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**All data, including phase data, are available on CD-ROM/DVD-ROM
and from the internet - http://www.isc.ac.uk**

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Addendum I

From data-month September 2002 onwards, the printed ISC Bulletins have been generated directly from the ISC Relational Database.

From data-month October 2002, a new location program ISCloc has been used in operations. Also, the IASPEI standard seismic phase list has now been adopted by the ISC, please see the last pages of this Bulletin for details.

From data-month January 2003 onwards, an updated regionalisation scheme has been adopted (Young,J.B., B.W.Presgrave, H.Aichele, D.A.Wiens, E.A.Flinn The Flinn-Engdahl Regionalisation Scheme: the 1995 Revision, Physics of the Earth and Planetary Interiors 96 (1996), 223-297)

These developments have prompted the need to review and revise the format of the Bulletin.

The following example illustrates the changes :-

September 2002

```
      NEIC 01 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,
              Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
       IDC 01 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,
              mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
              s-min=20.6km az=159.0
       ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
              n22,σ1s15/21,mb4.4/9,1C,South of Fiji Islands
Code  Station Name       Δ°    AZ°   Phase ID           Time       Res
                                     Op       ISC       h  m  s    ISC
HBZ   Hicks Bay          15.41 186   eP       P         18 48 53.1 -1.7
URZ   Urewera            16.21 189    P       P         18 49 01.5 -0.9
MRZ   Mangatainoka R     18.81 192   eP       P         18 49 26.7  0.0
DIW   D'Urville Isla     19.30 195   eP       P         18 49 27.3 -3.9
CAW   Cannon Point       19.34 192   eP       P         18 49 31.7 +0.1
OTW   Orongorongo Tu     19.52 192   eP       P         18 49 33.0 -0.2
MOW   Moikau             19.61 192   eP       P         18 49 35.5 +1.5
THZ   Tophouse           20.46 196   eP       P         18 49 42.0 +0.2
KHZ   Kahutara           20.93 194    P       P         18 49 46.2 +0.2
ARMA  Armidale           27.03 246   eP       P         18 50 42.4 +2.3
      4.9nm,0.5s,mb4.4
CTA   Charters Tower     31.93 267⇑iP       P         18 51 22.3 +0.4
      13nm,0.5s,mb4.8
STKA  Stephens Creek     35.75 246   eP       P         18 51 55.3 +1.8
      3.1nm,0.4s,mb4.2
ASAR  Alice Springs      42.74 259    P       P         18 52 50.1 +0.3
      9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47
ASAR                                  S       S         18 58 31.3 -0.1
      1.0nm,0.8s,baz=95,slow=15,SNR=5.7
ASPA  Alice Springs      42.74 259   eP       P         18 52 50.1 +0.2
WRA   Warramunga Arr     42.96 264    P       P         18 52 51.0 -0.7
      1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93
WRA                                   S       S         18 58 33.0 -1.5
      0.3nm,0.9s,baz=99,slow=14,SNR=3.0
KAKA  Kakadu             46.64 273   eP       P         18 53 18.2 -1.8
      14nm,0.4s,mb4.8
FITZ  Fitzroy Crossi     51.39 264   eP       P         18 53 54.3 -0.7
      12nm,0.3s,mb4.8
MBWA  Marble Bar         56.08 259   eP       P         18 54 27.1 -0.7
      11nm,0.6s,mb4.2
CMAR  Chiang Mai Arr     89.35 290    P       P         18 57 38.1 +1.0
      1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1
ARCES ARCESS Array B    130.36 349   PKP      PKP       19 03 43.7 -0.5
      0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5
FINES FINESS Array B    137.02 342   PKP      PKP       19 03 57.3 +0.5
      3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4
MLR   Muntele Rosu      148.85 324   PKPbc    PKP       19 04 22.7 +5.2
      0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3
```

Epicentral Estimates

Origin times - The superscripts have been removed and a simpler format adopted.
Magnitudes - All magnitudes that were reported to the ISC are now shown. Only two per agency were allowed in the past.
Error Ellipses - The keywords have been shortened.

Observational Data

The station code, station name, epicentral distance and azimuth are all shown in **bold** for Initial phases. For Secondary phases, only the station code (in normal font) is repeated.

Phase ID's - The Operator's identification is shown in normal font. The Operator's residual is no longer printed. When the arrival time of an initial or secondary phase has contributed to the location - the ISC's identification, the arrival time and the ISC's travel-time residual are all shown in **bold** .

Phase Parameters - The following parameters are included on supplementary lines where appropriate :-

Component, amplitude and period (or logA/T) - reported by the Operator.
Station magnitude estimate - computed by the ISC.
Slowness, Back-Azimuth, Signal-to-Noise ratio - measured by the Operator.

Addendum II

From data-month January 2006 the ISC hypocentres are computed using the AK135 earth velocity model (*Kennett, B.L.N. Engdahl, E.R. & Buland R., 1995. Constraints on seismic velocities in the Earth from travel times, Geophys J Int, 122, 108-124; B.L.N. Kennett, 2005. Seismological tables: ak135. Research School of Earth Sciences, the Australian National University, Canberra*) and then reviewed by the ISC seismologists. The ISC still produces the hypocentre solutions based on Jeffreys-Bullen travel time tables (agency code ISCJB), yet these solutions are no longer reviewed.

The ISC is planning to re-compute the entire ISC dataset using AK135 once new location procedures are designed, tested, discussed and approved by the ISC Governing Council. Until that time the automatic ISCJB locations will continue to be produced alongside the AK135 solutions to observe the long-time continuity of the ISC Bulletin.

Addendum III

From data month January 2009 the ISC hypocentres are computed using the new ISC location algorithm and all reported IASPEI seismic phases, for which ak135 predictions are available. This algorithm is described in: *Bondár, I. and D.A. Storchak (2011), Improved location procedures at the International Seismological Centre, Geophys. J. Int., 186, 1220-1244, doi:10.1111/j.1365-246X.2011.05107.x*

The alternative locations based on JB-tables are still produced with the original location algorithm for consistency with the past data. It is still the plan that by the middle of calendar year 2014 all ISC locations (1960-2008) are going to be re-computed with the new locatin algorithm and ak135 as part of the ISC Bulletin Re-Build project, sponsored by the US NSF and several agencies from Japan, China and India.

IDC 01 00:06:13.6±4.0**, 5°.21S×153°.26E, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.5**/44**, mbtmp3.8**/3**, Error ellipse: s-maj=156.1km s-min=35.1km az=114.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 3.8nm,1.1s,baz=54,slow=9.6,SNR=6.5	**23.53**	**230**	P	P	00 11 25.2	-0.4
ASAR	**Alice Springs** 0.7nm,0.8s,baz=57,slow=10,SNR=4.7	**26.17**	**224**	P	P	00 11 50.0	+0.1
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=107,slow=6.4,SNR=4.9	**81.75**	**326**	P	P	00 18 34.1	0.0
TORD	**Torodi Ar. Bea** 0.5nm,0.5s,baz=94,slow=1.9,SNR=7.7	**150.87**	**288**	PKPbc	PKPbc	00 26 09.2	-0.1

---

*SOME **01** 00:08:53.1, 42°.52N×79°.68E, h25^{km}*

*KRNET **01** 00:08:53.3±0.1, 42°.58N×79°.63E, h15^{km}, mb2.8*

*NNC **01** 00:08:53.0±0.8, 42°.58N×79°.61E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=4.8km s-min=2.4km az=137.0*

ISC 01 00:08:53.2±1.5**, 42°.58N**±0°.05×**79°.61E**±0°.04**, h9^{km}**±11^{km}**, n41, $\sigma 0^{s}.86$**/72**, 13C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode** 16nm,0.1s	**0.59**	**349**	P	**Pb**	**00 09 05.7**	**-0.1**
SHLS	141nm,0.2s			S	**Sb**	**00 09 14.8**	**+0.5**
SHLS	**Shalkode** baz=18	**0.59**	**349**	*e*P	**Pb**	**00 09 05.7**	**-0.1**
SHLS	baz=18			*e*S	**Sb**	**00 09 13.8**	**-0.5**
SHLS	**Shalkode** 16nm,0.1s	**0.59**	**349**	*e*P	**Pb**	**00 09 05.7**	**-0.1**
SHLS	141nm,0.2s			*e*S	**Sb**	**00 09 14.8**	**+0.5**
UZB	**Uzynbulak** baz=22	**0.71**	**323**	*e*P	**Pg**	**00 09 06.9**	**-0.1**
UZB	baz=22			*e*S	**Sg**	**00 09 17.1**	**+0.7**
UZB	**Uzynbulak** 14nm,0.1s	**0.71**	**323**	*e*P	**Pg**	**00 09 06.9**	**-0.1**
UZB	10.0nm,0.2s			*e*S	**Sg**	**00 09 17.1**	**+0.7**
PDGK	**Podgornoye** 4.6nm,0.2s	**0.76**	**353**	P	**Pg**	**00 09 07.6**	**-0.3**
PDGK	7.0nm,0.1s			S	**Sb**	**00 09 18.5**	**-0.6**
PDGK	**Podgornoye** 1.2nm,0.2s	**0.76**	**353**	⇓P	**Pg**	**00 09 07.5**	**-0.3**
PDGK	7.1nm,0.4s			⇓S	**Sb**	**00 09 18.2**	**-0.9**
PDGK	**Podgornoye** baz=52	**0.76**	**353**	⇓*i*P	**Pg**	**00 09 07.5**	**-0.3**
PDGK	baz=52			⇓*i*S	**Sg**	**00 09 17.9**	**+0.2**
PRZ	**Przheval'sk** baz=65	**0.90**	**264**	⇑*i*P	**Pb**	**00 09 10.4**	**-0.6**
PRZ	baz=65			⇑*i*S	**Sb**	**00 09 22.7**	**-0.5**
SATY	**Saty** 2.4nm,0.1s	**1.01**	**299**	P	**Pb**	**00 09 12.5**	**-0.4**
SATY	26nm,0.1s			S	**Sb**	**00 09 26.0**	**-0.3**
SATY	**Saty** 2.4nm,0.1s	**1.01**	**299**	*e*P	**Pb**	**00 09 12.5**	**-0.4**
SATY	26nm,0.1s			*e*S	**Sb**	**00 09 26.0**	**-0.3**
KTMS	**Ketmen** 4.0nm,0.1s	**1.02**	**32**	P	**Pb**	**00 09 12.3**	**-0.8**
KTMS	4.5nm,0.1s			S	**Sg**	**00 09 26.1**	**-0.1**
KTMS	**Ketmen** baz=30	**1.02**	**32**	*e*P	**Pb**	**00 09 12.4**	**-0.8**
KTMS	baz=30			*e*S	**Sg**	**00 09 26.2**	**-0.1**
KTMS	**Ketmen** 4.0nm,0.1s	**1.02**	**32**	*e*P	**Pb**	**00 09 12.3**	**-0.8**
KTMS	4.5nm,0.1s			*e*S	**Sg**	**00 09 26.1**	**-0.1**
KURS	**Kuram** baz=11	**1.39**	**311**	*e*P	**Pb**	**00 09 19.5**	**+0.1**
KURS	baz=11			*e*S	**Sg**	**00 09 38.4**	**+0.3**
KURS	**Kuram** 1.0nm,0.1s	**1.39**	**311**	*e*P	**Pb**	**00 09 19.5**	**+0.1**
KURS	4.3nm,0.4s			*e*S	**Sg**	**00 09 38.4**	**+0.3**
MNBS	**Baschi** 2.4nm,0.2s	**1.74**	**330**	P	**Pb**	**00 09 24.1**	**-1.2**
MNBS	4.5nm,0.1s			S	**Sb**	**00 09 46.6**	**-0.8**
MNBS	**Baschi** baz=30	**1.74**	**330**	*e*P	**Pb**	**00 09 24.1**	**-1.2**
MNBS	baz=30			*e*S	**Sn**	**00 09 45.6**	**-0.5**
MNBS	**Baschi** 2.4nm,0.2s	**1.74**	**330**	*e*P	**Pb**	**00 09 24.1**	**-1.2**
MNBS	4.5nm,0.1s			*e*S	**Sb**	**00 09 46.6**	**-0.8**
KDJ	**Kajisay** baz=57	**1.86**	**257**	⇑*i*P	**Pb**	**00 09 27.9**	**+0.6**
KDJ	baz=57			⇑*i*S	**Sg**	**00 09 52.3**	**-0.5**
KOTS	**Kotyrbulak** 2.5nm,0.2s	**1.95**	**291**	Pg	**Pb**	**00 09 29.4**	**+0.5**
KOTS	20nm,0.2s			Lg	Lg	00 09 55.8	
KOTS	**Kotyrbulak** baz=90	**1.95**	**291**	*e*P	**Pb**	**00 09 29.4**	**+0.5**
KOTS	baz=90			*e*S	**Sg**	**00 09 55.8**	**0.0**
KOTS	**Kotyrbulak** 2.5nm,0.2s	**1.95**	**291**	*e*P	**Pb**	**00 09 29.4**	**+0.5**
KOTS	20nm,0.2s			*e*S	**Sg**	**00 09 55.8**	**0.0**
MDOK	**Medeo** 1.0nm,0.5s	**1.97**	**288**	Pg	**Pb**	**00 09 28.6**	**-0.7**
MDOK	13nm,1.0s			⇑Lg	Lg	00 09 55.1	
TNSS	**Tian-Shan** 1.5nm,0.5s	**2.01**	**284**	Pg	**Pb**	**00 09 29.9**	**-0.3**
TNSS	5.5nm,0.4s			Lg	Lg	00 09 56.2	
TNSS	**Tian-Shan** baz=84	**2.01**	**284**	*e*P	**Pb**	**00 09 29.9**	**-0.3**
TNSS	baz=84			*e*S	**Sg**	**00 09 57.2**	**-0.7**
TNSS	**Tian-Shan** 1.5nm,0.5s	**2.01**	**284**	*e*P	**Pb**	**00 09 29.9**	**-0.3**
TNSS	5.5nm,0.4s			*e*S	**Sb**	**00 09 56.2**	**+0.7**
ARXS	**Arharly** 2.0nm,0.3s	**2.09**	**322**	Pg	**Pb**	**00 09 30.9**	**-0.3**
ARXS	5.3nm,0.5s			Lg	Lg	00 09 58.1	
ARXS	**Arharly** 2.0nm,0.3s	**2.09**	**322**	*e*P	**Pb**	**00 09 30.9**	**-0.3**
ARXS	5.3nm,0.5s			*e*S	**Sb**	**00 09 58.1**	**+0.8**
IZV	**Izvestkoviy** 3.2nm,0.2s	**2.25**	**283**	Pg	**Pb**	**00 09 34.1**	**0.0**
IZV	11nm,0.2s			Lg	Lg	00 10 03.5	
IZV	**Izvestkoviy** baz=83	**2.25**	**283**	*e*P	**Pb**	**00 09 34.1**	**0.0**
IZV	baz=83			*e*S	**Sb**	**00 10 03.5**	**+1.4**
IZV	**Izvestkoviy** 3.2nm,0.2s	**2.25**	**283**	*e*P	**Pb**	**00 09 34.1**	**0.0**
IZV	11nm,0.2s			*e*S	**Sb**	**00 10 03.5**	**+1.4**
CHKK	**Chushkaly** 1.8nm,0.1s	**2.30**	**305**	Pg	**Pb**	**00 09 35.3**	**+0.4**
CHKK	11nm,0.3s			Lg	Lg	00 10 05.5	
CHKK	**Chushkaly** 1.8nm,0.1s	**2.30**	**305**	*e*P	**Pb**	**00 09 35.3**	**+0.4**
CHKK	11nm,0.3s			*e*S	**Sg**	**00 10 05.5**	**-1.6**
MTBS	**Maitube** 2.5nm,0.1s	**2.40**	**284**	*e*P	**Pb**	**00 09 37.0**	**+0.4**
MTBS	6.2nm,0.2s			*e*S	**Sb**	**00 10 08.4**	**+2.0**
KTBS	**Karatobe** 1.6nm,0.2s	**2.42**	**299**	Pg	**Pb**	**00 09 37.0**	**0.0**
KTBS	10nm,0.2s			Lg	Lg	00 10 09.0	
KTBS	**Karatobe** 1.6nm,0.2s	**2.42**	**299**	*e*P	**Pb**	**00 09 37.0**	**0.0**
KTBS	10nm,0.2s			*e*S	**Sb**	**00 10 09.0**	**+2.0**
BOOM	**Boomskoye usch** baz=69	**2.71**	**269**	⇑*i*P	**Pb**	**00 09 39.7**	**-2.3**
BOOM	baz=69			⇑*i*S	**Sb**	**00 10 14.2**	**-1.2**
TKM2	**Tokmak 2** 0.8nm,0.5s	**2.98**	**278**	⇑Pg	**Pb**	**00 09 47.2**	**+0.8**
TKM2	4.1nm,0.6s			⇑Lg	Lg	00 10 27.5	
AAK	**Ala-Archa** 0.6nm,0.4s	**3.78**	**273**	⇑Pg	**Pb**	**00 10 01.3**	**+1.2**
AAK	2.2nm,0.7s			⇑Lg	Lg	00 10 53.2	
MK31	**Makanchi Array** 0.1nm,0.3s	**4.63**	**23**	⇑Pg	**Pb**	**00 10 17.7**	**+3.2**
MK31	0.1nm,0.3s			⇑Lg	Lg	00 11 19.7	

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*BJI **01** 00:18:03.1, 11°.06S×165°.96E, h6^{km}, mB5.4/46, mb4.8/50, Ms5.2/45, Ms7 4.9/44*

*IDC **01** 00:18:05.5±0.4, 11°.01S×165°.59E, h0^{km}, mb4.7/21, mb1 4.9/23, mb1mx4.8/31, mbtmp4.7/23, ML5.4/2, MS4.9/21, Ms1 4.9/21, ms1mx4.6/38, Error ellipse: s-maj=16.7km s-min=13.2km az=93.0*

*NEIC **01** 00:18:07.2±2.6, 10°.96S×165°.48E, h11^{km}±16^{km}, mb4.9/46, Error ellipse: s-maj=5.6km s-min=4.7km az=106.0*

*ISCJB **01** 00:18:08.4±0.1, 10°.98S±0°.03×165°.43E±0°.03, h30^{km}, mb4.8/71, MS5.0/32, Error ellipse: s-maj=4.2km s-min=3.6km az=25.7*

*GCMT **01** 00:18:12.2±0.1, 11°.18S±0°.01×165°.31E±0°.01, h21^{km}, MW5.4/115, Moment Tensor Solution. s102,c185; s115,c180; Duration: $1^{s}.2$ Moment tensor: Scale 10^{17} Nm; M_{rr}0.96±.02; $M_{\theta\theta}$-0.66±.02; $M_{\phi\phi}$-0.30±.02; $M_{r\theta}$0.88±.04; $M_{\theta\phi}$0.50±.01; $M_{\phi r}$-1.00±.04; Best double couple: $M_0$1.65700×10^{17} NP1:ϕ_s136.00000°, δ72.00000°, λ97.00000°. NP2:ϕ_s294.00000°, δ19.00000°, λ69.00000°. Principal axes: T 1.6500, Plg62.0000°, Azm57.0000°; N 0.0120, Plg7.0000°, Azm314.0000°; P -1.6630, Plg27.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 00:18:10.2±0.3**, 11°.06S**±0°.05×**165°.54E**±0°.05**, h30^{km}, n296, $\sigma 1^{s}.65$**/313**, mb4.8**/71**, MS5.0**/33**, 2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.74**	**286**	*e*Pn	**Pn**	**00 19 32.4**	**-1.1**
HNR				*e*Sn	**Sn**	**00 20 33.4**	**-5.0**
HNR	**Honiara** 171nm,0.3s,baz=149,slow=6.3,SNR=18	**5.74**	**286**	Pn	**Pn**	**00 19 32.7**	**-0.8**
HNR	39nm,0.3s,baz=342,slow=20,SNR=3.4			Sn	**Sn**	**00 20 35.6**	**-2.8**
HNR	comp=Z,16µm,19.6s,baz=118,slow=38			LR	LR	00 21 41.9	
DZM	**Mont Dzumac** 225nm,1.2s	**10.98**	**176**	*e*Pn	**Pn**	**00 20 45.6**	**+0.2**
DZM	8µm,23.1s			*e*LQ	LQ	00 22 49.0	
DZM	comp=Z,8µm,25.8s			*e*LR	LR	00 23 18.5	
DZM	**Mont Dzumac** 15nm,0.3s,baz=329,slow=12,SNR=77	**10.98**	**176**	Pn	**Pn**	**00 20 45.6**	**+0.2**
DZM	0.9nm,0.3s,baz=144,slow=19,SNR=3.2			Sn	**Sn**	**00 22 46.1**	**-1.3**
DZM	comp=Z,7µm,20.3s,baz=9.0,slow=34			LR	LR	00 24 21.0	
MSVF	**Nonsavu**	**13.81**	**120**	*e*Pn	**P**	**00 21 28.6**	**-3.6**
TARA	**Tarawa**	**14.36**	**31**	*e*Pn	**Pn**	**00 21 28.7**	**-2.8**
EIDS	**Eidsvold** baz=20,SNR=12	**19.75**	**222**	P	**Pn**	**00 22 38.7**	**-0.7**
EIDS	**Eidsvold** 31nm,0.8s	**19.75**	**222**	*e*P	**Pn**	**00 22 38.2**	**-1.2**
KWAJ	**Kwajalein Atol**	**19.84**	**6**	*e*P	**P**	**00 22 37.1**	**-1.8**
MANU	**Manus Island** 422nm,1.0s	**20.14**	**295**	*e*P	Pn	00 22 42.0	-2.2
CTA	**Charters Tower** 58nm,0.9s,baz=71,slow=13,SNR=57	**20.61**	**242**	P	Pn	00 22 47.0	-2.6
CTA	comp=Z,6µm,18.5s,baz=66,slow=34			LR	LR	00 29 56.5	
CTAO	**Charters Tower** 86nm,1.0s	**20.61**	**242**	*e*P	Pn	00 22 47.2	-2.4
MTSU	**Mount Surprise** baz=22,SNR=44	**21.70**	**249**	P	**P**	**00 22 59.0**	**+0.1**
COEN	**Coen** baz=22,SNR=13	**22.02**	**260**	P	**P**	**00 23 01.9**	**-0.6**
COEN	**Coen** 64nm,1.1s	**22.02**	**260**	*e*P	**P**	**00 23 01.6**	**-0.9**
RMQ	**Roma** baz=22,SNR=32	**22.05**	**224**	P	**P**	**00 23 03.1**	**+0.4**
ARMA	**Armidale** baz=23,SNR=6.4	**23.20**	**212**	P	**P**	**00 23 15.4**	**+0.6**
ARMA	**Armidale** 53nm,1.1s	**23.20**	**212**	*e*P	**P**	**00 23 15.6**	**+0.8**
OUZ	**Omahuta** 37nm,1.1s	**25.14**	**164**	*e*P	**P**	**00 23 33.4**	**+0.7**
QLP	**Quilpie** baz=26,SNR=4.7	**25.33**	**230**	P	**P**	**00 23 34.3**	**-0.3**
MGCD	**Mangrove Creek** baz=26,SNR=5.1	**25.72**	**209**	P	**P**	**00 23 40.1**	**+2.1**
JAY	**Jayapura** 12nm,0.8s,baz=188,slow=2.3,SNR=3.9	**26.06**	**287**	P	**P**	**00 23 38.0**	**-3.4**
RIV	**Riverview** baz=26	**26.21**	**208**	P	**P**	**00 23 45.5**	**+3.0**
QIS	**Mount Isa** baz=27,SNR=11	**26.65**	**246**	P	**P**	**00 23 45.6**	**-1.0**
CMSA	**Cobar Meteorol** baz=28,SNR=13	**27.42**	**219**	P	**P**	**00 23 53.3**	**-0.1**
HAZ	**Te Kaha**	**28.76**	**160**	P	**P**	**00 24 07.1**	**+1.9**
URZ	**Urewera** 35nm,0.9s,baz=146,slow=18,SNR=11	**28.99**	**161**	P	**P**	**00 24 08.0**	**+0.7**
URZ	**Urewera**	**28.99**	**161**	P	**P**	**00 24 08.5**	**+1.1**
MWZ	**Matawai**	**29.20**	**160**	P	**P**	**00 24 09.9**	**+0.6**
PUZ	**Puketiti**	**29.21**	**159**	P	**P**	**00 24 10.8**	**+1.5**
H11S2	**WAKE ISLAND Hy** baz=183,slow=76,SNR=107	**29.39**	**2**	T	T	00 54 55.5	
H11S3	**WAKE ISLAND Hy** baz=183,slow=76,SNR=68	**29.39**	**2**	T	T	00 54 51.9	
NGZ	**Ngauruhoe**	**29.39**	**164**	P	P	00 24 15.9	+4.9
H11S1	**WAKE ISLAND Hy** baz=183,slow=76,SNR=71	**29.41**	**2**	T	T	00 54 53.6	
SNGZ	**Shannon Statio**	**29.54**	**161**	P	**P**	**00 24 12.1**	**-0.2**
BKZ	**Black Stump Fm** 45nm,0.7s	**29.64**	**163**	*e*P	**P**	**00 24 14.3**	**+1.1**
BKZ	**Black Stump Fm**	**29.64**	**163**	P	**P**	**00 24 14.5**	**+1.4**
MILA	**Mila** baz=30	**29.79**	**207**	P	**P**	**00 24 16.5**	**+1.9**
BHHZ	**Black Hill Sta**	**29.82**	**163**	P	**P**	**00 24 16.8**	**+2.1**
KWHZ	**Kaweka Forest**	**29.86**	**163**	P	**P**	**00 24 17.0**	**+2.0**
KNZ	**Kokohu**	**29.87**	**161**	P	**P**	**00 24 16.3**	**+1.2**
STKA	**Stephens Creek** baz=30,SNR=18	**30.29**	**223**	P	**P**	**00 24 19.2**	**+0.2**
STKA	**Stephens Creek** 5.0nm,0.9s	**30.29**	**223**	*e*P	**P**	**00 24 19.2**	**+0.2**
STKA	**Stephens Creek** 17nm,0.8s,baz=31,slow=9.3,SNR=23	**30.29**	**223**	P	**P**	**00 24 19.4**	**+0.4**
STKA	comp=Z,7µm,18.3s,baz=66,slow=36			LR	LR	00 36 03.1	
KAHZ	**Kahuranaki**	**30.33**	**163**	P	**P**	**00 24 20.6**	**+1.4**
PXZ	**Pawanui**	**30.55**	**163**	P	**P**	**00 24 22.0**	**+1.0**
DVHZ	**Dannevirke**	**30.60**	**164**	P	**P**	**00 24 23.7**	**+2.1**
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=91	**30.61**	**2**	T	T	00 56 27.2	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=80	**30.62**	**3**	T	T	00 56 19.1	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=70	**30.63**	**3**	T	T	00 56 28.6	
MRZ	**Mangatainoka R**	**30.78**	**165**	P	**P**	**00 24 25.1**	**+2.0**
KIW	**Kapiti Island**	**30.81**	**166**	P	**P**	**00 24 25.2**	**+1.8**
BAKI	**Biak**	**30.83**	**287**	P	**P**	**00 24 24.0**	**+0.1**
BFZ	**Birch Farm** 46nm,0.9s	**30.98**	**164**	*e*P	**P**	**00 24 25.2**	**+0.4**
BFZ	**Birch Farm**	**30.98**	**164**	P	**P**	**00 24 25.3**	**+0.4**
HOWZ	**Holdsworth Sta**	**30.99**	**165**	P	**P**	**00 24 25.4**	**+0.3**
TCW	**Tory Channel**	**31.00**	**167**	P	**P**	**00 24 27.5**	**+2.4**
CAW	**Cannon Point**	**31.08**	**166**	P	**P**	**00 24 27.9**	**+2.1**
MTW	**Mount Morrison**	**31.23**	**165**	P	**P**	**00 24 27.1**	**-0.1**
THZ	**Tophouse** 25nm,0.9s	**31.25**	**169**	*e*P	**P**	**00 24 29.1**	**+1.7**
THZ	**Tophouse**	**31.25**	**169**	P	**P**	**00 24 29.7**	**+2.4**
WRAB	**Tennant Creek** 42nm,1.1s	**31.28**	**250**	*e*P	**P**	**00 24 26.1**	**-1.8**
WB2	**Warramunga Arr**	**31.28**	**250**	*e*P	**P**	**00 24 25.5**	**-2.3**
WRA	**Warramunga Arr** 26nm,0.9s,baz=81,slow=9.2,SNR=76	**31.29**	**250**	P	**P**	**00 24 26.2**	**-1.8**
WRA	5.4nm,1.0s,baz=78,slow=2.6,SNR=4.7			PcP	**PcP**	**00 27 22.8**	**+0.8**
WRA	comp=Z,4µm,18.1s,baz=80,slow=36			LR	LR	00 36 50.5	
BHW	**Baring Head**	**31.32**	**166**	P	**P**	**00 24 28.2**	**+0.3**
TOO	**Toolangi** baz=32,SNR=4.7	**31.95**	**211**	P	**P**	**00 24 34.0**	**+0.4**
KHZ	**Kahutara**	**32.01**	**169**	*e*P	**P**	**00 24 35.3**	**+1.4**
KHZ	**Kahutara**	**32.01**	**169**	P	**P**	**00 24 33.5**	**-0.3**
LTZ	**Lake Taylor** 18nm,0.8s	**32.14**	**171**	*e*P	**P**	**00 24 37.3**	**+2.2**
FOZ	**Fox Glacier**	**32.56**	**174**	P	**P**	**00 24 41.6**	**+2.9**
AS01	**Alice Springs**	**32.56**	**243**	*e*P	**P**	**00 24 36.1**	**-3.0**
AS31	**Alice Springs** 9.3nm,1.0s	**32.60**	**243**	*e*P	**P**	**00 24 37.7**	**-1.8**
ASAR	**Alice Springs** 24nm,0.9s,baz=71,slow=9.5,SNR=124	**32.61**	**243**	P	**P**	**00 24 37.9**	**-1.6**
ASAR	4.7nm,0.9s,baz=62,slow=2.2,SNR=7.1			PcP	**PcP**	**00 27 26.6**	**+1.1**
ASAR	comp=Z,4µm,20.3s,baz=75,slow=34			LR	LR	00 36 43.7	
RPZ	**Rata Peaks** 19nm,0.9s,baz=291,slow=4.2,SNR=8.0	**32.88**	**173**	P	**P**	**00 24 40.5**	**-1.1**
JCZ	**Jackson Bay**	**33.01**	**176**	P	**P**	**00 24 45.6**	**+2.8**
HTT	**Hallett** baz=33,SNR=4.8	**33.02**	**223**	P	**P**	**00 24 42.8**	**-0.2**
MQZ	**McQueen's Vall** 26nm,1.0s	**33.10**	**171**	*e*P	**P**	**00 24 46.3**	**+2.8**
LBZ	**Lake Benmore**	**33.44**	**174**	P	**P**	**00 24 47.0**	**+0.6**
BBOO	**Buckleboo** baz=35	**34.67**	**227**	P	**P**	**00 24 56.7**	**-0.6**
KNRA	**Kununurra** baz=36,SNR=5.2	**36.04**	**259**	P	**P**	**00 25 07.8**	**-1.5**
WRKA	**Warakurna** baz=38,SNR=23	**37.90**	**243**	P	**P**	**00 25 23.7**	**-1.3**
FITZ	**Fitzroy Crossi** baz=39,SNR=17	**39.18**	**255**	P	**P**	**00 25 34.2**	**-1.6**
FITZ	**Fitzroy Crossi** 15nm,0.8s	**39.18**	**255**	*e*P	**P**	**00 25 34.3**	**-1.6**
PPT	**Papeete** comp=Z,2µm,20.2s,baz=274,slow=31	**43.88**	**104**	LR	LR	00 40 30.9	
PPT2	**Papeete2** 751nm,26.0s	**43.88**	**104**	*e*S	**S**	**00 32 52.4**	**+8.1**
PPT2	3µm,28.0s			*e*LQ	LQ	00 36 46.7	
PPT2	comp=Z,3µm,21.8s,baz=272			*e*LR	LR	00 38 38.3	
TBI	**Tubuai** 537nm,26.2s	**44.51**	**112**	*e*S	S	00 33 02.7	+10
TBI	4µm,28.0s			*e*LQ	LQ	00 37 03.1	
TBI	comp=Z,3µm,26.2s,baz=283			*e*LR	LR	00 38 53.0	
MBWA	**Marble Bar**	**45.00**	**251**	*e*P	**P**	**00 26 23.4**	**0.0**
MPSI	**Mapaga**	**46.75**	**281**	P	**P**	**00 26 35.5**	**-1.7**
MEEK	**Meekatharra** baz=47,SNR=16	**46.76**	**244**	P	**P**	**00 26 36.7**	**-0.5**
KLBR	**Kellerberrin** baz=49,SNR=5.2	**48.53**	**238**	P	**P**	**00 26 50.0**	**-0.8**
BLDU	**Ballidu** baz=49	**49.18**	**239**	P	**P**	**00 26 55.3**	**-0.5**
NWAO	**Narrogin (SRO)** baz=49,SNR=4.0	**49.29**	**236**	P	**P**	**00 26 56.1**	**-0.5**
NWAO	**Narrogin (SRO)**	**49.29**	**236**	*e*P	**P**	**00 26 55.4**	**-1.2**
MORW	**Morawa** baz=50,SNR=3.5	**49.44**	**241**	P	**P**	**00 26 58.5**	**+0.6**
MORW	**Morawa** 28nm,1.0s	**49.44**	**241**	*e*P	**P**	**00 26 58.4**	**+0.6**
TAOE	**Nuku Hiva Isla** 794nm,25.4s	**53.48**	**93**	*e*S	S	00 35 08.2	+8.5
TAOE	comp=Z,2µm,23.3s			*e*LR	LR	00 42 59.7	
PCJI	**Pacitan**	**53.62**	**268**	P	**P**	**00 27 30.4**	**+1.1**
MJAR	**Matsushiro Arr** 5.1nm,0.8s,baz=170,slow=9.1,SNR=9.8	**53.90**	**333**	P	**P**	**00 27 29.5**	**-1.4**
MAJO	**Matsushiro** 22nm,1.1s	**53.90**	**333**	*e*P	**P**	**00 27 30.2**	**-0.8**
MAT	**Matsushiro**	**53.90**	**333**	P	**P**	**00 27 29.1**	**-1.8**
MAT				S	**S**	**00 35 07.0**	**+2.6**
MJB9	**Matsu-Tunnel** 21nm,1.1s	**53.90**	**333**	*e*P	**P**	**00 27 31.3**	**+0.4**
JNU	**Nakatsue** baz=126,slow=6.1	**54.98**	**324**	P	**P**	**00 27 38.3**	**-0.6**
LEM	**Lembang** comp=Z,506nm,18.6s,baz=77,slow=38	**57.31**	**269**	LR	LR	00 54 37.2	
RKT	**Rikitea** 674nm,30.8s	**57.77**	**110**	*e*S	**S**	**00 36 03.3**	**+6.8**
RKT	1µm,29.5s			*e*LQ	LQ	00 42 37.0	
RKT	comp=Z,3µm,25.5s			*e*LR	LR	00 45 03.7	
KSRS	**Korea Array** 2.1nm,0.8s,baz=116,slow=6.9,SNR=4.8	**59.78**	**326**	P	**P**	**00 28 13.6**	**+1.0**
KSRS	comp=Z,432nm,18.4s,baz=145,slow=35			LR	LR	00 53 06.6	
KSAR	**Wonju Array Be**	**59.79**	**326**	P	**P**	**00 28 13.6**	**+0.8**
NJ2	**Nanjing**	**61.89**	**316**	*e*P	**P**	**00 28 26.0**	**-1.1**
NJ2	comp=Z,16nm,0.5s			pmax	pmax		
NJ2	comp=Z,320nm,4.9s			pmax	pmax		
NJ2	comp=N,620nm,13.0s			LR	LR		
NJ2	comp=E,680nm,17.9s			LR	LR		
NJ2	comp=Z,790nm,16.5s			LR	LR		
QIZ	**Qiongzhong**	**62.51**	**298**	P	**P**	**00 28 31.1**	**-0.4**
QIZ				S	**S**	**00 37 02.8**	**+5.3**
QIZ				SS	**SS**	**00 41 08.9**	**+6.7**
QIZ	comp=N,420nm,17.5s			LR	LR		
QIZ	comp=E,570nm,18.1s			LR	LR		
QIZ	comp=Z,740nm,27.5s			LR	LR		
USRK	**Ussuriysk Ar.** 8.0nm,1.0s,baz=134,slow=8.2,SNR=8.9	**62.88**	**333**	P	**P**	**00 28 34.2**	**+0.8**
WHN	**Wuhan**	**64.26**	**312**	⇓P	P	00 28 48.6	+5.8
WHN				S	**S**	**00 37 25.1**	**+6.3**
WHN	comp=N,4µm,13.9s			LR	LR		
WHN	comp=E,1µm,13.5s			LR	LR		
WHN	comp=Z,3µm,15.3s			LR	LR		
PETK	**Petropavlovsk-** 3.4nm,0.7s,baz=154,slow=9.9,SNR=4.7	**64.27**	**355**	P	**P**	**00 28 42.3**	**-0.2**
MDJ	**Mudanjiang**	**64.27**	**332**	P	**P**	**00 28 41.3**	**-1.4**
MDJ	comp=Z,7.0nm,1.5s			pmax	pmax		
MDJ	comp=Z,230nm,5.3s			pmax	pmax		
MDJ	**Mudanjiang** 5.8nm,0.6s	**64.27**	**332**	*e*P	**P**	**00 28 41.5**	**-1.2**
DL2	**Dalian**	**64.38**	**323**	P	**P**	**00 28 43.7**	**+0.3**
DL2				S	**S**	**00 37 23.8**	**+3.8**
DL2	comp=Z,260nm,6.2s			pmax	pmax		
DL2	comp=N,1µm,17.6s			LR	LR		
DL2	comp=E,680nm,16.5s			LR	LR		
DL2	comp=Z,680nm,15.4s			LR	LR		
SNY	**Shenyang**	**65.24**	**327**	⇓P	P	00 28 43.7	-5.3
SNY				S	S	00 37 21.2	-9.3
SNY	comp=Z,240nm,7.5s			pmax	pmax		
SNY	comp=N,930nm,16.4s			LR	LR		
SNY	comp=E,450nm,13.5s			LR	LR		
SNY	comp=Z,850nm,18.5s			LR	LR		
CN2	**Changchun**	**65.66**	**329**	*e*P	**P**	**00 28 53.5**	**+1.8**
CASY	**Casey**	**66.29**	**201**	*e*P	**P**	**00 28 55.4**	**0.0**
VNDA	**Vanda** comp=Z,2.3nm,0.8s,baz=14,slow=6.0,SNR=3.7	**66.47**	**181**	P	**P**	**00 28 58.0**	**+1.5**
VNDA				LR	LR	00 53 35.9	

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         comp=Z,699nm,21.0s,baz=3.5,slow=32
KLR   Kul'dur           67.00 337  LR      LR       00 55 01.6
         comp=Z,374nm,20.9s,baz=141,slow=33
PSI   Prapat            67.68 278  LR      LR       01 03 28.3
         comp=Z,394nm,18.1s,baz=91,slow=40
ENH   Enshi             67.75 309 eP       P        00 29 04.3 -1.2
GYA   Guiyang           68.26 304  P       P        00 29 08.4 -0.4
GYA                                PP      PP       00 31 42.0 +2.2
GYA                                S       S        00 38 08.9 +0.9
GYA                                SKS     ScS      00 39 05.3 -1.3
GYA                                pmax    pmax
         comp=Z,20nm,0.8s
GYA                                pmax    pmax
         comp=Z,120nm,5.2s
GYA                                LR      LR
         comp=Z,420nm,18.6s
GYA                                LR      LR
         comp=Z,390nm,18.5s
GYA                                LR      LR
         comp=Z,380nm,18.2s
BJT   Baijiatuau        68.36 321 eP       P        00 29 09.1 +0.1
         comp=Z,3.5nm,0.4s
XAN   Xi'an             69.99 312  P       P        00 29 19.3  0.0
XAN                                pP      pP       00 29 23.6 -4.3
XAN                                sP      pwP      00 29 26.2 -4.8
XAN                                PP      PP       00 31 53.6 -0.9
XAN                                S       S        00 38 23.1 -4.8
XAN                                ScS     SKSac    00 39 15.9 -2.7
XAN                                pmax    pmax
         comp=Z,5.0nm,0.9s
XAN                                pmax    pmax
         comp=Z,230nm,4.8s
XAN                                LR      LR
         comp=Z,690nm,16.5s
XAN                                LR      LR
         comp=Z,380nm,17.4s
XAN                                LR      LR
         comp=Z,740nm,19.5s
KMI   Kunming           70.96 301  P       P        00 29 26.9 +1.3
KMI                                pP      pP       00 29 33.2 -0.8
KMI                                sP      pwP      00 29 36.0 -2.4
KMI                                PP      PP       00 32 07.5 +4.2
KMI                                S       S        00 38 41.1 +1.1
KMI                                sS      sS       00 38 52.4 -1.6
KMI                                SKS     ScS      00 39 26.2 -2.0
KMI                                SS      SS       00 43 13.7 +0.1
KMI                                pmax    pmax
         comp=Z,9.0nm,1.3s
KMI                                pmax    pmax
         comp=Z,87nm,3.6s
KMI                                LR      LR
         comp=Z,200nm,17.4s
KMI                                LR      LR
         comp=Z,440nm,19.4s
KMI                                LR      LR
         comp=Z,560nm,22.9s
MA2   Magadan           71.40 352 eP       P        00 29 26.8 -0.5
HHC   Hu-ho-hao-te      71.72 320 eP       P        00 29 30.9 +1.2
HHC                                S       S        00 38 53.3 +5.4
HHC                                sS      SKiKP    00 39 04.3 -2.1
HHC                                ScS     ScS      00 39 32.9 -0.4
HHC                                SS      SS       00 43 28.6 +4.2
HHC                                pmax    pmax
         comp=Z,7.0nm,1.1s
HHC                                pmax    pmax
         comp=Z,170nm,5.8s
HHC                                LR      LR
         comp=Z,610nm,16.6s
HHC                                LR      LR
         comp=Z,510nm,17.6s
HHC                                LR      LR
         comp=Z,740nm,19.6s
CMAR  Chiang Mai Arr    71.94 294  P       P        00 29 32.2 +0.9
         comp=Z,4.9nm,1.0s,baz=119,slow=4.6,SNR=11
CMAR                               LR      LR       01 00 25.7
         comp=Z,210nm,19.7s,baz=180,slow=35
CHTO  Chiang Mai        72.05 294 eP       P        00 29 31.4 -0.6
         comp=Z,1.9nm,0.6s
CHTO  Chiang Mai        72.05 294  P       P        00 29 38.4 +6.4
CD2   Chengdu           72.46 307  P       P        00 29 34.0 -0.3
CD2                                pP      pP       00 29 37.2 -5.4
CD2                                PP      PP       00 32 14.7 -1.1
CD2                                S       S        00 38 58.6 +1.9
CD2                                SKS     ScS      00 39 38.5 -0.9
CD2                                SS      SS       00 43 38.0 +2.0
CD2                                pmax    pmax
         comp=Z,10.0nm,0.5s
CD2                                pmax    pmax
         comp=Z,120nm,5.0s
CD2                                LR      LR
         comp=Z,780nm,13.5s
CD2                                LR      LR
         comp=Z,710nm,15.5s
CD2                                LR      LR
         comp=Z,740nm,9.9s
LZH   Lanzhou           74.62 312 eP       P        00 29 48.5 +1.4
LZH                                pP      pP       00 29 52.8 -2.6
LZH                                sP      pwP      00 29 55.9 -4.2
LZH                                PP      PP       00 32 39.0 +4.7
LZH                                pmax    pmax
         comp=Z,29nm,1.3s
LZH                                pmax    pmax
         comp=Z,150nm,6.0s
LZH                                LR      LR
         comp=Z,1μm,17.9s
LZH                                LR      LR
         comp=Z,560nm,17.4s
LZH                                LR      LR
         comp=Z,1μm,18.4s
KDAK  Kodiak Island     76.67  22 eP       P        00 29 57.5 -0.5
ULN   Ulaanbaatar       78.20 324 eP       P        00 30 06.9 -0.2
         comp=Z,8.9nm,0.8s
SONM  Songino Array     78.56 324  P       P        00 30 09.4 +0.4
         comp=Z,3.4nm,0.8s,baz=142,slow=6.6,SNR=25
BILL  Bilibino          78.90   0 eP       P        00 30 09.3 -1.0
         comp=Z,20nm,0.8s
GTA   Gaotai            78.93 314 eP       P        00 30 11.7 +0.4
GTA                                pP      PcP      00 30 16.4 -3.4
GTA                                sP      pP       00 30 19.7 +0.1
GTA                                S       S        00 40 07.3 -0.8
GTA                                pmax    pmax
         comp=Z,4.0nm,1.0s
GTA                                pmax    pmax
         comp=Z,180nm,8.2s
GTA                                LR      LR
         comp=Z,470nm,19.2s
GTA                                LR      LR
         comp=Z,570nm,20.3s
QSPA  South Pole Qui    78.94 180 eP       P        00 30 10.8 -0.1
RPN   Rapa Nui          80.74 116  LR      LR       00 58 20.5
         comp=Z,538nm,20.0s,baz=256,slow=30
TLY   Talaya            82.03 326 eP       P        00 30 26.5 -0.9
         comp=Z,12nm,0.9s
TLY   Talaya            82.03 326  P       P        00 30 27.3 -0.2
         comp=Z,0.8nm,0.5s,baz=173,slow=10,SNR=3.6
TLY                                LR      LR       01 03 40.6
         comp=Z,636nm,21.4s,baz=114,slow=33
MCCM  Marconi Confer    82.68  49 eP       P        00 30 30.8 -0.4
HOPS  Hopland Field     82.84  48 eP       P        00 30 31.6 -0.4
         comp=Z,18nm,0.9s
SAO   San Andreas Ge    83.30  51 eP       P        00 30 34.4  0.0
         comp=Z,11nm,1.0s
HDA   Harding Lake      83.33  19  P       P        00 30 32.8 -1.1
         baz=227
TCOL  CIGO, UAF Yank    83.36  18  P       P        00 30 32.6 -1.4
         baz=226
COLA  College           83.37  18 eP       P        00 30 33.7 -0.4
O02D  Mt. Diablo Mer    83.45  47  P       P        00 30 33.8 -1.4
         baz=250,SNR=13
L02E  Cave Junction     83.58  45  P       P        00 30 34.1 -1.6
         baz=249
ILAR  Eielson Array     83.59  19  P       P        00 30 34.2 -1.1
         comp=Z,4.3nm,0.7s,baz=236,slow=4.7,SNR=40
ILAR                               LR      LR       01 01 23.0
         comp=Z,422nm,22.0s,baz=239,slow=31
POKR  Poker Plat Res    83.66  18  P       P        00 30 34.3 -1.4
         baz=226
J01E  Myrtle Point      83.71  44  P       P        00 30 36.0 -0.4
         baz=249
K02D  Willamette Mer    83.73  44  P       P        00 30 36.5 -0.1
         baz=249,SNR=11
N02D  Trinity Center    83.79  46  P       P        00 30 36.9  0.0
         baz=250,SNR=7.1
M02C  Callahan          83.83  46  P       P        00 30 37.3 +0.2
         baz=250,SNR=9.6
PKM   Mcpherson Peak    83.96  53  P       P        00 30 37.6 -0.5
         baz=252
I02D  Swisshome         84.11  43  P       P        00 30 38.1 -0.3
         baz=249
HUMO  Hull Mountain     84.18  45 eP       P        00 30 39.0 +0.1
O03E  Paynes Creek      84.20  47  P       P        00 30 38.4 -0.6
         baz=250,SNR=11
I03D  Drain, OR         84.30  44  P       P        00 30 39.0 -0.3
         baz=249
L04D  Klamath Falls     84.50  45  P       P        00 30 39.8 -0.8
         baz=250,SNR=8.8
CMB   Columbia Colle    84.50  50 eP       P        00 30 39.6 -1.0
CIS   Catalina Islan    84.63  55  P       P        00 30 40.5 -0.8
         baz=253
M04C  Macdoel           84.68  46  P       P        00 30 41.0 -0.5
         baz=250,SNR=12
I04A  Tendick Farm,     84.97  44  P       P        00 30 41.9 -0.9
         baz=250,SNR=5.5
J04D  Umpqua Nationa    84.99  44  P       P        00 30 42.7 -0.4
         baz=250,SNR=12
H04D  Lebanon           85.01  43  P       P        00 30 42.8 -0.1
         baz=249
ISA   Isabella, Lake    85.24  52  P       P        00 30 43.8 -0.7
         baz=253,SNR=11
EDW2  Edwards Air Fo    85.39  53  P       P        00 30 44.6 -0.5
         baz=253,SNR=17
BFSC  Mount Baldy Ra    85.47  54  P       P        00 30 45.1 -0.5
         baz=254
J05D  Fort Rock, OR     85.60  45  P       P        00 30 45.6 -0.5
         baz=251,SNR=22
DAWY  Dawson            85.64  21 eP       P        00 30 45.3 -0.4
         comp=Z,8.4nm,0.8s
CWC   Cottonwood Cre    85.77  52  P       P        00 30 46.3 -0.9
         baz=253
MOD   Modoc Plateau     85.80  46 eP       P        00 30 46.3 -0.9
         comp=Z,9.2nm,0.8s
LRMC  Laurel Mtn Rad    85.81  53  P       P        00 30 46.6 -0.8
         baz=253,SNR=13
D03D  Eldon             85.85  40  P       P        00 30 47.2 +0.1
         baz=249
TIXI  Tiksi             86.07 349 eP       P        00 30 46.7 -0.8
         comp=Z,7.4nm,1.1s
MONP2 Monument Peak     86.09  56  P       P        00 30 48.0 -0.9
         baz=254
DAC   Darwin (Calif)    86.10  52 eP       P        00 30 48.4 -0.4
         comp=Z,7.0nm,1.0s
MPMC  Manual Prospec    86.12  52  P       P        00 30 47.5 -1.4
         baz=254,SNR=8.7
NVAR  Mina Array Bea    86.19  50  P       P        00 30 48.8 -0.4
         comp=Z,12nm,0.9s,baz=233,slow=7.1,SNR=47
NVAR                               LR      LR       01 03 45.6
         comp=Z,2μm,19.1s,baz=293,slow=32
G05D  Wamic, OR         86.20  43  P       P        00 30 48.0 -0.9
         baz=250
PFO   Pinyon Flats O    86.26  55 eP       P        00 30 49.0 -0.5
         comp=Z,6.2nm,1.1s
PFO   Pinyon Flats O    86.26  55  P       P        00 30 48.6 -0.9
         baz=254
IKP   In-Ko-Pah, Jac    86.28  56  P       P        00 30 49.7  0.0
         baz=254
F05D  White Salmon      86.33  42  P       P        00 30 49.1 -0.4
         baz=250
GSC   Goldstone, Bar    86.44  53  P       P        00 30 49.8 -0.6
         baz=254
GRAC  Grapevine Rang    86.48  51  P       P        00 30 49.9 -0.6
         baz=254,SNR=9.6
A04D  Lummi Island      86.52  39  P       P        00 30 50.1 -0.2
         baz=249
SWSC  Sam W. Stewart    86.61  56  P       P        00 30 50.7 -0.4
         baz=255
HEC   Hector,Ludlow     86.69  54  P       P        00 30 50.7 -0.8
         baz=254
FURC  Furnace Creek,    86.72  52  P       P        00 30 50.8 -0.8
         baz=254
BELC  Belle Mtn. Jos    86.73  55  P       P        00 30 51.2 -0.7
         baz=254,SNR=9.7
B05A  Bryant            86.74  40  P       P        00 30 50.8 -0.5
         baz=250
BC3   Big Chuckawall    87.08  55  P       P        00 30 53.3 -0.2
         baz=255,SNR=5.6
WVOR  Wild Horse Val    87.14  46 eP       P        00 30 53.2 -0.5
         comp=Z,7.5nm,0.9s
TUQ   Turquoise Moun    87.17  53  P       P        00 30 53.9 -0.1
         baz=254,SNR=5.9
GMRC  Granite Mounta    87.21  54  P       P        00 30 52.8 -1.4
         baz=255,SNR=6.5
TPNV  Topopah Spring    87.33  52  P       P        00 30 53.4 -1.4
         baz=254
GLA   Glamis            87.43  56  P       P        00 30 54.9 -0.3
         baz=255
IRM   Iron Mountain     87.45  55  P       P        00 30 54.4 -0.8
         baz=255,SNR=6.6
HAWA  Hanford           87.76  42 eP       P        00 30 56.4  0.0
         comp=Z,5.9nm,0.8s
Y12C  Blythe            87.85  55  P       P        00 30 56.4 -0.7
         baz=255,SNR=5.5
PDMCI Parker Dam,Lak    88.30  55  P       P        00 30 58.5 -0.7
         baz=256,SNR=13
BMO   Blue Mountains    88.78  44 eP       P        00 31 00.7 -0.8
         comp=Z,4.0nm,0.8s
214A  Organ Pipe Nat    88.81  57  P       P        00 31 02.4 +0.7
         baz=256
WMQ   Urumqi            88.97 315 eP       P        00 31 03.3 +1.0
WMQ                                sP      pP       00 31 10.2 -0.6
WMQ                                PP      PP       00 34 36.4 +4.1
WMQ                                SKS     SKSac    00 41 29.0 -1.0
WMQ                                S       ScS      00 41 53.9 +0.2
WMQ                                SS      SS       00 47 46.3 +4.2
WMQ                                pmax    pmax
         comp=Z,14nm,0.7s
WMQ                                pmax    pmax
         comp=Z,360nm,7.9s
WMQ                                LR      LR
         comp=Z,1μm,15.5s
WMQ                                LR      LR
         comp=Z,820nm,19.1s
WMQ                                LR      LR
         comp=Z,500nm,25.7s
NEW   Newport           89.89  41 eP       P        00 31 05.3 -1.1
         comp=Z,1.6nm,0.6s
HLID  Hailey            90.43  46 eP       P        00 31 08.5 -0.8
         comp=Z,6.2nm,0.9s
HLID  Hailey            90.43  46  P       P        00 31 09.1 -0.1
         baz=255
TUC   Tucson            90.56  57 eP       P        00 31 09.8 -0.2
         comp=Z,5.5nm,0.9s
TUC   Tucson            90.56  57  P       P        00 31 10.4 +0.3
         baz=257
DUG   Dugway, Tooele    90.76  49 eP       P        00 31 10.8  0.0
         comp=Z,3.6nm,0.8s
DUG   Dugway, Tooele    90.76  49  P       P        00 31 11.0 +0.2
         baz=256
WUAZ  Wupatki           90.79  54 eP       P        00 31 11.8 +0.7
         comp=Z,8.6nm,0.8s
WUAZ  Wupatki           90.79  54  P       P        00 31 11.4 +0.3
         baz=257
HWUT  Hardware Ranch    92.01  48 eP       P        00 31 16.1 -0.5
         comp=Z,3.1nm,0.8s
W18A  Petrified Fore    92.02  55  P       P        00 31 16.7 -0.1
         baz=258
WALA  Waterton Lakes    92.15  40 eP       P        00 31 17.2 +0.2
         comp=Z,5.2nm,0.9s
AHID  Auburn Hatcher    92.60  47 eP       P        00 31 18.8 -0.6
BOZ   Bozeman (W)       92.85  44 eP       P        00 31 20.3 -0.2
         comp=Z,5.9nm,0.8s
BOZ   Bozeman (W)       92.85  44  P       P        00 31 20.2 -0.2
         baz=257
121A  Cookes Peak, D    93.09  58  P       P        00 31 21.8 -0.1
         baz=259
H17A  Grant Village     93.32  46  P       P        00 31 23.8 +1.0
         baz=258
MKAR  Makanchi Array    93.40 317  P       P        00 31 22.3 -0.4
         comp=Z,2.1nm,0.8s,baz=99,slow=6.3,SNR=21
MKAR                               PP      PP       00 35 04.6 -2.6
         comp=Z,0.4nm,0.8s,baz=101,slow=7.5,SNR=2.8
MKAR                               PKKPbc  PKKPdf   00 48 29.3 -0.8
         comp=Z,0.9nm,1.0s,baz=263,slow=3.0,SNR=5.5
ZALV  Zalesovo Beam     93.45 324  P       P        00 31 21.5 -1.3
         comp=Z,2.0nm,0.7s,baz=106,slow=3.7,SNR=9.8
ZALV                               LR      LR       01 14 39.0
         comp=Z,129nm,18.1s,baz=74,slow=36
BW06  Boulder Array     93.71  47 eP       P        00 31 23.6 -1.0
         comp=Z,3.4nm,0.9s
BW06  Boulder Array     93.71  47  P       P        00 31 24.1 -0.4
         baz=259
PDAR  Pinedale Array    93.71  47  P       P        00 31 23.6 -1.0
         comp=Z,3.1nm,0.9s,baz=246,slow=2.9,SNR=22
PDAR                               PP      PP       00 35 07.1 -3.0
         comp=Z,0.3nm,0.7s,baz=266,slow=2.4,SNR=3.6
PDAR                               LR      LR       01 06 25.5
         comp=Z,412nm,21.3s,baz=264,slow=31
EGMT  Eagleton          94.62  42 eP       P        00 31 27.8 -0.5
         comp=Z,11nm,0.9s
EGMT  Eagleton          94.62  42  P       P        00 31 27.7 -0.7
         baz=259
ANMO  Albuquerque       94.62  55 eP       P        00 31 28.8 -0.1
         comp=Z,2.6nm,1.0s
ANMO  Albuquerque       94.62  55  P       P        00 31 28.5 -0.3
         baz=260
S22A  4UR Ranch, Cre    94.82  53  P       P        00 31 29.4 -0.4
         baz=260
MNTX  Cornudas Mount    94.94  59 eP       P        00 31 30.0 -0.2
         comp=Z,2.0nm,0.8s
MNTX  Cornudas Mount    94.94  59  P       P        00 31 29.4 -0.8
         baz=260
YKA   Yellowknife Ar    95.08  27  P       P        00 31 28.0 -2.0
         comp=Z,2.9nm,0.8s,baz=256,slow=4.6,SNR=33
YKA                                LR      LR       01 11 52.2
         comp=Z,117nm,18.1s,baz=252,slow=34
TXAR  Lajitas Array     96.01  61  P       P        00 31 34.8 -0.4
         comp=Z,0.7nm,0.8s,baz=235,slow=4.4,SNR=7.1
TXAR                               PP      PP       00 35 31.9 +3.7
         comp=Z,0.5nm,1.0s,baz=255,slow=4.8,SNR=5.4
TXAR                               LR      LR       01 11 14.2
         comp=Z,2μm,18.0s,baz=0.0,slow=33
KSH   Kashi             96.61 309  P       P        00 31 38.0 +0.3
KSH                                sP      pwP      00 31 48.0 -2.9
KSH                                PP      PP       00 35 36.6 +4.0
KSH                                SKS     SKSac    00 42 15.2 +2.4
KSH                                S       S        00 42 54.2 -3.0
KSH                                sS      pS       00 43 06.8 -1.9
KSH                                LR      LR
         comp=Z,200nm,5.1s
KSH                                LR      LR
         comp=Z,230nm,6.1s
KSH                                LR      LR
         comp=Z,490nm,7.0s
ARCES ARCESS Array B   116.30 345  PKP     PKPdf    00 36 49.1 -1.2
         comp=Z,1.8nm,0.8s,baz=35,slow=3.0,SNR=6.7
LPAZ  La Paz           120.35 116  PKP     PKiKP    00 37 00.7 +0.2
         comp=Z,0.9nm,0.6s,baz=52,slow=8.7,SNR=3.9
FINES FINESS Array B   121.72 338  PKP     PKiKP    00 37 00.8 -0.2
         comp=Z,1.7nm,0.9s,baz=58,slow=13,SNR=4.1
CPUP  Villa Florida    124.16 132  PKP     PKiKP    00 37 06.7 -0.3
         comp=Z,2.2nm,0.8s,baz=128,slow=3.7,SNR=4.4
SDV   Santo Domingo    124.70  87 ePKPdf   PKiKP    00 37 07.5 -1.1
BOSA  Boshof           124.97 223  PKP     PKiKP    00 37 08.7  0.0
         comp=Z,4.3nm,0.9s,baz=175,slow=4.6,SNR=6.2
NB2   NORSAR Subarra126.67 345  PKPdf   PKiKP    00 37 10.5 -0.4
         comp=Z,0.6nm,0.7s,baz=32,slow=1.8
NOA   NORSAR Array B 126.67 345  PKP     PKPdf    00 37 08.5 -2.0
         comp=Z,1.7nm,0.9s,baz=30,slow=1.9,SNR=3.6
AKASG Malin Array Be   126.77 327  PKP     PKiKP    00 37 10.5 -0.9
         comp=Z,1.2nm,0.7s,baz=93,slow=1.7,SNR=4.3
KIEV  Kiev             126.78 327 ePKPdf   PKiKP    00 37 11.6 +0.2
KMBO  Kilima Mbogo     127.19 260  PKP     PKiKP    00 37 15.2 +1.6
         comp=Z,0.7nm,0.4s,baz=53,slow=18,SNR=3.5
BRTR  Keskin Array B   128.83 313  PKP     PKiKP    00 37 14.8 -1.2
         comp=Z,1.6nm,1.0s,baz=328,slow=1.6,SNR=4.8
LSZ   Lusaka           130.31 239 ePKPdf   PKiKP    00 37 20.1 +0.5
CLL   Collm            134.04 336 ePKPdf   PKiKP    00 37 26.0  0.0
CLL                                Lm      MLR      01 40 00.0
         comp=Z,400nm,18.2s
MODS  Modra-Piesok     134.33 331 ePKP     PKiKP    00 37 27.2 +0.5
CONA  Conrad Observa   135.32 331  PKPdf   PKPdf    00 37 26.1 -1.2
         comp=Z,3.5nm,1.3s
KHC   Kasperske Hory   135.47 334 ePKP     PKiKP    00 37 28.5 -0.6
GERES GERESS Array B   135.63 334  PKP     PKiKP    00 37 27.5 -2.0
         comp=Z,2.0nm,1.0s,baz=53,slow=0.7,SNR=5.8
SOKA  Soboth           136.60 330 ePKPdf   PKPdf    00 37 29.0 -0.8
         comp=Z,5.1nm,1.5s
KBA   Koelnbreinsper   137.11 332  PKiKP   PKiKP    00 37 31.7 -0.9
         comp=Z,5.8nm,1.5s
BDFB  Brasilia         137.48 128  PKP     PKiKP    00 37 32.9 -1.3
         comp=Z,1.9nm,0.8s,baz=167,slow=9.2,SNR=3.1
ABTA  Abfaltersbach    137.74 332 ePKPdf   PKPdf    00 37 31.3 -0.6
         comp=Z,3.3nm,0.8s
MOTA  Moosalm          137.90 334  PKiKP   PKiKP    00 37 33.0 -1.2
         comp=Z,1.5nm,0.6s
RETA  Reutte           137.94 334  PKPdf   PKPdf    00 37 30.5 -1.6
         comp=Z,7.4nm,1.5s
SQTA  Sankt Quirin     137.96 334 ePKPdf   PKPdf    00 37 31.6 -0.7
         comp=Z,3.7nm,1.1s
FETA  Feichten         138.32 334 ePKiKP   PKiKP    00 37 33.7 -1.4
         comp=Z,5.2nm,1.3s
KEST  Kesra            147.31 323  PKPbc   PKPab    00 37 51.8 -1.5
         comp=Z,11nm,0.9s,baz=290,slow=4.7,SNR=8.8
PBRG  Braganca         148.64 349 ePKPdf   PKPdf    00 37 51.3 +0.2
PBRG  Braganca         148.64 349 ePKPab   PKPab    00 37 58.9 +0.6
PGAV  Gavieira, Arco   148.74 351 eLR      LR       01 40 39.1
         comp=Z,608nm,18.0s
POLO  Lamas de Olo     149.25 350 ePKPdf   PKiKP    00 37 56.8 -0.8
MVO   Moncorvo         149.31 349 ePKPdf   PKiKP    00 37 57.0 -0.7
MVO   Moncorvo         149.31 349 eLR      LR       01 40 23.5
         comp=Z,599nm,18.0s
PVRL  Vila Real        149.33 350 ePKPdf   PKiKP    00 37 56.5 -1.2
PVIS  Viseu            149.90 350 ePKPdf   PKiKP    00 37 58.1 -0.8
ESDC  Sonseca Array    150.02 344  PKP     PKPdf    00 37 54.4 +1.0
         comp=Z,2.9nm,0.9s,baz=349,slow=2.1,SNR=3.2
ESDC                               PKPbc   PKiKP    00 37 58.8 -0.4
         comp=Z,3.8nm,0.9s,baz=16,slow=1.7,SNR=19
MTE   Manteigas        150.15 349 ePKPdf   PKiKP    00 37 58.6 -0.9
MTE   Manteigas        150.15 349 ePKPab   PKPab    00 38 05.3 +0.8
MTE   Manteigas        150.15 349 eLR      LR       01 41 06.6
         comp=Z,703nm,18.0s
PCAS  Casmilo, Conde   150.65 351 ePKPdf   PKiKP    00 38 00.3 -0.1
PCBR  Castelo Branco   150.68 349 ePKPdf   PKiKP    00 38 00.5  0.0
PTOM  Tomar            151.06 350 ePKPdf   PKiKP    00 38 01.2 -0.1
PMRV  Marv??o          151.06 349 ePKPdf   PKiKP    00 38 01.2 -0.1
PMRV  Marv??o          151.06 349 eLR      LR       01 37 51.7
         comp=Z,442nm,18.0s
PMTG  Montargil        151.56 350 ePKPdf   PKiKP    00 38 02.3  0.0
PMAFR Mafra            151.84 351 ePKPdf   PKiKP    00 38 03.8 +0.9
PBEJ  Beja             152.51 349 ePKPdf   PKiKP    00 38 05.9 +1.6
MESJ  Messejana        152.76 349 ePKPdf   PKiKP    00 38 05.9 +1.1
MESJ  Messejana        152.76 349 ePKPab   PKPab    00 38 16.0 +0.7
MORF  Marmelete        153.35 350 ePKPdf   PKiKP    00 38 07.8 +1.7
MORF  Marmelete        153.35 350 ePKPab   PKPab    00 38 19.2 +1.3
PMOZ  Porto Moniz, M   158.20   6 eLR      LR       01 37 39.3
         comp=Z,415nm,20.0s
TORD  Torodi Ar. Bea   164.07 279  PKP     PKPdf    00 38 11.6 -0.1
         comp=Z,3.4nm,0.9s,baz=354,slow=2.8,SNR=19
TORD                               PKPab   PKPab    00 39 07.0 +1.9
         comp=Z,2.7nm,1.1s,baz=80,slow=2.9,SNR=4.7
KIC   Kosan Boka       169.32 245 ePKIKP   PKPdf    00 38 15.5 -0.3
         comp=Z,20nm,1.1s
LIC   Lamto            169.51 243 ePKIKP   PKPdf    00 38 15.6 -0.3
         comp=Z,26nm,1.3s
DBIC  Dimbokro         169.56 246  PKP     PKPdf    00 38 14.9 -1.0
         comp=Z,6.2nm,1.0s,baz=128,slow=1.0,SNR=8.5
TIC   Toumodi          169.69 246 ePKIKP   PKPdf    00 38 15.7 -0.3
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BJI **01** *00:42:55.9, 11°.32S×166°.02E, h6^{km}, mB5.3/29, mb4.7/45, Ms5.2/29, Ms7 4.9/29*

IDC **01** *00:42:57.8±0.5, 11°.05S×165°.55E, h0^{km}, mb4.5/29, mb1 4.6/31, mb1mx4.6/50, mbtmp4.5/31, ML5.0/2, MS4.8/21, Ms1 4.8/21, ms1mx4.6/38, Error ellipse: s-maj=14.6km s-min=11.8km az=123.0*

ISCJB **01** *00:43:01.2±0.2, 11°.14S±0°.04×165°.45E±0°.03, h30^{km}, mb4.7/116, MS4.9/27, Error ellipse: s-maj=5.5km s-min=4.6km az=160.2*

NEIC **01** *00:43:01.5±1.8, 11°.06S×165°.49E, h22^{km}±12^{km}, mb4.8/80, Error ellipse: s-maj=4.6km s-min=4.0km az=124.0*

GCMT **01** *00:43:04.5±0.1, 11°.22S±0°.01×165°.36E±0°.01, h18^{km}, MW5.5/117, Moment Tensor Solution. s110,c190; s117,c203; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.11±.03; $M_{\theta\theta}$-0.37±.02; $M_{\phi\phi}$-0.74±.02; $M_{r\theta}$1.10±.06; $M_{\theta\phi}$0.43±.01; $M_{\phi r}$-1.19±.06; Best double couple: $M_0$1.93900×10^{17} NP1:ϕ_s139.00000°, δ73.00000°, λ86.00000°. NP2:ϕ_s333.00000°, δ17.00000°, λ103.00000°. Principal axes: T 1.9920, Plg61.0000°, Azm43.0000°; N -0.1080, Plg4.0000°, Azm140.0000°; P -1.8860, Plg28.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 00:43:03.1±0.3**, 11°.15S**±0°.05×**165°.53E**±0°.05**, h30**^{km}**, n192,** σ**1^{s}64**/198**, mb4.8**/119**, MS4.9**/27**, Santa Cruz Islands**

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Code  Station Name          Δ°   AZ°  Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
HNR   Honiara            5.75 287 ePn      Pn        00 44 24.9 -1.6
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HNR                                eSn     Sn      00 45 28.8 -2.8
HNR   Honiara              5.75 287 Pn     Pn      00 44 26.5  0.0
      49nm,0.3s,baz=180,slow=5.1,SNR=4.3
HNR                                Sn      Sn      00 45 30.5 -1.0
      22nm,0.3s,baz=348,slow=19,SNR=2.6
HNR                                LR      LR      00 46 47.7
      comp=Z,10µm,21.9s,baz=111,slow=40
DZM   Mont Dzumac         10.89 176 ePn    Pn      00 45 38.0 +0.8
      167nm,1.2s
DZM                                eLQ     LQ      00 47 42.0
      7µm,22.9s
DZM                                eLR     LR      00 48 10.5
      comp=Z,6µm,25.1s
DZM   Mont Dzumac         10.89 176 Pn     Pn      00 45 37.5 +0.4
      7.5nm,0.3s,baz=357,slow=11,SNR=63
DZM                                Sn      Sn      00 47 35.3 -2.9
      0.3nm,0.3s,baz=343,slow=19,SNR=1.5
DZM                                LR      LR      00 49 12.4
      comp=Z,5µm,19.8s,baz=356,slow=34
FUNA  Funafuti            13.72  80 ePn    Pn      00 46 19.2 +3.6
TARA  Tarawa              14.44  31 ePn    Pn      00 46 22.3 -3.2
EIDS  Eidsvold            19.68 222 eP     P       00 47 28.5 -1.4
      15nm,0.8s
MANU  Manus Island        20.17 295 eP     P       00 47 36.1 +0.8
      237nm,1.0s
CTA   Charters Tower      20.56 242 P      P       00 47 40.3 +0.7
      30nm,0.8s,baz=70,slow=13,SNR=26
CTA                                LR      LR      00 55 00.1
      comp=Z,5µm,18.0s,baz=70,slow=35
CTAO  Charters Tower      20.56 242 eP     P       00 47 40.5 +0.9
COEN  Coen                22.00 260 eP     P       00 47 55.3 +0.3
      47nm,1.1s
URZ   Urewera             28.92 161 P      P       00 48 59.6 +0.1
      13nm,0.8s,baz=281,slow=4.1,SNR=5.4
H11S2 WAKE ISLAND Hy 29.48        2 T      T       01 19 33.1
      baz=181,slow=76,SNR=40
H11S3 WAKE ISLAND Hy 29.48        2 T      T       01 19 33.3
      baz=181,slow=76,SNR=33
H11S1 WAKE ISLAND Hy 29.49        2 T      T       01 19 48.8
      baz=181,slow=76,SNR=32
BKZ   Black Stump Fm      29.56 163 eP     P       00 49 05.7 +0.4
      24nm,0.6s
STKA  Stephens Creek      30.22 223 P      P       00 49 11.6 +0.4
      4.5nm,0.6s,baz=33,slow=10.0,SNR=11
STKA                               LR      LR      01 01 32.9
      comp=Z,4µm,18.4s,baz=52,slow=37
H11N1 WAKE ISLAND Hy 30.70        3 T      T       01 21 12.7
      baz=182,slow=76,SNR=32
H11N3 WAKE ISLAND Hy 30.70        3 T      T       01 21 09.0
      baz=182,slow=76,SNR=8.3
H11N2 WAKE ISLAND Hy 30.72        3 T      T       01 21 14.0
      baz=182,slow=76,SNR=26
BFZ   Birch Farm          30.90 164 eP     P       00 49 16.9 -0.2
      34nm,1.0s
SNZO  South Karori        31.11 167 eP     P       00 49 19.7 +0.9
THZ   Tophouse            31.17 169 eP     P       00 49 20.8 +1.3
      19nm,0.8s
WRAB  Tennant Creek       31.24 250 eP     P       00 49 19.2 -1.1
WB2   Warramunga Arr      31.24 250 eP     P       00 49 19.0 -1.3
WRA   Warramunga Arr      31.25 250 P      P       00 49 19.4 -1.0
      14nm,1.0s,baz=83,slow=9.1,SNR=38
WRA                                PcP     PcP     00 52 14.9 +0.2
      1.2nm,0.7s,baz=77,slow=2.8,SNR=5.2
WRA                                S       S       00 54 28.9 +3.6
      0.5nm,0.8s,baz=86,slow=12,SNR=2.9
WRA                                LR      LR      01 00 42.3
      comp=Z,2µm,21.8s,baz=80,slow=34
GUMO  Guam                32.00 320 LR     LR      01 01 49.3
      comp=Z,2µm,18.7s,baz=248,slow=35
LTZ   Lake Taylor         32.06 171 eP     P       00 49 28.7 +1.4
      16nm,0.9s
AS01  Alice Springs       32.51 243 eP     P       00 49 30.7 -0.9
AS01                               ePcP    PcP     00 52 17.9 -0.2
OXZ   Oxford              32.55 171 eP     P       00 49 31.9 +0.4
      12nm,0.7s
AS31  Alice Springs       32.55 243 eP     P       00 49 31.3 -0.6
      1.9nm,0.8s
ASAR  Alice Springs       32.55 243 P      P       00 49 30.4 -1.5
      3.6nm,0.6s,baz=70,slow=9.5,SNR=32
ASAR                               PcP     PcP     00 52 18.2  0.0
      2.4nm,0.9s,baz=80,slow=3.8,SNR=4.2
ASAR                               LR      LR      01 01 47.8
      comp=Z,3µm,20.3s,baz=76,slow=35
RPZ   Rata Peaks          32.80 173 P      P       00 49 33.8 +0.1
      7.5nm,0.8s,baz=15,slow=12,SNR=4.7
RPZ                                LR      LR      01 02 03.1
      comp=Z,3µm,18.4s,baz=344,slow=35
MQZ   McQueen's Vall      33.02 170 eP     P       00 49 36.3 +0.7
      15nm,0.8s
RAR   Rarotonga           34.72 111 LR     LR      01 01 05.8
      comp=Z,2µm,21.0s,baz=278,slow=31
FITZ  Fitzroy Crossi      39.15 255 P      P       00 50 27.0 -1.4
      3.9nm,0.7s,baz=122,slow=6.7,SNR=11
PPT   Papeete             43.88 104 LR     LR      01 08 20.7
      comp=Z,2µm,18.1s,baz=266,slow=35
PPT2  Papeete2            43.88 104 eS     S       00 57 42.6 +5.5
      942nm,24.8s
PPT2                               eLQ     LQ      01 01 32.9
      2µm,27.8s
PPT2                               eLR     LR      01 03 24.6
      comp=Z,2µm,21.5s,baz=278
TBI   Tubuai              44.49 112 eS     S       00 57 52.0 +6.3
      822nm,26.2s
TBI                                eLQ     LQ      01 01 46.8
      3µm,30.0s
TBI                                eLR     LR      01 03 44.0
      comp=Z,2µm,26.5s,baz=282
MBWA  Marble Bar          44.96 251 eP     P       00 51 15.4 -0.5
JAGI  Jajag, Banyuwa      50.65 268 eP     P       00 52 00.5 +0.4
      23nm,1.0s
TAOE  Nuku Hiva Isla      53.49  93 eS     S       00 59 58.6 +5.9
      903nm,25.8s
TAOE                               eLR     LR      01 07 52.3
      comp=Z,1µm,22.9s
MJAR  Matsushiro Arr      53.97 333 P      P       00 52 21.5 -2.8
      2.2nm,0.8s,baz=162,slow=8.2,SNR=3.5
JNU   Nakatsue            55.04 324 P      P       00 52 31.1 -1.1
      3.9nm,0.7s,baz=207,slow=11,SNR=2.3
LEM   Lembang             57.29 269 P      P       00 52 48.6 -0.2
      18nm,0.3s,baz=302,slow=19,SNR=3.9
RKT   Rikitea             57.75 110 eLQ    LQ      01 07 24.7
      1µm,29.5s
RKT                                eLR     LR      01 09 53.2
      comp=Z,2µm,24.2s
ASAJ  Asahikawa           58.82 341 P      P       00 52 58.5 -0.3
      3.5nm,0.3s,baz=219,slow=18,SNR=2.8
KSRS  Korea Array         59.84 326 P      P       00 53 05.6 -0.4
      0.8nm,0.6s,baz=142,slow=6.2,SNR=3.0
KSAR  Wonju Array Be      59.86 326 P      P       00 53 05.5 -0.5
NJ2   Nanjing             61.95 316 eP     P       00 53 21.9 +1.6
NJ2                                pmax    pmax
      comp=Z,9.0nm,0.5s
NJ2                                LR      LR
      comp=N,660nm,16.3s
NJ2                                LR      LR
      comp=E,880nm,17.9s
NJ2                                LR      LR
      comp=Z,870nm,17.9s
QIZ   Qiongzhong          62.54 298 P      P       00 53 26.9 +2.3
QIZ                                S       S       01 01 58.4 +7.7
QIZ                                pmax    pmax
      comp=Z,19nm,1.4s
QIZ                                LR      LR
      comp=N,410nm,17.3s
QIZ                                LR      LR
      comp=E,390nm,23.1s
QIZ                                LR      LR
      comp=Z,550nm,21.3s
USRK  Ussuriysk Ar.       62.95 333 P      P       00 53 25.1 -1.7
      2.7nm,0.9s,baz=119,slow=8.6,SNR=3.2
PETK  Petropavlovsk-      64.35 355 P      P       00 53 34.8 -1.1
      2.2nm,0.6s,baz=188,slow=8.7,SNR=3.6
PETK                               LR      LR      01 17 00.5
      comp=Z,377nm,20.3s,baz=169,slow=32
CN2   Changchun           65.72 329 eP     P       00 53 46.2 +1.2
VNDA  Vanda               66.39 181 P      P       00 53 48.1 -0.7
      2.1nm,1.0s,baz=2.8,slow=3.3,SNR=3.2
VNDA                               LR      LR      01 20 06.3
      comp=Z,608nm,18.3s,baz=7.0,slow=34
KLR   Kul'dur             67.07 337 P      P       00 53 52.3 -1.2
      2.8nm,0.8s,baz=99,slow=4.9,SNR=5.5
PSI   Prapat              67.67 278 P      P       00 53 57.3 -0.9
      2.1nm,0.3s,baz=360,slow=15,SNR=8.5
GYA   Guiyang             68.30 304 eP     P       00 54 02.9 +1.0
GYA                                pmax    pmax
      comp=Z,10.0nm,1.0s
GSI   Gunungsitoli        68.66 276 eP     P       00 54 03.4 -0.8
      21nm,1.0s
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XAN   Xi'an               70.03 312 P      P       00 54 18.4 +6.0
XAN                                pmax    pmax
      comp=Z,6.0nm,0.8s
XAN                                pmax    pmax
      comp=Z,330nm,8.4s
KMI   Kunming             70.99 302 P      P       00 54 19.7 +1.0
KMI                                pP      pP      00 54 23.2 -3.6
KMI                                sP      sP      00 54 24.2 -5.7
KMI                                S       S       01 03 37.0 +3.8
KMI                                SS      SS      01 08 10.3 +3.4
KMI                                pmax    pmax
      comp=Z,32nm,0.5s
KMI                                pmax    pmax
      comp=Z,230nm,5.4s
KMI                                LR      LR
      comp=N,230nm,21.8s
KMI                                LR      LR
      comp=E,460nm,20.4s
KMI                                LR      LR
      comp=Z,580nm,17.1s
MA2   Magadan             71.48 352 eP     P       00 54 19.5 -1.1
MA2   Magadan             71.48 352 P      P       00 54 19.0 -1.6
      2.7nm,0.3s,baz=146,slow=15,SNR=2.5
HHC   Hu-ho-hao-te        71.77 320 eP     P       00 54 23.0 +0.1
HHC                                sP      sP      00 54 35.1 +0.5
HHC                                S       S       01 03 46.3 +4.9
HHC                                pmax    pmax
      comp=Z,12nm,0.8s
HHC                                pmax    pmax
      comp=Z,220nm,6.5s
HHC                                LR      LR
      comp=N,670nm,15.6s
HHC                                LR      LR
      comp=E,610nm,15.1s
HHC                                LR      LR
      comp=Z,540nm,16.4s
CMAR  Chiang Mai Arr      71.96 294 P      P       00 54 24.5 +0.1
      1.4nm,0.4s,baz=110,slow=4.4,SNR=6.5
HIA   Hailar              72.36 330 eP     P       00 54 25.1 -1.0
CD2   Chengdu             72.50 307 P      P       00 54 27.5 +0.1
CD2                                pP      pP      00 54 31.3 -4.2
CD2                                PP      PP      00 57 09.0  0.0
CD2                                S       S       01 03 53.1 +3.1
CD2                                SS      SS      01 08 32.8 +3.3
CD2                                pmax    pmax
      comp=Z,10.0nm,0.5s
CD2                                pmax    pmax
      comp=Z,120nm,4.8s
CD2                                LR      LR
      comp=N,650nm,14.5s
CD2                                LR      LR
      comp=E,880nm,13.5s
CD2                                LR      LR
      comp=Z,590nm,11.3s
SEY   Seymchan            74.56 354 P      P       00 54 38.3 -0.4
      2.0nm,0.9s,baz=110,slow=7.6,SNR=5.8
LZH   Lanzhou             74.67 312 eP     P       00 54 42.6 +2.4
LZH                                pP      pP      00 54 46.5 -1.8
LZH                                sP      sP      00 54 49.7 -1.6
LZH                                PP      PP      00 57 30.2 +2.6
LZH                                eS      S       01 04 21.3 +6.7
LZH                                sS      pS      01 04 28.6 +3.7
LZH                                pmax    pmax
      comp=Z,480nm,5.4s
LZH                                LR      LR
      comp=N,1µm,17.9s
LZH                                LR      LR
      comp=E,560nm,17.4s
LZH                                LR      LR
      comp=Z,1µm,18.4s
GAMB  Gambell             76.71  10 eP     P       00 54 50.7 -0.3
      16nm,1.2s
KDAK  Kodiak Island       76.75  22 eP     P       00 54 50.9 -0.5
      14nm,0.7s
ULN   Ulaanbaatar         78.26 324 eP     P       00 54 58.8 -1.5
      4.7nm,0.9s
SONM  Songino Array       78.62 324 P      P       00 55 01.9 -0.3
      1.4nm,0.9s,baz=142,slow=5.1,SNR=7.8
SONM                               LR      LR      01 25 35.2
      comp=Z,394nm,21.4s,baz=116,slow=33
SONA1 Songino Array       78.63 324 eP     P       00 55 02.0 -0.3
ANM   Nome                78.64  12 eP     P       00 55 02.3 +0.5
      8.4nm,1.2s
RSO   Redoubt South       78.69  20 eP     P       00 55 01.0 -1.4
BRLK  Bradley Lake        78.81  21 eP     P       00 55 01.9 -1.0
      20nm,0.9s
QSPA  South Pole Qui      78.86 180 eP     P       00 55 03.0 -0.3
GTA   Gaotai              78.98 314 eP     P       00 55 06.6 +2.2
GTA                                pP      PcP     00 55 11.0 -1.9
GTA                                sP      pP      00 55 13.9 +1.3
GTA                                pmax    pmax
      comp=Z,3.0nm,1.1s
GTA                                pmax    pmax
      comp=Z,150nm,7.9s
GTA                                LR      LR
      comp=N,690nm,18.5s
GTA                                LR      LR
      comp=E,480nm,16.5s
GTA                                LR      LR
      comp=Z,650nm,17.9s
BILL  Bilibino            78.98   0 eP     P       00 55 02.3 -1.3
      6.8nm,0.8s
KNK   Knik Glacier        80.83  21 eP     P       00 55 14.5 +0.8
      9.8nm,0.8s
CAST  Castle Rocks        81.11  18 eP     P       00 55 13.6 -1.6
      7.1nm,0.8s
DIV   Divide              81.58  22 eP     P       00 55 16.9 -1.0
      17nm,0.8s
TRF   Thorofare Moun      81.69  18 eP     P       00 55 18.6 +0.2
      4.1nm,0.8s
KLU   Klutina             81.77  21 eP     P       00 55 17.8 -1.1
      14nm,1.0s
RND   Reindeer            82.11  19 eP     P       00 55 19.3 -1.3
      14nm,1.0s
MCK   McKinley            82.31  19 eP     P       00 55 21.3 -0.2
      8.1nm,1.0s
DHY   Denali Highway      82.35  20 eP     P       00 55 22.2 +0.3
      6.5nm,0.9s
IM3   Indian Mountai      82.58  16 eP     P       00 55 21.9 -1.0
HARP  HAARP               82.66  21 eP     P       00 55 23.3 -0.1
      24nm,0.8s
MLY   Manley              82.70  17 eP     P       00 55 23.2 -0.4
      4.9nm,0.9s
H02S1 DAWSON INLET T 82.89       32 T      T       02 25 19.4
      SNR=65
WRH   Wood River Hil      83.10  18 eP     P       00 55 25.0 -0.6
      12nm,0.9s
COLA  College             83.45  18 eP     P       00 55 25.8 -1.6
      20nm,0.9s
RIDG  Independ'e Rid      83.64  20 eP     P       00 55 27.9 -0.6
      28nm,1.2s
IL1   Eielson Array       83.68  19 eP     P       00 55 26.4 -2.2
ILAR  Eielson Array       83.68  19 P      P       00 55 27.4 -1.2
      4.8nm,0.7s,baz=233,slow=4.9,SNR=63
ILAR                               LR      LR      01 25 42.2
      comp=Z,402nm,21.8s,baz=236,slow=31
ILB   Eielson Array       83.68  19 eP     P       00 55 27.0 -1.6
YBH   Yreka Blue Hor      84.12  46 eP     P       00 55 31.3 -0.2
      7.0nm,0.9s
ORV   Oroville            84.24  48 eP     P       00 55 31.0 -1.1
      6.1nm,1.0s
HUMO  Hull Mountain       84.25  45 eP     P       00 55 31.5 -0.6
AFDM  Forest Hills D      84.43  49 eP     P       00 55 32.3 -0.7
      9.2nm,0.9s
MAW   Mawson              84.55 202 LR     LR      01 30 32.8
      comp=Z,412nm,18.0s,baz=100,slow=34
CMB   Columbia Colle      84.57  50 eP     P       00 55 32.5 -1.3
      7.0nm,1.0s
SKAG  Skagway             84.73  26 eP     P       00 55 35.3 +1.3
      12nm,1.1s
ISA   Isabella, Lake      85.31  52 eP     P       00 55 36.9 -0.7
      3.5nm,0.9s
RAMN  Ramite              85.32 298 eP     P       00 55 37.6 -0.5
WAKR  Walker              85.43  49 eP     P       00 55 38.0 -0.3
      5.7nm,1.0s
MDPB  Devils Postpil      85.43  50 eP     P       00 55 37.8 -0.6
      5.9nm,0.8s
OMMB  Old Mammoth Mi      85.48  50 eP     P       00 55 38.2 -0.6
      3.4nm,0.9s
H04A  Detroit Lake        85.50  43 eP     P       00 55 38.2 -0.2
      5.2nm,0.9s
DAWY  Dawson              85.73  21 eP     P       00 55 38.5 -0.5
      6.6nm,0.8s
PAHR  Pah Rah Range       85.84  48 eP     P       00 55 40.9 +0.6
      7.1nm,1.2s
JIRN  Jiri                85.85 299 eP     P       00 55 41.3 +0.4
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PINE  Pine Mountain       86.04  44 eP     P       00 55 40.5 -0.7
      10nm,0.9s
RYN   Ryan                86.15  50 eP     P       00 55 41.6 -0.3
      4.1nm,0.9s
TIXI  Tiksi               86.15 349 P      P       00 55 40.0 -0.9
      0.7nm,0.2s,baz=12,slow=2.3,SNR=2.0
DAC   Darwin (Calif)      86.17  52 eP     P       00 55 41.4 -0.6
      4.1nm,1.0s
NV01  Mina Array Sit      86.25  50 eP     P       00 55 41.4 -1.1
NVAR  Mina Array Bea      86.25  50 P      P       00 55 41.7 -0.7
      6.6nm,1.0s,baz=234,slow=7.3,SNR=20
NVAR                               LR      LR      01 28 48.3
      comp=Z,2µm,18.9s,baz=284,slow=32
NV11  Mina Array Sit      86.36  50 eP     P       00 55 42.2 -0.7
      0.5nm,1.0s
PKI   Pulchoki            86.50 299 eP     P       00 55 43.9 -0.1
PKIN  Phulchoki           86.51 299 eP     P       00 55 43.9 -0.1
KVN   Kaiserville         86.59  49 eP     P       00 55 43.3 -0.8
      5.7nm,1.1s
DMN   Daman               86.77 299 eP     P       00 55 44.9 -0.4
      30nm,1.0s
I07A  Izee                87.12  44 eP     P       00 55 45.6 -0.8
      4.7nm,0.9s
WVOR  Wild Horse Val      87.21  46 eP     P       00 55 46.3 -0.6
      6.3nm,1.0s
J08A  Circle Bar Ran      87.61  45 eP     P       00 55 48.2 -0.6
      5.8nm,0.8s
HAWA  Hanford             87.83  42 eP     P       00 55 48.9 -0.7
      6.6nm,0.9s
G08A  Pilot Rock          87.87  43 eP     P       00 55 49.2 -0.8
      10.0nm,1.0s
Y12C  Blythe              87.91  55 eP     P       00 55 50.2 -0.1
      7.4nm,1.0s
DANN  Dangsing            88.11 299 eP     P       00 55 50.7 -1.0
      17nm,1.1s
KOLN  Koldanda            88.11 299 eP     P       00 55 50.2 -1.4
SHPR  Sheep Range         88.12  52 eP     P       00 55 51.8 +0.3
      2.9nm,1.0s
E08A  Dider Farm, El      88.17  42 eP     P       00 55 51.5 +0.3
B08A  Colville Reser      88.58  40 eP     P       00 55 52.0 -1.2
      5.2nm,1.1s
PYUN  Piuthan             88.71 299 eP     P       00 55 53.4 -1.1
      12nm,1.0s
WMQ   Urumqi              89.02 315 eP     P       00 55 55.6 +0.2
WMQ                                sP      pP      00 56 02.6 -1.1
WMQ                                pmax    pmax
      comp=Z,11nm,1.1s
WMQ                                pmax    pmax
      comp=Z,360nm,8.7s
WMQ                                LR      LR
      comp=N,2µm,18.7s
WMQ                                LR      LR
      comp=E,1µm,16.3s
WMQ                                LR      LR
      comp=Z,540nm,23.1s
F10A  Beach Ranch, E      89.23  43 eP     P       00 55 55.4 -0.9
      5.4nm,1.1s
PSUT  Pine Spring         89.64  51 eP     P       00 55 59.8 +1.2
      3.4nm,0.9s
LCMT  Little Creek M      89.73  52 eP     P       00 55 58.8 -0.2
      6.7nm,1.0s
CCUT  Cedar City          89.77  52 eP     P       00 55 59.5 +0.2
      5.8nm,0.9s
NEW   Newport             89.96  41 eP     P       00 55 58.7 -1.0
      1.3nm,0.5s
SZCU  Shurtz Canyon       90.00  52 eP     P       00 56 00.4 +0.1
      4.0nm,0.9s
KNB   Kanab               90.06  52 eP     P       00 56 01.0 +0.4
      6.3nm,1.0s
HLID  Hailey              90.50  46 eP     P       00 56 01.6 -0.8
      2.1nm,0.7s
PKCU  Pink Cliffs         90.56  52 eP     P       00 56 03.6 +0.6
      9.8nm,1.0s
TUC   Tucson              90.62  57 eP     P       00 56 02.7 -0.5
      2.5nm,0.6s
MTPU  Mount Pierson       90.80  51 eP     P       00 56 04.7 +0.5
      5.8nm,0.8s
DUG   Dugway, Tooele      90.83  49 eP     P       00 56 05.2 +1.1
      4.1nm,1.1s
BGU   Big Grassy Mou      90.84  49 eP     P       00 56 03.7 -0.4
      3.8nm,0.9s
WUAZ  Wupatki             90.85  54 eP     P       00 56 03.6 -0.6
      3.0nm,0.6s
MSU   Marysvale           90.91  51 eP     P       00 56 04.9 +0.4
HVU   Hansel Valley       91.23  48 eP     P       00 56 05.6 -0.3
      6.0nm,0.9s
JLU   Jordanelle          91.94  49 eP     P       00 56 09.0 -0.3
      2.6nm,0.8s
DLMT  Dillon              92.20  44 eP     P       00 56 10.0 -0.3
      6.6nm,0.9s
WALA  Waterton Lakes      92.22  40 eP     P       00 56 08.6 -1.7
      3.3nm,0.8s
FXWY  Fox Creek           92.91  46 eP     P       00 56 13.2 -0.5
      1.6nm,0.8s
BOZ   Bozeman (W)         92.92  44 eP     P       00 56 13.1 -0.6
      5.2nm,1.1s
HRY   Holter Researc      93.03  43 eP     P       00 56 13.4 -0.6
MK31  Makanchi Array      93.45 317 eP     P       00 56 15.1 -0.8
MKAR  Makanchi Array      93.45 317 P      P       00 56 15.0 -0.8
      2.3nm,1.0s,baz=96,slow=6.1,SNR=8.7
MKAR                               PKKPbc  PKKPdf  01 13 21.2 -1.7
      0.9nm,0.8s,baz=267,slow=2.9,SNR=9.4
MKAR                               LR      LR      01 37 19.8
      comp=Z,237nm,21.5s,baz=90,slow=35
ZALV  Zalesovo Beam       93.52 324 P      P       00 56 14.0 -1.9
      1.8nm,0.8s,baz=123,slow=5.5,SNR=8.1
MAKZ  Makanchi            93.67 317 eP     P       00 56 16.6 -0.2
      6.9nm,1.0s
BW06  Boulder Array       93.78  47 eP     P       00 56 17.3 -0.4
      1.4nm,0.9s
PDAR  Pinedale Array      93.78  47 P      P       00 56 17.2 -0.5
      2.1nm,1.1s,baz=252,slow=3.0,SNR=7.3
PDAR                               LR      LR      01 34 47.4
      comp=Z,325nm,18.4s,baz=261,slow=33
ANMO  Albuquerque         94.68  55 eP     P       00 56 20.9 -1.1
      0.8nm,0.9s
EGMT  Eagleton            94.69  42 eP     P       00 56 20.2 -1.4
      7.1nm,1.0s
MNTX  Cornudas Mount      95.00  59 eP     P       00 56 22.0 -1.3
      1.2nm,0.7s
YKA   Yellowknife Ar      95.16  27 P      P       00 56 20.5 -2.7
      1.1nm,0.6s,baz=255,slow=4.8,SNR=17
YKA                                LR      LR      01 33 49.3
      comp=Z,92nm,19.6s,baz=258,slow=32
TXAR  Lajitas Array       96.07  61 P      P       00 56 27.5 -0.9
      0.5nm,0.7s,baz=221,slow=3.6,SNR=4.3
TXAR                               LR      LR      01 35 57.7
      comp=Z,1µm,18.0s,baz=0.0,slow=33
NRIK  Noril'sk            96.15 340 LR     LR      01 39 16.8
      comp=Z,294nm,20.6s,baz=248,slow=35
KSH   Kashi               96.66 309 P      P       00 56 30.6 -0.2
KSH                                pP      pP      00 56 37.2 -1.9
KSH                                PP      PP      01 00 28.3 +2.5
ARCES ARCESS Array B 116.38 345 PKP       PKPdf   01 01 42.1 -1.2
      2.2nm,0.7s,baz=68,slow=0.5,SNR=8.1
LPAZ  La Paz             120.33 116 PKP    PKPdf   01 01 52.6 -0.6
      1.1nm,0.7s,baz=252,slow=8.8,SNR=4.6
FINES FINESS Array B 121.79 338 PKP       PKPdf   01 01 52.8 -1.1
      2.1nm,0.9s,baz=274,slow=2.1,SNR=3.7
CPUP  Villa Florida      124.11 132 PKP    PKPdf   01 01 58.0 -1.4
      1.2nm,0.3s,baz=358,slow=2.1,SNR=2.7
SDV   Santo Domingo      124.71  87 ePKPdf PKPdf   01 01 59.6 -1.6
BOSA  Boshof             124.89 223 PKP    PKPdf   01 02 01.9 +0.8
      2.4nm,0.7s,baz=138,slow=2.6,SNR=6.8
NOA   NORSAR Array B 126.75 345 PKP       PKPdf   01 02 02.7 -0.8
      0.4nm,0.7s,baz=52,slow=2.3,SNR=2.7
BRTR  Keskin Array B     128.88 312 PKP    PKPdf   01 02 07.6 -0.7
      0.6nm,0.9s,baz=155,slow=4.1,SNR=3.5
SJG   San Juan           129.65  76 ePKPdf PKPdf   01 02 09.1 -1.0
LSZ   Lusaka             130.26 239 ePKPdf PKPdf   01 02 11.9 +0.3
CONA  Conrad Observa     135.39 331 ePKPdf PKPdf   01 02 19.4 -0.9
      1.9nm,0.8s
KHC   Kasperske Hory     135.54 334 ePKP   PKPdf   01 02 21.0 +0.5
GERES GERESS Array B 135.70 333 PKP       PKPdf   01 02 21.4 +0.5
      0.6nm,0.6s,baz=103,slow=2.1,SNR=3.2
ABTA  Abfaltersbach      137.81 332 PKiKP  PKPdf   01 02 25.7 +0.8
      1.2nm,0.5s
SQTA  Sankt Quirin       138.03 334 ePKPdf PKPdf   01 02 22.9 -2.3
      8.6nm,1.4s
FETA  Feichten           138.39 334 ePKPdf PKPdf   01 02 23.3 -2.7
      0.1nm,0.2s
KEST  Kesra              147.37 322 PKPbc  PKPdf   01 02 41.4 -0.7
      3.8nm,0.8s,baz=316,slow=15,SNR=3.5
ESDC  Sonseca Array      150.10 344 PKP    PKPdf   01 02 45.7 -0.7
      0.1nm,0.3s,baz=352,slow=3.9,SNR=3.6
ESDC                               PKPbc   PKPbc   01 02 51.0 -0.4
      0.7nm,0.6s,baz=358,slow=3.9,SNR=4.1
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	164.07	279	PKP	PKPdf	01 03 03.0	-1.5
	1.3nm,0.9s,baz=9.7,slow=1.8,SNR=8.2						
TORD				PKPab	PKPab	01 03 57.8	-0.2
	1.7nm,1.0s,baz=75,slow=1.9,SNR=5.0						

IDC 01 00:45:03.6±2.8,30°.11S×177°.46W,h0^{km},mb3.9/3, mb1 4.1/4,mb1mx3.8/37,mbtmp3.9/4,ML2.3/1,Error ellipse: s-maj=57.8km s-min=28.1km az=98.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.94	335	Pn	Pn	00 45 23.9	-0.2
	173nm,0.3s,baz=0.2,slow=20,SNR=6.1						
RAO				Sn	Sg	00 45 34.3	+0.5
	693nm,0.3s,baz=20,slow=20,SNR=12						
URZ	Urewera	9.29	207	Pn	Pn	00 47 19.0	+0.1
	0.0nm,0.3s,baz=217,slow=20,SNR=1.3						
CTA	Charters Tower	34.22	278	P	P	00 51 52.6	+1.4
	1.9nm,0.4s,baz=122,slow=12,SNR=2.1						
ASAR	Alice Springs	43.59	266	P	P	00 53 09.8	0.0
	0.4nm,0.5s,baz=104,slow=7.2,SNR=1.2						
WRA	Warramunga Arr	44.56	272	P	P	00 53 16.2	-1.3
	0.5nm,0.3s,baz=113,slow=6.4,SNR=12						
FINES	FINESS Array B	145.03	340	PKPbc	PKPbc	01 04 41.2	-0.3
	1.6nm,0.4s,baz=57,slow=5.1,SNR=20						

DJA 01 00:46:50.0±0.6,9°S±5°×11°8E±°,h118^{km}±9^{km},M3.8/13, MLv3.8/13,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.61	248	P	Pn	00 47 09.3	+0.8
WSI	Waingapu	2.20	119	P	Pn	00 47 27.1	+1.3
BASI	Baing, Sumba	2.72	126	P	Pn	00 47 32.1	-0.5
SRBI	Singaraja	3.15	279	P	Pn	00 47 38.4	+0.2
IGBI	Denpasar	3.17	266	P	Pn	00 47 39.0	+0.5
EDFI	Ende, Flores	3.31	93	P	Pn	00 47 40.2	-0.2
BKSI	Bulukumba	3.70	28	P	Pn	00 47 45.4	-0.2
JAGI	Jajag, Banyuwa	4.15	271	P	Pn	00 47 50.4	-1.2
BATI	Baumata	5.48	107	P	Pn	00 48 09.2	-0.3

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*ISK **01** 00:51:42.7,38°.62N×43°.16E,h15^{km}±4^{km},ML2.0/7*
*DDA **01** 00:51:43.1,38°.65N×43°.17E,h7^{km}±2^{km},ML2.5*
ISC 01 00:51:43.4±1.0,38°.64N±0°.03×43°.18E±0°.03,h14^{km}±9^{km}, n14,σ0^{s}.72/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.17	104	PG	Pg	00 51 47.7	0.0
VANB				SG	Sb	00 51 51.9	+0.1
TVAN	Van	0.21	121	*i* P	Pg	00 51 48.4	+0.1
TVAN				*i* S	Sb	00 51 52.8	-0.2
TVAN				IAML_P			
	comp=Z,3μm,0.1s						
GEVA	Gevas	0.34	196	*i* P	Pg	00 51 50.4	0.0
AKDM	Akdamar-Van	0.34	207	PG	Pg	00 51 49.9	-0.6
AKDM				SG	Sg	00 51 54.8	-0.5
ADCV	BITLIS_Adilcev	0.39	296	*i* P	Pg	00 51 51.5	+0.1
ADCV				IAML_P			
	comp=Z,399nm,0.1s						
ERCV	ERCIS-VAN	0.40	18	PG	Pg	00 51 51.2	-0.4
ERCV				SG	Sb	00 51 58.5	-0.1
VMUR	Van-Muradiye	0.47	41	*i* P	Pg	00 51 53.1	+0.3
VMUR				*i* S	Sb	00 52 01.7	+1.2
VMUR				IAML_P			
	comp=Z,614nm,0.1s						
MLAZ	Malazgirt-MUS	0.70	316	PG	Pg	00 51 56.7	-0.5
CLDR	Caldiran	0.77	48	PG	Pg	00 51 58.6	+0.2
CLDR				SG	Sb	00 52 09.9	+0.8
TUTA	Tutak	0.82	340	*i* P	Pg	00 51 58.7	-0.6
GURO	Guroymak-BITLI	0.90	265	PG	Pb	00 52 00.3	-0.6
GURO				SG	Sg	00 52 13.3	+0.5
AGRB	Hanur-Agry	0.95	351	PG	Pb	00 52 01.3	-0.5
AGRB				SG	Sn	00 52 15.1	-0.9
SRTM	Siirt_Merkez	1.18	237	*i* P	Pg	00 52 07.8	+1.6
EATA	Eleskirt	1.34	337	*i* P	Pb	00 52 08.6	+0.1
EATA				*i* S	Sg	00 52 27.9	+1.3
EATA				IAML_P			
	comp=Z,124nm,0.2s						

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*IDC **01** 00:58:51.4±1.5,10°.98S×165°.45E,h0^{km},mb3.8/5, mb1 4.1/6,mb1mx3.7/34,mbtmp3.9/6,ML4.2/1,Error ellipse: s-maj=50.7km s-min=25.4km az=134.0*
*ISCJB **01** 00:58:53.9±1.1,11°.2S±0°.1×165°.5E±0°.2,h30^{km},mb3.8/4, Error ellipse: s-maj=27.0km s-min=19.6km az=25.0*
ISC 01 00:58:55.7±1.1,11°.1S±0°.2×165°.5E±0°.2,h30^{km},n6, σ0^{s}.63/6,mb3.7/4,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.97	175	Pn	Pn	01 01 30.9	0.0
	1.7nm,0.3s,baz=314,slow=10,SNR=22						
CTA	Charters Tower	20.57	242	P	P	01 03 33.0	+0.6
	3.7nm,0.7s,baz=75,slow=13,SNR=7.1						
WRA	Warramunga Arr	31.25	250	P	P	01 05 12.8	-0.3
	3.0nm,0.8s,baz=79,slow=9.0,SNR=13						
ASAR	Alice Springs	32.56	243	P	P	01 05 24.1	-0.5
	0.6nm,0.5s,baz=66,slow=10,SNR=8.7						
ILAR	Eielson Array	83.62	19	P	P	01 11 21.5	+0.5
	0.3nm,0.7s,baz=230,slow=5.1,SNR=5.3						
YKA	Yellowknife Ar	95.11	27	P	P	01 12 15.2	-0.5
	0.2nm,0.8s,baz=258,slow=7.5,SNR=2.0						

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*SOME **01** 01:02:07.8,42°.53N×79°.68E,h15^{km}*
*KRNET **01** 01:02:07.8±0.1,42°.58N×79°.67E,h18^{km},mb2.3*
*NNC **01** 01:02:07.7±1.0,42°.60N×79°.65E,h0^{km},mb2.7,mpv2.5, Error ellipse: s-maj=5.8km s-min=3.7km az=139.0*
ISC 01 01:02:07.1±1.9,42°.55N±0°.06×79°.67E±0°.05,h7^{km}±14^{km}, n25,σ1^{s}.10/47,7C-11D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.63	346	P	Pb	01 02 20.0	-0.4
	22nm,0.1s						
SHLS				S	Sb	01 02 29.0	-0.6
	8.7nm,0.2s						
SHLS	Shalkode	0.63	346	*e*P	Pb	01 02 20.0	-0.4
	baz=15						
SHLS				*e*S	Sb	01 02 28.9	-0.6
	baz=15						
SHLS	Shalkode	0.63	346	*e*P	Pb	01 02 20.0	-0.4
	22nm,0.1s						
SHLS				*e*S	Sb	01 02 28.9	-0.6
	8.7nm,0.2s						
UZB	Uzynbulak	0.77	322	P	Pg	01 02 22.0	+0.2
	1.3nm,0.1s						
UZB				S	Sg	01 02 32.2	+0.4
	13nm,0.3s						
UZB	Uzynbulak	0.77	322	*e*P	Pg	01 02 22.0	+0.2
	baz=20						
UZB				*e*S	Sg	01 02 32.2	+0.4
	baz=20						
UZB	Uzynbulak	0.77	322	*e*P	Pg	01 02 22.0	+0.2
	1.3nm,0.1s						
UZB				*e*S	Sg	01 02 32.1	+0.4
	13nm,0.3s						
PDGK	Podgornoye	0.79	350	P	Pg	01 02 22.2	-0.1
	0.6nm,0.1s						
PDGK				S	Sg	01 02 32.7	+0.2
	1.6nm,0.1s						
PDGK	Podgornoye	0.79	350	⇓P	Pg	01 02 21.6	-0.7
	0.7nm,0.4s						
PDGK				⇑S	Sg	01 02 32.5	-0.1
	3.7nm,0.6s						
PDGK	Podgornoye	0.79	350	⇓*i*P	Pg	01 02 22.2	-0.1
	baz=50						
PDGK				⇓*i*S	Sg	01 02 32.8	+0.2
	baz=50						
PRZ	Przheval'sk	0.94	266	⇑*e*P	Pb	01 02 25.3	-0.6
	baz=65						
PRZ				⇑*i*S	Sg	01 02 38.4	+1.0
	baz=65						
KTMS	Ketmen	1.03	29	P	Pb	01 02 26.7	-0.6
	1.9nm,0.1s						
KTMS				S	Sb	01 02 40.2	-0.8
	6.2nm,0.2s						
KTMS	Ketmen	1.03	29	*e*P	Pb	01 02 26.7	-0.6
	baz=29						
KTMS				*e*S	Sb	01 02 40.2	-0.8
	baz=29						
KTMS	Ketmen	1.03	29	*e*P	Pb	01 02 26.7	-0.6
	1.9nm,0.1s						
KTMS				*e*S	Sb	01 02 40.2	-0.8
	6.2nm,0.2s						
SATY	Saty	1.06	299	P	Pb	01 02 27.7	-0.1
	1.5nm,0.1s						
SATY				S	Sg	01 02 41.7	+0.5
	5.6nm,0.3s						
SATY	Saty	1.06	299	*e*P	Pb	01 02 27.7	-0.1
	1.5nm,0.1s						
SATY				*e*S	Sg	01 02 41.7	+0.5
	5.6nm,0.3s						
DJR	Jarkent	1.78	3	P	Pb	01 02 40.5	+0.3
	0.5nm,0.2s						
DJR				S	Sg	01 03 04.1	-0.4
	1.3nm,0.3s						
DJR	Jarkent	1.78	3	⇓*i*P	Pb	01 02 40.5	+0.3
	0.5nm,0.2s						
DJR				⇓*i*S	Sg	01 03 04.1	-0.4
	1.3nm,0.3s						
KDJ	Kajisay	1.89	258	⇑*i*P	Pb	01 02 42.7	+0.6
	baz=57						
KDJ				⇑*i*S	Sg	01 03 07.8	-0.1
	baz=57						
MDOK	Medeo	2.02	289	⇓Pg	Pb	01 02 43.4	-0.8
	2.1nm,1.0s						
MDOK				Lg	Lg	01 03 10.3	
	2.2nm,1.0s						
IZV	Izvestkoviy	2.30	283	Pg	Pb	01 02 49.6	+0.6
	2.8nm,0.7s						
IZV				Lg	Lg	01 03 19.3	
	2.8nm,0.4s						
ULHL	Ulahol	2.56	264	⇓*e*P	Pb	01 02 52.1	-1.3
	baz=64						
ULHL				⇓*i*S	Sb	01 03 24.3	-0.9
	baz=64						
KAPS	Kapalarasan	2.74	355	Pg	Pb	01 02 56.8	+0.3
	0.2nm,0.2s						
KAPS				Lg	Lg	01 03 32.2	
	1.1nm,0.4s						
KAPS	Kapalarasan	2.74	355	*e*P	Pb	01 02 56.8	+0.3
	0.2nm,0.2s						
KAPS				⇓*e*S	Sg	01 03 32.2	-3.0
	1.1nm,0.4s						
BOOM	Boomskoye usch	2.76	270	⇓*i*P	Pb	01 02 54.5	-2.3
	baz=70						
BOOM				⇓*i*S	Sb	01 03 28.5	-2.4
	baz=70						
TKM2	Tokmak 2	3.02	278	⇑*e*P	Pn	01 02 58.3	+2.7
	baz=78						
TKM2				⇑*i*S	Sb	01 03 35.1	-3.5
	baz=78						

IDC 01 01:22:51.2±7.8,13°.00N×93°.99E,h0^{km},mb3.7/2, mb1 3.7/3,mb1mx3.2/52,mbtmp3.7/3,ML4.3/1,Error ellipse: s-maj=129.5km s-min=57.5km az=3.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.22	41	Pn	Pn	01 24 38.1	0.0
	1.2nm,0.3s,baz=234,slow=15,SNR=9.7						
MKAR	Makanchi Array	35.09	346	P	P	01 29 46.2	0.0
	0.3nm,0.6s,baz=161,slow=9.0,SNR=5.5						
ZALV	Zalesovo Beam	41.49	352	P	P	01 30 39.7	-0.2
	1.3nm,0.4s,baz=172,slow=7.3,SNR=6.4						

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*IDC **01** 01:25:17.4±1.7,10°.99S×165°.39E,h0^{km},mb3.7/6, mb1 3.9/7,mb1mx3.7/40,mbtmp3.8/7,ML4.3/1,Error ellipse: s-maj=48.7km s-min=27.5km az=120.0*
*ISCJB **01** 01:25:20.2±1.1,11°.2S±0°.1×165°.4E±0°.2,h30^{km},mb3.6/5, Error ellipse: s-maj=27.8km s-min=18.6km az=5.4*
ISC 01 01:25:22.0±1.2,11°.1S±0°.1×165°.4E±0°.2,h30^{km},n7, σ0^{s}.42/7,mb3.6/5,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.01	175	Pn	Pn	01 27 57.6	+0.1
	2.1nm,0.3s,baz=353,slow=11,SNR=21						
CTA	Charters Tower	20.50	242	P	P	01 29 58.3	+0.5
	1.3nm,0.4s,baz=60,slow=15,SNR=5.7						
WRA	Warramunga Arr	31.17	250	P	P	01 31 38.2	-0.4
	1.7nm,0.9s,baz=80,slow=8.8,SNR=6.7						
ASAR	Alice Springs	32.49	243	P	P	01 31 49.8	-0.4
	1.7nm,0.9s,baz=73,slow=9.8,SNR=10						
SONM	Songino Array	78.47	324	P	P	01 37 20.4	+0.1
	0.2nm,0.5s,baz=140,slow=7.0,SNR=2.0						
ILAR	Eielson Array	83.62	19	P	P	01 37 47.0	-0.2
	0.2nm,0.7s,baz=242,slow=6.3,SNR=1.5						
MKAR	Makanchi Array	93.29	317	P	P	01 38 34.2	+0.2
	0.1nm,0.4s,baz=84,slow=5.9,SNR=1.3						

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*IDC **01** 01:26:59.2±0.8,38°.56N×142°.16E,h0^{km},mb3.8/12, mb1 4.0/15,mb1mx3.9/47,mbtmp3.8/15,ML3.5/3,Error ellipse: s-maj=24.3km s-min=15.5km az=111.0*
*NIED **01** 01:27:00,38°.70N×142°.20E,h59^{km},Mw4.1 Best double couple: $M_0$1.41000×10^{15} NP1:ϕ_s212.00000°,δ34.00000°, λ-162.00000°. NP2:ϕ_s107.00000°,δ80.00000°, λ-58.00000°.*
*NEIC **01** 01:27:01.8±4.1,38°.54N×142°.17E,h16^{km}±26^{km},mb4.2/2, Error ellipse: s-maj=13.5km s-min=8.2km az=114.0*
NEIC Recorded [3 JMA] in Iwate.
*JMA **01** 01:27:04.6±0.1,38°.71N×142°.21E,h40^{km}±1^{km},M4.2*
JMA Felt III J1.
ISC 01 01:27:01.9±1.7,38°.57N±0°.04×142°.21E±0°.05,h17^{km}±10^{km}, n57,σ1^{s}.51/60,mb4.0/14,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.62	293	P	Pn	01 27 16.5	+0.6
JKMT				S	Sn	01 27 24.5	-1.0
JIKH	Ishinomakikobu	0.63	247	P	Pn	01 27 18.0	+1.9
JIKH				*e*S	Sn	01 27 27.4	+1.6
OFUJ	Ofunato	0.66	321	P	Pn	01 27 16.2	-0.3
OFUJ				*e*S	Sb	01 27 24.3	+0.3
JIO	Ouri	0.68	261	P	Pn	01 27 18.2	+1.5
JIO				*e*S	Sn	01 27 27.4	+0.5
JMK	Ichinoseki	0.86	297	P	Pn	01 27 19.8	+0.6
JMK				*e*S	Sn	01 27 30.3	-1.1
JOM	Ohasama	1.15	322	P	Pb	01 27 23.3	-0.1
JOM				S	Sb	01 27 36.5	-1.5
JOU	Okura	1.23	261	P	Pg	01 27 26.1	+0.5
JOU				S	Sg	01 27 42.0	+0.4
JMM	Marumori	1.31	238	P	Pg	01 27 27.5	+0.3
JTH	Tanohata	1.40	349	P	Pn	01 27 25.8	-0.8
JTH				*e*S	Sn	01 27 42.4	-2.3
JRG	Rokugo	1.48	305	P	Pb	01 27 28.7	-0.2
JYK	Kaneyama	1.49	284	P	Pb	01 27 29.1	0.0
ERM	Erimo	3.52	12	*e*Pn	Pn	01 27 55.2	-0.6
ERM				*e*Sn	Sn	01 28 37.5	+0.5
MAJO	Matsushiro	3.76	239	*e*Pn	Pn	01 27 56.0	-3.1
MAT	Matsushiro	3.76	239	P	Pb	01 28 03.5	-4.4
MJAR	Matsushiro Arr	3.76	239	Pn	Pn	01 27 55.8	-3.4
	1.0nm,0.3s,baz=81,slow=15,SNR=32						
MJB9	Matsu-Tunnel	3.77	239	*e*Pn	Pn	01 27 56.3	-2.9
INU	Inuyama	5.25	234	*e*Pn	Pn	01 28 20.5	+1.0
ASAJ	Asahikawa	5.55	3	Pn	Pn	01 28 24.7	+0.9
	4.9nm,0.3s,baz=204,slow=11,SNR=17						
ASAJ				Sn	Sn	01 29 27.8	+0.7
	1.7nm,0.3s,baz=251,slow=16,SNR=4.5						
JHJ2	Mitsune	5.78	200	*e*Pn	Pn	01 28 29.4	+2.6
JHJ	Hachijo jima 2	5.78	201	Pn	Pn	01 28 31.4	+4.6
	38nm,0.3s,baz=97,slow=23,SNR=7.4						
JHJ				Sn	Sn	01 29 32.2	-0.5
	18nm,0.3s,baz=68,slow=19,SNR=3.1						
USRK	Ussuriysk Ar.	9.52	310	Pn	Pn	01 29 20.4	+2.3
	0.7nm,0.3s,baz=124,slow=14,SNR=11						
JNU	Nakatsue	10.68	243	Pn	Pn	01 29 38.4	+4.3
	0.3nm,0.3s,baz=53,slow=10,SNR=3.7						
KSRS	Korea Array	11.32	269	Pn	Pn	01 29 48.6	+5.7
	0.3nm,0.3s,baz=80,slow=14,SNR=5.4						
KS15	Wonju Array Si	11.36	269	*e*Pn	Pn	01 29 44.4	+1.1
KSAR	Wonju Array Be	11.36	269	Pn	Pn	01 29 48.6	+5.3
KLR	Kul'dur	13.04	328	Pn	Pn	01 30 06.2	-0.1
	0.1nm,0.3s,baz=189,slow=9.3,SNR=2.3						
MA2	Magadan	21.73	12	P	P	01 31 51.4	-0.7
	3.3nm,0.3s,baz=167,slow=19,SNR=2.9						
SEY	Seymchan	25.17	11	P	P	01 32 26.1	+0.1
	3.5nm,0.9s,baz=207,slow=7.6,SNR=12						
H11N2	WAKE ISLAND Hy	28.44	124	T	T	02 03 34.7	
	baz=317,slow=75,SNR=1050						
H11N1	WAKE ISLAND Hy	28.45	124	T	T	02 03 18.1	
	baz=317,slow=75,SNR=1236						
H11N3	WAKE ISLAND Hy	28.46	124	T	T	02 03 36.1	
	baz=317,slow=75,SNR=810						
H11S1	WAKE ISLAND Hy	29.21	126	T	T	02 04 29.2	
	baz=319,slow=76,SNR=80						
H11S3	WAKE ISLAND Hy	29.21	126	T	T	02 04 24.1	
	baz=319,slow=76,SNR=114						
H11S2	WAKE ISLAND Hy	29.23	126	T	T	02 04 24.3	
	baz=319,slow=76,SNR=79						
ZAA1	Zalesovo Array	41.37	311	*e*P	P	01 34 46.6	-0.1
ZALV	Zalesovo Beam	41.37	311	*e*P	P	01 34 47.3	+0.6
ZALV	Zalesovo Beam	41.37	311	P	P	01 34 46.6	-0.1
	0.6nm,0.3s,baz=96,slow=8.0,SNR=4.0						
MK01	Makanchi Array	43.85	301	*e*P	P	01 35 07.4	+0.3
MK31	Makanchi Array	43.85	301	*e*P	P	01 35 07.1	0.0
MK32	Makanchi Array	43.85	301	*e*P	P	01 35 06.8	-0.3
MKAR	Makanchi Array	43.85	301	P	P	01 35 06.8	-0.3
	0.5nm,0.6s,baz=83,slow=11,SNR=7.1						
ILAR	Eielson Array	47.87	33	P	P	01 35 38.2	-0.2
	1.0nm,0.6s,baz=265,slow=6.1,SNR=17						
ILB	Eielson Array	47.87	33	*e*P	P	01 35 38.2	-0.2
INK	Inuvik	52.74	28	P	P	01 36 15.4	+0.2
	0.8nm,0.5s,baz=340,slow=1.9,SNR=6.3						
ABKAR	Akbulak array	57.44	310	*e*P	P	01 36 49.6	+0.1
WRAB	Tennant Creek	58.65	189	*e*P	P	01 36 58.0	-0.2
	1.4nm,0.6s						
WRA	Warramunga Arr	58.66	189	P	P	01 36 58.5	+0.2
	1.4nm,0.6s,baz=6.2,slow=7.2,SNR=9.3						
YKA	Yellowknife Ar	62.17	31	P	P	01 37 21.6	-0.2
	0.2nm,0.5s,baz=298,slow=6.6,SNR=3.2						
YKB5	Yellowknife Ar	62.17	31	*e*P	P	01 37 21.6	-0.2
AS31	Alice Springs	62.39	189	*e*P	P	01 37 24.1	+0.4
	2.5nm,1.4s						
ASAR	Alice Springs	62.39	189	P	P	01 37 24.1	+0.4
	1.3nm,0.8s,baz=22,slow=8.6,SNR=6.2						
NV01	Mina Array Sit	73.57	54	*e*P	P	01 38 34.9	+0.5
NVAR	Mina Array Bea	73.57	54	P	P	01 38 34.9	+0.5
	0.7nm,0.9s,baz=273,slow=3.5,SNR=3.0						
PD31	Pinedale Array	76.15	46	*e*P	P	01 38 49.2	0.0
PDAR	Pinedale Array	76.15	46	P	P	01 38 49.2	0.0
	0.7nm,0.6s,baz=235,slow=1.3,SNR=7.5						
LTX	Lajitas	88.69	53	*e*P	P	01 39 54.8	+0.1
TXAR	Lajitas Array	88.69	53	P	P	01 39 54.8	+0.1
	0.4nm,0.6s,baz=307,slow=3.2,SNR=6.8						

DJA 01 01:34:38.2±5.0,11°S±44°×10°9E±1°1,h10^{km},M3.9/6, MLv3.9/6,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	2.92	343	P	Pn	01 35 24.0	-0.7
UGM	Wanagama	2.94	25	P	Pn	01 35 24.4	-0.6
PCJI	Pacitan	3.03	38	P	Pn	01 35 25.1	-1.1
WOJI	Wonogiri, Jawa	3.18	31	P	Pn	01 35 27.7	-0.7
KPJI	Karang Pucung	3.27	354	P	Pn	01 35 30.2	+0.7
CISI	Cisompet, Garu	3.36	334	P	Pn	01 35 30.2	-0.6
PWJI	Pagerwojo	3.57	44	P	Pn	01 35 32.5	-1.1
NGJI	Ngawi	3.86	34	P	Pn	01 35 41.0	+3.3
KRJI	Kerinci	11.48	317	P	Pn	01 37 24.7	+2.2
KDI	Kendari	14.77	64	P	Pn	01 38 03.4	-4.0

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*IDC **01** 01:35:49.0±12.0,47°.90S×164°.90E,h0^{km},mb3.9/3, mb1 4.1/4,mb1mx3.9/30,mbtmp3.9/4,ML3.5/1,MS3.6/1, Ms1 3.6/1,ms1mx3.0/22,Error ellipse: s-maj=263.2km s-min=29.9km az=162.0*
*WEL **01** 01:35:50.6±1.6,49°S±10°×16°5E±1°1,h33^{km},ML4.5/7*
ISC 01 01:35:49.3±1.7,48°.6S±0°.1×165°.15E±0°.09,h35^{km},n17, σ1^{s}.27/28,mb4.0/3,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ	The Paps	2.63	48	P	Pn	01 36 29.5	+0.3
APZ				S	Sn	01 37 00.2	+0.3
PYZ	Puysegur Point	2.68	23	P	Pn	01 36 28.8	-1.1
PYZ				S	Sn	01 37 00.0	-1.0
WHZ	Wether Hill Ro	3.34	36	P	Pn	01 36 38.4	-0.5
WHZ				S	Sn	01 37 15.9	-1.5
SYZ	Scrubby Hill	3.42	54	P	Pn	01 36 40.9	+0.9
SYZ				S	Sn	01 37 18.5	-0.8
DCZ	Deep Cove	3.45	24	P	Pn	01 36 40.2	-0.2
DCZ				S	Sn	01 37 20.2	+0.1
MLZ	Mavora Lakes	3.84	33	P	Pn	01 36 47.1	+1.1
MLZ				S	Sn	01 37 30.4	+0.5
TUZ	Tuapeka	4.06	50	P	Pn	01 36 49.5	+0.7
TUZ				S	Sn	01 37 35.8	+0.7
MSZ	Milford Sound	4.40	27	P	Pn	01 36 55.9	+2.4
EAZ	Earnscleugh	4.44	41	P	Pn	01 36 54.3	+0.3
EAZ				S	Sn	01 37 45.8	+1.4
HHSZ	Highcliff Hill	4.62	56	P	Pn	01 36 58.0	+1.5
HHSZ				S	Sn	01 37 48.0	-0.9
WKZ	Wanaka	4.64	36	P	Pn	01 36 58.1	+1.2
WKZ				S	Sn	01 37 51.6	+2.0
ODZ	Otahua Downs	5.20	48	P	Pn	01 37 03.9	-0.7
JCZ	Jackson Bay	5.21	30	P	Pn	01 37 06.8	+2.1
RPZ	Rata Peaks	6.40	42	Pn	Pn	01 37 19.0	-2.0
	1.3nm,0.3s,baz=248,slow=1.8,SNR=8.2						
RPZ				Sn	Sn	01 38 30.5	-2.3
	6.0nm,0.3s,baz=30,slow=17,SNR=9.9						
STKA	Stephens Creek	24.41	305	P	P	01 41 05.0	+0.6
	3.9nm,0.8s,baz=127,slow=10,SNR=4.6						
STKA				LR	LR	01 49 43.7	
	comp=Z,148nm,18.5s,baz=177,slow=35						
ASAR	Alice Springs	35.04	304	P	P	01 42 38.5	-0.2
	1.1nm,0.6s,baz=133,slow=7.8,SNR=9.8						
WRA	Warramunga Arr	37.84	308	P	P	01 43 01.8	-0.8
	1.2nm,0.7s,baz=140,slow=8.5,SNR=6.7						

IDC 01 01:36:01.6±3.6,5°.06S×153°.01E,h0^{km},mb3.8/5, mb1 4.0/5,mb1mx3.7/36,mbtmp3.8/5,Error ellipse: s-maj=121.7km s-min=29.8km az=114.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.43	229	P	P	01 41 12.5	-0.3
	2.9nm,1.0s,baz=54,slow=9.7,SNR=6.7						
ASAR	Alice Springs	26.10	223	P	P	01 41 38.2	+0.8
	0.9nm,0.9s,baz=46,slow=11,SNR=5.0						
FITZ	Fitzroy Crossi	29.72	242	P	P	01 42 09.0	-0.8
	1.8nm,0.6s,baz=86,slow=8.0,SNR=5.4						
MKAR	Makanchi Array	80.65	319	P	P	01 48 17.9	+1.3
	0.2nm,0.6s,baz=91,slow=7.2,SNR=2.3						
ZALV	Zalesovo Beam	81.48	326	P	P	01 48 20.1	-0.7
	0.8nm,0.7s,baz=104,slow=6.3,SNR=4.6						
TORD	Torodi Ar. Bea	150.58	288	PKPbc	PKPbc	01 55 56.2	-0.5
	0.4nm,0.7s,baz=93,slow=2.1,SNR=6.4						

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*IDC **01** 01:49:08.4±0.5,11°.00S×165°.53E,h0^{km},mb4.5/21, mb1 4.7/23,mb1mx4.7/31,mbtmp4.5/23,ML5.1/2,MS4.5/7, Ms1 4.5/7,ms1mx4.1/31,Error ellipse: s-maj=16.8km s-min=13.3km az=102.0*
*BJI **01** 01:49:09.0,10°.91S×165°.73E,h14^{km},mB5.2/28,mb4.7/41, Ms4.9/7,Ms7 4.6/11*
*ISCJB **01** 01:49:10.8±0.1,11°.03S±0°.03×165°.42E±0°.03,h24^{km}, mb4.8/130,MS4.7/10,Error ellipse: s-maj=4.5km s-min=3.7km az=23.9*
*NEIC **01** 01:49:12.3±1.9,10°.97S×165°.46E,h24^{km}±13^{km}, mb4.9/102,Error ellipse: s-maj=4.9km s-min=3.8km az=140.0*
*GCMT **01** 01:49:13.3±0.4,11°.26S±0°.04×165°.30E±0°.03,h33^{km}±1^{km}, MW5.0/45,Moment Tensor Solution. s39,c45; s45,c60; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.51±.26; $M_{\theta\theta}$-1.79±.18; $M_{\phi\phi}$-1.71±.18; $M_{r\theta}$1.71±.24; $M_{\theta\phi}$1.39±.12; $M_{\phi r}$-2.51±.24; Best double couple: $M_0$4.50000×10^{16} NP1:ϕ_s142.00000°,δ66.00000°,λ95.00000°. NP2: ϕ_s309.00000°,δ24.00000°,λ78.00000°. Principal axes: T 4.7110, Plg68.0000°, Azm62.0000°; N -0.4110, Plg5.0000°, Azm319.0000°; P -4.2900, Plg21.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 01:49:09.9±1.7,11°.01S±0°.05×165°.48E±0°.05,h6^{km}±9^{km}, n274,σ1^{s}.28/285,mb4.9/130,MS4.6/10,Santa Cruz

Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.67	286	*e*Pn	Pn	01 50 36.1	+1.4
HNR				*e*Sn	Sn	01 51 39.1	-1.0
HNR	Honiara	5.67	286	Pn	Pn	01 50 36.4	+1.8
	109nm,0.3s,baz=140,slow=6.9,SNR=12						
HNR				Sn	Sn	01 51 39.4	-0.7
	43nm,0.3s,baz=147,slow=22,SNR=4.1						
HNR				LR	LR	01 52 44.9	
	comp=Z,4µm,19.5s,baz=120,slow=38						
DZM	Mont Dzumac	11.04	175	*e*Pn	Pn	01 51 49.2	+0.7
	115nm,1.4s						
DZM				*e*LR	LR	01 54 23.0	
	comp=Z,2µm,25.2s						
DZM	Mont Dzumac	11.04	175	Pn	Pn	01 51 49.4	+0.9
	7.5nm,0.3s,baz=353,slow=13,SNR=46						
DZM				Sn	Sn	01 53 51.2	-1.2
	0.6nm,0.3s,baz=348,slow=19,SNR=2.4						
DZM				LR	LR	01 55 25.4	
	comp=Z,2µm,20.4s,baz=258,slow=34						
TARA	Tarawa	14.34	32	*e*Pn	Pn	01 52 32.6	-1.0
EIDS	Eidsvold	19.75	222	*e*P	Pn	01 53 42.8	+0.8
	24nm,0.9s						
MANU	Manus Island	20.06	295	*e*P	Pn	01 53 45.4	-0.5
	373nm,1.0s						
CTA	Charters Tower	20.59	242	P	Pn	01 53 51.4	-0.6
	40nm,1.0s,baz=71,slow=13,SNR=36						
CTA				LR	LR	02 00 59.4	
	comp=Z,1µm,18.2s,baz=48,slow=34						
CTAO	Charters Tower	20.59	242	*e*P	Pn	01 53 50.6	-1.3
COEN	Coen	21.97	260	*e*P	P	01 54 03.9	-0.9
	53nm,1.1s						
ARMA	Armidale	23.21	212	*e*P	P	01 54 18.2	+0.4
	31nm,1.2s						
HAZ	Te Kaha	28.83	160	P	P	01 55 10.2	+1.2
URZ	Urewera	29.07	161	P	P	01 55 10.3	-0.8
	13nm,0.8s,baz=19,slow=8.2,SNR=5.8						
URZ	Urewera	29.07	161	P	P	01 55 11.2	+0.2
MWZ	Matawai	29.27	160	P	P	01 55 13.5	+0.6
PUZ	Puketiti	29.28	159	P	P	01 55 13.1	+0.1
H11S2	WAKE ISLAND Hy	29.34	2	T	T	02 25 48.3	
	baz=183,slow=76,SNR=53						
H11S3	WAKE ISLAND Hy	29.34	2	T	T	02 25 48.2	
	baz=183,slow=76,SNR=31						
RTZ	Ruatahuna	29.35	161	P	P	01 55 14.4	+0.7
H11S1	WAKE ISLAND Hy	29.36	2	T	T	02 25 49.0	
	baz=183,slow=76,SNR=36						
BKZ	Black Stump Fm	29.71	163	*e*P	P	01 55 18.0	+1.2
	52nm,1.1s						
BKZ	Black Stump Fm	29.71	163	P	P	01 55 17.8	+1.0
BHHZ	Black Hill Sta	29.89	163	P	P	01 55 19.4	+1.0
STKA	Stephens Creek	30.29	223	P	P	01 55 21.9	0.0
	8.5nm,0.8s,baz=36,slow=11,SNR=13						
STKA				PcP	PcP	01 58 23.2	+0.6
	2.5nm,0.7s,baz=36,slow=5.8,SNR=3.5						
STKA				LR	LR	02 07 06.2	
	comp=Z,2µm,18.3s,baz=40,slow=36						
QRZ	Quartz Range	30.34	169	P	P	01 55 24.2	+1.9
TSZ	Takapari Road	30.39	164	P	P	01 55 23.1	+0.4
H11N1	WAKE ISLAND Hy	30.56	3	T	T	02 27 23.5	
	baz=182,slow=76,SNR=38						
H11N3	WAKE ISLAND Hy	30.57	3	T	T	02 27 23.5	
	baz=182,slow=76,SNR=24						
H11N2	WAKE ISLAND Hy	30.58	3	T	T	02 27 24.1	
	baz=182,slow=76,SNR=20						
DVHZ	Dannevirke	30.67	164	P	P	01 55 26.1	+0.9
MRZ	Mangatainoka R	30.85	165	P	P	01 55 27.4	+0.6
NNZ	Nelson	30.88	168	P	P	01 55 28.1	+1.0
BFZ	Birch Farm	31.05	164	P	P	01 55 29.3	+0.7
HOWZ	Holdsworth Sta	31.06	165	P	P	01 55 29.4	+0.7
TCW	Tory Channel	31.06	167	P	P	01 55 30.1	+1.4
WRAB	Tennant Creek	31.24	250	*e*P	P	01 55 29.4	-1.1
	5.8nm,0.6s						
WB2	Warramunga Arr	31.24	250	*e*P	P	01 55 29.4	-1.2
WB2				*e*PcP	PcP	01 58 25.4	+0.1
WRA	Warramunga Arr	31.25	250	P	P	01 55 30.0	-0.6
	12nm,0.6s,baz=81,slow=9.0,SNR=101						
WRA				PcP	PcP	01 58 24.9	-0.5
	2.7nm,0.8s,baz=73,slow=3.2,SNR=10.0						
WRA				LR	LR	02 08 02.8	
	comp=Z,1µm,18.1s,baz=65,slow=36						
SNZO	South Karori	31.25	167	*e*P	P	01 55 28.2	-2.2
MTW	Mount Morrison	31.30	165	P	P	01 55 29.8	-1.0
THZ	Tophouse	31.32	169	*e*P	P	01 55 32.4	+1.4
	16nm,0.7s						
THZ	Tophouse	31.32	169	P	P	01 55 31.6	+0.6
PAWZ	Paruwai Farm	31.49	166	P	P	01 55 32.5	-0.1
TRWZ	Traveller	31.57	165	P	P	01 55 34.0	+0.8
PLWZ	Palliser	31.63	166	P	P	01 55 33.7	-0.1
KHZ	Kahutara	32.07	169	P	P	01 55 39.2	+1.7
LTZ	Lake Taylor	32.20	171	*e*P	P	01 55 39.9	+1.2
	22nm,0.9s						
LTZ	Lake Taylor	32.20	171	P	P	01 55 40.1	+1.4
AS01	Alice Springs	32.53	243	*e*P	P	01 55 40.7	-1.3
AS01				*e*PcP	PcP	01 58 28.7	-0.1
AS31	Alice Springs	32.57	243	*e*P	P	01 55 41.3	-1.0
	6.8nm,0.6s						
ASAR	Alice Springs	32.58	243	P	P	01 55 41.4	-1.0
	24nm,0.7s,baz=70,slow=9.7,SNR=192						
ASAR				PcP	PcP	01 58 28.7	-0.2
	2.0nm,0.8s,baz=60,slow=2.7,SNR=7.5						
ASAR				LR	LR	02 07 46.5	
	comp=Z,881nm,19.9s,baz=68,slow=34						
FOZ	Fox Glacier	32.62	174	P	P	01 55 42.9	+0.6
RPZ	Rata Peaks	32.94	173	P	P	01 55 43.3	-1.8
	3.7nm,0.6s,baz=350,slow=12,SNR=5.0						
FITZ	Fitzroy Crossi	39.14	255	P	P	01 56 37.6	-0.9
	5.2nm,0.8s,baz=86,slow=7.0,SNR=6.7						
FORT	Forrest	39.85	235	*e*P	P	01 56 44.2	-0.2
	23nm,0.8s						
PPT2	Papeete2	43.96	104	*e*S	S	02 03 53.0	+2.2
	137nm,25.0s						
PPT2				*e*LR	LR	02 09 34.2	
	comp=Z,684nm,22.0s,baz=280						
TBI	Tubuai	44.59	112	*e*S	S	02 04 03.6	+4.0
	187nm,33.5s						
TBI				*e*LQ	LQ	02 07 54.8	
	799nm,29.2s						
TBI				*e*LR	LR	02 09 54.4	
	comp=Z,772nm,26.0s,baz=286						
MBWA	Marble Bar	44.96	251	*e*P	P	01 57 25.6	-0.6
PLAI	Plampang	47.00	268	P	P	01 57 40.8	-1.6
	12nm,0.7s						
NWAO	Narrogin (SRO)	49.27	236	*e*P	P	01 58 00.0	+0.4
TAOE	Nuku Hiva Isla	53.54	93	*e*S	S	02 06 09.2	+3.1
	178nm,24.3s						
TAOE				*e*LR	LR	02 13 59.6	
	comp=Z,350nm,23.3s						
MJAR	Matsushiro Arr	53.82	333	P	P	01 58 32.7	-0.9
	3.9nm,0.7s,baz=170,slow=9.4,SNR=8.7						
RKT	Rikitea	57.84	110	*e*LR	LR	02 16 03.6	
	comp=Z,990nm,25.5s						
KSRS	Korea Array	59.70	326	P	P	01 59 13.9	-1.4
	1.2nm,0.8s,baz=130,slow=9.0,SNR=3.1						
KSAR	Wonju Array Be	59.71	326	P	P	01 59 13.9	-1.5
NJ2	Nanjing	61.81	316	*e*P	P	01 59 30.8	+1.0
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
QIZ	Qiongzhong	62.43	298	P	P	01 59 36.5	+2.2
QIZ				S	S	02 08 05.5	+3.4
QIZ				LR	LR		
	comp=Z,240nm,16.9s						
USRK	Ussuriysk Ar.	62.80	333	P	P	01 59 36.8	+0.6
	2.3nm,0.7s,baz=142,slow=8.4,SNR=6.1						
PETK	Petropavlovsk-	64.21	355	P	P	01 59 45.9	+0.5
	2.9nm,0.6s,baz=164,slow=7.2,SNR=5.0						
CN2	Changchun	65.58	329	*e*P	P	01 59 58.5	+4.0
CASY	Casey	66.32	201	*e*P	P	01 59 59.4	+0.4
	4.4nm,0.5s						
VNDA	Vanda	66.53	181	P	P	02 00 00.7	+0.6
	1.5nm,0.8s,baz=0.0,slow=9.1,SNR=4.6						
GYA	Guiyang	68.18	304	*e*P	P	02 00 13.0	+1.4
GYA				PP	PP	02 02 45.0	+2.8
GYA				SKS	SKiKP	02 10 05.0	-2.9
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.5s						
GYA				LR	LR		
	comp=N,410nm,18.3s						
GYA				LR	LR		
	comp=E,400nm,18.6s						
GYA				LR	LR		
	comp=Z,380nm,18.0s						
GSI	Gunungsitoli	68.60	276	*e*P	P	02 00 13.8	-0.5
	22nm,0.7s						
XAN	Xi'an	69.91	312	P	P	02 00 28.0	+5.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,190nm,7.1s						
XAN	Xi'an	69.91	312	*e*P	P	02 00 20.9	-1.2
	8.9nm,1.2s						
KMI	Kunming	70.88	301	P	P	02 00 29.8	+1.3
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC	Hu-ho-hao-te	71.64	320	*e*P	P	02 00 35.5	+2.9
HHC				S	S	02 09 57.4	+4.7
HHC				SS	SS	02 14 33.1	+4.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,91nm,5.4s						
HHC				LR	LR		
	comp=N,360nm,17.1s						
HHC				LR	LR		
	comp=Z,780nm,14.7s						
CM01	Chiang Mai Arr	71.83	294	*e*P	P	02 00 33.4	-0.7
CMAR	Chiang Mai Arr	71.86	294	P	P	02 00 35.0	+0.8
	1.4nm,0.3s,baz=115,slow=3.8,SNR=14						
CD2	Chengdu	72.37	307	*e*P	P	02 00 37.5	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH	Lanzhou	74.54	312	*e*P	P	02 00 49.7	-0.2
LZH				pP	pwP	02 00 58.2	+3.9
LZH				sP	PcP	02 01 01.4	-3.0
LZH				PP	PP	02 03 43.8	+7.1
LZH				*e*S	S	02 10 20.5	-5.6
LZH				sS	sS	02 10 39.4	+11
LZH				SS	SS	02 15 09.2	-4.0
LZH				pmax	pmax		
	comp=Z,79nm,1.3s						
LZH				pmax	pmax		
	comp=Z,290nm,4.6s						
LZH				LR	LR		
	comp=E,310nm,14.4s						
LZH				LR	LR		
	comp=Z,600nm,15.5s						
GAMB	Gambell	76.58	10	*e*P	P	02 01 01.5	+0.8
	14nm,1.2s						
ULN	Ulaanbaatar	78.12	324	*e*P	P	02 01 09.9	-0.1
	5.5nm,0.8s						
SONM	Songino Array	78.48	324	P	P	02 01 11.9	-0.1
	2.0nm,0.8s,baz=146,slow=7.2,SNR=17						
SONA1	Songino Array	78.48	324	*e*P	P	02 01 12.1	0.0
ANM	Nome	78.51	12	*e*P	P	02 01 11.0	-0.6
	13nm,1.3s						
RSO	Redoubt South	78.58	20	*e*P	P	02 01 11.1	-1.1
BILL	Bilibino	78.84	0	*e*P	P	02 01 13.1	-0.2
	8.8nm,0.9s						
GTA	Gaotai	78.85	314	*e*P	P	02 01 14.8	+0.6
GTA				pP	sP	02 01 19.6	+4.2
GTA				sP	pwP	02 01 22.7	+4.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
QSPA	South Pole Qui	79.00	180	*e*P	P	02 01 14.5	0.0
CAST	Castle Rocks	80.99	18	*e*P	P	02 01 23.9	-1.2
	5.0nm,0.8s						
DIV	Divide	81.47	22	*e*P	P	02 01 26.8	-1.0
	15nm,0.9s						
KLU	Klutina	81.66	21	*e*P	P	02 01 28.5	-0.3
	14nm,1.1s						
RND	Reindeer	81.99	19	*e*P	P	02 01 30.1	-0.3
	25nm,1.4s						
MCK	McKinley	82.19	19	*e*P	P	02 01 31.0	-0.4
	21nm,1.4s						
IM3	Indian Mountai	82.46	16	*e*P	P	02 01 32.2	-0.6
HARP	HAARP	82.54	21	*e*P	P	02 01 33.2	-0.1
	28nm,1.1s						
MLY	Manley	82.58	17	*e*P	P	02 01 33.4	-0.1
	8.6nm,1.3s						
WRH	Wood River Hil	82.98	18	*e*P	P	02 01 33.4	-2.1
	8.3nm,1.0s						
GDXM	Geysers	82.98	48	*e*P	P	02 01 34.5	-1.8
	6.0nm,0.8s						
MDM	Murphy Dome	83.28	18	*e*P	P	02 01 36.0	-1.1
	15nm,1.2s						
HDA	Harding Lake	83.29	19	*e*P	P	02 01 36.5	-0.6
	15nm,0.9s						
HDA	Harding Lake	83.29	19	P	P	02 01 36.7	-0.5
	baz=227						
SAO	San Andreas Ge	83.31	51	*e*P	P	02 01 36.9	-1.0
	6.0nm,0.8s						
TCOL	CIGO, UAF Yank	83.33	18	P	P	02 01 37.3	0.0
	baz=226						
COLA	College	83.33	18	*e*P	P	02 01 35.9	-1.4
	2.3nm,0.3s						
O02D	Mt. Diablo Mer	83.46	47	P	P	02 01 38.7	0.0
	baz=250,SNR=7.5						
RIDG	Independ'e Rid	83.53	20	*e*P	P	02 01 37.3	-1.1
	18nm,1.1s						
IL1	Eielson Array	83.56	19	*e*P	P	02 01 36.3	-2.2
ILAR	Eielson Array	83.56	19	P	P	02 01 37.4	-1.2
	2.5nm,0.5s,baz=239,slow=4.9,SNR=57						
ILB	Eielson Array	83.56	19	*e*P	P	02 01 37.4	-1.2
L02E	Cave Junction	83.58	45	P	P	02 01 39.0	-0.2
	baz=249						
POKR	Poker Plat Res	83.63	18	P	P	02 01 38.2	-0.7
	baz=226						
J01E	Myrtle Point	83.72	44	P	P	02 01 39.2	-0.6
	baz=249						
K02D	Willamette Mer	83.73	44	P	P	02 01 39.6	-0.4
	baz=249						
DOT	Dot Lake	83.73	20	*e*P	P	02 01 38.8	-0.7
	25nm,1.3s						
N02D	Trinity Center	83.80	46	P	P	02 01 40.4	0.0
	baz=250						
M02C	Callahan	83.83	46	P	P	02 01 39.7	-0.9
	baz=250						
SCRK	Sand Creek	83.97	20	*e*P	P	02 01 40.9	+0.1
	22nm,1.2s						
PKM	Mcpherson Peak	83.98	53	P	P	02 01 41.5	-0.1
	baz=252						
YBH	Yreka Blue Hor	84.05	46	*e*P	P	02 01 42.0	+0.3
	12nm,1.0s						
ORV	Oroville	84.18	48	*e*P	P	02 01 41.6	-0.6
	6.0nm,0.8s						
HUMO	Hull Mountain	84.19	45	*e*P	P	02 01 41.8	-0.5
	13nm,1.0s						
O03E	Paynes Creek	84.21	47	P	P	02 01 41.6	-0.9
	baz=250,SNR=5.7						
I03D	Drain, OR	84.31	44	P	P	02 01 42.0	-0.8
	baz=249						
AFDM	Forest Hills D	84.37	49	*e*P	P	02 01 43.1	-0.2
	14nm,1.1s						
HYT	Haines Junctio	84.46	24	*e*P	P	02 01 43.0	-0.4
	12nm,1.0s						
L04D	Klamath Falls	84.50	45	P	P	02 01 43.2	-0.9
	baz=250						
CMB	Columbia Colle	84.52	50	*e*P	P	02 01 43.1	-0.9
	6.7nm,0.8s						
SKAG	Skagway	84.62	26	*e*P	P	02 01 44.0	0.0
	24nm,1.4s						
M04C	Macdoel	84.68	46	P	P	02 01 44.4	-0.5
	baz=250,SNR=5.2						
I04A	Tendick Farm,	84.98	44	P	P	02 01 45.2	-1.0
	baz=250,SNR=5.2						
J04D	Umpqua Nationa	84.99	44	P	P	02 01 45.3	-1.3
	baz=250,SNR=5.5						
H04D	Lebanon	85.01	43	P	P	02 01 45.8	-0.5
	baz=249						
MWC	Mount Wilson	85.17	54	*e*P	P	02 01 47.9	+0.3
	9.8nm,1.0s						
ISA	Isabella, Lake	85.26	52	*e*P	P	02 01 47.8	-0.1
	6.1nm,0.9s						
ISA	Isabella, Lake	85.26	52	P	P	02 01 47.0	-0.9
	baz=253,SNR=6.4						
WAKR	Walker	85.37	50	*e*P	P	02 01 48.8	+0.2
	14nm,1.3s						
MDPB	Devils Postpil	85.38	50	*e*P	P	02 01 48.1	-0.6
	7.7nm,0.9s						
EDW2	Edwards Air Fo	85.41	53	P	P	02 01 47.8	-0.8
	baz=253,SNR=10						
OMMB	Old Mammoth Mi	85.43	50	*e*P	P	02 01 49.0	0.0
	11nm,1.2s						
PNTR	Pine Nut	85.43	49	*e*P	P	02 01 49.1	+0.2
	7.7nm,0.9s						
H04A	Detroit Lake	85.44	43	*e*P	P	02 01 48.5	0.0
	13nm,1.1s						
BFSC	Mount Baldy Ra	85.49	54	P	P	02 01 48.0	-1.2
	baz=254						
J05D	Fort Rock, OR	85.61	45	P	P	02 01 48.6	-1.0
	baz=251,SNR=13						
DAWY	Dawson	85.62	21	*e*P	P	02 01 49.1	+0.1
	10nm,1.1s						
MURC	Murrieta	85.68	55	P	P	02 01 49.4	-0.6
	baz=254						
PAHR	Pah Rah Range	85.78	48	*e*P	P	02 01 50.4	-0.1
	7.0nm,0.9s						
CWC	Cottonwood Cre	85.79	52	P	P	02 01 49.7	-0.9
	baz=253						
MOD	Modoc Plateau	85.81	46	*e*P	P	02 01 49.7	-0.9
	5.2nm,0.7s						
LRMC	Laurel Mtn Rad	85.82	53	P	P	02 01 50.0	-0.8
	baz=253,SNR=5.5						
E04D	Cinebar	85.84	41	P	P	02 01 50.3	-0.1
	baz=249						
D03D	Eldon	85.85	40	P	P	02 01 50.4	-0.1
	baz=249						
I05D	Terrebonne, OR	85.89	44	P	P	02 01 50.4	-0.4
	baz=250						
PINE	Pine Mountain	85.98	44	*e*P	P	02 01 51.6	+0.1
	11nm,0.9s						
TIXI	Tiksi	86.00	349	*e*P	P	02 01 50.0	-0.7
	1.9nm,0.6s						
PGC	Sidney	86.03	39	*e*P	P	02 01 51.2	-0.1
	13nm,0.8s						
RYN	Ryan	86.09	50	*e*P	P	02 01 52.0	-0.1
	8.1nm,1.1s						
MONP2	Monument Peak	86.11	56	P	P	02 01 51.7	-0.6
	baz=254						
DAC	Darwin (Calif)	86.12	52	*e*P	P	02 01 52.3	0.0
	12nm,1.4s						
MPMC	Manual Prospec	86.14	52	P	P	02 01 51.6	-0.9
	baz=254,SNR=5.3						
NV01	Mina Array Sit	86.20	50	*e*P	P	02 01 52.0	-0.6
NVAR	Mina Array Bea	86.20	50	P	P	02 01 52.5	-0.2
	6.6nm,0.9s,baz=232,slow=8.5,SNR=31						
G05D	Wamic, OR	86.21	43	P	P	02 01 51.9	-0.5
	baz=250						
PFO	Pinyon Flats O	86.28	55	*e*P	P	02 01 52.4	-0.6
	7.7nm,1.0s						
PFO	Pinyon Flats O	86.28	55	P	P	02 01 52.4	-0.6
	baz=254						
XPFO	Pion Flat	86.28	55	*e*P	P	02 01 52.4	-0.6
	9.1nm,1.1s						
IKP	In-Ko-Pah, Jac	86.30	56	P	P	02 01 52.9	-0.3
	baz=254						
NV11	Mina Array Sit	86.31	50	*e*P	P	02 01 52.7	-0.5
	0.8nm,1.0s						
F05D	White Salmon	86.33	42	P	P	02 01 53.1	+0.3
	baz=250						
GSC	Goldstone, Bar	86.46	53	*e*P	P	02 01 53.1	-0.7
	5.2nm,1.1s						
GSC	Goldstone, Bar	86.46	53	P	P	02 01 53.5	-0.4
	baz=254						
GRAC	Grapevine Rang	86.50	51	P	P	02 01 53.6	-0.4
	baz=254						
KVN	Kaiserville	86.53	49	*e*P	P	02 01 53.3	-1.0
	6.7nm,1.0s						
SWSC	Sam W. Stewart	86.63	56	P	P	02 01 54.2	-0.5
	baz=255						
HEC	Hector,Ludlow	86.70	54	P	P	02 01 54.1	-1.0
	baz=254						
B05A	Bryant	86.73	40	P	P	02 01 54.9	+0.2
	baz=250						
FURC	Furnace Creek,	86.74	52	P	P	02 01 54.3	-0.8
	baz=254						
BELC	Belle Mtn. Jos	86.75	55	P	P	02 01 54.9	-0.5
	baz=254,SNR=11						
I07A	Izee	87.05	44	*e*P	P	02 01 56.1	-0.5
	5.2nm,0.8s						
BC3	Big Chuckawall	87.09	55	P	P	02 01 56.9	-0.2
	baz=255						
WVOR	Wild Horse Val	87.15	46	*e*P	P	02 01 56.7	-0.4
	10nm,1.3s						
TUQ	Turquoise Moun	87.19	53	P	P	02 01 57.0	-0.5
	baz=254						
GMRC	Granite Mounta	87.23	54	P	P	02 01 56.9	-0.8
	baz=255,SNR=5.5						
TPNV	Topopah Spring	87.34	52	*e*P	P	02 01 58.2	0.0
TPNV	Topopah Spring	87.34	52	P	P	02 01 58.1	-0.2
	baz=254						
GLA	Glamis	87.45	56	*e*P	P	02 01 59.0	+0.3
	9.3nm,0.8s						
GLA	Glamis	87.45	56	P	P	02 01 58.7	0.0
	baz=255						
IRM	Iron Mountain	87.47	55	P	P	02 01 58.3	-0.4
	baz=255,SNR=6.6						
J08A	Circle Bar Ran	87.54	45	*e*P	P	02 01 58.8	-0.2
	6.0nm,0.8s						
HAWA	Hanford	87.76	42	*e*P	P	02 01 59.9	0.0
	19nm,1.5s						
G08A	Pilot Rock	87.80	43	*e*P	P	02 01 59.5	-0.7
Y12C	Blythe	87.87	55	*e*P	P	02 02 01.1	+0.5
	10nm,1.0s						
Y12C	Blythe	87.87	55	P	P	02 02 00.8	+0.2
	baz=255						
SHPR	Sheep Range	88.07	52	*e*P	P	02 02 02.2	+0.5
	9.1nm,1.4s						
R11A	Troy Canyon, C	88.23	51	*e*P	P	02 02 02.4	-0.1
	3.9nm,1.1s						
R11A	Troy Canyon, C	88.23	51	P	P	02 02 02.0	-0.5
	baz=255						
PDMCI	Parker Dam,Lak	88.31	55	P	P	02 02 02.4	-0.3
	baz=256						
B08A	Colville Reser	88.51	40	*e*P	P	02 02 02.9	-0.5
	8.5nm,1.2s						
W13A	Hualapai Mount	88.72	54	*e*P	P	02 02 05.0	+0.1
	9.5nm,1.4s						
BMO	Blue Mountains	88.78	44	*e*P	P	02 02 04.5	-0.4
	3.6nm,1.1s						
214A	Organ Pipe Nat	88.83	57	P	P	02 02 05.3	0.0
	baz=256						
WMQ	Urumqi	88.89	315	*e*P	P	02 02 05.7	+0.4
WMQ				pP	pwP	02 02 14.9	+4.0
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,300nm,5.1s						
WMQ				LR	LR		
	comp=N,200nm,18.3s						
WMQ				LR	LR		
	comp=E,110nm,18.3s						
WMQ				LR	LR		
	comp=Z,160nm,14.7s						
ELK	Elko	89.12	48	*e*P	P	02 02 06.8	+0.1
	5.2nm,1.4s						
ELK	Elko	89.12	48	LR	LR	02 34 19.1	
	comp=Z,196nm,20.6s,baz=282,slow=30						
F10A	Beach Ranch, E	89.16	43	*e*P	P	02 02 06.0	-0.6
	6.0nm,1.0s						
MFID	Camas Ranch	89.41	46	*e*P	P	02 02 07.3	-0.5
	7.1nm,1.2s						
PSUT	Pine Spring	89.59	51	*e*P	P	02 02 09.1	+0.2
	3.7nm,0.8s						
LCMT	Little Creek M	89.69	52	*e*P	P	02 02 09.6	+0.3
	8.4nm,1.0s						
CCUT	Cedar City	89.72	52	*e*P	P	02 02 10.2	+0.5
	9.3nm,1.1s						
SZCU	Shurtz Canyon	89.95	52	*e*P	P	02 02 10.6	0.0
	5.6nm,0.9s						
KNB	Kanab	90.02	52	*e*P	P	02 02 10.8	-0.2
	17nm,1.2s						
U15A	North Rim	90.29	53	*e*P	P	02 02 12.4	+0.1
	9.3nm,0.9s						
HLID	Hailey	90.44	46	*e*P	P	02 02 12.6	-0.2
	6.5nm,1.0s						
HLID	Hailey	90.44	46	P	P	02 02 12.8	0.0
	baz=255						
PKCU	Pink Cliffs	90.51	52	*e*P	P	02 02 12.1	-1.4
	21nm,1.2s						
X16A	Lo Mia Camp, P	90.51	55	*e*P	P	02 02 13.3	0.0
	4.2nm,0.8s						
TUC	Tucson	90.58	57	*e*P	P	02 02 13.1	-0.5
	2.9nm,0.6s						
TUC	Tucson	90.58	57	P	P	02 02 13.8	+0.3
	baz=257						
TCRU	Three Creeks R	90.68	51	*e*P	P	02 02 13.7	-0.4
	6.6nm,0.8s						
MTPU	Mount Pierson	90.75	51	*e*P	P	02 02 14.8	+0.2
	8.2nm,1.0s						
DUG	Dugway, Tooele	90.77	49	*e*P	P	02 02 13.6	-0.7
	2.8nm,0.8s						
DUG	Dugway, Tooele	90.77	49	P	P	02 02 13.9	-0.4
	baz=256						
BGU	Big Grassy Mou	90.79	49	*e*P	P	02 02 13.4	-0.9
	4.0nm,0.9s						

WUAZ	Wupatki	90.81	54	*e*P	P	02 02 14.3	-0.3
	5.4nm,0.8s						
WUAZ	Wupatki	90.81	54	P	P	02 02 14.1	-0.5
	baz=257						
MSU	Marysvale	90.86	51	*e*P	P	02 02 15.0	+0.1
HVU	Hansel Valley	91.17	48	*e*P	P	02 02 15.3	-0.9
	11nm,1.0s						
NLU	North Lily Min	91.27	50	*e*P	P	02 02 16.3	-0.4
	5.2nm,1.0s						
SPUT	South Promonto	91.30	48	*e*P	P	02 02 16.9	+0.1
	4.0nm,1.0s						
HWUT	Hardware Ranch	92.02	48	*e*P	P	02 02 18.3	-1.8
	2.2nm,0.9s						
TCUT	Toone Canyon	92.02	49	*e*P	P	02 02 20.2	0.0
	15nm,1.3s						
W18A	Petrified Fore	92.03	55	P	P	02 02 20.2	-0.2
	baz=258						
DLMT	Dillon	92.14	44	*e*P	P	02 02 20.7	+0.2
	9.1nm,0.9s						
WALA	Waterton Lakes	92.15	40	*e*P	P	02 02 20.5	0.0
	5.7nm,0.9s						
LRM	Limekiln Ridge	92.34	44	*e*P	P	02 02 20.7	-0.9
FXWY	Fox Creek	92.85	46	*e*P	P	02 02 23.4	-0.6
	2.4nm,0.8s						
BOZ	Bozeman (W)	92.85	44	*e*P	P	02 02 24.0	+0.2
	5.7nm,1.0s						
BOZ	Bozeman (W)	92.85	44	P	P	02 02 23.5	-0.4
	baz=257						
HRY	Holter Researc	92.96	43	*e*P	P	02 02 24.3	0.0
MK01	Makanchi Array	93.31	317	*e*P	P	02 02 24.7	-1.0
MK31	Makanchi Array	93.32	317	*e*P	P	02 02 25.2	-0.6
MKAR	Makanchi Array	93.32	317	P	P	02 02 25.4	-0.4
	1.5nm,0.8s,baz=95,slow=6.8,SNR=17						
MKAR				PKKPbc	PKKPdf	02 19 32.2	-1.6
	0.2nm,0.5s,baz=234,slow=5.0,SNR=2.7						
MKAR				PKKP	PKKPbc	02 19 38.4	+3.4
	1.0nm,0.9s,baz=273,slow=2.2,SNR=5.4						
H17A	Grant Village	93.33	46	*e*P	P	02 02 25.4	-0.8
	3.7nm,0.9s						
ZALV	Zalesovo Beam	93.38	324	*e*P	P	02 02 23.8	-2.0
ZALV	Zalesovo Beam	93.38	324	P	P	02 02 24.2	-1.7
	0.9nm,0.6s,baz=106,slow=4.8,SNR=6.6						
MAKZ	Makanchi	93.53	317	*e*P	P	02 02 26.1	-0.7
	3.0nm,1.0s						
BW06	Boulder Array	93.72	47	*e*P	P	02 02 27.1	-1.0
	2.4nm,1.0s						
BW06	Boulder Array	93.72	47	P	P	02 02 27.3	-0.7
	baz=259						
PD31	Pinedale Array	93.72	47	*e*P	P	02 02 27.7	-0.3
PDAR	Pinedale Array	93.72	47	*e*P	P	02 02 27.1	-0.9
PDAR	Pinedale Array	93.72	47	P	P	02 02 27.4	-0.7
	1.3nm,0.9s,baz=253,slow=3.7,SNR=10						
EGMT	Eagleton	94.62	42	*e*P	P	02 02 31.4	-0.4
	2.7nm,0.5s						
EGMT	Eagleton	94.62	42	P	P	02 02 31.7	-0.1
	baz=259						
ANMO	Albuquerque	94.64	55	*e*P	P	02 02 32.0	-0.4
	1.3nm,0.6s						
ANMO	Albuquerque	94.64	55	P	P	02 02 32.0	-0.4
	baz=260						
S22A	4UR Ranch, Cre	94.83	53	P	P	02 02 32.7	-0.7
	baz=260						
YKA	Yellowknife Ar	95.06	27	P	P	02 02 31.7	-1.7
	1.1nm,0.7s,baz=256,slow=4.6,SNR=18						
YKB5	Yellowknife Ar	95.06	27	*e*P	P	02 02 30.8	-2.5
TXAR	Lajitas Array	96.04	61	P	P	02 02 38.9	+0.1
	0.3nm,0.6s,baz=215,slow=6.5,SNR=4.7						
KSH	Kashi	96.53	309	P	P	02 02 42.8	+2.0
KSH				sP	pwP	02 02 57.6	+11
KSH				PP	PP	02 06 39.3	+4.2
KSH				S	S	02 13 59.8	-2.6
KSH				sS	sS	02 14 16.1	+12
LAO	LASA Array	96.75	44	P	P	02 02 41.2	-0.3
	baz=261						
ARCES	ARCESS Array B	116.23	345	PKP	PKiKP	02 07 52.2	-1.4
	2.8nm,0.9s,baz=40,slow=1.5,SNR=6.0						
ARCES				PKKPbc	PKKPbc	02 18 22.5	-3.2
	4.7nm,1.0s,baz=220,slow=0.7,SNR=5.0						
CPUP	Villa Florida	124.24	132	PKP	PKiKP	02 08 09.9	-0.7
	1.0nm,0.6s,baz=14,slow=3.0,SNR=3.6						
SDV	Santo Domingo	124.75	87	*e*PKPdf	PKPdf	02 08 11.4	-0.5
BOSA	Boshof	124.96	223	PKP	PKiKP	02 08 12.1	-0.2
	2.6nm,0.6s,baz=146,slow=2.8,SNR=8.7						
AKASG	Malin Array Be	126.69	327	PKP	PKPdf	02 08 13.9	-0.4
	0.3nm,0.3s,baz=55,slow=1.8,SNR=3.0						
KEST	Kesra	147.23	323	PKPbc	PKPab	02 08 55.0	-1.4
	7.2nm,1.1s,baz=345,slow=5.8,SNR=4.1						
ES19	SONSECA Array	149.91	344	*e*PKPbc	PKPbc	02 09 00.8	-0.7
ES19				*e*PKPab	PKPab	02 09 06.4	-0.6
ESDC	Sonseca Array	149.95	344	PKPbc	PKPbc	02 09 00.8	-0.8
	1.0nm,0.7s,baz=14,slow=2.7,SNR=8.9						
TOA0	Torodi Ar. Sit	164.00	279	*e*PKPdf	PKPdf	02 09 13.3	-1.8
TORD	Torodi Ar. Bea	164.00	279	PKP	PKPdf	02 09 13.8	-1.4
	1.3nm,0.9s,baz=338,slow=4.9,SNR=8.2						
TORD				PKPab	PKPab	02 10 06.0	-2.3
	0.6nm,1.0s,baz=79,slow=3.1,SNR=2.6						
DBIC	Dimbokro	169.52	246	PKP	PKPdf	02 09 18.3	-1.1
	2.9nm,1.0s,baz=338,slow=5.3,SNR=4.1						

MEX 01 01:58:32.2±0.4**, 16°.30N×98°.20W, h14**^{km}±1^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.12	38	*i* P	Pg	01 58 34.8	-0.8
PNIG				*i* S	Sg	01 58 37.5	-0.5

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*IDC **01** 02:11:21.1±1.8, 10°.99S×165°.41E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.7/33, mbtmp3.9/6, ML4.2/1, Error ellipse: s-maj=49.0km s-min=29.3km az=134.0*

*ISCJB **01** 02:11:23.6±1.5, 11°.2S±0°.2×165°.5E±0°.2, h30^{km}, mb3.7/4, Error ellipse: s-maj=27.6km s-min=23.3km az=172.8*

ISC 01 02:11:25.5±1.5**, 11°.1S**±0°.2×**165°.5E**±0°.2**, h30**^{km}**, n6, σ0^{s}99**/6**, mb3.7**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.95	175	Pn	Pn	02 14 00.2	-0.1
	1.8nm,0.3s,baz=6.2,slow=11,SNR=15						
CTA	Charters Tower	20.55	242	P	P	02 16 03.1	+1.3
	1.7nm,0.5s,baz=83,slow=12,SNR=5.1						
WRA	Warramunga Arr	31.22	250	P	P	02 17 42.0	-0.6
	1.2nm,0.9s,baz=80,slow=9.2,SNR=9.6						
ASAR	Alice Springs	32.54	243	P	P	02 17 54.0	-0.1
	0.4nm,0.5s,baz=62,slow=10,SNR=5.2						
FITZ	Fitzroy Crossi	39.12	255	P	P	02 18 49.6	-0.9
	1.7nm,0.9s,baz=78,slow=9.3,SNR=3.0						
ILAR	Eielson Array	83.64	19	P	P	02 23 51.0	+0.2
	0.4nm,0.7s,baz=237,slow=5.5,SNR=5.8						

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*DDA **01** 02:16:46.5, 37°.89N×29°.30E, h7^{km}±2^{km}, ML2.7*

*ISCJB **01** 02:16:47.2±0.5, 37°.88N±0°.03×29°.27E±0°.03, h6^{km}±5^{km}, Error ellipse: s-maj=5.2km s-min=3.9km az=165.3*

*ISK **01** 02:16:47.1, 37°.85N×29°.26E, h6^{km}, ML2.2/7*

ISC 01 02:16:47.2±1.2**, 37°.91N**±0°.03×**29°.27E**±0°.03**, h6**^{km}±11^{km}**, n15, σ1^{s}17**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.25	230	PG	Pg	02 16 51.7	-0.3
DENT				SG	Sg	02 16 55.5	+0.3
KHAL	Karahalli	0.49	21	*i* P	Pg	02 16 56.3	-0.3
KHAL				*i* S	Sb	02 17 05.5	-0.3
KHAL				IAML_P			
	comp=Z,576nm,0.2s						
TAVA	DENIZLI_Tavas	0.53	213	*i* P	Pg	02 16 56.6	-0.7
TAVA				IAML_P			
	comp=Z,1µm,0.1s						
BRDR	BURDUR-Merkez	0.66	109	*i* P	Pg	02 16 59.2	-0.7
BRDR				*i* S	Sb	02 17 10.2	-0.5
BRDR				IAML_P			
	comp=Z,405nm,0.2s						
KZIL	AFYON_Kizioren	0.77	63	*i* P	Pg	02 17 01.6	-0.4
KZIL				*i* S	Sn	02 17 18.3	+1.6
KZIL				IAML_P			
	comp=Z,433nm,0.2s						
KULA	Kula-Manisa	0.77	322	PG	Pb	02 17 03.3	+0.2
KULA				SG	Sn	02 17 14.9	-1.8
MANT	Manisa	0.81	316	*i* P	Pb	02 17 03.4	-0.4
MANT				*i* S	Sg	02 17 13.6	+0.5
ISP	Isparta	0.99	95	PG	Pb	02 17 06.3	-0.6
ISP				SG	Sn	02 17 21.4	-0.8
AYDB	Zeytinkoy-Aydi	1.09	272	PN	Pg	02 17 07.9	-0.2
AYDN	Tasoluk	1.13	258	*i* P	Pn	02 17 09.7	0.0
AYDN				*i* S	Sb	02 17 23.3	-0.8
AYDN				IAML_P			
	comp=Z,1µm,0.2s						
TURN	Turunc	1.17	207	PN	Pg	02 17 12.9	+3.4
SHUT	Suhut-Afyon	1.19	57	PN	Pg	02 17 11.0	+0.9
SHUT				SN	Sn	02 17 28.9	+1.7
DALY	Dalyan (Mula)	1.20	204	PN	Pb	02 17 08.9	-1.4
DEMI	Demirci	1.21	339	*i* P	Pg	02 17 11.0	+0.6
DEMI				IAML_P			
	comp=Z,1µm,0.2s						
MLSB	Milas	1.34	243	PN	Pb	02 17 12.4	-0.3
MLSB				SN	Sg	02 17 31.2	+1.1

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*IDC **01** 02:17:20.5±0.5, 6°.85S×147°.77E, h0^{km}, mb4.8/23, mb1 4.9/24, mb1mx4.9/30, mbtmp4.8/24, ML4.6/1, MS5.9/27, Ms1 5.8/27, ms1mx5.8/31, Error ellipse: s-maj=16.3km s-min=12.6km az=76.0*

*BJI **01** 02:17:22.7, 6°.89S×148°.25E, h31^{km}, mB5.4/54, mb5.0/64, Ms6.1/83, Ms7 5.9/74*

*NEIC **01** 02:17:23.1±0.0, 6°.92S×147°.97E, h11^{km}, Moment Tensor Solution. s7 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.05; $M_{\theta\theta}$-4.97; $M_{\phi\phi}$6.03; $M_{r\theta}$2.36; $M_{\theta\phi}$1.57; $M_{\phi r}$1.76; Best double couple: $M_0$6.50000×10^{17} NP1:ϕ_s231.00000°, δ84.00000°, λ-28.00000°. NP2:ϕ_s324.00000°, δ62.00000°, λ-173.00000°. Principal axes: T 6.8200, Plg15.0000°, Azm280.0000°; N -0.6900, Plg61.0000°, Azm40.0000°; P -6.1200, Plg23.0000°, Azm183.0000°;*

*GCMT **01** 02:17:25.7±0.1, 6°.91S±0°.01×147°.73E±0°.01, h12^{km}, MW5.8/140, Moment Tensor Solution. s117, c215; s140, c369; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.51±.04; $M_{\theta\theta}$-4.73±.05; $M_{\phi\phi}$5.24±.05; $M_{r\theta}$0.87±.13; $M_{\theta\phi}$2.02±.04; $M_{\phi r}$0.90±.13; Best double couple: $M_0$5.51800×10^{17} NP1:ϕ_s56.00000°, δ89.00000°, λ13.00000°. NP2:ϕ_s326.00000°, δ77.00000°, λ179.00000°. Principal axes: T 5.8100, Plg10.0000°, Azm282.0000°; N -0.5850, Plg77.0000°, Azm59.0000°; P -5.2250, Plg8.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*MOS **01** 02:17:25.8±1.3, 6°.86S×147°.67E, h39^{km}, mb5.2/60, MS5.8/33 Error ellipse: s-maj=9.0km s-min=5.5km az=107.3*

*NEIC **01** 02:17:27.7±1.1, 6°.96S×147°.68E, h44^{km}±9^{km}, mb5.2/99, MS6.0/142, MW5.8, Error ellipse: s-maj=6.2km s-min=5.7km az=103.0*

*ISCJB **01** 02:17:27.2±0.1, 6°.98S±0°.02×147°.83E±0°.02, h54^{km}, mb5.1/181, MS5.9/205, Error ellipse: s-maj=3.5km s-min=3.1km az=167.7*

*DJA **01** 02:17:29.8±0.8, 7°S±4°×14°8E±°, h55^{km}±6^{km}, M5.6/63, mb5.3/63, mB6.0/54, Mw(mB)5.6/54, Mwp5.8/6*

ISC 01 02:17:29.3±0.2**, 7°.03S**±0°.03×**147°.85E**±0°.03**, h54**^{km}**, n672, σ2^{s}23**/582**, mb5.2**/176**, MS6.0**/205**, 36C-26D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	4.98	354	*e*Pn	Pn	02 18 40.5	-1.0
RABL	Rabaul	5.14	57	*e*Pn	Pn	02 18 42.2	-1.6
COEN	Coen	8.28	213	P	Pn	02 19 26.1	-0.7
	baz=8.4,SNR=36						
COEN				S	Sn	02 21 02.5	+3.5
	baz=8.4						
COEN	Coen	8.28	213	*e*Pn	Pn	02 19 25.6	-1.2
JAY	Jayapura	8.41	302	P	Pn	02 19 28.6	-0.1
JAY	Jayapura	8.41	302	Pn	Pn	02 19 28.8	+0.1
	3.3nm,0.3s,baz=110,slow=11,SNR=7.5						
JAY				Sn	Sn	02 21 01.9	-0.4
	1.2nm,0.3s,baz=356,slow=19,SNR=2.2						
JAY				LR	LR	02 23 31.8	
	comp=Z,136µm,18.6s,baz=96,slow=45						
GENI	Genyem	8.83	300	P	Pn	02 19 34.5	+0.1
HNR	Honiara	12.21	102	Pn	Pn	02 20 22.0	+1.4
HNR				Sn	Sn	02 22 38.0	+2.7
HNR	Honiara	12.21	102	P	Pn	02 20 22.0	+1.4
HNR						02 22 38.1	
HNR	Honiara	12.21	102	Pn	Pn	02 20 23.5	+2.9
	17nm,0.3s,baz=183,slow=17,SNR=2.3						
HNR				Sn	Sn	02 22 38.0	+2.7
	12nm,0.3s,baz=309,slow=6.5,SNR=2.4						
HNR				LR	LR	02 24 33.8	
	comp=Z,20µm,20.9s,baz=257,slow=35						
CTA	Charters Tower	13.07	187	P	Pn	02 20 33.1	+0.7
	baz=13						
CTA	Charters Tower	13.07	187	Pn	Pn	02 20 33.7	+1.3
	1.9nm,0.3s,baz=18,slow=14,SNR=35						
CTA				Sn	S	02 23 08.6	-10
	0.2nm,0.3s,baz=288,slow=20,SNR=1.9						
CTA				LR	LR	02 25 34.2	
	comp=Z,53µm,18.8s,baz=7.0,slow=37						
CTAO	Charters Tower	13.07	187	*e*Pn	Pn	02 20 34.5	+2.1
CTAO				*e*S	Sn	02 22 49.3	-7.1
CTAO	Charters Tower	13.07	187	*e*P	Pn	02 20 34.5	+2.1
RKPI	Ransiki, Papua	14.69	291	P	Pn	02 20 55.2	+1.1
QIS	Mount Isa	15.64	210	P	Pn	02 21 05.6	-0.8
	baz=16,SNR=32						
FAKI	Fak Fak	16.06	284	*e*Pn	Pn	02 21 10.0	-1.9
	110nm,1.1s						
FAKI	Fak Fak	16.06	284	P	Pn	02 21 10.9	-0.9
KDU	Kakadu	16.15	248	P	Pn	02 21 09.1	-3.8
	baz=16,SNR=23						
SAUI	Saumlaki	16.43	266	*e*Pn	Pn	02 21 16.5	0.0
	936nm,1.1s						
SAUI	Saumlaki	16.43	266	P	P	02 21 19.4	+0.9
SIJI	Sorong	17.63	290	P	Pn	02 21 30.4	-0.9
	1.9nm,0.3s,baz=101,slow=7.7,SNR=15						
SIJI				S	Sn	02 24 47.7	+0.6
	0.2nm,0.3s,baz=53,slow=20,SNR=2.3						
SIJI				LR	LR	02 30 17.4	
	comp=Z,106µm,18.4s,slow=44						
SWI	Sorong	17.64	290	P	P	02 21 32.0	+0.2
	225nm,0.8s,4µm						
WRAB	Tennant Creek	18.33	224	*e*Pn	P	02 21 38.7	-0.7
	110nm,1.0s						
WRAB				*e*S	Sn	02 25 04.9	+0.9
WRAB	Tennant Creek	18.33	224	*ce*P	P	02 21 38.6	-0.8
WRAB				pmax	pmax		
	comp=Z,136nm,1.1s						
WB2	Warramunga Arr	18.34	224	*e*P	P	02 21 38.5	-1.0
WRA	Warramunga Arr	18.34	224	P	P	02 21 37.5	-2.1
	comp=Z,2.1nm,0.3s,baz=49,slow=11,SNR=36						
WRA				S	S	02 25 10.4	+3.9
	comp=Z,0.2nm,0.3s,baz=43,slow=21,SNR=3.1						
WRA				LR	LR	02 29 29.2	
	comp=Z,80µm,18.4s,baz=50,slow=40						
EIDS	Eidsvold	18.50	171	P	Pn	02 21 42.3	+0.5
	baz=19,SNR=7.0						
EIDS	Eidsvold	18.50	171	*e*P	P	02 21 41.3	+0.2
	comp=Z,93nm,1.1s						
RMQ	Roma	19.37	178	P	P	02 21 51.1	+0.4
	baz=20,SNR=36						
QLP	Quilpie	19.75	190	P	P	02 21 54.5	-0.3
	baz=20,SNR=33						
KNRA	Kununurra	20.57	244	P	P	02 22 01.2	-2.7
	baz=21,SNR=5.3						
GUMO	Guam	20.70	352	PFAKE		02 22 20.0	+12
GUMO				LR	LR		
	comp=Z,25µm,19.0s						
GUMO	Guam	20.70	352	S	Sn	02 25 57.3	-3.6
	comp=Z,36nm,0.4s,baz=30,slow=20,SNR=2.0						
GUMO				LR	LR	02 29 01.6	
	comp=Z,23µm,20.3s,baz=184,slow=34						
AS01	Alice Springs	21.25	217	*e*P	P	02 22 09.4	-1.8
AS31	Alice Springs	21.28	217	*e*P	P	02 22 10.2	-1.4
	comp=Z,27nm,0.8s						
AS31				LR	LR		
	comp=Z,800nm,19.0s						
ASAR	Alice Springs	21.28	217	P	P	02 22 10.4	-1.1
	comp=Z,23nm,0.6s,baz=57,slow=9.6,SNR=94						
ASAR				S	Sn	02 26 14.3	-0.7
	comp=Z,28nm,1.0s,baz=34,slow=22,SNR=5.7						
ASAR				LR	LR	02 30 59.1	
	comp=Z,50µm,19.9s,baz=45,slow=38						
TNTI	Ternate	21.85	290	*e*P	P	02 22 20.7	+3.0
	comp=Z,311nm,1.2s						
TNTI				LR	LR		
	comp=Z,32µm,21.0s						
TNTI	Ternate	21.85	290	P	P	02 22 18.9	+1.2
SANI	Sanana	22.34	282	P	P	02 22 23.0	+0.1
DZM	Mont Dzumac	23.36	132	*e*P	P	02 22 33.2	-0.1
	comp=Z,228nm,1.3s						
DZM				*e*S	S	02 26 40.0	-2.4
	comp=Z,3µm,23.2s						
DZM				*e*LR	LR	02 28 19.6	
	comp=Z,102µm,21.3s						
DZM	Mont Dzumac	23.36	132	P	P	02 22 32.8	-0.6
DZM				LR	LR		
	comp=Z,96µm,20.0s						
DZM	Mont Dzumac	23.36	132	P	P	02 22 32.8	-0.6
	comp=Z,26nm,0.8s,baz=317,slow=17,SNR=9.7						
DZM				LR	LR	02 30 45.6	
	comp=Z,73µm,21.2s,baz=328,slow=34						
SOEI	Soe	23.48	262	*e*P	P	02 22 33.1	-1.5
	comp=Z,173nm,1.5s						
SOEI				LR	LR		
	comp=Z,21µm,22.0s						
SOEI	Soe	23.48	262	P	P	02 22 35.9	+1.3
ARMA	Armidale	23.54	172	P	P	02 22 35.0	0.0
	baz=24,SNR=15						
ARMA	Armidale	23.54	172	*e*P	P	02 22 33.3	-1.7
	comp=Z,150nm,1.3s						
ARMA				LR	LR		
	comp=Z,52µm,18.0s						
BATI	Baumata	24.11	261	P	P	02 22 43.9	+3.5
BATI	Baumata	24.11	261	P	P	02 22 42.4	+2.0
	comp=Z,21nm,0.4s,baz=195,slow=8.1,SNR=5.0						
BATI				S	S	02 27 03.4	+8.8
	comp=Z,16nm,0.5s,baz=111,slow=17,SNR=2.4						
BATI				LR	LR	02 33 49.7	
	comp=Z,44µm,20.7s,baz=90,slow=41						
FITZ	Fitzroy Crossi	24.27	241	P	P	02 22 40.0	-1.7
	baz=24,SNR=99						
FITZ	Fitzroy Crossi	24.27	241	P	P	02 22 39.9	-1.9
FITZ				S	S	02 27 03.9	+6.8
FITZ				Lg	Lg	02 30 08.7	
FITZ				LR	LR		
	comp=Z,40µm,20.0s						
FITZ	Fitzroy Crossi	24.27	241	P	P	02 22 39.9	-1.9
	comp=Z,10nm,0.6s,baz=62,slow=6.5,SNR=49						
FITZ				S	S	02 27 03.9	+6.8
	comp=Z,9.9nm,1.1s,baz=90,slow=14,SNR=2.1						
FITZ				Lg	Lg	02 30 08.7	
	comp=Z,26nm,1.2s,baz=147,slow=17,SNR=2.6						
FITZ				LR	LR	02 33 20.2	
	comp=Z,41µm,20.8s,baz=66,slow=40						
CMSA	Cobar Meteorol	24.47	184	P	P	02 22 42.9	-0.5
	baz=25,SNR=12						
KMSI	Cibinong	24.98	287	P	P	02 22 48.6	+0.4
BBSI	Bau Bau	25.17	272	P	P	02 22 51.2	+1.2
KWAJ	Kwajalein Atol	25.21	52	PFAKE		02 23 00.0	+10
KWAJ				LR	LR		
	comp=Z,33µm,19.0s						
STKA	Stephens Creek	25.40	192	P	P	02 22 52.0	+0.2
	baz=26,SNR=27						
STKA	Stephens Creek	25.40	192	P	P	02 22 50.9	-0.9
	comp=Z,25nm,0.7s,baz=7.3,slow=8.8,SNR=25						
STKA				S	S	02 27 24.4	+10
	comp=Z,3.5nm,0.9s,baz=348,slow=18,SNR=1.7						
STKA				LR	LR	02 33 45.6	
	comp=Z,37µm,19.8s,baz=11,slow=38						
MMRI	Maumere	25.42	265	*e*P	P	02 22 50.6	-1.5
	comp=Z,78nm,0.8s						
MMRI				LR	LR		
	comp=Z,34µm,20.0s						
MMRI	Maumere	25.42	265	P	P	02 22 53.5	+1.3
LUWI	Luwuk	25.70	282	*e*P	P	02 22 53.7	-1.1
	comp=Z,422nm,1.1s						
LUWI	Luwuk	25.70	282	P	P	02 22 55.9	+1.2
WRKA	Warakurna	25.89	224	P	P	02 22 53.9	-2.5
	baz=26,SNR=124						
EDFI	Ende, Flores	25.96	264	P	P	02 22 52.5	-4.8
MGCD	Mangrove Creek	26.23	174	P	P	02 23 00.6	+1.3
	baz=26,SNR=7.1						
DAV	Davao City (W)	26.26	302	PFAKE		02 23 10.0	+10
DAV				LR	LR		
	comp=Z,23µm,19.0s						
DAV	Davao City (W)	26.26	302⇑	*e*P	P	02 23 05.0	+5.2
TARA	Tarawa	26.37	73	PFAKE		02 23 10.0	+9.2
TARA				LR	LR		
	comp=Z,50µm,20.0s						
LHI	Lord Howe Isla	26.52	158	PFAKE		02 23 10.0	+8.0
LHI				LR	LR		
	comp=Z,12µm,22.0s						
APSI	Ampana	26.82	282	P	P	02 23 06.3	+1.4
MRSI	Marisa	26.90	285	P	P	02 23 16.6	+11
YNG	Young	27.14	179	P	P	02 23 06.8	-0.7
	baz=27,SNR=9.4						
BASI	Baing, Sumba	27.14	261	P	P	02 23 08.2	+0.5
HTT	Hallett	27.54	196	P	P	02 23 12.0	+0.8
	baz=28,SNR=12						
BKSI	Bulukumba	27.61	272	P	P	02 23 13.2	+1.2
BNSI	Bone	27.72	274	P	P	02 23 14.2	+1.2
BBOO	Buckleboo	27.89	202	P	P	02 23 14.4	+0.2
	baz=28,SNR=7.2						
BBOO	Buckleboo	27.89	202	*e*P	P	02 23 15.1	+0.9
	comp=Z,44nm,0.9s						
BBOO				LR	LR		
	comp=Z,37µm,18.0s						
KAPI	Kappang	28.01	273	PFAKE		02 23 30.0	+14
KAPI				LR	LR		
	comp=Z,24µm,19.0s						
SPSI	Sidrap Palu	28.11	275	P	P	02 23 17.6	+1.2
CAN	Canberra	28.18	178	PFAKE		02 23 30.0	+13
CAN				LR	LR		
	comp=Z,54µm,20.0s						
PCI	Palu	28.59	281	P	P	02 23 21.8	+1.1
MPSI	Mapaga	28.83	284	P	P	02 23 25.0	+2.2
	comp=Z,28nm,1.7s,comp=Z,831nm						
PLAI	Plampang	29.83	265	P	P	02 23 33.0	+1.3
FORT	Forrest	30.03	216	P	P	02 23 33.9	+0.6
	baz=30,SNR=13						
FORT	Forrest	30.03	216	*e*P	P	02 23 32.8	-0.5
	comp=Z,44nm,0.8s						
ARPS	Mount Arapiles	30.11	190	P	P	02 23 34.5	+0.7
	baz=30,SNR=6.1						
TOO	Toolangi	30.48	184	P	P	02 23 38.4	+1.2
	baz=31,SNR=4.0						
TOO	Toolangi	30.48	184	*e*P	P	02 23 37.7	+0.5
	comp=Z,68nm,1.4s						
TOO	Toolangi	30.48	184	*e*P	P	02 23 37.7	+0.5
TOO				pmax	pmax		
	comp=Z,68nm,1.4s						
MBWA	Marble Bar	30.60	240	*e*P	P	02 23 36.0	-2.4
	comp=Z,25nm,1.0s						
MBWA				LR	LR		
	comp=Z,34µm,21.0s						
FUNA	Funafuti	31.09	95	PFAKE		02 24 00.0	+17
FUNA				LR	LR		
	comp=Z,18µm,20.0s						
MSVF	Nonsavu	31.31	113	*i* P	P	02 23 44.6	-0.2
MSVF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MSVF				MLR	MLR		
	comp=Z,27µm,16.0s						
WAKE	Wake Island	32.05	35	PFAKE		02 24 00.0	+8.9
WAKE				LR	LR		
	comp=Z,14µm,19.0s						
JAGI	Jajag, Banyuwa	33.41	265	*e*P	P	02 24 00.1	-3.1
	comp=Z,40nm,0.8s						
JAGI	Jajag, Banyuwa	33.41	265	P	P	02 24 04.4	+1.2
MEEK	Meekatharra	33.95	232	P	P	02 24 05.8	-2.0
	baz=34,SNR=25						
KKM	Kota Kinabalu	34.13	292	*e*P	P	02 24 07.1	-2.5
	comp=Z,50nm,1.0s						
KKM	Kota Kinabalu	34.13	292	P	P	02 24 10.0	+0.4
TAU	Tasmania Unive	35.74	181	PFAKE		02 24 30.0	+7.1
TAU				LR	LR		
	comp=Z,36µm,19.0s						
PWJI	Pagerwojo	35.74	266	P	P	02 24 24.4	+1.1
PCJI	Pacitan	36.36	266	P	P	02 24 29.7	+1.1
WOJI	Wonogiri, Jawa	36.62	266	P	P	02 24 31.9	+1.1
SBUM	Sibu	36.78	284	*e*P	P	02 24 35.2	+2.9
	comp=Z,47nm,1.2s						
SBUM	Sibu	36.78	284	P	P	02 24 35.0	+2.8
MORW	Morawa	37.14	230	P	P	02 24 33.1	-1.9
	baz=37,SNR=4.9						
MORW	Morawa	37.14	230	*e*P	P	02 24 34.9	-0.2
	comp=Z,26nm,0.9s						
KLBR	Kellerberrin	37.23	225	P	P	02 24 33.6	-2.2
	baz=37,SNR=17						
NWAO	Narrogin (SRO)	38.35	224	P	P	02 24 45.2	-0.1
	baz=38,SNR=9.4						
NWAO	Narrogin (SRO)	38.35	224	*e*P	P	02 24 44.8	-0.5
	comp=Z,36nm,1.1s						

NWAO				*e*PP	PP	02 26 13.1	-0.7
NWAO				LR	LR		
	comp=Z,55µm,19.0s						
NWAO	Narrogin (SRO)	38.35	224	*e*P	P	02 24 44.8	-0.5
NWAO				*e*		02 26 13.1	
NWAO				pmax	pmax		
	comp=Z,35nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,55µm,19.0s						
KSM	Kuching	38.40	281	P	P	02 24 49.1	+3.2
MUN	Mundaring	38.53	226	P	P	02 24 47.0	+0.2
	baz=39,SNR=4.2						
KPJI	Karang Pucung	38.60	267	P	P	02 24 48.7	+1.1
CMJI	Cimerak	39.07	266	P	P	02 24 52.3	+0.8
	comp=Z,114nm,0.7s,comp=Z,2µm						
RAO	Raoul Island	39.09	129	PFAKE		02 25 00.0	+8.6
RAO				LR	LR		
	comp=Z,18µm,21.0s						
RKGY	Rocky Gully	39.52	222	P	P	02 24 55.7	+0.8
	baz=40,SNR=8.3						
CISI	Cisompet, Garu	39.70	267	*e*P	P	02 24 54.7	-2.2
CISI	Cisompet, Garu	39.70	267	P	P	02 24 57.6	+0.7
	comp=Z,212nm,1.1s,comp=Z,8µm						
NACB	Ninganchiao	40.22	321	*e*P	P	02 24 59.6	-1.3
	comp=Z,113nm,1.4s						
CBJI	Citeko	40.71	268	P	P	02 25 05.4	+0.2
YHNB	Yeheng	40.72	322	*e*P	P	02 25 05.7	+0.5
	comp=Z,102nm,1.2s						
TATO	Taipei	40.88	322	*e*P	P	02 25 06.3	0.0
	comp=Z,254nm,1.4s						
TATO				LR	LR		
	comp=Z,28µm,19.0s						
SKJI	Sukabumi	40.97	267	P	P	02 25 08.3	+1.0
	comp=Z,268nm,0.7s,comp=Z,3µm						
THZ	Tophouse	41.12	151	*e*P	P	02 25 10.7	+2.5
	comp=Z,62nm,0.9s						
LTZ	Lake Taylor	41.61	153	*e*P	P	02 25 16.4	+4.2
	comp=Z,75nm,1.3s						
SNZO	South Karori	41.66	149	PFAKE		02 25 20.0	+7.4
SNZO				LR	LR		
	comp=Z,25µm,20.0s						
DCZ	Deep Cove	41.79	160	*e*P	P	02 25 12.7	-0.8
	comp=Z,40nm,1.3s						
RPZ	Rata Peaks	41.82	155	*e*P	P	02 25 12.0	-1.9
	comp=Z,52nm,1.4s						
PPBI	Pangkal Pinang	41.84	275	P	P	02 25 15.4	+1.0
LBZ	Lake Benmore	42.01	156	*e*P	P	02 25 19.7	+4.3
	comp=Z,57nm,1.2s						
MLZ	Mavora Lakes	42.05	159	*e*P	P	02 25 15.6	-0.1
	comp=Z,70nm,1.3s						
WHZ	Wether Hill Ro	42.44	159	*e*P	P	02 25 17.5	-1.4
	comp=Z,79nm,1.5s						
MQZ	McQueen's Vall	42.51	153	*e*P	P	02 25 19.5	+0.1
	comp=Z,84nm,1.4s						
QZH	Quanzhou	42.68	319	P	P	02 25 21.2	+0.2
QZH				S	S	02 31 36.3	-4.5
QZH				LR	LR		
	comp=Z,4µm,15.7s						
QZH				LR	LR		
	comp=Z,12µm,19.4s						
QZH				LR	LR		
	comp=Z,8µm,18.9s						
KASI	Kota Agung	43.11	269	P	P	02 25 25.7	+1.0
MDSI	Maura Dua	43.51	271	P	P	02 25 27.1	-0.9
	comp=Z,33nm,1.7s,comp=Z,2µmcomp=Z,28µm						
LHSI	Lahat	44.23	272	P	P	02 25 42.2	+8.5
MJAR	Matsushiro Arr	44.27	349	P	P	02 25 31.4	-2.3
	comp=Z,18nm,1.1s,baz=181,slow=8.0,SNR=20						
MJAR				S	S	02 32 00.1	-3.7
	comp=Z,0.5nm,0.3s,baz=345,slow=14,SNR=2.6						
MJAR				LR	LR	02 42 34.0	
	comp=Z,5µm,18.9s,baz=155,slow=34						
MAJO	Matsushiro	44.28	349	*e*P	P	02 25 31.7	-2.1
	comp=Z,89nm,1.4s						
MAJO				LR	LR		
	comp=Z,12µm,22.0s						
MAJO	Matsushiro	44.28	349	*i* P	P	02 25 32.5	-1.3
MAJO				pmax	pmax		
	comp=Z,70nm,1.4s						
MAJO				MLR	MLR		
	comp=Z,11µm,16.0s						
MAT	Matsushiro	44.28	349	P	P	02 25 31.5	-2.3
MAT				S	S	02 32 04.0	+0.2
MJB9	Matsu-Tunnel	44.28	349	*e*P	P	02 25 32.4	-1.4
	comp=Z,62nm,1.2s						
MYKOM	Kota Tinggi	44.77	280	P	P	02 25 40.1	+2.0
KGM	Kluang	45.34	280	P	P	02 25 43.6	+1.0
QIZ	Qiongzhong	45.53	305	P	P	02 25 43.5	-0.5
QIZ				sP	pP	02 25 56.2	-1.6
QIZ				PP	PP	02 27 35.7	+4.2
QIZ				S	S	02 32 20.6	-1.9
QIZ				pmax	pmax		
	comp=Z,390nm,4.5s						
QIZ				LR	LR		
	comp=Z,3µm,18.6s						
QIZ				LR	LR		
	comp=Z,7µm,18.6s						
QIZ				LR	LR		
	comp=Z,12µm,19.1s						
QIZ	Qiongzhong	45.53	305	PFAKE		02 25 50.0	+6.0
QIZ				LR	LR		
	comp=Z,2µm,20.0s						
SSE	Sheshan	45.70	327	P	P	02 25 44.1	-1.0
SSE				S	S	02 32 25.6	+1.1
SSE				pmax	pmax		
	comp=Z,16nm,0.9s						
SSE				pmax	pmax		
	comp=Z,290nm,11.5s						
SSE				LR	LR		
	comp=Z,7µm,20.9s						
SSE				LR	LR		
	comp=Z,7µm,21.1s						
SSE	Sheshan	45.70	327	*e*P	P	02 25 43.6	-1.4
	comp=Z,132nm,1.3s						
SSE				LR	LR		
	comp=Z,19µm,20.0s						
KTGM	Kuala Trenggan	46.28	284	P	P	02 25 49.5	-0.6
PDSI	Padang	47.63	275	P	P	02 26 01.5	+0.9
NJ2	Nanjing	47.70	326	*e*P	P	02 26 00.6	-0.1
NJ2				S	S	02 32 55.9	+2.8
NJ2				SS	SS	02 36 19.2	-3.0
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,330nm,3.5s						
NJ2				LR	LR		
	comp=Z,19µm,20.6s						
NJ2				LR	LR		
	comp=Z,12µm,16.3s						
NJ2				LR	LR		
	comp=Z,17µm,22.2s						
KSRS	Korea Array	48.01	339	P	P	02 26 01.5	-1.5
	comp=Z,12nm,1.0s,baz=157,slow=9.5,SNR=16						
KSRS				LR	LR	02 44 49.7	
	comp=Z,10µm,20.1s,baz=155,slow=34						
KSAR	Wonju Array Be	48.01	339	P	P	02 26 01.5	-1.6
KSAR	Wonju Array Be	48.01	339	P	P	02 26 01.5	-1.6
KS01	Wonju Array Si	48.04	339	*e*P	P	02 26 01.4	-1.9
IPM	Ipoh	48.11	282	*e*P	P	02 26 00.8	-3.5
	comp=Z,43nm,0.9s						
IPM	Ipoh	48.11	282	P	P	02 26 05.1	+0.8
JOHN	Johnston Islan	48.31	60	PFAKE		02 26 20.0	+14
JOHN				LR	LR		
	comp=Z,1µm,21.0s						
MIDW	Midway	48.53	42	PFAKE		02 26 20.0	+13
MIDW				LR	LR		
	comp=Z,9µm,22.0s						
KULM	Kulim	48.66	283	*e*P	P	02 26 07.4	-1.2
	comp=Z,49nm,1.1s						
KULM	Kulim	48.66	283	P	P	02 26 07.7	-0.9
MNSI	Mandailing Nat	48.78	277	P	P	02 26 13.0	+3.6
SISI	Saibi	48.93	274	P	P	02 26 11.5	+0.9
ERM	Erimo	48.99	355	PFAKE		02 26 20.0	+9.5
ERM				LR	LR		
	comp=Z,4µm,22.0s						
WHN	Wuhan	49.26	321	⇓P	P	02 26 11.9	-0.9
WHN				S	S	02 33 18.7	+3.6
WHN				LR	LR		
	comp=Z,23µm,16.4s						
WHN				LR	LR		
	comp=Z,32µm,14.7s						
WHN				LR	LR		
	comp=Z,53µm,20.1s						
SKNT	Sakolnakorn	49.49	299	P	P	02 26 15.9	+1.1
	comp=Z,26nm,1.0s,comp=Z,987nm						
PSI	Prapat	49.80	280	*e*P	P	02 26 15.5	-1.8
	comp=Z,188nm,1.5s						
PSI	Prapat	49.80	280	*e*P	P	02 26 15.5	-1.8
PSI				pmax	pmax		
	comp=Z,188nm,1.5s						
PSI	Prapat	49.80	280	LR	LR	02 51 14.0	
	comp=Z,8µm,20.7s,baz=91,slow=41						
SRAK	Srakaew	50.03	295	P	P	02 26 22.6	+3.7
	comp=Z,56nm,1.3s,comp=Z,1µm						
TRTT	Trang	50.24	286	P	P	02 26 27.5	+7.0
	comp=Z,19nm,2.4s						
COCO	West Island	50.50	260	PFAKE		02 26 30.0	+7.5
COCO				LR	LR		
	comp=Z,10µm,22.0s						
PATY	Pattaya	50.71	293	P	P	02 26 34.4	+10
CHAI	Chaiyaphum	50.80	297	P	P	02 26 24.8	+0.1
	comp=Z,16nm,0.7s,comp=Z,142nm						
GSI	Gunungsitoli	50.84	277	*e*P	P	02 26 23.3	-1.8
	comp=Z,50nm,0.9s						
GSI	Gunungsitoli	50.84	277	P	P	02 26 25.1	0.0
	comp=Z,75nm,0.9s,comp=Z,3µm						
YUK	Yuzh-Kuril'sk	50.86	358	*e*P	P	02 26 23.0	-1.6
YUK				*e*		02 28 14.4	
YUK				*e*S	S	02 33 34.6	-2.3
KCSI	Kotacane, Aceh	51.07	280	P	P	02 26 25.4	-1.4
	comp=Z,72nm,1.3s,comp=Z,1µm						
PKDT	Phuket	51.55	286	P	P	02 26 36.4	+6.0
	comp=Z,45nm,1.1s,comp=Z,2µm						
TPTI		51.59	280	P	P	02 26 31.6	+0.9
DL2	Dalian	51.78	334	P	P	02 26 33.6	+2.0
DL2				S	S	02 33 52.0	+2.2
DL2				pmax	pmax		
	comp=Z,56nm,1.7s						
DL2				pmax	pmax		
	comp=Z,410nm,4.7s						
DL2				LR	LR		
	comp=Z,10µm,20.4s						
DL2				LR	LR		
	comp=Z,10µm,18.3s						
DL2				LR	LR		
	comp=Z,14µm,22.2s						
TIA	Tai'an	51.79	328	P	P	02 26 29.4	-2.4
TIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PHET	Kaeng Krachan	51.84	292	P	P	02 26 34.9	+2.4
	comp=Z,26nm,1.2s,comp=Z,293nm						
PBKT	Sadao Pong	51.96	297	P	P	02 26 36.5	+3.1
	comp=Z,25nm,2.2s,comp=Z,2µm						
GYA	Guiyang	51.99	311	*e*P	P	02 26 34.8	+1.2
GYA				pP	pP	02 26 44.3	-3.3
GYA				PP	PP	02 28 33.0	+0.7
GYA				S	S	02 33 53.4	-0.1
GYA				SS	SS	02 37 28.5	-2.8
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
GYA				pmax	pmax		
	comp=Z,180nm,8.0s						
GYA				LR	LR		
	comp=Z,3µm,24.6s						
GYA				LR	LR		
	comp=Z,5µm,24.7s						
GYA				LR	LR		
	comp=Z,8µm,20.1s						
KUR	Kuril'sk	52.02	0	*ce*P	P	02 26 33.0	-0.3
ENH	Enshi	52.24	317	*e*P	P	02 26 31.3	-4.0
ENH				LR	LR		
	comp=Z,17µm,19.0s						
SNSI	Sinabang, Aceh	52.27	279	P	P	02 26 36.6	+0.9
RAR	Rarotonga	52.48	111	PFAKE		02 26 50.0	+13
RAR				LR	LR		
	comp=Z,5µm,21.0s						
SRDT	SRDT	52.80	294	P	P	02 26 42.2	+2.6
	comp=Z,86nm,1.4s,comp=Z,2µm						
TEY	Ternei	52.80	350	⇓*e*P	P	02 26 37.4	-1.7
TEY				*e*		02 33 54.2	
TEY				pmax	pmax		
	comp=N,10.0nm,2.0s						
TEY				pmax	pmax		
	comp=Z,10.0nm,2.3s						
TEY				pmax	pmax		
	comp=E,5µm,22.7s						
UTHA	Uthaitani	52.94	295	P	P	02 26 40.7	+0.1
	comp=E,20nm,1.1s,comp=E,192nm						
USA0B	Ussuriysk Arra	52.97	346	*e*P	P	02 26 39.2	-1.2
	comp=E,35nm,1.4s						
USRK	Ussuriysk Ar.	52.97	346	P	P	02 26 38.0	-2.3
	comp=E,17nm,1.1s,baz=172,slow=9.8,SNR=9.5						
USRK				S	S	02 34 04.0	-1.9
	comp=E,0.6nm,0.5s,baz=172,slow=28,SNR=1.8						
USRK				LR	LR	02 46 11.3	
	comp=E,10µm,20.9s,baz=144,slow=33						
SNY	Shenyang	53.45	338	⇑P	P	02 26 45.8	+1.9
SNY				S	S	02 34 14.8	+2.2
SNY				pmax	pmax		
	comp=E,9.0nm,0.5s						
SNY				LR	LR		
	comp=E,8µm,18.5s						
SNY				LR	LR		
	comp=E,6µm,17.1s						
SNY				LR	LR		
	comp=E,15µm,23.5s						
SUKH	Sukhothai	53.49	298	P	P	02 26 46.6	+1.9
	comp=E,12nm,0.9s						
UMPA	Umpang Tak	53.70	296	P	P	02 26 47.0	+0.8
	comp=E,16nm,0.8s						
YSS	Yuzh-Sakhalins	53.94	356	*e*P	P	02 26 45.6	-1.8
	comp=E,33nm,1.0s						
YSS				LR	LR		
	comp=Z,4µm,20.0s						
YSS	Yuzh-Sakhalins	53.94	356	*e*P	P	02 26 47.7	+0.3
YSS				*e**SP	pP	02 27 02.2	+0.7
YSS				*e*		02 27 57.1	
YSS				*e*PPP	PPP	02 29 56.0	
YSS				*e*S	S	02 34 22.4	+3.5
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,4µm,18.0s						
YSS				MLR	MLR		
	comp=N,3µm,17.0s						
YSS				MLR	MLR		
	comp=E,2µm,17.0s						
MDJ	Mudanjiang	53.98	344	*e*P	P	02 26 47.1	-0.7
	comp=E,17nm,1.0s						
MDJ				LR	LR		
	comp=Z,6µm,20.0s						
PAYA	Payao	54.04	300	P	P	02 26 50.3	+1.6
	comp=Z,20nm,0.8s,comp=Z,224nm						
KMI	Kunming	54.29	308	P	P	02 26 52.6	+1.9
KMI				pP	pP	02 27 03.9	-0.9
KMI				S	S	02 34 30.7	+5.7
KMI				pmax	pmax		
	comp=Z,14nm,1.2s						
KMI				pmax	pmax		
	comp=Z,230nm,5.4s						
KMI				LR	LR		
	comp=Z,10µm,19.9s						
KMI				LR	LR		
	comp=Z,3µm,24.6s						
KMI				LR	LR		
	comp=Z,7µm,21.5s						
CM01	Chiang Mai Arr	54.45	298	*e*P	P	02 26 51.7	0.0
CM31	Chiang Mai Arr	54.48	298	*e*P	P	02 26 53.8	+1.8
CMAR	Chiang Mai Arr	54.48	298	*ce*P	P	02 26 52.0	+0.1
CMAR				pmax	pmax		
	comp=Z,20nm,0.7s						
CMAR	Chiang Mai Arr	54.48	298	P	P	02 26 50.4	-1.5
	comp=Z,20nm,0.7s,baz=123,slow=5.9,SNR=47						
CMAR				S	S	02 34 30.1	+2.8
	comp=Z,1.3nm,0.3s,baz=127,slow=33,SNR=2.8						
CN2	Changchun	54.51	340	*e*P	P	02 26 51.0	-0.6
CN2				*e*pP	pP	02 27 01.0	-4.9
CN2				*e*S	S	02 34 25.4	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,9µm,20.0s						
CN2				LR	LR		
	comp=Z,9µm,20.0s						
CN2				LR	LR		
	comp=Z,10µm,20.0s						
CHTO	Chiang Mai	54.62	299	*e*P	P	02 26 51.2	-1.7
	comp=Z,27nm,1.1s						
CHTO				LR	LR		
	comp=Z,5µm,19.0s						
CHTO	Chiang Mai	54.62	299	*e*P	P	02 26 51.2	-1.7
CHTO				pmax	pmax		
	comp=Z,27nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,5µm,19.0s						
CHTO	Chiang Mai	54.62	299	P	P	02 26 54.9	+2.0
	comp=Z,100nm,0.9s,comp=Z,7µm						
XAN	Xi'an	55.01	320	P	P	02 26 53.9	-1.6
XAN				pP	pP	02 27 04.1	-5.5
XAN				sP	pwP	02 27 08.0	-3.9
XAN				PP	PP	02 28 58.5	-0.7
XAN				S	S	02 34 31.9	-2.1
XAN				sS	pS	02 34 48.6	-2.3
XAN				ScS	ScS	02 36 39.8	-0.5
XAN				SS	SS	02 38 15.4	-3.2
XAN				pmax	pmax		
	comp=Z,17nm,1.3s						
XAN				pmax	pmax		
	comp=Z,280nm,8.3s						
XAN				LR	LR		
	comp=Z,9µm,17.3s						
XAN				LR	LR		
	comp=Z,5µm,18.0s						
XAN				LR	LR		
	comp=Z,9µm,19.6s						
XAN	Xi'an	55.01	320	*e*P	P	02 26 53.9	-1.6
	comp=Z,28nm,1.1s						
XAN	Xi'an	55.01	320	*e*P	P	02 26 53.9	-1.6
XAN				pmax	pmax		
	comp=Z,28nm,1.1s						
BJT	Baijiatuau	55.19	331	*e*P	P	02 26 55.2	-1.5
	comp=Z,31nm,1.2s						
BJT				LR	LR		
	comp=Z,20µm,21.0s						
BJT	Baijiatuau	55.19	331	*e*P	P	02 26 55.2	-1.5
BJT				pmax	pmax		
	comp=Z,31nm,1.2s						
BJT				MLR	MLR		
	comp=Z,20µm,21.0s						
BJI	Beijing	55.21	331	P	P	02 26 55.0	-1.7
BJI				S	S	02 34 37.7	+1.4
BJI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BJI				LR	LR		
	comp=Z,3µm,19.1s						
BJI				LR	LR		
	comp=Z,6µm,17.8s						
BJI				LR	LR		
	comp=Z,1µm,23.2s						
CMBY	CAMPBELL BAY	55.56	283	*e*P	P	02 26 56.2	-3.6
CMBY				IAmb	IAmb	02 27 00.3	
	comp=Z,4µm,3.9s						
CD2	Chengdu	56.59	314	P	P	02 27 05.5	-1.4
CD2				pP	pP	02 27 17.8	-3.2
CD2				sP	pwP	02 27 23.1	-0.3
CD2				PP	PP	02 29 11.6	-1.8
CD2				S	S	02 34 54.3	-0.9
CD2				SS	SS	02 38 43.4	-0.2
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				pmax	pmax		
	comp=Z,1µm,7.2s						
CD2				LR	LR		
	comp=Z,11µm,21.4s						
CD2				LR	LR		
	comp=Z,18µm,18.9s						
CD2				LR	LR		
	comp=Z,16µm,19.9s						
KLR	Kul'dur	57.77	348	⇑*e*P	P	02 27 12.0	-2.8
KLR	Kul'dur	57.77	348	LR	LR	02 49 38.4	
	comp=Z,8µm,21.3s,baz=170,slow=34						
TYV	Tymovskoe	57.83	356	*e*P	P	02 27 11.0	-4.2
TYV				*e*S	S	02 35 06.3	-4.3
TYV				pmax	pmax		
	comp=Z,300nm,7.5s						
TYV				smax	smax		
	comp=E,2µm,11.9s						
PBA	Port Blair	57.87	288	*e*P	P	02 27 13.5	-2.6
HHC	Hu-ho-hao-te	58.15	328	*e*P	P	02 27 20.1	+2.3
HHC				S	S	02 35 16.5	+1.1
HHC				SS	SS	02 39 12.4	+4.5
HHC				pmax	pmax		
	comp=E,14nm,0.8s						
HHC				pmax	pmax		
	comp=E,230nm,5.5s						
HHC				LR	LR		
	comp=E,9µm,20.0s						
HHC				LR	LR		
	comp=E,10µm,18.2s						
HHC				LR	LR		
	comp=E,15µm,21.8s						
GRNR	Gornyy	58.41	352	*e*P	P	02 27 14.8	-4.5
BTO	Baotou	58.80	327	*e*P	P	02 27 24.4	+2.1
LZH	Lanzhou	59.53	319	*e*P	P	02 27 28.8	+1.2
LZH				pP	pP	02 27 37.9	-3.9
LZH				sP	pwP	02 27 41.7	-2.4
LZH				PP	PP	02 29 40.9	+1.3
LZH				*e*S	S	02 35 37.9	+4.2
LZH				sS	pS	02 35 52.0	+0.1
LZH				SS	SS	02 39 35.3	+5.3
LZH				pmax	pmax		
	comp=E,240nm,1.4s						
LZH				pmax	pmax		
	comp=E,1µm,6.5s						
LZH				LR	LR		
	comp=E,7µm,15.7s						
LZH				LR	LR		
	comp=E,13µm,15.5s						
LZH				LR	LR		
	comp=E,20µm,18.3s						
KIP	Kipapa	60.16	61	PFAKE		02 27 40.0	+8.1
KIP				LR	LR		
	comp=Z,16µm,19.0s						
NKL	Nikolayevsk	60.26	355	*e*P	P	02 27 29.0	-2.9
NKL				*e*		02 35 45.0	
NKL				pmax	pmax		
	comp=Z,55nm,1.1s						
PEA0B	Petropavlovsk-	60.49	7	*e*P	P	02 27 35.5	+1.9
	comp=Z,36nm,1.0s						
PETK	Petropavlovsk-	60.49	7	*e*P	P	02 27 33.6	0.0
PETK	Petropavlovsk-	60.49	7	*e*P	P	02 27 33.6	0.0
PETK	Petropavlovsk-	60.49	7	P	P	02 27 30.0	-3.6
	comp=Z,14nm,0.8s,baz=176,slow=9.9,SNR=8.9						
PET	Petropavlovsk	60.52	7	PFAKE		02 27 50.0	+16
PET				LR	LR		
	comp=Z,4µm,20.0s						
PET	Petropavlovsk	60.52	7	*e*P	P	02 27 40.1	+6.3
PET				*i* S	S	02 35 52.3	+7.0
PET				*e*SS	SS	02 39 43.4	-1.1
PET				pmax	pmax		
	comp=Z,700nm,17.5s						
HIA	Hailar	61.21	339	*e*P	P	02 27 37.2	-1.3
	comp=Z,44nm,1.2s						
HIA				LR	LR		
	comp=Z,11µm,20.0s						
HIA	Hailar	61.21	339	⇓*e*P	P	02 27 37.8	-0.8
HIA				pmax	pmax		
	comp=Z,32nm,1.4s						
HIA				MLR	MLR		
	comp=Z,11µm,18.0s						
POHA	Pohakuloa	61.74	63	PFAKE		02 28 00.0	+17
POHA				LR	LR		
	comp=Z,13µm,19.0s						
PPT	Papeete	61.80	106	LR	LR	02 48 58.2	
	comp=Z,4µm,21.6s,baz=268,slow=31						
PPT2	Papeete2	61.80	106	*e*S	S	02 36 02.9	-0.2
	comp=Z,10µm,28.0s						
PPT2				*e*LQ	LQ	02 43 32.2	
	comp=Z,8µm,25.0s						
PPT2				*e*LR	LR	02 46 09.9	
	comp=Z,11µm,24.2s						
TBI	Tubuai	62.20	113	*e*S	S	02 36 08.0	+0.2
	comp=Z,8µm,29.8s						
TBI				*e*LQ	LQ	02 43 41.5	
	comp=Z,7µm,25.0s						
TBI				*e*LR	LR	02 46 20.5	
	comp=Z,7µm,23.5s						
ZEA	Zeya	62.99	346	*e*P	P	02 27 49.8	-0.6
ZEA				*e*S	S	02 36 20.0	+3.5
ZEA				pmax	pmax		
	comp=N,86nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.6s						
ZEA				smax	smax		
	comp=E,1µm,10.0s						
ZEA				smax	smax		
	comp=N,800nm,9.0s						
ZEA				MLR	MLR		

	comp=Z,8µm,17.0s						
ZEA				MLR	MLR		
	comp=E,2µm,16.0s						
ZEA				MLR	MLR		
	comp=N,6µm,17.0s						
SHL	Shillong	63.28	303	eP	P	02 27 54.7	+1.6
	comp=N,64nm,1.1s						
SHL	Shillong	63.28	303	eP	P	02 27 54.7	+1.6
SHL				pmax	pmax		
	comp=Z,64nm,1.1s						
SHL	Shillong	63.28	303	eP	P	02 27 50.0	-3.1
	comp=Z,7.0nm,1.2s						
SHL				i S	S	02 36 21.0	-0.6
CASY	Casey	64.50	196	eP	P	02 27 59.7	-0.4
	comp=Z,29nm,1.3s						
CASY				LR	LR		
	comp=Z,2µm,20.0s						
ULN	Ulaanbaatar	65.41	331	eP	P	02 28 04.4	-2.2
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	65.41	331	ceP	P	02 28 05.5	-1.1
ULN				pmax	pmax		
	comp=Z,12nm,1.3s						
ULN	Ulaanbaatar	65.41	331	P	P	02 28 06.8	+0.2
	SNR=13						
LSA	Lhasa	65.53	307	P	P	02 28 10.9	+2.8
LSA				S	S	02 36 49.4	-0.4
LSA				pmax	pmax		
	comp=Z,22nm,0.8s						
LSA				LR	LR		
	comp=Z,2µm,25.6s						
LSA				LR	LR		
	comp=Z,1µm,21.0s						
LSA				LR	LR		
	comp=Z,6µm,24.1s						
LSA	Lhasa	65.53	307	eP	P	02 28 06.3	-1.8
	comp=Z,19nm,0.9s						
LSA				LR	LR		
	comp=Z,4µm,20.0s						
SONM	Songino Array	65.71	331	P	P	02 28 05.1	-3.3
	comp=Z,7.5nm,1.1s,baz=152,slow=6.4,SNR=24						
SONM				LR	LR	02 56 38.2	
	comp=Z,15µm,19.6s,baz=134,slow=36						
SONM				PKP2bc		02 56 52.9	
	comp=Z,0.3nm,0.5s,baz=302,slow=2.7,SNR=3.4						
SONA1	Songino Array	65.71	331	eP	P	02 28 07.4	-1.1
ADK	Adak	66.07	23	PFAKE		02 28 20.0	+10
ADK				LR	LR		
	comp=Z,9µm,20.0s						
MA2	Magadan	66.43	2	eP	P	02 28 12.7	0.0
	comp=Z,34nm,1.3s						
MA2				LR	LR		
	comp=Z,4µm,21.0s						
MA2	Magadan	66.43	2	ceP	P	02 28 12.5	-0.2
MA2				pmax	pmax		
	comp=Z,33nm,1.4s						
MA2				MLR	MLR		
	comp=Z,5µm,18.0s						
BOK	Bokaro	67.75	299	eP	P	02 28 21.9	+0.1
BOK				IAmb	IAmb	02 28 25.0	
	comp=Z,36nm,0.2s						
RAMN	Ramite	68.20	303	eP	P	02 28 26.3	+1.4
	comp=Z,22nm,0.7s						
PALK	Pallekele	68.46	281	eP	P	02 28 26.1	-0.4
	comp=Z,7.6nm,0.6s						
PALK	Pallekele	68.46	281	eP	P	02 28 26.1	-0.4
PALK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JIRN	Jiri	68.79	303	eP	P	02 28 27.2	-1.5
	comp=Z,51nm,0.6s						
ZAK	Zakamensk	68.94	331	eP	P	02 28 27.1	-1.7
ZAK				pmax	pmax		
	comp=Z,22nm,1.2s						
GUN	Gumba	69.13	303	eP	P	02 28 28.7	-2.1
	comp=Z,88nm,0.8s						
PKI	Pulchoki	69.41	303	eP	P	02 28 32.0	-0.5
	comp=Z,184nm,1.6s						
PKIN	Phulchoki	69.42	303	eP	P	02 28 31.9	-0.6
	comp=Z,81nm,1.3s						
KKN	Kakani	69.59	303	eP	P	02 28 31.5	-2.0
	comp=Z,118nm,1.1s						
TLY	Talaya	69.64	332	eP	P	02 28 32.3	-0.7
	comp=Z,5.8nm,0.5s						
TLY				LR	LR		
	comp=Z,5µm,20.0s						
TLY	Talaya	69.64	332	⇓iP	P	02 28 33.3	+0.3
TLY				MLR	MLR		
	comp=Z,13µm,19.0s						
TLY	Talaya	69.64	332	P	P	02 28 32.6	-0.4
	SNR=9.0						
TLY				P	P	02 28 32.6	-0.4
	SNR=9.0						
DMN	Daman	69.67	303	eP	P	02 28 33.4	-0.6
	comp=Z,81nm,0.8s						
SEY	Seymchan	69.85	2	ceP	P	02 28 32.6	-1.4
MDRS	Chennai	70.05	287	eP	P	02 28 34.2	-2.0
MDRS				IAmb	IAmb	02 28 35.1	
	comp=Z,18nm,0.5s						
YAK	Yakutsk	70.28	351	eP	P	02 28 35.9	-0.8
YAK				e		02 28 55.1	
YAK				e*PP	PcP	02 28 59.7	+1.7
YAK				ePPP	PPP	02 32 50.4	
YAK				eS	S	02 37 42.2	-2.2
YAK				e*SS	SKiKP	02 38 18.4	+1.3
YAK				e		02 38 23.7	
YAK				pmax	pmax		
	comp=Z,191nm,1.9s						
YAK				pmax	pmax		
	comp=N,63nm,0.9s						
YAK				pmax	pmax		
	comp=E,17nm,1.5s						
YAK				pmax	pmax		
	comp=N,1µm,6.1s						
YAK				pmax	pmax		
	comp=Z,3µm,9.1s						
YAK				pmax	pmax		
	comp=E,626nm,4.7s						
YAK				smax	smax		
	comp=N,7µm,10.5s						
YAK				smax	smax		
	comp=E,5µm,10.5s						
VNDA	Vanda	70.84	177	P	P	02 28 39.5	-0.5
	comp=E,8.6nm,0.8s,baz=336,slow=7.5,SNR=23						
VNDA				LR	LR	02 57 40.8	
	comp=E,13µm,18.6s,baz=344,slow=34						
MOY	Mondy	70.88	331	eP	P	02 28 40.3	-0.4
MOY				pmax	pmax		
	comp=Z,49nm,1.9s						
KOLN	Koldanda	70.99	302	eP	P	02 28 40.0	-2.0
	comp=Z,76nm,0.8s						
DANN	Dangsing	71.04	303	eP	P	02 28 38.2	-4.2
	comp=Z,61nm,0.7s						
TAOE	Nuku Hiva Isla	71.24	97	eS	S	02 38 01.3	+3.7
	comp=Z,2µm,23.5s						
TAOE				eLQ	LQ	02 47 32.0	
	comp=Z,4µm,25.5s						
TAOE				eLR	LR	02 50 27.2	
	comp=Z,7µm,21.7s,baz=263						
SBA	Scott Base	71.47	176	PFAKE		02 29 00.0	+16
SBA				LR	LR		
	comp=Z,9µm,19.0s						
PYUN	Piuthan	71.60	303	eP	P	02 28 43.1	-2.6
	comp=Z,98nm,0.8s						
KNGR	Kungurtug, Tuv	71.94	329	i P	P	02 28 46.5	-0.6
TRD	Trivandrum	72.33	281	eP	P	02 28 50.4	+0.3
TRD				IAmb	IAmb	02 28 59.8	
	comp=Z,42nm,0.9s						
HYB	Hyderabad	72.61	291	i P	P	02 28 52.0	+0.3
HYB				eS	S	02 38 12.0	-1.0
HYB	Hyderabad	72.61	291	eP	P	02 28 50.6	-1.1
JBP	Jabalpur	72.74	297	⇑eP	P	02 28 51.6	-0.7
NGP	Nagpur	73.05	295	⇓eP	P	02 28 52.9	-1.3
WMQ	Urumqi	74.12	319	P	P	02 29 00.3	+0.1
WMQ				pP	pP	02 29 06.9	-7.9
WMQ				sP	PcP	02 29 15.8	+0.8
WMQ				PP	PP	02 31 45.9	-0.4
WMQ				S	S	02 38 32.8	+3.6
WMQ				sS	pS	02 38 46.2	-1.9
WMQ				pmax	pmax		
	comp=Z,49nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,580nm,3.7s						
WMQ				LR	LR		
	comp=Z,11µm,19.1s						
WMQ				LR	LR		
	comp=Z,9µm,19.1s						
WMQ				LR	LR		
	comp=Z,8µm,23.9s						
WMQ	Urumqi	74.12	319	eP	P	02 29 00.2	+0.1
	comp=Z,43nm,1.4s						
WMQ	Urumqi	74.12	319	eP	P	02 29 00.2	+0.1
WMQ				pmax	pmax		
	comp=Z,43nm,1.4s						
DGAR	Diego Garcia	74.70	264	PFAKE		02 29 10.0	+6.0
DGAR				LR	LR		
	comp=Z,2µm,22.0s						
BHPL	Bhopal	75.04	296	eP	P	02 29 04.9	-0.9
BHPL				IAmb	IAmb	02 29 14.3	
	comp=Z,606nm,3.2s						
RKT	Rikitea	75.51	112	eS	S	02 38 44.9	-0.5
	comp=Z,6µm,30.2s						
RKT	Rikitea	75.51	112	eLQ	LQ	02 49 17.9	
	comp=Z,4µm,25.5s						
RKT				eLR	LR	02 52 32.0	
	comp=Z,10µm,29.2s,baz=275						
BILL	Bilibino	76.02	7	eP	P	02 29 10.4	-0.1
	comp=Z,8.8nm,1.1s						
BILL				LR	LR		
	comp=Z,4µm,21.0s						
BILL	Bilibino	76.02	7	c iP	P	02 29 10.6	+0.1
BILL				i		02 29 22.1	
BILL				e		02 31 59.9	
BILL				i S	S	02 38 53.1	+3.8
BILL				eSS	SS	02 43 48.9	+5.6
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
DDI	Dehra Dun	76.39	303	eP	P	02 29 13.4	0.0
DDI				IAmb	IAmb	02 29 16.3	
NDI	New Delhi	76.63	302	eP	P	02 29 13.0	-1.8
GOA	Goa	76.64	288	eP	P	02 29 14.4	-0.6
GOA				IAmb	IAmb	02 29 25.1	
	comp=Z,30nm,0.7s						
DGZ	Jazzator, Alta	76.95	325	⇓eP	P	02 29 13.9	-2.4
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DGZ				MLR	MLR		
	comp=Z,4µm,18.0s						
POO	Poona	77.22	291	eP	P	02 29 15.2	-3.1
POO				IAmb	IAmb	02 29 26.6	
	comp=Z,34nm,0.8s						
SMLA	Simla	77.35	304	eP	P	02 29 16.0	-2.7
SMLA				IAmb	IAmb	02 29 23.8	
	comp=Z,3µm,6.5s						
ZSN	Zaisan	77.48	322	d iP	P	02 29 18.4	-0.8
ZSN				pmax	pmax		
	comp=Z,27nm,0.9s						
ZSN				MLR	MLR		
	comp=Z,356nm,18.0s						
ZSN	Zaisan	77.48	322	⇓iP	P	02 29 18.4	-0.8
	comp=Z,27nm,0.9s						
ZSN				eLRM	MLR	03 06 54.0	
	comp=Z,356nm,17.8s						
DHRM	DHARAMSHALA	78.37	305	eP	P	02 29 22.5	-2.1
DHRM				IAmb	IAmb	02 29 29.2	
	comp=Z,38nm,1.2s						
MK01	Makanchi Array	78.81	320	eP	P	02 29 22.8	-3.7
MK31	Makanchi Array	78.82	320	eP	P	02 29 22.9	-3.6
MK31	Makanchi Array	78.82	320	eP	P	02 29 23.0	-3.6
MKAR	Makanchi Array	78.82	320	i P	P	02 29 22.7	-3.9
MKAR				pmax	pmax		
	comp=Z,11nm,0.8s						
MKAR	Makanchi Array	78.82	320	P	P	02 29 22.8	-3.8
	comp=Z,11nm,0.8s,baz=100,slow=6.8,SNR=35						
MKAR				S	S	02 39 25.9	+5.4
	comp=Z,0.4nm,0.8s,baz=113,slow=10,SNR=3.7						
MKAR				LR	LR	03 03 06.2	
	comp=Z,3µm,20.9s,baz=93,slow=35						
MAKZ	Makanchi	79.03	320	eP	P	02 29 24.0	-3.7
	comp=Z,20nm,1.0s						
MAKZ	Makanchi	79.03	320	eP	P	02 29 24.0	-3.7
MAKZ				pmax	pmax		
	comp=Z,20nm,1.0s						
SHLS	Shalkode	79.36	316	d iP	P	02 29 26.3	-3.5
SHLS				pmax	pmax		
	comp=Z,203nm,1.5s						
SHLS				MLR	MLR		
	comp=Z,632nm,17.0s						
SHLS	Shalkode	79.36	316	⇓iP	P	02 29 26.3	-3.5
	comp=Z,203nm,1.5s						
SHLS				i LRM	MLR	03 06 15.8	
	comp=Z,632nm,16.9s						
PDGK	Podgornoye	79.40	316	P	P	02 29 27.1	-2.9
PDGK				pmax	pmax		
	comp=Z,15nm,0.9s						
ANM	Nome	79.40	19	eP	P	02 29 29.3	0.0
	comp=Z,6.8nm,1.0s						
TIXI	Tiksi	79.52	354	P	P	02 29 26.6	-3.2
TIXI				LR	LR		
	comp=Z,4µm,19.0s						
TIXI	Tiksi	79.52	354	ceP	P	02 29 28.0	-1.8
TIXI				pmax	pmax		
	comp=Z,15nm,1.4s						
TIXI				MLR	MLR		
	comp=Z,4µm,18.0s						
TIXI	Tiksi	79.52	354	P	P	02 29 26.6	-3.2
	comp=Z,4.3nm,0.8s,baz=127,slow=2.6,SNR=8.1						
UZB	Uzynbulak	79.66	316	c iP	P	02 29 29.0	-2.4
UZB				pmax	pmax		
	comp=Z,96nm,0.6s						
UZB				MLR	MLR		
	comp=Z,718nm,21.0s						
UZB	Uzynbulak	79.66	316	⇑iP	P	02 29 29.0	-2.4
	comp=Z,96nm,0.6s						
UZB				eLRM	MLR	03 06 27.7	
	comp=Z,718nm,20.6s						
PTCN	Pitcairn Islan	79.89	114	PFAKE		02 29 40.0	+7.1
PTCN				LR	LR		
	comp=Z,5µm,19.0s						
KPKS	Kokpek	80.00	316	ceP	P	02 29 30.6	-2.6
KPKS				pmax	pmax		
	comp=Z,78nm,1.2s						
KPKS				MLR	MLR		
	comp=Z,1µm,14.0s						
KPKS	Kokpek	80.00	316	⇑eP	P	02 29 30.6	-2.6
	comp=Z,78nm,1.2s						
KPKS				eLRM	MLR	03 04 43.5	
	comp=Z,1µm,13.9s						
ZAA0	Zalesovo Array	80.33	328	eP	P	02 29 33.4	-1.2
	comp=Z,8.3nm,0.8s						
ZALV	Zalesovo Beam	80.33	328	eP	P	02 29 30.6	-4.0
ZALV	Zalesovo Beam	80.33	328	P	P	02 29 31.7	-2.9
	comp=Z,6.8nm,0.7s,baz=105,slow=4.0,SNR=26						
ZALV				LR	LR	03 04 23.0	
	comp=Z,12µm,20.1s,baz=132,slow=35						
KDAK	Kodiak Island	80.41	28	PFAKE		02 29 50.0	+15
KDAK				LR	LR		
	comp=Z,2µm,20.0s						
KSH	Kashi	80.69	312	P	P	02 29 37.0	0.0
KSH				pP	pP	02 29 50.8	-1.1
KSH				PP	PP	02 32 47.6	+6.0
KSH				S	S	02 39 38.5	-2.3
KSH				SKS	SKSac	02 39 49.6	-1.6
KSH				sS	pS	02 40 02.1	+2.0
KSH				SS	SS	02 45 01.6	+6.7
KSH				pmax	pmax		
	comp=Z,480nm,4.5s						
KSH				LR	LR		
	comp=Z,3µm,11.0s						
KSH				LR	LR		
	comp=Z,5µm,15.5s						
KSH				LR	LR		
	comp=Z,8µm,18.3s						
MDOK	Medeo	81.03	316	c iP	P	02 29 37.1	-1.7
MDOK				pmax	pmax		
	comp=Z,56nm,1.0s						
MDOK				MLR	MLR		
	comp=Z,1µm,15.0s						
MDOK	Medeo	81.03	316	⇑iP	P	02 29 37.1	-1.7
	comp=Z,56nm,1.0s						
MDOK				eLRM	MLR	03 07 22.5	
	comp=Z,1µm,15.4s						
NIL	Nilore	81.21	306	eP	P	02 29 37.6	-2.2
	comp=Z,56nm,0.8s						
NIL				LR	LR		
	comp=Z,3µm,20.0s						
NIL	Nilore	81.21	306	eP	P	02 29 37.6	-2.2
NIL				pmax	pmax		
	comp=Z,56nm,0.8s						
NIL				MLR	MLR		
	comp=Z,3µm,20.0s						
CHKK	Chushkaly	81.29	316	deP	P	02 29 37.5	-2.5
CHKK				pmax	pmax		
	comp=Z,29nm,0.7s						
CHKK	Chushkaly	81.29	316	⇓eP	P	02 29 37.5	-2.5
	comp=Z,29nm,0.7s						
ULHL	Ulahol	81.31	315	P	P	02 29 39.0	-1.4
	SNR=7.0						
SEM	Semipalatinsk	81.45	323	d iP	P	02 29 39.0	-1.9
SEM				pmax	pmax		
	comp=Z,75nm,1.5s						
SEM				MLR	MLR		
	comp=Z,2µm,18.0s						
SEM	Semipalatinsk	81.45	323	⇓iP	P	02 29 39.1	-1.9
	comp=Z,75nm,1.5s						
SEM				eLRM	MLR	03 06 00.9	
	comp=Z,2µm,18.1s						
NVS	Novosibirsk	81.55	328	⇑iP	P	02 29 40.6	-0.4
NVS				eS	S	02 39 49.9	+1.2
NVS				pmax	pmax		
	comp=Z,22nm,1.4s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.4s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.4s						
NVS				smax	smax		
	comp=N,6.0nm,1.0s						
NVS				smax	smax		
	comp=E,6.0nm,1.0s						
MAW	Mawson	81.63	203	LR	LR	03 06 23.2	
	comp=E,6µm,18.3s,baz=80,slow=36						
KUU	Kurty	81.74	316	c iP	P	02 29 39.9	-2.5
KUU				pmax	pmax		
	comp=Z,69nm,1.1s						
KUU				MLR	MLR		
	comp=Z,546nm,16.0s						
KUU	Kurty	81.74	316	⇑iP	P	02 29 39.9	-2.5
	comp=Z,69nm,1.1s						
KUU				eLRM	MLR	03 07 53.5	
	comp=Z,546nm,16.1s						
KZA	Kyzart	81.96	314	P	P	02 29 41.5	-2.6
	SNR=35						
TKM2	Tokmak 2	81.97	315	P	P	02 29 42.2	-1.7
	SNR=13						
BHJ	Bhuj	82.01	295	eP	P	02 29 42.3	-1.9
UCH	Uchtor	82.53	314	P	P	02 29 46.2	-0.9
	SNR=22						
KURK	Kurchatov	82.53	323	eP	P	02 29 44.0	-2.3
	comp=Z,27nm,1.2s						
KURK				LR	LR		
	comp=Z,9µm,20.0s						
KURK	Kurchatov	82.53	323	ceP	P	02 29 44.9	-1.4
KURK				pmax	pmax		
	comp=Z,41nm,1.7s						
KURK				MLR	MLR		
	comp=Z,5µm,20.0s						
KURK	Kurchatov	82.53	323	P	P	02 29 47.1	+0.8
	SNR=12						
KURK				P	P	02 29 47.1	+0.8
	SNR=12						
KURBB	Kurchatov Arra	82.55	323	P	P	02 29 43.6	-2.8
	comp=Z,4.9nm,1.0s,baz=107,slow=4.0,SNR=18						
CHMS	Chumysh	82.58	315	P	P	02 29 45.1	-1.7
	SNR=7.4						
FRU	Bishkek	82.63	315	eP	P	02 29 46.0	-1.1
SFK	Sufi-Kurgan	82.65	312	P	P	02 29 45.7	-1.8
SFK				pmax	pmax		
	comp=Z,11nm,0.9s						
AAK	Ala-Archa	82.66	315	P	P	02 29 50.7	+3.3
	SNR=6.7						
AAK	Ala-Archa	82.66	315	eP	P	02 29 45.5	-1.9
	comp=Z,18nm,1.0s						
AAK				LR	LR		
	comp=Z,3µm,19.0s						
AAK	Ala-Archa	82.66	315	ceP	P	02 29 45.9	-1.5
AAK				pmax	pmax		
	comp=Z,17nm,1.2s						
AAK				MLR	MLR		
	comp=Z,3µm,18.0s						
AAK	Ala-Archa	82.66	315	P	P	02 29 49.4	+2.0
	SNR=15						
AAK				P	P	02 29 49.4	+2.0
	SNR=15						
USP	Ospenovka	82.83	315	P	P	02 29 47.0	-1.2
	SNR=10						
QSPA	South Pole Qui	82.94	180	eP	P	02 29 47.0	-1.4
	comp=Z,197nm,1.0s						
QSPA				LR	LR		
	comp=Z,7µm,21.0s						
AML	Almayashu	83.09	314	P	P	02 29 48.9	-1.0
	SNR=20						
EKS2	Erkin-Say	83.17	314	P	P	02 29 49.2	-0.8
	SNR=13						
RC01	Rabbit Creek A	83.28	26	eP	P	02 29 49.3	-0.7
	comp=Z,14nm,1.0s						
ARSB	Arslanbob	83.38	313	eP	P	02 29 51.8	+0.6
CAST	Castle Rocks	83.44	23	eP	P	02 29 50.3	-0.5
	comp=Z,12nm,1.2s						
BTLS	Baital	83.65	317	deP	P	02 29 50.5	-1.7
BTLS				pmax	pmax		
	comp=Z,69nm,0.6s						
BTLS				MLR	MLR		
	comp=Z,227nm,15.0s						
BTLS	Baital	83.65	317	⇓eP	P	02 29 50.5	-1.7
	comp=Z,69nm,0.6s						
BTLS				eLRM	MLR	03 09 31.3	
	comp=Z,227nm,15.2s						
PMR	Palmer	83.77	25	eP	P	02 29 53.4	+1.0
	comp=Z,12nm,1.2s						
PMR	Palmer	83.77	25	eP	P	02 29 53.4	+1.0
PMR				pmax	pmax		
	comp=Z,12nm,1.2s						
KNK	Knik Glacier	83.97	26	eP	P	02 29 55.0	+1.4
	comp=Z,29nm,1.3s						
MNAS	Manas	84.03	314	P	P	02 29 52.9	-1.6
MNAS				pmax	pmax		
	comp=Z,34nm,1.1s						
IM3	Indian Mountai	84.15	21	eP	P	02 29 53.6	-0.7
SML	Sawmill	84.20	25	eP	P	02 29 54.7	0.0
	comp=Z,25nm,1.0s						
RND	Reindeer	84.71	24	eP	P	02 29 54.7	-2.6
	comp=Z,10.0nm,1.0s						
RND	Reindeer	84.71	24	eP	P	02 29 54.7	-2.6
RND				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MLY	Manley	84.75	22	eP	P	02 29 55.6	-1.9
	comp=Z,8.1nm,1.0s						
GAR	Garm	84.79	310	eP	P	02 29 57.6	-0.8
	comp=Z,36nm,1.2s						
KBL	Kabul	84.81	306	eP	P	02 29 56.3	-2.3
	comp=Z,6.2nm,0.9s						
MCK	McKinley	84.83	24	eP	P	02 29 57.1	-0.7
	comp=Z,29nm,1.2s						
MCK	McKinley	84.83	24	eP	P	02 29 57.1	-0.7
MCK				pmax	pmax		
	comp=Z,29nm,1.2s						
DZA	Taraz	84.97	314	deP	P	02 29 57.4	-1.6
DZA				pmax	pmax		
	comp=Z,284nm,0.9s						
DZA	Taraz	84.97	314	⇓eP	P	02 29 57.4	-1.6
	comp=Z,284nm,0.9s						
DIV	Divide	85.03	27	eP	P	02 29 57.5	-1.4
	comp=Z,27nm,1.2s						
KLU	Klutina	85.11	26	eP	P	02 29 59.8	+0.4
	comp=Z,26nm,1.2s						
DHY	Denali Highway	85.17	24	eP	P	02 29 58.3	-1.4
	comp=Z,15nm,1.1s						
WRH	Wood River Hil	85.50	23	eP	P	02 29 59.7	-1.4
	comp=Z,18nm,1.3s						
CHGR	Chuyangaron	85.60	310	eP	P	02 30 00.8	-1.5
	comp=Z,39nm,1.0s						
KK31	Karatay Array	85.61	314	eP	P	02 29 59.6	-2.6
KK31	Karatay Array	85.61	314	P	P	02 30 01.7	-0.5
KK31				pmax	pmax		
	comp=Z,40nm,1.3s						
KKAR	Karatay Array	85.61	314	eP	P	02 29 59.6	-2.6
OTUK	Ortayu	85.67	320	P	P	02 30 00.9	-1.5
OTUK				pmax	pmax		
	comp=Z,53nm,1.3s						
IUG	Iuzhnay	85.73	313	ceP	P	02 30 02.3	-0.6
IUG				pmax	pmax		
	comp=Z,80nm,1.0s						
IUG				MLR	MLR		
	comp=Z,833nm,18.0s						
IUG	Iuzhnay	85.73	313	⇑eP	P	02 30 02.3	-0.6
	comp=Z,80nm,1.0s						
IUG				eLRM	MLR	03 09 56.6	
	comp=Z,833nm,18.1s						
COLA	College	85.77	23	eP	P	02 29 58.3	-4.1
	comp=Z,12nm,1.2s						
COLA				LR	LR		

	comp=Z,4µm,20.0s						
COLA	**College**	**85.77**	**23**	*e*P	**P**	**02 29 58.3**	**-4.1**
COLA				pmax	pmax		
	comp=Z,12nm,1.2s						
COLA				MLR	MLR		
	comp=Z,4µm,20.0s						
HDA	**Harding Lake**	**85.91**	**23**	*e*P	**P**	**02 30 02.1**	**-1.1**
	comp=Z,14nm,1.5s						
HDA	**Harding Lake**	**85.91**	**23**	P	**P**	**02 29 59.6**	**-3.6**
	baz=245						
BRZS	**Berezniki**	**85.92**	**321**	*d i*P	**P**	**02 30 01.3**	**-2.3**
BRZS				pmax	pmax		
	comp=Z,122nm,1.4s						
BRZS				MLR	MLR		
	comp=Z,901nm,17.0s						
BRZS	**Berezniki**	**85.92**	**321**	⇓*i*P	**P**	**02 30 01.3**	**-2.3**
	comp=Z,122nm,1.4s						
BRZS				*e*LRM	MLR	03 10 05.5	
	comp=Z,901nm,17.4s						
CHM	**Chimkent**	**86.08**	**313**	*ce*P	**P**	**02 30 02.3**	**-2.2**
CHM				pmax	pmax		
	comp=Z,306nm,0.5s						
CHM				MLR	MLR		
	comp=Z,328nm,16.0s						
CHM	**Chimkent**	**86.08**	**313**	⇑*e*P	**P**	**02 30 02.4**	**-2.2**
	comp=Z,306nm,0.5s						
CHM				*e*LRM	MLR	03 09 17.0	
	comp=Z,328nm,16.3s						
ILAR	**Eielson Array**	**86.09**	**23**	P	**P**	**02 30 00.7**	**-3.4**
	comp=Z,4.9nm,0.9s,baz=255,slow=4.5,SNR=26						
ILAR				LR	LR	03 07 00.7	
	comp=Z,2µm,19.2s,baz=250,slow=35						
ILB	**Eielson Array**	**86.09**	**23**	*e*P	**P**	**02 30 00.8**	**-3.4**
RIDG	**Independ'e Rid**	**86.48**	**24**	*e*P	**P**	**02 30 05.6**	**-0.5**
	comp=Z,19nm,1.2s						
NRIK	**Noril'sk**	**86.51**	**342**	P	**P**	**02 30 01.9**	**-4.1**
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,3µm,18.1s						
NRIK	**Noril'sk**	**86.51**	**342**	P	**P**	**02 30 01.9**	**-4.1**
	comp=Z,6.2nm,1.0s,baz=151,slow=24,SNR=8.7						
NRIK				LR	LR	03 11 12.2	
	comp=Z,3µm,18.1s,baz=58,slow=37						
SCRK	**Sand Creek**	**86.92**	**24**	*e*P	**P**	**02 30 07.7**	**-0.6**
	comp=Z,5.4nm,1.1s						
FYU	**Fort Yukon**	**87.47**	**22**	*e*P	**P**	**02 30 13.3**	**+2.6**
	comp=Z,22nm,1.2s						
BVA0	**Borovoye Array**	**88.09**	**324**	*i* P	**P**	**02 30 11.5**	**-2.5**
BVA0				pmax	pmax		
	comp=Z,12nm,1.0s						
BVAR	**Borovoye Array**	**88.09**	**324**	P	**P**	**02 30 10.1**	**-3.9**
	comp=Z,7.3nm,0.8s,baz=104,slow=5.4,SNR=25						
BRVK	**Borovoye**	**88.16**	**324**	*e*P	**P**	**02 30 11.6**	**-2.7**
	comp=Z,20nm,1.3s						
BRVK				LR	LR		
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**88.16**	**324**	⇓*e*P	**P**	**02 30 11.4**	**-2.9**
BRVK				pmax	pmax		
	comp=Z,18nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,5µm,19.0s						
BRVK	**Borovoye**	**88.16**	**324**	P	**P**	**02 30 14.2**	**-0.1**
	SNR=6.7						
BRVK				P	**P**	**02 30 14.2**	**-0.1**
	SNR=6.7						
HYT	**Haines Junctio**	**88.70**	**28**	*e*P	**P**	**02 30 18.2**	**+1.3**
	comp=Z,28nm,1.1s						
DAWY	**Dawson**	**88.85**	**25**	*e*P	**P**	**02 30 17.1**	**-0.2**
	comp=Z,19nm,1.3s						
SKAG	**Skagway**	**89.37**	**30**	*e*P	**P**	**02 30 21.1**	**+1.3**
	comp=Z,16nm,1.1s						
WHY	**Whitehorse**	**89.89**	**29**	*e*P	**P**	**02 30 25.4**	**+3.0**
	comp=Z,12nm,1.4s						
WRAK	**Wrangell Islan**	**90.20**	**33**	PFAKE		02 30 40.0	+16
WRAK				LR	LR		
	comp=Z,8µm,20.0s						
INK	**Inuvik**	**92.30**	**21**	*e*P	**P**	**02 30 32.8**	**-0.5**
	comp=Z,8.4nm,1.2s						
INK	**Inuvik**	**92.30**	**21**	*e*P	**P**	**02 30 32.8**	**-0.5**
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
L02E	**Cave Junction**	**93.59**	**48**	P	**P**	**02 30 42.8**	**+2.9**
	baz=264						
AB31	**Akbulak array**	**93.90**	**319**	*i* P	P	02 30 36.2	-4.9
AB31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ABKAR	**Akbulak array**	**93.90**	**319**	*e*P	**P**	**02 30 38.6**	**-2.5**
NLWA	**Neilton Lookou**	**93.96**	**43**	PFAKE		02 30 50.0	+8.5
NLWA				LR	LR		
	comp=Z,6µm,20.0s						
O02D	**Mt. Diablo Mer**	**94.00**	**50**	P	**P**	**02 30 44.1**	**+2.2**
	baz=264						
GEYT	**Alibeck**	**94.06**	**308**	P	**P**	**02 30 38.9**	**-3.3**
	comp=Z,1.4nm,0.5s,baz=108,slow=9.5,SNR=4.2						
GEYT				LR	LR	03 15 03.7	
	comp=Z,3µm,21.3s,baz=95,slow=37						
M02C	**Callahan**	**94.07**	**49**	P	**P**	**02 30 46.5**	**+4.3**
	baz=264						
YBH	**Yreka Blue Hor**	**94.21**	**49**	P	**P**	**02 30 47.4**	**+4.5**
	comp=Z,2.7nm,0.8s,baz=124,slow=5.1,SNR=4.2						
ORV	**Oroville**	**94.92**	**51**	*e*P	**P**	**02 30 50.1**	**+4.1**
	comp=Z,7.8nm,1.1s						
AKTO	**Aktyubinsk**	**95.25**	**320**	P	**P**	**02 30 45.3**	**-2.0**
AKTO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
AKTO	**Aktyubinsk**	**95.25**	**320**	P	**P**	**02 30 46.6**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=79,slow=5.9,SNR=4.1						
AFDM	**Forest Hills D**	**95.28**	**52**	*e*P	**P**	**02 30 49.7**	**+2.0**
	comp=Z,7.4nm,1.1s						
ARU	**Arti**	**95.41**	**326**	PFAKE		02 31 00.0	+12
ARU				LR	LR		
	comp=Z,3µm,19.0s						
ARU	**Arti**	**95.41**	**326**	P	P	02 30 42.6	-5.2
ARU				S	**SKSac**	**02 41 15.2**	**-3.9**
ARU				SP	**SP**	**02 43 12.4**	**-4.6**
ARU				PS	**PS**	**02 43 28.9**	**+4.6**
ARU				MLR	MLR		
	comp=Z,5µm,18.0s						
J05D	**Fort Rock, OR**	**95.43**	**47**	P	**P**	**02 30 51.3**	**+2.8**
	baz=266						
PKM	**Mcpherson Peak**	**95.89**	**56**	P	**P**	**02 30 52.8**	**+2.0**
	baz=266						
PNTR	**Pine Nut**	**96.36**	**51**	*e*P	P	02 30 57.7	+4.8
	comp=Z,8.0nm,1.1s						
HAWA	**Hanford**	**96.84**	**44**	PFAKE		02 31 10.0	+15
HAWA				LR	LR		
	comp=Z,4µm,20.0s						
ISA	**Isabella, Lake**	**97.03**	**55**	*e*P	Pdif	02 30 59.0	+3.1
	comp=Z,5.5nm,1.1s						
ISA	**Isabella, Lake**	**97.03**	**55**	*e*P	Pdif	02 30 59.0	+3.1
ISA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ISA	**Isabella, Lake**	**97.03**	**55**	P	Pdif	02 30 58.0	+2.0
	baz=267						
RYN	**Ryan**	**97.17**	**52**	*e*P	Pdif	02 31 00.9	+4.3
	comp=Z,4.1nm,1.2s						
MWC	**Mount Wilson**	**97.28**	**56**	*e*P	Pdif	02 31 00.4	+3.1
	comp=Z,15nm,1.1s						
WVOR	**Wild Horse Val**	**97.28**	**48**	PFAKE		02 31 10.0	+13
WVOR				LR	LR		
	comp=Z,9µm,20.0s						
NV01	**Mina Array Sit**	**97.33**	**52**	*e*P	Pdif	02 30 59.1	+1.7
NVAR	**Mina Array Bea**	**97.33**	**52**	P	Pdif	02 30 57.8	+0.4
	comp=Z,3.1nm,1.0s,baz=259,slow=5.5,SNR=12						
NVAR				LR	LR	03 08 05.7	
	comp=Z,8µm,21.4s,baz=276,slow=31						
EDW2	**Edwards Air Fo**	**97.38**	**56**	P	Pdif	02 31 01.3	+3.8
	baz=267						
CWC	**Cottonwood Cre**	**97.40**	**54**	P	Pdif	02 30 58.1	+0.5
	baz=267						
NV11	**Mina Array Sit**	**97.45**	**52**	*e*P	Pdif	02 31 02.2	+4.4
	comp=Z,0.3nm,1.0s						
KVN	**Kaiserville**	**97.52**	**52**	*e*P	Pdif	02 31 01.9	+3.7
	comp=Z,7.6nm,1.3s						
LRMC	**Laurel Mtn Rad**	**97.67**	**55**	P	Pdif	02 31 01.0	+2.1
	baz=267						
ABPO	**Ambohimpanom**	**97.68**	**250**	PFAKE		02 31 10.0	+11
ABPO				LR	LR		
	comp=Z,4µm,20.0s						
DAC	**Darwin (Calif)**	**97.78**	**54**	*e*P	Pdif	02 30 59.7	+0.3
	comp=Z,13nm,1.3s						
DAC	**Darwin (Calif)**	**97.78**	**54**	*e*P	Pdif	02 30 59.7	+0.3
DAC				pmax	pmax		
	comp=Z,13nm,1.3s						
MPMC	**Manual Prospec**	**97.85**	**55**	P	Pdif	02 31 01.7	+1.9
	baz=267						
RPN	**Rapa Nui**	**98.11**	**119**	PFAKE		02 31 10.0	+9.1
RPN				LR	LR		
	comp=Z,2µm,22.0s						
GSC	**Goldstone, Bar**	**98.37**	**55**	*e*P	Pdif	02 31 06.5	+4.5
	comp=Z,3.8nm,1.1s						
NEW	**Newport**	**98.55**	**42**	P	**P**	**02 31 00.2**	**-2.0**
NEW				LR	LR		
	comp=Z,6µm,20.0s						
NEW	**Newport**	**98.55**	**42**	P	**P**	**02 31 00.3**	**-2.0**
NEW				MLR	MLR		
	comp=Z,6µm,20.0s						
NEW	**Newport**	**98.55**	**42**	P	**P**	**02 31 00.2**	**-2.0**
	comp=Z,1.2nm,0.7s,baz=157,slow=7.7,SNR=2.5						
MONP2	**Monument Peak**	**98.58**	**58**	P	Pdif	02 31 04.7	+1.7
	baz=267						
PFO	**Pinyon Flats O**	**98.58**	**57**	P	**P**	**02 31 02.8**	**-0.1**
PFO				LR	LR		
	comp=Z,9µm,20.0s						
PFO	**Pinyon Flats O**	**98.58**	**57**	P	Pdif	02 31 04.8	+1.8
	baz=267						
PFO	**Pinyon Flats O**	**98.58**	**57**	P	**P**	**02 31 02.8**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=243,slow=2.3						
TPFO	**Pinon Flats**	**98.58**	**57**	P	Pdif	02 31 05.2	+2.2
	baz=267						
XPFO	**Pion Flat**	**98.58**	**57**	*e*P	Pdif	02 31 05.7	+2.7
	comp=Z,13nm,1.4s						
TPNV	**Topopah Spring**	**98.89**	**54**	*e*P	Pdif	02 31 09.4	+5.1
	comp=Z,5.7nm,1.1s						
BELC	**Belle Mtn. Jos**	**98.98**	**57**	P	Pdif	02 31 07.7	+2.9
	baz=268						
GMRC	**Granite Mounta**	**99.29**	**56**	P	**Pdif**	**02 31 09.0**	**+3.0**
	baz=268						
R11A	**Troy Canyon, C**	**99.46**	**52**	*e*P	**Pdif**	**02 31 13.4**	**+6.6**
	comp=Z,3.3nm,1.4s						
R11A	**Troy Canyon, C**	**99.46**	**52**	P	**Pdif**	**02 31 10.0**	**+3.1**
	baz=269						
YKA	**Yellowknife Ar**	**99.68**	**28**	P	**Pdif**	**02 31 06.6**	**-0.4**
	comp=Z,1.2nm,1.1s,baz=278,slow=4.8,SNR=7.8						
YKA				PKKPbc	**PKKPbc**	**02 47 26.7**	**-4.0**
	comp=Z,0.4nm,0.7s,baz=92,slow=2.7,SNR=7.2						
YKA				PKKP	**PKKPdf**	**02 47 33.8**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=88,slow=2.9,SNR=5.8						
YKA				LR	LR	03 13 30.0	
	comp=Z,572nm,20.1s,baz=276,slow=34						
ELK	**Elko**	**99.78**	**50**	P	**Pdif**	**02 31 11.1**	**+2.9**
	comp=Z,0.7nm,0.7s,baz=246,slow=3.0,SNR=4.1						
HLID	**Hailey**	**100.41**	**47**	PFAKE		02 31 20.0	+9.1
HLID				LR	LR		
	comp=Z,8µm,20.0s						
DUG	**Dugway, Tooele**	**101.63**	**51**	PFAKE		02 31 30.0	+14
DUG				LR	LR		
	comp=Z,5µm,20.0s						
PRGR	**Permogore**	**101.95**	**332**	*e*P	**Pdif**	**02 31 14.1**	**-3.0**
PRGR				pmax	pmax		
	comp=Z,12nm,1.4s						
MAK	**Makhachkala**	**102.32**	**312**	*e*P	**Pdif**	**02 31 11.6**	**-7.5**
MAK				*e*		02 35 28.5	
MAK				*e*PPP	PPP	02 37 36.8	
MAK				*e*		02 41 56.9	
MAK				pmax	pmax		
	comp=Z,33nm,0.5s						
BOZ	**Bozeman (W)**	**102.35**	**45**	PFAKE		02 31 30.0	+11
BOZ				LR	LR		
	comp=Z,3µm,20.0s						
HWUT	**Hardware Ranch**	**102.55**	**49**	PFAKE		02 31 30.0	+10
HWUT				LR	LR		
	comp=Z,70nm,20.0s						
WUAZ	**Wupatki**	**102.81**	**55**	PFAKE		02 31 30.0	+8.2
WUAZ				LR	LR		
	comp=Z,7µm,22.0s						
AHID	**Auburn Hatcher**	**102.85**	**48**	PFAKE		02 31 30.0	+8.2
AHID				LR	LR		
	comp=Z,9µm,20.0s						
LKWY	**Lake**	**103.27**	**46**	PFAKE		02 31 30.0	+6.3
LKWY				LR	LR		
	comp=Z,9µm,20.0s						
TUC	**Tucson**	**103.32**	**59**	PFAKE		02 31 40.0	+16
TUC				LR	LR		
	comp=Z,8µm,21.0s						
EGMT	**Eagleton**	**103.48**	**42**	PFAKE		02 31 40.0	+16
EGMT				LR	LR		
	comp=Z,3µm,20.0s						
BW06	**Boulder Array**	**103.98**	**48**	PFAKE		02 31 40.0	+13
BW06				LR	LR		
	comp=Z,8µm,20.0s						
PDAR	**Pinedale Array**	**103.98**	**48**	Pdiff	**Pdif**	**02 31 26.4**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=274,slow=3.4,SNR=2.2						
PDAR				PKiKP	**PP**	**02 35 48.1**	**+3.3**
	comp=Z,0.2nm,0.5s,baz=342,slow=2.1,SNR=3.2						
RLMT	**Red Lodge**	**104.04**	**45**	PFAKE		02 31 40.0	+13
RLMT				LR	LR		
	comp=Z,3µm,20.0s						
RAYN	**Ar Rayn**	**104.06**	**292**	PFAKE		02 31 40.0	+13
RAYN				LR	LR		
	comp=Z,3µm,22.0s						
GNI	**Garni**	**104.51**	**310**	PFAKE		02 31 40.0	+11
GNI				LR	LR		
	comp=Z,3µm,20.0s						
PMSA	**Palmer Station**	**104.55**	**166**	PFAKE		02 31 40.0	+11
PMSA				LR	LR		
	comp=Z,5µm,19.0s						
KBS	**Kingsbay**	**104.90**	**352**	PFAKE		02 31 40.0	+10
KBS				LR	LR		
	comp=Z,3µm,20.0s						
KLMR	**Klimovskoe**	**105.00**	**331**	*e*P	**Pdif**	**02 31 29.6**	**-1.0**
KLMR				*e*		02 35 48.0	
KLMR				pmax	pmax		
	comp=Z,15nm,1.4s						
KLMR	**Klimovskoe**	**105.00**	**331**	*e*Pdif	**Pdif**	**02 31 29.6**	**-1.0**
KLMR				AMP		02 31 40.0	
	comp=Z,15nm,1.4s						
KLMR				*e*PP	**PKiKP**	**02 35 48.0**	**+2.8**
MVCO	**Mesa Verde**	**105.09**	**53**	PFAKE		02 36 00.0	+14
MVCO				LR	LR		
	comp=Z,4µm,19.0s						
LVZ	**Lovozero**	**105.10**	**339**	PFAKE		02 31 40.0	+9.0
LVZ				LR	LR		
	comp=Z,2µm,19.0s						
APA	**Apatity**	**105.66**	**339**	⇑*i*P	**Pdif**	**02 31 35.5**	**+2.1**
APA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KIV	**Kislovodsk**	**105.76**	**314**	PFAKE		02 36 00.0	+13
KIV				LR	LR		
	comp=Z,3µm,20.0s						
LAO	**LASA Array**	**106.00**	**44**	PFAKE		02 36 00.0	+12
LAO				LR	LR		
	comp=Z,4µm,20.0s						
ANMO	**Albuquerque**	**106.85**	**56**	PFAKE		02 36 00.0	+10
ANMO				LR	LR		
	comp=Z,5µm,20.0s						
KEV	**Kevo**	**106.92**	**342**	PFAKE		02 36 00.0	+12
KEV				LR	LR		
	comp=Z,7µm,20.0s						
DGMT	**Dagmar**	**107.12**	**41**	PFAKE		02 36 00.0	+10
DGMT				LR	LR		
	comp=Z,4µm,20.0s						
ISCO	**Idaho Springs**	**107.17**	**51**	PFAKE		02 36 00.0	+10
ISCO				LR	LR		
	comp=Z,6µm,22.0s						
FFC	**Flin Flon**	**107.31**	**35**	PFAKE		02 36 00.0	+10
FFC				LR	LR		
	comp=Z,6µm,20.0s						
SDCO	**Great Sand Dun**	**107.43**	**53**	PFAKE		02 36 00.0	+9.2
SDCO				LR	LR		
	comp=Z,4µm,21.0s						
OBN	**Obninsk**	**107.85**	**326**	PFAKE		02 36 00.0	+9.4
OBN				LR	LR		
	comp=Z,3µm,21.0s						
MNTX	**Cornudas Mount**	**107.92**	**59**	PFAKE		02 36 00.0	+8.5
MNTX				LR	LR		
	comp=Z,5µm,20.0s						
TXAR	**Lajitas Array**	**109.52**	**61**	PKiKP	**PKiKP**	**02 35 54.7**	**0.0**
	comp=Z,0.3nm,0.9s,baz=299,slow=6.1,SNR=2.6						
TXAR				PKKP	**PKKPdf**	**02 47 14.3**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=95,slow=6.1,SNR=4.8						
OGNE	**Ogallala**	**109.76**	**49**	PFAKE		02 36 10.0	+15
OGNE				LR	LR		
	comp=Z,4µm,20.0s						
KMBO	**Kilima Mbogo**	**110.29**	**266**	PFAKE		02 36 10.0	+13
KMBO				LR	LR		
	comp=Z,3µm,20.0s						
FINES	**FINESS Array B**	**110.96**	**334**	Pdiff	**Pdif**	**02 31 54.2**	**-2.9**
	comp=Z,2.5nm,0.9s,baz=26,slow=3.5,SNR=3.2						
CBKS	**Cedar Bluff**	**111.81**	**51**	PFAKE		02 36 10.0	+11
CBKS				LR	LR		
	comp=Z,6µm,22.0s						
JCT	**Junction City**	**112.78**	**60**	PFAKE		02 36 10.0	+9.2
JCT				LR	LR		
	comp=Z,6µm,21.0s						
BRTR	**Keskin Array B**	**113.03**	**310**	*i* PKIKP	**PKiKP**	**02 36 08.3**	**+7.2**
WMOK	**Wichita Mounta**	**113.16**	**55**	PFAKE		02 36 10.0	+8.7
WMOK				LR	LR		
	comp=Z,4µm,20.0s						
ECSD	**EROS Data Cent**	**113.20**	**45**	PFAKE		02 36 10.0	+8.9
ECSD				LR	LR		
	comp=Z,6µm,20.0s						
AKASG	**Malin Array Be**	**113.34**	**323**	PKiKP	**PKiKP**	**02 36 01.4**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=59,slow=2.6,SNR=2.9						
KIEV	**Kiev**	**113.35**	**323**	PFAKE		02 36 10.0	+8.9
KIEV				LR	LR		
	comp=Z,4µm,21.0s						
ANTO	**Ankara**	**113.65**	**310**	PFAKE		02 36 10.0	+7.8
ANTO				LR	LR		
	comp=Z,1µm,20.0s						
KSU1	**Kansas State U**	**114.17**	**50**	PFAKE		02 36 10.0	+6.9
KSU1				LR	LR		
	comp=Z,7µm,21.0s						
KVTX	**Kingsville**	**114.71**	**63**	PFAKE		02 36 20.0	+16
KVTX				LR	LR		
	comp=Z,5µm,19.0s						
KIS	**Kishinev**	**114.73**	**319**	*e*PKP	PKPdf	02 36 30.0	+26
KIS				*e*SKS	SKSdf	02 43 30.0	+18
KIS				*e*SKKS	SKKSac	02 44 32.0	+33
KIS	**Kishinev**	**114.73**	**319**	*e*PS	PS	02 46 50.0	+8.2
KIS				LRM	MLR	03 23 52.0	
	comp=Z,4µm,20.0s						
EYMN	**Ely**	**115.48**	**40**	PFAKE		02 36 20.0	+15
EYMN				LR	LR		
	comp=Z,5µm,20.0s						
SCIA	**State Center**	**116.07**	**47**	PFAKE		02 36 20.0	+13
SCIA				LR	LR		
	comp=Z,5µm,19.0s						
SUR	**Sutherland**	**116.17**	**229**	PFAKE		02 36 20.0	+13
SUR				LR	LR		
	comp=Z,8µm,22.0s						
LSZ	**Lusaka**	**116.24**	**249**	PFAKE		02 36 20.0	+12
LSZ				LR	LR		
	comp=Z,4µm,20.0s						
MBAR	**Mbarara**	**116.81**	**266**	PFAKE		02 36 20.0	+11
MBAR				LR	LR		
	comp=Z,620nm,20.0s						
BURAR	**Bucovina Array**	**116.85**	**320**	⇑*i*P	PKiKP	02 36 17.7	+10
OZUR		**117.00**	**319**	⇓*i*P	**PKiKP**	**02 36 14.0**	**+5.6**
NATX	**Nacogdoches**	**117.00**	**58**	PFAKE		02 36 20.0	+11
NATX				LR	LR		
	comp=Z,5µm,19.0s						
NOA	**NORSAR Array B**	**117.22**	**338**	PKP	**PKPdf**	**02 36 06.3**	**-2.0**
	comp=Z,0.7nm,0.8s,baz=50,slow=2.2,SNR=2.7						
MIAR	**Mount Ida**	**117.42**	**55**	PFAKE		02 36 20.0	+10
MIAR				LR	LR		
	comp=Z,5µm,20.0s						
EFI	**East Falkland**	**117.44**	**162**	PFAKE		02 36 20.0	+11
EFI				LR	LR		
	comp=Z,4µm,19.0s						
COWI	**Conover**	**117.62**	**41**	PFAKE		02 36 20.0	+10
COWI				LR	LR		
	comp=Z,6µm,21.0s						
U40A	**Yellville**	**117.64**	**53**	P	**PKiKP**	**02 36 10.1**	**+0.2**
	baz=282						
JFWS	**Jewell Farm**	**117.90**	**45**	PFAKE		02 36 20.0	+10
JFWS				LR	LR		
	comp=Z,5µm,19.0s						
R41A	**Rosebud**	**118.33**	**50**	P	**PKPdf**	**02 36 10.9**	**-0.2**
	baz=285						
W41B	**Gary Mavity, V**	**118.37**	**54**	P	**PKiKP**	**02 36 12.4**	**+1.1**
	baz=282						
DRGR		**118.74**	**320**	⇑*i*P	**PKiKP**	**02 36 13.8**	**+2.0**
P42A	**Winchester**	**118.78**	**49**	P	**PKiKP**	**02 36 12.0**	**0.0**
	baz=286						
SFJD	**Kangerlussuaq**	**118.80**	**8**	PFAKE		02 36 20.0	+8.8
SFJD				LR	LR		
	comp=Z,2µm,20.0s						
HOPE	**Hope Point**	**118.81**	**177**	PFAKE		02 36 20.0	+8.4
HOPE				LR	LR		
	comp=Z,4µm,20.0s						
GZR	**Gura Zlata**	**119.22**	**319**	⇓*i*P	**PKiKP**	**02 36 15.9**	**+3.1**
HDIL	**Hopedale**	**119.28**	**47**	PFAKE		02 36 20.0	+7.0
HDIL				LR	LR		
	comp=Z,4µm,20.0s						
SIRR	**Siria**	**119.61**	**320**	⇑*i*P	**PKiKP**	**02 36 18.5**	**+5.0**
VTS	**Vitosha**	**119.88**	**316**	⇓*i*P	**PKiKP**	**02 36 18.4**	**+4.1**
BZS	**Buzias**	**119.89**	**319**	⇓*i*P	**PKiKP**	**02 36 16.6**	**+2.6**
MDVR	**Moldovita**	**120.14**	**318**	⇑*i*P	**PKiKP**	**02 36 19.0**	**+4.4**
OKC	**Ostrava-Krasne**	**120.21**	**325**	AMS	AMS	03 30 40.0	
	comp=Z,6µm,18.2s						
VYHS	**Vyhne**	**120.42**	**323**	*e*PKIKP	PKiKP	02 36 23.3	+8.3
VYHS	**Vyhne**	**120.42**	**323**	*e*PKP	PKiKP	02 36 23.3	+8.3
DPC	**Dobruska-Polom**	**120.99**	**326**	*e*PKP	**PKiKP**	**02 36 18.0**	**+1.9**
DPC				*e*PS	PS	02 48 02.1	+24
DPC				AMS	AMS	03 30 50.0	
	comp=Z,4µm,18.6s						
DPC	**Dobruska-Polom**	**120.99**	**326**	*e*PKIKP	**PKiKP**	**02 36 18.0**	**+1.9**
DPC				MLR	MLR		
	comp=Z,4µm,18.6s						
GLMI	**Grayling**	**121.05**	**41**	PFAKE		02 36 30.0	+14
GLMI				LR	LR		
	comp=Z,7µm,20.0s						
UPC	**Upice**	**121.08**	**326**	AMS	AMS	03 30 40.0	
	comp=Z,5µm,20.4s						
VRAC	**Vranov**	**121.35**	**325**	PKP	**PKiKP**	**02 36 16.9**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=89,slow=8.5,SNR=3.7						
MODS	**Modra-Piesok**	**121.40**	**324**	*e*PKIKP	PKiKP	02 36 25.8	+8.9
MODS	**Modra-Piesok**	**121.40**	**324**	*e*PKP	PKiKP	02 36 25.8	+8.9
PAYG	**Puerto Ayora**	**121.50**	**95**	PFAKE		02 36 30.0	+12
PAYG				LR	LR		
	comp=Z,3µm,20.0s						
PVCC	**Panska Ves**	**121.86**	**327**	AMS	AMS	03 28 10.0	
	comp=Z,4µm,22.4s						
TREC	**Trest**	**121.99**	**325**	AMS	AMS	03 31 50.0	
	comp=Z,5µm,17.8s						
R47A	**Wooly Knot Far**	**122.00**	**49**	P	**PKPdf**	**02 36 17.7**	**-0.5**
	baz=288						
BRG	**Berggiesshubel**	**122.02**	**327**	*e*PKP	**PKiKP**	**02 36 18.7**	**+0.7**
	comp=Z,17nm,1.6s						
BRG				SDIFF		02 48 14.0	
	comp=N,4µm,21.0s						
	comp=E,4µm,22.0s						
	comp=Z,7µm,20.7s						
BRG	**Berggiesshubel**	**122.02**	**327**	*e*PKIKP	**PKiKP**	**02 36 18.7**	**+0.7**
BRG				pmax	pmax		
	comp=Z,17nm,1.6s						
BRG				MLR	MLR		
	comp=N,4µm,21.0s						
BRG				MLR	MLR		
	comp=E,4µm,22.0s						
BRG				MLR	MLR		
	comp=Z,7µm,20.7s						
PRU	**Pruhonice**	**122.16**	**326**	*e*PKP	**PKiKP**	**02 36 18.8**	**+0.5**
PRU				AMS	AMS	03 30 10.0	
	comp=Z,4µm,20.0s						
PRU	**Pruhonice**	**122.16**	**326**	*e*PKIKP	**PKiKP**	**02 36 18.8**	**+0.5**
PRU				MLR	MLR		
	comp=Z,4µm,20.0s						
PRA	**Prague**	**122.18**	**326**	AMS	AMS	03 30 10.0	
	comp=Z,4µm,23.8s						
CLL	**Collm**	**122.28**	**328**	*e*PKPdf	**PKiKP**	**02 36 19.0**	**+0.5**
CLL				*e*PKPmax		02 36 25.0	
CLL				*e*pPKPdf	**pPKPdf**	**02 36 31.0**	**-2.8**
	comp=Z,7.0nm,1.0s						
CLL				*e*PP	**PP**	**02 37 54.0**	**0.0**
CLL				*e*		02 38 30.0	
CLL				*e*PPP	PPP	02 40 24.0	
CLL				*e*Sdif	Sdif	02 45 48.0	+3.1
CLL				*e*PS	**PS**	**02 47 48.0**	**-1.5**
CLL				*e*PPS	PPS	02 49 18.0	
CLL				*e*SS	**SS**	**02 54 30.0**	**+0.5**
CLL				*e*		02 56 48.0	
CLL				*e*SSS	SSS	02 59 00.0	
CLL				Lm	MLR	03 31 00.0	
	comp=N,6µm,19.1s						
CLL				Lm	MLR	03 31 00.0	
	comp=E,5µm,21.3s						
CLL				Lm	MLR	03 31 00.0	
	comp=Z,8µm,20.5s						
CLL	**Collm**	**122.28**	**328**	*e*PKIKP	**PKiKP**	**02 36 19.0**	**+0.5**
CLL				*e*		02 36 31.0	
CLL				MLR	MLR		
	comp=Z,8µm,20.5s						
CONA	**Conrad Observa**	**122.45**	**324**	PKiKP	**PKiKP**	**02 36 20.0**	**+0.9**
	comp=Z,4.3nm,0.9s						
AAM	**Ann Arbor**	**122.68**	**44**	PFAKE		02 36 30.0	+10

AAM				LR	LR		
	comp=Z,6µm,20.0s						
N49A	Columbus Grove	122.83	45	P	PKiKP	02 36 20.1	+0.2
	baz=292						
KHC	Kasperske Hory	123.15	326	*e*PKP	PKiKP	02 36 21.7	+1.3
KHC				*e*x	x	02 36 27.2	
KHC				AMS	AMS	03 31 50.0	
	comp=Z,5µm,20.0s						
KHC	Kasperske Hory	123.15	326	*e*PKIKP	PKiKP	02 36 21.7	+1.3
KHC				MLR	MLR		
	comp=Z,5µm,20.0s						
NKC	Novy Kostel	123.17	327	AMS	AMS	03 30 40.0	
	comp=Z,5µm,21.0s						
GERES	GERESS Array B	123.23	325	PKP	PKiKP	02 36 20.8	+0.2
	comp=Z,1.7nm,0.8s,baz=117,slow=2.1,SNR=7.1						
MOA	Molln	123.42	324	*e*PKiKP	PKiKP	02 36 22.0	+1.0
	comp=Z,8.2nm,1.8s						
BRAL	Brewton	123.50	57	PFAKE		02 36 30.0	+8.5
BRAL				LR	LR		
	comp=Z,3µm,19.0s						
SOKA	Soboth	123.55	323	*e*PKiKP	PKiKP	02 36 22.2	+0.9
	comp=Z,8.0nm,1.2s						
U50A	Jamestown	123.86	51	P	PKPdf	02 36 21.6	-0.3
	baz=288						
OBKA	Obir	123.92	323	PKiKP	PKiKP	02 36 22.2	+0.2
	comp=Z,7.2nm,1.2s						
ACSO	Alum Creek Sta	123.93	46	PFAKE		02 36 30.0	+7.9
ACSO				LR	LR		
	comp=Z,5µm,19.0s						
KBA	Koelnbreinsper	124.35	324	*e*PKiKP	PKiKP	02 36 23.2	+0.2
	comp=Z,7.1nm,1.1s						
T51A	Gray	124.37	50	P	PKiKP	02 36 23.4	+0.3
	baz=289						
S51A	Beattyville	124.41	49	P	PKiKP	02 36 23.4	+0.2
	baz=290						
TKL	Tuckaleechee C	124.92	51	PKP	PKPdf	02 36 23.5	-0.4
	comp=Z,8.1nm,0.9s,baz=22,slow=5.4,SNR=2.8						
ABTA	Abfaltersbach	125.01	324	*e*PKiKP	PKiKP	02 36 24.3	+0.1
	comp=Z,11nm,1.3s						
X52A	Dahlonega	125.15	52	P	PKiKP	02 36 25.9	+1.2
	baz=288						
WTTA	Wattenberg	125.24	325	*e*PKiKP	PKiKP	02 36 25.3	+0.5
	comp=Z,2.2nm,0.5s						
MOTA	Moosalm	125.50	325	*e*PKiKP	PKiKP	02 36 26.0	+0.7
	comp=Z,15nm,1.2s						
SQTA	Sankt Quirin	125.51	325	*e*PKiKP	PKiKP	02 36 25.7	+0.5
	comp=Z,15nm,1.3s						
U53A	Fall Branch	125.61	50	P	PKiKP	02 36 25.7	+0.1
	baz=290						
RETA	Reutte	125.62	325	*e*PKiKP	PKiKP	02 36 25.5	+0.1
	comp=Z,13nm,1.5s						
GOGA	Godfrey	125.84	54	PFAKE		02 36 40.0	+14
GOGA				LR	LR		
	comp=Z,5µm,22.0s						
FETA	Feichten	125.89	325	*e*PKiKP	PKiKP	02 36 26.6	+0.6
	comp=Z,12nm,1.4s						
DAVA	Damuels	126.23	326	PKiKP	PKiKP	02 36 27.4	+0.7
	comp=Z,10nm,1.0s						
MEM	Membach	126.23	331	⇑PKiKP	PKiKP	02 36 27.1	+0.8
FUORN	Ofenpass-Fuorn	126.38	325	*e*PKPdf	PKiKP	02 36 28.5	+1.4
BFO	Black Forest	126.47	327	PFAKE		02 36 40.0	+13
BFO				LR	LR		
	comp=Z,166nm,20.0s						
BFO	Black Forest	126.47	327	*i* PKIKP	PKiKP	02 36 27.5	+0.5
DAVOX	Davos/Dischmat	126.51	325	PKP	PKPdf	02 36 26.6	-0.2
	comp=Z,2.7nm,0.6s,baz=27,slow=5.1,SNR=5.4						
EKA	Eskdalemuir Ar	126.57	340	PKP	PKPdf	02 36 24.9	-1.6
	comp=Z,4.0nm,0.8s,baz=42,slow=3.3,SNR=5.3						
ESK	Eskdalemuir	126.60	340	PFAKE		02 36 40.0	+13
ESK				LR	LR		
	comp=Z,6µm,19.0s						
WLF	Walferdange	126.77	330	⇓PKiKP	PKiKP	02 36 28.0	+0.6
BLA	Blacksburg	126.92	48	PFAKE		02 36 40.0	+12
BLA				LR	LR		
	comp=Z,6µm,20.0s						
DOU	Dourbes	127.25	331	⇑PKiKP	PKiKP	02 36 30.7	+2.3
LONY	Lake Ozonia	127.47	37	PFAKE		02 36 40.0	+11
LONY				LR	LR		
	comp=Z,4µm,20.0s						
JTS	JuntasAbangare	127.75	82	PFAKE		02 36 40.0	+10
JTS				LR	LR		
	comp=Z,4µm,20.0s						
BINY	Binghamton	127.84	41	PFAKE		02 36 40.0	+10
BINY				LR	LR		
	comp=Z,6µm,20.0s						
LCO	Las Campanas	128.41	136	PFAKE		02 36 40.0	+8.2
LCO				LR	LR		
	comp=Z,3µm,21.0s						
NHSC	New Hope	128.56	53	PFAKE		02 36 40.0	+8.5
NHSC				LR	LR		
	comp=Z,4µm,19.0s						
CBN	Corbin Frederi	128.73	46	PFAKE		02 36 40.0	+8.3
CBN				LR	LR		
	comp=Z,5µm,20.0s						
CNNC	Cliffs of the	129.56	50	PFAKE		02 36 40.0	+6.5
CNNC				LR	LR		
	comp=Z,5µm,21.0s						
PKME	Peaks-Kenny Pk	130.16	34	PFAKE		02 36 40.0	+5.6
PKME				LR	LR		
	comp=Z,5µm,20.0s						
NNA	Nana	131.71	113	PFAKE		02 36 50.0	+12
NNA				LR	LR		
	comp=Z,2µm,20.0s						
OTAV	Otavalo	133.34	96	PFAKE		02 36 50.0	+7.7
OTAV				LR	LR		
	comp=Z,2µm,20.0s						
LVC	Limon Verde	133.50	130	PFAKE		02 36 50.0	+7.7
LVC				LR	LR		
	comp=Z,2µm,20.0s						
MTDJ	Mount Denham	134.46	71	PFAKE		02 36 50.0	+6.0
MTDJ				LR	LR		
	comp=Z,2µm,21.0s						
GCUF	Volcan Galeras	134.58	95	*e*P	PKiKP	02 36 48.0	+3.1
GCUF	Volcan Galeras	134.58	95	*e*P	PKiKP	02 36 48.0	+3.1
POPC	Popayan, Colom	135.43	94	*e*P	PKPdf	02 36 44.7	0.0
POPC	Popayan, Colom	135.43	94	*e*P	PKPdf	02 36 44.7	0.0
PCON	Cinco Dias	135.68	94	*e*P	PKiKP	02 36 46.7	-0.5
PCON	Cinco Dias	135.68	94	*e*P	PKiKP	02 36 46.7	-0.5
GTBY	Guantanamo Bay	136.44	68	PFAKE		02 37 00.0	+12
GTBY				LR	LR		
	comp=Z,2µm,20.0s						
ANIL	Santa Ana	136.91	91	*e*P	PKPdf	02 36 45.4	-2.2
ANIL	Santa Ana	136.91	91	*e*P	PKPdf	02 36 45.4	-2.2
LPAZ	La Paz	137.52	123	PKPpre	PKPpre	02 36 44.4	
LPAZ				*e*PKPdf	PKiKP	02 36 50.0	-0.9
LPAZ	La Paz	137.52	123	PKhKP	PKPpre	02 36 44.4	
	comp=Z,0.7nm,0.6s,baz=315,slow=5.7,SNR=3.3						
ROSC	El Rosal	138.01	91	PKP	PKPdf	02 36 50.5	+0.8
	comp=Z,3.8nm,0.4s,baz=131,slow=19,SNR=3.1						
CHIC	Chingaza	138.58	91	*e*P	PKPdf	02 36 50.7	-0.1
CHIC	Chingaza	138.58	91	*e*P	PKPdf	02 36 50.7	-0.1
BRRC	Barranca, Sant	138.77	87	*e*P	PKPdf	02 36 50.7	+0.1
BRRC	Barranca, Sant	138.77	87	*e*P	PKPdf	02 36 50.7	+0.1
ESDC	Sonseca Array	138.81	326	PKhKP	PKPpre	02 36 43.6	
	comp=Z,0.6nm,0.8s,baz=88,slow=1.9,SNR=3.7						
ESDC				SKPbc	SKiKP	02 40 26.1	+2.1
	comp=Z,1.4nm,1.0s,baz=49,slow=5.8,SNR=3.2						
CPUP	Villa Florida	138.81	145	PKP	PKPdf	02 36 51.4	+1.0
CPUP				*e*PKPdf	PKiKP	02 36 52.8	+0.2
CPUP	Villa Florida	138.81	145	PKP	PKPdf	02 36 51.4	+1.0
	comp=Z,3.2nm,0.9s,baz=216,slow=3.2,SNR=4.1						
PAB	San Pablo	139.11	327	PFAKE		02 37 00.0	+7.1
PAB				LR	LR		
	comp=Z,3µm,20.0s						
PGAV	Gavieira, Arco	139.28	332	*e*LQ	LQ	03 27 30.3	
PGAV				*e*LR	LR	03 35 09.4	
	comp=Z,7µm,20.0s						
MVO	Moncorvo	139.31	331	*e*SS	SS	02 58 16.0	+18
MVO	Moncorvo	139.31	331	*e*LQ	LQ	03 26 23.4	
MVO				*e*LR	LR	03 33 22.3	
	comp=Z,7µm,20.0s						
GRTK	Grand Turk	139.71	65	PFAKE		02 37 00.0	+5.5
GRTK				LR	LR		
	comp=Z,3µm,21.0s						
MTE	Manteigas	140.14	330	*e*LQ	LQ	03 27 34.6	
MTE				*e*LR	LR	03 33 46.7	
	comp=Z,8µm,20.0s						
TAMC	Tame, Arauca	140.64	88	⇑*e*P	PKPpre	02 36 47.4	
TAMC	Tame, Arauca	140.64	88	⇑*e*P	PKPpre	02 36 47.4	
PMRV	Marv??o	140.80	329	*e*SS	SS	02 58 37.9	+22
PMRV	Marv??o	140.80	329	*e*LR	LR	03 31 31.8	
	comp=Z,3µm,22.0s						
PESTR	Estremoz	141.33	329	*e*SS	SS	02 58 43.6	+22
SDV	Santo Domingo	141.86	85	*e*PKPpre	PKPpre	02 36 51.9	
SDV				*e*PKPdf	PKPdf	02 36 57.3	+0.9
SDV				LR	LR		
	comp=Z,3µm,21.0s						
PMAFR	Mafra	142.11	330	*e*SS	SS	02 58 54.2	+24
PVAQ	Vaqueiros	142.48	327	*e*SS	SS	02 58 49.2	+14
PVAQ	Vaqueiros	142.48	327	*e*LQ	LQ	03 27 48.4	
PBDV	Barranco-do-Ve	142.72	327	*e*SS	SS	02 58 43.6	+5.7
SJG	San Juan	145.11	68	*e*PKPdf	PKPbc	02 37 00.7	-0.6
SJG				LR	LR		
	comp=Z,3µm,20.0s						
SJG	San Juan	145.11	68	*e*PKIKP	PKPbc	02 37 00.7	-0.6
SJG				MLR	MLR		
	comp=Z,3µm,20.0s						
SHEL	Horse Pasture	145.28	229	PFAKE		02 37 10.0	+3.9
SHEL				LR	LR		
	comp=Z,2µm,20.0s						
HUMP	Col San Antoni	145.38	68	*e*PKPdf	PKiKP	02 37 04.7	-1.4
MTP	Monte Pirata	145.66	68	*e*PKPdf	PKPab	02 37 04.3	+0.8
STVI	Saint Thomas	146.15	67	*e*PKPdf	PKPbc	02 37 04.1	-0.4
TOA0	Torodi Ar. Sit	146.15	283	P	PKiKP	02 37 06.8	-1.1
	SNR=21						
TORD	Torodi Ar. Bea	146.15	283	PKPbc	PKPdf	02 37 02.8	-0.8
	comp=Z,12nm,0.7s,baz=74,slow=3.5,SNR=50						
CDVI	St. Croix	146.47	68	*e*PKPdf	PKPbc	02 37 05.8	+0.3
CMLA	Cha da Macela	148.82	350	PFAKE		02 37 20.0	+4.8
CMLA				LR	LR		
	comp=Z,4µm,20.0s						
ANWB	Willy Bob	149.23	67	PFAKE		02 37 20.0	+2.5
ANWB				LR	LR		
	comp=Z,3µm,20.0s						
PMOZ	Porto Moniz, M	150.81	334	*e*LR	LR	03 43 39.5	
	comp=Z,2µm,20.0s						
PTGA	Pitinga	151.20	104	PFAKE		02 37 20.0	+1.6
PTGA				LR	LR		
	comp=Z,14µm,22.0s						
BDFB	Brasilia	152.54	145	PKPbc	PKPbc	02 37 19.3	-1.6
	comp=Z,11nm,0.8s,baz=183,slow=1.8,SNR=17						
KIC	Kosan Boka	152.77	270	*e*PKIKP	PKiKP	02 37 22.7	+1.1
	comp=Z,109nm,1.4s						
DBIC	Dimbokro	152.90	271	PKP	PKPdf	02 37 14.6	+0.2
DBIC				PKPbc	PKPbc	02 37 20.2	-1.4
DBIC				*e*PKPbc	PKiKP	02 37 22.5	+0.7
DBIC	Dimbokro	152.90	271	PKP	PKPdf	02 37 14.6	+0.2
	comp=Z,2.3nm,0.9s,baz=357,slow=2.0,SNR=3.1						
DBIC				PKPbc	PKPbc	02 37 20.2	-1.4
	comp=Z,7.9nm,0.9s,baz=99,slow=2.3,SNR=14						
LIC	Lamto	153.04	270	*e*PKIKP	PKiKP	02 37 22.8	+0.7
	comp=Z,108nm,1.4s						
TIC	Toumodi	153.06	271	*e*PKIKP	PKiKP	02 37 23.2	+1.0
RCBR	Riachuelo	166.69	164	PFAKE		02 37 40.0	+10
RCBR				LR	LR		
	comp=Z,29µm,22.0s						
SACV	Santiago Islan	168.49	314	PFAKE		02 37 40.0	+8.8
SACV				LR	LR		
	comp=Z,2µm,20.0s						

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*DDA **01** 02:23:42.6, 37.°90N×29.°26E, h16^{km}±1^{km}, ML3.5*
*ISK **01** 02:23:42.6, 37.°87N×29.°29E, h5^{km}, ML3.4/27*
*ISCJB **01** 02:23:43.4±0.5, 37.°91N±0.°02×29.°27E±0.°02, h4^{km}±4^{km}, Error ellipse: s-maj=3.1km s-min=3.0km az=10.4*
ISC 01 02:23:44.4±1.1**, 37.°92N**±0.°02×**29.°29E**±0.°02**, h8**^{km}±10^{km}**, n73, σ1^{s}48**/86**, 8C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	Denizli	0.26	231	PG	Pg	02 23 48.3	-1.3
KHL	Karahalli	0.44	25	PG	Pg	02 23 53.2	+0.1
KHAL	Karahalli	0.48	19	*i* P	Pg	02 23 52.5	-1.2
KHAL				*i* S	Sb	02 24 02.0	-0.5
KHAL				IAML_P			
	comp=Z,11µm,0.2s						
TAVA	DENIZLI_Tavas	0.54	213	*i* P	Pg	02 23 52.9	-2.0
TAVA				*i* S	Sg	02 24 01.1	-1.0
TAVA				IAML_P			
	comp=Z,12µm,0.1s						
BRDR	BURDUR-Merkez	0.65	110	*i* P	Pg	02 23 55.6	-1.4
BRDR				*i* S	Sb	02 24 07.3	-0.1
BRDR				IAML_P			
	comp=Z,8µm,0.2s						
KZIL	AFYON_Kizioren	0.75	63	*i* P	Pg	02 23 58.2	-0.7
KZIL				IAML_P			
	comp=Z,9µm,0.5s						
KULA	Kula-Manisa	0.77	320	PG	Pg	02 23 59.3	0.0
MANT	Manisa	0.81	315	*i* P	Pg	02 23 59.1	-0.9
MANT				*i* S	Sg	02 24 10.4	-0.2
MANT				IAML_P			
	comp=Z,20µm,0.2s						
ISP	Isparta	0.98	95	PG	Pb	02 24 02.5	-1.2
ISP				SG	Sn	02 24 17.1	-1.7
SHAP	Saphane-Kutahy	1.10	357	PN	Pb	02 24 05.3	-0.5
AYDB	Zeytinkoy-Aydi	1.11	272	PN	Pb	02 24 04.9	-1.0
AYDB				SN	Sn	02 24 21.6	-0.3
GEDZ	Gediz	1.13	5	PN	Pb	02 24 06.2	0.0
BCK	Bucak	1.13	114	PN	Pb	02 24 05.7	-0.5
AYDN	Tasoluk	1.15	257	*i* P	Pb	02 24 05.6	-0.9
AYDN				*i* S	Sb	02 24 20.6	-1.0
AYDN				IAML_P			
	comp=Z,13µm,0.2s						
SHUT	Suhut-Afyon	1.18	57	PN	Pb	02 24 06.2	-0.9
TURN	Turunc	1.18	208	PN	Pg	02 24 09.7	+2.6
TURN				SN	Sg	02 24 30.8	+8.4
TURN	Turunc	1.18	208	*i* P	Pg	02 24 08.9	+1.9
TURN				IAML_P			
	comp=Z,3µm,0.5s						
BAGO	Egridir - ISPA	1.19	86	*i* P	Pb	02 24 05.7	-1.5
BAGO				*i* S	Sn	02 24 24.9	+1.0
BAGO				IAML_P			
	comp=Z,3µm,0.3s						
SMAA	Simav-Kutahya	1.20	348	PN	Pg	02 24 07.9	+0.4
DEMI	Demirci	1.21	338	*i* P	Pn	02 24 07.5	-0.3
DEMI				*i* S	Sb	02 24 22.9	-0.5
DALY	Dalyan (Mula)	1.21	205	PN	Pn	02 24 06.5	-1.2
DALY				SN	Sb	02 24 23.2	-0.2
DALY	Dalyan (Mula)	1.21	205	*i* P	Pn	02 24 05.3	-2.3
DALY				*i* S	Sb	02 24 22.3	-1.2
DALY				IAML_P			
	comp=Z,3µm,0.4s						
KORT	Korkueli	1.25	137	PN	Pn	02 24 06.7	-1.6
KORT	Korkueli	1.25	137	*i* P	Pn	02 24 06.9	-1.5
KORT				IAML_P			
	comp=Z,2µm,0.2s						
ELL	Elmali	1.27	157	PN	Pn	02 24 07.1	-1.5
FETY	Fethiye	1.29	187	PN	Pn	02 24 07.1	-1.7
MLSB	Milas	1.35	243	PN	Pn	02 24 08.9	-0.8
MLSB				SN	Sg	02 24 28.9	+0.9
SUTC	Sutluce-Ispart	1.43	108	PN	Pn	02 24 10.2	-0.6
ANTB	Antalya	1.49	133	PN	Pn	02 24 11.4	-0.1
AKHS	Akhisar	1.50	310	*i* P	Pn	02 24 11.6	-0.1
AKHS				IAML_P			
	comp=Z,5µm,0.2s						
BOLV	Bolvadin	1.53	58	*i* P	Pb	02 24 12.6	-0.5
BOLV				IAML_P			
	comp=Z,9µm,0.4s						
GCAM	G?zelcaml?	1.64	263	PN	Pn	02 24 13.6	0.0
GCAM	G?zelcaml?	1.64	263	*i* P	Pn	02 24 13.9	+0.3
GCAM				IAML_P			
	comp=Z,2µm,0.1s						
BDRM	Kayabasi	1.70	240	*i* P	Pn	02 24 13.5	-1.0
BDRM				IAML_P			
	comp=Z,1µm,0.2s						
AKAS	Kas	1.70	171	PN	Pn	02 24 14.3	-0.3
AKAS	Kas	1.70	171	*i* P	Pn	02 24 14.6	0.0
AKAS				IAML_P			
	comp=Z,3µm,0.2s						
BODT	Bodrum	1.79	242	PN	Pn	02 24 15.4	-0.3
DURS	Dursunbey	1.80	339	*i* P	Pn	02 24 15.9	0.0
DURS				IAML_P			
	comp=Z,2µm,0.4s						
DAT	Datca	1.81	229	PN	Pn	02 24 15.5	-0.5
DAT	Datca	1.81	229	*i* P	Pn	02 24 14.1	-2.0
BLCB	Balcova	1.83	285	PN	Pn	02 24 16.4	+0.2
STEP	BALIKESIR_Sava	1.91	320	*i* P	Pn	02 24 17.6	+0.4
STEP				IAML_P			
	comp=Z,2µm,0.2s						
DGB	zmir	1.91	275	*i* P	Pn	02 24 16.6	-0.6
DGB				IAML_P			
	comp=Z,701nm,0.1s						
ARG	Arkhangelos	1.94	209	PN	Pn	02 24 16.8	-0.9
BALB	Balikesir	2.04	328	PN	Pn	02 24 20.3	+1.2
BORA	Eskisehir	2.16	25	PN	Pn	02 24 21.8	+1.0
BORA	Eskisehir	2.16	25	*i* P	Pb	02 24 23.3	-0.6
BORA				IAML_P			
	comp=Z,3µm,0.4s						
URLA	Izmir	2.17	283	PN	Pn	02 24 21.9	+1.0
ZEY	zmir	2.22	279	*i* P	Pn	02 24 19.7	-1.9
ZEY				IAML_P			
	comp=Z,908nm,0.1s						
KDHN	Kadinhani	2.31	74	*i* P	Pn	02 24 22.4	-0.5
CAVI	Cavuskoy	2.32	11	PN	Pn	02 24 23.9	+0.9
KONT	Konya--Tatoy	2.43	88	PN	Pn	02 24 24.9	+0.4
LADK	Ladik-KONYA	2.44	82	PN	Pn	02 24 24.9	+0.1
KCTX	Karacabey (Bur	2.45	343	PN	Pn	02 24 26.6	+1.8
AYVA	Ayvalik	2.46	305	*i* P	Pn	02 24 25.0	+0.1
AYVA				IAML_P			
	comp=Z,407nm,0.2s						
GONE	Gonen-Balikesi	2.46	330	PN	Pn	02 24 26.4	+1.5
MDNY	Mudanya-Bursa	2.47	353	PN	Pn	02 24 26.6	+1.7
CHOS	Chios island	2.59	281	PN	Pn	02 24 27.3	+0.5
BAYC	CANAKKALE_Bayr	2.81	311	*i* P	Pn	02 24 29.5	-0.2
BAYC				IAML_P			
	comp=Z,551nm,0.2s						
KESN	Edirne-Kesan	3.54	326	*i* P	Pn	02 24 40.2	+0.2
KESN				IAML_P			
	comp=Z,278nm,0.2s						
TIRR	Tirgusor	6.56	354	⇓*i*P	Pn	02 25 21.5	+0.2
VTS	Vitosha	6.59	317	⇑*i*P	Pn	02 25 22.2	+0.4
TLCR		7.27	357	⇑*i*P	Pn	02 25 31.6	+0.7
CFR	Carcaliu	7.30	354	⇓*i*P	Pn	02 25 31.5	+0.1
MLR	Muntele Rosu	7.97	343	⇓*i*P	Pn	02 25 42.7	+2.1
VOIR		8.15	338	⇓*i*P	Pn	02 25 43.5	+0.4
PLOR	Plostina	8.16	347	⇑*i*P	Pn	02 25 43.5	+0.2
VRI	Vrincioaia	8.17	347	⇑*i*P	Pn	02 25 46.9	+3.6
ARR	Arges	8.21	336	⇑*i*P	Pn	02 25 47.0	+3.0
OZUR		8.57	343	⇑*i*P	Pn	02 25 49.9	+1.0
MDVR	Moldovita	8.91	323	⇑*i*P	Pn	02 25 53.3	-0.2
MILM	Milestii Mici	9.00	358	⇑*i*P	Pn	02 25 54.8	+0.2
BIZ	Bicaz	9.31	346	⇓*i*P	Pn	02 25 59.6	+0.6

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*ISCJB **01** 02:37:09.8±0.7, 35.°53N±0.°06×140.°13E±0.°07, h78^{km}±5^{km}, mb3.3/3, Error ellipse: s-maj=11.7km s-min=7.1km az=38.4*
*JMA **01** 02:37:10.3±0.3, 35.°62N×140.°11E, h68^{km}±3^{km}, M2.7*
*IDC **01** 02:37:15.8±3.3, 35.°19N×139.°30E, h91^{km}±26^{km}, mb3.0/3, mb1 3.1/3, mb1mx2.8/63, mbtmp3.3/3, Error ellipse: s-maj=83.6km s-min=30.4km az=62.0*
ISC 01 02:37:10.8±1.0**, 35.°55N**±0.°06×**140.°12E**±0.°06**, h71**^{km}±8^{km}**, n18, σ0^{s}78**/21**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	Nagara	0.15	155	P	Pn	02 37 21.3	-0.1
JCN				S	Sn	02 37 30.1	+1.0
JSMT	Sammumatsuo	0.28	71	P	Pn	02 37 21.8	-0.2
TOK	Tokyo	0.33	294	P	Pn	02 37 22.3	+0.1
BSO3	Boso 3	0.81	157	P	Pn	02 37 26.7	-0.2
JOD2	Odawara 2	0.89	251	P	Pn	02 37 27.6	-0.5
JOD2				S	Sn	02 37 40.1	-0.8
JIM2	Oshima 3	1.01	214	P	Pn	02 37 28.8	-0.7
JAG	Ashikaga	1.02	328	P	Pn	02 37 28.7	-1.0
JAG				S	Sn	02 37 41.8	-2.0
JRY	Ryogami san	1.10	295	P	Pn	02 37 30.6	0.0
JRY				S	Sn	02 37 46.2	+0.8
BSO1	Boso 1	1.14	142	P	Pn	02 37 30.3	-0.3
JFNN	Fujinakano	1.23	253	S	Sn	02 37 48.2	-0.2
MJAR	Matsushiro Arr	1.84	303	P	Pn	02 37 40.8	+0.5
	0.7nm,0.3s,baz=151,slow=12,SNR=19						
MJAR				S	Sn	02 38 03.6	+0.8
	1.5nm,0.3s,baz=238,slow=41,SNR=5.7						
MAT	Matsushiro	1.84	303	P	Pn	02 37 40.7	+0.3
MAT				S	Sn	02 38 03.4	+0.6
H11N2	WAKE ISLAND Hy	28.35	117	T	T	03 12 45.9	
	baz=314						
H11N1	WAKE ISLAND Hy	28.36	117	T	T	03 12 40.8	
	baz=314						
H11N3	WAKE ISLAND Hy	28.37	117	T	T	03 12 51.5	
	baz=314						
MKAR	Makanchi Array	44.04	303	P	P	02 45 12.0	+0.5
	0.2nm,0.4s,baz=86,slow=9.4,SNR=1.8						
KURBB	Kurchatov Arra	46.10	309	P	P	02 45 27.1	-0.5
	0.2nm,0.4s,baz=83,slow=7.5,SNR=2.3						
WRA	Warramunga Arr	55.46	187	P	P	02 46 38.5	+0.3
	0.2nm,0.4s,baz=1.3,slow=7.4,SNR=1.6						

NNC 01 02:40:17.0±2.8**, 37.°69N**×**71.°48E, h0**^{km}**, mb3.5, mpv3.2, 2C-4D, Error ellipse: s-maj=21.6km s-min=18.1km az=177.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	2.80	34	⇓P	Pn	02 41 03.3	-0.1
	5.4nm,0.3s						
SFK				⇓S	Sn	02 41 39.5	+1.5
	2.4nm,0.3s						
MNAS	Manas	4.85	9	⇓P	Pn	02 41 31.2	-0.2
	2.0nm,0.4s						
MNAS				⇑S	Sn	02 42 28.6	+0.2
	2.2nm,0.5s						
KK31	Karatay Array	5.46	353	⇓P	Pn	02 41 40.2	+0.6
	0.6nm,0.5s,baz=180,slow=14,SNR=9.7						
KK31				⇑S	Sn	02 42 45.0	+1.9
	1.4nm,0.3s,baz=179,slow=22,SNR=20						

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*IDC **01** 02:44:00.9±0.7, 10.°30N×126.°11E, h0^{km}, mb3.7/12, mb1 3.8/12, mb1mx3.7/52, mbtmp3.7/12, Error ellipse: s-maj=44.1km s-min=16.4km az=75.0*
*ISCJB **01** 02:44:06.1±0.8, 10.°31N±0.°03×126.°23E±0.°06, h50^{km}±8^{km}, mb3.7/12, Error ellipse: s-maj=10.8km s-min=4.9km az=168.8*
*MAN **01** 02:44:06.4, 10.°34N×126.°12E, h23^{km}, MS3.0*
ISC 01 02:44:07.1±1.5**, 10.°32N**±0.°04×**126.°21E**±0.°08**, h42**^{km}±15^{km}**, n32, σ1^{s}25**/36**, mb3.8**/12**, 3C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.89	233	⇑*e*P	Pn	02 44 21.7	-1.5
SCPH				*e*S	Sn	02 44 34.3	-0.7
MSLP	Maasin	1.35	262	*e*P	Pn	02 44 28.4	-1.0
MSLP				*e*S	Sn	02 44 45.6	-0.5
BUTP	Butuan	1.47	204	*e*P	Pn	02 44 30.7	-0.4
BUTP				*e*S	Sn	02 44 49.4	+0.4
PLP	Palo	1.47	305	⇓*e*P	Pn	02 44 30.3	-0.9
PLP				*e*S	Sn	02 44 48.2	-1.1
BESP	Borongan	1.48	329	*e*P	Pn	02 44 30.9	-0.4
BESP				*e*S	Sn	02 44 50.9	+1.5
BIPH	Bislig	2.13	176	⇑*i*P	Pn	02 44 39.9	-0.3
BIPH				*i* S	Sn	02 45 04.2	-1.2
LLP	Lapu-Lapu	2.21	270	*e*P	Pn	02 44 42.0	+0.7
LLP				*e*S	Sn	02 45 09.7	+2.3
CGP	Cagayan de Oro	2.39	219	⇓*e*P	Pn	02 44 54.4	+11
CGP				*e*S	Sn	02 45 13.9	+2.1
TBP	Tagbilaran	2.40	255	*e*P	Pn	02 44 44.7	+0.8
CNP	Catarman	2.65	325	*e*P	Pn	02 44 47.5	+0.2
CNP				*e*S	Sn	02 45 18.8	+0.5
BUKP	Musuan	2.68	205	*e*P	Pn	02 44 49.6	+1.8
BUKP				*e*S	Sn	02 45 22.7	+3.6
DCPH	Dipolog City	3.31	239	⇑*e*P	Pn	02 44 55.5	-0.9
DCPH				*e*S	Sn	02 45 33.1	-1.4
RCP	Roxas	3.62	290	⇓*e*P	Pn	02 45 01.7	+1.0
FITZ	Fitzroy Crossi	28.25	181	P	P	02 49 55.9	-0.4
	0.4nm,0.4s,baz=1.5,slow=13,SNR=1.6						
WRA	Warramunga Arr	31.12	165	P	P	02 50 21.7	-0.2
	0.3nm,0.6s,baz=345,slow=9.6,SNR=1.8						
ASAR	Alice Springs	34.61	168	P	P	02 50 52.2	-0.1
	0.3nm,0.4s,baz=356,slow=6.9,SNR=6.2						
H11S3	WAKE ISLAND Hy	39.96	74	T	T	03 34 31.0	
	baz=261,slow=73,SNR=13						
H11S1	WAKE ISLAND Hy	39.97	74	T	T	03 34 35.1	
	baz=261,slow=73,SNR=7.8						
H11S2	WAKE ISLAND Hy	39.98	74	T	T	03 34 30.0	
	baz=261,slow=73,SNR=7.6						
H11N1	WAKE ISLAND Hy	40.29	72	T	T	03 35 05.8	
	baz=265,slow=74,SNR=30						
H11N2	WAKE ISLAND Hy	40.30	72	T	T	03 34 58.2	
	baz=265,slow=74,SNR=22						
H11N3	WAKE ISLAND Hy	40.31	72	T	T	03 35 07.1	
	baz=265,slow=74,SNR=26						
SONM	Songino Array	40.95	340	P	P	02 51 46.3	+0.5
	0.2nm,0.3s,baz=165,slow=7.2,SNR=1.8						
STKA	Stephens Creek	44.47	161	P	P	02 52 14.0	-0.3
	2.6nm,0.8s,baz=338,slow=11,SNR=3.0						

PETK	Petropavlovsk-	49.61	24	P	P	02 52 55.2	+1.0
	1.3nm,0.6s,baz=223,slow=5.9,SNR=1.6						
MKAR	Makanchi Array	51.95	323	P	P	02 53 11.1	-0.8
	0.5nm,0.5s,baz=128,slow=7.2,SNR=6.7						
KURBB	Kurchatov Arra	56.00	325	P	P	02 53 40.0	-1.3
	0.5nm,0.5s,baz=126,slow=7.0,SNR=4.4						
BVAR	Borovoye Array	61.59	325	P	P	02 54 21.7	+1.5
	0.4nm,0.6s,baz=108,slow=4.7,SNR=2.1						
ILAR	Eielson Array	79.42	26	P	P	02 56 08.3	-0.4
	0.4nm,0.8s,baz=260,slow=5.4,SNR=2.7						
FINES	FINESS Array B	85.82	332	P	P	02 56 42.0	+0.1
	3.1nm,1.1s,baz=83,slow=3.4,SNR=4.6						
YKA	Yellowknife Ar	93.73	24	P	P	02 57 19.5	+0.3
	0.3nm,0.7s,baz=304,slow=4.9,SNR=5.6						
TORD	Torodi Ar. Bea	120.20	292	PKP	PKPdf	03 02 53.2	-1.4
	0.2nm,0.7s,baz=91,slow=2.3,SNR=2.8						

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*DDA **01** 02:44:32.4, 36°.95N×36°.03E, h2^{km}±2^{km}, ML2.5*
*ISK **01** 02:44:32.3, 36°.99N×36°.02E, h8^{km}±1^{km}, ML2.2/9*
ISC 01 02:44:32.8±1.1**, 36°.96N**±0°.03×**36°.03E**±0°.03**, h7**^{km}±11^{km},
n21, σ0ˢ.58/28**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEYT	Ceyhan	0.23	282	PG	Pg	02 44 37.1	-0.2
CEYT				SG	Sg	02 44 40.9	+0.5
YURE	YUREGIR	0.35	247	PG	Pg	02 44 39.7	+0.2
YURE	YUREGIR	0.35	247	*i* P	Pg	02 44 39.9	+0.4
KOZT	Kozan	0.54	343	PG	Pg	02 44 42.9	-0.4
TAHT	Tahtakopru-Hat	0.60	168	PG	Pb	02 44 44.7	-0.9
TAHT				SG	Sb	02 44 53.9	-0.3
KRTS	Karatas	0.65	234	PG	Pb	02 44 45.8	-0.7
ANDN	Andirin	0.67	22	*i* P	Pb	02 44 47.3	+0.4
ANDN				IAML_P			
	comp=Z,347nm,0.1s						
KARA	Karaisali	0.83	291	PG	Pg	02 44 48.6	-0.2
KUZU	Kuzuini	0.86	102	*i* P	Pb	02 44 49.9	-0.2
KMRS	Kahramanmaras	0.88	52	PG	Pb	02 44 49.7	-0.8
KMRS				SG	Sb	02 45 01.9	-0.6
YAYL	Yayladag	0.93	176	*i* P	Pb	02 44 51.3	0.0
YAYL				IAML_P			
	comp=Z,772nm,0.2s						
GAZ	Gaziantep	0.97	77	PG	Pb	02 44 51.5	-0.4
GAZ				SG	Sb	02 45 05.1	+0.1
SAIM	ADANA	1.01	2	*i* P	Pb	02 44 52.3	-0.4
SAIM				IAML_P			
	comp=Z,304nm,0.1s						
GULE	Gulek	1.05	288	*i* P	Pb	02 44 53.3	-0.1
GULE				IAML_P			
	comp=Z,225nm,0.1s						
MERS	Mersin	1.21	266	PN	Pg	02 44 55.5	-0.5
YAHY	KAYSERI_Yahyal	1.25	335	*i* P	Pn	02 44 57.4	+0.6
YAHY				IAML_P			
	comp=Z,192nm,0.1s						
GZT	Gaziantep	1.29	72	*i* P	Pn	02 44 57.3	0.0
GZT				*i* S	Sn	02 45 15.1	+0.2
GZT				IAML_P			
	comp=Z,533nm,0.1s						
AKCD	Akcadag	2.01	48	*i* P	Pn	02 45 07.7	+0.5
AKCD				IAML_P			
	comp=Z,66nm,0.1s						
SURC	SANLIURFA_SURC	2.07	91	*i* P	Pg	02 45 13.2	+0.7
SURC				*i* S	Sg	02 45 40.3	+0.9
SURC				IAML_P			
	comp=Z,84nm,0.1s						
URFA	Urfa	2.28	77	PN	Pn	02 45 11.9	+1.0
SANL	SANLIURFA_Merk	2.38	84	*i* P	Pg	02 45 17.7	-0.6
SANL				*i* S	Sg	02 45 48.1	-1.1
SANL				IAML_P			
	comp=Z,141nm,0.1s						

DJA 01 02:48:39.6±1.4**, 5°N**±13°×**9°6E**±°**, h59**^{km}±19^{km}**, M3.5**/6,
MLv3.5/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSI	Banda Aceh	0.53	286	P	Pn	02 48 53.7	+1.8
LHMI	Lhok Sumawe	1.14	96	P	Pn	02 48 59.0	-0.4
LHMI				S	Sn	02 49 14.8	+0.6
TPTI		2.48	147	P	Pn	02 49 15.6	-2.1
KCSI	Kotacane, Aceh	2.67	133	P	Pn	02 49 20.6	+0.4
KCSI				S	Sn	02 49 53.4	+2.0

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*ISCJB **01** 03:02:24.8±0.6, 37°.88N±0°.03×29°.30E±0°.04, h8^{km}±6^{km},*
Error ellipse: s-maj=6.1km s-min=4.9km az=32.3
*DDA **01** 03:02:24.5, 37°.88N×29°.30E, h7^{km}±2^{km}, ML2.6*
*ISK **01** 03:02:24.6, 37°.84N×29°.30E, h11^{km}, ML2.4/7*
ISC 01 03:02:24.6±1.2**, 37°.87N**±0°.04×**29°.30E**±0°.03**, h9**^{km}±11^{km},
n14, σ0ˢ.58/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVA	DENIZLI_Tavas	0.51	218	*i* P	Pg	03 02 34.8	+0.3
TAVA				*i* S	Sb	03 02 42.9	-0.5
TAVA				IAML_P			
	comp=Z,847nm,0.1s						
KHAL	Karahalli	0.52	16	*i* P	Pg	03 02 34.1	-0.7
KHAL				*i* S	Sg	03 02 42.5	+0.8
KHAL				IAML_P			
	comp=Z,1µm,0.1s						
BRDR	BURDUR-Merkez	0.62	106	*i* P	Pb	03 02 37.7	-0.1
BRDR				IAML_P			
	comp=Z,533nm,0.2s						
KZIL	AFYON_Kizioren	0.77	59	*i* P	Pg	03 02 39.7	+0.3
KZIL				IAML_P			
	comp=Z,632nm,0.2s						
KULA	Kula-Manisa	0.82	322	PG	Pb	03 02 40.9	-0.3
MANT	Manisa	0.86	317	*i* P	Pb	03 02 41.6	-0.2
MANT				*i* S	Sg	03 02 51.9	-0.5
MANT				IAML_P			
	comp=Z,2µm,0.2s						
ISP	Isparta	0.96	92	PG	Pg	03 02 42.9	-0.3
ISP				SG	Sn	03 02 57.8	-0.6
AYDB	Zeytinkoy-Aydi	1.12	275	PN	Pn	03 02 46.4	-0.3
AYDN	Tasoluk	1.15	260	*i* P	Pn	03 02 47.7	+0.7
SHAP	Saphane-Kutahy	1.16	357	PN	Pn	03 02 48.2	+1.0
DALY	Dalyan (Mula)	1.17	207	PN	Pb	03 02 46.4	-0.6
DALY				SN	Sn	03 03 03.8	+0.6
GEDZ	Gediz	1.18	4	PN	Pn	03 02 47.8	+0.4
SHUT	Suhut-Afyon	1.20	55	PN	Pn	03 02 48.0	+0.3
DEMI	Demirci	1.26	339	*i* P	Pg	03 02 49.0	+0.1
DEMI				IAML_P			
	comp=Z,1µm,0.3s						

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*ISCJB **01** 03:22:42.5±0.6, 37°.89N±0°.04×29°.23E±0°.03, h3^{km}±7^{km},*
Error ellipse: s-maj=6.1km s-min=4.6km az=6.4
*DDA **01** 03:22:42.1, 37°.89N×29°.31E, h7^{km}±1^{km}, ML2.5*
*ISK **01** 03:22:42.4, 37°.92N×29°.20E, h10^{km}, ML2.1/6*
ISC 01 03:22:42.3±1.4**, 37°.91N**±0°.04×**29°.26E**±0°.03**, h6**^{km}±13^{km},
n13, σ0ˢ.61/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	Denizli	0.23	230	PG	Pg	03 22 47.5	+0.5
KHAL	Karahalli	0.50	21	*i* P	Pg	03 22 52.5	+0.5
KHAL				*i* S	Sb	03 23 00.5	-0.7
KHAL				IAML_P			
	comp=Z,827nm,0.1s						
TAVA	DENIZLI_Tavas	0.52	212	*i* P	Pg	03 22 52.7	+0.4
TAVA				IAML_P			
	comp=Z,389nm,0.1s						
BRDR	BURDUR-Merkez	0.67	108	*i* P	Pg	03 22 54.8	-0.3
BRDR				*i* S	Sb	03 23 05.1	-0.9
BRDR				IAML_P			
	comp=Z,290nm,0.1s						
KULA	Kula-Manisa	0.77	322	PG	Pg	03 22 56.9	-0.2
KZIL	AFYON_Kizioren	0.78	63	*i* P	Pb	03 22 57.8	-0.5
KZIL				IAML_P			
	comp=Z,504nm,0.1s						
MANT	Manisa	0.81	317	*i* P	Pb	03 22 58.8	0.0
MANT				*i* S	Sb	03 23 09.6	-0.5
MANT				IAML_P			
	comp=Z,902nm,0.1s						
ISP	Isparta	1.00	94	PG	Pn	03 23 03.5	+0.5
ISP				SG	Sn	03 23 17.8	+0.3
AYDB	Zeytinkoy-Aydi	1.08	273	PG	Pg	03 23 02.7	-0.4
AYDN	Tasoluk	1.12	258	*i* P	Pn	03 23 04.8	+0.1
DALY	Dalyan (Mula)	1.19	204	PN	Pn	03 23 05.3	-0.1
SHUT	Suhut-Afyon	1.21	57	PN	Pn	03 23 06.1	+0.3
SHUT				SN	Sn	03 23 23.9	+1.4
DEMI	Demirci	1.21	340	*i* P	Pn	03 23 06.0	+0.1
DEMI				IAML_P			
	comp=Z,651nm,0.2s						

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*EAF **01** 03:41:29.7±1.8, 27°.46S×28°.03E, h10^{km}, MD3.8*
*ISCJB **01** 03:41:36.7±1.2, 26°.88S±0°.05×26°.72E±0°.04, h6^{km}±9^{km},*
Error ellipse: s-maj=9.0km s-min=4.4km az=151.9
*PRE **01** 03:41:36.0±2.1, 26°.88S×26°.71E, h2^{km}, ML2.4*
ISC 01 03:41:36.5±1.2**, 26°.83S**±0°.04×**26°.71E**±0°.04**, h12**^{km}±10^{km},
n17, σ1ˢ.67/31**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	0.59	99	*e*P	Pg	03 41 46.9	-1.2
PRYS				*e*S	Sb	03 41 56.8	-0.5
PRYS				AML	AML	03 42 01.5	
	comp=Z,179nm,0.2s						
WDLM	Western Deep L	0.76	58	*e*P	Pb	03 41 52.4	+0.6
WDLM				*e*S	Sg	03 42 01.4	+0.1
WDLM				AML	AML	03 42 08.8	
	comp=Z,322nm,0.2s						
KLOF	Kloof	0.94	59	*e*P	Pg	03 41 55.0	+0.2
KLOF				*e*S	Sg	03 42 06.4	-0.6
KLOF				AML	AML	03 42 13.0	
	comp=Z,622nm,0.1s						
KSR	Koster	0.99	10	*e*P	Pb	03 41 56.5	+0.7
KSR				*e*S	Sb	03 42 10.6	+1.7
KSR				AML	AML	03 42 15.8	
	comp=Z,118nm,0.1s						
SWZ	Schweizer	1.27	254	*e*P	Pn	03 42 01.5	+1.1
SWZ				*e*S	Sg	03 42 16.7	-0.9
SWZ				AML	AML	03 42 26.9	
	comp=Z,52nm,0.6s						
ERPM	east rand prop	1.46	71	*e*P	Pg	03 42 04.6	0.0
ERPM				*e*S	Sn	03 42 24.5	+2.4
ERPM				AML	AML	03 42 26.6	
	comp=Z,55nm,0.4s						
SLR	Silverton	1.79	53	*e*P	Pb	03 42 09.9	+0.6
SLR				*e*S	Sn	03 42 31.8	+1.7
SLR				AML	AML	03 42 38.9	
	comp=Z,39nm,0.1s						
LBTB	Lobatse	2.07	331	*e*P	Pn	03 42 13.6	+2.3
LBTB				*e*S	Sn	03 42 40.0	+3.0
LBTB				AML	AML	03 42 47.4	
	comp=Z,36nm,0.2s						
BOSA	Boshof	2.19	216	*i* P	Pn	03 42 14.1	+1.2
BOSA	Boshof	2.19	216	*i* P	Pn	03 42 14.1	+1.2
BOSA				*i* S	Sb	03 42 44.1	+0.7
BOSA	Boshof	2.19	216	*e*P	Pn	03 42 13.1	+0.1
BOSA				*e*S	Sn	03 42 41.6	+1.5
BOSA				AML	AML	03 42 53.3	
	comp=Z,22nm,0.4s						
BOSA	Boshof	2.19	216	*i* P	Pn	03 42 14.1	+1.2
BOSA				*i* S	Sb	03 42 44.1	+0.7
PKA	Prieska	4.49	230	*e*P	Pn	03 42 44.7	+0.2
PKA				*e*S	Sn	03 43 35.1	-1.5
PKA				AML	AML	03 43 56.0	
	comp=Z,4.0nm,0.5s						
MATP	Matopo	6.59	15	*i* P	Pn	03 43 12.1	-1.3
MATP				*i* S	Sn	03 44 25.7	-2.8
MATP	Matopo	6.59	15	*i* P	Pn	03 43 12.1	-1.3
MATP				*i* S	Sn	03 44 25.7	-2.8
BLWY	Bulawayo	6.89	15	*i* P	Pn	03 43 13.3	-4.3
BLWY				*i* S	Sn	03 44 33.3	-2.7
BLWY	Bulawayo	6.89	15	*i* P	Pn	03 43 13.3	-4.3
BLWY				*i* S	Sn	03 44 33.3	-2.7

NNC 01 03:48:17.0±5.2**, 37°.41N×71°.32E, h13**^{km}±155^{km}**, mb3.7,**
mpv3.4, 3C-4D, Error ellipse: s-maj=150.3km
s-min=21.1km az=10.0, Afghanistan-Tajikistan border
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.11	33	⇑P	Pn	03 49 06.4	+0.4
	1.9nm,0.2s						
SFK				⇑S	Sn	03 49 45.0	+1.8
	7.9nm,0.3s						
MNAS	Manas	5.15	10	⇓P	Pn	03 49 34.3	+0.3
	3.1nm,0.4s						
MNAS				⇓S	Sn	03 50 34.1	+0.6
	9.8nm,0.6s						
KK31	Karatay Array	5.72	354	⇓P	Pn	03 49 42.7	+1.0
	1.4nm,0.2s,baz=170,slow=11,SNR=89						
KK31				S	Sn	03 50 49.0	+1.8
	13nm,0.7s,baz=169,slow=22,SNR=25						
AAK	Ala-Archa	5.76	24	⇓P	Pn	03 49 41.3	-1.1
	1.6nm,0.5s						
AAK				⇑S	Sn	03 50 48.1	-0.4
	3.5nm,0.5s						
AB31	Akbulak array	14.43	329	P	Pn	03 51 38.0	-2.8
	0.2nm,0.3s,baz=148,slow=12,SNR=12						

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*NAO **01** 04:19:47.3±0.9, 66°.97N×13°.37E, ML2.4*
*IDC **01** 04:19:47.9±1.7, 67°.00N×13°.41E, h0^{km}, mb1 3.0/3,*
mb1mx2.8/30, mbtmp2.9/3, ML1.9/3, Error ellipse:
s-maj=19.5km s-min=9.4km az=118.0
*HEL **01** 04:19:48.1, 67°.03N×13°.19E, h15^{km}, ML2.5*
*BER **01** 04:19:48.5±3.4, 67°.03N×13°.18E, h1^{km}±9^{km}, ML2.3,*
ML2.4(NAO), Confirmed Earthquake
*UPP **01** 04:19:48.8±1.2, 66°.95N×13°.56E, h0^{km}, ML2.0, Suspected*
explosion
ISC 01 04:19:48.0±1.1**, 66°.97N**±0°.03×**13°.48E**±0°.04**, h11**^{km}±9^{km},
n75, σ2ˢ.00/130**, 1C, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KONS	Konsvik	0.50	197	⇑*e*P	Pg	04 19 58.7	+1.0
KONS				*e*S	Sg	04 20 05.8	+1.6
KONS				IAML		04 20 07.2	
	comp=Z,326nm,0.2s						
STOK	Stokkvaagen	0.67	196	*e*P	Pg	04 20 01.6	+0.7
STOK				*e*S	Sg	04 20 11.4	+1.7
MOR8	Moi Rana	0.89	154	*e*P	Pg	04 20 05.8	+0.6
MOR8				*e*S	Sg	04 20 18.5	+1.7
MOR8				IAML		04 20 19.8	
	comp=Z,192nm,0.2s						
LOF	Lofoten	1.16	1	*e*P	Pg	04 20 07.5	-2.8
LOF				IAML		04 20 26.3	
	comp=Z,34nm,0.3s						
STEI	Steigen	1.18	34	*e*P	Pg	04 20 10.0	-0.6
SALU	Saltoluokta	2.00	76	P	Pn	04 20 24.0	+2.2
SALU				S	Sn	04 20 50.3	+3.5
SALU	Saltoluokta	2.00	76	*e*P	Pn	04 20 24.0	+2.2
SALU				*e*S	Sn	04 20 50.3	+3.5
NIKU	Nikkaluokta	2.32	65	P	Pn	04 20 27.9	+1.7
NIKU				S	Sn	04 20 58.0	+3.3
NIKU	Nikkaluokta	2.32	65	*e*P	Pn	04 20 27.9	+1.7
NIKU				*e*S	Sn	04 20 58.0	+3.3
RATU	Laukkuluspa	2.51	67	P	Pn	04 20 31.0	+2.3
RATU	Laukkuluspa	2.51	67	*e*P	Pn	04 20 31.0	+2.3
NSS	Namsos	2.53	195	*e*P	Pn	04 20 30.1	+1.1
NSS				IAML		04 21 12.6	
	comp=Z,20nm,0.3s						
DUNU	Dundret	2.78	84	P	Pn	04 20 34.2	+1.7
DUNU	Dundret	2.78	84	*e*P	Pn	04 20 34.2	+1.7
KUA	Kurravaara	2.82	66	P	Pn	04 20 35.0	+2.1
KUA	Kurravaara	2.82	66	*e*P	Pn	04 20 35.0	+2.1
LILU	Lilltraesk	3.09	120	P	Pn	04 20 38.3	+1.6
LILU	Lilltraesk	3.09	120	*e*P	Pn	04 20 38.3	+1.6
HARU	Harads	3.10	102	P	Pn	04 20 38.5	+1.7
HARU	Harads	3.10	102	*e*P	Pn	04 20 38.5	+1.7
MASU	Masugnsbyn	3.35	78	P	Pn	04 20 41.7	+1.5
MASU	Masugnsbyn	3.35	78	*e*P	Pn	04 20 41.7	+1.5
TRO	Tromso	3.35	35	Pn	Pn	04 20 40.8	+0.5
TRO				Sn	Sn	04 21 19.0	-0.9
TRO				Lg	Lg	04 21 33.5	
TRO	Tromso	3.35	35	Pn	Pn	04 20 40.8	+0.5
TRO				Sn	Sn	04 21 19.0	-0.9
TRO				Sg	Sg	04 21 33.5	-1.9
TRO	Tromso	3.35	35	*e*P	Pn	04 20 40.5	+0.3
TRO				*e*SG	Sg	04 21 33.1	-2.3
KIF	Kilpisjarvi	3.43	50	Pn	Pn	04 20 42.6	+1.3
KIF				Pg	Pb	04 20 51.5	+2.9
KIF				Sn	Sn	04 21 24.4	+2.5
KIF				Lg	Lg	04 21 37.8	
KIF	Kilpisjarvi	3.43	50	*e*P	Pn	04 20 42.8	+1.5
KIF				Pg	Pb	04 20 51.5	+2.9
KIF				Sn	Sn	04 21 24.4	+2.5
KIF	Kilpisjarvi	3.43	50	*e*P	Pn	04 20 42.8	+1.5
KIF				*e*S	Sn	04 21 21.2	-0.7
KIF				*e*SG	Sg	04 21 36.1	-1.9
KIF				MSG		04 21 43.5	
	comp=Z,14nm,0.3s						
LANU	Lannavaara	3.44	68	P	Pn	04 20 43.6	+2.1
LANU	Lannavaara	3.44	68	*e*P	Pn	04 20 43.4	+1.9
LANU				*e*S	Sn	04 21 24.1	+1.8
LANU				*e*SG	Sg	04 21 39.5	+1.0
ERTU	Ertsjaerv	3.48	93	P	Pn	04 20 43.3	+1.3
ERTU	Ertsjaerv	3.48	93	*e*P	Pn	04 20 43.6	+1.6
ERTU				*e*S	Sn	04 21 23.9	+0.8
SVAU	Svanoeiden	3.54	132	P	Pn	04 20 44.3	+1.5
SVAU	Svanoeiden	3.54	132	*e*P	Pn	04 20 44.3	+1.5
NOD	Norderasen	3.59	170	P	Pn	04 20 45.2	+1.6
NOD	Norderasen	3.59	170	*e*P	Pn	04 20 45.2	+1.6
SJUU	Sjulsmark	3.60	110	P	Pn	04 20 45.4	+1.7
SJUU	Sjulsmark	3.60	110	*e*P	Pn	04 20 45.4	+1.7
PAJU	Pajala	3.78	85	P	Pn	04 20 47.4	+1.2
PAJU				S	Sn	04 21 31.9	+1.3
PAJU	Pajala	3.78	85	*e*P	Pn	04 20 47.4	+1.2
PAJU				*e*S	Sn	04 21 31.9	+1.3
BURU	Burvik	4.04	123	*e*P	Pn	04 20 51.5	+1.8
BURU				*e*S	Sn	04 21 38.2	+1.2
BURU				*e*SG	Sg	04 21 56.0	-1.6
KALU	Kalix	4.12	101	*e*P	Pn	04 20 52.1	+1.3
KALU				*e*S	Sn	04 21 38.9	-0.1
KALU				*e*SG	Sg	04 21 59.0	-1.2
HEF	Hetta	4.14	65	*e*P	Pn	04 20 52.9	+1.8
HEF	Hetta	4.14	65	*e*P	Pn	04 20 52.2	+1.1
HEF				*e*S	Sn	04 21 39.8	+0.3
HEF				*e*SG	Sg	04 22 00.1	-0.6
HEF				MSG		04 22 03.0	
	comp=Z,12nm,0.3s						
KTK1	Kautokeino	4.20	56	*e*P	Pn	04 20 53.2	+1.3
KTK1	Kautokeino	4.20	56	*e*P	Pn	04 20 53.2	+1.3
KTK1				*e*S	Sn	04 21 40.9	0.0
UMAU	Umeaa	4.32	133	*e*P	Pn	04 20 55.3	+1.8
UMAU				*e*S	Sn	04 21 44.7	+1.0
TOF	Tornio	4.43	97	*e*P	Pn	04 20 56.7	+1.6
HEMU	Hemsoen	4.73	154	*e*P	Pn	04 21 00.8	+1.6
HEMU				*e*SG	Sg	04 22 16.8	-2.9
RNF	Rovaniemi	4.97	88	*e*P	Pn	04 21 03.9	+1.4
RNF				*e*S	Sn	04 21 59.7	-0.2
SGF	Sodankyl	5.09	79	*e*P	Pn	04 21 04.6	+0.4
ARA0	ARCESS Array S	5.16	55	Pn	Pn	04 21 04.9	-0.1
	baz=239,slow=14						
ARA0				Sn	Sn	04 22 02.7	-1.7
	baz=238,slow=22						
ARA0				Lg	Lg	04 22 28.1	
	baz=242,slow=28						
ARA0	ARCESS Array S	5.16	55	Pn	Pn	04 21 04.9	-0.1
	baz=239,slow=14						
ARA0				Sn	Sn	04 22 02.7	-1.7
	baz=238,slow=22						
ARA0				Sg	Sg	04 22 28.1	-5.2
	baz=242,slow=28						
ARCES	ARCESS Array B	5.16	55	Pn	Pn	04 21 05.3	+0.3
	comp=Z,0.1nm,0.3s,baz=240,slow=13,SNR=16						
ARCES				Sn	Sn	04 22 02.9	-1.5
	comp=Z,0.7nm,0.3s,baz=241,slow=22,SNR=6.3						
ARCES				Lg	Lg	04 22 27.6	
	comp=Z,0.8nm,0.3s,baz=240,slow=24,SNR=4.1						
ARE0	ARCESS Array S	5.16	55	*e*P	Pn	04 21 05.1	+0.1
ARE0	ARCESS Array S	5.16	55	*e*P	Pn	04 21 05.1	+0.1
OUL	Oulu	5.40	105	*e*P	Pn	04 21 09.6	+1.2
OUL				*e*S	Sn	04 22 09.1	-1.4
VAF	Ylistaro	5.54	131	*e*P	Pn	04 21 12.2	+1.9
VAF				*e*S	Sn	04 22 13.7	-0.2
VAF				*e*SG	Sg	04 22 43.9	-1.8
VAF				MSG		04 22 48.0	
	comp=Z,4.6nm,0.3s						
AKN	Aaknes	5.56	213	Pn	Pn	04 21 08.7	-2.0
AKN				Sn	Sn	04 22 09.3	-5.2
AKN				Lg	Lg	04 22 43.1	
AKN	Aaknes	5.56	213	Pn	Pn	04 21 08.7	-2.0
AKN				Sn	Sn	04 22 09.3	-5.2
AKN				Sg	Sg	04 22 43.1	-3.3
KEV	Kevo	5.72	55	Pn	Pn	04 21 12.5	-0.3
KEV				Sn	Sn	04 22 15.6	-2.8
KEV				Lg	Lg	04 22 48.8	
KEV	Kevo	5.72	55	Pn	Pn	04 21 12.5	-0.3
KEV				Sn	Sn	04 22 15.6	-2.8
KEV				Sg	Sg	04 22 48.8	-2.7
KEV	Kevo	5.72	55	*e*P	Pn	04 21 12.8	0.0
NB2	NORSAR Subarra	6.04	191	Pn	Pn	04 21 17.1	-0.2
	baz=9.0,slow=14						
NB2				Lg	Lg	04 22 55.8	
NB2	NORSAR Subarra	6.04	191	Pn	Pn	04 21 17.1	-0.2
	baz=9.0,slow=14						
NB2				Sg	Sg	04 22 55.8	-5.9
NOA	NORSAR Array B	6.04	191	Pn	Pn	04 21 17.0	-0.3
	comp=Z,0.0nm,0.3s,baz=2.3,slow=13,SNR=2.6						
NOA				Lg	Lg	04 22 55.6	
	comp=Z,0.1nm,0.3s,baz=349,slow=15,SNR=5.2						
NRA0	NORESS Array S	6.32	189	Pn	Pn	04 21 21.3	+0.3
	baz=7.6,slow=14						
NRA0				Sn	Sn	04 22 34.4	+1.2
	baz=16,slow=28						
NRA0				Lg	Lg	04 23 06.7	
	slow=28						
NRA0	NORESS Array S	6.32	189	Pn	Pn	04 21 21.3	+0.3
	baz=7.6,slow=14						
NRA0				Sn	Sn	04 22 34.4	+1.2
	baz=16,slow=28						
NRA0				Sg	Sg	04 23 06.7	-4.0
	slow=28						
HFS	Hagfors	6.87	179	Pn	Pn	04 21 28.5	0.0
	baz=11,slow=12						
HFS				Sn	Sn	04 22 43.7	-2.9
	baz=355,slow=37						
HFS				Lg	Lg	04 23 20.1	
	baz=0.3,slow=28						
HFS	Hagfors	6.87	179	Pn	Pn	04 21 28.5	0.0
	baz=11,slow=12						
HFS				Sn	Sn	04 22 43.7	-2.9
	baz=355,slow=37						
HFS				Sg	Sb	04 23 20.1	+11
	baz=0.3,slow=28						
FIA0	FINESS Array S	7.79	129	Pn	Pn	04 21 41.8	+0.6
	baz=322,slow=16						
FIA0				Sn	Sn	04 23 06.7	-2.7
	baz=326,slow=22						
FIA0				Lg	Lg	04 23 53.9	
	baz=323,slow=37						
FIA0	FINESS Array S	7.79	129	Pn	Pn	04 21 41.8	+0.6
	baz=322,slow=16						
FIA0				Sn	Sn	04 23 06.7	-2.7
	baz=326,slow=22						
FIA0				Sg	Sg	04 23 53.9	-4.0
	baz=323,slow=37						
FINES	FINESS Array B	7.79	129	Pn	Pn	04 21 42.7	+1.4
	comp=Z,0.1nm,0.3s,baz=325,slow=12,SNR=4.5						
FINES				Sn	Sn	04 23 06.8	-2.5
	comp=Z,0.2nm,0.3s,baz=323,slow=23,SNR=3.7						
FINES				Lg	Lg	04 23 52.4	
	comp=Z,0.4nm,0.3s,baz=323,slow=25,SNR=3.5						
SPA0	Spitsbergen Ar	11.30	3	Pn	Pn	04 22 28.7	-0.4
	baz=183,slow=18						
SPA0	Spitsbergen Ar	11.30	3	Pn	Pn	04 22 28.7	-0.4
	baz=183,slow=18						

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*GUC **01** 04:23:53.7±0.7, 32°.00S×69°.85W, h146^{km}±5^{km}, ML3.3*
*SJA **01** 04:23:53.9±1.3, 32°.02S×69°.45W, h111^{km}±7^{km}, ML3.2,*
MW3.4
*ISCJB **01** 04:23:54.3±0.8, 32°.02S±0°.03×69°.48W±0°.04, h114^{km}±8^{km},*
Error ellipse: s-maj=5.6km s-min=4.1km az=33.5
ISC 01 04:23:55.5±1.5**, 32°.00S**±0°.03×**69°.49W**±0°.04,
h103^{km}±12^{km}**, n28, σ0ˢ.97**/43**, 3C-17D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUSP	Uspallata	0.24	159	⇓*e*P	Pn	04 24 10.2	-0.5
RTLS	Leoncito	0.26	39	⇓*e*P	Pn	04 24 10.4	-0.4
RTLS				IAML		04 24 10.6	
	comp=Z,1µm,0.1s						
ASAL	Salagasta	0.81	137	*e*P	Pn	04 24 14.1	-0.3
ASAL				⇓*e*S	Sn	04 24 29.0	+0.4
RTCV	Cerro Valdivia	0.82	81	*e*S	Sn	04 24 29.0	+0.3
SJA	San Juan	0.92	59	*e*P	Pn	04 24 15.3	-0.2
SJA				IAML		04 24 32.5	
	comp=Z,221nm,0.2s						

ARCO	**CERRO ARCO**	**0.96**	**151**	*e*P	**Pn**	**04 24 16.1**	**+0.1**
ARCO				*e*S	**Sn**	**04 24 31.8**	**+0.4**
ARCO				IAML		04 24 34.1	
	comp=Z,212nm,0.3s						
RTLL	**Cerro Villicun**	**1.09**	**53**	⇓*e*S	**Sn**	**04 24 34.1**	**+0.3**
RTLL				IAML		04 24 34.3	
	comp=Z,489nm,0.3s						
RTLL	**Cerro Villicun**	**1.09**	**53**	*e*P	**Pn**	**04 24 16.6**	**-0.7**
RTLL				⇓*e*S	**Sn**	**04 24 33.9**	**+0.1**
RTLL				IAML		04 24 34.9	
	comp=N,1µm,0.4s						
CFA	**Coronel Fontan**	**1.14**	**70**	⇓*e*P	**Pn**	**04 24 17.3**	**-0.5**
CFA				⇓*e*S	**Sn**	**04 24 34.4**	**-0.1**
AAGR	**Agrelo**	**1.22**	**153**	⇓*e*P	**Pn**	**04 24 18.4**	**-0.4**
AMOG	**MOGNA**	**1.36**	**39**	*e*P	**Pn**	**04 24 20.1**	**-0.2**
AMOG				⇓*e*S	**Sn**	**04 24 38.5**	**-0.7**
ACCO	**Cerro Coronel**	**1.46**	**15**	⇓*e*P	**Pn**	**04 24 21.8**	**0.0**
ACCO				⇓*e*S	**Sn**	**04 24 42.5**	**+0.8**
FCH	**Farellones**	**1.48**	**207**	*e*P	**Pn**	**04 24 21.8**	**-0.3**
FCH				*e*S	**Sn**	**04 24 45.2**	**+2.9**
FCH				IAML		04 24 48.9	
	comp=E,223nm,0.2s						
PEL	**Peldehue**	**1.52**	**221**	⇑*e*P	**Pn**	**04 24 21.8**	**-0.5**
PEL				*e*S	**Sn**	**04 24 42.8**	**+0.2**
PEL				IAML		04 24 44.5	
	comp=N,266nm,0.2s						
CMCH	**Combarbala**	**1.53**	**302**	*e*P	**Pn**	**04 24 21.8**	**-0.7**
CMCH				*e*S	**Sn**	**04 24 42.3**	**-0.5**
ROCH	**El Roble**	**1.61**	**233**	⇑*i*P	**Pn**	**04 24 22.1**	**-1.4**
ROCH				*e*S	**Sn**	**04 24 43.8**	**-1.0**
ROCH				IAML		04 24 45.4	
	comp=E,803nm,0.3s						
ROC1	**El Roble**	**1.61**	**233**	⇓*e*S	**Sn**	**04 24 43.5**	**-1.4**
CLCH	**Cerro Calan**	**1.65**	**212**	*e*P	**Pn**	**04 24 23.3**	**-0.5**
CLCH				*e*S	**Sn**	**04 24 46.2**	**+0.8**
AROD	**Rodeo**	**1.83**	**0**	*e*P	**Pn**	**04 24 27.1**	**+0.7**
AROD				⇓*e*S	**Sn**	**04 24 51.8**	**+1.9**
ACDV	**Cuesta del Vie**	**1.85**	**10**	*e*P	**Pn**	**04 24 26.9**	**+0.4**
ACDV				⇓*e*S	**Sn**	**04 24 51.7**	**+1.6**
LMEL	**Las Melosas**	**1.94**	**198**	*e*P	**Pn**	**04 24 28.0**	**+0.4**
LMEL				*e*S	**Sn**	**04 24 54.6**	**+2.6**
LMEL				IAML		04 25 01.4	
	comp=E,176nm,0.1s						
ACAN	**Cantantal**	**1.97**	**99**	⇓*e*P	**Pn**	**04 24 27.0**	**-0.9**
ACAN				⇓*e*S	**Sn**	**04 24 51.6**	**-1.0**
GO04	**Tololo Observa**	**2.14**	**328**	⇓*e*P	**Pn**	**04 24 29.8**	**-0.6**
GO04	**Tololo Observa**	**2.14**	**328**	⇑*i*P	**Pn**	**04 24 29.4**	**-0.9**
GO04				*e*S	**Sn**	**04 24 56.7**	**-0.1**
GO04				IAML		04 25 07.0	
	comp=N,286nm,0.4s						
AGUA	**GUANDACOL**	**2.65**	**19**	*e*P	**Pn**	**04 24 37.3**	**+0.5**
APLL	**PUNTA DE LOS L**	**3.00**	**59**	*e*P	**Pn**	**04 24 40.2**	**-1.3**
MRA	**San Martin**	**3.23**	**98**	IAML		04 25 22.9	
	comp=Z,47nm,0.4s						
ACLC	**CERRO LA CRUZ**	**3.37**	**41**	*e*P	**Pn**	**04 24 46.3**	**-0.2**

IDC 01 04:54:28.1±1.7**,2°.75S**×**141°.65E,h0**^{km}**,mb3.4**/3**,mb1 3.8**/4**,mb1mx3.4**/39**,mbtmp3.5**/4**,ML3.8**/1**,MS3.8**/1**,Ms1 3.8**/1**,ms1mx3.1**/27**,Error ellipse: s-maj=27.4km s-min=13.8km az=21.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.97**	**284**	Pg	Pg	04 54 46.8	+0.1
	29nm,0.3s,baz=151,slow=8.6,SNR=70						
JAY				Lg	Lg	04 55 00.3	
	34nm,0.3s,baz=168,slow=14,SNR=12						
WRA	**Warramunga Arr**	**18.52**	**202**	P	P	04 58 46.1	-0.2
	0.3nm,0.3s,baz=21,slow=12,SNR=16						
BATI	**Baumata**	**19.34**	**247**	LR	LR	05 08 00.8	
	comp=Z,268nm,19.9s,baz=253,slow=42						
FITZ	**Fitzroy Crossi**	**21.89**	**225**	P	P	04 59 22.6	-0.2
	1.1nm,0.7s,baz=98,slow=7.1,SNR=2.8						
ASAR	**Alice Springs**	**22.11**	**199**	P	P	04 59 25.5	+0.3
	0.4nm,0.5s,baz=34,slow=10,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**32.45**	**48**	T	T	05 35 16.5	
	baz=232,slow=75,SNR=105						
H11S2	**WAKE ISLAND Hy**	**32.46**	**48**	T	T	05 35 17.7	
	baz=232,slow=75,SNR=58						
H11S1	**WAKE ISLAND Hy**	**32.47**	**48**	T	T	05 35 18.8	
	baz=232,slow=75,SNR=49						
H11N1	**WAKE ISLAND Hy**	**33.36**	**47**	T	T	05 36 24.4	
	baz=230,slow=76,SNR=53						
H11N2	**WAKE ISLAND Hy**	**33.37**	**47**	T	T	05 36 25.6	
	baz=230,slow=76,SNR=73						
H11N3	**WAKE ISLAND Hy**	**33.37**	**47**	T	T	05 36 25.7	
	baz=230,slow=76,SNR=47						
ILAR	**Eielson Array**	**84.66**	**24**	P	P	05 07 03.4	-0.1
	0.7nm,0.8s,baz=252,slow=5.0,SNR=6.3						

JMA ***01*** *04:57:10.5±0.3,39°.90N×143°.86E,h12*^{km}*,M3.7*
ISCJB ***01*** *04:57:11.9±1.2,39°.99N±0°.08×143°.6E±0°.2,h6*^{km}*,mb3.5/7,Error ellipse: s-maj=20.5km s-min=6.2km az=31.5*
IDC ***01*** *04:57:13.4±2.5,40°.05N×143°.38E,h0*^{km}*,mb3.7/7,mb1 3.7/9,mb1mx3.5/58,mbtmp3.6/9,ML2.9/2,Error ellipse: s-maj=50.7km s-min=24.6km az=144.0*
ISC 01 04:57:14.4±1.4**,40°.09N**±0°.09×**143°.4E**±0°.1**,h6**^{km}**,n17,**σ**1**^{s}**.49**/18**,mb3.4**/7**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.31**	**248**	P	**Pn**	**04 57 39.2**	**-0.1**
JANG	**Nango**	**1.46**	**282**	P	**Pb**	**04 57 42.7**	**+0.7**
JOM	**Ohasama**	**1.73**	**250**	P	**Pn**	**04 57 45.7**	**+0.7**
JMK	**Ichinoseki**	**2.03**	**237**	P	**Pn**	**04 57 48.2**	**-0.9**
JCH	**Churui**	**2.52**	**360**	*e*S	**Sn**	**04 58 28.9**	**+1.9**
JYK	**Kaneyama**	**2.62**	**244**	P	**Pn**	**04 57 57.6**	**+0.3**
JAK	**Akkeshi**	**3.07**	**18**	*e*S	**Sn**	**04 58 39.5**	**-0.8**
JAR	**Ashorobuto**	**3.22**	**5**	P	**Pn**	**04 58 05.3**	**-0.2**
ASAJ	**Asahikawa**	**4.07**	**352**	Pn	**Pn**	**04 58 18.0**	**+0.8**
	0.9nm,0.3s,baz=256,slow=10,SNR=3.3						
ASAJ				Sn	**Sn**	**04 59 00.3**	**-4.8**
	1.0nm,0.3s,baz=90,slow=20,SNR=2.4						
MJAR	**Matsushiro Arr**	**5.40**	**231**	Pn	**Pn**	**04 58 35.2**	**-0.3**
	0.1nm,0.3s,baz=45,slow=11,SNR=9.6						
SEY	**Seymchan**	**23.50**	**10**	P	**P**	**05 02 24.9**	**+0.1**
	1.8nm,0.2s,baz=204,slow=9.9,SNR=7.0						
SONM	**Songino Array**	**27.52**	**299**	P	**P**	**05 03 02.5**	**+0.7**
	0.5nm,0.7s,baz=92,slow=9.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**41.07**	**310**	P	**P**	**05 04 58.8**	**+0.2**
	0.3nm,0.4s,baz=101,slow=6.3,SNR=2.3						
MKAR	**Makanchi Array**	**43.88**	**300**	P	**P**	**05 05 19.9**	**-1.7**
	0.6nm,0.9s,baz=79,slow=11,SNR=3.7						
KURBB	**Kurchatov Arra**	**45.40**	**306**	P	**P**	**05 05 34.0**	**+0.5**
	0.8nm,0.6s,baz=81,slow=8.6,SNR=5.8						
ILAR	**Eielson Array**	**46.09**	**34**	P	**P**	**05 05 39.0**	**+0.1**
	0.1nm,0.7s,baz=256,slow=6.4,SNR=2.5						
FINES	**FINESS Array B**	**66.83**	**332**	P	**P**	**05 08 06.9**	**+0.3**
	0.6nm,0.6s,baz=95,slow=7.0,SNR=3.3						

IDC ***01*** *05:04:22.2±2.2,22°.88S×68°.68W,h0*^{km}*,mb3.7/4,mb1 3.8/5,mb1mx3.6/22,mbtmp3.6/5,ML3.1/1,Error ellipse: s-maj=71.1km s-min=34.9km az=29.0*
ISCJB ***01*** *05:04:40.7±0.7,21°.70S±0°.04×68°.5W±0°.1,h132*^{km}*±7*^{km}*,mb3.5/4,Error ellipse: s-maj=15.6km s-min=6.6km az=179.3*
GUC ***01*** *05:04:40.4±0.8,21°.71S×68°.49W,h128*^{km}*±5*^{km}*,ML3.3*
ISC 01 05:04:41.6±1.0**,21°.70S**±0°.05×**68°.5W**±0°.1**,h124**^{km}±9^{km}**,n17,**σ**0**^{s}**.72**/28**,mb3.6**/4**,7C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.70**	**262**	⇑*e*P	**Pn**	**05 05 01.5**	**-0.1**
PB09				*e*S	**Sn**	**05 05 17.2**	**+0.5**
PB09				IAML		05 05 22.1	
	comp=E,508nm,0.4s						
LVC	**Limon Verde**	**0.98**	**203**	⇑*i*P	**Pn**	**05 05 04.1**	**-0.2**
LVC				*e*S	**Sn**	**05 05 21.4**	**0.0**
PB01	**IPOC Station P**	**1.14**	**305**	⇓*e*P	**Pn**	**05 05 04.4**	**-1.0**
PB01				*e*S	**Sn**	**05 05 23.6**	**+0.1**
PB01				IAML		05 05 24.6	
	comp=E,420nm,0.3s						
PB03	**IPOC Station P**	**1.22**	**253**	*e*P	**Pn**	**05 05 06.0**	**-0.4**
PB03				*e*S	**Sn**	**05 05 25.2**	**0.0**
PB03				IAML		05 05 26.5	
	comp=E,662nm,0.6s						
PB07	**IPOC Station P**	**1.30**	**269**	⇑*e*P	**Pn**	**05 05 07.0**	**-0.3**
PB07				*e*S	**Sn**	**05 05 27.2**	**+0.6**
PB02	**IPOC Station P**	**1.36**	**286**	*e*P	**Pn**	**05 05 07.2**	**-0.7**
PB02				*e*S	**Sn**	**05 05 28.4**	**+0.6**
PB02				IAML		05 05 29.5	
	comp=N,578nm,0.5s						
PB06	**IPOC Station P**	**1.42**	**225**	⇑*e*P	**Pn**	**05 05 07.8**	**-0.7**
PB06				*e*S	**Sn**	**05 05 29.2**	**+0.3**
PB06				IAML		05 05 30.6	
	comp=E,529nm,0.4s						
PB08	**IPOC Station P**	**1.67**	**338**	⇑*i*P	**Pn**	**05 05 12.2**	**+0.5**
PB08				*e*S	**Sn**	**05 05 35.6**	**+1.0**
PB08				IAML		05 05 37.4	
	comp=E,230nm,0.5s						
PB05	**IPOC Station P**	**1.96**	**234**	⇓*i*P	**Pn**	**05 05 15.0**	**+0.1**
PB05				*e*S	**Sn**	**05 05 40.7**	**+0.5**
PB05				IAML		05 05 46.5	
	comp=E,270nm,0.2s						
PB11	**IPOC Station P**	**2.22**	**330**	⇑*i*P	**Pn**	**05 05 17.9**	**-0.3**
PB11				*e*S	**Sn**	**05 05 45.7**	**-0.4**
PB11				IAML		05 05 47.8	
	comp=N,329nm,0.5s						
PSGC	**Pisagua**	**2.59**	**324**	⇑*i*P	**Pn**	**05 05 21.7**	**-1.2**
PSGC				*e*S	**Sn**	**05 05 53.5**	**-1.0**
PSGC				IAML		05 06 00.1	
	comp=E,110nm,0.5s						
LPAZ	**La Paz**	**5.40**	**4**	Pn	**Pn**	**05 06 01.1**	**+0.5**
	comp=E,0.2nm,0.3s,baz=185,slow=10,SNR=7.0						
TXAR	**Lajitas Array**	**61.02**	**325**	P	**P**	**05 14 43.5**	**+1.2**
	comp=E,0.1nm,0.3s,baz=146,slow=8.7,SNR=2.7						
DBIC	**Dimbokro**	**68.42**	**73**	P	**P**	**05 15 29.7**	**-0.9**
	comp=E,2.0nm,0.8s,baz=231,slow=6.5,SNR=3.2						
TORD	**Torodi Ar. Bea**	**77.06**	**70**	P	**P**	**05 16 20.3**	**-1.3**
	comp=E,0.7nm,0.8s,baz=239,slow=5.2,SNR=5.4						
YKA	**Yellowknife Ar**	**91.51**	**340**	P	**P**	**05 17 34.3**	**+0.8**
	comp=E,0.4nm,0.6s,baz=133,slow=5.0,SNR=8.6						
MKAR	**Makanchi Array**	**145.56**	**36**	PKPbc	**PKPab**	**05 24 06.4**	**+0.4**
	comp=E,0.2nm,0.4s,baz=328,slow=4.5,SNR=3.3						

WEL 01 05:16:30.0,40°.8S±0°.6×**17°5E**±°**,h32**^{km}±1^{km}**,ML3.8**/13**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OGWZ	**Otaki Gorge**	**0.08**	**78**	P	Pb	05 16 35.7	+0.2
OGWZ				S	Sb	05 16 40.0	+0.7
KIW	**Kapiti Island**	**0.12**	**257**	P	Pb	05 16 36.1	+0.4
KIW				S	Sb	05 16 40.6	+0.9
CAW	**Cannon Point**	**0.27**	**180**	P	Pn	05 16 37.8	0.0
CAW				S	Sn	05 16 43.2	+0.4
HOWZ	**Holdsworth Sta**	**0.34**	**101**	P	Pb	05 16 38.3	+0.1
HOWZ				S	Sn	05 16 44.6	-0.1
MRZ	**Mangatainoka R**	**0.42**	**66**	P	Pb	05 16 39.1	-0.2
MRZ				S	Sb	05 16 45.8	0.0
MTW	**Mount Morrison**	**0.46**	**135**	P	Pn	05 16 40.3	-0.1
MTW				S	Sn	05 16 48.3	+0.8
BHW	**Baring Head**	**0.59**	**194**	P	Pn	05 16 42.1	-0.1
MSWZ	**Moikau Station**	**0.60**	**167**	P	Pn	05 16 42.5	+0.2
PAWZ	**Paruwai Farm**	**0.61**	**154**	P	Pn	05 16 42.5	0.0
TIWZ	**Tintock**	**0.62**	**85**	P	Pb	05 16 42.5	-0.1
OHWZ	**Ohakea**	**0.66**	**17**	P	Pn	05 16 43.1	+0.1
TMWZ	**Te Maipa**	**0.68**	**114**	P	Pb	05 16 43.6	+0.1
POWZ	**Post Office Ro**	**0.69**	**51**	P	Pn	05 16 43.2	-0.3
TCW	**Tory Channel**	**0.71**	**238**	P	Pb	05 16 43.9	0.0
TRWZ	**Traveller**	**0.73**	**140**	P	Pn	05 16 43.7	-0.4
TRWZ				P	Pn	05 16 43.7	-0.4
PRWZ	**Pori Road**	**0.74**	**68**	P	Pn	05 16 44.3	+0.1
PLWZ	**Palliser**	**0.75**	**169**	P	Pn	05 16 44.2	-0.1
CPWZ	**Castlepoint**	**0.86**	**95**	P	Pn	05 16 46.0	+0.1
DUWZ	**D'Urville Isla**	**0.87**	**272**	P	Pb	05 16 46.5	-0.1
BFZ	**Birch Farm**	**0.91**	**81**	P	Pn	05 16 46.0	-0.5
DVHZ	**Dannevirke**	**0.99**	**58**	P	Pn	05 16 47.2	-0.5
TSZ	**Takapari Road**	**1.03**	**42**	P	Pn	05 16 48.2	0.0
TUWZ	**Tuamarina**	**1.04**	**235**	P	Pn	05 16 48.5	+0.2
WAZ	**Wanganui**	**1.08**	**357**	P	Pb	05 16 49.8	-0.3
WAZ				P	Pb	05 16 49.8	-0.3
CMWZ	**Cape Campbell**	**1.12**	**215**	P	Pn	05 16 49.6	+0.2
ANWZ	**Angora Road**	**1.13**	**71**	P	Pn	05 16 49.0	-0.7
BSWZ	**Blackbirch Sta**	**1.26**	**225**	P	Pn	05 16 51.9	+0.5
WPHZ	**Waipukurau**	**1.30**	**54**	P	Pn	05 16 51.3	-0.6
PRHZ	**Porangahau**	**1.32**	**65**	P	Pn	05 16 51.3	-0.9
NNZ	**Nelson**	**1.33**	**253**	P	Pb	05 16 53.5	-0.9
LREZ	**Lake Rotokare**	**1.46**	**339**	P	Pn	05 16 54.6	+0.5
MTVZ	**Mangateitei**	**1.48**	**12**	P	Pn	05 16 55.6	+1.2
MOVZ	**Moawhango**	**1.52**	**20**	P	Pn	05 16 55.3	+0.3
BHHZ	**Black Hill Sta**	**1.54**	**30**	P	Pn	05 16 55.4	0.0
PKVZ	**Pokaka**	**1.56**	**8**	P	Pn	05 16 56.7	+1.2
PKVZ				P	Pn	05 16 56.7	+1.2
TRVZ	**Turoa**	**1.58**	**14**	P	Pn	05 16 56.8	+0.9
PXZ	**Pawanui**	**1.59**	**60**	P	Pn	05 16 54.7	-1.1
WHVZ	**Whangaehu Hut**	**1.60**	**15**	P	Pn	05 16 57.2	+1.0
DRZ	**Dome Shelter**	**1.60**	**14**	P	Pn	05 16 57.4	+1.0
FWVZ	**Far West T-bar**	**1.62**	**13**	P	Pn	05 16 57.4	+0.9
TUVZ	**Tukino**	**1.63**	**16**	P	Pn	05 16 57.6	+1.0
PREZ	**Palmer Road**	**1.65**	**335**	P	Pb	05 16 58.6	-1.1
COVZ	**Chateau Observ**	**1.67**	**13**	P	Pb	05 16 58.3	-1.9
COVZ				P	Pn	05 16 58.2	+1.1
NMEZ	**Namu Road**	**1.69**	**327**	P	Pb	05 16 59.2	-1.2
NGZ	**Ngauruhoe**	**1.71**	**14**	P	Pn	05 16 58.8	+1.2
VRZ	**Vera Road**	**1.72**	**352**	P	Pn	05 16 59.2	+1.5
KAHZ	**Kahuranaki**	**1.73**	**54**	P	Pn	05 16 56.8	-1.0
KHEZ	**Kahui Hut**	**1.74**	**332**	P	Pb	05 16 59.8	-1.5
KWHZ	**Kaweka Forest**	**1.75**	**37**	P	Pn	05 16 57.5	-0.7
WTVZ	**West Tongariro**	**1.76**	**13**	P	Pn	05 16 59.4	+1.0
TWVZ	**Taurewa**	**1.78**	**9**	P	Pn	05 16 59.5	+0.8
KRVZ	**Karewarewa**	**1.79**	**14**	P	Pn	05 17 00.1	+1.3
NBEZ	**Newall Road No**	**1.81**	**329**	P	Pb	05 17 01.3	-1.3
PKE	**Pukeiti**	**1.84**	**333**	P	Pb	05 17 01.2	-1.7
PKE				P	Pn	05 17 01.1	+1.8
MHEZ	**Mangahewa**	**1.85**	**342**	P	Pb	05 17 01.8	-1.3
MCHZ	**McNeill Hill**	**1.87**	**43**	P	Pn	05 16 59.1	-0.6
THZ	**Tophouse**	**1.88**	**240**	P	Pn	05 17 00.2	+0.3
KATZ	**Kakaramea**	**1.92**	**15**	P	Pn	05 17 02.0	+1.4
QRZ	**Quartz Range**	**1.93**	**269**	P	Pn	05 17 01.4	+0.9
KHZ	**Kahutara**	**1.95**	**215**	P	Pn	05 17 00.5	-0.4
BKZ	**Black Stump Fm**	**1.99**	**34**	P	Pn	05 17 00.7	-0.8
RATZ	**Rangitukua**	**2.04**	**16**	P	Pb	05 17 04.5	-1.9
WATZ	**Wairara**	**2.18**	**14**	P	Pb	05 17 06.7	-2.1
NMHZ	**Naumai**	**2.19**	**38**	P	Pn	05 17 03.2	-1.0
HIZ	**Hauiti**	**2.32**	**356**	P	Pn	05 17 07.6	+1.6
MTHZ	**Maungataniwha**	**2.40**	**35**	P	Pn	05 17 06.1	-1.0
ALRZ	**Allen Road**	**2.47**	**24**	P	Pn	05 17 07.1	-0.9
TLZ	**Tolley Road**	**2.53**	**8**	P	Pn	05 17 11.1	+2.3
DSZ	**Denniston Nort**	**2.62**	**249**	P	Pn	05 17 11.0	+0.9
TARZ	**Mount Tarawera**	**2.82**	**24**	P	Pn	05 17 12.2	-0.8
LTZ	**Lake Taylor**	**2.86**	**226**	P	Pn	05 17 12.7	-0.6
URZ	**Urewera**	**3.02**	**32**	P	Pn	05 17 13.5	-2.0
OKCZ	**Okains Bay**	**3.25**	**207**	P	Pn	05 17 17.0	-1.7
MQZ	**McQueen's Vall**	**3.38**	**211**	P	Pn	05 17 18.2	-2.4
RUGZ	**Raukumara Rang**	**3.51**	**36**	P	Pn	05 17 20.3	-2.1
MKAZ	**Moumakai**	**3.73**	**1**	P	Pn	05 17 27.4	+2.2
MKAZ				P	Pb	05 17 28.2	-6.9

ISCJB ***01*** *05:33:46.3±0.6,35°.10S±0°.07×108°.4W±0°.1,h10*^{km}*,mb4.5/27,MS4.5/4,Error ellipse: s-maj=14.4km s-min=9.1km az=149.8*
IDC ***01*** *05:33:46.3±0.7,35°.16S×108°.33W,h0*^{km}*,mb4.3/14,mb1 4.4/15,mb1mx4.4/30,mbtmp4.3/15,ML4.0/1,MS4.4/5,Ms1 4.4/5,ms1mx4.1/30,Error ellipse: s-maj=21.6km s-min=18.8km az=87.0*
GCMT ***01*** *05:33:47.6±0.4,35°.27S±0°.03×108°.24W±0°.03,h12*^{km}*,MW5.5/49,Moment Tensor Solution. s37,c45; s49,c64; Duration: 1*^{s}*.1 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*0.85±.07;* $M_{\theta\theta}$*-1.62±.10;* $M_{\phi\phi}$*0.77±.08;* $M_{r\theta}$*0.28±.19;* $M_{\theta\phi}$*-1.47±.06;* $M_{\phi r}$*-0.10±.16; Best double couple:* M_0*1.93500×*10^{17} *NP1:*ϕ_s*108.00000°,δ81.00000°,λ165.00000°. NP2:*ϕ_s*200.00000°,δ75.00000°,λ10.00000°. Principal axes: T 1.5370, Plg17.0000°, Azm64.0000°; N 0.8010, Plg72.0000°, Azm257.0000°; P -2.3330, Plg4.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***01*** *05:33:47.6±0.5,35°.17S×108°.43W,h10*^{km}*,mb4.8/18 Error ellipse: s-maj=14.1km s-min=11.6km az=50.0*
ISC 01 05:33:47.9±0.7**,35°.15S**±0°.09×**108°.4W**±0°.1**,h10**^{km}**,n92,**σ**1**^{s}**.59**/85**,mb4.7**/27**,MS4.5**/4**,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.04**	**354**	*e*Pn	**Pn**	**05 35 47.2**	**+2.5**
RPN	**Rapa Nui**	**8.04**	**354**	Pn	**Pn**	**05 35 46.2**	**+1.5**
	2.1nm,0.3s,baz=174,slow=10,SNR=3.5						
RPN				LR	LR	05 37 54.2	
	comp=Z,653nm,20.5s,baz=167,slow=31						
GO06	**Curarrehue**	**29.52**	**110**	*e*P	**P**	**05 39 55.4**	**+2.7**
	16nm,0.9s						
PLCA	**Paso Flores**	**30.18**	**112**	*e*P	**P**	**05 40 00.1**	**+1.8**
	11nm,0.9s						
PLCA	**Paso Flores**	**30.18**	**112**	*e*P	**P**	**05 39 59.6**	**+1.2**
GO04	**Tololo Observa**	**31.89**	**92**	*e*P	**P**	**05 40 14.2**	**+0.4**
	37nm,1.1s						
LCO	**Las Campanas**	**32.37**	**90**	*e*P	**P**	**05 40 18.1**	**+0.1**
	9.8nm,0.9s						
LCO	**Las Campanas**	**32.37**	**90**	*e*P	**P**	**05 40 18.1**	**+0.1**
USHA	**Ushuaia**	**33.80**	**138**	P	**P**	**05 40 29.9**	**+0.1**
	6.6nm,0.7s,baz=225,slow=20,SNR=3.0						
GO02	**Mina Guanaco**	**34.79**	**84**	*e*P	**P**	**05 40 39.3**	**+0.1**
	12nm,0.8s						
PB04	**IPOC Station P**	**35.65**	**79**	*e*P	**P**	**05 40 46.5**	**+0.1**
	18nm,1.0s						
LVC	**Limon Verde**	**36.52**	**81**	*e*P	**P**	**05 40 55.0**	**+1.0**
	22nm,1.1s						
LVC	**Limon Verde**	**36.52**	**81**	P	**P**	**05 40 54.7**	**+0.7**
	12nm,0.9s,baz=222,slow=8.1,SNR=4.6						
LVC	**Limon Verde**	**36.52**	**81**	*e*P	**P**	**05 40 54.7**	**+0.7**
NNA	**Nana**	**36.71**	**59**	LR	LR	05 52 34.5	
	comp=Z,452nm,18.4s,baz=183,slow=31						
PB01	**IPOC Station P**	**36.83**	**78**	*e*P	**P**	**05 40 56.3**	**-0.1**
	12nm,0.9s						
PB11	**IPOC Station P**	**37.36**	**76**	*e*P	**P**	**05 41 00.8**	**-0.2**
	18nm,0.9s						
MNMC	**Minye Minye**	**37.75**	**75**	*e*P	**P**	**05 41 04.4**	**-0.1**
	20nm,0.7s						
ATAH	**Atahualpa**	**39.19**	**52**	P	**P**	**05 41 15.9**	**-0.8**
	11nm,0.9s,baz=236,slow=6.3,SNR=8.3						
PMSA	**Palmer Station**	**39.73**	**152**	*e*P	P	05 41 31.2	+11
LPAZ	**La Paz**	**40.50**	**73**	*e*P	**P**	**05 41 28.5**	**+0.6**
	16nm,0.9s						
LPAZ	**La Paz**	**40.50**	**73**	P	**P**	**05 41 28.3**	**+0.5**
	10.0nm,0.8s,baz=251,slow=4.3,SNR=32						
CPUP	**Villa Florida**	**44.34**	**93**	*e*P	**P**	**05 41 57.6**	**-0.8**
	7.3nm,1.1s						
CPUP	**Villa Florida**	**44.34**	**93**	P	**P**	**05 41 57.5**	**-0.8**
	3.8nm,0.9s,baz=278,slow=11,SNR=4.5						
CPUP				LR	LR	05 57 00.3	
	comp=Z,239nm,18.2s,baz=292,slow=32						
CPUP	**Villa Florida**	**44.34**	**93**	*e*P	**P**	**05 41 57.7**	**-0.6**
OTAV	**Otavalo**	**44.94**	**45**	*e*P	**P**	**05 42 03.2**	**-0.5**
	8.2nm,1.1s						
OTAV	**Otavalo**	**44.94**	**45**	*e*P	**P**	**05 42 00.8**	**-2.9**
PLTB	**Pedras Altas**	**45.34**	**102**	*e*P	**P**	**05 42 08.8**	**+2.5**
CPSB	**Cacapava Do Su**	**45.95**	**100**	*e*P	**P**	**05 42 12.7**	**+1.6**
PTLC	**Puerto Leguiza**	**47.08**	**49**	*e*P	**P**	**05 42 16.7**	**-3.4**
PTLC	**Puerto Leguiza**	**47.08**	**49**	*e*P	**P**	**05 42 16.7**	**-3.4**
SOTA	**Rioblanco**	**47.55**	**45**	*e*P	**P**	**05 42 24.9**	**+0.6**
SOTA	**Rioblanco**	**47.55**	**45**	*e*P	**P**	**05 42 24.9**	**+0.6**
PCON	**Cinco Dias**	**47.82**	**46**	*e*P	**P**	**05 42 30.2**	**+3.7**
PCON	**Cinco Dias**	**47.82**	**46**	*e*P	**P**	**05 42 30.2**	**+3.7**
POPC	**Popayan, Colom**	**47.83**	**45**	*e*P	**P**	**05 42 22.2**	**-4.0**
POPC	**Popayan, Colom**	**47.83**	**45**	*e*P	**P**	**05 42 22.2**	**-4.0**
ITAB	**Concordia**	**48.22**	**97**	*e*P	**P**	**05 42 30.4**	**+1.5**
AQDB	**Aquidauana**	**48.30**	**87**	*e*P	**P**	**05 42 28.7**	**-0.9**
CNLB	**Canela**	**48.44**	**100**	*e*P	**P**	**05 42 33.6**	**+3.0**
PTGB	**Pitanga**	**49.33**	**94**	*e*P	**P**	**05 42 38.0**	**+0.5**
TRCB	**Terra Rica**	**49.72**	**91**	*e*P	**P**	**05 42 40.2**	**-0.3**
ROSC	**El Rosal**	**51.06**	**46**	*e*P	**P**	**05 42 52.0**	**+0.9**
	29nm,1.1s						
ROSC	**El Rosal**	**51.06**	**46**	P	**P**	**05 42 52.2**	**+1.1**
	26nm,1.0s,baz=135,slow=4.8,SNR=12						
CHIC	**Chingaza**	**51.24**	**47**	*e*P	**P**	**05 42 52.1**	**-0.3**
CHIC	**Chingaza**	**51.24**	**47**	*e*P	**P**	**05 42 52.1**	**-0.3**
FRTB	**Fartura**	**51.99**	**94**	*e*P	**P**	**05 42 58.7**	**+1.1**
BOAB	**BOACO BROADBA**	**52.00**	**29**	*e*P	**P**	**05 43 00.5**	**+2.9**
	12nm,0.9s						
PTBC	**PUERTO BERRIO,**	**52.35**	**44**	*e*P	**P**	**05 42 59.1**	**-1.1**
PTBC	**PUERTO BERRIO,**	**52.35**	**44**	*e*P	**P**	**05 42 59.1**	**-1.1**
RUSC	**La Rusia**	**52.63**	**46**	*e*P	**P**	**05 43 03.4**	**+0.5**
RUSC	**La Rusia**	**52.63**	**46**	*e*P	**P**	**05 43 03.4**	**+0.5**
ITRB	**Iturama**	**53.05**	**89**	*e*P	**P**	**05 43 06.1**	**+0.6**
BARC	**Barichara**	**53.13**	**46**	*e*P	**P**	**05 43 06.1**	**-0.2**
BARC	**Barichara**	**53.13**	**46**	*e*P	**P**	**05 43 06.1**	**-0.2**
BRRC	**Barranca, Sant**	**53.24**	**45**	*e*P	**P**	**05 43 05.4**	**-1.4**
BRRC	**Barranca, Sant**	**53.24**	**45**	*e*P	**P**	**05 43 05.4**	**-1.4**
BB19B	**Bebedouro**	**53.90**	**92**	*e*P	**P**	**05 43 11.7**	**0.0**
RCLB	**Rio Claro- Sao**	**54.07**	**94**	*e*P	**P**	**05 43 14.8**	**+1.8**
QSPA	**South Pole Qui**	**55.05**	**180**	P	**P**	**05 43 19.3**	**-0.3**
	1.1nm,0.6s,baz=166,slow=12,SNR=1.8						
IPMB	**Ipameri, GO**	**55.67**	**89**	*e*P	**P**	**05 43 24.0**	**-0.7**
VNDA	**Vanda**	**55.94**	**195**	P	**P**	**05 43 26.8**	**+1.2**
	0.9nm,0.7s,baz=79,slow=9.4,SNR=3.9						
SDV	**Santo Domingo**	**56.47**	**47**	*e*P	**P**	**05 43 28.0**	**-2.5**
	13nm,1.0s						
SDV	**Santo Domingo**	**56.47**	**47**	*e*P	**P**	**05 43 28.5**	**-1.9**
PTGA	**Pitinga**	**56.55**	**64**	*e*P	**P**	**05 43 28.6**	**-2.3**
	8.3nm,1.0s						
PTGA	**Pitinga**	**56.55**	**64**	LR	LR	06 04 28.8	
	comp=Z,715nm,19.2s,baz=164,slow=33						
PTGA	**Pitinga**	**56.55**	**64**	*e*P	**P**	**05 43 29.2**	**-1.7**
PMNB	**Patos De Minas**	**56.85**	**90**	*e*P	**P**	**05 43 33.4**	**+0.3**
BSCB	**Bom Sucesso**	**57.00**	**94**	*e*P	**P**	**05 43 35.4**	**+1.3**
BDFB	**Brasilia**	**57.04**	**86**	*e*P	**P**	**05 43 34.3**	**-0.2**
	9.9nm,1.1s						
BDFB	**Brasilia**	**57.04**	**86**	P	**P**	**05 43 32.6**	**-1.9**
	5.7nm,1.0s,baz=307,slow=2.1,SNR=6.9						
JANB	**Januaria**	**60.38**	**88**	*e*P	**P**	**05 43 58.0**	**+0.3**
LTX	**Lajitas**	**64.29**	**5**	*e*P	**P**	**05 44 23.0**	**-0.5**
TX31	**Lajitas Ar. Si**	**64.29**	**5**	*e*P	**P**	**05 44 23.8**	**+0.2**
TXAR	**Lajitas Array**	**64.29**	**5**	P	**P**	**05 44 23.0**	**-0.5**
	0.5nm,0.9s,baz=191,slow=6.1,SNR=5.4						
MDP	**Montagnes des**	**65.86**	**64**	LR	LR	06 09 51.2	
	comp=Z,596nm,18.8s,baz=179,slow=33						
NVAR	**Mina Array Bea**	**73.79**	**352**	P	**P**	**05 45 23.3**	**+0.8**
	1.0nm,0.8s,baz=180,slow=6.4,SNR=7.9						
PDAR	**Pinedale Array**	**77.55**	**359**	P	**P**	**05 45 43.9**	**-0.1**
	0.5nm,0.6s,baz=153,slow=5.0,SNR=6.4						
ULM	**Lac du Bonnet**	**85.75**	**8**	P	**P**	**05 46 26.4**	**-0.4**
	1.3nm,0.6s,baz=174,slow=6.3,SNR=4.1						
YKA	**Yellowknife Ar**	**97.44**	**357**	P	**P**	**05 47 21.1**	**+0.1**
	0.2nm,0.6s,baz=165,slow=5.6,SNR=3.4						
H01W1	**Cape Leeuwin H**	**99.79**	**214**	T	T	07 39 50.7	
	baz=144,slow=76,SNR=8.5						
H01W2	**Cape Leeuwin H**	**99.79**	**214**	T	T	07 39 50.6	
	baz=144,slow=76,SNR=9.0						
H01W3	**Cape Leeuwin H**	**99.81**	**214**	T	T	07 39 51.9	
	baz=144,slow=76,SNR=7.8						
FIA0	**FINESS Array S**	**141.11**	**33**	*e*PKPdf	**PKPdf**	**05 53 15.0**	**-2.6**
FINES	**FINESS Array B**	**141.11**	**33**	PKP	**PKPdf**	**05 53 15.0**	**-2.6**
	0.7nm,0.7s,baz=258,slow=7.0,SNR=2.7						
AK11	**Malin Array Si**	**145.78**	**50**	*e*PKPdf	**PKPdf**	**05 53 25.0**	**-1.2**
KIEV	**Kiev**	**145.80**	**50**	*e*PKPdf	**PKPdf**	**05 53 25.4**	**-0.8**
AKASG	**Malin Array Be**	**145.81**	**50**	PKPbc	**PKPdf**	**05 53 25.6**	**-0.6**
	4.6nm,1.0s,baz=277,slow=3.5,SNR=14						
BRTR	**Keskin Array B**	**149.65**	**70**	PKPbc	**PKPbc**	**05 53 35.9**	**-1.9**
	1.9nm,1.0s,baz=226,slow=5.0,SNR=7.1						
CMAR	**Chiang Mai Arr**	**150.63**	**243**	PKPbc	**PKiKP**	**05 53 41.0**	**-0.3**
	1.2nm,0.7s,baz=183,slow=1.6,SNR=4.5						
SONA0	**Songino Array**	**151.29**	**307**	*e*PKPbc	**PKPbc**	**05 53 41.0**	**-0.5**
SONM	**Songino Array**	**151.29**	**307**	PKPbc	**PKPbc**	**05 53 41.0**	**-0.5**
	1.9nm,1.0s,baz=134,slow=3.7,SNR=5.1						

SJA ***01*** *05:35:34.8±0.5,28°.23S×71°.18W,h29*^{km}*±5*^{km}*,ML3.4,MW3.9*
ISCJB ***01*** *05:35:35.7±1.2,28°.08S±0°.04×71°.1W±0°.2,h38*^{km}*,Error ellipse: s-maj=22.5km s-min=5.2km az=5.0*
GUC ***01*** *05:35:35.0±0.6,28°.15S×70°.59W,h49*^{km}*±7*^{km}*,ML3.7*
ISC 01 05:35:36.5±1.6**,28°.10S**±0°.04×**71°.1W**±0°.1**,h38**^{km}**,n11,**σ**1**^{s}**.28**/16**,1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.99**	**157**	*i* P	**Pn**	**05 35 52.4**	**-1.6**
LCO				*i* S	**Sn**	**05 36 05.5**	**-1.5**
LCO	**Las Campanas**	**0.99**	**157**	⇓*i*P	**Pn**	**05 35 52.7**	**-1.4**
LCO				*e*S	**Sn**	**05 36 04.6**	**-2.4**
LCO				IAML		05 36 06.1	
	comp=E,1µm,0.6s						
CRCH	**Chaqaral**	**1.81**	**15**	*e*P	**Pn**	**05 36 05.5**	**+0.4**
GO04	**Tololo Observa**	**2.09**	**172**	*e*P	**Pn**	**05 36 09.1**	**-0.1**
GO04				*e*S	**Sn**	**05 36 35.7**	**+1.6**
GO04				IAML		05 36 41.8	
	comp=E,2µm,0.5s						
AROD	**Rodeo**	**2.52**	**145**	*i* P	**Pn**	**05 36 16.1**	**+0.8**
AGUA	**GUANDACOL**	**2.70**	**121**	*i* P	**Pn**	**05 36 18.5**	**+0.9**

ACDV	**Cuesta del Vie**	2.72	140	*i* P	Pn	05 36 18.7	+0.9
CMCH	**Combarbala**	3.07	178	*e*P	Pn	05 36 22.9	+0.4
CMCH				*e*S	Sn	05 36 58.9	+0.9
GO02	**Mina Guanaco**	3.24	26	*e*P	Pn	05 36 24.2	-0.8
GO02				*e*S	Sn	05 37 02.5	0.0
GO02				IAML		05 37 21.9	
	comp=E,270nm,0.4s						
RTLS	**Leoncito**	4.02	157	*i* P	Pn	05 36 37.0	+1.2
RTLS				IAML		05 37 36.9	
	comp=Z,54nm,0.4s						
RTCV	**Cerro Valdivia**	4.38	150	*i* P	Pn	05 36 41.1	+0.7

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*SOME **01** 05:35:43.0, 42.°48N×79.°60E, h10^{km}*

*KRNET **01** 05:35:43.7±0.1, 42.°57N×79.°59E, h9^{km}, mb2.5*

*NNC **01** 05:35:43.6±2.0, 42.°55N×79.°59E, h0^{km}, mb2.5, mpv2.9, Error ellipse: s-maj=13.0km s-min=7.1km az=153.0*

ISC 01 05:35:43.5±2.0**, 42.°54N**±0.°06×**79.°59E**±0.°07**, h7**^{km}±13^{km}**, n23, σ0.^{s}69**/45**, 11C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	0.62	351	P	Pg	05 35 56.1	+0.6
	30nm,0.2s						
SHLS				S	Sb	05 36 05.7	-0.1
	26nm,0.1s						
SHLS	**Shalkode**	0.62	351	*e*P	Pg	05 35 56.1	+0.6
	baz=20						
SHLS				*e*S	Sb	05 36 05.7	-0.1
	baz=20						
SHLS	**Shalkode**	0.62	351	*e*P	Pg	05 35 56.1	+0.6
	30nm,0.2s						
SHLS				*e*S	Sb	05 36 05.7	-0.1
	26nm,0.1s						
UZB	**Uzynbulak**	0.74	326	P	Pg	05 35 57.4	-0.3
	7.7nm,0.1s						
UZB				S	Sg	05 36 07.8	+0.5
	11nm,0.2s						
UZB	**Uzynbulak**	0.74	326	*e*P	Pg	05 35 57.4	-0.3
	baz=25						
UZB				*e*S	Sg	05 36 07.8	+0.5
	baz=25						
UZB	**Uzynbulak**	0.74	326	*e*P	Pg	05 35 57.4	-0.3
	7.7nm,0.1s						
UZB				*e*S	Sg	05 36 07.8	+0.5
	11nm,0.2s						
PDGK	**Podgornoye**	0.79	355	P	Pg	05 35 58.1	-0.7
	7.3nm,0.1s						
PDGK				S	Sg	05 36 09.0	-0.1
	3.6nm,0.3s						
PDGK	**Podgornoye**	0.79	355	⇑*i*P	Pg	05 35 58.0	-0.7
	baz=54						
PDGK				⇑*i*S	Sg	05 36 08.5	-0.5
	baz=54						
PRZ	**Przheval'sk**	0.88	267	⇑*i*P	Pg	05 36 00.4	0.0
	baz=65						
PRZ				⇑*i*S	Sb	05 36 13.0	-0.3
	baz=65						
SATY	**Saty**	1.01	301	P	Pg	05 36 02.4	-0.6
	2.3nm,0.2s						
SATY				S	Sg	05 36 16.3	+0.2
	10nm,0.1s						
SATY	**Saty**	1.01	301	*e*P	Pg	05 36 02.4	-0.6
	2.3nm,0.2s						
SATY				*e*S	Sg	05 36 16.3	+0.2
	10nm,0.1s						
KURS	**Kuram**	1.41	313	P	Pb	05 36 10.1	0.0
	2.3nm,0.5s						
KURS				S	Sg	05 36 29.3	+0.5
	4.1nm,0.7s						
KURS	**Kuram**	1.41	313	*e*P	Pb	05 36 10.1	0.0
	baz=12						
KURS				*e*S	Sg	05 36 29.3	+0.5
	baz=12						
KURS	**Kuram**	1.41	313	*e*P	Pb	05 36 10.1	0.0
	2.3nm,0.5s						
KURS				*e*S	Sg	05 36 29.3	+0.5
	4.1nm,0.7s						
MNBS	**Baschi**	1.77	331	P	Pb	05 36 15.8	-0.5
	4.5nm,0.2s						
MNBS				S	Sg	05 36 39.4	-0.8
	14nm,0.2s						
MNBS	**Baschi**	1.77	331	*e*P	Pn	05 36 15.1	+0.5
	baz=31						
MNBS				*e*S	Sb	05 36 38.4	-0.3
	baz=31						
MNBS	**Baschi**	1.77	331	*e*P	Pn	05 36 15.1	+0.5
	4.5nm,0.2s						
MNBS				*e*S	Sb	05 36 38.4	-0.3
	14nm,0.2s						
DJR	**Jarkent**	1.80	5	P	Pb	05 36 15.8	-1.0
	1.3nm,0.5s						
DJR				S	Sb	05 36 39.4	-0.1
	2.4nm,0.2s						
DJR	**Jarkent**	1.80	5	*e*P	Pn	05 36 15.7	+0.7
	1.3nm,0.5s						
DJR				*e*S	Sb	05 36 39.2	-0.3
	2.7nm,0.2s						
KDJ	**Kajisay**	1.83	258	⇑*i*P	Pb	05 36 17.6	+0.2
	baz=57						
KDJ				⇑*i*S	Sg	05 36 42.7	+0.3
	baz=57						
ULHL	**Ulahol**	2.50	264	⇑*e*P	Pb	05 36 27.1	-1.7
	baz=64						
ULHL				⇑*i*S	Sb	05 36 59.1	-0.7
	baz=64						
BOOM	**Boomskoye usch**	2.70	270	⇑*i*P	Pn	05 36 29.3	+1.8
	baz=70						
BOOM				⇑*i*S	Sb	05 37 03.5	-2.1
	baz=70						
TKM2	**Tokmak 2**	2.97	279	⇓Pg	Pb	05 36 37.1	+0.4
	1.9nm,0.9s						
TKM2				⇑Lg	Lg	05 37 18.1	
	1.1nm,0.5s						

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*IDC **01** 05:36:39.2±0.4, 11.°10S×165.°60E, h0^{km}, mb4.8/29, mb1 4.9/31, mb1mx4.8/42, mbtmp4.8/31, ML5.1/2, MS5.6/25, Ms1 5.6/25, ms1mx5.5/37, Error ellipse: s-maj=15.4km s-min=11.9km az=95.0*

*ISCJB **01** 05:36:39.7±0.1, 11.°12S±0.°02×165.°57E±0.°02, h12^{km}, mb5.3/285, MS6.0/680, Error ellipse: s-maj=3.1km s-min=2.7km az=29.1*

*BJI **01** 05:36:40.8, 10.°80S×165.°41E, h5^{km}, mB5.7/72, mb5.2/62, Ms6.0/82, Ms7 5.7/76*

*NEIC **01** 05:36:41.8±0.1, 11.°10S×165.°53E, h15^{km}, mb5.5/222, ME5.5, MS5.9/299, MW5.9, MW6.0, MW6.0, Error ellipse: s-maj=3.6km s-min=2.8km az=124.0, Moment Tensor Solution. s55 Moment tensor: Scale 10^{17}Nm; M_{rr}3.92; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-4.05; $M_{r\theta}$5.09; $M_{\theta\phi}$1.11; $M_{\phi r}$-7.07; Best double couple: $M_0$9.70000×10^{17} NP1:ϕ_s147.00000°, δ78.00000°, λ81.00000°. NP2:ϕ_s4.00000°, δ15.00000°, λ127.00000°. Principal axes: T 9.7100, Plg56.0000°, Azm45.0000°; N -0.1300, Plg9.0000°, Azm148.0000°; P -9.5900, Plg32.0000°, Azm244.0000°; Depth from synthetics of broadband displacement seismograms. Apparent Stress 0.09 MPa. Energy computed from MT mechanism.*

*NEIC **01** 05:36:41.0±0.0, 11.°23S×165.°48E, h15^{km} Best double couple: NP1:ϕ_s149.00000°, δ74.00000°, λ91.00000°. NP2:ϕ_s325.00000°, δ16.00000°, λ85.00000°. Principal axes: T 1.1400, Plg60.0000°, Azm61.0000°; N -0.0700, Plg1.0000°, Azm329.0000°; P -1.0700, Plg29.0000°, Azm238.0000°;*

*MOS **01** 05:36:43.3±1.0, 11.°04S×165.°43E, h33^{km}, mb5.5/65, MS5.8/61 Error ellipse: s-maj=7.2km s-min=6.0km az=94.1*

*GCMT **01** 05:36:46.8±0.1, 11.°34S±0.°01×165.°39E±0.°01, h18^{km}, MW6.0/139, Moment Tensor Solution. s139,c296; s134,c413; Duration: 2.^{s}4 Moment tensor: Scale 10^{18} Nm; M_{rr}0.73±.01; $M_{\theta\theta}$-0.24±.01; $M_{\phi\phi}$-0.49±.01; $M_{r\theta}$0.61±.02; $M_{\theta\phi}$0.32±.01; $M_{\phi r}$-0.78±.02; Best double couple: $M_0$1.22600×10^{18} NP1:ϕ_s143.00000°, δ72.00000°, λ88.00000°. NP2:ϕ_s329.00000°, δ18.00000°, λ95.00000°. Principal axes: T 1.2350, Plg63.0000°, Azm50.0000°; N -0.0190, Plg2.0000°, Azm143.0000°; P -1.2160, Plg27.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 05:36:52.7±0.0, 12.°13S×165.°54E, h21^{km}, Moment Tensor Solution. s13 Moment tensor: Scale 10^{18}Nm; M_{rr}0.79; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$-0.54; $M_{r\theta}$1.01; $M_{\theta\phi}$0.32; $M_{\phi r}$-0.15; Best double couple: $M_0$1.30000×10^{18} NP1:ϕ_s340.00000°, δ25.00000°, λ135.00000°. NP2:ϕ_s112.00000°, δ73.00000°, λ72.00000°. Principal axes: T 1.4100, Plg59.0000°, Azm358.0000°; N -0.3200, Plg17.0000°, Azm118.0000°; P -1.0900, Plg26.0000°, Azm216.0000°;*

ISC 01 05:36:42.1±0.7**, 11.°16S**±0.°04×**165.°49E**±0.°04**, h15**^{km}±4^{km}**, n1188, σ1.^{s}79**/816**, mb5.4**/289**, MS6.0**/683**, 14C-19D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.72	287	*e*P	Pn	05 38 09.0	+2.4
HNR				*e*S	Sn	05 39 20.0	+8.0
HNR	**Honiara**	5.72	287	*e*Pn	Pn	05 38 05.5	-1.1
HNR				*e*Sn	Sn	05 39 10.9	-1.1
HNR	**Honiara**	5.72	287	*e*P	Pn	05 38 05.5	-1.1
HNR				*e*		05 39 10.9	
HNR	**Honiara**	5.72	287	Pn	Pn	05 38 06.3	-0.3
	33nm,0.3s,baz=240,slow=7.7,SNR=7.2						
HNR				Sn	Sn	05 39 12.0	0.0
	50nm,0.3s,baz=166,slow=17,SNR=2.4						
MARNC	**Mare, Loyalty**	10.55	167	*e*Pn	Pn	05 39 13.1	+0.2
DZM	**Mont Dzumac**	10.89	175	*e*Pn	Pn	05 39 17.9	+0.3
	920nm,1.4s						
DZM				*e*LQ	LQ	05 41 19.8	
	52μm,23.2s						
DZM				*e*LR	LR	05 41 50.5	
	comp=Z,38μm,25.4s						
DZM	**Mont Dzumac**	10.89	175	*e*Pn	Pn	05 39 17.0	-0.6
DZM				Sn	Sn	05 41 16.2	-3.0
DZM	**Mont Dzumac**	10.89	175	Pn	Pn	05 39 17.5	-0.1
	21nm,0.3s,baz=360,slow=14,SNR=118						
DZM				Sn	Sn	05 41 16.2	-3.0
	0.6nm,0.3s,baz=20,slow=15,SNR=1.8						
DZM				LR	LR	05 42 52.1	
	comp=Z,34μm,19.9s,baz=360,slow=34						
PINNC	**Pines Island,**	11.54	171	*e*Pn	Pn	05 39 26.8	+0.3
PINNC				*e*Sn	Sn	05 41 37.1	+2.0
MSVF	**Nonsavu**	13.80	120	*e*Pn	Pn	05 40 00.7	+3.2
MSVF	**Nonsavu**	13.80	120	*e*P	Pn	05 40 00.7	+3.2
TARA	**Tarawa**	14.47	31	*e*Pn	Pn	05 40 06.7	+0.1
RABL	**Rabaul**	14.90	297	*e*Pn	Pn	05 40 12.3	-0.3
PATS	**Pohnpei**	19.25	338	*e*P	P	05 41 05.6	-0.7
	551nm,1.4s						
EIDS	**Eidsvold**	19.64	222	P	Pn	05 41 11.6	-0.1
	baz=20,SNR=20						
EIDS	**Eidsvold**	19.64	222	*e*P	Pn	05 41 11.7	-0.1
	237nm,1.4s						
KWAJ	**Kwajalein Atol**	19.95	6	*e*P	P	05 41 14.4	+0.6
	786nm,1.4s						
KWAJ	**Kwajalein Atol**	19.95	6	*e*P	P	05 41 14.4	+0.6
KWAJ				pmax	pmax		
	comp=Z,786nm,1.4s						
MANU	**Manus Island**	20.14	295	*e*P	P	05 41 16.8	+0.8
MANU				LR	LR		
	comp=Z,30μm,18.0s						
CTA	**Charters Tower**	20.52	242	P	P	05 41 21.0	+0.9
	comp=Z,69nm,1.1s,baz=64,slow=13,SNR=31						
CTA				LR	LR	05 48 41.4	
	comp=Z,29μm,18.1s,baz=76,slow=35						
CTAO	**Charters Tower**	20.52	242	*e*P	P	05 41 20.6	+0.5
	comp=Z,486nm,1.4s						
CTAO				LR	LR		
	comp=Z,35μm,18.0s						
CTAO	**Charters Tower**	20.52	242	*e*P	P	05 41 20.6	+0.5
CTAO				pmax	pmax		
	comp=Z,486nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,35μm,18.0s						
LHI	**Lord Howe Isla**	21.11	195	*e*P	P	05 41 25.9	-0.4
	comp=Z,386nm,1.3s						
LHI				LR	LR		
	comp=Z,28μm,18.0s						
MTSU	**Mount Surprise**	21.61	249	P	P	05 41 33.5	+1.6
	baz=22,SNR=43						
RMQ	**Roma**	21.94	224	P	P	05 41 36.7	+1.4
	baz=22,SNR=102						
COEN	**Coen**	21.95	260	P	P	05 41 35.9	+0.4
	baz=22,SNR=25						
COEN	**Coen**	21.95	260	*e*P	P	05 41 35.9	+0.4
	comp=Z,354nm,1.4s						
COEN				LR	LR		
	comp=Z,28μm,21.0s						
ARMA	**Armidale**	23.09	212	P	P	05 41 48.6	+1.1
	baz=23,SNR=18						
ARMA	**Armidale**	23.09	212	*e*P	P	05 41 47.5	-0.1
	comp=Z,218nm,1.3s						
ARMA				LR	LR		
	comp=Z,26μm,18.0s						
RAO	**Raoul Island**	23.74	142	LR	LR	05 49 17.5	
	comp=Z,9μm,18.1s,baz=317,slow=32						
KNTN	**Kanton**	24.09	71	*e*P	P	05 41 58.4	+1.0
	comp=Z,577nm,1.6s						
KNTN				LR	LR		
	comp=Z,26μm,19.0s						
OUZ	**Omahuta**	25.06	164	*e*P	P	05 42 07.0	+1.0
	comp=Z,302nm,1.3s						
OUZ				LR	LR		
	comp=Z,26μm,19.0s						
QLP	**Quilpie**	25.23	230	P	P	05 42 08.2	+0.6
	baz=25,SNR=18						
JAY	**Jayapura**	26.04	287	LR	LR	05 53 26.5	
	comp=Z,11μm,19.3s,baz=42,slow=39						
QIS	**Mount Isa**	26.56	246	P	P	05 42 19.7	-0.1
	baz=27,SNR=17						
CMSA	**Cobar Meteorol**	27.31	219	P	P	05 42 26.8	+0.3
	baz=28,SNR=20						
YNG	**Young**	27.82	211	P	P	05 42 30.9	0.0
	baz=28,SNR=5.3						
CAN	**Canberra**	28.34	209	PFAKE		05 42 50.0	+14
CAN				LR	LR		
	comp=Z,8μm,20.0s						
HIZ	**Hauiti**	28.49	164	*e*P	P	05 42 37.0	+0.1
	comp=Z,300nm,1.4s						
HIZ				LR	LR		
	comp=Z,27μm,18.0s						
HAZ	**Te Kaha**	28.69	159	P	P	05 42 44.0	+5.4
MXZ	**Matakaoa Point**	28.70	158	PFAKE		05 42 50.0	+11
MXZ				LR	LR		
	comp=Z,19μm,18.0s						
RUGZ	**Raukumara Rang**	28.84	160	P	P	05 42 40.9	+0.8
URZ	**Urewera**	28.92	161	*e*P	P	05 42 40.9	+0.3
	comp=Z,134nm,1.4s						
URZ				LR	LR		
	comp=Z,17μm,19.0s						
URZ	**Urewera**	28.92	161	P	P	05 42 41.1	+0.4
	comp=Z,56nm,1.2s,baz=43,slow=4.0,SNR=7.0						
URZ	**Urewera**	28.92	161	P	P	05 42 41.4	+0.8
MWZ	**Matawai**	29.12	160	P	P	05 42 43.8	+1.3
TWGZ	**Tauwhareparae**	29.13	160	P	P	05 42 44.8	+2.1
NGZ	**Ngauruhoe**	29.32	164	P	P	05 42 47.8	+3.5
MTHZ	**Maungataniwha**	29.38	162	P	P	05 42 47.2	+2.4
TRVZ	**Turoa**	29.42	164	P	P	05 42 51.8	+6.4
SNGZ	**Shannon Statio**	29.47	161	P	P	05 42 44.9	-0.6
H11S2	**WAKE ISLAND Hy**	29.49	2	T	T	06 13 25.7	
	baz=181,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	29.49	2	T	T	06 13 25.2	
	baz=181,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	29.51	2	T	T	06 13 26.9	
	baz=181,slow=76,SNR=24						
RAHZ	**Arahi**	29.51	161	P	P	05 42 47.1	+1.1
RIGZ	**Rimuhau**	29.54	160	P	P	05 42 47.4	+1.1
BKZ	**Black Stump Fm**	29.56	162	*e*P	P	05 42 46.7	+0.2
	comp=Z,202nm,1.4s						
BKZ				*e*S	S	05 47 36.3	-4.7
BKZ				LR	LR		
	comp=Z,13μm,18.0s						
BKZ	**Black Stump Fm**	29.56	162	P	P	05 42 47.2	+0.8
MOVZ	**Moawhango**	29.57	164	P	P	05 42 50.5	+4.0
NMHZ	**Naumai**	29.59	162	P	P	05 42 48.2	+1.5
WHHZ	**Waihua**	29.70	161	P	P	05 42 46.8	-0.8
BHHZ	**Black Hill Sta**	29.74	163	P	P	05 42 49.3	+1.3
KWHZ	**Kaweka Forest**	29.78	163	P	P	05 42 49.5	+1.1
MCHZ	**McNeill Hill**	29.88	162	P	P	05 42 51.6	+2.5
STKA	**Stephens Creek**	30.18	223	P	P	05 42 52.6	+0.6
	baz=30,SNR=15						
STKA	**Stephens Creek**	30.18	223	*e*P	P	05 42 52.6	+0.6
	comp=Z,7.7nm,0.9s						
STKA	**Stephens Creek**	30.18	223	*e*P	P	05 42 52.6	+0.6
STKA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STKA	**Stephens Creek**	30.18	223	P	P	05 42 52.5	+0.6
	comp=Z,29nm,1.0s,baz=48,slow=9.8,SNR=19						
STKA				LR	LR	05 55 23.3	
	comp=Z,26μm,18.2s,baz=57,slow=37						
KAHZ	**Kahuranaki**	30.25	162	P	P	05 42 53.4	+0.8
WAKE	**Wake Island**	30.27	2	PFAKE		05 43 00.0	+7.2
WAKE				LR	LR		
	comp=Z,7μm,21.0s						
H11N1	**WAKE ISLAND Hy**	30.71	3	T	T	06 14 57.7	
	baz=182,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	30.72	3	T	T	06 14 57.4	
	baz=182,slow=76,SNR=20						
H11N2	**WAKE ISLAND Hy**	30.73	3	T	T	06 14 57.7	
	baz=182,slow=76,SNR=20						
BFZ	**Birch Farm**	30.90	164	*e*P	P	05 42 58.1	-0.1
	comp=Z,334nm,1.3s						
BFZ				LR	LR		
	comp=Z,31μm,18.0s						
SNZO	**South Karori**	31.11	166	PFAKE		05 43 10.0	+10
SNZO				LR	LR		
	comp=Z,18μm,18.0s						
THZ	**Tophouse**	31.17	169	*e*P	P	05 43 01.5	+0.8
	comp=Z,137nm,1.0s						
THZ				*e*S	S	05 48 11.4	+5.3
THZ				LR	LR		
	comp=Z,15μm,18.0s						
WRAB	**Tennant Creek**	31.19	250	*e*P	P	05 43 00.2	-0.9
	comp=Z,150nm,1.1s						
WRAB				LR	LR		
	comp=Z,28μm,18.0s						
WRAB	**Tennant Creek**	31.19	250	⇓*e*P	P	05 42 59.6	-1.5
WRAB				pmax	pmax		
	comp=Z,145nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,28μm,17.0s						
WB2	**Warramunga Arr**	31.20	250	*e*P	P	05 43 00.2	-0.9
	comp=Z,172nm,1.1s						
WR1	**Warramunga Arr**	31.21	250	*e*P	P	05 43 00.2	-1.0
	comp=Z,214nm,1.2s						
WR1				*e*PcP	PcP	05 45 56.8	+0.8
WR1				*e*ScP	ScP	05 49 42.0	+3.3
WR1				*e*ScS	PKiKP	05 53 23.9	-2.2
WR1				*e*		05 55 36.3	
WRA	**Warramunga Arr**	31.21	250	P	P	05 43 00.2	-1.0
	comp=Z,30nm,0.9s,baz=80,slow=8.2,SNR=81						
WRA				PcP	PcP	05 45 56.8	+0.8
	comp=Z,4.7nm,0.9s,baz=77,slow=3.0,SNR=3.6						
WRA				ScP	ScP	05 49 42.0	+3.3
	comp=Z,4.2nm,1.4s,baz=76,slow=3.3,SNR=5.2						
WRA				PKiKP	PKiKP	05 53 23.9	-2.2
	comp=Z,0.3nm,0.7s,baz=45,slow=1.0,SNR=4.7						
WRA				LR	LR	05 55 36.3	
	comp=Z,22μm,18.3s,baz=80,slow=36						
TOO	**Toolangi**	31.84	211	P	P	05 43 08.4	+1.9
	baz=32,SNR=7.0						
TOO	**Toolangi**	31.84	211	*e*P	P	05 43 08.5	+1.9
	comp=Z,108nm,1.8s						
TOO				LR	LR		
	comp=Z,12μm,20.0s						
TOO	**Toolangi**	31.84	211	*e*P	P	05 43 08.5	+1.9
TOO				pmax	pmax		
	comp=Z,109nm,1.8s						
TOO				MLR	MLR		
	comp=Z,12μm,20.0s						
KHZ	**Kahutara**	31.92	169	*e*P	P	05 43 07.0	-0.1
	comp=Z,204nm,1.5s						
KHZ				LR	LR		
	comp=Z,20μm,19.0s						
GUMO	**Guam**	31.99	320	LR	LR	05 55 32.6	
	comp=Z,10μm,19.2s,baz=154,slow=35						
LTZ	**Lake Taylor**	32.05	171	*e*P	P	05 43 09.8	+1.4
	comp=Z,69nm,0.9s						
LTZ				LR	LR		
	comp=Z,15μm,18.0s						
KDU	**Kakadu**	32.33	264	P	P	05 43 09.5	-1.5
	baz=32,SNR=15						
FOZ	**Fox Glacier**	32.47	174	*e*P	P	05 43 12.0	+0.1
	comp=Z,86nm,1.0s						
FOZ				LR	LR		
	comp=Z,16μm,19.0s						
AS01	**Alice Springs**	32.47	243	*e*P	P	05 43 11.2	-1.1
AS31	**Alice Springs**	32.51	243	*e*P	P	05 43 12.7	0.0
	comp=Z,13nm,1.4s						
AS31				*e*PcP	PcP	05 45 58.9	-0.6
AS31				*e*ScP	ScP	05 49 45.1	+2.0
AS31				LR	LR		
	comp=Z,300nm,20.0s						
ASAR	**Alice Springs**	32.51	243	P	P	05 43 11.8	-0.9
	comp=Z,5.4nm,0.8s,baz=71,slow=9.7,SNR=30						
ASAR				PcP	PcP	05 45 58.9	-0.6
	comp=Z,2.0nm,0.8s,baz=84,slow=2.6,SNR=2.9						
ASAR				ScP	ScP	05 49 45.1	+2.0
	comp=Z,2.4nm,1.1s,baz=64,slow=2.2,SNR=3.0						
ASAR				LR	LR	05 55 29.4	
	comp=Z,19μm,20.5s,baz=80,slow=35						
OXZ	**Oxford**	32.55	171	*e*P	P	05 43 09.6	-3.1
	comp=Z,16nm,0.8s						
RPZ	**Rata Peaks**	32.79	173	*e*P	P	05 43 15.6	+0.8
	comp=Z,123nm,1.2s						
RPZ	**Rata Peaks**	32.79	173	P	P	05 43 14.1	-0.7
	comp=Z,18nm,0.9s,baz=359,slow=5.1,SNR=5.5						
RPZ				LR	LR	05 55 43.5	
	comp=Z,17μm,18.5s,baz=345,slow=35						
CRLZ	**Canterbury Las**	32.88	170	*e*P	P	05 43 15.9	+0.4
	comp=Z,430nm,1.5s						
CRLZ				LR	LR		
	comp=Z,8μm,19.0s						
HTT	**Hallett**	32.92	223	P	P	05 43 17.2	+1.1
	baz=33,SNR=13						
MQZ	**McQueen's Vall**	33.01	170	*e*P	P	05 43 16.9	+0.2
	comp=Z,177nm,1.2s						
MQZ				LR	LR		
	comp=Z,13μm,18.0s						
LBZ	**Lake Benmore**	33.35	174	*e*P	P	05 43 20.5	+0.8
	comp=Z,217nm,1.8s						
LBZ				LR	LR		
	comp=Z,14μm,18.0s						
WKZ	**Wanaka**	33.68	175	*e*P	P	05 43 22.3	-0.2
	comp=Z,249nm,1.4s						
WKZ				LR	LR		
	comp=Z,13μm,21.0s						
SAUI	**Saumlaki**	33.85	272	PFAKE		05 43 40.0	+16
SAUI				LR	LR		
	comp=Z,14μm,18.0s						
FAKI	**Fak Fak**	33.96	281	PFAKE		05 43 40.0	+15
FAKI				LR	LR		
	comp=Z,10μm,20.0s						
ODZ	**Otahua Downs**	34.05	173	*e*P	P	05 43 27.0	+1.3
	comp=Z,64nm,1.2s						
ODZ				LR	LR		
	comp=Z,13μm,18.0s						
MLZ	**Mavora Lakes**	34.16	177	*e*P	P	05 43 27.6	+0.9
	comp=Z,40nm,1.1s						
MLZ				LR	LR		
	comp=Z,22μm,18.0s						
DCZ	**Deep Cove**	34.21	178	*e*P	P	05 43 25.8	-1.3
	comp=Z,70nm,1.1s						
DCZ				LR	LR		
	comp=Z,10μm,19.0s						
BBOO	**Buckleboo**	34.56	227	P	P	05 43 31.2	+0.8
	baz=35,SNR=9.5						
BBOO	**Buckleboo**	34.56	227	*e*P	P	05 43 30.8	+0.4
	comp=Z,117nm,1.2s						
BBOO				LR	LR		
	comp=Z,22μm,18.0s						
WHZ	**Wether Hill Ro**	34.67	177	PFAKE		05 43 40.0	+8.9
WHZ				LR	LR		
	comp=Z,18μm,19.0s						
RAR	**Rarotonga**	34.75	111	LR	LR	05 54 47.1	
	comp=Z,10μm,21.2s,baz=275,slow=31						
PYZ	**Puysegur Point**	34.90	179	PFAKE		05 43 50.0	+17
PYZ				LR	LR		
	comp=Z,8μm,20.0s						
TAU	**Tasmania Unive**	35.36	203	*e*P	P	05 43 37.4	+0.3
	comp=Z,92nm,1.3s						
TAU				LR	LR		
	comp=Z,12μm,19.0s						
TAU	**Tasmania Unive**	35.36	203	*e*P	P	05 43 37.4	+0.3
TAU				pmax	pmax		
	comp=Z,92nm,1.3s						
TAU				MLR	MLR		
	comp=Z,12μm,19.0s						
SIJI	**Sorong**	35.49	284	P	P	05 43 39.1	+0.5
	comp=Z,7.0nm,0.5s,baz=108,slow=20,SNR=2.8						
KNRA	**Kununurra**	35.97	259	P	P	05 43 41.8	-0.9
	baz=36,SNR=10						
JOHN	**Johnston Islan**	37.13	42	PFAKE		05 44 00.0	+7.5
JOHN				LR	LR		

	comp=Z,15µm,20.0s						
WRKA	**Warakurna**	**37.81**	**243**	P	**P**	**05 43 57.8**	**-0.5**
	baz=38,SNR=8.6						
FITZ	**Fitzroy Crossi**	**39.11**	**255**	P	**P**	**05 44 09.4**	**+0.1**
	baz=39,SNR=16						
FITZ	**Fitzroy Crossi**	**39.11**	**255**	*e*P	**P**	**05 44 09.8**	**+0.6**
	comp=Z,90nm,1.4s						
FITZ				LR	LR		
	comp=Z,16µm,18.0s						
XMAS	**Kiritimati**	**39.13**	**73**	PFAKE		05 44 20.0	+11
XMAS				LR	LR		
	comp=Z,18µm,20.0s						
TNTI	**Ternate**	**39.70**	**285**	PFAKE		05 44 30.0	+16
TNTI				LR	LR		
	comp=Z,4µm,20.0s						
FORT	**Forrest**	**39.77**	**235**	P	**P**	**05 44 15.4**	**+0.8**
	baz=40,SNR=7.7						
FORT	**Forrest**	**39.77**	**235**	*e*P	**P**	**05 44 15.5**	**+0.8**
	comp=Z,281nm,1.8s						
FORT				LR	LR		
	comp=Z,11µm,20.0s						
SOEI	**Soe**	**40.54**	**268**	*e*P	**P**	**05 44 22.7**	**+1.3**
	comp=Z,85nm,1.1s						
SOEI				LR	LR		
	comp=Z,8µm,18.0s						
MIDW	**Midway**	**42.52**	**23**	PFAKE		05 44 50.0	+13
MIDW				LR	LR		
	comp=Z,11µm,19.0s						
MMRI	**Maumere**	**42.65**	**269**	*e*P	**P**	**05 44 38.5**	**-0.1**
	comp=Z,126nm,1.1s						
MCQ	**Macquarie Isla**	**43.54**	**186**	PFAKE		05 45 00.0	+15
MCQ				LR	LR		
	comp=Z,12µm,18.0s						
LUWI	**Luwuk**	**43.59**	**280**	*e*P	**P**	**05 44 48.4**	**+2.2**
	comp=Z,218nm,1.4s						
DAV	**Davao City (W)**	**43.65**	**293**	PFAKE		05 45 00.0	+13
DAV				LR	LR		
	comp=Z,4µm,18.0s						
PPT	**Papeete**	**43.91**	**104**	LR	LR	06 00 01.5	
	comp=Z,8µm,18.8s,baz=266,slow=32						
PPT2	**Papeete2**	**43.91**	**104**	*e*S	**S**	**05 51 21.9**	**+1.7**
	comp=Z,6µm,25.0s						
PPT2				*e*LQ	LQ	05 55 14.6	
	comp=Z,21µm,28.5s						
PPT2				*e*LR	LR	05 57 03.4	
	comp=Z,11µm,21.8s,baz=278						
PPTF	**Pamatai, Papee**	**43.92**	**104**	PFAKE		05 45 00.0	+11
PPTF				LR	LR		
	comp=Z,11µm,20.0s						
TBI	**Tubuai**	**44.52**	**112**	*e*S	**S**	**05 51 33.0**	**+4.3**
	comp=Z,5µm,26.0s						
TBI				*e*LQ	LQ	05 55 29.2	
	comp=Z,23µm,30.0s						
TBI				*e*LR	LR	05 57 22.6	
	comp=Z,9µm,26.5s,baz=284						
MBWA	**Marble Bar**	**44.92**	**251**	*e*P	**P**	**05 44 55.8**	**-0.9**
	comp=Z,68nm,1.0s						
MBWA				LR	LR		
	comp=Z,9µm,21.0s						
MEEK	**Meekatharra**	**46.67**	**244**	P	**P**	**05 45 11.6**	**+1.1**
	baz=47,SNR=16						
KLBR	**Kellerberrin**	**48.43**	**238**	P	**P**	**05 45 24.6**	**+0.4**
	baz=49,SNR=8.1						
KHLU	**Kahalu`u**	**48.79**	**51**	PFAKE		05 45 40.0	+13
KHLU				LR	LR		
	comp=Z,10µm,20.0s						
KHU	**Kahuku**	**48.81**	**52**	PFAKE		05 45 40.0	+13
KHU				LR	LR		
	comp=Z,10µm,18.0s						
HUH	**Hualalai**	**48.89**	**51**	PFAKE		05 45 40.0	+12
HUH				LR	LR		
	comp=Z,12µm,18.0s						
AIN	**Ainahou**	**49.00**	**52**	PFAKE		05 45 40.0	+11
AIN				LR	LR		
	comp=Z,12µm,18.0s						
MLOA	**Mauna Loa Obse**	**49.01**	**52**	PFAKE		05 45 40.0	+11
MLOA				LR	LR		
	comp=Z,11µm,18.0s						
HLP	**Hilina Pali**	**49.08**	**52**	PFAKE		05 45 40.0	+11
HLP				LR	LR		
	comp=Z,12µm,18.0s						
HMH	**Humu‘ula Sheep**	**49.12**	**52**	PFAKE		05 45 40.0	+10
HMH				LR	LR		
	comp=Z,12µm,21.0s						
MLH	**Mauna Loa**	**49.13**	**52**	PFAKE		05 45 40.0	+10
MLH				LR	LR		
	comp=Z,11µm,19.0s						
SDHHI	**Sand Hill**	**49.14**	**52**	PFAKE		05 45 40.0	+10
SDHHI				LR	LR		
	comp=Z,12µm,18.0s						
WRMHI	**West Rim**	**49.15**	**52**	PFAKE		05 45 40.0	+10
WRMHI				LR	LR		
	comp=Z,11µm,18.0s						
KHLH	**Kahului Airpor**	**49.16**	**50**	PFAKE		05 45 40.0	+10
KHLH				LR	LR		
	comp=Z,14µm,19.0s						
RIM	**Rim**	**49.16**	**52**	PFAKE		05 45 40.0	+10
RIM				LR	LR		
	comp=Z,12µm,18.0s						
UWE	**Uwekahuna**	**49.16**	**52**	PFAKE		05 45 40.0	+10
UWE				LR	LR		
	comp=Z,11µm,18.0s						
NPH	**North Pit**	**49.16**	**52**	PFAKE		05 45 40.0	+10
NPH				LR	LR		
	comp=Z,13µm,19.0s						
OBL	**Observatory Le**	**49.16**	**52**	PFAKE		05 45 40.0	+10
OBL				LR	LR		
	comp=Z,13µm,18.0s						
KKO	**Keanakako`i**	**49.17**	**52**	PFAKE		05 45 40.0	+10
KKO				LR	LR		
	comp=Z,12µm,18.0s						
POHA	**Pohakuloa**	**49.17**	**52**	PFAKE		05 45 40.0	+10
POHA				LR	LR		
	comp=Z,11µm,18.0s						
UWB	**Uwekahuna B**	**49.17**	**52**	PFAKE		05 45 40.0	+10
UWB				LR	LR		
	comp=Z,14µm,18.0s						
BYL	**Byron's Ledge**	**49.18**	**52**	PFAKE		05 45 40.0	+10
BYL				LR	LR		
	comp=Z,12µm,18.0s						
SBLHI	**Steaming Bluff**	**49.18**	**52**	PFAKE		05 45 40.0	+10
SBLHI				LR	LR		
	comp=Z,12µm,18.0s						
HATHI	**Halema‘uma‘u T**	**49.18**	**52**	PFAKE		05 45 40.0	+10
HATHI				LR	LR		
	comp=Z,12µm,19.0s						
NWAO	**Narrogin (SRO)**	**49.19**	**236**	P	**P**	**05 45 30.2**	**+0.2**
	baz=49,SNR=5.8						
NWAO	**Narrogin (SRO)**	**49.19**	**236**	*e*P	**P**	**05 45 29.8**	**-0.1**
	comp=Z,102nm,1.3s						
NWAO				LR	LR		
	comp=Z,42µm,18.0s						
NWAO	**Narrogin (SRO)**	**49.19**	**236**	*e*P	**P**	**05 45 29.8**	**-0.1**
NWAO				pmax	pmax		
	comp=Z,102nm,1.3s						
NWAO				MLR	MLR		
	comp=Z,42µm,18.0s						
PUH	**Pauahi**	**49.19**	**52**	PFAKE		05 45 40.0	+10
PUH				LR	LR		
	comp=Z,11µm,18.0s						
HPAH	**Hawaii Prepara**	**49.20**	**51**	PFAKE		05 45 40.0	+10
HPAH				LR	LR		
	comp=Z,10µm,20.0s						
HLK	**Haleakala**	**49.21**	**50**	PFAKE		05 45 40.0	+10
HLK				LR	LR		
	comp=Z,13µm,19.0s						
STCH	**Steam Cracks**	**49.27**	**52**	PFAKE		05 45 40.0	+9.3
STCH				LR	LR		
	comp=Z,12µm,18.0s						
NPOC	**North of Pu‘u**	**49.28**	**52**	PFAKE		05 45 40.0	+9.1
NPOC				LR	LR		
	comp=Z,13µm,19.0s						
JCUZ	**Jacuzzi**	**49.29**	**52**	PFAKE		05 45 40.0	+9.1
JCUZ				LR	LR		
	comp=Z,13µm,18.0s						
MORW	**Morawa**	**49.35**	**241**	P	**P**	**05 45 32.2**	**+1.0**
	baz=50,SNR=4.9						
MORW	**Morawa**	**49.35**	**241**	*e*P	**P**	**05 45 28.4**	**-2.8**
	comp=Z,176nm,1.7s						
MORW				LR	LR		
	comp=Z,23µm,18.0s						
MUN	**Mundaring**	**49.80**	**237**	P	**P**	**05 45 35.6**	**+1.0**
	baz=50,SNR=6.0						
GIRL	**Giralia**	**50.13**	**250**	PFAKE		05 45 50.0	+13
GIRL				LR	LR		
	comp=Z,9µm,18.0s						
JHJ2	**Mitsune**	**50.38**	**332**	PFAKE		05 45 50.0	+11
JHJ2				LR	LR		
	comp=Z,4µm,20.0s						
JAGI	**Jajag, Banyuwa**	**50.61**	**268**	*e*P	**P**	**05 45 40.3**	**-0.7**
	comp=Z,98nm,1.2s						
KKM	**Kota Kinabalu**	**51.93**	**287**	*e*P	**P**	**05 45 51.5**	**+0.5**
	comp=Z,177nm,1.6s						
KKM	**Kota Kinabalu**	**51.93**	**287**	P	**P**	**05 45 53.6**	**+2.6**
TAOE	**Nuku Hiva Isla**	**53.53**	**93**	*e*S	**S**	**05 53 37.7**	**+1.9**
	comp=Z,6µm,25.6s						
TAOE				*e*LQ	LQ	05 59 14.1	
	comp=Z,7µm,23.1s						
TAOE				*e*LR	LR	06 01 32.5	
	comp=Z,6µm,22.7s,baz=266						
TAOE	**Nuku Hiva Isla**	**53.53**	**93**	PFAKE		05 46 10.0	+7.2
TAOE				LR	LR		
	comp=Z,7µm,19.0s						
INU	**Inuyama**	**53.53**	**331**	*e*P	**P**	**05 46 01.9**	**-0.4**
	comp=Z,40nm,1.3s						
INU				LR	LR		
	comp=Z,4µm,18.0s						
MJAR	**Matsushiro Arr**	**53.96**	**333**	P	**P**	**05 46 04.7**	**-0.8**
	comp=Z,3.2nm,0.7s,baz=170,slow=8.6,SNR=6.4						
MAJO	**Matsushiro**	**53.96**	**333**	*e*P	**P**	**05 46 04.8**	**-0.7**
	comp=Z,62nm,1.5s						
MAJO				LR	LR		
	comp=Z,6µm,19.0s						
MAJO	**Matsushiro**	**53.96**	**333**	*e*P	**P**	**05 46 04.8**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,62nm,1.5s						
MAJO				MLR	MLR		
	comp=Z,6µm,19.0s						
MAT	**Matsushiro**	**53.96**	**333**	P	**P**	**05 46 04.3**	**-1.2**
MAT				S	**S**	**05 53 41.0**	**+0.2**
MJB9	**Matsu-Tunnel**	**53.96**	**333**	*e*P	**P**	**05 46 04.8**	**-0.7**
	comp=Z,61nm,1.5s						
MJB9				LR	LR		
	comp=Z,6µm,19.0s						
YOJ	**Yonaguni jima**	**54.52**	**311**	PFAKE		05 46 20.0	+10
YOJ				LR	LR		
	comp=Z,4µm,21.0s						
SBUM	**Sibu**	**54.68**	**281**	*e*P	**P**	**05 46 14.1**	**+3.0**
	comp=Z,60nm,1.5s						
JNU	**Nakatsue**	**55.03**	**324**	*e*P	**P**	**05 46 11.7**	**-1.6**
	comp=Z,192nm,1.9s						
JNU				LR	LR		
	comp=Z,3µm,18.0s						
JNU	**Nakatsue**	**55.03**	**324**	P	**P**	**05 46 11.6**	**-1.8**
	comp=Z,8.4nm,0.8s,baz=84,slow=10,SNR=2.9						
TWG	**Pinlang**	**55.07**	**308**	PFAKE		05 46 30.0	+16
TWG				LR	LR		
	comp=Z,16µm,19.0s						
YULB	**Yu-li**	**55.21**	**309**	PFAKE		05 46 30.0	+15
YULB				LR	LR		
	comp=Z,4µm,19.0s						
NACB	**Ninganchiao**	**55.42**	**310**	PFAKE		05 46 30.0	+14
NACB				LR	LR		
	comp=Z,4µm,18.0s						
TPUB	**Ta-pu**	**55.67**	**308**	PFAKE		05 46 30.0	+12
TPUB				LR	LR		
	comp=Z,3µm,20.0s						
SSLB	**Suanglung**	**55.69**	**309**	PFAKE		05 46 30.0	+12
SSLB				LR	LR		
	comp=Z,2µm,19.0s						
YHNB	**Yeheng**	**55.86**	**310**	PFAKE		05 46 30.0	+10
YHNB				LR	LR		
	comp=Z,5µm,20.0s						
TATO	**Taipei**	**55.95**	**310**	PFAKE		05 46 30.0	+10
TATO				LR	LR		
	comp=Z,4µm,19.0s						
KSM	**Kuching**	**56.27**	**279**	*e*P	**P**	**05 46 25.1**	**+2.5**
	comp=Z,45nm,1.2s						
ERM	**Erimo**	**56.76**	**340**	PFAKE		05 46 40.0	+15
ERM				LR	LR		
	comp=Z,8µm,20.0s						
CISI	**Cisompet, Garu**	**56.95**	**268**	*e*P	**P**	**05 46 26.0**	**-1.6**
	comp=Z,222nm,1.5s						
YUK	**Yuzh-Kuril'sk**	**57.76**	**343**	*e*P	**P**	**05 46 31.6**	**-0.9**
YUK				*e*		05 47 22.3	
YUK				*e*S	**S**	**05 54 28.3**	**-2.8**
YUK				*e*		05 56 11.2	
YUK				pmax	pmax		
	comp=Z,167nm,1.2s						
YUK				pmax	pmax		
	comp=E,151nm,1.1s						
YUK				pmax	pmax		
	comp=N,190nm,1.7s						
YUK				pmax	pmax		
	comp=Z,175nm,1.5s						
RKT	**Rikitea**	**57.78**	**110**	*e*S	**S**	**05 54 35.4**	**+3.1**
	comp=Z,4µm,27.5s						
RKT				*e*LQ	LQ	06 01 04.9	
	comp=Z,8µm,30.2s						
RKT				*e*LR	LR	06 03 28.5	
	comp=Z,9µm,23.0s,baz=279						
QZH	**Quanzhou**	**58.12**	**309**	⇑*i*P	**P**	**05 46 35.7**	**+0.2**
QZH				S	**S**	**05 54 37.7**	**+1.2**
QZH				pmax	pmax		
	comp=Z,650nm,3.7s						
QZH				LR	LR		
	comp=Z,4µm,18.5s						
QZH				LR	LR		
	comp=Z,1µm,19.9s						
QZH				LR	LR		
	comp=Z,2µm,19.6s						
KUR	**Kuril'sk**	**58.35**	**345**	*de*P	**P**	**05 46 33.3**	**-3.3**
KUR				*i* S	**S**	**05 54 41.6**	**+2.9**
KUR				pmax	pmax		
	comp=E,69nm,1.5s						
KUR				pmax	pmax		
	comp=Z,176nm,1.5s						
KUR				pmax	pmax		
	comp=N,128nm,1.4s						
XMIS	**Christmas Isla**	**58.69**	**264**	PFAKE		05 46 50.0	+10
XMIS				LR	LR		
	comp=Z,3µm,18.0s						
ASAJ	**Asahikawa**	**58.82**	**341**	P	**P**	**05 46 39.7**	**-0.3**
	comp=Z,13nm,0.8s,baz=274,slow=6.6,SNR=6.0						
SSE	**Sheshan**	**59.76**	**316**	P	**P**	**05 46 48.0**	**+1.3**
SSE				S	**S**	**05 54 55.1**	**-2.5**
SSE				pmax	pmax		
	comp=Z,12nm,0.9s						
SSE				pmax	pmax		
	comp=Z,270nm,5.1s						
SSE				LR	LR		
	comp=Z,2µm,15.7s						
KSRS	**Korea Array**	**59.83**	**326**	P	**P**	**05 46 46.2**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=73,slow=31,SNR=5.4						
KSRS				LR	LR	06 11 37.4	
	comp=Z,3µm,18.8s,baz=135,slow=35						
KSAR	**Wonju Array Be**	**59.84**	**326**	P	**P**	**05 46 46.2**	**-1.0**
KSAR	**Wonju Array Be**	**59.84**	**326**	P	**P**	**05 46 46.2**	**-1.0**
KS01	**Wonju Array Si**	**59.86**	**326**	*e*P	**P**	**05 46 45.8**	**-1.5**
YSS	**Yuzh-Sakhalins**	**61.32**	**342**	*e*P	**P**	**05 46 58.0**	**+1.0**
	comp=Z,68nm,1.4s						
YSS				LR	LR		
	comp=Z,3µm,19.0s						
YSS	**Yuzh-Sakhalins**	**61.32**	**342**	*e*P	**P**	**05 46 58.8**	**+1.7**
YSS				*e*		05 47 10.6	
YSS				*e*		05 47 32.4	
YSS				*e*		05 49 09.2	
YSS				*e*S	**S**	**05 55 18.8**	**+1.9**
YSS				*e*		05 55 26.7	
YSS				*e*PS		05 55 43.2	
YSS				*e*SSS	SSS	06 01 55.0	
GZH	**Guangzhou**	**61.34**	**304**	P	**P**	**05 46 56.3**	**-1.4**
GZH				PcP	**PcP**	**05 47 36.4**	**-3.6**
GZH				ScP	**ScP**	**05 51 39.2**	**-2.2**
GZH				S	**S**	**05 55 17.7**	**-0.4**
GZH				ScS	**SKKSac**	**05 56 46.7**	**-2.4**
GZH				LR	LR		
	comp=Z,3µm,17.7s						
GZH				LR	LR		
	comp=Z,2µm,17.7s						
TEY	**Ternei**	**61.73**	**337**	⇓*e*P	P	05 47 09.6	+10
TEY				*e*		05 55 20.7	
TEY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NJ2	**Nanjing**	**61.93**	**316**	*e*P	**P**	**05 47 03.9**	**+2.4**
NJ2				S	**S**	**05 55 27.1**	**+1.9**
NJ2				SS	**SS**	**05 59 28.3**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,19nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,620nm,7.3s						
NJ2				LR	LR		
	comp=Z,4µm,17.3s						
NJ2				LR	LR		
	comp=Z,4µm,19.0s						
NJ2				LR	LR		
	comp=Z,7µm,18.4s						
MSHR	**Mys Shultsa**	**62.04**	**332**	⇑*i*P	**P**	**05 47 02.2**	**+0.2**
VLA	**Vladivostok**	**62.13**	**333**	⇑*e*P	**P**	**05 47 04.5**	**+1.9**
VLA				pmax	pmax		
	comp=Z,39nm,0.8s						
PTCN	**Pitcairn Islan**	**62.27**	**112**	PFAKE		05 47 20.0	+16
PTCN				LR	LR		
	comp=Z,5µm,20.0s						
QIZ	**Qiongzhong**	**62.51**	**298**	P	**P**	**05 47 06.7**	**+1.0**
QIZ				S	**S**	**05 55 34.0**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,480nm,8.4s						
QIZ				LR	LR		
	comp=Z,2µm,16.5s						
QIZ				LR	LR		
	comp=Z,2µm,22.6s						
QIZ				LR	LR		
	comp=Z,3µm,25.5s						
QIZ	**Qiongzhong**	**62.51**	**298**	PFAKE		05 47 20.0	+14
QIZ				LR	LR		
	comp=Z,3µm,18.0s						
USA0B	**Ussuriysk Arra**	**62.94**	**334**	*e*P	**P**	**05 47 08.9**	**+1.0**
	comp=Z,130nm,1.8s						
USRK	**Ussuriysk Ar.**	**62.94**	**334**	P	**P**	**05 47 08.7**	**+0.7**
	comp=Z,5.2nm,0.8s,baz=145,slow=5.3,SNR=7.7						
USRK				LR	LR	06 13 10.1	
	comp=Z,2µm,20.0s,baz=131,slow=35						
KGM	**Kluang**	**63.18**	**278**	P	P	05 47 15.1	+4.8
KTGM	**Kuala Trenggan**	**64.17**	**281**	P	**P**	**05 47 20.5**	**+3.7**
PET	**Petropavlovsk**	**64.20**	**355**	*e*P	**P**	**05 47 17.8**	**+1.7**
PET				*i* S	**S**	**05 55 52.7**	**-0.1**
PET				*e*SS	**SS**	**06 00 04.1**	**+1.5**
PET				pmax	pmax		
	comp=Z,1µm,22.0s						
PET				pmax	pmax		
	comp=Z,1µm,15.8s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
WHN	**Wuhan**	**64.28**	**312**	P	**P**	**05 47 14.6**	**-2.5**
WHN				S	**S**	**05 55 52.6**	**-2.1**
WHN				LR	LR		
	comp=Z,20µm,13.6s						
WHN				LR	LR		
	comp=Z,5µm,16.5s						
WHN				LR	LR		
	comp=Z,18µm,18.0s						
MDJ	**Mudanjiang**	**64.33**	**332**	P	**P**	**05 47 18.8**	**+1.6**
MDJ				pP	sP	05 47 21.8	-0.3
MDJ				sP	pP	05 47 23.1	+2.3
MDJ				S	**S**	**05 56 00.9**	**+6.0**
MDJ				sS	sS	05 56 06.4	+5.1
MDJ				pmax	pmax		
	comp=Z,18nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,880nm,6.1s						
MDJ				LR	LR		
	comp=Z,4µm,15.1s						
MDJ				LR	LR		
	comp=Z,7µm,15.9s						
MDJ				LR	LR		
	comp=Z,6µm,16.7s						
MDJ	**Mudanjiang**	**64.33**	**332**	*e*P	**P**	**05 47 18.3**	**+1.1**
	comp=Z,45nm,1.4s						
MDJ				LR	LR		
	comp=Z,3µm,18.0s						
PEA0B	**Petropavlovsk-**	**64.36**	**355**	PFAKE		05 47 30.0	+13
PEA0B				LR	LR		
	comp=Z,4µm,20.0s						
PETK	**Petropavlovsk-**	**64.36**	**355**	*e*P	**P**	**05 47 18.4**	**+1.2**
PETK	**Petropavlovsk-**	**64.36**	**355**	P	**P**	**05 47 16.8**	**-0.4**
	comp=Z,8.7nm,1.0s,baz=143,slow=14,SNR=3.5						
PETK				LR	LR	06 13 15.2	
	comp=Z,2µm,18.7s,baz=170,slow=34						
PEA1	**Petropavlovsk-**	**64.36**	**355**	*e*P	**P**	**05 47 16.8**	**-0.4**
DL2	**Dalian**	**64.42**	**323**	P	**P**	**05 47 19.2**	**+1.3**
DL2				S	**S**	**05 56 02.6**	**+6.5**
DL2				pmax	pmax		
	comp=Z,26nm,0.8s						
DL2				pmax	pmax		
	comp=Z,430nm,3.7s						
DL2				LR	LR		
	comp=Z,5µm,15.1s						
DL2				LR	LR		
	comp=Z,2µm,17.7s						
DL2				LR	LR		
	comp=Z,4µm,18.0s						
KIWB	**Kanaga Island**	**64.53**	**12**	*e*P	**P**	**05 47 16.3**	**-2.0**
ADK	**Adak**	**64.65**	**12**	*e*P	**P**	**05 47 18.3**	**-0.8**
	comp=Z,96nm,1.2s						
ADK				LR	LR		
	comp=Z,5µm,19.0s						
ADK	**Adak**	**64.65**	**12**	*e*P	**P**	**05 47 18.3**	**-0.8**
ADK				pmax	pmax		
	comp=Z,96nm,1.2s						
ADK				MLR	MLR		
	comp=Z,5µm,19.0s						
TYV	**Tymovskoe**	**64.89**	**344**	*e*P	**P**	**05 47 18.9**	**-1.8**
TYV				*e*S	**S**	**05 56 00.2**	**-1.3**
TYV				pmax	pmax		
	comp=Z,700nm,6.3s						
TYV				pmax	pmax		
	comp=Z,9.0nm,1.8s						
TYV				smax	smax		
	comp=N,700nm,9.9s						
GSTR	**Great Sitkin T**	**64.98**	**12**	*e*P	**P**	**05 47 22.6**	**+1.3**
BKNI	**Bangkinang**	**65.03**	**276**	*e*P	**P**	**05 47 22.2**	**-0.2**
	comp=N,309nm,1.3s						
BKNI				LR	LR		
	comp=Z,2µm,18.0s						
SNY	**Shenyang**	**65.29**	**327**	⇓P	**P**	**05 47 28.0**	**+4.5**
SNY				S	**S**	**05 56 08.9**	**+2.2**
SNY				pmax	pmax		
	comp=Z,1µm,11.3s						
SNY				LR	LR		
	comp=Z,5µm,16.0s						
SNY				LR	LR		
	comp=Z,2µm,14.2s						
SNY				LR	LR		
	comp=Z,6µm,19.2s						
PPSI	**Pulau Pagai**	**65.42**	**272**	P	**P**	**05 47 24.5**	**-0.4**
ATKA	**Atka Island**	**65.50**	**14**	PFAKE		05 47 40.0	+15
ATKA				LR	LR		
	comp=Z,7µm,18.0s						
CN2	**Changchun**	**65.71**	**329**	*e*P	**P**	**05 47 27.3**	**+1.1**
CN2				*e*sP	pwP	05 47 35.2	+0.3
CN2				*e*S	**S**	**05 56 11.9**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				LR	LR		
	comp=Z,4µm,18.0s						
CN2				LR	LR		
	comp=Z,4µm,18.0s						
CN2				LR	LR		
	comp=Z,4µm,18.0s						
IPM	**Ipoh**	**65.99**	**280**	*e*P	**P**	**05 47 29.1**	**+0.5**
	comp=Z,90nm,1.0s						
IPM	**Ipoh**	**65.99**	**280**	P	**P**	**05 47 31.2**	**+2.5**
CASY	**Casey**	**66.18**	**201**	*e*P	**P**	**05 47 28.8**	**-0.1**
	comp=Z,64nm,1.2s						
CASY				LR	LR		
	comp=Z,4µm,19.0s						
VNDA	**Vanda**	**66.37**	**181**	*e*P	**P**	**05 47 30.0**	**+0.1**
	comp=Z,64nm,1.4s						
VNDA	**Vanda**	**66.37**	**181**	P	**P**	**05 47 30.3**	**+0.3**
	comp=Z,6.2nm,0.9s,baz=342,slow=8.0,SNR=9.8						
VNDA				LR	LR	06 13 46.6	
	comp=Z,4µm,18.3s,baz=8.0,slow=34						
MNSI	**Mandailing Nat**	**66.55**	**276**	P	**P**	**05 47 31.9**	**-0.3**
KULM	**Kulim**	**66.56**	**281**	*e*P	**P**	**05 47 31.7**	**-0.5**
	comp=Z,60nm,1.3s						
KULM				LR	LR		
	comp=Z,2µm,18.0s						
SISI	**Saibi**	**66.60**	**273**	P	**P**	**05 47 32.1**	**-0.4**
GRNR	**Gornyy**	**66.67**	**340**	*e*P	**P**	**05 47 33.8**	**+1.6**
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
SBA	**Scott Base**	**66.68**	**180**	*e*P	**P**	**05 47 34.3**	**+2.3**
	comp=Z,117nm,1.6s						
SBA				LR	LR		
	comp=Z,6µm,18.0s						

SBA	**Scott Base**	**66.68**	**180**	*e*P	**P**	**05 47 34.3**	**+2.3**
SBA				pmax	pmax		
	comp=Z,117nm,1.6s						
SBA				MLR	MLR		
	comp=Z,6µm,18.0s						
SKNT	**Sakolnakorn**	**66.91**	**294**	P	**P**	**05 47 36.7**	**+2.3**
	comp=Z,15nm,1.4s,comp=Z,915nm						
KLR	**Kul'dur**	**67.06**	**337**	*d i*P	**P**	**05 47 34.9**	**+0.2**
KLR	**Kul'dur**	**67.06**	**337**	P	**P**	**05 47 34.3**	**-0.4**
	comp=Z,6.7nm,0.9s,baz=157,slow=4.2,SNR=10.0						
KLR				LR	LR	06 13 51.8	
	comp=Z,2µm,19.8s,baz=150,slow=33						
COCO	**West Island**	**67.07**	**261**	PFAKE		05 47 50.0	+15
COCO				LR	LR		
	comp=Z,5µm,18.0s						
NKL	**Nikolayevsk**	**67.48**	**344**	*e*P	**P**	**05 47 37.0**	**-0.3**
NKL				pmax	pmax		
	comp=Z,1µm,9.0s						
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
NKL				MLR	MLR		
	comp=N,2µm,18.0s						
NKL				MLR	MLR		
	comp=E,1µm,18.0s						
NKL				MLR	MLR		
	comp=Z,3µm,17.0s						
PSI	**Prapat**	**67.64**	**278**	*e*P	**P**	**05 47 39.2**	**-0.1**
	comp=Z,44nm,1.0s						
PSI				LR	LR		
	comp=Z,3µm,18.0s						
PSI	**Prapat**	**67.64**	**278**	*e*P	**P**	**05 47 39.2**	**-0.1**
PSI				pmax	pmax		
	comp=Z,44nm,1.0s						
PSI				MLR	MLR		
	comp=Z,3µm,18.0s						
PBSI	**Pulau Batu**	**67.65**	**275**	P	**P**	**05 47 38.8**	**-0.4**
SRAK	**Srakaew**	**67.69**	**290**	P	P	05 47 46.0	+6.6
	comp=Z,23nm,1.6s						
ENH	**Enshi**	**67.78**	**309**	*e*P	**P**	**05 47 40.1**	**+0.4**
	comp=Z,53nm,1.3s						
NONG	**Nongkai**	**68.03**	**295**	P	**P**	**05 47 44.0**	**+2.5**
	comp=Z,0.6nm,1.3s						
TRTT	**Trang**	**68.13**	**283**	P	P	05 47 47.8	+5.6
	comp=Z,13nm,1.3s,comp=Z,1µm						
GYA	**Guiyang**	**68.28**	**304**	⇑*i*P	**P**	**05 47 44.2**	**+1.2**
GYA				PP	**PP**	**05 50 17.0**	**+3.1**
GYA				ScP		05 52 13.2	
GYA				S	**S**	**05 56 44.3**	**+0.5**
GYA				SKS	**SKiKP**	**05 57 39.6**	**+1.8**
GYA				SS	**SS**	**06 01 10.0**	**+2.7**
GYA				pmax	pmax		
	comp=Z,40nm,1.5s						
GYA				pmax	pmax		
	comp=Z,460nm,9.1s						
GYA				LR	LR		
	comp=Z,2µm,21.7s						
GYA				LR	LR		
	comp=Z,2µm,22.1s						
GYA				LR	LR		
	comp=Z,4µm,22.8s						
CHAI	**Chaiyaphum**	**68.35**	**292**	P	P	05 47 50.6	+7.1
	comp=Z,2.8nm,1.0s						
BJT	**Baijiatuau**	**68.41**	**321**	*e*P	**P**	**05 47 44.3**	**+0.9**
	comp=Z,30nm,1.2s						
BJT				LR	LR		
	comp=Z,4µm,20.0s						
BJT	**Baijiatuau**	**68.41**	**321**	*e*P	**P**	**05 47 44.3**	**+0.9**
BJT				pmax	pmax		
	comp=Z,30nm,1.2s						
BJT				MLR	MLR		
	comp=Z,4µm,20.0s						
PATY	**Pattaya**	**68.45**	**289**	P	P	05 47 56.3	+12
GSI	**Gunungsitoli**	**68.62**	**276**	*e*P	**P**	**05 47 45.0**	**-0.3**
	comp=Z,94nm,1.0s						
GSI	**Gunungsitoli**	**68.62**	**276**	P	**P**	**05 47 45.0**	**-0.3**
KCSI	**Kotacane, Aceh**	**68.92**	**278**	P	**P**	**05 47 46.3**	**-0.9**
UNV	**Unalaska Valle**	**69.00**	**17**	PFAKE		05 48 00.0	+13
UNV				LR	LR		
	comp=Z,4µm,19.0s						
TPTI		**69.44**	**278**	P	**P**	**05 47 50.1**	**-0.3**
TIY	**Taiyuan**	**69.47**	**317**	*e*P	**P**	**05 47 52.1**	**+1.9**
TIY				PP	**PP**	**05 50 20.8**	**-3.3**
TIY				S	**S**	**05 56 58.9**	**+1.4**
TIY				pmax	pmax		
	comp=Z,16nm,0.6s						
TIY				pmax	pmax		
	comp=Z,570nm,6.5s						
TIY				LR	LR		
	comp=Z,4µm,15.4s						
TIY				LR	LR		
	comp=Z,1µm,12.3s						
TIY				LR	LR		
	comp=Z,3µm,19.5s						
PBKT	**Sadao Pong**	**69.49**	**292**	*e*P	**P**	**05 47 49.9**	**-0.7**
PBKT	**Sadao Pong**	**69.49**	**292**	P	**P**	**05 47 53.5**	**+2.9**
	comp=Z,16nm,2.0s,comp=Z,993nm						
XAN	**Xi'an**	**70.01**	**312**	P	**P**	**05 47 54.0**	**+0.4**
XAN				pP	pP	05 47 57.2	0.0
XAN				sP	sP	05 48 00.4	+1.9
XAN				S	**S**	**05 57 02.9**	**-1.0**
XAN				sS	sS	05 57 10.7	+1.3
XAN				SKS	**SKSac**	**05 57 49.8**	**-4.8**
XAN				SS	**SS**	**06 01 34.2**	**+0.5**
XAN				pmax	pmax		
	comp=Z,16nm,1.4s						
XAN				pmax	pmax		
	comp=Z,510nm,6.2s						
XAN				LR	LR		
	comp=Z,4µm,15.7s						
XAN				LR	LR		
	comp=Z,3µm,17.8s						
XAN				LR	LR		
	comp=Z,4µm,16.5s						
XAN	**Xi'an**	**70.01**	**312**	*e*P	**P**	**05 47 52.5**	**-1.1**
	comp=Z,35nm,1.3s						
XAN				LR	LR		
	comp=Z,4µm,20.0s						
XAN	**Xi'an**	**70.01**	**312**	*e*P	**P**	**05 47 52.5**	**-1.1**
XAN				pmax	pmax		
	comp=Z,35nm,1.3s						
XAN				MLR	MLR		
	comp=Z,4µm,20.0s						
NANT	**Nan**	**70.47**	**295**	P	**P**	**05 48 00.9**	**+4.3**
	comp=Z,8.7nm,1.3s,comp=Z,173nm						
SRDT	**SRDT**	**70.49**	**290**	P	P	05 48 02.3	+5.5
	comp=Z,14nm,1.7s,comp=Z,4µm						
UTHA	**Uthaitani**	**70.56**	**291**	P	P	05 48 02.7	+5.5
	comp=Z,4.3nm,1.6s,comp=Z,61nm						
FALS	**False Pass**	**70.79**	**18**	PFAKE		05 48 10.0	+12
FALS				LR	LR		
	comp=Z,6µm,19.0s						
KMI	**Kunming**	**70.97**	**302**	P	**P**	**05 48 02.1**	**+2.3**
KMI				pP	pwP	05 48 09.5	+1.2
KMI				sP	PcP	05 48 13.5	-6.7
KMI				S	**S**	**05 57 15.8**	**+0.1**
KMI				SS	**SS**	**06 01 41.9**	**-7.2**
KMI				pmax	pmax		
	comp=Z,330nm,5.4s						
KMI				LR	LR		
	comp=Z,780nm,19.4s						
KMI				LR	LR		
	comp=Z,3µm,19.4s						
KMI				LR	LR		
	comp=Z,3µm,20.4s						
KMI	**Kunming**	**70.97**	**302**	*e*P	**P**	**05 48 01.5**	**+1.7**
	comp=Z,164nm,1.8s						
KMI				LR	LR		
	comp=Z,4µm,21.0s						
KMI	**Kunming**	**70.97**	**302**	*e*P	**P**	**05 48 01.5**	**+1.7**
KMI				pmax	pmax		
	comp=Z,164nm,1.8s						
KMI				MLR	MLR		
	comp=Z,4µm,21.0s						
SPIA	**Saint Paul Isl**	**70.98**	**14**	PFAKE		05 48 10.0	+11
SPIA				LR	LR		
	comp=Z,5µm,20.0s						
SUKH	**Sukhothai**	**71.00**	**293**	P	P	05 48 04.9	+5.1
	comp=Z,2.7nm,0.9s						
PAYA	**Payao**	**71.39**	**295**	P	**P**	**05 48 06.7**	**+4.5**
	comp=Z,7.6nm,1.4s,comp=Z,523nm						
MA2	**Magadan**	**71.49**	**352**	PFAKE		05 48 10.0	+8.1
MA2				LR	LR		
	comp=Z,5µm,22.0s						
MA2	**Magadan**	**71.49**	**352**	*c i*P	**P**	**05 48 02.1**	**+0.2**
MA2				pmax	pmax		
	comp=Z,31nm,2.8s						
MA2				MLR	MLR		
	comp=Z,4µm,18.0s						
HHC	**Hu-ho-hao-te**	**71.76**	**320**	*e*P	**P**	**05 48 06.0**	**+1.9**
HHC				sP	pwP	05 48 17.1	+4.4
HHC				S	**S**	**05 57 27.8**	**+3.8**
HHC				sS	sS	05 57 32.0	+2.1
HHC				ScS	**ScS**	**05 58 11.0**	**+1.6**
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,670nm,8.2s						
HHC				LR	LR		
	comp=Z,5µm,15.9s						
HHC				LR	LR		
	comp=Z,3µm,16.7s						
HHC				LR	LR		
	comp=Z,3µm,17.8s						
CM01	**Chiang Mai Arr**	**71.90**	**294**	*e*P	**P**	**05 48 06.8**	**+1.5**
CM31	**Chiang Mai Arr**	**71.93**	**294**	*e*P	**P**	**05 48 07.5**	**+2.0**
CM31	**Chiang Mai Arr**	**71.93**	**294**	pP	**P**	**05 48 07.7**	**+2.2**
	SNR=9.4						
CMAR	**Chiang Mai Arr**	**71.93**	**294**	*i* P	**P**	**05 48 07.1**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**71.93**	**294**	P	**P**	**05 48 06.9**	**+1.4**
	comp=Z,4.3nm,0.6s,baz=125,slow=4.4,SNR=19						
CMMT	**Chiang Mai**	**72.04**	**294**	P	**P**	**05 48 08.7**	**+2.6**
	comp=Z,27nm,1.3s,comp=Z,713nm						
CHTO	**Chiang Mai**	**72.04**	**294**	*e*P	**P**	**05 48 07.4**	**+1.3**
	comp=Z,38nm,1.3s						
CHTO				LR	LR		
	comp=Z,2µm,22.0s						
CHTO	**Chiang Mai**	**72.04**	**294**	pP	**P**	**05 48 08.5**	**+2.3**
	SNR=9.9						
CHTO	**Chiang Mai**	**72.04**	**294**	P	**P**	**05 48 08.8**	**+2.7**
	comp=Z,119nm,1.4s,comp=Z,3µm						
SDPT	**Sand Point**	**72.15**	**20**	PFAKE		05 48 20.0	+14
SDPT				LR	LR		
	comp=Z,5µm,20.0s						
HIA	**Hailar**	**72.35**	**331**	*e*P	**P**	**05 48 06.3**	**-1.1**
	comp=Z,35nm,1.4s						
HIA				LR	LR		
	comp=Z,2µm,18.0s						
HIA	**Hailar**	**72.35**	**331**	*e*P	**P**	**05 48 06.3**	**-1.1**
HIA				pmax	pmax		
	comp=Z,35nm,1.4s						
HIA				MLR	MLR		
	comp=Z,2µm,18.0s						
ZEA	**Zeya**	**72.35**	**337**	*e*P	**P**	**05 48 04.8**	**-2.4**
ZEA				*e*		05 48 25.0	
ZEA				*e*		05 50 47.0	
ZEA				*e*PPP	PPP	05 52 28.0	
ZEA				*e*S	**S**	**05 57 31.0**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,800nm,8.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=N,37nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,97nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,600nm,10.0s						
ZEA				smax	smax		
	comp=N,2µm,14.0s						
ZEA				smax	smax		
	comp=E,2µm,14.0s						
CD2	**Chengdu**	**72.47**	**307**	⇑P	**P**	**05 48 08.3**	**-0.3**
CD2				pP	pP	05 48 11.4	-0.8
CD2				PP	**PP**	**05 50 49.4**	**-0.6**
CD2				S	**S**	**05 57 33.8**	**+1.3**
CD2				sS	sS	05 57 39.1	+1.0
CD2				SS	**SS**	**06 02 13.8**	**+2.2**
CD2				pmax	pmax		
	comp=E,20nm,0.5s						
CD2				pmax	pmax		
	comp=E,1µm,7.9s						
CD2				LR	LR		
	comp=E,5µm,16.3s						
CD2				LR	LR		
	comp=E,6µm,14.3s						
CD2				LR	LR		
	comp=E,4µm,17.3s						
BTO	**Baotou**	**72.61**	**319**	*e*P	**P**	**05 48 10.5**	**+1.3**
BTO				S	**S**	**05 57 31.0**	**-2.9**
CMBY	**CAMPBELL BAY**	**73.45**	**281**	*e*P	**P**	**05 48 14.4**	**-0.2**
CMBY				IAmb	IAmb	05 48 18.5	
	comp=Z,76nm,0.8s						
CHGN	**Chignik**	**73.60**	**20**	PFAKE		05 48 30.0	+15
CHGN				LR	LR		
	comp=Z,4µm,19.0s						
SEY	**Seymchan**	**74.56**	**354**	⇑*e*P	**P**	**05 48 18.9**	**-1.2**
SEY	**Seymchan**	**74.56**	**354**	P	**P**	**05 48 19.1**	**-1.0**
	comp=Z,2.8nm,0.7s,baz=156,slow=6.2,SNR=7.5						
LZH	**Lanzhou**	**74.65**	**312**	*e*P	**P**	**05 48 23.0**	**+1.6**
LZH				pP	sP	05 48 26.2	-0.2
LZH				sP	pwP	05 48 28.2	-1.8
LZH				PP	**PP**	**05 51 09.3**	**+0.7**
LZH				*e*S	**S**	**05 57 59.7**	**+2.5**
LZH				sS	sS	05 58 06.7	+4.0
LZH				SS	**SS**	**06 02 42.9**	**-2.0**
LZH				pmax	pmax		
	comp=Z,250nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,5.4s						
LZH				LR	LR		
	comp=Z,7µm,16.8s						
LZH				LR	LR		
	comp=Z,2µm,16.3s						
LZH				LR	LR		
	comp=Z,6µm,17.4s						
PBA	**Port Blair**	**75.73**	**285**	*e*P	P	05 48 28.8	+1.0
OHAK	**Old Harbor**	**76.11**	**22**	*e*P	**P**	**05 48 27.9**	**-1.2**
	comp=Z,286nm,1.9s						
OHAK				LR	LR		
	comp=Z,5µm,18.0s						
GAMB	**Gambell**	**76.73**	**10**	*e*P	**P**	**05 48 30.6**	**-1.9**
	comp=Z,78nm,1.2s						
KDAK	**Kodiak Island**	**76.78**	**22**	*e*P	**P**	**05 48 32.6**	**-0.3**
	comp=Z,40nm,1.2s						
KDAK				LR	LR		
	comp=Z,4µm,18.0s						
KDAK	**Kodiak Island**	**76.78**	**22**	P	**P**	**05 48 33.3**	**+0.4**
	comp=Z,18nm,0.9s,baz=136,slow=7.6,SNR=5.5						
YAK	**Yakutsk**	**78.14**	**344**	*e*P	**P**	**05 48 39.2**	**-1.1**
YAK				*e*		05 48 50.9	
YAK				e*PP	**PcP**	**05 48 54.7**	**+4.8**
YAK				*e*		05 51 38.1	
YAK				*e*PPP	PPP	05 53 24.5	
YAK				*e*S	**S**	**05 58 31.6**	**-2.4**
YAK				e*SS	**ScS**	**05 58 57.2**	**-2.2**
YAK				*e*		05 59 09.4	
YAK				*e*SS	**SS**	**06 03 37.3**	**+1.1**
YAK				pmax	pmax		
	comp=Z,106nm,1.3s						
YAK				pmax	pmax		
	comp=N,32nm,1.5s						
YAK				pmax	pmax		
	comp=E,12nm,1.7s						
YAK				pmax	pmax		
	comp=Z,183nm,1.9s						
YAK				pmax	pmax		
	comp=N,185nm,2.0s						
YAK				pmax	pmax		
	comp=E,208nm,2.3s						
YAK				smax	smax		
	comp=N,5µm,11.4s						
YAK				smax	smax		
	comp=E,8µm,14.9s						
SVW2	**Sparrevohn**	**78.30**	**18**	*e*P	**P**	**05 48 39.5**	**-1.9**
	comp=E,35nm,1.0s						
SVW2				LR	LR		
	comp=Z,2µm,19.0s						
HOM	**Homer**	**78.50**	**21**	*e*P	**P**	**05 48 42.1**	**-0.3**
	comp=Z,117nm,0.9s						
HOM				LR	LR		
	comp=Z,5µm,19.0s						
SONA0	**Songino Array**	**78.61**	**324**	*e*P	**P**	**05 48 43.1**	**-0.4**
SONM	**Songino Array**	**78.61**	**324**	P	**P**	**05 48 43.1**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=144,slow=5.9,SNR=16						
SONM				LR	LR	06 19 18.6	
	comp=Z,3µm,21.6s,baz=112,slow=33						
SONA1	**Songino Array**	**78.61**	**324**	*e*P	**P**	**05 48 42.3**	**-1.2**
ANM	**Nome**	**78.66**	**12**	*e*P	**P**	**05 48 43.2**	**0.0**
	comp=Z,40nm,1.2s						
ANM				LR	LR		
	comp=Z,5µm,18.0s						
ANM	**Nome**	**78.66**	**12**	*e*P	**P**	**05 48 43.2**	**0.0**
ANM				pmax	pmax		
	comp=Z,40nm,1.2s						
ANM				MLR	MLR		
	comp=Z,5µm,18.0s						
RSO	**Redoubt South**	**78.72**	**20**	*e*P	**P**	**05 48 43.6**	**-0.2**
BRLK	**Bradley Lake**	**78.84**	**21**	*e*P	**P**	**05 48 44.4**	**0.0**
	comp=Z,44nm,0.9s						
BRLK				LR	LR		
	comp=Z,6µm,20.0s						
QSPA	**South Pole Qui**	**78.84**	**180**	*e*P	**P**	**05 48 45.0**	**+0.5**
	comp=Z,96nm,1.2s						
QSPA				LR	LR		
	comp=Z,11µm,18.0s						
GTA	**Gaotai**	**78.96**	**314**	P	**P**	**05 48 45.6**	**0.0**
GTA				pP	sP	05 48 50.3	-0.3
GTA				sP	PcP	05 48 52.9	-1.3
GTA				S	**S**	**05 58 43.8**	**-0.3**
GTA				sS	sS	05 58 50.4	+0.3
GTA				pmax	pmax		
	comp=Z,12nm,1.9s						
GTA				pmax	pmax		
	comp=Z,410nm,5.5s						
GTA				LR	LR		
	comp=Z,5µm,18.5s						
GTA				LR	LR		
	comp=Z,2µm,18.2s						
GTA				LR	LR		
	comp=Z,4µm,18.6s						
BILL	**Bilibino**	**79.00**	**0**	*e*P	**P**	**05 48 43.6**	**-1.4**
	comp=Z,51nm,1.2s						
BILL	**Bilibino**	**79.00**	**0**	*c i*P	**P**	**05 48 44.2**	**-0.8**
BILL				*e*		05 51 44.7	
BILL				*i* S	**S**	**05 58 42.9**	**-0.2**
BILL				*e*SS	**SS**	**06 03 48.7**	**-0.3**
BILL				pmax	pmax		
	comp=Z,42nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s						
SEW	**Seward**	**79.59**	**21**	*e*P	**P**	**05 48 49.2**	**+0.9**
	comp=Z,27nm,1.0s						
SEW				LR	LR		
	comp=Z,5µm,20.0s						
SUA	**Susitna One**	**80.12**	**20**	PFAKE		05 49 00.0	+8.6
SUA				LR	LR		
	comp=Z,4µm,21.0s						
RC01	**Rabbit Creek A**	**80.19**	**20**	*e*P	**P**	**05 48 51.0**	**-0.7**
	comp=Z,28nm,1.1s						
RC01				LR	LR		
	comp=Z,5µm,20.0s						
MID	**Middleton Isla**	**80.26**	**23**	PFAKE		05 49 00.0	+8.0
MID				LR	LR		
	comp=Z,6µm,18.0s						
SHL	**Shillong**	**80.35**	**298**	*e*P	**P**	**05 48 53.8**	**+0.2**
	comp=Z,72nm,1.3s						
SHL				LR	LR		
	comp=Z,2µm,19.0s						
SHL	**Shillong**	**80.35**	**298**	*e*P	**P**	**05 48 54.6**	**+1.1**
SHL	**Shillong**	**80.35**	**298**	⇓*i*P	**P**	**05 48 52.0**	**-1.5**
BOD	**Bodaibo**	**80.53**	**335**	*e*P	P	05 48 47.2	-6.3
BOD				pmax	pmax		
	comp=Z,28nm,1.7s						
PPLA	**Purkeypile**	**80.72**	**18**	*e*P	**P**	**05 48 54.8**	**+0.1**
	comp=Z,33nm,1.3s						
PPLA				LR	LR		
	comp=Z,4µm,18.0s						
RPN	**Rapa Nui**	**80.75**	**116**	LR	LR	06 18 44.1	
	comp=Z,3µm,18.1s,baz=239,slow=31						
PMR	**Palmer**	**80.75**	**20**	*e*P	**P**	**05 48 53.4**	**-1.2**
	comp=Z,46nm,1.3s						
PMR				LR	LR		
	comp=Z,5µm,20.0s						
PMR	**Palmer**	**80.75**	**20**	*e*P	**P**	**05 48 53.4**	**-1.2**
PMR				pmax	pmax		
	comp=Z,46nm,1.3s						
PMR				MLR	MLR		
	comp=Z,5µm,20.0s						
KNK	**Knik Glacier**	**80.86**	**21**	*e*P	**P**	**05 48 53.7**	**-1.5**
	comp=Z,120nm,1.6s						
KNK				LR	LR		
	comp=Z,5µm,19.0s						
GHO	**Glory Hole Cre**	**80.95**	**20**	*e*P	**P**	**05 48 54.1**	**-1.7**
	comp=Z,106nm,1.6s						
GHO				LR	LR		
	comp=Z,6µm,20.0s						
GLI	**Glacier Island**	**80.96**	**21**	*e*P	**P**	**05 48 55.0**	**-0.8**
	comp=Z,67nm,1.3s						
GLI				LR	LR		
	comp=Z,5µm,20.0s						
CAST	**Castle Rocks**	**81.14**	**18**	*e*P	**P**	**05 48 55.2**	**-1.5**
	comp=Z,89nm,1.8s						
CAST				LR	LR		
	comp=Z,5µm,18.0s						
SML	**Sawmill**	**81.17**	**20**	*e*P	**P**	**05 48 56.0**	**-1.0**
	comp=Z,80nm,1.4s						
SML				LR	LR		
	comp=Z,5µm,20.0s						
SML	**Sawmill**	**81.17**	**20**	*e*P	**P**	**05 48 56.0**	**-1.0**
SML				pmax	pmax		
	comp=Z,80nm,1.4s						
SML				MLR	MLR		
	comp=Z,5µm,20.0s						
EYAK	**Cordova Ski Ar**	**81.23**	**22**	*e*P	**P**	**05 48 56.6**	**-0.6**
	comp=Z,92nm,1.4s						
EYAK				LR	LR		
	comp=Z,9µm,20.0s						
SCM	**Sheep Creek Mo**	**81.54**	**21**	*e*P	**P**	**05 48 57.9**	**-1.0**
	comp=Z,95nm,1.4s						
SCM				LR	LR		
	comp=Z,4µm,20.0s						
SCM	**Sheep Creek Mo**	**81.54**	**21**	*e*P	**P**	**05 48 57.9**	**-1.0**
SCM				pmax	pmax		
	comp=Z,95nm,1.4s						
SCM				MLR	MLR		
	comp=Z,4µm,20.0s						
DIV	**Divide**	**81.61**	**22**	*e*P	**P**	**05 48 57.3**	**-2.0**
	comp=Z,42nm,0.9s						
DIV				LR	LR		
	comp=Z,8µm,20.0s						
HMT	**Hamilton**	**81.65**	**23**	PFAKE		05 49 10.0	+11
HMT				LR	LR		
	comp=Z,10µm,18.0s						
ZAK	**Zakamensk**	**81.65**	**325**	*e*P	**P**	**05 48 58.5**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
TRF	**Thorofare Moun**	**81.71**	**18**	*e*P	**P**	**05 48 59.0**	**-1.0**
	comp=Z,104nm,1.8s						
TRF				LR	LR		
	comp=Z,4µm,19.0s						
KLU	**Klutina**	**81.80**	**21**	*e*P	**P**	**05 49 00.1**	**-0.3**
	comp=Z,41nm,1.1s						
KLU				LR	LR		
	comp=Z,5µm,20.0s						
BPAW	**Bear Paw Mtn.**	**81.97**	**18**	*e*P	**P**	**05 48 57.6**	**-3.5**
	comp=Z,49nm,1.8s						
BPAW				LR	LR		
	comp=Z,4µm,18.0s						
IRK	**Irkutsk**	**82.02**	**327**	*e*P	**P**	**05 48 59.2**	**-2.4**
IRK				pmax	pmax		
	comp=Z,56nm,3.9s						
TLY	**Talaya**	**82.08**	**326**	*e*P	**P**	**05 49 02.3**	**+0.3**
	comp=Z,155nm,2.0s						
TLY	**Talaya**	**82.08**	**326**	*c i*P	**P**	**05 49 02.5**	**+0.6**
TLY				MLR	MLR		
	comp=Z,3µm,18.0s						
TLY	**Talaya**	**82.08**	**326**	P	**P**	**05 49 02.9**	**+1.0**
	SNR=11						
TLY	**Talaya**	**82.08**	**326**	P	**P**	**05 49 02.6**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=141,slow=5.4,SNR=9.7						
TLY				LR	LR	06 22 30.8	
	comp=Z,4µm,21.3s,baz=114,slow=34						
RND	**Reindeer**	**82.13**	**19**	*e*P	**P**	**05 49 00.2**	**-1.8**
	comp=Z,62nm,1.2s						
RND				LR	LR		
	comp=Z,3µm,18.0s						
RND	**Reindeer**	**82.13**	**19**	*e*P	**P**	**05 49 00.2**	**-1.8**
RND				pmax	pmax		
	comp=Z,62nm,1.2s						
RND				MLR	MLR		
	comp=Z,3µm,18.0s						
RDOG	**Red Dog Mine**	**82.19**	**11**	*e*P	**P**	**05 49 01.6**	**-0.5**
	comp=Z,76nm,1.4s						
RDOG				LR	LR		
	comp=Z,4µm,19.0s						
LSA	**Lhasa**	**82.20**	**302**	PFAKE		05 49 10.0	+6.3
LSA				LR	LR		

	comp=Z,2µm,21.0s						
MCK	McKinley	82.33	19	*e*P	P	05 49 01.1	-2.0
	comp=Z,58nm,1.3s						
MCK				LR	LR		
	comp=Z,4µm,19.0s						
MCK	McKinley	82.33	19	*e*P	P	05 49 01.1	-2.0
MCK				pmax	pmax		
	comp=Z,58nm,1.3s						
MCK				MLR	MLR		
	comp=Z,4µm,19.0s						
DHY	Denali Highway	82.38	20	*e*P	P	05 49 02.8	-0.6
	comp=Z,28nm,1.2s						
DHY				LR	LR		
	comp=Z,5µm,18.0s						
BWN	Browne	82.48	18	*e*P	P	05 49 02.9	-0.9
	comp=Z,69nm,1.0s						
BWN				LR	LR		
	comp=Z,5µm,20.0s						
IM3	Indian Mountai	82.61	16	*e*P	P	05 49 02.6	-1.8
HARP	HAARP	82.68	21	*e*P	P	05 49 04.3	-0.6
	comp=Z,42nm,0.9s						
MLY	Manley	82.73	17	*e*P	P	05 49 04.1	-1.0
	comp=Z,20nm,1.2s						
MLY				LR	LR		
	comp=Z,4µm,20.0s						
MCCM	Marconi Confer	82.79	49	PFAKE		05 49 20.0	+14
MCCM				LR	LR		
	comp=Z,5µm,19.0s						
KCPM	Cahto Peak	82.81	47	PFAKE		05 49 20.0	+14
KCPM				LR	LR		
	comp=Z,6µm,18.0s						
JCC	Jacoby Creek,	82.90	46	PFAKE		05 49 20.0	+14
JCC				LR	LR		
	comp=Z,6µm,18.0s						
KMRM	Mail Ridge	82.92	47	*e*P	P	05 49 05.5	-1.2
	comp=Z,66nm,1.3s						
KMRM				LR	LR		
	comp=Z,9µm,18.0s						
DIB	Dawson Inlet,	82.92	32	PFAKE		05 49 20.0	+14
DIB				LR	LR		
	comp=Z,5µm,18.0s						
HOPS	Hopland Field	82.94	48	*e*P	P	05 49 05.8	-0.9
	comp=Z,45nm,1.1s						
HOPS				LR	LR		
	comp=Z,6µm,19.0s						
YKU2	Yakutat	82.95	25	PFAKE		05 49 20.0	+14
YKU2				LR	LR		
	comp=Z,10µm,19.0s						
GDXM	Geysers	83.08	48	*e*P	P	05 49 09.2	+1.6
	comp=Z,352nm,0.5s						
GDXM				LR	LR		
	comp=Z,7µm,19.0s						
WRH	Wood River Hil	83.12	18	*e*P	P	05 49 07.5	+0.5
	comp=Z,39nm,1.0s						
WRH				LR	LR		
	comp=Z,4µm,19.0s						
KHMM	Horse Mountain	83.13	46	*e*P	P	05 49 08.3	+0.5
	comp=Z,71nm,1.5s						
KHMM				LR	LR		
	comp=Z,5µm,18.0s						
SAO	San Andreas Ge	83.40	51	*e*P	P	05 49 09.4	+0.3
	comp=Z,15nm,1.0s						
SAO				LR	LR		
	comp=Z,14µm,19.0s						
MDM	Murphy Dome	83.42	18	*e*P	P	05 49 07.4	-1.3
	comp=Z,29nm,1.0s						
MDM				LR	LR		
	comp=Z,3µm,20.0s						
HDA	Harding Lake	83.44	19	*e*P	P	05 49 07.7	-1.0
	comp=Z,50nm,0.9s						
HDA				LR	LR		
	comp=Z,4µm,18.0s						
HDA	Harding Lake	83.44	19	P	P	05 49 06.3	-2.4
	baz=227						
KEBM	Edson Butte	83.44	44	PFAKE		05 49 20.0	+11
KEBM				LR	LR		
	comp=Z,5µm,18.0s						
TCOL	CIGO, UAF Yank	83.47	18	P	P	05 49 06.4	-2.5
	baz=226						
COLA	College	83.48	18	*e*P	P	05 49 08.1	-0.7
	comp=Z,37nm,0.9s						
COLA				LR	LR		
	comp=Z,4µm,20.0s						
COLA	College	83.48	18	*e*P	P	05 49 08.1	-0.7
COLA				pmax	pmax		
	comp=Z,37nm,0.9s						
COLA				MLR	MLR		
	comp=Z,4µm,20.0s						
SIT	Sitka	83.48	28	PFAKE		05 49 20.0	+11
SIT				LR	LR		
	comp=Z,7µm,18.0s						
MOY	Mondy	83.53	326	*e*P	P	05 49 09.5	-0.1
MOY				pmax	pmax		
	comp=Z,36nm,2.1s						
O02D	Mt. Diablo Mer	83.56	47	P	P	05 49 07.0	-3.0
	baz=250,SNR=6.6						
RIDG	Independ’e Rid	83.67	20	*e*P	P	05 49 09.3	-0.7
	comp=Z,67nm,1.1s						
RIDG				LR	LR		
	comp=Z,6µm,19.0s						
L02E	Cave Junction	83.68	45	P	P	05 49 06.7	-3.8
	baz=249						
ILAR	Eielson Array	83.70	19	P	P	05 49 08.6	-1.5
	comp=Z,7.5nm,0.8s,baz=245,slow=4.9,SNR=62						
ILAR				LR	LR	06 19 25.9	
	comp=Z,2µm,21.5s,baz=234,slow=31						
ILB	Eielson Array	83.70	19	*e*P	P	05 49 08.8	-1.2
IL1	Eielson Array	83.70	19	*e*P	P	05 49 08.3	-1.7
CRAG	Craig	83.72	30	PFAKE		05 49 20.0	+10
CRAG				LR	LR		
	comp=Z,5µm,20.0s						
POKR	Poker Plat Res	83.77	18	P	P	05 49 07.2	-3.2
	baz=226						
J01E	Myrtle Point	83.82	44	P	P	05 49 07.1	-4.0
	baz=248						
K02D	Willamette Mer	83.83	44	P	P	05 49 07.6	-3.8
	baz=249						
DOT	Dot Lake	83.87	20	*e*P	P	05 49 09.9	-1.1
	comp=Z,70nm,1.3s						
DOT				LR	LR		
	comp=Z,4µm,20.0s						
WDC	Whiskeytown Da	83.88	47	*e*P	P	05 49 10.7	-0.8
	comp=Z,24nm,1.4s						
WDC				LR	LR		
	comp=Z,8µm,19.0s						
WDC	Whiskeytown Da	83.88	47	*e*P	P	05 49 10.7	-0.8
WDC				pmax	pmax		
	comp=Z,25nm,1.4s						
WDC				MLR	MLR		
	comp=Z,8µm,19.0s						
N02D	Trinity Center	83.89	46	P	P	05 49 07.6	-4.1
	baz=250,SNR=11						
M02C	Callahan	83.94	46	P	P	05 49 09.5	-2.4
	baz=249,SNR=8.3						
SCZ2	Santa Cruz Isl	83.94	54	P	P	05 49 07.7	-4.3
	baz=252						
PAGB	Antelope Grade	83.99	52	*e*P	P	05 49 12.8	+0.5
	comp=Z,57nm,1.8s						
PAGB				LR	LR		
	comp=Z,9µm,18.0s						
SBC	Santa Barbara	84.01	53	P	P	05 49 09.1	-3.2
	baz=252						
SMMC	Simmler	84.06	52	P	P	05 49 09.9	-2.7
	baz=252						
PKM	Mcpherson Peak	84.07	53	P	P	05 49 09.7	-3.1
	baz=252						
SCRK	Sand Creek	84.11	20	*e*P	P	05 49 11.2	-1.1
	comp=Z,62nm,1.1s						
SCRK				LR	LR		
	comp=Z,4µm,19.0s						
YBH	Yreka Blue Hor	84.16	46	*e*P	P	05 49 12.2	-0.8
	comp=Z,38nm,1.4s						
YBH				LR	LR		
	comp=Z,5µm,18.0s						
YBH	Yreka Blue Hor	84.16	46	*e*P	P	05 49 12.2	-0.8
YBH				pmax	pmax		
	comp=Z,38nm,1.4s						
YBH				MLR	MLR		
	comp=Z,5µm,18.0s						
I02D	Swisshome	84.22	43	P	P	05 49 10.8	-2.3
	baz=248						
ORV	Oroville	84.28	48	*e*P	P	05 49 12.2	-1.4
	comp=Z,27nm,1.4s						
ORV				LR	LR		
	comp=Z,3µm,18.0s						
ORV	Oroville	84.28	48	*e*P	P	05 49 12.2	-1.4
ORV				pmax	pmax		
	comp=Z,27nm,1.4s						
ORV				MLR	MLR		
	comp=Z,3µm,18.0s						
HUMO	Hull Mountain	84.29	45	*e*P	P	05 49 12.8	-0.8
	comp=Z,23nm,1.0s						
HUMO				LR	LR		
	comp=Z,6µm,18.0s						
O03E	Paynes Creek	84.31	47	P	P	05 49 10.8	-3.0
	baz=250,SNR=13						
I03D	Drain, OR	84.41	44	P	P	05 49 11.2	-2.9
	baz=249						
BLG	Laguna Peak, P	84.42	54	P	P	05 49 10.9	-3.5
	baz=253						
AFDM	Forest Hills D	84.47	49	*e*P	P	05 49 14.7	+0.1
	comp=Z,24nm,1.0s						
AFDM				LR	LR		
	comp=Z,3µm,19.0s						
COLD	Coldfoot	84.48	16	PFAKE		05 49 20.0	+6.0
COLD				LR	LR		
	comp=Z,4µm,20.0s						
BESE	Bessie Mountai	84.50	27	*e*P	P	05 49 14.0	-0.4
	comp=Z,94nm,1.8s						
BESE				LR	LR		
	comp=Z,10µm,19.0s						
SCI2	San Clemente I	84.50	55	P	P	05 49 12.2	-2.6
	baz=253						
MAW	Mawson	84.52	202	*e*P	P	05 49 16.1	+1.8
	comp=Z,16nm,1.3s						
MAW	Mawson	84.52	202	*e*P	P	05 49 16.1	+1.8
MAW				pmax	pmax		
	comp=Z,16nm,1.3s						
MAW	Mawson	84.52	202	P	P	05 49 15.2	+1.0
	comp=Z,33nm,1.1s,baz=99,slow=5.5,SNR=5.5						
MAW				LR	LR	06 24 04.3	
	comp=Z,2µm,18.1s,baz=102,slow=34						
JIS	Juneau Island	84.55	27	*e*P	P	05 49 15.6	+1.2
	comp=Z,52nm,1.7s						
JIS				LR	LR		
	comp=Z,11µm,18.0s						
WRAK	Wrangell Islan	84.56	30	*e*P	P	05 49 14.5	-0.1
	comp=Z,42nm,1.3s						
WRAK				LR	LR		
	comp=Z,7µm,20.0s						
ODAN	Odare	84.59	299	*e*P	P	05 49 16.5	+0.8
	comp=Z,314nm,1.6s						
HYT	Haines Junctio	84.60	24	*e*P	P	05 49 13.3	-1.6
	comp=Z,56nm,1.6s						
HYT				LR	LR		
	comp=Z,10µm,19.0s						
L04D	Klamath Falls	84.61	45	P	P	05 49 12.2	-3.2
	baz=250						
CMB	Columbia Colle	84.61	50	*e*P	P	05 49 15.2	-0.2
	comp=Z,28nm,1.5s						
CMB				LR	LR		
	comp=Z,11µm,19.0s						
CMB	Columbia Colle	84.61	50	*e*P	P	05 49 15.2	-0.2
CMB				pmax	pmax		
	comp=Z,28nm,1.5s						
CMB				MLR	MLR		
	comp=Z,11µm,19.0s						
PRP	Porcupine Dome	84.64	18	PFAKE		05 49 30.0	+15
PRP				LR	LR		
	comp=Z,2µm,18.0s						
SKAG	Skagway	84.76	26	*e*P	P	05 49 15.8	+0.3
	comp=Z,57nm,1.4s						
SKAG				LR	LR		
	comp=Z,11µm,20.0s						
COR	Corvallis	84.76	43	PFAKE		05 49 30.0	+14
COR				LR	LR		
	comp=Z,5µm,19.0s						
M04C	Macdoel	84.78	46	P	P	05 49 14.0	-2.3
	baz=250						
BBB	Bella Bella	84.82	35	PFAKE		05 49 30.0	+14
BBB				LR	LR		
	comp=Z,9µm,18.0s						
OSI	Osito Audit: C	84.84	53	PFAKE		05 49 30.0	+13
OSI				LR	LR		
	comp=Z,7µm,20.0s						
OSI	Osito Audit: C	84.84	53	P	P	05 49 13.4	-3.2
	baz=253						
ARVC	Arvin	84.91	53	P	P	05 49 13.2	-3.7
	baz=253						
FMP	Fort Macarthur	84.92	54	P	P	05 49 13.8	-3.1
	baz=253						
VES	Vestal, Richgr	84.92	52	P	P	05 49 13.8	-3.1
	baz=252						
G03D	McMinnville, O	85.01	42	P	P	05 49 14.5	-2.7
	baz=249						
KNGR	Kungurtug, Tuv	85.05	324	⇑*i*P	P	05 49 17.9	+0.5
I04A	Tendick Farm,	85.08	44	P	P	05 49 15.1	-2.5
	baz=250						
J04D	Umpqua Nationa	85.09	44	P	P	05 49 15.9	-2.0
	baz=250						
RUBR	Rubicon Trail	85.10	49	*e*P	P	05 49 18.2	+0.2
	comp=Z,47nm,1.1s						
RUBR				LR	LR		
	comp=Z,4µm,20.0s						
H04D	Lebanon	85.12	43	P	P	05 49 14.3	-3.4
	baz=249						
BOK	Bokaro	85.12	295	*e*P	P	05 49 18.3	+0.1
BOK				IAmb	IAmb	05 49 22.2	
	comp=Z,12nm,0.6s						
K04D	Chiloquin, OR	85.13	45	P	P	05 49 14.8	-3.2
	baz=250						
PASC	Pasadena Art C	85.14	54	PFAKE		05 49 30.0	+12
PASC				LR	LR		
	comp=Z,10µm,19.0s						
BEKR	Beckworth	85.21	48	*e*P	P	05 49 17.6	-1.0
	comp=Z,123nm,0.7s						
BEKR				LR	LR		
	comp=Z,4µm,20.0s						
MWC	Mount Wilson	85.25	54	*e*P	P	05 49 16.8	-2.1
	comp=Z,80nm,1.5s						
MWC				LR	LR		
	comp=Z,11µm,18.0s						
MWC	Mount Wilson	85.25	54	*e*P	P	05 49 16.8	-2.1
MWC				pmax	pmax		
	comp=Z,80nm,1.5s						
MWC				MLR	MLR		
	comp=Z,11µm,18.0s						
RAMN	Ramite	85.29	298	*e*P	P	05 49 19.9	+0.6
	comp=Z,168nm,1.6s						
ISA	Isabella, Lake	85.34	52	*e*P	P	05 49 17.3	-1.8
	comp=Z,15nm,1.1s						
ISA				LR	LR		
	comp=Z,6µm,20.0s						
ISA	Isabella, Lake	85.34	52	*e*P	P	05 49 17.3	-1.8
ISA				pmax	pmax		
	comp=Z,15nm,1.1s						
ISA				MLR	MLR		
	comp=Z,6µm,20.0s						
ISA	Isabella, Lake	85.34	52	P	P	05 49 14.2	-4.9
	baz=253,SNR=11						
NLWA	Neilton Lookou	85.42	40	PFAKE		05 49 30.0	+11
NLWA				LR	LR		
	comp=Z,6µm,20.0s						
FYU	Fort Yukon	85.43	18	*e*P	P	05 49 18.4	-0.3
	comp=Z,87nm,2.0s						
FYU				LR	LR		
	comp=Z,4µm,21.0s						
WAKR	Walker	85.47	50	*e*P	P	05 49 19.2	-0.7
	comp=Z,48nm,1.5s						
WAKR				LR	LR		
	comp=Z,11µm,20.0s						
MDPB	Devils Postpil	85.47	50	*e*P	P	05 49 18.3	-1.6
	comp=Z,24nm,1.1s						
MDPB				LR	LR		
	comp=Z,9µm,20.0s						
F04D	Rainier, OR	85.49	41	P	P	05 49 17.9	-1.6
	baz=249						
EDW2	Edwards Air Fo	85.49	53	P	P	05 49 16.1	-3.8
	baz=253,SNR=17						
OMMB	Old Mammoth Mi	85.52	50	*e*P	P	05 49 19.0	-1.3
	comp=Z,21nm,1.2s						
OMMB				LR	LR		
	comp=Z,12µm,19.0s						
PNTR	Pine Nut	85.53	49	*e*P	P	05 49 19.9	-0.3
	comp=Z,34nm,1.3s						
PNTR				LR	LR		
	comp=Z,4µm,20.0s						
VCNR	Virginia City	85.55	49	*e*P	P	05 49 19.4	-0.8
	comp=Z,21nm,1.3s						
VCNR				LR	LR		
	comp=Z,4µm,19.0s						
BFSC	Mount Baldy Ra	85.57	54	P	P	05 49 17.0	-3.4
	baz=253,SNR=8.4						
WHY	Whitehorse	85.59	25	PFAKE		05 49 30.0	+10
WHY				LR	LR		
	comp=Z,12µm,19.0s						
109C	Camp Elliot, M	85.64	55	P	P	05 49 16.2	-4.3
	baz=254						
CPE	Camp Elliot	85.64	55	PFAKE		05 49 30.0	+9.5
CPE				LR	LR		
	comp=Z,10µm,18.0s						
MLAC	Mammoth, Mammo	85.65	50	P	P	05 49 17.5	-3.4
	baz=252						
J05D	Fort Rock, OR	85.71	45	P	P	05 49 19.5	-1.4
	baz=250						
DAWY	Dawson	85.76	21	*e*P	P	05 49 19.3	-1.2
	comp=Z,29nm,1.0s						
DAWY				LR	LR		
	comp=Z,5µm,20.0s						
YERR	Yerington	85.76	49	*e*P	P	05 49 20.8	-0.5
	comp=Z,56nm,1.7s						
YERR				LR	LR		
	comp=Z,6µm,20.0s						
MURC	Murrieta	85.76	55	P	P	05 49 16.3	-4.9
	baz=254						
JIRN	Jiri	85.82	299	*e*P	P	05 49 22.7	+0.6
	comp=Z,425nm,1.7s						
PAHR	Pah Rah Range	85.88	48	*e*P	P	05 49 21.4	-0.3
	comp=Z,34nm,1.3s						
PAHR				LR	LR		
	comp=Z,3µm,19.0s						
CWC	Cottonwood Cre	85.88	52	P	P	05 49 20.3	-1.6
	baz=253						
MOD	Modoc Plateau	85.91	46	*e*P	P	05 49 20.8	-1.1
	comp=Z,11nm,1.0s						
MOD				LR	LR		
	comp=Z,6µm,19.0s						
LRMC	Laurel Mtn Rad	85.91	53	P	P	05 49 18.7	-3.3
	baz=253,SNR=13						
BAR	Barrett	85.93	56	*e*P	P	05 49 20.6	-1.4
	comp=Z,38nm,1.8s						
BAR				LR	LR		
	comp=Z,11µm,18.0s						
TIN	Tinemaha, Big	85.94	51	P	P	05 49 20.0	-2.1
	baz=253						
E04D	Cinebar	85.95	41	P	P	05 49 21.3	-0.5
	baz=249						
D03D	Eldon	85.96	40	P	P	05 49 20.8	-1.0
	baz=249						
I05D	Terrebonne, OR	85.99	44	P	P	05 49 18.7	-3.5
	baz=250						
PINE	Pine Mountain	86.08	44	*e*P	P	05 49 21.9	-0.9
	comp=Z,21nm,1.0s						
PINE				LR	LR		
	comp=Z,7µm,18.0s						
GUN	Gumba	86.15	299	*e*P	P	05 49 24.2	+0.5
	comp=Z,311nm,1.8s						
TIXI	Tiksi	86.16	349	*e*P	P	05 49 20.7	-1.5
	comp=Z,59nm,1.8s						
TIXI				LR	LR		
	comp=Z,3µm,18.0s						
TIXI	Tiksi	86.16	349	c *i*P	P	05 49 21.9	-0.3
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TIXI				MLR	MLR		
	comp=Z,2µm,19.0s						
BBRC	Big Bear Solar	86.17	54	P	P	05 49 20.0	-3.5
	baz=254						
RYN	Ryan	86.19	50	*e*P	P	05 49 22.8	-0.6
	comp=Z,26nm,1.3s						
RYN				LR	LR		
	comp=Z,10µm,20.0s						
MONP2	Monument Peak	86.19	56	P	P	05 49 19.5	-4.1
	baz=254,SNR=8.5						
DAC	Darwin (Calif)	86.21	52	*e*P	P	05 49 21.8	-1.8
	comp=Z,21nm,1.4s						
DAC				LR	LR		
	comp=Z,7µm,20.0s						
DAC	Darwin (Calif)	86.21	52	*e*P	P	05 49 21.8	-1.8
DAC				pmax	pmax		
	comp=Z,21nm,1.4s						
DAC				MLR	MLR		
	comp=Z,7µm,20.0s						
MPMC	Manual Prospec	86.22	52	P	P	05 49 21.4	-2.3
	baz=253,SNR=8.4						
RRX	Edison Barstow	86.28	54	P	P	05 49 22.2	-1.5
	baz=254						
NV01	Mina Array Sit	86.29	50	*e*P	P	05 49 22.6	-1.4
NVAR	Mina Array Bea	86.29	50	P	P	05 49 22.8	-1.2
	comp=Z,5.0nm,0.8s,baz=237,slow=7.9,SNR=24						
NVAR				LR	LR	06 22 31.3	
	comp=Z,10µm,19.0s,baz=277,slow=32						
G05D	Wamic, OR	86.31	43	P	P	05 49 21.4	-2.3
	baz=250						
PALK	Pallekele	86.31	278	PFAKE		05 49 40.0	+16
PALK				LR	LR		
	comp=Z,2µm,20.0s						
PFO	Pinyon Flats O	86.36	55	*e*P	P	05 49 23.4	-0.9
	comp=Z,15nm,1.1s						
PFO				LR	LR		
	comp=Z,10µm,18.0s						
PFO	Pinyon Flats O	86.36	55	*e*P	P	05 49 23.4	-0.9
PFO				pmax	pmax		
	comp=Z,15nm,1.1s						
PFO				MLR	MLR		
	comp=Z,10µm,18.0s						
PFO	Pinyon Flats O	86.36	55	P	P	05 49 20.3	-3.9
	baz=254						
XPFO	Pion Flat	86.36	55	*e*P	P	05 49 23.3	-1.0
	comp=Z,16nm,1.1s						
XPFO				LR	LR		
	comp=Z,9µm,18.0s						
IKP	In-Ko-Pah, Jac	86.38	56	P	P	05 49 20.4	-3.9
	baz=254						
NV11	Mina Array Sit	86.40	50	*e*P	P	05 49 22.3	-2.2
	comp=Z,1.8nm,1.1s						
NV11				LR	LR		
	comp=Z,800nm,20.0s						
F05D	White Salmon	86.44	42	P	P	05 49 22.0	-2.3
	baz=250						
PKI	Pulchoki	86.47	299	*e*P	P	05 49 25.4	+0.2
	comp=Z,134nm,1.4s						
PKIN	Phulchoki	86.48	299	*e*P	P	05 49 25.3	+0.1
	comp=Z,95nm,1.4s						
LON	Longmire	86.50	41	*e*P	P	05 49 23.7	-0.9
	comp=Z,20nm,1.4s						
LON				LR	LR		
	comp=Z,6µm,18.0s						
LON	Longmire	86.50	41	*e*P	P	05 49 23.7	-0.9
LON				pmax	pmax		
	comp=Z,20nm,1.4s						
LON				MLR	MLR		
	comp=Z,6µm,18.0s						
GSC	Goldstone, Bar	86.55	53	*e*P	P	05 49 24.0	-1.1
	comp=Z,49nm,1.8s						
GSC				LR	LR		
	comp=Z,7µm,20.0s						
GSC	Goldstone, Bar	86.55	53	*e*P	P	05 49 24.0	-1.1
GSC				pmax	pmax		
	comp=Z,49nm,1.8s						
GSC				MLR	MLR		
	comp=Z,7µm,20.0s						
GSC	Goldstone, Bar	86.55	53	P	P	05 49 23.5	-1.6
	baz=254						
GRAC	Grapevine Rang	86.59	51	P	P	05 49 23.2	-2.0
	baz=253						
KVN	Kaiserville	86.63	49	*e*P	P	05 49 25.0	-0.6
	comp=Z,12nm,1.0s						
KVN				LR	LR		
	comp=Z,7µm,20.0s						
KVN	Kaiserville	86.63	49	*e*P	P	05 49 25.0	-0.6
KVN				pmax	pmax		
	comp=Z,12nm,1.0s						
KVN				MLR	MLR		
	comp=Z,7µm,20.0s						
A04D	Lummi Island	86.63	39	P	P	05 49 22.9	-2.1
	baz=249						
DLBC	Dease Lake	86.63	28	*e*P	P	05 49 25.7	+0.8
	comp=Z,8.1nm,1.0s						
DLBC				LR	LR		
	comp=Z,7µm,20.0s						
KKN	Kakani	86.64	299	*e*P	P	05 49 26.3	+0.4
	comp=Z,163nm,1.6s						
SWSC	Sam W. Stewart	86.71	56	P	P	05 49 20.9	-4.9
	baz=254						
DMN	Daman	86.74	299	*e*P	P	05 49 27.0	+0.5
	comp=Z,212nm,1.6s						
HEC	Hector,Ludlow	86.79	54	P	P	05 49 23.0	-3.3
	baz=254						
FURC	Furnace Creek,	86.83	52	P	P	05 49 23.2	-3.1
	baz=254,SNR=10.0						
BELC	Belle Mtn. Jos	86.83	55	P	P	05 49 23.8	-2.8
	baz=254,SNR=10						
B05A	Bryant	86.85	40	P	P	05 49 24.6	-1.6

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      baz=250
SHOC  Shoshone, Teco  87.12  53  P        P        05 49 25.8 -2.1
      baz=254
I07A  Izee            87.16  44 eP        P        05 49 27.3 -0.6
      comp=Z,21nm,1.3s
BC3   Big Chuckawall  87.18  55  P        P        05 49 24.9 -3.4
      baz=255,SNR=7.4
WVOR  Wild Horse Val  87.25  46 eP        P        05 49 27.9 -0.5
      comp=Z,35nm,1.4s
WVOR                             LR       LR
      comp=Z,6µm,19.0s
TUQ   Turquoise Moun  87.28  53  P        P        05 49 25.9 -2.8
      baz=254,SNR=11
GMRC  Granite Mounta  87.31  54  P        P        05 49 23.8 -5.1
      baz=254,SNR=9.4
LTY   Liberty         87.41  41 eP        P        05 49 28.5 -0.6
      comp=Z,15nm,1.1s
LTY                              LR       LR
      comp=Z,5µm,19.0s
TPNV  Topopah Spring  87.43  52 eP        P        05 49 27.0 -2.5
      comp=Z,57nm,1.8s
TPNV                             LR       LR
      comp=Z,10µm,18.0s
TPNV  Topopah Spring  87.43  52 eP        P        05 49 27.0 -2.5
TPNV                             pmax     pmax
      comp=Z,57nm,1.8s
TPNV                             MLR      MLR
      comp=Z,10µm,18.0s
TPNV  Topopah Spring  87.43  52  P        P        05 49 26.7 -2.8
      baz=254,SNR=7.5
HVS   Khovu-Aksy      87.48 323 i P       P        05 49 29.8 +0.5
HVS                              pmax     pmax
      comp=Z,1.0nm,1.1s
C06D  Leavenworth     87.49  40  P        P        05 49 24.8 -4.5
      baz=250
GLA   Glamis          87.53  56 eP        P        05 49 29.5 -0.4
      comp=Z,39nm,1.1s
GLA                              LR       LR
      comp=Z,11µm,18.0s
GLA   Glamis          87.53  56 eP        P        05 49 29.5 -0.4
GLA                              pmax     pmax
      comp=Z,39nm,1.1s
GLA                              MLR      MLR
      comp=Z,11µm,18.0s
GLA   Glamis          87.53  56  P        P        05 49 27.7 -2.2
      baz=255,SNR=6.4
IRM   Iron Mountain   87.56  55  P        P        05 49 27.8 -2.2
      baz=255,SNR=18
J08A  Circle Bar Ran  87.64  45 eP        P        05 49 28.9 -1.4
      comp=Z,22nm,1.1s
J08A                             LR       LR
      comp=Z,3µm,18.0s
BMN   Battle Mountai  87.68  48  PFAKE             05 49 40.0 +9.4
BMN                              LR       LR
      comp=Z,3µm,18.0s
E07A  Sunnyside       87.71  42 eP        P        05 49 29.7 -0.7
LLLB  Lillooet        87.80  37 eP        P        05 49 29.9 -0.8
      comp=Z,46nm,1.8s
LLLB                             LR       LR
      comp=Z,8µm,19.0s
LDFC  Landfair        87.82  54 eP        P        05 49 30.3 -1.1
      comp=Z,38nm,1.1s
LDFC                             LR       LR
      comp=Z,14µm,18.0s
HAWA  Hanford         87.87  42 eP        P        05 49 30.8 -0.3
      comp=Z,37nm,1.4s
HAWA                             LR       LR
      comp=Z,4µm,20.0s
G08A  Pilot Rock      87.90  43 eP        P        05 49 30.6 -0.8
MDRS  Chennai         87.93 284 eP        P        05 49 32.2 +0.1
Y12C  Blythe          87.95  55 eP        P        05 49 31.6 -0.2
      comp=Z,25nm,1.1s
Y12C                             LR       LR
      comp=Z,8µm,18.0s
Y12C  Blythe          87.95  55  P        P        05 49 29.1 -2.7
      baz=255,SNR=7.9
DANN  Dangsing        88.08 299 eP        P        05 49 32.5 -0.4
      comp=Z,53nm,1.1s
KOLN  Koldanda        88.08 299 eP        P        05 49 32.6 -0.2
      comp=Z,116nm,1.7s
NEE2  Needles Airpor  88.13  54  P        P        05 49 30.6 -2.1
      baz=255
SHPR  Sheep Range     88.16  52 eP        P        05 49 32.0 -1.0
      comp=Z,46nm,1.6s
SHPR                             LR       LR
      comp=Z,8µm,19.0s
E08A  Dider Farm, El  88.21  42 eP        P        05 49 31.8 -0.9
      comp=Z,31nm,1.3s
SRIG  Santa Rosalia   88.30  62  PFAKE             05 49 40.0 +6.4
SRIG                             LR       LR
      comp=Z,11µm,18.0s
113A  Mohawk Valley,  88.32  56 eP        P        05 49 33.3 -0.3
      comp=Z,45nm,1.8s
113A                             LR       LR
      comp=Z,11µm,19.0s
R11A  Troy Canyon, C  88.32  51 eP        P        05 49 32.7 -1.0
      comp=Z,15nm,1.3s
R11A                             LR       LR
      comp=Z,10µm,20.0s
R11A  Troy Canyon, C  88.32  51  P        P        05 49 32.0 -1.7
      baz=254
PDMCI Parker Dam,Lak  88.40  55  P        P        05 49 31.8 -2.1
      baz=255,SNR=7.5
D08A  Wollman Farm,   88.48  41 eP        P        05 49 33.1 -0.9
B08A  Colville Reser  88.62  40 eP        P        05 49 33.5 -1.2
PYUN  Piuthan         88.68 299 eP        P        05 49 35.2 -0.5
      comp=Z,74nm,1.3s
W13A  Hualapai Mount  88.80  54 eP        P        05 49 35.0 -1.1
      comp=Z,35nm,1.6s
W13A                             LR       LR
      comp=Z,11µm,18.0s
E09A  Wood Farm, Sta  88.82  42  PFAKE             05 49 50.0  +14
E09A                             LR       LR
      comp=Z,4µm,20.0s
BMO   Blue Mountains  88.89  44 eP        P        05 49 35.5 -0.6
      comp=Z,36nm,1.6s
BMO   Blue Mountains  88.89  44 eP        P        05 49 35.5 -0.6
BMO                              pmax     pmax
      comp=Z,36nm,1.6s
214A  Organ Pipe Nat  88.91  57  P        P        05 49 33.1 -3.4
      baz=256,SNR=7.5
WMQ   Urumqi          89.00 315  P        P        05 49 37.5 +0.9
WMQ                              sP       pwP      05 49 44.4 -0.9
WMQ                              SKS      SKSac    06 00 05.7 -0.4
WMQ                              S        S        06 00 23.1 -1.6
WMQ                              sS       sS       06 00 35.9 +5.2
WMQ                              SS       SS       06 06 19.3 +1.3
WMQ                              pmax     pmax
      comp=Z,42nm,1.3s
WMQ                              pmax     pmax
      comp=Z,860nm,5.1s
WMQ                              LR       LR
      comp=Z,7µm,16.9s
WMQ                              LR       LR
      comp=Z,4µm,15.7s
WMQ                              LR       LR
      comp=Z,3µm,22.5s
WMQ   Urumqi          89.00 315 eP        P        05 49 37.2 +0.5
      comp=Z,106nm,1.8s
WMQ                              LR       LR
      comp=Z,2µm,20.0s
ELK   Elko            89.21  48 eP        P        05 49 36.9 -1.0
      comp=Z,32nm,1.6s
ELK                              LR       LR
      comp=Z,4µm,18.0s
ELK   Elko            89.21  48 eP        P        05 49 36.9 -1.0
ELK                              pmax     pmax
      comp=Z,33nm,1.6s
ELK                              MLR      MLR
      comp=Z,4µm,18.0s
Y14A  Wickenburg      89.22  55 eP        P        05 49 37.4 -0.5
      comp=Z,12nm,1.3s
Y14A                             LR       LR
      comp=Z,10µm,18.0s
F10A  Beach Ranch, E  89.27  43 eP        P        05 49 36.7 -1.2
      comp=Z,109nm,1.9s
F10A                             LR       LR
      comp=Z,4µm,19.0s
MFID  Camas Ranch     89.51  46 eP        P        05 49 38.4 -0.7
      comp=Z,55nm,2.0s
MFID                             LR       LR
      comp=Z,5µm,19.0s
SLBS  Sierra La Lagu  89.52  66  PFAKE             05 49 50.0  +10
SLBS                             LR       LR
      comp=Z,5µm,19.0s
PSUT  Pine Spring     89.68  51 eP        P        05 49 39.7 -0.5
      comp=Z,11nm,1.0s
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PSUT                             LR       LR
      comp=Z,9µm,19.0s
LCMT  Little Creek M  89.77  52 eP        P        05 49 40.1 -0.4
      comp=Z,32nm,1.3s
HSIG                  89.80  60  PFAKE             05 49 50.0 +9.4
HSIG                             LR       LR
      comp=Z,12µm,18.0s
CCUT  Cedar City      89.81  52 eP        P        05 49 40.1 -0.7
      comp=Z,54nm,1.7s
CCUT                             LR       LR
      comp=Z,9µm,20.0s
NEW   Newport         90.00  41 eP        P        05 49 40.1 -1.1
      comp=Z,39nm,1.9s
NEW                              LR       LR
      comp=Z,4µm,19.0s
NEW   Newport         90.00  41 eP        P        05 49 40.1 -1.1
NEW                              pmax     pmax
      comp=Z,39nm,1.9s
NEW                              MLR      MLR
      comp=Z,4µm,19.0s
NEW   Newport         90.00  41  P        P        05 49 37.2 -4.0
      baz=253
SZCU  Shurtz Canyon   90.03  52 eP        P        05 49 40.8 -1.0
      comp=Z,21nm,1.2s
SZCU                             LR       LR
      comp=Z,8µm,20.0s
INK   Inuvik          90.09  19 eP        P        05 49 41.3 +0.3
      comp=Z,17nm,1.4s
INK                              LR       LR
      comp=Z,4µm,20.0s
INK   Inuvik          90.09  19  P        P        05 49 40.6 -0.5
      comp=Z,7.4nm,1.2s,baz=184,slow=6.2,SNR=7.5
KNB   Kanab           90.10  52 eP        P        05 49 42.0 -0.1
      comp=Z,35nm,1.2s
KNB                              LR       LR
      comp=Z,7µm,19.0s
KNB   Kanab           90.10  52 eP        P        05 49 42.0 -0.1
KNB                              pmax     pmax
      comp=Z,35nm,1.2s
KNB                              MLR      MLR
      comp=Z,7µm,19.0s
TRD   Trivandrum      90.19 279 eP        P        05 49 42.2 -0.6
JBP   Jabalpur        90.26 293 eP        P        05 49 44.3 +1.5
JBP                             ex        x        05 53 34.3
U15A  North Rim       90.38  53 eP        P        05 49 43.5  0.0
      comp=Z,20nm,0.9s
U15A                             LR       LR
      comp=Z,7µm,18.0s
HYB   Hyderabad       90.41 288 i P       P        05 49 43.5 -0.3
HYB   Hyderabad       90.41 288 eP        P        05 49 43.5 -0.3
HYB                              IAmb     IAmb     05 49 46.5
      comp=Z,8.9nm,0.5s
HLID  Hailey          90.54  46 eP        P        05 49 43.5 -0.5
      comp=Z,14nm,1.1s
HLID                             LR       LR
      comp=Z,7µm,18.0s
HLID  Hailey          90.54  46  P        P        05 49 41.9 -2.1
      baz=255
X16A  Lo Mia Camp, P  90.59  55 eP        P        05 49 44.5  0.0
      comp=Z,8.9nm,0.9s
X16A                             LR       LR
      comp=Z,6µm,18.0s
PKCU  Pink Cliffs     90.60  52 eP        P        05 49 44.4 -0.2
      comp=Z,63nm,1.4s
PKCU                             LR       LR
      comp=Z,7µm,18.0s
TUC   Tucson          90.66  57 eP        P        05 49 44.5 -0.2
      comp=Z,11nm,1.2s
TUC                              LR       LR
      comp=Z,11µm,19.0s
TUC   Tucson          90.66  57 eP        P        05 49 44.5 -0.2
TUC                              pmax     pmax
      comp=Z,11nm,1.2s
TUC                              MLR      MLR
      comp=Z,11µm,19.0s
TUC   Tucson          90.66  57  P        P        05 49 44.6 -0.1
      baz=257
NGP   Nagpur          90.69 291 eP        P        05 49 44.6 -0.4
NGP                              IAmb     IAmb     05 49 45.8
      comp=Z,19nm,1.4s
NGP                             ex        x        06 00 41.6
TCRU  Three Creeks R  90.77  51  PFAKE             05 50 00.0  +15
TCRU                             LR       LR
      comp=Z,13µm,18.0s
DGZ   Jazzator, Alta  90.83 321d iP       P        05 49 44.8 -0.4
DGZ                              pmax     pmax
      comp=Z,7.0nm,1.3s
DGZ                              MLR      MLR
      comp=Z,2µm,18.0s
MTPU  Mount Pierson   90.84  51 eP        P        05 49 45.4 -0.4
      comp=Z,21nm,1.0s
MTPU                             LR       LR
      comp=Z,9µm,21.0s
DUG   Dugway, Tooele  90.87  49 eP        P        05 49 45.1 -0.5
      comp=Z,18nm,1.3s
DUG                              LR       LR
      comp=Z,6µm,19.0s
DUG   Dugway, Tooele  90.87  49 eP        P        05 49 45.1 -0.5
DUG                              pmax     pmax
      comp=Z,18nm,1.3s
DUG                              MLR      MLR
      comp=Z,6µm,19.0s
DUG   Dugway, Tooele  90.87  49  P        P        05 49 43.4 -2.2
      baz=256
BGU   Big Grassy Mou  90.88  49 eP        P        05 49 45.2 -0.4
      comp=Z,30nm,1.5s
BGU                              LR       LR
      comp=Z,3µm,20.0s
WUAZ  Wupatki         90.89  54 eP        P        05 49 44.2 -1.7
      comp=Z,22nm,1.2s
WUAZ                             LR       LR
      comp=Z,7µm,19.0s
WUAZ  Wupatki         90.89  54  P        P        05 49 42.9 -2.9
      baz=257
MSU   Marysvale       90.95  51 eP        P        05 49 45.5 -0.6
MSU   Marysvale       90.95  51 eP        P        05 49 45.5 -0.6
HVU   Hansel Valley   91.27  48 eP        P        05 49 47.1 -0.3
      comp=Z,27nm,1.1s
HVU                              LR       LR
      comp=Z,4µm,19.0s
HVU   Hansel Valley   91.27  48 eP        P        05 49 47.1 -0.3
HVU                              pmax     pmax
      comp=Z,27nm,1.1s
HVU                              MLR      MLR
      comp=Z,4µm,19.0s
NLU   North Lily Min  91.36  50 eP        P        05 49 47.4 -0.5
      comp=Z,20nm,1.1s
NLU                              LR       LR
      comp=Z,10µm,18.0s
SPUT  South Promonto  91.40  48 eP        P        05 49 47.3 -0.7
      comp=Z,60nm,2.0s
SPUT                             LR       LR
      comp=Z,3µm,18.0s
DGAR  Diego Garcia    91.54 262  PFAKE             05 50 00.0  +11
DGAR                             LR       LR
      comp=Z,4µm,18.0s
MSO   Missoula        91.69  43  PFAKE             05 50 00.0  +11
MSO                              LR       LR
      comp=Z,3µm,19.0s
MPU   Maple Canyon    91.70  50 eP        P        05 49 48.5 -1.0
      comp=Z,15nm,1.1s
MPU                              LR       LR
      comp=Z,9µm,20.0s
319A  Douglas         91.71  59 eP        P        05 49 49.0 -0.7
      comp=Z,33nm,1.4s
319A                             LR       LR
      comp=Z,11µm,18.0s
CTU   Camp Tracy      91.77  49 eP        P        05 49 48.9 -0.9
      comp=Z,25nm,1.2s
CTU                              LR       LR
      comp=Z,5µm,20.0s
Q16A  Castle Valley   91.81  51 eP        P        05 49 49.2 -0.8
      comp=Z,33nm,1.5s
Q16A                             LR       LR
      comp=Z,10µm,18.0s
X18A  Snowflake       91.82  55 eP        P        05 49 50.0 -0.2
      comp=Z,14nm,1.1s
X18A                             LR       LR
      comp=Z,6µm,18.0s
ZSN   Zaisan          91.88 318d iP       P        05 49 49.1 -0.8
ZSN                              pmax     pmax
      comp=Z,32nm,2.0s
ZSN                              MLR      MLR
      comp=Z,220nm,13.0s
ZSN   Zaisan          91.88 318⇓ iP       P        05 49 49.1 -0.8
      comp=Z,32nm,2.0s
ZSN                             eLRM      MLR      06 31 30.8
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      comp=Z,220nm,13.3s
HWUT  Hardware Ranch  92.11  48 eP        P        05 49 51.6 +0.2
      comp=Z,4.1nm,0.9s
W18A  Petrified Fore  92.11  55  PFAKE             05 50 00.0 +8.5
W18A                             LR       LR
      comp=Z,6µm,18.0s
W18A  Petrified Fore  92.11  55  P        P        05 49 49.1 -2.4
      baz=258
TCUT  Toone Canyon    92.12  49 eP        P        05 49 50.2 -1.3
      comp=Z,45nm,1.5s
TCUT                             LR       LR
      comp=Z,5µm,20.0s
DLMT  Dillon          92.24  44 eP        P        05 49 51.1 -0.7
      comp=Z,17nm,1.0s
DLMT                             LR       LR
      comp=Z,6µm,19.0s
P17A  Butcher Ranch,  92.26  50 eP        P        05 49 51.5 -0.5
      comp=Z,25nm,1.6s
P17A                             LR       LR
      comp=Z,8µm,18.0s
WALA  Waterton Lakes  92.26  41 eP        P        05 49 51.8  0.0
WALA                             LR       LR
      comp=Z,5µm,18.0s
SRU   San Rafael Swe  92.34  51 eP        P        05 49 51.9 -0.6
      comp=Z,24nm,1.7s
SRU                              LR       LR
      comp=Z,9µm,18.0s
SRU   San Rafael Swe  92.34  51 eP        P        05 49 51.9 -0.6
SRU                              pmax     pmax
      comp=Z,24nm,1.7s
SRU                              MLR      MLR
      comp=Z,9µm,18.0s
BHPL  Bhopal          92.58 293 eP        P        05 49 53.2 -0.5
AHID  Auburn Hatcher  92.71  47  PFAKE             05 50 00.0 +5.9
AHID                             LR       LR
      comp=Z,2µm,20.0s
FXWY  Fox Creek       92.95  46 eP        P        05 49 54.4 -0.9
      comp=Z,8.4nm,1.1s
BOZ   Bozeman (W)     92.96  44 eP        P        05 49 54.6 -0.6
      comp=Z,19nm,1.3s
BOZ                              LR       LR
      comp=Z,4µm,20.0s
BOZ   Bozeman (W)     92.96  44 eP        P        05 49 54.6 -0.6
BOZ                              pmax     pmax
      comp=Z,19nm,1.3s
BOZ                              MLR      MLR
      comp=Z,4µm,20.0s
BOZ   Bozeman (W)     92.96  44  P        P        05 49 52.5 -2.6
      baz=257
REDW  Red Top Meadow  93.01  47 eP        P        05 49 54.7 -0.8
      comp=Z,36nm,1.8s
REDW                             LR       LR
      comp=Z,6µm,18.0s
HRY   Holter Researc  93.07  43 eP        P        05 49 55.3 -0.3
YHB   Horse Butte     93.07  45 eP        P        05 49 55.6 -0.2
      comp=Z,35nm,1.8s
YHB                              LR       LR
      comp=Z,5µm,18.0s
SNOW  Snow King Moun  93.10  46 eP        P        05 49 54.2 -1.8
      comp=Z,6.9nm,1.0s
SNOW                             LR       LR
      comp=Z,6µm,18.0s
MOOW  Moose Ponds     93.17  46 eP        P        05 49 54.9 -1.3
      comp=Z,20nm,1.8s
MOOW                             LR       LR
      comp=Z,5µm,19.0s
121A  Cookes Peak, D  93.19  58  P        P        05 49 55.1 -1.4
      baz=259
YMR   Madison River   93.21  45  PFAKE             05 50 10.0  +14
YMR                              LR       LR
      comp=Z,7µm,18.0s
YPP   Pitchstone Pla  93.24  46  PFAKE             05 50 10.0  +13
YPP                              LR       LR
      comp=Z,9µm,18.0s
LOHW  Long Hollow     93.24  46 eP        P        05 49 57.5 +1.0
LOHW                             LR       LR
      comp=Z,4µm,19.0s
YFT   Old Faithful    93.26  45  PFAKE             05 50 10.0  +13
YFT                              LR       LR
      comp=Z,10µm,18.0s
FLWY  Flagg Ranch     93.28  46 eP        P        05 49 56.6 -0.1
      comp=Z,35nm,1.9s
FLWY                             LR       LR
      comp=Z,6µm,18.0s
PV09  Paradox Valley  93.28  52 eP        P        05 49 57.8 +0.8
PV10  Paradox Valley  93.33  52  PFAKE             05 50 10.0  +13
PV10                             LR       LR
      comp=Z,7µm,19.0s
PV14  Lion Creek, Pa  93.34  52 eP        P        05 49 56.0 -1.1
      comp=Z,44nm,2.0s
PV14                             LR       LR
      comp=Z,8µm,19.0s
PV19  Morning Glory   93.36  52  PFAKE             05 50 10.0  +13
PV19                             LR       LR
      comp=Z,6µm,19.0s
DDI   Dehra Dun       93.36 300 eP        P        05 49 58.4 +1.1
DDI                              IAmb     IAmb     05 50 08.3
      comp=Z,3µm,4.0s
PV23  Carpenter Ridg  93.36  52 eP        P        05 49 57.6 +0.2
      comp=Z,18nm,1.2s
PV23                             LR       LR
      comp=Z,11µm,19.0s
PV17  East Wray Mesa  93.37  52 eP        P        05 49 59.8 +2.5
      comp=Z,28nm,1.6s
PV17                             LR       LR
      comp=Z,8µm,18.0s
PV20  West Nyswonger  93.38  52  PFAKE             05 50 10.0  +13
PV20                             LR       LR
      comp=Z,6µm,19.0s
PV16  Nyswonger Mesa  93.41  52  PFAKE             05 50 10.0  +13
PV16                             LR       LR
      comp=Z,6µm,19.0s
PV21  Cone Mtn., Par  93.41  52  PFAKE             05 50 10.0  +12
PV21                             LR       LR
      comp=Z,9µm,18.0s
MK01  Makanchi Array  93.42 317 eP        P        05 49 55.7 -1.4
YNR   Norris Junctio  93.42  45  PFAKE             05 50 10.0  +13
YNR                              LR       LR
      comp=Z,6µm,18.0s
H17A  Grant Village   93.43  46 eP        P        05 49 56.8 -0.7
      comp=Z,6.9nm,1.0s
H17A                             LR       LR
      comp=Z,6µm,18.0s
H17A  Grant Village   93.43  46  P        P        05 49 59.1 +1.7
      baz=258
MK31  Makanchi Array  93.43 317 eP        P        05 49 57.4 +0.3
MK32  Makanchi Array  93.43 317 eP        P        05 49 56.3 -0.9
MKAR  Makanchi Array  93.43 317 eP        P        05 49 58.2 +1.0
      comp=Z,62nm,0.9s
MKAR                             PKKPbc   PKKPdf   06 07 02.4 -2.0
MKAR                             LR       LR
      comp=Z,600nm,18.0s
MKAR  Makanchi Array  93.43 317  P        P        05 49 56.3 -0.9
      comp=Z,6.8nm,0.8s,baz=99,slow=6.5,SNR=52
MKAR                             PKKPbc   PKKPdf   06 07 02.4 -2.0
      comp=Z,2.1nm,0.8s,baz=292,slow=3.0,SNR=12
PV04  Paradox Valley  93.43  52  PFAKE             05 50 10.0  +12
PV04                             LR       LR
      comp=Z,8µm,19.0s
PV11  David Mesa, Pa  93.44  52  PFAKE             05 50 10.0  +12
PV11                             LR       LR
      comp=Z,7µm,19.0s
PV03  Paradox Valley  93.45  52  PFAKE             05 50 10.0  +12
PV03                             LR       LR
      comp=Z,6µm,18.0s
PV13  Radium Mtn., P  93.45  52  PFAKE             05 50 10.0  +12
PV13                             LR       LR
      comp=Z,6µm,18.0s
PV12  Saucer Basin,   93.50  52 eP        P        05 49 57.5 -0.4
      comp=Z,25nm,1.6s
PV12                             LR       LR
      comp=Z,7µm,20.0s
ZAA0  Zalesovo Array  93.50 324 eP        P        05 49 56.7 -0.5
      comp=Z,30nm,1.4s
ZAA0                             LR       LR
      comp=Z,2µm,18.0s
ZALV  Zalesovo Beam   93.50 324 eP        P        05 49 54.9 -2.3
ZALV  Zalesovo Beam   93.50 324 i P       P        05 50 00.1 +2.9
ZALV                             pmax     pmax
      comp=Z,9.0nm,1.0s
ZALV  Zalesovo Beam   93.50 324  P        P        05 49 56.2 -1.0
      comp=Z,7.6nm,1.0s,baz=101,slow=3.0,SNR=14
ZAA1  Zalesovo Array  93.50 324 eP        P        05 49 56.2 -1.0
MVCO  Mesa Verde      93.52  53  PFAKE             05 50 10.0  +12
MVCO                             LR       LR
      comp=Z,8µm,18.0s
MVCO  Mesa Verde      93.52  53  P        P        05 49 55.6 -2.5
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       baz=259
PV02   Paradox Valley   93.53  52   PFAKE             05 50 10.0 +12
PV02                                LR      LR
       comp=Z,6µm,18.0s
HMDM   Hanimaadhoo      93.54 276   PFAKE             05 50 10.0 +12
HMDM                                LR      LR
       comp=Z,2µm,18.0s
LKWY   Lake             93.59  45   PFAKE             05 50 10.0 +12
LKWY                                LR      LR
       comp=Z,8µm,18.0s
PV01   Paradox Valley   93.64  52   PFAKE             05 50 10.0 +11
PV01                                LR      LR
       comp=Z,6µm,18.0s
PV07   Paradox Valley   93.64  52   PFAKE             05 50 10.0 +11
PV07                                LR      LR
       comp=Z,6µm,18.0s
MAKZ   Makanchi         93.65 317  eP       P         05 49 57.6 -0.5
       comp=Z,46nm,1.4s
MAKZ                                LR      LR
       comp=Z,2µm,18.0s
MAKZ   Makanchi         93.65 317  eP       P         05 49 57.6 -0.5
MAKZ                                pmax    pmax
       comp=Z,46nm,1.4s
MAKZ                                MLR     MLR
       comp=Z,2µm,18.0s
PV15   Paradox Valley   93.75  52   PFAKE             05 50 10.0 +11
PV15                                LR      LR
       comp=Z,5µm,19.0s
BW06   Boulder Array    93.82  47  eP       P         05 49 57.7 -1.5
BW06                                LR      LR
       comp=Z,4µm,18.0s
BW06   Boulder Array    93.82  47   P       P         05 49 57.5 -1.8
       baz=258
PD31   Pinedale Array   93.82  47  eP       P         05 49 57.6 -1.7
PDAR   Pinedale Array   93.82  47  eP       P         05 49 57.8 -1.5
PDAR   Pinedale Array   93.82  47   P       P         05 49 58.4 -0.9
       comp=Z,1.7nm,0.9s,baz=242,slow=3.2,SNR=8.6
PDAR                                LR      LR        06 25 03.0
       comp=Z,2µm,21.7s,baz=267,slow=31
HPIG                    93.96  63   PFAKE             05 50 10.0 +10
HPIG                                LR      LR
       comp=Z,6µm,20.0s
Y22D   IRIS PASSCAL I   94.19  56   PFAKE             05 50 10.0 +8.9
Y22D                                LR      LR
       comp=Z,6µm,20.0s
SMLA   Simla            94.26 301  eP       P         05 50 00.4 -0.8
O20A   White River Ci   94.28  50   PFAKE             05 50 10.0 +8.6
O20A                                LR      LR
       comp=Z,10µm,18.0s
RLMT   Red Lodge        94.49  45   PFAKE             05 50 10.0 +7.7
RLMT                                LR      LR
       comp=Z,4µm,20.0s
GOA    Goa              94.50 285  eP       P         05 50 02.7  0.0
NVS    Novosibirsk      94.61 325  eP       P         05 50 02.6 +0.3
SHLS   Shalkode         94.67 313d iP       P         05 50 00.6 -2.4
SHLS                                pmax    pmax
       comp=Z,130nm,2.1s
SHLS                                MLR     MLR
       comp=Z,694nm,16.0s
SHLS   Shalkode         94.67 313⇓ iP       P         05 50 00.7 -2.4
       comp=Z,130nm,2.1s
SHLS                               eLRM     MLR       06 30 41.6
       comp=Z,694nm,15.6s
ANMO   Albuquerque      94.72  55  eP       P         05 50 04.2 +0.6
ANMO                                LR      LR
       comp=Z,4µm,20.0s
ANMO   Albuquerque      94.72  55   P       P         05 50 01.0 -2.5
       baz=260
EGMT   Eagleton         94.72  42  eP       P         05 50 03.0 -0.2
       comp=Z,20nm,1.3s
EGMT                                LR      LR
       comp=Z,4µm,19.0s
S22A   4UR Ranch, Cre   94.92  53  eP       P         05 50 05.0 +0.4
S22A                                LR      LR
       comp=Z,7µm,18.0s
UZB    Uzynbulak        94.98 313d iP       P         05 50 01.9 -2.6
UZB                                 pmax    pmax
       comp=Z,84nm,1.8s
UZB                                 MLR     MLR
       comp=Z,511nm,17.0s
UZB    Uzynbulak        94.98 313⇓ iP       P         05 50 01.9 -2.6
       comp=Z,84nm,1.8s
POO    Poona            95.01 288  eP       P         05 50 04.5 -0.5
POO    Poona            95.01 288⇓ iP       P         05 50 04.0 -1.0
       comp=Z,3.0nm,1.0s
MNTX   Cornudas Mount   95.04  59  eP       P         05 50 05.5 +0.6
       comp=Z,12nm,1.8s
MNTX                                LR      LR
       comp=Z,10µm,18.0s
SMCO   Snowmass         95.06  51  eP       P         05 50 09.1 +3.8
SMCO                                LR      LR
       comp=Z,10µm,18.0s
DHRM   DHARAMSHALA      95.19 302  eP       P         05 50 05.4 -0.4
DHRM                                IAmb    IAmb      05 50 09.7
YKA    Yellowknife Ar   95.19  27   P       P         05 50 01.8 -3.0
       comp=Z,1.7nm,0.7s,baz=257,slow=4.6,SNR=23
YKB5   Yellowknife Ar   95.19  27  eP       P         05 50 02.8 -2.0
YKW3   Yellowknife Ar   95.20  27  eP       P         05 50 03.9 -1.0
       comp=Z,7.4nm,1.2s
YKW3                                LR      LR
       comp=Z,5µm,19.0s
KPKS   Kokpek           95.28 313d eP       P         05 50 04.7 -1.1
KPKS                                pmax    pmax
       comp=Z,137nm,2.2s
KPKS                                MLR     MLR
       comp=Z,1µm,21.0s
KPKS   Kokpek           95.28 313⇓ eP       P         05 50 04.7 -1.1
       comp=Z,137nm,2.2s
KPKS                               eLRM     MLR       06 34 07.2
       comp=Z,1µm,20.8s
RWWY   Rawlins          95.33  49   PFAKE             05 50 20.0 +14
RWWY                                LR      LR
       comp=Z,6µm,18.0s
SATY   Saty             95.41 313d iP       P         05 50 03.8 -2.6
SATY                                pmax    pmax
       comp=Z,64nm,1.7s
SATY                                MLR     MLR
       comp=Z,270nm,15.0s
SATY   Saty             95.41 313⇓ iP       P         05 50 03.9 -2.6
       comp=Z,64nm,1.7s
SATY                               eLRM     MLR       06 34 34.1
       comp=Z,270nm,14.8s
TARG   Taragay, Kyrgy   95.62 311  eP       P         05 50 07.1 -0.7
       comp=Z,28nm,1.6s
TARG                                LR      LR
       comp=Z,2µm,18.0s
SDCO   Great Sand Dun   95.96  53   PFAKE             05 50 20.0 +11
SDCO                                LR      LR
       comp=Z,3µm,20.0s
K22A   Casper           95.99  48   PFAKE             05 50 20.0 +11
K22A                                LR      LR
       comp=Z,4µm,19.0s
ZAIG   Zacatecas        96.01  68   PFAKE             05 50 20.0 +10
ZAIG                                LR      LR
       comp=Z,4µm,20.0s
LTX    Lajitas          96.11  61  eP       P         05 50 08.0 -1.9
LTX    Lajitas          96.11  61  eP       P         05 50 08.0 -1.9
TXAR   Lajitas Array    96.11  61   P       P         05 50 08.0 -1.9
       comp=Z,0.7nm,0.7s,baz=244,slow=4.4,SNR=8.1
TXAR                                PP      PP        05 54 09.3 +6.4
       comp=Z,0.6nm,1.0s,baz=240,slow=2.5,SNR=4.0
TXAR                                LR      LR        06 29 40.6
       comp=Z,9µm,18.0s,baz=0.0,slow=33
N23A   Red Feather La   96.13  50   PFAKE             05 50 20.0 +10
N23A                                LR      LR
       comp=Z,7µm,18.0s
KDJ    Kajisay          96.14 312   PFAKE             05 50 20.0 +10
KDJ                                 LR      LR
       comp=Z,2µm,18.0s
NRIK   Noril'sk         96.14 340   LR      LR        06 32 49.6
       comp=Z,1µm,20.6s,baz=61,slow=35
ISCO   Idaho Springs    96.21  51   PFAKE             05 50 20.0 +10
ISCO                                LR      LR
       comp=Z,11µm,18.0s
NVL    N'lazarevskaya   96.31 189  eP       P         05 50 05.8 -4.0
NVL                                e                  05 54 04.8
NVL                                eS       SKSac     06 00 38.0 -7.8
NVL                                e                  06 01 16.4
NVL                                 pmax    pmax
       comp=Z,9.0nm,1.0s
NVL                                 MLR     MLR
       comp=Z,5µm,17.0s
MDOK   Medeo            96.41 313  eP       P         05 50 11.2 +0.2
MDOK                                pmax    pmax
       comp=Z,34nm,2.2s
MDOK                                MLR     MLR

       comp=Z,701nm,19.0s
MDOK   Medeo            96.41 313  eP       P         05 50 11.2 +0.2
       comp=Z,34nm,2.2s
MDOK                               eLRM     MLR       06 34 32.1
       comp=Z,701nm,19.0s
Q24A   Divide           96.43  52   PFAKE             05 50 20.0 +8.6
Q24A                                LR      LR
       comp=Z,6µm,19.0s
PHWY   Pilot Hill       96.56  49   PFAKE             05 50 20.0 +8.1
PHWY                                LR      LR
       comp=Z,6µm,18.0s
KURK   Kurchatov        96.57 320  eP       P         05 50 10.1 -1.2
       comp=Z,38nm,1.8s
KURK                                PKKPbc  PKKPbc    06 06 55.9 -1.2
KURK                                LR      LR
       comp=Z,3µm,19.0s
KURK   Kurchatov        96.57 320  i P      P         05 50 10.1 -1.2
KURK                                pmax    pmax
       comp=Z,9.0nm,1.2s
KURK                                MLR     MLR
       comp=Z,2µm,17.0s
KURK   Kurchatov        96.57 320   P       P         05 50 09.4 -1.9
       SNR=6.2
KURBB  Kurchatov Arra   96.61 320   PKKPbc  PKKPbc    06 06 55.9 -1.1
       comp=Z,1.0nm,0.3s,baz=280,slow=3.5,SNR=7.8
KSH    Kashi            96.63 309   P       P         05 50 14.6 +2.5
KSH                                 sP      pwP       05 50 21.7 +1.0
KSH                                 PP      PP        05 54 12.1 +5.3
KSH                                 SKS     SKSac     06 00 51.1 +2.3
KSH                                 S       ScS       06 01 33.3 -0.3
KSH                                 sS      sS        06 01 41.3 +2.0
KSH                                 SS      SS        06 08 12.1 +4.3
KSH                                 pmax    pmax
       comp=Z,460nm,6.2s
KSH                                 LR      LR
       comp=Z,2µm,14.9s
KSH                                 LR      LR
       comp=Z,870nm,7.5s
KSH                                 LR      LR
       comp=Z,3µm,17.4s
T25A   Trinidad         96.72  54   PFAKE             05 50 20.0 +7.4
T25A                                LR      LR
       comp=Z,7µm,18.0s
LAO    LASA Array       96.85  44   PFAKE             05 50 20.0 +7.2
LAO                                 LR      LR
       comp=Z,4µm,18.0s
NRN    Naryn            96.90 311   PFAKE             05 50 20.0 +6.5
NRN                                 LR      LR
       comp=Z,2µm,20.0s
SNAA   Sanae            96.98 184  eP       P         05 50 15.7 +2.7
       comp=Z,22nm,1.4s
SNAA                                LR      LR
       comp=Z,8µm,18.0s
SNAA   Sanae            96.98 184  eP       P         05 50 15.7 +2.7
SNAA                                pmax    pmax
       comp=Z,22nm,1.4s
SNAA                                MLR     MLR
       comp=Z,8µm,18.0s
KUU    Kurty            97.03 313c iP       P         05 50 12.3 -1.3
KUU                                 pmax    pmax
       comp=Z,43nm,1.8s
KUU    Kurty            97.03 313⇑ iP       P         05 50 12.3 -1.3
       comp=Z,43nm,1.8s
MSTX   Muleshoe         97.57  57   PFAKE             05 50 30.0 +14
MSTX                                LR      LR
       comp=Z,10µm,18.0s
CRZF   Crozet Islands   97.65 220   PFAKE             05 50 30.0 +14
CRZF                                LR      LR
       comp=Z,2µm,18.0s
NIL    Nilore           97.93 303   PFAKE             05 50 30.0 +12
NIL                                 LR      LR
       comp=Z,1µm,19.0s
RSSD   Black Hills      98.01  47   PFAKE             05 50 30.0 +12
RSSD                                LR      LR
       comp=Z,5µm,19.0s
FRU1   Bishkek          98.11 312   PFAKE             05 50 30.0 +11
FRU1                                LR      LR
       comp=Z,2µm,18.0s
FRU    Bishkek          98.12 312  eP       Pdif      05 50 26.0 +7.4
AAK    Ala-Archa        98.19 312   PKKPbc  PKKPbc    06 06 52.0 -0.5
AAK                                 LR      LR
       comp=Z,3µm,18.0s
AAK    Ala-Archa        98.19 312  i P      Pdif      05 50 19.1  0.0
AAK                                 pmax    pmax
       comp=Z,1.0nm,1.0s
AAK                                 MLR     MLR
       comp=Z,1µm,16.0s
AAK    Ala-Archa        98.19 312   PKKPbc  PKKPbc    06 06 52.0 -0.6
       comp=Z,0.6nm,0.4s,baz=243,slow=4.6,SNR=4.2
KSCO   Kaye Shedlock'   98.38  52   PFAKE             05 50 30.0 +10
KSCO                                LR      LR
       comp=Z,4µm,20.0s
DGMT   Dagmar           98.46  42   PFAKE             05 50 30.0 +10
DGMT                                LR      LR
       comp=Z,4µm,19.0s
AMTX   Amarillo         98.59  56   PFAKE             05 50 30.0 +9.0
AMTX                                LR      LR
       comp=Z,8µm,18.0s
UNM    Universidad Na   98.59  72   PFAKE             05 50 30.0 +8.5
UNM                                 LR      LR
       comp=Z,4µm,19.0s
OGNE   Ogallala         99.07  50   PFAKE             05 50 30.0 +7.0
OGNE                                LR      LR
       comp=Z,8µm,19.0s
LNIG   Linares          99.14  66   PFAKE             05 50 30.0 +6.4
LNIG                                LR      LR
       comp=Z,5µm,20.0s
JCT    Junction City    99.59  61   PFAKE             05 50 40.0 +15
JCT                                 LR      LR
       comp=Z,12µm,20.0s
BHJ    Bhuj             99.63 292  eP       Pdif      05 50 24.9 -0.8
BHJ                                 IAmb    IAmb      05 50 33.8
       comp=Z,688nm,3.5s
833A   Chaparral WMA,   99.67  63   PFAKE             05 50 40.0 +14
833A                                LR      LR
       comp=Z,7µm,20.0s
ABTX   Abilene, Hawle   99.99  59   PFAKE             05 50 40.0 +13
ABTX                                LR      LR
       comp=Z,12µm,19.0s
FFC    Flin Flon       100.48  36   PFAKE             05 50 40.0 +11
FFC                                 LR      LR
       comp=Z,11µm,19.0s
FFC    Flin Flon       100.48  36  i P      Pdif      05 50 31.7 +2.9
CBKS   Cedar Bluff     100.60  52   PFAKE             05 50 40.0 +10
CBKS                                LR      LR
       comp=Z,5µm,20.0s
KVTX   Kingsville      100.89  64   PFAKE             05 50 40.0 +8.8
KVTX                                LR      LR
       comp=Z,5µm,18.0s
U32A   Winter Ranch,   100.93  55   PFAKE             05 50 40.0 +8.7
U32A                                LR      LR
       comp=Z,6µm,20.0s
WMOK   Wichita Mounta  100.94  57   PFAKE             05 50 40.0 +8.6
WMOK                                LR      LR
       comp=Z,11µm,18.0s
KK31   Karatay Array   101.15 312  ePdif    Pdif      05 50 31.5 -0.5
KK31   Karatay Array   101.15 312  eP       Pdif      05 50 31.5 -0.5
KKAR   Karatay Array   101.15 312  ePdif    Pdif      05 50 31.4 -0.6
KKAR   Karatay Array   101.15 312  eP       Pdif      05 50 31.4 -0.6
LVIG   Laguna Verde    101.23  72   PFAKE             05 50 40.0 +7.1
LVIG                                LR      LR
       comp=Z,4µm,19.0s
MDND   Maddock         101.46  43   PFAKE             05 50 40.0 +6.7
MDND                                LR      LR
       comp=Z,4µm,20.0s
435B   Jarrell         101.53  61   PFAKE             05 50 40.0 +6.0
435B                                LR      LR
       comp=Z,10µm,19.0s
WHTX   Lake Whitney,   101.76  59   PFAKE             05 50 50.0 +15
WHTX                                LR      LR
       comp=Z,10µm,18.0s
CHGR   Chuyangaron     101.79 307   PFAKE             05 50 50.0 +15
CHGR                                LR      LR
       comp=Z,3µm,20.0s
BRVK   Borovoye        101.95 322   PFAKE             05 50 50.0 +15
BRVK                                LR      LR
       comp=Z,3µm,20.0s
BRVK   Borovoye        101.95 322  i P      Pdif      05 50 34.9 -0.5
BRVK                                pmax    pmax
       comp=Z,3.0nm,1.2s
BGNE   Belgrade        102.04  50   PFAKE             05 50 50.0 +14
BGNE                                LR      LR
       comp=Z,8µm,19.0s
KSU1   Kansas State U  103.05  52   PFAKE             05 50 50.0 +9.4
KSU1                                LR      LR

       comp=Z,7µm,20.0s
RES    Resolute Bay    103.24  16   PFAKE             05 50 50.0 +9.4
RES                                 LR      LR
       comp=Z,3µm,20.0s
ECSD   EROS Data Cent  103.31  48   PFAKE             05 50 50.0 +8.3
ECSD                                LR      LR
       comp=Z,3µm,20.0s
TUL1   Leonard         103.48  56   PFAKE             05 50 50.0 +7.4
TUL1                                LR      LR
       comp=Z,9µm,18.0s
X37A   Clayton         103.73  57   PFAKE             05 50 50.0 +6.3
X37A                                LR      LR
       comp=Z,10µm,18.0s
PAYG   Puerto Ayora    103.82  93   PFAKE             05 51 00.0 +15
PAYG                                LR      LR
       comp=Z,4µm,18.0s
ULM    Lac du Bonnet   104.01  41   PFAKE             05 51 00.0 +15
ULM                                 LR      LR
       comp=Z,4µm,19.0s
NATX   Nacogdoches     104.11  60   PFAKE             05 51 00.0 +15
NATX                                LR      LR
       comp=Z,10µm,18.0s
CCIG   Comitan         104.81  76   PFAKE             05 51 00.0 +11
CCIG                                LR      LR
       comp=Z,3µm,18.0s
FCC    Fort Churchill  104.87  32   PFAKE             05 51 00.0 +12
FCC                                 LR      LR
       comp=Z,6µm,18.0s
HHAR   Hobbs           105.00  55   PFAKE             05 51 00.0 +11
HHAR                                LR      LR
       comp=Z,8µm,20.0s
W39A   Magazine        105.07  56   PFAKE             05 55 20.0 +16
W39A                                LR      LR
       comp=Z,6µm,18.0s
MIAR   Mount Ida       105.20  57   PFAKE             05 55 20.0 +15
MIAR                                LR      LR
       comp=Z,11µm,18.0s
SCIA   State Center    105.75  50   PFAKE             05 55 20.0 +15
SCIA                                LR      LR
       comp=Z,9µm,19.0s
Z41A   Richland Creek  105.77  58   PFAKE             05 55 20.0 +14
Z41A                                LR      LR
       comp=Z,14µm,18.0s
X40A   Basin Creek Fa  105.81  57   PFAKE             05 55 20.0 +14
X40A                                LR      LR
       comp=Z,9µm,18.0s
SPMN   Marine on St.   106.07  46   PFAKE             05 55 20.0 +14
SPMN                                LR      LR
       comp=Z,6µm,19.0s
UALR   University of   106.23  57   PFAKE             05 55 20.0 +13
UALR                                LR      LR
       comp=Z,14µm,19.0s
WHAR   Wooly Hollow    106.30  56   PFAKE             05 55 20.0 +13
WHAR                                LR      LR
       comp=Z,9µm,20.0s
W41B   Gary Mavity, V  106.32  57   PFAKE             05 55 20.0 +13
W41B                                LR      LR
       comp=Z,14µm,18.0s
CCAR   Cane Creek      106.67  58   PFAKE             05 55 20.0 +13
CCAR                                LR      LR
       comp=Z,8µm,19.0s
E38A   The Farm, Brul  106.92  45   PFAKE             05 55 20.0 +13
E38A                                LR      LR
       comp=Z,7µm,19.0s
I39A   Houston         107.00  47   PFAKE             05 55 20.0 +12
I39A                                LR      LR
       comp=Z,3µm,21.0s
CCM    Cathedral Cave  107.21  54   PFAKE             05 55 20.0 +12
CCM                                 LR      LR
       comp=Z,5µm,18.0s
L40A   Anamosa         107.24  49   PFAKE             05 55 20.0 +12
L40A                                LR      LR
       comp=Z,11µm,19.0s
T42A   Van Buren       107.31  55   PFAKE             05 55 20.0 +12
T42A                                LR      LR
       comp=Z,8µm,20.0s
X43A   Marvell         107.42  57   PFAKE             05 55 20.0 +11
X43A                                LR      LR
       comp=Z,4µm,21.0s
N41A   Harden Midland  107.52  51   PFAKE             05 55 20.0 +11
N41A                                LR      LR
       comp=Z,5µm,19.0s
MYIG   Mrida           107.59  71   PFAKE             05 55 20.0 +11
MYIG                                LR      LR
       comp=Z,4µm,21.0s
HBAR   Harrisburg      107.64  56   PFAKE             05 55 20.0 +11
HBAR                                LR      LR
       comp=Z,10µm,20.0s
VBMS   Vicksburg       107.65  60   PFAKE             05 55 20.0 +11
VBMS                                LR      LR
       comp=Z,7µm,20.0s
PBMO   Poplar Bluff    107.84  55   PFAKE             05 55 20.0 +11
PBMO                                LR      LR
       comp=Z,10µm,20.0s
G40A   Rib Lake        107.91  46   PFAKE             05 55 20.0 +11
G40A                                LR      LR
       comp=Z,6µm,19.0s
P42A   Winchester      107.92  52   PFAKE             05 55 20.0 +10
P42A                                LR      LR
       comp=Z,6µm,18.0s
JFWS   Jewell Farm     107.95  48   PFAKE             05 55 20.0 +11
JFWS                                LR      LR
       comp=Z,3µm,18.0s
SLM    Saint Louis     108.01  53   PFAKE             05 55 20.0 +10
SLM                                 LR      LR
       comp=Z,4µm,18.0s
GNAR   Gosnell         108.16  56   PFAKE             05 55 20.0 +10
GNAR                                LR      LR
       comp=Z,7µm,20.0s
I41A   Arkdale         108.19  47   PFAKE             05 55 20.0 +10
I41A                                LR      LR
       comp=Z,4µm,18.0s
MET    Memphis--Engin  108.22  57   PFAKE             05 55 20.0 +10
MET                                 LR      LR
       comp=Z,12µm,18.0s
H41A   Junction City   108.32  47   PFAKE             05 55 20.0 +10
H41A                                LR      LR
       comp=Z,5µm,18.0s
Z45A   Winona          108.38  58   PFAKE             05 55 20.0 +9.4
Z45A                                LR      LR
       comp=Z,11µm,20.0s
PARMO  Parma           108.38  55   PFAKE             05 55 20.0 +10
PARMO                               LR      LR
       comp=Z,10µm,18.0s
L42A   Oliver, Polo    108.40  49   PFAKE             05 55 20.0 +10
L42A                                LR      LR
       comp=Z,10µm,18.0s
PVMO   Portageville    108.42  55   PFAKE             05 55 20.0 +9.5
PVMO                                LR      LR
       comp=Z,8µm,18.0s
346A   Big Creek Wild  108.52  61   PFAKE             05 55 20.0 +9.1
346A                                LR      LR
       comp=Z,6µm,18.0s
ARU    Arti            108.58 326   PFAKE             05 55 20.0 +10
ARU                                 LR      LR
       comp=Z,2µm,19.0s
COWI   Conover         108.61  45   PFAKE             05 55 20.0 +9.3
COWI                                LR      LR
       comp=Z,4µm,18.0s
OXF    Oxford          108.64  57   PFAKE             05 55 20.0 +9.0
OXF                                 LR      LR
       comp=Z,7µm,19.0s
F41A   Three Lakes     108.66  45   PFAKE             05 55 20.0 +9.3
F41A                                LR      LR
       comp=Z,7µm,19.0s
HALT   Halls           108.71  56   PFAKE             05 55 20.0 +8.9
HALT                                LR      LR
       comp=Z,8µm,20.0s
HDIL   Hopedale        108.71  51   PFAKE             05 55 20.0 +9.0
HDIL                                LR      LR
       comp=Z,6µm,22.0s
TULEG  Thule           108.73  12   PFAKE             05 55 20.0 +10
TULEG                               LR      LR
       comp=Z,2µm,18.0s
GLAT   Glass           108.76  55   PFAKE             05 55 20.0 +8.8
GLAT                                LR      LR
       comp=Z,6µm,20.0s
SIUC   Southern Illin  108.81  54   PFAKE             05 55 20.0 +8.8
SIUC                                LR      LR
       comp=Z,8µm,20.0s
I42A   Draeger Farm,   108.88  47   PFAKE             05 55 20.0 +8.8
I42A                                LR      LR
       comp=Z,2µm,19.0s
TEIG   Tepich          108.89  72   PFAKE             05 55 20.0 +8.2
TEIG                                LR      LR
```

	comp=Z,3µm,21.0s						
GO05	**Huala**	**108.90**	**133**	PFAKE		05 55 20.0	+8.4
GO05				LR	LR		
	comp=Z,2µm,18.0s						
D41A	**Chassel**	**108.95**	**44**	PFAKE		05 55 20.0	+8.8
D41A				LR	LR		
	comp=Z,5µm,21.0s						
Q44A	**Meyer Farm, Va**	**108.96**	**53**	PFAKE		05 55 20.0	+8.5
Q44A				LR	LR		
	comp=Z,5µm,20.0s						
H42A	**Shiocton**	**109.13**	**47**	PFAKE		05 55 20.0	+8.4
H42A				LR	LR		
	comp=Z,5µm,18.0s						
G42A	**Mountain**	**109.16**	**46**	PFAKE		05 55 20.0	+8.3
G42A				LR	LR		
	comp=Z,6µm,19.0s						
TGUH	**Tegucigalpa,Un**	**109.19**	**79**	PFAKE		05 55 20.0	+7.5
TGUH				LR	LR		
	comp=Z,5µm,20.0s						
T45A	**Paducah**	**109.27**	**55**	PFAKE		05 55 20.0	+7.9
T45A				LR	LR		
	comp=Z,10µm,18.0s						
K43A	**Burlington**	**109.36**	**49**	PFAKE		05 55 20.0	+7.9
K43A				LR	LR		
	comp=Z,7µm,19.0s						
147A	**Livingston**	**109.56**	**59**	PFAKE		05 55 20.0	+7.2
147A				LR	LR		
	comp=Z,7µm,20.0s						
M44A	**Midewin, Midew**	**109.63**	**50**	PFAKE		05 55 20.0	+7.3
M44A				LR	LR		
	comp=Z,9µm,18.0s						
H43A	**Windswept, Lux**	**109.67**	**47**	PFAKE		05 55 20.0	+7.3
H43A				LR	LR		
	comp=Z,4µm,19.0s						
OLIL	**Olney**	**109.68**	**53**	PFAKE		05 55 20.0	+7.2
OLIL				LR	LR		
	comp=Z,5µm,18.0s						
G43A	**Wallace**	**109.68**	**46**	PFAKE		05 55 20.0	+7.4
G43A				LR	LR		
	comp=Z,6µm,19.0s						
PLAL	**Pickwick Lake**	**109.74**	**57**	PFAKE		05 55 20.0	+6.9
PLAL				LR	LR		
	comp=Z,9µm,18.0s						
P45A	**Graceland, Par**	**109.93**	**52**	PFAKE		05 55 20.0	+6.7
P45A				LR	LR		
	comp=Z,7µm,20.0s						
WVT	**Waverly**	**109.94**	**56**	PFAKE		05 55 20.0	+6.6
WVT				LR	LR		
	comp=Z,8µm,19.0s						
ESTN	**Estel**	**109.94**	**80**	PFAKE		05 55 30.0	+16
ESTN				LR	LR		
	comp=Z,2µm,21.0s						
USIN	**University of**	**110.04**	**54**	PFAKE		05 55 20.0	+6.5
USIN				LR	LR		
	comp=Z,10µm,20.0s						
E43A	**Lone Tree Farm**	**110.08**	**45**	PFAKE		05 55 20.0	+6.6
E43A				LR	LR		
	comp=Z,4µm,18.0s						
GYA0B	**ALIBECK ARRAY**	**110.45**	**306**	PFAKE		05 55 30.0	+16
GYA0B				LR	LR		
	comp=Z,2µm,18.0s						
BRAL	**Brewton**	**110.58**	**61**	PFAKE		05 55 30.0	+15
BRAL				LR	LR		
	comp=Z,6µm,18.0s						
X48A	**Hartselle**	**110.59**	**57**	PFAKE		05 55 30.0	+15
X48A				LR	LR		
	comp=Z,8µm,19.0s						
LRAL	**Lakeview Retre**	**110.64**	**59**	PFAKE		05 55 30.0	+15
LRAL				LR	LR		
	comp=Z,12µm,20.0s						
PEL	**Peldehue**	**110.71**	**132**	PFAKE		05 55 30.0	+15
PEL				LR	LR		
	comp=Z,2µm,20.0s						
V48A	**Smith Brothers**	**110.76**	**56**	PFAKE		05 55 30.0	+15
V48A				LR	LR		
	comp=Z,8µm,18.0s						
BLO	**Bloomington**	**110.89**	**52**	PFAKE		05 55 30.0	+15
BLO				LR	LR		
	comp=Z,8µm,20.0s						
M46A	**Old House Fiel**	**110.90**	**50**	PFAKE		05 55 30.0	+15
M46A				LR	LR		
	comp=Z,9µm,18.0s						
JTS	**JuntasAbangare**	**110.94**	**83**	PFAKE		05 55 30.0	+14
JTS				LR	LR		
	comp=Z,3µm,18.0s						
WCI	**Wyandotte Cave**	**111.11**	**53**	PFAKE		05 55 30.0	+14
WCI				LR	LR		
	comp=Z,10µm,20.0s						
Y49A	**Blount Mountai**	**111.12**	**58**	PFAKE		05 55 30.0	+14
Y49A				LR	LR		
	comp=Z,9µm,19.0s						
250A	**Grady**	**111.25**	**60**	PFAKE		05 55 30.0	+14
250A				LR	LR		
	comp=Z,5µm,18.0s						
SWET	**Sewanee**	**111.50**	**57**	PFAKE		05 55 30.0	+14
SWET				LR	LR		
	comp=Z,6µm,18.0s						
Z50A	**Ashland**	**111.54**	**59**	PFAKE		05 55 30.0	+13
Z50A				LR	LR		
	comp=Z,10µm,20.0s						
451A	**Vernon**	**111.69**	**61**	PFAKE		05 55 30.0	+13
451A				LR	LR		
	comp=Z,7µm,19.0s						
HDC	**Heredia**	**111.72**	**84**	PFAKE		05 55 30.0	+12
HDC				LR	LR		
	comp=Z,3µm,19.0s						
T49A	**Edmonton**	**111.76**	**54**	PFAKE		05 55 30.0	+13
T49A				LR	LR		
	comp=Z,6µm,18.0s						
ESPN	**Las Esperanzas**	**111.83**	**81**	PFAKE		05 55 30.0	+12
ESPN				LR	LR		
	comp=Z,2µm,20.0s						
GLMI	**Grayling**	**111.89**	**46**	PFAKE		05 55 30.0	+13
GLMI				LR	LR		
	comp=Z,8µm,19.0s						
W50A	**Signal Mountai**	**112.00**	**57**	PFAKE		05 55 30.0	+13
W50A				LR	LR		
	comp=Z,7µm,18.0s						
GO04	**Tololo Observa**	**112.05**	**129**	PFAKE		05 55 30.0	+12
GO04				LR	LR		
	comp=Z,3µm,18.0s						
M48A	**Edgerton**	**112.12**	**50**	PFAKE		05 55 30.0	+13
M48A				LR	LR		
	comp=Z,6µm,18.0s						
352A	**Blakely**	**112.39**	**61**	PFAKE		05 55 30.0	+12
352A				LR	LR		
	comp=Z,4µm,20.0s						
X51A	**Calhoun**	**112.40**	**57**	PFAKE		05 55 30.0	+12
X51A				LR	LR		
	comp=Z,6µm,18.0s						
O49A	**Covington**	**112.52**	**51**	PFAKE		05 55 30.0	+12
O49A				LR	LR		
	comp=Z,7µm,18.0s						
152A	**Waverly Hall**	**112.56**	**59**	PFAKE		05 55 30.0	+12
152A				LR	LR		
	comp=Z,10µm,20.0s						
N49A	**Columbus Grove**	**112.57**	**50**	PFAKE		05 55 30.0	+12
N49A				LR	LR		
	comp=Z,8µm,18.0s						
CPCT	**Cooper Cave**	**112.64**	**56**	PFAKE		05 55 30.0	+11
CPCT				LR	LR		
	comp=Z,6µm,18.0s						
LCO	**Las Campanas**	**112.67**	**128**	PFAKE		05 55 30.0	+11
LCO				LR	LR		
	comp=Z,4µm,20.0s						
V51A	**Loudon**	**112.77**	**56**	PFAKE		05 55 30.0	+11
V51A				LR	LR		
	comp=Z,7µm,20.0s						
453A	**Whigham**	**112.92**	**61**	PFAKE		05 55 30.0	+11
453A				LR	LR		
	comp=Z,5µm,20.0s						
253A	**Americus**	**113.07**	**60**	PFAKE		05 55 30.0	+11
253A				LR	LR		
	comp=Z,4µm,20.0s						
Y52A	**Lilburn**	**113.08**	**58**	PFAKE		05 55 30.0	+11
Y52A				LR	LR		
	comp=Z,12µm,18.0s						
W52A	**Murphy**	**113.14**	**57**	PFAKE		05 55 30.0	+10
W52A				LR	LR		
	comp=Z,7µm,18.0s						
TKL	**Tuckaleechee C**	**113.24**	**56**	PFAKE		05 55 30.0	+10
TKL				LR	LR		
	comp=Z,6µm,20.0s						
S51A	**Beattyville**	**113.27**	**54**	PFAKE		05 55 30.0	+10
S51A				LR	LR		
	comp=Z,8µm,18.0s						
Q51A	**Peebles**	**113.37**	**52**	PFAKE		05 55 30.0	+10
Q51A				LR	LR		
	comp=Z,8µm,20.0s						
TZTN	**Tazewell**	**113.38**	**55**	PFAKE		05 55 30.0	+10
TZTN				LR	LR		
	comp=Z,9µm,20.0s						
V52A	**Sevierville**	**113.38**	**56**	PFAKE		05 55 30.0	+10
V52A				LR	LR		
	comp=Z,7µm,18.0s						
M50A	**Fremont**	**113.39**	**50**	PFAKE		05 55 30.0	+10
M50A				LR	LR		
	comp=Z,5µm,20.0s						
TIGA	**Tifton**	**113.54**	**61**	PFAKE		05 55 30.0	+10
TIGA				LR	LR		
	comp=Z,3µm,20.0s						
ACSO	**Alum Creek Sta**	**113.54**	**51**	PFAKE		05 55 30.0	+10
ACSO				LR	LR		
	comp=Z,6µm,18.0s						
P51A	**Williamsport**	**113.55**	**52**	PFAKE		05 55 30.0	+10
P51A				LR	LR		
	comp=Z,6µm,18.0s						
GOGA	**Godfrey**	**113.59**	**58**	PFAKE		05 55 30.0	+10
GOGA				LR	LR		
	comp=Z,8µm,20.0s						
154A	**Montrose**	**113.92**	**59**	PFAKE		05 55 30.0	+8.9
154A				LR	LR		
	comp=Z,9µm,18.0s						
N51A	**Ashland**	**113.94**	**50**	PFAKE		05 55 30.0	+9.1
N51A				LR	LR		
	comp=Z,6µm,19.0s						
NNA	**Nana**	**113.97**	**108**	PFAKE		05 55 30.0	+8.3
NNA				LR	LR		
	comp=Z,4µm,20.0s						
V53A	**Saluda**	**114.02**	**56**	PFAKE		05 55 30.0	+8.7
V53A				LR	LR		
	comp=Z,7µm,20.0s						
555A	**McAlpin**	**114.10**	**62**	PFAKE		05 55 30.0	+8.5
555A				LR	LR		
	comp=Z,5µm,20.0s						
O52A	**Adamsville**	**114.43**	**51**	PFAKE		05 55 30.0	+8.2
O52A				LR	LR		
	comp=Z,9µm,20.0s						
255A	**Hazlehurst**	**114.47**	**60**	PFAKE		05 55 30.0	+7.9
255A				LR	LR		
	comp=Z,5µm,20.0s						
656A	**Willston**	**114.48**	**63**	PFAKE		05 55 30.0	+7.8
656A				LR	LR		
	comp=Z,5µm,20.0s						
957A	**Wimauma**	**114.76**	**65**	PFAKE		05 55 30.0	+7.2
957A				LR	LR		
	comp=Z,4µm,18.0s						
P53A	**Whipple**	**114.84**	**52**	PFAKE		05 55 30.0	+7.4
P53A				LR	LR		
	comp=Z,6µm,18.0s						
456A	**Hilliard**	**114.90**	**61**	PFAKE		05 55 30.0	+7.0
456A				LR	LR		
	comp=Z,4µm,19.0s						
KMSC	**Kings Mountain**	**115.26**	**56**	PFAKE		05 55 30.0	+6.4
KMSC				LR	LR		
	comp=Z,5µm,20.0s						
PB10	**IPOC Station P**	**115.27**	**123**	PFAKE		05 55 40.0	+16
PB10				LR	LR		
	comp=Z,2µm,19.0s						
GO02	**Mina Guanaco**	**115.32**	**125**	PFAKE		05 55 40.0	+16
GO02				LR	LR		
	comp=Z,3µm,19.0s						
JSC	**Jenkinsville**	**115.38**	**57**	PFAKE		05 55 30.0	+6.2
JSC				LR	LR		
	comp=Z,9µm,18.0s						
DWPF	**Disney Wildern**	**115.47**	**64**	PFAKE		05 55 40.0	+16
DWPF				LR	LR		
	comp=Z,6µm,18.0s						
ERPA	**Erie**	**115.57**	**49**	PFAKE		05 55 40.0	+16
ERPA				LR	LR		
	comp=Z,8µm,19.0s						
OTAV	**Otavalo**	**115.59**	**95**	PFAKE		05 55 40.0	+15
OTAV				LR	LR		
	comp=Z,2µm,19.0s						
658A	**Bunnell**	**115.59**	**63**	PFAKE		05 55 40.0	+16
658A				LR	LR		
	comp=Z,4µm,19.0s						
257A	**Skidaway Islan**	**115.70**	**60**	PFAKE		05 55 40.0	+15
257A				LR	LR		
	comp=Z,6µm,20.0s						
N54A	**Moraine State**	**115.73**	**50**	PFAKE		05 55 40.0	+16
N54A				LR	LR		
	comp=Z,7µm,20.0s						
059A	**Moore Haven**	**115.73**	**65**	PFAKE		05 55 40.0	+15
059A				LR	LR		
	comp=Z,3µm,18.0s						
SADO	**Sadowa**	**115.75**	**46**	PFAKE		05 55 40.0	+16
SADO				LR	LR		
	comp=Z,8µm,18.0s						
BCIP	**Isla Barro Col**	**115.78**	**85**	PFAKE		05 55 40.0	+15
BCIP				LR	LR		
	comp=Z,2µm,18.0s						
BLA	**Blacksburg**	**115.83**	**54**	PFAKE		05 55 40.0	+15
BLA				LR	LR		
	comp=Z,6µm,19.0s						
M54A	**Oil Creek Stat**	**115.89**	**49**	PFAKE		05 55 40.0	+15
M54A				LR	LR		
	comp=Z,8µm,20.0s						
061Z	**Ochoppi**	**115.94**	**67**	PFAKE		05 55 40.0	+15
061Z				LR	LR		
	comp=Z,4µm,20.0s						
MCWV	**Mont Chateau**	**116.00**	**51**	PFAKE		05 55 40.0	+15
MCWV				LR	LR		
	comp=Z,5µm,18.0s						
PB04	**IPOC Station P**	**116.11**	**122**	PFAKE		05 55 40.0	+14
PB04				LR	LR		
	comp=Z,3µm,18.0s						
VLDQ	**Val d'Or**	**116.23**	**42**	PFAKE		05 55 40.0	+15
VLDQ				LR	LR		
	comp=Z,5µm,19.0s						
NHSC	**New Hope**	**116.36**	**59**	PFAKE		05 55 40.0	+14
NHSC				LR	LR		
	comp=Z,9µm,18.0s						
ARA0	**ARCESS Array S**	**116.38**	**345**	*e*PKPdf	**PKPdf**	**05 55 22.9**	**-1.9**
ARCES	**ARCESS Array B**	**116.38**	**345**	PKP	**PKPdf**	**05 55 22.8**	**-1.9**
	comp=Z,2.7nm,0.7s,baz=66,slow=3.0,SNR=7.1						
060A	**Indiantown**	**116.43**	**65**	PFAKE		05 55 40.0	+14
060A				LR	LR		
	comp=Z,4µm,21.0s						
O56A	**Blue Knob Stat**	**116.89**	**50**	PFAKE		05 55 40.0	+13
O56A				LR	LR		
	comp=Z,10µm,19.0s						
MMNY	**Mt. Morris Dam**	**116.99**	**48**	PFAKE		05 55 40.0	+13
MMNY				LR	LR		
	comp=Z,5µm,20.0s						
LVC	**Limon Verde**	**117.02**	**122**	PFAKE		05 55 40.0	+12
LVC				LR	LR		
	comp=Z,2µm,20.0s						
PLVO	**Plevna**	**117.14**	**45**	PFAKE		05 55 40.0	+13
PLVO				LR	LR		
	comp=Z,5µm,19.0s						
PB01	**IPOC Station P**	**117.22**	**121**	PFAKE		05 55 40.0	+12
PB01				LR	LR		
	comp=Z,3µm,18.0s						
SSPA	**Standing Stone**	**117.35**	**50**	PFAKE		05 55 40.0	+13
SSPA				LR	LR		
	comp=Z,6µm,21.0s						
ILULI	**Ilulissat**	**117.45**	**14**	PFAKE		05 55 40.0	+13
ILULI				LR	LR		
	comp=Z,3µm,18.0s						
PB11	**IPOC Station P**	**117.62**	**119**	PFAKE		05 55 40.0	+11
PB11				LR	LR		
	comp=Z,4µm,22.0s						
R58B	**Mineral**	**117.74**	**53**	PFAKE		05 55 40.0	+12
R58B				LR	LR		
	comp=Z,10µm,20.0s						
MNMC	**Minye Minye**	**117.93**	**119**	PFAKE		05 55 40.0	+10
MNMC				LR	LR		
	comp=Z,4µm,22.0s						
MAK	**Makhachkala**	**117.94**	**313**	*e*P	**Pdif**	**05 51 40.8**	**-5.9**
MAK				*e*		06 02 15.8	
MAK				*e*PS	**PS**	**06 06 23.5**	**-5.0**
MAK				pmax	pmax		
	comp=Z,136nm,0.9s						
CNNC	**Cliffs of the**	**118.06**	**56**	PFAKE		05 55 40.0	+11
CNNC				LR	LR		
	comp=Z,6µm,20.0s						
CBN	**Corbin Frederi**	**118.11**	**53**	PFAKE		05 55 40.0	+11
CBN				LR	LR		
	comp=Z,10µm,20.0s						
PAGS	**Pennsylvania G**	**118.30**	**50**	PFAKE		05 55 40.0	+11
PAGS				LR	LR		
	comp=Z,12µm,18.0s						
BINY	**Binghamton**	**118.49**	**48**	PFAKE		05 55 40.0	+10
BINY				LR	LR		
	comp=Z,7µm,18.0s						
MVL	**Millersville**	**118.61**	**50**	PFAKE		05 55 40.0	+10
MVL				LR	LR		
	comp=Z,12µm,18.0s						
MTDJ	**Mount Denham**	**118.88**	**75**	PFAKE		05 55 40.0	+8.8
MTDJ				LR	LR		
	comp=Z,2µm,20.0s						
N59A	**State Game Lan**	**118.89**	**49**	PFAKE		05 55 40.0	+10
N59A				LR	LR		
	comp=Z,6µm,18.0s						
LONY	**Lake Ozonia**	**118.97**	**45**	PFAKE		05 55 40.0	+9.5
LONY				LR	LR		
	comp=Z,5µm,20.0s						
GROC	**Groznyy**	**119.12**	**313**	*i* PKIKP	**PKPdf**	**05 55 29.9**	**-0.9**
GROC				*e*		05 56 51.9	
GROC				pmax	pmax		
	comp=Z,18nm,0.4s						
SFJD	**Kangerlussuaq**	**119.24**	**15**	PFAKE		05 55 40.0	+10
SFJD				LR	LR		
	comp=Z,6µm,19.0s						
NCB	**Newcomb**	**119.37**	**46**	PFAKE		05 55 40.0	+8.7
NCB				LR	LR		
	comp=Z,5µm,20.0s						
FRNY	**Flat Rock**	**119.60**	**45**	PFAKE		05 55 40.0	+8.3
FRNY				LR	LR		
	comp=Z,5µm,19.0s						
ODNJ	**Ogdensburg**	**119.72**	**49**	PFAKE		05 55 40.0	+8.0
ODNJ				LR	LR		
	comp=Z,7µm,19.0s						
BRNJ	**Basking Ridge**	**119.83**	**49**	PFAKE		05 55 40.0	+7.7
BRNJ				LR	LR		
	comp=Z,8µm,19.0s						
ACCN	**Adirondack Com**	**119.90**	**46**	PFAKE		05 55 40.0	+7.7
ACCN				LR	LR		
	comp=Z,6µm,20.0s						
PAL	**Palisades**	**120.25**	**49**	PFAKE		05 55 40.0	+6.9
PAL				LR	LR		
	comp=Z,9µm,18.0s						
SCHQ	**Schefferville**	**120.26**	**32**	PFAKE		05 55 40.0	+7.3
SCHQ				LR	LR		
	comp=Z,7µm,18.0s						
LPAZ	**La Paz**	**120.36**	**116**	PKIKP	**PKPdf**	**05 55 34.0**	**-0.7**
LPAZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LPAZ	**La Paz**	**120.36**	**116**	PKP	**PKPdf**	**05 55 34.0**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=226,slow=4.3,SNR=5.4						
ROSC	**El Rosal**	**120.52**	**91**	PFAKE		05 55 50.0	+15
ROSC				LR	LR		
	comp=Z,1µm,18.0s						
GNI	**Garni**	**120.54**	**310**	PFAKE		05 55 40.0	+6.1
GNI				LR	LR		
	comp=Z,1µm,18.0s						
ZEI	**Tsey**	**120.57**	**313**	*i* PKIKP	**PKiKP**	**05 55 36.7**	**+2.7**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
OBN	**Obninsk**	**120.77**	**329**	PFAKE		05 55 40.0	+6.4
OBN				LR	LR		
	comp=Z,2µm,22.0s						
OBN	**Obninsk**	**120.77**	**329**	⇓*i*PKIKP	**PKiKP**	**05 55 35.7**	**+2.1**
OBN				*e*		05 57 05.5	
OBN				*i* SS	SS	06 13 31.8	+0.2
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YLE	**Yale**	**120.90**	**48**	PFAKE		05 55 50.0	+16
YLE				LR	LR		
	comp=Z,12µm,18.0s						
LBNH	**Lisbon**	**120.90**	**45**	PFAKE		05 55 50.0	+16
LBNH				LR	LR		
	comp=Z,4µm,21.0s						
VSR	**Storozhevoye**	**121.00**	**324**	*i* PKIKP	**PKPdf**	**05 55 32.7**	**-1.4**
VSR				MLR	MLR		
	comp=Z,2µm,18.0s						
KIV	**Kislovodsk**	**121.13**	**315**	PFAKE		05 55 50.0	+15
KIV				LR	LR		
	comp=Z,1µm,19.0s						
KIV	**Kislovodsk**	**121.13**	**315**	*i* PKIKP	**PKPdf**	**05 55 34.5**	**-0.2**
KIV				*e*PS	**PS**	**06 06 55.9**	**-1.4**
KIV				*e*SS	SS	06 13 37.7	+0.4
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTBY	**Guantanamo Bay**	**121.23**	**73**	PFAKE		05 55 50.0	+14
GTBY				LR	LR		
	comp=Z,2µm,18.0s						
HRV	**Adam Dziewonsk**	**121.61**	**47**	PFAKE		05 55 50.0	+14
HRV				LR	LR		
	comp=Z,9µm,18.0s						
RAYN	**Ar Rayn**	**121.77**	**291**	*e*PKPdf	**PKPdf**	**05 55 35.8**	**-0.7**
RAYN	**Ar Rayn**	**121.77**	**291**	*e*PKIKP	**PKPdf**	**05 55 35.8**	**-0.7**
FIA1	**FINESS Array S**	**121.79**	**338**	*e*PKPdf	**PKPdf**	**05 55 34.8**	**-0.6**
FIA0	**FINESS Array S**	**121.79**	**338**	*e*PKPdf	**PKPdf**	**05 55 33.4**	**-1.9**
FIA0	**FINESS Array S**	**121.79**	**338**	*e*PKIKP	**PKPdf**	**05 55 33.4**	**-1.9**
FINES	**FINESS Array B**	**121.79**	**338**	PKP	**PKPdf**	**05 55 33.3**	**-1.9**
	comp=Z,5.6nm,1.1s,baz=104,slow=4.6,SNR=3.3						
WES	**Weston**	**121.81**	**47**	PFAKE		05 55 50.0	+14
WES				LR	LR		
	comp=Z,8µm,20.0s						
PKME	**Peaks-Kenny Pk**	**122.40**	**43**	PFAKE		05 55 50.0	+13
PKME				LR	LR		
	comp=Z,4µm,18.0s						
DAMY	**Dhamar**	**122.60**	**280**	PFAKE		05 55 50.0	+11
DAMY				LR	LR		
	comp=Z,2µm,19.0s						
SOC	**Sochi**	**123.30**	**315**	*i* PKIKP	PKPpre	05 55 33.0	
SOC				*e*PS	PS	06 07 10.3	-6.0
SOC				*e*SSS	SSS	06 18 41.9	
SOC				MLR	MLR		
	comp=Z,1µm,19.0s						
BATG	**Bathurst New B**	**123.81**	**40**	PFAKE		05 55 50.0	+10
BATG				LR	LR		
	comp=Z,6µm,20.0s						
ATD	**Arta Tunnel**	**123.85**	**276**	PFAKE		05 55 50.0	+9.0
ATD				LR	LR		
	comp=Z,3µm,19.0s						
GGN	**Saint George**	**124.08**	**43**	PFAKE		05 55 50.0	+10
GGN				LR	LR		
	comp=Z,6µm,18.0s						
CPUP	**Villa Florida**	**124.13**	**133**	*e*PKPdf	**PKPdf**	**05 55 39.2**	**-1.8**
CPUP	**Villa Florida**	**124.13**	**133**	*e*PKIKP	**PKPdf**	**05 55 39.2**	**-1.8**
CPUP	**Villa Florida**	**124.13**	**133**	PKP	**PKiKP**	**05 55 41.0**	**-0.2**
	comp=Z,4.9nm,1.0s,baz=269,slow=2.8,SNR=4.7						
IVI	**Ivigtut**	**124.32**	**19**	PFAKE		05 55 50.0	+10
IVI				LR	LR		
	comp=Z,5µm,20.0s						
SDV	**Santo Domingo**	**124.75**	**87**	*e*PKPdf	**PKPdf**	**05 55 40.3**	**-2.3**
SDV				LR	LR		
	comp=Z,2µm,19.0s						
SDV	**Santo Domingo**	**124.75**	**87**	PKP	**PKPdf**	**05 55 40.1**	**-2.5**
	comp=Z,7.7nm,0.7s,baz=229,slow=3.6,SNR=10						
SDDR	**Presa de Saban**	**124.82**	**75**	PFAKE		05 55 50.0	+7.2
SDDR				LR	LR		
	comp=Z,3µm,19.0s						
BOSA	**Boshof**	**124.86**	**223**	*e*PKPdf	**PKPdf**	**05 55 41.9**	**-0.6**
BOSA				*e*PKPdf	**PKiKP**	**05 55 42.8**	**0.0**
BOSA	**Boshof**	**124.86**	**223**	*e*PKIKP	**PKPdf**	**05 55 41.9**	**-0.6**
BOSA	**Boshof**	**124.86**	**223**	PKP	**PKiKP**	**05 55 42.8**	**0.0**
	comp=Z,7.9nm,1.0s,baz=140,slow=1.2,SNR=4.0						
GRTK	**Grand Turk**	**124.95**	**72**	PFAKE		05 55 50.0	+7.1
GRTK				LR	LR		
	comp=Z,2µm,18.0s						
SUR	**Sutherland**	**125.10**	**217**	PFAKE		05 55 50.0	+6.7
SUR				LR	LR		
	comp=Z,3µm,18.0s						
NRS	**Narsarsuaq**	**125.20**	**18**	PFAKE		05 55 50.0	+7.8
NRS				LR	LR		
	comp=Z,9µm,20.0s						
SDD	**Santo Domingo**	**126.12**	**75**	PFAKE		05 56 00.0	+15
SDD				LR	LR		
	comp=Z,4µm,21.0s						
HAL	**Halifax**	**126.41**	**42**	PFAKE		05 56 00.0	+15
HAL				LR	LR		
	comp=Z,5µm,20.0s						
NB2	**NORSAR Subarra**	**126.75**	**345**	PKPdf	**PKiKP**	**05 55 45.2**	**-0.2**
	comp=Z,15nm,1.7s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**126.75**	**345**	PKPdf	**PKiKP**	**05 55 45.2**	**-0.2**
	baz=31,slow=1.9						
NB200	**NORSAR Array S**	**126.75**	**345**	*e*PKPdf	**PKPdf**	**05 55 45.0**	**0.0**
NOA	**NORSAR Array B**	**126.75**	**345**	PKIKP	**PKPdf**	**05 55 45.0**	**0.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**126.75**	**345**	PKP	**PKPdf**	**05 55 45.0**	**0.0**

	comp=Z,1.2nm,0.7s,baz=37,slow=2.0,SNR=6.3						
AKASG	Malin Array Be	126.82	327*c*	*i*PKIKP	PKPdf	05 55 44.7	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	126.82	327	PKP	PKiKP	05 55 45.5	-0.2
	comp=Z,1.0nm,0.6s,baz=50,slow=2.0,SNR=9.9						
AKBB	Malin Array Si	126.82	327	*e*PKPdf	PKPdf	05 55 44.5	-0.8
AKBB	Malin Array Si	126.82	327	*e*PKIKP	PKPdf	05 55 44.5	-0.8
KIEV	Kiev	126.83	327	*e*PKPdf	PKPdf	05 55 44.6	-0.7
KIEV				LR	LR		
	comp=Z,2µm,20.0s						
KIEV	Kiev	126.83	327	*e*PKIKP	PKPdf	05 55 44.6	-0.7
KIEV				MLR	MLR		
	comp=Z,2µm,20.0s						
AK11	Malin Array Si	126.86	327	*e*PKPdf	PKPdf	05 55 44.4	-1.0
KMBO	Kilima Mbogo	127.12	260	PFAKE		05 56 00.0	+12
KMBO				LR	LR		
	comp=Z,2µm,20.0s						
GBN	Guysborough	127.44	40	PFAKE		05 56 00.0	+13
GBN				LR	LR		
	comp=Z,7µm,20.0s						
FURI	Furi	127.63	273	PFAKE		05 56 00.0	+11
FURI				LR	LR		
	comp=Z,2µm,20.0s						
SUW	Suwalki	127.85	333	PFAKE		05 56 00.0	+12
SUW				LR	LR		
	comp=Z,3µm,19.0s						
DRLN	Deer Lake	128.00	35	PFAKE		05 56 00.0	+12
DRLN				LR	LR		
	comp=Z,13µm,18.0s						
BR101	Keskin Array S	128.86	312	*e*PKPdf	PKPdf	05 55 49.5	-0.3
BRTR	Keskin Array B	128.86	312	PKP	PKPdf	05 55 49.5	-0.3
	comp=Z,2.4nm,1.0s,baz=103,slow=3.1,SNR=4.9						
KIS	Kishinev	128.96	323	*e*PP	PP	05 58 08.0	+11
KIS				*e*SKP		05 59 14.0	
KIS				*e*SKSP		06 07 26.0	
KIS	Kishinev	128.96	323	*e*PS	PS	06 08 12.0	+6.2
KIS				*e*SS	SS	06 15 20.0	+4.9
KIS				*e*SSS	SSS	06 19 42.0	
KIS				LRM	MLR	06 56 24.0	
	comp=Z,3µm,20.0s						
OBIP	Obispado Ponce	129.26	76	PFAKE		05 56 00.0	+8.4
OBIP				LR	LR		
	comp=Z,2µm,19.0s						
ICMP	Isla Caja de M	129.34	76	PFAKE		05 56 00.0	+8.3
ICMP				LR	LR		
	comp=Z,900nm,20.0s						
ANTO	Ankara	129.42	313	PFAKE		05 56 00.0	+8.6
ANTO				LR	LR		
	comp=Z,900nm,20.0s						
SJG	San Juan	129.69	76	PFAKE		05 56 00.0	+7.6
SJG				LR	LR		
	comp=Z,2µm,21.0s						
CBYP	Canovanas	129.97	76	PFAKE		05 56 00.0	+6.9
CBYP				LR	LR		
	comp=Z,3µm,21.0s						
HUMP	Col San Antoni	129.98	76	PFAKE		05 56 00.0	+7.0
HUMP				LR	LR		
	comp=Z,2µm,20.0s						
LVV	L'vov	130.07	328	*e*PKIKP	PKiKP	05 55 52.8	+0.5
LVV				MLR	MLR		
	comp=N,600nm,21.0s						
LVV				MLR	MLR		
	comp=E,1µm,21.0s						
LVV				MLR	MLR		
	comp=Z,600nm,22.0s						
LSZ	Lusaka	130.22	239	*e*PKPdf	PKPdf	05 55 50.2	-2.8
LSZ				LR	LR		
	comp=Z,3µm,20.0s						
LSZ	Lusaka	130.22	239	*e*PKIKP	PKPdf	05 55 50.2	-2.8
LSZ				MLR	MLR		
	comp=Z,3µm,20.0s						
MTP	Monte Pirata	130.26	76	PFAKE		05 56 00.0	+6.4
MTP				LR	LR		
	comp=Z,2µm,21.0s						
TIRR	Tirgusor	130.45	320	PFAKE		05 56 00.0	+6.8
TIRR				LR	LR		
	comp=Z,2µm,19.0s						
CUPR	Culebra, Puert	130.51	75	PFAKE		05 56 00.0	+5.9
CUPR				LR	LR		
	comp=Z,4µm,21.0s						
BUR04	Bucovina Ar. S	130.71	325	*e*PKPdf	PKPdf	05 55 52.0	-0.9
STVI	Saint Thomas	130.83	75	PFAKE		05 56 00.0	+5.3
STVI				LR	LR		
	comp=Z,3µm,20.0s						
ABVI	Anegada Island	131.41	75	PFAKE		05 56 10.0	+14
ABVI				LR	LR		
	comp=Z,2µm,20.0s						
MLR	Muntele Rosu	131.45	322	*e*PKPdf	PKPdf	05 55 52.5	-1.9
MLR	Muntele Rosu	131.45	322	*e*PKIKP	PKPdf	05 55 52.5	-1.9
UZH	Uzhgorod	131.70	328	*e*PKHKP	PKPpre	05 55 37.0	
UZH				*e*		05 55 52.0	
UZH				MLR	MLR		
	comp=Z,200nm,17.0s						
SMRT	St. Maarten	132.62	76	PFAKE		05 56 10.0	+12
SMRT				LR	LR		
	comp=Z,3µm,18.0s						
SEUS	St. Eustatius	132.72	77	PFAKE		05 56 10.0	+11
SEUS				LR	LR		
	comp=Z,3µm,19.0s						
SPB	Sao Paulo	132.78	137	PFAKE		05 56 10.0	+11
SPB				LR	LR		
	comp=Z,2µm,18.0s						
LANS	Liptovska Anna	132.79	330	*e*PKIKP	PKiKP	05 56 02.8	+4.9
LANS	Liptovska Anna	132.79	330	*e*PKP	PKiKP	05 56 02.8	+4.9
OKC	Ostrava-Krasne	132.96	331	AMS	AMS	07 01 50.0	
	comp=Z,2µm,18.1s						
MORC	Moravsky Berou	133.29	332	PFAKE		05 56 10.0	+11
MORC				LR	LR		
	comp=Z,3µm,21.0s						
PTGA	Pitinga	133.31	102	PKP	PKPdf	05 55 58.6	-0.1
PTGA				LR	LR		
	comp=Z,2µm,20.0s						
PTGA	Pitinga	133.31	102	PKP	PKPdf	05 55 58.6	-0.1
	comp=Z,7.2nm,0.9s,baz=315,slow=8.6,SNR=5.1						
PSZ	Piszkesteto	133.39	328	PFAKE		05 56 10.0	+11
PSZ				LR	LR		
	comp=Z,3µm,20.0s						
DPC	Dobruska-Polom	133.43	333	*e*PKP	PKiKP	05 56 07.1	+7.9
DPC				AMS	AMS	06 58 30.0	
	comp=Z,2µm,17.8s						
DPC	Dobruska-Polom	133.43	333	*e*PKIKP	PKiKP	05 56 07.1	+7.9
DPC				MLR	MLR		
	comp=Z,2µm,17.8s						
UPC	Upice	133.46	333	*e*SKP	SKPab	05 59 29.4	+1.3
UPC				AMS	AMS	07 02 00.0	
	comp=Z,2µm,18.2s						
MBAR	Mbarara	133.54	258	PFAKE		05 56 10.0	+9.4
MBAR				LR	LR		
	comp=Z,4µm,20.0s						
ANWB	Willy Bob	133.85	76	PFAKE		05 56 10.0	+9.1
ANWB				LR	LR		
	comp=Z,2µm,21.0s						
PVCC	Panska Ves	134.06	334	AMS	AMS	06 54 10.0	
	comp=Z,2µm,19.6s						
CLL	Collm	134.11	336	PFAKE		05 56 10.0	+10
CLL				LR	LR		
	comp=Z,2µm,20.0s						
CLL	Collm	134.11	336	*e*PKPdf	PKPdf	05 55 59.0	-0.1
CLL				*e*		05 56 08.0	
	comp=Z,22nm,1.6s						
CLL				*e*		05 56 14.0	
CLL				*e*PP	PP	05 58 34.0	+4.7
CLL				*e*PKSdf	PKSdf	05 59 34.0	-1.3
CLL				*e*PPP	PPP	06 01 24.0	
CLL				*e*SKSac	SKSac	06 03 24.0	+13
CLL				*e*		06 06 07.0	
CLL				*e*Sdif	Sdif	06 06 48.0	+2.5
CLL				*e*SKSP		06 08 24.0	
CLL				*e*		06 09 32.0	
CLL				*e*PPS	PPS	06 10 33.0	
CLL				*e*		06 11 30.0	
CLL				*e*SS	SS	06 16 19.0	+2.0
CLL				*e*		06 17 56.0	
CLL				*e*SKSSKSac		06 18 17.0	
CLL				*e*SSS	SSS	06 21 18.0	
CLL				*e*		06 31 30.0	
CLL				LmH		06 55 00.0	
	comp=N,1µm,19.5s						
CLL				LmH		06 55 00.0	
	comp=E,1µm,22.0s						
CLL				Lm	MLR	06 59 00.0	
	comp=Z,2µm,19.4s						
CLL	Collm	134.11	336	*e*PKIKP	PKPdf	05 55 59.0	-0.1
CLL				*e*		05 56 08.0	
KRUC	Moravsky	134.32	332	*e*PKP	PKiKP	05 56 02.5	+1.5
MODS	Modra-Piesok	134.39	331	*e*PKIKP	PKiKP	05 56 02.3	+1.2
MODS	Modra-Piesok	134.39	331	*e*PKP	PKiKP	05 56 02.3	+1.2
PRA	Prague	134.46	334	AMS	AMS	06 54 20.0	
	comp=Z,2µm,17.0s						
FDF	Fort de France	134.47	80	PFAKE		05 56 10.0	+7.8
FDF				LR	LR		
	comp=Z,2µm,19.0s						
PRU	Pruhonice	134.48	334	*e*PP	PP	05 58 41.2	+10
PRU				AMS	AMS	07 00 50.0	
	comp=Z,2µm,16.9s						
VTS	Vitosha	134.63	321	PFAKE		05 56 10.0	+8.0
VTS				LR	LR		
	comp=Z,2µm,21.0s						
NKC	Novy Kostel	135.17	336	AMS	AMS	06 59 30.0	
	comp=Z,2µm,17.4s						
CONA	Conrad Observa	135.38	331	PKiKP	PKiKP	05 56 03.0	-0.3
	comp=Z,13nm,1.4s						
KHC	Kasperske Hory	135.54	334	PFAKE		05 56 10.0	+6.5
KHC				LR	LR		
	comp=Z,900nm,19.0s						
KHC	Kasperske Hory	135.54	334	*e*PKP	PKiKP	05 56 04.9	+1.4
KHC				*e*PKS	PKSdf	05 59 36.6	-1.5
KHC				AMS	AMS	06 55 10.0	
	comp=Z,2µm,18.5s						
KHC	Kasperske Hory	135.54	334	*e*PKIKP	PKiKP	05 56 04.9	+1.4
KHC				MLR	MLR		
	comp=Z,2µm,18.5s						
GEC2	GERESS Array S	135.70	333	PFAKE		05 56 10.0	+6.1
GEC2				LR	LR		
	comp=Z,2µm,20.0s						
GERES	GERESS Array B	135.70	333	PKP	PKPdf	05 56 01.5	-0.8
	comp=Z,1.4nm,0.8s,baz=354,slow=6.9,SNR=4.0						
DIVS	Divibare	135.73	324	PFAKE		05 56 10.0	+5.9
DIVS				LR	LR		
	comp=Z,2µm,19.0s						
ARSA	Arzberg	136.02	331	*e*PKPdf	PKPdf	05 56 02.5	-0.4
	comp=Z,4.0nm,1.1s						
GRA1	Grafenberg Arr	136.08	336	PFAKE		05 56 10.0	+5.5
GRA1				LR	LR		
	comp=Z,2µm,19.0s						
GRFO	Grafenberg	136.09	336	PFAKE		05 56 10.0	+5.5
GRFO				LR	LR		
	comp=Z,2µm,19.0s						
MOA	Molln	136.18	332	PKPdf	PKPdf	05 56 02.2	-0.9
	comp=Z,7.0nm,1.6s						
TSUM	Tsumeb	136.28	227	PFAKE		05 56 20.0	+14
TSUM				LR	LR		
	comp=Z,7µm,18.0s						
LIT	Litokhoron	136.43	318	PFAKE		05 56 20.0	+14
LIT				LR	LR		
	comp=Z,1µm,20.0s						
SOKA	Soboth	136.66	330	PKiKP	PKiKP	05 56 05.4	-0.5
	comp=Z,13nm,1.6s						
BLY	Banja Luka	136.88	327	PFAKE		05 56 20.0	+14
BLY				LR	LR		
	comp=Z,2µm,21.0s						
OBKA	Obir	137.02	331	*e*PKiKP	PKiKP	05 56 06.0	-0.7
	comp=Z,13nm,1.9s						
TTG	Podgorica	137.16	323	PFAKE		05 56 20.0	+13
TTG				LR	LR		
	comp=Z,2µm,22.0s						
KBA	Koelnbreinsper	137.17	332	*e*PKiKP	PKiKP	05 56 07.1	+0.1
	comp=Z,9.5nm,1.2s						
MYKA	Terra Mystica	137.36	331	*e*PKiKP	PKiKP	05 56 06.4	-0.9
	comp=Z,10nm,1.8s						
TIR	Tirane	137.43	321	PFAKE		05 56 20.0	+12
TIR				LR	LR		
	comp=Z,2µm,20.0s						
BDFB	Brasilia	137.46	128	*e*PKPdf	PKPdf	05 56 07.1	+0.6
BDFB				LR	LR		
	comp=Z,2µm,19.0s						
BDFB	Brasilia	137.46	128	PKP	PKPdf	05 56 07.1	+0.6
	comp=Z,3.3nm,0.9s,baz=218,slow=12,SNR=3.1						
STU	Stuttgart	137.62	337	PFAKE		05 56 20.0	+12
STU				LR	LR		
	comp=Z,2µm,18.0s						
ABTA	Abfaltersbach	137.80	332	*e*PKiKP	PKPdf	05 56 06.3	0.0
	comp=Z,17nm,1.5s						
WTTA	Wattenberg	137.80	333	*e*PKiKP	PKiKP	05 56 07.7	-0.6
	comp=Z,22nm,1.4s						
MOTA	Moosalm	137.97	334	*e*PKiKP	PKPdf	05 56 07.4	+0.7
	comp=Z,11nm,1.1s						
WLF	Walferdange	137.97	340	PFAKE		05 56 20.0	+12
WLF				LR	LR		
	comp=Z,11µm,19.0s						
RETA	Reutte	138.00	334	*e*pPKPdf	PKiKP	05 56 10.4	+1.7
	comp=Z,12nm,1.4s						
SQTA	Sankt Quirin	138.02	334	pPKPdf	PKiKP	05 56 10.2	+1.5
	comp=Z,8.9nm,1.1s						
BFO	Black Forest	138.31	337	PFAKE		05 56 20.0	+11
BFO				LR	LR		
	comp=Z,2µm,19.0s						
FETA	Feichten	138.38	334	pPKPdf	PKiKP	05 56 10.5	+1.0
	comp=Z,9.8nm,1.3s						
DAVA	Damuels	138.53	335	*e*PKPdf	PKPdf	05 56 06.3	-1.4
	comp=Z,17nm,1.6s						
FUORN	Ofenpass-Fuorn	138.89	334	PFAKE		05 56 20.0	+9.3
FUORN				LR	LR		
	comp=Z,3µm,19.0s						
TUE	Stuetta	139.40	335	PFAKE		05 56 20.0	+8.3
TUE				LR	LR		
	comp=Z,3µm,20.0s						
AQU	L'Aquila	140.52	327	PFAKE		05 56 20.0	+6.1
AQU				LR	LR		
	comp=Z,2µm,20.0s						
TIP	Timpagrande	140.62	321	PFAKE		05 56 20.0	+5.8
TIP				LR	LR		
	comp=Z,2µm,20.0s						
VLC	Villacollemand	140.73	331	PFAKE		05 56 20.0	+5.8
VLC				LR	LR		
	comp=Z,3µm,21.0s						
BNI	Bardonecchia	141.65	336	PFAKE		05 56 20.0	+3.8
BNI				LR	LR		
	comp=Z,3µm,19.0s						
TAMR	Tamra	146.59	324	PFAKE		05 56 30.0	+3.6
TAMR				LR	LR		
	comp=Z,1µm,20.0s						
MAHO	Mahon	146.89	333	PKP	PKPbc	05 56 24.1	-0.2
KEST	Kesra	147.35	322	*e*PKPbc	PKPbc	05 56 25.6	-0.3
KEST				LR	LR		
	comp=Z,2µm,19.0s						
KEST	Kesra	147.35	322	PKPbc	PKPbc	05 56 25.5	-0.3
	comp=Z,30nm,1.0s,baz=33,slow=1.3,SNR=11						
PBRG	Braganca	148.72	349	*e*PKPab	PKiKP	05 56 31.7	+0.9
PGAV	Gavieira, Arco	148.83	351	*e*PKPdf	PKiKP	05 56 30.9	-0.1
PGAV	Gavieira, Arco	148.83	351	*e*LR	LR	06 58 27.2	
	comp=Z,4µm,18.0s						
UCM	Universidad Co	149.31	343	PKP	PKiKP	05 56 33.5	+1.5
POLO	Lamas de Olo	149.33	350	*e*PKPdf	PKPbc	05 56 31.2	+0.3
MVO	Moncorvo	149.40	349	*e*PKPab	PKPab	05 56 35.7	0.0
MVO	Moncorvo	149.40	349	*e*LR	LR	06 57 23.0	
	comp=Z,3µm,18.0s						
PVRL	Vila Real	149.41	350	*e*PKPdf	PKiKP	05 56 32.2	0.0
PVIS	Viseu	149.99	350	*e*PKPab	PKiKP	05 56 33.6	+0.2
PVIS	Viseu	149.99	350	*e*PKPdf	PKPab	05 56 36.1	-2.0
ES19	SONSECA Array	150.06	343	*e*PKPdf	PKPdf	05 56 28.9	+1.2
ESDC	Sonseca Array	150.10	344	PKPbc	PKPbc	05 56 31.2	-1.6
	comp=Z,3.3nm,0.9s,baz=13,slow=3.1,SNR=10.0						
ESLA	Sonseca Array	150.10	344	*e*PKPbc	PKPbc	05 56 32.1	-0.6
ESLA				LR	LR		
	comp=Z,3µm,18.0s						
MTE	Manteigas	150.24	349	*e*PKPdf	PKiKP	05 56 34.2	+0.3
MTE	Manteigas	150.24	349	*e*LQ	LQ	06 55 32.1	
MTE				*e*LR	LR	06 56 57.1	
	comp=Z,3µm,18.0s						
PAB	San Pablo	150.32	344	*e*PKPbc	PKPbc	05 56 32.8	-0.6
PAB				LR	LR		
	comp=Z,3µm,19.0s						
PAB	San Pablo	150.32	344	*e*PKIKP	PKPbc	05 56 32.8	-0.6
PAB				MLR	MLR		
	comp=Z,3µm,19.0s						
PCBR	Castelo Branco	150.76	349	*e*PKPdf	PKiKP	05 56 35.2	+0.3
PCBR	Castelo Branco	150.76	349	*e*PKPab	PKPab	05 56 40.9	-0.3
CART	Cartagena	151.02	337	PFAKE		05 56 40.0	-2.3
CART				LR	LR		
	comp=Z,2µm,21.0s						
CART	Cartagena	151.02	337	PKP	PKPpre	05 56 22.5	
PMRV	Marv??o	151.15	349	*e*PKPdf	PKPbc	05 56 33.3	-1.9
PMRV	Marv??o	151.15	349	*e*LR	LR	06 56 25.2	
	comp=Z,2µm,20.0s						
PTOM	Tomar	151.15	350	*e*PKPdf	PKiKP	05 56 36.9	+1.2
PMTG	Montargil	151.65	350	*e*PKPdf	PKiKP	05 56 37.1	+0.3
PESTR	Estremoz	151.73	349	*e*PKPab	PKPab	05 56 44.8	-0.5
PESTR	Estremoz	151.73	349	*e*LR	LR	07 00 05.4	
	comp=Z,4µm,21.2s						
PESTR	Estremoz	151.73	349	PFAKE		05 56 40.0	+3.0
PESTR				LR	LR		
	comp=Z,2µm,19.0s						
PMAFR	Mafra	151.93	351	*e*PKPdf	PKPdf	05 56 31.8	+1.2
PMAFR	Mafra	151.93	351	*e*PKPab	PKPab	05 56 44.4	-1.7
LIS	Lisbon	152.15	351	*e*PKPdf	PKPdf	05 56 29.4	-1.4
LIS				*e*PP	PP	06 00 18.1	+0.5
LIS				AMS	AMS	07 19 38.0	
	comp=E,3µm,19.2s						
LIS	Lisbon	152.15	351	*e*PKIKP	PKPdf	05 56 29.4	-1.4
LIS				*e*		06 00 18.1	
PNCL	Nicolau / Gran	152.63	350	*e*PKPdf	PKPdf	05 56 31.1	-0.5
RCBR	Riachuelo	152.83	127	PFAKE		05 56 40.0	0.0
RCBR				LR	LR		
	comp=Z,13µm,22.0s						
MESJ	Messejana	152.84	349	*e*PKPdf	PKPdf	05 56 30.4	-1.5
MESJ				*e*PP	PP	06 00 22.2	+0.6
MESJ				AMS	AMS	07 07 49.3	
	comp=Z,2µm,21.8s						
MESJ	Messejana	152.84	349	*e*PKPdf	PKPdf	05 56 32.6	+0.7
MESJ	Messejana	152.84	349	*e*PKPab	PKPab	05 56 49.0	-0.9
MESJ	Messejana	152.84	349	*e*PKIKP	PKPdf	05 56 30.4	-1.5
MESJ				*e*		06 00 22.2	
EMAL	Malaga-Limoner	152.94	342	PKP	PKPdf	05 56 33.7	+1.6
PVAQ	Vaqueiros	153.17	348	*e*PKPab	PKPab	05 56 50.3	-1.0
MORF	Marmelete	153.44	350	*e*PKPdf	PKPdf	05 56 31.5	-1.5
MORF				*e*PP	PP	06 00 25.2	+0.2
MORF				AMS	AMS	07 09 28.5	
	comp=E,3µm,19.0s						
MORF	Marmelete	153.44	350	*e*PKIKP	PKPdf	05 56 31.4	-1.5
MORF				*e*		06 00 25.2	
PFVI	Vila Bisbo	153.64	350	PFAKE		05 56 40.0	-0.9
PFVI				LR	LR		
	comp=Z,4µm,20.0s						
SFS	San Fernando	153.71	345	*e*pPKPdf	pPKPdf	05 56 38.5	+1.5
SFS				LR	LR		
	comp=Z,2µm,19.0s						
SFS	San Fernando	153.71	345	*e*PKIKP	pPKPdf	05 56 38.5	+1.5
SFS				MLR	MLR		
	comp=Z,2µm,19.0s						
MELI	Melilla	153.77	338	PKP	PKPpre	05 56 28.5	
CEU	Ceuta	154.02	343	PKP	PKPdf	05 56 35.6	+1.9
IFR	Ifrane	156.14	340	PKP	PKPdf	05 56 41.8	+4.9
RTC	Rabat Centre	156.22	344	PFAKE		05 56 50.0	+13
RTC				LR	LR		
	comp=Z,8µm,20.0s						
AVE	Averroes	157.03	345	PKP	PKPdf	05 56 45.8	+8.0
TAM	Tamanrasset	157.65	304	PFAKE		05 56 50.0	+11
TAM				LR	LR		
	comp=Z,2µm,21.0s						
PMOZ	Porto Moniz, M	158.30	6	*e*LR	LR	06 57 15.2	
	comp=Z,3µm,20.0s						
TOA0	Torodi Ar. Sit	164.03	279	*e*PKPdf	PKPdf	05 56 45.2	-0.8
TOA0	Torodi Ar. Sit	164.03	279	PKPdf	PKPdf	05 56 44.1	-1.9
	SNR=11						
TORD	Torodi Ar. Bea	164.03	279	PKP	PKPdf	05 56 46.1	+0.1
	comp=Z,10nm,1.1s,baz=360,slow=2.4,SNR=19						
TORD				PKPab	PKPab	05 57 37.9	-1.2
	comp=Z,1.6nm,1.0s,baz=108,slow=4.7,SNR=2.3						
TORD				PP	PP	06 01 21.5	-3.7
	comp=Z,1.6nm,1.1s,baz=148,slow=8.7,SNR=3.5						
TOA1	Torodi Ar. Sit	164.03	279	*e*PKPdf	PKPdf	05 56 46.1	+0.1
TOA1				*e*PKPab	PKPab	05 57 37.9	-1.2
TOA1				*e*PP	PP	06 01 21.5	-3.7
KIC	Kosan Boka	169.23	245	*e*PKP1	PKPdf	05 56 50.7	+0.7
	comp=Z,146nm,1.5s						
LIC	Lamto	169.42	243	*e*PKP1	PKPdf	05 56 50.8	+0.7
	comp=Z,94nm,1.5s						
DBIC	Dimbokro	169.47	246	*e*PKPdf	PKPdf	05 56 48.6	-1.5
DBIC	Dimbokro	169.47	246	*e*PKIKP	PKPdf	05 56 48.6	-1.5
DBIC	Dimbokro	169.47	246	PKP	PKPdf	05 56 50.0	-0.1
	comp=Z,15nm,1.1s,baz=106,slow=2.0,SNR=7.1						
TIC	Toumodi	169.60	245	*e*PKP1	PKPdf	05 56 49.5	-0.8

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*NEIC **01** 05:44:28.2±0.0, 18°.18N×67°.40W, h10^{km}, MD2.8(RSPR), After RSPR.*

NEIC Felt at Villalba.

RSPR 01 05:44:28.2, 18°.18N×67°.40W, h10^{km}, MD2.8/10, 23C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPR	Mayaguez	0.25	84⥣	*e*P	Pg	05 44 33.5	+0.2
MPR	Mayaguez	0.25	84⥣	*e*P	Pg	05 44 33.6	+0.2
MPR				*e*S	Sg	05 44 37.5	+0.8
MPR	Mayaguez	0.25	84⥣	*e*P	Pg	05 44 33.5	+0.2
MPR				*e*S	Sg	05 44 37.5	+0.8
LSP	Las Mesas	0.30	92⥣	*e*P	Pg	05 44 34.4	+0.1
LSP	Las Mesas	0.30	92	*e*S	Sg	05 44 39.2	+0.9
LSP	Las Mesas	0.30	92⥣	*e*P	Pg	05 44 34.4	+0.1
LSP				*e*S	Sg	05 44 39.2	+0.9
AGPR	Aguadilla, PR	0.40	45⥣	*i*P	Pg	05 44 35.9	-0.1
AGPR	Aguadilla, PR	0.40	45	*e*S	Sg	05 44 41.7	+0.4
AGPR	Aguadilla, PR	0.40	45	*i* Pu	Pg	05 44 35.9	-0.1
AGPR				*e*S	Sg	05 44 41.7	+0.4
GBPR	Guanica, Bosqu	0.54	113⥣	*e*P	Pg	05 44 38.3	-0.4
GBPR	Guanica, Bosqu	0.54	113	*e*S	Sg	05 44 46.0	+0.2
GBPR	Guanica, Bosqu	0.54	113	*e*P	Pg	05 44 38.3	-0.4
GBPR	Guanica, Bosqu	0.54	113⥣	*e*P	Pg	05 44 38.3	-0.4
GBPR				*e*S	Sg	05 44 46.0	+0.2
OBIP	Obispado Ponce	0.77	100⥣	*e*P	Pg	05 44 40.7	-2.4
OBIP	Obispado Ponce	0.77	100⥣	*e*P	Pg	05 44 40.7	-2.4
CELP	Cerrillos	0.79	98⥣	*e*P	Pg	05 44 41.8	-1.7
CELP				*e*S	Sg	05 44 53.2	-0.6
CELP	Cerrillos	0.79	98⥣	*e*P	Pg	05 44 41.8	-1.7
CELP				*e*S	Sg	05 44 53.2	-0.6
EMPR	Esperanza - Ma	0.88	71⥣	*e*P	Pg	05 44 43.8	-1.3
EMPR	Esperanza - Ma	0.88	71	*e*S	Sg	05 44 55.2	-1.4
EMPR	Esperanza - Ma	0.88	71⥣	*e*P	Pg	05 44 43.8	-1.3
EMPR				*e*S	Sg	05 44 55.2	-1.4
SJG	San Juan	1.19	93⥣	*e*P	Pb	05 44 48.2	-2.7
SJG	San Juan	1.19	93	*e*S	Sb	05 45 03.4	-3.0
SJG	San Juan	1.19	93⥣	*e*P	Pb	05 44 48.2	-2.7
SJG				*e*S	Sb	05 45 03.4	-3.0
CBYP	Canovanas	1.47	86⥣	*e*P	Pn	05 44 52.8	-2.1
CBYP	Canovanas	1.47	86⥣	*e*P	Pn	05 44 53.5	-1.4
CBYP	Canovanas	1.47	86⥣	*e*P	Pn	05 44 53.5	-1.4
HUMP	Col San Antoni	1.48	91⥣	*e*P	Pn	05 44 53.9	-1.0
HUMP	Col San Antoni	1.48	91⥣	*e*P	Pn	05 44 53.9	-1.0
HUMP	Col San Antoni	1.48	91⥣	*e*P	Pn	05 44 53.9	-1.0
MTP	Monte Pirata	1.76	93⥣	*e*P	Pn	05 44 58.3	-0.5
MTP	Monte Pirata	1.76	93⥣	*e*P	Pn	05 44 58.3	-0.5

IDC 01 05:56:42.5±1.6, 14°.04S×72°.82W, h83^{km}±22^{km}, mb3.0/1, mb1 3.6/4, mb1mx3.3/30, mbtmp3.8/4, Error ellipse: s-maj=78.3km s-min=11.4km az=28.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	4.42	297	P	Pn	05 57 47.6	+0.3
	16nm,0.3s,baz=124,slow=11,SNR=21						
NNA				S	Sn	05 58 37.8	+0.2
	11nm,0.3s,baz=122,slow=7.4,SNR=4.1						
LPAZ	La Paz	5.05	117	P	Pn	05 57 58.2	+1.8
	2.0nm,0.3s,baz=294,slow=8.9,SNR=56						
LPAZ				S	Sn	05 58 53.5	-0.3
	baz=29,slow=25,SNR=7.0						
CPUP	Villa Florida	18.97	133	P	P	06 00 57.3	-0.1
	0.2nm,0.3s,baz=302,slow=9.9,SNR=7.2						
TORD	Torodi Ar. Bea	78.58	73	P	P	06 08 35.7	-0.1
	0.1nm,0.2s,baz=270,slow=7.2,SNR=2.5						
WRA	Warramunga Arr	136.94	219	PKP	PKPdf	06 15 56.5	-0.1
	0.5nm,1.0s,baz=156,slow=2.3,SNR=3.0						

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*IDC **01** 06:10:50.7±0.8, 20°.49S×169°.57E, h0^{km}, mb4.3/14, mb1 4.4/15, mb1mx4.2/43, mbtmp4.3/15, ML4.3/1, MS4.5/1, Ms1 4.5/1, ms1mx3.6/22, Error ellipse: s-maj=25.0km s-min=17.3km az=135.0*

*NEIC **01** 06:10:56.0±3.6, 20°.47S×169°.45E, h31^{km}±25^{km}, mb4.5/15, Error ellipse: s-maj=14.1km s-min=10.9km az=151.0*

*ISCJB **01** 06:10:57.9±0.4, 20°.50S±0°.07×169°.23E±0°.07, h55^{km}, mb4.5/26, MS4.5/1, Error ellipse: s-maj=12.6km s-min=5.0km az=44.9*

ISC 01 06:10:58.9±0.5, 20°.5S±0°.1×169°.4E±0°.1, h55^{km}, n88, σ1^{s}28/91, mb4.4/26, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.56	233	*e*Pn	Pn	06 11 22.5	-1.8
MARNC				*e*Sn	Sn	06 11 40.1	-3.5
PINNC	Pines Island,	2.73	221	*e*Pn	Pn	06 11 39.3	-1.0
PINNC				*e*Sn	Sn	06 12 11.3	-0.9
DZM	Mont Dzumac	3.12	240	Pn	Pn	06 11 44.4	-1.4
	29nm,0.3s,baz=105,slow=13,SNR=216						
DZM				Sn	Sn	06 12 19.1	-2.8
	28nm,0.3s,baz=137,slow=24,SNR=7.6						
ONTNC	Ouen Toro	3.24	236	*e*Pn	Pn	06 11 46.2	-1.1
MSVF	Nonsavu	8.67	73	*e*Pn	Pn	06 13 07.8	+6.0
EIDS	Eidsvold	17.51	251	*e*Pn	P	06 15 02.9	+3.1
	20nm,1.0s						
ARMA	Armidale	18.77	235	*e*P	Pn	06 15 17.3	+2.6
	10nm,0.9s						
CTA	Charters Tower	21.68	267	P	P	06 15 46.4	+1.2
	1.8nm,0.5s,baz=93,slow=11,SNR=5.1						
STKA	Stephens Creek	27.28	240	*e*P	P	06 16 40.1	+1.8
	1.2nm,1.0s						
STKA	Stephens Creek	27.28	240	P	P	06 16 38.8	+0.5
	1.9nm,0.7s,baz=98,slow=11,SNR=4.1						
WB2	Warramunga Arr	32.82	265	*e*P	P	06 17 27.4	0.0
WR1	Warramunga Arr	32.83	265	*e*P	P	06 17 26.4	-1.1
	2.2nm,0.8s						
WRA	Warramunga Arr	32.84	265	P	P	06 17 26.4	-1.1
	0.6nm,0.5s,baz=92,slow=8.6,SNR=16						
AS01	Alice Springs	32.91	258	*e*P	P	06 17 28.1	-0.1
AS31	Alice Springs	32.95	258	*e*P	P	06 17 28.9	+0.4
	1.9nm,0.9s						
ASAR	Alice Springs	32.95	258	P	P	06 17 28.4	-0.2
	3.7nm,0.7s,baz=82,slow=9.0,SNR=28						
ASAR				PcP	PcP	06 20 11.6	-0.2
	0.9nm,0.8s,baz=112,slow=3.4,SNR=4.8						
PPT	Papeete	38.85	93	LR	LR	06 32 57.3	
	comp=Z,675nm,18.4s,baz=333,slow=34						
FITZ	Fitzroy Crossi	41.25	266	*e*P	P	06 18 40.1	+1.2
	3.9nm,0.8s						
FITZ	Fitzroy Crossi	41.25	266	P	P	06 18 39.6	+0.7
	1.9nm,0.7s,baz=83,slow=5.6,SNR=4.5						
NPOC	North of Pu‘u	52.78	44	*e*P	P	06 20 06.6	-2.2
	301nm,0.6s						
ASAJ	Asahikawa	68.85	340	P	P	06 21 58.3	+0.8
	10nm,0.9s,baz=242,slow=9.6,SNR=4.5						
QSPA	South Pole Qui	69.52	180	*e*P	P	06 22 02.8	+1.1
	8.9nm,1.1s						
QSPA	South Pole Qui	69.52	180	P	P	06 22 02.3	+0.6
	4.9nm,0.8s,baz=56,slow=0.8,SNR=15						
YSS	Yuzh-Sakhalins	71.34	341	*e*P	P	06 22 10.2	-2.4
	16nm,0.9s						
USRK	Ussuriysk Ar.	72.94	333	P	P	06 22 22.1	-0.2
	6.0nm,0.9s,baz=189,slow=5.0,SNR=8.4						
PETK	Petropavlovsk-	74.03	353	P	P	06 22 28.1	-0.4
	3.4nm,0.8s,baz=149,slow=5.0,SNR=7.2						
PEA1	Petropavlovsk-	74.04	353	*e*P	P	06 22 28.1	-0.5
KLR	Kul'dur	77.10	336	P	P	06 22 46.0	-0.1
	4.5nm,0.8s,baz=131,slow=4.4,SNR=17						
CM01	Chiang Mai Arr	79.12	294	*e*P	P	06 22 59.7	+1.6
CM31	Chiang Mai Arr	79.15	294	*e*P	P	06 23 00.1	+1.9
CMAR	Chiang Mai Arr	79.15	294	P	P	06 23 00.0	+1.8
	1.3nm,0.3s,baz=133,slow=4.5,SNR=9.9						
BRLK	Bradley Lake	86.34	19	*e*P	P	06 23 35.0	+0.3
	9.8nm,1.1s						
KCPM	Cahto Peak	86.55	45	*e*P	P	06 23 37.8	+1.5
	16nm,1.1s						
SNAA	Sanae	87.88	182	P	P	06 23 42.0	-0.2
SNAA	Sanae	87.88	182	*e*P	P	06 23 41.8	-0.3
	3.0nm,0.9s						
CMB	Columbia Colle	87.93	48	*e*P	P	06 23 43.7	+0.8
	1.1nm,0.8s						
YBH	Yreka Blue Hor	88.14	44	*e*P	P	06 23 44.4	+0.5
	2.2nm,1.1s						
SONA0	Songino Array	88.33	323	*e*P	P	06 23 44.5	-0.2
SONM	Songino Array	88.33	323	P	P	06 23 44.5	-0.2
	2.2nm,0.8s,baz=140,slow=4.4,SNR=14						
SONA1	Songino Array	88.33	323	*e*P	P	06 23 45.0	+0.3
VNA3	Neumayer Olymp	88.46	180	P	P	06 23 44.6	-0.3
VNA2	Neumayer--Watz	88.75	181	P	P	06 23 46.3	+0.1
VNA1	Neumayer--Stat	89.05	181	P	P	06 23 48.5	+0.9
NVAR	Mina Array Bea	89.57	48	P	P	06 23 50.5	-0.3
	0.8nm,0.8s,baz=227,slow=7.8,SNR=5.7						
MOD	Modoc Plateau	89.80	45	*e*P	P	06 23 48.8	-2.9
	3.7nm,0.6s						
PINE	Pine Mountain	90.28	43	*e*P	P	06 23 55.1	+1.1
	3.8nm,0.8s						
IM3	Indian Mountai	90.65	14	*e*P	P	06 23 54.8	-0.1
IL1	Eielson Array	91.43	17	*e*P	P	06 23 57.5	-1.1
ILAR	Eielson Array	91.43	17	P	P	06 23 56.5	-2.1
	0.5nm,0.7s,baz=227,slow=4.8,SNR=8.4						
HYT	Haines Junctio	91.63	23	*e*P	P	06 23 59.2	-0.6
	3.0nm,0.9s						
YKA	Yellowknife Ar	101.76	27	P	Pdif	06 24 43.7	-1.7
	0.1nm,0.4s,baz=252,slow=5.8,SNR=2.4						
ARA0	ARCESS Array S	126.35	345	*e*PKPdf	PKPdf	06 29 53.7	-1.2
ARCES	ARCESS Array B	126.35	345	PKP	PKPdf	06 29 53.7	-1.2
	3.3nm,1.1s,baz=72,slow=4.0,SNR=9.3						
BDFB	Brasilia	128.61	132	PKP	PKPdf	06 29 59.4	-1.4
	1.0nm,0.5s,baz=113,slow=7.3,SNR=3.0						
FIA0	FINESS Array S	131.83	337	*e*PKPdf	PKPdf	06 30 04.5	-0.9
FINES	FINESS Array B	131.83	337	PKP	PKPdf	06 30 04.5	-0.9
	1.6nm,0.8s,baz=101,slow=3.9,SNR=4.0						
DPC	Dobruska-Polom	143.41	331	*e*PKP	PKPbc	06 30 24.4	0.0
BRG	Berggiesshubel	144.08	333	*i* PKP	PKPab	06 30 26.2	+0.4
	14nm,0.8s comp=N,1μm,16.5s comp=E,580nm,16.7s comp=Z,2μm,16.1s						
CLL	Collm	144.14	335	⇑*i*PKPdf	PKPab	06 30 25.9	-0.1
	comp=Z,9.0nm,0.6s						
PRU	Pruhonice	144.47	332	*e*PKP	PKPab	06 30 27.6	+0.3
NKC	Novy Kostel	145.19	334	*e*PKP	PKPbc	06 30 30.0	+0.1
CONA	Conrad Observa	145.31	328	*i* PKPdf	PKPdf	06 30 30.8	+0.3
	comp=Z,19nm,0.9s,SNR=13						
DIVS	Divibare	145.38	320	*e*PKPbc	PKPdf	06 30 30.7	-0.2
KHC	Kasperske Hory	145.53	332	*e*PKPdf	PKPdf	06 30 31.1	+0.2
KHC	Kasperske Hory	145.53	332	*e*PKP	PKPdf	06 30 30.8	-0.1
KHC				*e*pPKP	PKiKP	06 30 40.0	+5.1
GEC2	GERESS Array S	145.68	331	*e*PKPdf	PKPdf	06 30 31.5	+0.3
GERES	GERESS Array B	145.68	331	PKPbc	PKPdf	06 30 31.3	+0.1
	comp=Z,11nm,0.8s,baz=46,slow=3.9,SNR=43						
GEA0	GERESS Array S	145.69	331	*e*PKPdf	PKPdf	06 30 31.6	+0.4
ARSA	Arzberg	145.94	328	*e*PKPbc	PKPdf	06 30 31.2	-0.4
	comp=Z,3.2nm,0.9s						
MOA	Molln	146.14	329	*e*PKPbc	PKPdf	06 30 32.4	+0.4
	comp=Z,2.4nm,0.5s						
SOKA	Soboth	146.57	327	*i* PKPbc	PKPdf	06 30 33.7	+1.0
	comp=Z,4.8nm,0.9s						
TTG	Podgorica	146.72	318	*e*PKPdf	PKPbc	06 30 34.5	-0.3
OBKA	Obir	146.93	327	*e*PKPab	PKPbc	06 30 35.7	+0.3
	comp=Z,4.9nm,0.9s						
KBA	Koelnbreinsper	147.12	329	*e*PKPbc	PKPdf	06 30 35.1	+1.3
	comp=Z,2.6nm,0.5s						
ITM	Ithomi	147.22	307	*e*PKPdf	PKPbc	06 30 35.7	-0.7
MYKA	Terra Mystica	147.30	328	*i* PKPbc	PKPdf	06 30 35.4	+1.4
	comp=Z,4.6nm,0.5s						
ABTA	Abfaltersbach	147.76	330	*i* PKPbc	PKPdf	06 30 36.5	+1.7
	comp=Z,6.1nm,0.6s						
WATA	Walderalm	147.76	331	*e*PKPbc	PKPbc	06 30 37.2	-0.5
	comp=Z,2.8nm,0.4s						
WTTA	Wattenberg	147.79	331	*e*PKPbc	PKPbc	06 30 37.2	-0.6
	comp=Z,3.4nm,0.6s						
MOTA	Moosalm	147.97	332	*e*PKPbc	PKPbc	06 30 37.4	-0.9
	comp=Z,22nm,1.1s						
RETA	Reutte	148.01	332	*e*PKPbc	PKPbc	06 30 37.8	-0.5
	comp=Z,2.0nm,0.5s						
SQTA	Sankt Quirin	148.01	331	*i* PKPbc	PKPbc	06 30 37.7	-0.6
	comp=Z,7.9nm,0.6s						
BFO	Black Forest	148.34	336	*e*PKPbc	PKPbc	06 30 38.8	-0.2
BFO				*e*PKPab	PKPab	06 30 42.6	+0.3
FETA	Feichten	148.38	332	*i* PKPbc	PKPbc	06 30 38.9	-0.5
	comp=Z,9.3nm,1.0s,SNR=8.4						
DAVA	Damuels	148.54	333	PKPbc	PKPbc	06 30 39.4	-0.4
	comp=Z,10.0nm,1.0s						
FUORN	Ofenpass-Fuorn	148.89	332	*e*PKPbc	PKPbc	06 30 40.8	0.0
SENIN	Lac Senin/Sane	150.35	334	*e*PKPab	PKPab	06 30 50.4	-0.4
BNI	Bardonecchia	151.67	334	*e*PKPbc	PKPbc	06 30 47.0	-0.4

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*IDC **01** 06:13:20.3±1.1, 37°.21S×179°.87E, h0^{km}, mb4.5/3, mb1 4.6/5, mb1mx4.1/38, mbtmp4.4/5, ML3.9/2, Error ellipse: s-maj=43.2km s-min=29.6km az=159.0*

*ISCJB **01** 06:13:22.0±0.9, 37°.37S±0°.04×179°.88W±0°.07, h46^{km}±8^{km}, mb4.5/10, Error ellipse: s-maj=9.8km s-min=6.9km az=172.0*

*NEIC **01** 06:13:23.8±0.0, 37°.21S×179°.98W, h53^{km}, mb4.4/7, ML4.5(WEL), After WEL.*

*WEL **01** 06:13:25.5±1.1, 37°S±12°×18°0E±°, h33^{km}, ML4.7/12*

ISC 01 06:13:24.6±1.1, 37°.34S±0°.06×179°.89E±0°.07, h34^{km}±3^{km}, n99, σ2^{s}07/126, mb4.5/10, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.26	247	P	Pb	06 13 48.0	+0.1
WMGZ				S	Sb	06 14 05.9	+2.0
MXZ	Matakaoa Point	1.28	260	*e*Pn	Pn	06 13 46.1	+0.1
PUZ	Puketiti	1.48	240	P	Pb	06 13 51.0	-0.6
PUZ				S	Sb	06 14 10.5	+0.3
PKGZ	Pakihiroa	1.54	249	P	Pn	06 13 51.3	+1.6
PKGZ				S	Sb	06 14 11.3	-0.4
HAZ	Te Kaha	1.72	255	P	Pn	06 13 53.6	+1.4
TWGZ	Tauwhareparae	1.73	241	P	Pn	06 13 54.6	+2.3
TWGZ				S	Sb	06 14 17.0	-0.1
CNGZ	Carnagh Statio	1.75	229	P	Pb	06 13 56.0	-0.1
TKGZ	Te Karaka	1.95	235	P	Pn	06 13 57.6	+2.3
TKGZ				S	Sb	06 14 22.7	-0.7
MWZ	Matawai	2.12	241	P	Pn	06 13 59.4	+1.8
MWZ				S	Sn	06 14 25.4	+2.7
RIGZ	Rimuhau	2.16	230	P	Pn	06 14 01.0	+2.7
RIGZ				S	Sb	06 14 29.2	-0.4
RAGZ	Rawiri	2.27	239	P	Pn	06 14 01.9	+2.2
RAGZ				S	Sn	06 14 30.3	+3.7
WHRZ	Whale Island	2.37	257	S	Sn	06 14 30.6	+1.6
URZ	Urewera	2.38	247	Pn	Pn	06 14 02.5	+1.2
	42nm,0.3s,baz=39,slow=9.1,SNR=170						
URZ				Sn	Sn	06 14 29.3	+0.1
	104nm,0.3s,baz=41,slow=20,SNR=11						
URZ	Urewera	2.38	247	P	Pn	06 14 03.1	+1.9
URZ				S	Sn	06 14 31.5	+2.2
MHGZ	Mahia Peninsul	2.39	220	P	Pn	06 14 04.4	+3.1
KNZ	Kokohu	2.42	225	P	Pn	06 14 03.8	+2.0
SNGZ	Shannon Statio	2.47	234	P	Pn	06 14 04.7	+2.2
SNGZ				S	Sn	06 14 35.0	+3.5
EDRZ	Edgecumbe	2.61	252	P	Pn	06 14 05.9	+1.5
OPRZ	Ohinepanea	2.69	258	P	Pn	06 14 06.1	+0.6
BKZ	Black Stump Fm	3.23	235	*e*Pn	Pn	06 14 14.4	+1.4
BKZ				*e*Sn	Sn	06 14 55.1	+4.7
KUZ	Kuaotunu	3.39	279	P	Pn	06 14 14.1	-0.9
GRZ	Great Barrier	3.72	286	P	Pn	06 14 18.8	-0.8
MKAZ	Moumakai	3.78	272	P	Pn	06 14 20.3	-0.1
WPHZ	Waipukurau	3.83	224	P	Pn	06 14 23.1	+2.0
WIAZ	Waiheke Island	3.84	277	P	Pn	06 14 21.1	-0.2
PRHZ	Porangahau	3.87	220	P	Pn	06 14 22.7	+1.0
ETAZ	East Tamaki Re	3.98	274	P	Pn	06 14 23.5	+0.3
KBAZ	Karaka Road Bo	4.00	272	P	Pn	06 14 24.2	+0.8
MBAZ	Motutapu North	4.03	277	P	Pn	06 14 24.0	+0.1
TSZ	Takapari Road	4.10	227	P	Pn	06 14 25.7	+0.8
EPAZ	Eden Park BICE	4.14	275	P	Pn	06 14 26.3	+1.0
DVHZ	Dannevirke	4.14	223	P	Pn	06 14 26.4	+0.9
HIZ	Hauiti	4.15	252	*e*Pn	Pn	06 14 27.0	+1.5
HBAZ	Herne Bay Bore	4.15	275	P	Pn	06 14 26.3	+0.7
AWAZ	Awhitu Peninsu	4.20	272	P	Pn	06 14 26.9	+0.8
WTAZ	Waiatarua	4.27	274	P	Pn	06 14 28.0	+0.9
BFZ	Birch Farm	4.38	219	*e*Pn	Pn	06 14 29.2	+0.5
BFZ				*e*Sn	Sn	06 15 19.6	+1.1
BFZ	Birch Farm	4.38	219	P	Pn	06 14 29.2	+0.5
PRWZ	Pori Road	4.43	222	P	Pn	06 14 30.8	+1.5
CPWZ	Castlepoint	4.57	218	P	Pn	06 14 32.4	+1.0
TIWZ	Tintock	4.63	221	P	Pn	06 14 33.1	+0.9
WCZ	Waipu Caves	4.67	286	P	Pn	06 14 32.3	-0.4
MRZ	Mangatainoka R	4.72	224	P	Pn	06 14 33.9	+0.6
TMWZ	Te Maipa	4.88	218	P	Pn	06 14 35.8	+0.3
HOWZ	Holdsworth Sta	4.92	222	P	Pn	06 14 36.3	+0.2
OGWZ	Otaki Gorge	5.05	225	P	Pn	06 14 38.0	+0.1
MTW	Mount Morrison	5.11	220	P	Pn	06 14 38.5	-0.2
TRWZ	Traveller	5.20	217	P	Pn	06 14 39.5	-0.5
KIW	Kapiti Island	5.23	226	P	Pn	06 14 40.3	0.0
PAWZ	Paruwai Farm	5.31	219	P	Pn	06 14 41.3	-0.2
MSWZ	Moikau Station	5.43	220	P	Pn	06 14 42.6	-0.5
OUZ	Omahuta	5.51	291	*e*Pn	Pn	06 14 43.5	-0.7
OUZ	Omahuta	5.51	291	P	Pn	06 14 43.8	-0.3
PLWZ	Palliser	5.54	219	P	Pn	06 14 43.7	-0.9
BHW	Baring Head	5.62	222	P	Pn	06 14 46.0	+0.3
SNZO	South Karori	5.64	224	*e*Pn	Pn	06 14 45.3	-0.7
SNZO				*e*Sn	Sn	06 15 48.2	-1.4
DUWZ	D’Urville Isla	5.79	232	P	Pn	06 14 47.8	-0.3
TCW	Tory Channel	5.82	227	P	Pn	06 14 48.7	+0.3
NNZ	Nelson	6.36	231	P	Pn	06 14 55.4	-0.5
BSWZ	Blackbirch Sta	6.38	225	P	Pn	06 14 55.9	-0.2
QRZ	Quartz Range	6.70	236	P	Pn	06 14 59.3	-1.2
THZ	Tophouse	6.97	229	*e*Pn	Pn	06 15 02.6	-1.7
THZ				*e*Sn	Sn	06 16 20.5	-1.9
KHZ	Kahutara	7.04	222	*e*Pn	Pn	06 15 06.4	+1.3
KHZ				*e*Sn	Sn	06 16 20.4	-3.5
LTZ	Lake Taylor	7.97	225	*e*Pn	Pn	06 15 17.7	-0.4
LTZ				*e*Sn	Sn	06 16 44.7	-2.4
CRLZ	Canterbury Las	8.33	219	*e*Sn	Sn	06 16 53.1	-2.6
MQZ	McQueen’s Vall	8.41	219	*e*Pn	Pn	06 15 23.5	-0.4
MQZ				*e*Sn	Sn	06 16 52.9	-4.8
RPZ	Rata Peaks	9.26	224	*e*Pn	Pn	06 15 34.5	-1.1
RPZ				*e*Sn	Sn	06 17 12.2	-6.3
RPZ	Rata Peaks	9.26	224	Pn	Pn	06 15 35.0	-0.6
	0.9nm,0.3s,baz=357,slow=2.1,SNR=5.0						
RPZ				Sn	Sn	06 17 11.9	-6.6
	3.2nm,0.3s,baz=351,slow=20,SNR=14						
FOZ	Fox Glacier	9.85	228	*e*Pn	Pn	06 15 44.2	+0.5
FOZ				*e*Sn	Sn	06 17 27.4	-5.7
LBZ	Lake Benmore	10.17	223	*e*Pn	Pn	06 15 47.7	-0.4
LBZ				*e*Sn	Sn	06 17 33.9	-7.0
ODZ	Otahua Downs	10.37	219	*e*Pn	Pn	06 15 50.5	-0.4
ODZ				*e*Sn	Sn	06 17 42.0	-3.8
WKZ	Wanaka	11.09	224	*e*Pn	Pn	06 16 03.6	+2.8
WKZ				*e*Sn	Sn	06 17 57.6	-5.9
MLZ	Mavora Lakes	11.93	224	*e*Pn	Pn	06 16 15.5	+3.3
MLZ				*e*Sn	Sn	06 18 18.3	-5.7
WHZ	Wether Hill Ro	12.35	223	*e*Pn	Pn	06 16 20.2	+2.3
DZM	Mont Dzumac	19.15	319	*e*P	P	06 17 44.2	-0.9
	6.5nm,0.9s						
MSVF	Nonsavu	19.60	355	*e*P	P	06 17 47.0	-3.0
	8.3nm,1.0s						
RAR	Rarotonga	23.86	53	*e*P	P	06 18 32.5	-2.3
	68nm,1.1s						
STKA	Stephens Creek	31.83	268	P	P	06 19 50.9	+4.7
	1.4nm,0.6s,baz=129,slow=14,SNR=2.3						
VNDA	Vanda	41.03	186	*e*P	P	06 21 01.2	-2.8
	74nm,0.6s						
AS01	Alice Springs	41.47	276	*e*P	P	06 21 09.2	+0.8
AS31	Alice Springs	41.51	276	*e*P	P	06 21 09.0	+0.3
	3.3nm,0.6s						
ASAR	Alice Springs	41.51	276	P	P	06 21 09.1	+0.3
	4.3nm,0.6s,baz=124,slow=7.9,SNR=18						
WB2	Warramunga Arr	43.12	281	*e*P	P	06 21 22.4	+0.6
	9.9nm,1.0s						
WRAB	Tennant Creek	43.12	281	*e*P	P	06 21 23.2	+1.3
	6.1nm,0.7s						
WR1	Warramunga Arr	43.12	281	*e*P	P	06 21 21.8	-0.1
	10nm,1.1s						
WR1				*e*PP	PcP	06 23 12.8	+1.6
WRA	Warramunga Arr	43.12	281	P	P	06 21 21.8	-0.1
	1.4nm,0.3s,baz=120,slow=7.7,SNR=20						
WRA				PcP	PcP	06 23 12.8	+1.5
	0.8nm,0.7s,baz=120,slow=3.3,SNR=3.1						
CMAR	Chiang Mai Arr	94.07	290	P	P	06 26 39.9	+0.2
	1.2nm,0.4s,baz=145,slow=3.2,SNR=4.8						
MK32	Makanchi Array	120.75	308	*e*PKPdf	PKPdf	06 32 12.4	-0.2
MKAR	Makanchi Array	120.75	308	PKP	PKPdf	06 32 12.4	-0.2
	0.1nm,0.4s,baz=134,slow=3.5,SNR=3.8						
KURK	Kurchatov	124.42	311	*e*PKPdf	PKiKP	06 32 20.9	+1.1
KURBB	Kurchatov Arra	124.44	311	PKP	PKiKP	06 32 20.9	+1.0
	0.5nm,0.3s,baz=122,slow=1.8,SNR=3.1						
ARA0	ARCESS Array S	144.90	345	*e*PKPdf	PKPdf	06 32 57.0	0.0
ARCES	ARCESS Array B	144.90	345	PKP	PKPdf	06 32 57.0	0.0
	6.4nm,0.9s,baz=20,slow=3.9,SNR=8.6						
FIA0	FINESS Array S	150.85	334	*e*PKPbc	PKiKP	06 33 13.8	+0.6
FINES	FINESS Array B	150.85	334	PKPbc	PKiKP	06 33 13.8	+0.6
	3.3nm,0.8s,baz=45,slow=5.7,SNR=10						
BR101	Keskin Array S	153.58	286	*e*PKPbc	PKiKP	06 33 20.1	+0.3
BRTR	Keskin Array B	153.58	286	PKPbc	PKiKP	06 33 20.1	+0.3
	2.0nm,1.0s,baz=45,slow=0.5,SNR=7.1						
TORD	Torodi Ar. Bea	155.85	184	PKP	PKPdf	06 33 18.3	+2.7
	0.7nm,1.0s,baz=194,slow=2.4,SNR=3.7						
TORD				PKPab	PKPab	06 33 42.8	+0.6
	1.9nm,1.0s,baz=194,slow=2.0,SNR=5.8						
TOA1	Torodi Ar. Sit	155.86	184	*e*PKPdif	PKPdf	06 33 18.3	+2.7
TOA1				*e*PKPab	PKPab	06 33 42.8	+0.6

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*ISCJB **01** 06:19:47.6±0.6, 36°.15N±0°.04×136°.77E±0°.04, h8^{km}±6^{km}, mb3.4/3, Error ellipse: s-maj=7.2km s-min=4.9km az=160.2*

*IDC **01** 06:19:48.0±1.2, 36°.15N×136°.77E, h0^{km}, mb3.4/3, mb1 3.5/5, mb1mx3.3/52, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=18.1km s-min=12.4km az=171.0*

*JMA **01** 06:19:47.8, 36°.16N×136°.77E, h3^{km}, M3.4 Broadband fault plane solution: P waves. NP1:ϕ_s237.00000°, δ89.00000°, λ-178.00000°. NP2:ϕ_s147.00000°, δ88.00000°, λ-1.00000°. Principal axes: T Plg1.0000°, Azm12.0000°; N Plg88.0000°, Azm255.0000°; P Plg2.0000°, Azm102.0000°;*

JMA Felt I J1.

ISC 01 06:19:48.4±1.2, 36°.16N±0°.04×136°.79E±0°.03, h3^{km}±10^{km}, n11, σ0^{s}51/16, mb3.4/3, 1C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	0.39	288	⇓P	Pg	06 19 55.5	-0.4
JKG				S	Sg	06 20 01.0	+0.1
JGN	Niukaw	0.43	81	⇓P	Pg	06 19 56.4	-0.2
JGN				S	Sg	06 20 02.3	+0.1
JYTA	Yamagatataniai	0.57	185	P	Pg	06 19 58.9	-0.3
JYTA				S	Sg	06 20 06.7	+0.2
JTT	Ttatey	0.62	44	⇑P	Pg	06 20 00.2	-0.1
JTT				S	Sg	06 20 09.1	+0.7
MAT	Matsushiro	1.21	71	P	Pg	06 20 11.0	-0.5
MAT				S	Sn	06 20 28.9	-0.1
MJAR	Matsushiro Arr	1.21	71	Pg	Pb	06 20 11.8	0.0
	9.2nm,0.3s,baz=254,slow=15,SNR=287						
MJAR				Lg	Lg	06 20 28.9	
	12nm,0.3s,baz=252,slow=33,SNR=21						
JNU	Nakatsue	5.74	240	Pn	Pn	06 21 15.4	+1.0
	0.9nm,0.3s,baz=70,slow=2.3,SNR=5.2						
KSRS	Korea Array	7.23	283	Pn	Pn	06 21 35.4	+0.4
	0.4nm,0.3s,baz=96,slow=14,SNR=5.9						
SONM	Songino Array	25.26	307	P	P	06 25 14.8	-1.0
	0.3nm,0.5s,baz=111,slow=7.9,SNR=2.5						
KURBB	Kurchatov Arra	43.61	308	P	P	06 27 53.9	+0.2
	0.4nm,0.3s,baz=87,slow=7.7,SNR=4.0						
WRA	Warramunga Arr	55.84	183	P	P	06 29 27.0	-0.1
	0.3nm,0.7s,baz=0.3,slow=7.5,SNR=4.7						

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*IDC **01** 06:20:40.2±2.1, 11°.52S×165°.88E, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.7/41, mbtmp3.9/5, Error ellipse: s-maj=139.1km s-min=23.5km az=145.0*

*NEIC **01** 06:20:42.8±0.9, 10°.85S×165°.42E, h10^{km}, mb4.4/4, Error ellipse: s-maj=19.0km s-min=13.8km az=74.0*

*ISCJB **01** 06:20:43.9±0.8, 10°.95S±0°.10×165°.4E±0°.1, h30^{km}, mb4.1/8, Error ellipse: s-maj=17.4km s-min=13.8km az=162.7*

ISC 01 06:20:45.7±0.9, 10°.9S±0°.1×165°.3E±0°.2, h30^{km}, n12, σ1^{s}47/11, mb4.2/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.15	175	*e*Pn	Pn	06 23 20.7	-2.6
ONTNC	Ouen Toro	11.39	175	*e*Pn	Pn	06 23 27.0	+0.6
PINNC	Pines Island,	11.81	170	*e*Pn	Pn	06 23 34.0	+1.7
CTA	Charters Tower	20.52	241	P	Pn	06 25 23.8	-0.2
	2.6nm,0.5s,baz=69,slow=14,SNR=4.0						
BKZ	Black Stump Fm	29.85	162	*e*P	P	06 26 50.1	-0.3
	9.3nm,1.1s						
WB2	Warramunga Arr	31.15	249	*e*P	P	06 27 01.8	-0.3
	5.5nm,1.1s						
WR1	Warramunga Arr	31.16	249	*e*P	P	06 27 03.5	+1.2
	5.4nm,1.1s						
WRA	Warramunga Arr	31.16	249	P	P	06 27 03.5	+1.2
	3.5nm,1.1s,baz=82,slow=9.3,SNR=8.5						
ASAR	Alice Springs	32.50	243	P	P	06 27 14.1	+0.1
	0.5nm,0.9s,baz=67,slow=10,SNR=3.4						
USA0B	Ussuriysk Arra	62.65	334	*e*P	P	06 31 06.2	-1.2
	4.1nm,0.8s						
ILAR	Eielson Array	83.51	19	P	P	06 33 11.8	+1.5
	0.6nm,0.7s,baz=233,slow=5.4,SNR=8.5						
NVAR	Mina Array Bea	86.24	50	P	P	06 33 24.2	-0.7
	0.7nm,0.9s,baz=242,slow=4.9,SNR=4.0						

IDC 01 06:21:23.5±2.4, 54°.14N×86°.20E, h0^{km}, mb1 3.0/2, mb1mx2.9/47, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=19.0km s-min=11.7km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.84	257	*i*		06 27 00.8	
	baz=77,slow=352,SNR=2.0						
ZALV	Zalesovo Beam	0.84	257	Pg	Pg	06 21 38.5	-1.0
	3.4nm,0.3s,baz=74,slow=16,SNR=45						
ZALV				Lg	Lg	06 21 51.8	
	3.2nm,0.3s,baz=76,slow=29,SNR=20						
KURBB	Kurchatov Arra	5.87	236	Pn	Pn	06 22 52.7	+1.0
	0.1nm,0.3s,baz=51,slow=15,SNR=2.7						
MKAR	Makanchi Array	7.77	200	Pn	Pn	06 23 18.8	+1.1
	0.1nm,0.3s,baz=25,slow=15,SNR=7.6						
MKAR				Lg	Lg	06 25 27.1	
	0.0nm,0.3s,baz=30,slow=29,SNR=4.1						

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*SOME **01** 06:30:52.8, 42°.62N×78°.93E, h5^{km}*

*NNC **01** 06:30:52.7±0.6, 42°.64N×78°.94E, h0^{km}, mb2.5, mpv2.8, Error ellipse: s-maj=4.3km s-min=2.0km az=165.0*

ISC 01 06:30:53.6±1.5, 42°.65N±0°.07×78°.92E±0°.04, h10^{km}, n22, σ0^{s}88/43, 2C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.50	9	P	Pg	06 31 02.9	-0.5
	5.3nm,0.1s						
UZB				S	Sg	06 31 10.5	+0.4
	29nm,0.2s						
UZB	Uzynbulak	0.50	9	*e*P	Pg	06 31 02.9	-0.5
	5.3nm,0.1s						
UZB				*e*S	Sg	06 31 10.4	+0.4
	29nm,0.2s						
SATY	Saty	0.55	318	P	Pg	06 31 04.1	-0.2
	3.5nm,0.1s						
SATY				S	Sg	06 31 12.1	+0.4
	37nm,0.1s						
SATY	Saty	0.55	318	*e*P	Pg	06 31 04.1	-0.2
	3.5nm,0.1s						
SATY				⇑*i*S	Sg	06 31 12.1	+0.4
	37nm,0.1s						
SHLS	Shalkode	0.65	38	P	Pn	06 31 09.4	+0.5
	10nm,0.1s						
SHLS				S	Sn	06 31 21.6	+2.3
	61nm,0.4s						
SHLS	Shalkode	0.65	38	*e*P	Pn	06 31 09.4	+0.5
	10nm,0.1s						
SHLS				*e*S	Sn	06 31 21.6	+2.3
	61nm,0.4s						
PDGK	Podgornoye	0.80	32	P	Pg	06 31 07.9	-1.1
	2.4nm,0.1s						
PDGK				S	Sg	06 31 19.0	-0.5
	3.0nm,0.2s						
KURS	Kuram	1.00	327	P	Pg	06 31 12.3	-0.5
	1.1nm,0.2s						
KURS				S	Sb	06 31 26.2	-0.1
	3.5nm,0.2s						
KURS	Kuram	1.00	327	*e*P	Pg	06 31 12.3	-0.5
	1.1nm,0.2s						
KURS				*e*S	Sb	06 31 26.2	-0.1
	3.5nm,0.2s						
KOTS	Kotyrbulak	1.45	294	P	Pb	06 31 20.0	-0.8
	2.9nm,0.2s						
KOTS				S	Sg	06 31 39.5	-0.6
	5.2nm,0.3s						
KOTS	Kotyrbulak	1.45	294	*e*P	Pb	06 31 19.9	-0.8
	2.9nm,0.2s						
KOTS				*e*S	Sg	06 31 39.5	-0.6
	5.2nm,0.3s						
TNSS	Tian-Shan	1.50	286	P	Pb	06 31 20.9	-0.9
	2.2nm,0.1s						
TNSS				S	Sb	06 31 41.0	+0.1
	5.2nm,0.3s						
TNSS	Tian-Shan	1.50	286	*e*P	Pb	06 31 20.9	-0.9
	2.2nm,0.1s						
TNSS				*e*S	Sb	06 31 41.0	+0.1
	5.2nm,0.3s						
IZV	Izvestkoviy	1.74	284	P	Pb	06 31 25.0	-0.7
	4.8nm,0.1s						
IZV				S	Sb	06 31 48.0	+0.5

	5.9nm,0.3s						
IZV	Izvestkoviy	1.74	284	eP	Pb	06 31 25.0	-0.7
	4.8nm,0.1s						
IZV				eS	Sb	06 31 48.0	+0.5
	5.9nm,0.3s						
ARXS	Arharly	1.75	333	P	Pb	06 31 25.8	-0.1
	0.6nm,0.1s						
ARXS				S	Sg	06 31 49.4	-0.5
	9.5nm,0.3s						
ARXS	Arharly	1.75	333	eP	Pb	06 31 25.8	-0.1
	0.6nm,0.1s						
ARXS				eS	Sg	06 31 49.4	-0.5
	9.5nm,0.3s						
DJR	Jarkent	1.80	20	eP	Pb	06 31 25.7	-1.0
	0.6nm,0.2s						
DJR				eS	Sg	06 31 49.7	-1.6
	2.6nm,0.3s						
CHKK	Chushkaly	1.85	311	P	Pb	06 31 27.3	-0.3
	2.6nm,0.3s						
CHKK				S	Sg	06 31 52.2	-0.9
	13nm,0.2s						
CHKK	Chushkaly	1.85	311	⇑iP	Pb	06 31 27.3	-0.3
	2.6nm,0.3s						
CHKK				eS	Sg	06 31 52.2	-0.9
	13nm,0.2s						
TKM2	Tokmak 2	2.46	277	⇓Pg	Pb	06 31 37.9	-0.1
	1.3nm,0.7s						
TKM2				⇓Lg	Lg	06 32 11.1	
	2.3nm,0.6s						
KAPS	Kapalarasan	2.65	7	eP	Pb	06 31 41.4	+0.1
	0.8nm,0.3s						
KAPS				eS	Sg	06 32 16.3	-2.5
	3.6nm,0.2s						

JMA 01 06:32:05.6, 35°.65N×137°.12E, h8^{km}, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGF	Kuroka	0.20	104	P	Pg	06 32 09.7	0.0
JGF				S	Sg	06 32 12.5	+0.1
JYTA	Yamagatataniai	0.32	260	P	Pg	06 32 12.0	+0.1
JYTA				S	Sg	06 32 16.3	+0.2
JICN	Ichinomiyachia	0.41	213	P	Pg	06 32 14.0	+0.3
JGN	Niukaw	0.59	15	P	Pg	06 32 16.9	-0.2
JGN				S	Sg	06 32 24.8	-0.1
MAT	Matsushiro	1.25	44	P	Pn	06 32 29.1	-0.3
MAT				S	Sb	06 32 45.4	-0.4

ISCJB ***01*** *06:32:34.2±0.1, 47°.53N±0°.02×81°.05E±0°.02, h10^{km}, mb4.4/89, Error ellipse: s-maj=2.4km s-min=2.1km az=145.3*

IDC ***01*** *06:32:34.0±0.5, 47°.53N×80°.97E, h0^{km}, mb4.2/21, mb1 4.4/24, mb1mx4.3/31, mbtmp4.2/24, ML4.1/3, Error ellipse: s-maj=16.4km s-min=7.0km az=41.0*

MOS ***01*** *06:32:34.1±1.2, 47°.56N×80°.97E, h7^{km}, mb4.6/43, Error ellipse: s-maj=5.8km s-min=4.3km az=85.6*

BJI ***01*** *06:32:35.6, 47°.44N×81°.05E, h14^{km}, mB4.6/4, mb4.5/25, ML4.8/8, Ms4.2/4, Ms7 4.1/6*

NEIC ***01*** *06:32:35.9±0.7, 47°.54N×81°.09E, h10^{km}±4^{km}, mb4.5/48, Error ellipse: s-maj=3.9km s-min=2.9km az=152.0*

NNC ***01*** *06:32:36.3±0.6, 47°.45N×81°.02E, h20^{km}±5^{km}, mb5.5, mpv5.2, Error ellipse: s-maj=4.0km s-min=2.8km az=29.0*

ASRS ***01*** *06:32:37.8±1.2, 47°.56N×80°.92E, h15^{km}, Ms5.0/2*

SOME ***01*** *06:32:38.2, 47°.47N×80°.78E, h15^{km}*

ISC 01 06:32:35.6±0.3, **47°.48N**±0°.02×**80°.98E**±0°.02, **h10^{km}, n340, σ2^{s}02**/392, **mb4.5**/95, **38C-23D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKZ	Makanchi	0.95	134	ePg	Pg	06 32 53.7	-0.4
MAKZ				eSg	Sg	06 33 06.3	-0.1
MAKZ	Makanchi	0.95	134	⇑P	Pg	06 32 53.6	-0.4
	667nm,0.3s						
MAKZ				⇑S	Sg	06 33 05.8	-0.6
	10µm,0.5s						
MAKZ	Makanchi	0.95	134	PG	Pg	06 32 53.6	-0.4
MAKZ				S	Sg	06 33 05.8	-0.6
MAKZ				pmax	pmax		
	comp=Z,667nm,0.3s						
MAKZ				smax	smax		
	comp=N,10µm,0.5s						
MK31	Makanchi Array	1.13	127	ePg	Pb	06 32 56.6	-0.7
MK31	Makanchi Array	1.13	127	⇑P	Pb	06 32 56.4	-0.9
	comp=N,223nm,0.2s,baz=313,slow=17						
MK31				⇓S	Sb	06 33 11.2	-0.7
	comp=N,2µm,0.3s,baz=312,slow=28,SNR=16						
MK31	Makanchi Array	1.13	127	PG	Pb	06 32 56.3	-0.9
MK31				S	Sb	06 33 11.2	-0.7
MK31				pmax	pmax		
	comp=Z,223nm,0.2s						
MK31				smax	smax		
	comp=N,2µm,0.3s						
MK32	Makanchi Array	1.13	127	ePg	Pb	06 32 56.8	-0.4
MK32				eSn	Sb	06 33 11.6	-0.4
MKAR	Makanchi Array	1.13	127	Pg	Pb	06 32 56.8	-0.4
	comp=N,630nm,0.3s,baz=324,slow=16,SNR=7409						
MKAR				Lg	Lg	06 33 11.5	
	comp=N,5µm,0.3s,baz=319,slow=27,SNR=56						
MK01	Makanchi Array	1.15	128	ePg	Pb	06 32 56.5	-1.1
MK01				eSn	Sb	06 33 11.5	-1.0
KAPS	Kapalarasan	2.46	208	P	Pg	06 33 21.8	-1.0
	comp=N,1µm,0.5s						
KAPS	Kapalarasan	2.46	208	eP	Pb	06 33 18.3	-1.7
	comp=N,1µm,0.5s						
ZSN	Zaisan	2.64	89	Pg	Pb	06 33 22.7	-0.3
	comp=N,730nm,0.3s						
ZSN				Lg	Lg	06 33 54.4	
	comp=N,1µm,0.5s						
ZSN	Zaisan	2.64	89	eP	Pb	06 33 22.7	-0.3
	comp=N,730nm,0.3s						
ZSN				eS	Sb	06 33 55.7	+0.3
	comp=N,2µm,0.5s						
SEM	Semipalatinsk	2.97	351	Pg	Pb	06 33 29.5	+0.7
	comp=N,926nm,0.3s						
SEM				Lg	Lg	06 34 06.4	
	comp=N,12µm,0.6s						
SEM	Semipalatinsk	2.97	351	eP	Pb	06 33 29.6	+0.7
	comp=N,1µm,0.4s						
SEM				eS	Sb	06 34 07.2	+1.9
	comp=N,10µm,0.6s						
TDK	Taldyqorghan	3.05	217	Pg	Pg	06 33 33.0	-1.0
	comp=N,2µm,0.4s						
TDK				Lg	Lg	06 34 12.3	
	comp=N,11µm,0.6s						
TDK	Taldyqorghan	3.05	217	eP	Pg	06 33 33.3	-0.8
	comp=N,2µm,0.3s						
TDK				eS	Sg	06 34 13.3	-0.3
	comp=N,11µm,0.6s						
DJR	Jarkent	3.25	195	Pg	Pg	06 33 35.9	-2.0
	comp=N,493nm,0.5s						
DJR				Lg	Lg	06 34 17.2	
	comp=N,2µm,0.4s						
DJR	Jarkent	3.25	195	eP	Pg	06 33 35.9	-2.0
	comp=N,493nm,0.5s						
DJR				eS	Sg	06 34 17.2	-2.9
	comp=N,2µm,0.4s						
KURBB	Kurchatov Arra	3.54	334	Pn	Pn	06 33 29.9	-0.7
	comp=N,14nm,0.3s,baz=150,slow=13,SNR=141						
KURBB				Pg	Pb	06 33 39.1	+0.8
	comp=N,65nm,0.3s,baz=156,slow=17,SNR=99						
KURK	Kurchatov	3.59	335	ePn	Pn	06 33 31.6	+0.3
KURK				ePg	Pb	06 33 39.1	-0.1
KURK	Kurchatov	3.59	335	⇑Pn	Pn	06 33 31.5	+0.1
	comp=N,14nm,0.2s						
KURK				⇑Pg	Pb	06 33 40.3	+1.1
	comp=N,690nm,0.6s						
KURK				⇓Lg	Lg	06 34 30.0	
	comp=N,3µm,0.6s						
KURK	Kurchatov	3.59	335	cePN	Pn	06 33 31.6	+0.3
KURK				pmax	pmax		
	comp=Z,35nm,0.7s						
MNBS	Baschi	3.85	209	Pg	Pg	06 33 46.8	-2.5
	comp=Z,376nm,0.5s						
MNBS				Lg	Lg	06 34 36.1	
	comp=Z,3µm,0.8s						
MNBS	Baschi	3.85	209	eP	Pg	06 33 46.8	-2.5
	comp=Z,376nm,0.5s						
MNBS				eS	Sg	06 34 36.1	-3.0
	comp=Z,3µm,0.8s						
ARXS	Arharly	3.94	215	Pg	Pg	06 33 49.0	-2.0
	comp=Z,526nm,0.3s						
ARXS				Lg	Lg	06 34 39.8	
	comp=Z,9µm,0.6s						
ARXS	Arharly	3.94	215	eP	Pg	06 33 49.0	-2.0
	comp=Z,526nm,0.3s						
ARXS				eS	Sg	06 34 39.8	-2.2
	comp=Z,9µm,0.6s						
KTMS	Ketmen	4.05	186	Pg	Pg	06 33 51.5	-1.8
	comp=Z,267nm,0.3s						
KTMS				Lg	Lg	06 34 44.3	
	comp=Z,968nm,0.5s						
KTMS	Ketmen	4.05	186	eP	Pg	06 33 51.5	-1.8
	comp=Z,267nm,0.3s						
KTMS				eS	Sg	06 34 44.3	-1.5
	comp=Z,968nm,0.5s						
UKR	Ust'-Kan	4.26	34	ePn	Pn	06 33 43.7	+3.0
UKR				ePg	Pb	06 33 52.8	+2.1
UKR				eSg	Sg	06 34 48.4	-4.1
UKR	Ust'-Kan	4.26	34	ePN	Pn	06 33 43.7	+3.0
UKR				e		06 33 52.8	
PDGK	Podgornoye	4.28	195	Pg	Pg	06 33 55.0	-2.6
	comp=Z,343nm,0.5s						
PDGK				Lg	Lg	06 34 50.0	
	comp=Z,2µm,0.5s						
PDGK	Podgornoye	4.28	195	⇓Pn	Pn	06 33 41.6	+0.7
	comp=Z,58nm,0.5s						
PDGK				⇑Pg	Pg	06 33 54.7	-2.8
	comp=Z,403nm,0.5s						
PDGK				⇑Lg	Lg	06 34 52.0	
	comp=Z,2µm,0.7s						
PDGK	Podgornoye	4.28	195	PN	Pn	06 33 42.6	+1.7
PDGK						06 33 54.7	
PDGK						06 34 49.7	
PDGK				pmax	pmax		
	comp=Z,58nm,0.5s						
PDGK				pmax	pmax		
	comp=Z,403nm,0.5s						
PDGK				pmax	pmax		
	comp=N,2µm,0.7s						
KURS	Kuram	4.45	207	Pg	Pg	06 33 57.3	-3.5
	comp=N,228nm,0.4s						
KURS				Lg	Lg	06 34 54.1	
	comp=N,2µm,0.8s						
KURS	Kuram	4.45	207	eP	Pg	06 33 57.3	-3.5
	comp=N,228nm,0.4s						
KURS				eS	Sg	06 34 54.1	-4.4
	comp=N,2µm,0.8s						
SHLS	Shalkode	4.45	194	Pg	Pb	06 33 57.2	+3.3
	comp=N,760nm,0.2s						
SHLS				Lg	Lg	06 34 53.9	
	comp=N,2µm,0.4s						
SHLS	Shalkode	4.45	194	eP	Pb	06 33 57.2	+3.3
	comp=N,760nm,0.2s						
SHLS				eS	Sg	06 34 53.9	-4.6
	comp=N,2µm,0.4s						
CHKK	Chushkaly	4.58	219	Pg	Pg	06 34 00.6	-2.7
	comp=N,220nm,0.2s						
CHKK				Lg	Lg	06 34 59.7	
	comp=N,5µm,0.3s						
CHKK	Chushkaly	4.58	219	eP	Pg	06 34 00.6	-2.7
	comp=N,220nm,0.2s						
CHKK				eS	Sg	06 34 59.7	-2.8
	comp=N,5µm,0.3s						
SATY	Saty	4.78	203	Pg	Pg	06 34 04.7	-2.3
	comp=N,744nm,0.5s						
SATY				Lg	Lg	06 35 06.4	
	comp=N,5µm,0.4s						
SATY	Saty	4.78	203	eP	Pg	06 34 04.7	-2.3
	comp=N,744nm,0.5s						
SATY				⇑iS	Sg	06 35 06.4	-2.5
	comp=N,5µm,0.4s						
KTBS	Karatobe	4.82	220	Pg	Pg	06 34 04.5	-3.4
	comp=N,190nm,0.6s						
KTBS				Lg	Lg	06 35 06.7	
KTBS	Karatobe	4.82	220	eP	Pg	06 34 04.5	-3.4
	comp=N,190nm,0.6s						
KTBS				eS	Sg	06 35 06.7	-3.7
DGZ	Jazzator, Alta	4.83	60	i PN	Pn	06 33 50.9	+2.4
KUU	Kurty	4.84	224	Pg	Pb	06 34 03.7	+3.2
	comp=N,212nm,0.3s						
KUU				Lg	Lg	06 35 05.1	
	comp=N,2µm,0.3s						
KUU	Kurty	4.84	224	eP	Pb	06 34 03.7	+3.2
	comp=N,212nm,0.3s						
KUU				eS	Sg	06 35 05.1	-5.8
	comp=N,2µm,0.3s						
KOTS	Kotyrbulak	5.04	214	Pg	Pg	06 34 09.0	-3.2
	comp=N,230nm,0.4s						
KOTS				Lg	Lg	06 35 14.7	
	comp=N,64nm,0.5s						
KOTS	Kotyrbulak	5.04	214	eP	Pg	06 34 09.0	-3.2
	comp=N,230nm,0.4s						
KOTS				eS	Sg	06 35 14.7	-2.8
	comp=N,64nm,0.5s						
KNDC	Almaty	5.11	215	⇑Pn	Pn	06 33 53.3	+1.0
	comp=N,54nm,0.5s						
KNDC				⇓Pg	Pg	06 34 10.3	-3.2
	comp=N,442nm,0.8s						
KNDC				⇓Lg	Lg	06 35 19.5	
	comp=N,4µm,0.8s						
MDOK	Medeo	5.13	214	⇓Pn	Pn	06 33 53.8	+1.2
	comp=N,38nm,0.4s						
MDOK				⇑Pg	Pg	06 34 09.6	-4.2
	comp=N,208nm,0.5s						
MDOK				⇑Lg	Lg	06 35 19.1	
	comp=N,1µm,0.5s						
AAA	Alma-Ata	5.14	215	Pg	Pg	06 34 10.0	-4.0
	comp=N,156nm,0.2s						
AAA				Lg	Lg	06 35 16.1	
	comp=N,3µm,0.5s						
AAA	Alma-Ata	5.14	215	ePN	Pn	06 33 55.2	+2.5
AAA				eS	Sn	06 34 53.0	+0.9
AAA				pmax	pmax		
	comp=Z,112nm,0.2s						
AAA				smax	smax		
	comp=E,490nm,0.4s						
AAA	Alma-Ata	5.14	215	eP	Pg	06 34 10.0	-4.0
	comp=E,156nm,0.2s						
AAA				eS	Sg	06 35 16.1	-4.5
	comp=E,3µm,0.5s						
TNSS	Tian-Shan	5.27	214	Pg	Pg	06 34 12.8	-3.8
	comp=E,269nm,0.5s						
TNSS				Lg	Lg	06 35 21.1	
	comp=E,2µm,0.4s						
TNSS	Tian-Shan	5.27	214	eP	Pg	06 34 12.8	-3.8
	comp=E,269nm,0.5s						
TNSS				eS	Sg	06 35 21.1	-3.8
	comp=E,2µm,0.4s						
PRZ	Przheval'sk	5.32	201	ePn	Pn	06 33 58.5	+3.2
PRZ	Przheval'sk	5.32	201	ePN	Pn	06 33 58.5	+3.2
BTLS	Baital	5.39	246	eP	Pg	06 34 14.7	-4.1
	comp=E,150nm,0.5s						
BTLS				eS	Sg	06 35 23.7	-4.8
	comp=E,228nm,0.6s						
MTBS	Maitube	5.40	218	Pg	Pg	06 34 14.9	-4.2
	comp=E,194nm,0.3s						
MTBS				Lg	Lg	06 35 24.8	
	comp=E,2µm,0.4s						
MTBS	Maitube	5.40	218	eP	Pg	06 34 14.9	-4.2
	comp=E,194nm,0.3s						
MTBS				⇓iS	Sg	06 35 24.8	-4.2
	comp=E,2µm,0.4s						
IZV	Izvestkoviy	5.40	216	P	Pg	06 34 19.0	-0.1
	comp=E,244nm,0.6s						
IZV	Izvestkoviy	5.40	216	eP	Pg	06 34 19.0	-0.1
	comp=E,244nm,0.6s						
DGS	Degeres	5.60	223	Pg	Pg	06 34 20.0	-2.9
	comp=E,431nm,0.4s						
DGS				Lg	Lg	06 35 32.5	
	comp=E,2µm,0.6s						
DGS	Degeres	5.60	223	eP	Pg	06 34 20.0	-2.9
	comp=E,431nm,0.4s						
DGS				eS	Sg	06 35 32.5	-2.9
	comp=E,2µm,0.6s						
KST	Kastek	5.67	220	Pg	Pg	06 34 20.2	-4.0
	comp=E,359nm,0.6s						
KST				Lg	Lg	06 35 33.1	
	comp=E,1µm,0.7s						
KST	Kastek	5.67	220	eP	Pg	06 34 20.2	-4.0
	comp=E,359nm,0.6s						
KST				eS	Sg	06 35 33.1	-4.6
	comp=E,1µm,0.7s						
OTUK	Ortayu	5.87	281	⇓Pn	Pn	06 34 02.6	0.0
	comp=E,26nm,0.3s						
OTUK				⇓Pg	Pg	06 34 22.8	-5.1
	comp=E,90nm,0.6s						
OTUK				⇓Lg	Lg	06 35 42.4	
	comp=E,1µm,0.5s						
OTUK	Ortayu	5.87	281	PN	Pn	06 34 02.6	0.0
OTUK				pmax	pmax		
	comp=Z,91nm,0.6s						
OTUK				pmax	pmax		
	comp=N,1µm,0.6s						
TKM2	Tokmak 2	5.93	222	P	Pn	06 34 05.4	+1.6
	SNR=23						
TKM2	Tokmak 2	5.93	222	⇓Pn	Pn	06 34 05.2	+1.5
	comp=N,24nm,0.3s						
TKM2				⇓Pg	Pg	06 34 25.0	-4.2
	comp=N,115nm,0.5s						
TKM2				⇓Lg	Lg	06 35 45.2	
	comp=N,1µm,0.7s						
TKM2	Tokmak 2	5.93	222	PN	Pn	06 34 05.2	+1.5
WMQ	Urumqi	5.96	125	Pn	Pn	06 34 05.9	+1.9
WMQ				Sn	Sn	06 35 11.6	-0.7
WMQ				smax	smax		
	comp=N,2µm,0.9s						
WMQ				smax	smax		
	comp=N,2µm,0.9s						
WMQ				LR	LR		
	comp=N,1µm,17.7s						
WMQ	Urumqi	5.96	125	ePn	Pn	06 34 05.8	+1.9
WMQ	Urumqi	5.96	125	ePN	Pn	06 34 05.8	+1.8
KDJ	Kajisay	5.99	208	ePn	Pn	06 34 08.0	+3.5
KDJ	Kajisay	5.99	208	ePN	Pn	06 34 08.0	+3.5
TARG	Taragay, Kyrgy	6.18	203	ePn	Pn	06 34 09.8	+2.6
USP	Ospenovka	6.21	230	P	Pn	06 34 08.8	+1.5
	SNR=1790						
ULHL	Ulahol	6.22	214	P	Pn	06 34 10.5	+2.8
	SNR=420						
CHMS	Chumysh	6.27	227	P	Pn	06 34 09.8	+1.5
	SNR=81						
KBK	Karagaybulak	6.44	224	P	Pn	06 34 12.6	+2.0
	SNR=173						
FRU	Bishkek	6.46	226	ePN	Pn	06 34 11.0	+0.2
FRU				e		06 34 35.0	
FRU				pmax	pmax		
	comp=Z,150nm,1.8s						
FRU1	Bishkek	6.47	226	ePn	Pn	06 34 12.7	+1.7
FRU1	Bishkek	6.47	226	ePN	Pn	06 34 12.7	+1.7
AAK	Ala-Archa	6.67	226	P	Pn	06 34 15.5	+1.8
	SNR=74						
AAK	Ala-Archa	6.67	226	ePn	Pn	06 34 15.2	+1.4
AAK	Ala-Archa	6.67	226	⇓Pn	Pn	06 34 14.6	+0.8
	comp=Z,37nm,0.4s						
AAK				⇓Pg	Pg	06 34 38.1	-5.2
	comp=Z,61nm,0.5s						
AAK				⇑Lg	Lg	06 36 09.9	
	comp=Z,908nm,0.7s						
AAK	Ala-Archa	6.67	226	cePN	Pn	06 34 15.2	+1.4
AAK				pmax	pmax		
	comp=Z,48nm,0.6s						
ELT	Eltsovka	6.70	28	eSn	Sn	06 35 29.8	-0.4
ELT				eSg	Sg	06 36 04.4	-6.0
KZA	Kyzart	6.76	219	P	Pn	06 34 18.1	+2.9
	SNR=62						
TASR	Tashtagol	6.90	37	ePn	Pn	06 34 19.1	+2.3
TASR	Tashtagol	6.90	37	ePN	Pn	06 34 19.1	+2.3
ZAA0	Zalesovo Array	6.92	19	ePn	Pn	06 34 18.1	+1.0
ZAA0	Zalesovo Array	6.92	19	⇓Pn	Pn	06 34 17.2	+0.1
	comp=Z,133nm,0.8s						
ZAA0				⇑Sn	Sn	06 35 34.8	-1.0
	comp=Z,75nm,0.3s						
ZAA0				⇑Lg	Lg	06 36 16.5	
	comp=Z,1µm,0.8s						
ZALV	Zalesovo Beam	6.92	19	Pn	Pn	06 34 17.9	+0.8
	comp=Z,38nm,0.3s,baz=217,slow=16,SNR=402						
ZALV				Sn	Sn	06 35 31.0	-4.8
	comp=Z,62nm,0.3s,baz=210,slow=27,SNR=8.0						
ZALV				Lg	Lg	06 36 02.5	
	comp=Z,39nm,0.3s,baz=209,slow=23,SNR=4.0						
ZAA1	Zalesovo Array	6.93	19	ePn	Pn	06 34 17.9	+0.8
ZAA1				eSn	Sn	06 35 31.0	-4.9
ZAA1				eLg	Lg	06 36 02.5	
UCH	Uchtor	6.97	224	P	Pn	06 34 20.3	+2.0
	SNR=61						
EKS2	Erkin-Say	7.01	229	P	Pn	06 34 20.0	+1.6
	SNR=250						
NRN	Naryn	7.01	212	ePn	Pn	06 34 22.8	+4.1
NRN	Naryn	7.01	212	ePN	Pn	06 34 22.8	+4.1
AML	Almayashu	7.44	227	P	Pn	06 34 26.8	+2.2
	SNR=62						
NVS	Novosibirsk	7.51	10	ePn	Pn	06 34 26.0	+0.9
NVS				ePg	Pg	06 34 54.5	-4.8
NVS				eSn	Sn	06 35 51.1	+0.9
NVS				eSg	Sg	06 36 30.0	-6.4
NVS	Novosibirsk	7.51	10	⇑iP	Pn	06 34 26.0	+0.9
NVS				i S	Sn	06 35 51.1	+0.9
MNAS	Manas	7.81	233	⇑Pn	Pn	06 34 29.8	+0.4
	comp=Z,25nm,0.9s						
MNAS				⇑Pg	Pg	06 34 58.5	-6.5
	comp=Z,30nm,0.5s						
MNAS				⇑Lg	Lg	06 36 44.9	
	comp=Z,776nm,0.8s						
MNAS	Manas	7.81	233	P	Pn	06 34 29.8	+0.4
ARSB	Arslanbob	8.40	226	ePn	Pn	06 34 40.8	+3.2
KK31	Karatay Array	8.57	243	ePn	Pn	06 34 39.4	-0.4
KK31				eSn	Sn	06 36 14.8	-1.8
KK31	Karatay Array	8.57	243	⇑Pn	Pn	06 34 39.0	-0.9
	comp=Z,15nm,0.3s,baz=62,slow=12,SNR=594						
KK31				⇓Sn	Sn	06 36 17.1	+0.6
	comp=Z,39nm,0.4s,baz=54,slow=22,SNR=3.8						
KK31				⇓Lg	Lg	06 37 10.2	
	comp=Z,260nm,0.5s,baz=54,slow=28,SNR=4.3						
KK31	Karatay Array	8.57	243	P	Pn	06 34 38.9	-0.9
KK31				i		06 36 11.3	
KK31				pmax	pmax		
	comp=Z,21nm,0.4s						
KK31				smax	smax		
	comp=N,39nm,0.4s						
KK31				pmax	pmax		
	comp=N,260nm,0.5s						
KKAR	Karatay Array	8.57	243	ePn	Pn	06 34 39.6	-0.2
KKAR				eSn	Sn	06 36 14.8	-1.7
KKAR	Karatay Array	8.57	243	eP	Pn	06 34 39.6	-0.2
KKAR				e		06 36 14.8	
CERR	Cheremushki	8.59	47	eSg	Sg	06 37 05.9	-5.2
KSH	Kashi	8.75	206	P	Pn	06 34 52.0	+10
KSH				sP	Pg	06 35 01.9	-21
KSH				S	Sn	06 36 34.0	+13
KSH				sS	Sg	06 36 40.8	-35
KSH				pmax	pmax		
	comp=N,12nm,0.7s						
KSH				LR	LR		
	comp=N,3µm,7.8s						
BVA0	Borovoye Array	8.76	313	⇓Pn	Pn	06 34 43.1	+0.8
	comp=N,20nm,0.5s,baz=129,slow=13,SNR=292						
BVA0				Sn	Sn	06 36 21.2	+0.1
	comp=N,9.1nm,0.4s,baz=114,slow=22,SNR=7.4						
BVA0				⇑Lg	Lg	06 37 15.3	
	comp=N,37nm,0.9s,baz=120,slow=29,SNR=5.4						
BVAR	Borovoye Array	8.76	313	Pn	Pn	06 34 42.9	+0.6
	comp=N,12nm,0.3s,baz=115,slow=14,SNR=193						
BRVK	Borovoye	8.84	313	ePn	Pn	06 34 43.9	+0.6
BRVK				eSn	Sn	06 36 24.0	+1.2
BRVK	Borovoye	8.84	313	eP	Pn	06 34 43.9	+0.6
BRVK				e		06 36 24.0	
SFK	Sufi-Kurgan	9.21	219	⇑Pn	Pn	06 34 49.9	+1.2
	comp=N,7.3nm,0.6s						
SFK				⇓Pg		06 35 24.4	
	comp=N,18nm,0.7s						
SFK				⇑Lg	Lg	06 37 30.5	
	comp=N,248nm,1.1s						
BTK	Batken	10.43	228	ePn	Pn	06 35 07.5	+2.2
BTK	Batken	10.43	228	eP	Pn	06 35 07.5	+2.2
KNGR	Kungurtug, Tuv	11.30	68	i P	Pn	06 35 16.7	-0.4
GAR	Garm	11.49	226	ePn	Pn	06 35 21.9	+2.1
GAR	Garm	11.49	226	eP	Pn	06 35 21.9	+2.1
CHGR	Chuyangaron	12.33	229	ePn	Pn	06 35 33.3	+2.0
MOY	Mondy	13.64	65	eP	P	06 35 58.7	+0.6
MOY				eS	Sn	06 38 24.3	+3.7
AB31	Akbulak array	14.09	285	⇓Pn	Pn	06 35 52.0	-3.2
	comp=N,14nm,0.5s						
AB31				⇓Lg	Lg	06 40 04.4	
	comp=N,110nm,0.8s						
ABKAR	Akbulak array	14.09	285	ePn	Pn	06 35 52.3	-2.9
NIL	Nilore	14.99	206	ePn	Pn	06 36 08.3	+0.8
	comp=N,23nm,1.0s						
NIL	Nilore	14.99	206	eP	Pn	06 36 08.4	+0.8
NIL				pmax	pmax		
	comp=Z,23nm,1.0s						
AKTO	Aktyubinsk	15.36	290	⇑Pn	Pn	06 36 09.6	-2.7
	comp=Z,18nm,0.7s						
AKTO				⇑Lg	Lg	06 40 44.8	
	comp=Z,131nm,1.1s						
AKTO	Aktyubinsk	15.36	290	P	Pn	06 36 09.6	-2.7

SVE	Sverdlovsk	15.55	315	eP	Pn	06 36 13.3	-1.4
KBL	Kabul	15.73	219	ePn	P	06 36 19.1	-2.3
	comp=Z,8.5nm,0.6s						
KBL	Kabul	15.73	219	eP	P	06 36 19.1	-2.3
KBL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GTA	Gaotai	15.85	114	eP	Pn	06 36 18.1	-0.8
GTA				pP	P	06 36 22.4	-0.3
GTA				sP	pP	06 36 26.1	+0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				LR	LR		
	comp=Z,480nm,12.7s						
GTA				LR	LR		
	comp=Z,910nm,14.4s						
ARU	Arti	16.40	311	ePn	Pn	06 36 26.2	+0.5
	comp=Z,10nm,0.6s						
ARU	Arti	16.40	311	P	Pn	06 36 25.9	+0.2
ARU				S	Sn	06 39 29.7	+2.1
SONA0	Songino Array	17.11	79	ePn	Pn	06 36 33.8	-1.1
SONM	Songino Array	17.11	79	P	Pn	06 36 33.8	-1.1
	comp=Z,0.3nm,0.3s,baz=286,slow=12,SNR=10						
SONM				Lg	Lg	06 41 35.3	
	comp=Z,0.2nm,0.3s,baz=279,slow=29,SNR=3.9						
SONA1	Songino Array	17.11	79	ePn	P	06 36 36.1	-0.6
SONA1				eSn	Sn	06 39 47.5	+2.4
DANN	Dangsing	19.22	173	eP	Pn	06 37 00.7	-0.3
	comp=Z,36nm,0.7s						
GEYT	Alibeck	19.26	249	P	P	06 36 56.9	-3.3
	baz=31,slow=6.9,SNR=9.3						
GYA0B	ALIBECK ARRAY	19.26	249	eP	Pn	06 37 00.9	-0.3
	comp=Z,9.6nm,0.5s						
PYUN	Piuthan	19.41	175	eP	P	06 37 01.6	-0.5
	comp=Z,35nm,0.5s						
KOLN	Koldanda	19.78	173	eP	Pn	06 37 07.4	-0.2
	comp=Z,46nm,0.9s						
GUN	Gumba	19.91	167	eP	P	06 37 07.7	0.0
	comp=Z,53nm,0.5s						
KKN	Kakani	19.94	169	eP	P	06 37 08.1	+0.2
DMN	Daman	20.09	169	eP	P	06 37 10.0	+0.4
	comp=Z,20nm,0.5s						
PKIN	Phulchoki	20.16	169	eP	P	06 37 10.9	+0.5
	comp=Z,0.5nm,0.1s						
PKI	Pulchoki	20.17	169	eP	P	06 37 11.1	+0.6
	comp=Z,35nm,0.6s						
JIRN	Jiri	20.20	167	eP	P	06 37 11.6	+0.7
	comp=Z,106nm,0.5s						
LZH	Lanzhou	20.42	116	eP	Pn	06 37 18.3	+3.2
LZH				pP	sP	06 37 21.8	+4.1
LZH				sP	pP	06 37 24.3	+8.1
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
RAMN	Ramite	20.96	166	eP	P	06 37 18.2	-0.8
	comp=Z,39nm,0.5s						
KIRV	Kirov	21.78	312	P	P	06 37 25.1	-2.1
	comp=Z,37nm,0.5s,baz=117,slow=4.9,SNR=5.7						
KIRV				Lg	Lg	06 43 57.4	
	comp=Z,8.5nm,0.7s,baz=67,slow=21,SNR=3.5						
NRIK	Noril'sk	22.17	6	P	P	06 37 30.7	-0.7
	comp=Z,17nm,0.6s,baz=143,slow=20						
BOD	Bodaibo	22.33	50	eP	P	06 37 31.9	-1.3
BOD				pmax	pmax		
	comp=Z,20nm,1.5s						
HHC	Hu-ho-hao-te	22.82	96	eP	P	06 37 38.3	-0.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.5s						
SHL	Shillong	23.51	155	eP	P	06 37 45.6	-0.3
	comp=Z,12nm,0.7s						
SHL	Shillong	23.51	155	eP	P	06 37 45.6	-0.3
SHL				pmax	pmax		
	comp=Z,12nm,0.7s						
SHL	Shillong	23.51	155	eP	P	06 37 43.0	-2.9
GNBR	Gunib	24.48	271	i P	P	06 37 56.2	+1.3
GNBR				pmax	pmax		
	comp=Z,21nm,0.9s						
PRGR	Permogore	24.53	318	eP	P	06 37 54.8	-0.2
PRGR				eS	S	06 42 19.4	+4.2
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BTLR	Botlikh	24.88	272	i P	P	06 37 59.7	+1.3
BTLR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	Xi'an	24.91	112	P	P	06 38 00.2	+1.5
XAN				pP	sP	06 38 04.4	+0.9
XAN				sP	pP	06 38 06.8	+4.7
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VRH	Novokhopyorsk	25.64	293	eP	P	06 38 04.8	-0.3
VRH				pmax	pmax		
	comp=Z,20nm,1.6s						
NCK	Nalchik	26.34	275	i P	P	06 38 13.5	+1.9
NCK				pmax	pmax		
	comp=Z,17nm,0.7s						
ZEI	Tsey	26.40	274	eP	P	06 38 05.3	-7.1
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PYA1	Pyatigorsk	26.47	277	i P	P	06 38 14.1	+1.3
KBZ	Khabaz	26.72	276	P	P	06 38 15.1	+0.1
	comp=Z,2.3nm,0.7s,baz=100,slow=12,SNR=3.9						
KIV	Kislovodsk	26.78	277	eP	P	06 38 16.6	+0.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SHA1	Shidzhatmaz	26.88	276	i P	P	06 38 17.8	+1.1
GNI	Garni	26.97	268	eP	P	06 38 19.8	+2.3
	comp=Z,14nm,0.9s						
GNI	Garni	26.97	268	eP	P	06 38 19.8	+2.3
GNI				pmax	pmax		
	comp=Z,14nm,0.9s						
NEY	Neytrino	27.02	275	i P	P	06 38 19.3	+1.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLMR	Klimovskoe	27.18	315	eP	P	06 38 18.0	-0.9
KLMR				pmax	pmax		
	comp=Z,18nm,1.5s						
KLMR	Klimovskoe	27.18	315	eP	P	06 38 18.1	-0.9
KLMR				AMP		06 38 31.7	
	comp=Z,18nm,1.4s						
LPSR	Galich'ya Gora	27.19	297	eP	P	06 38 14.2	-4.9
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VSR	Storozhevoye	27.23	294	i P	P	06 38 18.1	-1.4
VSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DOMR	Dombai	27.75	276	i P	P	06 38 27.1	+2.7
DOMR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KMI	Kunming	28.20	135	P	P	06 38 33.1	+4.5
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
OBN	Obninsk	28.38	302	eP	P	06 38 28.5	-1.2
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WHN	Wuhan	30.65	111	⇓P	P	06 38 58.1	+8.0
LVZ	Lovozero	30.98	328	eP	P	06 38 53.2	+0.6
	comp=Z,11nm,1.0s						
LVZ	Lovozero	30.98	328	eP	P	06 38 53.3	+0.6
LVZ				pmax	pmax		
	comp=Z,11nm,1.0s						
CN2	Changchun	30.99	80	eP	P	06 38 55.3	+2.3
CMAR	Chiang Mai Arr	32.47	147	P	P	06 39 06.0	-0.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CMAR	Chiang Mai Arr	32.47	147	P	P	06 39 06.0	-0.2
	comp=Z,1.7nm,0.3s,baz=325,slow=8.9,SNR=12						
NJ2	Nanjing	32.57	104	eP	P	06 39 08.8	+1.8
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
TIXI	Tiksi	32.76	26	eP	P	06 39 07.8	-0.4
	comp=Z,3.0nm,0.6s						
TIXI	Tiksi	32.76	26	i P	P	06 39 07.1	-1.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KLR	Kul'dur	33.27	68	i P	P	06 39 11.9	-1.1
AKASG	Malin Array Be	33.48	295	P	P	06 39 14.3	-0.4
	comp=Z,6.9nm,0.7s,baz=64,slow=8.8,SNR=9.2						
AKBB	Malin Array Si	33.48	295	eP	P	06 39 14.6	-0.1
	comp=Z,6.0nm,0.8s						
AKBB	Malin Array Si	33.48	295	eP	P	06 39 14.6	-0.1
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIEV	Kiev	33.49	295	eP	P	06 39 14.8	0.0
	comp=Z,6.2nm,0.9s						
KIEV	Kiev	33.49	295	⇑iP	P	06 39 14.7	-0.1
KIEV	Kiev	33.49	295	eP	P	06 39 14.8	0.0
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AK11	Malin Array Si	33.52	295	eP	P	06 39 15.3	+0.3
FIA1	FINESS Array S	33.72	315	eP	P	06 39 16.8	+0.1
	comp=Z,8.1nm,1.0s						
FIA0	FINESS Array S	33.72	315	eP	P	06 39 16.4	-0.3
FIA0	FINESS Array S	33.72	315	eP	P	06 39 16.4	-0.3
FINES	FINESS Array B	33.72	315	P	P	06 39 16.4	-0.3
	comp=Z,1.7nm,0.4s,baz=96,slow=8.3,SNR=17						
KEV	Kevo	34.14	330	eP	P	06 39 21.0	+0.7
KEV	Kevo	34.14	330	eP	P	06 39 21.0	+0.7
ARCES	ARCESS Array B	34.61	329	eP	P	06 39 24.9	+0.5
ARCES	ARCESS Array B	34.61	329	eP	P	06 39 24.9	+0.5
ARCES	ARCESS Array B	34.61	329	P	P	06 39 23.7	-0.7
	comp=Z,2.5nm,0.6s,baz=90,slow=9.5,SNR=15						
ARE0	ARCESS Array S	34.61	329	eP	P	06 39 24.9	+0.5
	comp=Z,0.4nm,1.0s						
BR101	Keskin Array S	34.69	275	eP	P	06 39 26.7	+1.1
BR131	Keskin Array S	34.69	275	eP	P	06 39 26.8	+1.2
BRTR	Keskin Array B	34.69	275	P	P	06 39 26.7	+1.2
	comp=Z,5.9nm,0.8s,baz=77,slow=7.1,SNR=28						
USRK	Ussuriysk Ar.	35.17	76	P	P	06 39 29.6	+0.1
	comp=Z,1.0nm,0.5s,baz=284,slow=7.7,SNR=13						
KS15	Wonju Array Si	35.54	89	eP	P	06 39 32.0	-0.7
KSAR	Wonju Array Be	35.54	89	P	P	06 39 37.1	+4.4
KSAR	Wonju Array Be	35.54	89	P	P	06 39 37.1	+4.4
KSRS	Korea Array	35.56	89	P	P	06 39 37.1	+4.2
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSRS	Korea Array	35.56	89	P	P	06 39 37.1	+4.2
	comp=Z,2.4nm,0.7s,baz=294,slow=7.8,SNR=5.2						
BIZ	Bicaz	36.62	290	⇑iP	P	06 39 42.6	+0.7
BUR08	Bucovina Ar. S	36.94	292	eP	P	06 39 45.6	+0.9
BURAR	Bucovina Array	36.94	291	⇑iP	P	06 39 45.5	+0.8
BUR04	Bucovina Ar. S	36.94	291	eP	P	06 39 45.6	+0.9
RAYN	Ar Rayn	37.00	242	eP	P	06 39 46.4	+1.0
	comp=Z,10nm,0.8s						
RAYN	Ar Rayn	37.00	242	eP	P	06 39 46.4	+1.0
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ISR	Istrita	37.04	287	⇑iP	P	06 39 48.2	+2.7
MLR	Muntele Rosu	37.28	288	eP	P	06 39 49.3	+1.7
	comp=Z,2.1nm,0.7s						
MLR	Muntele Rosu	37.28	288	⇑iP	P	06 39 48.9	+1.3
MLR	Muntele Rosu	37.28	288	eP	P	06 39 49.3	+1.7
MLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CSS	Mathiatis	37.39	268	eP	P	06 39 50.2	+1.6
	comp=Z,11nm,1.0s						
DOPR	Dopca	37.45	289	⇑iP	P	06 39 50.5	+1.5
ARCR	ARCALIA	37.68	291	⇑iP	P	06 39 53.5	+2.6
VOIR		37.88	288	⇑iP	P	06 39 53.5	+0.8
ARR	Arges	38.17	288	⇑iP	P	06 39 55.8	+0.7
TRPA	Tarpa	38.43	293	⇑iP	P	06 39 58.5	+1.3
NIE	Niedzica	39.34	296	eP	P	06 40 06.4	+1.5
NIE	Niedzica	39.34	296	eP	P	06 40 06.4	+1.5
OJC	Ojcow	39.36	297	eP	P	06 40 06.0	+1.0
OJC	Ojcow	39.36	297	eP	P	06 40 06.0	+1.0
LANS	Liptovska Anna	39.95	296	eP	P	06 40 12.8	+2.9
LANS	Liptovska Anna	39.95	296	eP	P	06 40 12.8	+2.9
BZS	Buzias	40.00	290	⇑iP	P	06 40 11.6	+1.3
MDVR	Moldovita	40.30	289	⇑iP	P	06 40 13.6	+0.7
VYHS	Vyhne	40.58	295	eP	P	06 40 16.8	+1.7
VYHS				pmax	pmax		
	comp=Z,34nm,2.6s						
VYHS	Vyhne	40.58	295	eP	P	06 40 16.8	+1.7
NC405	NORSAR Array S	40.63	316	eP	P	06 40 15.7	+0.3
NC303	NORSAR Array S	40.77	316	eP	P	06 40 16.7	+0.2
NC602	NORSAR Array S	40.80	315	eP	P	06 40 16.7	0.0
NB201	NORSAR Array S	40.84	316	eP	P	06 40 17.6	+0.5
NB2	NORSAR Subarra	40.88	316	P	P	06 40 17.4	-0.1
	comp=Z,5.0nm,0.6s,baz=76,slow=8.6						
NB200	NORSAR Array S	40.88	316	eP	P	06 40 17.4	-0.1
NOA	NORSAR Array B	40.88	316	P	P	06 40 17.4	-0.1
	comp=Z,4.0nm,0.5s,baz=77,slow=8.1,SNR=32						
YSS	Yuzh-Sakhalins	40.97	67	eP	P	06 40 11.7	-6.6
NC204	NORSAR Array S	41.04	316	eP	P	06 40 18.6	-0.2
NAO01	NORSAR Array S	41.09	316	eP	P	06 40 19.0	-0.1
NBO00	NORSAR Array S	41.09	316	eP	P	06 40 19.2	+0.1
DIVS	Divibare	41.71	289	eP	P	06 40 25.3	+0.8
	comp=Z,6.2nm,0.6s						
LIT	Litokhoron	41.98	282	eP	P	06 40 27.7	+1.0
	comp=Z,13nm,1.0s						
LIT	Litokhoron	41.98	282	eP	P	06 40 27.7	+1.0
LIT				pmax	pmax		
	comp=Z,13nm,1.0s						
KONO	Kongsberg	42.02	314	eP	P	06 40 28.4	+1.7
	comp=Z,14nm,1.1s						
CONA	Conrad Observa	42.63	296	i pP	P	06 40 34.0	+1.9
	comp=Z,4.0nm,0.6s						
AGG	Agios Georgios	42.64	281	eP	P	06 40 32.7	+0.6
	comp=Z,4.4nm,0.9s						
AGG	Agios Georgios	42.64	281	eP	P	06 40 32.7	+0.6
AGG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	Collm	42.98	301	eP	P	06 40 35.5	+0.9
	comp=Z,5.2nm,0.6s						
CLL	Collm	42.98	301	i P	P	06 40 35.1	+0.5
	comp=Z,6.0nm,0.6s						
CLL				i		06 40 43.6	
CLL				ePP	PP	06 42 13.0	-1.2
CLL	Collm	42.98	301	eP	P	06 40 35.6	+0.9
CLL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GERES	GERESS Array B	43.56	298	P	P	06 40 40.3	+0.8
	comp=Z,0.6nm,0.5s,baz=60,slow=8.1,SNR=4.5						
GEA0	GERESS Array S	43.56	298	eP	P	06 40 40.9	+1.4
SOKA	Soboth	43.68	294	i P	P	06 40 41.1	+0.6
	comp=Z,2.1nm,0.7s						
ITM	Ithomi	43.88	279	eP	P	06 40 41.5	-0.7
	comp=Z,16nm,1.0s						
OBKA	Obir	44.05	294	i P	P	06 40 44.2	+0.7
	comp=Z,4.5nm,0.8s						
KBA	Koelnbreinsper	44.54	296	i pP	P	06 40 48.9	+1.4
	comp=Z,2.2nm,0.6s						
BILL	Bilibino	45.44	32	eP	P	06 40 55.4	+1.3
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s						
WTTA	Wattenberg	45.49	297	epP	P	06 40 55.8	+0.7
	comp=Z,6.5nm,0.8s						
SQTA	Sankt Quirin	45.77	297	epP	P	06 40 58.4	+1.2
	comp=Z,3.9nm,0.5s						
MOTA	Moosalm	45.78	297	epP	P	06 40 59.9	+2.6
	comp=Z,3.0nm,0.7s						
FETA	Feichten	46.16	297	i pP	P	06 41 02.3	+2.0
	comp=Z,6.2nm,1.2s						
PEA1	Petropavlovsk-	47.14	53	eP	P	06 41 07.3	-0.4
PETK	Petropavlovsk-	47.15	53	P	P	06 41 07.3	-0.5
	comp=Z,4.4nm,1.0s,baz=242,slow=3.2,SNR=3.5						
BNI	Bardonecchia	49.58	296	eP	P	06 41 28.8	+1.9
	comp=Z,6.0nm,0.7s						
BNI	Bardonecchia	49.58	296	eP	P	06 41 28.8	+1.9
BNI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ANM	Nome	56.96	28	eP	P	06 42 22.1	+1.4
	comp=Z,1.6nm,0.8s						
ANM	Nome	56.96	28	eP	P	06 42 22.1	+1.4
ANM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ESDC	Sonseca Array	59.11	296	P	P	06 42 35.2	-1.0
	comp=Z,0.6nm,0.6s,baz=49,slow=6.7,SNR=5.4						
IM3	Indian Mountai	59.33	23	eP	P	06 42 36.6	-0.7
BPAW	Bear Paw Mtn.	61.54	23	eP	P	06 42 52.5	+0.1
	comp=Z,2.8nm,1.1s						
MDM	Murphy Dome	61.56	21	eP	P	06 42 53.5	+1.0
	comp=Z,2.5nm,0.9s						
INK	Inuvik	61.69	14	eP	P	06 42 53.0	-0.3
	comp=Z,1.9nm,0.6s						
INK	Inuvik	61.69	14	eP	P	06 42 53.0	-0.3
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CAST	Castle Rocks	61.78	24	eP	P	06 42 54.6	+0.6
	comp=Z,1.3nm,0.9s						
WRH	Wood River Hil	61.99	22	eP	P	06 42 54.4	-1.0
	comp=Z,2.7nm,0.9s						
IL1	Eielson Array	62.04	21	eP	P	06 42 54.7	-1.0
ILAR	Eielson Array	62.04	21	P	P	06 42 54.7	-1.0
	comp=Z,2.0nm,0.7s,baz=323,slow=5.3,SNR=41						
ILB	Eielson Array	62.04	21	eP	P	06 42 54.8	-0.9
PPLA	Purkeypile	62.17	24	eP	P	06 42 56.7	0.0
	comp=Z,8.9nm,1.2s						
TRF	Thorofare Moun	62.25	23	eP	P	06 42 57.2	-0.1
HDA	Harding Lake	62.33	21	eP	P	06 42 56.9	-0.7
	comp=Z,2.6nm,0.8s						
DHY	Denali Highway	63.32	22	eP	P	06 43 03.3	-1.2
	comp=Z,3.9nm,0.8s						
RIDG	Independ'e Rid	63.40	21	eP	P	06 43 03.5	-1.4
	comp=Z,5.0nm,0.8s						
SCRK	Sand Creek	63.41	20	eP	P	06 43 04.4	-0.5
	comp=Z,1.8nm,0.7s						
DOT	Dot Lake	63.67	21	eP	P	06 43 05.5	-1.0
	comp=Z,1.0nm,0.7s						
SUA	Susitna One	63.73	25	eP	P	06 43 07.6	+0.5
	comp=Z,7.7nm,1.2s						
SML	Sawmill	64.11	24	eP	P	06 43 08.9	-0.7
	comp=Z,2.5nm,0.8s						
SML	Sawmill	64.11	24	eP	P	06 43 08.9	-0.7
SML				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RC01	Rabbit Creek A	64.31	25	eP	P	06 43 10.8	-0.1
	comp=Z,4.0nm,1.0s						
SCM	Sheep Creek Mo	64.36	23	eP	P	06 43 10.4	-0.9
	comp=Z,9.9nm,1.0s						
SCM	Sheep Creek Mo	64.36	23	eP	P	06 43 10.4	-0.9
SCM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DAWY	Dawson	64.37	18	eP	P	06 43 10.1	-1.1
KNK	Knik Glacier	64.41	24	eP	P	06 43 11.2	-0.2
	comp=Z,6.6nm,1.1s						
HARP	HAARP	64.45	22	eP	P	06 43 12.1	+0.4
	comp=Z,8.8nm,1.0s						
KLU	Klutina	65.02	23	eP	P	06 43 15.2	-0.3
	comp=Z,5.2nm,1.2s						
BRLK	Bradley Lake	65.06	26	eP	P	06 43 14.6	-1.1
	comp=Z,10.0nm,1.1s						
KDAK	Kodiak Island	66.14	28	i P	P	06 43 23.0	+0.3
HYT	Haines Junctio	67.65	19	eP	P	06 43 32.6	+0.2
	comp=Z,3.7nm,1.1s						
YKW3	Yellowknife Ar	69.61	8	eP	P	06 43 44.2	-0.2
	comp=Z,2.1nm,1.0s						
YKA	Yellowknife Ar	69.67	8	P	P	06 43 44.0	-0.8
	comp=Z,0.6nm,0.5s,baz=346,slow=6.7,SNR=17						
YKB5	Yellowknife Ar	69.67	8	eP	P	06 43 44.8	-0.1
TOA1	Torodi Ar. Sit	73.20	271	eP	P	06 44 06.0	-0.9
TOA0	Torodi Ar. Sit	73.20	271	eP	P	06 44 06.5	-0.4
	comp=Z,3.2nm,0.6s						
TORD	Torodi Ar. Bea	73.20	271	P	P	06 44 06.0	-1.0
	comp=Z,2.3nm,0.5s,baz=41,slow=4.9,SNR=28						
SCHQ	Schefferville	74.51	341	P	P	06 44 15.0	+1.0
	comp=Z,3.2nm,0.9s,baz=0.0,slow=10,SNR=2.1						
WR1	Warramunga Arr	82.43	130	eP	P	06 44 58.0	-0.1
	comp=Z,5.6nm,0.9s						
WRA	Warramunga Arr	82.43	130	P	P	06 44 58.0	-0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	82.43	130	P	P	06 44 58.0	-0.1
	comp=Z,0.9nm,0.5s,baz=336,slow=5.1,SNR=14						
ASAR	Alice Springs	85.31	133	P	P	06 45 13.1	+0.3
	comp=Z,1.1nm,0.6s,baz=326,slow=4.8,SNR=13						
F10A	Beach Ranch, E	85.58	13	eP	P	06 45 14.1	+0.1
	comp=Z,2.3nm,0.7s						
RSSD	Black Hills	88.68	4	eP	P	06 45 29.2	0.0
	comp=Z,5.5nm,0.6s						
RSSD	Black Hills	88.68	4	eP	P	06 45 29.3	0.0
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PD31	Pinedale Array	89.66	8	eP	P	06 45 34.5	+0.6
PDAR	Pinedale Array	89.66	8	eP	P	06 45 33.5	-0.4
PDAR	Pinedale Array	89.66	8	P	P	06 45 32.6	-1.2
	comp=Z,0.4nm,0.6s,baz=32,slow=2.9,SNR=5.2						
HVU	Hansel Valley	90.29	10	eP	P	06 45 37.5	+0.7
	comp=Z,1.2nm,0.6s						
HVU	Hansel Valley	90.29	10	eP	P	06 45 37.5	+0.7
HVU				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NV01	Mina Array Sit	92.76	15	eP	P	06 45 48.0	-0.4
NVAR	Mina Array Bea	92.76	15	P	P	06 45 48.2	-0.2
	comp=Z,0.3nm,0.6s,baz=90,slow=0.9,SNR=2.6						
LVC	Limon Verde	145.40	305	ePKPbc	PKPab	06 52 15.1	+0.8
LVC	Limon Verde	145.40	305	ePKIKP	PKPab	06 52 15.1	+0.8
LCO	Las Campanas	151.35	300	ePKPbc	PKiKP	06 52 29.9	-0.3
LCO	Las Campanas	151.35	300	ePKIKP	PKiKP	06 52 29.9	-0.3
EFI	East Falkland	153.37	246	ePKPbc	PKiKP	06 52 33.0	-0.2
EFI	East Falkland	153.37	246	ePKIKP	PKiKP	06 52 33.0	-0.2

NNC 01 07:06:12.1±1.2,41°.91N×78°.13E,h1^{km}±8^{km},mb3.0, mpv2.8,3C-1D,Error ellipse: s-maj=8.5km s-min=5.5km az=179.0,Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	1.40	28	P	Pn	07 06 38.5	-0.4
	1.7nm,0.3s						
UZB				S	Sg	07 06 57.3	+0.2
	2.1nm,0.3s						
TNSS	Tian-Shan	1.42	323	P	Pg	07 06 39.1	-0.2
	2.1nm,0.2s						
TNSS				S	Sb	07 06 58.4	0.0
	3.8nm,0.2s						
SHLS	Shalkode	1.59	38	P	Pg	07 06 44.9	+2.4
	7.2nm,0.2s						
SHLS				S	Sg	07 07 08.3	+5.2
	6.2nm,0.2s						
PDGK	Podgornoye	1.74	35	P	Pn	07 06 43.6	+0.2
	1.8nm,0.3s						
PDGK				S	Sn	07 07 06.4	+0.1
	1.7nm,0.3s						
PDGK	Podgornoye	1.74	35	⇓Pn	Pn	07 06 42.5	-1.0
	1.2nm,0.3s						
PDGK				⇑Lg	Lg	07 07 08.7	
	3.8nm,0.8s						
CHKK	Chushkaly	2.12	337	Pg	Pb	07 06 51.6	+0.4
	4.8nm,0.3s						
CHKK				Lg	Lg	07 07 19.8	
	13nm,0.2s						
TKM2	Tokmak 2	2.13	299	⇑Pg	Pb	07 06 50.9	-0.6
	0.8nm,0.3s						
TKM2				⇑Lg	Lg	07 07 19.2	
	1.7nm,0.3s						
ARXS	Arharly	2.31	355	Pg	Pb	07 06 53.1	-1.5
	3.5nm,0.3s						
ARXS				Lg	Lg	07 07 22.5	
	3.3nm,0.3s						
KUU	Kurty	2.38	327	Pg	Pb	07 06 55.0	-0.6
	3.8nm,0.1s						
KUU				Lg	Lg	07 07 25.4	
	3.0nm,0.5s						
AAK	Ala-Archa	2.79	286	Pg	Pb	07 07 02.4	-0.4
	0.9nm,0.6s						
AAK				Lg	Lg	07 07 41.0	
	3.4nm,0.7s						

KRNET 01 07:06:39.3±0.1,41°.58N×78°.03E,h23^{km},mb2.0,18C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.22	311	⇑iP	Pb	07 06 44.6	-0.9
	baz=11						
TARG				⇑iS	Sb	07 06 48.7	-1.0
	baz=11						
KDJ	Kajisay	0.84	311	⇑iP	Pb	07 06 55.3	0.0
	baz=11						
KDJ				⇑iS	Sb	07 07 06.6	+0.3
	baz=11						
PRZ	Przheval'sk	0.94	17	⇑iP	Pb	07 06 57.0	-0.1
	baz=18						
PRZ				⇑iS	Sb	07 07 09.6	+0.3
	baz=18						
ULHL	Ulahol	1.49	297	⇑iP	Pb	07 07 06.7	+0.3
	baz=97						
ULHL				⇑iS	Sb	07 07 26.1	+1.1
	baz=97						
NRN	Naryn	1.53	265	⇑eP	Pb	07 07 07.6	+0.4
	baz=65						
NRN				⇑iS	Sb	07 07 28.0	+1.7
	baz=65						
BOOM	Boomskoye usch	1.80	301	⇑iP	Pb	07 07 11.7	0.0
	baz=1.0						
BOOM				⇑iS	Sb	07 07 35.4	+1.4
	baz=1.0						
PDGK	Podgornoye	2.05	31	⇑iP	Pb	07 07 15.3	-0.7
	baz=31						
PDGK				⇑iS	Sb	07 07 41.1	-0.1
	baz=31						
KZA	Kyzart	2.14	284	⇑iP	Pb	07 07 16.3	-1.3
	baz=84						
KZA				⇑iS	Sb	07 07 43.3	-0.5
	baz=84						

TKM2	Tokmak 2 baz=7.0	2.25	307	⇑iP	Pb	07 07 18.2	-1.2
TKM2	baz=7.0			⇑iS	Sb	07 07 46.1	-0.7

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*NEIC **01** 07:13:07.8±5.0, 8°.45N×83°.15W, h11^{km}±29^{km}, mb4.4/5, ML4.3(UCR), Error ellipse: s-maj=31.8km s-min=10.5km az=197.0*

NEIC Felt at Ciudad Cortes, Golfito, Neily, Rio Claro and San Vito.

*IDC **01** 07:13:08.4±2.4, 9°.07N×82°.92W, h0^{km}, mb3.7/6, mb1 4.0/9, mb1mx3.7/39, mbtmp3.7/9, ML3.9/2, Error ellipse: s-maj=74.0km s-min=19.3km az=26.0*

*ISCJB **01** 07:13:09.7±0.5, 8°.60N±0°.04×83°.20W±0°.03, h23^{km}±3^{km}, mb3.9/10, Error ellipse: s-maj=7.7km s-min=3.5km az=19.6*

*UCR **01** 07:13:09.3±2.6, 8°.67N×83°.16W, h4^{km}±7^{km}, MD4.2, mb4.4(NEIC)*

ISC 01 07:13:09.8±0.8**, 8°.63N**±0°.04×**83°.19W**±0°.03**, h17**^{km}±5^{km}**, n51, σ1^{s}51**/63**, mb4.0**/10**, 1C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTJ1	Puerto Jimnez	0.14	229	⇑iP	Pg	07 13 13.6	-0.3
PTJ1				eS	Sg	07 13 17.9	+1.3
EDSV	San Vito	0.29	49	eP	Pg	07 13 16.6	+0.4
EDSV				eS	Sb	07 13 22.6	+1.4
EDPN	Palmar Norte	0.42	321	eP	Pg	07 13 17.8	-0.6
BRU2	Volcan	0.52	72	eP	Pg	07 13 20.0	-0.3
BRU2				eS	Sg	07 13 28.1	+0.7
EDBA	Buenos Aires	0.53	351	eP	Pg	07 13 20.2	-0.3
EDBA				eS	Sg	07 13 28.9	+1.2
EDLM	Las Mercedes	0.75	329	eP	Pg	07 13 23.4	-1.2
DVD	David	0.76	105	eP	Pg	07 13 23.3	-1.4
DVD				eS	Sg	07 13 34.2	-0.5
EDDO	Dominical	0.91	313	eP	Pg	07 13 25.7	-1.8
LCR2	La Lucha 2	1.36	324	eP	Pn	07 13 32.4	-1.9
CVTR	Volcan Turrial	1.49	338	eP	Pn	07 13 35.1	-1.1
HDC	Heredia	1.64	326	ePn	Pn	07 13 37.4	-0.6
HDC				eSn	Sg	07 14 02.9	+0.2
HDC	Heredia	1.64	326	eP	Pn	07 13 37.8	-0.2
HDC				eS	Sn	07 14 00.2	+1.5
SRA1	San Ramn	1.92	319	eP	Pn	07 13 42.3	+0.3
FORC	Fortuna	2.33	321	i P	Pn	07 13 49.1	+1.6
CASO	Castillo	2.35	320	i P	Pn	07 13 49.7	+1.9
ARE1	Arenal 1	2.36	320	eP	Pn	07 13 49.4	+1.5
CEDE	Laguna Cedeo	2.37	321	eP	Pn	07 13 49.6	+1.6
JTS	JuntasAbangare	2.40	314	ePn	Pn	07 13 49.2	+0.9
JTS				eSn	Sb	07 14 21.8	0.0
JTS	JuntasAbangare 49nm,0.3s,baz=334,slow=23,SNR=46	2.40	314	Pn	Pn	07 13 47.9	-0.4
JTS	38nm,0.3s,baz=18,slow=22,SNR=15			Sn	Sn	07 14 18.8	+1.4
JTS	JuntasAbangare	2.40	314	eP	Pn	07 13 48.8	+0.4
JTS				eS	Sn	07 14 20.1	+2.7
PLVR	Palo Verde	2.73	309	eP	Pn	07 13 53.4	+0.3
CUI	Cuipilapa	2.80	316	eP	Pn	07 13 56.5	+2.6
PNME	Penonome	2.84	93	eP	Pn	07 13 55.2	+0.8
PNME				eS	Sn	07 14 31.4	+3.1
MESS	Mesas	2.88	317	eP	Pn	07 13 56.7	+1.7
AZU	Azuero	3.01	106	i P	Pn	07 13 58.4	+1.7
AZU				i S	Sn	07 14 35.4	+3.0
NY14	Universidad de	3.06	311	i P	Pn	07 13 59.9	+2.4
BCIP	Isla Barro Col	3.36	81	ePn	Pn	07 14 01.7	+0.2
UPA	Univ. de Panam	3.63	84	eP	Pn	07 14 06.1	+0.7
UPA				eS	Sn	07 14 48.2	+0.4
ESPN	Las Esperanzas	3.71	343	ePn	Pn	07 14 06.0	-0.4
ESPN	Las Esperanzas	3.71	343	eP	Pn	07 14 05.9	-0.4
BOAB	BOACO BROADBAN	4.51	328	ePn	Pn	07 14 19.0	+1.6
UPD2	Meteti	5.12	91	eP	Pn	07 14 26.9	+1.1
UPD2				eS	Sn	07 15 25.1	+0.6
ESTN	Estel	5.43	325	ePn	Pn	07 14 32.9	+2.7
APG	El Apazote 0.5nm,0.3s,baz=136,slow=7.5,SNR=8.8	9.53	312	Pn	Pn	07 15 28.6	+2.0
MTDJ	Mount Denham	11.01	29	ePn	Pn	07 15 47.4	+0.6
SDV	Santo Domingo 0.1nm,0.3s,baz=13,slow=18,SNR=2.3	12.42	88	Pn	Pn	07 16 02.6	-3.5
CMIG	Matias Romero 0.4nm,0.3s,baz=129,slow=8.5,SNR=6.3	14.16	308	Pn	Pn	07 16 29.9	+0.2
957A	Wimauma 194nm,0.3s	18.96	3	eP	P	07 17 29.6	-0.7
PTGA	Pitinga 0.9nm,0.8s,baz=313,slow=18,SNR=2.3	24.94	111	P	P	07 18 32.4	-0.1
Y52A	Lilburn 5.1nm,1.1s	25.12	358	eP	P	07 18 36.7	+2.8
PAGS	Pennsylvania G 6.9nm,0.9s	31.99	9	eP	P	07 19 36.7	+1.6
N59A	State Game Lan 9.5nm,1.1s	32.82	10	eP	P	07 19 43.9	+1.4
ULM	Lac du Bonnet 4.2nm,1.1s	42.81	348	eP	P	07 21 05.0	-1.7
ULM	Lac du Bonnet 1.2nm,0.6s,baz=175,slow=10,SNR=5.6	42.81	348	P	P	07 21 04.2	-2.5
NVAR	Mina Array Bea 0.4nm,0.7s,baz=132,slow=6.2,SNR=3.2	43.31	319	P	P	07 21 11.8	+0.5
YKA	Yellowknife Ar 0.6nm,0.6s,baz=138,slow=6.9,SNR=15	58.41	343	P	P	07 23 02.8	-1.4
DOT	Dot Lake 4.1nm,1.0s	69.62	335	eP	P	07 24 18.9	+0.9
ILAR	Eielson Array 0.8nm,0.6s,baz=107,slow=4.7,SNR=3.0	71.19	336	P	P	07 24 26.9	-0.6
ESDC	Sonseca Array 0.1nm,0.3s,baz=287,slow=6.9,SNR=4.0	76.27	51	P	P	07 24 57.5	-0.4
WR1	Warramunga Arr	142.02	249	ePKPpre	PKPpre	07 32 35.8	
WRA	Warramunga Arr 0.3nm,0.7s,baz=105,slow=2.7,SNR=3.1	142.02	249	PKhKP	PKPpre	07 32 35.8	

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*IDC **01** 07:14:03.9±3.2, 36°.36N×70°.90E, h193^{km}±26^{km}, mb3.1/6, mb1 3.2/12, mb1mx3.0/56, mbtmp3.7/12, Error ellipse: s-maj=29.7km s-min=20.7km az=156.0*

*NNC **01** 07:14:08.5±3.2, 36°.99N×70°.57E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=28.3km s-min=23.6km az=126.0*

ISC 01 07:14:04.0±1.0**, 36°.46N**±0°.10×**70°.80E**±0°.09**, h188**^{km}**, n28, σ1^{s}72**/34**, mb3.3**/5**, 6C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 18nm,0.5s	4.14	30	⇑P	Pn	07 15 09.8	+2.5
SFK	12nm,0.3s			⇓S	Sn	07 15 56.3	-0.7
AML	Almayashu SNR=65	6.09	21	P	Pn	07 15 34.4	+1.7
MNAS	Manas 8.4nm,0.7s	6.16	12	⇓P	Pn	07 15 35.2	+1.9
MNAS	18nm,0.7s			⇓S	Sn	07 16 41.9	-1.9
UCH	Uchtor SNR=34	6.44	25	P	Pn	07 15 39.0	+1.9
KZA	Kyzart SNR=8.0	6.59	30	P	Pn	07 15 40.6	+1.6
EKS2	Erkin-Say SNR=7.1	6.61	19	P	Pn	07 15 40.9	+1.9
KK31	Karatay Array 2.4nm,0.4s,baz=178,slow=12,SNR=61	6.64	358	P	Pn	07 15 40.0	+0.6
KK31	6.2nm,0.6s,baz=184,slow=23,SNR=7.3			⇑S	Sn	07 16 52.2	-2.7
AAK	Ala-Archa SNR=20	6.80	24	P	Pn	07 15 43.7	+2.1
AAK	Ala-Archa 9.4nm,0.5s	6.80	24	⇑P	Pn	07 15 43.4	+1.8
AAK	7.2nm,0.5s			⇑S	Sn	07 16 58.1	-0.7
AAK	Ala-Archa 4.9nm,0.3s,baz=161,slow=4.4,SNR=49	6.80	24	P	Pn	07 15 43.8	+2.2
AAK	1.4nm,0.3s,baz=312,slow=22,SNR=12			S	Sn	07 16 56.9	-1.9
KBK	Karagaybulak SNR=11	6.97	26	P	Pn	07 15 46.1	+2.3
ULHL	Ulahol SNR=7.9	7.15	34	P	Pn	07 15 48.1	+1.8
CHMS	Chumysh SNR=6.0	7.20	24	P	Pn	07 15 49.0	+2.2
USP	Ospenovka SNR=11	7.37	22	P	Pn	07 15 50.9	+1.9
TKM2	Tokmak 2 SNR=7.0	7.43	28	P	Pn	07 15 51.8	+1.8
TKM2	Tokmak 2 11nm,0.7s	7.43	28	⇑P	Pn	07 15 52.6	+2.6
TKM2	6.7nm,0.8s			⇑S	Sn	07 17 13.1	-0.9
MDOK	Medeo 2.7nm,0.5s	8.24	34	⇓P	Pn	07 16 02.3	+1.8
GEYT	Alibeck 0.4nm,0.3s,baz=105,slow=27,SNR=2.5	10.23	282	P	Pn	07 16 27.9	+1.5
MKAR	Makanchi Array 0.4nm,0.3s,baz=217,slow=12,SNR=19	13.42	36	P	P	07 17 08.6	-1.4
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=200,slow=11,SNR=5.3	15.21	19	P	P	07 17 30.1	+0.3
BVAR	Borovoye Array 0.1nm,0.3s,baz=133,slow=8.1,SNR=2.5	16.57	359	P	Pn	07 17 46.1	+0.6
AKTO	Aktyubinsk 0.1nm,0.3s,baz=62,slow=4.8,SNR=4.5	16.74	331	P	Pn	07 17 47.6	+0.1
ZALV	Zalesovo Beam 1.5nm,0.3s,baz=219,slow=11,SNR=8.1	20.02	25	P	P	07 18 22.3	+0.2
ARCES	ARCESS Array B 2.4nm,0.9s,baz=108,slow=7.7,SNR=8.9	41.12	338	P	P	07 21 29.6	+0.5
TORD	Torodi Ar. Bea 0.2nm,0.4s,baz=22,slow=4.2,SNR=2.7	65.56	269	P	P	07 24 26.6	-1.2
INK	Inuvik 0.5nm,0.7s,baz=332,slow=5.0,SNR=2.8	73.97	9	P	P	07 25 18.7	+0.5
YKA	Yellowknife Ar 0.1nm,0.4s,baz=350,slow=5.2,SNR=4.3	81.29	3	P	P	07 25 58.2	-0.6
WRA	Warramunga Arr 0.2nm,0.8s,baz=328,slow=4.6,SNR=3.7	82.11	122	P	P	07 26 02.1	-1.6

NNC 01 07:23:15.9±8.0**, 53°.71N**×**88°.36E, h0**^{km}**, mb3.6, mpv3.2, 3C-4D, Error ellipse: s-maj=63.2km s-min=39.1km az=50.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array 10.0nm,0.8s	2.12	278	⇑P	Pn	07 23 52.5	0.0
ZAA0	17nm,0.8s			⇓S	Sn	07 24 20.6	+1.1
KURBB	Kurchatov Arra 1.0nm,0.3s	6.79	247	⇑Pn	Pn	07 24 57.3	+0.6
KURBB	3.2nm,0.7s			⇑Sn	Sn	07 26 15.7	+1.0
KURBB	5.1nm,0.7s			⇓Lg	Lg	07 26 51.9	
MK31	Makanchi Array 0.4nm,0.5s,baz=34,slow=26	7.94	212	⇓Sn	Sn	07 26 44.4	+1.5
MK31	2.7nm,0.9s,baz=22,slow=36,SNR=6.4			⇓Lg	Lg	07 27 26.7	

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*SOME **01** 07:24:23.0, 42°.48N×79°.58E, h15^{km}*

*NNC **01** 07:24:24.0±0.7, 42°.59N×79°.58E, h0^{km}, mb3.2, mpv3.1, Error ellipse: s-maj=4.8km s-min=2.4km az=136.0*

*KRNET **01** 07:24:24.0±0.1, 42°.58N×79°.56E, h18^{km}, mb2.9*

ISC 01 07:24:23.5±1.8**, 42°.56N**±0°.05×**79°.58E**±0°.05**, h5**^{km}±10^{km}**, n37, σ1^{s}59**/68**, 16C-15D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode 124nm,0.1s	0.60	352	P	Pb	07 24 36.2	-0.4
SHLS	150nm,0.2s			S	Sn	07 24 45.8	-3.2
SHLS	Shalkode baz=22	0.60	352	eP	Pb	07 24 36.2	-0.4
SHLS	baz=22			eS	Sn	07 24 45.8	-3.2
SHLS	Shalkode 124nm,0.1s	0.60	352	eP	Pb	07 24 36.2	-0.4
SHLS	150nm,0.2s			eS	Sn	07 24 45.8	-3.2
UZB	Uzynbulak baz=25	0.72	325	eP	Pg	07 24 37.5	+0.2
UZB	baz=25			eS	Sb	07 24 47.9	-0.8
UZB	Uzynbulak 8.3nm,0.1s	0.72	325	eP	Pg	07 24 37.5	+0.2
UZB	79nm,0.2s			eS	Sb	07 24 47.9	-0.8
PDGK	Podgornoye 15nm,0.2s	0.77	355	P	Pg	07 24 38.2	-0.1
PDGK	15nm,0.1s			S	Sb	07 24 49.0	-1.3
PDGK	Podgornoye 4.9nm,0.2s	0.77	355	⇑P	Pg	07 24 38.1	-0.1
PDGK	19nm,0.5s			⇑S	Sb	07 24 48.9	-1.4
PDGK	Podgornoye baz=56	0.77	355	⇓iP	Pg	07 24 38.2	-0.1
PDGK	baz=56			⇓iS	Sb	07 24 48.9	-1.4
PRZ	Przheval'sk baz=64	0.88	265	⇑iP	Pb	07 24 40.5	-0.8
PRZ	baz=64			⇑iS	Sb	07 24 53.1	-0.3
SATY	Saty 8.6nm,0.1s	1.00	300	P	Pb	07 24 42.6	-0.8
SATY	63nm,0.1s			S	Sn	07 24 56.9	-1.9
SATY	Saty 8.6nm,0.1s	1.00	300	eP	Pb	07 24 42.6	-0.8
SATY	63nm,0.1s			eS	Sn	07 24 56.9	-1.9
KURS	Kuram 2.9nm,0.6s	1.39	312	P	Pb	07 24 49.4	-0.6
KURS	21nm,0.6s			S	Sg	07 25 08.6	+0.5
KURS	Kuram baz=12	1.39	312	eP	Pb	07 24 49.4	-0.6
KURS	baz=12			eS	Sg	07 25 08.6	+0.5
KURS	Kuram 2.9nm,0.6s	1.39	312	eP	Pb	07 24 49.4	-0.6
KURS	21nm,0.6s			eS	Sg	07 25 08.6	+0.5
KDJ	Kajisay baz=56	1.83	257	⇑iP	Pb	07 24 57.8	+0.2
KDJ	baz=56			⇑iS	Sg	07 25 22.8	+0.5
MDOK	Medeo 6.6nm,0.5s	1.96	289	⇓Pn	Pb	07 24 59.4	-0.3
MDOK	10nm,0.4s			⇓Sn	Sg	07 25 25.7	-0.7
TNSS	Tian-Shan 9.9nm,0.4s	2.00	285	Pg	Pb	07 25 00.1	-0.3
TNSS	15nm,0.4s			Lg	Lg	07 25 26.5	
TNSS	Tian-Shan baz=84	2.00	285	⇓iP	Pb	07 25 00.2	-0.3
TNSS	baz=84			⇓iS	Sg	07 25 26.6	-1.1
TNSS	Tian-Shan 9.9nm,0.4s	2.00	285	⇓iP	Pb	07 25 00.1	-0.3
TNSS	15nm,0.4s			⇓iS	Sg	07 25 26.5	-1.1
ULHL	Ulahol baz=63	2.49	264	⇑eP	Pb	07 25 07.2	-1.7
ULHL	baz=63			⇑iS	Sb	07 25 39.6	-0.3
BOOM	Boomskoye usch baz=69	2.69	270	⇓iP	Pb	07 25 10.2	-2.0
BOOM	baz=69			⇓iS	Sb	07 25 44.0	-1.6
KST	Kastek 7.9nm,0.3s	2.71	281	Pg	Pb	07 25 12.4	-0.1
KST	9.1nm,0.5s			Lg	Lg	07 25 48.3	
KST	Kastek baz=81	2.71	281	eP	Pb	07 25 11.4	-1.1
KST	baz=81			eS	Sb	07 25 46.1	+0.1
KST	Kastek 7.9nm,0.3s	2.71	281	eP	Pb	07 25 11.4	-1.1
KST	9.1nm,0.5s			eS	Sb	07 25 46.1	+0.1
KUU	Kurty 1.9nm,0.1s	2.72	300	Pg	Pb	07 25 12.4	-0.2
KUU	13nm,0.2s			Lg	Lg	07 25 47.8	
KUU	Kurty baz=0.0	2.72	300	eP	Pb	07 25 12.4	-0.2
KUU	baz=0.0			eS	Sb	07 25 47.8	+1.6
KUU	Kurty 1.9nm,0.1s	2.72	300	eP	Pb	07 25 12.4	-0.2
KUU	13nm,0.2s			eS	Sb	07 25 47.8	+1.6
KAPS	Kapalarasan 1.4nm,0.2s	2.73	357	Pg	Pb	07 25 13.6	+0.8
KAPS	5.6nm,0.1s			Lg	Lg	07 25 49.4	
KAPS	Kapalarasan 1.4nm,0.2s	2.73	357	eP	Pb	07 25 13.7	+0.9
KAPS	5.6nm,0.1s			eS	Sg	07 25 50.4	-0.7
NRN	Naryn baz=48	2.90	248	⇓iP	Pb	07 25 13.3	-2.5
NRN	baz=48			⇓iS	Sb	07 25 49.9	-1.8
TKM2	Tokmak 2 1.0nm,0.3s	2.96	278	⇑Pg	Pb	07 25 16.9	+0.1
TKM2	7.0nm,0.6s			⇑Lg	Lg	07 25 57.6	
TKM2	Tokmak 2 baz=78	2.96	278	⇑iP	Pb	07 25 13.8	-3.0
TKM2	baz=78			⇑iS	Sb	07 25 50.8	-2.5
KZA	Kyzart baz=63	3.25	263	⇑iP	Pb	07 25 18.2	-3.6
KZA	baz=63			⇑iS	Sb	07 25 58.0	-3.8
AAK	Ala-Archa 1.4nm,0.6s	3.76	273	⇓Pg	Pb	07 25 31.9	+1.5
AAK	4.7nm,0.8s			Lg	Lg	07 26 22.7	
UCH	Uchtor baz=66	3.77	267	⇓iP	Pn	07 25 25.5	+2.9
UCH	baz=66			⇓iS	Sn	07 26 10.4	+2.8
ARLS	Aral baz=61	3.97	262	⇑iP	Pn	07 25 27.9	+2.8
ARLS	baz=61			⇑iS	Sn	07 26 14.8	+2.7
MK31	Makanchi Array 0.1nm,0.2s,baz=204,slow=13,SNR=17	4.65	24	Pn	Pn	07 25 35.9	+1.5
MK31				Sn	Sn	07 26 29.7	+1.0

IDC 01 07:25:03.6±2.1**, 5°.67S**×**151°.56E, h0**^{km}**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.5**/40**, mbtmp3.6**/4**, Error ellipse: s-maj=114.2km s-min=28.8km az=128.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.7nm,0.6s,baz=54,slow=10,SNR=14	21.94	228	P	P	07 29 58.6	-0.4
ASAR	Alice Springs 1.1nm,0.7s,baz=60,slow=9.3,SNR=12	24.68	222	P	P	07 30 26.7	+0.2
FITZ	Fitzroy Crossi 0.8nm,0.3s,baz=64,slow=14,SNR=3.2	28.16	242	P	P	07 30 57.6	-0.3
ILAR	Eielson Array 0.3nm,0.8s,baz=236,slow=4.9,SNR=3.4	83.43	22	P	P	07 37 32.3	-0.4
TORD	Torodi Ar. Bea 1.5nm,0.9s,baz=62,slow=2.4,SNR=7.3	149.38	286	PKPbc	PKPbc	07 44 55.6	0.0

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*SOME **01** 07:27:06.8, 42°.60N×79°.75E, h10^{km}*

*KRNET **01** 07:27:06.0±0.1, 42°.58N×79°.64E, h21^{km}, mb2.3*

*NNC **01** 07:27:08.3±1.8, 42°.69N×79°.66E, h0^{km}, mb2.7, mpv2.7, Error ellipse: s-maj=11.7km s-min=5.4km az=149.0*

ISC 01 07:27:06.0±2.1**, 42°.58N**±0°.06×**79°.65E**±0°.08**, h5**^{km}±11^{km}**, n20, σ0^{s}58**/39**, 15C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode 13nm,0.1s	0.59	346	P	Pg	07 27 17.8	+0.4
SHLS	111nm,0.4s			S	Sg	07 27 25.9	+0.8
SHLS	Shalkode baz=17	0.59	346	eP	Pg	07 27 17.8	+0.4
SHLS	baz=17			eS	Sg	07 27 25.9	+0.8
SHLS	Shalkode 13nm,0.1s	0.59	346	eP	Pg	07 27 17.8	+0.4
SHLS	111nm,0.4s			eS	Sg	07 27 25.9	+0.8
UZB	Uzynbulak 1.1nm,0.1s	0.73	321	P	Pg	07 27 19.9	-0.2
UZB	13nm,0.3s			S	Sg	07 27 29.6	+0.1
UZB	Uzynbulak baz=21	0.73	321	eP	Pg	07 27 20.3	+0.3
UZB	baz=21			eS	Sg	07 27 30.0	+0.5
UZB	Uzynbulak 1.7nm,0.1s	0.73	321	eP	Pg	07 27 20.3	+0.3
UZB	13nm,0.2s			eS	Sg	07 27 29.9	+0.5
PDGK	Podgornoye 1.1nm,0.1s	0.75	351	P	Pg	07 27 20.2	-0.4
PDGK	4.0nm,0.3s			S	Sg	07 27 29.8	-0.5
PDGK	Podgornoye baz=51	0.75	351	⇑iP	Pg	07 27 20.1	-0.4
PDGK	baz=51			⇑iS	Sg	07 27 30.4	+0.1
PRZ	Przheval'sk baz=64	0.93	264	⇑iP	Pg	07 27 23.1	-0.8
PRZ	baz=64			⇑iS	Sg	07 27 35.3	-0.7
SATY	Saty 2.9nm,0.2s	1.03	298	P	Pn	07 27 27.2	-0.1
SATY	9.2nm,0.1s			S	Sn	07 27 42.0	-0.2
SATY	Saty 2.9nm,0.2s	1.03	298	eP	Pn	07 27 27.2	-0.1
SATY	9.2nm,0.1s			eS	Sn	07 27 42.0	-0.2
DJR	Jarkent 1.0nm,0.3s	1.75	3	P	Pb	07 27 38.3	-0.4
DJR	2.7nm,0.2s			S	Sg	07 28 01.6	-0.6
DJR				Lg	Lg	07 28 01.6	
DJR	Jarkent 0.9nm,0.3s	1.75	3	eP	Pb	07 27 38.0	-0.7
DJR	3.0nm,0.2s			eS	Sb	07 28 00.3	-0.7
KDJ	Kajisay baz=57	1.89	257	⇑iP	Pn	07 27 39.8	+0.7
KDJ	baz=57			⇑iS	Sn	07 28 04.2	+0.8
ULHL	Ulahol baz=63	2.55	264	⇓eP	Pn	07 27 48.7	+0.5
ULHL	baz=63			⇓iS	Sn	07 28 19.9	+0.2
BOOM	Boomskoye usch baz=69	2.75	269	⇑iP	Pn	07 27 51.4	+0.5
BOOM	baz=69			⇑iS	Sn	07 28 24.9	+0.4
NRN	Naryn baz=48	2.95	248	⇑iP	Pn	07 27 54.9	+1.0
NRN	baz=48			⇑iS	Sn	07 28 30.7	+0.8
TKM2	Tokmak 2 1.5nm,0.7s	3.00	278	⇓Pg	Pg	07 28 03.4	-0.2
TKM2	1.2nm,0.5s			⇑Lg	Lg	07 28 43.0	
TKM2	Tokmak 2 baz=78	3.00	278	⇑iP	Pn	07 27 55.3	+0.8
TKM2	baz=78			⇑iS	Sn	07 28 31.4	+0.4
ARLS	Aral baz=62	4.02	261	⇑iP	Pn	07 28 09.2	+0.8
ARLS	baz=62			⇑iS	Sn	07 28 55.3	-0.7

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*SOME **01** 07:33:43.9, 42°.57N×79°.65E, h5^{km}*

*KRNET **01** 07:33:43.6±0.1, 42°.55N×79°.63E, h16^{km}, mb2.3*

*NNC **01** 07:33:44.2±1.1, 42°.59N×79°.63E, h0^{km}, mb2.7, mpv2.8, Error ellipse: s-maj=7.4km s-min=3.4km az=155.0*

ISC 01 07:33:42.4±1.6**, 42°.50N**±0°.05×**79°.65E**±0°.05**, h15**^{km}±12^{km}**, n26, σ1^{s}14**/50**, 9C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode 6.0nm,0.1s	0.67	348	P	Pb	07 33 56.2	+0.4
SHLS	58nm,0.3s			S	Sb	07 34 05.2	+0.1
SHLS	Shalkode baz=17	0.67	348	eP	Pb	07 33 56.3	+0.4
SHLS	baz=17			eS	Sb	07 34 05.2	+0.1

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SHLS  Shalkode          0.67 348  eP    Pb    07 33 56.2 +0.4
      6.0nm,0.1s
SHLS                              eS    Sb    07 34 05.2 +0.1
      58nm,0.3s
UZB   Uzynbulak         0.79 325   P    Pg    07 33 57.9  0.0
      6.3nm,0.1s
UZB                                S    Sg    07 34 08.2 -0.2
      2.7nm,0.2s
UZB   Uzynbulak         0.79 325  eP    Pg    07 33 57.9  0.0
      baz=23
UZB                               eS    Sg    07 34 08.2 -0.2
      baz=23
UZB   Uzynbulak         0.79 325  eP    Pg    07 33 57.9  0.0
      6.3nm,0.1s
UZB                               eS    Sg    07 34 08.2 -0.2
      2.7nm,0.2s
PDGK  Podgornoye        0.84 352   P    Pg    07 33 58.3 -0.4
      1.2nm,0.2s
PDGK                               S    Sg    07 34 08.9 -0.9
      2.3nm,0.1s
PDGK  Podgornoye        0.84 352⇑eP    Pg    07 33 58.3 -0.4
      baz=52
PDGK                             ⇑iS    Sg    07 34 08.8 -0.9
      baz=52
PRZ   Przheval'sk       0.92 269⇓iP    Pb    07 34 01.0 +0.8
      baz=66
PRZ                              ⇓iS    Sg    07 34 13.3 +0.9
      baz=66
SATY  Saty              1.07 302   P    Pn    07 34 03.5 +0.5
      3.4nm,0.0s
SATY                               S    Sg    07 34 17.5 +0.4
      4.7nm,0.1s
SATY  Saty              1.07 302  eP    Pn    07 34 03.5 +0.5
      3.4nm,0.0s
SATY                              eS    Sg    07 34 17.5 +0.4
      4.7nm,0.1s
KTMS  Ketmen            1.08  28   P    Pb    07 34 03.4 +0.6
      1.1nm,0.1s
KTMS                               S    Sg    07 34 17.5 +0.2
      12nm,0.2s
KTMS  Ketmen            1.08  28  eP    Pb    07 34 03.5 +0.6
      baz=29
KTMS                              eS    Sg    07 34 17.6 +0.3
      baz=29
KTMS  Ketmen            1.08  28  eP    Pb    07 34 03.5 +0.6
      1.1nm,0.1s
KTMS                              eS    Sg    07 34 17.5 +0.2
      12nm,0.2s
DJR   Jarkent           1.83   3   P    Pb    07 34 16.8 +1.1
      0.5nm,0.2s
DJR                                S    Sg    07 34 40.4 -1.0
      1.9nm,0.2s
DJR   Jarkent           1.83   3  eP    Pb    07 34 16.8 +1.1
      0.5nm,0.2s
DJR                              ⇓iS    Sg    07 34 40.4 -1.0
      1.9nm,0.2s
KDJ   Kajisay           1.87 259⇓iP    Pb    07 34 18.1 +1.8
      baz=58
KDJ                              ⇓iS    Sg    07 34 42.7 +0.3
      baz=58
IZV   Izvestkoviy       2.30 285   Pg   Pb    07 34 25.8 +2.1
      1.3nm,0.2s
IZV                                Lg   Lg    07 34 55.7
      4.9nm,0.2s
IZV   Izvestkoviy       2.30 285  eP    Pb    07 34 25.8 +2.1
      baz=83
IZV                               eS    Sg    07 34 55.7 -0.5
      baz=83
IZV   Izvestkoviy       2.30 285  eP    Pb    07 34 25.8 +2.1
      1.3nm,0.2s
IZV                               eS    Sg    07 34 55.7 -0.5
      4.9nm,0.2s
ULHL  Ulahol            2.54 265⇓iP    Pb    07 34 26.9 -0.8
      baz=64
ULHL                             ⇓iS    Sb    07 34 59.2 +0.4
      baz=64
BOOM  Boomskoye usch    2.74 271⇑eP    Pb    07 34 29.9 -1.3
      baz=70
BOOM                             ⇑iS    Sb    07 35 03.6 -1.1
      baz=70
KAPS  Kapalarasan       2.79 356  eP    Pb    07 34 33.4 +1.4
      0.3nm,0.2s
KAPS                              eS    Sg    07 35 08.9 -3.2
      1.0nm,0.2s
NRN   Naryn             2.92 250⇑eP    Pb    07 34 33.3 -1.0
      baz=49
NRN                              ⇑iS    Sb    07 35 09.3 -0.7
      baz=49
TKM2  Tokmak 2          3.02 279 ⇓Pg    Pb    07 34 37.7 +1.9
      3.0nm,1.1s
TKM2                             ⇑Lg    Lg    07 35 19.5
      1.3nm,0.6s
TKM2  Tokmak 2          3.02 279⇑iP    Pb    07 34 33.9 -2.0
      baz=79
TKM2                             ⇑iS    Sb    07 35 09.9 -2.7
      baz=79
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BJI **01** *07:39:44.0, 48°.30N×154°.70E, h36^{km}, mB5.0/29, mb4.9/43, Ms4.6/12, Ms7 4.4/14*

ISCJB **01** *07:39:46.5±0.4, 48°.29N±0°.02×154°.70E±0°.03, h59^{km}±3^{km}, mb4.7/199, MS4.1/7, Error ellipse: s-maj=4.6km s-min=2.4km az=143.4*

KRSC **01** *07:39:46.5±2.5, 48°.24N×155°.22E, h101^{km}±41^{km}, ML5.0*

SKHL **01** *07:39:47.4±0.7, 48°.16N×155°.04E, h75^{km}±5^{km}, mb4.8/12*

MOS **01** *07:39:48.0±1.3, 48°.35N×154°.76E, h74^{km}, mb5.0/67, Error ellipse: s-maj=6.3km s-min=3.4km az=82.0*

IDC **01** *07:39:48.9±1.9, 48°.30N×154°.62E, h66^{km}±16^{km}, mb4.3/40, mb1 4.4/47, mb1mx4.3/65, mbtmp4.6/47, MS3.8/8, Ms1 3.8/8, ms1mx3.4/52, Error ellipse: s-maj=11.9km s-min=8.2km az=140.0*

NEIC **01** *07:39:49.3±0.5, 48°.31N×154°.62E, h68^{km}±4^{km}, mb4.7/126, Error ellipse: s-maj=3.9km s-min=2.3km az=149.0*

ISC 01 07:39:47.4±0.8**, 48°.23N**±0°.04×**154°.82E**±0°.04**, h56**^{km}±7^{km}**, n561, σ1^{s}49**/631**, mb4.8**/209**, MS4.1**/7**, 33C-10D, Kuril Islands**

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Code  Station Name       Δ°   AZ°    Phase ID         Time       Res
                                  Op    ISC         h  m  s     ISC
SKR   Severo-Kuril's    2.60  18  eP    Pn    07 40 27.3 +0.4
SKR                               eS    Sn    07 40 57.4 +0.2
SKR   Severo-Kuril's    2.60  18  i P   Pn    07 40 27.4 +0.5
SKR                                AMB  AMB   07 40 27.9
      20nm,0.1s
SKR                                AMB  AMB   07 40 27.9
      50nm,0.1s
SKR                               eS    Sn    07 40 56.8 -0.4
SKR                                A    A     07 40 59.4
      560nm,0.3s
SKR                                A    A     07 40 59.4
      830nm,0.3s
SKR   Severo-Kuril's    2.60  18⇓iPN   Pn    07 40 27.4 +0.5
SKR                               eS    Sn    07 40 56.0 -1.2
SKR                                pmax pmax
      comp=Z,100nm,0.5s
SKR                                smax smax
      comp=N,1μm,0.6s
SKR                                smax smax
      comp=E,2μm,0.7s
PAU   Pauzhetka         3.49  21  eP    Pn    07 40 39.4 +0.4
PAU                               eS    Sn    07 41 19.0 -0.1
PAU   Pauzhetka         3.49  21  eP    Pn    07 40 39.8 +0.8
PAU                                AMB  AMB   07 40 40.4
      comp=E,130nm,0.3s
PAU                               eS    Sn    07 41 18.9 -0.1
PAU                                A    A     07 41 23.0
      comp=E,600nm,0.5s
PAU                                A    A     07 41 23.0
      comp=E,790nm,0.5s
PAU   Pauzhetka         3.49  21   PN   Pn    07 40 39.4 +0.4
PAU                                S    Sn    07 41 19.0 -0.1
KDTR  Khodutka, Kamc    4.15  29  eP    Pn    07 40 47.4 -0.7
KDTR                              eS    Sn    07 41 32.2 -3.1
KDTR  Khodutka, Kamc    4.15  29   PN   Pn    07 40 47.4 -0.7
KDTR                               S    Sn    07 41 32.2 -3.1
MTVR  Mutnovka          4.77  26  eP    Pn    07 40 57.0 +0.2
MTVR                              eS    Sn    07 41 48.9 -1.9
MTVR  Mutnovka          4.77  26   PN   Pn    07 40 57.0 +0.2
MTVR                               S    Sn    07 41 48.9 -1.9
GRL   Gorelyy           4.80  24  eP    Pn    07 40 58.0 +0.8
GRL   Gorelyy           4.80  24   PN   Pn    07 40 58.0 +0.8
RUS   Russkaya          4.83  28  eP    Pn    07 40 56.6 -0.8
RUS                               eS    Sn    07 41 48.2 -3.7
RUS   Russkaya          4.83  28  eP    Pn    07 40 56.6 -0.8
RUS   Russkaya          4.83  28   PN   Pn    07 40 56.6 -0.8
RUS                                S    Sn    07 41 48.2 -3.7
APC   Apacha            4.93  17  eP    Pn    07 41 01.0 +2.2
APC   Apacha            4.93  17   PN   Pn    07 41 01.0 +2.2
KRMR  Karymshinskiy     5.07  23  eP    Pn    07 41 01.5 +0.8
KRMR  Karymshinskiy     5.07  23   PN   Pn    07 41 01.5 +0.8
PEA0B Petropavlovsk-    5.22  19  ePn   Pn    07 41 04.3 +1.6
PETK  Petropavlovsk-    5.22  19  ePn   Pn    07 41 04.0 +1.2
PETK                               S    Sn    07 42 03.4 +1.9
PETK  Petropavlovsk-    5.22  19   P    Pn    07 41 04.3 +1.6
      comp=E,4.4nm,0.3s,baz=181,slow=15,SNR=58
PETK                               S    Sn    07 42 03.4 +1.9
      baz=202,slow=15,SNR=2.3
PETK                               LR   LR    07 43 14.5
      comp=E,437nm,18.5s,baz=260,slow=40
PEA1  Petropavlovsk-    5.22  19  ePn   Pn    07 41 04.3 +1.5
PEA1                              eSn   Sn    07 42 03.4 +1.8
PET   Petropavlovsk     5.38  25  ePn   Pn    07 41 05.7 +0.7
PET                               eSn   Sn    07 42 06.0 +0.5
PET   Petropavlovsk     5.38  25  eP    Pn    07 41 05.7 +0.7
PET                               eS    Sn    07 42 04.5 -1.1
PET   Petropavlovsk     5.38  25  eP    Pn    07 41 05.2 +0.2
PET                                AMB  AMB   07 41 08.4
      comp=E,40nm,0.3s
PET                               eS    Sn    07 42 04.1 -1.5
PET                                A    A     07 42 06.8
      comp=E,170nm,0.5s
PET                                A    A     07 42 06.8
      comp=E,180nm,0.5s
PET   Petropavlovsk     5.38  25  ePN   Pn    07 41 05.2 +0.2
PET                               eS    Sn    07 42 04.2 -1.4
PET                                pmax pmax
      comp=Z,63nm,0.6s
PET                                smax smax
      comp=E,248nm,0.5s
PET                                smax smax
      comp=N,218nm,0.7s
PET                                MLR  MLR
      comp=Z,300nm,14.0s
DALK  Dalny             5.42  26  eP    Pn    07 41 05.6 +0.1
DALK                              eS    Sn    07 42 04.4 -2.0
DALK  Dalny             5.42  26   PN   Pn    07 41 05.6 +0.1
DALK                               S    Sn    07 42 04.4 -2.0
UGLR  Uglovaya          5.60  25  eP    Pn    07 41 08.5 +0.5
UGLR  Uglovaya          5.60  25   PN   Pn    07 41 08.5 +0.5
KOK   Koryaka           5.62  24  eP    Pn    07 41 09.7 +1.4
KOK   Koryaka           5.62  24  eP    Pn    07 41 09.7 +1.4
KOK   Koryaka           5.62  24   PN   Pn    07 41 09.7 +1.4
AVH   Avacha            5.62  25  eP    Pn    07 41 09.5 +1.2
AVH   Avacha            5.62  25   PN   Pn    07 41 09.5 +1.2
SMAR  Somma             5.64  25  eP    Pn    07 41 10.0 +1.3
SMAR  Somma             5.64  25   PN   Pn    07 41 10.0 +1.3
KUR   Kuril'sk          5.64 241  eP    Pn    07 41 11.3 +2.7
KUR                                AMB  AMB   07 41 12.5
      comp=Z,40nm,0.3s
KUR                               eS    Sn    07 42 14.4 +2.4
KUR                                A    A     07 42 18.2
      comp=Z,190nm,0.6s
KUR                                A    A     07 42 18.2
      comp=Z,360nm,0.6s
KUR   Kuril'sk          5.64 241d iPN   Pn    07 41 11.7 +3.1
KUR                               i S   Sn    07 42 14.7 +2.7
KUR                                pmax pmax
      comp=E,71nm,0.5s
KUR                                pmax pmax
      comp=Z,347nm,0.5s
KUR                                pmax pmax
      comp=N,100nm,0.3s
KUR                                smax smax
      comp=N,393nm,0.5s
KUR                                smax smax
      comp=E,114nm,0.2s
KRX   Arik              5.68  24  eP    Pn    07 41 10.4 +1.2
KRX   Arik              5.68  24   PN   Pn    07 41 10.4 +1.2
NLC   Nalytchevo        5.72  28  eP    Pn    07 41 09.2 -0.4
NLC                               eS    Sn    07 42 08.4 -5.4
NLC   Nalytchevo        5.72  28   PN   Pn    07 41 09.2 -0.4
GNL   Ganaly            5.82  19  eP    Pn    07 41 12.8 +1.7
GNL   Ganaly            5.82  19   PN   Pn    07 41 12.8 +1.7
SPN   Mys Shipunski     5.89  32  eP    Pn    07 41 11.0 -0.9
SPN                               eS    Sn    07 42 13.6 -4.4
SPN   Mys Shipunski     5.89  32   PN   Pn    07 41 11.0 -0.9
SHO   Shikotan          7.06 235  i P   Pn    07 41 26.9 -1.2
SHO                                AMB  AMB   07 41 27.3
      comp=E,30nm,0.3s
SHO                                AMB  AMB   07 41 27.3
      comp=E,20nm,0.3s
SHO                                AMB  AMB   07 41 27.3
      comp=E,40nm,0.3s
SHO                               i S   Sn    07 42 43.2 -3.7
SHO                                A    A     07 42 45.2
      comp=E,180nm,0.3s
SHO                                A    A     07 42 45.2
      comp=E,210nm,0.3s
SHO   Shikotan          7.06 235d iPN   Pn    07 41 26.7 -1.4
SHO                                pmax pmax
      comp=E,23nm,0.3s
SHO                                pmax pmax
      comp=Z,58nm,0.3s
SHO                                pmax pmax
      comp=N,26nm,0.4s
YUK   Yuzh-Kuril'sk     7.50 239  i P   Pn    07 41 35.0 +0.9
YUK                                AMB  AMB   07 41 35.0
      comp=N,40nm,0.3s
YUK                                AMB  AMB   07 41 35.0
      comp=N,90nm,0.3s
YUK                                AMB  AMB   07 41 35.0
      comp=N,30nm,0.3s
YUK                               eS    Sn    07 42 59.0 +1.3
YUK   Yuzh-Kuril'sk     7.50 239  i PN  Pn    07 41 35.2 +1.1
TUMR  Tumrok            7.80  23  eP    Pn    07 41 41.8 +3.7
TUMR  Tumrok            7.80  23   PN   Pn    07 41 41.8 +3.7
NEM2  Nemuro 2          7.99 236   P    Pn    07 41 39.4 -1.4
NEM2                              eS    Sn    07 43 02.7 -6.9
YSS   Yuzh-Sakhalins    8.26 266  ePn   Pn    07 41 48.8 +4.4
YSS                               eSn   Sn    07 43 21.7 +5.5
YSS   Yuzh-Sakhalins    8.26 266  eP    Pn    07 41 47.7 +3.3
YSS                                AMB  AMB   07 41 49.6
      comp=N,90nm,1.0s
YSS                               eS    Sn    07 43 17.6 +1.4
YSS                                A    A     07 43 23.0
      comp=N,60nm,1.0s
YSS   Yuzh-Sakhalins    8.26 266κePN   Pn    07 41 48.9 +4.5
YSS                               eS    Sn    07 43 21.3 +5.1
YSS                                pmax pmax
      comp=Z,90nm,1.1s
YSS                                smax smax
      comp=E,60μm,1.2s
TYV   Tymovskoe         8.34 293  eP    Pn    07 41 48.5 +3.0
TYV                                AMB  AMB   07 41 53.3
      comp=E,20nm,0.5s
TYV                               eS    Sn    07 43 18.1  0.0
TYV                                A    A     07 43 22.1
      comp=E,30nm,0.7s
TYV                                A    A     07 43 22.1
      comp=E,20nm,0.7s
TYV   Tymovskoe         8.34 293  ePN   Pn    07 41 49.3 +3.8
TYV                               eS    Sn    07 43 20.7 +2.6
TYV                                pmax pmax
      comp=Z,15nm,0.8s
TYV                                smax smax
      comp=E,22nm,0.7s
JNK   Nakash            8.44 240   P    Pn    07 41 47.2 +0.4
JNK                               eS    Sn    07 43 17.3 -3.3
UGL   Uglegorsk         8.49 280  eP    Pn    07 41 51.5 +4.0
UGL                                AMB  AMB   07 41 53.5
      comp=E,80nm,1.0s
UGL                               eS    Sn    07 43 23.9 +2.1
UGL                                A    A     07 43 29.3
      comp=E,90nm,0.4s
UGL   Uglegorsk         8.49 280  ePN   Pn    07 41 51.9 +4.4
UGL                                S    Sn    07 43 30.4 +8.6
UGL                                pmax pmax
      comp=Z,116nm,0.7s
UGL                                smax smax
      comp=E,83nm,0.6s
UGL                                smax smax
      comp=N,61nm,0.4s
UGL                                MLR  MLR
      comp=Z,2μm,16.0s
JTKR  Abashiri--Toko    8.70 245   P    Pn    07 41 51.7 +1.3
JAK   Akkeshi           8.81 237   P    Pn    07 41 50.7 -1.3
JAK                               eS    Sn    07 43 23.4 -6.4
JSE   Soyaes            9.04 253   P    Pn    07 41 59.1 +4.0
JAR   Ashorobuto        9.16 242   P    Pn    07 41 57.3 +0.5
JAR                               eS    Sn    07 43 35.4 -3.0
OKH   Okha              9.21 310  eP    Pn    07 42 01.9 +4.6
OKH                                AMB  AMB   07 42 02.6
      comp=Z,40nm,0.7s
OKH                               eS    Sn    07 43 41.8 +2.5
OKH                                A    A     07 43 51.0
      comp=Z,50nm,0.9s
JWK2  Keihoku           9.34 257   P    Pn    07 42 04.6 +5.5
JOB   Onbets            9.36 239   P    Pn    07 41 58.7 -0.8
JOB                               eS    Sn    07 43 37.2 -6.1
KBTR  Krutoberegovo     9.37  29  eP    Pn    07 41 59.9 +0.4
KBTR  Krutoberegovo     9.37  29   PN   Pn    07 41 59.9 +0.4
ASAJ  Asahikawa         9.43 249   P    Pn    07 42 03.3 +2.9
ASAJ  Asahikawa         9.43 249   P    Pn    07 42 00.6 +0.2
      comp=Z,9.1nm,0.3s,baz=81,slow=14,SNR=41
ASAJ                               LR   LR    07 45 21.0
      comp=Z,326nm,21.0s,baz=25,slow=36
JKK2  Kamakawa 2        9.46 247   P    Pn    07 42 02.8 +2.0
JCH   Churui            9.82 239   P    Pn    07 42 04.1 -1.6
JCH                               eS    Sn    07 43 46.3 -8.0
NKL   Nikolayevsk      10.23 304  eP    Pn    07 42 14.0 +2.7
NKL                                AMB  AMB   07 42 16.0
      comp=Z,10.0nm,1.0s
NKL   Nikolayevsk      10.23 304  ePN   Pn    07 42 14.0 +2.7
NKL                                pmax pmax
      comp=Z,13nm,1.0s
ERM   Erimo            10.32 237  ePn   Pn    07 42 12.3 -0.2
ERM                               eSn   Sn    07 44 02.3 -4.3
ERM   Erimo            10.32 237  i PN  Pn    07 42 11.3 -1.2
JNBK  Urakawa-nobuka   10.38 239   P    Pn    07 42 10.7 -2.7
MA2   Magadan          11.61 350  ePn   Pn    07 42 30.9 +0.7
MA2   Magadan          11.61 350  eP    Pn    07 42 29.5 -0.7
MA2   Magadan          11.61 350ceP N   Pn    07 42 29.5 -0.7
MA2                                pmax pmax
      comp=Z,6.0nm,0.8s
MA2   Magadan          11.61 350   P    Pn    07 42 30.0 -0.2
      comp=Z,0.6nm,0.3s,baz=84,slow=14,SNR=3.8
JSH   Shimam           11.78 247   P    Pn    07 42 33.0 +0.5
SMY   Shemya           13.07  63  ePn   Pn    07 42 49.0 -1.0
SMY   Shemya           13.07  63  ePN   Pn    07 42 49.0 -1.0
OFUJ  Ofunato          13.19 231  eS    Sn    07 45 04.1  -13
EKMR  Ekimchan         14.68 297  eP    Pn    07 43 12.5 +0.9
EKMR                               AMB  AMB   07 43 26.1
      comp=Z,10.0nm,0.6s
SEY   Seymchan         14.80 356  eP    Pn    07 43 11.1 -2.0
SEY   Seymchan         14.80 356ceP    Pn    07 43 11.1 -2.0
SEY   Seymchan         14.80 356   P    Pn    07 43 12.8 -0.3
      comp=Z,0.1nm,0.3s,baz=177,slow=11,SNR=7.9
KLR   Kul'dur          15.25 282   P    Pn    07 43 19.4 +0.4
      comp=Z,0.1nm,0.3s,baz=86,slow=12,SNR=12
KLR                                LR   LR    07 48 49.1
      comp=Z,430nm,20.2s,baz=62,slow=36
USA0B Ussuriysk Arra   16.29 264  ePn   P     07 43 33.7 -0.7
      comp=Z,6.8nm,0.6s
USRK  Ussuriysk Ar.    16.29 264   P    Pn    07 43 32.1 -0.2
      comp=Z,1.4nm,0.3s,baz=63,slow=11,SNR=18
USRK                               LR   LR    07 49 47.3
      comp=Z,216nm,18.1s,baz=18,slow=37
MJB9  Matsu-Tunnel     16.90 232  ePn   P     07 43 42.8 +1.5
      comp=Z,14nm,0.7s
MAJO  Matsushiro       16.90 232  ePn   P     07 43 42.7 +1.5
      comp=Z,14nm,0.8s
MAJO  Matsushiro       16.90 232  eP    P     07 43 42.7 +1.5
MAJO                               pmax pmax
      comp=Z,14nm,0.8s
MAT   Matsushiro       16.90 232   P    P     07 43 42.1 +0.9
MJAR  Matsushiro Arr   16.90 232   P    Pn    07 43 38.6 -1.3
      comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=11
BMKR  Bomnak           17.37 302  eP    Pn    07 43 45.0 -0.7
BMKR                               AMB  AMB   07 43 49.0
      comp=Z,10.0nm,0.8s
MDJ   Mudanjiang       17.74 268  ePn   P     07 43 50.7 +0.3
      comp=Z,22nm,1.0s
ZEA   Zeya             18.15 298  eP    Pn    07 43 56.8 +1.7
ZEA   Zeya             18.15 298  eP    Pn    07 43 56.8 +1.7
KROS  Kirovskiy        18.40 300  eP    P     07 43 56.2 -1.4
KROS                               AMB  AMB   07 43 58.4
      comp=Z,4.0nm,0.4s
KROS                               AMB  AMB   07 43 58.4
      comp=Z,10.0nm,0.4s
YAK   Yakutsk          19.76 324  eP    P     07 44 10.3 -2.0
YAK                               eS    S     07 47 44.5 -7.2
YAK                                pmax pmax
      comp=Z,74nm,0.9s
YAK                                pmax pmax
      comp=E,17nm,1.1s
YAK                                pmax pmax
      comp=N,14nm,1.2s
YAK                                pmax pmax
      comp=Z,238nm,0.6s
YAK                                pmax pmax
      comp=E,58nm,0.7s
YAK                                pmax pmax
      comp=N,132nm,1.1s
YAK                                smax smax
      comp=N,292nm,2.3s
YAK                                smax smax
      comp=E,353nm,2.8s
YAK                                MLR  MLR
      comp=N,1μm,24.0s
YAK                                MLR  MLR
      comp=Z,1μm,25.0s
BILL  Bilibino         20.70  12  eP    P     07 44 21.1 -1.3
      comp=Z,9.5nm,0.5s
BILL  Bilibino         20.70  12ceP    P     07 44 20.4 -2.0
BILL                               pmax pmax
      comp=Z,11nm,1.0s
KSRS  Korea Array      22.36 251   P    P     07 44 40.7 +0.2
KSRS                               pmax pmax
      comp=Z,7.0nm,0.6s
KSRS  Korea Array      22.36 251   P    P     07 44 40.7 +0.2
      comp=Z,7.5nm,0.5s,baz=50,slow=9.9,SNR=20
KS01  Wonju Array Si   22.36 251  eP    P     07 44 41.2 +0.6
KS15  Wonju Array Si   22.39 251  eP    P     07 44 41.6 +0.7
KSAR  Wonju Array Be   22.39 251   P    P     07 44 40.8 -0.1
KSAR  Wonju Array Be   22.39 251  eP    P     07 44 40.8 -0.1
KSAR  Wonju Array Be   22.39 251   P    P     07 44 40.8 -0.1
JNU   Nakatsue         23.48 239  eP    P     07 44 52.9 +1.0
      comp=Z,16nm,0.8s
JNU   Nakatsue         23.48 239   P    P     07 44 52.7 +0.8
      comp=Z,12nm,0.6s,baz=336,slow=11,SNR=8.5
JNU                                LR   LR    07 53 53.3
      comp=Z,254nm,19.8s,baz=82,slow=36
BOD   Bodaibo          25.98 307  eP    P     07 45 11.4 -3.0
BOD                                pmax pmax
      comp=Z,9.0nm,1.4s
TIXI  Tiksi            26.40 342  eP    P     07 45 16.9 -1.2
      comp=Z,9.3nm,1.1s
TIXI  Tiksi            26.40 342ceP    P     07 45 15.7 -2.4
TIXI                               pmax pmax
      comp=Z,5.0nm,0.6s
TIXI  Tiksi            26.40 342   P    P     07 45 16.6 -1.4
      comp=Z,7.1nm,0.6s,baz=138,slow=9.0,SNR=7.0
ANM   Nome             26.81  38  eP    P     07 45 23.4 +1.5
      comp=Z,4.9nm,1.2s
ANM                               ePcP  PcP   07 48 44.1 +1.0
ANM   Nome             26.81  38  eP    P     07 45 23.4 +1.5
ANM                               e           07 48 44.1
ANM                                pmax pmax
      comp=Z,5.0nm,1.2s
MIDW  Midway           29.35 123  eP    P     07 45 45.5 +0.7
      comp=Z,129nm,0.9s
H11N2 WAKE ISLAND Hy   30.06 157   T    T     08 17 51.1
      baz=341,slow=76,SNR=261
H11N1 WAKE ISLAND Hy   30.08 157   T    T     08 17 51.4
      baz=341,slow=76,SNR=350
H11N3 WAKE ISLAND Hy   30.08 157   T    T     08 17 51.3
      baz=341,slow=76,SNR=136
H11S1 WAKE ISLAND Hy   31.18 158   T    T     08 19 05.1
      baz=345,slow=76,SNR=383
H11S3 WAKE ISLAND Hy   31.19 158   T    T     08 19 11.3
      baz=345,slow=76,SNR=327
H11S2 WAKE ISLAND Hy   31.20 158   T    T     08 19 08.1
      baz=345,slow=76,SNR=408
HHC   Hu-ho-hao-te     31.36 273  eP    P     07 46 02.6 -0.1
HHC                                S    S     07 51 06.1 +0.2
HHC                                sS   sS    07 51 24.8 -4.8
HHC                                pmax pmax
      comp=Z,25nm,1.1s
HHC                                pmax pmax
      comp=Z,87nm,7.3s
HHC                                LR   LR
      comp=Z,220nm,16.7s
HHC                                LR   LR
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	comp=Z,220nm,15.1s						
HHC				LR	LR		
	comp=Z,390nm,18.1s						
NJ2	Nanjing	31.54	252	*e*P	P	07 46 05.5	+1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
IM3	Indian Mountai	31.89	37	*e*P	P	07 46 07.5	+0.6
IM3				*e*PcP	PcP	07 48 56.7	+0.7
SONA1	Songino Array	31.95	288	*e*P	P	07 46 06.7	-1.1
SONA0	Songino Array	31.96	288	*e*P	P	07 46 06.3	-1.5
SONA0				*e*PcP	PcP	07 48 56.6	-0.1
SONM	Songino Array	31.96	288	P	P	07 46 06.4	-1.5
	comp=Z,4.6nm,0.8s,baz=68,slow=8.5,SNR=33						
SONM				PcP	PcP	07 48 56.6	-0.1
	comp=Z,1.2nm,0.7s,baz=158,slow=1.1,SNR=6.2						
KDAK	Kodiak Island	32.28	53	*e*P	P	07 46 09.5	-0.8
	comp=Z,20nm,1.0s						
KDAK	Kodiak Island	32.28	53	*e*P	P	07 46 09.5	-0.8
KDAK				pmax	pmax		
	comp=Z,20nm,1.0s						
PPLA	Purkeypile	32.29	43	*e*P	P	07 46 12.7	+2.1
	comp=Z,6.1nm,1.2s						
TLY	Talaya	32.56	296	*d i*P	P	07 46 12.2	-0.7
TLY	Talaya	32.56	296	P	P	07 46 13.0	+0.1
	comp=Z,4.7nm,0.7s,baz=73,slow=4.3,SNR=13						
BPAW	Bear Paw Mtn.	32.88	41	*e*P	P	07 46 18.2	+2.6
	comp=Z,2.7nm,1.0s						
BPAW				*e*PcP	PcP	07 48 59.5	+0.7
SUA	Susitna One	32.97	46	*e*P	P	07 46 16.9	+0.4
	comp=Z,6.2nm,1.2s						
BRLK	Bradley Lake	32.98	49	*e*P	P	07 46 16.4	-0.2
	comp=Z,13nm,1.1s						
BRLK				*e*PcP	PcP	07 48 59.1	-0.1
ZAK	Zakamensk	33.13	293	*e*P	P	07 46 17.0	-1.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TRF	Thorofare Moun	33.16	42	*e*P	P	07 46 19.3	+1.0
	comp=Z,4.8nm,1.2s						
TRF				*e*PcP	PcP	07 48 59.8	0.0
COLD	Coldfoot	33.45	35	*e*P	P	07 46 21.6	+1.1
	comp=Z,2.3nm,1.1s						
RND	Reindeer	33.81	42	*e*P	P	07 46 24.1	+0.3
	comp=Z,6.2nm,1.0s						
RND	Reindeer	33.81	42	*e*P	P	07 46 24.1	+0.3
RND				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GHO	Glory Hole Cre	33.82	45	*e*P	P	07 46 24.9	+1.0
	comp=Z,3.3nm,0.8s						
KNK	Knik Glacier	34.06	46	*e*P	P	07 46 26.3	+0.4
	comp=Z,7.8nm,1.1s						
KNK				*e*PcP	PcP	07 49 03.1	+0.9
MDM	Murphy Dome	34.10	40	*e*P	P	07 46 27.1	+1.0
	comp=Z,3.4nm,0.8s						
SML	Sawmill	34.10	45	*e*P	P	07 46 26.9	+0.6
	comp=Z,10.0nm,0.6s						
SML	Sawmill	34.10	45	*e*P	P	07 46 26.8	+0.6
SML	Sawmill	34.10	45	*e*P	P	07 46 26.9	+0.6
SML				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WRH	Wood River Hil	34.15	40	*e*P	P	07 46 27.5	+0.9
	comp=Z,4.2nm,1.1s						
WRH				*e*PcP	PcP	07 49 01.8	-0.5
DHY	Denali Highway	34.49	43	*e*P	P	07 46 30.6	+0.8
	comp=Z,2.9nm,1.0s						
DHY				*e*PcP	PcP	07 49 04.8	+1.3
SCM	Sheep Creek Mo	34.58	45	*e*P	P	07 46 31.4	+1.0
	comp=Z,6.0nm,1.0s						
HDA	Harding Lake	34.64	41	*e*P	P	07 46 31.5	+0.6
	comp=Z,2.1nm,0.6s						
IL1	Eielson Array	34.67	40	*e*P	P	07 46 32.0	+0.9
ILAR	Eielson Array	34.67	40	P	P	07 46 31.4	+0.3
	comp=Z,0.8nm,0.7s,baz=259,slow=8.1,SNR=13						
ILAR				PcP	PcP	07 49 02.5	-1.3
	comp=Z,0.8nm,0.8s,baz=282,slow=3.4,SNR=4.7						
ILB	Eielson Array	34.67	40	*e*P	P	07 46 31.8	+0.8
GLI	Glacier Island	34.77	47	*e*P	P	07 46 32.8	+0.9
	comp=Z,7.4nm,1.2s						
KLU	Klutina	35.27	46	*e*P	P	07 46 37.2	+0.8
	comp=Z,3.0nm,1.0s						
FYU	Fort Yukon	35.37	37	*e*P	P	07 46 38.9	+1.9
	comp=Z,9.0nm,0.8s						
DIV	Divide	35.38	46	*e*P	P	07 46 38.4	+1.1
	comp=Z,5.7nm,0.8s						
WHN	Wuhan	35.43	255	⇑P	P	07 46 37.5	-0.4
HARP	HAARP	35.55	44	*e*P	P	07 46 40.8	+2.1
RIDG	Independ’e Rid	35.59	42	*e*P	P	07 46 40.3	+1.2
	comp=Z,7.2nm,1.2s						
DOT	Dot Lake	35.95	42	*e*P	P	07 46 42.4	+0.3
	comp=Z,2.0nm,0.8s						
DOT				*e*PcP	PcP	07 49 08.9	+1.3
SCRK	Sand Creek	35.96	41	*e*P	P	07 46 44.1	+1.8
	comp=Z,1.7nm,1.1s						
SCRK				*e*PcP	PcP	07 49 08.7	+0.9
TPUB	Ta-pu	36.78	240	*e*P	P	07 46 49.7	+0.1
	comp=Z,26nm,0.6s						
DAWY	Dawson	37.96	41	*e*P	P	07 47 01.1	+1.9
	comp=Z,1.9nm,0.9s						
LZH	Lanzhou	39.01	271	*e*P	P	07 47 08.2	-0.2
LZH				pP	pP	07 47 18.2	-4.5
LZH				sP	sP	07 47 22.2	-6.9
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
HYT	Haines Junctio	39.41	46	*e*P	P	07 47 13.5	+2.1
	comp=Z,5.0nm,0.9s						
INK	Inuvik	39.78	33	*e*P	P	07 47 15.6	+1.3
	comp=Z,3.8nm,0.5s						
INK				*e*PcP	PcP	07 49 19.6	+0.3
INK	Inuvik	39.78	33	P	P	07 47 15.6	+1.3
	comp=Z,3.2nm,0.4s,baz=285,slow=6.0,SNR=50						
INK				PcP	PcP	07 49 19.5	+0.2
	comp=Z,0.5nm,0.4s,baz=268,slow=5.3,SNR=2.8						
GTA	Gaotai	39.89	278	*e*P	P	07 47 15.5	-0.2
GTA				pP	pP	07 47 24.9	-5.0
GTA				sP	sP	07 47 28.6	-7.8
GTA				PcP	PcP	07 49 20.8	+0.4
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,85nm,7.6s						
GTA				LR	LR		
	comp=Z,280nm,17.9s						
GTA				LR	LR		
	comp=Z,170nm,15.5s						
GTA				LR	LR		
	comp=Z,370nm,16.1s						
WHY	Whitehorse	40.70	45	*e*P	P	07 47 24.6	+2.6
	comp=Z,2.6nm,0.9s						
WHY				*e*PcP	PcP	07 49 23.3	+0.7
SKAG	Skagway	40.80	47	*e*P	P	07 47 25.0	+2.2
	comp=Z,3.4nm,0.9s						
JIS	Juneau Island	41.62	49	*e*P	P	07 47 32.2	+2.7
	comp=Z,4.1nm,0.9s						
CD2	Chengdu	42.16	265	P	P	07 47 34.5	+0.1
CD2				pmax	pmax		
	comp=Z,60nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
ZAA1	Zalesovo Array	42.70	305	*e*P	P	07 47 36.6	-1.7
ZAA1				*e*PcP	PcP	07 49 28.9	-0.2
ZAA0	Zalesovo Array	42.70	305	*e*P	P	07 47 36.8	-1.6
	comp=Z,6.6nm,0.6s						
ZAA0				*e*PcP	PcP	07 49 29.3	+0.2
ZALV	Zalesovo Beam	42.70	305	P	P	07 47 36.6	-1.7
	comp=Z,6.8nm,0.5s,baz=62,slow=6.5,SNR=38						
ZALV				PcP	PcP	07 49 28.9	-0.2
	comp=Z,3.0nm,0.5s,baz=65,slow=3.0,SNR=11						
DGZ	Jazzator, Alta	42.91	298	*i* P	P	07 47 39.6	-0.8
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NVS	Novosibirsk	43.22	307	*i* P	P	07 47 36.4	-6.2
DLBC	Dease Lake	43.73	47	*e*P	P	07 47 48.6	+1.8
	comp=Z,1.2nm,0.6s						
DLBC	Dease Lake	43.73	47	P	P	07 47 48.8	+2.0
	comp=Z,1.4nm,0.6s,baz=321,slow=8.7,SNR=3.2						
WMQ	Urumqi	45.48	291	P	P	07 48 00.6	-0.3
WMQ				pP	pP	07 48 08.8	-6.4
WMQ				sP	sP	07 48 15.0	-6.9
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,590nm,4.3s						
WMQ				LR	LR		
	comp=Z,340nm,16.1s						
WMQ				LR	LR		
	comp=Z,210nm,17.5s						
WMQ				LR	LR		
	comp=Z,390nm,17.5s						
QIZ	Qiongzhong	46.49	247	*e*P	P	07 48 10.4	+1.4
	comp=Z,39nm,1.1s						
KMI	Kunming	46.65	260	P	P	07 48 10.7	+0.2
KMI				pP	pP	07 48 20.0	-4.9
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI	Kunming	46.65	260	*e*P	P	07 48 11.4	+0.9
	comp=Z,26nm,0.4s						
KMI	Kunming	46.65	260	*e*P	P	07 48 11.4	+0.9
KMI				pmax	pmax		
	comp=Z,26nm,0.4s						
MK31	Makanchi Array	47.30	297	*e*P	P	07 48 13.7	-1.3
MK31	Makanchi Array	47.30	297	*e*P	P	07 48 13.7	-1.3
MK32	Makanchi Array	47.30	297	*e*P	P	07 48 13.6	-1.5
MK32				*e*PcP	PcP	07 49 45.2	0.0
MKAR	Makanchi Array	47.30	297	*e*P	P	07 48 13.7	-1.3
	comp=Z,123nm,0.6s						
MKAR				PcP	PcP	07 49 45.2	0.0
MKAR	Makanchi Array	47.30	297	*e*P	P	07 48 13.7	-1.3
MKAR	Makanchi Array	47.30	297	P	P	07 48 13.6	-1.5
	comp=Z,17nm,0.7s,baz=64,slow=8.2,SNR=129						
MKAR				PcP	PcP	07 49 45.2	0.0
	comp=Z,0.9nm,0.4s,baz=70,slow=4.9,SNR=4.2						
MK01	Makanchi Array	47.30	297	*e*P	P	07 48 13.5	-1.6
MK01				*e*PcP	PcP	07 49 44.9	-0.3
MAKZ	Makanchi	47.48	297	*e*P	P	07 48 14.9	-1.5
	comp=Z,11nm,1.0s						
MAKZ	Makanchi	47.48	297	*e*P	P	07 48 14.9	-1.5
MAKZ				pmax	pmax		
	comp=Z,11nm,1.0s						
KURK	Kurchatov	47.52	303	*e*P	P	07 48 15.4	-1.3
	comp=Z,46nm,0.7s						
KURK	Kurchatov	47.52	303	*ce*P	P	07 48 15.3	-1.3
KURK				pmax	pmax		
	comp=Z,77nm,1.3s						
KURBB	Kurchatov Arra	47.61	303	P	P	07 48 16.2	-1.1
	comp=Z,42nm,0.6s,baz=67,slow=8.4,SNR=161						
KURBB				PcP	PcP	07 49 46.0	-0.2
	comp=Z,3.9nm,0.8s,baz=67,slow=3.5,SNR=6.7						
YKW3	Yellowknife Ar	49.01	38	*e*P	P	07 48 28.5	+0.5
	comp=Z,2.2nm,0.9s						
YKA	Yellowknife Ar	49.04	38	P	P	07 48 28.9	+0.8
	comp=Z,1.1nm,0.6s,baz=295,slow=7.1,SNR=16						
YKA				PcP	PcP	07 49 50.9	-0.2
	comp=Z,0.5nm,0.6s,baz=304,slow=3.9,SNR=3.4						
YKB5	Yellowknife Ar	49.04	38	*e*P	P	07 48 28.1	-0.1
YKB5				*e*PcP	PcP	07 49 51.2	+0.1
RES	Resolute Bay	49.06	19	*e*P	P	07 48 29.4	+1.2
	comp=Z,7.7nm,1.0s						
RES	Resolute Bay	49.06	19	P	P	07 48 29.1	+0.9
	comp=Z,4.0nm,0.8s,baz=302,slow=8.8,SNR=14						
BVAR	Borovoye Array	50.82	309	P	P	07 48 40.3	-1.5
	comp=Z,18nm,0.4s,baz=62,slow=7.1,SNR=142						
BVAR				PcP	PcP	07 49 57.5	-0.4
	comp=Z,4.4nm,0.6s,baz=52,slow=3.7,SNR=6.6						
BRVK	Borovoye	50.86	309	*e*P	P	07 48 40.9	-1.2
	comp=Z,17nm,0.6s						
BRVK				*e*PcP	PcP	07 49 57.8	-0.2
BRVK	Borovoye	50.86	309	*i* P	P	07 48 39.8	-2.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	Lhasa	51.35	273	*e*P	P	07 48 48.0	+1.4
	comp=Z,12nm,0.6s						
LSA	Lhasa	51.35	273	*e*P	P	07 48 48.0	+1.4
LSA				pmax	pmax		
	comp=Z,11nm,0.6s						
SPA0	Spitsbergen Ar	51.36	350	*e*P	P	07 48 45.0	-0.6
NONG	Nongkai	51.42	253	P	P	07 48 48.4	+1.7
	comp=Z,0.4nm,0.9s,comp=Z,75nm						
SKNT	Sakolnakorn	51.70	251	P	P	07 48 50.1	+1.3
	comp=Z,7.5nm,1.6s						
TULEG	Thule	52.45	12	*e*P	P	07 48 53.5	-0.1
	comp=Z,8.4nm,0.8s						
PAYA	Payao	52.59	257	P	P	07 48 56.9	+1.5
	comp=Z,11nm,0.9s						
TARG	Taragay, Kyrgy	52.73	294	*e*P	P	07 48 55.6	-1.1
	comp=Z,5.0nm,0.7s						
TARG				*e*PcP	PcP	07 50 07.0	+1.3
KDJ	Kajisay	52.89	294	*e*P	P	07 48 57.7	+0.1
	comp=Z,8.6nm,0.6s						
KDJ	Kajisay	52.89	294	*e*P	P	07 48 57.7	+0.1
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TKM2	Tokmak 2	53.39	296	P	P	07 49 00.6	-0.7
	SNR=5.2						
ULHL	Ulahol	53.39	295	P	P	07 49 00.7	-0.6
	SNR=20						
SHL	Shillong	53.57	269	*e*P	P	07 49 02.1	-0.6
	comp=Z,66nm,0.7s						
SHL	Shillong	53.57	269	*e*P	P	07 49 02.1	-0.6
SHL				pmax	pmax		
	comp=Z,66nm,0.7s						
CMMT	Chiang Mai	53.58	257	P	P	07 49 03.4	+0.7
	comp=Z,25nm,0.9s						
CHTO	Chiang Mai	53.58	257	*e*P	P	07 49 03.3	+0.6
	comp=Z,17nm,0.8s						
CHTO	Chiang Mai	53.58	257	*e*P	P	07 49 03.3	+0.6
CHTO				pmax	pmax		
	comp=Z,17nm,0.8s						
CHTO	Chiang Mai	53.58	257	P	P	07 49 03.4	+0.6
	comp=Z,109nm,1.0s						
CHAI	Chaiyaphum	53.76	252	P	P	07 49 04.5	+0.5
	comp=Z,6.5nm,0.8s						
CMAR	Chiang Mai Arr	53.84	257	P	P	07 49 05.0	+0.4
	comp=Z,8.6nm,0.7s,baz=32,slow=7.5,SNR=41						
CMAR				PcP	PcP	07 50 10.4	+0.7
	comp=Z,1.6nm,0.7s,baz=20,slow=3.6,SNR=4.2						
USP	Ospenovka	53.85	297	P	P	07 49 03.8	-0.7
	SNR=20						
KBK	Karagaybulak	53.93	296	P	P	07 49 04.6	-0.6
	SNR=5.4						
KZA	Kyzart	54.09	295	P	P	07 49 06.5	-0.2
	SNR=9.5						
SUKH	Sukhothai	54.11	255	P	P	07 49 09.8	+3.3
	comp=Z,2.4nm,0.7s						
AAK	Ala-Archa	54.22	296	P	P	07 49 06.3	-1.0
	SNR=12						
AAK	Ala-Archa	54.22	296	*e*P	P	07 49 06.3	-1.0
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	54.22	296	*ce*P	P	07 49 06.4	-0.9
AAK				pmax	pmax		
	comp=Z,12nm,0.7s						
AAK	Ala-Archa	54.22	296	P	P	07 49 06.6	-0.7
	comp=Z,11nm,0.6s,baz=100,slow=5.0,SNR=40						
EKS2	Erkin-Say	54.63	297	P	P	07 49 10.0	-0.3
	SNR=11						
ARU	Arti	54.71	317	*e*P	P	07 49 08.9	-1.5
	comp=Z,17nm,0.5s						
ARU	Arti	54.71	317	*e*P	P	07 49 08.6	-1.8
ARU	Arti	54.71	317	*c i*P	P	07 49 08.6	-1.8
ARU						07 50 09.0	
ARU				S	S	07 56 44.8	-1.4
ARU				SS	SS	08 00 22.2	-6.8
ARU				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AML	Almayashu	54.99	296	P	P	07 49 12.7	-0.5
	SNR=5.5						
SRAK	Srakaew	55.15	250	P	P	07 49 13.3	-0.8
	comp=Z,32nm,0.9s						
KSH	Kashi	55.16	292	P	P	07 49 17.3	+3.2
KSH				pP	pP	07 49 30.5	+1.5
KSH				PP	PP	07 51 26.0	+8.4
KSH				S	S	07 56 54.1	+1.0
KSH				sS	sS	07 57 18.6	+1.9
KSH				SS	SS	08 00 43.3	+6.1
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH				pmax	pmax		
	comp=Z,540nm,9.9s						
KSH				LR	LR		
	comp=Z,210nm,6.2s						
KSH				LR	LR		
	comp=Z,180nm,5.3s						
KSH				LR	LR		
	comp=Z,670nm,8.6s						
DAG	Danmarks Havn	55.21	358	*i* P	P	07 49 12.9	-0.8
	comp=Z,4.6nm,0.8s						
DAG	Danmarks Havn	55.21	358	*i* P	P	07 49 12.9	-0.8
DAG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
UMPA	Umpang Tak	55.54	255	P	P	07 49 20.7	+3.7
JIRN	Jiri	55.98	275	*e*P	P	07 49 20.7	+0.2
	comp=Z,54nm,0.4s						
GUN	Gumba	56.02	275	*e*P	P	07 49 20.6	-0.1
	comp=Z,42nm,0.4s						
RAMN	Ramite	56.18	274	*e*P	P	07 49 21.7	0.0
	comp=Z,61nm,0.4s						
KK31	Karatay Array	56.30	299	*e*P	P	07 49 20.8	-1.3
KK31	Karatay Array	56.30	299	*e*P	P	07 49 20.8	-1.3
KKAR	Karatay Array	56.30	299	*e*P	P	07 49 20.9	-1.2
KKAR	Karatay Array	56.30	299	*e*P	P	07 49 20.9	-1.2
KEV	Kevo	56.33	341	*e*P	P	07 49 21.4	-0.5
	comp=Z,12nm,1.1s						
KEV	Kevo	56.33	341	*e*P	P	07 49 21.4	-0.5
KEV				pmax	pmax		
	comp=Z,12nm,1.1s						
KKN	Kakani	56.50	275	*e*P	P	07 49 24.2	+0.2
	comp=Z,52nm,0.6s						
PKI	Pulchoki	56.56	275	*e*P	P	07 49 24.5	0.0
	comp=Z,31nm,0.5s						
PKIN	Phulchoki	56.56	275	*e*P	P	07 49 24.3	-0.2
	comp=Z,24nm,0.5s						
WALA	Waterton Lakes	56.61	52	*e*P	P	07 49 25.1	+0.8
	comp=Z,3.0nm,0.9s						
DMN	Daman	56.74	275	*e*P	P	07 49 26.3	+0.6
	comp=Z,36nm,0.3s						
ARA0	ARCESS Array S	56.83	341	*e*P	P	07 49 24.8	-0.6
ARCES	ARCESS Array B	56.83	341	*e*P	P	07 49 24.6	-0.9
ARCES	ARCESS Array B	56.83	341	*e*P	P	07 49 24.6	-0.9
ARCES	ARCESS Array B	56.83	341	P	P	07 49 24.8	-0.6
	comp=Z,2.7nm,0.8s,baz=42,slow=8.2,SNR=33						
ARE0	ARCESS Array S	56.83	341	*e*P	P	07 49 25.1	-0.4
	comp=Z,0.3nm,1.1s						
DANN	Dangsing	57.15	277	*e*P	P	07 49 29.0	+0.4
	comp=Z,115nm,0.5s						
BMO	Blue Mountains	57.29	58	*e*P	P	07 49 30.1	+0.9
	comp=Z,1.9nm,0.8s						
BMO	Blue Mountains	57.29	58	*e*P	P	07 49 30.1	+0.9
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HNR	Honiara	57.59	174	LR	LR	08 14 15.4	
	comp=Z,309nm,19.1s,baz=106,slow=36						
KOLN	Koldanda	57.63	277	*e*P	P	07 49 32.2	+0.3
	comp=Z,29nm,0.4s						
PYUN	Piuthan	57.82	277	*e*P	P	07 49 33.4	+0.1
	comp=Z,27nm,0.5s						
BTK	Batken	57.98	296	*e*P	P	07 49 34.5	+0.4
	comp=Z,12nm,0.6s						
BTK	Batken	57.98	296	*e*P	P	07 49 34.5	+0.4
BTK				pmax	pmax		
	comp=Z,12nm,0.6s						
ABKAR	Akbulak array	58.37	310	*e*P	P	07 49 35.2	-1.3
AKTO	Aktyubinsk	58.60	312	P	P	07 49 36.9	-1.3
	comp=Z,1.9nm,0.4s,baz=57,slow=8.6,SNR=6.1						
AKTO				PcP	PcP	07 50 27.5	-0.3
	comp=Z,4.1nm,0.7s,baz=21,slow=4.5,SNR=6.1						
GAR	Garm	58.94	295	*e*P	P	07 49 40.0	-0.9
	comp=Z,19nm,0.7s						
GAR				*e*PcP	PcP	07 50 29.3	-0.2
GAR	Garm	58.94	295	*e*P	P	07 49 40.0	-0.9
GAR				*e*		07 50 29.3	
GAR				pmax	pmax		
	comp=Z,19nm,0.7s						
SUMG	Summit	59.14	5	*e*P	P	07 49 42.2	+0.2
	comp=Z,32nm,0.9s						
SUMG	Summit	59.14	5	*i* P	P	07 49 42.2	+0.2
	comp=Z,79nm,0.9s						
SUMG	Summit	59.14	5	*i* P	P	07 49 42.2	+0.2
SUMG				pmax	pmax		
	comp=Z,79nm,0.9s						
FCC	Fort Churchill	59.39	34	*e*P	P	07 49 43.8	+0.4
FCC	Fort Churchill	59.39	34	*e*P	P	07 49 43.7	+0.4
FCC	Fort Churchill	59.39	34	*e*P	P	07 49 43.8	+0.4
KLMR	Klimovskoe	59.44	329	*e*P	P	07 49 40.9	-2.8
KLMR				pmax	pmax		
	comp=Z,14nm,1.5s						
KLMR	Klimovskoe	59.44	329	*e*P	P	07 49 40.9	-2.8
KLMR				AMP		07 49 45.1	
	comp=Z,14nm,1.6s						
PNTR	Pine Nut	59.53	64	*e*P	P	07 49 45.9	+0.8
	comp=Z,2.5nm,0.8s						
CHGR	Chuyangaron	59.86	295	*e*P	P	07 49 46.1	-1.0
	comp=Z,50nm,1.0s						
CHGR				*e*PcP	PcP	07 50 33.1	0.0
NIL	Nilore	60.54	289	*e*P	P	07 49 51.0	-0.8
	comp=Z,23nm,0.9s						
NIL	Nilore	60.54	289	*e*P	P	07 49 51.0	-0.8
NIL				pmax	pmax		
	comp=Z,23nm,0.9s						
NV01	Mina Array Sit	60.73	64	*e*P	P	07 49 53.8	+0.6
NVAR	Mina Array Bea	60.73	64	P	P	07 49 54.5	+1.2
	comp=Z,0.6nm,0.5s,baz=302,slow=7.6,SNR=6.7						
GCMT	Greycliff	60.90	53	*e*P	P	07 49 55.4	+1.2
ILULI	Ilulissat	61.32	10	*e*P	P	07 49 57.2	+0.8
	comp=Z,8.5nm,0.7s						
ILULI	Ilulissat	61.32	10	*e*P	P	07 49 57.2	+0.8
ILULI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SCO	Scoresbysund	61.58	359	*e*P	P	07 49 58.6	+0.5
	comp=Z,4.9nm,0.8s						
SCO	Scoresbysund	61.58	359	*e*P	P	07 49 58.7	+0.5
SCO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MOOW	Moose Ponds	61.65	55	*e*P	P	07 50 01.4	+2.0
	comp=Z,1.0nm,0.9s						
REDW	Red Top Meadow	61.84	56	*e*P	P	07 50 02.8	+2.2
	comp=Z,3.5nm,1.0s						
AHID	Auburn Hatcher	62.09	56	*e*P	P	07 50 04.5	+2.2
	comp=Z,7.2nm,0.5s						
KBL	Kabul	62.59	292	*e*P	P	07 50 04.1	-1.7
	comp=Z,9.6nm,0.7s						
KBL	Kabul	62.59	292	*e*P	P	07 50 04.1	-1.7
KBL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
COEN	Coen	62.77	193	*e*P	P	07 50 07.5	+0.8
	comp=Z,5.4nm,0.5s						
PD31	Pinedale Array	62.94	55	*e*P	P	07 50 09.1	+1.1
PDAR	Pinedale Array	62.94	55	*e*P	P	07 50 08.9	+0.9
PDAR	Pinedale Array	62.94	55	P	P	07 50 09.4	+1.3
	comp=Z,0.6nm,0.6s,baz=318,slow=2.0,SNR=6.9						
FIA1	FINESS Array S	63.19	335	*e*P	P	07 50 07.9	-1.1
	comp=Z,19nm,1.0s						
FIA0	FINESS Array S	63.19	335	*e*P	P	07 50 08.1	-1.0
FIA0	FINESS Array S	63.19	335	*e*P	P	07 50 08.1	-1.0
FINES	FINESS Array B	63.19	335	*i* P	P	07 50 07.8	-1.3
FINES				pmax	pmax		
	comp=Z,9.0nm,0.4s						
FINES	FINESS Array B	63.19	335	P	P	07 50 08.1	-1.0
	comp=Z,9.1nm,0.4s,baz=36,slow=7.6,SNR=80						
FINES				LR	LR	08 20 18.1	
	comp=Z,119nm,18.9s,baz=87,slow=38						
PSUT	Pine Spring	63.31	61	*e*P	P	07 50 11.7	+1.2
	comp=Z,1.2nm,0.9s						
SFJD	Kangerlussuaq	63.48	11	*e*P	P	07 50 11.6	+0.7
	comp=Z,12nm,1.0s						
SFJD	Kangerlussuaq	63.48	11	*e*P	P	07 50 11.6	+0.7
SFJD				pmax	pmax		
	comp=Z,12nm,1.0s						
TCRU	Three Creeks R	64.08	60	*e*P	P	07 50 17.1	+1.4
	comp=Z,2.4nm,0.5s						
ULM	Lac du Bonnet	64.64	42	*e*P	P	07 50 19.2	+0.4
	comp=Z,0.6nm,0.6s						
ULM	Lac du Bonnet	64.64	42	P	P	07 50 19.0	+0.2
	comp=Z,2.2nm,0.7s,baz=312,slow=5.6,SNR=4.1						
OBN	Obninsk	64.74	326	*e*P	P	07 50 18.0	-1.3
OBN	Obninsk	64.74	326	⇓*e*P	P	07 50 18.0	-1.3
OBN				*e*		07 52 40.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SRU	San Rafael Swe	64.85	59	*e*P	P	07 50 21.8	+1.2
	comp=Z,3.8nm,0.8s						
SRU	San Rafael Swe	64.85	59	*e*P	P	07 50 21.8	+1.2
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RSSD	Black Hills	64.99	51	*e*P	P	07 50 22.3	+0.9
	comp=Z,5.1nm,0.6s						
RSSD	Black Hills	64.99	51	*e*P	P	07 50 22.3	+0.9
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PSI	Prapat	65.76	245	*e*P	P	07 50 28.2	+1.5
	comp=Z,6.3nm,0.7s						
PSI				*e*PcP	PcP	07 50 57.0	-0.5
PSI	Prapat	65.76	245	P	P	07 50 27.1	+0.4
	comp=Z,7.3nm,0.8s,baz=360,slow=6.3,SNR=4.1						
ANGG	Ammassalik, Gr	66.08	6	*e*P	P	07 50 28.5	+0.7
	comp=Z,25nm,1.1s						
N23A	Red Feather La	66.20	55	*e*P	P	07 50 30.7	+1.4
	comp=Z,4.6nm,1.1s						
PV20	West Nyswonger	66.27	59	*e*P	P	07 50 31.2	+1.4
	comp=Z,3.7nm,0.8s						
PV17	East Wray Mesa	66.31	59	*e*P	P	07 50 31.4	+1.3

	comp=Z,4.6nm,0.7s						
PV16	Nyswonger Mesa	66.32	59	eP	P	07 50 31.2	+1.2
	comp=Z,2.6nm,0.8s						
PV13	Radium Mtn., P	66.47	59	eP	P	07 50 32.4	+1.2
	comp=Z,2.9nm,0.8s						
PV02	Paradox Valley	66.49	59	eP	P	07 50 33.9	+2.7
	comp=Z,4.1nm,1.1s						
VSR	Storozhevoye	66.67	322	i P	P	07 50 28.8	-3.0
VSR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GEYT	Alibeck	66.83	301	P	P	07 50 33.2	0.0
	comp=Z,6.7nm,0.5s,baz=11,slow=3.0,SNR=14						
NC303	NORSAR Array S	66.99	342	eP	P	07 50 33.6	-0.2
NC405	NORSAR Array S	67.02	342	eP	P	07 50 33.6	-0.3
NC204	NORSAR Array S	67.07	342	eP	P	07 50 34.2	-0.1
NB201	NORSAR Array S	67.17	342	eP	P	07 50 34.7	-0.2
NB2	NORSAR Subarra	67.19	342	P	P	07 50 34.3	-0.8
	comp=Z,5.1nm,0.5s,baz=26,slow=6.5						
NB200	NORSAR Array S	67.19	342	eP	P	07 50 34.6	-0.5
NOA	NORSAR Array B	67.19	342	P	P	07 50 34.6	-0.5
	comp=Z,7.8nm,0.6s,baz=26,slow=6.4,SNR=43						
NOA				LR	LR	08 23 53.5	
	comp=Z,57nm,18.4s,baz=15,slow=39						
NBO00	NORSAR Array S	67.29	342	eP	P	07 50 36.0	+0.3
BORG	Borgarnes	67.32	358	eP	P	07 50 37.9	+2.2
	comp=Z,9.4nm,0.8s						
BORG	Borgarnes	67.32	358	eP	P	07 50 37.9	+2.2
BORG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NC602	NORSAR Array S	67.40	341	eP	P	07 50 35.7	-0.6
NAO01	NORSAR Array S	67.44	342	eP	P	07 50 36.1	-0.4
CTA	Charters Tower	68.44	189	P	P	07 50 43.1	-0.1
	comp=Z,1.8nm,0.5s,baz=357,slow=6.3,SNR=3.3						
CTAO	Charters Tower	68.44	189	eP	P	07 50 43.3	+0.1
	comp=Z,5.6nm,1.1s						
CTAO	Charters Tower	68.44	189	eP	P	07 50 43.3	+0.1
CTAO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KONO	Kongsberg	68.80	342	eP	P	07 50 45.5	+0.4
	comp=Z,27nm,1.1s						
KONO	Kongsberg	68.80	342	eP	P	07 50 45.5	+0.4
KONO				pmax	pmax		
	comp=Z,27nm,1.1s						
ECSD	EROS Data Cent	69.03	47	eP	P	07 50 47.1	+0.3
	comp=Z,4.7nm,0.9s						
GOF	Gofitskoye	69.59	315	eP	P	07 50 50.7	+0.5
WRAB	Tennant Creek	70.29	200	eP	P	07 50 54.5	-0.1
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	70.29	200	ceP	P	07 50 53.7	-0.9
WRAB				pmax	pmax		
	comp=Z,24nm,1.7s						
WB2	Warramunga Arr	70.29	200	eP	P	07 50 54.6	-0.1
	comp=Z,13nm,0.9s						
WB2				ePcP	PcP	07 51 16.4	+0.4
WR1	Warramunga Arr	70.30	200	eP	P	07 50 54.6	-0.1
	comp=Z,15nm,1.0s						
WRA	Warramunga Arr	70.30	200	P	P	07 50 54.6	-0.1
	comp=Z,9.8nm,0.8s,baz=16,slow=6.5,SNR=59						
WC3	Warramunga Arr	70.31	200	eP	P	07 50 54.6	-0.2
	comp=Z,12nm,0.8s						
POO	Poona	70.46	276	ex	P	07 50 55.0	-1.0
NCK	Nalchik	70.50	314	i P	P	07 50 55.5	-0.4
NCK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KIV	Kislovodsk	70.59	315	eP	P	07 50 55.6	-0.9
KIV	Kislovodsk	70.59	315	eP	P	07 50 55.6	-0.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KLNR	Kaliningrad	70.64	334	eP	P	07 50 55.8	-0.6
KLNR				pmax	pmax		
	comp=Z,83nm,1.1s						
KBZ	Khabaz	70.66	315	P	P	07 50 57.2	+0.5
	comp=Z,4.2nm,0.6s,baz=60,slow=2.6,SNR=16						
ZEI	Tsey	70.88	313	eP	P	07 50 54.2	-4.2
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	70.95	327	P	P	07 50 57.2	-1.2
	comp=Z,6.7nm,0.6s,baz=33,slow=6.1,SNR=11						
AKBB	Malin Array Si	70.95	327	eP	P	07 50 57.5	-0.9
	comp=Z,9.7nm,0.8s						
KIEV	Kiev	70.96	327	eP	P	07 50 57.3	-1.2
	comp=Z,9.8nm,0.8s						
KIEV	Kiev	70.96	327	⇑iP	P	07 50 57.4	-1.2
KIEV	Kiev	70.96	327	eP	P	07 50 57.3	-1.2
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AK11	Malin Array Si	70.99	327	eP	P	07 50 57.9	-0.8
FITZ	Fitzroy Crossi	71.00	209	eP	P	07 50 59.2	+0.2
	comp=Z,12nm,0.8s						
SCHQ	Schefferville	71.49	24	P	P	07 51 02.3	+0.6
	comp=Z,2.1nm,0.4s,baz=332,slow=5.3,SNR=10						
BSD	Bornholm Skovb	71.66	337	i P	P	07 51 02.4	-0.2
	comp=Z,7.8nm,0.4s						
BSD	Bornholm Skovb	71.66	337	i P	P	07 51 02.4	-0.2
BSD				pmax	pmax		
	comp=Z,8.0nm,0.4s						
H41A	Junction City	71.66	43	eP	P	07 51 03.1	+0.3
	comp=Z,10nm,1.1s						
MUD	Monsted U'grnd	71.82	341	i P	P	07 51 04.2	+0.7
MUD	Monsted U'grnd	71.82	341	eP	P	07 51 04.2	+0.7
GNI	Garni	72.45	311	P	P	07 51 09.0	+1.1
GNI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GNI	Garni	72.45	311	P	P	07 51 09.0	+1.1
	comp=Z,5.5nm,0.6s,baz=30,slow=8.1,SNR=4.9						
RGN	Rugen	72.57	338	eP	P	07 51 08.8	+0.7
	comp=Z,66nm,0.6s						
GKP	Gorka Klasztor	72.66	335	eP	P	07 51 08.7	+0.1
GKP	Gorka Klasztor	72.66	335	eP	P	07 51 08.7	+0.1
DAGI	Agillar	73.14	313	i P	P	07 51 11.3	-0.5
DBAD	Bademkaya	73.30	313	i P	P	07 51 13.1	+0.3
EATA	Eleskirt	73.79	312	i P	P	07 51 17.6	+1.6
AS01	Alice Springs	73.97	200	eP	P	07 51 17.3	+0.6
TUTA	Tutak	73.98	312	i P	P	07 51 18.0	+1.0
AS31	Alice Springs	73.98	200	eP	P	07 51 17.9	+1.2
	comp=Z,1.5nm,0.9s						
ASAR	Alice Springs	73.99	200	P	P	07 51 17.6	+0.8
	comp=Z,3.2nm,0.6s,baz=13,slow=5.4,SNR=48						
KWP	Kalwaria Pacla	74.14	330	eP	P	07 51 17.9	+0.5
KWP	Kalwaria Pacla	74.14	330	eP	P	07 51 18.1	+0.6
	comp=Z,562nm,1.1s						
KWP	Kalwaria Pacla	74.14	330	eP	P	07 51 17.9	+0.5
OJC	Ojcow	74.57	332	eP	P	07 51 19.8	-0.2
OJC	Ojcow	74.57	332	eP	P	07 51 19.5	-0.5
	comp=Z,20nm,0.6s						
OJC	Ojcow	74.57	332	eP	P	07 51 20.2	+0.3
OJC	Ojcow	74.57	332	eP	P	07 51 19.5	-0.5
OJC				pmax	pmax		
	comp=Z,20nm,0.6s						
BAYB	BAYBURT	74.58	314	i P	P	07 51 21.7	+1.3
KOPT	Kop Dagi	74.65	313	i P	P	07 51 22.0	+1.1
BUR08	Bucovina Ar. S	74.96	327	eP	P	07 51 21.9	-0.5
BUR04	Bucovina Ar. S	74.98	327	eP	P	07 51 22.1	-0.4
BURAR	Bucovina Array	74.98	327	⇓iP	P	07 51 22.1	-0.4
KSP	Ksiaz	75.08	334	eP	P	07 51 23.2	+0.3
KSP	Ksiaz	75.08	334	eP	P	07 51 23.2	+0.3
NIE	Niedzica	75.11	331	eP	P	07 51 23.5	+0.4
NIE	Niedzica	75.11	331	eP	P	07 51 23.5	+0.4
KELT	Kelkit	75.14	314	i P	P	07 51 24.6	+0.9
ESK	Eskdalemuir	75.19	347	eP	P	07 51 23.8	+0.4
ESK	Eskdalemuir	75.19	347	eP	P	07 51 23.8	+0.4
TUL1	Leonard	75.28	52	eP	P	07 51 24.9	+0.6
	comp=Z,5.4nm,0.8s						
OKC	Ostrava-Krasne	75.42	333	eP	P	07 51 25.1	+0.3
OKC	Ostrava-Krasne	75.42	333	eP	P	07 51 25.1	+0.3
UPC	Upice	75.47	334	eP	P	07 51 25.3	+0.2
UPC	Upice	75.47	334	eP	P	07 51 25.3	+0.2
TRPA	Tarpa	75.48	329	⇑iP	P	07 51 25.3	+0.1
TRPA	Tarpa	75.48	329	⇑eP	P	07 51 25.0	-0.2
DPC	Dobruska-Polom	75.51	334	eP	P	07 51 25.8	+0.4
DPC	Dobruska-Polom	75.51	334	eP	P	07 51 25.8	+0.4
SNOP	Sinop	75.54	318	eP	P	07 51 25.9	+0.3
	comp=Z,20nm,1.0s						
CLL	Collm	75.59	336	eP	P	07 51 25.3	-0.5
	comp=Z,30nm,0.8s						
CLL	Collm	75.59	336	⇑iP	P	07 51 25.2	-0.5
	comp=Z,33nm,0.8s						
CLL	Collm	75.59	336	eP	P	07 51 25.9	+0.2
CLL	Collm	75.59	336	⇑iP	P	07 51 25.2	-0.5
CLL				pmax	pmax		
	comp=Z,33nm,0.8s						
LANS	Liptovska Anna	75.61	332	eP	P	07 51 27.0	+1.0
LANS	Liptovska Anna	75.61	332	eP	P	07 51 27.0	+1.0
KRLC	Kraliky	75.62	334	eP	P	07 51 26.8	+0.8
KRLC	Kraliky	75.62	334	eP	P	07 51 26.8	+0.8
TLCR		75.66	324	⇑iP	P	07 51 25.8	-0.4
MORC	Moravsky Berou	75.66	333	eP	P	07 51 26.2	-0.1
	comp=Z,26nm,0.9s						
MORC	Moravsky Berou	75.66	333	⇑iP	P	07 51 26.6	+0.3
MORC	Moravsky Berou	75.66	333	eP	P	07 51 26.2	-0.1
MORC				pmax	pmax		
	comp=Z,27nm,0.9s						
MORC	Moravsky Berou	75.66	333	eP	P	07 51 26.2	-0.1
BRG	Berggiesshubel	75.72	336	eP	P	07 51 26.2	-0.3
	comp=Z,10.0nm,0.8s						
BRG	Berggiesshubel	75.72	336	eP	P	07 51 26.2	-0.3
BRG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TX31	Lajitas Ar. Si	75.76	62	eP	P	07 51 27.7	+0.4
LTX	Lajitas	75.76	62	eP	P	07 51 27.9	+0.6
LTX	Lajitas	75.76	62	eP	P	07 51 27.9	+0.6
TXAR	Lajitas Array	75.76	62	P	P	07 51 27.9	+0.6
	comp=Z,1.6nm,0.6s,baz=301,slow=4.4,SNR=26						
PVCC	Panska Ves	75.86	335	eP	P	07 51 27.8	+0.5
PVCC	Panska Ves	75.86	335	eP	P	07 51 27.8	+0.5
VRI	Vrincioaia	75.89	325	⇑iP	P	07 51 28.0	+0.4
KVT	Kavak	75.91	317	eP	P	07 51 28.3	+0.5
CFR	Carcaliu	75.93	324	⇑iP	P	07 51 27.5	-0.3
HHAR	Hobbs	75.97	51	eP	P	07 51 28.5	+0.3
	comp=Z,3.2nm,0.8s						
OZUR		76.06	326	⇑iP	P	07 51 29.1	+0.5
PTK	Pertek	76.06	313	i P	P	07 51 29.2	+0.3
KEMA	Kemaliye	76.20	314	i P	P	07 51 30.1	+0.6
PRU	Pruhonice	76.35	335	eP	P	07 51 30.5	+0.4
PRU	Pruhonice	76.35	335	eP	P	07 51 30.5	+0.4
VRAC	Vranov	76.36	333	⇑iP	P	07 51 30.8	+0.6
VRAC	Vranov	76.36	333	eP	P	07 51 30.4	+0.2
VYHS	Vyhne	76.39	332	eP	P	07 51 29.8	-0.6
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VYHS	Vyhne	76.39	332	eP	P	07 51 29.8	-0.6
SVSK	Karacayir	76.39	316	eP	P	07 51 30.7	+0.2
HARR	Harsova	76.42	324	⇓iP	P	07 51 29.7	-0.9
TIRR	Tirgusor	76.42	324	eP	P	07 51 30.7	+0.1
	comp=Z,17nm,1.0s						
TIRR	Tirgusor	76.42	324	⇑iP	P	07 51 30.4	-0.2
TIRR	Tirgusor	76.42	324	eP	P	07 51 30.7	+0.1
TIRR				pmax	pmax		
	comp=Z,17nm,1.0s						
TLB	Topalu	76.46	324	⇑iP	P	07 51 30.5	-0.3
MLR	Muntele Rosu	76.51	326	eP	P	07 51 31.5	+0.3
	comp=Z,22nm,0.7s						
MLR	Muntele Rosu	76.51	326	⇑iP	P	07 51 31.8	+0.5
MLR	Muntele Rosu	76.51	326	eP	P	07 51 31.5	+0.3
MLR				pmax	pmax		
	comp=Z,22nm,0.7s						
PSZ	Piszkesteto	76.55	331	⇑iP	P	07 51 31.6	+0.2
PSZ	Piszkesteto	76.55	331	⇑eP	P	07 51 31.1	-0.3
ELZG	Elazig	76.57	313	i P	P	07 51 32.6	+0.8
ISR	Istrita	76.59	325	⇑iP	P	07 51 31.6	-0.1
KRUC	Moravsky	76.64	333	eP	P	07 51 31.9	+0.1
MAZI	Mazidag	76.66	312	eP	P	07 51 32.4	+0.2
TREC	Trest	76.70	334	eP	P	07 51 32.9	+0.8
TREC	Trest	76.70	334	eP	P	07 51 32.9	+0.8
NKC	Novy Kostel	76.71	336	eP	P	07 51 32.7	+0.5
NKC	Novy Kostel	76.71	336	eP	P	07 51 32.7	+0.5
VOIR		76.89	326	⇓iP	P	07 51 33.6	+0.3
MODS	Modra-Piesok	76.98	332	eP	P	07 51 34.4	+0.7
MODS				pmax	pmax		
	comp=Z,15nm,1.0s						
MODS	Modra-Piesok	76.98	332	eP	P	07 51 34.4	+0.7
ARR	Arges	77.10	326	⇑iP	P	07 51 35.3	+0.8
DARE	Darende-Malaty	77.23	314	eP	P	07 51 36.3	+0.9
UOSS	Minazif	77.24	293	eP	P	07 51 35.3	-0.2
	comp=Z,42nm,1.1s						
KHC	Kasperske Hory	77.40	335	eP	P	07 51 36.1	0.0
	comp=Z,8.4nm,0.7s						
KHC	Kasperske Hory	77.40	335	eP	P	07 51 36.6	+0.5
KHC	Kasperske Hory	77.40	335	eP	P	07 51 36.6	+0.5
URFA	Urfa	77.48	313	eP	P	07 51 37.5	+0.7
MIAR	Mount Ida	77.49	52	eP	P	07 51 37.1	+0.3
	comp=Z,3.4nm,0.9s						
MIAR	Mount Ida	77.49	52	eP	P	07 51 37.1	+0.3
MIAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GRA1	Grafenberg Arr	77.53	337	eP	P	07 51 37.6	+0.8
	comp=Z,27nm,0.7s						
GRFO	Grafenberg	77.53	337	eP	P	07 51 37.3	+0.5
	comp=Z,25nm,0.8s						
GEC2	GERESS Array S	77.62	335	eP	P	07 51 37.2	-0.2
	comp=Z,8.2nm,0.6s						
GERES	GERESS Array B	77.62	335	P	P	07 51 37.5	+0.1
	comp=Z,6.2nm,0.6s,baz=32,slow=5.2,SNR=28						
GEA0	GERESS Array S	77.63	335	eP	P	07 51 37.2	-0.3
GZR	Gura Zlata	77.75	328	⇑iP	P	07 51 37.7	-0.5
CONA	Conrad Observa	77.81	333	eP	P	07 51 36.5	-1.9
	comp=Z,11nm,0.8s						
SOP	Sopron	77.82	333	eP	P	07 51 38.1	-0.3
MEM	Membach	77.96	340	P	P	07 51 39.4	+0.3
	comp=Z,20nm,1.0s						
BZS	Buzias	77.97	328	⇑iP	P	07 51 38.6	-0.7
BR101	Keskin Array S	78.09	318	eP	P	07 51 40.1	-0.1
BR131	Keskin Array S	78.09	318	eP	P	07 51 40.3	0.0
BRTR	Keskin Array B	78.09	318	i P	P	07 51 40.2	0.0
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRTR	Keskin Array B	78.09	318	P	P	07 51 40.1	-0.1
	comp=Z,11nm,0.9s,baz=64,slow=3.6,SNR=40						
HERR	Herculane	78.33	328	⇑iP	P	07 51 40.3	-0.9
ANTO	Ankara	78.36	318	eP	P	07 51 42.3	+0.7
	comp=Z,20nm,0.6s						
ANTO	Ankara	78.36	318	⇑iP	P	07 51 42.1	+0.5
ANTO	Ankara	78.36	318	eP	P	07 51 42.3	+0.7
ANTO				pmax	pmax		
	comp=Z,20nm,0.6s						
MOA	Molln	78.36	334	eP	P	07 51 41.0	-0.4
	comp=Z,8.9nm,0.8s						
MORH	Mrgy, Hungar	78.46	331	eP	P	07 51 40.1	-1.9
GAZ	Gaziantep	78.47	314	eP	P	07 51 44.7	+2.4
ARSA	Arzberg	78.52	333	eP	P	07 51 40.3	-2.0
	comp=Z,7.3nm,1.1s						
MDVR	Moldovita	78.66	328	⇑iP	P	07 51 42.3	-0.9
SOKA	Soboth	79.18	333	eP	P	07 51 44.2	-1.9
	comp=Z,15nm,1.0s						
CEYT	Ceyhan	79.30	315	eP	P	07 51 46.5	-0.2
KBA	Koelnbreinsper	79.32	334	eP	P	07 51 44.4	-2.5
	comp=Z,20nm,0.8s						
LHI	Lord Howe Isla	79.48	176	eP	P	07 51 47.8	+0.3
	comp=Z,126nm,1.1s						
OBKA	Obir	79.48	333	eP	P	07 51 46.2	-1.5
	comp=Z,6.0nm,1.1s						
BFO	Black Forest	79.53	338	eP	P	07 51 48.4	+0.6
	comp=Z,9.5nm,1.0s						
BFO	Black Forest	79.53	338	eP	P	07 51 48.4	+0.6
BFO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WATA	Walderalm	79.59	336	i P	P	07 51 46.7	-1.6
	comp=Z,7.2nm,0.5s						
WTTA	Wattenberg	79.64	335	i P	P	07 51 45.9	-2.7
	comp=Z,14nm,0.6s						
MYKA	Terra Mystica	79.64	334	eP	P	07 51 45.7	-2.9
	comp=Z,7.7nm,1.0s						
RETA	Reutte	79.67	336	i P	P	07 51 46.5	-2.1
	comp=Z,11nm,0.9s						
MOTA	Moosalm	79.71	336	i P	P	07 51 45.6	-3.4
	comp=Z,30nm,1.1s						
SQTA	Sankt Quirin	79.80	336	i P	P	07 51 47.7	-1.7
	SNR=8.2						
ABTA	Abfaltersbach	79.86	335	i P	P	07 51 45.9	-3.8
	comp=Z,6.6nm,0.8s						
DIVS	Divibare	79.86	329	eP	P	07 51 49.1	-0.7
	comp=Z,11nm,0.9s						
VTS	Vitosha	79.98	326	eP	P	07 51 51.0	+0.5
	comp=Z,18nm,0.9s						
VTS	Vitosha	79.98	326	⇑iP	P	07 51 51.0	+0.5
VTS	Vitosha	79.98	326	eP	P	07 51 51.0	+0.5
VTS				pmax	pmax		
	comp=Z,18nm,0.9s						
DAVA	Damuels	80.09	337	i P	P	07 51 48.9	-2.1
	comp=Z,18nm,1.1s						
FETA	Feichten	80.11	336	i P	P	07 51 48.2	-3.0
	comp=Z,14nm,1.1s						
FUORN	Ofenpass-Fuorn	80.60	336	eP	P	07 51 55.0	+1.1
	comp=Z,9.7nm,0.7s						
STKA	Stephens Creek	80.62	191	P	P	07 51 54.2	+0.6
	comp=Z,2.0nm,0.7s,baz=0.0,slow=8.1,SNR=2.9						
TTG	Podgorica	81.58	328	eP	P	07 51 58.2	-0.7
	comp=Z,14nm,1.1s						
TTG	Podgorica	81.58	328	eP	P	07 51 58.2	-0.7
TTG				pmax	pmax		
	comp=Z,14nm,1.1s						
CSS	Mathiatis	82.11	315	eP	P	07 52 02.6	+0.8
	comp=Z,14nm,0.5s						
FORT	Forrest	82.23	203	eP	P	07 52 02.7	+0.6
	comp=Z,36nm,0.6s						
Z50A	Ashland	82.41	48	eP	P	07 52 03.6	+0.2
	comp=Z,8.7nm,0.9s						
BNI	Bardonecchia	83.00	338	eP	P	07 52 07.7	+1.3
	comp=Z,7.2nm,1.0s						
BNI	Bardonecchia	83.00	338	eP	P	07 52 07.7	+1.3
BNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
JSC	Jenkinsville	83.80	44	eP	P	07 52 12.0	+1.5
	comp=Z,12nm,0.8s						
JSC	Jenkinsville	83.80	44	eP	P	07 52 12.0	+1.5
JSC				pmax	pmax		
	comp=Z,12nm,0.8s						
RAYN	Ar Rayn	84.72	300	eP	P	07 52 15.2	-0.2
	comp=Z,8.3nm,0.7s						
RAYN	Ar Rayn	84.72	300	eP	P	07 52 15.2	-0.2
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NWAO	Narrogin (SRO)	87.52	211	P	P	07 52 28.5	-0.1
	comp=Z,5.4nm,0.6s,baz=34,slow=3.6,SNR=4.1						
URZ	Urewera	88.37	163	P	P	07 52 32.6	+0.1
	comp=Z,7.0nm,0.9s,baz=334,slow=21,SNR=2.9						
ESDC	Sonseca Array	90.47	344	P	P	07 52 42.0	-0.8
	comp=Z,1.9nm,1.0s,baz=8.0,slow=4.3,SNR=5.8						
KEST	Kesra	90.91	333	eP	P	07 52 46.5	+1.6
	comp=Z,9.9nm,0.7s						
KEST	Kesra	90.91	333	P	P	07 52 45.1	+0.1
	comp=Z,6.8nm,0.6s,baz=342,slow=2.3,SNR=8.6						
TOA1	Torodi Ar. Sit	114.39	331	ePKiKP	PKiKP	07 58 19.8	-1.3
TORD	Torodi Ar. Bea	114.39	331	PKP	PKiKP	07 58 19.8	-1.3
	comp=Z,0.2nm,0.3s,baz=342,slow=3.0,SNR=2.7						
MAW	Mawson	134.07	212	PKP	PKiKP	07 58 57.9	-0.3
	comp=Z,6.7nm,0.9s,baz=90,slow=4.0,SNR=2.7						
BOSA	Boshof	136.78	278	ePKPdf	PKPdf	07 59 04.2	+0.8
BOSA				ePKPdf	PKiKP	07 59 04.9	-0.3
BOSA	Boshof	136.78	278	PKP	PKPdf	07 59 04.2	+0.8
	comp=Z,1.6nm,0.6s,baz=82,slow=3.2,SNR=4.5						
CPUP	Villa Florida	146.73	61	ePKPdf	PKPbc	07 59 22.8	0.0
CPUP	Villa Florida	146.73	61	PKPbc	PKPbc	07 59 22.4	-0.4
	comp=Z,1.8nm,0.5s,baz=328,slow=5.6,SNR=7.4						
PLCA	Paso Flores	147.17	94	ePKPbc	PKPbc	07 59 24.1	+0.3
PLCA	Paso Flores	147.17	94	ePKP2	PKPbc	07 59 24.1	+0.3

IDG 01 07:47:45.0, 54°.89N×41°.49E, M1.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Baltic States-Belarus-Northwestern Russia

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ISCJB ***01*** *07:51:40.9±0.8, 19°.9S±0°.3×179°.3W±0°.2, h600^{km}, mb3.4/6, Error ellipse: s-maj=40.1km s-min=15.1km az=163.3*

IDC ***01*** *07:51:43.7±3.1, 20°.16S×179°.11W, h625^{km}±44^{km}, mb2.8/6, mb1 3.2/8, mb1mx3.0/22, mbtmp3.9/8, Error ellipse: s-maj=62.8km s-min=17.0km az=164.0*

ISC 01 07:51:42.2±0.9, **20°.0S**±0°.3×**179°.1W**±0°.2, **h600**^{km}, **n11**, σ**1§37**/12, **mb3.5**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.64	259	P	P	07 54 39.6	+2.0
	0.3nm,0.3s,baz=57,slow=17,SNR=3.8						
RAR	Rarotonga	18.16	97	P	P	07 55 20.4	+1.1
	1.7nm,0.3s,baz=39,slow=12,SNR=3.4						
STKA	Stephens Creek	37.08	243	P	P	07 58 01.7	-1.5
	1.3nm,0.7s,baz=80,slow=12,SNR=2.6						
ASAR	Alice Springs	43.62	256	P	P	07 58 54.8	-0.4
	1.9nm,0.7s,baz=95,slow=7.7,SNR=30						
ASAR				PcP	PcP	08 00 27.6	-1.4
	0.5nm,0.6s,baz=114,slow=3.5,SNR=6.2						
WRA	Warramunga Arr	43.63	262	P	P	07 58 55.1	-0.2
	0.6nm,0.3s,baz=96,slow=7.5,SNR=36						
WRA				PcP	PcP	08 00 28.4	-0.6
	0.2nm,0.7s,baz=94,slow=3.0,SNR=2.8						
NVAR	Mina Array Bea	81.37	44	P	P	08 02 57.1	-0.5
	0.3nm,0.5s,baz=221,slow=8.0,SNR=3.5						
ILAR	Eielson Array	88.03	13	P	P	08 03 29.1	0.0
	0.2nm,0.5s,baz=216,slow=5.2,SNR=4.6						
PDAR	Pinedale Array	89.30	44	P	P	08 03 35.1	-0.7
	0.2nm,0.5s,baz=207,slow=6.3,SNR=3.7						
BVAR	Borovoye Array	117.99	320	PKP	PKPdf	08 09 20.5	-0.9
	0.4nm,0.4s,baz=99,slow=1.9,SNR=3.4						
AKASG	Malin Array Be	142.03	331	PKhKP	PKPpre	08 10 00.5	
	0.8nm,0.3s,baz=42,slow=4.1,SNR=7.8						
BRTR	Keskin Array B	145.70	312	PKPbc	PKPdf	08 10 16.0	+2.3
	0.4nm,0.4s,baz=124,slow=2.6,SNR=3.2						

SOME ***01*** *07:57:02.9, 42°.52N×79°.60E, h15^{km}*

KRNET ***01*** *07:57:03.1±0.1, 42°.57N×79°.61E, h18^{km}, mb2.6*

NNC ***01*** *07:57:03.1±0.9, 42°.60N×79°.60E, h2^{km}±5^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=6.5km s-min=3.0km az=163.0*

ISC 01 07:57:02.0±1.5, **42°.53N**±0°.05×**79°.59E**±0°.04, **h2**^{km}±12^{km}, **n30**, σ**1§37**/56, **16C-8D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.63	352	P	Pb	07 57 15.3	-0.5
	11nm,0.1s						
SHLS				S	Sb	07 57 24.4	-0.7
	50nm,0.5s						
SHLS	Shalkode	0.63	352	eP	Pb	07 57 15.3	-0.5
	baz=19						
SHLS				eS	Sb	07 57 24.5	-0.7
	baz=19						
SHLS	Shalkode	0.63	352	eP	Pb	07 57 15.3	-0.5
	11nm,0.1s						
SHLS				eS	Sb	07 57 24.4	-0.7
	50nm,0.5s						
UZB	Uzynbulak	0.74	326	P	Pg	07 57 16.7	+0.5
	1.9nm,0.2s						
UZB				S	Sb	07 57 26.8	-1.5
	11nm,0.1s						
UZB	Uzynbulak	0.74	326	eP	Pg	07 57 16.8	+0.5
	baz=23						
UZB				eS	Sb	07 57 26.9	-1.5
	baz=23						
UZB	Uzynbulak	0.74	326	eP	Pg	07 57 16.8	+0.5
	1.9nm,0.2s						
UZB				eS	Sb	07 57 26.8	-1.5
	11nm,0.1s						
PDGK	Podgornoye	0.80	355	P	Pg	07 57 17.4	+0.1
	2.8nm,0.1s						
PDGK				S	Sg	07 57 27.9	+0.1
	3.4nm,0.2s						
PDGK	Podgornoye	0.80	355	⇑iP	Pg	07 57 17.3	0.0
	baz=53						
PDGK				⇑iS	Sg	07 57 27.8	+0.1
	baz=53						
PRZ	Przheval'sk	0.88	267	⇑iP	Pb	07 57 19.7	-0.4
	baz=65						
PRZ				⇑iS	Sb	07 57 32.4	+0.1
	baz=65						
SATY	Saty	1.02	302	P	Pb	07 57 22.3	-0.1
	3.0nm,0.1s						
SATY				S	Sn	07 57 36.3	-2.0
	19nm,0.1s						
SATY	Saty	1.02	302	eP	Pb	07 57 22.3	-0.1
	3.0nm,0.1s						
SATY				⇑iS	Sn	07 57 36.3	-2.0
	19nm,0.1s						
KTMS	Ketmen	1.07	31	P	Pb	07 57 22.6	-0.7
	1.4nm,0.1s						
KTMS				S	Sg	07 57 36.5	+0.1
	5.2nm,0.1s						
KTMS	Ketmen	1.07	31	eP	Pb	07 57 22.6	-0.7
	baz=31						
KTMS				eS	Sg	07 57 36.5	+0.1
	baz=31						
KTMS	Ketmen	1.07	31	eP	Pb	07 57 22.6	-0.7
	1.4nm,0.1s						
KTMS				eS	Sg	07 57 36.5	+0.1
	5.2nm,0.1s						
KDJ	Kajisay	1.83	258	⇑iP	Pb	07 57 36.9	+0.6
	baz=57						
KDJ				⇑iS	Sg	07 58 01.6	+0.8
	baz=57						
TNSS	Tian-Shan	2.01	285	Pg	Pb	07 57 39.6	+0.1
	3.0nm,0.3s						
TNSS				Lg	Lg	07 58 06.3	
	2.8nm,0.5s						
TNSS	Tian-Shan	2.01	285	⇓iP	Pb	07 57 39.6	+0.1

	baz=84						
TNSS				⇓*e*S	Sb	07 58 06.1	+1.0
	baz=84						
TNSS	Tian-Shan	2.01	285	⇓*i*P	Pb	07 57 39.6	+0.1
	1.7nm,0.2s						
TNSS				*e*S	Sb	07 58 06.1	+1.0
	3.9nm,0.2s						
ARXS	Arharly	2.12	323	Pg	Pb	07 57 40.6	-0.5
	3.9nm,0.4s						
ARXS				Lg	Lg	07 58 08.6	
	9.4nm,0.5s						
ARXS	Arharly	2.12	323	*e*P	Pb	07 57 41.4	+0.3
	3.9nm,0.4s						
ARXS				*e*S	Sg	07 58 08.6	-1.3
	9.4nm,0.5s						
IZV	Izvestkoviy	2.25	284	Pg	Pb	07 57 43.7	+0.3
IZV				Lg	Lg	07 58 12.8	
IZV	Izvestkoviy	2.25	284	*e*P	Pb	07 57 43.6	+0.3
	baz=83						
IZV				*e*S	Sb	07 58 12.8	+1.1
	baz=83						
IZV	Izvestkoviy	2.25	284	*e*P	Pb	07 57 43.6	+0.3
	4.6nm,0.2s						
IZV				*e*S	Sb	07 58 12.8	+1.1
	5.7nm,0.3s						
ULHL	Ulahol	2.50	265	⇓*e*P	Pb	07 57 46.8	-0.8
	baz=64						
ULHL				⇓*i*S	Sb	07 58 18.5	-0.4
	baz=64						
BOOM	Boomskoye usch	2.70	270	⇓*i*P	Pb	07 57 49.3	-1.8
	baz=70						
BOOM				⇓*i*S	Sb	07 58 23.1	-1.6
	baz=70						
NRN	Naryn	2.89	249	⇑*i*P	Pb	07 57 52.6	-1.8
	baz=48						
NRN				⇑*i*S	Sb	07 58 28.7	-1.7
	baz=48						
TKM2	Tokmak 2	2.97	279	⇑Pg	Pg	07 57 58.0	-0.9
	2.8nm,1.1s						
TKM2				⇓Lg	Lg	07 58 38.7	
	1.7nm,0.5s						
TKM2	Tokmak 2	2.97	279	⇑*i*P	Pb	07 57 53.1	-2.6
	baz=78						
TKM2				⇑*i*S	Sb	07 58 29.5	-2.9
	baz=78						
KZA	Kyzart	3.25	263	⇑*i*P	Pb	07 57 57.5	-3.1
	baz=63						
KZA				⇑*e*S	Sb	07 58 37.0	-3.8
	baz=63						
ARLS	Aral	3.97	262	⇑*i*P	Pn	07 58 07.3	+3.3
	baz=62						
ARLS				⇑*i*S	Sn	07 58 53.5	+2.3
	baz=62						

IDC 01 08:17:48.9±1.6**, 2°.43N×89°.54E, h0^{km}, mb3.5**/5**, mb1 3.8**/6**, mb1mx3.5**/39**, mbtmp3.6**/6**, ML4.3**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/49**, Error ellipse: s-maj=51.8km s-min=24.5km az=57.0, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	18.40	29	P	Pn	08 22 05.5	-0.2
	0.4nm,0.3s,baz=221,slow=11,SNR=4.9						
H08S2	Diego Garcia H	19.74	239	T	T	08 43 08.8	
	baz=60,slow=75,SNR=15						
H08S3	Diego Garcia H	19.74	239	T	T	08 43 08.2	
	baz=60,slow=75,SNR=18						
H08S1	Diego Carcia H	19.75	239	T	T	08 43 08.9	
	baz=60,slow=75,SNR=6.2						
H01W3	Cape Leeuwin H	43.71	150	T	T	09 12 38.3	
	baz=326,slow=75,SNR=3.9						
H01W2	Cape Leeuwin H	43.72	150	T	T	09 12 38.2	
	baz=326,slow=75,SNR=3.6						
H01W1	Cape Leeuwin H	43.72	150	T	T	09 12 37.1	
	baz=326,slow=75,SNR=5.0						
MKAR	Makanchi Array	44.64	353	P	P	08 26 03.4	+0.1
	0.1nm,0.4s,baz=165,slow=6.0,SNR=2.4						
SONM	Songino Array	47.52	15	P	P	08 26 25.6	-0.5
	1.0nm,0.5s,baz=195,slow=9.5,SNR=11						
WRA	Warramunga Arr	49.26	119	P	P	08 26 39.7	-0.1
	0.5nm,0.5s,baz=298,slow=8.7,SNR=11						
ASAR	Alice Springs	50.35	124	P	P	08 26 47.6	-0.6
	0.7nm,1.1s,baz=294,slow=7.0,SNR=3.2						
AKTO	Aktyubinsk	54.76	336	LR	LR	08 53 55.6	
	comp=Z,25nm,18.9s,baz=12,slow=40						
BRTR	Keskin Array B	62.69	314	P	P	08 28 15.5	-0.5
	0.4nm,0.6s,baz=126,slow=6.3,SNR=2.7						
TXAR	Lajitas Array	145.97	21	PKPbc	PKPab	08 37 31.8	-0.2
	0.2nm,0.5s,baz=55,slow=0.7,SNR=7.9						

IDC 01 08:23:21.7±9.1**, 12°.49N×141°.95E, h0^{km}, mb3.6**/4**, mb1 3.7**/4**, mb1mx3.4**/47**, mbtmp3.6**/4**, Error ellipse: s-maj=381.1km s-min=28.3km az=80.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	24.56	73	T	T	08 52 13.0	
	baz=259,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	24.57	73	T	T	08 52 15.0	
	baz=259,slow=75,SNR=10.0						
H11S2	WAKE ISLAND Hy	24.57	73	T	T	08 52 14.5	
	baz=259,slow=75,SNR=9.6						
H11N1	WAKE ISLAND Hy	24.99	70	T	T	08 52 47.3	
	baz=255,slow=75,SNR=8.5						
H11N2	WAKE ISLAND Hy	25.00	70	T	T	08 52 48.3	
	baz=255,slow=75,SNR=8.2						
H11N3	WAKE ISLAND Hy	25.01	70	T	T	08 52 47.9	
	baz=255,slow=75,SNR=9.1						
WRA	Warramunga Arr	33.09	193	P	P	08 29 59.5	0.0
	0.5nm,0.8s,baz=16,slow=9.4,SNR=4.3						
SONM	Songino Array	46.04	327	P	P	08 31 47.8	+0.4
	0.3nm,0.6s,baz=145,slow=6.4,SNR=4.2						
MKAR	Makanchi Array	60.33	317	P	P	08 33 32.5	+0.1
	0.4nm,0.7s,baz=85,slow=6.5,SNR=3.0						
KURBB	Kurchatov Arra	63.64	321	P	P	08 33 54.2	-0.5
	1.4nm,0.6s,baz=104,slow=6.9,SNR=9.6						

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*KRNET **01** 08:27:56.9±0.1, 42°.85N×77°.78E, h26^{km}, mb2.1*
*SOME **01** 08:27:57.4, 42°.85N×77°.80E, h15^{km}*
*NNC **01** 08:27:57.0±0.5, 42°.86N×77°.79E, h0^{km}, mb2.7, mpv2.6, Error ellipse: s-maj=4.3km s-min=2.1km az=174.0*
ISC 01 08:27:56.9±1.0**, 42°.84N**±0°.02×**77°.79E**±0°.02**, h13**^{km}±9^{km}**, n41, σ0^{s}.54**/79**, 17C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.50	64	P	Pg	08 28 07.2	+0.4
	4.4nm,0.1s						
SATY				S	Sb	08 28 14.3	-0.8
	38nm,0.1s						
SATY	Saty	0.50	64	⇑*i*P	Pg	08 28 07.2	+0.4
	4.4nm,0.1s						
SATY				⇑*i*S	Sb	08 28 14.3	-0.8
	38nm,0.1s						
PRZ	Przheval'sk	0.58	128	⇓*i*P	Pb	08 28 09.0	0.0
	baz=28						
PRZ				⇓*i*S	Sb	08 28 17.0	-0.2
	baz=28						
KOTS	Kotyrbulak	0.63	309	P	Pg	08 28 09.2	-0.1
	1.7nm,0.2s						
KOTS				S	Sg	08 28 17.5	-0.2
	13nm,0.2s						
KOTS	Kotyrbulak	0.63	309	*e*P	Pg	08 28 09.2	-0.1
	baz=8.0						
KOTS				*e*S	Sg	08 28 17.5	-0.2
	baz=8.0						
KOTS	Kotyrbulak	0.63	309	*e*P	Pg	08 28 09.2	-0.1
	1.7nm,0.2s						
KOTS				*e*S	Sg	08 28 17.5	-0.2
	13nm,0.2s						
KURS	Kuram	0.70	23	P	Pg	08 28 10.4	-0.1
	2.7nm,0.2s						
KURS				S	Sg	08 28 19.8	0.0
	5.8nm,0.2s						
KURS	Kuram	0.70	23	*e*P	Pg	08 28 10.5	-0.1
	baz=24						
KURS				*e*S	Sg	08 28 19.9	0.0
	baz=24						
KURS	Kuram	0.70	23	*e*P	Pg	08 28 10.4	-0.1
	2.7nm,0.2s						
KURS				*e*S	Sg	08 28 19.8	0.0
	5.8nm,0.2s						
KDJ	Kajisay	0.84	212	⇓*i*P	Pg	08 28 13.0	-0.2
	baz=11						
KDJ				⇓*i*S	Sg	08 28 24.2	0.0
	baz=11						
IZV	Izvestkoviy	0.88	283	P	Pb	08 28 14.1	-0.1
	1.0nm,0.1s						
IZV				S	Sg	08 28 25.7	+0.2
	9.4nm,0.2s						
IZV	Izvestkoviy	0.88	283	*e*P	Pb	08 28 14.1	-0.1
	baz=83						
IZV				*e*S	Sg	08 28 25.8	+0.2
	baz=83						
IZV	Izvestkoviy	0.88	283	*e*P	Pb	08 28 14.1	-0.1
	1.0nm,0.1s						
IZV				*e*S	Sg	08 28 25.7	+0.2
	9.4nm,0.2s						
UZB	Uzynbulak	0.96	71	P	Pb	08 28 14.9	-0.5
	0.7nm,0.1s						
UZB				S	Sb	08 28 27.6	-0.5
	8.0nm,0.1s						
UZB	Uzynbulak	0.96	71	*e*P	Pb	08 28 14.9	-0.5
	baz=71						
UZB				*e*S	Sb	08 28 27.6	-0.5
	baz=71						
UZB	Uzynbulak	0.96	71	*e*P	Pb	08 28 14.9	-0.5
	0.7nm,0.1s						
UZB				*e*S	Sb	08 28 27.6	-0.5
	8.0nm,0.1s						
TARG	Taragay, Kyrgy	1.11	179	⇑*i*P	Pb	08 28 18.0	-0.2
	baz=79						
TARG				⇑*i*S	Sb	08 28 32.5	-0.3
	baz=79						
CHKK	Chushkaly	1.17	330	P	Pn	08 28 18.6	-0.4
	2.3nm,0.1s						
CHKK				S	Sn	08 28 34.0	-0.8
	13nm,0.2s						
CHKK	Chushkaly	1.17	330	⇑*i*P	Pn	08 28 18.6	-0.4
	baz=31						
CHKK				⇑*i*S	Sn	08 28 34.1	-0.8
	baz=31						
CHKK	Chushkaly	1.17	330	⇑*i*P	Pn	08 28 18.6	-0.4
	2.3nm,0.1s						
CHKK				⇑*i*S	Sn	08 28 34.0	-0.8
	13nm,0.2s						
ULHL	Ulahol	1.29	243	⇓*i*P	Pn	08 28 20.8	0.0
	baz=43						
ULHL				⇓*i*S	Sb	08 28 37.6	-0.1
	baz=43						
PDGK	Podgornoye	1.34	68	⇑*i*P	Pb	08 28 22.1	+0.1
	baz=68						
PDGK				⇑*i*S	Sn	08 28 39.5	+0.3
	baz=68						
KST	Kastek	1.35	279	*e*P	Pb	08 28 22.2	0.0
	baz=79						
KST				*e*S	Sb	08 28 39.9	+0.3
	baz=79						
KST	Kastek	1.35	279	*e*P	Pb	08 28 22.2	0.0
	1.0nm,0.2s						
KST				*e*S	Sb	08 28 39.9	+0.3
	2.3nm,0.3s						
ARXS	Arharly	1.37	1	P	Pb	08 28 22.7	+0.2
	2.9nm,0.2s						
ARXS				S	Sg	08 28 40.6	-0.5
	7.9nm,0.2s						
ARXS	Arharly	1.37	1	*e*P	Pb	08 28 22.7	+0.2
	2.9nm,0.2s						
ARXS				*e*S	Sg	08 28 40.6	-0.5
	7.9nm,0.2s						
BOOM	Boomskoye usch	1.41	256	⇑*i*P	Pb	08 28 22.8	-0.3
	baz=56						
BOOM				⇑*i*S	Sb	08 28 41.3	+0.2
	baz=56						
KUU	Kurty	1.49	315	P	Pg	08 28 25.7	+0.2
	1.6nm,0.1s						
KUU				S	Sg	08 28 46.0	+1.1
	12nm,0.4s						
KUU	Kurty	1.49	315	*e*P	Pb	08 28 24.1	-0.4
	baz=15						
KUU				*e*S	Sb	08 28 43.6	+0.2
	baz=15						
KUU	Kurty	1.49	315	*e*P	Pb	08 28 24.1	-0.4
	0.9nm,0.1s						
KUU				*e*S	Sb	08 28 43.5	+0.2
	12nm,0.4s						
DGS	Degeres	1.53	286	P	Pb	08 28 25.3	+0.1
	1.2nm,0.3s						
DGS				S	Sg	08 28 45.3	-0.9
	4.2nm,0.4s						
DGS	Degeres	1.53	286	*e*P	Pb	08 28 25.2	0.0
	baz=86						
DGS				*e*S	Sg	08 28 45.3	-0.9
	baz=86						
DGS	Degeres	1.53	286	*e*P	Pb	08 28 25.2	0.0
	1.2nm,0.3s						
DGS				*e*S	Sg	08 28 45.3	-0.9
	4.2nm,0.4s						
TKM2	Tokmak 2	1.61	274	⇓Pg	Pb	08 28 26.5	-0.1
	1.0nm,0.5s						
TKM2				⇑Lg	Lg	08 28 48.2	
	2.2nm,0.7s						
TKM2	Tokmak 2	1.61	274	⇓*i*P	Pb	08 28 26.3	-0.4
	baz=73						
TKM2				⇓*i*S	Sb	08 28 47.0	0.0
	baz=73						
NRN	Naryn	1.94	224	⇑*i*P	Pn	08 28 30.7	+0.9
	baz=24						
NRN				⇑*i*S	Sn	08 28 54.9	+0.7
	baz=24						
KZA	Kyzart	2.03	249	⇑*e*P	Pn	08 28 31.8	+0.6
	baz=49						
KZA				⇑*i*S	Sn	08 28 57.0	+0.4
	baz=49						
DJR	Jarkent	2.08	44	Pg	Pb	08 28 35.6	+1.0
	0.7nm,0.2s						
DJR				Lg	Lg	08 29 03.3	
	1.2nm,0.4s						
DJR	Jarkent	2.08	44	*e*P	Pb	08 28 35.6	+1.0
	0.7nm,0.3s						
DJR				*e*S	Sg	08 29 03.2	-0.6
	1.5nm,0.3s						
KAPS	Kapalarasan	2.69	24	Pg	Pb	08 28 45.6	+0.6
	1.0nm,0.3s						
KAPS				Lg	Lg	08 29 21.0	
	4.0nm,0.5s						
KAPS	Kapalarasan	2.69	24	*e*P	Pb	08 28 45.6	+0.6
	1.0nm,0.3s						
KAPS				*e*S	Sb	08 29 20.3	+2.4
	4.0nm,0.5s						

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*IDC **01** 08:31:58.1±0.7, 11°.22S×165°.58E, h0^{km}, mb4.2/13, mb1 4.4/15, mb1mx4.2/37, mbtmp4.3/15, ML4.8/2, MS3.9/9, Ms1 4.0/9, ms1mx3.6/28, Error ellipse: s-maj=20.8km s-min=16.9km az=121.0*
*NEIC **01** 08:32:00.7±0.2, 11°.18S×165°.48E, h10^{km}, mb4.7/36, Error ellipse: s-maj=7.4km s-min=5.7km az=117.0*
*ISCJB **01** 08:32:02.0±0.2, 11°.29S±0°.03×165°.41E±0°.04, h30^{km}, mb4.5/45, MS4.0/8, Error ellipse: s-maj=6.2km s-min=4.9km az=165.7*
ISC 01 08:32:03.5±0.5**, 11°.20S**±0°.07×**165°.50E**±0°.07**, h30**^{km}**, n90, σ0^{s}.97**/83**, mb4.6**/45**, MS4.0**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.74	287	*e*Pn	Pn	08 33 27.4	+0.6
HNR				*e*Sn	Sn	08 34 31.8	+0.1
HNR	Honiara	5.74	287	Pn	Pn	08 33 26.6	-0.1
	30nm,0.3s,baz=158,slow=3.9,SNR=3.9						
HNR				Sn	Sn	08 34 31.8	+0.1
	13nm,0.3s,baz=160,slow=23,SNR=2.9						
MARNC	Mare, Loyalty	10.50	167	*e*Pn	Pn	08 34 33.3	+1.2
DZM	Mont Dzumac	10.84	175	*e*Pn	Pn	08 34 36.0	-0.9
	30nm,0.3s						
DZM				*e*LR	LR	08 37 08.0	
	comp=Z,713nm,24.5s						
DZM	Mont Dzumac	10.84	175	Pn	Pn	08 34 36.5	-0.3
	6.5nm,0.3s,baz=305,slow=16,SNR=63						
DZM				Sn	Sn	08 36 36.1	-1.2
	0.5nm,0.3s,baz=241,slow=22,SNR=2.3						
DZM				LR	LR	08 38 06.4	
	comp=Z,742nm,19.3s,baz=45,slow=34						
PINNC	Pines Island,	11.50	171	*e*Pn	Pn	08 34 48.0	+2.3
MANU	Manus Island	20.16	296	*e*P	Pn	08 36 37.1	-0.6
	77nm,1.0s						
CTA	Charters Tower	20.51	242	P	P	08 36 40.2	+0.7
	12nm,0.9s,baz=71,slow=14,SNR=14						
CTAO	Charters Tower	20.51	242	*e*P	P	08 36 40.2	+0.7
	28nm,1.0s						
COEN	Coen	21.96	260	*e*P	P	08 36 55.6	+0.5
	18nm,0.9s						
MYRZ	Mayor Island	27.70	161	P	P	08 37 48.5	-0.7
URZ	Urewera	28.88	161	P	P	08 37 57.1	-2.5
	4.2nm,0.6s,baz=8.7,slow=13,SNR=5.9						
MTHZ	Maungataniwha	29.33	162	P	P	08 38 04.7	+1.0
SNGZ	Shannon Statio	29.43	161	P	P	08 38 04.6	+0.1
BKZ	Black Stump Fm	29.52	162	*e*P	P	08 38 05.9	+0.5
	19nm,0.5s						
BKZ	Black Stump Fm	29.52	162	P	P	08 38 06.1	+0.7
H11S2	WAKE ISLAND Hy	29.53	2	T	T	09 08 42.1	
	baz=181,slow=75,SNR=23						
H11S3	WAKE ISLAND Hy	29.53	2	T	T	09 08 42.1	
	baz=181,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	29.55	2	T	T	09 08 42.1	
	baz=181,slow=75,SNR=5.4						
NMHZ	Naumai	29.55	162	P	P	08 38 07.4	+1.8
BHHZ	Black Hill Sta	29.69	163	P	P	08 38 08.2	+1.3
KWHZ	Kaweka Forest	29.74	163	P	P	08 38 07.5	+0.2
STKA	Stephens Creek	30.16	223	*e*P	P	08 38 11.8	+0.7
	0.9nm,0.7s						
STKA	Stephens Creek	30.16	223	P	P	08 38 11.7	+0.6
	3.9nm,0.6s,baz=55,slow=9.5,SNR=11						
TSZ	Takapari Road	30.20	164	P	P	08 38 12.2	+0.9
KAHZ	Kahuranaki	30.21	162	P	P	08 38 12.9	+1.4
H11N1	WAKE ISLAND Hy	30.75	3	T	T	09 10 10.9	
	baz=182,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	30.76	3	T	T	09 10 11.1	
	baz=182,slow=76,SNR=6.3						
H11N2	WAKE ISLAND Hy	30.77	3	T	T	09 10 11.1	
	baz=182,slow=76,SNR=5.5						
BFZ	Birch Farm	30.86	164	*e*P	P	08 38 17.7	+0.6
	50nm,1.2s						
BFZ	Birch Farm	30.86	164	P	P	08 38 17.5	+0.4
THZ	Tophouse	31.13	169	*e*P	P	08 38 22.1	+2.6
	8.1nm,0.7s						
WRAB	Tennant Creek	31.19	250	*e*P	P	08 38 19.4	-0.9
	8.3nm,0.8s						
WB2	Warramunga Arr	31.19	250	*e*P	P	08 38 19.4	-0.9
	13nm,0.9s						
WR1	Warramunga Arr	31.20	250	*e*P	P	08 38 19.1	-1.4
	12nm,0.8s						
WR1				*e*PcP	PcP	08 41 14.5	-0.5
WRA	Warramunga Arr	31.20	250	P	P	08 38 19.1	-1.4
	7.8nm,0.8s,baz=80,slow=9.3,SNR=43						
WRA				PcP	PcP	08 41 14.5	-0.5
	0.8nm,0.9s,baz=77,slow=2.8,SNR=4.4						
WRA				LR	LR	08 48 44.9	
	comp=Z,314nm,20.1s,baz=265,slow=32						
TOO	Toolangi	31.81	211	*e*P	P	08 38 25.7	+0.1
	4.3nm,0.8s						
AS01	Alice Springs	32.46	243	*e*P	P	08 38 31.2	-0.3
AS31	Alice Springs	32.50	243	*e*P	P	08 38 30.6	-1.3
	1.8nm,1.1s						
ASAR	Alice Springs	32.51	243	P	P	08 38 30.4	-1.5
	1.2nm,0.6s,baz=63,slow=10,SNR=23						
ASAR				PcP	PcP	08 41 18.3	-0.2
	0.6nm,0.8s,baz=46,slow=2.7,SNR=3.5						
ASAR				LR	LR	08 50 45.7	
	comp=Z,595nm,18.5s,baz=72,slow=35						
RPZ	Rata Peaks	32.75	173	P	P	08 38 32.0	-1.7
	3.6nm,0.9s,baz=6.5,slow=8.5,SNR=1.8						
BBOO	Buckleboo	34.54	227	*e*P	P	08 38 48.9	-0.6
	13nm,1.0s						
FITZ	Fitzroy Crossi	39.10	255	P	P	08 39 27.4	-1.1
	3.2nm,0.7s,baz=90,slow=8.8,SNR=5.3						
PPT	Papeete	43.89	104	LR	LR	08 56 13.9	
	comp=Z,189nm,18.8s,baz=232,slow=33						
PPT2	Papeete2	43.89	104	*e*LR	LR	08 52 35.7	
	comp=Z,300nm,26.8s						
TBI	Tubuai	44.50	112	*e*LQ	LQ	08 50 58.0	
	352nm,26.2s						
TBI				*e*LR	LR	08 52 53.0	
	comp=Z,306nm,30.0s						
MBWA	Marble Bar	44.92	251	*e*P	P	08 40 15.6	-0.3
	13nm,1.0s						
PETK	Petropavlovsk-	64.40	355	LR	LR	09 05 05.3	
	comp=Z,62nm,19.4s,baz=168,slow=31						
GSI	Gunungsitoli	68.64	276	*e*P	P	08 43 06.1	+1.6
	12nm,0.7s						
SPIA	Saint Paul Isl	71.02	14	*e*P	P	08 43 18.8	+0.6
	147nm,1.2s						
CM01	Chiang Mai Arr	71.93	294	*e*P	P	08 43 25.5	+1.0
CM31	Chiang Mai Arr	71.95	294	*e*P	P	08 43 24.6	-0.1
CMAR	Chiang Mai Arr	71.95	294	P	P	08 43 24.0	-0.7
	0.9nm,0.4s,baz=98,slow=4.6,SNR=3.7						
CMAR				LR	LR	09 13 30.8	
	comp=Z,25nm,20.1s,baz=100,slow=35						
SONA0	Songino Array	78.65	324	*e*P	P	08 44 02.9	+0.1
SONM	Songino Array	78.65	324	P	P	08 44 02.9	+0.1
	0.2nm,0.5s,baz=114,slow=7.1,SNR=3.0						
QSPA	South Pole Qui	78.80	180	*e*P	P	08 44 03.2	-0.2
	4.7nm,0.9s						
BRLK	Bradley Lake	78.87	21	*e*P	P	08 44 03.0	-0.6
	22nm,1.1s						
RC01	Rabbit Creek A	80.22	20	*e*P	P	08 44 11.1	+0.2
	8.7nm,1.1s						
EYAK	Cordova Ski Ar	81.26	22	*e*P	P	08 44 16.6	+0.1
	17nm,1.2s						
SCM	Sheep Creek Mo	81.57	21	*e*P	P	08 44 19.4	+1.2
	9.4nm,1.1s						
TRF	Thorofare Moun	81.75	18	*e*P	P	08 44 19.3	+0.1
	4.8nm,1.2s						
RND	Reindeer	82.17	19	*e*P	P	08 44 21.7	+0.5
	8.5nm,1.2s						
DHY	Denali Highway	82.41	20	*e*P	P	08 44 24.2	+1.5
	3.6nm,1.0s						
IM3	Indian Mountai	82.64	16	*e*P	P	08 44 23.8	+0.1
HARP	HAARP	82.72	21	*e*P	P	08 44 25.5	+1.4
WRH	Wood River Hil	83.16	18	*e*P	P	08 44 28.3	+2.0
	5.9nm,1.0s						
MDM	Murphy Dome	83.45	18	*e*P	P	08 44 27.9	0.0
	6.5nm,1.2s						
HDA	Harding Lake	83.47	19	*e*P	P	08 44 28.6	+0.6
	11nm,0.8s						
RIDG	Independ'e Rid	83.71	20	*e*P	P	08 44 29.2	-0.1
	14nm,1.2s						
IL1	Eielson Array	83.74	19	*e*P	P	08 44 29.3	0.0
ILAR	Eielson Array	83.74	19	P	P	08 44 28.4	-0.9
	1.4nm,0.6s,baz=240,slow=4.7,SNR=32						
ILAR				LR	LR	09 18 19.0	
	comp=Z,51nm,18.7s,baz=244,slow=33						
ILB	Eielson Array	83.74	19	*e*P	P	08 44 29.0	-0.4
DOT	Dot Lake	83.91	20	*e*P	P	08 44 31.3	+1.0
	8.4nm,1.2s						
SCRK	Sand Creek	84.15	20	*e*P	P	08 44 31.7	+0.1
	6.9nm,1.1s						
HYT	Haines Junctio	84.63	24	*e*P	P	08 44 33.6	-0.5
	5.1nm,1.2s						
DAWY	Dawson	85.79	21	*e*P	P	08 44 39.6	-0.1
	6.7nm,1.1s						
PINE	Pine Mountain	86.10	44	*e*P	P	08 44 42.9	+1.0
	1.9nm,0.8s						
NVAR	Mina Array Bea	86.31	50	P	P	08 44 42.4	-0.7
	0.5nm,0.6s,baz=230,slow=8.4,SNR=4.7						
I07A	Izee	87.18	44	*e*P	P	08 44 47.8	+0.7
	3.0nm,1.1s						
U15A	North Rim	90.39	53	*e*P	P	08 45 03.0	+0.3
	2.6nm,1.0s						
HLID	Hailey	90.56	46	*e*P	P	08 45 03.5	+0.4
	1.2nm,0.9s						
MK32	Makanchi Array	93.47	317	*e*P	P	08 45 16.3	0.0
MKAR	Makanchi Array	93.47	317	P	P	08 45 16.3	0.0
	1.4nm,1.0s,baz=85,slow=5.3,SNR=3.8						
YKA	Yellowknife Ar	95.22	27	P	P	08 45 22.4	-1.6
	0.3nm,0.5s,baz=258,slow=4.5,SNR=12						
TXAR	Lajitas Array	96.12	61	LR	LR	09 25 17.5	
	comp=Z,102nm,18.0s,baz=0.0,slow=33						
NRIK	Noril'sk	96.19	340	LR	LR	09 29 36.7	
	comp=Z,40nm,19.0s,baz=242,slow=36						
ARA0	ARCESS Array S	116.43	345	*e*PKPdf	PKPdf	08 50 42.5	-1.4
ARCES	ARCESS Array B	116.43	345	PKP	PKPdf	08 50 42.5	-1.4
	3.1nm,1.0s,baz=64,slow=2.1,SNR=5.5						
LPAZ	La Paz	120.33	116	PKP	PKiKP	08 50 54.0	+0.3
	0.3nm,0.4s,baz=243,slow=6.8,SNR=2.7						
ESDC	Sonseca Array	150.14	344	PKPbc	PKiKP	08 51 52.4	-0.3
	0.2nm,0.4s,baz=15,slow=2.9,SNR=2.6						

IDC 01 09:00:22.4±3.3**, 48°.17N×33°.50E, h0^{km}, mb3.2**/1**, mb1 3.4**/3**, mb1mx3.1**/43**, mbtmp3.1**/3**, ML2.9**/2**, Error ellipse: s-maj=38.8km s-min=23.5km az=100.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	3.77	314	Pn	Pn	09 01 20.7	-1.0
	0.5nm,0.3s,baz=127,slow=14,SNR=3.4						

AKASG				Lg	Lg	09 02 24.1	
	4.0nm,0.3s,baz=134,slow=30,SNR=10						
MLR	Muntele Rosu	5.83	245	Pn	Pn	09 01 51.7	+1.4
	0.2nm,0.3s,baz=74,slow=19,SNR=3.0						
I31KZ	AKTYUBINSK INF	16.14	73	*i*		10 40 25.3	
	baz=266,slow=288,SNR=0.8						
ARCES	ARCESS Array B	21.78	352	P	P	09 05 16.3	+0.8
	1.2nm,0.9s,baz=176,slow=13,SNR=2.4						

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*IDC **01** 09:03:53.0±1.2, 11°.11S×165°.55E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx3.9/36, mbtmp4.0/9, ML4.3/1, Error ellipse: s-maj=43.6km s-min=20.4km az=126.0*

*ISCJB **01** 09:03:55.7±0.9, 11°.3S±0°.1×165°.6E±0°.2, h30^{km}, mb3.8/7, Error ellipse: s-maj=25.0km s-min=16.0km az=18.3*

ISC 01 09:03:57.5±1.0**, 11°.2S**±0°.1×**165°.6E**±0°.2**, h30**^{km}**, n9, σ0^s.58**/9**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.87	176	Pn	Pn	09 06 31.2	0.0
	2.3nm,0.3s,baz=307,slow=12,SNR=28						
CTA	Charters Tower	20.60	242	P	P	09 08 34.8	+0.4
	5.4nm,0.9s,baz=74,slow=8.3,SNR=6.8						
STKA	Stephens Creek	30.24	223	P	P	09 10 06.2	+0.5
	1.9nm,0.6s,baz=50,slow=7.9,SNR=2.8						
WRA	Warramunga Arr	31.29	250	P	P	09 10 14.5	-0.7
	2.8nm,0.7s,baz=82,slow=9.2,SNR=24						
ASAR	Alice Springs	32.59	243	P	P	09 10 25.8	-0.9
	0.7nm,0.6s,baz=65,slow=10,SNR=14						
SONM	Songino Array	78.68	324	P	P	09 15 57.2	+0.2
	0.1nm,0.3s,baz=104,slow=11,SNR=3.5						
ILAR	Eielson Array	83.69	19	P	P	09 16 22.9	-0.2
	0.6nm,0.7s,baz=238,slow=5.3,SNR=14						
MKAR	Makanchi Array	93.51	317	P	P	09 17 11.0	+0.5
	0.5nm,0.8s,baz=102,slow=5.1,SNR=4.5						
YKA	Yellowknife Ar	95.16	27	P	P	09 17 17.4	-0.2
	0.3nm,0.9s,baz=255,slow=5.0,SNR=3.5						

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*KRNET **01** 09:11:23.6±0.1, 42°.55N×79°.66E, h17^{km}, mb2.5*

*SOME **01** 09:11:24.3, 42°.53N×79°.67E, h15^{km}*

*NNC **01** 09:11:24.1±1.1, 42°.59N×79°.66E, h1^{km}±6^{km}, mb2.8, mpv2.8, Error ellipse: s-maj=8.2km s-min=4.0km az=161.0*

ISC 01 09:11:21.3±2.1**, 42°.45N**±0°.06×**79°.76E**±0°.05**, h6**^{km}±15^{km}**, n27, σ1^s.12**/50**, 14C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.74	343	P	Pg	09 11 36.6	+1.1
	17nm,0.1s						
SHLS				S	Sb	09 11 45.5	-1.6
	18nm,0.2s						
SHLS	Shalkode	0.74	343	*e*P	Pg	09 11 36.6	+1.1
	baz=15						
SHLS				*e*S	Sb	09 11 45.5	-1.6
	baz=15						
SHLS	Shalkode	0.74	343	*e*P	Pg	09 11 36.5	+1.1
	17nm,0.1s						
SHLS				*e*S	Sb	09 11 45.5	-1.6
	18nm,0.2s						
UZB	Uzynbulak	0.88	322	P	Pg	09 11 38.5	+0.3
	1.8nm,0.1s						
UZB				S	Sg	09 11 48.6	-1.1
	18nm,0.4s						
UZB	Uzynbulak	0.88	322	*e*P	Pg	09 11 38.5	+0.3
	baz=22						
UZB				*e*S	Sg	09 11 48.6	-1.1
	baz=22						
UZB	Uzynbulak	0.88	322	*e*P	Pg	09 11 38.5	+0.3
	1.8nm,0.1s						
UZB				*e*S	Sg	09 11 48.6	-1.1
	18nm,0.4s						
PDGK	Podgornoye	0.90	347	P	Pg	09 11 38.8	+0.3
	1.4nm,0.2s						
PDGK				S	Sg	09 11 49.2	-1.0
	3.1nm,0.2s						
PDGK	Podgornoye	0.90	347	⇑*i*P	Pg	09 11 38.8	+0.3
	baz=51						
PDGK				⇑*i*S	Sg	09 11 49.4	-0.8
	baz=51						
PRZ	Przheval'sk	1.01	272	⇑*i*P	Pb	09 11 41.1	-0.2
	baz=67						
PRZ				⇑*i*S	Sb	09 11 53.4	-1.4
	baz=67						
KTMS	Ketmen	1.08	23	P	Pb	09 11 43.0	+0.4
	2.5nm,0.1s						
KTMS				S	Sb	09 11 56.5	-0.6
	8.8nm,0.2s						
KTMS	Ketmen	1.08	23	*e*P	Pb	09 11 43.0	+0.4
	baz=28						
KTMS				*e*S	Sb	09 11 56.5	-0.6
	baz=28						
KTMS	Ketmen	1.08	23	*e*P	Pb	09 11 43.0	+0.4
	2.5nm,0.1s						
KTMS				*e*S	Sb	09 11 56.5	-0.6
	8.8nm,0.2s						
SATY	Saty	1.17	302	P	Pb	09 11 43.8	-0.2
	2.9nm,0.3s						
SATY				S	Sg	09 11 58.2	-0.6
	13nm,0.1s						
SATY	Saty	1.17	302	*e*P	Pb	09 11 43.8	-0.2
	2.9nm,0.3s						
SATY				*e*S	Sg	09 11 58.2	-0.6
	13nm,0.1s						
KDJ	Kajisay	1.94	261	⇑*i*P	Pb	09 11 58.7	+1.5
	baz=58						
KDJ				⇑*i*S	Sb	09 12 23.2	+1.5
	baz=58						
IZV	Izvestkoviy	2.39	285	Pg	Pb	09 12 05.6	+0.8
	2.6nm,0.2s						
IZV				Lg	Lg	09 12 35.5	
	6.3nm,0.4s						
IZV	Izvestkoviy	2.39	285	*e*P	Pb	09 12 05.6	+0.8
	baz=83						
IZV				*e*S	Sb	09 12 35.5	+0.8
	baz=83						
IZV	Izvestkoviy	2.39	285	*e*P	Pb	09 12 05.6	+0.8
	2.6nm,0.2s						
IZV				*e*S	Sb	09 12 35.5	+0.8
	6.3nm,0.4s						
ULHL	Ulahol	2.62	267	⇑*i*P	Pb	09 12 08.6	-0.1
	baz=64						
ULHL				⇑*i*S	Sb	09 12 40.1	-1.1
	baz=64						
BOOM	Boomskoye usch	2.83	272	⇑*i*P	Pb	09 12 10.7	-1.6
	baz=70						
BOOM				⇑*i*S	Sb	09 12 44.9	-2.3
	baz=70						
KAPS	Kapalarasan	2.85	354	Pg	Pb	09 12 13.5	+0.9
KAPS				Lg	Lg	09 12 48.7	
	3.3nm,0.5s						
KAPS	Kapalarasan	2.85	354	*e*P	Pb	09 12 13.5	+0.9
	0.3nm,0.1s						
KAPS				*e*S	Sb	09 12 48.7	+1.0
	2.4nm,0.2s						
KST	Kastek	2.86	283	Pg	Pb	09 12 13.9	+1.2
	2.2nm,0.3s						
KST				Lg	Lg	09 12 49.8	
	3.6nm,0.2s						
KST	Kastek	2.86	283	*e*P	Pb	09 12 14.0	+1.2
	baz=82						
KST				*e*S	Sb	09 12 49.8	+1.7
	baz=82						
KST	Kastek	2.86	283	*e*P	Pb	09 12 14.0	+1.2
	2.1nm,0.3s						
KST				*e*S	Sb	09 12 49.8	+1.7
	3.6nm,0.3s						
NRN	Naryn	2.98	251	⇑*i*P	Pb	09 12 14.4	-0.6
	baz=49						
NRN				⇑*i*S	Sb	09 12 50.5	-1.4
	baz=49						
TKM2	Tokmak 2	3.10	280	⇑Pg	Pb	09 12 19.1	+2.1
	1.0nm,0.5s						
TKM2				⇑Lg	Lg	09 12 59.5	
	0.9nm,0.4s						

IDC 01 09:17:11.6±1.1**, 10°.42S**×**166°.34E, h0**^{km}**, mb3.6**/6**, mb1 3.9**/7**, mb1mx3.7**/30**, mbtmp3.7**/7**, ML3.3**/1**, MS3.7**/5**, Ms1 3.7**/5**, ms1mx3.1**/32**, Error ellipse: s-maj=49.1km s-min=23.4km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.59	180	Pn	Pn	09 19 57.3	-1.2
	0.2nm,0.3s,baz=119,slow=15,SNR=3.5						
DZM				LR	LR	09 23 35.4	
	comp=Z,360nm,21.9s,baz=28,slow=33						
H11S2	WAKE ISLAND Hy	28.73	1	T	T	09 53 32.3	
	baz=181,slow=76,SNR=31						
H11S3	WAKE ISLAND Hy	28.73	1	T	T	09 53 30.0	
	baz=181,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	28.75	1	T	T	09 53 33.7	
	baz=181,slow=76,SNR=30						
STKA	Stephens Creek	31.30	223	LR	LR	09 35 30.8	
	comp=Z,105nm,19.2s,baz=23,slow=35						
WRA	Warramunga Arr	32.25	249	P	P	09 23 42.5	+0.4
	1.2nm,1.0s,baz=80,slow=8.2,SNR=3.9						
WRA				LR	LR	09 35 49.7	
	comp=Z,102nm,18.4s,baz=80,slow=35						
ASAR	Alice Springs	33.59	243	P	P	09 23 54.0	+0.1
	0.8nm,1.0s,baz=79,slow=9.5,SNR=6.0						
ASAR				LR	LR	09 36 31.1	
	comp=Z,109nm,19.4s,baz=79,slow=34						
ILAR	Eielson Array	82.74	18	P	P	09 29 37.3	+0.3
	0.3nm,0.8s,baz=207,slow=5.8,SNR=3.4						
NVAR	Mina Array Bea	85.18	50	P	P	09 29 51.4	+1.1
	0.3nm,0.8s,baz=241,slow=7.0,SNR=2.4						
NVAR				LR	LR	09 59 41.1	
	comp=Z,46nm,19.8s,baz=288,slow=30						
MKAR	Makanchi Array	93.47	317	P	P	09 30 28.4	-0.9
	0.5nm,0.9s,baz=104,slow=6.1,SNR=3.2						
YKA	Yellowknife Ar	94.15	27	P	P	09 30 30.5	-1.4
	0.2nm,0.8s,baz=258,slow=3.1,SNR=3.1						

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*ISK **01** 09:21:28.5, 37°.25N×36°.04E, h19^{km}±7^{km}, ML2.1/4*

*ISCJB **01** 09:21:29.1±0.6, 37°.26N±0°.04×35°.99E±0°.05, h15^{km}, Error ellipse: s-maj=5.9km s-min=4.9km az=33.0*

*DDA **01** 09:21:29.0, 37°.37N×36°.05E, h7^{km}±2^{km}, ML2.7*

ISC 01 09:21:28.8±0.9**, 37°.30N**±0°.04×**36°.03E**±0°.04**, h15**^{km}**, n12, σ0^s.69**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	Kozan	0.24	319	PG	Pb	09 21 34.9	0.0
KOZT				SG	Sb	09 21 39.9	+0.9
CEYT	Ceyhan	0.36	218	PG	Pg	09 21 36.1	0.0
ANDN	Andirin	0.38	42	*i* P	Pb	09 21 36.9	-0.4
YURE	YUREGIR	0.56	214	PG	Pg	09 21 39.6	-0.3
SAIM	ADANA	0.68	4	*i* P	Pg	09 21 41.2	-0.9
SAIM				IAML_P			
	comp=Z,1μm,0.1s						
KMRS	Kahramanmaras	0.73	73	PG	Pb	09 21 43.2	0.0
TAHT	Tahtakopru-Hat	0.93	172	PG	Pb	09 21 45.9	-0.7
GAZ	Gaziantep	0.95	97	PG	Pn	09 21 47.8	+0.1
YAHY	KAYSERI_Yahyal	0.96	327	*i* P	Pb	09 21 46.7	-0.4
KUZU	Kuzuini	0.99	122	*i* P	Pn	09 21 49.3	+1.1
KUZU				*i* S	Sn	09 22 01.7	-0.2
GZT	Gaziantep	1.23	87	*i* P	Pg	09 21 52.6	+0.2
GZT				*i* S	Sb	09 22 06.1	-1.4
GZT				IAML_P			
	comp=Z,713nm,0.1s						
AKCD	Akcadag	1.80	56	*i* P	Pb	09 22 02.0	+0.4
AKCD				*i* S	Sb	09 22 24.6	+0.5
AKCD				IAML_P			
	comp=Z,228nm,0.2s						

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*SOME **01** 09:24:31.5, 42°.57N×79°.65E, h10^{km}*

*KRNET **01** 09:24:31.3±0.1, 42°.57N×79°.64E, h14^{km}, mb2.3*

*NNC **01** 09:24:31.8±1.8, 42°.59N×79°.61E, h0^{km}, mb2.5, mpv2.6, Error ellipse: s-maj=12.0km s-min=5.5km az=155.0*

ISC 01 09:24:31.6±2.2**, 42°.56N**±0°.07×**79°.59E**±0°.08**, h12**^{km}±13^{km}**, n18, σ0^s.72**/34**, 8C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.60	351	P	Pg	09 24 43.4	0.0
	4.7nm,0.1s						
SHLS				S	Sb	09 24 52.4	-0.3
	57nm,0.1s						
SHLS	Shalkode	0.60	351	*e*P	Pg	09 24 43.4	0.0
	baz=17						
SHLS				*e*S	Sb	09 24 52.2	-0.5
	baz=17						
SHLS	Shalkode	0.60	351	*e*P	Pg	09 24 43.4	0.0
	4.7nm,0.1s						
SHLS				*e*S	Sb	09 24 52.2	-0.5
	57nm,0.1s						
UZB	Uzynbulak	0.72	324	P	Pg	09 24 45.8	+0.2
	3.1nm,0.2s						
UZB				S	Sb	09 24 56.1	-0.1
	6.4nm,0.3s						
UZB	Uzynbulak	0.72	324	*e*P	Pg	09 24 45.7	+0.1
	baz=22						
UZB				*e*S	Sb	09 24 56.0	-0.1
	baz=22						
UZB	Uzynbulak	0.72	324	*e*P	Pg	09 24 45.7	+0.1
	3.4nm,0.1s						
UZB				*e*S	Sb	09 24 56.0	-0.1
	6.4nm,0.3s						
PDGK	Podgornoye	0.77	354	⇑*i*P	Pg	09 24 45.9	-0.6
	baz=52						
PDGK				⇑*i*S	Sg	09 24 56.5	-0.1
	baz=52						
PRZ	Przheval'sk	0.89	265	⇑*i*P	Pg	09 24 48.7	-0.1
	baz=65						
PRZ				⇑*i*S	Sg	09 25 01.6	+1.2
	baz=65						
SATY	Saty	1.00	300	P	Pg	09 24 50.4	-0.6
	2.0nm,0.3s						
SATY				S	Sg	09 25 03.9	-0.2
	6.3nm,0.1s						
SATY	Saty	1.00	300	*e*P	Pg	09 24 50.4	-0.6
	2.0nm,0.3s						
SATY				*e*S	Sg	09 25 03.9	-0.2
	6.3nm,0.1s						
KDJ	Kajisay	1.84	257	⇑*i*P	Pb	09 25 06.1	+0.8
	baz=57						
KDJ				⇑*i*S	Sg	09 25 31.3	+0.5
	baz=57						
IZV	Izvestkoviy	2.24	283	Pg	Pb	09 25 13.4	+1.2
	0.7nm,0.2s						
IZV				Lg	Lg	09 25 43.3	
	3.6nm,0.3s						
IZV	Izvestkoviy	2.24	283	*e*P	Pb	09 25 13.4	+1.2
	baz=83						
IZV				*e*S	Sg	09 25 43.4	-0.4
	baz=83						
IZV	Izvestkoviy	2.24	283	*e*P	Pb	09 25 13.4	+1.2
	0.7nm,0.2s						
IZV				*e*S	Sg	09 25 43.4	-0.4
	3.6nm,0.3s						
ULHL	Ulahol	2.50	264	⇑*e*P	Pb	09 25 15.6	-1.0
	baz=64						
ULHL				⇑*i*S	Sb	09 25 47.9	+0.4
	baz=64						
BOOM	Boomskoye usch	2.70	270	⇓*i*P	Pb	09 25 18.4	-1.6
	baz=70						
BOOM				⇓*i*S	Sb	09 25 52.4	-0.8
	baz=70						
KAPS	Kapalarasan	2.73	356	Pg	Pb	09 25 20.3	0.0
	0.6nm,0.3s						
KAPS				Lg	Lg	09 25 55.4	
	1.5nm,0.5s						
KAPS	Kapalarasan	2.73	356	*e*P	Pb	09 25 20.4	0.0
	0.6nm,0.3s						
KAPS				⇓*e*S	Sb	09 25 55.4	+1.6
	1.5nm,0.5s						

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*NIED **01** 09:38:00, 39°.20N×142°.40E, h41^{km}, Mw3.6 Best double couple: M$_0$2.61000×10^{14} NP1:φ$_s$313.00000°, δ28.00000°, λ-98.00000°. NP2:φ$_s$142.00000°, δ62.00000°, λ-86.00000°.*

*IDC **01** 09:38:50.3±1.4, 38°.81N×142°.94E, h0^{km}, mb3.4/2, mb1 3.7/4, mb1mx3.3/46, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=57.3km s-min=24.9km az=114.0*

*ISCJB **01** 09:38:52.8±1.1, 39°.13N±0°.04×142°.39E±0°.08, h23^{km}±6^{km}, mb3.5/2, Error ellipse: s-maj=10.4km s-min=5.4km az=15.3*

*JMA **01** 09:38:53.4±0.1, 39°.17N×142°.38E, h31^{km}±1^{km}, M3.9*

JMA Felt I J1.

ISC 01 09:38:54.4±1.7**, 39°.15N**±0°.04×**142°.29E**±0°.09**, h26**^{km}±12^{km}**, n15, σ1^s.56**/27**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.49	262	P	Pb	09 39 04.6	+0.2
OFUJ				S	Sb	09 39 12.2	+1.0
MIYJ	Miyakonagasawa	0.56	320	P	Pb	09 39 05.0	-0.7
MIYJ				*e*S	Sb	09 39 12.9	-0.5
JKMT	Kesennumamotoy	0.72	243	P	Pb	09 39 07.9	-0.3
JKMT				S	Sb	09 39 17.9	+0.2
JOM	Ohasama	0.84	293	P	Pb	09 39 09.9	-0.4
JOM				S	Sb	09 39 21.8	+0.6
JMK	Ichinoseki	0.85	257	P	Pb	09 39 10.2	-0.4
JMK				S	Sn	09 39 22.3	0.0
JTH	Tanohata	0.86	338	P	Pb	09 39 08.8	-1.8
JTH				*e*S	Sb	09 39 21.1	-0.6
JIO	Ouri	1.01	227	P	Pn	09 39 11.7	-1.1
JIO				S	Sb	09 39 24.7	-1.3
JKZ	Kuzumaki	1.12	319	P	Pn	09 39 13.8	-0.6
JKZ				*e*S	Sb	09 39 28.7	-0.6
JRG	Rokugo	1.31	282	P	Pb	09 39 17.9	-0.4
JRG				S	Sb	09 39 36.1	+1.4
JANG	Nango	1.36	334	P	Pn	09 39 17.0	-0.7
JANG				S	Sn	09 39 34.9	0.0
MJAR	Matsushiro Arr	4.15	232	Pn	Pn	09 39 58.3	+2.3
	0.3nm,0.3s,baz=45,slow=9.3,SNR=22						
MAT	Matsushiro	4.15	232	P	Pn	09 39 59.8	+3.8
MAT				S	Sn	09 40 42.3	-1.3
ASAJ	Asahikawa	4.97	3	Pn	Pn	09 40 10.3	+3.0
	0.8nm,0.3s,baz=90,slow=30,SNR=5.7						
ASAJ				Sn	Sn	09 41 07.0	+3.1
	0.6nm,0.3s,baz=11,slow=4.2,SNR=3.6						
ILAR	Eielson Array	47.35	33	P	P	09 47 25.8	+0.1
	0.4nm,0.7s,baz=260,slow=5.8,SNR=6.0						
WRA	Warramunga Arr	59.25	189	P	P	09 48 51.6	-1.9
	0.3nm,0.5s,baz=7.1,slow=7.0,SNR=7.7						

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*IDC **01** 09:49:41.1±4.3, 30°.60S×117°.67E, h0^{km}, mb3.4/1, mb1 3.8/5, mb1mx3.6/24, mbtmp3.6/5, ML3.8/3, Error ellipse: s-maj=82.8km s-min=16.1km az=114.0*

*AUST **01** 09:49:46.2±0.0, 30°.65S×117°.43E, h2^{km}, Error ellipse: s-maj=0.4km s-min=0.2km az=281.0*

ISC 01 09:49:42.2±1.9**, 30°.60S**±0°.05×**117°.59E**±0°.06**, h8**^{km}±14^{km}**, n15, σ1^s.90**/23**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLDU	Ballidu	0.76	269	P	Pg	09 49 56.7	-0.1
	baz=0.6,SNR=131						
BLDU				S	Sg	09 50 05.4	-1.3
	baz=0.6						
KLBR	Kellerberrin	1.00	172	P	Pn	09 50 03.7	+1.1
	baz=1.0,SNR=194						
KLBR				S	Sb	09 50 16.4	+1.2
	baz=1.0						
MUN	Mundaring	1.81	220	P	Pn	09 50 15.0	+1.3
	baz=1.7,SNR=16						
MUN				S	Sn	09 50 37.8	+0.9
	baz=1.7						
MORW	Morawa	2.03	318	P	Pn	09 50 18.3	+1.5
	baz=2.0,SNR=24						
MORW				S	Sn	09 50 43.0	+0.7
	baz=2.0						
NWAO	Narrogin (SRO)	2.34	187	P	Pn	09 50 22.6	+1.6
	baz=2.3,SNR=18						
NWAO				S	Sn	09 50 49.8	-0.2
	baz=2.3						
NWAO	Narrogin (SRO)	2.34	187	Pn	Pn	09 50 22.4	+1.4
	3.1nm,0.3s,baz=239,slow=13,SNR=21						
NWAO				Sn	Sn	09 50 49.8	-0.2
	26nm,0.3s,baz=327,slow=22,SNR=37						
NWAO				Lg	Lg	09 50 54.6	
	26nm,0.3s,baz=322,slow=19,SNR=34						
RKGY	Rocky Gully	4.03	187	P	Pn	09 50 46.5	+2.3
	baz=4.0,SNR=7.4						
RKGY				S	Sn	09 51 30.4	-1.3
	baz=4.0						
MEEK	Meekatharra	4.05	13	P	Pn	09 50 47.7	+3.2
	baz=4.1,SNR=16						
GIRL	Giralia	8.47	338	P	Pn	09 51 46.9	+1.6
	baz=8.5						
FORT	Forrest	9.02	94	P	Pn	09 51 55.0	+2.2
	baz=9.1,SNR=21						
FORT				S	Sn	09 53 32.0	-2.6
	baz=9.1						
WRKA	Warakurna	10.98	62	P	Pn	09 52 22.5	+2.8
	baz=11,SNR=5.0						
FITZ	Fitzroy Crossi	14.44	32	Pn	Pn	09 53 05.7	-1.3
	0.8nm,0.3s,baz=213,slow=11,SNR=19						
FITZ				Sn	Sn	09 55 37.7	-10
	0.4nm,0.3s,baz=325,slow=19,SNR=4.8						
ASAR	Alice Springs	16.07	68	Pn	Pn	09 53 26.1	-2.6
	0.5nm,0.3s,baz=236,slow=11,SNR=35						
ASAR				Sn	Sn	09 56 15.2	-12
	0.2nm,0.3s,baz=251,slow=23,SNR=7.2						
WRA	Warramunga Arr	18.47	59	P	P	09 53 56.4	-2.3
	0.2nm,0.3s,baz=233,slow=13,SNR=6.3						
WRA				S	Sn	09 57 11.9	-14
	0.1nm,0.3s,baz=233,slow=25,SNR=3.9						
STKA	Stephens Creek	20.56	100	P	P	09 54 22.7	+1.3
	1.5nm,0.7s,baz=266,slow=11,SNR=3.5						

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*SOME **01** 09:49:46.7, 42°.57N×79°.63E, h10^{km}*

*NNC **01** 09:49:47.0±0.8, 42°.61N×79°.60E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=5.1km s-min=3.2km az=133.0*

*KRNET **01** 09:49:47.1±0.1, 42°.59N×79°.61E, h17^{km}, mb2.2*

ISC 01 09:49:47.7±1.6**, 42°.58N**±0°.06×**79°.58E**±0°.07**, h10**^{km}**, n22, σ1^s.22**/42**, 7C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.58	351	P	Pg	09 49 58.7	-0.3
	8.0nm,0.1s						
SHLS				S	Sb	09 50 07.5	-0.9
	60nm,0.2s						
SHLS	Shalkode	0.58	351	*e*P	Pg	09 49 58.7	-0.3
	baz=20						
SHLS				*e*S	Sb	09 50 07.5	-0.9
	baz=20						
SHLS	Shalkode	0.58	351	*e*P	Pg	09 49 58.7	-0.3
	8.0nm,0.1s						
SHLS				*e*S	Sb	09 50 07.5	-0.9
	60nm,0.2s						
UZB	Uzynbulak	0.70	324	P	Pg	09 50 00.5	-0.7
	1.0nm,0.1s						
UZB				S	Sg	09 50 10.5	+0.1
	12nm,0.2s						
UZB	Uzynbulak	0.70	324	*e*P	Pg	09 50 00.5	-0.7
	baz=22						
UZB				*e*S	Sg	09 50 10.5	+0.1
	baz=22						
UZB	Uzynbulak	0.70	324	*e*P	Pg	09 50 00.5	-0.7
	1.0nm,0.1s						
UZB				*e*S	Sg	09 50 10.5	+0.1
	12nm,0.2s						
PDGK	Podgornoye	0.75	355	P	Pg	09 50 01.0	-1.1
	0.8nm,0.1s						
PDGK				S	Sg	09 50 11.4	-0.5
	3.1nm,0.2s						
PDGK	Podgornoye	0.75	355	⇓P	Pg	09 50 00.8	-1.4
	0.7nm,0.4s						
PDGK				⇑S	Sg	09 50 11.2	-0.7
	1.4nm,0.3s						
PDGK	Podgornoye	0.75	355	⇓*i*P	Pg	09 50 00.9	-1.2
	baz=53						
PDGK				⇓*i*S	Sg	09 50 11.3	-0.7
	baz=53						
PRZ	Przheval'sk	0.88	264	⇓*e*P	Pg	09 50 03.9	-0.7
	baz=63						
PRZ				⇓*i*S	Sg	09 50 16.4	+0.3
	baz=63						
SATY	Saty	0.99	299	P	Pg	09 50 05.9	-0.8
	2.0nm,0.3s						
SATY				S	Sb	09 50 19.7	-0.4
	6.9nm,0.2s						
SATY	Saty	0.99	299	*e*P	Pg	09 50 05.9	-0.8
	2.0nm,0.3s						
SATY				*e*S	Sb	09 50 19.7	-0.4
	6.9nm,0.2s						
DJR	Jarkent	1.75	5	P	Pb	09 50 19.2	-0.8
	1.3nm,0.4s						
DJR				S	Sg	09 50 42.7	-1.3
	1.9nm,0.3s						
DJR	Jarkent	1.75	5	*e*P	Pb	09 50 19.2	-0.8
	1.3nm,0.4s						
DJR				⇓*i*S	Sg	09 50 42.7	-1.3
	1.9nm,0.3s						
KDJ	Kajisay	1.84	257	⇑*e*P	Pb	09 50 21.1	-0.3
	baz=56						

KDJ				⇑iS	Sg	09 50 45.9	-0.8
	baz=56						
ULHL	Ulahol	2.50	263	⇓iP	Pb	09 50 30.4	-2.3
	baz=63						
ULHL				⇓iS	Sb	09 51 02.3	-1.3
	baz=63						
BOOM	Boomskoye usch	2.69	269	⇑iP	Pn	09 50 33.1	+1.9
	baz=69						
BOOM				⇑iS	Sb	09 51 07.4	-1.8
	baz=69						
KAPS	Kapalarasan	2.71	357	Pg	Pb	09 50 35.9	-0.3
	0.6nm,0.3s						
KAPS				Lg	Lg	09 51 11.2	
	2.3nm,0.3s						
KAPS	Kapalarasan	2.71	357	eP	Pb	09 50 35.9	-0.3
	0.6nm,0.3s						
KAPS				eS	Sb	09 51 11.2	+1.8
	2.3nm,0.3s						
NRN	Naryn	2.91	248	⇓iP	Pn	09 50 36.6	+2.3
	baz=48						
NRN				⇓iS	Sb	09 51 12.9	-2.6
	baz=48						
TKM2	Tokmak 2	2.95	278	⇑Pg	Pb	09 50 39.9	-0.6
	1.0nm,0.6s						
TKM2				⇑Lg	Lg	09 51 21.7	
	1.2nm,0.5s						
ARLS	Aral	3.97	261	⇓iP	Pn	09 50 50.8	+2.0
	baz=61						
ARLS				⇓iS	Sn	09 51 38.1	+2.6
	baz=61						

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*DDA **01** 09:51:09.9, 37°.88N×29°.29E, h7^{km}±3^{km}, ML2.7*

*ISK **01** 09:51:09.6, 37°.86N×29°.31E, h10^{km}, ML2.6/5*

*ISCJB **01** 09:51:10.6±0.5, 37°.89N±0°.03×29°.25E±0°.03, h7^{km}±6^{km}, Error ellipse: s-maj=6.0km s-min=3.7km az=151.1*

ISC 01 09:51:10.3±1.1**, 37°.86N**±0°.03×**29°.29E**±0°.03**, h12**^{km}±9^{km}**, n19, σ0^{s}66**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.23	242	PG	Pg	09 51 15.2	-0.1
DENT				SG	Sg	09 51 19.1	+0.5
KHL	Karahalli	0.49	22	PG	Pg	09 51 19.3	-0.7
KHL				SG	Sb	09 51 27.4	-0.8
TAVA	DENIZLI_Tavas	0.50	217	i P	Pg	09 51 20.1	-0.1
TAVA				i S	Sb	09 51 27.9	-0.5
BRDR	BURDUR-Merkez	0.63	105	i P	Pb	09 51 23.2	-0.2
BRDR				i S	Sn	09 51 34.0	-1.3
KZIL	AFYON_Kizioren	0.78	59	i P	Pg	09 51 25.4	0.0
KZIL				i S	Sn	09 51 38.7	-0.2
KZIL				IAML_P			
	comp=Z,1μm,0.2s						
KULA	Kula-Manisa	0.82	323	PG	Pb	09 51 26.5	-0.1
MANT	Manisa	0.85	317	i P	Pg	09 51 26.4	-0.5
ISP	Isparta	0.97	92	PG	Pg	09 51 28.6	-0.5
AYDB	Zeytinkoy-Aydi	1.11	275	PN	Pb	09 51 31.4	-0.2
AYDN	Tasoluk	1.14	260	i P	Pn	09 51 32.2	0.0
AYDN				i S	Sb	09 51 47.0	+0.2
AYDN				IAML_P			
	comp=Z,1000nm,0.3s						
SHAP	Saphane-Kutahy	1.16	357	PN	Pb	09 51 32.2	-0.2
DALY	Dalyan (Mula)	1.16	206	PN	Pb	09 51 32.1	-0.2
GEDZ	Gediz	1.18	4	PN	Pg	09 51 32.9	-0.2
BAGO	Egridir - ISPA	1.19	83	i P	Pg	09 51 33.2	0.0
BAGO				i S	Sn	09 51 51.1	+2.1
SHUT	Suhut-Afyon	1.21	55	PN	Pg	09 51 33.3	-0.2
GDZ	Gediz	1.23	7	i P	Pb	09 51 33.6	0.0
GDZ				IAML_P			
	comp=Z,3μm,0.3s						
DEMI	Demirci	1.26	339	i P	Pn	09 51 33.8	0.0
DURS	Dursunbey	1.85	340	i P	Pn	09 51 42.7	+0.8
BORA	Eskisehir	2.21	24	i P	Pb	09 51 50.9	+0.7

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*ISCJB **01** 09:58:09.8±0.7, 31°.71S±0°.03×69°.74W±0°.04, h117^{km}±7^{km}, Error ellipse: s-maj=5.6km s-min=4.1km az=11.9*

*GUC **01** 09:58:09.6±0.6, 31°.79S×70°.21W, h147^{km}±5^{km}, ML3.0*

*SJA **01** 09:58:09.7±1.0, 31°.74S×69°.73W, h107^{km}±5^{km}, ML2.9, MW3.2*

ISC 01 09:58:10.9±1.5**, 31°.72S**±0°.03×**69°.75W**±0°.04**, h107**^{km}±12^{km}**, n26, σ0^{s}77**/44**, 2C-3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.40	102	eP	Pn	09 58 26.8	-0.4
RTLS				IAML		09 58 27.0	
	comp=Z,579nm,0.1s						
RTLS				eS	Sn	09 58 39.1	-0.3
AUSP	Uspallata	0.59	149	eP	Pn	09 58 28.2	-0.2
AUSP				eS	Sn	09 58 41.7	0.0
SJA	San Juan	1.03	80	eS	Sn	09 58 49.5	+1.1
RTCV	Cerro Valdivia	1.04	98	eP	Pn	09 58 31.8	-0.5
RTCV				eS	Sn	09 58 48.7	+0.1
RTLL	Cerro Villicun	1.16	71	eP	Pn	09 58 33.2	-0.4
RTLL				eS	Sn	09 58 50.2	-0.5
RTLL				IAML		09 58 51.8	
	comp=Z,237nm,0.4s						
RTLL	Cerro Villicun	1.16	71	⇑eP	Pn	09 58 32.9	-0.7
RTLL				eS	Sn	09 58 50.3	-0.5
RTLL				IAML		09 58 51.9	
	comp=N,562nm,0.7s						
ASAL	Salagasta	1.17	139	eP	Pn	09 58 33.5	-0.2
CMCH	Combarbala	1.20	297	eP	Pn	09 58 33.7	-0.4
CMCH				eS	Sn	09 58 52.1	+0.5
ACCO	Cerro Coronel	1.27	28	eP	Pn	09 58 35.2	0.0
ACCO				eS	Sn	09 58 54.6	+1.1
CFA	Coronel Fontan	1.30	86	eP	Pn	09 58 34.5	-0.7
CFA				⇓eS	Sn	09 58 53.2	-0.3
ARCO	CERRO ARCO	1.32	148	eP	Pn	09 58 35.5	-0.1
ARCO				eS	Sn	09 58 55.1	+0.8
ARCO				IAML		09 58 56.6	
	comp=Z,107nm,0.4s						
AMOG	MOGNA	1.33	55	eP	Pn	09 58 35.2	-0.3
AMOG				⇓eS	Sn	09 58 54.0	-0.2
AROD	Rodeo	1.56	9	eP	Pn	09 58 39.4	+0.7
AROD				eS	Sn	09 59 01.5	+1.9
AAGR	Agrelo	1.57	150	eP	Pn	09 58 38.5	0.0
AAGR				eS	Sn	09 59 00.7	+1.2
ACDV	Cuesta del Vie	1.63	20	eP	Pn	09 58 39.8	+0.5
ACDV				eS	Sn	09 59 02.3	+1.4
ROCH	El Roble	1.65	220	eP	Pn	09 58 38.8	-0.7
ROCH				eS	Sn	09 59 00.5	-0.8
ROCH				IAML		09 59 05.3	
	comp=E,120nm,0.2s						
ROC1	El Roble	1.65	220	eP	Pn	09 58 38.9	-0.7
FCH	Farellones	1.67	196	eP	Pn	09 58 40.4	+0.5
FCH				eS	Sn	09 59 03.8	+1.8
FCH				IAML		09 59 06.5	
	comp=N,111nm,0.3s						
GO04	Tololo Observa	1.78	329	eP	Pn	09 58 41.1	-0.1
GO04	Tololo Observa	1.78	329	⇑eP	Pn	09 58 40.8	-0.5
GO04				eS	Sn	09 59 03.9	-0.4
CLCH	Cerro Calan	1.80	201	eS	Sn	09 59 04.8	+0.3
CLCH				IAML		09 59 08.0	
	comp=E,179nm,0.5s						
LMEL	Las Melosas	2.16	190	eP	Pn	09 58 45.8	-0.2
LMEL				eS	Sn	09 59 13.4	+0.6
LMEL				IAML		09 59 21.9	
	comp=N,70nm,0.2s						
ACAN	Cantantal	2.25	105	eP	Pn	09 58 46.1	-0.9
AGUA	GUANDACOL	2.47	26	eP	Pn	09 58 50.6	+0.6
LCO	Las Campanas	2.82	343	⇓iP	Pn	09 58 54.0	-0.7
LCO				eS	Sn	09 59 26.8	-1.5
LCO				IAML		09 59 30.2	
	comp=E,65nm,0.5s						
APLL	PUNTA DE LOS L	3.06	65	eP	Pn	09 58 57.1	-0.6
APLL				IAML		09 59 33.8	
	comp=Z,10.0nm,0.2s						

IDC 01 10:16:48.9±62.0**, 20°.92S**×**178°.56W, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/27**, mbtmp3.6**/3**, Error ellipse: s-maj=1130.0km s-min=155.7km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.14	245	P	P	10 24 00.1	-1.5
	0.9nm,0.5s,baz=100,slow=12,SNR=2.5						
ASAR	Alice Springs	43.91	257	P	P	10 24 58.0	+0.2
	0.4nm,0.5s,baz=95,slow=7.2,SNR=11						
WRA	Warramunga Arr	44.03	263	P	P	10 24 59.4	+0.7
	0.1nm,0.3s,baz=90,slow=8.5,SNR=13						

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*ISCJB **01** 10:22:19.4±0.4, 67°.71N±0°.03×143°.67W±0°.07, h10^{km}, mb3.7/5, Error ellipse: s-maj=3.8km s-min=3.6km az=24.7*

*IDC **01** 10:22:19.9±1.2, 67°.99N×143°.57W, h0^{km}, mb3.6/5, mb1 3.9/8, mb1mx3.6/48, mbtmp3.6/8, ML3.3/3, Error ellipse: s-maj=24.6km s-min=20.0km az=82.0*

*NEIC **01** 10:22:20.2±0.0, 67°.78N×143°.68W, h10^{km}, ML3.5(AEIC), After AEIC.*

ISC 01 10:22:20.1±0.7**, 67°.82N**±0°.05×**143°.69W**±0°.04**, h10**^{km}**, n66, σ1^{s}34**/93**, mb3.6**/5**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BM3	Burnt Mountain	0.54	222	ePg	Pg	10 22 29.6	-0.9
FYU	Fort Yukon	1.40	206	ePn	Pn	10 22 45.6	0.0
FYU				eSn	Sn	10 23 04.0	0.0
PS04	TAPS Pump Stn4	2.21	288	ePn	Pn	10 22 58.0	+1.2
PS04				eSn	Sb	10 23 26.2	-1.2
PRP	Porcupine Dome	2.43	198	ePn	Pn	10 22 59.7	-0.2
PRP				eSn	Sn	10 23 28.2	-1.5
COLD	Coldfoot	2.57	260	ePn	Pn	10 23 02.7	+0.9
COLD				eSn	Sn	10 23 31.8	-1.3
PS05	TAPS Pump Stn5	2.89	253	ePn	Pn	10 23 07.1	+1.0
PS01	TAPS Pump Stn	3.02	326	ePn	Pn	10 23 08.9	+1.1
PS06	TAPS Pump Stn6	3.10	233	ePn	Pn	10 23 08.3	-0.7
EGAK	Eagle	3.22	160	ePn	Pn	10 23 10.3	-0.4
EGAK				eSn	Sn	10 23 47.3	-1.8
IL1	Eielson Array	3.32	204	ePn	Pn	10 23 13.5	+1.5
IL1				eSn	Sn	10 23 50.8	-0.8
ILAR	Eielson Array	3.32	204	Pn	Pn	10 23 13.0	+0.9
	3.2nm,0.3s,baz=20,slow=13,SNR=117						
ILAR				Lg	Lg	10 24 04.2	
	20nm,0.3s,baz=26,slow=30,SNR=9.3						
ILB	Eielson Array	3.32	204	ePn	Pn	10 23 12.3	+0.2
ILB				eSn	Sn	10 23 49.1	-2.4
COLA	College	3.40	211	ePn	Pn	10 23 13.4	+0.3
COLA				eSn	Sn	10 23 52.3	-1.1
MDM	Murphy Dome	3.41	215	ePn	Pn	10 23 12.8	-0.4
MDM				eSn	Sn	10 23 52.0	-1.7
PS08	TAPS Pump Stn8	3.53	203	ePn	Pn	10 23 14.8	-0.1
HDA	Harding Lake	3.67	203	ePn	Pn	10 23 17.1	+0.2
HDA				eSn	Sn	10 23 58.0	-2.2
WRH	Wood River Hil	3.81	210	ePn	Pn	10 23 18.5	-0.3
WRH				eSn	Sn	10 24 01.1	-2.4
INK	Inuvik	3.85	78	ePn	Pn	10 23 18.9	-0.3
INK				eSn	Sn	10 24 02.2	-2.2
INK	Inuvik	3.85	78	Pn	Pn	10 23 18.5	-0.8
	1.3nm,0.3s,baz=260,slow=21,SNR=84						
INK				Sn	Sn	10 24 01.4	-3.0
	2.9nm,0.3s,baz=41,slow=13,SNR=3.5						
SCRK	Sand Creek	3.86	182	ePn	Pn	10 23 20.1	+0.5
SCRK				eSn	Sn	10 24 02.5	-2.5
MLY	Manley	3.98	229	ePn	Pn	10 23 21.1	-0.1
MLY				eSn	Sn	10 24 06.8	-1.0
RIDG	Independ'e Rid	4.12	187	ePn	Pn	10 23 25.3	+2.1
RIDG				eSn	Sn	10 24 09.5	-1.9
DAWY	Dawson	4.16	153	ePn	Pn	10 23 24.3	+0.6
DAWY				eSn	Sn	10 24 10.7	-1.6
DOT	Dot Lake	4.19	182	ePn	Pn	10 23 25.1	+1.0
BWN	Browne	4.36	215	ePn	Pn	10 23 26.9	+0.6
BWN				eSn	Sn	10 24 15.1	-1.9
IM3	Indian Mountai	4.37	250	ePn	Pn	10 23 28.3	+1.8
IM3				eSn	Sn	10 24 18.4	+1.0
MCK	McKinley	4.64	210	ePn	Pn	10 23 30.8	+0.6
MCK				eSn	Sn	10 24 23.5	-0.5
BPAW	Bear Paw Mtn.	4.78	222	ePn	Pn	10 23 31.1	-1.0
BCA3	Beaver Creek A	4.84	170	ePn	Pn	10 23 33.2	+0.2
RND	Reindeer	4.92	208	ePn	Pn	10 23 35.0	+0.9
PAX	Paxson	4.93	190	ePn	Pn	10 23 33.0	-1.2
DHY	Denali Highway	5.00	200	ePn	Pn	10 23 37.5	+2.1
DHY				eSn	Sn	10 24 33.7	+0.4
TRF	Thorofare Moun	5.17	215	ePn	Pn	10 23 37.5	0.0
TRF				eSn	Sn	10 24 38.3	+1.1
HARP	HAARP	5.47	187	ePn	Pn	10 23 43.1	+1.5
BVCY	Beaver Creek	5.56	166	P	Pn	10 23 43.2	+0.4
CAST	Castle Rocks	5.62	222	ePn	Pn	10 23 42.9	-0.7
CAST				eSn	Sn	10 24 48.2	+0.1
PPLA	Purkeypile	6.08	220	ePn	Pn	10 23 48.5	-1.6
YUK2	White River	6.18	167	P	Pn	10 23 52.0	+0.6
SCM	Sheep Creek Mo	6.21	196	ePn	Pn	10 23 52.1	+0.4
SCM				eSn	Sn	10 25 02.1	-0.6
YUK3	Moose Creek	6.22	166	P	Pn	10 23 52.4	+0.3
SML	Sawmill	6.35	200	ePn	Pn	10 23 53.5	-0.2
SML				eSn	Sn	10 25 03.3	-2.9
KLU	Klutina	6.43	190	ePn	Pn	10 23 54.9	+0.2
GHO	Glory Hole Cre	6.47	203	ePn	Pn	10 23 57.5	+2.2
GHO				eSn	Sn	10 25 07.0	-2.2
PMR	Palmer	6.67	203	ePn	Pn	10 23 58.3	+0.3
KNK	Knik Glacier	6.75	200	ePn	Pn	10 23 59.8	+0.6
KNK				eSn	Sn	10 25 15.2	-0.7
YUK4	Talbot Arm	6.85	159	P	Pn	10 24 00.1	-0.6
SUA	Susitna One	7.06	209	ePn	Pn	10 24 03.9	+0.5
GLI	Glacier Island	7.12	194	ePn	Pn	10 24 04.7	+0.4
TT01	Tatalina	7.12	232	ePn	Pn	10 24 03.2	-1.0
YUK5	Granite Creek	7.17	157	ePn	Pn	10 24 05.6	+0.6
RDOG	Red Dog Mine	7.24	281	ePn	Pn	10 24 05.9	+0.2
RC01	Rabbit Creek A	7.24	204	ePn	Pn	10 24 06.4	+0.5
YUK6	Outpost Mounta	7.28	159	ePn	Pn	10 24 07.4	+0.9
EYAK	Cordova Ski Ar	7.36	188	ePn	Pn	10 24 08.5	+1.1
HYT	Haines Junctio	7.51	156	ePn	Pn	10 24 10.7	+1.0
WHY	Whitehorse	8.14	148	ePn	Pn	10 24 18.1	-0.1
WHY				eSn	Sn	10 25 48.0	-2.2
SEW	Seward	8.15	201	ePn	Pn	10 24 16.9	-1.3
SEW				eSn	Sn	10 25 49.7	-0.5
SKAG	Skagway	9.17	152	ePn	Pn	10 24 31.7	-0.5
YKA	Yellowknife Ar	13.24	100	Pn	Pn	10 25 23.7	-4.1
	0.3nm,0.3s,baz=306,slow=13,SNR=26						
YKA				Sn	Sn	10 27 42.7	-12
	0.2nm,0.3s,baz=305,slow=23,SNR=4.3						
YKB5	Yellowknife Ar	13.24	100	ePn	Pn	10 25 22.7	-5.1
RES	Resolute Bay	16.60	44	Pn	Pn	10 26 08.9	-3.6
	0.1nm,0.3s,baz=270,slow=3.0,SNR=2.5						
PDAR	Pinedale Array	30.98	127	P	P	10 28 39.2	+1.8
	0.9nm,0.9s,baz=20,slow=4.7,SNR=4.9						
NVAR	Mina Array Bea	32.64	141	P	P	10 28 55.4	+3.3
	0.4nm,0.8s,baz=316,slow=6.3,SNR=2.7						
TXAR	Lajitas Array	45.19	128	P	P	10 30 39.2	+2.2
	0.4nm,0.9s,baz=1.1,slow=6.3,SNR=3.4						
FINES	FINESS Array B	50.82	6	P	P	10 31 19.4	-0.6
	2.9nm,1.0s,baz=14,slow=8.6,SNR=5.0						
AKASG	Malin Array Be	61.68	5	P	P	10 32 38.3	+0.7
	0.4nm,0.4s,baz=356,slow=6.9,SNR=3.3						

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*ASRS **01** 10:29:05.8, 53°.60N×87°.77E, M2.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*ISCJB **01** 10:29:06.3±0.8, 53°.44N±0°.06×87°.80E±0°.08, h0^{km}, Error ellipse: s-maj=8.9km s-min=7.2km az=2.7*

*IDC **01** 10:29:08.1±1.1, 53°.55N×87°.87E, h0^{km}, mb1 3.4/5, mb1mx3.2/44, mbtmp3.4/5, ML3.1/5, Error ellipse: s-maj=14.3km s-min=8.8km az=1.0*

*NNC **01** 10:29:08.5±2.6, 53°.51N×87°.70E, h2^{km}±16^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=23.7km s-min=11.9km az=74.0, Suspected Mining explosion.*

ISC 01 10:29:07.8±1.2**, 53°.6N**±0°.1×**87°.73E**±0°.07**, h0**^{km}**, n11, σ1^{s}25**/14**, 5C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.76	283	⇓Pn	Pn	10 29 39.9	+0.4
	33nm,0.6s						
ZAA0				⇑Sn	Sb	10 30 04.2	+0.7
	214nm,0.9s						
ZALV	Zalesovo Beam	1.76	283	Pn	Pn	10 29 40.2	+0.7
	16nm,0.3s,baz=101,slow=14,SNR=191						
ZALV				Lg	Lg	10 30 05.2	
	14nm,0.3s,baz=100,slow=24,SNR=11						
KURK	Kurchatov	6.30	246	⇑Pn	Pn	10 30 43.3	+1.4
	4.4nm,0.7s						
KURK				⇓Lg	Lg	10 32 24.4	
	25nm,0.9s						
KURBB	Kurchatov Arra	6.40	246	Pn	Pn	10 30 45.0	+1.7
	0.2nm,0.3s,baz=61,slow=14,SNR=26						
KURBB				Sn	Sn	10 31 57.2	+0.3
	0.1nm,0.3s,baz=169,slow=31,SNR=5.7						
KURBB				Lg	Lg	10 32 31.7	
	0.2nm,0.3s,baz=63,slow=33,SNR=18						
MK31	Makanchi Array	7.65	209	⇑Sn	Sn	10 32 26.9	-0.9
	2.0nm,0.6s,baz=27,slow=23,SNR=6.4						
MK31				Lg	Lg	10 33 09.4	
	7.3nm,0.7s,baz=32,slow=28,SNR=6.8						
MKAR	Makanchi Array	7.65	209	Pn	Pn	10 31 02.4	+1.9
	0.6nm,0.3s,baz=29,slow=13,SNR=32						
MKAR				Sn	Sn	10 32 27.1	-0.7
	0.5nm,0.3s,baz=28,slow=26,SNR=10						
MKAR				Lg	Lg	10 33 10.0	
	0.8nm,0.3s,baz=28,slow=32,SNR=11						
TLY	Talaya	9.87	95	Pn	Pn	10 31 30.3	-0.5
	0.0nm,0.3s,baz=279,slow=19,SNR=2.4						
BVAR	Borovoye Array	10.39	274	Pn	Pn	10 31 38.8	+0.8
	0.3nm,0.3s,baz=69,slow=15,SNR=5.7						
BVAR				Sn	Sn	10 33 33.4	-1.7
	0.3nm,0.3s,baz=76,slow=25,SNR=8.6						
OTUK	Ortayu	11.09	247	⇓Pn	Pn	10 31 46.1	-1.4
	1.0nm,0.7s						
OTUK				⇑Pg		10 32 31.5	
	1.7nm,0.7s						
OTUK				⇑Lg	Lg	10 34 59.3	
	9.1nm,1.0s						
SONM	Songino Array	13.14	108	Pn	Pn	10 32 16.2	+0.5
	0.2nm,0.3s,baz=310,slow=9.0,SNR=2.8						
SONM				Lg	Lg	10 36 01.2	
	1.0nm,0.3s,baz=292,slow=28,SNR=6.4						
AAK	Ala-Archa	14.06	224	Lg	Lg	10 36 33.0	
	0.1nm,0.3s,baz=345,slow=19,SNR=3.4						

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*NIED **01** 10:32:00, 40°.80N×143°.00E, h32^{km}, Mw3.6 Best double couple: M$_0$2.44000×10^{14} NP1:ϕ$_s$271.00000°, δ37.00000°, λ165.00000°. NP2:ϕ$_s$13.00000°, δ81.00000°, λ54.00000°.*

*JMA **01** 10:32:13.8±0.3, 40°.77N×143°.02E, h1^{km}±3^{km}, M4.0*

*ISCJB **01** 10:32:14.8±1.6, 40°.76N±0°.04×143°.06E±0°.07, h13^{km}±13^{km}, mb3.3/4, Error ellipse: s-maj=11.0km s-min=4.7km az=34.4*

*IDC **01** 10:32:31.3±3.9, 40°.29N×141°.99E, h129^{km}±36^{km}, mb3.0/4, mb1 3.2/5, mb1mx2.9/42, mbtmp3.3/5, Error ellipse: s-maj=32.4km s-min=24.0km az=74.0*

ISC 01 10:32:13.8±1.6**, 40°.77N**±0°.04×**143°.03E**±0°.06**, h7**^{km}±10^{km}**, n19, σ0^{s}94**/28**, mb3.4**/4**, 1C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	1.15	241	P	Pb	10 32 35.6	-0.4
JKEN				eS	Sg	10 32 50.8	0.0
JTH	Tanohata	1.22	228	P	Pg	10 32 37.1	0.0
JTH				S	Sn	10 32 53.8	-0.2
JANG	Nango	1.22	252	⇓P	Pg	10 32 37.0	-0.2
JANG				eS	Sn	10 32 53.6	-0.5
JEM	Erimo	1.25	4	P	Pg	10 32 38.0	+0.2
JEM				eS	Sn	10 32 55.6	+0.7
JARK	Aomorirokkasho	1.28	281	P	Pb	10 32 37.8	-0.5
JARK				eS	Sg	10 32 55.9	+0.8
JTM	Tenmabayashi	1.49	271	P	Pb	10 32 41.4	-0.4
JTM				eS	Sg	10 33 01.2	-0.5
JNBK	Urakawa-nobuka	1.53	352	⇓P	Pb	10 32 42.2	-0.2
JOT	Ohata	1.62	293	P	Pn	10 32 42.9	+0.1
JOT				eS	Sb	10 33 04.2	-0.5
JOM	Ohasama	1.86	226	P	Pb	10 32 47.1	-0.9
JCH	Churui	1.86	8	P	Pb	10 32 46.8	-1.4
JCH				eS	Sn	10 33 09.7	-0.3
JKB	Kayabe	1.88	307	P	Pn	10 32 46.8	+0.5
JKB				eS	Sb	10 33 10.5	-1.5
JAH	Hinai	1.92	253	P	Pb	10 32 48.7	-0.4
JAH				eS	Sb	10 33 13.7	+0.5
JIAM	Iburiatsuma	2.03	336	P	Pb	10 32 51.6	+0.5
JMK	Ichinoseki	2.29	218	⇑P	Pb	10 32 53.8	-1.6
MJAR	Matsushiro Arr	5.66	223	P	Pn	10 33 41.3	+3.0
	0.2nm,0.3s,baz=29,slow=14,SNR=15						
SONM	Songino Array	26.96	298	P	P	10 37 56.7	+0.6
	0.7nm,0.9s,baz=96,slow=6.4,SNR=2.5						
MKAR	Makanchi Array	43.31	299	P	P	10 40 16.2	0.0
	0.2nm,0.4s,baz=79,slow=7.6,SNR=3.8						
ILAR	Eielson Array	45.69	34	P	P	10 40 45.1	+10
	0.2nm,0.5s,baz=273,slow=5.9,SNR=4.1						
WRA	Warramunga Arr	60.93	189	P	P	10 42 26.5	-0.9
	0.6nm,1.0s,baz=5.6,slow=7.3,SNR=4.0						

IDC 01 10:37:47.2±1.9**, 11°.01S**×**165°.38E, h0**^{km}**, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/43**, mbtmp3.6**/4**, ML3.9**/1**, Error ellipse: s-maj=52.6km s-min=33.7km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.05	175	Pn	Pn	10 40 26.6	-0.1
	0.8nm,0.3s,baz=357,slow=13,SNR=10						
WRA	Warramunga Arr	31.16	250	P	P	10 44 08.3	+0.2
	0.5nm,0.8s,baz=80,slow=9.1,SNR=4.2						
ASAR	Alice Springs	32.49	243	P	P	10 44 19.6	-0.3
	0.2nm,0.5s,baz=65,slow=10,SNR=4.2						
ILAR	Eielson Array	83.59	19	P	P	10 50 17.1	0.0
	0.1nm,0.6s,baz=225,slow=5.0,SNR=4.1						

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*ISCJB **01** 10:39:47.3±0.4, 26°.49S±0°.02×179°.13W±0°.03, h393^{km}±4^{km}, mb4.7/183, Error ellipse: s-maj=4.2km s-min=2.7km az=29.4*

*IDC **01** 10:39:48.6±0.5, 26°.38S×179°.17W, h396^{km}±4^{km}, mb4.2/23, mb1 4.3/25, mb1mx4.2/39, mbtmp4.9/25, Error ellipse: s-maj=11.1km s-min=9.3km az=115.0*

*NEIC **01** 10:39:48.4±0.1, 26°.57S×179°.07W, mb4.8/154, Error ellipse: s-maj=5.4km s-min=3.1km az=136.0*

*WEL **01** 10:39:52.5±0.8, 27°S±11°×17°7W±2°8, h443^{km}±7^{km}*

*GCMT **01** 10:39:52.4±0.4, 26°.40S±0°.05×179°.15W±0°.05, h406^{km}±2^{km}, MW5.3/63, Moment Tensor Solution. s63,c85; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.17±.04; M$_{\theta\theta}$-0.09±.07; M$_{\phi\phi}$-0.08±.06; M$_{r\theta}$0.01±.06; M$_{\theta\phi}$-0.04±.06; M$_{\phi r}$-1.09±.04; Best double couple: M$_0$1.09800×10^{17} NP1:ϕ$_s$180.00000°, δ87.00000°, λ88.00000°. NP2:ϕ$_s$30.00000°, δ4.00000°, λ119.00000°. Principal axes: T 1.1410, Plg48.0000°, Azm88.0000°; N -0.0860, Plg2.0000°, Azm180.0000°; P -1.0550, Plg42.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 01 10:39:48.5±0.3**, 26°.48S**±0°.04×**179°.03W**±0°.04**, h394**^{km}±3^{km}**, h395**^{km}**:pP-P, n541, σ1^{s}82**/620**, mb4.8**/183**, 1C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	2.92	161	P	Pn	10 40 54.2	+3.6
RAO	Raoul Island	2.93	161	ePn	Pn	10 40 50.7	+0.1
RAO				eS	S	10 41 43.5	+2.6
RAO	Raoul Island	2.93	161	P	Pn	10 40 51.2	+0.6
	1μm,0.3s,baz=279,slow=3.3,SNR=24						
RAO				S	S	10 41 46.4	+5.5
	763nm,0.3s,baz=106,slow=20,SNR=5.6						
GLKZ	Green Lake	2.94	161	P	Pn	10 40 54.2	+3.5
GLKZ				S	S	10 41 42.3	+1.2
MSVF	Nonsavu	9.12	342	eP	Pn	10 41 55.4	-1.1
MSVF				eS	S	10 43 39.2	-2.3
OUZ	Omahuta	10.77	214	eP	P	10 42 13.9	-0.7
WCZ	Waipu Caves	11.00	209	P	Pn	10 42 20.9	+2.9
KUZ	Kuaotunu	11.16	202	P	Pn	10 42 22.1	+2.2
NIUE	Niue	11.17	51	P	Pn	10 42 23.7	+3.4
	baz=11,SNR=12						
NIUE	Niue	11.17	51	eP	P	10 42 18.6	-0.7
NIUE				eS	S	10 44 23.3	-0.5
MXZ	Matakaoa Point	11.28	191	eP	P	10 42 18.8	-1.5
MXZ				eS	S	10 44 23.7	-1.8
MXZ	Matakaoa Point	11.28	191	P	P	10 42 19.4	-0.8
MXZ				S	S	10 44 21.4	-4.1
WMGZ	Waiomatatini S	11.51	190	P	P	10 42 21.7	-1.1
WMGZ				S	S	10 44 25.3	-4.9
WMGZ	Waiomatatini S	11.51	190	P	S	10 44 28.3	-1.9
HAZ	Te Kaha	11.56	193	P	P	10 42 22.8	-0.6
HAZ	Te Kaha	11.56	193	P	S	10 44 29.3	-2.0
PKGZ	Pakihiroa	11.63	191	P	S	10 44 28.4	-4.6
PUZ	Puketiti	11.78	191	P	P	10 42 24.8	-1.1
PUZ				S	S	10 44 31.3	-4.6
PUZ	Puketiti	11.78	191	P	S	10 44 30.7	-5.2
RUGZ	Raukumara Rang	11.78	193	P	P	10 42 25.9	-0.1
RUGZ				S	S	10 44 33.7	-2.4
RUGZ	Raukumara Rang	11.78	193	P	S	10 44 31.8	-4.3
TWGZ	Tauwhareparae	11.93	191	P	S	10 44 32.4	-6.6
KMRZ	Kaimai	12.10	199	P	Pn	10 42 33.3	+2.4
EDRZ	Edgecumbe	12.13	196	P	Pn	10 42 32.4	+1.2

EDRZ				S	S	10 44 47.2	+4.2
TOZ	Tahuroa Road	12.13	201	P	Pn	10 42 33.4	+2.3
MWZ	Matawai	12.17	193	P	P	10 42 29.5	-0.7
MWZ				S	S	10 44 42.4	-1.4
MWZ	Matawai	12.17	193	P	S	10 44 44.3	+0.4
KARZ	Kaharoa	12.18	198	P	Pn	10 42 33.5	+1.8
URZ	Urewera	12.19	195	eP	P	10 42 29.4	-0.8
URZ				eS	S	10 44 43.4	-0.7
URZ	Urewera	12.19	195	P	P	10 42 29.8	-0.4
	12nm,0.3s,baz=282,slow=3.4,SNR=127						
URZ				S	S	10 44 43.4	-0.7
	20nm,0.3s,baz=107,slow=17,SNR=20						
URZ	Urewera	12.19	195	P	P	10 42 29.3	-1.0
URZ				S	S	10 44 41.8	-2.3
URZ	Urewera	12.19	195	P	S	10 44 43.4	-0.7
CNGZ	Carnagh Statio	12.19	190	P	P	10 42 30.8	+0.4
CNGZ				S	S	10 44 39.0	-5.2
CNGZ	Carnagh Statio	12.19	190	P	S	10 44 36.5	-7.6
TKGZ	Te Karaka	12.21	192	P	P	10 42 29.3	-1.2
TKGZ				S	S	10 44 40.2	-4.4
TKGZ	Te Karaka	12.21	192	P	S	10 44 40.2	-4.4
TARZ	Mount Tarawera	12.31	197	P	Pn	10 42 33.1	-0.2
TARZ				S	S	10 44 51.4	+4.7
UTU	Utuhina	12.34	198	P	Pn	10 42 37.0	+3.5
RAGZ	Rawiri	12.35	193	P	Pn	10 42 33.9	+0.2
RAGZ				S	S	10 44 47.4	-0.1
RAGZ	Rawiri	12.35	193	P	S	10 44 43.4	-4.1
HLRZ	Highlands Stat	12.37	197	P	Pn	10 42 35.6	+1.7
RRRZ	Republican Roa	12.40	197	P	Pn	10 42 35.8	+1.4
RRRZ				S	S	10 44 50.8	+2.3
RRRZ	Republican Roa	12.40	197	P	S	10 44 51.9	+3.4
HSRZ	Hossack Road	12.45	197	P	Pn	10 42 36.7	+1.8
MUGZ	Murupara	12.47	195	P	P	10 42 33.1	-0.4
MUGZ				S	S	10 44 48.8	-1.1
RIGZ	Rimuhau	12.48	192	P	P	10 42 32.7	-0.9
RIGZ				S	S	10 44 47.8	-2.4
RIGZ	Rimuhau	12.48	192	P	S	10 44 44.4	-5.8
HRRZ	Handcock Road	12.51	197	P	Pn	10 42 37.2	+1.6
GRRZ	Galatos Road	12.52	198	P	Pn	10 42 37.3	+1.6
RTZ	Ruatahuna	12.55	195	P	P	10 42 34.5	+0.1
RTZ				S	S	10 44 49.6	-2.1
RTZ	Ruatahuna	12.55	195	P	S	10 44 48.6	-3.1
PRRZ	Plateau Road	12.59	197	P	Pn	10 42 36.4	-0.1
PRRZ				S	S	10 44 52.4	+0.2
PRRZ	Plateau Road	12.59	197	P	S	10 44 52.6	+0.4
SNGZ	Shannon Statio	12.64	193	P	P	10 42 35.4	+0.1
SNGZ				S	S	10 44 51.8	-1.4
SNGZ	Shannon Statio	12.64	193	P	S	10 44 49.3	-4.0
ALRZ	Allen Road	12.66	197	P	Pn	10 42 37.3	0.0
ALRZ				S	S	10 44 54.5	+0.8
WPRZ	Whakapapatarin	12.67	197	P	Pn	10 42 38.9	+1.5
TLZ	Tolley Road	12.67	200	P	Pn	10 42 38.2	+0.7
PRGZ	Paritu Road	12.67	191	P	Pn	10 42 37.1	-0.4
PRGZ				S	S	10 44 49.8	-4.2
PRGZ	Paritu Road	12.67	191	P	S	10 44 45.6	-8.4
KNZ	Kokohu	12.81	192	P	P	10 42 36.0	-1.1
KNZ				S	S	10 44 53.3	-3.3
KNZ	Kokohu	12.81	192	P	S	10 44 50.5	-6.0
MTHZ	Maungataniwha	12.81	195	P	P	10 42 38.1	+0.8
MTHZ				S	S	10 44 55.1	-1.8
MTHZ	Maungataniwha	12.81	195	P	S	10 44 54.1	-2.7
RAHZ	Arahi	12.82	194	P	P	10 42 37.3	0.0
RAHZ				S	S	10 44 54.5	-2.5
RAHZ	Arahi	12.82	194	P	S	10 44 55.0	-1.9
MARNC	Mare, Loyalty	12.83	290	eP	Pn	10 42 39.5	+0.1
MHGZ	Mahia Peninsul	12.89	191	P	Pn	10 42 40.9	+0.9
MHGZ				S	S	10 44 57.3	-1.1
MHGZ	Mahia Peninsul	12.89	191	P	S	10 44 54.6	-3.7
PINNC	Pines Island,	12.89	284	eP	Pn	10 42 40.3	+0.1
WHHZ	Waihua	12.94	193	P	Pn	10 42 40.1	-0.5
WHHZ	Waihua	12.94	193	P	S	10 44 58.5	-0.9
WATZ	Wairara	12.96	199	P	Pn	10 42 41.0	+0.2
HIZ	Hauiti	13.05	202	eP	P	10 42 39.7	-0.1
HIZ	Hauiti	13.05	202	P	Pn	10 42 44.1	+2.2
NMHZ	Naumai	13.05	194	P	P	10 42 40.0	+0.1
ARHZ	Aropaoanui	13.17	194	P	S	10 45 03.2	-0.8
BKZ	Black Stump Fm	13.19	195	eP	P	10 42 38.3	-3.2
BKZ				eS	S	10 44 54.6	-10
KATZ	Kakaramea	13.22	198	P	Pn	10 42 43.2	-0.8
WTVZ	West Tongariro	13.38	198	P	P	10 42 44.4	+0.8
TWVZ	Taurewa	13.38	199	P	Pn	10 42 45.5	-0.3
MCHZ	McNeill Hill	13.41	194	P	P	10 42 43.7	0.0
MCHZ	McNeill Hill	13.41	194	P	S	10 45 07.8	-1.0
NGZ	Ngauruhoe	13.43	198	P	Pn	10 42 45.8	-0.6
KWHZ	Kaweka Forest	13.46	195	P	P	10 42 43.5	-0.8
KWHZ	Kaweka Forest	13.46	195	P	S	10 45 09.1	-0.7
COVZ	Chateau Observ	13.47	198	P	P	10 42 45.2	+0.7
TUVZ	Tukino	13.51	198	P	P	10 42 44.8	-0.1
FWVZ	Far West T-bar	13.52	198	P	P	10 42 45.9	+0.7
CKHZ	Cape Kidnapper	13.54	193	P	S	10 45 08.2	-3.0
DRZ	Dome Shelter	13.54	198	P	S	10 45 16.6	+4.7
TRVZ	Turoa	13.56	198	P	P	10 42 45.9	+0.2
BHHZ	Black Hill Sta	13.61	196	P	P	10 42 44.2	-1.7
BHHZ	Black Hill Sta	13.61	196	P	S	10 45 11.5	-1.2
MOVZ	Moawhango	13.61	197	P	P	10 42 45.8	-0.2
MOVZ	Moawhango	13.61	197	P	S	10 45 12.8	-0.1
VRZ	Vera Road	13.64	201	P	Pn	10 42 48.8	+0.1
KAHZ	Kahuranaki	13.71	193	P	S	10 45 13.8	-1.0
ONTNC	Ouen Toro	13.86	284	eP	Pn	10 42 50.4	-1.1
PXZ	Pawanui	13.94	193	P	P	10 42 48.4	-1.1
PXZ	Pawanui	13.94	193	P	S	10 45 15.4	-3.9
DZM	Mont Dzumac	13.95	285	eP	Pn	10 42 52.6	0.0
	557nm,1.1s						
DZM	Mont Dzumac	13.95	285	eP	Pn	10 42 53.1	+0.5
DZM	Mont Dzumac	13.95	285	P	Pn	10 42 51.6	-1.0
	5.9nm,0.3s,baz=100,slow=14,SNR=81						
WPHZ	Waipukurau	14.06	194	P	S	10 45 19.5	-2.3
WAZ	Wanganui	14.15	199	P	S	10 45 25.3	+1.8
TSZ	Takapari Road	14.17	196	P	S	10 45 23.3	-0.7
PRHZ	Porangahau	14.21	194	P	S	10 45 18.9	-5.9
ANWZ	Angora Road	14.43	194	P	S	10 45 26.2	-2.9
POWZ	Post Office Ro	14.53	196	P	S	10 45 30.4	-0.8
BFZ	Birch Farm	14.70	194	eP	P	10 42 57.1	-0.7
BFZ				eS	S	10 45 29.1	-5.3
BFZ	Birch Farm	14.70	194	P	S	10 45 31.6	-2.8
MRZ	Mangatainoka R	14.83	196	P	S	10 45 33.5	-3.6
CPWZ	Castlepoint	14.92	194	P	S	10 45 38.4	-0.5
SNZO	South Karori	15.67	198	eP	P	10 43 05.3	-2.9
	60nm,1.0s						
SNZO				eS	S	10 45 51.9	-1.7
THZ	Tophouse	16.63	202	eP	P	10 43 16.8	-1.8
	9.2nm,0.7s						
THZ				eS	S	10 46 10.1	-2.5
KHZ	Kahutara	17.02	199	eP	P	10 43 20.5	-2.3
	28nm,1.1s						
KHZ				eS	S	10 46 17.6	-2.5
LTZ	Lake Taylor	17.75	201	eP	P	10 43 28.4	-2.1
	16nm,0.8s						
LTZ				eS	S	10 46 32.0	-2.4
OXZ	Oxford	18.31	201	eP	P	10 43 32.9	-3.5
	22nm,0.9s						
OXZ				eS	S	10 46 40.8	-3.9
RAR	Rarotonga	18.38	77	eP	P	10 43 35.5	-1.9
	51nm,0.9s						
MQZ	McQueen’s Vall	18.46	199	eP	P	10 43 34.6	-3.4
	3.3nm,0.8s						
MQZ				eS	S	10 46 44.7	-2.7
RPZ	Rata Peaks	18.98	203	eP	P	10 43 42.1	-1.5
	16nm,0.8s						
RPZ				eS	S	10 46 52.5	-4.0
RPZ	Rata Peaks	18.98	203	P	P	10 43 42.1	-1.5
	3.0nm,0.3s,baz=342,slow=2.7,SNR=23						
RPZ				S	S	10 46 58.7	+2.2
	0.9nm,0.3s,baz=335,slow=11,SNR=5.8						
FOZ	Fox Glacier	19.28	205	eP	P	10 43 45.1	-1.2
	36nm,0.8s						
FOZ				eS	S	10 46 57.7	-3.7
LBZ	Lake Benmore	19.88	203	eP	P	10 43 50.4	-1.7
	11nm,1.2s						
LBZ				eS	S	10 47 00.8	-10
ODZ	Otahua Downs	20.30	201	eP	P	10 43 54.9	-1.0
	17nm,1.1s						
ODZ				eS	S	10 47 07.4	-10
WKZ	Wanaka	20.68	205	eP	P	10 43 57.3	-2.1
	47nm,1.2s						
WKZ				eS	S	10 47 17.1	-7.1
MLZ	Mavora Lakes	21.48	205	eP	P	10 44 05.4	-1.3
	20nm,0.8s						
DCZ	Deep Cove	21.94	207	eP	P	10 44 10.3	-0.5
	16nm,0.8s						
WHZ	Wether Hill Ro	21.98	205	eP	P	10 44 10.4	-0.8
	22nm,0.8s						
ARMA	Armidale	26.06	254	P	P	10 44 50.0	+1.9
	baz=26,SNR=8.6						
ARMA	Armidale	26.06	254	eP	P	10 44 49.6	+1.4
	25nm,0.9s						
MGCD	Mangrove Creek	26.70	248	P	P	10 44 56.3	+2.6
	baz=27,SNR=13						
EIDS	Eidsvold	26.88	266	P	P	10 44 55.7	+0.3
	baz=27,SNR=22						
EIDS	Eidsvold	26.88	266	eP	P	10 44 55.8	+0.5
	73nm,0.8s						
TBI	Tubuai	26.97	90	eT	T	11 12 00.5	
	6.2nm,0.3s						
PAE	Paea	28.61	78	eP	P	10 45 11.0	+0.3
	6.0nm,0.6s						
PAE	Paea	28.61	78	eT	T	11 12 34.1	
	7.5nm,0.3s						
CAN	Canberra	28.71	244	eP	P	10 45 12.8	+1.3
	40nm,1.0s						
RMQ	Roma	28.79	263	P	P	10 45 13.7	+1.4
	baz=29,SNR=34						
TVO	Taravao	28.86	79	eP	P	10 45 13.3	+0.4
	11nm,0.5s						
TIAR	Tiarei	28.86	78	eP	P	10 45 13.1	+0.2
	56nm,1.0s						
MILA	Mila	28.91	241	P	P	10 45 15.8	+2.6
	baz=29,SNR=5.3						
YNG	Young	29.07	247	P	P	10 45 16.3	+1.7
	baz=29,SNR=14						
CMSA	Cobar Meteorol	31.17	252	P	P	10 45 33.6	+0.7
	baz=31,SNR=50						
TOO	Toolangi	31.87	241	P	P	10 45 40.2	+1.2
	baz=32,SNR=12						
TOO	Toolangi	31.87	241	eP	P	10 45 40.3	+1.4
	48nm,0.9s						
CTA	Charters Tower	32.45	274	P	P	10 45 43.8	-0.3
	23nm,0.3s,baz=103,slow=9.7,SNR=69						
CTA				ScP	ScP	10 51 27.1	+0.9
	15nm,1.0s,baz=129,slow=2.7,SNR=11						
CTAO	Charters Tower	32.45	274	eP	P	10 45 44.0	-0.1
	73nm,1.0s						
QLP	Quilpie	32.79	261	P	P	10 45 46.7	-0.3
	baz=33,SNR=25						
ARPS	Mount Arapiles	34.65	243	P	P	10 46 03.7	+1.1
	baz=35,SNR=7.7						
STKA	Stephens Creek	34.66	252	P	P	10 46 03.4	+0.6
	baz=35,SNR=15						
STKA	Stephens Creek	34.66	252	P	P	10 46 03.1	+0.3
	21nm,0.8s,baz=85,slow=9.7,SNR=23						
STKA				ScP	ScP	10 51 34.6	+0.8
	2.6nm,0.5s,baz=145,slow=9.2,SNR=4.7						
MTSU	Mount Surprise	34.82	276	P	P	10 46 04.1	-0.2
	baz=35,SNR=33						
HTT	Hallett	36.89	249	P	P	10 46 21.5	-0.1
	baz=37,SNR=26						
COEN	Coen	37.45	282	P	P	10 46 26.1	-0.2
	baz=37,SNR=43						
COEN	Coen	37.45	282	eP	P	10 46 26.2	-0.1
	93nm,1.0s						
QIS	Mount Isa	38.26	270	P	P	10 46 32.1	-0.9
	baz=38,SNR=17						
BBOO	Buckleboo	39.31	250	P	P	10 46 40.3	-1.2
	baz=39,SNR=76						
BBOO	Buckleboo	39.31	250	eP	P	10 46 40.4	-1.0
	90nm,1.0s						
RKT	Rikitea	39.99	95	eT	T	11 28 23.0	
	1.7nm,0.3s						
TAOE	Nuku Hiva Isla	40.77	72	eP	P	10 46 53.6	0.0
	290nm,1.1s						
TAOE	Nuku Hiva Isla	40.77	72	eP	P	10 46 54.0	+0.3
	143nm,1.1s						
AS01	Alice Springs	42.50	263	eP	P	10 47 06.3	-1.0
AS31	Alice Springs	42.54	263	eP	P	10 47 07.1	-0.6
	36nm,1.0s						
ASAR	Alice Springs	42.54	263	P	P	10 47 06.4	-1.2
	33nm,0.4s,baz=85,slow=7.1,SNR=255						
ASAR				ScP	ScP	10 52 05.2	+0.9
	6.7nm,1.0s,baz=118,slow=4.3,SNR=14						
ASAR				S	S	10 53 00.6	+0.4
	3.3nm,0.9s,baz=104,slow=15,SNR=6.3						
WC3	Warramunga Arr	43.13	269	eP	P	10 47 11.0	-1.3
	50nm,1.0s						
WB2	Warramunga Arr	43.15	269	eP	P	10 47 11.1	-1.3
WRAB	Tennant Creek	43.16	269	eP	P	10 47 11.0	-1.5
	35nm,0.8s						
WR1	Warramunga Arr	43.16	269	eP	P	10 47 10.8	-1.8
	54nm,1.0s						
WR1				epP	pP	10 48 27.7	-0.4
WR1				ePP	PP	10 49 04.7	+2.3
WR1				eScP	ScP	10 52 07.0	+0.1
WRA	Warramunga Arr	43.16	269	P	P	10 47 10.8	-1.8
	81nm,1.2s,baz=105,slow=7.4,SNR=225						
WRA				pP	pP	10 48 27.7	-0.4
	1.9nm,0.4s,baz=106,slow=8.1,SNR=1.9						
WRA				PP	PP	10 49 04.7	+2.3
	4.1nm,0.8s,baz=107,slow=8.7,SNR=5.2						
WRA				ScP	ScP	10 52 07.0	+0.1
	5.8nm,1.0s,baz=104,slow=4.4,SNR=9.5						
FORT	Forrest	46.29	252	P	P	10 47 35.5	-1.3
	baz=46,SNR=14						
FORT	Forrest	46.29	252	eP	P	10 47 35.3	-1.4
	127nm,0.9s						
WRKA	Warakurna	47.18	260	P	P	10 47 42.0	-1.7
	baz=47,SNR=470						
KDU	Kakadu	47.44	277	P	P	10 47 43.7	-2.0
	baz=47,SNR=46						
MTN	Manton Dam	48.57	276	eP	P	10 47 52.1	-2.1
	12nm,0.7s						
KNRA	Kununurra	49.59	272	P	P	10 48 01.0	-0.9
	baz=50,SNR=16						
MLH	Mauna Loa	51.14	29	eP	P	10 48 13.9	+0.5
	62nm,0.9s						
HMH	Humu‘ula Sheep	51.20	29	eP	P	10 48 13.7	-0.3
	156nm,0.9s						
POHA	Pohakuloa	51.31	29	eP	P	10 48 12.5	-2.2
	107nm,1.0s						
HPAH	Hawaii Prepara	51.48	28	eP	P	10 48 15.8	+0.1
	102nm,0.8s						
FITZ	Fitzroy Crossi	51.55	267	P	P	10 48 15.3	-0.9
	baz=51,SNR=26						
FITZ	Fitzroy Crossi	51.55	267	eP	P	10 48 15.5	-0.7
	24nm,0.8s						
HON	Honolulu	51.71	25	eP	P	10 48 17.4	+0.1
	108nm,0.8s						
SBA	Scott Base	51.87	184	eP	P	10 48 21.4	+3.7
	13nm,1.1s						
VNDA	Vanda	51.89	185	eP	P	10 48 20.1	+2.2
	0.9nm,0.8s						
VNDA	Vanda	51.89	185	P	P	10 48 19.2	+1.3
	2.0nm,0.8s,baz=9.1,slow=6.8,SNR=9.3						
FAKI	Fak Fak	52.19	288	eP	P	10 48 21.4	+0.3
	32nm,0.9s						
FAKI	Fak Fak	52.19	288	P	P	10 48 20.4	-0.7
	38nm,1.1s						
SIJI	Sorong	54.11	290	P	P	10 48 33.0	-1.8
	baz=285,slow=3.6,SNR=22						
SWI	Sorong	54.12	290	P	P	10 48 35.0	+0.1
	129nm,0.9s,2µm						
KLBR	Kellerberrin	54.84	249	P	P	10 48 38.6	-1.2
	baz=55,SNR=8.0						
MEEK	Meekatharra	55.25	255	P	P	10 48 41.0	-1.9
	baz=55,SNR=20						
MBWA	Marble Bar	55.83	261	eP	P	10 48 45.4	-1.5
	13nm,0.8s						
BLDU	Ballidu	55.92	250	P	P	10 48 45.9	-1.6
	baz=56,SNR=30						
SOEI	Soe	55.97	276	eP	P	10 48 48.0	-0.2
	46nm,0.8s						
SOEI	Soe	55.97	276	P	P	10 48 49.1	+1.0
	87nm,0.9s,922nm						
MUN	Mundaring	56.05	248	P	P	10 48 47.3	-1.0
	baz=56,SNR=3.7						
MORW	Morawa	56.85	251	P	P	10 48 52.5	-1.4
	baz=57,SNR=16						
MORW	Morawa	56.85	251	eP	P	10 48 52.8	-1.1
	10nm,0.8s						
SANI	Sanana	58.01	285	P	P	10 48 59.8	-2.3
	61nm,0.9s						
CASY	Casey	58.19	207	eP	P	10 49 02.6	0.0
	15nm,0.8s						
EDFI	Ende, Flores	58.69	276	P	P	10 49 05.0	-1.9
	25nm,1.0s,867nm						
GIRL	Giralia	60.21	258	eP	P	10 49 17.1	+0.2
	42nm,0.9s						
BKSI	Bulukumba	61.60	279	P	P	10 49 25.2	-1.1
	19nm,0.9s						
BNSI	Bone	62.03	280	P	P	10 49 28.5	-0.6
	23nm,1.1s,439nm						
PLAI	Plampang	62.15	274	P	P	10 49 29.2	-0.7
	74nm,0.9s,728nm						
QSPA	South Pole Qui	63.61	180	P	P	10 49 40.4	+1.6
	11nm,0.9s,baz=318,slow=0.5,SNR=43						
MPSI	Mapaga	64.47	284	P	P	10 49 42.9	-2.0
	17nm,1.0s,312nm						
IGBI	Denpasar	64.51	273	P	P	10 49 44.3	-0.9
SBUM	Sibu	72.20	282	eP	P	10 50 31.4	-0.9
	15nm,1.0s						
MJAR	Matsushiro Arr	74.51	325	P	P	10 50 44.2	-1.0
	17nm,0.8s,baz=167,slow=5.8,SNR=30						
MAJO	Matsushiro	74.52	325	eP	P	10 50 44.5	-0.6
	25nm,0.9s						
MAT	Matsushiro	74.52	325	P	P	10 50 44.0	-1.2
MJB9	Matsu-Tunnel	74.52	325	eP	P	10 50 44.5	-0.7
	26nm,0.9s						
MAW	Mawson	75.65	200	P	P	10 50 51.8	+0.7
	3.0nm,0.6s,baz=132,slow=6.9,SNR=6.9						
JNU	Nakatsue	76.03	318	P	P	10 50 51.9	-1.9
	15nm,0.9s,baz=147,slow=8.5,SNR=3.0						
ASAJ	Asahikawa	78.56	333	P	P	10 51 06.8	-0.5
	9.7nm,0.8s,baz=247,slow=13,SNR=5.2						
SYO	Syowa Base	80.71	193⇓	eP	P	10 51 17.4	-1.1
KSRS	Korea Array	80.78	320	P	P	10 51 18.9	-0.4
	7.3nm,0.8s,baz=138,slow=6.2,SNR=16						
KS01	Wonju Array Si	80.81	320	eP	P	10 51 19.3	-0.2
PETK	Petropavlovsk-	81.81	346	P	P	10 51 23.6	-0.7
	5.9nm,0.8s,baz=123,slow=8.2,SNR=18						
PEA1	Petropavlovsk-	81.81	346	eP	P	10 51 23.6	-0.8
SNAA	Sanae	82.08	179	P	P	10 51 25.9	+0.2
SNAA	Sanae	82.08	179	P	pP	10 52 57.0	+2.8
VNA3	Neumayer Olymp	82.26	177	P	P	10 51 26.8	+0.2
VNA3	Neumayer Olymp	82.26	177	P	pP	10 53 00.3	+5.1
SCZ2	Santa Cruz Isl	82.40	46	P	P	10 51 28.1	+0.3
	baz=231						
SCI2	San Clemente I	82.48	48	P	P	10 51 28.6	+0.4
	baz=232						
SBC	Santa Barbara	82.63	46	P	P	10 51 28.6	-0.3
	baz=231						
VNA2	Neumayer--Watz	82.68	177	P	P	10 51 29.4	+0.7
	baz=182,slow=4.8						
VNA2	Neumayer--Watz	82.68	177	P	pP	10 53 02.3	+4.8
CIS	Catalina Islan	82.83	47	P	P	10 51 30.2	+0.1
	baz=232						
BLG	Laguna Peak, P	82.84	46	P	P	10 51 29.3	-0.7
	baz=231						
PKM	Mcpherson Peak	82.85	45	P	P	10 51 30.9	+0.6
	baz=231,SNR=6.8						
VNA1	Neumayer--Stat	82.92	177	P	P	10 51 30.3	+0.5
SMMC	Simmler	83.00	45	P	P	10 51 31.4	+0.6
	baz=231						
NJ2	Nanjing	83.01	311	eP	P	10 51 32.9	+2.0
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
SAO	San Andreas Ge	83.02	43	eP	P	10 51 31.9	+1.0
	comp=Z,17nm,1.0s						
FMP	Fort Macarthur	83.10	47	P	P	10 51 31.6	+0.3
	baz=232						
PAGB	Antelope Grade	83.10	44	eP	P	10 51 32.6	+1.2
	comp=Z,14nm,0.8s						
SLBS	Sierra La Lagu	83.33	60	eP	P	10 51 33.0	+0.1
	comp=Z,38nm,1.1s						
OSI	Osito Audit: C	83.38	46	P	P	10 51 33.2	+0.4
	baz=231						
109C	Camp Elliot, M	83.39	48	P	P	10 51 32.7	-0.1
	baz=233						
USRK	Ussuriysk Ar.	83.40	327	P	P	10 51 32.1	-0.5
	comp=Z,6.3nm,0.7s,baz=125,slow=4.5,SNR=12						
USRK				pP	pP	10 53 00.4	-1.2
	comp=Z,1.7nm,0.9s,baz=161,slow=5.8,SNR=1.7						
DECC	Green Verdugo	83.41	47	P	P	10 51 32.7	-0.2
	baz=232						
HOPS	Hopland Field	83.51	41	eP	P	10 51 33.6	+0.3
	comp=Z,20nm,0.9s						
ARVC	Arvin	83.62	46	P	P	10 51 34.2	+0.2
	baz=231,SNR=6.2						
MURC	Murrieta	83.75	48	P	P	10 51 34.9	+0.2
	baz=232,SNR=11						
BFSC	Mount Baldy Ra	83.84	47	P	P	10 51 35.1	-0.1
	baz=232,SNR=11						
MONP2	Monument Peak	83.85	49	P	P	10 51 35.8	+0.4
	baz=233,SNR=17						
VES	Vestal, Richgr	83.91	45	P	P	10 51 35.0	-0.4
	baz=231,SNR=12						
IKP	In-Ko-Pah, Jac	83.91	49	P	P	10 51 36.3	+0.8
	baz=233						
KMRM	Mail Ridge	83.96	39	eP	P	10 51 36.7	+1.0
	comp=Z,44nm,1.0s						
EDW2	Edwards Air Fo	84.01	46	P	P	10 51 36.2	+0.2
	baz=232,SNR=20						
VOG	Valley Oaks Go	84.02	44	P	P	10 51 35.8	-0.1
	baz=231						
PSI	Prapat	84.12	276	P	P	10 51 35.2	-2.0
	comp=Z,10.0nm,0.8s,baz=360,slow=2.3,SNR=4.3						
ISA	Isabella, Lake	84.19	45	eP	P	10 51 37.8	+0.9
	comp=Z,30nm,1.0s						
ISA	Isabella, Lake	84.19	45	P	P	10 51 37.0	+0.1
	baz=232,SNR=31						
PFO	Pinyon Flats O	84.25	48	P	P	10 51 37.3	-0.1
	baz=233,SNR=11						
SWSC	Sam W. Stewart	84.30	49	P	P	10 51 37.7	+0.3
	baz=233						
BBRC	Big Bear Solar	84.34	47	P	P	10 51 38.2	+0.3
	baz=233						
KHMM	Horse Mountain	84.39	39	eP	P	10 51 39.1	+1.3
	comp=Z,22nm,1.1s						
O02D	Mt. Diablo Mer	84.46	40	P	P	10 51 39.2	+1.1
	baz=228,SNR=20						
CMB	Columbia Colle	84.48	43	eP	P	10 51 38.6	+0.3
	comp=Z,23nm,0.9s						
LRMC	Laurel Mtn Rad	84.58	46	P	P	10 51 38.7	-0.2
	baz=232,SNR=17						
RRX	Edison Barstow	84.66	47	P	P	10 51 39.2	0.0
	baz=232						
GSI	Gunungsitoli	84.66	274	eP	P	10 51 39.9	+0.3
	comp=Z,72nm,0.9s						
AFDM	Forest Hills D	84.72	42	eP	P	10 51 39.3	0.0
	comp=Z,21nm,1.1s						
BELC	Belle Mtn. Jos	84.79	48	P	P	10 51 40.4	+0.4
	baz=233,SNR=24						
ORV	Oroville	84.80	41	eP	P	10 51 39.6	-0.1
	comp=Z,15nm,1.0s						
WDC	Whiskeytown Da	84.87	40	eP	P	10 51 40.2	+0.2
	comp=Z,26nm,1.0s						
CWC	Cottonwood Cre	84.92	45	P	P	10 51 40.4	-0.2
	baz=232						
BC3	Big Chuckawall	84.95	49	P	P	10 51 41.4	+0.6
	baz=234,SNR=12						
GLA	Glamis	85.02	49	eP	P	10 51 40.9	-0.1
	comp=Z,42nm,1.1s						
GLA	Glamis	85.02	49	P	P	10 51 41.3	+0.3
	baz=234						
MDPB	Devils Postpil	85.03	44	eP	P	10 51 41.1	-0.1
	comp=Z,18nm,1.0s						
N02D	Trinity Center	85.03	39	P	P	10 51 41.6	+0.6
	baz=228,SNR=11						
GSC	Goldstone, Bar	85.04	47	eP	P	10 51 41.3	+0.2
	comp=Z,30nm,1.1s						
GSC	Goldstone, Bar	85.04	47	P	P	10 51 41.3	+0.2
	baz=233,SNR=22						
MPMC	Manual Prospec	85.06	46	P	P	10 51 41.6	+0.3
	baz=232,SNR=17						
HEC	Hector,Ludlow	85.06	47	P	P	10 51 41.3	0.0
	baz=233,SNR=30						
O03E	Paynes Creek	85.10	40	P	P	10 51 41.0	-0.3
	baz=229,SNR=12						
DAC	Darwin (Calif)	85.12	45	eP	P	10 51 41.7	+0.1
	comp=Z,5.4nm,0.9s						
MLAC	Mammoth, Mammo	85.18	44	P	P	10 51 42.3	+0.3
	baz=231						
TIN	Tinemaha, Big	85.20	44	P	P	10 51 42.1	+0.2
	baz=232						
M02C	Callahan	85.23	39	P	P	10 51 42.8	+0.9
	baz=228,SNR=11						
WHN	Wuhan	85.26	307	⇑P	P	10 51 42.5	+0.3
RUBR	Rubicon Trail	85.27	42	eP	P	10 51 42.3	0.0
	comp=Z,19nm,1.1s						
L02E	Cave Junction	85.32	38	P	P	10 51 42.7	+0.4
	baz=228						
WAKR	Walker	85.36	43	eP	P	10 51 43.1	+0.4
	comp=Z,17nm,1.2s						
IRM	Iron Mountain	85.45	48	P	P	10 51 43.7	+0.6
	baz=234,SNR=20						
HSIG		85.47	55	eP	P	10 51 43.4	+0.2
	comp=Z,33nm,0.8s						
GMRC	Granite Mounta	85.48	48	P	P	10 51 43.6	+0.3
	baz=233,SNR=11						
YBH	Yreka Blue Hor	85.53	39	eP	P	10 51 44.0	+0.6

	comp=Z,9.3nm,0.9s						
YBH	Yreka Blue Hor	85.53	39	P	P	10 51 43.5	+0.2
	baz=235,slow=9.8						
YBH				pP	pwP	10 53 14.8	-0.5
	comp=Z,2.1nm,0.8s,baz=351,slow=4.5,SNR=3.3						
113A	Mohawk Valley,	85.58	50	*e*P	P	10 51 44.4	+0.7
	comp=Z,22nm,1.1s						
PNTR	Pine Nut	85.63	42	*e*P	P	10 51 44.5	+0.4
	comp=Z,17nm,0.9s						
Y12C	Blythe	85.63	49	*e*P	P	10 51 44.5	+0.6
	comp=Z,18nm,1.0s						
Y12C	Blythe	85.63	49	P	P	10 51 44.6	+0.6
	baz=234,SNR=9.6						
K02D	Willamette Mer	85.65	37	P	P	10 51 44.6	+0.7
	baz=228						
BEKR	Beckworth	85.67	41	*e*P	P	10 51 44.1	-0.1
	comp=Z,5.9nm,0.8s						
TUQ	Turquoise Moun	85.70	47	P	P	10 51 44.5	+0.1
	baz=233,SNR=9.9						
FURC	Furnace Creek,	85.71	46	P	P	10 51 44.5	+0.3
	baz=232,SNR=8.4						
GRAC	Grapevine Rang	85.71	45	P	P	10 51 44.7	+0.4
	baz=232						
VCNR	Virginia City	85.73	42	*e*P	P	10 51 45.0	+0.4
	comp=Z,8.4nm,1.1s						
SHOC	Shoshone, Teco	85.75	46	P	P	10 51 44.7	+0.3
	baz=233,SNR=16						
214A	Organ Pipe Nat	85.78	51	P	P	10 51 45.5	+0.8
	baz=235						
YERR	Yerington	85.78	42	*e*P	P	10 51 44.8	0.0
	comp=Z,8.7nm,0.9s						
J01E	Myrtle Point	85.82	37	P	P	10 51 45.1	+0.5
	baz=227						
GO06	Curarrehue	85.84	132	*e*P	P	10 51 46.1	+0.9
	comp=Z,9.8nm,1.0s						
PLCA	Paso Flores	85.85	134	*e*P	P	10 51 46.2	+1.1
	comp=Z,22nm,1.1s						
HUMO	Hull Mountain	85.98	38	*e*P	P	10 51 46.3	+0.9
	comp=Z,12nm,0.9s						
RYN	Ryan	85.99	43	*e*P	P	10 51 46.2	+0.4
	comp=Z,6.4nm,0.9s						
NV01	Mina Array Sit	86.01	43	*e*P	P	10 51 43.7	-2.2
NVAR	Mina Array Bea	86.01	43	P	P	10 51 46.0	+0.1
	comp=Z,9.5nm,0.8s,baz=222,slow=8.5,SNR=89						
NVAR				pP	pwP	10 53 17.7	-0.3
	comp=Z,1.6nm,0.7s,baz=225,slow=7.9,SNR=6.3						
LDFC	Landfair	86.02	48	*e*P	P	10 51 47.0	+1.0
	comp=Z,64nm,1.1s						
M04C	Macdoel	86.06	39	P	P	10 51 46.3	+0.3
	baz=229,SNR=5.6						
L04D	Klamath Falls	86.08	38	P	P	10 51 46.3	+0.2
	baz=229						
NV11	Mina Array Sit	86.10	43	*e*P	P	10 51 46.4	+0.1
	comp=Z,1.0nm,1.0s						
PAHR	Pah Rah Range	86.15	42	*e*P	P	10 51 46.3	-0.2
	comp=Z,12nm,1.1s						
NEE2	Needles Airpor	86.16	48	P	P	10 51 47.1	+0.7
	baz=234						
PDMCI	Parker Dam,Lak	86.21	49	P	P	10 51 47.1	+0.4
	baz=234,SNR=11						
SKNT	Sakolnakorn	86.31	291	P	P	10 51 48.0	+0.5
TPNV	Topopah Spring	86.39	46	*e*P	P	10 51 47.7	0.0
	comp=Z,24nm,1.1s						
TPNV	Topopah Spring	86.39	46	P	P	10 51 47.7	0.0
	baz=233,SNR=22						
CN2	Changchun	86.48	323	*e*P	P	10 51 52.3	+4.6
I03D	Drain, OR	86.49	37	P	P	10 51 48.4	+0.6
	baz=228,SNR=8.5						
I02D	Swisshome	86.50	36	P	P	10 51 48.8	+1.0
	baz=227						
KVN	Kaiserville	86.52	43	*e*P	P	10 51 48.2	-0.2
	comp=Z,16nm,1.0s						
K04D	Chiloquin, OR	86.66	38	P	P	10 51 48.6	-0.2
	baz=229						
SHPR	Sheep Range	86.83	46	*e*P	P	10 51 50.9	+1.1
	comp=Z,8.8nm,1.1s						
W13A	Hualapai Mount	86.85	48	*e*P	P	10 51 50.7	+0.7
	comp=Z,6.3nm,0.9s						
J04D	Umpqua Nationa	86.86	38	P	P	10 51 50.4	+0.5
	baz=229,SNR=8.9						
MOD	Modoc Plateau	87.01	40	*e*P	P	10 51 50.2	-0.3
	comp=Z,14nm,1.0s						
PATY	Pattaya	87.04	286	P	P	10 51 53.3	+2.2
PATY	Pattaya	87.04	286	P	P	10 51 53.3	+2.2
	comp=Z,7.9nm,0.6s,comp=Z,4µm						
I04A	Tendick Farm,	87.06	37	P	P	10 51 50.6	0.0
	baz=228,SNR=8.1						
H04D	Lebanon	87.37	37	P	P	10 51 52.7	+0.7
	baz=228,SNR=7.2						
J05D	Fort Rock, OR	87.38	38	P	P	10 51 52.6	+0.4
	baz=229,SNR=16						
TUC	Tucson	87.40	52	*e*P	P	10 51 53.8	+1.3
	comp=Z,37nm,1.0s						
TUC	Tucson	87.40	52	P	P	10 51 53.3	+0.8
	baz=236						
CHAI	Chaiyaphum	87.47	289	P	P	10 51 53.3	+0.2
NONG	Nongkai	87.53	291	P	P	10 51 53.8	+0.5
G03D	McMinnville, O	87.55	36	P	P	10 51 53.5	+0.7
	baz=228						
R11A	Troy Canyon, C	87.65	45	P	P	10 51 53.6	-0.1
	baz=233,SNR=5.4						
H04A	Detroit Lake	87.77	37	*e*P	P	10 51 54.0	+0.1
	comp=Z,22nm,0.8s						
PINE	Pine Mountain	87.87	38	*e*P	P	10 51 55.4	+0.8
	comp=Z,32nm,0.8s						
319A	Douglas	87.96	53	*e*P	P	10 51 56.5	+1.3
	comp=Z,24nm,0.8s						
I05D	Terrebonne, OR	88.00	37	P	P	10 51 55.4	+0.4
	baz=229,SNR=11						
PHET	Kaeng Krachan	88.10	285	P	P	10 51 57.8	+1.7
PHET	Kaeng Krachan	88.10	285	P	P	10 51 57.8	+1.7
	comp=Z,14nm,1.0s						
X16A	Lo Mia Camp, P	88.11	50	*e*P	P	10 51 56.6	+0.7
	comp=Z,24nm,1.1s						
F04D	Rainier, OR	88.27	35	P	P	10 51 57.2	+1.1
	baz=228						
WVOR	Wild Horse Val	88.30	40	*e*P	P	10 51 57.0	+0.4
	comp=Z,9.4nm,0.9s						
HPIG		88.33	59	*e*P	P	10 51 56.9	-0.2
	comp=Z,18nm,0.9s						
LCMT	Little Creek M	88.37	47	*e*P	P	10 51 57.7	+0.7
	comp=Z,16nm,1.1s						
CCUT	Cedar City	88.61	46	*e*P	P	10 51 59.1	+0.8
	comp=Z,20nm,1.2s						
G05D	Wamic, OR	88.61	37	P	P	10 51 58.2	+0.4
	baz=229,SNR=6.0						
ENH	Enshi	88.64	305	*e*P	P	10 51 57.8	-0.5
	comp=Z,26nm,1.0s						
KNB	Kanab	88.65	47	*e*P	P	10 51 59.5	+1.1
	comp=Z,25nm,1.2s						
U15A	North Rim	88.67	48	*e*P	P	10 51 59.5	+0.9
	comp=Z,11nm,0.8s						
ZAIG	Zacatecas	88.69	64	*e*P	P	10 51 59.5	+0.4
	comp=Z,20nm,1.0s						
WUAZ	Wupatki	88.77	49	*e*P	P	10 51 59.7	+0.7
	comp=Z,13nm,0.9s						
WUAZ	Wupatki	88.77	49	P	P	10 51 59.6	+0.6
	baz=236						
GYA	Guiyang	88.81	300	*e*P	P	10 52 01.0	+1.7
GYA				pP	pP	10 53 27.4	-2.2
GYA				sP	sP	10 54 04.0	-6.1
GYA				PP	PP	10 55 38.2	+2.9
GYA				SKS	SKSac	11 01 53.8	+3.2
GYA	Guiyang	88.81	300	S	S	11 02 15.0	+2.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SZCU	Shurtz Canyon	88.81	47	*e*P	P	10 51 59.8	+0.6
	comp=Z,10nm,1.2s						
E04D	Cinebar	88.81	35	P	P	10 51 59.5	+0.9
	baz=228						
I07A	Izee	88.85	38	*e*P	P	10 51 59.6	+0.6
	comp=Z,29nm,1.0s						
PSUT	Pine Spring	88.86	45	*e*P	P	10 51 59.7	+0.3
	comp=Z,5.5nm,0.9s						
F05D	White Salmon	88.95	36	P	P	10 52 00.1	+0.8
	baz=229						
J08A	Circle Bar Ran	88.97	39	*e*P	P	10 52 00.1	+0.4
	comp=Z,12nm,0.9s						
D04E	Lakebay	89.12	35	P	P	10 52 01.3	+1.3
	baz=228						
SRDT	SRDT	89.20	286	P	P	10 52 03.0	+1.8
SRDT	SRDT	89.20	286	P	P	10 52 03.0	+1.8
	comp=Z,24nm,1.0s						
D03D	Eldon	89.20	34	P	P	10 52 01.4	+0.9
	baz=228						
X18A	Snowflake	89.20	50	*e*P	P	10 52 01.9	+0.9
	comp=Z,8.4nm,0.8s						
PKCU	Pink Cliffs	89.23	47	*e*P	P	10 52 02.4	+1.1
	comp=Z,34nm,1.1s						
ELK	Elko	89.29	43	*e*P	P	10 52 01.8	+0.4
	comp=Z,4.6nm,1.0s						
ELK	Elko	89.29	43	P	P	10 52 01.2	-0.1
	comp=Z,2.6nm,0.8s,baz=286,slow=15						
LON	Longmire	89.33	35	*e*P	P	10 52 00.3	-0.9
	comp=Z,10nm,0.8s						
MTPU	Mount Pierson	89.65	47	*e*P	P	10 52 03.5	+0.3
	comp=Z,19nm,0.9s						
121A	Cookes Peak, D	89.66	53	P	P	10 52 03.8	+0.6
	baz=238						
W18A	Petrified Fore	89.67	50	*e*P	P	10 52 03.8	+0.6
	comp=Z,7.8nm,0.8s						
W18A	Petrified Fore	89.67	50	P	P	10 52 03.1	-0.1
	baz=237						
PGC	Sidney	89.77	33	*e*P	P	10 52 02.3	-0.7
	comp=Z,27nm,0.9s						
G08A	Pilot Rock	89.91	38	*e*P	P	10 52 03.5	-0.5
	comp=Z,23nm,0.9s						
BBB	Bella Bella	90.09	29	P	P	10 52 04.3	-0.1
	comp=Z,8.9nm,0.9s,baz=224,slow=7.0,SNR=3.8						
A04D	Lummi Island	90.19	33	P	P	10 52 05.5	+0.5
	baz=228						
B05A	Bryant	90.19	34	P	P	10 52 05.6	+0.6
	baz=229						
LTY	Liberty	90.26	35	*e*P	P	10 52 05.3	-0.2
	comp=Z,8.4nm,0.8s						
HAWA	Hanford	90.30	37	*e*P	P	10 52 05.3	-0.3
	comp=Z,17nm,1.0s						
DUG	Dugway, Tooele	90.47	45	*e*P	P	10 52 07.0	+0.2
	comp=Z,4.7nm,1.1s						
DUG	Dugway, Tooele	90.47	45	P	P	10 52 06.8	0.0
	baz=235						
BMO	Blue Mountains	90.56	39	*e*P	P	10 52 06.1	-0.8
	comp=Z,5.0nm,0.9s						
C06D	Leavenworth	90.57	35	P	P	10 52 07.1	+0.3
	baz=230						
SUA	Susitna One	90.58	13	*e*P	P	10 52 05.4	-1.2
	comp=Z,9.8nm,0.7s						
BGU	Big Grassy Mou	90.76	44	*e*P	P	10 52 07.7	-0.3
	comp=Z,3.0nm,0.9s						
Q16A	Castle Valley	90.80	46	*e*P	P	10 52 09.4	+1.1
	comp=Z,10nm,1.1s						
NLU	North Lily Min	90.80	45	*e*P	P	10 52 09.0	+0.6
	comp=Z,7.2nm,1.1s						
GLI	Glacier Island	90.85	15	*e*P	P	10 52 07.2	-0.6
	comp=Z,9.5nm,0.8s						
PAYA	Payao	90.87	291	P	P	10 52 10.1	+1.2
MNTX	Cornudas Mount	90.97	55	*e*P	P	10 52 09.5	+0.4
MNTX	Cornudas Mount	90.97	55	P	P	10 52 09.5	+0.4
	baz=239						
XAN	Xi'an	91.02	308	P	P	10 52 09.5	+0.2
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,140nm,4.3s						
D08A	Wollman Farm,	91.05	36	*e*P	P	10 52 09.3	+0.3
	comp=Z,8.7nm,0.8s						
LTX	Lajitas	91.06	58	*e*P	P	10 52 10.3	+0.7
LTX				*e*pP	pwP	10 53 42.3	-0.3
LTX				*e*PP	PP	10 55 57.8	+4.8
TX31	Lajitas Ar. Si	91.06	58	*e*P	P	10 52 09.9	+0.3
TXAR	Lajitas Array	91.06	58	P	P	10 52 10.3	+0.7
	comp=Z,6.6nm,0.8s,baz=211,slow=7.2,SNR=74						
TXAR				pP	pwP	10 53 42.3	-0.3
	comp=Z,3.2nm,1.2s,baz=210,slow=7.2,SNR=3.9						
TXAR				PP	PP	10 55 57.8	+4.8
	comp=Z,0.9nm,1.0s,baz=223,slow=6.8,SNR=3.7						
LENM	Lemitar	91.09	52	*e*P	P	10 52 10.3	+0.5
LAZ	Ladron	91.09	52	*e*P	P	10 52 10.9	+1.0
CM01	Chiang Mai Arr	91.20	290	*e*P	P	10 52 11.1	+0.7
KMI	Kunming	91.23	297	P	P	10 52 11.5	+0.8
KMI				pmax	pmax		
	comp=Z,26nm,1.1s						
CM31	Chiang Mai Arr	91.23	290	*e*P	P	10 52 11.1	+0.5
	comp=Z,13nm,1.1s						
CMAR	Chiang Mai Arr	91.23	290	P	P	10 52 11.1	+0.5
	comp=Z,4.3nm,0.9s,baz=144,slow=3.2,SNR=22						
CMAR				PP	PP	10 55 54.7	+0.3
	comp=Z,0.9nm,0.3s,baz=126,slow=5.3,SNR=4.7						
CMAR				PKKPbc	PKKPbc	11 09 31.1	+0.8
	comp=Z,0.7nm,0.4s,baz=294,slow=4.3,SNR=4.6						
BNM	Barren Site	91.33	52	*e*P	P	10 52 11.9	+0.9
SRU	San Rafael Swe	91.33	46	*e*P	P	10 52 11.3	+0.5
	comp=Z,17nm,1.0s						
SPUT	South Promonto	91.34	44	*e*P	P	10 52 10.3	-0.5
	comp=Z,22nm,1.0s						
P17A	Butcher Ranch,	91.39	46	*e*P	P	10 52 10.8	-0.2
	comp=Z,14nm,1.1s						
CMMT	Chiang Mai	91.39	290	P	P	10 52 12.3	+1.0
CMMT	Chiang Mai	91.39	290	P	P	10 52 12.3	+1.0
	comp=Z,13nm,1.3s,comp=Z,519nm						
CHTO	Chiang Mai	91.40	290	*e*P	P	10 52 12.1	+0.8
	comp=Z,15nm,1.1s						
CHTO	Chiang Mai	91.40	290	P	P	10 52 12.3	+1.0
	comp=Z,57nm,1.1s						
HVU	Hansel Valley	91.40	43	*e*P	P	10 52 11.6	+0.6
	comp=Z,23nm,1.1s						
CTU	Camp Tracy	91.42	45	*e*P	P	10 52 11.1	-0.1
	comp=Z,11nm,1.0s						
HLID	Hailey	91.45	41	*e*P	P	10 52 10.9	-0.3
	comp=Z,8.6nm,1.0s						
HLID	Hailey	91.45	41	P	P	10 52 11.6	+0.3
	baz=234						
JLU	Jordanelle	91.56	45	*e*P	P	10 52 11.7	-0.2
	comp=Z,11nm,1.2s						
MVCO	Mesa Verde	91.64	49	P	P	10 52 12.0	-0.3
	baz=238						
B08A	Colville Reser	91.65	35	*e*P	P	10 52 10.5	-1.4
	comp=Z,4.7nm,0.7s						
ANMO	Albuquerque	91.86	52	*e*P	P	10 52 13.8	+0.5
	comp=Z,7.5nm,1.0s						
ANMO	Albuquerque	91.86	52	P	P	10 52 13.3	0.0
	baz=239						
TCUT	Toone Canyon	91.88	44	*e*P	P	10 52 14.1	+0.7
	comp=Z,18nm,0.8s						
PV09	Paradox Valley	91.91	47	*e*P	P	10 52 14.0	+0.4
PV03	Paradox Valley	91.96	48	*e*P	P	10 52 13.6	-0.2
	comp=Z,2.2nm,1.0s						
GDL2	Guadalupe Moun	91.97	55	*e*P	P	10 52 14.6	+0.8
PV12	Saucer Basin,	92.03	48	*e*P	P	10 52 14.4	+0.3
	comp=Z,13nm,1.1s						
PV21	Cone Mtn., Par	92.04	48	*e*P	P	10 52 14.2	+0.1
	comp=Z,3.6nm,0.8s						
HWUT	Hardware Ranch	92.05	44	*e*P	P	10 52 14.1	0.0
	comp=Z,4.0nm,0.7s						
PV01	Paradox Valley	92.08	48	*e*P	P	10 52 14.4	+0.1
	comp=Z,7.0nm,0.9s						
CAST	Castle Rocks	92.10	12	*e*P	P	10 52 12.0	-1.5
	comp=Z,5.2nm,0.9s						
LNIG	Linares	92.19	63	*e*P	P	10 52 14.4	-0.4
	comp=Z,17nm,0.9s						
TRF	Thorofare Moun	92.47	12	*e*P	P	10 52 14.3	-1.1
	comp=Z,8.3nm,0.7s						
RND	Reindeer	92.71	13	*e*P	P	10 52 15.5	-0.9
	comp=Z,7.9nm,1.0s						
NEW	Newport	92.75	36	P	P	10 52 16.4	-0.6
	baz=232						
NEW	Newport	92.75	36	P	P	10 52 16.1	-0.8
	comp=Z,1.3nm,0.6s,baz=3.5,slow=19,SNR=3.3						
HHC	Hu-ho-hao-te	92.86	315	*e*P	P	10 52 22.7	+5.0
HHC				sP	sP	10 54 18.7	-10
HHC	Hu-ho-hao-te	92.86	315	SKS	SKSac	11 02 24.7	+12
HHC	Hu-ho-hao-te	92.86	315	S	S	11 02 54.6	+6.3
HHC	Hu-ho-hao-te	92.86	315	sS	sS	11 05 28.6	-0.9
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
S22A	4UR Ranch, Cre	93.05	49	*e*P	P	10 52 19.5	+0.6
	comp=Z,10nm,1.1s						
S22A	4UR Ranch, Cre	93.05	49	P	P	10 52 18.7	-0.2
	baz=239						
O20A	White River Ci	93.36	46	P	P	10 52 19.6	-0.5
	baz=238						
REDW	Red Top Meadow	93.47	43	*e*P	P	10 52 21.1	+0.5
	comp=Z,14nm,1.1s						
FXWY	Fox Creek	93.51	42	*e*P	P	10 52 21.4	+0.6
	comp=Z,4.0nm,0.9s						
DLMT	Dillon	93.55	40	*e*P	P	10 52 22.2	+1.4
	comp=Z,4.8nm,1.0s						
SNOW	Snow King Moun	93.58	43	*e*P	P	10 52 21.9	+0.7
	comp=Z,13nm,1.0s						
MSO	Missoula	93.63	39	P	P	10 52 21.6	+0.5
	baz=234						
SMCO	Snowmass	93.69	48	*e*P	P	10 52 22.2	+0.3
	comp=Z,11nm,1.1s						
LOHW	Long Hollow	93.75	43	*e*P	P	10 52 22.6	+0.7
	comp=Z,0.9nm,0.8s						
833A	Chaparral WMA,	93.85	60	P	P	10 52 22.5	+0.1
	baz=242						
BW06	Boulder Array	93.94	44	*e*P	P	10 52 22.5	-0.3
	comp=Z,4.9nm,1.0s						
BW06	Boulder Array	93.94	44	P	P	10 52 21.8	-0.9
	baz=237						
PD31	Pinedale Array	93.94	44	*e*P	P	10 52 22.2	-0.5
	comp=Z,4.6nm,1.0s						
PD31				*e*PP	PP	10 56 13.2	-2.0
PDAR	Pinedale Array	93.94	44	P	P	10 52 22.3	-0.5
	comp=Z,3.3nm,0.9s,baz=209,slow=3.4,SNR=23						
PDAR				pP	pP	10 53 54.5	+0.9
	comp=Z,1.6nm,0.9s,baz=207,slow=3.0,SNR=6.0						
PDAR				PP	PP	10 56 13.2	-2.0
	comp=Z,1.3nm,1.0s,baz=220,slow=3.9,SNR=5.4						
SDCO	Great Sand Dun	93.95	50	*e*P	P	10 52 22.9	-0.2
	comp=Z,0.9nm,0.9s						
SDCO	Great Sand Dun	93.95	50	P	P	10 52 22.6	-0.5
	baz=239						
FLWY	Flagg Ranch	93.96	42	*e*P	P	10 52 23.5	+0.7
	comp=Z,4.4nm,0.9s						
HDA	Harding Lake	94.00	13	P	P	10 52 21.2	-1.0
	baz=208						
MSTX	Muleshoe	94.00	54	*e*P	P	10 52 22.4	-0.7
	comp=Z,6.6nm,0.8s						
MSTX	Muleshoe	94.00	54	P	P	10 52 22.8	-0.3
	baz=241						
TCOL	CIGO, UAF Yank	94.22	13	P	P	10 52 22.7	-0.5
	baz=208						
BOZ	Bozeman (W)	94.25	41	*e*P	P	10 52 21.3	-2.7
	comp=Z,5.7nm,0.8s						
IL1	Eielson Array	94.33	13	*e*P	P	10 52 22.2	-1.5
ILAR	Eielson Array	94.33	13	P	P	10 52 22.0	-1.6
	comp=Z,1.7nm,1.0s,baz=215,slow=5.4,SNR=12						
ILB	Eielson Array	94.33	13	*e*P	P	10 52 22.1	-1.6
	comp=Z,0.8nm,0.8s						
T25A	Trinidad	94.40	51	P	P	10 52 25.0	0.0
	baz=240						
POKR	Poker Plat Res	94.52	13	P	P	10 52 24.4	-0.2
	baz=208						
JCT	Junction City	94.55	58	*e*P	P	10 52 25.2	-0.4
	comp=Z,2.3nm,0.8s						
JCT	Junction City	94.55	58	P	P	10 52 24.8	-0.8
	baz=242						
ISCO	Idaho Springs	94.92	48	P	P	10 52 26.7	-0.7
	baz=239						
N23A	Red Feather La	95.25	47	P	P	10 52 28.7	-0.1
	baz=239						
RLMT	Red Lodge	95.38	42	P	P	10 52 29.2	-0.1
	baz=238						
LZH	Lanzhou	95.64	307	*e*P	P	10 52 35.1	+4.5
LZH				pP	sP	10 54 34.0	-7.6
LZH				sP	PP	10 55 34.4	-54
LZH				SKS	SKSac	11 02 28.5	+0.4
LZH	Lanzhou	95.64	307	*e*S	S	11 03 16.8	+4.0
LZH	Lanzhou	95.64	307	sS	sS	11 05 45.5	-9.1
LZH	Lanzhou	95.64	307	SS	SS	11 09 55.1	+1.8
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
ABTX	Abilene, Hawle	95.66	56	*e*P	P	10 52 30.8	+0.2
	comp=Z,4.9nm,1.0s						
ABTX	Abilene, Hawle	95.66	56	P	P	10 52 30.2	-0.4
	baz=242						
K22A	Casper	95.78	45	P	P	10 52 30.1	-1.0
	baz=239						
LAO	LASA Array	98.01	42	Pdiff	P	10 52 41.2	+0.4
	baz=240						
RSSD	Black Hills	98.08	45	Pdiff	Pdif	10 52 41.3	-0.1
	baz=241						
SONA0	Songino Array	99.62	319	*e*Pdif	Pdif	10 52 46.1	-2.0
SONA0				*e*pP	pP	10 54 19.5	+0.6
SONA0				*e*PKKPbc	PKKPbc	11 09 09.6	+0.2
SONM	Songino Array	99.62	319	P	Pdif	10 52 46.1	-2.0
	comp=Z,0.2nm,0.3s,baz=90,slow=2.9,SNR=3.4						
SONM				pP	pP	10 54 19.5	+0.6
	comp=Z,0.3nm,0.8s,baz=117,slow=5.0,SNR=1.5						
SONM				PKKPbc	PKKPbc	11 09 09.6	+0.2
	comp=Z,0.2nm,0.4s,baz=300,slow=1.4,SNR=3.8						
YKA	Yellowknife Ar	102.31	25	P	Pdif	10 52 57.8	-1.7
	comp=Z,0.2nm,0.9s,baz=224,slow=5.2,SNR=2.8						
YKA				PP	PP	10 57 16.5	-1.4
	comp=Z,0.5nm,1.0s,baz=239,slow=7.2,SNR=4.1						
MK32	Makanchi Array	114.53	312	*e*PP	PP	10 58 53.2	+6.8
MK32				*e*PKKPbc	PKKPab	11 08 29.6	+1.7
MKAR	Makanchi Array	114.53	312	PP	PP	10 58 53.2	+6.8
	comp=Z,0.6nm,0.8s,baz=109,slow=6.9,SNR=4.0						
MKAR				PKKPbc	PKKPab	11 08 29.6	+1.7
	comp=Z,0.7nm,0.7s,baz=284,slow=4.9,SNR=6.3						
KSH	Kashi	117.42	303	PKP	PKiKP	10 57 49.6	+1.4
KSH				PP	pPKPdf	10 59 15.7	-8.5
KSH				AMB	AMB		
	comp=Z,270nm,4.5s						
KURK	Kurchatov	117.66	315	*e*PKPdf	PKPdf	10 57 46.9	-1.2
KURK				*e*pPKPdf	pPKPdf	10 59 24.4	0.0
KURK				*e*PKKPbc	PKKPbc	11 08 11.9	-0.2
KURBB	Kurchatov Arra	117.70	315	PKP	PKPdf	10 57 46.9	-1.3
	comp=Z,0.7nm,0.9s,baz=103,slow=2.9,SNR=4.3						
KURBB				pPKP	pPKPdf	10 59 24.4	-0.1
	comp=Z,0.5nm,0.7s,baz=107,slow=2.9,SNR=2.2						
KURBB				PKKPbc	PKKPbc	11 08 11.9	0.0
	comp=Z,1.0nm,0.8s,baz=279,slow=4.7,SNR=5.3						
AAK	Ala-Archa	119.14	306	PKKPbc	PKKPbc	11 08 07.5	+0.7
	comp=Z,2.9nm,0.7s,baz=198,slow=2.2,SNR=9.3						
FRB	Frobisher Bay	122.46	30	*e*PKPdf	PKPdf	10 57 55.6	-1.3
FRB				*e*PKPdf	PKPdf	10 57 55.6	-1.3
FRB	Frobisher Bay	122.46	30	PKP	PKPdf	10 57 55.6	-1.3
	comp=Z,4.2nm,0.7s,baz=9.6,slow=1.1,SNR=10						
BVAR	Borovoye Array	122.94	318	PKP	PKPdf	10 57 57.4	-0.9
	comp=Z,0.4nm,0.3s,baz=188,slow=1.0,SNR=3.6						
BVAR				PP	PP	10 59 44.6	+1.0
	comp=Z,0.5nm,0.5s,baz=70,slow=5.2,SNR=3.7						
SPITS	Spitsbergen Ar	127.75	356	PKP	PKPdf	10 58 05.5	-1.3
	comp=Z,19nm,1.1s,baz=348,slow=3.5,SNR=4.6						
AKTO	Aktyubinsk	130.75	315	SKPbc	SKPbc	11 00 59.1	-0.6
	comp=Z,6.2nm,1.0s,baz=104,slow=4.0,SNR=11						
GEYT	Alibeck	130.99	298	SKPbc	SKPab	11 01 01.6	-0.1
	comp=Z,21nm,1.1s,baz=194,slow=0.6,SNR=25						
ARA0	ARCESS Array S	134.58	348	*e*PKPdf	PKPdf	10 58 18.8	-1.1
ARA0				*e*SKPbc	SKPbc	11 01 12.4	+0.3
ARCES	ARCESS Array B	134.58	348	PKP	PKPdf	10 58 18.8	-1.1
	comp=Z,1.2nm,0.6s,baz=11,slow=1.2,SNR=4.0						
ARCES				SKPbc	SKPbc	11 01 12.4	+0.3
	comp=Z,9.6nm,0.9s,baz=46,slow=3.5,SNR=9.1						
KMBO	Kilima Mbogo	135.53	238	SKPbc	SKPbc	11 01 18.4	+1.3
	comp=Z,6.7nm,1.1s,baz=80,slow=3.1,SNR=6.0						
GNI	Garni	141.34	302	*e*PKPdf	PKPdf	10 58 34.4	+1.0
KBZ	Khabaz	142.08	308	PKP	PKPdf	10 58 31.4	-3.0
	comp=Z,1.7nm,0.8s,baz=18,slow=2.0,SNR=4.1						
SIRT	Sirnak	143.41	298	*e*PKPdf	PKPab	10 58 34.7	0.0
NC303	NORSAR Array S	144.56	351	*e*PKPbc	PKPbc	10 58 37.0	-0.8
NC405	NORSAR Array S	144.62	351	*e*PKPbc	PKPbc	10 58 37.6	-0.5
NB201	NORSAR Array S	144.74	351	*e*PKPdf	PKPbc	10 58 38.0	-0.5
NB2	NORSAR Subarra	144.76	351	PKP	PKPbc	10 58 37.3	-1.2
	comp=Z,22nm,1.2s,baz=16,slow=3.2						
NB200	NORSAR Array S	144.76	351	*e*PKPdf	PKPbc	10 58 37.5	-1.1
NOA	NORSAR Array B	144.76	351	PKP	PKPbc	10 58 37.5	-1.1
	comp=Z,6.4nm,0.9s,baz=15,slow=4.6,SNR=11						
HFS	Hagfors	145.24	349	PKPbc	PKPdf	10 58 38.5	-0.8
	comp=Z,4.2nm,0.5s,baz=72,slow=4.8,SNR=18						
HFS				pPKP	pPKPdf	11 00 19.7	+4.0
	comp=Z,4.7nm,0.8s,baz=11,slow=3.0,SNR=3.0						
AKASG	Malin Array Be	147.60	326	PKPbc	PKPdf	10 58 44.6	+1.1
	comp=Z,0.8nm,0.4s,baz=46,slow=4.0,SNR=9.2						
AKASG				pPKPbc	pPKPab	11 00 22.8	+0.3
	comp=Z,2.4nm,0.7s,baz=43,slow=4.8,SNR=1.5						
AKBB	Malin Array Si	147.60	326	*e*PKPdf	PKPdf	10 58 39.8	-3.7
AKBB				*e*PKPbc	PKPbc	10 58 46.8	-0.1
AK11	Malin Array Si	147.64	326	*e*PKPbc	PKPbc	10 58 45.6	-1.4
BR101	Keskin Array S	149.79	304	*e*PKPbc	PKPbc	10 58 51.5	-1.4
BR101				*e*PKPab	PKPab	10 58 59.5	-0.5
BR101				*e*pPKPdf	pPKPbc	11 00 28.8	+1.0
BR131	Keskin Array S	149.79	304	*e*PKPbc	PKPbc	10 58 52.8	-0.1
BR131				*e*PKPab	PKPab	10 58 59.1	-0.8
BRTR	Keskin Array B	149.79	304	PKPbc	PKPbc	10 58 51.5	-1.4
	comp=Z,0.9nm,0.7s,baz=315,slow=0.2,SNR=5.0						
BRTR				PKPab	PKPab	10 58 59.5	-0.5
	comp=Z,6.2nm,0.8s,baz=112,slow=3.4,SNR=24						
BRTR				pPKPbc	pPKPbc	11 00 28.8	+1.0
	comp=Z,1.3nm,1.0s,baz=56,slow=2.6,SNR=1.9						
ANTO	Ankara	150.37	305	*e*PKPbc	PKPbc	10 58 54.0	-0.2
ANTO				*e*PKPab	PKPab	10 59 02.5	+0.2
CSS	Mathiatis	151.02	295	*e*PKPab	PKPab	10 59 03.5	-1.5

BUR04	Bucovina Ar. S	151.58	324	*e*PKPbc	PKiKP	10 58 57.0	-0.1
BUR04				*e*PKPab	PKPab	10 59 03.1	-4.0
MLR	Muntele Rosu	152.47	320	PKPab	PKPab	10 59 10.5	-0.4
	comp=Z,3.5nm,0.6s,baz=112,slow=4.3,SNR=3.9						
CLL	Collm	153.57	343	*e*PKPbc	PKPbc	10 59 00.0	-0.8
CLL				*e*PKPab	PKPab	10 59 15.0	-0.1
CLL				*e*		10 59 25.0	
CLL				*e*pPKPab	pPKPab	11 00 45.0	-1.8
CLL				*e*		11 00 50.0	
VTS	Vitosha	155.71	317	*e*PKPab	PKPab	10 59 22.8	-2.1
LIC	Lamto	159.06	163	*e*P	PKPab	10 59 38.4	-1.3
	comp=Z,41nm,1.1s						
KIC	Kosan Boka	159.26	164	*e*P	PKPab	10 59 40.7	+0.1
	comp=Z,30nm,1.0s						
TIC	Toumodi	159.46	163	*e*P	PKPab	10 59 41.8	+0.3
DBIC	Dimbokro	159.53	163	*e*PKPab	PKPab	10 59 39.6	-2.1
DBIC	Dimbokro	159.53	163	PKPab	PKPab	10 59 41.1	-0.6
	comp=Z,5.4nm,1.0s,baz=166,slow=5.4,SNR=3.8						
TOA0	Torodi Ar. Sit	166.72	183	*e*PKPdf	PKPdf	10 59 07.0	-1.2
TOA0				*e*PKPab	PKPab	11 00 12.6	-0.7
TOA0				*e*PKPab	PKPab	11 00 13.2	0.0
TORD	Torodi Ar. Bea	166.72	183	PKP	PKPdf	10 59 07.4	-0.8
	comp=Z,2.3nm,1.1s,baz=120,slow=1.4,SNR=7.6						
TORD				PKPab	PKPab	11 00 12.2	-1.0
	comp=Z,1.7nm,0.7s,baz=176,slow=3.3,SNR=10						
TOA1	Torodi Ar. Sit	166.72	183	*e*PKPdf	PKPdf	10 59 07.4	-0.8
TOA1				*e*PKPab	PKPab	11 00 12.2	-1.1

NIED ***01*** *10:45:00, 35°.70N×137°.10E, h8^{km}, Mw3.3 Best double couple: $M_0$1.01000×10^{14} NP1:ϕ_s64.00000°, δ40.00000°, λ173.00000°. NP2:ϕ_s159.00000°, δ86.00000°, λ50.00000°.*

JMA 01 10:45:03.0, 35°.65N×137°.13E, h8^{km}, M3.5, 1C-1D Broadband fault plane solution: P waves. NP1: ϕ_s174.00000°**,** δ77.00000°**,** λ38.00000°. **NP2:**ϕ_s73.00000°**,** δ53.00000°**,** λ163.00000°. **Principal axes:** T Plg36.0000°, Azm40.0000°**;** N Plg50.0000°, Azm190.0000°**;** P Plg15.0000°, Azm299.0000°**; Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGF	Kuroka	0.19	105	⇓P	Pg	10 45 07.1	+0.2
JGF				S	Sg	10 45 10.0	+0.4
JYTA	Yamagatataniai	0.33	260	P	Pg	10 45 09.4	0.0
JYTA				S	Sg	10 45 13.8	0.0
JICN	Ichinomiyachia	0.42	214	P	Pg	10 45 11.5	+0.4
JGN	Niukaw	0.59	15	⇑P	Pg	10 45 14.3	-0.2
JGN				S	Sg	10 45 22.2	0.0
JKG	Kaga	0.90	314	P	Pg	10 45 20.4	+0.1
JTT	Ttatey	0.97	10	P	Pb	10 45 22.0	0.0
MAT	Matsushiro	1.25	44	P	Pn	10 45 26.5	-0.3
MAT				S	Sg	10 45 43.2	+0.1

HEL ***01*** *10:51:16.0±0.6, 67°.68N×34°.14E, h0^{km}, ML2.6, Explosion*

IDC ***01*** *10:51:17.1±2.8, 67°.73N×33°.94E, h0^{km}, mb1 3.2/4, mb1mx3.0/71, mbtmp3.2/4, ML2.7/4, Error ellipse: s-maj=30.4km s-min=10.4km az=73.0*

KOLA ***01*** *10:51:17.1, 67°.65N×33°.90E, M1.8, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NAO ***01*** *10:51:19.9±0.9, 67°.49N×33°.36E, ML2.9*

ISC 01 10:51:17.4±1.9**, 67°.70N**±0°.04×**33°.78E**±0°.09**, h0^{km}, n34,** σ**1^s.95**/57**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.20	227	P	Pg	10 51 20.7	-0.4
APA				S	Sg	10 51 23.4	-0.2
APZ9	Apatity	0.20	227	Pg	Pg	10 51 20.7	-0.4
APZ9				Lg	Lg	10 51 23.4	
APZ9	Apatity	0.20	227	Pg	Pg	10 51 20.7	-0.4
APZ9				Sg	Sg	10 51 23.4	-0.2
APA0	Apatity Array	0.32	253	Pg	Pg	10 51 23.3	-0.2
APA0				Lg	Lg	10 51 27.4	
APA0	Apatity Array	0.32	253	P	Pg	10 51 23.3	-0.2
APA0				S	Sg	10 51 27.8	+0.3
APA0	Apatity Array	0.32	253	Pg	Pg	10 51 23.3	-0.2
APA0				Sg	Sg	10 51 27.4	-0.2
VRF	Varrio	1.59	274	PG	Pn	10 51 46.2	-0.6
	baz=87						
VRF				MSG		10 52 07.6	
	comp=Z,50nm,0.2s						
VRF				SN	Sn	10 52 08.3	+0.3
MSF	Maaselka	2.60	228	PB	Pn	10 52 01.8	+1.2
MSF				SB	Sb	10 52 37.4	+0.1
SGF	Sodankyl	2.79	268	PN	Pn	10 52 03.4	+0.1
	baz=81						
SGF				SG	Sb	10 52 44.1	+1.3
KEV	Kevo	3.22	313	Pn	Pn	10 52 10.2	+1.1
KEV				Sn	Sn	10 52 48.9	+0.8
KEV				Lg	Lg	10 52 59.2	
KEV	Kevo	3.22	313	Pn	Pn	10 52 10.2	+1.1
KEV				Sn	Sn	10 52 48.9	+0.8
KEV				Sg	Sg	10 52 59.2	-1.4
KEV	Kevo	3.22	313	PB	Pn	10 52 10.1	+1.1
	baz=128						
KEV				SG	Sg	10 52 59.5	-1.1
RNF	Rovaniemi	3.22	254	PN	Pn	10 52 08.9	-0.3
	baz=71						
ARA0	ARCESS Array S	3.54	305	Pn	Pn	10 52 14.0	+0.4
	baz=123,slow=16						
ARA0				Sn	Sn	10 52 56.2	0.0
	baz=122,slow=28						
ARA0				Lg	Lg	10 53 08.4	
	baz=116,slow=37						
ARA0	ARCESS Array S	3.54	305	Pn	Pn	10 52 14.0	+0.4
	baz=123,slow=16						
ARA0				Sn	Sn	10 52 56.2	0.0
	baz=122,slow=28						
ARA0				Sg	Sb	10 53 08.4	+4.0
	baz=116,slow=37						
ARCES	ARCESS Array B	3.54	305	Pn	Pn	10 52 14.0	+0.4
	comp=Z,4.5nm,0.3s,baz=120,slow=16,SNR=186						
ARCES				Sn	Sn	10 52 56.1	-0.1
	comp=Z,4.0nm,0.3s,baz=120,slow=24,SNR=11						
ARCES				Lg	Lg	10 53 08.5	
	comp=Z,9.1nm,0.3s,baz=112,slow=33,SNR=14						
ARE0	ARCESS Array S	3.54	305	PN	Pn	10 52 13.8	+0.2
	baz=121						
ARE0				SN	Sn	10 52 57.4	+1.2
HEF	Hetta	3.87	285	PN	Pn	10 52 18.0	0.0
	baz=99						
HEF				SG	Sg	10 53 19.6	-1.8
TOF	Tornio	4.07	251	PN	Pn	10 52 21.2	+0.4
OUL	Oulu	4.12	234	PN	Pn	10 52 23.2	+1.8
KTK1	Kautokeino	4.12	293	*e*P	Pn	10 52 22.1	+0.6
KTK1				*e*S	Sn	10 53 08.8	-1.5
KTK1				IAML		10 53 27.8	
	comp=Z,19nm,0.4s						
LANU	Lannavaara	4.47	280	PN	Pn	10 52 25.4	-1.0
LANU				SG	Sg	10 53 39.2	-1.8
KIF	Kilpisjarvi	4.98	291	Pn	Pn	10 52 33.1	-0.2
KIF				Sn	Sn	10 53 30.6	-0.8
KIF				Lg	Lg	10 53 50.5	
KIF	Kilpisjarvi	4.98	291	Pn	Pn	10 52 33.1	-0.2
KIF				Sn	Sn	10 53 30.6	-0.8
KIF				Sg	Sb	10 53 50.5	+4.9
STEI	Steigen	7.02	280	*e*P	Pn	10 52 58.6	-2.6
STEI				IAML		10 54 13.9	
	comp=Z,4.2nm,0.7s						
FIA0	FINESS Array S	7.10	211	Pn	Pn	10 53 01.1	-1.3
	baz=30,slow=14						
FIA0				Lg	Lg	10 54 54.0	
	baz=17,slow=28						
FIA0	FINESS Array S	7.10	211	Pn	Pn	10 53 01.1	-1.3
	baz=30,slow=14						
FIA0				Sg	Sb	10 54 54.0	+7.4
	baz=17,slow=28						
FINES	FINESS Array B	7.10	211	Pn	Pn	10 53 00.5	-1.9
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=3.5						
FINES				Sn	Sn	10 54 21.6	-2.0
	comp=Z,0.3nm,0.3s,baz=36,slow=22,SNR=2.9						
FINES				Lg	Lg	10 54 54.6	
	comp=Z,1.1nm,0.3s,baz=24,slow=27,SNR=7.1						
HFS	Hagfors	11.59	239	Pn	Pn	10 53 59.5	-4.4
HFS	Hagfors	11.59	239	Pn	Pn	10 53 58.8	-5.1
	comp=Z,0.1nm,0.3s,baz=46,slow=10,SNR=2.7						
HFS	Hagfors	11.59	239	Pn	Pn	10 53 59.5	-4.4
NOA	NORSAR Array B	11.77	246	Pn	Pn	10 54 03.0	-3.4
	comp=Z,0.0nm,0.3s,baz=43,slow=11,SNR=2.4						
NRA0	NORESS Array S	11.87	245	Pn	Pn	10 54 05.0	-2.7
	baz=37,slow=14						
NRA0	NORESS Array S	11.87	245	Pn	Pn	10 54 05.0	-2.7
	baz=37,slow=14						

NIED ***01*** *10:55:00, 38°.50N×142°.30E, h50^{km}, Mw4.0 Best double couple: $M_0$9.59000×10^{14} NP1:ϕ_s44.00000°, δ30.00000°, λ110.00000°. NP2:ϕ_s201.00000°, δ62.00000°, λ79.00000°.*

ISCJB ***01*** *10:55:24.6±0.6, 38°.46N±0°.03×142°.28E±0°.06, h50^{km}±5^{km}, mb4.1/32, Error ellipse: s-maj=8.0km s-min=4.2km az=18.3*

JMA ***01*** *10:55:25.3±0.1, 38°.48N×142°.25E, h42^{km}±1^{km}, M4.2*

JMA Felt II J1.

IDC ***01*** *10:55:26.2±0.6, 38°.42N×142°.25E, h49^{km}±5^{km}, mb3.7/23, mb1 3.9/28, mb1mx3.8/79, mbtmp4.0/28, MS2.8/5, Ms1 2.8/5, ms1mx2.6/51, Error ellipse: s-maj=13.1km s-min=11.7km az=132.0*

NEIC ***01*** *10:55:26.4±0.8, 38°.50N×142°.35E, h53^{km}±7^{km}, mb4.3/7, Error ellipse: s-maj=10.4km s-min=6.5km az=105.0*

NEIC Recorded [2 JMA] in Miyagi.

ISC 01 10:55:26.3±0.7**, 38°.49N**±0°.04×**142°.28E**±0°.07**, h47^{km}**±5^{km}**, n77,** σ**1^s.17**/94**, mb4.1**/32**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.66	255	P	Pn	10 55 37.9	-1.5
JIKH				S	Sn	10 55 46.6	-2.2
JKMT	Kesennumamotoy	0.71	298	P	Pn	10 55 38.8	-1.2
JKMT				S	Sn	10 55 48.4	-1.5
JIO	Ouri	0.73	268	P	Pn	10 55 38.9	-1.4
JIO				S	Sn	10 55 48.5	-1.9
OFUJ	Ofunato	0.76	321	P	Pn	10 55 39.7	-1.0
OFUJ				S	Sn	10 55 49.8	-1.4
JMK	Ichinoseki	0.95	300	P	Pn	10 55 42.2	-1.0
JMK				S	Sn	10 55 54.5	-1.2
JOM	Ohasama	1.25	322	P	Pn	10 55 46.7	-0.6
JOM				S	Sn	10 56 02.4	-0.6
JOU	Okura	1.27	265	P	Pn	10 55 46.8	-0.9
JOU				S	Sn	10 56 02.9	-0.7
JMM	Marumori	1.32	243	P	Pn	10 55 47.0	-1.3
JMM				*e*S	Sn	10 56 03.1	-1.7
JYK	Kaneyama	1.56	287	P	Pn	10 55 51.0	-0.6
JRG	Rokugo	1.57	306	P	Pn	10 55 51.1	-0.6
JFK	Kawauchi	1.57	225	P	Pn	10 55 50.4	-1.4
JFK				*e*S	Sn	10 56 08.8	-2.2
JYS	Shirataka	1.76	262	P	Pn	10 55 53.7	-0.6
JYS				S	Sn	10 56 15.7	+0.2
JFT	Otama	1.81	238	P	Pn	10 55 54.8	-0.2
ERM	Erimo	3.59	11	*e*Pn	Pn	10 56 18.2	-1.1
ERM				*e*Sn	Sn	10 57 00.2	-0.3
MJAR	Matsushiro Arr	3.77	240	P	Pn	10 56 22.2	+0.3
	0.8nm,0.3s,baz=114,slow=8.1,SNR=33						
MJAR				LR	LR	10 58 05.7	
	comp=Z,174nm,18.5s,baz=80,slow=43						
MAJO	Matsushiro	3.77	240	*e*Pn	Pn	10 56 23.1	+1.2
MAJO				*e*Sn	Sn	10 57 02.9	-2.2
MAT	Matsushiro	3.77	240	P	Pn	10 56 23.3	+1.4
MAT				*e*S	Sn	10 57 10.3	+5.2
MJB9	Matsu-Tunnel	3.77	240	*e*Pn	Pn	10 56 23.3	+1.4
INU	Inuyama	5.25	235	*e*Pn	Pn	10 56 43.9	+1.7
INU				*e*Sn	Sn	10 57 39.9	-1.6
ASAJ	Asahikawa	5.63	2	P	Pn	10 56 48.0	+0.7
	2.1nm,0.3s,baz=223,slow=7.7,SNR=14						
ASAJ				LR	LR	10 59 30.4	
	comp=Z,59nm,21.6s,baz=146,slow=43						
JHJ2	Mitsune	5.72	201	*e*Pn	Pn	10 56 49.1	+0.4
JHJ2				*e*Sn	Sn	10 57 53.5	+0.4
USA0B	Ussuriysk Arra	9.61	310	*e*Pn	Pn	10 57 42.4	+0.5
USRK	Ussuriysk Ar.	9.61	310	P	Pn	10 57 43.7	+1.8
	0.8nm,0.3s,baz=125,slow=12,SNR=7.5						
JNU	Nakatsue	10.69	243	LR	LR	11 02 16.1	
	comp=Z,68nm,21.7s,baz=120,slow=38						
KSRS	Korea Array	11.38	269	P	Pn	10 58 07.6	+1.5
	0.2nm,0.3s,baz=79,slow=13,SNR=3.0						
KSRS				LR	LR	11 02 01.0	
	comp=Z,44nm,20.3s,baz=51,slow=35						
KLR	Kul'dur	13.14	328	P	Pn	10 58 32.0	+1.9
	0.3nm,0.3s,baz=146,slow=17,SNR=3.6						
KLR				LR	LR	11 03 11.6	
	comp=Z,71nm,21.6s,baz=153,slow=35						
CN2	Changchun	13.74	298	*e*P	Pn	10 58 40.2	+1.8
MA2	Magadan	21.80	12	P	P	11 00 15.0	+1.0
	4.5nm,0.7s,baz=199,slow=9.0,SNR=4.6						
HHC	Hu-ho-hao-te	23.70	285	*e*P	P	11 00 33.8	-0.1
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.2s						
SEY	Seymchan	25.24	11	P	P	11 00 48.5	+1.0
	comp=Z,2.0nm,0.7s,baz=145,slow=3.5,SNR=10.0						
SONM	Songino Array	27.58	301	P	P	11 01 09.4	+0.4
	comp=Z,0.5nm,0.3s,baz=101,slow=7.7,SNR=4.3						
H11N2	WAKE ISLAND Hy	28.35	124	T	T	11 31 47.5	
	baz=317,slow=75,SNR=538						
H11N1	WAKE ISLAND Hy	28.36	124	T	T	11 31 47.2	
	baz=317,slow=75,SNR=496						
H11N3	WAKE ISLAND Hy	28.37	124	T	T	11 31 45.3	
	baz=317,slow=75,SNR=478						
H11S1	WAKE ISLAND Hy	29.12	126	T	T	11 32 31.9	
	baz=318,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	29.12	126	T	T	11 32 34.2	
	baz=318,slow=76,SNR=85						
H11S2	WAKE ISLAND Hy	29.13	126	T	T	11 32 45.8	
	baz=318,slow=76,SNR=38						
WMQ	Urumqi	40.81	296	*e*P	P	11 03 04.5	+1.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,380nm,5.3s						
ZALV	Zalesovo Beam	41.46	311	P	P	11 03 07.8	-0.5
	comp=Z,1.0nm,0.4s,baz=89,slow=9.2,SNR=4.5						
ZALV				pP	pP	11 03 20.6	-0.2
	comp=Z,1.1nm,0.4s,baz=89,slow=7.8,SNR=3.8						
ZALV				PcP	PcP	11 05 04.7	-0.5
	comp=Z,1.1nm,0.5s,baz=74,slow=2.2,SNR=4.3						
MK01	Makanchi Array	43.94	301	*e*P	P	11 03 27.4	-1.2
MK31	Makanchi Array	43.94	301	*e*P	P	11 03 28.1	-0.5
MKAR	Makanchi Array	43.94	301	*e*P	P	11 03 28.5	-0.1
	comp=Z,11nm,0.6s						
MKAR	Makanchi Array	43.94	301	P	P	11 03 28.2	-0.4
	comp=Z,0.9nm,0.4s,baz=84,slow=10,SNR=14						
MKAR				pP	pP	11 03 40.1	-1.0
	comp=Z,1.9nm,0.6s,baz=85,slow=9.7,SNR=8.6						
MAKZ	Makanchi	44.15	301	*e*P	P	11 03 29.9	-0.2
	comp=Z,3.2nm,0.9s						
IM3	Indian Mountai	45.06	31	*e*P	P	11 03 37.5	+0.4
PPLA	Purkeypile	45.59	36	*e*P	P	11 03 39.8	-1.7
KURK	Kurchatov	45.59	307	*e*P	P	11 03 40.7	-0.8
	comp=Z,5.8nm,0.6s						
KURBB	Kurchatov Arra	45.66	307	P	P	11 03 41.3	-0.8
	comp=Z,5.7nm,0.6s,baz=81,slow=8.0,SNR=16						
ILAR	Eielson Array	47.91	33	P	P	11 03 59.5	+0.1
	comp=Z,0.5nm,0.6s,baz=268,slow=6.0,SNR=9.3						
ILAR				pP	pP	11 04 13.7	+1.7
	comp=Z,2.0nm,0.7s,baz=267,slow=6.3,SNR=14						
SCRK	Sand Creek	49.22	34	*e*P	P	11 04 09.1	-0.6
	comp=Z,1.8nm,1.2s						
BVAR	Borovoye Array	50.11	312	P	P	11 04 16.5	0.0
	comp=Z,0.6nm,0.5s,baz=46,slow=6.4,SNR=4.0						
BVAR				PcP	PcP	11 05 34.8	-0.6
	comp=Z,1.3nm,0.5s,baz=88,slow=2.6,SNR=5.9						
INK	Inuvik	52.78	28	P	P	11 04 36.5	+0.3
	comp=Z,0.6nm,0.5s,baz=264,slow=5.4,SNR=5.9						
INK				pP	pP	11 04 49.2	+0.3
	comp=Z,0.7nm,0.5s,baz=313,slow=5.0,SNR=3.5						
ABKAR	Akbulak array	57.53	310	*e*P	P	11 05 10.2	-0.5
	comp=Z,1.9nm,0.6s						
AKTO	Aktyubinsk	58.22	312	P	P	11 05 15.7	+0.2
	comp=Z,1.7nm,0.6s,baz=72,slow=12,SNR=6.2						
WRAB	Tennant Creek	58.58	189	*e*P	P	11 05 17.4	-0.9
	comp=Z,5.6nm,1.1s						
WB2	Warramunga Arr	58.59	189	*e*P	P	11 05 16.9	-1.5
WRA	Warramunga Arr	58.59	189	P	P	11 05 17.1	-1.2
	comp=Z,1.7nm,0.4s,baz=6.9,slow=7.0,SNR=51						
WRA				pP	pP	11 05 31.3	0.0
	comp=Z,1.5nm,0.4s,baz=6.7,slow=6.7,SNR=9.5						
YKA	Yellowknife Ar	62.21	31	P	P	11 05 42.2	-0.4
	comp=Z,0.5nm,0.7s,baz=301,slow=6.6,SNR=11						
YKA				pP	pP	11 05 56.5	+0.9
	comp=Z,0.3nm,0.7s,baz=300,slow=6.2,SNR=4.1						
YKA				PcP	PcP	11 06 22.5	+0.3
	comp=Z,0.3nm,0.6s,baz=299,slow=4.7,SNR=5.2						
AS01	Alice Springs	62.31	189	*e*P	P	11 05 43.1	-0.6
AS31	Alice Springs	62.32	189	*e*P	P	11 05 43.5	-0.3
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	62.32	189	P	P	11 05 43.1	-0.7
	comp=Z,1.0nm,0.7s,baz=10,slow=5.5,SNR=18						
ARCES	ARCESS Array B	62.88	339	P	P	11 05 47.2	+0.2
	comp=Z,1.6nm,0.8s,baz=52,slow=7.9,SNR=4.2						
FIA1	FINESS Array S	67.85	332	*e*P	P	11 06 18.6	-0.6
FINES	FINESS Array B	67.85	332	P	P	11 06 18.8	-0.4
	comp=Z,2.3nm,0.6s,baz=21,slow=11,SNR=11						
NEW	Newport	68.61	45	P	P	11 06 24.1	-0.2
	comp=Z,0.4nm,0.3s,baz=229,slow=3.4,SNR=3.8						
SUMG	Summit	69.23	0	*e*P	P	11 06 28.8	+0.6
KBZ	Khabaz	70.48	311	P	P	11 06 36.0	+0.2
	comp=Z,1.6nm,0.7s,baz=136,slow=4.6,SNR=4.6						
NB2	NORSAR Subarra	73.11	337	P	P	11 06 50.5	-0.8
	comp=Z,0.9nm,0.5s,baz=36,slow=6.2						
NOA	NORSAR Array B	73.11	337	P	P	11 06 50.6	-0.8
	comp=Z,1.1nm,0.6s,baz=39,slow=6.0,SNR=6.7						
NVAR	Mina Array Bea	73.58	54	P	P	11 06 55.6	+0.9
	comp=Z,0.6nm,0.7s,baz=286,slow=7.1,SNR=4.9						
PDAR	Pinedale Array	76.16	46	P	P	11 07 09.7	0.0
	comp=Z,0.8nm,0.5s,baz=289,slow=2.2,SNR=8.8						
KWP	Kalwaria Pacla	77.35	325	*e*P	P	11 07 16.7	+0.8
	comp=Z,58nm,0.8s						
ULM	Lac du Bonnet	77.92	34	P	P	11 07 18.3	-0.7
	comp=Z,1.4nm,0.7s,baz=333,slow=9.2,SNR=3.2						
EKA	Eskdalemuir Ar	81.99	341	P	P	11 07 40.5	-0.4
	comp=Z,1.2nm,0.8s,baz=8.3,slow=6.3,SNR=3.5						
CLNB	Carlsbad	86.53	51	*e*P	P	11 08 04.6	0.0
TXAR	Lajitas Array	88.70	53	P	P	11 08 15.1	+0.1
	comp=Z,0.5nm,0.7s,baz=301,slow=4.0,SNR=7.2						
LPAZ	La Paz	145.36	59	PKPbc	PKPbc	11 14 58.4	-1.7
	comp=Z,0.7nm,0.4s,baz=311,slow=3.6,SNR=4.7						

ISK ***01*** *11:09:06.4, 38°.75N×43°.17E, h5^{km}, ML2.3/8*

DDA ***01*** *11:09:07.9, 38°.78N×43°.20E, h7^{km}±6^{km}, ML2.8*

ISCJB ***01*** *11:09:08.6±0.6, 38°.76N±0°.03×43°.16E±0°.04, h21^{km}±9^{km}, Error ellipse: s-maj=5.4km s-min=5.2km az=18.0*

ISC 01 11:09:08.2±1.0**, 38°.76N**±0°.03×**43°.18E**±0°.03**, h17^{km}**±10^{km}**, n14,** σ**0^s.98**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.23	135	PG	Pb	11 09 13.8	-0.3
VANB				SG	Sg	11 09 18.9	+1.4
TVAN	Van	0.29	142	*i* P	Pg	11 09 14.6	-0.2
TVAN				*i* S	Sb	11 09 19.9	+0.1
TVAN				IAML_P			
	comp=Z,4μm,0.1s						
ADCV	BITLIS_Adilcev	0.36	278	*i* P	Pb	11 09 16.4	+0.1
ADCV				*i* S	Sb	11 09 22.2	+0.6
ADCV				IAML_P			
	comp=Z,743nm,0.1s						
VMUR	Van-Muradiye	0.38	53	*i* P	Pb	11 09 16.8	+0.1
VMUR				*i* S	Sb	11 09 23.4	+1.0
VMUR				IAML_P			
	comp=Z,929nm,0.2s						
GEVA	Gevas	0.46	192	*i* P	Pg	11 09 16.6	-1.0
GEVA				*i* S	Sb	11 09 26.0	+1.5
GEVA				IAML_P			
	comp=Z,2μm,0.1s						
AKDM	Akdamar-Van	0.46	200	PG	Pg	11 09 16.1	-1.5
MLAZ	Malazgirt-MUS	0.62	308	PG	Pg	11 09 20.2	-0.3
CLDR	Caldiran	0.69	56	PG	Pg	11 09 20.7	-1.2
CLDR				SG	Sb	11 09 31.7	+0.4
CLDR	Caldiran	0.69	56	*i* P	Pg	11 09 20.1	-1.8
CLDR				*i* S	Sb	11 09 31.9	+0.7
CLDR				IAML_P			
	comp=Z,595nm,0.1s						
TUTA	Tutak	0.70	336	*i* P	Pg	11 09 21.8	-0.3
TUTA				*i* S	Sg	11 09 31.3	-0.1
TUTA				IAML_P			
	comp=Z,9μm,0.2s						
AGRB	Hanur-Agry	0.82	350	PG	Pg	11 09 23.6	-0.8
GURO	Guroymak-BITLI	0.92	257	PG	Pg	11 09 24.7	-1.5
SIRT	Sirnak	1.39	205	PN	Pb	11 09 33.8	+0.1
TASB	TASBURUN-IGDIR	1.47	34	PN	Pb	11 09 35.3	+0.1

IDC 01 11:14:47.7±4.7**, 10°.96S**×**166°.63E, h0^{km}, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/31**, mbtmp3.6**/4**, Error ellipse: s-maj=227.7km s-min=32.8km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.33	250	P	P	11 21 19.0	0.0
	1.2nm,1.0s,baz=80,slow=9.5,SNR=4.8						
ASAR	Alice Springs	33.61	244	P	P	11 21 29.6	-0.5
	0.5nm,0.8s,baz=78,slow=9.5,SNR=5.4						
FITZ	Fitzroy Crossi	40.24	255	P	P	11 22 26.9	+0.2
	0.8nm,0.6s,baz=74,slow=7.4,SNR=3.3						
ILAR	Eielson Array	83.15	18	P	P	11 27 15.3	0.0
	0.3nm,0.8s,baz=238,slow=5.2,SNR=4.7						

ISCJB ***01*** *11:30:10.9±0.7, 37°.22N±0°.04×38°.87E±0°.04, h3^{km}±8^{km}, Error ellipse: s-maj=7.4km s-min=5.6km az=171.6*

DDA ***01*** *11:30:10.0, 37°.22N×38°.84E, h7^{km}±3^{km}, ML2.6*

ISK ***01*** *11:30:12.1, 37°.41N×38°.92E, h8^{km}, ML2.0/2*

ISC 01 11:30:11.1±1.1**, 37°.23N**±0°.05×**38°.88E**±0°.04**, h8^{km}**±9^{km}**, n9,** σ**0^s.99**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANL	SANLIURFA_Merk	0.11	123	*i* P	Pg	11 30 13.1	-0.5
SANL				*i* S	Sg	11 30 16.9	+1.5
SANL				IAML_P			
	comp=Z,17μm,0.2s						
URFA	Urfa	0.21	348	PG	Pg	11 30 14.5	-0.9
SURC	SANLIURFA_SURC	0.41	211	*i* P	Pg	11 30 17.9	-1.1
SURC				*i* S	Sg	11 30 23.7	-0.8
SURC				IAML_P			
	comp=Z,734nm,0.1s						
GZT	Gaziantep	1.05	277	*i* P	Pg	11 30 30.6	-0.7
GZT				*i* S	Sb	11 30 45.9	+0.2
GZT				IAML_P			
	comp=Z,288nm,0.2s						
ELZG	Elazig	1.27	4	*i* P	Pn	11 30 35.1	-0.2
ELZG				*i* S	Sn	11 30 52.2	-0.4
ELZG				IAML_P			
	comp=Z,254nm,0.1s						
MAZI	Mazidag	1.27	79	PN	Pg	11 30 35.8	+0.3
MAZI				SN	Sn	11 30 52.9	+0.3
AKCD	Akcadag	1.30	325	*i* P	Pn	11 30 36.4	+0.7
AKCD				*i* S	Sn	11 30 53.7	+0.2
AKCD				IAML_P			
	comp=Z,264nm,0.1s						
GAZ	Gaziantep	1.33	268	PN	Pg	11 30 38.3	+1.7
PTK	Pertek	1.71	14	PN	Pn	11 30 40.3	-1.0

ISCJB ***01*** *11:31:21.5±0.3, 81°.36N±0°.04×3°.6W±0°.3, h10^{km}, mb3.9/24, MS3.2/16, Error ellipse: s-maj=7.5km s-min=4.9km az=42.2*

IDC ***01*** *11:31:21.8±0.6, 81°.42N×4°.20W, h0^{km}, mb3.8/20, mb1 4.0/22, mb1mx3.9/46, mbtmp3.9/22, ML4.0/2, MS3.3/19, Ms1 3.3/19, ms1mx3.1/45, Error ellipse: s-maj=15.8km s-min=11.6km az=41.0*

NEIC ***01*** *11:31:23.1±0.3, 81°.42N×3°.87W, h10^{km}, mb4.1/7, Error ellipse: s-maj=8.7km s-min=5.8km az=47.0*

BER ***01*** *11:31:25.1±2.3, 81°.94N×0°.49E, h10^{km}, ML3.0, ML4.1(NAO), Confirmed Earthquake*

IEPN ***01*** *11:31:25.0, 81°.49N×1°.14W, h10^{km}, station ZFI2 has station magnitude of 3.53*

ISC 01 11:31:22.7±0.5**, 81°.31N**±0°.07×**3°.85W**±0°.05**, h10^{km}, n95,** σ**2^s.39**/98**, mb4.0**/24**, MS3.1**/16**, 1C-1D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	3.61	123	*e*Pn	Pn	11 32 17.9	-0.6
KBS	Kingsbay	3.61	123	Pn	Pn	11 32 18.2	-0.4
KBS				Sn	Sn	11 32 57.9	-3.3
KBS	Kingsbay	3.61	123	⇓*i*P	Pn	11 32 18.0	-0.6
KBS				*i* S	Sn	11 32 57.1	-4.0
KBS	Kingsbay	3.61	123	*e*P	Pn	11 32 18.2	-0.4
KBS				*e*S	Sn	11 32 57.6	-3.6
KBS				IAML		11 33 03.0	
	comp=Z,110nm,0.3s						

BRBA	**Barentsburg A**	**4.58**	**126**	Pn	**Pn**	**11 32 32.4**	**+0.5**
BRBA				Sn	**Sn**	**11 33 23.1**	**-1.9**
BRBA	**Barentsburg A**	**4.58**	**126**	Pn	**Pn**	**11 32 32.4**	**+0.5**
BRBA				Sn	**Sn**	**11 33 23.1**	**-1.9**
SPA0	**Spitsbergen Ar**	**4.76**	**121**	*e*Pn	**Pn**	**11 32 33.9**	**-0.4**
SPA0	**Spitsbergen Ar**	**4.76**	**121**	Pn	**Pn**	**11 32 33.9**	**-0.4**
	baz=343,slow=10						
SPA0				Sn	**Sn**	**11 33 24.8**	**-4.6**
	baz=341,slow=22						
SPA0	**Spitsbergen Ar**	**4.76**	**121**	⇑*i*P	**Pn**	**11 32 33.6**	**-0.7**
SPA0				*i* S	**Sn**	**11 33 24.6**	**-4.8**
SPA0	**Spitsbergen Ar**	**4.76**	**121**	Pn	**Pn**	**11 32 33.9**	**-0.4**
	baz=343,slow=10						
SPA0				Sn	**Sn**	**11 33 24.8**	**-4.6**
	baz=341,slow=22						
SPITS	**Spitsbergen Ar**	**4.76**	**121**	Pn	**Pn**	**11 32 33.6**	**-0.7**
	baz=334,slow=10,SNR=349						
SPITS				Sn	**Sn**	**11 33 25.8**	**-3.7**
	baz=342,slow=21,SNR=6.7						
SPITS				LR	LR	11 34 17.2	
	comp=Z,460nm,19.0s,baz=30,slow=36						
DAG	**Danmarks Havn**	**5.34**	**219**	*i* P	**Pn**	**11 32 43.9**	**+1.6**
DAG				*i* S	**Sn**	**11 33 41.3**	**-2.4**
HSP	**Hornsund**	**5.62**	**130**	Pn	**Pn**	**11 32 46.7**	**+0.6**
HSP				Sn	**Sn**	**11 33 49.6**	**-0.9**
HSPB	**Hornsund (broa**	**5.62**	**130**	*e*P	**Pn**	**11 32 46.8**	**+0.6**
HSPB				*e*S	**Sn**	**11 33 48.4**	**-2.3**
HSPB				IAML		11 33 53.8	
	comp=Z,29nm,0.5s						
HOPEN	**Hopen**	**7.24**	**116**	Pn	**Pn**	**11 33 07.7**	**-0.7**
HOPEN				Sn	**Sn**	**11 34 24.5**	**-6.0**
HOPEN	**Hopen**	**7.24**	**116**	*e*P	**Pn**	**11 33 07.5**	**-0.9**
ZFI2	**Zemlya Franca-**	**7.81**	**68**	*i* P	Pn	11 33 10.7	-5.4
	comp=Z,7μm,1.0s						
ZFI2				*i* S	Sn	11 34 30.1	-14
BJO1	**Bjornoya**	**8.25**	**133**	Pn	**Pn**	**11 33 23.9**	**+1.8**
BJO	**Bjornoya**	**8.27**	**133**	Pn	**Pn**	**11 33 23.9**	**+1.5**
SUMG	**Summit**	**11.43**	**240**	*e*Pn	**Pn**	**11 34 05.3**	**-0.8**
SUMG	**Summit**	**11.43**	**240**	*i* P	**Pn**	**11 34 07.3**	**+1.2**
TULEG	**Thule**	**12.60**	**283**	*e*Pn	Pn	11 34 15.9	-5.7
KEV	**Kevo**	**13.59**	**131**	*e*Pn	**Pn**	**11 34 34.8**	**-0.3**
KEV	**Kevo**	**13.59**	**131**	Pn	**Pn**	**11 34 36.2**	**+1.1**
KEV	**Kevo**	**13.59**	**131**	Pn	**Pn**	**11 34 36.2**	**+1.1**
ARA0	**ARCESS Array S**	**13.63**	**133**	*e*Pn	**Pn**	**11 34 35.0**	**-0.7**
ARA0				*e*Sn	**Sn**	**11 37 01.2**	**-5.6**
ARA0	**ARCESS Array S**	**13.63**	**133**	Pn	**Pn**	**11 34 35.5**	**-0.2**
	baz=346,slow=12						
ARA0	**ARCESS Array S**	**13.63**	**133**	Pn	**Pn**	**11 34 35.5**	**-0.2**
	baz=346,slow=12						
ARCES	**ARCESS Array B**	**13.63**	**133**	*e*Pn	**Pn**	**11 34 37.0**	**+1.3**
ARCES				Sn	**Sn**	**11 37 01.2**	**-5.6**
ARCES	**ARCESS Array B**	**13.63**	**133**	Pn	**Pn**	**11 34 35.0**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=356,slow=12,SNR=23						
ARCES				Sn	**Sn**	**11 37 01.2**	**-5.6**
	comp=Z,0.3nm,0.3s,baz=347,slow=19,SNR=5.5						
ARE0	**ARCESS Array S**	**13.63**	**133**	*e*Pn	**Pn**	**11 34 36.1**	**+0.4**
KIF	**Kilpisjarvi**	**13.65**	**140**	Pn	**Pn**	**11 34 37.9**	**+2.0**
KIF	**Kilpisjarvi**	**13.65**	**140**	Pn	**Pn**	**11 34 37.9**	**+2.0**
APA0	**Apatity Array**	**16.35**	**125**	P	**Pn**	**11 35 11.1**	**-0.8**
	baz=8.1,slow=16						
APA0	**Apatity Array**	**16.35**	**125**	P	**Pn**	**11 35 11.1**	**-0.8**
	baz=8.1,slow=16						
RES	**Resolute Bay**	**17.81**	**300**	*e*Pn	**Pn**	**11 35 23.3**	**-6.8**
	comp=Z,9.7nm,0.9s						
RES	**Resolute Bay**	**17.81**	**300**	Pn	**Pn**	**11 35 23.8**	**-6.3**
	comp=Z,0.9nm,0.3s,baz=25,slow=13,SNR=18						
RES				LR	LR	11 42 15.5	
	comp=Z,104nm,20.9s,baz=66,slow=37						
SFJD	**Kangerlussuaq**	**18.24**	**246**	*e*P	**Pn**	**11 35 31.8**	**-3.6**
SFJD	**Kangerlussuaq**	**18.24**	**246**	Pn	**Pn**	**11 35 31.4**	**-4.0**
	comp=Z,1.6nm,0.3s,baz=359,slow=12,SNR=8.2						
SFJD				Sn	Sn	11 38 41.2	-17
	comp=Z,1.1nm,0.3s,baz=14,slow=5.2,SNR=4.6						
SFJD				LR	LR	11 43 07.1	
	comp=Z,122nm,18.2s,baz=14,slow=39						
NC204	**NORSAR Array S**	**20.53**	**160**	*e*P	Pn	11 36 03.7	+0.7
NC405	**NORSAR Array S**	**20.74**	**158**	*e*P	Pn	11 36 05.3	-0.1
	comp=Z,5.5nm,0.8s						
NBO00	**NORSAR Array S**	**20.77**	**160**	*e*P	Pn	11 36 06.0	+0.2
	comp=Z,3.7nm,0.8s						
NB2	**NORSAR Subarra**	**20.79**	**159**	P	Pn	11 36 06.9	+0.9
	comp=Z,1.3nm,0.7s,baz=354,slow=11						
NB2	**NORSAR Subarra**	**20.79**	**159**	P	Pn	11 36 07.5	+1.5
NB2	**NORSAR Subarra**	**20.79**	**159**	P	Pn	11 36 07.5	+1.5
NB200	**NORSAR Array S**	**20.79**	**159**	*e*P	Pn	11 36 06.4	+0.4
NOA	**NORSAR Array B**	**20.79**	**159**	P	Pn	11 36 06.4	+0.4
	comp=Z,2.6nm,0.7s,baz=358,slow=8.3,SNR=11						
NOA				LR	LR	11 43 08.2	
	comp=Z,30nm,19.5s,baz=355,slow=34						
NRA0	**NORESS Array S**	**21.11**	**159**	P	**P**	**11 36 10.2**	**+3.3**
	baz=342,slow=18						
NRA0	**NORESS Array S**	**21.11**	**159**	P	**P**	**11 36 10.2**	**+3.3**
	baz=342,slow=18						
FIA1	**FINESS Array S**	**21.54**	**139**	*e*P	**P**	**11 36 12.9**	**+1.3**
	comp=Z,11nm,1.0s						
FIA0	**FINESS Array S**	**21.55**	**139**	*e*P	**P**	**11 36 13.4**	**+1.8**
FIA0	**FINESS Array S**	**21.55**	**139**	P	**P**	**11 36 13.9**	**+2.3**
	baz=353,slow=12						
FIA0	**FINESS Array S**	**21.55**	**139**	P	**P**	**11 36 13.9**	**+2.3**
	baz=353,slow=12						
FINES	**FINESS Array B**	**21.55**	**139**	P	**P**	**11 36 13.4**	**+1.8**
	comp=Z,5.9nm,0.9s,baz=352,slow=12,SNR=8.7						
FINES				LR	LR	11 44 05.8	
	comp=Z,69nm,21.8s,baz=22,slow=35						
HFS	**Hagfors**	**21.84**	**156**	P	**P**	**11 36 17.9**	**+3.2**
	slow=5.9						
HFS	**Hagfors**	**21.84**	**156**	P	**P**	**11 36 16.5**	**+1.7**
	comp=Z,5.5nm,0.9s,baz=327,slow=7.3,SNR=5.5						
HFS				LR	LR	11 43 08.1	
	comp=Z,71nm,18.9s,baz=338,slow=32						
HFS	**Hagfors**	**21.84**	**156**	P	**P**	**11 36 17.9**	**+3.2**
	slow=5.9						
NRIK	**Noril'sk**	**22.68**	**67**	P	**P**	**11 36 23.9**	**+0.3**
	comp=Z,2.4nm,0.4s,baz=350,slow=12,SNR=4.5						
NRIK				LR	LR	11 45 22.0	
	comp=Z,64nm,21.0s,baz=173,slow=37						
FRB	**Frobisher Bay**	**23.91**	**263**	P	**P**	**11 36 36.6**	**+0.5**
	comp=Z,7.2nm,0.8s,baz=357,slow=9.1,SNR=9.1						
FRB				LR	LR	11 45 01.7	
	comp=Z,96nm,19.0s,baz=22,slow=34						
TIXI	**Tiksi**	**25.20**	**33**	P	**P**	**11 36 47.4**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=92,slow=9.0,SNR=3.3						
KIRV	**Kirov**	**27.18**	**113**	LR	LR	11 48 49.5	
	comp=Z,54nm,19.1s,baz=191,slow=38						
INK	**Inuvik**	**28.19**	**323**	*e*P	**P**	**11 37 13.1**	**-1.6**
INK	**Inuvik**	**28.19**	**323**	P	**P**	**11 37 13.7**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=23,slow=3.0,SNR=4.6						
BRG	**Berggiesshubel**	**31.08**	**158**	*e*P	**P**	**11 37 43.7**	**+3.2**
	comp=Z,13nm,1.5s						
YKA	**Yellowknife Ar**	**31.75**	**304**	P	**P**	**11 37 45.6**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=20,slow=9.8,SNR=4.9						
YKA				PcP	**PcP**	**11 40 37.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=5.0,slow=2.6,SNR=9.4						
SCHQ	**Schefferville**	**32.21**	**255**	LR	LR	11 51 44.8	
	comp=Z,81nm,21.8s,baz=298,slow=38						
AKASG	**Malin Array Be**	**32.45**	**140**	LR	LR	11 52 12.9	
	comp=Z,26nm,18.9s,baz=330,slow=38						
ILAR	**Eielson Array**	**32.76**	**332**	P	**P**	**11 37 55.4**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=19,slow=5.8,SNR=5.5						
ILAR				PcP	**PcP**	**11 40 39.5**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=346,slow=3.4,SNR=7.6						
DAWY	**Dawson**	**32.87**	**325**	*e*P	**P**	**11 37 55.8**	**-0.4**
	comp=Z,1.9nm,1.1s						
GEC2	**GERESS Array S**	**33.09**	**159**	*e*P	**P**	**11 38 00.8**	**+2.6**
	comp=Z,4.3nm,1.0s						
GERES	**GERESS Array B**	**33.09**	**159**	P	**P**	**11 38 00.8**	**+2.6**
	comp=Z,2.6nm,0.9s,baz=10,slow=8.1,SNR=12						
SUA	**Susitna One**	**36.31**	**334**	*e*P	**P**	**11 38 23.8**	**-2.2**
ZAA1	**Zalesovo Array**	**36.93**	**80**	*e*P	**P**	**11 38 31.6**	**+0.4**
ZALV	**Zalesovo Beam**	**36.94**	**80**	P	**P**	**11 38 31.6**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=342,slow=9.1,SNR=2.8						
ZALV				LR	LR	11 55 36.2	
	comp=Z,33nm,20.4s,baz=254,slow=39						
KURK	**Kurchatov**	**39.14**	**87**	*e*P	**P**	**11 38 50.5**	**+0.6**
	comp=Z,4.1nm,0.7s						
KBZ	**Khabaz**	**40.85**	**126**	P	**P**	**11 39 06.8**	**+2.7**
	comp=Z,2.7nm,0.8s,baz=334,slow=4.6,SNR=6.8						
ULM	**Lac du Bonnet**	**41.03**	**282**	LR	LR	11 56 48.3	
	comp=Z,61nm,21.1s,baz=159,slow=37						
MK32	**Makanchi Array**	**43.52**	**85**	*e*P	**P**	**11 39 26.4**	**+0.6**
MKAR	**Makanchi Array**	**43.52**	**85**	P	**P**	**11 39 26.4**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=349,slow=7.5,SNR=12						
MKAR				LR	LR	12 00 12.8	
	comp=Z,23nm,18.3s,baz=326,slow=40						
MK01	**Makanchi Array**	**43.54**	**85**	*e*P	**P**	**11 39 26.1**	**0.0**
BR101	**Keskin Array S**	**43.76**	**137**	*e*P	**P**	**11 39 30.1**	**+2.0**
BRTR	**Keskin Array B**	**43.76**	**137**	P	**P**	**11 39 30.1**	**+2.0**
	comp=Z,1.0nm,0.9s,baz=2.3,slow=6.2,SNR=4.3						
BRTR				LR	LR	11 59 10.9	
	comp=Z,19nm,18.6s,baz=4.5,slow=38						
SONA0	**Songino Array**	**45.98**	**62**	*e*P	**P**	**11 39 45.6**	**0.0**
SONM	**Songino Array**	**45.98**	**62**	P	**P**	**11 39 45.6**	**0.0**
	comp=Z,1.4nm,1.0s,baz=337,slow=7.7,SNR=6.3						
SONM				LR	LR	11 59 22.6	
	comp=Z,46nm,19.8s,baz=18,slow=37						
GEYT	**Alibeck**	**48.58**	**111**	P	**P**	**11 40 07.7**	**+1.9**
	comp=Z,1.2nm,0.5s,baz=350,slow=5.9,SNR=2.9						
GEYT				LR	LR	12 03 30.1	
	comp=Z,31nm,19.5s,baz=280,slow=40						
PDAR	**Pinedale Array**	**50.33**	**293**	LR	LR	12 02 02.7	
	comp=Z,68nm,21.2s,baz=49,slow=37						
USRK	**Ussuriysk Ar.**	**52.54**	**39**	P	**P**	**11 40 37.5**	**+1.9**
	comp=Z,1.5nm,0.8s,baz=302,slow=3.2,SNR=2.4						
GTA	**Gaotai**	**53.34**	**70**	*e*P	**P**	**11 40 41.7**	**0.0**
GTA				pP	pwP	11 40 45.8	-2.6
GTA				sP	sP	11 40 49.2	+4.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LTX	**Lajitas**	**62.67**	**284**	*e*P	**P**	**11 41 47.7**	**+0.5**
TXAR	**Lajitas Array**	**62.67**	**284**	P	**P**	**11 41 47.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=43,slow=5.4,SNR=4.5						
TOA1	**Torodi Ar. Sit**	**68.23**	**174**	*e*P	**P**	**11 42 23.8**	**+0.7**
TOA0	**Torodi Ar. Sit**	**68.23**	**174**	*e*P	**P**	**11 42 23.7**	**+0.6**
TORD	**Torodi Ar. Bea**	**68.23**	**174**	P	**P**	**11 42 23.8**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=353,slow=6.7,SNR=18						
CMAR	**Chiang Mai Arr**	**73.80**	**75**	P	**P**	**11 42 58.9**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=358,slow=2.2,SNR=2.6						
CMAR				LR	LR	12 18 56.0	
	comp=Z,13nm,18.3s,baz=190,slow=39						
ASAR	**Alice Springs**	**119.85**	**45**	PKP	**PKPdf**	**11 50 10.7**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=8.1,slow=1.9,SNR=7.6						

*NIED **01** 11:33:00,28°.80N×129°.30E,h65^{km},Mw3.6 Best double couple: M$_0$3.07000×10^{14} NP1:φ$_s$12.00000°,δ70.00000°, λ0.00000°. NP2:φ$_s$282.00000°,δ90.00000°,λ160.00000°.*

*ISCJB **01** 11:33:35.8±0.4,28°.79N±0°.04×129°.46E±0°.07,h84^{km}±4^{km}, mb3.2/4,Error ellipse: s-maj=10.7km s-min=3.5km az=28.3*

*JMA **01** 11:33:36.6±0.2,28°.84N×129°.36E,h76^{km}±2^{km},M3.7*

JMA Felt I J1.

*IDC **01** 11:33:37.3±2.0,28°.73N×129°.57E,h86^{km}±22^{km},mb3.1/4, mb1 3.3/7,mb1mx3.0/49,mbtmp3.4/7,MS2.3/1,Ms1 2.3/1, ms1mx2.1/15,Error ellipse: s-maj=43.7km s-min=17.4km az=98.0*

ISC 01 11:33:36.7±0.8,**28°.79N**±0°.04×**129°.45E**±0°.05,**h80**^{km}±6^{km}, **n25**,σ**1^{s}.08**/41,**mb3.3**/4,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.40**	**160**	P	**Pn**	**11 33 49.3**	**-0.4**
JAM				S	**Sn**	**11 33 59.0**	**-0.2**
JTAJ	**Takarajima**	**0.42**	**330**	P	**Pn**	**11 33 48.8**	**-1.0**
JTAJ				S	**Sn**	**11 33 58.2**	**-1.3**
JAMN	**Amaminishikomi**	**0.59**	**204**	P	**Pn**	**11 33 51.1**	**-0.2**
JAMN				S	**Sn**	**11 34 01.6**	**-0.5**
JZK	**Kikaishima**	**0.66**	**135**	P	**Pn**	**11 33 53.3**	**+1.3**
JZK				*e*S	**Sn**	**11 34 07.2**	**+3.9**
JTK	**Tokunoshima**	**1.09**	**204**	P	**Pn**	**11 33 56.9**	**0.0**
JTK				S	**Sn**	**11 34 11.7**	**-0.2**
JNN	**Nakanoshima**	**1.11**	**19**	P	**Pn**	**11 33 56.6**	**-0.6**
JOKE	**Okinoerabujima**	**1.62**	**209**	P	**Pn**	**11 34 04.2**	**+0.6**
JOKE				*e*S	**Sn**	**11 34 24.4**	**+0.5**
JYAK	**Yakushimahirau**	**1.72**	**32**	P	**Pn**	**11 34 04.7**	**-0.2**
JYAK				S	**Sn**	**11 34 25.6**	**-0.6**
JKC	**Kuchinoerabu**	**1.79**	**21**	P	**Pn**	**11 34 05.8**	**0.0**
JKC				*e*S	**Sn**	**11 34 27.3**	**-0.7**
JYRO	**Yoronjima**	**1.96**	**207**	P	**Pn**	**11 34 08.6**	**+0.5**
JYRO				S	**Sn**	**11 34 32.2**	**+0.2**
JMTN	**Minamitane**	**2.04**	**38**	P	**Pn**	**11 34 09.4**	**+0.2**
JMTN				*e*S	**Sn**	**11 34 33.1**	**-0.9**
JIH	**Iheya**	**2.18**	**217**	P	**Pn**	**11 34 11.4**	**+0.4**
JIH				S	**Sn**	**11 34 37.6**	**+0.4**
JOW	**Kunigami**	**2.21**	**208**	P	**Pn**	**11 34 11.6**	**+0.2**
JOW				*e*S	**Sn**	**11 34 37.7**	**-0.2**
JOW	**Kunigami**	**2.21**	**208**	P	**Pn**	**11 34 11.8**	**+0.4**
	1.6nm,0.3s,baz=82,slow=22,SNR=21						
JTN	**Tanegashima 3**	**2.29**	**35**	P	**Pn**	**11 34 12.7**	**+0.2**
JNTH	**Nagotoyohara**	**2.59**	**210**	P	**Pn**	**11 34 16.9**	**+0.4**
JNTH				*e*S	**Sn**	**11 34 46.3**	**-0.7**
JAGN	**Aguni-jima**	**2.94**	**222**	P	**Pn**	**11 34 21.9**	**+0.7**
JAGN				*e*S	**Sn**	**11 34 56.2**	**+0.8**
JMZ	**Minamidaito 2**	**3.35**	**151**	P	**Pn**	**11 34 26.3**	**-0.5**
JMZ				S	**Sn**	**11 35 02.5**	**-3.0**
JKE	**Kume jima 2**	**3.40**	**225**	P	**Pn**	**11 34 27.5**	**0.0**
JKE				*e*S	**Sn**	**11 35 06.3**	**-0.5**
JNU	**Nakatsue**	**4.49**	**16**	P	**Pn**	**11 34 43.4**	**+1.0**
	1.5nm,0.3s,baz=224,slow=3.9,SNR=14						
JNU				LR	LR	11 36 39.1	
	comp=Z,34nm,19.5s,baz=301,slow=40						
KSRS	**Korea Array**	**8.74**	**352**	P	**Pn**	**11 35 42.6**	**+2.4**
	0.4nm,0.3s,baz=173,slow=14,SNR=5.1						
SONM	**Songino Array**	**26.08**	**323**	P	**P**	**11 39 03.8**	**+0.9**
	0.4nm,0.3s,baz=131,slow=12,SNR=5.0						
WRA	**Warramunga Arr**	**48.67**	**174**	P	**P**	**11 42 12.6**	**-0.3**
	0.2nm,0.6s,baz=356,slow=8.5,SNR=3.1						
ILAR	**Eielson Array**	**61.68**	**29**	P	**P**	**11 43 45.6**	**-0.4**
	0.3nm,1.0s,baz=284,slow=7.3,SNR=5.0						
YKA	**Yellowknife Ar**	**75.76**	**26**	P	**P**	**11 45 13.2**	**-0.3**
	0.2nm,0.5s,baz=299,slow=5.6,SNR=4.7						

IDC 01 11:52:58.7±1.9,**2°.80N**×**128°.16E**,**h0**^{km},**mb3.4**/4, **mb1 3.7**/4,**mb1mx3.3**/42,**mbtmp3.5**/4,**Error ellipse: s-maj=99.3km s-min=23.3km az=71.0**,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.91**	**187**	P	Pn	11 57 44.7	-0.7
	0.8nm,0.6s,baz=348,slow=9.5,SNR=7.4						
WRA	**Warramunga Arr**	**23.40**	**165**	P	P	11 58 08.9	-0.5
	0.5nm,0.3s,baz=343,slow=10.0,SNR=32						
ASAR	**Alice Springs**	**26.90**	**168**	P	P	11 58 40.4	-1.2
	0.2nm,0.3s,baz=349,slow=7.4,SNR=8.7						
MKAR	**Makanchi Array**	**59.13**	**325**	P	P	12 03 01.6	+0.4
	0.2nm,0.5s,baz=124,slow=7.0,SNR=3.5						

*ISK **01** 12:05:03.5,38°.56N×43°.15E,h17^{km},ML2.1/4*

*DDA **01** 12:05:04.3,38°.64N×43°.21E,h7^{km}±5^{km},ML2.7*

ISC 01 12:05:04.3±1.0,**38°.59N**±0°.04×**43°.17E**±0°.03,**h15**^{km}±8^{km}, **n10**,σ**0^{s}.78**/20,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.17**	**89**	PG	**Pg**	**12 05 08.1**	**-0.5**
VANB				SG	**Sg**	**12 05 12.7**	**+1.2**
TVAN	**Van**	**0.20**	**109**	*i* P	**Pg**	**12 05 08.2**	**-0.8**
TVAN				*i* S	**Sg**	**12 05 12.5**	**+0.2**
GEVA	**Gevas**	**0.29**	**197**	*i* P	**Pg**	**12 05 10.7**	**+0.2**
GEVA				*i* S	**Sb**	**12 05 17.2**	**+1.0**
GEVA				IAML_P			
	comp=Z,5μm,0.2s						
AKDM	**Akdamar-Van**	**0.30**	**209**	PG	**Pg**	**12 05 10.2**	**-0.5**
AKDM				SG	**Sg**	**12 05 14.5**	**-0.6**
ADCV	**BITLIS_Adilcev**	**0.41**	**302**	*i* P	**Pg**	**12 05 12.6**	**0.0**
ADCV				*i* S	**Sb**	**12 05 20.5**	**+1.0**
VMUR	**Van-Muradiye**	**0.51**	**38**	*i* P	**Pg**	**12 05 14.1**	**-0.3**
VMUR				*i* S	**Sb**	**12 05 23.4**	**+1.0**
CLDR	**Caldiran**	**0.80**	**47**	PG	**Pb**	**12 05 20.1**	**-0.1**
CLDR				SG	**Sn**	**12 05 31.9**	**-1.3**
TUTA	**Tutak**	**0.85**	**341**	*i* P	**Pg**	**12 05 20.4**	**-0.6**
TUTA				*i* S	**Sb**	**12 05 32.6**	**+0.2**
TUTA				IAML_P			
	comp=Z,854nm,0.2s						
GURO	**Guroymak-BITLI**	**0.89**	**268**	PG	**Pg**	**12 05 20.8**	**-0.8**
GURO				SG	**Sb**	**12 05 33.5**	**+0.1**
AGRB	**Hanur-Agry**	**0.99**	**352**	PG	**Pg**	**12 05 22.9**	**-0.6**
AGRB				SG	**Sn**	**12 05 38.5**	**+0.7**

*DDA **01** 12:12:57.7,37°.90N×29°.26E,h7^{km}±4^{km},ML2.6*

*ISK **01** 12:12:57.2,37°.85N×29°.33E,h7^{km},ML2.3/7*

*ISCJB **01** 12:12:58.1±0.5,37°.89N±0°.02×29°.26E±0°.04,h4^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=3.5km az=28.3*

ISC 01 12:12:58.0±1.1,**37°.90N**±0°.02×**29°.29E**±0°.03,**h5**^{km}±10^{km}, **n16**,σ**1^{s}.31**/28,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.25**	**234**	PG	**Pg**	**12 13 02.7**	**-0.2**
DENT				SG	**Sg**	**12 13 06.7**	**+0.4**
KHL	**Karahalli**	**0.46**	**23**	PG	**Pg**	**12 13 06.9**	**0.0**
KHL				SG	**Sg**	**12 13 14.2**	**+1.3**
KHAL	**Karahalli**	**0.49**	**19**	*i* P	**Pg**	**12 13 07.8**	**+0.2**
KHAL				*i* S	**Sb**	**12 13 16.3**	**-0.5**
KHAL				IAML_P			
	comp=Z,868nm,0.2s						
TAVA	**DENIZLI_Tavas**	**0.53**	**215**	*i* P	**Pg**	**12 13 07.2**	**-1.0**
TAVA				*i* S	**Sg**	**12 13 15.1**	**+0.1**
TAVA				IAML_P			
	comp=Z,963nm,0.1s						
BRDR	**BURDUR-Merkez**	**0.64**	**108**	*i* P	**Pb**	**12 13 10.6**	**-1.2**
BRDR				*i* S	**Sn**	**12 13 22.0**	**-2.4**
BRDR				IAML_P			
	comp=Z,653nm,0.2s						
KZIL	**AFYON_Kizioren**	**0.76**	**62**	*i* P	**Pg**	**12 13 12.6**	**-0.1**
KZIL				*i* S	**Sn**	**12 13 29.3**	**+1.9**
KZIL				IAML_P			
	comp=Z,479nm,0.2s						
KULA	**Kula-Manisa**	**0.79**	**321**	PG	**Pb**	**12 13 14.6**	**+0.3**
MANT	**Manisa**	**0.82**	**316**	*i* P	**Pb**	**12 13 14.3**	**-0.7**
MANT				*i* S	**Sg**	**12 13 24.6**	**-0.1**
MANT				IAML_P			
	comp=Z,2μm,0.1s						
AYDB	**Zeytinkoy-Aydi**	**1.11**	**273**	PN	**Pb**	**12 13 19.3**	**-0.4**
AYDN	**Tasoluk**	**1.15**	**258**	*i* P	**Pn**	**12 13 20.0**	**-0.7**
AYDN				*i* S	**Sb**	**12 13 34.9**	**-0.6**
AYDN				IAML_P			
	comp=Z,851nm,0.2s						
TURN	**Turunc**	**1.16**	**208**	PN	**Pn**	**12 13 23.6**	**+2.7**
SHUT	**Suhut-Afyon**	**1.19**	**56**	PN	**Pn**	**12 13 21.0**	**-0.4**
GDZ	**Gediz**	**1.20**	**7**	*i* P	**Pb**	**12 13 20.9**	**-0.3**
GDZ				*i* S	**Sn**	**12 13 38.1**	**-0.1**
GDZ				IAML_P			
	comp=Z,2μm,0.3s						
DALY	**Dalyan (Mula)**	**1.20**	**205**	PN	**Pb**	**12 13 20.1**	**-1.0**
DALY				SN	**Sn**	**12 13 36.2**	**-1.7**
DEMI	**Demirci**	**1.23**	**339**	*i* P	**Pg**	**12 13 21.6**	**0.0**
DEMI				*i* S	**Sn**	**12 13 38.4**	**-0.5**
DEMI				IAML_P			
	comp=Z,2μm,0.3s						
FETY	**Fethiye**	**1.27**	**188**	*i* P	**Pg**	**12 13 23.1**	**+0.7**
FETY				*i* S	**Sn**	**12 13 43.6**	**+3.6**
FETY				IAML_P			
	comp=Z,387nm,0.2s						

*KRNET **01** 12:26:42.9±0.1,43°.53N×77°.72E,h22^{km},mb2.3*

*NNC **01** 12:26:42.3±0.2,43°.54N×77°.71E,h7^{km}±2^{km},mpv2.7, Error ellipse: s-maj=1.8km s-min=1.3km az=176.0*

*SOME **01** 12:26:43.4,43°.55N×77°.70E,h15^{km}*

ISC 01 12:26:42.9±1.0,**43°.53N**±0°.02×**77°.72E**±0°.02,**h14**^{km}±9^{km}, **n42**,σ**0^{s}.49**/83,**11C-11D**,**Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURS	**Kuram**	**0.33**	**97**	P	**Pb**	**12 26 50.4**	**-0.2**
	5.4nm,0.2s						
KURS				S	**Sb**	**12 26 55.6**	**-0.2**
	6.4nm,0.6s						
KURS	**Kuram**	**0.33**	**97**	⇓*i*P	**Pb**	**12 26 50.4**	**-0.2**
	baz=97						
KURS				⇓*i*S	**Sb**	**12 26 55.6**	**-0.2**
	baz=97						
KURS	**Kuram**	**0.33**	**97**	⇓*i*P	**Pb**	**12 26 50.4**	**-0.2**
	5.4nm,0.2s						
KURS				⇓*i*S	**Sb**	**12 26 55.6**	**-0.2**
	6.4nm,0.6s						
KOTS	**Kotyrbulak**	**0.53**	**236**	P	**Pg**	**12 26 53.4**	**0.0**
	3.6nm,0.3s						
KOTS				S	**Sg**	**12 27 00.9**	**+0.3**
	12nm,0.3s						
KOTS	**Kotyrbulak**	**0.53**	**236**	*e*P	**Pg**	**12 26 53.4**	**0.0**
	baz=36						
KOTS				*e*S	**Sg**	**12 27 00.9**	**+0.3**
	baz=36						
KOTS	**Kotyrbulak**	**0.53**	**236**	*e*P	**Pg**	**12 26 53.4**	**0.0**
	3.6nm,0.3s						
KOTS				*e*S	**Sg**	**12 27 00.9**	**+0.3**
	12nm,0.3s						
CHKK	**Chushkaly**	**0.62**	**302**	P	**Pg**	**12 26 55.0**	**-0.1**
	1.4nm,0.1s						
CHKK				S	**Sg**	**12 27 03.2**	**-0.1**
	16nm,0.2s						
CHKK	**Chushkaly**	**0.62**	**302**	*e*P	**Pg**	**12 26 55.0**	**-0.1**
	baz=2.0						
CHKK				*e*S	**Sg**	**12 27 03.3**	**-0.1**
	baz=2.0						
CHKK	**Chushkaly**	**0.62**	**302**	*e*P	**Pg**	**12 26 55.0**	**-0.1**
	1.4nm,0.1s						
CHKK				*e*S	**Sg**	**12 27 03.2**	**-0.1**
	16nm,0.2s						
ARXS	**Arharly**	**0.69**	**6**	P	**Pg**	**12 26 56.3**	**-0.1**
	3.3nm,0.1s						
ARXS				S	**Sb**	**12 27 05.6**	**-0.5**
	14nm,0.2s						
ARXS	**Arharly**	**0.69**	**6**	*e*P	**Pg**	**12 26 56.3**	**-0.1**
	3.3nm,0.1s						
ARXS				*e*S	**Sb**	**12 27 05.6**	**-0.5**
	14nm,0.2s						
SATY	**Saty**	**0.69**	**133**	P	**Pg**	**12 26 56.5**	**+0.1**
	3.5nm,0.1s						
SATY				S	**Sg**	**12 27 05.9**	**+0.4**
	114nm,0.1s						
SATY	**Saty**	**0.69**	**133**	⇓*i*P	**Pg**	**12 26 56.5**	**+0.1**
	3.5nm,0.1s						
SATY				⇑*i*S	**Sg**	**12 27 05.9**	**+0.4**
	114nm,0.1s						
TNSS	**Tian-Shan**	**0.75**	**229**	P	**Pg**	**12 26 57.7**	**+0.1**
	1.0nm,0.1s						
TNSS				S	**Sb**	**12 27 07.9**	**-0.2**
	3.4nm,0.2s						
TNSS	**Tian-Shan**	**0.75**	**229**	*e*P	**Pg**	**12 26 57.7**	**+0.1**
	baz=29						
TNSS				*e*S	**Sb**	**12 27 08.0**	**-0.2**
	baz=29						
TNSS	**Tian-Shan**	**0.75**	**229**	*e*P	**Pg**	**12 26 57.7**	**+0.1**
	1.0nm,0.1s						
TNSS				*e*S	**Sb**	**12 27 07.9**	**-0.2**
	3.4nm,0.2s						
IZV	**Izvestkoviy**	**0.95**	**239**	P	**Pb**	**12 27 00.9**	**-0.3**
	0.7nm,0.1s						
IZV				S	**Sg**	**12 27 13.7**	**+0.1**
	5.5nm,0.2s						
IZV	**Izvestkoviy**	**0.95**	**239**	*e*P	**Pb**	**12 27 00.9**	**-0.3**
	baz=39						
IZV				*e*S	**Sg**	**12 27 13.8**	**+0.1**
	baz=39						
IZV	**Izvestkoviy**	**0.95**	**239**	*e*P	**Pb**	**12 27 00.9**	**-0.3**
	0.7nm,0.1s						
IZV				*e*S	**Sg**	**12 27 13.7**	**+0.1**
	5.5nm,0.2s						
MTBS	**Maitube**	**1.02**	**247**	P	**Pb**	**12 27 02.3**	**-0.1**
	3.8nm,0.1s						
MTBS				S	**Sg**	**12 27 15.8**	**-0.3**
	15nm,0.3s						
MTBS	**Maitube**	**1.02**	**247**	*e*P	**Pb**	**12 27 02.3**	**-0.1**
	baz=47						
MTBS				*e*S	**Sg**	**12 27 15.8**	**-0.3**
	baz=47						
MTBS	**Maitube**	**1.02**	**247**	*e*P	**Pb**	**12 27 02.3**	**-0.1**
	3.8nm,0.1s						
MTBS				*e*S	**Sg**	**12 27 15.8**	**-0.3**
	15nm,0.3s						
UZB	**Uzynbulak**	**1.02**	**112**	P	**Pb**	**12 27 02.2**	**-0.3**
	0.7nm,0.1s						
UZB				S	**Sb**	**12 27 15.7**	**-0.2**
	7.2nm,0.1s						
UZB	**Uzynbulak**	**1.02**	**112**	*e*P	**Pb**	**12 27 02.2**	**-0.3**
	baz=12						
UZB				*e*S	**Sb**	**12 27 15.7**	**-0.2**
	baz=12						
UZB	**Uzynbulak**	**1.02**	**112**	*e*P	**Pb**	**12 27 02.2**	**-0.3**
	0.7nm,0.1s						
UZB				*e*S	**Sb**	**12 27 15.7**	**-0.2**
	7.2nm,0.1s						
KUU	**Kurty**	**1.06**	**290**	P	**Pb**	**12 27 02.7**	**-0.4**
	1.0nm,0.1s						
KUU				S	**Sb**	**12 27 16.5**	**-0.4**
	5.9nm,0.2s						
KUU	**Kurty**	**1.06**	**290**	*e*P	**Pb**	**12 27 02.7**	**-0.4**
	baz=90						
KUU				*e*S	**Sb**	**12 27 16.5**	**-0.4**

	baz=90						
KUU	**Kurty** 1.0nm,0.1s	**1.06**	**290**	*e*P	**Pb**	**12 27 02.7**	**-0.4**
KUU	5.9nm,0.2s			*e*S	**Sb**	**12 27 16.4**	**-0.4**
PRZ	**Przheval'sk** baz=54	**1.16**	**154**	⇑*i*P	**Pn**	**12 27 03.7**	**-1.2**
PRZ	baz=54			⇑*i*S	**Sb**	**12 27 19.2**	**-0.6**
PDGK	**Podgornoye** 0.4nm,0.2s	**1.31**	**98**	P	**Pb**	**12 27 07.2**	**-0.1**
PDGK	1.3nm,0.1s			S	**Sn**	**12 27 24.4**	**+0.3**
PDGK	**Podgornoye** baz=98	**1.31**	**98**	⇓*e*P	**Pn**	**12 27 06.5**	**-0.3**
PDGK	baz=98			⇓*i*S	**Sb**	**12 27 23.7**	**-0.2**
KST	**Kastek** 1.9nm,0.2s	**1.37**	**250**	P	**Pb**	**12 27 08.4**	**0.0**
KST	3.9nm,0.3s			S	**Sb**	**12 27 26.2**	**+0.4**
KST	**Kastek** baz=50	**1.37**	**250**	*e*P	**Pb**	**12 27 08.4**	**0.0**
KST	baz=50			*e*S	**Sb**	**12 27 26.3**	**+0.4**
KST	**Kastek** 1.9nm,0.2s	**1.37**	**250**	*e*P	**Pb**	**12 27 08.4**	**0.0**
KST	3.9nm,0.3s			*e*S	**Sb**	**12 27 26.2**	**+0.4**
KDJ	**Kajisay** baz=96	**1.46**	**196**	⇑*i*P	**Pn**	**12 27 09.0**	**+0.1**
KDJ	baz=96			⇑*i*S	**Sb**	**12 27 28.2**	**-0.1**
TKM2	**Tokmak 2** baz=49	**1.67**	**249**	⇓*i*P	**Pb**	**12 27 12.7**	**-0.8**
TKM2	baz=49			⇓*i*S	**Sb**	**12 27 34.9**	**+0.5**
BOOM	**Boomskoye usch** baz=32	**1.67**	**232**	⇑*i*P	**Pb**	**12 27 13.1**	**-0.4**
BOOM	baz=32			⇑*i*S	**Sb**	**12 27 35.1**	**+0.7**
ULHL	**Ulahol** baz=21	**1.68**	**221**	⇑*e*P	**Pb**	**12 27 13.2**	**-0.6**
ULHL	baz=21			⇑*i*S	**Sb**	**12 27 35.5**	**+0.6**
TARG	**Taragay, Kyrgy** baz=78	**1.80**	**178**	⇑*e*P	**Pb**	**12 27 15.6**	**-0.3**
TARG	baz=78			⇑*i*S	**Sb**	**12 27 39.6**	**+1.1**
KAPS	**Kapalarasan** 0.4nm,0.2s	**2.11**	**33**	Pg	**Pb**	**12 27 20.8**	**-0.2**
KAPS	2.4nm,0.3s			Lg	Lg	12 27 48.0	
KAPS	**Kapalarasan** 0.5nm,0.2s	**2.11**	**33**	*e*P	**Pb**	**12 27 21.5**	**+0.5**
KAPS	2.0nm,0.2s			*e*S	**Sb**	**12 27 48.8**	**+1.8**
USP	**Ospenovka** baz=65	**2.36**	**265**	⇓*e*P	**Pn**	**12 27 22.9**	**+1.6**
USP	baz=65			⇓*e*S	**Sb**	**12 27 52.5**	**-1.7**

IDC 01 12:32:32.2±5.5, **23°.18S**×**178°.10W**, **h0**^{km}, **mb4.1**/4, **mb1 4.3**/4, **mb1mx3.8**/31, **mbtmp4.0**/4, **Error ellipse: s-maj=268.7km s-min=42.4km az=152.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 1.0nm,0.4s,baz=90,slow=7.3,SNR=58	**43.88**	**259**	P	P	12 40 40.1	-0.6
WRA	**Warramunga Arr** 1.2nm,0.5s,baz=103,slow=8.1,SNR=16	**44.20**	**265**	P	P	12 40 43.5	0.0
FITZ	**Fitzroy Crossi** 0.8nm,0.4s,baz=107,slow=14,SNR=2.9	**52.63**	**264**	P	P	12 41 48.7	+0.3
YKA	**Yellowknife Ar** 0.2nm,0.7s,baz=240,slow=5.9,SNR=4.1	**98.97**	**25**	P	P	12 46 14.0	-0.2

IDC 01 12:33:13.8±1.7, **11°.27S**×**165°.50E**, **h0**^{km}, **mb3.5**/3, **mb1 3.9**/4, **mb1mx3.5**/36, **mbtmp3.6**/4, **ML3.3**/1, **Error ellipse: s-maj=53.6km s-min=31.1km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 0.2nm,0.3s,baz=318,slow=17,SNR=11	**10.78**	**175**	Pn	Pn	12 35 50.0	+0.4
WRA	**Warramunga Arr** 0.8nm,0.9s,baz=82,slow=10,SNR=5.2	**31.18**	**250**	P	P	12 39 35.8	+0.9
ASAR	**Alice Springs** 0.3nm,0.9s,baz=73,slow=9.6,SNR=3.1	**32.48**	**243**	P	P	12 39 45.3	-1.0
ILAR	**Eielson Array** 1.0nm,1.2s,baz=226,slow=7.5,SNR=3.7	**83.80**	**19**	P	P	12 45 44.6	0.0

MEX 01 12:43:01.6±0.9, **16°.08N**×**97°.64W**, **h16**^{km}±999^{km}, **MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.56**	**303**	*e*P	Pg	12 43 10.8	-2.0
PNIG				*e*S	Sg	12 43 18.2	-2.2

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*IDC **01** 12:53:59.5±3.4, 5°.58S×150°.21E, h85^{km}±29^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.6/35, mbtmp3.9/11, Error ellipse: s-maj=24.7km s-min=18.0km az=83.0*

*ISCJB **01** 12:54:03.5±0.8, 5°.66S±0°.10×150°.1E±0°.2, h135^{km}, mb3.6/9, Error ellipse: s-maj=21.4km s-min=13.8km az=4.6*

ISC 01 12:54:05.2±0.9, **5°.7S**±0°.1×**150°.2E**±0°.2, **h135**^{km}, **n12**, σ**1^{s}98**/13, **mb3.8**/9, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower** 0.2nm,0.3s,baz=15,slow=11,SNR=5.2	**14.82**	**195**	P	**Pn**	**12 57 27.7**	**-0.4**
WRA	**Warramunga Arr** 1.8nm,0.4s,baz=51,slow=10,SNR=41	**20.94**	**226**	P	**P**	**12 58 35.9**	**-1.6**
WRA	0.7nm,0.9s,baz=47,slow=2.8,SNR=6.6			ScP	**ScP**	**13 06 09.7**	**+5.3**
DZM	**Mont Dzumac** 8.5nm,0.5s,baz=315,slow=16,SNR=24	**22.64**	**138**	P	**P**	**12 58 54.3**	**-0.8**
ASAR	**Alice Springs** 1.7nm,0.4s,baz=51,slow=9.1,SNR=68	**23.78**	**220**	P	**P**	**12 59 05.4**	**-0.2**
FITZ	**Fitzroy Crossi** 1.8nm,0.3s,baz=49,slow=9.4,SNR=44	**26.96**	**241**	P	**P**	**12 59 33.6**	**-0.7**
STKA	**Stephens Creek** 1.3nm,0.6s,baz=5.4,slow=12,SNR=4.2	**27.27**	**196**	P	**P**	**12 59 37.2**	**+0.2**
SONM	**Songino Array** 0.7nm,0.5s,baz=124,slow=4.4,SNR=5.8	**65.72**	**329**	P	**P**	**13 04 36.7**	**+1.2**
VNDA	**Vanda** 0.9nm,0.9s,baz=0.0,slow=5.1,SNR=3.4	**72.06**	**177**	P	**P**	**13 05 15.3**	**+1.3**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=101,slow=9.5,SNR=3.3	**79.30**	**320**	P	**P**	**13 05 56.0**	**+0.1**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=108,slow=4.7,SNR=2.9	**80.46**	**327**	P	**P**	**13 06 00.3**	**-1.6**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=258,slow=5.5,SNR=4.2	**83.96**	**23**	P	**P**	**13 06 18.8**	**-1.2**
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=84,slow=4.5,SNR=3.4	**148.08**	**286**	PKPbc	**PKPbc**	**13 13 35.3**	**-0.8**

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*KRNET **01** 13:00:33.6±0.1, 42°.50N×79°.65E, h16^{km}, mb2.5*

*SOME **01** 13:00:34.4, 42°.48N×79°.68E, h20^{km}*

*NNC **01** 13:00:34.8±1.1, 42°.55N×79°.62E, h0^{km}, mb2.8, mpv2.8, Error ellipse: s-maj=7.3km s-min=3.7km az=153.0*

ISC 01 13:00:32.5±1.8, **42°.47N**±0°.05×**79°.68E**±0°.05, **h2**^{km}±13^{km}, **n30**, σ**1^{s}24**/55, **8C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode** 4.8nm,0.1s	**0.71**	**347**	P	**Pb**	**13 00 47.8**	**+0.1**
SHLS	29nm,0.4s			S	**Sb**	**13 00 57.4**	**-0.6**
SHLS	**Shalkode** baz=14	**0.71**	**347**	*e*P	**Pb**	**13 00 47.8**	**+0.1**
SHLS	baz=14			*e*S	**Sb**	**13 00 57.4**	**-0.6**
SHLS	**Shalkode** 4.8nm,0.1s	**0.71**	**347**	*e*P	**Pb**	**13 00 47.8**	**+0.1**
SHLS	29nm,0.4s			*e*S	**Sb**	**13 00 57.4**	**-0.6**
UZB	**Uzynbulak** 3.8nm,0.1s	**0.83**	**325**	P	**Pg**	**13 00 49.0**	**+0.5**
UZB	5.4nm,0.2s			S	**Sg**	**13 00 59.7**	**+0.3**
UZB	**Uzynbulak** baz=25	**0.83**	**325**	*e*P	**Pg**	**13 00 49.0**	**+0.5**
UZB	baz=25			*e*S	**Sg**	**13 00 59.6**	**+0.3**
UZB	**Uzynbulak** 3.8nm,0.1s	**0.83**	**325**	*e*P	**Pg**	**13 00 49.0**	**+0.5**
UZB	5.4nm,0.2s			*e*S	**Sg**	**13 00 59.7**	**+0.3**
PDGK	**Podgornoye** 1.8nm,0.1s	**0.87**	**351**	P	**Pb**	**13 00 49.7**	**-0.8**
PDGK	5.0nm,0.2s			S	**Sb**	**13 01 00.6**	**-2.1**
PDGK	**Podgornoye** baz=52	**0.87**	**351**	⇓*i*P	**Pb**	**13 00 49.7**	**-0.8**
PDGK	baz=52			⇓*i*S	**Sb**	**13 01 00.6**	**-2.1**
PRZ	**Przheval'sk** baz=70	**0.94**	**272**	⇑*i*P	**Pb**	**13 00 51.5**	**-0.2**
PRZ	baz=70			⇑*i*S	**Sg**	**13 01 04.0**	**+1.1**
KTMS	**Ketmen** 1.6nm,0.1s	**1.10**	**27**	P	**Pn**	**13 00 54.2**	**-0.9**
KTMS	8.1nm,0.1s			S	**Sg**	**13 01 08.5**	**+0.6**
KTMS	**Ketmen** baz=27	**1.10**	**27**	*e*P	**Pn**	**13 00 54.2**	**-0.9**
KTMS	baz=27			*e*S	**Sg**	**13 01 08.5**	**+0.6**
KTMS	**Ketmen** 1.6nm,0.1s	**1.10**	**27**	*e*P	**Pn**	**13 00 54.2**	**-0.9**
KTMS	8.1nm,0.1s			*e*S	**Sg**	**13 01 08.5**	**+0.6**
DJR	**Jarkent** 0.4nm,0.2s	**1.87**	**2**	P	**Pb**	**13 01 07.8**	**+0.4**
DJR	1.7nm,0.4s			S	**Sg**	**13 01 31.9**	**-0.6**
DJR	**Jarkent** 0.4nm,0.2s	**1.87**	**2**	*e*P	**Pb**	**13 01 07.8**	**+0.4**
DJR	1.7nm,0.4s			*e*S	**Sg**	**13 01 31.9**	**-0.6**
KDJ	**Kajisay** baz=59	**1.88**	**261**	⇓*i*P	**Pb**	**13 01 08.3**	**+0.6**
KDJ	baz=59			⇓*i*S	**Sg**	**13 01 33.2**	**+0.2**
ARXS	**Arharly** 1.8nm,0.2s	**2.21**	**323**	Pg	**Pb**	**13 01 13.6**	**+0.4**
ARXS	3.6nm,0.3s			Lg	Lg	13 01 41.9	
ARXS	**Arharly** 1.8nm,0.2s	**2.21**	**323**	*e*P	**Pb**	**13 01 13.6**	**+0.4**
ARXS	3.6nm,0.3s			*e*S	**Sg**	**13 01 41.9**	**-1.5**
IZV	**Izvestkoviy** 1.2nm,0.1s	**2.33**	**285**	Pg	**Pb**	**13 01 16.3**	**+1.0**
IZV	9.0nm,0.2s			Lg	Lg	13 01 46.3	
IZV	**Izvestkoviy** baz=85	**2.33**	**285**	*e*P	**Pb**	**13 01 16.3**	**+1.0**
IZV	baz=85			*e*S	**Sg**	**13 01 46.3**	**-1.0**
IZV	**Izvestkoviy** 1.2nm,0.1s	**2.33**	**285**	*e*P	**Pb**	**13 01 16.3**	**+1.0**
IZV	9.0nm,0.2s			*e*S	**Sg**	**13 01 46.3**	**-1.0**
CHKK	**Chushkaly** 0.8nm,0.1s	**2.41**	**306**	Pg	**Pb**	**13 01 17.4**	**+0.8**
CHKK	4.4nm,0.2s			Lg	Lg	13 01 48.2	
CHKK	**Chushkaly** baz=6.0	**2.41**	**306**	*e*P	**Pb**	**13 01 17.4**	**+0.8**
CHKK	baz=6.0			*e*S	**Sg**	**13 01 48.2**	**-1.6**
CHKK	**Chushkaly** 0.8nm,0.1s	**2.41**	**306**	*e*P	**Pb**	**13 01 17.4**	**+0.8**
CHKK	4.4nm,0.2s			*e*S	**Sg**	**13 01 48.2**	**-1.6**
ULHL	**Ulahol** baz=66	**2.56**	**266**	⇓*i*P	**Pb**	**13 01 18.0**	**-1.2**
ULHL	baz=66			⇓*i*S	**Sb**	**13 01 50.2**	**-1.0**
KAPS	**Kapalarasan** 0.3nm,0.2s	**2.83**	**355**	Pg	**Pb**	**13 01 24.0**	**+0.2**
KAPS	1.9nm,0.6s			Lg	Lg	13 01 59.8	
KAPS	**Kapalarasan** 0.3nm,0.2s	**2.83**	**355**	*e*P	**Pb**	**13 01 24.0**	**+0.2**
KAPS	1.9nm,0.6s			⇓*e*S	**Sb**	**13 01 59.8**	**+0.9**
NRN	**Naryn** baz=50	**2.93**	**251**	⇑*e*P	**Pb**	**13 01 23.9**	**-1.8**
NRN	baz=50			⇑*i*S	**Sb**	**13 01 59.9**	**-2.2**
TKM2	**Tokmak 2** 2.5nm,0.8s	**3.04**	**280**	⇑Pg	**Pb**	**13 01 29.0**	**+1.5**
TKM2	1.1nm,0.4s			⇑Lg	Lg	13 02 10.6	
TKM2	**Tokmak 2** baz=79	**3.04**	**280**	⇓*i*P	**Pb**	**13 01 24.6**	**-2.9**
TKM2	baz=79			⇓*i*S	**Sb**	**13 02 02.0**	**-3.2**
ARLS	**Aral** baz=63	**4.03**	**263**	⇑*i*P	**Pn**	**13 01 38.2**	**+2.9**
ARLS	baz=63			⇑*i*S	**Sn**	**13 02 25.2**	**+2.0**

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*DDA **01** 13:07:44.9, 42°.15N×40°.88E, h7^{km}±2^{km}, ML3.1*

*TIF **01** 13:07:44.2, 42°.38N×41°.02E, h42^{km}±2^{km}*

*MOS **01** 13:07:46.6±0.0, 42°.51N×41°.22E, h10^{km}, MPVA3.5*

*NORS **01** 13:07:48.1±0.0, 42°.59N×41°.22E, h3^{km}, MPVA2.9*

ISC 01 13:07:43.9±1.3, **42°.35N**±0°.03×**41°.17E**±0°.05, **h2**^{km}±11^{km}, **n12**, σ**0^{s}47**/24, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.84**	**152**	P	**Pn**	**13 08 02.5**	**-0.3**
BATM				S	**Sn**	**13 08 16.0**	**+0.3**
DOMR	**Dombai**	**1.00**	**19**	*e*Pg	**Pg**	**13 08 03.4**	**+0.3**
DOMR				*i* Sg	**Sg**	**13 08 15.7**	**-0.4**
DBOC	**Borcka**	**1.07**	**159**	*i* P	**Pn**	**13 08 05.7**	**-0.2**
DBOC				*i* S	**Sn**	**13 08 21.2**	**-0.1**
DBOC	comp=Z,2µm,0.1s			IAML_P			
ARXR	**Arkhyz**	**1.22**	**4**	*e*Pg	**Pg**	**13 08 07.1**	**-0.2**
ARXR				*e*Sg	**Sg**	**13 08 22.2**	**-0.8**
ARTV	**Artvin**	**1.29**	**154**	*i* P	**Pn**	**13 08 09.7**	**+0.5**
ARTV				*i* S	**Sn**	**13 08 26.6**	**-0.5**
ARTV	comp=Z,1µm,0.1s			IAML_P			
DBAD	**Bademkaya**	**1.38**	**163**	*i* P	**Pg**	**13 08 11.0**	**+0.6**
DBAD				*i* S	**Sn**	**13 08 28.4**	**-0.9**
DBAD	comp=Z,571nm,0.1s			IAML_P			
DAGI	**Agillar**	**1.39**	**156**	*i* P	**Pg**	**13 08 10.3**	**-0.1**
DAGI				*i* S	**Sn**	**13 08 29.5**	**+0.2**
NEY	**Neytrino**	**1.46**	**51**	*i* Pg	**Pn**	**13 08 11.4**	**0.0**
NEY				*e*Sg	**Sb**	**13 08 30.6**	**-0.3**
DDEM	**Demirkent**	**1.52**	**163**	*i* P	**Pn**	**13 08 12.1**	**0.0**
DDEM				*i* S	**Sg**	**13 08 32.3**	**-0.3**
DDEM	comp=Z,741nm,0.1s			IAML_P			
SHA1	**Shidzhatmaz**	**1.77**	**38**	*e*Pg	**Pb**	**13 08 17.1**	**-0.1**
SHA1				*i* Sg	**Sn**	**13 08 39.0**	**+0.1**
LZRR	**Lazarevskoye**	**2.06**	**321**	*i* Pg	**Pb**	**13 08 22.1**	**+0.2**
LZRR				*i* Sg	**Sn**	**13 08 46.6**	**+0.9**
ZEI	**Tsey**	**2.07**	**77**	*e*Pg	**Pg**	**13 08 24.2**	**+0.8**
ZEI				*e*Sg	**Sg**	**13 08 50.2**	**0.0**

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*DDA **01** 13:10:58.2, 38°.69N×43°.60E, h7^{km}±4^{km}, ML3.1*

*ISK **01** 13:10:58.2, 38°.70N×43°.43E, h5^{km}, ML2.7/7*

*ISCJB **01** 13:10:59.1±0.5, 38°.68N±0°.02×43°.53E±0°.04, h2^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=3.2km az=12.2*

ISC 01 13:10:59.1±0.9, **38°.70N**±0°.02×**43°.55E**±0°.03, **h13**^{km}±8^{km}, **n23**, σ**1^{s}15**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.16**	**230**	PG	**Pg**	**13 11 02.9**	**-0.1**
TVAN	**Van**	**0.20**	**213**	*i* P	**Pg**	**13 11 03.6**	**-0.1**
TVAN				*i* S	**Sg**	**13 11 07.3**	**+0.5**
TVAN	comp=Z,45µm,0.2s			IAML_P			
VMUR	**Van-Muradiye**	**0.29**	**4**	*i* P	**Pb**	**13 11 05.4**	**-1.0**
VMUR				*i* S	**Sb**	**13 11 11.3**	**0.0**
VMUR	comp=Z,7µm,0.1s			IAML_P			
CLDR	**Caldiran**	**0.53**	**33**	PG	**Pb**	**13 11 10.2**	**-0.3**
CLDR				SG	**Sb**	**13 11 19.7**	**+1.5**
CLDR	**Caldiran**	**0.53**	**33**	*i* P	**Pb**	**13 11 10.0**	**-0.5**
CLDR				*i* S	**Sn**	**13 11 20.2**	**-1.5**
CLDR	comp=Z,3µm,0.2s			IAML_P			
GEVA	**Gevas**	**0.54**	**225**	*i* P	**Pg**	**13 11 08.5**	**-1.3**
GEVA				*i* S	**Sg**	**13 11 16.4**	**-0.6**
GEVA	comp=Z,5µm,0.1s			IAML_P			
AKDM	**Akdamar-Van**	**0.58**	**230**	PG	**Pg**	**13 11 09.4**	**-1.0**
AKDM				SG	**Sg**	**13 11 17.2**	**-0.9**
ADCV	**BITLIS_Adilcev**	**0.65**	**280**	*i* P	**Pg**	**13 11 11.2**	**-0.7**
ADCV				*i* S	**Sb**	**13 11 23.0**	**+1.4**
ADCV	comp=Z,2µm,0.1s			IAML_P			
BASK	**Baskale_VAN**	**0.74**	**151**	*i* P	**Pg**	**13 11 12.6**	**-0.9**
BASK				*i* S	**Sb**	**13 11 23.7**	**-0.4**
BASK	comp=Z,2µm,0.1s			IAML_P			
DYDN	**Diyadin**	**0.85**	**7**	*i* P	**Pg**	**13 11 15.2**	**-0.5**
DYDN				*i* S	**Sb**	**13 11 28.2**	**+0.8**
DYDN	comp=Z,1µm,0.1s			IAML_P			
MLAZ	**Malazgirt-MUS**	**0.89**	**300**	PG	**Pg**	**13 11 14.7**	**-1.7**
TUTA	**Tutak**	**0.91**	**321**	*i* P	**Pg**	**13 11 15.8**	**-0.9**
TUTA				*i* S	**Sb**	**13 11 29.7**	**+0.7**
AGRB	**Hanur-Agry**	**0.98**	**334**	PG	**Pg**	**13 11 17.4**	**-0.6**
GURO	**Guroymak-BITLI**	**1.19**	**263**	PN	**Pb**	**13 11 20.5**	**-1.2**
YOVA	**Hakkari_Yksek**	**1.25**	**152**	*i* P	**Pb**	**13 11 21.1**	**-1.7**
YOVA				*i* S	**Sn**	**13 11 41.6**	**+2.1**
YOVA	comp=Z,848nm,0.2s			IAML_P			
TASB	**TASBURUN-IGDIR**	**1.39**	**22**	PN	**Pg**	**13 11 26.1**	**+0.2**
EATA	**Eleskirt**	**1.42**	**325**	*i* P	**Pn**	**13 11 25.1**	**+0.1**
EATA				*i* S	**Sg**	**13 11 46.3**	**+1.3**
SRTM	**Siirt_Merkez**	**1.46**	**242**	*i* P	**Pg**	**13 11 26.4**	**-0.7**
SRTM				*i* S	**Sg**	**13 11 48.6**	**+2.5**
SRTM	comp=Z,1µm,0.2s			IAML_P			
SIRT	**Sirnak**	**1.48**	**217**	PN	**Pb**	**13 11 26.3**	**-0.3**
SIRN	**Sırnak**	**1.50**	**217**	*i* P	**Pg**	**13 11 27.7**	**-0.1**
SIRN				*i* S	**Sg**	**13 11 49.9**	**+2.6**
SIRN	comp=Z,2µm,0.2s			IAML_P			
GNI	**Garni**	**1.72**	**32**	PN	**Pg**	**13 11 31.3**	**-0.9**
KOPR	**Koprukoy-ERZUR**	**1.84**	**315**	PN	**Pn**	**13 11 31.2**	**+0.5**
BTMN	**Batman**	**1.96**	**246**	*i* P	**Pn**	**13 11 32.5**	**+0.3**
BTMN				*i* S	**Sg**	**13 12 01.7**	**-0.5**
BTMN	comp=Z,215nm,0.5s			IAML_P			

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*KRNET **01** 13:28:22.9±0.1, 40°.35N×77°.26E, h12^{km}, mb2.1*

*NNC **01** 13:28:29.8±1.5, 40°.56N×77°.23E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=11.1km s-min=6.5km az=159.0*

*SOME **01** 13:28:30.4, 40°.62N×77°.30E, h5^{km}*

ISC 01 13:28:23.3±2.8, **40°.4N**±0°.1×**77°.27E**±0°.05, **h8**^{km}±13^{km}, **n19**, σ**1^{s}22**/28, **8C-13D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy** baz=16	**1.43**	**16**	⇓*e*P	**Pn**	**13 28 49.6**	**-0.3**
TARG	baz=16			⇓*i*S	**Sb**	**13 29 08.8**	**-0.1**
NRN	**Naryn** baz=18	**1.44**	**319**	⇓*e*P	**Pb**	**13 28 49.8**	**-0.8**
NRN	baz=18			⇓*i*S	**Sg**	**13 29 09.2**	**-0.5**
KDJ	**Kajisay** baz=58	**1.77**	**358**	⇓*e*P	**Pb**	**13 28 55.7**	**-0.4**
KDJ	baz=58			⇓*i*S	**Sg**	**13 29 19.6**	**-0.6**
ULHL	**Ulahol** baz=38	**2.04**	**338**	⇑*i*P	**Pb**	**13 28 59.4**	**-1.3**
ULHL	baz=38			⇑*i*S	**Sb**	**13 29 26.3**	**0.0**
KZA	**Kyzart** baz=19	**2.30**	**319**	⇓*e*P	**Pb**	**13 29 02.9**	**-2.3**
KZA	baz=19			⇓*i*S	**Sb**	**13 29 32.4**	**-1.5**
BOOM	**Boomskoye usch** baz=36	**2.35**	**335**	⇑*i*P	**Pn**	**13 29 03.4**	**+1.0**
BOOM	baz=36			⇑*i*S	**Sb**	**13 29 33.3**	**-2.0**
TNSS	**Tian-Shan** 5.1nm,0.5s	**2.69**	**355**	Pg	**Pg**	**13 29 16.6**	**+1.8**
TNSS	7.1nm,0.4s			Lg	Lg	13 29 49.9	
TNSS	**Tian-Shan** 5.1nm,0.5s	**2.69**	**355**	*e*P	**Pg**	**13 29 16.6**	**+1.8**
TNSS	7.1nm,0.4s			*e*S	**Sg**	**13 29 49.9**	**+0.2**
UCH	**Uchtor** baz=13	**2.79**	**313**	⇑*i*P	**Pn**	**13 29 10.2**	**+1.5**
UCH	baz=13			⇑*i*S	**Sn**	**13 29 44.2**	**+1.4**
SATY	**Saty** 1.3nm,0.3s	**2.83**	**17**	Pg	**Pg**	**13 29 18.7**	**+1.2**
SATY	3.4nm,0.5s			Lg	Lg	13 29 53.6	
SATY	**Saty** 1.5nm,0.1s	**2.83**	**17**	*e*P	**Pg**	**13 29 18.7**	**+1.2**
SATY	5.9nm,0.4s			*e*S	**Sg**	**13 29 53.6**	**-0.5**
TKM2	**Tokmak 2** 2.8nm,0.7s	**2.85**	**334**	⇑Lg	Lg	13 29 54.3	
KST	**Kastek** 1.5nm,0.2s	**2.85**	**340**	Pg	**Pg**	**13 29 19.3**	**+1.3**
KST	3.7nm,0.5s			Lg	Lg	13 29 54.4	
KST	**Kastek** 1.5nm,0.2s	**2.85**	**340**	*e*P	**Pg**	**13 29 19.3**	**+1.3**
KST	3.7nm,0.5s			⇑*i*S	**Sg**	**13 29 54.4**	**-0.6**
SFK	**Sufi-Kurgan** 1.2nm,0.4s	**2.91**	**264**	⇓Lg	Lg	13 30 00.7	
UZB	**Uzynbulak** 0.7nm,0.3s	**3.08**	**25**	*e*P	**Pg**	**13 29 23.4**	**+1.1**
UZB	2.5nm,0.3s			*e*S	**Sg**	**13 30 01.3**	**-0.9**
AAK	**Ala-Archa**	**3.09**	**318**	⇓Pg	**Pg**	**13 29 22.6**	**+0.1**
AAK	4.0nm,0.7s			⇓Lg	Lg	13 30 01.2	
PDGK	**Podgornoye** 0.5nm,0.7s	**3.40**	**28**	Pg	**Pg**	**13 29 28.8**	**+0.4**
PDGK	2.1nm,0.7s			Lg	Lg	13 30 11.0	
PDGK	**Podgornoye** 0.9nm,1.0s	**3.40**	**28**	⇓Pg	**Pg**	**13 29 28.2**	**-0.2**
PDGK	4.2nm,0.7s			⇓Lg	Lg	13 30 11.7	

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*ISCJB **01** 13:31:54.8±0.7, 6°.67S±0°.06×129°.95E±0°.08, h146^{km}, mb3.7/3, Error ellipse: s-maj=11.1km s-min=7.8km az=3.0*

*IDC **01** 13:31:55.1±1.6, 6°.65S×130°.00E, h134^{km}±17^{km}, mb3.5/3, mb1 3.7/8, mb1mx3.4/48, mbtmp4.1/8, Error ellipse: s-maj=21.2km s-min=11.5km az=96.0*

ISC 01 13:31:55.5±0.9, **6°.73S**±0°.06×**130°.1E**±0°.1, **h146**^{km}, **n8**, σ**2^{s}32**/12, **mb3.7**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong** 10nm,0.3s,baz=57,slow=20,SNR=54	**5.94**	**12**	P	**Pn**	**13 33 22.2**	**+0.7**
SIJI	6.0nm,0.3s,baz=252,slow=23,SNR=8.4			S	**Sn**	**13 34 25.2**	**-3.4**
BATI	**Baumata** 9.9nm,0.3s,baz=113,slow=4.5,SNR=5.6	**7.21**	**241**	P	**Pn**	**13 33 39.5**	**+1.2**
BATI	11nm,0.3s,baz=30,slow=21,SNR=7.6			S	**Sn**	**13 34 56.8**	**-2.4**
FITZ	**Fitzroy Crossi** 1.3nm,0.3s,baz=24,slow=10,SNR=35	**12.10**	**200**	P	**Pn**	**13 34 43.4**	**+0.2**
FITZ	0.7nm,0.3s,baz=77,slow=15,SNR=3.8			S	Sn	13 36 50.5	-6.3
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=347,slow=13,SNR=35	**13.78**	**163**	P	**Pn**	**13 35 05.5**	**+0.8**
WRA	2.0nm,0.3s,baz=331,slow=23,SNR=12			S	**Sn**	**13 37 33.9**	**-3.5**

ASAR	**Alice Springs**	**17.24**	**168**	P	**Pn**	**13 35 49.9**	**+2.3**
	0.7nm,0.3s,baz=344,slow=8.8,SNR=64						
ASAR				S	**S**	**13 38 57.6**	**-1.6**
	0.5nm,0.3s,baz=356,slow=29,SNR=7.3						
STKA	**Stephens Creek**	**27.24**	**158**	P	**P**	**13 37 28.9**	**+2.9**
	1.5nm,0.8s,baz=341,slow=7.7,SNR=5.2						
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**13 42 39.6**	**+0.5**
	1.4nm,0.5s,baz=116,slow=8.5,SNR=35						
KURBB	**Kurchatov Arra**	**72.31**	**328**	P	**P**	**13 43 04.8**	**-0.3**
	0.4nm,0.6s,baz=132,slow=5.0,SNR=3.7						

KRNET 01 13:41:36.2±0.1**, 42°.54N**×**79°.62E, h30**^{km}**, mb1.8, 2C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**0.79**	**353**	⇓*e*P	Pn	13 41 51.3	-0.2
	baz=53						
PRZ	**Przheval'sk**	**0.91**	**267**	⇓*i*P	Pn	13 41 53.1	0.0
	baz=67						
KDJ	**Kajisay**	**1.86**	**258**	⇓*i*P	Pb	13 42 08.1	-1.5
	baz=58						
KDJ				⇓*i*S	Sb	13 42 31.9	-0.6
	baz=58						
BOOM	**Boomskoye usch**	**2.72**	**270**	⇑*i*P	Pn	13 42 20.5	+2.4
	baz=70						
BOOM				⇑*i*S	Sn	13 42 52.2	+2.1
	baz=70						

KRNET ***01*** *13:41:48.9±0.1, 42°.57N×79°.61E, h20^{km}, mb2.4*
SOME ***01*** *13:41:48.0, 42°.48N×79°.67E, h25^{km}*
NNC ***01*** *13:41:48.0±1.4, 42°.54N×79°.61E, h0^{km}, mb2.7, mpv2.8, Error ellipse: s-maj=9.7km s-min=4.9km az=156.0*

ISC 01 13:41:48.6±1.4**, 42°.55N**±0°.04×**79°.61E**±0°.04**, h2**^{km}±10^{km}**, n41, σ0**^{s}**.93**/75**, 17C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.61**	**350**	P	**Pg**	**13 42 01.2**	**+0.8**
	18nm,0.1s						
SHLS				S	**Sg**	**13 42 10.6**	**+2.2**
	100nm,0.2s						
SHLS	**Shalkode**	**0.61**	**350**	*e*P	**Pg**	**13 42 01.2**	**+0.8**
	baz=19						
SHLS				*e*S	**Sg**	**13 42 10.6**	**+2.2**
	baz=19						
SHLS	**Shalkode**	**0.61**	**350**	*e*P	**Pg**	**13 42 01.2**	**+0.8**
	18nm,0.1s						
SHLS				*e*S	**Sg**	**13 42 10.6**	**+2.2**
	100nm,0.2s						
UZB	**Uzynbulak**	**0.74**	**324**	P	**Pg**	**13 42 02.4**	**-0.4**
	3.8nm,0.1s						
UZB				S	**Sg**	**13 42 12.8**	**+0.5**
	11nm,0.2s						
UZB	**Uzynbulak**	**0.74**	**324**	*e*P	**Pg**	**13 42 02.4**	**-0.4**
	baz=23						
UZB				*e*S	**Sg**	**13 42 12.8**	**+0.5**
	baz=23						
UZB	**Uzynbulak**	**0.74**	**324**	*e*P	**Pg**	**13 42 02.4**	**-0.4**
	3.8nm,0.1s						
UZB				*e*S	**Sg**	**13 42 12.8**	**+0.5**
	11nm,0.2s						
PDGK	**Podgornoye**	**0.78**	**353**	P	**Pg**	**13 42 03.1**	**-0.6**
	1.9nm,0.1s						
PDGK				S	**Sg**	**13 42 14.0**	**+0.3**
	2.2nm,0.2s						
PDGK	**Podgornoye**	**0.78**	**353**	⇑*i*P	**Pg**	**13 42 03.0**	**-0.6**
	baz=53						
PDGK				⇑*i*S	**Sg**	**13 42 13.5**	**-0.2**
	baz=53						
PRZ	**Przheval'sk**	**0.90**	**266**	⇑*i*P	**Pg**	**13 42 05.7**	**-0.2**
	baz=65						
PRZ				⇑*i*S	**Sg**	**13 42 18.3**	**+0.7**
	baz=65						
SATY	**Saty**	**1.02**	**300**	P	**Pg**	**13 42 07.5**	**-0.7**
	1.7nm,0.2s						
SATY				S	**Sg**	**13 42 21.5**	**0.0**
	11nm,0.1s						
SATY	**Saty**	**1.02**	**300**	*e*P	**Pg**	**13 42 07.5**	**-0.7**
	1.7nm,0.2s						
SATY				*e*S	**Sg**	**13 42 21.5**	**0.0**
	11nm,0.1s						
KTMS	**Ketmen**	**1.04**	**31**	P	**Pg**	**13 42 08.1**	**-0.6**
	2.1nm,0.1s						
KTMS				S	**Sg**	**13 42 22.0**	**-0.1**
	3.4nm,0.2s						
KTMS	**Ketmen**	**1.04**	**31**	*e*P	**Pg**	**13 42 08.1**	**-0.6**
	baz=31						
KTMS				*e*S	**Sg**	**13 42 22.1**	**-0.1**
	baz=31						
KTMS	**Ketmen**	**1.04**	**31**	*e*P	**Pg**	**13 42 08.1**	**-0.6**
	2.1nm,0.1s						
KTMS				*e*S	**Sg**	**13 42 22.0**	**-0.1**
	3.4nm,0.2s						
KURS	**Kuram**	**1.41**	**312**	P	**Pn**	**13 42 14.7**	**-0.7**
	0.8nm,0.3s						
KURS				S	**Sn**	**13 42 33.7**	**-0.9**
	1.7nm,0.2s						
KURS	**Kuram**	**1.41**	**312**	*e*P	**Pn**	**13 42 14.7**	**-0.7**
	baz=11						
KURS				*e*S	**Sn**	**13 42 33.7**	**-0.9**
	baz=11						
KURS	**Kuram**	**1.41**	**312**	*e*P	**Pn**	**13 42 14.7**	**-0.7**
	0.8nm,0.3s						
KURS				*e*S	**Sn**	**13 42 33.7**	**-0.9**
	1.7nm,0.2s						
MNBS	**Baschi**	**1.76**	**330**	P	**Pb**	**13 42 21.2**	**-0.6**
	2.6nm,0.2s						
MNBS				S	**Sb**	**13 42 44.6**	**+0.3**
	12nm,0.2s						
MNBS	**Baschi**	**1.76**	**330**	*e*P	**Pn**	**13 42 20.7**	**+0.4**
	2.6nm,0.2s						
MNBS				*e*S	**Sb**	**13 42 44.3**	**0.0**
	12nm,0.2s						
DJR	**Jarkent**	**1.78**	**4**	P	**Pb**	**13 42 21.1**	**-1.0**
	0.9nm,0.2s						
DJR				S	**Sb**	**13 42 45.3**	**+0.4**
	1.5nm,0.2s						
DJR	**Jarkent**	**1.78**	**4**	⇑*i*P	**Pb**	**13 42 21.1**	**-1.0**
	0.9nm,0.2s						
DJR				⇑*i*S	**Sb**	**13 42 45.3**	**+0.4**
	1.5nm,0.2s						
KDJ	**Kajisay**	**1.85**	**258**	⇑*i*P	**Pb**	**13 42 22.6**	**-0.7**
	baz=57						
KDJ				⇑*i*S	**Sb**	**13 42 46.9**	**-0.1**
	baz=57						
ARXS	**Arharly**	**2.11**	**322**	Pg	**Pb**	**13 42 26.3**	**-1.3**
	1.0nm,0.3s						
ARXS				Lg	Lg	13 42 54.2	
	5.2nm,0.5s						
ARXS	**Arharly**	**2.11**	**322**	*e*P	**Pb**	**13 42 26.3**	**-1.3**
	1.0nm,0.3s						
ARXS				*e*S	**Sb**	**13 42 54.2**	**-0.1**
	5.2nm,0.5s						
IZV	**Izvestkoviy**	**2.26**	**283**	Pg	**Pb**	**13 42 29.1**	**-1.1**
	2.4nm,0.2s						
IZV				Lg	Lg	13 42 58.7	
	5.7nm,0.2s						
IZV	**Izvestkoviy**	**2.26**	**283**	*e*P	**Pb**	**13 42 29.1**	**-1.1**
	2.4nm,0.2s						
IZV				*e*S	**Sb**	**13 42 58.7**	**0.0**
	5.7nm,0.2s						
CHKK	**Chushkaly**	**2.32**	**305**	Pg	**Pb**	**13 42 30.5**	**-0.7**
	0.7nm,0.1s						
CHKK				Lg	Lg	13 43 00.8	
	7.8nm,0.2s						
CHKK	**Chushkaly**	**2.32**	**305**	*e*P	**Pb**	**13 42 30.5**	**-0.7**
	0.7nm,0.1s						
CHKK				*e*S	**Sb**	**13 43 00.8**	**+0.5**
	7.8nm,0.2s						
ULHL	**Ulahol**	**2.52**	**264**	⇓*i*P	**Pn**	**13 42 31.6**	**+0.9**
	baz=64						
ULHL				⇓*i*S	**Sb**	**13 43 03.3**	**-2.8**
	baz=64						
BOOM	**Boomskoye usch**	**2.72**	**270**	⇑*i*P	**Pn**	**13 42 34.7**	**+1.3**
	baz=70						
BOOM				⇑*i*S	**Sn**	**13 43 07.6**	**+0.7**
	baz=70						
KST	**Kastek**	**2.73**	**282**	Pg	**Pb**	**13 42 37.0**	**-1.3**
	1.7nm,0.2s						
KST				Lg	Lg	13 43 12.6	
	2.0nm,0.4s						
KST	**Kastek**	**2.73**	**282**	*e*P	**Pb**	**13 42 37.0**	**-1.3**
	1.7nm,0.2s						
KST				*e*S	**Sb**	**13 43 12.7**	**+0.4**
	2.0nm,0.4s						
KAPS	**Kapalarasan**	**2.74**	**356**	Pg	**Pb**	**13 42 37.6**	**-0.7**
	0.3nm,0.1s						
KAPS				Lg	Lg	13 43 13.6	
	1.1nm,0.1s						
KAPS	**Kapalarasan**	**2.74**	**356**	*e*P	**Pb**	**13 42 37.6**	**-0.7**
	0.3nm,0.1s						
KAPS				⇓*e*S	**Sb**	**13 43 13.6**	**+1.2**
	1.1nm,0.1s						
KUU	**Kurty**	**2.74**	**300**	Pg	**Pb**	**13 42 37.5**	**-0.9**
	1.4nm,0.2s						
KUU				Lg	Lg	13 43 12.9	
	5.0nm,0.4s						
KUU	**Kurty**	**2.74**	**300**	*e*P	**Pb**	**13 42 37.5**	**-0.9**
	1.4nm,0.2s						
KUU				⇓*i*S	**Sb**	**13 43 12.9**	**+0.5**
	5.0nm,0.4s						
NRN	**Naryn**	**2.92**	**249**	⇑*i*P	**Pn**	**13 42 37.7**	**+1.4**
	baz=48						
NRN				⇑*i*S	**Sn**	**13 43 13.3**	**+1.2**
	baz=48						
TKM2	**Tokmak 2**	**2.98**	**278**	⇓Pg	**Pb**	**13 42 42.0**	**-0.6**
	1.4nm,0.6s						
TKM2				⇑Lg	Lg	13 43 22.5	
	1.9nm,0.4s						
TKM2	**Tokmak 2**	**2.98**	**278**	⇑*i*P	**Pn**	**13 42 38.1**	**+1.0**
	baz=78						
TKM2				⇑*i*S	**Sn**	**13 43 14.0**	**+0.5**
	baz=78						
KZA	**Kyzart**	**3.27**	**263**	⇓*e*P	**Pn**	**13 42 42.3**	**+1.0**
	baz=63						
KZA				⇓*e*S	**Sn**	**13 43 21.5**	**+0.6**
	baz=63						
ARLS	**Aral**	**3.99**	**262**	⇑*i*P	**Pn**	**13 42 52.1**	**+1.2**
	baz=62						
ARLS				⇑*i*S	**Sn**	**13 43 38.2**	**-0.1**
	baz=62						

IDC 01 14:04:35.9±1.3**, 2°.05N**×**126°.22E, h0**^{km}**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/38**, mbtmp3.6**/5**, Error ellipse: s-maj=105.1km s-min=22.5km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.03**	**182**	P	Pn	14 09 11.8	-0.5
	1.3nm,0.9s,baz=4.6,slow=10,SNR=6.1						
WRA	**Warramunga Arr**	**23.26**	**160**	P	P	14 09 44.5	-0.7
	1.2nm,0.4s,baz=336,slow=10,SNR=44						
WRA				PcP	PcP	14 13 32.7	-0.6
	0.2nm,0.5s,baz=338,slow=2.2,SNR=3.4						
ASAR	**Alice Springs**	**26.63**	**164**	P	P	14 10 17.1	+0.6
	0.2nm,0.3s,baz=343,slow=11,SNR=14						
ASAR				PcP	PcP	14 13 40.1	-0.6
	0.3nm,0.4s,baz=352,slow=2.2,SNR=8.8						
STKA	**Stephens Creek**	**36.76**	**158**	P	P	14 11 44.5	-0.7
	1.4nm,0.6s,baz=332,slow=9.5,SNR=4.4						
MKAR	**Makanchi Array**	**58.65**	**326**	P	P	14 14 35.1	+0.1
	0.2nm,0.3s,baz=122,slow=6.6,SNR=6.6						

NIED ***01*** *14:06:00, 35°.60N×140°.10E, h71^{km}, Mw4.6 Best double couple: $M_0$8.93000×10^{15} NP1:ϕ_s170.00000°, δ24.00000°, λ80.00000°. NP2:ϕ_s0.00000°, δ66.00000°, λ94.00000°.*
BJI ***01*** *14:06:42.7, 35°.46N×140°.46E, h72^{km}, mB4.9/33, mb4.6/51, Ms4.2/16, Ms7 3.9/16*
MOS ***01*** *14:06:44.0±1.2, 35°.54N×140°.12E, h55^{km}, mb4.9/42, Error ellipse: s-maj=9.0km s-min=5.1km az=109.0*
ISCJB ***01*** *14:06:46.8±0.3, 35°.54N±0°.02×140°.06E±0°.03, h78^{km}±2^{km}, mb4.5/98, Error ellipse: s-maj=4.5km s-min=3.6km az=168.8*
JMA ***01*** *14:06:47.5±0.2, 35°.62N×140°.04E, h71^{km}±2^{km}, M4.4 Broadband fault plane solution: P waves. NP1: ϕ_s2.00000°, δ66.00000°, λ91.00000°. NP2:ϕ_s179.00000°, δ24.00000°, λ88.00000°. Principal axes: T Plg69.0000°, Azm274.0000°; N Plg1.0000°, Azm181.0000°; P Plg21.0000°, Azm91.0000°;*
JMA Felt III J1.
NEIC ***01*** *14:06:47.5±0.6, 35°.54N×140°.11E, h70^{km}±5^{km}, mb4.8/20 Error ellipse: s-maj=7.4km s-min=5.4km az=90.0*
NEIC Felt [IV] at Chiba and [III] at Tokyo. Felt in much of east-central Honshu. Recorded [3 JMA] in Chiba, Kanagawa and Tokyo.
IDC ***01*** *14:06:48.1±1.1, 35°.52N×139°.98E, h74^{km}±10^{km}, mb4.1/28, mb1 4.3/32, mb1mx4.2/45, mbtmp4.4/32, MS3.4/21, Ms1 3.4/21, ms1mx3.2/46, Error ellipse: s-maj=12.6km s-min=7.5km az=83.0*

ISC 01 14:06:47.1±0.4**, 35°.58N**±0°.03×**140°.13E**±0°.04**, h69**^{km}±3^{km}**, h69**^{km}**:pP-P, n247, σ1**^{s}**.61**/280**, mb4.6**/100**, 17C-16D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.17**	**160**	⇑P	**Pn**	**14 06 59.2**	**+1.7**
JCN				S	**Sn**	**14 07 08.1**	**+3.1**
JSMT	**Sammumatsuo**	**0.27**	**76**	P	**Pn**	**14 06 59.7**	**+1.8**
TOK	**Tokyo**	**0.32**	**290**	P	**Pn**	**14 06 59.4**	**+1.1**
TOK				S	**Sn**	**14 07 08.5**	**+2.1**
BSO3	**Boso 3**	**0.84**	**158**	⇑P	**Pn**	**14 07 04.3**	**+1.0**
JOD2	**Odawara 2**	**0.91**	**250**	⇓P	**Pn**	**14 07 04.0**	**-0.4**
JOD2				S	**Sn**	**14 07 15.8**	**-1.4**
JAG	**Ashikaga**	**1.01**	**327**	⇓P	**Pn**	**14 07 05.6**	**-0.1**
JAG				S	**Sn**	**14 07 18.7**	**-0.7**
JIM2	**Oshima 3**	**1.03**	**214**	⇓P	**Pn**	**14 07 05.5**	**-0.5**
JIM2				S	**Sn**	**14 07 19.4**	**-0.6**
JRY	**Ryogami san**	**1.09**	**294**	⇓P	**Pn**	**14 07 06.9**	**+0.2**
BSO1	**Boso 1**	**1.16**	**143**	⇑P	**Pn**	**14 07 08.0**	**+1.0**
JFNN	**Fujinakano**	**1.24**	**252**	P	**Pn**	**14 07 08.5**	**-0.1**
JFNN				S	**Sn**	**14 07 24.1**	**-0.6**
JYN	**Shimob**	**1.29**	**267**	⇓P	**Pn**	**14 07 09.1**	**-0.3**
JYN				*e*S	**Sn**	**14 07 25.4**	**-0.7**
JIZS	**Izushimoda**	**1.34**	**230**	⇓P	**Pn**	**14 07 09.7**	**-0.2**
JIZS				S	**Sn**	**14 07 26.0**	**-1.0**
JKT	**Katashina**	**1.38**	**329**	⇓P	**Pn**	**14 07 10.4**	**-0.2**
JKT				S	**Sn**	**14 07 27.9**	**-0.3**
MJAR	**Matsushiro Arr**	**1.83**	**302**	P	**Pn**	**14 07 16.0**	**-0.5**
	18nm,0.3s,baz=157,slow=14,SNR=826						
MJAR				S	**Sn**	**14 07 40.0**	**+1.3**
	22nm,0.3s,baz=121,slow=25,SNR=14						
MJAR				LR	LR	14 07 56.2	
	comp=Z,882nm,18.9s,baz=105,slow=39						
MAJO	**Matsushiro**	**1.83**	**302**	*e*Pn	**Pn**	**14 07 16.9**	**+0.4**
MAJO				*e*Sn	**Sn**	**14 07 37.3**	**-1.5**
MAJO	**Matsushiro**	**1.83**	**302**	*d i*P	**Pn**	**14 07 16.6**	**+0.1**
MAT	**Matsushiro**	**1.83**	**302**	P	**Pn**	**14 07 16.9**	**+0.4**
MAT				*e*S	**Sn**	**14 07 39.9**	**+1.1**
MJB9	**Matsu-Tunnel**	**1.83**	**302**	*e*Pn	**Pn**	**14 07 16.9**	**+0.4**
MJB9				*e*Sn	**Sn**	**14 07 37.3**	**-1.6**
JHJ	**Hachijo jima 2**	**2.47**	**187**	P	**Pn**	**14 07 25.9**	**+0.8**
	355nm,0.3s,baz=130,slow=22,SNR=41						
JHJ				S	**Sn**	**14 07 53.9**	**-0.3**
	708nm,0.3s,baz=255,slow=23,SNR=12						
JHJ2	**Mitsune**	**2.47**	**186**	*e*Pn	**Pn**	**14 07 25.5**	**+0.3**
JHJ2				*e*Sn	**Sn**	**14 07 54.1**	**-0.2**
INU	**Inuyama**	**2.55**	**266**	*e*Pn	**Pn**	**14 07 26.7**	**+0.5**
INU				*e*Sn	Sn	14 07 43.0	-13
ERM	**Erimo**	**6.85**	**19**	*e*Pn	**Pn**	**14 08 25.1**	**+0.3**
ERM	**Erimo**	**6.85**	**19**	⇑*i*P	**Pn**	**14 08 23.2**	**-1.6**
JNU	**Nakatsue**	**8.03**	**255**	*e*Pn	**Pn**	**14 08 42.6**	**+1.5**
JNU	**Nakatsue**	**8.03**	**255**	P	**Pn**	**14 08 41.8**	**+0.7**
	1.6nm,0.3s,baz=32,slow=9.5,SNR=13						
JNU				LR	LR	14 12 27.9	
	comp=Z,200nm,19.0s,baz=117,slow=43						
CBIJ	**Chichi jima**	**8.64**	**168**	P	**Pn**	**14 08 47.2**	**-2.2**
CBIJ				S	**Sn**	**14 10 17.7**	**-7.5**
JCJ	**Chichijima**	**8.64**	**168**	P	**Pn**	**14 08 47.2**	**-2.2**
	62nm,0.3s,baz=180,slow=24,SNR=15						
JCJ				S	**Sn**	**14 10 17.7**	**-7.6**
	32nm,0.3s,baz=0.0,slow=20,SNR=3.5						
ASAJ	**Asahikawa**	**8.73**	**12**	P	**Pn**	**14 08 48.6**	**-2.0**
	2.6nm,0.3s,baz=216,slow=13,SNR=48						
ASAJ				S	**Sn**	**14 10 22.0**	**-5.5**
	1.0nm,0.3s,baz=108,slow=19,SNR=2.8						
YUK	**Yuzh-Kuril'sk**	**9.52**	**26**	⇑*i*P	**Pn**	**14 08 57.4**	**-4.0**
YUK				*i* S	**Sn**	**14 10 38.7**	**-8.0**
YUK				pmax	pmax		
	comp=Z,81nm,0.7s						
YUK				pmax	pmax		
	comp=N,46nm,0.8s						
YUK				pmax	pmax		
	comp=E,65nm,0.8s						
SHO	**Shikotan**	**9.75**	**30**	*e*P	Pn	14 08 58.8	-5.7
SHO				pmax	pmax		
	comp=Z,23nm,0.3s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.3s						
KSRS	**Korea Array**	**10.00**	**284**	P	**Pn**	**14 09 09.4**	**+1.5**
	comp=E,0.7nm,0.3s,baz=101,slow=14,SNR=26						
KSRS				LR	LR	14 12 53.2	
	comp=E,311nm,20.7s,baz=120,slow=37						
KS01	**Wonju Array Si**	**10.03**	**284**	*e*Pn	**Pn**	**14 09 11.2**	**+2.9**
KS15	**Wonju Array Si**	**10.03**	**284**	*e*Pn	**Pn**	**14 09 11.2**	**+2.9**
KSAR	**Wonju Array Be**	**10.03**	**284**	P	**Pn**	**14 09 09.4**	**+1.1**
KSAR	**Wonju Array Be**	**10.03**	**284**	P	**Pn**	**14 09 09.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**10.64**	**327**	P	**Pn**	**14 09 19.0**	**+2.4**
	comp=E,0.1nm,0.3s,baz=142,slow=10.0,SNR=5.5						
USRK				LR	LR	14 13 22.0	
	comp=E,81nm,19.4s,baz=146,slow=37						
KUR	**Kuril'sk**	**11.30**	**29**	*e*P	**Pn**	**14 09 25.0**	**-0.6**
KUR				*e*S	**Sn**	**14 11 23.5**	**-6.5**
KUR				pmax	pmax		
	comp=N,15nm,0.8s						
KUR				pmax	pmax		
	comp=Z,38nm,0.8s						
KUR				pmax	pmax		
	comp=E,14nm,0.4s						
KUR				smax	smax		
	comp=E,51nm,0.5s						
KUR				smax	smax		
	comp=N,31nm,0.3s						
YSS	**Yuzh-Sakhalins**	**11.53**	**9**	*e*P	**Pn**	**14 09 30.0**	**+1.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ	**Mudanjiang**	**12.10**	**321**	P	**Pn**	**14 09 39.4**	**+2.9**
MDJ				pmax	pmax		
	comp=Z,310nm,2.9s						
CN2	**Changchun**	**13.96**	**310**	*e*P	**Pn**	**14 10 03.5**	**+2.0**
KLR	**Kul'dur**	**14.97**	**338**	⇓*i*P	**Pn**	**14 10 13.3**	**-1.3**
KLR	**Kul'dur**	**14.97**	**338**	P	**Pn**	**14 10 12.3**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=164,slow=6.6,SNR=7.6						
KLR				LR	LR	14 15 44.2	
	comp=Z,74nm,21.0s,baz=146,slow=36						
TYV	**Tymovskoe**	**15.39**	**6**	*e*P	**P**	**14 10 23.7**	**+0.5**
TYV				pmax	pmax		
	comp=Z,23nm,1.1s						
NKL	**Nikolayevsk**	**17.57**	**1**	*e*P	P	14 10 57.0	+10
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
NJ2	**Nanjing**	**18.02**	**265**	*e*P	**P**	**14 10 52.2**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
ZEA	**Zeya**	**20.28**	**338**	*e*P	**P**	**14 11 16.6**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
PETK	**Petropavlovsk-**	**21.46**	**30**	P	**P**	**14 11 32.0**	**+2.4**
	comp=Z,10nm,1.0s,baz=209,slow=8.5,SNR=7.8						
PETK				LR	LR	14 19 39.0	
	comp=Z,37nm,20.4s,baz=221,slow=36						
PET	**Petropavlovsk**	**21.80**	**31**	*e*P	**P**	**14 11 35.3**	**+2.1**
PET				*e*S	**S**	**14 15 30.6**	**+0.4**
PET				pmax	pmax		
	comp=Z,20nm,1.3s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PET				MLR	MLR		
	comp=Z,400nm,16.0s						
GUMO	**Guam**	**22.31**	**168**	LR	LR	14 19 52.2	
	comp=Z,65nm,18.7s,baz=86,slow=35						
HHC	**Hu-ho-hao-te**	**23.00**	**292**	*e*P	**P**	**14 11 44.8**	**-1.4**
HHC				S	**S**	**14 15 49.8**	**-1.6**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
HHC				LR	LR		
	comp=Z,180nm,10.1s						
HHC				LR	LR		
	comp=Z,130nm,10.2s						
HHC				LR	LR		
	comp=Z,270nm,13.0s						
MA2	**Magadan**	**25.00**	**13**	*e*P	**P**	**14 12 05.1**	**+0.9**
	comp=Z,14nm,0.7s						
MA2	**Magadan**	**25.00**	**13**	*i* P	**P**	**14 12 05.4**	**+1.2**
MA2				pmax	pmax		
	comp=Z,13nm,0.8s						
MA2	**Magadan**	**25.00**	**13**	P	**P**	**14 12 05.4**	**+1.2**
	comp=Z,14nm,0.7s,baz=194,slow=8.0,SNR=20						
MA2				LR	LR	14 22 35.4	
	comp=Z,39nm,18.8s,baz=100,slow=38						
XAN	**Xi'an**	**25.62**	**276**	P	**P**	**14 12 09.5**	**-0.7**
XAN				pP	pP	14 12 25.4	-1.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,160nm,5.2s						
YAK	**Yakutsk**	**27.28**	**349**	*e*P	**P**	**14 12 23.3**	**-1.4**
YAK				*e**PP	**sP**	**14 12 48.0**	**-1.3**
YAK				*e*		14 15 41.4	
YAK				*e*S	**S**	**14 16 58.9**	**0.0**
YAK				*e*SS	SS	14 18 20.2	-36
YAK				pmax	pmax		
	comp=Z,65nm,1.0s						
YAK				pmax	pmax		
	comp=N,62nm,1.4s						
YAK				pmax	pmax		
	comp=E,20nm,1.3s						
YAK				pmax	pmax		
	comp=Z,50nm,0.9s						
YAK				pmax	pmax		
	comp=N,60nm,1.4s						
YAK				pmax	pmax		
	comp=E,78nm,1.6s						
YAK				smax	smax		
	comp=N,280nm,3.0s						
YAK				smax	smax		
	comp=E,483nm,4.2s						
SONA1	**Songino Array**	**27.77**	**307**	*e*P	**P**	**14 12 28.8**	**-0.8**
SONM	**Songino Array**	**27.78**	**307**	P	**P**	**14 12 28.3**	**-1.2**
	comp=E,2.5nm,0.7s,baz=108,slow=9.3,SNR=18						
SONM				LR	LR	14 23 45.4	
	comp=E,132nm,19.1s,baz=114,slow=37						
BOD	**Bodaibo**	**28.24**	**330**	*e*P	**P**	**14 12 32.3**	**-1.0**
BOD				pmax	pmax		
	comp=Z,14nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.36**	**117**	T	T	14 42 05.5	
	baz=309,slow=75,SNR=62						
H11N1	**WAKE ISLAND Hy**	**28.36**	**117**	T	T	14 42 06.0	
	baz=309,slow=75,SNR=68						
H11N3	**WAKE ISLAND Hy**	**28.38**	**117**	T	T	14 42 06.4	
	baz=309,slow=75,SNR=62						
SEY	**Seymchan**	**28.42**	**12**	⇑*i*P	**P**	**14 12 35.5**	**+0.6**
SEY	**Seymchan**	**28.42**	**12**	P	**P**	**14 12 35.2**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=218,slow=6.1,SNR=16						
H11S3	**WAKE ISLAND Hy**	**29.00**	**119**	T	T	14 42 39.4	
	baz=312,slow=75,SNR=68						
H11S1	**WAKE ISLAND Hy**	**29.00**	**119**	T	T	14 42 47.2	
	baz=312,slow=75,SNR=70						
H11S2	**WAKE ISLAND Hy**	**29.02**	**119**	T	T	14 42 53.8	
	baz=312,slow=75,SNR=65						
LZH	**Lanzhou**	**29.32**	**282**	*e*P	P	14 12 49.8	+6.4
LZH				pP	sP	14 13 08.6	+0.6
LZH				sP	pP	14 13 16.8	+17
LZH				PP	**PP**	**14 13 53.2**	**+2.7**
LZH				*e*S	**S**	**14 17 34.3**	**+2.4**
LZH				sS	sS	14 18 04.1	+4.0
LZH				SS	**ScP**	**14 19 18.5**	**-5.5**
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,99nm,4.6s						
LZH				LR	LR		
	comp=N,1µm,15.4s						
LZH				LR	LR		
	comp=E,1µm,15.4s						
LZH				LR	LR		
	comp=Z,1µm,17.1s						
GYA	**Guiyang**	**29.97**	**262**	P	**P**	**14 12 46.9**	**-2.3**
GYA				pP	pP	14 13 07.0	+1.3
GYA				PP	**PnPn**	**14 13 49.2**	**+0.8**
GYA				S	**S**	**14 17 40.0**	**-2.2**
GYA				sS	sS	14 18 10.6	+0.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						

ZAK	Zakamensk	30.39	311	eP	P	14 12 51.7	-0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TLY	Talaya	30.53	313	iP	P	14 12 54.1	+0.3
CD2	Chengdu	30.66	272	P	P	14 12 54.5	-0.6
CD2				S	S	14 17 51.2	-1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
CD2				LR	LR		
	comp=Z,290nm,15.4s						
CD2				LR	LR		
	comp=Z,300nm,11.9s						
GTA	Gaotai	32.03	289	eP	P	14 13 07.2	0.0
GTA				pP	pP	14 13 24.4	+0.6
GTA				sP	sP	14 13 34.4	+2.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMI	Kunming	33.73	262	P	P	14 13 25.2	+2.9
KMI				pmax	pmax		
	comp=Z,14nm,1.2s						
BILL	Bilibino	35.71	16	eP	P	14 13 39.1	+0.5
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIXI	Tiksi	36.62	354	eP	P	14 13 46.5	+0.3
	comp=Z,5.4nm,0.8s						
TIXI	Tiksi	36.62	354	iP	P	14 13 46.6	+0.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SKNT	Sakolnakorn	37.06	249	P	P	14 13 50.3	-0.4
	comp=Z,5.0nm,0.9s						
NONG	Nongkai	37.06	252	P	P	14 13 50.0	-0.7
	comp=Z,0.7nm,0.9s						
CHAI	Chaiyaphum	39.23	250	P	P	14 14 07.6	-1.3
	comp=Z,7.5nm,1.0s						
UTTA	Uttaradit	39.26	254	P	P	14 14 09.0	-0.2
	comp=Z,2.3nm,1.0s						
CMMT	Chiang Mai	39.93	256	P	P	14 14 17.4	+2.6
	comp=Z,3.7nm,0.8s						
CHTO	Chiang Mai	39.94	256	P	P	14 14 17.5	+2.7
	comp=Z,17nm,0.8s						
CMAR	Chiang Mai Arr	40.13	256	P	P	14 14 15.8	-0.6
CMAR						14 16 20.7	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,44nm,18.8s						
CMAR	Chiang Mai Arr	40.13	256	P	P	14 14 15.8	-0.6
	comp=Z,1.2nm,0.8s,baz=48,slow=7.3,SNR=11						
CMAR				PcP	PcP	14 16 20.7	+1.0
	comp=Z,1.2nm,0.9s,baz=20,slow=1.8,SNR=7.5						
CMAR				LR	LR	14 32 42.4	
	comp=Z,44nm,18.8s,baz=50,slow=39						
SRAK	Srakaew	40.35	248	P	P	14 14 14.2	-4.0
	comp=Z,33nm,0.9s						
DGZ	Jazzator, Alta	40.42	307	iP	P	14 14 19.5	+0.8
DGZ				pmax	pmax		
	comp=Z,16nm,1.0s						
WMQ	Urumqi	40.59	298	P	P	14 14 20.6	+0.6
WMQ				pP	pP	14 14 38.9	+1.9
WMQ				sP	sP	14 14 49.8	+4.8
WMQ				pmax	pmax		
	comp=Z,41nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,450nm,5.3s						
WMQ				LR	LR		
	comp=Z,150nm,21.1s						
WMQ				LR	LR		
	comp=Z,140nm,20.5s						
WMQ				LR	LR		
	comp=Z,100nm,19.7s						
UTHA	Uthaitani	41.39	252	P	P	14 14 29.2	+2.4
	comp=Z,2.0nm,1.0s,comp=Z,162nm						
ZAA0	Zalesovo Array	42.15	314	eP	P	14 14 32.8	+0.3
	comp=Z,16nm,1.0s						
ZALV	Zalesovo Beam	42.15	314	eP	P	14 14 32.2	-0.3
ZALV				PcP	PcP	14 16 25.9	+0.2
ZALV	Zalesovo Beam	42.15	314	eP	P	14 14 32.2	-0.3
ZALV						14 16 25.9	
ZALV	Zalesovo Beam	42.15	314	P	P	14 14 32.7	+0.2
	comp=Z,10.0nm,0.7s,baz=92,slow=6.5,SNR=52						
ZALV				PcP	PcP	14 16 25.9	+0.2
	comp=Z,3.7nm,0.7s,baz=86,slow=2.7,SNR=6.1						
ZALV				LR	LR	14 31 41.4	
	comp=Z,22nm,18.6s,baz=54,slow=36						
PHET	Kaeng Krachan	42.86	249	P	P	14 14 39.1	+0.3
	comp=Z,6.4nm,0.8s,comp=Z,325nm						
NVS	Novosibirsk	43.11	315	⇓iP	P	14 14 40.9	+0.6
NVS				i		14 15 01.7	
NVS				pmax	pmax		
	comp=Z,11nm,0.8s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,10.0nm,0.9s						
MK01	Makanchi Array	44.02	303	eP	P	14 14 47.8	0.0
MK31	Makanchi Array	44.03	303	eP	P	14 14 48.2	+0.4
MK31	Makanchi Array	44.03	303	eP	P	14 14 48.2	+0.4
MKAR	Makanchi Array	44.03	303	eP	P	14 14 48.2	+0.4
	comp=E,78nm,0.8s						
MKAR				PcP	PcP	14 16 32.0	-0.2
MKAR	Makanchi Array	44.03	303	eP	P	14 14 48.2	+0.4
MKAR						14 16 32.0	
MKAR				pmax	pmax		
	comp=Z,78nm,0.8s						
MKAR	Makanchi Array	44.03	303	P	P	14 14 47.6	-0.2
	comp=Z,12nm,0.8s,baz=91,slow=10,SNR=72						
MKAR				PcP	PcP	14 16 32.0	-0.2
	comp=Z,0.9nm,0.7s,baz=111,slow=3.2,SNR=2.3						
MKAR				LR	LR	14 33 38.4	
	comp=Z,92nm,18.2s,baz=78,slow=37						
NRIK	Noril'sk	44.16	336	P	P	14 14 48.6	0.0
	comp=Z,14nm,1.0s,baz=108,slow=12,SNR=11						
NRIK				PcP	PP	14 16 32.6	+0.3
	comp=Z,4.1nm,0.7s,baz=157,slow=2.7,SNR=3.5						
NRIK				LR	LR	14 33 28.8	
	comp=Z,43nm,19.2s,baz=300,slow=36						
MAKZ	Makanchi	44.24	303	eP	P	14 14 49.9	+0.4
	comp=Z,12nm,0.8s						
MAKZ	Makanchi	44.24	303	eP	P	14 14 49.9	+0.4
MAKZ				pmax	pmax		
	comp=Z,12nm,0.8s						
KURK	Kurchatov	46.03	309	eP	P	14 15 03.6	0.0
	comp=Z,36nm,0.8s						
KURK	Kurchatov	46.03	309	c iP	P	14 15 03.4	-0.2
KURK				pmax	pmax		
	comp=Z,33nm,0.9s						
RAMN	Ramite	46.08	275	eP	P	14 15 04.2	-0.5
	comp=Z,48nm,0.8s						
JIRN	Jiri	46.12	276	eP	P	14 15 05.1	0.0
	comp=Z,74nm,0.9s						
GUN	Gumba	46.28	276	eP	P	14 15 06.3	0.0
	comp=Z,40nm,0.9s						
PKI	Pulchoki	46.79	276	eP	P	14 15 09.8	-0.5
	comp=Z,19nm,0.9s						
PKIN	Phulchoki	46.80	276	eP	P	14 15 09.8	-0.5
	comp=Z,12nm,0.9s						
KKN	Kakani	46.81	277	eP	P	14 15 10.1	-0.2
	comp=Z,27nm,0.9s						
DMN	Daman	47.02	276	eP	P	14 15 11.6	-0.4
	comp=Z,18nm,1.0s						
DANN	Dangsing	47.81	278	eP	P	14 15 18.3	+0.1
	comp=Z,44nm,0.6s						
BATI	Baumata	48.12	202	P	P	14 15 20.1	-0.1
	comp=Z,16nm,0.7s,baz=23,slow=2.6,SNR=4.0						
KOLN	Koldanda	48.18	277	eP	P	14 15 21.0	+0.1
	comp=Z,40nm,1.2s						
KDJ	Kajisay	48.48	298	eP	P	14 15 24.7	+1.7
	comp=Z,7.4nm,0.9s						
KDJ	Kajisay	48.48	298	eP	P	14 15 24.7	+1.7
KDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PYUN	Piuthan	48.54	278	eP	P	14 15 23.7	0.0
	comp=Z,68nm,0.9s						
KDAK	Kodiak Island	48.87	41	LR	LR	14 33 39.4	
	comp=Z,74nm,21.8s,baz=260,slow=33						
ULHL	Ulahol	49.13	298	P	P	14 15 29.0	+0.9
	SNR=5.2						
COEN	Coen	49.35	176	eP	P	14 15 30.2	+0.6
	comp=Z,11nm,0.9s						
TKM2	Tokmak 2	49.42	299	P	P	14 15 31.3	+1.0
	SNR=10						
KZA	Kyzart	49.88	298	P	P	14 15 35.5	+1.5
	SNR=14						
KBK	Karagaybulak	49.95	299	P	P	14 15 34.9	+0.7
	SNR=19						
KSH	Kashi	50.06	295	P	P	14 15 38.2	+3.1
KSH				sP	sP	14 16 02.0	+1.6
KSH				S	S	14 22 41.7	+0.5
KSH				sS	sS	14 23 14.6	+3.7
KSH				SS	SS	14 26 14.5	-0.2
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,300nm,5.7s						
KSH				LR	LR		
	comp=Z,130nm,4.5s						
KSH				LR	LR		
	comp=Z,140nm,5.2s						
KSH				LR	LR		
	comp=Z,300nm,5.9s						
USP	Ospenovka	50.11	300	P	P	14 15 35.8	+0.5
	SNR=12						
FRU	Bishkek	50.14	299	eP	P	14 15 36.0	+0.5
AAK	Ala-Archa	50.28	299	iP	P	14 15 35.3	-1.4
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
UCH	Uchtor	50.37	299	P	P	14 15 39.0	+1.3
	SNR=6.8						
MDM	Murphy Dome	50.70	31	eP	P	14 15 41.8	+2.4
	comp=Z,6.7nm,0.8s						
BRVK	Borovoye	50.85	313	iP	P	14 15 40.9	+0.3
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
COLA	College	50.86	32	iP	P	14 15 40.3	-0.2
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AML	Almayashu	50.98	299	P	P	14 15 43.5	+1.2
	SNR=29						
ILAR	Eielson Array	51.27	32	P	P	14 15 44.9	+1.3
	comp=Z,1.2nm,0.7s,baz=271,slow=5.6,SNR=18						
ILAR				PcP	PcP	14 16 58.1	+0.4
	comp=Z,0.4nm,0.6s,baz=255,slow=3.9,SNR=1.9						
ARSB	Arslanbob	51.72	298	eP	P	14 15 47.8	+0.3
	comp=Z,9.2nm,0.8s						
GAR	Garm	54.39	296	eP	P	14 16 06.0	-1.1
	comp=Z,20nm,1.2s						
GAR	Garm	54.39	296	eP	P	14 16 06.0	-1.1
GAR				pmax	pmax		
	comp=Z,20nm,1.2s						
FITZ	Fitzroy Crossi	55.12	197	eP	P	14 16 12.3	-0.1
	comp=Z,15nm,1.0s						
FITZ	Fitzroy Crossi	55.12	197	P	P	14 16 12.6	+0.3
	comp=Z,11nm,0.9s,baz=23,slow=7.5,SNR=20						
WRAB	Tennant Creek	55.48	187	eP	P	14 16 14.6	-0.3
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	55.48	187	c iP	P	14 16 14.5	-0.3
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
WB2	Warramunga Arr	55.49	187	eP	P	14 16 14.7	-0.3
WRA	Warramunga Arr	55.49	187	P	P	14 16 14.5	-0.5
	comp=Z,10nm,0.8s,baz=0.9,slow=7.6,SNR=75						
SVE	Sverdlovsk	55.56	319	eP	P	14 16 15.9	+0.8
SVE				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	Arti	56.77	319	c iP	P	14 16 23.8	+0.1
ARU				*PP	pP	14 16 40.3	-1.2
ARU				S	S	14 24 13.6	+2.3
ARU				pmax	pmax		
	comp=Z,11nm,0.7s						
HYB	Hyderabad	57.13	269	iP	P	14 16 27.0	+0.1
HYB				epP	pP	14 16 48.0	+3.3
ABKAR	Akbulak array	58.09	310	eP	P	14 16 33.4	+0.3
AKTO	Aktyubinsk	58.88	312	LR	LR	14 45 46.9	
	comp=Z,34nm,18.6s,baz=43,slow=40						
AS01	Alice Springs	59.21	187	eP	P	14 16 40.9	-0.3
AS31	Alice Springs	59.22	187	eP	P	14 16 41.1	-0.1
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	59.22	187	P	P	14 16 41.0	-0.2
	comp=Z,2.7nm,0.7s,baz=15,slow=9.6,SNR=36						
MBWA	Marble Bar	59.65	202	eP	P	14 16 43.6	-0.5
	comp=Z,17nm,0.8s						
PRGR	Permogore	61.42	327	eP	P	14 16 55.5	-0.3
PRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
GEYT	Alibeck	63.63	299	P	P	14 17 10.9	-0.1
	comp=Z,1.9nm,0.9s,baz=29,slow=6.8,SNR=6.2						
GEYT				LR	LR	14 47 10.0	
	comp=Z,31nm,18.5s,baz=330,slow=38						
RES	Resolute Bay	64.26	14	eP	P	14 17 15.0	+0.6
	comp=Z,7.2nm,0.9s						
RES	Resolute Bay	64.26	14	eP	P	14 17 15.0	+0.6
RES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLMR	Klimovskoe	64.43	328	eP	P	14 17 13.0	-2.7
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KLMR	Klimovskoe	64.43	328	eP	P	14 17 13.1	-2.7
KLMR				AMP		14 17 16.3	
	comp=Z,5.0nm,0.7s						
ARCES	ARCESS Array B	64.99	339	P	P	14 17 19.4	+0.1
	comp=Z,7.6nm,0.8s,baz=55,slow=7.9,SNR=12						
YKA	Yellowknife Ar	65.58	29	P	P	14 17 24.3	+1.1
	comp=Z,1.0nm,0.7s,baz=303,slow=6.6,SNR=18						
FORT	Forrest	66.98	191	eP	P	14 17 33.0	+0.6
	comp=Z,34nm,0.8s						
STKA	Stephens Creek	67.11	179	P	P	14 17 32.9	-0.4
	comp=Z,2.8nm,0.8s,baz=341,slow=11,SNR=6.1						
STKA				LR	LR	14 48 00.0	
	comp=Z,29nm,18.2s,baz=42,slow=37						
DAG	Danmarks Havn	67.13	355	iP	P	14 17 33.5	+0.6
	comp=Z,6.6nm,0.8s						
DAG	Danmarks Havn	67.13	355	iP	P	14 17 33.5	+0.6
DAG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VRH	Novokhopyorsk	67.96	318	eP	P	14 17 37.9	-0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	Obninsk	68.64	323	⇓eP	P	14 17 41.8	-0.9
OBN				i		14 18 05.8	
OBN				e		14 20 15.3	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LPSR	Galich'ya Gora	68.75	320	eP	P	14 17 42.9	-0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	69.34	319	eP	P	14 17 46.0	-1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FIA1	FINESS Array S	69.61	332	eP	P	14 17 48.7	+0.1
FINES	FINESS Array B	69.61	332	P	P	14 17 49.0	+0.4
	comp=Z,10nm,0.8s,baz=65,slow=9.0,SNR=24						
FINES				LR	LR	14 49 33.6	
	comp=Z,46nm,19.1s,baz=356,slow=37						
NCK	Nalchik	70.75	310	iP	P	14 17 56.3	+0.4
NCK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	71.06	311	P	P	14 17 58.2	+0.4
	comp=Z,5.8nm,0.9s,baz=17,slow=1.2,SNR=13						
KIV	Kislovodsk	71.07	311	eP	P	14 17 58.7	+0.7
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KIV				MLR	MLR		
	comp=Z,32nm,18.0s						
VSU	Vasula	71.18	329	iP	P	14 17 57.8	-0.4
VSU				pmax	pmax		
	comp=Z,33nm,0.9s						
NWAO	Narrogin (SRO)	71.45	200	P	P	14 17 59.9	-0.1
	comp=Z,7.2nm,0.7s,baz=240,slow=11,SNR=4.2						
SUMG	Summit	72.13	360	eP	P	14 18 05.9	+1.8
	comp=Z,12nm,0.8s						
SUMG	Summit	72.13	360	iP	P	14 18 06.0	+1.8
	comp=Z,31nm,0.8s						
SUMG	Summit	72.13	360	iP	P	14 18 06.0	+1.8
SUMG				pmax	pmax		
	comp=Z,31nm,0.8s						
NACGM	Naroch	73.36	326	e	P	14 18 11.0	-0.3
ANN	Anapa	73.79	314	eP	P	14 18 10.8	-3.1
ANN				pmax	pmax		
	comp=Z,68nm,1.4s						
AKASG	Malin Array Be	74.81	322	P	P	14 18 19.7	-0.1
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKASG	Malin Array Be	74.81	322	P	P	14 18 19.7	-0.1
	comp=Z,1.4nm,0.3s,baz=47,slow=5.4,SNR=15						
KIEV	Kiev	74.82	322	⇓iP	P	14 18 20.0	+0.2
KIEV	Kiev	74.82	322	iP	P	14 18 18.6	-1.2
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NB2	NORSAR Subarra	75.12	337	P	P	14 18 21.8	+0.3
	comp=Z,8.0nm,0.9s,baz=40,slow=6.2						
NOA	NORSAR Array B	75.12	337	P	P	14 18 21.8	+0.3
NOA				*PP	pP	14 18 41.5	+1.4
NOA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,14nm,20.3s						
NOA	NORSAR Array B	75.12	337	P	P	14 18 21.8	+0.3
	comp=Z,5.5nm,0.8s,baz=40,slow=5.8,SNR=16						
NOA				pP	pP	14 18 41.5	+1.4
	comp=Z,2.5nm,0.7s,baz=41,slow=5.9,SNR=5.5						
NOA				LR	LR	14 53 49.8	
	comp=Z,14nm,20.3s,baz=355,slow=38						
BOZ	Bozeman (W)	76.51	43	eP	P	14 18 31.8	+2.0
	comp=Z,5.2nm,1.1s						
BOZ	Bozeman (W)	76.51	43	eP	P	14 18 31.8	+2.0
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NV01	Mina Array Sit	76.69	52	eP	P	14 18 33.3	+2.2
NVAR	Mina Array Bea	76.69	52	P	P	14 18 32.8	+1.7
	comp=Z,1.7nm,0.7s,baz=295,slow=5.4,SNR=17						
KWP	Kalwaria Pacla	78.70	324	eP	P	14 18 42.7	+0.9
KWP	Kalwaria Pacla	78.70	324	eP	P	14 18 42.7	+0.9
BURAR	Bucovina Array	78.80	321	⇓iP	P	14 18 43.4	+0.9
BURAR	Bucovina Array	78.80	321	⇓P	P	14 18 43.4	+0.9
BRTR	Keskin Array B	79.03	311	P	P	14 18 44.8	+0.8
	comp=Z,2.3nm,0.9s,baz=76,slow=5.2,SNR=8.1						
BRTR				LR	LR	14 55 48.5	
	comp=Z,10nm,18.7s,baz=270,slow=37						
PDAR	Pinedale Array	79.43	45	P	P	14 18 47.9	+1.7
	comp=Z,1.0nm,0.6s,baz=264,slow=1.9,SNR=14						
OJC	Ojcow	79.66	326	eP	P	14 18 47.8	+0.8
OJC	Ojcow	79.66	326	eP	P	14 18 47.8	+0.8
TRPA	Tarpa	79.80	323	⇑iP	P	14 18 49.6	+1.9
NIE	Niedzica	79.99	325	eP	P	14 18 49.8	+1.0
NIE	Niedzica	79.99	325	eP	P	14 18 49.8	+1.0
RAYN	Ar Rayn	80.24	292	eP	P	14 18 50.9	+0.3
	comp=Z,5.0nm,0.6s						
RAYN	Ar Rayn	80.24	292	eP	P	14 18 50.9	+0.3
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LANS	Liptovska Anna	80.56	325	eP	P	14 18 53.4	+1.5
LANS	Liptovska Anna	80.56	325	eP	P	14 18 53.4	+1.5
KSP	Ksiaz	80.78	328	eP	P	14 18 53.6	+0.6
KSP	Ksiaz	80.78	328	eP	P	14 18 53.6	+0.6
MORC	Moravsky Berou	81.00	326	⇑iP	P	14 18 55.6	+1.3
MORC	Moravsky Berou	81.00	326	⇑P	P	14 18 55.6	+1.3
URZ	Urewera	81.06	151	LR	LR	14 52 02.1	
	comp=Z,25nm,19.4s,baz=300,slow=34						
DPC	Dobruska-Polom	81.13	327	eP	P	14 18 56.2	+1.3
DPC	Dobruska-Polom	81.13	327	eP	P	14 18 56.2	+1.3
ULM	Lac du Bonnet	81.29	33	P	P	14 18 54.8	-0.9
	comp=Z,3.4nm,1.1s,baz=353,slow=8.7,SNR=4.0						
VYHS	Vyhne	81.32	325	eP	P	14 18 57.0	+1.1
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.4s						
VYHS	Vyhne	81.32	325	eP	P	14 18 57.0	+1.1
GZR	Gura Zlata	81.54	321	⇑iP	P	14 18 58.3	+1.1
GZR	Gura Zlata	81.54	321	⇑P	P	14 18 58.3	+1.1
BRG	Berggiesshubel	81.77	329	eP	P	14 18 59.0	+0.8
	comp=Z,5.3nm,0.9s						
BRG	Berggiesshubel	81.77	329	eP	P	14 18 59.0	+0.8
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	81.83	330	⇑iP	P	14 18 58.7	+0.2
	comp=Z,10.0nm,0.9s						
CLL				esP	sP	14 19 23.0	-1.9
CLL	Collm	81.83	330	⇑iP	P	14 18 58.7	+0.2
CLL				e*SP	sP	14 19 23.0	-1.9
CLL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HERR	Herculane	82.08	321	⇑iP	P	14 19 01.7	+1.7
CONA	Conrad Observa	83.11	326	iP	P	14 19 04.9	-0.5
	comp=Z,5.6nm,1.4s						
VTS	Vitosha	83.19	318	⇓iP	P	14 19 07.7	+1.7
VTS	Vitosha	83.19	318	⇓P	P	14 19 07.7	+1.7
KHC	Kasperske Hory	83.23	328	eP	P	14 19 06.7	+0.8
KHC	Kasperske Hory	83.23	328	eP	P	14 19 06.7	+0.8
GERES	GERESS Array B	83.39	328	P	P	14 19 06.2	-0.7
	comp=Z,1.1nm,0.7s,baz=46,slow=5.8,SNR=8.2						
GERES				LR	LR	14 59 38.6	
	comp=Z,25nm,19.1s,baz=128,slow=38						
ARSA	Arzberg	83.76	326	iP	P	14 19 07.9	-0.8
	comp=Z,4.5nm,0.8s						
MOA	Molln	83.89	327	iP	P	14 19 08.9	-0.4
	comp=Z,5.3nm,1.1s						
SOKA	Soboth	84.41	326	iP	P	14 19 11.6	-0.5
	comp=Z,9.5nm,1.1s						
KBA	Koelnbreinsper	84.88	327	i PcP	P	14 19 17.3	+2.8
	comp=Z,2.2nm,0.7s						
WTTA	Wattenberg	85.49	328	iP	P	14 19 16.5	-1.1
	comp=Z,8.3nm,1.1s						
ABTA	Abfaltersbach	85.50	327	iP	P	14 19 16.5	-1.0
	comp=Z,7.2nm,1.3s						
RETA	Reutte	85.70	328	i PcP	P	14 19 19.1	+0.6
	comp=Z,5.8nm,1.0s						
FETA	Feichten	86.08	328	iP	P	14 19 18.2	-2.3
	comp=Z,7.8nm,1.9s						
DAVA	Damuels	86.23	329	iP	P	14 19 18.9	-2.3
	comp=Z,8.6nm,1.3s						
ANMO	Albuquerque	86.32	49	iP	P	14 19 22.8	+0.9
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TXAR	Lajitas Array	91.83	52	P	P	14 19 49.5	+1.6
	comp=Z,0.6nm,0.7s,baz=317,slow=1.9,SNR=7.8						
TORD	Torodi Ar. Bea	117.59	313	PKP	PKPdf	14 25 24.1	-1.7
	comp=Z,0.5nm,0.7s,baz=338,slow=7.0,SNR=4.1						
QSPA	South Pole Qui	125.32	180	ePKPdf	PKiKP	14 25 40.1	+0.6
DBIC	Dimbokro	126.61	315	PKP	PKPdf	14 25 42.5	-0.6
	comp=Z,2.6nm,0.7s,baz=239,slow=7.0,SNR=4.9						
LPAZ	La Paz	148.32	60	ePKPbc	PKiKP	14 26 28.5	+0.1
LPAZ	La Paz	148.32	60	PKPbc	PKiKP	14 26 27.9	-0.5
	comp=Z,2.3nm,0.7s,baz=299,slow=2.7,SNR=12						
LCO	Las Campanas	153.20	85	ePKPbc	PKiKP	14 26 39.5	+1.8
LCO	Las Campanas	153.20	85	ePKIKP	PKiKP	14 26 39.5	+1.8

DDA 01 14:15:34.0,39°.99N×32°.47E,h7^{km}±4^{km},ML2.1,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMDR	Camlidere-ANKA	0.50	0	iP	Pb	14 15 45.2	0.0
CMDR				IAML_P			
	comp=Z,850nm,0.2s						
KIBS	BOLU	0.64	312	iP	Pg	14 15 46.6	+0.2
KIBS				IAML_P			
	comp=Z,284nm,0.1s						
BCAM	Yenicaga	0.88	339	iP	Pb	14 15 51.9	+0.2
BCAM				iS	Sn	14 16 08.2	+2.1
BCAM				IAML_P			
	comp=Z,119nm,0.1s						

IDC ***01*** *14:23:17.3±2.6,4°.38N×127°.34E,h0^{km},mb3.2/3,*
mb1 3.4/3,mb1mx3.2/34,mbtmp3.2/3,Error ellipse:
s-maj=213.6km s-min=26.1km az=66.0
DJA ***01*** *14:23:26.7±0.5,4°N±5°×12°6E±°,h10^{km},M4.0/2,MLv4.0/2*
ISC 01 14:23:29.6±1.5,**4°.0N**±0°.2×**126°.1E**±0°.1,**h100**^{km}**,n6,**
σ2^{s}.97/7,**mb3.0**/3,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SGSI	Sangihe	0.63	240	P	Pn	14 23 43.5	-2.9
SGSI				S	Sn	14 23 56.2	-2.8
TNTI	Ternate	3.46	158	P	Pn	14 24 21.1	-0.5
KMSI	Cibinong	4.00	212	P	Pn	14 24 31.7	+2.9
WRA	Warramunga Arr	25.15	161	P	P	14 28 44.2	-1.5
	0.4nm,0.7s,baz=344,slow=9.5,SNR=6.4						
ASAR	Alice Springs	28.55	165	P	P	14 29 15.7	-0.5
	0.2nm,0.7s,baz=350,slow=7.0,SNR=4.3						
MKAR	Makanchi Array	56.96	325	P	P	14 33 07.4	+2.8
	0.3nm,0.7s,baz=120,slow=8.5,SNR=3.5						

DJA 01 14:30:23.4±0.5,**4°N**±5°×**12°6E**±°,**h12**^{km}±5^{km},**M4.1**/7,
MLv4.1/7,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SGSI	Sangihe	0.94	241	P	Pg	14 30 41.2	-0.3
SGSI				S	Sg	14 30 52.9	-0.8
TNTI	Ternate	3.50	163	P	Pn	14 31 17.6	0.0
KMSI	Cibinong	4.26	214	P	Pn	14 31 27.8	-0.3

IDC 01 14:30:51.5±1.9,4°.31N×127°.11E,h0^{km},mb3.3/5, mb1 3.5/5,mb1mx3.2/49,mbtmp3.3/5,Error ellipse: s-maj=124.3km s-min=21.7km az=71.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.31**	**184**	P	P	14 35 51.8	+0.9
	0.8nm,0.6s,baz=6.4,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**25.13**	**164**	P	P	14 36 18.7	+0.3
	0.4nm,0.5s,baz=343,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**28.59**	**167**	P	P	14 36 48.5	-1.1
	0.3nm,0.8s,baz=346,slow=7.4,SNR=3.0						
MKAR	**Makanchi Array**	**57.30**	**325**	P	P	14 40 39.8	-1.4
	0.2nm,0.6s,baz=126,slow=8.4,SNR=2.5						
KURBB	**Kurchatov Arra**	**61.46**	**327**	P	P	14 41 10.7	+0.8
	0.4nm,0.7s,baz=133,slow=6.0,SNR=3.4						

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*DJA **01** 14:32:43.6±0.5,8°S±10°×11°1E±°,h173^{km}±4^{km},M3.6/5, MLv3.6/5*

*IDC **01** 14:33:03.6±7.8,6°.47S×112°.37E,h371^{km}±77^{km},mb2.5/3, mb1 2.7/4,mb1mx2.5/47,mbtmp3.3/4,Error ellipse: s-maj=160.8km s-min=26.1km az=54.0*

ISC 01 14:32:42.7±0.9,7°.8S±0°.2×110°.94E±0°.06,h188^{km}±7^{km}, n14,σ1^{s}.09/20,mb2.9/3,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WOJI	**Wonogiri, Jawa**	**0.02**	**238**	P	**Pn**	**14 33 07.8**	**+0.4**
WOJI				S	**Sn**	**14 33 26.2**	**-0.2**
UGM	**Wanagama**	**0.43**	**258**	P	**Pn**	**14 33 07.8**	**-0.4**
UGM				S	**Sn**	**14 33 28.0**	**+0.2**
PCJI	**Pacitan**	**0.43**	**148**	P	**Pn**	**14 33 07.8**	**-0.4**
PCJI				S	**Sn**	**14 33 26.0**	**-2.0**
NGJI	**Ngawi**	**0.69**	**49**	P	**Pn**	**14 33 10.3**	**+1.0**
PWJI	**Pagerwojo**	**0.87**	**103**	P	**Pn**	**14 33 10.9**	**+0.5**
PWJI				S	**Sn**	**14 33 31.7**	**0.0**
KPJI	**Karang Pucung**	**2.06**	**284**	P	**Pn**	**14 33 21.4**	**+0.5**
KPJI				S	**Sn**	**14 33 51.7**	**+1.1**
CMJI	**Cimerak**	**2.47**	**271**	P	**Pn**	**14 33 25.8**	**+0.2**
GMJI	**Gumukmas**	**2.52**	**100**	P	**Pn**	**14 33 26.5**	**+0.5**
GMJI				S	**Sn**	**14 33 59.8**	**0.0**
CISI	**Cisompet, Garu**	**3.11**	**275**	P	**Pn**	**14 33 32.9**	**-0.3**
JAGI	**Jajag, Banyuwa**	**3.24**	**102**	P	**Pn**	**14 33 33.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**17.57**	**127**	P	Pn	14 36 44.4	+7.9
	0.2nm,0.3s,baz=311,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**25.66**	**120**	P	**P**	**14 37 56.9**	**+1.4**
	0.2nm,0.7s,baz=298,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**27.07**	**128**	P	**P**	**14 38 10.2**	**+2.2**
	0.1nm,0.5s,baz=303,slow=8.1,SNR=4.3						
ASAR				PcP	**PcP**	**14 41 24.4**	**+0.1**
	0.2nm,0.5s,baz=306,slow=1.8,SNR=3.9						
MKAR	**Makanchi Array**	**60.06**	**338**	P	**P**	**14 42 27.8**	**-2.0**
	0.3nm,0.5s,baz=147,slow=8.1,SNR=5.1						

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*ISCJB **01** 14:40:31.7±0.8,2°.4N±0°.1×127°.0E±0°.2,h47^{km},mb3.7/6, MS3.7/1,Error ellipse: s-maj=27.7km s-min=6.8km az=144.2*

*DJA **01** 14:40:32.7±0.5,2°N±4°×12°7E±°,h10^{km},M3.8/3,MLv3.8/3*

*IDC **01** 14:40:33.8±2.8,2°.11N×126°.65E,h54^{km}±27^{km},mb3.4/7, mb1 3.6/8,mb1mx3.4/40,mbtmp3.7/8,ML3.2/1,MS3.7/1, Ms1 3.7/1,ms1mx2.5/30,Error ellipse: s-maj=50.5km s-min=13.6km az=63.0*

ISC 01 14:40:33.2±0.8,2°.4N±0°.1×126°.8E±0°.2,h47^{km},n11, σ1^{s}.85/15,mb3.7/6,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.67**	**161**	P	**Pn**	**14 41 01.2**	**+1.2**
TNTI				S	**Sn**	**14 41 22.9**	**+2.7**
SGSI	**Sangihe**	**1.85**	**315**	P	**Pn**	**14 41 02.9**	**+0.3**
SGSI				S	**Sn**	**14 41 26.6**	**+1.8**
SIJI	**Sorong**	**5.47**	**126**	P	**Pn**	**14 41 53.1**	**+0.9**
	0.7nm,0.3s,baz=195,slow=20,SNR=3.4						
FITZ	**Fitzroy Crossi**	**20.36**	**183**	P	Pn	14 45 03.5	-4.9
	0.7nm,0.4s,baz=8.2,slow=11,SNR=7.6						
WRA	**Warramunga Arr**	**23.36**	**162**	P	**P**	**14 45 35.5**	**-2.2**
	1.2nm,0.4s,baz=338,slow=11,SNR=58						
WRA				PcP	**PcP**	**14 49 23.0**	**-0.7**
	0.3nm,0.6s,baz=326,slow=2.3,SNR=3.9						
WRA				S	**S**	**14 49 44.4**	**-2.9**
	0.5nm,0.8s,baz=336,slow=20,SNR=3.2						
ASAR	**Alice Springs**	**26.77**	**165**	P	**P**	**14 46 07.1**	**-1.8**
	0.6nm,0.4s,baz=344,slow=11,SNR=21						
ASAR				PcP	**PcP**	**14 49 31.2**	**0.0**
	0.4nm,0.5s,baz=348,slow=2.1,SNR=8.6						
ASAR				S	**S**	**14 50 44.0**	**+2.3**
	0.1nm,0.8s,baz=342,slow=18,SNR=2.9						
CMAR	**Chiang Mai Arr**	**31.67**	**302**	P	**P**	**14 46 52.7**	**+0.2**
	0.3nm,0.6s,baz=133,slow=6.5,SNR=3.4						
STKA	**Stephens Creek**	**36.82**	**159**	P	**P**	**14 47 35.2**	**-1.7**
	1.5nm,0.4s,baz=324,slow=6.0,SNR=5.1						
SONM	**Songino Array**	**48.62**	**342**	P	**P**	**14 49 14.0**	**+1.5**
	0.5nm,0.6s,baz=149,slow=6.7,SNR=3.7						
TLY	**Talaya**	**52.85**	**342**	LR	LR	15 14 19.3	
	comp=Z,71nm,18.6s,baz=76,slow=38						
MKAR	**Makanchi Array**	**58.74**	**326**	P	**P**	**14 50 25.7**	**-0.6**
	0.3nm,0.4s,baz=120,slow=7.7,SNR=5.7						

IDC 01 15:02:55.7±1.4,31°.78S×178°.51W,h0^{km},mb4.1/3, mb1 4.3/4,mb1mx3.9/40,mbtmp4.1/4,ML3.8/1,Error ellipse: s-maj=38.1km s-min=31.2km az=71.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.39**	**208**	Pn	Pn	15 04 43.2	-1.6
	1.7nm,0.3s,baz=273,slow=3.7,SNR=16						
URZ				Sn	Sn	15 05 57.4	-12
	1.9nm,0.3s,baz=154,slow=22,SNR=9.9						
ASAR	**Alice Springs**	**42.62**	**269**	P	P	15 10 53.9	-0.1
	1.3nm,0.6s,baz=108,slow=7.3,SNR=44						
WRA	**Warramunga Arr**	**43.73**	**274**	P	P	15 11 03.1	+0.1
	3.2nm,0.5s,baz=112,slow=7.9,SNR=71						
QSPA	**South Pole Qui**	**58.33**	**180**	P	P	15 12 52.5	+0.2
	0.9nm,0.4s,baz=18,slow=6.4,SNR=11						
ARCES	**ARCESS Array B**	**139.84**	**347**	PKP	PKPdf	15 22 25.4	+0.6
	2.9nm,0.9s,baz=36,slow=2.3,SNR=3.7						
FINES	**FINESS Array B**	**146.28**	**339**	PKPbc	PKPbc	15 22 37.1	-0.4
	1.7nm,0.7s,baz=59,slow=3.6,SNR=12						
NOA	**NORSAR Array B**	**150.04**	**351**	PKPbc	PKPbc	15 22 46.2	-1.4
	0.5nm,0.7s,baz=15,slow=4.6,SNR=3.6						

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*ISCJB **01** 15:04:48.5±0.4,4°.82S±0°.04×75°.09W±0°.05,h50^{km}, mb4.1/17,MS3.2/4,Error ellipse: s-maj=7.8km s-min=5.2km az=154.8*

*IDC **01** 15:04:50.5±0.5,4°.77S×75°.13W,h54^{km}±4^{km},mb3.8/14, mb1 4.0/20,mb1mx3.9/40,mbtmp4.1/20,MS3.3/9, Ms1 3.3/9,ms1mx3.1/34,Error ellipse: s-maj=18.9km s-min=11.6km az=63.0*

ISC 01 15:04:49.8±0.4,4°.83S±0°.05×75°.06W±0°.06,h50^{km},n59, σ1^{s}.85/67,mb4.2/17,MS3.2/4,Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**4.04**	**235**	P	**Pn**	**15 05 48.5**	**-0.9**
	66nm,0.3s,baz=40,slow=8.8,SNR=147						
ATAH				S	**Sn**	**15 06 30.0**	**-5.6**
	28nm,0.3s,baz=316,slow=23,SNR=3.5						
PTLC	**Puerto Leguiza**	**4.97**	**3**	*e*P	**Pn**	**15 05 58.1**	**-3.9**
PTLC	**Puerto Leguiza**	**4.97**	**3**	*e*P	**Pn**	**15 05 58.1**	**-3.9**
OTAV	**Otavalo**	**6.07**	**326**	*e*P	**Pn**	**15 06 20.4**	**+3.0**
OTAV	**Otavalo**	**6.07**	**326**	*e*P	**Pn**	**15 06 20.4**	**+3.0**
GCUF	**Volcan Galeras**	**6.43**	**339**	*e*P	Pn	15 06 32.7	+10
GCUF	**Volcan Galeras**	**6.43**	**339**	*e*P	Pn	15 06 32.7	+10
CRUC	**La Cruz**	**6.63**	**343**	*e*P	**Pn**	**15 06 28.3**	**+3.3**
CRUC	**La Cruz**	**6.63**	**343**	*e*P	**Pn**	**15 06 28.3**	**+3.3**
SOTA	**Rioblanco**	**7.09**	**347**	*e*P	**Pn**	**15 06 31.4**	**-0.1**
SOTA	**Rioblanco**	**7.09**	**347**	*e*P	**Pn**	**15 06 31.4**	**-0.1**
PCON	**Cinco Dias**	**7.23**	**349**	*e*P	**Pn**	**15 06 33.5**	**0.0**
PCON	**Cinco Dias**	**7.23**	**349**	*e*P	**Pn**	**15 06 33.5**	**0.0**
NNA	**Nana**	**7.33**	**194**	P	**Pn**	**15 06 34.5**	**+0.2**
	6.4nm,0.3s,baz=357,slow=12,SNR=6.8						
NNA				S	**Sn**	**15 07 51.8**	**-4.4**
	17nm,0.3s,baz=268,slow=20,SNR=12						
NNA				LR	LR	15 10 15.2	
	comp=Z,182nm,21.2s,baz=6.5,slow=44						
POPC	**Popayan, Colom**	**7.50**	**347**	*e*P	**Pn**	**15 06 39.0**	**+2.3**
POPC	**Popayan, Colom**	**7.50**	**347**	*e*P	**Pn**	**15 06 39.0**	**+2.3**
MARP	**Paez Belalcaza**	**7.67**	**353**	*e*P	**Pn**	**15 06 40.3**	**+1.1**
MARP	**Paez Belalcaza**	**7.67**	**353**	*e*P	**Pn**	**15 06 40.3**	**+1.1**
VILC	**Villavicencio,**	**8.98**	**9**	*e*P	**Pn**	**15 06 59.1**	**+2.0**
VILC	**Villavicencio,**	**8.98**	**9**	*e*P	**Pn**	**15 06 59.1**	**+2.0**
ANIL	**Santa Ana**	**9.26**	**358**	*e*P	Pn	15 07 12.5	+11
ANIL	**Santa Ana**	**9.26**	**358**	*e*P	Pn	15 07 12.5	+11
CHIC	**Chingaza**	**9.49**	**8**	*e*P	**Pn**	**15 07 06.1**	**+1.9**
CHIC	**Chingaza**	**9.49**	**8**	*e*P	**Pn**	**15 07 06.1**	**+1.9**
ROSC	**El Rosal**	**9.63**	**4**	P	**Pn**	**15 07 06.2**	**+0.1**
	1.5nm,0.3s,baz=184,slow=13,SNR=2.3						
ROSC				LR	LR	15 11 29.1	
	comp=Z,120nm,21.4s,baz=200,slow=42						
RUSC	**La Rusia**	**10.83**	**11**	*e*P	**Pn**	**15 07 24.3**	**+1.6**
RUSC	**La Rusia**	**10.83**	**11**	*e*P	**Pn**	**15 07 24.3**	**+1.6**
LPAZ	**La Paz**	**13.26**	**150**	P	**Pn**	**15 07 56.6**	**+0.6**
	0.4nm,0.3s,baz=337,slow=13,SNR=14						
SDV	**Santo Domingo**	**14.32**	**18**	P	**Pn**	**15 08 08.7**	**-1.2**
	1.8nm,0.3s,baz=187,slow=17,SNR=3.2						
SDV				S	**Sn**	**15 10 42.8**	**-4.7**
	0.9nm,0.3s,baz=322,slow=7.5,SNR=4.7						
SDV				LR	LR	15 13 50.8	
	comp=Z,113nm,19.5s,baz=102,slow=38						
PTGA	**Pitinga**	**15.61**	**75**	P	**Pn**	**15 08 27.0**	**+0.3**
	1.3nm,0.3s,baz=255,slow=14,SNR=12						
PTGA				S	**Sn**	**15 11 17.4**	**-1.2**
	4.2nm,0.3s,baz=166,slow=16,SNR=6.3						
PTGA				LR	LR	15 14 43.8	
	comp=Z,129nm,21.4s,baz=188,slow=38						
SIV	**San Ignacio**	**17.65**	**130**	P	**Pn**	**15 08 54.3**	**+1.9**
	0.2nm,0.3s,baz=324,slow=11,SNR=13						
SIV				S	**Sn**	**15 12 06.7**	**-1.6**
	0.3nm,0.3s,baz=247,slow=16,SNR=4.3						
SIV				LR	LR	15 16 30.4	
	comp=Z,220nm,18.9s,baz=307,slow=39						
MDP	**Montagnes des**	**24.46**	**67**	LR	LR	15 20 15.5	
	comp=Z,92nm,21.0s,baz=213,slow=38						
APG	**El Apazote**	**24.93**	**322**	LR	LR	15 18 10.2	
	comp=Z,75nm,21.2s,baz=76,slow=32						
CPUP	**Villa Florida**	**27.29**	**143**	P	**P**	**15 10 30.0**	**+0.3**
	1.8nm,0.5s,baz=324,slow=5.8,SNR=8.0						
CPUP				LR	LR	15 22 50.7	
	comp=Z,92nm,18.2s,baz=347,slow=40						
BDFB	**Brasilia**	**28.66**	**114**	P	**P**	**15 10 42.7**	**+0.4**
	1.3nm,0.6s,baz=265,slow=11,SNR=2.8						
CMIG	**Matias Romero**	**29.29**	**318**	LR	LR	15 21 05.9	
	comp=Z,36nm,21.2s,baz=159,slow=33						
TXAR	**Lajitas Array**	**43.69**	**323**	P	**P**	**15 12 49.4**	**-0.7**
	0.2nm,0.7s,baz=112,slow=9.1,SNR=3.5						
TXAR				pP	**pP**	**15 13 04.3**	**+0.8**
	1.0nm,0.7s,baz=142,slow=8.8,SNR=11						
TXAR				PcP	**PcP**	**15 14 37.9**	**+1.3**
	0.4nm,0.7s,baz=141,slow=6.1,SNR=4.1						
TXAR				pPcP		15 14 53.0	
	0.9nm,0.9s,baz=145,slow=4.6,SNR=4.6						
PDAR	**Pinedale Array**	**56.76**	**330**	P	**P**	**15 14 27.6**	**-1.4**
	0.4nm,0.8s,baz=132,slow=7.4,SNR=3.6						
PDAR				pP	**pP**	**15 14 42.8**	**-0.1**
	0.5nm,0.7s,baz=123,slow=9.5,SNR=4.6						
ULM	**Lac du Bonnet**	**57.73**	**344**	P	**P**	**15 14 33.3**	**-2.1**
	3.0nm,0.8s,baz=182,slow=1.6,SNR=5.1						
ULM				pP	**pP**	**15 14 48.5**	**-0.8**
	3.9nm,0.8s,baz=161,slow=7.8,SNR=4.6						
NVAR	**Mina Array Bea**	**58.78**	**321**	P	**P**	**15 14 43.4**	**+0.1**
	0.7nm,0.7s,baz=134,slow=8.3,SNR=6.1						
NVAR				pP	**pP**	**15 14 57.8**	**+0.6**
	3.3nm,0.9s,baz=140,slow=6.6,SNR=9.6						
LIC	**Lamto**	**70.77**	**82**	*e*P	**P**	**15 16 01.2**	**-0.4**
	58nm,1.9s						
TIC	**Toumodi**	**70.83**	**81**	*e*P	**P**	**15 16 03.5**	**+1.5**
DBIC	**Dimbokro**	**71.00**	**81**	P	**P**	**15 16 03.8**	**+0.9**
	2.8nm,0.5s,baz=255,slow=3.3,SNR=7.2						
KIC	**Kosan Boka**	**71.07**	**82**	*e*P	**P**	**15 16 05.0**	**+1.6**
	6.4nm,0.6s						
YKA	**Yellowknife Ar**	**73.58**	**342**	P	**P**	**15 16 17.0**	**-0.3**
	0.9nm,0.6s,baz=141,slow=6.0,SNR=16						
YKA				pP	**pP**	**15 16 32.2**	**+0.5**
	1.0nm,0.6s,baz=140,slow=5.5,SNR=8.7						
TORD	**Torodi Ar. Bea**	**78.25**	**76**	P	**P**	**15 16 45.6**	**+0.6**
	1.9nm,0.6s,baz=301,slow=6.3,SNR=11						
ESDC	**Sonseca Array**	**78.69**	**48**	P	**P**	**15 16 48.1**	**+1.1**
	0.5nm,0.4s,baz=272,slow=6.2,SNR=6.2						
RES	**Resolute Bay**	**80.30**	**355**	P	**P**	**15 16 54.6**	**-0.3**
	1.2nm,0.9s,baz=180,slow=5.1,SNR=3.6						
SUMG	**Summit**	**80.72**	**10**	*i* P	**P**	**15 16 58.8**	**+1.1**
	17nm,0.9s						
INK	**Inuvik**	**83.33**	**341**	P	**P**	**15 17 11.5**	**+0.6**
	3.4nm,0.8s,baz=93,slow=4.8,SNR=10						
INK				pP	**pP**	**15 17 27.0**	**+1.5**
	2.4nm,0.8s,baz=116,slow=5.9,SNR=4.9						
QSPA	**South Pole Qui**	**85.26**	**180**	P	**P**	**15 17 22.0**	**+1.0**
	5.0nm,1.0s,baz=153,slow=2.2,SNR=12						
QSPA				pP	**pP**	**15 17 37.9**	**+2.3**
	5.1nm,0.9s,baz=157,slow=2.6,SNR=8.4						
ILAR	**Eielson Array**	**86.69**	**336**	P	**P**	**15 17 27.8**	**-0.2**
	0.7nm,0.9s,baz=116,slow=3.7,SNR=6.1						
ZALV	**Zalesovo Beam**	**128.35**	**15**	PKP	**PKPdf**	**15 23 51.2**	**+0.4**
	2.7nm,0.9s,baz=285,slow=2.3,SNR=9.0						
ZALV				pPKP	**pPKPdf**	**15 24 06.8**	**+0.7**
	1.5nm,0.8s,baz=298,slow=3.2,SNR=4.1						
STKA	**Stephens Creek**	**129.51**	**221**	PKP	**PKPdf**	**15 23 52.6**	**-1.2**
	2.6nm,0.8s,baz=323,slow=7.2,SNR=2.9						
STKA				pPKP	**pPKPdf**	**15 24 10.3**	**+1.3**
	1.0nm,0.5s,baz=330,slow=14,SNR=1.8						
MKAR	**Makanchi Array**	**133.83**	**22**	PKP	**PKPdf**	**15 24 01.3**	**-0.2**
	0.2nm,0.4s,baz=285,slow=2.6,SNR=7.0						
ASAR	**Alice Springs**	**140.00**	**224**	PKhKP	PKPpre	15 24 05.8	
	0.3nm,0.6s,baz=133,slow=3.5,SNR=7.2						
ASAR				PKP	**PKPdf**	**15 24 13.5**	**-0.1**
	1.0nm,0.8s,baz=108,slow=1.8,SNR=11						
ASAR				pPKP	pPKPdf	15 24 29.8	+0.9
	1.0nm,0.7s,baz=122,slow=1.8,SNR=6.2						
KSRS	**Korea Array**	**141.32**	**330**	PKP	**PKPdf**	**15 24 15.0**	**-0.4**
	1.4nm,0.8s,baz=146,slow=0.4,SNR=3.3						
WRA	**Warramunga Arr**	**142.04**	**229**	PKhKP	PKPpre	15 24 10.9	
	0.4nm,0.6s,baz=122,slow=2.4,SNR=6.9						
WRA				PKP	**PKPdf**	**15 24 17.4**	**+0.1**
	0.9nm,0.5s,baz=123,slow=2.0,SNR=14						
WRA				pPKP	pPKPdf	15 24 34.2	+1.6
	1.0nm,0.5s,baz=116,slow=2.0,SNR=6.9						
CMAR	**Chiang Mai Arr**	**165.24**	**23**	PKPab	**PKPab**	**15 25 47.6**	**+0.8**
	0.4nm,0.8s,baz=331,slow=5.4,SNR=3.3						

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*SJA **01** 15:04:49.9±0.8,30°.49S×69°.32W,h15^{km}±2^{km},ML3.7, MW3.6*

*ISCJB **01** 15:04:51.2±0.9,30°.49S±0°.03×69°.29W±0°.03,h6^{km}±7^{km}, Error ellipse: s-maj=4.6km s-min=4.1km az=37.6*

*GUC **01** 15:04:52.7±0.9,30°.39S×69°.32W,h75^{km}±13^{km},ML3.5*

ISC 01 15:04:50.4±1.1,30°.50S±0°.02×69°.32W±0°.03,h13^{km}±11^{km}, n21,σ1^{s}.17/37,2C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AROD	**Rodeo**	**0.36**	**338**	*e*S	**Sb**	**15 05 04.6**	**0.0**
ACDV	**Cuesta del Vie**	**0.37**	**28**	*e*S	**Sb**	**15 05 04.6**	**-0.1**
AMOG	**MOGNA**	**0.83**	**122**	*e*P	**Pg**	**15 05 06.4**	**-0.1**
AMOG				*e*S	**Sb**	**15 05 18.6**	**+0.5**
RTLL	**Cerro Villicun**	**1.10**	**139**	*e*P	**Pb**	**15 05 11.2**	**-0.1**
RTLL				*e*S	**Sg**	**15 05 26.4**	**+0.5**
RTLL				IAML		15 05 27.0	
	comp=Z,19µm,0.3s						
RTLL	**Cerro Villicun**	**1.10**	**139**	*e*P	**Pb**	**15 05 11.3**	**-0.1**
RTLL				*i* S	**Sn**	**15 05 26.5**	**-0.2**
RTLL				IAML		15 05 27.4	
	comp=N,2µm,0.4s						
AGUA	**GUANDACOL**	**1.24**	**36**	*e*P	**Pn**	**15 05 13.2**	**-0.3**
AGUA				*e*S	**Sg**	**15 05 30.2**	**-0.2**
RTLS	**Leoncito**	**1.29**	**179**	*e*P	**Pb**	**15 05 14.9**	**+0.1**
RTLS				IAML		15 05 34.8	
	comp=Z,146nm,0.4s						
GO04	**Tololo Observa**	**1.32**	**284**	*e*P	**Pb**	**15 05 14.9**	**-0.3**
GO04	**Tololo Observa**	**1.32**	**284**	⇓*i*P	**Pb**	**15 05 15.3**	**+0.1**
GO04				*e*S	**Sg**	**15 05 33.1**	**+0.1**
GO04				IAML		15 05 34.8	
	comp=N,1µm,0.2s						
CFA	**Coronel Fontan**	**1.44**	**140**	*e*P	**Pb**	**15 05 16.8**	**-0.3**
RTCV	**Cerro Valdivia**	**1.51**	**154**	*e*P	**Pb**	**15 05 18.3**	**0.0**
RTCV				*e*S	**Sg**	**15 05 39.6**	**+0.5**
CMCH	**Combarbala**	**1.59**	**245**	*e*P	**Pg**	**15 05 20.7**	**-0.3**
CMCH				*e*S	**Sg**	**15 05 42.6**	**+0.8**
AUSP	**Uspallata**	**1.72**	**182**	*e*P	**Pb**	**15 05 22.4**	**+0.3**
AUSP				*e*S	**Sg**	**15 05 46.1**	**+0.4**
LCO	**Las Campanas**	**1.91**	**321**	*e*P	**Pb**	**15 05 24.5**	**-0.8**
LCO				*e*S	**Sb**	**15 05 49.6**	**+0.4**
LCO	**Las Campanas**	**1.91**	**321**	⇑*i*P	**Pb**	**15 05 24.3**	**-0.9**
LCO				*i* S	**Sb**	**15 05 49.8**	**+0.6**
LCO				IAML		15 05 50.6	
	comp=E,722nm,0.4s						
ASAL	**Salagasta**	**2.12**	**169**	*e*P	**Pb**	**15 05 27.9**	**-0.9**
ASAL				*e*S	**Sb**	**15 05 55.2**	**0.0**
APLL	**PUNTA DE LOS L**	**2.41**	**88**	*e*P	**Pn**	**15 05 30.5**	**+0.8**
APLL				*e*S	**Sb**	**15 06 01.9**	**-1.5**
AAGR	**Agrelo**	**2.61**	**171**	*e*P	**Pn**	**15 05 34.8**	**+2.4**
AAGR				*e*S	**Sb**	**15 06 07.5**	**-1.7**
ROCH	**El Roble**	**2.85**	**210**	*e*P	**Pn**	**15 05 37.8**	**+1.9**
ROCH				*e*S	**Sb**	**15 06 13.5**	**-2.8**
ROC1	**El Roble**	**2.86**	**210**	*e*P	**Pn**	**15 05 37.8**	**+1.8**
ROC1				*e*S	**Sb**	**15 06 13.7**	**-2.8**
FCH	**Farellones**	**2.94**	**196**	⇑*i*P	**Pb**	**15 05 40.8**	**-2.0**
FCH				*i* S	**Sb**	**15 06 17.6**	**-1.2**

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*NIED **01** 15:06:00,38°.90N×142°.00E,h53^{km},Mw4.0 Best double couple: $M_0$1.12000×10^{15} NP1:ϕ_s194.00000°,δ25.00000°, λ89.00000°. NP2:ϕ_s15.00000°,δ65.00000°,λ90.00000°.*

*ISCJB **01** 15:06:52.7±0.9,38°.88N±0°.04×142°.1E±0°.1,h53^{km}±6^{km}, mb3.8/10,MS2.9/1,Error ellipse: s-maj=14.1km s-min=5.9km az=18.9*

*JMA **01** 15:06:54.1±0.1,38°.89N×141°.97E,h50^{km}±1^{km},M3.9*

JMA Felt II J1.

*IDC **01** 15:06:56.0±0.9,38°.89N×142°.02E,h70^{km}±7^{km},mb3.6/10, mb1 3.7/14,mb1mx3.5/41,mbtmp3.8/14,MS2.8/4, Ms1 2.8/4,ms1mx2.6/36,Error ellipse: s-maj=19.9km s-min=12.6km az=103.0*

ISC 01 15:06:55.2±0.9,38°.89N±0°.05×141°.98E±0°.09,h55^{km}±6^{km}, n32,σ1^{s}.82/38,mb3.8/10,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.31**	**309**	P	**Pn**	**15 07 03.3**	**-1.6**
OFUJ				S	**Sn**	**15 07 09.6**	**-2.3**
JKMT	**Kesennumamotoy**	**0.40**	**259**	P	**Pn**	**15 07 04.1**	**-1.6**
JKMT				S	**Sn**	**15 07 10.9**	**-2.4**
JMK	**Ichinoseki**	**0.59**	**276**	P	**Pn**	**15 07 06.4**	**-1.5**
JMK				S	**Sn**	**15 07 15.2**	**-1.9**
JIO	**Ouri**	**0.66**	**229**	P	**Pn**	**15 07 07.0**	**-1.6**
JIO				S	**Sn**	**15 07 15.7**	**-2.6**
JOM	**Ohasama**	**0.79**	**318**	P	**Pn**	**15 07 09.0**	**-1.3**
JOM				S	**Sn**	**15 07 20.0**	**-1.4**
JOU	**Okura**	**1.15**	**244**	P	**Pn**	**15 07 13.7**	**-1.4**
JOU				*e*S	**Sn**	**15 07 28.6**	**-1.3**
JRG	**Rokugo**	**1.16**	**296**	P	**Pn**	**15 07 14.0**	**-1.2**
JYK	**Kaneyama**	**1.26**	**272**	P	**Pn**	**15 07 15.4**	**-1.2**
JMM	**Marumori**	**1.38**	**223**	P	**Pn**	**15 07 16.6**	**-1.5**
JMM				*e*S	**Sn**	**15 07 33.7**	**-1.6**
JANG	**Nango**	**1.53**	**347**	P	**Pn**	**15 07 18.8**	**-1.3**
MJAR	**Matsushiro Arr**	**3.80**	**233**	P	**Pn**	**15 07 52.0**	**+0.8**
	0.3nm,0.3s,baz=37,slow=12,SNR=47						
MJAR				LR	LR	15 09 30.8	
	comp=Z,76nm,20.7s,baz=70,slow=41						
MAT	**Matsushiro**	**3.80**	**233**	P	**Pn**	**15 07 52.2**	**+1.0**
MAT				*e*S	**Sn**	**15 08 38.9**	**+4.3**
ASAJ	**Asahikawa**	**5.25**	**5**	P	**Pn**	**15 08 11.0**	**0.0**
	1.2nm,0.3s,baz=207,slow=14,SNR=29						
ASAJ				S	**Sn**	**15 09 09.3**	**-0.7**
	0.9nm,0.3s,baz=137,slow=18,SNR=3.3						
USRK	**Ussuriysk Ar.**	**9.18**	**309**	P	**Pn**	**15 09 06.5**	**+1.7**
	0.2nm,0.3s,baz=120,slow=14,SNR=11						
KSRS	**Korea Array**	**11.16**	**267**	P	**Pn**	**15 09 35.2**	**+3.4**
	0.1nm,0.3s,baz=80,slow=13,SNR=3.8						
KSRS				LR	LR	15 13 17.2	
	comp=Z,51nm,21.6s,baz=71,slow=34						
KLR	**Kul'dur**	**12.67**	**328**	LR	LR	15 14 52.4	
	comp=Z,56nm,18.9s,baz=218,slow=38						
SEY	**Seymchan**	**24.89**	**11**	P	**P**	**15 12 13.2**	**+0.7**
	0.9nm,0.5s,baz=215,slow=6.3,SNR=7.2						
SONM	**Songino Array**	**27.17**	**301**	P	**P**	**15 12 33.9**	**+0.5**
	0.3nm,0.5s,baz=101,slow=7.5,SNR=2.7						
H11N2	**WAKE ISLAND Hy**	**28.77**	**124**	T	T	15 43 08.8	
	baz=317,slow=75,SNR=1097						
H11N1	**WAKE ISLAND Hy**	**28.78**	**124**	T	T	15 43 12.4	
	baz=317,slow=75,SNR=392						
H11N3	**WAKE ISLAND Hy**	**28.79**	**124**	T	T	15 43 13.0	
	baz=317,slow=75,SNR=784						
H11S1	**WAKE ISLAND Hy**	**29.55**	**126**	T	T	15 44 10.0	
	baz=319,slow=76,SNR=172						
H11S3	**WAKE ISLAND Hy**	**29.55**	**126**	T	T	15 44 10.2	
	baz=319,slow=76,SNR=302						
H11S2	**WAKE ISLAND Hy**	**29.56**	**126**	T	T	15 44 10.2	
	baz=319,slow=76,SNR=124						
ZALV	**Zalesovo Beam**	**41.02**	**311**	P	**P**	**15 14 32.1**	**-0.5**
	2.6nm,0.8s,baz=89,slow=7.4,SNR=11						
ZALV				pP	**pP**	**15 14 49.5**	**+2.3**
	3.1nm,0.5s,baz=89,slow=8.0,SNR=9.4						
ZALV				LR	LR	15 34 11.5	
	comp=Z,16nm,18.3s,baz=70,slow=40						
MKAR	**Makanchi Array**	**43.54**	**301**	P	**P**	**15 14 52.8**	**-0.5**
	3.3nm,0.8s,baz=86,slow=9.7,SNR=32						
MKAR				pP	**pP**	**15 15 10.2**	**+2.4**
	2.1nm,0.9s,baz=80,slow=9.4,SNR=6.8						
ILAR	**Eielson Array**	**47.70**	**33**	P	**P**	**15 15 25.5**	**-0.4**
	0.7nm,0.7s,baz=262,slow=4.4,SNR=10.0						
ILAR				pP	**pP**	**15 15 43.4**	**+3.1**
	0.5nm,0.7s,baz=278,slow=6.5,SNR=3.2						
WRA	**Warramunga Arr**	**58.96**	**188**	P	**P**	**15 16 47.4**	**-1.4**
	0.9nm,0.6s,baz=6.7,slow=7.2,SNR=15						
ASAR	**Alice Springs**	**62.68**	**188**	P	**P**	**15 17 13.6**	**-0.6**
	0.4nm,0.7s,baz=13,slow=5.0,SNR=11						
FINES	**FINESS Array B**	**67.39**	**332**	P	**P**	**15 17 43.3**	**-0.9**
	2.0nm,0.8s,baz=38,slow=7.0,SNR=4.1						
NOA	**NORSAR Array B**	**72.65**	**337**	P	**P**	**15 18 15.1**	**-1.5**
	1.1nm,0.9s,baz=40,slow=5.2,SNR=2.6						
AKASG	**Malin Array Be**	**73.11**	**322**	P	**P**	**15 18 18.1**	**-1.2**
	0.3nm,0.4s,baz=44,slow=6.1,SNR=3.8						
AKASG				pP	**PcP**	**15 18 36.2**	**+0.3**
	0.7nm,0.5s,baz=45,slow=6.4,SNR=3.3						

IDC 01 15:13:27.7±2.0,17°.88S×69°.39W,h131^{km}±14^{km},mb3.2/2, mb1 3.3/4,mb1mx3.2/26,mbtmp3.6/4,Error ellipse: s-maj=41.9km s-min=10.5km az=103.0,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.99**	**38**	P	Pn	15 14 03.9	+1.6
	4.0nm,0.3s,baz=212,slow=6.7,SNR=58						
LPAZ				S	Sn	15 14 28.6	+0.1
	1.2nm,0.3s,baz=30,slow=14,SNR=4.2						
LVC	**Limon Verde**	**4.73**	**175**	P	Pn	15 14 39.0	+1.5
	0.6nm,0.3s,baz=359,slow=6.7,SNR=9.8						
LVC				S	Sn	15 15 31.2	-0.6
	1.2nm,0.3s,baz=72,slow=21,SNR=9.5						
SIV	**San Ignacio**	**8.18**	**78**	P	Pn	15 15 24.2	+0.5
	1.9nm,0.3s,baz=275,slow=7.6,SNR=10						
TORD	**Torodi Ar. Bea**	**76.60**	**71**	P	P	15 25 04.6	+0.2
	0.3nm,0.8s,baz=245,slow=3.0,SNR=3.0						
YKA	**Yellowknife Ar**	**87.64**	**341**	P	P	15 26 00.3	-0.5
	0.3nm,0.4s,baz=134,slow=4.9,SNR=6.7						

IDC 01 15:34:59.1±1.5,4°.72S×153°.21E,h0^{km},mb3.6/6, mb1 3.8/6,mb1mx3.6/31,mbtmp3.6/6,Error ellipse: s-maj=57.8km s-min=22.6km az=118.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.80**	**229**	P	P	15 40 14.3	+0.4
	1.4nm,0.7s,baz=53,slow=9.4,SNR=21						
ASAR	**Alice Springs**	**26.48**	**223**	P	P	15 40 38.5	+0.1
	0.4nm,0.7s,baz=55,slow=9.3,SNR=9.7						
STKA	**Stephens Creek**	**29.13**	**201**	P	P	15 41 01.4	-0.5
	1.0nm,0.7s,baz=9.5,slow=6.1,SNR=2.5						
FITZ	**Fitzroy Crossi**	**30.06**	**242**	P	P	15 41 10.1	-0.1
	1.8nm,0.9s,baz=50,slow=7.9,SNR=3.4						
MKAR	**Makanchi Array**	**80.54**	**319**	P	P	15 47 13.2	-0.2
	0.3nm,0.9s,baz=104,slow=3.6,SNR=2.3						
ILAR	**Eielson Array**	**81.93**	**22**	P	P	15 47 20.7	+0.3
	0.4nm,0.9s,baz=243,slow=5.9,SNR=3.7						

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*IDC **01** 15:35:50.7±1.9,32°.22S×178°.23W,h0^{km},mb3.9/6, mb1 4.0/7,mb1mx3.9/30,mbtmp3.9/7,ML3.4/1,MS3.4/1, Ms1 3.4/1,ms1mx2.7/25,Error ellipse: s-maj=43.4km s-min=30.1km az=50.0*

*ISCJB **01** 15:35:53.2±1.8,32°.37S±0°.10×178°.4W±0°.3,h24^{km}, mb3.9/6,Error ellipse: s-maj=32.6km s-min=13.4km*

az=8.1

ISC 01 15:35:54.4±1.7,**32°.3S**±0°.1×**178°.3W**±0°.2,**h24km,n10,**
σ1ˢ.05/9,**mb4.0**/6,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.04	211	Pn	Pn	15 37 34.8	-1.1
	0.6nm,0.3s,baz=259,slow=7.2,SNR=5.1						
URZ				Sn	Sn	15 38 55.6	+0.4
	1.7nm,0.3s,baz=356,slow=22,SNR=8.8						
RPZ	Rata Peaks	14.15	213	Sn	Sn	15 41 38.3	-11
	0.3nm,0.3s,baz=17,slow=17,SNR=2.5						
DZM	Mont Dzumac	16.98	303	LR	LR	15 44 53.7	
	comp=Z,130nm,19.4s,baz=198,slow=32						
STKA	Stephens Creek	33.87	260	P	P	15 42 35.9	+0.7
	2.7nm,1.1s,baz=130,slow=7.9,SNR=3.3						
CTA	Charters Tower	33.93	282	P	P	15 42 36.7	+0.9
	1.8nm,0.6s,baz=102,slow=9.3,SNR=5.0						
ASAR	Alice Springs	42.81	269	P	P	15 43 50.8	+0.2
	1.0nm,0.7s,baz=109,slow=7.5,SNR=17						
WRA	Warramunga Arr	43.98	274	P	P	15 43 60.0	0.0
	1.2nm,0.3s,baz=112,slow=8.0,SNR=35						
FITZ	Fitzroy Crossi	52.16	272	P	P	15 45 01.8	-1.4
	0.6nm,0.7s,baz=111,slow=8.6,SNR=2.2						
QSPA	South Pole Qui	57.81	180	P	P	15 45 44.6	+1.0
	0.9nm,0.9s,baz=142,slow=5.0,SNR=3.9						
FINES	FINESS Array B	146.84	339	PKPbc	PKPbc	15 55 32.8	-0.9
	1.6nm,0.5s,baz=67,slow=2.8,SNR=10						

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*DDA **01** 15:39:23.2,36°.97N×28°.14E,h7km±2km,ML2.7*
*ISK **01** 15:39:23.2,36°.94N×28°.13E,h1km,ML2.2/5*
ISC 01 15:39:22.2±1.1,**36°.94N**±0°.04×**28°.21E**±0°.03,**h7km**±11km,
n13,σ1ˢ.14/22,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSB	Marmaris-Mugla	0.22	183	PG	Pg	15 39 28.7	+2.2
BBRN	Bozburun-Marma	0.28	205	PG	Pb	15 39 29.3	-0.3
BBRN				SG	Sb	15 39 33.9	-0.7
TURN	Turunc	0.32	101	PG	Pg	15 39 27.9	-0.6
TURN				SG	Sg	15 39 31.3	-1.4
TURN	Turunc	0.32	101	*i* P	Pg	15 39 28.7	+0.3
TURN				*i* S	Sg	15 39 31.5	-1.2
TURN				IAML_P			
	comp=Z,5µm,0.1s						
DALY	Dalyan (Mula)	0.38	108	PG	Pn	15 39 33.5	-0.5
DALY	Dalyan (Mula)	0.38	108	*e*P	Pn	15 39 32.8	-1.3
DALY				*i* S	Sb	15 39 40.5	+3.3
DAT	Datca	0.55	248	PG	Pb	15 39 33.9	-0.3
DAT				SG	Sb	15 39 41.7	-0.6
DAT	Datca	0.55	248	*i* P	Pb	15 39 33.8	-0.4
DAT				*i* S	Sb	15 39 41.9	-0.4
BDRM	Kayabasi	0.63	282	*e*P	Pb	15 39 34.9	-0.6
BDRM				*i* S	Sg	15 39 42.4	0.0
BODT	Bodrum	0.73	280	PG	Pb	15 39 37.2	-0.1
AYDN	Tasoluk	0.77	340	*i* P	Pb	15 39 38.2	+0.2
AYDN				*i* S	Sb	15 39 48.4	-0.3
AYDN				IAML_P			
	comp=Z,2µm,0.3s						
TAVA	DENIZLI_Tavas	0.77	47	*e*P	Pn	15 39 39.9	+0.3
TAVA				*i* S	Sn	15 39 52.3	+0.7
AYDB	Zeytinkoy-Aydi	1.04	346	PG	Pn	15 39 43.3	-0.1

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*ISCJB **01** 15:42:11.3±0.5,23°.50S±0°.04×179°.98W±0°.09,h532km,*
mb4.5/1,Error ellipse: s-maj=11.3km s-min=5.6km
az=173.7
*IDC **01** 15:42:13.5±3.6,23°.58S×180°.00E,h550km±40km,*
mb3.4/15,mb1 3.6/16,mb1mx3.5/30,mbtmp4.3/16,Error
ellipse: s-maj=21.3km s-min=13.8km az=62.0
*WEL **01** 15:42:15.2±1.3,24°S±10°×18°0W±3°9,h546km±23km*
ISC 01 15:42:11.8±0.6,**23°.60S**±0°.07×**179°.93W**±0°.10,**h532km,**
n54,σ1ˢ.68/63,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.92	163	P	P	15 43 49.2	+0.6
GLKZ				S	S	15 45 07.1	-0.8
DZM	Mont Dzumac	12.66	274	P	P	15 44 57.8	+0.4
	0.1nm,0.3s,baz=86,slow=18,SNR=2.2						
WCZ	Waipu Caves	13.26	201	P	P	15 45 05.1	+1.9
KUZ	Kuaotunu	13.62	195	P	P	15 45 07.8	+0.8
WIAZ	Waiheke Island	13.82	197	P	P	15 45 10.1	+1.0
MBAZ	Motutapu North	13.86	198	P	P	15 45 10.3	+0.9
MXZ	Matakaoa Point	14.00	186	P	P	15 45 12.6	+1.8
WMGZ	Waiomatatini S	14.24	185	P	P	15 45 14.0	+0.6
WMGZ				S	S	15 47 45.5	+2.3
HAZ	Te Kaha	14.24	187	P	P	15 45 13.1	-0.3
HAZ				S	S	15 47 40.6	-2.6
RUGZ	Raukumara Rang	14.46	188	P	P	15 45 16.8	+1.0
PUZ	Puketiti	14.51	186	P	P	15 45 17.7	+1.5
PUZ				S	S	15 47 48.0	-0.4
OPRZ	Ohinepanea	14.51	191	P	P	15 45 17.8	+1.5
KMRZ	Kaimai	14.63	193	P	P	15 45 21.8	+4.3
TWGZ	Tauwhareparae	14.64	187	P	P	15 45 13.9	-3.7
TWGZ				S	S	15 47 51.3	+0.5
KARZ	Kaharoa	14.74	192	P	P	15 45 21.6	+3.0
OMRZ	Omania	14.80	191	P	P	15 45 21.8	+2.5
URZ	Urewera	14.83	189	P	P	15 45 16.6	-2.9
	6.9nm,0.3s,baz=184,slow=1.4,SNR=49						
URZ	Urewera	14.83	189	P	P	15 45 17.3	-2.2
URZ				S	S	15 47 50.5	-3.8
NGRZ	Ngongotaha	14.83	192	P	P	15 45 23.7	+4.1
MWZ	Matawai	14.84	188	P	P	15 45 18.7	-1.1
MWZ				S	S	15 47 52.5	-2.3
UTU	Utuhina	14.90	192	P	P	15 45 23.9	+3.6
CNGZ	Carnagh Statio	14.92	186	P	P	15 45 21.7	+1.2
RRRZ	Republican Roa	15.00	191	P	P	15 45 23.1	+1.7
RAGZ	Rawiri	15.02	188	P	P	15 45 21.6	0.0
MUGZ	Murupara	15.09	190	P	P	15 45 22.7	+0.4
MUGZ				S	S	15 47 57.3	-2.0
RTZ	Ruatahuna	15.20	189	P	P	15 45 23.3	-0.2
RAHZ	Arahi	15.47	189	P	P	15 45 25.3	-1.0
RPZ	Rata Peaks	21.39	198	P	P	15 46 20.4	-0.7
	8.2nm,0.6s,baz=313,slow=2.0,SNR=11						
CTA	Charters Tower	31.54	270	P	P	15 47 50.5	-0.1
	13nm,0.4s,baz=94,slow=11,SNR=64						
STKA	Stephens Creek	34.89	248	P	P	15 48 18.9	0.0
	4.4nm,0.5s,baz=84,slow=9.3,SNR=17						
ASAR	Alice Springs	42.15	260	P	P	15 49 17.9	+0.1
	8.1nm,0.7s,baz=96,slow=7.1,SNR=129						
ASAR				S	S	15 54 58.3	-1.1
	0.4nm,0.8s,baz=96,slow=14,SNR=5.2						
WRA	Warramunga Arr	42.49	266	P	P	15 49 20.1	-0.4
	10.0nm,0.7s,baz=102,slow=8.6,SNR=84						
FITZ	Fitzroy Crossi	50.92	265	P	P	15 50 24.3	+0.1
	4.0nm,0.7s,baz=126,slow=7.6,SNR=12						
VNDA	Vanda	54.68	185	P	P	15 50 51.3	+1.2
	1.3nm,0.7s,baz=4.4,slow=5.1,SNR=7.9						
QSPA	South Pole Qui	66.48	180	P	P	15 52 09.2	+1.0
	11nm,0.7s,baz=1.7,slow=1.3,SNR=70						
MJAR	Matsushiro Arr	71.69	326	P	P	15 52 39.0	-0.9
	0.9nm,0.6s,baz=153,slow=3.3,SNR=4.0						
ASAJ	Asahikawa	75.63	333	P	P	15 53 03.5	+1.5
	2.5nm,0.5s,baz=233,slow=20						
PETK	Petropavlovsk-	78.83	346	P	P	15 53 18.7	-0.6
	1.2nm,0.8s,baz=180,slow=6.5,SNR=4.7						
NVAR	Mina Array Bea	84.49	44	P	P	15 53 49.4	+0.5
	0.2nm,0.5s,baz=218,slow=5.7,SNR=2.0						
SNAA	Sanae	84.96	179	P	P	15 53 50.1	-0.3
VNA3	Neumayer Olymp	85.17	177	P	P	15 53 51.3	-0.1
VNA2	Neumayer--Watz	85.58	178	P	P	15 53 53.7	+0.3
	baz=193,slow=3.0						
CMAR	Chiang Mai Arr	89.49	290	P	P	15 54 13.8	+1.2
	0.2nm,0.2s,baz=134,slow=3.9,SNR=3.5						
TXAR	Lajitas Array	90.22	58	P	P	15 54 16.6	+0.6
	0.8nm,0.7s,baz=221,slow=6.6,SNR=11						
PDAR	Pinedale Array	92.43	44	P	P	15 54 25.7	-0.3
	0.2nm,0.5s,baz=180,slow=3.5,SNR=2.5						
MKAR	Makanchi Array	112.00	313	Pdiff	Pdif	15 55 52.6	-0.4
	0.2nm,0.7s,baz=102,slow=6.1,SNR=2.5						
MKAR				PKiKP	PKiKP	15 59 45.0	-1.5
	0.2nm,0.6s,baz=217,slow=2.2,SNR=3.9						
KURBB	Kurchatov Arra	115.08	316	PKP	PKPdf	15 59 50.8	-1.4
	0.5nm,0.6s,baz=84,slow=2.0,SNR=4.6						
BVAR	Borovoye Array	120.26	319	PKP	PKPdf	16 00 00.7	-1.4
	0.6nm,0.5s,baz=151,slow=0.8,SNR=5.0						
ARCES	ARCESS Array B	131.61	348	PKP	PKPdf	16 00 21.9	-1.4
	2.1nm,1.0s,baz=64,slow=2.8,SNR=4.1						
FINES	FINESS Array B	138.19	342	SKPbc	SKPbc	16 03 19.7	-0.3
	1.6nm,0.7s,baz=54,slow=3.3,SNR=4.0						
NOA	NORSAR Array B	141.80	351	PKhKP	PKPpre	16 00 37.9	
	1.6nm,0.9s,baz=16,slow=4.7,SNR=3.3						
AKASG	Malin Array Be	144.76	328	PKP	PKPdf	16 00 46.7	-1.1
	0.9nm,0.5s,baz=46,slow=4.1,SNR=5.7						
BRTR	Keskin Array B	147.45	308	PKPbc	PKPdf	16 00 53.6	+0.7
	0.5nm,0.7s,baz=63,slow=5.6,SNR=3.8						
TORD	Torodi Ar. Bea	169.49	189	PKPab	PKPab	16 02 35.2	-0.4
	0.5nm,0.6s,baz=165,slow=2.8,SNR=3.8						

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*IDC **01** 15:48:38.9±1.0,10°.88S×165°.38E,h0km,mb3.9/8,*
mb1 4.2/9,mb1mx3.8/44,mbtmp4.0/9,ML4.2/1,Error
ellipse: s-maj=42.4km s-min=21.3km az=134.0
*ISCJB **01** 15:48:41.7±0.8,11°.1S±0°.1×165°.4E±0°.2,h30km,mb4.0/7,*
Error ellipse: s-maj=22.9km s-min=15.6km az=29.2
ISC 01 15:48:43.4±0.8,**11°.0S**±0°.1×**165°.4E**±0°.2,**h30km,n15,**
σ1ˢ.01/9,**mb3.9**/7,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.10	175	Pn	Pn	15 51 19.8	-0.4
	1.5nm,0.3s,baz=314,slow=22,SNR=17						
CTA	Charters Tower	20.58	241	P	P	15 53 20.6	+0.5
	3.2nm,0.9s,baz=68,slow=11,SNR=3.7						
H11S2	WAKE ISLAND Hy	29.28	2	T	T	16 25 16.4	
	baz=181,slow=76,SNR=8.1						
H11S3	WAKE ISLAND Hy	29.29	2	T	T	16 25 17.0	
	baz=181,slow=76,SNR=5.0						
H11S1	WAKE ISLAND Hy	29.30	2	T	T	16 25 17.8	
	baz=181,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.51	3	T	T	16 26 52.1	
	baz=182,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	30.51	3	T	T	16 26 51.7	
	baz=182,slow=76,SNR=5.3						
H11N2	WAKE ISLAND Hy	30.52	3	T	T	16 26 50.4	
	baz=182,slow=76,SNR=4.1						
WRA	Warramunga Arr	31.23	250	P	P	15 54 59.8	-0.8
	0.8nm,0.5s,baz=82,slow=9.1,SNR=9.0						
ASAR	Alice Springs	32.57	243	P	P	15 55 11.3	-1.0
	3.7nm,0.9s,baz=63,slow=10,SNR=39						
ILAR	Eielson Array	83.52	19	P	P	16 01 08.5	+0.4
	0.5nm,0.5s,baz=237,slow=5.3,SNR=14						
MAW	Mawson	84.69	202	P	P	16 01 15.5	+1.4
	2.2nm,0.6s,baz=117,slow=9.0,SNR=2.8						
NVAR	Mina Array Bea	86.19	50	P	P	16 01 22.6	+0.2
	0.7nm,0.7s,baz=231,slow=8.4,SNR=4.7						
MKAR	Makanchi Array	93.25	317	P	P	16 01 55.7	+0.5
	0.4nm,0.9s,baz=110,slow=4.3,SNR=3.3						
YKA	Yellowknife Ar	95.03	27	P	P	16 02 01.7	-1.3
	0.1nm,0.3s,baz=254,slow=4.4,SNR=2.5						

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*ISCJB **01** 16:16:08.8±0.7,31°.69S±0°.02×69°.67W±0°.03,h121km±6km,*
Error ellipse: s-maj=4.6km s-min=3.9km az=24.6
*SJA **01** 16:16:08.3±0.6,31°.72S×69°.70W,h114km±2km,ML3.0,*
MW3.5
*GUC **01** 16:16:09.0±0.7,31°.66S×70°.02W,h130km±13km,ML3.1*
ISC 01 16:16:09.4±1.4,**31°.69S**±0°.03×**69°.69W**±0°.03,
h115km±10km,**n24,σ0ˢ.68**/46,**3C-3D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.35	108	*e*P	Pn	16 16 25.9	-0.6
RTLS				*e*S	Sn	16 16 39.3	+0.1
AUSP	Uspallata	0.59	154	*e*P	Pn	16 16 27.7	-0.2
AUSP				*e*S	Sn	16 16 41.6	-0.1
RTCV	Cerro Valdivia	0.99	100	*e*P	Pn	16 16 31.0	0.0
RTCV				*e*S	Sn	16 16 47.0	-0.4
RTLL	Cerro Villicun	1.10	71	*e*P	Pn	16 16 32.2	+0.1
RTLL				*e*S	Sn	16 16 49.0	-0.3
RTLL				IAML		16 16 51.9	
ACCO	Cerro Coronel	1.22	26	*e*P	Pn	16 16 34.1	+0.3
ACCO				*e*S	Sn	16 16 53.5	+1.4
CMCH	Combarbala	1.23	294	⇓*i*P	Pn	16 16 33.6	0.0
CMCH				*i* S	Sn	16 16 51.9	-0.1
CFA	Coronel Fontan	1.24	87	*e*P	Pn	16 16 33.9	+0.2
CFA				*e*S	Sn	16 16 51.8	-0.2
AMOG	MOGNA	1.27	54	*e*P	Pn	16 16 34.1	+0.1
AMOG				*e*S	Sn	16 16 53.0	+0.4
AROD	Rodeo	1.53	7	*e*P	Pn	16 16 37.8	+0.5
AROD				*e*S	Sn	16 16 59.1	+0.8
AAGR	Agrelo	1.57	153	*e*P	Pn	16 16 37.1	-0.4
AAGR				*e*S	Sn	16 16 58.3	-0.6
ACDV	Cuesta del Vie	1.59	18	*e*P	Pn	16 16 38.2	+0.3
ACDV				*e*S	Sn	16 17 00.2	+0.8
PEL	Peldehue	1.68	210	⇑*i*P	Pn	16 16 38.7	-0.1
PEL				*i* S	Sn	16 17 01.3	+0.2
PEL				IAML		16 17 03.6	
	comp=E,136nm,0.1s						
ROCH	El Roble	1.70	221	⇓*i*P	Pn	16 16 38.9	-0.3
ROCH				*i* S	Sn	16 17 01.5	-0.4
ROCH				IAML		16 17 03.8	
	comp=N,194nm,0.2s						
ROC1	El Roble	1.71	221	*e*P	Pn	16 16 38.4	-0.9
ROC1				*e*S	Sn	16 17 01.1	-0.9
FCH	Farellones	1.71	197	⇓*i*P	Pn	16 16 40.6	+1.1
FCH				*i* S	Sn	16 17 04.3	+2.0
FCH				IAML		16 17 08.7	
	comp=E,131nm,0.2s						
GO04	Tololo Observa	1.79	327	⇑*i*P	Pn	16 16 40.0	-0.3
GO04				*i* S	Sn	16 17 02.9	-0.8
GO04				IAML		16 17 07.0	
	comp=N,627nm,0.1s						
CLCH	Cerro Calan	1.85	203	*e*P	Pn	16 16 41.3	+0.5
CLCH				*e*S	Sn	16 17 06.0	+1.1
CLCH				IAML		16 17 08.1	
	comp=E,132nm,0.3s						
AVIZ	Vizcacheras	2.04	151	*e*P	Pn	16 16 43.0	-0.2
AVIZ				*e*S	Sn	16 17 08.2	-0.8
LMEL	Las Melosas	2.20	191	*e*P	Pn	16 16 46.4	+1.1
LMEL				IAML		16 17 26.0	
	comp=N,108nm,0.2s						
ACAN	Cantantal	2.20	106	*e*P	Pn	16 16 45.4	+0.1
ACAN				*e*S	Sn	16 17 12.6	-0.2
AGUA	GUANDACOL	2.42	26	*e*P	Pn	16 16 48.6	+0.4
LCO	Las Campanas	2.81	342	⇑*i*P	Pn	16 16 53.0	-0.4
LCO				*i* S	Sn	16 17 25.8	-1.3
LCO				IAML		16 17 26.8	
	comp=E,144nm,0.4s						
APLL	PUNTA DE LOS L	3.00	65	*e*P	Pn	16 16 55.9	+0.2
APLL				*e*S	Sn	16 17 31.0	-0.4
APLL				IAML		16 17 32.2	
	comp=Z,37nm,0.2s						
MRA	San Martin	3.45	103	*e*P	Pn	16 17 01.5	-0.1
MRA				*e*S	Sn	16 17 41.3	-0.7
MRA				IAML		16 17 42.2	
	comp=Z,30nm,0.4s						

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*IDC **01** 16:20:22.8±0.9,32°.17S×178°.05W,h0km,mb4.4/7,*
mb1 4.5/8,mb1mx4.1/41,mbtmp4.3/8,ML3.7/1,MS3.8/13,
Ms1 3.8/13,ms1mx3.6/37,Error ellipse: s-maj=26.8km
s-min=25.7km az=139.0
*ISCJB **01** 16:20:24.9±1.4,32°.42S±0°.08×178°.2W±0°.2,h20km,*
mb4.3/8,MS3.8/11,Error ellipse: s-maj=25.5km
s-min=10.6km az=9.2
*NEIC **01** 16:20:27.1±0.7,32°.53S×177°.96W,h35km,mb4.1/1,Error*
ellipse: s-maj=21.6km s-min=12.8km az=118.0
ISC 01 16:20:25.5±0.9,**32°.4S**±0°.1×**178°.0W**±0°.2,**h20km,n37,**
σ1ˢ.30/23,**mb4.3**/8,**MS3.8**/11,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.11	213	Pn	Pn	16 22 08.0	-0.4
	1.3nm,0.3s,baz=276,slow=4.5,SNR=15						
URZ				Sn	Sn	16 23 28.8	+0.2
	3.3nm,0.3s,baz=267,slow=3.4,SNR=9.6						
RPZ	Rata Peaks	14.22	214	Pn	Pn	16 23 42.6	-3.2
	0.5nm,0.3s,baz=82,slow=7.1,SNR=3.3						
RPZ				Sn	Sn	16 26 10.7	-12
	0.6nm,0.3s,baz=141,slow=23,SNR=6.8						
DZM	Mont Dzumac	17.17	303	*e*P	P	16 24 26.6	+0.7
	60nm,1.2s						
DZM				*e*LR	LR	16 28 06.5	
	comp=Z,807nm,23.2s						
DZM	Mont Dzumac	17.17	303	LR	LR	16 29 47.6	
	comp=Z,807nm,20.1s,baz=202,slow=33						
RAR	Rarotonga	19.69	60	LR	LR	16 33 06.5	
	comp=Z,131nm,18.0s,baz=226,slow=39						
PPT2	Papeete2	29.57	67	*e*LR	LR	16 34 11.0	
	comp=Z,170nm,25.2s						
PPT	Papeete	29.59	67	LR	LR	16 37 35.6	
	comp=Z,109nm,18.1s,baz=191,slow=35						
HNR	Honiara	30.58	313	LR	LR	16 37 01.3	
	comp=Z,173nm,18.7s,baz=138,slow=33						
STKA	Stephens Creek	34.06	260	P	P	16 27 10.1	+1.6
	2.5nm,0.8s,baz=107,slow=14,SNR=4.4						
STKA				LR	LR	16 40 34.7	
	comp=Z,245nm,18.1s,baz=43,slow=36						
CTA	Charters Tower	34.13	282	P	P	16 27 10.3	+1.0
	6.3nm,0.8s,baz=112,slow=11,SNR=9.8						
RKT	Rikitea	38.99	87	*e*LR	LR	16 38 32.0	
	comp=Z,246nm,30.8s						
ASAR	Alice Springs	43.01	269	P	P	16 28 23.8	-0.1
	3.6nm,0.8s,baz=106,slow=8.0,SNR=23						
ASAR				LR	LR	16 45 43.1	
	comp=Z,121nm,18.9s,baz=100,slow=35						
WRAB	Tennant Creek	44.17	274	*e*P	P	16 28 32.2	-0.9
	2.3nm,0.6s						
WRA	Warramunga Arr	44.17	274	P	P	16 28 32.9	-0.3
	14nm,1.0s,baz=112,slow=8.0,SNR=38						
WRA				LR	LR	16 45 56.3	
	comp=Z,196nm,19.8s,baz=115,slow=35						
VNDA	Vanda	46.16	186	LR	LR	16 44 41.0	
	comp=Z,103nm,18.3s,baz=138,slow=32						
FITZ	Fitzroy Crossi	52.35	271	P	P	16 29 36.0	-0.3
	4.9nm,0.9s,baz=122,slow=6.0,SNR=7.0						
QSPA	South Pole Qui	57.77	180	P	P	16 30 18.4	+3.3
	1.0nm,0.8s,baz=16,slow=5.9,SNR=3.2						
SNAA	Sanae	76.22	178	P	P	16 32 22.7	+11
VNA3	Neumayer Olymp	76.37	176	P	P	16 32 25.0	+12
VNA2	Neumayer--Watz	76.80	177	P	P	16 32 27.9	+13
VNA1	Neumayer--Stat	77.03	177	P	P	16 32 29.1	+12
KSRS	Korea Array	85.81	320	LR	LR	17 11 10.0	
	comp=Z,20nm,19.3s,baz=114,slow=36						
PETK	Petropavlovsk-	87.69	346	P	P	16 33 12.0	-0.2
	4.3nm,0.9s,baz=151,slow=7.7,SNR=5.7						
PETK				LR	LR	17 09 22.7	
	comp=Z,33nm,18.4s,baz=117,slow=34						
NVAR	Mina Array Bea	89.69	43	LR	LR	17 08 48.6	
	comp=Z,88nm,18.6s,baz=204,slow=32						
TXAR	Lajitas Array	93.46	57	LR	LR	17 08 54.5	
	comp=Z,29nm,18.9s,baz=0.0,slow=31						
PDAR	Pinedale Array	97.56	44	LR	LR	17 13 22.8	
	comp=Z,49nm,18.3s,baz=276,slow=33						
MKAR	Makanchi Array	118.99	309	PKP	PKPdf	16 39 11.6	-0.8
	0.9nm,1.0s,baz=90,slow=2.9,SNR=5.6						
ARCES	ARCESS Array B	140.48	347	PKhKP	PKPpre	16 39 46.7	
	3.0nm,0.9s,baz=8.4,slow=3.1,SNR=4.4						
ARCES				PKP	PKiKP	16 39 54.0	-1.0
	1.5nm,0.9s,baz=48,slow=1.3						
KBZ	Khabaz	146.14	302	PKPbc	PKPab	16 40 04.5	-0.2
	4.3nm,1.0s,baz=190,slow=2.1,SNR=7.9						
FINES	FINESS Array B	146.95	339	PKPbc	PKPbc	16 40 05.8	0.0
	3.6nm,0.6s,baz=46,slow=3.3,SNR=20						
NB2	NORSAR Subarra	150.66	351	PKP	PKPbc	16 40 15.4	-0.1
	comp=Z,5.4nm,1.2s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.66	351	PKPbc	PKPbc	16 40 15.0	-0.4
	comp=Z,0.8nm,0.6s,baz=15,slow=4.1,SNR=3.2						
AKASG	Malin Array Be	152.80	320	PKPbc	PKiKP	16 40 21.4	+0.6
	comp=Z,3.4nm,0.9s,baz=51,slow=3.1,SNR=8.1						
BRTR	Keskin Array B	153.45	295	PKPbc	PKiKP	16 40 22.8	+0.1
	comp=Z,1.6nm,0.9s,baz=119,slow=4.4,SNR=7.8						
CLL	Collm	159.39	340	*e*PKPab	PKPab	16 40 59.0	-0.8
TORD	Torodi Ar. Bea	160.89	179	PKPab	PKPab	16 41 05.7	-1.4
	comp=Z,0.8nm,0.9s,baz=194,slow=3.0,SNR=2.7						
GERES	GERESS Array B	161.30	335	PKPab	PKPab	16 41 06.9	-1.5
	comp=Z,0.5nm,0.7s,baz=304,slow=2.3,SNR=3.7						

IDC 01 16:38:29.7±3.1,**32°.33S**×**178°.16W,h0km,mb3.5**/2,
mb1 3.8/3,**mb1mx3.6**/29,**mbtmp3.6**/3,**ML3.1**/1,**MS3.3**/1,
Ms1 3.3/1,**ms1mx2.6**/19,**Error ellipse: s-maj=71.3km**
s-min=36.4km az=114.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.07	212	Pn	Pn	16 40 13.9	-0.5
	0.4nm,0.3s,baz=282,slow=20,SNR=5.6						
URZ				Sn	Sn	16 41 35.5	+0.1
	1.6nm,0.3s,baz=272,slow=5.5,SNR=9.7						
ASAR	Alice Springs	42.91	269	P	P	16 46 30.2	-0.1
	0.3nm,0.6s,baz=115,slow=7.7,SNR=5.4						
WRA	Warramunga Arr	44.07	274	P	P	16 46 39.6	0.0
	0.5nm,0.3s,baz=114,slow=8.0,SNR=15						
GUMO	Guam	57.76	316	LR	LR	17 10 11.6	
	comp=Z,26nm,18.0s,baz=145,slow=33						
FINES	FINESS Array B	146.90	339	PKPbc	PKPbc	16 58 12.5	-0.7
	0.6nm,0.4s,baz=29,slow=3.2,SNR=5.4						

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*IDC **01** 16:57:55.8±10.0,23°.40S×179°.36E,h479km±106km,*
mb3.4/7,mb1 3.5/8,mb1mx3.2/32,mbtmp4.3/8,Error
ellipse: s-maj=80.4km s-min=27.4km az=37.0
ISC 01 16:58:01.6±1.6,**23°.9S**±0°.1×**179°.3E**±0°.2,**h548km,n11,**
σ1ˢ.23/12,**mb4.0**/6,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.44	187	P	P	17 01 05.7	+0.6
	1.0nm,0.3s,baz=246,slow=3.8,SNR=11						
URZ				S	S	17 03 34.5	-1.8
	0.3nm,0.3s,baz=254,slow=19,SNR=2.4						
RPZ	Rata Peaks	20.89	197	P	P	17 02 08.0	+2.4
	3.0nm,0.5s,baz=7.9,slow=6.1,SNR=3.4						
STKA	Stephens Creek	34.11	248	P	P	17 04 02.0	+0.9
	2.4nm,0.8s,baz=72,slow=9.6,SNR=4.1						
ASAR	Alice Springs	41.38	261	P	P	17 05 00.3	-0.3
	2.0nm,0.5s,baz=95,slow=6.8,SNR=73						
WRA	Warramunga Arr	41.75	266	P	P	17 05 02.7	-0.8
	2.3nm,0.4s,baz=90,slow=5.9,SNR=60						
SIJI	Sorong	51.81	289	P	P	17 06 18.1	-1.3
	6.1nm,0.5s,baz=132,slow=12,SNR=4.4						
BATI	Baumata	54.57	274	P	P	17 06 39.6	+0.6
	5.7nm,0.5s,baz=198,slow=19,SNR=3.7						
CMAR	Chiang Mai Arr	88.91	291	P	P	17 09 58.9	+0.6
	0.3nm,0.5s,baz=106,slow=2.0,SNR=4.2						
ARCES	ARCESS Array B	131.75	348	PKP	PKPdf	17 16 11.9	+0.1
	2.4nm,0.9s,baz=56,slow=3.4,SNR=2.8						
AKASG	Malin Array Be	144.61	327	PKP	PKPdf	17 16 35.1	-0.7
	0.5nm,0.5s,baz=49,slow=4.2,SNR=2.6						
BRTR	Keskin Array B	147.05	307	PKPbc	PKPbc	17 16 43.2	-0.3
	0.7nm,0.7s,baz=108,slow=4.7,SNR=3.7						

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*ISCJB **01** 17:03:33.1±0.7,13°.25N±0°.08×89°.22W±0°.05,h75km±4km,*
mb3.9/3,Error ellipse: s-maj=15.3km s-min=4.3km
az=23.7
*UCR **01** 17:03:33.7±1.2,13°.15N×89°.26W,h46km±14km,MD3.8,*
ML4.4,mb3.9(NEIC)
*NEIC **01** 17:03:33.0±0.0,13°.18N×89°.26W,h56km,mb3.9/3,*
MD4.4(SNET),After SNET.
NEIC Felt [III] at San Salvador.
*GCG **01** 17:03:34.8,13°.39N×89°.33W,h5km,MD4.2*
*IDC **01** 17:03:34.4±2.2,13°.35N×89°.11W,h79km±20km,mb3.4/3,*
mb1 3.6/7,mb1mx3.4/30,mbtmp3.7/7,MS2.7/3,Ms1 2.7/3,
ms1mx2.4/26,Error ellipse: s-maj=59.7km s-min=19.3km
az=41.0
ISC 01 17:03:33.3±1.0,**13°.23N**±0°.10×**89°.21W**±0°.05,**h66km**±7km,
n48,σ1ˢ.36/60,**mb4.0**/3,**1C-3D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	El Faro	0.42	20	⇓*i*P	Pn	17 03 44.8	-0.3
UESV	Ojushtada	0.44	70	*e*P	Pn	17 03 46.6	+1.4
UESV				*e*S	Sn	17 03 57.0	+3.1
SNET	Serv Nac Est T	0.45	357	*e*P	Pn	17 03 45.1	-0.3
SNET				*e*S	Sn	17 03 54.3	0.0
SNET				IAML		17 03 55.4	
	comp=Z,12µm,0.2s						
CLUB	San Salvador	0.47	354	*e*P	Pn	17 03 45.4	-0.2
CLUB				*e*S	Sn	17 03 54.9	+0.4
CLUB				IAML		17 03 56.0	
	comp=Z,24µm,0.3s						
OPAM	San Salvador	0.48	1	*e*P	Pn	17 03 45.9	+0.2
OPAM				*e*S	Sn	17 03 55.2	+0.4
UDBS	Soyapango	0.49	6	*e*P	Pn	17 03 45.8	0.0
UDBS				*e*S	Sn	17 03 55.5	+0.5
UEES	San Salvador	0.49	356	*e*P	Pn	17 03 45.6	-0.3
UEES				*e*S	Sn	17 03 55.2	+0.2
CUSC	San Salvador	0.50	2	*e*P	Pn	17 03 46.0	+0.2
CUSC				*e*S	Sn	17 03 55.7	+0.7
BOQS	Boqueron	0.51	352	⇑*i*P	Pn	17 03 46.0	-0.1
LFU	La Fuente	0.52	10	⇓*i*P	Pn	17 03 46.4	+0.3
SNVI	San Vicente	0.52	44	*e*P	Pn	17 03 46.1	-0.1
LBRS	Las Brisas	0.53	18	⇓*i*P	Pn	17 03 46.5	+0.3
PAVA	Las Pavas	0.55	29	*e*P	Pn	17 03 46.6	+0.2
PAVA				*e*S	Sn	17 03 56.9	+1.0
CEVE	Cerro Verde	0.72	326	*e*P	Pn	17 03 48.3	-0.1

CEVE				eS	Sn	17 04 00.0	+0.6
CEVE				IAML		17 04 02.4	
	comp=Z,23µm,0.4s						
SBLS	**San Blas**	0.72	327	eP	Pn	17 03 48.4	-0.1
TECA	**Tecapa**	0.74	69	eP	Pn	17 03 48.6	+0.1
PACA	**Pacayal**	0.90	75	eP	Pn	17 03 50.8	+0.4
PACA				eS	Sn	17 04 05.1	+2.0
LCY	**Lacayo**	0.91	78	eP	Pn	17 03 51.3	+0.7
LCND	**La Caada**	1.29	86	eP	Pn	17 03 55.9	+0.6
LCND				eS	Sn	17 04 14.1	+2.2
CNCH	**Conchagua**	1.34	88	eP	Pn	17 03 57.5	+1.3
CNCH				eS	Sn	17 04 15.9	+2.6
IXG	**Ixpaco**	1.53	308	eP	Pn	17 03 59.3	+0.6
NBG	**Las Nubes**	1.74	321	eP	Pn	17 04 03.4	+1.7
MRL	**Marmol**	1.88	346	eP	Pn	17 04 05.6	+2.2
FUG	**Fuego 3**	1.99	308	eP	Pn	17 04 06.8	+1.8
FUG				eS	Sn	17 04 31.6	+2.6
TGUH	**Tegucigalpa,Un**	2.06	66	ePn	Pn	17 04 06.2	+0.6
APG	**El Apazote**	2.14	326	P	Pn	17 04 07.8	+0.8
	comp=Z,5.4nm,0.3s,baz=125,slow=8.3,SNR=28						
APG				S	Sn	17 04 22.2	-10
	comp=Z,15nm,0.3s,baz=4.1,slow=14,SNR=17						
APG				LR	LR	17 05 07.9	
	comp=Z,87nm,20.8s,baz=106,slow=44						
BOAB	**BOACO BROADBAN**	3.54	102	ePn	Pn	17 04 25.5	-0.4
CCIG	**Comitan**	4.15	317	ePn	Pn	17 04 36.6	+2.2
PCIG		4.59	303	ePn	Pn	17 04 42.1	+1.9
ESPN	**Las Esperanzas**	4.90	102	ePn	Pn	17 04 44.4	0.0
JTS	**JuntasAbangare**	5.09	125	ePn	Pn	17 04 49.6	+2.5
JTS	**JuntasAbangare**	5.09	125	P	Pn	17 04 48.6	+1.5
	comp=Z,1.3nm,0.3s,baz=0.0,slow=20,SNR=3.9						
JTS				S	Sn	17 05 41.3	-3.4
	comp=Z,1.1nm,0.3s,baz=182,slow=22,SNR=5.5						
JTS				LR	LR	17 06 57.6	
	comp=Z,78nm,18.3s,baz=156,slow=40						
CMIG	**Matias Romero**	6.69	306	P	Pn	17 05 09.9	+1.0
	comp=Z,0.9nm,0.3s,baz=117,slow=8.1,SNR=6.9						
CMIG				S	Sn	17 06 23.5	-0.2
	comp=Z,2.1nm,0.3s,baz=319,slow=19,SNR=4.9						
TEIG	**Tepich**	7.01	7	ePn	Pn	17 05 15.4	+2.1
MTDJ	**Mount Denham**	12.29	65	ePn	Pn	17 06 26.7	+1.1
SDV	**Santo Domingo**	18.73	101	eP	P	17 07 46.2	-0.9
	comp=Z,8.4nm,1.2s						
SDV	**Santo Domingo**	18.73	101	P	P	17 07 46.1	-0.9
	comp=Z,0.3nm,0.3s,baz=305,slow=12,SNR=3.7						
TX31	**Lajitas Ar. Si**	20.90	322	eP	Pn	17 08 12.4	-1.1
	comp=Z,12nm,1.8s						
TXAR	**Lajitas Array**	20.90	322	P	Pn	17 08 10.5	-3.0
	comp=Z,0.8nm,0.5s,baz=142,slow=10,SNR=14						
MIAR	**Mount Ida**	21.59	350	eP	P	17 08 19.5	+1.9
	comp=Z,4.3nm,0.8s						
TKL	**Tuckaleechee C**	22.86	11	LR	LR	17 17 32.3	
	comp=Z,32nm,21.4s,baz=348,slow=37						
PDAR	**Pinedale Array**	34.29	333	PcP	PcP	17 12 47.4	-1.2
	comp=Z,0.4nm,0.6s,baz=110,slow=5.3,SNR=2.8						
NVAR	**Mina Array Bea**	35.99	319	PcP	PcP	17 12 53.6	0.0
	comp=Z,0.3nm,0.5s,baz=165,slow=3.7,SNR=4.2						
ULM	**Lac du Bonnet**	37.32	353	P	P	17 10 38.2	-0.8
	comp=Z,0.9nm,0.5s,baz=162,slow=12,SNR=3.2						
YKA	**Yellowknife Ar**	52.42	345	P	P	17 12 37.7	-1.0
	comp=Z,0.9nm,0.6s,baz=142,slow=7.7,SNR=20						
WRA	**Warramunga Arr**	137.82	255	PKP	PKiKP	17 22 51.5	-1.5
	comp=Z,0.6nm,1.0s,baz=93,slow=2.8,SNR=3.1						
ASAR	**Alice Springs**	137.95	249	PKP	PKPdf	17 22 51.0	-0.2
	comp=Z,0.5nm,0.9s,baz=96,slow=2.8,SNR=3.3						
CMAR	**Chiang Mai Arr**	147.50	345	PKPbc	PKPbc	17 23 08.7	-2.2
	comp=Z,0.4nm,0.4s,baz=340,slow=2.6,SNR=4.2						

BJI ***01*** *17:08:20.6, 0°.85S×123°.31E, h126km, mB5.0/27, mb4.6/41*
MOS ***01*** *17:08:21.9±1.4, 0°.08S×123°.00E, h94km, mb4.8/23, Error ellipse: s-maj=11.1km s-min=6.0km az=111.3*
ISCJB ***01*** *17:08:25.8±0.3, 0°.11S±0°.02×123°.13E±0°.02, h128km±3km, mb4.7/136, Error ellipse: s-maj=4.0km s-min=3.6km az=35.6*
IDC ***01*** *17:08:26.2±1.5, 0°.07S×123°.09E, h118km±12km, mb4.1/23, mb1 4.2/26, mb1mx4.0/39, mbtmp4.4/26, MS2.9/1, Ms1 2.9/1, ms1mx2.4/34, Error ellipse: s-maj=16.4km s-min=8.5km az=73.0*
NEIC ***01*** *17:08:27.3±0.1, 0°.13S×123°.10E, mb4.9/95, Error ellipse: s-maj=4.6km s-min=3.4km az=67.0*
DJA ***01*** *17:08:28.7±0.2, 0°S±2°×12°3E±°, h77km±5km, M4.8/7, mb4.8/6, mB5.3/2, MLv4.7/7, Mw(mB)4.8/2*
ISC 01 17:08:26.5±0.4**, 0°.15S**±0°.04×**123°.11E**±0°.04**, h123**km±3km**, n270, σ1ˢ.49**/323**, mb4.8**/145**, 7C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	0.94	201	ePn	Pn	17 08 47.2	-1.1
LUWI				eSn	Sn	17 09 03.2	-1.6
LUWI	**Luwuk**	0.94	201	P	Pn	17 08 47.5	-0.8
LUWI				S	Sn	17 09 02.2	-2.5
KMSI	**Cibinong**	1.13	50	P	Pn	17 08 49.6	-0.5
KMSI				S	Sn	17 09 06.2	-1.7
MRSI	**Marisa**	1.33	298	P	Pn	17 08 50.1	-2.1
MRSI				S	Sn	17 09 07.8	-3.9
APSI	**Ampana**	1.65	243	P	Pn	17 08 55.2	-0.6
APSI				S	Sn	17 09 16.3	-1.8
MPSI	**Mapaga**	3.25	279	P	Pn	17 09 16.6	+0.4
PCI	**Palu**	3.36	257	P	Pn	17 09 17.1	-0.5
SANI	**Sanana**	3.44	123	P	Pn	17 09 21.0	+2.3
SANI				S	Sn	17 09 55.7	-3.3
KDI	**Kendari**	3.81	187	P	Pn	17 09 25.8	+2.2
TNTI	**Ternate**	4.35	78	ePn	Pn	17 09 30.2	-0.7
TNTI				eSn	Sn	17 10 21.6	+0.8
TNTI	**Ternate**	4.35	78	P	Pn	17 09 33.1	+2.2
NLAI	**Namlea**	5.03	128	P	Pn	17 09 42.4	+2.5
SPSI	**Sidrap Palu**	5.05	221	P	Pn	17 09 41.8	+1.6
BNSI	**Bone**	5.18	215	P	Pn	17 09 43.8	+1.9
BBSI	**Bau Bau**	5.33	186	P	Pn	17 09 46.1	+2.2
SMKI	**Samarinda**	5.91	267	P	Pn	17 09 52.8	+1.0
BKSI	**Bulukumba**	5.94	210	P	Pn	17 09 53.9	+1.7
DAV	**Davao City (W)**	7.59	19	LR	LR	17 14 15.0	
	comp=Z,75nm,18.6s,baz=226,slow=46						
KBKI	**Kotabaru**	7.61	246	P	Pn	17 10 15.8	+1.0
SWI	**Sorong**	8.18	95	P	Pn	17 10 27.2	+4.7
	110nm,0.8s,0.4nm						
SIJI	**Sorong**	8.19	95	P	Pn	17 10 23.0	+0.5
	9.3nm,0.3s,baz=294,slow=9.8,SNR=27						
SIJI				S	Sn	17 11 52.6	-0.9
	0.9nm,0.3s,baz=270,slow=20,SNR=2.6						
MTKI	**Muara Teweh, K**	8.25	265	P	Pn	17 10 25.3	+1.8
	64nm,0.4s,4µm0.6nm						
MMRI	**Maumere**	8.47	186	ePn	Pn	17 10 22.7	-3.7
EDFI	**Ende, Flores**	8.66	189	P	Pn	17 10 40.9	+12
KKM	**Kota Kinabalu**	9.24	312	ePn	Pn	17 10 37.4	+0.6
KKM				eSn	Sn	17 12 15.3	-3.8
FAKI	**Fak Fak**	9.54	107	ePn	Pn	17 10 39.8	-1.0
FAKI				eSn	Sn	17 12 20.0	-6.3
SOEI	**Soe**	9.61	173	ePn	Pn	17 10 44.6	+2.8
BATI	**Baumata**	10.00	177	P	Pn	17 10 49.8	+2.7
	0.9nm,0.3s,baz=260,slow=6.1,SNR=2.3						
SBUM	**Sibu**	11.19	283	ePn	Pn	17 11 03.7	+0.6
KSM	**Kuching**	12.90	277	eP	P	17 11 32.1	+0.7
PWJI	**Pagerwojo**	13.71	235	P	P	17 11 43.0	+2.5
UGM	**Wanagama**	14.73	238	ePn	P	17 11 51.0	-0.8
KPJI	**Karang Pucung**	15.84	243	P	P	17 12 08.5	+4.4
CISI	**Cisompet, Garu**	16.93	244	eP	Pn	17 12 15.6	-0.6
	37nm,0.9s						
CBJI	**Citeko**	17.38	249	P	Pn	17 12 22.6	+1.0
	68nm,0.5s						
FITZ	**Fitzroy Crossi**	18.00	172	eP	Pn	17 12 29.3	+0.2
	10nm,0.6s						
FITZ	**Fitzroy Crossi**	18.00	172	P	Pn	17 12 29.3	+0.2
	1.8nm,0.3s,baz=5.9,slow=8.3,SNR=59						
MYKOM	**Kota Tinggi**	19.36	276	eP	P	17 12 43.3	+0.6
	21nm,0.7s						
MDSI	**Maura Dua**	19.40	257	P	Pn	17 12 45.6	+0.1
	15nm,0.7s						
XMIS	**Christmas Isla**	20.17	239	eP	P	17 12 48.5	-3.0
	30nm,0.8s						
MNAI	**Manna**	20.57	258	eP	P	17 12 56.6	+0.8
	158nm,1.0s						
MBWA	**Marble Bar**	21.14	189	eP	P	17 13 00.8	-1.0
	17nm,1.1s						
WRAB	**Tennant Creek**	22.53	151	eP	P	17 13 17.1	+0.8
	7.0nm,0.6s						
WRAB	**Tennant Creek**	22.53	151	ceP	P	17 13 16.3	-0.1
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WR1	**Warramunga Arr**	22.53	151	eP	P	17 13 16.4	0.0
	comp=Z,6.6nm,0.7s						
WR1				ePcP	PcP	17 17 06.0	0.0
WR1				eScP	ScP	17 20 34.4	+2.0
WRA	**Warramunga Arr**	22.53	151	i P	P	17 13 16.3	-0.1
WRA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WRA	**Warramunga Arr**	22.53	151	P	P	17 13 16.4	0.0
	comp=Z,6.4nm,0.5s,baz=334,slow=10,SNR=110						
WRA				PcP	PcP	17 17 06.0	0.0
	comp=Z,0.3nm,0.5s,baz=326,slow=2.8,SNR=2.9						
WRA				ScP	ScP	17 20 34.4	+2.0
	comp=Z,2.0nm,0.7s,baz=342,slow=2.9,SNR=12						
IPM	**Ipoh**	22.54	282	eP	P	17 13 16.9	+0.3
	comp=Z,9.6nm,1.0s						
WB2	**Warramunga Arr**	22.54	151	eP	P	17 13 15.8	-0.7
WC3	**Warramunga Arr**	22.56	151	eP	P	17 13 16.9	+0.2
	comp=Z,10nm,0.8s						
KULM	**Kulim**	23.07	284	eP	P	17 13 21.8	+0.1
	comp=Z,52nm,1.7s						
QIZ	**Qiongzhong**	23.09	326	eP	P	17 13 23.3	+1.6
	comp=Z,31nm,1.4s						
TPUB	**Ta-pu**	23.44	354	eP	P	17 13 25.9	+1.0
	comp=Z,31nm,1.3s						
YULB	**Yu-li**	23.47	356	eP	P	17 13 25.9	+0.6
	comp=Z,48nm,1.8s						
SSLB	**Suanglung**	23.89	355	eP	P	17 13 28.6	-0.4
	comp=Z,14nm,1.1s						
GIRL	**Giralia**	23.97	201	eP	P	17 13 30.8	+1.1
	comp=Z,180nm,1.3s						
COEN	**Coen**	24.14	125	eP	P	17 13 31.2	-0.2
	comp=Z,6.3nm,0.8s						
NACB	**Ninganchiao**	24.23	357	eP	P	17 13 33.3	+1.3
	comp=Z,22nm,1.0s						
YHNB	**Yeheng**	24.73	356	eP	P	17 13 38.4	+1.7
	comp=Z,49nm,1.7s						
SRAK	**Srakaew**	25.16	305	P	P	17 13 41.3	+0.6
	comp=Z,24nm,0.8s						
SKNT	**Sakolnakorn**	25.40	313	P	P	17 13 45.4	+2.6
	comp=Z,8.8nm,0.8s						
GUMO	**Guam**	25.52	57	eP	P	17 13 42.9	-1.0
	comp=Z,786nm,1.6s						
GUMO	**Guam**	25.52	57	eP	P	17 13 42.9	-1.0
GUMO				pmax	pmax		
	comp=Z,786nm,1.6s						
GSI	**Gunungsitoli**	25.57	273	eP	P	17 13 43.8	-0.6
	comp=Z,10nm,0.8s						
AS31	**Alice Springs**	25.61	157	eP	P	17 13 45.4	+0.7
	comp=Z,2.3nm,0.4s						
ASAR	**Alice Springs**	25.61	157	P	P	17 13 45.2	+0.6
	comp=Z,2.3nm,0.5s,baz=340,slow=14,SNR=62						
ASAR				PcP	PcP	17 17 12.8	+0.2
	comp=Z,1.0nm,0.4s,baz=348,slow=2.3,SNR=11						
ASAR				ScP	ScP	17 20 42.5	+1.6
	comp=Z,1.8nm,0.6s,baz=339,slow=2.8,SNR=16						
AS01	**Alice Springs**	25.63	157	eP	P	17 13 45.5	+0.6
CHAI	**Chaiyaphum**	26.26	308	P	P	17 13 51.6	+1.1
	comp=Z,8.8nm,0.7s,comp=Z,86nm						
NONG	**Nongkai**	26.71	314	P	P	17 13 56.1	+1.6
	comp=Z,0.3nm,0.8s						
UTHA	**Uthaitani**	28.11	305	P	P	17 14 08.6	+1.5
	comp=Z,5.3nm,0.6s,comp=Z,51nm						
UTTA	**Uttaradit**	28.44	310	P	P	17 14 11.8	+1.8
	comp=Z,2.8nm,0.7s						
COCO	**West Island**	28.69	244	eP	P	17 14 12.7	+0.5
	comp=Z,184nm,1.4s						
COCO	**West Island**	28.69	244	eP	P	17 14 12.7	+0.5
COCO				pmax	pmax		
	comp=Z,184nm,1.4s						
SUKH	**Sukhothai**	29.01	308	P	P	17 14 17.3	+2.3
	comp=Z,5.8nm,0.7s						
MORW	**Morawa**	29.54	193	eP	P	17 14 19.6	0.0
	comp=Z,18nm,1.3s						
CM01	**Chiang Mai Arr**	30.07	309	eP	P	17 14 25.6	+1.1
CM01				ePcP	PcP	17 17 23.6	0.0
CM31	**Chiang Mai Arr**	30.10	309	eP	P	17 14 26.2	+1.5
	comp=Z,5.8nm,0.6s						
CMAR	**Chiang Mai Arr**	30.10	309	P	P	17 14 26.1	+1.3
	comp=Z,5.2nm,0.6s,baz=133,slow=7.0,SNR=66						
CMAR				PcP	PcP	17 17 24.7	+1.1
	comp=Z,1.9nm,0.7s,baz=167,slow=2.2,SNR=12						
CMAR				ScP	ScP	17 20 55.5	+0.8
	comp=Z,1.2nm,0.7s,baz=160,slow=2.6,SNR=8.6						
CMMT	**Chiang Mai**	30.30	310	P	P	17 14 27.8	+1.3
	comp=Z,15nm,0.7s						
CHTO	**Chiang Mai**	30.30	310	eP	P	17 14 27.7	+1.2
	comp=Z,9.7nm,0.7s						
CHTO	**Chiang Mai**	30.30	310	eP	P	17 14 27.7	+1.2
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CHTO	**Chiang Mai**	30.30	310	P	P	17 14 27.9	+1.4
	comp=Z,67nm,0.8s						
FORT	**Forrest**	30.82	172	eP	P	17 14 30.8	-0.1
	comp=Z,32nm,0.7s						
GYA	**Guiyang**	30.84	330	⇑iP	P	17 14 34.8	+3.5
GYA				PP	PP	17 15 41.0	-2.4
GYA				PcP	PcP	17 17 26.1	+0.5
GYA				S	S	17 19 28.0	+1.7
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
NJ2	**Nanjing**	32.28	353	eP	P	17 14 44.2	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ENH	**Enshi**	32.92	338	eP	P	17 14 50.3	+0.9
	comp=Z,18nm,0.8s						
NWAO	**Narrogin (SRO)**	33.07	189	P	P	17 14 50.5	0.0
	comp=Z,2.8nm,0.4s,baz=262,slow=7.2,SNR=7.7						
JNU	**Nakatsue**	33.90	12	eP	P	17 14 59.3	+1.5
	comp=Z,64nm,1.5s						
BBOO	**Buckleboo**	34.70	161	eP	P	17 15 05.2	+0.5
	comp=Z,75nm,1.8s						
PATS	**Pohnpei**	35.80	78	eP	P	17 15 15.2	+0.8
	comp=Z,872nm,2.0s						
CD2	**Chengdu**	35.95	331	eP	P	17 15 16.5	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
STKA	**Stephens Creek**	36.07	153	eP	P	17 15 17.5	+1.0
	comp=Z,1.2nm,0.7s						
STKA				ePcP	PcP	17 17 40.0	-0.1
STKA	**Stephens Creek**	36.07	153	eP	P	17 15 17.5	+1.0
STKA				e		17 17 40.0	
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	36.07	153	P	P	17 15 17.6	+1.2
	comp=Z,6.3nm,0.5s,baz=331,slow=8.3,SNR=26						
STKA				PcP	PcP	17 17 39.9	-0.2
	comp=Z,0.9nm,0.4s,baz=9.1,slow=3.6,SNR=3.1						
XAN	**Xi'an**	36.53	340	P	P	17 15 20.4	+0.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,130nm,4.6s						
XAN	**Xi'an**	36.53	340	eP	P	17 15 21.0	+0.7
	comp=Z,20nm,1.4s						
XAN	**Xi'an**	36.53	340	eP	P	17 15 21.0	+0.7
XAN				pmax	pmax		
	comp=Z,20nm,1.4s						
INU	**Inuyama**	37.63	19	eP	P	17 15 29.3	-0.3
	comp=Z,19nm,1.2s						
KSAR	**Wonju Array Be**	37.67	6	P	P	17 15 31.0	+1.2
KSAR	**Wonju Array Be**	37.67	6	P	P	17 15 31.0	+1.2
KSRS	**Korea Array**	37.69	6	P	P	17 15 31.0	+1.1
	comp=Z,1.0nm,0.7s,baz=186,slow=8.8,SNR=3.6						
MAJO	**Matsushiro**	39.11	19	eP	P	17 15 41.9	-0.1
	comp=Z,23nm,1.4s						
MAJO	**Matsushiro**	39.11	19	i P	P	17 15 40.2	-1.8
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJAR	**Matsushiro Arr**	39.11	19	P	P	17 15 40.8	-1.1
	comp=Z,4.5nm,0.6s,baz=192,slow=10.0,SNR=14						
MJB9	**Matsu-Tunnel**	39.11	19	eP	P	17 15 42.0	+0.1
	comp=Z,24nm,1.4s						
LZH	**Lanzhou**	40.26	336	eP	P	17 15 54.4	+2.7
LZH				pP	pP	17 16 21.5	+2.1
LZH				sP	sP	17 16 36.0	+2.6
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
ARMA	**Armidale**	40.50	141	eP	P	17 15 56.0	+2.2
	comp=Z,105nm,1.8s						
HHC	**Hu-ho-hao-te**	42.14	347	eP	P	17 16 08.9	+2.0
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
CAN	**Canberra**	42.50	148	eP	P	17 16 12.0	+2.1
	comp=Z,140nm,1.9s						
CAN	**Canberra**	42.50	148	eP	P	17 16 12.0	+2.1
CAN				pmax	pmax		
	comp=Z,140nm,1.9s						
LSA	**Lhasa**	42.54	317	eP	P	17 16 12.6	+1.9
	comp=Z,11nm,0.9s						
TOO	**Toolangi**	42.58	153	eP	P	17 16 12.3	+1.9
	comp=Z,36nm,1.6s						
TOO	**Toolangi**	42.58	153	eP	P	17 16 12.4	+1.9
TOO				pmax	pmax		
	comp=Z,36nm,1.6s						
CN2	**Changchun**	43.81	2	eP	P	17 16 22.7	+2.5
RAMN	**Ramite**	44.26	310	eP	P	17 16 25.2	+0.9
	comp=Z,46nm,0.6s						
GTA	**Gaotai**	44.78	334	eP	P	17 16 29.5	+1.4
GTA				pP	pP	17 16 57.9	+1.6
GTA				sP	sP	17 17 12.5	+2.4
GTA				PcP	PcP	17 18 08.7	+0.5
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USA0B	**Ussuriysk Arra**	44.86	9	eP	P	17 16 28.4	-0.2
	comp=Z,145nm,2.0s						
USRK	**Ussuriysk Ar.**	44.86	9	P	P	17 16 28.6	+0.1
	comp=Z,3.4nm,0.5s,baz=191,slow=5.9,SNR=13						
JIRN	**Jiri**	44.94	311	eP	P	17 16 29.6	-0.3
	comp=Z,37nm,0.5s						
MDJ	**Mudanjiang**	44.95	7	eP	P	17 16 29.7	+0.5
	comp=Z,82nm,1.9s						
GUN	**Gumba**	45.30	311	eP	P	17 16 32.6	-0.2
	comp=Z,46nm,0.4s						
PKI	**Pulchoki**	45.48	310	eP	P	17 16 34.2	0.0
	comp=Z,20nm,0.7s						
PKIN	**Phulchoki**	45.49	310	eP	P	17 16 34.2	0.0
	comp=Z,12nm,0.5s						
KKN	**Kakani**	45.69	311	eP	P	17 16 35.6	-0.1
ERM	**Erimo**	45.71	21	eP	P	17 16 34.9	-0.4
	comp=Z,46nm,1.4s						
ERM	**Erimo**	45.71	21	eP	P	17 16 34.9	-0.4
ERM				pmax	pmax		
	comp=Z,46nm,1.4s						
DMN	**Daman**	45.73	310	eP	P	17 16 35.6	-0.5
	comp=Z,22nm,0.7s						
KOLN	**Koldanda**	46.97	310	eP	P	17 16 45.7	+0.1
	comp=Z,49nm,0.6s						
DANN	**Dangsing**	47.13	310	eP	P	17 16 46.8	-0.2
	comp=Z,73nm,0.6s						
ASAJ	**Asahikawa**	47.38	19	P	P	17 16 48.6	+0.3
	comp=Z,10.0nm,0.7s,baz=225,slow=12,SNR=15						
PYUN	**Piuthan**	47.60	310	eP	P	17 16 50.9	+0.4
	comp=Z,88nm,0.8s						
MARNC	**Mare, Loyalty**	48.66	119	eP	P	17 17 00.5	+1.9
	comp=Z,521nm,2.0s						
SONA0	**Songino Array**	49.96	345	eP	P	17 17 08.1	0.0
SONA0				ePcP	PcP	17 18 25.5	-1.0
SONA0				eScP	ScP	17 22 10.6	-0.4
SONM	**Songino Array**	49.96	345	P	P	17 17 08.1	0.0
	comp=Z,6.1nm,0.7s,baz=162,slow=8.2,SNR=45						
SONM				PcP	PcP	17 18 25.5	-1.0
	comp=Z,2.6nm,0.4s,baz=164,slow=4.0,SNR=14						
SONM				ScP	ScP	17 22 10.6	-0.4
	comp=Z,1.0nm,0.9s,baz=175,slow=2.7,SNR=5.0						
SONA1	**Songino Array**	49.97	345	eP	P	17 17 07.9	-0.3
SONA1				ePcP	PcP	17 18 25.5	-1.1
WMQ	**Urumqi**	53.98	329	eP	P	17 17 38.6	+0.7
WMQ				sP	sP	17 18 24.1	+4.2
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.7s						
WMQ	**Urumqi**	53.98	329	eP	P	17 17 38.9	+0.9
	comp=Z,9.8nm,1.1s						
WMQ	**Urumqi**	53.98	329	eP	P	17 17 38.9	+0.9
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TLY	**Talaya**	54.20	345	eP	P	17 17 39.8	+0.5
	comp=Z,14nm,1.1s						
TLY	**Talaya**	54.20	345	i P	P	17 17 38.4	-0.9
MOY	**Mondy**	54.91	343	eP	P	17 17 46.1	+1.6
MOY				pmax	pmax		
	comp=Z,11nm,2.5s						
NIL	**Nilore**	57.57	311	eP	P	17 18 04.9	+1.2
	comp=Z,9.6nm,0.6s						
NIL	**Nilore**	57.57	311	eP	P	17 18 04.9	+1.2
NIL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DGZ	**Jazzator, Alta**	58.30	334	i P	P	17 18 08.4	-0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH	**Kashi**	58.37	318	P	P	17 18 11.9	+2.6
KSH				pP	pP	17 18 41.8	+3.6
KSH				PP	PP	17 20 26.7	+6.8
KSH				S	S	17 26 02.5	-0.2
KSH				sS	sS	17 26 59.6	+9.2
KSH				SS	SS	17 30 03.6	+6.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,250nm,5.2s						
KSH				LR	LR		
	comp=Z,140nm,5.0s						
KSH				LR	LR		
	comp=Z,100nm,5.0s						
KSH				LR	LR		
	comp=Z,420nm,5.7s						
PRZ	**Przheval'sk**	58.41	322	eP	P	17 18 11.2	+1.6
	comp=Z,6.2nm,0.6s						
PRZ	**Przheval'sk**	58.41	322	eP	P	17 18 11.2	+1.6
PRZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MK01	**Makanchi Array**	58.78	328	eP	P	17 18 11.4	-0.4
MK01				epP	pP	17 18 40.8	-0.1
MK01				ePcP	PcP	17 18 59.2	-1.0
MK31	**Makanchi Array**	58.80	328	eP	P	17 18 11.4	-0.5
MK31				epP	pP	17 18 42.0	+1.0
MK31				ePcP	PcP	17 18 59.2	-1.1
MK31	**Makanchi Array**	58.80	328	eP	P	17 18 11.5	-0.5
MK31				e*PP	pP	17 18 42.1	+1.0
MK31				e		17 18 59.2	
MK32	**Makanchi Array**	58.80	328	eP	P	17 18 11.8	-0.2
MK32				ePcP	PcP	17 18 59.0	-1.3
MK32				eScP	ScP	17 22 47.8	-1.8
MKAR	**Makanchi Array**	58.80	328	eP	P	17 18 11.4	-0.6
	comp=Z,59nm,0.3s						
MKAR				epP	pP	17 18 42.7	+1.6
MKAR				ePcP	PcP	17 18 58.8	-1.5
MKAR				ScP	ScP	17 22 47.8	-1.8
MKAR	**Makanchi Array**	58.80	328	ceP	P	17 18 12.0	0.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MKAR	**Makanchi Array**	58.80	328	P	P	17 18 11.8	-0.2
	comp=Z,3.5nm,0.3s,baz=124,slow=8.5,SNR=98						
MKAR				PcP	PcP	17 18 59.0	-1.3
	comp=Z,3.3nm,0.7s,baz=126,slow=4.5,SNR=8.8						
MKAR				ScP	ScP	17 22 47.8	-1.8
	comp=Z,1.7nm,0.8s,baz=126,slow=5.3,SNR=10.0						
KDJ	**Kajisay**	58.96	321	eP	P	17 18 14.4	+1.0
	comp=Z,3.0nm,0.6s						
MAKZ	**Makanchi**	58.98	328	eP	P	17 18 12.9	-0.3
	comp=Z,4.1nm,0.4s						
MAKZ				epP	pP	17 18 45.3	+3.0
MAKZ				ePcP	PcP	17 18 59.6	-1.4
MAKZ	**Makanchi**	58.98	328	eP	P	17 18 12.9	-0.3
MAKZ				e*PP	pP	17 18 45.3	+3.0
MAKZ				e		17 18 59.6	
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NRN	**Naryn**	59.34	320	eP	P	17 18 16.6	+0.5
	comp=Z,1.4nm,0.8s						
NRN	**Naryn**	59.34	320	eP	P	17 18 16.7	+0.5
NRN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FOZ	**Fox Glacier**	59.96	142	eP	P	17 18 21.2	+1.2
	comp=Z,57nm,1.5s						
MLZ	**Mavora Lakes**	59.98	145	eP	P	17 18 21.9	+1.8
	comp=Z,61nm,1.6s						
WHZ	**Wether Hill Ro**	60.19	145	eP	P	17 18 22.5	+1.0
	comp=Z,83nm,1.9s						
PEA0B	**Petropavlovsk-**	60.38	23	eP	P	17 18 23.1	+0.4
PEA0B				ePcP	sP	17 19 05.1	-0.8
PETK	**Petropavlovsk-**	60.38	23	eP	P	17 18 23.0	+0.3
PETK				ePcP	PcP	17 19 05.5	-1.0
PETK	**Petropavlovsk-**	60.38	23	eP	P	17 18 23.0	+0.3
PETK				e		17 19 05.5	
PETK	**Petropavlovsk-**	60.38	23	P	P	17 18 22.8	+0.1

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           comp=Z,3.2nm,0.6s,baz=204,slow=5.1,SNR=18
PEA1  Petropavlovsk-     60.39  23 eP      P        17 18 22.8 +0.1
LBZ   Lake Benmore       60.65 143 eP      P        17 18 24.9 +0.2
           comp=Z,67nm,1.8s
PET   Petropavlovsk      60.70  24 eP      P        17 18 25.0 +0.2
           comp=Z,66nm,1.7s
PET   Petropavlovsk      60.70  24 eP      P        17 18 25.0 +0.2
PET                                 pmax   pmax
           comp=Z,66nm,1.7s
RPZ   Rata Peaks         60.82 142 eP      P        17 18 26.2 +0.4
           comp=Z,54nm,1.6s
RPZ   Rata Peaks         60.82 142  P      P        17 18 27.3 +1.5
           comp=Z,3.6nm,0.4s,baz=353,slow=2.1,SNR=7.0
AAK   Ala-Archa          60.92 321 eP      P        17 18 26.7 -0.1
           comp=Z,2.2nm,0.8s
AAK                                ePcP    PcP      17 19 08.5 -0.6
AAK   Ala-Archa          60.92 321 i P     P        17 18 26.6 -0.1
AAK                                 pmax   pmax
           comp=Z,2.0nm,0.9s
THZ   Tophouse           61.01 139 eP      P        17 18 28.0 +0.7
           comp=Z,39nm,1.5s
KBL   Kabul              61.12 310 eP      P        17 18 28.5 +0.1
KBL   Kabul              61.12 310 eP      P        17 18 28.5 +0.1
KHZ   Kahutara           61.74 140 eP      P        17 18 32.9 +0.9
           comp=Z,55nm,1.4s
GAR   Garm               62.00 315 eP      P        17 18 33.7 -0.3
           comp=Z,5.7nm,0.7s
GAR                                ePcP    sP       17 19 19.0 +2.5
GAR   Garm               62.00 315 eP      P        17 18 33.7 -0.3
GAR                                e                17 19 19.0
GAR                                 pmax   pmax
           comp=Z,6.0nm,0.7s
BKZ   Black Stump Fm     62.27 135 eP      P        17 18 36.5 +0.8
           comp=Z,34nm,1.6s
URZ   Urewera            62.33 134 eP      P        17 18 36.0 -0.1
           comp=Z,33nm,1.3s
URZ   Urewera            62.33 134  P      P        17 18 36.5 +0.4
           comp=Z,5.3nm,0.7s,baz=262,slow=7.1,SNR=4.5
ZAA0  Zalesovo Array     62.50 336 eP      P        17 18 35.8 -1.0
           comp=Z,10nm,1.7s
ZALV  Zalesovo Beam      62.50 336 eP      P        17 18 34.9 -2.0
ZALV  Zalesovo Beam      62.50 336 eP      P        17 18 34.9 -2.0
ZALV  Zalesovo Beam      62.50 336  P      P        17 18 35.1 -1.7
           comp=Z,1.0nm,0.3s,baz=116,slow=6.6,SNR=10
ZAA1  Zalesovo Array     62.50 336 eP      P        17 18 35.1 -1.8
CHGR  Chuyangaron        62.67 315 eP      P        17 18 37.7 -0.8
           comp=Z,9.9nm,0.9s
BFZ   Birch Farm         62.74 137 eP      P        17 18 39.6 +0.8
           comp=Z,47nm,1.1s
KURK  Kurchatov          63.16 330 eP      P        17 18 40.8 -0.6
           comp=Z,9.4nm,0.7s
KURK  Kurchatov          63.16 330ceP      P        17 18 40.6 -0.8
KURK                                pmax   pmax
           comp=Z,16nm,1.3s
MA2   Magadan            63.35  15 eP      P        17 18 42.8 +0.4
           comp=Z,6.6nm,0.7s
MA2   Magadan            63.35  15 eP      P        17 18 42.8 +0.4
MA2                                 pmax   pmax
           comp=Z,7.0nm,0.7s
MIDW  Midway             63.49  58 eP      P        17 18 44.9 +1.0
           comp=Z,212nm,1.1s
NVS   Novosibirsk        63.79 336 eP      P        17 18 43.2 -2.1
KNTN  Kanton             65.19  93 eP      P        17 18 54.4 -0.9
           comp=Z,125nm,1.3s
CASY  Casey              66.59 186 eP      P        17 19 03.9 +0.7
           comp=Z,39nm,1.4s
SEY   Seymchan           66.63  14 i P     P        17 19 03.3 -0.3
MRIV  Mauritius Mete     67.14 248 eP      P        17 19 06.6 -1.1
           comp=Z,171nm,1.9s
BRVK  Borovoye           68.74 329 eP      P        17 19 15.7 -1.4
           comp=Z,2.9nm,0.7s
BRVK  Borovoye           68.74 329 i P     P        17 19 15.3 -1.7
BRVK                                pmax   pmax
           comp=Z,4.0nm,1.1s
RER   Riviere de l'E     68.89 247 eP      P        17 19 18.0 -0.7
           comp=Z,959nm,2.0s
GEYT  Alibeck            70.57 311  P      P        17 19 28.5 -0.2
           comp=Z,2.0nm,0.7s,baz=129,slow=6.3,SNR=5.4
TIXI  Tiksi              71.78   2 eP      P        17 19 33.7 -1.5
           comp=Z,6.4nm,0.4s
TIXI  Tiksi              71.78   2 i P     P        17 19 33.6 -1.5
TIXI                                pmax   pmax
           comp=Z,4.0nm,0.9s
ABKAR Akbulak array      72.92 322 eP      P        17 19 41.4 -1.0
           comp=Z,9.4nm,1.8s
NRIK  Noril'sk           73.37 348  P      P        17 19 43.4 -1.2
           comp=Z,2.4nm,0.4s,baz=125,slow=6.0,SNR=4.9
ATKA  Atka Island        73.73  35 eP      P        17 19 47.2 +0.2
           comp=Z,133nm,1.4s
BILL  Bilibino           74.22  16 eP      P        17 19 49.2 -0.4
           comp=Z,3.6nm,0.4s
BILL  Bilibino           74.22  16 eP      P        17 19 49.2 -0.4
BILL                                pmax   pmax
           comp=Z,4.0nm,0.4s
SVE   Sverdlovsk         75.41 330 eP      P        17 19 55.6 -1.1
SVE                                 pmax   pmax
           comp=Z,13nm,0.7s
ARU   Arti               76.32 329 eP      P        17 20 00.0 -1.9
           comp=Z,7.8nm,0.8s
ARU   Arti               76.32 329c iP     P        17 20 00.4 -1.5
ARU                                 S      S        17 29 37.5 +0.9
ARU                                 SS     SS       17 34 31.8 -1.5
ARU                                 pmax   pmax
           comp=Z,7.0nm,0.7s
ABPO  Ambohimpanom       76.61 251 eP      P        17 20 01.9 -2.6
           comp=Z,114nm,1.8s
ABPO  Ambohimpanom       76.61 251 eP      P        17 20 01.9 -2.6
ABPO                                pmax   pmax
           comp=Z,115nm,1.8s
SPIA  Saint Paul Isl     77.66  31 eP      P        17 20 06.0 -3.3
           comp=Z,579nm,1.4s
UNV   Unalaska Valle     78.65  35 eP      P        17 20 14.5 -0.4
           comp=Z,161nm,1.7s
RAYN  Ar Rayn            78.70 294 eP      P        17 20 13.5 -2.4
           comp=Z,2.6nm,0.9s
RAYN  Ar Rayn            78.70 294 eP      P        17 20 13.5 -2.4
RAYN                                pmax   pmax
           comp=Z,3.0nm,0.9s
DAMY  Dhamar             79.12 285 eP      P        17 20 19.1 +0.5
           comp=Z,14nm,0.4s
AKUT  Akutan             79.15  35 eP      P        17 20 18.1 +0.5
           comp=Z,250nm,1.5s
VNDA  Vanda              80.08 172 eP      P        17 20 22.1 -0.1
           comp=Z,4.4nm,0.6s
VNDA  Vanda              80.08 172 eP      P        17 20 22.1 -0.1
VNDA                                pmax   pmax
           comp=Z,4.0nm,0.6s
VNDA  Vanda              80.08 172  P      P        17 20 23.1 +0.8
           comp=Z,3.5nm,0.7s,baz=316,slow=7.2,SNR=20
FALS  False Pass         80.66  34 eP      P        17 20 25.6 -0.1
           comp=Z,219nm,1.4s
PRGR  Permogore          84.19 332 eP      P        17 20 41.4 -2.5
PRGR                                pmax   pmax
           comp=Z,14nm,0.7s
KLMR  Klimovskoe         87.00 331 eP      P        17 20 54.5 -3.3
KLMR                                pmax   pmax
           comp=Z,12nm,0.6s
KLMR  Klimovskoe         87.00 331 eP      P        17 20 54.5 -3.3
KLMR                                AMP             17 20 57.5
           comp=Z,12nm,0.7s
KDAK  Kodiak Island      87.08  32 eP      P        17 20 58.6 +0.3
           comp=Z,165nm,1.5s
KDAK  Kodiak Island      87.08  32 eP      P        17 20 58.6 +0.3
KDAK                                pmax   pmax
           comp=Z,165nm,1.5s
IM3   Indian Mountai     87.34  24 eP      P        17 20 59.2 -0.2
IM3                                epP     pwP      17 21 33.7 +0.9
SYO   Syowa Base         87.53 201⇑eP      P        17 21 00.0 -0.2
SYO   Syowa Base         87.53 201⇑ePcP    PcP      17 21 02.6 +0.6
PPLA  Purkeypile         87.71  27 eP      P        17 21 01.8 +0.4
           comp=Z,56nm,1.9s
BRLK  Bradley Lake       88.11  30 eP      P        17 21 02.5 -0.7
           comp=Z,135nm,1.8s
SUA   Susitna One        88.28  29 eP      P        17 21 03.7 -0.4
           comp=Z,35nm,1.7s
MLY   Manley             88.50  25 eP      P        17 21 04.6 -0.4
           comp=Z,6.8nm,1.4s
TRF   Thorofare Moun     88.61  27 eP      P        17 21 04.8 -0.8
           comp=Z,41nm,1.9s
RC01  Rabbit Creek A     88.75  29 eP      P        17 21 06.0 -0.1
           comp=Z,43nm,1.8s
COLD  Coldfoot           88.85  23 eP      P        17 21 07.0 +0.4
           comp=Z,4.7nm,1.3s
RND   Reindeer           89.25  27 eP      P        17 21 07.8 -0.8
           comp=Z,22nm,1.6s
RND   Reindeer           89.25  27 eP      P        17 21 07.8 -0.8
RND                                 pmax   pmax
           comp=Z,22nm,1.6s
SML   Sawmill            89.45  28 eP      P        17 21 09.0 -0.5
           comp=Z,39nm,1.4s
SML   Sawmill            89.45  28 eP      P        17 21 09.0 -0.5
SML                                 pmax   pmax
           comp=Z,39nm,1.4s
MDM   Murphy Dome        89.57  25 eP      P        17 21 10.7 +0.7
           comp=Z,10nm,1.6s
WRH   Wood River Hil     89.62  26 eP      P        17 21 09.5 -0.6
           comp=Z,25nm,1.9s
BR101 Keskin Array S     89.69 310 eP      P        17 21 11.1 -0.2
BRTR  Keskin Array B     89.69 310  P      P        17 21 11.0 -0.2
           comp=Z,0.6nm,0.8s,baz=129,slow=4.7,SNR=3.1
QSPA  South Pole Qui     89.78 180 eP      P        17 21 10.7 -0.3
           comp=Z,14nm,1.6s
DHY   Denali Highway     89.92  27 eP      P        17 21 11.5 -0.3
           comp=Z,20nm,1.6s
SCM   Sheep Creek Mo     89.93  28 eP      P        17 21 11.3 -0.4
           comp=Z,63nm,1.8s
ILAR  Eielson Array      90.14  25  P      P        17 21 10.9 -1.7
           comp=Z,0.4nm,0.6s,baz=240,slow=5.2,SNR=9.2
ILB   Eielson Array      90.14  25 eP      P        17 21 11.1 -1.5
AKASG Malin Array Be     92.59 321  P      P        17 21 22.1 -2.2
           comp=Z,0.3nm,0.4s,baz=70,slow=4.5,SNR=2.5
ARA0  ARCESS Array S     92.81 340 eP      P        17 21 22.8 -2.1
ARCES ARCESS Array B     92.81 340  P      P        17 21 22.8 -2.1
           comp=Z,2.5nm,0.7s,baz=89,slow=4.2,SNR=7.8
FIA0  FINESS Array S     93.51 331 eP      P        17 21 26.0 -2.2
FIA0  FINESS Array S     93.51 331 eP      P        17 21 26.0 -2.2
FINES FINESS Array B     93.51 331  P      P        17 21 26.0 -2.2
           comp=Z,1.0nm,0.6s,baz=41,slow=6.1,SNR=6.9
NVAR  Mina Array Bea    112.17  48  PKiKP  PKiKP    17 26 48.4 -0.1
           comp=Z,0.4nm,0.6s,baz=270,slow=2.7,SNR=3.9
TOA0  Torodi Ar. Sit    120.56 285 ePKPdf  PKPdf    17 27 03.4 -1.4
TOA0                               ePKPdf  PKiKP    17 27 03.7 -1.2
TORD  Torodi Ar. Bea    120.56 285  PKP    PKPdf    17 27 03.5 -1.3
           comp=Z,2.9nm,0.6s,baz=84,slow=1.8,SNR=22
TOA1  Torodi Ar. Sit    120.56 285 ePKPdf  PKPdf    17 27 03.5 -1.3
LTX   Lajitas           126.82  53 ePKPdf  PKiKP    17 27 17.5 +0.4
LTX   Lajitas           126.82  53 ePKIKP  PKiKP    17 27 17.5 +0.4
TXAR  Lajitas Array     126.82  53  PKP    PKiKP    17 27 17.5 +0.4
           comp=Z,0.2nm,0.5s,baz=219,slow=1.2,SNR=4.2
DBIC  Dimbokro          127.69 278 ePKPdf  PKPdf    17 27 18.2 -0.3
DBIC  Dimbokro          127.69 278 ePKIKP  PKPdf    17 27 18.2 -0.3
DBIC  Dimbokro          127.69 278  PKP    PKPdf    17 27 18.8 +0.2
           comp=Z,2.4nm,0.6s,baz=35,slow=2.4,SNR=4.3
```

IDC 01 17:15:18.1±2.9**,3°.58S**×**134°.48E,h0**^{km}**,mb3.3**/1**, mb1 3.7**/4**,mb1mx3.5**/29**,mbtmp3.5**/4**,ML3.5**/3**,Error ellipse: s-maj=101.9km s-min=27.2km az=71.0,Irian Jaya region**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
SIJI  Sorong              4.19 310   Pn      Pn       17 16 22.6 -0.7
      2.6nm,0.3s,baz=209,slow=22,SNR=15
SIJI                                 Sn      Sn       17 17 08.8 -4.2
      3.0nm,0.3s,baz=120,slow=23,SNR=6.9
WRA   Warramunga Arr     16.26 180   Pn      Pn       17 19 08.4 +0.3
      0.2nm,0.3s,baz=0.3,slow=12,SNR=5.9
ASAR  Alice Springs      19.98 182   P       P        17 19 52.0 -0.2
      0.2nm,0.3s,baz=6.5,slow=11,SNR=16
MKAR  Makanchi Array     67.95 324   P       P        17 26 19.3 +0.3
      0.2nm,0.5s,baz=116,slow=8.1,SNR=4.2
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*ISCJB **01** 17:21:23.1±0.2, 24°.07S±0°.02×67°.01W±0°.03, h192^{km}±3^{km}, mb4.2/19, Error ellipse: s-maj=4.4km s-min=3.3km az=155.7*

*SJA **01** 17:21:23.4±0.8, 24°.10S×67°.09W, h200^{km}±8^{km}, ML3.6, MW4.5*

*NEIC **01** 17:21:23.4±0.5, 24°.10S×66°.86W, h173^{km}±6^{km}, mb4.7/15, ML4.8(GUC), Error ellipse: s-maj=9.6km s-min=5.6km az=92.0*

*IDC **01** 17:21:24.1±1.2, 24°.00S×66°.88W, h181^{km}±9^{km}, mb3.6/9, mb1 3.9/15, mb1mx3.9/27, mbtmp4.3/15, Error ellipse: s-maj=20.9km s-min=12.1km az=13.0*

*VAO **01** 17:21:24.5±0.3, 24°.08S×66°.95W, h188^{km}±4^{km}, mb4.8*

*GUC **01** 17:21:26.2±0.8, 23°.86S×67°.63W, h241^{km}±12^{km}, ML4.9*

ISC 01 17:21:23.8±0.6**,24°.08S**±0°.03×**67°.04W**±0°.04**,h181**^{km}±5^{km}**, n142,**σ1^{s}.**75**/183**,mb4.5**/19**,16C-1D,Chile-Argentina border region**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
SLA   San Lorenzo         1.54 115  eP       Pn       17 21 59.3 +2.8
SLA                                 eS       Sn       17 22 24.2 +2.4
SLA                                  IAML             17 22 26.6
           comp=E,173nm,0.6s
HJA   Humahuaca           1.73  60  eP       Pn       17 22 00.7 +2.1
LVC   Limon Verde         2.25 310  ePn      Pn       17 22 06.5 +2.3
LVC                                 eSn      Sn       17 22 37.4 +2.0
LVC   Limon Verde         2.25 310  eP       Pn       17 22 05.3 +1.1
LVC                                 eS       Sn       17 22 36.5 +1.1
LVC   Limon Verde         2.25 310⇓iP       Pn       17 22 06.5 +2.3
LVC                                 i S      Sn       17 22 36.9 +1.5
LVC   Limon Verde         2.25 310   P       Pn       17 22 06.5 +2.3
           comp=E,182nm,0.3s,baz=126,slow=7.8,SNR=1369
LVC                                  S       Sn       17 22 36.7 +1.2
           comp=E,92nm,0.3s,baz=243,slow=24,SNR=16
LVC   Limon Verde         2.25 310  eP       Pn       17 22 06.6 +2.4
LVC                                 eS       Sn       17 22 37.4 +2.0
PB15  IPOC Station P      2.39 291⇑iP       Pn       17 22 08.0 +2.4
PB15                                i S      Sn       17 22 39.8 +1.9
GO02  Mina Guanaco        2.56 244  ePn      Pn       17 22 10.1 +2.5
GO02                                eSn      Sn       17 22 43.7 +2.1
GO02  Mina Guanaco        2.56 244⇑iP       Pn       17 22 10.1 +2.5
GO02                                i S      Sn       17 22 44.0 +2.4
PB06  IPOC Station P      2.69 300⇑iP       Pn       17 22 11.2 +2.1
PB06                                i S      Sn       17 22 45.1 +0.9
PB06                                 IAML             17 22 46.8
           comp=E,2µm,0.1s
PB09  IPOC Station P      3.04 318⇑iP       Pn       17 22 15.4 +2.1
PB09                                i S      Sn       17 22 52.6 +0.8
AHML  Horco Molle         3.11 151  eP       Pn       17 22 15.4 +1.5
AHML                                 IAML             17 22 16.8
           comp=Z,173nm,0.5s
AHML                                eS       Sn       17 22 52.6 -0.4
PB14  IPOC Station P      3.11 259⇑iP       Pn       17 22 16.0 +1.7
PB14                                eS       Sn       17 22 53.8 +0.3
PB05  IPOC Station P      3.15 292⇑iP       Pn       17 22 15.9 +1.4
PB05                                i S      Sn       17 22 53.1 -0.8
PB03  IPOC Station P      3.21 308⇑iP       Pn       17 22 16.7 +1.4
PB03                                i S      Sn       17 22 55.0 -0.4
PB03                                 IAML             17 22 57.1
           comp=E,1µm,0.3s
PB10  IPOC Station P      3.26 279  ePn      Pn       17 22 17.6 +1.8
PB10                                eSn      Sn       17 22 56.0 -0.3
PB10  IPOC Station P      3.26 279⇑iP       Pn       17 22 17.6 +1.8
PB10                                i S      Sn       17 22 55.3 -1.0
PB04  IPOC Station P      3.34 301  ePn      Pn       17 22 18.2 +1.3
PB04                                eSn      Sn       17 22 57.8 -0.6
PB04  IPOC Station P      3.34 301  eP       Pn       17 22 17.3 +0.4
PB04                                eS       Sn       17 22 57.7 -0.6
PB04  IPOC Station P      3.34 301⇑iP       Pn       17 22 18.2 +1.3
PB04                                i S      Sn       17 22 57.5 -0.8
PB04                                 IAML             17 23 01.3
           comp=N,1µm,0.3s
PB07  IPOC Station P      3.51 311⇑iP       Pn       17 22 20.2 +1.1
PB07                                i S      Sn       17 23 01.2 -1.0
PB07                                 IAML             17 23 02.4
           comp=E,2µm,0.3s
PB01  IPOC Station P      3.77 323  ePn      Pn       17 22 22.8 +0.6
PB01                                eSn      Sn       17 23 06.4 -1.4
PB01  IPOC Station P      3.77 323⇑iP       Pn       17 22 22.9 +0.6
PB01                                i S      Sn       17 23 06.7 -1.1
PB01                                 IAML             17 23 09.7
           comp=E,954nm,0.5s
PB02  IPOC Station P      3.80 316⇑iP       Pn       17 22 23.3 +0.6
PB02                                i S      Sn       17 23 07.3 -1.3
PB08  IPOC Station P      4.38 333⇑iP       Pn       17 22 31.4 +1.2
PB08                                i S      Sn       17 23 21.7 -0.5
GO03  Copiap              4.53 219  ePn      Pn       17 22 32.1 +0.3
GO03                                eSn      Sn       17 23 22.6 -2.6
GO03  Copiap              4.53 219  eP       Pn       17 22 32.1 +0.3
GO03                                eS       Sn       17 23 24.7 -0.5
GO03                                 IAML             17 23 26.5
           comp=N,631nm,0.2s
PB11  IPOC Station P      4.93 330  ePn      Pn       17 22 36.5 -0.7
PB11                                eSn      Sn       17 23 28.9 -5.9
PB11  IPOC Station P      4.93 330⇑iP       Pn       17 22 36.5 -0.7
PB11                                i S      Sn       17 23 31.4 -3.3
MNMC  Minye Minye         5.46 334  ePn      Pn       17 22 43.8 -0.4
MNMC                                eSn      Sn       17 23 40.7 -6.6
MNMC  Minye Minye         5.46 334  eP       Pn       17 22 44.0 -0.2
MNMC                                eS       Sn       17 23 44.6 -2.8
AGUA  GUANDACOL           5.54 193  eS       Sn       17 23 45.7 -3.1
LCO   Las Campanas        5.90 213  ePn      Pn       17 22 49.3 -0.5
LCO                                 eSn      Sn       17 23 49.3 -8.3
LCO   Las Campanas        5.90 213  eP       Pn       17 22 49.4 -0.4
APLL  PUNTA DE LOS L      6.31 176  eP       Pn       17 22 54.7 -0.2
APLL                                eS       Sn       17 24 03.1 -3.8
ACDV  Cuesta del Vie      6.34 196  eP       Pn       17 22 56.3 +0.8
ACDV                                eS       Sn       17 24 04.0 -3.8
ACCO  Cerro Coronel       6.73 195  eP       Pn       17 23 01.1 +0.4
ACCO                                eS       Sn       17 24 13.7 -3.5
GO04  Tololo Observa      6.93 208  ePn      Pn       17 23 02.2 -1.1
GO04                                eSn      Sn       17 24 17.4 -4.4
LPAZ  La Paz              7.82 352  ePn      Pn       17 23 15.4 +0.1
LPAZ                                eSn      Sn       17 24 41.6 -2.0
LPAZ  La Paz              7.82 352   P       Pn       17 23 15.9 +0.5
           comp=N,2.2nm,0.3s,baz=167,slow=8.2,SNR=55
LPAZ                                 S       Sn       17 24 40.5 -3.0
           comp=N,0.7nm,0.3s,baz=287,slow=19,SNR=4.0
LPAZ  La Paz              7.82 352  eP       Pn       17 23 16.1 +0.7
AUSP  Uspallata           8.37 194  eP       Pn       17 23 22.2 -0.1
ASAL  Salagasta           8.63 190  eP       Pn       17 23 24.6 -0.8
CPUP  Villa Florida       9.08 106  ePn      Pn       17 23 29.5 -1.8
CPUP  Villa Florida       9.08 106   P       Pn       17 23 30.0 -1.3
           comp=N,0.7nm,0.3s,baz=290,slow=12,SNR=16
CPUP  Villa Florida       9.08 106  eP       Pn       17 23 30.9 -0.4
AAGR  Agrelo              9.11 190  eP       Pn       17 23 31.3 -0.4
ROC1  El Roble            9.53 201  ePn      Pn       17 23 37.0 -0.3
PEL   Peldehue            9.58 199  ePn      Pn       17 23 38.5 +0.6
SIV   San Ignacio         9.81  36   P       Pn       17 23 38.8 -2.2
           comp=N,9.6nm,0.3s,baz=230,slow=12,SNR=352
AQDB  Aquidauana         11.10  73  eP       Pn       17 23 56.4 -1.3
GO05  Huala              11.69 200  ePn      Pn       17 24 04.0 -1.2
CPSB  Cacapava Do Su     13.64 120  eP       Pn       17 24 29.5 -0.5
ITAB  Concordia          13.81 106  eP       Pn       17 24 31.8 -0.4
NNA   Nana               15.20 321  ePn      P        17 24 50.8 +0.4
           comp=N,14nm,0.7s
NNA   Nana               15.20 321   P       P        17 24 51.0 +0.7
           comp=N,1.6nm,0.3s,baz=206,slow=12,SNR=4.9
CNLB  Canela             15.38 113  eP       Pn       17 24 50.5 -1.1
GO06  Curarrehue         15.91 193  ePn      P        17 24 57.6 -0.4
           comp=N,48nm,1.0s
FRTB  Fartura            16.03  91  eP       Pn       17 25 00.2 +0.7
ITRB  Iturama            16.08  78  eP       Pn       17 25 00.4 +0.2
TIJ01 Guaruva-PR         16.44  98  eP       Pn       17 25 04.8 +0.2
TER01 Tubaro-SC          16.66 109  eP       Pn       17 25 06.6 -0.5
PLCA  Paso Flores        16.87 189  eP       P        17 25 08.9 +0.4
           comp=N,14nm,0.7s
PLCA  Paso Flores        16.87 189  eP       Pn       17 25 09.4  0.0
BB19B Bebedouro          17.36  84  eP       P        17 25 13.9 -0.2
SPB   Sao Paulo          17.95  92  eP       P        17 25 19.5 -1.0
           comp=N,46nm,0.8s
RCLB  Rio Claro- Sao     18.01  89  eP       P        17 25 20.6 -0.6
IPMB  Ipameri, GO        18.59  75  eP       P        17 25 27.3 -0.2
BDFB  Brasilia           19.75  68  eP       P        17 25 38.8 -1.3
           comp=N,119nm,0.8s
BDFB  Brasilia           19.75  68   P       P        17 25 39.7 -0.5
           comp=N,11nm,0.3s,baz=245,slow=9.5,SNR=130
GO07  Milladeo Hill,     19.76 194  eP       Pn       17 25 41.8 -1.7
           comp=N,301nm,0.8s
ESAR  Angra dos Reis     20.75  92  eP       P        17 25 48.0 -2.6
BSCB  Bom Sucesso        20.79  86  eP       P        17 25 50.0 -1.1
VAS01 Vassouras-RJ       21.77  90  eP       P        17 26 00.5 -0.9
DUB01 Friburgo-RJ        22.78  90  eP       P        17 26 10.2 -0.8
MCI6  Montes Claros      22.85  76  eP       P        17 26 10.0 -1.7
MCI8  Montes Claros      22.88  76  eP       P        17 26 10.4 -1.5
MCI9  Montes Claros      22.89  76  eP       P        17 26 10.4 -1.6
MCI7  Montes Claros      22.92  76  eP       P        17 26 10.2 -2.1
JANB  Januaria           23.20  71  eP       P        17 26 13.0 -1.8
CAM01 Campos-RJ          23.48  90  eP       P        17 26 16.2 -1.0
PTGA  Pitinga            24.20  17  eP       P        17 26 24.1 +0.2
           comp=N,8.0nm,0.8s
PTGA  Pitinga            24.20  17   P       P        17 26 22.9 -1.0
           comp=N,4.4nm,0.5s,baz=205,slow=12,SNR=8.8
PTGA  Pitinga            24.20  17  eP       P        17 26 24.1 +0.2
ALF01 Guarapari-ES       24.57  87  eP       P        17 26 26.3 -0.9
SJMB  Sao Joao De Ma     24.65  82  eP       P        17 26 26.6 -1.3
BSFB  Barra de Sao F     24.92  83  eP       P        17 26 29.0 -1.4
RIB01 Linhares ES        25.19  84  eP       P        17 26 31.4 -1.5
EFI   East Falkland      28.41 168  eP       P        17 27 04.8 +3.7
           comp=N,127nm,1.4s
RCBR  Riachuelo          34.99  64  eP       P        17 27 58.2 -1.0
           comp=N,44nm,1.5s
RCBR  Riachuelo          34.99  64  eP       P        17 27 59.3 +0.1
ANWB  Willy Bob          41.81   8  eP       P        17 28 56.2 +0.4
           comp=N,91nm,0.8s
VNA3  Neumayer Olymp     57.09 161   P       P        17 30 52.1 +1.3
VNA1  Neumayer--Stat     57.29 160   P       P        17 30 54.5 +2.4
VNA2  Neumayer--Watz     57.66 160   P       P        17 30 56.7 +2.0
           baz=288,slow=7.7
SNAA  Sanae              59.29 161   P       P        17 31 07.2 +1.1
SNAA  Sanae              59.29 161  eP       P        17 31 06.5 +0.4
           comp=N,6.0nm,0.7s
TXAR  Lajitas Array      63.72 324   P       P        17 31 37.3 +1.0
           comp=N,0.1nm,0.6s,baz=148,slow=8.6,SNR=2.7
QSPA  South Pole Qui     66.13 180  eP       P        17 31 53.0 +1.5
           comp=N,4.5nm,0.6s
CLNB  Carlsbad           66.16 326  ePcP     PcP      17 32 22.2 +1.4
CLNB                                eS       S        17 40 30.0 +3.8
LIC   Lamto              67.50  72  eP       P        17 31 59.8 -1.0
           comp=N,17nm,1.0s
TIC   Toumodi            67.71  71  eP       P        17 32 01.7 -0.4
KIC   Kosan Boka         67.81  72  eP       P        17 32 01.2 -1.6
           comp=N,15nm,0.6s
DBIC  Dimbokro           67.86  72   P       P        17 32 01.8 -1.3
           comp=N,3.3nm,0.4s,baz=222,slow=8.0,SNR=8.8
SYO   Syowa Base         73.49 159⇑eX       P        17 32 30.5 -5.6
SYO   Syowa Base         73.49 159⇑ePcP     PcP      17 32 47.0 -4.2
TOA0  Torodi Ar. Sit     76.63  69  eP       P        17 32 52.3 -2.7
TORD  Torodi Ar. Bea     76.63  69   P       P        17 32 53.0 -2.0
           comp=N,5.6nm,0.6s,baz=233,slow=4.8,SNR=29
PDAR  Pinedale Array     77.19 329   P       P        17 32 58.2 +0.4
           comp=N,0.2nm,0.6s,baz=156,slow=2.5,SNR=2.6
TSUM  Tsumeb             77.67 106  eP       P        17 32 59.1 -1.9
           comp=N,6.3nm,0.7s
NVAR  Mina Array Bea     78.57 321   P       P        17 33 05.8 +0.3
           comp=N,0.1nm,0.4s,baz=130,slow=4.1,SNR=3.1
BOSA  Boshof             80.73 117  eP       P        17 33 16.5 -0.9
           comp=N,8.6nm,0.8s
BOSA  Boshof             80.73 117   P       P        17 33 17.4 -0.1
           comp=N,6.0nm,0.5s,baz=255,slow=2.6,SNR=19
BOSA  Boshof             80.73 117  eP       P        17 33 17.4 -0.1
LBTB  Lobatse            82.39 114  eP       P        17 33 26.2  0.0
           comp=N,32nm,1.5s
ESDC  Sonseca Array      86.48  44   P       P        17 33 46.3 +0.2
           comp=N,1.3nm,0.8s,baz=250,slow=3.0,SNR=4.2
LSZ   Lusaka             88.52 106  eP       P        17 33 58.1 +1.5
           comp=N,14nm,1.0s
SNZO  South Karori       93.39 222  eP       P        17 34 19.6 +1.1
YKA   Yellowknife Ar     94.18 340   P       P        17 34 21.7 +0.2
           comp=N,0.2nm,0.6s,baz=132,slow=4.8,SNR=5.6
ASAR  Alice Springs     128.37 205   PKP     PKPdf    17 40 09.8 +0.2
           comp=N,0.3nm,0.6s,baz=138,slow=2.2,SNR=7.9
ASAR                                 SKPbc   SKPbc    17 43 11.2
           comp=N,0.4nm,0.6s,baz=142,slow=3.4,SNR=5.9
WRA   Warramunga Arr    131.54 207   PKP     PKiKP    17 40 16.2 -0.4
           comp=N,0.5nm,0.5s,baz=152,slow=1.7,SNR=9.5
WRA                                  SKPbc   SKPbc    17 43 23.3 -0.8
           comp=N,1.2nm,0.5s,baz=150,slow=3.4,SNR=23
PETK  Petropavlovsk-    135.65 323   PKP     PKPdf    17 40 22.8 +0.5
           comp=N,1.9nm,0.8s,baz=26,slow=3.7,SNR=3.4
ZAA0  Zalesovo Array    143.48  28  ePKPdf   PKPbc    17 40 34.7 +0.5
ZALV  Zalesovo Beam     143.48  28  ePKPpre  PKPpre   17 40 33.7
ZALV  Zalesovo Beam     143.48  28   PKP     PKPbc    17 40 34.6 +0.3
           comp=N,1.8nm,0.5s,baz=302,slow=4.2,SNR=13
BATI  Baumata           144.35 198   PKP     PKPdf    17 40 38.8 -0.5
           comp=N,4.4nm,0.4s,baz=153,slow=2.3,SNR=3.1
NRN   Naryn             144.75  52  ePKPbc   PKPdf    17 40 39.4 -0.1
KSH   Kashi             145.27  55   PKPbc   PKPab    17 40 40.4 -0.3
KSH                                  pPKP    pPKPab   17 41 23.3 -4.9
KSH                                  PP      PP       17 43 42.2  -19
KSH                                  SKS     SKSdf    17 47 33.8 +1.4
KSH                                  SKKS    SKKSac   17 50 35.1 -0.8
KSH                                  AMB     AMB
           comp=Z,280nm,6.6s
KDJ   Kajisay           145.36  50  ePKPdf   PKPdf    17 40 40.2 -0.2
TARG  Taragay, Kyrgy    145.94  50  ePKPdf   PKPab    17 40 42.9 -0.6
PRZ   Przheval'sk       146.08  49  ePKPdf   PKPab    17 40 44.2 +0.5
MAKZ  Makanchi          146.42  40  ePKPdf   PKPbc    17 40 43.1 -0.3
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MK31	**Makanchi Array**	146.61	40	*e*PKPdf	PKPdf	17 40 42.3	+0.2
MK31				*e*PKPbc	PKPbc	17 40 44.4	+0.4
MKAR	**Makanchi Array**	146.61	40	*e*PKPdf	PKPdf	17 40 42.8	+0.6
MKAR				*e*PKPbc	PKPbc	17 40 44.2	+0.3
MKAR	**Makanchi Array**	146.61	40	PKPbc	PKPbc	17 40 43.0	-1.0
	comp=Z,3.9nm,0.6s,baz=313,slow=2.6,SNR=49						
MK01	**Makanchi Array**	146.63	40	*e*PKPdf	PKPdf	17 40 42.5	+0.4
MK01				*e*PKPbc	PKPbc	17 40 44.4	+0.4
HYB	**Hyderabad**	147.21	95	*i* PKP	PKPbc	17 40 46.5	0.0
SONM	**Songino Array**	155.72	11	PKPab	PKPab	17 41 24.2	+0.9
	comp=Z,0.2nm,0.5s,baz=343,slow=4.5,SNR=2.5						
HHC	**Hu-ho-hao-te**	163.24	4	*e*P	PKPdf	17 41 05.7	+0.9
CM01	**Chiang Mai Arr**	165.79	111	*e*PKPab	PKPab	17 42 06.7	-1.4
CMAR	**Chiang Mai Arr**	165.79	111	PKPab	PKPab	17 42 08.2	+0.1
	comp=Z,1.7nm,0.7s,baz=254,slow=5.3,SNR=16						

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*IDC **01** 17:33:24.6±9.3, 1°.87S×100°.57E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.3/32, mbtmp3.3/3, Error ellipse: s-maj=486.0km s-min=31.8km az=53.0*

*ISCJB **01** 17:33:30.4±0.6, 2°.07S±0°.05×100°.31E±0°.05, h56^{km}, mb3.3/3, Error ellipse: s-maj=7.2km s-min=6.8km az=172.9*

*DJA **01** 17:33:31.0±0.3, 2°S±3°×10°0E±°, h25^{km}±10^{km}, M3.5/4, MLv3.5/4*

ISC 01 17:33:31.0±1.0**, 2°.07S**±0°.05×**100°.30E**±0°.05**, h56^{km}, n12, σ0^{s}.60**/13**, mb3.4**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	0.74	203	P	Pn	17 33 45.3	-0.3
PPSI				S	Sn	17 33 56.7	+0.4
KRJI	**Kerinci**	1.16	91	P	Pn	17 33 51.2	0.0
KRJI				S	Sn	17 34 07.2	+1.1
PDSI	**Padang**	1.16	8	P	Pn	17 33 51.0	-0.2
PDSI				S	Sn	17 34 06.0	-0.1
SISI	**Saibi**	1.42	301	P	Pn	17 33 54.4	-0.1
SISI				S	Sn	17 34 13.5	+1.3
SDSI	**Sungai Dareh**	1.60	45	P	Pn	17 33 56.9	-0.1
PPI	**Padang Panjang**	1.61	3	P	Pn	17 33 56.7	-0.4
H08S2	**Diego Garcia H**	28.24	258	T	T	18 08 00.1	
	baz=79,slow=74						
H08S3	**Diego Garcia H**	28.25	258	T	T	18 08 01.5	
	baz=79,slow=74						
H08S1	**Diego Carcia H**	28.26	258	T	T	18 08 13.0	
	baz=79						
WRA	**Warramunga Arr**	37.70	121	P	P	17 40 41.1	-0.3
	0.2nm,0.4s,baz=297,slow=12,SNR=4.5						
ASAR	**Alice Springs**	38.97	126	P	P	17 40 51.7	-0.4
	0.4nm,0.7s,baz=297,slow=7.6,SNR=4.4						
MKAR	**Makanchi Array**	51.18	344	P	P	17 42 28.6	0.0
	0.3nm,0.5s,baz=159,slow=8.8,SNR=2.7						

IDC 01 17:48:05.8±8.4**, 13°.88S**×**166°.94E, h148^{km}**±82^{km}**, mb3.2**/4**, mb1 3.4**/5**, mb1mx3.1**/45**, mbtmp3.6**/5**, Error ellipse: s-maj=76.8km s-min=44.3km az=160.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	8.16	183	P	Pn	17 50 01.8	+0.2
	0.5nm,0.3s,baz=343,slow=14,SNR=15						
DZM				S	Sn	17 51 28.0	-4.5
	0.1nm,0.3s,baz=345,slow=20,SNR=2.3						
STKA	**Stephens Creek**	29.31	228	P	P	17 53 55.0	+0.5
	1.6nm,0.6s,baz=51,slow=6.5,SNR=4.1						
WRA	**Warramunga Arr**	31.73	255	P	P	17 54 15.3	-0.7
	0.3nm,0.8s,baz=85,slow=9.5,SNR=3.3						
ASAR	**Alice Springs**	32.68	248	P	P	17 54 23.8	-0.6
	0.4nm,0.7s,baz=72,slow=9.9,SNR=11						
CMAR	**Chiang Mai Arr**	74.31	294	P	P	17 59 28.8	+1.3
	0.4nm,0.7s,baz=119,slow=5.8,SNR=5.2						
ARCES	**ARCESS Array B**	119.35	345	PKP	PKPdf	18 06 35.7	-1.4
	1.9nm,0.8s,baz=64,slow=2.1,SNR=4.9						

IDC 01 17:50:48.4±3.0**, 32°.32S**×**178°.15W, h0^{km}, mb3.4**/2**, mb1 3.7**/3**, mb1mx3.5**/37**, mbtmp3.5**/3**, ML3.1**/1**, Error ellipse: s-maj=72.2km s-min=36.1km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	7.08	212	Pn	Pn	17 52 32.8	-0.4
	0.3nm,0.3s,baz=60,slow=16,SNR=5.0						
URZ				Sn	Sn	17 53 55.0	+0.7
	1.2nm,0.3s,baz=197,slow=22,SNR=9.1						
ASAR	**Alice Springs**	42.91	269	P	P	17 58 49.0	0.0
	0.6nm,1.0s,baz=112,slow=8.1,SNR=3.6						
WRA	**Warramunga Arr**	44.07	274	P	P	17 58 58.3	-0.1
	0.2nm,0.3s,baz=111,slow=8.1,SNR=4.5						
FINES	**FINESS Array B**	146.89	339	PKPbc	PKPbc	18 10 31.2	-0.8
	1.4nm,0.8s,baz=29,slow=3.5,SNR=2.9						

IDC 01 17:51:18.9±2.2**, 1°.52N**×**126°.56E, h0^{km}, mb2.9**/3**, mb1 3.2**/3**, mb1mx3.0**/38**, mbtmp3.0**/3**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.4**/12**, Error ellipse: s-maj=202.4km s-min=25.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.65	161	P	P	17 56 22.4	+0.5
	0.4nm,0.9s,baz=339,slow=11,SNR=4.6						
ASAR	**Alice Springs**	26.03	165	P	P	17 56 53.6	-0.5
	0.1nm,0.7s,baz=347,slow=9.2,SNR=6.1						
KSRS	**Korea Array**	35.78	2	LR	LR	18 13 36.1	
	comp=Z,12nm,19.4s,baz=60,slow=37						
MKAR	**Makanchi Array**	59.27	326	P	P	18 01 22.4	0.0
	0.2nm,0.6s,baz=116,slow=5.1,SNR=4.0						

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*NIED **01** 18:03:00, 23°.20N×121°.00E, h8^{km}, Mw3.9 Best double couple: M$_0$7.29000×10^{14} NP1:ϕ_s119.00000°, δ42.00000°, λ-103.00000°. NP2:ϕ_s316.00000°, δ49.00000°, λ-79.00000°.*

*JMA **01** 18:03:05.9±0.1, 23°.17N×120°.98E, h0^{km}, M3.7*

*IDC **01** 18:03:06.9±3.5, 23°.12N×121°.23E, h0^{km}, mb3.4/5, mb1 3.4/6, mb1mx3.3/47, mbtmp3.4/6, ML2.7/1, MS3.1/4, Ms1 3.2/4, ms1mx2.8/27, Error ellipse: s-maj=70.3km s-min=32.3km az=155.0*

*ISCJB **01** 18:03:07.0±0.2, 23°.13N±0°.01×121°.00E±0°.01, h4^{km}±2^{km}, mb3.3/5, MS3.2/3, Error ellipse: s-maj=1.9km s-min=1.7km az=136.8*

*TAP **01** 18:03:06.3, 23°.15N×120°.96E, h6^{km}, ML4.1, C*

*BJI **01** 18:03:06.1, 23°.00N×121°.08E, h20^{km}, ML3.5/4*

ISC 01 18:03:06.8±0.9**, 23°.15N**±0°.01×**121°.04E**±0°.01**, h3^{km}**±6^{km}**, n133, σ1^{s}.20**/200**, mb3.2**/5**, MS3.5**/3**, 28C-14D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	0.05	331	⇑*i*P	Pg	18 03 08.5	+0.6
	baz=59						
ELDTW				*i* S	Sg	18 03 09.9	+1.2
	baz=59						
STYT	**Tauyuan**	0.26	273	⇑*i*P	Pg	18 03 10.5	-1.4
	baz=274						
STYT				*i* S	Sg	18 03 13.1	-2.2
	baz=274						
CHKT	**Chengkung**	0.30	99	*e*P	Pn	18 03 15.4	-2.7
	baz=97						
CHKT				*e*S	Sb	18 03 22.3	+2.1
	baz=97						
TWF1	**Yuli**	0.31	49	⇑*i*P	Pb	18 03 14.2	-0.8
	baz=57						
TWF1				*i* S	Sb	18 03 18.7	-1.8
	baz=57						
TWG	**Pinlang**	0.33	175	⇓*i*P	Pb	18 03 13.9	-1.3
	baz=153						
TWG				S	Sg	18 03 18.3	+0.9
	baz=153						
TWGBT	**Beinan**	0.33	174	⇓P	Pb	18 03 13.9	-1.4
	baz=153						
TWGBT				S	Sg	18 03 18.5	+1.0
	baz=153						
YULB	**Yu-li**	0.34	44	⇑P	Pb	18 03 14.3	-1.2
	baz=51						
YULB				S	Sb	18 03 18.9	-2.3
	baz=51						
SLGT	**Liugui**	0.40	247	⇑P	Pg	18 03 13.5	-0.9
	baz=233						
TTN	**Taitung**	0.41	166	P	Pb	18 03 16.5	-0.1
	baz=155						
TTN				*e*S	Sb	18 03 23.1	-0.1
	baz=155						
WTP	**Ta-pu**	0.41	284	⇑*i*P	Pg	18 03 13.9	-0.7
	baz=287						
WTP				*i* S	Sg	18 03 19.0	-0.9
	baz=287						
TPUB	**Ta-pu**	0.41	292	⇓P	Pg	18 03 14.0	-0.7
	baz=305						
TPUB				S	Sg	18 03 18.9	-1.0
	baz=305						
SGST	**Jiashian**	0.43	261	⇑*i*P	Pg	18 03 14.3	-0.7
	baz=255						
SGST				S	Sg	18 03 19.3	-1.2
	baz=255						
EHY	**Hungye**	0.44	36	⇑*i*P	Pb	18 03 16.1	-1.1
	baz=43						
EHY				*i* S	Sb	18 03 21.8	-2.4
	baz=43						
CHN4	**Tsaushan**	0.46	296	⇑*i*P	Pg	18 03 15.3	-0.4
	baz=309						
CHN4				S	Sg	18 03 21.2	-0.3
	baz=309						
CHN1	**Nanshi**	0.47	274	⇑*i*P	Pg	18 03 15.5	-0.4
	baz=269						
CHN1				S	Sg	18 03 21.9	-0.2
	baz=269						
HGSD	**Ruisui**	0.49	46	⇑*e*P	Pb	18 03 17.9	-0.1
	baz=42						
HGSD				S	Sb	18 03 25.7	0.0
	baz=42						
SNST	**Tainan City**	0.51	278	⇑*i*P	Pg	18 03 16.4	-0.1
	baz=280						
SNST				*e*S	Sg	18 03 23.8	+0.7
	baz=280						
TWK	**Hsinying**	0.52	283	⇑*i*P	Pg	18 03 16.5	-0.3
	baz=286						
TWK				S	Sg	18 03 23.5	-0.1
	baz=286						
SSD	**Sandimen**	0.55	223	⇑*i*P	Pg	18 03 16.2	-1.2
	baz=221						
ECL	**Taimali**	0.56	188	⇓*i*P	Pg	18 03 17.4	-0.1
	baz=180						
ECL				*e*S	Sg	18 03 24.6	-0.1
	baz=180						
CHN5	**Tsauling**	0.56	323	⇓*i*P	Pg	18 03 17.4	-0.1
	baz=330						
CHN5				S	Sg	18 03 24.9	+0.2
	baz=330						
WHYT	**Xinyi Township**	0.57	342	⇓P	Pg	18 03 17.7	-0.1
	baz=355						
WHYT				*e*S	Sg	18 03 25.8	+0.5
	baz=355						
VWDT	**VWDT**	0.61	9	⇑P	Pg	18 03 18.1	-0.4
	baz=13						
VWDT				*e*S	Sb	18 03 29.0	-0.1
	baz=13						
CHN3	**Shinhua**	0.63	263	⇑*i*P	Pb	18 03 19.9	-0.5
	baz=263						
CHN3				S	Sb	18 03 29.4	-0.2
	baz=263						
EGFH	**Guangfu**	0.63	34	⇑*e*P	Pb	18 03 19.3	-1.1
	baz=39						
EGFH				*e*S	Sb	18 03 27.8	-1.8
	baz=39						
SSLB	**Suanglung**	0.64	353	⇑P	Pg	18 03 18.3	-0.8
	baz=7.0						
CHN2	**Minshiung**	0.65	306	P	Pg	18 03 19.7	+0.5
	baz=311						
CHN2				S	Sg	18 03 29.1	+1.5
	baz=311						
MASBT	**Mashibuluo**	0.65	215	⇑P	Pg	18 03 18.2	-1.2
	baz=209						
MASBT				*e*S	Sg	18 03 27.0	-0.8
	baz=209						
TWM1	**Shoushan**	0.66	240	*e*P	Pg	18 03 19.7	+0.3
	baz=225						
SGLT	**Jiouru**	0.66	230	P	Pg	18 03 19.5	0.0
	baz=220						
SGLT				*e*S	Sg	18 03 29.1	+1.1
	baz=220						
CHY	**Chiayi**	0.67	302	*e*P	Pg	18 03 19.4	-0.1
	baz=306						
CHY				S	Sg	18 03 29.2	+1.0
	baz=306						
WGK	**Gukeng**	0.69	321	⇓*i*P	Pg	18 03 20.7	+0.6
	baz=327						
WGK				*e*S	Sg	18 03 29.9	+0.8
	baz=327						
WDLH	**Douliu**	0.71	319	⇓*e*P	Pb	18 03 21.2	-0.6
	baz=324						
WDLH				*e*S	Sb	18 03 31.8	-0.1
	baz=324						
WJS	**Zhushan**	0.73	337	*e*P	Pb	18 03 21.7	-0.4
	baz=351						
SMLT	**Sun Moon Lake**	0.74	350	⇓P	Pg	18 03 20.9	-0.2
	baz=3.0						
ESL	**Shilin**	0.75	28	⇑*e*P	Pb	18 03 21.2	-1.3
	baz=34						
WLGB	**Puzi**	0.76	296	⇑P	Pg	18 03 21.4	+0.1
	baz=299						
WLGB				S	Sb	18 03 32.8	-0.4
	baz=299						
TAI1	**Yung-k'ang**	0.76	262	*e*P	Pg	18 03 21.7	+0.4
	baz=276						
SNJT	**Kaohsiung City**	0.76	239	*e*P	Pn	18 03 23.9	-0.5
	baz=253						
TYC	**Yuchr**	0.77	347	*e*P	Pg	18 03 21.5	-0.1
TYC				*e*S	Sb	18 03 34.3	+0.6
SCLT	**Jiali**	0.78	272	*e*P	Pg	18 03 21.9	+0.2
	baz=273						
SCLT				*e*S	Sb	18 03 34.1	+0.1
	baz=273						
EAST	**Anshuo**	0.78	193	*e*P	Pg	18 03 21.4	-0.4
	baz=187						
CHN8	**Yiju**	0.79	285	⇓P	Pg	18 03 21.8	-0.1
	baz=287						
CHN8				*e*S	Sg	18 03 33.3	+1.2
	baz=287						
WNT	**Mingjian**	0.80	336	⇓*i*P	Pb	18 03 23.0	-0.3
	baz=341						
WNT				*e*S	Sb	18 03 34.2	-0.3
	baz=341						
TAW	**Tawu**	0.80	190	*e*P	Pg	18 03 21.9	-0.2
	baz=183						
SCZT	**Fangliau**	0.87	207	*e*P	Pg	18 03 22.6	-0.8
	baz=193						
KAU	**Kaohsiung**	0.89	230	*e*P	Pn	18 03 25.6	-0.5
	baz=244						
WSF	**Szhu**	0.90	303	⇓P	Pg	18 03 23.8	-0.2
	baz=307						
WSF				*e*S	Sg	18 03 36.2	+0.6
	baz=307						
ENLB	**Shoufeng**	0.91	34	*e*P	Pb	18 03 24.7	-0.5
	baz=38						
ENLB				*e*S	Sn	18 03 40.5	+0.5
	baz=38						
CHGB	**Renai**	0.92	8	⇓P	Pg	18 03 23.5	-0.8
	baz=12						
RLNB	**Erlin**	0.97	320	*e*P	Pg	18 03 25.2	-0.2
	baz=324						
RLNB				*e*S	Sg	18 03 37.8	-0.2
	baz=324						
WMLT	**Mailiao**	0.99	311	*e*P	Pb	18 03 26.4	-0.3
	baz=315						
WMLT				*e*S	Sb	18 03 39.7	-0.4
	baz=315						
WTCT	**Ta-ch'eng**	1.00	316	*e*P	Pg	18 03 25.6	-0.3
	baz=319						
WTCT				*e*S	Sb	18 03 39.8	-0.4
	baz=319						
WLCH	**Liuqiu**	1.00	218	*e*P	Pn	18 03 28.9	+1.2
	baz=214						
WLCH				*e*S	Sn	18 03 46.0	+3.7
	baz=214						
WHF	**Hehuan Shan**	1.01	12	*e*P	Pb	18 03 26.3	-0.9
	baz=16						
TWP	**Hsiaoliuchiu**	1.02	218	P	Pn	18 03 28.6	+0.7
	baz=217						
TWP				*e*S	Sn	18 03 45.8	+3.1
	baz=217						
WCHH	**Zhanghua**	1.03	335	*e*P	Pg	18 03 26.3	-0.2
	baz=338						
TCU	**Taichung**	1.05	341	*e*P	Pb	18 03 27.4	-0.2
	baz=330						
TWD	**Chiawan**	1.06	29	*e*P	Pb	18 03 27.0	-0.7
	baz=46						
TDCB	**Techi**	1.10	6	*e*P	Pg	18 03 26.9	-1.1
	baz=2.0						
TWT	**Tachien**	1.11	6	*e*P	Pb	18 03 28.1	-0.5
	baz=2.0						
WHP	**Taichung City**	1.13	356	⇑P	Pn	18 03 29.4	-0.1
	baz=6.0						
NACB	**Ninganchiao**	1.14	26	⇑P	Pb	18 03 28.3	-0.8
	baz=29						
NACB				*e*S	Sn	18 03 44.9	-0.8
	baz=29						
HEN	**Hengchun**	1.17	194	*e*P	Pn	18 03 30.4	+0.4
	baz=189						
LAY	**Lan-yu**	1.20	157	*e*P	Pg	18 03 28.3	-1.5
	baz=154						
TWQ1	**Liyutan**	1.22	348	*e*P	Pn	18 03 30.6	-0.1
	baz=352						
TWQ1				*e*S	Sn	18 03 49.6	+1.9
	baz=352						
TWK1	**Hengchun**	1.22	190	*e*P	Pn	18 03 31.1	+0.4
	baz=177						
TWKBT	**Hengchun**	1.22	190	*e*P	Pn	18 03 31.1	+0.4
	baz=177						
WDJ	**Dajia District**	1.25	343	*e*P	Pn	18 03 31.7	+0.6
	baz=336						
WDJ				*e*S	Sn	18 03 49.0	+0.6
	baz=336						
TSEB	**Hengchuen, Pin**	1.25	186	*e*P	Pn	18 03 31.6	+0.5
	baz=175						
WDGT	**Dungji**	1.28	275	⇑*i*P	Pn	18 03 29.3	-2.2
	baz=277						
WDGT				S	Sb	18 03 45.5	-2.8
	baz=277						
NNSB	**Datong**	1.31	14	*e*P	Pn	18 03 30.5	-1.6
	baz=26						
NNSB				*e*S	Sn	18 03 50.9	+0.7
	baz=26						
NNS	**Nan Shan**	1.32	13	*e*P	Pn	18 03 31.0	-1.2
	baz=3.0						
PTSB	**Yuanli**	1.33	347	*e*P	Pg	18 03 32.9	+0.6
	baz=349						
PTSB				*e*S	Sn	18 03 51.5	+1.1
	baz=349						
PHUB	**P'eng-hu**	1.40	285	⇑P	Pn	18 03 30.9	-2.2
	baz=287						
PHUB				*e*S	Sb	18 03 48.4	-3.4
	baz=287						
NMLH	**Miaoli**	1.40	351	*e*P	Pg	18 03 33.3	-0.4
	baz=353						
PNG	**Penghu**	1.43	287	⇑*i*P	Pn	18 03 31.6	-2.0
	baz=289						
PNG				S	Sn	18 03 50.0	-2.8
	baz=289						
NSTT	**Nanjuang**	1.48	359	*e*P	Pg	18 03 34.7	-0.4
	baz=349						
NSTT				*e*S	Sg	18 03 54.7	+0.4
	baz=349						
VCHM	**Qimei**	1.48	273	⇑P	Pn	18 03 32.1	-2.3
	baz=274						
VCHM				*e*S	Sn	18 03 50.8	-3.5
	baz=274						
LIOB	**Emei**	1.49	359	*e*P	Pg	18 03 35.2	-0.1
	baz=349						
LIOB				*e*S	Sg	18 03 56.6	+1.9
	baz=349						
NDT	**Datong Townshi**	1.51	17	*e*P	Pg	18 03 35.8	0.0
	baz=27						
NDT				*e*S	Sg	18 03 57.4	+2.1
	baz=27						
YHNB	**Yeheng**	1.54	11	*e*P	Pn	18 03 34.6	-0.7
	baz=13						
YHNB				*e*S	Sg	18 03 58.1	+1.7
	baz=13						
ENTT	**Nioudou**	1.56	18	⇑P	Pg	18 03 36.0	-0.8
	baz=28						
ENTT				*e*S	Sg	18 03 58.6	+1.7
	baz=28						
TWC	**Suao**	1.63	27	⇓*i*P	Pg	18 03 37.7	-0.4
	baz=29						
TWC				*e*S	Sg	18 03 59.1	-0.1
	baz=29						
SBCB	**Hsinchu**	1.64	358	*e*P	Pg	18 03 38.9	+0.7
SBCB				*e*S	Sg	18 04 01.3	+1.9
TWE	**Neicheng**	1.67	20	P	Pg	18 03 38.0	-0.8
	baz=33						
TWE				*e*S	Sg	18 04 01.5	+1.1
	baz=33						
NWLT	**Wulai**	1.68	15	*e*P	Pg	18 03 37.9	-1.0
	baz=4.0						
EOS1	**EOS1**	1.71	35	*e*P	Pg	18 03 38.8	-0.9
	baz=54						
ILA	**Ilan**	1.73	22	*e*P	Pb	18 03 38.2	-1.1
	baz=41						
NCUH	**Zhongli**	1.81	4	*e*P	Pg	18 03 41.7	+0.1
	baz=3.0						
NCU	**National Centr**	1.82	4	*e*P	Pg	18 03 41.8	+0.1
	baz=3.0						
NTC	**Toucheng**	1.84	23	*e*P	Pg	18 03 41.9	-0.3
	baz=40						
NHDH	**Xindian Distri**	1.86	14	*e*P	Pg	18 03 41.5	-0.9
	baz=25						
NHDH				*e*S	Sg	18 04 07.3	+0.7
	baz=25						
TATO	**Taipei**	1.86	13	*e*P	Pg	18 03 41.8	-0.7
	baz=13						
EGS		1.88	26	*e*P	Pg	18 03 42.4	-0.4
	baz=42						
TWA	**Mucha**	1.89	15	*e*P	Pg	18 03 42.7	-0.3
	baz=16						
TWA				*e*S	Sg	18 04 08.8	+1.3
	baz=16						
TIPB	**Shuangxi**	1.95	21	*e*P	Pb	18 03 41.9	-1.1
	baz=39						
TIPB				*e*S	Sg	18 04 08.3	-1.2
	baz=39						
TWS1	**Kuangyinshan**	1.97	10	*e*P	Pg	18 03 44.9	+0.2
	baz=22						
TWS1				*e*S	Sg	18 04 11.7	+1.5
	baz=22						
NWF	**Wu-fen Shan**	2.03	19	*e*P	Pg	18 03 44.9	-0.9
	baz=39						
WFSB	**Wu-fen Shan**	2.03	19	*e*P	Pb	18 03 44.2	-0.1
	baz=39						
NTST	**Danshui**	2.04	10	*e*P	Pg	18 03 45.5	-0.5
	baz=9.0						
TWB1	**Santiao Chiao**	2.04	25	*e*P	Pg	18 03 44.7	-1.3
	baz=41						
YM01	**YM01**	2.05	14	*e*P	Pb	18 03 44.4	-0.3
	baz=354						
YM04	**YM04**	2.05	13	*e*P	Pb	18 03 44.1	-0.5
	baz=353						
YM05	**YM05**	2.06	13	*e*P	Pb	18 03 43.8	-1.2
	baz=354						
YM11	**YM11**	2.07	14	*e*P	Pb	18 03 44.2	-0.8
	baz=353						
YM08	**YM08**	2.09	14	*e*P	Pb	18 03 45.3	-0.1
	baz=353						
JYNG	**Yonagunijimaku**	2.17	53	P	Pb	18 03 44.5	-2.2
JYNG				S	Sb	18 04 13.0	-1.1
TWY	**Chenhua**	2.18	13	*e*P	Pb	18 03 46.1	-0.7
	baz=355						
YOJ	**Yonaguni jima**	2.23	54	P	Pb	18 03 45.2	-2.5
YOJ				*e*S	Sb	18 04 13.5	-2.1
VWUC	**VWUC**	2.34	322	*e*P	Pn	18 03 44.7	-1.5
	baz=323						
HATJ	**Hateruma jima**	2.69	70	*e*S	Sn	18 04 23.7	-0.3
KNM	**Kinmen**	2.70	298	*e*P	Pn	18 03 50.8	-0.3
	baz=300						
IRIF	**Iriomote-Funau**	2.73	64	P	Pn	18 03 52.4	+0.9
IRIF				*e*S	Sb	18 04 27.0	-3.2
KNMB	**Chin-men Tao**	2.76	299	*e*P	Pn	18 03 49.8	-2.1
	baz=302						
QZH	**Quanzhou**	2.86	309	Pn	Pn	18 03 52.2	-1.1
QZH				Sn	Sn	18 04 26.1	-2.2
QZH				smax	smax		
	comp=N,120nm,0.6s						
QZH				smax	smax		
	comp=E,100nm,0.5s						
JKRS	**Kuro-shima**	2.93	68	P	Pn	18 03 54.1	-0.1
JKRS				*e*S	Sn	18 04 30.5	+0.6
JIJ	**Ishigaki jima**	3.09	66	P	Pn	18 03 56.8	+0.4
JIJ				S	Sn	18 04 32.3	-1.6
MATB	**Ma-tsu**	3.15	342	*e*P	Pn	18 03 56.3	-0.9
	baz=341						
JISG	**Ishigakijimahi**	3.32	64	P	Pn	18 03 59.4	-0.2
JISG				*e*S	Sn	18 04 39.3	-0.2
JTJ	**Tarama**	3.67	65	P	Pn	18 04 05.0	+0.7
JTJ				*e*S	Sn	18 04 48.5	+0.4
JIRB	**Irabujima**	4.13	65	*e*S	Sn	18 04 59.8	+0.2
JIKM	**Ikemajima**	4.23	64	*e*S	Sn	18 05 02.8	+0.7

JOW	**Kunigami**	**7.52**	**59**	Pn	**Pn**	**18 04 56.8**	**-0.6**
	0.3nm,0.3s,baz=89,slow=17,SNR=5.6						
MJAR	**Matsushiro Arr**	**19.95**	**44**	LR	LR	18 16 30.1	
	comp=Z,26nm,18.8s,baz=100,slow=40						
CMAR	**Chiang Mai Arr**	**21.17**	**261**	P	**P**	**18 07 55.8**	**+2.4**
	0.3nm,0.8s,baz=63,slow=8.6,SNR=4.7						
CMAR				LR	LR	18 17 22.6	
	comp=Z,30nm,18.2s,baz=112,slow=40						
SONM	**Songino Array**	**27.27**	**338**	P	**P**	**18 08 54.2**	**+1.7**
	0.3nm,0.6s,baz=156,slow=12,SNR=3.5						
WMQ	**Urumqi**	**34.28**	**315**	*e*P	**P**	**18 09 54.2**	**-0.1**
MKAR	**Makanchi Array**	**38.99**	**317**	P	**P**	**18 10 38.1**	**+3.7**
	0.4nm,0.7s,baz=112,slow=10,SNR=4.9						
ZALV	**Zalesovo Beam**	**41.04**	**328**	P	**P**	**18 10 51.4**	**+0.1**
	0.5nm,0.4s,baz=130,slow=5.8,SNR=2.6						
STKA	**Stephens Creek**	**58.14**	**159**	LR	LR	18 42 17.9	
	comp=Z,39nm,18.4s,baz=25,slow=40						
FINES	**FINESS Array B**	**72.27**	**330**	P	**P**	**18 14 34.0**	**+0.8**
	1.3nm,0.9s,baz=101,slow=7.4,SNR=4.0						
NOA	**NORSAR Array B**	**79.07**	**332**	LR	LR	18 54 19.1	
	comp=Z,20nm,19.1s,baz=315,slow=39						

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*SOME **01** 18:03:14.7, 42°.50N×79°.57E, h10^{km}*

*KRNET **01** 18:03:15.5±0.1, 42°.59N×79°.59E, h12^{km}, mb2.1*

*NNC **01** 18:03:15.5±1.1, 42°.59N×79°.58E, h0^{km}, mb3.3, mpv2.5, Error ellipse: s-maj=7.0km s-min=3.5km az=155.0*

ISC 01 18:03:15.3±2.1, **42°.58N**±0°.06×**79°.56E**±0°.07, **h9**^{km}±14^{km}, **n19**, σ**0**^{s}.**62**/36, **10C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.58**	**353**	P	**Pb**	**18 03 27.6**	**-0.2**
	3.2nm,0.1s						
SHLS				S	**Sb**	**18 03 36.9**	**+0.6**
	15nm,0.2s						
SHLS	**Shalkode**	**0.58**	**353**	*e*P	**Pb**	**18 03 27.6**	**-0.2**
	baz=21						
SHLS				*e*S	**Sb**	**18 03 36.9**	**+0.6**
	baz=21						
SHLS	**Shalkode**	**0.58**	**353**	*e*P	**Pb**	**18 03 27.6**	**-0.2**
	3.2nm,0.1s						
SHLS				*e*S	**Sb**	**18 03 36.9**	**+0.6**
	15nm,0.2s						
UZB	**Uzynbulak**	**0.69**	**325**	P	**Pg**	**18 03 28.9**	**+0.2**
	1.4nm,0.1s						
UZB				S	**Sb**	**18 03 39.1**	**-0.3**
	7.4nm,0.2s						
UZB	**Uzynbulak**	**0.69**	**325**	*e*P	**Pg**	**18 03 28.9**	**+0.2**
	baz=24						
UZB				*e*S	**Sb**	**18 03 39.1**	**-0.3**
	baz=24						
UZB	**Uzynbulak**	**0.69**	**325**	*e*P	**Pg**	**18 03 28.9**	**+0.2**
	1.4nm,0.1s						
UZB				*e*S	**Sb**	**18 03 39.1**	**-0.3**
	7.4nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**356**	P	**Pg**	**18 03 29.5**	**-0.3**
	0.3nm,0.1s						
PDGK				S	**Sg**	**18 03 40.2**	**+0.5**
	1.2nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**356**	⇑*i*P	**Pg**	**18 03 29.3**	**-0.5**
	baz=54						
PDGK				⇑*i*S	**Sg**	**18 03 40.1**	**+0.4**
	baz=54						
PRZ	**Przheval'sk**	**0.86**	**264**	⇑*i*P	**Pg**	**18 03 32.5**	**+0.6**
	baz=64						
PRZ				⇑*i*S	**Sb**	**18 03 45.0**	**+0.7**
	baz=64						
SATY	**Saty**	**0.97**	**300**	P	**Pg**	**18 03 34.2**	**+0.2**
	1.3nm,0.2s						
SATY				S	**Sb**	**18 03 48.3**	**+0.8**
	7.3nm,0.1s						
SATY	**Saty**	**0.97**	**300**	*e*P	**Pg**	**18 03 34.2**	**+0.2**
	1.3nm,0.2s						
SATY				*e*S	**Sb**	**18 03 48.3**	**+0.8**
	7.3nm,0.1s						
KDJ	**Kajisay**	**1.82**	**257**	⇑*i*P	**Pg**	**18 03 50.0**	**-0.2**
	baz=56						
KDJ				⇑*i*S	**Sg**	**18 04 14.9**	**+1.1**
	baz=56						
ARXS	**Arharly**	**2.06**	**323**	Pg	**Pb**	**18 03 53.3**	**+0.3**
	4.6nm,0.5s						
ARXS				Lg	Lg	18 04 21.2	
	4.7nm,0.4s						
ARXS	**Arharly**	**2.06**	**323**	*e*P	**Pb**	**18 03 53.4**	**+0.3**
	4.6nm,0.5s						
ARXS				*e*S	**Sg**	**18 04 21.2**	**-0.4**
	4.7nm,0.4s						
CHKK	**Chushkaly**	**2.27**	**305**	Pg	**Pb**	**18 03 56.8**	**+0.3**
	0.5nm,0.1s						
CHKK				Lg	Lg	18 04 27.0	
	3.1nm,0.2s						
CHKK	**Chushkaly**	**2.27**	**305**	*e*P	**Pb**	**18 03 56.8**	**+0.3**
	baz=5.0						
CHKK				*e*S	**Sg**	**18 04 27.0**	**-1.3**
	baz=5.0						
CHKK	**Chushkaly**	**2.27**	**305**	*e*P	**Pb**	**18 03 56.8**	**+0.3**
	0.5nm,0.1s						
CHKK				*e*S	**Sg**	**18 04 27.0**	**-1.3**
	3.1nm,0.2s						
ULHL	**Ulahol**	**2.48**	**263**	⇑*i*P	**Pb**	**18 03 59.4**	**-0.8**
	baz=63						
ULHL				⇑*i*S	**Sb**	**18 04 31.2**	**+0.3**
	baz=63						
BOOM	**Boomskoye usch**	**2.68**	**269**	⇑*i*P	**Pb**	**18 04 02.2**	**-1.3**
	baz=69						
BOOM				⇑*i*S	**Sb**	**18 04 36.4**	**-0.1**
	baz=69						

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*ISCJB **01** 18:04:07.0±0.3, 6°.82S±0°.03×129°.64E±0°.04, h139^{km}, mb4.3/15, Error ellipse: s-maj=6.5km s-min=4.2km az=156.8*

*IDC **01** 18:04:07.4±2.5, 6°.84S×129°.47E, h130^{km}±25^{km}, mb3.3/6, mb1 3.5/10, mb1mx3.3/33, mbtmp3.8/10, MS2.9/1, Ms1 2.9/1, ms1mx2.3/18, Error ellipse: s-maj=34.2km s-min=13.8km az=69.0*

*NEIC **01** 18:04:09.3±0.8, 6°.82S×129°.58E, h148^{km}±9^{km}, mb4.5/14, Error ellipse: s-maj=10.7km s-min=7.9km az=45.0*

ISC 01 18:04:07.4±0.5, **6°.86S**±0°.05×**129°.65E**±0°.06, **h139**^{km}, **n45**, σ**2**^{s}.**90**/49, **mb4.4**/16, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.98**	**124**	*e*Pn	Pn	18 04 47.3	+5.6
SAUI				*e*Sn	**Sn**	**18 05 09.2**	**+1.2**
FAKI	**Fak Fak**	**4.69**	**34**	*e*Pn	**Pn**	**18 05 17.2**	**+0.5**
FAKI				*e*Sn	**Sn**	**18 06 03.2**	**-7.3**
SOEI	**Soe**	**6.05**	**241**	*e*Pn	Pn	18 05 39.8	+4.9
SOEI				*e*Sn	**Sn**	**18 06 40.5**	**-2.7**
MTN	**Manton Dam**	**6.12**	**166**	*e*Pn	**Pn**	**18 05 39.2**	**+3.5**
MTN				*e*Sn	**Sn**	**18 06 44.7**	**0.0**
SIJI	**Sorong**	**6.17**	**15**	P	**Pn**	**18 05 36.7**	**+0.4**
	1.4nm,0.3s,baz=98,slow=4.3,SNR=30						
SIJI				S	**Sn**	**18 06 39.6**	**-6.2**
	8.3nm,0.3s,baz=3.4,slow=23,SNR=19						
BATI	**Baumata**	**6.79**	**240**	P	Pn	18 05 48.8	+4.1
	8.1nm,0.3s,baz=75,slow=3.0,SNR=18						
BATI				S	**Sn**	**18 07 03.1**	**+2.3**
	5.0nm,0.3s,baz=173,slow=23,SNR=8.6						
MMRI	**Maumere**	**7.55**	**256**	*e*Pn	**Pn**	**18 05 57.3**	**+2.4**
TNTI	**Ternate**	**7.92**	**343**	*e*Pn	Pn	18 05 51.5	-8.3
TNTI				*e*Sn	**Sn**	**18 07 21.8**	**-6.2**
FITZ	**Fitzroy Crossi**	**11.84**	**199**	*e*Pn	**Pn**	**18 06 52.6**	**+0.7**
FITZ				*e*Sn	Sn	18 08 52.3	-10
FITZ	**Fitzroy Crossi**	**11.84**	**199**	P	**Pn**	**18 06 52.0**	**0.0**
	0.3nm,0.3s,baz=22,slow=11,SNR=17						
FITZ				S	**Sn**	**18 08 57.9**	**-4.7**
	0.6nm,0.3s,baz=291,slow=22,SNR=7.4						
WRAB	**Tennant Creek**	**13.78**	**161**	*e*Pn	**Pn**	**18 07 17.2**	**+0.1**
WRAB				*e*Sn	Sn	18 09 40.3	-9.1
WRA	**Warramunga Arr**	**13.78**	**161**	P	**Pn**	**18 07 16.5**	**-0.6**
	0.8nm,0.3s,baz=339,slow=13,SNR=31						
WRA				S	**Sn**	**18 09 42.7**	**-6.9**
	1.3nm,0.3s,baz=333,slow=22,SNR=7.8						
WB2	**Warramunga Arr**	**13.78**	**161**	*e*Pn	**Pn**	**18 07 15.3**	**-1.9**
WB2				*e*Sn	Sn	18 09 40.2	-9.4
WC3	**Warramunga Arr**	**13.80**	**161**	*e*Pn	**Pn**	**18 07 17.1**	**-0.3**
WC3				*e*Sn	**Sn**	**18 09 44.3**	**-5.9**
COEN	**Coen**	**15.05**	**119**	*e*Pn	**P**	**18 07 35.4**	**+0.3**
	10nm,1.0s						
COEN				*e*Sn	Sn	18 10 11.1	-9.1
JAGI	**Jajag, Banyuwa**	**15.44**	**263**	*e*Pn	**P**	**18 07 39.0**	**-0.4**
	16nm,1.1s						
AS31	**Alice Springs**	**17.20**	**167**	*e*P	**Pn**	**18 08 01.4**	**+1.9**
	2.2nm,0.9s						
AS31				*e*S	**S**	**18 11 06.6**	**-4.6**
ASAR	**Alice Springs**	**17.20**	**167**	P	**Pn**	**18 08 00.8**	**+1.4**
	1.0nm,0.3s,baz=345,slow=9.4,SNR=162						
ASAR				S	**S**	**18 11 06.1**	**-5.1**
	0.3nm,0.3s,baz=357,slow=25,SNR=4.2						
AS01	**Alice Springs**	**17.21**	**167**	*e*P	**Pn**	**18 08 01.7**	**+2.1**
AS01				*e*S	**S**	**18 11 08.2**	**-3.2**
CTA	**Charters Tower**	**20.80**	**131**	P	**P**	**18 08 40.3**	**+2.4**
	4.7nm,1.1s,baz=287,slow=11,SNR=3.2						
CTAO	**Charters Tower**	**20.80**	**131**	*e*P	**P**	**18 08 40.3**	**+2.4**
	7.3nm,1.0s						
KSM	**Kuching**	**21.00**	**293**	*e*P	**P**	**18 08 38.8**	**-1.3**
	22nm,1.2s						
CISI	**Cisompet, Garu**	**21.67**	**267**	*e*P	**P**	**18 08 47.4**	**0.0**
	35nm,1.3s						
BBOO	**Buckleboo**	**26.50**	**168**	*e*P	**P**	**18 09 33.2**	**+1.3**
	71nm,1.8s						
STKA	**Stephens Creek**	**27.27**	**157**	*e*P	**P**	**18 09 40.7**	**+1.8**
	4.4nm,1.6s						
STKA	**Stephens Creek**	**27.27**	**157**	P	**P**	**18 09 40.7**	**+1.8**
	1.3nm,0.4s,baz=331,slow=9.8,SNR=6.2						
HNR	**Honiara**	**30.10**	**97**	*e*P	**P**	**18 10 06.2**	**+2.1**
	305nm,0.9s						
CAN	**Canberra**	**33.45**	**151**	*e*P	**P**	**18 10 35.9**	**+2.6**
	32nm,1.2s						
CMAR	**Chiang Mai Arr**	**39.37**	**310**	P	**P**	**18 11 23.4**	**-0.3**
	0.4nm,0.8s,baz=130,slow=7.4,SNR=4.9						
KMI	**Kunming**	**41.19**	**321**	P	P	18 11 45.1	+6.3
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MJAR	**Matsushiro Arr**	**43.91**	**10**	LR	LR	18 30 31.2	
	comp=Z,14nm,19.1s,baz=60,slow=36						
MAJO	**Matsushiro**	**43.91**	**10**	*e*P	P	18 12 06.0	+5.6
	comp=Z,48nm,1.9s						
MJB9	**Matsu-Tunnel**	**43.91**	**10**	*e*P	P	18 12 06.0	+5.6
	comp=Z,53nm,1.9s						
HHC	**Hu-ho-hao-te**	**50.30**	**342**	*e*P	P	18 12 53.9	+3.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.6s						
CN2	**Changchun**	**50.57**	**356**	*e*P	**P**	**18 12 54.3**	**+2.5**
SONM	**Songino Array**	**58.20**	**342**	P	**P**	**18 13 48.0**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=150,slow=12,SNR=2.4						
WMQ	**Urumqi**	**63.09**	**327**	*e*P	**P**	**18 14 22.4**	**+2.2**
MK01	**Makanchi Array**	**67.90**	**327**	*e*P	**P**	**18 14 51.6**	**+0.6**
MK31	**Makanchi Array**	**67.92**	**327**	*e*P	**P**	**18 14 51.6**	**+0.5**
MKAR	**Makanchi Array**	**67.92**	**327**	*e*P	**P**	**18 14 51.5**	**+0.4**
	comp=Z,28nm,1.8s						
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**18 14 51.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=117,slow=8.2,SNR=19						
MAKZ	**Makanchi**	**68.10**	**327**	*e*P	**P**	**18 14 52.9**	**+0.6**
	comp=Z,9.9nm,2.0s						
ARSB	**Arslanbob**	**70.55**	**318**	*e*P	**P**	**18 15 09.1**	**+1.4**
	comp=Z,7.9nm,1.4s						
ZALV	**Zalesovo Beam**	**71.30**	**334**	P	**P**	**18 15 11.4**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=132,slow=8.7,SNR=3.4						
LPAZ	**La Paz**	**151.04**	**143**	PKPbc	**PKiKP**	**18 23 46.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=180,slow=1.0,SNR=3.0						

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*NIED **01** 18:23:00, 42°.80N×142°.90E, h116^{km}, Mw4.1 Best double couple: M$_0$1.74000×10^{15} NP1:φ$_s$228.00000°, δ16.00000°, λ27.00000°. NP2:φ$_s$112.00000°, δ83.00000°, λ104.00000°.*

*MOS **01** 18:23:04.1±1.1, 42°.79N×142°.78E, h136^{km}, mb4.2/45, Error ellipse: s-maj=8.0km s-min=4.9km az=75.9*

*IDC **01** 18:23:04.1±1.6, 42°.81N×142°.85E, h119^{km}±14^{km}, mb3.9/25, mb1 4.0/29, mb1mx4.0/42, mbtmp4.2/29, MS3.1/2, Ms1 3.1/2, ms1mx2.4/41, Error ellipse: s-maj=11.6km s-min=9.5km az=122.0*

*ISCJB **01** 18:23:04.2±0.2, 42°.76N±0°.02×142°.80E±0°.02, h132^{km}±1^{km}, mb4.4/184, Error ellipse: s-maj=4.0km s-min=2.6km az=153.2*

*JMA **01** 18:23:05.9±0.1, 42°.79N×142°.86E, h121^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: φ$_s$124.00000°, δ84.00000°, λ76.00000°. NP2:φ$_s$13.00000°, δ15.00000°, λ158.00000°. Principal axes: T Plg49.0000°, Azm19.0000°; N Plg14.0000°, Azm126.0000°; P Plg38.0000°, Azm227.0000°;*

JMA Felt II J1.

*NEIC **01** 18:23:06.3±0.1, 42°.78N×142°.75E, mb4.5/145 Error ellipse: s-maj=3.5km s-min=2.4km az=149.0*

ISC 01 18:23:05.3±0.5, **42°.82N**±0°.03×**142°.83E**±0°.03, **h130**^{km}±4^{km}, **n370**, σ**1**^{s}.**31**/417, **mb4.5**/191, **17C-16D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JBT2	**Biratori 2**	**0.34**	**264**	⇑P	**Pn**	**18 23 23.4**	**-0.2**
JBT2				*e*S	**Sn**	**18 23 37.0**	**-0.5**
JFR	**Furan**	**0.39**	**334**	⇓P	**Pn**	**18 23 23.6**	**-0.2**
JFR				*e*S	**Sn**	**18 23 37.3**	**-0.6**
JCH	**Churui**	**0.44**	**117**	⇑P	**Pn**	**18 23 23.3**	**-0.8**
JCH				*e*S	**Sn**	**18 23 36.5**	**-1.7**
JNBK	**Urakawa-nobuka**	**0.54**	**186**	⇑P	**Pn**	**18 23 24.7**	**+0.1**
JIAM	**Iburiatsuma**	**0.70**	**254**	P	**Pn**	**18 23 26.4**	**+0.8**
JOB	**Onbets**	**0.74**	**83**	⇓P	**Pn**	**18 23 26.1**	**+0.1**
JOB				*e*S	**Sn**	**18 23 41.3**	**-0.4**
JAB	**Ashibetsu**	**0.82**	**327**	⇓P	**Pn**	**18 23 26.9**	**+0.3**
JAB				*e*S	**Sn**	**18 23 43.0**	**+0.2**
ERM	**Erimo**	**0.83**	**163**	*e*Pn	**Pn**	**18 23 26.6**	**-0.2**
ERM	**Erimo**	**0.83**	**163**	*c i*PN	**Pn**	**18 23 26.5**	**-0.2**
JEM	**Erimo**	**0.83**	**163**	⇑P	**Pn**	**18 23 26.5**	**-0.2**
JAR	**Ashorobuto**	**0.84**	**55**	⇓P	**Pn**	**18 23 26.6**	**-0.2**
JAR				*e*S	**Sn**	**18 23 42.7**	**-0.4**
JEW	**Eniwo**	**1.01**	**272**	⇑P	**Pn**	**18 23 28.1**	**-0.2**
JEW				*e*S	**Sn**	**18 23 45.0**	**-0.8**
JKK2	**Kamakawa 2**	**1.06**	**357**	⇓P	**Pn**	**18 23 29.4**	**+0.6**
JHR	**Hokuryu**	**1.23**	**319**	⇓P	**Pn**	**18 23 30.9**	**+0.5**
JHR				*e*S	**Sn**	**18 23 50.1**	**+0.5**
ASAJ	**Asahikawa**	**1.31**	**353**	P	**Pn**	**18 23 32.4**	**+1.1**
	234nm,0.3s,baz=211,slow=14,SNR=4858						
ASAJ				S	**Sn**	**18 23 52.5**	**+1.4**
	56nm,0.3s,baz=29,slow=31,SNR=11						
JAK	**Akkeshi**	**1.38**	**82**	⇓P	**Pn**	**18 23 31.5**	**-0.6**
JAK				*e*S	**Sn**	**18 23 51.0**	**-1.5**
JTKR	**Abashiri--Toko**	**1.40**	**34**	⇓P	**Pn**	**18 23 32.7**	**+0.5**
JTKR				*e*S	**Sn**	**18 23 53.2**	**+0.4**
JKB	**Kayabe**	**1.62**	**236**	⇑P	**Pn**	**18 23 33.4**	**-1.3**
JKB				*e*S	**Sn**	**18 23 54.8**	**-2.4**
JSK	**Shakotan**	**1.81**	**288**	⇑P	**Pn**	**18 23 36.6**	**-0.3**
JSK				*e*S	**Sn**	**18 24 00.2**	**-0.8**
JYG	**Yagishiri**	**1.91**	**328**	⇓P	**Pn**	**18 23 38.7**	**+0.6**
JYG				*e*S	**Sn**	**18 24 04.1**	**+0.9**
JOT	**Ohata**	**1.95**	**223**	⇑P	**Pn**	**18 23 37.0**	**-1.6**
JOT				*e*S	**Sn**	**18 24 01.0**	**-3.2**
JRA	**Rausu**	**2.01**	**55**	⇓P	**Pn**	**18 23 40.1**	**+0.7**
JRA				*e*S	**Sn**	**18 24 07.0**	**+1.5**
GLVR	**Golovnino**	**2.17**	**64**	*c i*PN	**Pn**	**18 23 42.0**	**+0.7**
GLVR				*i* S	**Sn**	**18 24 09.3**	**+0.4**
GLVR				pmax	pmax		
	comp=Z,284nm,0.5s						
GLVR				smax	smax		
	comp=N,947nm,0.3s						
GLVR				smax	smax		
	comp=E,1μm,0.7s						
GRPR	**Tuman**	**2.45**	**60**	⇑*i*PN	**Pn**	**18 23 45.6**	**+0.8**
GRPR				*e*S	**Sn**	**18 24 15.8**	**+0.7**
GRPR				pmax	pmax		
	comp=Z,166nm,0.4s						
GRPR				smax	smax		
	comp=N,2μm,0.5s						
GRPR				smax	smax		
	comp=E,471nm,0.3s						
LAGR	**Lagunnoye**	**2.48**	**59**	⇑*i*PN	**Pn**	**18 23 46.2**	**+1.0**
LAGR				*i* S	**Sn**	**18 24 16.7**	**+0.7**
LAGR				pmax	pmax		
	comp=Z,342nm,0.5s						
LAGR				smax	smax		
	comp=N,995nm,0.5s						
LAGR				smax	smax		
	comp=E,2μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.52**	**60**	*d i*PN	**Pn**	**18 23 46.7**	**+1.0**
YUK				*i* S	**Sn**	**18 24 17.5**	**+0.7**
YUK				pmax	pmax		
	comp=E,140nm,0.5s						
YUK				pmax	pmax		
	comp=Z,189nm,0.5s						
YUK				pmax	pmax		
	comp=N,140nm,0.4s						
YUK				smax	smax		
	comp=N,1μm,0.4s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
SHO	**Shikotan**	**3.10**	**69**	*d i*PN	**Pn**	**18 23 52.8**	**-0.4**
SHO				*i* S	**Sn**	**18 24 27.0**	**-3.2**
SHO				pmax	pmax		
	comp=Z,95nm,0.5s						
SHO				pmax	pmax		
	comp=N,24nm,0.2s						
SHO				pmax	pmax		
	comp=E,42nm,0.2s						
SHO				smax	smax		
	comp=N,1μm,0.4s						
SHO				smax	smax		
	comp=E,1μm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.14**	**359**	*e*Pn	**Pn**	**18 24 08.5**	**+1.6**
YSS				*e*Sn	**Sn**	**18 24 56.6**	**+2.0**
YSS	**Yuzh-Sakhalins**	**4.14**	**359**	⇓*i*PN	**Pn**	**18 24 08.4**	**+1.6**
YSS				*i* S	**Sn**	**18 24 56.1**	**+1.5**
YSS				pmax	pmax		
	comp=N,80nm,1.0s						
YSS				pmax	pmax		
	comp=Z,80nm,1.0s						
YSS				smax	smax		
	comp=N,700nm,2.7s						
YSS				smax	smax		
	comp=E,700nm,3.9s						
YSS				smax	smax		
	comp=N,210nm,1.2s						
YSS				smax	smax		
	comp=E,160nm,1.1s						
KUR	**Kuril'sk**	**4.36**	**55**	⇑*i*PN	**Pn**	**18 24 11.3**	**+1.5**
KUR				*i* S	**Sn**	**18 25 01.4**	**+1.5**
KUR				pmax	pmax		
	comp=Z,29nm,0.3s						
KUR				pmax	pmax		
	comp=N,7.0nm,0.2s						
KUR				pmax	pmax		
	comp=E,9.0nm,0.2s						
KUR				smax	smax		
	comp=N,46nm,0.3s						
KUR				smax	smax		
	comp=E,136nm,0.4s						
TEY	**Ternei**	**5.01**	**298**	*e*PN	Pn	18 24 31.2	+13
MJB9	**Matsu-Tunnel**	**7.20**	**211**	*e*Pn	**Pn**	**18 24 46.7**	**-1.4**
MAJO	**Matsushiro**	**7.21**	**211**	*e*Pn	**Pn**	**18 24 46.2**	**-1.8**
MAJO	**Matsushiro**	**7.21**	**211**	*e*PN	**Pn**	**18 24 46.3**	**-1.8**
MAT	**Matsushiro**	**7.21**	**211**	P	**Pn**	**18 24 46.6**	**-1.4**
MAT				*e*S	**Sn**	**18 26 03.9**	**-4.5**
MJAR	**Matsushiro Arr**	**7.21**	**211**	P	**Pn**	**18 24 46.8**	**-1.3**
	comp=E,0.4nm,0.3s,baz=31,slow=10,SNR=27						
USA0B	**Ussuriysk Arra**	**8.00**	**284**	*e*Pn	Pn	18 24 54.5	-4.2
USRK	**Ussuriysk Ar.**	**8.00**	**284**	P	**Pn**	**18 24 56.2**	**-2.4**
	comp=E,0.2nm,0.3s,baz=104,slow=24,SNR=2.7						
TYV	**Tymovskoe**	**8.05**	**359**	*e*PN	**Pn**	**18 24 59.9**	**+0.6**
TYV				*e*S	**Sn**	**18 26 32.3**	**+3.7**
TYV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TYV				smax	smax		
	comp=E,4.0nm,1.1s						
INU	**Inuyama**	**8.71**	**213**	*e*Pn	**Pn**	**18 25 07.3**	**-1.0**
KLR	**Kul'dur**	**10.02**	**314**	P	**Pn**	**18 25 25.9**	**+0.1**
	comp=E,0.1nm,0.3s,baz=122,slow=12,SNR=6.0						
NKL	**Nikolayevsk**	**10.44**	**353**	*e*PN	**Pn**	**18 25 32.5**	**+1.2**
SKR	**Severo-Kuril's**	**12.03**	**45**	*e*PN	**Pn**	**18 25 50.9**	**-1.4**
CN2	**Changchun**	**12.70**	**280**	*e*P	**Pn**	**18 26 03.2**	**+2.0**
JNU	**Nakatsue**	**13.50**	**228**	*e*Pn	**Pn**	**18 26 11.0**	**-0.5**
JNU	**Nakatsue**	**13.50**	**228**	LR	LR	18 30 30.0	
	comp=E,42nm,20.0s,baz=112,slow=33						
PEA0B	**Petropavlovsk-**	**14.30**	**39**	*e*Pn	**Pn**	**18 26 19.4**	**-2.1**
PETK	**Petropavlovsk-**	**14.30**	**39**	*e*Pn	**Pn**	**18 26 19.1**	**-2.4**
PETK	**Petropavlovsk-**	**14.30**	**39**	*e*P	**Pn**	**18 26 19.1**	**-2.4**
PETK	**Petropavlovsk-**	**14.30**	**39**	P	**Pn**	**18 26 18.9**	**-2.6**
	comp=E,0.8nm,0.3s,baz=217,slow=11,SNR=22						
PEA1	**Petropavlovsk-**	**14.30**	**39**	*e*Pn	**Pn**	**18 26 18.9**	**-2.6**
PET	**Petropavlovsk**	**14.69**	**40**	*e*Pn	**Pn**	**18 26 22.8**	**-3.7**
PET	**Petropavlovsk**	**14.69**	**40**	⇓*i*P	**Pn**	**18 26 22.8**	**-3.7**
PET				pmax	pmax		
	comp=Z,29nm,0.4s						
ZEA	**Zeya**	**15.03**	**322**	*e*P	**P**	**18 26 32.6**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MA2	**Magadan**	**17.48**	**14**	*e*P	**P**	**18 27 00.3**	**+0.4**
	comp=Z,28nm,1.0s						
MA2	**Magadan**	**17.48**	**14**	*ce*P	**P**	**18 26 58.5**	**-1.4**
MA2				pmax	pmax		
	comp=Z,50nm,1.7s						
MA2	**Magadan**	**17.48**	**14**	P	**P**	**18 26 59.8**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=197,slow=9.9,SNR=22						
YAK	**Yakutsk**	**20.77**	**342**	*e*P	**P**	**18 27 32.1**	**-3.4**
YAK				*e*		18 28 11.5	
YAK				*e*S	**S**	**18 31 12.2**	**-7.7**
YAK				*e*		18 38 51.9	
YAK				pmax	pmax		
	comp=Z,200nm,0.9s						
YAK				pmax	pmax		
	comp=E,25nm,0.9s						
YAK				pmax	pmax		
	comp=N,50nm,0.9s						
YAK				pmax	pmax		
	comp=Z,787nm,5.1s						
YAK				pmax	pmax		
	comp=E,930nm,5.3s						
YAK				pmax	pmax		
	comp=N,341nm,4.7s						
YAK				smax	smax		
	comp=N,388nm,2.7s						
YAK				smax	smax		
	comp=E,482nm,3.5s						
SEY	**Seymchan**	**20.92**	**12**	*e*P	**P**	**18 27 35.4**	**-1.7**
SEY	**Seymchan**	**20.92**	**12**	P	**P**	**18 27 35.6**	**-1.5**
	comp=E,9.8nm,0.5s,baz=188,slow=8.7,SNR=89						
NJ2	**Nanjing**	**21.79**	**248**	*e*P	**P**	**18 27 47.6**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**23.31**	**276**	*e*P	**P**	**18 28 01.1**	**-0.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.7s						
SONA1	**Songino Array**	**25.93**	**294**	*e*P	**P**	**18 28 26.2**	**+0.9**
SONA0	**Songino Array**	**25.94**	**294**	*e*P	**P**	**18 28 26.4**	**+1.0**
SONM	**Songino Array**	**25.94**	**294**	P	**P**	**18 28 26.4**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=78,slow=8.7,SNR=14						
TPUB	**Ta-pu**	**26.78**	**230**	*e*P	**P**	**18 28 35.2**	**+2.2**
	comp=Z,27nm,1.3s						
TLY	**Talaya**	**27.75**	**302**	*i* P	**P**	**18 28 40.4**	**-1.0**
XAN	**Xi'an**	**27.82**	**263**	P	**P**	**18 28 42.5**	**+0.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,110nm,5.7s						
BILL	**Bilibino**	**28.19**	**18**	*e*P	**P**	**18 28 45.0**	**-0.2**
	comp=Z,12nm,1.9s						
BILL	**Bilibino**	**28.19**	**18**	*i* P	**P**	**18 28 43.5**	**-1.6**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KIWB	**Kanaga Island**	**28.27**	**57**	*e*P	**P**	**18 28 46.7**	**+0.6**
ADK	**Adak**	**28.57**	**57**	*e*P	**P**	**18 28 48.6**	**0.0**
	comp=Z,74nm,1.2s						
ADK	**Adak**	**28.57**	**57**	*e*P	**P**	**18 28 48.6**	**0.0**
ADK				pmax	pmax		
	comp=Z,74nm,1.2s						
ENH	**Enshi**	**29.37**	**256**	*e*P	**P**	**18 28 56.3**	**+0.2**
	comp=Z,9.5nm,1.0s						
TIXI	**Tiksi**	**29.72**	**351**	*i* P	**P**	**18 28 55.7**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TIXI	**Tiksi**	**29.72**	**351**	P	**P**	**18 28 55.9**	**-2.7**
	comp=Z,0.9nm,0.5s,baz=135,slow=4.1,SNR=3.9						
LZH	**Lanzhou**	**30.64**	**271**	*e*P	**P**	**18 29 07.8**	**+0.5**
LZH				pP	pP	18 29 24.0	-11
LZH				sP	sP	18 29 36.7	-14
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
H11N2	**WAKE ISLAND Hy**	**30.67**	**131**	T	T	19 00 53.8	
	baz=330,slow=77,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**30.68**	**131**	T	T	19 00 52.2	
	baz=330,slow=77,SNR=47						
H11N3	**WAKE ISLAND Hy**	**30.68**	**131**	T	T	19 00 51.1	
	baz=330,slow=77,SNR=31						
H11S1	**WAKE ISLAND Hy**	**31.55**	**133**	T	T	19 01 58.6	
	baz=328,slow=76,SNR=45						
H11S3	**WAKE ISLAND Hy**	**31.55**	**133**	T	T	19 02 03.1	
	baz=328,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	**31.57**	**133**	T	T	19 02 07.6	

baz=328,slow=76,SNR=38
GTA Gaotai 32.33 279 eP P 18 29 24.6 +2.5
GTA pP pP 18 29 28.8 -21
GTA sP sP 18 29 32.2 -33
GTA pmax pmax
comp=Z,2.0nm,0.9s
GYA Guiyang 33.63 253 eP P 18 29 35.1 +1.6
GYA pmax pmax
comp=Z,10.0nm,0.7s
ANM Nome 36.17 35 eP P 18 29 55.2 +0.5
comp=Z,9.1nm,1.6s
ANM Nome 36.17 35 eP P 18 29 55.2 +0.5
ANM pmax pmax
comp=Z,9.0nm,1.6s
KMI Kunming 37.23 255 P P 18 30 05.3 +0.9
KMI pmax pmax
comp=Z,14nm,1.1s
DGZ Jazzator, Alta 38.16 300 i P P 18 30 10.5 -1.4
DGZ pmax pmax
comp=Z,2.0nm,0.9s
ZAA0 Zalesovo Array 39.05 307 eP P 18 30 18.9 -0.1
comp=Z,3.6nm,0.7s
ZAA1 Zalesovo Array 39.05 307 eP P 18 30 19.1 0.0
ZAA1 ePcP PcP 18 32 26.2 -0.1
ZAA1 eScP ScP 18 36 02.5 +0.2
ZALV Zalesovo Beam 39.05 307 eP P 18 30 19.8 +0.7
ZALV PcP PcP 18 32 26.2 -0.1
ZALV ScP ScP 18 36 02.5 +0.2
ZALV Zalesovo Beam 39.05 307 i P P 18 30 19.7 +0.7
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV Zalesovo Beam 39.05 307 P P 18 30 19.1 0.0
comp=Z,1.9nm,0.3s,baz=86,slow=7.8,SNR=18
ZALV PcP PcP 18 32 26.2 -0.1
comp=Z,1.0nm,0.5s,baz=71,slow=2.9,SNR=4.9
ZALV ScP ScP 18 36 02.6 +0.2
comp=Z,0.6nm,0.5s,baz=46,slow=6.2,SNR=3.5
CHGN Chignik 39.20 49 eP P 18 30 21.7 +1.5
comp=Z,114nm,1.0s
WMQ Urumqi 39.49 291 eP P 18 30 24.2 +1.2
KWAJ Kwajalein Atol 40.25 140 eP P 18 30 31.0 +1.7
comp=Z,195nm,0.9s
KWAJ Kwajalein Atol 40.25 140 eP P 18 30 31.0 +1.7
KWAJ pmax pmax
comp=Z,195nm,0.9s
SVW2 Sparrevohn 40.36 41 eP P 18 30 31.1 +1.3
comp=Z,40nm,0.6s
SVW2 eS S 18 36 26.4 -1.3
IM3 Indian Mountai 41.18 34 eP P 18 30 36.8 +0.3
IM3 ePcP PcP 18 32 34.2 +1.2
RSO Redoubt South 41.79 42 eP P 18 30 42.6 +0.9
PPLA Purkeypile 41.88 38 eP P 18 30 44.4 +1.9
comp=Z,52nm,1.9s
OHAK Old Harbor 41.89 47 eP P 18 30 42.2 -0.1
comp=Z,307nm,1.9s
CAST Castle Rocks 41.91 38 eP P 18 30 44.1 +1.6
comp=Z,9.0nm,0.8s
KDAK Kodiak Island 42.19 46 eP P 18 30 44.6 -0.1
comp=Z,301nm,2.0s
KDAK Kodiak Island 42.19 46 i P P 18 30 44.7 0.0
KDAK Kodiak Island 42.19 46 P P 18 30 43.1 -1.6
comp=Z,7.5nm,0.5s,baz=280,slow=3.4,SNR=11
MK31 Makanchi Array 42.21 297 eP P 18 30 45.5 +0.4
comp=Z,1.9nm,0.8s
MK32 Makanchi Array 42.21 297 eP P 18 30 45.5 +0.3
MK32 ePcP PcP 18 32 36.8 0.0
MK32 eScP ScP 18 36 14.9 -0.2
MKAR Makanchi Array 42.21 297 eP P 18 30 45.5 +0.4
comp=Z,19nm,0.5s
MKAR PcP PcP 18 32 36.8 0.0
MKAR ScP ScP 18 36 14.9 -0.2
MKAR Makanchi Array 42.21 297 P P 18 30 45.5 +0.4
comp=Z,1.6nm,0.6s,baz=83,slow=9.1,SNR=16
MKAR PcP PcP 18 32 36.7 0.0
comp=Z,0.3nm,0.6s,baz=85,slow=3.6,SNR=2.2
MKAR ScP ScP 18 36 14.9 -0.2
comp=Z,0.2nm,0.6s,baz=62,slow=5.7,SNR=2.5
MK01 Makanchi Array 42.21 297 eP P 18 30 45.4 +0.3
BPAW Bear Paw Mtn. 42.37 37 eP P 18 30 47.0 +0.8
comp=Z,7.2nm,0.8s
MAKZ Makanchi 42.41 297 eP P 18 30 47.0 +0.3
comp=Z,2.9nm,1.0s
MAKZ Makanchi 42.41 297 eP P 18 30 47.0 +0.3
MAKZ pmax pmax
comp=Z,3.0nm,1.0s
MLY Manley 42.44 35 eP P 18 30 47.9 +1.2
comp=Z,2.7nm,0.8s
MLY ePcP PcP 18 32 37.6 +0.4
SUA Susitna One 42.67 40 eP P 18 30 49.0 +0.2
comp=Z,6.5nm,0.8s
SUA ePP PcP 18 32 38.5 +0.4
TRF Thorofare Moun 42.71 38 eP P 18 30 50.0 +0.8
comp=Z,50nm,2.0s
TRF ePP PcP 18 32 38.7 +0.4
BRLK Bradley Lake 42.79 43 eP P 18 30 50.0 +0.3
comp=Z,135nm,1.9s
BWN Browne 43.03 36 eP P 18 30 53.1 +1.7
comp=Z,17nm,0.7s
RC01 Rabbit Creek A 43.19 41 eP P 18 30 53.0 +0.2
comp=Z,54nm,2.0s
MCK McKinley 43.29 37 eP P 18 30 54.4 +0.8
comp=Z,9.2nm,0.8s
MCK ePcP PcP 18 32 40.7 +0.6
RND Reindeer 43.36 38 eP P 18 30 54.4 +0.2
comp=Z,8.0nm,0.8s
RND ePP PcP 18 32 40.8 +0.4
RND Reindeer 43.36 38 eP P 18 30 54.4 +0.2
RND e 18 32 40.8
RND pmax pmax
comp=Z,8.0nm,0.8s
KURK Kurchatov 43.43 304 eP P 18 30 55.1 +0.2
comp=Z,6.4nm,0.8s
KURK Kurchatov 43.43 304c iP P 18 30 52.8 -2.0
KURK pmax pmax
comp=Z,5.0nm,0.8s
SEW Seward 43.46 42 eP P 18 30 54.1 -0.8
comp=Z,111nm,1.8s
GHO Glory Hole Cre 43.50 40 eP P 18 30 55.9 +0.5
comp=Z,14nm,0.8s
GHO ePP PcP 18 32 43.2 +2.3
MDM Murphy Dome 43.51 35 eP P 18 30 55.9 +0.6
comp=Z,8.7nm,0.7s
WRH Wood River Hil 43.60 36 eP P 18 30 56.5 +0.5
comp=Z,29nm,1.9s
WRH ePP PP 18 32 39.8 0.0
COLA College 43.67 35 eP P 18 30 57.8 +1.3
comp=Z,18nm,0.7s
COLA College 43.67 35 i P P 18 30 54.9 -1.7
COLA pmax pmax
comp=Z,10.0nm,0.8s
KNK Knik Glacier 43.77 40 eP P 18 30 58.1 +0.6
comp=Z,39nm,1.6s
SML Sawmill 43.77 40 eP P 18 30 58.5 +1.0
comp=Z,10nm,0.8s
SML Sawmill 43.77 40 eP P 18 30 58.5 +1.0
SML pmax pmax
comp=Z,10.0nm,0.8s
CHTO Chiang Mai 43.99 251 eP P 18 31 00.6 +0.8
comp=Z,16nm,2.0s
DHY Denali Highway 44.06 38 eP P 18 31 00.4 +0.5
comp=Z,10nm,0.7s
DHY ePcP PcP 18 32 43.7 +0.8
IL1 Eielson Array 44.09 35 eP P 18 31 00.5 +0.5
IL1 ePcP PcP 18 32 41.5 -1.3
ILAR Eielson Array 44.09 35 P P 18 31 00.2 +0.2
comp=Z,9.1nm,0.9s,baz=257,slow=5.5,SNR=103
ILB Eielson Array 44.09 35 eP P 18 31 00.4 +0.4
comp=Z,7.9nm,0.6s
HDA Harding Lake 44.10 36 eP P 18 31 00.1 +0.1
comp=Z,10nm,0.5s
CMAR Chiang Mai Arr 44.23 251 P P 18 31 02.5 +0.9
comp=Z,0.5nm,0.5s,baz=45,slow=6.8,SNR=6.3
SCM Sheep Creek Mo 44.24 40 eP P 18 31 02.0 +0.7
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 44.24 40 eP P 18 31 02.0 +0.7
SCM pmax pmax
comp=Z,14nm,0.8s
GLI Glacier Island 44.50 41 eP P 18 31 03.5 +0.2
comp=Z,81nm,2.0s
PRP Porcupine Dome 44.59 34 eP P 18 31 04.6 +0.5
comp=Z,11nm,0.7s
FYU Fort Yukon 44.61 33 eP P 18 31 05.3 +1.3
comp=Z,37nm,1.8s
SIJI Sorong 44.72 197 P P 18 31 05.8 +0.4
comp=Z,12nm,0.7s,baz=11,slow=13,SNR=8.4
KLU Klutina 44.96 40 eP P 18 31 08.1 +1.1

comp=Z,9.7nm,0.6s
DIV Divide 45.09 41 eP P 18 31 08.7 +0.6
comp=Z,30nm,1.3s
DIV ePP PP 18 32 51.5 -4.2
RIDG Independ'e Rid 45.10 37 eP P 18 31 07.9 -0.1
comp=Z,11nm,1.1s
RIDG epP pP 18 31 38.0 +0.1
RIDG ePcP PcP 18 32 46.0 -0.4
MID Middleton Isla 45.13 43 eP P 18 31 10.3 +2.1
comp=Z,306nm,1.1s
MID Middleton Isla 45.13 43 eP P 18 31 10.3 +2.1
MID pmax pmax
comp=Z,306nm,1.1s
HARP HAARP 45.16 39 eP P 18 31 09.9 +1.4
comp=Z,20nm,0.7s
EYAK Cordova Ski Ar 45.21 41 eP P 18 31 10.3 +1.5
comp=Z,142nm,1.9s
SCRK Sand Creek 45.44 36 eP P 18 31 11.0 +0.2
comp=Z,16nm,0.5s
DOT Dot Lake 45.46 37 eP P 18 31 10.7 -0.2
comp=Z,6.1nm,0.6s
FAKI Fak Fak 46.52 195 eP P 18 31 19.7 +0.1
comp=Z,88nm,1.4s
KDJ Kajisay 47.29 293 eP P 18 31 26.6 +0.9
comp=Z,8.1nm,1.7s
KDJ Kajisay 47.29 293 eP P 18 31 26.6 +0.9
KDJ pmax pmax
comp=Z,8.0nm,1.7s
DAWY Dawson 47.42 36 eP P 18 31 26.3 +0.2
comp=Z,9.9nm,1.6s
BRVK Borovoye 47.69 309 eP P 18 31 29.0 +0.7
comp=Z,10nm,1.5s
BRVK Borovoye 47.69 309 i P P 18 31 26.5 -1.8
BRVK pmax pmax
comp=Z,3.0nm,0.9s
JIRN Jiri 47.81 271 eP P 18 31 33.0 +3.0
comp=Z,4.7nm,0.3s
GUN Gumba 47.90 271 eP P 18 31 32.9 +2.2
comp=Z,6.3nm,0.3s
YKU2 Yakutat 48.41 42 eP P 18 31 32.2 -1.5
comp=Z,857nm,0.9s
PKI Pulchoki 48.43 271 eP P 18 31 39.0 +4.2
comp=Z,5.4nm,0.7s
PKIN Phulchoki 48.44 271 eP P 18 31 39.0 +4.2
comp=Z,1.6nm,0.3s
DMN Daman 48.63 271 eP P 18 31 41.4 +5.2
comp=Z,3.7nm,0.5s
INK Inuvik 48.78 29 eP P 18 31 36.8 +0.4
comp=Z,6.3nm,0.8s
INK Inuvik 48.78 29 eP P 18 31 36.8 +0.4
INK pmax pmax
comp=Z,6.0nm,0.8s
INK Inuvik 48.78 29 P P 18 31 37.0 +0.6
comp=Z,4.2nm,0.3s,baz=286,slow=4.7,SNR=32
AAK Ala-Archa 48.89 294 eP P 18 31 37.8 -0.1
comp=Z,5.8nm,1.8s
AAK Ala-Archa 48.89 294 eP P 18 31 37.8 -0.1
AAK pmax pmax
comp=Z,6.0nm,1.8s
HYT Haines Junctio 49.08 40 eP P 18 31 41.3 +2.3
comp=Z,22nm,0.7s
DANN Dangsing 49.21 273 eP P 18 31 45.2 +4.5
comp=Z,16nm,0.6s
KSH Kashi 49.24 290 P P 18 31 45.2 +4.6
KSH pP pP 18 32 15.4 +4.8
KSH pmax pmax
comp=Z,180nm,5.2s
TARA Tarawa 49.28 139 eP P 18 31 41.0 +0.1
comp=Z,706nm,2.0s
PYUN Piuthan 49.92 273 eP P 18 31 52.2 +6.3
comp=Z,4.1nm,0.5s
WHY Whitehorse 50.36 39 eP P 18 31 50.3 +1.6
comp=Z,24nm,1.8s
WHY ePcP PcP 18 33 05.9 +0.6
KSM Kuching 50.39 224 eP P 18 31 49.6 +0.3
comp=Z,45nm,1.5s
ARSB Arslanbob 50.48 294 eP P 18 31 50.9 +0.9
comp=Z,9.1nm,1.4s
KK31 Karatay Array 51.34 297 eP P 18 31 56.3 +0.1
KK31 Karatay Array 51.34 297 eP P 18 31 56.3 +0.1
KKAR Karatay Array 51.34 297 eP P 18 31 56.3 +0.2
KKAR Karatay Array 51.34 297 eP P 18 31 56.3 +0.2
JIS Juneau Island 51.41 42 eP P 18 31 56.7 +0.3
comp=Z,41nm,1.5s
ARU Arti 52.85 316 eP P 18 32 07.2 +0.1
comp=Z,4.6nm,0.7s
ARU Arti 52.85 316c iP P 18 32 04.2 -2.9
ARU *PP pP 18 32 37.2 -0.4
ARU 18 34 03.6
ARU S S 18 39 22.2 -3.3
ARU SS SS 18 43 00.6 -4.7
ARU pmax pmax
comp=Z,4.0nm,0.7s
GAR Garm 53.37 292 eP P 18 32 11.2 -0.1
comp=Z,20nm,1.8s
GAR Garm 53.37 292 eP P 18 32 11.2 -0.1
GAR pmax pmax
comp=Z,20nm,1.8s
CHGR Chuyangaron 54.32 292 eP P 18 32 18.5 +0.3
comp=Z,5.8nm,0.6s
SPA0 Spitsbergen Ar 55.08 348 eP P 18 32 23.1 +0.1
ABKAR Akbulak array 55.16 308 eP P 18 32 24.5 +0.5
PUH Pauahi 56.64 94 eP P 18 32 37.5 +2.5
comp=Z,337nm,1.6s
RES Resolute Bay 56.74 16 eP P 18 32 34.7 -0.1
comp=Z,11nm,0.6s
RES Resolute Bay 56.74 16 eP P 18 32 34.7 -0.1
RES pmax pmax
comp=Z,11nm,0.6s
YKW3 Yellowknife Ar 58.26 32 eP P 18 32 46.3 +0.7
comp=Z,3.5nm,0.7s
YKA Yellowknife Ar 58.30 32 P P 18 32 46.1 +0.2
comp=Z,1.4nm,0.5s,baz=305,slow=6.6,SNR=37
YKB5 Yellowknife Ar 58.30 32 eP P 18 32 45.4 -0.5
KEV Kevo 58.45 338 eP P 18 32 46.7 -0.1
comp=Z,74nm,1.6s
KEV Kevo 58.45 338 eP P 18 32 46.7 -0.1
KEV pmax pmax
comp=Z,74nm,1.6s
ARA0 ARCESS Array S 58.99 339 eP P 18 32 50.6 0.0
ARCES ARCESS Array B 58.99 339 eP P 18 32 50.5 -0.1
ARCES ARCESS Array B 58.99 339 P P 18 32 50.6 0.0
comp=Z,1.0nm,0.5s,baz=45,slow=8.4,SNR=11
ARE0 ARCESS Array S 58.99 339 eP P 18 32 50.5 -0.2
comp=Z,6.0nm,1.9s
TULEG Thule 59.23 8 eP P 18 32 51.6 -0.5
comp=Z,11nm,0.9s
GEYT Alibeck 62.09 297 P P 18 33 11.5 -0.7
comp=Z,1.2nm,0.4s,baz=75,slow=6.3,SNR=4.6
CTA Charters Tower 62.67 176 P P 18 33 15.5 -0.5
comp=Z,2.3nm,1.1s,baz=346,slow=4.2,SNR=3.0
WB2 Warramunga Arr 62.93 189 eP P 18 33 16.7 -1.0
comp=Z,13nm,1.5s
WB2 epP pP 18 33 51.6 +2.5
WR1 Warramunga Arr 62.93 189 eP P 18 33 16.9 -0.9
comp=Z,21nm,1.8s
WRA Warramunga Arr 62.93 189 P P 18 33 16.9 -0.9
comp=Z,1.1nm,0.5s,baz=7.0,slow=6.8,SNR=25
LON Longmire 63.62 50 eP P 18 33 22.4 +0.2
comp=Z,10nm,1.6s
LON Longmire 63.62 50 eP P 18 33 22.4 +0.2
LON pmax pmax
comp=Z,10.0nm,1.6s
FIA1 FINESS Array S 64.23 332 eP P 18 33 25.4 -0.4
FIA0 FINESS Array S 64.23 332 eP P 18 33 25.4 -0.4
FIA0 FINESS Array S 64.23 332 eP P 18 33 25.4 -0.4
FINES FINESS Array B 64.23 332 P P 18 33 25.4 -0.4
comp=Z,6.4nm,0.5s,baz=48,slow=7.7,SNR=64
KEBM Edson Butte 64.39 55 eP P 18 33 28.6 +1.4
comp=Z,65nm,1.3s
H04A Detroit Lake 64.60 52 eP P 18 33 29.7 +1.1
SUMG Summit 64.91 0 eP P 18 33 31.0 +0.4
comp=Z,13nm,0.8s
SUMG Summit 64.91 0 i P P 18 33 31.3 +0.7
comp=Z,39nm,0.9s
SUMG Summit 64.91 0 i P P 18 33 31.3 +0.7
SUMG pmax pmax
comp=Z,39nm,0.9s
C09A Chrisman Ranch 64.95 47 eP P 18 33 31.6 +0.8
comp=Z,6.0nm,0.8s
D08A Wollman Farm, 65.04 48 eP P 18 33 31.9 +0.5
HAWA Hanford 65.10 49 eP P 18 33 32.1 +0.4
comp=Z,6.8nm,1.3s
NEW Newport 65.29 46 eP P 18 33 32.4 -0.6
comp=Z,3.6nm,0.8s
NEW Newport 65.29 46 eP P 18 33 32.4 -0.6

NEW pmax pmax
comp=Z,4.0nm,0.8s
E08A Dider Farm, El 65.30 49 eP P 18 33 33.7 +0.7
comp=Z,5.8nm,0.7s
VSR Storozhevoye 65.34 318 i P P 18 33 29.1 -4.1
VSR pmax pmax
comp=Z,4.0nm,0.8s
HUMO Hull Mountain 65.36 54 eP P 18 33 34.4 +0.9
comp=Z,23nm,2.0s
YBH Yreka Blue Hor 66.03 55 eP P 18 33 39.5 +1.6
comp=Z,17nm,1.8s
YBH Yreka Blue Hor 66.03 55 eP P 18 33 39.5 +1.6
YBH pmax pmax
comp=Z,17nm,1.8s
KMRM Mail Ridge 66.33 57 eP P 18 33 40.7 +0.9
comp=Z,35nm,1.5s
SCO Scoresbysund 66.47 354 eP P 18 33 40.7 +0.6
comp=Z,28nm,1.7s
SCO Scoresbysund 66.47 354 eP P 18 33 40.7 +0.6
SCO pmax pmax
comp=Z,28nm,1.7s
F10A Beach Ranch, E 66.63 48 eP P 18 33 43.6 +2.0
comp=Z,12nm,1.7s
AS01 Alice Springs 66.65 189 eP P 18 33 42.1 +0.3
AS31 Alice Springs 66.66 189 eP P 18 33 43.8 +1.9
comp=Z,1.0nm,1.1s
ASAR Alice Springs 66.66 189 P P 18 33 41.8 -0.1
comp=Z,1.0nm,0.7s,baz=8.5,slow=6.9,SNR=16
KCPM Cahto Peak 66.72 57 eP P 18 33 42.5 +0.1
comp=Z,34nm,1.6s
MBWA Marble Bar 67.12 203 eP P 18 33 44.3 -0.5
comp=Z,25nm,1.5s
BMO Blue Mountains 67.28 49 eP P 18 33 46.5 +0.7
comp=Z,1.6nm,0.7s
BMO Blue Mountains 67.28 49 eP P 18 33 46.5 +0.7
BMO pmax pmax
comp=Z,2.0nm,0.7s
MSO Missoula 67.87 46 eP P 18 33 50.1 +0.6
comp=Z,25nm,2.0s
KIV Kislovodsk 67.99 310 eP P 18 33 50.5 +0.2
comp=Z,8.5nm,0.8s
KIV Kislovodsk 67.99 310 eP P 18 33 48.3 -2.0
KIV pmax pmax
comp=Z,11nm,1.0s
KBZ Khabaz 68.01 310 P P 18 33 51.6 +1.4
comp=Z,1.0nm,0.6s,baz=77,slow=4.7,SNR=7.4
ORV Oroville 68.08 56 eP P 18 33 50.7 -0.1
comp=Z,1.9nm,0.6s
ORV Oroville 68.08 56 eP P 18 33 50.7 -0.1
ORV pmax pmax
comp=Z,2.0nm,0.6s
FCC Fort Churchill 68.37 28 eP P 18 33 52.4 +0.2
comp=Z,24nm,1.8s
FCC Fort Churchill 68.37 28 eP P 18 33 52.4 +0.2
FCC pmax pmax
comp=Z,24nm,1.8s
BEKR Beckworth 68.58 55 eP P 18 33 54.7 +0.6
comp=Z,2.6nm,0.8s
HRY Holter Researc 69.06 45 eP P 18 33 58.0 +1.1
NC405 NORSAR Array S 69.08 337 eP P 18 33 56.5 -0.1
NC303 NORSAR Array S 69.09 337 eP P 18 33 56.2 -0.5
NC204 NORSAR Array S 69.22 337 eP P 18 33 57.4 -0.2
NB201 NORSAR Array S 69.25 337 eP P 18 33 57.5 -0.2
EGMT Eagleton 69.26 43 eP P 18 33 59.1 +1.0
comp=Z,5.0nm,0.8s
NB2 NORSAR Subarra 69.28 337 P P 18 33 57.3 -0.6
comp=Z,1.6nm,0.5s,baz=35,slow=6.5
NB200 NORSAR Array S 69.28 337 eP P 18 33 57.6 -0.3
NOA NORSAR Array B 69.28 337 P P 18 33 57.6 -0.3
comp=Z,2.2nm,0.6s,baz=35,slow=6.2,SNR=12
LRM Limekiln Ridge 69.31 46 eP P 18 33 59.6 +1.0
NBO00 NORSAR Array S 69.42 337 eP P 18 33 58.4 -0.3
PNTR Pine Nut 69.53 55 eP P 18 34 00.7 +0.7
comp=Z,4.1nm,1.0s
NAO01 NORSAR Array S 69.54 337 eP P 18 33 59.2 -0.3
BOZ Bozeman (W) 69.89 46 eP P 18 34 03.2 +1.1
comp=Z,4.4nm,0.7s
BOZ Bozeman (W) 69.89 46 eP P 18 34 03.2 +1.1
BOZ pmax pmax
comp=Z,4.0nm,0.7s
WAKR Walker 69.99 56 eP P 18 34 04.1 +1.3
comp=Z,7.6nm,1.5s
AKASG Malin Array Be 70.41 322 i P P 18 34 04.5 -0.4
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 70.41 322 P P 18 34 04.3 -0.6
comp=Z,0.7nm,0.4s,baz=43,slow=6.1,SNR=8.7
AKBB Malin Array Si 70.41 322 eP P 18 34 04.6 -0.3
comp=Z,14nm,1.6s
AKBB Malin Array Si 70.41 322 eP P 18 34 04.6 -0.3
AKBB pmax pmax
comp=Z,14nm,1.6s
KVN Kaiserville 70.45 55 eP P 18 34 06.9 +1.2
comp=Z,2.8nm,0.7s
KVN Kaiserville 70.45 55 eP P 18 34 06.9 +1.2
KVN pmax pmax
comp=Z,3.0nm,0.7s
YHB Horse Butte 70.68 47 eP P 18 34 07.9 +0.9
comp=Z,5.7nm,0.7s
NV01 Mina Array Sit 70.73 55 eP P 18 34 08.1 +0.7
NVAR Mina Array Bea 70.73 55 P P 18 34 08.2 +0.9
comp=Z,1.7nm,0.6s,baz=295,slow=6.1,SNR=16
NVAR LR LR 19 04 07.1
comp=Z,21nm,19.5s,baz=335,slow=35
GCMT Greycliff 70.79 45 eP P 18 34 08.8 +1.3
NV11 Mina Array Sit 70.81 55 eP P 18 34 08.5 +0.7
comp=Z,1.1nm,1.8s
H17A Grant Village 71.25 47 eP P 18 34 11.4 +1.0
comp=Z,3.7nm,0.8s
FXWY Fox Creek 71.51 47 eP P 18 34 13.0 +1.0
comp=Z,1.8nm,0.8s
MOOW Moose Ponds 71.59 47 eP P 18 34 13.6 +1.2
comp=Z,2.3nm,0.9s
DGMT Dagmar 71.68 40 eP P 18 34 12.8 +0.1
comp=Z,28nm,1.6s
R11A Troy Canyon, C 72.41 54 eP P 18 34 17.3 -0.1
comp=Z,10nm,1.8s
DAC Darwin (Calif) 72.54 57 eP P 18 34 18.8 +0.6
comp=Z,6.8nm,1.7s
DAC Darwin (Calif) 72.54 57 eP P 18 34 18.8 +0.6
DAC pmax pmax
comp=Z,7.0nm,1.7s
DUG Dugway, Tooele 72.81 51 eP P 18 34 20.9 +1.3
comp=Z,2.8nm,0.6s
DUG Dugway, Tooele 72.81 51 eP P 18 34 21.0 +1.3
DUG pmax pmax
comp=Z,3.0nm,0.6s
BW06 Boulder Array 72.89 47 eP P 18 34 20.7 +0.4
comp=Z,16nm,1.9s
PD31 Pinedale Array 72.89 47 eP P 18 34 20.9 +0.6
PDAR Pinedale Array 72.89 47 eP P 18 34 20.7 +0.5
PDAR Pinedale Array 72.89 47 P P 18 34 20.6 +0.4
comp=Z,2.0nm,0.6s,baz=242,slow=1.3,SNR=17
TPNV Topopah Spring 72.92 55 eP P 18 34 21.1 +0.7
comp=Z,3.3nm,0.6s
TPNV Topopah Spring 72.92 55 eP P 18 34 21.2 +0.7
TPNV pmax pmax
comp=Z,3.0nm,0.6s
PSUT Pine Spring 73.31 53 eP P 18 34 23.1 +0.4
comp=Z,3.8nm,0.4s
NLU North Lily Min 73.39 51 eP P 18 34 24.2 +1.0
comp=Z,2.9nm,0.9s
MPU Maple Canyon 73.60 50 eP P 18 34 25.1 +0.7
comp=Z,3.3nm,0.7s
ULM Lac du Bonnet 74.11 35 P P 18 34 26.9 0.0
comp=Z,1.2nm,0.5s,baz=308,slow=5.3,SNR=3.2
MSU Marysvale 74.30 52 eP P 18 34 29.8 +1.2
MSU Marysvale 74.30 52 eP P 18 34 29.8 +1.2
BUR08 Bucovina Ar. S 74.45 322 eP P 18 34 28.8 -0.3
comp=Z,23nm,2.0s
BUR04 Bucovina Ar. S 74.46 322 eP P 18 34 29.4 +0.2
BURAR Bucovina Array 74.46 322⇓iP P 18 34 29.6 +0.5
P17A Butcher Ranch, 74.47 50 eP P 18 34 30.6 +1.2
comp=Z,4.2nm,0.7s
MTPU Mount Pierson 74.61 52 eP P 18 34 31.6 +1.1
comp=Z,3.0nm,0.8s
RSSD Black Hills 74.84 43 eP P 18 34 30.6 -0.9
comp=Z,14nm,1.8s
RSSD Black Hills 74.84 43 eP P 18 34 30.6 -0.9
RSSD pmax pmax
comp=Z,14nm,1.8s
SRU San Rafael Swe 74.84 51 eP P 18 34 32.5 +0.9
comp=Z,7.7nm,1.0s
SRU San Rafael Swe 74.84 51 eP P 18 34 32.5 +0.9
SRU pmax pmax
comp=Z,8.0nm,1.0s

OJC	Ojcow	74.85	326	eP	P	18 34 31.8	+0.6
	comp=Z,27nm,1.9s						
TRPA	Tarpa	75.28	323	⇓iP	P	18 34 34.3	+0.6
BR101	Keskin Array S	75.85	311	eP	P	18 34 37.1	-0.2
BRTR	Keskin Array B	75.85	311	P	P	18 34 37.1	-0.2
	comp=Z,0.6nm,0.8s,baz=343,slow=7.5,SNR=3.0						
PV21	Cone Mtn., Par	76.10	50	eP	P	18 34 40.1	+1.2
	comp=Z,7.6nm,0.7s						
N23A	Red Feather La	76.13	47	eP	P	18 34 41.1	+2.0
	comp=Z,8.8nm,0.9s						
DPC	Dobruska-Polom	76.14	328	eP	P	18 34 41.7	+3.1
DPC	Dobruska-Polom	76.14	328	eP	P	18 34 41.7	+3.1
PV23	Carpenter Ridg	76.15	50	eP	P	18 34 40.2	+1.0
	comp=Z,6.9nm,0.9s						
PV10	Paradox Valley	76.19	50	eP	P	18 34 40.7	+1.3
	comp=Z,18nm,0.8s						
PV14	Lion Creek, Pa	76.20	50	eP	P	18 34 40.3	+0.9
	comp=Z,9.8nm,1.2s						
BR231	Keskin MP Arra	76.24	312	eP	P	18 34 39.4	0.0
PV04	Paradox Valley	76.25	50	eP	P	18 34 39.9	+0.2
	comp=Z,24nm,1.7s						
PV20	West Nyswonger	76.26	50	eP	P	18 34 40.4	+0.7
	comp=Z,7.8nm,0.7s						
PV19	Morning Glory	76.27	50	eP	P	18 34 40.2	+0.4
	comp=Z,5.7nm,0.8s						
PV17	East Wray Mesa	76.30	50	eP	P	18 34 40.6	+0.6
	comp=Z,8.9nm,0.7s						
PV16	Nyswonger Mesa	76.31	50	eP	P	18 34 40.1	+0.2
	comp=Z,20nm,1.7s						
PV11	David Mesa, Pa	76.34	50	eP	P	18 34 41.0	+0.9
	comp=Z,26nm,0.2s						
PV05	Paradox Valley	76.36	51	eP	P	18 34 40.6	+0.2
	comp=Z,7.8nm,0.6s						
PV12	Saucer Basin,	76.37	50	eP	P	18 34 40.5	+0.2
	comp=Z,26nm,1.9s						
PV07	Paradox Valley	76.37	50	eP	P	18 34 40.4	+0.1
	comp=Z,5.5nm,1.1s						
PV03	Paradox Valley	76.38	50	eP	P	18 34 41.6	+1.2
	comp=Z,4.5nm,0.7s						
PV13	Radium Mtn., P	76.47	50	eP	P	18 34 42.3	+1.4
	comp=Z,4.7nm,0.8s						
PV02	Paradox Valley	76.48	50	eP	P	18 34 41.0	0.0
	comp=Z,3.2nm,0.8s						
PV15	Paradox Valley	76.53	50	eP	P	18 34 41.4	+0.1
	comp=Z,20nm,1.7s						
CLL	Collm	76.62	330	i P	P	18 34 41.0	-0.2
	comp=Z,5.0nm,1.0s						
CLL	Collm	76.62	330	i P	P	18 34 41.0	-0.2
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PV01	Paradox Valley	76.62	50	eP	P	18 34 41.7	-0.2
	comp=Z,2.9nm,0.9s						
SMCO	Snowmass	76.78	49	eP	P	18 34 42.9	-0.1
	comp=Z,2.7nm,0.6s						
WUAZ	Wupatki	76.81	54	eP	P	18 34 42.7	-0.1
	comp=Z,2.7nm,0.6s						
Y14A	Wickenburg	76.90	56	eP	P	18 34 43.3	+0.1
	comp=Z,15nm,1.8s						
ISCO	Idaho Springs	77.09	47	eP	P	18 34 44.8	+0.3
	comp=Z,11nm,1.8s						
ISCO	Idaho Springs	77.09	47	eP	P	18 34 44.8	+0.3
ISCO				pmax	pmax		
	comp=Z,11nm,1.8s						
PRU	Pruhonice	77.12	329	eP	P	18 34 44.4	+0.3
PRU	Pruhonice	77.12	329	eP	P	18 34 44.4	+0.3
113A	Mohawk Valley,	77.23	57	eP	P	18 34 44.9	-0.1
	comp=Z,3.8nm,0.9s						
MVCO	Mesa Verde	77.31	51	eP	P	18 34 45.5	-0.1
	comp=Z,16nm,1.6s						
X16A	Lo Mia Camp, P	77.52	55	eP	P	18 34 47.1	+0.3
	comp=Z,5.5nm,1.5s						
EYMN	Ely	77.72	34	eP	P	18 34 47.3	-0.1
	comp=Z,17nm,1.3s						
KHC	Kasperske Hory	78.18	329	eP	P	18 34 50.9	+0.8
	comp=Z,8.0nm,1.8s						
KHC	Kasperske Hory	78.18	329	eP	P	18 34 50.5	+0.5
KHC	Kasperske Hory	78.18	329	eP	P	18 34 50.5	+0.5
GEC2	GERESS Array S	78.37	328	eP	P	18 34 51.0	-0.1
	comp=Z,15nm,1.9s						
GEC2	GERESS Array S	78.37	328	eP	P	18 34 51.0	-0.1
GEC2				pmax	pmax		
	comp=Z,15nm,1.9s						
GERES	GERESS Array B	78.37	328	P	P	18 34 51.0	-0.1
GERES	GERESS Array B	78.37	328	P	P	18 34 51.0	-0.1
	comp=Z,0.1nm,0.3s,baz=39,slow=6.3,SNR=3.8						
GEA0	GERESS Array S	78.37	328	eP	P	18 34 51.3	+0.2
ECSD	EROS Data Cent	78.74	40	eP	P	18 34 53.1	0.0
	comp=Z,4.6nm,0.9s						
NWAO	Narrogin (SRO)	78.94	202	eP	P	18 34 54.8	+0.7
	comp=Z,57nm,1.6s						
NWAO	Narrogin (SRO)	78.94	202	eP	P	18 34 54.8	+0.7
NWAO				pmax	pmax		
	comp=Z,57nm,1.6s						
VTS	Vitosha	79.16	319	eP	P	18 34 56.5	+0.8
	comp=Z,2.3nm,0.8s						
VTS	Vitosha	79.16	319	eP	P	18 34 56.5	+0.8
VTS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DIVS	Divibare	79.51	322	eP	P	18 34 57.7	+0.3
	comp=Z,11nm,1.5s						
T25A	Trinidad	79.65	49	eP	P	18 34 59.3	+0.8
	comp=Z,13nm,1.5s						
ANMO	Albuquerque	80.08	51	i P	P	18 34 59.4	-1.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIR	Tirane	81.71	320	⇑iP	P	18 35 13.1	+4.0
TX31	Lajitas Ar. Si	85.77	53	eP	P	18 35 30.2	+0.1
LTX	Lajitas	85.77	53	eP	P	18 35 30.8	+0.7
LTX	Lajitas	85.77	53	eP	P	18 35 30.8	+0.7
TXAR	Lajitas Array	85.77	53	P	P	18 35 30.8	+0.7
	comp=Z,1.5nm,0.6s,baz=293,slow=3.7,SNR=22						

MAN 01 18:27:26.2,7°.96N×124°.63E,h1^{km},MS3.5,3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.44	100	eP	Pg	18 27 34.2	-0.4
BUKP				eS	Sg	18 27 38.4	-1.8
CGP	Cagayan de Oro	0.50	7	⇑iP	Pg	18 27 36.4	+0.6
CGP				i S	Sg	18 27 43.5	+1.2
DMPH	Davao City--Mi	1.23	135	⇓eP	Pn	18 27 51.7	+1.1
DMPH				eS	Sn	18 28 08.5	+0.6
PAGZ	Pagadian	1.24	265	eP	Pg	18 27 49.7	-0.3
PAGZ				eS	Sn	18 28 07.5	-0.6
BUTP	Butuan	1.40	44	eP	Pg	18 27 53.1	-0.1
BUTP				eS	Sg	18 28 11.3	-0.2
DCPH	Dipolog City	1.41	296	⇑eP	Pg	18 27 53.3	0.0
DCPH				eS	Sn	18 28 14.1	+1.8
SKMP	Bagumbayan, Su	1.43	183	eP	Pn	18 27 50.7	-2.7
SKMP				eS	Sg	18 28 08.6	-3.7
BIPH	Bislig	1.73	82	⇑iP	Pn	18 27 56.2	-1.2
BIPH				i S	Sn	18 28 20.6	+0.4
TBP	Tagbilaran	1.88	336	eP	Pn	18 27 59.1	-0.5
SNPH	Sibulan	1.95	315	⇓eP	Pb	18 28 02.4	-0.1
SNPH				eS	Sg	18 28 29.1	+0.2
IPIL	Ipil	2.05	265	eP	Pn	18 28 02.9	+1.1
IPIL				eS	Sb	18 28 31.1	+0.9
DDMP	Don Marcelino,	2.13	150	eP	Pn	18 28 03.3	+0.3
DDMP				eS	Sb	18 28 31.7	-1.0
MSLP	Maasin	2.17	6	eP	Pn	18 28 03.2	-0.4
MSLP				eS	Sn	18 28 29.6	-1.6
OCLP	Ormoc	3.07	360	eP	Pn	18 28 16.3	+0.3
OCLP				eS	Sn	18 28 55.5	+2.1
GUIM	Jordan	3.33	323	eP	Pn	18 28 20.1	+0.7
GUIM				eS	Sn	18 29 01.9	+2.2
RCP	Roxas	4.03	333	⇓eP	Pn	18 28 30.6	+1.5

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*WEL **01** 18:38:40.7±0.6,34°S±9°×18°0W±2°0,h33^{km},ML5.1/19*

*IDC **01** 18:38:41.2±5.2,33°.73S×179°.97E,h177^{km}±46^{km},mb3.9/2, mb1 3.9/5,mb1mx3.5/35,mbtmp4.3/5,Error ellipse: s-maj=50.0km s-min=43.7km az=69.0*

*ISCJB **01** 18:38:45.4±0.6,33°.87S±0°.03×179°.27E±0°.09,h200^{km}, mb4.5/1,Error ellipse: s-maj=10.9km s-min=3.8km az=0.8*

*NEIC **01** 18:38:46.6±0.9,34°.12S×179°.51E,h217^{km}±10^{km}, mb4.5/10,Error ellipse: s-maj=17.6km s-min=9.0km az=104.0*

ISC 01 18:38:46.3±0.8,33°.97S±0°.05×179°.34E±0°.09,h200^{km},n91, σ2^{s}.23/116,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.68	193	ePn	Pn	18 39 44.3	+0.3
MXZ				eS	Sn	18 40 29.1	-0.3
MXZ	Matakaoa Point	3.68	193	P	Pn	18 39 44.8	+0.8
MXZ				S	Sn	18 40 33.5	+4.0
WMGZ	Waiomatatini S	3.91	191	P	Pn	18 39 47.7	+0.9
WMGZ				S	Sn	18 40 39.0	+4.4
HAZ	Te Kaha	3.98	198	P	Pn	18 39 49.7	+2.0
HAZ				S	Sn	18 40 42.6	+6.4
PKGZ	Pakihiroa	4.04	194	P	Pn	18 39 48.9	+0.4
PKGZ				S	Sn	18 40 41.5	+3.9
PUZ	Puketiti	4.18	192	P	Pn	18 39 50.2	-0.1
PUZ				S	Sn	18 40 44.1	+3.3
RUGZ	Raukumara Rang	4.21	198	P	Pn	18 39 51.5	+0.8
TWGZ	Tauwhareparae	4.34	194	P	Pn	18 39 53.7	+1.5
TWGZ				S	Sn	18 40 48.7	+4.3
OPRZ	Ohinepanea	4.48	210	P	Pn	18 39 57.9	+3.9
MWZ	Matawai	4.59	198	P	Pn	18 39 56.1	+0.7
MWZ				S	Sn	18 40 54.4	+4.3
CNGZ	Carnagh Statio	4.60	191	P	Pn	18 39 56.0	+0.5
TKGZ	Te Karaka	4.62	195	P	Pn	18 39 56.4	+0.7
TKGZ				S	Sn	18 40 54.5	+3.9
TKGZ	Te Karaka	4.62	195	P	Sn	18 40 53.5	+3.0
URZ	Urewera	4.64	202	ePn	Pn	18 39 56.6	+0.5
URZ				eS	Sn	18 40 54.9	+3.8
URZ	Urewera	4.64	202	P	Pn	18 39 57.4	+1.4
	5.6nm,0.3s,baz=269,slow=5.0,SNR=57						
URZ				S	Sn	18 40 54.9	+3.8
	34nm,0.3s,baz=287,slow=23,SNR=15						
URZ	Urewera	4.64	202	P	Pn	18 39 57.5	+1.4
URZ				S	Sn	18 40 55.6	+4.4
KMRZ	Kaimai	4.75	215	P	Pn	18 40 03.5	+6.1
RAGZ	Rawiri	4.78	198	P	Pn	18 40 00.9	+3.0
RAGZ				S	Sn	18 41 00.0	+5.7
TOZ	Tahuroa Road	4.88	219	P	Pn	18 40 05.1	+6.1
RIGZ	Rimuhau	4.89	195	P	Pn	18 40 01.3	+2.0
RIGZ				S	Sn	18 41 00.2	+3.3
RIGZ	Rimuhau	4.89	195	P	Sn	18 40 56.8	-0.2
OUZ	Omahuta	4.90	254	ePn	Pn	18 40 02.0	+2.7
MUGZ	Murupara	4.95	204	P	Pn	18 40 03.5	+3.5
MUGZ				S	Sn	18 41 04.8	+6.5
RTZ	Ruatahuna	5.01	202	P	Pn	18 40 00.9	+0.1
SNGZ	Shannon Statio	5.07	198	P	Pn	18 40 02.0	+0.6
SNGZ				S	Sn	18 41 05.7	+4.9
PRGZ	Paritu Road	5.08	193	P	Pn	18 40 02.2	+0.5
PRGZ				S	Sn	18 41 03.7	+2.5
KNZ	Kokohu	5.22	194	P	Pn	18 40 03.9	+0.6
RAO	Raoul Island	5.25	27	ePn	Pn	18 40 06.7	+2.7
RAHZ	Arahi	5.26	200	P	Pn	18 40 06.1	+2.2
MTHZ	Maungataniwha	5.27	202	P	Pn	18 40 05.9	+1.8
MHGZ	Mahia Peninsul	5.30	192	P	Pn	18 40 04.2	-0.2
NMHZ	Naumai	5.51	201	P	Pn	18 40 08.5	+1.4
ARHZ	Aropaoanui	5.61	199	P	Pn	18 40 09.7	+1.3
BKZ	Black Stump Fm	5.67	203	ePn	Pn	18 40 09.8	+0.6
BKZ				eS	Sn	18 41 12.2	-2.6
BKZ	Black Stump Fm	5.67	203	P	Pn	18 40 10.5	+1.3
HIZ	Hauiti	5.80	217	ePn	Pn	18 40 12.6	+1.7
MCHZ	McNeill Hill	5.86	200	P	Pn	18 40 13.7	+2.1
KWHZ	Kaweka Forest	5.92	202	P	Pn	18 40 14.0	+1.5
CKHZ	Cape Kidnapper	5.96	197	P	Pn	18 40 14.6	+1.7
FWVZ	Far West T-bar	6.09	209	P	Pn	18 40 18.0	+3.2
KAHZ	Kahuranaki	6.14	198	P	Pn	18 40 15.2	-0.1
PXZ	Pawanui	6.37	197	P	Pn	18 40 18.0	-0.1
BFZ	Birch Farm	7.14	199	ePn	Pn	18 40 27.3	-0.9
BFZ				eS	Sn	18 41 49.7	+0.5
DUWZ	D’Urville Isla	8.07	211	P	Pn	18 40 40.8	+0.5
SNZO	South Karori	8.20	205	ePn	Pn	18 40 40.2	-1.7
SNZO				eS	Sn	18 42 12.5	-1.7
BHW	Baring Head	8.22	204	P	Pn	18 40 41.8	-0.5
TCW	Tory Channel	8.27	208	P	Pn	18 40 42.1	-0.7
NNZ	Nelson	8.64	211	P	Pn	18 40 48.1	+0.3
QRZ	Quartz Range	8.73	216	P	Pn	18 40 50.1	+1.2
BSWZ	Blackbirch Sta	8.85	208	P	Pn	18 40 50.6	+0.1
THZ	Tophouse	9.29	211	ePn	Pn	18 40 54.7	-1.6
THZ				eS	Sn	18 42 40.0	-0.3
THZ	Tophouse	9.29	211	P	Pn	18 40 56.4	+0.1
KHZ	Kahutara	9.59	207	ePn	Pn	18 40 58.6	-1.4
KHZ				eS	Sn	18 42 47.5	+0.4
KHZ	Kahutara	9.59	207	P	Pn	18 40 58.9	-1.1
DSZ	Denniston Nort	9.78	215	P	Pn	18 41 04.1	+1.5
LTZ	Lake Taylor	10.40	210	ePn	Pn	18 41 11.5	+1.0
LTZ	Lake Taylor	10.40	210	P	Pn	18 41 09.8	-0.8
INZ	Inchbonnie	10.71	213	P	Pn	18 41 14.5	-0.1
OKCZ	Okains Bay	10.89	205	P	Pn	18 41 16.3	-0.6
OXZ	Oxford	10.94	209	ePn	Pn	18 41 15.6	-1.9
OXZ				eS	Sn	18 43 17.0	-2.5
MQZ	McQueen’s Vall	11.03	206	ePn	Pn	18 41 16.6	-2.0
MQZ				eS	Sn	18 43 18.4	-3.0
AKCZ	Akaroa Harbour	11.08	205	P	Pn	18 41 18.4	-0.9
RPZ	Rata Peaks	11.67	211	ePn	Pn	18 41 25.1	-1.7
RPZ				eS	Sn	18 43 33.1	-3.8
RPZ	Rata Peaks	11.67	211	P	Pn	18 41 26.8	0.0
	0.7nm,0.3s,baz=50,slow=16,SNR=5.6						
RPZ				S	Sn	18 43 34.2	-2.7
	1.2nm,0.3s,baz=128,slow=17,SNR=6.7						
RPZ	Rata Peaks	11.67	211	P	Pn	18 41 26.1	-0.8
FOZ	Fox Glacier	12.09	215	ePn	Pn	18 41 30.9	-1.2
FOZ				eS	Sn	18 43 45.8	-1.0
ODZ	Otahua Downs	12.93	209	ePn	Pn	18 41 42.7	+0.1
WKZ	Wanaka	13.45	213	ePn	Pn	18 41 48.9	-0.3
WHZ	Wether Hill Ro	14.75	213	ePn	Pn	18 42 04.0	-1.3
DCZ	Deep Cove	14.80	216	ePn	Pn	18 42 03.6	-2.3
PINNC	Pines Island,	15.40	314	eP	Pn	18 42 12.9	-0.5
	71nm,1.5s						
DZM	Mont Dzumac	16.42	313	eP	P	18 42 23.7	-1.2
	25nm,1.5s						
DZM	Mont Dzumac	16.42	313	P	P	18 42 23.8	-1.1
	0.1nm,0.3s,baz=129,slow=15,SNR=4.7						
TAU	Tasmania Unive	26.49	241	eP	P	18 44 02.9	-2.2
	140nm,1.9s						
TOO	Toolangi	27.61	253	eP	P	18 44 13.8	-1.3
	81nm,1.9s						
HNR	Honiara	30.23	319	eP	P	18 44 38.2	-0.2
	224nm,0.9s						
KNTN	Kanton	32.14	17	eP	P	18 44 56.0	+0.9
	305nm,1.9s						
CTAO	Charters Tower	32.40	287	eP	P	18 44 59.2	+1.8
	27nm,1.6s						
TARA	Tarawa	35.65	349	eP	P	18 45 23.4	-2.0
	441nm,1.8s						
COEN	Coen	38.31	292	eP	P	18 45 47.5	-0.2
	19nm,1.5s						
AS01	Alice Springs	40.79	272	eP	P	18 46 10.3	+2.1
AS31	Alice Springs	40.83	272	eP	P	18 46 10.5	+2.0
	0.9nm,0.7s						
ASAR	Alice Springs	40.83	272	P	P	18 46 10.1	+1.5
	2.6nm,0.6s,baz=109,slow=7.7,SNR=72						
WC3	Warramunga Arr	42.11	278	eP	P	18 46 20.1	+1.2
	8.8nm,1.2s						
WB2	Warramunga Arr	42.14	278	eP	P	18 46 18.6	-0.6
WR1	Warramunga Arr	42.15	278	eP	P	18 46 20.2	+0.9
	5.3nm,0.6s						
WRA	Warramunga Arr	42.15	278	P	P	18 46 20.2	+0.9
	2.5nm,0.4s,baz=116,slow=8.1,SNR=73						
SBA	Scott Base	44.33	184	eP	P	18 46 33.4	-2.5
	32nm,1.4s						
FITZ	Fitzroy Crossi	50.23	274	eP	P	18 47 24.2	+2.0
	9.2nm,1.4s						
FIA0	FINESS Array S	147.61	336	ePKPdf	PKPdf	18 58 03.0	-0.1
FINES	FINESS Array B	147.61	336	PKPbc	PKPdf	18 58 03.0	-0.1
	0.9nm,0.8s,baz=46,slow=6.0,SNR=4.7						

NNC 01 18:48:31.8±1.7,38°.96N×75°.53E,h0^{km},mb3.5,mpv3.1, 6C-6D,Error ellipse: s-maj=12.9km s-min=6.4km az=160.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.88	304	⇓Pn	Pn	18 49 05.0	-0.5
	11nm,0.3s						
SFK				⇓Sn	Sb	18 49 31.5	+0.1
	30nm,0.4s						
SFK	Sufi-Kurgan	1.88	304	Pg	Pb	18 49 06.5	-0.7
	13nm,0.1s						
SFK				Lg	Lg	18 49 31.5	
	35nm,0.2s						
AAK	Ala-Archa	3.75	348	⇑Pn	Pn	18 49 31.5	+0.5
	3.7nm,1.0s						
AAK				⇑Sn	Sn	18 50 17.8	+1.7
	5.3nm,0.8s						
TKM2	Tokmak 2	3.95	1	⇑Pn	Pn	18 49 33.8	-0.1
	0.6nm,0.3s						
TKM2				⇓Sn	Sn	18 50 23.0	+2.0
	2.5nm,0.6s						
KST	Kastek	4.09	5	Pg	Pb	18 49 46.0	+1.3
	1.3nm,0.3s						
KST				Lg	Lg	18 50 38.7	
	5.4nm,0.4s						
IZV	Izvestkoviy	4.15	11	Pg	Pb	18 49 47.7	+1.9
	1.4nm,0.4s						
IZV				Lg	Lg	18 50 41.8	
	3.2nm,0.6s						
MNAS	Manas	4.20	328	⇑Pg	Pb	18 49 48.3	+1.7
	1.4nm,0.7s						
MNAS				⇑Sn	Sn	18 50 27.9	+0.8
	1.1nm,0.6s						
MNAS				⇓Lg	Lg	18 50 45.0	
	3.0nm,0.8s						
MNAS	Manas	4.20	328	Pg	Pb	18 49 47.6	+1.0
	0.4nm,0.3s						
MNAS				Lg	Lg	18 50 41.9	
	1.4nm,0.6s						
TNSS	Tian-Shan	4.21	14	Pg	Pb	18 49 48.8	+1.8
	1.6nm,0.3s						
TNSS				Lg	Lg	18 50 43.3	
	3.7nm,0.6s						
KOTS	Kotyrbulak	4.43	15	Pg	Pb	18 49 53.5	+2.9
	2.4nm,0.5s						
KOTS				Lg	Lg	18 50 51.5	
	5.5nm,0.5s						
SATY	Saty	4.63	27	Pg	Pg	18 49 57.9	-2.7
	3.6nm,0.3s						
SATY				Lg	Lg	18 50 59.5	
	7.6nm,0.8s						
KUU	Kurty	4.96	7	Pg	Pb	18 50 01.9	+2.3
	1.0nm,0.6s						
KUU				Lg	Lg	18 51 06.1	
	5.8nm,1.2s						
KK31	Karatay Array	5.61	319	⇑Pn	Pn	18 49 55.3	-1.2
	0.2nm,0.3s,baz=129,slow=12,SNR=10						
KK31				⇓Sn	Sn	18 51 02.3	+0.7
	1.4nm,0.5s,baz=140,slow=25,SNR=4.7						
KK31				⇓Lg	Lg	18 51 30.3	
	2.3nm,0.9s,baz=142,slow=31						

IDC 01 19:00:08.5±2.1,6°.91S×129°.85E,h147^{km}±27^{km},mb2.9/1, mb1 3.0/6,mb1mx2.9/32,mbtmp3.5/6,Error ellipse: s-maj=37.8km s-min=20.1km az=96.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.16	13	P	Pn	19 01 37.3	-0.2
	1.0nm,0.3s,baz=149,slow=7.7,SNR=23						
SIJI				S	Sn	19 02 42.5	-4.5
	1.2nm,0.3s,baz=224,slow=22,SNR=7.3						
BATI	Baumata	6.94	241	P	Pn	19 01 49.2	+1.3
	1.9nm,0.3s,baz=97,slow=4.5,SNR=5.5						
BATI				S	Sn	19 03 03.0	-2.8
	1.6nm,0.3s,baz=31,slow=19,SNR=7.7						
FITZ	Fitzroy Crossi	11.86	200	P	Pn	19 02 51.3	-1.8
	0.1nm,0.3s,baz=9.2,slow=8.1,SNR=15						
FITZ				S	Sn	19 04 53.5	-11
	0.1nm,0.3s,baz=96,slow=19,SNR=2.5						
WRA	Warramunga Arr	13.67	162	P	Pn	19 03 15.4	-1.1
	0.2nm,0.3s,baz=343,slow=13,SNR=9.5						
WRA				S	Sn	19 05 39.6	-8.3
	0.2nm,0.3s,baz=347,slow=18,SNR=5.4						
ASAR	Alice Springs	17.11	167	P	Pn	19 04 00.2	+1.2
	0.1nm,0.3s,baz=332,slow=9.4,SNR=11						
MKAR	Makanchi Array	68.07	327	P	P	19 10 52.2	-0.1
	0.1nm,0.3s,baz=116,slow=6.6,SNR=4.0						

IDC 01 19:01:05.0±4.3,5°.64S×150°.76E,h0^{km},mb3.1/2, mb1 3.4/2,mb1mx3.2/28,mbtmp3.1/2,Error ellipse: s-maj=189.5km s-min=50.9km az=117.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.38	227	P	P	19 05 54.9	+0.5
	0.3nm,0.3s,baz=53,slow=11,SNR=5.3						
ASAR	Alice Springs	24.18	220	P	P	19 06 23.1	-0.3
	0.3nm,0.5s,baz=49,slow=10,SNR=5.1						
TORD	Torodi Ar. Bea	148.61	286	PKPbc	PKPbc	19 20 54.5	-0.7
	0.6nm,0.5s,baz=94,slow=2.5,SNR=6.6						

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*DDA **01** 19:01:17.3,37°.93N×27°.15E,h7^{km}±3^{km},ML2.8*

*ISK **01** 19:01:17.2,37°.96N×27°.24E,h20^{km},ML2.3/9*

ISC 01 19:01:17.5±0.9,37°.93N±0°.03×27°.18E±0°.03,h15^{km}±8^{km}, n19,σ0^{s}.68/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.23	170	PG	Pg	19 01 22.9	+0.2
GCAM				SG	Sg	19 01 26.6	+0.4
GCAM	G?zelcaml?	0.23	170	i P	Pb	19 01 23.5	+0.1
GCAM				i S	Sb	19 01 27.4	+0.1
GCAM				IAML_P			
	comp=Z,5µm,0.1s						
GMLD	Gumuldur	0.26	305	PG	Pb	19 01 24.7	+0.9
DGB	zmir	0.27	297	i P	Pg	19 01 23.4	+0.1
DGB				i S	Sg	19 01 26.4	-0.8
DGB				IAML_P			
	comp=Z,3µm,0.1s						
BLCB	Balcova	0.47	346	PG	Pg	19 01 26.2	-0.6
AYDB	Zeytinkoy-Aydi	0.56	88	PG	Pg	19 01 28.2	-0.4
AYDB				SG	Sg	19 01 35.8	-0.3
AYDN	Tasoluk	0.61	116	i P	Pb	19 01 30.1	+0.2
AYDN				i S	Sb	19 01 39.0	+0.6
AYDN				IAML_P			
	comp=Z,2µm,0.1s						
ZEY	zmir	0.62	300	i P	Pb	19 01 29.8	-0.1
ZEY				i S	Sg	19 01 37.8	-0.1
ZEY				IAML_P			
	comp=Z,3µm,0.2s						
URLA	Izmir	0.63	313	PG	Pb	19 01 30.7	+0.5
URLA	Izmir	0.63	313	i P	Pb	19 01 30.1	-0.1
URLA				i S	Sb	19 01 38.5	-0.4
MLSB	Milas	0.79	143	PG	Pn	19 01 33.8	-0.3
BODT	Bodrum	0.87	173	PG	Pn	19 01 35.9	+0.7
CHOS	Chios island	1.00	297	PG	Pg	19 01 36.7	-0.1
AKHS	Akhisar	1.07	27	i P	Pn	19 01 38.5	+0.6
AKHS				IAML_P			
	comp=Z,1µm,0.2s						
MANT	Manisa	1.22	62	i P	Pg	19 01 42.1	+1.1
MANT				i S	Sb	19 01 55.2	-0.8
MANT				IAML_P			
	comp=Z,336nm,0.1s						
TAVA	DENIZLI_Tavas	1.45	108	i P	Pn	19 01 31.5	-12
TAVA				i S	Sn	19 01 40.3	-22
STEP	BALIKESIR_Sava	1.50	16	i P	Pg	19 01 46.1	-0.3
STEP				i S	Sg	19 02 06.9	+0.9
STEP				IAML_P			
	comp=Z,672nm,0.1s						
TURN	Turunc	1.55	133	PN	Pn	19 01 42.5	-1.9
DEMI	Demirci	1.64	47	i P	Pg	19 01 48.9	-0.1
DEMI				IAML_P			
	comp=Z,426nm,0.2s						

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*IDC **01** 19:29:03.6±5.3,4°.00N×124°.83E,h254^{km}±57^{km},mb3.5/10, mb1 3.6/11,mb1mx3.2/36,mbtmp4.1/11,MS3.0/1, Ms1 3.0/1,ms1mx2.3/21,Error ellipse: s-maj=29.9km s-min=12.1km az=71.0*

*DJA **01** 19:29:21.5±0.4,3°N±4°×12°6E±°,h10^{km},M3.6/3,MLv3.6/3*

ISC 01 19:28:59.7±0.6,4°.12N±0°.10×124°.7E±0°.2,h200^{km},n18, σ1^{s}.76/18,mb4.0/10,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	0.95	117	P	Pn	19 29 32.1	+2.9
KMSI	Cibinong	3.59	191	P	Pn	19 30 09.0	+13
TNTI	Ternate	4.27	141	P	Pn	19 30 07.9	+2.9
BATI	Baumata	14.27	184	P	Pn	19 32 14.7	+1.6
	3.5nm,0.3s,baz=36,slow=1.6,SNR=8.7						
BATI				LR	LR	19 38 57.2	
	comp=Z,56nm,18.1s,baz=240,slow=42						
FITZ	Fitzroy Crossi	22.10	178	P	P	19 33 37.1	-1.9
	1.6nm,0.3s,baz=5.9,slow=8.7,SNR=11						
WRA	Warramunga Arr	25.73	159	P	P	19 34 09.2	-2.8
	3.2nm,0.5s,baz=331,slow=11,SNR=46						
CMAR	Chiang Mai Arr	28.92	302	P	P	19 34 41.7	+1.3
	0.7nm,0.8s,baz=87,slow=5.8,SNR=5.6						
ASAR	Alice Springs	29.05	162	P	P	19 34 39.0	-2.4
	0.6nm,0.3s,baz=343,slow=7.8,SNR=27						
MJAR	Matsushiro Arr	34.58	19	P	P	19 35 28.9	-0.7

	0.9nm,0.6s,baz=196,slow=7.6,SNR=3.1						
STKA	**Stephens Creek**	**39.25**	**157**	P	**P**	**19 36 07.1**	**-1.9**
	1.6nm,0.4s,baz=346,slow=7.5,SNR=11						
JIRN	**Jiri**	**43.49**	**307**	*e*P	**P**	**19 36 44.0**	**0.0**
	11nm,0.8s						
GUN	**Gumba**	**43.85**	**307**	*e*P	**P**	**19 36 47.4**	**+0.6**
	6.5nm,0.5s						
KOLN	**Koldanda**	**45.63**	**305**	*e*P	**P**	**19 37 00.7**	**0.0**
	2.6nm,0.3s						
DANN	**Dangsing**	**45.73**	**306**	*e*P	**P**	**19 37 01.0**	**-0.6**
	6.7nm,0.5s						
SONM	**Songino Array**	**46.30**	**343**	P	**P**	**19 37 05.2**	**-0.4**
	0.6nm,0.7s,baz=146,slow=6.7,SNR=4.5						
MKAR	**Makanchi Array**	**56.08**	**326**	P	**P**	**19 38 17.1**	**-1.0**
	1.7nm,0.5s,baz=120,slow=8.3,SNR=42						
MKAR				PcP	**pwP**	**19 39 09.7**	**+1.3**
	0.3nm,0.5s,baz=122,slow=4.4,SNR=3.7						
NRIK	**Noril'sk**	**69.58**	**347**	P	**P**	**19 39 46.5**	**-0.2**
	14nm,0.8s,baz=135,slow=4.3,SNR=9.8						
ARCES	**ARCESS Array B**	**89.38**	**340**	P	**P**	**19 41 33.7**	**+0.4**
	2.6nm,0.9s,baz=84,slow=8.3,SNR=3.2						

*ISCJB **01** 19:33:02.5±0.8, 11°.26S±0°.08×33°.48E±0°.06, h10^{km}, mb3.5/2, Error ellipse: s-maj=11.6km s-min=8.3km az=173.8*

*IDC **01** 19:33:03.3±2.1, 11°.26S×33°.40E, h0^{km}, mb3.6/2, mb1 3.9/4, mb1mx3.4/30, mbtmp3.8/4, ML4.1/2, Error ellipse: s-maj=111.4km s-min=30.3km az=116.0*

ISC 01 19:33:04.9±1.0,**11°.31S**±0°.10×**33°.61E**±0°.08,**h10^{km},n11, σ0^{s}.86**/13**, Malawi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MZM	**Mzuzu**	**0.40**	**106**	*i* P	**Pb**	**19 33 14.0**	**-0.2**
MZM				S	**Sb**	**19 33 20.5**	**0.0**
MZM	**Mzuzu**	**0.40**	**106**	*i* P	**Pb**	**19 33 14.0**	**-0.2**
MZM				S	**Sb**	**19 33 20.5**	**0.0**
BLWY	**Bulawayo**	**10.01**	**208**	*i* P	**Pn**	**19 35 29.4**	**+0.4**
BLWY	**Bulawayo**	**10.01**	**208**	*i* P	**Pn**	**19 35 29.5**	**+0.5**
MATP	**Matopo**	**10.31**	**208**	*i* P	**Pn**	**19 35 33.6**	**+0.5**
KMBO	**Kilima Mbogo**	**10.74**	**20**	Pn	**Pn**	**19 35 38.2**	**-1.0**
	0.5nm,0.3s,baz=203,slow=16,SNR=7.0						
KMBO				Lg	Lg	19 38 30.1	
	0.2nm,0.3s,baz=234,slow=19,SNR=3.6						
BOSA	**Boshof**	**18.91**	**203**	*i* P	**P**	**19 37 24.8**	**-1.2**
BOSA	**Boshof**	**18.91**	**203**	*i* P	**P**	**19 37 24.5**	**-1.4**
BOSA	**Boshof**	**18.91**	**203**	P	**P**	**19 37 25.2**	**-0.7**
	0.6nm,0.3s,baz=21,slow=12,SNR=12						
BOSA				Lg	Lg	19 42 48.1	
	0.1nm,0.3s,baz=103,slow=18,SNR=2.4						
CMAR	**Chiang Mai Arr**	**70.90**	**66**	P	**P**	**19 44 23.7**	**+0.9**
	0.4nm,0.8s,baz=248,slow=7.4,SNR=4.5						
MKAR	**Makanchi Array**	**72.34**	**33**	P	**P**	**19 44 31.9**	**+1.0**
	0.6nm,0.8s,baz=236,slow=6.8,SNR=5.5						

*ISCJB **01** 19:38:26.2±0.9, 38°.89N±0°.04×142°.06E±0°.10, h53^{km}±7^{km}, mb3.5/4, Error ellipse: s-maj=13.0km s-min=6.1km az=16.9*

*JMA **01** 19:38:27.7±0.1, 38°.89N×141°.98E, h49^{km}±1^{km}, M3.5*

JMA Felt I J1.

*IDC **01** 19:38:28.2±2.8, 38°.89N×142°.18E, h61^{km}±25^{km}, mb3.3/4, mb1 3.4/7, mb1mx3.1/34, mbtmp3.5/7, ML2.7/3, MS2.4/1, Ms1 2.4/1, ms1mx1.9/22, Error ellipse: s-maj=30.6km s-min=16.4km az=109.0*

ISC 01 19:38:27.0±1.4,**38°.88N**±0°.05×**142°.08E**±0°.10,**h44^{km}**±12^{km}**, n25, σ1^{s}.50**/28**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.38**	**303**	P	**Pn**	**19 38 36.9**	**+0.4**
OFUJ				S	**Sn**	**19 38 43.2**	**+0.1**
JKMT	**Kesennumamotoy**	**0.47**	**262**	P	**Pn**	**19 38 37.7**	**+0.1**
JKMT				*i* S	**Sn**	**19 38 44.5**	**-0.6**
JMK	**Ichinoseki**	**0.67**	**277**	P	**Pn**	**19 38 40.1**	**-0.1**
JMK				S	**Sn**	**19 38 48.9**	**-0.7**
JIO	**Ouri**	**0.71**	**234**	P	**Pn**	**19 38 40.6**	**-0.1**
JIO				*i* S	**Sn**	**19 38 49.5**	**-1.0**
JOM	**Ohasama**	**0.85**	**315**	P	**Pn**	**19 38 42.7**	**+0.1**
JOM				*i* S	**Sn**	**19 38 53.4**	**-0.6**
JOU	**Okura**	**1.22**	**246**	P	**Pn**	**19 38 47.3**	**-0.3**
JOU				*e*S	**Sn**	**19 39 02.2**	**-0.8**
JRG	**Rokugo**	**1.24**	**295**	P	**Pn**	**19 38 47.7**	**-0.2**
JRG				*e*S	**Sn**	**19 39 02.4**	**-1.0**
JYK	**Kaneyama**	**1.34**	**272**	P	**Pn**	**19 38 49.1**	**-0.2**
JMM	**Marumori**	**1.43**	**225**	P	**Pn**	**19 38 50.0**	**-0.5**
JMM				S	**Sn**	**19 39 07.2**	**-0.8**
JANG	**Nango**	**1.56**	**344**	P	**Pn**	**19 38 52.4**	**+0.1**
MAT	**Matsushiro**	**3.85**	**234**	P	**Pn**	**19 39 26.8**	**+3.0**
MAT				*e*S	**Sn**	**19 40 12.8**	**+5.0**
MJAR	**Matsushiro Arr**	**3.85**	**234**	P	**Pn**	**19 39 25.6**	**+1.9**
	0.3nm,0.3s,baz=38,slow=12,SNR=34						
ASAJ	**Asahikawa**	**5.25**	**4**	P	**Pn**	**19 39 43.7**	**+0.7**
	0.6nm,0.3s,baz=209,slow=17,SNR=9.8						
ASAJ				S	**Sn**	**19 40 42.8**	**+0.7**
	0.4nm,0.3s,baz=270,slow=18,SNR=2.5						
USRK	**Ussuriysk Ar.**	**9.24**	**308**	P	**Pn**	**19 40 40.8**	**+3.1**
	0.2nm,0.3s,baz=129,slow=13,SNR=4.7						
KLR	**Kul'dur**	**12.72**	**328**	LR	LR	19 45 52.5	
	comp=Z,18nm,21.1s,baz=78,slow=35						
H11N2	**WAKE ISLAND Hy**	**28.70**	**125**	T	T	20 14 45.8	
	baz=317,slow=75,SNR=181						
H11N1	**WAKE ISLAND Hy**	**28.71**	**125**	T	T	20 14 46.5	
	baz=317,slow=75,SNR=112						
H11N3	**WAKE ISLAND Hy**	**28.72**	**125**	T	T	20 14 47.2	
	baz=317,slow=75,SNR=119						
H11S1	**WAKE ISLAND Hy**	**29.48**	**127**	T	T	20 15 40.7	
	baz=318,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**29.48**	**127**	T	T	20 15 43.1	
	baz=318,slow=76,SNR=66						
H11S2	**WAKE ISLAND Hy**	**29.49**	**127**	T	T	20 15 43.6	
	baz=318,slow=76,SNR=39						
ZALV	**Zalesovo Beam**	**41.09**	**311**	P	**P**	**19 46 06.1**	**-0.2**
	0.4nm,0.3s,baz=76,slow=6.5,SNR=3.0						
MKAR	**Makanchi Array**	**43.61**	**301**	P	**P**	**19 46 26.4**	**-0.6**
	0.8nm,0.6s,baz=84,slow=9.2,SNR=10						
ILAR	**Eielson Array**	**47.66**	**33**	P	**P**	**19 46 57.9**	**-0.7**
	0.4nm,0.9s,baz=255,slow=5.5,SNR=3.6						
WRA	**Warramunga Arr**	**58.96**	**189**	P	**P**	**19 48 21.2**	**-0.8**
	0.4nm,0.7s,baz=8.9,slow=7.1,SNR=3.8						

*SOME **01** 19:44:46.6, 42°.48N×79°.70E, h25^{km}*

*NNC **01** 19:44:46.4±1.5, 42°.53N×79°.62E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=10.5km s-min=5.2km az=151.0*

*KRNET **01** 19:44:47.8±0.1, 42°.59N×79°.62E, h17^{km}, mb2.4*

ISC 01 19:44:46.2±1.7,**42°.54N**±0°.05×**79°.65E**±0°.04,**h6^{km}**±11^{km}**, n38, σ1^{s}.20**/67**, 15C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.63**	**348**	P	**Pb**	**19 44 59.7**	**-0.2**
	28nm,0.1s						
SHLS				S	**Sn**	**19 45 09.2**	**-3.3**
	62nm,0.2s						
SHLS	**Shalkode**	**0.63**	**348**	*e*P	**Pb**	**19 44 59.7**	**-0.2**
	baz=19						
SHLS				*e*S	**Sb**	**19 45 08.3**	**-0.8**
	baz=19						
SHLS	**Shalkode**	**0.63**	**348**	*e*P	**Pb**	**19 44 59.6**	**-0.2**
	28nm,0.1s						
SHLS				*e*S	**Sn**	**19 45 09.2**	**-3.3**
	62nm,0.2s						
UZB	**Uzynbulak**	**0.76**	**323**	P	**Pg**	**19 45 00.8**	**0.0**
	6.1nm,0.1s						
UZB				S	**Sg**	**19 45 11.1**	**+0.3**
	21nm,0.2s						
UZB	**Uzynbulak**	**0.76**	**323**	*e*P	**Pg**	**19 45 00.9**	**0.0**
	baz=22						
UZB				*e*S	**Sg**	**19 45 11.2**	**+0.3**
	baz=22						
UZB	**Uzynbulak**	**0.76**	**323**	*e*P	**Pg**	**19 45 00.8**	**0.0**
	6.1nm,0.1s						
UZB				*e*S	**Sg**	**19 45 11.1**	**+0.3**
	21nm,0.2s						
PDGK	**Podgornoye**	**0.80**	**352**	P	**Pb**	**19 45 01.7**	**-0.9**
	0.8nm,0.1s						
PDGK				S	**Sg**	**19 45 12.4**	**+0.4**
	10nm,0.2s						
PDGK	**Podgornoye**	**0.80**	**352**	⇑*i*P	**Pb**	**19 45 01.8**	**-0.9**
	baz=53						
PDGK				⇑*i*S	**Sg**	**19 45 12.2**	**+0.2**
	baz=53						
PRZ	**Przheval'sk**	**0.92**	**267**	⇓*i*P	**Pb**	**19 45 04.7**	**-0.1**
	baz=64						
PRZ				⇓*i*S	**Sb**	**19 45 16.5**	**-0.9**
	baz=64						
KTMS	**Ketmen**	**1.05**	**29**	P	**Pb**	**19 45 06.2**	**-0.7**
	4.4nm,0.1s						
KTMS				S	**Sb**	**19 45 20.5**	**-0.5**
	4.2nm,0.2s						
KTMS	**Ketmen**	**1.05**	**29**	*e*P	**Pb**	**19 45 06.2**	**-0.7**
	baz=31						
KTMS				*e*S	**Sb**	**19 45 20.4**	**-0.5**
	baz=31						
KTMS	**Ketmen**	**1.05**	**29**	*e*P	**Pb**	**19 45 06.2**	**-0.7**
	4.4nm,0.1s						
KTMS				*e*S	**Sb**	**19 45 20.5**	**-0.5**
	4.2nm,0.2s						
MNBS	**Baschi**	**1.79**	**330**	P	**Pb**	**19 45 19.4**	**-0.1**
	2.0nm,0.2s						
MNBS				S	**Sg**	**19 45 43.4**	**-0.3**
	12nm,0.3s						
MNBS	**Baschi**	**1.79**	**330**	*e*P	**Pb**	**19 45 19.1**	**-0.4**
	2.0nm,0.2s						
MNBS				*e*S	**Sg**	**19 45 42.6**	**-1.1**
	12nm,0.3s						
DJR	**Jarkent**	**1.80**	**3**	P	**Pb**	**19 45 19.6**	**0.0**
	0.5nm,0.2s						
DJR				S	**Sg**	**19 45 44.0**	**0.0**
	5.0nm,0.2s						
DJR	**Jarkent**	**1.80**	**3**	*e*P	**Pb**	**19 45 19.8**	**+0.2**
	0.5nm,0.2s						
DJR				⇓*i*S	**Sg**	**19 45 44.0**	**0.0**
	5.0nm,0.2s						
KDJ	**Kajisay**	**1.87**	**258**	⇑*i*P	**Pb**	**19 45 21.9**	**+0.9**
	baz=57						
KDJ				⇑*i*S	**Sb**	**19 45 46.1**	**+1.4**
	baz=57						
TNSS	**Tian-Shan**	**2.05**	**285**	Pg	**Pb**	**19 45 23.4**	**-0.7**
	2.6nm,0.1s						
TNSS				Lg	Lg	19 45 50.5	
	4.0nm,0.4s						
TNSS	**Tian-Shan**	**2.05**	**285**	*e*P	**Pb**	**19 45 23.4**	**-0.7**
	2.6nm,0.1s						
TNSS				*e*S	**Sb**	**19 45 50.3**	**+0.3**
	4.0nm,0.4s						
ARXS	**Arharly**	**2.14**	**322**	Pg	**Pb**	**19 45 25.0**	**-0.5**
	2.1nm,0.3s						
ARXS				Lg	Lg	19 45 53.0	
	11nm,0.5s						
ARXS	**Arharly**	**2.14**	**322**	*e*P	**Pb**	**19 45 25.0**	**-0.5**
	2.1nm,0.3s						
ARXS				*e*S	**Sg**	**19 45 53.0**	**-1.8**
	11nm,0.5s						
CHKK	**Chushkaly**	**2.35**	**305**	Pg	**Pb**	**19 45 28.7**	**-0.3**
	0.8nm,0.1s						
CHKK				Lg	Lg	19 45 59.5	
	4.3nm,0.3s						
CHKK	**Chushkaly**	**2.35**	**305**	*e*P	**Pb**	**19 45 28.7**	**-0.3**
	0.8nm,0.1s						
CHKK				*e*S	**Sb**	**19 45 59.3**	**+1.1**
	4.3nm,0.3s						
MTBS	**Maitube**	**2.44**	**285**	Pg	**Pb**	**19 45 30.9**	**+0.3**
	6.2nm,0.3s						
MTBS				Lg	Lg	19 46 02.7	
	11nm,0.3s						
MTBS	**Maitube**	**2.44**	**285**	*e*P	**Pb**	**19 45 30.9**	**+0.3**
	6.2nm,0.3s						
MTBS				*e*S	**Sg**	**19 46 02.8**	**-1.8**
	11nm,0.3s						
ULHL	**Ulahol**	**2.54**	**265**	⇑*i*P	**Pb**	**19 45 30.8**	**-1.5**
	baz=63						
ULHL				⇑*i*S	**Sb**	**19 46 02.8**	**-1.1**
	baz=63						
BOOM	**Boomskoye usch**	**2.74**	**270**	⇑*i*P	**Pn**	**19 45 33.4**	**+2.5**
	baz=69						
BOOM				⇑*i*S	**Sb**	**19 46 06.8**	**-2.9**
	baz=69						
KAPS	**Kapalarasan**	**2.75**	**356**	Pg	**Pb**	**19 45 35.8**	**-0.1**
	0.2nm,0.2s						
KAPS				Lg	Lg	19 46 11.9	
	4.3nm,0.4s						
KAPS	**Kapalarasan**	**2.75**	**356**	*e*P	**Pb**	**19 45 35.8**	**-0.1**
	0.2nm,0.2s						
KAPS				*e*S	**Sb**	**19 46 11.5**	**+1.5**
	4.3nm,0.4s						
KST	**Kastek**	**2.76**	**282**	Pg	**Pb**	**19 45 36.6**	**+0.6**
	3.2nm,0.3s						
KST				Lg	Lg	19 46 12.7	
	3.8nm,0.5s						
KST	**Kastek**	**2.76**	**282**	*e*P	**Pb**	**19 45 36.6**	**+0.6**
	3.2nm,0.3s						
KST				⇑*i*S	**Sg**	**19 46 12.7**	**-2.1**
	3.8nm,0.5s						
KUU	**Kurty**	**2.77**	**300**	Pg	**Pb**	**19 45 35.7**	**-0.5**
	0.5nm,0.3s						
KUU				Lg	Lg	19 46 11.2	
	2.4nm,0.3s						
KUU	**Kurty**	**2.77**	**300**	⇑*i*P	**Pb**	**19 45 35.7**	**-0.5**
	0.5nm,0.3s						
KUU				*e*S	**Sb**	**19 46 11.2**	**+0.8**
	2.4nm,0.3s						
DGS	**Degeres**	**2.93**	**285**	Pg	**Pb**	**19 45 38.5**	**-0.5**
	2.1nm,0.4s						
DGS				Lg	Lg	19 46 16.0	
	5.6nm,0.4s						
DGS	**Degeres**	**2.93**	**285**	*e*P	**Pb**	**19 45 38.5**	**-0.5**
	2.1nm,0.4s						
DGS				*e*S	**Sb**	**19 46 16.0**	**+0.9**
	5.6nm,0.4s						
NRN	**Naryn**	**2.93**	**249**	⇑*i*P	**Pb**	**19 45 37.2**	**-1.9**
	baz=48						
NRN				⇑*i*S	**Sb**	**19 46 12.9**	**-2.5**
	baz=48						
TKM2	**Tokmak 2**	**3.01**	**279**	⇑Pg	**Pb**	**19 45 40.4**	**+0.1**
	1.3nm,0.7s						
TKM2				⇓Lg	Lg	19 46 21.0	
	2.7nm,0.6s						
ARLS	**Aral**	**4.01**	**262**	⇑*i*P	**Pn**	**19 45 51.4**	**+3.0**
	baz=61						
ARLS				⇑*i*S	**Sn**	**19 46 37.5**	**+1.7**
	baz=61						

*ISCJB **01** 19:53:27.3±0.5, 3°.11S±0°.06×138°.58E±0°.04, h50^{km}, mb3.2/3, MS2.7/1, Error ellipse: s-maj=9.2km s-min=5.5km az=160.6*

*IDC **01** 19:53:30.0±1.9, 3°.04S×138°.73E, h63^{km}±24^{km}, mb3.1/4, mb1 3.5/8, mb1mx3.3/23, mbtmp3.5/8, ML3.4/4, MS2.7/2, Ms1 2.9/2, ms1mx2.6/9, Error ellipse: s-maj=24.3km s-min=14.9km az=147.0*

*DJA **01** 19:53:31.3±0.4, 2°S±15°×13°9E±°, h47^{km}±59^{km}, M4.1/3, MLv4.1/3*

ISC 01 19:53:28.1±0.7,**3°.27S**±0°.08×**138°.66E**±0°.06,**h50^{km}, n14, σ2^{s}.23**/19**, mb3.0**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**1.65**	**66**	P	**Pn**	**19 53 55.5**	**+0.8**
GENI				S	**Sn**	**19 54 15.1**	**+0.4**
JAY	**Jayapura**	**2.17**	**70**	P	**Pn**	**19 54 02.7**	**+0.8**
JAY				S	**Sn**	**19 54 27.4**	**-0.3**
JAY	**Jayapura**	**2.17**	**70**	P	**Pn**	**19 54 02.2**	**+0.3**
	5.3nm,0.3s,baz=228,slow=11,SNR=25						
JAY				S	**Sn**	**19 54 26.9**	**-0.8**
	5.6nm,0.3s,baz=166,slow=22,SNR=4.6						
SRPI	**Serui, Papua**	**2.79**	**300**	P	**Pn**	**19 54 09.3**	**-1.0**
BAKI	**Biak**	**3.28**	**309**	P	**Pn**	**19 54 13.3**	**-3.8**
RKPI	**Ransiki, Papua**	**4.81**	**291**	P	**Pn**	**19 54 38.2**	**+0.2**
SIJI	**Sorong**	**7.76**	**288**	P	**Pn**	**19 55 19.2**	**+0.6**
	1.0nm,0.3s,baz=258,slow=23,SNR=6.7						
BATI	**Baumata**	**16.40**	**244**	P	**P**	**19 57 22.4**	**+5.2**
	2.3nm,0.3s,baz=97,slow=5.6,SNR=5.7						
BATI				LR	LR	20 05 55.8	
	comp=Z,26nm,18.5s,baz=50,slow=45						
WRA	**Warramunga Arr**	**17.10**	**194**	P	**P**	**19 57 26.2**	**+1.3**
	0.2nm,0.3s,baz=16,slow=12,SNR=11						
WRA				S	**Sn**	**20 00 29.9**	**-3.3**
	0.1nm,0.3s,baz=2.9,slow=24,SNR=4.0						
FITZ	**Fitzroy Crossi**	**19.49**	**220**	P	**Pn**	**19 57 54.3**	**+1.5**
	0.1nm,0.3s,baz=68,slow=11,SNR=3.7						
FITZ				S	**S**	**20 01 24.9**	**-4.1**
	0.1nm,0.3s,baz=199,slow=17,SNR=5.2						
ASAR	**Alice Springs**	**20.80**	**192**	P	Pn	19 58 09.4	+1.2
	2.2nm,0.7s,baz=19,slow=11,SNR=24						
ASAR				S	**S**	**20 01 54.1**	**-0.7**
	0.6nm,1.0s,baz=12,slow=28,SNR=2.6						
CMAR	**Chiang Mai Arr**	**44.67**	**300**	P	**P**	**20 01 35.3**	**-1.1**
	0.2nm,0.8s,baz=108,slow=5.8,SNR=3.1						
CMAR				LR	LR	20 20 10.9	
	comp=Z,11nm,21.4s,baz=180,slow=36						
MKAR	**Makanchi Array**	**70.20**	**323**	P	**P**	**20 04 36.8**	**+1.0**
	0.1nm,0.5s,baz=113,slow=9.2,SNR=2.7						
ILAR	**Eielson Array**	**86.36**	**24**	P	**P**	**20 06 03.6**	**-1.1**
	0.3nm,0.8s,baz=264,slow=4.5,SNR=4.3						

*SOME **01** 19:54:08.8, 42°.52N×79°.58E, h15^{km}*

*KRNET **01** 19:54:09.5±0.1, 42°.58N×79°.61E, h19^{km}, mb3.8*

*NNC **01** 19:54:09.4±0.6, 42°.59N×79°.58E, h0^{km}, mb4.1, mpv4.0, Error ellipse: s-maj=4.3km s-min=2.3km az=137.0*

*ISCJB **01** 19:54:10.3±0.6, 42°.57N±0°.03×79°.68E±0°.04, h10^{km}, Error ellipse: s-maj=5.6km s-min=2.8km az=139.0*

ISC 01 19:54:09.7±1.0,**42°.56N**±0°.04×**79°.63E**±0°.03,**h10^{km}, n83, σ1^{s}.44**/132**, 38C-17D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.61**	**349**	P	**Pb**	**19 54 21.9**	**-0.7**
	955nm,0.1s						
SHLS				S	**Sb**	**19 54 31.2**	**-0.1**
	2µm,0.2s						
SHLS	**Shalkode**	**0.61**	**349**	*e*P	**Pb**	**19 54 21.9**	**-0.7**
	baz=19						
SHLS				*e*S	**Sg**	**19 54 30.2**	**+0.5**
	baz=19						
SHLS	**Shalkode**	**0.61**	**349**	*e*P	**Pb**	**19 54 21.9**	**-0.7**
	955nm,0.1s						
SHLS				*e*S	**Sb**	**19 54 31.2**	**-0.1**
	2µm,0.2s						
UZB	**Uzynbulak**	**0.74**	**323**	P	**Pg**	**19 54 23.1**	**-0.9**
	130nm,0.2s						
UZB				S	**Sg**	**19 54 33.2**	**-0.5**
	535nm,0.2s						
UZB	**Uzynbulak**	**0.74**	**323**	*e*P	**Pg**	**19 54 23.1**	**-0.9**
	baz=23						
UZB				*e*S	**Sg**	**19 54 33.2**	**-0.5**
	baz=23						
UZB	**Uzynbulak**	**0.74**	**323**	*e*P	**Pg**	**19 54 23.1**	**-0.9**
	130nm,0.2s						
UZB				*e*S	**Sg**	**19 54 33.2**	**-0.5**
	535nm,0.2s						
PDGK	**Podgornoye**	**0.78**	**353**	P	**Pg**	**19 54 23.8**	**-0.9**
	94nm,0.3s						
PDGK				S	**Sg**	**19 54 34.8**	**-0.2**
	65nm,0.3s						
PDGK	**Podgornoye**	**0.78**	**353**	⇓P	**Pg**	**19 54 23.7**	**-1.0**
	57nm,0.3s						
PDGK				⇑S	**Sg**	**19 54 34.2**	**-0.7**
	53nm,0.4s						
PDGK	**Podgornoye**	**0.78**	**353**	⇓*i*P	**Pg**	**19 54 23.8**	**-1.0**
	baz=53						
PDGK				⇓*i*S	**Sg**	**19 54 33.9**	**-1.0**
	baz=53						
PRZ	**Przheval'sk**	**0.91**	**266**	⇑*i*P	**Pg**	**19 54 25.9**	**-1.4**
	baz=64						
PRZ				⇑*i*S	**Sg**	**19 54 38.3**	**-0.9**
	baz=64						
SATY	**Saty**	**1.03**	**300**	P	**Pg**	**19 54 27.9**	**-1.7**
	42nm,0.1s						
SATY				S	**Sg**	**19 54 41.8**	**-1.2**
	676nm,0.2s						
SATY	**Saty**	**1.03**	**300**	*e*P	**Pg**	**19 54 27.9**	**-1.7**
	42nm,0.1s						
SATY				*e*S	**Sg**	**19 54 41.8**	**-1.2**
	676nm,0.2s						
KTMS	**Ketmen**	**1.03**	**31**	P	**Pg**	**19 54 28.5**	**-1.1**
	146nm,0.1s						
KTMS				S	**Sb**	**19 54 42.6**	**-0.9**
	303nm,0.2s						
KTMS	**Ketmen**	**1.03**	**31**	*e*P	**Pg**	**19 54 28.5**	**-1.1**
	baz=31						
KTMS				*e*S	**Sb**	**19 54 42.6**	**-0.9**
	baz=31						
KTMS	**Ketmen**	**1.03**	**31**	*e*P	**Pg**	**19 54 28.5**	**-1.1**
	146nm,0.1s						
KTMS				*e*S	**Sb**	**19 54 42.6**	**-0.9**
	303nm,0.2s						
KURS	**Kuram**	**1.42**	**312**	P	**Pn**	**19 54 35.4**	**-0.2**
	10nm,0.2s						
KURS				S	**Sn**	**19 54 54.0**	**-0.4**
	180nm,0.4s						
KURS	**Kuram**	**1.42**	**312**	⇑*i*P	**Pn**	**19 54 35.4**	**-0.2**
	baz=11						
KURS				⇑*e*S	**Sn**	**19 54 54.0**	**-0.4**
	baz=11						
KURS	**Kuram**	**1.42**	**312**	⇑*i*P	**Pn**	**19 54 35.4**	**-0.2**
	10nm,0.2s						
KURS				*e*S	**Sn**	**19 54 54.0**	**-0.4**
	180nm,0.4s						
MNBS	**Baschi**	**1.77**	**330**	P	**Pb**	**19 54 41.4**	**-0.8**
	72nm,0.3s						
MNBS				S	**Sb**	**19 55 05.1**	**+0.6**
	393nm,0.3s						
MNBS	**Baschi**	**1.77**	**330**	*e*P	**Pb**	**19 54 41.4**	**-0.8**
	72nm,0.3s						
MNBS				*e*S	**Sb**	**19 55 05.1**	**+0.6**
	393nm,0.3s						
DJR	**Jarkent**	**1.78**	**4**	P	**Pb**	**19 54 41.5**	**-0.9**
	16nm,0.2s						
DJR				S	**Sg**	**19 55 05.7**	**-1.2**
	53nm,0.2s						
DJR	**Jarkent**	**1.78**	**4**	*e*P	**Pb**	**19 54 41.5**	**-0.9**
	16nm,0.2s						
DJR				*e*S	**Sg**	**19 55 05.7**	**-1.2**
	53nm,0.2s						
KDJ	**Kajisay**	**1.86**	**258**	⇑*i*P	**Pb**	**19 54 43.5**	**-0.5**
	baz=57						
KDJ				⇑*i*S	**Sb**	**19 55 07.9**	**+0.5**
	baz=57						
KOTS	**Kotyrbulak**	**1.97**	**291**	Pg	**Pb**	**19 54 44.8**	**-0.9**
	61nm,0.3s						
KOTS				Lg	Lg	19 55 10.7	
	341nm,0.3s						
KOTS	**Kotyrbulak**	**1.97**	**291**	*e*P	**Pb**	**19 54 44.8**	**-0.9**
	baz=90						
KOTS				*e*S	**Sb**	**19 55 10.7**	**+0.3**
	baz=90						
KOTS	**Kotyrbulak**	**1.97**	**291**	*e*P	**Pb**	**19 54 44.8**	**-0.9**
	61nm,0.3s						
KOTS				*e*S	**Sb**	**19 55 10.7**	**+0.3**
	341nm,0.3s						
MDOK	**Medeo**	**1.99**	**289**	⇓Pn	**Pn**	**19 54 44.5**	**+0.9**
	26nm,0.6s						
MDOK				⇑Lg	Lg	19 55 10.6	
	161nm,0.6s						
TNSS	**Tian-Shan**	**2.03**	**285**	Pg	**Pb**	**19 54 45.4**	**-1.6**
	74nm,0.2s						
TNSS				Lg	Lg	19 55 12.3	
	127nm,0.4s						
TNSS	**Tian-Shan**	**2.03**	**285**	*e*P	**Pb**	**19 54 45.4**	**-1.6**
	baz=84						
TNSS				*e*S	**Sb**	**19 55 12.1**	**-0.3**
	baz=84						
TNSS	**Tian-Shan**	**2.03**	**285**	*e*P	**Pb**	**19 54 45.4**	**-1.6**
	74nm,0.2s						
TNSS				*e*S	**Sb**	**19 55 12.1**	**-0.3**
	127nm,0.4s						
KNDC	**Almaty**	**2.06**	**290**	⇓Pn	**Pn**	**19 54 45.2**	**+0.7**
	49nm,0.3s						
KNDC				⇑Lg	Lg	19 55 14.4	
	208nm,0.7s						
AAA	**Alma-Ata**	**2.10**	**289**	Pg	**Pb**	**19 54 47.7**	**-0.2**
	183nm,0.3s						
AAA				Lg	Lg	19 55 15.7	
	162nm,0.3s						
AAA	**Alma-Ata**	**2.10**	**289**	*e*P	**Pb**	**19 54 47.7**	**-0.2**
	183nm,0.3s						
AAA				*e*S	**Sb**	**19 55 15.7**	**+1.7**
	162nm,0.3s						
ARXS	**Arharly**	**2.11**	**322**	Pg	**Pb**	**19 54 46.8**	**-1.4**
	18nm,0.4s						
ARXS				Lg	Lg	19 55 14.9	
	226nm,0.5s						
ARXS	**Arharly**	**2.11**	**322**	*e*P	**Pb**	**19 54 46.8**	**-1.4**
	18nm,0.4s						
ARXS				*e*S	**Sb**	**19 55 14.5**	**0.0**
	226nm,0.5s						
IZV	**Izvestkoviy**	**2.27**	**283**	Pg	**Pb**	**19 54 49.9**	**-1.0**
	135nm,0.2s						
IZV				Lg	Lg	19 55 19.2	
	141nm,0.4s						
IZV	**Izvestkoviy**	**2.27**	**283**	*e*P	**Pb**	**19 54 49.9**	**-1.0**
	135nm,0.2s						
IZV				*e*S	**Sb**	**19 55 19.2**	**+0.1**
	141nm,0.4s						

CHKK	**Chushkaly** 8.6nm,0.2s	**2.33**	**305**	Pg	**Pb**	**19 54 50.8**	**-1.0**
CHKK	182nm,0.2s			Lg	Lg	19 55 21.2	
CHKK	**Chushkaly** 8.6nm,0.2s	**2.33**	**305**	*e*P	**Pb**	**19 54 50.8**	**-1.0**
CHKK	182nm,0.2s			⇑*i*S	**Sb**	**19 55 21.2**	**+0.7**
MTBS	**Maitube** 50nm,0.2s	**2.42**	**285**	Pg	**Pb**	**19 54 52.4**	**-1.0**
MTBS	112nm,0.3s			Lg	Lg	19 55 24.0	
MTBS	**Maitube** 50nm,0.2s	**2.42**	**285**	*e*P	**Pb**	**19 54 52.4**	**-1.0**
MTBS	112nm,0.3s			*e*S	**Sb**	**19 55 24.0**	**+0.6**
KTBS	**Karatobe** 21nm,0.2s	**2.45**	**299**	Pg	**Pb**	**19 54 52.5**	**-1.3**
KTBS	285nm,0.4s			Lg	Lg	19 55 24.1	
KTBS	**Karatobe** 21nm,0.2s	**2.45**	**299**	*e*P	**Pb**	**19 54 52.5**	**-1.3**
KTBS	285nm,0.4s			*e*S	**Sb**	**19 55 24.1**	**+0.1**
ULHL	**Ulahol** SNR=82	**2.53**	**264**	P	**Pb**	**19 54 54.8**	**-0.5**
ULHL	**Ulahol** baz=63	**2.53**	**264**	⇑*i*P	**Pn**	**19 54 52.2**	**+1.2**
ULHL	baz=63			⇑*i*S	**Sb**	**19 55 24.5**	**-2.0**
TDK	**Taldyqorghan** 94nm,0.3s	**2.60**	**341**	Pg	**Pb**	**19 54 55.4**	**-1.0**
TDK	127nm,0.4s			Lg	Lg	19 55 29.3	
TDK	**Taldyqorghan** 94nm,0.3s	**2.60**	**341**	*e*P	**Pb**	**19 54 55.4**	**-1.0**
TDK	127nm,0.4s			*e*S	**Sb**	**19 55 29.3**	**+0.9**
BOOM	**Boomskoye usch** baz=69	**2.73**	**270**	⇑*i*P	**Pn**	**19 54 55.8**	**+2.1**
BOOM	baz=69			⇑*i*S	**Sn**	**19 55 29.2**	**+2.3**
KAPS	**Kapalarasan** 16nm,0.4s	**2.73**	**356**	Pg	**Pb**	**19 54 58.4**	**-0.4**
KAPS	28nm,0.5s			Lg	Lg	19 55 33.4	
KAPS	**Kapalarasan** 16nm,0.4s	**2.73**	**356**	*e*P	**Pb**	**19 54 58.4**	**-0.4**
KAPS	28nm,0.5s			*e*S	**Sb**	**19 55 33.4**	**+1.1**
KST	**Kastek** 52nm,0.2s	**2.74**	**281**	Pg	**Pb**	**19 54 57.7**	**-1.2**
KST	86nm,0.5s			Lg	Lg	19 55 33.2	
KST	**Kastek** 52nm,0.2s	**2.74**	**281**	*e*P	**Pb**	**19 54 57.7**	**-1.2**
KST	86nm,0.5s			⇑*i*S	**Sb**	**19 55 33.2**	**+0.6**
KUU	**Kurty** 4.9nm,0.3s	**2.75**	**300**	Pg	**Pb**	**19 54 58.2**	**-0.8**
KUU	124nm,0.2s			Lg	Lg	19 55 33.5	
KUU	**Kurty** 4.9nm,0.3s	**2.75**	**300**	*e*P	**Pb**	**19 54 58.2**	**-0.8**
KUU	124nm,0.2s			*e*S	**Sb**	**19 55 33.5**	**+0.8**
DGS	**Degeres** 37nm,0.3s	**2.92**	**285**	Pg	**Pb**	**19 55 00.4**	**-1.5**
DGS	103nm,0.5s			Lg	Lg	19 55 37.7	
DGS	**Degeres** 37nm,0.3s	**2.92**	**285**	*e*P	**Pb**	**19 55 00.4**	**-1.5**
DGS	103nm,0.5s			*e*S	**Sb**	**19 55 37.7**	**+0.1**
NRN	**Naryn** baz=48	**2.93**	**249**	⇓*i*P	**Pb**	**19 54 59.0**	**-3.2**
NRN	baz=48			⇓*i*S	**Sn**	**19 55 34.3**	**+2.3**
TKM2	**Tokmak 2** SNR=31	**2.99**	**278**	P	**Pn**	**19 54 59.3**	**+1.9**
TKM2	**Tokmak 2** 7.5nm,0.3s	**2.99**	**278**	⇑Pn	**Pn**	**19 54 59.2**	**+1.8**
TKM2	31nm,0.3s			⇓Lg	Lg	19 55 43.4	
TKM2	**Tokmak 2** baz=78	**2.99**	**278**	⇑*i*P	**Pn**	**19 54 59.3**	**+1.9**
TKM2	baz=78			⇑*i*S	**Sn**	**19 55 35.4**	**+2.0**
KZA	**Kyzart** SNR=21	**3.28**	**263**	P	**Pn**	**19 55 03.7**	**+2.1**
KZA	**Kyzart** baz=63	**3.28**	**263**	⇑*e*P	**Pn**	**19 55 03.7**	**+2.1**
KZA	baz=63			⇑*e*S	**Sn**	**19 55 42.6**	**+1.7**
KBK	**Karagaybulak** SNR=14	**3.46**	**273**	P	**Pn**	**19 55 05.5**	**+1.7**
KBK	**Karagaybulak** baz=73	**3.46**	**273**	⇑*i*P	**Pn**	**19 55 05.4**	**+1.7**
KBK	baz=73			⇑*i*S	**Sn**	**19 55 46.7**	**+1.8**
CHMS	**Chumysh** SNR=5.9	**3.62**	**279**	P	**Pb**	**19 55 13.9**	**+0.1**
CHMS	**Chumysh** baz=78	**3.62**	**279**	⇑*i*P	**Pn**	**19 55 07.6**	**+1.8**
CHMS	baz=78			⇑*i*S	**Sn**	**19 55 50.4**	**+1.8**
FRU1	**Bishkek** baz=75	**3.69**	**276**	⇑*i*P	**Pn**	**19 55 08.9**	**+2.0**
FRU1	baz=75			⇑*i*S	**Sn**	**19 55 52.0**	**+1.5**
AAK	**Ala-Archa** 6.0nm,0.5s	**3.79**	**273**	⇑Pg	**Pb**	**19 55 17.4**	**+0.6**
AAK	12nm,0.5s			⇑Lg	Lg	19 56 09.2	
AAK	**Ala-Archa** baz=73	**3.79**	**273**	⇓*e*P	**Pn**	**19 55 10.4**	**+2.1**
AAK	baz=73			⇓*i*S	**Sn**	**19 55 54.6**	**+1.5**
UCH	**Uchtor** SNR=8.6	**3.80**	**267**	P	**Pb**	**19 55 17.7**	**+0.6**
USP	**Ospenovka** SNR=7.8	**3.83**	**282**	P	**Pb**	**19 55 15.7**	**-1.8**
ARLS	**Aral** baz=61	**4.00**	**262**	⇓*i*P	**Pn**	**19 55 13.3**	**+2.1**
ARLS	baz=61			⇓*i*S	**Sn**	**19 55 59.4**	**+1.1**
EKS2	**Erkin-Say** SNR=9.8	**4.32**	**273**	P	**Pb**	**19 55 28.1**	**+2.3**
AML	**Almayashu** SNR=19	**4.42**	**266**	P	**Pb**	**19 55 29.6**	**+2.0**
MAKZ	**Makanchi** 1.1nm,0.2s	**4.57**	**21**	⇑Pn	**Pn**	**19 55 20.4**	**+1.6**
MAKZ	1.2nm,0.4s			⇑Sn	**Sn**	**19 56 14.0**	**+2.0**
MAKZ	3.2nm,0.5s			⇑Lg	Lg	19 56 33.0	
MK31	**Makanchi Array** 0.8nm,0.3s,baz=202,slow=13,SNR=50	**4.64**	**23**	⇑Pn	**Pn**	**19 55 21.2**	**+1.3**
MK31	1.0nm,0.3s,baz=204,slow=24,SNR=4.6			⇑Sn	**Sn**	**19 56 14.8**	**+1.0**
MK31	2.9nm,0.5s,baz=204,slow=26,SNR=3.7			⇑Lg	Lg	19 56 35.6	
MRKS	**Merke** 6.1nm,0.3s	**4.73**	**274**	Pg	**Pb**	**19 55 34.5**	**+1.8**
MRKS	9.9nm,0.3s			Lg	Lg	19 56 36.0	
MRKS	**Merke** 6.1nm,0.3s	**4.73**	**274**	*e*P	**Pb**	**19 55 34.5**	**+1.8**
MRKS	9.9nm,0.3s			*e*S	**Sg**	**19 56 36.0**	**-5.4**
MNAS	**Manas** 3.3nm,0.5s	**5.27**	**272**	⇓Pg	**Pb**	**19 55 45.5**	**+3.6**
MNAS	7.2nm,0.7s			⇓Lg	Lg	19 56 56.4	
SFK	**Sufi-Kurgan** 4.8nm,0.8s	**5.27**	**243**	⇑Pg	**Pg**	**19 55 46.8**	**-3.8**
SFK	9.5nm,1.0s			⇓Lg	Lg	19 56 56.2	
KK31	**Karatay Array** 0.8nm,0.4s,baz=78,slow=16,SNR=8.1	**6.73**	**278**	⇓Pg	**Pb**	**19 56 10.6**	**+3.9**
KK31	6.3nm,0.7s,baz=85,slow=26,SNR=10			⇑Lg	Lg	19 57 41.6	
OTUK	**Ortayu** 6.8nm,0.7s	**7.66**	**320**	⇓Lg	Lg	19 58 10.3	
KURK	**Kurchatov** 5.7nm,0.9s	**8.19**	**355**	⇑Lg	Lg	19 58 28.0	

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*ISCJB **01** 20:16:39.1±0.6, 20°.02S±0°.03×69°.34W±0°.09, h122^{km}±5^{km}, mb3.5/2, Error ellipse: s-maj=13.9km s-min=5.0km az=176.8*

*GUC **01** 20:16:39.5±0.5, 20°.01S×69°.28W, h111^{km}±2^{km}, ML3.6*

*IDC **01** 20:16:40.4±1.0, 20°.07S×68°.75W, h128^{km}±11^{km}, mb3.3/2, mb1 3.4/6, mb1mx3.1/24, mbtmp3.6/6, MS2.5/2, Ms1 2.5/2, ms1mx2.3/10, Error ellipse: s-maj=32.8km s-min=8.6km az=97.0*

ISC 01 20:16:38.9±0.9**, 20°.00S**±0°.04×**69°.24W**±0°.09**, h116**^{km}±7^{km}**, n18,** σ1^{s}.**30**/27**, 6C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.16**	**148**	⇓*i*P	**Pn**	**20 16 55.9**	**+0.4**
PB08				*i* S	**Sn**	**20 17 08.4**	**+0.5**
PB08	comp=N,2μm,0.3s			IAML		20 17 09.8	
PB11	**IPOC Station P**	**0.46**	**302**	⇓*i*P	**Pn**	**20 16 56.8**	**+0.5**
PB11				*i* S	**Sn**	**20 17 09.6**	**+0.1**
PB11	comp=E,6μm,0.2s			IAML		20 17 10.4	
PSGC	**Pisagua**	**0.92**	**296**	⇑*i*P	**Pn**	**20 17 00.3**	**+0.4**
PSGC				*i* S	**Sn**	**20 17 15.8**	**0.0**
PSGC	comp=E,2μm,0.3s			IAML		20 17 17.8	
MNMC	**Minye Minye**	**0.93**	**339**	⇑*i*P	**Pn**	**20 17 01.0**	**+0.8**
MNMC				*i* S	**Sn**	**20 17 17.2**	**+1.0**
MNMC	comp=E,3μm,0.2s			IAML		20 17 19.4	
PB01	**IPOC Station P**	**1.06**	**192**	⇓*i*P	**Pn**	**20 17 02.0**	**+0.7**
PB01				*i* S	**Sn**	**20 17 18.8**	**+0.5**
PB01	comp=N,3μm,0.2s			IAML		20 17 20.5	
PB02	**IPOC Station P**	**1.45**	**205**	⇓*i*P	**Pn**	**20 17 06.3**	**+0.8**
PB02				*i* S	**Sn**	**20 17 26.6**	**+0.8**
PB02	comp=E,1μm,0.4s			IAML		20 17 29.5	
PB12	**IPOC Station P**	**1.72**	**323**	⇑*i*P	**Pn**	**20 17 08.7**	**-0.1**
PB12				*i* S	**Sn**	**20 17 31.2**	**-0.3**
PB12	comp=N,389nm,0.2s			IAML		20 17 33.2	
PB09	**IPOC Station P**	**1.79**	**180**	⇑*i*P	**Pn**	**20 17 10.8**	**+1.1**
PB09	comp=N,499nm,0.7s			IAML		20 17 36.5	
PB07	**IPOC Station P**	**1.82**	**199**	*e*P	**Pn**	**20 17 10.9**	**+0.8**
PB07	comp=E,491nm,0.4s			IAML		20 17 37.4	
PB03	**IPOC Station P**	**2.09**	**193**	⇑*i*P	**Pn**	**20 17 14.1**	**+0.7**
PB03	comp=E,386nm,0.2s			IAML		20 17 42.6	
PB04	**IPOC Station P**	**2.47**	**200**	*e*P	**Pn**	**20 17 18.6**	**+0.3**
PB04	comp=N,395nm,0.1s			IAML		20 17 49.2	
LVC	**Limon Verde** comp=N,4.8nm,0.3s,baz=27,slow=10,SNR=74	**2.61**	**173**	P	**Pn**	**20 17 21.7**	**+1.4**
LVC	comp=N,24nm,0.3s,baz=273,slow=23,SNR=56			S	**Sn**	**20 17 53.1**	**+0.9**
PB06	**IPOC Station P**	**2.71**	**186**	⇑*i*P	**Pn**	**20 17 21.9**	**+0.5**
PB06				*i* S	**Sn**	**20 17 52.6**	**-1.4**
PB06	comp=N,241nm,0.4s			IAML		20 17 57.6	
LPAZ	**La Paz** comp=N,2.9nm,0.3s,baz=204,slow=5.8,SNR=50	**3.84**	**16**	P	**Pn**	**20 17 39.0**	**+2.2**
LPAZ	comp=N,0.4nm,0.3s,baz=299,slow=19,SNR=4.2			S	**Sn**	**20 18 23.2**	**+1.6**
LPAZ	comp=N,40nm,19.8s,baz=58,slow=46			LR	LR	20 19 36.3	
SIV	**San Ignacio** comp=N,0.1nm,0.3s,baz=279,slow=15,SNR=2.5	**8.74**	**64**	P	**Pn**	**20 18 38.4**	**-4.0**
SIV	comp=N,51nm,21.9s,baz=76,slow=42			LR	LR	20 22 29.4	
CPUP	**Villa Florida** comp=N,0.3nm,0.3s,baz=294,slow=4.3,SNR=3.2	**12.64**	**122**	P	Pn	20 19 29.6	-4.9
TORD	**Torodi Ar. Bea** comp=N,0.2nm,0.3s,baz=250,slow=5.1,SNR=4.2	**77.16**	**71**	P	**P**	**20 28 18.6**	**-1.6**
YKA	**Yellowknife Ar** comp=N,0.5nm,0.7s,baz=134,slow=4.5,SNR=10	**89.68**	**341**	P	**P**	**20 29 24.1**	**+0.8**

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*NIED **01** 20:52:00, 36°.20N×141°.10E, h38^{km}, Mw4.2 Best double couple: $M_0$1.99000×10^{15} NP1:ϕ_s246.00000°, δ21.00000°, λ156.00000°. NP2:ϕ_s358.00000°, δ82.00000°, λ71.00000°.*

*ISCJB **01** 20:52:44.6±0.6, 36°.22N±0°.03×141°.07E±0°.06, h39^{km}±4^{km}, mb3.9/24, MS3.2/8, Error ellipse: s-maj=7.5km s-min=4.6km az=11.4*

*JMA **01** 20:52:45.1±0.1, 36°.19N×140°.98E, h44^{km}±1^{km}, M3.9*

JMA Felt II J1.

*IDC **01** 20:52:46.0±4.0, 36°.21N×140°.95E, h33^{km}±30^{km}, mb3.7/22, mb1 3.9/25, mb1mx3.8/64, mbtmp3.9/25, ML3.6/3, MS3.2/11, Ms1 3.3/11, ms1mx3.0/58, Error ellipse: s-maj=14.9km s-min=13.1km az=112.0*

ISC 01 20:52:45.2±1.2**, 36°.23N**±0°.03×**141°.03E**±0°.05**, h27**^{km}±8^{km}**, n62,** σ0^{s}.**88**/66**, mb4.1**/33**, MS3.2**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.38**	**287**	P	**Pn**	**20 52 54.4**	**-0.4**
JHYU				S	**Sn**	**20 53 00.6**	**-0.6**
JIHU	**Itakohorinouch**	**0.49**	**237**	P	**Pb**	**20 52 55.8**	**+0.5**
JIHU				S	**Sn**	**20 53 03.4**	**-0.6**
JHO	**Hitachi**	**0.53**	**315**	P	**Pb**	**20 52 56.2**	**+0.2**
CHOJ	**Chosi**	**0.55**	**195**	P	**Pb**	**20 52 55.9**	**-0.4**
CHOJ				S	**Sb**	**20 53 03.1**	**-0.7**
JYT	**Yasato**	**0.68**	**270**	P	**Pb**	**20 52 57.8**	**-0.6**
JYT				S	**Sb**	**20 53 06.5**	**-1.0**
JSMT	**Sammumatsuo**	**0.76**	**219**	P	**Pb**	**20 52 59.2**	**-0.6**
JSMT				S	**Sb**	**20 53 09.6**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.89**	**348**	P	**Pn**	**20 53 01.2**	**-0.8**
ONAJ				S	**Sb**	**20 53 12.4**	**-1.1**
JFFD	**Fukushimafurud**	**0.94**	**336**	P	**Pn**	**20 53 02.2**	**-0.4**
JCN	**Nagara**	**1.06**	**220**	P	**Pn**	**20 53 04.3**	**+0.1**
JFK	**Kawauchi**	**1.14**	**354**	P	**Pn**	**20 53 04.6**	**-0.8**
TOK	**Tokyo**	**1.17**	**243**	P	**Pn**	**20 53 05.6**	**-0.1**
JAG	**Ashikaga**	**1.29**	**279**	P	**Pn**	**20 53 06.6**	**-0.8**
MJAR	**Matsushiro Arr** 2.7nm,0.3s,baz=218,slow=24,SNR=140	**2.30**	**279**	Pn	**Pn**	**20 53 21.4**	**+0.1**
MJAR	3.5nm,0.3s,baz=92,slow=12,SNR=9.8			Sn	**Sn**	**20 53 48.5**	**-0.3**
MJAR	comp=Z,536nm,19.0s,baz=115,slow=44			LR	LR	20 54 24.2	
MAT	**Matsushiro**	**2.30**	**279**	P	**Pn**	**20 53 21.5**	**+0.2**
MAT				S	**Sn**	**20 53 50.4**	**+1.6**
JHJ	**Hachijo jima 2** 13nm,0.3s,baz=176,slow=24,SNR=6.5	**3.27**	**199**	Pn	**Pn**	**20 53 35.0**	**+0.3**
JHJ	21nm,0.3s,baz=73,slow=19,SNR=3.7			Sn	**Sn**	**20 54 11.4**	**-1.3**
ASAJ	**Asahikawa** 1.8nm,0.3s,baz=236,slow=9.6,SNR=15	**7.96**	**8**	Pn	**Pn**	**20 54 38.1**	**-1.0**
ASAJ	0.9nm,0.3s,baz=78,slow=18,SNR=3.2			Sn	**Sn**	**20 56 08.5**	**+0.3**
JNU	**Nakatsue** comp=Z,282nm,18.7s,baz=115,slow=40	**8.92**	**253**	LR	LR	20 58 37.3	
USRK	**Ussuriysk Ar.** 0.2nm,0.3s,baz=139,slow=14,SNR=5.2	**10.54**	**322**	Pn	**Pn**	**20 55 18.4**	**+4.1**
KSRS	**Korea Array** comp=Z,114nm,21.0s,baz=73,slow=34	**10.58**	**281**	LR	LR	20 58 48.7	
PETK	**Petropavlovsk-** 2.6nm,0.9s,baz=196,slow=14,SNR=3.5	**20.53**	**30**	P	**P**	**20 57 22.4**	**+1.1**
PETK	comp=Z,26nm,21.6s,baz=222,slow=37			LR	LR	21 05 29.0	
HHC	**Hu-ho-hao-te**	**23.45**	**290**	*e*P	**P**	**20 57 52.8**	**+0.4**
HHC	comp=Z,12nm,0.7s			pmax	pmax		
XAN	**Xi'an**	**26.29**	**275**	P	**P**	**20 58 18.1**	**-0.4**
XAN	comp=Z,7.0nm,1.1s			pmax	pmax		
XAN	comp=Z,87nm,4.9s			pmax	pmax		
SONM	**Songino Array** comp=Z,1.2nm,0.6s,baz=110,slow=9.4,SNR=8.4	**27.99**	**305**	P	**P**	**20 58 33.1**	**-0.6**
SONM	comp=Z,66nm,20.2s,baz=343,slow=36			LR	LR	21 09 37.2	
H11N2	**WAKE ISLAND Hy** baz=312,slow=75,SNR=43	**28.02**	**119**	T	T	21 28 03.5	
H11N1	**WAKE ISLAND Hy** baz=312,slow=75,SNR=48	**28.02**	**119**	T	T	21 27 53.2	
H11N3	**WAKE ISLAND Hy** baz=312,slow=75,SNR=52	**28.03**	**119**	T	T	21 27 54.1	
H11S1	**WAKE ISLAND Hy** baz=314,slow=76,SNR=194	**28.70**	**121**	T	T	21 28 47.7	
H11S3	**WAKE ISLAND Hy** baz=314,slow=76,SNR=137	**28.70**	**121**	T	T	21 28 49.2	
H11S2	**WAKE ISLAND Hy** baz=314,slow=76,SNR=150	**28.71**	**121**	T	T	21 28 52.1	
TLY	**Talaya** comp=Z,97nm,20.1s,baz=78,slow=34	**30.63**	**312**	LR	LR	21 10 07.2	
GTA	**Gaotai**	**32.51**	**288**	*e*P	**P**	**20 59 14.0**	**+0.2**
GTA				pP	pP	20 59 18.4	-3.4
GTA				sP	sP	20 59 21.9	-3.1
GTA	comp=Z,2.0nm,1.0s			pmax	pmax		
CMAR	**Chiang Mai Arr** comp=Z,0.4nm,0.5s,baz=48,slow=6.7,SNR=4.0	**41.00**	**256**	P	**P**	**21 00 27.1**	**+1.1**
CMAR	comp=Z,31nm,19.7s,baz=35,slow=36			LR	LR	21 17 14.3	
ZALV	**Zalesovo Beam** comp=Z,1.6nm,0.5s,baz=84,slow=6.9,SNR=9.5	**42.23**	**313**	P	**P**	**21 00 35.5**	**-0.2**
ZALV	comp=Z,0.6nm,0.6s,baz=120,slow=5.2,SNR=3.4			PcP	**PcP**	**21 02 28.8**	**-0.5**
ZALV	comp=Z,24nm,18.4s,baz=70,slow=37			LR	LR	21 18 57.4	
MKAR	**Makanchi Array** comp=Z,1.5nm,0.8s,baz=84,slow=11,SNR=16	**44.29**	**303**	P	**P**	**21 00 51.4**	**-1.1**
MKAR	comp=Z,0.4nm,0.7s,baz=87,slow=3.3,SNR=2.8			PcP	**PP**	**21 02 35.8**	**0.0**
MKAR	comp=Z,36nm,18.5s,baz=24,slow=37			LR	LR	21 19 53.9	
KURBB	**Kurchatov Arra** comp=Z,2.7nm,0.6s,baz=82,slow=7.6,SNR=24	**46.26**	**309**	P	**P**	**21 01 07.6**	**-0.4**
RAMN	**Ramite** comp=Z,27nm,1.1s	**46.76**	**275**	*e*P	**P**	**21 01 12.3**	**-0.2**
JIRN	**Jiri** comp=Z,44nm,1.3s	**46.79**	**276**	*e*P	**P**	**21 01 12.3**	**-0.6**
GUN	**Gumba** comp=Z,14nm,0.9s	**46.93**	**276**	*e*P	**P**	**21 01 13.5**	**-0.5**
PKI	**Pulchoki** comp=Z,11nm,0.9s	**47.45**	**276**	*e*P	**P**	**21 01 16.8**	**-1.3**
PKIN	**Phulchoki** comp=Z,13nm,1.3s	**47.46**	**276**	*e*P	**P**	**21 01 16.7**	**-1.3**
KKN	**Kakani** comp=Z,7.5nm,0.7s	**47.47**	**276**	*e*P	**P**	**21 01 17.8**	**-0.2**
DANN	**Dangsing** comp=Z,55nm,0.9s	**48.45**	**278**	*e*P	**P**	**21 01 26.0**	**+0.3**
KOLN	**Koldanda** comp=Z,11nm,1.0s	**48.82**	**277**	*e*P	**P**	**21 01 28.6**	**+0.1**
PYUN	**Piuthan** comp=Z,41nm,0.9s	**49.17**	**278**	*e*P	**P**	**21 01 31.4**	**+0.2**
ILAR	**Eielson Array** comp=Z,0.9nm,0.7s,baz=268,slow=5.8,SNR=14	**50.33**	**32**	P	**P**	**21 01 39.9**	**+0.7**
AAK	**Ala-Archa** comp=Z,0.4nm,0.4s,baz=169,slow=0.5,SNR=4.5	**50.60**	**299**	P	**P**	**21 01 41.5**	**-0.3**
BVAR	**Borovoye Array** comp=Z,0.7nm,0.5s,baz=64,slow=6.6,SNR=8.7	**50.89**	**313**	P	**P**	**21 01 42.9**	**-0.7**
BVAR	comp=Z,0.7nm,0.8s,baz=64,slow=6.6,SNR=2.7			PcP	**PcP**	**21 02 59.8**	**0.0**
BVAR	comp=Z,26nm,18.1s,baz=8.0,slow=37			LR	LR	21 24 07.5	
INK	**Inuvik** comp=Z,0.7nm,0.5s,baz=314,slow=8.8,SNR=5.7	**55.24**	**27**	P	**P**	**21 02 16.6**	**+1.3**
WRA	**Warramunga Arr** comp=Z,0.9nm,0.4s,baz=5.0,slow=7.4,SNR=25	**56.23**	**188**	P	**P**	**21 02 21.4**	**-1.6**
AKTO	**Aktyubinsk** comp=Z,1.2nm,0.8s,baz=76,slow=9.3,SNR=4.9	**58.98**	**312**	P	**P**	**21 02 42.0**	**-0.1**
AKTO	comp=Z,16nm,18.2s,baz=24,slow=38			LR	LR	21 29 42.2	
ASAR	**Alice Springs** comp=Z,1.1nm,0.7s,baz=11,slow=7.7,SNR=11	**59.95**	**188**	P	**P**	**21 02 48.6**	**-0.5**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.5s,baz=303,slow=6.3,SNR=4.5	**64.65**	**30**	P	**P**	**21 03 19.8**	**-0.3**
FINES	**FINESS Array B** comp=Z,1.0nm,0.6s,baz=64,slow=8.7,SNR=6.9	**69.38**	**332**	P	**P**	**21 03 49.7**	**-0.4**
KBZ	**Khabaz** comp=Z,3.2nm,0.9s,baz=225,slow=1.0,SNR=5.0	**71.19**	**311**	P	**P**	**21 04 01.0**	**-0.5**
GNI	**Garni** comp=Z,2.2nm,0.7s,baz=0.0,slow=20,SNR=3.1	**71.94**	**307**	P	**P**	**21 04 06.8**	**+0.5**
AKASG	**Malin Array Be** comp=Z,1.3nm,0.5s,baz=46,slow=6.0,SNR=8.1	**74.74**	**322**	P	**P**	**21 04 21.2**	**-1.2**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.6s,baz=40,slow=5.9	**74.81**	**337**	P	**P**	**21 04 22.2**	**-0.5**
NOA	**NORSAR Array B** comp=Z,2.3nm,1.0s,baz=38,slow=5.7,SNR=4.6	**74.81**	**337**	P	**P**	**21 04 22.1**	**-0.6**
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.5s,baz=290,slow=3.7,SNR=2.9	**75.72**	**53**	P	**P**	**21 04 29.9**	**+1.3**
PDAR	**Pinedale Array** comp=Z,0.3nm,0.6s,baz=260,slow=1.2,SNR=4.6	**78.45**	**45**	P	**P**	**21 04 44.2**	**+0.4**
GERES	**GERESS Array B** comp=Z,0.6nm,0.5s,baz=79,slow=6.9,SNR=4.7	**83.23**	**328**	P	**P**	**21 05 08.9**	**-0.2**
LPAZ	**La Paz** comp=Z,0.6nm,0.5s,baz=315,slow=4.3,SNR=3.1	**147.36**	**60**	PKPbc	**PKPbc**	**21 12 27.7**	**+0.1**

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*IDC **01** 21:00:58.9±6.0, 36°.33N×70°.15E, h176^{km}±42^{km}, mb3.0/1, mb1 2.8/7, mb1mx2.7/55, mbtmp3.4/7, Error ellipse: s-maj=81.2km s-min=23.6km az=153.0*

*ISCJB **01** 21:01:00.5±0.7, 36°.46N±0°.04×70°.08E±0°.09, h213^{km}, Error ellipse: s-maj=10.6km s-min=5.6km az=166.3*

*NNC **01** 21:01:05.1±3.8, 37°.00N×69°.83E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=27.4km s-min=26.5km az=30.0*

ISC 01 21:01:01.0±1.0**, 36°.49N**±0°.08×**70°.04E**±0°.09**, h213**^{km}**, n21,** σ**1**^{s}.**39**/25**, 5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 1.5nm,0.4s	**4.45**	**37**	⇓Pn	**Pn**	**21 02 10.5**	**+1.5**
SFK	7.8nm,0.3s			⇓Sn	**S**	**21 03 01.1**	**-1.3**
MNAS	**Manas** 0.3nm,0.4s	**6.29**	**17**	⇑Pn	**Pn**	**21 02 34.2**	**+2.0**
MNAS	2.6nm,0.6s			⇑Sn	**S**	**21 03 43.4**	**-1.1**
KK31	**Karatay Array** 2.0nm,0.6s,baz=186,slow=22	**6.62**	**3**	⇑Sn	**S**	**21 03 48.5**	**-3.6**
AAK	**Ala-Archa** 1.1nm,0.5s	**7.04**	**28**	⇑Pn	**Pn**	**21 02 43.0**	**+1.2**
AAK	3.8nm,0.9s			⇑Sn	**S**	**21 04 01.1**	**-1.0**
AAK	**Ala-Archa** 0.4nm,0.3s,baz=186,slow=1.8,SNR=8.1	**7.04**	**28**	P	**Pn**	**21 02 42.4**	**+0.5**
AAK	0.1nm,0.3s,baz=131,slow=23,SNR=8.6			S	**S**	**21 04 00.4**	**-1.7**
GEYT	**Alibeck** 0.3nm,0.3s,baz=97,slow=12,SNR=5.3	**9.62**	**282**	P	**Pn**	**21 03 14.1**	**-1.1**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=224,slow=12,SNR=6.7	**13.76**	**38**	P	**P**	**21 04 08.7**	**-0.6**
PYUN	**Piuthan** 5.1nm,0.3s	**13.77**	**124**	*e*P	**Pn**	**21 04 07.5**	**-0.3**
DANN	**Dangsing** 7.3nm,0.3s	**14.13**	**121**	*e*P	**Pn**	**21 04 12.1**	**-0.3**
KOLN	**Koldanda** 3.7nm,0.4s	**14.39**	**123**	*e*P	**Pn**	**21 04 14.8**	**-0.7**
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=211,slow=10,SNR=3.3	**15.39**	**21**	P	**Pn**	**21 04 27.6**	**+0.3**
DMN	**Daman** 4.3nm,0.3s	**15.52**	**120**	*e*P	**P**	**21 04 28.7**	**-0.5**
KKN	**Kakani**	**15.53**	**120**	*e*P	**P**	**21 04 29.1**	**-0.1**
PKIN	**Phulchoki** 5.4nm,0.4s	**15.74**	**120**	*e*P	**Pn**	**21 04 32.6**	**+0.6**
PKI	**Pulchoki** 2.8nm,0.3s	**15.76**	**120**	*e*P	**Pn**	**21 04 32.4**	**+0.2**
GUN	**Gumba** 4.7nm,0.4s	**15.88**	**118**	*e*P	**P**	**21 04 32.9**	**-0.3**
JIRN	**Jiri** 12nm,0.3s	**16.25**	**118**	*e*P	**Pn**	**21 04 38.2**	**0.0**
AKTO	**Aktyubinsk** 0.2nm,0.3s,baz=163,slow=11,SNR=4.5	**16.42**	**332**	P	**Pn**	**21 04 41.8**	**+2.3**
BVAR	**Borovoye Array** 0.1nm,0.3s,baz=171,slow=11,SNR=4.2	**16.54**	**1**	P	**Pn**	**21 04 43.4**	**+2.5**
RAMN	**Ramite** 4.7nm,0.3s	**16.97**	**119**	*e*P	**Pn**	**21 04 46.1**	**-0.5**
ZALV	**Zalesovo Beam** 1.1nm,0.5s,baz=212,slow=11,SNR=6.7	**20.25**	**26**	P	**P**	**21 05 20.3**	**+0.4**

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*ISCJB **01** 21:03:47.3±1.0, 65°.57N±0°.03×144°.33W±0°.05, h1^{km}±7^{km}, mb3.8/12, MS3.3/8, Error ellipse: s-maj=4.5km s-min=3.5km az=30.4*

*IDC **01** 21:03:48.9±0.5, 65°.53N×144°.48W, h0^{km}, mb3.8/12, mb1 4.1/16, mb1mx3.8/64, mbtmp3.8/16, ML4.0/4, MS3.2/10, Ms1 3.2/10, ms1mx2.9/60, Error ellipse: s-maj=11.9km s-min=8.3km az=176.0*

*NEIC **01** 21:03:50.4±0.0, 65°.52N×144°.46W, h14^{km}, MW4.0, ML4.3(AEIC) Best double couple: NP1:ϕ_s31.00000°, δ85.00000°, λ42.00000°. NP2:ϕ_s297.00000°, δ48.00000°, λ173.00000°. Principal axes: T 1.0500, Plg32.0000°, Azm263.0000°; N 0.0000, Plg47.0000°, Azm37.0000°; P -1.0500, Plg24.0000°, Azm156.0000°; After AEIC.*

ISC 01 21:03:49.1±1.9**, 65°.53N**±0°.04×**144°.38W**±0°.04**, h6^{km}**±13^{km}**, n110, σ1^{s}.76**/114**, mb3.9**/12**, MS3.4**/8**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRP	Porcupine Dome	0.48	269	P	Pb	21 03 59.2	-0.8
PRP				S	Sg	21 04 05.2	+0.6
FYU	Fort Yukon	1.10	342	P	Pn	21 04 11.1	+0.1
FYU				S	Sn	21 04 27.0	+0.5
IL1	Eielson Array	1.30	235	*e*Pn	Pn	21 04 13.1	-0.8
ILAR	Eielson Array	1.30	235	Pg	Pn	21 04 13.2	-0.7
	483nm,0.3s,baz=51,slow=17						
ILAR				Lg	Lg	21 04 29.6	
	1μm,0.3s,baz=52,slow=28,SNR=51						
ILB	Eielson Array	1.30	235	*e*Pn	Pn	21 04 13.3	-0.6
PS08	TAPS Pump Stn8	1.43	227	P	Pn	21 04 15.3	-0.3
PS08				S	Sg	21 04 34.7	-0.4
SCRK	Sand Creek	1.57	174	P	Pn	21 04 17.9	+0.3
SCRK				S	Sn	21 04 38.8	+0.6
HDA	Harding Lake	1.57	225	P	Pn	21 04 17.1	-0.4
COLA	College	1.61	247	*e*Pn	Pn	21 04 17.6	-0.4
COLA				*e*S	Sg	21 04 40.3	-0.3
PS07	TAPS Pump Stn7	1.65	264	P	Pn	21 04 18.2	-0.4
PS07				S	Sg	21 04 40.9	-1.0
MDM	Murphy Dome	1.72	252	P	Pn	21 04 18.9	-0.7
RIDG	Independ'e Rid	1.81	187	P	Pn	21 04 21.1	+0.3
DOT	Dot Lake	1.89	176	P	Pn	21 04 22.1	+0.2
BM3	Burnt Mountain	1.90	357	P	Pn	21 04 22.3	+0.2
WRH	Wood River Hil	1.90	238	P	Pn	21 04 21.6	-0.5
NEA	Nenana	2.21	247	P	Pn	21 04 25.3	-0.9
PS06	TAPS Pump Stn6	2.24	281	P	Pn	21 04 25.6	-1.1
BWN	Browne	2.56	240	P	Pn	21 04 29.9	-1.2
DAWY	Dawson	2.59	122	P	Pn	21 04 30.6	-0.9
PAX	Paxson	2.61	191	P	Pn	21 04 32.5	+0.6
MCK	McKinley	2.67	229	P	Pn	21 04 32.6	0.0
MLY	Manley	2.72	262	P	Pn	21 04 32.1	-1.3
DHY	Denali Highway	2.79	209	*e*Pn	Pn	21 04 35.2	+0.8
PS05	TAPS Pump Stn5	2.86	300	P	Pn	21 04 34.6	-0.6
RND	Reindeer	2.88	224	P	Pn	21 04 36.0	+0.4
COLD	Coldfoot	2.90	309	P	Pn	21 04 35.7	-0.1
HARP	HAARP	3.15	187	*e*Pn	Pn	21 04 40.4	+1.1
BPAW	Bear Paw Mtn.	3.17	246	P	Pn	21 04 38.4	-1.1
TRF	Thorofare Moun	3.30	233	P	Pn	21 04 41.3	-0.1
HUR	Hurricane	3.44	224	P	Pn	21 04 44.2	+1.0
BVCY	Beaver Creek	3.49	152	P	Pn	21 04 44.1	+0.2
PS11	TAPS Pump St11	3.50	188	P	Pn	21 04 45.5	+1.6
PS04	TAPS Pump Stn4	3.50	328	P	Pn	21 04 45.0	+1.0
IM3	Indian Mountai	3.89	281	P	Pn	21 04 48.0	-1.3
SCM	Sheep Creek Mo	3.94	201	P	Pn	21 04 51.5	+1.4
CAST	Castle Rocks	3.95	241	P	Pn	21 04 49.1	-1.1
KLU	Klutina	4.11	190	P	Pn	21 04 53.9	+1.4
SML	Sawmill	4.13	207	P	Pn	21 04 54.6	+1.9
YUK3	Moose Creek	4.15	153	P	Pn	21 04 53.4	+0.2
GHO	Glory Hole Cre	4.28	210	*e*Pn	Pn	21 04 55.9	+1.1
PPLA	Purkeypile	4.31	236	P	Pn	21 04 54.9	-0.5
DIV	Divide	4.46	189	P	Pn	21 04 59.4	+2.1
PMR	Palmer	4.49	210	*e*Pn	Pn	21 04 58.9	+1.4
KNK	Knik Glacier	4.52	206	P	Pn	21 05 00.0	+2.0
GLI	Glacier Island	4.83	196	P	Pn	21 05 03.4	+1.2
YUK4	Talbot Arm	4.92	146	P	Pn	21 05 03.2	-0.5
SUA	Susitna One	4.98	218	P	Pn	21 05 05.6	+1.2
PWL	Port Wells	5.02	203	P	Pn	21 05 06.4	+1.6
EYAK	Cordova Ski Ar	5.04	188	P	Pn	21 05 07.0	+1.9
SGAM	Sherman Glacie	5.06	185	P	Pn	21 05 07.5	+2.0
RC01	Rabbit Creek A	5.07	211	P	Pn	21 05 08.1	+2.6
INK	Inuvik	5.10	52	*e*Pn	Pn	21 05 06.5	+0.6
INK				*e*S	Sn	21 06 01.5	-3.5
INK	Inuvik	5.10	52	Pn	Pn	21 05 05.8	-0.2
	4.9nm,0.3s,baz=232,slow=15,SNR=63						
INK				Sn	Sn	21 05 59.4	-5.6
	6.2nm,0.3s,baz=278,slow=14,SNR=2.1						
INK				Lg	Lg	21 06 23.1	
	12nm,0.3s,baz=187,slow=13,SNR=6.1						
HMT	Hamilton	5.21	179	*e*Pn	Pn	21 05 10.2	+2.6
YUK5	Granite Creek	5.30	143	P	Pn	21 05 09.3	+0.4
YUK6	Outpost Mounta	5.34	147	P	Pn	21 05 10.4	+0.8
KULT	Kultieth River	5.36	171	P	Pn	21 05 11.3	+1.8
RKAV	Rock Avalanche	5.43	164	P	Pn	21 05 12.7	+2.0
HYT	Haines Junctio	5.65	143	P	Pn	21 05 14.3	+0.7
SAMH	Samovar Hills	5.66	161	P	Pn	21 05 16.3	+2.5
TT01	Tatalina	5.72	248	P	Pn	21 05 13.4	-1.1
YUK7	Dusty Glacier	5.76	148	P	Pn	21 05 16.3	+1.1
SEW	Seward	5.92	205	*e*Pn	Pn	21 05 18.7	+1.5
MID	Middleton Isla	6.19	189	*e*Pn	Pn	21 05 22.0	+1.1
RSO	Redoubt South	6.35	221	*e*Pn	Pn	21 05 25.3	+1.9
RDWB	Redoubt West	6.35	221	P	Pn	21 05 25.0	+1.7
WHY	Whitehorse	6.51	134	P	Pn	21 05 25.2	-0.2
BRLK	Bradley Lake	6.51	210	*e*Pn	Pn	21 05 27.1	+1.7
SVW2	Sparrevohn	6.72	234	*e*Pn	Pn	21 05 28.5	+0.3
PLBC	Pleasant Camp	7.13	145	P	Pn	21 05 34.8	+1.0
SKAG	Skagway	7.38	141	*e*Pn	Pn	21 05 38.0	+0.8
RDOG	Red Dog Mine	7.73	297	*e*Pn	Pn	21 05 40.9	-1.2
BESE	Bessie Mountai	8.27	143	P	Pn	21 05 50.9	+1.3
JIS	Juneau Island	8.66	142	*e*Pn	Pn	21 05 50.8	-4.0
KDAK	Kodiak Island	8.69	210	*e*Pn	Pn	21 05 54.5	-0.7
KDAK				*e*S	Sn	21 07 26.4	-6.9
KDAK	Kodiak Island	8.69	210	Pn	Pn	21 05 53.5	-1.6
	0.5nm,0.3s,baz=120,slow=19,SNR=9.5						
KDAK				Sn	Sn	21 07 26.2	-7.1
	0.5nm,0.3s,baz=127,slow=20,SNR=2.1						
KDAK				LR	LR	21 08 34.2	
	comp=Z,46nm,20.9s,baz=65,slow=33						
ANM	Nome	8.92	273	P	Pn	21 05 57.2	-1.1
OHAK	Old Harbor	9.36	211	*e*Pn	Pn	21 06 02.5	-1.8
SIT	Sitka	9.54	149	*e*Pn	Pn	21 06 04.6	-2.1
DLBC	Dease Lake	9.78	130	Pn	Pn	21 06 11.4	+1.2
	2.2nm,0.3s,baz=342,slow=8.7,SNR=14						
DLBC				Lg	Lg	21 08 54.1	
	1.3nm,0.3s,baz=68,slow=26,SNR=11						
DLBC				LR	LR	21 10 20.4	
	comp=Z,62nm,18.2s,baz=352,slow=40						
WRAK	Wrangell Islan	10.82	142	*e*Pn	Pn	21 06 25.9	+1.5
YKA	Yellowknife Ar	13.33	89	Pn	Pn	21 06 55.3	-3.3
	0.6nm,0.3s,baz=290,slow=13,SNR=39						
YKA				Sn	Sn	21 09 16.1	-11
	0.9nm,0.3s,baz=294,slow=21,SNR=6.2						
RES	Resolute Bay	18.50	40	P	P	21 08 04.4	-1.0
	0.1nm,0.3s,baz=244,slow=16,SNR=3.2						
B08A	Colville Reser	21.71	130	*e*P	P	21 08 42.2	+1.6
LON	Longmire	22.40	136	*e*P	P	21 08 48.8	+0.8
SEY	Seymchan	26.59	294	P	P	21 09 28.2	+0.7
	0.9nm,0.5s,baz=0.0,slow=20,SNR=5.6						
MA2	Magadan	29.23	289	LR	LR	21 22 19.5	
	comp=Z,32nm,18.8s,baz=102,slow=38						
PDAR	Pinedale Array	29.90	122	P	P	21 09 58.6	+1.0
	0.8nm,0.8s,baz=0.0,slow=4.4,SNR=6.2						
NV01	Mina Array Sit	31.06	138	*e*P	P	21 10 10.1	+2.2
NVAR	Mina Array Bea	31.06	138	P	P	21 10 10.5	+2.7
	3.4nm,0.8s,baz=321,slow=7.6,SNR=20						
NVAR				LR	LR	21 22 50.4	
	comp=Z,71nm,21.5s,baz=343,slow=37						
OMMB	Old Mammoth Mi	31.64	140	*e*P	P	21 10 15.0	+2.0
TMUT	Trail Mountain	32.43	128	*e*P	P	21 10 20.2	+0.2
NRIK	Noril'sk	40.64	335	LR	LR	21 30 19.8	
	comp=Z,27nm,18.8s,baz=46,slow=39						
TX31	Lajitas Ar. Si	44.04	125	*e*P	P	21 11 59.0	+1.5
TXAR	Lajitas Array	44.04	125	P	P	21 11 59.2	+1.7
	1.5nm,0.8s,baz=338,slow=6.0,SNR=15						
KLR	Kul'dur	44.30	291	P	P	21 11 58.4	-0.9
	1.2nm,0.7s,baz=316,slow=14,SNR=4.2						
TKL	Tuckaleechee C	46.04	100	LR	LR	21 30 12.0	
	comp=Z,54nm,19.1s,baz=336,slow=34						
USRK	Ussuriysk Ar.	48.33	287	P	P	21 12 31.0	+0.1
	1.9nm,0.8s,baz=4.0,slow=8.2,SNR=6.0						
CN2	Changchun	51.23	292	*e*P	P	21 12 55.2	+2.2
MJAR	Matsushiro Arr	52.26	276	LR	LR	21 38 38.1	
	comp=Z,25nm,18.3s,baz=210,slow=40						
FINES	FINESS Array B	53.14	6	P	P	21 13 08.9	+2.0
	1.3nm,0.7s,baz=12,slow=9.8,SNR=6.3						
SONM	Songino Array	54.59	309	P	P	21 13 19.7	+1.7
	0.4nm,0.7s,baz=28,slow=5.9,SNR=3.7						
ZALV	Zalesovo Beam	55.08	327	LR	LR	21 41 05.7	
	comp=Z,32nm,18.1s,baz=68,slow=41						
KURK	Kurchatov	59.46	330	P	P	21 13 53.6	+1.4
KURBB	Kurchatov Arra	59.57	330	P	P	21 13 53.6	+0.7
	0.4nm,0.7s,baz=348,slow=2.7,SNR=4.2						
MKAR	Makanchi Array	62.34	326	P	P	21 14 11.2	-0.7
	0.3nm,0.7s,baz=51,slow=9.6,SNR=4.2						
MKAR				LR	LR	21 46 08.6	
	comp=Z,29nm,19.5s,baz=348,slow=41						
WMQ	Urumqi	63.77	320	*e*P	P	21 14 24.1	+2.6
AKASG	Malin Array Be	64.00	5	P	P	21 14 24.2	+1.4
	0.5nm,0.5s,baz=359,slow=7.0,SNR=2.9						
CMAR	Chiang Mai Arr	83.77	301	P	P	21 16 18.6	-0.3
	0.6nm,0.7s,baz=360,slow=6.4,SNR=5.9						
TORD	Torodi Ar. Bea	97.54	33	LR	LR	22 03 12.7	
	comp=Z,17nm,18.3s,baz=285,slow=36						

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*ISCJB **01** 21:12:45.0±0.3, 70°.77N±0°.03×6°.56W±0°.07, h16^{km}, mb3.0/1, MS2.9/1, Error ellipse: s-maj=4.8km s-min=2.8km az=157.8*

*IDC **01** 21:12:44.8±1.1, 70°.82N×6°.97W, h0^{km}, mb2.9/1, mb1 3.7/7, mb1mx3.3/67, mbtmp3.6/7, ML3.2/5, MS2.9/1, Ms1 2.9/1, ms1mx2.4/8, Error ellipse: s-maj=29.0km s-min=13.4km az=18.0*

*BER **01** 21:12:49.7±3.2, 70°.87N×6°.72W, h0^{km}±26^{km}, ML2.9, Confirmed Earthquake*

*REY **01** 21:12:51.1, 70°.69N×8°.10W, h10^{km}*

ISC 01 21:12:46.9±0.7**, 70°.76N**±0°.06×**6°.50W**±0°.04**, h16^{km}, n48, σ2^{s}.29**/65**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	Jan Mayen	0.70	290	Pn	Pg	21 12 59.5	-1.0
	199nm,0.3s,baz=81,slow=3.5,SNR=261						
JMIC				Sn	Sg	21 13 07.7	-2.0
	1μm,0.3s,baz=142,slow=19,SNR=273						
JMIC	Jan Mayen	0.70	290	*e*P	Pg	21 12 59.5	-1.0
JMIC				*e*S	Sg	21 13 07.7	-2.0
JMIC				IAML		21 13 08.4	
	comp=Z,3μm,0.4s						
ILEI	Leirhofn	5.70	225	P	Pn	21 14 10.6	0.0
	baz=220						
ILEI				S	Sn	21 15 14.9	-0.7
	baz=220						
IGIL	Gilhagi	5.94	222	P	Pn	21 14 14.9	+0.9
	baz=217						
IGIL				S	Sn	21 15 22.2	+0.6
	baz=217						
IHED	Heoinshofoi	6.16	225	P	Pn	21 14 18.6	+1.6
	baz=221						
IHED				S	Sn	21 15 26.5	-0.4
	baz=221						
IDIM	Dimmadalss	6.17	224	P	Pn	21 14 18.3	+1.2
	baz=219						
IDIM				S	Sn	21 15 26.7	-0.5
	baz=219						
IGHA	Grjothals	6.21	222	P	Pn	21 14 18.8	+1.2
	baz=217						
IGHA				S	Sn	21 15 28.6	+0.5
	baz=217						
IGRS	Grimsstaoir	6.26	219	P	Pn	21 14 20.1	+1.6
	baz=214						
IGRA	Granastaoir	6.35	225	P	Pn	21 14 20.8	+1.1
	baz=221						
IGRA				S	Sn	21 15 31.5	-0.2
	baz=221						
IREN	Reynihlio	6.42	222	P	Pn	21 14 22.8	+2.1
	baz=217						
IMEL	Melhnausar	6.44	221	P	Pn	21 14 22.0	+1.1
	baz=216						
IMEL				S	Sn	21 15 34.9	+1.0
	baz=216						
IHLA	Hella	6.53	228	S	Sn	21 15 36.7	+0.7
	baz=224						
IADA	Aoalbol	6.70	215	P	Pn	21 14 26.1	+1.6
	baz=210						
IASK	Askja	6.88	219	P	Pn	21 14 28.6	+1.6
	baz=214						
IMKO	Mokollar	6.89	217	P	Pn	21 14 28.6	+1.6
	baz=212						
DAG	Danmarks Havn	6.91	336	*i* P	Pn	21 14 25.5	-1.8
DAG				*i* S	Sn	21 15 37.3	-8.1
IVSH	V-Sauoahnukur	6.92	215	P	Pn	21 14 29.1	+1.5
	baz=210						
IDYN	Dyngjuhals	7.26	220	P	Pn	21 14 34.3	+2.0
	baz=215						
LOF	Lofoten	7.51	101	*e*P	Pn	21 14 36.3	+0.7
STEI	Steigen	8.17	100	*e*P	Pn	21 14 45.6	+1.0
STEI				*e*S	Sn	21 16 11.4	-4.9
STEI				IAML		21 16 15.4	
	comp=Z,6.7nm,0.7s						
KONS	Konsvik	8.32	111	*e*P	Pn	21 14 48.3	+1.7
KONS				*e*S	Sn	21 16 15.1	-4.9
KONS				IAML		21 16 18.7	
	comp=Z,6.4nm,0.3s						
TRO	Tromso	8.68	85	*e*P	Pn	21 14 51.1	-0.4
HSPB	Hornsund (broa	8.69	34	*e*P	Pn	21 14 53.2	+1.6
MOR8	Moi Rana	8.94	111	*e*P	Pn	21 14 57.6	+2.5
MOR8				*e*S	Sn	21 16 32.3	-3.0
MOR8				IAML		21 16 39.0	
	comp=Z,9.7nm,0.2s						
NSS	Namsos	9.37	123	*e*P	Pn	21 15 03.6	+2.6
NSS				*e*S	Sn	21 16 41.5	-4.4
NSS				IAML		21 16 49.6	
	comp=Z,14nm,0.5s						
KBS	Kingsbay	9.44	22	*e*P	Pn	21 15 02.7	+0.8
KIF	Kilpisjarvi	9.53	88	*e*P	Pn	21 15 03.8	+0.7
KIF				*e*S	Sn	21 16 44.9	-4.7
SPA0	Spitsbergen Ar	9.54	29	*e*P	Pn	21 15 04.7	+1.3
SPITS	Spitsbergen Ar	9.54	29	Pn	Pn	21 15 05.3	+1.9
	baz=224,slow=19,SNR=121						
HAMF	Hammerfest	9.93	76	*e*P	Pn	21 15 07.8	-0.8
AKN	Aaknes	10.13	142	*e*P	Pn	21 15 12.7	+1.2
AKN				*e*S	Sn	21 16 59.9	-4.8
AKN				IAML		21 17 08.1	
	comp=Z,3.3nm,0.3s						
FOO	Floro	10.29	148	*e*S	Sn	21 17 04.5	-4.0
KTK1	Kautokeino	10.33	86	*e*P	Pn	21 15 15.0	+0.9
HEF	Hetta	10.72	88	*e*P	Pn	21 15 20.3	+0.8
SUE	Sulen	10.75	149	*e*P	Pn	21 15 20.4	+0.5
ARCES	ARCESS Array B	10.87	81	Pn	Pn	21 15 22.4	+0.9
	comp=Z,0.5nm,0.3s,baz=290,slow=12,SNR=42						
ARE0	ARCESS Array S	10.87	81	*e*P	Pn	21 15 22.3	+0.7
LRW	Lerwick	10.89	166	*e*P	Pn	21 15 25.5	+3.7
LRW				*e*S	Sn	21 17 17.0	-6.2
HYA	Hoyanger	10.90	146	*e*P	Pn	21 15 24.2	+2.2
NOD	Norderasen	11.03	121	*e*P	Pn	21 15 26.3	+2.6
KEV	Kevo	11.29	79	*e*P	Pn	21 15 28.0	+0.8
NOA	NORSAR Array B	12.08	135	Pn	Pn	21 15 39.6	+1.5
	comp=Z,0.0nm,0.3s,baz=343,slow=12,SNR=2.7						
HFS	Hagfors	13.47	132	Pn	Pn	21 16 00.5	+3.4
	comp=Z,0.3nm,0.3s,baz=328,slow=11,SNR=7.5						
HFS				Sn	Sn	21 18 26.9	+0.7
	comp=Z,0.3nm,0.3s,baz=343,slow=24,SNR=4.2						
EKA	Eskdalemuir Ar	15.56	173	Pn	Pn	21 16 27.9	+2.7
	baz=358,slow=14,SNR=3.7						
FINES	FINESS Array B	15.93	109	Pn	Pn	21 16 31.8	+1.9
	comp=Z,0.2nm,0.3s,baz=319,slow=10,SNR=7.7						
FINES				Sn	Sn	21 19 22.2	-3.7
	comp=Z,0.1nm,0.3s,baz=335,slow=22,SNR=2.6						
LSH	Leshukonskoye	19.98	81	*e*P	P	21 17 20.2	+2.2
MLR	Muntele Rosu	29.85	131	LR	LR	21 31 57.9	
	comp=Z,25nm,19.6s,baz=354,slow=38						
MKAR	Makanchi Array	46.34	72	P	P	21 21 13.2	+1.5
	comp=Z,0.1nm,0.5s,baz=346,slow=5.2,SNR=3.0						

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*IDC **01** 21:28:18.3±0.8, 10°.92S×165°.35E, h0^{km}, mb4.1/12, mb1 4.3/13, mb1mx4.1/46, mbtmp4.2/13, ML4.4/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/33, Error ellipse: s-maj=26.2km s-min=16.9km az=132.0*

*NEIC **01** 21:28:19.8±0.5, 10°.96S×165°.28E, h10^{km}, mb4.3/5, Error ellipse: s-maj=11.7km s-min=9.6km az=111.0*

*ISCJB **01** 21:28:20.9±0.5, 11°.08S±0°.07×165°.29E±0°.09, h30^{km}, mb4.1/15, MS3.5/2, Error ellipse: s-maj=13.1km s-min=10.5km az=12.6*

ISC 01 21:28:22.5±0.7**, 11°.09S**±0°.08×**165°.3E**±0°.1**, h30^{km}, n29, σ1^{s}.40**/22**, mb4.1**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.52	287	LR	LR	21 32 00.2	
	comp=Z,360nm,21.5s,baz=116,slow=40						
DZM	Mont Dzumac	10.98	174	Pn	Pn	21 30 58.7	+1.0
	2.8nm,0.3s,baz=24,slow=9.9,SNR=38						
DZM				Sn	Sn	21 32 55.9	-3.6
	0.1nm,0.3s,baz=90,slow=20,SNR=2.0						
PINNC	Pines Island,	11.64	170	*e*Pn	Pn	21 31 07.3	+0.6
CTA	Charters Tower	20.39	242	P	Pn	21 32 59.8	+0.4
	6.7nm,1.0s,baz=71,slow=12,SNR=4.6						
CTAO	Charters Tower	20.39	242	*e*P	P	21 32 55.8	-1.4
	14nm,1.1s						
COEN	Coen	21.79	260	*e*P	P	21 33 09.4	-2.7
	14nm,1.1s						
URZ	Urewera	29.05	161	P	P	21 34 21.7	+1.6
	12nm,1.0s,baz=253,slow=2.5,SNR=4.6						
H11S2	WAKE ISLAND Hy	29.42	3	T	T	22 05 13.3	
	baz=187,slow=74,SNR=3.0						
H11S3	WAKE ISLAND Hy	29.43	3	T	T	22 05 07.0	
	baz=187						
H11S1	WAKE ISLAND Hy	29.44	3	T	T	22 05 16.1	
	baz=187,slow=74,SNR=2.1						
STKA	Stephens Creek	30.11	223	P	P	21 34 31.6	+2.0
	1.3nm,0.5s,baz=45,slow=7.3,SNR=4.2						
STKA				LR	LR	21 46 03.4	
	comp=Z,158nm,18.4s,baz=26,slow=35						
H11N1	WAKE ISLAND Hy	30.65	3	T	T	22 06 29.7	
	baz=189,SNR=3.9						
H11N3	WAKE ISLAND Hy	30.65	3	T	T	22 06 42.8	
	baz=189						
H11N2	WAKE ISLAND Hy	30.67	3	T	T	22 06 31.8	
	baz=189						
WB2	Warramunga Arr	31.05	250	*e*P	P	21 34 39.1	+1.0
	8.4nm,1.1s						
WR1	Warramunga Arr	31.06	250	*e*P	P	21 34 38.7	+0.5
	4.4nm,1.0s						
WRA	Warramunga Arr	31.06	250	P	P	21 34 38.7	+0.5
	1.6nm,0.5s,baz=80,slow=9.1,SNR=18						
AS01	Alice Springs	32.34	243	*e*P	P	21 34 49.2	-0.2
AS31	Alice Springs	32.38	243	*e*P	P	21 34 50.9	+1.0
	1.2nm,0.6s						
ASAR	Alice Springs	32.38	243	P	P	21 34 50.4	+0.5
	4.2nm,0.7s,baz=66,slow=10,SNR=53						
ASAR				LR	LR	21 47 02.6	
	comp=Z,56nm,19.6s,baz=56,slow=35						
FITZ	Fitzroy Crossi	38.95	255	P	P	21 35 46.8	+0.6
	2.3nm,0.9s,baz=39,slow=7.9,SNR=3.0						
MJAR	Matsushiro Arr	53.81	333	P	P	21 37 42.2	-0.3
	1.1nm,0.7s,baz=170,slow=7.9,SNR=3.2						
MAJO	Matsushiro	53.81	333	*e*P	P	21 37 42.2	-0.3
ILAR	Eielson Array	83.69	19	P	P	21 40 47.4	-0.7
	0.8nm,0.7s,baz=229,slow=5.9,SNR=9.8						
YBH	Yreka Blue Hor	84.23	46	P	P	21 40 51.6	+0.2
	2.0nm,0.9s,baz=272,slow=3.2,SNR=5.8						
NVAR	Mina Array Bea	86.38	50	P	P	21 41 02.8	+0.3
	1.6nm,0.8s,baz=231,slow=7.7,SNR=8.8						
MK32	Makanchi Array	93.26	317	*e*P	P	21 41 34.9	+0.5
MKAR	Makanchi Array	93.26	317	P	P	21 41 34.9	+0.5
	0.3nm,0.7s,baz=104,slow=5.9,SNR=4.6						
YKA	Yellowknife Ar	95.21	27	P	P	21 41 41.5	-1.4
	0.1nm,0.5s,baz=256,slow=5.0,SNR=3.7						

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*IDC **01** 21:33:49.1±1.9, 43°.13N×105°.13W, h0^{km}, mb3.5/3, mb1 3.7/6, mb1mx3.5/49, mbtmp3.5/6, ML3.5/3, Error ellipse: s-maj=44.6km s-min=8.9km az=157.0*

*ISCJB **01** 21:33:51.5±0.4, 43°.60N±0°.04×105°.29W±0°.05, h0^{km}, mb3.9/2, Error ellipse: s-maj=5.8km s-min=4.7km az=36.5*

*ANF **01** 21:33:52.6±0.6, 43°.48N×105°.17W, ML3.4/8, Error ellipse: s-maj=7.9km s-min=3.8km az=122.0*

*NEIC **01** 21:33:52.4±0.8, 43°.54N×105°.25W, h0^{km}, MN3.0, Error ellipse: s-maj=10.6km s-min=10.5km az=58.0, Suspected Mining explosion.*

NEIC 85 km [53 miles] E of Midwest.

ISC 01 21:33:51.9±0.7**, 43°.53N**±0°.04×**105°.24W**±0°.04**, h0^{km}, n28, σ1^{s}.75**/36**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.05	56	*e*Pn	Pg	21 34 12.5	+0.5
RSSD				*e*S	Sb	21 34 28.7	+1.2
RSSD	Black Hills	1.05	56	P	Pg	21 34 12.5	+0.5
	baz=237						
K22A	Casper	1.29	227	P	Pn	21 34 18.1	+0.8
	baz=46						
N23A	Red Feather La	2.69	191	Pb	Pb	21 34 40.9	-0.1
	baz=11						
N23A				Sb	Sg	21 35 17.4	-0.8
	baz=11						
LAO	LASA Array	3.23	348	*e*Pn	Pn	21 34 45.3	+1.4
LAO				*e*S	Sn	21 35 23.5	+0.4
LAO	LASA Array	3.23	348	S	Sb	21 35 27.5	-2.5
	baz=167						
BW06	Boulder Array	3.25	258	*e*Pn	Pn	21 34 43.8	-0.5
BW06				*e*Pg	Pb	21 34 51.2	+0.7
BW06				*e*S	Sb	21 35 28.4	-2.4
BW06	Boulder Array	3.25	258	Sb	Sb	21 35 33.4	+2.6
	baz=75						
PDAR	Pinedale Array	3.25	258	Pn	Pn	21 34 46.0	+1.7
	5.8nm,0.3s,baz=86,slow=16,SNR=22						
PDAR				Lg	Lg	21 35 30.2	
	19nm,0.3s,baz=157,slow=28,SNR=18						
RLMT	Red Lodge	3.30	300	*e*Pn	Pn	21 34 45.3	+0.4
RLMT				*e*S	Sn	21 35 24.9	0.0
RLMT	Red Lodge	3.30	300	P	Pn	21 34 45.5	+0.6
	baz=117						
OGNE	Ogallala	3.52	136	*e*Pn	Pn	21 34 49.7	+1.8
ISCO	Idaho Springs	3.74	184	*e*Pn	Pn	21 34 51.8	+0.6
AHID	Auburn Hatcher	4.36	262	Pn	Pn	21 34 57.9	-1.6
AHID				*e*Pg	Pb	21 35 12.2	+2.8
AHID				*e*S	Sn	21 35 48.1	-2.9
DGMT	Dagmar	4.99	8	*e*Pn	Pn	21 35 08.4	+0.3
DGMT	Dagmar	4.99	8	P	Pn	21 35 08.9	+0.8
	baz=189						
BOZ	Bozeman (W)	5.01	297	*e*Pn	Pn	21 35 08.5	+0.1
	6.2nm,0.6s						
BOZ	Bozeman (W)	5.01	297	P	Pn	21 35 08.8	+0.4
	baz=113						
BOZ				Sb	Sb	21 36 26.1	+4.9
	baz=113						
HWUT	Hardware Ranch	5.05	250	*e*Pn	Pn	21 34 59.0	-10
HWUT				*e*S	Sn	21 35 55.0	-13
EGMT	Eagleton	5.49	326	*e*Pn	Pn	21 35 16.7	+1.8
	15nm,0.6s						
EGMT				*e*S	Sn	21 36 15.6	-3.2
MDND	Maddock	5.85	41	P	Pn	21 35 19.9	+0.1
	baz=224						
DUG	Dugway, Tooele	6.56	242	*e*Pn	Pn	21 35 31.4	+1.6
	2.3nm,0.6s						
I10CA	LAC DU BONNET	9.18	40	*i*		22 32 20.0	
	baz=216,slow=305,SNR=0.5						
ULM	Lac du Bonnet	9.28	40	Pn	Pn	21 36 05.0	-1.9
	1.5nm,0.3s,baz=228,slow=12,SNR=18						
ULM				Pg		21 36 41.1	
	0.5nm,0.3s,baz=214,slow=16,SNR=4.2						
ULM				Lg	Lg	21 38 38.8	
	0.2nm,0.3s,baz=137,slow=19,SNR=2.8						
NVAR	Mina Array Bea	11.11	247	Pn	Pn	21 36 29.9	-2.2
	0.1nm,0.3s,baz=61,slow=14,SNR=2.4						
YKA	Yellowknife Ar	19.77	347	P	P	21 38 23.7	+0.5
	0.3nm,0.5s,baz=157,slow=12,SNR=4.4						
ARCES	ARCESS Array B	61.60	18	P	P	21 44 09.9	-0.7
	1.5nm,0.7s,baz=328,slow=6.4,SNR=4.1						
MKAR	Makanchi Array	89.81	355	P	P	21 46 51.6	-0.6
	0.3nm,0.9s,baz=358,slow=3.6,SNR=4.0						

RSNC 01 21:34:29.0±1.0**, 6°.80N**×**73°.15W, h144^{km}**±6^{km}**, ML3.2, Mw3.5, 1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.21	188	*e*P	Pn	21 34 48.5	-0.4
BARC				*e*S	Sn	21 35 03.2	-0.7
BARC				*i*		21 35 04.3	
	comp=Z,611nm,0.2s						
BRRC	Barranca, Sant	0.63	299	⇑*i*P	Pn	21 34 50.4	0.0
BRRC				*e*S	Sn	21 35 07.2	+0.6
BRRC				*i*		21 35 08.2	
	comp=Z,259nm,0.3s						
PAMC	Pamplona, Colo	0.70	40	*e*P	Pn	21 34 51.3	-0.1
PAMC				*e*S	Sn	21 35 08.2	-0.2
PAMC				*i*		21 35 10.7	
	comp=Z,415nm,0.6s						
RUSC	La Rusia	0.90	176	*e*P	Pn	21 34 52.4	-0.5
RUSC				*e*S	Sn	21 35 10.6	-0.5
RUSC				*i*		21 35 12.6	
	comp=Z,109nm,0.3s						
PTBC	PUERTO BERRIO,	1.32	259	*e*P	Pn	21 34 55.2	-1.1
PTBC				*e*S	Sn	21 35 15.9	-1.0
PTBC				*i*		21 35 19.0	
	comp=Z,293nm,0.1s						
TAMC	Tame, Arauca	1.40	105	⇓*i*P	Pn	21 34 56.8	-0.3
TAMC				*e*S	Sn	21 35 17.8	-0.7
TAMC				*i*		21 35 18.9	
	comp=Z,83nm,0.5s						
OCAC	Ocana	1.44	353	*e*P	Pn	21 34 56.8	-0.8
OCAC				*e*S	Sn	21 35 18.5	-1.1
OCAC				*i*		21 35 21.9	

	comp=Z,340nm,0.3s						
ZARC	Zaragoza, Cauc	1.83	292	eP	Pn	21 35 01.5	-0.3
ZARC				eS	Sn	21 35 27.4	+0.5
ZARC				i		21 35 32.6	
	comp=Z,170nm,0.4s						
NORC	Norcasia	2.10	234	eP	Pn	21 35 04.8	-0.2
NORC				eS	Sn	21 35 32.1	-0.6
NORC				i		21 35 35.5	
	comp=Z,87nm,0.2s						
SMLC	San Martn de	2.19	336	eP	Pn	21 35 05.3	-0.7
SMLC				eS	Sn	21 35 33.4	-1.1
CHIC	Chingaza	2.23	195	eP	Pn	21 35 06.8	-0.2
CHIC				eS	Sn	21 35 36.1	0.0
ROSC	El Rosal	2.27	211	eP	Pn	21 35 08.5	+1.1
ROSC				i		21 35 46.2	
	comp=Z,62nm,0.4s						
HELC	Santa Helena	2.44	256	eP	Pn	21 35 09.7	+0.3
HELC				eS	Sn	21 35 39.2	-1.2
HELC				i		21 35 47.5	
	comp=Z,58nm,0.3s						
UREC	San Jos de Ur	2.54	292	eP	Pn	21 35 08.8	-1.5
UREC				i		21 35 50.2	
	comp=Z,123nm,0.2s						
DBBC	Dabeiba	3.04	274	eP	Pn	21 35 16.8	0.0

MEX 01 21:39:07.8±0.5**,16°.29N×98°.26W,h10**^{km}±3^{km}**,MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.16	52	i P	Pg	21 39 10.8	-0.6
PNIG				i S	Sg	21 39 13.6	-0.3

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*IDC **01** 21:44:51.1±1.4, 9°.60S×121°.95E, h0^{km}, mb3.7/4, mb1 3.8/7, mb1mx3.6/34, mbtmp3.7/7, ML3.6/3, MS3.0/4, Ms1 3.1/4, ms1mx2.9/41, Error ellipse: s-maj=137.2km s-min=19.0km az=60.0*

*ISCJB **01** 21:44:59.1±0.5, 9°.90S±0°.05×121°.85E±0°.05, h91^{km}±7^{km}, mb3.6/4, Error ellipse: s-maj=9.2km s-min=7.5km az=37.1*

*DJA **01** 21:45:01.7±1.0, 10°S±3°×12°2E±°, h39^{km}±13^{km}, M4.0/11, MLv4.0/11*

ISC 01 21:44:60.0±0.9**,9°.91S**±0°.06×**121°.82E**±0°.05**,h79**^{km}±10^{km}**, n20,**σ**2^{s}45**/23**,mb3.6**/4**,Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.16	354	P	Pn	21 45 20.2	-0.8
EDFI				S	Sn	21 45 35.8	-1.0
BASI	Baing, Sumba	1.26	256	P	Pn	21 45 22.8	+0.6
MMRI	Maumere	1.33	18	P	Pn	21 45 23.2	+0.1
MMRI				S	Sn	21 45 40.5	0.0
WSI	Waingapu	1.52	279	P	Pn	21 45 26.3	+0.8
WSI				S	Sn	21 45 46.8	+2.0
BATI	Baumata	1.84	99	P	Pn	21 45 30.7	+0.9
BATI				S	Sn	21 45 54.9	+2.4
BATI	Baumata	1.84	99	Pn	Pn	21 45 30.7	+0.9
	35nm,0.3s,baz=279,slow=2.8,SNR=25						
BATI				Sn	Sn	21 45 57.3	+4.8
	78nm,0.3s,baz=51,slow=18,SNR=8.4						
SOEI	Soe	2.42	87	P	Pn	21 45 38.2	+0.6
PLAI	Plampang	4.13	285	P	Pn	21 46 01.2	+0.5
BBSI	Bau Bau	4.45	10	P	Pn	21 46 06.3	+1.2
BKSI	Bulukumba	4.85	340	P	Pn	21 46 12.4	+1.8
FITZ	Fitzroy Crossi	8.95	156	Pn	Pn	21 47 05.5	-1.0
	0.3nm,0.3s,baz=336,slow=10,SNR=6.5						
FITZ				Sn	Sn	21 48 37.5	-8.1
	0.7nm,0.3s,baz=156,slow=8.8,SNR=7.3						
WRA	Warramunga Arr	15.67	131	Pn	Pn	21 48 33.1	-3.1
	0.3nm,0.3s,baz=306,slow=14,SNR=9.5						
WRA				Sn	Sn	21 51 15.7	-14
	0.3nm,0.3s,baz=308,slow=24,SNR=5.3						
DAV	Davao City (W)	17.28	13	LR	LR	21 55 41.6	
	comp=Z,25nm,19.5s,baz=175,slow=38						
ASAR	Alice Springs	17.90	141	P	P	21 49 04.5	+1.1
	0.2nm,0.3s,baz=322,slow=13,SNR=14						
ASAR				S	Sn	21 52 15.7	-7.6
	0.2nm,0.3s,baz=315,slow=23,SNR=4.4						
PSI	Prapat	26.06	298	LR	LR	22 03 03.6	
	comp=Z,42nm,19.3s,baz=98,slow=42						
STKA	Stephens Creek	28.52	143	P	P	21 50 49.8	+1.6
	0.9nm,0.5s,baz=332,slow=5.6,SNR=4.7						
STKA				LR	LR	22 04 28.0	
	comp=Z,56nm,18.9s,baz=33,slow=41						
CMAR	Chiang Mai Arr	36.11	321	LR	LR	22 09 21.8	
	comp=Z,21nm,18.2s,baz=140,slow=41						
SONM	Songino Array	59.09	348	P	P	21 54 52.1	0.0
	0.2nm,0.4s,baz=164,slow=11,SNR=3.3						
MKAR	Makanchi Array	66.55	332	P	P	21 55 41.5	0.0
	0.5nm,0.6s,baz=132,slow=8.3,SNR=7.1						
ZALV	Zalesovo Beam	70.90	338	P	P	21 56 08.1	-0.3
	0.5nm,0.3s,baz=138,slow=6.2,SNR=3.5						

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*SOME **01** 21:53:18.4, 42°.53N×79°.67E, h20^{km}*

*KRNET **01** 21:53:18.4±0.1, 42°.57N×79°.65E, h14^{km}, mb2.2*

*NNC **01** 21:53:18.4±1.6, 42°.58N×79°.63E, h0^{km}, mpv2.5, Error ellipse: s-maj=10.5km s-min=5.0km az=159.0*

ISC 01 21:53:17.3±1.8**,42°.53N**±0°.06×**79°.67E**±0°.05**,h11**^{km}±13^{km}**, n21,**σ**0^{s}65**/41**,6C-4D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.64	346	P	Pb	21 53 30.8	+0.2
	4.0nm,0.1s						
SHLS				S	Sb	21 53 39.8	0.0
	51nm,0.3s						
SHLS	Shalkode	0.64	346	eP	Pb	21 53 30.8	+0.2
	baz=16						
SHLS				eS	Sb	21 53 39.7	0.0
	baz=16						
SHLS	Shalkode	0.64	346	eP	Pb	21 53 30.8	+0.2
	4.0nm,0.1s						
SHLS				eS	Sb	21 53 39.8	0.0
	22nm,0.2s						
UZB	Uzynbulak	0.78	323	P	Pg	21 53 32.3	0.0
	2.7nm,0.1s						
UZB				S	Sg	21 53 42.5	-0.1
	5.0nm,0.2s						
UZB	Uzynbulak	0.78	323	eP	Pg	21 53 32.4	0.0
	baz=21						
UZB				eS	Sg	21 53 42.5	-0.1
	baz=21						
UZB	Uzynbulak	0.78	323	eP	Pg	21 53 32.4	0.0
	2.7nm,0.1s						
UZB				eS	Sg	21 53 42.5	-0.1
	5.0nm,0.2s						
PDGK	Podgornoye	0.81	351	P	Pg	21 53 32.8	-0.1
	1.8nm,0.1s						
PDGK				S	Sg	21 53 43.4	-0.1
	1.6nm,0.2s						
PDGK	Podgornoye	0.81	351	⇑iP	Pg	21 53 32.8	-0.1
	baz=51						
PDGK				⇑iS	Sg	21 53 43.4	-0.1
	baz=51						
PRZ	Przheval'sk	0.94	268	⇓iP	Pb	21 53 35.8	+0.1
	baz=65						
PRZ				⇓iS	Sg	21 53 48.5	+0.8
	baz=65						
KTMS	Ketmen	1.04	28	P	Pb	21 53 37.2	-0.3
	1.4nm,0.1s						
KTMS				S	Sb	21 53 50.8	-0.4
	3.0nm,0.3s						
KTMS	Ketmen	1.04	28	eP	Pb	21 53 37.2	-0.3
	baz=29						
KTMS				eS	Sb	21 53 50.8	-0.4
	baz=29						
KTMS	Ketmen	1.04	28	eP	Pb	21 53 37.2	-0.3
	1.4nm,0.1s						
KTMS				eS	Sb	21 53 50.8	-0.4
	3.0nm,0.3s						
SATY	Saty	1.07	300	P	Pb	21 53 37.5	-0.4
	0.7nm,0.1s						
SATY				S	Sb	21 53 51.3	-0.7
	5.4nm,0.1s						
SATY	Saty	1.07	300	eP	Pb	21 53 37.5	-0.4
	0.7nm,0.1s						
SATY				eS	Sb	21 53 51.3	-0.7
	5.4nm,0.1s						
DJR	Jarkent	1.80	3	P	Pb	21 53 51.1	+0.7
	0.3nm,0.1s						
DJR				S	Sg	21 54 14.8	-0.5
	1.7nm,0.2s						
DJR	Jarkent	1.80	3	eP	Pb	21 53 51.1	+0.7
	0.3nm,0.1s						
DJR				eS	Sg	21 54 14.8	-0.5
	1.7nm,0.2s						
KDJ	Kajisay	1.89	259	⇑iP	Pb	21 53 53.6	+1.7
	baz=57						
KDJ				⇑iS	Sg	21 54 18.4	+0.4
	baz=57						
ULHL	Ulahol	2.56	265	⇑eP	Pb	21 54 02.6	-0.7
	baz=64						
ULHL				⇑iS	Sb	21 54 35.2	+0.4
	baz=64						
BOOM	Boomskoye usch	2.76	270	⇓iP	Pb	21 54 05.9	-0.8
	baz=70						
BOOM				⇓iS	Sb	21 54 39.3	-1.3
	baz=70						
KAPS	Kapalarasan	2.76	355	Pg	Pb	21 54 07.6	+0.8
	0.1nm,0.1s						
KAPS				Lg	Lg	21 54 42.6	
	0.8nm,0.2s						
KAPS	Kapalarasan	2.76	355	eP	Pb	21 54 07.6	+0.8
	0.1nm,0.1s						
KAPS				eS	Sb	21 54 42.6	+1.9
	0.8nm,0.2s						

IDC 01 22:11:52.9±2.8**,18°.42S**×**177°.80W,h0**^{km}**,mb3.8**/4**, mb1 4.2**/4**,mb1mx3.8**/32**,mbtmp3.8**/4**,Error ellipse: s-maj=254.1km s-min=27.2km az=156.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.11	260	P	P	22 20 10.2	-1.2
	0.3nm,0.3s,baz=96,slow=8.0,SNR=4.1						
ASAR	Alice Springs	45.21	255	P	P	22 20 12.7	+0.5
	1.8nm,0.5s,baz=88,slow=8.2,SNR=28						
NVAR	Mina Array Bea	79.39	44	P	P	22 24 01.5	+0.3
	0.3nm,0.6s,baz=223,slow=4.8,SNR=2.3						
TXAR	Lajitas Array	85.78	57	P	P	22 24 34.4	-0.2
	0.5nm,0.7s,baz=218,slow=5.9,SNR=5.7						

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*IDC **01** 22:16:31.2±0.4, 10°.97S×165°.43E, h0^{km}, mb4.9/25, mb1 5.0/27, mb1mx5.0/34, mbtmp4.9/27, ML5.0/2, MS6.1/15, Ms1 6.1/15, ms1mx5.8/32, Error ellipse: s-maj=15.5km s-min=12.5km az=91.0*

*BJI **01** 22:16:33.9, 10°.95S×165°.45E, h10^{km}, mB6.1/73, mb5.1/48, Ms6.4/89, Ms7 6.2/81*

*NEIC **01** 22:16:34.2±0.1, 10°.90S×165°.38E, h10^{km}, mb5.3/37, ME5.8, MS6.3/130, MW6.3, MW6.3, Error ellipse: s-maj=5.2km s-min=4.1km az=135.0, Moment Tensor Solution. s71 Moment tensor: Scale 10^{18}Nm; M_{rr}0.99; $M_{\theta\theta}$0.81; $M_{\phi\phi}$-1.80; $M_{r\theta}$1.30; $M_{\theta\phi}$0.76; $M_{\phi r}$-2.34; Best double couple: $M_0$3.20000×10^{18} NP1:ϕ_s148.00000°, δ77.00000°, λ76.00000°. NP2:ϕ_s17.00000°, δ20.00000°, λ137.00000°. Principal axes: T 2.6800, Plg56.0000°, Azm40.0000°; N 0.8500, Plg14.0000°, Azm152.0000°; P -3.5300, Plg30.0000°, Azm250.0000°; Energy computed from BB mechanism.*

*ISCJB **01** 22:16:35.8±0.1, 10°.89S±0°.02×165°.42E±0°.02, h30^{km}, mb5.2/116, MS6.2/205 Error ellipse: s-maj=3.0km s-min=2.6km az=32.2*

*MOS **01** 22:16:36.6±1.3, 10°.78S×165°.29E, h37^{km}, mb5.2/50, MS6.1/48, Error ellipse: s-maj=8.3km s-min=6.2km az=108.9*

*NEIC **01** 22:16:37.0±0.0, 11°.00S×165°.20E, h23^{km}, Moment Tensor Solution. s30 Moment tensor: Scale 10^{18}Nm; M_{rr}2.72; $M_{\theta\theta}$-0.68; $M_{\phi\phi}$-2.04; $M_{r\theta}$0.91; $M_{\theta\phi}$0.99; $M_{\phi r}$-1.44; Best double couple: $M_0$3.10000×10^{18} NP1:ϕ_s150.00000°, δ61.00000°, λ88.00000°. NP2:ϕ_s334.00000°, δ29.00000°, λ94.00000°. Principal axes: T 3.2300, Plg73.0000°, Azm54.0000°; N -0.1700, Plg1.0000°, Azm150.0000°; P -3.0600, Plg16.0000°, Azm241.0000°;*

*GCMT **01** 22:16:44.2±0.1, 11°.15S±0°.01×165°.23E±0°.01, h13^{km}, MW6.4/147, Moment Tensor Solution. s147,c349; s142,c497; Duration: 3^{s}9 Moment tensor: Scale 10^{18} Nm; M_{rr}2.65±.03; $M_{\theta\theta}$-0.79±.02; $M_{\phi\phi}$-1.86±.02; $M_{r\theta}$2.40±.09; $M_{\theta\phi}$1.35±.02; $M_{\phi r}$-3.35±.11; Best double couple: $M_0$4.93400×10^{18} NP1:ϕ_s145.00000°, δ73.00000°, λ89.00000°. NP2:ϕ_s327.00000°, δ17.00000°, λ92.00000°. Principal axes: T 4.8710, Plg62.0000°, Azm54.0000°; N 0.1270, Plg1.0000°, Azm145.0000°; P -4.9970, Plg28.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 01 22:16:37.4±0.2**,11°.03S**±0°.03×**165°.44E**±0°.04**,h30**^{km}**, n1012,**σ**2^{s}22**/934**,mb5.2**/122**,MS6.2**/207**,32C-10D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.63	286	eP	Pn	22 17 55.0	-4.2
HNR				eS	Sn	22 19 05.0	+2.1
HNR	Honiara	5.63	286	ePn	Pn	22 17 58.3	-0.9
HNR				eS	Sn	22 19 02.0	-0.9
HNR	Honiara	5.63	286	eP	Pn	22 17 58.3	-0.9
HNR				eS	Sn	22 19 02.0	-0.9
HNR	Honiara	5.63	286	Pn	Pn	22 17 57.0	-2.1
	35nm,0.3s,baz=124,slow=11,SNR=6.0						
HNR				Sn	Sn	22 19 04.6	+1.8
	54nm,0.3s,baz=330,slow=20,SNR=2.3						
HNR				LR	LR	22 20 18.5	
	comp=Z,334μm,20.6s,baz=116,slow=40						
MARNC	Mare, Loyalty	10.69	167	ePn	Pn	22 19 10.1	+1.5
MARNC				eSn	Sn	22 21 08.4	+1.1
DZM	Mont Dzumac	11.03	175	ePn	Pn	22 19 11.1	-2.2
	1μm,1.4s						
DZM				eSn	Sn	22 21 09.8	-5.9
	986nm,1.4s						
DZM				eLR	LR	22 21 44.3	
	comp=Z,180μm,23.8s						
DZM	Mont Dzumac	11.03	175	Pn	Pn	22 19 11.8	-1.5
DZM				eSn	Sn	22 21 17.1	+1.5
DZM	Mont Dzumac	11.03	175	Pn	Pn	22 19 11.8	-1.5
	11nm,0.3s,baz=342,slow=13,SNR=55						
PINNC	Pines Island,	11.68	171	ePn	Pn	22 19 24.5	+2.4
PINNC				eSn	Sn	22 21 24.3	-7.3
MSVF	Nonsavu	13.91	120	ePn	Pn	22 19 55.7	+2.9
MSVF	Nonsavu	13.91	120	P	Pn	22 19 56.3	+3.5
TARA	Tarawa	14.38	32	ePn	Pn	22 19 58.0	-1.1
PATS	Pohnpei	19.11	338	P	P	22 20 58.4	+0.4
	baz=19,SNR=5.5						
EIDS	Eidsvold	19.71	222	P	Pn	22 21 06.3	+0.2
	baz=20,SNR=14						
EIDS	Eidsvold	19.71	222	eP	Pn	22 21 05.6	-0.5
EIDS				eS	S	22 24 45.1	-0.2
KWAJ	Kwajalein Atol	19.82	6	eP	P	22 21 04.2	-1.6
	230nm,0.8s						
KWAJ	Kwajalein Atol	19.82	6	eP	P	22 21 04.2	-1.6
KWAJ				pmax	pmax		
	comp=Z,230nm,0.8s						
MANU	Manus Island	20.03	295	eP	P	22 21 06.9	-1.3
CTA	Charters Tower	20.54	242	P	P	22 21 11.3	-2.3
	comp=Z,137nm,1.0s,baz=70,slow=13,SNR=20						
CTA				LR	LR	22 27 55.7	
	comp=Z,105μm,20.8s,baz=68,slow=33						
CTAO	Charters Tower	20.54	242	eP	P	22 21 12.8	-0.9
	comp=Z,2μm,1.1s						
CTAO				LR	LR		
	comp=Z,218μm,19.0s						
LHI	Lord Howe Isla	21.23	195	eP	P	22 21 25.8	+4.9
LHI				eS	S	22 25 12.2	-3.3
MTSU	Mount Surprise	21.61	248	P	P	22 21 23.9	-1.3
	baz=22,SNR=43						
COEN	Coen	21.93	260	P	P	22 21 27.2	-1.4
	baz=22,SNR=55						
COEN	Coen	21.93	260	eP	P	22 21 26.9	-1.7
RMQ	Roma	22.00	223	P	P	22 21 28.5	-0.9
	baz=22,SNR=61						
ARMA	Armidale	23.17	212	P	P	22 21 42.3	+0.5
	baz=23,SNR=13						
ARMA	Armidale	23.17	212	eP	P	22 21 42.3	+0.5
RAO	Raoul Island	23.88	142	LR	LR	22 29 09.3	
	comp=Z,42μm,20.2s,baz=319,slow=32						
OUZ	Omahuta	25.20	164	eP	P	22 22 05.0	+4.6
OUZ	Omahuta	25.20	164	P	P	22 22 02.4	+1.9
QLP	Quilpie	25.28	229	P	P	22 22 01.9	+0.6
	baz=25,SNR=14						
MGCD	Mangrove Creek	25.70	209	P	P	22 22 07.9	+2.8
	baz=26,SNR=6.1						
JAY	Jayapura	25.95	287	P	P	22 22 09.3	+1.7
	comp=Z,1μm,2.0s,comp=Z,43μm						
JAY	Jayapura	25.95	287	P	P	22 22 05.7	-2.0
	comp=Z,29nm,0.9s,baz=115,slow=14,SNR=3.7						
WCZ	Waipu Caves	26.08	163	P	P	22 22 12.5	+4.0
RIV	Riverview	26.19	208	P	P	22 22 12.8	+3.3
	baz=26,SNR=4.4						
GENI	Genyem	26.43	287	P	P	22 22 16.0	+4.1
	comp=Z,96nm,0.9s,comp=Z,7μm						
QIS	Mount Isa	26.57	246	P	P	22 22 11.6	-1.5
	baz=26,SNR=19						
CMSA	Cobar Meteorol	27.39	219	P	P	22 22 20.6	+0.3
	baz=27,SNR=38						
MKAZ	Moumakai	27.40	163	P	P	22 22 23.2	+2.8
TOZ	Tahuroa Road	28.09	163	P	P	22 22 26.6	+0.2
HIZ	Hauiti	28.64	164	eP	P	22 22 32.1	+0.8
HIZ	Hauiti	28.64	164	P	P	22 22 37.9	+6.5
TLZ	Tolley Road	28.65	163	P	P	22 22 36.7	+5.1
HAZ	Te Kaha	28.83	159	P	P	22 22 35.0	+1.9
RUGZ	Raukumara Rang	28.98	160	P	P	22 22 35.6	+1.0
PKGZ	Pakihiroa	29.05	159	P	P	22 22 35.0	-0.1
URZ	Urewera	29.06	161	eP	P	22 22 34.7	-0.5
URZ	Urewera	29.06	161	P	P	22 22 33.1	-2.0
	comp=Z,70nm,0.9s,baz=339,slow=4.8,SNR=20						
URZ	Urewera	29.06	161	P	P	22 22 36.4	+1.3
WMGZ	Waiomatatini S	29.11	159	P	P	22 22 38.6	+3.0
MUGZ	Murupara	29.16	162	P	P	22 22 38.9	+2.9
MWZ	Matawai	29.27	160	P	P	22 22 38.1	+1.1
PUZ	Puketiti	29.28	159	P	P	22 22 40.3	+3.2
RTZ	Ruatahuna	29.35	161	P	P	22 22 40.2	+2.4
H11S2	WAKE ISLAND Hy	29.36	2	T	T	22 53 22.5	
	baz=183,slow=76,SNR=469						
H11S3	WAKE ISLAND Hy	29.36	2	T	T	22 53 22.8	
	baz=183,slow=76,SNR=395						
H11S1	WAKE ISLAND Hy	29.37	2	T	T	22 53 29.8	
	baz=183,slow=76,SNR=414						
MRHZ	Matea Rd	29.38	162	P	P	22 22 39.6	+1.6
RAGZ	Rawiri	29.38	161	P	P	22 22 39.5	+1.4
WTVZ	West Tongariro	29.40	164	P	P	22 22 39.5	+1.2
NGZ	Ngauruhoe	29.46	164	P	P	22 22 43.4	+4.5
FWVZ	Far West T-bar	29.52	164	P	P	22 22 43.6	+4.1
MTHZ	Maungataniwha	29.52	162	P	P	22 22 41.9	+2.6
TRVZ	Turoa	29.56	164	P	P	22 22 43.1	+3.2
SNGZ	Shannon Statio	29.61	161	P	P	22 22 40.4	+0.4
CNGZ	Carnagh Statio	29.63	159	P	P	22 22 43.0	+2.8
RAHZ	Arahi	29.66	161	P	P	22 22 41.6	+1.2
RIGZ	Rimuhau	29.68	160	P	P	22 22 42.6	+2.0
BKZ	Black Stump Fm	29.70	162	eP	P	22 22 41.4	+0.5
BKZ	Black Stump Fm	29.70	162	P	P	22 22 41.8	+0.9
MOVZ	Moawhango	29.72	164	P	P	22 22 43.6	+2.5
NMHZ	Naumai	29.73	162	P	P	22 22 44.3	+3.1
MILA	Mila	29.78	207	P	P	22 22 43.7	+2.0
	baz=30,SNR=3.5						
WHHZ	Waihua	29.85	161	P	P	22 22 44.5	+2.4
BHHZ	Black Hill Sta	29.88	163	P	P	22 22 44.2	+1.7
KWHZ	Kaweka Forest	29.92	163	P	P	22 22 44.7	+1.8
KNZ	Kokohu	29.94	161	P	P	22 22 44.5	+1.6
ARHZ	Aropaoanui	29.95	162	P	P	22 22 45.2	+2.2
WAKE	Wake Island	30.14	2	PFAKE		22 23 00.0	+15
WAKE				LR	LR		
	comp=Z,14μm,19.0s						
STKA	Stephens Creek	30.25	223	P	P	22 22 44.5	-1.3
	baz=30,SNR=20						
STKA	Stephens Creek	30.25	223	eP	P	22 22 44.3	-1.5
STKA	Stephens Creek	30.25	223	eP	P	22 22 44.3	-1.5
STKA	Stephens Creek	30.25	223	P	P	22 22 43.3	-2.5
	comp=Z,17nm,1.1s,baz=30,slow=11,SNR=8.0						
STKA				LR	LR	22 34 32.3	
	comp=Z,144μm,20.5s,baz=60,slow=36						
KAHZ	Kahuranaki	30.40	162	P	P	22 22 48.4	+1.4
H11N1	WAKE ISLAND Hy	30.58	3	T	T	22 54 54.1	
	baz=182,slow=76,SNR=545						
H11N3	WAKE ISLAND Hy	30.59	3	T	T	22 54 51.8	
	baz=182,slow=76,SNR=306						
H11N2	WAKE ISLAND Hy	30.60	3	T	T	22 55 04.2	
	baz=182,slow=76,SNR=323						
BFZ	Birch Farm	31.04	164	eP	P	22 22 53.5	+0.8
WRAB	Tennant Creek	31.19	250	eP	P	22 22 52.9	-1.4
	comp=Z,443nm,1.6s						
WRAB				LR	LR		
	comp=Z,89μm,21.0s						
WRAB	Tennant Creek	31.19	250	i P	P	22 22 53.5	-0.8
WRAB				pmax	pmax		
	comp=Z,68nm,1.4s						
WRAB				MLR	MLR		
	comp=Z,110μm,16.0s						
WB2	Warramunga Arr	31.20	250	eP	P	22 22 52.2	-2.0
WRA	Warramunga Arr	31.21	250	P	P	22 22 51.3	-3.1
	comp=Z,40nm,1.0s,baz=81,slow=9.0,SNR=34						
WRA				LR	LR	22 34 35.3	
	comp=Z,31μm,19.4s,baz=75,slow=35						
SNZO	South Karori	31.25	166	eP	P	22 22 55.5	+1.1
	comp=Z,521nm,0.8s						
SNZO				LR	LR		
	comp=Z,75μm,19.0s						
THZ	Tophouse	31.31	169	eP	P	22 22 56.4	+1.3
GUMO	Guam	31.85	320	PFAKE		22 23 10.0	+10
GUMO				LR	LR		
	comp=Z,40μm,22.0s						
TOO	Toolangi	31.93	211	P	P	22 23 01.8	+1.2
	baz=32,SNR=6.4						
TOO	Toolangi	31.93	211	eP	P	22 23 03.6	+3.0
KHZ	Kahutara	32.06	169	eP	P	22 23 04.3	+2.8
LTZ	Lake Taylor	32.19	171	eP	P	22 23 04.1	+1.3
KDU	Kakadu	32.29	264	P	P	22 23 00.9	-3.1
	baz=32,SNR=16						
AS01	Alice Springs	32.49	243	eP	P	22 23 01.9	-3.7
AS31	Alice Springs	32.53	243	eP	P	22 23 03.0	-3.1
ASAR	Alice Springs	32.53	243	P	P	22 23 02.8	-3.3
	comp=Z,80nm,1.2s,baz=71,slow=8.9,SNR=54						
ASAR				LR	LR	22 36 23.8	
	comp=Z,89μm,19.9s,baz=80,slow=37						
OXZ	Oxford	32.69	171	eP	P	22 23 10.1	+3.0
RPZ	Rata Peaks	32.93	172	eP	P	22 23 10.6	+1.4
RPZ	Rata Peaks	32.93	172	P	P	22 23 06.5	-2.7
	comp=Z,11nm,0.5s,baz=341,slow=2.2,SNR=12						
HTT	Hallett	32.98	223	P	P	22 23 10.3	+0.4
	baz=33,SNR=16						
MQZ	McQueen's Vall	33.16	170	eP	P	22 23 14.4	+3.3
ARPS	Mount Arapiles	33.31	216	P	P	22 23 13.4	+0.7
	baz=33,SNR=5.8						
LBZ	Lake Benmore	33.49	174	eP	P	22 23 19.6	+5.5
ODZ	Otahua Downs	34.19	173	eP	P	22 23 26.2	+6.0
MLZ	Mavora Lakes	34.30	177	eP	P	22 23 25.0	+3.9
DCZ	Deep Cove	34.35	178	eP	P	22 23 20.7	-0.8
BBOO	Buckleboo	34.62	227	P	P	22 23 24.2	+0.1
	baz=35,SNR=9.9						
BBOO	Buckleboo	34.62	227	eP	P	22 23 23.5	-0.6
RAR	Rarotonga	34.85	111	PFAKE		22 23 40.0	+14
RAR				LR	LR		
	comp=Z,42μm,21.0s						
MOO	Moorlands	35.12	204	P	P	22 23 30.6	+2.3
	baz=35,SNR=4.1						
TAU	Tasmania Unive	35.47	203	eP	P	22 23 32.5	+1.3
	comp=Z,45nm,1.1s						
TAU				LR	LR		
	comp=Z,23μm,20.0s						
TAU	Tasmania Unive	35.47	203	eP	P	22 23 32.5	+1.3
TAU				pmax	pmax		
	comp=Z,45nm,1.1s						
TAU				MLR	MLR		
	comp=Z,23μm,20.0s						
KNRA	Kununurra	35.95	259	P	P	22 23 35.6	-0.1
	baz=36,SNR=7.1						
JOHN	Johnston Islan	37.06	42	PFAKE		22 24 00.0	+15
JOHN				LR	LR		
	comp=Z,2μm,19.0s						
WRKA	Warakurna	37.82	243	P	P	22 23 49.0	-2.6
	baz=38,SNR=61						
NLAI	Namlea	38.78	279	P	P	22 24 00.8	+1.1
	comp=Z,128nm,1.6s,comp=Z,4μm						
FITZ	Fitzroy Crossi	39.09	255	P	P	22 24 00.2	-2.1
	baz=39,SNR=16						
FITZ	Fitzroy Crossi	39.09	255	eP	P	22 24 01.5	-0.8
FORT	Forrest	39.81	235	P	P	22 24 08.5	+0.4
	baz=40,SNR=7.5						
FORT	Forrest	39.81	235	eP	P	22 24 06.0	-2.2
SANI	Sanana	40.15	280	P	P	22 24 12.2	+1.1
	comp=Z,85nm,1.3s,comp=Z,5μmcomp=Z,20μm						
SOEI	Soe	40.49	268	eP	P	22 24 16.1	+2.0
SOEI	Soe	40.49	268	P	P	22 24 15.5	+1.3
	comp=Z,59nm,1.2s,comp=Z,4μmcomp=Z,30μm						
BATI	Baumata	41.04	267	P	P	22 24 19.2	+0.6
	comp=Z,57nm,1.1s,comp=Z,2μmcomp=Z,12μm						

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BATI  Baumata           41.04 267   P       P        22 24 17.0 -1.6
        comp=Z,31nm,0.7s,baz=81,slow=9.6,SNR=9.6
MIDW  Midway            42.41  23   PFAKE            22 24 40.0  +11
MIDW                                LR      LR
        comp=Z,17µm,19.0s
MMRI  Maumere           42.61 269  eP       P        22 24 31.5 +0.1
MMRI  Maumere           42.61 269   P       P        22 24 32.5 +1.2
        comp=Z,98nm,1.4s,comp=Z,5µm
KMSI  Cibinong          42.79 283   P       P        22 24 41.3 +8.5
EDFI  Ende, Flores      43.13 269   P       P        22 24 38.1 +2.4
        comp=Z,42nm,1.3s,comp=Z,4µm
DAV   Davao City (W)    43.55 293   PFAKE            22 24 50.0  +11
DAV                                 LR      LR
        comp=Z,14µm,22.0s
DAV   Davao City (W)    43.55 293   P       P        22 24 38.5 -0.4
PPT   Papeete           43.99 104   LR      LR       22 40 48.2
        comp=Z,37µm,19.2s,baz=268,slow=33
PPT2  Papeete2          43.99 104  eS       S        22 31 19.1 +6.0
        comp=Z,24µm,25.8s
PPT2                               eLQ      LQ       22 35 12.0
        comp=Z,59µm,30.8s
PPT2                               eLR      LR       22 37 03.6
        comp=Z,40µm,23.0s
BASI  Baing, Sumba      44.07 267   P       P        22 24 59.5  +16
JCJ   Chichijima        44.11 330   LR      LR       22 42 27.4
        comp=Z,13µm,19.3s,baz=82,slow=35
TBI   Tubuai            44.62 112  eS       S        22 31 26.6 +4.7
        comp=Z,20µm,27.2s
TBI                                eLQ      LQ       22 35 26.1
        comp=Z,85µm,30.0s
TBI                                eLR      LR       22 37 21.4
        comp=Z,35µm,26.0s
APSI  Ampana            44.63 280   P       P        22 24 49.8 +2.2
        comp=Z,90nm,2.4s,comp=Z,3µm
MRSI  Marisa            44.72 282   P       P        22 25 01.6  +13
MBWA  Marble Bar        44.92 251  eP       P        22 24 50.1 +0.3
MBWA                                LR      LR
        comp=Z,57µm,19.0s
BKSI  Bulukumba         45.17 273   P       P        22 25 03.2  +11
BNSI  Bone              45.36 275   P       P        22 24 56.8 +3.4
        comp=Z,116nm,1.0s,comp=Z,4µm
KAPI  Kappang           45.59 274   PFAKE            22 25 10.0  +15
KAPI                                LR      LR
        comp=Z,13µm,20.0s
SPSI  Sidrap Palu       45.77 275   P       P        22 25 04.2 +7.5
PCI   Palu              46.38 279   P       P        22 25 04.4 +2.8
        comp=Z,206nm,1.6s,comp=Z,5µm
MPSI  Mapaga            46.64 281   P       P        22 25 05.1 +1.5
        comp=Z,27nm,1.6s,comp=Z,2µmcomp=Z,8µm
MEEK  Meekatharra       46.68 244   P       P        22 25 01.9 -1.9
        baz=47,SNR=29
PLAI  Plampang          46.96 268   P       P        22 25 08.8 +2.7
        comp=Z,92nm,1.3s,comp=Z,5µm
RCP   Roxas             47.98 297⇑eP       P        22 25 18.6 +4.6
KIP   Kipapa            48.25  48   PFAKE            22 25 30.0  +14
KIP                                 LR      LR
        comp=Z,36µm,19.0s
KIP   Kipapa            48.25  48  i P      P        22 25 14.7 -1.2
KLBR  Kellerberrin      48.46 237   P       P        22 25 18.0 +0.5
        baz=48,SNR=5.9
HMH   Humu'ula Sheep    49.07  52  eP       P        22 25 24.6 +2.0
BLDU  Ballidu           49.11 239   P       P        22 25 22.2 -0.3
        baz=49,SNR=6.6
POHA  Pohakuloa         49.12  52  eP       P        22 25 22.8 -0.1
        comp=Z,97nm,0.5s
POHA                                LR      LR
        comp=Z,24µm,19.0s
NWAO  Narrogin (SRO)    49.22 236   P       P        22 25 23.9 +0.5
        baz=49,SNR=9.3
NWAO  Narrogin (SRO)    49.22 236  eP       P        22 25 23.1 -0.2
NWAO                                LR      LR
        comp=Z,130µm,21.0s
NWAO  Narrogin (SRO)    49.22 236  eP       P        22 25 23.1 -0.2
NWAO                                MLR     MLR
        comp=Z,130µm,21.0s
MORW  Morawa            49.37 241   P       P        22 25 24.6 +0.1
        baz=49,SNR=22
MORW  Morawa            49.37 241  eP       P        22 25 23.3 -1.2
IGBI  Denpasar          49.54 268   P       P        22 25 27.7 +1.7
        comp=Z,250nm,1.4s,comp=Z,8µmcomp=Z,30µm
SRBI  Singaraja         49.57 269   P       P        22 25 33.7 +7.5
TSM   Tawau             49.72 285   P       P        22 25 29.0 +1.6
MUN   Mundaring         49.83 237   P       P        22 25 29.4 +1.4
        baz=50,SNR=5.7
JAGI  Jajag, Banyuwa    50.56 268  eP       P        22 25 33.2 -0.6
JAGI  Jajag, Banyuwa    50.56 268   P       P        22 25 35.0 +1.2
        comp=Z,92nm,1.5s,comp=Z,4µmcomp=Z,15µm
TGY   Tagaytay City     50.70 298   LR      LR       22 48 02.6
        comp=Z,13µm,19.2s,baz=124,slow=37
SDKM  Sandakan          50.79 287   P       P        22 25 37.4 +1.9
KKM   Kota Kinabalu     51.84 287  eP       P        22 25 44.5 +1.0
TAOE  Nuku Hiva Isla    53.58  93  eS       S        22 33 33.6 +5.3
        comp=Z,22µm,25.9s
TAOE                               eLQ      LQ       22 39 11.9
        comp=Z,19µm,24.1s
TAOE                               eLR      LR       22 41 31.4
        comp=Z,20µm,22.3s
MJAR  Matsushiro Arr    53.81 333   P       P        22 25 54.1 -3.4
MJAR                                pmax    pmax
        comp=Z,17nm,1.0s
MJAR  Matsushiro Arr    53.81 333   P       P        22 25 54.1 -3.4
        comp=Z,9.6nm,0.8s,baz=170,slow=8.0,SNR=15
MAJO  Matsushiro        53.82 333  eP       P        22 25 55.6 -1.9
        comp=Z,10nm,1.0s
MAJO                                LR      LR
        comp=Z,16µm,20.0s
MAJO  Matsushiro        53.82 333  i P      P        22 25 55.3 -2.2
MAJO                                pmax    pmax
        comp=Z,28nm,1.1s
MAT   Matsushiro        53.82 333   P       P        22 25 55.5 -2.0
MAT                                 S       S        22 33 28.0 -2.5
MJB9  Matsu-Tunnel      53.82 333  eP       P        22 25 56.8 -0.8
UGM   Wanagama          54.20 268  eP       P        22 25 59.0 -1.8
SBUM  Sibu              54.60 281  eP       P        22 26 05.8 +2.1
JNU   Nakatsue          54.89 324  eP       P        22 26 04.0 -1.4
YHNB  Yeheng            55.74 310  eP       P        22 26 13.1 +1.3
TATO  Taipei            55.83 310   PFAKE            22 26 20.0 +7.7
TATO                                LR      LR
        comp=Z,21µm,21.0s
KSM   Kuching           56.20 279  eP       P        22 26 17.0 +1.7
KSM   Kuching           56.20 279   P       P        22 26 14.6 -0.6
ERM   Erimo             56.61 340   PFAKE            22 26 30.0  +12
ERM                                 LR      LR
        comp=Z,9µm,20.0s
CISI  Cisompet, Garu    56.90 268  eP       P        22 26 20.8 +0.5
YUK   Yuzh-Kuril'sk     57.62 343c iP       P        22 26 25.5 +0.9
YUK                                i                 22 27 17.8
YUK                                i                 22 28 29.9
YUK                                i S      S        22 34 23.0 +2.2
YUK                                i *SS    pS       22 34 29.3 -1.8
YUK                                 pmax    pmax
        comp=Z,430nm,1.2s
YUK                                 pmax    pmax
        comp=N,85nm,0.6s
YUK                                 pmax    pmax
        comp=E,219nm,1.2s
YUK                                 pmax    pmax
        comp=Z,554nm,1.4s
YUK                                 MLR     MLR
        comp=N,15µm,16.0s
YUK                                 MLR     MLR
        comp=Z,17µm,16.0s
YUK                                 MLR     MLR
        comp=E,2µm,21.0s
RKT   Rikitea           57.88 110  eS       S        22 34 29.0 +3.9
        comp=E,10µm,28.8s
RKT                                eLQ      LQ       22 41 03.6
        comp=E,28µm,30.2s
RKT                                eLR      LR       22 43 32.9
        comp=E,36µm,24.0s,baz=276
QZH   Quanzhou          58.00 309⇑iP       P        22 26 28.4 +0.7
QZH                                 S       S        22 34 28.1 +1.6
QZH                                 pmax    pmax
        comp=E,2µm,6.2s
QZH                                 LR      LR
        comp=E,15µm,17.1s
QZH                                 LR      LR
        comp=E,9µm,16.6s
QZH                                 LR      LR
        comp=E,11µm,19.9s
KUR   Kuril'sk          58.20 345c iP       P        22 26 27.0 -1.7
KUR                                e                 22 27 13.3
KUR                                e                 22 28 33.4
KUR                                ePPP     PPP      22 29 55.8
KUR                                eS       S        22 34 28.4  0.0
KUR                                 pmax    pmax
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        comp=Z,2µm,7.4s
KUR                                 MLR     MLR
        comp=Z,11µm,17.0s
KUR                                 MLR     MLR
        comp=N,13µm,16.0s
KUR                                 MLR     MLR
        comp=E,2µm,17.0s
ASAJ  Asahikawa         58.68 341   P       P        22 26 28.2 -3.8
        comp=E,12nm,0.9s,baz=106,slow=18,SNR=2.2
SSE   Sheshan           59.63 316   P       P        22 26 40.8 +1.9
SSE                                 S       S        22 34 51.2 +3.7
SSE                                 pmax    pmax
        comp=E,16nm,1.1s
SSE                                 pmax    pmax
        comp=E,660nm,4.9s
SSE                                 LR      LR
        comp=E,8µm,18.2s
SSE   Sheshan           59.63 316  eP       P        22 26 37.2 -1.7
        comp=E,42nm,1.0s
SSE                                 LR      LR
        comp=Z,18µm,20.0s
KSRS  Korea Array       59.69 326   P       P        22 26 37.9 -1.3
        comp=Z,12nm,1.2s,baz=154,slow=7.5,SNR=10
KSAR  Wonju Array Be    59.70 326   P       P        22 26 37.9 -1.4
KSAR  Wonju Array Be    59.70 326   P       P        22 26 37.9 -1.4
KS01  Wonju Array Si    59.72 326  eP       P        22 26 38.0 -1.4
MCO   Taipa Grande      60.60 303   P       P        22 26 59.0  +13
YSS   Yuzh-Sakhalins    61.18 342  eP       P        22 26 48.7 -0.5
        comp=Z,6.9nm,0.3s
YSS                                 LR      LR
        comp=Z,12µm,20.0s
YSS   Yuzh-Sakhalins    61.18 342αeP       P        22 26 49.8 +0.7
YSS                                e*SP     sP       22 27 00.7 +0.1
YSS                                e                 22 27 31.5
YSS                                e                 22 29 07.4
YSS                                eS       S        22 35 09.3 +2.6
YSS                                ePS               22 35 32.6
YSS                                 pmax    pmax
        comp=Z,30nm,1.6s
GZH   Guangzhou         61.23 304   P       P        22 26 50.4 +0.4
GZH                                 S       S        22 35 10.3 +2.1
GZH                                 SS      SS       22 39 07.1 -1.9
GZH                                 LR      LR
        comp=Z,7µm,17.3s
GZH                                 LR      LR
        comp=Z,11µm,20.8s
TEY   Ternei            61.59 337⇓eP       P        22 26 52.0  0.0
TEY                                e                 22 35 23.1
TEY                                 pmax    pmax
        comp=Z,10.0nm,1.6s
TEY                                 MLR     MLR
        comp=E,600nm,17.0s
TEY                                 MLR     MLR
        comp=N,600nm,12.0s
TEY                                 MLR     MLR
        comp=Z,800nm,14.0s
NJ2   Nanjing           61.79 316  eP       P        22 26 56.2 +2.6
NJ2                                 sP      pP       22 26 59.2 -2.8
NJ2                                 S       S        22 35 18.5 +3.4
NJ2                                 SS      SS       22 39 23.0 +5.3
NJ2                                 pmax    pmax
        comp=Z,25nm,1.1s
NJ2                                 pmax    pmax
        comp=Z,2µm,6.2s
NJ2                                 LR      LR
        comp=Z,11µm,17.4s
NJ2                                 LR      LR
        comp=Z,14µm,19.0s
NJ2                                 LR      LR
        comp=Z,19µm,17.9s
MSHR  Mys Shultsa       61.90 332  i P      P        22 26 51.0 -3.1
SKR   Severo-Kuril's    61.98 353  eP       P        22 26 50.2 -4.3
SKR                                eS       S        22 35 17.3 +0.5
SKR                                 pmax    pmax
        comp=Z,1µm,10.2s
SKR                                 smax    smax
        comp=N,3µm,13.8s
SKR                                 smax    smax
        comp=E,12µm,17.5s
SKR                                 MLR     MLR
        comp=Z,10µm,16.0s
SKR                                 MLR     MLR
        comp=Z,11µm,17.0s
VLA   Vladivostok       61.99 333  i P      P        22 26 51.9 -2.8
VLA                                 pmax    pmax
        comp=Z,21nm,1.0s
PTCN  Pitcairn Islan    62.37 113   PFAKE            22 27 10.0  +12
PTCN                                LR      LR
        comp=Z,13µm,19.0s
QIZ   Qiongzhong        62.41 298   P       P        22 27 01.5 +3.5
QIZ                                 PP      PP       22 29 18.8 +3.1
QIZ                                 S       S        22 35 29.5 +6.2
QIZ                                 SS      SS       22 39 27.0 -0.6
QIZ                                 pmax    pmax
        comp=Z,1µm,5.5s
QIZ                                 LR      LR
        comp=Z,7µm,14.9s
QIZ                                 LR      LR
        comp=Z,10µm,20.4s
QIZ                                 LR      LR
        comp=Z,17µm,22.6s
QIZ   Qiongzhong        62.41 298   PFAKE            22 27 10.0  +12
QIZ                                 LR      LR
        comp=Z,2µm,21.0s
MYKOM Kota Tinggi       62.55 278   P       P        22 26 58.8 -0.2
USA0B Ussuriysk Arra    62.80 334  eP       P        22 27 01.4 +1.3
USRK  Ussuriysk Ar.     62.80 334   P       P        22 26 58.9 -1.2
        comp=Z,14nm,1.1s,baz=116,slow=5.0,SNR=7.4
USRK                                LR      LR       22 51 21.9
        comp=Z,6µm,21.8s,baz=133,slow=33
PET   Petropavlovsk     64.06 355  eP       P        22 27 10.1 +1.9
        comp=Z,33nm,1.1s
PET                                 LR      LR
        comp=Z,15µm,20.0s
PET   Petropavlovsk     64.06 355⇑iP       P        22 27 07.9 -0.3
PET                                eS       S        22 35 40.9 -1.8
PET                                ePS               22 36 03.6
PET                                 pmax    pmax
        comp=Z,16nm,1.2s
PET                                 pmax    pmax
        comp=Z,1µm,11.4s
PET                                 pmax    pmax
        comp=Z,2µm,19.2s
PET                                 MLR     MLR
        comp=Z,8µm,19.0s
PET                                 MLR     MLR
        comp=Z,7µm,18.0s
WHN   Wuhan             64.15 312  ⇑P       P        22 27 19.0  +10
WHN                                 S       S        22 35 42.9 -1.9
WHN                                 LR      LR
        comp=N,52µm,14.1s
WHN                                 LR      LR
        comp=E,8µm,12.8s
WHN                                 LR      LR
        comp=Z,77µm,21.4s
MDJ   Mudanjiang        64.19 332   PFAKE            22 27 20.0  +11
MDJ                                 LR      LR
        comp=Z,9µm,19.0s
PETK  Petropavlovsk-    64.22 355   P       P        22 27 07.5 -1.8
PETK                                pmax    pmax
        comp=Z,6.0nm,0.8s
PETK                                MLR     MLR
        comp=Z,11µm,21.5s
PETK  Petropavlovsk-    64.22 355   P       P        22 27 07.5 -1.8
        comp=Z,2.0nm,0.5s,baz=172,slow=6.4,SNR=8.6
PETK                                LR      LR       22 49 28.4
        comp=Z,11µm,21.5s,baz=164,slow=31
DL2   Dalian            64.28 323⇓iP       P        22 27 14.1 +4.1
DL2                                 S       S        22 35 54.6 +8.6
DL2                                 pmax    pmax
        comp=Z,52nm,1.7s
DL2                                 pmax    pmax
        comp=Z,1µm,6.9s
DL2                                 LR      LR
        comp=Z,14µm,15.9s
DL2                                 LR      LR
        comp=Z,10µm,20.0s
DL2                                 LR      LR
        comp=Z,14µm,19.1s
ADK   Adak              64.53  12  eP       P        22 27 11.6 +0.2
        comp=Z,200nm,1.3s
ADK                                 LR      LR
        comp=Z,15µm,19.0s
ADK   Adak              64.53  12  eP       P        22 27 11.6 +0.2
ADK                                 pmax    pmax
        comp=Z,200nm,1.3s
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ADK                                 MLR     MLR
        comp=Z,15µm,19.0s
TYV   Tymovskoe         64.75 344  eP       P        22 27 09.9 -2.9
TYV                                eS       S        22 35 48.5 -2.8
TYV                                 pmax    pmax
        comp=Z,17nm,1.6s
TYV                                 pmax    pmax
        comp=Z,1µm,4.2s
TYV                                 smax    smax
        comp=E,1µm,7.3s
TYV                                 MLR     MLR
        comp=N,15µm,18.0s
TYV                                 MLR     MLR
        comp=Z,18µm,18.0s
SNY   Shenyang          65.15 327  ⇓P       P        22 27 19.6 +4.0
SNY                                 S       S        22 35 59.5 +2.9
SNY                                 pmax    pmax
        comp=Z,63nm,2.5s
SNY                                 LR      LR
        comp=Z,20µm,18.2s
SNY                                 LR      LR
        comp=Z,15µm,17.1s
SNY                                 LR      LR
        comp=Z,24µm,18.5s
CN2   Changchun         65.57 329  eP       P        22 27 19.5 +1.2
CN2                                esP      sP       22 27 28.8 -1.1
CN2                                eS       S        22 35 57.5 -4.2
CN2                                 pmax    pmax
        comp=Z,40nm,1.0s
CN2                                 pmax    pmax
        comp=Z,2µm,10.0s
CN2                                 LR      LR
        comp=Z,14µm,18.0s
CN2                                 LR      LR
        comp=Z,9µm,18.0s
CN2                                 LR      LR
        comp=Z,8µm,18.0s
IPM   Ipoh              65.92 280  eP       P        22 27 22.3 +1.0
IPM   Ipoh              65.92 280   P       P        22 27 22.2 +1.0
CASY  Casey             66.29 201   PFAKE            22 27 40.0  +17
CASY                                LR      LR
        comp=Z,2µm,19.0s
KULM  Kulim             66.48 281  eP       P        22 27 21.4 -3.4
KULM  Kulim             66.48 281   P       P        22 27 24.6 -0.2
VNDA  Vanda             66.51 181   P       P        22 27 23.6 -0.3
VNDA                                pmax    pmax
        comp=Z,4.0nm,0.7s
VNDA  Vanda             66.51 181   P       P        22 27 23.6 -0.3
        comp=Z,6.6nm,1.0s,baz=12,slow=11,SNR=13
GRNR  Gornyy            66.52 340  eP       P        22 27 23.8 -0.5
GRNR                                pmax    pmax
        comp=Z,21nm,1.0s
SKNT  Sakolnakorn       66.81 294   P       P        22 27 28.4 +1.6
        comp=Z,33nm,1.2s,comp=Z,1µm
SBA   Scott Base        66.82 180  eP       P        22 27 25.8  0.0
SBA                                 LR      LR
        comp=Z,13µm,19.0s
SBA   Scott Base        66.82 180  eP       P        22 27 25.8  0.0
SBA                                 MLR     MLR
        comp=Z,13µm,19.0s
KLR   Kul'dur           66.92 337  i P      P        22 27 24.1 -2.8
COCO  West Island       67.04 261   PFAKE            22 27 40.0  +12
COCO                                LR      LR
        comp=Z,18µm,22.0s
NKL   Nikolayevsk       67.34 344  eP       P        22 27 28.0 -1.4
NKL                                eS       S        22 36 34.0  +11
NKL                                 pmax    pmax
        comp=Z,43nm,1.0s
NKL                                 pmax    pmax
        comp=Z,2µm,15.0s
NKL                                 smax    smax
        comp=E,4µm,10.0s
NIKH  Nikolski High     67.44  17  eP       P        22 27 28.3 -1.8
PSI   Prapat            67.57 278  eP       P        22 27 32.3 +0.4
PSI   Prapat            67.57 278  eP       P        22 27 32.3 +0.4
SRAK  Srakaew           67.60 290   P       P        22 27 40.7 +8.8
ENH   Enshi             67.65 309  eP       P        22 27 31.8 -0.2
ENH                                 LR      LR
        comp=Z,10µm,21.0s
NONG  Nongkai           67.93 295   P       P        22 27 35.7 +1.8
        comp=Z,1.5nm,1.2s
TRTT  Trang             68.05 283   P       P        22 27 45.9  +11
GYA   Guiyang           68.16 304⇑iP       P        22 27 36.9 +1.6
GYA                                 pP      pP       22 27 43.7 -0.1
GYA                                 PP      PP       22 30 09.0 +2.9
GYA                                 ScP              22 32 03.8
GYA                                 S       S        22 36 35.0 +1.1
GYA                                 sS      pS       22 36 45.8 +1.5
GYA                                 SKS     SKiKP    22 37 30.0 +1.1
GYA                                 SS      SS       22 40 58.9 +1.6
GYA                                 pmax    pmax
        comp=Z,60nm,1.1s
GYA                                 pmax    pmax
        comp=Z,570nm,7.1s
GYA                                 LR      LR
        comp=Z,7µm,19.6s
GYA                                 LR      LR
        comp=Z,10µm,20.8s
GYA                                 LR      LR
        comp=Z,14µm,22.4s
CHAI  Chaiyaphum        68.25 292   P       P        22 27 43.1 +7.1
        comp=Z,6.2nm,0.8s,comp=Z,76nm
BJT   Baijiatuau        68.27 321  eP       P        22 27 35.4 -0.2
        comp=Z,32nm,1.1s
BJT                                 LR      LR
        comp=Z,19µm,21.0s
BJT   Baijiatuau        68.27 321  eP       P        22 27 35.4 -0.2
BJT                                 pmax    pmax
        comp=Z,32nm,1.1s
BJT                                 MLR     MLR
        comp=Z,19µm,21.0s
BJI   Beijing           68.28 321   P       P        22 27 36.2 +0.6
BJI                                 S       S        22 36 36.7 +2.2
BJI                                 LR      LR
        comp=Z,5µm,18.3s
BJI                                 LR      LR
        comp=Z,7µm,19.1s
PATY  Pattaya           68.36 289   P       P        22 27 45.3 +8.7
GSI   Gunungsitoli      68.56 276  eP       P        22 27 41.7 +3.7
TIY   Taiyuan           69.34 317  eP       P        22 27 45.4 +3.0
TIY                                 PP      PP       22 30 17.7 +1.6
TIY                                 S       S        22 36 51.6 +4.2
TIY                                 pmax    pmax
        comp=Z,1µm,7.5s
TIY                                 LR      LR
        comp=Z,14µm,18.0s
TIY                                 LR      LR
        comp=Z,9µm,17.3s
TIY                                 LR      LR
        comp=Z,12µm,20.2s
PBKT  Sadao Pong        69.39 292  eP       P        22 27 42.5 -0.6
PBKT  Sadao Pong        69.39 292   P       P        22 27 45.9 +2.9
        comp=Z,39nm,1.1s,comp=Z,4µm
XAN   Xi'an             69.89 312   P       P        22 27 47.0 +1.2
XAN                                 pP      pP       22 27 52.4 -1.9
XAN                                 sP      sP       22 27 56.0 -1.5
XAN                                 PcP     PcP      22 28 09.7 +1.5
XAN                                 PP      PP       22 30 22.5 +1.7
XAN                                 S       S        22 36 54.4 +0.5
XAN                                 sS      pS       22 37 04.6 -0.1
XAN                                 SS      SS       22 41 24.8 +1.2
XAN                                 pmax    pmax
        comp=Z,890nm,6.2s
XAN                                 LR      LR
        comp=Z,7µm,20.6s
XAN                                 LR      LR
        comp=Z,9µm,21.8s
XAN                                 LR      LR
        comp=Z,10µm,23.3s
XAN   Xi'an             69.89 312  eP       P        22 27 45.3 -0.5
        comp=Z,144nm,1.2s
XAN   Xi'an             69.89 312  eP       P        22 27 45.3 -0.5
XAN                                 pmax    pmax
        comp=Z,144nm,1.2s
SRDT  SRDT              70.40 290   P       P        22 27 57.1 +7.8
        comp=Z,38nm,1.9s,comp=Z,3µm
UTHA  Uthaitani         70.47 291   P       P        22 27 57.6 +7.9
        comp=Z,7.5nm,1.0s,comp=Z,96nm
KMI   Kunming           70.85 301   P       P        22 27 51.8 -0.4
KMI                                 pP      pP       22 27 59.7 -1.0
KMI                                 sP      sP       22 28 03.4 -0.5
KMI                                 S       S        22 37 09.7 +3.8
KMI                                 sS      sS       22 37 20.4 +0.5
KMI                                 SKS     SKSac    22 37 52.7 -0.3
KMI                                 SS      SS       22 41 41.1 +2.0
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KMI				pmax	pmax		
	comp=Z,1µm,6.8s						
KMI				LR	LR		
	comp=Z,5µm,18.5s						
KMI				LR	LR		
	comp=Z,11µm,22.4s						
KMI				LR	LR		
	comp=Z,13µm,22.4s						
PAYA	Payao	71.29	295	P	P	22 27 59.5	+4.8
	comp=Z,7.1nm,1.2s						
MA2	Magadan	71.35	352	*e*P	P	22 27 54.4	+0.3
	comp=Z,239nm,1.5s						
MA2				LR	LR		
	comp=Z,13µm,21.0s						
MA2	Magadan	71.35	352	*i* P	P	22 27 52.1	-2.0
MA2				pmax	pmax		
	comp=Z,12nm,1.2s						
MA2				MLR	MLR		
	comp=Z,11µm,18.0s						
HHC	Hu-ho-hao-te	71.62	320	*e*P	P	22 27 58.1	+1.8
HHC				sP	pwP	22 28 09.0	+0.4
HHC				S	S	22 37 18.8	+4.8
HHC				sS	sS	22 37 29.0	+0.6
HHC				pmax	pmax		
	comp=Z,15nm,1.3s						
HHC				pmax	pmax		
	comp=Z,840nm,5.5s						
HHC				LR	LR		
	comp=Z,9µm,15.3s						
HHC				LR	LR		
	comp=Z,9µm,18.6s						
HHC				LR	LR		
	comp=Z,17µm,16.5s						
CM01	Chiang Mai Arr	71.80	294	*e*P	P	22 27 56.8	-0.9
CMAR	Chiang Mai Arr	71.83	294	P	P	22 27 56.9	-1.0
	comp=Z,4.8nm,1.0s,baz=116,slow=4.1,SNR=19						
CMAR				PKPPKP		22 55 46.4	
	comp=Z,0.6nm,0.3s,baz=284,slow=3.6,SNR=6.4						
CMMT	Chiang Mai	71.94	294	P	P	22 28 00.0	+1.4
	comp=Z,27nm,1.4s,comp=Z,2µm						
CHTO	Chiang Mai	71.94	294	*e*P	P	22 27 58.5	0.0
CHTO				LR	LR		
	comp=Z,7µm,20.0s						
CHTO	Chiang Mai	71.94	294	*e*P	P	22 27 58.6	0.0
CHTO				MLR	MLR		
	comp=Z,7µm,20.0s						
CHTO	Chiang Mai	71.94	294	P	P	22 28 00.1	+1.5
	comp=Z,122nm,1.4s,comp=Z,9µmcomp=Z,31µm						
HIA	Hailar	72.20	331	*e*P	P	22 27 59.7	+0.2
	comp=Z,3.9nm,0.4s						
HIA				LR	LR		
	comp=Z,12µm,19.0s						
HIA	Hailar	72.20	331	*i* P	P	22 27 57.2	-2.3
HIA				pmax	pmax		
	comp=Z,18nm,1.0s						
HIA				MLR	MLR		
	comp=Z,7µm,16.0s						
ZEA	Zeya	72.21	337	*e*P	P	22 27 58.3	-1.1
ZEA				*e*S	S	22 37 22.0	+2.0
ZEA				pmax	pmax		
	comp=N,47nm,1.0s						
ZEA				pmax	pmax		
	comp=E,37nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,55nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,4.0s						
ZEA				pmax	pmax		
	comp=N,900nm,5.0s						
ZEA				pmax	pmax		
	comp=N,600nm,12.0s						
ZEA				pmax	pmax		
	comp=Z,3µm,12.0s						
ZEA				smax	smax		
	comp=Z,1µm,10.0s						
ZEA				smax	smax		
	comp=E,5µm,18.0s						
ZEA				smax	smax		
	comp=N,5µm,19.0s						
ZEA				MLR	MLR		
	comp=Z,10µm,17.0s						
ZEA				MLR	MLR		
	comp=E,7µm,16.0s						
ZEA				MLR	MLR		
	comp=N,10µm,19.0s						
CD2	Chengdu	72.35	307	P	P	22 27 59.5	-1.4
CD2				PP	PP	22 30 40.0	-2.1
CD2				S	S	22 37 23.6	+0.9
CD2				SS	SS	22 42 02.7	+1.1
CD2				pmax	pmax		
	comp=N,60nm,1.1s						
CD2				pmax	pmax		
	comp=N,3µm,6.6s						
CD2				LR	LR		
	comp=N,20µm,17.9s						
CD2				LR	LR		
	comp=N,17µm,18.9s						
CD2				LR	LR		
	comp=N,18µm,17.4s						
BTO	Baotou	72.48	319	*e*P	P	22 28 02.6	+1.1
CMBY	CAMPBELL BAY	73.38	281	*e*P	P	22 28 06.9	-0.3
SEY	Seymchan	74.42	354	*i* P	P	22 28 10.8	-1.5
LZH	Lanzhou	74.52	312	*e*P	P	22 28 15.7	+2.0
LZH				pP	pP	22 28 20.9	-1.3
LZH				sP	sP	22 28 23.6	-1.8
LZH				PP	PP	22 31 02.3	+1.7
LZH				*e*S	S	22 37 50.8	+3.5
LZH				sS	sS	22 38 01.3	-0.6
LZH				SS	SS	22 42 42.0	+7.3
LZH				pmax	pmax		
	comp=N,3µm,6.1s						
LZH				LR	LR		
	comp=N,23µm,17.6s						
LZH				LR	LR		
	comp=N,17µm,17.6s						
LZH				LR	LR		
	comp=N,20µm,19.5s						
PBA	Port Blair	75.64	285	*e*P	P	22 28 18.6	-1.7
GAMB	Gambell	76.60	10	*e*P	P	22 28 23.5	-1.2
KDAK	Kodiak Island	76.67	22	PFAKE		22 28 40.0	+15
KDAK				LR	LR		
	comp=Z,5µm,19.0s						
YAK	Yakutsk	77.99	344	*e*P	P	22 28 31.5	-1.1
YAK				*e*		22 28 41.3	
YAK				*e**PP	pwP	22 28 47.9	+2.9
YAK				*e*		22 31 28.6	
YAK				*e*S	S	22 38 22.3	-1.6
YAK				*e**SS	SKKSac	22 38 44.7	-0.4
YAK				*e*SS	SS	22 43 26.5	+0.7
YAK				*e*SSS	SSS	22 46 42.3	
YAK				pmax	pmax		
	comp=Z,102nm,1.1s						
YAK				pmax	pmax		
	comp=N,23nm,1.0s						
YAK				pmax	pmax		
	comp=E,23nm,1.4s						
YAK				pmax	pmax		
	comp=Z,9µm,8.5s						
YAK				pmax	pmax		
	comp=E,1µm,5.5s						
YAK				pmax	pmax		
	comp=N,3µm,5.7s						
YAK				smax	smax		
	comp=N,13µm,15.1s						
YAK				smax	smax		
	comp=E,10µm,12.0s						
SONM	Songino Array	78.47	324	P	P	22 28 34.6	-1.1
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	78.47	324	P	P	22 28 34.6	-1.1
	comp=Z,4.4nm,0.8s,baz=134,slow=6.2,SNR=13						
SONM				PKPPKP		22 55 37.5	
	comp=Z,0.5nm,0.9s,baz=48,slow=2.1,SNR=3.9						
SONA1	Songino Array	78.47	324	*e*P	P	22 28 34.3	-1.4
ANM	Nome	78.54	12	*e*P	P	22 28 35.2	-0.4
RSO	Redoubt South	78.61	20	*e*P	P	22 28 35.5	-0.7
BRLK	Bradley Lake	78.73	21	*e*P	P	22 28 34.9	-1.9
GTA	Gaotai	78.83	314	*e*P	P	22 28 37.1	-0.8
GTA				pP	pP	22 28 44.2	-2.3
GTA				sP	sP	22 28 48.8	-0.9
GTA				S	S	22 38 34.0	-0.2
GTA				sS	pS	22 38 44.6	-0.7
GTA				pmax	pmax		
	comp=Z,680nm,8.2s						
GTA				LR	LR		
	comp=Z,12µm,18.5s						
GTA				LR	LR		
	comp=Z,9µm,18.2s						
GTA				LR	LR		
	comp=Z,14µm,18.9s						
BILL	Bilibino	78.86	0	*e*P	P	22 28 35.1	-2.1
BILL				LR	LR		
	comp=Z,6µm,21.0s						
BILL	Bilibino	78.86	0	*d i*P	P	22 28 35.6	-1.7
BILL				*e*		22 31 34.7	
BILL				*i* S	S	22 38 29.3	-3.8
BILL				pmax	pmax		
	comp=Z,25nm,1.1s						
BILL				MLR	MLR		
	comp=Z,5µm,19.0s						
QSPA	South Pole Qui	78.98	180	*e*P	P	22 28 37.1	-1.2
	comp=Z,76nm,0.9s						
QSPA				LR	LR		
	comp=Z,16µm,19.0s						
SUA	Susitna One	80.01	20	*e*P	P	22 28 43.3	-0.5
SHL	Shillong	80.24	298	*e*P	P	22 28 47.5	+1.6
SHL	Shillong	80.24	298	*e*P	P	22 28 47.5	+1.6
SHL	Shillong	80.24	298	*e*P	P	22 28 45.2	-0.8
SHL				IAmb	IAmb	22 28 59.3	
	comp=Z,2µm,5.2s						
BOD	Bodaibo	80.39	335	*e*P	P	22 28 45.1	-0.6
BOD				pmax	pmax		
	comp=Z,47nm,1.4s						
PMR	Palmer	80.64	20	*e*P	P	22 28 50.8	+3.8
KNK	Knik Glacier	80.75	21	*e*P	P	22 28 48.2	+0.5
RPN	Rapa Nui	80.85	116	PFAKE		22 29 00.0	+11
RPN				LR	LR		
	comp=Z,5µm,21.0s						
GLI	Glacier Island	80.86	21	*e*P	P	22 28 49.1	+0.8
CAST	Castle Rocks	81.02	18	*e*P	P	22 28 48.1	-1.0
SML	Sawmill	81.07	20	*e*P	P	22 28 50.1	+0.7
SML	Sawmill	81.07	20	*e*P	P	22 28 50.1	+0.7
EYAK	Cordova Ski Ar	81.12	22	*e*P	P	22 28 52.6	+3.0
DIV	Divide	81.50	22	*e*P	P	22 28 51.6	-0.1
ZAK	Zakamensk	81.51	325	*e*P	P	22 28 49.8	-2.3
ZAK				pmax	pmax		
	comp=Z,18nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
TRF	Thorofare Moun	81.60	18	*e*P	P	22 28 53.4	+1.1
KLU	Klutina	81.69	21	*e*P	P	22 28 52.9	+0.2
IRK	Irkutsk	81.88	327	*e*P	P	22 28 57.2	+3.3
IRK				*e*S	S	22 39 02.0	-3.4
IRK				pmax	pmax		
	comp=Z,134nm,3.7s						
TLY	Talaya	81.94	326	*e*P	P	22 28 54.6	+0.4
	comp=Z,50nm,1.0s						
TLY				LR	LR		
	comp=Z,4µm,22.0s						
TLY	Talaya	81.94	326	*i* P	P	22 28 53.2	-1.0
RND	Reindeer	82.02	19	*e*P	P	22 28 55.1	+0.7
RND	Reindeer	82.02	19	*e*P	P	22 28 55.1	+0.7
RDOG	Red Dog Mine	82.06	11	*e*P	P	22 28 55.0	+0.5
LSA	Lhasa	82.09	302	P	P	22 29 06.3	+10
LSA	Lhasa	82.09	302	S	S	22 39 08.6	-0.8
LSA				pmax	pmax		
	comp=Z,29nm,2.9s						
LSA				pmax	pmax		
	comp=Z,1µm,7.1s						
LSA				LR	LR		
	comp=N,2µm,20.1s						
LSA				LR	LR		
	comp=E,2µm,19.0s						
LSA				LR	LR		
	comp=Z,7µm,23.5s						
LSA	Lhasa	82.09	302	*e*P	P	22 28 59.0	+2.9
LSA				LR	LR		
	comp=Z,5µm,20.0s						
LSA	Lhasa	82.09	302	*e*P	P	22 28 59.0	+2.9
LSA				MLR	MLR		
	comp=Z,5µm,20.0s						
DHY	Denali Highway	82.27	20	*e*P	P	22 28 57.0	+1.2
IM3	Indian Mountai	82.49	16	*e*P	P	22 28 54.7	-2.0
HARP	HAARP	82.57	21	*e*P	P	22 28 58.5	+1.3
MLY	Manley	82.61	17	*e*P	P	22 28 55.8	-1.7
MCCM	Marconi Confer	82.74	49	*e*P	P	22 28 58.3	-0.3
	comp=Z,151nm,0.8s						
KCPM	Cahto Peak	82.76	47	*e*P	P	22 28 58.3	-0.6
KMRM	Mail Ridge	82.86	47	*e*P	P	22 28 59.0	-0.4
HOPS	Hopland Field	82.89	48	*e*P	P	22 28 58.3	-1.2
WRH	Wood River Hil	83.01	18	*e*P	P	22 28 58.5	-1.0
MDM	Murphy Dome	83.31	18	*e*P	P	22 28 59.5	-1.6
HDA	Harding Lake	83.32	19	*e*P	P	22 28 59.4	-1.7
HDA	Harding Lake	83.32	19	P	P	22 28 59.5	-1.7
	baz=227						
HDA				S	S	22 39 26.3	+6.6
	baz=227						
SAO	San Andreas Ge	83.35	51	*e*P	P	22 29 00.7	-1.2
	comp=Z,13nm,1.0s						
TCOL	CIGO, UAF Yank	83.36	18	P	P	22 29 00.1	-1.1
	baz=226						
COLA	College	83.36	18	*e*P	P	22 29 00.1	-1.2
	comp=Z,53nm,1.0s						
COLA				LR	LR		
	comp=Z,9µm,21.0s						
COLA	College	83.36	18	*i* P	P	22 29 00.5	-0.7
COLA				pmax	pmax		
	comp=Z,13nm,1.1s						
COLA				MLR	MLR		
	comp=Z,6µm,17.0s						
MOY	Mondy	83.39	326	*e*P	P	22 29 05.4	+3.5
MOY				pmax	pmax		
	comp=Z,171nm,3.8s						
O02D	Mt. Diablo Mer	83.50	47	P	P	22 29 01.9	-0.8
	baz=250,SNR=27						
RIDG	Independ'e Rid	83.56	20	*e*P	P	22 29 03.2	+0.8
IL1	Eielson Array	83.59	19	*e*P	P	22 28 59.3	-3.2
ILAR	Eielson Array	83.59	19	P	P	22 29 00.6	-1.9
	comp=Z,4.8nm,0.7s,baz=233,slow=4.0,SNR=28						
ILAR				PKKPbc	PKKPbc	22 47 20.6	-3.0
	comp=Z,0.8nm,1.0s,baz=336,slow=3.5,SNR=4.5						
ILAR				PKPPKP	P'P'df	22 55 27.4	+4.0
	comp=Z,0.7nm,0.9s,baz=174,slow=0.8,SNR=4.1						
ILAR				LR	LR	23 01 29.5	
	comp=Z,5µm,20.4s,baz=240,slow=32						
ILB	Eielson Array	83.59	19	*e*P	P	22 29 00.5	-2.0
L02E	Cave Junction	83.62	45	P	P	22 29 02.5	-0.6
	baz=249						
POKR	Poker Plat Res	83.66	18	P	P	22 29 01.7	-1.1
	baz=226						
J01E	Myrtle Point	83.76	44	P	P	22 29 03.5	-0.3
	baz=249						
SNCC	San Nicolas Is	83.76	55	P	P	22 29 03.3	-0.8
	baz=253						
K02D	Willamette Mer	83.77	44	P	P	22 29 03.2	-0.8
	baz=249,SNR=13						
WDC	Whiskeytown Da	83.82	47	*e*P	P	22 29 03.0	-1.2
WDC	Whiskeytown Da	83.82	47	*e*P	P	22 29 03.0	-1.2
N02D	Trinity Center	83.84	46	P	P	22 29 03.7	-0.7
	baz=250,SNR=16						
M02C	Callahan	83.88	46	P	P	22 29 04.1	-0.5
	baz=250,SNR=16						
SCZ2	Santa Cruz Isl	83.89	54	P	P	22 29 04.2	-0.6
	baz=252						
PAGB	Antelope Grade	83.94	52	*e*P	P	22 29 06.2	+1.3
SBC	Santa Barbara	83.97	53	P	P	22 29 04.6	-0.5
	baz=252						
SCRK	Sand Creek	84.00	20	*e*P	P	22 29 03.2	-1.5
SMMC	Simmler	84.01	52	P	P	22 29 05.1	-0.2
	baz=252						
PKM	Mcpherson Peak	84.03	53	P	P	22 29 04.3	-1.3
	baz=252						
YBH	Yreka Blue Hor	84.10	46	*e*P	P	22 29 04.3	-1.4
I02D	Swisshome	84.16	43	P	P	22 29 05.8	0.0
	baz=249						
ORV	Oroville	84.23	48	*e*P	P	22 29 04.2	-2.1
ORV	Oroville	84.23	48	*e*P	P	22 29 04.2	-2.1
HUMO	Hull Mountain	84.23	45	*e*P	P	22 29 05.2	-1.1
BWNR	Bhubaneshwar	84.24	292	*e*P	P	22 28 54.4	-12
O03E	Paynes Creek	84.25	47	P	P	22 29 05.3	-1.2
	baz=250,SNR=23						
I03D	Drain, OR	84.35	44	P	P	22 29 06.5	-0.2
	baz=249						
BLG	Laguna Peak, P	84.38	54	P	P	22 29 06.4	-0.8
	baz=253						
BESE	Bessie Mountai	84.40	27	*e*P	P	22 29 07.5	+0.7
AFDM	Forest Hills D	84.42	49	*e*P	P	22 29 05.8	-1.6
JIS	Juneau Island	84.45	27	*e*P	P	22 29 08.5	+1.5
SCI2	San Clemente I	84.46	55	P	P	22 29 07.2	-0.5
	baz=253						
WRAK	Wrangell Islan	84.47	30	*e*P	P	22 29 07.0	-0.1
WRAK				LR	LR		
	comp=Z,18µm,20.0s						
HYT	Haines Junctio	84.50	24	*e*P	P	22 29 06.2	-1.1
PRP	Porcupine Dome	84.52	18	*e*P	P	22 29 09.4	+2.0
L04D	Klamath Falls	84.55	45	P	P	22 29 07.1	-0.9
	baz=250,SNR=11						
CMB	Columbia Colle	84.56	50	*e*P	P	22 29 05.9	-2.2
	comp=Z,57nm,1.0s						
CMB	Columbia Colle	84.56	50	*e*P	P	22 29 05.9	-2.2
CMB				pmax	pmax		
	comp=Z,57nm,1.0s						
MAW	Mawson	84.63	202	P	P	22 29 08.4	+0.7
	comp=Z,8.9nm,1.0s,baz=141,slow=13,SNR=3.7						
SKAG	Skagway	84.66	26	*e*P	P	22 29 09.4	+1.4
CIS	Catalina Islan	84.69	55	P	P	22 29 08.1	-0.8
	baz=253						
M04C	Macdoel	84.73	46	P	P	22 29 07.4	-1.6
	baz=250,SNR=21						
VOG	Valley Oaks Go	84.79	52	P	P	22 29 08.0	-1.2
	baz=252						
OSI	Osito Audit: C	84.80	53	P	P	22 29 08.5	-0.9
	baz=253						
ARVC	Arvin	84.87	53	P	P	22 29 08.7	-0.9
	baz=253						
FMP	Fort Macarthur	84.88	54	P	P	22 29 09.0	-0.7
	baz=253						
VES	Vestal, Richgr	84.88	52	P	P	22 29 08.7	-1.0
	baz=253						
G03D	McMinnville, O	84.94	42	P	P	22 29 08.9	-0.9
	baz=249						
DECC	Green Verdugo	85.00	54	P	P	22 29 09.5	-0.9
	baz=253						
I04A	Tendick Farm,	85.02	44	P	P	22 29 09.2	-1.1
	baz=250,SNR=11						
BOK	Bokaro	85.02	295	*e*P	P	22 29 10.9	+0.2
BOK				IAmb	IAmb	22 29 22.6	
	comp=Z,589nm,3.0s						
J04D	Umpqua Nationa	85.03	44	P	P	22 29 09.6	-1.0
	baz=250,SNR=20						
H04D	Lebanon	85.05	43	P	P	22 29 09.7	-0.6
	baz=250						
RUBR	Rubicon Trail	85.05	49	*e*P	P	22 29 11.3	+0.5
K04D	Chiloquin, OR	85.07	45	P	P	22 29 09.7	-0.9
	baz=250						
BEKR	Beckworth	85.16	48	*e*P	P	22 29 11.5	+0.3
RAMN	Ramite	85.18	298	*e*P	P	22 29 12.7	+1.0
	comp=Z,9.2nm,0.6s						
MWC	Mount Wilson	85.21	54	*e*P	P	22 29 11.4	-0.2
ISA	Isabella, Lake	85.30	52	*e*P	P	22 29 10.5	-1.4
ISA	Isabella, Lake	85.30	52	*e*P	P	22 29 10.5	-1.4
ISA	Isabella, Lake	85.30	52	P	P	22 29 11.2	-0.7
	baz=253,SNR=17						
NLWA	Neilton Lookou	85.35	40	*e*P	P	22 29 12.7	+0.9
	comp=Z,3.6nm,0.7s						
NLWA				LR	LR		
	comp=Z,18µm,20.0s						
WAKR	Walker	85.42	50	*e*P	P	22 29 11.4	-1.2
MDPB	Devils Postpil	85.42	50	*e*P	P	22 29 11.4	-1.3
F04D	Rainier, OR	85.42	41	P	P	22 29 11.6	-0.6
	baz=249						
EDW2	Edwards Air Fo	85.45	53	P	P	22 29 11.3	-1.4
	baz=253,SNR=36						
OMMB	Old Mammoth Mi	85.47	50	*e*P	P	22 29 11.6	-1.4
PNTR	Pine Nut	85.47	49	*e*P	P	22 29 12.1	-0.8
H04A	Detroit Lake	85.48	43	*e*P	P	22 29 10.6	-1.9
BFSC	Mount Baldy Ra	85.53	54	P	P	22 29 11.4	-1.8
	baz=254,SNR=9.5						
109C	Camp Elliot, M	85.60	55	P	P	22 29 12.1	-1.2
	baz=254						
MLAC	Mammoth, Mammo	85.60	51	P	P	22 29 12.7	-0.9
	baz=253						
DAWY	Dawson	85.65	21	*e*P	P	22 29 12.1	-0.8
	comp=Z,23nm,1.4s						
J05D	Fort Rock, OR	85.65	45	P	P	22 29 12.9	-0.6
	baz=251,SNR=27						
YERR	Yerington	85.71	49	*e*P	P	22 29 13.0	-1.0
JIRN	Jiri	85.72	299	*e*P	P	22 29 14.6	+0.1
	comp=Z,37nm,1.0s						
MURC	Murrieta	85.72	55	P	P	22 29 12.9	-1.1
	baz=254						
PAHR	Pah Rah Range	85.82	48	*e*P	P	22 29 13.1	-1.4
CWC	Cottonwood Cre	85.83	52	P	P	22 29 13.5	-1.1
	baz=253						
MOD	Modoc Plateau	85.85	46	*e*P	P	22 29 12.4	-2.2
	comp=Z,9.3nm,0.8s						
LRMC	Laurel Mtn Rad	85.87	53	P	P	22 29 14.0	-0.8
	baz=254,SNR=20						
E04D	Cinebar	85.88	41	P	P	22 29 14.1	-0.3
	baz=250,SNR=8.1						
D03D	Eldon	85.89	40	P	P	22 29 13.8	-0.7
	baz=249						
BAR	Barrett	85.89	56	*e*P	P	22 29 14.7	-0.2
TIN	Tinemaha, Big	85.90	51	P	P	22 29 14.0	-0.9
	baz=253						
I05D	Terrebonne, OR	85.93	44	P	P	22 29 14.2	-0.6
	baz=250,SNR=7.9						
TIXI	Tiksi	86.01	349	*e*P	P	22 29 12.8	-1.7
TIXI				LR	LR		
	comp=Z,9µm,20.0s						
TIXI	Tiksi	86.01	349	*i* P	P	22 29 12.8	-1.7
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PINE	Pine Mountain	86.02	44	*e*P	P	22 29 14.3	-1.2
GUN	Gumba	86.04	299	*e*P	P	22 29 16.1	0.0
	comp=Z,582nm,2.2s						
PGC	Sidney	86.07	39	*e*P	P	22 29 13.9	-1.3
	comp=Z,20nm,1.0s						
BBRC	Big Bear Solar	86.13	54	P	P	22 29 15.0	-1.3
	baz=254						
RYN	Ryan	86.14	50	*e*P	P	22 29 15.1	-1.0
MONP2	Monument Peak	86.16	56	P	P	22 29 15.4	-1.0
	baz=254,SNR=14						
DAC	Darwin (Calif)	86.16	52	*e*P	P	22 29 14.2	-2.1
	comp=Z,20nm,1.2s						
DAC	Darwin (Calif)	86.16	52	*e*P	P	22 29 14.2	-2.1
DAC				pmax	pmax		
	comp=Z,20nm,1.2s						
MPMC	Manual Prospec	86.18	52	P	P	22 29 15.8	-0.6
	baz=254,SNR=20						
RRX	Edison Barstow	86.24	54	P	P	22 29 15.6	-0.9
	baz=254						
NV01	Mina Array Sit	86.24	50	*e*P	P	22 29 14.8	-2.0
NVAR	Mina Array Bea	86.24	50	P	P	22 29 14.4	-2.3
	comp=Z,19nm,0.9s,baz=237,slow=6.5,SNR=34						
NVAR				PKPPKP	P'P'df	22 55 24.4	+3.2
	comp=Z,0.5nm,0.8s,baz=115,slow=1.5,SNR=3.0						
G05D	Wamic, OR	86.25	43	P	P	22 29 15.6	-0.7
	baz=250						
PFO	Pinyon Flats O	86.32	55	*e*P	P	22 29 15.2	-1.9
PFO				LR	LR		
	comp=Z,21µm,20.0s						
PFO	Pinyon Flats O	86.32	55	*e*P	P	22 29 15.2	-1.9
PFO				MLR	MLR		
	comp=Z,21µm,20.0s						
PFO	Pinyon Flats O	86.32	55	P	P	22 29 15.9	-1.2
	baz=254,SNR=7.9						
XPFO	Pion Flat	86.32	55	*e*P	P	22 29 15.6	-1.5
IKP	In-Ko-Pah, Jac	86.34	56	P	P	22 29 16.1	-1.0
	baz=255						
NV11	Mina Array Sit	86.35	50	*e*P	P	22 29 15.7	-1.5
PKI	Pulchoki	86.36	299	*e*P	P	22 29 18.4	+0.7
	comp=Z,353nm,2.2s						
F05D	White Salmon	86.37	42	P	P	22 29 16.1	-0.8
	baz=250						
PKIN	Phulchoki	86.38	299	*e*P	P	22 29 18.4	+0.7
	comp=Z,391nm,2.2s						
LON	Longmire	86.43	41	*e*P	P	22 29 18.2	+0.9
GSC	Goldstone, Bar	86.50	53	*e*P	P	22 29 16.5	-1.4
GSC	Goldstone, Bar	86.50	53	*e*P	P	22 29 16.5	-1.4
GSC	Goldstone, Bar	86.50	53	P	P	22 29 18.1	+0.2
	baz=254,SNR=7.8						
GRAC	Grapevine Rang	86.54	51	P	P	22 29 17.2	-0.7
	baz=254						
A04D	Lummi Island	86.56	39	P	P	22 29 16.8	-0.8
	baz=249						
KVN	Kaiserville	86.58	49	*e*P	P	22 29 16.7	-1.6
KVN	Kaiserville	86.58	49	*e*P	P	22 29 16.7	-1.6
DMN	Daman	86.63	299	*e*P	P	22 29 19.6	+0.7
	comp=Z,120nm,1.3s						
SWSC	Sam W. Stewart	86.67	56	P	P	22 29 17.4	-1.2
	baz=255,SNR=8.9						
HEC	Hector,Ludlow	86.75	54	P	P	22 29 17.5	-1.5
	baz=254,SNR=15						
B05A	Bryant	86.78	40	P	P	22 29 17.9	-0.9
	baz=250						

FURC	Furnace Creek,	86.78	52	P	P	22 29 18.2	-0.9
	baz=254,SNR=9.0						
BELC	Belle Mtn. Jos	86.79	55	P	P	22 29 18.2	-1.2
	baz=255,SNR=31						
SHOC	Shoshone, Teco	87.08	53	P	P	22 29 20.0	-0.6
	baz=254,SNR=7.7						
I07A	Izee	87.09	44	*e*P	P	22 29 18.6	-2.0
BC3	Big Chuckawall	87.14	55	P	P	22 29 20.3	-0.7
	baz=255,SNR=12						
WVOR	Wild Horse Val	87.19	46	*e*P	P	22 29 19.8	-1.3
	comp=Z,17nm,1.0s						
WVOR				LR	LR		
	comp=Z,7µm,20.0s						
WVOR	Wild Horse Val	87.19	46	*e*P	P	22 29 19.8	-1.3
WVOR				pmax	pmax		
	comp=Z,17nm,1.0s						
WVOR				MLR	MLR		
	comp=Z,7µm,20.0s						
TUQ	Turquoise Moun	87.23	53	P	P	22 29 20.2	-1.3
	baz=255,SNR=8.7						
GMRC	Granite Mounta	87.27	54	P	P	22 29 20.5	-1.2
	baz=255,SNR=20						
LTY	Liberty	87.34	41	*e*P	P	22 29 20.3	-1.4
F07A	Phinny Hill Vi	87.38	42	*e*P	P	22 29 21.6	-0.1
TPNV	Topopah Spring	87.39	52	*e*P	P	22 29 20.7	-1.6
TPNV	Topopah Spring	87.39	52	*e*P	P	22 29 20.7	-1.6
TPNV	Topopah Spring	87.39	52	P	P	22 29 21.7	-0.6
	baz=254,SNR=11						
C06D	Leavenworth	87.42	40	P	P	22 29 21.0	-1.0
	baz=251						
GLA	Glamis	87.49	56	*e*P	P	22 29 22.0	-0.7
GLA	Glamis	87.49	56	*e*P	P	22 29 22.0	-0.7
GLA	Glamis	87.49	56	P	P	22 29 21.9	-0.7
	baz=255,SNR=9.0						
IRM	Iron Mountain	87.52	55	P	P	22 29 21.6	-1.2
	baz=255,SNR=28						
J08A	Circle Bar Ran	87.58	45	*e*P	P	22 29 21.2	-1.8
LDFC	Landfair	87.78	54	*e*P	P	22 29 23.1	-1.1
HAWA	Hanford	87.80	42	*e*P	P	22 29 22.4	-1.4
	comp=Z,11nm,0.9s						
HAWA				LR	LR		
	comp=Z,9µm,20.0s						
G08A	Pilot Rock	87.84	43	*e*P	P	22 29 22.6	-1.6
MDRS	Chennai	87.85	284	*e*P	P	22 29 24.3	-0.4
Y12C	Blythe	87.91	55	*e*P	P	22 29 23.7	-0.9
Y12C	Blythe	87.91	55	P	P	22 29 24.0	-0.6
	baz=255,SNR=6.8						
DANN	Dangsing	87.97	299	*e*P	P	22 29 25.5	+0.1
	comp=Z,44nm,1.0s						
KOLN	Koldanda	87.97	299	*e*P	P	22 29 25.5	+0.2
	comp=Z,45nm,1.3s						
NEE2	Needles Airpor	88.09	54	P	P	22 29 24.7	-0.8
	baz=255						
SHPR	Sheep Range	88.11	52	*e*P	P	22 29 24.8	-0.9
E08A	Dider Farm, El	88.14	42	*e*P	P	22 29 24.7	-0.7
R11A	Troy Canyon, C	88.27	51	*e*P	P	22 29 24.8	-1.7
R11A	Troy Canyon, C	88.27	51	P	P	22 29 25.2	-1.3
	baz=255,SNR=24						
SRIG	Santa Rosalia	88.28	62	*e*P	P	22 29 25.6	-0.9
113A	Mohawk Valley,	88.28	56	*e*P	P	22 29 27.7	+1.3
PDMCI	Parker Dam,Lak	88.36	55	P	P	22 29 25.9	-0.8
	baz=256,SNR=19						
D08A	Wollman Farm,	88.41	42	*e*P	P	22 29 26.9	+0.2
B08A	Colville Reser	88.55	40	*e*P	P	22 29 25.9	-1.5
PYUN	Piuthan	88.57	299	*e*P	P	22 29 28.1	0.0
	comp=Z,60nm,1.2s						
E09A	Wood Farm, Sta	88.75	42	*e*P	P	22 29 28.5	+0.2
W13A	Hualapai Mount	88.76	54	*e*P	P	22 29 27.9	-1.0
BMO	Blue Mountains	88.83	44	*e*P	P	22 29 28.4	-0.4
BMO	Blue Mountains	88.83	44	*e*P	P	22 29 28.4	-0.4
WMQ	Urumqi	88.87	315	P	P	22 29 28.9	-0.1
WMQ				sP	sP	22 29 39.8	-1.1
WMQ				SKS	SKSac	22 39 55.9	-0.7
WMQ				S	SKKSac	22 40 10.3	+2.2
WMQ				sS	pS	22 40 25.4	-1.0
WMQ				SS	SS	22 46 12.5	+4.6
WMQ				pmax	pmax		
	comp=Z,76nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,3µm,5.5s						
WMQ				LR	LR		
	comp=Z,23µm,18.9s						
WMQ				LR	LR		
	comp=Z,11µm,19.9s						
WMQ				LR	LR		
	comp=Z,10µm,23.1s						
WMQ	Urumqi	88.87	315	*e*P	P	22 29 28.2	-0.8
WMQ	Urumqi	88.87	315	*e*P	P	22 29 28.2	-0.8
214A	Organ Pipe Nat	88.87	57	P	P	22 29 28.1	-1.2
	baz=256						
C09A	Chrisman Ranch	89.05	41	*e*P	P	22 29 30.1	+0.4
ELK	Elko	89.16	48	*e*P	P	22 29 29.4	-1.3
ELK				P'P'		22 55 13.6	
ELK	Elko	89.16	48	*e*P	P	22 29 29.4	-1.3
ELK	Elko	89.16	48	PKPPKP	P'P'df	22 55 13.6	-2.2
	comp=Z,0.2nm,0.3s,baz=309,slow=6.5,SNR=1.8						
Y14A	Wickenburg	89.19	55	*e*P	P	22 29 31.8	+1.1
F10A	Beach Ranch, E	89.20	43	*e*P	P	22 29 28.7	-1.8
MFID	Camas Ranch	89.45	46	*e*P	P	22 29 30.6	-1.3
SLBS	Sierra La Lagu	89.51	66	*e*P	P	22 29 32.9	+0.4
PSUT	Pine Spring	89.63	51	*e*P	P	22 29 31.7	-1.2
LCMT	Little Creek M	89.73	52	*e*P	P	22 29 32.2	-1.1
CCUT	Cedar City	89.77	52	*e*P	P	22 29 32.8	-0.7
HSIG		89.77	61	*e*P	P	22 29 34.6	+1.1
NEW	Newport	89.93	41	*e*P	P	22 29 33.5	-0.3
NEW	Newport	89.93	41	P	P	22 29 32.8	-1.0
	baz=254						
NEW	Newport	89.93	41	LR	LR	23 03 34.2	
	comp=Z,6µm,20.1s,baz=268,slow=31						
INK	Inuvik	89.98	19	*e*P	P	22 29 32.8	-0.7
	comp=Z,4.5nm,1.2s						
INK				PKKPbc	PKKPbc	22 47 07.7	-0.3
INK	Inuvik	89.98	19	*e*P	P	22 29 32.8	-0.7
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
INK	Inuvik	89.98	19	PKKPbc	PKKPbc	22 47 07.7	-0.3
	comp=Z,1.4nm,0.9s,baz=116,slow=4.1,SNR=3.5						
INK				LR	LR	23 06 29.3	
	comp=Z,6µm,19.7s,baz=232,slow=33						
SZCU	Shurtz Canyon	89.99	52	*e*P	P	22 29 33.8	-0.8
KNB	Kanab	90.06	52	*e*P	P	22 29 34.2	-0.7
KNB	Kanab	90.06	52	*e*P	P	22 29 34.2	-0.7
TRD	Trivandrum	90.12	279	*e*P	P	22 29 34.7	-0.7
JBP	Jabalpur	90.16	293	⇑*e*P	P	22 29 35.6	+0.2
JBP				*e*x	x	22 34 26.5	
HYB	Hyderabad	90.32	288	*i* P	P	22 29 40.0	+3.7
HYB				*e*SKS	SKSac	22 40 06.0	-0.1
HYB				*e*S	S	22 40 30.0	+0.7
HYB				*e*		22 42 24.0	
HYB	Hyderabad	90.32	288	*e*P	P	22 29 36.4	0.0
HYB				IAmb	IAmb	22 29 46.6	
	comp=Z,87nm,2.0s						
U15A	North Rim	90.34	53	*e*P	P	22 29 35.6	-0.7
HLID	Hailey	90.48	46	*e*P	P	22 29 35.6	-1.1
	comp=Z,10nm,1.0s						
HLID				LR	LR		
	comp=Z,11µm,19.0s						
HLID	Hailey	90.48	46	P	P	22 29 36.1	-0.6
	baz=255						
X16A	Lo Mia Camp, P	90.56	55	*e*P	P	22 29 36.6	-0.7
NGP	Nagpur	90.60	291	⇑*e*P	P	22 29 36.9	-0.7
NGP				IAmb	IAmb	22 29 45.9	
	comp=Z,5.5nm,0.7s						
NGP				*e*x	x	22 40 32.5	
TUC	Tucson	90.63	57	*e*P	P	22 29 37.0	-0.6
	comp=Z,11nm,1.0s						
TUC				LR	LR		
	comp=Z,38µm,20.0s						
TUC	Tucson	90.63	57	*e*P	P	22 29 37.0	-0.6
TUC				pmax	pmax		
	comp=Z,11nm,1.0s						
TUC				MLR	MLR		
	comp=Z,38µm,20.0s						
TUC	Tucson	90.63	57	P	P	22 29 36.5	-1.1
	baz=258						
DGZ	Jazzator, Alta	90.69	321	*i* P	P	22 29 33.6	-3.9
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DGZ				MLR	MLR		
	comp=Z,8µm,18.0s						
MTPU	Mount Pierson	90.79	52	*e*P	P	22 29 38.1	-0.4
DUG	Dugway, Tooele	90.82	49	*e*P	P	22 29 38.9	+0.6
DUG				LR	LR		
	comp=Z,17µm,20.0s						
DUG	Dugway, Tooele	90.82	49	P	P	22 29 37.3	-1.0
	baz=256						
BGU	Big Grassy Mou	90.83	49	*e*P	P	22 29 37.0	-1.4
WUAZ	Wupatki	90.85	54	*e*P	P	22 29 37.6	-1.0
	comp=Z,9.5nm,0.9s						
WUAZ				LR	LR		
	comp=Z,17µm,20.0s						
WUAZ	Wupatki	90.85	54	P	P	22 29 37.6	-1.0
	baz=257						
MSU	Marysvale	90.90	51	*e*P	P	22 29 38.4	-0.5
MSU	Marysvale	90.90	51	*e*P	P	22 29 38.4	-0.5
HVU	Hansel Valley	91.22	48	*e*P	P	22 29 39.0	-1.1
HVU	Hansel Valley	91.22	48	*e*P	P	22 29 39.0	-1.1
NLU	North Lily Min	91.31	50	*e*P	P	22 29 40.0	-0.7
SPUT	South Promonto	91.34	48	*e*P	P	22 29 40.0	-0.7
DGAR	Diego Garcia	91.51	262	PFAKE		22 29 50.0	+8.1
DGAR				LR	LR		
	comp=Z,6µm,21.0s						
MSO	Missoula	91.62	43	P	P	22 29 40.2	-1.6
	baz=256						
MPU	Maple Canyon	91.66	50	*e*P	P	22 29 42.5	+0.2
319A	Douglas	91.68	59	*e*P	P	22 29 44.0	+1.5
SYO	Syowa Base	91.71	197	⇑*e*X	P	22 29 38.0	-3.7
SYO	Syowa Base	91.71	197	*e*SH	SKSac	22 40 15.4	+3.3
CTU	Camp Tracy	91.72	49	*e*P	P	22 29 41.8	-0.7
ZSN	Zaisan	91.74	318	*de*P	P	22 29 39.4	-2.9
ZSN				*e*S	SKSac	22 40 16.1	+3.2
ZSN				pmax	pmax		
	comp=Z,13nm,1.4s						
ZSN				smax	smax		
	comp=N,390nm,4.3s						
ZSN				MLR	MLR		
	comp=Z,603nm,16.0s						
ZSN	Zaisan	91.74	318	⇓*e*P	P	22 29 39.4	-2.9
	comp=Z,13nm,1.4s						
ZSN				*e*S	SKSac	22 40 16.2	+3.2
	comp=Z,390nm,4.3s						
ZSN				*e*LRM	MLR	23 11 26.6	
	comp=Z,603nm,16.4s						
Q16A	Castle Valley	91.76	51	*e*P	P	22 29 42.9	+0.1
X18A	Snowflake	91.78	55	*e*P	P	22 29 44.2	+1.3
TMUT	Trail Mountain	91.82	50	*e*P	P	22 29 43.0	-0.2
MCMT	McKenzie Canyo	91.88	45	*e*P	P	22 29 43.3	0.0
JLU	Jordanelle	91.92	49	*e*P	P	22 29 39.4	-4.1
HWUT	Hardware Ranch	92.06	48	*e*P	P	22 29 42.7	-1.4
	comp=Z,2.7nm,0.7s						
HWUT				LR	LR		
	comp=Z,102nm,19.0s						
TCUT	Toone Canyon	92.07	49	*e*P	P	22 29 45.2	+1.0
W18A	Petrified Fore	92.08	55	P	P	22 29 43.2	-1.2
	baz=258						
DLMT	Dillon	92.18	44	*e*P	P	22 29 43.3	-1.2
WALA	Waterton Lakes	92.19	41	*e*P	P	22 29 44.0	-0.5
	comp=Z,15nm,1.1s						
P17A	Butcher Ranch,	92.21	50	*e*P	P	22 29 46.0	+1.2
SRU	San Rafael Swe	92.30	51	*e*P	P	22 29 46.5	+1.2
SRU	San Rafael Swe	92.30	51	*e*P	P	22 29 46.5	+1.2
LRM	Limekiln Ridge	92.39	44	*e*P	P	22 29 45.2	-0.4
BHPL	Bhopal	92.48	293	*e*P	P	22 29 45.3	-1.0
AHID	Auburn Hatcher	92.65	47	PFAKE		22 30 00.0	+13
AHID				LR	LR		
	comp=Z,9µm,20.0s						
QLMT	Earthquake Lak	92.86	45	*e*P	P	22 29 49.8	+2.0
FXWY	Fox Creek	92.89	46	*e*P	P	22 29 46.6	-1.3
BOZ	Bozeman (W)	92.89	44	*e*P	P	22 29 46.6	-1.2
BOZ				LR	LR		
	comp=Z,14µm,20.0s						
BOZ	Bozeman (W)	92.89	44	P	P	22 29 46.9	-0.9
	baz=257						
HRY	Holter Researc	93.00	43	*e*P	P	22 29 48.8	+0.6
YHB	Horse Butte	93.01	45	*e*P	P	22 29 49.8	+1.3
MOOW	Moose Ponds	93.11	46	*e*P	P	22 29 49.1	+0.2
121A	Cookes Peak, D	93.16	58	P	P	22 29 48.8	-0.6
	baz=259						
PV05	Paradox Valley	93.18	52	*e*P	P	22 29 52.2	+2.8
LOHW	Long Hollow	93.19	46	*e*P	P	22 29 49.3	+0.1
YFT	Old Faithful	93.20	45	*e*P	P	22 29 52.3	+2.9
FLWY	Flagg Ranch	93.22	46	*e*P	P	22 29 50.8	+1.4
PV09	Paradox Valley	93.23	52	*e*P	P	22 29 50.7	+1.0
DDI	Dehra Dun	93.25	300	*e*P	P	22 29 49.6	-0.1
DDI				IAmb	IAmb	22 30 01.1	
PV10	Paradox Valley	93.28	52	*e*P	P	22 29 52.2	+2.3
MK01	Makanchi Array	93.29	317	*e*P	P	22 29 46.8	-2.6
PV14	Lion Creek, Pa	93.29	52	*e*P	P	22 29 51.1	+1.2
MK31	Makanchi Array	93.30	317	*e*P	P	22 29 47.3	-2.2
MKAR	Makanchi Array	93.30	317	*e*P	P	22 29 47.3	-2.2
MKAR				PKKPbc	PKKPbc	22 46 58.2	-0.6
MKAR	Makanchi Array	93.30	317	P	P	22 29 47.0	-2.5
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	Makanchi Array	93.30	317	P	P	22 29 47.0	-2.5
	comp=Z,5.1nm,0.9s,baz=99,slow=5.5,SNR=20						
MKAR				PKKPbc	PKKPbc	22 46 58.2	-0.6
	comp=Z,5.8nm,0.9s,baz=298,slow=2.6,SNR=18						
PV19	Morning Glory	93.31	52	*e*P	P	22 29 52.5	+2.5
PV23	Carpenter Ridg	93.32	52	*e*P	P	22 29 51.1	+1.0
PV17	East Wray Mesa	93.33	52	*e*P	P	22 29 52.2	+2.2
PV20	West Nyswonger	93.33	52	*e*P	P	22 29 52.4	+2.4
ZAA0	Zalesovo Array	93.36	324	*e*P	P	22 29 47.1	-2.4
ZALV	Zalesovo Beam	93.36	324	P	P	22 29 46.4	-3.1
	comp=Z,2.3nm,0.7s,baz=121,slow=4.0,SNR=11						
ZALV				PKKPbc	PKKPdf	22 46 55.7	-1.8
	comp=Z,1.0nm,0.8s,baz=322,slow=4.4,SNR=3.5						
PV16	Nyswonger Mesa	93.36	52	*e*P	P	22 29 52.7	+2.4
H17A	Grant Village	93.37	46	*e*P	P	22 29 52.0	+1.8
H17A	Grant Village	93.37	46	P	P	22 29 49.7	-0.5
	baz=258						
PV21	Cone Mtn., Par	93.37	52	*e*P	P	22 29 51.1	+0.8
PV04	Paradox Valley	93.39	52	*e*P	P	22 29 50.1	-0.2
PV11	David Mesa, Pa	93.40	52	*e*P	P	22 29 52.4	+2.0
PV03	Paradox Valley	93.41	52	*e*P	P	22 29 51.0	+0.6
PV13	Radium Mtn., P	93.41	52	*e*P	P	22 29 52.6	+2.1
PV12	Saucer Basin,	93.45	52	*e*P	P	22 29 51.5	+0.9
MVCO	Mesa Verde	93.48	53	*e*P	P	22 29 50.8	0.0
MVCO				LR	LR		
	comp=Z,17µm,20.0s						
MVCO	Mesa Verde	93.48	53	P	P	22 29 49.8	-1.0
	baz=259						
LKWY	Lake	93.53	45	PFAKE		22 30 00.0	+9.1
LKWY				LR	LR		
	comp=Z,13µm,20.0s						
PV07	Paradox Valley	93.60	52	*e*P	P	22 29 52.6	+1.3
PV01	Paradox Valley	93.60	52	*e*P	P	22 29 52.5	+1.1
PV15	Paradox Valley	93.71	52	*e*P	P	22 29 54.7	+2.9
BW06	Boulder Array	93.76	47	*e*P	P	22 29 50.2	-1.8
	comp=Z,3.1nm,0.8s						
BW06				LR	LR		
	comp=Z,7µm,19.0s						
BW06	Boulder Array	93.76	47	P	P	22 29 50.9	-1.1
	baz=259						
PD31	Pinedale Array	93.76	47	*e*P	P	22 29 50.3	-1.7
PDAR	Pinedale Array	93.76	47	P	P	22 29 49.1	-2.8
	comp=Z,6.2nm,1.0s,baz=225,slow=1.9,SNR=18						
SMLA	Simla	94.15	301	*e*P	P	22 29 54.5	+0.8
O20A	White River Ci	94.23	50	P	P	22 29 53.5	-0.7
	baz=259						
GCMT	Greycliff	94.28	44	*e*P	P	22 29 56.2	+2.0
GOA	Goa	94.42	285	*e*P	P	22 29 54.8	-0.4
GOA				IAmb	IAmb	22 30 00.9	
	comp=Z,10nm,1.0s						
RLMT	Red Lodge	94.43	45	PFAKE		22 30 10.0	+15
RLMT				LR	LR		
	comp=Z,11µm,21.0s						
RLMT	Red Lodge	94.43	45	P	P	22 29 54.3	-0.7
	baz=259						
NVS	Novosibirsk	94.47	325	*e*P	P	22 29 48.1	-6.5
NVS				*i*		22 33 49.9	
NVS				*i* PPP	PPP	22 35 49.6	
NVS				*e*S	SKSac	22 40 26.8	-0.8
NVS				pmax	pmax		
	comp=Z,30nm,1.5s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,15nm,1.1s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.3s						
NVS				smax	smax		
	comp=E,30nm,2.1s						
SHLS	Shalkode	94.54	313	*e*P	P	22 29 51.8	-3.5
SHLS				*e*S	SKSac	22 40 27.3	-1.5
SHLS				pmax	pmax		
	comp=Z,58nm,2.0s						
SHLS				smax	smax		
	comp=N,622nm,4.8s						
SHLS				MLR	MLR		
	comp=Z,2µm,15.0s						
SHLS	Shalkode	94.54	313	*e*P	P	22 29 51.9	-3.5
	comp=Z,58nm,1.9s						
SHLS				*e*S	SKSac	22 40 27.3	-1.5
	comp=Z,622nm,4.8s						
SHLS				*e*LRM	MLR	23 12 26.7	
	comp=Z,2µm,14.7s						
EGMT	Eagleton	94.66	42	*e*P	P	22 29 55.3	-0.4
EGMT				LR	LR		
	comp=Z,7µm,21.0s						
EGMT	Eagleton	94.66	42	P	P	22 29 54.8	-1.0
	baz=259						
ANMO	Albuquerque	94.69	55	*e*P	P	22 29 55.6	-0.7
	comp=Z,5.2nm,0.9s						
ANMO				LR	LR		
	comp=Z,8µm,20.0s						
ANMO	Albuquerque	94.69	55	*i* P	P	22 29 56.7	+0.3
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ANMO	Albuquerque	94.69	55	P	P	22 29 55.1	-1.3
	baz=260						
S22A	4UR Ranch, Cre	94.88	53	*e*P	P	22 30 01.0	+3.7
S22A	4UR Ranch, Cre	94.88	53	P	P	22 29 56.1	-1.2
	baz=260						
POO	Poona	94.92	288	*e*P	P	22 29 57.0	-0.6
POO				IAmb	IAmb	22 30 07.5	
	comp=Z,54nm,1.7s						
MNTX	Cornudas Mount	95.01	59	*e*P	P	22 29 58.3	+0.6
	comp=Z,5.6nm,0.8s						
MNTX				LR	LR		
	comp=Z,27µm,20.0s						
MNTX	Cornudas Mount	95.01	59	P	P	22 29 55.7	-2.0
	baz=260						
DHRM	DHARAMSHALA	95.07	302	*e*P	P	22 29 57.5	-0.7
DHRM				IAmb	IAmb	22 30 07.1	
	comp=Z,13nm,0.5s						
YKA	Yellowknife Ar	95.09	27	P	P	22 29 54.3	-3.0
	comp=Z,1.3nm,0.6s,baz=252,slow=4.5,SNR=15						
YKB5	Yellowknife Ar	95.09	27	*e*P	P	22 29 53.8	-3.5
YKW3	Yellowknife Ar	95.11	27	*e*P	P	22 29 55.7	-1.6
KPKS	Kokpek	95.15	313	*e*P	P	22 29 55.9	-2.2
KPKS				*e*		22 33 47.8	
KPKS				pmax	pmax		
	comp=Z,52nm,2.9s						
KPKS				MLR	MLR		
	comp=Z,2µm,17.0s						
KPKS	Kokpek	95.15	313	*e*P	P	22 29 56.0	-2.2
	comp=Z,52nm,2.9s						
KPKS				*e*PP	PP	22 33 47.8	-0.5
KPKS				*e*LRM	MLR	23 13 02.3	
	comp=Z,2µm,16.9s						
SATY	Saty	95.28	313	*de*P	P	22 29 56.2	-2.6
SATY				*e*		22 33 48.1	
SATY				pmax	pmax		
	comp=Z,37nm,1.3s						
SATY				MLR	MLR		
	comp=Z,1µm,16.0s						
SATY	Saty	95.28	313	*e*P	P	22 29 56.2	-2.6
	comp=Z,37nm,1.3s						
SATY				⇓*e*PP	PP	22 33 48.1	-1.2
SATY				*e*LRM	MLR	23 13 24.0	
	comp=Z,1µm,16.0s						
SEM	Semipalatinsk	95.36	320	*e*P	P	22 29 56.6	-2.5
SEM				pmax	pmax		
	comp=Z,38nm,1.3s						
SEM				MLR	MLR		
	comp=Z,4µm,27.0s						
SEM	Semipalatinsk	95.36	320	*e*P	P	22 29 56.6	-2.5
	comp=Z,38nm,1.2s						
SEM				*e*LRM	MLR	23 13 00.5	
	comp=Z,4µm,26.5s						
TDK	Taldyqorghan	95.61	315	*e*P	P	22 29 58.8	-1.3
TDK				*e*S	SKSac	22 40 35.6	+1.4
TDK				pmax	pmax		
	comp=Z,60nm,1.5s						
TDK				smax	smax		
	comp=N,1µm,12.5s						
TDK				MLR	MLR		
	comp=Z,5µm,20.0s						
TDK	Taldyqorghan	95.61	315	*e*P	P	22 29 58.9	-1.3
	comp=Z,60nm,1.5s						
TDK				*e*S	SKSac	22 40 35.7	+1.4
	comp=Z,1µm,12.5s						
TDK				*e*LRM	MLR	23 14 09.8	
	comp=Z,5µm,19.9s						
PMSA	Palmer Station	95.83	161	PFAKE		22 30 10.0	+9.3
PMSA				LR	LR		
	comp=Z,8µm,20.0s						
SDCO	Great Sand Dun	95.92	53	PFAKE		22 30 10.0	+8.0
SDCO				LR	LR		
	comp=Z,9µm,19.0s						
SDCO	Great Sand Dun	95.92	53	P	P	22 30 00.5	-1.5
	baz=261						
K22A	Casper	95.94	48	P	P	22 30 01.2	-0.6
	baz=261						
NRIK	Noril'sk	96.00	340	P	P	22 29 59.2	-2.1
	comp=Z,1.0nm,0.3s,baz=87,slow=6.9,SNR=3.7						
KDJ	Kajisay	96.02	312	*e*P	P	22 30 04.5	+2.2
N23A	Red Feather La	96.08	50	P	P	22 30 02.1	-0.6
	baz=261						
TX31	Lajitas Ar. Si	96.08	61	*e*P	P	22 30 03.8	+1.0
TXAR	Lajitas Array	96.09	61	P	P	22 30 01.1	-1.6
	comp=Z,1.0nm,0.8s,baz=243,slow=5.5,SNR=5.2						
TXAR				PKKPbc	PKKPdf	22 46 51.6	-0.4
	comp=Z,0.4nm,0.7s,baz=102,slow=4.2,SNR=3.9						
ISCO	Idaho Springs	96.16	51	PFAKE		22 30 10.0	+6.9
ISCO				LR	LR		
	comp=Z,31µm,20.0s						
ISCO	Idaho Springs	96.16	51	P	P	22 30 01.3	-1.9
	baz=261						
MDOK	Medeo	96.28	313	*e*P	P	22 30 06.0	+2.6
MDOK				*i* S	SKSac	22 40 37.4	-0.7
MDOK				pmax	pmax		
	comp=Z,45nm,2.3s						
MDOK				smax	smax		
	comp=N,1µm,15.3s						
MDOK				MLR	MLR		
	comp=Z,3µm,18.0s						
MDOK	Medeo	96.28	313	*e*P	P	22 30 06.0	+2.6
	comp=Z,45nm,2.4s						
MDOK				⇓*i*S	SKSac	22 40 37.5	-0.7
	comp=Z,1µm,15.3s						
MDOK				*e*LRM	MLR	23 12 11.4	
	comp=Z,3µm,17.5s						
AAA	Alma-Ata	96.38	313	*e*P	P	22 30 10.6	+6.9
AAA				pmax	pmax		
	comp=Z,400nm,6.1s						
AAA				MLR	MLR		
	comp=Z,4µm,17.0s						
KURK	Kurchatov	96.43	320	PKKPbc	PKKPbc	22 46 50.2	-0.2
KURK				P'P'		22 55 00.2	
KURK				LR	LR		
	comp=Z,12µm,20.0s						
KURK	Kurchatov	96.43	320	*i* P	P	22 29 59.5	-4.2
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK				MLR	MLR		
	comp=Z,6µm,16.0s						
NVL	N'lazarevskaya	96.44	189	*e*P	P	22 30 08.6	+5.2
NVL				*e*S	SKSac	22 40 41.8	+4.1
NVL				*e*PS	PS	22 42 47.8	+3.0
NVL				MLR	MLR		
	comp=Z,10µm,17.0s						
KURBB	Kurchatov Arra	96.47	320	PKKPbc	PKKPbc	22 46 50.2	-0.1
	comp=Z,4.8nm,1.1s,baz=281,slow=3.3,SNR=14						
KURBB				PKPPKP		22 55 00.2	
	comp=Z,0.1nm,0.3s,baz=85,slow=1.0,SNR=2.5						
KSH	Kashi	96.51	309	P	P	22 30 09.1	+4.6
KSH				sP	pwP	22 30 17.8	+1.1
KSH				PP	PP	22 34 01.9	+3.0
KSH				SKS	SKSac	22 40 42.9	+3.5
KSH				S	ScS	22 41 25.0	+1.0
KSH				SS	SS	22 48 03.6	+5.8
KSH				pmax	pmax		
	comp=Z,480nm,5.4s						
KSH				LR	LR		
	comp=Z,5µm,14.7s						
KSH				LR	LR		
	comp=Z,5µm,17.3s						
KSH				LR	LR		
	comp=Z,8µm,19.0s						

T25A	**Trinidad**	**96.68**	**54**	P	**P**	**22 30 04.0**	**-1.5**
	baz=261						
LAO	**LASA Array**	**96.79**	**44**	*e*P	**P**	**22 30 05.6**	**+0.1**
	comp=Z,4.3nm,0.7s						
LAO				LR	LR		
	comp=Z,11µm,20.0s						
LAO	**LASA Array**	**96.79**	**44**	P	**P**	**22 30 04.5**	**-1.0**
	baz=261						
KUU	**Kurty**	**96.90**	**313**	*e*P	**P**	**22 30 02.9**	**-3.1**
KUU				*e*		22 33 55.8	
KUU				*i* S	**SKSac**	**22 40 39.9**	**-1.1**
KUU				pmax	pmax		
	comp=Z,13nm,2.0s						
KUU				smax	smax		
	comp=N,1µm,4.9s						
KUU				MLR	MLR		
	comp=Z,1µm,17.0s						
KUU	**Kurty**	**96.90**	**313**	*e*P	**P**	**22 30 02.9**	**-3.1**
	comp=Z,13nm,2.0s						
KUU				*e*PP	**PP**	**22 33 55.9**	**-5.9**
KUU				⇑*i*S	**SKSac**	**22 40 40.0**	**-1.1**
	comp=Z,1µm,4.9s						
KUU				*e*LRM	MLR	23 12 06.2	
	comp=Z,1µm,17.3s						
SNAA	**Sanae**	**97.12**	**184**	P	Pdif	22 30 08.2	+1.6
SNAA	**Sanae**	**97.12**	**184**	*e*P	Pdif	22 30 08.6	+1.9
SNAA	**Sanae**	**97.12**	**184**	*i* P	**P**	**22 30 06.4**	**-0.1**
MSTX	**Muleshoe**	**97.54**	**57**	P	**P**	**22 30 08.5**	**-0.7**
	baz=262						
NIL	**Nilore**	**97.82**	**303**	PFAKE		22 30 20.0	+10
NIL				LR	LR		
	comp=Z,3µm,20.0s						
VNA3	**Neumayer Olymp**	**97.85**	**182**	P	Pdif	22 30 12.4	+2.5
RSSD	**Black Hills**	**97.95**	**47**	P	**P**	**22 30 09.6**	**-1.4**
	baz=262						
FRU	**Bishkek**	**97.99**	**312**	*e*P	Pdif	22 30 17.0	+6.0
FRU				*e*		22 40 48.0	
FRU				pmax	pmax		
	comp=Z,160nm,3.0s						
AAK	**Ala-Archa**	**98.06**	**312**	*i* P	**P**	**22 30 07.8**	**-3.6**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK				MLR	MLR		
	comp=Z,5µm,18.0s						
AAK	**Ala-Archa**	**98.06**	**312**	PKKPbc	PKKPbc	22 46 45.8	-0.1
	comp=Z,2.3nm,1.0s,baz=176,slow=6.4,SNR=4.6						
AAK				LR	LR	23 14 09.9	
	comp=Z,4µm,21.6s,baz=81,slow=35						
VNA2	**Neumayer--Watz**	**98.09**	**182**	P	Pdif	22 30 11.1	+0.2
KSCO	**Kaye Shedlock'**	**98.33**	**52**	Pdiff	**P**	**22 30 11.7**	**-1.0**
	baz=263						
DGMT	**Dagmar**	**98.40**	**42**	*e*P	**P**	**22 30 11.9**	**-0.8**
	comp=Z,4.2nm,0.7s						
DGMT				LR	LR		
	comp=Z,9µm,21.0s						
DGMT	**Dagmar**	**98.40**	**42**	Pdiff	**P**	**22 30 10.9**	**-1.8**
	baz=263						
VNA1	**Neumayer--Stat**	**98.40**	**182**	P	Pdif	22 30 15.0	+2.8
AMTX	**Amarillo**	**98.56**	**56**	Pdiff	**P**	**22 30 12.3**	**-1.5**
	baz=263						
OGNE	**Ogallala**	**99.03**	**50**	PFAKE		22 30 30.0	+14
OGNE				LR	LR		
	comp=Z,18µm,20.0s						
OGNE	**Ogallala**	**99.03**	**50**	Pdiff	**Pdif**	**22 30 13.3**	**-2.5**
	baz=263						
BHJ	**Bhuj**	**99.53**	**292**	*e*P	**Pdif**	**22 30 17.1**	**-1.1**
BHJ				IAmb	IAmb	22 30 31.1	
	comp=Z,4µm,6.9s						
JCT	**Junction City**	**99.57**	**61**	PFAKE		22 30 30.0	+12
JCT				LR	LR		
	comp=Z,37µm,20.0s						
JCT	**Junction City**	**99.57**	**61**	Pdiff	**Pdif**	**22 30 15.3**	**-3.0**
	baz=263						
833A	**Chaparral WMA,**	**99.65**	**63**	Pdiff	**Pdif**	**22 30 16.4**	**-2.3**
	baz=263						
ABTX	**Abilene, Hawle**	**99.96**	**59**	Pdiff	**Pdif**	**22 30 17.0**	**-3.0**
	baz=263						
FFC	**Flin Flon**	**100.40**	**36**	PFAKE		22 30 30.0	+8.6
FFC				LR	LR		
	comp=Z,20µm,20.0s						
CBKS	**Cedar Bluff**	**100.55**	**52**	PFAKE		22 30 30.0	+7.5
CBKS				LR	LR		
	comp=Z,13µm,20.0s						
CBKS	**Cedar Bluff**	**100.55**	**52**	Pdiff	**Pdif**	**22 30 20.8**	**-1.7**
	baz=264						
KVTX	**Kingsville**	**100.88**	**64**	PFAKE		22 30 40.0	+16
KVTX				LR	LR		
	comp=Z,9µm,20.0s						
WMOK	**Wichita Mounta**	**100.91**	**57**	PFAKE		22 30 40.0	+16
WMOK				LR	LR		
	comp=Z,26µm,20.0s						
BRVK	**Borovoye**	**101.81**	**322**	PFAKE		22 30 40.0	+12
BRVK				LR	LR		
	comp=Z,7µm,21.0s						
BRVK	**Borovoye**	**101.81**	**322**	*i* P	**Pdif**	**22 30 25.5**	**-2.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,10µm,18.0s						
KSU1	**Kansas State U**	**103.01**	**52**	PFAKE		22 30 40.0	+6.6
KSU1				LR	LR		
	comp=Z,20µm,20.0s						
ECSD	**EROS Data Cent**	**103.26**	**48**	PFAKE		22 30 50.0	+16
ECSD				LR	LR		
	comp=Z,11µm,20.0s						
PAYG	**Puerto Ayora**	**103.88**	**93**	PFAKE		22 30 50.0	+12
PAYG				LR	LR		
	comp=Z,7µm,20.0s						
NATX	**Nacogdoches**	**104.08**	**60**	PFAKE		22 30 50.0	+12
NATX				LR	LR		
	comp=Z,29µm,20.0s						
MIAR	**Mount Ida**	**105.17**	**57**	PFAKE		22 35 10.0	+13
MIAR				LR	LR		
	comp=Z,28µm,20.0s						
SCIA	**State Center**	**105.70**	**49**	PFAKE		22 35 10.0	+12
SCIA				LR	LR		
	comp=Z,25µm,20.0s						
EYMN	**Ely**	**106.85**	**43**	PFAKE		22 35 10.0	+10
EYMN				LR	LR		
	comp=Z,12µm,20.0s						
EFI	**East Falkland**	**107.14**	**153**	PFAKE		22 35 10.0	+9.4
EFI				LR	LR		
	comp=Z,6µm,20.0s						
JFWS	**Jewell Farm**	**107.89**	**48**	PFAKE		22 35 10.0	+7.7
JFWS				LR	LR		
	comp=Z,12µm,20.0s						
ARU	**Arti**	**108.44**	**326**	PFAKE		22 35 10.0	+7.1
ARU				LR	LR		
	comp=Z,5µm,20.0s						
COWI	**Conover**	**108.55**	**45**	PFAKE		22 35 10.0	+6.6
COWI				LR	LR		
	comp=Z,9µm,22.0s						
HDIL	**Hopedale**	**108.67**	**51**	PFAKE		22 35 20.0	+16
HDIL				LR	LR		
	comp=Z,13µm,20.0s						
AKTO	**Aktyubinsk**	**109.52**	**320**	PKKPbc	PKKPbc	22 46 10.7	-0.9
	comp=Z,3.9nm,1.1s,baz=208,slow=5.6,SNR=3.7						
BRAL	**Brewton**	**110.55**	**61**	PFAKE		22 35 20.0	+12
BRAL				LR	LR		
	comp=Z,16µm,19.0s						
KBS	**Kingsbay**	**110.87**	**355**	PFAKE		22 35 20.0	+13
KBS				LR	LR		
	comp=Z,4µm,20.0s						
JTS	**JuntasAbangare**	**110.98**	**83**	PFAKE		22 35 20.0	+11
JTS				LR	LR		
	comp=Z,11µm,20.0s						
GLMI	**Grayling**	**111.83**	**46**	PFAKE		22 35 20.0	+10
GLMI				LR	LR		
	comp=Z,16µm,20.0s						
ABPO	**Ambohimpanom**	**112.18**	**244**	PFAKE		22 35 20.0	+8.7
ABPO				LR	LR		
	comp=Z,8µm,22.0s						
HOPE	**Hope Point**	**112.34**	**166**	PFAKE		22 35 20.0	+10
HOPE				LR	LR		
	comp=Z,6µm,21.0s						
AAM	**Ann Arbor**	**112.79**	**49**	PFAKE		22 35 20.0	+8.5
AAM				LR	LR		
	comp=Z,27µm,20.0s						
LCO	**Las Campanas**	**112.80**	**128**	PFAKE		22 35 20.0	+7.6
LCO				LR	LR		
	comp=Z,10µm,21.0s						
ACSO	**Alum Creek Sta**	**113.50**	**51**	PFAKE		22 35 20.0	+7.1
ACSO				LR	LR		
	comp=Z,9µm,20.0s						
GOGA	**Godfrey**	**113.56**	**58**	PFAKE		22 35 20.0	+6.7
GOGA				LR	LR		
	comp=Z,27µm,20.0s						
NNA	**Nana**	**114.06**	**108**	PFAKE		22 35 30.0	+15
NNA				LR	LR		
	comp=Z,7µm,20.0s						
LVZ	**Lovozero**	**114.75**	**342**	PFAKE		22 35 30.0	+15
LVZ				LR	LR		
	comp=Z,3µm,21.0s						
PRVC	**Isla de Provid**	**114.84**	**80**	*e*P	**PP**	**22 36 20.0**	**+5.1**
PRVC	**Isla de Provid**	**114.84**	**80**	*e*P	**PP**	**22 36 20.0**	**+5.1**
APA	**Apatity**	**115.32**	**342**	⇑*i*PKIKP	**PKiKP**	**22 35 14.3**	**-1.3**
APA				*i*		22 36 11.0	
APA				*i* PS	**PS**	**22 45 57.0**	**+0.1**
APA				*i* PPS	PPS	22 47 08.0	
APA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,6µm,24.0s						
OTAV	**Otavalo**	**115.65**	**95**	PFAKE		22 35 30.0	+12
OTAV				LR	LR		
	comp=Z,6µm,20.0s						
KEV	**Kevo**	**115.71**	**345**	PFAKE		22 35 30.0	+14
KEV				LR	LR		
	comp=Z,9µm,22.0s						
BLA	**Blacksburg**	**115.79**	**54**	PFAKE		22 35 30.0	+12
BLA				LR	LR		
	comp=Z,12µm,20.0s						
BCIP	**Isla Barro Col**	**115.82**	**85**	PFAKE		22 35 30.0	+12
BCIP				LR	LR		
	comp=Z,4µm,19.0s						
BCIP	**Isla Barro Col**	**115.82**	**85**	*e*P	**PP**	**22 36 29.2**	**+7.3**
BCIP	**Isla Barro Col**	**115.82**	**85**	*e*P	**PP**	**22 36 29.2**	**+7.3**
ARCES	**ARCESS Array B**	**116.24**	**345**	PKP	**PKiKP**	**22 35 16.4**	**-0.9**
	comp=Z,3.1nm,0.7s,baz=43,slow=4.1,SNR=20						
NHSC	**New Hope**	**116.33**	**59**	PFAKE		22 35 30.0	+11
NHSC				LR	LR		
	comp=Z,26µm,20.0s						
KLMR	**Klimovskoe**	**116.59**	**334**	*e*PKIKP	**PKPdf**	**22 35 15.6**	**-2.6**
KLMR				pmax	pmax		
	comp=Z,17nm,1.6s						
KLMR	**Klimovskoe**	**116.59**	**334**	*e*PKPdf	**PKPdf**	**22 35 15.7**	**-2.5**
KLMR				AMP		22 35 31.0	
	comp=Z,17nm,1.6s						
GCUF	**Volcan Galeras**	**116.94**	**94**	*e*P	**PP**	**22 36 28.0**	**-2.2**
GCUF	**Volcan Galeras**	**116.94**	**94**	*e*P	**PP**	**22 36 28.0**	**-2.2**
LVC	**Limon Verde**	**117.14**	**122**	PFAKE		22 35 30.0	+9.0
LVC				LR	LR		
	comp=Z,8µm,20.0s						
MAK	**Makhachkala**	**117.82**	**313**	*e*P	**Pdif**	**22 31 31.5**	**-7.6**
MAK				*i*		22 35 16.5	
MAK				*e*		22 36 28.5	
MAK				*e*		22 42 05.3	
MAK				*e*PS	**PKKPdf**	**22 46 14.5**	**+2.8**
MAK				pmax	pmax		
	comp=Z,171nm,1.3s						
MAK				MLR	MLR		
	comp=Z,8µm,16.0s						
SOTA	**Rioblanco**	**117.84**	**93**	*e*P	**PP**	**22 36 29.5**	**-7.1**
SOTA	**Rioblanco**	**117.84**	**93**	*e*P	**PP**	**22 36 29.5**	**-7.1**
POPC	**Popayan, Colom**	**117.85**	**93**	*e*P	**PP**	**22 36 31.7**	**-4.6**
POPC	**Popayan, Colom**	**117.85**	**93**	*e*P	**PP**	**22 36 31.7**	**-4.6**
CNNC	**Cliffs of the**	**118.03**	**56**	PFAKE		22 35 30.0	+8.2
CNNC				LR	LR		
	comp=Z,13µm,20.0s						
MNMC	**Minye Minye**	**118.04**	**119**	*e*PKPdf	**PKiKP**	**22 35 23.4**	**+0.7**
CBN	**Corbin Frederi**	**118.06**	**53**	PFAKE		22 35 30.0	+8.2
CBN				LR	LR		
	comp=Z,25µm,20.0s						
PCON	**Cinco Dias**	**118.08**	**93**	*e*P	**PP**	**22 36 31.7**	**-6.6**
PCON	**Cinco Dias**	**118.08**	**93**	*e*P	**PP**	**22 36 31.7**	**-6.6**
BINY	**Binghamton**	**118.43**	**48**	PFAKE		22 35 30.0	+7.6
BINY				LR	LR		
	comp=Z,9µm,20.0s						
YOTC	**Yotoco, Valle**	**118.44**	**91**	*e*P	**PP**	**22 36 39.9**	**-0.3**
YOTC	**Yotoco, Valle**	**118.44**	**91**	*e*P	**PP**	**22 36 39.9**	**-0.3**
MARP	**Paez Belalcaza**	**118.61**	**93**	*e*P	**PP**	**22 36 38.5**	**-3.2**
MARP	**Paez Belalcaza**	**118.61**	**93**	*e*P	**PP**	**22 36 38.5**	**-3.2**
PLMC	**San Jos del P**	**118.66**	**90**	*e*P	PP	22 36 31.7	-10
PLMC	**San Jos del P**	**118.66**	**90**	*e*P	PP	22 36 31.7	-10
MTDJ	**Mount Denham**	**118.89**	**75**	PFAKE		22 35 40.0	+16
MTDJ				LR	LR		
	comp=Z,7µm,20.0s						
LONY	**Lake Ozonia**	**118.91**	**45**	PFAKE		22 35 30.0	+6.7
LONY				LR	LR		
	comp=Z,12µm,19.0s						
GROC	**Groznyy**	**118.99**	**313**	*i* PKIKP	PKPdf	22 35 15.4	-8.0
GROC				*e*		22 36 40.7	
GROC				*e*		22 42 30.0	
GROC				*e*PS	PKKPdf	22 46 31.3	+22
GROC				pmax	pmax		
	comp=Z,11nm,1.2s						
SFJD	**Kangerlussuaq**	**119.12**	**15**	PFAKE		22 35 30.0	+7.0
SFJD				LR	LR		
	comp=Z,11µm,19.0s						
PTLC	**Puerto Leguiza**	**119.21**	**96**	*e*P	PP	22 36 27.8	-18
PTLC	**Puerto Leguiza**	**119.21**	**96**	*e*P	PP	22 36 27.8	-18
VRH	**Novokhopyorsk**	**119.38**	**323**	*i* PKIKP	**PKPdf**	**22 35 20.5**	**-3.4**
VRH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VRH				MLR	MLR		
	comp=Z,6µm,19.0s						
HELC	**Santa Helena**	**119.61**	**89**	*e*P	PP	22 36 39.6	-9.0
HELC	**Santa Helena**	**119.61**	**89**	*e*P	PP	22 36 39.6	-9.0
MOS	**Moscow**	**119.81**	**329**	*i* PKIKP	PKiKP	22 35 36.7	+12
MOS				pmax	pmax		
	comp=Z,21nm,0.8s						
UREC	**San Jos de Ur**	**119.84**	**87**	*e*P	**PP**	**22 36 52.1**	**+2.3**
UREC	**San Jos de Ur**	**119.84**	**87**	*e*P	**PP**	**22 36 52.1**	**+2.3**
GNI	**Garni**	**120.41**	**310**	PKP	**PKPdf**	**22 35 24.7**	**-1.8**
GNI				LR	LR		
	comp=Z,7µm,20.0s						
GNI	**Garni**	**120.41**	**310**	PKP	**PKPdf**	**22 35 24.7**	**-1.8**
	comp=Z,3.3nm,1.0s,baz=79,slow=19,SNR=1.8						
LPSR	**Galich'ya Gora**	**120.45**	**325**	*i* PKIKP	**PKPdf**	**22 35 24.4**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LPAZ	**La Paz**	**120.46**	**116**	*e*PKPdf	**PKPdf**	**22 35 27.9**	**+0.1**
LPAZ	**La Paz**	**120.46**	**116**	PKP	**PKPdf**	**22 35 27.1**	**-0.7**
	comp=Z,3.8nm,1.0s,baz=270,slow=3.0,SNR=7.7						
ZARC	**Zaragoza, Cauc**	**120.47**	**88**	*e*P	**PP**	**22 36 46.9**	**-7.2**
ZARC	**Zaragoza, Cauc**	**120.47**	**88**	*e*P	**PP**	**22 36 46.9**	**-7.2**
ROSC	**El Rosal**	**120.58**	**91**	*e*P	**PP**	**22 36 51.3**	**-4.0**
ROSC	**El Rosal**	**120.58**	**91**	*e*P	**PP**	**22 36 51.3**	**-4.0**
OBN	**Obninsk**	**120.63**	**329**	PFAKE		22 35 40.0	+14
OBN				LR	LR		
	comp=Z,4µm,19.0s						
OBN	**Obninsk**	**120.63**	**329**	*e*PKIKP	**PKPdf**	**22 35 26.0**	**-0.1**
OBN				*i*		22 36 57.1	
OBN				*e*		22 42 36.0	
OBN				*i* SS	SS	22 53 15.3	-6.0
OBN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PTBC	**PUERTO BERRIO,**	**120.72**	**89**	*e*P	PP	22 36 43.5	-12
PTBC	**PUERTO BERRIO,**	**120.72**	**89**	*e*P	PP	22 36 43.5	-12
VSR	**Storozhevoye**	**120.87**	**324**	*i* PKIKP	**PKPdf**	**22 35 26.6**	**-0.1**
VSR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KIV	**Kislovodsk**	**121.00**	**315**	PFAKE		22 35 40.0	+12
KIV				LR	LR		
	comp=Z,4µm,20.0s						
KIV	**Kislovodsk**	**121.00**	**315**	*e*P	**Pdif**	**22 31 49.1**	**-4.3**
KIV				*i*		22 35 24.0	
KIV				*e*		22 36 51.8	
KIV				*e*		22 42 20.1	
KIV				*e*PS	**SP**	**22 46 43.3**	**-1.5**
KIV				*e*SS	**SKKSdf**	**22 53 21.4**	**+4.8**
KIV				*e*SSS	SSS	22 57 48.3	
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,4µm,23.0s						
CHIC	**Chingaza**	**121.12**	**91**	*e*P	**PP**	**22 36 54.7**	**-4.3**
CHIC	**Chingaza**	**121.12**	**91**	*e*P	**PP**	**22 36 54.7**	**-4.3**
NEY	**Neytrino**	**121.16**	**314**	*i* PKIKP	**PKPdf**	**22 35 27.3**	**-0.5**
NEY				MLR	MLR		
	comp=Z,3µm,19.0s						
GTBY	**Guantanamo Bay**	**121.24**	**73**	PFAKE		22 35 40.0	+12
GTBY				LR	LR		
	comp=Z,4µm,20.0s						
SMLC	**San Martn de**	**121.42**	**86**	*e*P	PP	22 36 50.4	-10
SMLC	**San Martn de**	**121.42**	**86**	*e*P	PP	22 36 50.4	-10
BRRC	**Barranca, Sant**	**121.53**	**88**	*e*P	PP	22 36 46.6	-15
BRRC	**Barranca, Sant**	**121.53**	**88**	*e*P	PP	22 36 46.6	-15
SMRC	**Santa Marta, M**	**121.55**	**84**	*e*P	**PP**	**22 37 07.8**	**+6.3**
SMRC	**Santa Marta, M**	**121.55**	**84**	*e*P	**PP**	**22 37 07.8**	**+6.3**
FINES	**FINESS Array B**	**121.64**	**338**	PKP	**PKPdf**	**22 35 27.0**	**-0.9**
	comp=Z,2.5nm,0.8s,baz=98,slow=2.7,SNR=4.5						
RAYN	**Ar Rayn**	**121.67**	**291**	*e*PKPdf	**PKiKP**	**22 35 29.9**	**+0.5**
RAYN	**Ar Rayn**	**121.67**	**291**	*e*PKIKP	**PKiKP**	**22 35 29.9**	**+0.5**
RUSC	**La Rusia**	**121.96**	**90**	*e*P	PP	22 36 55.2	-10
RUSC	**La Rusia**	**121.96**	**90**	*e*P	PP	22 36 55.2	-10
PKME	**Peaks-Kenny Pk**	**122.34**	**43**	PFAKE		22 35 40.0	+10
PKME				LR	LR		
	comp=Z,10µm,20.0s						
SIRT	**Sirnak**	**122.71**	**308**	*e*PKPdf	**PKiKP**	**22 35 32.4**	**+1.3**
SOC	**Sochi**	**123.17**	**315**	*i* PKIKP	**PKPdf**	**22 35 27.9**	**-3.5**
SOC				*e*		22 37 05.0	
SOC				*e*		22 42 21.1	
SOC				*e*PS	PS	22 47 05.1	-3.3
SOC				*e*SS	SS	22 53 51.6	-3.0
SOC				MLR	MLR		
	comp=Z,4µm,21.0s						
ATD	**Arta Tunnel**	**123.78**	**277**	PKP	**PKPdf**	**22 35 32.1**	**-1.4**
	comp=Z,6.6nm,1.0s,baz=113,slow=14,SNR=2.4						
CPUP	**Villa Florida**	**124.26**	**132**	*e*PKPdf	**PKPdf**	**22 35 34.0**	**0.0**
CPUP	**Villa Florida**	**124.26**	**132**	*e*PKIKP	**PKPdf**	**22 35 34.1**	**0.0**
CPUP	**Villa Florida**	**124.26**	**132**	PKP	**PKPdf**	**22 35 33.7**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=211,slow=4.0,SNR=7.0						
ANN	**Anapa**	**124.32**	**317**	*i* PKIKP	**PKPdf**	**22 35 30.4**	**-3.2**
ANN				*e*		22 37 21.1	
ANN				*e*		22 42 32.4	
ANN				*e*SS	SS	22 54 08.4	-0.6
ANN				pmax	pmax		
	comp=Z,58nm,1.0s						
SDV	**Santo Domingo**	**124.80**	**87**	*e*PKPdf	**PKPdf**	**22 35 34.6**	**-1.1**
SDV				LR	LR		
	comp=Z,4µm,21.0s						
SDV	**Santo Domingo**	**124.80**	**87**	*e*P	**PP**	**22 37 18.7**	**-5.0**
SDV	**Santo Domingo**	**124.80**	**87**	*e*P	**PP**	**22 37 18.7**	**-5.0**
SDDR	**Presa de Saban**	**124.83**	**75**	PFAKE		22 35 50.0	+14
SDDR				LR	LR		
	comp=Z,14µm,20.0s						
BOSA	**Boshof**	**124.92**	**223**	*e*PKPdf	**PKiKP**	**22 35 37.5**	**+1.7**
BOSA	**Boshof**	**124.92**	**223**	PKP	**PKiKP**	**22 35 35.8**	**0.0**
	comp=Z,6.7nm,0.8s,baz=144,slow=3.4,SNR=11						
GRTK	**Grand Turk**	**124.95**	**71**	PFAKE		22 35 50.0	+14
GRTK				LR	LR		
	comp=Z,7µm,21.0s						
SUR	**Sutherland**	**125.17**	**217**	PFAKE		22 35 50.0	+14
SUR				LR	LR		
	comp=Z,15µm,22.0s						
IZAR	**Zarasai**	**125.23**	**333**	*e*P	**PKiKP**	**22 35 42.5**	**+7.2**
IZAR				IAmb	IAmb	22 35 53.7	
	comp=Z,6.5nm,0.8s						
MICGM	**Minsk**	**125.23**	**331**	*e*PKP	**PKiKP**	**22 35 42.0**	**+6.6**
MICGM				*e*PP	PP	22 37 35.0	+10
MICGM				*e*PPP	PPP	22 39 54.0	
MICGM				*e*SKS	SKSac	22 42 24.0	-13
MICGM				*e*PS	PS	22 47 30.0	+4.0
MICGM				*e*SS	SS	22 54 32.0	+12
MICGM				*e*SSS	SSS	22 59 32.0	
MICGM				*e*LR	LR	23 18 40.0	
MICGM				LRM	MLR	23 35 00.0	
	comp=Z,16nm,18.0s						
MICGM				LRM	MLR	23 35 04.0	
	comp=Z,13nm,18.0s						
MNK	**Minsk**	**125.23**	**331**	*e*PKIKP	**PKiKP**	**22 35 42.0**	**+6.6**
MNK				*e*SS	SS	22 54 32.0	+12
MNK				MLR	MLR		
	comp=Z,6µm,13.0s						
IDID	**Didziasalis**	**125.28**	**332**	*e*P	**PKiKP**	**22 35 40.0**	**+4.6**
IDID				IAmb	IAmb	22 35 54.6	
	comp=Z,13nm,1.1s						
ISAL	**Salakas**	**125.40**	**333**	*e*P	**PKiKP**	**22 35 42.2**	**+6.5**
ISAL				IAmb	IAmb	22 35 56.0	
	comp=Z,7.3nm,0.9s						
IIGN	**Ignalina**	**125.49**	**333**	*e*P	**PKiKP**	**22 35 41.1**	**+5.2**
IIGN				IAmb	IAmb	22 35 56.1	
	comp=Z,11nm,1.0s						
NACGM	**Naroch**	**125.51**	**332**	*e*PKP	**PKPdf**	**22 35 34.0**	**-1.5**
NACGM				*e*PP	PP	22 37 42.0	+16
NACGM				*e*SKKKS		22 45 40.0	
NACGM				*e*SKSP		22 47 30.0	
NACGM				*e*PS	PS	22 48 06.0	+38
NACGM				*e*SS	SS	22 55 42.0	+79
NACGM				*e*SSS	SSS	23 00 25.0	
NACGM				*e*LQ	LQ	23 15 24.0	
NACGM				*e*LR	LR	23 21 52.0	
NACGM				LRM	MLR	23 30 05.0	
	comp=Z,17nm,22.0s						
NB2	**NORSAR Subarra**	**126.60**	**345**	PKPdf	**PKiKP**	**22 35 40.1**	**+2.1**
	comp=Z,1.1nm,0.8s,baz=31,slow=1.7						
NOA	**NORSAR Array B**	**126.60**	**345**	PKP	**PKPdf**	**22 35 35.5**	**-2.1**
	comp=Z,1.3nm,0.9s,baz=32,slow=2.0,SNR=2.9						
AKASG	**Malin Array Be**	**126.68**	**327**	PKP	**PKPdf**	**22 35 36.2**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=56,slow=2.4,SNR=9.5						
KIEV	**Kiev**	**126.69**	**327**	PFAKE		22 35 50.0	+12
KIEV				LR	LR		
	comp=Z,7µm,22.0s						
KIEV	**Kiev**	**126.69**	**327**	⇑*i*P	**PKiKP**	**22 35 46.0**	**+7.6**
KIEV	**Kiev**	**126.69**	**327**	*i* PKIKP	**PKPdf**	**22 35 36.5**	**-1.4**
AK11	**Malin Array Si**	**126.72**	**327**	*e*PKPdf	**PKPdf**	**22 35 38.0**	**0.0**
PBUR	**Paburg**	**126.90**	**335**	*e*P	**PKiKP**	**22 35 41.7**	**+3.1**
PBUR				IAmb	IAmb	22 35 56.6	
	comp=Z,58nm,1.1s						
LBTB	**Lobatse**	**126.93**	**227**	*e*PKPdf	**PKiKP**	**22 35 41.6**	**+1.7**
KMBO	**Kilima Mbogo**	**127.09**	**260**	PKP	**PKPdf**	**22 35 39.7**	**-0.5**
KMBO				LR	LR		
	comp=Z,10µm,20.0s						
KMBO	**Kilima Mbogo**	**127.09**	**260**	PKP	**PKPdf**	**22 35 39.7**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=101,slow=5.2,SNR=3.6						
BRTR	**Keskin Array B**	**128.73**	**313**	PKP	**PKPdf**	**22 35 40.5**	**-1.9**
	comp=Z,2.4nm,1.1s,baz=90,slow=6.3,SNR=5.5						
KIS	**Kishinev**	**128.82**	**323**	*e*P	**Pdif**	**22 32 30.0**	**+2.0**
KIS	**Kishinev**	**128.82**	**323**	*e*PKP	**PKPdf**	**22 35 42.0**	**-0.1**
KIS	**Kishinev**	**128.82**	**323**	*e*PP	PP	22 38 00.0	+11
KIS	**Kishinev**	**128.82**	**323**	*e*PS	PS	22 48 03.0	+5.2
KIS	**Kishinev**	**128.82**	**323**	*e*P	**Pdif**	**22 32 30.0**	**+2.0**
KIS				*e*		22 35 42.0	
KIS				*e*PPP	PPP	22 40 36.0	
KIS				*e*SSS	SSS	22 59 50.0	
KIS				MLR	MLR		
	comp=Z,7µm,20.0s						
KIS				MLR	MLR		
	comp=N,3µm,20.0s						
ANTO	**Ankara**	**129.29**	**313**	PFAKE		22 35 50.0	+5.9
ANTO				LR	LR		
	comp=Z,4µm,21.0s						
SJG	**San Juan**	**129.71**	**76**	PFAKE		22 36 00.0	+15
SJG				LR	LR		
	comp=Z,7µm,20.0s						
SJG	**San Juan**	**129.71**	**76**	*e*P	PKPpre	22 35 35.0	
SJG	**San Juan**	**129.71**	**76**	*e*P	PKPpre	22 35 35.0	
LVV	**L'vov**	**129.93**	**328**	*e*PKIKP	**PKiKP**	**22 35 49.0**	**+4.1**
LVV				*e*		22 38 01.8	
LVV				*e*		22 55 36.1	
LVV				MLR	MLR		
	comp=E,4µm,22.0s						
LVV				MLR	MLR		
	comp=N,3µm,21.0s						
LVV				MLR	MLR		
	comp=Z,5µm,21.0s						
HUMP	**Col San Antoni**	**129.99**	**76**	*e*PKPdf	**PKPdf**	**22 35 43.6**	**-1.5**
LSZ	**Lusaka**	**130.24**	**239**	*e*PKPdf	**PKiKP**	**22 35 46.4**	**-0.3**
LSZ				LR	LR		
	comp=Z,19µm,20.0s						
LSZ	**Lusaka**	**130.24**	**239**	*e*PKIKP	**PKiKP**	**22 35 46.4**	**-0.3**
LSZ				MLR	MLR		
	comp=Z,19µm,20.0s						
BIZ	**Bicaz**	**130.44**	**324**	⇓*i*P	**PKPdf**	**22 35 45.2**	**0.0**
TLB	**Topalu**	**130.49**	**321**	⇑*i*P	PKiKP	22 35 54.6	+8.4
TLB	**Topalu**	**130.49**	**321**	⇑PKIKP	PKiKP	22 35 54.6	+8.4
HARR	**Harsova**	**130.51**	**321**	⇑*i*P	PKiKP	22 36 01.7	+15
BURAR	**Bucovina Array**	**130.57**	**325**	⇑*i*P	**PKiKP**	**22 35 50.1**	**+3.6**
BURAR	**Bucovina Array**	**130.57**	**325**	⇑PKIKP	**PKiKP**	**22 35 50.1**	**+3.6**
BUR04	**Bucovina Ar. S**	**130.57**	**325**	*e*PKPdf	**PKiKP**	**22 35 47.7**	**+1.3**
VRI	**Vrincioaia**	**130.65**	**323**	⇑*i*P	**PKiKP**	**22 35 50.9**	**+4.3**
VRI	**Vrincioaia**	**130.65**	**323**	⇑PKIKP	**PKiKP**	**22 35 50.9**	**+4.3**
MLR	**Muntele Rosu**	**131.31**	**323**	*e*PKPdf	**PKiKP**	**22 35 47.8**	**-0.3**
MLR	**Muntele Rosu**	**131.31**	**323**	⇑*i*P	**PKPdf**	**22 35 46.0**	**-1.1**
MLR	**Muntele Rosu**	**131.31**	**323**	⇑PKIKP	**PKPdf**	**22 35 46.0**	**-1.1**
MLR	**Muntele Rosu**	**131.31**	**323**	PKP	**PKPdf**	**22 35 46.3**	**-0.8**
	comp=Z,5.1nm,1.1s,baz=107,slow=20,SNR=3.2						
DOPR	**Dopca**	**131.38**	**323**	⇑*i*P	**PKiKP**	**22 35 51.7**	**+3.7**
UZH	**Uzhgorod**	**131.56**	**328**	*e*PKHKP	PKPpre	22 35 29.0	
UZH				*e*SS	SS	22 55 29.0	-9.1
UZH				MLR	MLR		

	comp=Z,900nm,20.0s						
TRPA	Tarpa	131.73	327	⇑iP	PKiKP	22 35 50.2	+1.6
ARR	Arges	132.16	323	⇑iP	PKiKP	22 35 50.8	+1.1
LTVH	Ltavrtes, Hu	132.53	327	ePKiKP	PKPdf	22 35 48.1	-1.1
LANS	Liptovska Anna	132.65	330	ePKIKP	PKiKP	22 35 55.0	+4.5
LANS	Liptovska Anna	132.65	330	ePKP	PKiKP	22 35 55.0	+4.5
LANS				e		22 37 55.6	
OKC	Ostrava-Krasne	132.82	332	AMS	AMS	23 40 20.0	
	comp=Z,4µm,17.3s						
OKC	Ostrava-Krasne	132.82	332	ePKIKP	PKiKP	22 36 02.7	+12
OKC				MLR	MLR		
	comp=Z,4µm,17.3s						
MORC	Moravsky Berou	133.14	332	ePKP	PKiKP	22 35 52.8	+1.3
KRLC	Kraliky	133.28	333	ePKP	PKiKP	22 35 57.8	+6.0
KRLC	Kraliky	133.28	333	ePKIKP	PKiKP	22 35 57.8	+6.0
DPC	Dobruska-Polom	133.29	333	AMS	AMS	23 39 40.0	
	comp=Z,8µm,20.6s						
UPC	Upice	133.31	333	AMS	AMS	23 39 20.0	
	comp=Z,10µm,19.4s						
UPC	Upice	133.31	333	ePKIKP	PKiKP	22 36 00.2	+8.4
UPC				MLR	MLR		
	comp=Z,10µm,19.4s						
PTGA	Pitinga	133.38	102	PFAKE		22 36 00.0	+7.0
PTGA				LR	LR		
	comp=Z,23µm,22.0s						
VYHS	Vyhne	133.40	330	eSS	SS	22 56 19.5	+19
HERR	Herculane	133.73	324	⇑iP	PKiKP	22 35 53.8	+1.0
BZS	Buzias	133.75	325	⇑iP	PKiKP	22 35 53.6	+0.8
BZS	Buzias	133.75	325	⇑PKIKP	PKiKP	22 35 53.6	+0.8
ANWB	Willy Bob	133.87	76	PFAKE		22 36 00.0	+6.2
ANWB				LR	LR		
	comp=Z,7µm,21.0s						
GRGR	Grenville	133.90	84	PFAKE		22 36 00.0	+6.0
GRGR				LR	LR		
	comp=Z,5µm,19.0s						
VRAC	Vranov	133.91	332	ePKP	PKiKP	22 35 54.0	+1.0
VRAC	Vranov	133.91	332	PKP	PKPdf	22 35 51.4	-0.4
	comp=Z,1.5nm,0.7s,baz=83,slow=18,SNR=2.5						
PVCC	Panska Ves	133.92	334	AMS	AMS	23 36 20.0	
	comp=Z,8µm,20.7s						
BRG	Berggiesshubel	133.92	335	ePKP	PKiKP	22 35 54.9	+1.9
	comp=Z,24nm,1.7s						
BRG	Berggiesshubel	133.92	335	ePKIKP	PKiKP	22 35 54.9	+1.9
BRG				pmax	pmax		
	comp=Z,24nm,1.7s						
BRG	Berggiesshubel	133.92	335	eSKP	SKPdf	22 39 25.4	+0.6
	comp=Z,29nm,1.6s						
BRG				SS	SS	22 56 07.0	+0.6
CLL	Collm	133.97	336	ePKPdf	PKPdf	22 35 50.0	-1.7
CLL				i PKPdfmax		22 36 00.4	
CLL				e		22 36 10.0	
	comp=Z,10.0nm,1.0s						
CLL				ePP	PP	22 38 18.0	-3.4
CLL				ePKSdf	PKSdf	22 39 24.0	-3.9
CLL				eSdif	Sdif	22 46 42.0	+6.3
CLL				ePSKS		22 48 36.0	
CLL				e(PPS)		22 50 06.0	
CLL				ePPPrev		22 51 42.0	
CLL				eSS	SS	22 56 04.0	-2.9
CLL				e(SSS)		23 00 42.0	
CLL				eSSSS		23 04 36.0	
CLL	Collm	133.97	336	i PKIKP	PKiKP	22 36 00.4	+7.4
CLL				e		22 36 10.0	
CLL				MLR	MLR		
	comp=Z,8µm,19.1s						
KRUC	Moravsky	134.18	332	ePKP	PKiKP	22 35 54.4	+0.8
MDVR	Moldovita	134.19	324	⇑iP	PKiKP	22 35 55.3	+1.5
MODS	Modra-Piesok	134.25	331	e	PKiKP	22 36 09.8	+16
MODS				e		22 37 58.3	
MODS				eSS	SS	22 56 09.3	-1.3
MODS				eL	L	23 26 47.7	
PRA	Prague	134.32	334	AMS	AMS	23 36 20.0	
	comp=Z,8µm,19.6s						
PRU	Pruhonice	134.33	334	ePKP	PKiKP	22 35 57.9	+4.1
PRU				ePP	PP	22 38 34.1	+10
PRU				eSKP		22 39 28.3	
PRU				AMS	AMS	23 36 10.0	
	comp=Z,7µm,17.6s						
PRU	Pruhonice	134.33	334	ePKIKP	PKiKP	22 35 57.9	+4.1
PRU				MLR	MLR		
	comp=Z,7µm,17.6s						
TREC	Trest	134.43	333	ePP	PP	22 38 35.6	+11
TREC				AMS	AMS	23 36 20.0	
	comp=Z,8µm,21.0s						
ZST	Bratislava	134.45	331	eSS	SS	22 56 20.2	+7.1
VTS	Vitosha	134.49	321	ePKPdf	PKiKP	22 35 56.1	+1.5
ESK	Eskdalemuir	134.92	351	PFAKE		22 36 00.0	+5.1
ESK				LR	LR		
	comp=Z,7µm,20.0s						
MORH	Mrgy, Hungar	135.00	327	ePKiKP	PKPpre	22 35 47.0	
NKC	Novy Kostel	135.02	336	AMS	AMS	23 41 10.0	
	comp=Z,7µm,18.7s						
CONA	Conrad Observa	135.23	331	ePKPdf	PKPdf	22 35 52.8	-1.6
	comp=Z,0.4nm,0.4s						
KHC	Kasperske Hory	135.39	334	ePKPdf	PKiKP	22 35 56.1	0.0
KHC	Kasperske Hory	135.39	334	ePKP	PKPdf	22 35 55.0	+0.5
KHC				epPKP	PKiKP	22 35 59.5	+3.4
KHC				ex	x	22 36 08.2	
KHC				eSKP		22 39 26.8	
KHC				AMS	AMS	23 35 40.0	
	comp=Z,9µm,20.1s						
KHC	Kasperske Hory	135.39	334	ePKIKP	PKPdf	22 35 55.0	+0.5
KHC				e		22 36 08.2	
KHC				MLR	MLR		
	comp=Z,9µm,20.1s						
GEC2	GERESS Array S	135.55	333	ePKPdf	PKPdf	22 35 55.4	+0.5
GEC2	GERESS Array S	135.55	333	ePKIKP	PKPdf	22 35 55.4	+0.5
GERES	GERESS Array B	135.55	333	PKP	PKPdf	22 35 53.9	-1.1
	comp=Z,2.5nm,1.0s,baz=304,slow=1.0,SNR=5.4						
GEA0	GERESS Array S	135.56	333	ePKPdf	PKPdf	22 35 54.9	0.0
BBGH	Gun Hill	135.99	82	PFAKE		22 36 10.0	+12
BBGH				LR	LR		
	comp=Z,14µm,22.0s						
MOA	Molln	136.04	332	ePKPdf	PKPdf	22 35 54.7	-1.1
	comp=Z,7.1nm,1.3s						
TSUM	Tsumeb	136.34	227	ePKPdf	PKiKP	22 35 59.1	0.0
TSUM				LR	LR		
	comp=Z,1913µm,22.0s						
SOKA	Soboth	136.52	330	ePKPdf	PKPdf	22 35 54.5	-2.3
	comp=Z,11nm,1.0s						
OBKA	Obir	136.87	331	ePKPdf	PKPdf	22 35 56.5	-1.0
	comp=Z,12nm,1.5s						
KBA	Koelnbreinsper	137.03	332	PKPdf	PKPdf	22 35 56.7	-1.2
	comp=Z,5.9nm,1.0s						
MEM	Membach	137.06	341	⇑PKiKP	PKiKP	22 36 03.8	+4.4
BDFB	Brasilia	137.59	128	ePKPdf	PKPdf	22 35 58.1	-1.5
BDFB	Brasilia	137.59	128	ePKIKP	PKPdf	22 35 58.1	-1.5
BDFB	Brasilia	137.59	128	PKP	PKPdf	22 35 57.2	-2.4
	comp=Z,7.1nm,1.0s,baz=171,slow=2.0,SNR=7.6						
WATA	Walderalm	137.63	334	PKPdf	PKPdf	22 35 58.3	-0.6
	comp=Z,4.1nm,0.6s						
ABTA	Abfaltersbach	137.66	332	PKiKP	PKPdf	22 35 59.1	+0.2
	comp=Z,15nm,1.4s						
WTTA	Wattenberg	137.66	333	PKPdf	PKPdf	22 35 56.2	-2.8
	comp=Z,1.8nm,0.5s						
MOTA	Moosalm	137.82	334	PKPdf	PKPdf	22 35 59.1	-0.2
	comp=Z,10nm,1.0s						
RETA	Reutte	137.86	334	ePKPdf	PKPdf	22 35 58.1	-1.1
	comp=Z,15nm,1.7s						
SQTA	Sankt Quirin	137.88	334	PKPdf	PKPdf	22 35 57.3	-2.0
	comp=Z,11nm,0.9s						
BFO	Black Forest	138.17	337	PFAKE		22 36 10.0	+8.3
BFO				LR	LR		
	comp=Z,239nm,20.0s						
FETA	Feichten	138.24	334	PKPdf	PKPdf	22 35 57.3	-2.7
	comp=Z,12nm,1.0s						
DAVA	Damuels	138.39	335	PKPdf	PKPdf	22 35 59.7	-0.6
	comp=Z,7.4nm,1.0s						
MAHO	Mahon	146.75	333	PKP	PKPdf	22 36 15.5	+0.4
KEST	Kesra	147.22	322	PKPbc	PKPdf	22 36 16.4	+0.2
KEST				ePKPdf	PKPbc	22 36 17.6	-0.8
KEST	Kesra	147.22	322	PKPbc	PKPdf	22 36 16.4	+0.2
	comp=Z,16nm,1.0s,baz=13,slow=6.2,SNR=3.9						
CMAH	Djebel Manchou	147.70	326	P	PKPdf	22 36 14.8	-2.1
ABSA	Djebel Ababsia	147.92	325	P	PKPdf	22 36 14.4	-2.9
H07S1	FLORES T-PHASE	148.12	25	eLR	LR	23 27 27.4	
CASM	Ain Smara	148.48	326	P	PKPdf	22 36 18.2	0.0
PBRG	Braganca	148.58	349	ePKPdf	PKPbc	22 36 20.5	-1.3
DFRA	Djebel Bou Aff	148.59	327	P	PKPbc	22 36 21.1	-1.0
CTEI	Djebel Teioual	148.67	326	P	PKPbc	22 36 21.9	-0.5
PGAV	Gavieira, Arco	148.69	351	ePKPab	PKPab	22 36 26.8	+1.0
PGAV	Gavieira, Arco	148.69	351	eLQ	LQ	23 30 43.1	
PGAV				eLR	LR	23 38 41.8	
	comp=Z,11µm,18.0s						
SET	Setif	149.11	327	P	PKPab	22 36 27.0	-0.7
UCM	Universidad Co	149.16	343	PKP	PKPdf	22 36 20.0	+0.9
CKHR	Kef el Ahmar	149.19	327	P	PKiKP	22 36 25.1	+0.2
POLO	Lamas de Olo	149.19	350	ePKPdf	PKPdf	22 36 19.3	+0.1
MVO	Moncorvo	149.26	349	ePKPdf	PKPab	22 36 27.8	-0.2
MVO	Moncorvo	149.26	349	eLR	LR	23 41 56.1	
	comp=Z,8µm,18.0s						
PGRA	Graciosa	149.66	21	eLR	LR	23 27 27.8	
	comp=Z,824nm,18.9s						
ROSA	Rosais	149.84	22	A	A	23 28 06.2	
	comp=Z,986nm,22.3s						
ES19	SONSECA Array	149.91	343	ePKPbc	PKPbc	22 36 24.2	-1.0
ESDC	Sonseca Array	149.96	344	PKPbc	PKPbc	22 36 24.2	-1.2
	comp=Z,2.1nm,0.8s,baz=2.1,slow=3.0,SNR=7.4						
MTE	Manteigas	150.09	349	ePKPdf	PKiKP	22 36 28.7	+2.2
MTE	Manteigas	150.09	349	eLR	LR	23 36 49.4	
	comp=Z,6µm,20.0s						
PAB	San Pablo	150.18	344	ePKPbc	PKPbc	22 36 25.2	-0.7
PAB				LR	LR		
	comp=Z,7µm,19.0s						
PAB	San Pablo	150.18	344	ePKP2	PKPbc	22 36 25.2	-0.7
PAB				MLR	MLR		
	comp=Z,7µm,19.0s						
PCAS	Casmilo, Conde	150.59	350	ePKPdf	PKiKP	22 36 30.0	+2.5
CART	Cartagena	150.88	337	PKP	PKiKP	22 36 30.2	+2.1
PMRV	Marv??o	151.00	348	ePKPdf	PKPdf	22 36 21.9	-0.1
PMRV	Marv??o	151.00	348	A	A	23 49 28.1	
	comp=Z,6µm,18.0s						
PTOM	Tomar	151.00	350	ePKPab	PKPab	22 36 35.6	+0.5
PSET	Sete Cidades	151.50	19	eLR	LR	23 27 28.1	
	comp=Z,1µm,18.3s						
PESTR	Estremoz	151.59	349	eLR	LR	23 40 27.5	
	comp=Z,8µm,34.4s						
PESTR	Estremoz	151.59	349	ePKPab	PKPab	22 36 36.7	-0.9
CMLA	Cha da Macela	151.62	18	eLR	LR	23 27 00.9	
	comp=Z,1µm,17.1s						
CMLA	Cha da Macela	151.62	18	PFAKE		22 36 30.0	+0.3
CMLA				LR	LR		
	comp=Z,12µm,20.0s						
PMAFR	Mafra	151.79	351	ePKPdf	PKPbc	22 36 28.3	-1.3
SHEL	Horse Pasture	151.80	198	ePKPbc	PKiKP	22 36 30.9	+0.2
SHEL				LR	LR		
	comp=Z,6µm,19.0s						
SHEL	Horse Pasture	151.80	198	ePKIKP	PKiKP	22 36 30.9	+0.2
SHEL				MLR	MLR		
	comp=Z,6µm,19.0s						
LIS	Lisbon	152.00	351	ePKPdf	PKPdf	22 36 23.0	-0.5
LIS				AMS	AMS	00 04 42.7	
	comp=Z,8µm,23.1s						
LIS	Lisbon	152.00	351	ePKIKP	PKPdf	22 36 23.0	-0.5
PBEJ	Beja	152.45	349	ePKPdf	PKPbc	22 36 29.0	-2.1
PSMN	Pico do Norte,	152.46	18	eLR	LR	23 27 44.0	
	comp=Z,1µm,18.9s						
PNCL	Nicolau / Gran	152.49	350	ePKPab	PKPab	22 36 39.8	-1.6
MESJ	Messejana	152.70	349	ePKPdf	PKPdf	22 36 23.8	-0.9
MESJ				AMS	AMS	00 05 12.6	
	comp=Z,6µm,14.0s						
MESJ	Messejana	152.70	349	ePKPab	PKPab	22 36 40.0	-2.3
MESJ	Messejana	152.70	349	ePKIKP	PKPdf	22 36 23.7	-0.9
EMAL	Malaga-Limoner	152.79	342	PKP	PKiKP	22 36 33.5	+1.4
LIJA	Lijar	152.94	344	ePKP	PKiKP	22 36 37.0	+4.4
PVAQ	Vaqueiros	153.02	348	A	A	23 49 39.7	
	comp=Z,5µm,20.0s						
MORF	Marmelete	153.30	349	ePKPdf	PKPdf	22 36 25.0	-0.6
MORF				AMS	AMS	23 50 51.0	
	comp=Z,8µm,20.2s						
MORF	Marmelete	153.30	349	ePKPab	PKPab	22 36 41.9	-3.0
MORF	Marmelete	153.30	349	ePKIKP	PKPdf	22 36 24.9	-0.6
PFVI	Vila Bisbo	153.50	350	ePKPdf	PKPdf	22 36 25.5	-0.3
IFR	Ifrane	156.00	340	PKP	PKPdf	22 36 30.3	+0.7
AVE	Averroes	156.88	345	PKP	PKPdf	22 36 31.3	+0.8
PMOZ	Porto Moniz, M	158.17	6	eLR	LR	23 38 34.3	
	comp=Z,5µm,20.0s						
TOA0	Torodi Ar. Sit	163.96	279	ePKPdf	PKPdf	22 36 37.5	-1.3
TORD	Torodi Ar. Bea	163.96	279	PKP	PKPdf	22 36 36.9	-1.9
	comp=Z,3.7nm,1.0s,baz=64,slow=0.8,SNR=14						
LIC	Lamto	169.44	244	ePKP2	PKPdf	22 36 39.3	-3.7
	comp=Z,260nm,2.2s						
DBIC	Dimbokro	169.48	247	ePKPdf	PKPdf	22 36 41.3	-1.7
DBIC	Dimbokro	169.48	247	ePKIKP	PKPdf	22 36 41.3	-1.7
DBIC	Dimbokro	169.48	247	PKP	PKPdf	22 36 40.6	-2.5
	comp=Z,6.8nm,1.0s,baz=192,slow=1.6,SNR=5.5						
TIC	Toumodi	169.62	246	ePKP2	PKPdf	22 36 40.8	-2.4
SACV	Santiago Islan	170.35	65	PFAKE		22 36 50.0	+6.5
SACV				LR	LR		
	comp=Z,4µm,19.0s						

IDC ***01*** *22:18:30.9±0.5, 11°.23S×165°.69E, h0^{km}, mb4.8/23, mb1 4.9/24, mb1mx4.9/34, mbtmp4.8/24, MS6.0/6, Ms1 6.0/6, ms1mx5.6/31, Error ellipse: s-maj=19.8km s-min=15.2km az=99.0*

NEIC ***01*** *22:18:33.1±0.2, 11°.12S×165°.38E, h10^{km}, mb5.7/104, MW6.3, MW6.4, Error ellipse: s-maj=5.4km s-min=4.6km az=114.0, Moment Tensor Solution. s63 Moment tensor: Scale 10^{18}Nm; M_{rr}1.54; $M_{\theta\theta}$0.71; $M_{\phi\phi}$-2.25; $M_{r\theta}$1.40; $M_{\theta\phi}$0.59; $M_{\phi r}$-2.40; Best double couple: $M_0$3.50000×10^{18} NP1:ϕ_s151.00000°, δ74.00000°, λ74.00000°. NP2: ϕ_s16.00000°, δ22.00000°, λ133.00000°. Principal axes: T 3.1500, Plg58.0000°, Azm39.0000°; N 0.5700, Plg15.0000°, Azm155.0000°; P -3.7200, Plg27.0000°, Azm253.0000°;*

ISCJB ***01*** *22:18:34.4±0.1, 11°.17S±0°.02×165°.35E±0°.03, h30^{km}, mb5.5/127 Error ellipse: s-maj=4.0km s-min=3.3km az=170.1*

NEIC ***01*** *22:18:35.0±0.0, 11°.23S×165°.16E, h15^{km}, Moment Tensor Solution. s22 Moment tensor: Scale 10^{18}Nm; M_{rr}2.79; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$-2.08; $M_{r\theta}$1.55; $M_{\theta\phi}$1.08; $M_{\phi r}$-2.93; Best double couple: $M_0$4.30000×10^{18} NP1:ϕ_s0.00000°, δ0.00000°, λ0.00000°. NP2:ϕ_s330.00000°, δ20.00000°, λ89.00000°. Principal axes: T 4.3600, Plg64.0000°, Azm62.0000°; N -0.1200, Plg0.0000°, Azm331.0000°; P -4.2400, Plg25.0000°, Azm241.0000°;*

BJI ***01*** *22:18:36.3, 11°.05S×164°.76E, h9^{km}, mB6.1/26, mb5.3/20, Ms6.3/25, Ms7 6.1/25*

GCMT ***01*** *22:18:41.1±0.1, 11°.24S±0°.01×165°.30E±0°.01, h14^{km}, MW6.3/135, Moment Tensor Solution. s135, c286; s133, c373; Duration: 3^{s}.7 Moment tensor: Scale 10^{18} Nm; M_{rr}2.44±.04; $M_{\theta\theta}$-0.89±.03; $M_{\phi\phi}$-1.55±.03; $M_{r\theta}$2.02±.09; $M_{\theta\phi}$1.34±.03; $M_{\phi r}$-2.72±.11; Best double couple: $M_0$4.22300×10^{18} NP1:ϕ_s143.00000°, δ72.00000°, λ91.00000°. NP2:ϕ_s320.00000°, δ18.00000°, λ87.00000°. Principal axes: T 4.1430, Plg63.0000°, Azm54.0000°; N 0.1560, Plg1.0000°, Azm323.0000°; P -4.3030, Plg27.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 01 22:18:36.3±0.3, **11°.16S**±0°.05×**165°.47E**±0°.05, **h30**^{km}**, n307, σ2^{s}.11**/304, **mb5.6**/127, **2C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.70	287	ePn	Pn	22 19 56.4	-2.6
HNR				eS	Sn	22 21 08.2	+4.8
HNR	Honiara	5.70	287	Sn	Sn	22 21 03.3	-0.2
	baz=163,slow=19,SNR=3.7						
MARNC	Mare, Loyalty	10.56	167	ePn	Pn	22 21 06.5	+0.8
DZM	Mont Dzumac	10.89	175	ePn	Pn	22 21 09.2	-1.2
DZM	Mont Dzumac	10.89	175	Pn	Pn	22 21 08.8	-1.6
	baz=19,slow=18,SNR=1.2						
PINNC	Pines Island,	11.55	171	ePn	Pn	22 21 21.0	+1.8
MSVF	Nonsavu	13.82	120	Pn	Pn	22 21 54.1	+3.7
TARA	Tarawa	14.47	31	ePn	Pn	22 21 58.5	-0.7
PATS	Pohnpei	19.24	338	eP	P	22 22 53.3	-5.0
	599nm,1.4s						
EIDS	Eidsvold	19.63	222	P	Pn	22 23 08.2	+4.0
	baz=20,SNR=3.4						
EIDS	Eidsvold	19.63	222	eP	Pn	22 23 05.2	+1.0
	231nm,1.3s						
KWAJ	Kwajalein Atol	19.94	6	eP	P	22 23 06.1	+0.1
	1µm,1.4s						
MANU	Manus Island	20.12	295	eP	P	22 23 07.5	-0.6
	1µm,1.1s						
CTA	Charters Tower	20.51	242	P	P	22 23 11.8	-0.5
	84nm,0.9s,baz=77,slow=14,SNR=3.0						
CTAO	Charters Tower	20.51	242	P	P	22 23 11.7	-0.5
	521nm,1.3s						
LHI	Lord Howe Isla	21.11	195	eP	P	22 23 19.3	+0.7
	457nm,1.3s						
RMQ	Roma	21.93	224	P	P	22 23 31.8	+4.3
	baz=22,SNR=4.8						
COEN	Coen	21.94	260	P	P	22 23 27.1	-0.5
	baz=22,SNR=3.9						
COEN	Coen	21.94	260	eP	P	22 23 26.5	-1.2
	610nm,1.4s						
ARMA	Armidale	23.08	212	eP	P	22 23 41.3	+1.5
	294nm,1.4s						
KNTN	Kanton	24.11	71	eP	P	22 23 52.4	+2.7
	578nm,1.5s						
NIUE	Niue	25.00	111	eP	P	22 23 57.4	-0.4
	297nm,1.1s						
OUZ	Omahuta	25.07	164	eP	P	22 24 06.0	+7.8
	336nm,1.4s						
JAY	Jayapura	26.02	287	LR	LR	22 33 49.3	
	comp=Z,52µm,21.2s,baz=56,slow=35						
RIV	Riverview	26.09	208	P	P	22 24 16.8	+9.3
	baz=26,SNR=3.6						
MKAZ	Moumakai	27.27	163	P	P	22 24 17.2	-0.8
CMSA	Cobar Meteorol	27.31	219	P	P	22 24 26.4	+7.9
	baz=28,SNR=5.5						
CAN	Canberra	28.33	209	eP	P	22 24 29.6	+1.9
	98nm,1.5s						
HIZ	Hauiti	28.51	164	eP	P	22 24 30.5	+1.4
	440nm,1.3s						
OMRZ	Omania	28.56	162	P	P	22 24 32.0	+2.3
HAZ	Te Kaha	28.70	159	P	P	22 24 32.5	+1.6
MXZ	Matakaoa Point	28.71	158	eP	P	22 24 35.6	+4.7
RUGZ	Raukumara Rang	28.85	160	P	P	22 24 32.8	+0.4
PKGZ	Pakihiroa	28.92	159	P	P	22 24 32.6	-0.3
URZ	Urewera	28.93	161	eP	P	22 24 34.4	+1.5
URZ	Urewera	28.93	161	P	P	22 24 30.9	-1.9
	12nm,0.5s,baz=16,slow=18,SNR=3.4						
URZ	Urewera	28.93	161	P	P	22 24 33.4	+0.5
WMGZ	Waiomatatini S	28.98	159	P	P	22 24 34.3	+1.0
MUGZ	Murupara	29.02	162	P	P	22 24 34.9	+1.2
MWZ	Matawai	29.14	160	P	P	22 24 34.6	-0.2
RTZ	Ruatahuna	29.22	161	P	P	22 24 35.9	+0.3
MRHZ	Matea Rd	29.24	162	P	P	22 24 36.9	+1.2
RAGZ	Rawiri	29.25	161	P	P	22 24 35.3	-0.5
WTVZ	West Tongariro	29.27	164	P	P	22 24 38.1	+2.0
NGZ	Ngauruhoe	29.33	164	P	P	22 24 39.0	+2.4
TKGZ	Te Karaka	29.34	160	P	P	22 24 36.7	+0.2
FWVZ	Far West T-bar	29.39	164	P	P	22 24 39.4	+2.1
MTHZ	Maungataniwha	29.39	162	P	P	22 24 37.5	+0.5
TRVZ	Turoa	29.43	164	P	P	22 24 39.1	+1.5
SNGZ	Shannon Statio	29.48	161	P	P	22 24 37.6	-0.2
H11S2	WAKE ISLAND Hy	29.48	2	T	T	22 55 13.5	
	baz=189						
H11S3	WAKE ISLAND Hy	29.49	2	T	T	22 55 13.5	
	baz=189						
H11S1	WAKE ISLAND Hy	29.50	2	T	T	22 55 13.5	
	baz=189						
CNGZ	Carnagh Statio	29.50	159	P	P	22 24 37.2	-0.8
RAHZ	Arahi	29.52	161	P	P	22 24 38.3	+0.1
RIGZ	Rimuhau	29.55	160	P	P	22 24 38.6	+0.2
BKZ	Black Stump Fm	29.57	162	eP	P	22 24 37.9	-0.8
	159nm,1.3s						
BKZ	Black Stump Fm	29.57	162	P	P	22 24 39.0	+0.3
MOVZ	Moawhango	29.59	164	P	P	22 24 40.3	+1.5
WHHZ	Waihua	29.72	161	P	P	22 24 40.0	+0.1
BHHZ	Black Hill Sta	29.75	163	P	P	22 24 41.1	+0.9
KWHZ	Kaweka Forest	29.79	163	P	P	22 24 40.9	+0.3
KNZ	Kokohu	29.81	161	P	P	22 24 40.6	-0.1
ARHZ	Aropaoanui	29.81	162	P	P	22 24 40.7	-0.1
STKA	Stephens Creek	30.18	223	P	P	22 24 43.8	-0.2
	12nm,0.7s,baz=39,slow=14,SNR=2.3						
KAHZ	Kahuranaki	30.27	162	P	P	22 24 44.8	0.0
H11N1	WAKE ISLAND Hy	30.71	3	T	T	22 56 43.2	
	baz=185						
H11N3	WAKE ISLAND Hy	30.71	3	T	T	22 56 43.2	
	baz=185						
H11N2	WAKE ISLAND Hy	30.72	3	T	T	22 56 51.0	
	baz=185						
BFZ	Birch Farm	30.91	164	eP	P	22 24 50.5	+0.1
	372nm,1.3s						
SNZO	South Karori	31.12	166	eP	P	22 24 53.1	+1.0
	157nm,1.2s						
THZ	Tophouse	31.18	169	eP	P	22 24 53.7	+0.8
	88nm,0.8s						
WRAB	Tennant Creek	31.18	250	eP	P	22 24 52.4	-0.6
	240nm,1.3s						
WB2	Warramunga Arr	31.18	250	eP	P	22 24 51.6	-1.4
	244nm,1.3s						
WRA	Warramunga Arr	31.19	250	P	P	22 24 52.8	-0.4
	58nm,1.0s,baz=80,slow=9.2,SNR=5.6						
WRA				PcP	PcP	22 27 48.1	+0.3
	5.8nm,1.1s,baz=84,slow=3.3,SNR=2.6						
TOO	Toolangi	31.84	211	eP	P	22 25 00.5	+1.8
	118nm,1.4s						
LTZ	Lake Taylor	32.06	171	eP	P	22 25 01.5	+1.0
	79nm,0.8s						
KDU	Kakadu	32.31	264	P	P	22 25 02.6	-0.4
	baz=32,SNR=3.7						
AS01	Alice Springs	32.46	243	eP	P	22 25 03.5	-0.8
FOZ	Fox Glacier	32.48	174	eP	P	22 25 05.2	+1.1
	84nm,1.1s						
AS31	Alice Springs	32.50	243	eP	P	22 25 00.8	-3.8
	20nm,1.1s						
ASAR	Alice Springs	32.50	243	P	P	22 25 03.9	-0.8
	10nm,0.8s,baz=66,slow=10,SNR=5.6						
ASAR				PcP	PcP	22 27 51.9	+0.6
	6.0nm,0.8s,baz=53,slow=3.1,SNR=2.2						
OXZ	Oxford	32.56	171	eP	P	22 25 03.1	-1.7
	79nm,0.9s						
RPZ	Rata Peaks	32.80	173	eP	P	22 25 07.4	+0.4
RPZ	Rata Peaks	32.80	173	P	P	22 25 05.7	-1.3
	14nm,0.6s,baz=340,slow=7.2,SNR=2.0						
CRLZ	Canterbury Las	32.89	170	eP	P	22 25 05.9	-1.8
	398nm,1.5s						
HTT	Hallett	32.91	223	P	P	22 25 13.3	+5.1
	baz=33,SNR=3.7						
MQZ	McQueen’s Vall	33.02	170	eP	P	22 25 09.3	+0.4
	118nm,0.9s						
FAKI	Fak Fak	33.94	281	eP	P	22 25 16.0	-1.3
	60nm,1.2s						
ODZ	Otahua Downs	34.06	173	eP	P	22 25 17.0	-0.9
	74nm,1.3s						
MLZ	Mavora Lakes	34.17	177	eP	P	22 25 16.9	-1.9
	97nm,1.3s						
DCZ	Deep Cove	34.22	178	eP	P	22 25 19.0	-0.3
	85nm,1.2s						
BBOO	Buckleboo	34.56	227	eP	P	22 25 20.0	-2.5
	203nm,1.4s						
WHZ	Wether Hill Ro	34.68	177	eP	P	22 25 23.7	+0.4
	80nm,1.4s						
RAR	Rarotonga	34.77	111	LR	LR	22 36 31.9	
	comp=Z,41µm,20.8s,baz=276,slow=31						
TAU	Tasmania Unive	35.36	203	eP	P	22 25 29.5	+0.3
	83nm,1.3s						
JOHN	Johnston Islan	37.13	42	eP	P	22 25 46.3	+1.7
	397nm,1.4s						
FITZ	Fitzroy Crossi	39.09	255	eP	P	22 25 59.4	-1.8
	93nm,1.3s						
FORT	Forrest	39.76	235	eP	P	22 26 05.4	-1.2
	186nm,1.2s						
SOEI	Soe	40.52	268	eP	P	22 26 10.1	-3.2
	113nm,1.1s						
BATI	Baumata	41.07	267	P	P	22 26 18.1	+0.4
	50nm,0.8s,baz=130,slow=7.3,SNR=2.4						
MMRI	Maumere	42.64	269	eP	P	22 26 27.5	-3.0
	203nm,1.2s						
MCQ	Macquarie Isla	43.54	186	eP	P	22 26 43.7	+6.5
	196nm,1.4s						
LUWI	Luwuk	43.57	280	eP	P	22 26 34.6	-3.4
	169nm,1.1s						
DAV	Davao City (W)	43.63	293	LR	LR	22 46 31.9	
	comp=Z,8µm,18.1s,baz=106,slow=38						
PPT	Papeete	43.93	104	eP	P	22 26 39.1	-1.8
MBWA	Marble Bar	44.91	251	eP	P	22 26 46.5	-2.2
	86nm,1.1s						
OPA	Opana	48.48	48	eP	P	22 27 17.9	+1.4
	223nm,1.1s						
KHLU	Kahalu`u	48.80	51	eP	P	22 27 19.2	0.0
	232nm,1.3s						
MWH	Moku‘aweowe	48.97	52	eP	P	22 27 24.3	+3.3
	352nm,1.5s						
AIN	Ainahou	49.01	52	eP	P	22 27 21.5	+0.6
	361nm,1.2s						
MLOA	Mauna Loa Obse	49.02	52	eP	P	22 27 23.3	+2.1
	494nm,1.5s						
BLDU	Ballidu	49.07	239	P	P	22 27 24.2	+3.1
	baz=49,SNR=4.8						
HLP	Hilina Pali	49.09	52	eP	P	22 27 22.8	+1.5
	273nm,1.2s						
HMH	Humu‘ula Sheep	49.12	52	eP	P	22 27 20.3	-1.7

	390nm,1.4s						
MLH	**Mauna Loa**	**49.14**	**52**	*e*P	**P**	**22 27 22.3**	**+0.3**
	212nm,1.2s						
KHLH	**Kahului Airpor**	**49.16**	**50**	*e*P	**P**	**22 27 21.6**	**-0.3**
	186nm,1.1s						
NWAO	**Narrogin (SRO)**	**49.18**	**236**	*e*P	**P**	**22 27 19.9**	**-1.9**
	85nm,1.1s						
MORW	**Morawa**	**49.33**	**241**	P	**P**	**22 27 24.5**	**+1.4**
	baz=49,SNR=3.2						
MORW	**Morawa**	**49.33**	**241**	*e*P	**P**	**22 27 20.7**	**-2.4**
	85nm,1.0s						
RKGY	**Rocky Gully**	**49.83**	**234**	P	P	22 27 31.6	+4.8
	baz=50,SNR=4.3						
GIRL	**Giralia**	**50.12**	**250**	*e*P	**P**	**22 27 29.4**	**+0.2**
	273nm,1.4s						
JAGI	**Jajag, Banyuwa**	**50.59**	**268**	*e*P	**P**	**22 27 32.0**	**-0.8**
	109nm,1.0s						
KKM	**Kota Kinabalu**	**51.91**	**287**	*e*P	**P**	**22 27 43.1**	**+0.2**
	144nm,1.4s						
JOW	**Kunigami**	**52.25**	**317**	*e*P	**P**	**22 27 44.4**	**-0.7**
	36nm,1.1s						
MJAR	**Matsushiro Arr**	**53.94**	**333**	P	**P**	**22 27 58.0**	**+0.6**
	5.5nm,0.8s,baz=162,slow=8.1,SNR=2.6						
MAJO	**Matsushiro**	**53.95**	**333**	*e*P	**P**	**22 27 59.0**	**+1.6**
	36nm,1.1s						
MAT	**Matsushiro**	**53.95**	**333**	P	**P**	**22 27 58.3**	**+0.9**
MJB9	**Matsu-Tunnel**	**53.95**	**333**	*e*P	**P**	**22 27 58.4**	**+1.0**
	34nm,1.1s						
UGM	**Wanagama**	**54.22**	**268**	*e*P	**P**	**22 27 59.4**	**-0.5**
	243nm,1.3s						
SMRI	**Semarang**	**54.43**	**269**	*e*P	**P**	**22 27 58.1**	**-3.3**
	318nm,1.4s						
YOJ	**Yonaguni jima**	**54.51**	**311**	*e*P	**P**	**22 28 00.0**	**-1.6**
	243nm,1.5s						
SBUM	**Sibu**	**54.66**	**281**	*e*P	**P**	**22 28 01.1**	**-1.9**
	67nm,1.5s						
JNU	**Nakatsue**	**55.01**	**324**	*e*P	**P**	**22 28 03.3**	**-1.9**
	116nm,1.3s						
JNU	**Nakatsue**	**55.01**	**324**	P	**P**	**22 28 06.9**	**+1.7**
	22nm,1.0s,baz=156,slow=12						
TWG	**Pinlang**	**55.05**	**308**	*e*P	**P**	**22 28 01.7**	**-4.0**
	87nm,0.8s						
NACB	**Ninganchiao**	**55.40**	**310**	*e*P	**P**	**22 28 06.6**	**-1.6**
	137nm,1.5s						
TPUB	**Ta-pu**	**55.66**	**308**	*e*P	**P**	**22 28 08.7**	**-1.4**
	72nm,1.2s						
SSLB	**Suanglung**	**55.67**	**309**	*e*P	P	22 28 04.7	-5.4
	39nm,1.2s						
KSM	**Kuching**	**56.25**	**279**	*e*P	P	22 28 09.1	-5.4
	61nm,1.3s						
CISI	**Cisompet, Garu**	**56.93**	**268**	*e*P	**P**	**22 28 19.1**	**-0.3**
	118nm,0.9s						
XMIS	**Christmas Isla**	**58.67**	**264**	*e*P	**P**	**22 28 28.9**	**-2.6**
	114nm,1.4s						
ASAJ	**Asahikawa**	**58.81**	**341**	P	**P**	**22 28 32.7**	**+0.8**
	11nm,0.9s,baz=217,slow=20,SNR=1.7						
KSRS	**Korea Array**	**59.81**	**326**	P	**P**	**22 28 40.0**	**+1.1**
	8.1nm,1.1s,baz=145,slow=7.3,SNR=2.4						
KS15	**Wonju Array Si**	**59.83**	**326**	*e*P	**P**	**22 28 34.9**	**-4.2**
KSAR	**Wonju Array Be**	**59.83**	**326**	P	**P**	**22 28 40.0**	**+1.0**
KS01	**Wonju Array Si**	**59.85**	**326**	*e*P	**P**	**22 28 39.6**	**+0.5**
YSS	**Yuzh-Sakhalins**	**61.31**	**342**	P	**P**	**22 28 46.7**	**-2.3**
	76nm,1.2s						
NJ2	**Nanjing**	**61.91**	**316**	*e*P	**P**	**22 28 55.4**	**+2.1**
NJ2				sP	**pP**	**22 29 02.4**	**+0.8**
NJ2				S	**S**	**22 37 19.2**	**+3.7**
NJ2				pmax	pmax		
	comp=Z,1µm,8.4s						
NJ2				LR	LR		
	comp=E,13µm,16.8s						
NJ2				LR	LR		
	comp=Z,14µm,18.4s						
QIZ	**Qiongzhong**	**62.49**	**298**	P	**P**	**22 28 56.4**	**-1.1**
QIZ				S	**S**	**22 37 25.6**	**+2.3**
USRK	**Ussuriysk Ar.**	**62.92**	**334**	P	**P**	**22 29 00.7**	**+0.8**
	8.1nm,0.9s,baz=123,slow=10,SNR=1.9						
SMY	**Shemya**	**64.06**	**6**	*e*P	**P**	**22 29 04.8**	**-2.3**
	315nm,1.3s						
MDJ	**Mudanjiang**	**64.32**	**332**	P	**P**	**22 29 11.2**	**+2.1**
PETK	**Petropavlovsk-**	**64.35**	**355**	P	**P**	**22 29 09.7**	**+0.6**
	6.3nm,0.9s,baz=159,slow=8.7,SNR=2.0						
DL2	**Dalian**	**64.40**	**323**	P	**P**	**22 29 12.1**	**+2.4**
DL2				S	**S**	**22 37 54.4**	**+8.0**
DL2				pmax	pmax		
	comp=Z,41nm,1.4s						
DL2				pmax	pmax		
	comp=Z,2µm,8.5s						
DL2				LR	LR		
	comp=N,10µm,15.1s						
DL2				LR	LR		
	comp=E,5µm,21.2s						
DL2				LR	LR		
	comp=Z,12µm,18.4s						
KIWB	**Kanaga Island**	**64.53**	**12**	*e*P	**P**	**22 29 09.6**	**-0.7**
BKNI	**Bangkinang**	**65.01**	**276**	*e*P	**P**	**22 29 14.3**	**+0.1**
	180nm,1.1s						
IPM	**Ipoh**	**65.97**	**280**	*e*P	**P**	**22 29 19.3**	**-1.2**
	71nm,1.0s						
CASY	**Casey**	**66.18**	**201**	*e*P	**P**	**22 29 20.9**	**+0.1**
	80nm,1.2s						
VNDA	**Vanda**	**66.38**	**181**	*e*P	**P**	**22 29 21.7**	**-0.3**
	30nm,1.0s						
SBA	**Scott Base**	**66.69**	**180**	*e*P	**P**	**22 29 28.4**	**+4.4**
	47nm,1.1s						
NIKH	**Nikolski High**	**67.55**	**16**	*e*P	**P**	**22 29 28.9**	**-0.8**
	135nm,1.1s						
PSI	**Prapat**	**67.62**	**278**	*e*P	**P**	**22 29 29.1**	**-2.0**
	41nm,0.9s						
ENH	**Enshi**	**67.76**	**309**	*e*P	**P**	**22 29 30.8**	**-0.8**
	83nm,1.3s						
GYA	**Guiyang**	**68.26**	**304**	⇓*i*P	**P**	**22 29 35.5**	**+0.6**
GYA				pP	pP	22 29 42.0	-0.8
GYA				PP	**PP**	**22 32 08.6**	**+2.7**
GYA				ScP		22 34 02.2	
GYA				S	**S**	**22 38 33.3**	**-0.7**
GYA				sS	pS	22 38 44.0	0.0
GYA				SKS	**SKiKP**	**22 39 29.1**	**+1.2**
GYA				pmax	pmax		
	comp=Z,80nm,1.0s						
GYA				pmax	pmax		
	comp=Z,620nm,7.4s						
GYA				LR	LR		
	comp=N,9µm,19.2s						
GYA				LR	LR		
	comp=E,10µm,20.0s						
GYA				LR	LR		
	comp=Z,16µm,20.4s						
GSI	**Gunungsitoli**	**68.60**	**276**	*e*P	**P**	**22 29 36.5**	**-0.7**
	78nm,0.8s						
UNV	**Unalaska Valle**	**69.00**	**17**	*e*P	**P**	**22 29 39.3**	**+0.6**
	96nm,1.3s						
XAN	**Xi'an**	**70.00**	**312**	P	P	22 29 52.7	+7.3
XAN				pP	pwP	22 29 59.0	-0.4
XAN				sP	PcP	22 30 02.1	-5.5
XAN				PP	**PP**	**22 32 27.8**	**+7.1**
XAN				S	**S**	**22 38 58.4**	**+4.3**
XAN				sS	sS	22 39 08.9	+1.5
XAN				ScS	**ScS**	**22 39 49.6**	**+3.7**
XAN	**Xi'an**	**70.00**	**312**	SS	SS	22 43 28.6	+4.4
XAN				pmax	pmax		
	comp=Z,26nm,1.3s						
XAN				pmax	pmax		
	comp=Z,1µm,5.6s						
XAN				LR	LR		
	comp=N,11µm,17.4s						
XAN				LR	LR		
	comp=E,7µm,19.5s						
XAN				LR	LR		
	comp=Z,14µm,21.1s						
KMI	**Kunming**	**70.95**	**302**	P	P	22 29 56.9	+5.3
MA2	**Magadan**	**71.48**	**352**	*e*P	**P**	**22 29 55.6**	**+1.7**
	comp=Z,18nm,1.1s						
MA2	**Magadan**	**71.48**	**352**	LR	LR	22 55 27.9	
	comp=Z,7µm,21.9s,baz=168,slow=31						
HHC	**Hu-ho-hao-te**	**71.74**	**320**	*e*P	**P**	**22 29 58.1**	**+2.1**
HHC				sP	pwP	22 30 10.4	+1.8
HHC				PP	**PP**	**22 32 34.0**	**-1.6**
HHC				S	**S**	**22 39 19.3**	**+5.0**
HHC				pmax	pmax		
	comp=Z,29nm,1.4s						
HHC				pmax	pmax		
	comp=Z,800nm,6.2s						
HHC				LR	LR		
	comp=Z,9µm,20.2s						
HHC				LR	LR		
	comp=Z,17µm,19.4s						
CM01	**Chiang Mai Arr**	**71.88**	**294**	*e*P	**P**	**22 29 57.8**	**+0.7**
CM31	**Chiang Mai Arr**	**71.91**	**294**	*e*P	**P**	**22 29 55.3**	**-2.0**
CMAR	**Chiang Mai Arr**	**71.91**	**294**	P	**P**	**22 29 58.5**	**+1.2**
	comp=Z,2.8nm,1.0s,baz=102,slow=3.8,SNR=2.1						
HIA	**Hailar**	**72.33**	**331**	P	**P**	**22 29 56.8**	**-2.4**
CD2	**Chengdu**	**72.45**	**307**	*e*P	**P**	**22 29 59.5**	**-0.9**
LZH	**Lanzhou**	**74.63**	**312**	*e*P	**P**	**22 30 16.4**	**+3.2**
LZH				pP	pP	22 30 21.6	+0.4
LZH				sP	pwP	22 30 26.0	-1.3
LZH				pmax	pmax		
	comp=Z,330nm,1.4s						
LZH				pmax	pmax		
	comp=Z,2µm,6.1s						
SONM	**Songino Array**	**78.59**	**324**	P	**P**	**22 30 35.9**	**+0.5**
	comp=Z,12nm,1.3s,baz=132,slow=2.1,SNR=1.9						
QSPA	**South Pole Qui**	**78.85**	**180**	*e*P	**P**	**22 30 37.0**	**+0.6**
BILL	**Bilibino**	**78.99**	**0**	*e*P	**P**	**22 30 35.5**	**-1.3**
	comp=Z,14nm,0.9s						
HMT	**Hamilton**	**81.65**	**23**	*e*P	**P**	**22 30 51.9**	**+0.5**
	comp=Z,221nm,1.5s						
KLU	**Klutina**	**81.80**	**21**	*e*P	**P**	**22 30 51.4**	**-0.8**
	comp=Z,68nm,1.1s						
TLY	**Talaya**	**82.06**	**326**	*e*P	**P**	**22 30 52.2**	**-1.6**
	comp=Z,5.7nm,0.8s						
MCK	**McKinley**	**82.33**	**19**	*e*P	**P**	**22 30 54.3**	**-0.6**
	comp=Z,67nm,1.2s						
KCPM	**Cahto Peak**	**82.82**	**47**	*e*P	**P**	**22 30 58.4**	**+0.2**
	comp=Z,79nm,1.0s						
KMRM	**Mail Ridge**	**82.92**	**47**	*e*P	**P**	**22 30 58.4**	**-0.2**
	comp=Z,76nm,1.0s						
HOPS	**Hopland Field**	**82.95**	**48**	*e*P	**P**	**22 30 57.4**	**-1.2**
	comp=Z,74nm,1.1s						
SAO	**San Andreas Ge**	**83.41**	**51**	*e*P	**P**	**22 31 01.3**	**+0.2**
	comp=Z,54nm,1.3s						
HDA	**Harding Lake**	**83.43**	**19**	P	**P**	**22 31 00.9**	**+0.3**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.47**	**18**	P	**P**	**22 31 02.2**	**+1.5**
	baz=226						
COLA	**College**	**83.47**	**18**	*e*P	**P**	**22 31 03.8**	**+3.1**
	comp=Z,40nm,0.8s						
ILAR	**Eielson Array**	**83.70**	**19**	P	**P**	**22 31 00.6**	**-1.4**
	comp=Z,6.4nm,0.7s,baz=234,slow=5.0,SNR=6.0						
ILB	**Eielson Array**	**83.70**	**19**	*e*P	**P**	**22 31 01.0**	**-1.0**
K02D	**Willamette Mer**	**83.84**	**44**	P	**P**	**22 31 03.3**	**+0.1**
	baz=249						
N02D	**Trinity Center**	**83.90**	**46**	P	**P**	**22 31 03.8**	**+0.2**
	baz=250						
M02C	**Callahan**	**83.94**	**46**	P	**P**	**22 31 04.1**	**+0.3**
	baz=250						
ORV	**Oroville**	**84.29**	**48**	*e*P	**P**	**22 31 06.7**	**+1.2**
	comp=Z,40nm,1.1s						
O03E	**Paynes Creek**	**84.32**	**47**	P	**P**	**22 31 05.3**	**-0.5**
	baz=250						
AFDM	**Forest Hills D**	**84.48**	**49**	*e*P	**P**	**22 31 08.5**	**+2.0**
	comp=Z,65nm,1.1s						
MAW	**Mawson**	**84.52**	**202**	P	P	22 31 12.9	+6.8
	baz=85,SNR=12						
MAW	**Mawson**	**84.52**	**202**	P	**P**	**22 31 06.6**	**+0.5**
	comp=Z,7.5nm,0.8s,baz=90,slow=2.0,SNR=2.6						
BBB	**Bella Bella**	**84.82**	**35**	LR	LR	23 01 41.1	
	comp=Z,21µm,19.9s,baz=270,slow=31						
G03D	**McMinnville, O**	**85.02**	**42**	P	**P**	**22 31 08.2**	**-0.9**
	baz=249						
I04A	**Tendick Farm,**	**85.09**	**44**	P	**P**	**22 31 07.9**	**-1.6**
	baz=250						
J04D	**Umpqua Nationa**	**85.10**	**44**	P	**P**	**22 31 09.6**	**-0.2**
	baz=250						
H04D	**Lebanon**	**85.12**	**43**	P	**P**	**22 31 09.3**	**-0.3**
	baz=249						
ISA	**Isabella, Lake**	**85.35**	**52**	*e*P	**P**	**22 31 13.1**	**+2.0**
	comp=Z,40nm,1.2s						
ISA	**Isabella, Lake**	**85.35**	**52**	P	**P**	**22 31 10.7**	**-0.4**
	baz=253						
EDW2	**Edwards Air Fo**	**85.50**	**53**	P	**P**	**22 31 11.4**	**-0.4**
	baz=253						
OMMB	**Old Mammoth Mi**	**85.53**	**50**	*e*P	**P**	**22 31 14.3**	**+2.1**
	comp=Z,53nm,1.3s						
J05D	**Fort Rock, OR**	**85.72**	**45**	P	**P**	**22 31 12.0**	**-0.8**
	baz=250						
CWC	**Cottonwood Cre**	**85.89**	**52**	P	**P**	**22 31 13.2**	**-0.6**
	baz=253						
E04D	**Cinebar**	**85.95**	**41**	P	**P**	**22 31 13.1**	**-0.6**
	baz=249						
PINE	**Pine Mountain**	**86.09**	**44**	*e*P	**P**	**22 31 14.6**	**-0.1**
	comp=Z,65nm,1.0s						
TIXI	**Tiksi**	**86.15**	**349**	*e*P	**P**	**22 31 14.8**	**+0.8**
	comp=Z,45nm,1.3s						
MPMC	**Manual Prospec**	**86.23**	**52**	P	**P**	**22 31 15.0**	**-0.6**
	baz=253						
PALK	**Pallekele**	**86.30**	**278**	*e*P	**P**	**22 31 15.2**	**-1.0**
NVAR	**Mina Array Bea**	**86.30**	**50**	P	**P**	**22 31 15.1**	**-0.8**
	comp=Z,6.8nm,1.0s,baz=232,slow=6.6,SNR=2.2						
PFO	**Pinyon Flats O**	**86.37**	**55**	*e*P	**P**	**22 31 16.4**	**+0.2**
IKP	**In-Ko-Pah, Jac**	**86.39**	**56**	P	**P**	**22 31 16.1**	**-0.1**
	baz=254						
F05D	**White Salmon**	**86.44**	**42**	P	**P**	**22 31 15.8**	**-0.3**
	baz=250						
GSC	**Goldstone, Bar**	**86.56**	**53**	P	**P**	**22 31 16.7**	**-0.3**
	baz=254						
DLBC	**Dease Lake**	**86.63**	**28**	*e*P	**P**	**22 31 14.8**	**-2.1**
	comp=Z,14nm,1.0s						
A04D	**Lummi Island**	**86.64**	**39**	P	**P**	**22 31 16.8**	**-0.2**
	baz=249						
HEC	**Hector,Ludlow**	**86.80**	**54**	P	**P**	**22 31 17.8**	**-0.4**
	baz=254						
BELC	**Belle Mtn. Jos**	**86.84**	**55**	P	**P**	**22 31 18.3**	**-0.2**
	baz=254						
B06A	**Marblemount**	**87.32**	**40**	*e*P	**P**	**22 31 18.6**	**-1.8**
GLA	**Glamis**	**87.54**	**56**	P	**P**	**22 31 21.8**	**-0.1**
	baz=255						
HAWA	**Hanford**	**87.87**	**42**	*e*P	**P**	**22 31 21.4**	**-1.7**
G08A	**Pilot Rock**	**87.91**	**43**	*e*P	**P**	**22 31 22.2**	**-1.2**
Y12C	**Blythe**	**87.96**	**55**	P	**P**	**22 31 23.1**	**-0.6**
	baz=255						
E08A	**Dider Farm, El**	**88.22**	**42**	*e*P	**P**	**22 31 25.6**	**+0.9**
	comp=Z,66nm,1.3s						
PDMCI	**Parker Dam,Lak**	**88.41**	**55**	P	**P**	**22 31 25.7**	**-0.1**
	baz=256						
214A	**Organ Pipe Nat**	**88.92**	**57**	P	**P**	**22 31 28.4**	**0.0**
	baz=256						
WMQ	**Urumqi**	**88.98**	**315**	P	**P**	**22 31 31.7**	**+3.3**
WMQ				PP	**PP**	**22 34 59.7**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,50nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.9s						
WMQ				LR	LR		
	comp=Z,11µm,19.5s						
WMQ				LR	LR		
	comp=Z,10µm,22.7s						
LCMT	**Little Creek M**	**89.78**	**52**	*e*P	**P**	**22 31 33.0**	**+0.5**
	comp=Z,43nm,1.3s						
SZCU	**Shurtz Canyon**	**90.05**	**52**	*e*P	**P**	**22 31 36.4**	**+2.6**
	comp=Z,66nm,1.3s						
SYO	**Syowa Base**	**91.60**	**197**	⇓*i*P	**P**	**22 31 39.8**	**-0.3**
SYO	**Syowa Base**	**91.60**	**197**	⇑*i*sP	P	22 31 45.4	+5.3
MKAR	**Makanchi Array**	**93.42**	**317**	P	**P**	**22 31 48.6**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=98,slow=4.9,SNR=2.0						
MKAR				PKKPbc	**PKKPdf**	**22 48 54.0**	**-2.2**
	comp=Z,1.1nm,0.9s,baz=270,slow=1.7,SNR=3.8						
MKAR				PKPPKP		22 56 54.1	
	comp=Z,0.5nm,0.7s,baz=283,slow=3.4,SNR=3.6						
ZAA0	**Zalesovo Array**	**93.49**	**324**	*e*P	**P**	**22 31 49.0**	**0.0**
	comp=Z,19nm,1.1s						
ZALV	**Zalesovo Beam**	**93.49**	**324**	P	**P**	**22 31 48.5**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=126,slow=2.5,SNR=2.6						
ZALV				PKKPbc	**PKKPdf**	**22 48 54.4**	**-1.8**
	comp=Z,0.4nm,0.4s,baz=268,slow=5.6,SNR=2.5						
PDAR	**Pinedale Array**	**93.83**	**47**	P	**P**	**22 31 49.6**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=277,slow=3.5,SNR=1.5						
PDAR				LR	LR	23 08 38.4	
	comp=Z,4µm,19.7s,baz=266,slow=32						
MNTX	**Cornudas Mount**	**95.05**	**59**	P	**P**	**22 31 55.9**	**-0.9**
	baz=260						
YKA	**Yellowknife Ar**	**95.19**	**27**	P	**P**	**22 31 53.8**	**-2.8**
	comp=Z,2.0nm,0.8s,baz=256,slow=4.7,SNR=4.4						
TXAR	**Lajitas Array**	**96.12**	**61**	P	**P**	**22 31 59.9**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=245,slow=3.9,SNR=2.3						
KURK	**Kurchatov**	**96.55**	**320**	*e*P	**P**	**22 32 04.3**	**+1.2**
KURK				PKKPbc	**PKKPbc**	**22 48 46.8**	**-2.2**
KURBB	**Kurchatov Arra**	**96.59**	**320**	PKKPbc	PKKPbc	22 48 46.8	-2.1
	comp=Z,0.6nm,0.7s,baz=281,slow=3.9,SNR=3.3						
KSH	**Kashi**	**96.61**	**309**	P	P	22 32 09.4	+5.5
KSH				sP	sP	22 32 15.2	+0.2
KSH				PP	**PP**	**22 36 03.3**	**+4.6**
KSH				SKS	**SKSac**	**22 42 39.5**	**+0.6**
KSH				S	**ScS**	**22 43 27.7**	**+3.9**
KSH				SS	**SS**	**22 50 00.5**	**+2.3**
KSH				pmax	pmax		
	comp=Z,21nm,1.2s						
KSH				LR	LR		
	comp=Z,5µm,14.7s						
KSH				LR	LR		
	comp=Z,6µm,18.5s						
KSH				LR	LR		
	comp=Z,9µm,20.1s						
AAK	**Ala-Archa**	**98.17**	**312**	PKKPbc	PKKPbc	22 48 41.7	-2.8
	comp=Z,2.3nm,1.1s,baz=248,slow=5.4,SNR=2.7						
ARCES	**ARCESS Array B**	**116.37**	**345**	PKP	**PKPdf**	**22 37 15.8**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=93,slow=5.7,SNR=4.5						
LPAZ	**La Paz**	**120.38**	**116**	PKP	**PKPdf**	**22 37 25.5**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=280,slow=4.4,SNR=3.0						
RAYN	**Ar Rayn**	**121.75**	**291**	*e*PKPdf	**PKiKP**	**22 37 28.2**	**-0.3**
FINES	**FINESS Array B**	**121.77**	**338**	PKP	**PKPdf**	**22 37 25.3**	**-1.8**
	comp=Z,1.9nm,0.9s,baz=328,slow=4.9,SNR=3.3						
CPUP	**Villa Florida**	**124.15**	**133**	PKP	**PKPdf**	**22 37 31.6**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=290,slow=6.5,SNR=3.2						
SDV	**Santo Domingo**	**124.77**	**87**	*e*PKPdf	**PKPdf**	**22 37 32.8**	**-1.8**
BOSA	**Boshof**	**124.85**	**223**	PKP	**PKPdf**	**22 37 33.9**	**-0.4**
	comp=Z,3.4nm,0.7s,baz=165,slow=3.7,SNR=3.9						
NB2	**NORSAR Subarra**	**126.74**	**345**	PKPdf	**PKPdf**	**22 37 36.6**	**-0.1**
	comp=Z,9.5nm,1.1s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**126.74**	**345**	PKPdf	**PKPdf**	**22 37 36.6**	**-0.1**
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**126.74**	**345**	PKP	**PKPdf**	**22 37 35.1**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=38,slow=2.3,SNR=2.4						
AKASG	**Malin Array Be**	**126.81**	**327**	PKP	**PKPdf**	**22 37 35.6**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=52,slow=2.6,SNR=3.2						
KMBO	**Kilima Mbogo**	**127.10**	**260**	PKP	**PKiKP**	**22 37 39.2**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=102,slow=3.7,SNR=2.2						
BRTR	**Keskin Array B**	**128.84**	**312**	PKP	**PKiKP**	**22 37 42.0**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=70,slow=1.7,SNR=2.1						
HUMP	**Col San Antoni**	**129.99**	**76**	*e*PKPdf	**PKPdf**	**22 37 42.2**	**-1.9**
LSZ	**Lusaka**	**130.20**	**239**	*e*PKPdf	**PKiKP**	**22 37 49.1**	**+3.5**
BEL	**Belsk**	**130.36**	**332**	*e*PKP	**PKiKP**	**22 37 50.5**	**+5.8**
OJC	**Ojcow**	**131.91**	**331**	*e*PKP	**PKiKP**	**22 37 51.7**	**+3.8**
NIE	**Niedzica**	**132.19**	**330**	*e*PKP	**PKiKP**	**22 37 55.1**	**+6.6**
KSP	**Ksiaz**	**133.07**	**334**	*e*PKP	**PKiKP**	**22 37 53.9**	**+3.7**
MORC	**Moravsky Berou**	**133.27**	**332**	*e*PKP	**PKiKP**	**22 37 55.8**	**+5.1**
DPC	**Dobruska-Polom**	**133.42**	**333**	*e*pPKP	pPKPdf	22 37 56.8	-1.6
UPC	**Upice**	**133.44**	**333**	*e*pPKP	pPKPdf	22 37 57.1	-1.3
VYHS	**Vyhne**	**133.53**	**330**	*e*	**PKiKP**	**22 37 57.6**	**+6.4**
VYHS				*e*L	L	23 34 10.5	
VRAC	**Vranov**	**134.04**	**332**	*e*PKP	**PKiKP**	**22 37 57.4**	**+5.2**
VRAC	**Vranov**	**134.04**	**332**	PKP	**PKPdf**	**22 37 50.1**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=72,slow=4.1,SNR=2.1						
PVCC	**Panska Ves**	**134.05**	**334**	*e*pPKP	pPKPdf	22 37 55.7	-3.8
BRG	**Berggiesshubel**	**134.05**	**335**	*e*PKP	**PKiKP**	**22 37 56.6**	**+4.5**
	comp=Z,37nm,1.4s						
	comp=N,4µm,15.7s						
	comp=E,5µm,18.2s						
	comp=Z,9µm,18.1s						
CLL	**Collm**	**134.10**	**336**	*e*PKPdf	**PKPdf**	**22 37 50.0**	**-0.9**
CLL				⇑*i*PKPdfmax		22 37 58.0	
	comp=Z,30nm,1.4s						
CLL				*e*PP	**PP**	**22 40 18.0**	**-3.1**
CLL				*e*PKSdf	PKSdf	22 41 28.0	+0.9
CLL				*e*PPPrev		22 53 48.0	
CLL				*e*SS	SS	22 58 06.0	-1.3
CLL				*e*SSS	SSS	23 03 12.0	
CLL				*e*SSSS		23 06 48.0	
CLL				LmV		23 40 00.0	
	comp=Z,8µm,19.1s						
KRUC	**Moravsky**	**134.31**	**332**	*e*PKP	**PKiKP**	**22 37 57.6**	**+4.9**
PRU	**Pruhonice**	**134.46**	**334**	*e*PKP	**PKiKP**	**22 37 55.6**	**+2.6**
PRU				*e*pPKP	**pPKPdf**	**22 37 59.0**	**-1.3**
CONA	**Conrad Observa**	**135.36**	**331**	pPKiKP	**PKiKP**	**22 37 58.5**	**+3.4**
	comp=Z,9.9nm,1.0s						
KHC	**Kasperske Hory**	**135.52**	**334**	*e*PKP	**PKiKP**	**22 37 54.4**	**-0.9**
KHC				*e*pPKP	**pPKPdf**	**22 38 00.6**	**-1.7**
GERES	**GERESS Array B**	**135.68**	**333**	PKP	**PKPdf**	**22 37 53.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=66,slow=2.5,SNR=2.0						
ARSA	**Arzberg**	**136.00**	**331**	pPKiKP	PKiKP	22 38 05.1	+8.8
	comp=Z,4.1nm,0.9s						
MOA	**Molln**	**136.16**	**332**	*e*pPKiKP	**PKiKP**	**22 38 00.8**	**+4.3**
	comp=Z,4.6nm,0.9s						
SOKA	**Soboth**	**136.65**	**330**	pPKiKP	**PKiKP**	**22 38 00.5**	**+2.9**
	comp=Z,8.2nm,0.9s						
BEBN	**Eben Emael**	**137.14**	**341**	PKiKP	**PKiKP**	**22 38 02.2**	**+3.8**
KBA	**Koelnbreinsper**	**137.16**	**332**	pPKPdf	**PKiKP**	**22 38 00.0**	**+1.2**
	comp=Z,11nm,0.8s						
MEM	**Membach**	**137.20**	**341**	PKiKP	**PKiKP**	**22 38 04.8**	**+6.2**
MYKA	**Terra Mystica**	**137.35**	**331**	PKiKP	**PKiKP**	**22 37 58.3**	**-0.8**
	comp=Z,6.7nm,1.0s						
BDFB	**Brasilia**	**137.48**	**128**	PKP	**PKPdf**	**22 37 57.3**	**-1.1**
	comp=Z,4.1nm,0.9s,baz=275,slow=1.1,SNR=2.0						
WATA	**Walderalm**	**137.76**	**334**	*e*pPKiKP	**PKiKP**	**22 38 02.4**	**+2.4**
	comp=Z,4.3nm,0.7s						
ABTA	**Abfaltersbach**	**137.78**	**332**	PKiKP	**PKiKP**	**22 37 59.5**	**-0.5**
	comp=Z,13nm,0.9s						
WTTA	**Wattenberg**	**137.78**	**333**	pPKiKP	**PKiKP**	**22 38 02.4**	**+2.3**
	comp=Z,19nm,1.4s						
MOTA	**Moosalm**	**137.95**	**334**	*e*pPKiKP	**PKiKP**	**22 38 03.9**	**+3.5**
	comp=Z,8.9nm,0.9s						
SQTA	**Sankt Quirin**	**138.00**	**334**	*e*pPKiKP	**PKiKP**	**22 38 03.6**	**+3.1**
	comp=Z,8.2nm,0.9s						
DOU	**Dourbes**	**138.09**	**342**	PKiKP	**PKiKP**	**22 38 06.7**	**+6.4**
FETA	**Feichten**	**138.37**	**334**	pPKiKP	**PKiKP**	**22 38 02.8**	**+1.5**
	comp=Z,18nm,1.1s						
DAVA	**Damuels**	**138.52**	**335**	pPKiKP	**PKiKP**	**22 38 05.8**	**+4.2**
	comp=Z,6.8nm,0.9s						
KEST	**Kesra**	**147.34**	**322**	PKPbc	**PKPbc**	**22 38 16.6**	**-1.1**
	comp=Z,16nm,0.9s,baz=74,slow=6.1,SNR=1.7						
ES19	**SONSECA Array**	**150.04**	**343**	*e*PKPbc	**PKPbc**	**22 38 24.6**	**+0.1**
ESDC	**Sonseca Array**	**150.09**	**344**	PKPbc	**PKPbc**	**22 38 23.8**	**-0.8**
	comp=Z,3.4nm,0.9s,baz=24,slow=1.2,SNR=2.7						
PAB	**San Pablo**	**150.31**	**344**	*e*PKPbc	**PKPbc**	**22 38 24.7**	**-0.4**
PAB				*e*PKPab	**PKPab**	**22 38 29.7**	**-1.6**
TORD	**Torodi Ar. Bea**	**164.01**	**279**	PKP	**PKPdf**	**22 38 37.4**	**-0.4**
	comp=Z,7.5nm,1.0s,baz=74,slow=3.1,SNR=2.1						
TORD				PKPab	**PKPab**	**22 39 30.6**	**-0.4**
	comp=Z,6.5nm,1.0s,baz=93,slow=2.3,SNR=2.5						
DBIC	**Dimbokro**	**169.46**	**246**	PKP	**PKPdf**	**22 38 41.6**	**-0.3**
	comp=Z,9.9nm,1.1s,baz=117,slow=2.3,SNR=2.2						

MEX 01 22:20:22.8±0.4, 16°.29N×98°.25W, h13^{km}±2^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.15**	**50**	*i* P	Pg	22 20 25.9	-0.7
PNIG				*i* S	Sg	22 20 28.6	-0.5

IDC 01 22:24:01.9±1.4, 10°.98S×165°.41E, h0^{km}, mb4.3/5, mb1 4.7/7, mb1mx4.1/42, mbtmp4.5/7, ML4.7/2, Error ellipse: s-maj=40.8km s-min=25.1km az=144.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.60**	**285**	Pn	Pn	22 25 27.8	+1.4
	45nm,0.3s,baz=180,slow=5.1,SNR=4.6						
DZM	**Mont Dzumac**	**11.07**	**175**	Pn	Pn	22 26 42.7	+1.0
	2.3nm,0.3s,baz=306,slow=20,SNR=6.6						
CTA	**Charters Tower**	**20.54**	**242**	P	P	22 28 43.1	+0.9
	30nm,0.9s,baz=80,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**31.20**	**250**	P	P	22 30 22.5	-0.6
	3.6nm,1.0s,baz=80,slow=9.2,SNR=3.0						
ASAR	**Alice Springs**	**32.53**	**243**	P	P	22 30 34.1	-0.7
	12nm,1.0s,baz=71,slow=9.4,SNR=11						
ILAR	**Eielson Array**	**83.56**	**19**	P	P	22 36 31.5	0.0
	0.7nm,0.7s,baz=233,slow=5.4,SNR=3.9						
NVAR	**Mina Array Bea**	**86.23**	**50**	P	P	22 36 46.0	+0.1
	2.0nm,1.0s,baz=236,slow=6.4,SNR=3.5						

TAP 01 22:25:58.3, 23°.15N×120°.97E, h6^{km}, ML2.0, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.06**	**46**	⇑*i*P	Pg	22 26 00.4	+0.4
	baz=51						
ELDTW				S	Sg	22 26 01.8	+0.6
	baz=51						
STYT	**Tauyuan**	**0.20**	**275**	*i* P	Pg	22 26 02.5	+0.4
	baz=276						
STYT				*i* S	Sg	22 26 05.4	+0.6
	baz=276						
SLGT	**Liugui**	**0.33**	**243**	*i* P	Pg	22 26 05.5	+0.7
	baz=243						
SLGT				S	Sg	22 26 09.9	+0.7
	baz=243						

TWG	Pinlang baz=154	0.34	163	*i* P	Pb	22 26 05.9	-0.8
TWG	baz=154			S	Sg	22 26 10.7	+1.4
WTP	Ta-pu baz=287	0.34	287	*i* P	Pb	22 26 06.0	-0.8
WTP	baz=287			S	Sb	22 26 11.7	-0.8
TWGBT	Beinan baz=154	0.34	162	*i* P	Pb	22 26 05.9	-0.9
TWGBT	baz=154			S	Sg	22 26 10.5	+1.0
TPUB	Ta-pu	0.35	296	*e*P	Pb	22 26 06.2	-0.7
SGST	Jiashian baz=256	0.36	260	P	Pb	22 26 06.5	-0.6
SGST	baz=256			S	Sb	22 26 12.5	-0.5
TWF1	Yuli baz=56	0.37	56	*i* P	Pg	22 26 06.1	+0.7
TWF1	baz=56			*i* S	Sg	22 26 10.8	+0.5
YULB	Yu-li	0.39	51	*e*P	Pg	22 26 06.5	+0.6
YULB	Yu-li baz=50	0.39	51	*i* P	Pg	22 26 06.3	+0.4
YULB	baz=50			S	Sg	22 26 11.2	+0.2
ALS	Alishan baz=339	0.39	338	*i* P	Pg	22 26 06.6	+0.6
ALS	baz=339			S	Sg	22 26 12.6	+1.4
CHN4	Tsaushan baz=309	0.40	301	P	Pb	22 26 07.4	-0.4
CHN4	baz=309			*i* S	Sb	22 26 13.5	-0.7
CHN1	Nanshi baz=277	0.41	276	P	Pb	22 26 07.7	-0.2
CHN1	baz=277			S	Sb	22 26 14.2	-0.2
SNST	Tainan City baz=277	0.44	280	P	Pb	22 26 08.6	+0.2
SNST	baz=277			*e*S	Sb	22 26 15.4	+0.2
TWK	Hsinying baz=286	0.46	285	P	Pb	22 26 08.7	0.0
TWK	baz=286			*e*S	Sb	22 26 14.6	-1.2
EHY	Hungye baz=42	0.48	42	P	Pg	22 26 08.1	+0.5
EHY	baz=42			S	Sg	22 26 14.1	+0.1
SSD	Sandimen baz=224	0.50	218	*i* P	Pg	22 26 08.2	+0.2
SSD	baz=224			*e*S	Sb	22 26 15.9	-1.3
CHN5	Tsauling baz=329	0.52	329	P	Pb	22 26 09.4	-0.5
CHN5	baz=329			S	Sb	22 26 17.0	-0.8
HGSD	Ruisui baz=42	0.54	50	P	Pb	22 26 10.0	-0.2
HGSD	baz=42			S	Sg	22 26 16.9	+1.1
ECL	Taimali baz=180	0.55	181	P	Pg	22 26 09.2	+0.4
ECL	baz=180			*e*S	Sg	22 26 16.7	+0.8
WHYT	Xinyi Township baz=354	0.56	349	*e*P	Pb	22 26 10.2	-0.3
WHYT	baz=354			S	Sg	22 26 17.2	+0.9
MASBT	Mashibuluo baz=211	0.61	210	P	Pg	22 26 10.0	-0.1
MASBT	baz=211			*e*S	Sb	22 26 19.7	-0.6
VWDT	VWDT baz=12	0.62	15	P	Pg	22 26 10.6	+0.3
VWDT	baz=12			S	Sg	22 26 19.0	+0.5
SSLB	Suanglung	0.64	359	*e*P	Pg	22 26 10.9	+0.3
SSLB	Suanglung baz=354	0.64	359	P	Pg	22 26 10.7	+0.1
SSLB	baz=354			S	Sg	22 26 18.4	-0.5
EGFH	Guangfu baz=38	0.67	39	*e*P	Pb	22 26 11.9	-0.4
EGFH	baz=38			*e*S	Sg	22 26 20.7	+0.8
SMLT	Sun Moon Lake baz=6.0	0.74	355	*e*P	Pg	22 26 12.9	+0.5
SMLT	baz=6.0			*e*S	Sb	22 26 24.2	+0.3
TYC	Yuchr baz=3.0	0.76	352	P	Pb	22 26 14.1	+0.2
TYC	baz=3.0			*e*S	Sb	22 26 25.6	+1.0
EAST	Anshuo baz=187	0.77	188	*e*P	Pg	22 26 13.5	+0.5
SCZT	Fangliau baz=194	0.83	203	*e*P	Pg	22 26 14.4	+0.1
CHGB	Renai baz=19	0.93	12	P	Pg	22 26 16.0	-0.2
CHGB	baz=19			*e*S	Sb	22 26 29.6	0.0
WHF	Hehuan Shan baz=22	1.03	15	*e*S	Sb	22 26 33.6	+0.9
TDCB	Techi baz=15	1.12	9	*e*P	Pn	22 26 20.8	+0.2
TDCB	baz=15			*e*S	Sb	22 26 35.4	+0.5
TWT	Tachien baz=16	1.12	10	*e*P	Pn	22 26 21.1	+0.5
TWT	baz=16			*e*S	Sb	22 26 35.7	+0.7
WHP	Taichung City baz=6.0	1.13	359	P	Pn	22 26 21.4	+0.7
WHP	baz=6.0			*e*S	Sn	22 26 37.1	+0.6
NACB	Ninganchiao baz=44	1.17	29	*e*P	Pg	22 26 20.1	-0.7
NACB	baz=44			*e*S	Sb	22 26 36.4	0.0
NNSB	Datong baz=25	1.33	16	*e*P	Pb	22 26 23.6	-0.1
NNSB	baz=25			S	Sn	22 26 42.5	+0.9
NNS	Nan Shan baz=2.0	1.34	16	*e*P	Pn	22 26 23.6	0.0
YHNB	Yeheng baz=11	1.56	14	*e*P	Pb	22 26 27.7	+0.1
YHNB	baz=11			*e*S	Sg	22 26 48.9	+0.4

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*ISCJB **01** 22:26:28.8±0.3, 11°.22S±0°.05×165°.34E±0°.06, h10^{km}, mb4.5/42, MS5.7/1, Error ellipse: s-maj=7.9km s-min=6.5km az=166.4*

*IDC **01** 22:26:28.5±0.5, 11°.13S×165°.40E, h0^{km}, mb4.3/20, mb1 4.5/22, mb1mx4.3/47, mbtmp4.4/22, ML5.0/2, MS5.7/1, Ms1 5.7/1, ms1mx4.6/48, Error ellipse: s-maj=19.0km s-min=14.7km az=121.0*

*NEIC **01** 22:26:30.1±0.2, 11°.09S×165°.37E, h10^{km}, mb4.8/18, Error ellipse: s-maj=6.8km s-min=6.0km az=99.0*

*BJI **01** 22:26:30.5, 11°.14S×165°.13E, h8^{km}, mb4.7/21, Ms5.2/1*

ISC 01 22:26:30.3±0.4**, 11°.19S**±0°.07×**165°.38E**±0°.08**, h10^{km}, n72, σ1^{s}.69**/70**, mb4.7**/42**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.63	288	Pn	Pn	22 27 50.3	-3.7
HNR				*e*S	Sn	22 28 46.9	-12
HNR	Honiara 33nm,0.3s,baz=90,slow=2.0,SNR=4.0	5.63	288	Pn	Pn	22 27 54.3	+0.3
HNR	39nm,0.3s,baz=164,slow=20,SNR=3.0			Sn	Sn	22 28 56.2	-2.6
MARNC	Mare, Loyalty	10.55	166	*e*Pn	Pn	22 29 02.9	+1.3
DZM	Mont Dzumac 16nm,0.3s,baz=5.8,slow=12,SNR=34	10.87	175	Pn	Pn	22 29 07.1	+1.0
PINNC	Pines Island,	11.53	170	*e*Pn	Pn	22 29 16.3	+1.2
EIDS	Eidsvold 8.5nm,0.7s	19.55	222	*e*P	P	22 30 58.6	+0.3
MANU	Manus Island 192nm,1.0s	20.05	296	*e*P	Pn	22 31 05.4	-0.3
CTA	Charters Tower 22nm,0.9s,baz=66,slow=13,SNR=11	20.42	242	P	Pn	22 31 09.5	-0.4
CTAO	Charters Tower 31nm,0.9s	20.42	242	*e*P	Pn	22 31 10.1	+0.2
COEN	Coen 35nm,0.8s	21.85	260	*e*P	P	22 31 24.4	+1.1
URZ	Urewera 16nm,1.0s,baz=243,slow=2.3,SNR=2.6	28.93	161	P	P	22 32 29.7	0.0
H11S2	WAKE ISLAND Hy baz=182,slow=74,SNR=4.1	29.52	3	T	T	23 04 04.2	
H11S3	WAKE ISLAND Hy baz=182	29.52	3	T	T	23 04 00.4	
H11S1	WAKE ISLAND Hy baz=182,slow=74	29.53	3	T	T	23 04 05.6	
BKZ	Black Stump Fm 15nm,0.8s	29.57	162	*e*P	P	22 32 37.0	+1.6
STKA	Stephens Creek 8.7nm,0.8s,baz=48,slow=8.7,SNR=12	30.10	223	P	P	22 32 40.2	+0.1
BFZ	Birch Farm 30nm,0.9s	30.91	164	*e*P	P	22 32 48.0	+0.9
WB2	Warramunga Arr 13nm,0.9s	31.09	250	*e*P	P	22 32 48.2	-0.8
WRAB	Tennant Creek	31.09	250	*e*P	P	22 32 49.0	-0.1
WRA	Warramunga Arr 14nm,0.9s,baz=79,slow=9.1,SNR=17	31.10	250	P	P	22 32 48.9	-0.3
WRA	2.2nm,0.8s,baz=78,slow=3.5,SNR=5.1			PcP	PcP	22 35 45.6	+0.9
THZ	Tophouse 19nm,0.9s	31.16	169	*e*P	P	22 32 50.4	+0.9
ASAR	Alice Springs 4.1nm,0.7s,baz=72,slow=9.7,SNR=12	32.41	243	P	P	22 32 59.8	-0.9
ASAR	2.1nm,0.8s,baz=90,slow=2.6,SNR=6.6			PcP	PcP	22 35 48.8	+0.6
RPZ	Rata Peaks 11nm,0.8s,baz=258,slow=2.3,SNR=4.9	32.78	172	P	P	22 33 04.0	+0.4
BBOO	Buckleboo 15nm,0.9s	34.48	227	*e*P	P	22 33 17.9	-0.6
BATI	Baumata comp=Z,12μm,21.1s,baz=96,slow=36	40.98	267	LR	LR	22 51 26.4	
MBWA	Marble Bar 16nm,1.0s	44.82	251	*e*P	P	22 34 45.0	+0.1
NWAO	Narrogin (SRO) 28nm,1.3s	49.09	236	*e*P	P	22 35 16.3	-1.8
MJAR	Matsushiro Arr 2.5nm,1.0s,baz=172,slow=8.1,SNR=3.4	53.93	333	P	P	22 35 53.5	-0.7
NJ2	Nanjing	61.87	316	*e*P	P	22 36 51.8	+1.8
NJ2	comp=Z,14nm,0.5s			pmax	pmax		
PETK	Petropavlovsk- 2.5nm,0.8s,baz=163,slow=5.3,SNR=2.4	64.37	355	P	P	22 37 05.2	-1.1
VNDA	Vanda 1.2nm,1.0s,baz=355,slow=7.9,SNR=2.9	66.35	181	P	P	22 37 18.3	-0.5
GYA	Guiyang	68.20	304	*e*P	P	22 37 34.0	+2.5
GYA	comp=Z,10.0nm,1.0s			pmax	pmax		
XAN	Xi'an	69.95	313	P	P	22 37 43.8	+1.6
XAN	comp=Z,4.0nm,1.0s			pmax	pmax		
KMI	Kunming	70.89	302	P	P	22 37 50.7	+2.4
KMI	comp=Z,10.0nm,1.2s			pmax	pmax		
HHC	Hu-ho-hao-te	71.71	320	*e*P	P	22 37 53.9	+1.1
HHC				sP	pwP	22 38 02.3	+2.5
HHC				PP	PP	22 40 38.8	+6.6
HHC				S	S	22 47 14.2	+1.3
HHC	comp=Z,7.0nm,0.8s			pmax	pmax		
CMAR	Chiang Mai Arr 1.1nm,0.8s,baz=121,slow=3.5,SNR=5.3	71.84	294	P	P	22 37 53.9	-0.1
CHTO	Chiang Mai 17nm,1.7s	71.96	294	*e*P	P	22 37 54.8	+0.2
CD2	Chengdu	72.41	308	*e*P	P	22 37 56.5	-0.6
LZH	Lanzhou	74.59	312	*e*P	P	22 38 13.2	+3.2
LZH				pP	pwP	22 38 17.8	-0.6
LZH				sP	PcP	22 38 21.1	-3.3
LZH	comp=Z,16nm,1.2s			pmax	pmax		
SONM	Songino Array 0.6nm,0.8s,baz=132,slow=7.0,SNR=3.0	78.57	324	P	P	22 38 32.7	+0.4
QSPA	South Pole Qui 7.1nm,0.8s	78.82	180	*e*P	P	22 38 34.1	+0.7
GTA	Gaotai	78.90	314	*e*P	P	22 38 33.2	-1.1
GTA				pP	pwP	22 38 40.2	-2.4
GTA				sP	PcP	22 38 43.9	+1.0
GTA	comp=Z,2.0nm,1.1s			pmax	pmax		
COLA	College 1.5nm,0.6s	83.53	18	*e*P	P	22 38 56.0	-2.1
ILAR	Eielson Array 1.2nm,0.7s,baz=234,slow=5.2,SNR=12	83.76	19	P	P	22 38 58.9	-0.5
YBH	Yreka Blue Hor 2.1nm,0.7s,baz=244,slow=4.9,SNR=7.1	84.24	46	P	P	22 39 02.5	+0.1
ISA	Isabella, Lake 2.2nm,0.7s	85.44	52	*e*P	P	22 39 08.4	-0.2
NVAR	Mina Array Bea 1.7nm,0.7s,baz=231,slow=8.8,SNR=9.3	86.38	50	P	P	22 39 13.6	+0.2
PFO	Pinyon Flats O 1.7nm,0.6s,baz=323,slow=13,SNR=2.6	86.45	55	P	P	22 39 14.1	+0.4
WMQ	Urumqi	88.94	315	*e*P	P	22 39 26.8	+1.4
WMQ	comp=Z,4.0nm,0.7s			pmax	pmax		
U15A	North Rim 5.5nm,0.8s	90.47	53	*e*P	P	22 39 33.4	+0.4
X16A	Lo Mia Camp, P 2.7nm,0.8s	90.69	55	*e*P	P	22 39 32.1	-1.8
MTPU	Mount Pierson 2.9nm,0.8s	90.93	52	*e*P	P	22 39 36.4	+1.3
MSU	Marysvale	91.04	51	*e*P	P	22 39 35.0	-0.5
SYO	Syowa Base	91.55	197	⇑*e*X	P	22 39 34.6	-2.3
SYO	Syowa Base	91.55	197	⇓*e*X	P	22 39 45.1	+8.2
MK01	Makanchi Array	93.37	317	*e*P	P	22 39 46.1	+0.3
MK31	Makanchi Array	93.38	317	*e*P	P	22 39 46.0	+0.1
MKAR	Makanchi Array 2.0nm,0.9s,baz=102,slow=6.2,SNR=8.5	93.38	317	P	P	22 39 45.6	-0.2
ZALV	Zalesovo Beam 0.8nm,0.8s,baz=96,slow=3.0,SNR=3.6	93.46	324	P	P	22 39 45.1	-0.9
PDAR	Pinedale Array 0.5nm,0.9s,baz=263,slow=4.5,SNR=2.4	93.91	47	P	P	22 39 48.1	-0.5
YKA	Yellowknife Ar 0.2nm,0.6s,baz=253,slow=4.9,SNR=2.6	95.26	27	P	P	22 39 52.4	-1.6
TXAR	Lajitas Array 0.3nm,0.6s,baz=211,slow=4.4,SNR=3.9	96.21	61	P	P	22 39 58.7	-0.6
KSH	Kashi	96.57	309	P	P	22 40 04.2	+3.5
KSH				pP	pwP	22 40 06.6	-2.5
KSH				PP	PP	22 44 00.3	+5.1
ARCES	ARCESS Array B 3.3nm,0.8s,baz=54,slow=1.3,SNR=11	116.38	345	PKP	PKPdf	22 45 13.5	-0.2
FINES	FINESS Array B 1.8nm,0.8s,baz=34,slow=0.7,SNR=4.3	121.77	338	PKP	PKPdf	22 45 23.2	-1.0
BOSA	Boshof 2.7nm,0.8s,baz=146,slow=7.3,SNR=2.3	124.77	223	PKP	PKPdf	22 45 31.2	-0.1
SDV	Santo Domingo 2.3nm,0.5s,baz=318,slow=5.2,SNR=3.5	124.86	87	PKP	PKPdf	22 45 31.0	-0.9
AKASG	Malin Array Be 0.2nm,0.3s,baz=63,slow=2.1,SNR=3.4	126.78	327	PKP	PKPdf	22 45 33.8	-0.4
LANS	Liptovska Anna	132.76	330	*e*PDIF	Pdif	22 42 38.3	-3.2
GERES	GERESS Array B 0.4nm,0.5s,baz=20,slow=2.3,SNR=4.2	135.67	333	PKP	PKPdf	22 45 49.9	-1.4
KEST	Kesra 5.8nm,0.8s,baz=336,slow=3.8,SNR=7.8	147.31	322	PKPbc	PKPbc	22 46 13.3	-1.4
TORD	Torodi Ar. Bea 2.6nm,1.0s,baz=333,slow=1.6,SNR=4.0	163.94	279	PKP	PKPdf	22 46 34.8	-0.1

IDC 01 22:28:35.6±1.3**, 11°.18S**×**165°.34E, h0^{km}, mb4.1**/6**, mb1 4.3**/7**, mb1mx3.8**/49**, mbtmp4.2**/7**, ML4.3**/1**, Error ellipse: s-maj=43.8km s-min=24.9km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac 2.5nm,0.3s,baz=61,slow=18,SNR=4.8	10.88	175	Pn	Pn	22 31 14.9	+2.1
STKA	Stephens Creek 2.0nm,0.7s,baz=22,slow=11,SNR=3.0	30.07	223	P	P	22 34 46.9	+0.1
WRA	Warramunga Arr 5.1nm,1.0s,baz=80,slow=9.5,SNR=3.0	31.06	250	P	P	22 34 55.0	-0.7
ASAR	Alice Springs 1.3nm,0.6s,baz=64,slow=10.0,SNR=3.5	32.38	243	P	P	22 35 06.2	-1.0
CMAR	Chiang Mai Arr 0.4nm,0.3s,baz=126,slow=4.6,SNR=3.3	71.80	294	P	P	22 40 02.2	+1.6
ILAR	Eielson Array 0.6nm,0.6s,baz=233,slow=5.2,SNR=3.6	83.76	19	P	P	22 41 05.9	-0.4
MKAR	Makanchi Array 0.9nm,0.8s,baz=99,slow=7.5,SNR=3.9	93.34	317	P	P	22 41 53.1	+0.4
ARCES	ARCESS Array B 1.1nm,0.7s,baz=70,slow=1.1,SNR=4.7	116.36	345	PKP	PKiKP	22 47 20.4	-0.3
BRTR	Keskin Array B 0.9nm,1.0s,baz=339,slow=3.6,SNR=3.2	128.76	312	PKP	PKPdf	22 47 43.9	-1.7

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*IDC **01** 22:31:28.4±1.2, 11°.12S×165°.53E, h0^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.7/48, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=40.2km s-min=26.0km az=123.0*

*ISCJB **01** 22:31:31.2±0.8, 11°.2S±0°.1×165°.5E±0°.2, h30^{km}, mb3.8/7, Error ellipse: s-maj=25.5km s-min=16.4km az=5.4*

ISC 01 22:31:33.0±0.9**, 11°.2S**±0°.1×**165°.5E**±0°.2**, h30^{km}, n9, σ0^{s}.60**/10**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.0nm,0.3s,baz=92,slow=17,SNR=5.4	10.90	175	Pn	Pn	22 34 07.2	+0.2
WRA	Warramunga Arr 1.1nm,0.6s,baz=82,slow=8.9,SNR=4.8	31.24	250	P	P	22 37 50.2	0.0
WRA	0.5nm,0.7s,baz=91,slow=2.0,SNR=2.9			PcP	PcP	22 40 43.3	-1.3
ASAR	Alice Springs 0.5nm,0.6s,baz=64,slow=10,SNR=4.8	32.55	243	P	P	22 38 01.6	-0.1
MJAR	Matsushiro Arr 3.2nm,1.1s,baz=171,slow=8.6,SNR=3.2	53.96	333	P	P	22 40 54.1	-0.1
SONM	Songino Array 0.2nm,0.6s,baz=142,slow=5.4,SNR=2.0	78.62	324	P	P	22 43 32.2	+0.1
ILAR	Eielson Array 0.4nm,0.7s,baz=225,slow=6.2,SNR=5.0	83.68	19	P	P	22 43 58.3	-0.2
NVAR	Mina Array Bea 0.2nm,0.5s,baz=258,slow=3.6,SNR=2.3	86.26	50	P	P	22 44 12.3	-0.1
MKAR	Makanchi Array 0.9nm,0.9s,baz=100,slow=5.4,SNR=5.1	93.44	317	P	P	22 44 46.3	+0.6
ARCES	ARCESS Array B 8.1nm,1.2s,baz=29,slow=2.1,SNR=5.0	116.38	345	PKP	PKiKP	22 50 13.9	+0.7

IDC 01 22:32:53.7±1.7**, 11°.02S**×**165°.02E, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.5**/48**, mbtmp3.7**/4**, ML3.9**/1**, Error ellipse: s-maj=55.9km s-min=34.1km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.9nm,0.3s,baz=36,slow=17,SNR=1.9	11.07	173	Pn	Pn	22 35 33.6	0.0
WRA	Warramunga Arr 1.6nm,1.1s,baz=83,slow=10,SNR=3.8	30.82	250	P	P	22 39 11.2	-0.5
ASAR	Alice Springs 0.3nm,0.4s,baz=66,slow=10,SNR=1.8	32.17	243	P	P	22 39 24.1	+0.6
ILAR	Eielson Array 0.3nm,0.7s,baz=226,slow=6.2,SNR=1.5	83.72	19	P	P	22 45 24.4	+0.2
ARCES	ARCESS Array B 1.6nm,0.9s,baz=61,slow=5.6,SNR=1.2	116.13	345	PKP	PKiKP	22 51 38.0	-0.4

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*SOME **01** 22:35:15.8, 42°.48N×79°.67E, h20^{km}*

*NNC **01** 22:35:15.6±1.2, 42°.54N×79°.61E, h0^{km}, mb3.1, mpv3.0, Error ellipse: s-maj=8.1km s-min=4.0km az=153.0*

*KRNET **01** 22:35:16.9±0.1, 42°.58N×79°.63E, h17^{km}, mb2.8*

ISC 01 22:35:16.9±1.1**, 42°.58N**±0°.04×**79°.63E**±0°.04**, h10^{km}, n51, σ1^{s}.03**/91**, 6C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode 34nm,0.1s	0.59	348	P	Pg	22 35 28.6	+0.2
SHLS	184nm,0.2s			S	Sb	22 35 37.9	0.0
SHLS	Shalkode baz=18	0.59	348	*e*P	Pg	22 35 28.6	+0.2
SHLS	baz=18			*e*S	Sg	22 35 36.9	+0.8
SHLS	Shalkode 34nm,0.1s	0.59	348	*e*P	Pg	22 35 28.6	+0.2
SHLS	184nm,0.2s			*e*S	Sb	22 35 37.9	0.0
UZB	Uzynbulak 7.2nm,0.2s	0.72	322	P	Pg	22 35 29.9	-1.0
UZB	17nm,0.2s			S	Sg	22 35 40.1	-0.2
UZB	Uzynbulak baz=22	0.72	322	*e*P	Pg	22 35 29.9	-1.0
UZB	baz=22			*e*S	Sg	22 35 40.1	-0.2
UZB	Uzynbulak 7.2nm,0.2s	0.72	322	*e*P	Pg	22 35 29.9	-1.0
UZB	17nm,0.2s			*e*S	Sg	22 35 40.1	-0.2
PDGK	Podgornoye 4.1nm,0.1s	0.75	352	P	Pg	22 35 30.6	-0.9
PDGK	5.8nm,0.2s			S	Sg	22 35 41.5	+0.1
PDGK	Podgornoye baz=52	0.75	352	⇑*i*P	Pg	22 35 30.6	-0.9
PDGK	baz=52			⇑*i*S	Sg	22 35 41.3	-0.1
PRZ	Przheval'sk baz=64	0.91	264	⇓*i*P	Pg	22 35 33.4	-1.1
PRZ	baz=64			⇓*i*S	Sg	22 35 45.6	-0.8
KTMS	Ketmen 2.8nm,0.1s	1.01	31	P	Pg	22 35 35.3	-1.1
KTMS	4.0nm,0.2s			S	Sg	22 35 49.0	-0.6
KTMS	Ketmen baz=30	1.01	31	*e*P	Pg	22 35 35.3	-1.1
KTMS	baz=30			*e*S	Sg	22 35 49.0	-0.6
KTMS	Ketmen 2.8nm,0.1s	1.01	31	*e*P	Pg	22 35 35.3	-1.1
KTMS	4.0nm,0.2s			*e*S	Sg	22 35 49.0	-0.6
SATY	Saty 1.6nm,0.1s	1.02	298	P	Pg	22 35 35.2	-1.3
SATY	26nm,0.1s			S	Sg	22 35 49.1	-0.7
SATY	Saty 1.6nm,0.1s	1.02	298	*e*P	Pg	22 35 35.2	-1.3
SATY	26nm,0.1s			*e*S	Sg	22 35 49.1	-0.7
KURS	Kuram 0.6nm,0.1s	1.40	311	P	Pn	22 35 42.2	-0.4
KURS	2.6nm,0.3s			S	Sb	22 36 01.1	-0.1
KURS	Kuram baz=11	1.40	311	*e*P	Pn	22 35 42.2	-0.4
KURS	baz=11			*e*S	Sb	22 36 01.1	-0.1
KURS	Kuram 0.6nm,0.1s	1.40	311	*e*P	Pn	22 35 42.2	-0.4
KURS	2.6nm,0.3s			*e*S	Sb	22 36 01.1	-0.1
MNBS	Baschi 4.8nm,0.2s	1.74	330	P	Pb	22 35 48.3	-0.8
MNBS	11nm,0.4s			S	Sg	22 36 12.0	-1.0
MNBS	Baschi 4.8nm,0.2s	1.74	330	*e*P	Pb	22 35 48.3	-0.8
MNBS	11nm,0.4s			*e*S	Sg	22 36 12.0	-1.0
DJR	Jarkent 0.8nm,0.1s	1.75	4	P	Pb	22 35 48.9	-0.4
DJR	4.2nm,0.3s			S	Sg	22 36 12.7	-0.6
DJR	Jarkent 0.8nm,0.1s	1.75	4	*e*P	Pb	22 35 48.9	-0.4
DJR	4.2nm,0.3s			*e*S	Sg	22 36 12.7	-0.6
KDJ	Kajisay baz=57	1.87	257	⇓*i*P	Pb	22 35 50.7	-0.6
KDJ	baz=57			⇓*i*S	Sb	22 36 15.6	+0.8
KOTS	Kotyrbulak 2.3nm,0.2s	1.96	290	Pg	Pb	22 35 52.1	-0.7
KOTS	22nm,0.3s			Lg	Lg	22 36 18.5	
KOTS	Kotyrbulak baz=90	1.96	290	*e*P	Pb	22 35 52.1	-0.7
KOTS	baz=90			*e*S	Sb	22 36 18.5	+1.1
KOTS	Kotyrbulak 2.3nm,0.2s	1.96	290	*e*P	Pb	22 35 52.1	-0.7
KOTS	22nm,0.3s			*e*S	Sb	22 36 18.5	+1.1
TNSS	Tian-Shan 2.9nm,0.2s	2.02	284	Pg	Pb	22 35 52.8	-1.2
TNSS	7.2nm,0.5s			Lg	Lg	22 36 19.3	
TNSS	Tian-Shan baz=84	2.02	284	*e*P	Pb	22 35 52.8	-1.2

TNSS				⇓*i*S	Sb	22 36 19.3	-0.2
	baz=84						
TNSS	Tian-Shan	2.02	284	*e*P	Pb	22 35 52.8	-1.2
	2.9nm,0.2s						
TNSS				⇓*i*S	Sb	22 36 19.3	-0.2
	7.2nm,0.5s						
ARXS	Arharly	2.09	322	Pg	Pb	22 35 54.0	-1.0
	1.3nm,0.3s						
ARXS				Lg	Lg	22 36 21.8	
	7.9nm,0.2s						
ARXS	Arharly	2.09	322	*e*P	Pb	22 35 54.0	-1.0
	1.3nm,0.3s						
ARXS				*e*S	Sb	22 36 21.8	+0.7
	7.9nm,0.2s						
IZV	Izvestkoviy	2.27	283	Pg	Pb	22 35 56.7	-1.2
	5.6nm,0.2s						
IZV				Lg	Lg	22 36 26.5	
	11nm,0.3s						
IZV	Izvestkoviy	2.27	283	*e*P	Pb	22 35 56.8	-1.2
	baz=83						
IZV				*e*S	Sb	22 36 26.5	+0.4
	baz=83						
IZV	Izvestkoviy	2.27	283	*e*P	Pb	22 35 56.8	-1.2
	5.6nm,0.2s						
IZV				*e*S	Sb	22 36 26.5	+0.4
	11nm,0.3s						
CHKK	Chushkaly	2.31	304	Pg	Pb	22 35 58.1	-0.6
	0.7nm,0.2s						
CHKK				Lg	Lg	22 36 28.2	
	9.1nm,0.2s						
CHKK	Chushkaly	2.31	304	*e*P	Pb	22 35 58.1	-0.6
	0.7nm,0.2s						
CHKK				*e*S	Sb	22 36 28.2	+0.9
	9.1nm,0.2s						
KTBS	Karatobe	2.43	299	Pg	Pb	22 35 59.9	-0.8
	1.0nm,0.2s						
KTBS				Lg	Lg	22 36 31.9	
	15nm,0.2s						
KTBS	Karatobe	2.43	299	*e*P	Pb	22 36 00.0	-0.8
	baz=98						
KTBS				*e*S	Sb	22 36 32.0	+1.1
	baz=98						
KTBS	Karatobe	2.43	299	*e*P	Pb	22 35 60.0	-0.8
	1.0nm,0.2s						
KTBS				*e*S	Sb	22 36 31.9	+1.1
	15nm,0.2s						
ULHL	Ulahol	2.53	264	⇑*i*P	Pn	22 35 59.9	+1.6
	baz=63						
ULHL				⇑*i*S	Sb	22 36 31.9	-1.9
	baz=63						
KAPS	Kapalarasan	2.71	356	Pg	Pb	22 36 05.5	0.0
	1.1nm,0.2s						
KAPS				Lg	Lg	22 36 41.4	
	1.7nm,0.2s						
KAPS	Kapalarasan	2.71	356	*e*P	Pb	22 36 05.5	0.0
	1.1nm,0.2s						
KAPS				*e*S	Sg	22 36 41.4	-2.6
	1.7nm,0.2s						
BOOM	Boomskoye usch	2.73	269	⇓*i*P	Pn	22 36 02.9	+2.0
	baz=69						
BOOM				⇓*i*S	Sb	22 36 37.1	-2.3
	baz=69						
KST	Kastek	2.74	281	Pg	Pb	22 36 05.5	-0.5
	5.0nm,0.4s						
KST				Lg	Lg	22 36 41.3	
	5.8nm,0.5s						
KST	Kastek	2.74	281	*e*P	Pb	22 36 05.5	-0.5
	5.0nm,0.4s						
KST				*e*S	Sb	22 36 41.3	+1.6
	5.8nm,0.5s						
KUU	Kurty	2.74	300	Pg	Pb	22 36 05.1	-0.9
	0.9nm,0.1s						
KUU				Lg	Lg	22 36 40.8	
	7.4nm,0.4s						
KUU	Kurty	2.74	300	*e*P	Pb	22 36 05.1	-0.9
	0.9nm,0.1s						
KUU				*e*S	Sb	22 36 40.8	+1.2
	7.4nm,0.4s						
DGS	Degeres	2.91	284	Pg	Pb	22 36 07.7	-1.2
	2.2nm,0.4s						
DGS				Lg	Lg	22 36 45.0	
	8.3nm,0.4s						
DGS	Degeres	2.91	284	*e*P	Pb	22 36 07.7	-1.2
	2.2nm,0.4s						
DGS				*e*S	Sb	22 36 45.0	+0.4
	8.3nm,0.4s						
TKM2	Tokmak 2	2.99	278	⇓Pg	Pb	22 36 09.0	-1.4
	3.0nm,1.1s						
TKM2				⇓Lg	Lg	22 36 49.9	
	3.7nm,0.6s						
TKM2	Tokmak 2	2.99	278	⇓*i*P	Pn	22 36 06.4	+1.9
	baz=78						
TKM2				⇓*i*S	Sn	22 36 43.1	+2.6
	baz=78						
ARLS	Aral	4.01	261	⇑*i*P	Pn	22 36 20.5	+2.0
	baz=62						
ARLS				⇑*i*S	Sn	22 37 06.9	+1.3
	baz=62						

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*IDC **01** 22:45:24.6±1.4, 11.°03S×165.°38E, h0^{km}, mb3.9/9, mb1 4.1/10, mb1mx3.9/49, mbtmp3.9/10, ML4.1/1, Error ellipse: s-maj=44.0km s-min=22.8km az=124.0*

*ISCJB **01** 22:45:27.4±0.9, 11.°2S±0.°1×165.°4E±0.°2, h30^{km}, mb3.8/9, Error ellipse: s-maj=24.9km s-min=15.8km az=13.0*

ISC 01 22:45:29.2±1.0, **11.°1S**±0.°1×**165.°4E**±0.°2, **h30**^{km}, **n10**, σ**0.^{s}72**/10, **mb3.8**/9, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.97	175	Pn	Pn	22 48 04.3	+0.1
	1.2nm,0.3s,baz=351,slow=8.9,SNR=14						
STKA	Stephens Creek	30.16	223	P	P	22 51 36.5	-0.2
	0.7nm,0.3s,baz=54,slow=8.7,SNR=2.6						
WRA	Warramunga Arr	31.12	250	P	P	22 51 45.6	+0.2
	3.4nm,1.0s,baz=78,slow=8.0,SNR=6.2						
ASAR	Alice Springs	32.45	243	P	P	22 51 57.2	+0.2
	0.5nm,0.5s,baz=63,slow=10,SNR=11						
FITZ	Fitzroy Crossi	39.02	255	P	P	22 52 52.9	-0.5
	1.6nm,0.8s,baz=62,slow=6.5,SNR=3.6						
SONM	Songino Array	78.49	324	P	P	22 57 28.6	+1.0
	0.4nm,0.7s,baz=147,slow=8.1,SNR=2.3						
ILAR	Eielson Array	83.67	19	P	P	22 57 53.4	-1.2
	0.4nm,0.7s,baz=208,slow=7.6,SNR=4.4						
MKAR	Makanchi Array	93.31	317	P	P	22 58 41.3	0.0
	1.1nm,0.9s,baz=96,slow=5.0,SNR=6.7						
ZALV	Zalesovo Beam	93.38	324	P	P	22 58 41.0	-0.4
	0.5nm,0.6s,baz=126,slow=2.0,SNR=3.6						
YKA	Yellowknife Ar	95.18	27	P	P	22 58 50.2	+0.7
	0.1nm,0.4s,baz=254,slow=4.4,SNR=2.9						

IDC 01 22:49:36.0±1.7, **11.°00S**×**165.°31E**, **h0**^{km}, **mb3.7**/3, **mb1 4.1**/4, **mb1mx3.6**/45, **mbtmp3.8**/4, **ML4.0**/1, **Error ellipse: s-maj=52.1km s-min=30.7km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.06	175	Pn	Pn	22 52 15.8	+0.1
	1.1nm,0.3s,baz=10.0,slow=6.0,SNR=10						
WRA	Warramunga Arr	31.10	250	P	P	22 55 56.5	+0.1
	0.7nm,0.6s,baz=81,slow=9.2,SNR=3.8						
ASAR	Alice Springs	32.43	243	P	P	22 56 08.0	-0.1
	1.3nm,0.8s,baz=70,slow=10.0,SNR=7.8						
ILAR	Eielson Array	83.60	19	P	P	23 02 05.9	0.0
	0.4nm,0.8s,baz=238,slow=5.2,SNR=3.3						

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*IDC **01** 22:53:18.7±0.5, 32.°60S×177.°77W, h0^{km}, mb4.3/13, mb1 4.4/16, mb1mx4.3/39, mbtmp4.3/16, ML4.3/2, Error ellipse: s-maj=19.6km s-min=18.1km az=126.0*

*NEIC **01** 22:53:19.8±4.9, 32.°78S×177.°81W, h10^{km}±29^{km}, mb4.3/11, Error ellipse: s-maj=14.3km s-min=9.9km az=53.0*

*WEL **01** 22:53:22.8±0.5, 32°S±12°×17°9W±2°8, h160^{km}±13^{km}*

ISC 01 22:53:21.7±0.4, **32.°68S**±0.°05×**177.°97W**±0.°08, **h20**^{km}, **n120**, σ**2.^{s}41**/164, **mb4.4**/18, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.41	1	P	Pn	22 54 12.1	-1.6
GLKZ				S	Sn	22 54 50.0	-3.6
RAO	Raoul Island	3.42	1	*e*Pn	Pn	22 54 11.5	-2.4
RAO				Sn	Sn	22 54 50.4	-3.4
RAO	Raoul Island	3.42	1	Sn	Sn	22 54 50.4	-3.4
	718nm,0.3s,baz=217,slow=20,SNR=9.9						
RIZ	Raoul Island	3.42	1	S	Sn	22 54 50.2	-3.8
MXZ	Matakaoa Point	5.75	211	*e*Pn	Pn	22 54 46.9	+1.0
MXZ				*e*Sn	Sn	22 55 47.5	-3.7
MXZ	Matakaoa Point	5.75	211	P	Pn	22 54 46.1	+0.2
MXZ				S	Sn	22 55 52.0	+0.8
WMGZ	Waiomatatini S	5.92	209	P	Pn	22 54 49.7	+1.5
WMGZ				S	Sn	22 55 58.4	+3.0
PKGZ	Pakihiroa	6.12	211	P	Pn	22 54 52.2	+1.2
PUZ	Puketiti	6.20	209	P	Pn	22 54 52.2	+0.1
PUZ				S	Sn	22 56 04.3	+1.9
MWZ	Matawai	6.73	212	P	Pn	22 54 57.5	-2.0
MWZ				S	Sn	22 56 16.0	+0.5
URZ	Urewera	6.86	214	Pn	Pn	22 55 02.3	+1.1
	2.1nm,0.3s,baz=25,slow=18,SNR=74						
URZ				Sn	Sn	22 56 19.8	+1.1
	16nm,0.3s,baz=285,slow=4.0,SNR=14						
URZ	Urewera	6.86	214	P	Pn	22 55 00.3	-0.9
URZ				S	Sn	22 56 21.1	+2.4
RAGZ	Rawiri	6.91	212	P	Pn	22 54 59.6	-2.3
RAGZ				S	Sn	22 56 20.4	+0.4
SNGZ	Shannon Statio	7.18	211	P	Pn	22 55 06.3	+0.6
SNGZ				S	Sn	22 56 25.9	-0.7
OUZ	Omahuta	7.45	248	*e*Pn	Pn	22 55 17.4	+8.1
OUZ				*e*Sn	Sn	22 56 39.1	+6.0
BKZ	Black Stump Fm	7.87	213	*e*Pn	Pn	22 55 16.1	+1.0
POWZ	Post Office Ro	9.19	211	P	Pn	22 55 31.2	-2.0
POWZ				S	Sn	22 57 12.8	-3.3
BFZ	Birch Farm	9.23	209	*e*Pn	Pn	22 55 34.5	+0.7
BFZ				*e*Sn	Sn	22 57 14.4	-2.7
CPWZ	Castlepoint	9.45	208	S	Sn	22 57 19.7	-2.5
TIWZ	Tintock	9.46	210	P	Pn	22 55 36.4	-0.4
TIWZ				P	Sn	22 57 20.2	-2.5
MRZ	Mangatainoka R	9.50	211	P	Pn	22 55 36.1	-1.2
MRZ				S	Sn	22 57 19.3	-4.1
HOWZ	Holdsworth Sta	9.72	211	P	Pn	22 55 37.9	-2.5
HOWZ				S	Sn	22 57 22.8	-6.1
TMWZ	Te Maipa	9.74	209	P	Pn	22 55 38.3	-2.3
TMWZ				S	Sn	22 57 26.1	-3.4
MTW	Mount Morrison	9.94	210	P	Pn	22 55 41.6	-1.8
MTW				S	Sn	22 57 28.8	-5.6
KIW	Kapiti Island	9.96	213	P	Pn	22 55 41.7	-2.0
KIW				S	Sn	22 57 30.2	-4.6
TRWZ	Traveller	10.06	208	P	Pn	22 55 44.3	-0.9
TRWZ				S	Sn	22 57 32.0	-5.5
PAWZ	Paruwai Farm	10.16	209	P	Pn	22 55 44.6	-1.8
PAWZ				S	Sn	22 57 35.4	-4.3
MSWZ	Moikau Station	10.26	210	P	Pn	22 55 47.3	-0.5
MSWZ				S	Sn	22 57 36.2	-6.1
PLWZ	Palliser	10.38	209	P	Pn	22 55 46.0	-3.5
PLWZ				P	Sn	22 57 38.1	-7.2
DUWZ	D’Urville Isla	10.39	216	P	Sn	22 57 41.9	-3.5
SNZO	South Karori	10.41	212	*e*Pn	Pn	22 55 47.7	-2.1
SNZO				*e*Sn	Sn	22 57 39.9	-6.0
BHW	Baring Head	10.42	211	P	Pn	22 55 47.7	-2.2
BHW				S	Sn	22 57 40.2	-5.8
TCW	Tory Channel	10.53	214	P	Pn	22 55 46.0	-5.5
TCW				S	Sn	22 57 41.0	-7.8
THZ	Tophouse	11.61	216	*e*Pn	Pn	22 56 04.9	-1.4
THZ				*e*Sn	Sn	22 58 10.0	-5.4
KHZ	Kahutara	11.82	212	*e*Pn	Pn	22 56 07.9	-1.1
KHZ				*e*Sn	Sn	22 58 05.8	-14
LTZ	Lake Taylor	12.69	215	*e*Pn	Pn	22 56 20.6	-0.5
LTZ				*e*Sn	Sn	22 58 29.8	-12
CRLZ	Canterbury Las	13.14	211	*e*Pn	Pn	22 56 31.1	+3.9
OXZ	Oxford	13.22	214	*e*Pn	Pn	22 56 27.1	-1.2
OXZ				*e*Sn	Sn	22 58 48.0	-6.5
MQZ	McQueen’s Vall	13.24	211	*e*Pn	Pn	22 56 27.1	-1.3
MQZ				*e*Sn	Sn	22 58 42.2	-13
RPZ	Rata Peaks	13.98	215	Pn	Pn	22 56 38.3	-0.3
	3.9nm,0.3s,baz=36,slow=3.9,SNR=14						
RPZ				Sn	Sn	22 59 03.0	-10
	1.7nm,0.3s,baz=46,slow=11,SNR=14						
FOZ	Fox Glacier	14.47	218	*e*Pn	Pn	22 56 44.4	-0.9
FOZ				*e*Sn	Sn	22 59 12.7	-12
LBZ	Lake Benmore	14.90	215	*e*Pn	Pn	22 56 49.9	-1.3
	7.4nm,0.9s						
LBZ				*e*Sn	Sn	22 59 24.9	-11
ODZ	Otahua Downs	15.18	212	*e*Pn	Pn	22 56 52.9	-2.0
	6.5nm,0.9s						
ODZ				*e*Sn	Sn	22 59 31.2	-11
WKZ	Wanaka	15.79	216	*e*Pn	Pn	22 57 01.0	-1.9
WKZ				*e*Sn	Sn	22 59 44.4	-13
MLZ	Mavora Lakes	16.62	216	*e*Pn	Pn	22 57 12.3	-1.2
	7.0nm,0.8s						
WHZ	Wether Hill Ro	17.08	215	*e*Pn	Pn	22 57 18.0	-1.2
	15nm,1.2s						
DCZ	Deep Cove	17.18	218	*e*Pn	Pn	22 57 18.3	-2.2
	7.7nm,0.9s						
DZM	Mont Dzumac	17.39	304	P	P	22 57 24.5	-0.1
	baz=143,slow=20,SNR=1.9						
PYZ	Puysegur Point	17.90	217	*e*Pn	P	22 57 29.3	-0.6
	48nm,1.1s						
EIDS	Eidsvold	27.95	277	*e*P	P	22 59 12.1	+1.2
	13nm,1.1s						
TOO	Toolangi	30.15	250	*e*P	P	22 59 29.1	-1.4
	4.3nm,1.0s						
STKA	Stephens Creek	34.05	260	P	P	23 00 06.7	+2.1
	1.2nm,0.6s,baz=84,slow=13,SNR=2.8						
CTA	Charters Tower	34.25	283	P	P	23 00 09.2	+2.7
	6.8nm,0.7s,baz=118,slow=10,SNR=13						
CTAO	Charters Tower	34.25	283	*e*P	P	23 00 09.3	+2.8
	16nm,1.1s						
COEN	Coen	39.97	289	*e*P	P	23 00 55.4	+0.4
AS01	Alice Springs	43.02	269	*e*P	P	23 01 21.3	+1.2
AS31	Alice Springs	43.06	269	*e*P	P	23 01 21.2	+0.7
	2.1nm,0.6s						
AS31				*e*ScP	ScP	23 07 01.6	+1.2
AS31				*e*S	S	23 07 43.2	-2.2
ASAR	Alice Springs	43.06	269	P	P	23 01 21.9	+1.5
	6.1nm,0.7s,baz=108,slow=7.8,SNR=54						
ASAR				ScP	ScP	23 07 01.6	+1.2
	0.9nm,1.0s,baz=76,slow=3.9,SNR=3.1						
ASAR				S	S	23 07 43.2	-2.2
	1.3nm,0.9s,baz=115,slow=15,SNR=9.0						
WB2	Warramunga Arr	44.24	274	*e*P	P	23 01 31.0	+1.0
WR1	Warramunga Arr	44.25	274	*e*P	P	23 01 31.3	+1.2
	7.7nm,0.6s						
WR1				*e*PP	PP	23 03 13.3	0.0
WR1				*e*ScP	ScP	23 07 07.4	+2.1
WR1				*e*S	S	23 08 00.7	-2.2
WRA	Warramunga Arr	44.25	274	P	P	23 01 31.3	+1.2
	8.8nm,0.7s,baz=115,slow=7.5,SNR=40						
WRA				PcP	PP	23 03 13.3	0.0
	1.6nm,0.7s,baz=122,slow=3.3,SNR=5.1						
WRA				ScP	ScP	23 07 07.4	+2.1
	0.6nm,0.8s,baz=96,slow=2.1,SNR=2.9						
WRA				S	S	23 08 00.7	-2.2
	0.6nm,0.8s,baz=111,slow=17,SNR=3.3						
VNDA	Vanda	45.84	186	P	P	23 01 42.9	+1.0
	0.9nm,0.9s,baz=38,slow=11,SNR=2.4						
FITZ	Fitzroy Crossi	52.41	272	P	P	23 02 34.0	+1.0
	2.6nm,0.9s,baz=114,slow=6.2,SNR=3.3						
QSPA	South Pole Qui	57.44	180	P	P	23 03 11.1	+2.2
	6.2nm,0.8s,baz=41,slow=3.2,SNR=13						
SNAA	Sanae	75.88	178	P	P	23 05 07.0	+0.7
SNAA	Sanae	75.88	178	P	P	23 05 23.7	+17
SNAA	Sanae	75.88	178	*e*P	P	23 05 07.1	+0.7
	16nm,1.0s						
VNA3	Neumayer Olymp	76.04	176	P	P	23 05 07.5	+0.3
VNA3	Neumayer Olymp	76.04	176	P	PcP	23 05 26.1	+6.7
VNA2	Neumayer--Watz	76.47	177	P	P	23 05 10.5	+0.8
	baz=175,slow=5.0						
VNA2	Neumayer--Watz	76.47	177	P	PcP	23 05 29.4	+8.1
VNA1	Neumayer--Stat	76.70	176	P	P	23 05 11.6	+0.7
VNA1	Neumayer--Stat	76.70	176	P	PcP	23 05 29.1	+6.9
MJAR	Matsushiro Arr	80.12	326	P	P	23 05 29.6	-0.6
	1.5nm,0.8s,baz=153,slow=5.7,SNR=3.1						
MAJO	Matsushiro	80.13	326	*e*P	P	23 05 29.6	-0.6
PETK	Petropavlovsk-	88.02	346	P	P	23 06 10.8	+0.8
	1.6nm,0.8s,baz=248,slow=12,SNR=2.6						
PEA1	Petropavlovsk-	88.02	346	*e*P	P	23 06 10.8	+0.8
USRK	Ussuriysk Ar.	89.07	327	P	P	23 06 16.6	+1.4
	2.9nm,0.8s,baz=114,slow=1.4,SNR=5.6						
YBH	Yreka Blue Hor	89.81	38	P	P	23 06 20.0	+1.2
	2.2nm,1.0s,baz=227,slow=8.1,SNR=3.5						
NV01	Mina Array Sit	89.89	43	*e*P	P	23 06 19.8	+0.3
NVAR	Mina Array Bea	89.89	43	P	P	23 06 19.8	+0.3
	0.6nm,0.7s,baz=223,slow=6.1,SNR=5.2						
LTX	Lajitas	93.60	57	*e*P	P	23 06 36.9	+0.1
TXAR	Lajitas Array	93.60	57	P	P	23 06 36.9	+0.1
	0.7nm,1.1s,baz=183,slow=6.3,SNR=3.4						
SONA0	Songino Array	104.84	318	*e*PKiKP	PKiKP	23 11 40.6	-1.4
SONM	Songino Array	104.84	318	PKiKP	PKiKP	23 11 40.6	-1.4
	0.8nm,1.1s,baz=97,slow=3.5,SNR=3.6						
MK32	Makanchi Array	119.24	309	*e*PKPdf	PKPdf	23 12 08.0	-1.2
MKAR	Makanchi Array	119.24	309	PKP	PKPdf	23 12 08.0	-1.2
	0.4nm,0.7s,baz=67,slow=3.0,SNR=5.0						
KURK	Kurchatov	122.62	313	PKP	PKPdf	23 12 15.0	-0.5
KURBB	Kurchatov Arra	122.66	313	PKP	PKPdf	23 12 15.0	-0.5
	1.3nm,0.8s,baz=107,slow=1.7,SNR=10						
BVAR	Borovoye Array	128.03	315	PKP	PKiKP	23 12 26.1	-0.2
	0.8nm,0.6s,baz=66,slow=1.7,SNR=7.2						
ARA0	ARCESS Array S	140.81	347	*e*PKPdf	PKiKP	23 12 50.7	-1.1
ARCES	ARCESS Array B	140.81	347	PKP	PKiKP	23 12 50.7	-1.1
	1.6nm,0.8s,baz=355,slow=3.9,SNR=3.2						
GNI	Garni	145.09	295	PKPbc	PKPdf	23 12 58.5	+0.7
	13nm,1.2s,baz=149,slow=3.3,SNR=5.8						
TBLG	Delisi	145.10	297	*e*PKPbc	PKPdf	23 12 57.7	+0.1
KBZ	Khabaz	146.35	301	PKPbc	PKPab	23 13 01.5	-0.2
	8.5nm,1.0s,baz=108,slow=3.9,SNR=12						
KVAR	Kislovodsk Arr	146.48	302	PKPbc	PKiKP	23 13 03.3	-1.0
	5.5nm,1.1s,baz=102,slow=22,SNR=4.4						
KIV	Kislovodsk	146.48	302	*e*PKPdf	PKiKP	23 13 03.4	-1.0
FIA1	FINESS Array S	147.28	339	*e*PKPbc	PKPbc	23 13 02.9	-0.1
FIA0	FINESS Array S	147.28	339	*e*PKPbc	PKPbc	23 13 02.7	-0.3
FINES	FINESS Array B	147.28	339	PKPbc	PKPbc	23 13 02.7	-0.3
	8.0nm,0.9s,baz=71,slow=6.5,SNR=17						
NB2	NORSAR Subarra	151.00	351	PKP	PKPbc	23 13 12.2	-0.3
	comp=Z,1.1nm,0.8s,baz=15,slow=4.0						
NB200	NORSAR Array S	151.00	351	*e*PKPbc	PKPbc	23 13 11.3	-1.1
NOA	NORSAR Array B	151.00	351	PKPbc	PKPbc	23 13 11.3	-1.1
	comp=Z,0.9nm,0.9s,baz=22,slow=4.6,SNR=7.1						
HFS	Hagfors	151.47	348	PKPbc	PKPbc	23 13 12.5	-1.0
	comp=Z,2.9nm,0.8s,baz=5.7,slow=1.5,SNR=4.2						
EIL	Elat	151.73	273	PKPbc	PKiKP	23 13 16.6	+1.1
	comp=Z,4.8nm,0.7s,baz=130,slow=3.7,SNR=5.0						
MMAI	Mount Meron Ar	152.02	280	PKPbc	PKiKP	23 13 17.2	+1.1
	comp=Z,8.0nm,0.9s,baz=69,slow=7.9,SNR=10						
AKASG	Malin Array Be	153.09	320	PKPbc	PKPbc	23 13 17.1	-0.4
	comp=Z,1.8nm,0.8s,baz=65,slow=2.2,SNR=7.0						
AKASG				PKPab	PKPab	23 13 29.4	+0.5
	comp=Z,1.6nm,0.6s,baz=53,slow=4.2,SNR=12						
AKBB	Malin Array Si	153.09	320	*e*PKPdf	PKPdf	23 13 11.2	+1.1
AKBB				*e*PKPab	PKPab	23 13 28.4	-0.6
AK11	Malin Array Si	153.13	320	*e*PKPdf	PKPdf	23 13 09.8	-0.3
AK11				*e*PKPab	PKPab	23 13 30.3	+1.1
DBIC	Dimbokro	153.34	165	PKPbc	PKiKP	23 13 19.0	-0.2
	comp=Z,3.9nm,0.6s,baz=178,slow=3.8,SNR=7.4						
BR101	Keskin Array S	153.63	294	*e*PKPbc	PKiKP	23 13 19.7	+0.4
BR101				*e*PKPab	PKPab	23 13 32.0	+0.1
BR131	Keskin Array S	153.63	294	*e*PKPab	PKPab	23 13 31.1	-0.8
BRTR	Keskin Array B	153.63	294	PKPbc	PKiKP	23 13 19.7	+0.4
	comp=Z,2.7nm,1.0s,baz=122,slow=2.9,SNR=6.9						
BRTR				PKPab	PKPab	23 13 32.0	+0.1
	comp=Z,2.9nm,0.8s,baz=127,slow=4.7,SNR=11						
BUR08	Bucovina Ar. S	156.95	317	*e*PKPab	PKPab	23 13 46.2	+0.4
BUR04	Bucovina Ar. S	156.96	317	*e*PKPab	PKPab	23 13 47.2	+1.5
EKA	Eskdalemuir Ar	157.06	8	PKPab	PKPab	23 13 44.2	-1.5
	comp=Z,0.5nm,0.5s,baz=40,slow=10,SNR=3.6						
TOA0	Torodi Ar. Sit	160.56	179	*e*PKPdf	PKPdf	23 13 18.7	-2.0
TOA0				*e*PKPab	PKPab	23 14 00.8	-1.1
TORD	Torodi Ar. Bea	160.56	179	PKP	PKPdf	23 13 19.4	-1.3
	comp=Z,0.6nm,0.9s,baz=253,slow=1.5,SNR=3.6						
TORD				PKPab	PKPab	23 14 01.3	-0.6
	comp=Z,2.2nm,0.8s,baz=180,slow=3.1,SNR=13						
TORD				PP	PP	23 17 40.9	-2.1
	comp=Z,0.9nm,1.1s,baz=180,slow=5.8,SNR=3.6						
TOA1	Torodi Ar. Sit	160.56	179	*e*PKPdf	PKPdf	23 13 19.4	-1.3
TOA1				*e*PKPab	PKPab	23 14 01.3	-0.6
TOA1				*e*PP	PP	23 17 40.9	-2.1
GERES	GERESS Array B	161.62	335	PKPab	PKPab	23 14 04.5	-1.4
	comp=Z,0.1nm,0.3s,baz=26,slow=9.4,SNR=3.5						

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*SOME **01** 22:53:33.1, 42.°50N×79.°70E, h25^{km}*

*KRNET **01** 22:53:33.5±0.1, 42.°58N×79.°68E, h18^{km}, mb2.8*

*NNC **01** 22:53:33.2±1.1, 42.°57N×79.°65E, h0^{km}, mb3.2, mpv3.1, Error ellipse: s-maj=7.4km s-min=3.7km az=151.0*

ISC 01 22:53:31.8±1.6, **42.°53N**±0.°04×**79.°69E**±0.°04, **h1**^{km}±11^{km}, **n57**, σ**1.^{s}31**/98, **25C-3D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.65	345	P	Pb	22 53 45.7	-0.4
	37nm,0.1s						
SHLS				S	Sb	22 53 54.6	-1.1
	83nm,0.2s						
SHLS	Shalkode	0.65	345	*e*P	Pb	22 53 45.7	-0.4
	baz=15						
SHLS				*e*S	Sb	22 53 54.7	-1.1
	baz=15						
SHLS	Shalkode	0.65	345	*e*P	Pb	22 53 45.7	-0.4
	37nm,0.1s						
SHLS				*e*S	Sb	22 53 54.6	-1.1
	83nm,0.2s						
UZB	Uzynbulak	0.79	322	P	Pb	22 53 47.6	-0.9
	17nm,0.1s						
UZB				S	Sg	22 53 57.9	+0.6
	41nm,0.2s						
UZB	Uzynbulak	0.79	322	*e*P	Pb	22 53 47.6	-0.9
	baz=20						
UZB				*e*S	Sg	22 53 57.9	+0.6
	baz=20						
UZB	Uzynbulak	0.79	322	*e*P	Pb	22 53 47.6	-0.9
	17nm,0.1s						
UZB				*e*S	Sg	22 53 57.9	+0.6
	41nm,0.2s						
PDGK	Podgornoye	0.82	350	P	Pb	22 53 48.1	-0.8
	1.4nm,0.1s						
PDGK				S	Sg	22 53 58.5	+0.4
	13nm,0.1s						
PDGK	Podgornoye	0.82	350	⇓*i*P	Pb	22 53 47.9	-1.0
	baz=49						
PDGK				⇓*i*S	Sb	22 53 58.3	-2.2
	baz=49						
PRZ	Przheval'sk	0.96	268	⇑*i*P	Pg	22 53 51.6	+1.4
	baz=65						
PRZ				⇑*i*S	Sn	22 54 04.6	-2.3
	baz=65						
KTMS	Ketmen	1.04	28	P	Pb	22 53 52.1	-0.6
	6.5nm,0.1s						
KTMS				S	Sb	22 54 05.5	-1.4
	11nm,0.3s						
KTMS	Ketmen	1.04	28	*e*P	Pb	22 53 52.1	-0.6
	baz=29						
KTMS				*e*S	Sb	22 54 05.5	-1.4
	baz=29						
KTMS	Ketmen	1.04	28	*e*P	Pb	22 53 52.1	-0.6
	6.5nm,0.1s						
KTMS				*e*S	Sb	22 54 05.5	-1.4
	11nm,0.3s						
SATY	Saty	1.09	300	P	Pb	22 53 53.0	-0.5
	6.1nm,0.2s						
SATY				S	Sn	22 54 07.5	-2.6
	26nm,0.1s						
SATY	Saty	1.09	300	*e*P	Pb	22 53 53.0	-0.5
	6.1nm,0.2s						
SATY				*e*S	Sn	22 54 07.5	-2.6
	26nm,0.1s						
KURS	Kuram	1.47	311	P	Pb	22 53 59.8	-0.2
	2.7nm,0.5s						
KURS				S	Sg	22 54 19.0	-0.2
	9.5nm,0.4s						
KURS	Kuram	1.47	311	*e*P	Pb	22 53 59.9	-0.2
	baz=10.0						
KURS				*e*S	Sg	22 54 19.1	-0.2
	baz=10.0						
KURS	Kuram	1.47	311	*e*P	Pb	22 53 59.9	-0.2
	2.7nm,0.5s						
KURS				*e*S	Sg	22 54 19.0	-0.2
	9.5nm,0.4s						
DJR	Jarkent	1.81	2	P	Pb	22 54 05.5	-0.2
	2.6nm,0.2s						
DJR				S	Sg	22 54 29.1	-0.8
	9.4nm,0.3s						
DJR	Jarkent	1.81	2	*e*P	Pb	22 54 05.5	-0.2
	2.6nm,0.2s						
DJR				*e*S	Sg	22 54 29.1	-0.8
	9.4nm,0.3s						
MNBS	Baschi	1.82	329	P	Pb	22 54 05.7	-0.3
	5.6nm,0.1s						
MNBS				S	Sg	22 54 29.0	-1.2
	88nm,0.2s						
MNBS	Baschi	1.82	329	*e*P	Pb	22 54 05.7	-0.3
	5.6nm,0.1s						
MNBS				*e*S	Sg	22 54 29.0	-1.2
	88nm,0.2s						
KDJ	Kajisay	1.91	259	⇑*i*P	Pb	22 54 08.6	+1.1
	baz=57						
KDJ				⇑*i*S	Sg	22 54 33.8	+0.8

	baz=57						
MDOK	**Medeo** 4.2nm,0.4s	**2.05**	**289**	Pn	Pb	22 54 08.7	-1.2
MDOK	7.7nm,0.5s			⇑Lg	Lg	22 54 37.2	
TNSS	**Tian-Shan** 6.3nm,0.4s	**2.08**	**285**	Pg	Pb	22 54 10.4	-0.3
TNSS	9.7nm,0.3s			Lg	Lg	22 54 37.8	
TNSS	**Tian-Shan** baz=84	**2.08**	**285**	*e*P	Pb	22 54 10.4	-0.3
TNSS	baz=84			*e*S	Sb	22 54 37.6	+0.3
TNSS	**Tian-Shan** 6.3nm,0.4s	**2.08**	**285**	*e*P	Pb	22 54 10.4	-0.3
TNSS	9.7nm,0.3s			*e*S	Sb	22 54 37.5	+0.3
KNDC	**Almaty** 6.2nm,0.3s	**2.12**	**290**	⇑Pg	Pb	22 54 12.0	+0.9
KNDC	19nm,0.8s			⇓Lg	Lg	22 54 39.6	
ARXS	**Arharly** 5.3nm,0.4s	**2.17**	**322**	Pg	Pb	22 54 11.2	-0.7
ARXS	28nm,0.6s			Lg	Lg	22 54 38.7	
ARXS	**Arharly** 5.3nm,0.4s	**2.17**	**322**	*e*P	Pb	22 54 11.2	-0.7
ARXS	28nm,0.6s			*e*S	Sb	22 54 38.7	-0.6
IZV	**Izvestkoviy** 8.8nm,0.2s	**2.32**	**284**	Pg	Pb	22 54 14.8	+0.2
IZV	12nm,0.2s			Lg	Lg	22 54 44.9	
IZV	**Izvestkoviy** baz=82	**2.32**	**284**	*e*P	Pb	22 54 14.8	+0.2
IZV	baz=82			*e*S	Sg	22 54 44.9	-1.6
IZV	**Izvestkoviy** 8.8nm,0.2s	**2.32**	**284**	*e*P	Pb	22 54 14.8	+0.2
IZV	12nm,0.2s			*e*S	Sg	22 54 44.9	-1.6
CHKK	**Chushkaly** 2.3nm,0.2s	**2.38**	**305**	Pg	Pb	22 54 15.3	-0.2
CHKK	14nm,0.2s			Lg	Lg	22 54 45.7	
CHKK	**Chushkaly** baz=4.0	**2.38**	**305**	*e*P	Pb	22 54 15.3	-0.2
CHKK	baz=4.0			*e*S	Sb	22 54 45.7	+0.3
CHKK	**Chushkaly** 2.3nm,0.2s	**2.38**	**305**	*e*P	Pb	22 54 15.3	-0.2
CHKK	14nm,0.2s			*e*S	Sb	22 54 45.7	+0.3
MTBS	**Maitube** 8.8nm,0.2s	**2.48**	**285**	Pg	Pb	22 54 17.4	+0.3
MTBS	13nm,0.4s			Lg	Lg	22 54 49.7	
MTBS	**Maitube** 8.8nm,0.2s	**2.48**	**285**	*e*P	Pb	22 54 17.4	+0.3
MTBS	13nm,0.4s			*e*S	Sg	22 54 49.7	-1.7
KTBS	**Karatobe** 2.8nm,0.2s	**2.50**	**299**	Pg	Pb	22 54 17.1	-0.5
KTBS	10.0nm,0.3s			Lg	Lg	22 54 49.5	
KTBS	**Karatobe** 2.8nm,0.2s	**2.50**	**299**	*e*P	Pb	22 54 17.1	-0.5
KTBS	10.0nm,0.3s			*e*S	Sb	22 54 49.2	+0.3
ULHL	**Ulahol** baz=64	**2.57**	**265**	⇑*i*P	Pb	22 54 17.4	-1.5
ULHL	baz=64			⇑*i*S	Sb	22 54 50.4	-0.6
KAPS	**Kapalarasan** 0.5nm,0.2s	**2.77**	**355**	Pg	Pb	22 54 21.9	-0.2
KAPS	15nm,0.5s			Lg	Lg	22 54 57.1	
KAPS	**Kapalarasan** 0.5nm,0.2s	**2.77**	**355**	*e*P	Pb	22 54 21.9	-0.2
KAPS	15nm,0.5s			*e*S	Sb	22 54 57.1	+0.5
BOOM	**Boomskoye usch** baz=69	**2.77**	**271**	⇑*i*P	Pb	22 54 20.7	-1.6
BOOM	baz=69			⇑*i*S	Sb	22 54 54.9	-2.0
KST	**Kastek** 5.2nm,0.2s	**2.79**	**282**	Pg	Pb	22 54 22.1	-0.5
KST	7.6nm,0.5s			Lg	Lg	22 54 57.4	
KST	**Kastek** 5.2nm,0.2s	**2.79**	**282**	*e*P	Pb	22 54 22.1	-0.5
KST	7.6nm,0.5s			*e*S	Sb	22 54 57.4	+0.1
KUU	**Kurty** 1.0nm,0.2s	**2.81**	**300**	Pg	Pb	22 54 21.7	-1.0
KUU	7.2nm,0.3s			Lg	Lg	22 54 56.8	
KUU	**Kurty** 1.0nm,0.2s	**2.81**	**300**	*e*P	Pb	22 54 21.7	-1.0
KUU	7.2nm,0.3s			*e*S	Sb	22 54 56.8	-0.9
NRN	**Naryn** baz=49	**2.96**	**250**	⇑*i*P	Pb	22 54 24.0	-1.6
NRN	baz=49			⇑*i*S	Sb	22 55 00.6	-1.8
DGS	**Degeres** 3.5nm,0.3s	**2.97**	**285**	Pg	Pb	22 54 25.3	-0.3
DGS	5.8nm,0.8s			Lg	Lg	22 55 03.2	
DGS	**Degeres** 3.5nm,0.3s	**2.97**	**285**	*e*P	Pb	22 54 25.3	-0.3
DGS	5.8nm,0.8s			*e*S	Sb	22 55 03.2	+0.8
TKM2	**Tokmak 2** 0.7nm,0.3s	**3.04**	**279**	⇑Pg	Pg	22 54 29.3	-0.9
TKM2	4.7nm,0.6s			⇑Lg	Lg	22 55 08.3	
TKM2	**Tokmak 2** baz=78	**3.04**	**279**	⇑*i*P	Pb	22 54 24.0	-2.9
TKM2	baz=78			⇑*i*S	Sb	22 55 01.4	-3.2
KZA	**Kyzart** baz=63	**3.33**	**264**	⇑*e*P	Pb	22 54 28.7	-3.1
KZA	baz=63			⇑*i*S	Sb	22 55 08.5	-4.4
KBK	**Karagaybulak** baz=73	**3.51**	**274**	⇑*i*P	Pn	22 54 30.3	+2.7
KBK	baz=73			⇑*i*S	Sn	22 55 12.0	+2.2
AAK	**Ala-Archa** 1.9nm,0.5s	**3.84**	**273**	⇑Lg	Lg	22 55 35.4	
ARLS	**Aral** baz=62	**4.04**	**262**	⇑*i*P	Pn	22 54 38.5	+3.5
ARLS	baz=62			⇑*i*S	Sn	22 55 25.1	+2.0
MK31	**Makanchi Array** 0.1nm,0.3s,baz=197,slow=12,SNR=9.5	**4.65**	**23**	⇑Pn	Pn	22 54 45.1	+1.9
MK31	0.5nm,0.6s,baz=266,slow=2.9,SNR=3.6			⇑Lg	Lg	22 55 59.2	

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*IDC **01** 23:09:11.0±1.1, 10°.61S×165°.68E, h0^{km}, mb3.7/7, mb1 4.0/9, mb1mx3.7/47, mbtmp3.8/9, ML4.4/2, Error ellipse: s-maj=37.3km s-min=23.3km az=146.0*
*ISCJB **01** 23:09:13.8±0.7, 10°.8S±0°.1×165°.6E±0°.1, h31^{km}, mb3.7/7, Error ellipse: s-maj=17.7km s-min=16.2km az=147.7*
ISC 01 23:09:15.5±0.8**, 10°.7S**±0°.1×**165°.6E**±0°.1**, h31**^{km}**, n9, σ0ˢ.81**/9**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 24nm,0.3s,baz=46,slow=16,SNR=10	**5.73**	**282**	Pn	Pn	23 10 38.0	-0.6
DZM	**Mont Dzumac** 1.3nm,0.3s,baz=341,slow=12,SNR=16	**11.34**	**176**	Pn	Pn	23 11 55.2	-0.4
WRA	**Warramunga Arr** 0.8nm,0.7s,baz=81,slow=9.2,SNR=3.8	**31.50**	**249**	P	P	23 15 35.9	+0.9
ASAR	**Alice Springs** 0.8nm,0.7s,baz=62,slow=10,SNR=8.0	**32.85**	**243**	P	P	23 15 47.2	+0.4
SONM	**Songino Array** 1.1nm,1.1s,baz=142,slow=7.3,SNR=3.5	**78.31**	**324**	P	P	23 21 13.1	+0.3
ILAR	**Eielson Array** 0.5nm,0.9s,baz=220,slow=8.2,SNR=2.6	**83.21**	**19**	P	P	23 21 37.1	-1.3
NVAR	**Mina Array Bea** 0.6nm,0.7s,baz=231,slow=6.9,SNR=3.2	**85.88**	**50**	P	P	23 21 53.4	+0.6
YKA	**Yellowknife Ar** 0.1nm,0.6s,baz=259,slow=5.0,SNR=5.2	**94.71**	**27**	P	P	23 22 33.9	+0.4
TXAR	**Lajitas Array** 0.3nm,0.9s,baz=249,slow=1.7,SNR=2.6	**95.76**	**61**	P	P	23 22 39.3	+0.1

IDC 01 23:13:34.0±5.2**, 3°.77S**×**153°.75E, h465**^{km}±61^{km}**, mb3.0**/6**, mb1 3.1**/7**, mb1mx2.8**/47**, mbtmp3.8**/7**, Error ellipse: s-maj=34.0km s-min=24.1km az=37.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower** 0.5nm,0.3s,baz=31,slow=11,SNR=6.4	**17.79**	**204**	P	P	23 17 13.9	-0.2
DZM	**Mont Dzumac** 3.2nm,0.5s,baz=323,slow=10,SNR=7.5	**21.96**	**147**	P	P	23 17 52.1	-0.5
WRA	**Warramunga Arr** 0.3nm,0.4s,baz=56,slow=9.9,SNR=5.0	**24.83**	**228**	P	P	23 18 18.0	-0.2
ASAR	**Alice Springs** 0.8nm,0.4s,baz=54,slow=9.2,SNR=17	**27.54**	**222**	P	P	23 18 42.0	-0.2
SONM	**Songino Array** 0.3nm,0.4s,baz=134,slow=4.8,SNR=4.7	**65.97**	**327**	P	P	23 23 34.0	+0.6
VNDA	**Vanda** 0.7nm,0.8s,baz=0.0,slow=5.1,SNR=3.3	**73.82**	**178**	P	P	23 24 21.4	+1.7
MKAR	**Makanchi Array** 0.6nm,1.0s,baz=108,slow=4.7,SNR=3.7	**80.18**	**319**	P	P	23 24 55.4	+0.2
TORD	**Torodi Ar. Bea** 0.3nm,0.7s,baz=86,slow=2.4,SNR=2.8	**150.87**	**290**	PKPbc	PKPbc	23 32 32.0	-2.3

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*JMA **01** 23:15:38.3±0.2, 24°.44N×121°.84E, h49^{km}±4^{km}, M2.9*
*TAP **01** 23:15:38.9, 24°.51N×121°.90E, h29^{km}, ML3.7, B*
*ISCJB **01** 23:15:39.2±0.2, 24°.52N±0°.01×121°.96E±0°.01, h27^{km}±2^{km}, Error ellipse: s-maj=2.4km s-min=2.0km az=144.9*
ISC 01 23:15:39.4±0.9**, 24°.52N**±0°.02×**121°.93E**±0°.02**, h27**^{km}±5^{km}**, n114, σ0ˢ.88**/186**, 10C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao** baz=342	**0.12**	**323**	*i* P	Pb	23 15 44.3	-0.1
TWC	baz=342			*i* S	Sb	23 15 47.9	+0.1
EOS1	**EOS1** baz=73	**0.19**	**80**	⇑P	Pb	23 15 45.8	+0.7
EOS1	baz=73			*e*S	Sb	23 15 50.4	+1.5
ENA	**Nanau** baz=239	**0.19**	**242**	⇓*i*P	Pb	23 15 44.7	-0.4
ENA	baz=239			S	Sb	23 15 48.8	-0.2
ILA	**Ilan** baz=329	**0.30**	**327**	P	Pb	23 15 46.6	+0.1
ILA	baz=329			S	Sb	23 15 52.2	+0.9
TWE	**Neicheng** baz=317	**0.31**	**311**	⇑P	Pb	23 15 46.6	-0.1
TWE	baz=317			S	Sb	23 15 51.4	-0.4
EGS	baz=3.0	**0.33**	**1**	⇓*i*P	Pb	23 15 47.2	+0.2
EGS	baz=3.0			S	Sb	23 15 52.5	+0.3
NTC	**Toucheng** baz=357	**0.35**	**345**	⇓*e*P	Pb	23 15 47.2	-0.1
NTC	baz=357			*e*S	Sb	23 15 53.2	+0.6
ENTT	**Nioudou** baz=294	**0.35**	**291**	⇑*i*P	Pb	23 15 47.1	-0.2
ENTT	baz=294			*i* S	Sb	23 15 52.3	-0.4
NDT	**Datong Townshi** baz=285	**0.39**	**283**	⇑*i*P	Pb	23 15 47.7	-0.1
NDT	baz=285			S	Sb	23 15 53.3	-0.3
NACB	**Ninganchiao** baz=223	**0.46**	**222**	⇓P	Pb	23 15 47.9	-1.1
NACB	baz=223			S	Sb	23 15 55.9	+0.5
TIPB	**Shuangxi** baz=355	**0.46**	**349**	⇓*i*P	Pb	23 15 49.3	+0.2
TIPB	baz=355			S	Sb	23 15 56.0	+0.3
NWLT	**Wulai** baz=307	**0.47**	**304**	P	Pb	23 15 48.8	-0.3
NWLT	baz=307			*e*S	Sb	23 15 55.2	-0.5
TWB1	**Santiao Chiao** baz=8.0	**0.49**	**7**	⇓P	Pb	23 15 49.5	-0.1
TWB1	baz=8.0			S	Sb	23 15 56.8	+0.3
NNSB	**Datong** baz=261	**0.50**	**260**	⇓P	Pb	23 15 49.2	-0.6
NNSB	baz=261			*e*S	Sb	23 15 55.9	-1.0
NNS	**Nan Shan** baz=259	**0.51**	**262**	⇓*i*P	Pb	23 15 49.2	-0.7
NNS	baz=259			*e*S	Sb	23 15 56.2	-0.9
YHNB	**Yeheng** baz=294	**0.52**	**287**	⇑P	Pb	23 15 49.7	-0.4
YHNB	baz=294			S	Sb	23 15 56.2	-1.2
TWD	**Chiawan** baz=212	**0.53**	**215**	⇓*i*P	Pb	23 15 49.4	-0.7
TWD	baz=212			S	Sb	23 15 58.2	+0.8
NSK	**Sanguang** baz=294	**0.54**	**287**	⇑*i*P	Pb	23 15 49.9	-0.5
NSK	baz=294			S	Sb	23 15 56.9	-1.1
TWA	**Mucha** baz=324	**0.56**	**326**	⇑P	Pb	23 15 50.8	+0.2
TWA	baz=324			S	Sn	23 15 58.8	-1.2
NWF	**Wu-fen Shan** baz=344	**0.57**	**347**	⇓*i*P	Pb	23 15 51.2	+0.3
NWF	baz=344			S	Sn	23 15 59.5	-0.9
WFSB	**Wu-fen Shan** baz=344	**0.57**	**347**	⇓P	Pb	23 15 51.3	+0.5
WFSB	baz=344			S	Sn	23 15 59.3	-1.0
NHDH	**Xindian Distri** baz=318	**0.57**	**321**	⇑*e*P	Pb	23 15 51.3	+0.3
NHDH	baz=318			S	Sb	23 15 58.5	-0.3
HWA	**Hwalien** baz=206	**0.61**	**209**	*e*P	Pb	23 15 50.9	-0.7
TAP	**Taipei** baz=327	**0.65**	**324**	P	Pn	23 15 52.7	-0.1
TAP	baz=327			S	Sn	23 16 01.8	-0.3
ENLB	**Shoufeng** baz=192	**0.68**	**206**	*e*P	Pb	23 15 52.4	-0.3
ENLB	baz=192			S	Sn	23 16 03.8	+0.8
YM01	**YM01** baz=346	**0.71**	**333**	P	Pb	23 15 53.3	+0.1
YM01	baz=346			S	Sn	23 16 03.1	-0.6
WHF	**Hehuan Shan** baz=244	**0.71**	**239**	⇓*i*P	Pb	23 15 52.6	-0.9
WHF	baz=244			S	Sb	23 16 02.8	-0.2
YM11	**YM11** baz=347	**0.72**	**334**	*e*P	Pb	23 15 53.3	-0.1
YM11	baz=347			*e*S	Sn	23 16 03.4	-0.8
YM05	**YM05** baz=347	**0.72**	**333**	*e*P	Pb	23 15 53.5	0.0
YM05	baz=347			*e*S	Sn	23 16 03.6	-0.6
YM04	**YM04** baz=333	**0.73**	**331**	*e*P	Pb	23 15 53.4	-0.1
YM04	baz=333			*e*S	Sn	23 16 03.6	-0.6
TWT	**Tachien** baz=245	**0.73**	**249**	*e*P	Pb	23 15 53.2	-0.5
TWT	baz=245			*e*S	Sn	23 16 04.2	-0.4
YM08	**YM08** baz=338	**0.73**	**335**	*e*P	Pb	23 15 53.2	-0.4
YM08	baz=338			*e*S	Sb	23 16 03.2	-0.1
TWS1	**Kuangyinshan** baz=334	**0.74**	**322**	P	Pn	23 15 54.0	-0.1
TWS1	baz=334			S	Sn	23 16 04.9	+0.3
TDCB	**Techi** baz=245	**0.75**	**250**	⇓P	Pb	23 15 53.2	-0.7
TDCB	baz=245			*e*S	Sb	23 16 03.6	-0.2
NTST	**Danshui** baz=337	**0.78**	**326**	*e*P	Pn	23 15 54.5	-0.1
NTST	baz=337			*e*S	Sn	23 16 05.9	+0.5
NCU	**National Centr** baz=306	**0.81**	**304**	P	Pn	23 15 55.1	0.0
NCU	baz=306			S	Sn	23 16 07.2	+1.0
NCUH	**Zhongli** baz=305	**0.81**	**304**	*e*P	Pn	23 15 55.1	0.0
NCUH	baz=305			*e*S	Sn	23 16 07.3	+1.1
TWY	**Chenhua** baz=341	**0.81**	**339**	*e*P	Pn	23 15 55.4	+0.3
TWY	baz=341			S	Sn	23 16 06.2	0.0
CHGB	**Renai** baz=236	**0.82**	**237**	⇓P	Pb	23 15 54.4	-0.9
CHGB	baz=236			*e*S	Sn	23 16 07.8	+0.9
ESL	**Shilin** baz=223	**0.83**	**213**	*e*P	Pb	23 15 53.6	-1.6
LIOB	**Emei** baz=280	**0.84**	**279**	⇑P	Pn	23 15 55.6	+0.1
LIOB	baz=280			*e*S	Sn	23 16 07.6	+0.6
NSTT	**Nanjuang** baz=279	**0.85**	**278**	⇑*i*P	Pn	23 15 55.7	+0.1
NSTT	baz=279			*e*S	Sn	23 16 07.1	-0.1
SBCB	**Hsinchu** baz=289	**0.90**	**288**	*e*P	Pn	23 15 56.4	+0.1
SBCB	baz=289			*e*S	Sn	23 16 09.7	+1.2
HSN	**Hsinchu** baz=292	**0.92**	**288**	*e*P	Pn	23 15 56.5	0.0
HSN	baz=292			*e*S	Sn	23 16 09.6	+0.7
WHP	**Taichung City** baz=247	**0.93**	**255**	*e*P	Pb	23 15 57.0	+0.1
WHP	baz=247			*e*S	Sn	23 16 09.3	+0.1
JYNG	**Yonagunijimaku**	**0.93**	**94**	P	Pn	23 15 56.1	-0.6
JYNG				S	Sb	23 16 09.6	+0.7
EGFH	**Guangfu** baz=219	**0.96**	**208**	*e*P	Pn	23 15 54.9	-2.2
YOJ	**Yonaguni jima** baz=83	**0.99**	**93**	*e*P	Pn	23 15 57.1	-0.4
YOJ	baz=83			*e*S	Sn	23 16 10.9	+0.2
YOJ	**Yonaguni jima**	**0.99**	**93**	P	Pn	23 15 56.9	-0.6
YOJ				*e*S	Sn	23 16 10.4	-0.2
NMLH	**Miaoli** baz=272	**1.03**	**271**	*e*P	Pb	23 15 58.9	+0.2
NMLH	baz=272			*e*S	Sn	23 16 13.8	+2.0
VWDT	**VWDT** baz=211	**1.04**	**224**	⇓P	Pn	23 15 57.6	-0.7
VWDT	baz=211			*e*S	Sn	23 16 11.8	-0.2
TWQ1	**Liyutan** baz=261	**1.06**	**261**	P	Pb	23 15 59.8	+0.6
TWQ1	baz=261			*e*S	Sb	23 16 13.9	+1.2
NSY	**Sanyi** baz=273	**1.07**	**265**	*e*P	Pb	23 15 59.0	-0.2
NSY	baz=273			*e*S	Sb	23 16 14.9	+2.1
PTSB	**Yuanli** baz=267	**1.11**	**267**	*e*P	Pb	23 15 59.8	-0.3
PCYT	**Pengchaiyu** baz=8.0	**1.12**	**7**	*e*P	Pn	23 15 58.4	-0.9
HGSD	**Ruisui** baz=217	**1.12**	**204**	*e*P	Pn	23 15 58.9	-0.4
HGSD	baz=217			*e*S	Sb	23 16 15.6	+1.4
SMLT	**Sun Moon Lake** baz=242	**1.13**	**236**	⇓P	Pn	23 15 59.4	-0.2
SMLT	baz=242			*e*S	Sb	23 16 14.6	-0.1
SSLB	**Suanglung** baz=219	**1.15**	**231**	⇓P	Pn	23 15 59.3	-0.5
SSLB	baz=219			*e*S	Sb	23 16 15.3	+0.1
EHY	**Hungye** baz=218	**1.15**	**209**	*e*P	Pn	23 15 57.9	-1.9
TYC	**Yuchr** baz=237	**1.15**	**238**	⇓*i*P	Pn	23 15 59.8	+0.1
TYC	baz=237			S	Sb	23 16 15.4	+0.2
WDJ	**Dajia District** baz=269	**1.18**	**262**	*e*P	Pb	23 16 01.1	-0.1
WDJ	baz=269			*e*S	Sb	23 16 18.2	+2.0
TCU	**Taichung** baz=243	**1.20**	**252**	*e*P	Pb	23 16 01.2	-0.2
YULB	**Yu-li** baz=207	**1.26**	**207**	*e*P	Pn	23 15 59.2	-2.0
WHYT	**Xinyi Township** baz=218	**1.28**	**230**	*e*P	Pn	23 16 01.9	+0.4
WHYT	baz=218			*e*S	Sb	23 16 20.9	+2.1
TWF1	**Yuli** baz=217	**1.29**	**207**	*e*P	Pn	23 15 59.6	-2.1
WJS	**Zhushan** baz=237	**1.29**	**238**	*e*P	Pn	23 16 02.4	+0.7
WJS	baz=237			*e*S	Sb	23 16 21.0	+1.7
WNT	**Mingjian** baz=240	**1.30**	**241**	*e*P	Pb	23 16 02.8	-0.4
WNT	baz=240			*e*S	Sb	23 16 21.2	+1.7
WCHH	**Zhanghua** baz=251	**1.32**	**251**	*e*P	Pn	23 16 02.6	+0.5
CHN5	**Tsauling** baz=231	**1.46**	**232**	⇓P	Pn	23 16 05.3	+1.2
CHN5	baz=231			*e*S	Sb	23 16 25.0	+0.8
WGK	**Gukeng** baz=236	**1.50**	**237**	*e*P	Pb	23 16 06.1	-0.5
WGK	baz=236			*e*S	Sb	23 16 27.0	+1.9
CHKT	**Chengkung** baz=186	**1.50**	**200**	*e*P	Pn	23 16 03.6	-1.0
WDLH	**Douliu** baz=254	**1.51**	**237**	*e*P	Pb	23 16 06.0	-0.7
RLNB	**Erlin** baz=247	**1.56**	**247**	*e*P	Pn	23 16 06.2	+0.8
ELDTW	**Lidau** baz=201	**1.56**	**212**	*e*P	Pn	23 16 04.3	-1.3
WTCT	**Ta-ch'eng** baz=247	**1.64**	**247**	*e*P	Pn	23 16 05.4	-1.0
CHN2	**Minshiung** baz=233	**1.65**	**234**	*e*P	Pb	23 16 09.0	-0.1
CHN2	baz=233			*e*S	Sb	23 16 31.7	+2.2
IRIF	**Iriomote-Funau**	**1.65**	**96**	P	Pn	23 16 05.9	-0.8
IRIF				S	Sn	23 16 27.8	+0.7
CHN4	**Tsaushan** baz=215	**1.68**	**227**	*e*P	Pb	23 16 09.0	-0.7
CHN4	baz=215			S	Sb	23 16 31.9	+1.4
TPUB	**Ta-pu** baz=213	**1.69**	**225**	*e*P	Pn	23 16 08.8	+1.5
TPUB	baz=213			*e*S	Sb	23 16 31.4	+0.5
CHY	**Chiayi** baz=250	**1.71**	**234**	*e*P	Pn	23 16 08.5	+1.1
STYT	**Tauyuan** baz=218	**1.72**	**219**	*e*P	Pn	23 16 07.8	+0.2
WTP	**Ta-pu** baz=214	**1.74**	**224**	*e*P	Pn	23 16 09.5	+1.5
WTP	baz=214			*e*S	Sb	23 16 32.5	+0.2
HATJ	**Hateruma jima**	**1.77**	**105**	P	Pn	23 16 09.2	+0.9
HATJ				*e*S	Sn	23 16 30.8	+0.8
WSF	**Szhu** baz=241	**1.79**	**241**	*e*P	Pn	23 16 09.0	+0.5
TWK	**Hsinying** baz=225	**1.81**	**227**	*e*P	Pn	23 16 10.3	+1.4
TWK	baz=225			*e*S	Sb	23 16 34.4	+0.2
SNST	**Tainan City** baz=224	**1.84**	**226**	*e*P	Pn	23 16 10.6	+1.4
SNST				*e*S	Sb	23 16 34.6	-0.3

	baz=224						
CHN1	**Nanshi**	**1.84**	**224**	*e*P	**Pn**	**23 16 10.5**	**+1.2**
	baz=223						
CHN1				*e*S	**Sb**	**23 16 35.7**	**+0.6**
	baz=223						
TWG	**Pinlang**	**1.86**	**205**	*e*P	**Pn**	**23 16 08.6**	**-1.0**
	baz=192						
TWGBT	**Beinan**	**1.86**	**205**	*e*P	**Pn**	**23 16 08.5**	**-1.0**
	baz=192						
SGST	**Jiashian**	**1.89**	**221**	*e*P	**Pn**	**23 16 11.4**	**+1.6**
	baz=220						
SLGT	**Liugui**	**1.92**	**218**	*e*P	**Pn**	**23 16 11.9**	**+1.5**
	baz=218						
JKRS	**Kuro-shima**	**1.92**	**98**	P	**Pn**	**23 16 10.4**	**+0.1**
JKRS				*e*S	**Sn**	**23 16 33.6**	**0.0**
JIJ	**Ishigaki jima**	**2.03**	**94**	*e*S	**Sn**	**23 16 34.9**	**-1.3**
ECL	**Taimali**	**2.11**	**205**	*e*P	**Pn**	**23 16 12.4**	**-0.6**
	baz=194						
SSD	**Sandimen**	**2.12**	**214**	*e*P	**Pn**	**23 16 15.0**	**+1.8**
	baz=200						
JISG	**Ishigakijimahi**	**2.17**	**88**	P	**Pn**	**23 16 13.2**	**-0.6**
JISG				*e*S	**Sn**	**23 16 39.9**	**0.0**
PTTC	**Pingtan**	**2.19**	**297**	*e*P	**Pn**	**23 16 13.0**	**-1.0**
	baz=296						
MASBT	**Mashibuluo**	**2.24**	**212**	*e*P	**Pn**	**23 16 15.3**	**+0.6**
	baz=199						
VWUC	**VWUC**	**2.30**	**282**	*e*P	**Pn**	**23 16 14.6**	**-1.0**
	baz=282						
EAST	**Anshuo**	**2.34**	**205**	*e*P	**Pn**	**23 16 16.8**	**+0.6**
	baz=195						
PNG	**Penghu**	**2.37**	**247**	*e*P	**Pn**	**23 16 15.8**	**-0.6**
	baz=247						
PHUB	**P'eng-hu**	**2.37**	**246**	*e*P	**Pn**	**23 16 15.2**	**-1.4**
	baz=245						
PHUB				*e*S	**Sn**	**23 16 43.3**	**-1.5**
	baz=245						
MATB	**Ma-tsu**	**2.42**	**313**	*e*P	**Pn**	**23 16 16.6**	**-0.7**
	baz=311						
WDGT	**Dungji**	**2.42**	**239**	*e*P	**Pn**	**23 16 17.8**	**+0.5**
	baz=239						
SCZT	**Fangliau**	**2.45**	**210**	*e*P	**Pn**	**23 16 19.3**	**+1.6**
	baz=197						
LAY	**Lan-yu**	**2.49**	**188**	*e*P	**Pn**	**23 16 16.8**	**-1.5**
	baz=178						
PTMZ	**Houxiangcun**	**2.60**	**282**	*e*P	**Pn**	**23 16 19.2**	**-0.5**
	baz=281						
VCHM	**Qimei**	**2.63**	**241**	*e*P	**Pn**	**23 16 19.8**	**-0.3**
	baz=240						
LYJJ	**Jianjiangzhen**	**2.82**	**316**	*e*P	**Pn**	**23 16 22.1**	**-0.5**
	baz=315						
XPSS	**Dashiqiu**	**2.87**	**327**	*e*P	**Pn**	**23 16 22.6**	**-0.7**
	baz=327						
MHZQ	**Yeshan**	**3.06**	**302**	*e*P	**Pn**	**23 16 25.4**	**-0.6**
	baz=300						
KNM	**Kinmen**	**3.18**	**269**	*e*P	**Pn**	**23 16 29.1**	**+1.4**
	baz=268						
KNMB	**Chin-men Tao**	**3.22**	**270**	*e*P	**Pn**	**23 16 28.1**	**-0.2**
	baz=269						
AXDP	**Jialang**	**3.62**	**277**	*e*P	**Pn**	**23 16 33.5**	**-0.2**
	baz=276						

*ISCJB **01** 23:16:02.1±0.3, 13°.80N±0°.05×144°.49E±0°.06, h144^{km}, mb4.1/49, Error ellipse: s-maj=8.2km s-min=7.0km az=170.2*

*IDC **01** 23:16:03.7±0.3, 13°.81N×144°.64E, h149^{km}±3^{km}, mb3.8/28, mb1 3.9/28, mb1mx3.8/53, mbtmp4.2/28, Error ellipse: s-maj=13.6km s-min=10.9km az=76.0*

*NEIC **01** 23:16:04.7±0.7, 13°.81N×144°.62E, h157^{km}±6^{km}, mb4.4/21, Error ellipse: s-maj=7.5km s-min=5.8km az=92.0*

ISC 01 23:16:03.6±0.5, 13°.86N±0°.08×144°.6E±0°.1, h144^{km}, n79, σ1^s.03/77, mb4.3/56, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.36**	**137**	*e*Pn	**Pn**	**23 16 25.7**	**+2.1**
GUMO				*e*Sn	**Sn**	**23 16 41.6**	**+2.7**
GUMO	**Guam**	**0.36**	**137**	P	**Pn**	**23 16 25.7**	**+2.1**
	742nm,0.3s,baz=277,slow=1.4,SNR=113						
GUMO				S	**Sn**	**23 16 41.0**	**+2.2**
	263nm,0.3s,baz=269,slow=23,SNR=18						
JOW	**Kunigami**	**20.00**	**313**	P	**P**	**23 20 26.8**	**+1.7**
	1.3nm,0.6s,baz=142,slow=14,SNR=4.2						
FAKI	**Fak Fak**	**20.69**	**217**	*e*P	**P**	**23 20 33.8**	**+1.3**
	37nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**21.69**	**75**	T	T	23 43 32.1	
	baz=260,slow=75,SNR=5.2						
H11S1	**WAKE ISLAND Hy**	**21.70**	**75**	T	T	23 43 33.4	
	baz=260,slow=75,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**21.70**	**75**	T	T	23 43 33.1	
	baz=260,slow=75,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**22.10**	**72**	T	T	23 44 04.7	
	baz=257,slow=75,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**22.11**	**72**	T	T	23 44 04.8	
	baz=257,slow=75,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	**22.12**	**72**	T	T	23 44 05.2	
	baz=257,slow=75,SNR=5.6						
JNU	**Nakatsue**	**22.90**	**329**	P	**P**	**23 20 55.0**	**0.0**
	3.5nm,0.4s,baz=59,slow=1.4,SNR=5.3						
MJAR	**Matsushiro Arr**	**23.31**	**347**	P	**P**	**23 20 58.4**	**-0.3**
	4.6nm,0.5s,baz=171,slow=5.7,SNR=17						
MAJO	**Matsushiro**	**23.31**	**347**	*e*P	**P**	**23 20 59.7**	**+1.0**
	23nm,1.1s						
MJB9	**Matsu-Tunnel**	**23.31**	**347**	*e*P	**P**	**23 20 59.3**	**+0.5**
	22nm,1.1s						
KSRS	**Korea Array**	**27.81**	**331**	P	**P**	**23 21 39.6**	**+0.4**
	6.7nm,0.9s,baz=142,slow=9.2,SNR=9.9						
KSAR	**Wonju Array Be**	**27.82**	**331**	P	**P**	**23 21 39.6**	**+0.3**
USRK	**Ussuriysk Ar.**	**32.11**	**343**	P	**P**	**23 22 18.2**	**+1.2**
	2.3nm,0.7s,baz=162,slow=9.5,SNR=4.8						
WRAB	**Tennant Creek**	**35.06**	**197**	*e*P	**P**	**23 22 42.3**	**-0.7**
	12nm,0.8s						
WB2	**Warramunga Arr**	**35.07**	**197**	*e*P	**P**	**23 22 42.5**	**-0.5**
	13nm,1.2s						
WRA	**Warramunga Arr**	**35.08**	**197**	P	**P**	**23 22 42.1**	**-1.0**
	1.0nm,0.5s,baz=18,slow=9.3,SNR=12						
KLR	**Kul'dur**	**36.83**	**346**	P	**P**	**23 22 57.8**	**+0.1**
	1.2nm,0.5s,baz=167,slow=9.9,SNR=6.1						
FITZ	**Fitzroy Crossi**	**36.86**	**211**	*e*P	**P**	**23 22 57.5**	**-0.7**
	3.8nm,1.1s						
AS31	**Alice Springs**	**38.73**	**196**	*e*P	**P**	**23 23 13.1**	**-0.8**
	1.9nm,1.5s						
ASAR	**Alice Springs**	**38.74**	**196**	P	**P**	**23 23 12.7**	**-1.3**
	0.6nm,0.4s,baz=17,slow=13,SNR=14						
HHC	**Hu-ho-hao-te**	**39.41**	**319**	*e*P	**P**	**23 23 20.4**	**+0.9**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,2μm,7.6s						
PETK	**Petropavlovsk-**	**40.52**	**12**	P	**P**	**23 23 29.7**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=197,slow=14,SNR=2.5						
PETK				PcP	**PcP**	**23 25 26.7**	**-1.3**
	comp=Z,2.3nm,0.8s,baz=205,slow=5.7,SNR=4.3						
HIA	**Hailar**	**40.80**	**335**	*e*P	**P**	**23 23 30.8**	**0.0**
	comp=Z,3.4nm,0.4s						
CM01	**Chiang Mai Arr**	**44.01**	**282**	*e*P	**P**	**23 23 57.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**44.02**	**282**	P	**P**	**23 23 57.0**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=88,slow=6.1,SNR=14						
STKA	**Stephens Creek**	**45.56**	**184**	P	**P**	**23 24 08.4**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=0.0,slow=14,SNR=2.4						
SONM	**Songino Array**	**46.37**	**325**	P	**P**	**23 24 16.5**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=140,slow=7.8,SNR=9.3						
SONA1	**Songino Array**	**46.37**	**325**	*e*P	**P**	**23 24 16.2**	**+0.7**
GTA	**Gaotai**	**46.81**	**312**	*e*P	**P**	**23 24 19.6**	**+0.5**
GTA				pP	pP	23 24 25.3	-25
GTA				sP	pwP	23 24 28.8	-27
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SEY	**Seymchan**	**49.32**	**5**	P	**P**	**23 24 38.6**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=218,slow=8.1,SNR=4.4						
LSA	**Lhasa**	**51.65**	**297**	*e*P	**P**	**23 24 57.1**	**+0.7**
	comp=Z,3.9nm,0.6s						
JIRN	**Jiri**	**55.87**	**294**	*e*P	**P**	**23 25 26.6**	**-0.5**
	comp=Z,8.2nm,0.6s						
GUN	**Gumba**	**56.16**	**294**	*e*P	**P**	**23 25 28.2**	**-0.8**
	comp=Z,7.3nm,0.6s						
PKI	**Pulchoki**	**56.56**	**294**	*e*P	**P**	**23 25 31.1**	**-0.8**
	comp=Z,5.1nm,0.8s						
DMN	**Daman**	**56.84**	**294**	*e*P	**P**	**23 25 32.9**	**-0.8**
	comp=Z,6.7nm,0.6s						
DANN	**Dangsing**	**58.04**	**295**	*e*P	**P**	**23 25 41.4**	**-0.8**
	comp=Z,13nm,0.5s						
KOLN	**Koldanda**	**58.17**	**294**	*e*P	**P**	**23 25 42.2**	**-0.8**
	comp=Z,3.4nm,0.5s						
PYUN	**Piuthan**	**58.71**	**295**	*e*P	**P**	**23 25 46.4**	**-0.4**
	comp=Z,7.9nm,0.8s						
MK01	**Makanchi Array**	**61.12**	**316**	*e*P	**P**	**23 26 02.7**	**+0.1**
MK31	**Makanchi Array**	**61.13**	**316**	*e*P	**P**	**23 26 02.8**	**+0.1**
MKAR	**Makanchi Array**	**61.13**	**316**	P	**P**	**23 26 02.7**	**0.0**
	comp=Z,2.2nm,0.4s,baz=94,slow=8.4,SNR=65						
ZALV	**Zalesovo Beam**	**61.26**	**324**	*e*P	**P**	**23 26 00.4**	**-3.0**
MAKZ	**Makanchi**	**61.34**	**316**	*e*P	**P**	**23 26 04.3**	**+0.1**
	comp=Z,4.1nm,0.4s						
KURK	**Kurchatov**	**64.22**	**320**	*e*P	**P**	**23 26 22.5**	**-0.5**
KURBB	**Kurchatov Arra**	**64.26**	**320**	P	**P**	**23 26 22.9**	**-0.5**
	comp=Z,3.5nm,0.5s,baz=102,slow=6.6,SNR=27						
NRIK	**Noril'sk**	**65.80**	**341**	P	**P**	**23 26 32.5**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=108,slow=3.2,SNR=3.4						
AAK	**Ala-Archa**	**66.15**	**311**	P	**P**	**23 26 35.0**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=155,slow=9.1,SNR=3.8						
NIL	**Nilore**	**67.03**	**301**	*e*P	**P**	**23 26 41.4**	**-0.1**
	comp=Z,4.9nm,0.6s						
ILAR	**Eielson Array**	**68.43**	**25**	P	**P**	**23 26 47.7**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=250,slow=5.8,SNR=22						
IL1	**Eielson Array**	**68.43**	**25**	*e*P	**P**	**23 26 47.9**	**-1.8**
BVAR	**Borovoye Array**	**69.56**	**322**	P	**P**	**23 26 55.9**	**-0.9**
	comp=Z,2.0nm,0.4s,baz=110,slow=7.7,SNR=33						
INK	**Inuvik**	**74.22**	**22**	P	**P**	**23 27 23.8**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=253,slow=8.0,SNR=4.5						
YKA	**Yellowknife Ar**	**82.74**	**27**	P	**P**	**23 28 09.4**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=288,slow=5.0,SNR=8.2						
YBH	**Yreka Blue Hor**	**82.88**	**49**	P	**P**	**23 28 11.0**	**-1.5**
YBH	**Yreka Blue Hor**	**82.88**	**49**	P	**P**	**23 28 11.0**	**-1.5**
	comp=Z,2.7nm,0.8s,baz=325,slow=5.5,SNR=9.5						
PINE	**Pine Mountain**	**83.71**	**47**	*e*P	**P**	**23 28 17.2**	**+0.4**
	comp=Z,6.6nm,0.8s						
SPITS	**Spitsbergen Ar**	**83.75**	**351**	P	**P**	**23 28 16.0**	**-0.1**
	baz=16,slow=11						
NEW	**Newport**	**85.19**	**42**	P	**P**	**23 28 23.5**	**-0.5**
	comp=Z,4.2nm,0.8s,baz=278,slow=3.7,SNR=6.9						
BMO	**Blue Mountains**	**85.97**	**45**	*e*P	**P**	**23 28 28.0**	**0.0**
	comp=Z,4.8nm,0.9s						
ARCES	**ARCESS Array B**	**86.75**	**342**	P	**P**	**23 28 31.4**	**+0.3**
	comp=Z,4.1nm,1.1s,baz=64,slow=6.1,SNR=3.3						
KVN	**Kaiserville**	**86.94**	**51**	*e*P	**P**	**23 28 33.2**	**+0.3**
	comp=Z,3.3nm,0.7s						
NV01	**Mina Array Sit**	**86.95**	**51**	*e*P	**P**	**23 28 32.9**	**-0.2**
NVAR	**Mina Array Bea**	**86.95**	**51**	P	**P**	**23 28 33.2**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=266,slow=6.0,SNR=25						
ELK	**Elko**	**88.58**	**48**	P	**P**	**23 28 40.8**	**0.0**
	comp=Z,5.2nm,0.8s,baz=301,slow=5.1,SNR=19						
TPNV	**Topopah Spring**	**88.92**	**52**	*e*P	**P**	**23 28 42.2**	**-0.1**
	comp=Z,5.6nm,0.7s						
PFO	**Pinyon Flats O**	**89.69**	**56**	P	**P**	**23 28 46.8**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=282,slow=2.0,SNR=4.5						
SHPR	**Sheep Range**	**89.88**	**52**	*e*P	**P**	**23 28 47.3**	**+0.5**
	comp=Z,3.6nm,0.8s						
HVU	**Hansel Valley**	**90.04**	**47**	*e*P	**P**	**23 28 47.9**	**+0.4**
	comp=Z,2.5nm,1.0s						
FINES	**FINESS Array B**	**90.81**	**335**	P	**P**	**23 28 48.3**	**-2.1**
	comp=Z,0.8nm,0.6s,baz=66,slow=4.4,SNR=6.6						
HWUT	**Hardware Ranch**	**90.95**	**47**	*e*P	**P**	**23 28 51.5**	**-0.2**
	comp=Z,1.8nm,0.8s						
W13A	**Hualapai Mount**	**91.29**	**53**	*e*P	**P**	**23 28 53.8**	**+0.3**
	comp=Z,2.1nm,0.8s						
PDAR	**Pinedale Array**	**91.95**	**45**	P	**P**	**23 28 56.0**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=221,slow=2.7,SNR=5.2						
U15A	**North Rim**	**92.11**	**52**	*e*P	**P**	**23 28 58.1**	**+0.8**
	comp=Z,2.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**134.51**	**305**	PKP	**PKPdf**	**23 35 04.8**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=27,slow=3.6,SNR=5.2						
LPAZ	**La Paz**	**148.31**	**99**	PKP	**PKPdf**	**23 35 31.2**	**+0.2**
	comp=Z,3.6nm,0.6s,baz=271,slow=1.8,SNR=3.8						
LPAZ				PKPbc	**PKiKP**	**23 35 35.3**	**-0.8**
	comp=Z,3.0nm,0.5s,baz=341,slow=9.8,SNR=13						

*IDC **01** 23:36:34.6±0.9, 11°.25S×165°.75E, h0^{km}, mb4.1/12, mb1 4.3/14, mb1mx4.1/41, mbtmp4.1/14, ML4.7/2, MS4.1/1, Ms1 4.1/1, ms1mx3.7/41, Error ellipse: s-maj=32.2km s-min=18.0km az=138.0*

*NEIC **01** 23:36:36.5±0.4, 11°.14S×165°.63E, h10^{km}, mb4.5/10, Error ellipse: s-maj=11.7km s-min=8.8km az=130.0*

*ISCJB **01** 23:36:38.4±0.4, 11°.27S±0°.06×165°.48E±0°.06, h30^{km}, mb4.2/20, Error ellipse: s-maj=9.1km s-min=8.8km az=150.0*

ISC 01 23:36:39.8±0.6, 11°.12S±0°.09×165°.58E±0°.09, h30^{km}, n49, σ1^s.44/46, mb4.2/20, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.79**	**286**	Pn	**Pn**	**23 38 04.4**	**+0.7**
	16nm,0.3s,baz=150,slow=14,SNR=3.0						
HNR				Sn	**Sn**	**23 39 07.0**	**-2.1**
	15nm,0.3s,baz=173,slow=17,SNR=2.8						
HNR				LR	LR	23 40 40.8	
	comp=Z,1μm,19.2s,baz=136,slow=41						
DZM	**Mont Dzumac**	**10.92**	**176**	Pn	**Pn**	**23 39 12.5**	**-1.7**
	7.0nm,0.3s,baz=6.2,slow=19,SNR=53						
OUENC	**Ouen Island, N**	**11.30**	**174**	*e*Pn	**Pn**	**23 39 20.1**	**+0.8**
CTA	**Charters Tower**	**20.62**	**242**	P	**P**	**23 41 17.0**	**+0.1**
	7.9nm,0.8s,baz=64,slow=14,SNR=7.6						
CTAO	**Charters Tower**	**20.62**	**242**	*e*P	**P**	**23 41 16.7**	**-0.1**
	18nm,1.0s						
COEN	**Coen**	**22.05**	**260**	*e*P	**P**	**23 41 32.4**	**+0.1**
	20nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**29.45**	**2**	T	T	00 13 24.9	
	baz=182,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.45**	**2**	T	T	00 13 32.0	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**29.46**	**2**	T	T	00 13 32.0	
	baz=182,slow=74						
STKA	**Stephens Creek**	**30.27**	**223**	P	**P**	**23 42 47.8**	**-0.5**
	3.3nm,0.7s,baz=44,slow=8.7,SNR=11						
H11N1	**WAKE ISLAND Hy**	**30.67**	**2**	T	T	00 15 06.7	
	baz=181						
H11N3	**WAKE ISLAND Hy**	**30.67**	**2**	T	T	00 15 16.6	
	baz=181						
H11N2	**WAKE ISLAND Hy**	**30.68**	**2**	T	T	00 15 03.3	
	baz=181						
THZ	**Tophouse**	**31.19**	**169**	*e*P	**P**	**23 42 58.2**	**+1.8**
	9.6nm,1.0s						
WC3	**Warramunga Arr**	**31.27**	**250**	*e*P	**P**	**23 42 55.4**	**-1.9**
	8.6nm,1.1s						
WB2	**Warramunga Arr**	**31.29**	**250**	*e*P	**P**	**23 42 56.5**	**-0.9**
WR1	**Warramunga Arr**	**31.30**	**250**	*e*P	**P**	**23 42 56.8**	**-0.8**
	7.6nm,0.9s						
WRA	**Warramunga Arr**	**31.30**	**250**	P	**P**	**23 42 56.8**	**-0.8**
	4.2nm,0.6s,baz=82,slow=8.8,SNR=24						
TOO	**Toolangi**	**31.92**	**211**	*e*P	**P**	**23 43 02.5**	**-0.3**
	7.2nm,1.0s						
AS01	**Alice Springs**	**32.57**	**243**	*e*P	**P**	**23 43 07.7**	**-1.0**
AS31	**Alice Springs**	**32.61**	**243**	*e*P	**P**	**23 43 07.8**	**-1.3**
	0.8nm,0.6s						
ASAR	**Alice Springs**	**32.61**	**243**	P	**P**	**23 43 07.8**	**-1.3**
	1.3nm,0.5s,baz=65,slow=10,SNR=30						
CM31	**Chiang Mai Arr**	**71.99**	**294**	*e*P	**P**	**23 48 03.2**	**+2.0**
CMAR	**Chiang Mai Arr**	**71.99**	**294**	P	**P**	**23 48 03.2**	**+2.0**
	0.5nm,0.3s,baz=120,slow=11,SNR=2.8						
SONA0	**Songino Array**	**78.63**	**324**	*e*P	**P**	**23 48 40.4**	**+1.4**
SONM	**Songino Array**	**78.63**	**324**	P	**P**	**23 48 40.4**	**+1.4**
	0.3nm,0.6s,baz=140,slow=9.2,SNR=3.3						
HDA	**Harding Lake**	**83.37**	**19**	*e*P	**P**	**23 49 04.5**	**+0.8**
	9.8nm,0.9s						
ILAR	**Eielson Array**	**83.64**	**19**	P	**P**	**23 49 04.2**	**-0.8**
	0.8nm,0.6s,baz=234,slow=5.0,SNR=9.8						
ILB	**Eielson Array**	**83.64**	**19**	*e*P	**P**	**23 49 04.2**	**-0.8**
AFDM	**Forest Hills D**	**84.38**	**49**	*e*P	**P**	**23 49 11.3**	**+1.8**
	2.6nm,0.9s						
NV01	**Mina Array Sit**	**86.20**	**50**	*e*P	**P**	**23 49 18.7**	**-0.2**
NVAR	**Mina Array Bea**	**86.20**	**50**	P	**P**	**23 49 18.7**	**-0.2**
	0.9nm,0.8s,baz=250,slow=5.3,SNR=5.7						
H17A	**Grant Village**	**93.34**	**46**	*e*P	**P**	**23 49 49.8**	**-2.6**
	3.1nm,0.6s						
MK01	**Makanchi Array**	**93.45**	**317**	*e*P	**P**	**23 49 51.6**	**-0.9**
MK31	**Makanchi Array**	**93.46**	**317**	*e*P	**P**	**23 49 54.1**	**+1.5**
MK32	**Makanchi Array**	**93.46**	**317**	*e*P	**P**	**23 49 53.5**	**+0.9**
MKAR	**Makanchi Array**	**93.46**	**317**	P	**P**	**23 49 53.5**	**+0.9**
	0.8nm,0.9s,baz=92,slow=7.2,SNR=4.9						
ZALV	**Zalesovo Beam**	**93.52**	**324**	P	**P**	**23 49 54.2**	**+1.6**
	0.2nm,0.3s,baz=92,slow=4.3,SNR=2.5						
ZAA1	**Zalesovo Array**	**93.52**	**324**	*e*P	**P**	**23 49 54.2**	**+1.6**
PD31	**Pinedale Array**	**93.73**	**47**	*e*P	**P**	**23 49 51.5**	**-2.7**
PDAR	**Pinedale Array**	**93.73**	**47**	P	**P**	**23 49 53.2**	**-1.0**
	0.5nm,0.9s,baz=250,slow=2.7,SNR=2.7						
YKA	**Yellowknife Ar**	**95.12**	**27**	P	**P**	**23 49 58.0**	**-1.7**
	0.3nm,0.7s,baz=258,slow=5.2,SNR=3.4						
YKB5	**Yellowknife Ar**	**95.12**	**27**	*e*P	**P**	**23 49 56.2**	**-3.6**
ARA0	**ARCESS Array S**	**116.36**	**345**	*e*PKPdf	**PKPdf**	**23 55 19.9**	**-0.1**
ARCES	**ARCESS Array B**	**116.36**	**345**	PKP	**PKPdf**	**23 55 19.9**	**-0.1**
	2.0nm,1.0s,baz=99,slow=2.8,SNR=5.5						
FIA0	**FINESS Array S**	**121.78**	**338**	*e*PKPdf	**PKPdf**	**23 55 29.8**	**-0.7**
FINES	**FINESS Array B**	**121.78**	**338**	PKP	**PKPdf**	**23 55 29.8**	**-0.7**
	1.9nm,0.9s,baz=282,slow=16,SNR=2.1						
TORD	**Torodi Ar. Bea**	**164.11**	**279**	PKP	**PKPdf**	**23 56 40.7**	**-0.6**
	0.7nm,1.1s,baz=85,slow=3.0,SNR=3.4						
TORD				PKPab	**PKPab**	**23 57 36.6**	**+1.8**
	0.7nm,1.1s,baz=126,slow=2.5,SNR=2.3						
TOA1	**Torodi Ar. Sit**	**164.11**	**279**	*e*PKPdf	**PKPdf**	**23 56 40.6**	**-0.6**
TOA1				*e*PKPab	**PKPab**	**23 57 36.6**	**+1.8**

IDC 01 23:42:12.7±1.4, 11°.26S×165°.12E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.7/42, mbtmp3.8/5, ML4.2/1, Error ellipse: s-maj=51.5km s-min=27.0km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.83**	**173**	Pn	Pn	23 44 48.7	-0.4
	1.9nm,0.3s,baz=309,slow=17,SNR=9.1						
WRA	**Warramunga Arr**	**30.83**	**250**	P	P	23 48 30.1	-0.6
	1.4nm,1.0s,baz=82,slow=9.7,SNR=3.7						
ASAR	**Alice Springs**	**32.14**	**243**	P	P	23 48 43.0	+0.7
	0.4nm,0.7s,baz=67,slow=10,SNR=2.5						
ILAR	**Eielson Array**	**83.91**	**19**	P	P	23 54 43.6	-0.6
	0.5nm,0.9s,baz=219,slow=6.4,SNR=3.7						
YKA	**Yellowknife Ar**	**95.45**	**27**	P	P	23 55 39.7	+0.8
	0.4nm,1.0s,baz=273,slow=4.5,SNR=4.6						

*IDC **01** 23:44:16.9±0.8, 11°.16S×165°.41E, h0^{km}, mb4.2/13, mb1 4.4/15, mb1mx4.1/44, mbtmp4.2/15, ML4.6/2, MS4.6/2, Ms1 4.6/2, ms1mx3.8/38, Error ellipse: s-maj=28.8km s-min=17.4km az=137.0*

*NEIC **01** 23:44:18.5±0.3, 11°.12S×165°.35E, h10^{km}, mb4.4/6, Error ellipse: s-maj=9.3km s-min=7.1km az=132.0*

*ISCJB **01** 23:44:20.0±0.4, 11°.27S±0°.07×165°.27E±0°.06, h30^{km}, mb4.2/18, MS4.6/2, Error ellipse: s-maj=9.5km s-min=8.4km az=12.6*

ISC 01 23:44:21.5±0.5, 11°.20S±0°.10×165°.32E±0°.09, h30^{km}, n52, σ1^s.02/50, mb4.2/18, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.58**	**288**	Pn	**Pn**	**23 45 42.8**	**+0.4**
	31nm,0.3s,baz=117,slow=4.5,SNR=3.2						
HNR				Sn	**Sn**	**23 46 45.7**	**+0.2**
	21nm,0.3s,baz=217,slow=20,SNR=6.0						
DZM	**Mont Dzumac**	**10.86**	**174**	Pn	**Pn**	**23 46 55.3**	**+0.2**
	2.5nm,0.3s,baz=355,slow=5.8,SNR=12						
OUENC	**Ouen Island, N**	**11.25**	**173**	*e*Pn	**Pn**	**23 47 01.8**	**+1.6**
CTA	**Charters Tower**	**20.36**	**242**	P	Pn	23 48 58.3	+0.4
	25nm,1.2s,baz=70,slow=9.2,SNR=5.7						
CTAO	**Charters Tower**	**20.36**	**242**	*e*P	**P**	**23 48 52.5**	**-3.2**
	10.0nm,1.0s						
COEN	**Coen**	**21.79**	**260**	*e*P	**P**	**23 49 11.1**	**0.0**
	31nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**29.54**	**3**	T	T	00 21 01.4	
	baz=182,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.54**	**3**	T	T	00 21 03.9	
	baz=182,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.55**	**3**	T	T	00 21 02.3	
	baz=182						
STKA	**Stephens Creek**	**30.04**	**223**	P	**P**	**23 50 28.2**	**+0.3**
	2.0nm,0.6s,baz=21,slow=8.6,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**30.76**	**3**	T	T	00 22 33.6	
	baz=183						
H11N3	**WAKE ISLAND Hy**	**30.77**	**3**	T	T	00 22 31.2	
	baz=183						
H11N2	**WAKE ISLAND Hy**	**30.78**	**3**	T	T	00 22 31.9	
	baz=183						
WRAB	**Tennant Creek**	**31.03**	**250**	*e*P	**P**	**23 50 34.3**	**-2.5**
WB2	**Warramunga Arr**	**31.03**	**250**	*e*P	**P**	**23 50 36.4**	**-0.5**
	7.6nm,0.9s						
WR1	**Warramunga Arr**	**31.04**	**250**	*e*P	**P**	**23 50 37.0**	**0.0**
	16nm,1.1s						
WR1				*e*PcP	**PcP**	**23 53 32.5**	**0.0**
WRA	**Warramunga Arr**	**31.04**	**250**	P	**P**	**23 50 37.0**	**0.0**
	13nm,1.2s,baz=80,slow=9.2,SNR=15						
WRA				PcP	**PcP**	**23 53 32.5**	**0.0**
	1.0nm,1.1s,baz=67,slow=2.5,SNR=3.6						
AS01	**Alice Springs**	**32.31**	**243**	*e*P	**P**	**23 50 47.9**	**-0.2**
AS31	**Alice Springs**	**32.35**	**243**	*e*P	**P**	**23 50 48.7**	**+0.2**
	0.7nm,0.5s						
ASAR	**Alice Springs**	**32.35**	**243**	P	**P**	**23 50 48.7**	**+0.2**
	2.1nm,0.8s,baz=64,slow=10,SNR=17						
ASAR				PcP	**PcP**	**23 53 37.1**	**+1.1**
	0.7nm,0.9s,baz=73,slow=3.1,SNR=4.4						
SIJI	**Sorong**	**35.34**	**285**	LR	LR	00 08 11.8	
	comp=Z,544nm,18.0s,baz=68,slow=40						
FITZ	**Fitzroy Crossi**	**38.94**	**255**	P	**P**	**23 51 45.4**	**+0.4**
	2.7nm,0.7s,baz=84,slow=5.7,SNR=5.6						
KLR	**Kul'dur**	**67.04**	**337**	P	**P**	**23 55 12.6**	**+1.0**
	1.4nm,1.0s,baz=90,slow=13,SNR=2.4						
KMI	**Kunming**	**70.85**	**302**	P	**P**	**23 55 37.6**	**+1.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.9s						
CMAR	**Chiang Mai Arr**	**71.80**	**294**	P	**P**	**23 55 42.0**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=114,slow=4.0,SNR=7.2						
SONA0	**Songino Array**	**78.55**	**324**	*e*P	**P**	**23 56 20.8**	**+0.6**
SONM	**Songino Array**	**78.55**	**324**	P	**P**	**23 56 20.8**	**+0.6**
	comp=Z,1.1nm,1.1s,baz=139,slow=7.0,SNR=4.9						
ILAR	**Eielson Array**	**83.79**	**19**	P	**P**	**23 56 47.4**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=236,slow=5.2,SNR=9.7						
ILB	**Eielson Array**	**83.79**	**19**	*e*P	**P**	**23 56 46.3**	**-1.3**
SCRK	**Sand Creek**	**84.21**	**20**	*e*P	**P**	**23 56 49.8**	**0.0**
	comp=Z,1.9nm,0.9s						
NV01	**Mina Array Sit**	**86.44**	**50**	*e*P	**P**	**23 57 00.4**	**-1.3**
NVAR	**Mina Array Bea**	**86.44**	**50**	P	**P**	**23 57 00.9**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=231,slow=7.5,SNR=5.5						
MK01	**Makanchi Array**	**93.34**	**317**	*e*P	**P**	**23 57 34.3**	**+0.6**
MK32	**Makanchi Array**	**93.35**	**317**	*e*P	**P**	**23 57 33.9**	**+0.1**
MKAR	**Makanchi Array**	**93.35**	**317**	P	**P**	**23 57 33.9**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=96,slow=7.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**93.44**	**324**	P	**P**	**23 57 33.8**	**-0.1**
	comp=Z,1.5nm,0.9s,baz=123,slow=5.5,SNR=6.7						
ZALV				LR	LR	00 41 16.9	
	comp=Z,376nm,18.1s,baz=252,slow=37						
ZAA1	**Zalesovo Array**	**93.44**	**324**	*e*P	**P**	**23 57 33.8**	**-0.1**
LTX	**Lajitas**	**96.27**	**61**	*e*P	**P**	**23 57 48.2**	**+0.6**
TXAR	**Lajitas Array**	**96.27**	**61**	P	**P**	**23 57 48.2**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=188,slow=2.5,SNR=2.5						
NIL	**Nilore**	**97.82**	**303**	*e*P	**P**	**23 57 53.9**	**-0.5**
KBL	**Kabul**	**101.39**	**303**	*e*Pdif	**Pdif**	**23 58 11.3**	**+0.7**
ARA0	**ARCESS Array S**	**116.38**	**345**	*e*PKPdf	**PKPdf**	**00 03 00.9**	**-0.8**
ARCES	**ARCESS Array B**	**116.38**	**345**	PKP	**PKPdf**	**00 03 00.9**	**-0.8**
	comp=Z,3.4nm,1.1s,baz=70,slow=1.4,SNR=10						
FIA0	**FINESS Array S**	**121.77**	**338**	*e*PKPdf	**PKPdf**	**00 03 12.2**	**0.0**
FINES	**FINESS Array B**	**121.77**	**338**	PKP	**PKPdf**	**00 03 12.2**	**0.0**
	comp=Z,2.4nm,1.0s,baz=45,slow=3.0,SNR=5.1						
AKASG	**Malin Array Be**	**126.77**	**327**	PKP	**PKPdf**	**00 03 20.8**	**-1.3**
	comp=Z,0.2nm,0.2s,baz=61,slow=1.1,SNR=5.1						
AKBB	**Malin Array Si**	**126.77**	**327**	*e*PKPdf	**PKPdf**	**00 03 18.7**	**-3.4**
GERES	**GERESS Array B**	**135.66**	**333**	PKP	**PKPdf**	**00 03 39.5**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=2.7,slow=2.8,SNR=3.7						
KEST	**Kesra**	**147.29**	**322**	PKPbc	**PKPab**	**00 04 03.8**	**-0.7**
	comp=Z,6.4nm,0.8s,baz=350,slow=1.7,SNR=6.9						
ESDC	**Sonseca Array**	**150.09**	**343**	PKPbc	**PKPbc**	**00 04 09.8**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=358,slow=7.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**163.88**	**279**	PKP	**PKPdf**	**00 04 23.4**	**+0.7**
	comp=Z,0.9nm,1.1s,baz=104,slow=2.2,SNR=4.2						
TORD				PKPab	**PKPab**	**00 05 16.3**	**+0.8**
	comp=Z,0.8nm,1.1s,baz=79,slow=3.2,SNR=3.7						
TOA1	**Torodi Ar. Sit**	**163.88**	**279**	*e*PKPdf	**PKPdf**	**00 04 23.4**	**+0.7**
TOA1				*e*PKPab	**PKPab**	**00 05 16.3**	**+0.8**

*ISCJB **01** 23:48:17.8±0.5, 44°.31N±0°.04×147°.98E±0°.06, h103^{km}±3^{km}, mb4.1/33, Error ellipse: s-maj=8.6km s-min=4.9km az=41.2*

*MOS **01** 23:48:18.3±1.0, 44°.36N×147°.92E, h111^{km}, mb4.2/20, Error ellipse: s-maj=8.8km s-min=7.7km az=86.4*

*JMA **01** 23:48:19.6±0.3, 44°.03N×148°.02E, h93^{km}, M4.2*

*SKHL **01** 23:48:19.1±0.4, 44°.33N×147°.90E, h105^{km}±14^{km}, mb5.2/8, msh6.6/6*

*IDC **01** 23:48:20.5±2.1, 44°.40N×147°.82E, h107^{km}±18^{km}, mb3.7/20, mb1 3.8/27, mb1mx3.7/52, mbtmp4.0/27, Error ellipse: s-maj=17.0km s-min=12.3km az=150.0*

ISC 01 23:48:18.8±0.7, 44°.28N±0°.05×147°.95E±0°.06, h99^{km}±5^{km}, n117, σ1^s.48/142, mb4.4/43, 3C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.91**	**243**	*i* P	**Pn**	**23 48 38.2**	**0.0**
SHO				AMB	AMB	23 48 39.0	

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       130nm,0.2s
SHO                                 AMB     AMB       23 48 39.0
       180nm,0.2s
SHO                                 AMB     AMB       23 48 39.0
       340nm,0.2s
SHO                                iS       Sn        23 48 51.7 -1.0
SHO                                 A       A         23 48 52.0
       2µm,0.3s
SHO                                 A       A         23 48 52.0
       840nm,0.3s
SHO    Shikotan          0.91 243d iPN      Pn        23 48 38.1 -0.1
SHO                                iS       Sn        23 48 51.5 -1.2
SHO                                 pmax    pmax
       comp=E,178nm,0.3s
SHO                                 pmax    pmax
       comp=Z,343nm,0.3s
SHO                                 pmax    pmax
       comp=N,125nm,0.2s
SHO                                 smax    smax
       comp=E,841nm,0.2s
SHO                                 smax    smax
       comp=N,2µm,0.3s
KUR    Kuril'sk          0.95 357  iP       Pn        23 48 38.4 -0.2
KUR                                 AMB     AMB       23 48 39.3
       comp=N,2µm,0.4s
KUR                                 AMB     AMB       23 48 39.3
       comp=N,3µm,0.4s
KUR                                 AMB     AMB       23 48 39.3
       comp=N,3µm,0.4s
KUR                                iS       Sn        23 48 52.7 -0.8
KUR                                 A       A         23 48 55.0
       comp=N,4µm,0.4s
KUR                                 A       A         23 48 55.0
       comp=N,4µm,0.4s
KUR    Kuril'sk          0.95 357d iPN      Pn        23 48 38.3 -0.3
KUR                                iS       Sn        23 48 52.6 -0.9
KUR                                 pmax    pmax
       comp=Z,3µm,0.4s
KUR                                 pmax    pmax
       comp=E,3µm,0.2s
KUR                                 pmax    pmax
       comp=N,2µm,0.4s
KUR                                 smax    smax
       comp=N,664nm,0.1s
KUR                                 smax    smax
       comp=E,4µm,0.2s
YUK    Yuzh-Kuril'sk     1.52 261  iP       Pn        23 48 45.3  0.0
YUK                                 AMB     AMB       23 48 47.3
       comp=E,250nm,0.3s
YUK                                 AMB     AMB       23 48 47.3
       comp=E,160nm,0.3s
YUK                                 AMB     AMB       23 48 47.3
       comp=E,730nm,0.3s
YUK                                iS       Sn        23 49 05.4  0.0
YUK                                 A       A         23 49 07.8
       comp=E,5µm,0.7s
YUK                                 A       A         23 49 07.9
       comp=E,3µm,0.3s
YUK    Yuzh-Kuril'sk     1.52 261  iPN      Pn        23 48 46.0 +0.7
LAGR   Lagunnoye         1.57 262  eP       Pn        23 48 46.0 +0.1
LAGR                                AMB     AMB       23 48 51.0
       comp=E,430nm,0.2s
LAGR                                AMB     AMB       23 48 51.0
       comp=E,440nm,0.2s
LAGR                                AMB     AMB       23 48 51.0
       comp=E,400nm,0.2s
LAGR                               iS       Sn        23 49 06.0 -0.5
LAGR                                A       A         23 49 09.0
       comp=E,3µm,0.4s
LAGR                                A       A         23 49 09.0
       comp=E,3µm,0.4s
LAGR   Lagunnoye         1.57 262  ePN      Pn        23 48 46.6 +0.7
LAGR                               iS       Sn        23 49 06.5  0.0
LAGR                                pmax    pmax
       comp=N,430nm,0.3s
LAGR                                pmax    pmax
       comp=E,444nm,0.3s
LAGR                                pmax    pmax
       comp=Z,398nm,0.3s
LAGR                                smax    smax
       comp=N,3µm,0.3s
LAGR                                smax    smax
       comp=E,3µm,0.5s
GRPR   Tuman             1.59 260  iP       Pn        23 48 46.0 -0.2
GRPR                                AMB     AMB       23 48 48.0
       comp=E,370nm,0.2s
GRPR                                AMB     AMB       23 48 48.0
       comp=E,110nm,0.2s
GRPR                                AMB     AMB       23 48 48.0
       comp=E,560nm,0.2s
GRPR                               iS       Sn        23 49 06.0 -1.0
GRPR                                A       A         23 49 09.0
       comp=E,3µm,0.4s
GRPR                                A       A         23 49 09.0
       comp=E,2µm,0.4s
GRPR   Tuman             1.59 260⇑ iPN      Pn        23 48 46.7 +0.5
GRPR                               iS       Sn        23 49 06.7 -0.3
GRPR                                pmax    pmax
       comp=N,372nm,0.3s
GRPR                                pmax    pmax
       comp=Z,560nm,0.3s
GRPR                                pmax    pmax
       comp=E,105nm,0.1s
GRPR                                smax    smax
       comp=N,3µm,0.4s
GRPR                                smax    smax
       comp=E,2µm,0.4s
GLVR   Golovnino         1.84 254  iP       Pn        23 48 50.0 +0.8
GLVR                                AMB     AMB       23 48 52.0
       comp=E,230nm,0.1s
GLVR                               iS       Sn        23 49 12.0 -0.4
GLVR                                A       A         23 49 16.0
       comp=E,3µm,0.3s
GLVR                                A       A         23 49 16.0
       comp=E,2µm,0.3s
GLVR   Golovnino         1.84 254⇑ iPN      Pn        23 48 50.1 +0.8
GLVR                               iS       Sn        23 49 12.9 +0.5
GLVR                                pmax    pmax
       comp=Z,230nm,0.1s
GLVR                                smax    smax
       comp=N,3µm,0.3s
GLVR                                smax    smax
       comp=E,2µm,0.2s
NEM2   Nemuro 2          1.84 241   P       Pn        23 48 49.3  0.0
NEM2                               eS       Sn        23 49 11.3 -1.2
JRA    Rausu             2.06 261   P       Pn        23 48 53.5 +1.3
JRA                                eS       Sn        23 49 19.8 +2.2
JKHN   Kushirohamanak    2.35 240   P       Pn        23 48 56.3 +0.4
JNK    Nakash            2.44 254   P       Pn        23 48 58.0 +1.0
JNK                                eS       Sn        23 49 27.0 +0.7
JAK    Akkeshi           2.69 243   P       Pn        23 49 00.5 +0.1
JAK                                eS       Sn        23 49 31.1 -1.2
JTKR   Abashiri--Toko    2.93 265   P       Pn        23 49 05.1 +1.6
JAR    Ashorobuto        3.18 253   P       Pn        23 49 08.6 +1.6
JAR                                eS       Sn        23 49 46.2 +2.1
JCH    Churui            3.73 245   P       Pn        23 49 14.8 +0.4
JCH                                eS       Sn        23 49 56.6 -0.8
JKK2   Kamakawa 2        3.77 266   P       Pn        23 49 16.8 +1.9
ASAJ   Asahikawa         3.85 269   P       Pn        23 49 18.0 +2.1
       comp=E,14nm,0.3s,baz=69,slow=14,SNR=47
ASAJ                                S       Sn        23 49 58.0 -2.3
       comp=E,2.1nm,0.3s,baz=93,slow=19,SNR=2.4
JSE    Soyaes            3.89 282   P       Pn        23 49 17.9 +1.5
JFR    Furan             4.04 256   P       Pn        23 49 20.5 +2.0
JFR                                eS       Sn        23 50 06.5 +1.7
ERM    Erimo             4.17 239  eP       Pn        23 49 22.7 +2.4
ERM    Erimo             4.17 239  iPN      Pn        23 49 22.7 +2.4
JNBK   Urakawa-nobuka    4.29 244   P       Pn        23 49 21.9  0.0
JWK2   Keihoku           4.43 286   P       Pn        23 49 26.9 +3.2
YSS    Yuzh-Sakhalins    4.52 308  iP       Pn        23 49 25.9 +1.0
YSS                                iS       Sn        23 50 14.5 -1.7
YSS                                 A       A         23 50 19.2
       comp=E,40nm,0.8s
YSS                                 A       A         23 50 19.2
       comp=E,80nm,0.8s
YSS    Yuzh-Sakhalins    4.52 308⇓ iPN      Pn        23 49 26.6 +1.7
YSS                                eS       Sn        23 50 17.8 +1.6
YSS                                 smax    smax
       comp=N,40nm,0.7s
YSS                                 smax    smax
       comp=E,80nm,0.8s
JKB    Kayabe            5.60 247   P       Pn        23 49 40.2 +0.6
JKB                                eS       Sn        23 50 40.0 -2.6
JOT    Ohata             5.84 243   P       Pn        23 49 42.5 -0.4
JOT                                eS       Sn        23 50 44.9 -3.6
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JANG   Nango             6.16 233   P       Pn        23 49 46.2 -1.1
JANG                               eS       Sn        23 50 51.3 -5.1
UGL    Uglegorsk         6.27 322  eP       Pn        23 49 49.3 +0.6
TYV    Tymovskoe         7.49 333  eP       Pn        23 50 05.6 +0.4
OKH    Okha              9.84 342  eP       Pn        23 50 40.3 +3.2
OKH                                 AMB     AMB       23 50 40.7
       comp=E,10.0nm,0.4s
MJAR   Matsushiro Arr   10.71 227   P       Pn        23 50 49.7 +0.5
       comp=E,0.1nm,0.3s,baz=65,slow=8.6,SNR=3.3
MAJO   Matsushiro       10.71 227  eP       Pn        23 50 49.7 +0.5
MAJO   Matsushiro       10.71 227  iPN      Pn        23 50 49.7 +0.5
PETK   Petropavlovsk-   10.92  33   P       Pn        23 50 52.1 +0.2
       comp=E,0.2nm,0.3s,baz=191,slow=13,SNR=4.3
USRK   Ussuriysk Ar.    11.45 275   P       Pn        23 50 59.8 +0.7
       comp=E,0.8nm,0.3s,baz=84,slow=15,SNR=16
KLR    Kul'dur          12.15 300  eP       Pn        23 51 10.2 +1.8
KLR    Kul'dur          12.15 300  iPN      Pn        23 51 10.2 +1.8
KLR    Kul'dur          12.15 300   P       Pn        23 51 08.4  0.0
       comp=E,0.1nm,0.3s,baz=81,slow=19,SNR=2.8
BMKR   Bomnak           16.16 317  eP       Pn        23 51 58.0 -1.9
BMKR                                AMB     AMB       23 52 03.2
       comp=E,20nm,0.6s
KSRS   Korea Array      16.59 253   P       Pn        23 52 05.8 +0.5
       comp=E,0.2nm,0.3s,baz=69,slow=8.1,SNR=5.1
KROS   Kirovskiy        16.96 314  eP       Pn        23 52 04.7 -5.0
KROS                                AMB     AMB       23 52 05.8
       comp=E,5.0nm,0.4s
SEY    Seymchan         18.86   6   P       P         23 52 30.1 -0.7
       comp=E,0.1nm,0.3s,baz=162,slow=19,SNR=3.3
BOD    Bodaibo          24.95 315  eP       P         23 53 27.3 -5.3
BOD                                 pmax    pmax
       comp=Z,6.0nm,1.7s
BILL   Bilibino         25.69  16  iP       P         23 53 37.1 -2.1
BILL                                pmax    pmax
       comp=Z,2.0nm,1.8s
HHC    Hu-ho-hao-te     26.88 275  eP       P         23 53 54.0 +3.7
HHC                                 pmax    pmax
       comp=Z,19nm,0.8s
SONM   Songino Array    28.80 292   P       P         23 54 07.1 -0.3
       comp=Z,4.0nm,0.6s,baz=84,slow=8.2,SNR=34
SONM                                PcP     PcP       23 57 15.5 +0.8
       comp=Z,0.8nm,1.1s,baz=90,slow=4.6,SNR=2.3
H11N2  WAKE ISLAND Hy   29.14 141   T       T         00 25 10.8
       baz=333,slow=76,SNR=321
H11N1  WAKE ISLAND Hy   29.15 141   T       T         00 25 11.8
       baz=333,slow=76,SNR=340
H11N3  WAKE ISLAND Hy   29.16 141   T       T         00 25 12.1
       baz=333,slow=76,SNR=381
H11S1  WAKE ISLAND Hy   30.13 143   T       T         00 26 25.1
       baz=334,slow=76,SNR=341
H11S3  WAKE ISLAND Hy   30.13 143   T       T         00 26 22.8
       baz=334,slow=76,SNR=188
H11S2  WAKE ISLAND Hy   30.15 143   T       T         00 26 26.4
       baz=334,slow=76,SNR=189
LZH    Lanzhou          34.33 272  eP       P         23 54 58.0 +2.0
LZH                                 pP      pP        23 55 13.8 -4.6
LZH                                 sP      sP        23 55 20.2  -10
LZH                                 pmax    pmax
       comp=Z,29nm,1.2s
GTA    Gaotai           35.77 279  eP       P         23 55 10.1 +1.7
GTA                                 pP      pP        23 55 14.4  -16
GTA                                 sP      sP        23 55 17.6  -25
GTA                                 pmax    pmax
       comp=Z,4.0nm,0.5s
DGZ    Jazzator, Alta   40.65 300  iP       P         23 55 48.9 -0.2
DGZ                                 pmax    pmax
       comp=Z,1.0nm,0.8s
ILAR   Eielson Array    40.72  37   P       P         23 55 49.8 +0.5
       comp=Z,0.3nm,0.5s,baz=268,slow=8.7,SNR=6.4
ZALV   Zalesovo Beam    41.14 307   P       P         23 55 51.3 -1.5
       comp=Z,0.8nm,0.4s,baz=88,slow=6.4,SNR=6.8
ZALV                                PcP     PcP       23 57 51.0 +0.8
       comp=Z,1.1nm,0.5s,baz=85,slow=2.9,SNR=5.7
MKAR   Makanchi Array   44.85 297   P       P         23 56 23.6 +0.7
       comp=Z,11nm,0.6s,baz=78,slow=8.5,SNR=122
MKAR                                PcP     PcP       23 58 04.2 +1.2
       comp=Z,0.6nm,0.6s,baz=84,slow=4.8,SNR=2.5
INK    Inuvik           45.65  31   P       P         23 56 30.7 +1.8
       comp=Z,1.0nm,0.3s,baz=301,slow=9.2,SNR=20
KURK   Kurchatov        45.71 304  eP       P         23 56 29.1 -0.5
KURK   Kurchatov        45.71 304  iP       P         23 56 29.1 -0.5
KURK                                pmax    pmax
       comp=Z,5.0nm,0.9s
BRVK   Borovoye         49.66 309  eP       P         23 56 59.2 -0.9
BRVK   Borovoye         49.66 309  iP       P         23 56 59.2 -0.9
BRVK                                pmax    pmax
       comp=Z,2.0nm,1.0s
ULHL   Ulahol           50.69 294   P       P         23 57 09.3 +0.9
       SNR=8.0
TKM2   Tokmak 2         50.80 295   P       P         23 57 10.8 +1.7
       SNR=7.8
KBK    Karagaybulak     51.34 295   P       P         23 57 14.5 +1.4
       SNR=8.1
USP    Ospenovka        51.34 296   P       P         23 57 14.1 +1.1
       SNR=13
KZA    Kyzart           51.42 295   P       P         23 57 16.0 +1.9
       SNR=13
JIRN   Jiri             51.48 273  eP       P         23 57 15.8 +1.2
       comp=Z,15nm,0.4s
GUN    Gumba            51.56 273  eP       P         23 57 16.2 +1.1
       comp=Z,18nm,0.4s
RAMN   Ramite           51.61 272  eP       P         23 57 16.3 +0.9
       comp=Z,28nm,0.4s
AAK    Ala-Archa        51.65 296  iP       P         23 57 14.9 -0.5
AAK                                 pmax    pmax
       comp=Z,4.0nm,1.1s
KKN    Kakani           52.06 274  eP       P         23 57 20.0 +1.3
       comp=Z,57nm,0.8s
PKI    Pulchoki         52.09 273  eP       P         23 57 19.9 +0.8
       comp=Z,9.1nm,0.5s
EKS2   Erkin-Say        52.10 296   P       P         23 57 19.8 +1.1
       SNR=6.8
PKIN   Phulchoki        52.10 273  eP       P         23 57 19.9 +0.8
       comp=Z,8.0nm,0.4s
DMN    Daman            52.29 274  eP       P         23 57 21.7 +1.2
       comp=Z,12nm,0.3s
DANN   Dangsing         52.82 275  eP       P         23 57 25.9 +1.5
       comp=Z,37nm,0.7s
KOLN   Koldanda         53.27 275  eP       P         23 57 28.9 +1.3
       comp=Z,6.6nm,0.5s
PYUN   Piuthan          53.52 275  eP       P         23 57 30.6 +1.2
       comp=Z,10.0nm,0.4s
RES    Resolute Bay     54.29  17   P       P         23 57 33.4 -0.7
       comp=Z,1.4nm,0.4s,baz=266,slow=1.1,SNR=7.9
ARU    Arti             54.35 317c iP       P         23 57 32.8 -2.0
ARU                                                   23 58 32.2
ARU                                                   23 59 33.2
ARU                                 S       S         00 05 04.6 -0.4
ARU                                 SS      SS        00 08 46.4 -1.3
ARU                                 pmax    pmax
       comp=Z,24nm,3.5s
YKA    Yellowknife Ar   55.04  34   P       P         23 57 40.2 +0.6
       comp=Z,0.1nm,0.3s,baz=298,slow=6.4,SNR=3.8
ARCES  ARCESS Array B   58.95 340   P       P         23 58 06.1 -1.1
       comp=Z,0.8nm,0.4s,baz=47,slow=8.8,SNR=6.4
FINES  FINESS Array B   64.66 333   P       P         23 58 44.2 -1.3
       comp=Z,5.0nm,0.6s,baz=41,slow=8.2,SNR=41
GEYT   Alibeck          64.69 299   P       P         23 58 45.7 -0.4
       comp=Z,1.3nm,0.4s,baz=336,slow=3.3,SNR=5.8
WRA    Warramunga Arr   65.12 194   P       P         23 58 50.2 +1.2
       comp=Z,1.5nm,0.9s,baz=15,slow=7.0,SNR=3.8
VSR    Storozhevoye     66.70 320  iP       P         23 58 57.2 -1.6
VSR                                 pmax    pmax
       comp=Z,6.0nm,0.8s
NVAR   Mina Array Bea   66.81  58   P       P         23 59 00.6 +0.6
       comp=Z,0.3nm,0.6s,baz=294,slow=8.3,SNR=3.6
ASAR   Alice Springs    68.83 194   P       P         23 59 13.3 +0.9
       comp=Z,0.7nm,0.8s,baz=36,slow=4.5,SNR=5.6
PDAR   Pinedale Array   69.12  50   P       P         23 59 15.9 +1.4
       comp=Z,0.2nm,0.6s,baz=323,slow=2.3,SNR=2.2
PDAR                                pP      pP        23 59 40.0 +0.5
       comp=Z,0.4nm,0.7s,baz=268,slow=2.6,SNR=2.9
SEKA   Sheki            69.17 308   P       P         23 59 12.7 -1.9
ZKTA   Zakatala         69.22 308   P       P         23 59 13.2 -1.6
NB2    NORSAR Subarra   69.31 339   P       P         23 59 14.1 -1.0
       comp=Z,1.2nm,0.5s,baz=30,slow=6.5
NOA    NORSAR Array B   69.31 339   P       P         23 59 15.0 -0.1
NOA                                 pmax    pmax
       comp=Z,1.0nm,0.5s
NOA    NORSAR Array B   69.31 339   P       P         23 59 14.9 -0.1
       comp=Z,1.2nm,0.5s,baz=32,slow=6.6,SNR=17
MNGR   Mingechevir, A   69.52 307   P       P         23 59 15.1 -1.5
KIV    Kislovodsk       69.83 312  eP       P         23 59 18.8 +0.2
KIV    Kislovodsk       69.83 312  eP       P         23 59 18.8 +0.2
KIV                                 pmax    pmax
       comp=Z,17nm,0.9s
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KBZ    Khabaz           69.87 312   P       P         23 59 19.7 +1.0
       comp=Z,5.6nm,0.8s,baz=72,slow=3.4,SNR=23
LKRN   Lenkeran, Azer   69.89 305   P       P         23 59 17.9 -1.0
ZEI    Tsey             69.96 311  eP       P         23 59 19.1 -0.5
ZEI                                 pmax    pmax
       comp=Z,4.0nm,0.6s
GANJ   Ganja            70.04 308   P       P         23 59 18.3 -1.6
AKASG  Malin Array Be   71.49 324   P       P         23 59 28.2 -0.2
       comp=Z,4.1nm,0.5s,baz=38,slow=6.2,SNR=22
NAX    Nakhchivan       71.50 307   P       P         23 59 28.1 -0.7
KIEV   Kiev             71.50 324  eP       P         23 59 28.1 -0.4
KIEV   Kiev             71.50 324  iP       P         23 59 28.1 -0.4
KIEV                                pmax    pmax
       comp=Z,7.0nm,1.0s
BRTR   Keskin Array B   77.59 314   P       P         00 00 04.8 +0.7
       comp=Z,1.1nm,0.7s,baz=76,slow=1.7,SNR=6.2
GERES  GERESS Array B   78.97 331   P       P         00 00 11.5  0.0
       comp=Z,0.9nm,0.6s,baz=43,slow=6.4,SNR=7.5
TXAR   Lajitas Array    81.87  57   P       P         00 00 28.4 +1.0
       comp=Z,0.7nm,0.6s,baz=311,slow=4.1,SNR=10
TXAR                                pP      pP        00 00 53.8 +0.7
       comp=Z,0.5nm,0.5s,baz=285,slow=4.4,SNR=5.9
TORD   Torodi Ar. Bea  115.12 323   PKP     PKiKP     00 06 48.1 -0.6
       comp=Z,0.2nm,0.5s,baz=18,slow=1.7,SNR=3.2
```

IDC 01 23:49:19.3±1.4, 11°.10S×165°.28E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.7/37, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=52.9km s-min=29.1km az=130.0, Santa Cruz Islands

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Code   Station Name           Δ°  AZ°   Phase ID              Time    Res
                                    Op       ISC        h  m  s    ISC
DZM    Mont Dzumac      10.97 174   Pn      Pn        23 51 57.9 +0.2
       1.0nm,0.3s,baz=50,slow=19,SNR=9.5
WRA    Warramunga Arr   31.03 250   P       P         23 55 39.3 +0.1
       1.6nm,1.0s,baz=85,slow=10,SNR=4.4
ASAR   Alice Springs    32.36 243   P       P         23 55 50.8  0.0
       0.4nm,0.5s,baz=66,slow=10,SNR=8.6
ILAR   Eielson Array    83.71  19   P       P         00 01 50.2 +0.5
       0.4nm,0.9s,baz=234,slow=5.4,SNR=3.5
ARCES  ARCESS Array B  116.27 345   PKP     PKiKP     00 08 03.3 -1.0
       3.3nm,1.0s,baz=74,slow=1.3,SNR=3.5
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*IDC **01** 23:49:54.5±0.9, 11°.20S×165°.36E, h0^{km}, mb4.1/11, mb1 4.2/12, mb1mx4.1/37, mbtmp4.1/12, ML4.3/1, Error ellipse: s-maj=35.8km s-min=19.3km az=132.0*

*NEIC **01** 23:49:56.0±0.3, 11°.21S×165°.38E, h10^{km}, mb4.3/4, Error ellipse: s-maj=10.1km s-min=7.4km az=164.0*

*ISCJB **01** 23:49:57.4±0.5, 11°.31S±0°.08×165°.32E±0°.07, h30^{km}, mb4.0/15, Error ellipse: s-maj=11.7km s-min=9.6km az=173.2*

ISC 01 23:49:59.1±0.7, 11°.3S±0°.1×165°.4E±0°.1, h30^{km}, n33, σ0^{s}.93/33, mb4.0/15, Santa Cruz Islands

```
Code   Station Name           Δ°  AZ°   Phase ID              Time    Res
                                    Op       ISC        h  m  s    ISC
HNR    Honiara           5.64 288   Sn      Sn        23 52 24.9 +0.2
       18nm,0.3s,baz=183,slow=18,SNR=4.5
DZM    Mont Dzumac      10.81 175   Pn      Pn        23 52 32.5 +0.5
       2.2nm,0.3s,baz=21,slow=17,SNR=8.5
COEN   Coen             21.83 261  eP       P         23 54 49.8 +0.5
       14nm,1.0s
STKA   Stephens Creek   30.04 223   P       P         23 56 04.8 -0.8
       1.3nm,0.5s,baz=19,slow=18,SNR=2.3
WB2    Warramunga Arr   31.06 250  eP       P         23 56 15.8 +1.1
       2.6nm,0.8s
WR1    Warramunga Arr   31.07 250  eP       P         23 56 14.5 -0.4
       11nm,1.1s
WRA    Warramunga Arr   31.07 250   P       P         23 56 14.5 -0.4
       3.8nm,1.0s,baz=79,slow=9.2,SNR=8.8
AS01   Alice Springs    32.33 243  eP       P         23 56 24.1 -1.9
AS31   Alice Springs    32.37 243  eP       P         23 56 26.5 +0.2
       0.7nm,0.6s
ASAR   Alice Springs    32.38 243   P       P         23 56 26.5 +0.2
       1.1nm,0.5s,baz=64,slow=10,SNR=17
FITZ   Fitzroy Crossi   38.98 255   P       P         23 57 23.2 +0.2
       1.1nm,0.6s,baz=113,slow=5.0,SNR=7.0
ASAJ   Asahikawa        58.87 341   P       P         23 59 54.1 -0.9
       11nm,0.9s,baz=197,slow=19,SNR=2.8
SONA0  Songino Array    78.62 324  eP       P         00 01 59.5 +1.4
SONM   Songino Array    78.62 324   P       P         00 01 59.5 +1.4
       0.4nm,0.7s,baz=143,slow=6.8,SNR=4.0
ILAR   Eielson Array    83.82  19   P       P         00 02 25.6 +0.3
       0.6nm,0.6s,baz=228,slow=5.4,SNR=8.9
ILB    Eielson Array    83.82  19  eP       P         00 02 25.6 +0.3
NV01   Mina Array Sit   86.43  50  eP       P         00 02 37.4 -1.9
NVAR   Mina Array Bea   86.43  50   P       P         00 02 39.5 +0.2
       0.6nm,0.8s,baz=228,slow=8.3,SNR=3.5
I07A   Izee             87.30  44  eP       P         00 02 45.2 +1.9
MK32   Makanchi Array   93.42 317  eP       P         00 03 10.5 -1.2
MKAR   Makanchi Array   93.42 317   P       P         00 03 10.5 -1.2
       0.6nm,0.6s,baz=87,slow=6.2,SNR=6.8
ZALV   Zalesovo Beam    93.51 324   P       P         00 03 11.3 -0.6
       0.2nm,0.4s,baz=101,slow=7.5,SNR=2.8
ZAA1   Zalesovo Array   93.51 324  eP       P         00 03 11.3 -0.6
PD31   Pinedale Array   93.96  47  eP       P         00 03 14.3 -0.2
PDAR   Pinedale Array   93.96  47   P       P         00 03 14.3 -0.2
       0.3nm,0.7s,baz=211,slow=9.5,SNR=3.0
ARA0   ARCESS Array S  116.44 345  ePKPdf   PKiKP     00 08 40.1 +0.7
ARCES  ARCESS Array B  116.44 345   PKP     PKiKP     00 08 40.1 +0.7
       1.4nm,0.7s,baz=29,slow=2.8,SNR=7.8
FIA0   FINESS Array S  121.83 338  ePKPdf   PKPdf     00 08 49.3 -0.6
FINES  FINESS Array B  121.83 338   PKP     PKPdf     00 08 49.3 -0.6
       1.7nm,1.0s,baz=350,slow=7.2,SNR=4.1
NB200  NORSAR Array S  126.80 345  ePKPdf   PKPdf     00 08 59.3 -0.3
NOA    NORSAR Array B  126.80 345   PKP     PKPdf     00 08 59.3 -0.3
       0.4nm,0.6s,baz=29,slow=1.9,SNR=2.5
AKASG  Malin Array Be  126.83 327   PKP     PKPdf     00 08 58.8 -1.0
       0.2nm,0.3s,baz=52,slow=3.0,SNR=3.5
KEST   Kesra           147.36 322   PKPbc   PKPbc     00 09 41.2 +0.8
       5.3nm,0.8s,baz=222,slow=2.2,SNR=6.5
```

IDC 01 23:50:41.2±1.4, 11°.09S×165°.28E, h0^{km}, mb3.9/5, mb1 4.2/6, mb1mx3.8/37, mbtmp4.0/6, ML4.3/1, Error ellipse: s-maj=50.1km s-min=26.2km az=123.0, Santa Cruz Islands

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Code   Station Name           Δ°  AZ°   Phase ID              Time    Res
                                    Op       ISC        h  m  s    ISC
DZM    Mont Dzumac      10.98 174   Pn      Pn        23 53 20.0 +0.2
       2.3nm,0.3s,baz=349,slow=16,SNR=3.8
STKA   Stephens Creek   30.09 223   P       P         23 56 52.8 +0.2
       1.3nm,0.7s,baz=0.4,slow=14,SNR=3.4
WRA    Warramunga Arr   31.04 250   P       P         23 57 01.4 +0.3
       2.0nm,0.9s,baz=80,slow=9.1,SNR=3.3
ASAR   Alice Springs    32.36 243   P       P         23 57 11.9 -0.8
       1.3nm,0.8s,baz=77,slow=8.5,SNR=4.4
ILAR   Eielson Array    83.70  19   P       P         00 03 11.5 -0.1
       0.5nm,0.8s,baz=230,slow=4.3,SNR=3.3
MKAR   Makanchi Array   93.24 317   P       P         00 03 58.2 +0.3
       0.3nm,0.7s,baz=97,slow=6.8,SNR=2.4
ARCES  ARCESS Array B  116.26 345   PKP     PKiKP     00 09 25.8 -0.4
       1.6nm,0.8s,baz=62,slow=4.3,SNR=2.7
```

IDC 02 00:11:12.2±1.2, 10°.89S×165°.40E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/36, mbtmp3.9/7, ML3.9/1, MS4.6/1, Ms1 4.6/1, ms1mx3.8/30, Error ellipse: s-maj=45.1km s-min=23.1km az=133.0, Santa Cruz Islands

```
Code   Station Name           Δ°  AZ°   Phase ID              Time    Res
                                    Op       ISC        h  m  s    ISC
DZM    Mont Dzumac      11.16 175   Pn      Pn        00 13 53.2  0.0
       0.9nm,0.3s,baz=336,slow=18,SNR=18
RAO    Raoul Island     24.01 142   LR      LR        00 24 24.6
       comp=Z,2µm,21.9s,baz=156,slow=33
H11S2  WAKE ISLAND Hy   29.22   3   T       T         00 47 56.7
       baz=181,slow=76,SNR=11
H11S3  WAKE ISLAND Hy   29.23   3   T       T         00 47 43.3
       baz=181,slow=76,SNR=6.1
H11S1  WAKE ISLAND Hy   29.24   3   T       T         00 47 58.7
       baz=181,slow=76,SNR=9.1
STKA   Stephens Creek   30.32 223   P       P         00 17 26.3 +0.8
       1.0nm,0.5s,baz=45,slow=4.3,SNR=3.1
H11N1  WAKE ISLAND Hy   30.45   3   T       T         00 49 25.8
       baz=182,slow=76,SNR=8.4
H11N3  WAKE ISLAND Hy   30.45   3   T       T         00 49 25.3
       baz=182,slow=76,SNR=7.6
H11N2  WAKE ISLAND Hy   30.46   3   T       T         00 49 29.0
       baz=182,slow=76,SNR=8.2
WRA    Warramunga Arr   31.21 249   P       P         00 17 33.1 -0.5
       1.5nm,0.6s,baz=81,slow=8.9,SNR=12
ASAR   Alice Springs    32.56 243   P       P         00 17 45.0 -0.4
```

	2.6nm,0.7s,baz=70,slow=9.6,SNR=30						
ILAR	Eielson Array	83.48	19	P	P	00 23 41.6	+0.2
	0.4nm,0.7s,baz=229,slow=5.3,SNR=5.2						
NVAR	Mina Array Bea	86.19	50	P	P	00 23 55.5	-0.4
	0.7nm,1.0s,baz=223,slow=4.9,SNR=3.8						
MKAR	Makanchi Array	93.17	317	P	P	00 24 28.9	+0.5
	0.1nm,0.6s,baz=93,slow=7.2,SNR=2.5						

KRSC 02 00:17:06.0±1.4, 56°.52N×162°.93E, h25km±10km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.29	205	eP	Pb	00 17 13.0	+0.1
KBG				eS	Sn	00 17 19.7	-0.4
KBTR	Krutoberegovo	0.32	191	eP	Pb	00 17 14.1	+0.9
KBTR				eS	Sn	00 17 19.5	-1.3
SMKR	Semkarok	0.81	275	eP	Pb	00 17 20.7	-0.7
SMKR				eS	Sb	00 17 31.7	-0.3
BDR	Baidarnaya	0.95	274	eP	Pn	00 17 23.5	-0.3
BDR				eS	Sn	00 17 37.1	+0.5
SRKR	Sorokina	0.98	279	eP	Pn	00 17 24.1	-0.1
SRKR				eS	Sn	00 17 37.4	+0.1
CIRR	Tsirk	1.28	252	eP	Pb	00 17 29.6	+0.2
CIRR				eS	Sb	00 17 45.8	+0.3
KLY	Klyuchi	1.28	262	eP	Pn	00 17 26.8	-1.4
KLY				eS	Sn	00 17 41.8	-2.7
ZLN	Zelenaya	1.29	248	eP	Pb	00 17 29.4	-0.1
KRSR	Krestovskiy	1.35	258	eP	Pn	00 17 29.8	+0.6
KRSR				eS	Sn	00 17 46.8	+0.4
BZGR	Bezymyannyi-Gr	1.37	246	eP	Pb	00 17 31.0	0.0
BZWR	Bezymyannyi-We	1.47	249	eP	Pb	00 17 32.3	-0.3
KIRR	Kirishev	1.55	250	eP	Pb	00 17 33.4	-0.6
KOZ	Kozyrevsk	1.76	256	eP	Pb	00 17 37.0	-0.6
KOZ				eS	Sb	00 18 00.6	+1.3
TUMD	Tumrok D	1.94	228	eP	Pb	00 17 39.0	-1.6
TUMD				eS	Sb	00 18 03.5	-0.9
TUMR	Tumrok	2.00	233	eP	Pb	00 17 40.5	-1.1
KZV	Kizimen	2.05	228	eP	Pb	00 17 41.8	-0.7
ESO	Esso	2.43	258	eP	Pb	00 17 47.8	-1.2
SPN	Mys Shipunski	3.82	207	eP	Pn	00 18 06.0	+2.9
GNL	Ganaly	4.03	227	eP	Pn	00 18 08.9	+2.9
AVH	Avacha	4.06	218	eP	Pn	00 18 10.0	+3.5
UGLR	Uglovaya	4.08	217	eP	Pn	00 18 10.3	+3.6

IDC 02 00:38:13.3±2.3, 11°.04S×165°.34E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.5/41, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=52.5km s-min=46.3km az=118.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.02	175	Pn	Pn	00 40 53.0	+0.6
	0.6nm,0.3s,baz=47,slow=9.0,SNR=13						
H11S2	WAKE ISLAND Hy	29.37	3	T	T	01 14 54.5	
	baz=182,slow=75,SNR=3.8						
H11S3	WAKE ISLAND Hy	29.37	3	T	T	01 14 54.8	
	baz=182,slow=75,SNR=3.3						
H11S1	WAKE ISLAND Hy	29.39	3	T	T	01 14 56.3	
	baz=182,slow=75,SNR=4.3						
WRA	Warramunga Arr	31.11	250	P	P	00 44 34.1	+0.2
	0.5nm,0.5s,baz=83,slow=9.1,SNR=3.6						
ASAR	Alice Springs	32.44	243	P	P	00 44 45.2	-0.3
	0.4nm,0.5s,baz=63,slow=10.0,SNR=6.7						
ARCES	ARCESS Array B	116.22	345	PKP	PKiKP	00 56 57.9	-0.3
	3.2nm,1.0s,baz=46,slow=2.6,SNR=3.5						

MEX 02 00:42:17.2±0.3, 14°.65N×92°.60W, h86km±33km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.21	330	iP	Pn	00 42 37.7	-1.4
PCIG				iS	Sn	00 42 54.0	-1.4

IDC 02 00:44:02.9±1.3, 10°.99S×165°.70E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/51, mbtmp3.7/7, ML3.8/1, Error ellipse: s-maj=48.7km s-min=24.8km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.04	176	Pn	Pn	00 46 42.3	0.0
	0.7nm,0.3s,baz=341,slow=15,SNR=8.5						
H11S2	WAKE ISLAND Hy	29.31	2	T	T	01 21 18.0	
	baz=184,slow=76,SNR=7.3						
H11S3	WAKE ISLAND Hy	29.32	2	T	T	01 21 13.8	
	baz=184,slow=76,SNR=5.9						
H11S1	WAKE ISLAND Hy	29.33	2	T	T	01 21 22.9	
	baz=184,slow=76,SNR=5.5						
H11N1	WAKE ISLAND Hy	30.54	2	T	T	01 22 46.9	
	baz=182						
H11N3	WAKE ISLAND Hy	30.54	2	T	T	01 22 47.0	
	baz=182,slow=74						
H11N2	WAKE ISLAND Hy	30.55	2	T	T	01 22 49.8	
	baz=182,slow=74						
WRA	Warramunga Arr	31.46	250	P	P	00 50 26.6	+0.1
	1.6nm,0.7s,baz=81,slow=9.0,SNR=9.6						
ASAR	Alice Springs	32.78	243	P	P	00 50 37.6	-0.5
	0.6nm,0.8s,baz=73,slow=10,SNR=6.3						
FITZ	Fitzroy Crossi	39.35	255	P	P	00 51 34.5	+0.1
	1.3nm,0.7s,baz=120,slow=8.2,SNR=5.2						
ILAR	Eielson Array	83.48	19	P	P	00 56 31.6	-0.5
	0.3nm,0.7s,baz=244,slow=4.6,SNR=5.2						
MKAR	Makanchi Array	93.45	317	P	P	00 57 20.5	0.0
	0.2nm,0.8s,baz=84,slow=3.7,SNR=2.8						
YKA	Yellowknife Ar	94.95	27	P	P	00 57 27.3	+0.4
	0.1nm,0.7s,baz=256,slow=4.1,SNR=4.1						
ARCES	ARCESS Array B	116.27	345	PKP	PKiKP	01 02 47.8	-0.1
	1.8nm,0.9s,baz=76,slow=1.1,SNR=3.2						

IDC 02 00:44:38.0±1.8, 10°.88S×165°.38E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.7/51, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=50.1km s-min=31.5km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.18	175	Pn	Pn	00 47 20.0	+0.8
	0.9nm,0.3s,baz=328,slow=19,SNR=8.3						
WRA	Warramunga Arr	31.20	249	P	P	00 50 59.0	-0.3
	0.4nm,0.4s,baz=83,slow=8.9,SNR=6.0						
ASAR	Alice Springs	32.54	243	P	P	00 51 10.7	-0.4
	3.1nm,0.7s,baz=66,slow=10,SNR=26						
FITZ	Fitzroy Crossi	39.07	255	P	P	00 52 07.5	+0.4
	1.1nm,0.7s,baz=90,slow=7.1,SNR=3.6						
ILAR	Eielson Array	83.47	19	P	P	00 57 07.1	-0.1
	0.3nm,0.6s,baz=232,slow=4.8,SNR=4.8						

IDC 02 00:46:13.4±1.6, 11°.02S×165°.37E, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.7/49, mbtmp3.9/6, ML4.3/1, Error ellipse: s-maj=49.2km s-min=27.4km az=136.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.04	175	Pn	Pn	00 48 52.5	-0.2
	2.1nm,0.3s,baz=351,slow=18,SNR=9.0						
CTA	Charters Tower	20.48	242	P	Pn	00 50 54.7	-0.5
	2.6nm,0.8s,baz=64,slow=16,SNR=2.8						
WRA	Warramunga Arr	31.14	250	P	P	00 52 33.5	-0.7
	1.2nm,0.6s,baz=81,slow=8.8,SNR=5.1						
ASAR	Alice Springs	32.47	243	P	P	00 52 45.4	-0.5
	0.9nm,0.5s,baz=66,slow=9.9,SNR=12						
FITZ	Fitzroy Crossi	39.03	255	P	P	00 53 42.3	+0.1
	1.4nm,0.7s,baz=63,slow=6.8,SNR=6.6						
ILAR	Eielson Array	83.61	19	P	P	00 58 43.8	+0.4
	0.2nm,0.5s,baz=233,slow=5.0,SNR=4.7						
ARCES	ARCESS Array B	116.22	345	PKP	PKiKP	01 04 57.7	-0.7
	5.4nm,1.0s,baz=63,slow=0.2,SNR=3.8						

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*BJI **02** 01:15:43.8, 11°.74S×165°.87E, h23km, mB5.3/18, mb4.8/36, Ms5.2/12, Ms7 4.9/12*

*IDC **02** 01:15:44.9±0.5, 11°.12S×165°.48E, h0km, mb4.6/21, mb1 4.7/23, mb1mx4.6/45, mbtmp4.6/23, ML5.0/2, MS4.5/1, Ms1 4.5/1, ms1mx3.5/32, Error ellipse: s-maj=16.3km s-min=13.9km az=124.0*

*NEIC **02** 01:15:47.1±2.0, 11°.13S×165°.42E, h14km±12km, mb5.0/92, Error ellipse: s-maj=3.5km s-min=3.0km az=191.0*

*ISCJB **02** 01:15:48.1±0.1, 11°.22S±0°.03×165°.36E±0°.03, h30km, mb4.8/120, Error ellipse: s-maj=4.6km s-min=3.7km az=142.8*

*MOS **02** 01:15:48.5±1.0, 11°.12S×165°.32E, h33km, mb4.9/41, Error ellipse: s-maj=10.1km s-min=8.7km az=157.1*

ISC 02 01:15:49.6±0.3, 11°.25S±0°.05×165°.50E±0°.06, h30km, n298, σ1s.27/307, mb4.9/120, 1C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.75	288	ePn	Pn	01 17 10.1	-2.9
HNR	Honiara	5.75	288	eP	Pn	01 17 10.1	-2.9
HNR	Honiara	5.75	288	Pn	Pn	01 17 12.7	-0.4
	25nm,0.3s,baz=151,slow=10,SNR=3.6						
HNR				Sn	Sn	01 18 15.8	-2.3
	40nm,0.3s,baz=195,slow=20,SNR=5.0						
MARNC	Mare, Loyalty	10.46	167	ePn	Pn	01 18 17.8	+0.2
DZM	Mont Dzumac	10.80	175	ePn	Pn	01 18 23.0	+0.6
DZM				Sn	Sn	01 20 19.5	-2.9
DZM	Mont Dzumac	10.80	175	Pn	Pn	01 18 23.4	+1.0
	16nm,0.3s,baz=358,slow=12,SNR=228						
DZM				Sn	Sn	01 20 19.5	-2.9
	baz=323,slow=20,SNR=1.7						
PINNC	Pines Island,	11.45	171	ePn	Pn	01 18 32.0	+0.8
MSVF	Nonsavu	13.75	119	iP	Pn	01 19 04.8	+2.1
EIDS	Eidsvold	19.59	222	P	Pn	01 20 17.6	+0.8
	baz=19,SNR=5.5						
EIDS	Eidsvold	19.59	222	eP	P	01 20 15.4	0.0
	30nm,1.0s						
MANU	Manus Island	20.18	296	eP	P	01 20 20.6	-1.4
	403nm,1.5s						
CTA	Charters Tower	20.49	242	P	Pn	01 20 26.4	-1.2
	31nm,1.1s,baz=69,slow=13,SNR=20						
CTAO	Charters Tower	20.49	242	eP	P	01 20 25.2	-0.1
	59nm,1.1s						
MTSU	Mount Surprise	21.59	249	P	P	01 20 39.2	+2.0
	baz=21,SNR=11						
RMQ	Roma	21.88	224	P	P	01 20 42.1	+1.8
	baz=21,SNR=16						
COEN	Coen	21.95	261	P	P	01 20 41.4	+0.3
	baz=21,SNR=11						
COEN	Coen	21.95	261	eP	P	01 20 40.5	-0.6
	117nm,1.4s						
ARMA	Armidale	23.02	212	P	P	01 20 53.6	+1.2
	baz=22,SNR=4.5						
ARMA	Armidale	23.02	212	eP	P	01 20 52.8	+0.4
	50nm,1.1s						
OUZ	Omahuta	24.97	164	eP	P	01 21 12.7	+2.1
	79nm,1.1s						
QLP	Quilpie	25.18	230	P	P	01 21 13.5	+0.8
	baz=24,SNR=5.1						
QIS	Mount Isa	26.53	246	P	P	01 21 25.1	+0.1
	baz=26,SNR=4.6						
HIZ	Hauiti	28.41	164	eP	P	01 21 43.5	+1.9
	119nm,1.4s						
URZ	Urewera	28.84	161	P	P	01 21 46.8	+1.5
	43nm,1.0s,baz=20,slow=9.6,SNR=9.8						
BKZ	Black Stump Fm	29.48	162	eP	P	01 21 52.1	+1.0
	110nm,1.3s						
H11S2	WAKE ISLAND Hy	29.57	2	T	T	01 52 33.4	
	baz=182,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	29.58	2	T	T	01 52 36.5	
	baz=182,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	29.59	2	T	T	01 52 18.7	
	baz=182,slow=76,SNR=5.5						
STKA	Stephens Creek	30.13	223	P	P	01 21 57.8	+0.9
	baz=29,SNR=6.4						
STKA	Stephens Creek	30.13	223	eP	P	01 21 57.0	+0.1
STKA				epP	P	01 21 57.9	+0.9
STKA	Stephens Creek	30.13	223	eP	P	01 21 57.0	+0.1
STKA	Stephens Creek	30.13	223	P	P	01 21 56.8	-0.1
	12nm,0.9s,baz=21,slow=9.2,SNR=16						
H11N1	WAKE ISLAND Hy	30.80	3	T	T	01 54 13.3	
	baz=186,slow=76						
H11N3	WAKE ISLAND Hy	30.80	3	T	T	01 54 12.2	
	baz=186,slow=76						
BFZ	Birch Farm	30.81	164	eP	P	01 22 02.5	-0.3
H11N2	WAKE ISLAND Hy	30.81	3	T	T	01 54 15.0	
	baz=186,slow=76						
THZ	Tophouse	31.08	169	eP	P	01 22 06.2	+1.0
	37nm,0.9s						
WRAB	Tennant Creek	31.18	250	eP	P	01 22 05.9	-0.4
	21nm,0.9s						
WRAB	Tennant Creek	31.18	250	iP	P	01 22 05.4	-0.9
WRAB				pmax	pmax		
	comp=Z,33nm,1.2s						
WB2	Warramunga Arr	31.18	250	eP	P	01 22 04.9	-1.4
WR1	Warramunga Arr	31.19	250	eP	P	01 22 05.1	-1.3
	comp=Z,57nm,1.1s						
WR1				ePcP	PcP	01 25 01.5	+0.5
WRA	Warramunga Arr	31.19	250	P	P	01 22 05.1	-1.3
	comp=Z,17nm,0.9s,baz=83,slow=8.8,SNR=49						
WRA				PcP	PcP	01 25 01.5	+0.5
	comp=Z,2.3nm,1.1s,baz=73,slow=3.2,SNR=4.8						
WRA				LR	LR	01 34 29.5	
	comp=Z,870nm,19.2s,baz=275,slow=36						
TOO	Toolangi	31.77	211	P	P	01 22 13.0	+1.6
	baz=31,SNR=4.2						
TOO	Toolangi	31.77	211	eP	P	01 22 12.1	+0.7
	comp=Z,20nm,1.1s						
TOO	Toolangi	31.77	211	eP	P	01 22 12.1	+0.7
TOO				pmax	pmax		
	comp=Z,21nm,1.1s						
KHZ	Kahutara	31.83	169	eP	P	01 22 12.6	+0.8
	comp=Z,63nm,1.1s						
LTZ	Lake Taylor	31.96	171	eP	P	01 22 14.0	+1.0
	comp=Z,36nm,1.1s						
KDU	Kakadu	32.33	264	P	P	01 22 14.9	-1.6
	baz=32,SNR=7.1						
FOZ	Fox Glacier	32.38	174	eP	P	01 22 17.7	+1.1
	comp=Z,25nm,1.1s						
AS01	Alice Springs	32.45	243	eP	P	01 22 16.1	-1.4
OXZ	Oxford	32.46	171	eP	P	01 22 18.0	+0.8
	comp=Z,55nm,1.2s						
AS31	Alice Springs	32.48	243	eP	P	01 22 17.0	-0.8
	comp=Z,2.2nm,0.6s						
ASAR	Alice Springs	32.49	243	P	P	01 22 17.1	-0.8
	comp=Z,2.9nm,0.5s,baz=64,slow=10,SNR=51						
ASAR				PcP	PcP	01 25 05.1	+0.6
	comp=Z,2.8nm,1.0s,baz=70,slow=2.7,SNR=5.8						
RPZ	Rata Peaks	32.70	173	P	P	01 22 20.3	+0.9
	comp=Z,21nm,0.9s,baz=307,slow=2.9,SNR=9.1						
HTT	Hallett	32.86	224	P	P	01 22 21.5	+0.5
	baz=32,SNR=8.6						
MQZ	McQueen's Vall	32.93	170	eP	P	01 22 22.6	+1.3
	comp=Z,61nm,1.1s						
WKZ	Wanaka	33.60	175	eP	P	01 22 28.1	+0.9
	comp=Z,37nm,1.3s						
BBOO	Buckleboo	34.52	227	P	P	01 22 35.7	+0.3
	baz=34,SNR=8.6						
BBOO	Buckleboo	34.52	227	eP	P	01 22 35.2	-0.2
	comp=Z,30nm,1.1s						
WRKA	Warakurna	37.78	244	P	P	01 23 02.8	-0.7
	baz=37,SNR=29						
FITZ	Fitzroy Crossi	39.09	255	P	P	01 23 13.5	-1.0
	baz=38,SNR=13						
FITZ	Fitzroy Crossi	39.09	255	eP	P	01 23 13.8	-0.7
	comp=Z,11nm,0.8s						
FITZ	Fitzroy Crossi	39.09	255	P	P	01 23 13.2	-1.3
	comp=Z,3.8nm,0.6s,baz=93,slow=6.2,SNR=16						
FORT	Forrest	39.73	235	eP	P	01 23 18.9	-0.8
	comp=Z,20nm,0.8s						
BATI	Baumata	41.09	267	P	P	01 23 31.2	0.0
	comp=Z,13nm,0.4s,baz=90,slow=8.1,SNR=4.5						
MBWA	Marble Bar	44.90	251	eP	P	01 24 02.4	+0.5
MEEK	Meekatharra	46.64	244	P	P	01 24 16.2	+0.6
	baz=46,SNR=6.7						
IPIL	Ipil	46.71	292	eP	P	01 24 14.6	-1.6
NWAO	Narrogin (SRO)	49.15	236	eP	P	01 24 34.5	-0.5
	comp=Z,32nm,1.3s						
NWAO	Narrogin (SRO)	49.15	236	eP	P	01 24 34.5	-0.5
NWAO				pmax	pmax		
	comp=Z,32nm,1.3s						
NWAO	Narrogin (SRO)	49.15	236	P	P	01 24 35.0	0.0
	comp=Z,13nm,1.0s,baz=112,slow=18,SNR=3.2						
MORW	Morawa	49.32	241	eP	P	01 24 35.4	-0.9
	comp=Z,33nm,1.3s						
YSS	Yuzh-Sakhalins	61.41	342	eP	P	01 26 03.8	+0.9
YSS				e		01 26 45.6	
YSS				MLR	MLR		
	comp=Z,700nm,11.0s						
YSS				MLR	MLR		
	comp=N,500nm,12.0s						
NJ2	Nanjing	61.99	316	eP	P	01 26 07.0	-0.2
NJ2				pmax	pmax		
	comp=N,12nm,0.6s						
USRK	Ussuriysk Ar.	63.02	334	P	P	01 26 13.3	-0.4
	comp=N,2.4nm,0.8s,baz=155,slow=7.8,SNR=3.3						
RGRI	Rengat	63.64	275	P	P	01 26 22.5	+4.0
VNDA	Vanda	66.29	181	eP	P	01 26 35.3	+0.6
	comp=N,18nm,1.3s						
VNDA	Vanda	66.29	181	eP	P	01 26 35.3	+0.6
VNDA				pmax	pmax		
	comp=Z,18nm,1.3s						
VNDA	Vanda	66.29	181	P	P	01 26 35.9	+1.3
	comp=Z,5.7nm,1.1s,baz=18,slow=4.1,SNR=8.1						
SBA	Scott Base	66.60	180	eP	P	01 26 38.5	+1.9
SBA	Scott Base	66.60	180	eP	P	01 26 38.5	+1.9
KLR	Kul'dur	67.15	337	iP	P	01 26 38.1	-2.4
PSI	Prapat	67.66	278	eP	P	01 26 43.3	-1.3
	comp=Z,19nm,1.2s						
PSI	Prapat	67.66	278	P	P	01 26 43.3	-1.3
	comp=Z,7.3nm,0.9s,baz=179,slow=3.8,SNR=3.6						
GYA	Guiyang	68.33	304	eP	P	01 26 50.0	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	70.08	313	P	P	01 26 59.8	+0.6
XAN				pP	pP	01 27 07.6	+0.4
XAN				sP	sP	01 27 10.8	+0.6
XAN				PP	PP	01 29 38.8	+4.1
XAN				S	S	01 36 11.5	+3.1
XAN				sS	sS	01 36 23.7	+2.5
XAN				SS	SS	01 40 44.9	+6.2
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,47nm,4.1s						
XAN				LR	LR		
	comp=Z,540nm,18.4s						
XAN				LR	LR		
	comp=Z,400nm,16.8s						
XAN				LR	LR		
	comp=Z,530nm,17.1s						
KMI	Kunming	71.02	302	P	P	01 27 08.3	+2.9
KMI				pmax	pmax		
	comp=Z,13nm,0.7s						
KMI				LR	LR		
	comp=Z,170nm,5.6s						
KMI				LR	LR		
	comp=Z,400nm,14.4s						
KMI				LR	LR		
	comp=Z,260nm,18.8s						
HHC	Hu-ho-hao-te	71.83	320	eP	P	01 27 11.7	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,1.2s						
HHC				pmax	pmax		
	comp=Z,310nm,6.9s						
CM01	Chiang Mai Arr	71.95	294	eP	P	01 27 10.8	0.0
CM31	Chiang Mai Arr	71.97	294	eP	P	01 27 10.8	-0.1
CMAR	Chiang Mai Arr	71.97	294	P	P	01 27 11.3	+0.4
	comp=Z,0.9nm,0.3s,baz=124,slow=4.7,SNR=5.8						
CHTO	Chiang Mai	72.09	294	eP	P	01 27 09.4	-2.2
	comp=Z,12nm,1.4s						
CHTO	Chiang Mai	72.09	294	eP	P	01 27 09.4	-2.2
CHTO				pmax	pmax		
	comp=Z,12nm,1.4s						
HIA	Hailar	72.43	331	iP	P	01 27 10.9	-2.2
HIA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CD2	Chengdu	72.53	307	P	P	01 27 13.5	-0.6
LZH	Lanzhou	74.72	312	eP	P	01 27 27.7	+0.7
LZH				pP	pP	01 27 34.0	-1.1
LZH				sP	sP	01 27 38.0	-0.1
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
GAMB	Gambell	76.81	10	eP	P	01 27 38.2	+0.1
	comp=Z,17nm,1.4s						
SONA0	Songino Array	78.69	324	eP	P	01 27 48.9	-0.2
SONM	Songino Array	78.69	324	P	P	01 27 48.9	-0.2
	comp=Z,0.7nm,0.7s,baz=128,slow=5.6,SNR=6.8						
SONA1	Songino Array	78.69	324	eP	P	01 27 48.5	-0.6
ANM	Nome	78.74	12	eP	P	01 27 49.4	+0.5
	comp=Z,17nm,1.5s						
ANM	Nome	78.74	12	eP	P	01 27 49.4	+0.5
ANM				pmax	pmax		
	comp=Z,17nm,1.5s						
QSPA	South Pole Qui	78.76	180	eP	P	01 27 50.2	+1.0
GTA	Gaotai	79.03	314	eP	P	01 27 52.1	+0.9
GTA				pP	PcP	01 27 59.3	-0.3
GTA				sP	pwP	01 28 03.7	-1.3
GTA				pmax	pmax		
	comp=Z,9.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,250nm,10.0s						
GTA				LR	LR		
	comp=Z,240nm,15.5s						
GTA				LR	LR		
	comp=Z,220nm,17.5s						
GTA				LR	LR		
	comp=Z,280nm,17.2s						
BILL	Bilibino	79.08	0	eP	P	01 27 50.5	-0.1
	comp=Z,8.7nm,1.2s						
BILL	Bilibino	79.08	0	eP	P	01 27 47.6	-3.1
BILL				e		01 27 56.0	
BILL				e		01 30 46.0	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BOD	Bodaibo	80.61	335	eP	P	01 27 58.1	-1.0
BOD				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ZAK	Zakamensk	81.73	325	eP	P	01 28 04.7	-0.7
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
TLY	Talaya	82.16	326	iP	P	01 28 05.5	-2.0
MCK	McKinley	82.41	19	eP	P	01 28 08.4	-0.2
	comp=Z,27nm,1.4s						
MCK	McKinley	82.41	19	eP	P	01 28 08.4	-0.2
MCK				pmax	pmax		
	comp=Z,27nm,1.4s						
IM3	Indian Mountai	82.68	16	eP	P	01 28 09.5	-0.4
MLY	Manley	82.80	17	eP	P	01 28 10.9	+0.2
	comp=Z,8.4nm,1.4s						
MDM	Murphy Dome	83.50	18	eP	P	01 28 13.7	-0.5
	comp=Z,14nm,1.5s						
HDA	Harding Lake	83.51	19	eP	P	01 28 14.2	-0.1
	comp=Z,7.9nm,0.8s						
HDA	Harding Lake	83.51	19	P	P	01 28 14.2	-0.1
	baz=227						
COLA	College	83.55	18	eP	P	01 28 13.5	-0.9
	comp=Z,3.2nm,0.6s						
COLA	College	83.55	18	iP	P	01 28 12.9	-1.5
COLA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
O02D	Mt. Diablo Mer	83.61	47	P	P	01 28 16.2	+0.8
	baz=250						
RIDG	Independ'e Rid	83.75	20	eP	P	01 28 15.4	-0.1
	comp=Z,27nm,1.3s						
IL1	Eielson Array	83.78	19	eP	P	01 28 13.4	-2.2
ILAR	Eielson Array	83.78	19	P	P	01 28 15.2	-0.4
	comp=Z,2.0nm,0.7s,baz=239,slow=5.0,SNR=16						
ILB	Eielson Array	83.78	19	eP	P	01 28 15.3	-0.4
POKR	Poker Plat Res	83.85	18	P	P	01 28 17.3	+1.3
	baz=226						
K02D	Willamette Mer	83.89	44	P	P	01 28 17.4	+0.6
	baz=249						
WDC	Whiskeytown Da	83.92	47	eP	P	01 28 16.9	0.0
	comp=Z,9.4nm,1.4s						
WDC	Whiskeytown Da	83.92	47	eP	P	01 28 16.9	0.0
WDC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
N02D	Trinity Center	83.94	46	P	P	01 28 18.0	+0.9
	baz=250						
M02C	Callahan	83.99	46	P	P	01 28 18.3	+1.0
	baz=250						
YBH	Yreka Blue Hor	84.21	46	eP	P	01 28 18.3	-0.2
	comp=Z,20nm,1.5s						
YBH	Yreka Blue Hor	84.21	46	eP	P	01 28 18.3	-0.2
YBH				pmax	pmax		
	comp=Z,20nm,1.5s						
ORV	Oroville	84.33	48	eP	P	01 28 19.0	0.0
	comp=Z,8.7nm,1.3s						
ORV	Oroville	84.33	48	eP	P	01 28 19.0	0.0
ORV				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HUMO	Hull Mountain	84.34	45	eP	P	01 28 18.8	-0.2
	comp=Z,7.1nm,1.1s						
O03E	Paynes Creek	84.36	47	P	P	01 28 19.8	+0.5
	baz=250						
AFDM	Forest Hills D	84.52	49	eP	P	01 28 20.1	+0.1
	comp=Z,18nm,1.4s						
CMB	Columbia Colle	84.66	50	eP	P	01 28 20.9	+0.1
	comp=Z,3.5nm,0.9s						

CMB	**Columbia Colle**	**84.66**	**50**	*e*P	**P**	**01 28 20.9**	**+0.1**
CMB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
L04D	**Klamath Falls**	**84.66**	**45**	P	**P**	**01 28 21.1**	**+0.3**
	baz=250						
M04C	**Macdoel**	**84.83**	**46**	P	**P**	**01 28 22.0**	**+0.3**
	baz=250						
I04A	**Tendick Farm,**	**85.13**	**44**	P	**P**	**01 28 23.1**	**+0.1**
	baz=250						
J04D	**Umpqua Nationa**	**85.15**	**44**	P	**P**	**01 28 23.4**	**+0.1**
	baz=250						
ISA	**Isabella, Lake**	**85.39**	**52**	*e*P	**P**	**01 28 24.9**	**+0.4**
	comp=Z,10nm,1.4s						
ISA	**Isabella, Lake**	**85.39**	**52**	*e*P	**P**	**01 28 24.9**	**+0.4**
ISA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ISA	**Isabella, Lake**	**85.39**	**52**	P	**P**	**01 28 24.6**	**+0.1**
	baz=253						
WAKR	**Walker**	**85.51**	**50**	*e*P	**P**	**01 28 25.4**	**+0.2**
	comp=Z,19nm,1.4s						
MDPB	**Devils Postpil**	**85.51**	**50**	*e*P	**P**	**01 28 25.6**	**+0.3**
	comp=Z,15nm,1.4s						
EDW2	**Edwards Air Fo**	**85.53**	**53**	P	**P**	**01 28 25.6**	**+0.4**
	baz=253						
OMMB	**Old Mammoth Mi**	**85.57**	**50**	*e*P	**P**	**01 28 26.0**	**+0.3**
	comp=Z,10nm,1.4s						
PNTR	**Pine Nut**	**85.57**	**49**	*e*P	**P**	**01 28 25.5**	**0.0**
	comp=Z,19nm,1.5s						
VCNR	**Virginia City**	**85.60**	**49**	*e*P	**P**	**01 28 26.1**	**+0.5**
	comp=Z,7.4nm,1.2s						
BFSC	**Mount Baldy Ra**	**85.61**	**54**	P	**P**	**01 28 25.6**	**-0.1**
	baz=253						
J05D	**Fort Rock, OR**	**85.76**	**45**	P	**P**	**01 28 26.7**	**+0.4**
	baz=250						
YERR	**Yerington**	**85.81**	**49**	*e*P	**P**	**01 28 26.9**	**+0.2**
	comp=Z,4.3nm,0.9s						
DAWY	**Dawson**	**85.83**	**21**	*e*P	**P**	**01 28 25.5**	**-0.6**
	comp=Z,13nm,1.4s						
CWC	**Cottonwood Cre**	**85.92**	**52**	P	**P**	**01 28 27.3**	**0.0**
	baz=253						
PAHR	**Pah Rah Range**	**85.92**	**48**	*e*P	**P**	**01 28 27.5**	**+0.3**
	comp=Z,12nm,1.3s						
LRMC	**Laurel Mtn Rad**	**85.95**	**53**	P	**P**	**01 28 27.8**	**+0.4**
	baz=253						
MOD	**Modoc Plateau**	**85.96**	**46**	*e*P	**P**	**01 28 26.8**	**-0.5**
	comp=Z,1.6nm,0.6s						
E04D	**Cinebar**	**86.00**	**41**	P	**P**	**01 28 27.7**	**+0.5**
	baz=249						
D03D	**Eldon**	**86.02**	**40**	P	**P**	**01 28 27.7**	**+0.4**
	baz=249						
PINE	**Pine Mountain**	**86.13**	**44**	*e*P	**P**	**01 28 28.7**	**+0.5**
	comp=Z,13nm,1.4s						
MONP2	**Monument Peak**	**86.23**	**56**	P	**P**	**01 28 28.8**	**-0.1**
	baz=254						
RYN	**Ryan**	**86.23**	**50**	*e*P	**P**	**01 28 29.1**	**+0.3**
	comp=Z,12nm,1.4s						
TIXI	**Tiksi**	**86.24**	**349**	*i* P	**P**	**01 28 24.0**	**-3.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
DAC	**Darwin (Calif)**	**86.25**	**52**	*e*P	**P**	**01 28 28.5**	**-0.4**
	comp=Z,7.8nm,1.3s						
DAC	**Darwin (Calif)**	**86.25**	**52**	*e*P	**P**	**01 28 28.5**	**-0.4**
DAC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MPMC	**Manual Prospec**	**86.27**	**52**	P	**P**	**01 28 29.0**	**0.0**
	baz=253						
NV01	**Mina Array Sit**	**86.34**	**50**	*e*P	**P**	**01 28 29.1**	**-0.2**
NVAR	**Mina Array Bea**	**86.34**	**50**	P	**P**	**01 28 28.6**	**-0.7**
	comp=Z,4.7nm,1.0s,baz=237,slow=6.9,SNR=18						
PFO	**Pinyon Flats O**	**86.39**	**55**	*e*P	**P**	**01 28 29.0**	**-0.6**
	comp=Z,2.1nm,0.7s						
PFO	**Pinyon Flats O**	**86.39**	**55**	*e*P	**P**	**01 28 29.0**	**-0.6**
PFO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PFO	**Pinyon Flats O**	**86.39**	**55**	P	**P**	**01 28 29.6**	**0.0**
	baz=254						
NV11	**Mina Array Sit**	**86.45**	**50**	*e*P	**P**	**01 28 29.5**	**-0.3**
	comp=Z,1.0nm,1.4s						
F05D	**White Salmon**	**86.49**	**42**	P	**P**	**01 28 30.9**	**+1.3**
	baz=250						
GRAC	**Grapevine Rang**	**86.63**	**51**	P	**P**	**01 28 31.5**	**+0.9**
	baz=253						
KVN	**Kaiserville**	**86.67**	**49**	*e*P	**P**	**01 28 31.0**	**0.0**
	comp=Z,11nm,1.4s						
KVN	**Kaiserville**	**86.67**	**49**	*e*P	**P**	**01 28 31.0**	**0.0**
KVN				pmax	pmax		
	comp=Z,11nm,1.4s						
SWSC	**Sam W. Stewart**	**86.75**	**56**	P	**P**	**01 28 31.9**	**+0.8**
	baz=255						
FURC	**Furnace Creek,**	**86.87**	**52**	P	**P**	**01 28 32.1**	**+0.4**
	baz=254						
BELC	**Belle Mtn. Jos**	**86.87**	**55**	P	**P**	**01 28 32.4**	**+0.4**
	baz=254						
B05A	**Bryant**	**86.91**	**40**	P	**P**	**01 28 32.5**	**+1.0**
	baz=250						
I07A	**Izee**	**87.21**	**44**	*e*P	**P**	**01 28 33.6**	**+0.3**
	comp=Z,9.2nm,1.4s						
BC3	**Big Chuckawall**	**87.22**	**55**	P	**P**	**01 28 34.3**	**+0.7**
	baz=255						
WVOR	**Wild Horse Val**	**87.30**	**46**	*e*P	**P**	**01 28 33.8**	**0.0**
	comp=Z,6.3nm,1.2s						
WVOR	**Wild Horse Val**	**87.30**	**46**	*e*P	**P**	**01 28 33.8**	**0.0**
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TUQ	**Turquoise Moun**	**87.32**	**53**	P	**P**	**01 28 34.4**	**+0.3**
	baz=254						
GMRC	**Granite Mounta**	**87.35**	**54**	P	**P**	**01 28 34.7**	**+0.4**
	baz=255						
TPNV	**Topopah Spring**	**87.47**	**52**	P	**P**	**01 28 34.9**	**+0.1**
	baz=254						
IRM	**Iron Mountain**	**87.59**	**55**	P	**P**	**01 28 35.9**	**+0.6**
	baz=255						
J08A	**Circle Bar Ran**	**87.69**	**45**	*e*P	**P**	**01 28 36.1**	**+0.4**
	comp=Z,3.6nm,0.8s						
HAWA	**Hanford**	**87.92**	**42**	*e*P	**P**	**01 28 36.7**	**+0.2**
	comp=Z,7.9nm,1.1s						
G08A	**Pilot Rock**	**87.96**	**43**	*e*P	**P**	**01 28 37.0**	**+0.1**
	comp=Z,11nm,1.4s						
Y12C	**Blythe**	**87.99**	**55**	*e*P	**P**	**01 28 37.7**	**+0.6**
	comp=Z,12nm,1.3s						
Y12C	**Blythe**	**87.99**	**55**	P	**P**	**01 28 38.1**	**+0.9**
	baz=255						
SHPR	**Sheep Range**	**88.20**	**52**	*e*P	**P**	**01 28 38.7**	**+0.4**
	comp=Z,10nm,1.4s						
R11A	**Troy Canyon, C**	**88.36**	**51**	*e*P	**P**	**01 28 39.1**	**0.0**
	comp=Z,6.5nm,1.4s						
R11A	**Troy Canyon, C**	**88.36**	**51**	P	**P**	**01 28 39.5**	**+0.4**
	baz=254						
PDMCI	**Parker Dam,Lak**	**88.44**	**55**	P	**P**	**01 28 40.0**	**+0.7**
	baz=255						
W13A	**Hualapai Mount**	**88.84**	**54**	*e*P	**P**	**01 28 41.5**	**+0.1**
	comp=Z,8.7nm,1.3s						
214A	**Organ Pipe Nat**	**88.94**	**57**	P	**P**	**01 28 42.8**	**+1.0**
	baz=256						
BMO	**Blue Mountains**	**88.94**	**44**	*e*P	**P**	**01 28 41.6**	**+0.1**
	comp=Z,8.5nm,1.8s						
WMQ	**Urumqi**	**89.07**	**315**	*e*P	**P**	**01 28 42.2**	**+0.1**
WMQ				sP	pwP	01 28 56.2	+0.1
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,530nm,11.6s						
WMQ				LR	LR		
	comp=Z,450nm,17.5s						
WMQ				LR	LR		
	comp=Z,360nm,21.3s						
WMQ				LR	LR		
	comp=Z,310nm,21.3s						
WMQ	**Urumqi**	**89.07**	**315**	*e*P	**P**	**01 28 41.4**	**-0.7**
	comp=Z,4.7nm,0.4s						
WMQ	**Urumqi**	**89.07**	**315**	*e*P	**P**	**01 28 41.4**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.4s						
F10A	**Beach Ranch, E**	**89.32**	**43**	*e*P	**P**	**01 28 43.2**	**0.0**
	comp=Z,6.0nm,1.4s						
PSUT	**Pine Spring**	**89.72**	**51**	*e*P	**P**	**01 28 45.4**	**-0.2**
	comp=Z,4.7nm,1.1s						
LCMT	**Little Creek M**	**89.82**	**52**	*e*P	**P**	**01 28 46.0**	**+0.1**
	comp=Z,11nm,1.3s						
CCUT	**Cedar City**	**89.86**	**52**	*e*P	**P**	**01 28 46.2**	**0.0**
	comp=Z,5.7nm,1.1s						
SZCU	**Shurtz Canyon**	**90.08**	**52**	*e*P	**P**	**01 28 47.4**	**+0.2**
	comp=Z,16nm,1.5s						
KNB	**Kanab**	**90.14**	**52**	*e*P	**P**	**01 28 47.4**	**-0.1**
	comp=Z,17nm,1.3s						
KNB	**Kanab**	**90.14**	**52**	*e*P	**P**	**01 28 47.4**	**-0.1**
KNB				pmax	pmax		
	comp=Z,17nm,1.3s						
U15A	**North Rim**	**90.42**	**53**	*e*P	**P**	**01 28 48.7**	**-0.2**
	comp=Z,15nm,1.4s						
HLID	**Hailey**	**90.59**	**46**	*e*P	**P**	**01 28 49.1**	**-0.3**
	comp=Z,1.0nm,0.5s						
HLID	**Hailey**	**90.59**	**46**	P	**P**	**01 28 49.5**	**+0.1**
	baz=255						
X16A	**Lo Mia Camp, P**	**90.63**	**55**	*e*P	**P**	**01 28 50.0**	**+0.2**
	comp=Z,7.8nm,1.3s						
PKCU	**Pink Cliffs**	**90.64**	**52**	*e*P	**P**	**01 28 50.0**	**+0.1**
	comp=Z,26nm,1.4s						
TUC	**Tucson**	**90.70**	**57**	*e*P	**P**	**01 28 50.9**	**+0.9**
	comp=Z,6.9nm,1.2s						
TUC	**Tucson**	**90.70**	**57**	P	**P**	**01 28 50.8**	**+0.8**
	baz=257						
MTPU	**Mount Pierson**	**90.88**	**51**	*e*P	**P**	**01 28 51.6**	**+0.5**
	comp=Z,7.2nm,1.2s						
DGZ	**Jazzator, Alta**	**90.90**	**321**	*i* P	**P**	**01 28 47.3**	**-3.3**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
DUG	**Dugway, Tooele**	**90.91**	**49**	*e*P	**P**	**01 28 50.5**	**-0.4**
	comp=Z,20nm,1.8s						
DUG	**Dugway, Tooele**	**90.91**	**49**	*e*P	**P**	**01 28 50.5**	**-0.4**
DUG				pmax	pmax		
	comp=Z,20nm,1.8s						
DUG	**Dugway, Tooele**	**90.91**	**49**	P	**P**	**01 28 51.8**	**+0.8**
	baz=256						
BGU	**Big Grassy Mou**	**90.93**	**49**	*e*P	**P**	**01 28 51.2**	**+0.2**
	comp=Z,6.5nm,1.4s						
WUAZ	**Wupatki**	**90.93**	**54**	*e*P	**P**	**01 28 51.6**	**+0.5**
	comp=Z,12nm,1.4s						
WUAZ	**Wupatki**	**90.93**	**54**	P	**P**	**01 28 52.0**	**+0.8**
	baz=257						
MSU	**Marysvale**	**90.99**	**51**	*e*P	**P**	**01 28 51.7**	**+0.2**
MSU	**Marysvale**	**90.99**	**51**	*e*P	**P**	**01 28 51.7**	**+0.2**
HVU	**Hansel Valley**	**91.32**	**48**	*e*P	**P**	**01 28 52.5**	**-0.3**
	comp=Z,13nm,1.4s						
HVU	**Hansel Valley**	**91.32**	**48**	*e*P	**P**	**01 28 52.5**	**-0.3**
HVU				pmax	pmax		
	comp=Z,13nm,1.4s						
NLU	**North Lily Min**	**91.41**	**50**	*e*P	**P**	**01 28 53.6**	**+0.2**
	comp=Z,8.3nm,1.3s						
SYO	**Syowa Base**	**91.52**	**197**⇑	*i*P	**P**	**01 28 53.0**	**0.0**
SYO	**Syowa Base**	**91.52**	**197**⇓	*e*pP	pP	01 29 03.2	+2.1
Q16A	**Castle Valley**	**91.85**	**51**	*e*P	**P**	**01 28 55.3**	**-0.1**
	comp=Z,9.5nm,1.4s						
DLMT	**Dillon**	**92.29**	**44**	*e*P	**P**	**01 28 57.1**	**-0.1**
	comp=Z,13nm,1.4s						
WALA	**Waterton Lakes**	**92.32**	**41**	*e*P	**P**	**01 28 57.4**	**+0.2**
	comp=Z,10nm,1.3s						
BOZ	**Bozeman (W)**	**93.01**	**44**	*e*P	**P**	**01 29 00.3**	**-0.2**
	comp=Z,4.7nm,1.3s						
BOZ	**Bozeman (W)**	**93.01**	**44**	*e*P	**P**	**01 29 00.3**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BOZ	**Bozeman (W)**	**93.01**	**44**	P	**P**	**01 29 00.9**	**+0.3**
	baz=257						
MK01	**Makanchi Array**	**93.49**	**317**	*e*P	**P**	**01 29 01.9**	**-0.7**
MK31	**Makanchi Array**	**93.50**	**317**	*e*P	**P**	**01 29 02.4**	**-0.2**
MK31	**Makanchi Array**	**93.50**	**317**	*i* P	**P**	**01 29 01.5**	**-1.1**
MK31				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MK32	**Makanchi Array**	**93.50**	**317**	*e*P	**P**	**01 29 02.2**	**-0.4**
MKAR	**Makanchi Array**	**93.50**	**317**	P	**P**	**01 29 02.2**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=93,slow=6.1,SNR=17						
MKAR				PKKP	**PKKPdf**	**01 46 08.8**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=278,slow=3.3,SNR=9.8						
ZAA0	**Zalesovo Array**	**93.58**	**324**	*e*P	**P**	**01 29 02.1**	**-0.6**
	comp=Z,7.4nm,1.3s						
ZALV	**Zalesovo Beam**	**93.58**	**324**	*e*P	**P**	**01 29 01.0**	**-1.7**
ZALV	**Zalesovo Beam**	**93.58**	**324**	*e*P	**P**	**01 29 01.0**	**-1.7**
ZALV	**Zalesovo Beam**	**93.58**	**324**	P	**P**	**01 29 02.0**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=90,slow=3.0,SNR=11						
ZAA1	**Zalesovo Array**	**93.58**	**324**	*e*P	**P**	**01 29 02.0**	**-0.7**
MAKZ	**Makanchi**	**93.72**	**317**	*e*P	**P**	**01 29 02.7**	**-0.9**
	comp=Z,22nm,1.4s						
MAKZ	**Makanchi**	**93.72**	**317**	*e*P	**P**	**01 29 02.7**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,22nm,1.4s						
BW06	**Boulder Array**	**93.86**	**47**	*e*P	**P**	**01 29 04.0**	**-0.7**
	comp=Z,0.9nm,0.3s						
PD31	**Pinedale Array**	**93.87**	**47**	*e*P	**P**	**01 29 03.8**	**-0.9**
PDAR	**Pinedale Array**	**93.87**	**47**	P	**P**	**01 29 03.2**	**-1.5**
	comp=Z,1.8nm,1.1s,baz=225,slow=4.0,SNR=5.5						
NVS	**Novosibirsk**	**94.69**	**325**	*e*P	**P**	**01 29 07.1**	**-0.7**
NVS				pmax	pmax		
	comp=E,9.0nm,1.6s						
NVS				pmax	pmax		
	comp=Z,9.0nm,1.6s						
ANMO	**Albuquerque**	**94.76**	**55**	*i* P	**P**	**01 29 07.4**	**-1.5**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
EGMT	**Eagleton**	**94.78**	**42**	*e*P	**P**	**01 29 08.7**	**+0.2**
YKA	**Yellowknife Ar**	**95.26**	**27**	P	**P**	**01 29 08.2**	**-2.0**
	comp=Z,0.4nm,0.7s,baz=258,slow=4.6,SNR=6.5						
YKB5	**Yellowknife Ar**	**95.26**	**27**	*e*P	**P**	**01 29 08.2**	**-2.0**
LTX	**Lajitas**	**96.14**	**61**	*e*P	**P**	**01 29 14.9**	**-0.3**
LTX	**Lajitas**	**96.14**	**61**	*e*P	**P**	**01 29 14.9**	**-0.3**
TXAR	**Lajitas Array**	**96.14**	**61**	P	**P**	**01 29 14.9**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=236,slow=5.0,SNR=4.4						
KURK	**Kurchatov**	**96.64**	**320**	*e*P	**P**	**01 29 15.1**	**-1.7**
KURK	**Kurchatov**	**96.64**	**320**	*i* P	**P**	**01 29 13.5**	**-3.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KSH	**Kashi**	**96.69**	**309**	P	**P**	**01 29 15.9**	**-1.6**
KSH				pP	pP	01 29 26.0	+0.2
KSH				PP	**PP**	**01 33 18.6**	**+6.0**
KSH				SKS	**SKSac**	**01 39 56.6**	**+4.0**
KSH				S	**SKKSac**	**01 40 27.2**	**+8.6**
KSH				SS	**SS**	**01 47 14.9**	**+2.3**
KSH				LR	LR		
	comp=Z,180nm,8.3s						
KSH				LR	LR		
	comp=Z,110nm,4.6s						
KSH				LR	LR		
	comp=Z,410nm,7.0s						
SNAA	**Sanae**	**96.90**	**184**	*i* P	**P**	**01 29 16.9**	**-0.9**
ARA0	**ARCESS Array S**	**116.47**	**345**	*e*PKPdf	**PKPdf**	**01 34 29.5**	**-0.5**
ARCES	**ARCESS Array B**	**116.47**	**345**	PKP	**PKPdf**	**01 34 29.5**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=60,slow=2.2,SNR=7.7						
LPAZ	**La Paz**	**120.31**	**116**	*e*PKPdf	**PKPdf**	**01 34 38.9**	**-0.8**
LPAZ	**La Paz**	**120.31**	**116**	*e*PKIKP	**PKPdf**	**01 34 38.9**	**-0.8**
LPAZ	**La Paz**	**120.31**	**116**	PKP	**PKiKP**	**01 34 39.6**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=270,slow=1.0,SNR=4.9						
OBN	**Obninsk**	**120.85**	**329**	*e*PKIKP	PKPpre	01 34 32.6	
OBN				*e*		01 36 03.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RAYN	**Ar Rayn**	**121.81**	**291**	*e*PKPdf	**PKiKP**	**01 34 41.5**	**-0.3**
FIA0	**FINESS Array S**	**121.87**	**338**	*e*PKPdf	**PKPdf**	**01 34 40.1**	**-0.4**
FIA0	**FINESS Array S**	**121.87**	**338**	*e*PKIKP	**PKPdf**	**01 34 40.1**	**-0.4**
FINES	**FINESS Array B**	**121.87**	**338**	PKP	**PKPdf**	**01 34 40.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=85,slow=2.1,SNR=3.6						
CPUP	**Villa Florida**	**124.07**	**133**	*e*PKPdf	**PKPdf**	**01 34 45.6**	**-0.3**
CPUP	**Villa Florida**	**124.07**	**133**	*e*PKIKP	**PKPdf**	**01 34 45.6**	**-0.3**
CPUP	**Villa Florida**	**124.07**	**133**	PKP	**PKiKP**	**01 34 46.2**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=313,slow=1.8,SNR=4.4						
SDV	**Santo Domingo**	**124.75**	**87**	*e*PKPdf	**PKiKP**	**01 34 48.1**	**0.0**
NB200	**NORSAR Array S**	**126.83**	**345**	*e*PKPdf	**PKiKP**	**01 34 50.3**	**-0.4**
NOA	**NORSAR Array B**	**126.83**	**345**	PKP	**PKiKP**	**01 34 50.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=30,slow=3.1,SNR=3.1						
AKASG	**Malin Array Be**	**126.90**	**327**	PKP	**PKPdf**	**01 34 50.2**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=71,slow=2.1,SNR=5.6						
BR101	**Keskin Array S**	**128.92**	**312**	*e*PKPdf	**PKiKP**	**01 34 55.4**	**-0.2**
BRTR	**Keskin Array B**	**128.92**	**312**	PKP	**PKiKP**	**01 34 55.4**	**-0.2**
	comp=Z,2.2nm,1.2s,baz=46,slow=3.6,SNR=3.5						
LSZ	**Lusaka**	**130.18**	**239**	*e*PKPdf	**PKiKP**	**01 34 58.1**	**-0.6**
LSZ	**Lusaka**	**130.18**	**239**	*e*PKIKP	**PKiKP**	**01 34 58.2**	**-0.6**
GERES	**GERESS Array B**	**135.78**	**333**	PKP	**PKiKP**	**01 35 08.1**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=38,slow=2.4,SNR=3.8						
KEST	**Kesra**	**147.43**	**322**	*e*PKPbc	**PKPbc**	**01 35 31.4**	**+0.2**
KEST	**Kesra**	**147.43**	**322**	PKPbc	**PKPbc**	**01 35 31.8**	**+0.6**
	comp=Z,7.5nm,0.8s,baz=78,slow=2.3,SNR=7.6						
ES19	**SONSECA Array**	**150.14**	**343**	*e*PKPbc	**PKPbc**	**01 35 38.1**	**+0.1**
ESDC	**Sonseca Array**	**150.18**	**344**	PKPbc	**PKPbc**	**01 35 38.0**	**-0.1**
	comp=Z,2.2nm,0.9s,baz=3.7,slow=5.5,SNR=4.1						
TOA0	**Torodi Ar. Sit**	**164.06**	**278**	*e*PKPdf	**PKPdf**	**01 35 50.8**	**-0.2**
TORD	**Torodi Ar. Bea**	**164.06**	**278**	PKP	**PKPdf**	**01 35 50.6**	**-0.5**
	comp=Z,4.5nm,1.1s,baz=67,slow=0.9,SNR=16						
TORD				PKPab	**PKPab**	**01 36 43.7**	**-0.7**
	comp=Z,2.0nm,1.2s,baz=92,slow=4.5,SNR=4.3						
TOA1	**Torodi Ar. Sit**	**164.06**	**278**	*e*PKPdf	**PKPdf**	**01 35 50.6**	**-0.5**
TOA1				*e*PKPab	**PKPab**	**01 36 43.7**	**-0.7**
DBIC	**Dimbokro**	**169.44**	**245**	*e*PKPdf	**PKPdf**	**01 35 55.8**	**+0.6**
DBIC				*e*PKPab	**PKPab**	**01 37 07.5**	**-0.7**
DBIC	**Dimbokro**	**169.44**	**245**	*e*PKIKP	**PKPdf**	**01 35 55.8**	**+0.6**
DBIC				*e*		01 37 07.5	

IDC ***02*** *01:19:30.1±0.5, 6°.80S×105°.42E, h0^{km}, mb4.7/28, mb1 4.8/28, mb1mx4.7/45, mbtmp4.7/28, MS4.2/9, Ms1 4.3/9, ms1mx3.9/40, Error ellipse: s-maj=18.6km s-min=10.8km az=48.0*

DJA ***02*** *01:19:32.4±0.3, 7°S±3°×10°5E±°, h10^{km}, M5.2/25, mb5.5/25, mB5.7/18, MLv5.3/24, Mw(mB)5.2/18*

MOS ***02*** *01:19:33.7±1.1, 6°.67S×105°.51E, h33^{km}, mb5.1/58, MS4.4/4, Error ellipse: s-maj=10.6km s-min=5.7km az=113.1*

KLM ***02*** *01:19:33.8, 7°.33S×105°.03E, h48^{km}, mb5.1*

BJI ***02*** *01:19:35.0, 7°.00S×105°.40E, h39^{km}, mB5.1/26, mb4.8/36, Ms4.8/19, Ms7 4.5/19*

ISCJB ***02*** *01:19:35.8±0.2, 6°.90S±0°.03×105°.48E±0°.02, h56^{km}, mb4.9/117, MS4.4/19, Error ellipse: s-maj=5.0km s-min=2.4km az=32.6*

NEIC ***02*** *01:19:35.0±1.1, 6°.94S×105°.37E, h35^{km}±7^{km}, mb5.0/53, Error ellipse: s-maj=5.6km s-min=3.2km az=45.0*

NEIC Felt [III] at Pandeglang.

ISC 02 01:19:37.1±0.3, **7°.04S**±0°.04×**105°.39E**±0°.04, **h56^{km}, n620, σ1^{s}.27**/612, **mb4.9**/125, **MS4.3**/19, **30C-14D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.16**	**88**	P	**Pn**	**01 19 53.8**	**-3.3**
TNG	**Tangerang**	**1.52**	**55**	P	**Pn**	**01 20 01.6**	**-0.4**
CBJI	**Citeko**	**1.58**	**67**	P	**Pn**	**01 20 01.3**	**-1.4**
BLSI	**Bandar Lampung**	**1.67**	**355**	P	**Pn**	**01 20 02.8**	**-1.2**
KASI	**Kota Agung**	**1.75**	**330**	P	**Pn**	**01 20 03.0**	**-2.1**
KLI	**Kotabumi**	**2.23**	**346**	P	**Pn**	**01 20 11.3**	**-0.3**
LWLI	**Liwa**	**2.41**	**327**	P	**Pn**	**01 20 14.0**	**-0.1**
CISI	**Cisompet, Garu**	**2.46**	**102**	*e*Pn	**Pn**	**01 20 12.4**	**-2.5**
CISI				*e*Sn	**Sn**	**01 20 42.5**	**-1.3**
CISI	**Cisompet, Garu**	**2.46**	**102**	P	**Pn**	**01 20 12.3**	**-2.6**
MDSI	**Maura Dua**	**2.81**	**335**	P	**Pn**	**01 20 18.9**	**-0.7**
JCJI	**Jatiwangi**	**2.92**	**79**	P	**Pn**	**01 20 21.0**	**0.0**
CMJI	**Cimerak**	**3.12**	**104**	P	**Pn**	**01 20 21.4**	**-2.5**
XMIS	**Christmas Isla**	**3.43**	**176**	*e*Pn	Pn	01 20 21.0	-7.0
XMIS				*e*Sn	Sn	01 20 56.7	-11
KPJI	**Karang Pucung**	**3.53**	**95**	P	**Pn**	**01 20 29.1**	**-0.3**
MNAI	**Manna**	**3.60**	**318**	*e*Pn	**Pn**	**01 20 28.8**	**-1.5**
MNAI				*e*Sn	**Sn**	**01 21 08.9**	**-2.8**
MNAI	**Manna**	**3.60**	**318**	P	**Pn**	**01 20 29.3**	**-1.1**
LHSI	**Lahat**	**3.69**	**330**	P	**Pn**	**01 20 32.0**	**+0.3**
PMBI	**Palembang**	**4.13**	**351**	P	**Pn**	**01 20 39.4**	**+1.7**
TPI	**Tanjungpandan**	**4.82**	**28**	P	**Pn**	**01 20 46.6**	**-0.5**
	253nm,1.0s,3μm1.6nm						
PPBI	**Pangkal Pinang**	**4.90**	**9**	P	**Pn**	**01 20 48.8**	**+0.5**
	158nm,1.2s,2μm0.9nm						
MASI	**Maura Aman, Be**	**4.98**	**321**	P	**Pn**	**01 20 48.9**	**-0.5**
	861nm,1.4s,10μm3.9nm						
SMRI	**Semarang**	**5.02**	**90**	*e*Pn	**Pn**	**01 20 50.2**	**+0.4**
SMRI	**Semarang**	**5.02**	**90**	P	**Pn**	**01 20 46.2**	**-3.6**
	828nm,0.9s,8μm3.3nm						
UGM	**Wanagama**	**5.17**	**100**	*e*Pn	**Pn**	**01 20 50.1**	**-1.8**
UGM				*e*Sn	**Sn**	**01 21 49.5**	**-0.8**
UGM	**Wanagama**	**5.17**	**100**	P	**Pn**	**01 20 49.7**	**-2.2**
	1μm,1.1s,12μm4.1nm						
WOJI	**Wonogiri, Jawa**	**5.55**	**99**	P	**Pn**	**01 20 55.7**	**-1.4**
	240nm,0.8s,3μm1.0nm						
JMBI	**JAMBI**	**5.65**	**342**	P	**Pn**	**01 20 59.0**	**+0.5**
	583nm,1.2s,8μm3.3nm						
PCJI	**Pacitan**	**5.85**	**102**	P	**Pn**	**01 20 59.8**	**-1.5**
	704nm,0.8s,10μm3.4nm						
NGJI	**Ngawi**	**6.04**	**93**	P	**Pn**	**01 21 06.7**	**+2.9**
TBJI	**Tambak Boyo**	**6.42**	**88**	P	**Pn**	**01 21 11.0**	**+2.0**
	244nm,0.9s,2μm						
PWJI	**Pagerwojo**	**6.44**	**99**	P	**Pn**	**01 21 08.1**	**-1.2**
	662nm,0.7s,7μm						
PPSI	**Pulau Pagai**	**6.84**	**308**	P	**Pn**	**01 21 12.4**	**-2.4**
	438nm,0.7s,4μm						
GRJI	**Gresik**	**7.04**	**89**	P	**Pn**	**01 21 18.7**	**+1.1**
	248nm,0.7s,3μm						
GMJI	**Gumukmas**	**8.08**	**99**	P	**Pn**	**01 21 30.6**	**-1.2**
	230nm,0.8s,3μm						
SISI	**Saibi**	**8.46**	**312**	P	**Pn**	**01 21 33.3**	**-3.8**
	96nm,0.9s,946nm						
KMMI	**Kalianget**	**8.52**	**91**	P	**Pn**	**01 21 40.2**	**+2.4**
	181nm,0.8s						
JAGI	**Jajag, Banyuwa**	**8.80**	**100**	*e*Pn	**Pn**	**01 21 41.1**	**-0.6**
JAGI				*e*Sn	**Sn**	**01 23 19.6**	**0.0**
JAGI	**Jajag, Banyuwa**	**8.80**	**100**	P	**Pn**	**01 21 41.7**	**0.0**
	403nm,1.2s,9μm						
MYKOM	**Kota Tinggi**	**8.90**	**350**	*e*Pn	**Pn**	**01 21 41.9**	**-1.2**
KSM	**Kuching**	**9.78**	**30**	*e*Pn	**Pn**	**01 21 53.5**	**-1.6**
KSM				*e*Sn	**Sn**	**01 23 39.9**	**-3.7**
SRBI	**Singaraja**	**9.80**	**97**	P	**Pn**	**01 21 55.6**	**+0.3**
	323nm,0.7s,3μm						
IGBI	**Denpasar**	**9.83**	**101**	P	**Pn**	**01 21 55.3**	**-0.4**
	988nm,0.8s,10μm						
COCO	**West Island**	**9.86**	**238**	*e*Pn	**Pn**	**01 21 54.6**	**-1.6**
COCO	**West Island**	**9.86**	**238**	*e*P	**Pn**	**01 21 54.6**	**-1.6**
DNP	**Denpasar**	**9.87**	**100**	P	**Pn**	**01 21 55.5**	**-0.8**
	647nm,0.7s						
PBSI	**Pulau Batu**	**9.92**	**314**	P	**Pn**	**01 21 54.8**	**-2.2**
	82nm,1.2s						
KBKI	**Kotabaru**	**11.36**	**71**	P	**Pn**	**01 22 19.3**	**+2.6**
GSI	**Gunungsitoli**	**11.38**	**316**	*e*Pn	**Pn**	**01 22 13.8**	**-3.2**
GSI	**Gunungsitoli**	**11.38**	**316**	P	Pn	01 22 11.9	-5.1
SBUM	**Sibu**	**11.64**	**36**	*e*Pn	**Pn**	**01 22 18.1**	**-2.4**
SBUM	**Sibu**	**11.64**	**36**	P	Pn	01 22 25.3	+4.8
IPM	**Ipoh**	**12.24**	**339**	*e*Pn	Pn	01 22 23.4	-5.4
MMRI	**Maumere**	**16.77**	**97**	*e*Pn	**Pn**	**01 23 27.6**	**-0.7**
	354nm,0.9s						
KKM	**Kota Kinabalu**	**16.90**	**40**	*e*Pn	**Pn**	**01 23 28.9**	**-1.2**
	33nm,0.9s						
KKM	**Kota Kinabalu**	**16.90**	**40**	P	**P**	**01 23 33.0**	**+1.7**
SDKM	**Sandakan**	**17.25**	**43**	P	**P**	**01 23 38.0**	**+2.9**
GIRL	**Giralia**	**17.70**	**152**	P	**Pn**	**01 23 37.3**	**-2.4**
	baz=18,SNR=18						
GIRL	**Giralia**	**17.70**	**152**	*e*Pn	**Pn**	**01 23 39.8**	**0.0**
	81nm,1.0s						
KDM	**Kudat**	**17.96**	**40**	P	**Pn**	**01 23 46.5**	**+3.5**
BATI	**Baumata**	**18.34**	**101**	P	**P**	**01 23 43.8**	**-3.4**
	23nm,0.3s,baz=309,slow=1.6,SNR=14						
BATI				S	**Sn**	**01 27 12.2**	**+0.3**
	9.4nm,0.3s,baz=342,slow=19,SNR=4.4						
SOEI	**Soe**	**18.87**	**100**	*e*P	**P**	**01 23 48.0**	**-5.1**
	160nm,0.7s						
SOEI				*e*Sn	**Sn**	**01 27 23.6**	**-1.3**
SRAK	**Srakaew**	**21.18**	**351**	P	**P**	**01 24 24.8**	**+6.9**
FITZ	**Fitzroy Crossi**	**22.59**	**121**	P	**P**	**01 24 33.5**	**+0.4**
	baz=23,SNR=24						
FITZ	**Fitzroy Crossi**	**22.59**	**121**	*e*P	**P**	**01 24 33.2**	**+0.1**
	48nm,0.8s						
FITZ				S	**S**	**01 28 36.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.59**	**121**	P	**P**	**01 24 33.2**	**+0.1**
	45nm,0.8s,baz=284,slow=6.7,SNR=38						
FITZ				S	**S**	**01 28 36.8**	**-0.1**
	5.9nm,0.9s,baz=218,slow=19,SNR=2.4						
CHAI	**Chaiyaphum**	**23.04**	**352**	P	**P**	**01 24 38.6**	**+0.9**
	5.6nm,0.7s						
TNTI	**Ternate**	**23.26**	**71**	*e*P	**P**	**01 24 39.5**	**-0.5**
	61nm,0.7s						
UMPA	**Umpang Tak**	**23.98**	**344**	P	**P**	**01 24 47.9**	**+1.3**
	4.2nm,1.2s,939nm						
MORW	**Morawa**	**24.11**	**157**	*e*P	**P**	**01 24 45.9**	**-1.7**
	24nm,0.9s						
KNRA	**Kununurra**	**24.45**	**113**	P	**P**	**01 24 51.2**	**+0.3**
	baz=25,SNR=30						
SUKH	**Sukhothai**	**25.02**	**347**	P	**P**	**01 24 57.9**	**+1.9**
	3.7nm,0.8s						
SAUI	**Saumlaki**	**25.71**	**94**	*e*P	**P**	**01 25 01.8**	**-0.5**
	141nm,0.8s						
MTN	**Manton Dam**	**25.99**	**105**	*e*P	**P**	**01 25 05.2**	**+0.3**
	59nm,1.0s						
CM01	**Chiang Mai Arr**	**26.08**	**346**	*e*P	**P**	**01 25 03.9**	**-1.8**
CM31	**Chiang Mai Arr**	**26.12**	**346**	*e*P	**P**	**01 25 02.9**	**-3.2**
CMAR	**Chiang Mai Arr**	**26.12**	**346**	P	**P**	**01 25 02.9**	**-3.2**
	2.8nm,0.7s,baz=179,slow=8.8,SNR=22						
CMAR				LR	LR	01 36 49.6	
	comp=Z,605nm,18.8s,baz=192,slow=40						
QIZ	**Qiongzhong**	**26.27**	**10**	P	**P**	**01 25 09.6**	**+2.2**
QIZ				S	**S**	**01 29 41.4**	**+5.2**
QIZ				LR	LR		
	comp=N,620nm,13.2s						
QIZ				LR	LR		
	comp=E,370nm,17.2s						
QIZ				LR	LR		
	comp=Z,660nm,17.6s						
CMMT	**Chiang Mai**	**26.46**	**346**	P	**P**	**01 25 08.7**	**-0.4**

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        7.3nm,1.2s
CHTO  Chiang Mai        26.46 346  eP     P       01 25 08.0 -1.1
        4.3nm,0.8s
CHTO  Chiang Mai        26.46 346  eP     P       01 25 08.0 -1.1
CHTO                                pmax   pmax
        comp=Z,4.0nm,0.8s
CHTO  Chiang Mai        26.46 346   P     P       01 25 08.8 -0.3
        comp=Z,33nm,1.2s
SIJI  Sorong            26.52  78   P     P       01 25 08.1 -1.7
        comp=Z,38nm,0.9s,baz=284,slow=7.6,SNR=5.7
FAKI  Fak Fak           27.07  83  eP     P       01 25 14.3 -0.4
        comp=Z,33nm,0.8s
KDU   Kakadu            27.25 104   P     P       01 25 15.9 -0.4
        baz=28,SNR=21
NWAO  Narrogin (SRO)    28.01 158   LR    LR      01 35 35.4
        comp=Z,631nm,19.7s,baz=260,slow=34
WRKA  Warakurna         28.29 132   P     P       01 25 26.1 +0.7
        baz=28,SNR=5.7
PALK  Pallekele         28.43 300   LR    LR      01 36 08.0
        comp=Z,432nm,19.4s,baz=116,slow=35
H01W3 Cape Leeuwin H    28.86 165   T     T       01 55 49.7
        baz=344,slow=76,SNR=1264
H01W1 Cape Leeuwin H    28.87 165   T     T       01 55 48.7
        baz=344,slow=76,SNR=1099
H01W2 Cape Leeuwin H    28.87 165   T     T       01 55 50.8
        baz=344,slow=76,SNR=1445
WR1   Warramunga Arr    30.87 117  eP     P       01 25 48.4  0.0
        comp=Z,18nm,0.9s
WRA   Warramunga Arr    30.87 117   P     P       01 25 48.4  0.0
        comp=Z,10nm,0.5s,baz=298,slow=9.7,SNR=52
WRAB  Tennant Creek     30.87 117  eP     P       01 25 49.2 +0.8
        comp=Z,12nm,0.6s
WRAB  Tennant Creek     30.87 117⇓iP     P       01 25 47.9 -0.5
WRAB                                pmax   pmax
        comp=Z,23nm,1.1s
WB2   Warramunga Arr    30.88 117  eP     P       01 25 48.9 +0.4
FORT  Forrest           31.76 141  eP     P       01 25 56.5 +0.5
        comp=Z,30nm,0.7s
FORT                               epP    pP      01 26 08.7 -0.8
AS31  Alice Springs     31.98 124  eP     P       01 25 58.3 +0.1
        comp=Z,3.6nm,0.5s
ASAR  Alice Springs     31.98 124   P     P       01 25 58.6 +0.5
        comp=Z,8.4nm,0.7s,baz=303,slow=8.1,SNR=49
AS01  Alice Springs     32.02 124  eP     P       01 25 58.6 +0.2
KMI   Kunming           32.07 355   P     P       01 26 01.8 +2.7
KMI                                 pmax   pmax
        comp=Z,12nm,0.6s
KMI                                 LR     LR
        comp=Z,470nm,14.5s
KMI                                 LR     LR
        comp=Z,970nm,15.3s
KMI                                 LR     LR
        comp=Z,760nm,19.4s
H08S2 Diego Garcia H    32.62 267   T     T       02 00 15.9
        baz=91,slow=76,SNR=580
H08S3 Diego Garcia H    32.63 267   T     T       02 00 16.1
        baz=91,slow=76,SNR=657
H08S1 Diego Carcia H    32.64 267   T     T       02 00 16.7
        baz=91,slow=76,SNR=183
GYA   Guiyang           33.32   2  eP     P       01 26 10.8 +0.9
GYA                                 pP     pP      01 26 24.6 +0.5
GYA                                 PP     PP      01 27 25.9 -0.3
GYA                                 S      S       01 31 31.3 +4.5
GYA                                 sS     sS      01 31 49.6 -0.8
GYA                                 SS     SS      01 33 35.0  -18
GYA                                 pmax   pmax
        comp=Z,20nm,0.8s
GYA                                 pmax   pmax
        comp=Z,120nm,4.9s
GYA                                 LR     LR
        comp=Z,460nm,17.9s
GYA                                 LR     LR
        comp=Z,410nm,18.0s
GYA                                 LR     LR
        comp=Z,460nm,17.8s
JAY   Jayapura          35.47  84   P     P       01 26 28.6  0.0
        comp=Z,24nm,0.8s,baz=168,slow=20,SNR=5.8
QIS   Mount Isa         35.74 116   P     P       01 26 31.8 +0.9
        baz=36,SNR=8.2
HYB   Hyderabad         35.97 313  i P    P       01 26 33.5 +0.7
COEN  Coen              37.75 104   P     P       01 26 48.7 +0.8
        baz=38,SNR=8.0
COEN  Coen              37.75 104  eP     P       01 26 48.0  0.0
        comp=Z,20nm,1.0s
CD2   Chengdu           37.77 358   P     P       01 26 50.0 +2.1
CD2                                 S      S       01 32 39.5 +4.8
CD2                                 pmax   pmax
        comp=Z,10.0nm,0.5s
CD2                                 pmax   pmax
        comp=Z,120nm,4.8s
CD2                                 LR     LR
        comp=Z,700nm,17.4s
CD2                                 LR     LR
        comp=Z,760nm,16.9s
CD2                                 LR     LR
        comp=Z,740nm,13.9s
BBOO  Buckleboo         38.32 136   P     P       01 26 53.6 +1.0
        baz=39,SNR=7.6
BBOO  Buckleboo         38.32 136  eP     P       01 26 53.1 +0.6
        comp=Z,41nm,1.5s
RAMN  Ramite            38.38 332  eP     P       01 26 52.9 -0.5
        comp=Z,9.8nm,0.4s
LSA   Lhasa             39.01 340  eP     P       01 26 58.2 -0.6
        comp=Z,6.3nm,0.4s
LSA   Lhasa             39.01 340  eP     P       01 26 58.2 -0.6
LSA                                 pmax   pmax
        comp=Z,6.0nm,0.4s
JIRN  Jiri              39.18 333  eP     P       01 26 59.5 -0.7
        comp=Z,59nm,0.8s
PKI   Pulchoki          39.47 331  eP     P       01 27 01.3 -1.2
MTSU  Mount Surprise    39.47 110   P     P       01 27 04.2 +1.8
        baz=40,SNR=10
PKIN  Phulchoki         39.48 331  eP     P       01 27 01.7 -0.8
        comp=Z,3.5nm,0.3s
GUN   Gumba             39.53 332  eP     P       01 27 02.4 -0.7
        comp=Z,22nm,0.5s
DMN   Daman             39.64 331  eP     P       01 27 02.9 -1.0
        comp=Z,40nm,1.2s
KOLN  Koldanda          40.51 330  eP     P       01 27 10.0 -1.1
        comp=Z,68nm,1.1s
DANN  Dangsing          40.91 330  eP     P       01 27 13.2 -1.2
        comp=Z,74nm,1.1s
NJ2   Nanjing           40.94  18  eP     P       01 27 15.8 +1.5
NJ2                                 pmax   pmax
        comp=Z,15nm,0.6s
XAN   Xi'an             40.99   4  eP     P       01 27 13.7 -1.0
        comp=Z,8.6nm,0.8s
XAN   Xi'an             40.99   4  eP     P       01 27 13.7 -1.0
XAN                                 pmax   pmax
        comp=Z,9.0nm,0.8s
PYUN  Piuthan           41.09 329  eP     P       01 27 14.7 -1.1
        comp=Z,93nm,1.1s
CTA   Charters Tower    41.66 112   P     P       01 27 22.5 +2.1
        comp=Z,15nm,0.9s,baz=277,slow=11,SNR=5.7
CTAO  Charters Tower    41.66 112  eP     P       01 27 20.9 +0.4
        comp=Z,27nm,1.1s
CTAO  Charters Tower    41.66 112  eP     P       01 27 20.9 +0.4
CTAO                                pmax   pmax
        comp=Z,27nm,1.1s
QLP   Quilpie           41.72 122   P     P       01 27 22.7 +1.9
        baz=42,SNR=4.1
STKA  Stephens Creek    41.81 131   P     P       01 27 23.0 +1.5
        baz=42,SNR=10.0
STKA  Stephens Creek    41.81 131  eP     P       01 27 22.1 +0.6
        comp=Z,8.7nm,0.9s
STKA  Stephens Creek    41.81 131  eP     P       01 27 22.1 +0.6
STKA                                pmax   pmax
        comp=Z,9.0nm,0.9s
STKA  Stephens Creek    41.81 131   P     P       01 27 22.8 +1.3
        comp=Z,29nm,0.5s,baz=299,slow=8.8,SNR=21
LZH   Lanzhou           42.92 358  eP     P       01 27 38.7 +8.1
LZH                                 pP     pP      01 27 46.6 +1.5
LZH                                 sP     sP      01 27 51.0 -0.6
LZH                                 pmax   pmax
        comp=Z,20nm,1.0s
LZH                                 LR     LR
        comp=N,1µm,15.1s
LZH                                 LR     LR
        comp=E,720nm,13.2s
LZH                                 LR     LR
        comp=Z,890nm,16.2s
ARPS  Mount Arapiles    44.47 137   P     P       01 27 44.2 +1.4
        baz=45,SNR=5.1
NDI   New Delhi         44.71 324  eP     P       01 27 45.4 +0.5
CMSA  Cobar Meteorol    44.79 128   P     P       01 27 47.7 +2.2
        baz=45,SNR=5.3
RMQ   Roma              45.52 120   P     P       01 27 52.9 +1.5
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        baz=46,SNR=4.9
EIDS  Eidsvold          47.23 118   P     P       01 28 07.2 +2.4
        baz=48,SNR=3.1
HHC   Hu-ho-hao-te      47.99   6  eP     P       01 28 12.8 +2.3
HHC                                 pmax   pmax
        comp=Z,11nm,1.4s
HHC                                 pmax   pmax
        comp=Z,390nm,7.2s
KS15  Wonju Array Si    48.99  24  eP     P       01 28 18.6 +0.5
KSAR  Wonju Array Be    48.99  24   P     P       01 28 17.4 -0.7
KSAR  Wonju Array Be    48.99  24   P     P       01 28 17.4 -0.7
KSRS  Korea Array       49.02  24   P     P       01 28 17.4 -0.9
        comp=Z,3.1nm,0.6s,baz=221,slow=8.2,SNR=8.9
NIL   Nilore            50.66 325  eP     P       01 28 29.7 -1.3
NIL   Nilore            50.66 325  eP     P       01 28 29.7 -1.3
WMQ   Urumqi            53.10 344  eP     P       01 28 48.5 -0.5
WMQ                                 pP     pP      01 28 59.0 -4.9
WMQ                                 sP     sP      01 29 04.5 -5.8
WMQ                                 pmax   pmax
        comp=Z,17nm,1.3s
WMQ                                 pmax   pmax
        comp=Z,510nm,11.5s
WMQ                                 LR     LR
        comp=Z,450nm,21.3s
WMQ                                 LR     LR
        comp=Z,290nm,25.5s
WMQ                                 LR     LR
        comp=Z,260nm,25.5s
MAJO  Matsushiro        53.16  33  eP     P       01 28 46.9 -2.6
MAJO  Matsushiro        53.16  33  i P    P       01 28 46.9 -2.6
MAJO                                pmax   pmax
        comp=Z,12nm,1.2s
MJAR  Matsushiro Arr    53.16  33   P     P       01 28 46.9 -2.6
        comp=Z,1.3nm,0.3s,baz=214,slow=8.3,SNR=3.2
KSH   Kashi             53.73 332   P     P       01 28 52.4 -1.3
KSH                                 sP     sP      01 29 11.9 -3.2
KSH                                 PP     PP      01 31 01.4 +6.1
KSH                                 S      S       01 36 17.8 -6.3
KSH                                 sS     pS      01 36 43.0 +1.7
KSH                                 SS     SS      01 40 08.1 +2.4
KSH                                 pmax   pmax
        comp=Z,21nm,0.7s
KSH                                 pmax   pmax
        comp=Z,500nm,6.5s
KSH                                 LR     LR
        comp=Z,340nm,7.6s
KSH                                 LR     LR
        comp=Z,230nm,5.3s
KSH                                 LR     LR
        comp=Z,650nm,6.8s
CN2   Changchun         53.77  18  eP     P       01 28 52.5 -1.3
CN2                                 pmax   pmax
        comp=Z,20nm,0.8s
SONA0 Songino Array     54.65   1  eP     P       01 28 59.7 -0.5
SONA0                              ePcP   PcP     01 30 03.2 +0.6
SONM  Songino Array     54.65   1   P     P       01 28 59.7 -0.5
        comp=Z,1.9nm,0.7s,baz=176,slow=7.5,SNR=6.8
SONM                                PcP    PcP     01 30 03.2 +0.6
        comp=Z,8.7nm,0.8s,baz=185,slow=3.8,SNR=11
SONA1 Songino Array     54.66   1  eP     P       01 28 59.2 -1.1
TARG  Taragay, Kyrgy    54.71 335  eP     P       01 29 00.8 -0.3
        comp=Z,3.7nm,0.9s
NRN   Naryn             55.25 333  eP     P       01 29 04.0 -1.0
        comp=Z,7.0nm,1.0s
NRN   Naryn             55.25 333  eP     P       01 29 04.0 -1.0
NRN                                 pmax   pmax
        comp=Z,7.0nm,1.0s
SFK   Sufi-Kurgan       55.30 330   P     P       01 29 04.2 -1.1
SFK                                 pmax   pmax
        comp=Z,47nm,1.5s
KDJ   Kajisay           55.30 335  eP     P       01 29 05.6 +0.4
        comp=Z,10nm,0.8s
KDJ   Kajisay           55.30 335  eP     P       01 29 05.6 +0.4
KDJ                                 pmax   pmax
        comp=Z,10.0nm,0.8s
PDGK  Podgornoye        55.37 337   P     P       01 29 04.0 -1.6
PDGK                                pmax   pmax
        comp=Z,11nm,0.7s
MDJ   Mudanjiang        55.85  21   P     P       01 29 12.9 +4.1
MDJ                                 pP     pP      01 29 22.2 -1.7
MDJ                                 sP     sP      01 29 28.1 -2.2
MDJ                                 ScP    ScP     01 34 04.5 +2.9
MDJ                                 PcS    PcS     01 34 06.4 -1.0
MDJ                                 pmax   pmax
        comp=Z,12nm,1.8s
MDJ                                 pmax   pmax
        comp=Z,600nm,4.1s
MDJ                                 LR     LR
        comp=Z,1µm,4.8s
MDJ                                 LR     LR
        comp=Z,550nm,5.0s
MDJ                                 LR     LR
        comp=Z,850nm,4.6s
MDJ   Mudanjiang        55.85  21  eP     P       01 29 08.3 -0.5
        comp=Z,4.6nm,0.5s
GAR   Garm              56.17 327  eP     P       01 29 09.6 -1.8
        comp=Z,45nm,1.0s
GAR   Garm              56.17 327  eP     P       01 29 09.6 -1.8
GAR                                 pmax   pmax
        comp=Z,45nm,1.0s
USRK  Ussuriysk Ar.     56.38  23   P     P       01 29 11.8 -0.8
        comp=Z,6.2nm,0.7s,baz=204,slow=5.6,SNR=15
CHGR  Chuyangaron       56.56 326  eP     P       01 29 12.5 -1.6
        comp=Z,62nm,0.8s
ARSB  Arslanbob         56.56 331  eP     P       01 29 13.8 -0.4
        comp=Z,25nm,0.9s
TKM2  Tokmak 2          56.62 334   P     P       01 29 12.3 -2.4
TKM2                                pmax   pmax
        comp=Z,7.0nm,0.8s
BTK   Batken            56.69 329  eP     P       01 29 15.2 +0.2
        comp=Z,23nm,0.9s
BTK   Batken            56.69 329  eP     P       01 29 15.2 +0.2
BTK                                 pmax   pmax
        comp=Z,23nm,0.9s
AAK   Ala-Archa         56.88 333  eP     P       01 29 16.3 -0.2
        comp=Z,5.8nm,1.3s
AAK   Ala-Archa         56.88 333⇓iP     P       01 29 14.6 -1.9
AAK                                 pmax   pmax
        comp=Z,9.0nm,1.9s
MK32  Makanchi Array    57.40 341  eP     P       01 29 19.1 -0.8
MKAR  Makanchi Array    57.40 341  i P    P       01 29 19.3 -0.5
MKAR                                pmax   pmax
        comp=Z,2.0nm,0.5s
MKAR  Makanchi Array    57.40 341   P     P       01 29 19.1 -0.8
        comp=Z,2.4nm,0.5s,baz=145,slow=7.9,SNR=14
MKAR                                LR     LR      01 58 01.3
        comp=Z,169nm,19.8s,baz=139,slow=40
HIA   Hailar            57.46  11⇑iP     P       01 29 16.8 -3.4
HIA                                 pmax   pmax
        comp=Z,6.0nm,1.1s
MNAS  Manas             57.68 332   P     P       01 29 20.8 -1.3
MNAS                                pmax   pmax
        comp=Z,34nm,1.1s
DGZ   Jazzator, Alta    58.64 346ceP     P       01 29 27.3 -1.3
KLR   Kul'dur           60.59  20⇑iP     P       01 29 39.5 -2.4
ASAJ  Asahikawa         60.99  30   P     P       01 29 44.5 -0.2
        comp=Z,6.7nm,0.8s,baz=162,slow=20,SNR=3.0
KURK  Kurchatov         62.01 341⇓iP     P       01 29 49.2 -2.2
KURK                                pmax   pmax
        comp=Z,8.0nm,1.0s
OTUK  Ortayu            62.25 336   P     P       01 29 51.6 -1.5
OTUK                                pmax   pmax
        comp=Z,23nm,1.3s
GEYT  Alibeck           62.74 319   P     P       01 29 56.8 +0.2
        comp=Z,18nm,0.9s,baz=142,slow=7.5,SNR=40
GEYT                                LR     LR      01 59 19.1
        comp=Z,203nm,18.9s,baz=95,slow=38
GYA0B ALIBECK ARRAY     62.74 319  eP     P       01 29 56.0 -0.6
        comp=Z,22nm,1.0s
YSS   Yuzh-Sakhalins    63.15  28  eP     P       01 29 57.9 -1.2
        comp=Z,7.8nm,0.4s
YSS   Yuzh-Sakhalins    63.15  28  eP     P       01 30 02.5 +3.4
YSS                                 MLR    MLR
        comp=Z,400nm,13.0s
ZAA0  Zalesovo Array    63.19 347  eP     P       01 29 58.3 -0.9
        comp=Z,12nm,0.8s
ZALV  Zalesovo Beam     63.19 347  eP     P       01 29 57.4 -1.8
ZALV  Zalesovo Beam     63.19 347  eP     P       01 29 57.4 -1.8
ZALV  Zalesovo Beam     63.19 347   P     P       01 29 57.8 -1.4
        comp=Z,9.0nm,0.6s,baz=151,slow=4.4,SNR=28
ZALV                                LR     LR      02 01 05.2
        comp=Z,244nm,18.5s,baz=72,slow=40
ZAA1  Zalesovo Array    63.19 347  eP     P       01 29 57.8 -1.4
ZEA   Zeya              63.30  14  eP     P       01 29 59.2 -0.8
ZEA                                 pmax   pmax
        comp=Z,72nm,1.8s
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NVS   Novosibirsk       64.38 346  eP     P       01 30 05.5 -1.5
NVS                                 pmax   pmax
        comp=Z,7.0nm,1.3s
NVS                                 pmax   pmax
        comp=N,8.0nm,1.5s
BOD   Bodaibo           65.02   5  eP     P       01 30 10.1 -1.0
BOD                                 pmax   pmax
        comp=Z,6.0nm,1.8s
RAYN  Ar Rayn           65.87 300  eP     P       01 30 17.9 +0.5
        comp=Z,13nm,1.1s
RAYN  Ar Rayn           65.87 300  eP     P       01 30 17.9 +0.5
RAYN                                pmax   pmax
        comp=Z,13nm,1.1s
BVA0  Borovoye Array    66.79 338  i P    P       01 30 21.3 -1.3
BVA0                                pmax   pmax
        comp=Z,12nm,0.9s
BRVK  Borovoye          66.86 338  eP     P       01 30 22.7 -0.3
        comp=Z,9.5nm,0.8s
BRVK  Borovoye          66.86 338c iP     P       01 30 22.5 -0.5
BRVK                                pmax   pmax
        comp=Z,10.0nm,1.0s
NKL   Nikolayevsk       67.00  22  eP     P       01 30 22.7 -1.2
NKL                                 pmax   pmax
        comp=Z,21nm,1.0s
RPZ   Rata Peaks        67.64 134   P     P       01 30 30.4 +2.1
        comp=Z,5.8nm,0.6s,baz=222,slow=3.3,SNR=5.7
KMBO  Kilima Mbogo      68.16 272   LR    LR      01 54 57.6
        comp=Z,168nm,21.6s,baz=80,slow=31
THZ   Tophouse          68.61 132  eP     P       01 30 35.2 +0.7
AB31  Akbulak array     68.64 330  i P    P       01 30 33.8 -0.5
AB31                                pmax   pmax
        comp=Z,52nm,0.7s
ABKAR Akbulak array     68.64 330  eP     P       01 30 34.1 -0.2
AKTO  Aktyubinsk        70.35 330   P     P       01 30 43.9 -1.0
AKTO                                pmax   pmax
        comp=Z,29nm,1.2s
BKZ   Black Stump Fm    70.95 129  eP     P       01 30 49.6 +0.7
        comp=Z,24nm,0.6s
URZ   Urewera           71.33 128   P     P       01 30 54.0 +2.8
        comp=Z,5.9nm,0.6s,baz=247,slow=7.7,SNR=3.7
YAK   Yakutsk           71.39  12  eP     P       01 30 49.7 -1.2
YAK                                e*PP   pP      01 31 00.0 -6.5
YAK                                e               01 31 12.7
YAK                                e               01 33 27.0
YAK                                ePPP   PPP     01 35 06.8
YAK                                eS     S       01 40 04.8 +0.2
YAK                                e               01 40 55.2
YAK                                 pmax   pmax
        comp=Z,176nm,1.2s
YAK                                 pmax   pmax
        comp=N,82nm,1.1s
YAK                                 pmax   pmax
        comp=E,45nm,1.2s
YAK                                 pmax   pmax
        comp=Z,870nm,4.1s
YAK                                 pmax   pmax
        comp=N,517nm,4.6s
YAK                                 pmax   pmax
        comp=E,185nm,2.3s
YAK                                 smax   smax
        comp=E,1µm,4.3s
YAK                                 smax   smax
        comp=N,341nm,3.8s
YAK                                 MLR    MLR
        comp=Z,1µm,20.0s
YAK                                 MLR    MLR
        comp=N,674nm,17.0s
YAK                                 MLR    MLR
        comp=E,494nm,21.0s
GNI   Garni             72.86 316  eP     P       01 30 59.9 -0.5
GNI   Garni             72.86 316⇓iP     P       01 31 00.1 -0.3
GNI                                 pmax   pmax
        comp=Z,21nm,1.1s
SVE   Sverdlovsk        73.39 336c iP     P       01 31 03.6 +0.6
SVE                                 pmax   pmax
        comp=Z,70nm,1.2s
GROC  Groznyy           73.48 319  eP     P       01 31 03.0 -0.8
GROC                               e               01 31 16.5
GROC                               eS     SKiKP   01 40 32.4 +2.7
GROC                                pmax   pmax
        comp=Z,9.0nm,0.6s
TBLG  Delisi            73.54 317  eP     P       01 31 04.3 +0.1
        comp=Z,26nm,1.3s
TBLG  Delisi            73.54 317  eP     P       01 31 04.3 +0.1
TBLG                                pmax   pmax
        comp=Z,26nm,1.3s
ARU   Arti              73.98 335  eP     P       01 31 05.8 -0.6
        comp=Z,56nm,1.2s
ARU   Arti              73.98 335d iP     P       01 31 06.1 -0.3
ARU                                                01 33 52.0
ARU                                 S      S       01 40 39.1 +4.8
ARU                                 SS     SS      01 45 20.8 +0.7
ARU                                 pmax   pmax
        comp=Z,53nm,1.2s
PETK  Petropavlovsk-    74.41  30   P     P       01 31 08.1 -0.9
        comp=Z,7.1nm,0.9s,baz=158,slow=4.3,SNR=6.1
PEA1  Petropavlovsk-    74.42  30  eP     P       01 31 08.1 -1.0
ZEI   Tsey              74.55 318  eP     P       01 31 10.4 +0.1
ZEI                                 pmax   pmax
        comp=Z,6.0nm,0.6s
PET   Petropavlovsk     74.84  30⇑eP     P       01 31 11.3 -0.1
PET                                 pmax   pmax
        comp=Z,22nm,1.3s
SYO   Syowa Base        74.92 200⇑eP     P       01 31 12.6 +0.9
SYO   Syowa Base        74.92 200⇓eX     P       01 31 23.0  +11
NCK   Nalchik           75.05 318⇑iP     P       01 31 13.0  0.0
NCK                                 pmax   pmax
        comp=Z,9.0nm,0.6s
MA2   Magadan           75.52  22⇓iP     P       01 31 14.4 -0.9
MA2                                 pmax   pmax
        comp=Z,12nm,0.8s
NEY   Neytrino          75.53 318  i P    P       01 31 16.5 +0.6
NEY                                 pmax   pmax
        comp=Z,2.0nm,1.1s
KBZ   Khabaz            75.61 318   P     P       01 31 17.0 +0.9
        comp=Z,7.4nm,0.9s,baz=129,slow=6.3,SNR=11
KIV   Kislovodsk        75.84 319  eP     P       01 31 17.8 +0.1
        comp=Z,4.1nm,0.6s
KIV   Kislovodsk        75.84 319  eP     P       01 31 16.9 -0.7
KIV                                 pmax   pmax
        comp=Z,8.0nm,1.1s
LSZ   Lusaka            75.87 256  eP     P       01 31 18.5 +0.1
        comp=Z,8.3nm,1.4s
LSZ   Lusaka            75.87 256  eP     P       01 31 18.5 +0.1
LSZ                                 pmax   pmax
        comp=Z,8.0nm,1.4s
GOF   Gofitskoye        76.08 320  eP     P       01 31 19.4 +0.6
GOF                                 pmax   pmax
        comp=Z,10.0nm,0.8s
VNDA  Vanda             76.22 169  eP     P       01 31 19.9 +0.8
        comp=Z,13nm,1.0s
VNDA  Vanda             76.22 169   P     P       01 31 24.0 +4.9
        comp=Z,3.7nm,0.9s,baz=306,slow=6.7,SNR=7.9
NRIK  Noril'sk          77.20 354   P     P       01 31 24.1 -0.5
        comp=Z,21nm,0.9s,baz=152,slow=4.5,SNR=25
SBA   Scott Base        77.31 169  eP     P       01 31 24.9 -0.2
SBA   Scott Base        77.31 169  eP     P       01 31 24.9 -0.2
BOSA  Boshof            78.02 242   P     P       01 31 31.5 +1.2
        comp=Z,2.2nm,0.8s,baz=90,slow=3.0,SNR=6.3
SEY   Seymchan          78.38  20ceP     P       01 31 31.5 +0.2
VRH   Novokhopyorsk     79.49 325  eP     P       01 31 36.8 -0.8
VRH                                 pmax   pmax
        comp=Z,10.0nm,0.6s
CSS   Mathiatis         79.53 307  eP     P       01 31 38.7 +0.5
        comp=Z,30nm,0.9s
TIXI  Tiksi             80.05   7  eP     P       01 31 38.5 -1.7
        comp=Z,16nm,0.8s
TIXI  Tiksi             80.05   7ceP     P       01 31 38.0 -2.2
TIXI                                pmax   pmax
        comp=Z,27nm,1.3s
BR101 Keskin Array S    80.66 312  eP     P       01 31 44.6 +0.2
BRTR  Keskin Array B    80.66 312   P     P       01 31 44.6 +0.2
        comp=Z,8.3nm,0.7s,baz=140,slow=7.0,SNR=57
BRTR                                LR     LR      02 10 15.0
        comp=Z,90nm,19.2s,baz=86,slow=38
BR131 Keskin Array S    80.66 312  eP     P       01 31 45.0 +0.5
VSR   Storozhevoye      80.97 324  i P    P       01 31 44.5 -1.0
VSR                                 pmax   pmax
        comp=Z,15nm,0.8s
LPSR  Galich'ya Gora    81.64 326  eP     P       01 31 49.2 +0.1
LPSR                                pmax   pmax
        comp=Z,10.0nm,0.8s
PRGR  Permogore         82.43 335  eP     P       01 31 45.6 -7.4
PRGR                                pmax   pmax
        comp=Z,22nm,0.8s
QSPA  South Pole Qui    82.95 180  eP     P       01 31 57.0 +1.1
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QSPA	South Pole Qui	82.95	180	P	P	01 31 57.2	+1.3
	comp=Z,1.2nm,0.4s,baz=349,slow=3.9						
OBN	Obninsk	83.89	327	*ce*P	P	01 32 00.4	-0.3
OBN				*e*		01 35 10.5	
OBN				pmax	pmax		
	comp=Z,26nm,1.7s						
OBN				MLR	MLR		
	comp=Z,137nm,19.0s						
MANT	Manisa	84.15	310	*e*P	P	01 32 02.7	0.0
	comp=Z,29nm,0.9s						
KARP	Karpathos	84.57	307	*e*P	P	01 32 05.0	+0.3
	comp=Z,73nm,0.9s						
KLMR	Klimovskoe	84.69	333	*e*P	P	01 32 04.6	0.0
KLMR				pmax	pmax		
	comp=Z,34nm,1.5s						
KLMR	Klimovskoe	84.69	333	*e*P	P	01 32 04.6	0.0
KLMR				AMP		01 32 07.9	
	comp=Z,34nm,1.4s						
TIRR	Tirgusor	85.69	316	⇑*i*P	P	01 32 11.3	+1.3
TLB	Topalu	85.97	316	⇑*i*P	P	01 32 12.7	+1.3
BILL	Bilibino	86.05	19	*e*P	P	01 32 10.5	-0.8
	comp=Z,2.4nm,0.5s						
BILL	Bilibino	86.05	19	*ce*P	P	01 32 08.3	-3.0
BILL				*e*		01 35 27.1	
BILL				pmax	pmax		
	comp=Z,24nm,3.5s						
BILL				MLR	MLR		
	comp=Z,195nm,17.0s						
CFR	Carcaliu	86.05	316	⇑*i*P	P	01 32 12.5	+0.7
LEOM	Leova	86.29	318	⇑*i*P	P	01 32 14.5	+1.6
AKASG	Malin Array Be	86.73	322	P	P	01 32 14.5	-0.5
	comp=Z,2.2nm,0.6s,baz=88,slow=4.9,SNR=6.0						
AKBB	Malin Array Si	86.73	322	*e*P	P	01 32 15.3	+0.4
	comp=Z,4.4nm,0.6s						
KIEV	Kiev	86.74	322	*e*P	P	01 32 15.1	+0.1
	comp=Z,4.3nm,0.7s						
KIEV	Kiev	86.74	322	⇓*i*P	P	01 32 15.1	+0.1
KIEV	Kiev	86.74	322	*i* P	P	01 32 14.1	-0.9
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VRI	Vrincioaia	87.18	317	⇑*i*P	P	01 32 19.3	+2.0
PLOR	Plostina	87.23	317	⇑*i*P	P	01 32 19.2	+1.6
MLR	Muntele Rosu	87.63	316	*e*P	P	01 32 19.9	+0.3
	comp=Z,40nm,1.3s						
MLR	Muntele Rosu	87.63	316	⇓*i*P	P	01 32 21.3	+1.6
MLR	Muntele Rosu	87.63	316	*e*P	P	01 32 19.9	+0.3
MLR				pmax	pmax		
	comp=Z,40nm,1.3s						
BIZ	Bicaz	87.83	318	⇑*i*P	P	01 32 22.0	+1.6
PRAR	RASCA	87.84	318	⇑*i*P	P	01 32 21.8	+1.3
HUMR	Humele	88.10	315	⇑*i*P	P	01 32 23.1	+1.4
MTUR	Matau	88.18	316	⇑*i*P	P	01 32 22.4	+0.2
VOIR		88.23	316	⇓*i*P	P	01 32 23.2	+0.7
VLAD	Vladila	88.40	315	⇑*i*P	P	01 32 24.9	+1.8
ARR	Arges	88.51	316	⇑*i*P	P	01 32 24.9	+1.2
BURAR	Bucovina Array	88.57	318	⇑*i*P	P	01 32 26.1	+2.1
BUR04	Bucovina Ar. S	88.57	318	*e*P	P	01 32 24.9	+0.8
BUR08	Bucovina Ar. S	88.59	318	*e*P	P	01 32 24.5	+0.3
VTS	Vitosha	88.97	313	*e*P	P	01 32 26.6	+0.5
	comp=Z,9.8nm,0.9s						
VTS	Vitosha	88.97	313	⇑*i*P	P	01 32 27.5	+1.4
AGG	Agios Georgios	89.02	309	*e*P	P	01 32 26.5	+0.2
	comp=Z,27nm,1.4s						
AGG	Agios Georgios	89.02	309	*e*P	P	01 32 26.5	+0.2
AGG				pmax	pmax		
	comp=Z,27nm,1.4s						
ARCR	ARCALIA	89.04	318	⇓*i*P	P	01 32 28.0	+1.9
LIT	Litokhoron	89.08	310	*e*P	P	01 32 27.1	+0.6
	comp=Z,32nm,0.8s						
LIT	Litokhoron	89.08	310	*e*P	P	01 32 27.1	+0.6
LIT				pmax	pmax		
	comp=Z,32nm,0.8s						
PUNG	Punghina	89.49	315	⇓*i*P	P	01 32 29.6	+1.3
GZR	Gura Zlata	89.80	316	⇓*i*P	P	01 32 31.9	+2.1
VSU	Vasula	90.05	329	*ce*P	P	01 32 30.6	+0.1
VSU				pmax	pmax		
	comp=Z,50nm,1.3s						
DRGR		90.09	317	⇑*i*P	P	01 32 31.5	+0.4
MDVR	Moldovita	90.44	315	⇑*i*P	P	01 32 34.4	+1.6
BZS	Buzias	90.64	316	⇑*i*P	P	01 32 34.9	+1.3
FIA0	FINESS Array S	91.05	332	*e*P	P	01 32 35.6	+0.5
FIA0	FINESS Array S	91.05	332	*e*P	P	01 32 35.6	+0.5
FINES	FINESS Array B	91.05	332	P	P	01 32 35.6	+0.5
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	91.05	332	P	P	01 32 35.6	+0.5
	comp=Z,3.1nm,0.6s,baz=94,slow=6.1,SNR=21						
SUW	Suwalki	91.08	324	*e*P	P	01 32 35.8	+0.4
	comp=Z,27nm,1.1s						
SUW	Suwalki	91.08	324	*e*P	P	01 32 35.8	+0.4
SUW				pmax	pmax		
	comp=Z,27nm,1.1s						
MORH	Mrgy, Hungar	92.78	316	⇓*e*P	P	01 32 46.0	+2.5
ARA0	ARCESS Array S	93.02	340	*e*P	P	01 32 43.9	-0.3
ARCES	ARCESS Array B	93.02	340	P	P	01 32 43.9	-0.3
	comp=Z,3.4nm,0.7s,baz=91,slow=5.1,SNR=18						
GERES	GERESS Array B	96.36	318	P	P	01 33 00.2	+0.2
	comp=Z,0.2nm,0.6s,baz=79,slow=7.1,SNR=3.4						
KHC	Kasperske Hory	96.45	319	*e*P	P	01 32 57.0	-3.3
KHC	Kasperske Hory	96.45	319	*e*P	P	01 32 57.0	-3.3
NOA	NORSAR Array B	98.14	331	LR	LR	02 22 42.8	
	comp=Z,91nm,18.9s,baz=5.0,slow=39						
YKA	Yellowknife Ar	117.45	20	PKP	PKPdf	01 38 15.9	-0.2
	comp=Z,0.6nm,0.9s,baz=301,slow=1.3,SNR=5.7						
YKB5	Yellowknife Ar	117.45	20	*e*PKPdf	PKPdf	01 38 16.0	-0.2
B05A	Bryant	122.60	36	P	PKiKP	01 38 27.2	+0.5
	baz=300						
I03D	Drain, OR	123.96	41	P	PKiKP	01 38 30.5	+1.0
	baz=296						
H04D	Lebanon	123.99	40	P	PKiKP	01 38 30.4	+0.8
	baz=297						
K02D	Willamette Mer	124.18	42	P	PKiKP	01 38 30.5	+0.3
	baz=295						
I04A	Tendick Farm,	124.53	41	P	PKiKP	01 38 31.7	+0.9
	baz=297						
HUMO	Hull Mountain	124.69	42	*e*PKPdf	PKiKP	01 38 31.0	-0.1
I05D	Terrebonne, OR	124.96	40	P	PKiKP	01 38 32.4	+0.8
	baz=298						
J04D	Umpqua Nationa	124.97	41	P	PKiKP	01 38 32.9	+1.0
	baz=297						
M02C	Callahan	125.28	43	P	PKiKP	01 38 32.7	+0.3
	baz=295						
L04D	Klamath Falls	125.30	42	P	PKiKP	01 38 33.0	+0.6
	baz=296						
NEW	Newport	125.42	34	P	PKiKP	01 38 32.6	+0.3
	baz=305						
PINE	Pine Mountain	125.47	40	*e*PKPdf	PKiKP	01 38 33.1	+0.2
J05D	Fort Rock, OR	125.52	41	P	PKiKP	01 38 34.1	+1.3
	baz=298						
N02D	Trinity Center	125.56	44	P	PKiKP	01 38 33.8	+0.8
	baz=295						
M04C	Macdoel	125.80	43	P	PKiKP	01 38 34.1	+0.6
	baz=296						
O02D	Mt. Diablo Mer	125.83	45	P	PKiKP	01 38 34.4	+0.9
	baz=294						
O03E	Paynes Creek	126.47	44	P	PKiKP	01 38 35.3	+0.5
	baz=295						
WVOR	Wild Horse Val	127.61	40	*e*PKPdf	PKPdf	01 38 36.5	0.0
WVOR	Wild Horse Val	127.61	40	*e*PKIKP	PKPdf	01 38 36.5	0.0
MSO	Missoula	128.00	34	P	PKiKP	01 38 38.2	+0.5
	baz=307						
EGMT	Eagleton	129.43	30	P	PKiKP	01 38 41.0	+0.5
	baz=312						
HLID	Hailey	129.64	37	P	PKiKP	01 38 41.3	+0.2
	baz=305						
NVAR	Mina Array Bea	129.72	45	PKP	PKiKP	01 38 41.2	-0.4
	comp=Z,0.7nm,0.6s,baz=240,slow=2.9,SNR=5.2						
NV01	Mina Array Sit	129.72	45	*e*PKPdf	PKiKP	01 38 41.2	-0.4
BOZ	Bozeman (W)	130.03	34	*e*PKPdf	PKiKP	01 38 41.5	-0.3
BOZ	Bozeman (W)	130.03	34	*e*PKIKP	PKiKP	01 38 41.5	-0.3
MPMC	Manual Prospec	131.36	47	P	PKiKP	01 38 45.4	+0.6
	baz=296						
DUG	Dugway, Tooele	132.51	40	*e*PKPdf	PKPdf	01 38 46.2	+0.3
DUG	Dugway, Tooele	132.51	40	*e*PKIKP	PKPdf	01 38 46.2	+0.3
TUQ	Turquoise Moun	132.77	47	P	PKiKP	01 38 47.4	-0.3
	baz=297						
BW06	Boulder Array	132.96	35	P	PKiKP	01 38 47.8	-0.2
	baz=309						
PD31	Pinedale Array	132.96	35	*e*PKPdf	PKPdf	01 38 47.3	+0.5
PDAR	Pinedale Array	132.96	35	PKP	PKiKP	01 38 48.4	+0.4
	comp=Z,0.5nm,0.7s,baz=205,slow=0.6,SNR=4.4						
GLA	Glamis	134.64	50	*e*PKPdf	PKiKP	01 38 51.1	-0.3
GLA	Glamis	134.64	50	P	PKiKP	01 38 51.8	+0.4
	baz=296						
U15A	North Rim	134.87	44	*e*PKPdf	PKiKP	01 38 51.6	-0.5
RSSD	Black Hills	135.00	30	*e*PKPdf	PKPdf	01 38 51.1	+0.6
RSSD	Black Hills	135.00	30	*e*PKIKP	PKPdf	01 38 51.1	+0.6
RSSD	Black Hills	135.00	30	P	PKiKP	01 38 52.4	+0.4
	baz=317						
O20A	White River Ci	135.38	37	*e*PKPdf	PKiKP	01 38 52.3	-0.6
O20A	White River Ci	135.38	37	P	PKiKP	01 38 52.8	-0.1
	baz=309						
C40A	Isle Royale Na	137.43	14	P	PKiKP	01 38 57.1	+0.5
	baz=338						
LSQQ	Lebel-sur-Quev	138.08	2	P	PKiKP	01 38 57.9	+0.1
	baz=356						
ECSD	EROS Data Cent	138.68	24	P	PKiKP	01 38 59.1	-0.1
	baz=326						
F39A	Loretta	138.78	17	P	PKiKP	01 38 59.3	-0.1
	baz=335						
E43A	Lone Tree Farm	139.38	13	P	PKiKP	01 39 01.1	+0.5
	baz=341						
ANMO	Albuquerque	139.65	42	*e*PKPdf	PKPdf	01 39 00.2	+0.8
ANMO	Albuquerque	139.65	42	*e*PKIKP	PKPdf	01 39 00.2	+0.8
ANMO	Albuquerque	139.65	42	P	PKiKP	01 39 01.7	-0.1
	baz=306						
D54A	Lac Fusel, La	140.00	2	P	PKiKP	01 39 03.0	+1.1
	baz=357						
D52A	ZEK Kipawa Sen	140.08	4	P	PKiKP	01 39 02.8	+0.8
	baz=354						
H40A	Chili	140.12	18	P	PKiKP	01 39 02.9	+0.7
	baz=335						
E48A	Lockeyer	140.17	8	P	PKiKP	01 39 02.7	+0.5
	baz=348						
E51A	G1948 Merrick	140.43	5	P	PKiKP	01 39 02.7	0.0
	baz=352						
ALGO	Algonquin Park	141.12	4	P	PKiKP	01 39 04.4	+0.3
	baz=355						
GLMI	Grayling	141.37	11	P	PKiKP	01 39 04.7	0.0
	baz=344						
I43A	Langenfeld Bro	141.43	16	P	PKiKP	01 39 06.1	+1.3
	baz=338						
BUKO	Buck Lake	141.52	5	P	PKiKP	01 39 06.0	+1.0
	baz=352						
ALFO	Alfred	141.56	0	P	PKiKP	01 39 05.5	+0.5
	baz=360						
L40A	Anamosa	142.14	20	P	PKiKP	01 39 07.0	+0.7
	baz=333						
MNTX	Cornudas Mount	142.25	45	*e*PKPdf	PKPdf	01 39 04.0	+0.1
CPUP	Villa Florida	142.83	206	PKhKP	PKPpre	01 39 03.6	
	comp=Z,1.2nm,0.7s,baz=145,slow=4.6,SNR=2.5						
LCO	Las Campanas	143.96	186	*e*PKPdf	PKPdf	01 39 07.4	0.0
O41A	Passleys Farm,	143.98	21	P	PKPbc	01 39 04.8	+0.2
	baz=332						
HDIL	Hopedale	144.14	19	P	PKPbc	01 39 05.7	+0.6
	baz=335						
L49A	Milan	144.15	12	P	PKPbc	01 39 05.9	+0.8
	baz=344						
L48A	N Adams	144.17	13	P	PKPbc	01 39 05.7	+0.6
	baz=343						
P41A	Barry, Barry	144.30	22	P	PKPbc	01 39 06.0	+0.4
	baz=331						
O43A	Sugar Creek Fa	144.38	19	P	PKPbc	01 39 06.4	+0.6
	baz=335						
L50A	Kingsville	144.39	11	P	PKPdf	01 39 06.6	-0.7
	baz=346						
N45A	Kentland	144.42	17	P	PKPbc	01 39 06.3	+0.4
	baz=338						
M47A	Cromwell	144.45	14	P	PKPbc	01 39 06.3	+0.2
	baz=341						
M48A	Edgerton	144.54	13	P	PKPbc	01 39 06.8	+0.5
	baz=343						
WMOK	Wichita Mounta	144.57	36	*e*PKPdf	PKPbc	01 39 07.0	+0.3
WMOK	Wichita Mounta	144.57	36	*e*PKIKP	PKPbc	01 39 07.0	+0.3
WMOK	Wichita Mounta	144.57	36	P	PKPbc	01 39 06.6	-0.1
	baz=316,SNR=6.7						
HRV	Adam Dziewonsk	144.58	356	P	PKPbc	01 39 06.9	+0.6
	baz=5.2						
N46A	Monticello	144.59	16	P	PKPbc	01 39 07.0	+0.5
	baz=339						
P42A	Winchester	144.65	21	*e*PKPdf	PKPab	01 39 06.4	-0.2
P42A	Winchester	144.65	21	P	PKPab	01 39 06.5	0.0
	baz=332,SNR=7.8						
O44A	Mansfield	144.77	19	P	PKPab	01 39 06.7	-0.2
	baz=336						
TX31	Lajitas Ar. Si	144.78	47	*e*PKPdf	PKPbc	01 39 07.8	+0.2
TX31				*e*PKPdf	PKPdf	01 39 09.0	+0.4
LTX	Lajitas	144.78	47	*e*PKPdf	PKPdf	01 39 08.9	+0.3
LTX	Lajitas	144.78	47	*e*PKIKP	PKPdf	01 39 08.9	+0.3
TXAR	Lajitas Array	144.78	47	PKP	PKPdf	01 39 08.9	+0.3
	comp=Z,5.9nm,0.8s,baz=280,slow=1.7,SNR=49						
L55A	Hinsdale	144.84	5	P	PKPab	01 39 07.0	-0.2
	baz=354						
Q41A	Truxton	144.87	23	P	PKPab	01 39 06.9	-0.5
	baz=331,SNR=6.0						
N47A	Urbana	144.88	15	P	PKPab	01 39 07.1	-0.3
	baz=341						
P43A	Skaggs, Pawnee	144.88	20	P	PKPab	01 39 07.1	-0.3
	baz=334						
O45A	Potomac	144.91	18	P	PKPab	01 39 07.4	-0.1
	baz=337						
BINY	Binghamton	144.97	2	*e*PKPdf	PKPab	01 39 07.4	-0.2
BINY	Binghamton	144.97	2	P	PKPbc	01 39 07.7	0.0
	baz=358						
M50A	Fremont	144.97	11	P	PKPab	01 39 07.5	-0.2
	baz=345						
SFIN	Lafayette	144.97	17	*e*PKPdf	PKPdf	01 39 08.3	-0.1
SFIN	Lafayette	144.97	17	P	PKPab	01 39 07.4	-0.3
	baz=338,SNR=5.6						
N48A	Decatur	145.06	14	P	PKPbc	01 39 07.9	-0.1
	baz=342,SNR=6.1						
M52A	Chesterland	145.12	9	P	PKPbc	01 39 08.1	-0.1
	baz=348						
Q42A	Golden Eagle	145.17	22	P	PKPab	01 39 08.4	0.0
	baz=332,SNR=9.1						
M51A	Elyria	145.19	10	P	PKPbc	01 39 08.1	-0.3
	baz=347						
N49A	Columbus Grove	145.20	13	*e*PKPbc	PKPdf	01 39 08.7	-0.1
N49A	Columbus Grove	145.20	13	P	PKPbc	01 39 08.4	0.0
	baz=343						
M53A	WI Miller and	145.32	8	P	PKPbc	01 39 08.5	-0.3
	baz=350						
BDFB	Brasilia	145.33	229	PKPbc	PKPab	01 39 11.5	+1.6
	comp=Z,3.4nm,0.8s,baz=168,slow=3.1,SNR=5.0						
TUL1	Leonard	145.33	31	*e*PKPbc	PKPab	01 39 09.4	+0.2
TUL1	Leonard	145.33	31	P	PKPab	01 39 09.4	+0.2
	baz=321						
P44A	Sand Creek, Wi	145.34	19	P	PKPab	01 39 09.1	0.0
	baz=335,SNR=8.1						
O47A	Sheridan	145.36	16	P	PKPbc	01 39 08.8	-0.2
	baz=340						
R41A	Rosebud	145.38	24	P	PKPbc	01 39 08.9	-0.2
	baz=330,SNR=13						
M54A	Oil Creek Stat	145.38	7	*e*PKPbc	PKPab	01 39 09.3	+0.1
M54A	Oil Creek Stat	145.38	7	P	PKPab	01 39 09.4	+0.1
	baz=351						
Q43A	New Douglas	145.45	21	P	PKPdf	01 39 09.2	-0.1
	baz=333						
ABTX	Abilene, Hawle	145.51	39	*e*PKPdf	PKPab	01 39 10.4	+0.4
ABTX	Abilene, Hawle	145.51	39	P	PKPab	01 39 10.5	+0.4
	baz=312						
M55A	Ridgway	145.52	6	P	PKPbc	01 39 09.5	0.0
	baz=353						
N50A	Nevada	145.56	11	P	PKPab	01 39 09.7	-0.1
	baz=345,SNR=7.4						
N51A	Ashland	145.56	10	*e*PKPdf	PKPbc	01 39 09.5	-0.1
N51A	Ashland	145.56	10	P	PKPdf	01 39 09.2	-0.2
	baz=346						
P45A	Graceland, Par	145.57	18	*e*PKPdf	PKPab	01 39 09.9	-0.1
P45A	Graceland, Par	145.57	18	P	PKPbc	01 39 09.7	0.0
	baz=337,SNR=7.7						
O48A	Farmland	145.60	14	P	PKPbc	01 39 09.8	+0.1
	baz=341,SNR=6.2						
KSPA	Keystone Colle	145.61	2	*e*PKPdf	PKPbc	01 39 09.8	0.0
R42A	Luebbering	145.62	23	P	PKPdf	01 39 09.5	0.0
	baz=331,SNR=15						
CCM	Cathedral Cave	145.64	24	*e*PKPbc	PKPbc	01 39 09.9	0.0
CCM	Cathedral Cave	145.64	24	*e*PKIKP	PKPbc	01 39 09.9	0.0
CCM	Cathedral Cave	145.64	24	P	PKPbc	01 39 09.9	0.0
	baz=330						
P46A	Rosedale	145.65	17	P	PKPbc	01 39 09.9	0.0
	baz=338						
Q44A	Meyer Farm, Va	145.72	20	*e*PKPdf	PKPbc	01 39 10.0	-0.2
Q44A	Meyer Farm, Va	145.72	20	P	PKPbc	01 39 09.9	-0.2
	baz=334,SNR=5.8						
N52A	McGinn’s Farm,	145.78	10	P	PKPbc	01 39 10.1	-0.2
	baz=348						
S41A	Jillco Farms,	145.84	25	P	PKPdf	01 39 10.2	+0.1
	baz=329,SNR=13						
O49A	Covington	145.86	13	*e*PKPdf	PKPdf	01 39 10.2	+0.2
O49A	Covington	145.86	13	P	PKPbc	01 39 10.6	+0.1
	baz=343						
N54A	Moraine State	145.88	7	*e*PKPdf	PKPbc	01 39 10.4	-0.2
N54A	Moraine State	145.88	7	P	PKPbc	01 39 10.8	+0.2
	baz=350						
N53A	Lisbon	145.92	8	P	PKPbc	01 39 10.9	+0.2
	baz=349						
HHAR	Hobbs	145.95	29	*e*PKPdf	PKPab	01 39 11.7	+0.2
R43A	Red Bud	145.95	22	P	PKPdf	01 39 10.4	+0.3
	baz=332,SNR=13						
Q45A	Warren Harvey,	146.01	19	P	PKPbc	01 39 10.9	-0.1
	baz=336						
P47A	Martinsville	146.04	16	P	PKPbc	01 39 11.3	+0.2
	baz=339						
O50A	Cable	146.06	12	P	PKPbc	01 39 11.1	-0.1
	baz=344						
S42A	Caledonia	146.07	23	P	PKPbc	01 39 11.2	0.0
	baz=330,SNR=14						
ACSO	Alum Creek Sta	146.11	12	*e*PKPdf	PKPbc	01 39 11.2	-0.1
ACSO	Alum Creek Sta	146.11	12	P	PKPbc	01 39 11.2	-0.1
	baz=345						
PAL	Palisades	146.17	359	P	PKPbc	01 39 11.6	+0.1
	baz=1.3						
N55A	Marion Center	146.18	6	P	PKPbc	01 39 11.7	+0.2
	baz=352						
OLIL	Olney	146.18	19	*e*PKPdf	PKiKP	01 39 13.8	-0.9
N59A	State Game Lan	146.25	2	*e*PKPdf	PKPab	01 39 12.3	-0.2
N59A	State Game Lan	146.25	2	P	PKPab	01 39 12.2	-0.3
	baz=358						
BLO	Bloomington	146.26	17	*e*PKPdf	PKPab	01 39 12.6	0.0
BLO	Bloomington	146.26	17	*e*PKP2	PKPab	01 39 12.6	0.0
O51A	Pataskala	146.27	11	P	PKPbc	01 39 11.9	+0.1
	baz=346						
R44A	Waltonville	146.28	21	P	PKPbc	01 39 12.0	+0.2
	baz=334						
P48A	Milroy	146.29	15	P	PKPab	01 39 12.2	-0.4
	baz=340						
T41A	Mountain View	146.29	25	P	PKPbc	01 39 12.2	+0.2
	baz=328,SNR=13						
U40A	Yellville	146.39	27	P	PKPbc	01 39 12.6	+0.3
	baz=326,SNR=24						
P49A	Miami Univ. Ec	146.40	14	P	PKPbc	01 39 12.5	+0.4
	baz=342						
O53A	New Philadelph	146.41	9	P	PKPbc	01 39 12.6	+0.3
	baz=348						
SSPA	Standing Stone	146.42	5	P	PKPbc	01 39 12.5	+0.2
	baz=354						
O52A	Adamsville	146.44	10	P	PKPbc	01 39 12.6	+0.3
	baz=347						
Q47A	Bedord North L	146.50	17	P	PKPab	01 39 13.2	-0.3
	baz=339						
S43A	Fulton Ridge,	146.52	23	P	PKPab	01 39 13.1	-0.5
	baz=332						
R45A	Skylar, Fairfi	146.52	20	P	PKPab	01 39 13.2	-0.3
	baz=335						
P50A	Jamestown	146.54	13	P	PKPab	01 39 13.1	-0.5
	baz=343						
T42A	Van Buren	146.58	24	*e*PKPdf	PKPbc	01 39 13.1	+0.3
T42A	Van Buren	146.58	24	P	PKPbc	01 39 12.7	-0.1
	baz=330,SNR=16						
O54A	Avella	146.60	8	P	PKPab	01 39 13.3	-0.5
	baz=350						
Q48A	North Vernon	146.70	16	P	PKPbc	01 39 13.3	+0.2
	baz=340						
SIUC	Southern Illin	146.71	21	*e*PKPbc	PKPab	01 39 13.9	-0.4
O55A	Ligonier	146.71	7	P	PKPbc	01 39 13.2	+0.1
	baz=352						
S44A	Carbondale	146.71	21	P	PKPbc	01 39 13.4	+0.3
	baz=333,SNR=6.2						
O56A	Blue Knob Stat	146.73	6	*e*PKPdf	PKPbc	01 39 13.4	+0.3
O56A	Blue Knob Stat	146.73	6	P	PKPbc	01 39 13.5	+0.3
	baz=353						
JCT	Junction City	146.81	42	*e*PKPbc	PKPbc	01 39 14.3	+0.6
JCT	Junction City	146.81	42	*e*PKP2	PKPbc	01 39 14.3	+0.6
JCT	Junction City	146.81	42	P	PKPbc	01 39 14.1	+0.4
	baz=310						
U41A	Viola	146.82	26	P	PKPbc	01 39 13.3	-0.2
	baz=328,SNR=7.5						
P51A	Williamsport	146.82	12	*e*PKPdf	PKPbc	01 39 13.3	-0.1
P51A	Williamsport	146.82	12	P	PKPbc	01 39 13.6	+0.2
	baz=345						
R46A	Gibon Southern	146.84	19	P	PKPbc	01 39 13.9	+0.4
	baz=336						
P52A	Corning	146.85	11	P	PKPbc	01 39 13.4	-0.1
	baz=346						
Q49A	Aurora	146.85	15	P	PKPbc	01 39 14.0	+0.5
	baz=341						
T43A	Greenville	146.86	23	P	PKPbc	01 39 13.2	-0.4
	baz=331,SNR=5.5						
W39A	Magazine	146.90	30	P	PKPab	01 39 14.8	-0.4
	baz=324						
S45A	Carrier Mills	146.97	21	P	PKPab	01 39 14.6	-0.7
	baz=334						
R47A	Wooly Knot Far	147.07	17	P	PKPbc	01 39 14.8	+0.7
	baz=338						
U42A	Revenden	147.10	25	P	PKPbc	01 39 13.9	-0.4
	baz=329,SNR=9.4						
P53A	Whipple	147.12	10	*e*PKPbc	PKPab	01 39 15.1	-0.8
P53A	Whipple	147.12	10	P	PKPbc	01 39 15.0	+0.7
	baz=348						
P54A	Burton	147.15	8	P	PKPbc	01 39 15.0	+0.6
	baz=349						
R48A	Northridge Ran	147.16	16	P	PKPbc	01 39 15.1	+0.7
	baz=339						
V41A	Mountainview	147.18	27	P	PKPbc	01 39 14.7	+0.1
	baz=327,SNR=11						
MCWV	Mont Chateau	147.19	7	P	PKPbc	01 39 15.1	+0.7
	baz=350						
Q51A	Peebles	147.20	13	*e*PKPbc	PKPbc	01 39 14.6	+0.1
Q51A	Peebles	147.20	13	P	PKPbc	01 39 14.8	+0.3
	baz=344						
WCI	Wyandotte Cave	147.20	17	*e*PKPbc	PKPbc	01 39 14.8	+0.3
WCI	Wyandotte Cave	147.20	17	*e*PKP2	PKPbc	01 39 14.8	+0.3
WCI	Wyandotte Cave	147.20	17	P	PKPbc	01 39 15.1	+0.6
	baz=338						
Q50A	Georgetown	147.23	14	P	PKPbc	01 39 15.1	+0.5
	baz=343						
S46A	Don Dixon Farm	147.25	19	P	PKPbc	01 39 15.5	+0.8
	baz=336						
WHTX	Lake Whitney,	147.29	38	*e*PKPbc	PKPab	01 39 16.9	0.0
WHTX	Lake Whitney,	147.29	38	P	PKPab	01 39 16.4	-0.4
	baz=315						
P55A	Reedsville	147.34	7	P	PKPbc	01 39 15.0	+0.1
	baz=350						
R49A	Shelbyville	147.45	16	P	PKPbc	01 39 15.7	+0.4
	baz=340						
Q52A	Bidwell	147.48	11	P	PKPbc	01 39 15.4	+0.1
	baz=346						
V42A	Cord	147.50	26	P	PKPbc	01 39 15.8	+0.4
	baz=328,SNR=5.9						
MIAR	Mount Ida	147.52	30	*e*PKPbc	PKPbc	01 39 16.3	+0.8
MIAR	Mount Ida	147.52	30	*e*PKP2	PKPbc	01 39 16.3	+0.8
MIAR	Mount Ida	147.52	30	P	PKPbc	01 39 16.4	+0.8
	baz=323,SNR=10						
WHAR	Wooly Hollow	147.53	28	*e*PKPbc	PKiKP	01 39 18.0	+0.3
S47A	Hartford	147.61	18	P	PKPbc	01 39 15.7	0.0
	baz=337						
W41B	Gary Mavity, V	147.65	28	*e*PKPbc	PKPab	01 39 18.4	+0.3
W41B	Gary Mavity, V	147.65	28	P	PKPbc	01 39 16.7	+0.9
	baz=326,SNR=6.8						
R50A	Paris	147.68	14	P	PKPbc	01 39 16.1	+0.3
	baz=342						
Q54A	Coxs Mills	147.71	9	P	PKPbc	01 39 16.4	+0.5
	baz=348						
T46A	Princeton	147.78	20	P	PKPbc	01 39 16.9	+0.8
	baz=335						
S48A	Wiedeman Farm,	147.80	17	P	PKPbc	01 39 16.7	+0.5
	baz=338						
Q55A	Buckhannon	147.81	8	P	PKPbc	01 39 16.7	+0.5
	baz=350						
R51A	Hillsboro	147.84	13	P	PKPbc	01 39 16.7	+0.5
	baz=343						
U44B	Burton Farm, H	147.88	23	P	PKPbc	01 39 17.1	+0.7
	baz=332						
X40A	Basin Creek Fa	147.93	29	P	PKPbc	01 39 17.4	+0.8
	baz=324						
R53A	Hurricane	148.15	11	P	PKPbc	01 39 17.6	+0.5
	baz=346						
T48A	Bowling Green	148.20	18	P	PKPbc	01 39 17.7	+0.4
	baz=338						
S50A	Richmond	148.23	15	P	PKPbc	01 39 17.7	+0.4
	baz=342						
U46A	Springville	148.29	21	P	PKPbc	01 39 18.3	+0.8
	baz=334						
833A	Chaparral WMA,	148.42	45	*e*PKPbc	PKiKP	01 39 19.9	+0.2
T49A	Edmonton	148.46	17	P	PKPbc	01 39 18.2	+0.3
	baz=339						
S51A	Beattyville	148.47	14	P	PKPbc	01 39 18.3	+0.4
	baz=343						

U47A	Clarksville	148.53	20	P	PKPbc	01 39 18.8	+0.7
	baz=336						
Y41A	Eaglette Beard	148.53	29	P	PKiKP	01 39 18.9	-0.8
	baz=324						
WVT	Waverly	148.62	21	*e*PKPbc	PKPbc	01 39 18.7	+0.4
WVT	Waverly	148.62	21	*e*PKP2	PKPbc	01 39 18.7	+0.4
WVT	Waverly	148.62	21	P	PKPbc	01 39 18.8	+0.4
	baz=334						
U48A	Cassie Pea, Po	148.71	19	P	PKPbc	01 39 19.0	+0.4
	baz=337						
T50A	Nancy	148.74	16	P	PKPbc	01 39 19.0	+0.3
	baz=340						
V46A	Holladay	148.81	22	P	PKPbc	01 39 18.7	-0.2
	baz=334						
U49A	Red Boiling Sp	148.94	18	P	PKPbc	01 39 19.2	0.0
	baz=338						
W45A	Hickory Valley	148.97	24	P	PKiKP	01 39 20.0	-0.6
	baz=331						
V47A	Nunnelly	149.00	21	P	PKPbc	01 39 19.9	+0.5
	baz=335						
T51A	Gray	149.02	15	P	PKiKP	01 39 20.0	-0.7
	baz=342						
R58B	Mineral	149.07	5	P	PKPbc	01 39 19.9	+0.4
	baz=354						
T52A	Hallie	149.11	13	P	PKPbc	01 39 19.8	+0.2
	baz=344						
U50A	Jamestown	149.30	16	P	PKiKP	01 39 20.9	-0.4
	baz=340						
V48A	Smith Brothers	149.32	20	P	PKiKP	01 39 20.8	-0.6
	baz=336						
T53A	Wise	149.33	12	P	PKiKP	01 39 21.0	-0.4
	baz=345						
OXF	Oxford	149.44	25	P	PKPbc	01 39 21.0	+0.5
	baz=330						
T54A	Tazewell	149.45	11	P	PKPbc	01 39 20.8	+0.3
	baz=346						
W47A	Westpoint	149.49	21	P	PKPbc	01 39 20.8	+0.2
	baz=334						
BLA	Blacksburg	149.51	9	P	PKiKP	01 39 21.4	-0.4
	baz=349						
TZTN	Tazewell	149.52	14	P	PKPbc	01 39 20.9	+0.3
	baz=342						
X45A	UM Field Stati	149.53	25	P	PKPbc	01 39 21.1	+0.4
	baz=330						
U51A	La Follette	149.56	15	P	PKPbc	01 39 21.1	+0.3
	baz=342						
U52A	Thorn Hill	149.71	14	P	PKPbc	01 39 21.4	+0.2
	baz=343						
W48A	Pulaski	149.83	20	P	PKPbc	01 39 21.1	-0.3
	baz=335						
U53A	Fall Branch	149.92	13	P	PKPbc	01 39 21.0	-0.7
	baz=344						
V50A	Pikevile	149.92	17	P	PKPbc	01 39 21.8	+0.1
	baz=339						
Y45A	Yeager Farm, C	149.94	25	P	PKPbc	01 39 21.5	-0.2
	baz=330						
V51A	Loudon	150.01	16	P	PKPbc	01 39 21.7	-0.1
	baz=340						
X47A	Russelville	150.05	22	P	PKPbc	01 39 21.8	-0.2
	baz=333						
W49A	Belvidere	150.07	19	P	PKPbc	01 39 21.7	-0.3
	baz=336						
V52A	Sevierville	150.18	15	*e*PKPbc	PKiKP	01 39 22.8	-0.3
V52A	Sevierville	150.18	15	P	PKiKP	01 39 22.9	-0.2
	baz=342						
Y46A	Houston	150.22	24	P	PKPbc	01 39 22.7	+0.3
	baz=331						
CPCT	Cooper Cave	150.30	16	*e*PKPbc	PKiKP	01 39 23.2	-0.1
LNIG	Linares	150.33	50	*e*PKPbc	PKiKP	01 39 23.4	-0.3
X48A	Hartselle	150.41	21	*e*PKPbc	PKPbc	01 39 22.9	+0.1
W51A	Cleveland	150.50	17	P	PKiKP	01 39 23.6	-0.2
	baz=339						
V53A	Saluda	150.53	14	*e*PKPbc	PKiKP	01 39 24.0	+0.1
V53A	Saluda	150.53	14	P	PKiKP	01 39 23.6	-0.3
	baz=343						
X49A	Woodville	150.60	20	P	PKiKP	01 39 24.0	0.0
	baz=336						
Y48A	Jasper	150.84	22	P	PKPbc	01 39 23.6	-0.3
	baz=334						
X50B	Fort Payne	150.87	19	P	PKiKP	01 39 24.7	0.0
	baz=337						
VBMS	Vicksburg	150.90	29	P	PKiKP	01 39 25.3	+0.6
	baz=326						
W53A	Cullowhee	150.92	15	P	PKiKP	01 39 25.2	+0.4
	baz=342						
X51A	Calhoun	151.02	18	P	PKiKP	01 39 25.7	+0.8
	baz=339						
BG3	Lake Jocassee	151.15	14	*e*PKPbc	PKiKP	01 39 25.7	+0.5
Y49A	Blount Mountai	151.17	21	*e*PKPbc	PKiKP	01 39 25.2	0.0
Y49A	Blount Mountai	151.17	21	P	PKiKP	01 39 25.7	+0.5
	baz=335						
Z48A	Northport	151.18	23	P	PKiKP	01 39 25.6	+0.4
	baz=333						
X52A	Dahlonega	151.27	16	P	PKiKP	01 39 26.1	+0.6
	baz=341						
KMSC	Kings Mountain	151.36	12	*e*PKPbc	PKiKP	01 39 25.7	+0.1
KMSC	Kings Mountain	151.36	12	P	PKiKP	01 39 26.3	+0.7
	baz=346						
Y50A	Piedmont	151.37	20	P	PKiKP	01 39 26.3	+0.7
	baz=337						
147A	Livingston	151.51	25	P	PKiKP	01 39 26.7	+0.8
	baz=331						
X53A	Estanollee	151.52	15	P	PKiKP	01 39 26.8	+0.9
	baz=342						
Y51A	Rockmart	151.58	18	P	PKiKP	01 39 26.8	+0.7
	baz=338						
Z49A	Columbiana	151.72	21	P	PKiKP	01 39 26.9	+0.5
	baz=335						
CNNC	Cliffs of the	151.78	6	P	PKiKP	01 39 27.3	+0.9
	baz=353						
148A	Greensboro	151.81	24	P	PKiKP	01 39 27.3	+0.7
	baz=332						
Z50A	Ashland	151.88	20	*e*PKPbc	PKiKP	01 39 26.8	+0.1
Y52A	Lilburn	151.91	17	P	PKiKP	01 39 27.6	+0.9
	baz=340						
Y53A	Monroe	152.06	16	P	PKiKP	01 39 27.7	+0.7
	baz=341						
Z51A	Franklin	152.08	19	P	PKiKP	01 39 27.8	+0.7
	baz=337						
149A	Jones	152.16	22	P	PKiKP	01 39 28.0	+0.7
	baz=334						
Y54A	Tignall	152.28	15	P	PKiKP	01 39 28.5	+1.0
	baz=343						
150A	Eclectic	152.44	21	P	PKiKP	01 39 28.4	+0.6
	baz=335						
Z52A	Williamson	152.44	18	P	PKiKP	01 39 28.5	+0.7
	baz=339						
GOGA	Godfrey	152.51	16	P	PKiKP	01 39 29.2	+1.2
	baz=341						
249A	Camden	152.59	24	P	PKiKP	01 39 29.2	+1.1
	baz=332						
Z53A	Monticello	152.60	16	P	PKiKP	01 39 29.3	+1.2
	baz=341						
151A	Opelika	152.75	20	P	PKiKP	01 39 29.6	+1.0
	baz=336						
152A	Waverly Hall	152.82	19	P	PKiKP	01 39 29.7	+1.0
	baz=338						
Z54A	Sparta	152.84	15	P	PKiKP	01 39 29.7	+1.0
	baz=342						
250A	Grady	152.91	22	P	PKiKP	01 39 29.3	+0.5
	baz=334						
251A	Midway	153.12	21	P	PKiKP	01 39 30.4	+1.2
	baz=336						
451A	Vernon	154.33	23	P	PKPbc	01 39 31.3	-0.5
	baz=334						
257A	Skidaway Islan	154.48	13	P	PKPbc	01 39 31.5	-0.6
	baz=345						

IDC ***02*** *01:20:35.9±0.6, 10°.79S×165°.48E, h0^{km}, mb4.4/15, mb1 4.6/17, mb1mx4.5/41, mbtmp4.5/17, ML4.7/2, MS4.6/4, Ms1 4.6/4, ms1mx3.9/31, Error ellipse: s-maj=20.3km s-min=16.2km az=125.0*

NEIC ***02*** *01:20:36.2±1.9, 10°.77S×165°.36E, h2^{km}±11^{km}, mb4.9/80, Error ellipse: s-maj=4.8km s-min=3.5km az=151.0*

BJI ***02*** *01:20:37.6, 11°.45S×165°.37E, h32^{km}, mB5.3/12, mb4.8/25, Ms5.1/5, Ms7 4.8/6*

ISCJB ***02*** *01:20:38.9±0.2, 10°.93S±0°.05×165°.35E±0°.04, h30^{km}, mb4.8/100, MS4.6/4, Error ellipse: s-maj=7.0km s-min=4.7km az=156.3*

GCMT ***02*** *01:20:41.2±0.4, 11°.09S±0°.03×165°.22E±0°.03, h34^{km}±1^{km}, MW5.4/57, Moment Tensor Solution. s35,c41; s57,c71; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.42±.07; $M_{\theta\theta}$-0.69±.05; $M_{\phi\phi}$-0.73±.05; $M_{r\theta}$0.50±.06; $M_{\theta\phi}$0.32±.03; $M_{\phi r}$-0.57±.05; Best double couple: $M_0$1.43800×10^{17} NP1:ϕ_s138.00000°, δ61.00000°, λ91.00000°. NP2:ϕ_s317.00000°, δ29.00000°, λ89.00000°. Principal axes: T 1.6340, Plg74.0000°, Azm49.0000°; N -0.3960, Plg0.0000°, Azm318.0000°; P -1.2420, Plg16.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 01:20:40.4±0.4**, 10°.88S**±0°.06×**165°.43E**±0°.07**, h30**^{km}**, n216, σ0^{s}85**/207**, mb4.8**/100**, MS4.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.58	284	*e*Pn	Pn	01 21 58.7	-2.9
HNR	Honiara	5.58	284	Pn	Pn	01 22 00.6	-1.0
	28nm,0.3s,baz=89,slow=4.0,SNR=5.8						
HNR				Sn	Sn	01 23 06.2	+1.4
	9.7nm,0.3s,baz=195,slow=20,SNR=2.1						
HNR				LR	LR	01 24 21.3	
	comp=Z,6µm,19.2s,baz=79,slow=40						
DZM	Mont Dzumac	11.17	175	*e*Pn	Pn	01 23 18.9	+0.7
	79nm,1.2s						
DZM	Mont Dzumac	11.17	175	*e*Pn	Pn	01 23 18.9	+0.7
DZM	Mont Dzumac	11.17	175	Pn	Pn	01 23 17.8	-0.5
	4.0nm,0.3s,baz=81,slow=16,SNR=12						
DZM				Sn	Sn	01 25 17.9	-4.2
	0.1nm,0.3s,baz=311,slow=18,SNR=2.1						
PINNC	Pines Island,	11.82	171	*e*Pn	Pn	01 23 27.4	+0.4
MSVF	Nonsavu	13.99	121	*e*P	P	01 24 07.3	+2.8
TARA	Tarawa	14.26	32	*e*Pn	Pn	01 23 58.3	-2.2
EIDS	Eidsvold	19.81	221	*e*P	P	01 25 08.3	-0.4
	15nm,1.1s						
CTA	Charters Tower	20.60	241	P	P	01 25 18.1	+0.8
	26nm,0.8s,baz=67,slow=13,SNR=18						
CTAO	Charters Tower	20.60	241	*e*P	P	01 25 17.3	-0.1
	55nm,1.1s						
COEN	Coen	21.94	260	*e*P	P	01 25 29.4	-2.4
	22nm,1.0s						
URZ	Urewera	29.20	161	P	P	01 26 39.9	+0.6
	19nm,1.0s,baz=6.6,slow=3.7,SNR=5.0						
H11S2	WAKE ISLAND Hy	29.22	2	T	T	01 57 15.1	
	baz=182,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.22	2	T	T	01 57 17.5	
	baz=182,slow=76,SNR=8.8						
H11S1	WAKE ISLAND Hy	29.23	2	T	T	01 57 15.0	
	baz=182,slow=76,SNR=14						
BKZ	Black Stump Fm	29.84	163	*e*P	P	01 26 46.1	+1.0
	22nm,0.6s						
STKA	Stephens Creek	30.34	223	*e*P	P	01 26 50.2	+0.6
	1.7nm,1.1s						
STKA	Stephens Creek	30.34	223	P	P	01 26 51.0	+1.4
	1.6nm,0.3s,baz=76,slow=12,SNR=3.9						
H11N1	WAKE ISLAND Hy	30.44	3	T	T	01 58 43.1	
	baz=182,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.44	3	T	T	01 58 44.5	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.46	3	T	T	01 58 44.8	
	baz=182,slow=76,SNR=12						
WB2	Warramunga Arr	31.23	249	*e*P	P	01 26 56.0	-1.7
	18nm,1.1s						
WR1	Warramunga Arr	31.25	249	*e*P	P	01 26 58.6	+0.9
	19nm,1.0s						
WRA	Warramunga Arr	31.25	249	P	P	01 26 58.6	+0.9
	2.6nm,0.7s,baz=82,slow=9.0,SNR=3.7						
AS01	Alice Springs	32.55	243	*e*P	P	01 27 08.2	-1.0
AS31	Alice Springs	32.59	243	*e*P	P	01 27 08.8	-0.7
	3.2nm,0.8s						
ASAR	Alice Springs	32.59	243	P	P	01 27 08.8	-0.7
	10.0nm,0.8s,baz=74,slow=9.8,SNR=16						
ASAR				LR	LR	01 39 35.0	
	comp=Z,2µm,20.0s,baz=63,slow=35						
RPZ	Rata Peaks	33.07	173	P	P	01 27 14.5	+1.1
	5.0nm,0.6s,baz=37,slow=8.8,SNR=3.2						
HTT	Hallett	33.08	223	P	P	01 27 14.3	+0.6
	baz=41,SNR=8.2						
PPT	Papeete	44.04	104	LR	LR	01 42 51.7	
	comp=Z,632nm,19.3s,baz=216,slow=30						
PPT2	Papeete2	44.04	104	*e*LR	LR	01 41 07.2	
	comp=Z,943nm,22.2s						
TBI	Tubuai	44.68	112	*e*LQ	LQ	01 39 32.7	
	766nm,26.5s						
TBI				*e*LR	LR	01 41 24.6	
	comp=Z,1µm,28.5s						
MORW	Morawa	49.43	241	*e*P	P	01 29 27.7	-0.2
	19nm,1.0s						
TAOE	Nuku Hiva Isla	53.60	93	*e*LR	LR	01 45 38.4	
	comp=Z,630nm,23.7s						
RKT	Rikitea	57.94	110	*e*LR	LR	01 47 33.4	
	comp=Z,1µm,27.5s						
NJ2	Nanjing	61.69	316	*e*P	P	01 30 55.2	-0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
GYA	Guiyang	68.07	304	*e*P	P	01 31 38.2	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	69.78	312	P	P	01 31 56.2	+8.0
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,340nm,6.5s						
KMI	Kunming	70.77	301	P	P	01 31 55.4	+0.7
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC	Hu-ho-hao-te	71.51	320	*e*P	P	01 32 00.7	+2.0
HHC				pmax	pmax		
	comp=Z,14nm,1.2s						
HHC				pmax	pmax		
	comp=Z,440nm,6.2s						
CMAR	Chiang Mai Arr	71.76	294	P	P	01 32 01.7	+1.2
	comp=Z,0.8nm,0.3s,baz=124,slow=4.5,SNR=3.7						
CD2	Chengdu	72.26	307	*e*P	P	01 32 02.5	-0.8
LZH	Lanzhou	74.42	312	*e*P	P	01 32 18.5	+2.4
LZH				pP	sP	01 32 28.1	-0.2
LZH				sP	PcP	01 32 31.3	+0.7
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
GAMB	Gambell	76.47	10	*e*P	P	01 32 27.2	+0.2
	comp=Z,11nm,1.2s						
SONA0	Songino Array	78.35	324	*e*P	P	01 32 38.4	+0.3
SONM	Songino Array	78.35	324	P	P	01 32 38.4	+0.3
	comp=Z,0.7nm,0.6s,baz=99,slow=8.9,SNR=3.9						
SONA1	Songino Array	78.35	324	*e*P	P	01 32 37.1	-1.0
ANM	Nome	78.40	12	*e*P	P	01 32 36.9	-0.9
	comp=Z,8.4nm,1.4s						
BILL	Bilibino	78.72	0	*e*P	P	01 32 39.5	0.0
	comp=Z,8.3nm,1.0s						
QSPA	South Pole Qui	79.12	180	*e*P	P	01 32 42.5	+0.5
MCCM	Marconi Confer	82.65	49	*e*P	P	01 33 01.5	+0.3
KCPM	Cahto Peak	82.67	47	*e*P	P	01 33 01.5	0.0
	comp=Z,13nm,0.9s						
KMRM	Mail Ridge	82.77	47	*e*P	P	01 33 02.4	+0.5
	comp=Z,20nm,1.0s						
GDXM	Geysers	82.94	48	*e*P	P	01 33 03.1	+0.2
	comp=Z,8.5nm,1.0s						
KHMM	Horse Mountain	82.98	46	*e*P	P	01 33 03.3	+0.2
	comp=Z,13nm,1.1s						
MDM	Murphy Dome	83.17	18	*e*P	P	01 33 03.4	0.0
	comp=Z,6.9nm,1.1s						
HDA	Harding Lake	83.19	19	*e*P	P	01 33 03.5	+0.1
	comp=Z,10nm,0.9s						
HDA	Harding Lake	83.19	19	P	P	01 33 03.2	-0.2
	baz=227						
COLA	College	83.23	18	*e*P	P	01 33 03.0	-0.6
	comp=Z,8.2nm,1.0s						
O02D	Mt. Diablo Mer	83.41	47	P	P	01 33 05.7	+0.5
	baz=250,SNR=9.7						
ILAR	Eielson Array	83.46	19	P	P	01 33 04.8	0.0
	comp=Z,1.6nm,0.6s,baz=236,slow=5.0,SNR=29						
ILB	Eielson Array	83.46	19	*e*P	P	01 33 04.8	0.0
IL1	Eielson Array	83.46	19	*e*P	P	01 33 03.7	-1.1
L02E	Cave Junction	83.53	45	P	P	01 33 06.1	+0.4
	baz=249						
K02D	Willamette Mer	83.68	45	P	P	01 33 06.8	+0.2
	baz=249						
WDC	Whiskeytown Da	83.73	47	*e*P	P	01 33 06.9	+0.2
	comp=Z,7.1nm,1.1s						
N02D	Trinity Center	83.75	46	P	P	01 33 07.2	+0.3
	baz=250						
M02C	Callahan	83.79	46	P	P	01 33 07.9	+0.8
	baz=250,SNR=5.7						
SCRK	Sand Creek	83.87	20	*e*P	P	01 33 07.2	+0.1
	comp=Z,9.3nm,1.0s						
SMMC	Simmler	83.93	52	P	P	01 33 08.3	+0.3
	baz=252						
PKM	Mcpherson Peak	83.95	53	P	P	01 33 08.8	+0.6
	baz=252						
YBH	Yreka Blue Hor	84.00	46	*e*P	P	01 33 08.6	+0.4
	comp=Z,10nm,1.0s						
HUMO	Hull Mountain	84.14	45	*e*P	P	01 33 09.3	+0.5
	comp=Z,9.7nm,1.0s						
ORV	Oroville	84.14	48	*e*P	P	01 33 09.2	+0.3
	comp=Z,6.2nm,1.0s						
O03E	Paynes Creek	84.16	47	P	P	01 33 08.8	-0.3
	baz=251,SNR=7.0						
I03D	Drain, OR	84.25	44	P	P	01 33 09.7	+0.4
	baz=249						
AFDM	Forest Hills D	84.33	49	*e*P	P	01 33 10.1	+0.2
	comp=Z,10nm,0.9s						
L04D	Klamath Falls	84.45	45	P	P	01 33 10.7	+0.1
	baz=250						
CMB	Columbia Colle	84.48	50	*e*P	P	01 33 10.6	-0.1
	comp=Z,8.7nm,1.0s						
M04C	Macdoel	84.63	46	P	P	01 33 11.4	-0.1
	baz=250,SNR=6.2						
I04A	Tendick Farm,	84.92	44	P	P	01 33 12.7	-0.1
	baz=250						
J04D	Umpqua Nationa	84.94	44	P	P	01 33 12.8	-0.3
	baz=250,SNR=5.6						
H04D	Lebanon	84.95	43	P	P	01 33 13.4	+0.5
	baz=250						
MWC	Mount Wilson	85.14	54	*e*P	P	01 33 14.6	+0.3
	comp=Z,19nm,1.4s						
ISA	Isabella, Lake	85.22	52	*e*P	P	01 33 15.0	+0.5
	comp=Z,6.8nm,1.0s						
ISA	Isabella, Lake	85.22	52	P	P	01 33 14.3	-0.2
	baz=253,SNR=7.1						
WAKR	Walker	85.33	50	*e*P	P	01 33 15.6	+0.4
	comp=Z,13nm,1.2s						
MDPB	Devils Postpil	85.34	50	*e*P	P	01 33 14.8	-0.5
	comp=Z,10nm,1.0s						
EDW2	Edwards Air Fo	85.38	53	P	P	01 33 15.3	+0.1
	baz=254,SNR=13						
H04A	Detroit Lake	85.38	43	*e*P	P	01 33 14.9	-0.2
	comp=Z,11nm,1.2s						
PNTR	Pine Nut	85.39	49	*e*P	P	01 33 15.6	+0.1
	comp=Z,12nm,1.3s						
OMMB	Old Mammoth Mi	85.39	50	*e*P	P	01 33 15.5	-0.1
	comp=Z,6.6nm,1.1s						
BFSC	Mount Baldy Ra	85.46	54	P	P	01 33 15.4	-0.4
	baz=254,SNR=5.3						
DAWY	Dawson	85.52	21	*e*P	P	01 33 15.0	-0.3
	comp=Z,5.1nm,0.9s						
J05D	Fort Rock, OR	85.56	45	P	P	01 33 16.2	+0.1
	baz=251,SNR=8.2						
MURC	Murrieta	85.65	55	P	P	01 33 16.3	-0.3
	baz=254						
PAHR	Pah Rah Range	85.74	48	*e*P	P	01 33 16.6	-0.5
	comp=Z,9.8nm,1.1s						
CWC	Cottonwood Cre	85.75	52	P	P	01 33 17.5	+0.2
	baz=253						
MOD	Modoc Plateau	85.76	46	*e*P	P	01 33 16.6	-0.6
	comp=Z,7.8nm,1.1s						
E04D	Cinebar	85.78	41	P	P	01 33 17.4	+0.5
	baz=250						
LRMC	Laurel Mtn Rad	85.79	53	P	P	01 33 17.3	-0.2
	baz=254,SNR=8.5						
D03D	Eldon	85.79	40	P	P	01 33 17.2	+0.2
	baz=249						
TIN	Tinemaha, Big	85.81	51	P	P	01 33 17.7	+0.2
	baz=253						
PINE	Pine Mountain	85.92	44	*e*P	P	01 33 18.0	0.0
	comp=Z,8.9nm,1.0s						
PGC	Sidney	85.97	39	*e*P	P	01 33 17.3	-0.5
	comp=Z,5.8nm,0.7s						
RYN	Ryan	86.05	50	*e*P	P	01 33 18.8	+0.1
	comp=Z,8.1nm,1.0s						
DAC	Darwin (Calif)	86.08	52	*e*P	P	01 33 18.8	-0.2
	comp=Z,5.2nm,1.0s						
MONP2	Monument Peak	86.08	56	P	P	01 33 19.0	0.0
	baz=255,SNR=7.9						
MPMC	Manual Prospec	86.10	52	P	P	01 33 19.1	+0.1
	baz=254,SNR=8.5						
NV01	Mina Array Sit	86.16	50	*e*P	P	01 33 19.0	-0.3
NVAR	Mina Array Bea	86.16	50	P	P	01 33 19.5	+0.2
	comp=Z,6.2nm,0.9s,baz=233,slow=8.5,SNR=30						
PFO	Pinyon Flats O	86.25	55	*e*P	P	01 33 20.1	+0.4
	comp=Z,8.9nm,1.3s						
PFO	Pinyon Flats O	86.25	55	P	P	01 33 19.6	-0.1
	baz=254						
XPFO	Pion Flat	86.25	55	*e*P	P	01 33 19.8	+0.1
	comp=Z,9.5nm,1.3s						
NV11	Mina Array Sit	86.27	50	*e*P	P	01 33 19.8	0.0
	comp=Z,0.7nm,0.9s						
IKP	In-Ko-Pah, Jac	86.27	56	P	P	01 33 19.7	-0.1
	baz=255						
GSC	Goldstone, Bar	86.43	53	*e*P	P	01 33 21.0	+0.5
	comp=Z,5.0nm,1.0s						
GSC	Goldstone, Bar	86.43	53	P	P	01 33 20.7	+0.2
	baz=254						
A04D	Lummi Island	86.45	39	P	P	01 33 20.8	+0.6
	baz=249						
GRAC	Grapevine Rang	86.46	51	P	P	01 33 20.8	+0.2
	baz=254,SNR=7.7						
KVN	Kaiserville	86.49	49	*e*P	P	01 33 21.2	+0.4
	comp=Z,5.2nm,0.9s						
SWSC	Sam W. Stewart	86.60	56	P	P	01 33 21.5	+0.2
	baz=255						
HEC	Hector,Ludlow	86.67	54	P	P	01 33 21.7	-0.1
	baz=254						
B05A	Bryant	86.67	40	P	P	01 33 21.3	0.0
	baz=250						
FURC	Furnace Creek,	86.70	52	P	P	01 33 22.1	+0.4
	baz=254						
BELC	Belle Mtn. Jos	86.72	55	P	P	01 33 22.1	+0.1
	baz=255,SNR=11						
I07A	Izee	87.00	44	*e*P	P	01 33 23.1	-0.1
	comp=Z,7.7nm,1.0s						
SHOC	Shoshone, Teco	87.01	53	P	P	01 33 23.5	+0.3
	baz=254						
BC3	Big Chuckawall	87.07	55	P	P	01 33 24.0	+0.3
	baz=255,SNR=5.2						
WVOR	Wild Horse Val	87.10	46	*e*P	P	01 33 23.2	-0.5
	comp=Z,9.9nm,1.2s						
TUQ	Turquoise Moun	87.16	53	P	P	01 33 24.3	+0.1
	baz=255,SNR=6.2						
GMRC	Granite Mounta	87.19	54	P	P	01 33 24.2	-0.1
	baz=255						
TPNV	Topopah Spring	87.31	52	P	P	01 33 24.9	0.0
	baz=254						
GLA	Glamis	87.42	56	*e*P	P	01 33 25.8	+0.4
	comp=Z,11nm,0.9s						
GLA	Glamis	87.42	56	P	P	01 33 25.9	+0.6
	baz=255						
IRM	Iron Mountain	87.44	55	P	P	01 33 25.5	+0.1
	baz=255,SNR=9.8						
J08A	Circle Bar Ran	87.49	45	*e*P	P	01 33 25.3	-0.2
	comp=Z,8.5nm,1.0s						
HAWA	Hanford	87.70	42	*e*P	P	01 33 26.3	-0.1
	comp=Z,12nm,1.2s						
LDFC	Landfair	87.71	54	*e*P	P	01 33 26.6	-0.1
	comp=Z,21nm,1.1s						
G08A	Pilot Rock	87.74	43	*e*P	P	01 33 27.1	+0.4
	comp=Z,6.7nm,1.0s						
Y12C	Blythe	87.84	55	*e*P	P	01 33 27.6	+0.3
	comp=Z,12nm,1.0s						
Y12C	Blythe	87.84	55	P	P	01 33 27.8	+0.5
	baz=256						
SHPR	Sheep Range	88.03	52	*e*P	P	01 33 28.3	-0.1
	comp=Z,5.4nm,1.2s						
R11A	Troy Canyon, C	88.19	51	*e*P	P	01 33 29.0	-0.1
	comp=Z,5.3nm,1.4s						
R11A	Troy Canyon, C	88.19	51	P	P	01 33 29.2	+0.1
	baz=255						
113A	Mohawk Valley,	88.21	56	*e*P	P	01 33 28.8	-0.3
	comp=Z,6.4nm,1.1s						
PDMCI	Parker Dam,Lak	88.28	55	P	P	01 33 29.5	+0.1
	baz=256,SNR=6.4						
W13A	Hualapai Mount	88.69	54	*e*P	P	01 33 31.7	+0.1
	comp=Z,7.2nm,1.1s						
BMO	Blue Mountains	88.73	44	*e*P	P	01 33 31.6	+0.2
	comp=Z,3.3nm,1.0s						
WMQ	Urumqi	88.76	315	*e*P	P	01 33 30.4	-1.1
WMQ				pP	pP	01 33 39.3	-1.3
WMQ				sP	pwP	01 33 46.3	+3.5
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,410nm,4.9s						
WMQ				LR	LR		
	comp=Z,320nm,24.1s						
WMQ				LR	LR		
	comp=Z,360nm,20.1s						
WMQ				LR	LR		
	comp=Z,290nm,20.1s						
214A	Organ Pipe Nat	88.81	57	P	P	01 33 32.5	+0.6
	baz=257						

F10A	Beach Ranch, E	89.11	43	*e*P	P	01 33 33.3	+0.2
	comp=Z,3.3nm,0.8s						
Y14A	Wickenburg	89.11	55	*e*P	P	01 33 33.1	-0.3
	comp=Z,4.1nm,1.0s						
PSUT	Pine Spring	89.55	51	*e*P	P	01 33 35.5	-0.1
	comp=Z,4.6nm,0.9s						
LCMT	Little Creek M	89.65	52	*e*P	P	01 33 35.9	-0.1
	comp=Z,7.7nm,1.0s						
CCUT	Cedar City	89.69	52	*e*P	P	01 33 36.4	+0.2
	comp=Z,8.8nm,1.1s						
SZCU	Shurtz Canyon	89.91	52	*e*P	P	01 33 37.1	-0.1
	comp=Z,8.0nm,1.0s						
KNB	Kanab	89.98	52	*e*P	P	01 33 37.6	+0.1
	comp=Z,9.7nm,1.2s						
U15A	North Rim	90.26	53	*e*P	P	01 33 39.0	0.0
	comp=Z,11nm,0.9s						
HLID	Hailey	90.39	46	*e*P	P	01 33 39.2	-0.1
	comp=Z,4.3nm,1.0s						
HLID	Hailey	90.39	46	P	P	01 33 39.6	+0.3
	baz=256						
PKCU	Pink Cliffs	90.48	52	*e*P	P	01 33 40.6	+0.6
	comp=Z,14nm,1.1s						
X16A	Lo Mia Camp, P	90.48	55	*e*P	P	01 33 40.7	+0.7
	comp=Z,5.4nm,0.9s						
TUC	Tucson	90.56	57	*e*P	P	01 33 40.9	+0.7
	comp=Z,5.0nm,1.1s						
TUC	Tucson	90.56	57	P	P	01 33 40.8	+0.5
	baz=258						
MTPU	Mount Pierson	90.71	52	*e*P	P	01 33 42.0	+0.9
	comp=Z,7.1nm,0.9s						
DUG	Dugway, Tooele	90.73	49	*e*P	P	01 33 41.0	0.0
	comp=Z,3.3nm,0.9s						
DUG	Dugway, Tooele	90.73	49	P	P	01 33 41.2	+0.3
	baz=256						
BGU	Big Grassy Mou	90.74	49	*e*P	P	01 33 41.0	0.0
	comp=Z,6.0nm,1.1s						
WUAZ	Wupatki	90.78	54	*e*P	P	01 33 41.9	+0.6
	comp=Z,8.3nm,1.0s						
WUAZ	Wupatki	90.78	54	P	P	01 33 42.2	+0.9
	baz=257						
MSU	Marysvale	90.82	51	*e*P	P	01 33 42.4	+0.9
HVU	Hansel Valley	91.13	48	*e*P	P	01 33 42.2	-0.6
	comp=Z,12nm,1.1s						
NLU	North Lily Min	91.23	50	*e*P	P	01 33 43.6	+0.3
	comp=Z,6.0nm,1.0s						
TMUT	Trail Mountain	91.73	50	*e*P	P	01 33 45.6	-0.2
	comp=Z,4.5nm,1.0s						
DLMT	Dillon	92.08	44	*e*P	P	01 33 46.7	-0.3
	comp=Z,11nm,1.0s						
LRM	Limekiln Ridge	92.29	44	*e*P	P	01 33 48.5	+0.4
FXWY	Fox Creek	92.80	46	*e*P	P	01 33 50.5	0.0
	comp=Z,3.9nm,1.1s						
BOZ	Bozeman (W)	92.80	44	*e*P	P	01 33 50.5	+0.1
	comp=Z,8.1nm,1.1s						
BOZ	Bozeman (W)	92.80	44	P	P	01 33 51.2	+0.8
	baz=258						
121A	Cookes Peak, D	93.09	58	P	P	01 33 52.4	+0.4
	baz=259						
MK01	Makanchi Array	93.18	317	*e*P	P	01 33 51.2	-0.7
MK32	Makanchi Array	93.19	317	*e*P	P	01 33 51.9	-0.1
MKAR	Makanchi Array	93.19	317	P	P	01 33 51.9	-0.1
	comp=Z,0.5nm,0.4s,baz=104,slow=6.1,SNR=5.5						
MKAR				PKKP	PKKPdf	01 50 59.0	-1.6
	comp=Z,0.2nm,0.6s,baz=318,slow=1.9,SNR=2.8						
PV14	Lion Creek, Pa	93.21	52	*e*P	P	01 33 53.1	+0.5
	comp=Z,3.4nm,0.9s						
ZALV	Zalesovo Beam	93.24	324	*e*P	P	01 33 50.8	-1.2
ZALV	Zalesovo Beam	93.24	324	P	P	01 33 51.4	-0.6
	comp=Z,0.7nm,0.6s,baz=122,slow=5.2,SNR=2.8						
ZAA1	Zalesovo Array	93.25	324	*e*P	P	01 33 51.4	-0.6
H17A	Grant Village	93.28	46	P	P	01 33 53.2	+0.5
	baz=258						
BW06	Boulder Array	93.67	47	P	P	01 33 55.2	+0.7
	baz=259						
PD31	Pinedale Array	93.67	47	*e*P	P	01 33 54.5	-0.1
PDAR	Pinedale Array	93.67	47	*e*P	P	01 33 53.9	-0.7
PDAR	Pinedale Array	93.67	47	P	P	01 33 54.2	-0.4
	comp=Z,2.0nm,0.9s,baz=236,slow=1.6,SNR=12						
ANMO	Albuquerque	94.61	55	P	P	01 33 59.3	+0.2
	baz=260						
MNTX	Cornudas Mount	94.95	59	P	P	01 34 00.8	+0.4
	baz=260						
YKA	Yellowknife Ar	94.97	27	P	P	01 33 58.2	-1.5
	comp=Z,1.2nm,0.9s,baz=254,slow=4.6,SNR=13						
YKB5	Yellowknife Ar	94.97	27	*e*P	P	01 33 57.4	-2.4
NRIK	Noril'sk	95.86	340	LR	LR	02 16 34.8	
	comp=Z,137nm,20.0s,baz=130,slow=35						
LTX	Lajitas	96.03	61	*e*P	P	01 34 05.2	-0.3
TXAR	Lajitas Array	96.03	61	P	P	01 34 05.2	-0.3
	comp=Z,0.5nm,0.8s,baz=238,slow=7.1,SNR=5.2						
KURK	Kurchatov	96.32	320	*e*P	P	01 34 05.4	-0.8
KSH	Kashi	96.41	309	P	P	01 34 09.1	+2.1
KSH				pP	sP	01 34 20.2	+1.1
KSH				PP	PP	01 38 06.2	+5.0
AAK	Ala-Archa	97.96	312	*e*P	P	01 34 13.2	-0.8
	comp=Z,0.7nm,0.3s						
ARA0	ARCESS Array S	116.10	345	*e*PKPdf	PKPdf	01 39 20.5	+0.4
ARCES	ARCESS Array B	116.10	345	PKP	PKPdf	01 39 20.5	+0.4
	comp=Z,4.6nm,1.1s,baz=64,slow=2.1,SNR=4.6						
SDV	Santo Domingo	124.80	87	*e*PKPdf	PKPdf	01 39 38.1	-0.6
BOSA	Boshof	125.02	223	PKP	PKPdf	01 39 38.5	-0.2
	comp=Z,1.9nm,0.7s,baz=126,slow=6.9,SNR=3.9						
CLL	Collm	133.83	336	*e*PKPdf	PKiKP	01 39 56.0	+0.2
GERES	GERESS Array B	135.42	334	PKP	PKPdf	01 39 58.3	+0.6
	comp=Z,0.1nm,0.3s,baz=117,slow=1.7,SNR=4.5						
KEST	Kesra	147.10	323	*e*PKPbc	PKPbc	01 40 21.6	+0.6
KEST	Kesra	147.10	323	PKPbc	PKPbc	01 40 21.9	+0.8
	comp=Z,1.8nm,0.7s,baz=0.0,slow=8.1,SNR=2.3						
ES19	SONSECA Array	149.77	344	*e*PKPbc	PKPbc	01 40 26.7	-1.2
ESDC	Sonseca Array	149.82	344	PKPbc	PKPbc	01 40 26.2	-1.8
	comp=Z,0.9nm,0.8s,baz=330,slow=3.1,SNR=3.5						
TORD	Torodi Ar. Bea	163.93	280	PKP	PKPdf	01 40 42.5	+0.7
	comp=Z,0.6nm,0.9s,baz=106,slow=3.6,SNR=2.5						
TOA1	Torodi Ar. Sit	163.93	280	*e*PKPdf	PKPdf	01 40 42.5	+0.7

IDC 02 01:21:51.6±8.3**, 22°.08S**×**66°.30W, h283**^{km}±59^{km}**, mb3.4**/2**, mb1 3.4**/4**, mb1mx3.2**/24**, mbtmp4.1**/4**, Error ellipse: s-maj=104.9km s-min=33.9km az=21.0, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	6.02	343	P	Pn	01 23 20.9	-0.5
	0.9nm,0.3s,baz=164,slow=9.4,SNR=26						
LPAZ				S	S	01 24 34.4	+0.9
	baz=253,slow=20,SNR=3.9						
BDFB	Brasilia	18.44	73	P	P	01 25 47.6	+0.4
	0.8nm,0.3s,baz=240,slow=12,SNR=18						
DBIC	Dimbokro	66.59	72	P	P	01 32 13.3	+1.0
	0.9nm,0.5s,baz=227,slow=7.2,SNR=3.4						
TORD	Torodi Ar. Bea	75.28	69	P	P	01 33 03.2	-1.0
	0.7nm,0.4s,baz=244,slow=5.4,SNR=22						
MKAR	Makanchi Array	144.63	38	PKP	PKPdf	01 40 55.0	+0.6
	0.2nm,0.3s,baz=302,slow=3.2,SNR=3.2						

IDC 02 01:31:29.2±1.7**, 11°.11S**×**165°.34E, h0**^{km}**, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/28**, mbtmp3.8**/4**, ML4.3**/1**, Error ellipse: s-maj=52.5km s-min=31.0km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.95	175	Pn	Pn	01 34 08.0	+0.6
	2.1nm,0.3s,baz=68,slow=17,SNR=16						
WRA	Warramunga Arr	31.09	250	P	P	01 37 49.5	+0.1
	1.6nm,0.9s,baz=83,slow=8.6,SNR=5.5						
ASAR	Alice Springs	32.41	243	P	P	01 38 00.8	-0.2
	0.4nm,0.5s,baz=66,slow=10,SNR=7.1						
ILAR	Eielson Array	83.70	19	P	P	01 43 59.5	0.0
	0.3nm,1.0s,baz=231,slow=5.7,SNR=3.7						

IDC 02 01:44:23.9±1.6**, 10°.87S**×**165°.57E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/30**, mbtmp3.8**/5**, ML4.4**/1**, Error ellipse: s-maj=52.4km s-min=28.6km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.17	176	Pn	Pn	01 47 05.0	0.0
	2.4nm,0.3s,baz=353,slow=13,SNR=36						
H11N1	WAKE ISLAND Hy	30.42	2	T	T	02 22 27.2	
	baz=182						
H11N3	WAKE ISLAND Hy	30.43	3	T	T	02 22 10.0	
	baz=182						
H11N2	WAKE ISLAND Hy	30.44	2	T	T	02 22 29.7	
	baz=182						
STKA	Stephens Creek	30.44	223	P	P	01 50 39.0	+0.6
	1.2nm,0.4s,baz=41,slow=8.8,SNR=3.8						
WRA	Warramunga Arr	31.38	250	P	P	01 50 46.8	+0.1
	1.2nm,0.7s,baz=82,slow=8.7,SNR=6.5						
ASAR	Alice Springs	32.71	243	P	P	01 50 57.8	-0.6
	0.2nm,0.4s,baz=63,slow=11,SNR=3.5						
ILAR	Eielson Array	83.41	19	P	P	01 56 52.8	0.0
	0.2nm,0.8s,baz=219,slow=7.0,SNR=2.4						

IDC 02 01:48:40.7±2.0**, 11°.09S**×**165°.31E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.6**/26**, mbtmp3.8**/4**, ML3.9**/1**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx3.0**/36**, Error ellipse: s-maj=53.0km s-min=38.1km az=110.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.98	174	Pn	Pn	01 51 18.6	-0.6
	0.9nm,0.3s,baz=15,slow=14,SNR=8.8						
JAY	Jayapura	25.85	287	LR	LR	02 05 00.9	
	comp=Z,186nm,18.0s,baz=311,slow=38						
H11S2	WAKE ISLAND Hy	29.42	3	T	T	02 25 30.0	
	baz=182						
H11S3	WAKE ISLAND Hy	29.43	3	T	T	02 25 23.9	
	baz=182						
H11S1	WAKE ISLAND Hy	29.44	3	T	T	02 25 28.0	
	baz=182						
WRA	Warramunga Arr	31.06	250	P	P	01 55 00.5	-0.2
	1.1nm,0.9s,baz=78,slow=9.0,SNR=5.1						
ASAR	Alice Springs	32.39	243	P	P	01 55 12.6	+0.2
	0.3nm,0.7s,baz=69,slow=10,SNR=4.1						
MKAR	Makanchi Array	93.26	317	P	P	02 01 57.4	+0.1
	0.3nm,0.8s,baz=92,slow=4.6,SNR=3.2						
ARCES	ARCESS Array B	116.27	345	PKP	PKiKP	02 07 25.4	-0.2
	1.3nm,0.8s,baz=51,slow=2.5,SNR=4.2						

IDC 02 01:52:22.9±1.7**, 10°.93S**×**165°.16E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.6**/25**, mbtmp3.7**/4**, ML3.8**/1**, Error ellipse: s-maj=52.9km s-min=30.9km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.15	174	Pn	Pn	01 55 03.7	-0.1
	0.6nm,0.3s,baz=297,slow=23,SNR=8.3						
H11S2	WAKE ISLAND Hy	29.27	3	T	T	02 28 58.6	
	baz=183,slow=76,SNR=5.0						
H11S3	WAKE ISLAND Hy	29.28	3	T	T	02 29 08.7	
	baz=183,slow=76,SNR=4.3						
H11S1	WAKE ISLAND Hy	29.29	3	T	T	02 29 03.9	
	baz=183,slow=76,SNR=5.4						
H11N1	WAKE ISLAND Hy	30.50	3	T	T	02 30 31.1	
	baz=182						
H11N3	WAKE ISLAND Hy	30.50	3	T	T	02 30 29.7	
	baz=182						
H11N2	WAKE ISLAND Hy	30.52	3	T	T	02 30 40.6	
	baz=182						
WRA	Warramunga Arr	30.98	249	P	P	01 58 42.2	-0.1
	0.3nm,1.0s,baz=81,slow=9.2,SNR=2.7						
ASAR	Alice Springs	32.33	243	P	P	01 58 54.2	0.0
	0.7nm,0.8s,baz=67,slow=10.0,SNR=6.5						
ILAR	Eielson Array	83.59	19	P	P	02 04 52.8	0.0
	0.3nm,0.3s,baz=234,slow=5.7,SNR=20						

IDC ***02*** *01:58:27.9±10.0, 32°.90S×69°.91W, h73*^{km}*±72*^{km}*, mb3.5/4, mb1 3.9/8, mb1mx3.7/28, mbtmp3.9/8, ML4.0/4, Error ellipse: s-maj=96.0km s-min=29.3km az=21.0*

ISCJB ***02*** *01:58:31.9±0.3, 32°.67S±0°.03×70°.01W±0°.05, h119*^{km}*±3*^{km}*, mb4.0/6, Error ellipse: s-maj=7.8km s-min=5.4km az=20.2*

SJA ***02*** *01:58:31.0±0.7, 32°.73S×70°.01W, h123*^{km}*±7*^{km}*, ML3.8, MW4.1*

GUC ***02*** *01:58:32.0±0.7, 32°.56S×69°.93W, h105*^{km}*±15*^{km}*, ML4.0*

NEIC ***02*** *01:58:32.0±0.0, 32°.56S×69°.93W, h105*^{km}*, mb4.3/2, ML4.0(GUC), After GUC.*

ISC 02 01:58:32.3±0.7**, 32°.63S**±0°.04×**70°.00W**±0°.05**, h112**^{km}±6^{km}**, n49, σ1**^{s}**77**/65**, mb3.8**/6**, 1C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUSP	Uspallata	0.66	52	*i*P	Pn	01 58 52.0	+1.1
FCH	Farellones	0.73	199	*e*P	Pn	01 58 51.8	+0.2
FCH				*e*S	Sn	01 59 06.3	+0.2
FCH				IAML		01 59 07.0	
	comp=E,6μm,0.2s						
PEL	Peldehue	0.77	228	*e*Pn	Pn	01 58 51.7	+0.1
PEL				*e*Sn	Sn	01 59 06.0	0.0
PEL	Peldehue	0.77	228	*i*P	Pn	01 58 51.7	+0.1
PEL				*i*S	Sn	01 59 06.3	+0.3
PEL	Peldehue	0.77	228⇓	*e*P	Pn	01 58 50.9	-0.7
PEL				*e*S	Sn	01 59 06.3	+0.3
PEL				IAML		01 59 07.2	
	comp=N,7μm,0.3s						
CLCH	Cerro Calan	0.88	210⇑	*e*P	Pn	01 58 52.7	+0.1
CLCH				*e*S	Sn	01 59 07.8	-0.2
CLCH				IAML		01 59 09.5	
	comp=E,5μm,0.3s						
ROCH	El Roble	0.91	248⇓	*e*P	Pn	01 58 53.2	+0.2
ROCH				*e*S	Sn	01 59 09.4	+0.7
ROC1	El Roble	0.92	248	*e*Pn	Pn	01 58 53.4	+0.3
ROC1				*e*Sn	Sn	01 59 09.0	+0.1
ROC1	El Roble	0.92	248	*i*P	Pn	01 58 53.4	+0.3
ROC1				*i*S	Sn	01 59 09.4	+0.5
ARCO	CERRO ARCO	0.93	103	*i*P	Pn	01 58 53.5	+0.3
ARCO				IAML		01 59 10.8	
	comp=Z,2μm,0.2s						
ASAL	Salagasta	0.99	88	*i*P	Pn	01 58 54.3	+0.7
RTLS	Leoncito	1.02	36	*i*P	Pn	01 58 56.2	+1.9
RTLS				*i*S	Sn	01 59 14.3	+3.4
RTLS				IAML		01 59 14.9	
	comp=Z,1μm,0.2s						
AAGR	Agrelo	1.09	115	*i*P	Pn	01 58 55.0	+0.3
LMEL	Las Melosas	1.22	188⇓	*e*P	Pn	01 58 56.0	-0.2
LMEL				*e*S	Sn	01 59 15.1	+0.7
LMEL				IAML		01 59 21.3	
	comp=E,2μm,0.1s						
RTCV	Cerro Valdivia	1.46	59	*i*P	Pn	01 58 59.8	+1.0
RTLL	Cerro Villicun	1.84	45	*i*P	Pn	01 59 04.5	+1.0
RTLL				IAML		01 59 29.5	
	comp=Z,735nm,0.3s						
ACAN	Cantantal	2.41	82	*i*P	Pn	01 59 10.5	-0.2
GO04	Tololo Observa	2.54	344	*e*Pn	Pn	01 59 14.2	+1.6
GO04				*e*Sn	Sn	01 59 45.4	+1.9
GO05	Huala	2.86	214	*e*Pn	Pn	01 59 14.3	-2.3
LCO	Las Campanas	3.66	350	*e*Pn	Pn	01 59 28.4	+1.0
LCO				*e*Sn	Sn	02 00 09.7	-0.3
GO03	Copiap	5.03	358	*e*Pn	Pn	01 59 45.8	+0.2
GO03				*e*Sn	Sn	02 00 40.5	-2.1
GO06	Curarrehue	7.04	189	*e*Pn	Pn	02 00 11.2	-1.6
GO06				*e*Sn	Sn	02 01 19.1	-12
GO02	Mina Guanaco	7.45	3	*e*Pn	Pn	02 00 18.3	-0.4
GO02				*e*Sn	Sn	02 01 38.5	-3.3
LVC	Limon Verde	10.03	6	*e*Pn	Pn	02 00 52.7	-0.9
LVC				*e*Sn	Sn	02 02 37.4	-7.2
LVC	Limon Verde	10.03	6	P	Pn	02 00 53.1	-0.5
	comp=Z,0.5nm,0.3s,baz=176,slow=7.9,SNR=4.3						
LVC				S	Sn	02 02 37.4	-7.2
	comp=Z,0.5nm,0.3s,baz=241,slow=19,SNR=2.9						
CPUP	Villa Florida	12.70	64	*e*Pn	Pn	02 01 26.1	-2.7
CPUP	Villa Florida	12.70	64	P	Pn	02 01 25.9	-2.9
	comp=Z,0.1nm,0.3s,baz=219,slow=6.5,SNR=1.7						
LPAZ	La Paz	16.36	6	*e*Pn	Pn	02 02 16.7	+0.7
	comp=Z,6.3nm,0.8s						
LPAZ	La Paz	16.36	6	P	P	02 02 17.9	+1.0
	comp=Z,0.7nm,0.3s,baz=186,slow=7.5,SNR=22						
SIV	San Ignacio	18.44	28	P	P	02 02 39.2	0.0
	comp=Z,0.5nm,0.3s,baz=220,slow=11,SNR=16						
LTX	Lajitas	69.41	329	*e*P	P	02 09 29.9	+1.7
TXAR	Lajitas Array	69.41	329	P	P	02 09 29.9	+1.7
	comp=Z,0.5nm,0.5s,baz=154,slow=8.7,SNR=9.9						
WVT	Waverly	70.41	345	*e*P	P	02 09 34.7	+0.7
	comp=Z,7.0nm,0.6s						
TOA1	Torodi Ar. Sit	82.14	69	*e*P	P	02 10 40.8	-0.1
TORD	Torodi Ar. Bea	82.14	69	P	P	02 10 40.8	-0.1
	comp=Z,0.4nm,0.6s,baz=238,slow=5.8,SNR=6.3						
PD31	Pinedale Array	83.34	332	*e*P	P	02 10 48.0	+1.2
PDAR	Pinedale Array	83.34	332	P	P	02 10 48.0	+1.2
	comp=Z,0.5nm,0.6s,baz=131,slow=5.4,SNR=5.8						
NV01	Mina Array Sit	83.76	324	*e*P	P	02 10 50.6	+1.6
NVAR	Mina Array Bea	83.76	324	P	P	02 10 50.6	+1.6
	comp=Z,1.1nm,0.7s,baz=155,slow=5.2,SNR=7.8						
J08A	Circle Bar Ran	87.66	327	*e*P	P	02 11 09.2	+1.2
	comp=Z,4.4nm,0.6s						
YKA	Yellowknife Ar	101.33	341	P	Pdif	02 12 10.1	+0.3
	comp=Z,0.1nm,0.5s,baz=143,slow=4.6,SNR=3.2						
YKB5	Yellowknife Ar	101.33	341	*e*Pdif	Pdif	02 12 10.1	+0.3
ARA0	ARCESS Array S	122.06	24	*e*PKPdf	PKPdf	02 17 12.6	0.0
ARCES	ARCESS Array B	122.06	24	PKP	PKPdf	02 17 12.6	0.0
	comp=Z,2.1nm,1.1s,baz=246,slow=3.8,SNR=2.9						
BVAR	Borovoye Array	145.12	42	PKPbc	PKPdf	02 17 57.1	+1.2
	comp=Z,1.1nm,0.4s,baz=301,slow=2.6,SNR=10						
ZAA1	Zalesovo Array	152.16	33	*e*PKPbc	PKiKP	02 18 14.7	+0.4
ZALV	Zalesovo Beam	152.16	33	PKPbc	PKiKP	02 18 14.7	+0.4
	comp=Z,4.2nm,0.3s,baz=315,slow=2.9,SNR=21						
MK32	Makanchi Array	154.58	48	*e*PKPab	PKPab	02 18 35.2	+0.5
MKAR	Makanchi Array	154.58	48	PKPab	PKPab	02 18 35.2	+0.5
	comp=Z,0.3nm,0.4s,baz=286,slow=3.0,SNR=7.1						

IDC 02 02:00:18.2±1.2**, 10°.93S**×**165°.39E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/31**, mbtmp3.8**/5**, ML3.8**/1**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.9**/35**, Error ellipse: s-maj=49.4km s-min=25.0km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.56	285	LR	LR	02 04 13.6	
	comp=Z,380nm,18.2s,baz=217,slow=42						
DZM	Mont Dzumac	11.12	175	Pn	Pn	02 02 59.3	+0.6
	0.6nm,0.3s,baz=305,slow=19,SNR=12						
H11S2	WAKE ISLAND Hy	29.27	3	T	T	02 36 56.3	
	baz=181,slow=76,SNR=3.9						
H11S3	WAKE ISLAND Hy	29.27	3	T	T	02 37 03.6	
	baz=181,slow=76,SNR=2.9						
H11S1	WAKE ISLAND Hy	29.28	3	T	T	02 37 01.7	
	baz=181,slow=76,SNR=4.5						
H11N1	WAKE ISLAND Hy	30.49	3	T	T	02 38 36.9	
	baz=182,slow=76,SNR=4.6						
H11N3	WAKE ISLAND Hy	30.49	3	T	T	02 38 38.4	
	baz=182,slow=76,SNR=4.0						
H11N2	WAKE ISLAND Hy	30.51	3	T	T	02 38 38.4	
	baz=182,slow=76,SNR=3.9						
WRA	Warramunga Arr	31.20	250	P	P	02 06 39.5	0.0
	0.5nm,0.6s,baz=81,slow=9.3,SNR=7.4						
ASAR	Alice Springs	32.53	243	P	P	02 06 51.0	-0.2
	1.1nm,0.7s,baz=71,slow=9.7,SNR=12						
ILAR	Eielson Array	83.52	19	P	P	02 12 48.1	+0.4
	0.3nm,0.8s,baz=232,slow=5.4,SNR=3.3						
NVAR	Mina Array Bea	86.22	50	P	P	02 13 01.8	-0.4
	0.3nm,0.7s,baz=246,slow=4.3,SNR=2.8						

MEX 02 02:01:00.2±0.4**, 14°.56N**×**92°.99W, h20**^{km}±763^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.16	349	*e*P	Pn	02 01 18.2	-3.2
PCIG				*i*S	Sb	02 01 31.8	-4.5

PDG ***02*** *02:18:18.2±0.3, 41°.97N×20°.15E, h14*^{km}*±1*^{km}*, ML2.5/7, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

ISC 02 02:18:18.3±1.1**, 41°.95N**±0°.04×**20°.15E**±0°.03**, h16**^{km}±9^{km}**, n16, σ0**^{s}**88**/32**, 7C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVY	Plav	0.66	347⇑	*i*Pg	Pg	02 18 30.7	-0.6
PVY				*i*Sg	Sb	02 18 41.0	+0.6
ULC	Ulcinj	0.68	271⇑	*i*Pg	Pg	02 18 31.3	-0.3
ULC				*i*Sg	Sb	02 18 41.6	+0.7
DRME	Dracevica, Mon	0.76	288⇓	*i*Pg	Pg	02 18 32.2	-0.9
DRME				*i*Sg	Sb	02 18 43.3	+0.1
TTG	Podgorica	0.82	306⇑	*i*Pg	Pg	02 18 33.1	-1.2
TTG				*i*Sg	Sb	02 18 45.8	+0.8
IVA	Berane	0.94	348⇓	*i*Pg	Pb	02 18 35.8	-0.4
IVA				*i*Sg	Sn	02 18 50.0	0.0
SKO	Skopje	0.96	88	*i*Pg	Pn	02 18 37.1	0.0
SKO				*i*Sg	Sb	02 18 48.0	-1.0
BUM	Brajici-Budva	1.00	291⇑	*i*Pg	Pb	02 18 36.7	-0.6
BUM				*i*Sg	Sn	02 18 52.4	+0.9
KRUS	Krusevo	1.01	125	*i*Pg	Pb	02 18 35.8	-1.6
KRUS				*i*Sg	Sb	02 18 50.0	-0.5
KOME	Kolasin	1.01	332⇓	*i*Pg	Pb	02 18 36.8	-0.7
KOME				*i*Sg	Sn	02 18 52.1	+0.2
NKME	Niksic	1.21	313⇑	*i*Pg	Pn	02 18 40.2	-0.3
NKME				*i*Sg	Sg	02 18 59.1	+1.8
BIA	Bitola	1.28	136	*e*Pg	Pg	02 18 43.3	+0.2
BIA				*i*Sg	Sn	02 18 59.1	+0.6
HCY	Herceg Novi	1.33	292⇑	*i*Pg	Pb	02 18 42.6	-0.2
HCY				*i*Sg	Sg	02 19 02.5	+1.3
BRY	Bratogost	1.52	309⇑	*i*Pg	Pb	02 18 46.5	+0.2
BRY				*i*Sg	Sg	02 19 08.3	+0.8
STIP	Stip	1.54	99	*i*Pg	Pg	02 18 47.9	0.0
STIP				*i*Sg	Sg	02 19 09.3	+1.3
VAY	Valandovo	1.92	108	*i*Pn	Pb	02 18 52.4	-0.5
VAY				*i*Sn	Sb	02 19 17.8	+1.2
STON	Ston	2.04	298	*e*Pn	Pb	02 18 53.3	-1.5
STON				Sn	Sg	02 19 23.7	-0.1

IDC ***02*** *02:40:23.4±1.4, 2°.26N×126°.96E, h0*^{km}*, mb3.5/4, mb1 3.6/4, mb1mx3.5/25, mbtmp3.5/4, Error ellipse: s-maj=139.5km s-min=20.6km az=69.0*

DJA ***02*** *02:40:34.5±1.0, 2°N±5°×12°7E±°, h163*^{km}*±16*^{km}*, M4.0/7, mb4.2/1, MLv3.9/7*

ISCJB ***02*** *02:40:37.5±0.7, 2°.00N±0°.06×126°.3E±0°.2, h150*^{km}*, Error ellipse: s-maj=21.8km s-min=7.4km az=167.4*

ISC 02 02:40:38.9±1.0**, 2°.00N**±0°.07×**126°.3E**±0°.2**, h150**^{km}**, n10, σ2**^{s}**44**/11**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.65	138	P	Pn	02 41 09.3	-0.9
SGSI	Sangihe	1.82	337	P	Pn	02 41 09.2	-2.8
SGSI				S	Sn	02 41 35.3	-2.2
SANI	Sanana	4.04	184	P	Pn	02 41 40.6	+0.9
SANI				S	Sn	02 42 24.3	-2.6
NLAI	Namlea	5.28	171	P	Pn	02 41 53.0	-3.1
DNP	Denpasar	15.29	226	P	P	02 44 08.3	-0.2
JAGI	Jajag, Banyuwa	15.93	229	P	Pn	02 44 06.4	-8.6
WRA	Warramunga Arr	23.21	160	P	P	02 45 31.2	-1.6
	0.5nm,0.3s,baz=341,slow=11,SNR=7.7						
ASAR	Alice Springs	26.58	164	P	P	02 46 05.0	+1.7
	0.1nm,0.3s,baz=345,slow=11,SNR=3.0						
SONM	Songino Array	48.78	342	P	P	02 49 10.3	+1.5
	0.3nm,0.4s,baz=153,slow=7.2,SNR=2.4						
MKAR	Makanchi Array	58.70	326	P	P	02 50 23.9	+3.1
	0.9nm,0.5s,baz=122,slow=8.4,SNR=14						

ISCJB ***02*** *02:59:34.4±0.2, 39°.96S±0°.01×175°.59E±0°.03, h68*^{km}*±2*^{km}*, mb4.2/5, Error ellipse: s-maj=3.5km s-min=2.3km az=11.7*

WEL ***02*** *02:59:35.3, 40°.0S±0°.9×175°.6E±0°.9, h56*^{km}*±2*^{km}*, ML4.9/36*

IDC ***02*** *02:59:35.8±1.0, 39°.69S×175°.54E, h64*^{km}*±8*^{km}*, mb3.6/4, mb1 3.8/4, mb1mx3.6/28, mbtmp3.9/4, MS3.5/3, Ms1 3.5/3, ms1mx3.1/37, Error ellipse: s-maj=23.2km s-min=19.7km az=16.0*

ISC 02 02:59:35.4±0.6**, 39°.97S**±0°.02×**175°.57E**±0°.03**, h62**^{km}±4^{km}**, n153, σ1**^{s}**05**/189**, mb4.3**/5**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHWZ	Ohakea	0.31	219	P	Pn	02 59 45.5	-0.2
OHWZ				S	Sn	02 59 53.9	+0.7
TSZ	Takapari Road	0.31	107	P	Pn	02 59 44.8	-1.0
TSZ				S	Sn	02 59 52.4	-1.0
POWZ	Post Office Ro	0.45	160	P	Pn	02 59 46.6	-0.4
POWZ				S	Sn	02 59 55.3	-0.2
WAZ	Wanganui	0.50	295	P	Pn	02 59 47.3	-0.2
WAZ				S	Sn	02 59 56.4	+0.1
DVHZ	Dannevirke	0.56	126	P	Pn	02 59 47.9	-0.3
DVHZ				S	Sn	02 59 58.1	+0.5
MOVZ	Moawhango	0.58	14	P	Pn	02 59 47.2	-1.2
MOVZ				S	Sn	02 59 56.2	-1.7
MTVZ	Mangateitei	0.59	352	P	Pn	02 59 47.9	-0.6
MTVZ				S	Sn	02 59 57.5	-0.6
BHHZ	Black Hill Sta	0.61	39	P	Pn	02 59 47.9	-0.9
BHHZ				S	Sn	02 59 57.3	-1.2
PRWZ	Pori Road	0.66	153	P	Pn	02 59 49.5	+0.2
PRWZ				S	Sn	03 00 00.7	+1.2
TRVZ	Turoa	0.67	359	P	Pn	02 59 49.0	-0.7

TRVZ				P	Pn	02 59 48.9	-0.7
TRVZ				S	Sn	02 59 59.3	-0.6
WPHZ	Waipukurau	0.68	99	P	Pn	02 59 49.4	0.0
WPHZ				S	Sn	03 00 01.4	+1.6
WHVZ	Whangaehu Hut	0.68	1	P	Pn	02 59 49.1	-0.6
WHVZ				S	Sn	02 59 59.4	-0.9
DRZ	Dome Shelter	0.69	360	P	Pn	02 59 49.3	-0.6
DRZ				S	Sn	02 59 59.7	-0.8
MRZ	Mangatainoka R	0.69	179	P	Pn	02 59 49.8	+0.1
MRZ				P	Pn	02 59 49.8	+0.1
MRZ				S	Sn	03 00 01.0	+0.9
PKVZ	Pokaka	0.70	346	P	Pn	02 59 49.3	-0.5
PKVZ				S	Sn	02 59 59.7	-0.6
TUVZ	Tukino	0.70	5	P	Pn	02 59 49.3	-0.6
TUVZ				S	Sn	03 00 00.0	-0.5
FWVZ	Far West T-bar	0.71	359	P	Pn	02 59 49.5	-0.6
FWVZ				S	Sn	02 59 59.9	-1.0
COVZ	Chateau Observ	0.77	358	P	Pn	02 59 50.1	-0.5
COVZ				S	Sn	03 00 01.4	-0.5
NGZ	Ngauruhoe	0.79	2	P	Pn	02 59 50.6	-0.4
NGZ				S	Sn	03 00 02.5	+0.1
TIWZ	Tintock	0.84	163	P	Pn	02 59 52.0	+0.5
ANWZ	Angora Road	0.85	126	P	Pn	02 59 51.7	+0.2
WTVZ	West Tongariro	0.85	1	P	Pn	02 59 51.4	-0.4
WTVZ				S	Sn	03 00 03.3	-0.4
KWHZ	Kaweka Forest	0.85	51	P	Pn	02 59 51.9	+0.2
KWHZ				S	Sn	03 00 05.2	+1.6
PRHZ	Porangahau	0.87	110	P	Pn	02 59 51.7	-0.2
KRVZ	Karewarewa	0.87	4	P	Pn	02 59 51.7	-0.3
KRVZ				S	Sn	03 00 03.6	-0.6
BFZ	Birch Farm	0.88	144	P	Pn	02 59 51.8	-0.2
TWVZ	Taurewa	0.90	353	P	Pn	02 59 51.7	-0.7
OGWZ	Otaki Gorge	0.90	200	P	Pn	02 59 52.8	+0.6
HOWZ	Holdsworth Sta	0.93	183	P	Pn	02 59 52.9	+0.3
PXZ	Pawanui	0.99	94	P	Pn	02 59 53.4	0.0
KATZ	Kakaramea	1.00	6	P	Pn	02 59 53.2	-0.4
MCHZ	McNeill Hill	1.01	59	P	Pn	02 59 54.0	+0.4
RITZ	Rihia Road	1.01	13	P	Pn	02 59 53.5	-0.2
KAHZ	Kahuranaki	1.02	81	P	Pn	02 59 53.6	-0.1
KIW	Kapiti Island	1.02	209	P	Pn	02 59 54.4	+0.5
LREZ	Lake Rotokare	1.03	299	P	Pn	02 59 54.7	+0.8
VRZ	Vera Road	1.05	323	P	Pn	02 59 54.1	0.0
CPWZ	Castlepoint	1.06	153	P	Pn	02 59 54.8	+0.6
CPWZ				P	Pn	02 59 56.7	+2.5
BKZ	Black Stump Fm	1.07	42	P	Pn	02 59 54.6	+0.1
RATZ	Rangitukua	1.11	8	P	Pn	02 59 54.7	-0.3
HATZ	Hinemaiaia	1.15	21	P	Pn	02 59 54.9	-0.5
TMWZ	Te Maipa	1.16	168	P	Pn	02 59 55.7	0.0
MTW	Mount Morrison	1.19	182	P	Pn	02 59 55.8	-0.2
CAW	Cannon Point	1.20	198	P	Pn	02 59 56.3	+0.2
CKHZ	Cape Kidnapper	1.20	76	P	Pn	02 59 56.0	-0.1
PREZ	Palmer Road	1.25	299	P	Pn	02 59 58.3	+1.4
PREZ				P	Pn	02 59 58.3	+1.4
WATZ	Wairara	1.26	6	P	Pn	02 59 56.6	-0.4
NMHZ	Naumai	1.29	48	P	Pn	02 59 57.7	+0.3
ARHZ	Aropaoanui	1.31	58	P	Pn	02 59 57.4	-0.1
MRHZ	Matea Rd	1.31	30	P	Pn	02 59 57.1	-0.5
MRHZ				P	Pn	02 59 57.2	-0.5
MHEZ	Mangahewa	1.31	312	P	Pn	02 59 58.6	+1.0
DREZ	Durham Road	1.31	306	P	Pn	02 59 58.6	+1.0
WHTZ	Whakaora	1.33	13	P	Pn	02 59 57.9	0.0
WHTZ				P	Pn	02 59 57.9	0.0
KHEZ	Kahui Hut	1.38	299	P	Pn	02 59 59.8	+1.3
PAWZ	Paruwai Farm	1.42	184	P	Pn	02 59 58.8	-0.3
NMEZ	Namu Road	1.42	292	P	Pn	03 00 00.3	+1.3
TRWZ	Traveller	1.43	176	P	Pn	02 59 58.9	-0.3
PKE	Pukeiti	1.45	302	P	Pn	03 00 00.9	+1.5
MSWZ	Moikau Station	1.47	189	P	Pn	02 59 59.3	-0.4
MTHZ	Maungataniwha	1.49	42	P	Pn	02 59 59.9	0.0
KUTZ	Kaahu Road	1.49	8	P	Pn	02 59 60.0	0.0
NBEZ	Newall Road No	1.49	297	P	Pn	03 00 01.5	+1.6
DUWZ	D’Urville Isla	1.51	236	P	Pn	03 00 00.5	+0.3
WPRZ	Whakapapatarin	1.52	18	P	Pn	03 00 00.0	-0.3
ALRZ	Allen Road	1.53	23	P	Pn	02 59 59.8	-0.7
BHW	Baring Head	1.54	200	P	Pn	03 00 00.2	-0.3
HIZ	Hauiti	1.55	339	P	Pn	03 00 00.7	-0.2
WHHZ	Waihua	1.56	56	P	Pn	03 00 01.1	+0.1
RAHZ	Arahi	1.57	49	P	Pn	03 00 01.1	-0.1
TCW	Tory Channel	1.58	218	P	Pn	03 00 01.2	0.0
PRRZ	Plateau Road	1.60	24	P	Pn	03 00 00.9	-0.5
PLWZ	Palliser	1.62	188	P	Pn	03 00 01.1	-0.7
TLZ	Tolley Road	1.64	359	P	Pn	03 00 01.1	-0.9
GRRZ	Galatos Road	1.67	15	P	Pn	03 00 02.2	-0.2
HRRZ	Handcock Road	1.67	20	P	Pn	03 00 02.4	0.0
HSRZ	Hossack Road	1.73	18	P	Pn	03 00 03.1	-0.1
RTZ	Ruatahuna	1.74	39	P	Pn	03 00 03.0	-0.4
MUGZ	Murupara	1.76	32	P	Pn	03 00 02.8	-0.7
RRRZ	Republican Roa	1.78	25	P	Pn	03 00 03.5	-0.5
SNGZ	Shannon Statio	1.81	50	P	Pn	03 00 03.8	-0.5
HLRZ	Highlands Stat	1.82	20	P	Pn	03 00 04.6	+0.2
UTU	Utuhina	1.85	15	P	Pn	03 00 04.8	-0.1
TARZ	Mount Tarawera	1.88	23	P	Pn	03 00 05.2	-0.1
KNZ	Kokohu	1.88	61	P	Pn	03 00 04.0	-1.2
TUWZ	Tuamarina	1.91	220	P	Pn	03 00 05.5	-0.2
NGRZ	Ngongotaha	1.92	15	P	Pn	03 00 05.8	-0.1
MKRZ	Makatiti	1.96	21	P	Pn	03 00 06.5	+0.2
OMRZ	Omania	1.96	19	P	Pn	03 00 06.2	-0.2
MHGZ	Mahia Peninsul	1.98	67	P	Pn	03 00 05.9	-0.7
RAGZ	Rawiri	2.05	45	P	Pn	03 00 06.9	-0.8
EDRZ	Edgecumbe	2.07	26	P	Pn	03 00 07.4	-0.5
PRGZ	Paritu Road	2.07	61	P	Pn	03 00 06.8	-1.1
NNZ	Nelson	2.08	232	P	Pn	03 00 07.9	0.0
URZ	Urewera	2.08	36	P	Pn	03 00 06.8	-1.2
	123nm,0.3s,baz=251,slow=4.0,SNR=358						
URZ				S	Sn	03 00 30.2	-2.6
	103nm,0.3s,baz=112,slow=19,SNR=21						
URZ				LR	LR	03 01 06.1	
	comp=Z,348nm,20.4s,baz=212,slow=48						
URZ	Urewera	2.08	36	P	Pn	03 00 06.9	-1.1
RIGZ	Rimuhau	2.12	54	P	Pn	03 00 07.8	-0.7
KMRZ	Kaimai	2.14	8	P	Pn	03 00 10.2	+1.4
BSWZ	Blackbirch Sta	2.17	216	P	Pn	03 00 08.7	-0.4
MWZ	Matawai	2.23	44	P	Pn	03 00 08.9	-1.1
TOZ	Tahuroa Road	2.23	359	P	Pn	03 00 10.1	+0.1
OPRZ	Ohinepanea	2.25	20	P	Pn	03 00 10.0	-0.3
TGRZ	Tauranga	2.30	14	P	Pn	03 00 10.8	-0.1
TKGZ	Te Karaka	2.34	50	P	Pn	03 00 10.7	-0.7
WHRZ	Whale Island	2.38	28	P	Pn	03 00 13.6	+1.6
QRZ	Quartz Range	2.48	249	P	Pn	03 00 12.8	-0.6
CNGZ	Carnagh Statio	2.53	55	P	Pn	03 00 13.2	-0.9
CNGZ				P	Pn	03 00 13.0	-1.0
RUGZ	Raukumara Rang	2.59	40	P	Pn	03 00 13.5	-1.5
TWGZ	Tauwhareparae	2.59	47	P	Pn	03 00 14.3	-0.6
THZ	Tophouse	2.70	228	P	Pn	03 00 15.9	-0.6
MYRZ	Mayor Island	2.73	11	P	Pn	03 00 18.2	+1.3
MYRZ				P	Pn	03 00 18.2	+1.3
HAZ	Te Kaha	2.80	39	P	Pn	03 00 15.9	-1.9
PUZ	Puketiti	2.82	49	P	Pn	03 00 16.3	-1.8
MKAZ	Moumakai	2.88	353	P	Pn	03 00 18.7	-0.1
KHZ	Kahutara	2.89	211	P	Pn	03 00 17.7	-1.2
KBAZ	Karaka Road Bo	2.92	349	P	Pn	03 00 20.1	+0.8
AWAZ	Awhitu Peninsu	2.99	346	P	Pn	03 00 21.2	+0.9
ETAZ	East Tamaki Re	3.05	350	P	Pn	03 00 21.9	+0.7
WMGZ	Waiomatatini S	3.09	47	P	Pn	03 00 20.0	-1.7
WTAZ	Waiatarua	3.13	345	P	Pn	03 00 23.2	+0.9
WTAZ				P	Pn	03 00 23.2	+0.9
EPAZ	Eden Park BICE	3.15	348	P	Pn	03 00 23.3	+0.7
HBAZ	Herne Bay Bore	3.18	348	P	Pn	03 00 23.6	+0.7
WIAZ	Waiheke Island	3.19	354	P	Pn	03 00 23.2	+0.1
MXZ	Matakaoa Point	3.22	43	P	Pn	03 00 22.3	-1.1
KUZ	Kuaotunu	3.22	2	P	Pn	03 00 23.7	+0.2
MBAZ	Motutapu North	3.24	350	P	Pn	03 00 24.9	+1.2
DSZ	Denniston Nort	3.36	237	P	Pn	03 00 24.6	-0.9
ABAZ	Army Bay	3.41	350	P	Pn	03 00 27.0	+0.9
GRZ	Great Barrier	3.71	359	P	Pn	03 00 29.6	-0.6
AMCZ	Amberley	3.88	213	P	Pn	03 00 30.4	-2.1
WCZ	Waipu Caves	4.14	346	P	Pn	03 00 36.3	+0.3
INZ	Inchbonnie	4.15	227	P	Pn	03 00 34.4	-1.8
OKCZ	Okains Bay	4.20	206	P	Pn	03 00 34.4	-2.4
AKCZ	Akaroa Harbour	4.38	206	P	Pn	03 00 36.7	-2.6
WVZ	Waitaha Valley	4.78	228	P	Pn	03 00 44.2	-0.5
OUZ	Omahuta	4.99	341	P	Pn	03 00 48.5	+0.8
OUZ				P	Pn	03 00 48.5	+0.8
RPZ	Rata Peaks	5.04	221	P	Pn	03 00 46.7	-1.7
	1.4nm,0.3s,baz=199,slow=4.3,SNR=8.6						
RPZ				S	Sn	03 01 39.6	-5.7
	12nm,0.3s,baz=132,slow=23,SNR=20						
RPZ				LR	LR	03 03 02.5	
	comp=Z,318nm,19.3s,baz=18,slow=40						
RPZ	Rata Peaks	5.04	221	P	Pn	03 00 46.7	-1.7
FOZ	Fox Glacier	5.59	229	P	Pn	03 00 53.6	-2.2
LBZ	Lake Benmore	5.96	220	P	Pn	03 00 59.3	-1.6
CTZ	Chatham Island	6.94	125	P	Pn	03 01 13.5	-0.8
DZM	Mont Dzumac	19.46	334	LR	LR	03 11 11.4	
	comp=Z,115nm,18.2s,baz=342,slow=36						
VNDA	Vanda	38.10	185	LR	LR	03 20 39.1	
	comp=Z,83nm,19.2s,baz=244,slow=33						
ASAR	Alice Springs	38.58	282	P	P	03 06 52.4	0.0
	0.5nm,0.5s,baz=130,slow=7.6,SNR=9.8						
ASAR				pP	pP	03 07 06.7	-1.2
	2.8nm,0.8s,baz=130,slow=8.3,SNR=13						
WRA	Warramunga Arr	40.48	287	P	P	03 07 08.3	+0.1
	0.9nm,0.4s,baz=125,slow=8.1,SNR=17						
WRA				pP	pP	03 07 23.4	-0.3
	2.0nm,0.7s,baz=126,slow=8.0,SNR=7.2						
FITZ	Fitzroy Crossi	48.08	282	P	P	03 08 09.2	+0.4
	1.5nm,0.8s,baz=124,slow=6.9,SNR=6.7						
FITZ				pP	pP	03 08 24.6	-0.2
	4.9nm,1.0s,baz=134,slow=4.5,SNR=4.7						
QSPA	South Pole Qui	50.16	180	P	P	03 08 27.5	+3.1
	2.1nm,0.7s,baz=308,slow=0.8,SNR=8.3						
PMSA	Palmer Station	65.70	156	P	P	03 10 16.1	+3.3
	25nm,0.7s,baz=304,slow=13,SNR=4.1						
MKAR	Makanchi Array	119.68	308	PKP	PKPdf	03 18 15.8	-2.0
	0.3nm,0.8s,baz=129,slow=2.0,SNR=3.7						
ARCES	ARCESS Array B	146.43	341	PKPbc	PKPdf	03 19 07.2	+0.4
	2.2nm,0.8s,baz=63,slow=4.2,SNR=12						
DBIC	Dimbokro	146.85	179	PKPbc	PKPbc	03 19 10.9	-0.1
	1.2nm,0.4s,baz=205,slow=3.9,SNR=4.1						
BRTR	Keskin Array B	150.91	282	PKPbc	PKPbc	03 19 19.4	-1.6
	0.6nm,0.6s,baz=148,slow=5.2,SNR=3.7						
FINES	FINESS Array B	151.56	329	PKPbc	PKPbc	03 19 20.3	-1.2
	1.9nm,1.0s,baz=42,slow=2.3,SNR=2.8						
TORD	Torodi Ar. Bea	152.75	193	PKPbc	PKPbc	03 19 24.4	-1.2
	0.5nm,0.4s,baz=167,slow=2.6,SNR=20						
TORD				PKPab	pPKPdf	03 19 37.1	+0.6
	1.2nm,0.8s,baz=162,slow=4.9,SNR=6.7						

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*ISCJB **02** 03:09:00.7±0.8, 15°.67S±0°.09×75°.11W±0°.09, h26^{km}, mb3.9/8, Error ellipse: s-maj=16.4km s-min=6.1km az=44.8*

*IDC **02** 03:09:09.0±2.3, 15°.25S×74°.91W, h63^{km}±16^{km}, mb3.6/8, mb1 3.9/11, mb1mx3.7/35, mbtmp4.0/11, Error ellipse: s-maj=33.8km s-min=11.0km az=38.0*

ISC 02 03:09:03.2±1.0**, 15°.6S**±0°.1×**75°.1W**±0°.1**, h26^{km}, n30, σ1^{s}80**/30**, mb4.0**/7**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	3.99	334	P	Pn	03 10 04.9	+2.1
	9.8nm,0.3s,baz=112,slow=13,SNR=20						
NNA				S	Sn	03 10 47.4	-1.4
	75nm,0.3s,baz=215,slow=20,SNR=14						
LPAZ	La Paz	6.70	97	P	Pn	03 10 46.1	+5.5
	3.1nm,0.3s,baz=323,slow=6.3,SNR=62						
LPAZ				S	Sn	03 11 58.9	+2.4
	baz=270,slow=19,SNR=1.2						
ATAH	Atahualpa	9.03	338	P	Pn	03 11 16.6	+4.3
	0.3nm,0.3s,baz=204,slow=10.0,SNR=4.2						
ATAH				S	Sn	03 12 49.1	-4.4
	baz=344,slow=15,SNR=1.5						
LVC	Limon Verde	9.07	141	P	Pn	03 11 19.4	+6.4
	4.5nm,0.3s,baz=4.2,slow=7.1,SNR=55						
LVC				S	Sn	03 12 54.4	-0.1
	1.5nm,0.3s,baz=146,slow=11,SNR=7.9						
SIV	San Ignacio	13.47	94	P	Pn	03 12 12.2	-0.7
	0.3nm,0.3s,baz=304,slow=11,SNR=7.9						
CRUC	La Cruz	17.16	354	*e*P	P	03 13 05.3	+2.0
CRUC	La Cruz	17.16	354	*e*P	P	03 13 05.3	+2.0
SOTA	Rioblanco	17.69	355	*e*P	P	03 13 11.7	+2.5
SOTA	Rioblanco	17.69	355	*e*P	P	03 13 11.7	+2.5
CHIC	Chingaza	20.15	4	*e*P	Pn	03 13 41.1	+3.1
CHIC	Chingaza	20.15	4	*e*P	Pn	03 13 41.1	+3.1
PTGA	Pitinga	20.99	47	P	P	03 13 43.4	-1.4
	4.2nm,0.6s,baz=240,slow=14,SNR=11						
RUSC	La Rusia	21.45	5	*e*P	P	03 13 51.4	+1.2
RUSC	La Rusia	21.45	5	*e*P	P	03 13 51.4	+1.2
PTBC	PUERTO BERRIO,	22.01	2	*e*P	P	03 13 54.8	-1.0
PTBC	PUERTO BERRIO,	22.01	2	*e*P	P	03 13 54.8	-1.0
BARC	Barichara	22.13	5	*e*P	P	03 13 56.1	-1.2
BARC	Barichara	22.13	5	*e*P	P	03 13 56.1	-1.2
ZARC	Zaragoza, Cauc	22.95	1	*e*P	P	03 14 04.3	-1.4
ZARC	Zaragoza, Cauc	22.95	1	*e*P	P	03 14 04.3	-1.4
SDV	Santo Domingo	24.73	11	*e*P	P	03 14 23.2	+0.3
SDV	Santo Domingo	24.73	11	*e*P	P	03 14 23.2	+0.3
SDV	Santo Domingo	24.73	11	P	P	03 14 22.6	-0.3
	4.8nm,0.4s,baz=206,slow=9.6,SNR=9.3						
TXAR	Lajitas Array	52.52	328	P	P	03 18 14.9	+0.4
	0.4nm,0.5s,baz=155,slow=9.1,SNR=8.8						
PDAR	Pinedale Array	66.17	333	P	P	03 19 49.3	+0.5
	0.2nm,0.5s,baz=123,slow=6.7,SNR=2.8						
NVAR	Mina Array Bea	67.30	324	P	P	03 19 56.3	+0.2
	0.2nm,0.5s,baz=140,slow=3.4,SNR=3.2						
ULM	Lac du Bonnet	68.08	346	P	P	03 19 59.0	-1.4
	0.9nm,0.4s,baz=180,slow=8.3,SNR=3.3						
TORD	Torodi Ar. Bea	81.11	74	P	P	03 21 16.0	-0.9
	1.5nm,0.7s,baz=263,slow=5.1,SNR=9.5						
YKA	Yellowknife Ar	83.78	343	P	P	03 21 29.3	-0.5
	0.7nm,0.7s,baz=139,slow=5.4,SNR=14						
SONM	Songino Array	147.84	358	PKPbc	PKPbc	03 28 46.1	0.0
	0.7nm,0.7s,baz=326,slow=1.5,SNR=4.7						

IDC 02 03:17:33.9±1.6**, 11°.00S**×**165°.35E, h0^{km}, mb4.0**/5**, mb1 4.3**/6**, mb1mx3.8**/39**, mbtmp4.2**/6**, ML4.5**/1**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx3.1**/45**, Error ellipse: s-maj=49.0km s-min=27.1km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.06	175	Pn	Pn	03 20 13.0	-0.5
	3.4nm,0.3s,baz=0.3,slow=12,SNR=38						
DZM				Sn	Sn	03 22 08.5	-10
	baz=134,slow=14,SNR=2.5						
CTA	Charters Tower	20.48	241	P	Pn	03 22 14.9	-0.6
	6.4nm,0.9s,baz=70,slow=12,SNR=7.6						
RAO	Raoul Island	23.96	142	LR	LR	03 29 51.1	
	comp=Z,977nm,20.2s,baz=159,slow=31						
STKA	Stephens Creek	30.21	223	P	P	03 23 46.1	-0.1
	1.7nm,0.5s,baz=52,slow=9.6,SNR=5.2						
WRA	Warramunga Arr	31.13	250	P	P	03 23 54.2	-0.3
	4.3nm,0.9s,baz=80,slow=9.1,SNR=18						
ASAR	Alice Springs	32.46	243	P	P	03 24 05.8	-0.4
	1.0nm,0.5s,baz=64,slow=10,SNR=27						
ILAR	Eielson Array	83.59	19	P	P	03 30 03.9	+0.2
	0.3nm,0.6s,baz=240,slow=5.5,SNR=2.7						

IDC 02 03:21:27.9±1.7**, 11°.18S**×**165°.17E, h0^{km}, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.7**/38**, mbtmp3.8**/4**, ML3.8**/1**, Error ellipse: s-maj=51.3km s-min=30.6km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.90	174	Pn	Pn	03 24 05.2	-0.1
	0.7nm,0.3s,baz=18,slow=20,SNR=5.0						
DZM				Sn	Sn	03 26 00.9	-7.1
	0.1nm,0.3s,baz=285,slow=16,SNR=2.0						
WRA	Warramunga Arr	30.91	250	P	P	03 27 46.6	0.0
	1.5nm,0.7s,baz=81,slow=8.9,SNR=8.7						
ASAR	Alice Springs	32.23	243	P	P	03 27 58.1	-0.1
	0.6nm,0.5s,baz=64,slow=10,SNR=11						
ILAR	Eielson Array	83.82	19	P	P	03 33 58.9	0.0
	0.3nm,0.8s,baz=232,slow=4.8,SNR=4.0						

IDC 02 03:25:16.4±1.7**, 11°.13S**×**165°.38E, h0^{km}, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.5**/33**, mbtmp3.7**/4**, ML4.0**/1**, Error ellipse: s-maj=52.6km s-min=31.3km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.93	175	Pn	Pn	03 27 54.5	+0.4
	1.1nm,0.3s,baz=172,slow=15,SNR=14						
WRA	Warramunga Arr	31.12	250	P	P	03 31 37.1	+0.1
	0.6nm,0.8s,baz=83,slow=8.5,SNR=6.3						
ASAR	Alice Springs	32.44	243	P	P	03 31 48.2	-0.3
	0.2nm,0.6s,baz=61,slow=10.0,SNR=4.0						
ILAR	Eielson Array	83.71	19	P	P	03 37 46.8	0.0
	0.7nm,1.1s,baz=238,slow=5.2,SNR=3.0						

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*IDC **02** 03:28:11.2±1.1, 11°.01S×165°.31E, h0^{km}, mb3.9/8, mb1 4.2/9, mb1mx3.9/37, mbtmp4.0/9, ML4.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.9/46, Error ellipse: s-maj=39.8km s-min=20.5km az=131.0*

*NEIC **02** 03:28:12.6±0.4, 11°.10S×165°.30E, h10^{km}, mb4.0/2, Error ellipse: s-maj=11.5km s-min=7.1km az=130.0*

*ISCJB **02** 03:28:13.9±0.6, 11°.23S±0°.06×165°.3E±0°.1, h30^{km}, mb4.0/10, Error ellipse: s-maj=14.4km s-min=9.2km az=179.4*

ISC 02 03:28:15.6±0.8**, 11°.14S**±0°.08×**165°.3E**±0°.2**, h30^{km}, n27, σ0^{s}46**/21**, mb4.0**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.52	287	LR	LR	03 31 47.7	
	comp=Z,492nm,21.1s,baz=148,slow=39						
DZM	Mont Dzumac	10.93	174	*e*Pn	Pn	03 30 49.8	-0.3
DZM				Sn	Sn	03 32 51.2	-0.3
DZM	Mont Dzumac	10.93	174	Pn	Pn	03 30 51.3	+1.1
	1.1nm,0.3s,baz=15,slow=12,SNR=18						
DZM				Sn	Sn	03 32 51.2	-0.3
	0.1nm,0.3s,baz=180,slow=20,SNR=2.2						
CTA	Charters Tower	20.36	242	P	Pn	03 32 52.4	+0.3
	7.1nm,1.0s,baz=80,slow=12,SNR=5.0						
CTAO	Charters Tower	20.36	242	*e*P	P	03 32 49.2	-0.7
H11S2	WAKE ISLAND Hy	29.47	3	T	T	04 04 53.6	
	baz=183,slow=76,SNR=5.8						
H11S3	WAKE ISLAND Hy	29.47	3	T	T	04 04 47.9	
	baz=183,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	29.49	3	T	T	04 04 49.9	
	baz=183,slow=76,SNR=6.7						
STKA	Stephens Creek	30.07	223	P	P	03 34 22.8	+0.4
	1.7nm,0.8s,baz=298,slow=6.4,SNR=3.7						
H11N1	WAKE ISLAND Hy	30.70	3	T	T	04 06 22.8	
	baz=182,slow=76,SNR=4.5						
H11N3	WAKE ISLAND Hy	30.70	3	T	T	04 06 20.7	
	baz=182,slow=76,SNR=4.5						
H11N2	WAKE ISLAND Hy	30.71	3	T	T	04 06 24.0	
	baz=182,slow=76,SNR=4.0						
WRAB	Tennant Creek	31.02	250	*e*P	P	03 34 31.2	+0.2
	2.9nm,0.8s						
WB2	Warramunga Arr	31.02	250	*e*P	P	03 34 31.0	0.0
WR1	Warramunga Arr	31.03	250	*e*P	P	03 34 31.4	+0.3
	51nm,1.9s						
WRA	Warramunga Arr	31.03	250	P	P	03 34 31.4	+0.3
	1.8nm,0.7s,baz=80,slow=8.9,SNR=19						
AS01	Alice Springs	32.31	243	*e*P	P	03 34 41.8	-0.5
AS31	Alice Springs	32.35	243	*e*P	P	03 34 42.8	+0.1
	1.0nm,0.8s						
ASAR	Alice Springs	32.35	243	P	P	03 34 42.8	+0.1
	3.1nm,0.8s,baz=75,slow=9.4,SNR=18						
SONA0	Songino Array	78.47	324	*e*P	P	03 40 13.6	-0.4
SONM	Songino Array	78.47	324	P	P	03 40 13.6	-0.4
	0.4nm,0.8s,baz=98,slow=4.4,SNR=2.8						
ILAR	Eielson Array	83.74	19	P	P	03 40 41.7	+0.3
	0.6nm,0.8s,baz=237,slow=5.0,SNR=8.7						
ILB	Eielson Array	83.74	19	*e*P	P	03 40 41.7	+0.3
NV01	Mina Array Sit	86.42	50	*e*P	P	03 40 55.3	-0.4
NVAR	Mina Array Bea	86.42	50	P	P	03 40 55.3	-0.5
	1.0nm,1.0s,baz=258,slow=3.4,SNR=4.1						
MK32	Makanchi Array	93.28	317	*e*P	P	03 41 28.0	+0.4
MKAR	Makanchi Array	93.28	317	P	P	03 41 28.0	+0.4
	0.4nm,0.7s,baz=109,slow=6.5,SNR=5.7						

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*ISCJB **02** 03:30:39.7±1.4, 11°.1S±0°.2×165°.5E±0°.2, h10^{km}, mb3.9/5, Error ellipse: s-maj=26.6km s-min=22.2km az=176.7*

*IDC **02** 03:30:40.0±1.6, 10°.94S×165°.47E, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx3.7/45, mbtmp4.0/7, ML4.3/1, Error ellipse: s-maj=47.2km s-min=27.1km az=131.0*

ISC 02 03:30:41.6±1.5**, 11°.2S**±0°.1×**165°.6E**±0°.2**, h10^{km}, n7, σ2^{s}50**/7**, mb4.0**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.87	176	Pn	Pn	03 33 20.2	+2.8
	2.1nm,0.3s,baz=312,slow=4.7,SNR=21						
DZM				Sn	Sn	03 35 15.5	-3.6
	0.2nm,0.3s,baz=330,slow=20,SNR=2.0						
CTA	Charters Tower	20.59	242	P	Pn	03 35 22.4	-0.8
	1.0nm,0.3s,baz=68,slow=11,SNR=4.1						
STKA	Stephens Creek	30.23	223	P	P	03 36 54.0	+1.3
	1.9nm,0.7s,baz=46,slow=7.8,SNR=4.2						
WRA	Warramunga Arr	31.28	250	P	P	03 37 01.3	-0.7
	2.7nm,0.9s,baz=83,slow=8.8,SNR=11						
ASAR	Alice Springs	32.58	243	P	P	03 37 12.8	-0.7
	0.8nm,0.5s,baz=64,slow=10,SNR=14						
FITZ	Fitzroy Crossi	39.18	255	P	P	03 38 09.5	-0.6
	2.0nm,0.7s,baz=113,slow=7.7,SNR=6.0						
ILAR	Eielson Array	83.69	19	P	P	03 43 09.4	-0.9
	0.4nm,1.0s,baz=238,slow=5.2,SNR=3.2						

IDC 02 03:34:26.5±1.8**, 10°.87S**×**165°.27E, h0^{km}, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.6**/56**, mbtmp3.6**/4**, ML3.4**/1**, Error ellipse: s-maj=53.7km s-min=32.2km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.20	174	Pn	Pn	03 37 08.2	+0.2
	0.2nm,0.3s,baz=315,slow=20,SNR=2.4						
WRA	Warramunga Arr	31.11	249	P	P	03 40 47.1	+0.1
	0.3nm,0.7s,baz=90,slow=11,SNR=3.1						
ASAR	Alice Springs	32.45	243	P	P	03 40 58.7	-0.2
	0.7nm,0.5s,baz=68,slow=9.8,SNR=9.7						
ILAR	Eielson Array	83.50	19	P	P	03 46 55.9	0.0
	0.6nm,1.1s,baz=237,slow=4.0,SNR=5.2						

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*NIED **02** 03:39:00, 23°.70N×122°.00E, h35^{km}, Mw4.9 Best double couple: M$_0$2.56000×10^{16} NP1:φ$_s$142.00000°, δ43.00000°, λ18.00000°. NP2:φ$_s$38.00000°, δ78.00000°, λ132.00000°.*

*IDC **02** 03:39:47.2±0.4, 23°.85N×122°.04E, h0^{km}, mb5.0/40, mb1 5.0/43, mb1mx4.9/62, mbtmp5.0/43, ML3.7/2, MS4.3/22, Ms1 4.3/22, ms1mx3.9/67, Error ellipse: s-maj=11.5km s-min=9.7km az=80.0*

*MOS **02** 03:39:49.8±1.0, 23°.87N×122°.06E, h29^{km}, mb5.3/74, MS4.2/4, Error ellipse: s-maj=7.7km s-min=4.1km az=118.8*

*BJI **02** 03:39:50.0, 23°.81N×122°.00E, h20^{km}, mB5.1/47, mb5.0/72, ML5.1/10, Ms4.6/73, Ms7 4.4/69*

*JMA **02** 03:39:50.9±0.1, 23°.72N×122°.01E, h20^{km}, M5.0*

JMA Felt I J1.

*ASIES **02** 03:39:51.3, 23°.74N×121°.99E, h28^{km}, MW4.7*

*GCMT **02** 03:39:51.5±0.5, 23°.71N±0°.03×121°.95E±0°.02, h29^{km}±2^{km}, MW4.9/63, Moment Tensor Solution. s12,c15; s63,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.13±.25; M$_{\theta\theta}$1.64±.14; M$_{\phi\phi}$-2.77±.17; M$_{r\theta}$1.68±.28; M$_{\theta\phi}$0.08±.10; M$_{\phi r}$1.02±.25; Best double couple: M$_0$3.11100×10^{16} NP1:φ$_s$37.00000°, δ74.00000°, λ137.00000°. NP2: φ$_s$142.00000°, δ49.00000°, λ22.00000°. Principal axes: T 3.1750, Plg42.0000°, Azm350.0000°; N -0.1290, Plg44.0000°, Azm200.0000°; P -3.0460, Plg15.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **02** 03:39:51.8±0.1, 23°.72N±0°.01×122°.05E±0°.01, h45^{km}±1^{km}, mb5.1/216, MS4.4/28 Error ellipse: s-maj=1.9km s-min=1.5km az=43.2*

*NEIC **02** 03:39:52.5±0.3, 23°.79N×121°.98E, h36^{km}±3^{km}, mb5.2/131, ML5.5(TAP), Error ellipse: s-maj=2.7km s-min=2.5km az=139.0*

NEIC Felt at Shulin, Taichung, Taipei, Yuanlin and Yungho. Recorded [4 TAP] in Hualien; [3 TAP] in Nantou, Taitung and Yilan; [2 TAP] in Changhua, Miaoli, Taoyuan and Yunlin; [1 TAP] in Chiayi and Pingtung. Recorded [1 JMA] on Yonaguni-jima, Ryukyu Islands.

*TAP **02** 03:39:52.4, 23°.75N×121°.98E, h35^{km}, ML5.6, B*

ISC 02 03:39:51.5±0.5**, 23°.75N**±0°.02×**122°.02E**±0°.02**, h29^{km}**±3^{km}**, n712, σ1^{s}40**/875**, mb5.1**/228**, MS4.3**/28**, 72C-96D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENLB	Shoufeng	0.41	292	⇓*i*P	Pn	03 40 01.0	-0.5
	baz=298						
ENLB				S	Sn	03 40 07.7	-0.4
	baz=298						

HWA	**Hwalien** baz=301	0.44	301	⇓*i*P	Pn	03 40 01.5	-0.4
HWA	baz=301			*e*S	Sn	03 40 08.6	-0.2
TWD	**Chiawan** baz=314	0.51	310	⇓*i*P	Pn	03 40 02.1	-0.6
TWD	baz=314			*i* S	Sn	03 40 09.2	-1.3
ESL	**Shilin** baz=272	0.54	277	⇓*i*P	Pb	03 40 02.3	-0.3
ESL	baz=272			S	Sb	03 40 09.5	-0.6
EGFH	**Guangfu** baz=256	0.55	261	⇓P	Pb	03 40 02.6	-0.1
EGFH	baz=256			*e*S	Sn	03 40 10.8	-0.8
NACB	**Ninganchiao**	0.57	317	*e*Pn	Pn	03 40 03.3	-0.4
NACB				*e*Sn	Sn	03 40 10.4	-1.7
NACB	**Ninganchiao** baz=318	0.57	317	⇓P	Pn	03 40 03.1	-0.6
NACB	baz=318			S	Sn	03 40 11.0	-1.2
HGSD	**Ruisui** baz=243	0.60	245	⇓P	Pb	03 40 03.2	-0.4
HGSD	baz=243			S	Sb	03 40 11.4	-0.4
EHY	**Hungye** baz=263	0.68	249	⇓*i*P	Pb	03 40 04.8	-0.2
EHY	baz=263			S	Sb	03 40 14.1	-0.1
ENA	**Nanau** baz=335	0.72	339	⇑*i*P	Pn	03 40 05.7	0.0
ENA	baz=335			S	Sn	03 40 15.5	-0.3
YULB	**Yu-li**	0.75	242	*e*Pn	Pb	03 40 05.8	-0.3
YULB				*e*Sn	Sb	03 40 15.3	-0.7
YULB	**Yu-li** baz=255	0.75	242	⇓P	Pb	03 40 05.8	-0.3
YULB	baz=255			*i* S	Sb	03 40 15.5	-0.5
TWF1	**Yuli** baz=252	0.77	239	⇓*i*P	Pb	03 40 05.9	-0.5
TWF1	baz=252			S	Sb	03 40 16.5	-0.1
WHF	**Hehuan Shan** baz=301	0.79	300	⇓*i*P	Pn	03 40 06.6	-0.5
WHF	baz=301			S	Sn	03 40 17.1	-1.1
EOS1	**EOS1** baz=18	0.80	7	⇑P	Pn	03 40 07.6	+0.8
EOS1	baz=18			S	Sn	03 40 18.7	+0.9
VWDT	**VWDT** baz=271	0.80	270	⇓P	Pn	03 40 06.9	0.0
VWDT	baz=271			S	Sn	03 40 17.2	-0.6
CHGB	**Renai** baz=299	0.83	292	⇓P	Pn	03 40 07.3	-0.2
CHGB	baz=299			S	Sn	03 40 18.5	-0.3
TWC	**Suao** baz=353	0.87	350	⇑*i*P	Pb	03 40 08.5	+0.4
TWC	baz=353			S	Sn	03 40 20.3	+0.8
CHKT	**Chengkung** baz=212	0.88	223	*e*P	Pn	03 40 06.8	-1.2
CHKT	baz=212			*e*S	Sb	03 40 17.0	-2.7
NNSB	**Datong** baz=321	0.89	319	⇑P	Pb	03 40 08.3	-0.2
NNSB	baz=321			S	Sn	03 40 19.5	-0.7
NNS	**Nan Shan** baz=313	0.90	319	⇑*i*P	Pb	03 40 08.5	-0.2
NNS	baz=313			S	Sn	03 40 20.6	+0.1
TWT	**Tachien** baz=304	0.92	303	⇓*i*P	Pb	03 40 09.2	+0.1
TWT	baz=304			S	Sn	03 40 20.4	-0.5
TDCB	**Techi** baz=304	0.93	303	⇓P	Pb	03 40 09.2	-0.1
TDCB	baz=304			S	Sb	03 40 20.2	-1.1
NDT	**Datong Townshi** baz=333	0.96	332	⇑*i*P	Pb	03 40 09.6	-0.1
NDT	baz=333			S	Sn	03 40 22.2	+0.3
SSLB	**Suanglung**	0.97	272	*e*Pn	Pb	03 40 09.2	-0.7
SSLB				*e*Sg	Sn	03 40 21.3	-0.9
SSLB	**Suanglung** baz=272	0.97	272	⇓P	Pb	03 40 09.2	-0.7
SSLB	baz=272			*e*S	Sn	03 40 20.7	-1.5
ENTT	**Nioudou** baz=337	0.98	335	⇑*i*P	Pb	03 40 09.7	-0.2
ENTT	baz=337			S	Sb	03 40 22.6	+0.1
TWE	**Neicheng** baz=344	1.02	342	⇑*i*P	Pb	03 40 10.6	0.0
TWE	baz=344			S	Sb	03 40 23.3	-0.3
SMLT	**Sun Moon Lake** baz=285	1.03	278	⇓*i*P	Pb	03 40 10.6	-0.3
SMLT	baz=285			S	Sb	03 40 23.7	-0.4
ILA	**Ilan** baz=349	1.04	346	⇑*i*P	Pb	03 40 11.2	+0.2
ILA	baz=349			*i* S	Sb	03 40 25.4	+1.2
WHYT	**Xinyi Township** baz=267	1.07	267	⇓P	Pb	03 40 11.0	-0.5
WHYT	baz=267			*e*S	Sb	03 40 24.9	-0.2
TYC	**Yuchr** baz=286	1.07	278	⇓*i*P	Pb	03 40 11.1	-0.4
TYC	baz=286			S	Sb	03 40 24.3	-0.9
ELDTW	**Lidau** baz=237	1.08	239	⇓*i*P	Pn	03 40 10.1	-0.6
ELDTW	baz=237			*e*S	Sn	03 40 23.0	-1.8
YHNB	**Yeheng**	1.09	327	*e*Pn	Pb	03 40 11.3	-0.5
YHNB				*e*Sn	Sb	03 40 24.7	-0.9
YHNB	**Yeheng** baz=329	1.09	327	⇑P	Pb	03 40 11.5	-0.2
YHNB	baz=329			*e*S	Sb	03 40 24.3	-1.3
EGS	baz=10.0	1.09	356	⇑*i*P	Pb	03 40 12.2	+0.4
EGS	baz=10.0			S	Sb	03 40 26.3	+0.6
JYNG	**Yonagunijimaku**	1.10	50	P	Pb	03 40 11.8	-0.1
JYNG				*e*S	Sb	03 40 26.1	+0.2
NTC	**Toucheng** baz=353	1.11	351	⇑P	Pb	03 40 12.2	0.0
NTC	baz=353			S	Sb	03 40 27.6	+1.3
WHP	**Taichung City** baz=307	1.11	298	⇓*i*P	Pb	03 40 12.0	-0.2
WHP	baz=307			*e*S	Sb	03 40 25.6	-0.7
NWLT	**Wulai** baz=326	1.12	335	⇑*e*P	Pb	03 40 12.1	-0.3
NWLT	baz=326			*e*S	Sb	03 40 26.4	-0.3
ALS	**Alishan** baz=268	1.14	258	⇓*i*P	Pb	03 40 12.5	-0.3
ALS	baz=268			S	Sb	03 40 26.9	-0.4
YOJ	**Yonaguni jima**	1.15	52	*e*Pn	Pb	03 40 12.4	-0.4
YOJ				*e*Sn	Sb	03 40 27.4	0.0
YOJ	**Yonaguni jima** baz=52	1.15	52	⇓P	Pb	03 40 12.7	-0.2
YOJ	baz=52			*e*S	Sb	03 40 27.3	-0.1
YOJ	**Yonaguni jima**	1.15	52	*e*P	Pb	03 40 12.4	-0.4
YOJ				*e*		03 40 27.4	
YOJ	**Yonaguni jima**	1.15	52	⇓P	Pb	03 40 12.6	-0.2
YOJ				S	Sb	03 40 27.5	+0.1
WJS	**Zhushan** baz=274	1.18	274	⇓*i*P	Pb	03 40 13.5	+0.1
WJS	baz=274			S	Sb	03 40 29.1	+0.8
TIPB	**Shuangxi** baz=6.0	1.23	352	⇑*i*P	Pb	03 40 14.2	+0.1
TIPB	baz=6.0			S	Sb	03 40 28.9	-0.8
WNT	**Mingjian** baz=276	1.23	276	⇓*i*P	Pb	03 40 14.5	+0.3
WNT	baz=276			S	Sb	03 40 30.2	+0.6
CHN5	**Tsauling** baz=263	1.24	263	⇓*i*P	Pb	03 40 14.3	0.0
CHN5	baz=263			S	Sb	03 40 30.1	+0.2
TWB1	**Santiao Chiao** baz=1.0	1.25	359	⇑*i*P	Pb	03 40 14.2	-0.4
TWB1	baz=1.0			S	Sb	03 40 29.4	-0.9
TWGBT	**Beinan** baz=232	1.27	223	⇓P	Pn	03 40 12.4	-0.9
TWGBT	baz=232			*e*S	Sn	03 40 26.8	-2.5
TWG	**Pinlang**	1.27	223	*e*Pn	Pn	03 40 12.5	-0.9
TWG				*e*Sn	Sn	03 40 28.4	-1.0
TWG	**Pinlang** baz=222	1.27	223	⇓*i*P	Pn	03 40 12.4	-0.9
TTN	**Taitung** baz=209	1.27	219	*e*P	Pn	03 40 13.4	0.0
TTN	baz=209			*e*S	Sn	03 40 28.1	-1.4
LIOB	**Emei** baz=316	1.28	314	⇑*i*P	Pb	03 40 15.3	+0.4
LIOB	baz=316			S	Sb	03 40 30.7	-0.3
NSTT	**Nanjuang** baz=315	1.28	314	⇑*i*P	Pb	03 40 15.2	+0.3
NSTT	baz=315			S	Sb	03 40 30.6	-0.4
TWQ1	**Liyutan** baz=299	1.28	298	⇓*i*P	Pb	03 40 15.6	+0.5
TWQ1	baz=299			S	Sb	03 40 31.4	+0.2
TWA	**Mucha** baz=334	1.29	342	⇑*i*P	Pb	03 40 15.1	0.0
TWA	baz=334			S	Sb	03 40 31.6	+0.3
NHDH	**Xindian Distri** baz=330	1.29	340	⇑P	Pb	03 40 15.0	-0.2
NHDH	baz=330			S	Sb	03 40 31.2	-0.1
TCU	**Taichung** baz=289	1.29	288	⇓P	Pb	03 40 15.7	+0.6
TCU	baz=289			*e*S	Sb	03 40 32.4	+1.1
STYT	**Tauyuan** baz=234	1.30	243	⇓*i*P	Pn	03 40 14.3	+0.5
STYT	baz=234			S	Sn	03 40 29.9	-0.3
TATO	**Taipei**	1.31	338	*e*Pn	Pb	03 40 14.9	-0.6
TATO				*e*Sn	Sb	03 40 31.4	-0.6
TATO	**Taipei** baz=340	1.31	338	⇑P	Pb	03 40 15.3	-0.2
TATO	baz=340			S	Sb	03 40 31.0	-1.0
TATO	**Taipei** SNR=58	1.31	338	P	Pb	03 40 15.5	0.0
NSY	**Sanyi** baz=301	1.32	300	⇓*i*P	Pb	03 40 16.3	+0.5
NSY	baz=301			*e*S	Sb	03 40 33.3	+0.9
NWF	**Wu-fen Shan** baz=352	1.33	351	⇑*i*P	Pb	03 40 16.0	+0.1
NWF	baz=352			S	Sb	03 40 32.8	+0.1
WFSB	**Wu-fen Shan** baz=352	1.33	351	⇑P	Pb	03 40 16.1	+0.2
WFSB	baz=352			S	Sb	03 40 33.1	+0.6
WGK	**Gukeng** baz=267	1.34	267	⇓P	Pb	03 40 15.6	-0.3
WGK	baz=267			S	Sb	03 40 33.0	+0.3
TPUB	**Ta-pu**	1.35	251	*e*Pn	Pb	03 40 15.7	-0.5
TPUB				*e*Sn	Sn	03 40 31.9	+0.4
TPUB	**Ta-pu** baz=241	1.35	251	⇓P	Pb	03 40 15.8	-0.5
TPUB	baz=241			S	Sb	03 40 32.6	-0.6
WDLH	**Douliu** baz=267	1.36	268	*e*P	Pb	03 40 16.0	-0.3
WDLH	baz=267			*e*S	Sb	03 40 33.9	+0.6
NMLH	**Miaoli** baz=306	1.37	305	⇓P	Pb	03 40 16.8	+0.3
NMLH	baz=306			*e*S	Sb	03 40 34.3	+0.7
CHN4	**Tsaushan** baz=253	1.37	253	⇓*i*P	Pb	03 40 16.3	-0.2
CHN4	baz=253			*e*S	Sb	03 40 34.1	+0.5
WCHH	**Zhanghua** baz=284	1.38	284	⇓P	Pb	03 40 16.7	+0.1
WCHH	baz=284			*e*S	Sb	03 40 34.5	+0.7
WTP	**Ta-pu** baz=239	1.38	249	⇓*i*P	Pb	03 40 16.3	-0.5
WTP	baz=239			*e*S	Sb	03 40 33.5	-0.6
PTSB	**Yuanli** baz=301	1.39	300	⇓P	Pb	03 40 17.0	+0.2
PTSB	baz=301			*e*S	Sb	03 40 34.6	+0.5
WDJ	**Dajia District** baz=296	1.39	296	⇓*i*P	Pb	03 40 17.1	+0.2
WDJ	baz=296			*e*S	Sb	03 40 34.9	+0.6
SBCB	**Hsinchu** baz=319	1.40	318	⇑P	Pb	03 40 17.2	+0.1
SBCB	baz=319			S	Sb	03 40 35.7	+1.2
HSN	**Hsinchu** baz=321	1.42	318	⇑P	Pb	03 40 17.4	+0.1
HSN	baz=321			S	Sb	03 40 36.1	+1.1
NCUH	**Zhongli** baz=329	1.43	328	⇑P	Pb	03 40 17.3	-0.3
NCUH	baz=329			S	Sb	03 40 35.6	+0.2
NCU	**National Centr** baz=329	1.43	328	⇑*i*P	Pb	03 40 17.3	-0.3
NCU	baz=329			S	Sb	03 40 35.6	+0.2
CHN2	**Minshiung** baz=261	1.43	262	P	Pb	03 40 17.6	0.0
CHN2	baz=261			S	Sb	03 40 36.0	+0.6
YM01	**YM01** baz=329	1.45	344	⇑P	Pb	03 40 17.0	-0.9
TWS1	**Kuangyinshan** baz=339	1.45	338	⇑*i*P	Pb	03 40 17.3	-0.6
TWS1	baz=339			S	Sb	03 40 35.7	-0.3
YM04	**YM04** baz=329	1.46	343	⇑*i*P	Pb	03 40 16.9	-1.2
YM05	**YM05** baz=329	1.47	344	⇑P	Pb	03 40 17.2	-1.0
YM11	**YM11** baz=329	1.47	344	⇑P	Pb	03 40 17.3	-0.9
SLGT	**Liugui** baz=231	1.47	239	⇓*e*P	Pb	03 40 17.1	-1.1
SLGT	baz=231			*e*S	Sb	03 40 35.5	-1.0
SGST	**Jiashian** baz=232	1.48	243	⇓P	Pb	03 40 17.5	-0.8
SGST	baz=232			*e*S	Sb	03 40 36.7	0.0
CHN1	**Nanshi** baz=247	1.48	248	⇓*i*P	Pb	03 40 17.9	-0.5
CHN1	baz=247			*e*S	Sb	03 40 37.1	+0.2
YM08	**YM08** baz=330	1.48	345	⇑P	Pb	03 40 17.3	-1.2
CHY	**Chiayi** baz=260	1.48	261	⇓*e*P	Pb	03 40 18.0	-0.4
TWK	**Hsinying** baz=250	1.48	251	⇓*i*P	Pb	03 40 17.7	-0.9
TWK	baz=250			*e*S	Sb	03 40 37.2	+0.2
SNST	**Tainan City** baz=249	1.49	250	⇓P	Pb	03 40 18.2	-0.4
SNST	baz=249			*e*S	Sb	03 40 37.7	+0.5
NTST	**Danshui** baz=341	1.50	340	*e*P	Pb	03 40 17.6	-1.1
NTST	baz=341			*e*S	Sb	03 40 36.8	-0.5
ECL	**Taimali** baz=219	1.51	221	⇑*e*P	Pn	03 40 15.6	-1.0
RLNB	**Erlin** baz=276	1.52	276	⇓P	Pb	03 40 18.6	-0.5
RLNB	baz=276			*e*S	Sb	03 40 38.2	+0.1
TWY	**Chenhua** baz=332	1.56	346	⇑*e*P	Pb	03 40 18.9	-1.0
WTCT	**Ta-ch'eng** baz=274	1.59	274	P	Pb	03 40 19.7	-0.6
WTCT	baz=274			S	Sb	03 40 40.1	+0.1
WLGB	**Puzi** baz=260	1.60	261	⇓P	Pb	03 40 19.5	-0.9
WLGB	baz=260			*e*S	Sb	03 40 39.6	-0.6
SSD	**Sandimen** baz=224	1.62	232	*e*P	Pn	03 40 18.5	+0.4
WMLT	**Mailiao** baz=272	1.65	272	*e*P	Pb	03 40 20.7	-0.5
WMLT	baz=272			*e*S	Sb	03 40 41.9	+0.3
WSF	**Szhu** baz=266	1.65	266	*e*P	Pb	03 40 20.0	-1.3
WSF	baz=266			*e*S	Sb	03 40 40.8	-0.9
CHN3	**Shinhua** baz=246	1.66	246	⇓P	Pb	03 40 21.3	-0.1
CHN3	baz=246			S	Sb	03 40 43.5	+1.5
HATJ	**Hateruma jima**	1.66	79	⇓P	Pn	03 40 19.4	+0.7
HATJ				S	Sn	03 40 39.7	+0.6
IRIF	**Iriomote-Funau**	1.67	69	⇓P	Pn	03 40 19.7	+0.9
IRIF				S	Sn	03 40 40.4	+1.1
CHN8	**Yiju** baz=256	1.71	257	⇓*i*P	Pb	03 40 20.9	-1.4
CHN8	baz=256			S	Sb	03 40 42.6	-0.7
MASBT	**Mashibuluo** baz=225	1.71	229	⇓*e*P	Pn	03 40 19.5	+0.1
MASBT	baz=225			*e*S	Sn	03 40 41.8	+1.6
TAW	**Tawu** baz=216	1.73	217	*e*P	Pn	03 40 18.9	-0.8
TWM1	**Shoushan** baz=237	1.73	238	⇓*e*P	Pb	03 40 22.5	-0.3
TWM1	baz=237			*e*S	Sb	03 40 45.6	+1.5
EAST	**Anshuo** baz=218	1.74	219	*e*P	Pn	03 40 19.1	-0.7
SGLT	**Jiouru** baz=223	1.74	234	⇑*e*P	Pb	03 40 23.2	+0.5
SGLT	baz=223			*e*S	Sb	03 40 45.6	+1.4
LAY	**Lan-yu** baz=184	1.76	194	⇑*e*P	Pn	03 40 18.4	-1.7
SCLT	**Jiali** baz=251	1.77	251	⇓P	Pb	03 40 22.2	-1.2
SCLT	baz=251			*e*S	Sb	03 40 45.3	+0.1
TAI1	**Yung-k'ang** baz=260	1.79	247	*e*P	Pb	03 40 22.6	-1.0
TAI1	baz=260			*e*S	Sb	03 40 46.1	+0.4
SNJT	**Kaohsiung City** baz=237	1.84	238	*e*P	Pb	03 40 23.8	-0.7
PCYT	**Pengchaiyu** baz=3.0	1.87	1	P	Pn	03 40 22.4	+0.9
SCZT	**Fangliau** baz=219	1.88	223	*e*P	Pn	03 40 22.2	+0.5
SCZT	baz=219			*e*S	Sn	03 40 45.0	+0.5
JKRS	**Kuro-shima**	1.89	75	⇓P	Pn	03 40 22.7	+0.9
JKRS				S	Sn	03 40 46.1	+1.5
KAU	**Kaohsiung** baz=233	1.97	234	*e*P	Pb	03 40 26.0	-0.7
JIJ	**Ishigaki jima**	2.04	72	⇓P	Pn	03 40 24.2	+0.3
JIJ				S	Sn	03 40 48.1	-0.2
WLCH	**Liuqiu** baz=227	2.06	228	*e*P	Pb	03 40 27.5	-0.7
TWP	**Hsiaoliuchiu** baz=227	2.07	228	*e*P	Pb	03 40 27.4	-1.0
TWP	baz=227			*e*S	Sb	03 40 54.6	+0.9
HEN	**Hengchun** baz=207	2.10	214	*e*P	Pn	03 40 25.5	+0.7
TSEB	**Hengchuen, Pin** baz=210	2.11	209	*e*P	Pn	03 40 24.5	-0.4
TSEB	baz=210			*e*S	Sn	03 40 50.0	-0.1
TWKBT	**Hengchun** baz=211	2.12	212	⇑*e*P	Pn	03 40 24.9	-0.1
TWKBT	baz=211			*e*S	Sn	03 40 49.4	-0.9
TWK1	**Hengchun** baz=211	2.12	212	*e*P	Pn	03 40 25.1	+0.1
TWK1	baz=211			*e*S	Sn	03 40 49.3	-1.0
WDGT	**Dungji** baz=257	2.22	258	⇓*i*P	Pn	03 40 27.4	+1.0
WDGT	baz=257			S	Sn	03 40 52.8	0.0
JISG	**Ishigakijimahi**	2.25	68	P	Pn	03 40 27.3	+0.5
JISG				S	Sn	03 40 53.1	-0.6
PHUB	**P'eng-hu** baz=252	2.25	264	⇓P	Pn	03 40 28.0	+1.1
PHUB	baz=252			*e*S	Sn	03 40 52.8	-0.9
PNG	**Penghu** baz=253	2.27	266	⇓P	Pn	03 40 28.1	+1.1
PNG	baz=253			*e*S	Sn	03 40 54.2	+0.2
VCHM	**Qimei** baz=257	2.44	258	⇓P	Pn	03 40 30.1	+0.7
VCHM	baz=257			*e*S	Sn	03 40 56.7	-1.5
JTJ	**Tarama**	2.61	70	⇓P	Pn	03 40 32.2	+0.5
JTJ				S	Sn	03 41 02.6	+0.2
VWUC	**VWUC** baz=298	2.65	298	⇓*e*P	Pn	03 40 32.6	+0.4
VWUC	baz=298			*e*S	Sn	03 41 01.8	-1.6
PTTC	**Pingtan** baz=311	2.69	311	⇑*e*P	Pn	03 40 33.1	+0.4
PTMZ	**Houxiangcun** baz=296	2.94	296	⇓*e*P	Pn	03 40 36.6	+0.4
PTMZ	baz=296			*e*S	Sn	03 41 08.4	-2.2
MATB	**Ma-tsu** baz=333	3.04	322	⇑*e*P	Pn	03 40 37.7	0.0
JIRB	**Irabujima**	3.07	69	P	Pn	03 40 38.4	+0.3
JIRB				S	Sn	03 41 13.3	-0.6
JIKM	**Ikemajima**	3.17	68	P	Pn	03 40 39.9	+0.5
JIKM				S	Sn	03 41 16.3	0.0
JMJ	**Miyako jima 2** baz=81	3.17	70	⇓*e*P	Pn	03 40 40.1	+0.6
JMJ	baz=81			*e*S	Sn	03 41 16.1	-0.3
JMJ	**Miyako jima 2**	3.17	70	⇓P	Pn	03 40 40.0	+0.6
JMJ				*e*S	Sn	03 41 16.5	+0.2
JOGS	**Gusukube**	3.25	71	⇓P	Pn	03 40 41.5	+0.9
BBP	**Basco**	3.29	181	*e*P	Pn	03 40 40.5	-0.7
BBP				*e*S	Sn	03 41 15.3	-4.1
KNM	**Kinmen** baz=280	3.34	282	⇓P	Pn	03 40 44.1	+2.3
KNM	baz=280			*e*S	Sn	03 41 21.9	+1.4
QZH	**Quanzhou**	3.34	291	⇓*i*Pn	Pn	03 40 42.1	+0.3
QZH				Sn	Sn	03 41 18.0	-2.5
QZH	comp=N,6µm,0.3s			smax	smax		
QZH	comp=E,2µm,0.2s			smax	smax		
QZH	comp=Z,6µm,13.3s			LR	LR		
KNMB	**Chin-men Tao** baz=282	3.39	283	⇓P	Pn	03 40 43.0	+0.5
KNMB	baz=282			*e*S	Sn	03 41 19.6	-2.1
LYJJ	**Jianjiangzhen** baz=335	3.46	324	⇑*e*P	Pn	03 40 43.5	+0.1
XPSS	**Dashiqiu** baz=333	3.57	333	⇑*e*P	Pn	03 40 45.0	+0.1
MHZQ	**Yeshan** baz=299	3.58	311	*e*P	Pn	03 40 45.4	+0.3

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AXDP  Jialang          3.87 288⇓eP     Pn      03 40 49.8 +0.8
      baz=287
AXDP                            eS     Sn      03 41 31.3 -2.2
      baz=287
ZPLA  Ao Xicun         3.91 273⇓eP     Pn      03 40 50.3 +0.7
      baz=283
ZPLA                            eS     Sn      03 41 33.2 -1.4
      baz=283
ZZJH  Jiuhuzhen        4.07 281⇓eP     Pn      03 40 52.4 +0.5
      baz=279
ZZJH                            eS     Sn      03 41 36.0 -2.5
      baz=279
APYP  Conner           5.91 187 eP     Pn      03 41 18.9 +1.9
APYP                            eS     Sn      03 42 21.6 -2.2
CVP   Callao Caves     6.02 182 eP     Pn      03 41 19.2 +0.5
CVP                             eS     Sn      03 42 18.2 -8.4
JOW   Kunigami         6.44  60 ePn    Pn      03 41 23.3 -1.1
JOW                             eSn    Sn      03 42 35.9 -1.1
JOW   Kunigami         6.44  60  Pn    Pn      03 41 23.4 -1.1
      7.1nm,0.3s,baz=194,slow=16,SNR=94
JOW                              Sn    Sn      03 42 33.4 -3.6
      6.3nm,0.3s,baz=112,slow=13,SNR=4.2
PALP  Palanan          6.67 177 eP     Pn      03 41 28.7 +1.2
PALP                            eS     Sn      03 42 41.5 -1.0
CAUP  Cauayan          6.78 182 eP     Pn      03 41 30.5 +1.5
CAUP                            eS     Sn      03 42 45.8 +0.5
SSE   Sheshan          7.35 354  Pn    Pn      03 41 37.4 +0.5
SSE                              Sn    Sn      03 42 58.5 -0.9
SSE   Sheshan          7.35 354 ePn    Pn      03 41 36.5 -0.4
BOLP  Bolinao          7.59 195 eP     Pn      03 41 42.1 +1.8
BOLP                            eS     Sn      03 43 05.4  0.0
SMPP  San Manuel, Pa   7.67 190 eP     Pn      03 41 42.5 +1.2
SMPP                            eS     Sn      03 43 04.6 -2.6
MCO   Taipa Grande     7.96 260  P     Pn      03 41 47.0 +1.6
GZH   Guangzhou        7.99 267  P     Pn      03 41 42.2 -3.5
GZH                              S     Sn      03 43 01.9  -13
GZH                              smax  smax
      comp=N,990nm,0.8s
GZH                              smax  smax
      comp=E,700nm,0.9s
NJ2   Nanjing          8.73 342 eP     Pn      03 41 55.9 +0.1
NJ2                              S     Sn      03 43 32.8 -0.4
NJ2                              smax  smax
      comp=E,400nm,1.1s
NJ2                              smax  smax
      comp=E,300nm,1.2s
NJ2                              LR    LR
      comp=E,2μm,16.3s
NJ2                              LR    LR
      comp=E,2μm,13.6s
NJ2                              LR    LR
      comp=E,2μm,14.1s
WHN   Wuhan            9.61 316 ⇑P     Pn      03 42 07.6 -0.3
WHN                              S     Sn      03 43 49.3 -5.6
TGY   Tagaytay City    9.65 186  LR    LR      03 46 51.9
      comp=E,884nm,18.7s,baz=7.0,slow=44
JNU   Nakatsue        12.16  38 ePn    Pn      03 42 43.8 +1.0
JNU   Nakatsue        12.16  38  Pn    Pn      03 42 40.1 -2.7
      comp=E,0.2nm,0.3s,baz=238,slow=9.5,SNR=2.0
QIZ   Qiongzhong      12.27 250  P     Pn      03 42 45.1 +0.7
QIZ                              S     Sn      03 45 07.6 +7.3
QIZ                              pmax  pmax
      comp=E,17nm,1.2s
QIZ                              LR    LR
      comp=E,730nm,16.7s
QIZ                              LR    LR
      comp=E,910nm,17.2s
QIZ                              LR    LR
      comp=E,760nm,16.2s
QIZ   Qiongzhong      12.27 250 ePn    Pn      03 42 43.6 -0.8
QIZ                             eSn    Sn      03 44 59.9 -0.4
ENH   Enshi           12.91 303 ePn    Pn      03 42 51.8 -1.4
ENH                             eSn    Sn      03 45 09.3 -6.6
TIA   Tai'an          13.12 342  P     Pn      03 42 55.6 -0.3
TIA                              pmax  pmax
      comp=E,9.0nm,0.5s
TIA                              pmax  pmax
      comp=E,220nm,4.6s
TIA                              LR    LR
      comp=E,550nm,12.2s
TIA                              LR    LR
      comp=E,810nm,13.1s
GYA   Guiyang         14.17 284⇑iP     Pn      03 43 11.7 +1.3
GYA                              pP    P       03 43 17.0 -0.6
GYA                              PP    PnPn    03 43 23.0 +4.6
GYA                              S     Sn      03 45 40.2 -6.5
GYA                              sS    S       03 45 57.5  -10
GYA                              SS    SnSn    03 46 05.2 +6.0
GYA                              pmax  pmax
      comp=E,60nm,0.9s
GYA                              pmax  pmax
      comp=E,150nm,4.9s
GYA                              LR    LR
      comp=E,2μm,13.1s
GYA                              LR    LR
      comp=E,2μm,12.4s
GYA                              LR    LR
      comp=E,2μm,13.7s
KS15  Wonju Array Si  14.54  19 ePn    Pn      03 43 14.8 -0.5
KSAR  Wonju Array Be  14.54  19  Pn    P       03 43 18.0 -3.6
KSAR  Wonju Array Be  14.54  19  P     P       03 43 18.0 -3.6
KSRS  Korea Array     14.57  19  Pn    Pn      03 43 18.0 +2.4
      comp=E,1.8nm,0.3s,baz=199,slow=12,SNR=47
KSRS                             LR    LR      03 49 59.3
      comp=E,453nm,19.9s,baz=202,slow=42
KS01  Wonju Array Si  14.58  19 ePn    Pn      03 43 17.6 +1.7
DL2   Dalian          15.11 359  P     P       03 43 26.6 -1.2
DL2                              S     S       03 46 17.0 -8.9
DL2                              pmax  pmax
      comp=E,110nm,0.9s
DL2                              pmax  pmax
      comp=E,540nm,3.5s
DL2                              LR    LR
      comp=E,1μm,17.8s
DL2                              LR    LR
      comp=E,600nm,15.4s
DL2                              LR    LR
      comp=E,1μm,17.6s
XAN   Xi'an           15.37 315  P     Pn      03 43 27.1 +0.7
XAN                              pP    P       03 43 32.7 +1.9
XAN                              sP    pP      03 43 37.2 -0.4
XAN                              S     Sn      03 46 09.5 -6.2
XAN                              pmax  pmax
      comp=E,11nm,0.8s
XAN                              pmax  pmax
      comp=E,380nm,5.2s
XAN                              LR    LR
      comp=E,770nm,10.0s
XAN                              LR    LR
      comp=E,2μm,10.3s
XAN                              LR    LR
      comp=E,2μm,11.4s
XAN   Xi'an           15.37 315 ePn    Pn      03 43 25.6 -0.7
      comp=E,83nm,0.7s
XAN   Xi'an           15.37 315 eP     Pn      03 43 25.7 -0.7
XAN                              pmax  pmax
      comp=Z,83nm,0.7s
TIY   Taiyuan         16.16 332 eP     P       03 43 39.4 -0.2
TIY                              pP    sP      03 43 47.8 -2.1
TIY                              pmax  pmax
      comp=Z,44nm,0.8s
TIY                              pmax  pmax
      comp=Z,440nm,4.8s
TIY                              LR    LR
      comp=Z,840nm,7.0s
TIY                              LR    LR
      comp=Z,750nm,8.3s
TIY                              LR    LR
      comp=Z,920nm,15.6s
CTBH  Cotabato--PC H  16.57 172⇑iP     P       03 43 48.2 +4.0
DAV   Davao City (W)  16.94 168  LR    LR      03 50 06.7
      comp=Z,686nm,18.4s,baz=314,slow=36
BJT   Baijiatuau      16.95 344 ePn    Pn      03 43 45.6 -0.9
      comp=Z,58nm,0.9s
BJT   Baijiatuau      16.95 344 eP     Pn      03 43 45.7 -0.9
BJT                              pmax  pmax
      comp=Z,58nm,0.9s
BJI   Beijing         16.97 344  P     P       03 43 48.7 +0.2
BJI                              S     Sn      03 46 57.2 +2.7
BJI                              pmax  pmax
      comp=Z,27nm,1.0s
BJI                              LR    LR
      comp=Z,640nm,14.3s
BJI                              LR    LR
      comp=Z,760nm,21.8s
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KMI   Kunming         17.61 278  P     P       03 43 59.2 +3.3
KMI                              pP    sP      03 44 04.0 -2.0
KMI                              PP    pwP     03 44 12.4 +4.9
KMI                              S     Sn      03 47 11.6 +1.1
KMI                              pmax  pmax
      comp=Z,15nm,0.9s
KMI                              pmax  pmax
      comp=Z,180nm,5.1s
KMI                              LR    LR
      comp=Z,440nm,6.5s
KMI                              LR    LR
      comp=Z,510nm,9.3s
KMI                              LR    LR
      comp=Z,1μm,13.9s
CD2   Chengdu         17.71 298  P     P       03 43 58.2 +1.4
CD2                              pP    sP      03 44 05.1 -1.7
CD2                              sP    pwP     03 44 08.2 +0.3
CD2                              S     S       03 47 15.5 -3.8
CD2                              pmax  pmax
      comp=Z,80nm,0.7s
CD2                              pmax  pmax
      comp=Z,300nm,6.8s
CD2                              LR    LR
      comp=Z,2μm,8.9s
CD2                              LR    LR
      comp=Z,3μm,9.9s
CD2                              LR    LR
      comp=Z,3μm,11.5s
SNY   Shenyang        18.07   4 ⇓P     P       03 44 01.4 +0.8
SNY                              pmax  pmax
      comp=Z,70nm,0.6s
SNY                              LR    LR
      comp=Z,1μm,14.1s
SNY                              LR    LR
      comp=Z,1μm,13.9s
KKM   Kota Kinabalu   18.47 199 eP     Pn      03 44 07.3 +1.8
      comp=Z,66nm,1.2s
CBIJ  Chichi jima     18.52  75 eP     P       03 44 05.5 -0.2
JCJ   Chichijima      18.52  75  P     P       03 44 05.5 -0.2
      comp=Z,7.5nm,0.3s,baz=360,slow=24,SNR=4.6
MJAR  Matsushiro Arr  18.90  44  LR    LR      03 52 44.0
      comp=Z,291nm,18.2s,baz=195,slow=41
HHC   Hu-ho-hao-te    19.18 335 eP     Pn      03 44 15.6 +1.7
HHC                              sP    pwP     03 44 24.6 +0.9
HHC                              PP    PnPn    03 44 33.2 +6.2
HHC                              S     Sn      03 47 46.0 -2.0
HHC                              SS    SnSn    03 48 05.9 +3.5
HHC                              pmax  pmax
      comp=Z,72nm,1.0s
HHC                              pmax  pmax
      comp=Z,630nm,4.1s
HHC                              LR    LR
      comp=Z,1μm,11.5s
HHC                              LR    LR
      comp=Z,1μm,10.8s
HHC                              LR    LR
      comp=Z,2μm,11.0s
BTO   Baotou          19.60 332 eP     Pn      03 44 20.0 +1.0
LZH   Lanzhou         19.94 312 eP     Pn      03 44 24.3 +1.2
LZH                              pP    pP      03 44 27.1 -1.1
LZH                              sP    sP      03 44 29.2 -2.2
LZH                              PP    PnPn    03 44 39.5 +1.9
LZH                             eS     S       03 48 03.8 -0.5
LZH                              sS    sS      03 48 14.0 -1.4
LZH                              SS    SnSn    03 48 32.1  +11
LZH                              pmax  pmax
      comp=Z,140nm,1.0s
LZH                              pmax  pmax
      comp=Z,810nm,4.1s
LZH                              LR    LR
      comp=Z,3μm,12.7s
LZH                              LR    LR
      comp=Z,2μm,11.8s
LZH                              LR    LR
      comp=Z,3μm,13.2s
CN2   Changchun       20.20   7⇑iP     P       03 44 23.8 -0.1
CN2                              pmax  pmax
      comp=Z,120nm,0.9s
CN2                              LR    LR
      comp=Z,1μm,15.0s
CN2                              LR    LR
      comp=Z,960nm,15.0s
CN2                              LR    LR
      comp=Z,960nm,17.0s
MDJ   Mudanjiang      21.72  15  P     P       03 44 39.6 -0.6
MDJ                              sP    sP      03 44 48.8 -1.9
MDJ                              S     Sn      03 48 44.9 -4.0
MDJ                              SS    SnSn    03 49 13.0 +8.5
MDJ                              pmax  pmax
      comp=Z,35nm,0.9s
MDJ                              pmax  pmax
      comp=Z,890nm,4.5s
MDJ                              LR    LR
      comp=Z,1μm,11.6s
MDJ                              LR    LR
      comp=Z,1μm,6.1s
MDJ                              LR    LR
      comp=Z,2μm,11.5s
MDJ   Mudanjiang      21.72  15 eP     P       03 44 39.5 -0.8
      comp=Z,26nm,0.9s
USA0B Ussuriysk Arra  21.98  19 eP     P       03 44 42.9 -0.1
      comp=Z,23nm,0.8s
USRK  Ussuriysk Ar.   21.98  19  P     P       03 44 42.1 -0.9
      comp=Z,15nm,0.6s,baz=208,slow=9.2,SNR=30
USRK                             LR    LR      03 53 10.0
      comp=Z,330nm,19.5s,baz=186,slow=37
CHTO  Chiang Mai      22.05 262 eP     P       03 44 43.8 -0.2
      comp=Z,24nm,1.0s
CHTO  Chiang Mai      22.05 262 eP     P       03 44 43.8 -0.2
CHTO                             pmax  pmax
      comp=Z,24nm,1.0s
CM01  Chiang Mai Arr  22.15 261 eP     P       03 44 45.9 +0.7
CM31  Chiang Mai Arr  22.15 261 eP     P       03 44 45.9 +0.7
CM31  Chiang Mai Arr  22.15 261  P     P       03 44 51.0 +5.8
      SNR=6.7
CMAR  Chiang Mai Arr  22.15 261  P     P       03 44 46.6 +1.4
      comp=Z,11nm,0.9s,baz=60,slow=8.4,SNR=19
CMAR                             PcP   PcP     03 48 42.0 +0.2
      comp=Z,2.4nm,0.6s,baz=47,slow=1.2,SNR=6.7
CMAR                             LR    LR      03 53 40.3
      comp=Z,258nm,20.4s,baz=81,slow=38
SBUM  Sibu            23.20 206 eP     P       03 44 56.5 +0.3
      comp=Z,22nm,0.7s
ANA2  Anatahan        23.43 104 eP     P       03 45 01.0 +2.6
      comp=Z,147nm,0.6s
GTA   Gaotai          24.43 315 eP     P       03 45 08.2 +0.4
GTA                              pP    pP      03 45 15.2 +0.1
GTA                              sP    pwP     03 45 18.9 -1.4
GTA                              PcP   PcP     03 48 47.1 +0.8
GTA                              S     S       03 49 22.5 -3.5
GTA                              SS    SnSn    03 50 15.7 +4.6
GTA                              pmax  pmax
      comp=Z,7.0nm,0.8s
GTA                              pmax  pmax
      comp=Z,170nm,4.8s
GTA                              LR    LR
      comp=Z,470nm,10.0s
GTA                              LR    LR
      comp=Z,1μm,14.1s
GTA                              LR    LR
      comp=Z,1μm,14.4s
APSI  Ampana          24.52 181  P     P       03 45 08.2 -0.4
HIA   Hailar          25.53 357 eP     P       03 45 16.2 -1.3
      comp=Z,38nm,0.7s
HIA   Hailar          25.53 357d iP    P       03 45 16.0 -1.5
HIA                              pmax  pmax
      comp=Z,55nm,0.9s
SIJI  Sorong          26.07 159  P     P       03 45 24.4 +1.7
      comp=Z,14nm,0.6s,baz=329,slow=17,SNR=4.2
ASAJ  Asahikawa       26.40  35  P     P       03 45 24.5 -1.0
      comp=Z,6.9nm,0.4s,baz=242,slow=16,SNR=8.0
KLR   Kul'dur         26.56  14 i P    P       03 45 25.0 -1.8
KLR   Kul'dur         26.56  14  P     P       03 45 26.2 -0.6
      comp=Z,18nm,0.6s,baz=204,slow=8.9,SNR=44
KLR                              PcP   PcP     03 48 51.0 +0.2
      comp=Z,4.4nm,0.6s,baz=195,slow=2.5,SNR=7.5
SONA0 Songino Array   27.06 336 eP     P       03 45 31.7 +0.1
SONM  Songino Array   27.06 336  P     P       03 45 31.7 +0.1
      comp=Z,92nm,0.7s,baz=152,slow=10.0,SNR=511
SONM                             LR    LR      03 57 48.0
      comp=Z,986nm,18.4s,baz=155,slow=40
SONA1 Songino Array   27.07 337 eP     P       03 45 32.2 +0.5
SHL   Shillong        27.42 280 eP     P       03 45 35.2 +0.1
      comp=Z,28nm,0.7s
SHL   Shillong        27.42 280 eP     P       03 45 35.2 +0.1
SHL                              pmax  pmax
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      comp=Z,28nm,0.7s
BRDH  Bariadhala      27.91 274  P     P       03 45 40.3 +1.1
      comp=Z,57nm,0.3s,baz=91,slow=10.0,SNR=5.0
YUK   Yuzh-Kuril'sk   28.13  38 eP     P       03 45 27.2  -14
YUK                              MLR   MLR
      comp=Z,721nm,22.0s
LSA   Lhasa           28.15 289  P     P       03 45 44.0 +2.1
LSA                              pmax  pmax
      comp=Z,37nm,0.7s
LSA                              LR    LR
      comp=Z,1μm,15.7s
LSA   Lhasa           28.15 289 eP     P       03 45 41.8 -0.1
      comp=Z,39nm,0.6s
LSA   Lhasa           28.15 289 eP     P       03 45 41.8 -0.1
LSA                              pmax  pmax
      comp=Z,39nm,0.6s
FAKI  Fak Fak         28.32 158 eP     P       03 45 43.1 +0.2
      comp=Z,46nm,0.8s
YSS   Yuzh-Sakhalins  28.50  31⇓eP     P       03 45 42.5 -1.7
YSS                             e              03 45 52.6
YSS                              pmax  pmax
      comp=Z,180nm,1.4s
YSS                              MLR   MLR
      comp=N,200nm,11.0s
YSS                              MLR   MLR
      comp=Z,300nm,11.0s
YSS                              MLR   MLR
      comp=E,400nm,17.0s
SHO   Shikotan        28.59  39  P     P       03 45 52.5 +7.5
SHO                              pmax  pmax
      comp=Z,7.0nm,0.4s
ZEA   Zeya            30.20   6 eP     P       03 45 57.8 -1.5
ZEA                             e              03 56 36.0
ZEA                              pmax  pmax
      comp=E,35nm,1.0s
ZEA                              pmax  pmax
      comp=N,120nm,1.6s
ZEA                              pmax  pmax
      comp=Z,130nm,1.4s
ZEA                              MLR   MLR
      comp=Z,800nm,16.0s
ZEA                              MLR   MLR
      comp=E,400nm,14.0s
ZEA                              MLR   MLR
      comp=N,700nm,17.0s
ZAK   Zakamensk       30.32 336 eP     P       03 45 59.2 -1.3
ZAK                              pmax  pmax
      comp=Z,13nm,1.1s
PSI   Prapat          30.54 230 eP     P       03 46 03.4 +0.7
      comp=Z,10.0nm,1.0s
PSI   Prapat          30.54 230 eP     P       03 46 03.4 +0.7
PSI                              pmax  pmax
      comp=Z,10.0nm,1.0s
PSI   Prapat          30.54 230  P     P       03 46 04.4 +1.7
      comp=Z,8.2nm,1.0s,baz=360,slow=8.0,SNR=3.3
TLY   Talaya          31.26 338 eP     P       03 46 08.6 -0.1
      comp=Z,121nm,0.7s
TLY   Talaya          31.26 338 eP     P       03 46 08.6 -0.1
TLY                              pmax  pmax
      comp=Z,121nm,0.7s
TLY   Talaya          31.26 338  P     P       03 46 08.6 -0.1
      SNR=14
TLY                              P     P       03 46 08.6 -0.1
      SNR=14
TLY   Talaya          31.26 338  LR    LR      04 00 23.2
      comp=Z,2μm,18.0s,baz=138,slow=40
ODAN  Odare           31.40 283 eP     P       03 46 11.7 +1.3
      comp=Z,87nm,0.8s
IRK   Irkutsk         31.52 339 eP     P       03 46 09.5 -1.4
IRK                              pmax  pmax
      comp=Z,102nm,1.0s
RAMN  Ramite          32.10 283 eP     P       03 46 18.0 +1.4
      comp=Z,54nm,0.7s
MOY   Mondy           32.22 335 eP     P       03 46 16.8 -0.4
MOY                              pmax  pmax
      comp=Z,28nm,1.5s
JIRN  Jiri            32.45 285 eP     P       03 46 21.2 +1.4
      comp=Z,93nm,0.8s
NKL   Nikolayevsk     32.59  21 eP     P       03 46 19.0 -1.2
NKL                              pmax  pmax
      comp=Z,21nm,1.0s
GUN   Gumba           32.72 285 eP     P       03 46 23.2 +1.1
      comp=Z,86nm,0.8s
PKI   Pulchoki        33.14 284 eP     P       03 46 26.4 +0.6
      comp=Z,39nm,0.8s
PKIN  Phulchoki       33.15 284 eP     P       03 46 26.5 +0.7
      comp=Z,16nm,0.6s
KKN   Kakani          33.25 285 eP     P       03 46 27.5 +0.9
      comp=Z,56nm,0.8s
DMN   Daman           33.41 285 eP     P       03 46 28.8 +0.7
      comp=Z,65nm,0.9s
WMQ   Urumqi          34.50 314  P     P       03 46 38.4 +1.2
WMQ                              pP    pP      03 46 44.1 -0.5
WMQ                              S     S       03 52 08.3 +4.3
WMQ                              pmax  pmax
      comp=Z,30nm,1.3s
WMQ                              pmax  pmax
      comp=Z,120nm,3.9s
WMQ                              LR    LR
      comp=Z,530nm,12.3s
WMQ                              LR    LR
      comp=Z,960nm,17.9s
WMQ                              LR    LR
      comp=Z,530nm,15.7s
WMQ   Urumqi          34.50 314 eP     P       03 46 37.0 -0.2
      comp=Z,17nm,1.0s
WMQ   Urumqi          34.50 314 eP     P       03 46 37.0 -0.2
WMQ                              pmax  pmax
      comp=Z,17nm,1.0s
BOD   Bodaibo         34.52 352 eP     P       03 46 35.5 -1.5
BOD                              pmax  pmax
      comp=Z,7.0nm,1.4s
DANN  Dangsing        34.58 286 eP     P       03 46 39.0 +0.7
      comp=Z,45nm,0.7s
KOLN  Koldanda        34.74 285 eP     P       03 46 40.4 +0.9
      comp=Z,62nm,0.8s
HVS   Khovu-Aksy      34.99 329 i P    P       03 46 40.4 -0.9
HVS                              pmax  pmax
      comp=Z,1.0nm,0.9s
PYUN  Piuthan         35.26 286 eP     P       03 46 45.1 +1.0
      comp=Z,92nm,0.8s
DGZ   Jazzator, Alta  37.40 323 i P    P       03 47 00.3 -1.7
DGZ                              pmax  pmax
      comp=Z,4.0nm,0.9s
YAK   Yakutsk         38.62   6 eP     P       03 47 08.9 -2.9
YAK                             e*PP   pP      03 47 15.6 -4.0
YAK                             e              03 48 41.6
YAK                             eS     S       03 53 01.8 -4.3
YAK                             e*SS   sS      03 53 19.5 +0.6
YAK                             eSS    SnSn    03 55 49.3 -5.7
YAK                             e              03 57 17.5
YAK                              pmax  pmax
      comp=Z,168nm,0.9s
YAK                              pmax  pmax
      comp=E,30nm,1.0s
YAK                              pmax  pmax
      comp=N,90nm,1.0s
YAK                              pmax  pmax
      comp=Z,295nm,2.5s
YAK                              pmax  pmax
      comp=N,110nm,1.4s
YAK                              pmax  pmax
      comp=E,251nm,2.8s
YAK                              smax  smax
      comp=N,1μm,4.6s
YAK                              smax  smax
      comp=E,824nm,4.3s
YAK                              MLR   MLR
      comp=Z,2μm,18.0s
YAK                              MLR   MLR
      comp=N,2μm,16.0s
YAK                              MLR   MLR
      comp=E,792nm,16.0s
MK01  Makanchi Array  39.16 316 eP     P       03 47 16.8 +0.1
MK31  Makanchi Array  39.18 316 eP     P       03 47 17.1 +0.3
MK31  Makanchi Array  39.18 316 eP     P       03 47 17.2 +0.3
MK31                             pmax  pmax
      comp=Z,28nm,0.9s
MK32  Makanchi Array  39.18 316 eP     P       03 47 17.3 +0.4
MK32                            ePcP   PcP     03 49 25.1 -0.7
MKAR  Makanchi Array  39.18 316 i P    P       03 47 17.2 +0.4
MKAR                             pmax  pmax
      comp=Z,20nm,0.6s
MKAR  Makanchi Array  39.18 316  P     P       03 47 17.3 +0.4
      comp=Z,19nm,0.6s,baz=101,slow=9.4,SNR=304
MKAR                             PcP   PcP     03 49 25.2 -0.7
      comp=Z,2.1nm,0.7s,baz=93,slow=4.5,SNR=3.9
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MKAR				LR	LR	04 04 51.4	
	comp=Z,403nm,18.9s,baz=106,slow=38						
MAKZ	Makanchi	39.38	316	eP	P	03 47 18.5	0.0
	comp=Z,48nm,1.1s						
MAKZ	Makanchi	39.38	316	P	P	03 47 18.9	+0.3
MAKZ				pmax	pmax		
	comp=Z,18nm,0.6s						
PEA0B	Petropavlovsk-	39.80	33	eP	P	03 47 22.3	+0.4
	comp=Z,46nm,1.3s						
PETK	Petropavlovsk-	39.80	33	eP	P	03 47 20.8	-1.1
PETK	Petropavlovsk-	39.80	33	eP	P	03 47 20.8	-1.1
PDGK	Podgornoye	39.95	310	P	P	03 47 24.2	+0.7
PDGK				pmax	pmax		
	comp=Z,37nm,0.9s						
PET	Petropavlovsk	40.24	34	iP	P	03 47 24.1	-1.4
PET				pmax	pmax		
	comp=Z,14nm,1.0s						
TARG	Taragay, Kyrgy	40.78	307	eP	P	03 47 30.8	+0.1
	comp=Z,16nm,1.1s						
ZAA0	Zalesovo Array	41.02	327	eP	P	03 47 31.2	-0.7
	comp=Z,57nm,1.0s						
ZALV	Zalesovo Beam	41.02	327	P	P	03 47 31.2	-0.7
	comp=Z,36nm,0.6s,baz=113,slow=8.1,SNR=180						
ZALV				LR	LR	04 05 52.5	
	comp=Z,361nm,19.1s,baz=84,slow=38						
ZAA1	Zalesovo Array	41.02	327	eP	P	03 47 31.2	-0.7
MA2	Magadan	41.10	22	eP	P	03 47 31.4	-1.2
MA2	Magadan	41.10	22	iP	P	03 47 31.7	-0.8
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MA2	Magadan	41.10	22	P	P	03 47 31.5	-1.0
	comp=Z,6.8nm,0.6s,baz=211,slow=6.6,SNR=4.4						
KDJ	Kajisay	41.32	307	eP	P	03 47 35.4	+0.5
	comp=Z,18nm,0.9s						
KDJ	Kajisay	41.32	307	eP	P	03 47 35.4	+0.5
KDJ				pmax	pmax		
	comp=Z,18nm,0.9s						
H11N1	WAKE ISLAND Hy	41.75	87	T	T	04 32 49.0	
	baz=283,slow=75,SNR=32						
H11N2	WAKE ISLAND Hy	41.75	87	T	T	04 32 55.4	
	baz=283,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	41.77	87	T	T	04 32 55.1	
	baz=283,slow=75,SNR=37						
KSH	Kashi	41.77	303	P	P	03 47 42.4	+3.9
KSH				pP	sP	03 47 49.3	+0.2
KSH				sP	pwP	03 47 56.5	+5.4
KSH				PP	PnPn	03 49 22.4	+2.0
KSH				S	S	03 53 59.0	+4.8
KSH				SS	SS	03 57 03.9	+3.3
KSH				ScS	ScS	03 57 41.2	+1.4
KSH				pmax	pmax		
	comp=Z,45nm,1.1s						
KSH				pmax	pmax		
	comp=Z,370nm,5.6s						
KSH				LR	LR		
	comp=Z,260nm,8.1s						
KSH				LR	LR		
	comp=Z,300nm,5.2s						
H11S3	WAKE ISLAND Hy	41.87	88	T	T	04 32 57.5	
	baz=284,slow=75,SNR=231						
H11S1	WAKE ISLAND Hy	41.88	88	T	T	04 32 58.2	
	baz=284,slow=75,SNR=165						
H11S2	WAKE ISLAND Hy	41.89	88	T	T	04 32 58.8	
	baz=284,slow=75,SNR=165						
ULHL	Ulahol	42.03	307	P	P	03 47 42.5	+1.8
	SNR=12						
NRN	Naryn	42.06	306	eP	P	03 47 41.3	+0.3
	comp=Z,31nm,0.8s						
NRN	Naryn	42.06	306	eP	P	03 47 41.3	+0.3
NRN				pmax	pmax		
	comp=Z,31nm,0.8s						
NVS	Novosibirsk	42.28	327	eP	P	03 47 41.8	-0.4
NVS				e		03 49 20.6	
NVS				pmax	pmax		
	comp=Z,49nm,1.7s						
NVS				pmax	pmax		
	comp=N,29nm,1.4s						
NVS				pmax	pmax		
	comp=E,26nm,1.4s						
TKM2	Tokmak 2	42.63	308	P	P	03 47 46.9	+1.3
	SNR=50						
TKM2	Tokmak 2	42.63	308	P	P	03 47 46.8	+1.2
TKM2				pmax	pmax		
	comp=Z,28nm,0.7s						
KZA	Kyzart	42.72	307	P	P	03 47 48.5	+1.9
	SNR=22						
COEN	Coen	42.81	149	eP	P	03 47 47.2	+0.3
	comp=Z,79nm,0.8s						
KURK	Kurchatov	42.91	320	eP	P	03 47 46.7	-0.8
KURK	Kurchatov	42.91	320	P	P	03 47 47.2	-0.2
KURK				pmax	pmax		
	comp=Z,20nm,0.7s						
KURK	Kurchatov	42.91	320	P	P	03 47 47.3	-0.2
	SNR=7.9						
KURK				P	P	03 47 47.3	-0.2
	SNR=7.9						
KURBB	Kurchatov Arra	42.93	320	P	P	03 47 47.5	0.0
	comp=Z,15nm,0.8s,baz=112,slow=8.9,SNR=83						
KBK	Karagaybulak	43.05	308	P	P	03 47 50.0	+1.1
	SNR=23						
CHMS	Chumysh	43.25	308	P	P	03 47 51.5	+1.1
	SNR=13						
UCH	Uchtor	43.29	307	P	P	03 47 53.1	+1.9
	SNR=41						
FRU	Bishkek	43.32	308	eP	P	03 47 51.0	0.0
FRU				pmax	pmax		
	comp=Z,40nm,2.0s						
AAK	Ala-Archa	43.37	308	P	P	03 47 52.6	+1.1
	SNR=9.6						
AAK	Ala-Archa	43.37	308	eP	P	03 47 52.2	+0.7
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	43.37	308	P	P	03 47 52.5	+1.0
AAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AAK	Ala-Archa	43.37	308	P	P	03 47 52.6	+1.0
	SNR=5.9						
USP	Ospenovka	43.48	308	P	P	03 47 53.2	+0.9
	SNR=9.1						
NIL	Nilore	43.56	294	eP	P	03 47 52.9	-0.1
NIL	Nilore	43.56	294	eP	P	03 47 52.9	-0.1
SFK	Sufi-Kurgan	43.73	304	P	P	03 47 55.8	+1.3
SFK				pmax	pmax		
	comp=Z,19nm,0.8s						
AML	Almayashu	43.87	307	P	P	03 47 57.6	+1.7
	SNR=27						
EKS2	Erkin-Say	43.90	307	P	P	03 47 57.0	+1.3
	SNR=17						
SEY	Seymchan	44.13	19	iP	P	03 47 54.1	-2.9
SEY	Seymchan	44.13	19	P	P	03 47 56.9	-0.1
	comp=Z,3.2nm,0.6s,baz=212,slow=8.3,SNR=14						
SEY				PcP	PcP	03 49 42.6	+0.9
	comp=Z,7.1nm,0.7s,baz=226,slow=6.2,SNR=9.5						
ARSB	Arslanbob	44.28	305	eP	P	03 47 59.3	+0.4
	comp=Z,25nm,1.3s						
MBWA	Marble Bar	44.70	183	eP	P	03 48 04.6	+2.5
MNAS	Manas	44.80	307	P	P	03 48 04.4	+1.4
MNAS				pmax	pmax		
	comp=Z,38nm,1.1s						
WRAB	Tennant Creek	45.05	164	eP	P	03 48 04.6	-0.4
	comp=Z,6.2nm,0.5s						
WRAB	Tennant Creek	45.05	164	ceP	P	03 48 02.5	-2.4
WRAB				pmax	pmax		
	comp=Z,24nm,1.7s						
WR1	Warramunga Arr	45.06	164	eP	P	03 48 04.8	-0.2
	comp=Z,18nm,0.6s						
WRA	Warramunga Arr	45.06	164	iP	P	03 48 04.8	-0.2
WRA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WRA	Warramunga Arr	45.06	164	P	P	03 48 04.8	-0.2
	comp=Z,6.0nm,0.7s,baz=346,slow=8.8,SNR=24						
POO	Poona	45.06	273	eP	P	03 48 04.0	-1.2
WB2	Warramunga Arr	45.06	164	eP	P	03 48 05.5	+0.5
BTK	Batken	45.78	303	eP	P	03 48 11.2	+0.6
	comp=Z,7.2nm,0.7s						
BTK	Batken	45.78	303	eP	P	03 48 11.3	+0.6
BTK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OTUK	Ortayu	46.04	315	P	P	03 48 13.0	+0.5
OTUK				pmax	pmax		
	comp=Z,20nm,0.9s						
GAR	Garm	46.09	302	eP	P	03 48 13.4	+0.2
	comp=Z,34nm,0.8s						
GAR	Garm	46.09	302	eP	P	03 48 13.4	+0.2
GAR				pmax	pmax		
	comp=Z,34nm,0.8s						
KK31	Karatay Array	46.34	308	eP	P	03 48 15.2	+0.2
KK31	Karatay Array	46.34	308	P	P	03 48 15.6	+0.6
KK31				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KKAR	Karatay Array	46.34	308	eP	P	03 48 15.2	+0.2
KKAR	Karatay Array	46.34	308	eP	P	03 48 15.2	+0.2
GIRL	Giralia	46.73	190	eP	P	03 48 17.8	-0.3
	comp=Z,102nm,1.1s						
CHGR	Chuyangaron	46.98	301	eP	P	03 48 20.2	0.0
	comp=Z,27nm,0.7s						
KBL	Kabul	47.04	296	eP	P	03 48 20.7	-0.1
	comp=Z,28nm,0.8s						
KBL	Kabul	47.04	296	eP	P	03 48 20.7	-0.1
KBL				pmax	pmax		
	comp=Z,28nm,0.8s						
TIXI	Tiksi	48.08	3	eP	P	03 48 26.2	-1.8
	comp=Z,63nm,0.8s						
TIXI	Tiksi	48.08	3	ceP	P	03 48 26.2	-1.8
TIXI				pmax	pmax		
	comp=Z,73nm,0.8s						
TIXI	Tiksi	48.08	3	P	P	03 48 26.7	-1.3
	comp=Z,61nm,0.8s,baz=168,slow=5.2,SNR=173						
TIXI				LR	LR	04 11 52.5	
	comp=Z,654nm,18.1s,baz=178,slow=40						
AS31	Alice Springs	48.53	165	eP	P	03 48 32.6	+0.5
	comp=Z,2.8nm,0.7s						
ASAR	Alice Springs	48.53	165	P	P	03 48 32.4	+0.3
	comp=Z,2.0nm,0.5s,baz=346,slow=7.8,SNR=17						
AS01	Alice Springs	48.54	165	eP	P	03 48 32.1	0.0
BRVK	Borovoye	48.56	321	eP	P	03 48 31.4	-0.7
BRVK	Borovoye	48.56	321	c iP	P	03 48 32.0	0.0
BRVK				pmax	pmax		
	comp=Z,24nm,0.9s						
BRVK	Borovoye	48.56	321	P	P	03 48 32.1	0.0
	SNR=7.4						
CTA	Charters Tower	49.57	150	P	P	03 48 40.9	+0.8
	comp=Z,9.2nm,0.7s,baz=331,slow=9.3,SNR=7.5						
CTAO	Charters Tower	49.57	150	eP	P	03 48 40.7	+0.6
	comp=Z,37nm,1.4s						
CTAO	Charters Tower	49.57	150	eP	P	03 48 40.7	+0.6
CTAO				pmax	pmax		
	comp=Z,37nm,1.4s						
NRIK	Noril'sk	50.02	345	P	P	03 48 41.8	-1.1
	comp=Z,17nm,0.8s,baz=128,slow=8.2,SNR=16						
BILL	Bilibino	51.83	20	eP	P	03 48 56.0	-0.6
	comp=Z,8.1nm,0.8s						
BILL	Bilibino	51.83	20	deP	P	03 48 56.5	-0.1
BILL				e		03 50 08.2	
BILL				e		03 50 51.4	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AB31	Akbulak array	54.29	315	iP	P	03 49 15.3	+0.3
AB31				pmax	pmax		
	comp=Z,11nm,0.6s						
ABKAR	Akbulak array	54.29	315	eP	P	03 49 14.8	-0.2
SVE	Sverdlovsk	54.84	324	eP	P	03 49 18.6	-0.3
SVE				pmax	pmax		
	comp=Z,25nm,0.7s						
AKTO	Aktyubinsk	55.61	316	LR	LR	04 15 04.2	
	comp=Z,266nm,19.0s,baz=101,slow=38						
GEYT	Alibeck	55.67	301	P	P	03 49 26.6	+1.4
	comp=Z,14nm,0.8s,baz=87,slow=3.3,SNR=28						
GEYT				LR	LR	04 17 16.2	
	comp=Z,263nm,18.4s,baz=85,slow=40						
GYA0B	ALIBECK ARRAY	55.67	301	eP	P	03 49 25.1	-0.2
	comp=Z,18nm,0.8s						
ARU	Arti	55.91	323	eP	P	03 49 26.0	-0.5
	comp=Z,23nm,0.7s						
ARU	Arti	55.91	323	c iP	P	03 49 26.1	-0.5
ARU						03 51 27.4	
ARU				S	S	03 57 15.4	+3.1
ARU				SS	SS	04 00 58.2	+0.2
ARU				pmax	pmax		
	comp=Z,68nm,1.9s						
EIDS	Eidsvold	56.37	148	eP	P	03 49 30.5	+0.4
	comp=Z,7.8nm,0.8s						
BBOO	Buckleboo	57.82	166	eP	P	03 49 40.4	+0.1
	comp=Z,44nm,1.3s						
STKA	Stephens Creek	58.40	160	eP	P	03 49 44.2	-0.2
	comp=Z,1.9nm,0.6s						
STKA	Stephens Creek	58.40	160	eP	P	03 49 44.2	-0.2
STKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
STKA	Stephens Creek	58.40	160	P	P	03 49 44.9	+0.5
	comp=Z,8.8nm,0.6s,baz=338,slow=7.1,SNR=16						
GAMB	Gambell	58.50	28	eP	P	03 49 44.8	+0.1
	comp=Z,22nm,1.4s						
ANM	Nome	61.35	28	eP	P	03 50 04.7	+0.4
	comp=Z,16nm,0.9s						
ANM	Nome	61.35	28	eP	P	03 50 04.7	+0.4
ANM				pmax	pmax		
	comp=Z,16nm,0.9s						
RDOG	Red Dog Mine	62.62	24	eP	P	03 50 12.9	+0.1
	comp=Z,5.6nm,0.7s						
DZM	Mont Dzumac	62.78	133	eP	P	03 50 14.6	0.0
	comp=Z,9.9nm,0.9s						
DZM	Mont Dzumac	62.78	133	P	P	03 50 15.7	+1.0
	comp=Z,5.1nm,0.6s,baz=172,slow=16,SNR=7.2						
LKRN	Lenkeran, Azer	62.86	303	P	P	03 50 15.2	+0.3
PRGR	Permogore	62.95	329	eP	P	03 50 13.1	-1.9
PRGR				pmax	pmax		
	comp=Z,42nm,0.6s						
SEKA	Sheki	63.65	306	P	P	03 50 20.2	0.0
MNGR	Mingechevir, A	63.80	305	P	P	03 50 21.6	+0.5
ZKTA	Zakatala	64.00	306	P	P	03 50 23.0	+0.5
GANJ	Ganja	64.40	305	P	P	03 50 25.6	+0.5
NAX	Nakhchivan	65.29	304	P	P	03 50 31.0	0.0
GNI	Garni	65.67	305	eP	P	03 50 33.1	-0.5
	comp=Z,16nm,1.1s						
GNI	Garni	65.67	305	ceP	P	03 50 32.4	-1.2
GNI				pmax	pmax		
	comp=Z,91nm,1.3s						
GNI	Garni	65.67	305	LR	LR	04 22 57.9	
	comp=Z,158nm,21.6s,baz=75,slow=40						
ZEI	Tsey	65.80	308	eP	P	03 50 33.1	-1.2
ZEI				pmax	pmax		
	comp=Z,15nm,0.9s						
VRH	Novokhopyorsk	65.89	317	eP	P	03 50 33.3	-1.2
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
KLMR	Klimovskoe	65.93	328	eP	P	03 50 32.3	-2.3
KLMR				pmax	pmax		
	comp=Z,47nm,1.5s						
KLMR	Klimovskoe	65.93	328	eP	P	03 50 32.4	-2.2
KLMR				AMP		03 50 36.1	
	comp=Z,47nm,1.4s						
IM3	Indian Mountai	66.23	26	eP	P	03 50 36.3	-0.1
KBZ	Khabaz	66.34	309	P	P	03 50 37.9	+0.3
	comp=Z,9.4nm,0.9s,baz=112,slow=3.0,SNR=16						
KBZ				LR	LR	04 23 49.9	
	comp=Z,149nm,18.2s,baz=72,slow=40						
KIV	Kislovodsk	66.45	309	eP	P	03 50 38.4	0.0
	comp=Z,25nm,1.0s						
KIV	Kislovodsk	66.45	309	eP	P	03 50 38.9	+0.5
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
KIV				MLR	MLR		
	comp=Z,159nm,17.0s						
CAST	Castle Rocks	67.22	29	eP	P	03 50 43.7	+0.8
	comp=Z,32nm,1.0s						
PPLA	Purkeypile	67.25	30	eP	P	03 50 43.6	+0.5
	comp=Z,28nm,0.7s						
RSO	Redoubt South	67.32	32	eP	P	03 50 44.3	+0.5
LPSR	Galich'ya Gora	67.38	319	eP	P	03 50 43.0	-1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	67.47	318	iP	P	03 50 42.4	-2.2
VSR				pmax	pmax		
	comp=Z,28nm,1.1s						
COLD	Coldfoot	67.50	25	eP	P	03 50 45.2	+0.7
	comp=Z,4.2nm,0.8s						
OHAK	Old Harbor	67.53	36	eP	P	03 50 44.7	-0.2
	comp=Z,46nm,1.0s						
MLY	Manley	67.58	27	eP	P	03 50 45.6	+0.5
	comp=Z,33nm,1.0s						
MOS	Moscow	67.61	323	eP	P	03 50 42.2	-3.2
MOS				e		03 51 09.3	
MOS				pmax	pmax		
	comp=Z,27nm,0.7s						
BPAW	Bear Paw Mtn.	67.61	28	eP	P	03 50 45.8	+0.5
	comp=Z,31nm,0.9s						
APA	Apatity	67.77	336	⇓iP	P	03 50 45.4	-0.8
APA				pmax	pmax		
	comp=Z,17nm,0.9s						
KDAK	Kodiak Island	67.82	35	eP	P	03 50 46.8	+0.1
	comp=Z,91nm,1.0s						
KDAK	Kodiak Island	67.82	35	iP	P	03 50 46.9	+0.3
KDAK	Kodiak Island	67.82	35	P	P	03 50 47.0	+0.4
	comp=Z,38nm,0.8s,baz=270,slow=1.1,SNR=24						
SIRT	Sirnak	68.00	302	eP	P	03 50 48.2	-0.1
	comp=Z,78nm,1.1s						
TRF	Thorofare Moun	68.02	29	eP	P	03 50 48.3	+0.3
	comp=Z,17nm,0.6s						
SUA	Susitna One	68.13	31	eP	P	03 50 48.7	0.0
	comp=Z,62nm,0.8s						
OBN	Obninsk	68.31	322	eP	P	03 50 49.2	-0.6
OBN				e		03 50 54.6	
OBN				e		03 51 17.3	
OBN				e		03 53 17.2	
OBN				ePPP	PPP	03 54 53.1	
OBN				pmax	pmax		
	comp=Z,27nm,1.7s						
BRLK	Bradley Lake	68.35	33	eP	P	03 50 50.0	0.0
	comp=Z,50nm,0.8s						
MCK	McKinley	68.56	29	eP	P	03 50 51.5	+0.2
	comp=Z,27nm,0.8s						
MCK	McKinley	68.56	29	eP	P	03 50 51.5	+0.2
MCK				pmax	pmax		
	comp=Z,27nm,0.8s						
MDM	Murphy Dome	68.65	27	eP	P	03 50 52.0	+0.2
	comp=Z,78nm,1.2s						
RND	Reindeer	68.66	29	eP	P	03 50 52.0	+0.1
	comp=Z,67nm,0.6s						
RND	Reindeer	68.66	29	eP	P	03 50 52.0	+0.1
RND				pmax	pmax		
	comp=Z,67nm,0.6s						
RC01	Rabbit Creek A	68.67	31	eP	P	03 50 51.8	-0.2
	comp=Z,14nm,0.6s						
WRH	Wood River Hil	68.80	28	eP	P	03 50 53.5	+0.9
	comp=Z,36nm,1.2s						
TCOL	CIGO, UAF Yank	68.82	27	P	P	03 50 54.3	+1.5
	baz=281						
COLA	College	68.82	27	eP	P	03 50 53.3	+0.5
	comp=Z,20nm,0.6s						
COLA	College	68.82	27	iP	P	03 50 52.2	-0.6
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PMR	Palmer	68.87	31	eP	P	03 50 53.3	+0.2
	comp=Z,23nm,0.6s						
PMR	Palmer	68.87	31	eP	P	03 50 53.3	+0.2
PMR				pmax	pmax		
	comp=Z,23nm,0.6s						
GHO	Glory Hole Cre	68.93	31	eP	P	03 50 54.1	+0.4
	comp=Z,42nm,1.2s						
POKR	Poker Plat Res	68.95	27	P	P	03 50 54.9	+1.2
	baz=281						
SEW	Seward	69.00	32	eP	P	03 50 54.2	+0.2
	comp=Z,43nm,1.0s						
SML	Sawmill	69.20	31	eP	P	03 50 55.6	+0.3
	comp=Z,33nm,0.7s						
RAYN	Ar Rayn	69.20	287	eP	P	03 50 56.0	0.0
	comp=Z,13nm,1.1s						
KNK	Knik Glacier	69.22	31	eP	P	03 50 55.5	+0.1
	comp=Z,49nm,1.0s						
ILAR	Eielson Array	69.25	27	P	P	03 50 54.6	-0.9
	comp=Z,3.4nm,0.5s,baz=268,slow=4.7,SNR=92						
ILB	Eielson Array	69.25	27	eP	P	03 50 54.9	-0.6
IL1	Eielson Array	69.25	27	eP	P	03 50 53.4	-2.1
HDA	Harding Lake	69.29	28	eP	P	03 50 55.6	-0.2
	comp=Z,46nm,1.4s						
HDA	Harding Lake	69.29	28	P	P	03 50 55.3	-0.5
	baz=282						
DHY	Denali Highway	69.38	29	eP	P	03 50 56.8	+0.3
	comp=Z,12nm,0.7s						
FYU	Fort Yukon	69.54	25	eP	P	03 50 57.8	+0.6
	comp=Z,13nm,0.7s						
PRP	Porcupine Dome	69.65	26	eP	P	03 50 58.3	+0.1
	comp=Z,17nm,1.2s						
SCM	Sheep Creek Mo	69.66	30	eP	P	03 50 58.6	+0.4
	comp=Z,52nm,0.6s						
SCM	Sheep Creek Mo	69.66	30	eP	P	03 50 58.6	+0.4
SCM				pmax	pmax		
	comp=Z,52nm,0.6s						
GLI	Glacier Island	69.98	31	eP	P	03 51 00.2	+0.1
	comp=Z,40nm,1.0s						
SPITS	Spitsbergen Ar	70.07	348	LR	LR	04 26 17.8	
	comp=Z,517nm,18.0s,baz=55,slow=40						
ARA0	ARCESS Array S	70.22	338	eP	P	03 51 01.0	-0.4
ARCES	ARCESS Array B	70.22	338	eP	P	03 51 00.6	-0.8
ARCES	ARCESS Array B	70.22	338	eP	P	03 51 00.6	-0.8
ARCES	ARCESS Array B	70.22	338	P	P	03 51 01.0	-0.4
	comp=Z,6.5nm,0.8s,baz=60,slow=5.7,SNR=17						
ARCES				LR	LR	04 25 46.2	
	comp=Z,145nm,18.6s,baz=56,slow=39						
PAX	Paxson	70.25	29	eP	P	03 51 02.0	+0.2
	comp=Z,27nm,1.3s						
PAX	Paxson	70.25	29	eP	P	03 51 02.0	+0.2
PAX				pmax	pmax		
	comp=Z,27nm,1.3s						
RIDG	Independ'e Rid	70.34	28	eP	P	03 51 02.9	+0.6
	comp=Z,58nm,1.3s						
KLU	Klutina	70.39	31	eP	P	03 51 03.2	+0.5
	comp=Z,27nm,1.0s						
HARP	HAARP	70.53	30	eP	P	03 51 04.4	+1.0
	comp=Z,42nm,1.0s						
DIV	Divide	70.55	31	eP	P	03 51 04.5	+0.9
	comp=Z,53nm,1.1s						
SCRK	Sand Creek	70.65	28	eP	P	03 51 04.0	-0.3
	comp=Z,40nm,1.4s						
EYAK	Cordova Ski Ar	70.70	32	eP	P	03 51 04.9	+0.5
	comp=Z,80nm,1.3s						
DOT	Dot Lake	70.70	28	eP	P	03 51 04.6	+0.1
	comp=Z,23nm,1.0s						
FIA1	FINESS Array S	72.20	330	eP	P	03 51 12.9	-0.6
FIA0	FINESS Array S	72.20	330	eP	P	03 51 12.9	-0.6
FIA0	FINESS Array S	72.20	330	eP	P	03 51 12.9	-0.6
FINES	FINESS Array B	72.20	330	P	P	03 51 12.9	-0.6
	comp=Z,12nm,0.7s,baz=61,slow=6.0,SNR=40						
DAWY	Dawson	72.57	27	eP	P	03 51 15.8	+0.1
	comp=Z,18nm,0.7s						
VSU	Vasula	72.76	327	ceP	P	03 51 15.7	-1.1
VSU				pmax	pmax		
	comp=Z,132nm,2.5s						
INK	Inuvik	73.34	22	eP	P	03 51 20.1	0.0
	comp=Z,32nm,1.0s						
INK	Inuvik	73.34	22	eP	P	03 51 20.1	0.0
INK				pmax	pmax		
	comp=Z,32nm,1.0s						
INK	Inuvik	73.34	22	P	P	03 51 19.9	-0.2
	comp=Z,46nm,1.1s,baz=298,slow=3.6,SNR=69						
PCA	Pinnacle	73.45	31	eP	P	03 51 22.2	+1.2
	comp=Z,77nm,1.0s						
AKASG	Malin Array Be	73.70	319	iP	P	03 51 21.3	-1.3
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AKASG	Malin Array Be	73.70	319	P	P	03 51 21.4	-1.1
	comp=Z,3.9nm,0.5s,baz=59,slow=6.3,SNR=15						
AKBB	Malin Array Si	73.70	319	eP	P	03 51 21.4	-1.1
	comp=Z,10.0nm,0.9s						
KIEV	Kiev	73.71	319	eP	P	03 51 21.3	-1.3
	comp=Z,8.7nm,0.8s						
KIEV	Kiev	73.71	319	iP	P	03 51 20.0	-2.6
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AK11	Malin Array Si	73.74	319	eP	P	03 51 21.5	-1.3
NACGM	Naroch	73.82	323	e	P	03 51 22.0	-1.2
BR101	Keskin Array S	74.04	307	eP	P	03 51 25.0	0.0
BR131	Keskin Array S	74.04	307	eP	P	03 51 24.3	-0.7
BR131	Keskin Array S	74.04	307	P	P	03 51 25.0	0.0
	SNR=7.8						
BRTR	Keskin Array B	74.04	307	iP	P	03 51 25.3	+0.3
BRTR				pmax	pmax		
	comp=Z,11nm,0.8s						
BRTR	Keskin Array B	74.04	307	P	P	03 51 25.0	0.0
	comp=Z,11nm,0.8s,baz=112,slow=5.9,SNR=61						
HYT	Haines Junctio	74.48	30	eP	P	03 51 27.5	+0.4
	comp=Z,18nm,1.1s						
ANTO	Ankara	74.62	307	eP	P	03 51 28.5	+0.2
	comp=Z,30nm,0.8s						
ANTO	Ankara	74.62	307	eP	P	03 51 28.5	+0.2
ANTO				pmax	pmax		
	comp=Z,30nm,0.8s						
BR231	Keskin MP Arra	74.64	307	eP	P	03 51 29.0	+0.5
TLCR		75.70	313	⇓iP	P	03 51 34.4	+0.1
WHY	Whitehorse	75.74	30	eP	P	03 51 34.6	+0.2
	comp=Z,9.9nm,0.8s						
CSS	Mathiatis	75.78	302	eP	P	03 51 34.4	-0.5
	comp=Z,25nm,0.7s						
SKAG	Skagway	76.00	31	eP	P	03 51 36.3	+0.5
	comp=Z,16nm,0.8s						
SUW	Suwalki	76.10	323	eP	P	03 51 35.5	-0.8
SUW	Suwalki	76.10	323	eP	P	03 51 36.0	-0.3
	comp=Z,55nm,0.9s						
SUW	Suwalki	76.10	323	eP	P	03 51 35.5	-0.8

CFR	Carcaliu	76.16	313	⇓*i*P	P	03 51 36.7	-0.2
TIRR	Tirgusor	76.21	313	*e*P	P	03 51 36.8	-0.4
	comp=Z,9.8nm,0.9s						
TIRR	Tirgusor	76.21	313	⇑*i*P	P	03 51 37.1	-0.1
TIRR	Tirgusor	76.21	313	*e*P	P	03 51 36.8	-0.4
TIRR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MFTR	Murfatlar	76.30	312	⇑*i*P	P	03 51 37.5	-0.2
TLB	Topalu	76.42	313	⇓*i*P	P	03 51 38.5	+0.1
PRAR	RASCA	76.65	316	⇑*i*P	P	03 51 39.6	-0.1
ICOR	Ion Corvin	76.74	312	⇑*i*P	P	03 51 40.8	+0.6
VRI	Vrincioaia	76.85	314	⇑*i*P	P	03 51 41.9	+1.1
BIZ	Bicaz	76.88	316	⇑*i*P	P	03 51 41.0	0.0
PLOR	Plostina	76.91	314	⇓*i*P	P	03 51 41.4	+0.2
DAG	Danmarks Havn	76.91	351	*i* P	P	03 51 39.2	-1.4
	comp=Z,18nm,1.1s						
DAG	Danmarks Havn	76.91	351	*i* P	P	03 51 39.2	-1.4
DAG				pmax	pmax		
	comp=Z,23nm,1.1s						
LVV	L'vov	77.13	319	*e*P	P	03 51 42.0	-0.3
BUR08	Bucovina Ar. S	77.20	316	*e*P	P	03 51 42.4	-0.5
BURAR	Bucovina Array	77.20	316	⇓*i*P	P	03 51 43.0	+0.1
BUR04	Bucovina Ar. S	77.20	316	*e*P	P	03 51 42.4	-0.6
OZUR		77.38	315	⇑*i*P	P	03 51 44.1	+0.2
MLR	Muntele Rosu	77.50	314	*e*P	P	03 51 44.2	-0.4
	comp=Z,12nm,0.8s						
MLR	Muntele Rosu	77.50	314	⇓*i*P	P	03 51 44.7	+0.1
MLR	Muntele Rosu	77.50	314	*e*P	P	03 51 44.2	-0.4
MLR				pmax	pmax		
	comp=Z,12nm,0.8s						
MLR	Muntele Rosu	77.50	314	LR	LR	04 30 46.6	
	comp=Z,93nm,18.7s,baz=64,slow=40						
SECR		77.58	314	⇓*i*P	P	03 51 43.7	-1.2
ARCR	ARCALIA	77.94	316	⇓*i*P	P	03 51 48.7	+1.8
KWP	Kalwaria Pacla	78.00	319	*e*P	P	03 51 47.3	+0.1
KWP	Kalwaria Pacla	78.00	319	*e*P	P	03 51 47.3	+0.1
VOIR		78.10	314	⇓*i*P	P	03 51 47.5	-0.4
MANT	Manisa	78.18	307	*e*P	P	03 51 48.2	-0.5
	comp=Z,62nm,1.1s						
ARR	Arges	78.40	314	⇓*i*P	P	03 51 49.8	+0.2
HUMR	Humele	78.49	314	⇑*i*P	P	03 51 49.4	-0.6
UZH	Uzhgorod	78.64	318	*e*P	P	03 51 50.2	-0.5
UZH				*e*		03 51 56.0	
TRPA	Tarpa	78.68	318	⇓*i*P	P	03 51 50.8	-0.1
NC405	NORSAR Array S	78.71	332	*e*P	P	03 51 50.4	-0.5
NB201	NORSAR Array S	78.92	332	*e*P	P	03 51 51.5	-0.6
DLBC	Dease Lake	78.93	31	*e*P	P	03 51 52.6	+0.4
	comp=Z,20nm,1.3s						
NB200	NORSAR Array S	78.96	332	*e*P	P	03 51 51.1	-1.2
NOA	NORSAR Array B	78.96	332	P	P	03 51 51.1	-1.2
	comp=Z,6.1nm,0.8s,baz=59,slow=5.5,SNR=17						
RES	Resolute Bay	78.96	9	*e*P	P	03 51 51.6	-0.4
	comp=Z,68nm,1.4s						
RES	Resolute Bay	78.96	9	*e*P	P	03 51 51.6	-0.4
RES				pmax	pmax		
	comp=Z,68nm,1.4s						
RES	Resolute Bay	78.96	9	P	P	03 51 51.7	-0.3
	comp=Z,23nm,1.0s,baz=314,slow=5.7,SNR=38						
NC602	NORSAR Array S	78.97	332	*e*P	P	03 51 51.1	-1.2
DRGR		79.09	316	⇑*i*P	P	03 51 53.3	-0.1
JMIC	Jan Mayen	79.44	345	LR	LR	04 31 42.6	
	comp=Z,224nm,18.0s,baz=62,slow=39						
OJC	Ojcow	79.49	320	*e*P	P	03 51 55.5	+0.1
OJC	Ojcow	79.49	320	*e*P	P	03 51 54.8	-0.6
	comp=Z,20nm,0.6s						
OJC	Ojcow	79.49	320	*e*P	P	03 51 55.5	+0.1
NIE	Niedzica	79.53	319	*e*P	P	03 51 56.0	+0.4
NIE	Niedzica	79.53	319	*e*P	P	03 51 56.0	+0.4
GZR	Gura Zlata	79.60	315	⇓*i*P	P	03 51 56.3	+0.2
TULEG	Thule	79.72	3	*e*P	P	03 51 55.9	-0.2
	comp=Z,17nm,0.9s						
LANS	Liptovska Anna	80.13	319	*e*P	P	03 51 59.5	+0.6
LANS	Liptovska Anna	80.13	319	*e*P	P	03 51 59.5	+0.6
BZS	Buzias	80.26	316	⇓*i*P	P	03 51 59.5	-0.1
KARP	Karpathos	80.30	304	*e*P	P	03 51 59.6	-0.4
	comp=Z,60nm,1.1s						
PSZ	Piszkesteto	80.39	318	*e*P	P	03 52 00.1	-0.3
	comp=Z,8.9nm,0.9s						
PSZ	Piszkesteto	80.39	318	⇓*i*P	P	03 52 00.5	+0.1
PSZ	Piszkesteto	80.39	318	*e*P	P	03 52 01.1	+0.7
PSZ	Piszkesteto	80.39	318	*e*P	P	03 52 00.1	-0.3
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VTS	Vitosha	80.42	312	*e*P	P	03 52 00.4	-0.3
	comp=Z,20nm,0.9s						
VTS	Vitosha	80.42	312	⇑*i*P	P	03 52 00.6	-0.1
VTS	Vitosha	80.42	312	*e*P	P	03 52 00.4	-0.3
VTS				pmax	pmax		
	comp=Z,21nm,0.9s						
VYHS	Vyhne	80.79	319	*e*P	P	03 52 02.7	+0.3
VYHS				pmax	pmax		
	comp=Z,13nm,1.0s						
VYHS	Vyhne	80.79	319	*e*P	P	03 52 02.7	+0.3
RPZ	Rata Peaks	80.81	146	P	P	03 52 02.9	+0.6
	comp=Z,8.7nm,0.8s,baz=109,slow=19,SNR=4.5						
MORC	Moravsky Berou	81.00	321	*e*P	P	03 52 03.2	-0.4
	comp=Z,8.2nm,1.1s						
MORC	Moravsky Berou	81.00	321	⇑*i*P	P	03 52 03.8	+0.2
MORC	Moravsky Berou	81.00	321	*e*P	P	03 52 03.2	-0.4
MORC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MORC	Moravsky Berou	81.00	321	*e*P	P	03 52 03.5	-0.1
KSP	Ksiaz	81.24	322	*e*P	P	03 52 04.8	0.0
KSP	Ksiaz	81.24	322	*e*P	P	03 52 04.8	0.0
VAY	Valandovo	81.36	311	*i* P	P	03 52 04.9	-0.7
DPC	Dobruska-Polom	81.45	321	*e*P	P	03 52 06.2	+0.3
DPC				*e*pP	PcP	03 52 12.1	+0.2
DPC	Dobruska-Polom	81.45	321	*e*P	P	03 52 06.2	+0.3
DPC				*e*		03 52 12.1	
STIP	Stip	81.48	312	*i* P	P	03 52 04.6	-1.6
UPC	Upice	81.55	322	*e*P	P	03 52 06.6	+0.2
UPC	Upice	81.55	322	*e*P	P	03 52 06.6	+0.2
VRAC	Vranov	81.76	320	⇓*i*P	P	03 52 08.2	+0.6
VRAC	Vranov	81.76	320	*e*P	P	03 52 07.9	+0.3
VRAC	Vranov	81.76	320	LR	LR	04 30 50.7	
	comp=Z,102nm,19.8s,baz=54,slow=38						
MODS	Modra-Piesok	81.78	319	*e*P	P	03 52 08.0	+0.3
MODS				pmax	pmax		
	comp=Z,69nm,2.7s						
MODS	Modra-Piesok	81.78	319	*e*P	P	03 52 08.0	+0.3
SKO	Skopje	81.87	312	*i* P	P	03 52 08.4	+0.2
MORH	Mrgy, Hungar	81.89	317	⇑*e*P	P	03 52 07.1	-1.2
KULLO	Kullorsuaq	81.91	360	⇑*i*P	P	03 52 07.5	-0.3
	comp=Z,59nm,1.1s						
KULLO	Kullorsuaq	81.91	360	⇑*i*P	P	03 52 07.5	-0.3
KULLO				pmax	pmax		
	comp=Z,59nm,1.1s						
LIT	Litokhoron	81.92	310	*e*P	P	03 52 07.4	-1.2
	comp=Z,21nm,0.6s						
LIT	Litokhoron	81.92	310	*e*P	P	03 52 07.4	-1.2
LIT				pmax	pmax		
	comp=Z,21nm,0.6s						
DIVS	Divibare	81.94	315	*e*P	P	03 52 06.3	-2.4
	comp=Z,15nm,1.3s						
KRUC	Moravsky	81.99	320	*e*P	P	03 52 08.9	+0.2
TIH	Tihany	82.06	318	⇑*e*P	P	03 52 08.0	-1.1
KRUS	Krusevo	82.25	312	*i* P	P	03 52 09.5	-0.9
PVCC	Panska Ves	82.36	322	*e*P	P	03 52 11.1	+0.4
PVCC	Panska Ves	82.36	322	*e*P	P	03 52 11.1	+0.4
TREC	Trest	82.41	321	*e*P	P	03 52 11.3	+0.3
TREC	Trest	82.41	321	*e*P	P	03 52 11.3	+0.3
AGG	Agios Georgios	82.47	309	*e*P	P	03 52 09.6	-1.9
	comp=Z,23nm,0.9s						
AGG	Agios Georgios	82.47	309	*e*P	P	03 52 09.6	-1.9
AGG				pmax	pmax		
	comp=Z,23nm,0.9s						
PRU	Pruhonice	82.63	322	*e*P	P	03 52 11.7	-0.4
PRU	Pruhonice	82.63	322	*e*P	P	03 52 11.7	-0.4
SCO	Scoresbysund	82.64	349	*i* P	P	03 52 12.1	+0.4
	comp=Z,22nm,1.3s						
SCO	Scoresbysund	82.64	349	*i* P	P	03 52 12.1	+0.4
SCO				pmax	pmax		
	comp=Z,22nm,1.3s						
CONA	Conrad Observa	82.82	319	*i* P	P	03 52 13.4	+0.2
	comp=Z,10nm,1.1s						
CLL	Collm	82.86	323	*e*P	P	03 52 12.9	-0.2
	comp=Z,6.7nm,0.6s						
CLL	Collm	82.86	323	*i* P	P	03 52 12.4	-0.8
	comp=Z,14nm,1.3s						
CLL	Collm	82.86	323	*e*P	P	03 52 13.0	-0.2
CLL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SUMG	Summit	83.01	354	⇑*i*P	P	03 52 13.9	-0.2
	comp=Z,49nm,0.7s						
SUMG	Summit	83.01	354	⇑*i*P	P	03 52 13.9	-0.2
SUMG				pmax	pmax		
	comp=Z,49nm,0.7s						
YKW3	Yellowknife Ar	83.02	23	*e*P	P	03 52 13.4	-0.4
	comp=Z,16nm,0.6s						
YKA	Yellowknife Ar	83.07	23	P	P	03 52 14.2	+0.2
	comp=Z,13nm,0.7s,baz=310,slow=5.0,SNR=185						
YKB5	Yellowknife Ar	83.07	23	*e*P	P	03 52 13.3	-0.7
TIR	Tirane	83.20	312	⇑*i*P	P	03 52 14.9	-0.3
ARSA	Arzberg	83.34	319	*i* P	P	03 52 15.5	-0.4
	comp=Z,3.7nm,0.9s						
ITM	Ithomi	83.53	308	*e*P	P	03 52 15.9	-1.1
	comp=Z,61nm,0.7s						
KHC	Kasperske Hory	83.59	321	*e*P	P	03 52 17.1	-0.1
	comp=Z,6.1nm,1.2s						
KHC	Kasperske Hory	83.59	321	*e*P	P	03 52 16.5	-0.6
KHC	Kasperske Hory	83.59	321	*e*P	P	03 52 16.5	-0.6
GEC2	GERESS Array S	83.66	321	*e*P	P	03 52 17.1	-0.5
	comp=Z,15nm,1.0s						
GEC2	GERESS Array S	83.66	321	*e*P	P	03 52 17.1	-0.5
GEC2				pmax	pmax		
	comp=Z,15nm,1.0s						
GERES	GERESS Array B	83.66	321	P	P	03 52 17.3	-0.3
	comp=Z,8.7nm,0.8s,baz=57,slow=4.9,SNR=44						
GEA0	GERESS Array S	83.66	321	*e*P	P	03 52 17.2	-0.4
MOA	Molln	83.81	320	*i* P	P	03 52 18.3	0.0
	comp=Z,7.4nm,0.7s,SNR=10						
PERS	Pernice	83.88	318	*i* P	P	03 52 18.3	-0.3
SOKA	Soboth	83.91	319	*i* P	P	03 52 18.6	-0.3
	comp=Z,9.4nm,0.7s						
OPO	Ambohidratompo	84.22	247	P	P	03 52 21.4	+0.4
	comp=Z,13nm,0.8s,baz=36,slow=2.5,SNR=8.7						
OBKA	Obir	84.28	319	*i* P	P	03 52 20.5	-0.3
	comp=Z,11nm,0.8s,SNR=6.1						
BOJS	Bojanci	84.33	317	*i* P	P	03 52 21.1	+0.2
VISS	Visnje	84.44	318	*i* P	P	03 52 21.1	-0.4
GRFO	Grafenberg	84.65	322	*e*P	P	03 52 21.9	-0.6
	comp=Z,5.1nm,0.4s						
GRFO	Grafenberg	84.65	322	*e*P	P	03 52 21.9	-0.6
GRFO				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KBA	Koelnbreinsper	84.73	319	*i* P	P	03 52 22.3	-0.8
	comp=Z,7.0nm,0.6s,SNR=10						
MYKA	Terra Mystica	84.77	319	P	P	03 52 22.6	-0.7
	comp=Z,7.6nm,1.0s						
JAVS	Javornik	84.87	318	*e*P	P	03 52 22.9	-0.8
ABTA	Abfaltersbach	85.39	319	*i* P	P	03 52 24.9	-1.5
	comp=Z,21nm,1.4s,SNR=7.0						
WATA	Walderalm	85.64	320	*i* P	P	03 52 26.3	-1.3
	comp=Z,6.0nm,0.8s						
WTTA	Wattenberg	85.65	320	*i* P	P	03 52 26.9	-0.8
	comp=Z,8.9nm,0.9s						
KMBO	Kilima Mbogo	85.66	267	P	P	03 52 29.5	+1.1
	comp=Z,7.0nm,0.9s,baz=44,slow=7.4,SNR=18						
MOTA	Moosalm	85.92	320	*i* P	P	03 52 28.6	-0.4
	comp=Z,6.4nm,0.9s						
SQTA	Sankt Quirin	85.92	320	*i* P	P	03 52 28.0	-1.0
	comp=Z,13nm,1.1s,SNR=5.1						
RETA	Reutte	86.04	321	*i* P	P	03 52 28.7	-0.8
	comp=Z,7.6nm,1.2s						
TIP	Timpagrande	86.30	311	⇓*i*P	P	03 52 31.1	+0.1
FETA	Feichten	86.30	320	*i* P	P	03 52 30.4	-0.5
	comp=Z,12nm,1.5s						
DAVA	Damuels	86.66	321	*i* PcP	P	03 52 32.3	-0.4
	comp=Z,19nm,2.0s						
FUORN	Ofenpass-Fuorn	86.78	320	*e*P	P	03 52 32.9	-0.5
	comp=Z,16nm,1.0s						
DAVOX	Davos/Dischmat	86.92	320	LR	LR	04 33 59.9	
	comp=Z,194nm,18.9s,baz=83,slow=37						
MEM	Membach	86.98	325	⇓P	P	03 52 33.5	-0.5
LLLB	Lillooet	87.03	35	*e*P	P	03 52 34.2	-0.1
	comp=Z,8.2nm,0.8s						
PGC	Sidney	87.28	37	*e*P	P	03 52 35.4	0.0
	comp=Z,16nm,0.9s						
CEL	Celeste	87.33	311	*e*P	P	03 52 36.0	0.0
	comp=Z,37nm,0.8s						
BORG	Borgarnes	87.34	345	LR	LR	04 35 14.5	
	comp=Z,165nm,18.8s,baz=7.6,slow=38						
WLF	Walferdange	87.44	324	*e*P	P	03 52 35.9	-0.3
	comp=Z,97nm,1.0s						
WLF	Walferdange	87.44	324	*e*P	P	03 52 35.9	-0.3
WLF				pmax	pmax		
	comp=Z,97nm,1.0s						
WLF	Walferdange	87.44	324	⇑P	P	03 52 36.5	+0.3
	comp=Z,18nm,1.2s						
UCC	Uccle	87.73	326	⇑P	P	03 52 37.4	-0.2
NLWA	Neilton Lookou	87.73	38	*e*P	P	03 52 36.8	-1.0
	comp=Z,20nm,1.3s						
DOU	Dourbes	88.02	325	⇑P	P	03 52 38.2	-0.8
D03D	Eldon	88.10	38	P	P	03 52 39.6	+0.2
	baz=304						
B05A	Bryant	88.24	37	P	P	03 52 41.2	+1.1
	baz=305						
B06A	Marblemount	88.43	37	*e*P	P	03 52 41.4	+0.5
C06D	Leavenworth	89.10	37	P	P	03 52 45.5	+1.3
	baz=305						
SFJD	Kangerlussuaq	89.36	357	P	P	03 52 44.7	-0.2
	comp=Z,8.7nm,0.7s,baz=4.4,slow=9.1,SNR=4.4						
LTY	Liberty	89.61	37	*e*P	P	03 52 46.0	-0.6
	comp=Z,7.2nm,0.6s						
H04D	Lebanon	89.98	40	P	P	03 52 49.9	+1.6
	baz=304						
I03D	Drain, OR	90.07	41	P	P	03 52 50.0	+1.3
	baz=304						
I04A	Tendick Farm,	90.58	41	P	P	03 52 52.2	+1.0
	baz=304						
C09A	Chrisman Ranch	90.59	36	*e*P	P	03 52 51.4	+0.2
	comp=Z,12nm,0.6s						
I05D	Terrebonne, OR	90.91	40	P	P	03 52 54.4	+1.7
	baz=305						
NEW	Newport	90.92	35	P	P	03 52 54.2	+1.5
	baz=308						
NEW	Newport	90.92	35	P	P	03 52 53.7	+1.0
	comp=Z,10.0nm,0.9s,baz=305,slow=2.6,SNR=14						
J04D	Umpqua Nationa	91.08	41	P	P	03 52 55.2	+1.5
	baz=305						
E09A	Wood Farm, Sta	91.44	37	*e*P	P	03 52 55.3	+0.2
	comp=Z,7.8nm,0.8s						
L04D	Klamath Falls	91.54	42	P	P	03 52 57.3	+1.5
	baz=304						
YBH	Yreka Blue Hor	91.56	43	*e*P	P	03 52 56.6	+0.8
	comp=Z,15nm,1.1s						
YBH	Yreka Blue Hor	91.56	43	*e*P	P	03 52 56.7	+0.8
YBH				pmax	pmax		
	comp=Z,15nm,1.1s						
J05D	Fort Rock, OR	91.58	41	P	P	03 52 57.8	+1.8
	baz=305						
K04D	Chiloquin, OR	91.64	41	P	P	03 52 57.8	+1.6
	baz=305						
M02C	Callahan	91.66	43	P	P	03 52 58.1	+1.8
	baz=304						
M04C	Macdoel	92.07	42	P	P	03 52 59.6	+1.3
	baz=305						
FRB	Frobisher Bay	92.40	5	P	P	03 52 58.5	-0.6
	comp=Z,18nm,0.9s,baz=320,slow=4.6,SNR=11						
FCC	Fort Churchill	92.52	18	*e*P	P	03 52 59.5	-0.3
	comp=Z,17nm,0.8s						
FCC	Fort Churchill	92.52	18	*e*P	P	03 52 59.5	-0.3
FCC				pmax	pmax		
	comp=Z,17nm,0.8s						
BMO	Blue Mountains	92.92	38	*e*P	P	03 53 02.3	+0.2
	comp=Z,4.0nm,0.6s						
BMO	Blue Mountains	92.92	38	*e*P	P	03 53 02.3	+0.2
BMO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KEST	Kesra	93.12	311	*e*P	P	03 53 03.1	-0.1
	comp=Z,13nm,0.9s						
KEST	Kesra	93.12	311	P	P	03 53 03.4	+0.2
	comp=Z,9.8nm,0.8s,baz=4.3,slow=1.6,SNR=10						
FFC	Flin Flon	93.22	24	*e*P	P	03 53 03.5	+0.4
	comp=Z,36nm,1.2s						
FFC	Flin Flon	93.22	24	*e*P	P	03 53 03.5	+0.4
FFC				pmax	pmax		
	comp=Z,36nm,1.2s						
MSO	Missoula	93.50	35	*e*P	P	03 53 04.9	+0.2
	comp=Z,16nm,1.4s						
MSO	Missoula	93.50	35	P	P	03 53 05.7	+1.0
	baz=311						
ORV	Oroville	93.55	44	*e*P	P	03 53 05.2	+0.2
	comp=Z,11nm,1.4s						
ORV	Oroville	93.55	44	*e*P	P	03 53 05.2	+0.2
ORV				pmax	pmax		
	comp=Z,11nm,1.4s						
HRY	Holter Researc	94.67	34	*e*P	P	03 53 10.1	0.0
VCNR	Virginia City	94.86	43	*e*P	P	03 53 11.6	+0.4
	comp=Z,5.8nm,0.9s						
NV01	Mina Array Sit	96.22	43	*e*P	P	03 53 17.2	-0.3
NVAR	Mina Array Bea	96.22	43	P	P	03 53 18.6	+1.1
	comp=Z,2.3nm,0.7s,baz=292,slow=5.2,SNR=5.5						
TOA1	Torodi Ar. Sit	111.11	296	*e*PKiKP	PKiKP	03 58 21.1	-2.0
TOA1				*e*PP	PP	03 59 01.9	0.0
TORD	Torodi Ar. Bea	111.11	296	PKiKP	PKiKP	03 58 21.2	-2.0
	comp=Z,0.8nm,0.6s,baz=59,slow=2.4,SNR=6.1						
TORD				PP	PP	03 59 01.9	0.0
	comp=Z,0.9nm,0.9s,baz=50,slow=7.7,SNR=4.5						
LTX	Lajitas	111.33	42	*e*PKiKP	PKiKP	03 58 22.9	-0.5
LTX				*e*PP	PP	03 59 02.2	-0.6
LTX	Lajitas	111.33	42	*e*PKIKP	PKiKP	03 58 22.9	-0.5
LTX				*e*		03 59 02.2	
TXAR	Lajitas Array	111.33	42	PKiKP	PKiKP	03 58 22.9	-0.5
	comp=Z,0.7nm,0.7s,baz=129,slow=0.7,SNR=7.0						
TXAR				PP	PP	03 59 02.2	-0.6
	comp=Z,0.6nm,0.7s,baz=326,slow=7.7,SNR=3.9						
TXAR				PKKPab	PKKPab	04 09 31.2	+0.7
	comp=Z,0.1nm,0.7s,baz=149,slow=7.2,SNR=3.7						
U50A	Jamestown	115.00	24	P	PKiKP	03 58 29.5	-0.6
	baz=333						
W49A	Belvidere	115.60	26	P	PKiKP	03 58 30.7	-0.6
	baz=331						
V52A	Sevierville	115.97	23	P	PKiKP	03 58 31.3	-0.6
	baz=334						
W53A	Cullowhee	116.72	23	P	PKPdf	03 58 33.0	-0.6
	baz=334						
X52A	Dahlonega	116.97	24	P	PKPdf	03 58 33.5	-0.5
	baz=334						
X53A	Estanollee	117.27	23	P	PKPdf	03 58 34.1	-0.4
	baz=334						
NVL	N'lazarevskaya	118.86	201	*e*P	Pdif	03 55 09.2	+12
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DBIC	Dimbokro	120.00	293	PKP	PKPdf	03 58 39.1	-1.1
	comp=Z,2.2nm,0.5s,baz=34,slow=3.6,SNR=6.7						
KIC	Kosan Boka	120.06	293	*e*PKIKP	PKPdf	03 58 38.9	-1.4
	comp=Z,5.6nm,0.4s						
TIC	Toumodi	120.15	294	*e*PKIKP	PKPdf	03 58 39.3	-1.2
LIC	Lamto	120.38	293	*e*PKIKP	PKPdf	03 58 39.1	-1.8
	comp=Z,17nm,0.8s						
SDV	Santo Domingo	145.28	22	*e*PKPbc	PKPab	03 59 27.3	-0.1
SDV	Santo Domingo	145.28	22	PKPbc	PKPab	03 59 27.2	-0.2
	comp=Z,99nm,0.8s,baz=333,slow=2.1,SNR=74						
ROSC	El Rosal	147.42	31	*e*PKPbc	PKPbc	03 59 34.5	+0.6
ROSC	El Rosal	147.42	31	PKPbc	PKPbc	03 59 33.9	-0.1
	comp=Z,15nm,0.5s,baz=280,slow=7.9,SNR=15						
OTAV	Otavalo	148.96	43	*e*PKPbc	PKPbc	03 59 38.5	+0.4
OTAV	Otavalo	148.96	43	*e*PKP2	PKPbc	03 59 38.5	+0.4
PTGA	Pitinga	157.03	5	PKPab	PKPab	04 00 13.6	-1.7
	comp=Z,5.2nm,0.7s,baz=357,slow=8.5,SNR=7.6						
BDFB	Brasilia	167.63	309	*e*PKPab	PKPab	04 01 01.4	-0.5
BDFB	Brasilia	167.63	309	*e*PKP2	PKPab	04 01 01.4	-0.5
BDFB	Brasilia	167.63	309	PKPab	PKPab	04 01 01.0	-0.9
	comp=Z,7.2nm,0.8s,baz=124,slow=1.6,SNR=11						
LPAZ	La Paz	167.92	54	PKPab	PKPab	04 01 02.6	-1.3
	comp=Z,2.4nm,0.8s,baz=355,slow=8.9,SNR=4.3						
SIV	San Ignacio	171.75	21	PKPab	PKPab	04 01 19.4	-0.5
	comp=Z,3.7nm,0.9s,baz=330,slow=4.3,SNR=7.8						

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*IDC **02** 03:39:48.6±0.4, 10°.92S×165°.42E, h0^{km}, mb4.5/32, mb1 4.7/34, mb1mx4.6/56, mbtmp4.6/34, ML5.0/2, MS4.5/17, Ms1 4.5/17, ms1mx4.2/46, Error ellipse: s-maj=14.5km s-min=12.0km az=119.0*

*BJI **02** 03:39:48.8, 11°.06S×165°.42E, h12^{km}, mB5.5/18, mb4.9/28, Ms5.1/14, Ms7 4.8/12*

*ISCJB **02** 03:39:51.6±0.1, 10°.98S±0°.03×165°.35E±0°.03, h30^{km}, mb4.8/120, MS4.5/21, Error ellipse: s-maj=4.3km s-min=3.8km az=21.9*

*NEIC **02** 03:39:52.2±1.6, 10°.92S×165°.39E, h24^{km}±11^{km}, mb4.9/90, Error ellipse: s-maj=4.6km s-min=3.9km az=154.0*

*GCMT **02** 03:39:53.2±0.2, 11°.05S±0°.02×165°.24E±0°.01, h18^{km}, MW5.2/93, Moment Tensor Solution. s66,c88; s93,c146; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.65±.03; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$-0.61±.02; $M_{r\theta}$0.41±.05; $M_{\theta\phi}$0.11±.01; $M_{\phi r}$-0.50±.04; Best double couple: $M_0$0.90400×10^{17} NP1:ϕ_s151.00000°, δ68.00000°, λ76.00000°. NP2:ϕ_s4.00000°, δ26.00000°, λ121.00000°. Principal axes: T 0.9460, Plg64.0000°, Azm37.0000°; N -0.0840, Plg13.0000°, Azm156.0000°; P -0.8620, Plg22.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 03:39:53.2±0.3**, 10°.99S**±0°.05×**165°.51E**±0°.05**, h30^{km}, n280, σ1^s.50**/269**, mb4.8**/120**, MS4.6**/21**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.69	285	*e*P	Pn	03 41 14.0	-1.7
HNR				*e*S	Sn	03 42 22.0	+2.0
HNR	Honiara	5.69	285	*e*Pn	Pn	03 41 12.8	-2.9
HNR				Sn	Sn	03 42 17.8	-2.2
HNR	Honiara	5.69	285	Pn	Pn	03 41 13.6	-2.0
	79nm,0.3s,baz=150,slow=5.1,SNR=8.6						
HNR				Sn	Sn	03 42 17.8	-2.2
	baz=165,slow=19,SNR=3.7						
HNR				LR	LR	03 43 30.3	
	comp=Z,9µm,20.7s,baz=104,slow=40						
MARNC	Mare, Loyalty	10.71	167	*e*Pn	Pn	03 42 26.5	+1.9
DZM	Mont Dzumac	11.06	175	*e*Pn	Pn	03 42 29.8	+0.3
	220nm,1.2s						
DZM				*e*LR	LR	03 45 00.0	
	comp=Z,3µm,25.1s						
DZM	Mont Dzumac	11.06	175	Pn	Pn	03 42 30.1	+0.6
	5.5nm,0.3s,baz=343,slow=9.2,SNR=90						
DZM				Sn	Sn	03 44 32.4	+0.2
	1.0nm,0.3s,baz=328,slow=19,SNR=2.0						
ONTNC	Ouen Toro	11.29	176	*e*Pn	Pn	03 42 33.6	+1.1
PINNC	Pines Island,	11.71	171	*e*Pn	Pn	03 42 38.9	+0.6
TARA	Tarawa	14.31	31	*e*Pn	Pn	03 43 13.0	-0.9
EIDS	Eidsvold	19.78	222	*e*P	Pn	03 44 22.1	-0.6
	40nm,0.9s						
CTA	Charters Tower	20.62	242	P	P	03 44 31.1	+0.9
	58nm,0.8s,baz=73,slow=12,SNR=24						
CTA				LR	LR	03 51 37.1	
	comp=Z,2µm,18.8s,baz=62,slow=34						
CTAO	Charters Tower	20.62	242	*e*P	P	03 44 30.0	-0.3
COEN	Coen	22.00	260	*e*P	P	03 44 43.8	-1.4
	74nm,1.4s						
ARMA	Armidale	23.24	212	*e*P	P	03 44 58.8	+0.5
	45nm,1.1s						
MKAZ	Moumakai	27.42	163	P	P	03 45 39.5	+3.2
HIZ	Hauiti	28.66	165	*e*P	P	03 45 49.9	+2.6
	36nm,1.1s						
HAZ	Te Kaha	28.84	160	P	P	03 45 51.3	+2.4
URZ	Urewera	29.08	161	P	P	03 45 52.5	+1.5
	16nm,0.8s,baz=243,slow=1.8,SNR=8.0						
URZ				LR	LR	03 56 47.3	
	comp=Z,1µm,18.5s,baz=351,slow=35						
URZ	Urewera	29.08	161	P	P	03 45 52.8	+1.8
MWZ	Matawai	29.28	160	P	P	03 45 55.1	+2.2
TWGZ	Tauwhareparae	29.29	160	P	P	03 45 54.2	+1.2
H11S2	WAKE ISLAND Hy	29.32	2	T	T	04 16 34.8	
	baz=183,slow=76,SNR=105						
H11S3	WAKE ISLAND Hy	29.32	2	T	T	04 16 29.6	
	baz=183,slow=76,SNR=55						
H11S1	WAKE ISLAND Hy	29.33	2	T	T	04 16 31.0	
	baz=183,slow=76,SNR=71						
WTVZ	West Tongariro	29.42	164	P	P	03 45 59.6	+5.4
TRVZ	Turoa	29.58	164	P	P	03 45 58.7	+3.0
SNGZ	Shannon Statio	29.63	161	P	P	03 45 57.0	+1.0
RIGZ	Rimuhau	29.70	160	P	P	03 45 58.0	+1.4
BKZ	Black Stump Fm	29.72	163	*e*P	P	03 45 58.0	+1.2
	41nm,1.0s						
BKZ	Black Stump Fm	29.72	163	P	P	03 45 58.7	+1.9
NMHZ	Naumai	29.75	162	P	P	03 45 59.5	+2.4
KWHZ	Kaweka Forest	29.94	163	P	P	03 46 00.6	+1.8
KNZ	Kokohu	29.95	161	P	P	03 45 59.7	+0.9
STKA	Stephens Creek	30.32	223	*e*P	P	03 46 01.8	-0.3
	2.2nm,0.8s						
STKA	Stephens Creek	30.32	223	P	P	03 46 02.3	+0.1
	9.5nm,0.8s,baz=30,slow=9.6,SNR=20						
STKA				LR	LR	03 57 44.6	
	comp=Z,3µm,18.1s,baz=49,slow=36						
TSZ	Takapari Road	30.40	164	P	P	03 46 04.5	+1.7
KAHZ	Kahuranaki	30.41	163	P	P	03 46 04.5	+1.6
H11N1	WAKE ISLAND Hy	30.54	3	T	T	04 18 04.8	
	baz=182,slow=76,SNR=53						
H11N3	WAKE ISLAND Hy	30.54	3	T	T	04 18 06.0	
	baz=182,slow=76,SNR=46						
H11N2	WAKE ISLAND Hy	30.56	3	T	T	04 18 06.3	
	baz=182,slow=76,SNR=32						

BFZ	Birch Farm	31.06	164	*e*P	P	03 46 08.5	0.0
	89nm,1.3s						
WRAB	Tennant Creek	31.27	250	*e*P	P	03 46 09.0	-1.7
	8.6nm,0.6s						
SNZO	South Karori	31.27	167	*e*P	P	03 46 10.7	+0.3
WB2	Warramunga Arr	31.27	250	*e*P	P	03 46 08.8	-1.9
	24nm,1.0s						
WRA	Warramunga Arr	31.28	250	P	P	03 46 09.6	-1.3
	3.8nm,0.5s,baz=81,slow=9.0,SNR=25						
WRA				LR	LR	03 58 58.4	
	comp=Z,2µm,18.3s,baz=70,slow=37						
THZ	Tophouse	31.34	169	*e*P	P	03 46 12.8	+1.8
	30nm,0.8s						
AS01	Alice Springs	32.56	243	*e*P	P	03 46 20.0	-2.1
AS31	Alice Springs	32.60	243	*e*P	P	03 46 21.0	-1.5
	10nm,0.7s						
ASAR	Alice Springs	32.61	243	P	P	03 46 20.6	-1.8
	35nm,0.7s,baz=72,slow=9.6,SNR=200						
ASAR				LR	LR	03 58 34.7	
	comp=Z,1µm,19.5s,baz=75,slow=35						
RPZ	Rata Peaks	32.96	173	P	P	03 46 25.1	-0.1
	6.7nm,0.7s,baz=313,slow=5.0,SNR=4.8						
RPZ				LR	LR	03 56 21.6	
	comp=Z,186nm,21.7s,baz=348,slow=30						
BBOO	Buckleboo	34.70	227	*e*P	P	03 46 39.6	-0.9
	19nm,0.9s						
SIJI	Sorong	35.46	284	LR	LR	04 00 53.4	
	comp=Z,685nm,21.9s,baz=112,slow=36						
FITZ	Fitzroy Crossi	39.17	255	*e*P	P	03 47 17.2	-1.5
	21nm,1.4s						
FITZ	Fitzroy Crossi	39.17	255	P	P	03 47 17.4	-1.3
	7.2nm,0.7s,baz=105,slow=6.1,SNR=22						
FITZ				LR	LR	04 03 08.5	
	comp=Z,1µm,18.4s,baz=78,slow=36						
FORT	Forrest	39.88	235	*e*P	P	03 47 24.3	-0.2
	38nm,1.0s						
BATI	Baumata	41.11	267	LR	LR	04 05 45.2	
	comp=Z,702nm,18.4s,baz=106,slow=38						
KMSI	Cibinong	42.84	283	P	P	03 47 54.1	+5.1
DAV	Davao City (W)	43.60	293	LR	LR	04 06 02.9	
	comp=Z,156nm,18.4s,baz=132,slow=36						
PPT	Papeete	43.94	104	LR	LR	04 05 23.1	
	comp=Z,961nm,18.0s,baz=261,slow=35						
PPT2	Papeete2	43.94	104	*e*S	S	03 54 27.3	-0.7
	525nm,25.2s						
PPT2				*e*LQ	LQ	03 58 11.8	
	834nm,30.0s						
PPT2				*e*LR	LR	04 00 02.6	
	comp=Z,1µm,22.5s						
WSI	Waingapu	44.46	267	P	P	03 48 02.8	+0.7
TBI	Tubuai	44.57	112	*e*S	S	03 54 36.6	-0.3
	483nm,27.2s						
TBI				*e*LQ	LQ	03 58 28.0	
	2µm,27.8s						
TBI				*e*LR	LR	04 00 20.3	
	comp=Z,1µm,32.0s						
NWAO	Narrogin (SRO)	49.30	236	*e*P	P	03 48 38.5	-1.2
NWAO	Narrogin (SRO)	49.30	236	P	P	03 48 39.9	+0.2
	11nm,0.8s,baz=323,slow=10,SNR=5.5						
TGY	Tagaytay City	50.74	298	LR	LR	04 07 25.2	
	comp=Z,525nm,21.9s,baz=168,slow=33						
TAOE	Nuku Hiva Isla	53.52	93	*e*S	S	03 56 41.7	-1.5
	546nm,24.5s						
TAOE				*e*LR	LR	04 04 27.6	
	comp=Z,814nm,26.1s						
MJAR	Matsushiro Arr	53.81	333	P	P	03 49 12.0	-1.3
	7.2nm,0.9s,baz=172,slow=9.0,SNR=7.6						
MAJO	Matsushiro	53.81	333	*e*P	P	03 49 11.8	-1.4
	7.3nm,0.7s						
JNU	Nakatsue	54.90	324	*e*P	P	03 49 19.3	-1.9
	45nm,1.1s						
JNU	Nakatsue	54.90	324	P	P	03 49 21.1	-0.2
	21nm,0.8s,baz=103,slow=3.6,SNR=7.1						
JNU				LR	LR	04 09 28.4	
	comp=Z,109nm,20.5s,baz=119,slow=32						
RKT	Rikitea	57.83	110	*e*LR	LR	04 06 28.5	
	comp=Z,1µm,29.8s						
ASAJ	Asahikawa	58.66	341	P	P	03 49 48.0	+0.3
	17nm,1.0s,baz=190,slow=16,SNR=3.6						
ASAJ				LR	LR	04 08 44.8	
	comp=Z,289nm,21.0s,baz=100,slow=30						
KSRS	Korea Array	59.70	326	P	P	03 49 55.0	+0.1
	3.5nm,1.0s,baz=142,slow=6.3,SNR=4.4						
KSAR	Wonju Array Be	59.71	326	P	P	03 49 55.0	0.0
NJ2	Nanjing	61.81	316	*e*P	P	03 50 10.0	+0.5
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
QIZ	Qiongzhong	62.45	298	P	P	03 50 14.1	+0.1
QIZ				S	S	03 58 45.6	+6.0
QIZ				pmax	pmax		
	comp=Z,550nm,9.6s						
QIZ				LR	LR		
	comp=N,280nm,18.0s						
QIZ				LR	LR		
	comp=E,360nm,26.5s						
QIZ				LR	LR		
	comp=Z,520nm,21.6s						
USRK	Ussuriysk Ar.	62.79	333	P	P	03 50 16.0	+0.2
	10nm,1.1s,baz=132,slow=8.0,SNR=5.9						
PETK	Petropavlovsk-	64.19	355	P	P	03 50 25.4	+0.5
	3.8nm,0.9s,baz=185,slow=14,SNR=2.8						
VNDA	Vanda	66.55	181	*e*P	P	03 50 40.9	+1.0
	7.2nm,1.1s						
VNDA	Vanda	66.55	181	P	P	03 50 40.8	+0.9
	1.3nm,0.7s,baz=354,slow=7.6,SNR=8.2						
MNSI	Mandailing Nat	66.55	276	P	P	03 50 39.3	-1.7
SKNT	Sakolnakorn	66.85	294	P	P	03 50 44.4	+1.5
	8.1nm,1.6s,959nm						
CHBT	CHBT	67.00	289	P	P	03 50 49.8	+6.0
	36nm,1.1s						
PSI	Prapat	67.63	278	P	P	03 50 46.8	-1.3
	6.6nm,0.9s,baz=180,slow=4.1,SNR=4.7						
GYA	Guiyang	68.19	304	*e*P	P	03 50 52.4	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	Baijiatuau	68.28	321	*e*P	P	03 50 50.6	-0.8
GSI	Gunungsitoli	68.62	276	*e*P	P	03 50 53.3	-0.8
	39nm,1.2s						
GSI	Gunungsitoli	68.62	276	P	P	03 50 51.7	-2.4
KMI	Kunming	70.89	301	P	P	03 51 08.8	+0.7
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC	Hu-ho-hao-te	71.64	320	*e*P	P	03 51 12.7	+0.5
HHC				S	S	04 00 35.3	+5.4
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,380nm,6.3s						
HHC				LR	LR		
	comp=N,340nm,16.2s						
HHC				LR	LR		
	comp=E,370nm,16.9s						
HHC				LR	LR		
	comp=Z,230nm,17.2s						
CM01	Chiang Mai Arr	71.85	294	*e*P	P	03 51 13.5	-0.3
CMAR	Chiang Mai Arr	71.87	294	P	P	03 51 13.6	-0.3
	1.5nm,0.3s,baz=118,slow=4.9,SNR=8.2						
CMMT	Chiang Mai	71.98	294	P	P	03 51 22.7	+8.1
CHTO	Chiang Mai	71.98	294	*e*P	P	03 51 14.0	-0.6
	16nm,1.4s						
CHTO	Chiang Mai	71.98	294	P	P	03 51 22.8	+8.2
CD2	Chengdu	72.38	307	*e*P	P	03 51 15.5	-1.3
SEY	Seymchan	74.39	354	P	P	03 51 27.1	-0.7
	1.9nm,0.9s,baz=197,slow=11,SNR=2.9						
LZH	Lanzhou	74.54	312	*e*P	P	03 51 32.1	+2.5
LZH				pP	pP	03 51 38.3	+0.1
LZH				sP	sP	03 51 40.8	-0.6
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,5.5s						
LZH				LR	LR		
	comp=N,960nm,13.2s						
LZH				LR	LR		
	comp=E,490nm,13.5s						
LZH				LR	LR		
	comp=Z,870nm,15.7s						
GAMB	Gambell	76.56	10	*e*P	P	03 51 39.6	-0.6
	28nm,1.4s						
SONM	Songino Array	78.48	324	P	P	03 51 51.6	+0.1
	2.5nm,0.8s,baz=144,slow=7.5,SNR=12						
SONA1	Songino Array	78.48	324	*e*P	P	03 51 51.2	-0.4
BILL	Bilibino	78.82	0	*e*P	P	03 51 52.5	-0.3
	13nm,1.0s						
GTA	Gaotai	78.85	314	*e*P	P	03 51 54.5	+0.7
GTA				pP	PcP	03 51 58.9	-3.5
GTA				sP	pP	03 52 02.2	-0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,5.5s						
GTA				LR	LR		
	comp=N,260nm,16.8s						
GTA				LR	LR		
	comp=E,210nm,15.8s						
GTA				LR	LR		
	comp=Z,310nm,19.9s						
QSPA	South Pole Qui	79.02	180	*e*P	P	03 51 54.0	-0.2
BRDH	Bariadhala	79.66	296	LR	LR	04 25 11.4	
	comp=Z,236nm,21.5s,baz=120,slow=34						
TLY	Talaya	81.94	326	*e*P	P	03 52 09.9	-0.1
	12nm,1.0s						
TLY	Talaya	81.94	326	P	P	03 52 09.5	-0.5
	1.2nm,0.6s,baz=81,slow=2.7,SNR=4.5						
TLY				LR	LR	04 27 40.4	
	comp=Z,247nm,18.3s,baz=116,slow=35						
RDOG	Red Dog Mine	82.01	11	*e*P	P	03 52 10.7	+0.7
	8.8nm,1.0s						
MCCM	Marconi Confer	82.66	49	*e*P	P	03 52 14.2	+0.2
KCPM	Cahto Peak	82.69	47	*e*P	P	03 52 15.1	+0.8
	15nm,1.0s						
KMRM	Mail Ridge	82.78	47	*e*P	P	03 52 16.1	+1.4
	15nm,0.9s						
GDXM	Geysers	82.95	48	*e*P	P	03 52 16.8	+1.2
	9.1nm,1.0s						
HDA	Harding Lake	83.27	19	P	P	03 52 16.9	+0.3
	baz=227						
SAO	San Andreas Ge	83.28	51	*e*P	P	03 52 17.6	+0.3
	7.5nm,0.9s						
COLA	College	83.31	18	*e*P	P	03 52 15.7	-1.0
	6.9nm,0.9s						
O02D	Mt. Diablo Mer	83.43	47	P	P	03 52 19.0	+0.9
	baz=250,SNR=7.7						
ILAR	Eielson Array	83.53	19	P	P	03 52 18.1	+0.1
	2.3nm,0.8s,baz=232,slow=5.4,SNR=4.8						
L02E	Cave Junction	83.55	45	P	P	03 52 19.2	+0.7
	baz=249						
K02D	Willamette Mer	83.70	44	P	P	03 52 19.7	+0.3
	baz=249						
WDC	Whiskeytown Da	83.74	47	*e*P	P	03 52 20.4	+0.9
	5.0nm,1.0s						
N02D	Trinity Center	83.76	46	P	P	03 52 20.2	+0.5
	baz=250,SNR=6.5						
M02C	Callahan	83.80	46	P	P	03 52 20.5	+0.6
	baz=250,SNR=5.5						
SCRK	Sand Creek	83.94	20	*e*P	P	03 52 19.9	-0.3
	14nm,1.2s						
PKM	Mcpherson Peak	83.95	53	P	P	03 52 21.9	+0.9
	baz=252						
YBH	Yreka Blue Hor	84.02	46	*e*P	P	03 52 20.8	-0.3
	7.4nm,0.9s						
YBH	Yreka Blue Hor	84.02	46	P	P	03 52 21.4	+0.4
	4.9nm,0.9s,baz=141,slow=1.4,SNR=17						
ORV	Oroville	84.15	48	*e*P	P	03 52 22.0	+0.3
	6.0nm,0.9s						
HUMO	Hull Mountain	84.16	45	*e*P	P	03 52 21.8	+0.1
	8.2nm,0.9s						
O03E	Paynes Creek	84.18	47	P	P	03 52 22.6	+0.7
	baz=250						
AFDM	Forest Hills D	84.34	49	*e*P	P	03 52 23.0	+0.3
	11nm,1.0s						
CMB	Columbia Colle	84.48	50	*e*P	P	03 52 23.6	+0.1
	5.4nm,0.8s						
ARVC	Arvin	84.79	53	P	P	03 52 25.0	0.0
	baz=253						
VES	Vestal, Richgr	84.80	52	P	P	03 52 25.0	0.0
	baz=253						
G03D	McMinnville, O	84.87	42	P	P	03 52 25.5	+0.3
	baz=249						
I04A	Tendick Farm,	84.94	44	P	P	03 52 25.9	+0.3
	baz=250						
J04D	Umpqua Nationa	84.96	44	P	P	03 52 26.0	+0.1
	baz=250						
H04D	Lebanon	84.98	43	P	P	03 52 25.9	+0.1
	baz=250						
RUBR	Rubicon Trail	84.98	49	*e*P	P	03 52 26.2	+0.1
	11nm,0.8s						
K04D	Chiloquin, OR	85.00	45	P	P	03 52 26.3	+0.3
	baz=250						
MWC	Mount Wilson	85.14	54	*e*P	P	03 52 27.4	+0.4
MWC				*e*pP	PcP	03 52 32.9	+2.8
ISA	Isabella, Lake	85.23	52	*e*P	P	03 52 26.7	-0.5
	5.7nm,1.0s						
ISA	Isabella, Lake	85.23	52	P	P	03 52 26.8	-0.5
	baz=253,SNR=5.7						
WAKR	Walker	85.34	50	*e*P	P	03 52 28.9	+0.9
	13nm,1.2s						
MDPB	Devils Postpil	85.34	50	*e*P	P	03 52 27.6	-0.4
	7.3nm,0.8s						
EDW2	Edwards Air Fo	85.38	53	P	P	03 52 28.1	+0.1
	baz=253,SNR=9.6						
OMMB	Old Mammoth Mi	85.40	50	*e*P	P	03 52 27.9	-0.5
	5.8nm,1.1s						
PNTR	Pine Nut	85.40	49	*e*P	P	03 52 27.7	-0.5
	7.6nm,1.0s						
BFSC	Mount Baldy Ra	85.46	54	P	P	03 52 28.4	-0.1
	baz=254						
J05D	Fort Rock, OR	85.58	45	P	P	03 52 29.6	+0.7
	baz=251						
DAWY	Dawson	85.59	21	*e*P	P	03 52 28.7	+0.3
	3.3nm,0.6s						
PAHR	Pah Rah Range	85.75	48	*e*P	P	03 52 30.5	+0.6
	8.2nm,1.0s						
CWC	Cottonwood Cre	85.76	52	P	P	03 52 30.5	+0.4
	baz=253						
MOD	Modoc Plateau	85.78	46	*e*P	P	03 52 29.4	-0.6
	3.7nm,0.7s						
LRMC	Laurel Mtn Rad	85.79	53	P	P	03 52 30.1	-0.1
	baz=254,SNR=6.0						
E04D	Cinebar	85.81	41	P	P	03 52 30.9	+1.1
	baz=250						
D03D	Eldon	85.82	40	P	P	03 52 30.5	+0.6
	baz=249						
TIN	Tinemaha, Big	85.82	51	P	P	03 52 31.1	+0.9
	baz=253						
I05D	Terrebonne, OR	85.86	44	P	P	03 52 30.9	+0.7
	baz=250						
D04E	Lakebay	85.89	40	P	P	03 52 31.3	+1.1
	baz=249						
PINE	Pine Mountain	85.94	44	*e*P	P	03 52 30.1	-0.8
	12nm,1.0s						
RYN	Ryan	86.06	50	*e*P	P	03 52 30.2	-1.3
	8.3nm,1.3s						
MONP2	Monument Peak	86.08	56	P	P	03 52 32.5	+0.8
	baz=254						
DAC	Darwin (Calif)	86.09	52	*e*P	P	03 52 31.9	+0.2
	5.6nm,1.1s						
MPMC	Manual Prospec	86.11	52	P	P	03 52 32.1	+0.3
	baz=254						
NV01	Mina Array Sit	86.17	50	*e*P	P	03 52 32.0	-0.1
NVAR	Mina Array Bea	86.17	50	P	P	03 52 32.5	+0.4
	3.4nm,0.8s,baz=232,slow=7.6,SNR=20						
G05D	Wamic, OR	86.17	43	P	P	03 52 32.2	+0.5
	baz=250						
PFO	Pinyon Flats O	86.24	55	*e*P	P	03 52 31.8	-0.6
	4.3nm,1.1s						
PFO	Pinyon Flats O	86.24	55	P	P	03 52 32.6	+0.2
	baz=254						
PFO	Pinyon Flats O	86.24	55	P	P	03 52 32.6	+0.2
	2.0nm,0.6s,baz=281,slow=2.9,SNR=5.0						
TPFO	Pinon Flats	86.25	55	P	P	03 52 32.4	0.0
	baz=254						
XPFO	Pion Flat	86.25	55	*e*P	P	03 52 31.8	-0.7
	2.8nm,0.8s						
IKP	In-Ko-Pah, Jac	86.27	56	P	P	03 52 32.8	+0.2
	baz=255						
NV11	Mina Array Sit	86.28	50	*e*P	P	03 52 32.2	-0.4
	0.6nm,1.0s						
LON	Longmire	86.36	41	*e*P	P	03 52 32.5	-0.2
	9.9nm,1.0s						
GSC	Goldstone, Bar	86.43	53	*e*P	P	03 52 34.0	+0.7
	4.1nm,1.1s						
GSC	Goldstone, Bar	86.43	53	P	P	03 52 33.7	+0.4
	baz=254						
GRAC	Grapevine Rang	86.47	51	P	P	03 52 33.5	+0.1
	baz=254,SNR=6.0						
KVN	Kaiserville	86.50	49	*e*P	P	03 52 33.3	-0.4
	5.2nm,1.0s						
SWSC	Sam W. Stewart	86.60	56	P	P	03 52 34.3	+0.2
	baz=255						
HEC	Hector,Ludlow	86.67	54	P	P	03 52 34.8	+0.4
	baz=254						
B05A	Bryant	86.70	40	P	P	03 52 34.6	+0.4
	baz=250						
FURC	Furnace Creek,	86.70	52	P	P	03 52 35.0	+0.6
	baz=254						
BELC	Belle Mtn. Jos	86.72	55	P	P	03 52 34.8	+0.1
	baz=255,SNR=10						
SHOC	Shoshone, Teco	87.01	53	P	P	03 52 36.4	+0.3
	baz=254						
I07A	Izee	87.02	44	*e*P	P	03 52 35.7	-0.3
	4.6nm,0.9s						
BC3	Big Chuckawall	87.06	55	P	P	03 52 36.7	+0.3
	baz=255						
WVOR	Wild Horse Val	87.12	46	*e*P	P	03 52 35.8	-0.8
	12nm,1.4s						
TUQ	Turquoise Moun	87.16	53	P	P	03 52 36.6	-0.3
	baz=255,SNR=5.2						
GMRC	Granite Mounta	87.19	54	P	P	03 52 37.3	+0.2
	baz=255						
LTY	Liberty	87.27	41	*e*P	P	03 52 37.1	0.0
	7.2nm,0.6s						
F07A	Phinny Hill Vi	87.31	42	*e*P	P	03 52 37.9	+0.7
	9.7nm,0.8s						
TPNV	Topopah Spring	87.31	52	*e*P	P	03 52 37.2	-0.4
	8.7nm,1.5s						
TPNV	Topopah Spring	87.31	52	P	P	03 52 37.7	+0.1
	baz=254						
IRM	Iron Mountain	87.44	55	P	P	03 52 37.9	-0.3
	baz=255,SNR=8.0						
J08A	Circle Bar Ran	87.51	45	*e*P	P	03 52 38.2	-0.1
	12nm,1.3s						
LDFC	Landfair	87.71	54	*e*P	P	03 52 39.7	+0.2
	12nm,0.8s						
HAWA	Hanford	87.73	42	*e*P	P	03 52 39.9	+0.7
	14nm,1.0s						
G08A	Pilot Rock	87.77	43	*e*P	P	03 52 40.0	+0.4
Y12C	Blythe	87.84	55	*e*P	P	03 52 40.4	+0.4
	10nm,1.1s						
Y12C	Blythe	87.84	55	P	P	03 52 40.7	+0.7
	baz=255						
SHPR	Sheep Range	88.04	52	*e*P	P	03 52 40.8	-0.4
	7.6nm,1.2s						
E08A	Dider Farm, El	88.07	42	*e*P	P	03 52 41.6	+0.8
	8.2nm,0.7s						
R11A	Troy Canyon, C	88.19	51	*e*P	P	03 52 41.6	-0.3
	2.4nm,1.0s						
R11A	Troy Canyon, C	88.19	51	P	P	03 52 42.2	+0.4
	baz=255						
PDMCI	Parker Dam,Lak	88.28	55	P	P	03 52 42.6	+0.5
	baz=256						
B08A	Colville Reser	88.47	40	*e*P	P	03 52 42.9	+0.1
W13A	Hualapai Mount	88.68	54	*e*P	P	03 52 41.6	-2.7
	9.6nm,1.3s						
214A	Organ Pipe Nat	88.80	57	P	P	03 52 45.5	+0.9
	baz=256						
WMQ	Urumqi	88.89	315	*e*P	P	03 52 44.0	-0.8
WMQ				pP	pP	03 52 51.4	-2.2
WMQ				sP	sP	03 52 54.7	-2.1
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.1s						
WMQ				LR	LR		
	comp=N,340nm,21.1s						
WMQ				LR	LR		
	comp=E,260nm,25.3s						
WMQ				LR	LR		
	comp=Z,280nm,27.3s						
ELK	Elko	89.09	48	*e*P	P	03 52 45.6	-0.4
	4.2nm,1.3s						
ELK	Elko	89.09	48	P	P	03 52 45.6	-0.4
	0.9nm,0.9s,baz=105,slow=4.1,SNR=4.2						
F10A	Beach Ranch, E	89.13	43	*e*P	P	03 52 44.4	-1.5
	3.9nm,0.7s						
MFID	Camas Ranch	89.38	46	*e*P	P	03 52 46.9	-0.3
	2.9nm,0.8s						
PSUT	Pine Spring	89.56	51	*e*P	P	03 52 48.7	+0.4
	6.9nm,1.1s						
LCMT	Little Creek M	89.65	52	*e*P	P	03 52 48.8	+0.1
	6.9nm,1.0s						
CCUT	Cedar City	89.69	52	*e*P	P	03 52 50.3	+1.3
	4.4nm,0.9s						
NEW	Newport	89.86	41	*e*P	P	03 52 48.4	-0.9
	12nm,0.9s						
NEW	Newport	89.86	41	P	P	03 52 49.8	+0.5
	baz=253						
NEW	Newport	89.86	41	P	P	03 52 48.7	-0.6
	11nm,1.0s,baz=167,slow=3.1,SNR=4.9						
SZCU	Shurtz Canyon	89.92	52	*e*P	P	03 52 50.0	0.0
	7.6nm,1.0s						
KNB	Kanab	89.98	52	*e*P	P	03 52 51.5	+1.2
	14nm,1.3s						
U15A	North Rim	90.26	53	*e*P	P	03 52 52.7	+0.9
	8.6nm,0.9s						
HLID	Hailey	90.41	46	*e*P	P	03 52 52.0	-0.1
	3.8nm,1.0s						
HLID	Hailey	90.41	46	P	P	03 52 52.6	+0.5
	baz=255						
X16A	Lo Mia Camp, P	90.48	55	*e*P	P	03 52 54.1	+1.4
	3.4nm,0.8s						
TUC	Tucson	90.55	57	*e*P	P	03 52 53.3	+0.4
	6.3nm,1.3s						
TUC	Tucson	90.55	57	P	P	03 52 53.5	+0.6
	baz=258						
MTPU	Mount Pierson	90.72	51	*e*P	P	03 52 55.6	+1.7
	8.7nm,1.0s						
DUG	Dugway, Tooele	90.74	49	*e*P	P	03 52 54.4	+0.6
	3.8nm,0.9s						
DUG	Dugway, Tooele	90.74	49	P	P	03 52 54.3	+0.6
	baz=256						
BGU	Big Grassy Mou	90.75	49	*e*P	P	03 52 54.4	+0.6
	7.1nm,1.2s						
WUAZ	Wupatki	90.78	54	*e*P	P	03 52 53.9	-0.1
	7.4nm,0.9s						
WUAZ	Wupatki	90.78	54	P	P	03 52 54.5	+0.5
	baz=257						
MSU	Marysvale	90.83	51	*e*P	P	03 52 55.8	+1.6
HVU	Hansel Valley	91.14	48	*e*P	P	03 52 56.2	+0.6
	5.4nm,0.9s						
NLU	North Lily Min	91.24	50	*e*P	P	03 52 55.8	-0.3
	5.0nm,0.9s						
TMUT	Trail Mountain	91.74	50	*e*P	P	03 52 58.0	-0.6
	4.0nm,0.9s						
SYO	Syowa Base	91.77	197⇑	*e*X	P	03 52 52.3	-5.4
DLMT	Dillon	92.11	44	*e*P	P	03 52 59.2	-0.7
	9.7nm,0.9s						
WALA	Waterton Lakes	92.12	40	*e*P	P	03 52 59.0	-0.8
FXWY	Fox Creek	92.82	46	*e*P	P	03 53 01.8	-1.6
BOZ	Bozeman (W)	92.82	44	*e*P	P	03 53 02.2	-1.0
	4.7nm,0.9s						
BOZ	Bozeman (W)	92.82	44	P	P	03 53 03.8	+0.6
	baz=257						
H17A	Grant Village	93.29	46	*e*P	P	03 53 04.4	-1.1
	3.4nm,0.8s						
MK01	Makanchi Array	93.31	317	*e*P	P	03 53 03.8	-1.4
MK31	Makanchi Array	93.32	317	*e*P	P	03 53 04.5	-0.8
MKAR	Makanchi Array	93.32	317	*e*P	P	03 53 04.0	-1.3
	22nm,0.9s						
MKAR	Makanchi Array	93.32	317	P	P	03 53 04.8	-0.5
	3.5nm,0.9s,baz=102,slow=5.1,SNR=9.1						
ZAA0	Zalesovo Array	93.37	324	*e*P	P	03 53 04.0	-1.3
	2.6nm,0.8s						
ZALV	Zalesovo Beam	93.37	324	*e*P	P	03 53 03.3	-2.0
ZALV	Zalesovo Beam	93.37	324	P	P	03 53 03.9	-1.4
	3.5nm,0.9s,baz=104,slow=4.7,SNR=6.5						
PDAR	Pinedale Array	93.69	47	*e*P	P	03 53 06.8	-0.6
PDAR	Pinedale Array	93.69	47	P	P	03 53 07.2	-0.1
	0.7nm,0.7s,baz=226,slow=3.9,SNR=6.2						
EGMT	Eagleton	94.58	42	P	P	03 53 11.4	+0.2
	baz=259						
ANMO	Albuquerque	94.61	55	P	P	03 53 12.6	+0.8
	1.0nm,0.8s,baz=239,slow=4.7,SNR=3.7						
MNTX	Cornudas Mount	94.94	59	P	P	03 53 13.0	-0.1
	baz=260						
TXAR	Lajitas Array	96.01	61	P	P	03 53 18.3	+0.2
	0.3nm,0.6s,baz=215,slow=6.1,SNR=3.9						
KURK	Kurchatov	96.44	320	P	P	03 53 18.4	-1.0
KURBB	Kurchatov Arra	96.49	320	P	P	03 53 18.4	-1.2
	0.7nm,0.8s,baz=91,slow=4.7,SNR=3.2						
KSH	Kashi	96.53	309	P	P	03 53 22.2	+1.9
KSH				pP	pP	03 53 27.9	-1.3
KSH				PP	PP	03 57 21.6	+6.7
ARCES	ARCESS Array B	116.22	345	PKP	PKiKP	03 58 31.7	-1.4
	2.5nm,0.9s,baz=71,slow=2.9,SNR=7.5						
FINES	FINESS Array B	121.63	338	PKP	PKPdf	03 58 42.5	-1.1
	1.9nm,0.9s,baz=228,slow=3.5,SNR=2.9						
SDV	Santo Domingo	124.73	87	*e*PKPdf	PKPdf	03 58 50.8	-0.5
BOSA	Boshof	125.00	223	PKP	PKPdf	03 58 51.0	-0.4
	3.2nm,0.8s,baz=233,slow=2.6,SNR=4.4						
LSZ	Lusaka	130.32	239	*e*PKPdf	PKPdf	03 59 02.2	+0.4
PCM	Pelee Case Pet	134.37	80	*e*P	Pdif	03 56 05.6	-3.5

CXM	Morne La Croix	134.41	80	eP	Pdif	03 56 06.0	-3.4
GBMF	Grand Be	134.41	80	eP	Pdif	03 56 05.9	-3.4
BAMF	Morne Balai	134.43	80	eP	Pdif	03 56 05.3	-4.1
BIM	Bigot	134.50	80	eP	Pdif	03 56 03.3	-6.3
TRMF	Trois Ilets	134.51	80	eP	Pdif	03 56 03.4	-6.3
ZAM	Aeronautique	134.54	80	eP	Pdif	03 56 03.3	-6.4
LPMF	Morne Lapointe	134.60	80	eP	Pdif	03 56 02.8	-7.2
GERES	GERESS Array B	135.55	334	PKP	PKPdf	03 59 10.1	-0.6
	0.8nm,0.8s,baz=133,slow=5.5,SNR=4.4						
KEST	Kesra	147.23	323	PKPbc	PKPbc	03 59 34.7	+0.5
	7.2nm,1.0s,baz=312,slow=9.2,SNR=4.9						
ES19	SONSECA Array	149.90	344	ePKPbc	PKiKP	03 59 41.8	-0.1
ESDC	Sonseca Array	149.94	344	PKPbc	PKPbc	03 59 41.5	+0.5
	0.1nm,0.3s,baz=347,slow=22,SNR=4.0						
TOA0	Torodi Ar. Sit	164.02	279	ePKPdf	PKPdf	03 59 54.8	+0.2
TORD	Torodi Ar. Bea	164.02	279	PKP	PKPdf	03 59 54.7	+0.1
	1.4nm,1.0s,baz=66,slow=1.2,SNR=5.8						

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*NIED **02** 03:42:00, 36°.00N×140°.10E, h65^{km}, Mw4.2 Best double couple: $M_0$2.42000×10^{15} NP1:ϕ_s186.00000°, δ27.00000°, λ90.00000°. NP2:ϕ_s6.00000°, δ63.00000°, λ90.00000°.*

*ISCJB **02** 03:42:30.0±0.4, 36°.01N±0°.03×140°.19E±0°.05, h76^{km}±3^{km}, mb4.3/22, Error ellipse: s-maj=6.7km s-min=5.2km az=178.6*

*IDC **02** 03:42:31.2±1.4, 35°.98N×140°.21E, h71^{km}±12^{km}, mb4.0/15, mb1 4.1/17, mb1mx3.8/66, mbtmp4.3/17, MS4.2/2, Ms1 4.2/2, ms1mx3.1/65, Error ellipse: s-maj=16.3km s-min=7.9km az=66.0*

*JMA **02** 03:42:31.9±0.1, 36°.02N×140°.09E, h62^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s1.00000°, δ62.00000°, λ89.00000°. NP2:ϕ_s183.00000°, δ28.00000°, λ92.00000°. Principal axes: T Plg73.0000°, Azm269.0000°; N Plg1.0000°, Azm2.0000°; P Plg17.0000°, Azm92.0000°;*

JMA Felt II J1.

*NEIC **02** 03:42:31.6±0.7, 36°.04N×140°.12E, h72^{km}±5^{km}, mb4.5/6 Error ellipse: s-maj=7.8km s-min=6.7km az=129.0*

ISC 02 03:42:31.2±0.8**, 36°.02N**±0°.05×**140°.14E**±0°.05**, h68**^{km}±6^{km}**, n60,** σ**0^{s}91**/69**, mb4.4**/22**, 1C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.21	11	⇑P	Pn	03 42 41.8	+0.1
JYT				S	Sn	03 42 49.1	-0.2
JIHU	Itakohorinouch	0.32	100	P	Pn	03 42 43.2	+0.9
JAG	Ashikaga	0.69	306	⇓P	Pn	03 42 46.0	+0.1
JAG				S	Sn	03 42 56.3	-0.4
JRY	Ryogami san	1.01	270	⇓P	Pn	03 42 49.8	+0.1
JRY				S	Sn	03 43 03.1	-0.4
JKT	Katashina	1.04	316	⇓P	Pn	03 42 50.2	0.0
JKT				S	Sn	03 43 04.5	+0.2
JOD2	Odawara 2	1.14	229	⇓P	Pn	03 42 51.2	-0.3
JOD2				S	Sn	03 43 05.4	-1.2
BSO3	Boso 3	1.25	166	P	Pn	03 42 53.9	+1.3
JYN	Shimob	1.40	249	⇓P	Pn	03 42 55.2	+0.3
JYN				S	Sn	03 43 12.7	0.0
JIM2	Oshima 3	1.42	204	eS	Sn	03 43 11.9	-1.2
MJAR	Matsushiro Arr	1.65	289	P	Pn	03 42 58.0	-0.1
	22nm,0.3s,baz=86,slow=2.6,SNR=941						
MJAR				S	Sn	03 43 19.8	+1.3
	10.0nm,0.3s,baz=49,slow=16,SNR=12						
MJAR				LR	LR	03 43 47.7	
	comp=Z,236nm,19.8s,baz=115,slow=46						
MAJO	Matsushiro	1.65	289	ePn	Pn	03 42 58.4	+0.3
MAJO				eSn	Sn	03 43 19.8	+1.3
MAJO				e		03 43 47.6	
MAT	Matsushiro	1.65	289	P	Pn	03 42 58.9	+0.7
MAT				S	Sn	03 43 19.2	+0.7
MJB9	Matsu-Tunnel	1.65	289	ePn	Pn	03 42 58.9	+0.7
INU	Inuyama	2.63	256	ePn	Pn	03 43 12.1	+0.7
JHJ	Hachijo jima 2	2.91	186	P	Pn	03 43 16.6	+1.4
	17nm,0.3s,baz=127,slow=20,SNR=3.6						
JHJ				S	Sn	03 43 48.0	-1.1
	45nm,0.3s,baz=52,slow=19,SNR=4.1						
JNU	Nakatsue	8.17	252	LR	LR	03 47 23.2	
	comp=Z,474nm,21.1s,baz=233,slow=36						
ASAJ	Asahikawa	8.30	12	P	Pn	03 44 28.2	-0.6
	1.7nm,0.3s,baz=237,slow=12,SNR=5.7						
ASAJ				S	Sn	03 46 01.3	+0.3
	1.2nm,0.3s,baz=234,slow=19,SNR=2.7						
KSRS	Korea Array	9.91	282	P	Pn	03 44 54.6	+3.7
	baz=99,slow=15,SNR=2.1						
KSAR	Wonju Array Be	9.94	282	P	Pn	03 44 54.6	+3.3
XAN	Xi'an	25.59	275	eP	P	03 47 53.7	-0.4
SONA0	Songino Array	27.53	306	eP	P	03 48 11.0	-0.5
SONM	Songino Array	27.53	306	P	P	03 48 11.0	-0.5
	2.4nm,0.6s,baz=104,slow=8.5,SNR=4.2						
ZAA0	Zalesovo Array	41.85	313	eP	P	03 50 13.6	-0.7
	6.6nm,0.8s						
ZAA1	Zalesovo Array	41.85	313	eP	P	03 50 14.4	+0.1
ZALV	Zalesovo Beam	41.85	313	eP	P	03 50 14.1	-0.2
ZALV	Zalesovo Beam	41.85	313	P	P	03 50 14.4	+0.1
	6.7nm,0.8s,baz=93,slow=7.2,SNR=5.2						
MK01	Makanchi Array	43.80	303	eP	P	03 50 29.1	-1.0
MK31	Makanchi Array	43.80	303	eP	P	03 50 29.5	-0.7
MK32	Makanchi Array	43.80	303	eP	P	03 50 30.5	+0.3
MKAR	Makanchi Array	43.80	303	P	P	03 50 30.5	+0.3
	5.0nm,0.7s,baz=89,slow=11,SNR=6.2						
MAKZ	Makanchi	44.01	303	eP	P	03 50 31.5	-0.4
	7.1nm,0.9s						
KURK	Kurchatov	45.76	309	eP	P	03 50 44.9	-0.8
KURBB	Kurchatov Arra	45.83	309	P	P	03 50 46.1	-0.1
	13nm,0.9s,baz=86,slow=8.2,SNR=20						
TARG	Taragay, Kyrgy	47.94	297	eP	P	03 51 03.6	+0.3
	13nm,0.9s						
AAK	Ala-Archa	50.07	299	eP	P	03 51 19.5	+0.1
	5.4nm,1.1s						
AAK	Ala-Archa	50.07	299	P	P	03 51 19.6	+0.3
	3.8nm,0.8s,baz=132,slow=6.7,SNR=3.9						
BRVK	Borovoye	50.56	313	eP	P	03 51 22.9	+0.3
ILAR	Eielson Array	50.90	32	P	P	03 51 25.1	+0.1
	2.8nm,0.8s,baz=272,slow=5.5,SNR=5.3						
ILB	Eielson Array	50.90	32	eP	P	03 51 24.9	-0.1
CHGR	Chuyangaron	55.18	296	eP	P	03 51 58.0	+0.9
	13nm,0.9s						
FITZ	Fitzroy Crossi	55.55	197	eP	P	03 51 59.4	-0.2
	20nm,1.8s						
FITZ	Fitzroy Crossi	55.55	197	P	P	03 51 59.4	-0.2
	1.4nm,0.7s,baz=41,slow=9.8,SNR=3.9						
WRAB	Tennant Creek	55.92	187	eP	P	03 52 01.8	-0.4
	2.0nm,0.6s						
WRA	Warramunga Arr	55.93	187	P	P	03 52 01.6	-0.7
	1.4nm,0.6s,baz=2.4,slow=7.5,SNR=7.6						
ARU	Arti	56.44	319	eP	P	03 52 05.4	-0.2
ABKAR	Akbulak array	57.81	310	eP	P	03 52 15.4	0.0
GEYT	Alibeck	63.43	299	P	P	03 52 54.0	+0.1
	1.6nm,0.7s,baz=64,slow=10,SNR=2.7						
ARA0	ARCESS Array S	64.58	339	eP	P	03 53 00.9	+0.1
ARCES	ARCESS Array B	64.58	339	P	P	03 53 00.9	+0.1
	2.8nm,1.0s,baz=60,slow=7.5,SNR=3.6						
FIA0	FINESS Array S	69.23	332	eP	P	03 53 30.3	-0.2
FINES	FINESS Array B	69.23	332	P	P	03 53 30.3	-0.2
	2.0nm,0.7s,baz=90,slow=4.2,SNR=4.4						
KBZ	Khabaz	70.78	310	P	P	03 53 40.2	0.0
	4.1nm,0.9s,baz=12,slow=1.6,SNR=4.4						
AKASG	Malin Array Be	74.47	322	P	P	03 54 00.6	-1.5
	1.8nm,0.6s,baz=49,slow=6.1,SNR=4.4						
AKBB	Malin Array Si	74.47	322	eP	P	03 54 00.6	-1.5
	12nm,1.4s						
KIEV	Kiev	74.48	322	eP	P	03 54 01.0	-1.1
	2.5nm,0.7s						
NB200	NORSAR Array S	74.72	337	eP	P	03 54 03.0	-0.3
NOA	NORSAR Array B	74.72	337	P	P	03 54 03.0	-0.3
	1.8nm,0.7s,baz=40,slow=5.8,SNR=6.4						
LTX	Lajitas	91.55	52	eP	P	03 55 31.9	+1.0
TXAR	Lajitas Array	91.55	52	P	P	03 55 31.9	+1.0
	0.4nm,0.6s,baz=289,slow=3.9,SNR=4.9						
SADO	Sadowa	92.06	27	LR	LR	04 41 57.2	
	comp=Z,475nm,19.2s,baz=346,slow=39						

MEX 02 03:44:21.2±0.3**, 16°.11N**×**97°.50W, h12**^{km}±5^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.66	295	eP	Pg	03 44 32.4	-1.7
PNIG				i S	Sg	03 44 41.0	-1.9
VHO	Vista Hermosa	1.21	38	eP	Pn	03 44 40.2	-3.9
VHO				eS	Sb	03 44 55.0	-4.9

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*IDC **02** 03:46:56.8±3.6, 9°.57S×112°.71E, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.6/45, mbtmp3.7/4, ML3.6/1, MS4.0/2, Ms1 4.0/2, ms1mx3.3/47, Error ellipse: s-maj=182.5km s-min=25.9km az=52.0*

*ISCJB **02** 03:47:02.1±0.9, 9°.71S±0°.09×112°.87E±0°.07, h36^{km}, mb3.7/3, MS4.1/2, Error ellipse: s-maj=14.1km s-min=7.7km az=26.0*

*DJA **02** 03:47:03.2±0.7, 10°S±8°×11°3E±°, h10^{km}, M3.9/13, MLv3.9/13*

ISC 02 03:47:02.9±1.1**, 9°.6S**±0°.1×**112°.87E**±0°.06**, h36**^{km}**, n18,** σ**1^{s}73**/15**, mb3.8**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	1.44	23	P	Pn	03 47 25.8	-0.6
JAGI	Jajag, Banyuwa	1.69	49	P	Pn	03 47 29.8	-0.2
PWJI	Pagerwojo	1.89	326	P	Pn	03 47 33.5	+0.8
PCJI	Pacitan	2.18	310	P	Pn	03 47 37.8	+1.1
IGBI	Denpasar	2.38	71	P	Pn	03 47 41.8	+2.4
DNP	Denpasar	2.49	69	P	Pn	03 47 47.9	+7.0
WOJI	Wonogiri, Jawa	2.60	312	P	Pn	03 47 44.4	+1.9
NGJI	Ngawi	2.62	328	P	Pn	03 47 47.9	+5.2
GRJI	Gresik	2.70	352	P	Pn	03 47 47.1	+3.3
KMMI	Kalianget	2.76	23	P	Pn	03 47 46.6	+2.0
SRBI	Singaraja	2.76	57	P	Pn	03 47 46.0	+1.3
UGM	Wanagama	2.86	306	P	Pn	03 47 47.1	+1.0
PLAI	Plampang	4.90	81	P	Pn	03 48 16.0	+1.8
FITZ	Fitzroy Crossi	14.99	126	Pn	Pn	03 50 31.7	-0.6
	0.2nm,0.3s,baz=310,slow=11,SNR=8.1						
FITZ				Sn	Sn	03 53 05.0	-12
	0.2nm,0.3s,baz=48,slow=15,SNR=2.9						
ASAR	Alice Springs	24.48	127	P	P	03 52 19.4	+0.4
	1.9nm,0.7s,baz=303,slow=8.5,SNR=7.5						
SONM	Songino Array	57.47	355	P	P	03 56 47.3	-1.1
	0.2nm,0.3s,baz=178,slow=8.6,SNR=3.5						
SONM				LR	LR	04 25 23.1	
	comp=Z,302nm,18.1s,baz=134,slow=40						
MKAR	Makanchi Array	62.42	337	P	P	03 57 21.1	-1.2
	0.4nm,0.5s,baz=146,slow=7.2,SNR=6.2						
ATD	Arta Tunnel	72.70	285	LR	LR	04 25 58.5	
	comp=Z,46nm,21.8s,baz=270,slow=32						

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*IDC **02** 03:48:01.1±1.1, 32°.53S×71°.64W, h0^{km}, mb4.2/9, mb1 4.2/13, mb1mx4.0/37, mbtmp4.1/13, ML3.5/4, MS3.5/5, Ms1 3.4/5, ms1mx3.3/30, Error ellipse: s-maj=30.9km s-min=24.7km az=24.0*

*ISCJB **02** 03:48:03.9±1.0, 32°.57S±0°.03×71°.86W±0°.05, h28^{km}±7^{km}, mb4.1/9, MS3.3/2, Error ellipse: s-maj=7.5km s-min=4.5km az=161.9*

*GUC **02** 03:48:06.3±0.6, 32°.53S×71°.53W, h28^{km}±5^{km}, ML4.3*

*NEIC **02** 03:48:06.0±0.0, 32°.53S×71°.53W, h28^{km}, mb4.0/2, ML4.3(GUC), After GUC.*

NEIC Felt [III] at Papudo, Quillota, Valparaiso, Villa Alemana and Vina del Mar; [II] at Cauacavi, El Monte, El Tabo, Maria Pinto, Melipilla, Padre Hurtado, Penaflor, San Bernardo and Talagante. Also felt at La Calera, Las Condes and Limache.

*SJA **02** 03:48:09.8±0.6, 32°.57S×71°.25W, h9^{km}±7^{km}, ML3.8, MW4.6*

ISC 02 03:48:05.7±1.4**, 32°.55S**±0°.03×**71°.61W**±0°.07**, h30**^{km}±9^{km}**, n54,** σ**1^{s}91**/66**, mb4.2**/9**, 5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROC1	El Roble	0.66	130	ePn	Pn	03 48 19.3	+0.1
ROC1				eSn	Sn	03 48 28.8	0.0
ROC1	El Roble	0.66	130	i P	Pn	03 48 19.4	+0.1
ROC1				i S	Sb	03 48 26.9	-1.0
ROCH	El Roble	0.66	130	⇓iP	Pn	03 48 19.6	+0.3
ROCH				eS	Sn	03 48 29.4	+0.6
PEL	Peldehue	0.98	127	ePn	Pb	03 48 24.1	0.0
PEL				eSn	Sb	03 48 37.7	+0.9
PEL	Peldehue	0.98	127	i P	Pb	03 48 24.5	+0.4
PEL	Peldehue	0.98	127	⇓iP	Pb	03 48 24.6	+0.4
PEL				eS	Sb	03 48 37.5	+0.8
PEL				IAML		03 48 39.7	
	comp=N,15µm,0.3s						
CLCH	Cerro Calan	1.24	133	⇓iP	Pb	03 48 28.4	-0.1
CLCH				eS	Sb	03 48 45.5	+1.4
CLCH				IAML		03 48 53.9	
	comp=N,9µm,0.5s						
FCH	Farellones	1.35	125	⇓iP	Pb	03 48 30.4	-0.3
FCH				eS	Sb	03 48 48.8	+1.1
FCH				IAML		03 48 49.9	
	comp=N,9µm,0.5s						
CMCH	Combarbala	1.47	21	eP	Pb	03 48 31.9	-0.5
CMCH				eS	Sb	03 48 51.8	+1.1
CMCH				IAML		03 48 59.5	
	comp=E,12µm,0.8s						
LMEL	Las Melosas	1.75	138	⇓iP	Pb	03 48 36.2	-1.1
LMEL				eS	Sb	03 48 59.8	+0.8
AUSP	Uspallata	1.91	81	i P	Pb	03 48 40.7	+0.6
RTLS	Leoncito	2.10	70	i P	Pb	03 48 44.2	+0.9
RTLS				i S	Sb	03 49 09.5	+0.4
RTLS				IAML		03 49 16.4	
	comp=Z,863nm,0.6s						
ASAL	Salagasta	2.34	92	i P	Pb	03 48 47.2	-0.2
AAGR	Agrelo	2.40	104	i P	Pb	03 48 47.9	-0.5
GO05	Huala	2.47	186	ePn	Pn	03 48 43.7	-0.4
GO05	Huala	2.47	186	eP	Pn	03 48 43.6	-0.4
GO04	Tololo Observa	2.47	17	ePn	Pn	03 48 45.5	+1.3
GO04				eSn	Sn	03 49 14.6	+1.2
RTCV	Cerro Valdivia	2.69	76	i P	Pb	03 48 51.8	-1.5
LCO	Las Campanas	3.61	13	ePn	Pn	03 49 00.5	+0.5
LCO				eSn	Sn	03 49 40.5	-1.3
GO03	Copiap	5.08	14	ePn	Pn	03 49 20.3	+0.4
GO03				eSn	Sn	03 50 20.1	+2.4
GO06	Curarrehue	7.02	179	ePn	Pn	03 49 47.2	+0.6
GO02	Mina Guanaco	7.57	14	ePn	Pn	03 49 52.7	-1.6
PLCA	Paso Flores	8.21	174	ePn	Pn	03 50 03.0	+0.1
LVC	Limon Verde	10.19	14	ePn	Pn	03 50 28.3	-2.0
LVC				eSn	Sn	03 52 32.0	+8.3
LVC	Limon Verde	10.19	14	Pn	Pn	03 50 26.8	-3.5
	comp=Z,0.3nm,0.3s,baz=171,slow=6.5,SNR=3.1						
LVC				Sn	Sn	03 52 32.0	+8.3
	comp=Z,0.2nm,0.3s,baz=155,slow=19,SNR=2.2						
LVC				LR	LR	03 54 40.6	
	comp=Z,293nm,19.7s,baz=216,slow=39						
CPUP	Villa Florida	13.90	67	Pn	Pn	03 51 20.7	0.0
	comp=Z,0.1nm,0.3s,baz=239,slow=16,SNR=2.5						
CPUP				Sn	Sn	03 53 47.5	-6.4
	comp=Z,0.0nm,0.3s,baz=307,slow=15,SNR=2.6						
CPUP				LR	LR	03 57 01.2	
	comp=Z,103nm,21.4s,baz=268,slow=39						
LPAZ	La Paz	16.50	12	ePn	Pn	03 51 55.1	-0.5
	comp=Z,5.0nm,1.0s						
LPAZ	La Paz	16.50	12	Pn	Pn	03 51 55.7	+0.1
	comp=Z,0.1nm,0.3s,baz=182,slow=7.4,SNR=6.1						
SIV	San Ignacio	19.06	33	P	P	03 52 25.1	-0.6
	comp=Z,0.1nm,0.3s,baz=232,slow=15,SNR=11						
SIV				LR	LR	04 01 08.3	
	comp=Z,174nm,19.1s,baz=136,slow=41						
NNA	Nana	21.02	346	LR	LR	03 59 05.9	
	comp=Z,78nm,20.6s,baz=174,slow=32						
BDFB	Brasilia	27.24	57	P	P	03 53 46.9	-0.6
	comp=Z,8.1nm,1.0s,baz=261,slow=5.0,SNR=8.2						
BDFB				LR	LR	04 05 36.1	
	comp=Z,179nm,21.8s,baz=225,slow=39						
PTGA	Pitinga	33.50	21	P	P	03 54 42.5	-0.1
	comp=Z,1.7nm,0.5s,baz=145,slow=15,SNR=3.9						
LTX	Lajitas	68.65	330	eP	P	03 59 06.3	0.0
TXAR	Lajitas Array	68.65	330	P	P	03 59 06.3	0.0
	comp=Z,0.7nm,0.7s,baz=156,slow=6.8,SNR=6.2						
DBIC	Dimbokro	74.38	71	eP	P	03 59 41.0	-0.1
	comp=Z,19nm,1.4s						
DBIC	Dimbokro	74.38	71	P	P	03 59 41.0	-0.1
	comp=Z,4.2nm,0.9s,baz=213,slow=6.0,SNR=4.5						
BOSA	Boshof	80.43	118	P	P	04 00 15.2	+0.2
	comp=Z,3.9nm,0.8s,baz=219,slow=6.1,SNR=5.6						
PD31	Pinedale Array	82.64	333	eP	P	04 00 25.9	-0.4
PDAR	Pinedale Array	82.64	333	P	P	04 00 25.9	-0.4
	comp=Z,0.4nm,0.9s,baz=128,slow=5.8,SNR=2.5						
NV01	Mina Array Sit	82.90	325	eP	P	04 00 28.4	+0.6
NVAR	Mina Array Bea	82.90	325	P	P	04 00 28.4	+0.6
	comp=Z,0.5nm,0.7s,baz=150,slow=4.6,SNR=4.2						
TORD	Torodi Ar. Bea	83.38	70	P	P	04 00 30.7	+0.3
	comp=Z,3.3nm,0.8s,baz=282,slow=5.0,SNR=12						
TOA1	Torodi Ar. Sit	83.38	70	eP	P	04 00 30.7	+0.3
ULM	Lac du Bonnet	85.20	345	P	P	04 00 37.6	-1.1
	comp=Z,1.4nm,0.8s,baz=229,slow=5.4,SNR=3.4						
H11S2	WAKE ISLAND Hy	126.14	270	T	T	06 26 05.2	
	baz=117,slow=75,SNR=250						
H11S1	WAKE ISLAND Hy	126.15	270	T	T	06 26 03.5	
	baz=117,slow=75,SNR=321						
H11S3	WAKE ISLAND Hy	126.16	270	T	T	06 26 03.8	
	baz=117,slow=75,SNR=286						
ZAA1	Zalesovo Array	152.81	31	ePKPbc	PKiKP	04 07 59.4	0.0
ZALV	Zalesovo Beam	152.81	31	PKPbc	PKiKP	04 07 59.4	0.0
	comp=Z,3.2nm,0.7s,baz=294,slow=3.6,SNR=16						
MK32	Makanchi Array	155.53	47	ePKPab	PKPab	04 08 22.3	+0.2
MKAR	Makanchi Array	155.53	47	PKPbc	PKPbc	04 08 05.1	
	comp=Z,2.2nm,1.3s,baz=307,slow=0.6,SNR=3.7						
MKAR				PKPab	PKPab	04 08 22.3	+0.2
	comp=Z,1.0nm,0.7s,baz=294,slow=4.5,SNR=9.2						
WMQ	Urumqi	160.28	49	eP	PKPdf	04 08 02.2	0.0
WMQ				LR	LR		
	comp=N,4µm,20.3s						
WMQ				LR	LR		
	comp=E,1µm,20.3s						
WMQ				LR	LR		
	comp=Z,1µm,22.3s						
SONA0	Songino Array	164.66	5	ePKPab	PKPab	04 09 02.0	+0.1
SONM	Songino Array	164.66	5	PKPab	PKPab	04 09 02.0	+0.1
	comp=Z,0.8nm,1.1s,baz=105,slow=3.5,SNR=4.2						

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*ISCJB **02** 04:00:57.9±0.4, 39°.81N±0°.04×143°.75E±0°.05, h6^{km}, mb3.7/17, Error ellipse: s-maj=6.3km s-min=4.1km az=140.2*

*IDC **02** 04:00:58.6±0.7, 39°.74N×143°.69E, h0^{km}, mb3.8/16, mb1 4.0/18, mb1mx3.8/55, mbtmp3.8/18, ML3.2/2, Error ellipse: s-maj=20.4km s-min=15.6km az=109.0*

*JMA **02** 04:01:00.2±0.2, 39°.85N×143°.75E, h30^{km}, M3.7*

*NEIC **02** 04:01:02.4±1.7, 39°.77N×143°.66E, h24^{km}±12^{km}, mb4.3/3, Error ellipse: s-maj=7.3km s-min=4.5km az=115.0*

ISC 02 04:00:59.6±0.7**, 39°.81N**±0°.06×**143°.72E**±0°.06**, h6**^{km}**, n50,** σ**1^{s}30**/56**, mb3.9**/17**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.43	276	eS	Sb	04 01 44.0	-1.2
MIYJ	Miyakonagasawa	1.48	262	P	Pn	04 01 26.1	-0.7
MIYJ				eS	Sn	04 01 44.0	-2.5
JKEN	Kujiedanarisaw	1.59	285	P	Pn	04 01 27.2	-1.1
OFUJ	Ofunato	1.75	246	P	Pn	04 01 29.7	-0.7
JANG	Nango	1.78	289	P	Pn	04 01 29.8	-1.1
JANG				eS	Sn	04 01 52.2	-1.7
JOM	Ohasama	1.90	261	P	Pn	04 01 32.6	0.0
JMK	Ichinoseki	2.12	247	P	Pn	04 01 35.1	-0.4
ERM	Erimo	2.25	349	ePn	Pn	04 01 38.4	+1.1
JNBK	Urakawa-nobuka	2.58	344	P	Pn	04 01 41.0	-0.8
JYK	Kaneyama	2.75	252	P	Pn	04 01 44.7	+0.5
JCH	Churui	2.82	355	P	Pn	04 01 44.9	-0.2
JCH				eS	Sn	04 02 17.4	-2.0
JAK	Akkeshi	3.27	13	P	Pn	04 01 50.3	-1.1
JAK				S	Sn	04 02 27.9	-2.7
JAR	Ashorobuto	3.49	1	P	Pn	04 01 53.2	-1.2
NEM2	Nemuro 2	3.87	22	P	Pn	04 01 58.7	-0.8
NEM2				S	Sn	04 02 41.5	-3.7
ASAJ	Asahikawa	4.39	349	Pn	Pn	04 02 07.2	+0.5
	1.8nm,0.3s,baz=203,slow=19,SNR=6.2						
ASAJ				Sn	Sn	04 03 02.3	+4.2
	0.7nm,0.3s,baz=284,slow=8.3,SNR=2.5						
MJAR	Matsushiro Arr	5.43	235	Pn	Pn	04 02 21.9	+0.9
	0.2nm,0.3s,baz=38,slow=12,SNR=11						
MAJO	Matsushiro	5.43	235	ePn	Pn	04 02 21.5	+0.4
MJB9	Matsu-Tunnel	5.43	235	ePn	Pn	04 02 20.7	-0.4
USRK	Ussuriysk Ar.	9.77	300	Pn	Pn	04 03 24.5	+3.9
	0.2nm,0.3s,baz=118,slow=16,SNR=5.4						
MA2	Magadan	20.29	10	P	P	04 05 36.1	+0.4
	3.9nm,0.4s,baz=200,slow=12,SNR=2.9						
SEY	Seymchan	23.74	10	P	P	04 06 12.3	+0.1
	2.7nm,0.6s,baz=191,slow=7.6,SNR=9.3						
SONA1	Songino Array	27.88	299	eP	P	04 06 50.0	-0.2
SONA0	Songino Array	27.88	299	eP	P	04 06 50.8	+0.6
SONM	Songino Array	27.88	299	P	P	04 06 50.8	+0.6
	0.6nm,0.6s,baz=87,slow=8.6,SNR=6.0						
ZAA1	Zalesovo Array	41.45	310	eP	P	04 08 47.0	+0.1
ZALV	Zalesovo Beam	41.45	310	P	P	04 08 47.0	+0.1
	0.8nm,0.4s,baz=92,slow=8.0,SNR=4.8						
MK01	Makanchi Array	44.24	300	eP	P	04 09 09.4	-0.2
MK32	Makanchi Array	44.24	300	eP	P	04 09 09.5	-0.1
MKAR	Makanchi Array	44.24	300	P	P	04 09 09.5	-0.1
	3.1nm,1.2s,baz=87,slow=4.4,SNR=4.6						
ILAR	Eielson Array	46.19	34	P	P	04 09 25.4	+0.7
	0.4nm,0.8s,baz=241,slow=6.5,SNR=4.1						
ILB	Eielson Array	46.19	34	eP	P	04 09 25.4	+0.7
INK	Inuvik	51.09	28	eP	P	04 10 02.5	+0.1
	20nm,2.0s						
INK	Inuvik	51.09	28	P	P	04 10 02.5	+0.1
	0.8nm,0.5s,baz=308,slow=4.7,SNR=9.4						
WRAB	Tennant Creek	60.07	190	eP	P	04 11 06.9	-0.5
	1.3nm,0.6s						
WRA	Warramunga Arr	60.08	190	P	P	04 11 06.7	-0.9
	0.8nm,0.6s,baz=8.6,slow=6.9,SNR=11						
YKA	Yellowknife Ar	60.50	31	P	P	04 11 10.4	+0.4
	0.1nm,0.4s,baz=298,slow=6.1,SNR=3.3						
YKB5	Yellowknife Ar	60.50	31	eP	P	04 11 10.4	+0.4
AS31	Alice Springs	63.80	190	eP	P	04 11 31.6	-1.0
	0.9nm,1.0s						
ASAR	Alice Springs	63.80	190	P	P	04 11 31.6	-1.0
	0.1nm,0.6s,baz=1.3,slow=5.3,SNR=5.6						
FIA0	FINESS Array S	67.20	333	eP	P	04 11 54.0	-0.1
FINES	FINESS Array B	67.20	333	P	P	04 11 54.0	-0.1
	1.3nm,0.7s,baz=54,slow=8.0,SNR=9.0						
KBZ	Khabaz	70.47	311	P	P	04 12 15.5	+0.8
	2.7nm,0.9s,baz=90,slow=4.0,SNR=3.7						
NV01	Mina Array Sit	71.90	55	eP	P	04 12 25.3	+1.5
NVAR	Mina Array Bea	71.90	55	P	P	04 12 25.3	+1.5
	0.4nm,0.7s,baz=297,slow=6.0,SNR=2.5						
NB200	NORSAR Array S	72.32	338	eP	P	04 12 25.5	-0.3
NOA	NORSAR Array B	72.32	338	P	P	04 12 25.5	-0.3
	0.7nm,0.9s,baz=33,slow=4.1,SNR=2.4						
AKASG	Malin Array Be	73.20	323	P	P	04 12 30.5	-0.6
	0.4nm,0.5s,baz=43,slow=6.9,SNR=4.1						
AKBB	Malin Array Si	73.20	323	eP	P	04 12 30.5	-0.6
LTX	Lajitas	87.01	54	eP	P	04 13 46.4	+0.3
TXAR	Lajitas Array	87.01	54	P	P	04 13 46.4	+0.3
	0.9nm,1.1s,baz=320,slow=4.0,SNR=4.0						

KRSC 02 04:03:44.8±0.9**, 53°.28N**×**160°.63E, h45**^{km}±10^{km}**, ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.41	244	eP	Pn	04 03 55.6	+1.0
SPN				eS	Sn	04 04 02.1	+0.6
NLC	Nalytchevo	0.78	263	eP	Pn	04 04 00.5	+1.1
NLC				eS	Sn	04 04 11.0	+1.0
KII	Karymskiy	1.04	318	eP	Pn	04 04 03.7	+0.7
KII				eS	Sn	04 04 16.8	+0.4
SDLR	Sedlovina	1.05	271	eP	Pn	04 04 04.5	+1.3
SDLR				eS	Sn	04 04 18.5	+1.8
UGLR	Uglovaya	1.09	267	eP	Pn	04 04 05.4	+1.7
UGLR				eS	Sn	04 04 19.5	+1.9
SMAR	Somma	1.10	270	i P	Pn	04 04 05.2	+1.3
SMAR				eS	Sn	04 04 19.3	+1.2
AVH	Avacha	1.14	270	eP	Pn	04 04 06.0	+1.7
AVH				eS	Sn	04 04 21.0	+2.2
DALK	Dalny	1.16	258	eP	Pn	04 04 05.8	+1.3
DALK				eS	Sn	04 04 20.0	+0.9
KRX	Arik	1.19	275	eP	Pn	04 04 06.5	+1.4
KRX				eS	Sn	04 04 21.2	+1.0
KOK	Koryaka	1.20	272	eP	Pn	04 04 06.7	+1.5
KOK				eS	Sn	04 04 23.8	+3.5
PET	Petropavlovsk	1.22	259	eP	Pn	04 04 06.9	+1.6
PET				eS	Sn	04 04 21.6	+1.0
RUS	Russkaya	1.54	238	eP	Pn	04 04 11.0	+1.3
RUS				eS	Sn	04 04 29.2	+0.8
KRMR	Karymshinskiy	1.57	254	eP	Pn	04 04 12.0	+1.8
KRMR				eS	Sn	04 04 30.9	+1.5
GNL	Ganaly	1.66	286	i P	Pn	04 04 13.5	+2.0
MTVR	Mutnovka	1.68	243	eP	Pn	04 04 13.7	+1.8
MTVR				eS	Sn	04 04 33.9	+1.6
KZV	Kizimen	1.85	354	i P	Pn	04 04 16.2	+2.0
KZV				eS	Sn	04 04 39.8	+3.4
TUMD	Tumrok D	1.94	356	eP	Pn	04 04 16.8	+1.6
TUMD				eS	Sn	04 04 41.1	+2.8
TUMR	Tumrok	2.03	352	i P	Pn	04 04 19.0	+2.4
APC	Apacha	2.12	262	eP	Pn	04 04 20.8	+3.1
APC				eS	Sn	04 04 47.5	+4.6

KDTR	Khodutka, Kamc	2.14	228	*e*P	Pn	04 04 20.2	+2.2
KDTR				*e*S	Sn	04 04 46.1	+2.8
ZLN	Zelenaya	2.75	2	*e*P	Pn	04 04 30.1	+3.7
KBTR	Krutoberegovo	3.20	22	*e*P	Pn	04 04 35.0	+2.5

IDC 02 04:06:43.2±1.7**, 11°.17S**×**165°.84E, h0^{km}, mb3.8**/3**, mb1 4.1**/4**, mb1mx3.6**/44**, mbtmp3.8**/4**, ML3.9**/1**, Error ellipse: s-maj=53.5km s-min=30.6km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.86	177	Pn	Pn	04 09 20.0	0.0
	0.9nm,0.3s,baz=290,slow=13,SNR=18						
WRA	Warramunga Arr	31.53	250	P	P	04 13 06.6	-0.8
	1.8nm,1.0s,baz=81,slow=8.8,SNR=4.0						
ASAR	Alice Springs	32.82	243	P	P	04 13 19.4	+0.7
	1.0nm,1.1s,baz=71,slow=9.2,SNR=3.7						
ILAR	Eielson Array	83.60	18	P	P	04 19 13.1	0.0
	0.8nm,1.1s,baz=233,slow=5.5,SNR=3.8						

IDC 02 04:13:13.6±6.8**, 19°.68S**×**179°.02W, h573^{km}**±80^{km}**, mb2.7**/5**, mb1 3.1**/6**, mb1mx2.9**/28**, mbtmp3.6**/6**, Error ellipse: s-maj=141.1km s-min=31.5km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	13.80	258	P	P	04 16 10.9	+0.1
	0.2nm,0.3s,baz=80,slow=8.4,SNR=3.1						
WRA	Warramunga Arr	43.77	261	P	P	04 20 29.5	-0.1
	0.4nm,0.7s,baz=97,slow=7.4,SNR=8.4						
ASAR	Alice Springs	43.78	256	P	P	04 20 29.4	-0.3
	1.0nm,0.9s,baz=81,slow=9.2,SNR=7.9						
NVAR	Mina Array Bea	81.09	44	P	P	04 24 30.2	+0.1
	0.6nm,1.0s,baz=224,slow=5.0,SNR=3.1						
ILAR	Eielson Array	87.73	13	P	P	04 25 01.8	+0.3
	0.4nm,0.8s,baz=209,slow=5.9,SNR=3.4						
PDAR	Pinedale Array	89.02	44	P	P	04 25 07.8	-0.6
	0.2nm,0.5s,baz=200,slow=2.4,SNR=2.2						
AKASG	Malin Array Be	141.83	331	PKhKP	PKPpre	04 31 36.6	
	0.5nm,0.4s,baz=58,slow=3.5,SNR=5.4						

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*IDC **02** 04:13:16.8±1.6, 39°.37N×74°.49E, h0^{km}, mb3.8/10, mb1 3.9/13, mb1mx3.7/65, mbtmp3.8/13, ML3.7/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/57, Error ellipse: s-maj=29.8km s-min=17.7km az=142.0*

*BJI **02** 04:13:20.5, 39°.76N×73°.94E, h5^{km}, ML3.3/3*

*SOME **02** 04:13:21.4, 39°.72N×74°.10E, h5^{km}*

*KRNET **02** 04:13:21.9±0.1, 39°.94N×74°.16E, h9^{km}, mb3.9*

*NNC **02** 04:13:22.2±1.2, 39°.73N×74°.05E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=10.3km s-min=3.7km az=6.0*

*NEIC **02** 04:13:24.9±0.7, 39°.68N×74°.19E, h39^{km}±7^{km}, mb4.5/1, Error ellipse: s-maj=9.9km s-min=7.2km az=128.0*

ISC 02 04:13:20.0±1.2**, 39°.73N**±0°.03×**74°.21E**±0°.02**, h2^{km}**±8^{km}**, n113, σ1^s.52**/155**, mb3.8**/10**, 37C-30D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.61	297	⇓P	Pg	04 13 31.5	-0.2
	114nm,0.2s						
SFK				⇑S	Sg	04 13 39.5	-0.2
	581nm,0.3s						
SFK	Sufi-Kurgan	0.61	297	Pg	Pg	04 13 31.5	-0.2
	470nm,0.1s						
SFK				Lg	Lg	04 13 39.6	
	925nm,0.2s						
SFK	Sufi-Kurgan	0.61	297	⇓*i*P	Pg	04 13 31.7	-0.1
	baz=79						
SFK				⇓*i*S	Sg	04 13 39.4	-0.3
	baz=79						
KSH	Kashi	1.38	98	Pg	Pn	04 13 44.4	-2.0
KSH				Sg	Sg	04 14 03.0	-1.2
KSH				smax	smax		
	comp=N,1µm,0.3s						
KSH				smax	smax		
	comp=E,570nm,0.5s						
ARSB	Arslanbob	1.85	330	*e*Pn	Pb	04 13 54.9	+0.3
ARSB				*e*Sn	Sg	04 14 21.1	+1.8
ARSB	Arslanbob	1.85	330	⇑*i*P	Pn	04 13 53.5	+0.6
	baz=27						
ARSB				⇑*i*S	Sn	04 14 15.5	-1.4
	baz=27						
DRK	Karamyk	1.88	263	⇑*i*P	Pg	04 13 57.5	+1.5
	baz=57						
DRK				⇑*i*S	Sg	04 14 23.0	+2.6
	baz=57						
ARLS	Aral	2.13	2	⇑*i*P	Pb	04 13 58.3	-1.1
	baz=4.0						
ARLS				⇑*i*S	Sn	04 14 23.5	-0.4
	baz=4.0						
NRN	Naryn	2.18	38	*e*Pn	Pb	04 14 01.0	+0.7
NRN	Naryn	2.18	38	⇓*i*P	Pb	04 13 59.5	-0.8
	baz=42						
NRN				⇓*i*S	Sn	04 14 26.0	+0.7
	baz=42						
AML	Almayashu	2.43	351	P	Pb	04 14 04.9	+0.3
	SNR=49						
AML	Almayashu	2.43	351	⇑*i*P	Pn	04 14 01.9	+0.8
	baz=51						
AML				⇑*i*S	Sn	04 14 30.5	-1.1
	baz=51						
KZA	Kyzart	2.47	18	P	Pb	04 14 06.4	+1.0
	SNR=233						
KZA	Kyzart	2.47	18	⇑*i*P	Pn	04 14 02.9	+1.2
	baz=21						
KZA				⇑*i*S	Sn	04 14 32.5	-0.2
	baz=21						
UCH	Uchtor	2.50	5	P	Pb	04 14 06.5	+0.6
	SNR=244						
UCH	Uchtor	2.50	5	⇓*i*P	Pn	04 14 03.0	+0.8
	baz=7.0						
UCH				⇓*i*S	Sn	04 14 32.6	-0.9
	baz=7.0						
BTK	Batken	2.63	278	*e*Pn	Pb	04 14 08.1	+0.2
BTK				*e*Sn	Sg	04 14 43.0	-1.5
BTK	Batken	2.63	278	⇓*i*P	Pb	04 14 07.1	-0.8
	baz=74						
BTK				⇓*i*S	Sb	04 14 39.5	-1.2
	baz=74						
ARK	Arkit	2.68	321	⇑*e*P	Pn	04 14 05.7	+1.4
	baz=19						
ARK				⇑*i*S	Sn	04 14 36.7	-0.7
	baz=19						
AAK	Ala-Archa	2.91	4	P	Pb	04 14 13.3	+0.5
	SNR=95						
AAK	Ala-Archa	2.91	4	*e*Pn	Pb	04 14 11.1	-1.6
AAK				*e*Sn	Sg	04 14 52.6	-0.9
AAK				*e*Sn	Sb	04 14 54.1	+5.3
AAK	Ala-Archa	2.91	4	⇓Pn	Pb	04 14 13.2	+0.5
	55nm,0.6s						
AAK				⇑Lg	Lg	04 14 54.6	
	343nm,0.7s						
AAK	Ala-Archa	2.91	4	⇑*i*P	Pn	04 14 08.5	+1.0
	baz=5.0						
AAK				⇑*i*S	Sn	04 14 41.9	-1.3
	baz=5.0						
AAK	Ala-Archa	2.91	4	Pn	Pb	04 14 12.5	-0.2
	21nm,0.3s,baz=153,slow=7.4,SNR=106						
AAK				Lg	Lg	04 14 54.1	
	26nm,0.3s,baz=3.3,slow=16,SNR=24						
AAK				LR	LR	04 15 06.3	
	comp=Z,103nm,18.3s,baz=183,slow=34						
ULHL	Ulahol	2.94	31	P	Pg	04 14 16.0	-0.4
	SNR=61						
ULHL	Ulahol	2.94	31	⇑*i*P	Pn	04 14 09.9	+1.9
	baz=34						
ULHL				⇑*i*S	Sn	04 14 44.2	+0.1
	baz=34						
EKS2	Erkin-Say	2.94	354	P	Pb	04 14 13.2	-0.1
	SNR=8.4						
EKS2	Erkin-Say	2.94	354	⇑*i*P	Pn	04 14 08.7	+0.8
	baz=54						
EKS2				⇑*i*S	Sn	04 14 42.4	-1.6
	baz=54						
KBK	Karagaybulak	2.97	11	P	Pb	04 14 13.9	+0.1
	SNR=72						
KBK	Karagaybulak	2.97	11	⇓*i*P	Pn	04 14 09.4	+1.0
	baz=12						
KBK				⇓*i*S	Sn	04 14 43.6	-1.1
	baz=12						
MNAS	Manas	3.04	335	⇑Pn	Pn	04 14 12.0	+2.7
	17nm,0.4s						
MNAS				⇑Lg	Lg	04 14 56.7	
	231nm,0.6s						
MNAS	Manas	3.04	335	Pg	Pg	04 14 16.9	-1.3
	10nm,0.5s						
MNAS				Lg	Lg	04 14 57.0	
	144nm,0.6s						
MNAS	Manas	3.04	335	⇓*i*P	Pn	04 14 10.2	+0.9
	baz=34						
MNAS				⇓*i*S	Sn	04 14 44.7	-1.6
	baz=34						
BOOM	Boomskoye usch	3.05	25	⇓*i*P	Pn	04 14 10.8	+1.4
	baz=27						
BOOM				⇓*i*S	Sn	04 14 46.9	+0.3
	baz=27						
FRU1	Bishkek	3.09	6	*e*Pn	Pg	04 14 17.6	-1.6
MRKS	Merke	3.10	346	Pg	Pb	04 14 17.1	+1.1
	63nm,0.5s						
MRKS				Lg	Lg	04 14 57.3	
	122nm,0.5s						
MRKS	Merke	3.10	346	*e*P	Pb	04 14 17.1	+1.1
	63nm,0.5s						
MRKS				*e*S	Sg	04 14 57.3	-2.3
	122nm,0.5s						
KDJ	Kajisay	3.29	42	*e*Pn	Pb	04 14 19.0	-0.1
KDJ	Kajisay	3.29	42	⇓*i*P	Pn	04 14 14.7	+2.0
	baz=45						
KDJ				⇓*i*S	Sn	04 14 52.9	+0.5
	baz=45						
CHMS	Chumysh	3.29	7	P	Pb	04 14 18.4	-0.7
	SNR=11						
CHMS	Chumysh	3.29	7	⇑*i*P	Pn	04 14 13.7	+1.1
	baz=8.0						
CHMS				⇑*i*S	Sn	04 14 51.1	-1.2
	baz=8.0						
TKM2	Tokmak 2	3.35	18	P	Pb	04 14 19.5	-0.8
	SNR=13						
TKM2	Tokmak 2	3.35	18	⇓Pn	Pb	04 14 19.7	-0.5
	16nm,0.4s						
TKM2				⇓Pg	Pg	04 14 21.4	-2.9
	22nm,0.5s						
TKM2				⇑Lg	Lg	04 15 06.9	
	96nm,0.6s						
TKM2	Tokmak 2	3.35	18	⇑*i*P	Pn	04 14 15.1	+1.5
	baz=20						
TKM2				⇑*i*S	Sn	04 14 53.4	-0.7
	baz=20						
TARG	Taragay, Kyrgy	3.38	53	*e*Pn	Pb	04 14 20.0	-0.9
USP	Ospenovka	3.54	3	P	Pb	04 14 21.1	-2.3
	SNR=7.4						
USP	Ospenovka	3.54	3	⇑*i*P	Pn	04 14 17.0	+1.0
	baz=4.0						
USP				⇑*i*S	Sn	04 14 56.7	-1.8
	baz=4.0						
KST	Kastek	3.56	21	*e*P	Pb	04 14 24.9	+1.1
	23nm,0.6s						
KST				*e*S	Sg	04 15 11.2	-3.2
	171nm,0.8s						
DGS	Degeres	3.70	18	Pg	Pg	04 14 30.9	+0.1
	84nm,0.6s						
DGS				Lg	Lg	04 15 20.4	
	134nm,0.7s						
DGS	Degeres	3.70	18	*e*P	Pg	04 14 30.9	+0.1
	84nm,0.6s						
DGS				*e*S	Sg	04 15 20.4	+1.7
	134nm,0.7s						
MTBS	Maitube	3.78	25	*e*P	Pg	04 14 32.2	-0.2
	48nm,0.4s						
MTBS				*e*S	Sg	04 15 22.8	+1.4
	84nm,0.6s						
TNSS	Tian-Shan	3.89	31	*e*P	Pg	04 14 35.7	+1.2
	88nm,0.4s						
TNSS				*e*S	Sg	04 15 28.8	+3.8
	69nm,0.6s						
IUG	Iuzhnay	3.98	309	Pg	Pg	04 14 34.1	-2.1
	74nm,0.7s						
IUG				Lg	Lg	04 15 25.8	
	108nm,0.5s						
IUG	Iuzhnay	3.98	309	*e*P	Pg	04 14 34.1	-2.1
	22nm,0.5s						
IUG				*e*S	Sg	04 15 25.9	-2.0
	78nm,0.9s						
MDOK	Medeo	4.04	31	⇑Pg	Pg	04 14 35.1	-2.2
	67nm,0.6s						
MDOK				⇓Lg	Lg	04 15 30.3	
	125nm,1.2s						
MDOK	Medeo	4.04	31	*e*P	Pg	04 14 35.8	-1.6
	66nm,0.5s						
MDOK				*e*S	Sg	04 15 29.7	+0.1
	60nm,0.7s						
KNDC	Almaty	4.05	30	⇓Pg	Pg	04 14 40.1	+2.6
	63nm,0.6s						
KNDC				⇓Lg	Lg	04 15 31.9	
	239nm,0.8s						
KOTS	Kotyrbulak	4.12	31	Pg	Pg	04 14 38.5	-0.5
	76nm,0.6s						
KOTS				Lg	Lg	04 15 33.7	
	79nm,0.7s						
KOTS	Kotyrbulak	4.12	31	*e*P	Pg	04 14 38.5	-0.5
	76nm,0.6s						
KOTS				*e*S	Sg	04 15 33.7	+1.3
	79nm,0.7s						
KK31	Karatay Array	4.37	322	*e*Pn	Pn	04 14 29.5	+2.1
KK31	Karatay Array	4.37	322	Pn	Pn	04 14 29.7	+2.3
	1.2nm,0.3s,baz=126,slow=13,SNR=42						
KK31				⇓Pg	Pg	04 14 42.1	-1.6
	4.7nm,0.3s,baz=135,slow=15,SNR=8.6						
KK31				⇑Sn	Sn	04 15 21.0	+2.1
	11nm,0.5s,baz=138,slow=16,SNR=4.3						
KK31				⇑Lg	Lg	04 15 37.7	
	28nm,0.5s,baz=122,slow=27,SNR=3.6						
KKAR	Karatay Array	4.37	322	*e*Pn	Pn	04 14 29.5	+2.1
KTBS	Karatobe	4.38	24	Pg	Pg	04 14 42.4	-1.6
	28nm,0.5s						
KTBS				Lg	Lg	04 15 40.3	
	73nm,0.6s						
KTBS	Karatobe	4.38	24	*e*P	Pg	04 14 42.4	-1.6
	28nm,0.5s						
KTBS				*e*S	Sg	04 15 40.2	-0.6
	73nm,0.6s						
KUU	Kurty	4.45	20	*e*P	Pg	04 14 43.9	-1.4
	19nm,0.7s						
KUU				*e*S	Sg	04 15 41.8	-1.1
	44nm,0.6s						
CHKK	Chushkaly	4.61	26	*e*P	Pg	04 14 46.6	-1.8
	9.1nm,0.4s						
CHKK				*e*S	Sg	04 15 47.5	-0.6
	58nm,0.6s						
UZB	Uzynbulak	4.97	45	Pg	Pg	04 14 54.0	-1.2
	13nm,0.7s						
UZB				Lg	Lg	04 16 00.9	
	18nm,0.7s						
UZB	Uzynbulak	4.97	45	*e*P	Pg	04 14 54.0	-1.2
	13nm,0.7s						
UZB				*e*S	Sg	04 16 00.9	+1.2
	18nm,0.7s						
ARXS	Arharly	5.23	30	Pg	Pg	04 14 57.4	-2.7
	29nm,0.8s						
ARXS				Lg	Lg	04 16 06.0	
	66nm,1.0s						
ARXS	Arharly	5.23	30	*e*P	Pg	04 14 57.0	-3.1
	29nm,0.8s						
ARXS				*e*S	Sg	04 16 05.7	-2.1
	66nm,1.0s						
PDGK	Podgornoye	5.35	46	⇓Pn	Pn	04 14 45.5	+4.5
	4.3nm,0.6s						
PDGK				⇓Pg	Pg	04 15 02.1	-0.3
	11nm,0.6s						
PDGK				⇑Lg	Lg	04 16 12.3	
	31nm,0.7s						
NIL	Nilore	6.12	188	*e*Pn	Pn	04 14 52.1	+0.6
NIL				*e*Sn	Sn	04 16 00.3	-1.8
KBL	Kabul	6.62	220	*e*Pn	Pn	04 15 00.0	+1.5
OTUK	Ortayu	8.62	352	⇑Pn	Pn	04 15 29.1	+3.4
	2.0nm,0.7s						
OTUK				⇓Lg	Lg	04 17 52.2	
	15nm,0.7s						
MAKZ	Makanchi	9.06	36	⇑Pg	Pn	04 16 10.6	+39
	2.8nm,1.1s						
MAKZ				⇑Lg	Lg	04 18 07.8	
	6.8nm,1.2s						
MK01	Makanchi Array	9.18	37	*e*Pn	Pn	04 15 36.0	+2.6
MK31	Makanchi Array	9.19	37	⇓Pn	Pn	04 15 39.7	+6.1
	0.8nm,0.5s,baz=212,slow=12,SNR=4.3						
MK31				⇓Lg	Lg	04 18 13.7	
MK32	Makanchi Array	9.19	37	*e*Pn	Pn	04 15 33.6	0.0
MKAR	Makanchi Array	9.19	37	Pn	Pn	04 15 33.6	0.0
	0.0nm,0.3s,baz=216,slow=12,SNR=2.0						
MKAR				Lg	Lg	04 18 05.6	
	0.1nm,0.3s,baz=231,slow=28,SNR=2.6						
WMQ	Urumqi	10.87	64	*e*P	Pn	04 15 58.6	+2.0
WMQ				PP	PnPn	04 16 07.0	+2.9
WMQ				ScS	ScS	04 29 10.8	+5.3
KURBB	Kurchatov Arra	11.31	14	Lg	Lg	04 19 16.1	
	0.0nm,0.3s,baz=199,slow=29,SNR=5.6						
KURK	Kurchatov	11.41	14	*e*Pn	Pn	04 16 06.6	+2.7
BVA0	Borovoye Array	13.55	350	P	Pn	04 16 34.1	+0.9
	3.2nm,0.8s,baz=174,slow=12,SNR=8.2						
BVAR	Borovoye Array	13.55	350	Pn	Pn	04 16 33.6	+0.4
	0.2nm,0.3s,baz=162,slow=13,SNR=10						
BVAR				Lg	Lg	04 20 20.9	
	0.1nm,0.3s,baz=166,slow=34,SNR=2.8						
BRVK	Borovoye	13.60	350	*e*Pn	Pn	04 16 34.7	+0.9
BRVK	Borovoye	13.60	350	⇑P	P	04 16 43.7	+0.7
	2.8nm,0.6s						
AB31	Akbulak array	13.92	318	P	Pn	04 16 37.5	-0.6
	4.2nm,0.8s,baz=131,slow=12,SNR=34						
ABKAR	Akbulak array	13.92	318	*e*Pn	Pn	04 16 37.7	-0.5
AKTO	Aktyubinsk	15.63	319	⇓P	Pn	04 17 00.7	-0.5
	3.2nm,0.9s						
AKTO	Aktyubinsk	15.63	319	Pn	Pn	04 17 01.2	0.0
	0.1nm,0.3s,baz=128,slow=15,SNR=5.6						
ZALV	Zalesovo Beam	15.94	23	*e*Pn	P	04 17 07.8	-1.2
ZALV	Zalesovo Beam	15.94	23	Pn	P	04 17 08.0	-1.0
	0.2nm,0.3s,baz=226,slow=10,SNR=4.8						
ZAA1	Zalesovo Array	15.94	23	*e*Pn	P	04 17 08.0	-1.0
ARU	Arti	19.63	334	*e*P	Pn	04 17 50.3	-0.6
BR101	Keskin Array S	31.02	283	*e*P	P	04 19 39.6	+0.5
BRTR	Keskin Array B	31.02	283	P	P	04 19 39.6	+0.5
	0.6nm,0.8s,baz=94,slow=6.1,SNR=2.8						
FIA0	FINESS Array S	36.33	323	*e*P	P	04 20 25.3	+0.4
FINES	FINESS Array B	36.33	323	P	P	04 20 25.3	+0.4
	1.7nm,0.5s,baz=113,slow=9.3,SNR=16						
ARA0	ARCESS Array S	39.20	335	*e*P	P	04 20 49.6	+0.6
ARCES	ARCESS Array B	39.20	335	P	P	04 20 49.6	+0.6
	1.3nm,0.6s,baz=106,slow=9.9,SNR=10.0						
HFS	Hagfors	42.17	320	P	P	04 21 13.9	+0.2
	1.8nm,0.5s,baz=102,slow=11,SNR=12						
GERES	GERESS Array B	43.22	303	P	P	04 21 23.0	+0.5
	0.4nm,0.5s,baz=67,slow=12,SNR=4.7						
NB2	NORSAR Subarra	43.40	321	P	P	04 21 23.5	-0.2
	comp=Z,0.7nm,0.5s,baz=90,slow=8.6						
NB200	NORSAR Array S	43.40	321	*e*P	P	04 21 23.7	0.0
NOA	NORSAR Array B	43.40	321	P	P	04 21 23.7	0.0
	comp=Z,0.9nm,0.5s,baz=90,slow=7.9,SNR=5.5						
TOA1	Torodi Ar. Sit	68.31	269	*e*P	P	04 24 20.4	-2.6
TORD	Torodi Ar. Bea	68.31	269	P	P	04 24 20.4	-2.6
	comp=Z,0.4nm,0.5s,baz=46,slow=5.8,SNR=5.5						
INK	Inuvik	70.29	11	*e*P	P	04 24 34.5	+0.1
	comp=Z,8.7nm,1.6s						
INK	Inuvik	70.29	11	P	P	04 24 34.5	+0.1
	comp=Z,0.4nm,0.4s,baz=349,slow=2.2,SNR=4.8						
ILAR	Eielson Array	70.96	17	P	P	04 24 36.8	-1.8
	comp=Z,0.2nm,0.6s,baz=320,slow=5.0,SNR=3.6						
ILB	Eielson Array	70.96	17	*e*P	P	04 24 36.8	-1.8
YKA	Yellowknife Ar	77.87	4	P	P	04 25 18.6	-0.1
	comp=Z,0.4nm,0.6s,baz=346,slow=5.4,SNR=7.4						
YKB5	Yellowknife Ar	77.87	4	*e*P	P	04 25 18.6	-0.1

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*IDC **02** 04:16:13.5±0.4, 10°.92S×165°.47E, h0^{km}, mb5.0/28, mb1 5.2/30, mb1mx5.1/35, mbtmp5.0/30, ML5.4/2, MS5.4/27, Ms1 5.4/27, ms1mx5.3/36, Error ellipse: s-maj=11.6km s-min=9.8km az=101.0*

*ISCJB **02** 04:16:17.1±0.1, 10°.97S±0°.02×165°.32E±0°.02, h30^{km}, mb5.3/305, MS5.6/188, Error ellipse: s-maj=3.0km s-min=2.5km az=43.9*

*NEIC **02** 04:16:17.5±1.0, 10°.96S×165°.36E, h22^{km}±7^{km}, mb5.4/260, MS5.6/129, MW5.8, Error ellipse: s-maj=2.6km s-min=2.3km az=146.0*

*MOS **02** 04:16:17.5±1.1, 10°.97S×165°.28E, h30^{km}, mb5.4/84, MS5.5/31, Error ellipse: s-maj=7.5km s-min=6.4km az=69.4*

*BJI **02** 04:16:20.9, 10°.50S×165°.05E, h29^{km}, mB5.5/65, mb5.1/50, Ms5.7/73, Ms7 5.4/71*

*NEIC **02** 04:16:20.0±0.0, 10°.99S×165°.17E, h11^{km}, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}3.02; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-2.54; $M_{r\theta}$3.33; $M_{\theta\phi}$1.21; $M_{\phi r}$-4.41; Best double couple: $M_0$6.30000×10^{17} NP1:ϕ_s144.00000°, δ76.00000°, λ85.00000°. NP2:ϕ_s345.00000°, δ15.00000°, λ110.00000°. Principal axes: T 6.3300, Plg58.0000°, Azm47.0000°; N -0.0300, Plg5.0000°, Azm145.0000°; P -6.3000, Plg30.0000°, Azm238.0000°;*

*GCMT **02** 04:16:21.5±0.1, 11°.05S±0°.01×165°.20E±0°.01, h18^{km}, MW5.8/136, Moment Tensor Solution. s129,c259; s136,c332; Duration: 2^s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}3.86±.06; $M_{\theta\theta}$-1.22±.04; $M_{\phi\phi}$-2.65±.04; $M_{r\theta}$3.29±.13; $M_{\theta\phi}$2.24±.04; $M_{\phi r}$-5.06±.17; Best double couple: $M_0$7.28200×10^{17} NP1:ϕ_s147.00000°, δ73.00000°, λ92.00000°. NP2:ϕ_s321.00000°, δ17.00000°, λ84.00000°. Principal axes: T 7.0730, Plg62.0000°, Azm59.0000°; N 0.4070, Plg2.0000°, Azm326.0000°; P -7.4900, Plg28.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 02 04:16:18.9±0.2**, 10°.99S**±0°.03×**165°.38E**±0°.04**, h30^{km}, n858, σ1^s.51**/825**, mb5.4**/309**, MS5.6**/189**, 14C-13D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.56	286	*e*P	Pn	04 17 39.0	-0.7
HNR				*e*S	Sn	04 18 41.0	-1.7
HNR	Honiara	5.56	286	*e*Pn	Pn	04 17 37.9	-1.8
HNR				*e*Sn	Sn	04 18 41.4	-1.3
HNR	Honiara	5.56	286	*e*P	Pn	04 17 37.9	-1.8
HNR				*e*		04 18 41.4	
HNR	Honiara	5.56	286	Pn	Pn	04 17 39.5	-0.2
	138nm,0.3s,baz=2.5,slow=7.3,SNR=18						
HNR				Sn	Sn	04 18 45.1	+2.4
	86nm,0.3s,baz=198,slow=19,SNR=2.3						
HNR				LR	LR	04 19 56.4	
	comp=Z,73µm,18.6s,baz=108,slow=40						
MARNC	Mare, Loyalty	10.74	167	*e*Pn	Pn	04 18 50.5	-0.2
DZM	Mont Dzumac	11.07	175	*e*Pn	Pn	04 18 54.7	-0.6
	988nm,1.4s						
DZM				*e*LQ	LQ	04 20 59.6	
	34µm,23.5s						
DZM				*e*LR	LR	04 21 27.8	
	comp=Z,23µm,25.4s						
DZM	Mont Dzumac	11.07	175	*e*Pn	Pn	04 18 54.4	-0.9
DZM				*e*Sn	Sn	04 20 57.4	-0.8
DZM	Mont Dzumac	11.07	175	Pn	Pn	04 18 55.1	-0.2
	26nm,0.3s,baz=13,slow=11,SNR=153						
DZM				Sn	Sn	04 20 59.7	+1.5
	2.4nm,0.3s,baz=150,slow=20,SNR=3.0						
ONTNC	Ouen Toro	11.30	175	*e*Pn	Pn	04 18 57.8	-0.6
ONTNC				*e*Sn	Sn	04 21 02.5	-1.3
OUENC	Ouen Island, N	11.45	173	*e*Pn	Pn	04 19 00.1	-0.4
OUENC				*e*Sn	Sn	04 21 06.3	-1.2
PINNC	Pines Island,	11.73	171	*e*Pn	Pn	04 19 03.9	-0.3
PINNC				*e*Sn	Sn	04 21 12.5	-1.7
FUNA	Funafuti	13.84	81	*e*Pn	Pn	04 19 32.7	-0.4
TARA	Tarawa	14.37	32	*e*Pn	Pn	04 19 39.2	-1.2
TARA				*e*Sn	Sn	04 22 11.9	-7.0
EIDS	Eidsvold	19.70	222	P	Pn	04 20 47.4	0.0
	baz=20,SNR=10.0						
EIDS	Eidsvold	19.70	222	*e*P	P	04 20 46.5	+0.7
	222nm,1.3s						
KWAJ	Kwajalein Atol	19.78	7	*e*P	P	04 20 45.3	-1.5
	355nm,0.9s						
KWAJ	Kwajalein Atol	19.78	7	*e*P	P	04 20 45.3	-1.5
KWAJ				pmax	pmax		
	comp=Z,355nm,0.9s						
MANU	Manus Island	19.96	295	*e*P	P	04 20 48.8	0.0
	comp=Z,2µm,1.4s						
CTA	Charters Tower	20.51	242	P	P	04 20 55.8	+1.0
	comp=Z,138nm,1.0s,baz=69,slow=13,SNR=61						
CTA				S	Sn	04 24 48.0	+0.4
	comp=Z,5.1nm,0.9s,baz=204,slow=20,SNR=3.8						
CTA				LR	LR	04 28 12.4	
	comp=Z,18µm,18.1s,baz=68,slow=35						
CTAO	Charters Tower	20.51	242	*e*P	P	04 20 54.3	-0.5
	comp=Z,471nm,1.1s						
CTAO				LR	LR		
	comp=Z,26µm,19.0s						
CTAO	Charters Tower	20.51	242	*e*P	P	04 20 54.3	-0.5
CTAO				pmax	pmax		
	comp=Z,471nm,1.1s						

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CTAO                                  MLR     MLR
      comp=Z,26µm,19.0s
LHI   Lord Howe Isla    21.25 195   eP      P        04 21 03.5 +0.8
      comp=Z,218nm,1.0s
MTSU  Mount Surprise    21.57 248    P      P        04 21 06.4 +0.1
      baz=22,SNR=153
COEN  Coen              21.88 260    P      P        04 21 09.3  -0.2
      baz=22,SNR=17
COEN  Coen              21.88 260   eP      P        04 21 09.3  -0.2
RMQ   Roma              21.99 223    P      P        04 21 11.6 +1.0
      baz=22,SNR=105
ARMA  Armidale          23.18 211    P      P        04 21 24.7 +1.5
      baz=23,SNR=9.1
ARMA  Armidale          23.18 211   eP      P        04 21 22.4  -0.8
      comp=Z,145nm,1.3s
RAO   Raoul Island      23.95 142    PFAKE           04 21 40.0 +9.4
RAO                                  LR     LR
      comp=Z,7µm,20.0s
RAO   Raoul Island      23.95 142    LR     LR       04 28 49.9
      comp=Z,6µm,19.3s,baz=328,slow=32
KNTN  Kanton            24.14  72   eP      P        04 21 31.1  -1.4
      comp=Z,283nm,1.4s
OUZ   Omahuta           25.26 164   eP      P        04 21 43.2 +0.8
      comp=Z,184nm,1.1s
QLP   Quilpie           25.26 229    P      P        04 21 44.2 +1.6
      baz=25,SNR=9.4
MGCD  Mangrove Creek    25.71 208    P      P        04 21 49.2 +2.6
      baz=26,SNR=5.9
JAY   Jayapura          25.89 287    P      P        04 21 46.9  -1.6
      comp=Z,29nm,0.8s,baz=72,slow=6.4,SNR=3.9
JAY                                  LR     LR       04 32 34.6
      comp=Z,8µm,18.8s,slow=38
QIS   Mount Isa         26.53 246    P      P        04 21 54.0  -0.1
      baz=27,SNR=3.2
CMSA  Cobar Meteorol    27.38 219    P      P        04 22 01.5  -0.2
      baz=28,SNR=16
MKAZ  Moumakai          27.46 163    P      P        04 22 04.5 +2.2
YNG   Young             27.91 211    P      P        04 22 08.5 +2.1
      baz=28,SNR=5.3
CAN   Canberra          28.44 209   eP      P        04 22 10.6  -0.6
      comp=Z,42nm,1.2s
CAN   Canberra          28.44 209   eP      P        04 22 10.6  -0.6
CAN                                  pmax   pmax
      comp=Z,42nm,1.2s
LIRZ  Lichensteins R    28.66 162    P      P        04 22 15.9 +2.9
HIZ   Hauiti            28.69 164   eP      P        04 22 13.9 +0.6
      comp=Z,113nm,1.1s
OMRZ  Omania            28.75 162    P      P        04 22 18.6 +4.8
HAZ   Te Kaha           28.89 159    P      P        04 22 16.7 +1.7
RUGZ  Raukumara Rang    29.04 160    P      P        04 22 17.9 +1.4
URZ   Urewera           29.12 161   eP      P        04 22 17.7 +0.7
      comp=Z,103nm,1.0s
URZ   Urewera           29.12 161    P      P        04 22 15.9  -1.2
      comp=Z,22nm,1.1s,baz=37,slow=2.5,SNR=12
URZ                                  S      S        04 27 11.1 +4.0
      comp=Z,9.0nm,0.9s,baz=202,slow=19,SNR=2.3
URZ                                  LR     LR       04 33 14.1
      comp=Z,7µm,18.3s,baz=348,slow=35
URZ   Urewera           29.12 161    P      P        04 22 19.0 +1.9
WMGZ  Waiomatatini S    29.17 158    P      P        04 22 19.1 +1.6
H11S2 WAKE ISLAND Hy    29.32   3    T      T        04 52 52.8
      baz=184,slow=76,SNR=276
H11S3 WAKE ISLAND Hy    29.32   3    T      T        04 53 03.1
      baz=184,slow=76,SNR=276
MWZ   Matawai           29.32 160    P      P        04 22 21.4 +2.4
TWGZ  Tauwhareparae     29.34 159    P      P        04 22 20.5 +1.5
H11S1 WAKE ISLAND Hy    29.34   3    T      T        04 52 59.7
      baz=184,slow=76,SNR=336
PUZ   Puketiti          29.34 159    P      P        04 22 20.8 +1.7
KATZ  Kakaramea         29.35 163    P      P        04 22 22.1 +2.8
KRVZ  Karewarewa        29.45 164    P      P        04 22 23.3 +3.2
WTVZ  West Tongariro    29.45 164    P      P        04 22 23.4 +3.2
TRVZ  Turoa             29.61 164    P      P        04 22 25.9 +4.1
SNGZ  Shannon Statio    29.67 161    P      P        04 22 22.6 +0.5
RAHZ  Arahi             29.71 161    P      P        04 22 23.5 +1.1
RIGZ  Rimuhau           29.74 160    P      P        04 22 24.1 +1.5
BKZ   Black Stump Fm    29.76 162   eP      P        04 22 23.5 +0.7
      comp=Z,233nm,1.2s
BKZ   Black Stump Fm    29.76 162    P      P        04 22 24.4 +1.5
NMHZ  Naumai            29.79 162    P      P        04 22 25.1 +1.9
BHHZ  Black Hill Sta    29.93 163    P      P        04 22 26.0 +1.7
KWHZ  Kaweka Forest     29.98 163    P      P        04 22 26.3 +1.5
KNZ   Kokohu            30.00 161    P      P        04 22 25.8 +1.0
MCHZ  McNeill Hill      30.08 162    P      P        04 22 28.4 +2.9
WAKE  Wake Island       30.11   2    PFAKE           04 22 40.0  +14
WAKE                                 LR     LR
      comp=Z,6µm,20.0s
STKA  Stephens Creek    30.24 223    P      P        04 22 27.5 +0.3
      baz=30,SNR=25
STKA  Stephens Creek    30.24 223   eP      P        04 22 27.4 +0.3
      comp=Z,21nm,1.5s
STKA  Stephens Creek    30.24 223    P      P        04 22 26.3  -0.8
      comp=Z,20nm,0.8s,baz=19,slow=6.7,SNR=31
STKA                                 LR     LR       04 34 10.7
      comp=Z,25µm,18.3s,baz=54,slow=36
H11N1 WAKE ISLAND Hy    30.54   3    T      T        04 54 24.5
      baz=182,slow=76,SNR=741
H11N3 WAKE ISLAND Hy    30.55   3    T      T        04 54 26.2
      baz=182,slow=76,SNR=116
H11N2 WAKE ISLAND Hy    30.56   3    T      T        04 54 25.9
      baz=182,slow=76,SNR=92
BFZ   Birch Farm        31.10 164   eP      P        04 22 35.0 +0.4
      comp=Z,151nm,0.9s
WB2   Warramunga Arr    31.15 250   eP      P        04 22 34.1  -1.3
WRAB  Tennant Creek     31.15 250   eP      P        04 22 34.2  -1.2
      comp=Z,177nm,1.5s
WRAB                                 LR     LR
      comp=Z,10µm,21.0s
WRAB  Tennant Creek     31.15 250⇑  eP      P        04 22 34.1  -1.2
WRAB                                 pmax   pmax
      comp=Z,129nm,1.9s
WRAB                                 MLR    MLR
      comp=Z,16µm,18.0s
WR1   Warramunga Arr    31.16 250   eP      P        04 22 34.4  -1.0
      comp=Z,164nm,1.4s
WRA   Warramunga Arr    31.17 250    P      P        04 22 34.4  -1.1
      comp=Z,29nm,0.9s,baz=80,slow=9.0,SNR=59
WRA                                  LR     LR       04 35 15.2
      comp=Z,15µm,18.0s,baz=75,slow=36
WRA                                  P3KPbc          04 54 18.0
      comp=Z,0.6nm,1.0s,baz=254,slow=3.2,SNR=5.3
SNZO  South Karori      31.30 166    PFAKE           04 22 50.0  +14
SNZO                                 LR     LR
      comp=Z,9µm,19.0s
THZ   Tophouse          31.36 169   eP      P        04 22 38.0 +1.1
      comp=Z,123nm,0.8s
GUMO  Guam              31.78 320    PFAKE           04 22 50.0 +9.2
GUMO                                 LR     LR
      comp=Z,6µm,20.0s
GUMO  Guam              31.78 320    LR     LR       04 34 49.1
      comp=Z,5µm,18.8s,baz=152,slow=35
TOO   Toolangi          31.94 211    P      P        04 22 42.7 +0.6
      baz=32,SNR=9.3
TOO   Toolangi          31.94 211   eP      P        04 22 42.0  -0.1
      comp=Z,29nm,0.8s
TOO   Toolangi          31.94 211   eP      P        04 22 42.0  -0.1
TOO                                  pmax   pmax
      comp=Z,29nm,0.8s
KHZ   Kahutara          32.11 169   eP      P        04 22 44.3 +0.8
      comp=Z,82nm,1.0s
KDU   Kakadu            32.24 264    P      P        04 22 43.9  -1.1
      baz=32,SNR=7.6
LTZ   Lake Taylor       32.24 170   eP      P        04 22 45.1 +0.4
      comp=Z,80nm,0.8s
AS01  Alice Springs     32.46 243   eP      P        04 22 44.5  -2.3
AS31  Alice Springs     32.50 243   eP      P        04 22 45.5  -1.7
      comp=Z,27nm,0.8s
ASAR  Alice Springs     32.50 243    P      P        04 22 45.6  -1.5
      comp=Z,100nm,0.9s,baz=73,slow=9.2,SNR=190
ASAR                                 PcP    PcP      04 25 35.0 +1.2
      comp=Z,8.4nm,1.0s,baz=84,slow=2.8,SNR=5.6
ASAR                                 LR     LR       04 35 00.6
      comp=Z,11µm,19.5s,baz=76,slow=35
ASAR                                 P3KPbc          04 54 14.2
      comp=Z,1.6nm,0.9s,baz=257,slow=3.9,SNR=12
FOZ   Fox Glacier       32.65 174   eP      P        04 22 48.8 +0.7
      comp=Z,134nm,0.9s
OXZ   Oxford            32.73 171   eP      P        04 22 49.9 +0.9
      comp=Z,101nm,0.9s
HTT   Hallett           32.97 223    P      P        04 22 51.2   0.0
      baz=33,SNR=20
RPZ   Rata Peaks        32.98 172    P      P        04 22 51.4 +0.4
      comp=Z,26nm,0.7s,baz=301,slow=1.8,SNR=8.2
RPZ                                  LR     LR       04 36 33.6
      comp=Z,10µm,18.1s,baz=342,slow=37
CRLZ  Canterbury Las    33.07 170   eP      P        04 22 50.8  -1.0
      comp=Z,154nm,1.2s
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MQZ   McQueen's Vall    33.20 170   eP      P        04 22 53.2 +0.3
      comp=Z,81nm,1.0s
ARPS  Mount Arapiles    33.31 216    P      P        04 22 55.6 +1.5
      baz=34,SNR=14
LBZ   Lake Benmore      33.54 174   eP      P        04 22 56.8 +0.9
      comp=Z,43nm,0.9s
MTN   Manton Dam        33.55 263   eP      P        04 22 55.1  -1.2
      comp=Z,46nm,1.0s
WKZ   Wanaka            33.87 175   eP      P        04 22 59.6 +0.8
      comp=Z,28nm,0.9s
ODZ   Otahua Downs      34.24 173   eP      P        04 23 02.4 +0.4
      comp=Z,51nm,1.1s
DCZ   Deep Cove         34.39 178   eP      P        04 23 03.9 +0.6
      comp=Z,76nm,1.1s
BBOO  Buckleboo         34.61 227    P      P        04 23 04.7  -0.6
      baz=35,SNR=12
BBOO  Buckleboo         34.61 227   eP      P        04 23 04.8  -0.6
      comp=Z,76nm,1.2s
RAR   Rarotonga         34.92 111    PFAKE           04 23 20.0  +12
RAR                                  LR     LR
      comp=Z,9µm,20.0s
RAR   Rarotonga         34.92 111    LR     LR       04 34 18.8
      comp=Z,5µm,21.5s,baz=276,slow=31
PYZ   Puysegur Point    35.08 178   eP      P        04 23 09.6 +0.4
      comp=Z,59nm,1.1s
SIJI  Sorong            35.34 284    LR     LR       04 38 56.6
      comp=Z,5µm,19.8s,baz=122,slow=38
TAU   Tasmania Unive    35.48 203   eP      P        04 23 12.1  -0.6
      comp=Z,28nm,0.8s
TAU                                  LR     LR
      comp=Z,6µm,19.0s
TAU   Tasmania Unive    35.48 203   eP      P        04 23 12.1  -0.6
TAU                                  pmax   pmax
      comp=Z,28nm,0.8s
TAU                                  MLR    MLR
      comp=Z,6µm,19.0s
KNRA  Kununurra         35.90 258    P      P        04 23 17.2 +0.5
      baz=36,SNR=3.9
WRKA  Warakurna         37.79 243    P      P        04 23 31.6  -1.2
      baz=38,SNR=70
NLAI  Namlea            38.72 279    P      P        04 23 48.5 +7.8
FITZ  Fitzroy Crossi    39.05 255    P      P        04 23 42.7  -0.6
      baz=39,SNR=18
FITZ  Fitzroy Crossi    39.05 255   eP      P        04 23 42.7  -0.6
      comp=Z,57nm,1.4s
FORT  Forrest           39.78 235    P      P        04 23 48.9  -0.3
      baz=40,SNR=14
FORT  Forrest           39.78 235   eP      P        04 23 49.0  -0.3
      comp=Z,174nm,1.4s
SANI  Sanana            40.08 280    P      P        04 23 49.9  -2.1
SOEI  Soe               40.44 268   eP      P        04 23 54.2  -0.9
      comp=Z,32nm,1.2s
BATI  Baumata           40.99 267    P      P        04 23 59.1  -0.5
MIDW  Midway            42.40  23    PFAKE           04 24 20.0 +9.3
MIDW                                 LR     LR
      comp=Z,5µm,19.0s
EDFI  Ende, Flores      43.07 269    P      P        04 24 15.4  -1.3
      comp=Z,20nm,1.2s,comp=Z,1µm
DAV   Davao City (W)    43.48 293    PFAKE           04 24 30.0  +10
DAV                                  LR     LR
      comp=Z,1µm,21.0s
PPT   Papeete           44.06 104    LR     LR       04 40 10.5
      comp=Z,6µm,18.3s,baz=266,slow=33
PPT2  Papeete2          44.06 104   eS      S        04 31 05.6  +10
      comp=Z,3µm,25.0s
PPT2                                eLQ     LQ       04 35 03.8
      comp=Z,11µm,28.0s
PPT2                                eLR     LR       04 36 55.0
      comp=Z,8µm,22.0s,baz=277
APSI  Ampana            44.57 280    P      P        04 24 28.4  -0.2
MRSI  Marisa            44.65 282    P      P        04 24 41.2  +12
TBI   Tubuai            44.69 112   eS      S        04 31 15.0  +11
      comp=Z,3µm,27.0s
TBI                                 eLQ     LQ       04 35 15.2
      comp=Z,14µm,30.0s
TBI                                 eLR     LR       04 37 08.8
      comp=Z,8µm,26.8s,baz=281
MBWA  Marble Bar        44.88 251   eP      P        04 24 30.9   0.0
MBWA                                 LR     LR
      comp=Z,7µm,19.0s
BKSI  Bulukumba         45.11 273    P      P        04 24 46.3  +13
BNSI  Bone              45.30 275    P      P        04 24 34.0  -0.4
KAPI  Kappang           45.53 274    PFAKE           04 24 50.0  +14
KAPI                                 LR     LR
      comp=Z,1µm,20.0s
SPSI  Sidrap Palu       45.71 275    P      P        04 24 31.8  -5.9
PCI   Palu              46.32 279    P      P        04 24 42.7 +0.2
MPSI  Mapaga            46.58 281    P      P        04 24 42.5  -2.0
MEEK  Meekatharra       46.65 244    P      P        04 24 44.8  -0.2
      baz=47,SNR=82
PLAI  Plampang          46.91 268    P      P        04 24 46.1  -1.0
KIP   Kipapa            48.27  48⇑  iP      P        04 24 59.6 +2.1
KIP                                  pmax   pmax
      comp=Z,95nm,0.9s
KIP                                  MLR    MLR
      comp=Z,4µm,17.0s
OPA   Opana             48.43  48   eP      P        04 24 59.5 +0.7
      comp=Z,320nm,0.9s
OPA   Opana             48.43  48   eP      P        04 24 59.5 +0.7
OPA                                  pmax   pmax
      comp=Z,320nm,0.9s
KLBR  Kellerberrin      48.44 237    P      P        04 24 58.6  -0.1
      baz=48,SNR=18
AIN   Ainahou           48.98  52   eP      P        04 25 03.0  -0.3
      comp=Z,133nm,0.8s
BLDU  Ballidu           49.08 239    P      P        04 25 03.6  -0.1
      baz=49,SNR=15
UWE   Uwekahuna         49.14  52   eP      P        04 25 02.2  -2.2
      comp=Z,144nm,1.0s
POHA  Pohakuloa         49.14  52   eP      P        04 25 04.1  -0.4
POHA                                 LR     LR
      comp=Z,6µm,20.0s
HPAH  Hawaii Prepara    49.17  51   eP      P        04 25 04.4  -0.1
      comp=Z,148nm,0.8s
HLK   Haleakala         49.18  50   eP      P        04 25 04.3  -0.5
      comp=Z,690nm,1.5s
NWAO  Narrogin (SRO)    49.20 236    P      P        04 25 05.5 +0.9
      baz=49,SNR=7.5
NWAO  Narrogin (SRO)    49.20 236   eP      P        04 25 05.1 +0.6
NWAO                                 LR     LR
      comp=Z,19µm,20.0s
NWAO  Narrogin (SRO)    49.20 236   eP      P        04 25 05.1 +0.6
NWAO                                 MLR    MLR
      comp=Z,19µm,20.0s
MORW  Morawa            49.34 241    P      P        04 25 05.7   0.0
      baz=49,SNR=13
MORW  Morawa            49.34 241   eP      P        04 25 05.4  -0.3
      comp=Z,142nm,1.0s
SRBI  Singaraja         49.51 269    P      P        04 25 18.1  +11
TSM   Tawau             49.66 285    P      P        04 25 10.4 +2.1
MUN   Mundaring         49.81 237    P      P        04 25 09.8 +0.6
      baz=50,SNR=15
GIRL  Giralia           50.09 250   eP      P        04 25 11.9 +0.4
      comp=Z,164nm,1.4s
JAGI  Jajag, Banyuwa    50.51 268   eP      P        04 25 13.0  -1.8
      comp=Z,47nm,0.9s
JAGI  Jajag, Banyuwa    50.51 268    P      P        04 25 23.2 +8.4
KKM   Kota Kinabalu     51.78 287   eP      P        04 25 24.6 +0.2
      comp=Z,98nm,1.2s
KKM   Kota Kinabalu     51.78 287    P      P        04 25 25.3 +0.9
PWJI  Pagerwojo         52.87 268    P      P        04 25 30.7  -1.7
NGJI  Ngawi             53.29 269    P      P        04 25 47.6  +12
INU   Inuyama           53.33 331   eP      P        04 25 35.6 +0.2
      comp=Z,73nm,1.4s
PCJI  Pacitan           53.46 268    P      P        04 25 34.0  -2.8
TAOE  Nuku Hiva Isla    53.64  93   eS      S        04 33 18.2 +7.7
      comp=Z,4µm,25.3s
TAOE                                eLR     LR       04 41 10.8
      comp=Z,5µm,24.7s
MJAR  Matsushiro Arr    53.75 333    P      P        04 25 37.4  -1.1
      comp=Z,12nm,0.8s,baz=170,slow=8.8,SNR=20
MAJO  Matsushiro        53.76 333   eP      P        04 25 37.4  -1.1
      comp=Z,57nm,1.2s
MAJO                                 LR     LR
      comp=Z,3µm,19.0s
MAJO  Matsushiro        53.76 333⇑  eP      P        04 25 38.9 +0.4
MAJO                                 pmax   pmax
      comp=Z,24nm,0.9s
MAT   Matsushiro        53.76 333    P      P        04 25 37.5  -1.0
MAT                                  S      S        04 33 12.4 +1.3
WOJI  Wonogiri, Jawa    53.76 268    P      P        04 25 37.0  -1.9
MJB9  Matsu-Tunnel      53.76 333   eP      P        04 25 38.8 +0.2
      comp=Z,58nm,1.2s
BTM   Bintulu           53.91 282    P      P        04 25 40.6 +0.5
UGM   Wanagama          54.14 268   eP      P        04 25 40.8  -1.0
      comp=Z,113nm,1.3s
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UGM   Wanagama          54.14 268    P      P        04 25 39.9  -1.9
SBUM  Sibu              54.54 281   eP      P        04 25 44.4  -0.3
      comp=Z,39nm,1.3s
SBUM  Sibu              54.54 281    P      P        04 25 45.9 +1.2
JNU   Nakatsue          54.82 324   eP      P        04 25 46.4   0.0
      comp=Z,101nm,1.1s
YULB  Yu-li             55.02 309   eP      P        04 25 47.6  -0.3
      comp=Z,30nm,1.0s
YHNB  Yeheng            55.67 310   eP      P        04 25 52.8 +0.1
      comp=Z,123nm,1.4s
TATO  Taipei            55.76 310    PFAKE           04 26 00.0 +6.8
TATO                                 LR     LR
      comp=Z,3µm,19.0s
KSM   Kuching           56.14 279   eP      P        04 25 55.6  -0.6
      comp=Z,37nm,1.2s
ERM   Erimo             56.56 340    PFAKE           04 26 10.0  +11
ERM                                  LR     LR
      comp=Z,2µm,19.0s
JCJI  Jatiwangi         56.56 269    P      P        04 25 58.6  -0.6
CISI  Cisompet, Garu    56.85 268   eP      P        04 25 59.5  -1.8
      comp=Z,115nm,1.3s
CISI  Cisompet, Garu    56.85 268    P      P        04 25 59.4  -1.9
YUK   Yuzh-Kuril'sk     57.56 343   eP      P        04 25 59.9  -5.8
YUK                                 e                04 26 52.3
YUK                                 e                04 28 08.4
YUK                                 i S     S        04 33 56.4  -5.1
YUK                                 i                04 35 53.5
YUK                                 eSS     SS       04 37 58.3 +6.1
YUK                                  pmax   pmax
      comp=N,252nm,1.1s
YUK                                  pmax   pmax
      comp=Z,413nm,1.1s
YUK                                  pmax   pmax
      comp=E,242nm,0.9s
QZH   Quanzhou          57.93 309    P      P        04 26 09.0 +0.4
QZH                                  S      S        04 34 10.3 +3.2
QZH                                  pmax   pmax
      comp=E,620nm,8.1s
QZH                                  LR     LR
      comp=E,2µm,16.6s
QZH                                  LR     LR
      comp=E,880nm,10.9s
QZH                                  LR     LR
      comp=E,2µm,18.9s
RKT   Rikitea           57.95 110   eS      S        04 34 15.0 +7.5
      comp=E,4µm,33.5s
RKT                                 eLQ     LQ       04 40 52.1
      comp=E,4µm,30.2s
RKT                                 eLR     LR       04 43 17.4
      comp=E,9µm,24.8s
KUR   Kuril'sk          58.15 346c iP       P        04 26 10.8 +1.0
KUR                                 e                04 28 19.8
KUR                                 ePPP    PPP      04 29 45.9
KUR                                 eS      S        04 34 13.1 +3.9
KUR                                  MLR    MLR
      comp=Z,2µm,18.0s
KUR                                  MLR    MLR
      comp=N,2µm,14.0s
SSE   Sheshan           59.56 316    P      P        04 26 21.6 +1.7
SSE                                  S      S        04 34 30.2 +2.2
SSE                                  pmax   pmax
      comp=N,12nm,0.8s
SSE                                  LR     LR
      comp=N,1µm,18.6s
SSE                                  LR     LR
      comp=N,940nm,17.7s
SSE                                  LR     LR
      comp=N,1µm,17.6s
SSE   Sheshan           59.56 316   eP      P        04 26 19.7  -0.2
      comp=N,10.0nm,0.6s
SSE                                  LR     LR
      comp=Z,2µm,21.0s
KSRS  Korea Array       59.63 326    P      P        04 26 20.6 +0.5
      comp=Z,6.5nm,0.8s,baz=141,slow=7.4,SNR=16
KS15  Wonju Array Si    59.64 326   eP      P        04 26 20.6 +0.4
KSAR  Wonju Array Be    59.64 326    P      P        04 26 20.6 +0.4
KSAR  Wonju Array Be    59.64 326    P      P        04 26 20.7 +0.4
KS01  Wonju Array Si    59.66 326   eP      P        04 26 20.4   0.0
MDSI  Maura Dua         60.90 271    P      P        04 26 27.5  -1.9
YSS   Yuzh-Sakhalins    61.12 342   eP      P        04 26 30.8 +0.6
      comp=Z,246nm,1.5s
YSS                                  LR     LR
      comp=Z,2µm,21.0s
YSS   Yuzh-Sakhalins    61.12 342   eP      P        04 26 31.0 +0.8
YSS                                 e                04 26 42.7
YSS                                 e                04 27 11.5
YSS                                 e                04 28 44.6
YSS                                 eS      S        04 34 49.7 +2.2
YSS                                 ePS              04 34 59.0
YSS                                  pmax   pmax
      comp=Z,60nm,1.3s
YSS                                  smax   smax
      comp=E,1µm,3.4s
YSS                                  smax   smax
      comp=E,2µm,4.7s
YSS                                  MLR    MLR
      comp=Z,2µm,14.0s
YSS                                  MLR    MLR
      comp=N,2µm,18.0s
YSS                                  MLR    MLR
      comp=E,2µm,16.0s
TEY   Ternei            61.53 337⇓  eP      P        04 26 33.0   0.0
TEY                                 e                04 27 19.7
TEY                                  pmax   pmax
      comp=Z,30nm,1.1s
NJ2   Nanjing           61.73 316   eP      P        04 26 36.5 +1.9
NJ2                                  sP     sP       04 26 46.2  -0.4
NJ2                                  PP     PP       04 28 51.8 +0.9
NJ2                                  S      S        04 34 58.2 +2.5
NJ2                                  pmax   pmax
      comp=Z,30nm,0.9s
NJ2                                  pmax   pmax
      comp=Z,34nm,4.1s
NJ2                                  LR     LR
      comp=Z,2µm,14.6s
NJ2                                  LR     LR
      comp=Z,2µm,16.3s
NJ2                                  LR     LR
      comp=Z,3µm,16.3s
SKR   Severo-Kuril's    61.94 353   eP      P        04 26 33.0  -2.6
SKR                                 e                04 28 53.5
SKR                                 ePPP    PPP      04 30 22.0
SKR                                 eS      S        04 34 51.8  -5.8
SKR                                 ePS     PnS      04 35 06.6  -8.6
SKR                                  pmax   pmax
      comp=Z,700nm,16.5s
SKR                                  pmax   pmax
      comp=Z,900nm,17.0s
SKR                                  MLR    MLR
      comp=Z,2µm,19.0s
SKR                                  MLR    MLR
      comp=Z,2µm,18.0s
QIZ   Qiongzhong        62.34 298    P      P        04 26 40.9 +1.9
QIZ                                  S      S        04 35 08.1 +4.2
QIZ                                  pmax   pmax
      comp=Z,400nm,4.7s
QIZ                                  LR     LR
      comp=Z,1µm,18.2s
QIZ                                  LR     LR
      comp=Z,1µm,21.0s
QIZ                                  LR     LR
      comp=Z,3µm,27.0s
QIZ   Qiongzhong        62.34 298    PFAKE           04 26 50.0  +11
QIZ                                  LR     LR
      comp=Z,279nm,22.0s
PTCN  Pitcairn Islan    62.43 113    PFAKE           04 26 50.0  +10
PTCN                                 LR     LR
      comp=Z,5µm,21.0s
USA0B Ussuriysk Arra    62.73 334   eP      P        04 26 41.8 +0.6
      comp=Z,91nm,1.4s
USRK  Ussuriysk Ar.     62.73 334    P      P        04 26 41.9 +0.8
      comp=Z,23nm,1.0s,baz=149,slow=6.0,SNR=14
USRK                                 LR     LR       04 52 47.5
      comp=Z,863nm,19.8s,baz=133,slow=35
PET   Petropavlovsk     64.01 355   eP      P        04 26 48.5  -0.9
      comp=Z,25nm,0.9s
PET                                  LR     LR
      comp=Z,2µm,20.0s
PET   Petropavlovsk     64.01 355   eP      P        04 26 46.5  -2.9
PET                                 eS      S        04 35 20.0  -3.5
PET                                 ePS              04 35 39.6
PET                                 eSS     SS       04 39 29.7  -3.3
PET                                  pmax   pmax
      comp=Z,22nm,1.2s
PET                                  pmax   pmax
      comp=Z,800nm,8.7s
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PET				pmax	pmax		
	comp=Z,1µm,6.5s						
PET				MLR	MLR		
	comp=Z,1µm,21.0s						
WHN	**Wuhan**	**64.08**	**312**	P	**P**	**04 26 52.5**	**+2.2**
WHN				S	**S**	**04 35 27.1**	**+1.8**
WHN				ScS	**ScS**	**04 36 43.5**	**+1.1**
WHN				LR	LR		
	comp=Z,12µm,14.8s						
WHN				LR	LR		
	comp=Z,4µm,12.6s						
WHN				LR	LR		
	comp=Z,11µm,14.3s						
MDJ	**Mudanjiang**	**64.13**	**332**	P	**P**	**04 26 52.6**	**+2.2**
MDJ				pP	pP	04 27 00.1	+1.0
MDJ				sP	sP	04 27 02.2	-0.2
MDJ				S	**S**	**04 35 29.8**	**+4.4**
MDJ				ScS	**ScS**	**04 36 42.9**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,33nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,640nm,4.2s						
MDJ				LR	LR		
	comp=Z,3µm,15.4s						
MDJ				LR	LR		
	comp=Z,4µm,13.6s						
MDJ				LR	LR		
	comp=Z,3µm,14.3s						
MDJ	**Mudanjiang**	**64.13**	**332**	*e*P	**P**	**04 26 49.2**	**-1.2**
	comp=Z,35nm,1.1s						
MDJ				LR	LR		
	comp=Z,2µm,19.0s						
PEA0B	**Petropavlovsk-**	**64.18**	**355**	*e*P	**P**	**04 26 51.3**	**+0.8**
	comp=Z,34nm,1.0s						
PETK	**Petropavlovsk-**	**64.18**	**355**	*e*P	**P**	**04 26 50.7**	**+0.2**
PETK	**Petropavlovsk-**	**64.18**	**355**	*e*P	**P**	**04 26 50.7**	**+0.2**
PETK	**Petropavlovsk-**	**64.18**	**355**	P	**P**	**04 26 50.0**	**-0.5**
	comp=Z,7.9nm,1.0s,baz=176,slow=6.4,SNR=7.1						
PETK				LR	LR	04 50 40.9	
	comp=Z,1µm,19.7s,baz=168,slow=32						
PEA1	**Petropavlovsk-**	**64.18**	**355**	*e*P	**P**	**04 26 50.0**	**-0.6**
DL2	**Dalian**	**64.22**	**323**	P	**P**	**04 26 52.4**	**+1.4**
DL2				S	**S**	**04 35 30.4**	**+3.8**
DL2				SS	**SS**	**04 39 31.4**	**-5.3**
DL2				pmax	pmax		
	comp=Z,32nm,1.1s						
DL2				pmax	pmax		
	comp=Z,760nm,8.9s						
DL2				LR	LR		
	comp=Z,2µm,14.7s						
DL2				LR	LR		
	comp=Z,1µm,18.1s						
DL2				LR	LR		
	comp=Z,2µm,16.2s						
KIWB	**Kanaga Island**	**64.38**	**12**	*e*P	**P**	**04 26 52.4**	**+0.6**
ADK	**Adak**	**64.50**	**12**	PFAKE		04 27 00.0	+7.4
ADK				LR	LR		
	comp=Z,4µm,21.0s						
TYV	**Tymovskoe**	**64.69**	**344**	*e*P	**P**	**04 26 54.8**	**+0.9**
TYV				*e*S	**S**	**04 35 33.5**	**+1.5**
TYV				pmax	pmax		
	comp=Z,16nm,1.8s						
TYV				pmax	pmax		
	comp=Z,900nm,5.4s						
TYV				smax	smax		
	comp=E,1µm,9.7s						
BKNI	**Bangkinang**	**64.90**	**276**	*e*P	**P**	**04 26 55.6**	**-0.5**
	comp=E,175nm,1.2s						
SNY	**Shenyang**	**65.09**	**327**	⇓P	**P**	**04 27 01.1**	**+4.5**
SNY				S	**S**	**04 35 40.9**	**+3.7**
SNY				pmax	pmax		
	comp=E,42nm,0.7s						
SNY				pmax	pmax		
	comp=E,950nm,4.9s						
SNY				LR	LR		
	comp=E,4µm,19.1s						
SNY				LR	LR		
	comp=E,2µm,17.6s						
SNY				LR	LR		
	comp=E,3µm,18.1s						
ATKA	**Atka Island**	**65.35**	**14**	*e*P	**P**	**04 26 58.2**	**+0.1**
	comp=E,141nm,1.3s						
CN2	**Changchun**	**65.51**	**329**	*e*P	**P**	**04 26 59.5**	**+0.1**
CN2				*e*pP	pP	04 27 07.1	-1.0
CN2				*e*S	**S**	**04 35 44.7**	**+2.3**
CN2				pmax	pmax		
	comp=E,30nm,1.0s						
CN2				pmax	pmax		
	comp=E,200nm,5.0s						
CN2				LR	LR		
	comp=E,2µm,16.0s						
CN2				LR	LR		
	comp=E,2µm,16.0s						
CN2				LR	LR		
	comp=E,3µm,17.0s						
IPM	**Ipoh**	**65.86**	**280**	*e*P	**P**	**04 27 01.6**	**-0.7**
	comp=E,88nm,1.2s						
CASY	**Casey**	**66.30**	**201**	*e*P	**P**	**04 27 03.6**	**-0.5**
	comp=E,20nm,0.9s						
CASY				LR	LR		
	comp=Z,320nm,19.0s						
KULM	**Kulim**	**66.42**	**281**	*e*P	**P**	**04 27 05.3**	**-0.5**
	comp=Z,64nm,1.5s						
GRNR	**Gornyy**	**66.47**	**340**	*e*P	**P**	**04 27 06.2**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
VNDA	**Vanda**	**66.55**	**181**	*e*P	**P**	**04 27 05.8**	**+0.2**
	comp=Z,48nm,1.4s						
VNDA	**Vanda**	**66.55**	**181**	*e*P	**P**	**04 27 05.8**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,48nm,1.4s						
VNDA	**Vanda**	**66.55**	**181**	P	**P**	**04 27 06.4**	**+0.8**
	comp=Z,4.5nm,0.6s,baz=0.2,slow=7.2,SNR=17						
VNDA				LR	LR	04 51 46.5	
	comp=Z,2µm,21.1s,baz=359,slow=32						
SKNT	**Sakolnakorn**	**66.74**	**294**	P	**P**	**04 27 09.6**	**+1.8**
	comp=Z,14nm,1.1s						
SBA	**Scott Base**	**66.86**	**180**	*e*P	**P**	**04 27 08.1**	**+0.6**
	comp=Z,37nm,1.1s						
SBA				LR	LR		
	comp=Z,2µm,21.0s						
SBA	**Scott Base**	**66.86**	**180**	*e*P	**P**	**04 27 08.1**	**+0.6**
SBA				pmax	pmax		
	comp=Z,37nm,1.1s						
SBA				MLR	MLR		
	comp=Z,2µm,21.0s						
KLR	**Kul'dur**	**66.86**	**337**	⇓*i*P	**P**	**04 27 06.6**	**-1.3**
COCO	**West Island**	**66.99**	**261**	PFAKE		04 27 20.0	+11
COCO				LR	LR		
	comp=Z,2µm,19.0s						
NKL	**Nikolayevsk**	**67.28**	**344**	*e*P	**P**	**04 27 10.0**	**-0.5**
NKL				*e*S	**S**	**04 36 10.0**	**+6.5**
NKL				pmax	pmax		
	comp=Z,1µm,11.0s						
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
NKL				smax	smax		
	comp=E,2µm,10.0s						
NIKH	**Nikolski High**	**67.42**	**17**	*e*P	**P**	**04 27 11.8**	**+0.5**
	comp=E,119nm,1.0s						
PSI	**Prapat**	**67.51**	**278**	*e*P	**P**	**04 27 12.7**	**-0.2**
	comp=E,53nm,1.3s						
PSI	**Prapat**	**67.51**	**278**	*e*P	**P**	**04 27 12.7**	**-0.2**
PSI				pmax	pmax		
	comp=Z,53nm,1.3s						
ENH	**Enshi**	**67.58**	**309**	*e*P	**P**	**04 27 12.6**	**-0.4**
ENH				LR	LR		
	comp=Z,1µm,19.0s						
NONG	**Nongkai**	**67.86**	**295**	P	**P**	**04 27 16.6**	**+1.7**
	comp=Z,0.7nm,1.0s						
GYA	**Guiyang**	**68.09**	**304**	P	**P**	**04 27 16.2**	**-0.1**
GYA				pP	pwP	04 27 28.4	-0.5
GYA				PP	**PP**	**04 29 51.2**	**+4.3**
GYA				S	**S**	**04 36 17.8**	**+3.3**
GYA				sS	sS	04 36 30.0	+1.3
GYA				SKS	**SKiKP**	**04 37 11.0**	**+0.8**
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
GYA				pmax	pmax		
	comp=Z,420nm,9.6s						
GYA				LR	LR		
	comp=Z,1µm,17.4s						
GYA				LR	LR		
	comp=Z,1µm,16.8s						
GYA				LR	LR		
	comp=Z,2µm,21.5s						
BJT	**Baijiatuau**	**68.20**	**321**	*e*P	**P**	**04 27 15.7**	**-0.9**
	comp=Z,22nm,1.1s						
BJT				LR	LR		
	comp=Z,2µm,19.0s						
BJT	**Baijiatuau**	**68.20**	**321**	*e*P	**P**	**04 27 15.7**	**-0.9**
BJT				pmax	pmax		
	comp=Z,22nm,1.1s						
BJT				MLR	MLR		
	comp=Z,2µm,19.0s						
BJI	**Beijing**	**68.21**	**321**	P	**P**	**04 27 19.1**	**+2.5**
BJI				S	**S**	**04 36 18.3**	**+3.2**
BJI				LR	LR		
	comp=Z,2µm,15.1s						
BJI				LR	LR		
	comp=Z,2µm,16.5s						
BJI				LR	LR		
	comp=Z,1µm,18.5s						
GSI	**Gunungsitoli**	**68.50**	**276**	*e*P	**P**	**04 27 18.4**	**-0.7**
	comp=Z,76nm,1.2s						
UNV	**Unalaska Valle**	**68.86**	**17**	*e*P	**P**	**04 27 20.6**	**+0.2**
	comp=Z,56nm,1.1s						
XAN	**Xi'an**	**69.82**	**312**	P	**P**	**04 27 27.1**	**+0.3**
XAN				pP	pP	04 27 34.8	-0.4
XAN				sP	sP	04 27 38.2	-0.1
XAN				PP	**PP**	**04 30 04.3**	**+2.6**
XAN				S	**S**	**04 36 35.1**	**+0.5**
XAN				sS	sS	04 36 48.1	-0.7
XAN				ScS	**SKSac**	**04 37 24.2**	**-1.7**
XAN				SS	**SS**	**04 41 01.0**	**-2.9**
XAN				pmax	pmax		
	comp=Z,330nm,6.5s						
XAN				LR	LR		
	comp=Z,2µm,17.6s						
XAN				LR	LR		
	comp=Z,1µm,19.0s						
XAN				LR	LR		
	comp=Z,2µm,20.1s						
XAN	**Xi'an**	**69.82**	**312**	*e*P	**P**	**04 27 26.8**	**-0.1**
	comp=Z,33nm,1.3s						
XAN	**Xi'an**	**69.82**	**312**	*e*P	**P**	**04 27 26.8**	**-0.1**
XAN				pmax	pmax		
	comp=Z,33nm,1.3s						
KMI	**Kunming**	**70.78**	**302**	P	**P**	**04 27 35.3**	**+2.1**
KMI				pP	pP	04 27 43.0	+1.4
KMI				sP	pwP	04 27 46.3	+0.6
KMI				S	**S**	**04 36 47.5**	**+0.9**
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
KMI				pmax	pmax		
	comp=Z,550nm,10.5s						
KMI				LR	LR		
	comp=Z,1µm,18.2s						
KMI				LR	LR		
	comp=Z,1µm,21.8s						
KMI				LR	LR		
	comp=Z,2µm,19.2s						
MA2	**Magadan**	**71.30**	**352**	PFAKE		04 27 50.0	+15
MA2				LR	LR		
	comp=Z,2µm,19.0s						
MA2	**Magadan**	**71.30**	**352***c*	*i*P	**P**	**04 27 35.9**	**+0.6**
MA2				pmax	pmax		
	comp=Z,16nm,1.3s						
HHC	**Hu-ho-hao-te**	**71.55**	**320**	*e*P	**P**	**04 27 39.9**	**+2.5**
HHC				sP	PcP	04 27 56.3	-0.3
HHC				pmax	pmax		
	comp=Z,18nm,1.3s						
HHC				pmax	pmax		
	comp=Z,530nm,7.2s						
HHC				LR	LR		
	comp=Z,2µm,15.3s						
HHC				LR	LR		
	comp=Z,1µm,14.2s						
HHC				LR	LR		
	comp=Z,2µm,17.8s						
CM01	**Chiang Mai Arr**	**71.73**	**294**	*e*P	**P**	**04 27 38.8**	**0.0**
CMAR	**Chiang Mai Arr**	**71.76**	**294**	P	**P**	**04 27 39.2**	**+0.3**
	comp=Z,7.5nm,0.9s,baz=119,slow=4.3,SNR=17						
CMAR				LR	LR	04 58 22.8	
	comp=Z,577nm,20.1s,baz=115,slow=35						
CMMT	**Chiang Mai**	**71.87**	**294**	P	**P**	**04 27 43.1**	**+3.5**
	comp=Z,25nm,1.9s,comp=Z,731nm						
CHTO	**Chiang Mai**	**71.87**	**294**	*e*P	**P**	**04 27 39.1**	**-0.5**
	comp=Z,36nm,1.3s						
CHTO				LR	LR		
	comp=Z,905nm,20.0s						
CHTO	**Chiang Mai**	**71.87**	**294**	*e*P	**P**	**04 27 39.1**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,36nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,905nm,20.0s						
CHTO	**Chiang Mai**	**71.87**	**294**	P	**P**	**04 27 43.2**	**+3.6**
	comp=Z,108nm,1.9s,comp=Z,3µm						
HIA	**Hailar**	**72.14**	**331**	*e*P	**P**	**04 27 41.0**	**+0.4**
	comp=Z,22nm,1.0s						
HIA				LR	LR		
	comp=Z,1µm,20.0s						
HIA	**Hailar**	**72.14**	**331***c*	*i*P	**P**	**04 27 42.3**	**+1.7**
HIA				pmax	pmax		
	comp=Z,26nm,1.3s						
ZEA	**Zeya**	**72.15**	**337**	*e*P	**P**	**04 27 40.5**	**0.0**
ZEA				*e*PPP	PPP	04 32 04.0	
ZEA				*e*S	**S**	**04 37 05.5**	**+4.8**
ZEA				pmax	pmax		
	comp=N,85nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,190nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,8.0s						
ZEA				smax	smax		
	comp=N,1µm,13.0s						
ZEA				smax	smax		
	comp=E,2µm,13.0s						
ZEA				MLR	MLR		
	comp=E,900nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
ZEA				MLR	MLR		
	comp=N,1µm,17.0s						
CD2	**Chengdu**	**72.28**	**307**	P	**P**	**04 27 42.9**	**+1.0**
CD2				pP	pP	04 27 51.8	+1.5
CD2				sP	pwP	04 27 55.3	+0.8
CD2				PP	**PP**	**04 30 23.5**	**+0.6**
CD2				S	**S**	**04 37 04.3**	**+1.0**
CD2				pmax	pmax		
	comp=N,20nm,0.7s						
CD2				pmax	pmax		
	comp=N,810nm,5.8s						
CD2				LR	LR		
	comp=N,3µm,17.4s						
CD2				LR	LR		
	comp=N,3µm,17.9s						
CD2				LR	LR		
	comp=N,2µm,18.4s						
BTO	**Baotou**	**72.41**	**319**	*e*P	P	04 27 33.9	-8.6
BTO				S	**S**	**04 36 59.2**	**-5.3**
BTO				LR	LR		
	comp=N,2361µm,15.3s						
BTO				LR	LR		
	comp=E,2138µm,15.1s						
SEY	**Seymchan**	**74.38**	**354**	⇓*i*P	**P**	**04 27 55.3**	**+1.9**
LZH	**Lanzhou**	**74.45**	**312**	*e*P	**P**	**04 27 56.3**	**+1.6**
LZH				pP	pP	04 28 03.8	+0.7
LZH				sP	sP	04 28 06.8	+0.6
LZH				PP	**PP**	**04 30 47.0**	**+5.5**
LZH				*e*S	**S**	**04 37 31.5**	**+3.6**
LZH				pmax	pmax		
	comp=E,30nm,1.0s						
LZH				pmax	pmax		
	comp=E,180nm,4.4s						
LZH				LR	LR		
	comp=E,3µm,14.9s						
LZH				LR	LR		
	comp=E,3µm,16.5s						
LZH				LR	LR		
	comp=E,3µm,17.1s						
PBA	**Port Blair**	**75.58**	**285**	*e*P	P	04 28 00.0	-1.4
GAMB	**Gambell**	**76.58**	**10**	*e*P	**P**	**04 28 05.8**	**-0.1**
	comp=E,37nm,0.9s						
KDAK	**Kodiak Island**	**76.66**	**22**	*e*P	**P**	**04 28 06.9**	**+0.3**
	comp=E,93nm,1.4s						
KDAK				LR	LR		
	comp=Z,1µm,21.0s						
KDAK	**Kodiak Island**	**76.66**	**22**	P	**P**	**04 28 07.4**	**+0.8**
	comp=Z,28nm,0.9s,baz=0.1,slow=2.6,SNR=5.0						
YAK	**Yakutsk**	**77.94**	**344**	*e*P	**P**	**04 28 14.3**	**+0.6**
YAK				*e*		04 28 23.0	
YAK				e*PP	**pwP**	**04 28 25.0**	**-0.2**
YAK				*e*		04 31 11.9	
YAK				*e*PPP	PPP	04 32 57.0	
YAK				*e*S	**S**	**04 38 04.3**	**-0.5**
YAK				e*SS	**SKSac**	**04 38 22.8**	**-2.4**
YAK				*e*		04 38 31.3	
YAK				*e*SS	**SS**	**04 43 07.7**	**+1.3**
YAK				*e*SSS	SSS	04 46 30.0	
YAK				pmax	pmax		
	comp=Z,84nm,0.9s						
YAK				pmax	pmax		
	comp=E,21nm,1.1s						
YAK				pmax	pmax		
	comp=N,27nm,0.9s						
YAK				pmax	pmax		
	comp=Z,985nm,4.7s						
YAK				pmax	pmax		
	comp=N,527nm,4.0s						
YAK				pmax	pmax		
	comp=E,939nm,5.1s						
YAK				smax	smax		
	comp=N,2µm,4.9s						
YAK				smax	smax		
	comp=E,2µm,5.1s						
YAK				MLR	MLR		
	comp=Z,8µm,18.0s						
YAK				MLR	MLR		
	comp=N,3µm,16.0s						
YAK				MLR	MLR		
	comp=E,6µm,17.0s						
SONA0	**Songino Array**	**78.41**	**324**	*e*P	**P**	**04 28 17.2**	**+0.4**
SONM	**Songino Array**	**78.41**	**324**	P	**P**	**04 28 17.2**	**+0.4**
	comp=E,5.1nm,0.8s,baz=146,slow=7.2,SNR=27						
SONM				LR	LR	04 59 55.9	
	comp=E,1µm,21.1s,baz=116,slow=33						
SONA1	**Songino Array**	**78.41**	**324**	*e*P	**P**	**04 28 16.4**	**-0.5**
ANM	**Nome**	**78.51**	**12**	*e*P	**P**	**04 28 17.1**	**+0.2**
	comp=E,48nm,1.4s						
ANM	**Nome**	**78.51**	**12**	*e*P	**P**	**04 28 17.1**	**+0.2**
ANM				pmax	pmax		
	comp=Z,48nm,1.4s						
RSO	**Redoubt South**	**78.59**	**20**	*e*P	**P**	**04 28 17.8**	**+0.2**
BRLK	**Bradley Lake**	**78.71**	**21**	*e*P	**P**	**04 28 18.3**	**+0.2**
	comp=Z,34nm,0.9s						
GTA	**Gaotai**	**78.76**	**314**	*e*P	**P**	**04 28 18.9**	**-0.1**
GTA				pP	pP	04 28 26.4	-1.0
GTA				sP	sP	04 28 30.0	-0.5
GTA				S	**S**	**04 38 17.4**	**+2.5**
GTA				pmax	pmax		
	comp=Z,280nm,5.2s						
GTA				LR	LR		
	comp=Z,2µm,17.5s						
GTA				LR	LR		
	comp=Z,2µm,19.9s						
GTA				LR	LR		
	comp=Z,2µm,18.9s						
BILL	**Bilibino**	**78.82**	**0**	*e*P	**P**	**04 28 17.5**	**-1.0**
	comp=Z,46nm,1.0s						
BILL				LR	LR		
	comp=Z,1µm,19.0s						
BILL	**Bilibino**	**78.82**	**0***c*	*e*P	**P**	**04 28 18.2**	**-0.3**
BILL				*e*		04 28 26.1	
BILL				pmax	pmax		
	comp=Z,50nm,1.0s						
QSPA	**South Pole Qui**	**79.02**	**180**	*e*P	**P**	**04 28 19.8**	**-0.1**
QSPA				LR	LR		
	comp=Z,3µm,19.0s						
BRDH	**Bariadhala**	**79.55**	**296**	P	**P**	**04 28 23.6**	**+0.1**
	comp=Z,37nm,0.3s,baz=79,slow=9.3,SNR=4.3						
SUA	**Susitna One**	**79.99**	**20**	*e*P	**P**	**04 28 25.3**	**+0.2**
	comp=Z,18nm,0.8s						
SHL	**Shillong**	**80.17**	**298**	*e*P	**P**	**04 28 26.3**	**-0.7**
	comp=Z,60nm,1.3s						
SHL	**Shillong**	**80.17**	**298**	*e*P	**P**	**04 28 26.3**	**-0.7**
SHL				pmax	pmax		
	comp=Z,60nm,1.3s						
SHL	**Shillong**	**80.17**	**298**	*e*P	**P**	**04 28 27.3**	**+0.3**
BOD	**Bodaibo**	**80.33**	**335**	*e*P	**P**	**04 28 28.4**	**+1.5**
BOD				pmax	pmax		
	comp=Z,21nm,1.6s						
PMR	**Palmer**	**80.62**	**20**	*e*P	**P**	**04 28 29.2**	**+0.9**
	comp=Z,37nm,1.3s						
PMR	**Palmer**	**80.62**	**20**	*e*P	**P**	**04 28 29.2**	**+0.9**
PMR				pmax	pmax		
	comp=Z,37nm,1.3s						
KNK	**Knik Glacier**	**80.73**	**21**	*e*P	**P**	**04 28 29.3**	**+0.3**
	comp=Z,47nm,1.4s						
GLI	**Glacier Island**	**80.84**	**21**	*e*P	**P**	**04 28 30.1**	**+0.5**
	comp=Z,45nm,1.1s						
RPN	**Rapa Nui**	**80.92**	**116**	PFAKE		04 28 40.0	+9.2
RPN				LR	LR		
	comp=Z,1µm,21.0s						
CAST	**Castle Rocks**	**81.00**	**18**	*e*P	**P**	**04 28 31.1**	**+0.7**
	comp=Z,27nm,1.1s						
SML	**Sawmill**	**81.05**	**20**	*e*P	**P**	**04 28 31.5**	**+0.8**
	comp=Z,32nm,1.1s						
SML	**Sawmill**	**81.05**	**20**	*e*P	**P**	**04 28 31.5**	**+0.8**
SML				pmax	pmax		
	comp=Z,32nm,1.1s						
ZAK	**Zakamensk**	**81.45**	**325**	*e*P	**P**	**04 28 32.0**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,16nm,1.3s						
DIV	**Divide**	**81.49**	**22**	*e*P	**P**	**04 28 33.5**	**+0.4**
	comp=Z,42nm,0.9s						
HMT	**Hamilton**	**81.53**	**23**	*e*P	**P**	**04 28 34.0**	**+0.8**
	comp=Z,73nm,0.8s						
TRF	**Thorofare Moun**	**81.58**	**19**	*e*P	**P**	**04 28 33.9**	**+0.2**
	comp=Z,27nm,1.2s						
KLU	**Klutina**	**81.67**	**21**	*e*P	**P**	**04 28 34.3**	**+0.2**
	comp=Z,30nm,1.0s						
TLY	**Talaya**	**81.88**	**326**	*e*P	**P**	**04 28 35.4**	**+0.1**
	comp=Z,41nm,1.1s						
TLY				LR	LR		
	comp=Z,601nm,20.0s						
TLY	**Talaya**	**81.88**	**326***c*	*i*P	**P**	**04 28 36.7**	**+1.4**
TLY	**Talaya**	**81.88**	**326**	P	**P**	**04 28 34.6**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=118,slow=2.9,SNR=18						
RND	**Reindeer**	**82.00**	**19**	*e*P	**P**	**04 28 35.9**	**+0.1**
	comp=Z,50nm,1.3s						
RND	**Reindeer**	**82.00**	**19**	*e*P	**P**	**04 28 35.9**	**+0.1**
RND				pmax	pmax		
	comp=Z,50nm,1.3s						
LSA	**Lhasa**	**82.02**	**302**	PFAKE		04 28 50.0	+13
LSA				LR	LR		
	comp=Z,1µm,20.0s						
RDOG	**Red Dog Mine**	**82.04**	**12**	*e*P	**P**	**04 28 35.8**	**+0.1**
	comp=Z,34nm,1.0s						
MCK	**McKinley**	**82.20**	**19**	*e*P	**P**	**04 28 37.1**	**+0.3**
	comp=Z,54nm,1.2s						
MCK	**McKinley**	**82.20**	**19**	*e*P	**P**	**04 28 37.1**	**+0.3**
MCK				pmax	pmax		
	comp=Z,54nm,1.2s						
DHY	**Denali Highway**	**82.25**	**20**	*e*P	**P**	**04 28 37.4**	**+0.2**
	comp=Z,16nm,1.1s						
IM3	**Indian Mountai**	**82.47**	**16**	*e*P	**P**	**04 28 36.8**	**-1.3**
HARP	**HAARP**	**82.56**	**21**	*e*P	**P**	**04 28 39.0**	**+0.3**
	comp=Z,56nm,1.0s						
MLY	**Manley**	**82.59**	**17**	*e*P	**P**	**04 28 39.0**	**+0.2**
	comp=Z,9.7nm,1.0s						
MCCM	**Marconi Confer**	**82.76**	**49**	*e*P	**P**	**04 28 39.5**	**-0.6**
KCPM	**Cahto Peak**	**82.78**	**47**	*e*P	**P**	**04 28 40.7**	**+0.3**
	comp=Z,51nm,0.8s						
JCC	**Jacoby Creek,**	**82.86**	**46**	*e*P	**P**	**04 28 40.6**	**0.0**
	comp=Z,50nm,1.4s						
KMRM	**Mail Ridge**	**82.87**	**47**	*e*P	**P**	**04 28 41.0**	**+0.2**
	comp=Z,52nm,0.8s						
HOPS	**Hopland Field**	**82.91**	**48**	*e*P	**P**	**04 28 40.6**	**-0.3**
	comp=Z,40nm,0.9s						
WRH	**Wood River Hil**	**82.99**	**18**	*e*P	**P**	**04 28 40.8**	**0.0**
	comp=Z,22nm,1.0s						
GDXM	**Geysers**	**83.05**	**48**	*e*P	**P**	**04 28 42.2**	**+0.4**
	comp=Z,29nm,0.9s						
MDM	**Murphy Dome**	**83.29**	**18**	*e*P	**P**	**04 28 41.8**	**-0.6**
	comp=Z,27nm,1.2s						
HDA	**Harding Lake**	**83.30**	**19**	*e*P	**P**	**04 28 41.5**	**-0.9**
	comp=Z,36nm,0.9s						
HDA	**Harding Lake**	**83.30**	**19**	P	**P**	**04 28 42.7**	**+0.3**
	baz=227						
MOY	**Mondy**	**83.33**	**326**	*e*P	**P**	**04 28 47.4**	**+4.4**
TCOL	**CIGO, UAF Yank**	**83.34**	**18**	P	**P**	**04 28 42.0**	**-0.6**
	baz=226						
COLA	**College**	**83.34**	**18**	*e*P	**P**	**04 28 42.6**	**0.0**
	comp=Z,26nm,0.8s						
COLA				LR	LR		
	comp=Z,2µm,20.0s						
COLA	**College**	**83.34**	**18**	⇓*e*P	**P**	**04 28 41.9**	**-0.7**

SAO	San Andreas Ge	83.37	51	*e*P	P	04 28 43.1	-0.3
	comp=Z,31nm,0.9s						
O02D	Mt. Diablo Mer	83.52	47	P	P	04 28 43.8	-0.4
	baz=250,SNR=33						
RIDG	Independ’e Rid	83.54	20	*e*P	P	04 28 44.0	+0.3
	comp=Z,41nm,1.0s						
IL1	Eielson Array	83.57	19	*e*P	P	04 28 42.4	-1.4
ILAR	Eielson Array	83.57	19	P	P	04 28 42.8	-1.1
	comp=Z,13nm,0.6s,baz=239,slow=5.1,SNR=95						
ILAR				PKKPbc	PKKPbc	04 47 04.8	-0.3
	comp=Z,0.3nm,0.6s,baz=358,slow=1.3,SNR=4.3						
ILAR				LR	LR	05 01 17.9	
	comp=Z,1µm,20.0s,baz=236,slow=32						
ILB	Eielson Array	83.57	19	*e*P	P	04 28 42.0	-1.8
L02E	Cave Junction	83.64	45	P	P	04 28 44.6	-0.1
	baz=249,SNR=7.1						
POKR	Poker Plat Res	83.64	18	P	P	04 28 43.1	-1.1
	baz=226						
J01E	Myrtle Point	83.77	44	P	P	04 28 45.9	+0.6
	baz=249						
SNCC	San Nicolas Is	83.78	55	*e*P	P	04 28 44.1	-1.5
	comp=Z,58nm,0.9s						
SNCC	San Nicolas Is	83.78	55	P	P	04 28 45.6	-0.1
	baz=253						
K02D	Willamette Mer	83.78	45	P	P	04 28 45.3	-0.2
	baz=249,SNR=14						
WDC	Whiskeytown Da	83.83	47	*e*P	P	04 28 45.3	-0.4
	comp=Z,17nm,1.0s						
WDC	Whiskeytown Da	83.83	47	*e*P	P	04 28 45.3	-0.4
WDC				pmax	pmax		
	comp=Z,17nm,1.0s						
N02D	Trinity Center	83.85	46	P	P	04 28 46.1	+0.2
	baz=250,SNR=19						
M02C	Callahan	83.89	46	P	P	04 28 45.7	-0.4
	baz=250,SNR=23						
SCZ2	Santa Cruz Isl	83.92	54	P	P	04 28 46.4	+0.1
	baz=252						
PAGB	Antelope Grade	83.97	52	*e*P	P	04 28 47.0	+0.4
	comp=Z,28nm,1.1s						
SCRK	Sand Creek	83.98	20	*e*P	P	04 28 44.8	-1.3
	comp=Z,82nm,1.4s						
SBC	Santa Barbara	83.99	53	P	P	04 28 46.8	+0.2
	baz=252						
SMMC	Simmler	84.03	52	P	P	04 28 47.2	+0.3
	baz=252						
PKM	Mcpherson Peak	84.05	53	P	P	04 28 47.1	0.0
	baz=252						
YBH	Yreka Blue Hor	84.11	46	*e*P	P	04 28 47.1	-0.1
	comp=Z,26nm,0.9s						
YBH	Yreka Blue Hor	84.11	46	*e*P	P	04 28 47.1	-0.1
YBH				pmax	pmax		
	comp=Z,26nm,0.9s						
I02D	Swisshome	84.17	43	P	P	04 28 47.6	+0.3
	baz=249						
HUMO	Hull Mountain	84.24	45	*e*P	P	04 28 47.7	-0.1
	comp=Z,39nm,1.0s						
ORV	Oroville	84.24	48	*e*P	P	04 28 47.1	-0.7
	comp=Z,22nm,0.9s						
ORV	Oroville	84.24	48	*e*P	P	04 28 47.1	-0.7
ORV				pmax	pmax		
	comp=Z,22nm,0.9s						
O03E	Paynes Creek	84.27	47	P	P	04 28 47.5	-0.5
	baz=250,SNR=35						
COLD	Coldfoot	84.34	16	*e*P	P	04 28 48.0	+0.3
	comp=Z,9.5nm,1.0s						
I03D	Drain, OR	84.36	44	P	P	04 28 48.2	-0.1
	baz=249						
BESE	Bessie Mountai	84.39	27	*e*P	P	04 28 48.1	-0.1
	comp=Z,64nm,1.4s						
BLG	Laguna Peak, P	84.40	54	P	P	04 28 48.2	-0.5
	baz=253						
AFDM	Forest Hills D	84.43	49	*e*P	P	04 28 48.0	-0.9
	comp=Z,44nm,0.9s						
WRAK	Wrangell Islan	84.47	30	*e*P	P	04 28 48.8	+0.3
	comp=Z,42nm,1.0s						
WRAK				LR	LR		
	comp=Z,5µm,20.0s						
HYT	Haines Junctio	84.48	24	*e*P	P	04 28 47.5	-1.2
	comp=Z,18nm,0.8s						
SCI2	San Clemente I	84.49	55	P	P	04 28 49.0	-0.2
	baz=253						
PRP	Porcupine Dome	84.50	18	*e*P	P	04 28 48.8	+0.1
	comp=Z,5.3nm,0.8s						
L04D	Klamath Falls	84.56	45	P	P	04 28 49.0	-0.6
	baz=250,SNR=11						
CMB	Columbia Colle	84.58	50	*e*P	P	04 28 48.5	-1.1
	comp=Z,25nm,0.9s						
CMB	Columbia Colle	84.58	50	*e*P	P	04 28 48.5	-1.1
CMB				pmax	pmax		
	comp=Z,25nm,0.9s						
MAW	Mawson	84.64	202	LR	LR	05 01 32.2	
	comp=Z,866nm,19.4s,baz=100,slow=32						
SKAG	Skagway	84.65	26	*e*P	P	04 28 49.9	+0.5
	comp=Z,62nm,1.3s						
CIS	Catalina Islan	84.72	55	P	P	04 28 50.1	-0.2
	baz=253						
M04C	Macdoel	84.74	46	P	P	04 28 49.6	-0.8
	baz=250,SNR=36						
VOG	Valley Oaks Go	84.81	52	P	P	04 28 50.0	-0.8
	baz=252						
KNGR	Kungurtug, Tuv	84.84	324⇓	*e*P	P	04 28 50.6	-0.1
ARVC	Arvin	84.89	53	P	P	04 28 51.0	-0.2
	baz=253,SNR=7.4						
VES	Vestal, Richgr	84.90	52	P	P	04 28 50.9	-0.3
	baz=253						
BOK	Bokaro	84.95	295	*e*P	P	04 28 50.7	-1.0
BOK				IAmb	IAmb	04 28 53.8	
	comp=Z,39nm,1.8s						
G03D	McMinnville, O	84.95	42	P	P	04 28 51.5	+0.3
	baz=249						
DECC	Green Verdugo	85.03	54	P	P	04 28 51.8	-0.1
	baz=253						
I04A	Tendick Farm,	85.03	44	P	P	04 28 51.7	-0.1
	baz=250						
J04D	Umpqua Nationa	85.05	44	P	P	04 28 51.5	-0.5
	baz=250,SNR=9.9						
H04D	Lebanon	85.06	43	P	P	04 28 51.3	-0.6
	baz=250						
RUBR	Rubicon Trail	85.07	49	*e*P	P	04 28 52.2	0.0
	comp=Z,38nm,0.8s						
RAMN	Ramite	85.11	299	*e*P	P	04 28 52.0	-0.8
BEKR	Beckworth	85.18	48	*e*P	P	04 28 52.2	-0.5
	comp=Z,26nm,0.8s						
MWC	Mount Wilson	85.24	54	*e*P	P	04 28 52.1	-1.1
	comp=Z,25nm,0.9s						
MWC	Mount Wilson	85.24	54	*e*P	P	04 28 52.1	-1.1
MWC				pmax	pmax		
	comp=Z,25nm,0.9s						
ISA	Isabella, Lake	85.32	52	*e*P	P	04 28 52.9	-0.6
	comp=Z,23nm,0.9s						
ISA	Isabella, Lake	85.32	52	*e*P	P	04 28 52.9	-0.6
ISA				pmax	pmax		
	comp=Z,23nm,0.9s						
ISA	Isabella, Lake	85.32	52	P	P	04 28 52.4	-1.1
	baz=253,SNR=31						
NLWA	Neilton Lookou	85.35	40	*e*P	P	04 28 52.5	-0.8
	comp=Z,14nm,0.9s						
NLWA				LR	LR		
	comp=Z,5µm,20.0s						
F04D	Rainier, OR	85.43	41	P	P	04 28 53.3	-0.3
	baz=249						
WAKR	Walker	85.43	50	*e*P	P	04 28 53.9	-0.2
	comp=Z,23nm,0.8s						
MDPB	Devils Postpil	85.44	50	*e*P	P	04 28 53.5	-0.7
	comp=Z,41nm,0.9s						
EDW2	Edwards Air Fo	85.47	53	P	P	04 28 53.2	-1.0
	baz=253,SNR=66						
H04A	Detroit Lake	85.49	43	*e*P	P	04 28 53.4	-0.7
	comp=Z,36nm,1.4s						
PNTR	Pine Nut	85.49	49	*e*P	P	04 28 54.1	-0.3
	comp=Z,26nm,0.9s						
OMMB	Old Mammoth Mi	85.49	51	*e*P	P	04 28 54.2	-0.4
	comp=Z,20nm,1.0s						
VCNR	Virginia City	85.52	49	*e*P	P	04 28 54.1	-0.4
	comp=Z,10nm,0.9s						
BFSC	Mount Baldy Ra	85.56	54	P	P	04 28 53.6	-1.1
	baz=254,SNR=30						
MLAC	Mammoth, Mammo	85.62	51	P	P	04 28 54.2	-0.9
	baz=253,SNR=7.1						
109C	Camp Elliot, M	85.63	55	P	P	04 28 54.7	-0.2
	baz=254						
CPE	Camp Elliot	85.63	55	*e*P	P	04 28 55.4	+0.5
	comp=Z,17nm,1.0s						
DAWY	Dawson	85.63	21	*e*P	P	04 28 53.9	-0.4
	comp=Z,29nm,1.2s						
JIRN	Jiri	85.64	299	*e*P	P	04 28 54.4	-1.2
J05D	Fort Rock, OR	85.66	45	P	P	04 28 54.6	-0.5
	baz=251						
YERR	Yerington	85.73	49	*e*P	P	04 28 54.9	-0.6
	comp=Z,13nm,0.8s						
MURC	Murrieta	85.75	55	P	P	04 28 54.5	-1.1
	baz=254,SNR=5.6						
PAHR	Pah Rah Range	85.84	48	*e*P	P	04 28 55.6	-0.5
	comp=Z,22nm,0.9s						
CWC	Cottonwood Cre	85.85	52	P	P	04 28 55.1	-1.1
	baz=253						
MOD	Modoc Plateau	85.86	46	*e*P	P	04 28 56.0	-0.1
	comp=Z,20nm,0.8s						
E04D	Cinebar	85.89	41	P	P	04 28 54.8	-1.1
	baz=250						
LRMC	Laurel Mtn Rad	85.89	53	P	P	04 28 55.3	-1.1
	baz=254,SNR=31						
D03D	Eldon	85.90	40	P	P	04 28 54.6	-1.3
	baz=249						
TIN	Tinemaha, Big	85.92	51	P	P	04 28 55.0	-1.4
	baz=253						
BAR	Barrett	85.92	56	*e*P	P	04 28 55.9	-0.5
	comp=Z,12nm,0.8s						
I05D	Terrebonne, OR	85.94	44	P	P	04 28 55.3	-1.0
	baz=250						
TIXI	Tiksi	85.96	349	*e*P	P	04 28 55.4	-0.3
	comp=Z,21nm,1.1s						
TIXI				LR	LR		
	comp=Z,2µm,20.0s						
TIXI	Tiksi	85.96	349⇓	*i*P	P	04 28 57.2	+1.5
TIXI				pmax	pmax		
	comp=Z,16nm,1.2s						
D04E	Lakebay	85.97	41	P	P	04 28 55.3	-0.9
	baz=249						
GUN	Gumba	85.97	299	*e*P	P	04 28 56.6	-0.6
	comp=Z,38nm,1.0s						
PINE	Pine Mountain	86.03	44	*e*P	P	04 28 56.6	-0.3
	comp=Z,33nm,0.9s						
BBRC	Big Bear Solar	86.15	54	P	P	04 28 56.6	-1.2
	baz=254						
RYN	Ryan	86.16	50	*e*P	P	04 28 57.1	-0.5
	comp=Z,21nm,0.9s						
MONP2	Monument Peak	86.18	56	P	P	04 28 57.0	-0.9
	baz=254,SNR=29						
DAC	Darwin (Calif)	86.18	52	*e*P	P	04 28 57.3	-0.6
	comp=Z,20nm,1.0s						
DAC	Darwin (Calif)	86.18	52	*e*P	P	04 28 57.3	-0.6
DAC				pmax	pmax		
	comp=Z,20nm,1.0s						
MPMC	Manual Prospec	86.20	52	P	P	04 28 56.5	-1.5
	baz=254,SNR=27						
G05D	Wamic, OR	86.26	43	P	P	04 28 57.2	-0.6
	baz=250						
RRX	Edison Barstow	86.26	54	P	P	04 28 57.1	-0.9
	baz=254						
NV01	Mina Array Sit	86.26	50	*e*P	P	04 28 57.2	-1.0
NVAR	Mina Array Bea	86.26	50	P	P	04 28 57.4	-0.8
	comp=Z,29nm,0.9s,baz=234,slow=7.7,SNR=35						
NVAR				LR	LR	05 01 55.8	
	comp=Z,6µm,19.1s,baz=271,slow=32						
PKIN	Phulchoki	86.31	299	*e*P	P	04 28 58.9	+0.2
PFO	Pinyon Flats O	86.34	55	*e*P	P	04 28 58.0	-0.6
	comp=Z,15nm,0.8s						
PFO				LR	LR		
	comp=Z,6µm,19.0s						
PFO	Pinyon Flats O	86.34	55	*e*P	P	04 28 58.0	-0.6
PFO				pmax	pmax		
	comp=Z,15nm,0.8s						
PFO				MLR	MLR		
	comp=Z,6µm,19.0s						
PFO	Pinyon Flats O	86.34	55	P	P	04 28 57.4	-1.2
	baz=254,SNR=11						
XPFO	Pion Flat	86.35	55	*e*P	P	04 28 58.0	-0.7
	comp=Z,16nm,0.8s						
IKP	In-Ko-Pah, Jac	86.37	56	P	P	04 28 58.3	-0.4
	baz=255,SNR=7.2						
NV11	Mina Array Sit	86.37	50	*e*P	P	04 28 57.9	-0.8
	comp=Z,2.5nm,0.9s						
F05D	White Salmon	86.38	42	P	P	04 28 57.6	-0.7
	baz=250						
LON	Longmire	86.44	41	*e*P	P	04 28 58.7	0.0
	comp=Z,8.0nm,0.9s						
LON	Longmire	86.44	41	*e*P	P	04 28 58.7	0.0
LON				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKN	Kakani	86.46	299	*e*P	P	04 28 59.5	+0.1
GSC	Goldstone, Bar	86.53	53	*e*P	P	04 28 59.3	-0.1
	comp=Z,14nm,1.0s						
GSC	Goldstone, Bar	86.53	53	P	P	04 28 59.1	-0.4
	baz=254,SNR=8.9						
DLBC	Dease Lake	86.53	28	*e*P	P	04 28 58.8	-0.1
	comp=Z,15nm,1.0s						
DLBC	Dease Lake	86.53	28	P	P	04 28 57.9	-1.0
	comp=Z,12nm,1.1s,baz=225,slow=7.7,SNR=2.3						
A04D	Lummi Island	86.56	39	P	P	04 28 58.9	-0.2
	baz=249						
GRAC	Grapevine Rang	86.56	51	P	P	04 28 59.3	-0.2
	baz=254,SNR=20						
DMN	Daman	86.56	299	*e*P	P	04 29 00.4	+0.4
	comp=Z,40nm,0.9s						
KVN	Kaiserville	86.59	49	*e*P	P	04 28 58.7	-1.1
	comp=Z,21nm,1.0s						
KVN	Kaiserville	86.59	49	*e*P	P	04 28 58.7	-1.1
KVN				pmax	pmax		
	comp=Z,21nm,1.0s						
SWSC	Sam W. Stewart	86.70	56	P	P	04 28 59.4	-0.8
	baz=255,SNR=12						
HEC	Hector,Ludlow	86.77	54	P	P	04 28 59.5	-1.2
	baz=254,SNR=32						
B05A	Bryant	86.78	40	P	P	04 28 59.5	-0.7
	baz=250						
FURC	Furnace Creek,	86.80	52	P	P	04 28 59.9	-0.7
	baz=254,SNR=24						
BELC	Belle Mtn. Jos	86.82	55	P	P	04 29 00.1	-0.8
	baz=255,SNR=51						
SHOC	Shoshone, Teco	87.11	53	P	P	04 29 01.8	-0.4
	baz=254,SNR=8.1						
I07A	Izee	87.11	44	*e*P	P	04 29 01.3	-0.8
	comp=Z,18nm,0.9s						
BC3	Big Chuckawall	87.16	55	P	P	04 29 01.4	-1.3
	baz=255,SNR=11						
WVOR	Wild Horse Val	87.20	46	*e*P	P	04 29 02.1	-0.5
	comp=Z,35nm,1.1s						
WVOR				LR	LR		
	comp=Z,3µm,19.0s						
WVOR	Wild Horse Val	87.20	46	*e*P	P	04 29 02.1	-0.5
WVOR				pmax	pmax		
	comp=Z,35nm,1.1s						
WVOR				MLR	MLR		
	comp=Z,3µm,19.0s						
B06A	Marblemount	87.25	40	*e*P	P	04 29 03.0	+0.5
	comp=Z,15nm,0.9s						
TUQ	Turquoise Moun	87.26	53	P	P	04 29 01.7	-1.4
	baz=254,SNR=12						
GMRC	Granite Mounta	87.29	54	P	P	04 29 02.2	-1.0
	baz=255,SNR=11						
LTY	Liberty	87.35	41	*e*P	P	04 29 02.3	-0.9
	comp=Z,12nm,0.9s						
F07A	Phinny Hill Vi	87.39	42	*e*P	P	04 29 03.0	-0.3
	comp=Z,20nm,1.0s						
TPNV	Topopah Spring	87.41	52	*e*P	P	04 29 03.1	-0.6
	comp=Z,16nm,1.1s						
TPNV	Topopah Spring	87.41	52	*e*P	P	04 29 03.2	-0.6
TPNV				pmax	pmax		
	comp=Z,16nm,1.1s						
TPNV	Topopah Spring	87.41	52	P	P	04 29 02.9	-0.9
	baz=254,SNR=9.7						
C06D	Leavenworth	87.42	40	P	P	04 29 03.1	-0.3
	baz=251						
GLA	Glamis	87.52	56	*e*P	P	04 29 03.8	-0.4
	comp=Z,41nm,0.8s						
GLA	Glamis	87.52	56	*e*P	P	04 29 03.8	-0.4
GLA				pmax	pmax		
	comp=Z,41nm,0.8s						
GLA	Glamis	87.52	56	P	P	04 29 03.6	-0.7
	baz=255,SNR=5.9						
IRM	Iron Mountain	87.54	55	P	P	04 29 03.7	-0.6
	baz=255,SNR=36						
J08A	Circle Bar Ran	87.60	45	*e*P	P	04 29 04.0	-0.5
	comp=Z,33nm,1.0s						
BMN	Battle Mountai	87.64	48	*e*P	P	04 29 04.7	-0.1
	comp=Z,12nm,0.9s						
BMN	Battle Mountai	87.64	48	*e*P	P	04 29 04.7	-0.1
BMN				pmax	pmax		
	comp=Z,12nm,0.9s						
LLLB	Lillooet	87.72	38	*e*P	P	04 29 04.9	+0.1
	comp=Z,17nm,1.3s						
MDRS	Chennai	87.78	284	*e*P	P	04 29 04.3	-1.5
LDFC	Landfair	87.81	54	*e*P	P	04 29 05.3	-0.4
	comp=Z,58nm,1.0s						
HAWA	Hanford	87.81	42	*e*P	P	04 29 05.2	-0.1
	comp=Z,21nm,1.0s						
HAWA				LR	LR		
	comp=Z,3µm,19.0s						
G08A	Pilot Rock	87.85	43	*e*P	P	04 29 04.9	-0.7
	comp=Z,36nm,1.1s						
DANN	Dangsing	87.90	299	*e*P	P	04 29 05.7	-0.8
	comp=Z,19nm,1.0s						
KOLN	Koldanda	87.90	299	*e*P	P	04 29 06.1	-0.3
	comp=Z,15nm,1.0s						
Y12C	Blythe	87.94	55	*e*P	P	04 29 06.1	-0.1
	comp=Z,31nm,0.9s						
Y12C	Blythe	87.94	55	P	P	04 29 05.1	-1.0
	baz=255,SNR=29						
NEE2	Needles Airpor	88.12	54	P	P	04 29 06.2	-0.8
	baz=255						
SHPR	Sheep Range	88.14	52	*e*P	P	04 29 07.2	-0.1
	comp=Z,23nm,1.2s						
E08A	Dider Farm, El	88.15	42	*e*P	P	04 29 07.0	+0.1
	comp=Z,53nm,1.3s						
R11A	Troy Canyon, C	88.29	51	*e*P	P	04 29 07.3	-0.6
	comp=Z,13nm,1.1s						
R11A	Troy Canyon, C	88.29	51	P	P	04 29 07.4	-0.6
	baz=255,SNR=12						
113A	Mohawk Valley,	88.31	56	*e*P	P	04 29 07.9	0.0
	comp=Z,21nm,0.9s						
PDMCI	Parker Dam,Lak	88.38	55	P	P	04 29 07.8	-0.5
	baz=256,SNR=24						
D08A	Wollman Farm,	88.42	42	*e*P	P	04 29 08.1	-0.1
	comp=Z,17nm,1.0s						
PYUN	Piuthan	88.50	299	*e*P	P	04 29 09.5	+0.3
	comp=Z,24nm,1.0s						
B08A	Colville Reser	88.55	40	*e*P	P	04 29 08.2	-0.7
	comp=Z,17nm,1.3s						
E09A	Wood Farm, Sta	88.76	42	*e*P	P	04 29 10.3	+0.6
	comp=Z,16nm,1.0s						
W13A	Hualapai Mount	88.78	54	*e*P	P	04 29 09.8	-0.7
	comp=Z,24nm,1.2s						
WMQ	Urumqi	88.80	315	P	P	04 29 12.0	+1.9
WMQ				pP	sP	04 29 20.4	-1.4
WMQ				PP	PP	04 32 39.3	-0.3
WMQ				SKS	SKSac	04 39 38.6	+1.0
WMQ				S	S	04 39 54.4	-1.2
WMQ				pmax	pmax		
	comp=Z,17nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,600nm,4.9s						
WMQ				LR	LR		
	comp=Z,3µm,17.9s						
WMQ				LR	LR		
	comp=Z,1µm,15.7s						
WMQ				LR	LR		
	comp=Z,1µm,24.5s						
WMQ	Urumqi	88.80	315	*e*P	P	04 29 09.8	-0.4
BMO	Blue Mountains	88.84	44	*e*P	P	04 29 09.4	-0.9
	comp=Z,11nm,0.9s						
BMO	Blue Mountains	88.84	44	*e*P	P	04 29 09.4	-0.9
BMO				pmax	pmax		
	comp=Z,11nm,0.9s						
214A	Organ Pipe Nat	88.90	57	P	P	04 29 10.4	-0.4
	baz=256						
C09A	Chrisman Ranch	89.06	41	*e*P	P	04 29 11.2	0.0
	comp=Z,16nm,1.3s						
ELK	Elko	89.18	48	*e*P	P	04 29 11.6	-0.6
	comp=Z,24nm,1.5s						
ELK	Elko	89.18	48	*e*P	P	04 29 11.6	-0.6
ELK				pmax	pmax		
	comp=Z,24nm,1.5s						
Y14A	Wickenburg	89.21	55	*e*P	P	04 29 12.4	+0.1
	comp=Z,11nm,0.9s						
F10A	Beach Ranch, E	89.21	43	*e*P	P	04 29 11.2	-0.9
	comp=Z,22nm,1.0s						
SLBS	Sierra La Lagu	89.55	66	*e*P	P	04 29 14.1	0.0
	comp=Z,20nm,0.8s						
PSUT	Pine Spring	89.65	51	*e*P	P	04 29 14.1	-0.3
	comp=Z,17nm,1.0s						
LCMT	Little Creek M	89.75	52	*e*P	P	04 29 14.8	-0.1
	comp=Z,21nm,0.9s						
CCUT	Cedar City	89.79	52	*e*P	P	04 29 15.3	+0.2
	comp=Z,26nm,1.0s						
NEW	Newport	89.93	41	*e*P	P	04 29 15.6	+0.3
	comp=Z,8.9nm,1.0s						
NEW				LR	LR		
	comp=Z,2µm,20.0s						
NEW	Newport	89.93	41	P	P	04 29 15.8	+0.5
	baz=253						
INK	Inuvik	89.96	19	*e*P	P	04 29 14.4	-0.4
	comp=Z,9.6nm,1.2s						
INK	Inuvik	89.96	19	*e*P	P	04 29 14.4	-0.4
INK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
INK	Inuvik	89.96	19	P	P	04 29 13.4	-1.5
	comp=Z,3.3nm,1.0s,baz=276,slow=2.7,SNR=6.3						
INK				LR	LR	05 03 22.3	
	comp=Z,2µm,20.4s,baz=228,slow=32						
SZCU	Shurtz Canyon	90.01	52	*e*P	P	04 29 16.1	0.0
	comp=Z,24nm,1.0s						
TRD	Trivandrum	90.06	279	*e*P	P	04 29 15.9	-0.7
KNB	Kanab	90.08	52	*e*P	P	04 29 16.5	+0.1
	comp=Z,30nm,1.1s						
KNB	Kanab	90.08	52	*e*P	P	04 29 16.5	+0.1
KNB				pmax	pmax		
	comp=Z,30nm,1.1s						
JBP	Jabalpur	90.09	293	*e*P	P	04 29 17.7	+1.2
JBP				AMB	AMB	04 29 28.9	
	comp=Z,13nm,1.2s						
HYB	Hyderabad	90.25	288	*e*P	P	04 29 16.3	-1.1
U15A	North Rim	90.36	53	*e*P	P	04 29 17.7	-0.1
	comp=Z,36nm,0.9s						
HLID	Hailey	90.49	46	*e*P	P	04 29 17.7	-0.5
	comp=Z,15nm,0.9s						
HLID				LR	LR		
	comp=Z,2µm,20.0s						
HLID	Hailey	90.49	46	P	P	04 29 18.4	+0.2
	baz=255						
NGP	Nagpur	90.53	291	*e*P	P	04 29 18.2	-0.4
NGP				IAmb	IAmb	04 29 22.6	
	comp=Z,7.6nm,0.3s						
PKCU	Pink Cliffs	90.58	52	*e*P	P	04 29 18.8	-0.2
	comp=Z,53nm,1.1s						
X16A	Lo Mia Camp, P	90.58	55	*e*P	P	04 29 19.1	+0.2
	comp=Z,21nm,0.9s						
DGZ	Jazzator, Alta	90.62	321⇓	*e*P	P	04 29 18.5	-0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUC	Tucson	90.66	57	*e*P	P	04 29 19.3	+0.2
	comp=Z,16nm,1.0s						
TUC				LR	LR		
	comp=Z,7µm,19.0s						
TUC	Tucson	90.66	57	P	P	04 29 18.5	-0.6
	baz=258						
MTPU	Mount Pierson	90.81	52	*e*P	P	04 29 19.7	-0.3
	comp=Z,29nm,0.9s						
DUG	Dugway, Tooele	90.83	49	*e*P	P	04 29 19.3	-0.5
	comp=Z,9.6nm,0.9s						
DUG				LR	LR		
	comp=Z,3µm,19.0s						
DUG	Dugway, Tooele	90.83	49	*e*P	P	04 29 19.3	-0.5
DUG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DUG				MLR	MLR		
	comp=Z,3µm,19.0s						
DUG	Dugway, Tooele	90.83	49	P	P	04 29 19.2	-0.5
	baz=256						
BGU	Big Grassy Mou	90.85	49	*e*P	P	04 29 19.5	-0.4
	comp=Z,15nm,1.0s						
WUAZ	Wupatki	90.88	54	*e*P	P	04 29 19.6	-0.5
	comp=Z,27nm,0.9s						
WUAZ				LR	LR		
	comp=Z,4µm,19.0s						
WUAZ	Wupatki	90.88	54	P	P	04 29 20.0	-0.2
	baz=257						
MSU	Marysvale	90.92	51	*e*P	P	04 29 19.9	-0.5
MSU	Marysvale	90.92	51	*e*P	P	04 29 19.9	-0.5
HVU	Hansel Valley	91.23	48	*e*P	P	04 29 21.4	-0.2
	comp=Z,26nm,0.9s						
HVU	Hansel Valley	91.23	48	*e*P	P	04 29 21.4	-0.2
HVU				pmax	pmax		
	comp=Z,26nm,0.9s						
NLU	North Lily Min	91.33	50	*e*P	P	04 29 22.0	-0.2
	comp=Z,22nm,1.0s						
SPUT	South Promonto	91.36	48	*e*P	P	04 29 22.3	0.0
	comp=Z,12nm,0.9s						
DGAR	Diego Garcia	91.46	262	PFAKE		04 29 30.0	+6.9
DGAR				LR	LR		
	comp=Z,1µm,20.0s						
MSO	Missoula	91.63	43	*e*P	P	04 29 23.6	+0.3
	comp=Z,8.1nm,1.0s						

MSO	Missoula	91.63	43	P	P	04 29 23.2	-0.2
	baz=256						
MPU	Maple Canyon	91.67	50	eP	P	04 29 24.0	+0.2
	comp=Z,28nm,1.4s						
319A	Douglas	91.71	59	eP	P	04 29 24.3	+0.3
	comp=Z,23nm,1.0s						
SYO	Syowa Base	91.73	197⇓	eX	P	04 29 19.0	-4.2
SYO	Syowa Base	91.73	197⇓	ipP	pP	04 29 31.0	-0.8
CTU	Camp Tracy	91.74	49	eP	P	04 29 24.0	-0.1
	comp=Z,20nm,1.0s						
Q16A	Castle Valley	91.78	51	eP	P	04 29 24.4	0.0
	comp=Z,28nm,1.1s						
X18A	Snowflake	91.81	55	eP	P	04 29 24.6	+0.1
	comp=Z,13nm,0.9s						
TMUT	Trail Mountain	91.84	50	eP	P	04 29 24.8	0.0
	comp=Z,17nm,0.9s						
MCMT	McKenzie Canyo	91.89	45	eP	P	04 29 24.5	-0.3
JLU	Jordanelle	91.94	49	eP	P	04 29 24.8	-0.3
	comp=Z,18nm,1.1s						
TCUT	Toone Canyon	92.08	49	eP	P	04 29 25.6	-0.2
	comp=Z,20nm,0.8s						
W18A	Petrified Fore	92.10	55	eP	P	04 29 25.5	-0.4
	comp=Z,26nm,1.2s						
W18A	Petrified Fore	92.10	55	P	P	04 29 24.7	-1.2
	baz=258						
DLMT	Dillon	92.19	44	eP	P	04 29 25.8	-0.2
	comp=Z,40nm,1.0s						
WALA	Waterton Lakes	92.20	41	eP	P	04 29 26.2	+0.3
	comp=Z,28nm,1.3s						
P17A	Butcher Ranch,	92.23	50	eP	P	04 29 26.6	+0.2
	comp=Z,7.0nm,0.9s						
SRU	San Rafael Swe	92.31	51	eP	P	04 29 26.7	-0.1
	comp=Z,10nm,1.1s						
SRU	San Rafael Swe	92.31	51	eP	P	04 29 26.7	-0.1
SRU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LRM	Limekiln Ridge	92.40	44	eP	P	04 29 26.7	-0.3
AHID	Auburn Hatcher	92.67	47	PFAKE		04 29 40.0	+12
AHID				LR	LR		
	comp=Z,1µm,20.0s						
QLMT	Earthquake Lak	92.88	45	eP	P	04 29 29.2	0.0
FXWY	Fox Creek	92.91	46	eP	P	04 29 29.1	-0.3
	comp=Z,9.0nm,0.8s						
BOZ	Bozeman (W)	92.91	44	eP	P	04 29 28.9	-0.4
	comp=Z,18nm,1.0s						
BOZ				LR	LR		
	comp=Z,4µm,20.0s						
BOZ	Bozeman (W)	92.91	44	P	P	04 29 29.3	0.0
	baz=257						
REDW	Red Top Meadow	92.97	47	eP	P	04 29 29.0	-0.7
	comp=Z,9.4nm,1.0s						
HRY	Holter Researc	93.02	43	eP	P	04 29 29.6	-0.1
YHB	Horse Butte	93.02	45	eP	P	04 29 29.6	-0.4
	comp=Z,14nm,1.0s						
SNOW	Snow King Moun	93.06	46	eP	P	04 29 30.1	-0.1
	comp=Z,9.8nm,0.9s						
MOOW	Moose Ponds	93.13	46	eP	P	04 29 29.9	-0.6
	comp=Z,17nm,1.4s						
YMR	Madison River	93.17	45	eP	P	04 29 30.2	-0.4
	comp=Z,11nm,0.8s						
DDI	Dehra Dun	93.18	300	eP	P	04 29 30.7	-0.1
DDI				IAmb	IAmb	04 29 36.7	
	comp=Z,1µm,3.8s						
121A	Cookes Peak, D	93.19	58	P	P	04 29 30.5	-0.5
	baz=259						
PV05	Paradox Valley	93.20	52	eP	P	04 29 31.4	+0.5
	comp=Z,22nm,1.4s						
LOHW	Long Hollow	93.20	46	eP	P	04 29 30.9	+0.1
	comp=Z,14nm,1.4s						
YFT	Old Faithful	93.21	45	eP	P	04 29 31.1	+0.2
	comp=Z,8.2nm,0.9s						
MK01	Makanchi Array	93.22	317	eP	P	04 29 29.6	-0.9
FLWY	Flagg Ranch	93.23	46	eP	P	04 29 31.1	+0.2
	comp=Z,11nm,1.0s						
MK31	Makanchi Array	93.23	317	eP	P	04 29 30.1	-0.5
MK32	Makanchi Array	93.23	317	eP	P	04 29 29.5	-1.1
MK32				ePP	PP	04 33 13.0	-1.6
MKAR	Makanchi Array	93.23	317	eP	P	04 29 30.1	-0.5
	comp=Z,70nm,0.9s						
MKAR				PP	PP	04 33 13.0	-1.6
MKAR				PKKPbc	PKKPdf	04 46 37.6	-1.4
MKAR	Makanchi Array	93.23	317	P	P	04 29 29.5	-1.1
	comp=Z,8.6nm,0.9s,baz=92,slow=6.1,SNR=34						
MKAR				PP	PP	04 33 13.0	-1.6
	comp=Z,2.1nm,1.0s,baz=95,slow=8.8,SNR=4.3						
MKAR				PKKPbc	PKKPdf	04 46 37.6	-1.4
	comp=Z,1.7nm,0.7s,baz=283,slow=3.0,SNR=13						
MKAR				LR	LR	05 10 40.2	
	comp=Z,819nm,21.9s,baz=94,slow=35						
PV09	Paradox Valley	93.25	52	eP	P	04 29 31.0	-0.3
ZAA0	Zalesovo Array	93.30	324	eP	P	04 29 30.3	-0.4
	comp=Z,18nm,1.1s						
ZALV	Zalesovo Beam	93.30	324	P	P	04 29 28.6	-2.0
	comp=Z,9.9nm,1.0s,baz=116,slow=3.4,SNR=18						
ZAA1	Zalesovo Array	93.30	324	eP	P	04 29 28.6	-2.0
PV10	Paradox Valley	93.30	52	eP	P	04 29 31.1	-0.3
	comp=Z,18nm,1.0s						
PV14	Lion Creek, Pa	93.31	52	eP	P	04 29 31.9	+0.4
	comp=Z,11nm,0.8s						
PV19	Morning Glory	93.33	52	eP	P	04 29 31.4	-0.2
	comp=Z,11nm,0.9s						
PV23	Carpenter Ridg	93.34	52	eP	P	04 29 31.1	-0.6
	comp=Z,20nm,0.8s						
PV17	East Wray Mesa	93.35	52	eP	P	04 29 31.4	-0.2
	comp=Z,14nm,1.0s						
PV20	West Nyswonger	93.35	52	eP	P	04 29 31.8	+0.2
	comp=Z,11nm,0.8s						
H17A	Grant Village	93.38	46	eP	P	04 29 31.6	-0.1
	comp=Z,13nm,0.9s						
H17A	Grant Village	93.38	46	P	P	04 29 31.1	-0.6
	baz=258						
PV16	Nyswonger Mesa	93.39	52	eP	P	04 29 31.4	-0.3
	comp=Z,8.7nm,1.1s						
PV21	Cone Mtn., Par	93.39	52	eP	P	04 29 31.3	-0.5
	comp=Z,24nm,1.3s						
PV04	Paradox Valley	93.41	52	eP	P	04 29 31.4	-0.4
	comp=Z,12nm,0.9s						
PV11	David Mesa, Pa	93.42	52	eP	P	04 29 31.6	-0.3
	comp=Z,14nm,1.2s						
PV03	Paradox Valley	93.43	52	eP	P	04 29 31.3	-0.7
	comp=Z,7.8nm,1.0s						
PV13	Radium Mtn., P	93.43	52	eP	P	04 29 30.8	-1.2
	comp=Z,3.2nm,0.8s						
MAKZ	Makanchi	93.45	317	eP	P	04 29 31.5	-0.1
	comp=Z,25nm,1.1s						
MAKZ	Makanchi	93.45	317	eP	P	04 29 31.5	-0.1
MAKZ				pmax	pmax		
	comp=Z,25nm,1.1s						
PV12	Saucer Basin,	93.47	52	eP	P	04 29 31.8	-0.3
	comp=Z,16nm,1.0s						
MVCO	Mesa Verde	93.50	53	eP	P	04 29 31.9	-0.4
	comp=Z,8.6nm,1.1s						
MVCO				LR	LR		
	comp=Z,3µm,19.0s						
MVCO	Mesa Verde	93.50	53	P	P	04 29 31.5	-0.9
	baz=259						
LKWY	Lake	93.54	45	eP	P	04 29 31.7	-0.7
	comp=Z,5.1nm,0.8s						
LKWY				LR	LR		
	comp=Z,5µm,20.0s						
LKWY	Lake	93.54	45	eP	P	04 29 31.7	-0.7
LKWY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LKWY				MLR	MLR		
	comp=Z,5µm,20.0s						
PV07	Paradox Valley	93.62	52	eP	P	04 29 33.0	+0.2
	comp=Z,13nm,1.0s						
PV01	Paradox Valley	93.62	52	eP	P	04 29 32.5	-0.4
	comp=Z,8.1nm,1.0s						
PV15	Paradox Valley	93.73	52	eP	P	04 29 33.0	-0.4
	comp=Z,11nm,1.0s						
BW06	Boulder Array	93.78	47	eP	P	04 29 33.2	-0.3
	comp=Z,6.8nm,0.9s						
BW06				LR	LR		
	comp=Z,2µm,20.0s						
BW06	Boulder Array	93.78	47	P	P	04 29 33.0	-0.5
	baz=259						
PD31	Pinedale Array	93.78	47	eP	P	04 29 33.2	-0.3
PDAR	Pinedale Array	93.78	47	eP	P	04 29 31.1	-2.4
PDAR	Pinedale Array	93.78	47	P	P	04 29 31.4	-2.1
	comp=Z,7.7nm,0.9s,baz=236,slow=1.6,SNR=18						
PDAR				LR	LR	05 08 52.7	
	comp=Z,1µm,18.2s,baz=264,slow=34						
SMLA	Simla	94.08	301	eP	P	04 29 34.0	-0.8
SMLA				IAmb	IAmb	04 29 36.1	
	comp=Z,5.9nm,0.5s						
O20A	White River Ci	94.25	50	eP	P	04 29 35.7	0.0
	comp=Z,10nm,1.1s						
O20A	White River Ci	94.25	50	P	P	04 29 35.3	-0.3
	baz=259						
GCMT	Greycliff	94.29	44	eP	P	04 29 36.1	+0.4
GOA	Goa	94.36	285	eP	P	04 29 34.1	-2.3
GOA				IAmb	IAmb	04 29 36.3	
	comp=Z,29nm,1.2s						
NVS	Novosibirsk	94.41	325	eP	P	04 29 36.2	+0.5
NVS				pmax	pmax		
	comp=Z,29nm,2.0s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.8s						
BNM	Barren Site	94.43	56	eP	P	04 29 36.4	-0.3
RLMT	Red Lodge	94.44	45	eP	P	04 29 36.4	-0.1
	comp=E,11nm,1.4s						
RLMT				LR	LR		
	comp=Z,3µm,19.0s						
RLMT	Red Lodge	94.44	45	P	P	04 29 36.3	-0.1
	baz=259						
EGMT	Eagleton	94.67	42	eP	P	04 29 37.1	-0.1
	comp=Z,15nm,0.8s						
EGMT				LR	LR		
	comp=Z,2µm,19.0s						
EGMT	Eagleton	94.67	42	P	P	04 29 37.2	0.0
	baz=259						
ANMO	Albuquerque	94.71	55	eP	P	04 29 36.9	-1.0
	comp=Z,6.6nm,0.8s						
ANMO				LR	LR		
	comp=Z,1µm,20.0s						
ANMO	Albuquerque	94.71	55⇑	eP	P	04 29 38.5	+0.6
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ANMO	Albuquerque	94.71	55	P	P	04 29 37.1	-0.8
	baz=260						
POO	Poona	94.86	288	eP	P	04 29 36.0	-2.7
S22A	4UR Ranch, Cre	94.90	53	eP	P	04 29 38.2	-0.6
	comp=Z,4.1nm,1.0s						
S22A	4UR Ranch, Cre	94.90	53	P	P	04 29 38.6	-0.2
	baz=260						
DHRM	DHARMSHALA	95.00	302	eP	P	04 29 38.9	-0.4
DHRM				IAmb	IAmb	04 29 44.6	
	comp=Z,87nm,2.5s						
SMCO	Snowmass	95.04	51	eP	P	04 29 39.2	-0.4
	comp=Z,6.6nm,1.3s						
MNTX	Cornudas Mount	95.04	59	eP	P	04 29 38.8	-0.5
	comp=Z,8.6nm,0.9s						
MNTX				LR	LR		
	comp=Z,5µm,20.0s						
MNTX	Cornudas Mount	95.04	59	P	P	04 29 38.9	-0.4
	baz=260						
YKA	Yellowknife Ar	95.09	27	P	P	04 29 36.2	-2.5
	comp=Z,4.8nm,0.9s,baz=255,slow=4.6,SNR=27						
YKA				PKKPbc	PKKPbc	04 46 33.6	-2.3
	comp=Z,0.4nm,0.8s,baz=80,slow=2.9,SNR=5.0						
YKA				LR	LR	05 10 10.1	
	comp=Z,397nm,18.0s,baz=252,slow=34						
YKB5	Yellowknife Ar	95.09	27	eP	P	04 29 36.2	-2.5
YKW3	Yellowknife Ar	95.10	27	eP	P	04 29 38.8	+0.1
	comp=Z,5.8nm,1.0s						
SDCO	Great Sand Dun	95.94	53	PFAKE		04 29 50.0	+6.4
SDCO				LR	LR		
	comp=Z,3µm,20.0s						
NRIK	Noril'sk	95.94	340	P	P	04 29 40.5	-2.0
	comp=Z,1.8nm,0.4s,baz=168,slow=3.3,SNR=4.2						
NRIK				LR	LR	05 11 45.1	
	comp=Z,715nm,21.6s,baz=104,slow=35						
LTX	Lajitas	96.12	61	eP	P	04 29 42.9	-1.4
LTX				ePP	PP	04 33 40.5	+2.9
LTX	Lajitas	96.12	61	eP	P	04 29 42.9	-1.4
LTX				e		04 33 40.5	
TX31	Lajitas Ar. Si	96.12	61	eP	P	04 29 43.2	-1.1
TXAR	Lajitas Array	96.12	61	P	P	04 29 42.9	-1.5
	comp=Z,2.0nm,0.9s,baz=226,slow=3.9,SNR=15						
TXAR				PP	PP	04 33 40.5	+2.9
	comp=Z,2.1nm,1.1s,baz=260,slow=7.5,SNR=7.0						
TXAR				PKKPbc	PKKPbc	04 46 32.3	+0.2
	comp=Z,0.3nm,0.7s,baz=79,slow=3.9,SNR=3.4						
TXAR				LR	LR	05 09 16.0	
	comp=Z,4µm,18.0s,baz=0.0,slow=33						
ISCO	Idaho Springs	96.18	51	PFAKE		04 30 00.0	+15
ISCO				LR	LR		
	comp=Z,7µm,20.0s						
KURK	Kurchatov	96.36	320	eP	P	04 29 44.8	0.0
	comp=Z,18nm,1.0s						
KURK				ePP	PP	04 33 42.5	+3.8
KURK				LR	LR		
	comp=Z,3µm,21.0s						
KURK	Kurchatov	96.36	320⇓	iP	P	04 29 45.8	+1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURBB	Kurchatov Arra	96.41	320	P	P	04 29 43.4	-1.6
	comp=Z,1.0nm,0.9s,baz=91,slow=4.8,SNR=6.5						
KURBB				PP	PP	04 33 42.5	+3.4
	comp=Z,0.7nm,0.7s,baz=98,slow=7.1,SNR=4.3						
KSH	Kashi	96.44	309	P	P	04 29 46.7	+1.1
KSH				pP	sP	04 29 56.8	-0.6
KSH				PP	PP	04 33 45.4	+5.6
KSH				SKS	SKSac	04 40 24.0	+3.5
KSH				S	S	04 40 58.6	-5.7
KSH				pmax	pmax		
	comp=Z,240nm,4.0s						
KSH				LR	LR		
	comp=Z,420nm,7.3s						
KSH				LR	LR		
	comp=Z,300nm,5.7s						
KSH				LR	LR		
	comp=Z,700nm,8.5s						
NVL	N'lazarevskaya	96.47	189	eP	P	04 29 51.6	+6.7
NVL				eS	SKSac	04 40 24.5	+5.2
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,4µm,18.0s						
LAO	LASA Array	96.80	44	PFAKE		04 30 00.0	+13
LAO				LR	LR		
	comp=Z,3µm,19.0s						
SNAA	Sanae	97.15	184	eP	Pdif	04 29 49.2	+1.0
	comp=Z,23nm,1.4s						
SNAA	Sanae	97.15	184	eP	Pdif	04 29 49.2	+1.0
SNAA				pmax	pmax		
	comp=Z,23nm,1.4s						
NIL	Nilore	97.75	303	PFAKE		04 30 00.0	+8.4
NIL				LR	LR		
	comp=Z,415nm,21.0s						
FRU	Bishkek	97.92	312	eP	Pdif	04 29 53.0	+0.8
AAK	Ala-Archa	97.99	312	PFAKE		04 30 00.0	+7.4
AAK				LR	LR		
	comp=Z,1µm,20.0s						
DGMT	Dagmar	98.41	42	eP	P	04 29 53.8	-0.4
	comp=Z,13nm,0.8s						
DGMT				LR	LR		
	comp=Z,2µm,19.0s						
AMTX	Amarillo	98.58	56	eP	P	04 29 54.2	-1.1
	comp=Z,12nm,1.3s						
OGNE	Ogallala	99.04	50	PFAKE		04 30 10.0	+13
OGNE				LR	LR		
	comp=Z,4µm,19.0s						
BHJ	Bhuj	99.46	292	eP	Pdif	04 29 58.2	-1.1
JCT	Junction City	99.60	61	ePdif	Pdif	04 30 00.0	+0.1
	comp=Z,6.4nm,1.0s						
JCT				LR	LR		
	comp=Z,6µm,20.0s						
JCT	Junction City	99.60	61	eP	Pdif	04 30 00.0	+0.1
JCT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
JCT				MLR	MLR		
	comp=Z,6µm,20.0s						
FFC	Flin Flon	100.40	36	PFAKE		04 30 10.0	+7.2
FFC				LR	LR		
	comp=Z,6µm,19.0s						
CBKS	Cedar Bluff	100.57	52	PFAKE		04 30 20.0	+16
CBKS				LR	LR		
	comp=Z,3µm,19.0s						
KVTX	Kingsville	100.91	64	PFAKE		04 30 20.0	+14
KVTX				LR	LR		
	comp=Z,2µm,20.0s						
WMOK	Wichita Mounta	100.94	57	PFAKE		04 30 20.0	+14
WMOK				LR	LR		
	comp=Z,4µm,20.0s						
BVAR	Borovoye Array	101.68	322	P	Pdif	04 30 06.6	-1.9
	comp=Z,2.9nm,1.0s,baz=96,slow=3.0,SNR=10.0						
BVAR				PP	PP	04 34 24.6	+5.3
	comp=Z,2.1nm,0.8s,baz=97,slow=7.4,SNR=6.1						
BRVK	Borovoye	101.75	322	ePdif	Pdif	04 30 09.5	+0.6
BRVK				LR	LR		
	comp=Z,869nm,20.0s						
BRVK	Borovoye	101.75	322⇑	eP	Pdif	04 30 08.4	-0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSU1	Kansas State U	103.03	52	PFAKE		04 30 30.0	+15
KSU1				LR	LR		
	comp=Z,4µm,19.0s						
ECSD	EROS Data Cent	103.27	48	PFAKE		04 30 30.0	+14
ECSD				LR	LR		
	comp=Z,3µm,20.0s						
PAYG	Puerto Ayora	103.94	93	PFAKE		04 30 30.0	+10
PAYG				LR	LR		
	comp=Z,2µm,19.0s						
NATX	Nacogdoches	104.11	60	PFAKE		04 30 30.0	+10
NATX				LR	LR		
	comp=Z,5µm,20.0s						
MIAR	Mount Ida	105.20	57	PFAKE		04 34 50.0	+11
MIAR				LR	LR		
	comp=Z,5µm,20.0s						
SCIA	State Center	105.72	49	PFAKE		04 34 50.0	+10
SCIA				LR	LR		
	comp=Z,5µm,20.0s						
EYMN	Ely	106.86	43	PFAKE		04 34 50.0	+8.4
EYMN				LR	LR		
	comp=Z,3µm,20.0s						
JFWS	Jewell Farm	107.91	48	PFAKE		04 35 00.0	+16
JFWS				LR	LR		
	comp=Z,3µm,19.0s						
ARU	Arti	108.38	326	PFAKE		04 35 00.0	+16
ARU				LR	LR		
	comp=Z,847nm,20.0s						
COWI	Conover	108.57	45	PFAKE		04 35 00.0	+15
COWI				LR	LR		
	comp=Z,3µm,21.0s						
HDIL	Hopedale	108.69	51	PFAKE		04 35 00.0	+15
HDIL				LR	LR		
	comp=Z,4µm,22.0s						
BRAL	Brewton	110.58	61	PFAKE		04 35 00.0	+11
BRAL				LR	LR		
	comp=Z,3µm,20.0s						
KBS	Kingsbay	110.83	355	PFAKE		04 35 00.0	+12
KBS				LR	LR		
	comp=Z,961nm,22.0s						
JTS	JuntasAbangare	111.03	83	PFAKE		04 35 00.0	+10
JTS				LR	LR		
	comp=Z,2µm,19.0s						
GLMI	Grayling	111.84	46	PFAKE		04 35 00.0	+8.9
GLMI				LR	LR		
	comp=Z,5µm,19.0s						
ABPO	Ambohimpanom	112.15	244	PFAKE		04 35 00.0	+7.4
ABPO				LR	LR		
	comp=Z,926nm,20.0s						
AAM	Ann Arbor	112.81	49	PFAKE		04 35 00.0	+7.0
AAM				LR	LR		
	comp=Z,6µm,19.0s						
LCO	Las Campanas	112.87	128	PFAKE		04 35 10.0	+16
LCO				LR	LR		
	comp=Z,2µm,20.0s						
ACSO	Alum Creek Sta	113.52	51	PFAKE		04 35 10.0	+16
ACSO				LR	LR		
	comp=Z,3µm,20.0s						
GOGA	Godfrey	113.59	58	PFAKE		04 35 10.0	+15
GOGA				LR	LR		
	comp=Z,5µm,20.0s						
NNA	Nana	114.12	108	PFAKE		04 35 10.0	+14
NNA				LR	LR		
	comp=Z,958nm,20.0s						
LVZ	Lovozero	114.69	342	PFAKE		04 35 10.0	+14
LVZ				LR	LR		
	comp=Z,627nm,20.0s						
APA	Apatity	115.27	342⇓	iPKIKP	Pdif	04 34 59.7	+2.8
APA				pmax	pmax		
	comp=Z,2.0nm,18.0s						
APA				MLR	MLR		
	comp=Z,2µm,18.0s						
KEV	Kevo	115.66	345	PFAKE		04 35 10.0	+12
KEV				LR	LR		
	comp=Z,2µm,20.0s						
OTAV	Otavalo	115.71	95	PFAKE		04 35 10.0	+10
OTAV				LR	LR		
	comp=Z,1µm,19.0s						
BLA	Blacksburg	115.81	54	PFAKE		04 35 10.0	+11
BLA				LR	LR		
	comp=Z,3µm,20.0s						
BCIP	Isla Barro Col	115.87	85	PFAKE		04 35 10.0	+10
BCIP				LR	LR		
	comp=Z,1µm,20.0s						
ARA0	ARCESS Array S	116.19	345	ePKPdf	PKPdf	04 34 59.0	+0.3
ARA0				ePKKPbc	PKKPbc	04 45 29.6	-1.5
ARCES	ARCESS Array B	116.19	345	PKP	PKPdf	04 34 59.0	+0.3
	comp=Z,3.7nm,1.0s,baz=81,slow=1.2,SNR=13						
ARCES				PKKPbc	PKKPbc	04 45 29.6	-1.5
	comp=Z,2.9nm,0.9s,baz=236,slow=0.9,SNR=7.7						
NHSC	New Hope	116.36	59	PFAKE		04 35 10.0	+10
NHSC				LR	LR		
	comp=Z,5µm,19.0s						
KLMR	Klimovskoe	116.53	334	ePKIKP	PKiKP	04 35 00.6	+1.1
KLMR				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	Klimovskoe	116.53	334	ePKPdf	PKiKP	04 35 00.6	+1.1
KLMR				AMP		04 35 06.7	
	comp=Z,12nm,1.4s						
LVC	Limon Verde	117.21	122	PFAKE		04 35 10.0	+7.5
LVC				LR	LR		
	comp=Z,1µm,20.0s						
CNNC	Cliffs of the	118.05	56	PFAKE		04 35 10.0	+6.7
CNNC				LR	LR		
	comp=Z,3µm,21.0s						
CBN	Corbin Frederi	118.09	53	PFAKE		04 35 10.0	+6.7
CBN				LR	LR		
	comp=Z,6µm,20.0s						
BINY	Binghamton	118.45	48	PFAKE		04 35 20.0	+16
BINY				LR	LR		
	comp=Z,3µm,22.0s						
LONY	Lake Ozonia	118.92	45	PFAKE		04 35 20.0	+15
LONY				LR	LR		
	comp=Z,2µm,19.0s						
MTDJ	Mount Denham	118.94	75	PFAKE		04 35 20.0	+14
MTDJ				LR	LR		
	comp=Z,1µm,20.0s						
SFJD	Kangerlussuaq	119.10	15	PFAKE		04 35 20.0	+16
SFJD				LR	LR		
	comp=Z,4µm,19.0s						
PTLC	Puerto Leguiza	119.27	96	eP	PKiKP	04 35 06.8	+0.5
PTLC	Puerto Leguiza	119.27	96	eP	PKiKP	04 35 06.8	+0.5
VRH	Novokhopyorsk	119.31	323	ePKIKP	PKPdf	04 35 03.2	-2.0
VRH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HELC	Santa Helena	119.67	89	eP	PKiKP	04 35 08.8	+1.3
HELC	Santa Helena	119.67	89	eP	PKiKP	04 35 08.8	+1.3
GNI	Garni	120.34	310	PFAKE		04 35 20.0	+12
GNI				LR	LR		
	comp=Z,786nm,19.0s						
GNI	Garni	120.34	310⇑	iPKIKP	PKiKP	04 35 09.6	+1.7
LPSR	Galich'ya Gora	120.39	325	ePKIKP	PKPdf	04 35 07.2	0.0
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
LPAZ	La Paz	120.53	116	PKP	PKPdf	04 35 08.6	-0.7
	comp=Z,2.6nm,0.7s,baz=299,slow=1.4,SNR=7.1						
OBN	Obninsk	120.57	329	PFAKE		04 35 20.0	+12
OBN				LR	LR		
	comp=Z,909nm,21.0s						
OBN	Obninsk	120.57	329	ePKIKP	PKiKP	04 35 08.5	+0.9
OBN				e		04 36 32.5	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VSR	Storozhevoye	120.80	324⇑	iPKIKP	PKiKP	04 35 08.8	+0.6
KIV	Kislovodsk	120.93	315	PFAKE		04 35 20.0	+11
KIV				LR	LR		
	comp=Z,627nm,19.0s						
KIV	Kislovodsk	120.93	315	i PKIKP	PKPdf	04 35 07.3	-1.4
KIV				e		04 36 35.7	
KIV				ePS	PS	04 46 27.7	-2.5
KIV				eSS	SS	04 53 05.6	-2.2
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHIC	Chingaza	121.17	91	eP	PKPdf	04 35 06.0	-4.4
CHIC	Chingaza	121.17	91	eP	PKPdf	04 35 06.0	-4.4
GTBY	Guantanamo Bay	121.28	73	PFAKE		04 35 20.0	+10
GTBY				LR	LR		
	comp=Z,896nm,19.0s						
FIA1	FINESS Array S	121.58	338	ePKPdf	PKiKP	04 35 10.1	+0.7
FIA0	FINESS Array S	121.58	338	ePKPdf	PKPdf	04 35 07.6	-1.6
FIA0	FINESS Array S	121.58	338	ePKIKP	PKPdf	04 35 07.6	-1.6

FINES	FINESS Array B	121.58	338	PKP	PKPdf	04 35 07.6	-1.6
	comp=Z,7.0nm,1.0s,baz=119,slow=2.4,SNR=8.5						
RAYN	Ar Rayn	121.61	291	*e*PKPdf	PKPdf	04 35 10.1	-0.4
RAYN				LR	LR		
	comp=Z,711nm,21.0s						
RAYN	Ar Rayn	121.61	291	*e*PKIKP	PKPdf	04 35 10.1	-0.4
RAYN				MLR	MLR		
	comp=Z,711nm,21.0s						
PKME	Peaks-Kenny Pk	122.35	43	PFAKE		04 35 20.0	+8.6
PKME				LR	LR		
	comp=Z,4µm,19.0s						
VSU	Vasula	123.26	335	⇓*i*PKIKP	PKiKP	04 35 13.4	+0.6
CPUP	Villa Florida	124.33	133	*e*PKPdf	PKiKP	04 35 16.0	0.0
CPUP	Villa Florida	124.33	133	PKP	PKPdf	04 35 14.8	-0.9
	comp=Z,6.1nm,1.0s,baz=156,slow=1.0,SNR=7.6						
SDV	Santo Domingo	124.85	87	*e*PKPdf	PKPdf	04 35 16.4	-0.8
SDV				LR	LR		
	comp=Z,915nm,21.0s						
SDV	Santo Domingo	124.85	87	*e*P	PKiKP	04 35 18.4	+0.9
SDV	Santo Domingo	124.85	87	*e*P	PKiKP	04 35 18.4	+0.9
SDV	Santo Domingo	124.85	87	PKP	PKPdf	04 35 16.0	-1.2
	comp=Z,13nm,0.8s,baz=294,slow=18,SNR=17						
SDDR	Presa de Saban	124.88	75	PFAKE		04 35 30.0	+13
SDDR				LR	LR		
	comp=Z,3µm,19.0s						
BOSA	Boshof	124.91	223	PKP	PKPdf	04 35 15.8	-1.1
	comp=Z,9.6nm,0.8s,baz=133,slow=3.5,SNR=11						
GRTK	Grand Turk	125.00	71	PFAKE		04 35 30.0	+13
GRTK				LR	LR		
	comp=Z,2µm,21.0s						
SUR	Sutherland	125.17	217	PFAKE		04 35 30.0	+12
SUR				LR	LR		
	comp=Z,3µm,21.0s						
NB2	NORSAR Subarra	126.55	345	PKPdf	PKiKP	04 35 20.2	+0.9
	comp=Z,8.3nm,1.2s,baz=31,slow=1.9						
NB2	NORSAR Subarra	126.55	345	PKPdf	PKiKP	04 35 20.2	+0.9
	baz=31,slow=1.9						
NB200	NORSAR Array S	126.55	345	*e*PKPdf	PKPdf	04 35 18.1	-0.8
NOA	NORSAR Array B	126.55	345	PKP	PKPdf	04 35 18.1	-0.8
	comp=Z,3.1nm,1.0s,baz=37,slow=1.9,SNR=4.8						
AKASG	Malin Array Be	126.62	327	PKP	PKPdf	04 35 18.8	-0.5
	comp=Z,5.1nm,1.1s,baz=52,slow=2.1,SNR=13						
AKASG				PP	PP	04 37 20.5	+5.1
	comp=Z,0.4nm,0.4s,baz=58,slow=7.7,SNR=8.4						
AKBB	Malin Array Si	126.62	327	*e*PKPdf	PKiKP	04 35 20.2	+0.5
AKBB				*e*PP	PP	04 37 20.5	+5.1
KIEV	Kiev	126.63	327	*e*PKPdf	PKPdf	04 35 19.2	0.0
KIEV				LR	LR		
	comp=Z,1µm,19.0s						
KIEV	Kiev	126.63	327	⇑*i*PKIKP	PKiKP	04 35 21.4	+1.7
AK11	Malin Array Si	126.66	327	*e*PKPdf	PKiKP	04 35 19.8	0.0
LBTB	Lobatse	126.92	227	*e*PKPdf	PKPdf	04 35 20.5	-0.3
KMBO	Kilima Mbogo	127.04	260	*e*PKPdf	PKPdf	04 35 20.0	-1.5
KMBO				LR	LR		
	comp=Z,1µm,20.0s						
KMBO	Kilima Mbogo	127.04	260	PKIKP	PKPdf	04 35 20.0	-1.5
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KMBO	Kilima Mbogo	127.04	260	PKP	PKPdf	04 35 20.0	-1.5
	comp=Z,1.5nm,0.8s,baz=80,slow=12,SNR=5.2						
KLNR	Kaliningrad	128.53	335	⇑*i*PKIKP	PKiKP	04 35 25.9	+2.5
BR101	Keskin Array S	128.66	313	*e*PKPdf	PKPdf	04 35 22.9	-0.9
BRTR	Keskin Array B	128.66	313	PKP	PKPdf	04 35 22.9	-0.9
	comp=Z,2.1nm,1.0s,baz=100,slow=1.5,SNR=7.1						
KIS	Kishinev	128.76	323	*e*PKP	PKPpre	04 35 00.0	
KIS				LRM	MLR	05 30 02.0	
	comp=Z,700nm,20.0s						
KIS	Kishinev	128.76	323	*e*PKHKP	PKPpre	04 35 00.0	
KIS				MLR	MLR		
	comp=Z,700nm,20.0s						
KIS				MLR	MLR		
	comp=N,300nm,17.0s						
ANTO	Ankara	129.22	313	PFAKE		04 35 40.0	+15
ANTO				LR	LR		
	comp=Z,562nm,20.0s						
SJG	San Juan	129.75	76	*e*PKPdf	PKiKP	04 35 26.8	-0.1
SJG				LR	LR		
	comp=Z,1µm,21.0s						
SJG	San Juan	129.75	76	*e*P	PKiKP	04 35 27.4	+0.5
SJG	San Juan	129.75	76	*e*PKIKP	PKiKP	04 35 26.8	-0.1
SJG				MLR	MLR		
	comp=Z,1µm,21.0s						
SJG	San Juan	129.75	76	*e*P	PKiKP	04 35 27.4	+0.5
SJG	San Juan	129.75	76	PKP	PKiKP	04 35 27.2	+0.3
	comp=Z,34nm,1.0s,baz=34,slow=5.9,SNR=5.3						
LVV	L'vov	129.86	328	*e*PKIKP	PKiKP	04 35 28.5	+2.2
LVV				MLR	MLR		
	comp=E,600nm,18.0s						
LVV				MLR	MLR		
	comp=N,550nm,17.0s						
LVV				MLR	MLR		
	comp=Z,700nm,18.0s						
HUMP	Col San Antoni	130.04	76	*e*PKPdf	PKPdf	04 35 26.6	-0.1
LSZ	Lusaka	130.21	239	*e*PKPdf	PKPdf	04 35 27.0	-0.3
LSZ				LR	LR		
	comp=Z,2µm,20.0s						
LSZ	Lusaka	130.21	239	*e*PKIKP	PKPdf	04 35 27.0	-0.3
LSZ				MLR	MLR		
	comp=Z,2µm,20.0s						
BUR04	Bucovina Ar. S	130.51	325	*e*PKPdf	PKPdf	04 35 27.3	+0.3
UZH	Uzhgorod	131.49	328	*e*PKIKP	PKPdf	04 35 27.4	-1.2
UZH				*e*		04 35 39.7	
OKC	Ostrava-Krasne	132.76	331	AMS	AMS	05 35 30.0	
	comp=Z,1µm,17.5s						
DPC	Dobruska-Polom	133.23	333	AMS	AMS	05 38 00.0	
	comp=Z,1µm,20.4s						
UPC	Upice	133.25	333	AMS	AMS	05 38 10.0	
	comp=Z,1µm,18.6s						
VYHS	Vyhne	133.34	330	*e*PKIKP	PKiKP	04 35 35.6	+2.3
VYHS				*e*		04 35 44.4	
VYHS				*e*		04 38 01.3	
VYHS	Vyhne	133.34	330	*e*PKP	PKiKP	04 35 35.6	+2.3
VYHS				*e*		04 35 44.4	
VYHS				*e*PP	PP	04 38 01.3	+2.2
MBAR	Mbarara	133.47	259	PFAKE		04 35 50.0	+15
MBAR				LR	LR		
	comp=Z,548nm,20.0s						
PVCC	Panska Ves	133.86	334	AMS	AMS	05 37 00.0	
	comp=Z,1µm,21.1s						
CLL	Collm	133.91	336	*e*PKPdf	PKiKP	04 35 34.0	-0.4
CLL				*e*PSKS		04 48 12.0	
CLL				*e*SS	SS	04 55 42.0	-5.6
CLL				*e*SSS	SSS	05 00 30.0	
CLL				*e*SSSS		05 04 12.0	
CLL				*e*		05 05 12.0	
CLL				Lm	MLR	05 39 00.0	
	comp=Z,900nm,20.1s						
CLL	Collm	133.91	336	*e*PKIKP	PKiKP	04 35 34.0	-0.4
CLL				MLR	MLR		
	comp=Z,900nm,20.1s						
ANWB	Willy Bob	133.92	76	PFAKE		04 35 50.0	+15
ANWB				LR	LR		
	comp=Z,2µm,20.0s						
GRGR	Grenville	133.95	84	PFAKE		04 35 50.0	+14
GRGR				LR	LR		
	comp=Z,1µm,20.0s						
MODS	Modra-Piesok	134.18	331	*e*PKIKP	PKiKP	04 35 36.9	+1.8
MODS				*e*		04 35 47.5	
MODS	Modra-Piesok	134.18	331	*e*PKP	PKiKP	04 35 36.9	+1.8
MODS				*e*		04 35 47.5	
PRA	Prague	134.26	334	AMS	AMS	05 36 20.0	
	comp=Z,1µm,18.7s						
PRU	Pruhonice	134.27	334	*e*pPKP	pPKPdf	04 35 41.9	-0.9
PRU				AMS	AMS	05 36 10.0	
	comp=Z,1µm,18.6s						
PRU	Pruhonice	134.27	334	*e*PKIKP	pPKPdf	04 35 41.9	-0.9
PRU				MLR	MLR		
	comp=Z,1µm,18.6s						
CONA	Conrad Observa	135.17	331	*i* PKiKP	PKiKP	04 35 37.3	+0.1
	comp=Z,8.1nm,1.5s						
KHC	Kasperske Hory	135.33	334	*e*PKP	PKiKP	04 35 38.5	+1.1
KHC				*e*pPKP	pPKPdf	04 35 45.8	+0.9
KHC				AMS	AMS	05 34 50.0	
	comp=Z,1µm,18.9s						
KHC	Kasperske Hory	135.33	334	*e*PKIKP	PKiKP	04 35 38.5	+1.1
KHC				*e*		04 35 45.8	
KHC				MLR	MLR		
	comp=Z,1µm,18.9s						
GERES	GERESS Array B	135.49	333	PKP	PKPdf	04 35 35.6	-0.7
	comp=Z,3.7nm,1.0s,baz=46,slow=2.8,SNR=6.0						
GEA0	GERESS Array S	135.50	333	*e*PKPdf	PKPdf	04 35 36.3	+0.1
ARSA	Arzberg	135.81	331	*i* PKPdf	PKPdf	04 35 36.4	-0.4
	comp=Z,6.8nm,1.2s						
BBGH	Gun Hill	136.04	82	PFAKE		04 35 50.0	+10
BBGH				LR	LR		
	comp=Z,3µm,20.0s						
TSUM	Tsumeb	136.33	227	PFAKE		04 35 50.0	+10
TSUM				LR	LR		
	comp=Z,4µm,22.0s						
SOKA	Soboth	136.46	330	PKPdf	PKPdf	04 35 37.5	-0.6
	comp=Z,13nm,1.4s						
OBKA	Obir	136.81	331	*e*PKiKP	PKiKP	04 35 40.5	0.0
	comp=Z,12nm,1.4s						
KBA	Koelnbreinsper	136.97	332	PKiKP	PKiKP	04 35 42.5	+1.6
	comp=Z,6.6nm,1.2s						
VISS	Visnje	137.17	330	*e*PKPdf	PKiKP	04 35 43.3	+2.1
BOJS	Bojanci	137.17	329	*i* PKPdf	PKiKP	04 35 43.6	+2.5
ABTA	Abfaltersbach	137.59	332	PKPdf	PKPdf	04 35 38.6	-1.6
	comp=Z,10nm,1.3s						
WTTA	Wattenberg	137.59	333	pPKPdf	PKiKP	04 35 44.2	+2.0
	comp=Z,9.7nm,1.0s						
BDFB	Brasilia	137.66	128	PKIKP	PKPdf	04 35 39.4	-1.8
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BDFB	Brasilia	137.66	128	PKP	PKPdf	04 35 39.4	-1.8
	comp=Z,5.4nm,1.0s,baz=62,slow=9.5,SNR=4.2						
MOTA	Moosalm	137.76	334	*e*PKiKP	PKiKP	04 35 43.6	+1.1
	comp=Z,6.1nm,1.0s						
SQTA	Sankt Quirin	137.81	334	PKiKP	PKiKP	04 35 42.2	-0.5
	comp=Z,9.0nm,1.0s						
KEST	Kesra	147.15	322	*e*PKPbc	PKPab	04 36 01.6	+0.3
KEST	Kesra	147.15	322	PKPbc	PKPbc	04 35 59.4	-0.3
	comp=Z,13nm,0.9s,baz=314,slow=2.7,SNR=13						
PBRG	Braganca	148.53	349	*e*PKPdf	PKPab	04 36 09.1	+2.6
PGAV	Gavieira, Arco	148.64	351	*e*PKPdf	PKPbc	04 36 03.8	+0.3
POLO	Lamas de Olo	149.14	350	*e*PKPdf	PKiKP	04 36 07.3	+1.3
MVO	Moncorvo	149.21	349	*e*PKPdf	PKPab	04 36 07.7	-1.6
ES19	SONSECA Array	149.86	343	*e*PKPbc	PKiKP	04 36 07.3	-0.2
ESDC	Sonseca Array	149.90	343	PKPbc	PKPbc	04 36 04.3	-2.4
	comp=Z,5.8nm,1.0s,baz=19,slow=1.9,SNR=3.3						
MTE	Manteigas	150.04	349	*e*PKPdf	PKPbc	04 36 06.7	-0.3
MTE	Manteigas	150.04	349	*e*PKPbc	PKiKP	04 36 09.0	+1.2
PAB	San Pablo	150.13	344	PFAKE		04 36 10.0	+1.9
PAB				LR	LR		
	comp=Z,1µm,20.0s						
PMRV	Marv??o	150.95	348	*e*PKPdf	PKiKP	04 36 11.6	+1.9
PMTG	Montargil	151.46	350	*e*PKPdf	PKiKP	04 36 11.4	+0.7
PESTR	Estremoz	151.53	348	*e*PKPdf	PKiKP	04 36 12.4	+1.5
CMLA	Cha da Macela	151.60	18	PFAKE		04 36 20.0	+0.9
CMLA				LR	LR		
	comp=Z,2µm,20.0s						
SHEL	Horse Pasture	151.82	198	*e*PKPbc	PKPbc	04 36 11.6	-0.2
SHEL				LR	LR		
	comp=Z,793nm,20.0s						
SHEL	Horse Pasture	151.82	198	*e*PKIKP	PKPbc	04 36 11.6	-0.2
SHEL				MLR	MLR		
	comp=Z,793nm,20.0s						
LIS	Lisbon	151.96	351	*e*PKPdf	PKPdf	04 36 05.1	+0.1
LIS				AMS	AMS	05 52 34.5	
	comp=E,2µm,17.1s						
LIS	Lisbon	151.96	351	*e*PKIKP	PKPdf	04 36 05.0	+0.1
MESJ	Messejana	152.65	349	*e*PKPdf	PKPdf	04 36 06.5	+0.5
MESJ				AMS	AMS	05 46 44.5	
	comp=Z,2µm,22.6s						
MESJ	Messejana	152.65	349	*e*PKIKP	PKPdf	04 36 06.4	+0.5
MORF	Marmelete	153.25	349	*e*PKPdf	PKPdf	04 36 07.1	+0.2
MORF				AMS	AMS	05 48 30.1	
	comp=Z,2µm,17.7s						
MORF	Marmelete	153.25	349	*e*PKIKP	PKPdf	04 36 07.1	+0.2
ASCN	Ascension	161.20	181	PFAKE		04 36 30.0	+12
ASCN				LR	LR		
	comp=Z,33µm,21.0s						
TOA0	Torodi Ar. Sit	163.90	279	*e*PKPdf	PKPdf	04 36 20.1	-0.1
TOA0				*e*PKPab	PKPab	04 37 08.9	-4.0
TORD	Torodi Ar. Bea	163.90	279	PKP	PKPdf	04 36 18.1	-2.1
	comp=Z,5.4nm,1.0s,baz=138,slow=2.4,SNR=7.4						
TOA1	Torodi Ar. Sit	163.90	279	*e*PKPdf	PKPdf	04 36 18.1	-2.1
DBIC	Dimbokro	169.44	247	*e*PKPdf	PKPdf	04 36 23.8	-0.6
DBIC	Dimbokro	169.44	247	*e*PKIKP	PKPdf	04 36 23.8	-0.6
DBIC	Dimbokro	169.44	247	PKP	PKPdf	04 36 22.9	-1.5
	comp=Z,9.5nm,1.1s,baz=318,slow=0.6,SNR=6.3						
SACV	Santiago Islan	170.39	65	PFAKE		04 36 40.0	+15
SACV				LR	LR		
	comp=Z,1µm,20.0s						

IDC 02 04:22:22.7±1.2**, 10°.85S**×**165°.20E, h0^{km}, mb4.1**/5**, mb1 4.4**/6**, mb1mx3.9**/46**, mbtmp4.2**/6**, ML4.4**/1**, Error ellipse: s-maj=45.8km s-min=24.8km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.22	174	Pn	Pn	04 25 04.0	-0.4
	2.7nm,0.3s,baz=114,slow=20,SNR=8.2						
CTA	Charters Tower	20.42	241	P	Pn	04 27 04.5	+0.9
	15nm,0.9s,baz=75,slow=13,SNR=9.2						
WRA	Warramunga Arr	31.05	249	P	P	04 28 43.1	+0.5
	1.6nm,0.9s,baz=81,slow=9.0,SNR=3.6						
ASAR	Alice Springs	32.40	243	P	P	04 28 54.4	-0.1
	6.8nm,0.9s,baz=68,slow=9.7,SNR=13						
ILAR	Eielson Array	83.50	19	P	P	04 34 52.4	+0.3
	0.7nm,0.6s,baz=243,slow=4.0,SNR=7.6						
NVAR	Mina Array Bea	86.31	50	P	P	04 35 07.2	+0.1
	1.3nm,1.1s,baz=239,slow=6.2,SNR=3.7						
MKAR	Makanchi Array	93.02	317	P	P	04 35 37.4	-0.9
	0.8nm,0.9s,baz=93,slow=5.8,SNR=3.0						

IDC ***02*** *04:23:04.0±0.7, 10°.94S×165°.44E, h0^{km}, mb4.2/17, mb1 4.5/19, mb1mx4.3/48, mbtmp4.3/19, ML5.0/2, Error ellipse: s-maj=26.1km s-min=15.1km az=142.0*

NEIC ***02*** *04:23:05.7±0.2, 10°.93S×165°.38E, h10^{km}, mb4.6/24, Error ellipse: s-maj=6.7km s-min=4.9km az=136.0*

ISCJB ***02*** *04:23:07.1±0.3, 11°.01S±0°.06×165°.32E±0°.05, h30^{km}, mb4.4/36, Error ellipse: s-maj=8.3km s-min=6.5km az=158.2*

ISC 02 04:23:08.6±0.5**, 11°.00S**±0°.07×**165°.40E**±0°.07**, h30^{km}, n73, σ0^{s}.86**/75**, mb4.5**/36**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	Honiara	5.59	286	*e*P	Pn	04 24 30.0	+0.3
HNR				*e*S	Sn	04 25 36.0	+3.0
HNR	Honiara	5.59	286	*e*Pn	Pn	04 24 29.2	-0.6
HNR				*e*Sn	Sn	04 25 31.8	-1.2
HNR				*e*Sn	Sn	04 25 32.6	-0.4
HNR	Honiara	5.59	286	Pn	Pn	04 24 30.0	+0.3
	53nm,0.3s,baz=152,slow=7.9,SNR=5.4						
HNR				Sn	Sn	04 25 32.6	-0.4
	4.8nm,0.3s,baz=254,slow=18,SNR=2.5						
DZM	Mont Dzumac	11.06	175	Pn	Pn	04 25 45.9	+1.0
	11nm,0.3s,baz=32,slow=9.7,SNR=17						
DZM				Sn	Sn	04 27 44.8	-2.8
	0.4nm,0.3s,baz=336,slow=20,SNR=2.1						
ONTNC	Ouen Toro	11.29	175	*e*Pn	Pn	04 25 48.9	+0.9
CTA	Charters Tower	20.52	242	P	Pn	04 27 46.3	-0.7
	10nm,0.6s,baz=64,slow=12,SNR=8.3						
CTAO	Charters Tower	20.52	242	*e*P	P	04 27 45.0	+0.3
	150nm,1.8s						
H11S2	WAKE ISLAND Hy	29.33	3	T	T	04 59 40.7	
	baz=183,slow=76,SNR=3.7						
H11S3	WAKE ISLAND Hy	29.33	2	T	T	04 59 43.0	
	baz=183,slow=76,SNR=3.5						
H11S1	WAKE ISLAND Hy	29.34	3	T	T	04 59 44.5	
	baz=183,slow=76,SNR=4.9						
BKZ	Black Stump Fm	29.74	162	*e*P	P	04 29 14.3	+1.8
	21nm,1.0s						
STKA	Stephens Creek	30.25	223	*e*P	P	04 29 14.2	-2.7
	5.8nm,1.5s						
STKA	Stephens Creek	30.25	223	P	P	04 29 18.2	+1.3
	3.1nm,0.9s,baz=53,slow=7.3,SNR=4.1						
H11N1	WAKE ISLAND Hy	30.55	3	T	T	05 01 09.5	
	baz=182,slow=76,SNR=4.0						
H11N3	WAKE ISLAND Hy	30.56	3	T	T	05 01 12.6	
	baz=182,slow=76,SNR=4.0						
H11N2	WAKE ISLAND Hy	30.57	3	T	T	05 01 13.2	
	baz=182,slow=76,SNR=3.5						
WRAB	Tennant Creek	31.17	250	*e*P	P	04 29 25.3	0.0
	2.9nm,0.4s						
WR1	Warramunga Arr	31.18	250	*e*P	P	04 29 25.1	-0.2
	43nm,1.5s						
WR1				*e*PcP	PcP	04 32 19.9	-0.1
WRA	Warramunga Arr	31.18	250	P	P	04 29 25.1	-0.3
	1.3nm,0.5s,baz=82,slow=8.8,SNR=13						
WRA				PcP	PcP	04 32 19.9	-0.1
	1.2nm,0.9s,baz=54,slow=2.6,SNR=4.7						
AS01	Alice Springs	32.47	243	*e*P	P	04 29 37.0	+0.3
AS31	Alice Springs	32.51	243	*e*P	P	04 29 36.9	-0.2
	3.7nm,1.1s						
AS31				*e*PcP	PcP	04 32 23.6	0.0
ASAR	Alice Springs	32.51	243	P	P	04 29 36.3	-0.7
	4.8nm,0.5s,baz=67,slow=10,SNR=29						
ASAR				PcP	PcP	04 32 23.6	0.0
	0.9nm,0.7s,baz=62,slow=2.1,SNR=4.2						
FITZ	Fitzroy Crossi	39.07	255	*e*P	P	04 30 33.3	+0.1
	25nm,1.6s						
FITZ	Fitzroy Crossi	39.07	255	P	P	04 30 32.9	-0.4
	3.3nm,1.1s,baz=55,slow=9.2,SNR=5.9						
MJAR	Matsushiro Arr	53.77	333	P	P	04 32 27.8	-0.6
	1.5nm,0.5s,baz=172,slow=9.5,SNR=4.5						
MAJO	Matsushiro	53.77	333	*e*P	P	04 32 27.8	-0.6
KLR	Kul'dur	66.88	337	P	P	04 33 58.0	+0.3
	3.3nm,1.1s,baz=150,slow=12,SNR=3.9						
ULN	Ulaanbaatar	78.06	324	*e*P	P	04 35 04.2	-0.5
	5.1nm,0.9s						
SONA0	Songino Array	78.43	324	*e*P	P	04 35 08.3	+1.6
SONM	Songino Array	78.43	324	P	P	04 35 08.3	+1.6
	0.5nm,0.5s,baz=138,slow=5.2,SNR=4.7						
SONA1	Songino Array	78.43	324	*e*P	P	04 35 07.4	+0.7
ANM	Nome	78.51	12	*e*P	P	04 35 06.6	+0.1
	8.7nm,1.4s						
BILL	Bilibino	78.83	0	*e*P	P	04 35 08.5	+0.3
	10nm,1.1s						
QSPA	South Pole Qui	79.01	180	*e*P	P	04 35 10.7	+1.1
MCCM	Marconi Confer	82.75	49	*e*P	P	04 35 30.2	+0.4
COLA	College	83.34	18	*e*P	P	04 35 31.6	-0.7
	2.0nm,0.5s						
ILAR	Eielson Array	83.57	19	P	P	04 35 34.3	+0.8
	2.0nm,0.6s,baz=240,slow=4.7,SNR=17						
ILB	Eielson Array	83.57	19	*e*P	P	04 35 34.1	+0.6
SCRK	Sand Creek	83.99	20	*e*P	P	04 35 35.9	+0.1
	17nm,1.4s						
YBH	Yreka Blue Hor	84.10	46	*e*P	P	04 35 37.1	+0.2
	7.2nm,1.1s						
YBH	Yreka Blue Hor	84.10	46	P	P	04 35 37.1	+0.2
	3.3nm,1.0s,baz=333,slow=2.3,SNR=7.4						
HUMO	Hull Mountain	84.23	45	*e*P	P	04 35 37.5	+0.1
AFDM	Forest Hills D	84.42	49	*e*P	P	04 35 38.9	+0.4
	10nm,1.3s						
CMB	Columbia Colle	84.57	50	*e*P	P	04 35 39.4	+0.1
MDPB	Devils Postpil	85.43	50	*e*P	P	04 35 44.3	+0.4
	5.4nm,1.0s						
OMMB	Old Mammoth Mi	85.48	50	*e*P	P	04 35 44.3	0.0
	5.5nm,1.4s						
DAWY	Dawson	85.63	21	*e*P	P	04 35 44.3	+0.3
	2.1nm,0.9s						
DAC	Darwin (Calif)	86.17	52	*e*P	P	04 35 47.5	0.0
	1.7nm,0.8s						
NV01	Mina Array Sit	86.25	50	*e*P	P	04 35 47.5	-0.4
NVAR	Mina Array Bea	86.25	50	P	P	04 35 48.1	+0.2
	2.8nm,1.0s,baz=235,slow=8.6,SNR=8.0						
NV11	Mina Array Sit	86.36	50	*e*P	P	04 35 48.5	+0.1
	0.4nm,1.1s						
WVOR	Wild Horse Val	87.19	46	*e*P	P	04 35 52.8	+0.5
	5.6nm,1.0s						
BMO	Blue Mountains	88.83	44	*e*P	P	04 36 00.1	+0.1
HLID	Hailey	90.48	46	*e*P	P	04 36 08.0	+0.2
	1.8nm,0.9s						
WUAZ	Wupatki	90.86	54	*e*P	P	04 36 09.8	0.0
	3.2nm,0.8s						
DLMT	Dillon	92.18	44	*e*P	P	04 36 16.1	+0.4
	8.1nm,1.1s						
BOZ	Bozeman (W)	92.90	44	*e*P	P	04 36 18.8	-0.2
	1.4nm,0.7s						
MK32	Makanchi Array	93.25	317	*e*P	P	04 36 20.6	+0.2
MKAR	Makanchi Array	93.25	317	P	P	04 36 20.6	+0.2
	0.6nm,0.6s,baz=97,slow=6.1,SNR=4.2						
ZALV	Zalesovo Beam	93.32	324	P	P	04 36 19.4	-1.1
	0.5nm,0.5s,baz=117,slow=5.0,SNR=2.9						
ZAA1	Zalesovo Array	93.32	324	*e*P	P	04 36 19.4	-1.1
PD31	Pinedale Array	93.77	47	*e*P	P	04 36 22.7	-0.5
PDAR	Pinedale Array	93.77	47	P	P	04 36 22.7	-0.5
	0.5nm,0.7s,baz=174,slow=0.9,SNR=3.1						
ANMO	Albuquerque	94.70	55	*e*P	P	04 36 26.8	-0.8
	2.3nm,1.0s						
ANMO	Albuquerque	94.70	55	P	P	04 36 26.8	-0.8
	0.4nm,0.6s,baz=333,slow=2.3,SNR=2.0						
YKA	Yellowknife Ar	95.08	27	P	P	04 36 27.3	-1.1
	0.4nm,0.7s,baz=255,slow=4.1,SNR=4.3						
YKB5	Yellowknife Ar	95.08	27	*e*P	P	04 36 27.3	-1.1
LTX	Lajitas	96.10	61	*e*P	P	04 36 34.2	+0.2
TXAR	Lajitas Array	96.10	61	P	P	04 36 34.2	+0.2
	0.5nm,0.8s,baz=197,slow=3.8,SNR=3.5						
ARA0	ARCESS Array S	116.20	345	*e*PKPdf	PKiKP	04 41 47.5	-0.9
ARCES	ARCESS Array B	116.20	345	PKP	PKiKP	04 41 47.5	-0.9
	2.5nm,0.9s,baz=48,slow=1.8,SNR=6.6						
SDV	Santo Domingo	124.83	87	*e*PKPdf	PKPdf	04 42 06.8	0.0
BOSA	Boshof	124.92	223	PKP	PKiKP	04 42 06.8	-0.1
	1.4nm,0.6s,baz=0.0,slow=0.0,SNR=6.0						

IDC ***02*** *04:29:05.1±1.2, 15°.88S×167°.16E, h0^{km}, mb4.2/8, mb1 4.4/9, mb1mx4.0/36, mbtmp4.2/9, ML4.1/1, Error ellipse: s-maj=44.0km s-min=22.4km az=134.0*

ISCJB ***02*** *04:29:07.8±0.5, 16°.04S±0°.04×167°.1E±0°.1, h27^{km}, mb4.2/10, Error ellipse: s-maj=14.9km s-min=6.4km az=176.8*

NEIC ***02*** *04:29:09.6±4.8, 15°.91S×167°.16E, h29^{km}±34^{km}, mb4.2/3, Error ellipse: s-maj=16.9km s-min=9.9km az=184.0*

ISC 02 04:29:09.3±0.7**, 15°.99S**±0°.07×**167°.2E**±0°.1**, h27^{km}, n26, σ0^{s}.92**/28**, mb4.2**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	5.53	172	*e*Pn	Pn	04 30 31.4	+1.6
MARNC				*e*Sn	Sn	04 31 31.2	-1.3
DZM	Mont Dzumac	6.09	186	Pn	Pn	04 30 39.0	+1.2
	4.4nm,0.3s,baz=62,slow=3.1,SNR=21						
DZM				Sn	Sn	04 31 44.8	-1.9
	6.2nm,0.3s,baz=121,slow=22,SNR=6.4						
ONTNC	Ouen Toro	6.33	186	*e*Pn	Pn	04 30 41.5	+0.7
OUENC	Ouen Island, N	6.41	183	*e*Pn	Pn	04 30 43.2	+1.2
CTA	Charters Tower	20.31	255	P	P	04 33 43.9	+0.4
	6.0nm,0.7s,baz=79,slow=12,SNR=9.1						
CTAO	Charters Tower	20.31	255	*e*P	P	04 33 43.9	+0.4
	10.0nm,0.8s						
WRA	Warramunga Arr	31.46	258	P	P	04 35 28.2	-0.7
	0.6nm,0.7s,baz=85,slow=7.9,SNR=4.9						
AS01	Alice Springs	32.13	251	*e*P	P	04 35 34.9	+0.2
AS31	Alice Springs	32.17	251	*e*P	P	04 35 35.0	-0.2
	1.0nm,0.8s						
ASAR	Alice Springs	32.17	251	P	P	04 35 34.1	-1.0
	2.1nm,0.7s,baz=73,slow=9.3,SNR=20						
QSPA	South Pole Qui	74.05	180	*e*P	P	04 40 43.5	+0.9
	18nm,1.4s						
SEY	Seymchan	79.51	353	P	P	04 41 13.4	+0.2
	2.3nm,0.7s,baz=146,slow=23,SNR=5.5						
ANM	Nome	83.01	12	*e*P	P	04 41 32.4	+0.7
	9.9nm,1.4s						
SONA0	Songino Array	83.45	324	*e*P	P	04 41 34.7	+0.1
SONM	Songino Array	83.45	324	P	P	04 41 34.7	+0.1
	1.7nm,0.9s,baz=134,slow=6.4,SNR=8.1						
IM3	Indian Mountai	86.79	15	*e*P	P	04 41 50.8	+0.1
ILAR	Eielson Array	87.74	18	P	P	04 41 53.9	-1.5
	2.6nm,0.5s,baz=240,slow=5.0,SNR=8.1						
ILB	Eielson Array	87.74	18	*e*P	P	04 41 53.9	-1.5
MK32	Makanchi Array	98.05	316	*e*P	P	04 42 43.5	+0.1
MKAR	Makanchi Array	98.05	316	P	P	04 42 43.5	+0.1
	0.3nm,0.5s,baz=86,slow=4.3,SNR=3.3						
YKA	Yellowknife Ar	98.69	27	P	P	04 42 45.1	-0.7
	0.6nm,0.7s,baz=257,slow=4.5,SNR=10						
YKB5	Yellowknife Ar	98.69	27	*e*P	P	04 42 45.1	-0.7
ARA0	ARCESS Array S	121.44	345	*e*PKPdf	PKPdf	04 47 59.0	-0.7
ARCES	ARCESS Array B	121.44	345	PKP	PKPdf	04 47 59.0	-0.7
	3.1nm,1.0s,baz=79,slow=2.2,SNR=15						
FIA0	FINESS Array S	126.85	338	*e*PKPdf	PKiKP	04 48 11.1	+0.4
FINES	FINESS Array B	126.85	338	PKP	PKiKP	04 48 11.1	+0.4
	4.6nm,1.2s,baz=318,slow=2.6,SNR=3.6						

IDC 02 04:34:07.6±29.0**, 1°.37S**×**15°.07W, h0^{km}, mb3.8**/2**, mb1 3.8**/3**, mb1mx3.5**/37**, mbtmp3.9**/3**, ML3.8**/1**, Error ellipse: s-maj=826.7km s-min=72.4km az=165.0, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.44	175	T	T	04 42 24.4	
	baz=350,slow=73,SNR=32						
H10N3	ASCENSION HYDR	6.45	175	T	T	04 42 23.9	
	baz=350,slow=73,SNR=38						
H10N1	ASCENSION HYDR	6.46	175	T	T	04 42 26.3	
	baz=350,slow=73,SNR=59						
H10S1	ASCENSION HYDR	7.53	177	T	T	04 43 43.1	

	baz=352,slow=74,SNR=14						
H10S3	**ASCENSION HYDR**	7.54	177	T	T	04 43 40.2	
	baz=352,slow=74,SNR=27						
H10S2	**ASCENSION HYDR**	7.55	177	T	T	04 43 40.2	
	baz=352,slow=74,SNR=14						
DBIC	**Dimbokro**	12.95	52	Pn	Pn	04 37 12.3	-0.7
	0.6nm,0.3s,baz=230,slow=15,SNR=11						
DBIC				Sn	Sn	04 39 32.9	-5.1
	0.1nm,0.3s,baz=323,slow=20,SNR=2.3						
TORD	**Torodi Ar. Bea**	22.01	49	P	P	04 39 04.1	+0.4
	1.5nm,0.6s,baz=226,slow=11,SNR=11						
FINES	**FINESS Array B**	70.07	20	P	P	04 45 21.2	-0.1
	0.5nm,0.5s,baz=240,slow=4.7,SNR=3.5						

IDC 02 04:37:12.4±1.8**, 10°.90S×165°.27E, h0^{km}, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.7**/29**, mbtmp3.8**/4**, ML4.0**/1**, Error ellipse: s-maj=52.0km s-min=32.7km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	11.16	174	Pn	Pn	04 39 53.7	+0.3
	1.0nm,0.3s,baz=324,slow=20,SNR=17						
DZM				Sn	Sn	04 41 52.5	-6.6
	0.1nm,0.3s,baz=30,slow=20,SNR=1.7						
WRA	**Warramunga Arr**	31.09	249	P	P	04 43 32.6	-0.1
	0.4nm,0.8s,baz=82,slow=9.7,SNR=5.3						
ASAR	**Alice Springs**	32.44	243	P	P	04 43 44.6	+0.1
	1.6nm,0.6s,baz=65,slow=10,SNR=29						
ILAR	**Eielson Array**	83.53	19	P	P	04 49 41.8	-0.1
	0.2nm,0.6s,baz=230,slow=4.9,SNR=4.5						

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*ISK **02** 04:46:23.0, 37°.81N×36°.31E, h10^{km}, ML2.0/5*

*DDA **02** 04:46:24.2, 37°.70N×36°.28E, h6^{km}±3^{km}, ML2.8*

ISC 02 04:46:24.4±1.1**, 37°.75N**±0°.03×**36°.26E**±0°.03**, h11**^{km}±9^{km}**, n14, σ0^{s}.98**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	0.18	159	*i* P	**Pg**	**04 46 27.9**	**-0.6**
ANDN				IAML_P			
	comp=Z,10μm,0.1s						
SAIM	**ADANA**	0.27	327	*i* P	**Pg**	**04 46 30.1**	**+0.2**
SAIM				*i* S	**Sb**	**04 46 35.4**	**-0.5**
SAIM				IAML_P			
	comp=Z,6μm,0.1s						
KOZT	**Kozan**	0.44	232	PG	**Pg**	**04 46 33.6**	**+0.5**
KOZT				SG	**Sb**	**04 46 41.0**	**+0.2**
KMRS	**Kahramanmaras**	0.56	116	PG	**Pg**	**04 46 33.6**	**-1.8**
YAHY	**KAYSERI_Yahyal**	0.79	296	*i* P	**Pn**	**04 46 41.8**	**+0.2**
YAHY				*i* S	**Sn**	**04 46 52.9**	**-0.6**
GAZ	**Gaziantep**	0.95	127	PG	**Pg**	**04 46 41.4**	**-1.3**
GAZ				SG	**Sb**	**04 46 55.9**	**+0.3**
GZT	**Gaziantep**	1.11	111	*i* P	**Pb**	**04 46 45.5**	**-0.2**
GZT				*i* S	**Sg**	**04 47 00.6**	**+0.5**
GZT				IAML_P			
	comp=Z,1μm,0.1s						
BNN	**Bunyan**	1.15	343	PN	**Pb**	**04 46 45.1**	**-1.2**
BNN				SN	**Sb**	**04 47 00.4**	**-0.9**
KUZU	**Kuzuini**	1.17	146	*i* P	**Pg**	**04 46 47.8**	**+0.8**
KUZU				*i* S	**Sn**	**04 47 03.8**	**+1.0**
CUGUR	**Gurin_SVAS**	1.25	39	*i* P	**Pg**	**04 46 50.3**	**+1.7**
DARE	**Darende-Malaty**	1.26	49	PN	**Pn**	**04 46 46.7**	**-1.4**
TAHT	**Tahtakopru-Hat**	1.38	183	PN	**Pn**	**04 46 49.4**	**-0.1**
AKCD	**Akcadag**	1.42	67	*i* P	**Pb**	**04 46 51.2**	**+0.2**
AKCD				*i* S	**Sg**	**04 47 11.6**	**+1.6**
AKCD				IAML_P			
	comp=Z,401nm,0.1s						
ATAB	**Bozova**	1.64	99	*i* P	**Pb**	**04 46 55.1**	**+0.4**
ATAB				*i* S	**Sb**	**04 47 15.6**	**+0.3**
ATAB				IAML_P			
	comp=Z,524nm,0.2s						

IDC 02 04:49:41.1±1.7**, 10°.48S×165°.64E, h0^{km}, mb3.9**/3**, mb1 4.1**/4**, mb1mx3.7**/36**, mbtmp3.9**/4**, ML3.8**/1**, Error ellipse: s-maj=54.1km s-min=30.1km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	11.55	176	Pn	Pn	04 52 27.4	-0.1
	0.7nm,0.3s,baz=103,slow=14,SNR=16						
WRA	**Warramunga Arr**	31.59	249	P	P	04 56 05.8	0.0
	0.9nm,0.8s,baz=78,slow=9.0,SNR=7.8						
ASAR	**Alice Springs**	32.96	242	P	P	04 56 17.7	-0.2
	2.7nm,1.0s,baz=67,slow=10.0,SNR=16						
ILAR	**Eielson Array**	83.01	19	P	P	05 02 08.1	+0.1
	0.5nm,1.0s,baz=222,slow=5.3,SNR=3.5						

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*IDC **02** 04:53:47.4±0.7, 36°.97N×141°.29E, h0^{km}, mb3.8/15, mb1 4.0/17, mb1mx4.0/37, mbtmp3.8/17, ML3.3/2, MS4.3/1, Ms1 4.3/1, ms1mx3.4/43, Error ellipse: s-maj=18.9km s-min=17.1km az=126.0*

*ISCJB **02** 04:53:48.4±1.0, 36°.95N±0°.03×141°.45E±0°.05, h21^{km}±6^{km}, mb3.9/18, MS4.3/1, Error ellipse: s-maj=7.7km s-min=5.2km az=27.3*

*JMA **02** 04:53:48.8±0.1, 36°.94N×141°.41E, h33^{km}±1^{km}, M4.3*

JMA Felt II J1.

*NEIC **02** 04:53:52.3±2.8, 37°.08N×141°.29E, h30^{km}±20^{km}, mb4.2/4, Error ellipse: s-maj=10.5km s-min=8.5km az=137.0*

NEIC Recorded [2 JMA] in Fukushima.

ISC 02 04:53:48.9±1.7**, 37°.00N**±0°.04×**141°.36E**±0°.06**, h11**^{km}±9^{km}**, n62, σ0^{s}.93**/70**, mb4.0**/18**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	0.46	283	P	**Pb**	**04 53 59.0**	**-0.2**
ONAJ				*e*S	**Sb**	**04 54 06.5**	**+0.4**
JFK	**Kawauchi**	0.53	313	P	**Pb**	**04 54 00.6**	**+0.2**
JFK				S	**Sb**	**04 54 08.6**	**+0.5**
JFFD	**Fukushimafurud**	0.65	278	P	**Pg**	**04 54 01.9**	**+0.4**
JFFD				S	**Sb**	**04 54 10.9**	**-0.4**
JHO	**Hitachi**	0.74	239	P	**Pb**	**04 54 02.7**	**-1.2**
JHO				*e*S	**Sg**	**04 54 13.0**	**-0.1**
JFT	**Otama**	0.97	303	P	**Pg**	**04 54 08.0**	**+0.4**
JFT				*e*S	**Sn**	**04 54 21.8**	**-0.5**
JMM	**Marumori**	0.98	333	P	**Pb**	**04 54 07.5**	**-0.4**
JMM				*e*S	**Sn**	**04 54 22.1**	**-0.4**
JFY	**Yanaizu**	1.38	288	P	**Pn**	**04 54 14.3**	**+0.1**
JFY				S	**Sg**	**04 54 32.9**	**-0.6**
JIO	**Ouri**	1.45	360	P	**Pn**	**04 54 14.4**	**-0.8**
JIO				*e*S	**Sn**	**04 54 33.5**	**-0.7**
JOU	**Okura**	1.47	338	P	**Pb**	**04 54 16.1**	**-0.3**
JOU				*e*S	**Sg**	**04 54 36.2**	**-0.1**
JAG	**Ashikaga**	1.64	250	P	**Pn**	**04 54 16.4**	**-1.3**
JAG				*e*S	**Sn**	**04 54 37.1**	**-1.7**
MJAR	**Matsushiro Arr**	2.57	261	Pn	**Pn**	**04 54 31.2**	**+0.6**
	1.4nm,0.3s,baz=89,slow=14,SNR=40						
MJAR				Sn	**Sb**	**04 55 07.9**	**+1.1**
	4.4nm,0.3s,baz=86,slow=17,SNR=6.2						
MAJO	**Matsushiro**	2.57	261	*e*Pn	**Pn**	**04 54 31.4**	**+0.8**
MAJO				*e*Sn	**Sb**	**04 55 07.9**	**+1.1**
MAT	**Matsushiro**	2.57	261	P	**Pn**	**04 54 31.4**	**+0.8**
MAT				*e*S	**Sb**	**04 55 05.2**	**-1.6**
MJB9	**Matsu-Tunnel**	2.58	261	*e*Pn	**Pn**	**04 54 31.8**	**+1.1**
INU	**Inuyama**	3.88	246	*e*Pn	**Pn**	**04 54 52.2**	**+3.6**
ASAJ	**Asahikawa**	7.17	7	Pn	**Pn**	**04 55 32.6**	**-1.1**
	0.9nm,0.3s,baz=198,slow=20,SNR=3.2						
ASAJ				Sn	**Sn**	**04 56 55.1**	**-0.1**
	0.3nm,0.3s,baz=131,slow=17,SNR=2.1						
USRK	**Ussuriysk Ar.**	10.12	318	Pn	Pn	04 56 19.6	+5.5
	0.2nm,0.3s,baz=133,slow=13,SNR=8.9						
SONA0	**Songino Array**	27.77	304	*e*P	**P**	**04 59 36.1**	**-1.7**
SONM	**Songino Array**	27.77	304	P	**P**	**04 59 36.1**	**-1.7**
	0.8nm,0.7s,baz=101,slow=8.5,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	28.17	121	T	T	05 29 04.8	
	baz=313,slow=75,SNR=248						
H11N1	**WAKE ISLAND Hy**	28.17	121	T	T	05 29 04.8	
	baz=313,slow=75,SNR=203						
H11N3	**WAKE ISLAND Hy**	28.18	121	T	T	05 29 06.2	
	baz=313,slow=75,SNR=206						
H11S1	**WAKE ISLAND Hy**	28.88	123	T	T	05 29 54.5	
	baz=315,slow=76,SNR=76						
H11S3	**WAKE ISLAND Hy**	28.88	123	T	T	05 29 54.6	
	baz=315,slow=76,SNR=86						
H11S2	**WAKE ISLAND Hy**	28.89	123	T	T	05 29 55.7	
	baz=315,slow=76,SNR=54						
TIXI	**Tiksi**	35.32	353	LR	LR	05 18 48.5	
	comp=Z,438nm,18.0s,baz=175,slow=42						
ZAA0	**Zalesovo Array**	41.91	312	*e*P	**P**	**05 01 39.2**	**0.0**
	3.8nm,0.9s						
ZAA1	**Zalesovo Array**	41.91	312	*e*P	**P**	**05 01 39.5**	**+0.2**
ZALV	**Zalesovo Beam**	41.91	312	*e*P	**P**	**05 01 38.7**	**-0.5**
ZALV	**Zalesovo Beam**	41.91	312	P	**P**	**05 01 39.5**	**+0.2**
	3.0nm,0.8s,baz=89,slow=6.6,SNR=12						
MK01	**Makanchi Array**	44.10	302	*e*P	**P**	**05 01 56.8**	**-0.3**
MK31	**Makanchi Array**	44.10	302	*e*P	**P**	**05 01 57.2**	**+0.1**
MK32	**Makanchi Array**	44.10	302	*e*P	**P**	**05 01 57.3**	**+0.1**
MK32				*e*PP	**PcP**	**05 03 42.8**	**+0.6**
MKAR	**Makanchi Array**	44.10	302	P	**P**	**05 01 57.3**	**+0.1**
	1.8nm,0.7s,baz=89,slow=10,SNR=22						
MKAR				PcP	**PcP**	**05 03 42.8**	**+0.6**
	0.8nm,1.0s,baz=108,slow=4.7,SNR=2.7						
MAKZ	**Makanchi**	44.31	302	*e*P	**P**	**05 01 59.2**	**+0.4**
	2.2nm,0.8s						
KURK	**Kurchatov**	45.92	308	*e*P	**P**	**05 02 11.5**	**0.0**
ILAR	**Eielson Array**	49.55	32	P	**P**	**05 02 41.0**	**+1.6**
	1.0nm,0.7s,baz=271,slow=6.3,SNR=10						
ILB	**Eielson Array**	49.55	32	*e*P	**P**	**05 02 40.5**	**+1.0**
INK	**Inuvik**	54.44	27	*e*P	**P**	**05 03 16.0**	**+0.2**
	14nm,1.8s						
INK	**Inuvik**	54.44	27	P	**P**	**05 03 16.0**	**+0.2**
	0.9nm,0.8s,baz=309,slow=1.7,SNR=2.8						
ARU	**Arti**	56.36	319	*e*P	**P**	**05 03 29.8**	**-0.1**
WRA	**Warramunga Arr**	57.02	188	P	**P**	**05 03 34.1**	**-0.7**
	0.8nm,0.3s,baz=5.9,slow=7.4,SNR=15						
ABKAR	**Akbulak array**	57.93	310	*e*P	**P**	**05 03 40.5**	**-0.6**
AS31	**Alice Springs**	60.75	188	*e*P	**P**	**05 04 00.4**	**-0.3**
	4.3nm,1.8s						
ASAR	**Alice Springs**	60.75	188	P	**P**	**05 04 00.4**	**-0.3**
	0.8nm,0.8s,baz=12,slow=7.1,SNR=8.6						
YKA	**Yellowknife Ar**	63.86	30	P	**P**	**05 04 19.8**	**-1.3**
	0.4nm,0.7s,baz=303,slow=7.1,SNR=4.0						
YKB5	**Yellowknife Ar**	63.86	30	*e*P	**P**	**05 04 19.8**	**-1.3**
FIA0	**FINESS Array S**	68.83	332	*e*P	**P**	**05 04 53.1**	**+0.2**
FINES	**FINESS Array B**	68.83	332	P	**P**	**05 04 53.1**	**+0.2**
	1.5nm,0.8s,baz=35,slow=7.0,SNR=5.4						
NB2	**NORSAR Subarra**	74.20	337	P	**P**	**05 05 25.5**	**0.0**
	comp=Z,1.0nm,0.8s,baz=41,slow=5.9						
NB200	**NORSAR Array S**	74.20	337	*e*P	**P**	**05 05 25.9**	**+0.4**
NOA	**NORSAR Array B**	74.20	337	P	**P**	**05 05 25.9**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=39,slow=5.7,SNR=4.2						
AKASG	**Malin Array Be**	74.30	322	P	**P**	**05 05 25.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=47,slow=6.8,SNR=6.0						
AKBB	**Malin Array Si**	74.30	322	*e*P	**P**	**05 05 25.9**	**-0.2**
NV01	**Mina Array Sit**	75.04	53	*e*P	**P**	**05 05 32.3**	**+1.3**
NVAR	**Mina Array Bea**	75.04	53	P	**P**	**05 05 32.3**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=287,slow=4.4,SNR=5.5						
PD31	**Pinedale Array**	77.72	45	*e*P	**P**	**05 05 47.8**	**+1.6**
PDAR	**Pinedale Array**	77.72	45	P	**P**	**05 05 47.8**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=207,slow=1.7,SNR=3.4						
GERES	**GERESS Array B**	82.72	328	P	**P**	**05 06 13.0**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=39,slow=8.0,SNR=1.7						
LTX	**Lajitas**	90.17	52	*e*P	**P**	**05 06 50.5**	**+0.7**
TXAR	**Lajitas Array**	90.17	52	P	**P**	**05 06 50.5**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=299,slow=3.7,SNR=3.2						
LPAZ	**La Paz**	146.75	60	PKPbc	**PKPbc**	**05 13 32.0**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=164,slow=14,SNR=3.4						

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*IDC **02** 05:00:49.5±3.8, 29°.02N×131°.20E, h0^{km}, mb3.5/2, mb1 3.5/5, mb1mx3.3/32, mbtmp3.5/5, ML2.9/3, Error ellipse: s-maj=71.8km s-min=29.2km az=126.0*

*ISCJB **02** 05:00:51.8±0.9, 28°.98N±0°.04×131°.33E±0°.07, h71^{km}, mb3.3/2, Error ellipse: s-maj=9.6km s-min=3.6km az=26.9*

*JMA **02** 05:00:52.1±0.1, 28°.99N×131°.32E, h79^{km}±5^{km}, M3.5*

ISC 02 05:00:53.3±1.2**, 28°.95N**±0°.04×**131°.39E**±0°.08**, h71**^{km}**, n21, σ2^{s}.01**/34**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	1.39	244	P	**Pn**	**05 01 16.2**	**-0.7**
JZK				*e*S	**Sn**	**05 01 33.9**	**-0.7**
JYAK	**Yakushimahirau**	1.50	330	P	**Pn**	**05 01 17.0**	**-1.3**
JYAK				S	**Sn**	**05 01 34.9**	**-2.2**
JMTN	**Minamitane**	1.51	344	P	**Pn**	**05 01 16.9**	**-1.5**
JMTN				S	**Sn**	**05 01 35.2**	**-2.2**
JNN	**Nakanoshima**	1.59	304	P	**Pn**	**05 01 18.4**	**-1.1**
JNN				*e*S	**Sn**	**05 01 37.8**	**-1.6**
JAM	**Amami Oshima**	1.65	252	P	**Pn**	**05 01 18.9**	**-1.4**
JAM				S	**Sn**	**05 01 39.1**	**-1.7**
JTN	**Tanegashima 3**	1.74	348	P	**Pn**	**05 01 20.2**	**-1.3**
JTN				*e*S	**Sn**	**05 01 40.8**	**-2.1**
JTAJ	**Takarajima**	1.92	277	P	**Pn**	**05 01 22.7**	**-1.2**
JTAJ				*e*S	**Sn**	**05 01 44.5**	**-2.7**
JAMN	**Amaminishikomi**	2.07	251	P	**Pn**	**05 01 24.9**	**-1.0**
JAMN				S	**Sn**	**05 01 49.6**	**-1.1**
JTSR	**Tashiro 2**	2.25	350	P	**Pn**	**05 01 27.6**	**-0.8**
JTK	**Tokunoshima**	2.44	242	P	**Pn**	**05 01 30.3**	**-0.6**
JTK				*e*S	**Sn**	**05 01 58.5**	**-1.2**
JNAR	**Kushima--Naru**	2.58	358	S	**Sn**	**05 02 01.4**	**-1.6**
JOKE	**Okinoerabujima**	2.94	238	P	**Pn**	**05 01 36.9**	**-0.9**
JOKE				S	**Sn**	**05 02 10.3**	**-1.7**
JSJ	**Shimokoshiki**	3.08	332	P	**Pn**	**05 01 38.1**	**-1.6**
JSJ				S	**Sn**	**05 02 12.3**	**-3.1**
JMZ	**Minamidaito 2**	3.12	183	*e*S	**Sn**	**05 02 12.1**	**-4.1**
JYRO	**Yoronjima**	3.22	234	P	**Pn**	**05 01 40.4**	**-1.2**
JYRO				S	**Sn**	**05 02 16.0**	**-2.9**
JOW	**Kunigami**	3.47	233	P	**Pn**	**05 01 43.5**	**-1.4**
JOW	**Kunigami**	3.47	233	Pn	**Pn**	**05 01 43.7**	**-1.2**
	1.8nm,0.3s,baz=101,slow=15,SNR=16						
JNU	**Nakatsue**	4.19	354	Pn	**Pn**	**05 01 54.5**	**-0.2**
	0.8nm,0.3s,baz=158,slow=16,SNR=4.2						
JNU				Sn	**Sn**	**05 02 38.6**	**-3.8**
	2.5nm,0.3s,baz=121,slow=23,SNR=12						
MJAR	**Matsushiro Arr**	9.50	35	Pn	**Pn**	**05 03 07.8**	**+0.4**
	0.2nm,0.3s,baz=226,slow=16,SNR=4.2						
SONM	**Songino Array**	27.00	321	P	**P**	**05 06 31.3**	**+2.8**
	0.3nm,0.4s,baz=134,slow=8.7,SNR=3.2						
MKAR	**Makanchi Array**	41.91	309	P	**P**	**05 08 40.4**	**+3.5**
	0.5nm,0.6s,baz=92,slow=10,SNR=6.0						

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*ISCJB **02** 05:10:02.8±0.2, 10°.97N±0°.02×62°.22W±0°.03, h111^{km}±3^{km}, mb4.4/95, Error ellipse: s-maj=5.5km s-min=3.0km az=4.1*

*NEIC **02** 05:10:03.6±0.3, 10°.86N×62°.19W, h112^{km}±3^{km}, mb4.4/83, MD3.9(TRN), MW3.9(CAR), Error ellipse: s-maj=5.5km s-min=3.7km az=74.0*

*CAR **02** 05:10:03.3±0.0, 10°.84N×62°.18W, h92^{km}*

*IDC **02** 05:10:04.1±1.5, 11°.09N×62°.47W, h105^{km}±13^{km}, mb3.7/12, mb1 3.9/15, mb1mx3.6/39, mbtmp4.0/15, Error ellipse: s-maj=15.3km s-min=11.3km az=123.0*

*TRN **02** 05:10:04.9, 10°.96N×62°.20W, h91^{km}, MD4.0*

ISC 02 05:10:02.5±0.6**, 10°.89N**±0°.03×**62°.35W**±0°.04**, h95**^{km}±6^{km}**, n245, σ1^{s}.73**/316**, mb4.4**/95**, 3C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALNG	**Atlantic LNG**	0.96	137	*e*P	**Pn**	**05 10 23.9**	**+1.8**
ALNG				*e*S	**Sn**	**05 10 38.2**	**+1.3**
ALNG	**Atlantic LNG**	0.96	137	*e*P	**Pn**	**05 10 23.9**	**+1.8**
ALNG				*e*S	**Sn**	**05 10 38.2**	**+1.3**
TRN	**Trinidad (W)**	0.96	104	*i* P	**Pn**	**05 10 22.8**	**+0.7**
TRN				*e*S	**Sn**	**05 10 35.3**	**-1.6**
TRN	**Trinidad (W)**	0.96	104	⇑*i*P	**Pn**	**05 10 22.8**	**+0.7**
TRN				*e*S	**Sn**	**05 10 35.3**	**-1.6**
BUAY	**Buenos Aires**	1.02	140	*e*P	**Pn**	**05 10 24.9**	**+2.2**
BUAY				*e*S	**Sn**	**05 10 38.8**	**+0.9**
BUAY	**Buenos Aires**	1.02	140	*e*P	**Pn**	**05 10 24.9**	**+2.2**
BUAY				*e*S	**Sn**	**05 10 38.8**	**+0.9**
TPP	**Pointe-a-Pierr**	1.05	123	*i* P	**Pn**	**05 10 24.3**	**+1.1**
TPP				*e*S	**Sn**	**05 10 39.2**	**+0.5**
TPP	**Pointe-a-Pierr**	1.05	123	⇑*i*P	**Pn**	**05 10 24.3**	**+1.1**
TPP				*e*S	**Sn**	**05 10 39.2**	**+0.5**
TBH	**Brigand Hill**	1.32	108	*i* P	**Pn**	**05 10 27.2**	**+0.8**
TBH				*e*S	**Sn**	**05 10 43.9**	**-0.5**
TBH	**Brigand Hill**	1.32	108	⇑*i*P	**Pn**	**05 10 27.2**	**+0.8**
TBH				*e*S	**Sn**	**05 10 45.7**	**+1.3**
GRGR	**Grenville**	1.41	29	*e*Pn	**Pn**	**05 10 27.6**	**+0.2**
GRGR				*e*Sn	**Sn**	**05 10 46.0**	**-0.2**
GRGR	**Grenville**	1.41	29	*e*P	**Pn**	**05 10 27.6**	**+0.2**
GRGR				*e*S	**Sn**	**05 10 45.9**	**-0.4**
GRHS	**Sauteurs**	1.50	28	*e*P	**Pn**	**05 10 29.6**	**+1.1**
GRHS				*e*S	**Sn**	**05 10 46.5**	**-1.6**
GRHS	**Sauteurs**	1.50	28	*e*P	**Pn**	**05 10 29.6**	**+1.1**
GRHS				*e*S	**Sn**	**05 10 46.5**	**-1.6**
TPR	**Prospect**	1.57	79	*e*P	**Pn**	**05 10 30.0**	**+0.6**
TPR				*e*S	**Sn**	**05 10 48.5**	**-1.4**
TPR	**Prospect**	1.57	79	*e*P	**Pn**	**05 10 30.0**	**+0.6**
TPR				*e*S	**Sn**	**05 10 48.5**	**-1.4**
GRSS	**Sisters**	1.58	27	*e*P	**Pn**	**05 10 31.3**	**+1.9**
GRSS				*e*S	**Sn**	**05 10 48.7**	**-1.1**
GRSS	**Sisters**	1.58	27	*e*P	**Pn**	**05 10 31.1**	**+1.6**
GRSS				*e*S	**Sn**	**05 10 48.7**	**-1.1**
BOT	**Bacolet**	1.63	80	*e*P	**Pn**	**05 10 30.6**	**+0.5**
BOT				*e*S	**Sn**	**05 10 49.5**	**-1.5**
BOT	**Bacolet**	1.63	80	*e*P	**Pn**	**05 10 30.6**	**+0.5**
BOT				*e*S	**Sn**	**05 10 49.5**	**-1.5**
TOSP	**Speyside**	1.83	77	*e*P	**Pn**	**05 10 32.5**	**-0.2**
TOSP				*e*S	**Sn**	**05 10 53.5**	**-2.1**
TOSP	**Speyside**	1.83	77	*e*P	**Pn**	**05 10 32.5**	**-0.2**
TOSP				*e*S	**Sn**	**05 10 53.5**	**-2.1**
FCV	**Fort Charlotte**	2.50	26	*e*P	**Pn**	**05 10 42.7**	**+1.3**
FCV				*e*S	**Sn**	**05 11 09.7**	**-1.7**
FCV				*e*S	**Sn**	**05 11 10.6**	**-0.8**
FCV	**Fort Charlotte**	2.50	26	*e*P	**Pn**	**05 10 42.7**	**+1.3**
FCV				*e*S	**Sn**	**05 11 09.7**	**-1.7**
SVB	**Belmont**	2.60	24	*e*Pn	**Pn**	**05 10 43.0**	**+0.2**
SVB				*e*Sn	**Sn**	**05 11 15.0**	**+1.3**
SVB	**Belmont**	2.60	24	*e*P	**Pn**	**05 10 43.2**	**+0.4**
SVB				*e*S	**Sn**	**05 11 13.2**	**-0.5**
SVCV	**St. Vincent, C**	2.65	26	*e*P	**Pn**	**05 10 43.6**	**+0.2**
SVCV				*e*S	**Sn**	**05 11 13.6**	**-1.2**
SVV	**Soufriere Volc**	2.66	25	*e*P	**Pn**	**05 10 45.1**	**+1.5**
SVV				*e*S	**Sn**	**05 11 14.3**	**-0.8**
SVV	**Soufriere Volc**	2.66	25	*e*P	**Pn**	**05 10 46.0**	**+2.4**
SVV				*e*S	**Sn**	**05 11 14.3**	**-0.8**
SSV	**Crater Summit**	2.67	25	*e*P	**Pn**	**05 10 45.1**	**+1.3**
SSV				*e*S	**Sn**	**05 11 15.6**	**0.0**
SSV	**Crater Summit**	2.67	25	*e*P	**Pn**	**05 10 46.4**	**+2.5**
SSV				*e*S	**Sn**	**05 11 15.6**	**0.0**
SFAN	**Fancy Village**	2.73	25	*e*P	**Pn**	**05 10 46.1**	**+1.5**
SFAN				*e*S	**Sn**	**05 11 15.3**	**-1.6**
SFAN	**Fancy Village**	2.73	25	*e*P	**Pn**	**05 10 46.1**	**+1.5**
SFAN				*e*S	**Sn**	**05 11 15.3**	**-1.6**
SLDE	**Delcer**	3.16	23	*e*P	**Pn**	**05 10 51.1**	**+0.8**
SLDE				*e*S	**Sn**	**05 11 25.5**	**-1.7**
SLDE	**Delcer**	3.16	23	*e*P	**Pn**	**05 10 51.1**	**+0.8**
SLDE				*e*S	**Sn**	**05 11 25.4**	**-1.7**
SLB	**Belfond**	3.19	24	*e*P	**Pn**	**05 10 51.3**	**+0.5**
SLB				*e*S	**Sn**	**05 11 25.9**	**-2.0**
SLB	**Belfond**	3.19	24	*e*P	**Pn**	**05 10 51.3**	**+0.5**
SLB				*e*S	**Sn**	**05 11 25.9**	**-2.0**
SLPA	**Patience**	3.26	25	*e*P	**Pn**	**05 10 52.4**	**+0.7**
SLPA				*e*S	**Sn**	**05 11 27.7**	**-1.9**
SLPA	**Patience**	3.26	25	*e*P	**Pn**	**05 10 52.4**	**+0.7**
SLPA				*e*S	**Sn**	**05 11 27.7**	**-1.9**
SLW	**Petit Monier**	3.40	24	*e*P	**Pn**	**05 10 54.3**	**+0.7**
SLW				*e*S	**Sn**	**05 11 30.2**	**-2.9**
SLW	**Petit Monier**	3.40	24	*e*P	**Pn**	**05 10 54.3**	**+0.7**
SLW				*e*S	**Sn**	**05 11 30.2**	**-2.9**
BBGH	**Gun Hill**	3.53	50	*e*Pn	**Pn**	**05 10 56.4**	**+1.1**
BBGH				*e*Sn	**Sn**	**05 11 35.7**	**-0.5**
BBGH	**Gun Hill**	3.53	50	*e*P	**Pn**	**05 10 56.1**	**+0.8**
BBGH				*e*S	**Sn**	**05 11 33.0**	**-3.2**
BBSP	**Saint Philip**	3.59	52	*e*P	**Pn**	**05 10 56.6**	**+0.6**
BBSP				*e*S	**Sn**	**05 11 34.7**	**-2.7**
BBSP	**Saint Philip**	3.59	52	*e*P	**Pn**	**05 10 56.6**	**+0.6**
BBSP				*e*S	**Sn**	**05 11 34.7**	**-2.7**
H05S1	**Guadeloupe/Mar**	3.81	23	P	**Pn**	**05 10 59.5**	**+0.4**
H05S1				S	**Sn**	**05 11 41.9**	**-1.0**
	SNR=79						
BIM	**Bigot**	3.81	19	*e*P	**Pn**	**05 10 59.9**	**+0.7**
TRMF	**Trois Ilets**	3.84	19	*e*P	**Pn**	**05 11 00.4**	**+1.0**
ZAM	**Aeronautique**	3.88	19	*e*P	**Pn**	**05 11 01.1**	**+1.1**
LPMF	**Morne Lapointe**	3.90	20	*e*P	**Pn**	**05 11 01.2**	**+0.9**
FDF	**Fort de France**	4.00	17	*e*Pn	**Pn**	**05 11 02.4**	**+0.8**
FDF				*e*S	**Sn**	**05 11 46.2**	**-1.2**
FDF	**Fort de France**	4.00	17	*e*P	**Pn**	**05 11 02.2**	**+0.6**
FDF				*e*S	**Sn**	**05 11 46.2**	**-1.2**
PML	**Morne Lenard**	4.03	16	*e*P	**Pn**	**05 11 03.1**	**+1.0**
GBMF	**Grand Be**	4.05	16	*e*P	**Pn**	**05 11 03.2**	**+0.8**
PCM	**Pelee Case Pet**	4.06	16	*e*P	**Pn**	**05 11 03.2**	**+0.8**
PCM	**Pelee Case Pet**	4.06	16	*e*P	**Pn**	**05 11 03.3**	**+0.8**
CXM	**Morne La Croix**	4.06	16	*e*P	**Pn**	**05 11 03.5**	**+0.9**
BAMF	**Morne Balai**	4.07	17	*e*P	**Pn**	**05 11 03.6**	**+0.9**
DSHT	**Scott's Head**	4.40	12	*e*P	**Pn**	**05 11 08.4**	**+1.3**
DSHT				*e*S	**Sn**	**05 11 54.5**	**-2.7**
DSHT	**Scott's Head**	4.40	12	*e*P	**Pn**	**05 11 08.4**	**+1.3**
DSTT	**Stowe**	4.45	13	*e*P	**Pn**	**05 11 08.8**	**+1.2**
DSTT				*e*S	**Sn**	**05 11 56.4**	**-1.9**
DSTT	**Stowe**	4.45	13	*e*P	**Pn**	**05 11 08.8**	**+1.2**
DBCT	**Belle View Cho**	4.46	13	*e*P	**Pn**	**05 11 09.2**	**+1.3**
DBCT				*e*S	**Sn**	**05 11 56.9**	**-1.9**
DBCT	**Belle View Cho**	4.46	13	*e*P	**Pn**	**05 11 09.2**	**+1.3**
MDN	**Morne-Daniel**	4.50	12	*e*P	**Pn**	**05 11 10.2**	**+1.8**
MDN				*e*S	**Sn**	**05 11 57.3**	**-2.3**
MDN	**Morne-Daniel**	4.50	12	*e*P	**Pn**	**05 11 10.2**	**+1.8**
DLPL	**La Plaine**	4.54	14	*e*P	**Pn**	**05 11 09.7**	**+0.7**
DLPL				*e*S	**Sn**	**05 11 57.9**	**-2.8**
DLPL	**La Plaine**	4.54	14	*e*P	**Pn**	**05 11 09.7**	**+0.7**
BBL	**Barber's Block**	4.69	10	*e*P	**Pn**	**05 11 12.9**	**+2.0**
BBL				*e*S	**Sn**	**05 12 02.8**	**-1.4**
BBL	**Barber's Block**	4.69	10	*e*P	**Pn**	**05 11 12.9**	**+2.0**
MDPO	**Dominica; Chan**	4.74	11	*e*P	**Pn**	**05 11 13.6**	**+2.0**
MDPO	**Dominica; Chan**	4.74	11	*e*S	**Sn**	**05 12 02.5**	**-2.9**
DWS	**Wesley**	4.76	12	*e*P	**Pn**	**05 11 13.6**	**+1.7**
DWS				*e*S	**Sn**	**05 12 03.1**	**-2.8**
DWS	**Wesley**	4.76	12	*e*P	**Pn**	**05 11 13.6**	**+1.7**
MDPV	**Dominica, Penn**	4.79	11	*e*P	**Pn**	**05 11 14.1**	**+1.7**
MDPV	**Dominica, Penn**	4.79	11	*e*S	**Sn**	**05 12 03.8**	**-3.0**
TBG	**Guadaloupe-3**	4.98	8	*e*P	**Pn**	**05 11 16.6**	**+1.8**
TBG	**Guadaloupe-3**	4.98	8	*e*S	**Sn**	**05 12 09.2**	**-2.1**
MGG	**Marie-Galante**	5.10	11	*e*P	**Pn**	**05 11 18.2**	**+1.7**
MGG				*e*S	**Sn**	**05 12 10.8**	**-3.3**
MGG	**Marie-Galante**	5.10	11	*e*P	**Pn**	**05 11 18.2**	**+1.7**
DEG	**La Desirade**	5.54	13	*e*P	**Pn**	**05 11 22.8**	**+0.3**
DEG	**La Desirade**	5.54	13	*e*S	**Sn**	**05 12 22.0**	**-2.8**
H05N1	**Guadeloupe/Mar**	5.54	13	P	**Pn**	**05 11 23.0**	**+0.5**
	SNR=9.1						
MLYT	**Lee's Yard**	5.80	2	*e*P	**Pn**	**05 11 27.8**	**+1.7**
MLYT	**Lee's Yard**	5.80	2	*e*S	**Sn**	**05 12 28.3**	**-2.9**
BPA	**Boggy Peak**	6.14	4	*e*P	**Pn**	**05 11 32.4**	**+1.7**
BPA				*e*S	**Sn**	**05 12 35.9**	**-3.6**
BPA	**Boggy Peak**	6.14	4	*e*P	**Pn**	**05 11 32.4**	**+1.7**
NEV	**Hard Times**	6.21	358	*e*P	**Pn**	**05 11 34.2**	**+2.5**
NEV	**Hard Times**	6.21	358	*e*P	**Pn**	**05 11 34.2**	**+2.5**
SEUS	**St. Eustatius**	6.59	355	*e*P	**Pn**	**05 11 39.5**	**+2.6**
SEUS	**St. Eustatius**	6.59	355	*e*P	**Pn**	**05 11 39.5**	**+2.6**
ANWB	**Willy Bob**	6.76	5	*e*P	**Pn**	**05 11 40.2**	**+1.1**
ANWB				*e*S	**Sn**	**05 12 50.0**	**-4.6**
ANWB	**Willy Bob**	6.76	5	*e*P	**Pn**	**05 11 40.2**	**+1.1**
SMRT	**St. Maarten**	7.15	354	*e*Pn	**Pn**	**05 11 46.9**	**+2.4**
SMRT				*e*S	**Sn**	**05 12 59.8**	**-4.4**
SMRT	**St. Maarten**	7.15	354	*e*P	**Pn**	**05 11 46.0**	**+1.5**
CDVI	**St. Croix**	7.21	341	*e*Pn	**Pn**	**05 11 46.8**	**+1.6**
MTP	**Monte Pirata**	7.81	337	*e*Pn	**Pn**	**05 11 54.6**	**+1.3**
MTP				*e*Sn	**Sn**	**05 13 15.8**	**-4.3**
STVI	**Saint Thomas**	7.83	342	*e*Pn	**Pn**	**05 11 55.6**	**+1.9**
STVI				*e*Sn	**Sn**	**05 13 18.0**	**-2.8**
CUPR	**Culebra, Puert**	7.90	339	*e*Pn	**Pn**	**05 11 55.9**	**+1.3**
CUPR				*e*Sn	**Sn**	**05 13 20.4**	**-2.0**
HUMP	**Col San Antoni**	7.96	335	*e*Pn	**Pn**	**05 11 56.3**	**+0.8**
HUMP				*e*Sn	**Sn**	**05 13 18.1**	**-5.9**
SJG	**San Juan**	8.07	333	*e*Pn	**Pn**	**05 11 59.5**	**+2.6**
SJG				*e*Sn	**Sn**	**05 13 21.3**	**-5.2**
SJG	**San Juan**	8.07	333	P	**Pn**	**05 11 57.0**	**+0.1**
	0.6nm,0.3s,baz=135,slow=20,SNR=2.1						
SJG				S	**Sn**	**05 13 21.1**	**-5.4**
	1.5nm,0.3s,baz=319,slow=22,SNR=5.7						
CBYP	**Canovanas**	8.08	336	*e*Pn	**Pn**	**05 11 58.4**	**+1.2**
OBIP	**Obispado Ponce**	8.22	330	*e*Pn	**Pn**	**05 12 01.5**	**+2.6**
SDV	**Santo Domingo**	8.40	257	*e*Pn	**Pn**	**05 12 00.8**	**-0.8**
SDV				*e*Sn	**Sn**	**05 13 32.0**	**-3.0**
SDV	**Santo Domingo**	8.40	257	*e*P	**Pn**	**05 12 02.0**	**+0.4**
SDV	**Santo Domingo**	8.40	257	*e*P	**Pn**	**05 12 02.0**	**+0.4**
SDV	**Santo Domingo**	8.40	257	P	**Pn**	**05 12 01.3**	**-0.3**
	1.7nm,0.3s,baz=84,slow=13,SNR=11						
SDV				S	**Sn**	**05 13 31.3**	**-3.6**
	16nm,0.3s,baz=44,slow=18,SNR=24						
EMPR	**Esperanza - Ma**	8.56	332	*e*Pn	**Pn**	**05 12 05.2**	**+1.6**
MPR	**Mayaguez**	8.63	328	*e*Pn	**Pn**	**05 12 08.4**	**+3.8**
AGP	**Aguadilla**	8.79	329	*e*Pn	Pn	05 12 12.1	+5.3
BANI	**BANI**	10.75	315	*e*Pn	**Pn**	**05 12 38.1**	**+4.5**
BANI				*e*Sn	**Sn**	**05 14 33.3**	**+1.2**
PAMC	**Pamplona, Colo**	10.81	252	*e*P	**Pn**	**05 12 33.2**	**-1.5**
PAMC	**Pamplona, Colo**	10.81	252	*e*P	**Pn**	**05 12 33.2**	**-1.5**
MDP	**Montagnes des**	11.20	120	P	Pn	05 12 34.2	-5.4
	3.0nm,0.3s,baz=321,slow=16,SNR=22						
MDP				S	Sn	05 14 30.5	-12

	12nm,0.3s,baz=69,slow=16,SNR=18						
RUSC	**La Rusia**	**11.72**	**246**	*e*P	**Pn**	**05 12 47.9**	**+0.9**
RUSC	**La Rusia**	**11.72**	**246**	*e*P	**Pn**	**05 12 47.9**	**+0.9**
PTGA	**Pitinga**	**11.79**	**168**	*e*Pn	**Pn**	**05 12 45.2**	**-2.3**
PTGA				*e*Sn	**Sn**	**05 14 50.0**	**-7.2**
PTGA	**Pitinga**	**11.79**	**168**	P	**Pn**	**05 12 45.2**	**-2.3**
	3.0nm,0.3s,baz=352,slow=18,SNR=18						
PTGA				S	**Sn**	**05 14 48.6**	**-8.6**
	3.0nm,0.3s,baz=270,slow=21,SNR=9.6						
SDDR	**Presa de Saban**	**11.80**	**314**	*e*Pn	**Pn**	**05 12 49.7**	**+2.1**
ZARC	**Zaragoza, Cauc**	**12.80**	**256**	*e*P	**Pn**	**05 13 02.5**	**+1.5**
ZARC	**Zaragoza, Cauc**	**12.80**	**256**	*e*P	**Pn**	**05 13 02.5**	**+1.5**
ROSC	**El Rosal**	**13.29**	**244**	*e*P	**Pn**	**05 13 10.3**	**+2.5**
ROSC	**El Rosal**	**13.29**	**244**	P	**Pn**	**05 13 09.1**	**+1.3**
	0.5nm,0.3s,baz=84,slow=9.2,SNR=1.6						
ANIL	**Santa Ana**	**14.41**	**245**	*e*P	**Pn**	**05 13 22.4**	**+0.2**
ANIL	**Santa Ana**	**14.41**	**245**	*e*P	**Pn**	**05 13 22.4**	**+0.2**
MARP	**Paez Belalcaza**	**15.69**	**240**	*e*P	**P**	**05 13 42.1**	**+1.5**
MARP	**Paez Belalcaza**	**15.69**	**240**	*e*P	**P**	**05 13 42.1**	**+1.5**
PCON	**Cinco Dias**	**16.33**	**240**	*e*P	**P**	**05 13 49.5**	**+1.5**
PCON	**Cinco Dias**	**16.33**	**240**	*e*P	**P**	**05 13 49.5**	**+1.5**
POPC	**Popayan, Colom**	**16.46**	**241**	*e*P	**Pn**	**05 13 45.4**	**-2.6**
POPC	**Popayan, Colom**	**16.46**	**241**	*e*P	**Pn**	**05 13 45.4**	**-2.6**
061Z	**Ochoppi**	**23.02**	**313**	*e*P	**P**	**05 15 00.8**	**+1.4**
	135nm,1.0s						
059A	**Moore Haven**	**23.86**	**315**	*e*P	**P**	**05 15 08.7**	**+1.6**
	44nm,1.0s						
ATAH	**Atahualpa**	**23.99**	**222**	P	**P**	**05 15 11.9**	**+3.0**
	8.9nm,0.7s,baz=46,slow=1.8,SNR=5.9						
DWPF	**Disney Wildern**	**24.77**	**316**	*e*P	**P**	**05 15 17.6**	**+2.2**
	38nm,1.1s						
TEIG	**Tepich**	**26.61**	**294**	*e*P	**P**	**05 15 33.8**	**+1.7**
	16nm,1.1s						
SIV	**San Ignacio**	**26.74**	**177**	P	**P**	**05 15 35.3**	**+2.0**
	0.8nm,0.5s,baz=16,slow=8.2,SNR=8.6						
NNA	**Nana**	**26.90**	**213**	P	**P**	**05 15 36.3**	**+1.4**
	2.6nm,0.3s,baz=346,slow=10.0,SNR=5.0						
352A	**Blakely**	**29.26**	**318**	*e*P	**P**	**05 15 57.7**	**+2.1**
	16nm,1.1s						
CCIG	**Comitan**	**29.42**	**284**	*e*P	**P**	**05 15 58.2**	**+0.7**
BG3	**Lake Jocassee**	**30.44**	**325**	*e*P	**P**	**05 16 07.9**	**+1.8**
	11nm,1.2s						
250A	**Grady**	**30.46**	**317**	*e*P	**P**	**05 16 08.1**	**+1.9**
	12nm,1.1s						
BRAL	**Brewton**	**30.50**	**315**	*e*P	**P**	**05 16 09.0**	**+2.3**
	31nm,0.8s						
LRAL	**Lakeview Retre**	**31.60**	**318**	*e*P	**P**	**05 16 17.8**	**+1.5**
	6.6nm,0.8s						
Y49A	**Blount Mountai**	**31.74**	**320**	*e*P	**P**	**05 16 18.7**	**+1.1**
	4.2nm,0.9s						
147A	**Livingston**	**32.23**	**316**	*e*P	**P**	**05 16 22.3**	**+0.5**
	11nm,0.6s						
X48A	**Hartselle**	**32.52**	**320**	*e*P	**P**	**05 16 25.4**	**+1.0**
	5.2nm,1.0s						
SSPA	**Standing Stone**	**32.65**	**338**	*e*P	**P**	**05 16 27.8**	**+2.3**
	7.2nm,1.0s						
S51A	**Beattyville**	**32.76**	**328**	*e*P	**P**	**05 16 27.9**	**+1.5**
	6.0nm,0.8s						
M54A	**Oil Creek Stat**	**34.08**	**336**	*e*P	**P**	**05 16 39.4**	**+1.6**
	14nm,1.1s						
OXF	**Oxford**	**34.09**	**318**	*e*P	**P**	**05 16 39.0**	**+1.0**
	12nm,1.0s						
WVT	**Waverly**	**34.10**	**322**	*e*P	**P**	**05 16 38.7**	**+0.6**
	4.7nm,0.9s						
NCB	**Newcomb**	**34.52**	**345**	*e*P	**P**	**05 16 42.8**	**+1.2**
	5.1nm,1.0s						
MOQ	**Mont Orford**	**35.34**	**348**	*e*P	**P**	**05 16 49.5**	**+0.8**
UALR	**University of**	**36.21**	**316**	*e*P	**P**	**05 16 56.0**	**-0.2**
	3.6nm,0.6s						
NATX	**Nacogdoches**	**36.34**	**310**	*e*P	**P**	**05 16 59.0**	**+1.6**
	12nm,0.4s						
P45A	**Graceland, Par**	**36.36**	**326**	*e*P	**P**	**05 16 58.3**	**+0.8**
	8.2nm,0.5s						
W41B	**Gary Mavity, V**	**36.37**	**316**	*e*P	**P**	**05 16 58.1**	**+0.6**
	3.2nm,0.6s						
WHAR	**Wooly Hollow**	**36.46**	**317**	*e*P	**P**	**05 16 59.1**	**+0.8**
	4.8nm,0.8s						
Q44A	**Meyer Farm, Va**	**36.65**	**324**	*e*P	**P**	**05 17 00.6**	**+0.7**
	11nm,0.6s						
M46A	**Old House Fiel**	**37.00**	**329**	*e*P	**P**	**05 17 03.9**	**+1.1**
	16nm,0.4s						
CCM	**Cathedral Cave**	**37.43**	**321**	*e*P	**P**	**05 17 06.2**	**-0.3**
	2.6nm,0.9s						
W39A	**Magazine**	**37.43**	**315**	*e*P	**P**	**05 17 07.5**	**+0.9**
P42A	**Winchester**	**37.87**	**324**	*e*P	**P**	**05 17 10.5**	**+0.3**
	7.6nm,0.8s						
HHAR	**Hobbs**	**38.13**	**317**	*e*P	**P**	**05 17 12.8**	**+0.4**
	3.0nm,1.2s						
435B	**Jarrell**	**38.18**	**307**	*e*P	**P**	**05 17 13.9**	**+1.0**
	16nm,0.6s						
WHTX	**Lake Whitney,**	**38.58**	**308**	*e*P	**P**	**05 17 16.9**	**+0.7**
	14nm,0.6s						
N41A	**Harden Midland**	**38.91**	**325**	*e*P	**P**	**05 17 18.8**	**-0.1**
	6.0nm,0.6s						
K43A	**Burlington**	**38.95**	**329**	*e*P	**P**	**05 17 19.6**	**+0.4**
L42A	**Oliver, Polo**	**39.14**	**327**	*e*P	**P**	**05 17 21.2**	**+0.4**
	7.6nm,0.9s						
TUL1	**Leonard**	**39.20**	**315**	*e*P	**P**	**05 17 21.1**	**-0.3**
	7.1nm,0.8s						
JCT	**Junction City**	**39.83**	**305**	*e*P	**P**	**05 17 27.5**	**+0.7**
	8.3nm,0.6s						
H43A	**Windswept, Lux**	**39.98**	**331**	*e*P	**P**	**05 17 28.5**	**+0.7**
	26nm,0.9s						
L40A	**Anamosa**	**40.02**	**326**	*e*P	**P**	**05 17 28.0**	**-0.1**
	7.8nm,0.5s						
JFWS	**Jewell Farm**	**40.09**	**328**	*e*P	**P**	**05 17 28.8**	**+0.2**
	6.8nm,0.4s						
I42A	**Draeger Farm,**	**40.10**	**330**	*e*P	**P**	**05 17 29.3**	**+0.5**
	14nm,1.0s						
ABTX	**Abilene, Hawle**	**40.52**	**308**	*e*P	**P**	**05 17 32.6**	**+0.2**
	10nm,0.7s						
WMOK	**Wichita Mounta**	**40.77**	**312**	*e*P	**P**	**05 17 33.3**	**-1.2**
	3.0nm,0.7s						
I39A	**Houston**	**41.41**	**328**	*e*P	**P**	**05 17 39.5**	**0.0**
	8.7nm,0.5s						
U32A	**Winter Ranch,**	**41.69**	**314**	*e*P	**P**	**05 17 41.6**	**-0.3**
	14nm,0.8s						
G40A	**Rib Lake**	**41.74**	**330**	*e*P	**P**	**05 17 43.2**	**+1.0**
TX31	**Lajitas Ar. Si**	**42.64**	**302**	*e*P	**P**	**05 17 50.6**	**+0.8**
TXAR	**Lajitas Array**	**42.64**	**302**	P	**P**	**05 17 50.0**	**+0.2**
	1.2nm,0.5s,baz=120,slow=9.4,SNR=45						
TXAR				PcP	**PcP**	**05 19 40.3**	**-0.1**
	0.9nm,0.6s,baz=121,slow=5.6,SNR=11						
MSTX	**Muleshoe**	**43.46**	**308**	*e*P	**P**	**05 17 56.3**	**-0.1**
	9.3nm,0.7s						
MNTX	**Cornudas Mount**	**44.75**	**304**	*e*P	**P**	**05 18 07.1**	**+0.5**
	2.1nm,0.6s						
T25A	**Trinidad**	**45.92**	**312**	*e*P	**P**	**05 18 16.2**	**+0.1**
	4.9nm,1.0s						
BNM	**Barren Site**	**46.52**	**307**	*e*P	**P**	**05 18 22.5**	**+1.7**
ANMO	**Albuquerque**	**46.65**	**308**	*e*P	**P**	**05 18 23.1**	**+1.3**
	2.9nm,0.9s						
SDCO	**Great Sand Dun**	**46.96**	**312**	*e*P	**P**	**05 18 24.2**	**-0.1**
	2.3nm,0.6s						
LAZ	**Ladron**	**47.00**	**307**	*e*P	**P**	**05 18 26.7**	**+2.1**
S22A	**4UR Ranch, Cre**	**47.93**	**312**	*e*P	**P**	**05 18 32.1**	**+0.3**
	0.1nm,0.6s						
ULM	**Lac du Bonnet**	**47.96**	**331**	*e*P	**P**	**05 18 29.9**	**-1.5**
	0.8nm,0.8s						
ULM	**Lac du Bonnet**	**47.96**	**331**	P	**P**	**05 18 29.9**	**-1.5**
	1.8nm,0.5s,baz=122,slow=8.4,SNR=5.6						
SMCO	**Snowmass**	**48.59**	**313**	*e*P	**P**	**05 18 37.1**	**+0.2**
	2.2nm,1.1s						
PV01	**Paradox Valley**	**49.36**	**311**	*e*P	**P**	**05 18 43.1**	**+0.4**
	3.8nm,0.8s						
PV15	**Paradox Valley**	**49.37**	**312**	*e*P	**P**	**05 18 43.8**	**+1.0**
	5.0nm,0.8s						
PV02	**Paradox Valley**	**49.51**	**311**	*e*P	**P**	**05 18 44.6**	**+0.8**
	4.9nm,0.7s						
PV13	**Radium Mtn., P**	**49.55**	**311**	*e*P	**P**	**05 18 45.0**	**+0.8**
	5.1nm,1.1s						
PV12	**Saucer Basin,**	**49.59**	**312**	*e*P	**P**	**05 18 45.0**	**+0.5**
	3.7nm,0.8s						
PV03	**Paradox Valley**	**49.60**	**311**	*e*P	**P**	**05 18 44.9**	**+0.4**
	3.6nm,1.2s						
PV11	**David Mesa, Pa**	**49.64**	**311**	*e*P	**P**	**05 18 45.2**	**+0.4**
	3.2nm,0.6s						
PV16	**Nyswonger Mesa**	**49.67**	**311**	*e*P	**P**	**05 18 45.4**	**+0.3**
	2.5nm,0.8s						
PV17	**East Wray Mesa**	**49.70**	**311**	*e*P	**P**	**05 18 45.6**	**+0.4**
PV20	**West Nyswonger**	**49.72**	**311**	*e*P	**P**	**05 18 45.6**	**+0.3**
	3.0nm,0.9s						
PV19	**Morning Glory**	**49.72**	**311**	*e*P	**P**	**05 18 45.7**	**+0.3**
	3.2nm,0.7s						
K22A	**Casper**	**49.72**	**318**	*e*P	**P**	**05 18 45.4**	**+0.1**
	3.4nm,0.8s						
PV14	**Lion Creek, Pa**	**49.77**	**312**	*e*P	**P**	**05 18 46.2**	**+0.3**
	3.2nm,0.6s						
PV09	**Paradox Valley**	**49.90**	**312**	*e*P	**P**	**05 18 47.3**	**+0.4**
SRU	**San Rafael Swe**	**51.13**	**312**	*e*P	**P**	**05 18 56.6**	**+0.6**
	3.2nm,0.8s						
DGMT	**Dagmar**	**51.17**	**325**	*e*P	**P**	**05 18 56.7**	**+0.8**
	14nm,0.9s						
TMUT	**Trail Mountain**	**51.69**	**312**	*e*P	**P**	**05 19 01.0**	**+0.7**
	3.2nm,1.0s						
BW06	**Boulder Array**	**51.80**	**317**	*e*P	**P**	**05 19 00.0**	**-1.0**
	3.2nm,0.6s						
PD31	**Pinedale Array**	**51.80**	**317**	*e*P	**P**	**05 19 00.2**	**-0.8**
PDAR	**Pinedale Array**	**51.80**	**317**	P	**P**	**05 19 00.1**	**-0.8**
	2.5nm,0.5s,baz=111,slow=9.5,SNR=33						
PDAR				PcP	**PcP**	**05 20 11.5**	**-1.3**
	0.2nm,0.5s,baz=105,slow=6.6,SNR=1.8						
MTPU	**Mount Pierson**	**52.02**	**310**	*e*P	**P**	**05 19 03.7**	**+0.9**
MSU	**Marysvale**	**52.16**	**311**	*e*P	**P**	**05 19 04.2**	**+0.5**
RLMT	**Red Lodge**	**52.59**	**319**	*e*P	**P**	**05 19 06.4**	**-0.3**
	2.9nm,0.8s						
REDW	**Red Top Meadow**	**52.91**	**317**	*e*P	**P**	**05 19 09.1**	**0.0**
	0.8nm,1.0s						
GCMT	**Greycliff**	**53.13**	**320**	*e*P	**P**	**05 19 10.5**	**-0.1**
FXWY	**Fox Creek**	**53.13**	**317**	*e*P	**P**	**05 19 10.2**	**-0.6**
	0.4nm,0.4s						
DUG	**Dugway, Tooele**	**53.16**	**312**	*e*P	**P**	**05 19 11.5**	**+0.5**
	2.2nm,0.7s						
FCC	**Fort Churchill**	**53.45**	**340**	*e*P	**P**	**05 19 11.6**	**-0.9**
	2.3nm,1.1s						
YMR	**Madison River**	**53.50**	**318**	*e*P	**P**	**05 19 14.2**	**+0.8**
	1.6nm,0.5s						
BGU	**Big Grassy Mou**	**53.55**	**313**	*e*P	**P**	**05 19 13.5**	**-0.3**
	3.3nm,0.9s						
BOZ	**Bozeman (W)**	**54.30**	**319**	*e*P	**P**	**05 19 18.8**	**-0.4**
	1.8nm,0.9s						
R11A	**Troy Canyon, C**	**54.67**	**309**	*e*P	**P**	**05 19 23.1**	**+1.0**
	0.8nm,1.0s						
DLMT	**Dillon**	**54.83**	**318**	*e*P	**P**	**05 19 22.9**	**-0.2**
	1.7nm,0.9s						
HLID	**Hailey**	**55.40**	**316**	*e*P	**P**	**05 19 27.6**	**+0.4**
	2.3nm,1.0s						
NVAR	**Mina Array Bea**	**56.76**	**309**	P	**P**	**05 19 36.2**	**-0.8**
	0.2nm,0.5s,baz=99,slow=5.8,SNR=3.1						
NEW	**Newport**	**58.79**	**320**	*e*P	**P**	**05 19 49.8**	**-1.0**
	2.2nm,0.8s						
I07A	**Izee**	**59.06**	**315**	*e*P	**P**	**05 19 52.7**	**-0.2**
	2.9nm,1.0s						
KMRM	**Mail Ridge**	**61.23**	**310**	*e*P	**P**	**05 20 08.2**	**+0.4**
	4.9nm,1.0s						
LLLB	**Lillooet**	**62.48**	**322**	*e*P	**P**	**05 20 15.7**	**-0.2**
	3.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**62.54**	**81**	P	**P**	**05 20 17.3**	**+0.5**
	0.8nm,0.6s,baz=287,slow=5.6,SNR=9.3						
NLWA	**Neilton Lookou**	**62.87**	**318**	*e*P	**P**	**05 20 18.9**	**+0.4**
	1.5nm,0.6s						
YKA	**Yellowknife Ar**	**63.55**	**336**	P	**P**	**05 20 20.8**	**-1.8**
	0.7nm,0.5s,baz=110,slow=7.3,SNR=23						
YKB5	**Yellowknife Ar**	**63.55**	**336**	*e*P	**P**	**05 20 21.5**	**-1.1**
ILAR	**Eielson Array**	**77.90**	**334**	P	**P**	**05 21 48.5**	**-1.1**
	0.3nm,0.5s,baz=92,slow=5.0,SNR=6.6						
MDM	**Murphy Dome**	**78.47**	**334**	*e*P	**P**	**05 21 53.2**	**+0.4**
	2.6nm,1.0s						
RND	**Reindeer**	**78.78**	**333**	*e*P	**P**	**05 21 54.8**	**+0.2**
FINES	**FINESS Array B**	**79.77**	**29**	P	**P**	**05 22 00.5**	**+0.6**
	1.0nm,0.4s,baz=264,slow=3.6,SNR=23						
FIA1	**FINESS Array S**	**79.77**	**29**	*e*P	**P**	**05 22 00.9**	**+1.0**
	2.7nm,1.1s						
BRTR	**Keskin Array B**	**87.68**	**50**	P	**P**	**05 22 42.3**	**+1.4**
	0.4nm,0.6s,baz=265,slow=3.3,SNR=2.8						
WRA	**Warramunga Arr**	**161.58**	**239**	PKPab	**PKPab**	**05 30 36.4**	**-1.9**
	0.3nm,0.7s,baz=111,slow=4.5,SNR=6.4						

RSNC 02 05:10:51.1±1.1**,5°.60N**×**74°.07W,h106**^{km}±8^{km}**,ML2.1, Mw2.7,4C-2D,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTBC	**PUERTO BERRIO,**	**1.00**	**338**⇑	*i*P	Pn	05 11 11.1	-1.0
PTBC				*e*S	Sn	05 11 27.2	-0.7
PTBC				*i*		05 11 28.9	
	comp=N,38nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.00**	**338**⇑	*i*P	Pn	05 11 11.1	-1.0
PTBC				*e*S	Sn	05 11 27.2	-0.7
PTBC				*i*		05 11 28.9	
	comp=N,38nm,0.2s						
RUSC	**La Rusia**	**1.02**	**74**⇓	*i*P	Pn	05 11 12.4	-0.3
RUSC				*e*S	Sn	05 11 29.0	-0.1
RUSC				*i*		05 11 29.8	
	comp=N,14nm,0.3s						
RUSC	**La Rusia**	**1.02**	**74**⇓	*i*P	Pn	05 11 12.4	-0.3
RUSC				*e*S	Sn	05 11 29.0	-0.1
RUSC				*i*		05 11 29.8	
	comp=N,14nm,0.3s						
CHIC	**Chingaza**	**1.03**	**161**	*e*P	Pn	05 11 12.2	-0.6
CHIC				*i*		05 11 12.7	
	comp=Z,14nm,0.4s						
CHIC				*e*S	Sn	05 11 28.7	-0.3
CHIC	**Chingaza**	**1.03**	**161**	*e*P	Pn	05 11 12.2	-0.6
CHIC				*i*		05 11 12.7	
	comp=Z,14nm,0.4s						
CHIC				*e*S	Sn	05 11 28.7	-0.3
BARC	**Barichara**	**1.32**	**42**	*e*P	Pn	05 11 15.6	-0.2
BARC				*e*S	Sn	05 11 34.5	0.0
BARC				*i*		05 11 37.4	
	comp=Z,28nm,0.3s						
BARC	**Barichara**	**1.32**	**42**	*e*P	Pn	05 11 15.6	-0.2
BARC				*e*S	Sn	05 11 34.5	0.0
BARC				*i*		05 11 37.4	
	comp=Z,28nm,0.3s						
VILC	**Villavicencio,**	**1.53**	**166**	*e*S	Sn	05 11 39.2	+0.4
BRRC	**Barranca, Sant**	**1.54**	**13**⇑	*i*P	Pn	05 11 17.6	-0.6
BRRC				*e*S	Sn	05 11 39.1	+0.4
BRRC				*i*		05 11 40.5	
	comp=N,59nm,0.2s						
BRRC	**Barranca, Sant**	**1.54**	**13**⇑	*i*P	Pn	05 11 17.6	-0.6
BRRC				*e*S	Sn	05 11 39.1	+0.4
BRRC				*i*		05 11 40.5	
	comp=N,59nm,0.2s						
HELC	**Santa Helena**	**1.56**	**292**	*e*P	Pn	05 11 18.6	-0.2
HELC				*e*S	Sn	05 11 40.6	+0.7
HELC				*i*		05 11 43.4	
	comp=N,8.1nm,0.4s						
HELC	**Santa Helena**	**1.56**	**292**	*e*P	Pn	05 11 18.6	-0.2
HELC				*e*S	Sn	05 11 40.6	+0.7
HELC				*i*		05 11 43.4	
	comp=N,8.1nm,0.4s						
ANIL	**Santa Ana**	**1.73**	**230**	*e*S	Sn	05 11 42.8	-0.5
ANIL				*i*		05 11 53.2	
	comp=N,13nm,0.4s						
ZARC	**Zaragoza, Cauc**	**2.03**	**337**	*e*P	Pn	05 11 23.9	-0.4
ZARC				*e*S	Sn	05 11 49.1	-0.7
ZARC	**Zaragoza, Cauc**	**2.03**	**337**	*e*P	Pn	05 11 23.9	-0.4
ZARC				*e*S	Sn	05 11 47.6	-2.2
PAMC	**Pamplona, Colo**	**2.20**	**38**	*e*P	Pn	05 11 26.7	-0.3
PAMC				*e*S	Sn	05 11 54.7	+0.4
PAMC	**Pamplona, Colo**	**2.20**	**38**	*e*P	Pn	05 11 26.7	-0.3
PAMC				*e*S	Sn	05 11 54.7	+0.4
OCAC	**Ocana**	**2.72**	**16**	*e*P	Pn	05 11 33.1	-0.4
OCAC				*e*S	Sn	05 12 04.6	-1.5
OCAC	**Ocana**	**2.72**	**16**	*e*P	Pn	05 11 33.1	-0.4
OCAC				*e*S	Sn	05 12 04.6	-1.5

UCR 02 05:20:23.6±1.7**,13°.02N**×**89°.37W,h15**^{km}**,MD3.7,ML4.0, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UESV	**Ojushtada**	**0.67**	**57**	IAML		05 20 39.6	
	comp=Z,2µm,0.3s						
LFRS	**El Faro**	**0.67**	**27**	*e*P	Pb	05 20 37.2	+0.1
SNET	**Serv Nac Est T**	**0.68**	**11**	*e*P	Pg	05 20 37.0	+0.1
SNET				*e*S	Sb	05 20 46.4	0.0
SNET				IAML		05 20 49.1	
	comp=Z,6µm,0.3s						
UESS	**San Salvador**	**0.70**	**14**	IAML		05 20 49.4	
	comp=Z,5µm,0.2s						
OPAM	**San Salvador**	**0.71**	**13**	*e*S	Sb	05 20 47.5	0.0
OPAM				IAML		05 20 50.6	
	comp=Z,4µm,0.3s						
UEES	**San Salvador**	**0.71**	**10**	*e*S	Sb	05 20 47.3	-0.2
UEES				IAML		05 20 49.1	
	comp=Z,12µm,0.2s						
BOQS	**Boqueron**	**0.72**	**7**	*e*P	Pb	05 20 37.9	-0.1
BOQS				*e*S	Sb	05 20 47.7	0.0
UDBS	**Soyapango**	**0.73**	**16**	*e*P	Pg	05 20 37.7	-0.2
CEDA	**San Andres**	**0.78**	**358**	*e*P	Pg	05 20 38.4	-0.4
CEDA				*e*S	Sg	05 20 48.9	-0.2
CEDA				IAML		05 20 56.1	
	comp=Z,7µm,0.3s						
LBRS	**Las Brisas**	**0.78**	**24**	*e*P	Pg	05 20 38.6	-0.2
SNVI	**San Vicente**	**0.78**	**41**	*e*P	Pg	05 20 38.5	-0.4
PAVA	**Las Pavas**	**0.81**	**31**	*e*P	Pg	05 20 39.0	-0.4
PAVA				*e*S	Sg	05 20 49.9	-0.1
PAVA				IAML		05 20 51.4	
	comp=Z,6µm,0.4s						
CEVE	**Cerro Verde**	**0.84**	**343**	*e*P	Pg	05 20 39.5	-0.5
CEVE				*e*S	Sg	05 20 51.0	-0.2
CEVE				IAML		05 20 52.9	
	comp=Z,7µm,0.3s						
SBLS	**San Blas**	**0.85**	**343**	*e*P	Pg	05 20 39.5	-0.7
SNJE	**San Jose**	**0.88**	**345**	*e*P	Pb	05 20 39.7	-0.9
RTR	**El Retiro**	**0.91**	**343**	*e*P	Pb	05 20 40.5	-0.8
TECA	**Tecapa**	**0.97**	**61**	*e*P	Pb	05 20 41.3	-0.9
UNIC	**Santa Ana**	**0.98**	**349**	*e*P	Pb	05 20 40.8	-1.6
PACA	**Pacayal**	**1.11**	**66**	*e*P	Pb	05 20 44.1	-0.5
PACA				*e*S	Sb	05 20 59.0	-0.1
PACA				IAML		05 21 05.0	
	comp=Z,18µm,0.4s						
LCY	**Lacayo**	**1.12**	**69**	*e*P	Pb	05 20 44.2	-0.6
VSM	**San Miguel**	**1.14**	**69**	*e*P	Pb	05 20 44.7	-0.5
CAHU	**Cacacuatique**	**1.35**	**56**	*e*P	Pn	05 20 46.6	-1.6
CAHU				*e*S	Sn	05 21 03.3	-2.7
LCND	**La Caada**	**1.47**	**79**	IAML		05 21 10.8	
	comp=Z,2µm,0.3s						
CNCH	**Conchagua**	**1.52**	**80**	*e*P	Pn	05 20 49.7	-0.7
IXG	**Ixpaco**	**1.55**	**318**	*e*P	Pn	05 20 50.3	-0.6
IXG				*e*S	Sn	05 21 08.4	-2.4
NBG	**Las Nubes**	**1.82**	**329**	*e*P	Pn	05 20 54.0	-0.7
FUG	**Fuego 3**	**2.02**	**315**	*e*P	Pn	05 20 57.9	+0.6
FUG				*e*S	Sn	05 21 21.4	-0.9
CRIN	**San Cristobal**	**2.29**	**98**	*e*P	Pn	05 21 00.9	0.0
CRIN				*e*S	Sn	05 21 29.3	+0.5
CNGN	**Cerro Negro**	**2.66**	**101**	*e*P	Pn	05 21 06.3	+0.3
MOMN	**Momotombo**	**2.83**	**102**	*e*P	Pn	05 21 07.2	-1.1
COPN	**Copaltepe**	**2.84**	**107**	*e*P	Pn	05 21 07.5	-0.9
ESTN	**Estel**	**2.92**	**88**	*e*P	Pn	05 21 09.3	-0.4

*ISCJB **02** 05:25:39.4±0.9, 11°.05S±0°.08×165°.4E±0°.2, h10^{km}, mb3.7/5, MS4.1/1, Error ellipse: s-maj=24.3km s-min=11.4km az=179.3*

*IDC **02** 05:25:39.5±1.1, 10°.85S×165°.40E, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.8/36, mbtmp3.8/6, ML4.0/1, MS4.3/1, Ms1 4.3/1, ms1mx3.2/28, Error ellipse: s-maj=49.6km s-min=23.1km az=137.0*

ISC 02 05:25:41.0±1.0**,10°.93S**±0°.10×**165°.4E**±0°.2**,h10**^{km}**,n7, σ0s.96**/7**,mb3.9**/5**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.12**	**175**	Pn	**Pn**	**05 28 21.5**	**+1.2**
	1.1nm,0.3s,baz=323,slow=20,SNR=15						
DZM				Sn	**Sn**	**05 30 23.5**	**-1.3**
	0.2nm,0.3s,baz=299,slow=19,SNR=2.9						
RAO	**Raoul Island**	**23.96**	**142**	LR	LR	05 37 18.1	
	comp=Z,709nm,20.7s,baz=132,slow=29						
WRA	**Warramunga Arr**	**31.24**	**250**	P	**P**	**05 32 01.2**	**+0.1**
	0.3nm,0.7s,baz=80,slow=8.4,SNR=3.8						
ASAR	**Alice Springs**	**32.58**	**243**	P	**P**	**05 32 12.7**	**-0.2**
	1.8nm,0.7s,baz=72,slow=9.5,SNR=21						
ILAR	**Eielson Array**	**83.50**	**19**	P	**P**	**05 38 08.8**	**0.0**
	0.4nm,0.5s,baz=237,slow=5.4,SNR=12						
NVAR	**Mina Array Bea**	**86.18**	**50**	P	**P**	**05 38 23.3**	**+0.2**
	1.1nm,0.9s,baz=232,slow=7.2,SNR=6.2						
YKA	**Yellowknife Ar**	**95.01**	**27**	P	**P**	**05 39 03.1**	**-0.6**
	0.1nm,0.8s,baz=257,slow=4.5,SNR=3.6						

IDC 02 05:28:14.0±1.8**,5°.18S**×**151°.94E,h0**^{km}**,mb3.7**/5**, mb1 3.9**/5**,mb1mx3.7**/32**,mbtmp3.7**/5**,MS3.8**/3**,Ms1 3.8**/3**, ms1mx3.3**/32**,Error ellipse: s-maj=74.9km s-min=23.7km az=124.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.55**	**228**	P	P	05 33 15.5	-0.4
	0.6nm,0.5s,baz=54,slow=10,SNR=12						
ASAR	**Alice Springs**	**25.30**	**222**	P	P	05 33 42.4	0.0
	1.6nm,0.8s,baz=52,slow=9.2,SNR=9.6						
STKA	**Stephens Creek**	**28.27**	**199**	LR	LR	05 45 07.8	
	comp=Z,170nm,18.9s,baz=235,slow=36						
FITZ	**Fitzroy Crossi**	**28.73**	**241**	P	P	05 34 13.4	+0.1
	0.6nm,0.4s,baz=46,slow=9.8,SNR=3.5						
DAV	**Davao City (W)**	**28.99**	**295**	LR	LR	05 45 25.8	
	comp=Z,133nm,19.9s,baz=56,slow=36						
MKAR	**Makanchi Array**	**80.05**	**319**	P	P	05 40 26.1	+0.4
	0.3nm,0.8s,baz=93,slow=6.2,SNR=2.2						
ILAR	**Eielson Array**	**82.83**	**22**	P	P	05 40 39.8	-0.2
	1.1nm,0.7s,baz=251,slow=5.2,SNR=9.8						
GEYT	**Alibeck**	**96.17**	**307**	LR	LR	06 28 28.0	
	comp=Z,55nm,18.1s,baz=250,slow=38						
TORD	**Torodi Ar. Bea**	**149.61**	**287**	PKPbc	PKPbc	05 48 06.2	-0.5
	0.3nm,0.8s,baz=48,slow=2.1,SNR=2.8						

*ISCJB **02** 05:59:48.0±0.5, 29°.8N±0°.1×87°.9E±0°.1, h10^{km}, mb3.7/14, Error ellipse: s-maj=21.8km s-min=9.1km az=141.2*

*IDC **02** 05:59:48.1±0.8, 29°.85N×87°.94E, h0^{km}, mb3.7/14, mb1 3.8/16, mb1mx3.7/46, mbtmp3.7/16, ML3.7/2, Error ellipse: s-maj=26.6km s-min=17.1km az=45.0*

ISC 02 05:59:50.0±0.6**,29°.9N**±0°.1×**88°.0E**±0°.1**,h10**^{km}**,n18, σ1s.17**/19**,mb3.7**/14**,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**5.53**	**140**	*e*P	**Pn**	**06 01 12.0**	**-0.5**
SHL				*e*S	**Sb**	**06 02 33.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**15.15**	**136**	Pn	**Pn**	**06 03 24.4**	**+0.4**
	0.3nm,0.3s,baz=318,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**17.45**	**347**	P	**Pn**	**06 03 53.4**	**-0.1**
	0.1nm,0.3s,baz=158,slow=11,SNR=8.0						
KURBB	**Kurchatov Arra**	**21.89**	**344**	P	**P**	**06 04 42.3**	**-0.7**
	1.9nm,0.7s,baz=157,slow=11,SNR=9.1						
SONM	**Songino Array**	**22.86**	**33**	P	**P**	**06 04 55.5**	**+2.0**
	1.7nm,0.7s,baz=223,slow=12,SNR=14						
GEYT	**Alibeck**	**25.96**	**296**	P	**P**	**06 05 21.9**	**-0.8**
	1.6nm,0.5s,baz=116,slow=9.8,SNR=2.6						
BRTR	**Keskin Array B**	**45.08**	**298**	P	**P**	**06 08 07.1**	**+0.7**
	0.5nm,0.8s,baz=89,slow=9.0,SNR=2.8						
AKASG	**Malin Array Be**	**48.00**	**313**	P	**P**	**06 08 28.4**	**-0.6**
	0.5nm,0.5s,baz=79,slow=7.1,SNR=4.3						
FINES	**FINESS Array B**	**50.85**	**327**	P	**P**	**06 08 50.7**	**+0.1**
	4.3nm,1.1s,baz=101,slow=9.9,SNR=7.0						
ARCES	**ARCESS Array B**	**52.75**	**337**	P	**P**	**06 09 04.9**	**+0.3**
	0.5nm,0.5s,baz=108,slow=8.6,SNR=3.0						
HFS	**Hagfors**	**56.84**	**325**	P	**P**	**06 09 34.2**	**-0.2**
	1.6nm,0.6s,baz=62,slow=9.9,SNR=3.4						
GERES	**GERESS Array B**	**58.14**	**312**	P	**P**	**06 09 43.7**	**-0.2**
	0.3nm,0.5s,baz=90,slow=9.8,SNR=3.8						
WRA	**Warramunga Arr**	**66.70**	**132**	P	**P**	**06 10 41.0**	**-0.4**
	0.3nm,0.4s,baz=326,slow=6.7,SNR=7.5						
ASAR	**Alice Springs**	**69.15**	**135**	P	**P**	**06 10 56.8**	**0.0**
	0.3nm,0.6s,baz=320,slow=6.6,SNR=3.6						
ILAR	**Eielson Array**	**76.49**	**21**	P	**P**	**06 11 38.7**	**-1.1**
	0.4nm,0.9s,baz=316,slow=2.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**80.38**	**280**	P	**P**	**06 12 02.3**	**+0.2**
	0.6nm,1.0s,baz=71,slow=3.5,SNR=3.0						
YKA	**Yellowknife Ar**	**86.17**	**10**	P	**P**	**06 12 30.1**	**-1.1**
	0.4nm,0.8s,baz=332,slow=4.8,SNR=8.0						
CPUP	**Villa Florida**	**149.25**	**268**	PKPbc	**PKPdf**	**06 19 38.5**	**+3.6**
	1.2nm,0.9s,baz=90,slow=2.0,SNR=4.0						

*ROM **02** 06:16:58.0±0.2, 45°.93N±0°.01×7°.74E±0°.02, h10^{km}, ML2.4/14*

*LDG **02** 06:16:58.8±0.1, 45°.91N×7°.75E, h2^{km}, Md2.9/2, Ml2.9/24, Error ellipse: s-maj=1.2km s-min=0.9km az=123.0*

*GEN **02** 06:16:58.6, 45°.93N×7°.74E, h4^{km}±3^{km}, Ml2.5*

*ISCJB **02** 06:16:58.2±0.2, 45°.91N±0°.01×7°.77E±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=1.9km az=43.5*

*ZUR **02** 06:16:58.9, 45°.92N×7°.76E, h2^{km}, MLh2.5/25, Error ellipse: s-maj=1.3km s-min=0.7km az=122.0*

*STR **02** 06:16:58.9±0.4, 46°N±2°×°±°, h5^{km}, M3.1/12, MLv3.1/12*

*VIE **02** 06:16:59.4±0.4, 45°.84N×8°.02E, h3^{km}, mb2.4/5, ml2.6/13, ms3.5/1, Error ellipse: s-maj=4.2km s-min=2.6km az=140.0*

ISC 02 06:16:58.7±0.8**,45°.92N**±0°.01×**7°.74E**±0°.01**,h9**^{km}±5^{km}**, n111,σ1s.37**/166**,17C-4D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATI	**Passo dei Sala**	**0.10**	**116**	P	**Pg**	**06 17 01.4**	**-0.1**
SATI				S	**Sg**	**06 17 02.7**	**-0.8**
SATI	**Passo dei Sala**	**0.10**	**116**	⇑Pg	**Pg**	**06 17 01.4**	**-0.1**
SATI				Sg	**Sg**	**06 17 02.8**	**-0.8**
SATI	**Passo dei Sala**	**0.10**	**116**	P	**Pg**	**06 17 01.4**	**-0.1**
SATI				S	**Sg**	**06 17 02.7**	**-0.8**
SATI				AML	AML		
	comp=E,13350μm,0.5s						
SATI				AML	AML		
	comp=N,13100μm,0.5s						
SATI				AML	AML		
	comp=E,13350μm,0.5s						
SATI				AML	AML		
	comp=N,13100μm,0.5s						
SATI				AML	AML		
	comp=N,13100μm,0.5s						
SATI				AML	AML		
	comp=E,13350μm,0.5s						
MMK	**Mattmark**	**0.20**	**50**	⇓Pg	**Pg**	**06 17 02.9**	**-0.1**
MMK				Sg	**Sg**	**06 17 05.2**	**-0.8**
MMK	**Mattmark**	**0.20**	**50**	P	**Pg**	**06 17 02.9**	**-0.1**
MMK				S	**Sg**	**06 17 05.2**	**-0.8**
MMK				AML	AML		
	comp=E,1036μm,0.6s						
MMK				AML	AML		
	comp=N,1820μm,0.3s						
MMK				AML	AML		
	comp=E,1036μm,0.6s						
MMK				AML	AML		
	comp=N,1820μm,0.2s						
MMK				AML	AML		
	comp=N,1820μm,0.3s						
MMK				AML	AML		
	comp=E,1036μm,0.6s						
SNIB	**St. Niklaus Ba**	**0.26**	**10**	⇑Pg	**Pg**	**06 17 03.9**	**-0.1**
DIX	**Grande Dixence**	**0.28**	**305**	⇑Pg	**Pg**	**06 17 04.3**	**-0.1**
DIX				Sg	**Sg**	**06 17 08.0**	**-0.4**
DIX	**Grande Dixence**	**0.28**	**305**	P	**Pg**	**06 17 04.3**	**-0.1**
DIX				S	**Sg**	**06 17 07.9**	**-0.4**
DIX				AML	AML		
	comp=E,2360μm,1.3s						
DIX				AML	AML		
	comp=N,3225μm,0.3s						
DIX				AML	AML		
	comp=E,2360μm,1.3s						
DIX				AML	AML		
	comp=N,3225μm,0.3s						
DIX				AML	AML		
	comp=N,3225μm,0.3s						
DIX				AML	AML		
	comp=E,2360μm,1.3s						
EMBD	**Embd, Matterta**	**0.30**	**12**	⇑Pg	**Pg**	**06 17 04.6**	**-0.2**
VANNI	**Vissoie, Val d**	**0.31**	**341**	⇑Pg	**Pg**	**06 17 04.8**	**-0.1**
VANNI				Sg	**Sg**	**06 17 08.7**	**-0.4**
CIRO	**Champorcher**	**0.34**	**201**	P	**Pg**	**06 17 05.7**	**+0.2**
CIRO				S	**Sg**	**06 17 10.5**	**+0.3**
CIRO	**Champorcher**	**0.34**	**201**	⇑Pg	**Pg**	**06 17 05.7**	**+0.2**
CIRO				Sg	**Sg**	**06 17 10.4**	**+0.3**
CIRO	**Champorcher**	**0.34**	**201**	*e*P	**Pg**	**06 17 05.7**	**+0.2**
CIRO				S	**Sg**	**06 17 10.4**	**+0.3**
CIRO				AML	AML		
	comp=E,1075μm,0.2s						
CIRO				AML	AML		
	comp=N,600μm,0.8s						
CIRO				AML	AML		
	comp=E,1075μm,0.2s						
CIRO				AML	AML		
	comp=N,600μm,0.8s						
CIRO				AML	AML		
	comp=E,1075μm,0.2s						
CIRO				AML	AML		
	comp=N,600μm,0.8s						
SIMPL	**Simplonpass**	**0.37**	**31**	⇑Pg	**Pg**	**06 17 06.0**	**-0.1**
TRAV	**Traversella**	**0.41**	**179**	P	**Pg**	**06 17 07.0**	**+0.3**
TRAV				S	**Sg**	**06 17 12.4**	**+0.3**
TRAV	**Traversella**	**0.41**	**179**	⇑Pg	**Pg**	**06 17 07.1**	**+0.3**
TRAV	**Traversella**	**0.41**	**179**	P	**Pg**	**06 17 07.0**	**+0.3**
TRAV				S	**Sg**	**06 17 12.6**	**+0.6**
TRAV				AML	AML		
	comp=E,746μm,0.5s						
TRAV				AML	AML		
	comp=N,667μm,1.3s						
TRAV				AML	AML		
	comp=E,746μm,0.5s						
TRAV				AML	AML		
	comp=N,667μm,1.3s						
TRAV				AML	AML		
	comp=E,746μm,0.5s						
TRAV				AML	AML		
	comp=N,667μm,1.3s						
SIOV	**Sion-Valere**	**0.41**	**320**	⇑Pg	**Pg**	**06 17 06.8**	**0.0**
LKBD2	**Leukerbad 2**	**0.46**	**352**	⇑Pg	**Pg**	**06 17 07.8**	**0.0**
LKBD	**Leukerbad**	**0.47**	**351**	⇑Pg	**Pg**	**06 17 08.0**	**0.0**
LAUCH	**Lauchernalp**	**0.50**	**3**	⇑Pg	**Pg**	**06 17 08.4**	**0.0**
MRGE	**Morge**	**0.50**	**253**	⇓Pg	**Pg**	**06 17 08.3**	**-0.1**
MRGE	**Morge**	**0.50**	**253**	P	**Pg**	**06 17 08.3**	**-0.1**
MRGE				AML	AML		
	comp=E,340μm,1.0s						
MRGE				AML	AML		
	comp=N,343μm,0.7s						
MRGE				AML	AML		
	comp=E,340μm,1.0s						
MRGE				AML	AML		
	comp=N,344μm,0.7s						
MRGE				AML	AML		
	comp=N,343μm,0.7s						
MRGE				AML	AML		
	comp=E,340μm,1.0s						
SENIN	**Lac Senin/Sane**	**0.54**	**326**	Pg	**Pg**	**06 17 09.1**	**-0.1**
GRYON	**Gryon**	**0.55**	**307**	Pg	**Pg**	**06 17 09.4**	**0.0**
FIESA	**Fiescheralp**	**0.58**	**26**	⇑Pg	**Pg**	**06 17 09.9**	**-0.1**
SALAN	**Lac Salanfe**	**0.58**	**293**	⇓Pg	**Pg**	**06 17 10.1**	**+0.1**
LSD	**Lago del Serru**	**0.63**	**223**	P	**Pg**	**06 17 10.8**	**-0.1**
LSD				S	**Sg**	**06 17 18.7**	**-0.4**
LSD	**Lago del Serru**	**0.63**	**223**	Pg	**Pg**	**06 17 10.8**	**-0.1**
LSD	**Lago del Serru**	**0.63**	**223**	P	**Pg**	**06 17 10.8**	**-0.1**
LSD				AML	AML		
	comp=E,607μm,0.1s						
LSD				AML	AML		
	comp=N,304μm,0.4s						
LSD				AML	AML		
	comp=E,607μm,0.1s						
LSD				AML	AML		
	comp=N,304μm,0.4s						
GRIMS	**Grimsel Gerste**	**0.77**	**31**	⇑Pg	**Pg**	**06 17 13.4**	**-0.3**
LPG	**La Plagne**	**0.81**	**239**	*e*Pg	**Pg**	**06 17 14.1**	**-0.3**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**06 17 25.2**	**+0.2**
	comp=N,66nm,0.2s,SNR=1.0						
LPL	**La Plagne**	**0.81**	**241**	*e*Pg	**Pg**	**06 17 14.1**	**-0.3**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**06 17 25.5**	**+0.5**
	comp=N,60nm,0.4s,SNR=1.0						
RSL	**Roselend**	**0.81**	**254**	Pg	**Pg**	**06 17 14.3**	**-0.1**
FUSIO	**Fusio**	**0.83**	**50**	P	**Pg**	**06 17 14.5**	**-0.4**
FUSIO				AML	AML		
	comp=E,163μm,0.5s						
FUSIO				AML	AML		
	comp=N,172μm,0.4s						
FUSIO				AML	AML		
	comp=E,163μm,0.5s						
FUSIO				AML	AML		
	comp=N,172μm,0.4s						
FUSIO				AML	AML		
	comp=N,172μm,0.4s						
FUSIO				AML	AML		
	comp=E,163μm,0.5s						
RSP	**Reno Superiore**	**0.84**	**204**	P	**Pg**	**06 17 14.7**	**-0.2**
RSP				S	**Sg**	**06 17 25.9**	**0.0**
RSP	**Reno Superiore**	**0.84**	**204**	Pg	**Pg**	**06 17 14.7**	**-0.2**
RSP	**Reno Superiore**	**0.84**	**204**	P	**Pg**	**06 17 14.7**	**-0.2**
RSP				AML	AML		
	comp=E,568μm,1.4s						
RSP				AML	AML		
	comp=N,408μm,1.2s						
RSP				AML	AML		
	comp=E,568μm,1.4s						
RSP				AML	AML		
	comp=N,408μm,1.2s						
HASLI	**Hasliberg/Brie**	**0.88**	**19**	Pg	**Pg**	**06 17 15.7**	**-0.1**
MUGIO	**Muggio**	**0.91**	**89**	⇓Pg	**Pg**	**06 17 15.9**	**-0.3**
MUGIO	**Muggio**	**0.91**	**89**	P	**Pg**	**06 17 15.9**	**-0.3**
MUGIO				AML	AML		
	comp=E,174μm,1.3s						
MUGIO				AML	AML		
	comp=N,163μm,0.5s						
MUGIO				AML	AML		
	comp=E,174μm,1.3s						
MUGIO				AML	AML		
	comp=N,163μm,0.5s						
BNALP	**Bannalp**	**1.06**	**26**	⇑Pn	**Pg**	**06 17 18.8**	**-0.4**
BNALP	**Bannalp**	**1.06**	**26**	P	**Pg**	**06 17 18.7**	**-0.4**
BNALP				AML	AML		
	comp=E,261μm,0.7s						
BNALP				AML	AML		
	comp=N,206μm,0.2s						
BNALP				AML	AML		
	comp=N,206μm,0.2s						
BNALP				AML	AML		
	comp=E,261μm,0.7s						
BHB	**Bricherasio**	**1.13**	**197**	AML	AML		
	comp=N,120μm,1.6s						
BHB				AML	AML		
	comp=E,102μm,1.5s						
BHB				AML	AML		
	comp=E,102μm,1.5s						
BHB				AML	AML		
	comp=N,120μm,1.6s						
BNI	**Bardonecchia**	**1.15**	**221**	AML	AML		
	comp=N,134μm,0.8s						
BNI				AML	AML		
	comp=E,89μm,0.3s						
BNI				AML	AML		
	comp=E,89μm,0.3s						
BNI				AML	AML		
	comp=N,134μm,0.8s						
RRL	**Rocca Remolon**	**1.20**	**214**	AML	AML		
	comp=E,157μm,1.5s						
RRL				AML	AML		
	comp=N,198μm,0.7s						
RRL				AML	AML		
	comp=N,198μm,0.7s						
RRL				AML	AML		
	comp=E,157μm,1.5s						
VDL	**Val di Lei**	**1.31**	**64**	Pn	**Pg**	**06 17 22.5**	**-1.5**
CABF	**La Chapelle**	**1.34**	**302**	*e*P	**Pb**	**06 17 24.9**	**+0.9**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**06 17 41.6**	**-0.2**
	comp=E,34nm,0.3s,SNR=1.0						
MBDF	**Montbardon**	**1.38**	**210**	*e*Pg	**Pn**	**06 17 24.3**	**+0.1**
	SNR=1.0						
MBDF				*e*Sn	**Sg**	**06 17 41.5**	**-1.4**
	comp=E,76nm,0.4s,SNR=1.0						
OG35	**Corcelles**	**1.52**	**275**	P	**Pb**	**06 17 28.0**	**+1.0**
OG35				S	**Sg**	**06 17 48.0**	**+0.5**
LOMF	**Lomont**	**1.56**	**337**	P	**Pn**	**06 17 27.5**	**+0.8**
LOMF				S	**Sb**	**06 17 48.6**	**+0.9**
SURF	**Saint Ours**	**1.58**	**205**	P	**Pn**	**06 17 27.5**	**+0.5**
SURF				S	**Sn**	**06 17 49.1**	**+1.4**
SULZ	**Cheisacher**	**1.63**	**9**	⇑Pn	**Pb**	**06 17 29.2**	**+0.3**
ORIF	**Oris-en-Rattie**	**1.65**	**233**	*e*Pn	**Pn**	**06 17 28.0**	**+0.1**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**06 17 48.2**	**-1.0**
	SNR=1.0						
ORIF				*e*Sg	**Sb**	**06 17 51.6**	**+1.4**
	comp=E,38nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.65**	**233**	P	**Pb**	**06 17 29.9**	**+0.6**
OGAG	**Argentiere**	**1.69**	**210**	P	**Pn**	**06 17 25.7**	**-2.8**
STIEG	**Stiegenhof Hun**	**1.70**	**21**	Pn	**Pb**	**06 17 30.7**	**+0.5**
SLE	**Schleitheim**	**1.92**	**15**	Pn	**Pn**	**06 17 32.8**	**+1.3**
FELD	**Feldberg im Sc**	**1.97**	**5**	Pn	**Pn**	**06 17 33.3**	**+1.0**
BERGE	**Lenzkirch (DE)**	**1.98**	**9**	⇑Pn	**Pn**	**06 17 33.4**	**+1.0**
MOF	**Molkenrain**	**1.98**	**348**	P	**Pn**	**06 17 33.9**	**+1.5**
HINF	**Hinteralfeld**	**1.99**	**343**	*e*Pn	**Pn**	**06 17 34.4**	**+1.8**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**06 17 56.5**	**-1.2**
	comp=E,33nm,0.3s,SNR=1.0						
DAVA	**Damuels**	**2.01**	**46**	*e*Pg	**Pb**	**06 17 36.5**	**+1.0**
	comp=E,1.8nm,0.1s						
DAVA				Sg	**Sg**	**06 18 03.0**	**-0.4**
	comp=E,24nm,0.3s						
RNI	**Roncone**	**2.01**	**87**	*e*Pn	**Pb**	**06 17 36.3**	**+0.8**
RNI				*e*Sn	**Sg**	**06 18 03.6**	**+0.2**
KIZ	**Kirchzarten**	**2.04**	**3**	P	**Pn**	**06 17 34.2**	**+1.0**
KIZ				S	**Sn**	**06 17 58.5**	**-0.4**
KIZ	**Kirchzarten**	**2.04**	**3**	Pn	**Pn**	**06 17 34.2**	**+1.0**
SBF	**Sospel**	**2.07**	**186**	*e*Pn	**Pn**	**06 17 32.7**	**-0.9**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**06 17 57.7**	**-1.8**
	comp=E,17nm,0.3s						
CARE	**Lago del Cares**	**2.12**	**75**	*e*Pn	**Pb**	**06 17 37.1**	**-0.3**
HAU	**Haudompre**	**2.29**	**336**	*e*P	**Pn**	**06 17 38.2**	**+1.5**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**06 18 11.6**	**-0.8**
	comp=E,33nm,0.3s,SNR=1.0						
ECH	**Echery**	**2.33**	**350**	P	**Pn**	**06 17 38.5**	**+1.3**
FETA	**Feichten**	**2.34**	**61**	*e*Pg	**Pb**	**06 17 41.9**	**+0.8**
	comp=E,0.2nm,0.2s						
FETA				*e*Sg	**Sg**	**06 18 12.6**	**-1.3**
	comp=E,0.5nm,0.2s						
VIVF	**Saint-Julien-l**	**2.41**	**245**	*e*P	**Pn**	**06 17 39.6**	**+1.3**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**06 18 06.4**	**-1.5**
	comp=E,5.4nm,0.2s,SNR=1.0						
MARN	**Marana (Italy)**	**2.44**	**95**	*e*Pn	**Pb**	**06 17 42.2**	**-0.6**
SMRF	**Simiane la Rot**	**2.48**	**219**	*e*Pn	**Pn**	**06 17 38.6**	**-0.6**
	SNR=1.0						
SMRF	**Simiane la Rot**	**2.48**	**219**	*e*Pg	**Pb**	**06 17 44.7**	**+1.3**
SMRF				*e*Sn	**Sn**	**06 18 07.8**	**-1.8**
	comp=E,5.0nm,0.3s						
FRF	**La Foret Royal**	**2.48**	**199**	*e*P	**Pn**	**06 17 40.3**	**+1.0**
PANI	**Panarotta**	**2.51**	**86**	*e*Pn	**Pb**	**06 17 43.2**	**-0.9**
CDF	**Champ du Feu**	**2.51**	**353**	*e*P	**Pn**	**06 17 41.0**	**+1.2**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**06 18 18.1**	**-1.3**
	comp=E,10.0nm,0.4s,SNR=1.0						
OPP	**Oppenau**	**2.60**	**7**	P	**Pn**	**06 17 41.6**	**+0.7**
RETA	**Reutte**	**2.60**	**52**	*e*Pn	**Pn**	**06 17 41.6**	**+0.6**
RETA				Sn	**Sn**	**06 18 14.6**	**+1.8**
	comp=E,2.3nm,0.3s						
MOTA	**Moosalm**	**2.72**	**57**	*e*Pn	**Pn**	**06 17 42.4**	**-0.3**
	comp=E,0.2nm,0.1s						
MOTA				Sg	**Sg**	**06 18 26.7**	**+0.6**
	comp=E,3.9nm,0.4s						
SQTA	**Sankt Quirin**	**2.72**	**60**	*e*Pn	**Pn**	**06 17 42.9**	**+0.2**
	comp=E,0.9nm,0.1s						
SQTA				Sn	**Sn**	**06 18 15.5**	**-0.3**
	comp=E,1.7nm,0.2s						
LMR	**La Mourre**	**2.73**	**199**	*e*P	**Pn**	**06 17 44.3**	**+1.6**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**06 18 13.0**	**-2.8**
	comp=E,4.2nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.80**	**286**	*e*P	**Pn**	**06 17 45.5**	**+1.9**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**06 18 26.9**	**-1.7**
	comp=E,9.7nm,0.2s,SNR=1.0						
CGRP	**Cima Grappa**	**2.84**	**89**	*e*Pn	**Pb**	**06 17 47.9**	**-1.7**
SFTF	**Sexfontaines**	**2.94**	**322**	*e*P	**Pn**	**06 17 47.9**	**+2.4**
	baz=135						
SFTF				*e*Sg	**Sg**	**06 18 31.0**	**-2.1**
	comp=E,23nm,0.4s,baz=140						
PAGF	**Fort de Pagny**	**2.97**	**333**	*e*P	**Pn**	**06 17 48.1**	**+2.1**
PAGF				*e*Sg	**Sg**	**06 18 32.7**	**-1.4**
	comp=E,8.7nm,0.2s						
LOR	**Lormes**	**3.00**	**298**	*e*P	**Pn**	**06 17 48.3**	**+1.9**
	baz=118,SNR=1.0						
LOR				*e*Sn	**Sn**	**06 18 20.6**	**-1.8**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**06 18 34.0**	**-0.9**
	comp=E,9.4nm,0.3s,SNR=1.0						
LOR	**Lormes**	**3.00**	**298**	P	**Pn**	**06 17 48.4**	**+2.1**
WATA	**Walderalm**	**3.00**	**60**	Pn	**Pn**	**06 17 46.0**	**-0.5**
	comp=E,0.4nm,0.2s						
WATA				*e*Sn	**Sn**	**06 18 23.8**	**+1.1**
	comp=E,0.6nm,0.2s						
WTTA	**Wattenberg**	**3.00**	**62**	*e*Pg	**Pb**	**06 17 50.3**	**-2.2**
	comp=E,0.3nm,0.1s						
WTTA				Sg	**Sg**	**06 18 36.2**	**+1.0**
	comp=E,0.9nm,0.2s						
SSF	**Saint Saulge**	**3.14**	**293**	*e*P	**Pn**	**06 17 50.6**	**+2.3**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**06 18 24.1**	**-1.8**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**06 18 38.6**	**-0.9**
	comp=E,3.1nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**3.16**	**288**	*e*P	**Pn**	**06 17 50.5**	**+1.9**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**06 18 23.7**	**-2.7**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**06 18 38.3**	**-1.9**
	comp=E,2.6nm,0.2s,SNR=1.0						
MEZF	**Maizieres J'vi**	**3.17**	**326**	*e*P	**Pn**	**06 17 50.5**	**+1.8**
MEZF				*e*Sg	**Sg**	**06 18 38.6**	**-1.8**
	comp=E,17nm,0.4s,SNR=1.0						
AGO	**Saint Agoulin**	**3.21**	**274**	P	**Pn**	**06 17 51.3**	**+1.9**
TRBF	**Trabuc cave**	**3.24**	**237**	P	**Pn**	**06 17 50.9**	**+1.2**
LASF	**Ste Croix**	**3.31**	**238**	*e*P	**Pn**	**06 17 53.1**	**+2.4**
ABTA	**Abfaltersbach**	**3.41**	**74**	*e*Pg	**Pb**	**06 18 01.0**	**+1.7**
	comp=E,0.3nm,0.2s						
ABTA				*e*Sn	**Sn**	**06 18 33.7**	**+1.1**
	comp=E,0.2nm,0.1s						
BGF	**Bois d'Agland**	**3.46**	**282**	*e*P	**Pn**	**06 17 54.6**	**+2.0**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**06 18 31.3**	**-2.4**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**06 18 47.4**	**-2.2**
	comp=E,10nm,0.4s,SNR=1.0						
HYF	**Humbligny**	**3.77**	**293**	*e*P	**Pn**	**06 17 59.1**	**+2.2**
TCF	**Toulx Ste Croi**	**3.86**	**277**	*e*P	**Pn**	**06 18 00.4**	**+2.1**
	SNR=1.0						
TCF				*e*Sn	**Sn**	**06 18 40.8**	**-3.0**
	comp=E,2.4nm,0.3s,SNR=1.0						
TCF				*e*Sg	**Sg**	**06 19 00.4**	**-2.3**
	comp=E,3.4nm,0.3s,SNR=1.0						
CAF	**Calviac**	**4.12**	**258**	*e*P	**Pn**	**06 18 04.0**	**+2.2**
	SNR=1.0						
MTLF	**Montolieu**	**4.71**	**239**	*e*P	**Pn**	**06 18 12.4**	**+2.5**
BAIF	**Baives**	**4.77**	**331**	*e*P	**Pn**	**06 18 13.5**	**+2.8**
	SNR=1.0						
MOA	**Molln**	**4.87**	**64**	*i* Pn	**Pn**	**06 18 11.3**	**-0.8**
	comp=E,0.2nm,0.1s						
MOA				*i* Sn	**Sn**	**06 19 08.3**	**-0.4**
	comp=E,0.2nm,0.1s						
MFF	**Saint Martin d**	**5.51**	**280**	*e*P	**Pn**	**06 18 23.1**	**+2.2**
	SNR=1.0						
CONA	**Conrad Observa**	**5.92**	**67**	*e*Pn	**Pn**	**06 18 25.1**	**-1.4**
	comp=E,0.6nm,0.3s						
CONA				*e*Sn	**Sn**	**06 19 33.9**	**-0.5**
	comp=E,0.9nm,0.4s						
LDF	**La Druitiere**	**5.98**	**299**	*e*P	**Pn**	**06 18 30.4**	**+3.1**
GRR	**Gorron**	**6.36**	**296**	*e*P	**Pn**	**06 18 34.3**	**+1.8**
SGMF	**Saint Gilles**	**7.41**	**292**	*e*P	**Pn**	**06 18 49.5**	**+2.6**
SGMF				*e*Sn	**Sn**	**06 20 04.6**	**-6.3**
	SNR=1.0						
QUIF	**Quistinic**	**7.73**	**289**	*e*P	**Pn**	**06 18 53.3**	**+2.0**

IDC 02 06:23:19.9±1.9**, 2°.96N**×**128°.32E, h0^{km}, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.5**/45**, mbtmp3.7**/4**, Error ellipse: s-maj=98.8km s-min=23.8km az=71.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.09**	**187**	P	P	06 28 07.0	+1.0
	1.2nm,0.4s,baz=21,slow=8.8,SNR=14						
WRA	**Warramunga Arr**	**23.52**	**166**	P	P	06 28 31.8	+0.1
	0.7nm,0.4s,baz=344,slow=10,SNR=22						
ASAR	**Alice Springs**	**27.02**	**169**	P	P	06 29 03.0	-0.9
	0.7nm,0.4s,baz=354,slow=8.0,SNR=22						
MKAR	**Makanchi Array**	**59.09**	**325**	P	P	06 33 22.3	+0.2
	0.3nm,0.5s,baz=109,slow=7.5,SNR=6.1						

NIED ***02*** *06:26:00, 30°.80N×143°.00E, h5^{km}, Mw4.3 Best double couple: M$_0$3.61000×10^{15} NP1:φ$_s$192.00000°, δ42.00000°, λ-63.00000°. NP2:φ$_s$338.00000°, δ54.00000°, λ-112.00000°.*

ISCJB ***02*** *06:26:25.4±1.1, 30°.87N±0°.02×142°.69E±0°.02, h1^{km}±6^{km}, mb4.8/306, MS4.2/13, Error ellipse: s-maj=3.8km s-min=3.0km az=10.0*

IDC ***02*** *06:26:26.4±0.4, 30°.80N×142°.77E, h0^{km}, mb4.7/31, mb1 4.8/36, mb1mx4.8/48, mbtmp4.7/36, ML4.3/4, MS3.6/5, Ms1 3.7/5, ms1mx3.2/43, Error ellipse: s-maj=14.0km s-min=10.3km az=94.0*

JMA ***02*** *06:26:26.0±0.2, 30°.85N×142°.97E, h44^{km}, M4.9*

NEIC ***02*** *06:26:28.4±0.1, 30°.81N×142°.72E, h10^{km}, mb4.8/235, Error ellipse: s-maj=2.6km s-min=2.2km az=165.0*

BJI ***02*** *06:26:30.8, 30°.86N×142°.42E, h29^{km}, mB5.0/37, mb4.7/57, Ms4.6/29, Ms7 4.3/28*

MOS ***02*** *06:26:31.8±0.8, 31°.14N×142°.72E, h34^{km}, mb5.1/95, Error ellipse: s-maj=7.0km s-min=4.2km az=113.2*

ISC 02 06:26:30.1±0.7**, 30°.85N**±0°.03×**142°.73E**±0°.05**, h23**^{km}±4^{km}**, n727, σ1^{s}.14**/760**, mb4.9**/318**, MS4.2**/13**, 18C-36D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.35**	**313**	*e*Pn	**Pn**	**06 27 20.1**	**-1.0**
JHJ2				*e*Sn	**Sn**	**06 27 57.6**	**-2.6**
JHJ2	**Mitsune**	**3.35**	**313**	P	**Pn**	**06 27 19.1**	**-2.0**
JHJ	**Hachijo jima 2**	**3.38**	**313**	Pn	**Pn**	**06 27 20.2**	**-1.2**
	58nm,0.3s,baz=72,slow=23,SNR=9.8						
JHJ				Sn	**Sn**	**06 27 57.5**	**-3.4**
	162nm,0.3s,baz=61,slow=23,SNR=10						
CBIJ	**Chichi jima**	**3.77**	**187**	*e*Pn	**Pn**	**06 27 24.4**	**-2.5**
CBIJ				*e*Sn	**Sn**	**06 28 05.3**	**-5.2**
CBIJ	**Chichi jima**	**3.77**	**187**	P	**Pn**	**06 27 24.1**	**-2.8**
CBIJ				*e*S	**Sn**	**06 28 06.5**	**-4.0**
JCJ	**Chichijima**	**3.77**	**187**	Pn	**Pn**	**06 27 24.4**	**-2.5**
	98nm,0.3s,baz=180,slow=24,SNR=39						
JCJ				Sn	**Sn**	**06 28 05.3**	**-5.2**
	60nm,0.3s,baz=179,slow=23,SNR=3.7						
BSO1	**Boso 1**	**4.07**	**339**	P	**Pn**	**06 27 29.0**	**-1.5**
BSO1				S	**Sn**	**06 28 15.1**	**-2.1**
BSO3	**Boso 3**	**4.36**	**335**	P	**Pn**	**06 27 33.1**	**-1.7**
BSO4	**Boso 4**	**4.59**	**335**	P	**Pn**	**06 27 36.7**	**-1.4**
JOD2	**Odawara 2**	**5.36**	**326**	P	**Pn**	**06 27 47.4**	**-1.4**
JOD2				*e*S	**Sn**	**06 28 47.4**	**-2.4**
JHU	**Hanno**	**5.76**	**331**	P	**Pn**	**06 27 52.1**	**-2.2**
JHU				*e*S	**Sn**	**06 28 56.4**	**-3.3**
JYT	**Yasato**	**5.77**	**339**	P	**Pn**	**06 27 52.9**	**-1.4**
JYT				*e*S	**Sn**	**06 28 58.6**	**-1.2**
HMMJ	**Hamamatsu 2**	**5.81**	**315**	P	**Pn**	**06 27 55.3**	**+0.4**
JHO	**Hitachi**	**6.02**	**343**	P	**Pn**	**06 27 55.3**	**-2.5**
JRY	**Ryogami san**	**6.07**	**329**	P	**Pn**	**06 27 56.9**	**-1.6**
JNY	**Yasuok**	**6.08**	**319**	P	**Pn**	**06 28 00.1**	**+1.5**
JAG	**Ashikaga**	**6.20**	**335**	P	**Pn**	**06 27 58.1**	**-2.1**
JAO	**Obara**	**6.37**	**315**	P	**Pn**	**06 28 03.6**	**+1.0**
INU	**Inuyama**	**6.57**	**315**	*e*Pn	**Pn**	**06 28 06.5**	**+1.2**
JFK	**Kawauchi**	**6.68**	**347**	P	**Pn**	**06 28 04.2**	**-2.7**
JTNC	**Tanabenakahech**	**6.71**	**298**	P	**Pn**	**06 28 07.2**	**-0.1**
MJAR	**Matsushiro Arr**	**6.81**	**328**	Pn	**Pn**	**06 28 07.9**	**-0.8**
	2.5nm,0.3s,baz=153,slow=11,SNR=61						
MJAR				Sn	**Sn**	**06 29 21.6**	**-4.0**
	0.6nm,0.3s,baz=149,slow=27,SNR=3.5						
MJAR				LR	LR	06 30 24.6	
	comp=Z,118nm,21.4s,baz=125,slow=35						
MAJO	**Matsushiro**	**6.82**	**328**	*e*Pn	**Pn**	**06 28 08.4**	**-0.3**
MAJO				*e*Sn	**Sn**	**06 29 21.6**	**-4.0**
MAJO	**Matsushiro**	**6.82**	**328***d*	*i*P	**Pn**	**06 28 08.4**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,51nm,0.6s						
MAT	**Matsushiro**	**6.82**	**328**	P	**Pn**	**06 28 07.9**	**-0.8**
MAT				*e*S	**Sn**	**06 29 23.5**	**-2.1**
MJB9	**Matsu-Tunnel**	**6.82**	**328**	*e*Pn	**Pn**	**06 28 08.3**	**-0.5**
JEG	**Eigenji**	**6.83**	**310**	P	**Pn**	**06 28 10.2**	**+1.3**
JNU	**Nakatsue**	**10.32**	**286**	*e*Pn	**Pn**	**06 29 00.3**	**+3.5**
JNU	**Nakatsue**	**10.32**	**286**	Pn	**Pn**	**06 28 59.4**	**+2.6**
	comp=Z,1.3nm,0.3s,baz=76,slow=5.8,SNR=7.8						
ASAJ	**Asahikawa**	**13.25**	**360**	Pn	**Pn**	**06 29 32.6**	**-4.1**
	comp=Z,5.2nm,0.3s,baz=222,slow=10,SNR=15						
ASAJ				Sn	**Sn**	**06 31 57.8**	**-5.5**
	comp=Z,1.2nm,0.3s,baz=90,slow=10,SNR=4.1						
SHO	**Shikotan**	**13.40**	**13**	*e*P	Pn	06 29 33.4	-5.4
SHO				*e*S	Sn	06 31 55.1	-12
SHO				pmax	pmax		
	comp=N,15nm,0.7s						
SHO				pmax	pmax		
	comp=Z,27nm,0.7s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.4s						
KSRS	**Korea Array**	**13.91**	**302**	Pn	**Pn**	**06 29 47.8**	**+2.0**
	comp=E,1.1nm,0.3s,baz=110,slow=13,SNR=37						
KSRS				LR	LR	06 34 36.1	
	comp=E,151nm,20.2s,baz=122,slow=35						
KS15	**Wonju Array Si**	**13.94**	**302**	*e*P	**P**	**06 29 51.6**	**-2.5**
KSAR	**Wonju Array Be**	**13.94**	**302**	Pn	**Pn**	**06 29 47.8**	**+1.6**
KSAR	**Wonju Array Be**	**13.94**	**302**	P	**Pn**	**06 29 47.8**	**+1.6**
KS01	**Wonju Array Si**	**13.94**	**302**	*e*Pn	**Pn**	**06 29 48.6**	**+2.3**
USRK	**Ussuriysk Ar.**	**15.80**	**331**	Pn	**Pn**	**06 30 09.3**	**-1.7**
	comp=E,0.3nm,0.3s,baz=148,slow=12,SNR=13						
USA0B	**Ussuriysk Arra**	**15.80**	**331**	*e*Pn	**Pn**	**06 30 10.5**	**-0.6**

	comp=E,13nm,0.8s						
YSS	**Yuzh-Sakhalins**	**16.08**	**0**	*e*Pn	**Pn**	**06 30 12.2**	**-2.5**
	comp=E,80nm,1.0s						
YSS	**Yuzh-Sakhalins**	**16.08**	**0**	⇓*e*P	**Pn**	**06 30 11.8**	**-2.9**
YSS				*e*S	**Sn**	**06 33 10.1**	**-2.2**
YSS				pmax	pmax		
	comp=Z,70nm,1.1s						
YSS				pmax	pmax		
	comp=N,60µm,1.1s						
YSS				pmax	pmax		
	comp=E,40nm,1.0s						
YSS				pmax	pmax		
	comp=Z,900nm,3.1s						
MDJ	**Mudanjiang**	**17.20**	**327**	P	**Pn**	**06 30 27.0**	**-1.8**
MDJ				pP	pP	06 30 34.1	-0.5
MDJ				sP	sP	06 30 38.4	+1.7
MDJ				S	**Sn**	**06 33 37.5**	**-1.9**
MDJ				pmax	pmax		
	comp=Z,31nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,600nm,4.0s						
MDJ				LR	LR		
	comp=Z,990nm,4.4s						
MDJ				LR	LR		
	comp=Z,760nm,4.3s						
MDJ				LR	LR		
	comp=Z,580nm,4.0s						
MDJ	**Mudanjiang**	**17.20**	**327**	*e*Pn	**Pn**	**06 30 27.9**	**-1.0**
	comp=Z,36nm,1.0s						
SSE	**Sheshan**	**18.48**	**276**	*e*P	**P**	**06 30 44.1**	**-0.4**
	comp=Z,49nm,0.9s						
YOJ	**Yonaguni jima**	**18.58**	**255**	*e*P	**Pn**	**06 30 45.9**	**-0.1**
	comp=Z,115nm,0.7s						
YOJ	**Yonaguni jima**	**18.58**	**255**	*e*P	**Pn**	**06 30 45.9**	**-0.1**
YOJ				pmax	pmax		
	comp=Z,115nm,0.7s						
CN2	**Changchun**	**18.82**	**318**	*e*P	**Pn**	**06 30 48.5**	**-0.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
SNY	**Shenyang**	**18.88**	**311**	⇑P	**Pn**	**06 30 49.3**	**-0.2**
SNY				pmax	pmax		
	comp=Z,44nm,0.7s						
YHNB	**Yeheng**	**19.86**	**257**	*e*P	**P**	**06 30 59.0**	**-0.8**
	comp=Z,30nm,0.8s						
NACB	**Ninganchiao**	**19.88**	**256**	*e*P	**P**	**06 31 00.3**	**+0.4**
	comp=Z,23nm,0.7s						
TYV	**Tymovskoe**	**20.00**	**360**	*e*P	**P**	**06 31 00.3**	**-0.6**
TYV				pmax	pmax		
	comp=Z,400nm,3.7s						
TYV				pmax	pmax		
	comp=Z,21nm,1.2s						
KLR	**Kul'dur**	**20.16**	**339**	⇓*e*P	Pn	06 31 03.5	-1.1
KLR	**Kul'dur**	**20.16**	**339**	P	**P**	**06 31 03.2**	**+0.5**
	comp=Z,30nm,0.8s,baz=139,slow=13,SNR=30						
NJ2	**Nanjing**	**20.40**	**280**	*e*P	**P**	**06 31 05.5**	**0.0**
NJ2				pmax	pmax		
	comp=Z,62nm,0.7s						
YULB	**Yu-li**	**20.45**	**254**	*e*P	**P**	**06 31 05.8**	**-0.3**
	comp=Z,34nm,0.6s						
SSLB	**Suanglung**	**20.57**	**255**	*e*P	Pn	06 31 08.7	-1.0
	comp=Z,38nm,0.9s						
TPUB	**Ta-pu**	**21.05**	**254**	*e*P	**P**	**06 31 12.8**	**+0.2**
	comp=Z,35nm,1.0s						
NKL	**Nikolayevsk**	**22.34**	**357**	*e*P	**P**	**06 31 26.0**	**-0.1**
NKL				pmax	pmax		
	comp=N,16nm,0.9s						
NKL				pmax	pmax		
	comp=Z,49nm,0.9s						
BJT	**Baijiatuau**	**23.43**	**300**	*e*P	**P**	**06 31 36.3**	**-1.3**
	comp=Z,16nm,0.6s						
BJT	**Baijiatuau**	**23.43**	**300**	*e*P	**P**	**06 31 36.3**	**-1.3**
BJT				pmax	pmax		
	comp=Z,16nm,0.6s						
BJI	**Beijing**	**23.43**	**300**	P	**P**	**06 31 37.8**	**+0.2**
BJI				pmax	pmax		
	comp=Z,13nm,1.0s						
WHN	**Wuhan**	**24.38**	**277**	P	**P**	**06 31 44.8**	**-1.9**
WHN				LR	LR		
	comp=Z,2µm,12.7s						
H11N2	**WAKE ISLAND Hy**	**24.44**	**111**	T	T	06 57 00.3	
	baz=304,slow=73,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**24.44**	**111**	T	T	06 57 00.6	
	baz=304,slow=73,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**24.46**	**111**	T	T	06 57 01.5	
	baz=304,slow=73,SNR=4.4						
PETK	**Petropavlovsk-**	**24.77**	**22**	P	**P**	**06 31 49.8**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=217,slow=9.3,SNR=3.0						
PEA1	**Petropavlovsk-**	**24.78**	**22**	*e*P	**P**	**06 31 49.8**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**24.94**	**114**	T	T	06 57 52.7	
	baz=304,slow=75,SNR=3.3						
H11S1	**WAKE ISLAND Hy**	**24.94**	**114**	T	T	06 57 56.9	
	baz=304,slow=75,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**24.96**	**114**	T	T	06 57 54.9	
	baz=304,slow=75,SNR=4.1						
PET	**Petropavlovsk**	**25.01**	**23**	⇓*e*P	**P**	**06 31 52.2**	**+0.1**
PET				pmax	pmax		
	comp=Z,21nm,1.6s						
HIA	**Hailar**	**25.29**	**323**	*e*P	**P**	**06 31 55.8**	**+1.0**
	comp=Z,28nm,0.8s						
HIA	**Hailar**	**25.29**	**323**	⇓*e*P	**P**	**06 31 55.2**	**+0.4**
HIA				pmax	pmax		
	comp=Z,25nm,0.7s						
ZEA	**Zeya**	**25.47**	**338**	*e*P	**P**	**06 31 56.1**	**-0.2**
ZEA				pmax	pmax		
	comp=N,52nm,0.8s						
ZEA				pmax	pmax		
	comp=E,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,59nm,0.8s						
HHC	**Hu-ho-hao-te**	**27.04**	**300**	*e*P	**P**	**06 32 11.3**	**+0.5**
HHC				pP	sP	06 32 20.8	+3.3
HHC				sP	pwP	06 32 25.8	+1.1
HHC				S	**S**	**06 36 40.0**	**-7.3**
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,4.6s						
HHC				LR	LR		
	comp=Z,420nm,11.1s						
HHC				LR	LR		
	comp=Z,300nm,11.4s						
HHC				LR	LR		
	comp=Z,220nm,11.4s						
ENH	**Enshi**	**28.58**	**277**	*e*P	**P**	**06 32 23.5**	**-1.0**
	comp=Z,14nm,0.6s						
XAN	**Xi'an**	**28.64**	**285**	P	**P**	**06 32 22.7**	**-2.4**
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN				pmax	pmax		
	comp=Z,120nm,4.3s						
XAN	**Xi'an**	**28.64**	**285**	*e*P	**P**	**06 32 24.4**	**-0.6**
	comp=Z,17nm,0.8s						
XAN	**Xi'an**	**28.64**	**285**	*e*P	**P**	**06 32 24.4**	**-0.6**
XAN				pmax	pmax		
	comp=Z,17nm,0.8s						
MA2	**Magadan**	**29.24**	**8**	⇓*e*P	**P**	**06 32 28.9**	**-1.1**
MA2				pmax	pmax		
	comp=Z,16nm,1.4s						
MA2	**Magadan**	**29.24**	**8**	P	**P**	**06 32 29.9**	**-0.1**
	comp=Z,6.9nm,0.9s,baz=193,slow=14,SNR=3.0						
GYA	**Guiyang**	**31.86**	**271**	*e*P	**P**	**06 32 52.8**	**-1.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK	**Yakutsk**	**32.33**	**349**	*e*P	**P**	**06 32 55.9**	**-1.4**
YAK				*e**PP	**sP**	**06 33 05.5**	**+1.4**
YAK				*e*		06 35 42.7	
YAK				*e*S	**S**	**06 38 07.7**	**-1.9**
YAK				*e**SS	**sS**	**06 38 19.5**	**+2.1**
YAK				*e*SS	**SnSn**	**06 40 00.5**	**-1.8**
YAK				*e*		06 43 25.7	
YAK				pmax	pmax		
	comp=Z,106nm,0.9s						
YAK				pmax	pmax		
	comp=E,18nm,1.0s						
YAK				pmax	pmax		
	comp=N,42nm,1.1s						
YAK				pmax	pmax		
	comp=Z,507nm,3.8s						
YAK				pmax	pmax		
	comp=N,281nm,3.1s						
YAK				pmax	pmax		
	comp=E,435nm,3.8s						
YAK				smax	smax		
	comp=N,732nm,4.5s						
YAK				smax	smax		
	comp=E,659nm,4.3s						
YAK				MLR	MLR		
	comp=Z,493nm,18.0s						
YAK				MLR	MLR		
	comp=N,215nm,18.0s						
YAK				MLR	MLR		
	comp=E,522nm,16.0s						
SONA1	**Songino Array**	**32.45**	**312**	*e*P	**P**	**06 33 00.4**	**+1.7**
SONA0	**Songino Array**	**32.45**	**312**	*e*P	**P**	**06 33 00.1**	**+1.3**
SONA0				*e*PcP	**PcP**	**06 35 45.9**	**+0.4**
SONM	**Songino Array**	**32.45**	**312**	P	**P**	**06 33 00.1**	**+1.3**
	comp=E,15nm,0.7s,baz=122,slow=7.7,SNR=56						
SONM				PcP	**PcP**	**06 35 45.9**	**+0.4**
	comp=E,1.0nm,0.5s,baz=112,slow=3.1,SNR=4.8						
SONM				LR	LR	06 47 57.1	
	comp=E,315nm,18.9s,baz=354,slow=40						
SEY	**Seymchan**	**32.69**	**8**	⇓*i*P	**P**	**06 33 01.0**	**+0.6**
SEY	**Seymchan**	**32.69**	**8**	P	**P**	**06 33 00.8**	**+0.4**
	comp=E,7.5nm,0.4s,baz=195,slow=9.0,SNR=46						
LZH	**Lanzhou**	**32.71**	**290**	*e*P	**P**	**06 33 03.2**	**+2.1**
LZH				pP	pwP	06 33 13.5	-1.7
LZH				sP	sP	06 33 17.2	+9.4
LZH				pmax	pmax		
	comp=E,26nm,1.2s						
LZH				LR	LR		
	comp=E,320nm,13.7s						
LZH				LR	LR		
	comp=E,540nm,14.0s						
LZH				LR	LR		
	comp=E,500nm,14.6s						
CD2	**Chengdu**	**33.33**	**280**	P	**P**	**06 33 05.5**	**-1.0**
CD2				S	**S**	**06 38 24.2**	**-1.9**
CD2				pmax	pmax		
	comp=E,20nm,0.5s						
CD2				pmax	pmax		
	comp=E,120nm,4.8s						
CD2				LR	LR		
	comp=E,900nm,12.4s						
CD2				LR	LR		
	comp=E,390nm,11.4s						
BOD	**Bodaibo**	**33.42**	**332**	*e*P	**P**	**06 33 06.8**	**-0.1**
BOD				pmax	pmax		
	comp=Z,12nm,0.9s						
FAKI	**Fak Fak**	**35.04**	**198**	*e*P	**P**	**06 33 21.1**	**-0.2**
	comp=Z,11nm,0.8s						
ZAK	**Zakamensk**	**35.20**	**315**	*e*P	**P**	**06 33 23.4**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TLY	**Talaya**	**35.42**	**317**	*e*P	**P**	**06 33 25.8**	**+1.5**
	comp=Z,26nm,1.0s						
TLY	**Talaya**	**35.42**	**317**	⇓*i*P	**P**	**06 33 25.3**	**+1.0**
KMI	**Kunming**	**35.64**	**271**	P	**P**	**06 33 27.0**	**+0.3**
KMI				pmax	pmax		
	comp=Z,17nm,0.7s						
KMI				LR	LR		
	comp=Z,240nm,7.6s						
KMI				LR	LR		
	comp=Z,260nm,4.4s						
KMI				LR	LR		
	comp=Z,290nm,10.9s						
GTA	**Gaotai**	**35.85**	**296**	*e*P	**P**	**06 33 27.7**	**-0.6**
GTA				pP	sP	06 33 36.9	+1.9
GTA				sP	pwP	06 33 40.8	-1.5
GTA				PcP	**PcP**	**06 35 56.2**	**+0.8**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,8.9s						
GTA				LR	LR		
	comp=Z,260nm,16.1s						
GTA				LR	LR		
	comp=Z,210nm,15.1s						
GTA				LR	LR		
	comp=Z,190nm,15.1s						
ADK	**Adak**	**36.37**	**43**	*e*P	**P**	**06 33 32.9**	**+0.6**
	comp=Z,35nm,1.0s						
ADK	**Adak**	**36.37**	**43**	*e*P	**P**	**06 33 32.9**	**+0.6**
ADK				pmax	pmax		
	comp=Z,35nm,1.0s						
MOY	**Mondy**	**36.98**	**316**	*e*P	**P**	**06 33 38.6**	**+0.9**
MOY				pmax	pmax		
	comp=Z,18nm,1.8s						
SKNT	**Sakolnakorn**	**37.82**	**258**	P	**P**	**06 33 45.4**	**+0.3**
	comp=Z,5.3nm,0.8s						
ATKA	**Atka Island**	**37.93**	**43**	*e*P	**P**	**06 33 45.7**	**+0.2**
	comp=Z,51nm,1.0s						
NONG	**Nongkai**	**38.02**	**260**	P	**P**	**06 33 48.0**	**+1.2**
	comp=Z,0.2nm,0.7s						
KNGR	**Kungurtug, Tuv**	**38.80**	**314**	⇑*e*P	**P**	**06 33 53.3**	**+0.1**
BILL	**Bilibino**	**39.71**	**14**	*e*P	**P**	**06 34 01.1**	**+0.8**
	comp=Z,18nm,0.8s						
BILL	**Bilibino**	**39.71**	**14**	*d i*P	**P**	**06 34 00.1**	**-0.2**
BILL				*e*		06 35 32.9	
BILL				*e*PPP	PPP	06 35 52.8	
BILL				pmax	pmax		
	comp=Z,24nm,1.0s						
BILL				MLR	MLR		
	comp=Z,156nm,19.0s						
CHAI	**Chaiyaphum**	**40.01**	**258**	P	**P**	**06 34 02.8**	**-0.7**
	comp=Z,5.0nm,0.7s						
PBKT	**Sadao Pong**	**40.55**	**259**	*e*P	**P**	**06 34 07.5**	**-0.4**
	comp=Z,7.8nm,0.7s						
PBKT	**Sadao Pong**	**40.55**	**259**	P	**P**	**06 34 08.7**	**+0.8**
	comp=Z,10nm,0.7s						
SRAK	**Srakaew**	**40.91**	**255**	P	**P**	**06 34 07.4**	**-3.5**
	comp=Z,33nm,0.8s						
CMMT	**Chiang Mai**	**41.26**	**264**	P	**P**	**06 34 15.4**	**+1.6**
	comp=Z,5.6nm,0.9s						
CHTO	**Chiang Mai**	**41.27**	**264**	*e*P	**P**	**06 34 12.7**	**-1.1**
	comp=Z,7.4nm,0.9s						
CHTO	**Chiang Mai**	**41.27**	**264**	*e*P	**P**	**06 34 12.7**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	**Chiang Mai**	**41.27**	**264**	P	**P**	**06 34 15.5**	**+1.7**
	comp=Z,38nm,1.0s						
CMAR	**Chiang Mai Arr**	**41.42**	**263**	*ce*P	**P**	**06 34 18.5**	**+3.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.42**	**263**	P	**P**	**06 34 14.4**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=53,slow=8.6,SNR=6.5						
CMAR				LR	LR	06 53 04.7	
	comp=Z,99nm,18.1s,baz=330,slow=39						
TIXI	**Tiksi**	**41.55**	**353**	*e*P	**P**	**06 34 15.3**	**-0.1**
	comp=Z,19nm,1.1s						
TIXI	**Tiksi**	**41.55**	**353**	*d i*P	**P**	**06 34 15.2**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,14nm,0.8s						
UTHA	**Uthaitani**	**42.32**	**259**	P	**P**	**06 34 25.9**	**+3.5**
	comp=Z,2.4nm,0.8s						
UMPA	**Umpang Tak**	**42.51**	**260**	P	**P**	**06 34 28.4**	**+4.4**
UNV	**Unalaska Valle**	**42.83**	**42**	*e*P	**P**	**06 34 25.7**	**-0.4**
	comp=Z,19nm,0.9s						
COEN	**Coen**	**44.55**	**179**	*e*P	**P**	**06 34 41.0**	**+0.7**
	comp=Z,26nm,0.9s						
SHL	**Shillong**	**44.81**	**276**	*e*P	**P**	**06 34 42.7**	**0.0**
	comp=Z,11nm,1.0s						
SHL	**Shillong**	**44.81**	**276**	*e*P	**P**	**06 34 42.7**	**0.0**
SHL				pmax	pmax		
	comp=Z,11nm,1.0s						
WMQ	**Urumqi**	**44.86**	**303**	P	**P**	**06 34 44.1**	**+1.3**
WMQ				pP	pwP	06 34 53.9	-3.0
WMQ				sP	sP	06 34 56.4	+6.8
WMQ				pmax	pmax		
	comp=Z,93nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,570nm,6.1s						
WMQ				LR	LR		
	comp=Z,300nm,22.7s						
WMQ				LR	LR		
	comp=Z,280nm,19.7s						
WMQ	**Urumqi**	**44.86**	**303**	*e*P	**P**	**06 34 43.9**	**+1.1**
	comp=Z,53nm,1.0s						
WMQ	**Urumqi**	**44.86**	**303**	*e*P	**P**	**06 34 43.9**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,53nm,1.0s						
DGZ	**Jazzator, Alta**	**45.09**	**311**	*de*P	**P**	**06 34 45.6**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,12nm,0.7s						
ANM	**Nome**	**46.42**	**28**	*e*P	**P**	**06 34 56.1**	**+1.5**
	comp=Z,17nm,0.9s						
ANM	**Nome**	**46.42**	**28**	*e*P	**P**	**06 34 56.1**	**+1.5**
ANM				pmax	pmax		
	comp=Z,17nm,0.9s						
ZAA0	**Zalesovo Array**	**47.03**	**317**	*e*P	**P**	**06 34 59.9**	**+0.3**
	comp=Z,5.6nm,0.8s						
ZAA0				*e*PcP	**PcP**	**06 36 31.5**	**+0.1**
ZAA1	**Zalesovo Array**	**47.03**	**317**	*e*P	**P**	**06 34 59.6**	**0.0**
ZAA1				*e*PcP	**PcP**	**06 36 31.4**	**-0.1**
ZALV	**Zalesovo Beam**	**47.03**	**317**	*e*P	**P**	**06 35 00.1**	**+0.5**
ZALV				*e*PcP	**PcP**	**06 36 31.4**	**-0.1**
ZALV	**Zalesovo Beam**	**47.03**	**317**	*e*P	**P**	**06 35 00.1**	**+0.5**
ZALV				*e*		06 36 31.4	
ZALV	**Zalesovo Beam**	**47.03**	**317**	P	**P**	**06 34 59.6**	**0.0**
	comp=Z,5.0nm,0.7s,baz=110,slow=7.2,SNR=16						
ZALV				PcP	**PcP**	**06 36 31.4**	**-0.1**
	comp=Z,11nm,0.5s,baz=102,slow=3.0,SNR=19						
NVS	**Novosibirsk**	**48.03**	**318**	*e*P	**P**	**06 35 07.9**	**+0.6**
NVS				*e*		06 36 35.2	
NVS				*e*S	**S**	**06 42 10.3**	**+6.3**
NVS				pmax	pmax		
	comp=Z,16nm,1.0s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,11nm,0.9s						
NVS				smax	smax		
	comp=N,18nm,2.4s						
ODAN	**Odare**	**48.23**	**280**	*e*P	**P**	**06 35 09.6**	**+0.1**
	comp=N,25nm,0.5s						
MK01	**Makanchi Array**	**48.52**	**307**	*e*P	**P**	**06 35 11.8**	**+0.5**
MK31	**Makanchi Array**	**48.53**	**307**	*e*P	**P**	**06 35 12.1**	**+0.7**
MK31	**Makanchi Array**	**48.53**	**307**	*i* P	**P**	**06 35 11.4**	**0.0**
MK31				pmax	pmax		
	comp=Z,13nm,0.7s						
MK32	**Makanchi Array**	**48.53**	**307**	*e*P	**P**	**06 35 11.9**	**+0.6**
MK32				*e*PcP	**PcP**	**06 36 37.0**	**0.0**
MK32				*e*ScP	**ScP**	**06 40 33.2**	**+2.7**
MKAR	**Makanchi Array**	**48.53**	**307**	*e*P	**P**	**06 35 12.0**	**+0.6**
	comp=Z,91nm,0.7s						
MKAR				PcP	**PcP**	**06 36 37.0**	**0.0**
MKAR				ScP	**ScP**	**06 40 33.2**	**+2.7**
MKAR	**Makanchi Array**	**48.53**	**307**	P	**P**	**06 35 12.0**	**+0.6**
MKAR						06 36 37.0	
MKAR				pmax	pmax		
	comp=Z,15nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.9s						
MKAR	**Makanchi Array**	**48.53**	**307**	P	**P**	**06 35 11.9**	**+0.6**
	comp=N,15nm,0.7s,baz=90,slow=9.3,SNR=101						
MKAR				PcP	**PcP**	**06 36 37.0**	**0.0**
	comp=N,3.2nm,0.8s,baz=108,slow=3.8,SNR=2.5						
MKAR				ScP	**ScP**	**06 40 33.2**	**+2.7**
	comp=N,0.6nm,0.9s,baz=121,slow=4.2,SNR=2.8						
MAKZ	**Makanchi**	**48.74**	**307**	*e*P	**P**	**06 35 13.8**	**+0.8**
	comp=N,14nm,0.6s						
MAKZ	**Makanchi**	**48.74**	**307**	P	**P**	**06 35 13.1**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.7s						
RAMN	**Ramite**	**48.87**	**280**	*e*P	**P**	**06 35 14.4**	**-0.1**
	comp=Z,31nm,0.6s						
JIRN	**Jiri**	**48.99**	**281**	*e*P	**P**	**06 35 15.4**	**-0.2**
	comp=Z,80nm,0.7s						
GUN	**Gumba**	**49.17**	**282**	*e*P	**P**	**06 35 17.4**	**+0.4**
	comp=Z,55nm,0.9s						
NRIK	**Noril'sk**	**49.36**	**337**	P	**P**	**06 35 17.5**	**+0.1**
	comp=Z,19nm,0.8s,baz=106,slow=10,SNR=12						
PKI	**Pulchoki**	**49.68**	**281**	*e*P	**P**	**06 35 20.5**	**-0.3**
	comp=Z,12nm,0.7s						
PKIN	**Phulchoki**	**49.69**	**281**	*e*P	**P**	**06 35 20.6**	**-0.2**
KKN	**Kakani**	**49.72**	**282**	*e*P	**P**	**06 35 21.4**	**+0.5**
	comp=Z,26nm,0.8s						
DMN	**Daman**	**49.92**	**282**	*e*P	**P**	**06 35 22.9**	**+0.4**
OHAK	**Old Harbor**	**50.70**	**39**	*e*P	**P**	**06 35 27.7**	**+0.1**
	comp=Z,38nm,1.2s						
CTA	**Charters Tower**	**50.76**	**176**	P	**P**	**06 35 28.3**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=353,slow=8.6,SNR=8.0						
CTAO	**Charters Tower**	**50.76**	**176**	*e*P	**P**	**06 35 29.1**	**+0.7**
	comp=Z,5.2nm,0.8s						
CTAO	**Charters Tower**	**50.76**	**176**	*e*P	**P**	**06 35 29.1**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**50.76**	**312**	*e*P	**P**	**06 35 29.5**	**+1.3**
	comp=Z,15nm,0.9s						
KURK	**Kurchatov**	**50.76**	**312**	*de*P	**P**	**06 35 28.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
DANN	**Dangsing**	**50.82**	**283**	*e*P	**P**	**06 35 29.3**	**-0.1**
	comp=Z,35nm,0.7s						
PDGK	**Podgornoye**	**50.84**	**303**	P	**P**	**06 35 29.4**	**+0.2**
PDGK				pmax	pmax		
	comp=Z,70nm,0.8s						
KDAK	**Kodiak Island**	**51.11**	**38**	*e*P	**P**	**06 35 30.7**	**0.0**
	comp=Z,51nm,1.1s						
KDAK	**Kodiak Island**	**51.11**	**38**	P	**P**	**06 35 30.6**	**-0.2**
	comp=Z,21nm,0.8s,baz=236,slow=4.3,SNR=18						
WRAB	**Tennant Creek**	**51.13**	**190**	*e*P	**P**	**06 35 30.5**	**-0.8**
	comp=Z,24nm,0.9s						
WRAB	**Tennant Creek**	**51.13**	**190**	*de*P	**P**	**06 35 30.3**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,24nm,0.9s						
KOLN	**Koldanda**	**51.14**	**282**	*e*P	**P**	**06 35 31.2**	**-0.5**
	comp=Z,18nm,0.6s						
WB2	**Warramunga Arr**	**51.14**	**190**	*e*P	**P**	**06 35 30.5**	**-0.8**
	comp=Z,28nm,0.9s						
WR1	**Warramunga Arr**	**51.14**	**190**	*e*P	**P**	**06 35 30.3**	**-1.0**
	comp=Z,23nm,0.8s						
WR1				*e*PcP	**PcP**	**06 36 47.9**	**+1.1**
WRA	**Warramunga Arr**	**51.14**	**190**	*i* P	**P**	**06 35 30.2**	**-1.1**
WRA				pmax	pmax		
	comp=Z,15nm,0.6s						
WRA	**Warramunga Arr**	**51.14**	**190**	P	**P**	**06 35 30.3**	**-1.0**
	comp=Z,15nm,0.6s,baz=6.9,slow=7.6,SNR=70						
WRA				PcP	**PcP**	**06 36 47.9**	**+1.1**
	comp=Z,4.0nm,0.9s,baz=2.2,slow=4.0,SNR=2.8						
RSO	**Redoubt South**	**51.20**	**35**	*e*P	**P**	**06 35 30.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**51.37**	**201**	*e*P	**P**	**06 35 32.8**	**-0.2**
	comp=Z,8.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**51.37**	**201**	P	**P**	**06 35 32.6**	**-0.4**
	comp=Z,5.3nm,0.6s,baz=32,slow=8.6,SNR=20						
IM3	**Indian Mountai**	**51.50**	**28**	*e*P	**P**	**06 35 34.3**	**+0.7**
PYUN	**Piuthan**	**51.54**	**283**	*e*P	**P**	**06 35 34.6**	**-0.1**
	comp=Z,53nm,0.6s						
PPLA	**Purkeypile**	**51.72**	**32**	*e*P	**P**	**06 35 36.5**	**+1.1**
	comp=Z,13nm,0.6s						
PRZ	**Przheval'sk**	**51.76**	**302**	*e*P	**P**	**06 35 37.8**	**+1.7**
	comp=Z,86nm,0.9s						
PRZ	**Przheval'sk**	**51.76**	**302**	*e*P	**P**	**06 35 37.8**	**+1.7**
PRZ				pmax	pmax		
	comp=Z,86nm,0.9s						
BRLK	**Bradley Lake**	**52.09**	**36**	*e*P	**P**	**06 35 38.1**	**0.0**
	comp=Z,20nm,1.1s						
SUA	**Susitna One**	**52.26**	**34**	*e*P	**P**	**06 35 39.2**	**-0.3**
	comp=Z,8.8nm,0.8s						
TARG	**Taragay, Kyrgy**	**52.33**	**301**	*e*P	**P**	**06 35 41.8**	**+1.1**
	comp=Z,26nm,0.8s						
BPAW	**Bear Paw Mtn.**	**52.39**	**31**	*e*P	**P**	**06 35 41.1**	**+0.9**
	comp=Z,35nm,1.2s						
MLY	**Manley**	**52.60**	**29**	*e*P	**P**	**06 35 42.6**	**+0.8**
	comp=Z,9.5nm,0.9s						
TRF	**Thorofare Moun**	**52.63**	**31**	*e*P	**P**	**06 35 43.0**	**+0.7**
	comp=Z,16nm,1.1s						
KDJ	**Kajisay**	**52.72**	**302**	*e*P	**P**	**06 35 45.1**	**+1.9**
	comp=Z,18nm,0.7s						
RC01	**Rabbit Creek A**	**52.72**	**34**	*e*P	**P**	**06 35 43.1**	**+0.4**
	comp=Z,9.2nm,1.0s						
SEW	**Seward**	**52.83**	**36**	*e*P	**P**	**06 35 43.4**	**-0.1**
	comp=Z,14nm,0.8s						
PMR	**Palmer**	**53.04**	**34**	*e*P	**P**	**06 35 45.0**	**0.0**
	comp=Z,18nm,1.2s						
PMR	**Palmer**	**53.04**	**34**	*e*P	**P**	**06 35 45.0**	**0.0**
PMR				pmax	pmax		
	comp=Z,18nm,1.2s						
COLD	**Coldfoot**	**53.10**	**27**	*e*P	**P**	**06 35 46.9**	**+1.5**
	comp=Z,4.1nm,0.9s						
MCK	**McKinley**	**53.26**	**31**	*e*P	**P**	**06 35 47.8**	**+1.1**
	comp=Z,20nm,1.2s						
RND	**Reindeer**	**53.27**	**31**	*e*P	**P**	**06 35 46.9**	**+0.1**
	comp=Z,7.1nm,0.6s						
RND	**Reindeer**	**53.27**	**31**	*e*P	**P**	**06 35 46.9**	**+0.1**
RND				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KNK	**Knik Glacier**	**53.35**	**34**	*e*P	**P**	**06 35 47.6**	**+0.2**
	comp=Z,16nm,0.7s						
ULHL	**Ulahol**	**53.38**	**302**	P	**P**	**06 35 49.5**	**+1.3**
	SNR=11						
SML	**Sawmill**	**53.43**	**33**	*e*P	**P**	**06 35 48.3**	**+0.3**
	comp=Z,15nm,1.0s						
SML	**Sawmill**	**53.43**	**33**	*e*P	**P**	**06 35 48.3**	**+0.3**
SML				pmax	pmax		
	comp=Z,15nm,1.0s						
MDM	**Murphy Dome**	**53.66**	**30**	*e*P	**P**	**06 35 50.1**	**+0.5**
	comp=Z,8.4nm,0.7s						

WRH	Wood River Hil	53.68	30	*e*P	P	06 35 49.8	0.0
	comp=Z,6.3nm,1.0s						
NRN	Naryn	53.71	301	*e*P	P	06 35 51.8	+1.0
	comp=Z,12nm,1.0s						
TKM2	Tokmak 2	53.72	303	P	P	06 35 52.0	+1.3
	SNR=16						
TKM2	Tokmak 2	53.72	303	P	P	06 35 51.7	+1.0
TKM2				pmax	pmax		
	comp=Z,14nm,0.8s						
TCOL	CIGO, UAF Yank	53.80	30	P	P	06 35 50.8	+0.2
	baz=266						
COLA	College	53.81	30	*e*P	P	06 35 51.5	+0.9
	comp=Z,6.0nm,0.8s						
COLA	College	53.81	30	⇓*i*P	P	06 35 51.5	+0.9
COLA				pmax	pmax		
	comp=Z,51nm,4.2s						
SCM	Sheep Creek Mo	53.91	33	*e*P	P	06 35 52.0	+0.5
	comp=Z,32nm,1.0s						
SCM	Sheep Creek Mo	53.91	33	*e*P	P	06 35 52.0	+0.5
SCM				pmax	pmax		
	comp=Z,32nm,1.0s						
DHY	Denali Highway	53.92	32	*e*P	P	06 35 52.3	+0.6
	comp=Z,5.8nm,1.0s						
POKR	Poker Plat Res	54.00	29	P	P	06 35 52.6	+0.5
	baz=266						
GLI	Glacier Island	54.01	35	*e*P	P	06 35 52.3	+0.1
	comp=Z,12nm,0.8s						
KSH	Kashi	54.13	299	P	P	06 35 57.9	+4.3
KSH				pP	pwP	06 36 08.2	+0.3
KSH				PP	PP	06 38 01.2	+6.0
KSH				S	S	06 43 32.1	+2.9
KSH				sS	sS	06 43 47.9	+11
KSH				pmax	pmax		
	comp=Z,34nm,0.7s						
KSH				pmax	pmax		
	comp=Z,520nm,5.7s						
KSH				LR	LR		
	comp=Z,200nm,4.5s						
KSH				LR	LR		
	comp=Z,160nm,4.8s						
KSH				LR	LR		
	comp=Z,350nm,7.7s						
KZA	Kyzart	54.14	302	P	P	06 35 55.9	+1.9
	SNR=22						
HDA	Harding Lake	54.17	30	*e*P	P	06 35 52.7	-0.6
	comp=Z,9.7nm,0.7s						
HDA	Harding Lake	54.17	30	P	P	06 35 52.9	-0.4
	baz=267						
ILAR	Eielson Array	54.22	30	P	P	06 35 53.1	-0.5
	comp=Z,7.7nm,0.7s,baz=257,slow=6.1,SNR=98						
ILB	Eielson Array	54.22	30	*e*P	P	06 35 53.5	-0.1
IL1	Eielson Array	54.22	30	*e*P	P	06 35 53.3	-0.3
KBK	Karagaybulak	54.24	303	P	P	06 35 55.5	+1.1
	SNR=32						
CHMS	Chumysh	54.32	303	P	P	06 35 55.9	+1.1
	SNR=5.6						
FRU	Bishkek	54.45	303	*e*P	P	06 35 56.0	+0.3
FRU				pmax	pmax		
	comp=Z,40nm,1.8s						
USP	Ospenovka	54.45	304	P	P	06 35 56.2	+0.4
	SNR=10						
KLU	Klutina	54.57	34	*e*P	P	06 35 56.9	+0.5
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	54.58	303	P	P	06 35 57.7	+0.9
	SNR=7.4						
AAK	Ala-Archa	54.58	303	*e*P	P	06 35 57.3	+0.5
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	54.58	303	*de*P	P	06 35 57.4	+0.6
AAK				pmax	pmax		
	comp=Z,13nm,0.8s						
UCH	Uchtor	54.64	302	P	P	06 35 58.9	+1.2
	SNR=14						
DIV	Divide	54.65	34	*e*P	P	06 35 58.0	+1.0
	comp=Z,11nm,0.6s						
EYAK	Cordova Ski Ar	54.67	35	*e*P	P	06 35 57.9	+0.9
	comp=Z,21nm,0.9s						
PRP	Porcupine Dome	54.83	29	*e*P	P	06 35 58.7	+0.5
	comp=Z,5.5nm,1.0s						
AS01	Alice Springs	54.85	190	*e*P	P	06 35 58.0	-0.7
AS31	Alice Springs	54.86	190	*e*P	P	06 35 57.9	-0.8
	comp=Z,3.3nm,0.5s						
ASAR	Alice Springs	54.86	190	P	P	06 35 57.8	-1.0
	comp=Z,3.7nm,0.5s,baz=8.2,slow=6.5,SNR=42						
ASAR				PcP	PcP	06 37 01.9	+1.1
	comp=Z,2.6nm,0.8s,baz=14,slow=4.0,SNR=4.2						
HARP	HAARP	54.93	33	*e*P	P	06 35 59.6	+0.7
	comp=Z,13nm,0.9s						
FYU	Fort Yukon	54.99	28	*e*P	P	06 36 00.2	+1.0
	comp=Z,21nm,0.8s						
OTUK	Ortayu	55.08	310	P	P	06 36 00.8	+0.6
OTUK				pmax	pmax		
	comp=Z,16nm,0.8s						
EKS2	Erkin-Say	55.09	303	P	P	06 36 01.4	+0.9
	SNR=9.3						
AML	Almayashu	55.26	302	P	P	06 36 03.6	+1.6
	SNR=32						
DOT	Dot Lake	55.42	31	*e*P	P	06 36 02.4	0.0
	comp=Z,7.2nm,0.8s						
SCRK	Sand Creek	55.46	31	*e*P	P	06 36 03.2	+0.5
	comp=Z,6.9nm,0.7s						
BVA0	Borovoye Array	55.65	316	P	P	06 36 04.1	-0.1
BVA0				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BRVK	Borovoye	55.71	316	*e*P	P	06 36 05.4	+0.8
	comp=Z,5.5nm,0.8s						
BRVK	Borovoye	55.71	316	*de*P	P	06 36 04.6	0.0
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s						
SFK	Sufi-Kurgan	55.87	300	P	P	06 36 07.1	+0.8
SFK				pmax	pmax		
	comp=Z,16nm,0.7s						
ARSB	Arslanbob	55.96	301	*e*P	P	06 36 07.5	+0.7
	comp=Z,20nm,0.9s						
MNAS	Manas	56.04	303	P	P	06 36 08.2	+0.8
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MBWA	Marble Bar	56.23	206	*e*P	P	06 36 08.2	-0.4
	comp=Z,12nm,0.9s						
EIDS	Eidsvold	56.47	171	*e*P	P	06 36 10.7	+0.4
	comp=Z,7.6nm,1.0s						
DZM	Mont Dzumac	57.33	154	*e*P	P	06 36 17.9	+1.4
	comp=Z,8.3nm,0.9s						
KK31	Karatay Array	57.33	304	*e*P	P	06 36 16.9	+0.5
KK31	Karatay Array	57.33	304	*i* P	P	06 36 16.9	+0.5
KK31				pmax	pmax		
	comp=Z,21nm,1.0s						
KKAR	Karatay Array	57.33	304	*e*P	P	06 36 17.4	+1.0
KKAR	Karatay Array	57.33	304	*e*P	P	06 36 17.4	+1.0
DAWY	Dawson	57.48	31	*e*P	P	06 36 17.6	+0.6
	comp=Z,16nm,1.0s						
NIL	Nilore	57.80	293	*e*P	P	06 36 21.2	+1.4
	comp=Z,32nm,0.6s						
NIL	Nilore	57.80	293	*e*P	P	06 36 21.2	+1.4
NIL				pmax	pmax		
	comp=Z,32nm,0.6s						
HYT	Haines Junctio	58.69	34	*e*P	P	06 36 26.8	+1.0
	comp=Z,8.2nm,0.9s						
INK	Inuvik	59.44	25	*e*P	P	06 36 31.0	+0.4
	comp=Z,9.2nm,0.9s						
INK	Inuvik	59.44	25	P	P	06 36 30.9	+0.4
	comp=Z,7.1nm,0.6s,baz=294,slow=5.9,SNR=58						
SKAG	Skagway	59.98	36	*e*P	P	06 36 35.7	+1.2
	comp=Z,11nm,1.0s						
WHY	Whitehorse	59.99	34	*e*P	P	06 36 35.7	+1.0
	comp=Z,9.3nm,1.1s						
BESE	Bessie Mountai	60.39	37	*e*P	P	06 36 38.5	+1.1
	comp=Z,9.9nm,0.9s						
SVE	Sverdlovsk	60.58	321	⇓*e*P	P	06 36 39.4	+0.8
SVE				pmax	pmax		
	comp=Z,13nm,0.9s						
JIS	Juneau Island	60.70	37	*e*P	P	06 36 40.9	+1.6
	comp=Z,14nm,1.1s						
KBL	Kabul	60.83	295	*e*P	P	06 36 41.4	+0.4
	comp=Z,18nm,0.8s						
KBL	Kabul	60.83	295	*e*P	P	06 36 41.4	+0.4
KBL				pmax	pmax		
	comp=Z,19nm,0.8s						
ARU	Arti	61.79	321	*e*P	P	06 36 47.1	+0.3
	comp=Z,13nm,0.9s						
ARU	Arti	61.79	321	*c i*P	P	06 36 46.6	-0.2
ARU						06 37 24.7	
ARU						06 38 59.9	
ARU				S	S	06 45 10.8	+2.3
ARU				SS	SS	06 49 11.0	+1.1
ARU				pmax	pmax		
	comp=Z,23nm,1.4s						
STKA	Stephens Creek	62.39	181	*e*P	P	06 36 50.6	-0.4
	comp=Z,0.6nm,0.9s						
STKA	Stephens Creek	62.39	181	*e*P	P	06 36 50.7	-0.4
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	62.39	181	P	P	06 36 50.5	-0.5
	comp=Z,2.3nm,0.7s,baz=341,slow=6.4,SNR=6.0						
FORT	Forrest	62.85	194	*e*P	P	06 36 54.1	0.0
	comp=Z,28nm,0.6s						
AB31	Akbulak array	62.86	313	*i* P	P	06 36 54.0	-0.1
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ABKAR	Akbulak array	62.86	313	*e*P	P	06 36 54.1	0.0
DLBC	Dease Lake	62.89	36	*e*P	P	06 36 55.3	+1.1
	comp=Z,8.2nm,1.1s						
DLBC	Dease Lake	62.89	36	P	P	06 36 55.4	+1.1
	comp=Z,4.1nm,0.9s,baz=315,slow=5.7,SNR=3.9						
LHI	Lord Howe Isla	63.93	164	*e*P	P	06 37 00.6	-0.7
	comp=Z,58nm,0.9s						
MORW	Morawa	64.78	206	*e*P	P	06 37 06.5	-0.4
	comp=Z,8.0nm,0.8s						
PRGR	Permogore	66.58	329	*e*P	P	06 37 17.7	-0.4
PRGR				pmax	pmax		
	comp=Z,16nm,0.9s						
SPA0	Spitsbergen Ar	66.79	350	*e*P	P	06 37 20.6	+1.3
KBS	Kingsbay	66.92	351	*e*P	P	06 37 21.4	+1.3
	comp=Z,19nm,0.9s						
KBS	Kingsbay	66.92	351	*e*P	P	06 37 21.4	+1.3
KBS				pmax	pmax		
	comp=Z,19nm,0.9s						
NWAO	Narrogin (SRO)	67.86	203	*e*P	P	06 37 27.6	+1.1
	comp=Z,13nm,0.8s						
NWAO	Narrogin (SRO)	67.86	203	*e*P	P	06 37 27.6	+1.1
NWAO				pmax	pmax		
	comp=Z,13nm,0.8s						
GEYT	Alibeck	67.91	302	P	P	06 37 28.1	+1.0
	comp=Z,8.6nm,0.9s,baz=46,slow=6.4,SNR=6.0						
RES	Resolute Bay	68.31	14	*e*P	P	06 37 28.9	0.0
	comp=Z,11nm,0.9s						
RES	Resolute Bay	68.31	14	*e*P	P	06 37 28.9	0.0
RES				pmax	pmax		
	comp=Z,11nm,0.9s						
YKW3	Yellowknife Ar	68.60	29	*e*P	P	06 37 30.7	-0.2
	comp=Z,11nm,1.0s						
YKA	Yellowknife Ar	68.63	29	P	P	06 37 31.0	0.0
	comp=Z,7.3nm,0.5s,baz=295,slow=6.5,SNR=159						
YKB5	Yellowknife Ar	68.63	29	*e*P	P	06 37 30.6	-0.5
KLMR	Klimovskoe	69.59	329	*e*P	P	06 37 35.9	-1.2
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLMR	Klimovskoe	69.59	329	*e*P	P	06 37 35.9	-1.2
KLMR				AMP		06 37 37.4	
	comp=Z,8.0nm,0.8s						
PGC	Sidney	69.88	45	*e*P	P	06 37 40.2	+1.1
	comp=Z,16nm,0.8s						
LLLB	Lillooet	70.01	42	*e*P	P	06 37 40.5	+0.5
	comp=Z,7.1nm,0.9s						
NLWA	Neilton Lookou	70.14	46	*e*P	P	06 37 42.1	+1.4
	comp=Z,14nm,0.6s						
ARCES	ARCESS Array B	70.17	341	*e*P	P	06 37 41.1	+0.6
ARCES	ARCESS Array B	70.17	341	*e*P	P	06 37 41.1	+0.6
ARCES	ARCESS Array B	70.17	341	P	P	06 37 40.8	+0.3
	comp=Z,3.6nm,0.7s,baz=60,slow=7.2,SNR=9.0						
ARE0	ARCESS Array S	70.17	341	*e*P	P	06 37 41.4	+0.9
	comp=Z,0.4nm,1.1s						
A04D	Lummi Island	70.31	45	P	P	06 37 42.6	+0.9
	baz=294						
D03D	Eldon	70.56	46	P	P	06 37 44.6	+1.3
	baz=295						
B05A	Bryant	70.86	45	P	P	06 37 45.8	+0.7
	baz=295						
TULEG	Thule	71.08	7	*e*P	P	06 37 45.9	0.0
	comp=Z,16nm,0.8s						
E04D	Cinebar	71.30	47	P	P	06 37 48.8	+1.0
	baz=295						
G03D	McMinnville, O	71.43	48	P	P	06 37 49.7	+1.1
	baz=295						
LON	Longmire	71.69	46	*e*P	P	06 37 50.6	+0.4
	comp=Z,5.2nm,0.7s						
LON	Longmire	71.69	46	*e*P	P	06 37 50.6	+0.4
LON				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KEBM	Edson Butte	71.73	51	*e*P	P	06 37 52.3	+1.7
	comp=Z,45nm,1.0s						
C06D	Leavenworth	71.74	45	P	P	06 37 51.3	+0.8
	baz=296						
J01E	Myrtle Point	71.87	50	P	P	06 37 52.4	+1.1
	baz=295						
DAG	Danmarks Havn	72.01	356	⇓*i*P	P	06 37 51.8	+0.2
DAG				*i*		06 38 03.6	
DAG	Danmarks Havn	72.01	356	⇓*i*P	P	06 37 51.8	+0.2
DAG				*i*		06 38 03.6	
I03D	Drain, OR	72.03	50	P	P	06 37 52.9	+0.7
	baz=296						
H04D	Lebanon	72.06	49	P	P	06 37 53.4	+1.0
	baz=296						
LTY	Liberty	72.17	45	*e*P	P	06 37 53.4	+0.3
	comp=Z,4.8nm,0.8s						
K02D	Willamette Mer	72.25	51	P	P	06 37 54.3	+0.6
	baz=296,SNR=5.4						
F05D	White Salmon	72.28	47	P	P	06 37 54.3	+0.6
	baz=296						
H04A	Detroit Lake	72.35	48	*e*P	P	06 37 55.1	+0.9
	comp=Z,18nm,0.8s						
B08A	Colville Reser	72.48	44	*e*P	P	06 37 55.6	+0.7
	comp=Z,8.3nm,1.0s						
L02E	Cave Junction	72.53	51	P	P	06 37 55.9	+0.6
	baz=296						
I04A	Tendick Farm,	72.59	49	P	P	06 37 56.0	+0.3
	baz=296,SNR=8.8						
G05D	Wamic, OR	72.66	47	P	P	06 37 56.6	+0.6
	baz=296						
HUMO	Hull Mountain	72.76	50	*e*P	P	06 37 57.6	+0.9
	comp=Z,6.3nm,1.0s						
JCC	Jacoby Creek,	72.82	52	*e*P	P	06 37 58.5	+1.5
	comp=Z,5.8nm,1.0s						
MOS	Moscow	72.90	325	*e*P	P	06 37 56.1	-1.1
VRH	Novokhopyorsk	72.95	320	*e*P	P	06 37 56.5	-1.0
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
KHMM	Horse Mountain	73.00	52	*e*P	P	06 37 58.9	+0.6
	comp=Z,7.8nm,0.7s						
J04D	Umpqua Nationa	73.04	50	P	P	06 37 59.1	+0.6
	baz=296,SNR=5.3						
I05D	Terrebonne, OR	73.05	48	P	P	06 37 58.9	+0.5
	baz=297						
F07A	Phinny Hill Vi	73.24	46	*e*P	P	06 38 00.3	+0.9
	comp=Z,10nm,0.9s						
HAWA	Hanford	73.25	46	*e*P	P	06 37 60.0	+0.5
	comp=Z,5.2nm,0.8s						
KMRM	Mail Ridge	73.30	53	*e*P	P	06 38 00.9	+0.9
	comp=Z,7.6nm,1.1s						
YBH	Yreka Blue Hor	73.31	51	*e*P	P	06 38 00.9	+0.9
	comp=Z,8.1nm,0.9s						
YBH	Yreka Blue Hor	73.31	51	*e*P	P	06 38 00.9	+0.9
YBH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
D08A	Wollman Farm,	73.32	45	*e*P	P	06 38 00.4	+0.5
	comp=Z,9.0nm,1.0s						
L04D	Klamath Falls	73.36	51	P	P	06 38 00.7	+0.3
	baz=297,SNR=9.8						
M02C	Callahan	73.36	52	P	P	06 38 01.2	+0.9
	baz=297						
C09A	Chrisman Ranch	73.37	44	*e*P	P	06 38 01.0	+0.9
	comp=Z,7.9nm,0.9s						
E08A	Dider Farm, El	73.50	45	*e*P	P	06 38 02.0	+1.1
PINE	Pine Mountain	73.55	49	*e*P	P	06 38 02.7	+1.2
	comp=Z,23nm,0.8s						
J05D	Fort Rock, OR	73.59	49	P	P	06 38 02.3	+0.6
	baz=297,SNR=9.3						
KCPM	Cahto Peak	73.63	53	*e*P	P	06 38 03.1	+1.1
	comp=Z,9.2nm,0.8s						
N02D	Trinity Center	73.65	52	P	P	06 38 02.9	+0.9
	baz=297						
OBN	Obninsk	73.74	325	*e*P	P	06 38 01.2	-0.9
OBN				*e*		06 38 16.6	
OBN				*e*		06 40 46.0	
OBN				pmax	pmax		
	comp=Z,42nm,2.5s						
OBN				MLR	MLR		
	comp=Z,62nm,13.0s						
LPSR	Galich'ya Gora	73.79	322	*e*P	P	06 38 02.0	-0.5
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
NEW	Newport	73.84	43	*e*P	P	06 38 03.4	+0.4
	comp=Z,10nm,1.0s						
NEW	Newport	73.84	43	*e*P	P	06 38 03.4	+0.4
NEW				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NEW	Newport	73.84	43	P	P	06 38 03.3	+0.4
	baz=298						
M04C	Macdoel	73.87	51	P	P	06 38 04.0	+0.7
	baz=297,SNR=7.5						
WDC	Whiskeytown Da	73.94	52	*e*P	P	06 38 04.1	+0.5
	comp=Z,5.0nm,0.9s						
WDC	Whiskeytown Da	73.94	52	*e*P	P	06 38 04.1	+0.5
WDC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
O02D	Mt. Diablo Mer	73.95	53	P	P	06 38 04.6	+0.8
	baz=297						
E09A	Wood Farm, Sta	74.05	45	*e*P	P	06 38 04.1	-0.1
	comp=Z,7.6nm,0.8s						
G08A	Pilot Rock	74.12	47	*e*P	P	06 38 05.7	+1.0
	comp=Z,3.0nm,0.8s						
I07A	Izee	74.34	48	*e*P	P	06 38 06.9	+0.9
	comp=Z,4.0nm,1.0s						
VSR	Storozhevoye	74.35	321	⇓*e*P	P	06 38 05.3	-0.5
VSR				pmax	pmax		
	comp=Z,14nm,0.6s						
O03E	Paynes Creek	74.57	52	P	P	06 38 07.3	-0.2
	baz=297						
FIA1	FINESS Array S	74.81	334	*e*P	P	06 38 08.2	-0.1
	comp=Z,19nm,1.0s						
FIA0	FINESS Array S	74.81	334	*e*P	P	06 38 08.0	-0.2
FIA0	FINESS Array S	74.81	334	*e*P	P	06 38 08.0	-0.2
FINES	FINESS Array B	74.81	334	*i* P	P	06 38 08.3	+0.1
FINES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FINES	FINESS Array B	74.81	334	P	P	06 38 08.0	-0.2
	comp=Z,8.6nm,0.8s,baz=71,slow=5.7,SNR=28						
F10A	Beach Ranch, E	74.86	45	*e*P	P	06 38 09.9	+0.9
	comp=Z,6.8nm,1.0s						
ORV	Oroville	75.12	53	*e*P	P	06 38 10.3	-0.2
	comp=Z,9.8nm,1.1s						
ORV	Oroville	75.12	53	*e*P	P	06 38 10.3	-0.2
ORV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WALA	Waterton Lakes	75.31	41	*e*P	P	06 38 12.3	+0.7
	comp=Z,7.2nm,0.6s						
J08A	Circle Bar Ran	75.34	48	*e*P	P	06 38 12.7	+0.9
	comp=Z,9.1nm,0.6s						
BMO	Blue Mountains	75.36	46	*e*P	P	06 38 12.5	+0.6
	comp=Z,9.1nm,1.1s						
BMO	Blue Mountains	75.36	46	*e*P	P	06 38 12.5	+0.6
BMO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZEI	Tsey	75.63	311	*e*P	P	06 38 12.7	-0.9
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WVOR	Wild Horse Val	75.67	49	*e*P	P	06 38 14.6	+0.8
	comp=Z,4.6nm,0.9s						
WVOR	Wild Horse Val	75.67	49	*e*P	P	06 38 14.6	+0.8
WVOR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	75.82	313	P	P	06 38 15.3	+0.9
	comp=Z,15nm,0.8s,baz=74,slow=3.4,SNR=28						
KIV	Kislovodsk	75.84	313	*e*P	P	06 38 16.1	+1.4
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
NEY	Neytrino	76.17	312	*de*P	P	06 38 18.5	+1.9
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RUBR	Rubicon Trail	76.28	53	*e*P	P	06 38 18.2	+0.8
	comp=Z,14nm,0.9s						
VSU	Vasula	76.36	331	⇓*e*P	P	06 38 17.2	+0.1
VSU				pmax	pmax		
	comp=Z,40nm,0.8s						
BKZ	Black Stump Fm	76.41	154	*e*P	P	06 38 19.3	+1.6
	comp=Z,5.9nm,0.9s						
MSO	Missoula	76.42	43	*e*P	P	06 38 18.0	+0.1
	comp=Z,3.7nm,0.7s						
MSO	Missoula	76.42	43	P	P	06 38 18.3	+0.4
	baz=301						
PAHR	Pah Rah Range	76.49	52	*e*P	P	06 38 18.8	+0.2
	comp=Z,5.0nm,0.8s						
VCNR	Virginia City	76.50	52	*e*P	P	06 38 19.6	+0.9
	comp=Z,5.8nm,0.8s						
CMB	Columbia Colle	76.60	54	*e*P	P	06 38 19.5	+0.4
	comp=Z,11nm,0.8s						
CMB	Columbia Colle	76.60	54	*e*P	P	06 38 19.5	+0.4
CMB				pmax	pmax		
	comp=Z,11nm,0.8s						
PNTR	Pine Nut	76.64	52	*e*P	P	06 38 20.1	+0.6
	comp=Z,11nm,0.8s						
SUMG	Summit	76.85	0	*e*P	P	06 38 21.5	+1.2
	comp=Z,24nm,1.1s						
SUMG	Summit	76.85	0	*i* P	P	06 38 21.4	+1.2
	comp=Z,48nm,1.0s						
SUMG				*i*		06 38 33.0	
SUMG	Summit	76.85	0	*e*P	P	06 38 21.5	+1.2
SUMG				pmax	pmax		
	comp=Z,24nm,1.1s						
YERR	Yerington	76.93	52	*e*P	P	06 38 21.5	+0.4
	comp=Z,14nm,1.0s						
MFID	Camas Ranch	76.99	47	*e*P	P	06 38 22.3	+1.0
	comp=Z,12nm,1.1s						
WAKR	Walker	77.03	53	*e*P	P	06 38 22.4	+0.7
	comp=Z,5.8nm,0.9s						
THZ	Tophouse	77.43	157	*e*P	P	06 38 23.8	+0.5
	comp=Z,16nm,1.1s						
RYN	Ryan	77.60	52	*e*P	P	06 38 25.1	+0.3
	comp=Z,8.4nm,0.9s						
BFZ	Birch Farm	77.64	155	*e*P	P	06 38 24.2	-0.2
	comp=Z,30nm,1.0s						
KVN	Kaiserville	77.68	52	*e*P	P	06 38 25.7	+0.4
	comp=Z,9.5nm,0.8s						
KVN	Kaiserville	77.68	52	*e*P	P	06 38 25.7	+0.4
KVN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDPB	Devils Postpil	77.70	54	*e*P	P	06 38 26.5	+1.0
	comp=Z,4.4nm,0.9s						
HRY	Holter Researc	77.72	43	*e*P	P	06 38 26.1	+0.8
HLID	Hailey	77.80	46	*e*P	P	06 38 26.2	+0.4
	comp=Z,2.9nm,0.9s						
HLID	Hailey	77.80	46	P	P	06 38 26.4	+0.5
	baz=301						
PAGB	Antelope Grade	77.81	56	*e*P	P	06 38 26.8	+1.0
	comp=Z,10nm,0.9s						
LRM	Limekiln Ridge	77.82	44	*e*P	P	06 38 26.6	+0.6
NV01	Mina Array Sit	77.84	53	*e*P	P	06 38 26.7	+0.5
NVAR	Mina Array Bea	77.84	53	P	P	06 38 26.7	+0.4
	comp=Z,11nm,0.7s,baz=293,slow=5.8,SNR=81						
MLAC	Mammoth, Mammo	77.87	53	P	P	06 38 26.8	+0.4
	baz=300						
NV11	Mina Array Sit	77.94	52	*e*P	P	06 38 27.1	+0.4
	comp=Z,0.3nm,0.7s						
DLMT	Dillon	77.98	44	*e*P	P	06 38 27.4	+0.6
	comp=Z,4.7nm,0.8s						
EGMT	Eagleton	78.20	41	P	P	06 38 28.5	+0.6
	baz=303						
KHZ	Kahutara	78.22	157	*e*P	P	06 38 27.4	-0.2
	comp=Z,14nm,1.2s						
FFC	Flin Flon	78.32	32	*e*P	P	06 38 28.3	0.0
	comp=Z,14nm,1.1s						
FFC	Flin Flon	78.32	32	*e*P	P	06 38 28.3	0.0
FFC				pmax	pmax		
	comp=Z,14nm,1.1s						
BOZ	Bozeman (W)	78.43	44	*e*P	P	06 38 29.5	+0.2
	comp=Z,4.2nm,0.8s						
BOZ	Bozeman (W)	78.43	44	*e*P	P	06 38 29.5	+0.2
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	Bozeman (W)	78.43	44	P	P	06 38 29.3	+0.1
	baz=302						
PKM	Mcpherson Peak	78.53	56	P	P	06 38 30.4	+0.3
	baz=300						
TIN	Tinemaha, Big	78.58	54	P	P	06 38 30.4	+0.2
	baz=300						
VES	Vestal, Richgr	78.58	55	P	P	06 38 29.5	-0.6
	baz=300,SNR=6.3						
ELK	Elko	78.72	49	*e*P	P	06 38 31.8	+0.7
	comp=Z,2.0nm,0.6s						
CWC	Cottonwood Cre	78.99	54	P	P	06 38 32.0	-0.5
	baz=300						
FCC	Fort Churchill	79.04	26	*e*P	P	06 38 31.3	-0.8
	comp=Z,3.2nm,1.1s						
FCC	Fort Churchill	79.04	26	*e*P	P	06 38 31.3	-0.8
FCC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARVC	Arvin	79.12	56	P	P	06 38 33.1	0.0
	baz=300						
YHB	Horse Butte	79.14	44	*e*P	P	06 38 34.3	+1.0
	comp=Z,6.9nm,0.9s						
GRAC	Grapevine Rang	79.20	53	P	P	06 38 33.7	+0.2
	baz=300,SNR=6.5						

DAC	Darwin (Calif)	79.41	54	eP	P	06 38 34.3	-0.6
	comp=Z,3.0nm,0.9s						
DAC	Darwin (Calif)	79.41	54	eP	P	06 38 34.3	-0.6
DAC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BLG	Laguna Peak, P	79.46	57	P	P	06 38 35.0	0.0
	baz=300						
SNCC	San Nicolas Is	79.55	58	P	P	06 38 35.4	-0.1
	baz=300						
MPMC	Manual Prospec	79.59	54	P	P	06 38 35.8	-0.1
	baz=301,SNR=6.6						
H17A	Grant Village	79.71	44	eP	P	06 38 39.1	+2.7
	comp=Z,11nm,0.9s						
H17A	Grant Village	79.71	44	P	P	06 38 38.9	+2.4
	baz=303						
LKWY	Lake	79.72	44	eP	P	06 38 39.4	+2.9
	comp=Z,7.8nm,0.9s						
R11A	Troy Canyon, C	79.73	51	eP	P	06 38 36.8	+0.3
	comp=Z,3.0nm,0.9s						
R11A	Troy Canyon, C	79.73	51	P	P	06 38 36.6	+0.1
	baz=301,SNR=8.2						
LRMC	Laurel Mtn Rad	79.75	55	P	P	06 38 37.0	+0.3
	baz=301						
HVU	Hansel Valley	79.77	47	eP	P	06 38 37.8	+1.1
	comp=Z,3.9nm,0.7s						
FLWY	Flagg Ranch	79.81	45	eP	P	06 38 39.4	+2.5
	comp=Z,8.1nm,0.9s						
FURC	Furnace Creek,	79.82	54	P	P	06 38 37.1	+0.3
	baz=301,SNR=6.9						
EDW2	Edwards Air Fo	79.83	56	P	P	06 38 37.0	0.0
	baz=300,SNR=8.2						
FXWY	Fox Creek	79.85	45	eP	P	06 38 38.6	+1.4
	comp=Z,7.3nm,1.1s						
AKASG	Malin Array Be	79.89	324	P	P	06 38 36.7	-0.2
	comp=Z,8.5nm,0.7s,baz=49,slow=5.9,SNR=18						
AKASG				LR	LR	07 18 53.9	
	comp=Z,66nm,18.2s,baz=250,slow=39						
AKBB	Malin Array Si	79.89	324	eP	P	06 38 37.0	+0.1
	comp=Z,9.5nm,0.8s						
AKBB	Malin Array Si	79.89	324	eP	P	06 38 37.0	+0.1
AKBB				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIEV	Kiev	79.90	324	eP	P	06 38 37.0	0.0
	comp=Z,9.3nm,0.8s						
KIEV	Kiev	79.90	324	⇑iP	P	06 38 37.0	0.0
KIEV	Kiev	79.90	324	⇓iP	P	06 38 36.7	-0.2
AK11	Malin Array Si	79.93	324	eP	P	06 38 37.0	-0.1
MOOW	Moose Ponds	79.96	45	eP	P	06 38 38.7	+0.9
	comp=Z,1.6nm,0.9s						
TPNV	Topopah Spring	80.00	53	eP	P	06 38 38.2	+0.2
	comp=Z,10nm,1.0s						
TPNV	Topopah Spring	80.00	53	eP	P	06 38 38.2	+0.2
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TPNV	Topopah Spring	80.00	53	P	P	06 38 38.0	0.0
	baz=301,SNR=11						
RLMT	Red Lodge	80.09	43	eP	P	06 38 39.3	+0.9
	comp=Z,6.1nm,0.6s						
RLMT	Red Lodge	80.09	43	P	P	06 38 39.3	+0.9
	baz=304						
NC405	NORSAR Array S	80.10	338	eP	P	06 38 38.2	+0.3
REDW	Red Top Meadow	80.11	45	eP	P	06 38 40.0	+1.5
	comp=Z,7.4nm,1.1s						
SNOW	Snow King Moun	80.11	45	eP	P	06 38 40.8	+2.1
	comp=Z,5.0nm,1.1s						
LOHW	Long Hollow	80.12	45	eP	P	06 38 39.6	+1.0
	comp=Z,5.2nm,1.0s						
SPUT	South Promonto	80.22	48	eP	P	06 38 39.8	+0.7
	comp=Z,3.7nm,0.9s						
CIS	Catalina Islan	80.28	57	P	P	06 38 39.2	-0.2
	baz=300						
NB2	NORSAR Subarra	80.31	338	P	P	06 38 38.4	-0.7
	comp=Z,2.7nm,0.7s,baz=40,slow=5.6						
NB200	NORSAR Array S	80.31	338	eP	P	06 38 38.7	-0.4
NOA	NORSAR Array B	80.31	338	P	P	06 38 38.7	-0.4
	comp=Z,4.5nm,0.8s,baz=40,slow=5.2,SNR=16						
BFSC	Mount Baldy Ra	80.40	56	P	P	06 38 40.0	-0.1
	baz=301						
GSC	Goldstone, Bar	80.46	55	eP	P	06 38 41.0	+0.6
	comp=Z,5.8nm,1.1s						
GSC	Goldstone, Bar	80.46	55	eP	P	06 38 41.0	+0.6
GSC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GSC	Goldstone, Bar	80.46	55	P	P	06 38 40.2	-0.2
	baz=301,SNR=5.4						
DUG	Dugway, Tooele	80.59	49	eP	P	06 38 41.7	+0.6
	comp=Z,5.2nm,0.6s						
DUG	Dugway, Tooele	80.59	49	eP	P	06 38 41.7	+0.6
DUG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
DUG	Dugway, Tooele	80.59	49	P	P	06 38 41.2	+0.1
	baz=302						
SUW	Suwalki	80.70	329	eP	P	06 38 41.5	+0.3
SUW	Suwalki	80.70	329	eP	P	06 38 41.5	+0.3
PSUT	Pine Spring	80.79	51	eP	P	06 38 42.6	+0.3
	comp=Z,3.2nm,0.9s						
LAO	LASA Array	80.94	41	P	P	06 38 42.9	+0.2
	baz=306						
SHPR	Sheep Range	80.97	53	eP	P	06 38 43.7	+0.4
	comp=Z,3.4nm,0.8s						
TCUT	Toone Canyon	80.99	47	eP	P	06 38 44.1	+0.7
	comp=Z,7.7nm,0.9s						
DGMT	Dagmar	81.00	38	P	P	06 38 43.0	+0.1
	baz=307						
CTU	Camp Tracy	81.00	48	eP	P	06 38 44.2	+0.8
	comp=Z,8.0nm,1.1s						
TUQ	Turquoise Moun	81.00	54	P	P	06 38 43.5	+0.1
	baz=302,SNR=8.1						
HEC	Hector,Ludlow	81.03	55	P	P	06 38 43.5	0.0
	baz=301,SNR=5.6						
MURC	Murrieta	81.06	56	P	P	06 38 43.4	-0.1
	baz=301						
NLU	North Lily Min	81.19	49	eP	P	06 38 44.6	+0.2
	comp=Z,2.5nm,0.7s						
BW06	Boulder Array	81.23	45	eP	P	06 38 44.9	+0.3
	comp=Z,2.6nm,0.8s						
BW06	Boulder Array	81.23	45	P	P	06 38 44.3	-0.3
	baz=304						
PD31	Pinedale Array	81.23	45	eP	P	06 38 45.6	+1.0
PDAR	Pinedale Array	81.23	45	P	P	06 38 44.5	-0.1
	comp=Z,1.9nm,0.6s,baz=276,slow=1.9,SNR=28						
JLU	Jordanelle	81.24	48	eP	P	06 38 45.7	+0.9
	comp=Z,5.2nm,0.8s						
MPU	Maple Canyon	81.44	48	eP	P	06 38 46.5	+0.8
	comp=Z,3.7nm,0.7s						
109C	Camp Elliot, M	81.49	57	P	P	06 38 46.0	+0.2
	baz=301						
GMRC	Granite Mounta	81.53	55	P	P	06 38 45.9	-0.3
	baz=302,SNR=8.2						
PFO	Pinyon Flats O	81.57	56	eP	P	06 38 46.5	0.0
	comp=Z,8.9nm,0.9s						
PFO	Pinyon Flats O	81.57	56	eP	P	06 38 46.5	0.0
PFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PFO	Pinyon Flats O	81.57	56	P	P	06 38 46.3	-0.1
	baz=301,SNR=9.5						
XPFO	Pion Flat	81.58	56	eP	P	06 38 46.5	0.0
	comp=Z,9.5nm,0.9s						
CCUT	Cedar City	81.64	51	eP	P	06 38 47.8	+1.0
BELC	Belle Mtn. Jos	81.70	55	P	P	06 38 46.5	-0.6
	baz=302,SNR=9.1						
MSU	Marysvale	81.91	50	eP	P	06 38 49.2	+0.9
MSU	Marysvale	81.91	50	eP	P	06 38 49.2	+0.9
MONP2	Monument Peak	81.97	57	P	P	06 38 48.5	-0.1
	baz=302,SNR=7.1						
LCMT	Little Creek M	82.01	52	eP	P	06 38 49.5	+0.8
	comp=Z,6.1nm,0.7s						
MTPU	Mount Pierson	82.16	50	eP	P	06 38 50.8	+1.1
	comp=Z,3.6nm,1.0s						
IRM	Iron Mountain	82.22	55	P	P	06 38 49.6	-0.2
	baz=302,SNR=6.6						
BC3	Big Chuckawall	82.27	55	P	P	06 38 50.0	0.0
	baz=302,SNR=11						
KNB	Kanab	82.29	51	eP	P	06 38 50.9	+0.7
	comp=Z,9.9nm,0.9s						
KNB	Kanab	82.29	51	eP	P	06 38 50.9	+0.7
KNB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
P17A	Butcher Ranch,	82.32	48	eP	P	06 38 51.3	+1.0
IKP	In-Ko-Pah, Jac	82.33	57	P	P	06 38 50.3	-0.1
	baz=302,SNR=5.1						
Q16A	Castle Valley	82.35	49	eP	P	06 38 51.5	+1.0
	comp=Z,4.4nm,0.8s						
SWSC	Sam W. Stewart	82.39	56	P	P	06 38 50.3	-0.3
	baz=302						
W13A	Hualapai Mount	82.60	54	eP	P	06 38 52.1	+0.1
	comp=Z,1.6nm,0.7s						
SRU	San Rafael Swe	82.66	49	eP	P	06 38 52.4	+0.3
	comp=Z,6.3nm,0.7s						
SRU	San Rafael Swe	82.66	49	eP	P	06 38 52.4	+0.3
SRU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PDMCI	Parker Dam,Lak	82.85	54	P	P	06 38 53.0	+0.1
	baz=302						
Y12C	Blythe	82.87	55	eP	P	06 38 54.1	+1.1
	comp=Z,4.6nm,0.8s						
Y12C	Blythe	82.87	55	P	P	06 38 53.3	+0.2
	baz=302						
U15A	North Rim	82.97	52	eP	P	06 38 54.4	+0.5
	comp=Z,2.5nm,0.7s						
GLA	Glamis	83.03	56	eP	P	06 38 54.1	+0.1
	comp=Z,9.5nm,0.8s						
GLA	Glamis	83.03	56	eP	P	06 38 54.1	+0.1
GLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GLA	Glamis	83.03	56	P	P	06 38 54.4	+0.4
	baz=302						
K22A	Casper	83.13	44	eP	P	06 38 53.5	-1.0
	comp=Z,7.4nm,0.7s						
K22A	Casper	83.13	44	P	P	06 38 54.5	0.0
	baz=306						
BEL	Belsk	83.24	328	eP	P	06 38 55.1	+0.5
BEL	Belsk	83.24	328	eP	P	06 38 55.1	+0.5
O20A	White River Ci	83.53	47	eP	P	06 38 57.3	+0.7
	comp=Z,8.1nm,0.8s						
O20A	White River Ci	83.53	47	P	P	06 38 57.1	+0.4
	baz=305						
RSSD	Black Hills	83.70	42	eP	P	06 38 57.4	-0.1
	comp=Z,4.1nm,0.7s						
RSSD	Black Hills	83.70	42	eP	P	06 38 57.4	-0.1
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RSSD	Black Hills	83.70	42	P	P	06 38 57.4	-0.1
	baz=307						
MDND	Maddock	83.79	37	eP	P	06 38 57.8	+0.2
	comp=Z,11nm,0.8s						
MDND	Maddock	83.79	37	P	P	06 38 57.7	+0.2
	baz=310						
BR101	Keskin Array S	83.81	313	eP	P	06 38 58.5	+0.5
BR131	Keskin Array S	83.81	313	eP	P	06 38 59.0	+1.0
BRTR	Keskin Array B	83.81	313	ceP	P	06 38 58.2	+0.2
BRTR				pmax	pmax		
	comp=Z,14nm,0.8s						
BRTR	Keskin Array B	83.81	313	P	P	06 38 58.4	+0.5
	comp=Z,14nm,0.8s,baz=104,slow=3.8,SNR=65						
KWP	Kalwaria Pacla	83.81	326	eP	P	06 38 58.5	+0.9
KWP	Kalwaria Pacla	83.81	326	eP	P	06 38 58.5	+0.9
BIZ	Bicaz	83.83	322	⇓iP	P	06 38 58.4	+0.6
Y14A	Wickenburg	83.84	54	eP	P	06 38 58.5	+0.3
	comp=Z,4.0nm,0.6s						
BUR08	Bucovina Ar. S	83.85	323	eP	P	06 38 58.5	+0.5
BUR04	Bucovina Ar. S	83.86	323	eP	P	06 38 58.4	+0.3
BURAR	Bucovina Array	83.86	323	⇑iP	P	06 38 58.2	+0.1
BURAR	Bucovina Array	83.86	323	⇑P	P	06 38 58.2	+0.1
PV09	Paradox Valley	83.90	49	eP	P	06 39 00.1	+1.4
PV21	Cone Mtn., Par	83.97	48	eP	P	06 38 59.4	+0.5
	comp=Z,6.6nm,0.7s						
PV23	Carpenter Ridg	84.01	49	eP	P	06 38 59.1	-0.1
	comp=Z,13nm,1.2s						
PV14	Lion Creek, Pa	84.04	49	eP	P	06 38 59.6	+0.2
	comp=Z,8.7nm,0.8s						
ULM	Lac du Bonnet	84.05	33	eP	P	06 38 58.3	-0.5
	comp=Z,3.5nm,1.1s						
ULM	Lac du Bonnet	84.05	33	eP	P	06 38 58.3	-0.5
ULM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULM	Lac du Bonnet	84.05	33	P	P	06 38 57.8	-1.0
	comp=Z,1.4nm,0.4s,baz=318,slow=6.5,SNR=4.9						
RAYN	Ar Rayn	84.08	294	eP	P	06 39 00.8	+1.3
	comp=Z,28nm,1.1s						
RAYN	Ar Rayn	84.08	294	eP	P	06 39 00.8	+1.3
RAYN				pmax	pmax		
	comp=Z,28nm,1.1s						
WUAZ	Wupatki	84.09	52	P	P	06 38 59.8	+0.3
	baz=304						
PV20	West Nyswonger	84.10	49	eP	P	06 39 00.3	+0.7
	comp=Z,8.1nm,0.8s						
PV19	Morning Glory	84.11	49	eP	P	06 38 59.8	+0.2
	comp=Z,6.5nm,0.7s						
PV04	Paradox Valley	84.11	49	eP	P	06 39 00.3	+0.7
TIRR	Tirgusor	84.12	319	⇓iP	P	06 38 59.5	+0.3
TIRR	Tirgusor	84.12	319	⇓P	P	06 38 59.5	+0.3
PV17	East Wray Mesa	84.14	49	eP	P	06 38 60.0	+0.2
	comp=Z,7.7nm,0.8s						
PV16	Nyswonger Mesa	84.15	49	eP	P	06 39 00.3	+0.4
	comp=Z,7.8nm,1.1s						
PV05	Paradox Valley	84.16	49	eP	P	06 38 59.3	-0.7
	comp=Z,7.8nm,0.8s						
VRI	Vrincioaia	84.17	321	⇑iP	P	06 39 00.4	+0.8
VRI	Vrincioaia	84.17	321	⇑P	P	06 39 00.4	+0.8
PV11	David Mesa, Pa	84.18	49	eP	P	06 39 00.6	+0.6
	comp=Z,15nm,1.1s						
PV12	Saucer Basin,	84.22	49	eP	P	06 39 00.7	+0.5
	comp=Z,7.7nm,0.9s						
PV03	Paradox Valley	84.22	49	eP	P	06 39 00.3	+0.1
	comp=Z,12nm,1.2s						
PLOR	Plostina	84.22	321	⇑iP	P	06 39 00.2	+0.3
PLOR	Plostina	84.22	321	⇑P	P	06 39 00.2	+0.3
TLB	Topalu	84.25	319	⇓iP	P	06 39 00.6	+0.7
TLB	Topalu	84.25	319	⇓P	P	06 39 00.6	+0.7
ANTO	Ankara	84.26	313	eP	P	06 39 00.8	+0.6
	comp=Z,16nm,0.7s						
ANTO	Ankara	84.26	313	eP	P	06 39 00.8	+0.6
ANTO				pmax	pmax		
	comp=Z,16nm,0.7s						
PV13	Radium Mtn., P	84.30	49	eP	P	06 39 00.8	+0.1
	comp=Z,5.7nm,0.7s						
PV02	Paradox Valley	84.32	49	eP	P	06 39 01.7	+0.9
	comp=Z,5.1nm,0.9s						
PV01	Paradox Valley	84.47	49	eP	P	06 39 01.7	+0.2
	comp=Z,5.2nm,0.9s						
N23A	Red Feather La	84.51	45	eP	P	06 39 02.8	+1.1
	comp=Z,13nm,0.7s						
N23A	Red Feather La	84.51	45	P	P	06 39 02.5	+0.8
	baz=306						
OZUR		84.54	321	⇑iP	P	06 39 02.5	+1.1
X16A	Lo Mia Camp, P	84.66	53	eP	P	06 39 03.2	+0.8
	comp=Z,2.2nm,0.9s						
UZH	Uzhgorod	84.68	325	eP	P	06 39 01.4	-0.6
UZH				e		06 39 07.4	
OJC	Ojcow	84.80	327	eP	P	06 39 03.4	+0.7
OJC	Ojcow	84.80	327	eP	P	06 39 03.0	+0.4
	comp=Z,7.8nm,0.8s						
OJC	Ojcow	84.80	327	eP	P	06 39 03.3	+0.7
DOPR	Dopca	84.83	322	⇑iP	P	06 39 03.8	+0.9
MLR	Muntele Rosu	84.84	321	⇓iP	P	06 39 03.4	+0.3
MLR	Muntele Rosu	84.84	321	⇓P	P	06 39 03.4	+0.3
SMCO	Snowmass	84.89	47	eP	P	06 39 04.4	+0.6
	comp=Z,5.7nm,0.9s						
MVCO	Mesa Verde	85.05	49	eP	P	06 39 03.3	-1.1
	comp=Z,1.5nm,0.8s						
MVCO	Mesa Verde	85.05	49	P	P	06 39 03.9	-0.5
	baz=305						
214A	Organ Pipe Nat	85.05	56	P	P	06 39 04.8	+0.5
	baz=303						
NIE	Niedzica	85.11	326	eP	P	06 39 05.2	+1.0
NIE	Niedzica	85.11	326	eP	P	06 39 05.2	+1.0
VOIR		85.35	321	⇓iP	P	06 39 06.0	+0.4
VOIR		85.35	321	⇓P	P	06 39 06.0	+0.4
ISCO	Idaho Springs	85.37	46	eP	P	06 39 06.4	+0.3
	comp=Z,5.2nm,0.8s						
ISCO	Idaho Springs	85.37	46	eP	P	06 39 06.4	+0.3
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ISCO	Idaho Springs	85.37	46	P	P	06 39 06.6	+0.5
	baz=307						
X18A	Snowflake	85.61	52	eP	P	06 39 07.8	+0.6
	comp=Z,1.7nm,0.6s						
ARR	Arges	85.62	321	⇑iP	P	06 39 07.7	+0.8
LANS	Liptovska Anna	85.69	327	eP	P	06 39 08.2	+1.0
LANS	Liptovska Anna	85.69	327	eP	P	06 39 08.2	+1.0
S22A	4UR Ranch, Cre	85.82	48	eP	P	06 39 09.2	+0.9
	comp=Z,4.6nm,1.1s						
S22A	4UR Ranch, Cre	85.82	48	P	P	06 39 08.5	+0.2
	baz=306						
OKC	Ostrava-Krasne	85.83	328	eP	P	06 39 08.4	+0.6
OKC	Ostrava-Krasne	85.83	328	eP	P	06 39 08.4	+0.6
MORC	Moravsky Berou	86.15	328	⇑iP	P	06 39 09.8	+0.4
MORC	Moravsky Berou	86.15	328	⇑P	P	06 39 09.8	+0.4
Q24A	Divide	86.15	46	eP	P	06 39 11.4	+1.4
	comp=Z,4.1nm,0.7s						
Q24A	Divide	86.15	46	P	P	06 39 10.0	0.0
	baz=307						
TUC	Tucson	86.29	54	P	P	06 39 10.5	+0.1
	baz=304						
DPC	Dobruska-Polom	86.29	329	eP	P	06 39 10.4	+0.3
DPC	Dobruska-Polom	86.29	329	eP	P	06 39 10.4	+0.3
SUSD	Miller	86.34	39	P	P	06 39 10.2	-0.2
	baz=311						
VYHS	Vyhne	86.45	326	eP	P	06 39 11.0	+0.1
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
VYHS	Vyhne	86.45	326	eP	P	06 39 11.0	+0.1
SDCO	Great Sand Dun	86.66	48	eP	P	06 39 13.1	+0.6
	comp=Z,2.9nm,0.8s						
SDCO	Great Sand Dun	86.66	48	P	P	06 39 12.6	0.0
	baz=307						
VRAC	Vranov	86.92	328	⇓iP	P	06 39 14.1	+1.0
VRAC	Vranov	86.92	328	⇓P	P	06 39 14.1	+1.0
CLL	Collm	87.01	331	⇓iP	P	06 39 12.7	-0.8
	comp=Z,15nm,1.3s						
CLL	Collm	87.01	331	⇓iP	P	06 39 12.7	-0.8
CLL				pmax	pmax		
	comp=Z,15nm,1.3s						
ANMO	Albuquerque	87.71	50	⇑eP	P	06 39 16.9	-0.6
ANMO				pmax	pmax		
	comp=Z,13nm,3.9s						
ANMO	Albuquerque	87.71	50	P	P	06 39 17.4	-0.2
	baz=306						
T25A	Trinidad	87.72	47	eP	P	06 39 19.1	+1.5
	comp=Z,3.3nm,1.1s						
T25A	Trinidad	87.72	47	P	P	06 39 17.9	+0.4
	baz=308						
EYMN	Ely	87.72	33	eP	P	06 39 17.3	+0.2
	comp=Z,11nm,1.1s						
ECSD	EROS Data Cent	88.07	39	eP	P	06 39 18.5	-0.3
	comp=Z,3.3nm,0.8s						
ECSD	EROS Data Cent	88.07	39	P	P	06 39 18.5	-0.3
	baz=312						
CONA	Conrad Observa	88.25	327	i P	P	06 39 16.3	-3.4
	comp=Z,4.7nm,0.8s						
KHC	Kasperske Hory	88.39	329	eP	P	06 39 20.0	-0.3
KHC				ex	x	06 39 31.2	
KHC	Kasperske Hory	88.39	329	eP	P	06 39 20.0	-0.3
KHC				e		06 39 31.2	
GERES	GERESS Array B	88.55	329	P	P	06 39 20.6	-0.5
	comp=Z,0.4nm,0.4s,baz=359,slow=5.3,SNR=4.9						
GEA0	GERESS Array S	88.56	329	eP	P	06 39 20.8	-0.3
E38A	The Farm, Brul	88.66	34	eP	P	06 39 21.3	-0.2
	comp=Z,10nm,0.8s						
E38A	The Farm, Brul	88.66	34	P	P	06 39 21.0	-0.5
	baz=316						
F37A	Hinrichs Farm,	88.76	35	P	P	06 39 21.6	-0.4
	baz=315						
ARSA	Arzberg	88.90	327	i PcP	P	06 39 23.1	+0.4
	comp=Z,3.9nm,1.0s						
DIVS	Divibare	88.93	323	eP	P	06 39 22.6	-0.4
	comp=Z,1.7nm,1.0s						
F38A	Pierce - Schro	88.96	35	P	P	06 39 22.9	0.0
	baz=316						
SPMN	Marine on St.	89.02	36	eP	P	06 39 23.4	+0.1
	comp=Z,10nm,0.8s						
SPMN	Marine on St.	89.02	36	P	P	06 39 22.9	-0.4
	baz=315						
E39A	Mellen	89.30	34	P	P	06 39 23.9	-0.6
	baz=316						
F39A	Loretta	89.46	34	P	P	06 39 24.8	-0.5
	baz=316						
G38A	Ridgeland	89.54	35	P	P	06 39 25.2	-0.5
	baz=316						
SOKA	Soboth	89.55	327	i P	P	06 39 25.3	-0.5
	comp=Z,5.4nm,0.8s						
E40A	Wakefield	89.56	33	P	P	06 39 25.4	-0.4
	baz=317						
H38A	Maiden Rock	89.67	36	P	P	06 39 25.7	-0.6
	baz=315						
D41A	Chassel	89.73	32	eP	P	06 39 27.1	+0.6
	comp=Z,29nm,1.1s						
G39A	Holcombe	89.79	35	P	P	06 39 27.0	+0.2
	baz=316						
F40A	Park Falls	89.84	34	P	P	06 39 27.4	+0.3
	baz=317						
OBKA	Obir	89.90	327	eP	P	06 39 26.1	-1.3
	comp=Z,6.9nm,1.1s						
KBA	Koelnbreinsper	90.03	328	i P	P	06 39 26.9	-1.3
	comp=Z,0.8nm,0.5s						
MYKA	Terra Mystica	90.23	328	i P	P	06 39 27.9	-1.1
	comp=Z,7.1nm,1.0s						
MNTX	Cornudas Mount	90.37	52	eP	P	06 39 30.5	+0.7
MNTX	Cornudas Mount	90.37	52	P	P	06 39 29.9	+0.1
	baz=307						
ABTA	Abfaltersbach	90.66	328	i P	P	06 39 29.7	-1.2
	comp=Z,7.9nm,1.0s						
MOTA	Moosalm	90.83	329	i PcP	P	06 39 31.4	-0.5
	comp=Z,4.7nm,0.9s						
AMTX	Amarillo	90.85	48	eP	P	06 39 33.2	+1.1
	comp=Z,2.6nm,0.8s						
AMTX	Amarillo	90.85	48	P	P	06 39 32.5	+0.4
	baz=309						
RETA	Reutte	90.87	330	eP	P	06 39 31.0	-0.9
	comp=Z,12nm,1.1s						
J39A	Decorah	90.92	36	P	P	06 39 31.4	-0.8
	baz=316						
I40A	Norwalk	91.07	35	P	P	06 39 32.3	-0.6
	baz=316						
KSU1	Kansas State U	91.19	42	P	P	06 39 33.1	-0.4
	baz=312						
BFO	Black Forest	91.24	332	i P	P	06 39 34.3	+0.7
FETA	Feichten	91.24	329	i P	P	06 39 30.9	-2.9
	comp=Z,9.8nm,1.0s						
K39A	Oelwein	91.28	37	P	P	06 39 33.4	-0.4
	baz=316						
DAVA	Damuels	91.40	330	i PcP	P	06 39 34.2	-0.4
	comp=Z,13nm,0.9s						
G43A	Wallace	91.48	33	eP	P	06 39 35.1	+0.4
	comp=Z,17nm,1.0s						
K40A	Colesburg	91.67	37	P	P	06 39 35.2	-0.4
	baz=316						
FUORN	Ofenpass-Fuorn	91.75	329	eP	P	06 39 36.3	0.0
	comp=Z,22nm,1.0s						
K41A	Shullsburg	92.16	36	P	P	06 39 37.2	-0.7
	baz=317						
N40A	Mertquake, Sal	92.73	38	P	P	06 39 40.7	+0.1
	baz=316						
WMOK	Wichita Mounta	92.78	46	eP	P	06 39 41.1	+0.2
	comp=Z,5.2nm,0.8s						
WMOK	Wichita Mounta	92.78	46	eP	P	06 39 41.2	+0.2
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMOK	Wichita Mounta	92.78	46	P	P	06 39 41.2	+0.2
	baz=311						
TX31	Lajitas Ar. Si	92.98	53	eP	P	06 39 42.7	+0.6
LTX	Lajitas	92.98	53	eP	P	06 39 42.5	+0.4
LTX	Lajitas	92.98	53	eP	P	06 39 42.5	+0.4
TXAR	Lajitas Array	92.98	53	P	P	06 39 42.5	+0.4
	comp=Z,5.9nm,1.0s,baz=298,slow=2.4,SNR=34						
ABTX	Abilene, Hawle	93.60	49	P	P	06 39 44.6	-0.2
	baz=310						
O41A	Passleys Farm,	93.66	38	P	P	06 39 44.7	-0.1
	baz=316						
TUL1	Leonard	93.82	44	P	P	06 39 45.7	0.0
	baz=313						
P41A	Barry, Barry	93.88	39	P	P	06 39 46.1	+0.2
	baz=316						
TOBO	Tobermory, Bru	94.26	30	P	P	06 39 47.1	-0.4
	baz=323						
Q41A	Truxton	94.30	39	P	P	06 39 47.8	0.0
	baz=316						
K46A	Dorr	94.33	34	P	P	06 39 46.3	-1.5
	baz=320						
P42A	Winchester	94.33	38	eP	P	06 39 48.7	+0.7
	comp=Z,8.6nm,0.8s						
P42A	Winchester	94.33	38	P	P	06 39 47.6	-0.4
	baz=316						
R41A	Rosebud	94.69	40	P	P	06 39 49.6	0.0
	baz=316						
JCT	Junction City	94.87	50	eP	P	06 39 50.9	+0.2
	comp=Z,5.5nm,0.7s						
JCT	Junction City	94.87	50	eP	P	06 39 50.9	+0.2
JCT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
JCT	Junction City	94.87	50	P	P	06 39 50.1	-0.6
	baz=310						
CCM	Cathedral Cave	94.94	40	P	P	06 39 50.2	-0.6
	baz=316						
S41A	Jillco Farms,	94.99	40	P	P	06 39 50.0	-1.1
	baz=316						
BRCO	Bruce Peninsul	95.08	30	P	P	06 39 50.9	-0.5
	baz=323						
U40A	Yellville	95.23	42	P	P	06 39 51.9	-0.3

	baz=315						
T41A	Mountain View	95.37	41	P	P	06 39 51.9	-0.9
	baz=315						
S42A	Caledonia	95.39	40	P	P	06 39 52.4	-0.5
	baz=316						
WHTX	Lake Whitney,	95.41	48	P	P	06 39 53.4	+0.4
	baz=312						
Q44A	Meyer Farm, Va	95.53	38	P	P	06 39 53.8	+0.4
	baz=317						
L48A	N Adams	95.54	33	P	P	06 39 53.3	-0.1
	baz=321						
V41A	Mountainview	96.04	42	P	P	06 39 55.2	-0.7
	baz=315						
MIAR	Mount Ida	96.07	44	*e*P	P	06 39 56.2	+0.2
	comp=Z,6.3nm,0.8s						
MIAR	Mount Ida	96.07	44	*e*P	P	06 39 56.2	+0.2
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MIAR	Mount Ida	96.07	44	P	P	06 39 55.9	-0.2
	baz=314						
R45A	Skylar, Fairfi	96.37	38	P	P	06 39 56.6	-0.7
	baz=318						
K52A	Tillsonburg	96.57	31	P	P	06 39 57.5	-0.6
	baz=324						
P49A	Miami Univ. Ec	97.26	35	P	Pdif	06 40 01.3	0.0
	baz=320						
TOA1	Torodi Ar. Sit	122.42	313	*e*PKPdf	PKPdf	06 45 22.1	-2.1
TOA0	Torodi Ar. Sit	122.42	313	*e*PKPdf	PKPdf	06 45 23.8	-0.5
TORD	Torodi Ar. Bea	122.42	313	PKP	PKPdf	06 45 22.1	-2.1
	comp=Z,0.8nm,0.5s,baz=4.1,slow=2.2,SNR=15						
SDV	Santo Domingo	129.16	44	*e*PKPdf	PKiKP	06 45 37.6	-0.5
DBIC	Dimbokro	131.48	315	PKP	PKiKP	06 45 42.2	-0.3
	comp=Z,1.4nm,0.5s,baz=36,slow=2.2,SNR=4.0						
LPAZ	La Paz	148.34	70	*e*PKPbc	PKPbc	06 46 16.3	+0.3
LPAZ	La Paz	148.34	70	PKPbc	PKPbc	06 46 16.1	+0.1
	comp=Z,8.9nm,0.7s,baz=322,slow=2.4,SNR=26						
MNMC	Minye Minye	148.57	76	*e*PKPdf	PKPdf	06 46 14.1	+1.7
MNMC				*e*PKPbc	PKiKP	06 46 17.1	-0.6
PB11	IPOC Station P	148.81	77	*e*PKPbc	PKPbc	06 46 17.0	+0.4
PB04	IPOC Station P	149.49	82	*e*PKPbc	PKiKP	06 46 18.8	-0.5
PB01	IPOC Station P	149.52	79	*e*PKPbc	PKiKP	06 46 18.6	-0.7
LVC	Limon Verde	150.65	81	*e*PKPbc	PKiKP	06 46 22.1	+0.2
LVC	Limon Verde	150.65	81	*e*PKIKP	PKiKP	06 46 22.1	+0.2
GO06	Curarrehue	150.87	117	*e*PKPbc	PKiKP	06 46 21.7	+0.1
GO02	Mina Guanaco	150.97	87	*e*PKPbc	PKiKP	06 46 22.4	0.0
LCO	Las Campanas	151.03	95	*e*PKPbc	PKiKP	06 46 22.3	-0.1
LCO	Las Campanas	151.03	95	*e*PKIKP	PKiKP	06 46 22.3	-0.1
GO03	Copiap	151.10	92	*e*PKPbc	PKiKP	06 46 22.3	-0.1
GO04	Tololo Observa	151.16	97	*e*PKPbc	PKPbc	06 46 21.6	-0.5
ROC1	El Roble	151.34	103	*e*PKPbc	PKiKP	06 46 22.6	-0.3
PLCA	Paso Flores	151.40	119	*e*PKPbc	PKiKP	06 46 22.8	+0.2
PLCA	Paso Flores	151.40	119	*e*PKIKP	PKiKP	06 46 22.8	+0.2

IDC ***02*** *06:36:52.3±2.6, 16°.24N×96°.26E, h0^{km}, mb3.7/2, mb1 3.6/3, mb1mx3.3/42, mbtmp3.6/3, ML3.8/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/38, Error ellipse: s-maj=30.3km s-min=21.0km az=12.0*

ISC 02 06:36:53.0±1.7**, 16°.22N**±0°.09×**96°.3E**±0°.1**, h10^{km}, n12,** σ**1^{s}73**/11**, Near south coast of Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UMPA	Umpang Tak	2.50	90	P	Pb	06 37 36.9	-1.2
UTHA	Uthaitani	3.14	102	P	Pb	06 37 50.1	+1.2
SRDT	SRDT	3.33	124	P	Pg	06 37 58.5	+1.7
CMAR	Chiang Mai Arr	3.40	49	Pn	Pn	06 37 45.6	-0.5
	2.5nm,0.3s,baz=237,slow=15,SNR=13						
CMAR				Pg	Pb	06 37 54.1	+0.8
	7.9nm,0.3s,baz=234,slow=19,SNR=44						
CMAR				Lg	Lg	06 38 40.2	
	9.8nm,0.3s,baz=234,slow=32,SNR=8.3						
CHTO	Chiang Mai	3.64	44	P	Pb	06 37 56.7	-0.7
CMMT	Chiang Mai	3.64	44	P	Pb	06 37 56.6	-0.9
PBKT	Sadao Pong	4.54	85	P	Pb	06 38 09.9	-2.9
PHET	Kaeng Krachan	4.63	135	P	Pg	06 38 33.7	+12
KRAB	Krabi	8.45	160	P	Pb	06 39 16.8	-2.7
PALK	Pallekele	17.62	241	LR	LR	06 47 25.1	
	comp=Z,174nm,18.1s,baz=295,slow=36						
MKAR	Makanchi Array	32.62	342	P	P	06 43 25.4	+0.5
	0.6nm,0.7s,baz=153,slow=10,SNR=7.0						
ZALV	Zalesovo Beam	38.70	349	P	P	06 44 17.9	+1.0
	0.7nm,0.6s,baz=169,slow=8.7,SNR=4.4						

IDC ***02*** *06:39:16.9±1.4, 60°.13N×152°.72W, h71^{km}±18^{km}, mb3.6/8, mb1 3.8/13, mb1mx3.5/45, mbtmp3.9/13, Error ellipse: s-maj=19.6km s-min=9.7km az=112.0*

ISCJB ***02*** *06:39:18.0±0.2, 60°.10N±0°.02×152°.53W±0°.04, h105^{km}±2^{km}, mb3.9/8, Error ellipse: s-maj=3.9km s-min=2.7km az=136.3*

AEIC ***02*** *06:39:20.2, 60°.07N×152°.55W, h91^{km}, ML3.5*

NEIC ***02*** *06:39:20.2±0.0, 60°.07N×152°.55W, h91^{km}, ML3.5(AEIC), After AEIC.*

NEIC Felt at Kasilof and Ninilchik.

ANF ***02*** *06:39:21.1±1.6, 60°.33N×152°.07W, h10^{km}, ML4.2/3, Error ellipse: s-maj=63.0km s-min=8.7km az=106.0*

ISC 02 06:39:19.3±0.6**, 60°.08N**±0°.03×**152°.55W**±0°.04**, h99^{km}**±5^{km}**, n104,** σ**1^{s}03**/135**, mb3.9**/8**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVE	Iliamna Volcan	0.24	255	P	Pn	06 39 33.0	-0.7
ILS	Iliamna Low So	0.29	245	P	Pn	06 39 33.1	-0.8
ILW	Iliamna West	0.30	266	*e*Pn	Pn	06 39 33.2	-0.8
RED	Redoubt Volcan	0.36	342	P	Pn	06 39 33.5	-0.7
RED				S	Sn	06 39 44.6	-0.7
RSO	Redoubt South	0.40	345	*e*Pn	Pn	06 39 33.9	-0.7
RDWB	Redoubt West	0.43	340	P	Pn	06 39 33.9	-0.8
RDWB				S	Sn	06 39 45.1	-1.1
HOM	Homer	0.62	133	*e*Pn	Pn	06 39 36.0	+0.1
HOM				*e*Sn	Sn	06 39 49.5	+1.1
AUL	Augustine Lava	0.83	213	P	Pn	06 39 37.6	-0.3
AUL				S	Sn	06 39 51.3	-0.5
AUW	Augustine West	0.85	214	P	Pn	06 39 37.7	-0.4
BRLK	Bradley Lake	0.90	110	*e*Pn	Pn	06 39 38.2	-0.4
BRLK				*e*Sn	Sn	06 39 53.1	0.0
BRLK				*e*Sn	Sn	06 39 53.4	+0.4
SPCR	Spurr Chakacha	1.14	8	P	Pn	06 39 40.9	-0.3
SPCR				S	Sn	06 39 56.9	-0.8
SPCN	Chakachatna No	1.16	9	P	Pn	06 39 41.4	-0.1
SPCP	Crater Peak Br	1.20	9	*e*Pn	Pn	06 39 42.0	-0.1
SPCP				*e*Sn	Sn	06 40 00.0	+0.7
FONW	Fourpeaked Sta	1.43	210	P	Pn	06 39 44.1	-0.7
SEW	Seward	1.55	88	*e*Pn	Pn	06 39 45.2	-0.9
SEW				*e*Sn	Sn	06 40 05.6	-0.8
SUA	Susitna One	1.65	32	*e*Pn	Pn	06 39 47.5	+0.1
SUA				*e*Sn	Sn	06 40 10.1	+1.4
RC01	Rabbit Creek A	1.72	53	*e*Pn	Pn	06 39 48.3	+0.1
RC01				*e*Sn	Sn	06 40 09.7	-0.4
SVW2	Sparrevohn	1.81	306	*e*Pn	Pn	06 39 48.5	-0.9
SVW2				*e*Sn	Sn	06 40 10.6	-1.7
KAHG	Katmai Hook Gl	1.90	214	P	Pn	06 39 50.4	-0.1
KAKN	Katmai Knife C	2.21	217	P	Pn	06 39 54.2	-0.4
PWL	Port Wells	2.23	68	*e*Pn	Pn	06 39 53.8	-1.0
PMR	Palmer	2.26	46	*e*Pn	Pn	06 39 54.6	-0.5
PMR				*e*Sn	Sn	06 40 22.3	-0.2
KDAK	Kodiak Island	2.31	180	*e*Pn	Pn	06 39 54.2	-1.6
KDAK				*e*		06 40 22.2	
KDAK				*e*Sn	Sn	06 40 22.6	-1.1
KDAK	Kodiak Island	2.31	180	P	Pn	06 39 54.0	-1.8
	12nm,0.3s,baz=48,slow=11,SNR=557						
KDAK				S	Sn	06 40 21.2	-2.5
	25nm,0.3s,baz=29,slow=20,SNR=5.2						
KELA	Mount Kelaz	2.32	226	P	Pn	06 39 55.7	-0.4
KNK	Knik Glacier	2.41	55	*e*Pn	Pn	06 39 56.5	-0.7
KNK				*e*Sn	Sn	06 40 25.5	-0.8
ANCK	Angle Creek	2.42	220	P	Pn	06 39 57.3	-0.1
GHO	Glory Hole Cre	2.45	45	*e*Pn	Pn	06 39 57.2	-0.6
GHO				*e*Sn	Sn	06 40 27.2	-0.1
CNTC	Contact Creek	2.50	225	P	Pn	06 39 58.3	-0.2
KJL	Kejulik	2.56	219	P	Pn	06 39 59.7	+0.5
SML	Sawmill	2.69	48	*e*Sn	Sn	06 40 32.8	0.0
GLI	Glacier Island	2.81	71	*e*Pn	Pn	06 40 00.6	-1.9
GLI				*e*Sn	Sn	06 40 33.7	-2.0
PPLA	Purkeypile	2.83	3	*e*Pn	Pn	06 40 03.3	+0.5
OHAK	Old Harbor	2.89	188	*e*Pn	Pn	06 40 01.6	-1.9
PLK3	Peulik 3	3.08	220	P	Pn	06 40 06.6	+0.5
SCM	Sheep Creek Mo	3.09	53	*e*Pn	Pn	06 40 05.7	-0.6
PLK1	Peulik 1	3.11	224	P	Pn	06 40 07.1	+0.7
MID	Middleton Isla	3.21	99	*e*Pn	Pn	06 40 07.8	+0.1
HUR	Hurricane	3.22	24	*e*Pn	Pn	06 40 09.0	+1.1
TT01	Tatalina	3.29	331	*e*Pn	Pn	06 40 08.3	-0.5
CAST	Castle Rocks	3.36	4	*e*Pn	Pn	06 40 09.6	-0.1
EYAK	Cordova Ski Ar	3.41	79	*e*Pn	Pn	06 40 10.0	-0.4
EYAK				*e*Sn	Sn	06 40 49.3	-0.7
DIV	Divide	3.50	70	*e*Pn	Pn	06 40 12.1	+0.4
DIV				*e*Sn	Sn	06 40 49.6	-2.7
KLU	Klutina	3.54	64	*e*Pn	Pn	06 40 11.2	-1.1
KLU				*e*Sn	Sn	06 40 51.2	-2.1
TRF	Thorofare Moun	3.55	17	*e*Pn	Pn	06 40 11.9	-0.5
RND	Reindeer	3.77	26	*e*Pn	Pn	06 40 15.3	0.0
DHY	Denali Highway	3.89	37	*e*Pn	Pn	06 40 16.7	-0.4
DHY				*e*Sn	Sn	06 41 01.8	0.0
MCK	McKinley	4.04	23	*e*Pn	Pn	06 40 19.0	0.0
BPAW	Bear Paw Mtn.	4.10	10	*e*Pn	Pn	06 40 19.9	+0.2
HMT	Hamilton	4.14	83	*e*Pn	Pn	06 40 20.2	-0.1
HMT				*e*Sn	Sn	06 41 05.0	-2.7
HARP	HAARP	4.26	54	*e*Pn	Pn	06 40 21.8	-0.2
BWN	Browne	4.35	18	*e*Pn	Pn	06 40 23.6	+0.5
PAX	Paxson	4.46	46	*e*Pn	Pn	06 40 24.7	0.0
PAX				*e*Sn	Sn	06 41 16.0	+0.6
PS10	TAPS Pump St10	4.65	41	*e*Pn	Pn	06 40 28.1	+0.9
WRH	Wood River Hil	4.87	23	*e*Pn	Pn	06 40 29.7	-0.4
CHGN	Chignik	4.90	222	*e*Pn	Pn	06 40 30.0	-0.5
MLY	Manley	5.04	9	*e*Pn	Pn	06 40 32.4	-0.1
HDA	Harding Lake	5.07	29	*e*Pn	Pn	06 40 32.4	-0.5
HDA	Harding Lake	5.07	29	P	Pn	06 40 32.3	-0.5
	baz=214,SNR=49						
HDA				S	Sn	06 41 28.0	-2.0
	baz=214						
RIDG	Independ'e Rid	5.17	41	*e*Pn	Pn	06 40 34.4	+0.1
PS08	TAPS Pump Stn8	5.21	28	*e*Pn	Pn	06 40 34.4	-0.4
TCOL	CIGO, UAF Yank	5.28	22	P	Pn	06 40 35.2	-0.4
	baz=206,SNR=24						
TCOL				S	Sn	06 41 33.5	-1.6
	baz=206						
COLA	College	5.28	22	*e*Pn	Pn	06 40 35.3	-0.3
MDM	Murphy Dome	5.29	20	*e*Pn	Pn	06 40 35.6	-0.2
DOT	Dot Lake	5.38	45	*e*Pn	Pn	06 40 37.0	0.0
IL1	Eielson Array	5.39	27	*e*Pn	Pn	06 40 36.0	-1.2
ILAR	Eielson Array	5.39	27	P	Pn	06 40 36.4	-0.8
	5.8nm,0.3s,baz=211,slow=14,SNR=216						
ILAR				S	Sn	06 41 35.0	-2.8
	4.7nm,0.3s,baz=105,slow=26,SNR=6.4						
ILB	Eielson Array	5.39	27	*e*Pn	Pn	06 40 36.2	-1.0
ILB				*e*Sn	Sn	06 41 37.1	-0.7
POKR	Poker Plat Res	5.58	23	P	Pn	06 40 39.4	-0.3
	baz=207,SNR=16						
POKR				S	Sn	06 41 39.1	-3.3
	baz=207						
SCRK	Sand Creek	5.61	42	*e*Pn	Pn	06 40 39.5	-0.8
IM3	Indian Mountai	5.95	355	*e*Pn	Pn	06 40 44.1	-0.7
PRP	Porcupine Dome	6.33	28	*e*Pn	Pn	06 40 49.6	-0.4
COLD	Coldfoot	7.25	7	*e*Pn	Pn	06 41 03.7	+1.3
FYU	Fort Yukon	7.29	24	*e*Pn	Pn	06 41 02.6	-0.2
DAWY	Dawson	7.35	51	*e*Pn	Pn	06 41 03.5	-0.4
ANM	Nome	7.47	312	*e*Pn	Pn	06 41 05.4	0.0
HYT	Haines Junctio	7.48	78	*e*Pn	Pn	06 41 06.0	+0.4
SKAG	Skagway	8.71	87	*e*Pn	Pn	06 41 23.4	+1.2
WHY	Whitehorse	8.77	79	*e*Pn	Pn	06 41 23.6	+0.3
BESE	Bessie Mountai	9.16	92	*e*Pn	Pn	06 41 30.1	+1.5
SIT	Sitka	9.49	101	*e*Pn	Pn	06 41 32.2	-0.6
JIS	Juneau Island	9.49	93	*e*Pn	Pn	06 41 34.0	+1.1
UNV	Unalaska Valle	9.84	237	*e*Pn	Pn	06 41 37.8	+0.2
WRAK	Wrangell Islan	11.24	100	*e*Pn	Pn	06 41 57.9	+1.2
CRAG	Craig	11.34	106	*e*Pn	Pn	06 41 58.5	+0.6
DLBC	Dease Lake	11.63	88	*e*Pn	Pn	06 42 04.5	+2.6
DLBC				S	Sn	06 44 08.5	-1.0
DLBC	Dease Lake	11.63	88	P	Pn	06 42 02.0	+0.1
	5.8nm,0.3s,baz=290,slow=7.0,SNR=54						
DLBC				S	Sn	06 44 08.5	-1.0
	0.3nm,0.3s,baz=283,slow=18,SNR=5.0						
INK	Inuvik	11.64	37	P	Pn	06 42 00.9	-0.9
	0.3nm,0.3s,baz=235,slow=16,SNR=12						
INK				S	Sn	06 44 07.7	-1.8
	0.1nm,0.3s,baz=174,slow=9.2,SNR=2.2						
BBB	Bella Bella	15.67	109	S	Sn	06 45 47.8	+0.5
	0.3nm,0.3s,baz=273,slow=18,SNR=2.8						
YKA	Yellowknife Ar	18.21	66	P	Pn	06 43 24.8	-0.3
	0.2nm,0.3s,baz=278,slow=10,SNR=16						
KLR	Kul'dur	42.73	291	P	P	06 47 05.9	-0.3
	1.2nm,0.8s,baz=59,slow=12,SNR=3.4						
LTX	Lajitas	44.80	111	*e*P	P	06 47 25.2	+2.1
TXAR	Lajitas Array	44.80	111	P	P	06 47 25.2	+2.1
	0.2nm,0.8s,baz=350,slow=6.4,SNR=3.4						
ARA0	ARCESS Array S	50.67	1	*e*P	P	06 48 06.7	-1.1
ARCES	ARCESS Array B	50.67	1	P	P	06 48 06.7	-1.1
	1.5nm,0.9s,baz=5.1,slow=8.1,SNR=2.2						
KSRS	Korea Array	53.38	283	P	P	06 48 28.5	+0.2
	2.8nm,0.8s,baz=32,slow=5.9,SNR=5.5						
KSAR	Wonju Array Be	53.41	283	P	P	06 48 28.5	0.0
SONA0	Songino Array	54.93	306	*e*P	P	06 48 40.4	+0.8
SONM	Songino Array	54.93	306	P	P	06 48 40.4	+0.8
	4.6nm,0.8s,baz=40,slow=7.3,SNR=28						
ZAA1	Zalesovo Array	57.44	324	*e*P	P	06 48 57.0	-0.1
ZALV	Zalesovo Beam	57.44	324	P	P	06 48 57.0	-0.2
	1.9nm,0.5s,baz=34,slow=6.6,SNR=9.3						
MK32	Makanchi Array	64.51	322	*e*P	P	06 49 44.3	-0.8
MKAR	Makanchi Array	64.51	322	P	P	06 49 44.3	-0.8
	0.6nm,0.5s,baz=39,slow=6.3,SNR=10						
AKASG	Malin Array Be	69.56	359	P	P	06 50 17.4	+0.5
	0.5nm,0.5s,baz=0.2,slow=5.9,SNR=1.9						

SJA 02 06:40:10.6±0.3**, 32°.70S**×**67°.76W, h24^{km}**±3^{km}**, ML2.2, MW3.5, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAL	Salagasta	0.92	277	*i* P	Pn	06 40 28.6	+0.5
AAGR	Agrelo	0.98	247	*i* P	Pn	06 40 29.8	+0.8
AAGR				*i* S	Sn	06 40 44.0	+1.7
ARCO	CERRO ARCO	1.00	262	*i* P	Pb	06 40 29.9	+0.5
ARCO				IAML		06 41 11.6	
	comp=Z,60nm,0.6s						
AUSP	Uspallata	1.46	289	*i* P	Pb	06 40 38.3	+1.0
AUSP				*i* S	Sb	06 40 58.6	+3.2

ISCJB ***02*** *06:41:08.8±0.7, 34°.81N±0°.04×139°.24E±0°.07, h9^{km}±5^{km}, mb3.3/2, Error ellipse: s-maj=9.4km s-min=5.8km az=161.6*

JMA ***02*** *06:41:08.8, 34°.81N×139°.23E, h10^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s8.00000°, δ78.00000°, λ14.00000°. NP2: ϕ_s276.00000°, δ77.00000°, λ168.00000°. Principal axes: T Plg18.0000°, Azm232.0000°; N Plg72.0000°, Azm49.0000°; P Plg1.0000°, Azm142.0000°;*

JMA Felt III J1.

IDC ***02*** *06:41:14.3±3.8, 34°.87N×138°.69E, h74^{km}±51^{km}, mb3.0/2, mb1 3.3/2, mb1mx2.9/44, mbtmp3.3/2 Error ellipse: s-maj=79.1km s-min=37.6km az=56.0*

ISC 02 06:41:07.8±1.2**, 34°.82N**±0°.03×**139°.22E**±0°.05**, h18^{km}**±3^{km}**, n18,** σ**1^{s}19**/17**, 1C-3D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTJ3	Kamata3	0.16	313	⇓P	Pg	06 41 12.7	+0.4
KTJ3				*e*S	Sg	06 41 15.5	+0.2
JIM2	Oshima 3	0.21	121	⇓P	Pb	06 41 13.0	+0.4
JHTM	Izuhatsuma	0.22	309	P	Pg	06 41 13.8	+0.7
JIZS	Izushimoda	0.30	249	⇑P	Pg	06 41 15.1	+0.8
JIZS				S	Sb	06 41 19.6	+0.5
JTHY	Toshimahigashi	0.30	169	P	Pg	06 41 15.2	+0.7
JOD2	Odawara 2	0.45	347	⇓P	Pg	06 41 18.0	+0.9
JOD2				S	Sb	06 41 24.5	+0.8
JFNN	Fujinakano	0.57	311	P	Pg	06 41 20.3	+1.1
JKO	Kozu shima	0.64	186	P	Pb	06 41 21.1	+0.8
MJAR	Matsushiro Arr	1.90	335	P	Pb	06 41 41.8	-0.2
	4.0nm,0.3s,baz=166,slow=14,SNR=74						
MJAR				S	Sb	06 42 06.1	+0.7
	4.9nm,0.3s,baz=185,slow=28,SNR=13						
MAT	Matsushiro	1.90	335	P	Pb	06 41 42.2	+0.2
MAT				S	Sb	06 42 07.3	+1.9
H11N2	WAKE ISLAND Hy	28.71	114	T	T	07 17 00.7	
	baz=308,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	28.72	114	T	T	07 17 01.1	
	baz=308,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	28.73	114	T	T	07 17 02.1	
	baz=308,slow=75,SNR=27						
H11S3	WAKE ISLAND Hy	29.32	117	T	T	07 17 46.6	
	baz=310,slow=75,SNR=6.8						
H11S1	WAKE ISLAND Hy	29.32	117	T	T	07 17 46.0	
	baz=310,slow=75,SNR=7.2						
H11S2	WAKE ISLAND Hy	29.33	117	T	T	07 17 47.9	
	baz=310,slow=75,SNR=6.3						
MKAR	Makanchi Array	43.82	304	P	P	06 49 09.7	-2.9
	0.2nm,0.7s,baz=68,slow=9.6,SNR=2.7						
WRA	Warramunga Arr	54.66	186	P	P	06 50 35.6	0.0
	0.6nm,0.8s,baz=0.5,slow=7.6,SNR=5.4						

IDC ***02*** *07:01:39.6±3.0, 23°.51S×179°.73W, h489^{km}±26^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.3/26, mbtmp4.5/7, Error ellipse: s-maj=33.1km s-min=18.2km az=48.0*

ISCJB ***02*** *07:01:41.2±1.1, 23°.66S±0°.09×179°.8W±0°.2, h518^{km}, mb4.1/6, Error ellipse: s-maj=19.9km s-min=9.5km az=159.0*

WEL ***02*** *07:01:47.2±1.5, 24°S±10°×18°0W±4°4, h511^{km}±27^{km}*

ISC 02 07:01:42.6±0.9**, 23°.81S**±0°.09×**179°.9W**±0°.1**, h518^{km}, n35,** σ**1^{s}79**/49**, mb4.2**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.72	162	P	P	07 03 16.4	-0.6
GLKZ				S	S	07 04 32.0	-2.2
OUZ	Omahuta	12.69	205	P	P	07 04 30.9	+2.8
HAZ	Te Kaha	14.04	188	P	P	07 04 45.1	+2.8
HAZ				S	S	07 07 10.2	-0.2
RUGZ	Raukumara Rang	14.26	188	P	P	07 04 46.5	+1.8
RUGZ				S	S	07 07 13.0	-1.9
PUZ	Puketiti	14.30	186	P	P	07 04 48.0	+2.9
PUZ				S	S	07 07 15.9	+0.3
TWGZ	Tauwhareparae	14.43	187	P	P	07 04 49.4	+2.8
TWGZ				S	S	07 07 20.9	+2.8
URZ	Urewera	14.62	189	P	P	07 04 49.1	+0.7
	2.8nm,0.3s,baz=276,slow=3.4,SNR=17						
URZ				S	S	07 07 18.2	-3.5
	0.5nm,0.3s,baz=208,slow=18,SNR=6.5						
URZ	Urewera	14.62	189	P	P	07 04 48.6	+0.2
URZ				S	S	07 07 18.5	-3.2
MWZ	Matawai	14.64	188	P	P	07 04 49.8	+1.1
MWZ				S	S	07 07 20.7	-1.4
KNZ	Kokohu	15.30	187	P	P	07 04 56.0	+0.5
NMHZ	Naumai	15.49	190	P	P	07 04 58.1	+0.5
BKZ	Black Stump Fm	15.61	190	P	P	07 04 58.2	-0.6
NGZ	Ngauruhoe	15.78	193	P	P	07 05 00.3	-0.4
KWHZ	Kaweka Forest	15.87	190	P	P	07 05 00.9	-0.6
KAHZ	Kahuranaki	16.16	189	P	P	07 05 04.3	-0.2
PXZ	Pawanui	16.40	189	P	P	07 05 07.1	+0.3
TSZ	Takapari Road	16.57	191	P	P	07 05 07.9	-0.6
BFZ	Birch Farm	17.13	190	P	P	07 05 12.4	-1.5
MRZ	Mangatainoka R	17.22	192	P	P	07 05 12.2	-2.6
KIW	Kapiti Island	17.55	193	P	P	07 05 15.6	-2.2
MTW	Mount Morrison	17.72	191	P	P	07 05 17.2	-2.2
CAW	Cannon Point	17.75	192	P	P	07 05 18.4	-1.3
QRZ	Quartz Range	18.11	199	P	P	07 05 23.6	+0.7
RPZ	Rata Peaks	21.20	198	P	P	07 05 52.6	+1.7
	7.1nm,0.4s,baz=26,slow=4.1,SNR=10						
STKA	Stephens Creek	34.82	248	P	P	07 07 51.2	+1.3
	2.8nm,0.5s,baz=99,slow=12,SNR=8.5						
ASAR	Alice Springs	42.12	261	P	P	07 08 50.0	+0.6
	5.9nm,0.5s,baz=98,slow=7.1,SNR=74						
ASAR				ScP	ScP	07 13 35.7	+2.5
	0.9nm,0.8s,baz=110,slow=3.9,SNR=6.8						
ASAR				S	S	07 14 30.8	-0.7
	0.1nm,0.4s,baz=94,slow=15,SNR=3.2						
WRA	Warramunga Arr	42.48	266	P	P	07 08 52.3	+0.1
	5.2nm,0.3s,baz=96,slow=8.4,SNR=135						
WRA				PcP	PcP	07 10 33.6	+0.2
	0.7nm,0.8s,baz=103,slow=3.3,SNR=3.4						
WRA				ScP	ScP	07 13 37.7	+3.0
	0.5nm,0.7s,baz=97,slow=3.9,SNR=4.4						
WRA				S	S	07 14 32.9	-3.8
	0.6nm,1.0s,baz=94,slow=13,SNR=3.3						
VNDA	Vanda	54.47	185	P	P	07 10 22.0	+1.4
	1.2nm,0.9s,baz=12,slow=7.8,SNR=3.7						
QSPA	South Pole Qui	66.27	180	P	P	07 11 40.4	+1.3
	3.2nm,0.7s,baz=20,slow=4.1,SNR=17						
MKAR	Makanchi Array	112.14	313	PKiKP	PKiKP	07 19 17.9	-1.2
	0.3nm,0.6s,baz=127,slow=0.8,SNR=5.1						
ARCES	ARCESS Array B	131.81	348	PKP	PKPdf	07 19 54.8	-1.2
	2.4nm,1.1s,baz=44,slow=3.7,SNR=6.5						
FINES	FINESS Array B	138.38	342	PKhKP	PKPpre	07 19 57.4	
	2.4nm,0.9s,baz=41,slow=4.4,SNR=2.8						
FINES				PKP	PKPdf	07 20 07.0	-1.4
	0.8nm,0.6s,baz=288,slow=0.6,SNR=4.4						
AKASG	Malin Array Be	144.93	327	PKP	PKPdf	07 20 19.3	-1.0
	0.8nm,0.3s,baz=43,slow=4.1,SNR=5.4						
BRTR	Keskin Array B	147.58	307	PKPbc	PKPbc	07 20 27.6	-1.2
	0.7nm,0.5s,baz=149,slow=4.1,SNR=4.8						
BRTR				PKPab	PKPab	07 20 33.2	+0.4
	1.5nm,0.8s,baz=80,slow=4.7,SNR=6.4						
TORD	Torodi Ar. Bea	169.28	189	PKPab	PKPab	07 22 07.1	+0.3
	0.3nm,0.5s,baz=174,slow=5.8,SNR=3.5						

ISCJB ***02*** *07:21:18.7±0.2, 6°.59S±0°.02×129°.99E±0°.03, h146^{km}, mb4.4/43, Error ellipse: s-maj=4.6km s-min=3.5km az=0.1*

IDC ***02*** *07:21:18.8±1.7, 6°.51S×129°.85E, h129^{km}±17^{km}, mb4.1/14, mb1 4.2/18, mb1mx4.0/40, mbtmp4.6/18, Error ellipse: s-maj=14.2km s-min=10.3km az=88.0*

NEIC ***02*** *07:21:18.8±0.8, 6°.54S×129°.97E, h131^{km}±8^{km}, mb4.5/28, Error ellipse: s-maj=7.2km s-min=5.3km az=77.0*

DJA ***02*** *07:21:20.5±0.3, 6°S±3°×13°0E±°, h10^{km}, M5.0/8, mb5.0/8, mB5.3/8, MLv5.2/8, Mw(mB)4.8/8*

ISC 02 07:21:20.4±0.4**, 6°.53S**±0°.04×**129°.95E**±0°.05**, h146^{km}, n110,** σ**1^{s}55**/113**, mb4.5**/43**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.97	137	*e*Pn	Pn	07 21 56.7	+1.8
SAUI				*e*Sn	Sn	07 22 18.9	-2.6
SAUI	Saumlaki	1.97	137	P	Pn	07 21 56.7	+1.8
SAUI				S	Sn	07 22 23.7	+2.2
BNDI	Bandanaira	1.99	359	P	Pn	07 21 57.1	+1.9
FAKI	Fak Fak	4.25	33	*e*Pn	Pn	07 22 23.1	-0.8
FAKI				*e*Sn	Sn	07 23 11.2	-2.0
FAKI	Fak Fak	4.25	33	P	Pn	07 22 23.3	-0.6
FAKI				S	Sn	07 23 09.8	-3.5
NLAI	Namlea	4.33	319	P	Pn	07 22 28.1	+3.2
SIJI	Sorong	5.77	13	P	Pn	07 22 43.0	-1.1
	50nm,0.3s,baz=11,slow=23,SNR=84						
SIJI				S	Sn	07 23 44.8	-4.6
	58nm,0.3s,baz=134,slow=23,SNR=16						
SWI	Sorong	5.77	13	P	Pn	07 22 43.2	-0.9
SANI	Sanana	5.95	318	P	Pn	07 22 47.0	+0.6
SOEI	Soe	6.48	240	*e*Pn	Pn	07 22 53.5	-0.1
SOEI				*e*Sn	Sn	07 24 05.0	-1.6
SOEI	Soe	6.48	240	P	Pn	07 22 54.3	+0.7
RKPI	Ransiki, Papua	6.53	40	P	Pn	07 22 54.5	+0.4
	950nm,0.5s,25µm						
BATI	Baumata	7.22	239	P	Pn	07 23 01.9	-1.5
BATI	Baumata	7.22	239	P	Pn	07 23 01.5	-1.9
	54nm,0.3s,baz=111,slow=3.2,SNR=19						
BATI				S	Sn	07 24 20.3	-3.9
	146nm,0.3s,baz=21,slow=12,SNR=11						
BBSI	Bau Bau	7.41	278	P	Pn	07 23 08.4	+2.4
KDI	Kendari	7.73	289	P	Pn	07 23 16.1	+5.8
BAKI	Biak	8.11	49	P	Pn	07 23 16.8	+1.5
EDFI	Ende, Flores	8.48	254	P	Pn	07 23 21.1	+0.7
APSI	Ampana	9.98	304	P	Pn	07 23 43.8	+3.5
MRSI	Marisa	10.60	311	P	Pn	07 23 51.4	+2.9
JAY	Jayapura	11.43	70	P	Pn	07 23 59.7	+0.2
	0.6nm,0.3s,baz=340,slow=14,SNR=2.0						
JAY				S	Sn	07 26 05.3	-0.7
	0.6nm,0.3s,baz=315,slow=17,SNR=2.0						
FITZ	Fitzroy Crossi	12.25	200	*e*Pn	Pn	07 24 06.8	-3.2
FITZ				*e*Sn	Sn	07 26 15.8	-10
FITZ	Fitzroy Crossi	12.25	200	P	Pn	07 24 06.2	-3.9
	6.1nm,0.3s,baz=29,slow=8.6,SNR=102						
FITZ				S	Sn	07 26 12.4	-13
	14nm,0.3s,baz=103,slow=18,SNR=8.2						
WRAB	Tennant Creek	14.00	163	*e*Pn	Pn	07 24 29.4	-3.1
WRAB				*e*Sn	Sn	07 26 55.0	-13
WR1	Warramunga Arr	14.00	163	*e*Pn	Pn	07 24 29.2	-3.3
WR1				*e*Sn	Sn	07 26 55.8	-12
WRA	Warramunga Arr	14.00	163	P	Pn	07 24 29.2	-3.4
	5.3nm,0.3s,baz=339,slow=13,SNR=81						
WRA				S	Sn	07 26 55.8	-12
	21nm,0.3s,baz=332,slow=23,SNR=14						
WB2	Warramunga Arr	14.01	163	*e*Pn	Pn	07 24 29.0	-3.7
WB2				*e*Sn	Sn	07 26 55.4	-12
COEN	Coen	14.96	121	*e*Pn	Pn	07 24 42.0	-2.5

COEN				*e*Sn	Sn	07 27 20.5	-10
AS31	Alice Springs	17.46	168	*e*P	P	07 25 14.7	+0.5
	18nm,0.3s						
AS31				*e*S	S	07 28 23.6	-5.0
ASAR	Alice Springs	17.46	168	P	P	07 25 14.7	+0.5
	2.2nm,0.3s,baz=341,slow=9.6,SNR=114						
ASAR				S	S	07 28 19.8	-8.8
	3.7nm,0.3s,baz=352,slow=27,SNR=7.2						
AS01	Alice Springs	17.47	168	*e*P	P	07 25 15.3	+1.0
MBWA	Marble Bar	17.59	213	*e*P	P	07 25 15.2	-0.4
	18nm,0.8s						
SBUM	Sibu	19.82	296	*e*P	P	07 25 41.7	+1.8
	11nm,0.7s						
CTA	Charters Tower	20.79	132	P	P	07 25 51.2	+1.0
	18nm,0.9s,baz=317,slow=12,SNR=19						
CTAO	Charters Tower	20.79	132	*e*P	P	07 25 51.5	+1.3
	22nm,0.9s						
CISI	Cisompet, Garu	21.99	266	*e*P	P	07 26 02.8	-0.3
	66nm,1.1s						
FORT	Forrest	24.19	184	*e*P	P	07 26 23.1	-0.3
	19nm,0.6s						
MORW	Morawa	25.99	209	*e*P	P	07 26 40.7	+1.0
	6.9nm,1.1s						
BBOO	Buckleboo	26.76	169	*e*P	P	07 26 46.7	+0.1
	7.1nm,1.0s						
STKA	Stephens Creek	27.47	158	*e*P	P	07 26 52.8	-0.1
	1.0nm,0.9s						
STKA	Stephens Creek	27.47	158	P	P	07 26 52.8	-0.1
	2.7nm,0.4s,baz=337,slow=8.3,SNR=14						
NWAO	Narrogin (SRO)	28.81	203	P	P	07 27 04.4	-0.4
	3.1nm,0.7s,baz=61,slow=16,SNR=3.6						
ARMA	Armidale	31.30	142	*e*P	P	07 27 28.3	+1.4
	10nm,1.1s						
CAN	Canberra	33.59	151	*e*P	P	07 27 48.2	+1.4
	11nm,0.7s						
CMAR	Chiang Mai Arr	39.39	310	P	P	07 28 35.3	-0.8
	1.1nm,0.3s,baz=138,slow=8.4,SNR=5.7						
NJ2	Nanjing	39.80	345	*e*P	P	07 28 39.4	+0.2
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
KMI	Kunming	41.12	321	P	P	07 28 51.7	+1.2
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
MJAR	Matsushiro Arr	43.53	10	P	P	07 29 08.4	-1.2
	comp=Z,5.6nm,0.7s,baz=196,slow=10,SNR=10						
MAJO	Matsushiro	43.53	10	*e*P	P	07 29 08.9	-0.7
	comp=Z,12nm,0.8s						
MAT	Matsushiro	43.53	10	P	P	07 29 08.4	-1.2
MJB9	Matsu-Tunnel	43.54	10	*e*P	P	07 29 08.9	-0.8
	comp=Z,12nm,0.8s						
KS15	Wonju Array Si	43.78	358	*e*P	P	07 29 11.8	+0.3
KSAR	Wonju Array Be	43.78	358	P	P	07 29 11.5	0.0
KSRS	Korea Array	43.79	358	P	P	07 29 11.5	-0.1
	comp=Z,1.4nm,0.7s,baz=176,slow=8.2,SNR=5.6						
XAN	Xi'an	44.99	335	P	P	07 29 20.4	-0.9
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,120nm,3.8s						
LZH	Lanzhou	48.97	332	*e*P	P	07 29 57.3	+5.0
LZH				pP	pP	07 30 26.8	+2.6
LZH				sP	sP	07 30 39.4	-0.5
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC	Hu-ho-hao-te	50.08	342	*e*P	P	07 30 03.8	+3.2
HHC				pmax	pmax		
	comp=Z,21nm,1.2s						
HHC				pmax	pmax		
	comp=Z,110nm,5.9s						
USA0B	Ussuriysk Arra	50.52	2	*e*P	P	07 30 04.2	+0.5
	comp=Z,14nm,1.1s						
USRK	Ussuriysk Ar.	50.52	2	P	P	07 30 03.7	0.0
	comp=Z,5.4nm,0.6s,baz=185,slow=7.2,SNR=16						
RPZ	Rata Peaks	51.64	143	P	P	07 30 12.9	+0.8
	comp=Z,5.8nm,0.6s,baz=235,slow=5.4,SNR=3.9						
GTA	Gaotai	53.54	331	*e*P	P	07 30 26.6	+0.4
GTA				pP	pP	07 30 59.3	+0.7
GTA				sP	sP	07 31 14.8	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONA0	Songino Array	57.98	341	*e*P	P	07 30 57.7	0.0
SONM	Songino Array	57.98	341	P	P	07 30 57.7	0.0
	comp=Z,1.0nm,0.6s,baz=159,slow=6.7,SNR=11						
WMQ	Urumqi	62.97	327	*e*P	P	07 31 32.3	+0.7
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.9s						
WMQ	Urumqi	62.97	327	*e*P	P	07 31 31.9	+0.3
	comp=Z,9.3nm,0.8s						
PEA0B	Petropavlovsk-	63.89	18	*e*P	P	07 31 38.1	+0.7
	comp=Z,34nm,1.1s						
PETK	Petropavlovsk-	63.89	18	*e*P	P	07 31 38.0	+0.6
PETK	Petropavlovsk-	63.89	18	P	P	07 31 37.9	+0.5
	comp=Z,4.7nm,0.6s,baz=178,slow=7.1,SNR=12						
PEA1	Petropavlovsk-	63.90	18	*e*P	P	07 31 37.9	+0.5
KSH	Kashi	67.64	317	P	P	07 32 02.7	+0.8
KSH				pP	pwP	07 32 39.6	-1.9
KSH				PP	PP	07 34 38.9	+5.9
KSH				pmax	pmax		
	comp=Z,280nm,5.9s						
MK01	Makanchi Array	67.78	327	*e*P	P	07 32 02.9	+0.4
MK31	Makanchi Array	67.81	327	*e*P	P	07 32 03.0	+0.4
MK32	Makanchi Array	67.81	327	*e*P	P	07 32 02.9	+0.2
MKAR	Makanchi Array	67.81	327	*e*P	P	07 32 03.0	+0.4
	comp=Z,104nm,0.4s						
MKAR	Makanchi Array	67.81	327	P	P	07 32 02.9	+0.2
	comp=Z,13nm,0.4s,baz=113,slow=8.7,SNR=330						
MAKZ	Makanchi	67.98	327	*e*P	P	07 32 03.9	+0.1
	comp=Z,11nm,0.5s						
KDJ	Kajisay	68.18	320	*e*P	P	07 32 07.0	+1.7
	comp=Z,4.2nm,0.8s						
KZA	Kyzart	69.39	320	P	P	07 32 14.3	+1.3
	SNR=5.8						
TKM2	Tokmak 2	69.59	320	P	P	07 32 14.8	+0.8
	SNR=7.8						
UCH	Uchtor	69.94	319	P	P	07 32 17.7	+1.3
	SNR=5.3						
AAK	Ala-Archa	70.15	320	*e*P	P	07 32 18.3	+0.9
	comp=Z,4.9nm,0.5s						
AML	Almayashu	70.42	319	P	P	07 32 20.5	+1.2
	SNR=8.9						
USP	Ospenovka	70.46	320	P	P	07 32 19.7	+0.6
	SNR=8.2						
ARSB	Arslanbob	70.51	318	*e*P	P	07 32 20.2	+0.6
	comp=Z,8.0nm,0.7s						
EKS2	Erkin-Say	70.62	319	P	P	07 32 21.1	+0.9
	SNR=7.4						
ZAA0	Zalesovo Array	71.14	334	*e*P	P	07 32 22.2	-0.7
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	71.14	334	*e*P	P	07 32 21.8	-1.1
ZALV	Zalesovo Beam	71.14	334	P	P	07 32 22.2	-0.7
	comp=Z,2.5nm,0.5s,baz=127,slow=6.7,SNR=11						
ZAA1	Zalesovo Array	71.14	334	*e*P	P	07 32 22.2	-0.7
GAR	Garm	71.30	315	*e*P	P	07 32 24.5	+0.1
	comp=Z,5.6nm,0.8s						
SEY	Seymchan	71.35	11	P	P	07 32 24.5	+0.5
	comp=Z,6.5nm,0.8s,baz=214,slow=4.6,SNR=14						
KURK	Kurchatov	72.09	329	*e*P	P	07 32 28.5	-0.2
	comp=Z,3.6nm,0.6s						
VNDA	Vanda	72.92	173	*e*P	P	07 32 33.2	0.0
	comp=Z,3.7nm,1.1s						
VNDA	Vanda	72.92	173	P	P	07 32 33.2	0.0
	comp=Z,1.6nm,0.9s,baz=34,slow=4.1,SNR=3.7						
KK31	Karatay Array	72.95	319	*e*P	P	07 32 34.6	+0.6
KKAR	Karatay Array	72.95	319	*e*P	P	07 32 34.2	+0.2
TIXI	Tiksi	78.02	360	*e*P	P	07 33 02.0	-0.2
	comp=Z,4.2nm,0.8s						
ABKAR	Akbulak array	82.11	322	*e*P	P	07 33 24.2	-0.5
SYO	Syowa Base	84.08	201⇓	*e*P	P	07 33 34.0	-0.4
ANM	Nome	85.31	23	*e*P	P	07 33 41.5	+0.8
	comp=Z,1.7nm,1.0s						
RND	Reindeer	91.85	26	*e*P	P	07 34 10.6	-1.2
	comp=Z,3.1nm,0.9s						
COLD	Coldfoot	92.05	23	*e*P	P	07 34 14.0	+1.5
	comp=Z,1.1nm,0.5s						
IL1	Eielson Array	92.94	25	*e*P	P	07 34 15.6	-1.0
ILAR	Eielson Array	92.94	25	P	P	07 34 14.6	-2.0
	comp=Z,0.6nm,0.7s,baz=253,slow=4.5,SNR=8.5						
ILB	Eielson Array	92.94	25	*e*P	P	07 34 15.3	-1.3
DAWY	Dawson	96.11	26	*e*P	P	07 34 31.4	+0.1
	comp=Z,1.6nm,1.0s						
Y14A	Wickenburg	116.00	55	*e*PKPdf	PKPdf	07 39 45.5	-1.1
RLMT	Red Lodge	116.09	43	*e*PKPdf	PKPdf	07 39 46.5	-0.1
LPAZ	La Paz	151.12	142	PKPbc	PKPbc	07 40 59.2	+1.1
	comp=Z,0.7nm,0.4s,baz=73,slow=2.6,SNR=5.1						
ABVI	Anegada Island	161.54	48	*e*PKPdf	PKPdf	07 41 04.4	-0.4

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*ISCJB **02** 07:33:01.8±0.3, 3°.36N±0°.06×122°.84E±0°.07, h545^{km}, mb3.9/21, Error ellipse: s-maj=11.0km s-min=5.5km az=149.1*

*DJA **02** 07:33:01.6±0.5, 3°N±8°×12°3E±°, h512^{km}±5^{km}, M4.3/8, mb4.4/8, mB4.8/4, MLv4.4/7, Mw(mB)4.0/4*

*IDC **02** 07:33:02.3±1.1, 3°.35N×122°.72E, h535^{km}±13^{km}, mb3.4/21, mb1 3.5/24, mb1mx3.3/48, mbtmp4.4/24, Error ellipse: s-maj=18.1km s-min=6.8km az=70.0*

ISC 02 07:33:03.0±0.4**, 3°.35N**±0°.07×**122°.8E**±0°.1**, h545**^{km}**, n46, σ1^s.30**/55**, mb4.1**/28**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	2.96	196	P	P	07 34 14.4	-3.0
APSI	Ampana	4.37	195	P	P	07 34 24.5	-2.9
TNTI	Ternate	5.26	119	P	P	07 34 32.9	-1.9
SANI	Sanana	6.25	149	P	P	07 34 39.7	-4.1
NLAI	Namlea	7.85	146	P	P	07 34 59.3	+0.2
BNSI	Bone	8.14	199	P	P	07 35 02.9	+0.9
SIJI	Sorong	9.47	116	P	P	07 35 14.0	-1.6
	4.3nm,0.3s,baz=269,slow=11,SNR=5.0						
BNDI	Bandanaira	10.58	138	P	P	07 35 26.4	-0.5
FAKI	Fak Fak	11.34	123	P	P	07 35 33.5	-1.3
BATI	Baumata	13.49	176	P	P	07 35 56.3	-0.8
	6.9nm,0.3s,baz=281,slow=1.6,SNR=4.3						
JAY	Jayapura	18.86	108	P	P	07 36 50.2	+1.1
JAY	Jayapura	18.86	108	P	P	07 36 49.8	+0.7
	6.3nm,0.3s,baz=221,slow=9.6,SNR=15						
FITZ	Fitzroy Crossi	21.50	173	P	P	07 37 13.2	+0.3
	2.9nm,0.6s,baz=5.0,slow=7.8,SNR=13						
FITZ				ScP	ScP	07 43 41.0	+2.1
	1.7nm,0.8s,baz=39,slow=4.4,SNR=5.4						
WRA	Warramunga Arr	25.79	154	P	P	07 37 50.6	-0.5
	7.4nm,0.6s,baz=337,slow=9.6,SNR=117						
WRA				PcP	PcP	07 41 02.8	+0.3
	0.6nm,0.7s,baz=301,slow=3.4,SNR=2.8						
WRA				S	S	07 41 39.9	-2.5
	1.0nm,0.7s,baz=331,slow=15,SNR=4.2						
WRA				ScP	ScP	07 43 52.5	+1.9
	1.3nm,0.7s,baz=341,slow=3.1,SNR=8.8						
CMAR	Chiang Mai Arr	27.73	305	PcP	PcP	07 41 07.9	+0.7
	1.1nm,0.7s,baz=167,slow=1.1,SNR=4.9						
ASAR	Alice Springs	28.96	159	P	P	07 38 19.1	+0.3
	3.3nm,0.4s,baz=335,slow=7.6,SNR=74						
ASAR				PcP	PcP	07 41 10.8	+0.5
	0.4nm,0.4s,baz=347,slow=3.8,SNR=3.6						
ASAR				S	S	07 42 31.5	-0.3
	3.0nm,0.8s,baz=350,slow=20,SNR=15						
ASAR				ScP	ScP	07 44 02.5	+2.0
	0.7nm,0.3s,baz=337,slow=3.3,SNR=7.5						
CTA	Charters Tower	32.78	136	P	P	07 38 51.8	+0.1
	2.8nm,0.7s,baz=287,slow=14,SNR=3.4						
NWAO	Narrogin (SRO)	36.45	188	P	P	07 39 22.2	+0.1
	3.8nm,0.8s,baz=116,slow=6.2,SNR=3.1						
STKA	Stephens Creek	39.34	154	P	P	07 39 46.5	+0.8
	5.9nm,0.6s,baz=324,slow=7.9,SNR=14						
USRK	Ussuriysk Ar.	41.49	10	P	P	07 40 02.6	0.0
	2.2nm,0.6s,baz=204,slow=7.2,SNR=4.6						
RAMN	Ramite	41.79	308	*e*P	P	07 40 06.8	+1.2
	7.9nm,0.5s						
JIRN	Jiri	42.45	308	*e*P	P	07 40 11.7	+0.8
	12nm,0.4s						
GUN	Gumba	42.81	309	*e*P	P	07 40 14.3	+0.6
	10nm,0.4s						
PKIN	Phulchoki	43.03	308	*e*P	P	07 40 15.9	+0.6
DMN	Daman	43.27	308	*e*P	P	07 40 18.0	+0.8
	3.7nm,0.4s						
ASAJ	Asahikawa	44.23	21	P	P	07 40 23.7	-0.3
	5.6nm,0.8s,baz=93,slow=7.8,SNR=3.2						
KOLN	Koldanda	44.54	307	*e*P	P	07 40 27.9	+1.0
	11nm,0.5s						
DANN	Dangsing	44.67	308	*e*P	P	07 40 28.7	+0.7
	17nm,0.6s						
PYUN	Piuthan	45.17	307	*e*P	P	07 40 32.6	+0.8
	19nm,0.6s						
KLR	Kul'dur	46.36	8	P	P	07 40 38.1	-2.0
	0.4nm,0.3s,baz=243,slow=9.0,SNR=3.4						
SONM	Songino Array	46.51	345	P	P	07 40 41.4	-0.1
	0.8nm,0.8s,baz=161,slow=9.4,SNR=7.3						
SONM				PcP	PcP	07 42 04.9	+0.1
	0.5nm,0.5s,baz=169,slow=3.9,SNR=3.9						
DZM	Mont Dzumac	49.61	123	P	P	07 41 06.6	+1.6
	6.1nm,1.0s,baz=277,slow=17,SNR=4.6						
MKAR	Makanchi Array	55.67	327	P	P	07 41 48.3	+0.5
	1.2nm,0.4s,baz=126,slow=7.5,SNR=39						
MKAR				PcP	PcP	07 42 39.5	+0.3
	3.0nm,0.6s,baz=128,slow=4.2,SNR=23						
MKAR				ScP	ScP	07 45 47.7	+1.6
	0.6nm,0.8s,baz=107,slow=4.1,SNR=4.3						
PETK	Petropavlovsk-	57.34	24	P	P	07 41 59.6	+0.4
	6.5nm,1.2s,baz=189,slow=5.4,SNR=6.4						
ZALV	Zalesovo Beam	59.20	335	P	P	07 42 10.9	-0.7
	0.9nm,0.4s,baz=113,slow=5.9,SNR=5.9						
ZALV				PcP	PcP	07 42 51.8	-1.2
	0.6nm,0.5s,baz=118,slow=5.1,SNR=2.5						
GEYT	Alibeck	68.07	310	P	P	07 43 09.0	+0.3
	1.4nm,0.7s,baz=91,slow=5.8,SNR=3.4						
NRIK	Noril'sk	69.90	347	P	P	07 43 19.0	0.0
	4.0nm,0.6s,baz=122,slow=5.6,SNR=7.9						
KMBO	Kilima Mbogo	85.58	269	P	P	07 44 44.0	-1.0
	0.8nm,0.3s,baz=46,slow=12,SNR=4.6						
ILAR	Eielson Array	87.15	25	P	P	07 44 49.7	-1.3
	0.4nm,0.6s,baz=242,slow=5.0,SNR=9.6						
ARCES	ARCESS Array B	89.43	340	P	P	07 45 00.7	-0.8
	1.5nm,0.7s,baz=85,slow=6.7,SNR=9.3						
FINES	FINESS Array B	90.29	331	P	P	07 45 04.9	-0.7
	1.3nm,0.6s,baz=66,slow=4.7,SNR=12						
INK	Inuvik	91.96	21	P	P	07 45 13.2	0.0
	0.9nm,0.9s,baz=312,slow=5.5,SNR=5.6						
YKA	Yellowknife Ar	101.46	24	PKKPbc	PKKPbc	08 02 01.3	-3.3
	0.1nm,0.5s,baz=119,slow=3.2,SNR=4.3						
PDAR	Pinedale Array	114.21	40	PKKPbc	PKKPbc	08 01 23.1	-1.7
	0.2nm,0.5s,baz=107,slow=5.0,SNR=2.6						
TORD	Torodi Ar. Bea	119.26	287	PKP	PKPdf	07 50 50.6	-0.8
	0.5nm,0.3s,baz=107,slow=2.0,SNR=9.0						
TXAR	Lajitas Array	124.93	51	PKP	PKiKP	07 51 03.0	+0.5
	0.3nm,0.7s,baz=321,slow=1.6,SNR=3.7						

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*IDC **02** 07:33:48.2±0.9, 11°.04S×165°.83E, h0^{km}, mb4.3/11, mb1 4.5/13, mb1mx4.1/43, mbtmp4.4/13, ML4.5/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/39, Error ellipse: s-maj=22.4km s-min=20.5km az=106.0*

*NEIC **02** 07:33:50.4±0.4, 10°.99S×165°.75E, h10^{km}, mb4.7/19, Error ellipse: s-maj=9.4km s-min=6.8km az=77.0*

*ISCJB **02** 07:33:52.1±0.5, 11°.11S±0°.05×165°.73E±0°.06, h35^{km}, mb4.6/26, MS3.6/3, Error ellipse: s-maj=9.7km s-min=6.5km az=142.3*

ISC 02 07:33:54.2±0.7**, 11°.13S**±0°.07×**165°.76E**±0°.09**, h35**^{km}**, n51, σ1^s.04**/48**, mb4.6**/26**, MS3.7**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.96	286	Pn	Pn	07 35 20.5	+0.5
	21nm,0.3s,baz=149,slow=11,SNR=4.1						
HNR				Sn	Sn	07 36 26.7	-0.5
	baz=122,slow=9.5,SNR=2.2						
HNR				LR	LR	07 38 02.8	
	comp=Z,424nm,18.1s,baz=103,slow=42						
MARNC	Mare, Loyalty	10.52	168	*e*Pn	Pn	07 36 23.1	+0.6
DZM	Mont Dzumac	10.90	177	*e*Pn	Pn	07 36 28.2	+0.3
DZM				*e*Sn	Sn	07 38 27.4	-1.3
DZM	Mont Dzumac	10.90	177	Pn	Pn	07 36 27.8	-0.1
	2.2nm,0.3s,baz=338,slow=11,SNR=23						
DZM				Sn	Sn	07 38 26.0	-2.6
	0.3nm,0.3s,baz=105,slow=20,SNR=2.9						
DZM				LR	LR	07 39 24.2	
	comp=Z,112nm,19.8s,baz=40,slow=31						
ONTNC	Ouen Toro	11.13	177	*e*Pn	Pn	07 36 32.0	+1.1
OUENC	Ouen Island, N	11.27	175	*e*Pn	Pn	07 36 35.2	+2.3
PINNC	Pines Island,	11.53	172	*e*Pn	Pn	07 36 39.4	+3.0
CTA	Charters Tower	20.77	242	P	P	07 38 33.0	+0.7
	8.7nm,0.9s,baz=70,slow=13,SNR=6.8						
CTAO	Charters Tower	20.77	242	*e*P	P	07 38 33.4	+1.0
	18nm,1.1s						
LHI	Lord Howe Isla	21.21	196	*e*P	P	07 38 35.5	-1.4
	74nm,0.9s						
ARMA	Armidale	23.25	212	*e*P	P	07 38 58.6	-0.1
	30nm,1.1s						
URZ	Urewera	28.86	161	*e*P	P	07 39 50.3	+0.8
	12nm,1.1s						
URZ	Urewera	28.86	161	P	P	07 39 49.4	-0.1
	4.1nm,0.7s,baz=146,slow=22,SNR=8.4						
H11S2	WAKE ISLAND Hy	29.45	2	T	T	08 10 08.8	
	baz=183						
H11S3	WAKE ISLAND Hy	29.45	2	T	T	08 10 09.4	
	baz=183,slow=74						
H11S1	WAKE ISLAND Hy	29.47	2	T	T	08 10 09.4	
	baz=183,slow=74						
BKZ	Black Stump Fm	29.51	163	*e*P	P	07 39 55.4	+0.1
	6.6nm,0.9s						
STKA	Stephens Creek	30.39	224	P	P	07 40 03.4	+0.3
	3.7nm,0.7s,baz=29,slow=8.3,SNR=6.0						
STKA				LR	LR	07 51 32.1	
	comp=Z,188nm,19.9s,baz=31,slow=35						
H11N1	WAKE ISLAND Hy	30.67	2	T	T	08 11 38.8	
	baz=183						
H11N3	WAKE ISLAND Hy	30.68	2	T	T	08 11 39.3	
	baz=183						
H11N2	WAKE ISLAND Hy	30.69	2	T	T	08 11 40.3	
	baz=183						
WRAB	Tennant Creek	31.45	250	*e*P	P	07 40 12.0	-0.7
	14nm,1.0s						
WB2	Warramunga Arr	31.45	250	*e*P	P	07 40 12.6	-0.1
	18nm,1.1s						
WR1	Warramunga Arr	31.46	250	*e*P	P	07 40 12.1	-0.7
	20nm,1.0s						
WR1				*e*PcP	PcP	07 43 05.7	0.0
WRA	Warramunga Arr	31.46	250	P	P	07 40 12.1	-0.8
	9.5nm,0.8s,baz=80,slow=9.3,SNR=28						
WRA				PcP	PcP	07 43 05.7	0.0
	0.6nm,0.7s,baz=84,slow=2.4,SNR=5.3						
TOO	Toolangi	32.01	211	*e*P	P	07 40 18.3	+0.9
	8.3nm,0.9s						
LTZ	Lake Taylor	32.04	171	*e*P	P	07 40 18.0	+0.5
	17nm,1.0s						
ASAR	Alice Springs	32.76	243	P	P	07 40 22.8	-1.5
	1.8nm,0.8s,baz=73,slow=9.5,SNR=15						
ASAR				PcP	PcP	07 43 08.8	-0.3
	0.9nm,0.7s,baz=76,slow=2.8,SNR=6.0						
RPZ	Rata Peaks	32.79	173	*e*P	P	07 40 25.6	+1.5
	6.7nm,0.7s						
RPZ	Rata Peaks	32.79	173	P	P	07 40 23.8	-0.3
	6.4nm,0.6s,baz=215,slow=5.4,SNR=4.5						
RPZ				LR	LR	07 52 33.5	
	comp=Z,141nm,19.0s,baz=342,slow=34						
MQZ	McQueen's Vall	33.00	171	*e*P	P	07 40 26.6	+0.7
	24nm,1.1s						
BBOO	Buckleboo	34.78	227	*e*P	P	07 40 41.8	+0.2
	3.0nm,0.8s						
FITZ	Fitzroy Crossi	39.37	255	*e*P	P	07 41 20.3	-0.5
	4.4nm,0.9s						
FITZ	Fitzroy Crossi	39.37	255	P	P	07 41 19.9	-0.8
	3.3nm,0.7s,baz=98,slow=6.1,SNR=9.1						
MBWA	Marble Bar	45.18	251	*e*P	P	07 42 08.7	+0.7
	5.7nm,0.9s						
JCUZ	Jacuzzi	49.06	52	*e*P	P	07 42 31.0	-7.4
	361nm,0.5s						
MORW	Morawa	49.59	241	*e*P	P	07 42 41.8	-0.6
	5.4nm,0.9s						
JNU	Nakatsue	55.16	324	LR	LR	08 01 44.1	
	comp=Z,37nm,20.2s,baz=119,slow=30						
GSI	Gunungsitoli	68.88	276	*e*P	P	07 44 56.4	+0.3
	14nm,0.9s						
SDPT	Sand Point	72.03	19	*e*P	P	07 45 12.8	-1.5
	28nm,0.9s						
CMAR	Chiang Mai Arr	72.16	294	P	P	07 45 16.6	+0.7
	2.7nm,0.3s,baz=124,slow=4.8,SNR=4.5						
ANM	Nome	78.57	12	*e*P	P	07 45 52.6	+0.8
	1.9nm,1.1s						
IM3	Indian Mountai	82.50	16	*e*P	P	07 46 12.5	-0.4
ILAR	Eielson Array	83.59	18	P	P	07 46 17.5	-1.0
	0.8nm,0.5s,baz=235,slow=5.4,SNR=15						
MK32	Makanchi Array	93.59	317	*e*P	P	07 47 06.2	-0.7
MKAR	Makanchi Array	93.59	317	P	P	07 47 06.2	-0.7
	0.5nm,0.7s,baz=109,slow=4.9,SNR=5.1						
YKA	Yellowknife Ar	95.04	27	P	P	07 47 10.9	-2.2
	0.1nm,0.6s,baz=262,slow=4.5,SNR=3.3						
RGRS	Roger Stewart	116.11	59	*e*PKPdf	PKPdf	07 52 36.0	+1.8
ES19	SONSECA Array	150.10	344	*e*PKPdf	PKPdf	07 53 37.3	+0.6
ESLA	Sonseca Array	150.14	344	*e*PKPdf	PKPdf	07 53 36.6	-0.2
PAB	San Pablo	150.37	344	*e*PKPdf	PKPdf	07 53 36.3	-0.9

MEX 02 07:39:28.1±0.4**, 16°.30N**×**98°.28W, h9**^{km}±2^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.17	59	*i* P	Pg	07 39 31.4	-0.4
PNIG				*e*S	Sg	07 39 34.1	-0.2

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*IDC **02** 07:39:55.5±7.7, 21°.99S×177°.41W, h338^{km}±72^{km}, mb3.5/9, mb1 3.6/10, mb1mx3.4/34, mbtmp4.2/10, Error ellipse: s-maj=35.5km s-min=30.3km az=4.0*

ISC 02 07:39:55.7±1.0**, 22°.4S**±0°.1×**177°.2W**±0°.2**, h350**^{km}**, n13, σ1^s.54**/15**, mb3.7**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.11	268	P	P	07 43 11.0	-0.8
	0.4nm,0.3s,baz=81,slow=19,SNR=3.3						
URZ	Urewera	16.58	196	P	P	07 43 23.7	-3.7
	2.4nm,0.3s,baz=304,slow=2.0,SNR=11						
URZ				S	S	07 46 23.2	+0.2
	1.4nm,0.3s,baz=63,slow=22,SNR=10						
RPZ	Rata Peaks	23.41	202	P	P	07 44 37.6	+3.0
	3.8nm,0.4s,baz=353,slow=3.9,SNR=4.1						
CTA	Charters Tower	34.05	267	P	P	07 46 08.2	-0.2
	9.5nm,0.6s,baz=96,slow=10,SNR=23						
STKA	Stephens Creek	37.66	246	P	P	07 46 39.2	+0.6
	1.1nm,0.3s,baz=74,slow=9.4,SNR=6.2						
ASAR	Alice Springs	44.81	258	P	P	07 47 36.4	-0.1
	2.8nm,0.6s,baz=98,slow=7.9,SNR=38						
ASAR				PcP	PcP	07 49 11.6	-0.1
	0.3nm,0.7s,baz=104,slow=4.7,SNR=2.9						
WRA	Warramunga Arr	45.07	264	P	P	07 47 37.5	-1.0
	1.6nm,0.3s,baz=93,slow=8.3,SNR=102						
FITZ	Fitzroy Crossi	53.50	264	P	P	07 48 42.0	+0.3
	1.0nm,0.3s,baz=122,slow=5.5,SNR=17						
NWAO	Narrogin (SRO)	58.19	244	P	P	07 49 15.9	+1.5
	3.6nm,0.7s,baz=45,slow=10,SNR=2.3						
TXAR	Lajitas Array	87.46	57	P	P	07 52 05.5	+0.8
	0.2nm,0.6s,baz=222,slow=8.0,SNR=3.3						
ILAR	Eielson Array	89.95	13	P	P	07 52 14.4	-1.0
	0.7nm,1.0s,baz=234,slow=5.4,SNR=3.3						
ARCES	ARCESS Array B	130.86	350	PKP	PKiKP	07 58 25.9	-0.2
	1.3nm,0.8s,baz=48,slow=1.8,SNR=4.5						
AKASG	Malin Array Be	144.96	330	PKP	PKPab	07 58 51.8	-0.1
	0.2nm,0.4s,baz=58,slow=3.7,SNR=3.4						

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*IDC **02** 07:50:18.6±2.5, 7°.02S×155°.72E, h59^{km}±24^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.1/46, mbtmp4.4/27, ML4.0/3, MS3.7/7, Ms1 3.7/7, ms1mx3.2/34, Error ellipse: s-maj=14.8km s-min=12.7km az=83.0*

*ISCJB **02** 07:50:19.9±1.3, 7°.03S±0°.04×155°.73E±0°.04, h84^{km}±12^{km}, mb4.5/76, Error ellipse: s-maj=7.3km s-min=6.7km az=23.9*

*NEIC **02** 07:50:24.6±0.8, 7°.04S×155°.65E, h111^{km}±7^{km}, mb4.5/46, Error ellipse: s-maj=6.1km s-min=4.7km az=104.0*

ISC 02 07:50:23.1±1.0**, 7°.06S**±0°.06×**155°.71E**±0°.06**, h97**^{km}±10^{km}**, n135, σ0^s.95**/145**, mb4.5**/76**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.53	309	*e*Pn	Pn	07 51 31.2	+1.7
HNR	Honiara	4.81	120	*e*P	Pn	07 51 36.0	+2.7
HNR				*e*S	Sn	07 52 37.0	+9.1
HNR	Honiara	4.81	120	*e*Pn	Pn	07 51 38.6	+5.3
HNR				*e*Sn	Sn	07 52 24.9	-3.0
HNR	Honiara	4.81	120	P	Pn	07 51 27.0	-6.3
	7.5nm,0.3s,baz=128,slow=14,SNR=2.2						
HNR				S	Sn	07 52 24.9	-3.0
	33nm,0.3s,baz=208,slow=17,SNR=2.9						
HNR				LR	LR	07 53 17.9	
	comp=Z,791nm,19.5s,baz=292,slow=37						
PATS	Pohnpei	14.05	11	*e*Pn	Pn	07 53 36.4	-1.4
COEN	Coen	14.09	240	*e*Pn	Pn	07 53 37.5	-1.0
JAY	Jayapura	15.61	286	LR	LR	08 00 06.7	
	comp=Z,81nm,19.9s,baz=330,slow=38						
CTA	Charters Tower	15.87	214	P	Pn	07 53 59.8	-1.2
	0.4nm,0.3s,baz=49,slow=10,SNR=16						
CTAO	Charters Tower	15.87	214	*e*Pn	Pn	07 54 00.9	-0.1
	15nm,0.8s						
DZM	Mont Dzumac	18.17	146	*e*P	P	07 54 28.4	+0.1

	8.2nm,0.7s						
DZM	Mont Dzumac	18.17	146	P	P	07 54 27.2	-1.0
	0.4nm,0.3s,baz=302,slow=13,SNR=5.5						
EIDS	Eidsvold	18.74	193	eP	Pn	07 54 36.0	+0.2
	6.1nm,1.0s						
WRAB	Tennant Creek	24.35	236	eP	P	07 55 31.9	-0.2
	15nm,1.0s						
WB2	Warramunga Arr	24.35	236	eP	P	07 55 31.9	-0.4
	12nm,0.9s						
WB2				ePcP	PcP	07 59 09.8	+0.2
WR1	Warramunga Arr	24.36	236	eP	P	07 55 31.7	-0.6
	12nm,0.9s						
WR1				ePcP	PcP	07 59 10.1	+0.5
WR1				e		08 05 08.1	
WRA	Warramunga Arr	24.36	236	P	P	07 55 31.7	-0.6
	7.0nm,0.8s,baz=60,slow=9.8,SNR=31						
WRA				PcP	PcP	07 59 10.1	+0.5
	1.0nm,0.6s,baz=59,slow=2.5,SNR=6.3						
WRA				LR	LR	08 05 08.1	
	comp=Z,158nm,18.8s,baz=45,slow=36						
MTN	Manton Dam	24.86	255	eP	P	07 55 37.0	+0.1
	27nm,1.1s						
MTN				ePcP	PcP	07 59 10.5	-0.2
SIJI	Sorong	25.13	283	P	P	07 55 38.4	-1.0
	14nm,0.6s,baz=72,slow=9.9,SNR=4.9						
AS01	Alice Springs	26.63	229	eP	P	07 55 52.5	-0.3
AS01				ePcP	PcP	07 59 15.4	+0.7
AS31	Alice Springs	26.66	229	eP	P	07 55 52.2	-0.9
	1.1nm,0.9s						
ASAR	Alice Springs	26.66	229	P	P	07 55 52.1	-1.0
	0.5nm,0.4s,baz=58,slow=10.0,SNR=16						
ASAR				PcP	PcP	07 59 15.5	+0.7
	1.1nm,0.6s,baz=69,slow=2.5,SNR=7.8						
ASAR				LR	LR	08 06 17.4	
	comp=Z,172nm,18.2s,baz=112,slow=36						
H11S3	WAKE ISLAND Hy	27.61	23	T	T	08 24 26.4	
	baz=202,slow=75,SNR=100						
H11S2	WAKE ISLAND Hy	27.61	23	T	T	08 24 25.3	
	baz=202,slow=75,SNR=79						
H11S1	WAKE ISLAND Hy	27.62	23	T	T	08 24 27.7	
	baz=202,slow=75,SNR=59						
STKA	Stephens Creek	27.98	206	eP	P	07 56 03.8	-1.0
	0.9nm,1.0s						
STKA				ePcP	PcP	07 59 18.6	+0.9
STKA	Stephens Creek	27.98	206	P	P	07 56 03.5	-1.3
	2.6nm,0.8s,baz=26,slow=16,SNR=4.8						
STKA				PcP	PcP	07 59 18.2	+0.5
	1.3nm,0.7s,baz=63,slow=2.3,SNR=3.4						
STKA				LR	LR	08 06 21.7	
	comp=Z,183nm,20.5s,baz=26,slow=34						
FITZ	Fitzroy Crossi	31.27	247	eP	P	07 56 32.7	-1.4
	6.9nm,0.8s						
BBOO	Buckleboo	31.46	213	eP	P	07 56 36.9	+1.3
	5.8nm,1.0s						
TOO	Toolangi	31.76	196	eP	P	07 56 38.6	+0.5
	6.7nm,1.0s						
FORT	Forrest	35.03	224	eP	P	07 57 05.6	-1.0
	12nm,0.8s						
BKZ	Black Stump Fm	37.05	153	eP	P	07 57 25.2	+1.4
	15nm,1.2s						
BKZ				ePcP	PcP	07 59 42.7	0.0
MBWA	Marble Bar	37.48	244	eP	P	07 57 27.1	-0.5
	6.9nm,0.8s						
MBWA				ePcP	PcP	07 59 45.2	+1.0
THZ	Tophouse	37.78	159	eP	P	07 57 29.6	-0.3
	13nm,0.8s						
LTZ	Lake Taylor	38.46	160	eP	P	07 57 35.9	+0.2
	8.4nm,0.8s						
KHZ	Kahutara	38.58	159	eP	P	07 57 35.9	-0.6
	26nm,1.1s						
RPZ	Rata Peaks	38.91	162	eP	P	07 57 39.9	+0.6
	16nm,0.9s						
RPZ	Rata Peaks	38.91	162	P	P	07 57 38.5	-0.9
	15nm,0.9s,baz=66,slow=3.1,SNR=9.0						
MQZ	McQueen's Vall	39.41	161	eP	P	07 57 44.0	+0.5
	20nm,1.1s						
MQZ				ePcP	PcP	07 59 50.3	+0.5
KKM	Kota Kinabalu	41.50	287	eP	P	07 58 02.3	+1.1
	20nm,0.8s						
MORW	Morawa	43.29	235	eP	P	07 58 14.8	-0.7
	5.7nm,0.8s						
MJAR	Matsushiro Arr	46.37	340	P	P	07 58 37.6	-2.2
	3.4nm,0.7s,baz=168,slow=8.4,SNR=6.8						
MAJO	Matsushiro	46.38	340	eP	P	07 58 37.6	-2.2
KSRS	Korea Array	51.33	332	P	P	07 59 17.4	-0.1
	2.2nm,0.8s,baz=149,slow=7.1,SNR=5.3						
KSRS				PcP	PcP	08 00 32.2	+1.1
	1.5nm,0.7s,baz=140,slow=4.3,SNR=4.8						
KSAR	Wonju Array Be	51.34	332	P	P	07 59 17.4	-0.2
KSAR				PcP	PcP	08 00 32.2	+1.0
QIZ	Qiongzhong	52.10	301	eP	P	07 59 25.2	+1.5
	11nm,0.8s						
JCUZ	Jacuzzi	55.11	61	eP	P	07 59 47.6	+1.9
	481nm,0.5s						
USRK	Ussuriysk Ar.	55.34	339	P	P	07 59 46.8	0.0
	3.2nm,0.7s,baz=161,slow=6.7,SNR=5.5						
SKNT	Sakolnakorn	56.43	296	P	P	07 59 55.3	+0.1
NONG	Nongkai	57.56	296	P	P	08 00 03.2	+0.1
	0.9nm,0.7s						
CHAI	Chaiyaphum	57.87	294	P	P	08 00 05.2	-0.1
	9.9nm,0.6s						
GSI	Gunungsitoli	58.59	276	eP	P	08 00 09.1	-1.3
	12nm,0.8s						
PBKT	Sadao Pong	59.01	294	eP	P	08 00 14.0	+0.8
	13nm,0.5s						
PBKT	Sadao Pong	59.01	294	P	P	08 00 13.8	+0.6
	21nm,0.5s,817nm						
PHET	Kaeng Krachan	59.14	290	P	P	08 00 15.3	+1.2
	12nm,0.7s,241nm						
UTTA	Uttaradit	59.77	295	P	P	08 00 18.9	+0.5
	9.9nm,0.7s,81nm						
KLR	Kul'dur	59.84	342	P	P	08 00 18.4	0.0
	3.2nm,0.7s,baz=168,slow=4.0,SNR=8.9						
PEA0B	Petropavlovsk-	59.96	1	eP	P	08 00 19.4	+0.4
	25nm,1.1s						
PETK	Petropavlovsk-	59.96	1	eP	P	08 00 19.6	+0.5
PETK	Petropavlovsk-	59.96	1	P	P	08 00 18.1	-0.9
	3.7nm,0.8s,baz=154,slow=8.0,SNR=6.9						
PEA1	Petropavlovsk-	59.97	1	eP	P	08 00 18.1	-1.0
NANT	Nan	59.99	296	P	P	08 00 20.2	+0.2
	18nm,0.6s,163nm						
SRDT	SRDT	60.02	291	P	P	08 00 21.4	+1.2
	35nm,0.7s						
UTHA	Uthaitani	60.08	292	P	P	08 00 21.1	+0.5
	12nm,0.8s,126nm						
SUKH	Sukhothai	60.51	295	P	P	08 00 24.4	+0.9
	9.3nm,0.8s						
PAYA	Payao	60.92	297	P	P	08 00 26.9	+0.6
	11nm,0.7s						
CM01	Chiang Mai Arr	61.42	295	eP	P	08 00 31.1	+1.4
CM31	Chiang Mai Arr	61.45	295	eP	P	08 00 31.2	+1.3
CMAR	Chiang Mai Arr	61.45	295	P	P	08 00 30.5	+0.6
	9.7nm,0.7s,baz=120,slow=5.3,SNR=48						
CMMT	Chiang Mai	61.56	296	P	P	08 00 31.0	+0.4
CHTO	Chiang Mai	61.56	296	eP	P	08 00 31.2	+0.5
	5.8nm,0.6s						
CHTO	Chiang Mai	61.56	296	P	P	08 00 31.1	+0.5
	47nm,1.0s						
LZH	Lanzhou	64.86	315	eP	P	08 00 52.8	+0.5
LZH				pP	pP	08 01 08.0	-8.6
LZH				sP	sP	08 01 14.8	-12
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
MA2	Magadan	66.54	357	P	P	08 01 02.8	+0.4
	comp=Z,1.4nm,0.3s,baz=169,slow=16,SNR=2.3						
GTA	Gaotai	69.27	317	eP	P	08 01 20.2	+0.1
GTA				pP	pP	08 01 24.0	-21
GTA				sP	PcP	08 01 26.9	-16
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONA0	Songino Array	69.77	327	eP	P	08 01 23.2	+0.2
SONM	Songino Array	69.77	327	P	P	08 01 23.2	+0.2
	comp=Z,5.1nm,0.7s,baz=140,slow=6.9,SNR=36						
SONM				LR	LR	08 31 54.2	
	comp=Z,58nm,19.6s,baz=18,slow=36						
SONA1	Songino Array	69.78	327	eP	P	08 01 23.6	+0.5
VNDA	Vanda	70.50	179	eP	P	08 01 27.5	+0.6
	comp=Z,4.9nm,1.1s						
VNDA	Vanda	70.50	179	P	P	08 01 27.4	+0.6
	comp=Z,2.2nm,1.0s,baz=336,slow=7.2,SNR=3.1						
SUA	Susitna One	79.86	23	eP	P	08 02 20.1	-0.8
	comp=Z,4.7nm,1.0s						
RC01	Rabbit Creek A	80.04	24	eP	P	08 02 21.4	-0.4
	comp=Z,18nm,1.2s						
PPLA	Purkeypile	80.17	22	eP	P	08 02 22.2	-0.4
	comp=Z,6.8nm,1.1s						
RDOG	Red Dog Mine	80.40	15	eP	P	08 02 24.1	+0.6
	comp=Z,10nm,0.5s						
TIXI	Tiksi	80.52	352	eP	P	08 02 25.8	+1.8
	comp=Z,2.9nm,1.1s						
TIXI	Tiksi	80.52	352	P	P	08 02 25.5	+1.4
	comp=Z,1.2nm,0.4s,baz=194,slow=2.9,SNR=4.6						
PMR	Palmer	80.57	23	eP	P	08 02 23.9	-0.6
	comp=Z,5.1nm,1.1s						
GHO	Glory Hole Cre	80.75	23	eP	P	08 02 25.1	-0.5
	comp=Z,12nm,1.1s						
TRF	Thorofare Moun	81.20	22	eP	P	08 02 27.5	-0.5
	comp=Z,6.8nm,1.2s						
IM3	Indian Mountai	81.56	19	eP	P	08 02 30.4	+0.6
RND	Reindeer	81.70	22	eP	P	08 02 29.8	-0.8
	comp=Z,6.3nm,1.1s						
KLU	Klutina	81.80	24	eP	P	08 02 31.4	+0.2
	comp=Z,13nm,1.2s						
MCK	McKinley	81.85	22	eP	P	08 02 30.3	-1.1
	comp=Z,9.8nm,1.2s						
BWN	Browne	81.91	21	eP	P	08 02 29.4	-2.2
	comp=Z,94nm,0.8s						
MLY	Manley	81.97	20	eP	P	08 02 31.6	-0.3
	comp=Z,1.2nm,0.8s						
DHY	Denali Highway	82.07	23	eP	P	08 02 32.2	-0.5
	comp=Z,5.7nm,1.2s						
QSPA	South Pole Qui	82.92	180	eP	P	08 02 37.6	+0.5
	comp=Z,4.3nm,0.6s						
HDA	Harding Lake	82.96	22	eP	P	08 02 36.8	-0.3
	comp=Z,4.0nm,1.2s						
IL1	Eielson Array	83.18	21	eP	P	08 02 37.1	-1.1
ILAR	Eielson Array	83.18	21	P	P	08 02 36.5	-1.7
	comp=Z,0.7nm,0.4s,baz=245,slow=5.2,SNR=26						
ILAR				LR	LR	08 37 15.3	
	comp=Z,48nm,19.7s,baz=152,slow=34						
ILB	Eielson Array	83.18	21	eP	P	08 02 36.9	-1.3
MK01	Makanchi Array	83.91	319	eP	P	08 02 42.2	-0.2
MK31	Makanchi Array	83.92	319	eP	P	08 02 42.7	+0.3
MK32	Makanchi Array	83.92	319	eP	P	08 02 42.4	0.0
MKAR	Makanchi Array	83.92	319	eP	P	08 02 42.8	+0.4
	comp=Z,20nm,0.8s						
MKAR	Makanchi Array	83.92	319	P	P	08 02 42.4	0.0
	comp=Z,2.5nm,0.6s,baz=103,slow=5.9,SNR=37						
MAKZ	Makanchi	84.13	318	eP	P	08 02 44.0	+0.5
	comp=Z,3.8nm,0.8s						
MAW	Mawson	84.61	203	eP	P	08 02 46.4	+1.0
	comp=Z,4.0nm,1.0s						
ZALV	Zalesovo Beam	84.63	326	eP	P	08 02 45.3	-0.4
ZALV	Zalesovo Beam	84.63	326	P	P	08 02 44.8	-1.0
	comp=Z,1.1nm,0.4s,baz=114,slow=5.7,SNR=5.6						
ZAA1	Zalesovo Array	84.63	326	eP	P	08 02 44.8	-1.0
BESE	Bessie Mountai	85.49	29	eP	P	08 02 48.0	-2.0
	comp=Z,26nm,1.0s						
KURK	Kurchatov	87.32	322	eP	P	08 02 58.2	-0.9
KURBB	Kurchatov Arra	87.35	322	P	P	08 02 58.2	-1.0
	comp=Z,0.7nm,0.2s,baz=100,slow=4.3,SNR=4.1						
AAK	Ala-Archa	88.31	313	P	P	08 03 04.2	0.0
	comp=Z,1.1nm,0.4s,baz=8.5,slow=12,SNR=6.4						
NRIK	Noril'sk	89.03	341	P	P	08 03 05.8	-1.0
	comp=Z,3.0nm,0.5s,baz=88,slow=2.9,SNR=7.1						
INK	Inuvik	89.53	21	eP	P	08 03 09.2	0.0
	comp=Z,2.7nm,1.1s						
INK	Inuvik	89.53	21	P	P	08 03 08.2	-0.9
	comp=Z,0.9nm,0.5s,baz=282,slow=4.8,SNR=13						
BVAR	Borovoye Array	92.77	323	P	P	08 03 23.9	-0.7
	comp=Z,1.8nm,0.5s,baz=113,slow=6.5,SNR=12						
YKA	Yellowknife Ar	96.06	28	P	P	08 03 38.9	-0.5
	comp=Z,0.6nm,0.7s,baz=267,slow=4.6,SNR=14						
YKB5	Yellowknife Ar	96.06	28	eP	P	08 03 39.4	0.0
FIA0	FINESS Array S	114.28	336	ePKiKP	PKPdf	08 08 50.8	-0.3
FINES	FINESS Array B	114.28	336	PKP	PKPdf	08 08 50.8	-0.3
	comp=Z,1.7nm,0.6s,baz=107,slow=2.3,SNR=12						
AKASG	Malin Array Be	118.00	325	PKP	PKPdf	08 08 58.5	-0.1
	comp=Z,0.4nm,0.3s,baz=64,slow=2.2,SNR=5.5						
AKBB	Malin Array Si	118.00	325	ePKPdf	PKPdf	08 08 58.5	-0.1
NB2	NORSAR Subarra	119.99	341	PKPdf	PKPdf	08 09 01.5	-0.7
	comp=Z,0.8nm,0.6s,baz=41,slow=1.9						
NB200	NORSAR Array S	119.99	341	ePKPdf	PKPdf	08 09 01.7	-0.4
NOA	NORSAR Array B	119.99	341	PKP	PKPdf	08 09 01.7	-0.4
	comp=Z,0.9nm,0.6s,baz=44,slow=1.9,SNR=5.2						
GERES	GERESS Array B	127.47	329	PKP	PKiKP	08 09 17.6	+0.1
	comp=Z,1.3nm,0.7s,baz=88,slow=3.3,SNR=8.6						
GEA0	GERESS Array S	127.47	329	ePKPdf	PKiKP	08 09 17.8	+0.3
BDFB	Brasilia	147.43	134	ePKPbc	PKPbc	08 09 57.7	+0.8
BDFB	Brasilia	147.43	134	PKPbc	PKPbc	08 09 57.4	+0.4
	comp=Z,4.4nm,0.7s,baz=12,slow=2.7,SNR=6.3						
TOA0	Torodi Ar. Sit	153.72	285	ePKPdf	PKPdf	08 10 04.2	+0.3
TOA0				ePKPbc	PKPbc	08 10 11.5	-0.4
TORD	Torodi Ar. Bea	153.72	285	PKP	PKPdf	08 10 03.0	-0.9
	comp=Z,0.4nm,0.7s,baz=132,slow=1.0,SNR=3.4						
TORD				PKPbc	PKPbc	08 10 11.5	-0.4
	comp=Z,1.4nm,0.7s,baz=52,slow=2.4,SNR=9.5						
TOA1	Torodi Ar. Sit	153.72	285	ePKPdf	PKPdf	08 10 03.0	-0.9
TOA1				ePKPbc	PKPbc	08 10 11.5	-0.4
DBIC	Dimbokro	160.70	270	PKPab	PKPab	08 10 53.4	-1.7
	comp=Z,2.7nm,0.7s,baz=94,slow=5.7,SNR=4.7						

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*IDC **02** 08:11:23.2±1.7, 11°.16S×165°.46E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.8/35, mbtmp4.0/8, ML4.3/1, Error ellipse: s-maj=46.5km s-min=27.3km az=119.0*

*NEIC **02** 08:11:24.4±0.8, 11°.01S×165°.47E, h10^{km}, mb4.1/7, Error ellipse: s-maj=15.9km s-min=12.8km az=82.0*

*ISCJB **02** 08:11:25.6±0.8, 11°.21S±0°.08×165°.5E±0°.1, h30^{km}, mb4.1/12, Error ellipse: s-maj=16.6km s-min=10.6km az=167.6*

ISC 02 08:11:26.8±0.9**, 11°.15S**±0°.08×**165°.6E**±0°.2**, h30^{km}, n21, σ1^{s}.89**/23**, mb4.1**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.89	176	ePn	Pn	08 14 00.9	+0.1
DZM				eSn	Sn	08 16 01.3	-0.4
DZM	Mont Dzumac	10.89	176	Pn	Pn	08 14 00.9	+0.1
	2.2nm,0.3s,baz=34,slow=6.0,SNR=38						
DZM				Sn	Sn	08 15 57.1	-4.6
	0.0nm,0.3s,baz=292,slow=19,SNR=1.8						
PINNC	Pines Island,	11.53	171	ePn	Pn	08 14 12.8	+3.3
CTA	Charters Tower	20.62	242	P	P	08 16 02.9	-1.0
	3.8nm,0.8s,baz=59,slow=12,SNR=5.7						
CTAO	Charters Tower	20.62	242	eP	P	08 16 05.4	+1.4
	6.3nm,0.9s						
BKZ	Black Stump Fm	29.54	163	eP	P	08 17 31.9	+3.1
	4.4nm,0.7s						
STKA	Stephens Creek	30.26	223	eP	P	08 17 35.0	-0.3
	0.5nm,1.0s						
STKA	Stephens Creek	30.26	223	P	P	08 17 35.7	+0.4
	1.9nm,1.0s,baz=52,slow=12,SNR=3.2						
WRAB	Tennant Creek	31.30	250	eP	P	08 17 44.8	+0.2
	9.1nm,1.1s						
WB2	Warramunga Arr	31.30	250	eP	P	08 17 44.7	+0.1
	4.7nm,1.0s						
WR1	Warramunga Arr	31.31	250	eP	P	08 17 44.4	-0.3
	2.5nm,1.0s						
WRA	Warramunga Arr	31.31	250	P	P	08 17 44.4	-0.3
	3.6nm,0.8s,baz=82,slow=9.0,SNR=18						
AS31	Alice Springs	32.61	243	eP	P	08 17 56.2	0.0
	0.8nm,1.0s						
ASAR	Alice Springs	32.61	243	P	P	08 17 54.9	-1.2
	2.6nm,1.2s,baz=66,slow=9.9,SNR=8.7						
CMAR	Chiang Mai Arr	72.02	294	P	P	08 22 50.4	+1.9
	1.0nm,0.3s,baz=101,slow=4.7,SNR=3.9						
BPAW	Bear Paw Mtn.	81.93	18	eP	P	08 23 42.1	-1.2
	27nm,0.9s						
ILAR	Eielson Array	83.66	19	P	P	08 23 53.6	+1.4
	0.2nm,0.6s,baz=221,slow=5.4,SNR=3.5						
MK32	Makanchi Array	93.50	317	eP	P	08 24 38.9	-0.9
MKAR	Makanchi Array	93.50	317	P	P	08 24 38.9	-0.9
	0.4nm,0.7s,baz=91,slow=5.9,SNR=2.1						
MNMC	Minye Minye	117.84	119	ePKPdf	PKPdf	08 30 08.9	-2.8
BBSR	BB Station	129.27	57	ePKPdf	PKPdf	08 30 29.8	-3.0

WEL 02 08:18:25.4±1.4**, 46°S**±8°×**16°6E**±°**, h12^{km}, ML3.9**/7**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.39	55	P	Pb	08 18 34.3	0.0
PYZ				S	Sb	08 18 39.5	-0.7
DCZ	Deep Cove	1.13	36	P	Pb	08 18 43.2	-3.6
APZ	The Paps	1.30	111	P	Pn	08 18 49.0	-0.4
WHZ	Wether Hill Ro	1.30	68	P	Pn	08 18 48.4	-0.9
WHZ				S	Sb	08 19 05.8	-0.7
MLZ	Mavora Lakes	1.68	53	P	Pn	08 18 54.3	-0.3
MLZ				S	Sb	08 19 18.0	+0.8
SYZ	Scrubby Hill	2.02	95	P	Pn	08 18 59.3	0.0
SYZ				S	Sn	08 19 25.3	+0.8
MSZ	Milford Sound	2.09	36	P	Pn	08 18 59.3	-1.0
TUZ	Tuapeka	2.41	81	P	Pn	08 19 04.5	-0.1
TUZ				S	Sn	08 19 35.1	+1.1
EAZ	Earnscleugh	2.45	63	P	Pn	08 19 05.5	+0.3
WKZ	Wanaka	2.51	53	P	Pn	08 19 06.7	+0.6
JCZ	Jackson Bay	2.94	39	P	Pn	08 19 12.4	+0.4
HHSZ	Highcliff Hill	3.09	82	P	Pn	08 19 13.7	-0.2
ODZ	Otahua Downs	3.38	68	P	Pn	08 19 16.4	-1.5
LBZ	Lake Benmore	3.44	56	P	Pn	08 19 17.4	-1.3
FOZ	Fox Glacier	3.83	43	P	Pn	08 19 24.4	+0.3
RPZ	Rata Peaks	4.35	54	P	Pn	08 19 29.0	-2.3
WVZ	Waitaha Valley	4.62	46	P	Pn	08 19 34.3	-0.6

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*IDC **02** 08:29:22.0±1.5, 33°.89N×24°.58E, h0^{km}, mb3.8/7, mb1 3.7/10, mb1mx3.5/46, mbtmp3.6/10, ML3.3/3, Error ellipse: s-maj=31.0km s-min=24.7km az=155.0*

*ISCJB **02** 08:29:24.1±0.9, 33°.70N±0°.08×24°.64E±0°.09, h30^{km}, mb3.6/7, Error ellipse: s-maj=12.5km s-min=9.1km az=36.4*

*ATH **02** 08:29:24.4, 33°.90N×24°.73E, h7^{km}±4^{km}, ML2.5/1, Error ellipse: s-maj=9.0km s-min=1.8km az=15.0*

ISC 02 08:29:26.3±1.2**, 33°.86N**±0°.10×**24°.6E**±0°.1**, h30^{km}, n19, σ1^{s}.01**/20**, mb3.8**/7**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GVD	Gavdhos	1.05	339	P	Pn	08 29 45.1	+0.1
GVD				S	Sb	08 29 59.8	+0.4
GVD				AML	AML	08 30 12.3	
	comp=E,469µm,0.7s						
GVD				AML	AML	08 30 14.1	
	comp=N,479µm,0.6s						
IDI	Anoyia	1.46	11	P	Pn	08 29 50.5	0.0
LAST	Lasithi	1.51	30	P	Pn	08 29 50.6	-0.7
VAM	Vamos	1.57	349	P	Pb	08 29 53.9	-0.9
NPS	Neapolis	1.65	32	P	Pn	08 29 53.5	+0.3
IMMV	Iera Moni Meta	1.67	344	P	Pb	08 29 55.7	-0.7
KERA	Keramoti	1.72	332	P	Pb	08 29 56.5	-0.7
ZKR	Zakros	1.86	47	P	Pn	08 29 56.4	+0.3
KARP	Karpathos	2.73	51	P	Pn	08 30 09.3	+1.1
MMAI	Mount Meron Ar	9.11	92	Pn	Pn	08 31 33.3	-2.4
	comp=N,0.9nm,0.3s,baz=273,slow=13,SNR=6.0						
BRTR	Keskin Array B	9.35	49	Pn	Pn	08 31 41.2	+2.2
	comp=N,0.1nm,0.3s,baz=224,slow=12,SNR=3.6						
AKASG	Malin Array Be	17.18	10	P	Pn	08 33 24.6	+0.7
	comp=N,0.2nm,0.3s,baz=205,slow=11,SNR=3.1						
FINES	FINESS Array B	27.62	2	P	P	08 35 10.0	-0.7
	comp=N,0.6nm,0.7s,baz=182,slow=11,SNR=2.0						
NOA	NORSAR Array B	28.54	346	P	P	08 35 18.4	-0.6
	comp=N,0.4nm,0.7s,baz=148,slow=9.0,SNR=2.8						
TORD	Torodi Ar. Bea	29.27	231	P	P	08 35 26.7	+0.8
	comp=N,0.1nm,0.5s,baz=39,slow=9.2,SNR=2.4						
ARCES	ARCESS Array B	35.73	1	P	P	08 36 22.1	+0.2
	comp=N,2.3nm,1.0s,baz=183,slow=8.1,SNR=3.5						
KURBB	Kurchatov Arra	42.34	50	P	P	08 37 17.4	0.0
	comp=N,1.1nm,0.5s,baz=274,slow=8.7,SNR=11						
MKAR	Makanchi Array	44.92	55	P	P	08 37 38.5	+0.2
	comp=N,1.1nm,0.5s,baz=277,slow=6.9,SNR=17						
ZALV	Zalesovo Beam	46.27	45	P	P	08 37 48.1	-0.6
	comp=N,1.2nm,0.4s,baz=271,slow=8.6,SNR=5.6						

IDC 02 08:35:01.5±2.8**, 29°.28N**×**139°.60E, h422^{km}**±31^{km}**, mb2.6**/5**, mb1 2.7**/7**, mb1mx2.6**/52**, mbtmp3.4**/7**, Error ellipse: s-maj=31.4km s-min=19.3km az=81.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	7.33	351	P	P	08 36 49.0	-0.4
	0.0nm,0.3s,baz=182,slow=12,SNR=3.3						
KSRS	Korea Array	12.71	313	P	P	08 37 48.7	+0.4
	0.2nm,0.3s,baz=128,slow=11,SNR=2.9						
MKAR	Makanchi Array	47.33	308	P	P	08 42 54.4	-0.8
	0.2nm,0.7s,baz=94,slow=9.3,SNR=2.7						
WRA	Warramunga Arr	49.20	187	P	P	08 43 09.3	-0.1
	0.3nm,0.9s,baz=6.2,slow=8.6,SNR=2.8						
KURBB	Kurchatov Arra	49.89	313	P	P	08 43 14.1	-0.1
	0.5nm,0.5s,baz=92,slow=7.9,SNR=5.7						
BVAR	Borovoye Array	54.89	316	P	P	08 43 50.7	+0.4
	0.5nm,0.4s,baz=94,slow=7.4,SNR=4.0						
YKA	Yellowknife Ar	71.30	28	P	P	08 45 36.4	0.0
	0.1nm,0.4s,baz=294,slow=6.0,SNR=2.8						

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*NORS **02** 08:36:51.4±0.0, 43°.26N×44°.17E, h11^{km}, MPVA3.5*

*MOS **02** 08:36:51.4±0.0, 43°.26N×44°.17E, h11^{km}, MPVA3.5*

MOS 02 08:36:52.1±0.8**, 43°.22N**×**44°.18E, h12^{km}, mb3.6**/1**, 7C-3D, Error ellipse: s-maj=8.6km s-min=6.3km az=125.5, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KORR	Kora	0.16	212	ePG	Pb	08 36 56.5	-0.5
KORR				pmax	pmax		
	comp=Z,30nm,0.2s						
KORR	Kora	0.16	212	ePg	Pb	08 36 56.6	-0.4
KORR				eSg	Sg	08 37 01.3	+2.9
STDR	Stavd-Durt	0.17	330⇓	iPG	Pg	08 36 55.8	-0.3
STDR				eS	Sg	08 36 59.6	+0.8
STDR	Stavd-Durt	0.17	330	i Pg	Pg	08 36 55.8	-0.2
STDR				eSg	Sg	08 36 59.6	+0.8
BTKR	Batakoyurt	0.30	60	ePG	Pg	08 36 58.2	-0.1
BTKR				eS	Sg	08 37 03.4	+0.9
BTKR	Batakoyurt	0.30	60	ePg	Pg	08 36 58.2	-0.1
BTKR				eSg	Sg	08 37 03.4	+0.9
LACR	Lac	0.40	168	dePG	Pb	08 37 00.9	-0.3
LACR				pmax	pmax		
	comp=Z,124nm,0.3s						
LACR	Lac	0.40	168	ePg	Pb	08 37 01.0	-0.2
LACR				eSg	Sb	08 37 10.2	+2.9
VLKR	Vladikavkaz	0.40	115	ePG	Pb	08 37 02.2	+1.0
VLKR				eS	Sb	08 37 10.3	+3.0
VLKR	Vladikavkaz	0.40	115	ePg	Pb	08 37 02.2	+1.1
VLKR				ePg	Pn	08 37 02.3	-1.4
VLKR				eSg	Sb	08 37 10.3	+3.0
VLKR				eSg	Sg	08 37 10.3	+4.9
ZEI	Tsey	0.48	206	ePG	Pb	08 37 03.2	+0.7
ZEI				eS	Sb	08 37 11.4	+1.8
ZEI	Tsey	0.48	206	ePg	Pb	08 37 03.2	+0.7
ZEI				eSg	Sb	08 37 11.3	+1.8
NCK	Nalchik	0.51	303⇑	ePG	Pb	08 37 03.6	+0.6
NCK	Nalchik	0.51	303	ePg	Pn	08 37 04.5	-0.7
NCK				eSg	Sn	08 37 12.6	-1.3
KMGR	Komgaron	0.53	108	ePG	Pb	08 37 03.1	-0.2
KMGR				eS	Sn	08 37 12.9	-1.5
KMGR	Komgaron	0.53	108	ePg	Pb	08 37 03.1	-0.2
KMGR				eSg	Sn	08 37 12.9	-1.5
PRTR	Priterechnaya	0.54	8c	iPG	Pb	08 37 03.6	+0.1
PRTR	Priterechnaya	0.54	8	ePg	Pb	08 37 03.7	+0.2
PRTR				eSg	Sb	08 37 11.1	-0.1
DIGR	Digorskoe uzhe	0.54	234	ePG	Pb	08 37 03.8	+0.1
DIGR				eS	Sb	08 37 13.1	+1.6
DIGR	Digorskoe uzhe	0.54	234	ePg	Pb	08 37 03.8	+0.1
DIGR				eSg	Sb	08 37 13.1	+1.6
KBTC	Kuba-Taba	0.82	317	ePG	Pb	08 37 08.4	+0.1
KBTC				eS	Sn	08 37 21.3	-0.4
KBTC	Kuba-Taba	0.82	317	ePg	Pb	08 37 08.4	0.0
KBTC				eSg	Sn	08 37 21.3	-0.4
NEY	Neytrino	1.07	272⇑	iPG	Pb	08 37 12.1	-0.5
NEY				i S	Sn	08 37 27.4	-0.5
NEY	Neytrino	1.07	272	ePg	Pb	08 37 12.2	-0.4
NEY				eSg	Sn	08 37 27.8	-0.1
PYA1	Pyatigorsk	1.16	317⇑	iPG	Pb	08 37 13.5	-0.5
PYA1				i S	Sn	08 37 29.7	-0.2
PYA1	Pyatigorsk	1.16	317	i Pg	Pb	08 37 13.5	-0.6
PYA1				i Sg	Sn	08 37 29.7	-0.2
GROC	Groznyy	1.18	90	ePG	Pg	08 37 15.0	+0.2
GROC				eS	Sn	08 37 32.7	+2.3
GROC	Groznyy	1.18	90	ePg	Pg	08 37 15.0	+0.2
GROC				eSg	Sn	08 37 32.7	+2.3
SHA1	Shidzhatmaz	1.23	296	ePG	Pn	08 37 14.7	-0.6
SHA1				eS	Sn	08 37 31.8	-0.1
SHA1	Shidzhatmaz	1.23	296	ePg	Pn	08 37 14.7	-0.6
SHA1				i Pg	Pb	08 37 14.7	-0.7
SHA1				eSg	Sg	08 37 31.8	+0.1
SHA1				i Sg	Sn	08 37 32.5	+0.6
BEYR	Belyy Ugol+	1.27	309⇓	iPG	Pn	08 37 15.6	-0.1
BEYR				i S	Sg	08 37 33.2	+0.2
BEYR	Belyy Ugol+	1.27	309	i Pg	Pn	08 37 15.6	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEYR				*i* Sg	Sg	08 37 33.2	+0.2
KIV0	**Kislovodsk Arr**	**1.31**	**305**	*i* Pg	Pn	08 37 16.4	+0.1
KIV0				*i* Sg	Sg	08 37 34.6	+0.4
KIV	**Kislovodsk**	**1.31**	**305**	⇑*i*PG	Pn	08 37 16.4	0.0
KIV				*i* S	Sg	08 37 34.7	+0.3
DVE	**Vedeno**	**1.45**	**100**	*e*PG	Pb	08 37 18.6	-0.4
DVE				pmax	pmax		
	comp=Z,19nm,0.2s						
DVE	**Vedeno**	**1.45**	**100**	*e*Pg	Pb	08 37 18.7	-0.3
DVE				*e*Sg	Sg	08 37 38.8	+0.1
BTLR	**Botlikh**	**1.60**	**110**	*e*PG	Pb	08 37 21.7	+0.1
BTLR				*e*S	Sg	08 37 44.1	+0.6
BTLR	**Botlikh**	**1.60**	**110**	*e*Pg	Pb	08 37 21.7	+0.2
BTLR				*e*Sg	Sg	08 37 44.1	+0.6
ALER	**Alexandrovskoy**	**1.80**	**330**	*e*Pg	Pb	08 37 24.5	-0.5
ALER				*i* Sg	Sb	08 37 48.4	+1.0
DBC	**Dubki**	**1.95**	**95**	*e*PN	Pb	08 37 26.9	-0.7
DBC				*e*S	Sb	08 37 53.1	+1.2
DBC	**Dubki**	**1.95**	**95**	*e*Pg	Pb	08 37 26.9	-0.7
DBC				*e*Sg	Sb	08 37 53.1	+1.2
GOF	**Gofitskoye**	**2.01**	**336**	*e*PN	Pg	08 37 30.3	-0.4
GOF				*e*S	Sg	08 38 05.6	+8.8
GOF				pmax	pmax		
	comp=Z,30nm,0.4s						
GOF				smax	smax		
	comp=E,30nm,0.6s						
GOF	**Gofitskoye**	**2.01**	**336**	*e*Pg	Pn	08 37 27.0	+1.1
GOF				*i* Sg	Sb	08 37 52.8	-0.8
BRVK	**Borovoye**	**19.90**	**51**	⇑*e*P	P	08 41 21.7	-1.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	**Ala-Archa**	**22.15**	**81**	⇑*e*P	P	08 41 47.1	-0.7

MEX 02 08:40:15.0±0.4, 15°.45N×93°.12W, h51^{km}±11^{km}, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.27**	**339**	*i* P	Pn	08 40 22.6	-1.4
THIG		**0.98**	**123**	*e*P	Pn	08 40 30.9	-1.6
THIG				*e*S	Sn	08 40 43.6	-1.9
CCIG	**Comitan**	**1.26**	**49**	*e*P	Pn	08 40 34.8	-1.6

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*ISCJB **02** 08:40:26.6±1.1, 46°.27S±0°.06×166°.07E±0°.07, h29^{km}±7^{km}, mb3.9/3, MS3.0/1, Error ellipse: s-maj=10.8km s-min=7.6km az=11.9*

*WEL **02** 08:40:27.7±1.2, 46°S±6°×16°6E±°, h12^{km}, ML4.5/11*

*IDC **02** 08:40:34.1±5.2, 45°.74S×166°.33E, h74^{km}±43^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/36, mbtmp3.9/5, ML3.7/2, MS3.5/2, Ms1 3.4/2, ms1mx3.0/17, Error ellipse: s-maj=58.0km s-min=21.6km az=4.0*

ISC 02 08:40:25.5±1.8, 46°.23S±0°.06×166°.16E±0°.06, h12^{km}±11^{km}, n41, σ1^{s}65/44, mb3.8/3, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.37**	**81**	P	**Pn**	**08 40 36.6**	**-0.1**
PYZ				S	**Sb**	**08 40 41.7**	**+2.0**
DCZ	**Deep Cove**	**1.03**	**43**	P	**Pn**	**08 40 45.5**	**-0.2**
DCZ				S	**Sb**	**08 40 58.7**	**0.0**
WHZ	**Wether Hill Ro**	**1.29**	**76**	P	**Pn**	**08 40 50.8**	**+1.5**
WHZ				S	**Sn**	**08 41 08.0**	**+1.5**
APZ	**The Paps**	**1.40**	**116**	P	**Pn**	**08 40 51.3**	**+0.4**
APZ				S	**Sg**	**08 41 08.3**	**-2.4**
MLZ	**Mavora Lakes**	**1.62**	**59**	P	**Pg**	**08 40 57.2**	**+0.6**
MLZ				S	**Sg**	**08 41 18.5**	**+0.9**
MSZ	**Milford Sound**	**1.99**	**39**	P	**Pb**	**08 41 00.5**	**-1.1**
SYZ	**Scrubby Hill**	**2.09**	**100**	P	**Pn**	**08 41 01.7**	**+1.4**
SYZ				S	**Sn**	**08 41 26.6**	**+0.5**
EAZ	**Earnscleugh**	**2.42**	**67**	P	**Pb**	**08 41 07.7**	**-1.2**
EAZ				S	**Sn**	**08 41 36.9**	**+2.5**
TUZ	**Tuapeka**	**2.43**	**85**	P	**Pn**	**08 41 06.7**	**+1.7**
WKZ	**Wanaka**	**2.45**	**56**	P	**Pb**	**08 41 08.9**	**-0.6**
JCZ	**Jackson Bay**	**2.84**	**42**	P	**Pb**	**08 41 13.9**	**-2.3**
HHSZ	**Highcliff Hill**	**3.11**	**85**	P	**Pn**	**08 41 16.1**	**+1.7**
ODZ	**Otahua Downs**	**3.36**	**71**	P	**Pn**	**08 41 18.6**	**+0.8**
LBZ	**Lake Benmore**	**3.38**	**59**	P	**Pn**	**08 41 19.7**	**+1.5**
LBZ				P		08 41 19.8	
FOZ	**Fox Glacier**	**3.74**	**45**	P	**Pn**	**08 41 26.0**	**+2.9**
FOZ				P		08 41 27.1	
RPZ	**Rata Peaks**	**4.29**	**56**	P	**Pn**	**08 41 31.1**	**+0.5**
	6.3nm,0.3s,baz=235,slow=4.1,SNR=28						
RPZ				S	**Sn**	**08 42 18.1**	**-2.3**
	12nm,0.3s,baz=54,slow=22,SNR=3.6						
RPZ				LR	LR	08 43 33.5	
	comp=Z,1μm,18.4s,baz=280,slow=46						
RPZ	**Rata Peaks**	**4.29**	**56**	P	**Pn**	**08 41 31.3**	**+0.8**
WVZ	**Waitaha Valley**	**4.54**	**48**	P	**Pn**	**08 41 37.0**	**+3.1**
INZ	**Inchbonnie**	**5.15**	**49**	P	**Pn**	**08 41 43.9**	**+1.5**
MQZ	**McQueen's Vall**	**5.25**	**64**	P	**Pn**	**08 41 44.9**	**+1.1**
AKCZ	**Akaroa Harbour**	**5.33**	**66**	P	**Pn**	**08 41 46.4**	**+1.6**
OKCZ	**Okains Bay**	**5.50**	**65**	P	**Pn**	**08 41 49.1**	**+1.9**
AMCZ	**Amberley**	**5.54**	**59**	P	**Pn**	**08 41 49.8**	**+2.1**
LTZ	**Lake Taylor**	**5.56**	**54**	P	**Pn**	**08 41 49.2**	**+1.1**
DSZ	**Denniston Nort**	**6.05**	**44**	P	**Pn**	**08 41 56.8**	**+2.0**
URZ	**Urewera**	**11.36**	**49**	P	**Pn**	**08 43 06.6**	**-1.0**
	0.5nm,0.3s,baz=234,slow=14,SNR=4.2						
URZ				S	**Sn**	**08 45 09.8**	**-4.5**
	0.1nm,0.3s,baz=90,slow=20,SNR=1.8						
STKA	**Stephens Creek**	**23.73**	**299**	LR	LR	08 52 42.8	
	comp=Z,60nm,21.4s,baz=32,slow=31						
ASAR	**Alice Springs**	**34.35**	**300**	P	**P**	**08 47 12.8**	**+0.6**
	0.9nm,0.5s,baz=132,slow=8.0,SNR=26						
WRA	**Warramunga Arr**	**36.97**	**304**	P	**P**	**08 47 34.5**	**-0.1**
	1.0nm,0.6s,baz=137,slow=7.9,SNR=24						
H01W1	**Cape Leeuwin H**	**40.43**	**267**	T	T	09 30 52.2	
	baz=123,slow=76						
H01W2	**Cape Leeuwin H**	**40.44**	**267**	T	T	09 30 55.5	
	baz=123,slow=76						
H01W3	**Cape Leeuwin H**	**40.45**	**267**	T	T	09 30 56.4	
	baz=123,slow=76						
FITZ	**Fitzroy Crossi**	**43.60**	**296**	P	**P**	**08 48 30.1**	**+0.5**
	1.2nm,0.7s,baz=113,slow=7.7,SNR=4.5						
H08S2	**Diego Garcia H**	**87.07**	**262**	T	T	10 29 01.2	
	baz=136,slow=77						
H08S1	**Diego Carcia H**	**87.08**	**262**	T	T	10 29 01.1	
	baz=136,slow=77						
H08S3	**Diego Garcia H**	**87.09**	**262**	T	T	10 29 04.3	
	baz=136,slow=77						
YKA	**Yellowknife Ar**	**125.26**	**34**	PKP	**PKPdf**	**08 59 23.9**	**-0.9**
	0.1nm,0.7s,baz=245,slow=1.4,SNR=3.3						
TORD	**Torodi Ar. Bea**	**144.51**	**207**	PKPbc	**PKPab**	**09 00 00.0**	**-0.3**
	0.3nm,0.6s,baz=184,slow=2.4,SNR=2.8						
BRTR	**Keskin Array B**	**145.09**	**277**	PKPbc	**PKPbc**	**09 00 01.9**	**-0.1**
	0.4nm,0.7s,baz=137,slow=3.0,SNR=2.9						
ARCES	**ARCESS Array B**	**149.61**	**334**	PKPbc	**PKPbc**	**09 00 12.4**	**-1.1**
	2.4nm,0.9s,baz=29,slow=2.8,SNR=7.1						
AKASG	**Malin Array Be**	**151.40**	**295**	PKPbc	**PKPbc**	**09 00 18.4**	**+0.1**
	0.2nm,0.3s,baz=86,slow=2.3,SNR=4.1						
AKASG				PKPab	**PKPab**	**09 00 27.2**	**+0.6**
	0.6nm,0.5s,baz=79,slow=2.7,SNR=6.1						

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*IDC **02** 08:42:12.0±1.8, 10°.96S×165°.29E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.7/46, mbtmp3.9/7, ML4.2/1, Error ellipse: s-maj=47.1km s-min=30.1km az=129.0*

*ISCJB **02** 08:42:15.0±0.7, 11°.10S±0°.08×165°.3E±0°.1, h30^{km}, mb4.2/13, Error ellipse: s-maj=14.7km s-min=11.0km az=4.2*

*NEIC **02** 08:42:14.3±0.7, 11°.02S×165°.32E, h10^{km}, mb4.2/10, Error ellipse: s-maj=14.3km s-min=10.9km az=94.0*

ISC 02 08:42:17.1±0.8, 11°.07S±0°.09×165°.3E±0°.1, h30^{km}, n28, σ1^{s}00/21, mb4.0/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.99**	**174**	*e*Pn	**Pn**	**08 44 51.9**	**-0.6**
DZM	**Mont Dzumac**	**10.99**	**174**	Pn	**Pn**	**08 44 51.6**	**-1.0**
	1.8nm,0.3s,baz=355,slow=16,SNR=23						
PINNC	**Pines Island,**	**11.66**	**170**	*e*Pn	**Pn**	**08 44 59.8**	**-1.7**
EIDS	**Eidsvold**	**19.58**	**222**	*e*P	**Pn**	**08 46 44.8**	**+0.5**
	2.8nm,0.8s						
CTA	**Charters Tower**	**20.39**	**242**	P	**P**	**08 46 52.6**	**+0.8**
	3.3nm,0.8s,baz=55,slow=13,SNR=5.3						
CTAO	**Charters Tower**	**20.39**	**242**	*e*P	Pn	08 46 54.1	+0.1
	4.4nm,0.9s						
ARMA	**Armidale**	**23.06**	**211**	*e*P	**P**	**08 47 21.8**	**+1.5**
H11S2	**WAKE ISLAND Hy**	**29.41**	**3**	T	T	09 18 52.4	
	baz=183,slow=76,SNR=7.0						
H11S3	**WAKE ISLAND Hy**	**29.41**	**3**	T	T	09 18 54.4	
	baz=183,slow=76,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**29.43**	**3**	T	T	09 18 55.1	
	baz=183,slow=76,SNR=5.2						
BKZ	**Black Stump Fm**	**29.70**	**162**	*e*P	**P**	**08 48 21.0**	**+0.4**
	3.6nm,1.1s						
STKA	**Stephens Creek**	**30.12**	**223**	*e*P	**P**	**08 48 24.6**	**+0.3**
	0.1nm,0.6s						
STKA	**Stephens Creek**	**30.12**	**223**	P	**P**	**08 48 24.2**	**-0.1**
	1.4nm,0.7s,baz=39,slow=14,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**30.63**	**3**	T	T	09 20 23.9	
	baz=182,slow=76,SNR=6.2						
H11N3	**WAKE ISLAND Hy**	**30.64**	**3**	T	T	09 20 24.3	
	baz=182,slow=76,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**30.65**	**3**	T	T	09 20 25.4	
	baz=182,slow=76,SNR=5.2						
BFZ	**Birch Farm**	**31.04**	**164**	*e*P	**P**	**08 48 33.9**	**+1.5**
	33nm,1.1s						
WR1	**Warramunga Arr**	**31.05**	**250**	*e*P	**P**	**08 48 31.8**	**-0.9**
	2.2nm,0.9s						
WRA	**Warramunga Arr**	**31.05**	**250**	P	**P**	**08 48 31.8**	**-0.9**
	1.0nm,0.7s,baz=80,slow=8.9,SNR=6.6						
AS31	**Alice Springs**	**32.38**	**243**	*e*P	**P**	**08 48 43.9**	**-0.5**
	0.8nm,1.1s						
ASAR	**Alice Springs**	**32.38**	**243**	P	**P**	**08 48 43.8**	**-0.7**
	0.7nm,0.5s,baz=66,slow=9.9,SNR=15						
FITZ	**Fitzroy Crossi**	**38.94**	**255**	*e*P	**P**	**08 49 41.3**	**+0.6**
	1.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**38.94**	**255**	P	**P**	**08 49 40.7**	**0.0**
	1.4nm,0.9s,baz=73,slow=11,SNR=4.1						
MIDW	**Midway**	**42.51**	**23**	*e*P	**P**	**08 50 11.6**	**+1.7**
	137nm,1.1s						
PET	**Petropavlovsk**	**64.09**	**356**	*e*P	**P**	**08 52 47.6**	**-0.6**
	13nm,1.1s						
MDJ	**Mudanjiang**	**64.17**	**332**	*e*P	**P**	**08 52 47.7**	**-1.2**
	4.8nm,0.8s						
GSI	**Gunungsitoli**	**68.42**	**276**	*e*P	**P**	**08 53 17.3**	**+0.5**
	6.1nm,0.9s						
ILAR	**Eielson Array**	**83.68**	**19**	P	**P**	**08 54 41.9**	**-0.7**
	0.3nm,0.8s,baz=222,slow=5.0,SNR=4.0						

MEX 02 08:42:39.4±0.8, 16°.09N×97°.38W, h4^{km}±21^{km}, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.78**	**293**	*e*P	Pg	08 42 53.3	-1.2
PNIG				*e*S	Sg	08 43 03.4	-1.2
VHO	**Vista Hermosa**	**1.16**	**32**	*e*P	Pg	08 42 59.0	-2.6
VHO				*e*S	Sg	08 43 13.8	-2.8

MEX 02 08:44:16.3±1.5, 16°.06N×97°.37W, h9^{km}±40^{km}, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.80**	**295**	*e*P	Pg	08 44 29.9	-1.9
PNIG				*e*S	Sg	08 44 40.3	-2.0
VHO	**Vista Hermosa**	**1.18**	**31**	*e*P	Pb	08 44 35.4	-3.6
VHO				*e*S	Sg	08 44 50.2	-4.2

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*IDC **02** 08:46:30.4±1.3, 1°.00S×127°.64E, h0^{km}, mb4.0/3, mb1 4.1/6, mb1mx3.7/45, mbtmp3.9/6, ML3.8/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/44, Error ellipse: s-maj=32.6km s-min=21.5km az=62.0*

*ISCJB **02** 08:46:33.4±0.4, 0°.97S±0°.04×127°.82E±0°.05, h35^{km}, mb4.6/7, Error ellipse: s-maj=8.0km s-min=5.0km az=146.9*

*DJA **02** 08:46:33.8±0.4, 1°S±3°×12°8E±°, h10^{km}, M4.2/6, mb4.5/4, mB4.9/1, MLv4.1/6, Mw(mB)4.2/1*

*NEIC **02** 08:46:35.7±1.1, 0°.95S×127°.75E, h46^{km}±12^{km}, mb4.2/7, Error ellipse: s-maj=18.5km s-min=7.5km az=67.0*

ISC 02 08:46:35.4±0.6, 1°.00S±0°.06×127°.73E±0°.07, h35^{km}, n44, σ2^{s}19/47, mb4.4/7, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.79**	**348**	*e*Pn	**Pn**	**08 47 03.1**	**-0.8**
TNTI	**Ternate**	**1.79**	**348**	P	**Pn**	**08 47 02.8**	**-1.1**
TNTI				S	**Sn**	**08 47 29.3**	**+3.8**
SANI	**Sanana**	**2.03**	**239**	P	**Pn**	**08 47 06.8**	**-0.4**
NLAI	**Namlea**	**2.32**	**196**	P	**Pn**	**08 47 12.3**	**+1.2**
SIJI	**Sorong**	**3.54**	**88**	Pn	**Pn**	**08 47 27.5**	**-0.4**
	11nm,0.3s,baz=262,slow=10,SNR=15						
SIJI				Sn	**Sn**	**08 48 12.9**	**+4.3**
	3.1nm,0.3s,baz=107,slow=19,SNR=3.3						
FAKI	**Fak Fak**	**4.90**	**113**	*e*Pn	**Pn**	**08 47 46.9**	**+0.3**
FAKI	**Fak Fak**	**4.90**	**113**	P	**Pn**	**08 47 47.0**	**+0.3**
MRSI	**Marisa**	**5.97**	**284**	P	**Pn**	**08 48 02.4**	**+1.0**
APSI	**Ampana**	**6.08**	**271**	P	**Pn**	**08 48 00.9**	**-2.0**
DAV	**Davao City (W)**	**8.29**	**345**	LR	LR	08 51 47.8	
	comp=Z,103nm,18.5s,baz=1.5,slow=38						
SPSI	**Sidrap Palu**	**8.48**	**250**	P	**Pn**	**08 48 37.9**	**+2.0**
BKSI	**Bulukumba**	**8.73**	**240**	P	**Pn**	**08 48 42.8**	**+3.6**
EDFI	**Ende, Flores**	**9.77**	**218**	P	**Pn**	**08 48 57.8**	**+4.1**
BATI	**Baumata**	**10.00**	**204**	LR	LR	08 53 06.8	
	comp=Z,53nm,19.5s,baz=343,slow=40						
MTN	**Manton Dam**	**12.24**	**164**	*e*Pn	**Pn**	**08 49 27.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**17.12**	**187**	*e*Pn	**P**	**08 50 33.0**	**-0.5**
	2.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.12**	**187**	P	**P**	**08 50 33.0**	**-0.5**
	0.1nm,0.3s,baz=8.3,slow=14,SNR=3.8						
WRAB	**Tennant Creek**	**19.91**	**161**	*e*P	**P**	**08 51 03.6**	**-0.6**
	3.6nm,0.6s						
WR1	**Warramunga Arr**	**19.91**	**161**	*e*P	**P**	**08 51 03.6**	**-0.6**
	12nm,1.1s						
WR1				*e*S	**S**	**08 54 40.7**	**-5.8**
WRA	**Warramunga Arr**	**19.91**	**161**	P	**P**	**08 51 03.6**	**-0.6**
	0.5nm,0.3s,baz=338,slow=12,SNR=22						
WRA				S	**S**	**08 54 40.7**	**-5.8**
	0.0nm,0.3s,baz=334,slow=22,SNR=3.0						
COEN	**Coen**	**19.98**	**131**	*e*P	**Pn**	**08 51 06.0**	**-0.9**
	7.7nm,1.0s						
AS31	**Alice Springs**	**23.32**	**166**	*e*P	**P**	**08 51 40.0**	**-0.6**
ASAR	**Alice Springs**	**23.32**	**166**	P	**P**	**08 51 40.2**	**-0.3**
	4.1nm,0.7s,baz=347,slow=11,SNR=47						
ASAR				S	**S**	**08 55 49.6**	**-1.4**
	1.6nm,0.9s,baz=350,slow=22,SNR=10						
AS01	**Alice Springs**	**23.33**	**165**	*e*P	**P**	**08 51 40.8**	**+0.1**
BBOO	**Buckleboo**	**32.60**	**167**	*e*P	**P**	**08 53 04.9**	**+1.1**
	6.5nm,1.1s						
HNR	**Honiara**	**33.13**	**106**	*e*P	**P**	**08 53 07.2**	**-1.5**
	234nm,1.0s						
STKA	**Stephens Creek**	**33.39**	**158**	P	**P**	**08 53 11.1**	**+0.4**
	1.1nm,0.6s,baz=320,slow=7.9,SNR=3.4						
PALK	**Pallekele**	**47.63**	**281**	*e*P	**P**	**08 55 06.4**	**-2.2**
	7.9nm,0.8s						
TAPN	**Taplejung**	**47.69**	**309**	*e*P	**P**	**08 55 09.8**	**+0.6**
	6.5nm,0.4s						
RAMN	**Ramite**	**48.36**	**308**	*e*P	**P**	**08 55 15.2**	**+0.8**
	16nm,0.5s						
JIRN	**Jiri**	**49.02**	**309**	*e*P	**P**	**08 55 20.1**	**+0.5**
	11nm,0.5s						
GUN	**Gumba**	**49.38**	**309**	*e*P	**P**	**08 55 23.1**	**+0.8**
	9.1nm,0.4s						
KOLN	**Koldanda**	**51.10**	**308**	*e*P	**P**	**08 55 35.8**	**+0.6**
	10nm,0.6s						
DANN	**Dangsing**	**51.24**	**308**	*e*P	**P**	**08 55 36.7**	**+0.4**
	11nm,0.6s						
PYUN	**Piuthan**	**51.73**	**308**	*e*P	**P**	**08 55 40.4**	**+0.5**
	8.0nm,0.5s						
MK01	**Makanchi Array**	**61.98**	**326**	*e*P	**P**	**08 56 52.4**	**+0.4**
MK31	**Makanchi Array**	**62.00**	**326**	*e*P	**P**	**08 56 52.5**	**+0.3**
MK32	**Makanchi Array**	**62.00**	**326**	*e*P	**P**	**08 56 52.1**	**0.0**
MKAR	**Makanchi Array**	**62.00**	**326**	*e*P	**P**	**08 56 52.6**	**+0.4**
MKAR	**Makanchi Array**	**62.00**	**326**	P	**P**	**08 56 52.1**	**0.0**
	0.7nm,0.4s,baz=115,slow=8.0,SNR=14						
ZAA0	**Zalesovo Array**	**65.23**	**334**	*e*P	**P**	**08 57 10.7**	**-2.6**
	5.5nm,0.9s						
ZALV	**Zalesovo Beam**	**65.23**	**334**	*e*P	**P**	**08 57 11.8**	**-1.5**
MNMC	**Minye Minye**	**153.74**	**140**	*e*PKPdf	**PKPdf**	**09 06 21.5**	**-2.8**
SPB	**Sao Paulo**	**155.11**	**191**	*e*PKPbc	**PKPdf**	**09 06 31.6**	**+5.8**

IDC 02 08:52:38.1±52.0, 16°.47S×179°.38W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/28, mbtmp3.7/3, Error ellipse: s-maj=941.5km s-min=148.0km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.53**	**239**	P	P	09 00 02.2	-0.4
	1.0nm,0.7s,baz=90,slow=7.1,SNR=3.2						
WRA	**Warramunga Arr**	**44.00**	**258**	P	P	09 00 47.7	0.0
	0.1nm,0.4s,baz=91,slow=7.9,SNR=6.6						
ASAR	**Alice Springs**	**44.31**	**253**	P	P	09 00 50.1	0.0
	2.0nm,0.5s,baz=89,slow=8.2,SNR=39						

IDC 02 09:05:55.7±3.2, 10°.65S×165°.85E, h139^{km}±30^{km}, mb3.6/9, mb1 3.8/11, mb1mx3.6/35, mbtmp4.1/11, Error ellipse: s-maj=20.9km s-min=19.6km az=110.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.94**	**281**	P	Pn	09 07 21.4	-0.1
	11nm,0.3s,baz=175,slow=12,SNR=3.4						
DZM	**Mont Dzumac**	**11.38**	**177**	P	Pn	09 08 35.4	+1.2
	0.8nm,0.3s,baz=339,slow=11,SNR=22						
DZM				S	Sn	09 10 36.2	-3.7
	0.2nm,0.3s,baz=323,slow=20,SNR=3.2						
CTA	**Charters Tower**	**21.08**	**241**	P	P	09 10 29.8	+0.6
	9.8nm,0.7s,baz=62,slow=11,SNR=18						
H11S2	**WAKE ISLAND Hy**	**28.96**	**2**	T	T	09 42 37.2	
	baz=182,slow=76,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**28.97**	**2**	T	T	09 42 37.5	
	baz=182,slow=76,SNR=3.3						
H11S1	**WAKE ISLAND Hy**	**28.98**	**2**	T	T	09 42 38.5	
	baz=182,slow=76,SNR=3.9						
URZ	**Urewera**	**29.29**	**162**	P	P	09 11 45.1	+0.1
	7.9nm,0.9s,baz=339,slow=14,SNR=5.5						
H11N1	**WAKE ISLAND Hy**	**30.18**	**2**	T	T	09 44 08.6	
	baz=182,slow=76,SNR=3.8						
H11N3	**WAKE ISLAND Hy**	**30.19**	**2**	T	T	09 44 09.1	
	baz=182,slow=76,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**30.20**	**2**	T	T	09 44 10.1	
	baz=182,slow=76,SNR=4.7						
STKA	**Stephens Creek**	**30.80**	**223**	P	P	09 11 59.1	+0.8
	2.7nm,0.6s,baz=40,slow=11,SNR=10						
WRA	**Warramunga Arr**	**31.72**	**249**	P	P	09 12 06.3	-0.3
	2.1nm,0.6s,baz=81,slow=9.1,SNR=35						
ASAR	**Alice Springs**	**33.06**	**243**	P	P	09 12 17.6	-0.8
	1.8nm,0.8s,baz=65,slow=10.0,SNR=14						
ILAR	**Eielson Array**	**83.10**	**18**	P	P	09 18 06.1	+0.6
	0.4nm,0.5s,baz=234,slow=5.1,SNR=12						
NVAR	**Mina Array Bea**	**85.69**	**50**	P	P	09 18 19.5	+0.1
	0.7nm,0.9s,baz=238,slow=6.9,SNR=4.3						
MKAR	**Makanchi Array**	**93.30**	**317**	P	P	09 18 54.6	-0.2
	0.2nm,0.7s,baz=95,slow=5.9,SNR=2.6						
YKA	**Yellowknife Ar**	**94.57**	**27**	P	P	09 18 58.5	-1.7
	0.1nm,0.5s,baz=263,slow=4.5,SNR=3.9						

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*IDC **02** 09:21:48.9±0.6, 11°.38S×165°.79E, h0^{km}, mb4.3/17, mb1 4.4/19, mb1mx4.3/41, mbtmp4.3/19, ML4.4/2, MS4.0/15, Ms1 4.1/15, ms1mx3.8/25, Error ellipse: s-maj=21.9km s-min=16.0km az=128.0*

*NEIC **02** 09:21:50.3±0.2, 11°.35S×165°.80E, h10^{km}, mb4.7/35, Error ellipse: s-maj=5.4km s-min=4.1km az=114.0*

*ISCJB **02** 09:21:52.6±0.2, 11°.46S±0°.04×165°.74E±0°.05, h37^{km}, mb4.5/45, MS4.1/13, Error ellipse: s-maj=7.1km s-min=5.7km az=20.1*

ISC 02 09:21:54.2±0.4, 11°.45S±0°.06×165°.75E±0°.07, h37^{km}, n101, σ1^{s}19/97, mb4.6/45, MS4.0/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.05**	**289**	*e*P	Pn	09 23 16.0	-5.2
HNR				*e*S	**Sn**	**09 24 31.0**	**+1.8**
HNR	**Honiara**	**6.05**	**289**	*e*Pn	**Pn**	**09 23 21.1**	**0.0**
HNR				*e*Sn	**Sn**	**09 24 25.0**	**-4.2**
HNR	**Honiara**	**6.05**	**289**	Pn	**Pn**	**09 23 20.3**	**-0.8**
	7.2nm,0.3s,baz=252,slow=20,SNR=2.7						
HNR				Sn	**Sn**	**09 24 25.0**	**-4.2**
	6.1nm,0.3s,baz=180,slow=20,SNR=3.6						
HNR				LR	LR	09 25 56.9	
	comp=Z,2μm,19.7s,baz=122,slow=41						
MARNC	**Mare, Loyalty**	**10.21**	**168**	*e*Pn	**Pn**	**09 24 19.1**	**+0.9**
DZM	**Mont Dzumac**	**10.58**	**176**	*e*Pn	**Pn**	**09 24 23.5**	**+0.1**
	70nm,1.6s						
DZM				*e*LR	LR	09 26 56.5	
	comp=Z,826nm,22.9s						
DZM	**Mont Dzumac**	**10.58**	**176**	*e*Pn	**Pn**	**09 24 23.9**	**+0.5**
DZM				*e*Sn	**Sn**	**09 26 17.3**	**-3.4**
DZM	**Mont Dzumac**	**10.58**	**176**	Pn	**Pn**	**09 24 23.6**	**+0.2**
	3.5nm,0.3s,baz=339,slow=12,SNR=34						
DZM				Sn	**Sn**	**09 26 17.3**	**-3.4**
	0.4nm,0.3s,baz=323,slow=20,SNR=1.8						
DZM				LR	LR	09 28 26.9	
	comp=Z,976nm,18.1s,baz=11,slow=37						
OUENC	**Ouen Island, N**	**10.96**	**175**	*e*Pn	**Pn**	**09 24 30.4**	**+2.0**
PINNC	**Pines Island,**	**11.22**	**172**	*e*Pn	**Pn**	**09 24 33.1**	**+1.1**
EIDS	**Eidsvold**	**19.60**	**223**	*e*P	**P**	**09 26 20.2**	**+0.9**
	34nm,1.4s						
KWAJ	**Kwajalein Atol**	**20.21**	**5**	*e*P	**P**	**09 26 25.7**	**-0.3**
	232nm,0.9s						
MANU	**Manus Island**	**20.49**	**296**	*e*P	**P**	**09 26 30.4**	**+1.2**
	229nm,1.4s						
CTA	**Charters Tower**	**20.62**	**243**	P	**P**	**09 26 32.0**	**+1.5**
	16nm,1.0s,baz=66,slow=13,SNR=13						
CTA				LR	LR	09 34 27.5	
	comp=Z,718nm,18.2s,baz=42,slow=37						
CTAO	**Charters Tower**	**20.62**	**243**	*e*P	**P**	**09 26 30.8**	**+0.3**
	71nm,1.4s						
COEN	**Coen**	**22.16**	**261**	*e*P	**P**	**09 26 47.4**	**+0.2**
	42nm,1.5s						
ARMA	**Armidale**	**22.98**	**213**	*e*P	**P**	**09 26 56.9**	**+1.2**
	114nm,1.6s						
BKZ	**Black Stump Fm**	**29.21**	**163**	*e*P	**P**	**09 27 53.3**	**+0.9**
	20nm,1.2s						
H11S2	**WAKE ISLAND Hy**	**29.77**	**2**	T	T	09 58 25.4	
	baz=182,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.77**	**2**	T	T	09 58 25.8	
	baz=182,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.78**	**2**	T	T	09 58 26.8	
	baz=182						
STKA	**Stephens Creek**	**30.15**	**224**	*e*P	**P**	**09 28 01.0**	**+0.2**
	4.5nm,1.6s						
STKA	**Stephens Creek**	**30.15**	**224**	P	**P**	**09 28 01.0**	**+0.2**
	7.3nm,1.2s,baz=78,slow=8.6,SNR=3.9						
STKA				LR	LR	09 39 45.8	
	comp=Z,270nm,18.7s,baz=28,slow=36						
BFZ	**Birch Farm**	**30.55**	**164**	*e*P	**P**	**09 28 04.2**	**0.0**
	62nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**30.99**	**2**	T	T	09 59 57.1	
	baz=185						
H11N3	**WAKE ISLAND Hy**	**30.99**	**2**	T	T	09 59 57.2	
	baz=185						
H11N2	**WAKE ISLAND Hy**	**31.01**	**2**	T	T	09 59 58.4	
	baz=185						
WRAB	**Tennant Creek**	**31.34**	**250**	*e*P	**P**	**09 28 11.7**	**+0.2**
	13nm,1.2s						
WB2	**Warramunga Arr**	**31.34**	**250**	*e*P	**P**	**09 28 11.8**	**+0.3**
WR1	**Warramunga Arr**	**31.35**	**250**	*e*P	**P**	**09 28 11.2**	**-0.3**
	17nm,1.2s						
WRA	**Warramunga Arr**	**31.35**	**250**	P	**P**	**09 28 11.2**	**-0.3**
	4.4nm,1.0s,baz=81,slow=9.0,SNR=15						
WRA				LR	LR	09 41 07.4	
	comp=Z,328nm,18.1s,baz=75,slow=37						
RPZ	**Rata Peaks**	**32.47**	**173**	P	**P**	**09 28 22.6**	**+1.5**
	14nm,0.8s,baz=128,slow=4.2,SNR=7.0						
AS01	**Alice Springs**	**32.58**	**244**	*e*P	**P**	**09 28 21.9**	**-0.4**
AS31	**Alice Springs**	**32.62**	**244**	*e*P	**P**	**09 28 22.3**	**-0.4**
	1.6nm,1.1s						
AS31				*e*PcP	**PcP**	**09 31 10.4**	**+2.0**
ASAR	**Alice Springs**	**32.62**	**244**	P	**P**	**09 28 21.2**	**-1.5**
	4.7nm,1.1s,baz=70,slow=9.5,SNR=22						
ASAR				PcP	**PcP**	**09 31 10.4**	**+2.0**
	0.5nm,0.9s,baz=92,slow=4.6,SNR=3.6						
ASAR				LR	LR	09 40 40.2	
	comp=Z,335nm,20.6s,baz=82,slow=35						
BBOO	**Buckleboo**	**34.56**	**227**	*e*P	**P**	**09 28 39.8**	**+0.4**
	39nm,1.5s						
FITZ	**Fitzroy Crossi**	**39.28**	**255**	*e*P	**P**	**09 29 19.6**	**-0.2**
	16nm,1.3s						
FITZ	**Fitzroy Crossi**	**39.28**	**255**	P	**P**	**09 29 19.2**	**-0.6**
	6.7nm,1.0s,baz=85,slow=8.6,SNR=8.3						
PPT	**Papeete**	**43.60**	**103**	LR	LR	09 45 59.4	
	comp=Z,394nm,18.9s,baz=276,slow=33						
PPT2	**Papeete2**	**43.60**	**103**	*e*S	S	09 36 37.4	+15
	109nm,25.0s						
PPT2				*e*LR	LR	09 42 21.2	
	comp=Z,341nm,26.0s,baz=283						
MORW	**Morawa**	**49.44**	**242**	*e*P	**P**	**09 30 41.3**	**+0.4**
	20nm,1.2s						
MJAR	**Matsushiro Arr**	**54.33**	**333**	P	**P**	**09 31 16.9**	**-0.2**
	1.2nm,0.8s,baz=168,slow=9.5,SNR=4.3						
MAJO	**Matsushiro**	**54.33**	**333**	*e*P	**P**	**09 31 16.9**	**-0.2**

PETK	Petropavlovsk-	64.67	355	LR	LR	09 54 44.8	
	comp=Z,48nm,21.9s,baz=152,slow=31						
VNDA	Vanda	66.09	181	LR	LR	09 59 08.4	
	comp=Z,78nm,18.0s,baz=318,slow=34						
CM31	Chiang Mai Arr	72.28	294	*e*P	P	09 33 17.9	+1.5
	6.6nm,1.0s						
CMAR	Chiang Mai Arr	72.28	294	P	P	09 33 17.9	+1.5
	1.0nm,0.3s,baz=124,slow=5.3,SNR=4.6						
CMAR				LR	LR	10 01 50.0	
	comp=Z,20nm,21.6s,baz=85,slow=33						
GAMB	Gambell	76.97	10	*e*P	P	09 33 42.5	0.0
	5.5nm,0.8s						
QSPA	South Pole Qui	78.56	180	*e*P	P	09 33 52.3	+0.6
	15nm,1.1s						
ANM	Nome	78.88	12	*e*P	P	09 33 53.2	0.0
	9.5nm,1.4s						
SONA0	Songino Array	79.00	324	*e*P	P	09 33 55.6	+1.2
SONM	Songino Array	79.00	324	P	P	09 33 55.6	+1.2
	0.9nm,0.8s,baz=135,slow=6.1,SNR=7.0						
SONA1	Songino Array	79.00	324	*e*P	P	09 33 54.8	+0.4
BILL	Bilibino	79.28	0	*e*P	P	09 33 55.8	+0.4
	8.7nm,1.1s						
GTA	Gaotai	79.34	314	*e*P	P	09 33 58.7	+2.2
GTA				pP	PcP	09 34 02.8	-1.8
GTA				sP	pP	09 34 06.0	-0.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RDOG	Red Dog Mine	82.42	11	*e*P	P	09 34 12.2	0.0
	comp=Z,6.6nm,0.9s						
TLY	Talaya	82.46	326	P	P	09 34 12.6	-0.1
	comp=Z,0.7nm,0.4s,baz=106,slow=5.3,SNR=3.1						
MDM	Murphy Dome	83.61	18	*e*P	P	09 34 16.5	-1.9
	comp=Z,13nm,1.4s						
HDA	Harding Lake	83.62	19	*e*P	P	09 34 18.3	-0.1
	comp=Z,11nm,0.9s						
COLA	College	83.67	18	*e*P	P	09 34 17.8	-0.8
	comp=Z,8.7nm,0.8s						
IL1	Eielson Array	83.89	18	*e*P	P	09 34 19.1	-0.6
ILAR	Eielson Array	83.89	18	P	P	09 34 19.3	-0.5
	comp=Z,1.2nm,0.6s,baz=242,slow=5.1,SNR=32						
ILAR				LR	LR	10 09 11.7	
	comp=Z,65nm,21.4s,baz=156,slow=34						
ILB	Eielson Array	83.89	18	*e*P	P	09 34 19.4	-0.4
	comp=Z,3.8nm,1.4s						
YBH	Yreka Blue Hor	84.17	46	*e*P	P	09 34 22.1	+0.2
	comp=Z,4.3nm,1.0s						
MAW	Mawson	84.35	202	LR	LR	10 07 38.0	
	comp=Z,124nm,18.9s,baz=130,slow=33						
AFDM	Forest Hills D	84.46	49	*e*P	P	09 34 23.2	-0.1
	comp=Z,5.7nm,1.1s						
MDPB	Devils Postpil	85.45	50	*e*P	P	09 34 28.6	0.0
	comp=Z,5.8nm,1.2s						
WAKR	Walker	85.46	49	*e*P	P	09 34 29.1	+0.6
	comp=Z,4.9nm,1.2s						
PAHR	Pah Rah Range	85.87	48	*e*P	P	09 34 30.4	-0.1
	comp=Z,4.6nm,1.1s						
NV01	Mina Array Sit	86.28	50	*e*P	P	09 34 32.6	0.0
NV01				*e*pP	pP	09 34 40.6	-2.2
NVAR	Mina Array Bea	86.28	50	P	P	09 34 32.1	-0.6
	comp=Z,1.0nm,0.9s,baz=233,slow=6.6,SNR=6.0						
NVAR				LR	LR	10 06 23.5	
	comp=Z,196nm,19.0s,baz=302,slow=31						
NV11	Mina Array Sit	86.39	50	*e*P	P	09 34 32.6	-0.5
	comp=Z,0.8nm,1.6s						
TIXI	Tiksi	86.49	349	P	P	09 34 32.3	-0.3
	comp=Z,0.4nm,0.3s,baz=167,slow=4.5,SNR=3.3						
LCMT	Little Creek M	89.75	52	*e*P	P	09 34 49.2	0.0
	comp=Z,3.6nm,1.1s						
CCUT	Cedar City	89.79	52	*e*P	P	09 34 48.6	-0.8
	comp=Z,5.8nm,1.3s						
U15A	North Rim	90.34	53	*e*P	P	09 34 51.4	-0.7
	comp=Z,5.0nm,1.1s						
MK01	Makanchi Array	93.81	317	*e*P	P	09 35 07.7	+0.1
MK31	Makanchi Array	93.82	317	*e*P	P	09 35 07.6	0.0
	comp=Z,2.7nm,0.9s						
MK32	Makanchi Array	93.82	317	*e*P	P	09 35 08.9	+1.3
MKAR	Makanchi Array	93.82	317	*e*P	P	09 35 07.7	+0.1
	comp=Z,14nm,0.7s						
MKAR	Makanchi Array	93.82	317	P	P	09 35 08.9	+1.2
	comp=Z,2.6nm,0.7s,baz=99,slow=6.1,SNR=25						
PDAR	Pinedale Array	93.82	47	LR	LR	10 12 03.1	
	comp=Z,54nm,18.0s,baz=315,slow=32						
ZALV	Zalesovo Beam	93.89	324	*e*P	P	09 35 07.2	-0.5
ZALV	Zalesovo Beam	93.89	324	P	P	09 35 07.6	-0.1
	comp=Z,0.7nm,0.6s,baz=124,slow=4.3,SNR=3.7						
ZAA1	Zalesovo Array	93.89	324	*e*P	P	09 35 07.6	-0.1
YKA	Yellowknife Ar	95.33	27	P	P	09 35 12.6	-1.5
	comp=Z,0.7nm,0.8s,baz=258,slow=4.9,SNR=12						
YKB5	Yellowknife Ar	95.33	27	*e*P	P	09 35 12.3	-1.8
LTX	Lajitas	96.02	61	*e*P	P	09 35 17.4	-0.8
TXAR	Lajitas Array	96.02	61	P	P	09 35 17.4	-0.8
	comp=Z,0.3nm,0.9s,baz=299,slow=4.0,SNR=2.6						
TXAR				LR	LR	10 10 53.5	
	comp=Z,161nm,20.2s,baz=0.0,slow=31						
ARA0	ARCESS Array S	116.73	345	*e*PKPdf	PKiKP	09 40 34.0	0.0
ARCES	ARCESS Array B	116.73	345	PKP	PKiKP	09 40 34.0	0.0
	comp=Z,1.1nm,0.6s,baz=39,slow=2.3,SNR=9.1						
CPUP	Villa Florida	123.75	133	*e*PKPdf	PKPdf	09 40 48.3	-0.5
CPUP	Villa Florida	123.75	133	PKP	PKiKP	09 40 49.3	+0.2
	comp=Z,2.1nm,0.8s,baz=253,slow=6.2,SNR=3.8						
NB200	NORSAR Array S	127.09	345	*e*PKPdf	PKiKP	09 40 54.8	0.0
NOA	NORSAR Array B	127.09	345	PKP	PKiKP	09 40 54.8	0.0
	comp=Z,1.0nm,0.8s,baz=28,slow=1.9,SNR=3.4						
KEST	Kesra	147.74	322	*e*PKPdf	PKPdf	09 41 32.4	-0.3
KEST	Kesra	147.74	322	PKPbc	PKPbc	09 41 36.5	+0.9
	comp=Z,8.5nm,0.9s,baz=221,slow=2.5,SNR=5.5						
ES19	SONSECA Array	150.40	344	*e*PKPbc	PKiKP	09 41 42.8	-0.1
ESDC	Sonseca Array	150.45	344	PKPbc	PKiKP	09 41 43.4	+0.4
	comp=Z,1.2nm,0.6s,baz=13,slow=3.9,SNR=5.5						
TOA0	Torodi Ar. Sit	164.33	278	*e*PKPdf	PKPdf	09 41 53.6	-1.2
TOA0				*e*PKPab	PKPab	09 42 46.9	-2.3
TORD	Torodi Ar. Bea	164.33	278	PKP	PKPdf	09 41 54.8	-0.1
	comp=Z,1.0nm,1.0s,baz=360,slow=5.1,SNR=4.9						
TOA1	Torodi Ar. Sit	164.33	278	*e*PKPdf	PKPdf	09 41 54.8	-0.1

SOME **02** *09:34:32.3, 42°.53N×79°.62E, h15^{km}*
KRNET **02** *09:34:32.5±0.1, 42°.57N×79°.56E, h13^{km}, mb3.2*
NNC **02** *09:34:32.8±0.8, 42°.58N×79°.56E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=5.5km s-min=2.9km az=143.0*
ISC 02 09:34:33.1±1.6, **42°.65N**±0°.05×**79°.49E**±0°.05, **h15**^{km}±10^{km}, **n46**, σ1^{s}**22**/81, **14C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.51	357	P	Pn	09 34 45.0	-1.0
	164nm,0.1s						
SHLS				S	Sn	09 34 54.5	-0.1
	292nm,0.2s						
SHLS	Shalkode	0.51	357	*e*P	Pn	09 34 45.0	-1.0
	baz=22						
SHLS				*e*S	Sn	09 34 54.5	-0.1
	baz=22						
SHLS	Shalkode	0.51	357	*e*P	Pn	09 34 45.0	-1.0
	164nm,0.1s						
SHLS				*e*S	Sn	09 34 54.5	-0.1
	292nm,0.2s						
UZB	Uzynbulak	0.61	325	P	Pn	09 34 46.6	-0.8
	24nm,0.2s						
UZB				S	Sn	09 34 56.6	-0.4
	156nm,0.1s						
UZB	Uzynbulak	0.61	325	*e*P	Pn	09 34 46.6	-0.8
	baz=26						
UZB				*e*S	Sn	09 34 56.7	-0.4
	baz=26						
UZB	Uzynbulak	0.61	325	*e*P	Pn	09 34 46.6	-0.8
	24nm,0.2s						
UZB				*e*S	Sn	09 34 56.6	-0.4
	156nm,0.1s						
PDGK	Podgornoye	0.68	360	P	Pn	09 34 47.1	-1.2
	17nm,0.2s						
PDGK				S	Sn	09 34 57.8	-1.0
	38nm,0.2s						
PDGK	Podgornoye	0.68	360	⇓P	Pb	09 34 46.8	+0.1
	5.0nm,0.2s						
PDGK				⇓S	Sn	09 34 57.4	-1.4
	16nm,0.3s						
PDGK	Podgornoye	0.68	360	⇓*i*P	Pn	09 34 47.1	-1.2
	baz=56						
PDGK				⇓*i*S	Sn	09 34 57.6	-1.2
	baz=56						
PRZ	Przheval'sk	0.82	259	⇑*i*P	Pb	09 34 48.9	-0.3
	baz=65						
PRZ				⇑*i*S	Sb	09 35 00.8	+0.6
	baz=65						
SATY	Saty	0.90	298	*e*P	Pn	09 34 51.6	+0.2
	12nm,0.3s						
SATY				*e*S	Sn	09 35 05.6	+1.5
	97nm,0.1s						
DJR	Jarkent	1.70	7	*e*P	Pg	09 35 04.9	-0.8
	7.2nm,0.2s						
DJR				*e*S	Sg	09 35 28.7	+0.9
	14nm,0.3s						
KDJ	Kajisay	1.79	254	⇑*i*P	Pg	09 35 06.8	-0.7
	baz=57						
KDJ				⇑*i*S	Sg	09 35 31.3	+0.6
	baz=57						
KOTS	Kotyrbulak	1.84	289	Pg	Pg	09 35 08.5	0.0
	12nm,0.3s						
KOTS				Lg	Lg	09 35 35.0	
	61nm,0.6s						
KOTS	Kotyrbulak	1.84	289	*e*P	Pg	09 35 08.5	0.0
	baz=91						
KOTS				*e*S	Sg	09 35 35.1	+2.6
	baz=91						
KOTS	Kotyrbulak	1.84	289	*e*P	Pg	09 35 08.5	0.0
	12nm,0.3s						
KOTS				*e*S	Sg	09 35 35.0	+2.6
	61nm,0.6s						
MDOK	Medeo	1.87	287	Pg	Pg	09 35 08.8	-0.1
	3.0nm,0.2s						
MDOK				Lg	Lg	09 35 35.0	
	11nm,0.6s						
MDOK	Medeo	1.87	287	*e*P	Pg	09 35 08.5	-0.5
	baz=89						
MDOK				*e*S	Sg	09 35 34.7	+1.4
	baz=89						
MDOK	Medeo	1.87	287	*e*P	Pg	09 35 08.4	-0.5
	12nm,0.2s						
MDOK				*e*S	Sg	09 35 34.7	+1.4
	12nm,0.5s						
TNSS	Tian-Shan	1.91	283	*e*P	Pg	09 35 09.2	-0.6
	baz=85						
TNSS				*e*S	Sg	09 35 36.1	+1.4
	baz=85						
TNSS	Tian-Shan	1.91	283	*e*P	Pg	09 35 09.2	-0.6
	8.0nm,0.3s						
TNSS				*e*S	Sg	09 35 36.1	+1.4
	22nm,0.4s						
ARXS	Arharly	1.98	323	Pg	Pg	09 35 10.9	-0.2
	5.7nm,0.3s						
ARXS				Lg	Lg	09 35 38.5	
	87nm,0.5s						
ARXS	Arharly	1.98	323	*e*P	Pg	09 35 10.9	-0.2
	5.7nm,0.3s						
ARXS				*e*S	Sg	09 35 38.5	+1.6
	87nm,0.5s						
CHKK	Chushkaly	2.19	304	*e*P	Pg	09 35 14.4	-0.7
	baz=5.0						
CHKK				*e*S	Sg	09 35 44.8	+1.2
	baz=5.0						
CHKK	Chushkaly	2.19	304	*e*P	Pg	09 35 14.4	-0.7
	3.5nm,0.2s						
CHKK				*e*S	Sg	09 35 44.8	+1.2
	43nm,0.3s						
MTBS	Maitube	2.30	283	*e*P	Pg	09 35 16.5	-0.7
	baz=85						
MTBS				*e*S	Sg	09 35 48.0	+0.9
	baz=85						
MTBS	Maitube	2.30	283	*e*P	Pg	09 35 16.5	-0.7
	11nm,0.2s						
MTBS				*e*S	Sg	09 35 48.0	+0.9
	27nm,0.3s						
KTBS	Karatobe	2.32	298	Pg	Pg	09 35 16.6	-0.9
	5.6nm,0.3s						
KTBS				Lg	Lg	09 35 48.2	
	60nm,0.3s						
KTBS	Karatobe	2.32	298	*e*P	Pg	09 35 16.6	-0.9
	baz=98						
KTBS				*e*S	Sg	09 35 48.3	+0.7
	baz=98						
KTBS	Karatobe	2.32	298	*e*P	Pg	09 35 16.6	-0.9
	5.6nm,0.3s						
KTBS				*e*S	Sg	09 35 48.2	+0.7
	60nm,0.3s						
ULHL	Ulahol	2.44	262	⇑*i*P	Pb	09 35 16.9	+0.1
	baz=64						
ULHL				⇑*i*S	Sb	09 35 48.6	+1.8
	baz=64						
KUU	Kurty	2.62	299	*e*P	Pg	09 35 21.8	-1.5
	baz=1.0						
KUU				*e*S	Sg	09 35 57.1	-0.2
	baz=1.0						
KUU	Kurty	2.62	299	*e*P	Pg	09 35 21.8	-1.5
	2.7nm,0.2s						
KUU				*e*S	Sg	09 35 57.0	-0.2
	24nm,0.3s						
BOOM	Boomskoye usch	2.63	268	⇓*i*P	Pb	09 35 19.4	-0.6
	baz=70						
BOOM				⇓*i*S	Sb	09 35 53.3	+1.1
	baz=70						
KAPS	Kapalarasan	2.64	358	*e*P	Pg	09 35 21.8	-1.9
	1.9nm,0.3s						
KAPS				*e*S	Sg	09 35 57.5	-0.4
	9.0nm,0.4s						
DGS	Degeres	2.80	284	Pg	Pg	09 35 25.2	-1.5
	10nm,0.6s						
DGS				Lg	Lg	09 36 02.9	
	32nm,0.6s						
DGS	Degeres	2.80	284	*e*P	Pg	09 35 25.2	-1.5
	baz=85						
DGS				*e*S	Sg	09 36 03.0	0.0
	baz=85						
DGS	Degeres	2.80	284	*e*P	Pg	09 35 25.2	-1.5
	10nm,0.6s						
DGS				*e*S	Sg	09 36 02.9	0.0
	32nm,0.6s						
NRN	Naryn	2.87	246	⇑*e*P	Pb	09 35 23.0	-1.2
	baz=48						
NRN				⇑*i*S	Sb	09 35 59.1	-0.2
	baz=48						
TKM2	Tokmak 2	2.88	277	⇑Pg	Pg	09 35 27.4	-0.9
	2.6nm,0.5s						
TKM2				⇑Lg	Lg	09 36 05.1	
	5.8nm,0.3s						
TKM2	Tokmak 2	2.88	277	⇓*i*P	Pb	09 35 23.2	-1.1
	baz=78						
TKM2				⇓*i*S	Sb	09 35 59.6	+0.1
	baz=78						
KZA	Kyzart	3.20	261	⇑*i*P	Pb	09 35 27.4	-2.4
	baz=63						
KZA				⇑*i*S	Sb	09 36 06.9	-1.8
	baz=63						
AAK	Ala-Archa	3.69	272	⇓Pg	Pb	09 35 39.5	+1.5
	0.8nm,0.3s						
AAK				⇓Lg	Lg	09 36 29.6	
	2.6nm,0.5s						
MK31	Makanchi Array	4.60	25	Pn	Pn	09 35 44.7	+2.6
	0.1nm,0.1s,baz=204,slow=12,SNR=28						
MK31				Sn	Sn	09 36 39.6	+4.3
	0.3nm,0.3s,baz=202,slow=24,SNR=4.1						
MK31				Lg	Lg	09 37 01.7	
	0.3nm,0.3s,baz=193,slow=27,SNR=3.7						
MNAS	Manas	5.17	271	⇑Lg	Lg	09 37 13.8	
	1.1nm,0.6s						
SFK	Sufi-Kurgan	5.22	242	⇑Lg	Lg	09 37 16.8	
	0.1nm,0.2s						

IDC 02 09:43:28.8±1.8, **11°.16S**×**165°.98E**, **h0**^{km}, **mb3.5**/4, **mb1 3.8**/5, **mb1mx3.6**/23, **mbtmp3.6**/5, **ML4.1**/1, **Error ellipse: s-maj=53.4km s-min=33.0km az=118.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.86	178	Pn	Pn	09 46 06.6	+0.8
	1.3nm,0.3s,baz=336,slow=18,SNR=17						
DZM				Sn	Sn	09 47 59.3	-8.8
	0.1nm,0.3s,baz=180,slow=20,SNR=3.6						
WRA	Warramunga Arr	31.66	250	P	P	09 49 53.9	-0.3
	0.6nm,0.9s,baz=81,slow=9.0,SNR=4.1						
ASAR	Alice Springs	32.95	244	P	P	09 50 05.2	-0.3
	0.3nm,0.9s,baz=87,slow=7.7,SNR=4.5						
ILAR	Eielson Array	83.55	18	P	P	09 55 58.0	-0.5
	0.3nm,0.6s,baz=218,slow=5.6,SNR=3.0						
MKAR	Makanchi Array	93.76	317	P	P	09 56 48.6	+0.8
	0.3nm,0.8s,baz=104,slow=6.1,SNR=3.3						

IDC 02 10:08:17.0±1.7, **11°.22S**×**165°.06E**, **h0**^{km}, **mb3.7**/5, **mb1 4.0**/6, **mb1mx3.7**/42, **mbtmp3.8**/6, **ML3.9**/1, **Error ellipse: s-maj=46.9km s-min=29.5km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.88	173	Pn	Pn	10 10 53.8	-0.3
	0.8nm,0.3s,baz=358,slow=18,SNR=20						
WRA	Warramunga Arr	30.79	250	P	P	10 14 34.7	-0.1
	0.8nm,0.6s,baz=83,slow=8.8,SNR=8.3						
ASAR	Alice Springs	32.12	243	P	P	10 14 46.5	+0.2
	0.5nm,0.5s,baz=64,slow=10.0,SNR=20						
FITZ	Fitzroy Crossi	38.69	255	P	P	10 15 43.2	+0.3
	1.7nm,0.7s,baz=77,slow=5.4,SNR=4.5						
ILAR	Eielson Array	83.89	19	P	P	10 20 49.3	+1.0
	0.3nm,0.6s,baz=238,slow=5.0,SNR=4.1						
MKAR	Makanchi Array	93.19	317	P	P	10 21 31.7	-1.7
	0.2nm,0.7s,baz=87,slow=6.1,SNR=2.5						

IDC **02** *10:10:45.1±1.6, 54°.28N×167°.95E, h0^{km}, mb3.6/10, mb1 3.9/11, mb1mx3.6/51, mbtmp3.6/11, ML3.1/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/43, Error ellipse: s-maj=46.7km s-min=19.1km az=178.0*
KRSC **02** *10:10:48.6±2.6, 54°.02N×167°.61E, h101^{km}±49^{km}, ML4.6*
ISCJB **02** *10:10:51.7±0.5, 54°.00N±0°.07×167°.36E±0°.06, h100^{km}, mb3.5/10, Error ellipse: s-maj=9.9km s-min=4.2km az=165.4*
MOS **02** *10:10:53.2±0.9, 54°.19N×167°.18E, h117^{km}, mb3.7/4, Error ellipse: s-maj=11.4km s-min=8.1km az=172.3*
ISC 02 10:10:54.0±0.8, **54°.03N**±0°.07×**167°.39E**±0°.06, **h100**^{km}, **n69**, σ1^{s}**89**/80, **mb3.5**/10, **1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	3.41	312	*e*P	Pn	10 11 42.0	-3.2
KBTR	Krutoberegovo	3.41	312	PN	Pn	10 11 42.0	-3.2
TUMD	Tumrok D	4.23	289	*e*P	Pn	10 11 54.5	-1.7
TUMD				*e*S	Sn	10 12 44.3	-0.2
SMKR	Semkarok	4.24	309	*e*P	Pn	10 11 56.1	-0.3
SMKR				*e*S	Sn	10 12 46.8	+2.0
SMKR	Semkarok	4.24	309	PN	Pn	10 11 56.1	-0.3
KZV	Kizimen	4.27	288	*e*P	Pn	10 11 54.6	-2.3
KZV	Kizimen	4.27	288	PN	Pn	10 11 54.6	-2.3
ZLN	Zelenaya	4.28	300	*e*P	Pn	10 11 56.0	-1.0
ZLN	Zelenaya	4.28	300	PN	Pn	10 11 56.0	-1.0
TUMR	Tumrok	4.39	290	*e*P	Pn	10 11 56.8	-1.7
TUMR	Tumrok	4.39	290	PN	Pn	10 11 54.5	-4.0
TUMR				S	Sn	10 12 44.3	-4.2
SRKR	Sorokina	4.42	309	*e*P	Pn	10 11 58.4	-0.4
SRKR	Sorokina	4.42	309	PN	Pn	10 11 58.4	-0.4
SPN	Mys Shipunski	4.49	261	*e*P	Pn	10 11 57.8	-1.9
SPN				*e*S	Sn	10 12 48.2	-2.6
SPN	Mys Shipunski	4.49	261	PN	Pn	10 11 57.8	-1.9
SPN				S	Sn	10 12 48.2	-2.6
KII	Karymskiy	4.68	273	*e*P	Pn	10 12 02.3	-0.1
KII	Karymskiy	4.68	273	PN	Pn	10 12 02.3	-0.1
NLC	Nalytchevo	4.87	263	*e*P	Pn	10 12 03.9	-0.9
NLC				*e*S	Sn	10 12 57.6	-2.4
NLC	Nalytchevo	4.87	263	PN	Pn	10 12 03.9	-0.9
NLC				S	Sn	10 12 57.6	-2.4
SDLR	Sedlovina	5.12	265	*e*P	Pn	10 12 07.0	-1.3
SDLR	Sedlovina	5.12	265	PN	Pn	10 12 07.0	-1.3
UGLR	Uglovaya	5.17	264	*e*P	Pn	10 12 08.0	-1.0
UGLR				*e*S	Sn	10 13 08.0	+0.6
UGLR	Uglovaya	5.17	264	PN	Pn	10 12 08.0	-1.0
UGLR				S	Sn	10 13 08.0	+0.6
SMAR	Somma	5.17	265	*e*P	Pn	10 12 08.6	-0.5
SMAR	Somma	5.17	265	PN	Pn	10 12 08.6	-0.5
AVH	Avacha	5.21	265	*e*P	Pn	10 12 08.7	-0.8
AVH	Avacha	5.21	265	PN	Pn	10 12 08.7	-0.8
KRX	Arik	5.24	266	*e*P	Pn	10 12 08.8	-1.2
KRX	Arik	5.24	266	PN	Pn	10 12 08.8	-1.2
DALK	Dalny	5.25	262	*e*P	Pn	10 12 08.2	-1.8
DALK				*e*S	Sn	10 13 06.4	-2.8
DALK	Dalny	5.25	262	PN	Pn	10 12 08.2	-1.8
DALK				S	Sn	10 13 06.4	-2.8
KOK	Koryaka	5.26	265	*e*P	Pn	10 12 09.3	-0.9
KOK	Koryaka	5.26	265	PN	Pn	10 12 09.3	-0.9
PET	Petropavlovsk	5.31	263	*e*P	Pn	10 12 11.0	+0.2
PET				*e*S	Sn	10 13 10.8	+0.1
PET	Petropavlovsk	5.31	263	*e*PN	Pn	10 12 11.2	+0.4
PET				*e*S	Sn	10 13 08.8	-1.9
PET				pmax	pmax		
	comp=Z,12nm,0.5s						
PET				smax	smax		
	comp=N,44nm,0.4s						
PET				smax	smax		
	comp=E,33nm,0.5s						
RUS	Russkaya	5.57	257	*e*P	Pn	10 12 13.5	-0.8
RUS	Russkaya	5.57	257	PN	Pn	10 12 13.5	-0.8
GNL	Ganaly	5.60	270	*e*P	Pn	10 12 14.6	-0.3
GNL	Ganaly	5.60	270	PN	Pn	10 12 14.6	-0.3
KRMR	Karymshinskiy	5.67	261	*e*P	Pn	10 12 14.8	-0.8
KRMR	Karymshinskiy	5.67	261	PN	Pn	10 12 14.8	-0.8
MTVR	Mutnovka	5.74	258	*e*P	Pn	10 12 16.8	0.0
MTVR				*e*S	Sn	10 13 19.7	-1.7
MTVR	Mutnovka	5.74	258	PN	Pn	10 12 16.8	0.0
MTVR				S	Sn	10 13 19.7	-1.7
OSSR	Ossora	5.75	337	*e*P	Pn	10 12 12.9	-3.8
OSSR	Ossora	5.75	337	PN	Pn	10 12 12.9	-3.8
PETK	Petropavlovsk-	5.85	265	Pn	Pn	10 12 18.6	+0.5
	comp=E,2.2nm,0.3s,baz=86,slow=18,SNR=43						
PETK				Sn	Sn	10 13 24.1	+0.3
	comp=E,2.3nm,0.3s,baz=71,slow=23,SNR=3.6						
KDTR	Khodutka, Kamc	6.06	252	*e*P	Pn	10 12 20.0	-1.0
KDTR				*e*S	Sn	10 13 25.3	-3.5
KDTR	Khodutka, Kamc	6.06	252	PN	Pn	10 12 20.0	-1.0
KDTR				S	Sn	10 13 25.3	-3.5
SKR	Severo-Kuril's	7.67	249	⇓*e*PN	Pn	10 12 42.7	-0.2
MA2	Magadan	10.66	308	LR	LR	10 17 10.7	
	comp=E,40nm,20.3s,baz=340,slow=36						
KDAK	Kodiak Island	22.51	64	P	P	10 15 42.0	-2.9
KDAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KDAK	Kodiak Island	22.51	64	P	P	10 15 42.0	-2.9
	comp=Z,4.2nm,0.8s,baz=284,slow=4.2,SNR=5.6						
TIXI	Tiksi	24.21	331	P	P	10 16 03.2	+2.5
	comp=Z,0.6nm,0.2s,baz=122,slow=9.8,SNR=2.6						
ILAR	Eielson Array	25.03	46	*e*P	P	10 16 05.6	-2.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	25.03	46	P	P	10 16 06.3	-2.0
	comp=Z,1.0nm,0.7s,baz=251,slow=7.2,SNR=14						
INK	Inuvik	30.43	39	P	P	10 16 56.0	-0.3
	comp=Z,0.4nm,0.6s,baz=272,slow=5.5,SNR=6.0						
H11N2	WAKE ISLAND Hy	34.24	181	T	T	10 54 26.2	
	baz=1.1,slow=76						
H11N3	WAKE ISLAND Hy	34.26	181	T	T	10 54 28.9	
	baz=1.1,slow=76						
H11N1	WAKE ISLAND Hy	34.26	181	T	T	10 54 24.8	
	baz=1.1,slow=76						
H11S1	WAKE ISLAND Hy	35.46	181	T	T	10 56 02.9	
	baz=1.1,slow=76						
H11S3	WAKE ISLAND Hy	35.47	181	T	T	10 56 01.1	
	baz=1.1,slow=76						
H11S2	WAKE ISLAND Hy	35.48	181	T	T	10 56 04.0	
	baz=1.1,slow=76						
SONM	Songino Array	37.87	286	P	P	10 18 05.1	+4.1
	comp=Z,0.3nm,0.5s,baz=44,slow=8.6,SNR=2.9						
YKA	Yellowknife Ar	39.46	46	P	P	10 18 13.1	-0.8
	comp=Z,0.2nm,0.5s,baz=296,slow=8.2,SNR=6.9						
NVAR	Mina Array Bea	51.30	76	P	P	10 19 47.5	-0.4
	comp=Z,0.2nm,0.4s,baz=287,slow=8.6,SNR=4.3						
PDAR	Pinedale Array	53.21	66	P	P	10 20 01.5	-0.5
	comp=Z,0.4nm,0.6s,baz=301,slow=2.1,SNR=4.2						
NOA	NORSAR Array B	63.72	347	*e*P	P	10 21 16.6	+2.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	63.72	347	P	P	10 21 15.8	+1.4
	comp=Z,0.9nm,0.8s,baz=13,slow=6.6,SNR=4.2						
TXAR	Lajitas Array	66.23	73	P	P	10 21 32.8	+1.6
	comp=Z,0.6nm,0.6s,baz=301,slow=4.7,SNR=14						

IDC 02 10:11:20.8±1.9, **4°.27S**×**150°.86E**, **h0**^{km}, **mb3.3**/3, **mb1 3.6**/3, **mb1mx3.3**/44, **mbtmp3.3**/3, **Error ellipse: s-maj=128.2km s-min=27.9km az=124.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.40	225	P	P	10 16 22.0	+0.9
	0.3nm,0.5s,baz=50,slow=10,SNR=7.5						
ASAR	Alice Springs	25.29	219	P	P	10 16 48.1	-1.1
	0.3nm,0.5s,baz=53,slow=9.3,SNR=5.4						
ILAR	Eielson Array	82.41	22	P	P	10 23 44.6	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	0.2nm,0.6s,baz=258,slow=4.5,SNR=2.8						
TORD	Torodi Ar. Bea 0.1nm,0.4s,baz=82,slow=2.3,SNR=2.3	148.31	288	PKPbc	PKPbc	10 31 09.7	-0.5

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*IDC **02** 10:17:10.6±2.2, 9°.51S×112°.75E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/55, mbtmp3.7/5, ML3.2/1, Error ellipse: s-maj=118.8km s-min=24.7km az=48.0*

*ISCJB **02** 10:17:15.9±0.7, 9°.69S±0°.08×112°.89E±0°.06, h36km, mb3.6/4, Error ellipse: s-maj=12.5km s-min=7.2km az=19.0*

*DJA **02** 10:17:17.6±0.6, 9°S±5°×11°3E±°, h10km, M3.8/10, MLv3.8/10*

ISC 02 10:17:17.0±1.0, 9°.5S±0°.1×112°.92E±0°.06, h36km, n13, σ1.76s/14, mb3.7/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.61	49	P	Pn	10 17 44.1	+1.2
JAGI				S	Sn	10 17 59.5	-3.0
PWJI	Pagerwojo	1.86	324	P	Pn	10 17 47.7	+1.4
PCJI	Pacitan	2.17	308	P	Pn	10 17 51.5	+0.9
IGBI	Denpasar	2.31	72	P	Pn	10 17 51.9	-0.6
IGBI				S	Sn	10 18 22.1	+2.4
DNP	Denpasar	2.42	70	P	Pn	10 18 02.6	+8.6
WOJI	Wonogiri, Jawa	2.59	310	P	Pn	10 17 56.8	+0.5
SRBI	Singaraja	2.69	58	P	Pn	10 18 00.5	+2.8
UGM	Wanagama	2.86	304	P	Pn	10 18 01.6	+1.5
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=334,slow=12,SNR=3.2	15.00	126	Pn	Pn	10 20 45.4	-1.0
FITZ	0.1nm,0.3s,baz=321,slow=3.1,SNR=3.3			Sn	Sn	10 23 18.6	-13
WRA	Warramunga Arr 0.9nm,0.8s,baz=291,slow=11,SNR=9.9	23.13	119	P	P	10 22 19.5	-0.7
ASAR	Alice Springs 1.3nm,0.7s,baz=305,slow=9.3,SNR=22	24.49	128	P	P	10 22 33.2	+0.2
STKA	Stephens Creek 0.9nm,0.6s,baz=315,slow=7.1,SNR=3.2	34.65	134	P	P	10 24 03.9	+0.8
MKAR	Makanchi Array 0.4nm,0.5s,baz=143,slow=7.3,SNR=5.0	62.38	337	P	P	10 27 34.5	-1.5

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*ISCJB **02** 10:19:12.6±1.2, 11°.30S±0°.09×165°.4E±0°.2, h10km, mb3.8/5, Error ellipse: s-maj=25.8km s-min=12.0km az=167.0*

*IDC **02** 10:19:12.7±1.7, 11°.07S×165°.29E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/47, mbtmp3.9/7, ML4.2/1, Error ellipse: s-maj=48.2km s-min=27.4km az=123.0*

ISC 02 10:19:14.3±1.3, 11°.2S±0°.1×165°.4E±0°.2, h10km, n7, σ1.31s/7, mb3.8/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.8nm,0.3s,baz=319,slow=20,SNR=16	10.88	175	Pn	Pn	10 21 51.7	+1.5
DZM	baz=131,slow=11,SNR=1.6			Sn	Sn	10 23 50.4	-1.7
CTA	Charters Tower 0.8nm,0.4s,baz=71,slow=13,SNR=2.5	20.39	242	P	Pn	10 23 52.5	-1.1
STKA	Stephens Creek 1.2nm,0.5s,baz=48,slow=10.0,SNR=4.1	30.07	223	P	P	10 25 24.1	+0.2
WRA	Warramunga Arr 3.4nm,1.1s,baz=81,slow=9.3,SNR=8.7	31.07	250	P	P	10 25 32.7	-0.2
ASAR	Alice Springs 0.8nm,0.6s,baz=64,slow=10,SNR=33	32.38	243	P	P	10 25 43.7	-0.7
ILAR	Eielson Array 0.4nm,1.0s,baz=239,slow=4.3,SNR=4.5	83.77	19	P	P	10 31 42.5	-0.8
MKAR	Makanchi Array 0.2nm,0.7s,baz=97,slow=6.3,SNR=3.1	93.36	317	P	P	10 32 30.3	+0.6

DJA 02 10:21:48.1±0.5, 1°S±4°×12°2E±°, h10km, M3.6/6, MLv3.6/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	0.59	244	P	Pg	10 21 58.8	-0.8
LUWI	Luwuk	0.71	123	P	Pg	10 22 01.5	-0.3
MRSI	Marisa	1.15	348	P	Pb	10 22 08.2	-1.8
PCI	Palu	2.36	264	P	Pn	10 22 27.9	+1.0
MPSI	Mapaga	2.48	293	P	Pn	10 22 30.3	+1.7
SPSI	Sidrap Palu	4.08	216	P	Pn	10 22 50.3	-0.3
BNSI	Bone	4.26	209	P	Pn	10 22 52.9	-0.2

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*IDC **02** 10:23:11.7±2.7, 8°.60S×113°.70E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.4/46, mbtmp3.5/4, ML3.5/1, MS3.0/2, Ms1 3.1/2, ms1mx2.7/18, Error ellipse: s-maj=155.6km s-min=26.2km az=49.0*

*ISCJB **02** 10:23:14.8±0.9, 9°.71S±0°.10×112°.89E±0°.07, h35km, mb3.3/3, MS2.9/2, Error ellipse: s-maj=15.5km s-min=7.8km az=31.4*

*DJA **02** 10:23:15.0±3.4, 10°S±13°×11°3E±°, h13km±26km, M3.9/9, MLv3.9/9*

ISC 02 10:23:15.6±1.1, 9°.6S±0°.1×112°.89E±0°.07, h35km, n15, σ1.71s/13, mb3.4/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.70	47	P	Pn	10 23 42.3	-0.4
PWJI	Pagerwojo	1.93	326	P	Pn	10 23 46.1	+0.2
PCJI	Pacitan	2.22	310	P	Pn	10 23 50.1	+0.2
IGBI	Denpasar	2.37	70	P	Pn	10 23 53.5	+1.6
NGJI	Ngawi	2.66	328	P	Pn	10 24 00.0	+4.0
GRJI	Gresik	2.73	351	P	Pn	10 23 57.8	+0.8
SRBI	Singaraja	2.76	56	P	Pn	10 23 58.5	+1.2
UGM	Wanagama	2.90	306	P	Pn	10 24 00.4	+1.1
PLAI	Plampang	4.89	81	P	Pn	10 24 28.1	+1.5
FITZ	Fitzroy Crossi 0.2nm,0.3s,baz=308,slow=8.4,SNR=7.1	14.96	126	Pn	Pn	10 26 44.5	0.0
FITZ	0.1nm,0.3s,baz=188,slow=19,SNR=2.7			Sn	Sn	10 29 16.9	-12
DAV	Davao City (W) comp=Z,57nm,20.6s,baz=70,slow=42	20.86	38	LR	LR	10 36 49.9	
WRA	Warramunga Arr 0.5nm,0.8s,baz=298,slow=11,SNR=4.4	23.10	119	P	P	10 28 18.3	-0.3
ASAR	Alice Springs 1.0nm,0.8s,baz=303,slow=7.8,SNR=11	24.44	127	P	P	10 28 31.8	+0.5
CMAR	Chiang Mai Arr comp=Z,26nm,19.3s,baz=185,slow=38	31.12	334	LR	LR	10 42 43.8	
MKAR	Makanchi Array 0.2nm,0.4s,baz=157,slow=7.0,SNR=4.4	62.46	337	P	P	10 33 33.2	-2.2

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*ISCJB **02** 10:54:37.8±0.6, 42°.87N±0°.02×77°.62E±0°.03, h5km±5km, Error ellipse: s-maj=4.2km s-min=3.5km az=166.5*

*SOME **02** 10:54:37.2, 42°.80N×77°.60E, h10km*

*NNC **02** 10:54:37.3±0.3, 42°.85N×77°.64E, h0km, mb1.9, mpv2.5, Error ellipse: s-maj=2.9km s-min=1.3km az=8.0*

*KRNET **02** 10:54:38.8±0.1, 42°.90N×77°.53E, h30km, mb2.0*

ISC 02 10:54:37.6±1.0, 42°.87N±0°.03×77°.61E±0°.02, h11km±9km, n26, σ0.44s/50, 15C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDOK	Medeo 0.8nm,0.3s	0.51	305	⇑P	Pb	10 54 48.5	-0.1
MDOK	5.2nm,0.4s			S	Sg	10 54 55.1	+0.8
MDOK	Medeo baz=7.0	0.51	305	*e*P	Pg	10 54 47.7	+0.2
MDOK	baz=7.0			*e*S	Sb	10 54 55.2	-0.8
MDOK	Medeo 0.5nm,0.1s	0.51	305	*e*P	Pg	10 54 47.7	+0.2
MDOK	11nm,0.3s			*e*S	Sb	10 54 55.2	-0.8
KOTS	Kotyrbulak 3.8nm,0.2s	0.52	315	P	Pg	10 54 48.1	+0.4
KOTS	21nm,0.3s			S	Sb	10 54 55.8	-0.6
KOTS	Kotyrbulak baz=17	0.52	315	*e*P	Pg	10 54 48.1	+0.4
KOTS	baz=17			*e*S	Sb	10 54 55.8	-0.6
KOTS	Kotyrbulak 3.0nm,0.3s	0.52	315	*e*P	Pg	10 54 48.1	+0.4
KOTS	21nm,0.3s			*e*S	Sb	10 54 55.8	-0.6
SATY	Saty 15nm,0.1s	0.61	72	P	Pg	10 54 49.3	-0.3
SATY	28nm,0.1s			S	Sg	10 54 57.9	+0.3
SATY	Saty 15nm,0.1s	0.61	72	*e*P	Pg	10 54 49.2	-0.3
SATY	28nm,0.1s			*e*S	Sg	10 54 57.9	+0.3
PRZ	Przheval'sk baz=22	0.70	123	⇑*i*P	Pn	10 54 54.3	+0.7
PRZ	baz=22			⇑*i*S	Sn	10 55 05.1	+0.6
KDJ	Kajisay baz=98	0.81	203	⇑*i*P	Pn	10 54 54.3	-0.8
KDJ	baz=98			⇑*i*S	Sb	10 55 05.2	+0.5
UZB	Uzynbulak 3.9nm,0.2s	1.07	75	P	Pg	10 54 57.5	-0.7
UZB	7.0nm,0.1s			S	Sg	10 55 11.9	-0.3
UZB	Uzynbulak 3.9nm,0.2s	1.07	75	*e*P	Pg	10 54 57.5	-0.7
UZB	7.0nm,0.1s			*e*S	Sg	10 55 11.9	-0.3
KTBS	Karatobe 1.1nm,0.1s	1.08	321	P	Pn	10 54 58.6	-0.1
KTBS	5.8nm,0.2s			S	Sn	10 55 14.2	+0.5
KTBS	Karatobe 1.1nm,0.1s	1.08	321	*e*P	Pn	10 54 58.6	-0.1
KTBS	5.8nm,0.2s			*e*S	Sn	10 55 14.2	+0.5
TARG	Taragay, Kyrgy baz=70	1.15	173	⇑*i*P	Pn	10 55 00.3	+0.3
TARG	baz=70			⇑*i*S	Sn	10 55 16.4	+0.4
ULHL	Ulahol baz=36	1.19	239	⇑*i*P	Pn	10 55 00.2	-0.2
ULHL	baz=36			⇑*i*S	Sg	10 55 15.9	-0.1
BOOM	Boomskoye usch baz=51	1.29	253	⇑*i*P	Pg	10 55 02.1	-0.3
BOOM	baz=51			⇑*i*S	Sb	10 55 18.6	0.0
ARXS	Arharly 0.8nm,0.1s	1.35	7	P	Pn	10 55 02.7	+0.2
ARXS	5.3nm,0.2s			S	Sg	10 55 21.0	-0.1
ARXS	Arharly 0.6nm,0.2s	1.35	7	*e*P	Pn	10 55 02.7	+0.2
ARXS	5.3nm,0.2s			*e*S	Sg	10 55 21.0	-0.1
DGS	Degeres 2.2nm,0.2s	1.40	286	P	Pb	10 55 03.6	-0.2
DGS	6.2nm,0.3s			S	Sg	10 55 22.9	+0.3
DGS	Degeres 2.2nm,0.2s	1.40	286	*e*P	Pb	10 55 03.6	-0.2
DGS	6.2nm,0.3s			*e*S	Sg	10 55 22.9	+0.3
PDGK	Podgornoye 1.3nm,0.3s	1.45	71	P	Pn	10 55 04.1	+0.2
PDGK	1.8nm,0.2s			S	Sb	10 55 23.5	+0.3
PDGK	Podgornoye 0.3nm,0.3s	1.45	71	⇓Pg	Pn	10 55 03.8	-0.1
PDGK	0.5nm,0.2s			⇓Lg	Lg	10 55 24.6	
PDGK	Podgornoye baz=73	1.45	71	⇓*i*P	Pg	10 55 05.6	+0.1
PDGK	baz=73			⇓*i*S	Sg	10 55 25.0	+0.7
TKM2	Tokmak 2 0.2nm,0.2s	1.48	273	⇑Pg	Pn	10 55 04.2	-0.2
TKM2	0.6nm,0.1s			⇑Lg	Lg	10 55 25.5	
NRN	Naryn baz=19	1.87	220	⇑*i*P	Pn	10 55 09.9	0.0
NRN	baz=19			⇑*i*S	Sn	10 55 33.9	+0.3

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*SOME **02** 10:55:39.3, 42°.27N×75°.95E, h10km*

*KRNET **02** 10:55:39.1±0.1, 42°.26N×75°.91E, h19km, mb2.8*

*NNC **02** 10:55:39.0±0.4, 42°.30N×75°.95E, h0km, mb2.7, mpv2.7, Error ellipse: s-maj=3.2km s-min=2.1km az=164.0*

ISC 02 10:55:38.9±0.9, 42°.27N±0°.02×75°.93E±0°.02, h14km±7km, n45, σ0.60s/73, 9C-11D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM	Boomskoye usch baz=6.0	0.22	1	⇑*i*P	Pg	10 55 44.0	0.0
BOOM	baz=6.0			⇑*i*S	Sg	10 55 47.5	+0.1
ULHL	Ulahol SNR=58	0.23	95	⇑P	Pg	10 55 44.1	0.0
KZA	Kyzart SNR=8.8	0.54	250	P	Pg	10 55 50.1	+0.4
TKM2	Tokmak 2 SNR=8.0	0.70	339	P	Pg	10 55 52.5	-0.2
TKM2	Tokmak 2 3.1nm,0.2s	0.70	339	⇑P	Pg	10 55 52.2	-0.4
TKM2	18nm,0.3s			⇓S	Sg	10 56 01.7	-0.2
KST	Kastek 11nm,0.2s	0.78	2	P	Pg	10 55 53.8	-0.3
KST	19nm,0.2s			S	Sg	10 56 04.7	+0.4
KST	Kastek baz=3.0	0.78	2	*e*P	Pg	10 55 53.8	-0.3
KST	baz=3.0			*e*S	Sg	10 56 04.7	+0.4
KST	Kastek 11nm,0.2s	0.78	2	*e*P	Pg	10 55 53.8	-0.3
KST	19nm,0.2s			*e*S	Sg	10 56 04.7	+0.4
NRN	Naryn baz=77	0.83	177	⇓*i*P	Pg	10 55 54.7	-0.5
NRN	baz=77			⇓*i*S	Sg	10 56 06.2	+0.1
KDJ	Kajisay baz=98	0.94	98	⇑*i*P	Pg	10 55 57.0	-0.1
KDJ	baz=98			⇑*i*S	Sb	10 56 10.1	+0.7
DGS	Degeres 3.3nm,0.1s	0.98	353	P	Pb	10 55 57.5	-0.4
DGS	24nm,0.2s			S	Sb	10 56 10.6	-0.1
DGS	Degeres baz=54	0.98	353	*e*P	Pb	10 55 57.5	-0.4
DGS	baz=54			*e*S	Sb	10 56 10.6	-0.1
DGS	Degeres 3.3nm,0.1s	0.98	353	*e*P	Pb	10 55 57.5	-0.4
DGS	24nm,0.2s			*e*S	Sb	10 56 10.6	-0.1
UCH	Uchtor SNR=7.3	1.05	268	P	Pb	10 55 59.0	-0.3
TNSS	Tian-Shan baz=44	1.07	44	*e*P	Pb	10 55 59.2	-0.4
TNSS	baz=44			*e*S	Sb	10 56 13.8	+0.1
TNSS	Tian-Shan 7.1nm,0.2s	1.07	44	*e*P	Pb	10 55 59.2	-0.4
TNSS	15nm,0.2s			*e*S	Sb	10 56 13.8	+0.1
AAK	Ala-Archa 2.4nm,0.5s	1.13	290	⇑Pg	Pn	10 56 00.6	+0.1
AAK	4.5nm,0.3s			⇓Lg	Lg	10 56 15.1	
MDOK	Medeo 1.2nm,0.4s	1.22	42	⇑Pg	Pn	10 56 01.4	-0.3
MDOK	9.8nm,0.5s			⇓Lg	Lg	10 56 17.8	
MDOK	Medeo baz=43	1.22	42	*e*P	Pn	10 56 01.5	-0.3
MDOK	baz=43			*e*S	Sb	10 56 17.6	+0.1
MDOK	Medeo 1.9nm,0.3s	1.22	42	*e*P	Pn	10 56 01.5	-0.2
MDOK	14nm,0.5s			*e*S	Sb	10 56 17.6	+0.1
ARLS	Aral baz=52	1.27	252	⇓*i*P	Pn	10 56 01.6	-0.8
ARLS	baz=52			⇓*i*S	Sb	10 56 18.4	-0.5
KOTS	Kotyrbulak 6.0nm,0.3s	1.30	41	P	Pb	10 56 03.4	+0.1
KOTS	31nm,0.5s			S	Sn	10 56 20.5	+0.3
KOTS	Kotyrbulak baz=42	1.30	41	*e*P	Pb	10 56 03.4	+0.1
KOTS	baz=42			*e*S	Sn	10 56 20.5	+0.3
KOTS	Kotyrbulak 1.1nm,0.2s	1.30	41	*e*P	Pb	10 56 03.4	+0.1
KOTS	31nm,0.5s			*e*S	Sn	10 56 20.5	+0.3
KTBS	Karatobe 8.8nm,0.2s	1.55	21	P	Pb	10 56 07.5	+0.1
KTBS	13nm,0.2s			S	Sg	10 56 28.0	-0.8
KTBS	Karatobe baz=16	1.55	21	*e*P	Pb	10 56 07.5	+0.1
KTBS	baz=16			*e*S	Sg	10 56 28.0	-0.8
KTBS	Karatobe 8.8nm,0.2s	1.55	21	*e*P	Pb	10 56 07.5	+0.1
KTBS	13nm,0.2s			*e*S	Sg	10 56 28.0	-0.8
EKS2	Erkin-Say SNR=6.8	1.64	285	P	Pg	10 56 10.6	0.0
KUU	Kurty baz=11	1.65	10	*e*P	Pb	10 56 09.3	+0.1
KUU	baz=11			*e*S	Sb	10 56 31.1	+1.1
KUU	Kurty 3.8nm,0.4s	1.65	10	*e*P	Pb	10 56 09.2	+0.1
KUU	5.1nm,0.4s			*e*S	Sb	10 56 31.0	+1.1
CHKK	Chushkaly baz=26	1.77	26	*e*P	Pb	10 56 11.4	+0.2
CHKK	baz=26			*e*S	Sg	10 56 34.7	-1.1
CHKK	Chushkaly 4.1nm,0.3s	1.77	26	*e*P	Pb	10 56 11.4	+0.2
CHKK	13nm,0.2s			*e*S	Sg	10 56 34.6	-1.1
SATY	Saty 2.2nm,0.2s	1.99	66	Pg	Pb	10 56 15.5	+0.5
SATY	17nm,0.1s			Lg	Lg	10 56 41.3	
SATY	Saty 2.2nm,0.2s	1.99	66	*e*P	Pb	10 56 15.5	+0.5
SATY	17nm,0.1s			*e*S	Sb	10 56 41.4	+1.7
MRKS	Merke 3.7nm,0.2s	2.06	284	Pg	Pb	10 56 17.1	+0.9
MRKS	12nm,0.2s			Lg	Lg	10 56 44.4	
MRKS	Merke baz=85	2.06	284	*e*P	Pb	10 56 17.1	+0.9
MRKS	baz=85			*e*S	Sg	10 56 44.4	-0.8
MRKS	Merke 3.7nm,0.2s	2.06	284	*e*P	Pb	10 56 17.1	+0.9
MRKS	12nm,0.2s			*e*S	Sg	10 56 44.4	-0.8
ARXS	Arharly 3.1nm,0.7s	2.39	35	Pg	Pb	10 56 21.9	+0.1
ARXS	20nm,0.4s			Lg	Lg	10 56 52.4	
ARXS	Arharly 0.9nm,0.3s	2.39	35	*e*P	Pb	10 56 21.9	+0.1
ARXS	20nm,0.4s			*e*S	Sb	10 56 52.4	+1.3
MNAS	Manas 0.7nm,0.5s	2.55	276	⇓Pg	Pb	10 56 25.8	+1.2
MNAS	1.1nm,0.7s			⇓Lg	Lg	10 56 59.5	
MNAS	Manas 0.7nm,0.6s	2.55	276	Pg	Pb	10 56 25.4	+0.8
MNAS	1.4nm,0.4s			Lg	Lg	10 56 59.0	
PDGK	Podgornoye 0.5nm,0.3s	2.83	67	Pg	Pb	10 56 30.1	+0.8
PDGK	2.4nm,0.6s			Lg	Lg	10 57 06.3	
PDGK	Podgornoye 0.7nm,0.7s	2.83	67	⇑Pg	Pb	10 56 27.8	-1.4
PDGK	2.1nm,0.5s			⇓Lg	Lg	10 57 06.6	
SFK	Sufi-Kurgan 0.4nm,0.1s	2.90	220	Pg	Pg	10 56 33.8	-0.8
SFK	0.8nm,0.4s			Lg	Lg	10 57 12.7	
KK31	Karatay Array 0.6nm,0.5s,baz=90,slow=27,SNR=3.6	4.08	284	⇓Lg	Lg	10 57 52.9	

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*SOME **02** 11:00:07.5, 39°.77N×69°.65E, h5km*

*KRNET **02** 11:00:07.9±0.1, 39°.88N×69°.34E, mb3.4*

*NNC **02** 11:00:10.1±1.6, 39°.99N×69°.34E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=11.7km s-min=8.3km az=39.0*

ISC 02 11:00:07.6±1.9, 39°.68N±0°.09×69°.21E±0°.07, h10km, n44, σ2.54s/70, 19C-26D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken baz=80	1.30	73	⇑*i*P	Pn	11 00 29.4	-2.5
BTK	baz=80			⇑*i*S	Sb	11 00 45.1	-3.7
TAS	Tashkent baz=59	1.65	2	⇑*i*P	Pn	11 00 34.9	-1.7
TAS	baz=59			⇑*i*S	Sn	11 00 54.3	-3.5
IUG	Iuzhnay 21nm,0.3s	2.54	14	Pg	Pn	11 00 49.3	+0.3
IUG	130nm,0.8s			Lg	Lg	11 01 20.9	
IUG	Iuzhnay 21nm,0.3s	2.54	14	*e*P	Pn	11 00 51.0	+2.0
IUG	130nm,0.8s			*e*S	Sn	11 01 22.3	+2.3
ARK	Arkit baz=46	2.98	44	⇓*i*P	Pn	11 00 54.4	-0.6
ARK	baz=46			⇓*i*S	Sn	11 01 28.3	-2.5
ARSB	Arslanbob baz=61	3.31	59	⇑*i*P	Pn	11 00 59.2	-0.4
ARSB	baz=61			⇑*i*S	Sn	11 01 36.9	-2.2
SFK	Sufi-Kurgan 3.8nm,0.5s	3.32	83	⇑Pg	Pb	11 01 09.6	+2.8
SFK	31nm,0.7s			⇓Lg	Lg	11 01 51.9	
SFK	Sufi-Kurgan 3.6nm,0.5s	3.32	83	Pg	Pb	11 01 08.1	+1.3
SFK	14nm,0.5s			Lg	Lg	11 01 52.4	
SFK	Sufi-Kurgan baz=86	3.32	83	⇓*i*P	Pn	11 01 00.6	+0.7
SFK	baz=86			⇓*i*S	Sn	11 01 38.8	-0.7
KK31	Karatay Array 0.4nm,0.2s,baz=200,slow=11,SNR=56	3.56	16	Pn	Pn	11 01 03.4	+0.5
KK31	2.5nm,0.4s,baz=108,slow=4.9,SNR=19			⇓Pg	Pb	11 01 11.1	+0.5
KK31	4.5nm,0.3s,baz=197,slow=28,SNR=7.5			Lg	Lg	11 01 55.5	
MNAS	Manas 2.7nm,0.4s	3.75	41	⇓Pn	Pn	11 01 05.1	-0.6
MNAS	14nm,0.4s			⇑Sn	Sn	11 01 48.4	-1.5
MNAS	Manas 2.5nm,0.3s	3.75	41	Pg	Pb	11 01 11.8	-2.2
MNAS	13nm,0.6s			Lg	Lg	11 01 58.7	
MNAS	Manas baz=41	3.75	41	⇓*i*P	Pn	11 01 05.2	-0.4
MNAS	baz=41			⇓*i*S	Sn	11 01 46.6	-3.3
AML	Almayashu SNR=11	4.19	53	P	Pn	11 01 12.2	+0.3
AML	Almayashu baz=54	4.19	53	⇓*i*P	Pn	11 01 11.3	-0.6
AML	baz=54			⇓*i*S	Sn	11 01 58.1	-3.0
MRKS	Merke 8.7nm,0.5s	4.31	43	Pg	Pb	11 01 21.6	-1.8
MRKS	18nm,0.5s			Lg	Lg	11 02 15.7	
MRKS	Merke 8.7nm,0.5s	4.31	43	*e*P	Pb	11 01 21.6	-1.8
MRKS	18nm,0.5s			*e*S	Sb	11 02 15.7	+0.2
ARLS	Aral baz=61	4.45	59	⇑*e*P	Pn	11 01 15.2	-0.1

ARLS				⇑*i*S	Sn	11 02 04.0	-3.3
	baz=61						
EKS2	Erkin-Say	4.56	48	P	Pn	11 01 16.8	+0.1
	SNR=11						
EKS2	Erkin-Say	4.56	48	⇓*i*P	Pn	11 01 16.3	-0.4
	baz=49						
EKS2				⇓*i*S	Sn	11 02 06.3	-3.5
	baz=49						
AAK	Ala-Archa	4.96	52	P	Pn	11 01 23.0	+0.7
	SNR=11						
AAK	Ala-Archa	4.96	52	⇑Pn	Pn	11 01 23.0	+0.7
	5.5nm,0.4s						
AAK				⇑Sn	Sn	11 02 20.7	+0.8
	11nm,0.5s						
AAK	Ala-Archa	4.96	52	⇓*i*P	Pn	11 01 22.1	-0.2
	baz=53						
AAK				⇓*i*S	Sn	11 02 16.0	-3.9
	baz=53						
FRU1	Bishkek	5.14	51	⇓*i*P	Pn	11 01 24.5	-0.2
	baz=52						
FRU1				⇓*i*S	Sn	11 02 20.2	-4.0
	baz=52						
KZA	Kyzart	5.17	60	⇓*i*P	Pn	11 01 25.2	-0.2
	baz=62						
KZA				⇓*i*S	Sn	11 02 21.7	-3.5
	baz=62						
KBK	Karagaybulak	5.25	54	P	Pn	11 01 27.3	+1.0
	SNR=6.7						
KBK	Karagaybulak	5.25	54	⇓*i*P	Pn	11 01 26.2	-0.1
	baz=55						
KBK				⇓*i*S	Sn	11 02 23.1	-3.9
	baz=55						
CHMS	Chumysh	5.33	50	P	Pn	11 01 27.2	-0.1
	SNR=6.8						
CHMS	Chumysh	5.33	50	⇑*i*P	Pn	11 01 26.8	-0.4
	baz=51						
CHMS				⇑*i*S	Sn	11 02 24.5	-4.2
	baz=51						
USP	Ospenovka	5.35	46	P	Pn	11 01 27.2	-0.3
	SNR=6.1						
USP	Ospenovka	5.35	46	⇓*i*P	Pn	11 01 27.2	-0.3
	baz=47						
USP				⇓*i*S	Sn	11 02 24.9	-4.3
	baz=47						
NRN	Naryn	5.46	69	⇑*i*P	Pn	11 01 29.2	-0.1
	baz=71						
NRN				⇑*i*S	Sn	11 02 28.4	-4.0
	baz=71						
TKM2	Tokmak 2	5.80	54	⇓Pn	Pn	11 01 33.6	-0.3
	1.4nm,0.4s						
TKM2				⇑Lg	Lg	11 03 09.1	
	18nm,0.7s						
TKM2	Tokmak 2	5.80	54	⇑*i*P	Pn	11 01 33.5	-0.3
	baz=55						
TKM2				⇑*i*S	Sn	11 02 36.1	-4.4
	baz=55						
BOOM	Boomskoye usch	5.81	59	⇓*i*P	Pn	11 01 33.4	-0.6
	baz=60						
BOOM				⇓*i*S	Sn	11 02 36.1	-4.6
	baz=60						
DGS	Degeres	6.08	52	Pg	Pb	11 01 55.2	+1.6
	3.8nm,0.6s						
DGS				Lg	Lg	11 03 13.1	
	15nm,0.7s						
DGS	Degeres	6.08	52	*e*P	Pb	11 01 55.2	+1.6
	3.8nm,0.6s						
DGS				*e*S	Sb	11 03 13.1	+6.6
	15nm,0.7s						
KST	Kastek	6.09	54	Pg	Pb	11 01 55.4	+1.5
	4.2nm,0.4s						
KST				Lg	Lg	11 03 13.0	
	12nm,0.6s						
KST	Kastek	6.09	54	*e*P	Pb	11 01 55.3	+1.5
	3.2nm,0.9s						
KST				*e*S	Sb	11 03 12.7	+5.8
	11nm,0.9s						
KTBS	Karatobe	6.89	52	Pg	Pb	11 02 08.8	+1.3
	0.8nm,0.2s						
KTBS				Lg	Lg	11 03 36.0	
	10nm,0.8s						
KTBS	Karatobe	6.89	52	*e*P	Pb	11 02 08.8	+1.3
	0.8nm,0.2s						
KTBS				*e*S	Sb	11 03 36.0	+6.3
	10nm,0.8s						
ARXS	Arharly	7.86	52	Pg	Pb	11 02 27.2	+3.3
	1.0nm,0.5s						
ARXS				Lg	Lg	11 04 07.7	
	6.7nm,0.6s						
ARXS	Arharly	7.86	52	*e*P	Pb	11 02 27.2	+3.3
	1.0nm,0.5s						
ARXS				*e*S	Sb	11 04 07.7	+10
	6.7nm,0.6s						
AB31	Akbulak array	11.63	328	P	Pn	11 02 53.1	-0.3
	0.3nm,0.3s,baz=143,slow=12,SNR=18						

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*IDC **02** 11:22:14.5±1.4, 51°.58N×178°.94W, h0^{km}, mb3.6/7, mb1 4.0/8, mb1mx3.6/48, mbtmp3.7/8, ML4.3/1, Error ellipse: s-maj=65.7km s-min=22.0km az=142.0*

*ISCJB **02** 11:22:21.5±0.7, 51°.6N±0°.1×178°.31W±0°.07, h45^{km}, mb3.9/10, Error ellipse: s-maj=14.5km s-min=6.1km az=177.8*

*NEIC **02** 11:22:21.5±0.0, 51°.47N×178°.13W, h13^{km}, mb4.1/15, ML3.5(AEIC), After AEIC.*

ISC 02 11:22:22.1±0.9, **51°.5N**±0°.1×**178°.33W**±0°.05, **h45**^{km}, **n55**, σ**1^{s}.38**/52, **mb4.1**/10, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASE	Tanaga Southea	0.38	28	*e*Pg	Pn	11 22 30.1	-1.6
GALAA	Gareloi Lava P	0.38	314	*e*Pg	Pn	11 22 31.6	-0.1
GAEA	Gareloi East	0.39	317	*e*Pg	Pn	11 22 31.6	-0.1
TAPA	Tanaga Point A	0.45	45	*e*Pg	Pn	11 22 30.6	-1.9
TAFP	Tanaga Falls P	0.45	28	*e*Pg	Pn	11 22 31.0	-1.6
KIMD	Kanaga Island	0.73	68	P	Pn	11 22 34.0	-2.0
KIWB	Kanaga Island	0.81	64	*e*Pg	Pn	11 22 35.4	-1.8
KIWB				*e*Sg	Sn	11 22 46.9	-1.2
KIKV	Kanaga Island	0.81	62	*e*Pg	Pn	11 22 35.6	-1.7
KIRH	Kanaga Island	0.86	62	*e*Pg	Pn	11 22 36.4	-1.5
ADK	Adak	1.09	69	*e*Pn	Pn	11 22 39.3	-1.6
ADK				*e*Sg	Sn	11 22 52.9	-2.0
ADAG	Mount Adagdak	1.18	65	*e*Pn	Pn	11 22 41.5	-0.6
ETKA	Kagalaska Isla	1.25	72	*e*Pn	Pn	11 22 42.0	-1.2
GSSP	Great Sitkin S	1.46	65	P	Pn	11 22 45.9	-0.1
GSTD	Great Sitkin T	1.47	67	*e*Pn	Pn	11 22 45.8	-0.4
GSTD				*e*Sn	Sn	11 23 04.6	+0.4
GSMY	Great Sitkin M	1.51	68	*e*Pn	Pn	11 22 46.4	-0.3
GSTR	Great Sitkin T	1.53	66	*e*Pn	Pn	11 22 46.6	-0.4
ATKA	Atka Island	2.66	73	*e*Pn	Pn	11 23 02.1	-0.3
ATKA				*e*Sn	Sn	11 23 33.2	-0.1
KOFP	Korovin Flat P	2.73	72	*e*Pn	Pn	11 23 04.2	+0.7
NIKH	Nikolski High	6.00	72	*e*Pn	Pn	11 23 49.7	+1.4
UNV	Unalaska Valle	7.56	67	*e*Pn	Pn	11 24 10.8	+1.2
GAMB	Gambell	12.80	13	*e*Pn	Pn	11 25 20.7	-0.4
OHAK	Old Harbor	15.63	59	*e*Pn	Pn	11 25 57.9	-1.1
	144nm,1.7s						
KDAK	Kodiak Island	16.11	57	*e*Pn	Pn	11 26 04.3	-0.8
	99nm,1.5s						
KDAK	Kodiak Island	16.11	57	Pn	Pn	11 26 02.6	-2.5
	1.1nm,0.3s,baz=248,slow=3.8,SNR=21						
SUA	Susitna One	18.06	46	*e*Pn	P	11 26 30.0	+0.5
	6.5nm,1.1s						
SEW	Seward	18.24	51	*e*Pn	Pn	11 26 31.8	+0.3
	58nm,1.4s						
TRF	Thorofare Moun	19.05	40	*e*P	Pn	11 26 41.5	0.0
	6.3nm,0.9s						
KNK	Knik Glacier	19.08	47	*e*P	Pn	11 26 41.6	-0.2
	11nm,1.2s						
RND	Reindeer	19.62	41	*e*P	P	11 26 47.3	+0.8
	12nm,1.5s						
MLY	Manley	19.62	36	*e*P	Pn	11 26 47.9	-0.3
	3.0nm,1.1s						
SCM	Sheep Creek Mo	19.72	46	*e*P	P	11 26 48.4	+0.8
	29nm,1.4s						
DHY	Denali Highway	20.11	43	*e*P	P	11 26 52.9	+0.9
	12nm,1.2s						
MDM	Murphy Dome	20.53	37	*e*P	Pn	11 26 57.8	-1.0
	7.4nm,1.2s						
HARP	HAARP	20.87	46	*e*P	P	11 27 01.1	+1.1
ILAR	Eielson Array	20.96	39	P	P	11 27 00.6	-0.4
	0.2nm,0.7s,baz=250,slow=12,SNR=3.3						
INK	Inuvik	27.19	35	*e*P	P	11 28 01.5	+0.5
	9.3nm,1.6s						
H11N2	WAKE ISLAND Hy	33.77	206	T	T	12 04 45.4	
	baz=17,slow=76,SNR=120						
H11N3	WAKE ISLAND Hy	33.78	206	T	T	12 04 46.0	
	baz=17,slow=76,SNR=127						
H11N1	WAKE ISLAND Hy	33.78	206	T	T	12 04 46.8	
	baz=17,slow=76,SNR=121						
YKA	Yellowknife Ar	34.93	47	P	P	11 29 09.8	+0.7
	0.2nm,0.6s,baz=273,slow=9.3,SNR=6.7						
YKB5	Yellowknife Ar	34.93	47	*e*P	P	11 29 09.9	+0.8
H11S1	WAKE ISLAND Hy	34.99	205	T	T	12 06 17.4	
	baz=17,slow=76,SNR=265						
H11S2	WAKE ISLAND Hy	35.00	205	T	T	12 06 17.8	
	baz=17,slow=76,SNR=159						
H11S3	WAKE ISLAND Hy	35.00	205	T	T	12 06 20.2	
	baz=17,slow=76,SNR=136						
BOZ	Bozeman (W)	43.16	71	*e*P	P	11 30 22.8	+4.5
	1.9nm,0.6s						
NVAR	Mina Array Bea	43.24	83	P	P	11 30 20.4	+1.3
	0.4nm,0.7s,baz=300,slow=7.2,SNR=2.5						
BW06	Boulder Array	45.99	73	*e*P	P	11 30 41.8	+0.9
	2.7nm,0.7s						
PD31	Pinedale Array	45.99	73	*e*P	P	11 30 42.2	+1.2
PDAR	Pinedale Array	45.99	73	*e*P	P	11 30 41.8	+0.9
PDAR	Pinedale Array	45.99	73	P	P	11 30 42.4	+1.4
	2.0nm,0.5s,baz=308,slow=3.3,SNR=13						
PV13	Radium Mtn., P	49.25	77	*e*P	P	11 31 07.7	+1.4
	2.9nm,0.8s						
LTX	Lajitas	58.34	82	*e*P	P	11 32 14.2	+1.6
TXAR	Lajitas Array	58.34	82	P	P	11 32 14.2	+1.6
	0.4nm,0.5s,baz=310,slow=5.5,SNR=9.1						
ASAR	Alice Springs	85.78	223	P	P	11 34 55.0	-1.4
	0.2nm,0.5s,baz=26,slow=5.8,SNR=3.5						
STKA	Stephens Creek	90.19	213	P	P	11 35 14.4	-2.8
	0.8nm,0.6s,baz=0.0,slow=6.1,SNR=3.1						

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*BJI **02** 11:33:49.4, 34°.35N×24°.72E, h5^{km}, mB5.1/28, mb4.9/49, Ms4.8/5, Ms7 4.5/8*

*ISCJB **02** 11:33:55.3±0.2, 34°.25N±0°.02×25°.08E±0°.02, h36^{km}±2^{km}, mb4.8/141, MS3.9/21, Error ellipse: s-maj=3.0km s-min=1.9km az=29.3*

*IDC **02** 11:33:56.0±2.0, 34°.39N×25°.04E, h25^{km}±12^{km}, mb4.4/36, mb1 4.6/48, mb1mx4.5/64, mbtmp4.6/48, ML4.5/10, MS3.9/28, Ms1 3.9/28, ms1mx3.7/54, Error ellipse: s-maj=13.4km s-min=9.8km az=172.0*

*THE **02** 11:33:55.2, 34°.27N×25°.04E, h0^{km}, ML4.2/6, Error ellipse: s-maj=1.6km s-min=0.5km az=179.0*

*HLW **02** 11:33:55.4, 34°.51N×25°.22E, h20^{km}±23^{km}, Md4.6, Ml4.6*

*MOS **02** 11:33:56.2±1.1, 34°.41N×25°.00E, h38^{km}, mb5.1/73, Error ellipse: s-maj=5.1km s-min=2.8km az=85.2*

*ATH **02** 11:33:58.4, 34°.53N×25°.03E, h31^{km}±1^{km}, ML4.1/15, Error ellipse: s-maj=2.9km s-min=0.8km az=358.0*

*NEIC **02** 11:33:58.4±0.0, 34°.53N×25°.02E, h31^{km}, mb4.8/78, ML4.2(THE), After ATH.*

*GII **02** 11:34:00.0±0.0, 34°.29N×25°.68E, h8^{km}, mb4.4/4, MD4.2/4*

*NIC **02** 11:34:01.8±0.3, 34°.40N×25°.70E, h85^{km}, mb5.0, ML4.7*

*ISK **02** 11:34:04.0, 35°.05N×25°.40E, h18^{km}, ML4.2/24*

ISC 02 11:33:55.3±0.6, **34°.28N**±0°.03×**25°.07E**±0°.02, **h24**^{km}±3^{km}, **h24**^{km}**:pP-P**, **n754**, σ**1^{s}.84**/823, **mb4.9**/148, **MS4.0**/22, **41C-36D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMBK	Timbaki Herakl	0.83	342	P	Pn	11 34 11.4	0.0
TMBK				S	Sn	11 34 24.4	+1.5
LAST	Lasithi	0.94	21	P	Pn	11 34 13.2	+0.1
LAST				S	Sb	11 34 23.9	-1.1
LAST				AML	AML	11 34 40.5	
	comp=N,22190μm,0.6s						
LAST				AML	AML	11 34 42.3	
	comp=E,27073μm,0.9s						
GVD	Gavdhos	0.98	305	*e*Pn	Pb	11 34 14.2	+0.6
GVD				*e*Sn	Sn	11 34 29.3	+2.5
GVD	Gavdhos	0.98	305	P	Pb	11 34 14.2	+0.6
GVD				S	Sn	11 34 26.7	-0.1
GVD				AML	AML	11 34 40.8	
	comp=N,40174μm,0.8s						
GVD				AML	AML	11 34 44.0	
	comp=E,64312μm,0.6s						
GVD	Gavdhos	0.98	305	P	Pb	11 34 14.2	+0.6
GVD				S	Sn	11 34 29.3	+2.5
IDI	Anoyia	1.01	352	PG	Pn	11 34 14.1	0.0
IDI	Anoyia	1.01	352	*e*Pg	Pn	11 34 13.3	-0.8
IDI				*e*Sg	Sb	11 34 26.1	-1.0
IDI	Anoyia	1.01	352	P	Pn	11 34 13.4	-0.7
IDI	Anoyia	1.01	352	Pg	Pn	11 34 13.7	-0.4
	comp=E,352nm,0.3s,baz=174,slow=17,SNR=870						
IDI				Lg	Lg	11 34 28.5	
	comp=E,347nm,0.3s,baz=336,slow=20,SNR=17						
KSTL	Kastelli Herak	1.02	0	P	Pn	11 34 13.7	-0.4
KSTL				S	Sn	11 34 28.6	+1.0
IACM	Heraklion	1.02	0	P	Pb	11 34 14.6	+0.4
IACM				S	Sb	11 34 25.3	-1.9
IACM	Heraklion	1.02	0	P	Pb	11 34 15.1	+0.8
NPS	Neapolis	1.07	24	P	Pb	11 34 15.9	+0.7
NPS	Neapolis	1.07	24	P	Pb	11 34 15.4	+0.2
NPS				AML	AML	11 34 42.0	
	comp=N,19686μm,1.1s						
NPS				AML	AML	11 34 47.6	
	comp=E,30036μm,0.8s						
NPS	Neapolis	1.07	24	P	Pb	11 34 15.9	+0.7
NPS				S	Sn	11 34 32.5	+3.4
NPS	Neapolis	1.07	24	P	Pb	11 34 15.9	+0.7
PRNS	Prines Rethymn	1.18	337	P	Pb	11 34 17.3	+0.4
PRNS				S	Sb	11 34 34.8	+3.1
STIA	Sitia Lasithi	1.24	42	P	Pb	11 34 18.8	+0.7
STIA				S	Sb	11 34 37.1	+3.4
ZKR	Zakros	1.26	48	PG	Pb	11 34 18.3	0.0
ZKR	Zakros	1.26	48	*e*Pn	Pb	11 34 19.1	+0.8
ZKR				*e*Sn	Sb	11 34 37.4	+3.3
ZKR	Zakros	1.26	48	P	Pb	11 34 19.4	+1.1
ZKR				S	Sb	11 34 35.4	+1.3
ZKR				AML	AML	11 34 46.4	
	comp=N,13924μm,0.8s						
ZKR				AML	AML	11 34 47.5	
	comp=E,27006μm,0.6s						
ZKR	Zakros	1.26	48	P	Pb	11 34 19.1	+0.8
ZKR				S	Sb	11 34 37.4	+3.3
VAM	Vamos	1.33	328	P	Pb	11 34 19.7	+0.2
VAM	Vamos	1.33	328	P	Pb	11 34 19.8	+0.2
VAM				AML	AML	11 34 50.0	
	comp=E,22906μm,0.7s						
VAM				AML	AML	11 34 56.0	
	comp=N,17041μm,0.6s						
VAM	Vamos	1.33	328	P	Pb	11 34 19.7	+0.2
VAM	Vamos	1.33	328	P	Pb	11 34 19.7	+0.2
IMMV	Iera Moni Meta	1.48	323	P	Pb	11 34 22.1	+0.1
IMMV				AML	AML	11 35 09.3	
	comp=N,17090μm,1.4s						
IMMV				AML	AML	11 35 15.9	
	comp=E,22187μm,1.1s						
IMMV	Iera Moni Meta	1.48	323	P	Pb	11 34 22.2	+0.1
IMMV				S	Sb	11 34 42.3	+1.9
KERA	Keramoti	1.65	311	P	Pb	11 34 24.9	-0.1
KERA				AML	AML	11 35 08.2	
	comp=N,11511μm,1.2s						
KERA				AML	AML	11 35 13.2	
	comp=E,10840μm,1.1s						
THR6	Thira Island,	2.08	7	P	Pb	11 34 30.8	-1.6
SANT	Santorini	2.11	9	PN	Pn	11 34 28.3	-0.8
SANT	Santorini	2.11	9	*e*Pn	Pn	11 34 29.9	+0.8
SANT				*e*Sn	Sn	11 34 53.5	-1.1
THT1	Athinios (Pele	2.12	8	P	Pn	11 34 29.9	+0.8
KARP	Karpathos	2.13	53	PN	Pn	11 34 31.2	+1.8
KARP	Karpathos	2.13	53	*e*Pn	Pn	11 34 30.2	+0.8
KARP				*e*Sn	Sn	11 34 56.7	+1.5
KARP	Karpathos	2.13	53	P	Pb	11 34 33.3	+0.1
KARP				AML	AML	11 35 21.5	
	comp=N,5522μm,0.8s						
KARP				AML	AML	11 35 28.7	
	comp=E,7363μm,1.1s						
KARP	Karpathos	2.13	53	P	Pb	11 34 32.0	-1.2
KARP				S	Sb	11 34 59.3	+0.1
THR3	Thira Island,	2.14	7	P	Pn	11 34 31.0	+1.6
ANKY	Antikythira Is	2.15	318	*e*Pn	Pn	11 34 31.4	+1.8
ANKY				*e*Sn	Sb	11 34 58.4	-1.2
ANKY	Antikythira Is	2.15	318	P	Pb	11 34 32.5	-0.9
ANKY				AML	AML	11 35 26.7	
	comp=E,8818μm,0.9s						
ANKY				AML	AML	11 35 31.8	
	comp=N,5688μm,1.2s						
ANKY	Antikythira Is	2.15	318	P	Pn	11 34 31.4	+1.8
ANKY				S	Sb	11 34 58.4	-1.2
SAP2K	Karterados	2.15	8	P	Pn	11 34 29.7	+0.2
THR8	Santorini-Mono	2.15	9	P	Pn	11 34 31.3	+1.8
ANAF	Anafi Island	2.15	15	P	Pb	11 34 31.7	-1.7
ANAF				AML	AML	11 35 22.2	
	comp=E,12530μm,0.5s						
ANAF				AML	AML	11 35 24.4	
	comp=N,9493μm,0.6s						
THR7	Fira-Santorini	2.15	8	P	Pn	11 34 31.5	+1.8
THT2	Imerovigli	2.17	8	P	Pn	11 34 31.8	+1.9
THR2	Thira island,	2.18	8	P	Pn	11 34 31.0	+1.0
IOSP	Ios island	2.44	4	P	Pn	11 34 33.3	-0.3
MHLO	Agia Marina, M	2.46	347	P	Pn	11 34 35.5	+1.5
MHLO	Agia Marina, M	2.46	347	P	Pn	11 34 35.4	+1.5
MHLO				S	Sb	11 35 07.1	-1.6
MHLA	Plaka, Milos I	2.51	348	P	Pn	11 34 36.0	+1.3
KYTH	Kithira	2.58	321	P	Pb	11 34 38.6	-2.3
AMGA	Amorgos Island	2.63	15	P	Pn	11 34 37.5	+1.3
AMGA				AML	AML	11 35 34.5	
	comp=E,2995μm,0.7s						
AMGA				AML	AML	11 35 36.3	
	comp=N,2776μm,1.2s						
SLUM	Salum	2.79	178	P	Pn	11 34 40.3	+1.9
	baz=181						
SLUM				AMP		11 35 00.0	
	baz=181						
SLUM				S	Sn	11 35 11.9	+0.7
	baz=181						
APE	Apeiranthos	2.81	8	PN	Pn	11 34 38.3	-0.4
APE	Apeiranthos	2.81	8	*e*Pn	Pn	11 34 39.9	+1.2
APE	Apeiranthos	2.81	8	P	Pn	11 34 39.7	+1.0
APE				AML	AML	11 35 39.8	
	comp=N,1373μm,1.1s						
APE				AML	AML	11 35 44.6	
	comp=E,1920μm,1.2s						
APE	Apeiranthos	2.81	8	P	Pn	11 34 39.9	+1.2
APE	Apeiranthos	2.81	8	*c* *i*P	Pn	11 34 39.5	+0.8
NISR	Nisiros	2.87	35	P	Pn	11 34 39.7	+0.3
SERI	Serifos	2.91	351	P	Pn	11 34 40.1	-0.1
VLI	Veliai	2.99	325	*e*Pn	Pn	11 34 42.5	+1.3
VLI	Veliai	2.99	325	P	Pn	11 34 42.2	+1.0
VLI				AML	AML	11 35 44.0	
	comp=E,1651μm,0.8s						
VLI				AML	AML	11 35 48.8	
	comp=N,2502μm,0.8s						
VLI	Veliai	2.99	325	P	Pn	11 34 42.5	+1.3
ARG	Arkhangelos	3.16	51	PN	Pn	11 34 45.3	+1.8
ARG	Arkhangelos	3.16	51	*e*Pn	Pn	11 34 45.8	+2.3
ARG				*e*Sn	Sn	11 35 24.7	+4.3
ARG	Arkhangelos	3.16	51	P	Pn	11 34 46.3	+2.8
ARG				AML	AML	11 35 44.9	
	comp=E,1970μm,1.1s						
ARG				AML	AML	11 35 46.4	
	comp=N,2243μm,1.1s						
ARG	Arkhangelos	3.16	51	P	Pn	11 34 45.8	+2.3
ARG				S	Sn	11 35 24.7	+4.3
ARG	Arkhangelos	3.16	51	*e*P	Pn	11 34 45.8	+2.3
ARG				*e*		11 35 24.7	
DAT	Datca	3.18	39	PN	Pn	11 34 44.4	+0.4
DAT	Datca	3.18	39	*i* P	Pn	11 34 47.0	+3.0
DATC	Datca-Mugla	3.25	40	PN	Pn	11 34 45.3	+0.5
BODT	Bodrum	3.32	33	PN	Pn	11 34 45.7	0.0
BDRM	Kayabasi	3.38	34	*i* P	Pn	11 34 49.8	+3.2
BBRN	Bozburun-Marma	3.42	45	PN	Pn	11 34 48.0	+1.0
KRND	KRANIDI	3.46	334	P	Pn	11 34 49.4	+1.7
MRSB	Marmaris-Mugla	3.52	46	PN	Pn	11 34 49.7	+1.2
DID	Didima	3.54	336	*e*Pn	Pn	11 34 50.5	+1.7
DID	Didima	3.54	336	P	Pn	11 34 49.4	+0.5
DID	Didima	3.54	336	P	Pn	11 34 50.5	+1.7
SMG	Samos	3.71	22	P	Pn	11 34 52.6	+1.5
SMG	Samos	3.71	22	P	Pn	11 34 52.5	+1.4
SMG	Samos	3.71	22	P	Pn	11 34 52.6	+1.5
VLY	Voula,Athens	3.71	344	*e*Pn	Pn	11 34 52.7	+1.6
VLY	Voula,Athens	3.71	344	P	Pn	11 34 52.6	+1.6
VLY	Voula,Athens	3.71	344	P	Pn	11 34 52.7	+1.6
MLSB	Milas	3.72	35	PN	Pn	11 34 51.6	+0.3
MES2	Methoni	3.73	314	P	Pn	11 34 51.6	+0.2
PYL	PYLOS	3.76	315	P	Pn	11 34 52.0	+0.2
ATHU	Athens Univers	3.82	345	P	Pn	11 34 53.5	+0.9
GCAM	G?zelcaml?	3.83	27	PN	Pn	11 34 52.9	+0.1
GCAM	G?zelcaml?	3.83	27	*i* P	Pn	11 34 56.4	+3.7
GCAM				IAML_P			
	comp=Z,726nm,0.1s						
ATH	Athens Observa	3.84	344	P	Pn	11 34 53.6	+0.7
ITM	Ithomi	3.86	319	*e*Pn	Pn	11 34 53.7	+0.5
ITM				*e*Sn	Sn	11 35 37.3	-0.4
ITM	Ithomi	3.86	319	P	Pn	11 34 54.1	+0.9
DALY	Dalyan (Mula)	3.86	48	PN	Pn	11 34 54.8	+1.6
DALY	Dalyan (Mula)	3.86	48	*i* P	Pn	11 34 56.5	+3.3
TURN	Turunc	3.87	47	PN	Pn	11 34 50.6	-2.6
TURN	Turunc	3.87	47	*i* P	Pn	11 34 51.2	-2.0
PTL	Penteli	3.88	346	*e*Pn	Pn	11 34 54.7	+1.2
PTL	Penteli	3.88	346	P	Pn	11 34 54.7	+1.2
PTL	Penteli	3.88	346	P	Pn	11 34 54.7	+1.2
DION	Dionisos Attik	3.90	347	P	Pn	11 34 54.9	+1.3
TRIP	Tripoli	3.96	326	P	Pn	11 34 57.1	+2.5
FETY	Fethiye	4.03	53	PN	Pn	11 34 57.8	+2.3
FETY	Fethiye	4.03	53	*i* P	Pn	11 34 57.4	+1.8
DGB	zmir	4.04	21	*i* P	Pn	11 34 54.4	-1.2
DGB				IAML_P			
	comp=Z,463nm,0.1s						
MES3	Kyparissia	4.05	318	P	Pn	11 34 57.2	+1.5
LOUT	Loutraki	4.07	336	P	Pn	11 34 58.5	+2.4
AYDN	Tasoluk	4.07	33	*i* P	Pn	11 34 59.0	+2.9
AYDN				IAML_P			
	comp=Z,2μm,0.3s						
KSL	Kastellorizon	4.14	62	P	Pn	11 34 58.5	+1.6
KSL				AML	AML	11 35 50.0	
	comp=N,857μm,0.6s						
KSL				AML	AML	11 36 02.8	
	comp=E,1091μm,0.9s						
CHOS	Chios island	4.17	11	PN	Pn	11 34 57.6	+0.1
CHOS	Chios island	4.17	11	P	Pn	11 34 59.1	+1.6
CHOS	Chios island	4.17	11	P	Pn	11 34 58.7	+1.2
CHOS	Chios island	4.17	11	P	Pn	11 34 59.1	+1.6
VIL2	Platees	4.18	340	P	Pn	11 34 57.9	+0.3
AKAS	Kas	4.19	61	PN	Pn	11 35 01.2	+3.4
AKAS	Kas	4.19	61	*i* P	Pn	11 34 59.6	+1.8
AMT	Artemida-Makis	4.24	321	P	Pn	11 35 00.7	+2.3
URLA	Izmir	4.25	16	PN	Pn	11 34 58.5	-0.1
URLA	Izmir	4.25	16	*i* P	Pn	11 35 00.5	+1.9
GUR	Goura	4.26	330	*e*Pn	Pn	11 35 00.3	+1.5
GUR	Goura	4.26	330	P	Pn	11 34 59.8	+1.0
GUR	Goura	4.26	330	P	Pn	11 35 00.3	+1.5
AYDB	Zeytinkoy-Aydi	4.31	31	PN	Pn	11 34 59.7	+0.2
KLV	Kalavryta, Ach	4.43	329	P	Pn	11 35 02.6	+1.5
TAVA	DENIZLI_Tavas	4.45	43	*i* P	Pn	11 35 03.7	+2.3
DRO	Drossia	4.56	324	P	Pn	11 35 05.8	+3.0
DRO	Drossia	4.56	324	P	Pn	11 35 05.0	+2.2
DSF	Desfina	4.60	334	*e*Pn	Pn	11 35 05.2	+1.8
DSF	Desfina	4.60	334	P	Pn	11 35 04.4	+1.0
DSF	Desfina	4.60	334	P	Pn	11 35 05.2	+1.8
ELL	Elmali	4.65	57	PN	Pn	11 35 06.9	+2.8
LAKA	Lakka	4.67	329	P	Pn	11 35 05.7	+1.3
ATAL	Atalanti	4.70	340	*e*Pn	Pn	11 35 06.1	+1.4
ATAL	Atalanti	4.70	340	P	Pn	11 35 06.0	+1.4
ATAL	Atalanti	4.70	340	P	Pn	11 35 06.1	+1.4
KALE	Kalithea	4.73	331	P	Pn	11 35 06.8	+1.6
EFP	Efpalio	4.86	329	P	Pn	11 35 08.4	+1.6
SIGR	SIGRI	4.96	7	PN	Pn	11 35 09.1	+0.9
AOS	Alonnisos	4.97	349	P	Pn	11 35 09.3	+0.9
ANX	Ano Chora	4.99	330	P	Pn	11 35 10.5	+1.6
ANX	Ano Chora	4.99	330	P	Pn	11 35 10.8	+2.0
SWA2		5.04	176	P	Pn	11 35 10.8	+1.5
	baz=177						
SWA2				S	Sn	11 36 06.9	+0.1
	baz=177						
SKIA	Skiathos	5.04	346	P	Pn	11 35 10.5	+1.1
MANT	Manisa	5.05	33	*e*Pn	Pn	11 35 10.1	+0.4
MANT	Manisa	5.05	33	*i* P	Pn	11 35 12.0	+2.2
MANT				IAML_P			
	comp=Z,2μm,0.7s						
KORT	Korkueli	5.08	56	PN	Pn	11 35 13.1	+3.0
KORT	Korkueli	5.08	56	*i* P	Pn	11 35 13.1	+3.0
KORT				IAML_P			
	comp=Z,699nm,0.2s						
AKHS	Akhisar	5.09	25	*i* P	Pn	11 35 12.9	+2.8
AKHS				IAML_P			
	comp=Z,2μm,0.5s						
KULA	Kula-Manisa	5.12	33	PN	Pn	11 35 11.4	+0.9
AYVA	Ayvalik	5.18	14	*i* P	Pb	11 35 31.9	+6.8
AYVA				IAML_P			
	comp=Z,16nm,0.1s						
PVO	Paravola	5.18	328	P	Pn	11 35 15.2	+3.8

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AGG   Agios Georgios     5.22 336  ePn    Pn     11 35 11.8  0.0
AGG   Agios Georgios     5.22 336   P     Pn     11 35 13.2 +1.3
AGG   Agios Georgios     5.22 336   P     Pn     11 35 14.0 +2.2
AGG   Agios Georgios     5.22 336  eP     Pn     11 35 11.8  0.0
ANTB  Antalya            5.25  59   PN    Pn     11 35 15.7 +3.5
BRDR  BURDUR-Merkez      5.29  48  i P    Pn     11 35 15.8 +3.0
BRDR                                IAML_P
      comp=Z,572nm,0.2s
XOR   Xorichti           5.29 344   P     Pn     11 35 13.8 +0.9
VLS   Valsamata          5.31 318   P     Pn     11 35 15.6 +2.5
EVR   Evrytania          5.32 331   P     Pn     11 35 18.0 +4.7
FYTO  Fytoko, Volos      5.39 342   P     Pn     11 35 15.5 +1.3
KHAL  Karahalli          5.42  40  i P    Pn     11 35 16.3 +1.6
KHAL                                IAML_P
      comp=Z,197nm,0.2s
HBRG  Burj al `Arab      5.47 131   P     Pn     11 35 15.0 -0.3
      baz=133
BCK   Bucak              5.49  53   PN    Pn     11 35 18.5 +2.9
STEP  BALIKESIR_Sava     5.51  22  i P    Pn     11 35 19.1 +3.2
STEP                                IAML_P
      comp=Z,619nm,0.3s
BAYC  CANAKKALE_Bayr     5.57  12  i P    Pn     11 35 18.1 +1.3
DEMI  Demirci            5.58  31  i P    Pn     11 35 19.8 +2.9
DEMI                                IAML_P
      comp=Z,1µm,0.3s
EVGI  Lefkada island     5.60 322   P     Pn     11 35 21.3 +4.2
ISP   Isparta            5.65  50  ePn    Pn     11 35 18.5 +0.6
ISP   Isparta            5.65  50⥣iP    Pn     11 35 19.7 +1.8
ISP   Isparta            5.65  50 ⥣P     Pn     11 35 19.7 +1.8
KZIL  AFYON_Kizioren     5.70  44  i P    Pn     11 35 20.3 +1.7
LKD2  Lefkada island     5.73 323   P     Pn     11 35 20.3 +1.4
TSLK  Tsoukalades, L     5.76 323   P     Pn     11 35 21.2 +1.9
SUTC  Sutluce-Ispart     5.77  55   PN    Pn     11 35 22.7 +3.1
BALB  Balikesir          5.80  22   PN    Pn     11 35 20.7 +0.9
BALY  Balya              5.82  20  i P    Pn     11 35 22.4 +2.3
BALY                                IAML_P
      comp=Z,2µm,0.7s
BAGO  Egridir - ISPA     5.92  50  i P    Pn     11 35 22.9 +1.3
KEPZ  Antalya-Kepez      5.93  62  i P    Pn     11 35 23.4 +1.8
KEPZ                                IAML_P
      comp=Z,1µm,0.3s
GDZ   Gediz              5.96  35  i P    Pn     11 35 24.9 +2.7
DURS  Dursunbey          5.97  26  i P    Pn     11 35 24.9 +2.7
DURS                                IAML_P
      comp=Z,1µm,0.6s
PPCY  Paphos             6.03  82   P     Pn     11 35 22.3 -0.7
      baz=266
SHUT  Suhut-Afyon        6.14  44   PN    Pn     11 35 26.8 +2.2
LIT   Litokhoron         6.16 341  ePn    Pn     11 35 25.2 +0.4
LIT   Litokhoron         6.16 341   P     Pn     11 35 25.6 +0.8
LIT   Litokhoron         6.16 341  eP     Pn     11 35 25.2 +0.4
ALFC  Alefka             6.26  80   P     Pn     11 35 26.1 -0.1
      baz=264
ALFC                                S     Sn     11 36 31.6 -5.4
SZAC  Souni              6.47  84   P     Pn     11 35 28.5 -0.5
      baz=268
SZAC                                S     Sn     11 36 37.2 -4.8
IGT   Igoumenitsa        6.47 325   P     Pn     11 35 29.1 +0.1
BOLV  Bolvadin           6.48  45  i P    Pn     11 35 31.2 +1.9
LEF   Lefka              6.50  80  i P    Pn     11 35 29.4  0.0
DOGA  KONYA_Doganhis     6.56  53  eP     Pn     11 35 32.9 +2.5
DOGA                                IAML_P
      comp=Z,373nm,0.2s
HMYD  Mayadein           6.61 131   P     Pn     11 35 32.0 +1.0
      baz=133
HNAT  Natroun            6.61 133   P     Pn     11 35 31.1 +0.1
      baz=135
ALN   Alexandroupoli     6.65   6  ePn    Pn     11 35 32.2 +0.8
ALN   Alexandroupoli     6.65   6  eP     Pn     11 35 32.2 +0.8
KESN  Edirne-Kesan       6.66  11  eP     Pn     11 35 33.9 +2.0
KESN                                IAML_P
      comp=Z,44nm,0.2s
SOH   Sokhos             6.67 349   P     Pn     11 35 34.8 +3.0
MAMC  Mammari            6.77  80   P     Pn     11 35 32.8 -0.3
      baz=265
ERMK  Ermenek            6.82  68  i P    Pn     11 35 37.3 +3.3
ERMK                                IAML_P
      comp=Z,3µm,0.3s
CSS   Mathiatis          6.84  82  ePn    Pn     11 35 34.5 +0.3
CSS                                eSn    Sn     11 36 48.1 -3.2
CSS   Mathiatis          6.84  82   P     Pn     11 35 34.2  0.0
      baz=267
CSS                                 S     Sn     11 36 45.6 -5.7
CSS   Mathiatis          6.84  82   P     Pn     11 35 32.0 -2.2
      comp=Z,16nm,0.8s,comp=Z,0.1nm
CSS   Mathiatis          6.84  82   Pn    Pn     11 35 33.6 -0.6
KMER  Konya-Meram        6.86  57  i P    Pn     11 35 38.3 +3.8
KMER                                IAML_P
      comp=Z,261nm,0.2s
KONT  Konya--Tatoy       6.94  56  i P    Pn     11 35 38.9 +3.4
KONT                                IAML_P
      comp=Z,515nm,0.2s
BORA  Eskisehir          7.05  36  i P    Pn     11 35 35.1 -1.9
BORA                                IAML_P
      comp=Z,207nm,0.1s
KDHN  Kadinhani          7.08  51  i P    Pn     11 35 38.3 +0.8
KDHN                                IAML_P
      comp=Z,245nm,0.7s
GULN  MERSIN_Gulnar      7.19  72  i P    Pn     11 35 40.0 +1.1
KOT   Kottamia           7.19 125   P     Pn     11 35 39.5 +0.5
      baz=127
VAY   Valandovo          7.30 345  i Pn   Pn     11 35 44.4 +4.0
GLL   Jalalah            7.34 128   P     Pn     11 35 41.2 +0.2
      baz=130
MMB   Musomiste          7.37 352  i P    Pn     11 35 49.0 +7.6
RZN   Rozhen             7.40 358  i P    Pn     11 35 43.9 +2.0
EREN  Erenkoy            7.58  78  i P    Pn     11 35 46.6 +2.3
KRUS  Krusevo            7.69 338  i Pn   Pn     11 35 47.9 +2.0
KIZK  Mersin             7.73  71  i P    Pn     11 35 47.8 +1.5
KKB   Krupnik            7.73 349  i P    Pn     11 35 54.6 +8.3
PLD   Plovdiv            7.81 358  i P    Pn     11 35 56.9 +9.5
KAND  Kocaeli-Kandir     7.92  29  i P    Pn     11 35 46.6 -2.2
KERG  Konya-Eregli       7.99  64  i P    Pn     11 35 52.2 +2.2
SAHE  Sakarya_HENDEK     8.00  33  i P    Pn     11 35 54.8 +4.7
KIBS  BOLU               8.16  39  eP     Pn     11 35 54.1 +1.7
KIBS                                IAML_P
      comp=Z,78nm,0.2s
TIR   Tirane             8.16 331  ePn    Pn     11 35 52.1 -0.1
TIR   Tirane             8.16 331  eP     Pn     11 35 52.1 -0.1
TIP   Timpagrande        8.27 309  ePn    Pn     11 35 53.3 -0.4
TIP                                eSn    Sn     11 37 22.2 -4.2
TIP   Timpagrande        8.27 309⥥iP    Pn     11 35 52.2 -1.6
TIP   Timpagrande        8.27 309   S     Sn     11 37 19.8 -6.6
BR231 Keskin MP Arra     8.29  46  ePn    Pn     11 35 55.3 +1.2
ANTO  Ankara             8.31  46  ePn    Pn     11 35 55.7 +1.3
ANTO  Ankara             8.31  46⥥iP    Pn     11 35 56.6 +2.2
ANTO  Ankara             8.31  46 ⥥P     Pn     11 35 56.6 +2.2
ANTO  Ankara             8.31  46   P     Pn     11 35 56.5 +2.2
      SNR=9.0
YIGI  Dzce               8.37  35  i P    Pn     11 35 58.6 +3.5
CEL   Celeste            8.40 301  ePn    Pn     11 35 55.4 -0.2
CEL                                eSn    Sn     11 37 26.5 -3.3
GULE  Gulek              8.44  66  i P    Pn     11 35 59.0 +2.8
VTS   Vitosha            8.45 351  ePn    Pn     11 35 56.3 +0.1
VTS   Vitosha            8.45 351⥣iP    Pn     11 35 53.6 -2.6
VTS   Vitosha            8.45 351 ⥣P     Pn     11 35 53.6 -2.6
VTS   Vitosha            8.45 351  i P    Pn     11 35 58.3 +2.1
HNTI  Hanita             8.51  95   Pn    Pn     11 35 56.7 -0.3
KZIT  Kziot              8.56 111   P     Pn     11 35 58.7 +1.0
      comp=Z,124nm,0.8s,comp=Z,1.4nm
KZIT  Kziot              8.56 111   Pn    Pn     11 35 58.2 +0.5
KZIT                                Sn    Sn     11 37 29.6 -3.9
BCAM  Yenicaga           8.56  38  i P    Pn     11 36 01.2 +3.4
BLGI  Bet Lehem HaGe     8.59  98   Pn    Pn     11 35 58.0 -0.2
SLTI  Sal'it             8.59 101   Pn    Pn     11 35 58.3 +0.1
SLTI                                Sn    Sn     11 37 29.8 -4.6
MMA0  Mount Meron ar     8.71  95   Pn    Pn     11 35 59.7 -0.1
MMAI  Mount Meron Ar     8.71  95   Pn    Pn     11 35 59.0 -0.8
      comp=Z,4.7nm,0.3s,baz=280,slow=11,SNR=23
MMAI                                Sn    Sn     11 37 30.7 -6.6
      comp=Z,18nm,0.3s,baz=283,slow=25,SNR=8.7
AMAZ  Amatzia            8.72 106   Pn    Pn     11 36 00.4 +0.5
AMAZ                                Sn    Sn     11 37 33.7 -3.8
BR101 Keskin Array S     8.74  49  ePn    Pn     11 36 01.1 +0.8
BR101                              eSn    Sn     11 37 36.8 -1.4
BR131 Keskin Array S     8.74  49  ePn    Pn     11 36 01.0 +0.7
BR131                              eSn    Sn     11 37 40.2 +2.1
BR131 Keskin Array S     8.74  49   P     Pn     11 36 01.5 +1.2
      SNR=18
BRTR  Keskin Array B     8.74  49  i P    Pn     11 36 01.1 +0.7
BRTR                                pmax  pmax
      comp=Z,5.0nm,0.8s
BRTR  Keskin Array B     8.74  49   Pn    Pn     11 36 01.1 +0.8
      comp=Z,0.4nm,0.3s,baz=227,slow=10.0,SNR=25
BRTR                                Sn    Sn     11 37 36.8 -1.4
      comp=Z,0.3nm,0.3s,baz=199,slow=26,SNR=3.3
BRTR                                LR    LR     11 40 23.5
      comp=Z,538nm,20.5s,baz=230,slow=45
WDD   Wied Dalam         8.79 283  ePn    Pn     11 35 58.7 -2.1
MMLI  Mount Malkishu     8.85  99   Pn    Pn     11 36 01.3 -0.5
MMLI                                Sn    Sn     11 37 36.3 -4.5
KSDI  Kefar Szold        8.89  94   Pn    Pn     11 36 01.5 -0.7
KSDI                                Sn    Sn     11 37 37.0 -4.5
PVL   Pavlikeni          8.92   1  i P    Pn     11 36 09.7 +7.1
NATI  Neve Ativ          8.94  94   Pn    Pn     11 36 03.1 +0.2
NATI                                Sn    Sn     11 37 39.1 -3.7
YTIR  Yattir             8.94 106   Pn    Pn     11 36 03.5 +0.5
YURE  YUREGIR            8.97  71  i P    Pn     11 36 03.0 -0.3
RMNI  Mount Ramon        8.98 112   Pn    Pn     11 36 03.9 +0.4
RCY   Rachaya            8.98  92  eP     Pn     11 36 02.6 -1.1
HMDT  Nahal Hemdat       8.99 100   Pn    Pn     11 36 04.4 +0.8
HMDT                                Sn    Sn     11 37 39.9 -4.1
SZH   Strazhica          8.99   4  i P    Pn     11 36 14.4  +11
HWQ   Hawqa              9.00  87  eP     Pn     11 36 04.9 +1.0
DELI  KIRIKKALE          9.08  49  i P    Pn     11 36 06.6 +1.7
DSI   Dead Sea           9.08 104   Pn    Pn     11 36 05.2 +0.4
DSI                                 Sn    Sn     11 37 42.2 -4.1
PRD   Provadia           9.09  11  i P    Pn     11 36 05.7 +0.8
MPEP  Malo Peshtene      9.12 354  i P    Pn     11 36 08.5 +3.2
YAHY  KAYSERI_Yahyal     9.15  62  i P    Pn     11 36 08.0 +2.1
CDAG  Cicekdag           9.15  52  i P    Pn     11 36 08.0 +2.0
MZDA  Masada             9.16 106   Pn    Pn     11 36 06.1 +0.3
MZDA                                Sn    Sn     11 37 44.1 -4.0
MATE  Matera             9.19 316⥣iP    Pn     11 36 04.2 -2.2
VAE   Valguarnera        9.22 293   Pn    Pn     11 36 08.9 +2.2
      comp=Z,2.4nm,0.3s,baz=9.2,slow=9.6,SNR=4.8
VAE                                 Sn    Sn     11 37 46.2 -3.5
      comp=Z,1.6nm,0.3s,baz=90,slow=19,SNR=1.9
PRNI  Paran              9.27 112   Pn    Pn     11 36 08.1 +0.6
PRNI                                Sn    Sn     11 37 46.8 -4.3
ZFRI  Zfri               9.32 111   Pn    Pn     11 36 08.0 -0.1
GHAJ  Ghor Haditha       9.32 106   P     Pn     11 36 08.1  0.0
      comp=Z,95nm,0.5s
GHAJ  Ghor Haditha       9.32 106   Pn    Pn     11 36 08.4 +0.3
PDG   Podgorica          9.32 332⥥iP    Pn     11 36 04.9 -3.2
PDG   Podgorica          9.32 332   S     Sn     11 37 45.9 -6.3
TTG   Podgorica          9.32 332  ePn    Pn     11 36 06.8 -1.4
TTG                                eSn    Sn     11 37 48.9 -3.3
TTG   Podgorica          9.32 332  eP     Pn     11 36 06.8 -1.4
TTG                                e             11 37 48.9
SG1   Sgolgore (BA)      9.34 317  ePn    Pn     11 36 08.2 -0.1
SG1                                 Sn    Sn     11 37 43.7 -8.9
BAI   Bari               9.40 319  ePn    Pn     11 36 10.4 +1.2
BAI                                 Sn    Sn     11 37 48.3 -5.9
WALJ  Wala               9.43 104   P     Pn     11 36 09.7 +0.1
      comp=Z,99nm,0.5s
HRFI  Mount Harif        9.45 114   P     Pn     11 36 11.1 +1.2
      comp=Z,123nm,0.6s
HRFI  Mount Harif        9.45 114   Pn    Pn     11 36 10.5 +0.6
HRFI                                Sn    Sn     11 37 52.3 -3.1
MBRI  Mt Berech          9.48 115   Pn    Pn     11 36 10.7 +0.3
SIRC  Yozgat             9.52  55  i P    Pn     11 36 15.6 +4.5
EIL   Elat               9.57 116   P     Pn     11 36 13.1 +1.6
      comp=Z,83nm,0.7s
EIL   Elat               9.57 116   Pn    Pn     11 36 12.0 +0.5
EIL   Elat               9.57 116   Pn    Pn     11 36 12.1 +0.5
      comp=Z,7.7nm,0.3s,baz=307,slow=8.8,SNR=73
EIL                                 Sn    Sn     11 37 51.4 -6.9
      comp=Z,2.7nm,0.3s,baz=76,slow=18,SNR=4.4
ILGA  Ilgaz              9.62  43  ePn    Pn     11 36 12.1 -0.3
JDRJ  Daraweish          9.62 109   P     Pn     11 36 14.6 +2.2
      comp=Z,72nm,0.6s
PSN   Preselentsi        9.69  14  i P    Pn     11 36 23.7  +11
ANDN  Andirin            9.72  67  i P    Pn     11 36 13.0 -0.6
ASF   Jabal al Asfar    10.13  99   P     Pn     11 36 19.0 -0.3
      comp=Z,16nm,1.4s
ASF   Jabal al Asfar    10.13  99   Pn    Pn     11 36 18.8 -0.5
      comp=Z,1.0nm,0.3s,baz=40,slow=3.3,SNR=5.8
ASF                                 Sn    Sn     11 38 07.2 -4.9
      comp=Z,2.2nm,0.3s,baz=264,slow=20,SNR=3.7
CUSAR Sarkisla-SIVAS    10.31  57  i P    Pn     11 36 25.5 +3.7
TIRR  Tirgusor          10.48  13  ePn    Pn     11 36 24.3 +0.3
TIRR  Tirgusor          10.48  13  eP     Pn     11 36 24.3 +0.3
DIVS  Divibare          10.56 340  ePn    Pn     11 36 24.8 -0.4
HERR  Herculane         10.78 350⥥iP    Pn     11 36 25.9 -2.2
ARR   Arges             11.08 358⥣iP    Pn     11 36 29.7 -2.5
AKCD  Akcadag           11.12  65  i P    Pn     11 36 34.1 +1.3
VOIR                    11.14 360⥣iP    Pn     11 36 31.2 -1.9
VOIR                    11.14 360 ⥣P     Pn     11 36 31.2 -1.9
MLR   Muntele Rosu      11.21   3  ePn    Pn     11 36 35.1 +0.9
MLR   Muntele Rosu      11.21   3⥥iP    Pn     11 36 32.4 -1.7
MLR   Muntele Rosu      11.21   3 ⥥P     Pn     11 36 32.4 -1.7
MLR   Muntele Rosu      11.21   3   Pn    Pn     11 36 33.8 -0.3
      comp=Z,0.3nm,0.3s,baz=203,slow=7.7,SNR=6.3
MLR                                 LR    LR     11 41 24.3
      comp=Z,494nm,20.9s,baz=184,slow=40
GZR   Gura Zlata        11.23 352⥥iP    Pn     11 36 32.9 -1.5
GZR   Gura Zlata        11.23 352 ⥥P     Pn     11 36 32.9 -1.5
BZS   Buzias            11.62 348⥣iP    Pn     11 36 37.3 -2.3
BZS   Buzias            11.62 348 ⥣P     Pn     11 36 37.3 -2.3
VRI   Vrincioaia        11.64   6⥣iP    Pn     11 36 37.9 -1.9
VRI   Vrincioaia        11.64   6 ⥣P     Pn     11 36 37.9 -1.9
KEMA  Kemaliye          11.85  61  i P    Pn     11 36 42.9  0.0
SUSE  Susehri           12.02  57  i P    Pn     11 36 47.2 +2.0
BLY   Banja Luka        12.09 332⥥iP    Pn     11 36 42.4 -3.6
DRGR                    12.62 353⥥iP    Pn     11 36 50.3 -3.0
DRGR                    12.62 353 ⥥P     Pn     11 36 50.3 -3.0
BIZ   Bicaz             12.67   3⥣iP    Pn     11 36 52.5 -1.4
SIM   Simferopol'       12.72  30d iP    Pn     11 36 56.7 +2.1
SIM                                eS     Sn     11 39 15.9 +0.5
SIM                                 pmax  pmax
      comp=Z,22nm,0.9s
SIM                                 MLR   MLR
      comp=Z,700nm,18.0s
KELT  Kelkit            12.73  58  i P    Pn     11 36 58.7 +3.8
MORH  Mrgy, Hungar      12.88 340  ePn    Pn     11 36 58.1 +1.3
MORH                                Sn    Sn     11 39 12.1 -7.3
KEST  Kesra             12.97 281   LR    LR     11 43 15.6
      comp=Z,204nm,20.3s,baz=18,slow=43
KIS   Kishinev          13.01  11  eP     P      11 37 08.0 -0.8
KIS                                 LRM   MLR    11 42 28.0
      comp=Z,900nm,12.0s
KIS   Kishinev          13.01  11  eP     P      11 37 08.0 -0.8
KIS                                 MLR   MLR
      comp=Z,900nm,12.0s
KIS                                 MLR   MLR
      comp=N,600nm,13.0s
BURAR Bucovina Array    13.32   0⥥iP    Pn     11 37 01.6 -1.3
BURAR Bucovina Array    13.32   0 ⥥P     Pn     11 37 01.6 -1.3
BUR04 Bucovina Ar. S    13.32   0  ePn    Pn     11 37 03.9 +0.9
BUR08 Bucovina Ar. S    13.35   0  ePn    Pn     11 37 03.5 +0.2
BOJS  Bojanci           13.49 329  i Pn   Pn     11 37 04.1 -1.0
BOJS                               eSn    Sn     11 39 21.9  -12
PSZ   Piszkesteto       14.16 346  ePn    Pn     11 37 14.5 +0.1
PSZ   Piszkesteto       14.16 346⥣iP    Pn     11 37 12.1 -2.3
PSZ   Piszkesteto       14.16 346 ⥣P     Pn     11 37 12.1 -2.3
PSZ   Piszkesteto       14.16 346  ePn    Pn     11 37 12.1 -2.3
PSZ                                 Sn    Sn     11 39 54.0 +3.3
ANN   Anapa             14.17  39  eP     Pn     11 37 13.4 -1.0
ANN                                eS     Sn     11 39 47.2 -3.5
ANN                                 pmax  pmax
      comp=Z,81nm,1.1s
ANN                                 MLR   MLR
      comp=N,79nm,8.0s
ANN                                 MLR   MLR
      comp=E,42nm,8.0s
ANN                                 MLR   MLR
      comp=Z,134nm,8.0s
JAVS  Javornik          14.31 327  i Pn   Pn     11 37 14.0 -2.5
JAVS                               i Sn   Sn     11 39 42.4  -12
SIRT  Sirnak            14.44  72  ePn    Pn     11 37 18.9 +0.6
PERS  Pernice           14.46 332  i Pn   Pn     11 37 16.1 -2.3
PERS                               i Sn   Sn     11 39 48.0  -10
UZH   Uzhgorod          14.48 353  eP     Pn     11 37 20.5 +1.8
UZH                                eS     Sn     11 39 58.3 -0.1
UZH                                 MLR   MLR
      comp=Z,100nm,16.0s
SOKA  Soboth            14.53 331  i Pn   Pn     11 37 16.9 -2.5
      comp=Z,42nm,1.2s,SNR=5.8
OBKA  Obir              14.59 330   Pn    Pn     11 37 17.9 -2.3
      comp=Z,27nm,1.2s
ARSA  Arzberg           14.82 334   Pn    Pn     11 37 22.3 -1.0
      comp=Z,8.7nm,0.5s
SOP   Sopron            14.84 337  ePn    Pn     11 37 23.1 -0.4
SOP                                 Sn    Sn     11 40 01.1 -5.9
SOP   Sopron            14.84 337   P     P      11 37 30.3 +1.2
VYHS  Vyhne             14.94 344  eP     P      11 37 29.9 -0.4
VYHS  Vyhne             14.94 344  eP     P      11 37 29.9 -0.4
MYKA  Terra Mystica     15.07 328   Pn    Pn     11 37 28.5 +1.8
      comp=Z,31nm,1.8s
MODS  Modra-Piesok      15.23 340  eP     P      11 37 33.8 +0.3
MODS  Modra-Piesok      15.23 340  eP     P      11 37 33.8 +0.3
CONA  Conrad Observa    15.28 336   Pn    Pn     11 37 27.4 -2.1
      comp=Z,10nm,1.3s
KWP   Kalwaria Pacla    15.44 354  ePn    Pn     11 37 31.5 +0.1
      comp=Z,181nm,1.2s
KWP   Kalwaria Pacla    15.44 354  eP     Pn     11 37 31.5 +0.1
KWP                                 pmax  pmax
      comp=Z,181nm,1.2s
NIE   Niedzica          15.53 348  eP     Pn     11 37 33.6 +1.0
NIE   Niedzica          15.53 348  eP     Pn     11 37 33.6 +1.0
LVV   L'vov             15.54 357  eP     P      11 37 36.9  0.0
LVV                                 MLR   MLR
      comp=N,500nm,12.0s
LVV                                 MLR   MLR
      comp=E,120nm,12.0s
LVV                                 MLR   MLR
      comp=Z,600nm,12.0s
KBA   Koelnbreinsper    15.55 329   Pn    Pn     11 37 31.6 -1.4
      comp=Z,46nm,1.4s,SNR=8.8
KBA   Koelnbreinsper    15.55 329   P     P      11 37 38.4 +1.2
ABTA  Abfaltersbach     15.66 326  i P    P      11 37 39.8 +1.4
      comp=Z,65nm,1.3s,SNR=9.8
MOA   Molln             15.79 332  ePn    Pn     11 37 37.0 +1.0
      comp=Z,22nm,1.1s
KRUC  Moravsky          16.11 339  ePN    P      11 37 42.7 -0.5
VRAC  Vranov            16.27 340⥣iP    Pn     11 37 39.7 -2.5
VRAC  Vranov            16.27 340 ⥣P     Pn     11 37 39.7 -2.5
VRAC  Vranov            16.27 340  ePN    Pn     11 37 42.3 +0.1
VRAC  Vranov            16.27 340   Pn    Pn     11 37 42.1  0.0
      comp=Z,1.4nm,0.3s,baz=147,slow=8.2,SNR=24
VRAC                                LR    LR     11 43 48.2
      comp=Z,179nm,19.6s,baz=167,slow=37
OJC   Ojcow             16.39 348  eP     Pn     11 37 42.1 -1.5
OJC   Ojcow             16.39 348  ePn    Pn     11 37 42.3 -1.3
      comp=Z,20nm,1.3s
OJC   Ojcow             16.39 348  eP     Pn     11 37 42.2 -1.5
NEY   Neytrino          16.40  52deP    P      11 37 46.3 -0.3
MORC  Moravsky Berou    16.45 343  ePn    Pn     11 37 43.0 -1.5
      comp=Z,15nm,1.2s
MORC  Moravsky Berou    16.45 343⥣iP    Pn     11 37 42.9 -1.5
MORC  Moravsky Berou    16.45 343 ⥣P     Pn     11 37 42.9 -1.5
MORC  Moravsky Berou    16.45 343  ePN    Pn     11 37 43.1 -1.3
WTTA  Wattenberg        16.45 326  i P    P      11 37 48.8 +1.6
      comp=Z,48nm,1.1s,SNR=9.0
WATA  Walderalm         16.53 326  i Pn   Pn     11 37 45.6  0.0
      comp=Z,68nm,1.2s,SNR=7.9
SQTA  Sankt Quirin      16.62 325  i Pn   Pn     11 37 45.9 -0.8
      comp=Z,22nm,0.7s,SNR=7.9
AK11  Malin Array Si    16.66   9  ePn    Pn     11 37 47.2 +0.2
FUORN Ofenpass-Fuorn    16.66 322  ePn    Pn     11 37 47.3 -0.1
      comp=Z,78nm,1.3s
KIEV  Kiev              16.68   9  ePn    Pn     11 37 46.8 -0.5
      comp=Z,96nm,1.0s
KIEV  Kiev              16.68   9⥣iP    Pn     11 37 46.6 -0.6
KIEV  Kiev              16.68   9c iP    Pn     11 37 47.8 +0.6
KIEV                                pmax  pmax
      comp=Z,127nm,1.2s
AKASG Malin Array Be    16.69   9  i P    Pn     11 37 46.2 -1.2
AKASG                               pmax  pmax
      comp=Z,33nm,0.6s
AKASG Malin Array Be    16.69   9   Pn    Pn     11 37 46.0 -1.4
      comp=Z,6.6nm,0.3s,baz=200,slow=11,SNR=62
AKBB  Malin Array Si    16.69   9  ePn    Pn     11 37 46.7 -0.7
      comp=Z,110nm,1.0s
AKBB  Malin Array Si    16.69   9  eP     Pn     11 37 46.7 -0.7
AKBB                                pmax  pmax
      comp=Z,110nm,1.0s
FETA  Feichten          16.71 324  i P    P      11 37 52.0 +2.0
      comp=Z,82nm,1.4s,SNR=12
KIV   Kislovodsk        16.71  49  ePn    Pn     11 37 48.7 +0.9
      comp=Z,137nm,1.1s
KIV   Kislovodsk        16.71  49⥣iP    P      11 37 50.8 +0.8
KIV   Kislovodsk        16.71  49  eP     P      11 37 52.1 +2.1
KIV                                eS     Sn     11 40 55.2 +2.5
KIV                                 pmax  pmax
      comp=Z,132nm,1.1s
KIV                                 MLR   MLR
      comp=Z,154nm,13.0s
KIV   Kislovodsk        16.71  49   P     P      11 37 50.9 +1.0
      SNR=15
KVAR  Kislovodsk Arr    16.71  49   Pn    P      11 37 50.8 +0.7
      baz=259,slow=20,SNR=12
GNI   Garni             16.72  64  ePn    Pn     11 37 48.5 +0.4
      comp=Z,48nm,1.3s
GNI   Garni             16.72  64c iP    P      11 37 49.7 -0.5
GNI                                 pmax  pmax
      comp=Z,209nm,1.7s
GNI   Garni             16.72  64   Pn    P      11 37 49.6 -0.5
      comp=Z,0.6nm,0.3s,baz=297,slow=5.1,SNR=6.2
GNI                                 LR    LR     11 45 37.3
      comp=Z,724nm,18.3s,baz=271,slow=42
KBZ   Khabaz            16.73  50   Pn    P      11 37 49.8 -0.4
      comp=Z,0.6nm,0.3s,baz=242,slow=12,SNR=25
KBZ                                 LR    LR     11 46 00.9
      comp=Z,237nm,20.5s,baz=259,slow=44
MOTA  Moosalm           16.76 325  i Pn   Pn     11 37 49.3 +0.8
      comp=Z,16nm,1.0s
GEA0  GERESS Array S    16.82 333  ePn    Pn     11 37 47.9 -1.3
GEC2  GERESS Array S    16.82 333  ePn    Pn     11 37 48.1 -1.1
      comp=Z,35nm,0.8s
GEC2  GERESS Array S    16.82 333  eP     Pn     11 37 48.1 -1.1
GEC2                                pmax  pmax
      comp=Z,35nm,0.8s
GERES GERESS Array B    16.82 333   P     Pn     11 37 49.0 -0.3
GERES                               pmax  pmax
      comp=Z,3.0nm,0.3s
GERES                               MLR   MLR
      comp=Z,657nm,18.3s
GERES GERESS Array B    16.82 333   Pn    Pn     11 37 49.0 -0.3
      comp=Z,2.9nm,0.3s,baz=146,slow=10.0,SNR=76
GERES                               LR    LR     11 45 49.3
      comp=Z,656nm,18.3s,baz=135,slow=43
DAVOX Davos/Dischmat    16.97 322   Pn    P      11 37 54.0 +1.1
      comp=Z,0.8nm,0.3s,baz=138,slow=12,SNR=16
DAVOX                               LR    LR     11 46 18.1
      comp=Z,272nm,18.4s,baz=86,slow=44
ZEI   Tsey              16.98  54  eP     Pn     11 37 52.2 +0.9
ZEI                                 pmax  pmax
      comp=Z,56nm,0.9s
RETA  Reutte            17.02 325  i Pn   Pn     11 37 52.2 +0.5
      comp=Z,9.8nm,0.6s
NCK   Nalchik           17.08  52⥥iP    P      11 37 53.9 -0.1
KHC   Kasperske Hory    17.11 334  ePn    Pn     11 37 52.5 -0.2
      comp=Z,31nm,1.4s
KHC   Kasperske Hory    17.11 334  eP     Pn     11 37 52.9 +0.2
KHC                                 AMS   AMS    11 45 30.0
      comp=Z,900nm,13.9s
KHC   Kasperske Hory    17.11 334  eP     Pn     11 37 52.5 -0.2
KHC                                 pmax  pmax
      comp=Z,31nm,1.4s
TBLG  Delisi            17.17  59  ePn    Pn     11 37 54.0 +0.4
      comp=Z,85nm,1.6s
TBLG  Delisi            17.17  59  eP     Pn     11 37 54.0 +0.4
TBLG                                pmax  pmax
      comp=Z,85nm,1.6s
DPC   Dobruska-Polom    17.29 341  eP     P      11 37 55.8 -0.5
DPC                                epP    pP     11 38 03.3 +1.0
DPC   Dobruska-Polom    17.29 341  eP     P      11 37 55.8 -0.5
DAVA  Damuels           17.31 323  i Pn   P      11 37 57.4 +0.7
      comp=Z,43nm,1.1s,SNR=7.2
GOF   Gofitskoye        17.49  47⥥iP    P      11 37 58.7 +0.2
GOF                                 pmax  pmax
      comp=Z,90nm,1.1s
PRU   Pruhonice         17.50 337  eP     P      11 37 58.3 -0.3
PRU                                epP    pP     11 38 05.0 +0.5
PRU   Pruhonice         17.50 337  eP     P      11 37 58.3 -0.3
UPC   Upice             17.52 340  eP     P      11 37 58.8  0.0
UPC                                epP    pP     11 38 04.8  0.0
UPC                                 AMS   AMS    11 45 50.0
      comp=Z,1µm,7.4s
UPC   Upice             17.52 340  eP     P      11 37 58.8  0.0
UPC                                 MLR   MLR
      comp=Z,1µm,7.4s
PRA   Prague            17.61 337  eP     P      11 38 00.3 +0.6
PRA                                epP    pwP    11 38 08.7 +0.2
PRA   Prague            17.61 337  eP     P      11 38 00.3 +0.6
BNI   Bardonecchia      17.74 313  ePn    Pn     11 38 00.2 -0.5
      comp=Z,17nm,1.1s
BNI   Bardonecchia      17.74 313  eP     Pn     11 38 00.2 -0.5
BNI                                 pmax  pmax
      comp=Z,17nm,1.1s
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KSP   Ksiaz            17.75 341  eP     Pn     11 37 59.8 -0.8
KSP   Ksiaz            17.75 341  eP     Pn     11 37 59.8 -0.8
LPG   La Plagne        17.93 314   P     P      11 38 06.1 +2.4
LPL   La Plagne        17.95 314   P     P      11 38 07.2 +3.4
PVCC  Panska Ves       17.96 338  eP     Pn     11 38 02.4 -0.8
PVCC  Panska Ves       17.96 338  eP     Pn     11 38 02.4 -0.8
SENIN Lac Senin/Sane   18.09 317  eP     P      11 38 05.5 +0.1
      comp=Z,15nm,0.6s
GROC  Groznyy          18.42  55  eP     Pn     11 38 09.6 +0.7
GROC                              eS     S      11 41 36.2 -1.6
GROC                               pmax  pmax
      comp=Z,48nm,1.4s
NKC   Novy Kostel      18.43 334  eP     Pn     11 38 09.8 +0.8
NKC   Novy Kostel      18.43 334  eP     Pn     11 38 09.8 +0.8
BRG   Berggiesshubel   18.46 337  eP     P      11 38 08.3 -0.8
      comp=Z,17nm,0.8s
BRG   Berggiesshubel   18.46 337  eP     P      11 38 08.3 -0.8
BRG                                pmax  pmax
      comp=Z,17nm,0.9s
GRFO  Grafenberg       18.47 331  eP     P      11 38 09.1 -0.2
      comp=Z,129nm,1.3s
GRFO  Grafenberg       18.47 331  eP     P      11 38 09.1 -0.2
GRFO                               pmax  pmax
      comp=Z,129nm,1.3s
GRA1  Grafenberg Arr   18.47 331  eP     P      11 38 09.1 -0.2
      comp=Z,120nm,1.2s
GRF   Grafenberg Arr   18.47 331  eP     P      11 38 09.1 -0.2
GRF                                pmax  pmax
      comp=Z,120nm,1.2s
BFO   Black Forest     18.79 323  eP     P      11 38 12.8  0.0
      comp=Z,26nm,1.1s
BFO   Black Forest     18.79 323  i P    Pn     11 38 14.8 +1.4
MOX   Moxa             19.08 333   P     Pn     11 38 17.5 +0.7
CLL   Collm            19.14 336  eP     P      11 38 16.7 +0.1
      comp=Z,33nm,1.2s
CLL   Collm            19.14 336⇓iP     P      11 38 16.6 +0.1
      comp=Z,48nm,1.5s
CLL                               epP    pP     11 38 23.0 +0.5
CLL                               esP    pwP    11 38 27.0 +1.6
CLL                               e(PP)         11 38 29.0
CLL                                LmV          11 46 00.0
      comp=Z,200nm,19.2s
CLL   Collm            19.14 336⇓iP     P      11 38 16.6 +0.1
CLL                                pmax  pmax
      comp=Z,48nm,1.5s
ECH   Echery           19.30 322  eP     Pn     11 38 19.1 -0.5
      comp=Z,18nm,1.1s
ECH   Echery           19.30 322  eP     Pn     11 38 19.1 -0.5
ECH                                pmax  pmax
      comp=Z,18nm,1.1s
SUW   Suwalki          19.77 357  eP     P      11 38 21.8 -1.6
SUW   Suwalki          19.77 357  eP     P      11 38 22.4 -1.0
      comp=Z,248nm,1.0s
SUW   Suwalki          19.77 357  eP     P      11 38 21.8 -1.6
VSR   Storozhevoye     19.78  27⇓eP     P      11 38 22.4 -1.2
VSR                                pmax  pmax
      comp=Z,51nm,0.9s
RUE   Ruedersdorf      19.91 339  eP     P      11 38 25.2 +0.3
RUE                                IAmb  IAmb   11 38 25.9
      comp=Z,38nm,1.2s
TAM   Tamanrasset      20.60 241  eP     P      11 38 33.5 +0.6
      comp=Z,40nm,1.6s
TAM   Tamanrasset      20.60 241  eP     P      11 38 33.5 +0.6
TAM                                pmax  pmax
      comp=Z,40nm,1.6s
KLNR  Kaliningrad      20.60 352⇓eP     P      11 38 31.9 -0.6
KLNR                               pmax  pmax
      comp=Z,78nm,1.1s
NACGM Naroch           20.65   3  e      P      11 38 30.0 -3.0
SSF   Saint Saulge     20.66 315   P     P      11 38 33.5 +0.2
WLF   Walferdange      20.74 324  eP     P      11 38 34.6 +0.5
      comp=Z,345nm,1.2s
WLF   Walferdange      20.74 324  ⇓P     P      11 38 34.6 +0.5
WLF                               ⇑pP    pP     11 38 38.4 -1.5
      comp=Z,44nm,1.2s
WLF                               ⇑sP    sP     11 38 42.2 -0.5
VRH   Novokhopyorsk    20.79  31  eP     P      11 38 33.9 -0.6
VRH                               eS     S      11 42 17.1 -8.1
VRH                                pmax  pmax
      comp=Z,110nm,0.7s
VRH                                smax  smax
      comp=N,140nm,3.3s
RAYN  Ar Rayn          20.82 116  eP     Pn     11 38 36.6 -1.0
      comp=N,47nm,1.5s
RAYN  Ar Rayn          20.82 116  eP     Pn     11 38 36.6 -1.1
RAYN                               pmax  pmax
      comp=Z,47nm,1.5s
LPSR  Galich'ya Gora   20.83  24  eP     P      11 38 32.9 -2.0
LPSR                              eS     S      11 42 16.5 -9.5
LPSR                               pmax  pmax
      comp=Z,70nm,1.3s
LPSR                               smax  smax
      comp=E,20nm,1.5s
LKLB  Kalborn          21.05 324   P     P      11 38 41.1 +3.7
IDID  Didziasalis      21.06   3  eP     P      11 38 34.8 -2.7
IDID                               IAmb  IAmb   11 38 49.8
      comp=Z,9.2nm,0.8s
IIGN  Ignalina         21.08   2  eP     P      11 38 36.1 -1.5
IIGN                               IAmb  IAmb   11 38 49.3
      comp=Z,18nm,0.9s
ISAL  Salakas          21.30   2  eP     P      11 38 39.5 -0.5
ISAL                               IAmb  IAmb   11 38 42.5
      comp=Z,12nm,0.6s
MEM   Membach          21.44 325  ⇑P     P      11 38 42.5 +0.9
MEM                               ⇑pP    pP     11 38 45.8 -1.6
MEM                               ⇑sP    sP     11 38 48.1 -2.1
      comp=Z,58nm,0.9s
IZAR  Zarasai          21.48   2  eP     P      11 38 39.2 -2.8
IZAR                               IAmb  IAmb   11 38 43.5
      comp=Z,12nm,0.8s
HGN   Heimansgroeve    21.58 326  eP     P      11 38 42.9 -0.2
HGN                               eL     L      11 48 11.3
      comp=Z,118nm,20.4s
BSTI  Sart Tilman      21.63 325   P     P      11 38 44.1 +0.5
BSTI                               sP    pP     11 38 50.8 +1.3
BLCH  La Chartreuse    21.66 325   P     P      11 38 45.6 +1.8
BEBN  Eben Emael       21.72 325   P     P      11 38 43.6 -1.0
BEBN                               sP    pP     11 38 48.8 -1.6
DOU   Dourbes          21.80 323   P     P      11 38 44.6 -0.8
DOU                                pP    pP     11 38 46.4 -4.8
DOU                                x     x      11 38 50.4
DOU                                x     x      11 38 53.5
DOU                                x     x      11 38 56.2
BMRD  Maredsous        21.84 323   P     P      11 38 48.5 +2.6
PBUR  Paburg           21.85 355  eP     P      11 38 44.3 -1.5
PBUR                               IAmb  IAmb   11 38 44.8
      comp=Z,79nm,1.1s
RGN   Rugen            21.87 341  eP     P      11 38 45.2 -0.9
RGN                                IAmb  IAmb   11 38 47.8
      comp=Z,156nm,1.2s
CLF   Chambon-Foret    21.88 316  eP     P      11 38 47.3 +0.9
      comp=Z,78nm,1.2s
BSD   Bornholm Skovb   22.00 344  i P    P      11 38 46.9 -0.6
      comp=Z,3.2nm,0.5s
BSD   Bornholm Skovb   22.00 344  i P    P      11 38 46.9 -0.6
BSD                                pmax  pmax
      comp=Z,3.0nm,0.5s
WTSB  Winterswijk      22.03 329  eP     P      11 38 48.4 +0.6
OBN   Obninsk          22.32  18  eP     P      11 38 50.8  0.0
      comp=Z,73nm,1.0s
OBN   Obninsk          22.32  18⇓eP     P      11 38 50.2 -0.7
OBN                               e             11 39 13.9
OBN                               eS     S      11 42 49.5 -5.4
OBN                                pmax  pmax
      comp=Z,109nm,1.3s
OBN                                MLR   MLR
      comp=Z,278nm,15.0s
OBN   Obninsk          22.32  18   P     P      11 38 50.9  0.0
      comp=Z,8.2nm,0.6s,baz=23,slow=23,SNR=15
OBN                                LR    LR     11 48 10.3
      comp=Z,70nm,19.5s,baz=190,slow=38
UCC   Uccle            22.36 324  eP     P      11 38 52.0 +0.6
      comp=Z,82nm,1.4s
UCC   Uccle            22.36 324  eP     P      11 38 52.0 +0.6
UCC                                pmax  pmax
      comp=Z,83nm,1.4s
MOS   Moscow           23.14  18  eP     P      11 38 56.7 -2.9
MOS                               e             11 43 09.3
MOS                                pmax  pmax
      comp=Z,29nm,0.6s
ES19  SONSECA Array    23.71 292  eP     P      11 39 05.3 -0.1
ESDC  Sonseca Array    23.75 292   P     P      11 39 06.1 +0.2
      comp=Z,7.6nm,0.7s,baz=83,slow=9.5,SNR=25
ESLA  Sonseca Array    23.75 292  eP     P      11 39 05.2 -0.6
      comp=Z,52nm,1.5s
PAB   San Pablo        24.04 291  eP     P      11 39 08.3 -0.3
      comp=Z,17nm,1.1s
PAB   San Pablo        24.04 291  eP     P      11 39 08.3 -0.3
PAB                                pmax  pmax
      comp=Z,17nm,1.1s
VSU   Vasula           24.21   2⇓eP     P      11 39 11.2 +1.4
VSU                                pmax  pmax
      comp=Z,74nm,1.3s
VSU   Vasula           24.21   2  eP     P      11 39 09.0 -0.8
VSU                                IAmb  IAmb   11 39 11.5
      comp=Z,29nm,0.8s
MUD   Monsted U'grnd   24.71 339  i P    P      11 39 13.4 -0.9
      comp=Z,48nm,1.0s
MUD   Monsted U'grnd   24.71 339  i P    P      11 39 13.4 -0.9
MUD                                pmax  pmax
      comp=Z,48nm,1.0s
MDT   Midelt           24.74 275   P     P      11 39 16.2 +1.2
      comp=Z,5.6nm,0.8s,baz=107,slow=16,SNR=5.8
PUL   Pulkovo          25.73   6⇓eP     P      11 39 22.8 -0.7
PUL                                pmax  pmax
      comp=Z,102nm,1.1s
PBRG  Braganca         26.05 296  eP     P      11 39 26.4 -0.4
      comp=Z,50nm,1.8s
MVO   Moncorvo         26.20 295  eP     P      11 39 29.9 +1.7
      comp=Z,35nm,0.9s
PMRV  Marv??o          26.39 291  eP     P      11 39 31.3 +1.4
      comp=Z,34nm,1.1s
PCBR  Castelo Branco   26.47 292  eP     P      11 39 33.0 +2.5
      comp=Z,43nm,1.6s
PESTR Estremoz         26.54 289  eP     P      11 39 32.0 +0.8
      comp=Z,37nm,1.4s
PESTR Estremoz         26.54 289  eP     P      11 39 31.8 +0.5
      comp=Z,22nm,1.4s
PVAQ  Vaqueiros        26.69 286  eP     P      11 39 37.6 +5.1
      comp=Z,49nm,1.6s
PBEJ  Beja             26.78 288  eP     P      11 39 36.2 +2.9
      comp=Z,17nm,1.3s
GEYT  Alibeck          26.87  73   P     P      11 39 34.0 -0.2
      comp=Z,3.5nm,0.7s,baz=297,slow=9.5,SNR=2.9
GYA0B ALIBECK ARRAY    26.87  73  eP     P      11 39 35.5 +1.3
      comp=Z,6.4nm,0.6s
PBDV  Barranco-do-Ve   26.87 286  eP     P      11 39 35.3 +1.1
      comp=Z,65nm,1.5s
HFS   Hagfors          26.91 347   P     P      11 39 32.9 -1.3
      comp=Z,2.3nm,0.3s,baz=149,slow=6.7,SNR=30
HFS                                LR    LR     11 52 46.6
      comp=Z,194nm,20.1s,baz=136,slow=42
MESJ  Messejana        27.06 287  eP     P      11 39 41.0 +5.1
      comp=Z,37nm,1.5s
FIA0  FINESS Array S   27.18   1  eP     P      11 39 35.0 -1.7
FIA0                              ePcP   PcP    11 42 56.7 +0.3
FIA0  FINESS Array S   27.18   1  eP     P      11 39 35.0 -1.7
FIA0                              e             11 42 56.7
FINES FINESS Array B   27.18   1  i P    P      11 39 35.2 -1.5
FINES                              pmax  pmax
      comp=Z,16nm,1.0s
FINES FINESS Array B   27.18   1   P     P      11 39 35.0 -1.7
      comp=Z,16nm,1.0s,baz=177,slow=7.8,SNR=21
FINES                              PcP   PcP    11 42 56.7 +0.3
      comp=Z,1.5nm,0.4s,baz=146,slow=1.0,SNR=6.2
FINES                              ScP   ScP    11 46 34.6 -0.6
      comp=Z,2.0nm,0.8s,baz=186,slow=3.8,SNR=4.1
FINES                              LR    LR     11 51 08.5
      comp=Z,173nm,21.3s,baz=199,slow=38
FIA1  FINESS Array S   27.19   1  eP     P      11 39 35.6 -1.1
      comp=Z,28nm,1.1s
KONO  Kongsberg        27.34 343⇓eP     P      11 39 37.1 -1.0
KONO                               pmax  pmax
      comp=Z,34nm,1.4s
ATD   Arta Tunnel      27.86 140   LR    LR     11 50 57.8
      comp=Z,42nm,18.3s,baz=296,slow=37
NAO01 NORSAR Array S   28.12 345  eP     P      11 39 44.4 -0.7
KLMR  Klimovskoe       28.18  15  eP     P      11 39 42.8 -2.8
KLMR                               pmax  pmax
      comp=Z,38nm,1.0s
KLMR  Klimovskoe       28.18  15  eP     P      11 39 42.9 -2.7
KLMR                               AMP          11 39 45.6
      comp=Z,38nm,1.0s
NB2   NORSAR Subarra   28.23 346   P     P      11 39 45.0 -1.1
      comp=Z,8.4nm,0.8s,baz=156,slow=9.3
NB200 NORSAR Array S   28.23 346  eP     P      11 39 45.4 -0.7
NOA   NORSAR Array B   28.23 346   P     P      11 39 45.4 -0.7
      comp=Z,0.5nm,0.3s,baz=151,slow=9.2,SNR=11
NOA                                LR    LR     11 52 51.3
      comp=Z,187nm,19.7s,baz=165,slow=40
EKA   Eskdalemuir Ar   28.72 326   P     P      11 39 50.4 -0.1
      comp=Z,9.5nm,0.9s,baz=126,slow=8.0,SNR=11
ESK   Eskdalemuir      28.73 326  eP     P      11 39 50.4 -0.1
      comp=Z,26nm,0.9s
ESK   Eskdalemuir      28.73 326  eP     P      11 39 50.4 -0.1
ESK                                pmax  pmax
      comp=Z,26nm,0.9s
AKTO  Aktyubinsk       28.91  46   P     P      11 39 51.6 -0.6
AKTO                               pmax  pmax
      comp=Z,17nm,1.1s
AKTO  Aktyubinsk       28.91  46   P     P      11 39 51.8 -0.4
      comp=Z,2.8nm,0.6s,baz=255,slow=8.8,SNR=12
KIRV  Kirov            29.22  26   P     P      11 39 53.8 -1.0
      comp=Z,19nm,0.8s,baz=228,slow=2.6,SNR=6.8
KIRV                               LR    LR     11 51 52.9
      comp=Z,115nm,18.5s,baz=198,slow=37
AB31  Akbulak array    29.69  49  i P    P      11 39 59.0 -0.2
AB31                               pmax  pmax
      comp=Z,7.0nm,1.0s
ABKAR Akbulak array    29.69  49  eP     P      11 39 59.6 +0.4
TOA1  Torodi Ar. Sit   29.87 231  eP     P      11 40 00.8 -0.2
TOA0  Torodi Ar. Sit   29.88 231  eP     P      11 40 01.2 +0.1
TOA0  Torodi Ar. Sit   29.88 231   P     P      11 40 02.5 +1.4
      SNR=5.0
TORD  Torodi Ar. Bea   29.88 231   P     P      11 40 00.8 -0.2
      comp=Z,19nm,0.6s,baz=25,slow=6.9,SNR=118
TORD                               LR    LR     11 55 11.7
      comp=Z,323nm,19.4s,baz=355,slow=43
PRGR  Permogore        30.36  19  eP     P      11 40 03.0 -1.9
PRGR                               pmax  pmax
      comp=Z,54nm,1.4s
ARU   Arti             31.80  36  eP     P      11 40 17.1 -0.6
      comp=Z,24nm,0.9s
ARU   Arti             31.80  36   P     P      11 40 17.6 -0.1
ARU                                             11 41 20.6
ARU                                S     S      11 45 25.2 -1.3
SVE   Sverdlovsk       33.00  36⇑eP     P      11 40 28.6 +0.4
SVE                                pmax  pmax
      comp=Z,46nm,0.9s
APA   Apatity          33.68   6⇑iP     P      11 40 31.7 -2.3
APA                                pmax  pmax
      comp=Z,13nm,0.9s
APA                                MLR   MLR
      comp=Z,600nm,11.0s
LVZ   Lovozero         34.11   6  eP     P      11 40 36.5 -1.3
      comp=Z,34nm,1.3s
LVZ   Lovozero         34.11   6⇓eP     P      11 40 38.2 +0.4
LVZ                                pmax  pmax
      comp=Z,25nm,1.1s
MBAR  Mbarara          35.11 170  eP     P      11 40 47.3 +0.3
      comp=Z,18nm,1.6s
MBAR  Mbarara          35.11 170  eP     P      11 40 47.3 +0.3
MBAR                               pmax  pmax
      comp=Z,18nm,1.6s
ARA0  ARCESS Array S   35.30   0  eP     P      11 40 46.8 -1.3
ARCES ARCESS Array B   35.30   0  eP     P      11 40 46.6 -1.5
ARCES ARCESS Array B   35.30   0  eP     P      11 40 46.6 -1.5
ARCES ARCESS Array B   35.30   0   P     P      11 40 46.8 -1.3
      comp=Z,8.3nm,0.9s,baz=178,slow=9.9,SNR=28
CHGR  Chuyangaron      35.47  70  eP     P      11 40 50.5 +0.6
      comp=Z,16nm,0.8s
KK31  Karatay Array    36.17  62  eP     P      11 40 56.6 +0.8
KK31  Karatay Array    36.17  62  i P    P      11 40 56.7 +0.9
KK31                               pmax  pmax
      comp=Z,12nm,0.9s
KKAR  Karatay Array    36.17  62  eP     P      11 40 56.5 +0.6
KKAR  Karatay Array    36.17  62  eP     P      11 40 56.5 +0.6
GAR   Garm             36.32  69  eP     P      11 40 58.7 +1.4
      comp=Z,13nm,0.7s
GAR   Garm             36.32  69  eP     P      11 40 58.7 +1.4
GAR                                pmax  pmax
      comp=Z,13nm,0.7s
BRVK  Borovoye         36.95  45  eP     P      11 41 02.2 -0.2
      comp=Z,11nm,1.0s
BRVK  Borovoye         36.95  45ceP     P      11 41 03.0 +0.7
BRVK                               pmax  pmax
      comp=Z,11nm,1.0s
KMBO  Kilima Mbogo     37.03 159   LR    LR     11 56 10.7
      comp=Z,180nm,21.5s,baz=86,slow=36
OTUK  Ortayu           37.57  54   P     P      11 41 08.3 +0.6
OTUK                               pmax  pmax
      comp=Z,15nm,1.0s
ARSB  Arslanbob        38.11  65  eP     P      11 41 12.8 +0.4
      comp=Z,19nm,0.9s
EKS2  Erkin-Say        38.59  63   P     P      11 41 18.2 +1.8
      SNR=14
SFK   Sufi-Kurgan      38.65  67   P     P      11 41 18.4 +1.3
SFK                                pmax  pmax
      comp=Z,15nm,0.7s
DBIC  Dimbokro         38.97 232  eP     P      11 41 19.5 -0.2
      comp=Z,12nm,1.0s
DBIC  Dimbokro         38.97 232  eP     P      11 41 19.5 -0.2
DBIC                               pmax  pmax
      comp=Z,12nm,1.0s
DBIC  Dimbokro         38.97 232   P     P      11 41 20.4 +0.7
      comp=Z,8.3nm,0.8s,baz=17,slow=9.6,SNR=11
DBIC                               LR    LR     12 00 47.5
      comp=Z,216nm,18.3s,baz=18,slow=41
USP   Ospenovka        39.08  62   P     P      11 41 21.6 +1.2
      SNR=5.9
TIC   Toumodi          39.09 232  eP     P      11 41 21.4 +0.6
AAK   Ala-Archa        39.12  63   P     P      11 41 22.8 +1.9
      SNR=10
AAK   Ala-Archa        39.12  63c iP    P      11 41 22.5 +1.6
AAK                                pmax  pmax
      comp=Z,23nm,1.7s
AAK   Ala-Archa        39.12  63   P     P      11 41 22.9 +1.9
      SNR=7.8
AAK                                P     P      11 41 22.9 +1.9
      SNR=7.8
AAK   Ala-Archa        39.12  63   P     P      11 41 21.3 +0.3
      comp=Z,10nm,0.9s,baz=230,slow=4.8,SNR=23
KIC   Kosan Boka       39.12 232  eP     P      11 41 21.7 +0.7
      comp=Z,50nm,1.0s
UCH   Uchtor           39.17  63   P     P      11 41 23.2 +1.5
      SNR=5.8
FRU1  Bishkek          39.20  62  eP     P      11 41 22.2 +0.6
      comp=Z,22nm,0.4s
FRU1  Bishkek          39.20  62  eP     P      11 41 22.2 +0.6
FRU1                               pmax  pmax
      comp=Z,22nm,0.4s
CHMS  Chumysh          39.28  62   P     P      11 41 23.7 +1.6
      SNR=9.5
LIC   Lamto            39.41 232  eP     P      11 41 24.0 +0.6
      comp=Z,41nm,0.8s
KBK   Karagaybulak     39.45  63   P     P      11 41 27.4 +3.7
      SNR=9.2
NIL   Nilore           39.66  77  eP     P      11 41 26.5 +1.0
      comp=Z,12nm,0.6s
NIL   Nilore           39.66  77  eP     P      11 41 26.5 +1.0
NIL                                pmax  pmax
      comp=Z,12nm,0.6s
KZA   Kyzart           39.73  63   P     P      11 41 28.4 +2.1
      SNR=9.2
TKM2  Tokmak 2         39.90  62   P     P      11 41 28.6 +1.1
      SNR=14
NRN   Naryn            40.35  64  eP     P      11 41 32.1 +0.7
      comp=Z,26nm,0.9s
NRN   Naryn            40.35  64  eP     P      11 41 32.1 +0.7
NRN                                pmax  pmax
      comp=Z,26nm,0.9s
ULHL  Ulahol           40.44  63   P     P      11 41 33.9 +1.9
      SNR=23
KSH   Kashi            40.60  67   P     P      11 41 31.5 -1.8
KSH                                pP    pP     11 41 40.7 +1.1
KSH                                PP    PnPn   11 43 09.6 -1.3
KSH                                S     S      11 47 39.4 -2.2
KSH                                sS    pS     11 47 47.3 -1.7
KSH                                SS    SS     11 50 33.4 -8.3
KSH                                pmax  pmax
      comp=Z,330nm,5.4s
KSH                                LR    LR
      comp=Z,150nm,5.3s
KSH                                LR    LR
      comp=Z,160nm,6.0s
KSH                                LR    LR
      comp=Z,580nm,5.7s
KDJ   Kajisay          41.15  63  eP     P      11 41 39.2 +1.4
      comp=Z,14nm,0.9s
KDJ   Kajisay          41.15  63  eP     P      11 41 39.2 +1.4
KDJ                                pmax  pmax
      comp=Z,14nm,0.9s
TARG  Taragay, Kyrgy   41.66  64  eP     P      11 41 43.0 +0.7
      comp=Z,10.0nm,1.1s
KURBB Kurchatov Arra   41.73  50   P     P      11 41 43.1 +0.9
      comp=Z,19nm,0.8s,baz=278,slow=8.7,SNR=100
KURK  Kurchatov        41.79  50  eP     P      11 41 43.1 +0.4
      comp=Z,1.1nm,0.9s
KURK  Kurchatov        41.79  50⇓iP     P      11 41 42.7  0.0
KURK                               pmax  pmax
      comp=Z,23nm,0.9s
KURK  Kurchatov        41.79  50   P     P      11 41 43.4 +0.7
      SNR=7.1
KURK                               P     P      11 41 43.4 +0.7
      SNR=7.1
PRZ   Przheval'sk      42.00  62  eP     P      11 41 45.2 +0.3
      comp=Z,15nm,0.6s
PRZ   Przheval'sk      42.00  62  eP     P      11 41 45.2 +0.3
PRZ                                pmax  pmax
      comp=Z,15nm,0.6s
PDGK  Podgornoye       42.70  61   P     P      11 41 50.9 +0.5
PDGK                               pmax  pmax
      comp=Z,12nm,0.9s
MAKZ  Makanchi         44.11  56  eP     P      11 42 01.9 +0.3
      comp=Z,7.2nm,0.8s
MAKZ  Makanchi         44.11  56  eP     P      11 42 01.9 +0.3
MAKZ                               pmax  pmax
      comp=Z,7.0nm,0.8s
SCO   Scoresbysund     44.13 339  eP     P      11 42 01.5 +0.2
      comp=Z,39nm,1.6s
SCO   Scoresbysund     44.13 339  eP     P      11 42 01.5 +0.2
SCO                                pmax  pmax
      comp=Z,39nm,1.6s
SPA0  Spitsbergen Ar   44.16 357  eP     P      11 42 01.6  0.0
SPITS Spitsbergen Ar   44.16 357   P     P      11 42 00.8 -0.8
SPITS                              pmax  pmax
      comp=Z,4.0nm,0.6s
SPITS Spitsbergen Ar   44.16 357   P     P      11 42 00.8 -0.8
      comp=Z,7.6nm,0.7s,baz=137,slow=11,SNR=14
MK31  Makanchi Array   44.32  56  eP     P      11 42 03.6 +0.3
MK31  Makanchi Array   44.32  56   P     P      11 42 03.9 +0.6
MK31                               pmax  pmax
      comp=Z,17nm,0.9s
MK32  Makanchi Array   44.32  56  eP     P      11 42 04.3 +1.0
MKAR  Makanchi Array   44.32  56  eP     P      11 42 03.7 +0.4
      comp=Z,81nm,0.6s
MKAR  Makanchi Array   44.32  56   P     P      11 42 04.3 +1.0
      comp=Z,14nm,0.8s,baz=276,slow=6.2,SNR=129
MK01  Makanchi Array   44.33  56  eP     P      11 42 04.1 +0.7
NVS   Novosibirsk      44.76  44  eP     P      11 42 08.0 +1.4
NVS                               e             11 43 48.4
NVS                               eS     S      11 48 49.8 +7.7
NVS                                pmax  pmax
      comp=Z,36nm,1.2s
NVS                                pmax  pmax
      comp=N,10.0nm,1.3s
NVS                                pmax  pmax
      comp=E,21nm,1.3s
NVS                                smax  smax
      comp=E,10.0nm,1.7s
ZAA0  Zalesovo Array   45.67  46  eP     P      11 42 13.6 -0.2
      comp=E,17nm,0.9s
ZAA1  Zalesovo Array   45.67  46  eP     P      11 42 13.9 +0.1
ZALV  Zalesovo Beam    45.67  46  eP     P      11 42 13.5 -0.3
ZALV  Zalesovo Beam    45.67  46  eP     P      11 42 13.5 -0.3
ZALV  Zalesovo Beam    45.67  46   P     P      11 42 13.9 +0.1
      comp=E,11nm,0.5s,baz=267,slow=9.5,SNR=78
ZALV                               LR    LR     12 05 30.6
      comp=E,52nm,20.1s,baz=249,slow=42
DAG   Danmarks Havn    46.89 347⇑iP     P      11 42 23.3 +0.2
      comp=E,26nm,1.1s
DAG   Danmarks Havn    46.89 347⇑iP     P      11 42 23.3 +0.2
DAG                                pmax  pmax
      comp=Z,32nm,1.1s
DGZ   Jazzator, Alta   47.48  51c iP    P      11 42 29.4 +1.1
DGZ                                pmax  pmax
      comp=Z,8.0nm,0.9s
WMQ   Urumqi           48.51  59   P     P      11 42 38.3 +2.0
WMQ                                pP    pP     11 42 42.4 -0.3
WMQ                                sP    pwP    11 42 47.4 +0.5
WMQ                                pmax  pmax
      comp=Z,31nm,1.3s
WMQ                                pmax  pmax
      comp=Z,270nm,11.1s
WMQ                                LR    LR
      comp=Z,240nm,28.9s
WMQ                                LR    LR
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	comp=Z,150nm,21.9s						
WMQ				LR	LR		
	comp=Z,200nm,19.3s						
WMQ	Urumqi	48.51	59	*e*P	P	11 42 37.1	+0.8
	comp=Z,27nm,1.4s						
WMQ	Urumqi	48.51	59	*e*P	P	11 42 37.1	+0.8
WMQ				pmax	pmax		
	comp=Z,27nm,1.4s						
NRIK	Noril'sk	48.70	25	P	P	11 42 37.3	0.0
	comp=Z,12nm,0.8s,baz=249,slow=5.1,SNR=11						
NRIK				LR	LR	12 05 20.9	
	comp=Z,106nm,18.4s,baz=225,slow=39						
PYUN	Piuthan	49.37	81	*e*P	P	11 42 44.6	+1.4
	comp=Z,47nm,0.8s						
SUMG	Summit	49.77	339	*e*P	P	11 42 46.0	+0.1
	comp=Z,7.3nm,0.8s						
SUMG	Summit	49.77	339	*i* P	P	11 42 46.3	+0.4
SUMG	Summit	49.77	339	*i* P	P	11 42 46.3	+0.4
DANN	Dangsing	49.90	80	*e*P	P	11 42 49.0	+1.6
	comp=Z,123nm,0.8s						
KOLN	Koldanda	49.99	81	*e*P	P	11 42 48.9	+0.9
	comp=Z,27nm,0.9s						
HVS	Khovu-Aksy	51.28	49	⇑*i*P	P	11 42 59.0	+1.7
HVS				pmax	pmax		
	comp=Z,1.0nm,1.0s						
DMN	Daman	51.28	80	*e*P	P	11 42 58.7	+0.9
	comp=Z,47nm,0.8s						
KKN	Kakani	51.35	80	*e*P	P	11 42 59.2	+0.9
	comp=Z,29nm,0.7s						
PKIN	Phulchoki	51.53	80	*e*P	P	11 43 00.4	+0.7
	comp=Z,32nm,0.9s						
PKI	Pulchoki	51.55	80	*e*P	P	11 43 00.5	+0.6
	comp=Z,47nm,0.9s						
GUN	Gumba	51.80	79	*e*P	P	11 43 02.6	+0.9
	comp=Z,68nm,0.9s						
JIRN	Jiri	52.15	80	*e*P	P	11 43 05.1	+0.7
	comp=Z,60nm,0.8s						
RAMN	Ramite	52.76	80	*e*P	P	11 43 09.1	+0.3
	comp=Z,25nm,0.7s						
KNGR	Kungurtug, Tuv	53.75	49	⇓*e*P	P	11 43 16.7	+1.1
LSA	Lhasa	55.35	75	*e*P	P	11 43 28.8	+0.8
	comp=Z,9.3nm,0.9s						
LSA	Lhasa	55.35	75	*e*P	P	11 43 28.8	+0.8
LSA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MOY	Mondy	55.66	47	*e*P	P	11 43 31.0	+1.6
MOY				pmax	pmax		
	comp=Z,15nm,1.1s						
TLY	Talaya	57.26	47	*e*P	P	11 43 41.5	+0.9
	comp=Z,41nm,1.1s						
TLY	Talaya	57.26	47	*c i*P	P	11 43 42.4	+1.7
TLY	Talaya	57.26	47	P	P	11 43 42.4	+1.7
	SNR=9.1						
ZAK	Zakamensk	57.38	48	*e*P	P	11 43 42.7	+1.0
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s						
IRK	Irkutsk	57.48	46	*e*P	P	11 43 42.2	0.0
IRK				pmax	pmax		
	comp=Z,37nm,1.2s						
SHL	Shillong	57.65	79	*e*P	P	11 43 43.9	-0.1
	comp=Z,16nm,0.3s						
SHL	Shillong	57.65	79	*e*P	P	11 43 43.9	-0.1
SHL				pmax	pmax		
	comp=Z,16nm,0.3s						
TULEG	Thule	57.87	344	*e*P	P	11 43 44.4	-0.1
	comp=Z,28nm,1.3s						
GTA	Gaotai	58.44	61	*e*P	P	11 43 50.3	+1.0
GTA				pP	pP	11 43 54.7	-1.3
GTA				sP	sP	11 43 57.8	-0.7
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
SONA0	Songino Array	60.10	50	*e*P	P	11 44 01.7	+1.1
SONM	Songino Array	60.10	50	P	P	11 44 01.7	+1.1
	comp=Z,14nm,1.0s,baz=287,slow=8.8,SNR=76						
SONA1	Songino Array	60.10	50	*e*P	P	11 44 00.7	+0.1
ULN	Ulaanbaatar	60.51	50	*e*P	P	11 44 03.5	0.0
	comp=Z,16nm,0.9s						
ULN	Ulaanbaatar	60.51	50	*ce*P	P	11 44 04.6	+1.1
ULN				pmax	pmax		
	comp=Z,22nm,1.1s						
ULN	Ulaanbaatar	60.51	50	P	P	11 44 05.4	+1.9
	SNR=6.1						
ULN				P	P	11 44 05.4	+1.9
	SNR=6.1						
BOD	Bodaibo	61.19	38	*e*P	P	11 44 07.5	-0.2
BOD				pmax	pmax		
	comp=Z,22nm,1.0s						
TIXI	Tiksi	62.01	20	⇑*e*P	P	11 44 12.6	-0.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TIXI	Tiksi	62.01	20	P	P	11 44 12.5	-0.6
	comp=Z,1.6nm,0.5s,baz=315,slow=5.5,SNR=7.1						
BOSA	Boshof	62.56	180	LR	LR	12 14 30.9	
	comp=Z,143nm,18.0s,baz=11,slow=39						
LZH	Lanzhou	62.65	63	*e*P	P	11 44 19.6	+1.4
LZH				pP	pP	11 44 24.6	-0.2
LZH				sP	pwP	11 44 28.6	+0.2
LZH				PcP	PcP	11 44 59.0	+2.1
LZH				pmax	pmax		
	comp=Z,43nm,1.0s						
SCHQ	Schefferville	63.81	320	*e*P	P	11 44 25.5	+0.2
	comp=Z,13nm,0.8s						
SCHQ	Schefferville	63.81	320	P	P	11 44 24.5	-0.8
	comp=Z,3.4nm,0.4s,baz=74,slow=2.4,SNR=9.5						
RES	Resolute Bay	64.49	345	*e*P	P	11 44 30.0	+0.6
	comp=Z,5.0nm,1.1s						
RES	Resolute Bay	64.49	345	*e*P	P	11 44 30.0	+0.6
RES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RES	Resolute Bay	64.49	345	P	P	11 44 28.9	-0.5
	comp=Z,2.4nm,0.9s,baz=61,slow=5.7,SNR=5.9						
CD2	Chengdu	64.77	69	*e*P	P	11 44 32.0	-0.1
HHC	Hu-ho-hao-te	66.19	56	*e*P	P	11 44 43.0	+1.9
HHC				sP	pwP	11 44 51.9	+0.5
HHC				pmax	pmax		
	comp=Z,32nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.7s						
CHTO	Chiang Mai	66.57	83	P	P	11 44 50.4	+6.6
	comp=Z,21nm,1.1s						
KMI	Kunming	66.61	75	P	P	11 44 46.2	+2.0
KMI				pmax	pmax		
	comp=Z,19nm,0.5s						
CM31	Chiang Mai Arr	66.75	83	*e*P	P	11 44 44.9	-0.1
CMAR	Chiang Mai Arr	66.75	83	P	P	11 44 45.8	+0.8
	comp=Z,2.7nm,1.0s,baz=300,slow=7.9,SNR=12						
CM01	Chiang Mai Arr	66.78	83	*e*P	P	11 44 45.5	+0.4
XAN	Xi'an	67.29	64	P	P	11 44 49.1	+0.9
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,90nm,5.2s						
XAN	Xi'an	67.29	64	*e*P	P	11 44 48.7	+0.5
	comp=Z,4.7nm,0.7s						
XAN	Xi'an	67.29	64	*e*P	P	11 44 48.7	+0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HIA	Hailar	67.70	45	*e*P	P	11 44 51.0	+0.5
	comp=Z,18nm,0.9s						
HIA	Hailar	67.70	45	*d i*P	P	11 44 52.3	+1.8
HIA				pmax	pmax		
	comp=Z,25nm,1.1s						
GYA	Guiyang	69.08	72	*e*P	P	11 45 02.0	+2.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PBKT	Sadao Pong	69.37	84	*e*P	P	11 45 01.7	+0.4
	comp=Z,5.0nm,1.0s						
ENH	Enshi	69.46	67	*e*P	P	11 45 02.2	+0.4
	comp=Z,13nm,1.0s						
ZEA	Zeya	69.68	38	*e*P	P	11 45 04.1	+1.4
ZEA				pmax	pmax		
	comp=Z,40nm,1.8s						
BJT	Baijiatuau	69.70	55	*e*P	P	11 45 03.9	+0.8
	comp=Z,10nm,0.9s						
BJT	Baijiatuau	69.70	55	*e*P	P	11 45 03.9	+0.8
BJT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2	Changchun	73.81	48	*e*P	P	11 45 28.5	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BILL	Bilibino	73.93	14	⇓*i*P	P	11 45 28.3	+0.3
BILL				*e*		11 45 44.6	
BILL				*e*PPP	PPP	11 49 56.0	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SEY	Seymchan	74.40	22	⇓*e*P	P	11 45 32.0	+1.2
SEY	Seymchan	74.40	22	P	P	11 45 31.1	+0.3
	comp=Z,4.2nm,0.8s,baz=296,slow=6.6,SNR=9.0						
KLR	Kul'dur	74.48	41	⇓*i*P	P	11 45 32.7	+1.2
KLR	Kul'dur	74.48	41	P	P	11 45 31.3	-0.2
	comp=Z,8.9nm,0.9s,baz=322,slow=4.8,SNR=17						
PSI	Prapat	75.09	97	*e*P	P	11 45 35.5	-0.3
	comp=Z,11nm,1.1s						
PSI	Prapat	75.09	97	*e*P	P	11 45 35.5	-0.3
PSI				pmax	pmax		
	comp=Z,11nm,1.1s						
NJ2	Nanjing	75.54	61	*e*P	P	11 45 41.2	+3.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
GRNR	Gornyy	76.01	38	*e*P	P	11 45 40.7	+0.3
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
MA2	Magadan	76.31	25	⇓*e*P	P	11 45 42.9	+1.1
MA2				pmax	pmax		
	comp=Z,29nm,1.5s						
MA2	Magadan	76.31	25	P	P	11 45 42.0	+0.2
	comp=Z,11nm,0.8s,baz=338,slow=5.4,SNR=4.8						
MA2				LR	LR	12 21 46.0	
	comp=Z,70nm,19.8s,baz=281,slow=38						
INK	Inuvik	76.47	352	*e*P	P	11 45 42.9	+0.3
	comp=Z,8.8nm,1.1s						
INK	Inuvik	76.47	352	*e*P	P	11 45 42.9	+0.3
INK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
INK	Inuvik	76.47	352	P	P	11 45 42.4	-0.2
	comp=Z,5.4nm,1.0s,baz=19,slow=6.0,SNR=11						
NKL	Nikolayevsk	76.58	34	*e*P	P	11 45 43.8	+0.3
NKL				pmax	pmax		
	comp=Z,25nm,1.0s						
USA0B	Ussuriysk Arra	77.51	45	*e*P	P	11 45 49.0	+0.1
	comp=Z,22nm,0.9s						
USRK	Ussuriysk Ar.	77.51	45	P	P	11 45 49.2	+0.3
	comp=Z,11nm,0.7s,baz=290,slow=5.3,SNR=24						
RDOG	Red Dog Mine	77.80	3	*e*P	P	11 45 50.6	+0.5
	comp=Z,8.1nm,0.9s						
YKA	Yellowknife Ar	78.26	342	P	P	11 45 52.7	0.0
	comp=Z,0.3nm,0.4s,baz=32,slow=5.0,SNR=13						
YKB5	Yellowknife Ar	78.26	342	*e*P	P	11 45 53.0	+0.3
COLD	Coldfoot	78.74	358	*e*P	P	11 45 55.5	+0.2
	comp=Z,8.0nm,1.1s						
KS01	Wonju Array Si	78.84	52	*e*P	P	11 45 56.8	+0.3
KSRS	Korea Array	78.88	52	P	P	11 45 57.8	+1.2
	comp=Z,9.5nm,0.9s,baz=304,slow=5.0,SNR=15						
IM3	Indian Mountai	80.05	360	*e*P	P	11 46 02.8	+0.3
PRP	Porcupine Dome	80.25	356	*e*P	P	11 46 05.0	+1.2
	comp=Z,18nm,1.7s						
MDM	Murphy Dome	80.94	357	*e*P	P	11 46 08.2	+0.8
	comp=Z,10.0nm,1.0s						
MLY	Manley	80.96	358	*e*P	P	11 46 08.1	+0.7
	comp=Z,8.0nm,1.0s						
ULM	Lac du Bonnet	80.99	326	LR	LR	12 22 10.2	
	comp=Z,155nm,20.5s,baz=304,slow=36						
COLA	College	81.01	357	⇑*i*P	P	11 46 09.5	+1.9
COLA				pmax	pmax		
	comp=Z,19nm,2.2s						
IL1	Eielson Array	81.07	357	*e*P	P	11 46 08.6	+0.6
ILAR	Eielson Array	81.07	357	P	P	11 46 09.0	+1.0
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	81.07	357	P	P	11 46 08.9	+1.0
	comp=Z,1.9nm,0.9s,baz=352,slow=4.3,SNR=18						
ILB	Eielson Array	81.07	357	*e*P	P	11 46 08.7	+0.7
ANM	Nome	81.14	5	*e*P	P	11 46 08.9	+0.6
	comp=Z,13nm,1.2s						
ANM	Nome	81.14	5	*e*P	P	11 46 08.9	+0.6
ANM				pmax	pmax		
	comp=Z,13nm,1.2s						
DAWY	Dawson	81.21	353	*e*P	P	11 46 09.4	+0.6
	comp=Z,7.7nm,1.0s						
WRH	Wood River Hil	81.43	357	*e*P	P	11 46 10.2	+0.3
	comp=Z,16nm,1.1s						
HDA	Harding Lake	81.44	357	*e*P	P	11 46 10.1	+0.1
	comp=Z,13nm,1.0s						
MCK	McKinley	82.20	357	*e*P	P	11 46 14.5	+0.5
	comp=Z,16nm,1.1s						
MCK	McKinley	82.20	357	*e*P	P	11 46 14.5	+0.5
MCK				pmax	pmax		
	comp=Z,16nm,1.1s						
RND	Reindeer	82.52	357	*e*P	P	11 46 16.2	+0.5
	comp=Z,11nm,1.1s						
RND	Reindeer	82.52	357	*e*P	P	11 46 16.2	+0.5
RND				pmax	pmax		
	comp=Z,11nm,1.1s						
TRF	Thorofare Moun	82.53	358	*e*P	P	11 46 15.8	-0.1
	comp=Z,21nm,1.5s						
DHY	Denali Highway	82.79	357	*e*P	P	11 46 17.7	+0.4
	comp=Z,9.6nm,0.8s						
PPLA	Purkeypile	83.13	359	*e*P	P	11 46 19.5	+0.5
	comp=Z,19nm,0.9s						
JNU	Nakatsue	83.36	54	LR	LR	12 27 38.5	
	comp=Z,58nm,18.5s,baz=294,slow=39						
PETK	Petropavlovsk-	83.73	27	LR	LR	12 28 08.4	
	comp=Z,56nm,18.6s,baz=320,slow=39						
SUA	Susitna One	84.53	358	*e*P	P	11 46 26.8	+0.6
	comp=Z,12nm,0.8s						
BDFB	Brasilia	85.30	248	P	P	11 46 31.6	+0.9
	comp=Z,1.9nm,0.6s,baz=67,slow=7.7,SNR=2.6						
BDFB				LR	LR	12 24 42.2	
	comp=Z,109nm,20.7s,baz=93,slow=36						
ECSD	EROS Data Cent	85.93	322	*e*P	P	11 46 33.5	+0.1
	comp=Z,5.8nm,0.9s						
MAJO	Matsushiro	85.96	48	*e*P	P	11 46 34.4	+0.8
MAJO	Matsushiro	85.96	48	⇓*e*P	P	11 46 34.5	+0.8
MAJO				pmax	pmax		
	comp=Z,33nm,2.3s						
MJAR	Matsushiro Arr	85.97	48	P	P	11 46 34.4	+0.7
	comp=Z,9.8nm,0.9s,baz=302,slow=6.2,SNR=14						
CCM	Cathedral Cave	86.88	315	*e*P	P	11 46 38.4	+0.3
	comp=Z,9.2nm,0.8s						
CCM	Cathedral Cave	86.88	315	*e*P	P	11 46 38.4	+0.3
CCM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LRAL	Lakeview Retre	87.54	309	*e*P	P	11 46 41.9	+0.5
	comp=Z,15nm,0.9s						
BBB	Bella Bella	90.75	344	LR	LR	12 31 12.5	
	comp=Z,224nm,18.5s,baz=14,slow=38						
NEW	Newport	91.14	336	P	P	11 46 58.3	+0.2
	comp=Z,1.1nm,0.6s,baz=22,slow=5.4,SNR=4.3						
PDAR	Pinedale Array	92.81	328	P	P	11 47 06.0	-0.2
	comp=Z,0.8nm,0.9s,baz=47,slow=2.6,SNR=4.2						
CPUP	Villa Florida	98.57	244	LR	LR	12 34 47.9	
	comp=Z,87nm,18.4s,baz=56,slow=37						
NVAR	Mina Array Bea	100.07	332	LR	LR	12 35 03.3	
	comp=Z,99nm,19.3s,baz=321,slow=37						
WRA	Warramunga Arr	116.56	97	PKIKP	PKiKP	11 52 38.0	+0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	116.56	97	PKP	PKiKP	11 52 38.0	+0.3
	comp=Z,0.6nm,0.6s,baz=316,slow=1.8,SNR=12						
ASAR	Alice Springs	117.96	101	PKP	PKiKP	11 52 40.9	+0.6
	comp=Z,0.6nm,0.7s,baz=315,slow=1.2,SNR=9.5						

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*NEIC **02** 11:34:19.9±0.0, 15°.63N×96°.43W, h20^{km}, MD4.0(MEX), After MEX.*

MEX 02 11:34:20.0±0.5**, 15°.63N×96°.43W, h20**^{km}±9^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.34	66	*e*Pg	Pb	11 34 26.0	-1.3
HUIG				*e*Sg	Sb	11 34 31.0	-1.3
HUIG	Huatulco	0.34	66	*e*P	Pb	11 34 26.0	-1.3
HUIG				*e*S	Sb	11 34 31.0	-1.3
VHO	Vista Hermosa	1.47	349	*e*Pn	Pn	11 34 42.3	-3.2
VHO				*e*Sn	Sn	11 34 59.8	-4.4
VHO	Vista Hermosa	1.47	349	*e*P	Pn	11 34 42.3	-3.2
VHO				*i* S	Sn	11 34 59.8	-4.4
PNIG	Pinotepa	1.80	295	*e*Pn	Pn	11 34 47.0	-3.0
PNIG				*e*Sn	Sn	11 35 08.1	-4.2
PNIG	Pinotepa	1.80	295	*i* P	Pn	11 34 47.0	-3.0
PNIG				*i* S	Sn	11 35 08.1	-4.2
LVIG	Laguna Verde	4.07	0	*e*Pn	Pn	11 35 19.3	-1.9
CCIG	Comitan	4.18	80	*e*Pn	Pn	11 35 24.4	+1.6
TEIG	Tepich	9.01	58	*e*Pn	Pn	11 36 28.1	-0.9

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*ISCJB **02** 11:41:07.8±0.3, 44°.10N±0°.03×10°.43E±0°.03, h21^{km}±2^{km}, Error ellipse: s-maj=4.4km s-min=3.6km az=169.8*

*ROM **02** 11:41:08.0±0.1, 44°.166N±0°.005×10°.502E±0°.006, h16^{km}, ML2.6/7*

*GEN **02** 11:41:08.3, 44°.20N×10°.51E, h14^{km}±1^{km}, Ml2.4*

*LDG **02** 11:41:08.2±0.1, 44°.20N×10°.52E, h14^{km}, Ml2.6/12, Error ellipse: s-maj=2.6km s-min=1.7km az=82.0*

ISC 02 11:41:08.1±0.9**, 44°.14N**±0°.03×**10°.44E**±0°.02**, h20**^{km}±3^{km}**, n44, σ1^{s}.95**/72**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLC	Villacollemand	0.04	292	P	Pg	11 41 11.5	-0.2
VLC				S	Sg	11 41 13.9	-0.2
VLC				AML	AML		
	comp=E,2720μm,0.5s						
VLC				AML	AML		
	comp=N,2215μm,0.6s						
VLC				AML	AML		
	comp=E,2795μm,0.5s						
VLC				AML	AML		
	comp=N,2175μm,0.6s						
VLC				AML	AML		
	comp=E,2795μm,0.5s						
VLC				AML	AML		
	comp=E,2720μm,0.5s						
VLC				AML	AML		
	comp=N,2175μm,0.6s						
VLC				AML	AML		
	comp=N,2215μm,0.6s						
VLC				END			
SARO	Sassorosso	0.05	325	P	Pg	11 41 11.3	-0.5
SARO				S	Sg	11 41 13.5	-0.8
BDI	Bagni Di Lucca	0.14	126	P	Pg	11 41 11.9	-0.6
BDI				S	Sg	11 41 14.7	-0.8
BDI				AML	AML		
	comp=E,10400μm,0.3s						
BDI				AML	AML		
	comp=N,15050μm,0.3s						
BDI				AML	AML		
	comp=E,10600μm,0.3s						
BDI				AML	AML		
	comp=N,14500μm,0.3s						
BDI				AML	AML		
	comp=E,10400μm,0.3s						
BDI				AML	AML		
	comp=N,15050μm,0.3s						
BDI				AML	AML		
	comp=E,10600μm,0.3s						
BDI				AML	AML		
	comp=N,14500μm,0.3s						
BDI				AML	AML		
	comp=N,15050μm,0.3s						
BDI				AML	AML		
	comp=N,14500μm,0.3s						
BDI				AML	AML		
	comp=E,10400μm,0.3s						
BDI				AML	AML		
	comp=E,10600μm,0.3s						
BDI				END			
BDI				END			
EQUI	Equi	0.21	276	P	Pg	11 41 14.0	+0.7
EQUI				S	Sg	11 41 17.5	+0.6
EQUI	Equi	0.21	276	P	Pg	11 41 13.8	+0.5
EQUI				AML	AML		
	comp=E,360μm,0.2s						
EQUI				AML	AML		
	comp=N,320μm,1.0s						
EQUI				END			
EQUI				END			
MAIM	Mastiano	0.23	171	P	Pg	11 41 13.9	+0.2
MAIM				S	Sg	11 41 18.1	+0.7
MAIM	Mastiano	0.23	171	P	Pg	11 41 13.9	+0.2
MAIM				S	Sg	11 41 18.3	+0.8
MAIM				AML	AML		
	comp=E,1495μm,0.4s						
MAIM				AML	AML		
	comp=N,1425μm,0.4s						
MAIM				AML	AML		
	comp=E,1495μm,0.4s						
MAIM				AML	AML		
	comp=N,1425μm,0.4s						
MAIM				AML	AML		
	comp=N,1425μm,0.4s						
MAIM				AML	AML		
	comp=E,1495μm,0.4s						
MAIM				END			
MAIM				END			
POPM	Popiglio	0.25	113	P	Pg	11 41 13.3	-0.7
POPM				S	Sg	11 41 17.1	-0.8
POPM	Popiglio	0.25	113	P	Pg	11 41 13.3	-0.7
POPM				S	Sg	11 41 17.2	-0.8
POPM				AML	AML		
	comp=E,9315μm,0.4s						
POPM				AML	AML		
	comp=N,5445μm,0.6s						
POPM				AML	AML		
	comp=E,9315μm,0.4s						
POPM				AML	AML		
	comp=N,5445μm,0.6s						
POPM				AML	AML		
	comp=E,9315μm,0.4s						
POPM				AML	AML		
	comp=N,5445μm,0.6s						
POPM				END			
POPM				END			
MTCR	Monte La Croce	0.42	106	P	Pg	11 41 16.0	-0.8
MTCR				S	Sg	11 41 21.9	-0.8
MTCR				AML	AML		
	comp=E,1275μm,0.4s						
MTCR				AML	AML		
	comp=N,2160μm,0.3s						
MTCR				END			
MTCR				END			
PLMA	Palmaria, Port	0.44	258	P	Pg	11 41 18.1	+1.0
PLMA				S	Sg	11 41 25.0	+1.9
PLMA				AML	AML		
	comp=E,350μm,0.6s						
PLMA				AML	AML		
	comp=N,314μm,1.2s						
PLMA				AML	AML		
	comp=N,314μm,1.2s						
PLMA				AML	AML		
	comp=E,350μm,0.6s						
PLMA				END			
ZCCA	Zocca	0.44	61	P	Pb	11 41 17.0	-0.2
ZCCA				AML	AML		
	comp=E,502μm,0.7s						
ZCCA				AML	AML		
	comp=N,610μm,0.5s						
ZCCA				AML	AML		
	comp=E,531μm,0.3s						
ZCCA				AML	AML		
	comp=N,610μm,0.5s						
ZCCA				AML	AML		
	comp=N,610μm,0.5s						
ZCCA				AML	AML		
	comp=E,531μm,0.3s						
GRAM	Graiana	0.44	322	P	Pg	11 41 16.7	-0.5
GRAM				S	Sb	11 41 23.7	+0.1
GRAM	Graiana	0.44	322	P	Pg	11 41 16.9	-0.3
GRAM				S	Sb	11 41 23.7	+0.1
GRAM				AML	AML		
	comp=E,1870μm,0.4s						
GRAM				AML	AML		
	comp=N,1290μm,0.4s						
GRAM				AML	AML		
	comp=N,1290μm,0.4s						
GRAM				AML	AML		
	comp=E,1870μm,0.4s						
GRAM				END			
GRAM				END			
PTF	Prato	0.49	112	P	Pg	11 41 17.2	-0.8
PTF				S	Sg	11 41 23.9	-0.9
PTF				END			
PGF	Pioggiola	1.91	214	*e*P	Pn	11 41 42.2	+2.5
PGF				*e*Sn	Sn	11 42 02.6	-0.6
	comp=E,3.6nm,0.3s						
SBF	Sospel	2.19	264	*e*Pn	Pn	11 41 43.7	+0.3
SBF				*e*Sn	Sn	11 42 09.2	-0.8
	comp=E,7.1nm,0.2s						
MBDF	Montbardon	2.69	284	*e*Pn	Pn	11 41 50.2	-0.3
MBDF	Montbardon	2.69	284	*e*P	Pn	11 41 53.2	+2.7
MBDF				*e*Sn	Sn	11 42 20.6	-2.0
	comp=E,2.4nm,0.4s						
MBDF				*e*Sg	Sg	11 42 34.4	-0.3
	comp=E,5.8nm,0.4s						
FRF	La Foret Royal	2.81	259	*e*Pn	Pn	11 41 52.2	+0.3
FRF				*e*Sn	Sn	11 42 23.9	-1.2
	comp=E,1.6nm,0.2s						

LPG	**La Plagne**	**2.95**	**299**	*e*P	**Pn**	**11 41 56.7**	**+2.5**
LMR	**La Mourre**	**2.96**	**256**	*e*Pn	**Pn**	**11 41 54.6**	**+0.6**
LMR				*e*Sn	**Sn**	**11 42 27.8**	**-1.2**
	comp=E,2.2nm,0.3s						
LPL	**La Plagne**	**2.98**	**299**	*e*P	**Pn**	**11 41 57.0**	**+2.6**
SQTA	**Sankt Quirin**	**3.12**	**10**	*i* Pn	**Pn**	**11 41 58.8**	**+2.4**
	comp=E,3.3nm,0.3s						
SQTA				*e*Sn	**Sn**	**11 42 36.2**	**+3.0**
	comp=E,11nm,0.6s						
WTTA	**Wattenberg**	**3.23**	**15**	*e*Pn	**Pn**	**11 41 59.8**	**+1.9**
	comp=E,1.5nm,0.2s						
WTTA				*e*Sn	**Sn**	**11 42 37.7**	**+1.9**
	comp=E,1.6nm,0.3s						
MOTA	**Moosalm**	**3.23**	**8**	*e*Pn	**Pn**	**11 41 58.7**	**+0.8**
	comp=E,0.3nm,0.1s						
MOTA				*e*Sn	**Sn**	**11 42 39.3**	**+3.3**
	comp=E,0.9nm,0.2s						
WATA	**Walderalm**	**3.29**	**14**	*e*Pn	**Pn**	**11 42 00.6**	**+1.9**
	comp=E,1.1nm,0.1s						
WATA				*i* Sn	**Sn**	**11 42 40.0**	**+2.7**
	comp=E,1.1nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.35**	**285**	*e*Pn	**Pn**	**11 41 59.2**	**-0.3**
SMRF	**Simiane la Rot**	**3.51**	**269**	*e*P	**Pn**	**11 42 04.4**	**+2.8**
SMRF				*e*Sn	**Sn**	**11 42 40.9**	**-1.7**
	comp=E,1.9nm,0.2s						
VIVF	**Saint-Julien-l**	**4.19**	**282**	*e*Pn	**Pn**	**11 42 10.4**	**-0.5**
HINF	**Hinteralfeld**	**4.44**	**327**	*e*Pn	**Pn**	**11 42 13.0**	**-1.4**
HINF	**Hinteralfeld**	**4.44**	**327**	*e*P	**Pn**	**11 42 16.2**	**+1.8**
HINF				*e*Sn	**Sn**	**11 43 01.3**	**-4.3**
	comp=E,12nm,0.5s						
LASF	**Ste Croix**	**4.74**	**271**	*e*Pn	**Pn**	**11 42 17.9**	**-0.6**
HAU	**Haudompre**	**4.80**	**325**	*e*P	**Pn**	**11 42 21.4**	**+2.1**
HAU				*e*Sn	**Sn**	**11 43 09.9**	**-4.4**
	comp=E,25nm,0.5s						
CDF	**Champ du Feu**	**4.80**	**334**	*e*P	**Pn**	**11 42 20.7**	**+1.3**
CDF				*e*Sn	**Sn**	**11 43 09.3**	**-5.1**
	comp=E,3.9nm,0.3s						
SMF	**Signal de Mont**	**5.28**	**301**	*e*Pn	**Pn**	**11 42 24.6**	**-1.3**
SMF	**Signal de Mont**	**5.28**	**301**	*e*P	**Pn**	**11 42 29.3**	**+3.4**
PAGF	**Fort de Pagny**	**5.49**	**325**	*e*P	**Pn**	**11 42 31.4**	**+2.7**
SFTF	**Sexfontaines**	**5.53**	**319**	*e*Pn	**Pn**	**11 42 27.5**	**-1.8**
	baz=140						
SFTF	**Sexfontaines**	**5.53**	**319**	*e*P	**Pn**	**11 42 32.0**	**+2.7**
LOR	**Lormes**	**5.57**	**306**	*e*Pn	**Pn**	**11 42 29.1**	**-0.7**
	baz=127						
LOR				*e*Sn	**Sn**	**11 43 28.9**	**-4.4**
	comp=E,1.6nm,0.3s						
AVF	**Avril sur Loir**	**5.64**	**300**	*e*P	**Pn**	**11 42 34.3**	**+3.5**
BGF	**Bois d'Agland**	**5.87**	**297**	*e*Pn	**Pn**	**11 42 32.9**	**-1.1**
BGF	**Bois d'Agland**	**5.87**	**297**	*e*P	**Pn**	**11 42 37.5**	**+3.5**

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*ROM **02** 11:42:00.2±0.1, 44°.163N±0°.007×10°.490E±0°.007, h16km, ML2.5/6*

*GEN **02** 11:42:00.5, 44°.20N×10°.51E, h14km±2km, Ml2.1*

ISC 02 11:42:00.4±1.0, **44°.18N**±0°.04×**10°.49E**±0°.03, **h16**km±6km, **n14**, σ**0s.22**/26, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARO	**Sassorosso**	**0.07**	**273**	P	**Pg**	**11 42 03.4**	**-0.1**
SARO				S	**Sg**	**11 42 05.3**	**-0.3**
VLC	**Villacollemand**	**0.08**	**254**	P	**Pg**	**11 42 03.7**	**+0.1**
VLC				S	**Sg**	**11 42 06.0**	**+0.4**
VLC				AML	AML		
	comp=E,1560µm,0.1s						
VLC				AML	AML		
	comp=N,2215µm,0.6s						
VLC				AML	AML		
	comp=E,1645µm,0.1s						
VLC				AML	AML		
	comp=N,2175µm,0.6s						
VLC				AML	AML		
	comp=E,1555µm,0.1s						
VLC				AML	AML		
	comp=N,2215µm,0.6s						
VLC				AML	AML		
	comp=E,1645µm,0.1s						
VLC				AML	AML		
	comp=N,2175µm,0.6s						
VLC				AML	AML		
	comp=E,1555µm,0.1s						
VLC				AML	AML		
	comp=E,1645µm,0.1s						
VLC				AML	AML		
	comp=N,2175µm,0.6s						
VLC				AML	AML		
	comp=N,2215µm,0.6s						
BDI	**Bagni Di Lucca**	**0.14**	**147**	*i* P	**Pg**	**11 42 04.2**	**-0.1**
BDI				S	**Sg**	**11 42 06.9**	**0.0**
BDI				AML	AML		
	comp=E,4090µm,0.4s						
BDI				AML	AML		
	comp=N,3480µm,0.3s						
BDI				AML	AML		
	comp=E,3890µm,0.1s						
BDI				AML	AML		
	comp=N,3720µm,0.2s						
BDI				AML	AML		
	comp=N,3720µm,0.2s						
BDI				AML	AML		
	comp=N,3480µm,0.3s						
BDI				AML	AML		
	comp=E,4090µm,0.4s						
BDI				AML	AML		
	comp=E,3890µm,0.1s						
POPM	**Popiglio**	**0.23**	**125**	P	**Pg**	**11 42 05.5**	**-0.1**
POPM				S	**Sg**	**11 42 09.2**	**0.0**
POPM	**Popiglio**	**0.23**	**125**	P	**Pg**	**11 42 05.5**	**-0.1**
POPM				S	**Sg**	**11 42 09.4**	**+0.2**
POPM				AML	AML		
	comp=E,2900µm,0.5s						
POPM				AML	AML		
	comp=N,3625µm,1.4s						
POPM				AML	AML		
	comp=E,2900µm,0.5s						
POPM				AML	AML		
	comp=N,3625µm,1.4s						
POPM				AML	AML		
	comp=E,2900µm,0.5s						
POPM				AML	AML		
	comp=N,3625µm,1.4s						
EQUI	**Equi**	**0.24**	**267**	P	**Pg**	**11 42 05.8**	**0.0**
EQUI				S	**Sg**	**11 42 09.3**	**-0.1**
EQUI	**Equi**	**0.24**	**267**	P	**Pg**	**11 42 05.7**	**0.0**
EQUI				S	**Sg**	**11 42 09.6**	**+0.2**
MAIM	**Mastiano**	**0.27**	**180**	P	**Pg**	**11 42 06.1**	**0.0**
MAIM				S	**Sg**	**11 42 10.5**	**+0.5**
MAIM	**Mastiano**	**0.27**	**180**	P	**Pg**	**11 42 06.1**	**0.0**
MAIM				S	**Sg**	**11 42 10.6**	**+0.5**
MAIM				AML	AML		
	comp=E,516µm,1.4s						
MAIM				AML	AML		
	comp=N,618µm,1.1s						
MAIM				AML	AML		
	comp=E,516µm,1.4s						
MAIM				AML	AML		
	comp=N,617µm,1.1s						
MAIM				AML	AML		
	comp=E,516µm,1.4s						
MAIM				AML	AML		
	comp=N,617µm,1.1s						
ZCCA	**Zocca**	**0.39**	**64**	P	**Pb**	**11 42 09.1**	**+0.1**
ZCCA				AML	AML		
	comp=E,531µm,0.3s						
ZCCA				AML	AML		
	comp=N,529µm,0.4s						
ZCCA				AML	AML		
	comp=E,531µm,0.3s						
ZCCA				AML	AML		
	comp=N,530µm,0.4s						
ZCCA				AML	AML		
	comp=N,530µm,0.4s						
ZCCA				AML	AML		
	comp=E,531µm,0.3s						
MTCR	**Monte La Croce**	**0.40**	**113**	P	**Pg**	**11 42 08.3**	**-0.2**
MTCR				S	**Sg**	**11 42 14.1**	**+0.2**
GRAM	**Graiana**	**0.43**	**316**	P	**Pg**	**11 42 09.2**	**+0.1**
GRAM				S	**Sb**	**11 42 15.9**	**-0.2**
GRAM	**Graiana**	**0.43**	**316**	P	**Pg**	**11 42 09.4**	**+0.2**
GRAM				S	**Sb**	**11 42 16.0**	**-0.1**
GRAM				AML	AML		
	comp=E,1220µm,0.3s						
GRAM				AML	AML		
	comp=N,829µm,0.7s						
GRAM				AML	AML		
	comp=E,1220µm,0.3s						
GRAM				AML	AML		
	comp=N,829µm,0.7s						
GRAM				AML	AML		
	comp=E,1220µm,0.3s						
GRAM				AML	AML		
	comp=N,829µm,0.7s						
PLMA	**Palmaria, Port**	**0.48**	**254**	P	**Pb**	**11 42 10.3**	**-0.2**

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*SOME **02** 11:49:42.6, 40°.97N×71°.12E, h15km*

*KRNET **02** 11:49:47.1±0.1, 41°.33N×71°.12E, h16km, mb2.3*

*NNC **02** 11:49:47.5±2.3, 41°.24N×71°.22E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=18.4km s-min=11.7km az=22.0*

ISC 02 11:49:48.0±1.1, **41°.27N**±0°.04×**71°.19E**±0°.04, **h16**km±12km, **n19**, σ**1s.05**/29, **20C-1D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.79**	**47**	⇑*i*P	**Pg**	**11 50 02.3**	**-1.0**
	baz=55						
ARK				⇑*i*S	**Sg**	**11 50 13.4**	**-0.3**
	baz=55						
IUG	**Iuzhnay**	**1.23**	**316**	P	**Pn**	**11 50 09.7**	**-1.0**
	9.3nm,0.2s						
IUG				S	**Sg**	**11 50 29.3**	**+1.4**
	19nm,0.3s						
IUG	**Iuzhnay**	**1.23**	**316**	*e*P	**Pn**	**11 50 09.7**	**-1.0**
	7.8nm,0.2s						
IUG				*e*S	**Sg**	**11 50 29.3**	**+1.4**
	19nm,0.3s						
BTK	**Batken**	**1.24**	**193**	⇑*i*P	**Pg**	**11 50 11.5**	**-0.4**
	baz=90						
BTK				⇑*i*S	**Sg**	**11 50 29.6**	**+1.5**
	baz=90						
ARSB	**Arslanbob**	**1.35**	**87**	⇑*i*P	**Pb**	**11 50 13.3**	**+0.3**
	baz=90						
ARSB				⇑*i*S	**Sg**	**11 50 32.6**	**+1.0**
	baz=90						
MNAS	**Manas**	**1.56**	**38**	⇑Pg	**Pb**	**11 50 16.7**	**0.0**
	1.3nm,0.4s						
MNAS				⇑Lg	Lg	11 50 40.5	
	2.5nm,0.5s						
MNAS	**Manas**	**1.56**	**38**	P	**Pn**	**11 50 15.9**	**+0.6**
	1.4nm,0.2s						
MNAS				S	**Sg**	**11 50 40.1**	**+1.6**
	2.8nm,0.3s						
MNAS	**Manas**	**1.56**	**38**	⇑*i*P	**Pn**	**11 50 15.9**	**+0.6**
	baz=41						
MNAS				⇑*i*S	**Sb**	**11 50 37.1**	**+0.8**
	baz=41						
KK31	**Karatay Array**	**1.90**	**345**	Pg	**Pn**	**11 50 20.3**	**+0.5**
	2.6nm,0.3s,baz=150,slow=14,SNR=48						
KK31				Lg	Lg	11 50 47.3	
	12nm,0.7s,baz=154,slow=25,SNR=14						
AML	**Almayashu**	**2.06**	**64**	⇑*i*P	**Pb**	**11 50 24.5**	**-0.8**
	baz=67						
AML				⇑*i*S	**Sg**	**11 50 53.7**	**-0.7**
	baz=67						
MRKS	**Merke**	**2.12**	**45**	Pg	**Pb**	**11 50 25.9**	**-0.2**
	4.3nm,0.4s						
MRKS				Lg	Lg	11 50 56.9	
	4.1nm,0.3s						
MRKS	**Merke**	**2.12**	**45**	*e*P	**Pb**	**11 50 25.8**	**-0.2**
	1.4nm,0.2s						
MRKS				*e*S	**Sg**	**11 50 57.0**	**+0.9**
	2.2nm,0.4s						
SFK	**Sufi-Kurgan**	**2.16**	**125**	⇑Lg	Lg	11 50 56.6	
	1.5nm,0.4s						
SFK	**Sufi-Kurgan**	**2.16**	**125**	Pg	**Pb**	**11 50 25.9**	**-1.0**
	0.6nm,0.1s						
SFK				Lg	Lg	11 50 56.9	
	2.2nm,0.2s						
EKS2	**Erkin-Say**	**2.38**	**53**	⇑*i*P	**Pn**	**11 50 28.1**	**+1.6**
	baz=55						
EKS2				⇑*i*S	**Sb**	**11 50 59.1**	**-0.6**
	baz=55						
ARLS	**Aral**	**2.42**	**75**	⇑*i*P	**Pb**	**11 50 30.4**	**-0.9**
	baz=76						
ARLS				⇑*i*S	**Sb**	**11 51 01.9**	**+0.8**
	baz=76						
UCH	**Uchtor**	**2.67**	**68**	⇑*i*P	**Pb**	**11 50 33.6**	**-2.0**
	baz=69						
UCH				⇑*i*S	**Sb**	**11 51 08.5**	**+0.2**
	baz=69						
AAK	**Ala-Archa**	**2.82**	**60**	Pg	**Pb**	**11 50 37.2**	**-0.9**
	0.5nm,0.3s						
AAK				⇓Lg	Lg	11 51 16.4	
	1.9nm,0.5s						
TKM2	**Tokmak 2**	**3.67**	**62**	⇑Lg	Lg	11 51 41.8	
	2.2nm,0.8s						

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*IDC **02** 11:53:59.6±0.8, 9°.34S×113°.00E, h0km, mb4.2/11, mb1 4.4/13, mb1mx4.2/41, mbtmp4.2/13, ML4.2/2, MS3.4/4, Ms1 3.5/4, ms1mx3.0/35, Error ellipse: s-maj=29.2km s-min=11.7km az=48.0*

*ISCJB **02** 11:54:02.1±0.3, 9°.82S±0°.04×112°.90E±0°.03, h33km, mb4.4/26, MS3.4/3, Error ellipse: s-maj=5.5km s-min=3.3km az=25.3*

*NEIC **02** 11:54:03.7±0.3, 9°.68S×112°.97E, h35km, mb4.5/15, Error ellipse: s-maj=7.6km s-min=4.3km az=217.0*

*DJA **02** 11:54:04.1±0.5, 10°S±6°×11°3E±°, h10km, M4.6/20, mb4.8/7, mB5.0/5, MLv4.7/20, Mw(mB)4.3/5*

ISC 02 11:54:04.1±0.4, **9°.81S**±0°.05×**112°.91E**±0°.04, **h35**km, **n94**, σ**2s.30**/103, **mb4.5**/30, **MS3.3**/3, **1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.81**	**43**	*e*Pn	**Pn**	**11 54 31.5**	**-1.3**
JAGI				*e*Sn	**Sn**	**11 54 52.2**	**-2.3**
JAGI	**Jajag, Banyuwa**	**1.81**	**43**	P	**Pn**	**11 54 31.9**	**-0.9**
PCJI	**Pacitan**	**2.35**	**313**	P	**Pn**	**11 54 40.2**	**0.0**
IGBI	**Denpasar**	**2.42**	**66**	P	**Pn**	**11 54 42.2**	**+1.1**
DNP	**Denpasar**	**2.53**	**64**	P	**Pn**	**11 54 44.7**	**+2.0**
WOJI	**Wonogiri, Jawa**	**2.78**	**315**	P	**Pn**	**11 54 46.7**	**+0.6**
NGJI	**Ngawi**	**2.82**	**329**	P	**Pn**	**11 54 49.6**	**+2.9**
SRBI	**Singaraja**	**2.85**	**53**	P	**Pn**	**11 54 48.6**	**+1.5**
GRJI	**Gresik**	**2.91**	**352**	P	**Pn**	**11 54 49.1**	**+1.2**
KMMI	**Kalianget**	**2.94**	**21**	P	**Pn**	**11 54 48.9**	**+0.6**
UGM	**Wanagama**	**3.02**	**308**	*e*Pn	**Pn**	**11 54 49.8**	**+0.3**
UGM				*e*Sn	**Sn**	**11 55 24.8**	**+0.3**
UGM	**Wanagama**	**3.02**	**308**	P	**Pn**	**11 54 50.4**	**+0.9**
TBJI	**Tambak Boyo**	**3.16**	**340**	P	**Pn**	**11 54 52.9**	**+1.6**
SMRI	**Semarang**	**3.68**	**318**	*e*Pn	**Pn**	**11 54 58.9**	**+0.4**
SMRI	**Semarang**	**3.68**	**318**	P	**Pn**	**11 55 00.0**	**+1.5**
KPJI	**Karang Pucung**	**4.64**	**302**	P	**Pn**	**11 55 13.6**	**+1.8**
CMJI	**Cimerak**	**4.85**	**294**	P	**Pn**	**11 55 15.8**	**+1.2**
PLAI	**Plampang**	**4.90**	**79**	P	**Pn**	**11 55 18.0**	**+2.7**
CISI	**Cisompet, Garu**	**5.51**	**294**	*e*Pn	**Pn**	**11 55 24.0**	**+0.1**
CISI				*e*Sn	**Sn**	**11 56 26.1**	**0.0**
CISI	**Cisompet, Garu**	**5.51**	**294**	P	**Pn**	**11 55 24.7**	**+0.9**
	123nm,0.6s,3µm						
XMIS	**Christmas Isla**	**7.18**	**264**	*e*Pn	**Pn**	**11 55 47.2**	**+0.6**
XMIS				*e*Sn	**Sn**	**11 57 03.3**	**-3.7**
BKSI	**Bulukumba**	**8.42**	**59**	P	**Pn**	**11 56 06.8**	**+3.1**
EDFI	**Ende, Flores**	**8.73**	**84**	P	**Pn**	**11 56 08.5**	**+0.5**
BNSI	**Bone**	**8.94**	**54**	P	**Pn**	**11 56 14.2**	**+3.5**
MMRI	**Maumere**	**9.28**	**84**	*e*Pn	**Pn**	**11 56 15.2**	**-0.3**
BATI	**Baumata**	**10.60**	**93**	Pn	**Pn**	**11 56 30.6**	**-3.0**
	2.0nm,0.3s,baz=156,slow=12,SNR=1.8						
BATI				Sn	**Sn**	**11 58 30.7**	**-0.4**
	4.5nm,0.3s,baz=108,slow=20,SNR=3.2						
SOEI	**Soe**	**11.19**	**91**	*e*Pn	**Pn**	**11 56 41.0**	**-0.8**
SOEI				*e*Sn	**Sn**	**11 58 44.0**	**-1.8**
SOEI	**Soe**	**11.19**	**91**	P	**Pn**	**11 56 43.6**	**+1.8**
MNAI	**Manna**	**11.27**	**298**	*e*Pn	**Pn**	**11 56 42.8**	**0.0**
GIRL	**Giralia**	**12.82**	**174**	*e*Pn	**Pn**	**11 57 04.7**	**+0.8**
MBWA	**Marble Bar**	**13.05**	**151**	*e*Pn	**Pn**	**11 57 06.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**14.84**	**125**	*e*Pn	**Pn**	**11 57 31.0**	**-0.5**
FITZ				*e*Sn	**Sn**	**12 00 11.8**	**-3.0**
FITZ	**Fitzroy Crossi**	**14.84**	**125**	Pn	**Pn**	**11 57 31.6**	**+0.2**
	0.7nm,0.3s,baz=316,slow=12,SNR=20						
FITZ				Sn	**Sn**	**12 00 08.0**	**-6.7**
	1.2nm,0.3s,baz=3.5,slow=19,SNR=8.1						
MTN	**Manton Dam**	**18.12**	**101**	*e*Pn	**P**	**11 58 13.3**	**+0.1**
	30nm,1.2s						
PSI	**Prapat**	**18.74**	**311**	LR	LR	12 05 52.4	
	comp=Z,153nm,20.7s,baz=115,slow=39						
MORW	**Morawa**	**19.38**	**172**	*e*P	**Pn**	**11 58 27.8**	**-0.5**
	11nm,1.0s						
FAKI	**Fak Fak**	**20.39**	**72**	*e*P	**P**	**11 58 37.0**	**-1.1**
	59nm,1.6s						
WR1	**Warramunga Arr**	**23.00**	**118**	*e*P	**P**	**11 59 07.5**	**+1.5**
	7.8nm,0.6s						
WR1				*e*Sn	**S**	**12 03 22.6**	**+8.2**
WRA	**Warramunga Arr**	**23.00**	**118**	P	**P**	**11 59 07.5**	**+1.5**
	6.8nm,0.8s,baz=291,slow=11,SNR=46						
WRA				S	**S**	**12 03 22.6**	**+8.2**
	0.6nm,0.6s,baz=286,slow=24,SNR=4.7						
WRA				LR	LR	12 08 13.5	
	comp=Z,70nm,20.4s,baz=305,slow=37						
WRAB	**Tennant Creek**	**23.00**	**118**	*e*P	**P**	**11 59 06.5**	**+0.3**
	8.6nm,0.8s						
WB2	**Warramunga Arr**	**23.01**	**118**	*e*P	**P**	**11 59 05.8**	**-0.3**
AS31	**Alice Springs**	**24.32**	**127**	*e*P	**P**	**11 59 19.4**	**+0.7**
	4.6nm,0.6s						
ASAR	**Alice Springs**	**24.32**	**127**	P	**P**	**11 59 21.6**	**+2.9**
	14nm,0.7s,baz=304,slow=8.8,SNR=196						
ASAR				PcP	**PcP**	**12 02 59.5**	**+1.5**
	0.7nm,0.8s,baz=336,slow=1.1,SNR=4.1						
ASAR				S	S	12 03 57.9	+22
	1.9nm,0.8s,baz=303,slow=24,SNR=8.6						
AS01	**Alice Springs**	**24.36**	**127**	*e*P	**P**	**11 59 20.1**	**+1.1**
FORT	**Forrest**	**25.18**	**148**	*e*P	**P**	**11 59 27.6**	**+1.3**
	26nm,0.7s						
COEN	**Coen**	**29.89**	**101**	*e*P	**P**	**12 00 07.7**	**-1.0**
	9.3nm,1.0s						
CM01	**Chiang Mai Arr**	**31.25**	**334**	*e*P	**P**	**12 00 19.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**31.29**	**334**	P	**P**	**12 00 19.5**	**-1.6**
	1.4nm,0.8s,baz=166,slow=8.3,SNR=8.7						
CMAR				LR	LR	12 12 36.3	
	comp=Z,65nm,20.8s,baz=192,slow=36						
BBOO	**Buckleboo**	**31.30**	**140**	*e*P	**P**	**12 00 21.0**	**-0.1**
	14nm,1.3s						
STKA	**Stephens Creek**	**34.45**	**134**	*e*P	**P**	**12 00 49.1**	**+0.5**
	1.9nm,0.8s						
STKA	**Stephens Creek**	**34.45**	**134**	P	**P**	**12 00 52.2**	**+3.6**
	7.1nm,0.7s,baz=302,slow=9.3,SNR=19						
KMI	**Kunming**	**36.11**	**344**	P	**P**	**12 01 06.6**	**+3.5**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NJ2	**Nanjing**	**42.01**	**8**	*e*P	**P**	**12 01 51.4**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
XAN	**Xi'an**	**43.77**	**355**	P	P	12 02 11.4	+5.0
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,120nm,6.0s						
JIRN	**Jiri**	**45.36**	**326**	*e*P	**P**	**12 02 19.2**	**-0.4**
	comp=Z,12nm,0.5s						
GUN	**Gumba**	**45.73**	**326**	*e*P	**P**	**12 02 21.2**	**-1.3**
	comp=Z,11nm,0.6s						
PKI	**Pulchoki**	**45.73**	**325**	*e*P	**P**	**12 02 22.2**	**-0.3**
LZH	**Lanzhou**	**46.45**	**350**	*e*P	**P**	**12 02 29.0**	**+1.2**
LZH				pP	pP	12 02 37.4	+0.1
LZH				sP	pwP	12 02 42.0	+0.9
KOLN	**Koldanda**	**46.92**	**324**	*e*P	**P**	**12 02 30.3**	**-1.4**
	comp=Z,7.4nm,0.5s						
DANN	**Dangsing**	**47.26**	**324**	*e*P	**P**	**12 02 32.7**	**-1.8**
	comp=Z,7.8nm,0.5s						
BJT	**Baijiatuau**	**49.67**	**3**	*e*P	**P**	**12 02 52.6**	**+0.2**
	comp=Z,8.4nm,1.2s						
HHC	**Hu-ho-hao-te**	**50.42**	**359**	*e*P	**P**	**12 03 01.4**	**+3.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
MAJO	**Matsushiro**	**51.89**	**26**	*e*P	**P**	**12 03 05.8**	**-3.4**
MJAR	**Matsushiro Arr**	**51.89**	**26**	P	**P**	**12 03 05.8**	**-3.4**
	comp=Z,2.2nm,0.8s,baz=204,slow=8.6,SNR=5.3						
USRK	**Ussuriysk Ar.**	**56.47**	**16**	P	**P**	**12 03 39.6**	**-2.8**
	comp=Z,0.9nm,0.6s,baz=206,slow=9.5,SNR=2.5						
NIL	**Nilore**	**57.35**	**321**	*e*P	**P**	**12 03 47.0**	**-2.0**
	comp=Z,6.3nm,1.0s						
ULN	**Ulaanbaatar**	**57.66**	**355**	*e*P	**P**	**12 03 49.7**	**-1.3**
	comp=Z,6.9nm,1.4s						
SONA0	**Songino Array**	**57.68**	**355**	*e*P	**P**	**12 03 49.3**	**-1.9**
SONM	**Songino Array**	**57.68**	**355**	P	**P**	**12 03 49.3**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=174,slow=7.1,SNR=7.8						
SONA1	**Songino Array**	**57.69**	**355**	*e*P	**P**	**12 03 49.3**	**-1.9**
WMQ	**Urumqi**	**58.09**	**339**	*e*P	**P**	**12 03 55.3**	**+1.3**
KSH	**Kashi**	**59.87**	**327**	P	**P**	**12 04 10.8**	**+4.3**
KSH				pP	sP	12 04 21.4	+1.1
KSH				PP	**PP**	**12 06 26.3**	**+7.3**
KSH				pmax	pmax		
	comp=Z,360nm,5.3s						
MK01	**Makanchi Array**	**62.61**	**337**	*e*P	**P**	**12 04 22.9**	**-1.9**
MK31	**Makanchi Array**	**62.63**	**337**	*e*P	**P**	**12 04 23.2**	**-1.8**
MK32	**Makanchi Array**	**62.63**	**337**	*e*P	**P**	**12 04 23.2**	**-1.8**
MKAR	**Makanchi Array**	**62.63**	**337**	*e*P	**P**	**12 04 23.2**	**-1.8**
	comp=Z,13nm,0.5s						
MKAR	**Makanchi Array**	**62.63**	**337**	P	**P**	**12 04 23.2**	**-1.8**
	comp=Z,2.0nm,0.6s,baz=150,slow=7.4,SNR=40						
AAK	**Ala-Archa**	**62.90**	**329**	*e*P	**P**	**12 04 26.0**	**-1.0**
	comp=Z,3.1nm,0.9s						
ZALV	**Zalesovo Beam**	**67.83**	**343**	*e*P	**P**	**12 04 56.2**	**-2.2**
ZALV	**Zalesovo Beam**	**67.83**	**343**	P	**P**	**12 04 55.6**	**-2.9**
	comp=Z,1.0nm,0.4s,baz=168,slow=4.6,SNR=8.2						
ZAA1	**Zalesovo Array**	**67.83**	**343**	*e*P	**P**	**12 04 55.6**	**-2.9**
GYA0B	**ALIBECK ARRAY**	**69.78**	**316**	*e*P	**P**	**12 05 09.7**	**-1.4**
	comp=Z,6.0nm,1.0s						
VNDA	**Vanda**	**72.18**	**170**	*e*P	**P**	**12 05 26.0**	**+1.1**
VNDA	**Vanda**	**72.18**	**170**	P	**P**	**12 05 27.6**	**+2.7**
	comp=Z,1.8nm,0.9s,baz=82,slow=2.8,SNR=3.1						
ABKAR	**Akbulak array**	**74.87**	**327**	*e*P	**P**	**12 05 39.8**	**-1.3**
SYO	**Syowa Base**	**74.94**	**201**	⇑*e*P	**P**	**12 05 41.0**	**-0.2**
BOSA	**Boshof**	**83.33**	**242**	LR	LR	12 37 24.0	
	comp=Z,30nm,19.5s,baz=215,slow=31						
BR101	**Keskin Array S**	**88.07**	**311**	*e*P	**P**	**12 06 51.5**	**+0.2**
BRTR	**Keskin Array B**	**88.07**	**311**	P	**P**	**12 06 51.5**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=148,slow=5.3,SNR=6.6						
YKA	**Yellowknife Ar**	**117.32**	**23**	PKP	**PKPdf**	**12 12 45.0**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=304,slow=1.8,SNR=3.9						
NVAR	**Mina Array Bea**	**126.13**	**49**	PKP	**PKiKP**	**12 13 05.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=306,slow=2.1,SNR=2.6						
T42A	**Van Buren**	**145.29**	**35**	*e*PKPbc	**PKPdf**	**12 13 38.8**	**+0.1**
MIAR	**Mount Ida**	**145.46**	**40**	*e*PKPbc	**PKPab**	**12 13 39.5**	**+0.3**
LPAZ	**La Paz**	**154.05**	**178**	PKPab	**PKPab**	**12 14 16.7**	**+1.6**
	comp=Z,1.3nm,0.6s,baz=243,slow=2.3,SNR=3.7						

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*IDC **02** 11:57:59.1±0.8, 10°.80S×165°.37E, h0km, mb3.9/11, mb1 4.2/13, mb1mx4.0/36, mbtmp4.0/13, ML4.6/2, MS3.4/3, Ms1 3.4/3, ms1mx3.0/28, Error ellipse: s-maj=28.7km s-min=18.9km az=148.0*

*NEIC **02** 11:58:00.6±0.2, 10°.84S×165°.42E, h10km, mb4.5/8, Error ellipse: s-maj=6.7km s-min=5.0km az=88.0*

*ISCJB **02** 11:58:01.7±0.4, 10°.97S±0°.05×165°.37E±0°.06, h30km, mb4.1/17, MS3.5/2, Error ellipse: s-maj=8.8km s-min=7.4km az=146.2*

ISC 02 11:58:03.5±0.6, **10°.87S**±0°.09×**165°.40E**±0°.08, **h30**km, **n37**, σ**1s.13**/38, **mb4.2**/17, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.55**	**284**	*e*P	**Pn**	**11 59 20.0**	**-4.2**
HNR	**Honiara**	**5.55**	**284**	*e*Pn	**Pn**	**11 59 23.4**	**-0.7**
HNR				*e*Sn	**Sn**	**12 00 29.1**	**+2.1**
HNR	**Honiara**	**5.55**	**284**	Pn	**Pn**	**11 59 22.0**	**-2.2**
	40nm,0.3s,baz=148,slow=5.4,SNR=8.7						
HNR				Sn	**Sn**	**12 00 29.1**	**+2.1**
	4.8nm,0.3s,baz=18,slow=12,SNR=2.3						
HNR				LR	LR	12 01 49.5	
	comp=Z,294nm,19.4s,baz=100,slow=42						
DZM	**Mont Dzumac**	**11.18**	**175**	*e*Pn	**Pn**	**12 00 40.6**	**-0.9**
DZM	**Mont Dzumac**	**11.18**	**175**	Pn	**Pn**	**12 00 40.9**	**-0.6**
	2.2nm,0.3s,baz=14,slow=5.6,SNR=38						
ONTNC	**Ouen Toro**	**11.42**	**175**	*e*Pn	**Pn**	**12 00 43.7**	**-0.9**
OUENC	**Ouen Island, N**	**11.57**	**173**	*e*Pn	**Pn**	**12 00 46.4**	**-0.2**
PINNC	**Pines Island,**	**11.84**	**171**	*e*Pn	**Pn**	**12 00 50.3**	**-0.1**
CTA	**Charters Tower**	**20.58**	**241**	P	**P**	**12 02 41.4**	**+1.2**
	2.7nm,0.6s,baz=77,slow=8.6,SNR=3.1						
CTAO	**Charters Tower**	**20.58**	**241**	*e*P	**P**	**12 02 40.6**	**+0.4**
	10nm,1.0s						
COEN	**Coen**	**21.92**	**260**	*e*P	**P**	**12 02 55.4**	**+0.8**
	6.6nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**29.20**	**3**	T	T	12 34 40.5	
	baz=183,slow=76,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**29.21**	**3**	T	T	12 34 37.8	
	baz=183,slow=76,SNR=6.5						
H11S1	**WAKE ISLAND Hy**	**29.22**	**3**	T	T	12 34 43.9	
	baz=183,slow=76,SNR=15						
WR1	**Warramunga Arr**	**31.22**	**249**	*e*P	**P**	**12 04 20.5**	**-0.1**
	4.3nm,0.9s						
WR1				*e*PcP	**PcP**	**12 07 16.1**	**+1.0**
WRA	**Warramunga Arr**	**31.22**	**249**	P	**P**	**12 04 20.5**	**-0.2**
	1.5nm,0.9s,baz=80,slow=9.2,SNR=3.0						

WRA				PcP	PcP	12 07 16.1	+1.0
	0.7nm,0.7s,baz=79,slow=3.2,SNR=5.4						
KHZ	Kahutara	32.22	169	eP	P	12 04 29.6	+0.5
	30nm,1.4s						
ASAR	Alice Springs	32.57	243	P	P	12 04 31.6	-0.8
	1.9nm,0.5s,baz=61,slow=10,SNR=12						
ASAR				PcP	PcP	12 07 19.2	+0.5
	0.7nm,0.6s,baz=69,slow=3.1,SNR=4.3						
ASAR				LR	LR	12 17 09.9	
	comp=Z,47nm,18.8s,baz=33,slow=35						
MJAR	Matsushiro Arr	53.66	333	P	P	12 07 22.2	-0.2
	1.9nm,0.9s,baz=175,slow=8.7,SNR=4.4						
MAJO	Matsushiro	53.66	333	eP	P	12 07 22.2	-0.3
MA2	Magadan	71.19	352	LR	LR	12 35 23.1	
	comp=Z,51nm,19.1s,baz=79,slow=32						
SONA0	Songino Array	78.32	324	eP	P	12 10 00.2	-0.8
SONM	Songino Array	78.32	324	P	P	12 10 00.2	-0.8
	0.5nm,0.8s,baz=131,slow=5.9,SNR=4.2						
SONA1	Songino Array	78.33	324	eP	P	12 10 00.9	-0.1
QSPA	South Pole Qui	79.13	180	eP	P	12 10 05.5	+0.3
	8.2nm,1.4s						
SUA	Susitna One	79.88	20	eP	P	12 10 09.5	+0.3
	5.4nm,1.1s						
TRF	Thorofare Moun	81.46	19	eP	P	12 10 18.8	+1.1
	16nm,1.5s						
ILAR	Eielson Array	83.46	19	P	P	12 10 28.4	+0.5
	1.0nm,0.5s,baz=239,slow=5.0,SNR=32						
ILB	Eielson Array	83.46	19	eP	P	12 10 28.1	+0.2
NV01	Mina Array Sit	86.17	50	eP	P	12 10 41.9	-0.6
NVAR	Mina Array Bea	86.17	50	P	P	12 10 43.0	+0.6
	1.5nm,0.9s,baz=234,slow=7.1,SNR=7.1						
U15A	North Rim	90.27	53	eP	P	12 11 02.1	0.0
	2.6nm,0.9s						
MK32	Makanchi Array	93.16	317	eP	P	12 11 15.2	+0.3
MKAR	Makanchi Array	93.16	317	P	P	12 11 15.2	+0.3
	0.4nm,0.6s,baz=96,slow=4.5,SNR=4.6						
PDAR	Pinedale Array	93.69	47	P	P	12 11 17.6	-0.1
	0.2nm,0.6s,baz=191,slow=4.3,SNR=2.6						
YKA	Yellowknife Ar	94.97	27	P	P	12 11 21.9	-0.9
	0.1nm,0.5s,baz=254,slow=4.6,SNR=3.2						
TXAR	Lajitas Array	96.05	61	P	P	12 11 29.4	+0.8
	0.1nm,0.6s,baz=266,slow=3.6,SNR=2.5						

IDC 02 12:14:25.1±3.0**,30°.49S**×**60°.55E,h0**^{km}**,mb3.5**/4**,
mb1 3.7**/4**,mb1mx3.5**/37**,mbtmp3.5**/4**,Error ellipse:
s-maj=96.0km s-min=41.2km az=50.0,Southwest Indian
Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	61.10	42	P	P	12 24 40.5	-0.7
	0.6nm,0.5s,baz=217,slow=7.4,SNR=4.5						
ASAR	Alice Springs	64.65	104	P	P	12 25 04.9	-0.1
	0.3nm,0.7s,baz=241,slow=6.8,SNR=4.1						
WRA	Warramunga Arr	66.56	100	P	P	12 25 17.8	+0.4
	0.3nm,0.8s,baz=244,slow=5.6,SNR=3.9						
MKAR	Makanchi Array	79.40	15	P	P	12 26 33.4	+0.7
	0.3nm,0.8s,baz=205,slow=6.4,SNR=2.9						
YKA	Yellowknife Ar	147.84	356	PKPbc	PKPbc	12 34 10.0	-1.3
	0.2nm,0.6s,baz=350,slow=2.8,SNR=5.7						

*NIED **02** 12:17:00,40°.10N×142°.80E,h35^{km},Mw3.7 Best double
couple: M$_0$3.99000×10^{14} NP1:φ$_s$175.00000°,δ13.00000°,
λ78.00000°. NP2:φ$_s$7.00000°,δ77.00000°,λ93.00000°.*

*IDC **02** 12:17:39.3±1.8,40°.08N×143°.12E,h0^{km},mb3.5/6,
mb1 3.5/8,mb1mx3.4/43,mbtmp3.5/8,ML2.6/2,MS3.2/1,
Ms1 3.2/1,ms1mx2.5/35,Error ellipse: s-maj=50.8km
s-min=22.0km az=79.0*

*ISCJB **02** 12:17:41.7±1.2,40°.07N±0°.04×142°.98E±0°.07,h19^{km}±7^{km},
mb3.4/6,MS3.1/1,Error ellipse: s-maj=8.8km s-min=6.9km
az=12.5*

*JMA **02** 12:17:44.0±0.1,40°.07N×142°.83E,h21^{km}±2^{km},M3.8*

ISC 02 12:17:41.0±1.9**,40°.10N**±0°.04×**142°.95E**±0°.07**,h9**^{km}±10^{km}**,
n27,**σ**1s.07**/31**,mb3.5**/6**,Near east coast of eastern
Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.85	259	P	Pb	12 17 58.4	+0.4
JTH				S	Sg	12 18 08.8	+0.3
JKEN	Kujiedanarisaw	0.96	277	P	Pb	12 18 00.2	+0.4
JKEN				eS	Sg	12 18 11.5	-0.5
MIYJ	Miyakonagasawa	1.02	239	P	Pg	12 18 00.8	+0.2
MIYJ				eS	Sg	12 18 12.7	-1.1
JANG	Nango	1.14	284	P	Pb	12 18 02.8	0.0
JANG				eS	Sb	12 18 16.0	-1.7
JKZ	Kuzumaki	1.25	265	P	Pn	12 18 04.9	+0.2
JKZ				eS	Sb	12 18 20.5	-0.6
OFUJ	Ofunato	1.42	225	P	Pb	12 18 07.6	-0.1
OFUJ				S	Sn	12 18 25.1	-0.7
JOM	Ohasama	1.43	244	P	Pb	12 18 07.5	-0.3
JOM				eS	Sn	12 18 24.7	-1.2
JARK	Aomorirokkasho	1.51	307	P	Pb	12 18 09.7	+0.5
JARK				eS	Sb	12 18 29.1	+0.6
JTM	Tenmabayashi	1.59	296	P	Pb	12 18 10.6	0.0
JTM				eS	Sn	12 18 30.2	+0.1
JMK	Ichinoseki	1.76	230	P	Pb	12 18 13.1	-0.4
JMK				eS	Sn	12 18 33.7	-0.6
JAH	Hinai	1.78	274	P	Pb	12 18 13.4	-0.4
JAH				S	Sn	12 18 35.1	+0.5
ASAJ	Asahikawa	4.02	356	Pn	Pn	12 18 44.2	+1.4
	0.5nm,0.3s,baz=205,slow=8.9,SNR=4.0						
ASAJ				Sn	Sb	12 19 37.1	-3.6
	1.5nm,0.3s,baz=13,slow=18,SNR=4.2						
MJAR	Matsushiro Arr	5.15	228	Pn	Pn	12 19 00.6	+2.3
	0.1nm,0.3s,baz=37,slow=13,SNR=8.8						
USRK	Ussuriysk Ar.	9.12	300	Pn	Pn	12 19 58.1	+5.4
	0.2nm,0.3s,baz=103,slow=13,SNR=3.5						
GUMO	Guam	26.46	176	LR	LR	12 33 24.4	
	comp=Z,50nm,19.7s,baz=106,slow=36						
SONM	Songino Array	27.22	299	P	P	12 23 25.4	+0.2
	0.4nm,0.7s,baz=81,slow=8.9,SNR=2.9						
H11N2	WAKE ISLAND Hy	28.87	128	T	T	12 54 30.2	
	baz=318,slow=75,SNR=31						
H11N1	WAKE ISLAND Hy	28.88	128	T	T	12 54 28.5	
	baz=318,slow=75,SNR=34						
H11N3	WAKE ISLAND Hy	28.89	128	T	T	12 54 31.1	
	baz=318,slow=75,SNR=31						
H11S1	WAKE ISLAND Hy	29.69	130	T	T	12 55 38.8	
	baz=320						
H11S3	WAKE ISLAND Hy	29.70	130	T	T	12 55 41.7	
	baz=320						
H11S2	WAKE ISLAND Hy	29.71	130	T	T	12 55 34.4	
	baz=320						
ZALV	Zalesovo Beam	40.81	310	P	P	12 25 23.2	+0.7
	0.8nm,0.5s,baz=78,slow=7.5,SNR=4.6						
MKAR	Makanchi Array	43.58	300	P	P	12 25 45.1	-0.1
	0.3nm,0.6s,baz=90,slow=7.0,SNR=4.4						
WRA	Warramunga Arr	60.27	189	P	P	12 27 48.7	-1.1
	0.5nm,1.0s,baz=7.6,slow=6.9,SNR=4.6						
ASAR	Alice Springs	63.99	189	P	P	12 28 15.2	+0.4
	0.3nm,0.9s,baz=19,slow=5.9,SNR=3.7						
FINES	FINESS Array B	66.67	332	P	P	12 28 31.9	+0.3
	1.1nm,0.9s,baz=35,slow=5.1,SNR=2.5						

IDC 02 12:17:58.9±1.7**,10°.90S**×**165°.32E,h0**^{km}**,mb3.7**/3**,
mb1 4.1**/4**,mb1mx3.6**/38**,mbtmp3.9**/4**,ML4.3**/1**,MS3.5**/2**,
Ms1 3.5**/2**,ms1mx2.8**/26**,Error ellipse: s-maj=52.1km
s-min=30.0km az=127.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.49	285	LR	LR	12 21 31.2	
	comp=Z,92nm,21.7s,baz=61,slow=39						
DZM	Mont Dzumac	11.16	175	Pn	Pn	12 20 40.4	+0.5
	2.3nm,0.3s,baz=304,slow=10,SNR=68						
RAO	Raoul Island	24.05	142	LR	LR	12 30 33.4	
	comp=Z,766nm,20.6s,baz=348,slow=31						
WRA	Warramunga Arr	31.14	249	P	P	12 24 19.9	+0.3
	0.3nm,0.7s,baz=82,slow=9.0,SNR=4.6						
ASAR	Alice Springs	32.49	243	P	P	12 24 31.1	-0.3
	1.5nm,0.7s,baz=67,slow=10,SNR=26						
ILAR	Eielson Array	83.50	19	P	P	12 30 28.2	0.0
	0.3nm,0.5s,baz=238,slow=4.8,SNR=9.4						

*ISK **02** 12:31:41.7,37°.34N×37°.12E,h9^{km},ML1.9/3*

*ISCJB **02** 12:31:42.7±0.5,37°.30N±0°.04×37°.13E±0°.04,h4^{km}±6^{km},
Error ellipse: s-maj=6.9km s-min=4.1km az=26.4*

*DDA **02** 12:31:42.1,37°.31N×37°.12E,h7^{km}±3^{km},ML2.5*

ISC 02 12:31:42.3±0.9**,37°.31N**±0°.04×**37°.14E**±0°.03**,h11**^{km}±7^{km}**,
n11,**σ**1s.18**/19**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	Gaziantep	0.15	158	PG	Pg	12 31 45.9	+0.1
GAZ				SG	Sg	12 31 48.9	+0.7
KMRS	Kahramanmaras	0.28	316	PG	Pg	12 31 47.1	-0.9
KMRS				SG	Sg	12 31 51.1	-0.7
GZT	Gaziantep	0.34	82	iP	Pb	12 31 50.2	-0.3
GZT				iS	Sg	12 31 54.9	+1.1
GZT				IAML_P			
	comp=Z,728nm,0.1s						
KUZU	Kuzuini	0.54	186	iP	Pg	12 31 53.0	+0.2
ANDN	Andirin	0.69	293	iP	Pb	12 31 55.6	-0.8
ANDN				iS	Sb	12 32 05.7	-0.4
ANDN				IAML_P			
	comp=Z,369nm,0.2s						
ATAB	Bozova	0.93	80	iP	Pn	12 32 01.6	+0.3
ATAB				iS	Sb	12 32 14.2	+1.3
ATAB				IAML_P			
	comp=Z,1μm,0.1s						
SAIM	ADANA	1.07	309	iP	Pn	12 32 05.5	+2.1
SAIM				iS	Sn	12 32 18.7	+0.3
SAIM				IAML_P			
	comp=Z,319nm,0.1s						
AKCD	Akcadag	1.16	32	iP	Pn	12 32 04.7	0.0
AKCD				iS	Sn	12 32 21.6	+1.0
AKCD				IAML_P			
	comp=Z,425nm,0.1s						
TAHT	Tahtakopru-Hat	1.21	220	PN	Pn	12 32 05.5	+0.4
SURC	SANLIURFA_SURC	1.25	110	iP	Pn	12 32 04.9	-0.9
SURC				iS	Sb	12 32 19.1	-3.0
SURC				IAML_P			
	comp=Z,136nm,0.1s						
URFA	Urfa	1.34	84	PN	Pb	12 32 07.5	-0.1

MEX 02 12:39:12.0±0.6**,16°.33N**×**98°.28W,h11**^{km}±4^{km}**,MD3.6,
Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.16	65	iP	Pg	12 39 15.0	-0.6
PNIG				iS	Sg	12 39 17.8	-0.4
VHO	Vista Hermosa	1.66	63	iS	Sn	12 40 00.1	-2.4

UCR 02 12:55:38.2±4.9**,9°.44N**×**83°.61W,h20**^{km}±10^{km}**,MD3.6,
ML4.0,4C-1D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDLM	Las Mercedes	0.16	173	⇓eP	Pb	12 55 43.3	+0.3
EDLM				eS	Sb	12 55 47.2	+1.1
EDDO	Dominical	0.31	233	⇑iP	Pb	12 55 44.6	-0.5
EDDO				eS	Sb	12 55 49.4	-0.4
DRK0	Durika	0.40	116	eP	Pb	12 55 47.0	+0.3
DRK0				eS	Sb	12 55 53.5	+1.0
EDBA	Buenos Aires	0.43	130	eP	Pb	12 55 46.8	-0.3
LCR2	La Lucha 2	0.49	308	⇑eP	Pb	12 55 47.9	-0.3
CVTR	Volcan Turrial	0.59	346	eP	Pb	12 55 50.8	+0.6
CVTR				eS	Sn	12 56 00.5	-0.6
HDC	Heredia	0.74	318	⇑iP	Pb	12 55 52.4	-0.2
	baz=96,slow=2.7						
HDC				AMP		12 55 53.4	
	comp=Z,5μm,0.2s						
HDC				eS	Sb	12 56 02.9	+0.5
SRA1	San Ramn	1.07	307	eP	Pb	12 55 57.0	-1.1
BRU2	Volcan	1.11	125	eP	Pn	12 55 58.8	0.0
	baz=309,slow=5.1						
BRU2				eS	Sn	12 56 14.0	+0.3
FORC	Fortuna	1.46	314	iP	Pn	12 56 03.8	+0.4
FORC				iS	Sb	12 56 22.5	-0.3
ARE1	Arenal 1	1.49	313	eP	Pn	12 56 04.2	+0.3
DVD	David	1.52	131	eP	Pn	12 56 02.5	-1.7
DVD				eS	Sn	12 56 24.0	+0.5
JTS	JuntasAbangare	1.57	303	eP	Pn	12 56 04.5	-0.5
JTS				eS	Sn	12 56 24.0	-0.8
PLVR	Palo Verde	1.94	298	eP	Pn	12 56 10.2	0.0
COLC	Colonia	1.98	308	iP	Pb	12 56 12.5	-1.2
COLC				iS	Sb	12 56 36.6	-1.4
BCIP	Isla Barro Col	3.73	94	⇑iP	Pn	12 56 35.5	+0.8
	baz=313,slow=5.1						

*KRNET **02** 13:04:44.9±0.1,41°.19N×71°.69E,h13^{km},mb2.2*

*NNC **02** 13:04:45.0±0.8,41°.21N×71°.70E,h0^{km},mb2.6,mpv2.6,
Error ellipse: s-maj=6.3km s-min=4.7km az=37.0*

ISC 02 13:04:44.6±1.4**,41°.18N**±0°.03×**71°.69E**±0°.03**,h4**^{km}±15^{km}**,
n17,**σ**0s.47**/29**,16C-9D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	Arkit	0.65	19	⇑iP	Pg	13 04 57.0	-0.1
	baz=20						
ARK				⇑iS	Sg	13 05 05.7	+0.2
	baz=20						
ARSB	Arslanbob	0.99	81	⇓iP	Pg	13 05 03.6	+0.1
	baz=82						
ARSB				⇓iS	Sb	13 05 17.1	-0.6
	baz=82						
BTK	Batken	1.30	211	⇓iP	Pn	13 05 09.6	0.0
	baz=11						
BTK				⇓iS	Sb	13 05 27.1	+0.4
	baz=11						
MNAS	Manas	1.44	25	⇑Pn	Pn	13 05 11.4	-0.1
	0.1nm,0.2s						
MNAS				⇑Sn	Sg	13 05 30.9	0.0
	1.1nm,0.3s						
MNAS	Manas	1.44	25	P	Pn	13 05 11.6	0.0
	0.4nm,0.1s						
MNAS				S	Sg	13 05 30.8	0.0
	2.3nm,0.2s						
MNAS	Manas	1.44	25	⇑iP	Pg	13 05 12.5	+0.3
	baz=25						
MNAS				⇑iS	Sg	13 05 31.1	+0.2
	baz=25						
IUG	Iuzhnay	1.57	308	P	Pb	13 05 14.0	-0.3
	18nm,0.2s						
IUG				S	Sb	13 05 34.2	-0.2
	30nm,0.2s						
AML	Almayashu	1.78	57	⇑iP	Pb	13 05 18.1	+0.1
	baz=57						
AML				⇑iS	Sg	13 05 42.1	+0.3
	baz=57						
SFK	Sufi-Kurgan	1.81	130	⇑Lg	Lg	13 05 42.2	
	7.5nm,0.3s						
SFK	Sufi-Kurgan	1.81	130	Pg	Pb	13 05 18.4	0.0
	1.7nm,0.1s						
SFK				Lg	Lg	13 05 42.7	
	10nm,0.3s						
SFK	Sufi-Kurgan	1.81	130	⇑iP	Pb	13 05 18.4	0.0
	baz=30						
SFK				⇑iS	Sg	13 05 42.8	+0.1
	baz=30						
MRKS	Merke	1.94	36	Pg	Pb	13 05 20.9	+0.4
	2.0nm,0.1s						
MRKS				Lg	Lg	13 05 46.2	
	9.7nm,0.2s						
ARLS	Aral	2.09	70	⇓iP	Pb	13 05 23.3	+0.1
	baz=70						
ARLS				⇓iS	Sg	13 05 50.7	-1.1
	baz=70						
KK31	Karatay Array	2.11	336	⇓Pn	Pb	13 05 22.7	-0.6
	0.2nm,0.2s,baz=162,slow=18,SNR=7.7						
KK31				⇑Sn	Sb	13 05 50.4	+0.6
	3.2nm,0.3s,baz=158,slow=31,SNR=12						
EKS2	Erkin-Say	2.15	46	⇑eP	Pb	13 05 23.7	-0.4
	baz=46						
EKS2				⇑iS	Sb	13 05 51.9	+0.7
	baz=46						
UCH	Uchtor	2.36	63	⇓iP	Pb	13 05 26.8	-1.1
	baz=63						
UCH				⇓iS	Sb	13 05 57.6	0.0
	baz=63						
AAK	Ala-Archa	2.55	54	⇑Pg	Pb	13 05 31.6	+0.6
	1.9nm,0.7s						
AAK				⇑Lg	Lg	13 06 05.9	
	1.4nm,0.5s						

*ISCJB **02** 13:10:10.9±0.3,8°.10S±0°.04×122°.43E±0°.06,h226^{km},
mb3.8/11,Error ellipse: s-maj=8.7km s-min=4.4km
az=151.7*

*IDC **02** 13:10:10.9±1.0,7°.99S×122°.53E,h206^{km}±13^{km},mb3.6/11,
mb1 3.8/15,mb1mx3.5/42,mbtmp4.2/15,Error ellipse:
s-maj=31.6km s-min=12.8km az=58.0*

*DJA **02** 13:10:12.2±0.4,8°S±3°×12°2E±°,h219^{km}±5^{km},M3.9/13,
mb4.1/3,MLv3.8/13*

ISC 02 13:10:11.9±0.6**,8°.15S**±0°.05×**122°.45E**±0°.07**,h226**^{km}**,n36,
σ1s.12**/43**,mb4.2**/18**,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	0.53	203	P	Pn	13 10 41.9	-0.3
MMRI				S	S	13 11 06.3	+0.4
EDFI	Ende, Flores	0.96	231	P	Pn	13 10 44.2	-0.1
BATI	Baumata	2.37	150	P	Pn	13 10 56.6	+0.4
BATI				S	S	13 11 30.3	-0.5
BATI	Baumata	2.37	150	P	Pn	13 10 56.4	+0.2
	45nm,0.3s,baz=72,slow=1.2,SNR=34						
BATI				S	S	13 11 29.4	-1.4
	145nm,0.3s,baz=154,slow=9.8,SNR=9.5						
SOEI	Soe	2.40	132	P	Pn	13 10 58.0	+1.4
BBSI	Bau Bau	2.65	3	P	Pn	13 10 58.5	-0.6
BASI	Baing, Sumba	2.77	222	P	Pn	13 11 01.7	+1.3
BASI				S	S	13 11 37.3	-1.0
BKSI	Bulukumba	3.64	320	P	Pn	13 11 09.3	-1.1
BNSI	Bone	4.39	328	P	Pn	13 11 19.1	-0.4
PLAI	Plampang	4.67	261	P	Pn	13 11 22.7	-0.2
SPSI	Sidrap Palu	4.94	327	P	Pn	13 11 24.9	-1.4
APSI	Ampana	7.23	354	P	Pn	13 11 54.3	-1.1
FITZ	Fitzroy Crossi	10.37	163	P	Pn	13 12 34.9	-0.6
	0.7nm,0.3s,baz=9.7,slow=10,SNR=22						
FITZ				S	S	13 14 27.4	-4.4
	3.0nm,0.3s,baz=134,slow=6.8,SNR=12						
PCJI	Pacitan	11.16	269	P	Pn	13 12 45.1	-0.5
WRA	Warramunga Arr	16.43	137	P	P	13 13 49.8	+0.7
	2.4nm,0.3s,baz=323,slow=13,SNR=116						
WRA				S	S	13 16 47.1	-2.7
	1.2nm,0.3s,baz=314,slow=26,SNR=8.7						
ASAR	Alice Springs	18.94	146	P	P	13 14 18.0	+1.7
	1.7nm,0.3s,baz=337,slow=14,SNR=100						
ASAR				S	S	13 17 39.0	-0.3
	baz=338,slow=24,SNR=6.3						
STKA	Stephens Creek	29.58	146	P	P	13 15 57.5	+1.5
	2.8nm,0.6s,baz=320,slow=11,SNR=12						
CMAR	Chiang Mai Arr	35.17	319	P	P	13 16 45.6	+0.9
	0.6nm,0.5s,baz=141,slow=6.8,SNR=4.4						
RAMN	Ramite	49.24	316	eP	P	13 18 38.8	+0.6
	20nm,0.5s						
JIRN	Jiri	49.98	317	eP	P	13 18 44.0	+0.1
	19nm,0.6s						
GUN	Gumba	50.35	317	eP	P	13 18 46.7	0.0
	18nm,0.6s						
PKI	Pulchoki	50.45	316	eP	P	13 18 47.0	-0.4
	14nm,0.5s						
PKIN	Phulchoki	50.47	316	eP	P	13 18 47.0	-0.4
	11nm,0.5s						
DMN	Daman	50.69	316	eP	P	13 18 49.1	0.0
KOLN	Koldanda	51.83	315	eP	P	13 18 57.1	-0.4
DANN	Dangsing	52.08	316	eP	P	13 18 59.2	-0.2
	21nm,0.5s						
PYUN	Piuthan	52.46	315	eP	P	13 19 02.0	-0.1
	5.2nm,0.4s						
USRK	Ussuriysk Ar.	52.81	9	P	P	13 19 03.2	-0.9
	1.5nm,0.6s,baz=196,slow=6.2,SNR=5.7						
SONM	Songino Array	57.52	347	P	P	13 19 37.5	-0.3
	0.3nm,0.5s,baz=177,slow=8.4,SNR=3.4						
MKAR	Makanchi Array	65.32	331	P	P	13 20 30.7	+0.8
	3.8nm,0.5s,baz=139,slow=7.7,SNR=113						
AAK	Ala-Archa	66.78	323	P	P	13 20 40.4	+1.0
	1.3nm,0.6s,baz=143,slow=7.5,SNR=7.6						
PETK	Petropavlovsk-	67.97	22	P	P	13 20 46.6	+0.2
	2.3nm,0.7s,baz=194,slow=4.7,SNR=8.2						
ZALV	Zalesovo Beam	69.52	337	P	P	13 20 56.0	+0.1
	1.6nm,0.3s,baz=148,slow=4.6,SNR=13						
KURBB	Kurchatov Arra	69.78	332	P	P	13 20 57.9	+0.3
	2.2nm,0.6s,baz=144,slow=5.5,SNR=23						
SEY	Seymchan	74.50	14	P	P	13 21 25.9	+0.7
	2.0nm,0.5s,baz=218,slow=5.8,SNR=16						
BVAR	Borovoye Array	75.20	330	P	P	13 21 29.6	+0.1
	0.9nm,0.7s,baz=134,slow=8.5,SNR=7.0						

GUC 02 13:17:53.4±0.4**,36°.47S**×**73°.42W,h25**^{km}±4^{km}**,ML3.5,
Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCHI	Chillan	1.09	97	eP	Pn	13 18 12.0	-1.1
CCHI				iS	Sn	13 18 25.8	-1.4
CCHI				IAML		13 18 37.9	
	comp=E,2μm,0.4s						
AGCH	Angol	1.45	157	eP	Pn	13 18 17.4	-0.7
AGCH				iS	Sn	13 18 36.2	-0.1
TMU	Temuco	2.35	164	eP	Pn	13 18 31.1	+0.7
TMU				iS	Sb	13 19 02.1	-1.5
TMU				IAML		13 19 06.6	
	comp=E,385nm,0.6s						
GO06	Curarrehue	3.46	154	iS	Sb	13 19 33.4	-2.4
GO06				IAML		13 19 41.3	
	comp=N,55nm,0.5s						
LMEL	Las Melosas	3.71	46	iS	Sn	13 19 33.5	+1.1
ROCH	El Roble	4.01	30	eP	Pn	13 18 54.7	+1.2
ROCH				iS	Sn	13 19 41.2	+1.3
FCH	Farellones	4.05	40	eP	Pn	13 18 54.9	+0.8
FCH				iS	Sn	13 19 42.2	+1.2

*ISK **02** 13:28:25.6,39°.59N×28°.89E,h12^{km},ML2.1/9*

*ISCJB **02** 13:28:26.1±0.6,39°.63N±0°.05×28°.90E±0°.04,h7^{km}±6^{km},
Error ellipse: s-maj=8.6km s-min=4.3km az=154.2*

*DDA **02** 13:28:26.8,39°.60N×28°.83E,h7^{km}±5^{km},ML2.5*

ISC 02 13:28:26.1±1.2**,39°.60N**±0°.04×**28°.90E**±0°.03**,h9**^{km}±11^{km}**,
n16,**σ**0s.49**/20**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DST	Dursunbey	0.21	271	PG	Pg	13 28 30.4	-0.1
DURS	Dursunbey	0.33	270	iP	Pg	13 28 32.3	-0.3
DURS				iS	Sg	13 28 37.3	+0.3
DURS				IAML_P			
	comp=Z,1μm,0.1s						
DEMI	Demirci	0.57	194	iP	Pb	13 28 38.4	0.0
DEMI				IAML_P			
	comp=Z,648nm,0.1s						
BALB	Balikesir	0.79	273	PG	Pb	13 28 41.5	-0.5
BALB				SG	Sb	13 28 52.8	0.0
AUBOZ	BOZOYUK	0.93	70	PG	Pg	13 28 44.1	+0.2
STEP	BALIKESIR_Sava	0.94	257	iP	Pn	13 28 46.5	+1.0
STEP				IAML_P			
	comp=Z,567nm,0.1s						
CAVI	Cavuskoy	0.94	50	PG	Pg	13 28 44.3	+0.1
CAVI				SG	Sb	13 28 58.2	+0.9
YLV	Yalova	1.03	21	PG	Pg	13 28 46.2	+0.3
EDC	Edincik	1.09	313	PN	Pb	13 28 46.9	-0.2
KULA	Kula-Manisa	1.10	190	PN	Pg	13 28 46.8	-0.4
AKHS	Akhisar	1.11	230	iP	Pn	13 28 48.5	+0.7
AKHS				iS	Sn	13 29 03.0	-0.3
AKHS				IAML_P			
	comp=Z,434nm,0.2s						
MANT	Manisa	1.14	194	iP	Pn	13 28 48.5	0.0
MANT				IAML_P			
	comp=Z,1μm,0.1s						
BORA	Eskisehir	1.23	76	PN	Pn	13 28 49.0	-0.6
MRMT	Marmara Adasi	1.41	315	PN	Pn	13 28 51.9	-0.2
KRBG	Karabiga-Canak	1.46	303	PN	Pn	13 28 52.3	-0.4
GULT	Gulveren	1.49	56	PN	Pn	13 28 52.9	-0.3

*IDC **02** 13:30:21.8±1.0,11°.34S×165°.57E,h0^{km},mb4.3/12,
mb1 4.5/14,mb1mx4.2/47,mbtmp4.3/14,ML4.3/2,MS3.4/5,
Ms1 3.4/5,ms1mx3.2/37,Error ellipse: s-maj=31.0km
s-min=17.9km az=134.0*

*NEIC **02** 13:30:23.3±0.6,11°.30S×165°.55E,h10^{km},mb4.4/3,Error
ellipse: s-maj=14.9km s-min=12.3km az=120.0*

*ISCJB **02** 13:30:24.4±0.6,11°.40S±0°.09×165°.38E±0°.08,h24^{km},
mb4.2/15,MS3.4/5,Error ellipse: s-maj=12.9km
s-min=10.6km az=30.4*

ISC 02 13:30:25.7±0.7**,11°.3S**±0°.1×**165°.5E**±0°.1**,h24**^{km}**,n25,
σ1s.32**/22**,mb4.3**/15**,MS3.3**/5**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.75	289	Pn	Pn	13 31 50.5	+1.0
	12nm,0.3s,baz=112,slow=6.3,SNR=3.2						

HNR				Sn	Sn	13 32 53.0	-1.7
	baz=139,slow=20,SNR=1.7						
DZM	Mont Dzumac	10.73	175	Pn	Pn	13 32 58.4	+0.5
	1.9nm,0.3s,baz=0.3,slow=12,SNR=18						
CTA	Charters Tower	20.43	242	P	Pn	13 35 02.9	-0.7
	12nm,0.8s,baz=72,slow=12,SNR=15						
CTAO	Charters Tower	20.43	242	eP	Pn	13 35 03.0	-0.6
	18nm,0.6s						
STKA	Stephens Creek	30.05	223	P	P	13 36 33.1	0.0
	3.9nm,0.8s,baz=49,slow=11,SNR=7.9						
STKA				LR	LR	13 46 52.7	
	comp=Z,50nm,20.7s,baz=27,slow=33						
WRAB	Tennant Creek	31.12	250	eP	P	13 36 40.4	-2.2
	3.0nm,0.6s						
WRA	Warramunga Arr	31.13	250	P	P	13 36 42.5	-0.2
	14nm,0.8s,baz=82,slow=9.0,SNR=77						
ASAR	Alice Springs	32.42	244	P	P	13 36 53.2	-0.9
	1.8nm,0.7s,baz=69,slow=9.3,SNR=31						
ASAR				PcP	PcP	13 39 41.5	+0.2
	0.5nm,0.7s,baz=66,slow=2.1,SNR=5.7						
ASAR				LR	LR	13 48 36.6	
	comp=Z,36nm,21.9s,baz=90,slow=34						
SIJI	Sorong	35.51	285	LR	LR	13 53 26.9	
	comp=Z,46nm,18.1s,slow=39						
FITZ	Fitzroy Crossi	39.04	255	P	P	13 37 51.5	+0.6
	3.6nm,0.7s,baz=99,slow=7.7,SNR=12						
PPT	Papeete	43.90	104	LR	LR	13 52 51.5	
	comp=Z,69nm,18.9s,baz=111,slow=31						
JHJ	Hachijo jima 2	50.53	332	LR	LR	13 55 21.2	
	comp=Z,134nm,22.0s,baz=24,slow=30						
CMAR	Chiang Mai Arr	71.97	294	P	P	13 41 49.3	+1.4
	2.8nm,0.8s,baz=118,slow=4.6,SNR=21						
CMMT	Chiang Mai	72.08	294	P	P	13 41 51.2	+2.6
	4.8nm,1.6s						
CHTO	Chiang Mai	72.09	294	P	P	13 41 51.3	+2.7
	21nm,1.6s						
ULN	Ulaanbaatar	78.37	324	eP	P	13 42 23.3	-1.0
	2.7nm,0.9s						
QSPA	South Pole Qui	78.68	180	eP	P	13 42 24.9	-0.8
SONM	Songino Array	78.73	324	P	P	13 42 27.0	+0.7
	1.9nm,0.9s,baz=138,slow=6.3,SNR=9.2						
ILAR	Eielson Array	83.86	19	P	P	13 42 53.1	+0.1
	0.8nm,0.8s,baz=235,slow=4.8,SNR=10						
NVAR	Mina Array Bea	86.42	50	P	P	13 43 06.9	+0.2
	0.8nm,0.8s,baz=235,slow=7.8,SNR=4.8						
MKAR	Makanchi Array	93.54	317	P	P	13 43 40.5	+0.8
	2.7nm,0.7s,baz=97,slow=6.1,SNR=31						
ZALV	Zalesovo Beam	93.62	324	eP	P	13 43 39.5	-0.4
ZALV	Zalesovo Beam	93.62	324	eP	P	13 43 39.5	-0.4
ZALV	Zalesovo Beam	93.62	324	P	P	13 43 39.7	-0.2
	2.3nm,0.8s,baz=112,slow=5.4,SNR=9.0						
YKA	Yellowknife Ar	95.35	27	P	P	13 43 45.7	-1.9
	0.1nm,0.5s,baz=257,slow=4.0,SNR=2.6						

ISCJB ***02*** *13:35:32.5±0.2, 46°.525N±0°.007×14°.651E±0°.009, h1^{km}±1^{km}, mb4.4/59, MS3.5/6, Error ellipse: s-maj=1.2km s-min=1.0km az=16.3*

IDC ***02*** *13:35:33.3±0.6, 46°.49N×14°.51E, h0^{km}, mb4.1/26, mb1 4.2/32, mb1mx4.1/57, mbtmp4.1/32, ML3.6/6, MS3.3/12, Ms1 3.3/12, ms1mx3.0/65, Error ellipse: s-maj=11.5km s-min=9.0km az=46.0*

NEIC ***02*** *13:35:33.0±0.0, 46°.49N×14°.62E, h10^{km}, mb4.5/23, MW4.0, ML4.0(LJU), ML4.4(VIE), ML4.4(ROM) Best double couple: NP1:ϕ_s246.00000°, δ86.00000°, λ-43.00000°. NP2:ϕ_s340.00000°, δ47.00000°, λ-175.00000°. Principal axes: T 1.3400, Plg26.0000°, Azm301.0000°; N -0.1600, Plg47.0000°, Azm62.0000°; P -1.1800, Plg32.0000°, Azm193.0000°; After ROM.*

NEIC Slight damage [VI] in the Bad Eisenkappel area. Felt [V] at Graz and Klagenfurt. Felt [II] at Celje, Slovenia. Felt in much of Austria and throughout Slovenia. Also felt in the Karlovac-Zagreb area, Croatia and at Trieste, Italy.

LJU ***02*** *13:35:33.6, 46°.48N×14°.62E, h12^{km}, ML4.0*

VIE ***02*** *13:35:34.0±0.2, 46°.48N×14°.63E, h6^{km}±1^{km}, mb4.0/8, ml4.4/9, Error ellipse: s-maj=1.7km s-min=1.0km az=164.0, felt 6 ems98 at Bad Eisenkappel / Carinthia*

MOS ***02*** *13:35:33.1±0.9, 46°.47N×14°.55E, h12^{km}, mb4.5/22, MS4.2/5, Error ellipse: s-maj=4.2km s-min=3.3km az=78.8*

LDG ***02*** *13:35:34.0±0.1, 46°.53N×14°.67E, h2^{km}, Ml4.4/27, Error ellipse: s-maj=2.1km s-min=1.9km az=6.0*

PRU ***02*** *13:35:34.7±0.0, 46°.51N×14°.65E, h3^{km}*

ROM ***02*** *13:35:34.3±0.2, 46°.46N±0°.01×14°.63E±0°.02, h10^{km}, ML4.4/38*

SAR ***02*** *13:35:34.2±0.6, 46°.50N×14°.61E, h6^{km}±2^{km}, ML4.4/1*

PDG ***02*** *13:35:34.0±1.1, 46°.51N×14°.64E, h4^{km}±2^{km}, ML4.5/6, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*

BEO ***02*** *13:35:35.3±0.4, 46°.45N×14°.75E, h8^{km}±4^{km}, ML4.2/11*

BGR ***02*** *13:35:37.3±0.2, 46°.58N×14°.66E, h10^{km}, ML4.9/31, Error ellipse: s-maj=4.4km s-min=3.3km az=172.0*

BGR Many fissures in the plastering, some in the bricking of houses. Felt up to Salzburg and Vienna.

BNS ***02*** *13:35:40.7±0.3, 46°.83N×14°.63E, h10^{km}, ML4.4*

STR ***02*** *13:35:43.7±0.7, 47°N±4°×1°4E±°, h5^{km}, M4.9/14, mb5.0/6, mB5.2/1, mb5.4/1, mB6.4/2, MLv4.7/6, MLv4.8/14, Mw(mB)4.6/1, Mw(mB)6.1/2*

ZUR ***02*** *13:35:43.4, 46°.62N×13°.70E, h13^{km}, Ml3.9/45*

ISC 02 13:35:34.8±0.7**, 46°.48N**±0°.01×**14°.59E**±0°.01**, h10**^{km}±4^{km}**, n668,** σ1§**81**/882**, mb4.4**/59**, MS3.4**/6**, 85C-55D,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBKA	Obir	0.04	317	P	Pg	13 35 36.1	-0.7
OBKA	Obir	0.04	317	i Pg	Pg	13 35 36.0	-0.9
	770nm,0.1s						
OBKA				eSg	Sg	13 35 37.7	-0.6
	14µm,0.1s						
OBKA	Obir	0.04	317	ePg	Pg	13 35 36.2	-0.7
MOZS	Mozjanca	0.21	208	⇓iPg	Pg	13 35 38.7	-0.5
MOZS				i Sg	Sg	13 35 42.2	0.0
	comp=Z,19µm,0.3s						
SOKA	Soboth	0.36	57	P	Pg	13 35 41.1	-1.0
SOKA	Soboth	0.36	57	i Pg	Pg	13 35 41.1	-1.0
	comp=Z,60µm,0.3s						
SOKA				eSg	Sg	13 35 45.6	-1.3
	comp=Z,336µm,0.3s						
VNDS	Vrh nad Dolski	0.39	168	⇓iPg	Pg	13 35 41.7	-0.7
VNDS				eSg	Sg	13 35 45.9	-1.7
	comp=Z,27µm,0.3s						
PERS	Pernice	0.40	67	⇓iPg	Pg	13 35 41.5	-1.2
PERS				i Sg	Sg	13 35 46.6	-1.3
	comp=Z,21µm,0.2s						
BISS	Bistriski jare	0.41	66	⇓iPg	Pg	13 35 41.7	-1.2
BISS				i Sg	Sg	13 35 46.9	-1.3
	comp=Z,26µm,0.1s						
LJU	Ljubljana	0.44	185	ePg	Pg	13 35 42.9	-0.5
LJU				eSg	Sg	13 35 49.4	+0.2
LJU	Ljubljana	0.44	185	⇓Pg	Pg	13 35 42.9	-0.5
LJU				eSg	Sg	13 35 49.0	-0.2
LJU	Ljubljana	0.44	185	⇓iPg	Pg	13 35 42.9	-0.5
LJU				i Sg	Sg	13 35 48.5	-0.6
	comp=Z,4µm,0.2s						
LJU	Ljubljana	0.44	185	⇓P	Pg	13 35 42.9	-0.5
LJU				e		13 35 49.0	
LJU	Ljubljana	0.44	185	⇓iPg	Pg	13 35 42.8	-0.6
LJU				eSg	Sg	13 35 49.3	+0.1
LJU	Ljubljana	0.44	185	P	Pg	13 35 42.9	-0.5
LJU				S	Sg	13 35 49.0	-0.2
LJU				AML	AML		
	comp=E,64050µm,0.4s						
LJU				AML	AML		
	comp=N,82450µm,0.6s						
LJU				AML	AML		
	comp=E,64050µm,0.4s						
LJU				AML	AML		
	comp=N,82450µm,0.6s						
LJU				AML	AML		
	comp=E,64050µm,0.4s						
LJU				AML	AML		
	comp=N,82450µm,0.6s						
GORS	Gorjuse	0.44	248	i Pg	Pg	13 35 42.9	-0.6
GORS				i Sg	Sg	13 35 49.6	+0.3
	comp=Z,3µm,0.2s						
CRNS	Crni Vrh	0.46	210	⇓iPg	Pg	13 35 43.5	-0.3
CRNS				eSg	Sg	13 35 50.7	+0.9
	comp=Z,4µm,0.2s						
PDKS	Podkum	0.51	146	⇓iPg	Pg	13 35 44.0	-0.6
PDKS				i Sg	Sg	13 35 50.3	-1.0
	comp=Z,11µm,0.2s						
GBAS	Gorenja Brezov	0.56	191	⇓iPg	Pg	13 35 44.8	-0.8
GBAS				eSg	Sg	13 35 52.1	-0.8
	comp=Z,3µm,0.2s						
GROS	Grobnik	0.63	91	⇓iPg	Pg	13 35 45.5	-1.6
GROS				i Sg	Sg	13 35 53.7	-1.7
	comp=Z,9µm,0.1s						
CADS	Cadrg	0.64	247	i Pg	Pg	13 35 46.4	-0.8
CADS				eSg	Sg	13 35 55.9	+0.3
	comp=Z,7µm,0.5s						
VOJS	Vojsko	0.66	228	⇓iPg	Pg	13 35 46.7	-0.9
VOJS				eSg	Sg	13 35 57.0	+0.7
	comp=Z,2µm,0.3s						
MYKA	Terra Mystica	0.67	283	ePg	Pg	13 35 46.9	-0.9
	comp=Z,148nm,0.2s,SNR=150						
MYKA				eSg	Sb	13 35 57.3	-0.7
	comp=Z,465nm,0.1s						
JAVS	Javornik	0.69	212	⇓iPg	Pg	13 35 47.3	-0.9
JAVS				eSg	Sg	13 35 57.5	+0.3
	comp=Z,624nm,0.1s						
DOBS	Dobrina	0.69	118	⇑iPg	Pg	13 35 47.0	-1.3
	comp=Z,4µm,0.1s						
VISS	Visnje	0.70	165	⇓iPg	Pg	13 35 47.3	-1.0
VISS				eSg	Sg	13 35 56.2	-1.2
PRED	Cave del Predi	0.71	267	⇑ePg	Pg	13 35 47.5	-1.0
PRED				eSg	Sb	13 35 59.1	+0.1
DRE	Drenchia	0.72	245	⇓ePg	Pg	13 35 47.9	-0.9
DRE				eSg	Sb	13 35 59.2	-0.3
LEGS	Legarje	0.73	136	⇑iPg	Pg	13 35 48.1	-0.9
LEGS				eSg	Sg	13 35 57.1	-1.5
ACOM	Acomizza, Ital	0.74	276	⇑ePg	Pg	13 35 48.5	-0.8
ACOM				eSg	Sb	13 35 59.9	-0.4
ACOM	Acomizza, Ital	0.74	276	P	Pg	13 35 48.4	-0.9
ACOM				S	Sb	13 35 59.9	-0.4
ACOM				AML	AML		
	comp=E,17150µm,1.3s						
ACOM				AML	AML		
	comp=N,19700µm,0.8s						
ACOM				AML	AML		
	comp=E,17150µm,1.3s						
ACOM				AML	AML		
	comp=N,19700µm,0.8s						
ACOM				AML	AML		
	comp=E,17150µm,1.3s						
ACOM				AML	AML		
	comp=N,19700µm,0.8s						
ACOM				AML	AML		
	comp=E,17150µm,1.3s						
ACOM				AML	AML		
	comp=N,19700µm,0.8s						
CEY	Cerknica	0.75	189	ePg	Pg	13 35 48.3	-1.0
CEY				eSg	Sg	13 35 59.0	0.0
CEY	Cerknica	0.75	189	⇓iPg	Pg	13 35 48.2	-1.0
CEY				eSg	Sg	13 35 58.4	-0.7
	comp=Z,5µm,0.2s						
CEY	Cerknica	0.75	189	⇓iPg	Pg	13 35 48.1	-1.2
CEY				eSg	Sg	13 35 59.1	0.0
ROBS	Robic	0.78	253	i Pg	Pg	13 35 48.6	-1.2
ROBS				eSg	Sg	13 35 59.9	-0.2
	comp=Z,6µm,0.6s						
CESS	Cesta pri Krsk	0.79	130	⇑iPg	Pg	13 35 49.2	-0.9
CESS				eSg	Sg	13 35 59.0	-1.4
SABO	M.te Sabotino	0.85	234	⇓ePg	Pg	13 35 49.6	-1.5
SABO				eSg	Sg	13 36 02.7	+0.5
SABO	M.te Sabotino	0.85	234	P	Pg	13 35 49.5	-1.6
SABO				S	Sg	13 36 02.4	+0.2
SABO				AML	AML		
	comp=E,29350µm,0.5s						
SABO				AML	AML		
	comp=N,23450µm,0.9s						
SABO				AML	AML		
	comp=E,29350µm,0.5s						
SABO				AML	AML		
	comp=N,23450µm,0.9s						
SABO				AML	AML		
	comp=E,29350µm,0.5s						
SABO				AML	AML		
	comp=N,23450µm,0.9s						
SABO				AML	AML		
	comp=E,29350µm,0.5s						
SABO				AML	AML		
	comp=N,23450µm,0.9s						
PTCC	Patocco-Chiusa	0.86	265	P	Pg	13 35 50.1	-1.2
PTCC				S	Sb	13 36 03.5	+0.1
PTCC				AML	AML		
	comp=E,15150µm,0.6s						
PTCC				AML	AML		
	comp=N,11600µm,0.6s						
PTCC				AML	AML		
	comp=E,15150µm,0.6s						
PTCC				AML	AML		
	comp=N,11600µm,0.6s						
PTCC				AML	AML		
	comp=E,15150µm,0.6s						
PTCC				AML	AML		
	comp=N,11600µm,0.6s						
PTCC				AML	AML		
	comp=N,11600µm,0.6s						
PTCC				AML	AML		
	comp=E,15150µm,0.6s						
GOLS	Golise	0.86	123	⇑iPg	Pg	13 35 50.4	-1.0
GOLS				i Sg	Sg	13 36 01.6	-1.0
	comp=Z,8µm,0.2s						
CRES	Cresnjev	0.89	137	⇑iPg	Pg	13 35 50.7	-1.2
CRES				eSg	Sg	13 36 02.1	-1.4
	comp=Z,2µm,0.2s						
CRES	Cresnjev	0.89	137	ePg	Pg	13 35 50.6	-1.4
CRES				eSg	Sg	13 36 03.0	-0.5
COLI	Coloredo	0.91	248	⇓ePg	Pg	13 35 51.2	-1.0
COLI				eSg	Sn	13 36 06.0	-0.8
VINO	Villanova	0.93	257	⇓ePg	Pg	13 35 51.5	-1.2
VINO				eSg	Sn	13 36 06.8	-0.6
GCIS	Gornji Cirnik	0.95	130	⇑iPg	Pg	13 35 51.9	-1.1
GCIS				eSg	Sg	13 36 04.4	-0.9
	comp=Z,7µm,0.2s						
BAD	Bernadia	0.96	256	⇓ePg	Pg	13 35 52.0	-1.3
BAD				eSg	Sb	13 36 06.9	+0.5
GBRS	Gornja Briga	0.96	171	⇓iPg	Pg	13 35 52.2	-1.1
GBRS				eSg	Sg	13 36 05.0	-0.8
	comp=Z,2µm,0.1s						
KNDS	Knezji Dol	0.96	189	i Pg	Pg	13 35 51.9	-1.5
KNDS				eSg	Sb	13 36 06.6	+0.1
	comp=Z,3µm,0.3s						
PLRO	Paularo	1.00	275	⇑ePg	Pg	13 35 52.8	-1.2
ARSA	Arzberg	1.00	39	ePg	Pg	13 35 52.5	-1.7
ARSA				eSg	Sg	13 36 05.3	-1.9
ARSA	Arzberg	1.00	39	P	Pg	13 35 52.4	-1.7
ARSA	Arzberg	1.00	39	ePg	Pg	13 35 52.3	-1.8
	comp=Z,1µm,0.4s,SNR=981						
ARSA				eSg	Sg	13 36 05.5	-1.7
	comp=Z,1µm,0.3s						
ARSA	Arzberg	1.00	39	ePg	Pg	13 35 52.4	-1.7
ARSA				eSg	Sg	13 36 05.3	-1.9
ARSA	Arzberg	1.00	39	P	Pg	13 35 52.2	-1.8
ARSA				AML	AML		
	comp=E,18700µm,0.6s						
ARSA				AML	AML		
	comp=N,11695µm,0.5s						
ARSA				AML	AML		
	comp=E,18700µm,0.6s						
ARSA				AML	AML		
	comp=N,11695µm,0.5s						
ARSA				AML	AML		
	comp=N,11695µm,0.5s						
ARSA				AML	AML		
	comp=E,18700µm,0.6s						
SKDS	Skadanscina	1.02	203	⇓iPg	Pg	13 35 52.5	-1.9
SKDS				eSg	Sg	13 36 06.7	-0.9
	comp=Z,3µm,0.3s						
GEPF	Gemona	1.02	259	P	Pg	13 35 53.2	-1.2
GEPF				S	Sb	13 36 08.1	0.0
GEPF				AML	AML		
	comp=E,22200µm,0.8s						
GEPF				AML	AML		
	comp=N,11400µm,0.6s						
GEPF				AML	AML		
	comp=E,22200µm,0.8s						
GEPF				AML	AML		
	comp=N,11400µm,0.6s						
GEPF				AML	AML		
	comp=E,22200µm,0.8s						
GEPF				AML	AML		
	comp=N,11400µm,0.6s						
GEPF				AML	AML		
	comp=E,22200µm,0.8s						
GEPF				AML	AML		
	comp=N,11400µm,0.6s						
BOO	Bordano	1.04	262	ePg	Pg	13 35 53.6	-1.3
KBA	Koelnbreinsper	1.04	305	i Pg	Pg	13 35 53.8	-1.0
	comp=N,58nm,0.1s,SNR=282						
KBA				Sg	Sb	13 36 09.0	+0.1
	comp=N,599nm,0.2s						
KBA	Koelnbreinsper	1.04	305	ePg	Pg	13 35 53.9	-1.0
KBA				eSg	Sg	13 36 08.3	-0.1
BUA	Buia	1.05	256	⇑ePg	Pg	13 35 53.8	-1.2
BUA				eSg	Sn	13 36 10.2	0.0
OZLJ	Ozalj	1.06	144	ePg	Pg	13 35 54.7	-0.5
OZLJ				Sg	Sg	13 36 08.4	-0.6
BOJS	Bojanci	1.08	154	ePg	Pb	13 35 54.8	-0.8
BOJS				eSg	Sg	13 36 08.5	-1.1
BOJS	Bojanci	1.08	154	ePg	Pb	13 35 54.0	-1.5
BOJS				eSg	Sg	13 36 09.7	+0.1
	comp=Z,9µm,0.4s						
BOJS	Bojanci	1.08	154	P	Pb	13 35 54.1	-1.5
BOJS				S	Sg	13 36 09.2	-0.4
BOJS				AML	AML		
	comp=E,29450µm,0.8s						
BOJS				AML	AML		
	comp=N,28650µm,0.5s						
BOJS				AML	AML		
	comp=E,29450µm,0.8s						
BOJS				AML	AML		
	comp=N,28650µm,0.5s						
BOJS				AML	AML		
	comp=E,29450µm,0.8s						
BOJS				AML	AML		
	comp=N,28650µm,0.5s						
FUSE	Fusea	1.10	267	⇑ePg	Pb	13 35 54.7	-1.2
FUSE				eSg	Sn	13 36 12.8	+1.3
ZOU	Zoufplan	1.12	274	⇓ePg	Pg	13 35 55.2	-1.1
ZOU				eSg	Sn	13 36 12.2	-0.1
ZOU	Zoufplan	1.12	274	⇓ePg	Pg	13 35 55.2	-1.1
ZOU				eSg	Sn	13 36 12.1	-0.1
MPRI	Monte Prat	1.13	258	ePg	Pb	13 35 55.6	-0.9
MPRI				eSg	Sn	13 36 13.7	+1.3
KOGS	Kog	1.15	91	i Pg	Pb	13 35 55.2	-1.5
KOGS				eSg	Sb	13 36 10.7	-1.0
	comp=Z,5µm,0.3s						
KOGS	Kog	1.15	91	P	Pb	13 35 55.2	-1.5
KOGS				AML	AML		
	comp=E,55900µm,0.5s						
KOGS				AML	AML		
	comp=N,65250µm,0.3s						
KOGS				AML	AML		
	comp=E,55900µm,0.5s						
KOGS				AML	AML		
	comp=N,65250µm,0.3s						
KOGS				AML	AML		
	comp=E,55900µm,0.5s						
KOGS				AML	AML		
	comp=N,65250µm,0.3s						
TLI	Talmassons	1.17	242	⇓ePg	Pb	13 35 56.1	-1.1
TLI				eSg	Sn	13 36 14.6	+1.3
CLUD	Cludinico	1.18	269	⇑ePg	Pb	13 35 56.2	-1.1
CLUD				eSg	Sn	13 36 15.2	+1.7
FVI	Forni Avoltri	1.25	276	P	Pn	13 35 57.1	-1.4
FVI				AML	AML		
	comp=E,6795µm,0.6s						
FVI				AML	AML		
	comp=N,7935µm,0.6s						
FVI				AML	AML		
	comp=E,6795µm,0.6s						
FVI				AML	AML		
	comp=N,7935µm,0.6s						
FVI				AML	AML		
	comp=E,6795µm,0.6s						
FVI				AML	AML		
	comp=N,7935µm,0.6s						
STAL	STALIGIAL	1.32	261	P	Pn	13 35 58.3	-1.0
STAL				AML	AML		
	comp=E,10465µm,1.6s						
STAL				AML	AML		
	comp=N,9920µm,1.4s						
STAL				AML	AML		
	comp=E,12650µm,1.6s						
STAL				AML	AML		
	comp=N,9525µm,1.4s						
STAL				AML	AML		
	comp=E,10465µm,1.6s						
STAL				AML	AML		
	comp=N,9920µm,1.4s						
STAL				AML	AML		
	comp=E,12650µm,1.6s						
STAL				AML	AML		
	comp=N,9525µm,1.4s						
STAL				AML	AML		
	comp=N,9525µm,1.4s						
STAL				AML	AML		
	comp=N,9920µm,1.4s						
STAL				AML	AML		
	comp=E,10465µm,1.6s						
STAL				AML	AML		
	comp=E,12650µm,1.6s						
CSMI	Casera Mimoias	1.34	272	ePg	Pn	13 35 58.9	-0.8
MOA	Molln	1.39	351	ePg	Pn	13 36 00.4	+0.2
	comp=E,200nm,0.4s,SNR=291						
MOA				Sn	Sn	13 36 18.9	+0.2
	comp=E,610nm,0.6s						
MOA	Molln	1.39	351	ePn	Pn	13 36 00.5	+0.2
MOA				eSg	Sg	13 36 19.1	-0.3
ABTA	Abfaltersbach	1.46	281	ePn	Pn	13 36 00.7	-0.5
	SNR=289						
ABTA				Sg	Sg	13 36 23.2	+1.6
	comp=E,2µm,0.6s						
CIMO	Cimolais	1.50	264	⇑ePg	Pb	13 36 03.0	+0.3
BEHE	Becsehely	1.51	90	ePn	Pn	13 36 01.1	-0.9
BEHE				Sn	Sg	13 36 23.1	-0.3
BEHE	Becsehely	1.51	90	⇑iPg	Pn	13 36 00.8	-1.1
BEHE				eSg	Sb	13 36 22.1	-0.1
POLC	Polcenigo	1.52	253	AML	AML		
	comp=E,51900µm,0.5s						
POLC				AML	AML		
	comp=E,51900µm,0.5s						
POLC				AML	AML		
	comp=N,44550µm,0.5s						
POLC				AML	AML		
	comp=E,51900µm,0.5s						
POLC				AML	AML		
	comp=N,44550µm,0.5s						
POLC				AML	AML		
	comp=N,44550µm,0.5s						
CAE	Caneva	1.57	253	⇑ePg	Pb	13 36 03.9	0.0
CAE				eSg	Sg	13 36 26.3	+1.2
CSO	Casso	1.58	263	⇑ePg	Pb	13 36 04.2	0.0
CSO				eSg	Sg	13 36 26.7	+1.1
AFL	Alpe Faloria	1.66	273	ePg	Pb	13 36 05.3	-0.3
CONA	Conrad Observa	1.69	30	ePn	Pn	13 36 04.7	+0.3
	comp=N,641nm,0.4s,SNR=451						
CONA				eSn	Sn	13 36 26.5	+0.3
	comp=N,1µm,0.6s						
RISI	Rein	1.79	286	⇑iP*P	Pb	13 36 07.1	-0.6
RISI	Rein	1.79	286	P	Pb	13 36 06.9	-0.9
RISI				AML	AML		
	comp=E,9610µm,0.5s						
RISI				AML	AML		
	comp=N,11750µm,0.4s						
RISI				AML	AML		
	comp=E,9610µm,0.5s						
RISI				AML	AML		
	comp=N,11750µm,0.4s						
SOP	Sopron	1.81	48	ePn	Pn	13 36 06.0	0.0
SOP				eSg	Sn	13 36 28.8	-0.2
SOP	Sopron	1.81	48	ePn	Pn	13 36 06.0	0.0
SOP				Sn	Sn	13 36 29.0	+0.1
NVLJ	Novalja	1.93	174	ePn	Pn	13 36 08.4	+0.8
NVLJ				Sn	Sb	13 36 33.9	-0.1
BRES	Bressanone	1.98	277	P	Pb	13 36 10.4	-0.7
BRES				AML	AML		
	comp=E,2130µm,1.1s						
BRES				AML	AML		
	comp=N,3060µm,0.5s						
BRES				AML	AML		
	comp=N,3060µm,0.5s						
BRES				AML	AML		
	comp=E,2130µm,1.1s						
CGRP	Cima Grappa	2.03	254	⇑iP*P	Pb	13 36 10.1	-1.7
CGRP	Cima Grappa	2.03	254	P	Pb	13 36 10.1	-1.7
CGRP				AML	AML		
	comp=E,12850µm,0.8s						
CGRP				AML	AML		
	comp=N,13700µm,1.0s						

CGRP				AML	AML		
	comp=E,12850µm,0.8s						
CGRP				AML	AML		
	comp=N,13700µm,1.0s						
CTI	**Castel Tesino**	**2.08**	**259**	P	**Pn**	**13 36 10.9**	**+1.0**
CTI				AML	AML		
	comp=E,4415µm,0.5s						
CTI				AML	AML		
	comp=N,4980µm,0.5s						
CTI				AML	AML		
	comp=E,4415µm,0.5s						
CTI				AML	AML		
	comp=N,4980µm,0.5s						
UDBI	**Udbina**	**2.12**	**157**	ePn	**Pn**	**13 36 11.1**	**+0.8**
UDBI				Sn	**Sb**	**13 36 38.9**	**-0.8**
WTTA	**Wattenberg**	**2.17**	**292**	Pg	**Pb**	**13 36 13.4**	**-0.9**
	comp=N,487nm,0.7s,SNR=122						
WTTA				i Sg	**Sg**	**13 36 44.8**	**+0.2**
	comp=N,619nm,0.5s						
WTTA	**Wattenberg**	**2.17**	**292**	⇑iPg	**Pb**	**13 36 13.5**	**-0.8**
WTTA	**Wattenberg**	**2.17**	**292**	ePn	**Pb**	**13 36 13.8**	**-0.5**
WTTA				eSg	**Sg**	**13 36 44.4**	**-0.2**
WTTA	**Wattenberg**	**2.17**	**292**	P	**Pb**	**13 36 13.3**	**-0.9**
WTTA				AML	AML		
	comp=E,3285µm,0.6s						
WTTA				AML	AML		
	comp=N,2270µm,1.1s						
WTTA				AML	AML		
	comp=N,2270µm,1.1s						
WTTA				AML	AML		
	comp=E,3285µm,0.6s						
MRAK	**Mrakovica**	**2.19**	**131**	ePn	**Pn**	**13 36 11.7**	**+0.5**
MRAK				eSn	**Sn**	**13 36 38.2**	**-0.2**
KOSI	**Kohlern**	**2.22**	**271**	⇑iP*	**Pb**	**13 36 13.6**	**-1.5**
KOSI	**Kohlern**	**2.22**	**271**	P	**Pb**	**13 36 13.6**	**-1.5**
KOSI				AML	AML		
	comp=E,6920µm,0.7s						
KOSI				AML	AML		
	comp=N,5920µm,0.5s						
KOSI				AML	AML		
	comp=N,5920µm,0.5s						
KOSI				AML	AML		
	comp=E,6920µm,0.7s						
ROSI	**Rosskopf**	**2.23**	**283**	⇑iP*	**Pb**	**13 36 13.9**	**-1.4**
ROSI	**Rosskopf**	**2.23**	**283**	P	**Pn**	**13 36 13.6**	**+1.6**
ROSI				AML	AML		
	comp=E,4255µm,1.0s						
ROSI				AML	AML		
	comp=N,5600µm,1.1s						
ROSI				AML	AML		
	comp=N,5600µm,1.1s						
ROSI				AML	AML		
	comp=E,4255µm,1.0s						
WATA	**Walderalm**	**2.23**	**294**	ePg	**Pb**	**13 36 14.4**	**-0.9**
	comp=E,63nm,0.3s,SNR=243						
WATA				Sg	**Sg**	**13 36 47.9**	**+1.3**
	comp=E,274nm,0.4s						
ABSI	**Aberstueckl**	**2.27**	**277**	⇑iP*	**Pb**	**13 36 14.4**	**-1.5**
ABSI	**Aberstueckl**	**2.27**	**277**	P	**Pb**	**13 36 14.4**	**-1.5**
ABSI				AML	AML		
	comp=E,9960µm,0.6s						
ABSI				AML	AML		
	comp=N,7395µm,0.6s						
ABSI				AML	AML		
	comp=E,9960µm,0.6s						
ABSI				AML	AML		
	comp=N,7395µm,0.6s						
TIH	**Tihany**	**2.31**	**78**	ePn	**Pn**	**13 36 11.1**	**-1.8**
TIH				Sn	**Sn**	**13 36 41.1**	**-0.4**
APPI	**Appiano**	**2.32**	**271**	P	**Pn**	**13 36 14.7**	**+1.6**
APPI				AML	AML		
	comp=E,2320µm,1.5s						
APPI				AML	AML		
	comp=N,4670µm,0.7s						
APPI				AML	AML		
	comp=E,2320µm,1.5s						
APPI				AML	AML		
	comp=N,4670µm,0.7s						
TEOL	**Teolo**	**2.32**	**242**	P	**Pn**	**13 36 13.6**	**+0.5**
TEOL				AML	AML		
	comp=E,20500µm,0.5s						
TEOL				AML	AML		
	comp=N,21600µm,0.7s						
TEOL				AML	AML		
	comp=N,21600µm,0.7s						
TEOL				AML	AML		
	comp=E,20500µm,0.5s						
GEA0	**GERESS Array S**	**2.43**	**346**	ePn	**Pn**	**13 36 14.4**	**-0.3**
GEA0				eSn	**Sb**	**13 36 49.1**	**+0.4**
SQTA	**Sankt Quirin**	**2.43**	**289**	ePn	**Pb**	**13 36 17.2**	**-1.5**
	comp=E,229nm,0.5s,SNR=125						
SQTA				Sg	**Sg**	**13 36 54.3**	**+1.3**
	comp=E,274nm,0.4s						
GEC2	**GERESS Array S**	**2.44**	**346**	ePn	**Pn**	**13 36 14.9**	**+0.1**
GEC2				eSn	**Sb**	**13 36 50.1**	**+1.1**
GEC2	**GERESS Array S**	**2.44**	**346**	eP	**Pn**	**13 36 14.9**	**+0.1**
GEC2				e		13 36 50.1	
GEC2	**GERESS Array S**	**2.44**	**346**	ePn	**Pn**	**13 36 15.4**	**+0.6**
GEC2				ePg	**Pb**	**13 36 19.8**	**+0.9**
GEC2				eSg	**Sb**	**13 36 50.9**	**+1.9**
GERES	**GERESS Array B**	**2.44**	**346**	Pn	**Pn**	**13 36 15.3**	**+0.6**
	comp=E,15nm,0.3s,baz=161,slow=14,SNR=362						
GERES				Lg	Lg	13 36 50.6	
	comp=E,270nm,0.3s,baz=159,slow=28,SNR=36						
GERES				LR	LR	13 37 31.9	
	comp=E,359nm,20.5s,baz=174,slow=49						
BLY	**Banja Luka**	**2.51**	**133**	ePn	**Pn**	**13 36 15.4**	**-0.3**
BLY				eSn	**Sn**	**13 36 42.4**	**-4.0**
BLY	**Banja Luka**	**2.51**	**133**	ePn	**Pn**	**13 36 15.3**	**-0.4**
BLY				eSn	**Sb**	**13 36 52.7**	**+1.8**
BLY	**Banja Luka**	**2.51**	**133**	⇑iP	**Pn**	**13 36 14.7**	**-1.0**
BLY	**Banja Luka**	**2.51**	**133**	S	**Sn**	**13 36 42.6**	**-3.8**
BLY	**Banja Luka**	**2.51**	**133**	⇑iPn	**Pn**	**13 36 14.9**	**-0.8**
BLY				eSn	**Sn**	**13 36 46.3**	**-0.1**
BLY	**Banja Luka**	**2.51**	**133**	P	**Pn**	**13 36 15.3**	**-0.4**
BLY				AML	AML		
	comp=E,4375µm,0.5s						
BLY				AML	AML		
	comp=N,2910µm,0.4s						
BLY				AML	AML		
	comp=E,4300µm,0.5s						
BLY				AML	AML		
	comp=N,2965µm,0.4s						
BLY				AML	AML		
	comp=E,4300µm,0.5s						
BLY				AML	AML		
	comp=E,4375µm,0.5s						
BLY				AML	AML		
	comp=N,2910µm,0.4s						
BLY				AML	AML		
	comp=N,2965µm,0.4s						
MOTA	**Moosalm**	**2.54**	**291**	ePn	**Pn**	**13 36 18.3**	**+2.1**
	comp=N,146nm,0.7s,SNR=181						
MOTA				Sg	**Sb**	**13 36 53.8**	**+1.9**
	comp=N,344nm,0.7s						
MODS	**Modra-Piesok**	**2.63**	**43**	eP	**Pn**	**13 36 17.2**	**-0.1**
MODS				e		13 36 57.4	
MODS				pmax	pmax		
	comp=N,1µm,0.7s						
MODS	**Modra-Piesok**	**2.63**	**43**	ePN	**Pn**	**13 36 17.2**	**-0.1**
MODS				ePG	**Pb**	**13 36 23.1**	**+1.1**
MODS				eSG	**Sg**	**13 36 57.4**	**-1.9**
MODS				eLG	Lg	13 37 08.5	
FETA	**Feichten**	**2.71**	**283**	ePn	**Pb**	**13 36 21.6**	**-1.8**
	comp=N,408nm,1.0s,SNR=135						
FETA				Sg	**Sg**	**13 36 59.5**	**-2.3**
	comp=N,153nm,0.8s						
KHC	**Kasperske Hory**	**2.74**	**346**	ePn	**Pn**	**13 36 18.7**	**-0.1**
KHC				eSn	**Sb**	**13 36 56.0**	**-1.4**
KHC	**Kasperske Hory**	**2.74**	**346**	ePN	**Pn**	**13 36 19.5**	**+0.6**
KHC				ePG	**Pb**	**13 36 24.9**	**+1.0**
KHC				eSG	**Sb**	**13 36 59.3**	**+1.8**
	comp=N,910nm,0.7s						
KHC				AMS	AMS	13 37 20.0	
	comp=N,6µm,5.6s						
KHC	**Kasperske Hory**	**2.74**	**346**	eP	**Pn**	**13 36 18.7**	**-0.1**
KHC				e		13 36 56.0	
KHC	**Kasperske Hory**	**2.74**	**346**	ePn	**Pn**	**13 36 19.4**	**+0.6**
KHC				ePg	**Pg**	**13 36 25.9**	**-1.3**
MOSI	**Grossmontoni**	**2.79**	**274**	⇑iPn	**Pn**	**13 36 21.8**	**+2.1**
MOSI	**Grossmontoni**	**2.79**	**274**	AML	AML		
	comp=E,5165µm,0.9s						
MOSI				AML	AML		
	comp=E,5165µm,0.9s						
MOSI				AML	AML		
	comp=N,8815µm,0.6s						
MOSI				AML	AML		
	comp=N,8815µm,0.6s						
SMOL	**Smolenice**	**2.80**	**42**	eP	**Pn**	**13 36 19.6**	**-0.1**
SMOL				e		13 37 02.6	
SMOL	**Smolenice**	**2.80**	**42**	ePN	**Pn**	**13 36 19.6**	**-0.1**
SMOL				ePG	**Pg**	**13 36 27.5**	**-1.0**
SMOL				eSG	**Sg**	**13 37 02.6**	**-2.2**
RETA	**Reutte**	**2.81**	**292**	ePn	**Pn**	**13 36 22.0**	**+2.2**
	comp=N,90nm,0.8s,SNR=38						
RETA				Sg	**Sg**	**13 37 03.8**	**-1.1**
	comp=N,471nm,0.6s						
FUR	**Furstenfeldbru**	**2.81**	**308**	ePn	**Pn**	**13 36 21.7**	**+1.8**
FUR				ePg	**Pg**	**13 36 27.8**	**-0.9**
FUR				eSg	**Sg**	**13 37 04.8**	**-0.3**
MORH	**Mrgy, Hungar**	**2.82**	**94**	ePn	**Pn**	**13 36 19.1**	**-0.8**
MORH				eSn	**Sn**	**13 36 53.9**	**-0.1**
MORH	**Mrgy, Hungar**	**2.82**	**94**	ePn	**Pn**	**13 36 18.1**	**-1.8**
MORH				Sn	**Sn**	**13 36 54.1**	**+0.1**
MAGA	**Magasa**	**2.84**	**257**	AML	AML		
	comp=N,8075µm,0.5s						
MAGA				AML	AML		
	comp=E,21750µm,0.7s						
MAGA				AML	AML		
	comp=N,8075µm,0.5s						
MAGA				AML	AML		
	comp=E,21750µm,0.7s						
KRUC	**Moravsky**	**2.86**	**25**	ePN	**Pn**	**13 36 20.3**	**-0.1**
KRUC				eSN	**Sb**	**13 37 02.3**	**+1.5**
KRUC	**Moravsky**	**2.86**	**25**	ePn	**Pn**	**13 36 20.3**	**-0.1**
KRUC				ePg	**Pb**	**13 36 26.3**	**+0.4**
KRUC				eSg	**Sb**	**13 37 02.5**	**+1.7**
TREC	**Trest**	**2.88**	**12**	ePN	**Pn**	**13 36 21.2**	**+0.4**
TREC	**Trest**	**2.88**	**12**	eP	**Pn**	**13 36 21.2**	**+0.4**
TREC	**Trest**	**2.88**	**12**	ePn	**Pn**	**13 36 21.2**	**+0.4**
TREC				eSg	**Sb**	**13 37 03.9**	**+2.3**
WET	**Wettzell**	**2.90**	**337**	ePn	**Pn**	**13 36 22.2**	**+1.1**
WET				ePg	**Pg**	**13 36 29.7**	**-0.7**
WET				eSg	**Sg**	**13 37 06.4**	**-1.6**
BRMO	**Bormio**	**2.91**	**271**	⇓iPn	**Pn**	**13 36 23.3**	**+2.0**
FUORN	**Ofenpass-Fuorn**	**2.99**	**274**	ePn	**Pn**	**13 36 23.1**	**+0.7**
FUORN	**Ofenpass-Fuorn**	**2.99**	**274**	⇑iPn	**Pn**	**13 36 24.6**	**+2.1**
FUORN	**Ofenpass-Fuorn**	**2.99**	**274**	AML	AML		
	comp=E,1395µm,0.7s						
FUORN				AML	AML		
	comp=N,1205µm,0.6s						
FUORN				AML	AML		
	comp=N,1205µm,0.6s						
FUORN				AML	AML		
	comp=E,1395µm,0.7s						
DOB	**Doboj**	**3.02**	**124**	ePn	**Pn**	**13 36 22.8**	**+0.1**
COR1	**Corinaldo**	**3.06**	**202**	AML	AML		
	comp=E,2743µm,0.8s						
COR1				AML	AML		
	comp=E,2743µm,0.8s						
COR1				AML	AML		
	comp=N,5485µm,1.2s						
COR1				AML	AML		
	comp=N,5485µm,1.2s						
FSSB	**Fossombrone**	**3.07**	**205**	AML	AML		
	comp=N,5615µm,0.5s						
FSSB				AML	AML		
	comp=E,3970µm,0.8s						
FSSB				AML	AML		
	comp=N,5615µm,0.5s						
FSSB				AML	AML		
	comp=E,3970µm,0.8s						
VRAC	**Vranov**	**3.13**	**25**	⇓iP	**Pn**	**13 36 24.2**	**-0.1**
VRAC	**Vranov**	**3.13**	**25**	S	**Sb**	**13 37 05.3**	**-3.6**
VRAC	**Vranov**	**3.13**	**25**	ePN	**Pn**	**13 36 24.0**	**-0.2**
VRAC				eSN	**Sb**	**13 37 09.5**	**+0.6**
VRAC	**Vranov**	**3.13**	**25**	ePn	**Pn**	**13 36 24.2**	**-0.1**
VRAC				ePg	**Pb**	**13 36 30.5**	**-0.1**
VRAC				eSg	**Sb**	**13 37 09.8**	**+1.0**
VRAC	**Vranov**	**3.13**	**25**	Pn	**Pn**	**13 36 24.0**	**-0.2**
	comp=E,5.1nm,0.3s,baz=211,slow=13,SNR=22						
VRAC				Lg	Lg	13 37 10.3	
	comp=E,65nm,0.3s,baz=296,slow=13,SNR=5.9						
VRAC				LR	LR	13 37 46.7	
	comp=E,694nm,19.7s,baz=167,slow=42						
PE3	**Peglio**	**3.15**	**209**	AML	AML		
	comp=E,5980µm,0.7s						
PE3				AML	AML		
	comp=E,5980µm,0.7s						
PE3				AML	AML		
	comp=N,4295µm,1.4s						
PE3				AML	AML		
	comp=N,4295µm,1.4s						
BERNI	**Berninapass**	**3.16**	**270**	⇓iPn	**Pn**	**13 36 27.3**	**+2.5**
JAVC	**Velka Javorina**	**3.16**	**40**	ePn	**Pn**	**13 36 25.1**	**+0.4**
BUD	**Budapest**	**3.20**	**70**	ePn	**Pn**	**13 36 25.0**	**-0.1**
BUD				Sn	**Sn**	**13 37 03.0**	**-0.3**
BUD	**Budapest**	**3.20**	**70**	ePn	**Pn**	**13 36 25.3**	**+0.2**
SFI	**Santa Sofia**	**3.22**	**218**	AML	AML		
	comp=E,2365µm,0.9s						
SFI				AML	AML		
	comp=E,2285µm,0.9s						
SFI				AML	AML		
	comp=N,1400µm,0.9s						
SFI				AML	AML		
	comp=N,1595µm,0.9s						
SFI				AML	AML		
	comp=N,1595µm,0.9s						
SFI				AML	AML		
	comp=N,1400µm,0.9s						
SFI				AML	AML		
	comp=E,2365µm,0.9s						
SFI				AML	AML		
	comp=E,2285µm,0.9s						
DAVOX	**Davos/Dischmat**	**3.26**	**277**	⇓iPn	**Pn**	**13 36 29.2**	**+3.1**
DAVOX	**Davos/Dischmat**	**3.26**	**277**	Pn	**Pn**	**13 36 29.0**	**+2.9**
	comp=E,15nm,0.3s,baz=103,slow=12,SNR=192						
DAVOX				Lg	Lg	13 37 13.7	
	comp=E,21nm,0.3s,baz=202,slow=19,SNR=6.3						
DAVOX	**Davos/Dischmat**	**3.26**	**277**	AML	AML		
	comp=N,920µm,0.8s						
DAVOX				AML	AML		
	comp=E,805µm,0.8s						
DAVOX				AML	AML		
	comp=N,920µm,0.8s						
DAVOX				AML	AML		
	comp=E,805µm,0.8s						
DAVA	**Damuels**	**3.33**	**286**	i Pn	**Pn**	**13 36 29.2**	**+2.2**
	comp=E,210nm,0.5s,SNR=57						
DAVA				Sg	**Sg**	**13 37 24.7**	**+3.1**
	comp=E,253nm,0.7s						
DAVA	**Damuels**	**3.33**	**286**	⇑iPn	**Pn**	**13 36 29.2**	**+2.2**
DAVA	**Damuels**	**3.33**	**286**	ePn	**Pn**	**13 36 29.3**	**+2.2**
DAVA				eSg	**Sg**	**13 37 21.8**	**+0.2**
KOLL	**Kolacno**	**3.33**	**50**	eP	**Pn**	**13 36 26.3**	**-0.7**
KOLL				e		13 37 02.5	
KOLL	**Kolacno**	**3.33**	**50**	ePN	**Pn**	**13 36 26.2**	**-0.7**
KOLL				eSG	**Sn**	**13 37 02.5**	**-4.0**
PRU	**Pruhonice**	**3.51**	**360**	ePN	**Pn**	**13 36 29.5**	**+0.1**
PRU				ePG	**Pb**	**13 36 37.1**	**+0.1**
PRU				eSG	**Sg**	**13 37 25.2**	**-2.3**
	comp=E,1µm,0.8s						
PRU				AMS	AMS	13 37 50.0	
	comp=E,6µm,4.9s						
PRU	**Pruhonice**	**3.51**	**360**	eP	**Pn**	**13 36 29.5**	**+0.1**
PRU				MLR	MLR		
	comp=Z,6µm,4.9s						
PRU	**Pruhonice**	**3.51**	**360**	ePn	**Pn**	**13 36 29.5**	**+0.1**
PRU				ePg	**Pg**	**13 36 39.9**	**-2.1**
PRU				eSg	**Sg**	**13 37 26.5**	**-1.0**
VYHS	**Vyhne**	**3.52**	**53**	eP	**Pn**	**13 36 28.3**	**-1.2**
VYHS				e		13 37 07.0	
VYHS				pmax	pmax		
	comp=N,237nm,1.0s						
VYHS	**Vyhne**	**3.52**	**53**	ePN	**Pn**	**13 36 28.3**	**-1.2**
VYHS				eSG	**Sn**	**13 37 06.9**	**-4.2**
VYHS				eLG	Lg	13 37 40.0	
MTCR	**Monte La Croce**	**3.53**	**227**	AML	AML		
	comp=E,1378µm,0.9s						
MTCR				AML	AML		
	comp=E,1378µm,0.9s						
MTCR				AML	AML		
	comp=N,1045µm,0.8s						
MTCR				AML	AML		
	comp=N,1045µm,0.8s						
VDL	**Val di Lei**	**3.55**	**272**	⇑iPn	**Pn**	**13 36 32.2**	**+2.1**
LIENZ	**Kamor/St.Gall**	**3.59**	**285**	⇑iPn	**Pn**	**13 36 32.5**	**+1.9**
PRA	**Prague**	**3.59**	**358**	eSG	**Sg**	**13 37 29.9**	**-0.3**
	comp=N,1µm,0.6s						
FDMO	**Fiordimonte**	**3.61**	**198**	AML	AML		
	comp=E,1122µm,0.6s						
FDMO				AML	AML		
	comp=N,1250µm,0.9s						
FDMO				AML	AML		
	comp=N,1250µm,0.9s						
FDMO				AML	AML		
	comp=E,1122µm,0.6s						
TUE	**Stuetta**	**3.62**	**272**	ePn	**Pn**	**13 36 32.8**	**+1.7**
PLONS	**Plons/SG**	**3.62**	**281**	⇑iPn	**Pn**	**13 36 33.3**	**+2.3**
PLONS	**Plons/SG**	**3.62**	**281**	AML	AML		
	comp=N,896µm,1.0s						
PLONS				AML	AML		
	comp=E,520µm,1.0s						
PLONS				AML	AML		
	comp=N,896µm,1.0s						
PLONS				AML	AML		
	comp=E,520µm,1.0s						
ROTZ	**Rotzenmuhle**	**3.66**	**335**	ePn	**Pn**	**13 36 31.8**	**+0.5**
ROTZ				ePg	**Pg**	**13 36 43.4**	**-1.4**
ROTZ				eSg	**Sg**	**13 37 30.2**	**-1.9**
CESI	**CESI - Serrava**	**3.68**	**200**	AML	AML		
	comp=N,967µm,1.6s						
CESI				AML	AML		
	comp=E,744µm,0.5s						
CESI				AML	AML		
	comp=E,744µm,0.5s						
CESI				AML	AML		
	comp=N,967µm,1.6s						
SGT04	**Schlatt-Haslen**	**3.69**	**285**	⇑iPn	**Pn**	**13 36 33.9**	**+1.9**
BLJ	**Bijeljina**	**3.70**	**116**	ePn	**Pn**	**13 36 31.3**	**-0.6**
VLC	**Villacollemand**	**3.76**	**233**	ePn	**Pn**	**13 36 34.8**	**+1.9**
PANIX	**Pigniu (Panix)**	**3.79**	**277**	⇑iPn	**Pn**	**13 36 35.6**	**+2.3**
MORC	**Moravsky Berou**	**3.85**	**30**	ePn	**Pn**	**13 36 34.0**	**0.0**
MORC	**Moravsky Berou**	**3.85**	**30**	⇑iP	**Pn**	**13 36 34.3**	**+0.2**
MORC	**Moravsky Berou**	**3.85**	**30**	S	**Sn**	**13 37 18.9**	**-0.4**
MORC	**Moravsky Berou**	**3.85**	**30**	eP	**Pn**	**13 36 34.0**	**0.0**
MORC	**Moravsky Berou**	**3.85**	**30**	ePN	**Pn**	**13 36 34.1**	**0.0**
MORC				eSN	**Sg**	**13 37 37.7**	**-0.5**
MORC	**Moravsky Berou**	**3.85**	**30**	ePn	**Pn**	**13 36 34.1**	**0.0**
MORC				ePg	**Pg**	**13 36 47.1**	**-1.4**
MORC				eSg	**Sg**	**13 37 37.8**	**-0.5**
LLS	**Linth-Limmern**	**3.86**	**277**	⇑iPn	**Pn**	**13 36 36.6**	**+2.3**
MANZ	**Manzenberg**	**3.88**	**336**	ePn	**Pn**	**13 36 35.0**	**+0.5**
MANZ				eSg	**Sg**	**13 37 38.1**	**-1.2**
FRGS	**Fruska Gora**	**3.88**	**108**	ePn	**Pn**	**13 36 33.4**	**-1.1**
FRGS				eSn	**Sn**	**13 37 17.4**	**-2.8**
FRGS	**Fruska Gora**	**3.88**	**108**	ePn	**Pn**	**13 36 33.5**	**-1.1**
FRGS				eSn	**Sn**	**13 37 18.9**	**-1.3**
KRLC	**Kraliky**	**3.88**	**21**	ePN	**Pn**	**13 36 35.0**	**+0.4**
KRLC	**Kraliky**	**3.88**	**21**	eP	**Pn**	**13 36 35.0**	**+0.4**
MUGIO	**Muggio**	**3.89**	**264**	⇑iPn	**Pn**	**13 36 36.4**	**+1.7**
PSZ	**Piszkesteto**	**3.89**	**66**	ePn	**Pn**	**13 36 34.6**	**-0.2**
PSZ	**Piszkesteto**	**3.89**	**66**	⇓iP	**Pn**	**13 36 34.2**	**-0.5**
PSZ	**Piszkesteto**	**3.89**	**66**	S	**Sn**	**13 37 19.6**	**-0.9**
PSZ	**Piszkesteto**	**3.89**	**66**	eP	**Pn**	**13 36 34.6**	**-0.2**
PSZ	**Piszkesteto**	**3.89**	**66**	ePn	**Pn**	**13 36 34.3**	**-0.4**
PSZ	**Piszkesteto**	**3.89**	**66**	ePn	**Pn**	**13 36 35.1**	**+0.4**
PSZ				Sn	**Sn**	**13 37 17.0**	**-3.5**
HAPS	**Han Pijesak,Bl**	**3.90**	**126**	ePn	**Pn**	**13 36 33.6**	**-1.3**
HAPS	**Han Pijesak,Bl**	**3.90**	**126**	⇑iPn	**Pn**	**13 36 33.5**	**-1.3**
HAPS				eSn	**Sn**	**13 37 19.7**	**-1.1**
GRA1	**Grafenberg Arr**	**3.93**	**326**	ePn	**Pn**	**13 36 34.8**	**-0.3**
GRF	**Grafenberg Arr**	**3.93**	**326**	eP	**Pn**	**13 36 34.8**	**-0.3**
GRF	**Grafenberg Arr**	**3.93**	**326**	ePn	**Pn**	**13 36 35.9**	**+0.7**
GRF				ePg	**Pg**	**13 36 48.9**	**-1.0**
GRF				eSg	**Sg**	**13 37 39.5**	**-1.3**
GRFO	**Grafenberg**	**3.93**	**326**	ePn	**Pn**	**13 36 35.8**	**+0.7**
GRFO	**Grafenberg**	**3.93**	**326**	eP	**Pn**	**13 36 35.8**	**+0.7**
WEIN	**Weingarten**	**3.97**	**287**	⇑iPn	**Pn**	**13 36 37.5**	**+1.7**
TEKS	**Tekeris**	**3.97**	**117**	ePn	**Pn**	**13 36 35.2**	**-0.6**
TEKS				eSn	**Sn**	**13 37 21.2**	**-1.2**
WILA	**Wila**	**4.00**	**286**	⇑iPn	**Pn**	**13 36 37.9**	**+1.7**
NKC	**Novy Kostel**	**4.02**	**340**	ePN	**Pn**	**13 36 36.8**	**+0.4**
NKC	**Novy Kostel**	**4.02**	**340**	eP	**Pn**	**13 36 36.8**	**+0.4**
DPC	**Dobruska-Polom**	**4.04**	**16**	ePN	**Pn**	**13 36 36.4**	**-0.3**
DPC				AMS	AMS	13 38 00.0	
	comp=N,3µm,5.4s						
DPC	**Dobruska-Polom**	**4.04**	**16**	eP	**Pn**	**13 36 36.4**	**-0.3**
DPC				MLR	MLR		
	comp=Z,3µm,5.4s						
DPC	**Dobruska-Polom**	**4.04**	**16**	ePn	**Pn**	**13 36 36.5**	**-0.3**
DPC				ePg	**Pb**	**13 36 47.7**	**+1.7**
DPC				eSg	**Sg**	**13 37 40.7**	**-3.8**
GUT	**Gutenstein**	**4.05**	**295**	⇑iPn	**Pn**	**13 36 37.9**	**+1.0**
PVCC	**Panska Ves**	**4.05**	**360**	eSG	**Sg**	**13 37 41.7**	**-3.1**
	comp=Z,2µm,0.6s						
PVCC	**Panska Ves**	**4.05**	**360**	eSg	**Sg**	**13 37 43.4**	**-1.4**
STEIN	**Stein am Rhein**	**4.08**	**289**	⇑iPn	**Pn**	**13 36 38.9**	**+1.6**
WERN	**Wernitzgruen**	**4.08**	**340**	ePn	**Pn**	**13 36 37.6**	**+0.2**
WERN				eSg	**Sg**	**13 37 43.3**	**-2.6**
FUSIO	**Fusio**	**4.09**	**272**	⇑iPn	**Pn**	**13 36 40.5**	**+2.9**
FUSIO	**Fusio**	**4.09**	**272**	AML	AML		
	comp=N,622µm,1.4s						
FUSIO				AML	AML		
	comp=E,552µm,0.8s						
FUSIO				AML	AML		
	comp=N,622µm,1.4s						
FUSIO				AML	AML		
	comp=E,552µm,0.8s						
OKC	**Ostrava-Krasne**	**4.12**	**34**	ePN	**Pn**	**13 36 38.0**	**+0.3**
OKC	**Ostrava-Krasne**	**4.12**	**34**	eP	**Pn**	**13 36 38.0**	**+0.3**
OKC	**Ostrava-Krasne**	**4.12**	**34**	ePn	**Pn**	**13 36 38.1**	**+0.4**
MUO	**Muotathal**	**4.12**	**279**	⇑iPn	**Pn**	**13 36 40.1**	**+2.1**
UPC	**Upice**	**4.14**	**13**	ePN	**Pn**	**13 36 37.9**	**-0.1**
UPC				AMS	AMS	13 38 10.0	
	comp=E,3µm,5.6s						
UPC	**Upice**	**4.14**	**13**	eP	**Pn**	**13 36 37.9**	**-0.1**
UPC				MLR	MLR		
	comp=Z,3µm,5.6s						
GUNZ	**Gunzen**	**4.17**	**340**	ePn	**Pn**	**13 36 38.6**	**+0.2**
GUNZ				ePg	**Pg**	**13 36 53.0**	**-1.6**
GUNZ				eSg	**Sg**	**13 37 47.1**	**-1.4**
TANN	**Tannenbergstha**	**4.18**	**341**	ePn	**Pn**	**13 36 39.0**	**+0.3**
TANN				eSg	**Sg**	**13 37 46.1**	**-3.0**
TRULL	**Truellikon**	**4.20**	**288**	⇑iPn	**Pn**	**13 36 40.5**	**+1.5**
ZUR	**Degenried**	**4.21**	**284**	⇑iPn	**Pn**	**13 36 40.7**	**+1.6**
AQU	**L'Aquila**	**4.21**	**192**	ePn	**Pn**	**13 36 39.2**	**+0.1**
AQU	**L'Aquila**	**4.21**	**192**	eP	**Pn**	**13 36 39.2**	**+0.1**
AQU	**L'Aquila**	**4.21**	**192**	ePn	**Pn**	**13 36 39.1**	**0.0**
LANS	**Liptovska Anna**	**4.24**	**49**	eP	**Pn**	**13 36 39.2**	**-0.2**
LANS				e		13 37 26.7	
LANS	**Liptovska Anna**	**4.24**	**49**	ePN	**Pn**	**13 36 39.2**	**-0.2**
LANS				eSG	**Sn**	**13 37 26.7**	**-2.2**
STON	**Ston**	**4.24**	**147**	i Pn	**Pn**	**13 36 41.2**	**+1.8**
FLACH	**Flaach**	**4.26**	**287**	⇑iPn	**Pn**	**13 36 41.2**	**+1.5**
BNALP	**Bannalp**	**4.26**	**277**	⇓iPn	**Pn**	**13 36 41.6**	**+1.8**
BNALP	**Bannalp**	**4.26**	**277**	AML	AML		
	comp=N,430µm,0.9s						
BNALP				AML	AML		
	comp=E,562µm,1.2s						
BNALP				AML	AML		
	comp=E,562µm,1.2s						
BNALP				AML	AML		
	comp=N,430µm,0.9s						
BBLS	**Lazići**	**4.29**	**126**	ePn	**Pn**	**13 36 39.7**	**-0.5**
BBLS				eSn	**Sn**	**13 37 28.1**	**-2.3**
BBLS	**Lazići**	**4.29**	**126**	ePn	**Pn**	**13 36 39.8**	**-0.5**
BBLS				eSn	**Sn**	**13 37 29.4**	**-1.0**
STU	**Stuttgart**	**4.31**	**304**	ePn	**Pn**	**13 36 40.4**	**0.0**
STU	**Stuttgart**	**4.31**	**304**	eP	**Pn**	**13 36 40.4**	**0.0**
STU	**Stuttgart**	**4.31**	**304**	ePn	**Pn**	**13 36 41.5**	**+1.1**
STU				ePg	**Pg**	**13 36 55.4**	**-1.8**
STU				eSg	**Sg**	**13 37 53.8**	**+0.8**
PLN	**Plauen**	**4.32**	**339**	ePn	**Pn**	**13 36 41.2**	**+0.7**
PLN				ePg	**Pg**	**13 36 56.5**	**-1.0**
PLN				eSg	**Sg**	**13 37 51.0**	**-2.5**
SLE	**Schleitheim**	**4.36**	**289**	P	**Pn**	**13 36 42.4**	**+1.4**
SLE	**Schleitheim**	**4.36**	**289**	⇑iPn	**Pn**	**13 36 42.1**	**+1.0**
BRG	**Berggiesshubel**	**4.42**	**355**	PN	**Pn**	**13 36 41.0**	**-0.8**
BRG				PG	**Pg**	**13 37 00.2**	**+0.8**
BRG				SG	**Sg**	**13 37 59.9**	**+3.4**
	comp=N,617nm,0.6s comp=N,2µm,4.6s comp=E,1µm,3.7s comp=Z,4µm,5.8s						
BRG	**Berggiesshubel**	**4.42**	**355**	P	**Pn**	**13 36 41.0**	**-0.8**
BRG				MLR	MLR		
	comp=N,2µm,4.6s						
BRG				MLR	MLR		
	comp=E,1µm,3.7s						
BRG				MLR	MLR		
	comp=Z,4µm,5.8s						
BRG	**Berggiesshubel**	**4.42**	**355**	ePn	**Pn**	**13 36 41.4**	**-0.5**

BRG				ePg	Pg	13 36 57.5	-1.9
HASLI	**Hasliberg/Brie**	**4.44**	**276**	⇑iPn	**Pn**	**13 36 44.4**	**+2.0**
ACHB	**Acheberg**	**4.47**	**287**	⇑iPn	**Pn**	**13 36 43.8**	**+1.2**
FIESA	**Fiescheralp**	**4.48**	**272**	⇑iPn	**Pn**	**13 36 45.8**	**+2.9**
UPM	**Unac-Piva**	**4.49**	**135**	ePn	**Pn**	**13 36 42.9**	**-0.1**
DIVS	**Divibare**	**4.50**	**120**	ePn	**Pn**	**13 36 42.1**	**-0.9**
DIVS				eSn	**Sn**	**13 37 30.5**	**-4.9**
DIVS	**Divibare**	**4.50**	**120**	ePn	**Pn**	**13 36 42.5**	**-0.6**
DIVS	**Divibare**	**4.50**	**120**	⇑iPn	**Pn**	**13 36 42.3**	**-0.7**
DIVS				eSn	**Sn**	**13 37 33.2**	**-2.2**
KSP	**Ksiaz**	**4.51**	**14**	ePn	**Pn**	**13 36 42.8**	**-0.3**
KSP	**Ksiaz**	**4.51**	**14**	eP	**Pn**	**13 36 42.8**	**-0.3**
FBE	**Freiberg**	**4.52**	**350**	ePn	**Pn**	**13 36 43.5**	**+0.3**
SULZ	**Cheisacher**	**4.55**	**286**	⇑iPn	**Pn**	**13 36 44.9**	**+1.1**
BRY	**Bratogost**	**4.55**	**140**	⇑iPn	**Pn**	**13 36 45.2**	**+1.3**
BRY				i Sn	**Sn**	**13 37 39.3**	**+2.4**
SIMPL	**Simplonpass**	**4.55**	**269**	⇓iPn	**Pn**	**13 36 45.6**	**+1.7**
MOX	**Moxa**	**4.61**	**336**	P	**Pn**	**13 36 45.6**	**+1.1**
MOX	**Moxa**	**4.61**	**336**	ePn	**Pn**	**13 36 45.4**	**+0.8**
MOX				eSg	**Sg**	**13 38 00.1**	**-2.6**
MMK	**Mattmark**	**4.61**	**267**	⇓iPn	**Pn**	**13 36 46.2**	**+1.4**
TREB	**Trebinje**	**4.62**	**143**	eSn	**Sn**	**13 37 37.3**	**-1.1**
BFO	**Black Forest**	**4.63**	**296**	ePn	**Pn**	**13 36 45.6**	**+0.8**
BFO	**Black Forest**	**4.63**	**296**	eP	**Pn**	**13 36 45.6**	**+0.8**
BFO	**Black Forest**	**4.63**	**296**	⇑iPn	**Pn**	**13 36 45.6**	**+0.8**
BFO	**Black Forest**	**4.63**	**296**	ePn	**Pn**	**13 36 45.7**	**+0.8**
PCP	**Piancastagn**	**4.67**	**248**	AML	AML		
	comp=N,504µm,0.8s						
PCP				AML	AML		
	comp=E,461µm,1.2s						
PCP				AML	AML		
	comp=N,504µm,0.8s						
PCP				AML	AML		
	comp=E,461µm,1.2s						
TRUS	**Trudelj**	**4.68**	**117**	ePn	**Pn**	**13 36 44.7**	**-0.8**
EMBD	**Embd, Matterta**	**4.69**	**269**	⇓iPn	**Pn**	**13 36 47.8**	**+2.2**
KIZ	**Kirchzarten**	**4.78**	**290**	P	**Pn**	**13 36 47.6**	**+0.8**
KIZ				S	**Sn**	**13 37 41.6**	**-0.7**
KIZ	**Kirchzarten**	**4.78**	**290**	⇑iPn	**Pn**	**13 36 47.5**	**+0.6**
OPP	**Oppenau**	**4.79**	**297**	P	**Pn**	**13 36 48.5**	**+1.6**
OPP				S	**Sn**	**13 37 43.2**	**+0.8**
BALST	**Balsthal**	**4.80**	**283**	⇑iPn	**Pn**	**13 36 48.2**	**+1.1**
LKBD2	**Leukerbad 2**	**4.80**	**271**	⇓iPn	**Pn**	**13 36 50.1**	**+2.7**
WIMIS	**Wimmis**	**4.81**	**275**	⇑iPn	**Pn**	**13 36 49.3**	**+2.0**
LKBD	**Leukerbad**	**4.81**	**271**	⇑iPn	**Pn**	**13 36 49.9**	**+2.5**
NKY	**Niksic**	**4.83**	**138**	⇓iPn	**Pn**	**13 36 48.9**	**+1.3**
NIE	**Niedzica**	**4.83**	**50**	ePn	**Pn**	**13 36 47.9**	**+0.3**
NIE				eSn	**Sn**	**13 37 43.8**	**+0.2**
NIE	**Niedzica**	**4.83**	**50**	eP	**Pn**	**13 36 47.9**	**+0.3**
NIE				e		13 37 43.8	
NKME	**Niksic**	**4.85**	**138**	⇑iPn	**Pn**	**13 36 49.1**	**+1.3**
NKME				i Sn	**Sn**	**13 37 46.1**	**+2.1**
IVAS	**Ivanjica**	**4.90**	**124**	ePn	**Pn**	**13 36 47.7**	**-0.8**
IVAS				eSn	**Sn**	**13 37 40.4**	**-4.9**
CLL	**Collm**	**4.94**	**348**	ePn	**Pn**	**13 36 48.4**	**-0.7**
CLL	**Collm**	**4.94**	**348**	i Pn	**Pn**	**13 36 49.0**	**-0.1**
	comp=Z,19nm,0.5s						
CLL				i		13 36 51.6	
CLL				i Pg	**Pg**	**13 37 07.8**	**-1.6**
CLL				e		13 37 50.0	
CLL				e		13 37 55.0	
CLL				i Sg	**Sg**	**13 38 07.4**	**-6.0**
	comp=Z,1µm,1.0s						
CLL				eSglp		13 38 12.0	
	comp=N,200nm,27.0s						
CLL				eSglp		13 38 12.0	
	comp=E,1µm,19.2s						
CLL	**Collm**	**4.94**	**348**	eP	**Pn**	**13 36 48.4**	**-0.7**
CLL	**Collm**	**4.94**	**348**	ePn	**Pn**	**13 36 49.3**	**+0.2**
CLL				eSg	**Sg**	**13 38 09.0**	**-4.4**
BZS	**Buzias**	**4.97**	**97**	ePn	**Pn**	**13 36 48.2**	**-1.2**
BZS	**Buzias**	**4.97**	**97**	⇑iP	**Pn**	**13 36 47.9**	**-1.5**
DIX	**Grande Dixence**	**4.99**	**268**	⇓iPn	**Pn**	**13 36 52.1**	**+2.1**
SENIN	**Lac Senin/Sane**	**5.04**	**271**	ePn	**Pn**	**13 36 51.9**	**+1.2**
SENIN	**Lac Senin/Sane**	**5.04**	**271**	⇑iPn	**Pn**	**13 36 50.2**	**-0.4**
GRUS	**Gruza**	**5.05**	**119**	ePn	**Pn**	**13 36 50.1**	**-0.4**
GRUS				eSn	**Sn**	**13 37 44.5**	**-4.4**
NEUB	**Neuenburg**	**5.08**	**340**	ePn	**Pn**	**13 36 51.9**	**+0.9**
OJC	**Ojcow**	**5.11**	**41**	ePn	**Pn**	**13 36 51.4**	**+0.1**
OJC	**Ojcow**	**5.11**	**41**	ePn	**Pn**	**13 36 50.9**	**-0.4**
OJC	**Ojcow**	**5.11**	**41**	eP	**Pn**	**13 36 50.9**	**-0.4**
BOURR	**Bourrignon**	**5.12**	**283**	⇑iPn	**Pn**	**13 36 52.5**	**+0.9**
GRYON	**Gryon**	**5.18**	**270**	⇑iPn	**Pn**	**13 36 54.6**	**+2.2**
BUM	**Brajici-Budva**	**5.19**	**142**	⇓iPn	**Pn**	**13 36 54.0**	**+1.4**
BUM				i Sn	**Sn**	**13 37 54.8**	**+2.2**
LANF	**Langenberg**	**5.21**	**301**	P	**Pn**	**13 36 53.6**	**+0.8**
LANF				S	**Sn**	**13 37 53.8**	**+0.8**
PDG	**Podgorica**	**5.25**	**139**	⇑iP	**Pn**	**13 36 51.2**	**-2.1**
PDG	**Podgorica**	**5.25**	**139**	S	**Sn**	**13 37 49.9**	**-3.9**
PDG	**Podgorica**	**5.25**	**139**	ePn	**Pn**	**13 36 53.4**	**+0.1**
PDG				eSn	**Sn**	**13 37 52.2**	**-1.6**
TTG	**Podgorica**	**5.25**	**139**	⇑iPn	**Pn**	**13 36 54.9**	**+1.6**
TTG				i Sn	**Sn**	**13 37 55.9**	**+2.1**
TTG	**Podgorica**	**5.25**	**139**	ePn	**Pn**	**13 36 54.3**	**+1.1**
TTG	**Podgorica**	**5.25**	**139**	eP	**Pn**	**13 36 54.3**	**+1.1**
TORNY	**Torny/Romont**	**5.26**	**276**	⇑iPn	**Pn**	**13 36 54.9**	**+1.4**
MOF	**Molkenrain**	**5.27**	**288**	P	**Pn**	**13 36 54.4**	**+0.8**
MRGE	**Morge**	**5.28**	**265**	⇓iPn	**Pn**	**13 36 56.0**	**+2.1**
AIGLE	**Aigle**	**5.28**	**271**	⇑iPn	**Pn**	**13 36 55.5**	**+1.7**
SALAN	**Lac Salanfe**	**5.29**	**269**	⇑iPn	**Pn**	**13 36 56.1**	**+2.1**
RSP	**Reno Superiore**	**5.29**	**258**	⇓iPn	**Pn**	**13 36 53.1**	**-0.9**
LSD	**Lago del Serru**	**5.29**	**262**	⇑ePn	**Pn**	**13 36 53.8**	**-0.4**
CDF	**Champ du Feu**	**5.32**	**294**	ePn	**Pn**	**13 36 54.7**	**+0.3**
CDF				eSg	**Sg**	**13 38 23.0**	**-2.6**
	comp=E,284nm,0.7s						
CDF	**Champ du Feu**	**5.32**	**294**	ePn	**Pn**	**13 36 54.7**	**+0.3**
CDF				eSg	**Sg**	**13 38 23.0**	**-2.6**
CDF	**Champ du Feu**	**5.32**	**294**	eP	**Pn**	**13 36 54.7**	**+0.3**
ECH	**Echery**	**5.34**	**292**	ePn	**Pn**	**13 36 55.3**	**+0.8**
ECH	**Echery**	**5.34**	**292**	P	**Pn**	**13 36 55.3**	**+0.8**
ECH	**Echery**	**5.34**	**292**	eP	**Pn**	**13 36 55.3**	**+0.8**
LOMF	**Lomont**	**5.39**	**282**	P	**Pn**	**13 36 56.4**	**+1.1**
KUBS	**Kucevo**	**5.40**	**110**	ePn	**Pn**	**13 36 52.9**	**-2.5**
DRME	**Dracevica, Mon**	**5.41**	**141**	⇑iPn	**Pn**	**13 36 56.7**	**+1.2**
DRME				i Sn	**Sn**	**13 37 59.6**	**+1.7**
HINF	**Hinteralfeld**	**5.44**	**287**	ePn	**Pn**	**13 36 55.8**	**-0.2**
HINF				eSn	**Sn**	**13 37 56.3**	**-2.4**
	comp=E,88nm,0.5s						
HINF				eSg	**Sg**	**13 38 25.7**	**-3.8**
	comp=E,303nm,0.9s						
HINF	**Hinteralfeld**	**5.44**	**287**	ePn	**Pn**	**13 36 55.8**	**-0.2**
HINF				eSn	**Sn**	**13 37 56.3**	**-2.4**
HINF				eSg	**Sg**	**13 38 25.7**	**-3.8**
HINF	**Hinteralfeld**	**5.44**	**287**	eP	**Pn**	**13 36 55.8**	**-0.2**
HINF				e		13 37 56.3	
TNS	**Taunus Mts**	**5.55**	**315**	P	**Pn**	**13 36 58.3**	**+0.9**
TNS	**Taunus Mts**	**5.55**	**315**	ePn	**Pn**	**13 36 58.5**	**+1.1**
LPG	**La Plagne**	**5.55**	**263**	ePn	**Pn**	**13 36 56.7**	**-1.0**
LPG	**La Plagne**	**5.55**	**263**	eP	**Pn**	**13 37 00.9**	**+3.2**
LPG				eSn	**Sn**	**13 37 56.4**	**-5.2**
	comp=E,132nm,0.7s						
LPG	**La Plagne**	**5.55**	**263**	ePn	**Pn**	**13 36 56.7**	**-1.0**
LPG				eSn	**Sn**	**13 37 56.4**	**-5.2**
LPG	**La Plagne**	**5.55**	**263**	eP	**Pn**	**13 36 56.7**	**-1.0**
LPG				e		13 37 56.4	
LPL	**La Plagne**	**5.56**	**263**	ePn	**Pn**	**13 36 56.6**	**-1.1**
LPL	**La Plagne**	**5.56**	**263**	eP	**Pn**	**13 37 00.7**	**+3.0**
LPL	**La Plagne**	**5.56**	**263**	eP	**Pn**	**13 37 00.7**	**+3.0**
BRANT	**Les Verrieres**	**5.60**	**278**	⇑iPn	**Pn**	**13 36 59.2**	**+1.0**
DRGR		**5.60**	**84**	⇑iP	**Pn**	**13 36 57.5**	**-0.7**
DRGR		**5.60**	**84**	S	**Sn**	**13 37 59.3**	**-3.4**
PGF	**Pioggiola**	**5.60**	**227**	eP	**Pn**	**13 37 00.3**	**+2.0**
PGF				eSn	**Sn**	**13 37 59.2**	**-3.5**
	comp=E,102nm,0.8s						
PGF	**Pioggiola**	**5.60**	**227**	eP	**Pn**	**13 37 00.3**	**+2.0**
PGF				eSn	**Sn**	**13 37 59.2**	**-3.5**
ULC	**Ulcinj**	**5.62**	**142**	⇑iPn	**Pn**	**13 36 59.9**	**+1.5**
ULC				i Sn	**Sn**	**13 38 04.9**	**+1.9**
BAI	**Bari**	**5.62**	**162**	ePn	**Pn**	**13 36 58.3**	**-0.1**
BAI				Sn	**Pn**	**13 37 01.4**	**+3.0**
UZH	**Uzhgorod**	**5.64**	**65**	eP	**Pn**	**13 37 01.2**	**+2.5**
UZH				eS	**Sn**	**13 38 06.4**	**+2.9**
SELS	**Selova**	**5.67**	**123**	ePn	**Pn**	**13 36 58.7**	**-0.4**
SELS				eSn	**Sn**	**13 37 59.1**	**-5.2**
SBF	**Sospel**	**5.69**	**245**	ePn	**Pn**	**13 37 00.4**	**+0.9**
SBF				eSn	**Sn**	**13 38 01.5**	**-3.4**
	comp=E,232nm,0.6s						
SBF	**Sospel**	**5.69**	**245**	ePn	**Pn**	**13 37 00.4**	**+0.9**
SBF				eSn	**Sn**	**13 38 01.5**	**-3.4**
HERR	**Herculane**	**5.71**	**103**	⇓iP	**Pn**	**13 36 58.3**	**-1.4**
HERR	**Herculane**	**5.71**	**103**	S	**Sn**	**13 38 02.1**	**-3.2**
BNI	**Bardonecchia**	**5.71**	**258**	ePn	**Pn**	**13 37 01.4**	**+1.5**
MBDF	**Montbardon**	**5.76**	**255**	ePn	**Pn**	**13 36 59.9**	**-0.5**
MBDF				eSn	**Sn**	**13 38 03.1**	**-3.5**
	comp=E,86nm,0.5s						
MBDF	**Montbardon**	**5.76**	**255**	ePn	**Pn**	**13 36 59.9**	**-0.5**
MBDF				eSn	**Sn**	**13 38 03.1**	**-3.5**
MBDF	**Montbardon**	**5.76**	**255**	eP	**Pn**	**13 36 59.9**	**-0.5**
MBDF				e		13 38 03.1	
BOVS	**Bovan**	**5.79**	**117**	ePn	**Pn**	**13 36 59.8**	**-0.9**
BOVS	**Bovan**	**5.79**	**117**	ePn	**Pn**	**13 37 00.3**	**-0.4**
ABH	**Alteburg**	**5.81**	**308**	P	**Pn**	**13 37 02.0**	**+1.1**
ABH				S	**Sn**	**13 38 08.2**	**+0.5**
HAU	**Haudompre**	**5.81**	**288**	ePn	**Pn**	**13 37 00.8**	**-0.3**
HAU				eSg	**Sg**	**13 38 37.9**	**-3.5**
	comp=E,379nm,0.9s						
HAU	**Haudompre**	**5.81**	**288**	ePn	**Pn**	**13 37 00.8**	**-0.3**
HAU				eSg	**Sg**	**13 38 37.9**	**-3.5**
HAU	**Haudompre**	**5.81**	**288**	eP	**Pn**	**13 37 00.8**	**-0.3**
GZR	**Gura Zlata**	**5.81**	**98**	⇑iP	**Pn**	**13 37 00.5**	**-0.6**
GZR	**Gura Zlata**	**5.81**	**98**	S	**Sn**	**13 38 05.1**	**-2.8**
SURF	**Saint Ours**	**5.82**	**253**	P	**Pn**	**13 37 02.4**	**+1.1**
SG1	**Sgolgore (BA)**	**5.84**	**164**	ePn	**Pn**	**13 37 01.2**	**-0.2**
SG1				Sn	**Sn**	**13 38 05.3**	**-3.1**
CABF	**La Chapelle**	**5.87**	**274**	ePn	**Pn**	**13 37 02.5**	**+0.7**
CABF				eSg	**Sg**	**13 38 40.0**	**-3.0**
	comp=E,424nm,1.2s						
CABF	**La Chapelle**	**5.87**	**274**	ePn	**Pn**	**13 37 02.5**	**+0.7**
CABF				eSg	**Sg**	**13 38 40.0**	**-3.0**
CABF	**La Chapelle**	**5.87**	**274**	eP	**Pn**	**13 37 02.5**	**+0.7**
GTTG	**Gvttingen**	**5.91**	**331**	ePn	**Pn**	**13 37 04.6**	**+2.3**
FASA	**Fasano**	**6.01**	**160**	ePn	**Pn**	**13 37 05.6**	**+1.9**
OGAG	**Argentiere**	**6.01**	**253**	P	**Pn**	**13 37 04.2**	**+0.3**
OGAG				S	**Sn**	**13 38 11.8**	**-1.0**
MATE	**Matera**	**6.03**	**164**	⇑iP	**Pn**	**13 37 03.6**	**-0.4**
MATE	**Matera**	**6.03**	**164**	S	**Sn**	**13 38 10.3**	**-2.7**
ZAGS	**Zajecar**	**6.03**	**114**	ePn	**Pn**	**13 37 03.1**	**-0.9**
KOE	**Koeppel**	**6.03**	**313**	ePn	**Pn**	**13 37 05.8**	**+1.8**
THEF	**They Montfort**	**6.10**	**290**	P	**Pn**	**13 37 05.8**	**+0.9**
BGG	**Burgeitz**	**6.10**	**310**	ePn	**Pn**	**13 37 07.0**	**+2.0**
OG35	**Corcelles**	**6.27**	**269**	P	**Pn**	**13 37 08.5**	**+1.1**
KWP	**Kalwaria Pacla**	**6.29**	**57**	ePn	**Pn**	**13 37 08.7**	**+1.1**
KWP				eSn	**Sn**	**13 38 20.7**	**+1.2**
KWP	**Kalwaria Pacla**	**6.29**	**57**	ePn	**Pn**	**13 37 08.4**	**+0.8**
KWP	**Kalwaria Pacla**	**6.29**	**57**	eP	**Pn**	**13 37 08.7**	**+1.1**
KWP				e		13 38 20.7	
ORIF	**Oris-en-Rattie**	**6.30**	**259**	eP	**Pn**	**13 37 10.3**	**+2.6**
ORIF				eSn	**Sn**	**13 38 16.2**	**-3.5**
	comp=E,130nm,0.7s						
ORIF	**Oris-en-Rattie**	**6.30**	**259**	eP	**Pn**	**13 37 10.3**	**+2.6**
ORIF				eSn	**Sn**	**13 38 16.2**	**-3.5**
ORIF	**Oris-en-Rattie**	**6.30**	**259**	P	**Pn**	**13 37 10.0**	**+2.2**
ORIF				S	**Sn**	**13 38 21.7**	**+2.0**
BARS	**Barje**	**6.32**	**123**	ePn	Pn	13 36 58.3	-10
BARS	**Barje**	**6.32**	**123**	ePn	**Pn**	**13 37 07.4**	**-0.7**
FRF	**La Foret Royal**	**6.34**	**245**	ePn	**Pn**	**13 37 08.8**	**+0.5**
FRF				eSn	**Sn**	**13 38 16.1**	**-4.6**
	comp=E,83nm,0.7s						
FRF	**La Foret Royal**	**6.34**	**245**	ePn	**Pn**	**13 37 08.8**	**+0.5**
FRF				eSn	**Sn**	**13 38 16.1**	**-4.6**
FRF	**La Foret Royal**	**6.34**	**245**	eP	**Pn**	**13 37 08.8**	**+0.5**
FRF				e		13 38 16.1	
PAGF	**Fort de Pagny**	**6.35**	**292**	ePn	**Pn**	**13 37 08.3**	**-0.1**
PAGF	**Fort de Pagny**	**6.35**	**292**	ePn	**Pn**	**13 37 08.3**	**-0.1**
TIR	**Tirane**	**6.39**	**142**	ePn	**Pn**	**13 37 10.5**	**+1.5**
TIR	**Tirane**	**6.39**	**142**	eP	**Pn**	**13 37 10.5**	**+1.5**
AHRW	**Bad Neuenahr-A**	**6.43**	**312**	ePn	**Pn**	**13 37 11.6**	**+2.1**
WLF	**Walferdange**	**6.49**	**302**	ePn	**Pn**	**13 37 11.3**	**+1.0**
WLF	**Walferdange**	**6.49**	**302**	eP	**Pn**	**13 37 11.3**	**+1.0**
WLF	**Walferdange**	**6.49**	**302**	pP	**Pn**	**13 37 12.8**	**+2.6**
	comp=Z,30nm,0.6s						
WLF				sP	**Pg**	**13 37 41.2**	**+2.3**
WLF				S	**Sg**	**13 39 08.9**	**+6.0**
HILG	**Hillesheim**	**6.50**	**309**	ePn	**Pn**	**13 37 12.6**	**+2.1**
LMR	**La Mourre**	**6.54**	**244**	ePn	**Pn**	**13 37 11.5**	**+0.5**
LMR				eSn	**Sn**	**13 38 22.0**	**-3.7**
	comp=Z,78nm,0.6s						
LMR	**La Mourre**	**6.54**	**244**	ePn	**Pn**	**13 37 11.5**	**+0.5**
LMR				eSn	**Sn**	**13 38 22.0**	**-3.7**
LMR	**La Mourre**	**6.54**	**244**	eP	**Pn**	**13 37 11.5**	**+0.5**
LMR				e		13 38 22.0	
ZAPS	**Zavoj**	**6.55**	**116**	ePn	**Pn**	**13 37 10.8**	**-0.4**
HOBG	**Hohbusch**	**6.58**	**316**	ePn	**Pn**	**13 37 13.3**	**+1.8**
LVIA	**Vianden**	**6.58**	**305**	P	**Pn**	**13 37 12.2**	**+0.6**
LVIA				pP	**Pn**	**13 37 13.8**	**+2.2**
LVIA				x	x	13 37 39.5	
STB	**Steinbach**	**6.59**	**311**	ePn	**Pn**	**13 37 13.6**	**+2.0**
STB				eSn	**Sn**	**13 38 24.1**	**-2.6**
	comp=Z,77nm,0.7s						
SKO	**Skopje**	**6.67**	**130**	i Pn	**Pn**	**13 37 14.5**	**+1.7**
SFTF	**Sexfontaines**	**6.71**	**288**	ePn	**Pn**	**13 37 13.6**	**+0.2**
SFTF				eSg	**Sg**	**13 39 06.4**	**-3.8**
	comp=Z,390nm,1.2s						
SFTF	**Sexfontaines**	**6.71**	**288**	ePn	**Pn**	**13 37 13.6**	**+0.2**
SFTF				eSg	**Sg**	**13 39 06.4**	**-3.8**
LKLB	**Kalborn**	**6.72**	**306**	pP	**Pn**	**13 37 15.3**	**+1.9**
MEZF	**Maizieres J'vi**	**6.77**	**291**	ePn	**Pn**	**13 37 14.1**	**0.0**
	baz=110						
MEZF				eSg	**Sg**	**13 39 07.6**	**-4.4**
	comp=Z,304nm,1.1s						
MEZF	**Maizieres J'vi**	**6.77**	**291**	ePn	**Pn**	**13 37 14.1**	**0.0**
MEZF				eSg	**Sg**	**13 39 07.6**	**-4.4**
SMRF	**Simiane la Rot**	**6.84**	**252**	eP	**Pn**	**13 37 18.5**	**+3.3**
SMRF	**Simiane la Rot**	**6.84**	**252**	eP	**Pn**	**13 37 18.5**	**+3.3**
KLL	**Kalltalsperre**	**6.89**	**310**	ePn	**Pn**	**13 37 17.8**	**+1.9**
BUG	**Bochum--Univer**	**6.92**	**319**	ePn	**Pn**	**13 37 17.5**	**+1.4**
KRUS	**Krusevo**	**7.01**	**134**	i Pn	**Pn**	**13 37 18.9**	**+1.2**
MEM	**Membach**	**7.04**	**309**	P	**Pn**	**13 37 19.0**	**+1.3**
MEM				⇓S	**Sn**	**13 38 38.2**	**+0.5**
MEM	**Membach**	**7.04**	**309**	P	**Pn**	**13 37 19.0**	**+1.3**
MEM				pP	**Pn**	**13 37 20.2**	**+2.4**
MEM				S	**Sn**	**13 38 40.4**	**+2.7**
ARR	**Arges**	**7.09**	**95**	⇑iP	**Pn**	**13 37 17.4**	**-1.3**
SSB	**Saint Sauveur**	**7.12**	**264**	ePn	**Pn**	**13 37 19.1**	**+0.1**
RETH	**Rethem/Aller,**	**7.12**	**333**	ePn	**Pn**	**13 37 21.4**	**+2.4**
VIVF	**Saint-Julien-l**	**7.13**	**260**	ePn	**Pn**	**13 37 18.5**	**-0.7**
VIVF				eSn	**Sn**	**13 38 36.0**	**-4.3**
	comp=Z,20nm,0.5s						
VIVF	**Saint-Julien-l**	**7.13**	**260**	ePn	**Pn**	**13 37 18.5**	**-0.7**
VIVF				eSn	**Sn**	**13 38 36.0**	**-4.3**
VIVF	**Saint-Julien-l**	**7.13**	**260**	eP	**Pn**	**13 37 18.5**	**-0.7**
VIVF				e		13 38 36.0	
LVV	**L'vov**	**7.14**	**59**	eP	Pn	13 37 09.0	-10
HGN	**Heimansgroeve**	**7.16**	**310**	ePn	**Pn**	**13 37 21.1**	**+1.7**
	comp=Z,32nm,0.7s						
HGN				eSn	**Sn**	**13 38 44.8**	**+4.0**
BSTI	**Sart Tilman**	**7.26**	**308**	pP	**Pn**	**13 37 23.6**	**+2.7**
BSTI				sP	**Pn**	**13 37 24.5**	**+3.6**
STIP	**Stip**	**7.27**	**128**	i Pn	**Pn**	**13 37 22.7**	**+1.7**
BLCH	**La Chartreuse**	**7.27**	**308**	pP	**Pn**	**13 37 24.3**	**+3.3**
VTS	**Vitosha**	**7.28**	**119**	ePn	**Pn**	**13 37 21.5**	**+0.1**
VTS	**Vitosha**	**7.28**	**119**	⇑iP	**Pn**	**13 37 18.7**	**-2.7**
VTS	**Vitosha**	**7.28**	**119**	eP	**Pn**	**13 37 21.5**	**+0.1**
BEBN	**Eben Emael**	**7.31**	**309**	pP	**Pn**	**13 37 24.4**	**+2.8**
BIA	**Bitola**	**7.32**	**136**	i Pn	**Pn**	**13 37 23.5**	**+1.7**
BUR08	**Bucovina Ar. S**	**7.34**	**77**	ePn	**Pn**	**13 37 22.4**	**+0.3**
BUR04	**Bucovina Ar. S**	**7.35**	**77**	ePn	**Pn**	**13 37 22.2**	**0.0**
BURAR	**Bucovina Array**	**7.35**	**77**	⇑iP	**Pn**	**13 37 22.2**	**0.0**
LOR	**Lormes**	**7.40**	**280**	ePn	**Pn**	**13 37 23.0**	**+0.2**
	baz=98						
LOR				eSn	**Sn**	**13 38 41.9**	**-4.8**
	comp=Z,21nm,0.5s						
LOR				eSg	**Sg**	**13 39 27.4**	**-4.7**
	comp=Z,198nm,1.3s						
LOR	**Lormes**	**7.40**	**280**	ePn	**Pn**	**13 37 23.0**	**+0.2**
LOR				eSn	**Sn**	**13 38 41.9**	**-4.8**
LOR				eSg	**Sg**	**13 39 27.4**	**-4.7**
SMF	**Signal de Mont**	**7.41**	**275**	ePn	**Pn**	**13 37 22.4**	**-0.6**
SMF				eSn	**Sn**	**13 38 42.0**	**-5.1**
	comp=Z,51nm,0.7s						
SMF	**Signal de Mont**	**7.41**	**275**	ePn	**Pn**	**13 37 22.4**	**-0.6**
SMF				eSn	**Sn**	**13 38 42.0**	**-5.1**
SMF	**Signal de Mont**	**7.41**	**275**	eP	**Pn**	**13 37 22.4**	**-0.6**
SMF				e		13 38 42.0	
BGES	**Gesves**	**7.43**	**305**	pP	**Pn**	**13 37 25.7**	**+2.5**
BGES				sS	**Sn**	**13 38 52.5**	**+5.1**
GIVF	**Givet**	**7.45**	**303**	eP	**Pn**	**13 37 26.6**	**+3.1**
GIVF				eSn	**Sn**	**13 38 42.2**	**-5.8**
	comp=Z,101nm,0.7s						
GIVF				eSg	**Sg**	**13 39 29.2**	**-4.6**
	comp=Z,296nm,1.0s						
GIVF	**Givet**	**7.45**	**303**	eP	**Pn**	**13 37 26.6**	**+3.1**
GIVF				eSn	**Sn**	**13 38 42.2**	**-5.8**
GIVF				eSg	**Sg**	**13 39 29.2**	**-4.6**
TIP	**Timpagrande**	**7.47**	**167**	ePn	**Pn**	**13 37 24.7**	**+0.9**
TIP	**Timpagrande**	**7.47**	**167**	⇑iP	**Pn**	**13 37 23.5**	**-0.4**
WTSB	**Winterswijk**	**7.49**	**320**	ePn	**Pn**	**13 37 25.5**	**+1.5**
	comp=Z,77nm,1.2s						
WTSB				eSn	Sn	13 38 58.9	+10
BMRD	**Maredsous**	**7.57**	**304**	pP	**Pn**	**13 37 27.6**	**+2.5**
BMRD				PP	**PnPn**	**13 37 33.2**	**+0.7**
BMRD				S	**Sn**	**13 38 50.4**	**-0.6**
DOU	**Dourbes**	**7.58**	**302**	P	**Pn**	**13 37 27.1**	**+1.8**
DOU				⇑S	**Sn**	**13 38 50.4**	**-0.8**
SSF	**Saint Saulge**	**7.63**	**278**	ePn	**Pn**	**13 37 26.2**	**+0.2**
SSF				eSn	**Sn**	**13 38 47.6**	**-4.9**
	comp=Z,18nm,0.6s						
SSF	**Saint Saulge**	**7.63**	**278**	ePn	**Pn**	**13 37 26.2**	**+0.2**
SSF				eSn	**Sn**	**13 38 47.6**	**-4.9**
SSF	**Saint Saulge**	**7.63**	**278**	eP	**Pn**	**13 37 26.2**	**+0.2**
SSF				e		13 38 47.6	
VAY	**Valandovo**	**7.73**	**129**	i Pn	**Pn**	**13 37 28.8**	**+1.4**
AVF	**Avril sur Loir**	**7.74**	**276**	ePn	**Pn**	**13 37 27.2**	**-0.3**
AVF	**Avril sur Loir**	**7.74**	**276**	ePn	**Pn**	**13 37 27.2**	**-0.3**
AVF	**Avril sur Loir**	**7.74**	**276**	eP	**Pn**	**13 37 27.2**	**-0.3**
BAIF	**Baives**	**7.79**	**301**	eP	**Pn**	**13 37 30.6**	**+2.4**
BAIF				eSn	**Sn**	**13 38 48.3**	**-8.2**
	comp=Z,90nm,1.0s						
BAIF				eSg	**Sg**	**13 39 39.2**	**-5.6**
	comp=Z,348nm,1.3s						
BAIF	**Baives**	**7.79**	**301**	eP	**Pn**	**13 37 30.6**	**+2.4**
BAIF				eSn	**Sn**	**13 38 48.3**	**-8.2**
BAIF				eSg	**Sg**	**13 39 39.2**	**-5.6**
BAIF	**Baives**	**7.79**	**301**	eP	**Pn**	**13 37 30.6**	**+2.4**
BAIF				e		13 38 48.3	
LASF	**Ste Croix**	**7.94**	**256**	ePn	**Pn**	**13 37 30.3**	**0.0**
LASF				eSn	**Sn**	**13 38 55.1**	**-5.0**
	comp=Z,97nm,0.8s						
LASF	**Ste Croix**	**7.94**	**256**	ePn	**Pn**	**13 37 30.3**	**0.0**
LASF				eSn	**Sn**	**13 38 55.1**	**-5.0**
SNF	**Seneffe**	**7.94**	**304**	P	**Pn**	**13 37 30.9**	**+0.8**
SNF				pP	**Pn**	**13 37 32.6**	**+2.4**
AGO	**Saint Agoulin**	**7.95**	**271**	P	**Pn**	**13 37 30.9**	**+0.5**
MLR	**Muntele Rosu**	**7.97**	**93**	ePn	**Pn**	**13 37 31.2**	**+0.4**
MLR				Lg	Lg	13 39 58.2	
MLR	**Muntele Rosu**	**7.97**	**93**	⇓iP	**Pn**	**13 37 29.8**	**-1.0**
MLR	**Muntele Rosu**	**7.97**	**93**	eP	**Pn**	**13 37 31.2**	**+0.4**
MLR	**Muntele Rosu**	**7.97**	**93**	Pn	**Pn**	**13 37 32.1**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=220,slow=8.0,SNR=14						
MLR				Lg	Lg	13 39 58.2	
	comp=Z,0.1nm,0.3s,baz=307,slow=20,SNR=2.4						
MLR				LR	LR	13 41 26.0	
	comp=Z,142nm,18.9s,baz=274,slow=44						
PYM	**Petit Puy Mans**	**8.08**	**269**	P	**Pn**	**13 37 33.0**	**+0.7**
BGF	**Bois d'Agland**	**8.10**	**275**	ePn	**Pn**	**13 37 31.6**	**-0.8**
BGF	**Bois d'Agland**	**8.10**	**275**	ePn	**Pn**	**13 37 31.6**	**-0.8**
BGF	**Bois d'Agland**	**8.10**	**275**	eP	**Pn**	**13 37 31.6**	**-0.8**
HYF	**Humbligny**	**8.23**	**280**	ePn	**Pn**	**13 37 32.7**	**-1.5**
HYF	**Humbligny**	**8.23**	**280**	eP	**Pn**	**13 37 37.8**	**+3.6**
HYF				eSg	**Sg**	**13 39 53.7**	**-4.9**
HYF	**Humbligny**	**8.23**	**280**	eP	**Pn**	**13 37 37.8**	**+3.6**
HYF				eSg	**Sg**	**13 39 53.7**	**-4.9**
CLF	**Chambon-Foret**	**8.53**	**285**	ePn	**Pn**	**13 37 39.2**	**+1.0**
TCF	**Toulx Ste Croi**	**8.56**	**273**	ePn	**Pn**	**13 37 38.5**	**-0.3**
TCF				eSn	**Sn**	**13 39 09.8**	**-5.6**
	comp=Z,33nm,0.7s						
TCF	**Toulx Ste Croi**	**8.56**	**273**	ePn	**Pn**	**13 37 38.5**	**-0.3**
TCF				eSn	**Sn**	**13 39 09.8**	**-5.6**
TCF	**Toulx Ste Croi**	**8.56**	**273**	eP	**Pn**	**13 37 38.5**	**-0.3**
TCF				e		13 39 09.8	
LIT	**Litokhoron**	**8.59**	**135**	ePn	**Pn**	**13 37 39.1**	**-0.1**
LIT	**Litokhoron**	**8.59**	**135**	eP	**Pn**	**13 37 39.1**	**-0.1**
BSD	**Bornholm Skovb**	**8.65**	**1**	i P	**Pn**	**13 37 42.0**	**+2.2**
BSD				eS	Sn	13 39 41.0	+24
BSD	**Bornholm Skovb**	**8.65**	**1**	eP	**Pn**	**13 37 42.0**	**+2.2**
CAF	**Calviac**	**8.90**	**264**	ePn	**Pn**	**13 37 43.6**	**+0.1**
CAF	**Calviac**	**8.90**	**264**	ePn	**Pn**	**13 37 43.6**	**+0.1**
CAF	**Calviac**	**8.90**	**264**	eP	**Pn**	**13 37 43.6**	**+0.1**
VAE	**Valguarnera**	**9.00**	**181**	LR	LR	13 42 21.6	
	comp=Z,492nm,19.8s,baz=30,slow=45						
RJF	**Les Rejaudoux**	**9.19**	**267**	ePn	**Pn**	**13 37 46.8**	**-0.6**
RJF	**Les Rejaudoux**	**9.19**	**267**	ePn	**Pn**	**13 37 46.8**	**-0.6**
RJF	**Les Rejaudoux**	**9.19**	**267**	eP	**Pn**	**13 37 46.8**	**-0.6**
MTLF	**Montolieu**	**9.32**	**255**	ePn	**Pn**	**13 37 49.2**	**0.0**
MTLF				eSn	**Sn**	**13 39 28.3**	**-5.7**
	comp=Z,9.3nm,0.5s						
MTLF	**Montolieu**	**9.32**	**255**	ePn	**Pn**	**13 37 49.2**	**0.0**
MTLF				eSn	**Sn**	**13 39 28.3**	**-5.7**
MTLF	**Montolieu**	**9.32**	**255**	eP	**Pn**	**13 37 49.2**	**0.0**
MTLF				e		13 39 28.3	
AGG	**Agios Georgios**	**9.38**	**140**	ePn	**Pn**	**13 37 50.1**	**+0.2**
AGG	**Agios Georgios**	**9.38**	**140**	eP	**Pn**	**13 37 50.1**	**+0.2**
LFF	**La Frestale**	**9.81**	**266**	ePn	**Pn**	**13 37 54.9**	**-0.9**
LFF	**La Frestale**	**9.81**	**266**	ePn	**Pn**	**13 37 54.9**	**-0.9**
LFF	**La Frestale**	**9.81**	**266**	eP	**Pn**	**13 37 54.9**	**-0.9**
MFF	**Saint Martin d**	**10.16**	**276**	ePn	**Pn**	**13 37 58.3**	**-2.3**
MFF	**Saint Martin d**	**10.16**	**276**	ePn	**Pn**	**13 37 58.3**	**-2.3**
MFF	**Saint Martin d**	**10.16**	**276**	eP	**Pn**	**13 37 58.3**	**-2.3**
LDF	**La Druitiere**	**10.17**	**287**	ePn	**Pn**	**13 38 01.1**	**+0.3**
LDF	**La Druitiere**	**10.17**	**287**	ePn	**Pn**	**13 38 01.1**	**+0.3**
LDF	**La Druitiere**	**10.17**	**287**	eP	**Pn**	**13 38 01.1**	**+0.3**
FLN	**La Foliniere**	**10.43**	**288**	ePn	**Pn**	**13 38 03.4**	**-0.9**
	baz=117						
FLN	**La Foliniere**	**10.43**	**288**	ePn	**Pn**	**13 38 03.4**	**-0.9**
FLN	**La Foliniere**	**10.43**	**288**	eP	**Pn**	**13 38 03.4**	**-0.9**
AK11	**Malin Array Si**	**10.53**	**61**	ePn	**Pn**	**13 38 05.5**	**-0.2**
KIEV	**Kiev**	**10.56**	**61**	⇓eP	**Pn**	**13 38 06.6**	**+0.5**
KIEV				pmax	pmax		
	comp=Z,22nm,3.1s						
AKASG	**Malin Array Be**	**10.57**	**61**	i P	**Pn**	**13 38 07.5**	**+1.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**10.57**	**61**	Pn	**Pn**	**13 38 06.8**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=250,slow=13,SNR=6.3						
GRR	**Gorron**	**10.64**	**286**	ePn	**Pn**	**13 38 05.5**	**-1.7**
GRR	**Gorron**	**10.64**	**286**	ePn	**Pn**	**13 38 05.5**	**-1.7**
GRR	**Gorron**	**10.64**	**286**	eP	**Pn**	**13 38 05.5**	**-1.7**
EPF	**Esparros**	**10.70**	**256**	eP	Pn	13 38 13.5	+5.4
EPF	**Esparros**	**10.70**	**256**	eP	Pn	13 38 13.5	+5.4
EPF	**Esparros**	**10.70**	**256**	eP	Pn	13 38 13.5	+5.4
ITM	**Ithomi**	**10.78**	**147**	ePn	**Pn**	**13 38 09.2**	**0.0**
ETSF	**Etsaut**	**11.36**	**257**	eP	**Pn**	**13 38 21.2**	**+4.1**
ETSF	**Etsaut**	**11.36**	**257**	eP	**Pn**	**13 38 21.2**	**+4.1**
ETSF	**Etsaut**	**11.36**	**257**	eP	**Pn**	**13 38 21.2**	**+4.1**
IIGN	**Ignalina**	**11.51**	**35**	eP	Pn	13 38 24.2	+5.2
ISAL	**Salakas**	**11.63**	**34**	eP	**Pn**	**13 38 24.4**	**+3.7**
IDID	**Didziasalis**	**11.69**	**36**	eP	**Pn**	**13 38 23.4**	**+1.9**
SGMF	**Saint Gilles**	**11.76**	**285**	ePn	**Pn**	**13 38 21.8**	**-0.7**
SGMF	**Saint Gilles**	**11.76**	**285**	ePn	**Pn**	**13 38 21.8**	**-0.7**
SGMF	**Saint Gilles**	**11.76**	**285**	eP	**Pn**	**13 38 21.8**	**-0.7**
IDI	**Anoyia**	**13.61**	**142**	ePn	**Pn**	**13 38 47.8**	**-0.2**
IDI	**Anoyia**	**13.61**	**142**	LR	LR	13 44 20.9	
	comp=Z,35nm,19.4s,baz=318,slow=39						
HFS	**Hagfors**	**13.69**	**358**	Pn	**Pn**	**13 38 50.3**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=6.5						
HFS				Lg	Lg	13 42 54.2	
	baz=160,slow=30,SNR=2.4						
VSU	**Vasula**	**14.07**	**27**	⇑eP	**Pn**	**13 38 55.0**	**+1.1**
VSU				pmax	pmax		
	comp=Z,184nm,3.7s						
VSU	**Vasula**	**14.07**	**27**	eP	**Pn**	**13 38 53.6**	**-0.3**
EKA	**Eskdalemuir Ar**	**14.24**	**315**	Pn	**Pn**	**13 38 54.7**	**-1.6**
	baz=116,slow=13,SNR=3.1						
NB2	**NORSAR Subarra**	**14.72**	**354**	P	**P**	**13 39 10.1**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=171,slow=11						
NOA	**NORSAR Array B**	**14.72**	**354**	Pn	**P**	**13 39 07.4**	**-1.7**
	comp=Z,0.0nm,0.3s,baz=168,slow=11,SNR=9.0						
NOA				LR	LR	13 45 13.9	
	comp=Z,136nm,18.7s,baz=175,slow=40						
ESDC	**Sonseca Array**	**15.15**	**250**	Pn	**P**	**13 39 14.2**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=56,slow=12,SNR=25						
BRTR	**Keskin Array B**	**15.45**	**109**	Pn	**P**	**13 39 17.6**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=318,slow=10,SNR=6.4						
PAB	**San Pablo**	**15.47**	**250**	ePn	**Pn**	**13 39 14.2**	**+1.2**
	comp=Z,42nm,1.6s						
PAB	**San Pablo**	**15.47**	**250**	eP	**Pn**	**13 39 14.2**	**+1.2**
PAB				pmax	pmax		
	comp=Z,42nm,1.6s						
OBN	**Obninsk**	**16.30**	**50**	eP	**Pn**	**13 39 23.9**	**+0.3**
OBN				pmax	pmax		
	comp=Z,12nm,0.5s						
OBN				MLR	MLR		
	comp=Z,140nm,15.0s						
OBN	**Obninsk**	**16.30**	**50**	LR	LR	13 45 05.5	

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             comp=Z,20nm,18.5s,baz=228,slow=35
FINES FINESS Array B   16.40  20   Pn      Pn       13 39 21.5 -3.3
             comp=Z,0.1nm,0.3s,baz=207,slow=17,SNR=3.8
FINES                              LR      LR       13 46 24.4
             comp=Z,228nm,18.4s,baz=232,slow=40
FIA1  FINESS Array S   16.40  20  ePn      Pn       13 39 24.2 -0.7
             comp=Z,25nm,1.3s
VSR   Storozhevoye     16.82  65⇑eP        P        13 39 32.2 -0.2
VSR                                pmax    pmax
             comp=Z,14nm,0.9s
LPSR  Galich'ya Gora   16.90  60  eP       Pn       13 39 29.1 -2.1
LPSR                               pmax    pmax
             comp=Z,10.0nm,0.7s
MOS   Moscow           17.11  49  eP       P        13 39 34.7 -0.8
MOS                                pmax    pmax
             comp=Z,38nm,0.8s
VRH   Novokhopyorsk    18.42  65  eP       Pn       13 39 50.7 +0.6
VRH                                pmax    pmax
             comp=Z,10.0nm,1.0s
KIV   Kislovodsk       19.91  87  eP       Pn       13 40 09.0 +0.8
KIV                                pmax    pmax
             comp=Z,14nm,1.1s
KIV                                MLR     MLR
             comp=Z,35nm,14.0s
KBZ   Khabaz           20.13  88   P       P        13 40 09.4 +0.7
             comp=Z,4.2nm,0.9s,baz=282,slow=14,SNR=5.1
KBZ                                LR      LR       13 49 35.3
             comp=Z,49nm,20.2s,baz=273,slow=42
NEY   Neytrino         20.16  89⇑eP        Pn       13 40 10.4 -0.8
NEY                                pmax    pmax
             comp=Z,3.0nm,1.1s
KLMR  Klimovskoe       20.44  36  eP       P        13 40 11.0 -1.0
KLMR                               pmax    pmax
             comp=Z,19nm,1.1s
KLMR  Klimovskoe       20.44  36  eP       P        13 40 11.0 -1.0
KLMR                               AMP              13 40 19.3
             comp=Z,19nm,1.1s
NCK   Nalchik          20.68  88⇓eP        Pn       13 40 17.4 +0.3
NCK                                pmax    pmax
             comp=Z,9.0nm,0.3s
MMAI  Mount Meron Ar   20.82 123   P       Pn       13 40 18.3 -0.6
             comp=Z,8.0nm,1.0s,baz=326,slow=12,SNR=3.2
ZEI   Tsey             21.13  89  eP       P        13 40 09.8  -10
ZEI                                pmax    pmax
             comp=Z,3.0nm,0.3s
ASF   Jabal al Asfar   22.30 122   P       P        13 40 34.9 +2.5
             comp=Z,5.1nm,0.9s,baz=205,slow=6.4,SNR=5.2
GNI   Garni            22.75  95⇓eP        P        13 40 40.0 +2.8
GNI                                pmax    pmax
             comp=Z,57nm,1.1s
GNI   Garni            22.75  95   P       P        13 40 39.2 +2.1
             comp=Z,13nm,1.0s,baz=304,slow=11,SNR=4.4
APA   Apatity          23.29  18⇓iP        P        13 40 42.9 +0.6
APA                                pmax    pmax
             comp=Z,7.0nm,0.9s
APA                                MLR     MLR
             comp=Z,1µm,11.0s
PRGR  Permogore        23.39  38  eP       P        13 40 40.5 -2.9
PRGR                               pmax    pmax
             comp=Z,10.0nm,0.8s
ARCES ARCESS Array B   23.75  10  eP       P        13 40 47.1 +0.2
ARCES ARCESS Array B   23.75  10  eP       P        13 40 47.1 +0.2
ARCES ARCESS Array B   23.75  10   P       P        13 40 46.1 -0.8
             comp=Z,7.6nm,1.1s,baz=183,slow=8.5,SNR=11
ARE0  ARCESS Array S   23.75  10  eP       P        13 40 47.4 +0.5
             comp=Z,1.6nm,1.4s
KIRV  Kirov            24.10  47   P       P        13 40 50.3 +0.1
             comp=Z,20nm,0.7s,baz=296,slow=3.5,SNR=7.5
KIRV                               LR      LR       13 49 41.9
             comp=Z,70nm,21.0s,baz=207,slow=35
KEV   Kevo             24.14  11  eP       P        13 40 50.8 +0.2
             comp=Z,36nm,1.4s
KEV   Kevo             24.14  11  eP       P        13 40 50.8 +0.2
KEV                                pmax    pmax
             comp=Z,36nm,1.4s
ARU   Arti             28.68  53  eP       P        13 41 30.9 -0.7
             comp=Z,7.1nm,1.0s
ARU   Arti             28.68  53d iP       P        13 41 31.7 +0.1
ARU                                                 13 42 17.6
ARU                                S       S        13 46 20.1 -0.1
ARU                                pmax    pmax
             comp=Z,8.0nm,1.0s
AKTO  Aktyubinsk       28.76  66   P       P        13 41 27.3 -5.1
             comp=Z,1.1nm,0.6s,baz=260,slow=11,SNR=5.5
SVE   Sverdlovsk       29.84  53  eP       P        13 41 42.9 +1.1
ABKAR Akbulak array    30.21  68  eP       P        13 41 45.1  0.0
SPITS Spitsbergen Ar   31.82   1   P       P        13 41 59.2 +0.1
             comp=Z,7.5nm,1.0s,baz=169,slow=8.5,SNR=4.2
GEYT  Alibeck          33.00  89   P       P        13 42 11.1 +1.1
             comp=Z,1.5nm,0.5s,baz=297,slow=7.8,SNR=5.3
RAYN  Ar Rayn          33.80 122  eP       P        13 42 17.2 +0.2
             comp=Z,5.5nm,1.2s
RAYN  Ar Rayn          33.80 122  eP       P        13 42 17.2 +0.2
RAYN                               pmax    pmax
             comp=Z,6.0nm,1.2s
TOA0  Torodi Ar. Sit   34.96 202  eP       P        13 42 27.7 +0.7
TORD  Torodi Ar. Bea   34.96 202   P       P        13 42 26.2 -0.8
             comp=Z,2.7nm,0.9s,baz=14,slow=8.5,SNR=7.6
TORD                               PcP     PcP      13 44 59.2 -0.2
             comp=Z,0.3nm,0.5s,baz=345,slow=1.9,SNR=4.2
BRVK  Borovoye         35.77  59  eP       P        13 42 34.0 +0.3
             comp=Z,6.1nm,1.1s
BRVK  Borovoye         35.77  59⇓eP        P        13 42 35.0 +1.3
BRVK                               pmax    pmax
             comp=Z,4.0nm,0.8s
BVAR  Borovoye Array   35.84  59   P       P        13 42 34.1 -0.2
             comp=Z,1.1nm,0.7s,baz=293,slow=5.6,SNR=8.7
GAR   Garm             40.87  80  eP       P        13 43 16.8 -0.1
             comp=Z,8.6nm,1.1s
GAR   Garm             40.87  80  eP       P        13 43 16.8 -0.1
GAR                                pmax    pmax
             comp=Z,9.0nm,1.1s
KURBB Kurchatov Arra   41.36  60   P       P        13 43 20.3 -0.4
             comp=Z,1.3nm,0.8s,baz=287,slow=9.7,SNR=6.6
KURK  Kurchatov        41.38  60  eP       P        13 43 20.6 -0.3
             comp=Z,4.8nm,1.1s
KURK  Kurchatov        41.38  60⇑eP        P        13 43 20.4 -0.4
KURK                               pmax    pmax
             comp=Z,7.0nm,1.7s
ARSB  Arslanbob        41.56  75  eP       P        13 43 22.1 -0.5
             comp=Z,6.0nm,1.0s
AAK   Ala-Archa        41.97  73  eP       P        13 43 26.4 +0.4
             comp=Z,5.2nm,1.0s
AAK   Ala-Archa        41.97  73⇑eP        P        13 43 26.9 +0.9
AAK                                pmax    pmax
             comp=Z,7.0nm,1.3s
AAK   Ala-Archa        41.97  73   P       P        13 43 26.7 +0.8
             comp=Z,4.7nm,1.1s,baz=241,slow=8.6,SNR=7.9
FRU1  Bishkek          41.98  72  eP       P        13 43 25.8 -0.2
             comp=Z,10.0nm,0.6s
FRU1  Bishkek          41.98  72  eP       P        13 43 25.8 -0.2
FRU1                               pmax    pmax
             comp=Z,10.0nm,0.6s
NVS   Novosibirsk      42.68  53  eP       P        13 43 35.5 +4.2
DBIC  Dimbokro         43.06 209   LR      LR       14 02 25.3
             comp=Z,57nm,20.1s,baz=326,slow=38
ZALV  Zalesovo Beam    43.85  53   LR      LR       14 04 12.0
             comp=Z,43nm,18.5s,baz=262,slow=39
KSH   Kashi            44.43  76   P       P        13 43 46.5 +0.6
KSH                                pP      pP       13 43 48.3 -1.1
KSH                                PP      PcP      13 45 32.2 +2.8
KSH                                pmax    pmax
             comp=Z,12nm,0.9s
KSH                                pmax    pmax
             comp=Z,400nm,4.5s
MKAR  Makanchi Array   45.14  64  i P      P        13 43 53.7 +2.4
MKAR                               pmax    pmax
             comp=Z,3.0nm,0.8s
MKAR  Makanchi Array   45.14  64   P       P        13 43 51.1 -0.2
             comp=Z,2.6nm,0.8s,baz=291,slow=5.9,SNR=11
DGZ   Jazzator, Alta   46.99  58⇑eP        P        13 44 06.7 +0.7
DGZ                                pmax    pmax
             comp=Z,2.0nm,0.8s
SCHQ  Schefferville    49.52 311   P       P        13 44 24.4 -0.8
             comp=Z,4.0nm,0.7s,baz=97,slow=5.9,SNR=4.8
WMQ   Urumqi           49.90  65  eP       P        13 44 30.0 +1.6
WMQ                                LR      LR
             comp=N,170nm,18.9s
WMQ                                LR      LR
             comp=E,46nm,16.1s
WMQ                                LR      LR
             comp=Z,97nm,19.9s
KMBO  Kilima Mbogo     51.43 150  i P      P        13 44 42.7 +2.3
KMBO                               pmax    pmax
             comp=Z,1.0nm,0.3s
TLY   Talaya           55.06  49⇓eP        P        13 45 08.0 +1.5
TLY   Talaya           55.06  49   P       P        13 45 07.0 +0.6
             comp=Z,1.0nm,0.6s,baz=292,slow=10.0,SNR=4.6
PYUN  Piuthan          55.71  84  eP       P        13 45 11.6 -0.1
             comp=Z,47nm,1.3s
DANN  Dangsing         56.08  83  eP       P        13 45 14.8 +0.3
             comp=Z,23nm,1.0s
KOLN  Koldanda         56.34  84  eP       P        13 45 16.2  0.0
             comp=Z,28nm,1.2s
BOD   Bodaibo          56.63  39  eP       P        13 45 16.4 -1.1
BOD                                pmax    pmax
             comp=Z,6.0nm,1.3s
DMN   Daman            57.47  83  eP       P        13 45 24.4 +0.1
PKIN  Phulchoki        57.69  83  eP       P        13 45 25.7 -0.1
             comp=Z,19nm,1.1s
PKI   Pulchoki         57.70  83  eP       P        13 45 25.5 -0.5
GUN   Gumba            57.81  82  eP       P        13 45 26.9 +0.1
             comp=Z,36nm,1.1s
JIRN  Jiri             58.18  82  eP       P        13 45 29.7 +0.3
             comp=Z,31nm,0.8s
SONM  Songino Array    58.70  52   P       P        13 45 32.8 +0.3
             comp=Z,1.2nm,0.7s,baz=289,slow=8.5,SNR=10
RAMN  Ramite           58.91  82  eP       P        13 45 34.0 -0.4
             comp=Z,15nm,0.8s
GTA   Gaotai           59.89  63  eP       P        13 45 38.9 -2.0
GTA                                pP      pP       13 45 43.1 -1.4
GTA                                sP      sP       13 45 46.3 +0.5
GTA                                pmax    pmax
             comp=Z,2.0nm,1.2s
YAK   Yakutsk          60.05  30  eP       P        13 45 40.3 -1.0
YAK                                pmax    pmax
             comp=Z,78nm,0.8s
YAK                                pmax    pmax
             comp=N,18nm,1.0s
YAK                                pmax    pmax
             comp=E,28nm,1.3s
BILL  Bilibino         63.84  11  eP       P        13 46 07.7 +1.0
             comp=E,4.9nm,1.0s
BILL  Bilibino         63.84  11  eP       P        13 46 07.7 +1.0
BILL                               pmax    pmax
             comp=Z,5.0nm,1.0s
YKW3  Yellowknife Ar   64.01 336  eP       P        13 46 08.3 +0.4
             comp=Z,6.8nm,1.0s
YKA   Yellowknife Ar   64.06 336   P       P        13 46 08.2 -0.1
             comp=Z,3.6nm,0.9s,baz=39,slow=6.6,SNR=45
YKB5  Yellowknife Ar   64.06 336  eP       P        13 46 08.0 -0.3
LZH   Lanzhou          64.46  64  eP       P        13 46 18.1 +6.5
LZH                                pP      sP       13 46 21.9 +5.4
LZH                                sP      pP       13 46 25.0  +10
LZH                                pmax    pmax
             comp=Z,16nm,1.4s
HIA   Hailar           64.67  44⇓eP        P        13 46 13.1 +0.5
HIA                                pmax    pmax
             comp=Z,6.0nm,0.9s
SEY   Seymchan         65.88  20⇓eP        P        13 46 20.3 +0.2
SEY   Seymchan         65.88  20   P       P        13 46 20.6 +0.4
             comp=Z,3.1nm,0.8s,baz=307,slow=14,SNR=6.6
HHC   Hu-ho-hao-te     65.97  56  eP       P        13 46 20.6 -0.6
HHC                                pmax    pmax
             comp=Z,17nm,1.1s
HHC                                pmax    pmax
             comp=Z,69nm,5.9s
ULM   Lac du Bonnet    66.48 319   P       P        13 46 24.0 -0.2
             comp=Z,3.6nm,0.8s,baz=40,slow=7.3,SNR=8.5
IM3   Indian Mountai   67.51 355  eP       P        13 46 31.2 +0.7
COLA  College          68.14 352deP        P        13 46 35.5 +1.1
COLA                               pmax    pmax
             comp=Z,7.0nm,1.3s
ILAR  Eielson Array    68.14 352   P       P        13 46 35.4 +0.8
             comp=Z,1.0nm,0.6s,baz=12,slow=6.3,SNR=13
MLY   Manley           68.24 353  eP       P        13 46 36.8 +1.6
             comp=Z,6.6nm,1.1s
KMI   Kunming          71.01  73   P       P        13 46 51.2 -1.9
KMI                                pmax    pmax
             comp=Z,16nm,0.7s
CMAR  Chiang Mai Arr   73.02  81  i P      P        13 47 07.1 +2.1
CMAR                               pmax    pmax
             comp=Z,1.0nm,0.5s
CMAR  Chiang Mai Arr   73.02  81   P       P        13 47 04.4 -0.6
             comp=Z,1.1nm,0.5s,baz=306,slow=6.4,SNR=11
BOSA  Boshof           75.36 170   P       P        13 47 18.7 +0.3
             comp=Z,2.1nm,0.7s,baz=353,slow=8.1,SNR=3.7
NJ2   Nanjing          76.28  58  eP       P        13 47 23.4 -0.3
NJ2                                pmax    pmax
             comp=Z,240nm,0.6s
KSAR  Wonju Array Be   77.29  49   P       P        13 47 29.4 +0.1
KSAR  Wonju Array Be   77.29  49   P       P        13 47 29.4 +0.1
KSRS  Korea Array      77.30  49   P       P        13 47 29.4  0.0
             comp=Z,1.3nm,0.8s,baz=324,slow=6.3,SNR=4.5
FLWY  Flagg Ranch      77.68 323  eP       P        13 47 33.5 +1.8
             comp=Z,4.2nm,0.8s
MOOW  Moose Ponds      77.97 323  eP       P        13 47 34.6 +1.4
PDAR  Pinedale Array   78.26 322   P       P        13 47 34.7 -0.3
             comp=Z,0.7nm,0.7s,baz=48,slow=6.5,SNR=7.1
BMO   Blue Mountains   79.64 327  eP       P        13 47 42.2  0.0
             comp=Z,5.6nm,0.9s
BMO   Blue Mountains   79.64 327  eP       P        13 47 42.3  0.0
BMO                                pmax    pmax
             comp=Z,6.0nm,0.9s
O20A  White River Ci   79.81 319  eP       P        13 47 44.0 +0.6
             comp=Z,6.5nm,1.0s
PV14  Lion Creek, Pa   81.59 319  eP       P        13 47 53.6 +0.5
             comp=Z,3.2nm,0.7s
PSUT  Pine Spring      83.60 322  eP       P        13 48 04.9 +1.4
             comp=Z,3.4nm,1.1s
R11A  Troy Canyon, C   84.48 323  eP       P        13 48 08.7 +0.8
             comp=Z,3.7nm,1.4s
PAHR  Pah Rah Range    84.85 326  eP       P        13 48 11.3 +1.6
             comp=Z,6.8nm,1.6s
YERR  Yerington        85.42 326  eP       P        13 48 13.6 +0.9
             comp=Z,6.2nm,1.2s
NVAR  Mina Array Bea   85.52 325   P       P        13 48 13.3 +0.1
             comp=Z,0.8nm,0.8s,baz=48,slow=4.1,SNR=4.7
WAKR  Walker           85.91 326  eP       P        13 48 16.2 +1.1
             comp=Z,9.1nm,1.6s
TXAR  Lajitas Array    86.18 310   P       P        13 48 16.9 +0.4
             comp=Z,0.3nm,0.5s,baz=53,slow=4.3,SNR=8.3
ASAR  Alice Springs   126.78  87   PKP     PKPdf    13 54 37.5 -1.2
             comp=Z,0.3nm,0.9s,baz=319,slow=1.6,SNR=4.2
VNDA  Vanda           146.30 168   PKPbc   PKPbc    13 55 13.9 -0.2
             comp=Z,1.4nm,0.7s,baz=264,slow=3.1,SNR=4.6
```

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*ISCJB **02** 13:35:41.8±0.7, 11°.69S±0°.08×118°.04E±0°.06, h36^{km}, mb3.5/1, Error ellipse: s-maj=13.2km s-min=6.2km az=31.3*

*IDC **02** 13:35:41.9±3.1, 11°.17S×118°.29E, h0^{km}, mb3.5/1, mb1 3.8/4, mb1mx3.5/45, mbtmp3.6/4, ML3.7/3, Error ellipse: s-maj=226.5km s-min=24.4km az=48.0*

*DJA **02** 13:35:42.7±0.5, 12°S±5°×11°8E±°, h10^{km}, M4.1/12, mb4.3/7, mB5.2/2, MLv4.0/12, Mw(mB)4.5/2*

ISC 02 13:35:45.5±1.1**, 11°.5S**±0°.1×**118°.09E**±0°.08**, h36^{km}, n16,** σ1^{s}**36**/16**, South of Sumbawa**

```
Code  Station Name      Δ°   AZ°   Phase ID           Time      Res
                                   Op      ISC      h  m  s    ISC
PLAI  Plampang          2.67 353   P       Pn       13 36 26.4 +0.4
IGBI  Denpasar          3.94 312   P       Pn       13 36 41.8 -1.6
SRBI  Singaraja         4.42 320   P       Pn       13 36 50.8 +0.7
EDFI  Ende, Flores      4.47  53   P       Pn       13 36 51.4 +0.5
JAGI  Jajag, Banyuwa    4.91 307   P       Pn       13 36 55.1 -1.7
BATI  Baumata           5.62  77   P       Pn       13 37 05.9 -0.8
      4.4nm,0.8s,0.1nm
BATI  Baumata           5.62  77   Sn      Sn       13 38 07.5 -2.5
      3.2nm,0.3s,baz=86,slow=19,SNR=2.8
KMMI  Kalianget         6.01 317   P       Pn       13 37 12.9 +1.0
BKSI  Bulukumba         6.46  18   P       Pn       13 37 19.3 +1.2
PCJI  Pacitan           7.56 295   P       Pn       13 37 32.4 -0.9
WOJI  Wonogiri, Jawa    7.95 297   P       Pn       13 37 38.0 -0.5
SMRI  Semarang          8.75 300   P       Pn       13 37 49.4 -0.2
FITZ  Fitzroy Crossi    9.81 133   Pn      Pn       13 38 04.2  0.0
      1.1nm,0.3s,baz=328,slow=9.9,SNR=45
FITZ                               Sn      Sn       13 39 45.9 -7.3
      1.0nm,0.3s,baz=178,slow=22,SNR=8.6
WRA   Warramunga Arr   17.74 120   P       Pn       13 39 49.3 -0.6
      0.2nm,0.3s,baz=289,slow=14,SNR=11
WRA                                S       Sn       13 42 54.1  -13
      0.1nm,0.3s,baz=295,slow=24,SNR=3.2
ASAR  Alice Springs    19.31 131   P       Pn       13 40 11.5 +2.6
      0.3nm,0.3s,baz=310,slow=12,SNR=31
ASAR                               S       S        13 43 32.9  -11
      0.1nm,0.3s,baz=307,slow=23,SNR=4.3
MKAR  Makanchi Array   66.28 334   P       P        13 46 30.5 +0.4
      0.2nm,0.4s,baz=148,slow=7.1,SNR=8.9
```

IDC 02 13:40:06.1±1.9**, 11°.13S×165°.15E, h0^{km}, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.4**/37**, mbtmp3.6**/4**, ML4.1**/1**, Error ellipse: s-maj=53.0km s-min=36.0km az=123.0, Santa Cruz Islands**

```
Code  Station Name      Δ°   AZ°   Phase ID           Time      Res
                                   Op      ISC      h  m  s    ISC
DZM   Mont Dzumac      10.95 174   Pn      Pn       13 42 44.0 -0.2
      1.4nm,0.3s,baz=355,slow=11,SNR=20
WRA   Warramunga Arr   30.90 250   P       P        13 46 23.8 -0.9
      0.3nm,0.8s,baz=82,slow=9.1,SNR=3.4
ASAR  Alice Springs    32.23 243   P       P        13 46 37.3 +0.9
      0.3nm,0.6s,baz=65,slow=9.6,SNR=3.9
ILAR  Eielson Array    83.78  19   P       P        13 52 36.9  0.0
      0.4nm,0.8s,baz=233,slow=6.7,SNR=3.0
```

MEX 02 13:46:07.2±0.4**, 16°.06N×98°.53W, h2^{km}**±3^{km}**, MD3.8, Near coast of Guerrero**

```
Code  Station Name      Δ°   AZ°   Phase ID           Time      Res
                                   Op      ISC      h  m  s    ISC
PNIG  Pinotepa          0.50  50  eP       Pg       13 46 16.6 -0.2
PNIG                              eS       Sg       13 46 23.9 +0.5
CAIG  El Cayaco         1.94 301  eP       Pn       13 46 38.3 -2.8
VHO   Vista Hermosa     1.99  60  eP       Pn       13 46 41.7 -0.5
VHO                               i S      Sg       13 47 11.7 +0.4
```

IDC 02 13:46:51.1±8.4**, 18°.28N×146°.76E, h91^{km}**±76^{km}**, mb3.4**/8**, mb1 3.6**/9**, mb1mx3.4**/33**, mbtmp3.7**/9**, ML2.8**/1**, Error ellipse: s-maj=38.6km s-min=16.4km az=91.0, Mariana Islands**

```
Code  Station Name      Δ°   AZ°   Phase ID           Time      Res
                                   Op      ISC      h  m  s    ISC
H11S3 WAKE ISLAND Hy   18.91  86   T       T        14 10 06.0
      baz=272,slow=75,SNR=10
H11S1 WAKE ISLAND Hy   18.92  86   T       T        14 10 06.1
      baz=272,slow=75,SNR=7.5
H11S2 WAKE ISLAND Hy   18.93  86   T       T        14 10 05.2
      baz=272,slow=75,SNR=6.6
MJAR  Matsushiro Arr   19.69 339   P       Pn       13 51 14.2 -1.1
      0.0nm,0.3s,baz=165,slow=11,SNR=3.5
WRA   Warramunga Arr   39.90 198   P       P        13 54 15.8 -0.4
      1.2nm,0.6s,baz=22,slow=8.4,SNR=17
WRA                                PcP     PcP      13 56 20.9 +0.5
      0.2nm,0.4s,baz=20,slow=3.6,SNR=5.0
ASAR  Alice Springs    43.54 197   P       P        13 54 45.6 -0.3
      1.4nm,0.7s,baz=19,slow=8.2,SNR=22
ASAR                               PcP     PcP      13 56 33.0 +0.7
      0.2nm,0.7s,baz=23,slow=3.8,SNR=2.9
SONM  Songino Array    44.10 321   P       P        13 54 49.5 -0.9
      0.3nm,0.6s,baz=96,slow=7.7,SNR=2.8
ZALV  Zalesovo Beam    58.96 322   P       P        13 56 40.7 -0.1
      0.7nm,0.6s,baz=107,slow=9.2,SNR=4.0
MKAR  Makanchi Array   59.48 314   P       P        13 56 44.8 +0.2
      0.3nm,0.6s,baz=90,slow=8.6,SNR=4.1
YKA   Yellowknife Ar   77.88  28   P       P        13 58 38.3 -0.2
      0.4nm,0.6s,baz=285,slow=5.4,SNR=8.5
NVAR  Mina Array Bea   82.60  52   P       P        13 59 04.7  0.0
      0.8nm,0.9s,baz=256,slow=5.3,SNR=4.5
FINES FINESS Array B   87.68 336   P       P        13 59 28.3 -0.9
      0.8nm,0.6s,baz=62,slow=3.3,SNR=3.3
```

IDC 02 14:04:05.2±10.0**, 2°.51N×128°.14E, h255^{km}**±105^{km}**, mb2.7**/3**, mb1 2.9**/3**, mb1mx2.6**/45**, mbtmp3.2**/3**, Error ellipse: s-maj=148.8km s-min=23.3km az=65.0, Halmahera**

```
Code  Station Name      Δ°   AZ°   Phase ID           Time      Res
                                   Op      ISC      h  m  s    ISC
WRA   Warramunga Arr   23.12 165   P       P        14 08 49.5 +0.2
      0.2nm,0.5s,baz=345,slow=10,SNR=8.3
ASAR  Alice Springs    26.61 168   P       P        14 09 20.4 -0.2
      0.3nm,0.6s,baz=357,slow=8.3,SNR=6.4
ASAR                               PcP     PcP      14 12 37.5 -0.3
      0.1nm,0.5s,baz=360,slow=2.4,SNR=4.0
MKAR  Makanchi Array   59.35 325   P       P        14 13 40.9  0.0
      0.3nm,0.5s,baz=117,slow=8.0,SNR=8.7
```

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*ISCJB **02** 14:06:09.1±0.4, 43°.57N±0°.02×44°.52E±0°.02, h4^{km}±4^{km}, mb3.4/2, Error ellipse: s-maj=3.6km s-min=2.6km az=26.0*

*MOS **02** 14:06:10.5±0.9, 43°.48N×44°.41E, h10^{km}, mb3.6/2, Error ellipse: s-maj=7.5km s-min=6.2km az=88.1*

*NORS **02** 14:06:10.7±0.0, 43°.49N×44°.33E, h11^{km}, MPVA3.4*

ISC 02 14:06:11.3±0.8**, 43°.47N**±0°.02×**44°.36E**±0°.02**, h14^{km}**±5^{km}**, n49,** σ1^{s}**31**/86**, 9C-7D, Western Caucasus**

```
Code  Station Name      Δ°   AZ°   Phase ID           Time      Res
                                   Op      ISC      h  m  s    ISC
BTKR  Batakoyurt        0.17 126⇓iPG       Pg       14 06 13.5 -1.8
BTKR  Batakoyurt        0.17 126 i Pg      Pg       14 06 13.5 -1.8
BTKR                             eSg       Sg       14 06 16.8 -1.2
STDR  Stavd-Durt        0.24 245 ePG       Pb       14 06 17.1 -0.3
STDR                             eS        Sg       14 06 21.2 +1.3
STDR  Stavd-Durt        0.24 245 ePg       Pb       14 06 17.1 -0.3
STDR                             eSg       Sg       14 06 21.2 +1.3
PRTR  Priterechnaya     0.29 349⇓ePG       Pb       14 06 18.3  0.0
PRTR  Priterechnaya     0.29 349 ePg       Pb       14 06 18.1 -0.2
PRTR                             eSg       Sb       14 06 23.0 +0.1
ARNR  Ardon             0.29 191 ePG       Pb       14 06 18.6 +0.3
ARNR                              pmax     pmax
      comp=Z,35nm,0.3s
ARNR  Ardon             0.29 191 ePg       Pg       14 06 17.4  0.0
ARNR                             eSg       Sb       14 06 25.3 +2.2
TRKR  Terskaya          0.37  47 ePG       Pb       14 06 20.7 +1.0
TRKR                             eS        Sb       14 06 26.5 +1.1
TRKR  Terskaya          0.37  47 ePg       Pb       14 06 20.7 +1.0
TRKR                             eSg       Sb       14 06 26.5 +1.1
LSNR  Lesken            0.43 244 ePG       Pn       14 06 21.8 -1.4
LSNR                             eS        Sb       14 06 30.7 +3.6
LSNR  Lesken            0.43 244 ePg       Pn       14 06 21.8 -1.4
LSNR                             eSg       Sb       14 06 30.7 +3.6
KORR  Kora              0.44 209 ePG       Pn       14 06 22.0 -1.2
KORR                             eS        Sb       14 06 30.0 +2.7
KORR  Kora              0.44 209 ePg       Pb       14 06 21.4 +0.6
KORR                             eSg       Sb       14 06 28.5 +1.3
VLKR  Vladikavkaz       0.48 151 ePG       Pb       14 06 21.6  0.0
VLKR                             eS        Sn       14 06 31.3 -0.8
VLKR  Vladikavkaz       0.48 151 ePg       Pb       14 06 21.6  0.0
VLKR                             ePg       Pb       14 06 21.6  0.0
VLKR                             eSg       Sn       14 06 31.3 -0.8
VLKR                             eSg       Sb       14 06 31.6 +3.0
NCK   Nalchik           0.56 273⇓ePG       Pn       14 06 23.2 -1.6
NCK                               pmax     pmax
      comp=Z,52nm,0.2s
NCK   Nalchik           0.56 273 ePg       Pn       14 06 23.6 -1.3
NCK                              eSg       Sn       14 06 34.5 +0.6
LACR  Lac               0.64 184d iPG      Pg       14 06 23.8 -0.1
LACR                              pmax     pmax
      comp=Z,71nm,0.1s
LACR  Lac               0.64 184 ePg       Pg       14 06 24.0 +0.1
LACR                             eSg       Sn       14 06 37.5 +1.3
ZEI   Tsey              0.76 206 ePG       Pb       14 06 26.2 -0.2
ZEI                              eS        Sn       14 06 38.3 -0.8
ZEI   Tsey              0.76 206 ePg       Pb       14 06 26.2 -0.2
ZEI                              eSg       Sn       14 06 38.3 -0.8
DIGR  Digorskoe uzhe    0.81 225⇑iPG       Pb       14 06 26.7 -0.5
DIGR                             eS        Sb       14 06 38.6 +0.6
DIGR  Digorskoe uzhe    0.81 225 ePg       Pb       14 06 26.6 -0.5
DIGR                             eSg       Sb       14 06 38.5 +0.6
GROC  Groznyy           1.08 104 ePG       Pn       14 06 33.5 +1.5
GROC                             e                  14 06 49.1
GROC                              pmax     pmax
      comp=Z,9.0nm,0.1s
GROC                              smax     smax
      comp=N,34nm,0.7s
GROC                              smax     smax
      comp=N,40nm,0.6s
GROC  Groznyy           1.08 104 ePg       Pg       14 06 32.0 -0.1
GROC                             eSg       Sn       14 06 48.1 +1.3
PYA1  Pyatigorsk        1.09 303⇓iPG       Pn       14 06 32.0 -0.2
PYA1                             i S       Sn       14 06 48.2 +1.1
PYA1  Pyatigorsk        1.09 303 i Pg      Pn       14 06 32.0 -0.2
PYA1                             i Sg      Sn       14 06 48.2 +1.1
NEY   Neytrino          1.21 260⇑iPG       Pg       14 06 33.8 -0.9
NEY                              i S       Sn       14 06 51.5 +1.1
NEY   Neytrino          1.21 260 ePg       Pg       14 06 33.6 -1.0
NEY                              eSg       Sn       14 06 51.5 +1.1
BEYR  Belyy Ugol+       1.24 296⇑iPG       Pg       14 06 34.2 -1.0
BEYR                             i S       Sn       14 06 52.4 +1.5
```

BEYR	**Belyy Ugol+**	**1.24**	**296**	*i* Pg	**Pg**	**14 06 34.2**	**-1.0**
BEYR				*i* Sg	**Sn**	**14 06 52.4**	**+1.5**
SHA1	**Shidzhatmaz**	**1.27**	**283**	⇓*i*PG	**Pg**	**14 06 34.5**	**-1.1**
SHA1				*i* S	**Sn**	**14 06 53.3**	**+1.6**
SHA1	**Shidzhatmaz**	**1.27**	**283**	*e*Pg	**Pg**	**14 06 34.6**	**-1.0**
SHA1				*e*Sg	**Sn**	**14 06 53.3**	**+1.6**
KIV0	**Kislovodsk Arr**	**1.30**	**293**	*i* Pg	**Pg**	**14 06 35.4**	**-0.9**
KIV0				*i* Sg	**Sg**	**14 06 54.0**	**+0.8**
KIV	**Kislovodsk**	**1.31**	**292**	⇑*i*PG	**Pg**	**14 06 35.6**	**-0.8**
KIV				*i* S	**Sg**	**14 06 54.0**	**+0.6**
DVE	**Vedeno**	**1.39**	**111**	*e*PG	**Pn**	**14 06 35.3**	**-1.0**
DVE				pmax	pmax		
	comp=Z,9.0nm,0.3s						
DVE	**Vedeno**	**1.39**	**111**	*e*Pg	**Pn**	**14 06 35.4**	**-0.9**
DVE				*e*Sg	**Sn**	**14 06 54.1**	**-0.5**
BTLR	**Botlikh**	**1.58**	**120**	⇑*e*PG	**Pn**	**14 06 38.6**	**-0.4**
BTLR	**Botlikh**	**1.58**	**120**	*e*Pg	**Pn**	**14 06 38.4**	**-0.6**
BTLR				*e*Sg	**Sn**	**14 07 00.0**	**+0.6**
ALER	**Alexandrovskoy**	**1.66**	**322**	*e*Pg	**Pg**	**14 06 45.4**	**+2.2**
ALER				*e*Sg	**Sg**	**14 07 06.2**	**+1.5**
GOF	**Gofitskoye**	**1.85**	**330**	*e*Pg	**Pb**	**14 06 44.5**	**-0.4**
GOF				*e*Sg	**Sg**	**14 07 08.2**	**-2.5**
DBC	**Dubki**	**1.86**	**103**	*e*Pg	**Pn**	**14 06 44.0**	**+1.2**
DBC				*e*Sg	**Sb**	**14 07 08.4**	**+0.1**
KIEV	**Kiev**	**12.59**	**310**	⇑*i*P	**Pn**	**14 09 08.1**	**-1.7**
KIEV				pmax	pmax		
	comp=Z,8.0nm,1.7s						
OBN	**Obninsk**	**12.71**	**339**	*e*P	**Pn**	**14 09 12.1**	**+0.7**
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARU	**Arti**	**15.82**	**30**	⇓*e*P	**Pn**	**14 09 54.5**	**+1.0**
ARU				pmax	pmax		
	comp=Z,10.0nm,2.1s						
BRVK	**Borovoye**	**19.65**	**52**	⇑*e*P	**Pn**	**14 10 40.1**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,2.0s						
AAK	**Ala-Archa**	**21.98**	**82**	⇑*e*P	**P**	**14 11 04.1**	**-0.9**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KURK	**Kurchatov**	**24.26**	**61**	⇑*e*P	**P**	**14 11 24.9**	**-2.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						

IDC 02 14:08:52.3±1.7**,27°.69N**×**139°.92E,h401**^{km}±22^{km}**,mb3.0**/4**, mb1 3.2**/5**,mb1mx2.7**/49**,mbtmp3.8**/5**,Error ellipse: s-maj=59.5km s-min=26.7km az=94.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.10**	**106**	P	P	14 09 50.5	+1.5
	41nm,0.3s,baz=330,slow=16,SNR=6.2						
JCJ				S	S	14 10 34.5	-0.2
	11nm,0.3s,baz=180,slow=24,SNR=2.1						
WRA	**Warramunga Arr**	**47.66**	**187**	P	P	14 16 50.3	-0.2
	0.4nm,0.9s,baz=4.8,slow=7.6,SNR=3.3						
ARCES	**ARCESS Array B**	**72.31**	**340**	P	P	14 19 35.6	+0.4
	4.7nm,1.1s,baz=69,slow=6.5,SNR=3.6						
YKA	**Yellowknife Ar**	**72.57**	**28**	P	P	14 19 36.8	+0.1
	0.2nm,0.4s,baz=297,slow=6.2,SNR=4.6						
FINES	**FINESS Array B**	**76.52**	**333**	P	P	14 19 58.6	-0.5
	0.5nm,0.4s,baz=51,slow=5.5,SNR=7.2						

NIED ***02*** *14:17:00,42°.70N×143°.30E,h116^{km},Mw6.9 Best double couple: $M_0$2.74000×10^{19} NP1:ϕ_s72.00000°, δ3.00000°,λ-116.00000°. NP2:ϕ_s278.00000°,δ87.00000°, λ-89.00000°.*

BJI ***02*** *14:17:32.0,42°.73N×143°.26E,h105^{km},mB6.4/53, mb6.2/51*

IDC ***02*** *14:17:32.2±1.2,42°.78N×143°.16E,h82^{km}±10^{km},mb5.9/46, mb1 6.0/52,mb1mx6.0/53,mbtmp6.3/52,MS6.1/44, Ms1 6.1/44,ms1mx6.0/51,Error ellipse: s-maj=8.8km s-min=6.3km az=106.0*

ISCJB ***02*** *14:17:34.0±0.1,42°.66N±0°.01×143°.17E±0°.01, h112^{km}±1^{km},mb6.4/656,Error ellipse: s-maj=2.0km s-min=1.3km az=146.2*

MOS ***02*** *14:17:33.9±1.0,42°.70N×143°.13E,h115^{km},mb6.5/136, Error ellipse: s-maj=4.9km s-min=3.5km az=107.6*

MOS Felt (IV-V) at Yuzhno-Kuril'sk, Lagunnoye, Goryachiy Plyazh, Golovnino, Mendeleyevo; (III-IV) at Krabozavodskoe, Malokuril'skoye, Kuril'sk, Goryachiye Klyuchi, Reydovo; (III) at Kitovyy.

NEIC ***02*** *14:17:34.0±0.0,42°.81N×143°.21E,h110^{km},Moment Tensor Solution. s78 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.40; $M_{\theta\theta}$0.52; $M_{\phi\phi}$-0.11; $M_{r\theta}$2.85; $M_{\theta\phi}$0.15; $M_{\phi r}$-0.15; Best double couple: $M_0$2.90000×10^{19} NP1:ϕ_s273.00000°, δ85.00000°,λ-86.00000°. NP2:ϕ_s54.00000°,δ6.00000°, λ-129.00000°. Principal axes: T 2.9400, Plg40.0000°, Azm359.0000°; N -0.1000, Plg3.0000°, Azm92.0000°; P -2.8400, Plg49.0000°, Azm186.0000°;*

NEIC ***02*** *14:17:35.1±0.1,42°.77N×143°.09E,h107^{km},mb6.4/298, ME6.6,MW6.9,MW6.9,MW6.9 Error ellipse: s-maj=2.5km s-min=1.7km az=144.0,Moment Tensor Solution. s122 Moment tensor: Scale 10^{19}Nm; M_{rr}0.02; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-0.13; $M_{r\theta}$2.75; $M_{\theta\phi}$-0.03; $M_{\phi r}$-0.13; Best double couple: $M_0$2.80000×10^{19} NP1:ϕ_s273.00000°,δ90.00000°, λ-90.00000°. NP2:ϕ_s136.00000°,δ1.00000°,λ-47.00000°. Principal axes: T 2.8200, Plg45.0000°, Azm3.0000°; N -0.1300, Plg0.0000°, Azm273.0000°; P -2.6800, Plg45.0000°, Azm182.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s268.00000°,δ2.00000°, λ90.00000°. NP2:ϕ_s88.00000°,δ88.00000°,λ90.00000°. Principal axes: T Plg47.0000°, Azm358.0000°; N Plg0.0000°, Azm0.0000°; P Plg43.0000°, Azm178.0000°; Apparent Stress 0.41 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Ten people injured. Felt [VI] at Kushiro and Obihiro, [IV] at Sapporo and [III] at Asahikawa and Makubetsu. Felt [V] at Misawa and [III] at Chiba, Sendai and Tokyo, Honshu. Felt throughout Hokkaido and northern Honshu. Recorded [5U JMA] in eastern and southeastern Hokkaido.

JMA ***02*** *14:17:35.8±0.2,42°.70N×143°.23E,h102^{km}±2^{km},M6.5 Broadband fault plane solution: P waves. NP1: ϕ_s268.00000°,δ83.00000°,λ-70.00000°. NP2:ϕ_s16.00000°, δ21.00000°,λ-160.00000°. Principal axes: T Plg35.0000°, Azm341.0000°; N Plg20.0000°, Azm86.0000°; P Plg48.0000°, Azm199.0000°;*

GCMT ***02*** *14:17:42.1±0.0,42°.85N×143°.24E,h105^{km},MW6.9/151, Moment Tensor Solution. s147,c412; s151,c709; Duration: $7^{s}.1$ Moment tensor: Scale 10^{19}Nm; M_{rr}-0.33±.01; $M_{\theta\theta}$0.67±.01; $M_{\phi\phi}$-0.34±.01; $M_{r\theta}$3.06±.01; $M_{\theta\phi}$0.21±.01; $M_{\phi r}$-0.16±.01; Best double couple: $M_0$3.11400×10^{19} NP1:ϕ_s273.00000°,δ86.00000°, λ-85.00000°. NP2:ϕ_s45.00000°,δ7.00000°,λ-138.00000°. Principal axes: T 3.2740, Plg40.0000°, Azm359.0000°; N -0.3220, Plg5.0000°, Azm93.0000°; P -2.9540, Plg49.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *14:17:50.2±0.0,42°.93N×143°.32E,h91^{km},Moment Tensor Solution. s95 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.39; $M_{\theta\theta}$0.67; $M_{\phi\phi}$-0.28; $M_{r\theta}$3.14; $M_{\theta\phi}$0.31; $M_{\phi r}$-0.11; Best double couple: $M_0$3.20000×10^{19} NP1:ϕ_s272.00000°, δ85.00000°,λ-84.00000°. NP2:ϕ_s40.00000°,δ8.00000°, λ-142.00000°. Principal axes: T 3.3300, Plg40.0000°, Azm357.0000°; N -0.2500, Plg6.0000°, Azm92.0000°; P -3.0700, Plg49.0000°, Azm189.0000°;*

ISC 02 14:17:34.8±0.2**,42°.79N**±0°.02×**143°.15E**±0°.02**,h105**^{km}±1^{km}**, h105**^{km}**:pP-P,n2689,**σ**1**^{s}**.66**/3184**,mb6.4**/674**,155C-142D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCH	**Churui**	**0.23**	**137**	⇓P	**Pn**	**14 17 50.1**	**+0.4**
JCH				*e*S	**Sn**	**14 18 00.9**	**+0.1**
JTHR	**Tokachihiroo**	**0.51**	**167**	⇑P	**Pn**	**14 17 51.2**	**+0.1**
JTHR				*e*S	**Sn**	**14 18 03.3**	**0.0**
JOB	**Onbets**	**0.52**	**77**	⇓P	**Pn**	**14 17 52.3**	**+1.1**
JFR	**Furan**	**0.56**	**313**	⇓P	**Pn**	**14 17 52.7**	**+1.2**
JBT2	**Biratori 2**	**0.58**	**270**	⇓P	**Pn**	**14 17 52.9**	**+1.3**
JNBK	**Urakawa-nobuka**	**0.58**	**210**	⇑P	**Pn**	**14 17 52.7**	**+1.0**
JSHD	**Hidakashinhida**	**0.63**	**234**	⇑P	**Pn**	**14 17 53.7**	**+1.7**
JAR	**Ashorobuto**	**0.69**	**41**	⇓P	**Pn**	**14 17 53.7**	**+1.2**
JEM	**Erimo**	**0.77**	**179**	⇑P	**Pn**	**14 17 53.7**	**+0.5**
ERM	**Erimo**	**0.77**	**179**	*e*Pn	**Pn**	**14 17 54.0**	**+0.8**
ERM				*e*Sn	**Sn**	**14 18 04.4**	**-2.7**
ERM	**Erimo**	**0.77**	**179**	*e*PN	**Pn**	**14 17 54.0**	**+0.8**
ERM				*e*		14 18 04.4	
JIAM	**Iburiatsuma**	**0.92**	**260**	P	**Pn**	**14 17 57.3**	**+2.6**
JAB	**Ashibetsu**	**0.99**	**317**	⇓P	**Pn**	**14 17 57.4**	**+2.0**
JKK2	**Kamakawa 2**	**1.13**	**345**	⇓P	**Pn**	**14 17 59.0**	**+2.1**
JAK	**Akkeshi**	**1.16**	**79**	⇓P	**Pn**	**14 17 57.3**	**+0.1**
JAK				*e*S	**Sn**	**14 18 15.1**	**+0.9**
JMP	**Maruseppu**	**1.23**	**7**	⇓P	**Pn**	**14 18 00.2**	**+2.1**
JEW	**Eniwo**	**1.25**	**273**	⇓P	**Pn**	**14 17 59.9**	**+1.6**
JTKR	**Abashiri--Toko**	**1.31**	**25**	⇓P	**Pn**	**14 18 00.5**	**+1.5**
JTKR				*e*S	**Sn**	**14 18 20.3**	**+3.0**
JISS	**Ishikarishitsu**	**1.36**	**292**	P	**Pn**	**14 18 01.6**	**+2.0**
ASAJ	**Asahikawa**	**1.39**	**343**	⇓P	**Pn**	**14 18 02.5**	**+2.6**
ASAJ	**Asahikawa**	**1.39**	**343**	P	**Pn**	**14 18 02.5**	**+2.6**
	12μm,0.3s,baz=199,slow=8.8,SNR=9419						
ASAJ				LR	LR	14 18 33.2	
	comp=Z,908μm,20.5s,baz=143,slow=43						
JNK	**Nakash**	**1.40**	**55**	⇓P	**Pn**	**14 18 00.7**	**+0.6**
JNK				*e*S	**Sn**	**14 18 20.8**	**+1.5**
JHR	**Hokuryu**	**1.41**	**313**	⇓P	**Pn**	**14 18 02.5**	**+2.3**
JKHN	**Kushirohamanak**	**1.51**	**78**	P	**Pn**	**14 18 01.6**	**+0.3**
JNB	**Noboribetsu**	**1.59**	**259**	⇓P	**Pn**	**14 18 03.0**	**+0.7**
JKB	**Kayabe**	**1.81**	**241**	P	**Pn**	**14 18 04.9**	**-0.1**
JKB				*e*S	**Sn**	**14 18 28.9**	**+0.8**
JRA	**Rausu**	**1.84**	**51**	⇓P	**Pn**	**14 18 06.9**	**+1.4**
JSS	**Shosan**	**1.87**	**330**	⇓P	**Pn**	**14 18 09.0**	**+3.2**
GLVR	**Golovnino**	**1.98**	**60**	⇓*i*PN	**Pn**	**14 18 08.1**	**+0.9**
GLVR				*i* S	**Sn**	**14 18 33.6**	**+1.6**
GLVR				pmax	pmax		
	comp=Z,78μm,0.3s						
GLVR				pmax	pmax		
	comp=E,10μm,0.2s						
GLVR				pmax	pmax		
	comp=N,19μm,0.3s						
GLVR				pmax	pmax		
	comp=Z,141μm,1.5s						
GLVR				smax	smax		
	comp=N,1902μm,2.6s						
GLVR				smax	smax		
	comp=E,3076μm,5.1s						
GLVR				smax	smax		
	comp=N,905μm,0.3s						
GLVR				smax	smax		
	comp=E,423μm,0.3s						
NEM2	**Nemuro 2**	**1.99**	**72**	⇓P	**Pn**	**14 18 06.8**	**-0.5**
JSK	**Shakotan**	**2.04**	**287**	P	**Pn**	**14 18 08.9**	**+0.9**
JYG	**Yagishiri**	**2.06**	**323**	P	**Pn**	**14 18 10.6**	**+2.3**
JOT	**Ohata**	**2.10**	**229**	⇓P	**Pn**	**14 18 08.0**	**-0.8**
JYM2	**Yakumo 2**	**2.16**	**253**	⇓P	**Pn**	**14 18 09.9**	**+0.3**
JSE	**Soyaes**	**2.21**	**350**	⇓P	**Pn**	**14 18 12.7**	**+2.5**
GRPR	**Tuman**	**2.26**	**57**	⇓*i*PN	**Pn**	**14 18 11.9**	**+1.0**
GRPR				*i* S	**Sn**	**14 18 39.6**	**+1.1**
GRPR				pmax	pmax		
	comp=Z,123μm,0.4s						
GRPR				pmax	pmax		
	comp=N,24μm,0.2s						
GRPR				pmax	pmax		
	comp=E,39μm,0.2s						
GRPR				smax	smax		
	comp=N,1127μm,0.5s						
GRPR				smax	smax		
	comp=E,393μm,0.2s						
JSH	**Shimam**	**2.29**	**268**	⇓P	**Pn**	**14 18 12.3**	**+1.1**
LAGR	**Lagunnoye**	**2.30**	**56**	⇓*i*PN	**Pn**	**14 18 12.7**	**+1.3**
LAGR				*i* S	**Sn**	**14 18 42.2**	**+2.7**
LAGR				pmax	pmax		
	comp=Z,211μm,1.6s						
LAGR				pmax	pmax		
	comp=Z,142μm,0.4s						
LAGR				pmax	pmax		
	comp=N,40μm,0.3s						
LAGR				pmax	pmax		
	comp=E,19μm,0.3s						
LAGR				smax	smax		
	comp=N,4170μm,1.5s						
LAGR				smax	smax		
	comp=E,8666μm,1.5s						
LAGR				smax	smax		
	comp=E,1142μm,0.5s						
LAGR				smax	smax		
	comp=N,473μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.34**	**57**	*d* *i*PN	**Pn**	**14 18 12.9**	**+1.0**
YUK				*i* S	**Sn**	**14 18 42.4**	**+2.1**
YUK				pmax	pmax		
	comp=Z,232μm,2.1s						
YUK				pmax	pmax		
	comp=Z,109μm,0.4s						
YUK				pmax	pmax		
	comp=N,31μm,0.2s						
YUK				pmax	pmax		
	comp=E,50μm,0.4s						
YUK				smax	smax		
	comp=N,2693μm,2.6s						
YUK				smax	smax		
	comp=E,2898μm,1.9s						
YUK				smax	smax		
	comp=N,1250μm,0.6s						
JSR	**Shiriuchi**	**2.39**	**239**	⇓P	**Pn**	**14 18 12.2**	**-0.3**
JHST	**Hiyamasetana**	**2.44**	**263**	⇓P	**Pn**	**14 18 14.5**	**+1.3**
JTM	**Tenmabayashi**	**2.53**	**219**	P	**Pn**	**14 18 13.2**	**-1.2**
JSI2	**Shiura 2**	**2.67**	**231**	⇓P	**Pn**	**14 18 15.9**	**-0.4**
JWK2	**Keihoku**	**2.69**	**341**	P	**Pn**	**14 18 19.8**	**+3.4**
JRR	**Rishiri**	**2.70**	**331**	P	**Pn**	**14 18 20.0**	**+3.4**
JANG	**Nango**	**2.70**	**207**	⇑P	**Pn**	**14 18 14.6**	**-2.1**
JOSM	**Okushiri--Mats**	**2.81**	**257**	⇓P	**Pn**	**14 18 18.6**	**+0.6**
SHO	**Shikotan**	**2.90**	**67**	*d* *i*PN	**Pn**	**14 18 18.7**	**-0.5**
SHO				*i* S	**Sn**	**14 18 51.5**	**-1.9**
SHO				pmax	pmax		
	comp=Z,59μm,1.5s						
SHO				pmax	pmax		
	comp=Z,40μm,0.5s						
SHO				pmax	pmax		
	comp=N,5μm,0.2s						
SHO				pmax	pmax		
	comp=E,7μm,0.3s						
SHO				smax	smax		
	comp=E,1352μm,2.3s						
SHO				smax	smax		
	comp=N,878μm,1.8s						
SHO				smax	smax		
	comp=N,509μm,0.5s						
SHO				smax	smax		
	comp=E,385μm,0.6s						
JIW	**Iwasaki**	**3.21**	**228**	P	**Pn**	**14 18 22.7**	**-0.8**
MIYJ	**Miyakonagasawa**	**3.36**	**198**	⇑P	**Pn**	**14 18 22.7**	**-2.7**
OFUJ	**Ofunato**	**3.87**	**197**	⇑P	**Pn**	**14 18 29.8**	**-2.4**
JMK	**Ichinoseki**	**4.10**	**202**	⇑P	**Pn**	**14 18 33.0**	**-2.3**
YSS	**Yuzh-Sakhalins**	**4.18**	**356**	*e*Pn	**Pn**	**14 18 39.6**	**+3.3**
YSS	**Yuzh-Sakhalins**	**4.18**	**356**	⇓*e*PN	**Pn**	**14 18 39.1**	**+2.8**
YSS				*e*S	**Sn**	**14 19 29.4**	**+5.3**
YSS				pmax	pmax		
	comp=Z,10μm,0.9s						
YSS				pmax	pmax		
	comp=N,8μm,1.0s						
YSS				pmax	pmax		
	comp=E,2μm,0.8s						
YSS				pmax	pmax		
	comp=N,115μm,3.6s						
YSS				pmax	pmax		
	comp=Z,115μm,3.6s						
YSS				pmax	pmax		
	comp=E,28μm,2.7s						
YSS				smax	smax		
	comp=N,12μm,1.2s						
YSS				smax	smax		
	comp=E,18μm,1.1s						
YSS				smax	smax		
	comp=E,778μm,10.0s						
YSS				MLR	MLR		
	comp=Z,543μm,13.0s						
YSS				MLR	MLR		
	comp=N,454μm,15.0s						
YSS				MLR	MLR		
	comp=E,445μm,15.0s						
KUR	**Kuril'sk**	**4.19**	**53**	*d* *i*PN	**Pn**	**14 18 37.9**	**+1.4**
KUR				*i* S	**Sn**	**14 19 26.8**	**+2.3**
KUR				pmax	pmax		
	comp=Z,64μm,1.5s						
KUR				pmax	pmax		
	comp=Z,23μm,0.5s						
KUR				pmax	pmax		
	comp=N,3μm,0.3s						
KUR				pmax	pmax		
	comp=E,2μm,0.2s						
KUR				smax	smax		
	comp=E,90μm,0.4s						
KUR				smax	smax		
	comp=N,75μm,0.5s						
KUR				smax	smax		
	comp=E,887μm,2.7s						
KUR				smax	smax		
	comp=N,668μm,2.3s						
JIO	**Ouri**	**4.54**	**198**	P	**Pn**	**14 18 38.8**	**-2.4**
JOU	**Okura**	**4.80**	**204**	⇓P	**Pn**	**14 18 43.1**	**-1.8**
JYA	**Atsumi**	**4.93**	**213**	⇓P	**Pn**	**14 18 45.4**	**-1.2**
TEY	**Ternei**	**5.24**	**298**	⇑*e*PN	**Pn**	**14 18 52.6**	**+2.0**
TEY				*e*S	**Sn**	**14 19 53.5**	**+3.8**
TEY				pmax	pmax		
	comp=Z,410nm,0.8s						
TEY				pmax	pmax		
	comp=E,1μm,1.1s						
TEY				pmax	pmax		
	comp=N,380nm,1.3s						
TEY				pmax	pmax		
	comp=Z,7μm,2.4s						
TEY				MLR	MLR		
	comp=E,153μm,12.0s						
TEY				MLR	MLR		
	comp=N,83μm,9.0s						
TEY				MLR	MLR		
	comp=Z,226μm,13.0s						
JAW	**Awa shima**	**5.24**	**216**	P	**Pn**	**14 18 50.1**	**-0.7**
JNS	**Sasagawa**	**5.76**	**212**	⇓P	**Pn**	**14 18 56.2**	**-1.6**
JFY	**Yanaizu**	**5.98**	**207**	⇓P	**Pn**	**14 18 59.2**	**-1.7**
JSD	**Sado**	**6.03**	**220**	P	**Pn**	**14 19 00.3**	**-1.2**
JSB	**Shiboa**	**6.32**	**204**	P	**Pn**	**14 19 03.8**	**-1.6**
UGL	**Uglegorsk**	**6.34**	**354**	*e*PN	**Pn**	**14 19 08.0**	**+2.5**
UGL				*e*S	**Sn**	**14 20 17.8**	**+1.4**
UGL				pmax	pmax		
	comp=Z,122μm,7.5s						
UGL				pmax	pmax		
	comp=N,123μm,9.4s						
UGL				pmax	pmax		
	comp=Z,7μm,1.2s						
UGL				pmax	pmax		
	comp=E,4μm,1.0s						
UGL				pmax	pmax		
	comp=N,3μm,1.1s						
UGL				smax	smax		
	comp=N,555μm,12.0s						
JHK	**Hiroka**	**6.37**	**211**	P	**Pn**	**14 19 04.5**	**-1.6**
JHO	**Hitachi**	**6.48**	**199**	P	**Pn**	**14 19 04.2**	**-3.4**
JKT	**Katashina**	**6.72**	**208**	P	**Pn**	**14 19 09.4**	**-1.5**
JJN	**Nakama**	**6.84**	**216**	P	**Pn**	**14 19 12.2**	**-0.3**
JHG	**Hegura jima**	**6.85**	**226**	P	**Pn**	**14 19 12.5**	**-0.1**
JSZ	**Suzu**	**6.93**	**222**	P	**Pn**	**14 19 13.3**	**-0.4**
JAG	**Ashikaga**	**6.96**	**205**	⇓P	**Pn**	**14 19 11.3**	**-2.8**
JGK	**Kuni**	**7.12**	**211**	P	**Pn**	**14 19 15.7**	**-0.6**
MAJO	**Matsushiro**	**7.30**	**213**	*e*Pn	**Pn**	**14 19 17.4**	**-1.4**
MAJO				*e*Sn	**Sn**	**14 20 40.9**	**+0.8**
MAJO	**Matsushiro**	**7.30**	**213**	*d* *e*PN	**Pn**	**14 19 17.2**	**-1.6**
MAT	**Matsushiro**	**7.30**	**213**	P	**Pn**	**14 19 17.1**	**-1.7**
MAT				S	**Sn**	**14 20 42.3**	**+2.2**
MAT	**Matsushiro**	**7.30**	**213**	P	**Pn**	**14 19 17.1**	**-1.7**
MJAR	**Matsushiro Arr**	**7.30**	**213**	P	**Pn**	**14 19 17.3**	**-1.5**
	comp=N,19nm,0.3s,baz=25,slow=12,SNR=432						
MJAR				S	**Sn**	**14 20 40.9**	**+0.8**
	comp=N,7.1nm,0.3s,baz=31,slow=14,SNR=2.8						
JNG	**Nsakai**	**7.46**	**213**	⇓P	**Pn**	**14 19 19.6**	**-1.4**
JRY	**Ryogami san**	**7.51**	**207**	P	**Pn**	**14 19 18.7**	**-3.0**
JTT	**Ttatey**	**7.63**	**218**	P	**Pn**	**14 19 22.6**	**-0.5**
JJH	**Hakui**	**7.63**	**222**	P	**Pn**	**14 19 22.8**	**-0.3**
I30JP	**ISUMI INFRASON**	**7.78**	**197**	P	**Pn**	**14 19 24.3**	**-1.0**
	baz=34,slow=11						
I30JP				S	**Sn**	**14 20 44.6**	**-7.2**
	baz=61,slow=9.5						
I30JP				*i*		15 11 20.0	
	baz=23,slow=324,SNR=0.3						
JNT	**Takato**	**7.92**	**211**	P	**Pn**	**14 19 25.5**	**-1.7**
JGN	**Niukaw**	**7.95**	**216**	⇓P	**Pn**	**14 19 26.7**	**-0.9**
BSO4	**Boso 4**	**8.09**	**197**	P	**Pn**	**14 19 25.7**	**-3.6**
TYV	**Tymovskoe**	**8.09**	**358**	*e*PN	**Pn**	**14 19 32.7**	**+3.4**
TYV				*e*S	**Sn**	**14 21 05.5**	**+6.6**
TYV				pmax	pmax		
	comp=Z,135μm,8.8s						
TYV				pmax	pmax		
	comp=Z,4μm,0.8s						
TYV				smax	smax		
	comp=E,1μm,1.3s						
TYV				smax	smax		
	comp=N,346μm,10.0s						
JOD2	**Odawara 2**	**8.15**	**204**	P	**Pn**	**14 19 25.8**	**-4.4**
USRK	**Ussuriysk Ar.**	**8.24**	**284**	P	**Pn**	**14 19 32.1**	**+0.7**
	comp=N,10nm,0.3s,baz=88,slow=14,SNR=72						
USRK				S	Sn	14 21 12.7	+10
	baz=109,slow=26,SNR=2.2						
USRK				LR	LR	14 23 10.0	
	comp=N,65μm,19.7s,baz=93,slow=41						
USA0B	**Ussuriysk Arra**	**8.24**	**284**	*e*Pn	**Pn**	**14 19 33.7**	**+2.4**
VLA	**Vladivostok**	**8.27**	**276**	*c* *i*PN	**Pn**	**14 19 33.9**	**+2.1**
VLA				pmax	pmax		
	comp=Z,1μm,1.2s						
BSO1	**Boso 1**	**8.29**	**192**	P	**Pn**	**14 19 28.1**	**-3.6**
JKG	**Kaga**	**8.36**	**221**	P	**Pn**	**14 19 32.9**	**-0.2**
JGF	**Kuroka**	**8.46**	**214**	P	**Pn**	**14 19 33.0**	**-1.6**
JNY	**Yasuok**	**8.48**	**211**	P	**Pn**	**14 19 32.6**	**-2.2**
JAO	**Obara**	**8.79**	**213**	⇓P	**Pn**	**14 19 37.5**	**-1.5**
INU	**Inuyama**	**8.82**	**215**	*e*Pn	**Pn**	**14 19 37.9**	**-1.4**
MSHR	**Mys Shultsa**	**8.84**	**273**	*c* *e*PN	**Pn**	**14 19 41.1**	**+1.6**
JYZW	**Yoshizawa**	**8.85**	**210**	P	**Pn**	**14 19 36.6**	**-3.1**
HMMJ	**Hamamatsu 2**	**8.98**	**210**	P	**Pn**	**14 19 38.8**	**-2.7**
JSG	**Sagara**	**8.98**	**207**	P	**Pn**	**14 19 38.9**	**-2.6**
JFM	**Mihama**	**9.13**	**220**	P	**Pn**	**14 19 43.5**	**-0.1**
GRNR	**Gornyy**	**9.22**	**332**	⇑*i*PN	**Pn**	**14 19 46.8**	**+2.1**
GRNR				*e*		14 21 36.0	
GRNR				pmax	pmax		
	comp=N,170nm,1.0s						
GRNR				pmax	pmax		
	comp=E,130nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,170nm,1.0s						
JWT	**Wachi**	**9.61**	**221**	⇓P	**Pn**	**14 19 49.0**	**-1.1**
TSUJ	**Tsu 2**	**9.62**	**215**	P	**Pn**	**14 19 47.8**	**-2.4**
JIE	**Ise**	**9.78**	**213**	P	**Pn**	**14 19 48.9**	**-3.4**
MDJ	**Mudanjiang**	**9.99**	**285**	P	**Pn**	**14 19 56.8**	**+1.6**
MDJ				sP		14 20 20.8	
MDJ				S	**Sn**	**14 21 50.8**	**+5.6**
MDJ				ScS	**ScS**	**14 32 53.6**	**0.0**
MDJ				pmax	pmax		
	comp=Z,440nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,8μm,4.8s						
MDJ	**Mudanjiang**	**9.99**	**285**	*e*Pn	**Pn**	**14 19 56.7**	**+1.6**
JHJ	**Hachijo jima 2**	**10.01**	**196**	P	**Pn**	**14 19 51.8**	**-3.7**
	comp=Z,502nm,0.3s,baz=202,slow=23,SNR=68						
JHJ				S	**Sn**	**14 21 37.6**	**-8.3**
	comp=Z,2μm,0.3s,baz=231,slow=23,SNR=15						
JHJ2	**Mitsune**	**10.01**	**196**	*e*Pn	**Pn**	**14 19 52.1**	**-3.3**
JHJ2				*e*Sn	**Sn**	**14 21 38.2**	**-7.6**
JKN2	**Miekihoku**	**10.09**	**214**	P	**Pn**	**14 19 53.0**	**-3.5**
KLR	**Kul'dur**	**10.21**	**313**	*i* PN	**Pn**	**14 20 00.6**	**+2.5**
KLR	**Kul'dur**	**10.21**	**313**	P	**Pn**	**14 19 58.6**	**+0.5**
	comp=Z,8.5nm,0.3s,baz=122,slow=13,SNR=139						
KLR				LR	LR	14 24 23.1	
	comp=Z,217μm,18.1s,baz=128,slow=40						
NKL	**Nikolayevsk**	**10.50**	**352**	*i* PN	**Pn**	**14 20 04.0**	**+2.0**
NKL				*i* S	**Sn**	**14 22 02.0**	**+4.5**
NKL				pmax	pmax		
	comp=E,180nm,1.0s						
NKL				pmax	pmax		
	comp=Z,580nm,1.0s						
NKL				pmax	pmax		
	comp=Z,162μm,9.0s						
NKL				smax	smax		
	comp=E,153μm,11.0s						
JAJ2	**Tsuna**	**10.56**	**220**	P	**Pn**	**14 20 00.4**	**-2.5**
OKH	**Okha**	**10.77**	**359**	⇓*i*PN	Pn	14 19 57.4	-8.3
OKH				pmax	pmax		
	comp=Z,65μm,9.5s						
SKR	**Severo-Kuril's**	**11.89**	**44**	*d* *i*PN	**Pn**	**14 20 18.3**	**-2.3**
SKR				pmax	pmax		
	comp=Z,42μm,16.3s						
SKR				pmax	pmax		
	comp=Z,66μm,13.7s						

SKR				pmax	pmax		
	comp=Z,7μm,0.8s						
SKR				MLR	MLR		
	comp=Z,158μm,15.0s						
SKR				MLR	MLR		
	comp=Z,132μm,20.0s						
JHIK	**Hikimi**	**12.02**	**230**	P	**Pn**	**14 20 22.3**	**-0.3**
KSRS	**Korea Array**	**12.81**	**251**	P	**Pn**	**14 20 32.3**	**-0.5**
	comp=Z,2.5nm,0.3s,baz=66,slow=13,SNR=41						
KSRS				S	**S**	**14 23 05.9**	**-6.5**
	comp=Z,12nm,0.3s,baz=66,slow=24,SNR=8.6						
KSRS				LR	LR	14 25 21.4	
	comp=Z,38μm,21.5s,baz=60,slow=36						
KSRS				ScP	**ScP**	**14 29 30.4**	**+7.3**
	comp=Z,0.2nm,0.3s,baz=52,slow=0.6,SNR=3.6						
KS15	**Wonju Array Si**	**12.84**	**251**	*e*Pn	**Pn**	**14 20 32.3**	**-1.0**
KS15				*e*Sn	**S**	**14 23 05.9**	**-7.2**
KSAR	**Wonju Array Be**	**12.84**	**251**	P	**Pn**	**14 20 32.3**	**-1.0**
KSAR				S	**S**	**14 23 05.9**	**-7.2**
KSAR				ScP	**ScP**	**14 29 30.4**	**+7.2**
KSAR	**Wonju Array Be**	**12.84**	**251**	PN	**Pn**	**14 20 32.3**	**-1.0**
CN2	**Changchun**	**12.94**	**281**	*e*P	**Pn**	**14 20 34.2**	**-0.4**
CN2				*e*S	**Sn**	**14 22 58.9**	**+2.1**
CN2				LR	LR		
	comp=Z,49μm,11.0s						
CN2				LR	LR		
	comp=Z,64μm,11.0s						
CN2				LR	LR		
	comp=Z,88μm,11.0s						
JNU	**Nakatsue**	**13.65**	**229**	*e*Pn	**Pn**	**14 20 41.5**	**-2.5**
JNU	**Nakatsue**	**13.65**	**229**	P	**Pn**	**14 20 41.3**	**-2.7**
	comp=Z,2.6nm,0.3s,baz=326,slow=1.5,SNR=24						
PETK	**Petropavlovsk-**	**14.18**	**38**	P	**Pn**	**14 20 47.9**	**-2.6**
	comp=Z,24nm,0.3s,baz=217,slow=8.1,SNR=127						
PETK				S	**Sn**	**14 23 23.9**	**-2.7**
	comp=Z,25nm,0.3s,baz=238,slow=32,SNR=4.2						
PETK				LR	LR	14 26 17.2	
	comp=Z,130μm,21.9s,baz=231,slow=37						
PETK				ScP	**ScP**	**14 29 28.4**	**+3.3**
	comp=Z,0.2nm,0.3s,baz=204,slow=3.2,SNR=4.1						
PEA1	**Petropavlovsk-**	**14.18**	**38**	*e*Pn	**Pn**	**14 20 48.0**	**-2.6**
PEA1				*e*Sn	**Sn**	**14 23 23.9**	**-2.7**
SNY	**Shenyang**	**14.52**	**273**	⇓P	**Pn**	**14 20 55.8**	**+0.8**
SNY				S	**Sn**	**14 23 37.1**	**+2.2**
SNY				pmax	pmax		
	comp=Z,6μm,6.9s						
SNY				LR	LR		
	comp=Z,45μm,10.8s						
SNY				LR	LR		
	comp=Z,53μm,14.9s						
SNY				LR	LR		
	comp=Z,62μm,15.7s						
PET	**Petropavlovsk**	**14.56**	**40**	*e*Pn	**Pn**	**14 20 53.8**	**-1.7**
PET				*e*Sn	**Sn**	**14 23 29.2**	**-6.6**
PET	**Petropavlovsk**	**14.56**	**40**	*c e*P	**Pn**	**14 20 52.6**	**-2.9**
PET				*e*S	**Sn**	**14 23 32.2**	**-3.7**
PET				pmax	pmax		
	comp=Z,65μm,17.1s						
PET				pmax	pmax		
	comp=Z,74μm,12.6s						
PET				pmax	pmax		
	comp=Z,2μm,0.8s						
PET				MLR	MLR		
	comp=Z,117μm,19.0s						
ZEA	**Zeya**	**15.20**	**322**	*e*P	**Pn**	**14 21 02.0**	**-1.5**
ZEA				*e*S	**Sn**	**14 23 50.0**	**-1.2**
ZEA				pmax	pmax		
	comp=N,1μm,1.0s						
ZEA				pmax	pmax		
	comp=E,720nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,2μm,1.0s						
ZEA				pmax	pmax		
	comp=Z,72μm,13.0s						
ZEA				smax	smax		
	comp=E,58μm,14.0s						
CBIJ	**Chichi jima**	**15.67**	**183**	*e*Pn	**Pn**	**14 21 07.3**	**-2.3**
CBIJ				S	Sn	14 23 49.0	-14
JCJ	**Chichijima**	**15.67**	**183**	P	**Pn**	**14 21 07.3**	**-2.3**
	comp=E,201nm,0.3s,baz=180,slow=24,SNR=38						
JCJ				S	Sn	14 23 49.0	-14
	comp=E,645nm,0.3s,baz=168,slow=24,SNR=7.3						
DL2	**Dalian**	**16.73**	**264**	⇓P	**P**	**14 21 23.2**	**+0.1**
DL2				S	**Sn**	**14 24 26.5**	**-1.8**
DL2				ScS	**ScS**	**14 33 07.9**	**-1.6**
DL2				pmax	pmax		
	comp=E,2μm,1.4s						
DL2				pmax	pmax		
	comp=E,11μm,3.7s						
MA2	**Magadan**	**17.46**	**13**	*e*P	**P**	**14 21 30.1**	**-1.0**
	comp=E,3μm,0.8s						
MA2				S	**Sn**	**14 24 41.8**	**-3.7**
MA2	**Magadan**	**17.46**	**13**	*c i*P	**P**	**14 21 29.9**	**-1.1**
MA2				pmax	pmax		
	comp=Z,2μm,1.0s						
MA2	**Magadan**	**17.46**	**13**	P	**P**	**14 21 29.9**	**-1.1**
	comp=Z,44nm,0.3s,baz=197,slow=10,SNR=219						
MA2				S	**Sn**	**14 24 41.8**	**-3.7**
	comp=Z,4.6nm,0.3s,baz=257,slow=20,SNR=0.5						
MA2				LR	LR	14 28 24.3	
	comp=Z,30μm,19.5s,baz=200,slow=37						
MA2				ScP	**ScP**	**14 29 32.0**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=164,slow=20,SNR=1.6						
HIA	**Hailar**	**17.46**	**300**	*e*P	**P**	**14 21 30.6**	**-0.5**
	comp=Z,2μm,0.8s						
HIA	**Hailar**	**17.46**	**300**	*c i*P	**P**	**14 21 30.4**	**-0.8**
HIA				pmax	pmax		
	comp=Z,2μm,0.8s						
JOW	**Kunigami**	**20.01**	**222**	*e*P	Pn	14 22 01.0	-0.9
	comp=Z,794nm,1.1s						
JOW	**Kunigami**	**20.01**	**222**	P	**P**	**14 21 58.4**	**-0.7**
	comp=Z,49nm,1.0s,baz=102,slow=17,SNR=17						
BJI	**Beijing**	**20.38**	**271**	P	**P**	**14 22 01.9**	**-1.1**
BJI				sP	**sP**	**14 22 33.1**	**-2.9**
BJI				S	**S**	**14 25 40.5**	**-5.0**
BJI				LR	LR		
	comp=Z,7μm,19.8s						
BJI				LR	LR		
	comp=Z,5μm,17.7s						
BJT	**Baijiatuau**	**20.40**	**271**	*e*P	**P**	**14 22 02.0**	**-1.2**
	comp=Z,701nm,0.9s						
BJT	**Baijiatuau**	**20.40**	**271**	*e*P	**P**	**14 22 02.0**	**-1.2**
BJT				pmax	pmax		
	comp=Z,701nm,0.9s						
YAK	**Yakutsk**	**20.87**	**342**	*e*P	**P**	**14 22 05.2**	**-2.8**
YAK				*e*S	**S**	**14 25 49.2**	**-5.4**
YAK				*e*		14 26 13.3	
YAK				*e*		14 33 25.5	
YAK				pmax	pmax		
	comp=N,8μm,0.9s						
YAK				pmax	pmax		
	comp=E,8μm,1.0s						
YAK				smax	smax		
	comp=N,66μm,2.1s						
YAK				smax	smax		
	comp=E,20μm,2.1s						
SEY	**Seymchan**	**20.90**	**12**	*c i*P	**P**	**14 22 07.0**	**-1.3**
SEY	**Seymchan**	**20.90**	**12**	P	**P**	**14 22 06.7**	**-1.6**
	comp=E,2μm,0.5s,baz=189,slow=7.3,SNR=1242						
SEY				S	**S**	**14 25 52.3**	**-2.8**
	comp=E,479nm,1.2s,baz=52,slow=21,SNR=6.9						
SSE	**Sheshan**	**21.01**	**243**	P	**P**	**14 22 07.8**	**-2.0**
SSE				S	**S**	**14 26 00.8**	**+2.9**
SSE				LR	LR		
	comp=E,2μm,20.4s						
SSE				LR	LR		
	comp=E,4μm,21.3s						
SSE	**Sheshan**	**21.01**	**243**	*e*P	**P**	**14 22 07.8**	**-2.0**
	comp=E,5μm,1.2s						
TIA	**Tai'an**	**21.08**	**261**	P	**P**	**14 22 08.4**	**-2.2**
TIA				S	**S**	**14 25 52.8**	**-6.4**
TIA				LR	LR		
	comp=E,15μm,13.0s						
TIA				LR	LR		
	comp=E,10μm,11.7s						
TIA				LR	LR		
	comp=E,15μm,12.8s						
CIT	**Chita**	**21.93**	**305**	*e*P	**P**	**14 22 18.5**	**-1.0**
CIT				*e*		14 22 49.9	
CIT				*e*S	**S**	**14 26 18.0**	**+2.9**
CIT				pmax	pmax		
	comp=Z,8μm,1.6s						
NJ2	**Nanjing**	**22.00**	**249**	⇓*i*P	**P**	**14 22 19.4**	**-0.9**
NJ2				pP	**pP**	**14 22 40.0**	**-0.3**
NJ2				S	**S**	**14 26 11.6**	**-4.9**
NJ2				SS	**SnSn**	**14 26 56.6**	**+4.2**
NJ2				pmax	pmax		
	comp=Z,12μm,10.8s						
NJ2				LR	LR		
	comp=Z,133μm,21.7s						
NJ2				LR	LR		
	comp=Z,104μm,24.9s						
NJ2				LR	LR		
	comp=Z,62μm,22.0s						
HHC	**Hu-ho-hao-te**	**23.55**	**276**	*e*P	**P**	**14 22 34.6**	**-1.1**
HHC				S	**S**	**14 26 41.3**	**-0.5**
HHC				LR	LR		
	comp=N,36μm,10.4s						
HHC				LR	LR		
	comp=E,26μm,10.8s						
HHC	**Hu-ho-hao-te**	**23.55**	**276**	*e*P	**P**	**14 22 34.8**	**-0.9**
HHC				pP	pP	14 22 56.8	-0.4
HHC				PP	**sP**	**14 23 13.9**	**+3.6**
HHC				S	**S**	**14 26 35.8**	**-6.0**
HHC				pmax	pmax		
	comp=E,6μm,4.0s						
BOD	**Bodaibo**	**23.68**	**320**	*e*P	**P**	**14 22 33.8**	**-2.7**
BOD				*e*		14 33 31.9	
BOD				pmax	pmax		
	comp=Z,2μm,1.5s						
TIY	**Taiyuan**	**23.91**	**268**	*e*P	**P**	**14 22 39.0**	**+0.1**
TIY				pP	**pP**	**14 22 58.1**	**-2.9**
TIY				sP	**sP**	**14 23 13.1**	**-0.9**
TIY				S	**S**	**14 26 46.9**	**-0.7**
TIY				pmax	pmax		
	comp=Z,5μm,4.7s						
TIY				LR	LR		
	comp=Z,22μm,11.5s						
TIY				LR	LR		
	comp=Z,19μm,14.7s						
TIY				LR	LR		
	comp=Z,21μm,19.3s						
YOJ	**Yonaguni jima**	**24.69**	**229**	*e*P	**P**	**14 22 44.7**	**-1.2**
	comp=Z,421nm,0.7s						
YOJ	**Yonaguni jima**	**24.69**	**229**	*e*P	**P**	**14 22 44.7**	**-1.2**
YOJ				pmax	pmax		
	comp=Z,421nm,0.7s						
BTO	**Baotou**	**24.75**	**276**	*e*P	**P**	**14 22 47.0**	**+0.5**
BTO				S	S	14 26 49.5	-11
TATO	**Taipei**	**25.16**	**232**	*e*P	**P**	**14 22 52.2**	**+2.0**
	comp=Z,2μm,0.9s						
TATO	**Taipei**	**25.16**	**232**	P	**P**	**14 22 52.6**	**+2.4**
	SNR=34						
TATO				P	**P**	**14 22 52.6**	**+2.4**
	SNR=34						
YHNB	**Yeheng**	**25.46**	**232**	*e*P	**P**	**14 22 54.4**	**+1.4**
	comp=Z,735nm,0.9s						
NACB	**Ninganchiao**	**25.71**	**231**	*e*P	**P**	**14 22 53.8**	**-1.5**
	comp=Z,319nm,1.0s						
ULN	**Ulaanbaatar**	**25.72**	**294**	*e*P	**P**	**14 22 56.2**	**+0.9**
	comp=Z,2μm,1.0s						
ULN	**Ulaanbaatar**	**25.72**	**294**	*c i*P	**P**	**14 22 56.0**	**+0.7**
ULN				pmax	pmax		
	comp=Z,2μm,1.3s						
ULN	**Ulaanbaatar**	**25.72**	**294**	P	**P**	**14 22 56.2**	**+0.9**
	SNR=699						
ULN				P	**P**	**14 22 56.2**	**+0.9**
	SNR=699						
WHN	**Wuhan**	**26.00**	**251**	⇑P	**P**	**14 22 58.1**	**+0.4**
WHN				S	**S**	**14 27 17.4**	**-3.3**
WHN				LR	LR		
	comp=Z,193μm,14.1s						
WHN				LR	LR		
	comp=Z,130μm,15.2s						
WHN				LR	LR		
	comp=Z,216μm,15.1s						
SARN	**Sarigan**	**26.09**	**174**	*e*P	**P**	**14 22 56.3**	**-2.5**
	comp=Z,775nm,1.1s						
I34MN	**SONGINO INFRAS**	**26.16**	**294**	P	**P**	**14 22 59.8**	**+0.6**
	baz=77,slow=8.5,SNR=1.6						
SONA0	**Songino Array**	**26.16**	**294**	*e*P	**P**	**14 22 59.3**	**0.0**
SONM	**Songino Array**	**26.16**	**294**	P	**P**	**14 22 59.3**	**0.0**
SONM				S	**S**	**14 27 29.8**	**+6.4**
SONM				pmax	pmax		
	comp=Z,1μm,0.9s						
SONM				smax	smax		
	comp=N,30nm,1.0s						
SONM				pmax	pmax		
	comp=N,57nm,1.0s						
SONM				MLR	MLR		
	comp=Z,27μm,21.7s						
SONM	**Songino Array**	**26.16**	**294**	P	**P**	**14 22 59.3**	**0.0**
	comp=Z,758nm,0.9s,baz=82,slow=7.2,SNR=405						
SONM				S	**S**	**14 27 29.8**	**+6.4**
	comp=Z,30nm,0.9s,baz=97,slow=7.4,SNR=1.9						
SONM				ScP	**ScP**	**14 29 56.2**	**+2.6**
	comp=Z,57nm,1.0s,baz=98,slow=2.0,SNR=3.4						
SONM				LR	LR	14 33 26.0	
	comp=Z,27μm,21.7s,baz=100,slow=36						
SSLB	**Suanglung**	**26.38**	**231**	*e*P	**P**	**14 23 02.0**	**+0.7**
	comp=Z,331nm,0.9s						
YULB	**Yu-li**	**26.50**	**230**	*e*P	**P**	**14 23 01.7**	**-0.6**
	comp=Z,2μm,2.0s						
QZH	**Quanzhou**	**26.91**	**236**	⇓*i*P	**P**	**14 23 06.9**	**+0.9**
QZH				sP	**sP**	**14 23 46.9**	**+5.6**
QZH				S	**S**	**14 27 37.3**	**+2.1**
QZH				pmax	pmax		
	comp=Z,530nm,1.7s						
QZH				pmax	pmax		
	comp=Z,9μm,4.5s						
QZH				LR	LR		
	comp=Z,27μm,18.0s						
QZH				LR	LR		
	comp=Z,22μm,14.2s						
QZH				LR	LR		
	comp=Z,27μm,15.6s						
TPUB	**Ta-pu**	**26.95**	**231**	*e*P	**P**	**14 23 06.9**	**+0.5**
	comp=Z,814nm,1.1s						
TWG	**Pinlang**	**27.07**	**230**	*e*P	**P**	**14 23 07.6**	**+0.2**
	comp=Z,1μm,0.8s						
IRK	**Irkutsk**	**27.61**	**304**	*e*P	**P**	**14 23 12.8**	**+0.8**
IRK				*e*S	**S**	**14 27 51.9**	**+6.1**
IRK				pmax	pmax		
	comp=Z,3μm,1.9s						
TLY	**Talaya**	**27.96**	**302**	*e*P	**P**	**14 23 16.7**	**+1.6**
TLY				ScP	**ScP**	**14 30 01.2**	**+2.4**
TLY	**Talaya**	**27.96**	**302**	*c i*P	**P**	**14 23 15.5**	**+0.3**
TLY	**Talaya**	**27.96**	**302**	P	**P**	**14 23 15.2**	**0.0**
	SNR=794						
TLY				P	**P**	**14 23 15.2**	**0.0**
	SNR=794						
TLY	**Talaya**	**27.96**	**302**	P	**P**	**14 23 16.2**	**+1.1**
	comp=Z,237nm,1.0s,baz=114,slow=4.2,SNR=213						
TLY				S	**S**	**14 27 51.9**	**+0.5**
	comp=Z,19nm,0.8s,baz=296,slow=2.0,SNR=1.6						
TLY				ScP	**ScP**	**14 30 01.2**	**+2.4**
	comp=Z,35nm,1.0s,baz=0.0,slow=2.0,SNR=3.4						
TLY				LR	LR	14 34 44.2	
	comp=Z,39μm,20.9s,baz=92,slow=37						
XAN	**Xi'an**	**28.05**	**263**	P	**P**	**14 23 16.2**	**0.0**
XAN				pP	pP	14 23 40.4	+1.0
XAN				sP	sP	14 23 53.5	+1.9
XAN				PP	**PnPn**	**14 24 08.0**	**-1.3**
XAN				S	**S**	**14 27 51.0**	**-2.1**
XAN				sS	sS	14 28 28.7	-4.9
XAN				SS	SS	14 29 21.2	-34
XAN				ScP	**ScP**	**14 29 58.4**	**-1.0**
XAN				pmax	pmax		
	comp=Z,1μm,3.8s						
XAN				LR	LR		
	comp=Z,22μm,14.1s						
XAN				LR	LR		
	comp=Z,22μm,13.6s						
XAN				LR	LR		
	comp=Z,28μm,12.7s						
XAN	**Xi'an**	**28.05**	**263**	*e*P	**P**	**14 23 16.3**	**+0.2**
	comp=Z,739nm,1.2s						
KIWB	**Kanaga Island**	**28.09**	**57**	*e*P	**P**	**14 23 15.6**	**-0.7**
BILL	**Bilibino**	**28.15**	**18**	*e*P	**P**	**14 23 14.9**	**-1.7**
	comp=Z,694nm,1.0s						
BILL	**Bilibino**	**28.15**	**18**	*c i*P	**P**	**14 23 13.4**	**-3.2**
BILL				*i* *PP	**pP**	**14 23 35.5**	**-4.5**
BILL				*i* *SP	**sP**	**14 23 47.7**	**-4.7**
BILL				*i*		14 24 07.7	
BILL				*i* S	**S**	**14 27 52.0**	**-1.9**
BILL				pmax	pmax		
	comp=Z,442nm,0.7s						
BILL				MLR	MLR		
	comp=Z,71μm,14.0s						
ZAK	**Zakamensk**	**28.16**	**300**	*e*P	**P**	**14 23 18.0**	**+1.0**
ZAK				*e*		14 27 58.4	
ZAK				pmax	pmax		
	comp=Z,2μm,1.4s						
ADK	**Adak**	**28.38**	**57**	*e*P	**P**	**14 23 18.2**	**-0.6**
	comp=Z,1μm,1.1s						
ADK	**Adak**	**28.38**	**57**	*e*P	**P**	**14 23 18.2**	**-0.6**
ADK				pmax	pmax		
	comp=Z,1μm,1.1s						
GSTR	**Great Sitkin T**	**28.78**	**57**	*e*P	**P**	**14 23 22.3**	**-0.2**
GUMO	**Guam**	**29.13**	**177**	P	**P**	**14 23 25.2**	**-0.5**
	comp=Z,247nm,1.0s,baz=352,slow=21,SNR=1.9						
ENH	**Enshi**	**29.59**	**256**	*e*P	**P**	**14 23 29.3**	**-0.6**
	comp=Z,647nm,1.0s						
MOY	**Mondy**	**29.61**	**302**	*e*P	**P**	**14 23 30.8**	**+0.9**
MOY				pmax	pmax		
	comp=Z,6μm,1.8s						
TIXI	**Tiksi**	**29.78**	**351**	*c i*P	**P**	**14 23 28.4**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,575nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,32μm,16.0s						
TIXI	**Tiksi**	**29.78**	**351**	P	**P**	**14 23 30.0**	**-1.0**
	comp=Z,90nm,0.4s,baz=145,slow=7.4,SNR=168						
ATKA	**Atka Island**	**29.93**	**57**	*e*P	**P**	**14 23 32.4**	**-0.2**
	comp=Z,484nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**30.47**	**132**	T	T	14 55 12.9	
	baz=327,slow=76						
H11N1	**WAKE ISLAND Hy**	**30.48**	**132**	T	T	14 55 17.3	
	baz=327,slow=76						
H11N3	**WAKE ISLAND Hy**	**30.49**	**132**	T	T	14 55 18.1	
	baz=327						
WAKE	**Wake Island**	**30.70**	**132**	*e*P	**P**	**14 23 37.9**	**-1.7**
LZH	**Lanzhou**	**30.87**	**271**	⇑P	**P**	**14 23 43.0**	**+1.7**
LZH				pP	pP	14 24 07.6	+2.9
LZH				sP	sP	14 24 18.5	+1.6
LZH				S	**S**	**14 28 37.1**	**-0.5**
LZH				sS	sS	14 29 19.4	+1.2
LZH				SS	ScP	14 30 23.5	+15
LZH				pmax	pmax		
	comp=Z,530nm,1.4s						
LZH				pmax	pmax		
	comp=Z,6μm,5.8s						
LZH				LR	LR		
	comp=Z,77μm,15.6s						
LZH				LR	LR		
	comp=Z,47μm,15.3s						
LZH				LR	LR		
	comp=Z,81μm,17.1s						
CVP	**Callao Caves**	**30.88**	**222**	*e*P	**P**	**14 23 40.6**	**-0.6**
H11S1	**WAKE ISLAND Hy**	**31.36**	**133**	T	T	14 56 25.1	
	baz=328,slow=74						
H11S3	**WAKE ISLAND Hy**	**31.36**	**133**	T	T	14 56 25.7	
	baz=328,slow=74						
H11S2	**WAKE ISLAND Hy**	**31.38**	**133**	T	T	14 56 27.7	
	baz=328						
GZH	**Guangzhou**	**31.56**	**241**	P	P	14 23 39.1	-8.0
GZH				pP	pP	14 23 59.2	-11
GZH				S	S	14 28 34.8	-13
GZH				pmax	pmax		
	comp=Z,13μm,17.3s						
GZH				LR	LR		
	comp=N,43μm,20.6s						
GZH				LR	LR		
	comp=E,53μm,19.8s						
HKC	**Hong Kong Obse**	**31.59**	**239**	⇑P	**P**	**14 23 51.0**	**+3.5**
KNGR	**Kungurtug, Tuv**	**31.83**	**300**	*c i*P	**P**	**14 23 50.2**	**+0.8**
MCO	**Taipa Grande**	**32.11**	**239**	P	P	14 23 57.0	+5.0
SPIA	**Saint Paul Isl**	**32.53**	**47**	*e*P	**P**	**14 23 56.6**	**+1.3**
	comp=E,1μm,0.8s						
GTA	**Gaotai**	**32.56**	**279**	P	**P**	**14 23 56.5**	**+0.5**
GTA				pP	pP	14 24 24.3	+4.7
GTA				sP	sP	14 24 38.4	+6.7
GTA				S	**S**	**14 29 02.1**	**-1.7**
GTA				sS	sS	14 29 51.3	+6.7
GTA				ScP	**ScP**	**14 30 14.9**	**+0.7**
GTA				ScS	**ScS**	**14 34 13.8**	**-0.2**
GTA				pmax	pmax		
	comp=E,3μm,10.7s						
GTA				LR	LR		
	comp=E,52μm,21.6s						
GTA				LR	LR		
	comp=E,26μm,22.0s						
GTA				LR	LR		
	comp=E,21μm,23.1s						
GAMB	**Gambell**	**33.18**	**35**	*e*P	**P**	**14 24 00.8**	**0.0**
	comp=E,436nm,1.2s						
NIKH	**Nikolski High**	**33.18**	**55**	*e*P	**P**	**14 23 59.2**	**-1.8**
	comp=E,237nm,0.7s						
CD2	**Chengdu**	**33.39**	**262**	P	**P**	**14 24 03.4**	**+0.2**
CD2				pP	pP	14 24 27.1	+0.4
CD2				sP	sP	14 24 39.6	+0.8
CD2				PP	**PP**	**14 25 20.7**	**+0.1**
CD2				S	**S**	**14 29 15.5**	**-1.1**
CD2				sS	sS	14 29 58.6	+1.2
CD2				pmax	pmax		
	comp=E,870nm,0.6s						
CD2				pmax	pmax		
	comp=E,6μm,6.2s						
CD2				LR	LR		
	comp=E,60μm,25.8s						
CD2				LR	LR		
	comp=E,62μm,26.8s						
CD2				LR	LR		
	comp=E,36μm,29.8s						
GYA	**Guiyang**	**33.85**	**253**	⇑*i*P	**P**	**14 24 07.0**	**-0.3**
GYA				pP	pP	14 24 32.4	+1.6
GYA				sP	sP	14 24 45.0	+2.1
GYA				PcP	**PcP**	**14 26 45.6**	**+1.8**
GYA				S	**S**	**14 29 21.1**	**-2.7**
GYA				sS	sS	14 30 05.0	+0.2
GYA				ScP	**ScP**	**14 30 20.4**	**+1.6**
GYA				SS	**SnSn**	**14 31 35.6**	**-4.8**
GYA				ScS	**ScS**	**14 34 20.8**	**-0.2**
GYA				pmax	pmax		
	comp=E,550nm,0.9s						
GYA				LR	LR		
	comp=E,28μm,17.1s						
GYA				LR	LR		
	comp=E,24μm,13.3s						
GYA				LR	LR		
	comp=E,41μm,16.1s						
HVS	**Khovu-Aksy**	**34.20**	**302**	*d i*P	**P**	**14 24 11.1**	**+1.1**
HVS				pmax	pmax		
	comp=Z,160nm,0.9s						
TGY	**Tagaytay City**	**34.40**	**220**	P	**P**	**14 24 12.1**	**+0.1**
	comp=Z,8μm,1.1s,baz=147,slow=0.4,SNR=28						
UNV	**Unalaska Valle**	**34.56**	**54**	*e*P	**P**	**14 24 11.3**	**-1.6**
	comp=Z,149nm,0.9s						
MIDW	**Midway**	**34.94**	**102**	*e*P	**P**	**14 24 20.4**	**+3.9**
AKUT	**Akutan**	**34.98**	**53**	*e*P	**P**	**14 24 13.8**	**-2.7**
	comp=Z,264nm,1.0s						
PLP	**Palo**	**35.25**	**212**	⇓*e*P	**P**	**14 24 18.8**	**-0.5**
RCP	**Roxas**	**35.81**	**216**	⇑*e*P	**P**	**14 24 24.8**	**+0.8**
ANM	**Nome**	**36.06**	**35**	*e*P	**P**	**14 24 26.6**	**+0.9**
	comp=Z,2μm,1.5s						
ANM	**Nome**	**36.06**	**35**	*e*P	**P**	**14 24 26.6**	**+0.9**
ANM				pmax	pmax		
	comp=Z,2μm,1.5s						
FALS	**False Pass**	**36.32**	**52**	*e*P	**P**	**14 24 26.4**	**-1.6**
	comp=Z,348nm,0.8s						
FALS				*e*PcP	**PcP**	**14 26 50.6**	**+0.2**
LLP	**Lapu-Lapu**	**36.42**	**213**	*e*P	**P**	**14 24 29.7**	**+0.4**
LLP				*e*S	**ScP**	**14 30 30.7**	**+2.6**
QIZ	**Qiongzhong**	**36.73**	**240**	P	**P**	**14 24 34.8**	**+2.9**
QIZ				PP	**PP**	**14 25 58.5**	**+0.9**
QIZ				S	**S**	**14 30 11.7**	**+3.7**
QIZ				sS	**sS**	**14 30 51.4**	**+2.2**
QIZ				LR	LR		
	comp=Z,25μm,23.0s						
QIZ				LR	LR		
	comp=Z,25μm,19.1s						
QIZ				LR	LR		
	comp=Z,28μm,17.2s						
QIZ	**Qiongzhong**	**36.73**	**240**	*e*P	**P**	**14 24 34.2**	**+2.3**
	comp=Z,321nm,1.0s						
JAP	**San Jose, Anti**	**36.88**	**216**	⇓*e*P	**P**	**14 24 31.2**	**-1.9**
KMI	**Kunming**	**37.45**	**255**	P	**P**	**14 24 38.4**	**+0.2**
KMI				pP	pP	14 25 00.6	-1.5
KMI				sP	sP	14 25 11.8	-2.3
KMI				PP	**PP**	**14 26 04.4**	**-1.2**
KMI				S	**S**	**14 30 18.9**	**-0.2**
KMI				sS	sS	14 31 00.2	-0.2
KMI				ScS	**ScS**	**14 34 41.5**	**+0.5**
KMI				pmax	pmax		
	comp=Z,930nm,0.9s						
KMI				LR	LR		
	comp=Z,16μm,19.1s						

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KMI                                    LR      LR
      comp=Z,17µm,21.1s
KMI   Kunming            37.45 255     eP      P         14 24 38.8 +0.6
RDOG  Red Dog Mine       37.81  30     eP      P         14 24 39.8 -0.7
      comp=Z,921nm,1.0s
CGP   Cagayan de Oro     37.84 211⇓    eP      P         14 24 41.4 +0.2
SDPT  Sand Point         37.97  51     eP      P         14 24 40.3 -1.6
      comp=Z,429nm,0.7s
SDPT                                   ePcP    PcP       14 26 55.5 +0.2
PATS  Pohnpei            38.23 155     eP      P         14 24 44.4 -0.1
DGZ   Jazzator, Alta     38.37 300c    iP      P         14 24 46.9 +1.3
DGZ                                    pmax    pmax
      comp=Z,1µm,0.9s
NRIK  Noril'sk           38.71 332     P       P         14 24 46.7 -1.3
      comp=Z,805nm,0.8s,baz=106,slow=11,SNR=132
NRIK                                   S       S         14 30 35.8 -0.9
      comp=Z,48nm,0.8s,baz=80,slow=20,SNR=3.7
NRIK                                   LR      LR        14 42 01.9
      comp=Z,63µm,20.0s,baz=93,slow=38
DAV   Davao City (W)     38.80 209⇓    iP      P         14 24 50.2 +0.8
DAV   Davao City (W)     38.80 209     P       P         14 24 49.6 +0.3
      SNR=20
DAV                                    P       P         14 24 49.6 +0.3
      SNR=20
DAV   Davao City (W)     38.80 209     P       P         14 24 49.3  0.0
      comp=Z,100nm,0.3s,baz=51,slow=5.3,SNR=12
DAV                                    LR      LR        14 40 50.3
      comp=Z,17µm,21.0s,baz=40,slow=36
CHGN  Chignik            39.04  49     eP      P         14 24 49.8 -1.1
      comp=Z,336nm,0.8s
CTBH  Cotabato--PC H     39.15 211⇓    iP      P         14 24 53.8 +1.6
ZAA1  Zalesovo Array     39.25 307     eP      P         14 24 52.7 +0.1
ZAA1                                   ePcP    PcP       14 26 59.2 -0.3
ZALV  Zalesovo Beam      39.25 307     P       P         14 24 52.7  0.0
      comp=Z,893nm,0.8s,baz=82,slow=6.6,SNR=457
ZALV                                   PcP     PcP       14 26 59.2 -0.3
      comp=Z,277nm,0.8s,baz=73,slow=3.2,SNR=5.1
ZALV                                   ScP     ScP       14 30 40.2 +2.0
      comp=Z,69nm,0.8s,baz=75,slow=3.7,SNR=5.7
ZALV                                   LR      LR        14 42 36.2
      comp=Z,34µm,18.2s,baz=94,slow=38
WMQ   Urumqi             39.72 291⇑    iP      P         14 24 57.2 +0.4
WMQ                                    sP      sP        14 25 36.6 +3.4
WMQ                                    PP      PnPn      14 26 37.3 +3.2
WMQ                                    PcP     PcP       14 27 03.9 +2.6
WMQ                                    ScP     ScP       14 30 43.3 +2.9
WMQ                                    S       S         14 30 54.0 +1.3
WMQ                                    sS      sS        14 31 38.9 +4.6
WMQ                                    pmax    pmax
      comp=Z,9µm,6.1s
WMQ                                    LR      LR
      comp=Z,191µm,17.5s
WMQ                                    LR      LR
      comp=Z,200µm,14.1s
WMQ                                    LR      LR
      comp=Z,102µm,17.5s
WMQ   Urumqi             39.72 291     eP      P         14 24 58.1 +1.3
WMQ   Urumqi             39.72 291     eP      P         14 24 58.1 +1.3
NVS   Novosibirsk        40.04 309     eP      P         14 25 00.0 +0.8
NVS                                    eS      S         14 30 54.3 -2.7
NVS                                    pmax    pmax
      comp=Z,3µm,1.5s
NVS                                    pmax    pmax
      comp=N,810nm,1.7s
NVS                                    pmax    pmax
      comp=E,3µm,1.5s
NVS                                    smax    smax
      comp=N,1µm,3.2s
NVS                                    smax    smax
      comp=E,847nm,2.2s
SVW2  Sparrevohn         40.23  41     eP      P         14 25 02.3 +1.6
      comp=E,725nm,1.4s
ZSN   Zaisan             40.56 297d    iP      P         14 25 04.3 +0.7
ZSN                                    i S     S         14 31 08.2 +3.2
ZSN                                    pmax    pmax
      comp=Z,503nm,1.1s
ZSN                                    MLR     MLR
      comp=Z,13µm,11.0s
ZSN   Zaisan             40.56 297⇓    iP      P         14 25 04.3 +0.7
      comp=Z,503nm,1.1s
ZSN                                   ⇑iS      S         14 31 08.2 +3.2
      comp=Z,6µm,4.4s
ZSN                                    eLRM    MLR       14 42 50.3
      comp=Z,13µm,10.9s
RSO   Redoubt South      41.65  42     eP      P         14 25 13.9 +1.3
OHAK  Old Harbor         41.74  47     eP      P         14 25 12.7 -0.4
      comp=Z,1µm,0.9s
PPLA  Purkeypile         41.76  38     eP      P         14 25 15.4 +1.9
      comp=Z,5µm,1.3s
CAST  Castle Rocks       41.79  38     eP      P         14 25 15.0 +1.6
      comp=Z,2µm,0.7s
NONG  Nongkai            41.84 246     P       P         14 25 14.9 +0.6
      comp=Z,19nm,0.9s,comp=Z,247nm
SGSI  Sangihe            41.98 207     P       P         14 25 21.4 +5.9
KDAK  Kodiak Island      42.04  46     eP      P         14 25 15.6 +0.1
      comp=Z,1µm,0.9s
KDAK                                   S       S         14 31 25.1 -1.4
KDAK  Kodiak Island      42.04  46     i P     P         14 25 14.8 -0.7
KDAK  Kodiak Island      42.04  46     P       P         14 25 15.4 -0.1
      comp=Z,677nm,0.7s,baz=294,slow=3.6,SNR=124
KDAK                                   S       S         14 31 25.1 -1.4
      comp=Z,64nm,1.1s,baz=195,slow=13,SNR=2.2
SKNT  Sakolnakorn        42.05 244     P       P         14 25 16.5 +0.4
      comp=Z,331nm,0.9s,comp=Z,4µmcomp=Z,24µm
BPAW  Bear Paw Mtn.      42.25  37     eP      P         14 25 18.3 +1.1
      comp=Z,1µm,1.0s
CRAI  Chiangrai          42.26 251     P       P         14 25 28.5  +11
HOM   Homer              42.29  43     eP      P         14 25 18.8 +1.3
      comp=Z,3µm,1.1s
MLY   Manley             42.33  35     eP      P         14 25 18.9 +1.0
      comp=Z,989nm,1.1s
MK31  Makanchi Array     42.43 297     i P     P         14 25 18.7 -0.2
MK31                                   pmax    pmax
      comp=Z,565nm,0.7s
MK32  Makanchi Array     42.43 297     eP      P         14 25 19.0 +0.1
MKAR  Makanchi Array     42.43 297     eP      P         14 25 19.5 +0.5
      comp=Z,4µm,0.6s
MKAR                                   ScP     ScP       14 30 52.6 +1.7
MKAR                                   S       S         14 31 31.3 -1.4
MKAR                                   e                 15 03 18.5
MKAR  Makanchi Array     42.43 297     P       P         14 25 19.0 +0.1
      comp=Z,246nm,0.6s,baz=82,slow=9.2,SNR=514
MKAR                                   ScP     ScP       14 30 52.6 +1.7
      comp=Z,24nm,0.8s,baz=56,slow=3.6,SNR=2.4
MKAR                                   S       S         14 31 31.3 -1.4
      comp=Z,12nm,0.7s,baz=82,slow=13,SNR=2.2
MKAR                                   LR      LR        14 44 54.6
      comp=Z,25µm,19.2s,baz=82,slow=39
MKAR                                   P4KPbc            15 03 18.5
      comp=Z,0.6nm,0.7s,baz=53,slow=3.6,SNR=5.0
COLD  Coldfoot           42.52  32     eP      P         14 25 20.1 +0.8
      comp=Z,277nm,0.9s
TRF   Thorofare Moun     42.59  38     eP      P         14 25 20.9 +0.7
      comp=Z,860nm,0.7s
KDM   Kudat              42.60 221     P       P         14 25 31.0  +10
MAKZ  Makanchi           42.63 297     eP      P         14 25 20.9 +0.3
      comp=Z,2µm,1.4s
MAKZ  Makanchi           42.63 297     P       P         14 25 20.5 -0.1
MAKZ                                   pmax    pmax
      comp=Z,1µm,1.2s
BRLK  Bradley Lake       42.66  43     eP      P         14 25 20.7 +0.1
      comp=Z,1µm,0.7s
SEM   Semipalatinsk      42.72 303     eP      P         14 25 20.3 -1.1
SEM                                    i S     S         14 31 34.1 -3.1
SEM                                    pmax    pmax
      comp=Z,3µm,1.3s
SEM                                    MLR     MLR
      comp=Z,30µm,14.0s
SEM   Semipalatinsk      42.72 303     eP      P         14 25 20.4 -1.1
      comp=Z,3µm,1.2s
SEM                                   ⇑iS      S         14 31 34.1 -3.1
      comp=Z,15µm,4.2s
SEM                                    eLRM    MLR       14 43 52.4
      comp=Z,30µm,13.8s
BWN   Browne             42.91  36     eP      P         14 25 24.6 +2.0
      comp=Z,5µm,0.9s
RC01  Rabbit Creek A     43.06  41     eP      P         14 25 23.8  0.0
      comp=Z,1µm,0.8s
MCK   McKinley           43.18  37     eP      P         14 25 25.1 +0.5
      comp=Z,2µm,1.0s
MCK   McKinley           43.18  37     eP      P         14 25 25.2 +0.5
MCK                                    pmax    pmax
      comp=Z,2µm,1.0s
PAYA  Payao              43.19 251     P       P         14 25 26.5 +1.1
      comp=Z,176nm,0.8s,comp=Z,1µm
RND   Reindeer           43.24  38     eP      P         14 25 25.5 +0.2
      comp=Z,1µm,0.8s
RND   Reindeer           43.24  38     eP      P         14 25 25.5 +0.2
RND                                    pmax    pmax
      comp=Z,1µm,0.8s
LSA   Lhasa              43.28 270     P       P         14 25 28.3 +1.8
LSA                                    S       S         14 31 48.4 +2.0
LSA                                    pmax    pmax
      comp=Z,320nm,1.3s
LSA                                    LR      LR
      comp=Z,15µm,22.2s
LSA                                    LR      LR
      comp=Z,16µm,15.3s
LSA   Lhasa              43.28 270     eP      P         14 25 28.1 +1.5
      comp=Z,303nm,1.0s
LSA   Lhasa              43.28 270     i P     P         14 25 28.0 +1.5
      SNR=62
PMR   Palmer             43.29  40     eP      P         14 25 25.9 +0.3
      comp=Z,998nm,0.8s
PMR   Palmer             43.29  40     eP      P         14 25 25.9 +0.3
PMR                                    pmax    pmax
      comp=Z,998nm,0.8s
SEW   Seward             43.33  42     eP      P         14 25 26.4 +0.5
      comp=Z,2µm,0.8s
MDM   Murphy Dome        43.40  35     eP      P         14 25 26.7 +0.3
      comp=Z,1µm,0.8s
WRH   Wood River Hil     43.49  36     eP      P         14 25 27.8 +0.6
      comp=Z,914nm,0.9s
SDKM  Sandakan           43.54 219     P       P         14 25 29.0 +0.8
TCOL  CIGO, UAF Yank     43.56  35     P       P         14 25 28.8 +1.1
      baz=274
TCOL                                   S       S         14 31 47.8 -0.8
      baz=274
COLA  College            43.56  35     eP      P         14 25 28.5 +0.8
      comp=Z,2µm,0.8s
COLA  College            43.56  35⇑    eP      P         14 25 27.8 +0.1
COLA                                   pmax    pmax
      comp=Z,1µm,0.9s
KNK   Knik Glacier       43.64  40     eP      P         14 25 28.8 +0.3
      comp=Z,4µm,1.6s
KURK  Kurchatov          43.64 304     eP      P         14 25 29.2 +0.6
KURK                                   PP      PcP       14 27 14.5 +0.6
KURK                                   eScP    ScP       14 30 58.1 +2.4
KURK  Kurchatov          43.64 304c    iP      P         14 25 28.3 -0.2
KURK                                   pmax    pmax
      comp=Z,2µm,0.9s
KURK  Kurchatov          43.64 304     P       P         14 25 28.7 +0.2
      SNR=1116
KURK                                   P       P         14 25 28.7 +0.2
      SNR=1116
KURK                                   P       P         14 25 28.7 +0.2
      SNR=1116
SML   Sawmill            43.65  40     eP      P         14 25 29.0 +0.5
      comp=Z,2µm,0.9s
SML   Sawmill            43.65  40     eP      P         14 25 29.0 +0.5
SML                                    pmax    pmax
      comp=Z,2µm,0.9s
KKM   Kota Kinabalu      43.65 221     eP      P         14 25 29.7 +0.6
      comp=Z,616nm,1.3s
KKM   Kota Kinabalu      43.65 221     P       P         14 25 32.0 +2.8
KURBB Kurchatov Arra     43.72 304     P       P         14 25 29.2  0.0
      comp=Z,1µm,0.5s,baz=71,slow=8.7,SNR=483
KURBB                                  PP      PcP       14 27 14.5 +0.3
      comp=Z,135nm,0.8s,baz=75,slow=9.0,SNR=3.2
KURBB                                  ScP     ScP       14 30 58.1 +2.0
      comp=Z,23nm,0.9s,baz=78,slow=4.1,SNR=4.6
POKR  Poker Plat Res     43.72  35     P       P         14 25 29.9 +0.9
      baz=274
UTTA  Uttaradit          43.82 249     P       P         14 25 30.8 +0.4
      comp=Z,158nm,0.9s,comp=Z,980nm
DHY   Denali Highway     43.94  38     eP      P         14 25 31.3 +0.3
      comp=Z,4µm,1.3s
ILAR  Eielson Array      43.98  35     P       P         14 25 31.0 -0.1
      comp=Z,980nm,1.0s,baz=259,slow=4.3,SNR=621
ILAR                                   S       S         14 31 52.8 -2.0
      comp=Z,2.8nm,1.0s,baz=262,slow=14,SNR=2.1
ILAR                                   LR      LR        14 44 18.2
      comp=Z,57µm,21.5s,baz=278,slow=36
ILAR                                   P4KPbc            15 03 23.2
      comp=Z,0.4nm,0.7s,baz=261,slow=3.7,SNR=5.2
ILAR                                   P4KP              15 05 57.2
      comp=Z,1.3nm,1.0s,baz=251,slow=2.8,SNR=5.1
ILB   Eielson Array      43.98  35     eP      P         14 25 31.0 -0.1
HDA   Harding Lake       43.99  36     eP      P         14 25 31.2 +0.1
      comp=Z,733nm,0.8s
HDA   Harding Lake       43.99  36     P       P         14 25 31.1 -0.1
      baz=276
CHAI  Chaiyaphum         44.15 245     P       P         14 25 33.0  0.0
      comp=Z,282nm,0.9s,comp=Z,2µm
TNTI  Ternate            44.16 203     eP      P         14 25 32.7 -0.3
      comp=Z,466nm,0.9s
TNTI  Ternate            44.16 203     P       P         14 25 32.4 -0.6
      comp=Z,570nm,1.3s,comp=Z,11µmcomp=Z,84µm
CMMT  Chiang Mai         44.20 251     P       P         14 25 33.8 +0.3
      comp=Z,462nm,0.8s,comp=Z,6µm
CHTO  Chiang Mai         44.21 251     eP      P         14 25 33.8 +0.4
      comp=Z,384nm,0.9s
CHTO  Chiang Mai         44.21 251     eP      P         14 25 33.8 +0.4
CHTO                                   pmax    pmax
      comp=Z,384nm,0.9s
CHTO  Chiang Mai         44.21 251     P       P         14 25 34.2 +0.8
      SNR=209
CHTO                                   P       P         14 25 34.2 +0.8
      SNR=209
CHTO  Chiang Mai         44.21 251     P       P         14 25 33.9 +0.4
      comp=Z,2µm,0.9s,comp=Z,28µmcomp=Z,211µm
BAKI  Biak               44.23 190     P       P         14 25 33.8 +0.2
PBKT  Sadao Pong         44.36 247     P       P         14 25 35.0 +0.4
      comp=Z,268nm,1.0s,comp=Z,5µm
GLI   Glacier Island     44.37  41     eP      P         14 25 34.5 +0.2
      comp=Z,1µm,0.8s
TSM   Tawau              44.42 217     P       P         14 25 36.0 +0.8
CM31  Chiang Mai Arr     44.45 251     eP      P         14 25 35.9 +0.5
CM31  Chiang Mai Arr     44.45 251     P       P         14 25 36.1 +0.7
      SNR=121
CMAR  Chiang Mai Arr     44.45 251     P       P         14 25 35.9 +0.5
      comp=Z,160nm,0.9s,baz=43,slow=7.4,SNR=103
CMAR                                   LR      LR        14 46 40.5
      comp=Z,16µm,18.7s,baz=58,slow=39
CMAR                                   P3KP              14 56 19.4
      comp=Z,0.4nm,0.7s,baz=270,slow=2.7,SNR=2.5
PRP   Porcupine Dome     44.49  34     eP      P         14 25 35.9 +0.6
      comp=Z,2µm,0.9s
FYU   Fort Yukon         44.51  33     eP      P         14 25 36.3 +1.0
      comp=Z,1µm,0.9s
SUKH  Sukhothai          44.64 249     P       P         14 25 37.8 +0.9
      comp=Z,133nm,0.9s,comp=Z,893nm
SWI   Sorong             44.75 197     P       P         14 25 38.0 +0.3
      comp=Z,789nm,0.7s,comp=Z,9µm
SIJI  Sorong             44.75 197     P       P         14 25 37.6 -0.1
      comp=Z,598nm,0.9s,baz=7.1,slow=13,SNR=74
SIJI                                   LR      LR        14 44 28.7
      comp=Z,12µm,18.5s,baz=12,slow=36
MANU  Manus Island       44.78 174     eP      P         14 25 37.3 -0.7
      comp=Z,522nm,0.9s
KLU   Klutina            44.83  40     eP      P         14 25 38.6 +0.6
      comp=Z,2µm,0.7s
RKPI  Ransiki, Papua     44.83 193     P       P         14 25 38.1 -0.3
      comp=Z,1µm,1.0s,comp=Z,16µm
SRPI  Serui, Papua       44.89 190     P       P         14 25 39.3 +0.5
      comp=Z,1µm,1.0s,comp=Z,18µmcomp=Z,138µm
DIV   Divide             44.96  41     eP      P         14 25 40.0 +1.0
      comp=Z,4µm,1.3s
RIDG  Independ'e Rid     44.99  37     eP      P         14 25 39.1  0.0
      comp=Z,1µm,1.1s
MID   Middleton Isla     44.99  43     eP      P         14 25 43.2 +4.0
HARP  HAARP              45.04  39     eP      P         14 25 40.7 +1.1
      comp=Z,3µm,0.8s
SHL   Shillong           45.05 265     eP      P         14 25 40.2  0.0
SHL                                    IAmb    IAmb      14 25 51.5
      comp=Z,2µm,1.9s
SHL                                    i x     x         14 32 07.0
EYAK  Cordova Ski Ar     45.07  41     eP      P         14 25 40.6 +0.8
      comp=Z,2µm,0.8s
JAY   Jayapura           45.15 183     P       P         14 25 41.0 +0.1
JAY                                    pmax    pmax
      comp=Z,593nm,0.9s
JAY                                    MLR     MLR
      comp=Z,5µm,20.6s
JAY   Jayapura           45.15 183     P       P         14 25 41.1 +0.1
      comp=Z,9µm,1.0s,comp=Z,135µmcomp=Z,971µm
JAY   Jayapura           45.15 183     P       P         14 25 41.0 +0.1
      comp=Z,592nm,0.9s,baz=312,slow=3.5,SNR=24
JAY                                    LR      LR        14 44 43.5
      comp=Z,5µm,20.6s,baz=10.0,slow=36
GENI  Genyem             45.25 184     P       P         14 25 41.8 +0.1
      comp=Z,2µm,1.0s,comp=Z,23µmcomp=Z,158µm
SCRK  Sand Creek         45.33  36     eP      P         14 25 41.4 -0.5
KMSI  Cibinong           45.41 207     P       P         14 25 42.7 -0.2
      comp=Z,4µm,1.1s,comp=Z,26µmcomp=Z,132µm
SRAK  Srakaew            45.47 244     P       P         14 25 40.9 -2.6
      comp=Z,1µm,0.8s,comp=Z,11µm
PDGK  Podgornoye         45.48 293     P       P         14 25 42.5 -1.0
PDGK                                   pmax    pmax
      comp=Z,535nm,1.1s
SHLS  Shalkode           45.57 293d    eP      P         14 25 39.9 -4.2
SHLS                                   i S     S         14 32 13.2 -5.3
SHLS                                   pmax    pmax
      comp=Z,3µm,0.9s
SHLS                                   MLR     MLR
      comp=Z,18µm,15.0s
SHLS  Shalkode           45.57 293⇓    eP      P         14 25 39.9 -4.2
      comp=Z,3µm,0.9s
SHLS                                  ⇑iS      S         14 32 13.2 -5.3
      comp=Z,7µm,5.2s
SHLS                                   eLRM    MLR       14 47 05.2
      comp=Z,18µm,15.0s
TDK   Taldyqorghan       45.59 296d    eP      P         14 25 43.4 -0.7
TDK                                    i S     S         14 32 16.8 -1.7
TDK                                    pmax    pmax
      comp=Z,3µm,0.9s
TDK                                    MLR     MLR
      comp=Z,26µm,11.0s
TDK   Taldyqorghan       45.59 296⇓    eP      P         14 25 43.4 -0.7
      comp=Z,3µm,0.9s
TDK                                   ⇓iS      S         14 32 16.9 -1.7
      comp=Z,14µm,4.3s
TDK                                    eLRM    MLR       14 46 52.1
      comp=Z,26µm,11.4s
HMT   Hamilton           45.84  41     eP      P         14 25 47.3 +1.4
      comp=Z,1µm,1.0s
UZB   Uzynbulak          45.87 293d    iP      P         14 25 44.5 -2.0
UZB                                    i S     S         14 32 20.8 -2.0
UZB                                    pmax    pmax
      comp=Z,716nm,1.1s
UZB                                    MLR     MLR
      comp=Z,10µm,12.0s
UZB   Uzynbulak          45.87 293⇓    iP      P         14 25 44.6 -2.0
      comp=Z,716nm,1.1s
UZB                                   ⇓iS      S         14 32 20.9 -2.0
      comp=Z,4µm,3.8s
UZB                                    eLRM    MLR       14 47 03.6
      comp=Z,10µm,11.9s
KPKS  Kokpek             45.97 294d    iP      P         14 25 45.5 -1.8
KPKS                                   i S     S         14 32 22.4 -1.8
KPKS                                   pmax    pmax
      comp=Z,3µm,1.2s
KPKS                                   MLR     MLR
      comp=Z,18µm,16.0s
KPKS  Kokpek             45.97 294⇓    iP      P         14 25 45.6 -1.8
      comp=Z,3µm,1.2s
KPKS                                  ⇓iS      S         14 32 22.4 -1.8
      comp=Z,4µm,5.6s
KPKS                                   eLRM    MLR       14 47 08.5
      comp=Z,18µm,16.3s
UMPA  Umpang Tak         46.05 249     P       P         14 25 50.3 +2.2
      comp=Z,132nm,0.9s,comp=Z,1µm
UTHA  Uthaitani          46.10 248     P       P         14 25 49.6 +1.1
      comp=Z,78nm,0.8s,comp=Z,819nm
CHBT  CHBT               46.21 242     P       P         14 25 57.8 +8.5
MRSI  Marisa             46.22 210     P       P         14 25 49.0 -0.3
      comp=Z,823nm,1.1s,comp=Z,11µmcomp=Z,80µm
SATY  Saty               46.32 294d    eP      P         14 25 48.5 -1.5
SATY                                   eS      S         14 32 28.1 -1.1
SATY                                   pmax    pmax
      comp=Z,2µm,0.9s
SATY                                   MLR     MLR
      comp=Z,13µm,13.0s
SATY  Saty               46.32 294⇓    eP      P         14 25 48.6 -1.5
      comp=Z,2µm,0.9s
SATY                                   eS      S         14 32 28.2 -1.1
      comp=Z,5µm,3.2s
SATY                                   eLRM    MLR       14 47 33.0
      comp=Z,13µm,12.6s
FAKI  Fak Fak            46.55 195     eP      P         14 25 51.2 -0.7
FAKI  Fak Fak            46.55 195     P       P         14 25 51.4 -0.5
      comp=Z,2µm,0.9s,comp=Z,27µmcomp=Z,159µm
PRZ   Przheval'sk        46.55 293     eP      P         14 25 53.1 +1.2
      comp=Z,372nm,0.8s
PRZ   Przheval'sk        46.55 293     eP      P         14 25 53.1 +1.2
PRZ                                    pmax    pmax
      comp=Z,373nm,0.8s
BRDH  Bariadhala         46.95 262     P       P         14 25 54.9 -0.1
      comp=Z,416nm,0.6s,baz=67,slow=5.7,SNR=26
CHKK  Chushkaly          46.96 295d    iP      P         14 25 54.0 -0.9
CHKK                                   i S     S         14 32 39.6 +1.5
CHKK                                   pmax    pmax
      comp=Z,1µm,0.9s
CHKK  Chushkaly          46.96 295⇓    iP      P         14 25 54.0 -0.9
      comp=Z,1µm,0.9s
CHKK                                  ⇓iS      S         14 32 39.7 +1.5
      comp=Z,3µm,2.8s
PATY  Pattaya            47.04 244     P       P         14 25 57.2 +1.4
      comp=Z,105nm,0.9s,comp=Z,2µm
MPSI  Mapaga             47.13 213     P       P         14 25 54.7 -1.7
      comp=Z,99nm,1.7s,comp=Z,5µmcomp=Z,88µm
SRDT  SRDT               47.18 247     P       P         14 25 57.9 +1.0
      comp=Z,283nm,0.7s,comp=Z,8µm
MDOK  Medeo              47.19 294c    eP      P         14 25 55.5 -1.3
MDOK                                   i S     S         14 32 37.8 -3.9
MDOK                                   pmax    pmax
      comp=Z,1µm,0.8s
MDOK                                   MLR     MLR
      comp=Z,12µm,13.0s
MDOK  Medeo              47.19 294⇑    eP      P         14 25 55.6 -1.3
      comp=Z,1µm,0.8s
MDOK                                  ⇑iS      S         14 32 37.8 -3.9
      comp=Z,9µm,11.7s
MDOK                                   eLRM    MLR       14 47 39.5
      comp=Z,12µm,13.1s
SANI  Sanana             47.24 204     P       P         14 25 55.8 -1.5
      comp=Z,1µm,1.1s,comp=Z,19µmcomp=Z,144µm
TARG  Taragay, Kyrgy     47.26 292     eP      P         14 25 58.3 +0.5
      comp=Z,332nm,0.7s
TARG                                   ePcP    PcP       14 27 29.6 +2.3
AAA   Alma-Ata           47.26 294d    iP      P         14 25 57.9 +0.6
AAA                                    eS      S         14 32 43.2 +0.7
AAA                                    pmax    pmax
      comp=Z,841nm,1.1s
AAA                                    MLR     MLR
      comp=Z,6µm,13.0s
AAA   Alma-Ata           47.26 294⇓    iP      P         14 25 57.9 +0.6
      comp=Z,841nm,1.1s
AAA                                    eS      S         14 32 43.3 +0.7
      comp=Z,7µm,2.6s
AAA                                    eLRM    MLR       14 47 32.7
      comp=Z,6µm,12.9s
DAWY  Dawson             47.30  36     eP      P         14 25 57.6 +0.3
      comp=Z,267nm,0.9s
DAWY                                   ePcP    PcP       14 27 29.4 +2.8
TNSS  Tian-Shan          47.31 294d    eP      P         14 25 56.6 -1.5
TNSS                                   pmax    pmax
      comp=Z,845nm,1.2s
TNSS  Tian-Shan          47.31 294⇓    eP      P         14 25 56.7 -1.5
      comp=Z,845nm,1.2s
LUWI  Luwuk              47.33 208     eP      P         14 25 55.9 -2.1
LUWI  Luwuk              47.33 208     P       P         14 25 55.8 -2.2
      comp=Z,795nm,1.5s,comp=Z,16µmcomp=Z,139µm
KUU   Kurty              47.38 295d    eP      P         14 25 55.8 -2.3
KUU                                    i S     S         14 32 42.7 -1.4
KUU                                    pmax    pmax
      comp=Z,722nm,1.0s
KUU                                    MLR     MLR
      comp=Z,8µm,13.0s
KUU   Kurty              47.38 295⇓    eP      P         14 25 55.9 -2.3
      comp=Z,722nm,1.0s
KUU                                   ⇑iS      S         14 32 42.7 -1.4
      comp=Z,4µm,6.3s
KUU                                    eLRM    MLR       14 48 26.2
      comp=Z,8µm,12.7s
RABL  Rabaul             47.47 168     eP      P         14 25 59.3 +0.2
      comp=Z,2µm,1.1s
KDJ   Kajisay            47.52 293     eP      P         14 26 00.8 +1.3
      comp=Z,409nm,0.9s
KDJ   Kajisay            47.52 293     eP      P         14 26 00.8 +1.3
KDJ                                    pmax    pmax
      comp=Z,409nm,0.9s
APSI  Ampana             47.61 210     P       P         14 25 59.0 -1.1
      comp=Z,911nm,1.1s,comp=Z,11µmcomp=Z,74µm
MTBS  Maitube            47.62 294     eP      P         14 25 59.2 -0.9
MTBS                                   pmax    pmax
      comp=Z,2µm,0.8s
MTBS  Maitube            47.62 294     eP      P         14 25 59.2 -0.9
      comp=Z,2µm,0.8s
BTM   Bintulu            47.65 223     P       P         14 26 03.0 +2.5
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BVA0  Borovoye Array    47.84 309   P        P        14 26 02.5 +0.9
BVA0                                pmax     pmax
      comp=Z,2µm,1.0s
BVAR  Borovoye Array    47.84 309   P4KPbc            15 03 41.4
      comp=Z,1.0nm,0.5s,baz=76,slow=4.6,SNR=8.6
PHET  Kaeng Krachan     47.87 245   P        P        14 26 03.4 +1.2
      comp=Z,238nm,1.0s,comp=Z,2µm
BRVK  Borovoye          47.89 309  eP        P        14 26 02.7 +0.7
      comp=Z,2µm,1.0s
BRVK  Borovoye          47.89 309c iP        P        14 26 02.0  0.0
BRVK                                pmax     pmax
      comp=Z,3µm,1.1s
BRVK  Borovoye          47.89 309   P        P        14 26 02.3 +0.3
      SNR=1059
BRVK                                P        P        14 26 02.3 +0.3
      SNR=1059
JIRN  Jiri              48.04 271  eP        P        14 26 04.6 +0.7
NLAI  Namlea            48.06 202   P        P        14 26 03.2 -0.4
      comp=Z,517nm,1.2s,comp=Z,10µmcomp=Z,161µm
ULHL  Ulahol            48.11 293   P        P        14 26 06.7 +2.6
      SNR=12
GUN   Gumba             48.13 271  eP        P        14 26 04.7 +0.1
      comp=Z,636nm,0.4s
RAMN  Ramite            48.14 270  eP        P        14 26 04.8 +0.3
      comp=Z,879nm,0.6s
TKM2  Tokmak 2          48.26 295   P        P        14 26 05.7 +0.5
      SNR=478
TKM2  Tokmak 2          48.26 295   P        P        14 26 05.7 +0.5
TKM2                                pmax     pmax
      comp=Z,743nm,0.9s
PCI   Palu              48.29 212   P        P        14 26 04.3 -1.1
      comp=Z,568nm,1.2s,comp=Z,11µmcomp=Z,138µm
OTUK  Ortayu            48.31 302   P        P        14 26 05.5 +0.2
OTUK                                pmax     pmax
      comp=Z,901nm,1.2s
BTLS  Baital            48.44 298c iP        P        14 26 04.9 -1.3
BTLS                               i S       S        14 32 56.8 -2.1
BTLS                                pmax     pmax
      comp=Z,1µm,1.5s
BTLS                                MLR      MLR
      comp=Z,20µm,13.0s
BTLS  Baital            48.44 298⇑iP        P        14 26 05.0 -1.3
      comp=Z,1µm,1.5s
BTLS                              ⇓iS        S        14 32 56.9 -2.1
      comp=Z,3µm,5.6s
BTLS                               eLRM      MLR      14 47 32.8
      comp=Z,20µm,13.0s
BNDI  Bandanaira        48.59 198   P        P        14 26 07.0 -0.7
      comp=Z,2µm,1.5s,comp=Z,39µmcomp=Z,154µm
NRN   Naryn             48.61 293  eP        P        14 26 08.6 +0.5
      comp=Z,428nm,1.3s
NRN                                ePcP      PcP      14 27 31.8 -0.3
PKI   Pulchoki          48.67 271  eP        P        14 26 08.8 +0.1
      comp=Z,961nm,1.0s
PKIN  Phulchoki         48.67 271  eP        P        14 26 08.8 +0.2
INK   Inuvik            48.70  29  eP        P        14 26 08.0 +0.1
      comp=Z,607nm,0.8s
INK   Inuvik            48.70  29   P        P        14 26 07.7 -0.2
      comp=Z,426nm,0.4s,baz=297,slow=6.9,SNR=460
SBUM  Sibu              48.73 223  eP        P        14 26 08.8 +0.1
      comp=Z,560nm,1.3s
SBUM  Sibu              48.73 223   P        P        14 26 09.2 +0.4
CHMS  Chumysh           48.80 295   P        P        14 26 08.6 -0.5
      SNR=52
KBK   Karagaybulak      48.81 294   P        P        14 26 09.7 +0.3
      SNR=406
KZA   Kyzart            48.85 294   P        P        14 26 10.9 +0.9
      SNR=172
USP   Ospenovka         48.85 295   P        P        14 26 09.6  0.0
      SNR=157
SGKI  Sangatta, Kali    48.85 215   P        P        14 26 03.7 -6.0
      comp=Z,1µm,1.3s,comp=Z,14µmcomp=Z,95µm
SGKI                                pP       pP       14 26 31.5 -3.1
      comp=Z,1µm,1.3s,comp=Z,14µmcomp=Z,95µm
DMN   Daman             48.87 272  eP        P        14 26 10.6 +0.5
      comp=Z,956nm,1.0s
SMKI  Samarinda         48.95 215   P        P        14 26 11.4 +1.0
FRU   Bishkek           48.95 295  eP        P        14 26 11.0 +0.7
FRU                                eS        S        14 33 06.0 -0.4
FRU                                 pmax     pmax
      comp=Z,700nm,1.8s
FRU1  Bishkek           48.95 295  eP        P        14 26 11.2 +0.9
FRU1  Bishkek           48.95 295  eP        P        14 26 11.3 +0.9
HYT   Haines Junctio    48.95  40  eP        P        14 26 11.9 +1.8
      comp=Z,6µm,0.8s
AAK   Ala-Archa         49.12 295   P        P        14 26 11.6 -0.1
      SNR=82
AAK   Ala-Archa         49.12 295  eP        P        14 26 11.9 +0.2
AAK   Ala-Archa         49.12 295  i P       P        14 26 11.7  0.0
      SNR=70
AAK   Ala-Archa         49.12 295c iP        P        14 26 11.6  0.0
AAK                                 pmax     pmax
      comp=Z,262nm,1.0s
AAK   Ala-Archa         49.12 295   P        P        14 26 11.7  0.0
      SNR=152
AAK                                 P        P        14 26 11.7  0.0
      SNR=152
UCH   Uchtor            49.28 294   P        P        14 26 14.2 +0.9
      SNR=68
DANN  Dangsing          49.45 273  eP        P        14 26 14.9 +0.3
KSH   Kashi             49.47 290⇑iP        P        14 26 18.7 +4.3
KSH                                 pP       sP       14 26 45.9 -5.4
KSH                                 PP       PP       14 28 18.2 +8.9
KSH                                 S        S        14 33 17.5 +3.6
KSH                                 sS       sS       14 34 02.8 +6.1
KSH                                 SS       SS       14 36 50.7 +4.1
KSH                                 pmax     pmax
      comp=Z,230nm,0.8s
KSH                                 pmax     pmax
      comp=Z,4µm,5.9s
KSH                                 LR       LR
      comp=Z,38µm,11.4s
KSH                                 LR       LR
      comp=Z,24µm,12.4s
KSH                                 LR       LR
      comp=Z,42µm,20.5s
EKS2  Erkin-Say         49.59 295   P        P        14 26 15.2  0.0
      SNR=133
BKB   Balikpapan        49.81 215   P        P        14 26 16.0 -1.0
      comp=Z,1µm,1.1s,comp=Z,24µmcomp=Z,155µm
AML   Almayashu         49.87 294   P        P        14 26 18.1 +0.4
      SNR=122
KOLN  Koldanda          49.89 273  eP        P        14 26 17.9 +0.1
      comp=Z,1µm,0.9s
KDI   Kendari           50.10 207   P        P        14 26 17.4 -1.8
      comp=Z,287nm,1.0s,comp=Z,13µm
PYUN  Piuthan           50.15 274  eP        P        14 26 20.4 +0.6
      comp=Z,2µm,0.9s
WHY   Whitehorse        50.23  39  eP        P        14 26 21.2 +1.4
      comp=Z,832nm,0.9s
MTKI  Muara Teweh, K    50.41 218   P        P        14 26 19.6 -1.9
      comp=Z,818nm,1.1s,comp=Z,13µmcomp=Z,138µm
SKAG  Skagway           50.41  41  eP        P        14 26 22.7 +1.7
      comp=Z,632nm,1.0s
BOK   Bokaro            50.49 267  eP        P        14 26 20.6 -1.5
BOK                                 IAmb     IAmb     14 26 31.1
      comp=Z,4µm,3.5s
MNAS  Manas             50.51 295   P        P        14 26 22.5 +0.3
MNAS                                pmax     pmax
      comp=Z,708nm,1.1s
KSM   Kuching           50.53 225  eP        P        14 26 22.9 +0.4
      comp=Z,2µm,1.9s
KSM   Kuching           50.53 225   P        P        14 26 23.4 +0.9
ARSB  Arslanbob         50.70 294  eP        P        14 26 24.4 +0.7
      comp=Z,1µm,0.8s
ARSB                               ePcP      PcP      14 27 37.9 -1.5
BESE  Bessie Mountai    50.94  42  eP        P        14 26 26.1 +1.0
      comp=Z,2µm,1.4s
SFK   Sufi-Kurgan       50.94 292   P        P        14 26 25.3 -0.3
SFK                                 pmax     pmax
      comp=Z,429nm,0.8s
DZA   Taraz             51.11 296d iP        P        14 26 26.7 +0.1
DZA                                eS        S        14 33 37.6 +1.3
DZA                                 pmax     pmax
      comp=Z,2µm,1.0s
DZA                                 MLR      MLR
      comp=Z,13µm,12.0s
DZA   Taraz             51.11 296⇓iP        P        14 26 26.7 +0.1
      comp=Z,2µm,1.0s
DZA                                eS        S        14 33 37.6 +1.3
DZA                                eLRM      MLR      14 49 55.0
      comp=Z,13µm,11.8s
SPSI  Sidrap Palu       51.12 211   P        P        14 26 25.4 -1.4
      comp=Z,170nm,1.0s,comp=Z,5µmcomp=Z,81µm
SIT   Sitka             51.24  44  eP        P        14 26 29.3 +2.1
      comp=Z,847nm,1.0s
SIT   Sitka             51.24  44  eP        P        14 26 29.3 +2.1
SIT                                 pmax     pmax
      comp=Z,847nm,1.0s
JIS   Juneau Island     51.28  42  eP        P        14 26 29.0 +1.6
      comp=Z,1µm,0.9s
BNSI  Bone              51.40 210   P        P        14 26 28.5 -0.4
      comp=Z,888nm,1.1s,comp=Z,14µmcomp=Z,138µm
KTGM  Kuala Trenggan    51.40 235   P        P        14 26 31.0 +2.0
SKLT  Songkhla          51.52 239   P        P        14 26 31.4 +1.5
      comp=Z,562nm,1.2s,comp=Z,8µm
BBSI  Bau Bau           51.55 207   P        P        14 26 30.4 +0.4
      comp=Z,112nm,1.0s,comp=Z,3µm
KK31  Karatay Array     51.56 297  i P       P        14 26 29.6 -0.3
KK31                                pmax     pmax
      comp=Z,375nm,1.1s
KKAR  Karatay Array     51.56 297  eP        P        14 26 30.0 +0.1
      comp=Z,306nm,0.9s
KKAR  Karatay Array     51.56 297  eP        P        14 26 30.0 +0.1
KKAR                                pmax     pmax
      comp=Z,306nm,0.9s
TRTT  Trang             51.60 240   P        P        14 26 31.8 +1.3
      comp=Z,200nm,1.0s,comp=Z,3µm
KRAB  Krabi             51.63 241   P        P        14 26 34.3 +3.6
      comp=Z,2µm,1.2s,comp=Z,20µm
SAUI  Saumlaki          51.67 195  eP        P        14 26 30.5 -0.4
SAUI  Saumlaki          51.67 195   P        P        14 26 30.8 -0.1
      comp=Z,3µm,1.2s,comp=Z,45µm
SVE   Sverdlovsk        51.82 316d iP        P        14 26 31.8 +0.2
SVE                                e                  14 28 26.1
SVE                                eS        S        14 33 43.2 -2.4
SVE                                e                  14 36 06.9
SVE                                 pmax     pmax
      comp=Z,12µm,19.4s
KBKI  Kotabaru          51.95 215   P        P        14 26 32.5 -0.5
      comp=Z,148nm,1.1s,comp=Z,2µm
BKSI  Bulukumba         52.24 210   P        P        14 26 33.9 -1.3
      comp=Z,244nm,0.9s,comp=Z,5µmcomp=Z,75µm
IUG   Iuzhnay           52.30 296d iP        P        14 26 33.8 -1.7
IUG                                i S       S        14 33 53.2 +0.4
IUG                                 pmax     pmax
      comp=Z,873nm,1.2s
IUG                                 MLR      MLR
      comp=Z,10µm,12.0s
IUG   Iuzhnay           52.30 296⇓iP        P        14 26 33.9 -1.7
      comp=Z,873nm,1.2s
IUG                               ⇓iS        S        14 33 53.2 +0.4
      comp=Z,5µm,4.2s
IUG                                eLRM      MLR      14 50 37.4
      comp=Z,10µm,11.8s
CHM   Chimkent          52.51 296d iP        P        14 26 43.5 +6.5
CHM                                i S       S        14 33 58.0 +2.6
CHM                                 pmax     pmax
      comp=Z,5µm,1.3s
CHM                                 MLR      MLR
      comp=Z,8µm,14.0s
CHM   Chimkent          52.51 296⇓iP        P        14 26 43.5 +6.6
      comp=Z,5µm,1.3s
CHM                               ⇓iS        S        14 33 58.0 +2.6
      comp=Z,6µm,6.7s
CHM                                eLRM      MLR      14 50 52.1
      comp=Z,8µm,14.0s
DDI   Dehra Dun         52.55 279  eP        P        14 26 37.5 +0.1
DDI                                 IAmb     IAmb     14 26 52.9
BTK   Batken            52.75 293  eP        P        14 26 40.5 +1.7
BTK   Batken            52.75 293  eP        P        14 26 40.5 +1.7
SMLA  Simla             52.76 280  eP        P        14 26 38.5 -0.4
SMLA                                IAmb     IAmb     14 26 41.9
      comp=Z,2µm,1.6s
DHRM  DHARAMSHALA       52.80 282  eP        P        14 26 39.1 -0.3
DHRM                                IAmb     IAmb     14 26 47.1
      comp=Z,698nm,0.9s
KULM  Kulim             52.95 237  eP        P        14 26 41.1 +0.6
      comp=Z,569nm,1.0s
KULM  Kulim             52.95 237   P        P        14 26 42.0 +1.5
CRAG  Craig             52.98  45  eP        P        14 26 41.3 +1.2
      comp=Z,1µm,1.4s
WRAK  Wrangell Islan    53.00  44  eP        P        14 26 42.6 +2.3
ARU   Arti              53.03 316  eP        P        14 26 40.6 +0.1
      comp=Z,5µm,1.2s
ARU   Arti              53.03 316d iP        P        14 26 39.9 -0.7
ARU                                 *PP      pP       14 27 07.6 +1.7
ARU                                 *SP      sP       14 27 19.4 +1.7
ARU                                                   14 27 44.3
ARU                                 PPP      PPP      14 29 51.1
ARU                                eS        S        14 34 01.7 -0.4
ARU                                 *SS      sS       14 34 47.0 +1.6
ARU                                                   14 36 12.8
ARU                                 pmax     pmax
      comp=Z,2µm,1.3s
DLBC  Dease Lake        53.34  41  eP        P        14 26 44.6 +1.7
      comp=Z,1µm,1.3s
DLBC  Dease Lake        53.34  41   P        P        14 26 44.4 +1.5
      comp=Z,158nm,0.8s,baz=292,slow=7.5,SNR=209
IPM   Ipoh              53.35 236  eP        P        14 26 43.3 -0.1
      comp=Z,2µm,1.9s
IPM                                ePcP      PcP      14 27 52.1 +2.6
IPM   Ipoh              53.35 236   P        P        14 26 44.0 +0.5
PBA   Port Blair        53.45 250  eP        P        14 26 45.5 +1.4
PBA                                 IAmb     IAmb     14 26 49.9
      comp=Z,169nm,0.7s
PBKI  Pangkalan Bun     53.46 220   P        P        14 26 43.0 -1.1
      comp=Z,576nm,0.9s,comp=Z,9µm
GAR   Garm              53.59 292  eP        P        14 26 44.7 -0.4
      comp=Z,1µm,1.2s
GAR   Garm              53.59 292  eP        P        14 26 44.7 -0.4
GAR                                 pmax     pmax
      comp=Z,1µm,1.2s
MYKOM Kota Tinggi       53.81 232  eP        P        14 26 47.5 +0.8
      comp=Z,1µm,1.8s
MYKOM Kota Tinggi       53.81 232   P        P        14 26 49.0 +2.2
FRIM  Kepong            53.97 235   P        P        14 26 49.0 +1.1
NDI   New Delhi         54.06 278  eP        P        14 26 48.5  0.0
NDI                                eS        S        14 34 15.0 -1.7
TPRI  Tanjung Pinang    54.13 230   P        P        14 26 50.5 +1.4
HNR   Honiara           54.19 159  eP        P        14 26 51.0 +1.6
HNR                                eS        ScS      14 36 39.0 +11
HNR   Honiara           54.19 159   P        P        14 26 49.8 +0.5
      comp=Z,111nm,0.8s,baz=225,slow=10.0,SNR=3.0
NIL   Nilore            54.24 285  eP        P        14 26 50.5 +0.7
      comp=Z,683nm,1.2s
NIL   Nilore            54.24 285  eP        P        14 26 50.5 +0.7
NIL                                 pmax     pmax
      comp=Z,683nm,1.2s
DIB   Dawson Inlet,     54.27  48  eP        P        14 26 50.7 +1.2
      comp=Z,829nm,1.0s
CHGR  Chuyangaron       54.55 293  eP        P        14 26 51.9 -0.2
      comp=Z,2µm,0.9s
MMRI  Maumere           54.62 206  eP        P        14 26 51.6 -0.9
      comp=Z,1µm,1.1s
MMRI                               ePcP      PcP      14 27 57.3 +3.0
MMRI  Maumere           54.62 206   P        P        14 26 50.9 -1.6
      comp=Z,922nm,0.8s,comp=Z,20µmcomp=Z,130µm
HOPEN Hopen             54.80 345  eP        P        14 26 53.6 +0.5
HOPEN                              eS        S        14 34 27.8 +2.4
EDFI  Ende, Flores      54.90 206   P        P        14 26 52.5 -2.2
      comp=Z,342nm,1.0s,comp=Z,10µmcomp=Z,97µm
SOEI  Soe               55.06 203  eP        P        14 26 54.2 -1.7
      comp=Z,1µm,1.0s
SOEI                               ePcP      PcP      14 28 00.8 +4.7
SOEI  Soe               55.06 203   P        P        14 26 54.3 -1.6
      comp=Z,1µm,1.1s,comp=Z,17µmcomp=Z,161µm
SPA0  Spitsbergen Ar    55.16 348  eP        P        14 26 53.4 -2.3
SPA0                                IVmB_BB           14 27 04.3
      comp=Z,13µm,1.1s
SPA0                               eS        S        14 34 30.5 +0.3
SPITS Spitsbergen Ar    55.16 348   LR       LR       14 52 26.0
      comp=Z,17µm,20.5s,baz=35,slow=38
JBP   Jabalpur          55.21 270  eP        P        14 26 57.0 +0.2
JBP                                 IAmb     IAmb     14 26 59.8
      comp=Z,874nm,0.4s
JBP                                ex        x        14 30 01.0
KBS   Kingsbay          55.23 350  eP        P        14 26 56.7 +0.5
      comp=Z,1µm,0.9s
KBS   Kingsbay          55.23 350  eP        P        14 26 56.7 +0.5
KBS                                 pmax     pmax
      comp=Z,1µm,0.9s
KBS   Kingsbay          55.23 350  eP        P        14 26 56.9 +0.6
KBS                                 IVmB_BB           14 27 01.0
      comp=Z,12µm,0.9s
KBS                                eS        S        14 34 28.8 -2.3
KBS                                eSS       SS       14 38 21.6 +5.8
LHMI  Lhok Sumawe       55.34 241   P        P        14 26 59.1 +1.3
AB31  Akbulak array     55.36 308   P        P        14 26 57.5 -0.1
AB31                                pmax     pmax
      comp=Z,421nm,0.6s
ABKAR Akbulak array     55.36 308  eP        P        14 26 58.1 +0.5
      comp=Z,2µm,1.3s
TPI   Tanjungpandan     55.50 225   P        P        14 26 58.9  0.0
      comp=Z,379nm,1.3s,comp=Z,7µm
TSI   Tuntungan         55.64 238   P        P        14 27 00.4 +0.5
      comp=Z,354nm,1.2s,comp=Z,9µmcomp=Z,86µm
BATI  Baumata           55.66 203   P        P        14 26 58.3 -1.8
BATI  Baumata           55.66 203   P        P        14 26 59.2 -0.9
      comp=Z,236nm,0.8s,baz=229,slow=0.9,SNR=38
BATI                                LR       LR       14 49 41.6
      comp=Z,7µm,21.2s,baz=18,slow=35
PPBI  Pangkal Pinang    55.80 227   P        P        14 27 01.0 -0.1
      comp=Z,343nm,1.4s,comp=Z,6µmcomp=Z,64µm
AKTO  Aktyubinsk        55.93 310   P        P        14 27 01.4 -0.2
AKTO                                pmax     pmax
      comp=Z,774nm,0.9s
AKTO  Aktyubinsk        55.93 310   P4KPbc            15 04 17.8
      comp=Z,3.3nm,0.8s,baz=42,slow=3.9,SNR=11
POHA  Pohakuloa         55.93  94  eP        P        14 27 05.0 +2.7
      comp=Z,2µm,1.0s
PSI   Prapat            55.96 237  eP        P        14 27 02.0 -0.4
      comp=Z,332nm,1.0s
PSI   Prapat            55.96 237   P        P        14 27 02.0 -0.4
      comp=Z,152nm,0.8s,baz=0.2,slow=5.3,SNR=24
HSPB  Hornsund (broa    56.12 348  eP        P        14 27 02.2 -0.3
HSPB                               eS        S        14 34 41.2 -1.7
HSPB                               e                  14 36 37.9
HSPB  Hornsund (broa    56.12 348  eP        P        14 27 03.4 +0.8
HSPB                                IVmB_BB           14 27 07.4
      comp=Z,24µm,0.9s
HSPB                               eS        S        14 34 44.1 +1.2
HSPB                               eSS       SS       14 38 31.2 +1.5
KCSI  Kotacane, Aceh    56.12 239   P        P        14 27 00.7 -2.7
BSI   Banda Aceh        56.21 243   P        P        14 27 04.6 +0.6
WSI   Waingapu          56.22 207   P        P        14 26 59.4 -4.6
KMMI  Kalianget         56.26 216   P        P        14 27 03.9 -0.4
      comp=Z,202nm,1.0s,comp=Z,3µm
PLAI  Plampang          56.34 211   P        P        14 27 02.2 -2.7
      comp=Z,383nm,0.9s,comp=Z,9µmcomp=Z,141µm
RGRI  Rengat            56.42 232   P        P        14 27 10.3 +4.8
      comp=Z,292nm,1.0s
COEN  Coen              56.46 180  eP        P        14 27 05.3 -0.4
      comp=Z,625nm,0.8s
KIRV  Kirov             56.53 321   LR       LR       14 53 49.8
      comp=Z,39µm,19.3s,baz=55,slow=38
BKNI  Bangkinang        56.63 233   P        P        14 27 08.2 +1.2
      comp=Z,1µm,1.1s,comp=Z,15µmcomp=Z,103µm
BASI  Baing, Sumba      56.64 207   P        P        14 27 04.4 -2.6
      comp=Z,695nm,0.5s,comp=Z,10µmcomp=Z,131µm
SRBI  Singaraja         56.67 214   P        P        14 27 07.1 -0.1
      comp=Z,444nm,1.2s,comp=Z,9µmcomp=Z,71µm
TPTI                    56.69 239   P        P        14 27 05.5 -1.9
      comp=Z,60nm,1.2s,comp=Z,2µmcomp=Z,56µm
RES   Resolute Bay      56.71  16  eP        P        14 27 06.4 -0.3
      comp=Z,3µm,0.8s
RES   Resolute Bay      56.71  16  eP        P        14 27 06.4 -0.3
RES                                 pmax     pmax
      comp=Z,3µm,0.8s
JMBI  JAMBI             56.73 230   P        P        14 27 08.4 +0.7
PRGR  Permogore         56.73 326⇑iP        P        14 27 06.5 -0.6
PRGR                               eS        S        14 34 51.2 -0.1
PRGR                                pmax     pmax
      comp=Z,3µm,1.0s
GRJI  Gresik            56.79 217   P        P        14 27 07.3 -0.7
      comp=Z,349nm,1.1s,comp=Z,4µm
TBJI  Tambak Boyo       56.99 218   P        P        14 27 08.0 -1.4
      comp=Z,371nm,1.0s,comp=Z,10µmcomp=Z,71µm
BHPL  Bhopal            57.05 272  eP        P        14 27 09.4 -0.5
BHPL                                IAmb     IAmb     14 27 16.9
      comp=Z,365nm,1.2s
BBB   Bella Bella       57.09  47   P        P        14 27 10.2 +0.5
      comp=Z,215nm,0.8s,baz=300,slow=7.6,SNR=32
NGP   Nagpur            57.12 269  eP        P        14 27 09.8 -0.7
NGP                                 IAmb     IAmb     14 27 12.4
      comp=Z,163nm,0.8s
NGP                                ex        x        14 34 54.7
MNSI  Mandailing Nat    57.13 235   P        P        14 27 09.9 -0.6
      comp=Z,139nm,0.9s,comp=Z,5µmcomp=Z,86µm
PMBI  Palembang         57.18 228   P        P        14 27 14.6 +3.8
      comp=Z,755nm,1.2s,comp=Z,13µm
DNP   Denpasar          57.21 213   P        P        14 27 09.3 -1.7
      comp=Z,561nm,1.0s,comp=Z,18µmcomp=Z,115µm
BJO   Bjornoya          57.23 345  eP        P        14 27 12.4 +2.0
BJO                                 IVmB_BB           14 27 16.3
      comp=Z,11µm,0.9s
BJO                                ePP       PP       14 29 15.9 -2.1
BJO                                eS        S        14 34 53.1 -4.4
IGBI  Denpasar          57.36 213   P        P        14 27 09.4 -2.6
      comp=Z,605nm,1.0s,comp=Z,13µmcomp=Z,130µm
SDSI  Sungai Dareh      57.42 232   P        P        14 27 13.3 +0.8
      comp=Z,854nm,1.6s,comp=Z,14µmcomp=Z,95µm
LVZ   Lovozero          57.45 335  eP        P        14 27 11.8 -0.4
      comp=Z,651nm,0.8s
LVZ   Lovozero          57.45 335c iP        P        14 27 10.9 -1.2
LVZ                                 pmax     pmax
      comp=Z,565nm,0.8s
JAGI  Jajag, Banyuwa    57.46 215  eP        P        14 27 10.8 -2.0
      comp=Z,223nm,1.1s
JAGI  Jajag, Banyuwa    57.46 215   P        P        14 27 10.1 -2.7
      comp=Z,174nm,1.5s,comp=Z,5µmcomp=Z,116µm
NGJI  Ngawi             57.65 218   P        P        14 27 13.2 -0.9
      comp=Z,572nm,1.1s,comp=Z,13µmcomp=Z,155µm
SMRI  Semarang          57.84 219  eP        P        14 27 15.7 +0.2
      comp=Z,2µm,1.1s
SMRI  Semarang          57.84 219   P        P        14 27 16.0 +0.6
      comp=Z,1µm,0.9s,comp=Z,18µmcomp=Z,102µm
SNSI  Sinabang, Aceh    57.89 239   P        P        14 27 16.8 +1.0
      comp=Z,562nm,1.5s,comp=Z,10µmcomp=Z,59µm
GSI   Gunungsitoli      57.96 237  eP        P        14 27 16.2 -0.1
GSI   Gunungsitoli      57.96 237   P        P        14 27 16.9 +0.5
      comp=Z,812nm,1.8s,comp=Z,13µmcomp=Z,79µm
PDSI  Padang            57.97 233   P        P        14 27 13.4 -3.0
      comp=Z,269nm,1.2s,comp=Z,5µmcomp=Z,95µm
APA   Apatity           58.03 335⇓iP        P        14 27 15.6 -0.5
APA                                i *PP     pP       14 27 40.0 -1.8
APA                                i                  14 28 02.1
APA                                i                  14 29 26.7
APA                                i PPP     PPP      14 30 57.0
APA                                i S       S        14 35 05.0 -3.1
APA                                 pmax     pmax
      comp=Z,337nm,0.7s
PWJI  Pagerwojo         58.07 217   P        P        14 27 15.7 -1.3
      comp=Z,767nm,1.2s,comp=Z,10µm
YKA   Yellowknife Ar    58.20  32   P        P        14 27 17.2 -0.2
YKA                                                   14 29 27.8
YKA                                 S        S        14 35 11.7 +1.1
YKA                                 pmax     pmax
      comp=Z,63nm,0.4s
YKA                                 pmax     pmax
      comp=Z,74nm,1.1s
YKA                                 smax     smax
      comp=N,3.0nm,0.9s
YKA                                 MLR      MLR
      comp=Z,2µm,19.4s
YKA   Yellowknife Ar    58.20  32   P        P        14 27 17.2 -0.2
      comp=Z,161nm,0.7s,baz=305,slow=6.4,SNR=811
YKA                                 PP       PP       14 29 27.8 +0.9
      comp=Z,74nm,1.1s,baz=308,slow=8.4,SNR=2.5
YKA                                 S        S        14 35 11.7 +1.1
      comp=Z,3.4nm,0.9s,baz=305,slow=13,SNR=2.0
YKA                                 LR       LR       14 55 22.3
      comp=Z,2µm,19.4s,baz=306,slow=39
YKA                                 PKPPKP            14 56 47.4
      comp=Z,1.9nm,0.8s,baz=150,slow=2.3,SNR=7.7
YKA                                 P4KPbc            15 04 25.9
      comp=Z,1.0nm,0.8s,baz=299,slow=4.4,SNR=15
YKB5  Yellowknife Ar    58.20  32  eP        P        14 27 17.2 -0.2
WOJI  Wonogiri, Jawa    58.31 218   P        P        14 27 17.2 -1.5
      comp=Z,328nm,1.2s,comp=Z,6µmcomp=Z,63µm
KRJI  Kerinci           58.34 231   P        P        14 27 18.9 -0.2
      comp=Z,847nm,1.0s,comp=Z,20µmcomp=Z,61µm
PCJI  Pacitan           58.51 218   P        P        14 27 17.7 -2.4
      comp=Z,248nm,1.2s,comp=Z,8µm
UGM   Wanagama          58.56 219  eP        P        14 27 19.2 -1.3
      comp=Z,2µm,1.0s
UGM   Wanagama          58.56 219   P        P        14 27 19.5 -1.0
      comp=Z,2µm,1.1s,comp=Z,17µmcomp=Z,124µm
KEV   Kevo              58.56 339  eP        P        14 27 20.0 +0.2
      comp=Z,2µm,0.9s
KEV   Kevo              58.56 339  eP        P        14 27 20.0 +0.2
KEV                                 pmax     pmax
      comp=Z,2µm,0.9s
PBSI  Pulau Batu        58.59 236   P        P        14 27 21.7 +1.0
      comp=Z,457nm,1.7s,comp=Z,7µmcomp=Z,54µm
LHSI  Lahat             58.61 228   P        P        14 27 21.4 +0.6
      comp=Z,939nm,1.2s,comp=Z,17µmcomp=Z,82µm
KLI   Kotabumi          58.75 226   P        P        14 27 20.8 -1.0
      comp=Z,726nm,1.4s,comp=Z,11µm
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MASI   Maura Aman, Be    58.75 230   P         P          14 27 21.7 -0.2
       comp=Z,975nm,1.0s,comp=Z,18µm
MDSI   Maura Dua         58.80 227   P         P          14 27 21.3 -0.8
       comp=Z,410nm,1.5s,comp=Z,8µmcomp=Z,80µm
KPJI   Karang Pucung     58.80 221   P         P          14 27 20.8 -1.3
       comp=Z,793nm,1.0s,comp=Z,12µmcomp=Z,110µm
HAMF   Hammerfest        58.85 340  eP         P          14 27 22.7 +1.0
HAMF                                 IVmB_BB              14 27 27.9
       comp=Z,10µm,1.2s
HAMF                                ePP        PP         14 29 34.4 +1.9
HAMF                                eS         S          14 35 21.2 +2.5
HAMF                                eSS        SS         14 39 13.9 +1.1
BLSI   Bandar Lampung    58.97 226   P         P          14 27 23.6 +0.3
       comp=Z,450nm,1.9s,comp=Z,8µmcomp=Z,78µm
CBJI   Citeko            59.04 223   P         P          14 27 25.5 +1.7
       comp=Z,404nm,1.0s,comp=Z,8µmcomp=Z,68µm
ARA0   ARCESS Array S    59.11 339  eP         P          14 27 23.3 -0.3
ARCES  ARCESS Array B    59.11 339   P         P          14 27 23.3 -0.3
       comp=Z,465nm,0.8s,baz=54,slow=6.2,SNR=191
ARCES                                LR        LR         14 55 02.1
       comp=Z,22µm,20.7s,baz=40,slow=38
ARCES                                PKPPKP    P'P'df     14 56 56.6 -1.2
       comp=Z,3.8nm,0.8s,baz=240,slow=4.1,SNR=5.8
ARE0   ARCESS Array S    59.11 339  eP         P          14 27 23.5 -0.1
ARE0                                 IVmB_BB              14 27 32.6
       comp=Z,11µm,2.0s
ARE0                                ePP        PP         14 29 33.6 -1.1
ARE0                                eS         S          14 35 21.6 -0.6
ARE0                                eSS        SS         14 39 19.4 +2.4
SISI   Saibi             59.11 234   P         P          14 27 23.9 -0.4
       comp=Z,222nm,1.1s,comp=Z,4µmcomp=Z,53µm
DBJI   Dramaga           59.20 223   P         P          14 27 23.9 -1.0
       comp=Z,270nm,1.7s,comp=Z,6µm
TULEG  Thule             59.23   8  eP         P          14 27 23.0 -1.3
       comp=Z,2µm,1.5s
LWLI   Liwa              59.31 227   P         P          14 27 24.6 -1.2
       comp=Z,194nm,0.9s
MNAI   Manna             59.36 228   P         P          14 27 25.8 -0.2
       comp=Z,646nm,1.5s,comp=Z,13µmcomp=Z,95µm
CMJI   Cimerak           59.42 221   P         P          14 27 23.1 -3.3
       comp=Z,220nm,1.0s,comp=Z,5µm
KASI   Kota Agung        59.50 226   P         P          14 27 24.8 -2.1
       comp=Z,335nm,1.0s,comp=Z,5µmcomp=Z,82µm
CISI   Cisompet, Garu    59.53 222   P         P          14 27 25.6 -1.7
       comp=Z,293nm,1.1s,comp=Z,5µmcomp=Z,89µm
KLMR   Klimovskoe        59.65 327⇓iP          P          14 27 26.9 -0.5
KLMR                                e                     14 29 37.0
KLMR                                i S        S          14 35 27.8 -1.5
KLMR                                 pmax      pmax
       comp=Z,2µm,1.0s
KLMR   Klimovskoe        59.65 327⇓iP          P          14 27 27.0 -0.5
KLMR                               ⇓eP         P          14 27 27.0 -0.5
KLMR                               ⇓eP         P          14 27 27.0 -0.5
KLMR                                 AMP                  14 27 31.9
       comp=Z,2µm,1.0s
KLMR                                ePP        PP         14 29 37.0 -2.7
KLMR                               ⇑iS         S          14 35 27.9 -1.4
KLMR                               ⇑eS         S          14 35 27.9 -1.4
SKJI   Sukabumi          59.69 223   P         P          14 27 27.5 -0.7
       comp=Z,449nm,1.2s,comp=Z,5µmcomp=Z,62µm
PPSI   Pulau Pagai       59.72 232   P         P          14 27 28.0 -0.5
       comp=Z,661nm,1.3s,comp=Z,11µmcomp=Z,69µm
HYB    Hyderabad         59.81 266  i P        P          14 27 29.0 -0.2
       comp=Z,200nm,1.0s
HYB                                 esP        sP         14 28 10.0 +3.4
HYB                                 eS         S          14 35 30.0 -2.6
HYB                                 ePKPPKP               14 56 58.0
HYB    Hyderabad         59.81 266  eP         P          14 27 27.2 -2.0
HYB                                  IAmb      IAmb       14 27 31.5
       comp=Z,79nm,0.6s
KTK1   Kautokeino        60.06 339  eP         P          14 27 31.2 +1.1
KTK1                                 IAmb      IAmb       14 27 38.6
       comp=Z,4µm,1.4s
KTK1                                ePP        PP         14 29 44.7 +1.5
KTK1                                eS         S          14 35 36.7 +2.3
KTK1                                eSS        SS         14 39 36.6 +4.7
DAG    Danmarks Havn     60.16 355⇑iP          P          14 27 30.6 -0.1
       comp=Z,2µm,0.8s
DAG    Danmarks Havn     60.16 355⇑iP          P          14 27 30.6 -0.1
DAG                                  pmax      pmax
       comp=Z,1µm,0.8s
TRO    Tromso            60.72 341  eP         P          14 27 36.0 +1.4
TRO                                  IVmB_BB              14 27 43.0
       comp=Z,23µm,1.0s
TRO                                 ePP        PP         14 29 50.5 +1.5
TRO                                 eS         S          14 35 44.3 +1.5
TRO                                 eSS        SS         14 39 47.1 +4.9
LLLB   Lillooet          61.25  46  eP         P          14 27 38.9 +0.3
       comp=Z,571nm,1.0s
MDRS   Chennai           61.39 261  eP         P          14 27 39.1 -0.8
MDRS                                 IAmb      IAmb       14 27 49.3
       comp=Z,77nm,0.6s
PGC    Sidney            61.47  49  eP         P          14 27 40.4 +0.4
       comp=Z,359nm,0.8s
A04D   Lummi Island      61.84  49   P         P          14 27 43.4 +0.9
       baz=304,SNR=29
A04D                                 S         S          14 35 57.5 -0.1
       baz=304
NLWA   Neilton Lookou    61.93  50  eP         P          14 27 44.4 +1.2
       comp=Z,535nm,0.9s
KULLO  Kullorsuaq        62.13   6  i P        P          14 27 44.0  0.0
       comp=Z,499nm,0.6s
KULLO  Kullorsuaq        62.13   6  i P        P          14 27 44.0  0.0
KULLO                                pmax      pmax
       comp=Z,500nm,0.6s
D03D   Eldon             62.29  50   P         P          14 27 46.7 +1.1
       baz=304,SNR=223
GEYT   Alibeck           62.31 297   P         P          14 27 45.6 -0.3
       comp=Z,314nm,0.9s,baz=29,slow=3.4,SNR=133
GEYT                                 S         S          14 36 03.7 -0.2
       comp=Z,4.5nm,0.9s,baz=94,slow=16,SNR=2.6
GEYT                                 LR        LR         14 58 14.7
       comp=Z,20µm,18.2s,baz=35,slow=39
GYA0B  ALIBECK ARRAY     62.31 297  eP         P          14 27 45.6 -0.2
       comp=Z,396nm,1.0s
B05A   Bryant            62.44  49   P         P          14 27 47.5 +1.0
       baz=304,SNR=202
POO    Poona             62.57 270  eP         P          14 27 47.2 -0.6
POO                                  IAmb      IAmb       14 27 54.8
       comp=Z,970nm,4.6s
CTA    Charters Tower    62.62 177   P         P          14 27 46.5 -1.4
       comp=Z,76nm,0.8s,baz=352,slow=8.6,SNR=35
CTAO   Charters Tower    62.62 177  eP         P          14 27 46.7 -1.2
       comp=Z,287nm,1.1s
CTAO   Charters Tower    62.62 177  eP         P          14 27 46.7 -1.2
CTAO                                 pmax      pmax
       comp=Z,287nm,1.1s
B06A   Marblemount       62.63  48  eP         P          14 27 48.3 +0.6
       comp=Z,1µm,1.2s
D04E   Lakebay           62.67  50   P         P          14 27 49.7 +1.7
       baz=304,SNR=36
FITZ   Fitzroy Crossi    62.69 199  eP         P          14 27 47.9 -0.5
       comp=Z,281nm,1.1s
FITZ   Fitzroy Crossi    62.69 199   P         P          14 27 47.5 -0.9
       comp=Z,128nm,1.2s,baz=12,slow=9.6,SNR=46
BHJ    Bhuj              62.74 277  eP         P          14 27 48.1 -0.7
BHJ                                  IAmb      IAmb       14 27 56.4
       comp=Z,290nm,1.3s
STEI   Steigen           62.89 340  eP         P          14 27 49.9 +0.7
STEI                                 IVmB_BB              14 27 57.4
       comp=Z,10µm,0.8s
STEI                                ePP        PP         14 30 08.6 +0.6
STEI                                eS         S          14 36 11.9 +1.8
STEI                                e                     14 37 32.5
WRAB   Tennant Creek     62.93 189  eP         P          14 27 48.2 -1.7
       comp=Z,892nm,1.4s
WRAB   Tennant Creek     62.93 189deP          P          14 27 48.4 -1.5
WRAB                                 pmax      pmax
       comp=Z,356nm,1.1s
WB2    Warramunga Arr    62.94 189  eP         P          14 27 48.5 -1.5
       comp=Z,752nm,1.3s
WR1    Warramunga Arr    62.94 189  eP         P          14 27 48.2 -1.9
       comp=Z,739nm,1.3s
WRA    Warramunga Arr    62.94 189  i P        P          14 27 47.5 -2.5
WRA                                  pmax      pmax
       comp=Z,251nm,1.0s
WRA    Warramunga Arr    62.94 189   P         P          14 27 48.2 -1.9
       comp=Z,251nm,1.0s,baz=4.5,slow=6.5,SNR=186
WRA                                  LR        LR         14 55 08.5
       comp=Z,10µm,21.6s,baz=10.0,slow=36
BOM    Bombay            63.10 271  ex         P          14 27 45.9 -5.4
BOM                                 ex         S          14 36 03.2  -11
XMIS   Christmas Isla    63.12 222  eP         P          14 27 50.1 -1.3
E04D   Cinebar           63.14  50   P         P          14 27 52.6 +1.5
       baz=305,SNR=193
LOF    Lofoten           63.15 341  eP         P          14 27 51.1 +0.2
LOF                                 eS         S          14 36 15.4 +2.1
F04D   Rainier, OR       63.15  51   P         P          14 27 52.5 +1.3
       baz=305,SNR=32
C06D   Leavenworth       63.29  48   P         P          14 27 53.1 +0.9
       baz=305,SNR=155
LON    Longmire          63.45  50  eP         P          14 27 53.4 +0.1
       comp=Z,340nm,0.9s
LON    Longmire          63.45  50  eP         P          14 27 53.4 +0.1
LON                                  pmax      pmax
       comp=Z,340nm,0.9s
MOS    Moscow            63.47 322  eP         P          14 27 55.5 +2.4
MOS                                 e*PP       PcP        14 28 25.1 -3.9
MOS                                 e                     14 30 15.3
MOS                                 ePPP       PPP        14 31 48.4
MOS                                 eS         S          14 36 17.9 +0.3
MOS                                 e                     14 36 59.3
MOS                                 e                     14 37 32.1
MOS                                 eSS        SS         14 40 22.4 -3.1
MOS                                  pmax      pmax
       comp=Z,3µm,1.5s
MOS                                  pmax      pmax
       comp=Z,4µm,1.5s
MOS                                  pmax      pmax
       comp=N,2µm,1.4s
MOS                                  pmax      pmax
       comp=E,1µm,1.2s
MOS                                  smax      smax
       comp=N,9µm,3.2s
MOS                                  MLR       MLR
       comp=Z,19µm,17.0s
MOS                                  MLR       MLR
       comp=E,16µm,16.0s
G03D   McMinnville, O    63.50  52   P         P          14 27 54.7 +1.2
       baz=305,SNR=36
I02D   Swisshome         63.80  53   P         P          14 27 56.9 +1.4
       baz=305,SNR=16
LTY    Liberty           63.80  49  eP         P          14 27 55.9 +0.3
       comp=E,703nm,1.2s
COR    Corvallis         63.84  53  eP         P          14 27 57.6 +1.8
       comp=E,702nm,0.8s
COR    Corvallis         63.84  53  eP         P          14 27 57.6 +1.8
COR                                  pmax      pmax
       comp=Z,702nm,0.8s
B08A   Colville Reser    63.90  47  eP         P          14 27 56.3 +0.1
       comp=Z,745nm,1.1s
PUL    Pulkovo           63.95 329⇓eP          P          14 27 56.7 +0.5
PUL                                  pmax      pmax
       comp=Z,3µm,1.2s
PUL    Pulkovo           63.95 329  eP         P          14 27 56.5 +0.2
PUL                                  IAmb      IAmb       14 28 01.9
       comp=Z,3µm,1.1s
PUL                                 eS         S          14 36 16.1 -7.4
F05D   White Salmon      64.15  51   P         P          14 27 58.9 +1.0
       baz=306,SNR=130
H04D   Lebanon           64.20  52   P         P          14 27 59.2 +1.1
       baz=306,SNR=73
KEBM   Edson Butte       64.21  55  eP         P          14 27 59.9 +1.5
       comp=Z,2µm,1.2s
VRH    Novokhopyorsk     64.26 317  eP         P          14 27 58.6 +0.2
VRH                                 eS         S          14 36 25.9 -1.7
VRH                                 eSSS       SSS        14 43 29.9
VRH                                  pmax      pmax
       comp=Z,2µm,0.9s
VRH                                  pmax      pmax
       comp=Z,3µm,1.0s
VRH                                  smax      smax
       comp=N,10µm,4.5s
VRH                                  MLR       MLR
       comp=Z,40µm,13.0s
J01E   Myrtle Point      64.29  54   P         P          14 28 00.2 +1.4
       baz=305,SNR=40
I03D   Drain, OR         64.32  53   P         P          14 28 00.6 +1.7
       baz=306,SNR=100
OBN    Obninsk           64.33 322  eP         P          14 27 58.5 -0.2
       comp=Z,1µm,0.9s
OBN    Obninsk           64.33 322c iP         P          14 27 58.5 -0.2
OBN                                 i *PP      pP         14 28 24.4 -0.4
OBN                                 i                     14 28 35.7
OBN                                 e                     14 30 21.4
OBN                                 ePPP       PPP        14 32 01.9
OBN                                 i S        S          14 36 26.4 -1.8
OBN                                 i SS       SS         14 40 33.8 -5.1
OBN                                  pmax      pmax
       comp=Z,3µm,1.5s
OBN                                  MLR       MLR
       comp=Z,29µm,16.0s
OBN    Obninsk           64.33 322   LR        LR         14 58 40.6
       comp=Z,9µm,18.0s,baz=44,slow=38
FIA0   FINESS Array S    64.37 332  eP         P          14 27 58.5 -0.5
FIA0   FINESS Array S    64.37 332  eP         P          14 27 58.5 -0.5
FINES  FINESS Array B    64.37 332  i P        P          14 27 58.2 -0.8
FINES                                pmax      pmax
       comp=Z,848nm,0.6s
FINES  FINESS Array B    64.37 332   P         P          14 27 58.5 -0.5
       comp=Z,848nm,0.6s,baz=51,slow=7.4,SNR=564
FINES                                S         S          14 36 22.3 -6.3
       comp=Z,4.0nm,0.8s,baz=39,slow=11,SNR=1.8
FINES                                LR        LR         14 59 04.6
       comp=Z,42µm,19.8s,baz=56,slow=39
FINES                                P4KPbc               15 04 49.6
       comp=Z,4.3nm,0.9s,baz=63,slow=5.1,SNR=10
H04A   Detroit Lake      64.43  52  eP         P          14 28 00.5 +0.7
       comp=Z,693nm,0.8s
MOR8   Moi Rana          64.44 339  eP         P          14 27 58.9 -0.5
MOR8                                 IVmB_BB              14 28 05.8
       comp=Z,25µm,0.9s
MOR8                                i                     14 28 37.1
MOR8                                eS         S          14 36 29.8 +0.3
MOR8                                eSS        SS         14 40 40.5 +0.1
GOA    Goa               64.52 268  eP         P          14 27 59.1 -1.4
KONS   Konsvik           64.53 340  eP         P          14 27 59.5 -0.4
KONS                                 IVmB_BB              14 28 08.7
       comp=Z,9µm,1.4s
KONS                                ePP        PP         14 30 21.9 -0.5
KONS                                eS         S          14 36 30.9 +0.5
G05D   Wamic, OR         64.61  51   P         P          14 28 02.1 +1.2
       baz=306,SNR=91
STOK   Stokkvaagen       64.68 340  eP         P          14 28 02.0 +1.1
STOK                                eS         S          14 36 33.3 +1.1
K02D   Willamette Mer    64.72  54   P         P          14 28 02.6 +1.0
       baz=306,SNR=113
JMIC   Jan Mayen         64.72 350   LR        LR         14 56 15.7
       comp=Z,8µm,21.5s,baz=12,slow=36
JMIC   Jan Mayen         64.72 350  eP         P          14 28 01.4 +0.4
JMIC                                 IVmB_BB              14 28 04.1
       comp=Z,10µm,3.6s
LPSR   Galich'ya Gora    64.78 319  eP         P          14 28 01.2 -0.6
LPSR                                eS         S          14 36 32.8 -1.2
LPSR                                 pmax      pmax
       comp=Z,3µm,0.8s
LPSR                                 pmax      pmax
       comp=Z,3µm,0.9s
LPSR                                 smax      smax
       comp=E,54µm,7.2s
LPSR                                 MLR       MLR
       comp=Z,9µm,11.0s
C09A   Chrisman Ranch    64.80  47  eP         P          14 28 02.6 +0.6
       comp=Z,951nm,0.9s
I04A   Tendick Farm,     64.82  53   P         P          14 28 03.2 +0.9
       baz=306,SNR=160
D08A   Wollman Farm,     64.89  48  eP         P          14 28 02.8 +0.2
       comp=Z,501nm,0.9s
SUMG   Summit            64.94   1  eP         P          14 28 03.4 +0.4
       comp=Z,2µm,0.7s
SUMG   Summit            64.94   1  i P        P          14 28 03.8 +0.8
       comp=Z,4µm,0.7s
SUMG   Summit            64.94   1  eP         P          14 28 03.4 +0.4
SUMG                                 pmax      pmax
       comp=Z,2µm,0.7s
HAWA   Hanford           64.94  49  eP         P          14 28 03.7 +0.7
       comp=Z,927nm,1.2s
PALK   Pallekele         64.98 256  eP         P          14 28 03.6  0.0
       comp=Z,281nm,1.2s
PALK   Pallekele         64.98 256  i P        P          14 28 04.9 +1.2
       SNR=18
PALK   Pallekele         64.98 256   P         P          14 28 04.9 +1.2
       SNR=9.1
PALK                                 P         P          14 28 04.9 +1.2
       SNR=9.1
PALK   Pallekele         64.98 256   P         P          14 28 05.3 +1.7
       comp=Z,39nm,0.8s,baz=116,slow=1.9,SNR=17
F07A   Phinny Hill Vi    65.01  50  eP         P          14 28 04.4 +0.9
       comp=Z,1µm,0.8s
L02E   Cave Junction     65.07  55   P         P          14 28 04.9 +1.1
       baz=306,SNR=93
I05D   Terrebonne, OR    65.13  52   P         P          14 28 04.9 +0.6
       baz=306,SNR=157
NEW    Newport           65.14  47  eP         P          14 28 04.6 +0.3
       comp=Z,827nm,1.1s
NEW    Newport           65.14  47  eP         P          14 28 04.6 +0.3
NEW                                  pmax      pmax
       comp=Z,827nm,1.1s
NEW    Newport           65.14  47   P         P          14 28 04.6 +0.3
       baz=307,SNR=640
E08A   Dider Farm, El    65.14  49  eP         P          14 28 05.0 +0.8
       comp=Z,828nm,0.9s
HUMO   Hull Mountain     65.19  54  eP         P          14 28 05.6 +0.9
       comp=Z,208nm,0.9s
J04D   Umpqua Nationa    65.32  53   P         P          14 28 06.4 +0.7
       baz=306,SNR=268
VSR    Storozhevoye      65.52 318  eP         P          14 28 06.3 -0.3
VSR                                 eS         S          14 36 39.0 -4.1
VSR                                 eSSS       SSS        14 43 52.8
VSR                                  pmax      pmax
       comp=Z,3µm,1.5s
VSR                                  pmax      pmax
       comp=Z,600nm,0.5s
VSR                                  smax      smax
       comp=N,6µm,5.9s
VSR                                  MLR       MLR
       comp=Z,26µm,18.0s
JCC    Jacoby Creek,     65.60  56  eP         P          14 28 08.7 +1.5
       comp=Z,1µm,1.3s
E09A   Wood Farm, Sta    65.64  49  eP         P          14 28 07.8 +0.4
PINE   Pine Mountain     65.68  52  eP         P          14 28 09.4 +1.4
       comp=Z,1µm,0.9s
KHMM   Horse Mountain    65.75  56  eP         P          14 28 09.9 +1.4
       comp=Z,898nm,1.1s
J05D   Fort Rock, OR     65.81  53   P         P          14 28 09.8 +1.0
       baz=307,SNR=377
L04D   Klamath Falls     65.81  54   P         P          14 28 09.4 +0.5
       baz=307,SNR=422
YBH    Yreka Blue Hor    65.86  55  eP         P          14 28 10.3 +1.3
       comp=Z,852nm,1.4s
YBH    Yreka Blue Hor    65.86  55  eP         P          14 28 10.3 +1.3
YBH                                  pmax      pmax
       comp=Z,852nm,1.4s
K04D   Chiloquin, OR     65.90  54   P         P          14 28 10.4 +1.0
       baz=307,SNR=50
G08A   Pilot Rock        65.92  50  eP         P          14 28 10.1 +0.6
       comp=Z,265nm,1.0s
M02C   Callahan          65.97  55   P         P          14 28 11.1 +1.3
       baz=307,SNR=285
MAK    Makhachkala       66.02 307  eP         P          14 28 09.0 -0.9
MAK                                 e*PP       pP         14 28 35.5 -0.8
MAK                                 e*SP       sP         14 28 46.7 -1.1
MAK                                 e                     14 30 36.9
MAK                                 eS         S          14 36 48.4 -0.9
MAK                                 eSS        SS         14 41 06.9 +1.1
MAK                                  pmax      pmax
       comp=Z,878nm,1.5s
MAK                                  pmax      pmax
       comp=Z,1µm,1.6s
KMRM   Mail Ridge        66.15  57  eP         P          14 28 12.2 +1.3
       comp=Z,909nm,1.6s
VSU    Vasula            66.19 329c iP         P          14 28 10.4 -0.4
VSU                                  pmax      pmax
       comp=Z,6µm,1.3s
VSU    Vasula            66.19 329  eP         P          14 28 10.6 -0.2
VSU                                  IAmb      IAmb       14 28 15.5
       comp=Z,3µm,0.8s
VSU                                 eS         S          14 36 44.0 -6.9
N02D   Trinity Center    66.31  56   P         P          14 28 13.1 +1.1
       baz=307,SNR=299
I07A   Izee              66.34  51  eP         P          14 28 12.8 +0.6
       comp=Z,264nm,1.0s
WALA   Waterton Lakes    66.34  44  eP         P          14 28 12.1 +0.1
       comp=Z,472nm,0.8s
M04C   Macdoel           66.35  54   P         P          14 28 13.4 +1.1
       baz=307,SNR=321
NSS    Namsos            66.38 339  eP         P          14 28 11.2 -0.7
NSS                                  IVmB_BB              14 28 17.3
       comp=Z,8µm,0.9s
NSS                                 eS         S          14 36 54.0 +1.0
NSS                                 eSS        SS         14 41 09.9 -0.4
F10A   Beach Ranch, E    66.47  49  eP         P          14 28 13.4 +0.5
       comp=Z,494nm,1.0s
SCO    Scoresbysund      66.53 355  eP         P          14 28 13.0 +0.3
       comp=Z,474nm,0.9s
SCO    Scoresbysund      66.53 355  i P        P          14 28 13.7 +1.0
       comp=Z,531nm,1.0s
SCO    Scoresbysund      66.53 355  eP         P          14 28 13.0 +0.3
SCO                                  pmax      pmax
       comp=Z,474nm,0.9s
KCPM   Cahto Peak        66.54  57  eP         P          14 28 14.4 +0.9
       comp=Z,546nm,1.0s
WDC    Whiskeytown Da    66.65  56  eP         P          14 28 13.7 -0.3
WDC    Whiskeytown Da    66.65  56  eP         P          14 28 13.7 -0.3
AS31   Alice Springs     66.67 189  eP         P          14 28 13.4 -0.7
ASAR   Alice Springs     66.67 189   P         P          14 28 13.4 -0.7
       comp=Z,197nm,0.8s,baz=9.2,slow=5.9,SNR=231
ASAR                                 PKPPKP    P'P'df     14 56 37.9 -3.6
       comp=Z,2.8nm,0.8s,baz=181,slow=3.0,SNR=5.8
ASAR                                 LR        LR         14 58 17.7
       comp=Z,12µm,20.0s,baz=5.5,slow=37
ASAR                                 P4KPbc               15 05 03.4
       comp=Z,1.5nm,1.1s,baz=4.5,slow=4.3,SNR=5.2
O02D   Mt. Diablo Mer    66.74  56   P         P          14 28 15.9 +1.2
       baz=307,SNR=186
TRD    Trivandrum        66.83 260  eP         P          14 28 15.6 +0.1
GROC   Groznyy           66.87 308  eP         P          14 28 15.8 +0.4
GROC                                e*PP       pP         14 28 40.9 -0.9
GROC                                e                     14 28 43.7
GROC                                e                     14 30 39.7
GROC                                eS         S          14 37 00.2 +0.5
GROC                                e                     14 37 32.7
GROC                                 pmax      pmax
       comp=Z,446nm,1.2s
BMO    Blue Mountains    67.12  50  eP         P          14 28 17.6 +0.5
       comp=Z,774nm,1.4s
BMO    Blue Mountains    67.12  50  eP         P          14 28 17.6 +0.5
BMO                                  pmax      pmax
       comp=Z,774nm,1.4s
MBWA   Marble Bar        67.19 204  eP         P          14 28 16.4 -1.1
       comp=Z,218nm,0.9s
MBWA   Marble Bar        67.19 204   P         P          14 28 16.7 -0.8
       SNR=33
MBWA                                 P         P          14 28 16.7 -0.8
       SNR=33
MOD    Modoc Plateau     67.19  54  eP         P          14 28 18.5 +0.8
       comp=Z,319nm,1.1s
O03E   Paynes Creek      67.27  56   P         P          14 28 18.4 +0.3
       baz=308,SNR=275
HOPS   Hopland Field     67.28  57  eP         P          14 28 18.7 +0.7
       comp=Z,429nm,1.3s
GOF    Gofitskoye        67.30 311⇑iP          P          14 28 18.3 +0.2
GOF                                 eS         S          14 37 07.7 +2.9
GOF                                  pmax      pmax
       comp=Z,3µm,0.8s
GOF                                  smax      smax
       comp=E,2µm,1.3s
J08A   Circle Bar Ran    67.37  51  eP         P          14 28 19.6 +0.9
       comp=E,678nm,1.0s
GDXM   Geysers           67.56  57  eP         P          14 28 21.2 +1.3
       comp=E,712nm,1.3s
MSO    Missoula          67.72  46  eP         P          14 28 21.1 +0.3
       comp=E,974nm,1.1s
MSO    Missoula          67.72  46   P         P          14 28 21.3 +0.5
       baz=309,SNR=276
ILULI  Ilulissat         67.82   5  eP         P          14 28 20.7 -0.2
       comp=E,847nm,0.8s
ILULI  Ilulissat         67.82   5⇑iP          P          14 28 21.0 +0.1
       comp=E,654nm,0.7s
ILULI  Ilulissat         67.82   5⇑iP          P          14 28 21.0 +0.1
ILULI                                pmax      pmax
       comp=Z,650nm,0.7s
WVOR   Wild Horse Val    67.85  52  eP         P          14 28 22.6 +0.8
       comp=Z,669nm,1.2s
TBLU   Trondheim         67.86 339  eP         P          14 28 20.3 -1.0
TBLU                                 IVmB_BB              14 28 23.4
       comp=Z,10µm,1.6s
TBLU                                ePP        PP         14 30 51.4 -0.1
TBLU                                eS         S          14 37 11.1 +0.2
TBLU                                eSS        SS         14 41 34.6 +1.4
ORV    Oroville          67.90  56  eP         P          14 28 21.5 -0.5
       comp=Z,172nm,0.7s
ORV    Oroville          67.90  56  eP         P          14 28 21.5 -0.5
ORV                                  pmax      pmax
       comp=Z,172nm,0.7s
MCCM   Marconi Confer    67.91  58  eP         P          14 28 22.1 +0.2
       comp=Z,215nm,0.8s
NCK    Nalchik           67.96 309⇓eP          P          14 28 23.5 +1.2
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NCK				pmax	pmax		
	comp=Z,835nm,1.0s						
DZM	**Mont Dzumac**	**68.02**	**157**	*e*P	**P**	**14 28 23.9**	**+1.1**
	comp=Z,888nm,1.4s						
DZM				*e*S	**S**	**14 37 11.9**	**-1.8**
	comp=Z,37µm,27.5s						
DZM				*e*LQ	LQ	14 46 01.4	
	comp=Z,82µm,27.6s						
DZM				*e*LR	LR	14 48 55.3	
	comp=Z,137µm,37.8s						
DZM	**Mont Dzumac**	**68.02**	**157**	P	**P**	**14 28 23.4**	**+0.6**
	comp=Z,81nm,1.0s,baz=7.9,slow=7.7,SNR=22						
FFC	**Flin Flon**	**68.18**	**35**	*e*P	**P**	**14 28 23.1**	**-0.3**
	comp=Z,525nm,0.8s						
FFC	**Flin Flon**	**68.18**	**35**	*e*P	**P**	**14 28 23.1**	**-0.3**
FFC				pmax	pmax		
	comp=Z,525nm,0.8s						
KIV	**Kislovodsk**	**68.19**	**310**	*e*P	**P**	**14 28 24.7**	**+1.0**
KIV				*e*PP	**PP**	**14 30 55.1**	**+0.2**
KIV	**Kislovodsk**	**68.19**	**310**	⇑*i*P	**P**	**14 28 24.9**	**+1.1**
KIV	**Kislovodsk**	**68.19**	**310**	*i* P	**P**	**14 28 24.2**	**+0.5**
	SNR=202						
KIV	**Kislovodsk**	**68.19**	**310**	P	**P**	**14 28 24.3**	**+0.5**
	SNR=331						
KIV				P	**P**	**14 28 24.3**	**+0.5**
	SNR=331						
EIDS	**Eidsvold**	**68.21**	**172**	*e*P	**P**	**14 28 23.7**	**-0.1**
	comp=Z,335nm,1.1s						
KBZ	**Khabaz**	**68.21**	**310**	P	**P**	**14 28 24.5**	**+0.8**
	comp=Z,383nm,0.8s,baz=57,slow=4.6,SNR=146						
KBZ				S	**S**	**14 37 16.5**	**+0.9**
	comp=Z,7.3nm,1.0s,baz=229,slow=19,SNR=2.3						
KBZ				LR	LR	15 02 46.7	
	comp=Z,36µm,18.9s,baz=38,slow=40						
ZEI	**Tsey**	**68.22**	**309**	*e*P	**P**	**14 28 21.6**	**-2.6**
ZEI				*e*S	**S**	**14 37 13.5**	**-2.8**
ZEI				pmax	pmax		
	comp=Z,509nm,0.8s						
ZEI				pmax	pmax		
	comp=N,187nm,0.8s						
ZEI				pmax	pmax		
	comp=E,401nm,0.8s						
MSVF	**Nonsavu**	**68.25**	**144**	*e*P	**P**	**14 28 26.4**	**+2.1**
FCC	**Fort Churchill**	**68.29**	**28**	*e*P	**P**	**14 28 23.7**	**-0.3**
	comp=E,3µm,1.8s						
FCC	**Fort Churchill**	**68.29**	**28**	*e*P	**P**	**14 28 23.7**	**-0.3**
FCC				pmax	pmax		
	comp=Z,3µm,1.8s						
IZAR	**Zarasai**	**68.29**	**327**	*e*P	**P**	**14 28 24.1**	**0.0**
IZAR				IAmb	IAmb	14 28 33.2	
	comp=Z,477nm,0.8s						
IZAR				*e*S	**S**	**14 37 19.9**	**+3.7**
TBLG	**Delisi**	**68.39**	**307**	*e*P	**P**	**14 28 25.7**	**+0.7**
TBLG	**Delisi**	**68.39**	**307**	*e*P	**P**	**14 28 25.9**	**+0.9**
TBLG	**Delisi**	**68.39**	**307**	*e*P	**P**	**14 28 25.9**	**+0.9**
IDID	**Didziasalis**	**68.40**	**327**	*e*P	**P**	**14 28 24.9**	**+0.2**
IDID				IAmb	IAmb	14 28 35.0	
	comp=Z,735nm,0.9s						
IDID				*e*S	**S**	**14 37 19.4**	**+1.9**
BEKR	**Beckworth**	**68.41**	**55**	*e*P	**P**	**14 28 25.6**	**+0.3**
	comp=Z,446nm,0.9s						
SLIT	**Slitere, Latvi**	**68.45**	**330**	*e*P	**P**	**14 28 23.6**	**-1.4**
SLIT				IAmb	IAmb	14 28 33.6	
	comp=Z,8µm,0.8s						
SLIT				*e*S	**S**	**14 37 09.9**	**-8.0**
ISAL	**Salakas**	**68.47**	**327**	*e*P	**P**	**14 28 25.3**	**+0.1**
ISAL				IAmb	IAmb	14 28 34.5	
	comp=Z,733nm,0.8s						
ISAL				*e*S	**S**	**14 37 17.3**	**-1.0**
MICGM	**Minsk**	**68.50**	**325**	⇑*i*P	**P**	**14 28 25.0**	**-0.4**
MICGM				⇑*i*P	**P**	**14 28 25.0**	**-0.4**
MICGM				PM		14 28 28.0	
	comp=Z,3.3nm,1.0s						
MICGM				PM		14 28 28.0	
	comp=E,2.8nm,1.0s						
MICGM				PM		14 28 29.0	
	comp=N,3.0nm,1.0s						
MICGM				PM		14 28 32.0	
	comp=Z,25nm,14.0s						
MICGM				*e*pP	**pP**	**14 28 54.0**	**+2.2**
MICGM				*e*PP	**PP**	**14 30 59.0**	**+1.8**
MICGM				*e*PPP	PPP	14 32 40.0	
MICGM				*e*S	**S**	**14 37 17.0**	**-1.7**
MICGM				SM		14 37 22.0	
	comp=N,16nm,12.0s						
MICGM				SM		14 37 24.0	
	comp=E,18nm,16.0s						
MICGM				*e*sS	**SKiKP**	**14 38 09.0**	**+1.1**
MICGM				*e*SS	**SS**	**14 41 40.0**	**-3.5**
MICGM				*e*SSS	SSS	14 45 06.0	
MICGM				*e*LR	LR	14 55 04.0	
MICGM				LRM	MLR	15 01 36.0	
	comp=N,29nm,13.0s						
MICGM				LRM	MLR	15 01 38.0	
	comp=Z,66nm,14.0s						
MICGM				LRM	MLR	15 01 40.0	
	comp=E,32nm,12.0s						
MNK	**Minsk**	**68.50**	**325**	⇑*i*P	**P**	**14 28 25.0**	**-0.4**
MNK				*e*		14 30 59.0	
MNK				*e*S	**S**	**14 37 17.0**	**-1.7**
MNK				*e*SS	**SS**	**14 41 40.0**	**-3.5**
MNK				pmax	pmax		
	comp=Z,5µm,1.0s						
MNK				smax	smax		
	comp=E,18µm,16.0s						
MNK				MLR	MLR		
	comp=Z,66µm,14.0s						
IIGN	**Ignalina**	**68.58**	**327**	*e*P	**P**	**14 28 26.1**	**+0.2**
IIGN				IAmb	IAmb	14 28 33.8	
	comp=Z,732nm,0.9s						
IIGN				*e*S	**S**	**14 37 19.4**	**-0.3**
AFDM	**Forest Hills D**	**68.60**	**56**	*e*P	**P**	**14 28 26.9**	**+0.5**
	comp=Z,578nm,1.4s						
NEY	**Neytrino**	**68.61**	**309**	*c* *e*P	**P**	**14 28 28.1**	**+1.6**
NEY				pmax	pmax		
	comp=Z,55nm,0.8s						
NACGM	**Naroch**	**68.67**	**326**	*e*P	**P**	**14 28 25.0**	**-1.4**
NACGM				*e*P	**P**	**14 28 25.0**	**-1.4**
NACGM				PM		14 28 30.0	
	comp=Z,3.7nm,1.0s						
NACGM				*e*PcP	**pP**	**14 28 54.0**	**+1.1**
NACGM				*e*PP	**PP**	**14 30 52.0**	**-6.7**
NACGM				*e*PPP	PPP	14 32 38.0	
NACGM				*e*S	**S**	**14 37 18.0**	**-2.8**
NACGM				*e*PS	**PnS**	**14 37 46.0**	**-14**
NACGM				*e*SS	**SS**	**14 41 36.0**	**-10**
NACGM				*e*SSS	SSS	14 44 48.0	
NACGM				*e*LQ	LQ	14 50 52.0	
NACGM				*e*LR	LR	14 54 26.0	
NACGM				LRM	MLR	14 58 22.0	
	comp=Z,66nm,26.0s						
PINNC	**Pines Island,**	**68.82**	**156**	*e*P	**P**	**14 28 28.9**	**+1.2**
MFID	**Camas Ranch**	**68.84**	**50**	*e*P	**P**	**14 28 28.4**	**+0.4**
	comp=Z,417nm,1.1s						
HRY	**Holter Researc**	**68.91**	**45**	*e*P	**P**	**14 28 28.8**	**+0.5**
RUBR	**Rubicon Trail**	**69.03**	**56**	*e*P	**P**	**14 28 30.0**	**+0.8**
	comp=Z,602nm,1.0s						
PAHR	**Pah Rah Range**	**69.09**	**55**	*e*P	**P**	**14 28 29.9**	**+0.4**
	comp=Z,563nm,1.1s						
EGMT	**Eagleton**	**69.12**	**43**	*e*P	**P**	**14 28 29.7**	**+0.2**
	comp=Z,958nm,0.8s						
EGMT	**Eagleton**	**69.12**	**43**	P	**P**	**14 28 30.1**	**+0.6**
	baz=311,SNR=137						
MOL	**Molde**	**69.13**	**340**	*e*P	**P**	**14 28 29.5**	**+0.4**
MOL				IVmB_BB		14 28 32.3	
	comp=Z,8µm,2.6s						
MOL				*e*S	**S**	**14 37 28.7**	**+2.8**
MOL				*e*SS	**SS**	**14 41 50.6**	**-2.2**
DOMB	**Dombas**	**69.17**	**339**	*e*P	**P**	**14 28 29.7**	**+0.2**
DOMB				IVmB_BB		14 28 37.8	
	comp=Z,11µm,0.6s						
DOMB				*e*S	**S**	**14 37 29.9**	**+3.3**
VCNR	**Virginia City**	**69.19**	**55**	*e*P	**P**	**14 28 31.1**	**+0.8**
	comp=Z,321nm,1.0s						
COCO	**West Island**	**69.19**	**229**	*e*P	**P**	**14 28 30.2**	**+0.1**
	comp=Z,7µm,1.8s						
COCO	**West Island**	**69.19**	**229**	*e*P	**P**	**14 28 30.2**	**+0.1**
COCO				pmax	pmax		
	comp=Z,7µm,1.8s						
PNTR	**Pine Nut**	**69.35**	**56**	*e*P	**P**	**14 28 31.9**	**+0.7**
	comp=Z,294nm,0.8s						
DLMT	**Dillon**	**69.38**	**47**	*e*P	**P**	**14 28 31.8**	**+0.5**
	comp=Z,1µm,1.1s						
GNI	**Garni**	**69.38**	**306**	*e*P	**P**	**14 28 32.2**	**+0.9**
GNI	**Garni**	**69.38**	**306**	*e*P	**P**	**14 28 33.0**	**+1.7**
GNI	**Garni**	**69.38**	**306**	*i* P	**P**	**14 28 33.0**	**+1.7**
	SNR=62						
GNI	**Garni**	**69.38**	**306**	*c* *i*P	**P**	**14 28 32.6**	**+1.3**
GNI				pmax	pmax		
	comp=Z,1µm,1.3s						
GNI	**Garni**	**69.38**	**306**	P	**P**	**14 28 33.0**	**+1.7**
	SNR=89						
GNI				P	**P**	**14 28 33.0**	**+1.7**
	SNR=89						
NB2	**NORSAR Subarra**	**69.40**	**337**	P	**P**	**14 28 30.5**	**-0.5**
	comp=Z,2µm,1.0s,baz=35,slow=6.5						
NB2	**NORSAR Subarra**	**69.40**	**337**	P	**P**	**14 28 30.5**	**-0.5**
	baz=35,slow=6.5						
NB200	**NORSAR Array S**	**69.40**	**337**	*e*P	**P**	**14 28 30.4**	**-0.5**
NOA	**NORSAR Array B**	**69.40**	**337**	P	**P**	**14 28 30.4**	**-0.5**
	comp=Z,310nm,0.7s,baz=35,slow=6.2,SNR=290						
NOA				PKP2bc		14 56 39.6	
	comp=Z,5.1nm,0.9s,baz=212,slow=3.6,SNR=6.7						
NOA				LR	LR	15 04 10.8	
	comp=Z,18µm,18.5s,baz=35,slow=40						
HFS	**Hagfors**	**69.40**	**336**	PKPPKP	**P'P'bc**	**14 56 39.6**	**-1.0**
	comp=Z,5.3nm,0.9s,baz=267,slow=3.0,SNR=6.1						
HFS				LR	LR	15 02 37.5	
	comp=Z,23µm,19.1s,baz=38,slow=39						
CMB	**Columbia Colle**	**69.53**	**57**	*e*P	**P**	**14 28 32.7**	**+0.6**
	comp=Z,1µm,1.6s						
CMB	**Columbia Colle**	**69.53**	**57**	*e*P	**P**	**14 28 32.7**	**+0.6**
CMB				pmax	pmax		
	comp=Z,1µm,1.6s						
HLID	**Hailey**	**69.54**	**49**	*e*P	**P**	**14 28 32.8**	**+0.5**
	comp=Z,393nm,1.1s						
HLID	**Hailey**	**69.54**	**49**	P	**P**	**14 28 33.2**	**+0.9**
	baz=310,SNR=251						
NC602	**NORSAR Array S**	**69.56**	**337**	*e*P	**P**	**14 28 29.9**	**-1.9**
NC602				*e*S	**S**	**14 37 29.7**	**-1.3**
MCMT	**McKenzie Canyo**	**69.59**	**47**	*e*P	**P**	**14 28 33.3**	**+0.7**
AKN	**Aaknes**	**69.60**	**340**	*e*P	**P**	**14 28 32.2**	**+0.1**
AKN				IVmB_BB		14 28 35.6	
	comp=Z,9µm,2.0s						
AKN				*e*PP	**PP**	**14 31 06.8**	**+0.3**
AKN				*e*S	**S**	**14 37 36.0**	**+4.5**
YERR	**Yerington**	**69.63**	**55**	*e*P	**P**	**14 28 33.6**	**+0.6**
	comp=Z,835nm,1.1s						
SAO	**San Andreas Ge**	**69.66**	**58**	*e*P	**P**	**14 28 33.5**	**+0.6**
	comp=Z,589nm,1.6s						
SAO	**San Andreas Ge**	**69.66**	**58**	*e*P	**P**	**14 28 33.5**	**+0.6**
SAO				pmax	pmax		
	comp=Z,589nm,1.6s						
EAK	**Akyaka**	**69.71**	**307**	*i* P	**P**	**14 28 35.4**	**+2.0**
EAK				IAML_P			
	comp=Z,3µm,0.8s						
BOZ	**Bozeman (W)**	**69.74**	**46**	*e*P	**P**	**14 28 33.9**	**+0.5**
	comp=Z,1µm,1.2s						
BOZ	**Bozeman (W)**	**69.74**	**46**	*e*P	**P**	**14 28 33.9**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,1µm,1.2s						
BOZ	**Bozeman (W)**	**69.74**	**46**	P	**P**	**14 28 34.1**	**+0.7**
	baz=311,SNR=745						
PBUR	**Paburg**	**69.77**	**329**	*e*P	**P**	**14 28 32.4**	**-0.8**
PBUR				IAmb	IAmb	14 28 40.7	
	comp=Z,1µm,0.7s						
PBUR				*e*S	**S**	**14 37 31.0**	**-2.6**
TASB	**TASBURUN-IGDIR**	**69.78**	**306**	*e*P	**P**	**14 28 34.2**	**+0.5**
WAKR	**Walker**	**69.81**	**56**	*e*P	**P**	**14 28 34.9**	**+0.8**
	comp=Z,293nm,1.0s						
MNCI	**Minicoy**	**69.82**	**262**	*e*P	**P**	**14 28 35.3**	**+1.2**
	comp=Z,285nm,1.0s						
MNCY	**Minicoy**	**69.85**	**262**	*e*P	**P**	**14 28 33.9**	**-0.4**
BMN	**Battle Mountai**	**69.93**	**53**	*e*P	**P**	**14 28 35.4**	**+0.7**
IGDI	**IGDIR**	**69.95**	**306**	*i* P	**P**	**14 28 36.3**	**+1.5**
IGDI				IAML_P			
	comp=Z,2µm,0.3s						
DIGO	**Kars**	**70.02**	**307**	*i* P	**P**	**14 28 38.2**	**+2.8**
DIGO				IAML_P			
	comp=Z,1µm,0.1s						
SFJD	**Kangerlussuaq**	**70.04**	**6**	*e*P	**P**	**14 28 34.4**	**-0.2**
	comp=Z,1µm,1.2s						
SFJD	**Kangerlussuaq**	**70.04**	**6**	⇑*i*P	**P**	**14 28 34.7**	**0.0**
	comp=Z,759nm,0.9s						
SFJD	**Kangerlussuaq**	**70.04**	**6**	⇑*i*P	**P**	**14 28 34.7**	**0.0**
SFJD				pmax	pmax		
	comp=Z,760nm,0.9s						
SFJD	**Kangerlussuaq**	**70.04**	**6**	LR	LR	15 01 29.2	
	comp=Z,16µm,18.7s,baz=346,slow=38						
SOC	**Sochi**	**70.08**	**311**	*c* *i*P	**P**	**14 28 35.4**	**+0.1**
SOC				*e**PP	**pP**	**14 29 03.5**	**+1.5**
SOC				*e**SP	**sP**	**14 29 16.7**	**+3.2**
SOC				*e*		14 31 08.4	
SOC				*e*PPP	PPP	14 32 49.1	
SOC				*i* S	**S**	**14 37 37.6**	**-0.1**
SOC				*e**SS	**sS**	**14 38 18.1**	**-5.1**
SOC				*e*SS	**SS**	**14 42 11.6**	**+3.2**
SOC				pmax	pmax		
	comp=Z,637nm,0.8s						
SOC				pmax	pmax		
	comp=Z,1µm,1.5s						
SOC				MLR	MLR		
	comp=Z,28µm,17.0s						
BATM	**Batumi**	**70.24**	**309**	*e*P	**P**	**14 28 35.9**	**-0.5**
KVN	**Kaiserville**	**70.28**	**55**	*e*P	**P**	**14 28 37.3**	**+0.4**
	comp=Z,664nm,1.2s						
KVN	**Kaiserville**	**70.28**	**55**	*e*P	**P**	**14 28 37.3**	**+0.4**
KVN				pmax	pmax		
	comp=Z,664nm,1.2s						
RYN	**Ryan**	**70.29**	**55**	*e*P	**P**	**14 28 37.9**	**+1.0**
	comp=Z,432nm,1.2s						
QLMT	**Earthquake Lak**	**70.35**	**47**	*e*P	**P**	**14 28 38.1**	**+0.8**
ARTV	**Artvin**	**70.38**	**308**	*i* P	**P**	**14 28 39.0**	**+1.5**
ARTV				IAML_P			
	comp=Z,337nm,0.3s						
BCA	**Borcka**	**70.39**	**309**	*e*P	**P**	**14 28 37.8**	**+0.5**
DYDN	**Diyadin**	**70.39**	**306**	*i* P	**P**	**14 28 40.1**	**+2.5**
DYDN				IAML_P			
	comp=Z,3µm,0.5s						
DBOC	**Borcka**	**70.42**	**308**	*i* P	**P**	**14 28 38.7**	**+1.1**
DBOC				IAML_P			
	comp=Z,6µm,0.3s						
OSL	**Oslo**	**70.44**	**337**	*e*P	**P**	**14 28 37.6**	**+0.4**
OSL				IVmB_BB		14 28 40.6	
	comp=Z,8µm,1.7s						
OSL				*e*PP	**PP**	**14 31 08.2**	**-5.6**
OSL				*e*S	**S**	**14 37 43.7**	**+2.3**
OSL				*e*SS	**SS**	**14 42 13.1**	**+0.1**
DAGI	**Agillar**	**70.45**	**308**	*i* P	**P**	**14 28 39.1**	**+1.3**
DAGI				IAML_P			
	comp=Z,5µm,0.6s						
CLDR	**Caldiran**	**70.51**	**305**	*e*P	**P**	**14 28 38.2**	**-0.1**
CLDR	**Caldiran**	**70.51**	**305**	*i* P	**P**	**14 28 40.7**	**+2.4**
CLDR				IAML_P			
	comp=Z,5µm,0.9s						
ANN	**Anapa**	**70.53**	**313**	*c* *i*P	**P**	**14 28 37.9**	**-0.1**
ANN				*e**PP	**pP**	**14 29 02.4**	**-2.3**
ANN				*e*		14 31 15.8	
ANN				*e*PPP	PPP	14 32 55.3	
ANN				*e**SS	**sS**	**14 38 25.9**	**-2.3**
ANN				pmax	pmax		
	comp=Z,811nm,1.5s						
NVAR	**Mina Array Bea**	**70.55**	**55**	P	**P**	**14 28 39.0**	**+0.4**
	comp=Z,156nm,0.7s,baz=291,slow=5.6,SNR=352						
NVAR				S	**S**	**14 37 44.6**	**+0.8**
	comp=Z,2.6nm,0.9s,baz=308,slow=4.4,SNR=2.4						
NVAR				PKP2bc		14 56 35.4	
	comp=Z,4.1nm,1.0s,baz=148,slow=3.1,SNR=7.3						
NVAR				P4KPbc		15 05 06.7	
	comp=Z,0.1nm,0.3s,baz=280,slow=2.7,SNR=2.2						
AKASG	**Malin Array Be**	**70.58**	**322**	*i* P	**P**	**14 28 37.4**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,310nm,0.6s						
AKASG	**Malin Array Be**	**70.58**	**322**	P	**P**	**14 28 37.6**	**-0.6**
	comp=Z,454nm,0.8s,baz=43,slow=6.5,SNR=248						
AKASG				PP	**PP**	**14 31 12.8**	**-2.4**
	comp=Z,83nm,0.7s,baz=39,slow=8.8,SNR=3.0						
AKASG				PKP2bc		14 56 32.1	
	comp=Z,0.6nm,0.7s,baz=238,slow=2.3,SNR=9.1						
AKASG				LR	LR	15 02 09.4	
	comp=Z,20µm,18.2s,baz=25,slow=38						
AKBB	**Malin Array Si**	**70.58**	**322**	*e*P	**P**	**14 28 37.6**	**-0.6**
	comp=Z,2µm,1.0s						
AKBB	**Malin Array Si**	**70.58**	**322**	*e*P	**P**	**14 28 37.6**	**-0.6**
AKBB				pmax	pmax		
	comp=Z,2µm,1.0s						
MDPB	**Devils Postpil**	**70.58**	**57**	*e*P	**P**	**14 28 39.7**	**+0.8**
	comp=Z,358nm,1.3s						
FOO	**Floro**	**70.58**	**340**	*e*P	**P**	**14 28 39.0**	**+0.9**
FOO				IVmB_BB		14 28 46.9	
	comp=Z,7µm,0.8s						
FOO				*e*S	**S**	**14 37 43.6**	**+0.7**
FOO				*e*SS	**SS**	**14 42 08.8**	**-6.3**
KIEV	**Kiev**	**70.59**	**322**	*e*P	**P**	**14 28 38.0**	**-0.3**
	comp=Z,2µm,1.0s						
KIEV	**Kiev**	**70.59**	**322**	⇓*i*P	**P**	**14 28 38.0**	**-0.3**
KIEV	**Kiev**	**70.59**	**322**	*i* P	**P**	**14 28 37.5**	**-0.8**
	SNR=546						
KIEV				*i* P	**P**	**14 28 38.3**	**0.0**
	SNR=31						
KIEV				*i* P	**P**	**14 28 39.9**	**+1.6**
	SNR=76						
KIEV	**Kiev**	**70.59**	**322**	*c* *e*P	**P**	**14 28 37.4**	**-0.9**
KIEV				pmax	pmax		
	comp=Z,777nm,0.9s						
GCMT	**Greycliff**	**70.65**	**45**	*e*P	**P**	**14 28 40.2**	**+1.3**
HYA	**Hoyanger**	**70.66**	**339**	*e*P	**P**	**14 28 38.3**	**-0.2**
HYA				IVmB_BB		14 28 47.6	
	comp=Z,12µm,1.4s						
HYA				*e*PP	**PP**	**14 31 08.4**	**-7.3**
HYA				*e*S	**S**	**14 37 44.8**	**+0.9**
HYA				*e*SS	**SS**	**14 42 17.9**	**+1.6**
DDEM	**Demirkent**	**70.67**	**308**	*i* P	**P**	**14 28 41.2**	**+2.1**
DDEM				IAML_P			
	comp=Z,7µm,0.8s						
BANOM	**Banah**	**70.69**	**288**	*i* P	**P**	**14 28 39.3**	**-0.1**
	SNR=22						
YMR	**Madison River**	**70.71**	**47**	*e*P	**P**	**14 28 40.3**	**+0.9**
	comp=Z,483nm,1.0s						
WSAR	**Wadi Sarin**	**70.72**	**284**	P	**P**	**14 28 40.2**	**+0.6**
	SNR=19						
SHME	**Shamm**	**70.72**	**288**	*i* P	**P**	**14 28 39.3**	**-0.3**
	SNR=30						
MLAC	**Mammoth, Mammo**	**70.73**	**56**	P	**P**	**14 28 40.5**	**+0.8**
	baz=310,SNR=89						
SUW	**Suwalki**	**70.77**	**327**	*e*P	**P**	**14 28 39.0**	**-0.3**
SUW				*e*S	**S**	**14 37 42.5**	**-2.8**
SUW				*e*SKSac	**SKSac**	**14 38 28.0**	**-3.6**
SUW				LMZ	LR	14 54 51.4	
	comp=Z,64µm,36.9s						
SUW	**Suwalki**	**70.77**	**327**	*e*P	**P**	**14 28 39.0**	**-0.3**
SUW				*e*S	**S**	**14 37 42.5**	**-2.8**
SUW				*e*		14 38 28.0	
AGRB	**Hanur-Agry**	**70.78**	**306**	*e*P	**P**	**14 28 39.6**	**-0.3**
VMUR	**Van-Muradiye**	**70.81**	**306**	*i* P	**P**	**14 28 42.9**	**+2.7**
VMUR				IAML_P			
	comp=Z,641nm,0.9s						
YNR	**Norris Junctio**	**70.83**	**46**	*e*P	**P**	**14 28 41.8**	**+1.6**
JLN	**Jalan Bani Buh**	**70.84**	**283**	P	**P**	**14 28 41.0**	**+0.7**
	SNR=64						
JLN				P	**P**	**14 28 41.0**	**+0.7**
	SNR=64						
WBK	**Wadi Bani Khal**	**70.87**	**283**	P	**P**	**14 28 42.2**	**+1.7**
	SNR=38						
ELK	**Elko**	**70.89**	**52**	*e*P	**P**	**14 28 41.1**	**+0.5**
	comp=Z,153nm,1.1s						
EATA	**Eleskirt**	**70.90**	**307**	*i* P	**P**	**14 28 43.6**	**+2.9**
EATA				IAML_P			
	comp=Z,5µm,0.7s						
BIDO	**Bidbid**	**70.90**	**285**	P	**P**	**14 28 41.4**	**+0.8**
	SNR=61						
BIDO				P	**P**	**14 28 41.4**	**+0.8**
	SNR=61						
YFT	**Old Faithful**	**70.92**	**47**	*e*P	**P**	**14 28 42.9**	**+2.1**
TUTA	**Tutak**	**71.00**	**306**	*i* P	**P**	**14 28 43.2**	**+1.9**
TUTA				IAML_P			
	comp=Z,9µm,0.6s						
KONO	**Kongsberg**	**71.01**	**337**	*e*P	**P**	**14 28 40.8**	**+0.2**
	comp=Z,398nm,0.8s						
KONO	**Kongsberg**	**71.01**	**337**	*e*P	**P**	**14 28 40.8**	**+0.2**
KONO				pmax	pmax		
	comp=Z,398nm,0.8s						
KONO	**Kongsberg**	**71.01**	**337**	*e*P	**P**	**14 28 40.5**	**-0.1**
KONO				*e*PP	**PP**	**14 31 17.7**	**-0.9**
KONO				*e*S	**S**	**14 37 46.8**	**-1.1**
PAGB	**Antelope Grade**	**71.06**	**59**	*e*P	**P**	**14 28 42.6**	**+1.2**
	comp=Z,531nm,1.0s						
YPP	**Pitchstone Pla**	**71.06**	**47**	*e*P	**P**	**14 28 43.8**	**+2.2**
	comp=Z,1µm,1.8s						
MDH	**Madha**	**71.08**	**287**	*i* P	**P**	**14 28 42.6**	**+0.9**
	SNR=6.5						
MDH	**Madha**	**71.08**	**287**	P	**P**	**14 28 41.4**	**-0.3**
LKWY	**Lake**	**71.08**	**46**	*e*P	**P**	**14 28 44.0**	**+2.3**
	comp=Z,386nm,1.0s						
LKWY	**Lake**	**71.08**	**46**	*e*P	**P**	**14 28 44.0**	**+2.3**
LKWY				pmax	pmax		
	comp=Z,386nm,1.0s						
H17A	**Grant Village**	**71.10**	**47**	*e*P	**P**	**14 28 42.9**	**+1.1**
H17A	**Grant Village**	**71.10**	**47**	P	**P**	**14 28 43.4**	**+1.5**
	baz=312,SNR=367						
CHOM	**Cayeli-Rize**	**71.11**	**309**	*e*P	**P**	**14 28 39.4**	**-2.2**
SUE	**Sulen**	**71.12**	**340**	*e*P	**P**	**14 28 42.1**	**+0.8**
SUE				IVmB_BB		14 28 50.4	
	comp=Z,11µm,0.9s						
SUE				*e*S	**S**	**14 37 51.1**	**+2.0**
SUE				*e*SS	**SS**	**14 42 27.4**	**+4.1**
MSFE	**Esma-Masafi**	**71.14**	**287**	*i* P	**P**	**14 28 42.2**	**+0.1**
	SNR=34						
BASK	**Baskale_VAN**	**71.15**	**305**	*i* P	**P**	**14 28 44.4**	**+2.1**
BASK				IAML_P			
	comp=Z,101nm,0.1s						
VANB	**Van**	**71.17**	**305**	*e*P	**P**	**14 28 43.6**	**+1.4**
KOPR	**Koprukoy-ERZUR**	**71.19**	**307**	*e*P	**P**	**14 28 41.9**	**-0.5**
VOG	**Valley Oaks Go**	**71.23**	**58**	P	**P**	**14 28 42.4**	**0.0**
	baz=310,SNR=7.5						
FLWY	**Flagg Ranch**	**71.24**	**47**	*e*P	**P**	**14 28 44.0**	**+1.4**
	comp=Z,307nm,0.9s						
SMDO	**Samad**	**71.25**	**284**	P	**P**	**14 28 44.7**	**+1.9**
	SNR=30						
YOVA	**Hakkari_Yksek**	**71.28**	**304**	*i* P	**P**	**14 28 45.6**	**+2.7**
YOVA				IAML_P			
	comp=Z,153nm,0.4s						
RLMT	**Red Lodge**	**71.31**	**45**	*e*P	**P**	**14 28 43.6**	**+0.6**
	comp=Z,900nm,1.4s						
RLMT	**Red Lodge**	**71.31**	**45**	P	**P**	**14 28 43.8**	**+0.8**
	baz=312,SNR=133						
MLAZ	**Malazgirt-MUS**	**71.33**	**306**	*e*P	**P**	**14 28 44.1**	**+0.9**
FXWY	**Fox Creek**	**71.36**	**47**	*e*P	**P**	**14 28 44.5**	**+1.1**
UOSS	**Minazif**	**71.37**	**287**	*i* P	**P**	**14 28 42.7**	**-0.8**
	SNR=13						
UOSS	**Minazif**	**71.37**	**287**	P	**P**	**14 28 42.8**	**-0.7**
	SNR=12						
UMQ	**Umm Al-Quwin**	**71.38**	**288**	*i* P	**P**	**14 28 45.4**	**+1.9**
	SNR=6.2						
UMQ	**Umm Al-Quwin**	**71.38**	**288**	P	**P**	**14 28 45.9**	**+2.4**
	SNR=5.7						
UMQ				P	**P**	**14 28 45.9**	**+2.4**
	SNR=5.7						
ADCV	**BITLIS_Adilcev**	**71.44**	**306**	*i* P	**P**	**14 28 46.6**	**+2.7**
ADCV				IAML_P			
	comp=Z,62nm,0.1s						
MOOW	**Moose Ponds**	**71.44**	**47**	*e*P	**P**	**14 28 44.8**	**+0.9**
	comp=Z,603nm,1.0s						
HOQ	**Hoqain**	**71.44**	**285**	P	**P**	**14 28 44.7**	**+0.7**
	SNR=36						
TIN	**Tinemaha, Big**	**71.47**	**57**	P	**P**	**14 28 44.9**	**+0.9**
	baz=310,SNR=23						
SMMC	**Simmler**	**71.48**	**59**	P	**P**	**14 28 44.7**	**+0.7**
	baz=310,SNR=72						
KLNR	**Kaliningrad**	**71.48**	**329**	*d* *i*P	**P**	**14 28 42.6**	**-1.0**
KLNR				pmax	pmax		
	comp=Z,1µm,0.7s						
HATD	**Hatta, Dubai**	**71.49**	**287**	*i* P	**P**	**14 28 44.5**	**+0.2**
	SNR=39						
HATD	**Hatta, Dubai**	**71.49**	**287**	P	**P**	**14 28 44.7**	**+0.5**
	SNR=15						
ASK	**Askoy**	**71.50**	**340**	*e*P	**P**	**14 28 44.2**	**+0.6**
ASK				*e*PP	**PP**	**14 31 28.4**	**+5.6**
ASK				*e*S	**S**	**14 37 55.0**	**+1.5**
ASK				*e*SS	**SS**	**14 42 31.0**	**+1.8**
BER	**Bergen**	**71.55**	**339**	*e*P	**P**	**14 28 45.3**	**+1.4**
BER				IVmB_BB		14 28 53.0	
	comp=Z,11µm,0.9s						
BER				*e*S	**S**	**14 37 56.2**	**+2.1**
DGMT	**Dagmar**	**71.55**	**40**	*e*P	**P**	**14 28 44.3**	**+0.1**
DGMT	**Dagmar**	**71.55**	**40**	P	**P**	**14 28 44.5**	**+0.3**
	baz=314,SNR=152						
GEVA	**Gevas**	**71.56**	**305**	*i* P	**P**	**14 28 47.7**	**+3.1**
GEVA				IAML_P			
	comp=Z,2µm,0.6s						
AKDM	**Akdamar-Van**	**71.59**	**305**	*e*P	**P**	**14 28 45.3**	**+0.5**
LOHW	**Long Hollow**	**71.61**	**47**	*e*P	**P**	**14 28 46.2**	**+1.3**
	comp=Z,436nm,1.3s						
ODD1	**Odda**	**71.61**	**339**	*e*P	**P**	**14 28 44.2**	**-0.2**
ODD1				IVmB_BB		14 28 48.1	
	comp=Z,6µm,1.5s						

ODD1				*e*S	SKiKP	14 38 04.2	-8.2
HVU	Hansel Valley	71.62	50	*e*P	P	14 28 45.6	+0.7
	comp=Z,331nm,1.0s						
HVU	Hansel Valley	71.62	50	*e*P	P	14 28 45.6	+0.7
HVU				pmax	pmax		
	comp=Z,331nm,1.0s						
SNOW	Snow King Moun	71.62	47	*e*P	P	14 28 46.2	+1.2
	comp=Z,536nm,1.1s						
ASHO	Ashiyiah	71.64	287	*i* P	P	14 28 45.4	+0.3
	SNR=32						
ASHO	Ashiyiah	71.64	287	P	P	14 28 45.6	+0.5
	SNR=16						
ASHO				P	P	14 28 45.6	+0.5
	SNR=16						
REDW	Red Top Meadow	71.64	48	*e*P	P	14 28 46.4	+1.3
	comp=Z,877nm,1.3s						
JMDO	Jabal Madar	71.64	284	P	P	14 28 47.6	+2.4
	SNR=17						
SOHO	SOHO	71.64	286	P	P	14 28 44.8	-0.3
	SNR=13						
VES	Vestal, Richgr	71.72	58	P	P	14 28 45.2	-0.2
	baz=310,SNR=119						
NAZ	Nazwa, Dubai	71.72	287	*i* P	P	14 28 45.7	+0.2
	SNR=26						
NAZ	Nazwa, Dubai	71.72	287	P	P	14 28 45.8	+0.2
	SNR=13						
KTUT	Trabzon	71.75	309	*e*P	P	14 28 43.4	-2.1
LAO	LASA Array	71.80	43	*e*P	P	14 28 46.7	+0.9
	comp=Z,2µm,1.4s						
LAO	LASA Array	71.80	43	P	P	14 28 46.2	+0.4
	baz=314,SNR=34						
PKM	Mcpherson Peak	71.87	59	P	P	14 28 47.1	+0.6
	baz=310,SNR=155						
AHID	Auburn Hatcher	71.90	48	*e*P	P	14 28 47.0	+0.3
	comp=Z,383nm,1.1s						
CUKT	Cukurca	71.91	304	*e*P	P	14 28 46.6	-0.1
CUKT	Cukurca	71.91	304	*i* P	P	14 28 47.6	+0.9
CUKT				IAML_P			
	comp=Z,11µm,0.6s						
BAYT	Aydıntepe-Bayb	71.92	308	*e*P	P	14 28 47.7	+0.9
FAQ	Al Faqa, Dubai	71.92	287	*i* P	P	14 28 46.6	-0.1
	SNR=50						
FAQ	Al Faqa, Dubai	71.92	287	P	P	14 28 46.7	-0.1
	SNR=15						
ANGG	Ammassalik, Gr	71.93	0	*e*P	P	14 28 46.5	+0.4
BAYB	BAYBURT	71.94	308	*i* P	P	14 28 48.5	+1.6
BAYB				IAML_P			
	comp=Z,7µm,1.0s						
ECAT	Cat-ERZURUM	71.95	307	*i* P	P	14 28 48.3	+1.3
CWC	Cottonwood Cre	71.96	57	P	P	14 28 47.3	+0.2
	baz=310						
KOPT	Kop Dagi	71.96	308	*i* P	P	14 28 50.4	+3.2
KOPT				IAML_P			
	comp=Z,3µm,1.0s						
GURO	Guroymak-BITLI	72.02	306	*e*P	P	14 28 47.8	+0.5
BGU	Big Grassy Mou	72.04	51	*e*P	P	14 28 47.6	+0.2
	comp=Z,355nm,1.4s						
GRAC	Grapevine Rang	72.04	56	P	P	14 28 48.2	+0.8
	baz=310,SNR=72						
BLS5	Blasjo	72.07	338	*e*P	P	14 28 47.8	+0.7
BLS5				IVmB_BB		14 28 51.0	
	comp=Z,6µm,1.6s						
BLS5				*e*PP	PP	14 31 27.8	0.0
BLS5				*e*S	S	14 37 58.8	-1.4
SPUT	South Promonto	72.11	50	*e*P	P	14 28 48.7	+0.8
	comp=Z,764nm,1.4s						
BORG	Borgarnes	72.12	353	*e*P	P	14 28 49.0	+1.8
	comp=Z,899nm,0.9s						
ARQ	Araqi	72.16	285	P	P	14 28 49.9	+1.7
	SNR=24						
SIM	Simferopol'	72.18	315	*ce*P	P	14 28 48.2	+0.2
SIM				*e*		14 31 26.0	
SIM				*e*S	S	14 38 04.0	+2.1
SIM				*e**SS	sS	14 38 48.0	+0.7
SIM				pmax	pmax		
	comp=Z,1µm,1.0s						
SIM				MLR	MLR		
	comp=Z,26µm,14.0s						
ASUD	Al Ashush, Dub	72.18	287	*i* P	P	14 28 48.5	+0.2
	SNR=35						
ASUD	Al Ashush, Dub	72.18	287	P	P	14 28 48.7	+0.4
	SNR=26						
ASUD				P	P	14 28 48.7	+0.4
	SNR=26						
ISA	Isabella, Lake	72.21	58	*e*P	P	14 28 48.5	0.0
ISA	Isabella, Lake	72.21	58	*e*P	P	14 28 48.5	0.0
ISA	Isabella, Lake	72.21	58	P	P	14 28 48.4	-0.1
	baz=310,SNR=128						
SBC	Santa Barbara	72.22	59	P	P	14 28 49.2	+0.9
	baz=310,SNR=26						
R11A	Troy Canyon, C	72.24	54	*e*P	P	14 28 49.0	+0.3
	comp=Z,277nm,1.1s						
R11A	Troy Canyon, C	72.24	54	P	P	14 28 49.3	+0.6
	baz=311,SNR=250						
ALNE	Al Ain	72.25	286	*i* P	P	14 28 48.7	0.0
	SNR=83						
ARVC	Arvin	72.33	58	P	P	14 28 49.2	+0.1
	baz=310,SNR=45						
DAC	Darwin (Calif)	72.36	57	*e*P	P	14 28 51.6	+2.1
	comp=Z,328nm,1.1s						
DAC	Darwin (Calif)	72.36	57	*e*P	P	14 28 51.6	+2.1
DAC				pmax	pmax		
	comp=Z,328nm,1.1s						
SRTM	Siirt_Merkez	72.44	306	*i* P	P	14 28 50.5	+0.7
SRTM				IAML_P			
	comp=Z,5µm,1.0s						
SIRT	Sirnak	72.45	305	*e*P	P	14 28 50.3	+0.4
SIRT	Sirnak	72.45	305	*e*P	P	14 28 51.2	+1.4
AJN	Ajban	72.47	287	*i* P	P	14 28 49.2	-0.7
	SNR=15						
AJN	Ajban	72.47	287	P	P	14 28 49.9	0.0
	SNR=12						
HOMB	Homborsund	72.47	337	*e*P	P	14 28 49.4	0.0
SIRN	Sırnak	72.47	305	*i* P	P	14 28 51.6	+1.6
BGOL	Bingol	72.53	307	*i* P	P	14 28 52.9	+2.5
BGOL				IAML_P			
	comp=Z,2µm,0.6s						
SCZ2	Santa Cruz Isl	72.55	60	P	P	14 28 50.7	+0.2
	baz=310,SNR=14						
MPMC	Manual Prospec	72.57	57	P	P	14 28 51.1	+0.4
	baz=311,SNR=338						
KMY	Karmoy	72.58	339	*e*P	P	14 28 50.2	+0.1
KMY				IVmB_BB		14 28 59.4	
	comp=Z,7µm,0.9s						
KMY				*e*S	S	14 38 08.9	+3.0
KMY				*e*SS	SS	14 42 46.5	+0.8
KELT	Kelkit	72.59	309	*i* P	P	14 28 51.8	+1.0
KELT				IAML_P			
	comp=Z,4µm,0.9s						
MHTO	MHTO	72.61	283	P	P	14 28 51.7	+0.8
	SNR=178						
MHTO				P	P	14 28 51.7	+0.8
	SNR=178						
EUZM	Uzumlu	72.63	308	*i* P	P	14 28 52.7	+1.8
EUZM				IAML_P			
	comp=Z,6µm,0.8s						
DUG	Dugway, Tooele	72.65	51	*e*P	P	14 28 51.7	+0.6
	comp=Z,1µm,1.4s						
DUG	Dugway, Tooele	72.65	51	*e*P	P	14 28 51.7	+0.6
DUG				pmax	pmax		
	comp=Z,1µm,1.4s						
DUG	Dugway, Tooele	72.65	51	P	P	14 28 51.6	+0.6
	baz=312,SNR=345						
FURC	Furnace Creek,	72.69	56	P	P	14 28 51.9	+0.8
	baz=311,SNR=321						
OSI	Osito Audit: C	72.73	59	*e*P	P	14 28 52.6	+1.0
	comp=Z,373nm,0.9s						
OSI	Osito Audit: C	72.73	59	P	P	14 28 51.9	+0.4
	baz=310,SNR=20						
BW06	Boulder Array	72.74	47	*e*P	P	14 28 51.7	0.0
	comp=Z,431nm,1.0s						
BW06	Boulder Array	72.74	47	P	P	14 28 51.6	0.0
	baz=313,SNR=400						
PD31	Pinedale Array	72.74	47	*e*P	P	14 28 51.5	-0.1
PDAR	Pinedale Array	72.74	47	P	P	14 28 51.5	-0.1
	comp=Z,122nm,0.6s,baz=267,slow=2.0,SNR=355						
PDAR				S	S	14 38 09.0	+0.2
	comp=Z,2.4nm,1.0s,baz=357,slow=3.6,SNR=2.3						
TPNV	Topopah Spring	72.75	56	*e*P	P	14 28 52.4	+0.7
	comp=Z,447nm,0.9s						
TPNV	Topopah Spring	72.75	56	*e*P	P	14 28 52.4	+0.7
TPNV				pmax	pmax		
	comp=Z,447nm,0.9s						
TPNV	Topopah Spring	72.75	56	P	P	14 28 52.2	+0.4
	baz=311,SNR=309						
SOFL	Sornfelli, Far	72.75	346	*e*P	P	14 28 52.4	+1.3
SOFL	Sornfelli, Far	72.75	346	*e*P	P	14 28 51.8	+0.6
SVAN	Silvan-Diyarba	72.77	306	*e*P	P	14 28 53.2	+1.5
SVAN	Silvan-Diyarba	72.77	306	*i* P	P	14 28 53.6	+1.9
SVAN				IAML_P			
	comp=Z,190nm,0.4s						
SNART	Snartemo	72.78	337	*e*P	P	14 28 51.3	0.0
SNART				IVmB_BB		14 28 55.0	
	comp=Z,3µm,1.2s						
SNART				*e*PP	PP	14 31 35.0	+1.2
SNART				*e*S	S	14 38 10.8	+2.5
SNART				*e*SS	SS	14 42 53.4	+4.5
LRMC	Laurel Mtn Rad	72.82	57	P	P	14 28 52.0	-0.2
	baz=311,SNR=165						
ORDU	Ordu-Boztepe	72.83	310	*i* P	P	14 28 53.3	+1.3
ORDU				IAML_P			
	comp=Z,6µm,0.8s						
BLG	Laguna Peak, P	72.84	59	P	P	14 28 52.4	+0.2
	baz=310,SNR=19						
BTMN	Batman	72.90	306	*i* P	P	14 28 55.7	+3.2
BTMN				IAML_P			
	comp=Z,1µm,0.9s						
CTU	Camp Tracy	72.92	50	*e*P	P	14 28 53.4	+0.7
	comp=Z,463nm,1.4s						
BSD	Bornholm Skovb	73.01	332	⇑*i*P	P	14 28 52.6	-0.1
	comp=Z,248nm,0.8s						
BSD	Bornholm Skovb	73.01	332	⇑*i*P	P	14 28 52.6	-0.1
BSD				pmax	pmax		
	comp=Z,250nm,0.8s						
EDW2	Edwards Air Fo	73.02	58	P	P	14 28 53.5	+0.3
	baz=311,SNR=307						
HANI	Diyarbakir_Han	73.07	307	*i* P	P	14 28 54.3	+0.8
HANI				IAML_P			
	comp=Z,9µm,1.0s						
SNCC	San Nicolas Is	73.11	60	*e*P	P	14 28 54.4	+0.7
	comp=Z,630nm,1.0s						
SNCC	San Nicolas Is	73.11	60	P	P	14 28 54.2	+0.5
	baz=310,SNR=26						
TNCL	Tunceli-Merkez	73.11	308	*i* P	P	14 28 58.0	+4.3
TNCL				IAML_P			
	comp=Z,2µm,0.8s						
PSUT	Pine Spring	73.14	53	*e*P	P	14 28 55.1	+1.0
SUSE	Susehri	73.15	309	*i* P	P	14 28 55.4	+1.4
SUSE				IAML_P			
	comp=Z,521nm,0.6s						
DECC	Green Verdugo	73.21	59	P	P	14 28 54.4	+0.1
	baz=311,SNR=26						
NLU	North Lily Min	73.23	51	*e*P	P	14 28 54.8	+0.3
	comp=Z,362nm,1.1s						
LRW	Lerwick	73.34	342	*e*P	P	14 28 55.1	+0.6
LRW				*e*		14 38 11.6	
LRW				IAMs_20	IAMs_20	14 53 16.1	
	comp=Z,91µm,58.9s						
PASC	Pasadena Art C	73.36	59	*e*P	P	14 28 55.5	+0.3
	comp=Z,234nm,1.0s						
BEL	Belsk	73.37	327	*e*P	P	14 28 55.8	+1.0
BEL				*i* S	SKiKP	14 38 14.5	-0.6
BEL				*e*SKSac	ScS	14 38 56.8	+3.0
BEL				LMZ	LR	14 59 38.1	
	comp=Z,48µm,26.7s						
BEL	Belsk	73.37	327	*e*P	P	14 28 55.8	+1.0
BEL				*i* S	SKiKP	14 38 14.5	-0.6
BEL				*e*		14 38 56.8	
REFA	Refahiye_ERZN	73.37	308	*i* P	P	14 28 56.0	+0.6
REFA				IAML_P			
	comp=Z,2µm,0.9s						
COP	Copenhagen	73.39	333	*i* P	P	14 28 55.4	+0.5
	comp=Z,810nm,0.9s						
COP	Copenhagen	73.39	333	*i* P	P	14 28 55.4	+0.5
COP				pmax	pmax		
	comp=Z,810nm,0.9s						
KIS	Kishinev	73.39	319	⇑*i*P	P	14 28 54.0	-1.1
	comp=Z,400nm,1.0s						
KIS				*i* pP	pP	14 29 24.0	+2.2
KIS	Kishinev	73.39	319	*i* PP	PP	14 31 40.0	+0.7
	comp=Z,5µm,16.0s						
KIS	Kishinev	73.39	319	⇑*i*P	P	14 28 54.0	-1.1
KIS				*i* *PP	pP	14 29 24.0	+2.2
KIS				*i*		14 31 40.0	
KIS				*i* PPP	PPP	14 33 28.0	
KIS				*i* S	SKiKP	14 38 12.0	-3.3
KIS				*i*		14 38 40.0	
KIS				pmax	pmax		
	comp=Z,400nm,1.0s						
KIS				pmax	pmax		
	comp=Z,11µm,19.0s						
KIS				pmax	pmax		
	comp=Z,5µm,16.0s						
KIS				MLR	MLR		
	comp=Z,37µm,20.0s						
MWC	Mount Wilson	73.40	59	*e*P	P	14 28 56.1	+0.4
	comp=Z,628nm,1.1s						
MWC	Mount Wilson	73.40	59	*e*P	P	14 28 56.1	+0.4
MWC				pmax	pmax		
	comp=Z,628nm,1.1s						
SHOC	Shoshone, Teco	73.42	56	P	P	14 28 55.9	+0.4
	baz=311,SNR=117						
MPU	Maple Canyon	73.44	51	*e*P	P	14 28 56.0	+0.2
	comp=Z,777nm,1.4s						
GSC	Goldstone, Bar	73.48	57	*e*P	P	14 28 56.3	+0.3
	comp=Z,209nm,1.0s						
GSC	Goldstone, Bar	73.48	57	*e*P	P	14 28 56.3	+0.3
GSC				pmax	pmax		
	comp=Z,209nm,1.0s						
GSC	Goldstone, Bar	73.48	57	P	P	14 28 56.5	+0.6
	baz=311,SNR=153						
LVV	L'vov	73.53	324	*e*P	P	14 28 56.5	+0.7
LVV				*e*		14 29 28.1	
LVV				*e*S	S	14 38 20.3	+3.3
LVV				pmax	pmax		
	comp=Z,4µm,1.4s						
LVV				smax	smax		
	comp=N,2µm,2.2s						
LVV				smax	smax		
	comp=E,900nm,2.2s						
LVV				MLR	MLR		
	comp=E,10µm,16.0s						
LVV				MLR	MLR		
	comp=N,16µm,17.0s						
LVV				MLR	MLR		
	comp=Z,2µm,18.0s						
FMP	Fort Macarthur	73.59	59	P	P	14 28 56.6	+0.2
	baz=311,SNR=13						
DQM	DQM	73.60	282	P	P	14 28 57.9	+1.2
	SNR=14						
SINO	SINOP_Merkez	73.60	312	*i* P	P	14 28 57.5	+1.1
SINO				IAML_P			
	comp=Z,6µm,0.8s						
CUZAR	Zara_SIVAS	73.61	309	*i* P	P	14 28 58.7	+1.9
KEMA	Kemaliye	73.62	308	*i* P	P	14 28 58.3	+1.7
KEMA				IAML_P			
	comp=Z,3µm,0.9s						
GKP	Gorka Klasztor	73.63	330	*e*P	P	14 28 56.8	+0.4
GKP				*i* S	S	14 38 17.2	-0.8
GKP				*e*SKSac	ScS	14 38 55.6	-0.3
GKP				LMZ	LR	14 57 19.8	
	comp=Z,65µm,35.6s						
GKP	Gorka Klasztor	73.63	330	*e*P	P	14 28 56.8	+0.4
GKP				*i* S	S	14 38 17.2	-0.8
GKP				*e*		14 38 55.6	
RRX	Edison Barstow	73.64	58	P	P	14 28 57.4	+0.5
	baz=311,SNR=14						
BFSC	Mount Baldy Ra	73.64	58	P	P	14 28 57.1	+0.1
	baz=311,SNR=187						
SHPR	Sheep Range	73.70	55	*e*P	P	14 28 57.9	+0.5
	comp=Z,511nm,1.3s						
CIS	Catalina Islan	73.71	60	P	P	14 28 57.4	+0.1
	baz=311,SNR=78						
MUD	Monsted U'grnd	73.79	335	*i* P	P	14 28 57.9	+0.7
	comp=Z,308nm,0.8s						
MUD	Monsted U'grnd	73.79	335	*i* P	P	14 28 57.9	+0.7
MUD				pmax	pmax		
	comp=Z,310nm,0.8s						
ELZG	Elazig	73.85	308	*i* P	P	14 28 59.3	+1.2
ELZG				IAML_P			
	comp=Z,2µm,0.8s						
IAS	Iasi	73.85	320	⇓*i*P	P	14 28 57.9	+0.1
SCI2	San Clemente I	73.90	60	P	P	14 28 58.5	+0.2
	baz=311,SNR=18						
TCRU	Three Creeks R	73.91	52	*e*P	P	14 28 59.6	+0.9
	comp=Z,180nm,0.8s						
TUQ	Turquoise Moun	73.94	57	P	P	14 28 59.0	+0.3
	baz=311,SNR=137						
HAVZ	Havza	73.96	311	*i* P	P	14 28 59.7	+1.1
HAVZ				IAML_P			
	comp=Z,4µm,0.7s						
SCER	sogukcermik	74.00	310	*i* P	P	14 29 01.0	+2.1
SCER				IAML_P			
	comp=Z,89nm,0.1s						
ULM	Lac du Bonnet	74.00	35	P	P	14 28 57.4	-1.2
	comp=Z,102nm,0.5s,baz=314,slow=6.7,SNR=167						
ULM				S	SKiKP	14 38 17.7	+1.6
	comp=Z,10.0nm,1.0s,baz=133,slow=21,SNR=1.2						
ULM				PKPPKP	P'P'df	14 56 29.6	-3.4
	comp=Z,3.7nm,1.0s,baz=120,slow=2.8,SNR=3.6						
ULM				LR	LR	15 04 10.5	
	comp=Z,22µm,18.6s,baz=330,slow=38						
RGN	Rugen	74.02	332	*e*P	P	14 28 59.0	+0.5
RGN				IAmb	IAmb	14 29 09.2	
	comp=Z,1µm,0.8s						
RGN				*e*S	SKiKP	14 38 19.0	+3.0
LEOM	Leova	74.04	319	⇑*i*P	P	14 28 59.3	+0.4
CCUT	Cedar City	74.08	53	*e*P	P	14 29 01.1	+1.4
HEC	Hector,Ludlow	74.08	57	P	P	14 28 59.9	+0.5
	baz=311,SNR=110						
BBRC	Big Bear Solar	74.09	58	P	P	14 28 59.9	+0.2
	baz=311,SNR=142						
MSU	Marysvale	74.14	52	*e*P	P	14 29 01.1	+1.1
MDND	Maddock	74.15	38	*e*P	P	14 28 59.7	+0.1
	comp=Z,2µm,1.0s						
MDND	Maddock	74.15	38	P	P	14 29 00.0	+0.5
	baz=317,SNR=93						
TMUT	Trail Mountain	74.17	51	*e*P	P	14 29 00.4	+0.2
	comp=Z,316nm,1.1s						
CUKAN	kangal_SIVAS	74.17	309	*i* P	P	14 29 01.1	+1.1
SZCU	Shurtz Canyon	74.22	53	*e*P	P	14 29 01.1	+0.7
	comp=Z,219nm,1.1s						
KWP	Kalwaria Pacla	74.24	324	*e*P	P	14 29 00.9	+0.9
KWP				*i* S	S	14 38 24.9	-0.1
KWP				*e*SKSac	SKSac	14 38 57.9	0.0
KWP				LMZ	LR	14 54 40.1	
	comp=Z,48µm,48.8s						
KWP	Kalwaria Pacla	74.24	324	*e*P	P	14 29 00.9	+0.9
KWP				*i* S	S	14 38 24.9	-0.1
KWP				*e*		14 38 57.9	
STKA	Stephens Creek	74.31	181	P	P	14 28 59.9	-0.6
	comp=Z,157nm,0.8s,baz=342,slow=7.5,SNR=89						
STKA				S	SKiKP	14 38 20.3	+3.4
	comp=Z,3.1nm,1.0s,baz=37,slow=12,SNR=1.5						
STKA				LR	LR	15 07 48.7	
	comp=Z,7µm,18.9s,baz=357,slow=41						
P17A	Butcher Ranch,	74.31	51	*e*P	P	14 29 01.5	+0.6
	comp=Z,880nm,1.3s						
PRAR	RASCA	74.35	321	⇓*i*P	P	14 29 00.6	-0.1
MURC	Murrieta	74.35	59	P	P	14 29 01.0	0.0
	baz=311,SNR=108						
Q16A	Castle Valley	74.44	51	*e*P	P	14 29 02.3	+0.6
	comp=Z,440nm,1.1s						
K22A	Casper	74.44	46	*e*P	P	14 29 01.4	-0.2
	comp=Z,724nm,1.3s						
K22A	Casper	74.44	46	P	P	14 29 01.5	-0.1
	baz=314,SNR=102						
MTPU	Mount Pierson	74.45	52	*e*P	P	14 29 03.0	+1.1
BIR	Birlad	74.49	319	⇓*i*P	P	14 29 02.2	+0.7
FORT	Forrest	74.51	193	*e*P	P	14 29 01.7	+0.2
	comp=Z,1µm,0.8s						
LCMT	Little Creek M	74.51	54	*e*P	P	14 29 03.3	+1.3
	comp=Z,254nm,1.1s						
MZR	Muzera	74.52	287	*i* P	P	14 29 01.8	-0.3
	SNR=84						
MZR	Muzera	74.52	287	P	P	14 29 02.4	+0.3
	SNR=52						
GMRC	Granite Mounta	74.53	57	P	P	14 29 02.6	+0.5
	baz=312,SNR=265						
AKCD	Akcadag	74.60	308	*i* P	P	14 29 04.0	+1.5
AKCD				IAML_P			
	comp=Z,6µm,1.0s						
CUALT	Altinyayla-SIV	74.61	309	*i* P	P	14 29 04.1	+1.6
BURAR	Bucovina Array	74.63	322	⇑*i*P	P	14 29 02.3	-0.1
SRU	San Rafael Swe	74.68	51	*e*P	P	14 29 03.7	+0.7
	comp=Z,952nm,1.2s						
CUGUR	Gurin_SVAS	74.69	309	*i* P	P	14 29 05.6	+2.6
TLCR		74.69	318	⇑*i*P	P	14 29 02.5	-0.2
RSSD	Black Hills	74.70	43	*e*P	P	14 29 02.8	-0.2
	comp=Z,544nm,0.9s						
RSSD	Black Hills	74.70	43	*e*P	P	14 29 02.8	-0.2
RSSD				pmax	pmax		
	comp=Z,544nm,0.9s						
RSSD	Black Hills	74.70	43	P	P	14 29 03.0	0.0
	baz=315						
BIZ	Bicaz	74.72	321	⇑*i*P	P	14 29 03.4	+0.6
RWWY	Rawlins	74.75	47	*e*P	P	14 29 03.8	+0.4
	comp=Z,2µm,1.4s						
KNB	Kanab	74.76	54	*e*P	P	14 29 04.7	+1.2
	comp=Z,357nm,1.1s						
GIUM	Giurgiulesti	74.77	319	⇓*i*P	P	14 29 04.2	+1.1
PKCU	Pink Cliffs	74.78	53	*e*P	P	14 29 05.1	+1.4
	comp=Z,731nm,1.6s						
CUSAR	Sarkisla-SIVAS	74.80	310	*i* P	P	14 29 05.0	+1.4
PFO	Pinyon Flats O	74.81	58	*e*P	P	14 29 03.4	-0.4
	comp=Z,212nm,0.9s						
PFO	Pinyon Flats O	74.81	58	*e*P	P	14 29 03.4	-0.4
PFO				pmax	pmax		
	comp=Z,212nm,0.9s						
PFO	Pinyon Flats O	74.81	58	P	P	14 29 03.9	+0.2
	baz=312,SNR=174						
XPFO	Pion Flat	74.81	58	*e*P	P	14 29 03.4	-0.4
	comp=Z,245nm,1.0s						
BELC	Belle Mtn. Jos	74.84	58	P	P	14 29 04.0	+0.1
	baz=312,SNR=148						
109C	Camp Elliot, M	74.88	59	P	P	14 29 04.3	+0.3
	baz=311,SNR=20						
CPE	Camp Elliot	74.88	59	*e*P	P	14 29 05.0	+1.1
COAL	Corum-Alaca	74.93	311	*i* P	P	14 29 06.0	+1.7
COAL				IAML_P			
	comp=Z,2µm,0.9s						
ATAB	Bozova	74.94	307	*i* P	P	14 29 06.5	+2.2
ATAB				IAML_P			
	comp=Z,11µm,0.8s						
OJC	Ojcow	75.01	326	*e*P	P	14 29 05.2	+0.8
OJC				*i* S	S	14 38 31.8	-1.8
OJC				*e*SKSac	SKKSac	14 39 05.3	+1.4
OJC				LMZ	LR	14 55 19.9	
	comp=Z,70µm,48.6s						
OJC	Ojcow	75.01	326	*e*P	P	14 29 05.1	+0.6
	comp=Z,2µm,1.0s						
OJC	Ojcow	75.01	326	*e*P	P	14 29 05.2	+0.8
OJC				*i* S	S	14 38 31.8	-1.8
OJC				*e*		14 39 05.3	
CFR	Carcaliu	75.03	318	⇑*i*P	P	14 29 04.8	+0.2
ELBS	KAHRAMANMARAS_	75.04	309	*i* P	P	14 29 06.4	+1.5
ELBS				IAML_P			
	comp=Z,2µm,0.7s						
PETR	Petresti	75.07	319	⇑*i*P	P	14 29 06.0	+1.1
ILGA	Ilgaz	75.08	312	*e*P	P	14 29 06.5	+1.2
	comp=Z,639nm,1.1s						
ILGA	Ilgaz	75.08	312	*i* P	P	14 29 06.7	+1.4
ILGA				IAML_P			
	comp=Z,5µm,0.6s						
ODBI	Odobesti	75.13	319	⇓*i*P	P	14 29 07.1	+1.9
UZH	Uzhgorod	75.17	324	*i* P	P	14 29 05.4	0.0
UZH				*e*		14 29 31.4	
UZH				*i*		14 31 52.8	
UZH				*i* S	S	14 38 33.7	-1.6
UZH				MLR	MLR		
	comp=Z,4µm,16.0s						
NEE2	Needles Airpor	75.18	56	P	P	14 29 06.2	+0.4
	baz=312,SNR=37						
VRI	Vrincioaia	75.21	320	⇑*i*P	P	14 29 06.0	+0.3
PLOR	Plostina	75.26	320	⇓*i*P	P	14 29 06.3	+0.3
O20A	White River Ci	75.26	49	*e*P	P	14 29 06.8	+0.5
O20A	White River Ci	75.26	49	P	P	14 29 06.5	+0.2
	baz=314,SNR=108						
IRM	Iron Mountain	75.26	57	P	P	14 29 06.8	+0.5
	baz=312,SNR=236						
BAR	Barrett	75.29	59	*e*P	P	14 29 06.7	+0.3
	comp=Z,174nm,0.9s						
MONP2	Monument Peak	75.31	59	P	P	14 29 07.0	+0.2
	baz=312,SNR=91						
BMR	Baia Mare	75.36	323	⇓*i*P	P	14 29 07.3	+0.8
BC3	Big Chuckawall	75.41	58	P	P	14 29 07.5	+0.3
	baz=312,SNR=172						
W13A	Hualapai Mount	75.41	56	*e*P	P	14 29 08.0	+0.7
	comp=Z,246nm,1.0s						
ARCR	ARCALIA	75.42	322	⇑*i*P	P	14 29 07.9	+1.1
TIRR	Tirgusor	75.42	318	*e*P	P	14 29 07.2	+0.4
	comp=Z,350nm,1.0s						
TIRR	Tirgusor	75.42	318	⇓*i*P	P	14 29 06.7	-0.1
TIRR	Tirgusor	75.42	318	*e*P	P	14 29 07.2	+0.4
TIRR				pmax	pmax		
	comp=Z,350nm,1.0s						
NIE	Niedzica	75.42	325	*e*P	P	14 29 07.9	+1.1

NIE				eS	S	14 38 38.0	-0.1
NIE				eSKSac	ScS	14 39 11.2	+0.7
NIE				LMZ	LR	14 55 41.3	
	comp=Z,28µm,46.3s						
NIE	Niedzica	75.42	325	eP	P	14 29 07.9	+1.1
NIE				eS	S	14 38 38.0	-0.1
NIE				e		14 39 11.2	
BIGH	Upper Bighouse	75.43	343	eP	P	14 29 06.6	0.0
BIGH				e		14 38 30.1	
BIGH				IAMs_20	IAMs_20	14 54 12.2	
	comp=Z,89µm,60.2s						
TRPA	Tarpa	75.44	323	⇑iP	P	14 29 07.5	+0.6
TRPA	Tarpa	75.44	323	⇑iP	P	14 29 05.1	-1.8
TRPA				⇓ePP	PP	14 31 53.0	-3.6
TRPA				eS	S	14 38 40.0	+1.7
GZT	Gaziantep	75.44	308	i P	P	14 29 09.0	+1.6
GZT				IAML_P			
	comp=Z,7µm,1.0s						
GRER		75.45	319	⇑iP	P	14 29 08.8	+1.8
BTIN	Bartın	75.45	314	i P	P	14 29 07.7	+0.6
BTIN				IAML_P			
	comp=Z,4µm,0.7s						
U15A	North Rim	75.47	54	eP	P	14 29 08.9	+1.2
	comp=Z,328nm,1.1s						
SIRC	Yozgat	75.47	310	i P	P	14 29 07.6	+0.1
SIRC				IAML_P			
	comp=Z,3µm,0.7s						
HARR	Harsova	75.48	318	⇓iP	P	14 29 08.0	+0.8
MLA1	Latheron	75.48	342	eP	P	14 29 07.5	+0.5
OZUR		75.49	320	⇓iP	P	14 29 08.3	+1.0
GUNE	Kayseri	75.50	310	i P	P	14 29 09.3	+1.6
TLB	Topalu	75.51	318	⇓iP	P	14 29 07.7	+0.3
BBOO	Buckleboo	75.51	186	eP	P	14 29 07.1	-0.2
	comp=Z,381nm,1.0s						
RUE	Ruedersdorf	75.53	331	eP	P	14 29 07.9	+0.5
RUE				IAmb	IAmb	14 29 15.3	
	comp=Z,1µm,1.1s						
RUE				eS	S	14 38 31.1	-8.0
KBUK	KARABUK-Merkez	75.53	313	i P	P	14 29 09.4	+1.8
KBUK				IAML_P			
	comp=Z,5µm,0.8s						
EFOR	EFORIE	75.58	317	⇑iP	P	14 29 08.4	+0.6
MFTR	Murfatlar	75.61	318	⇑iP	P	14 29 08.7	+0.7
ELDT	Eldivan	75.62	312	i P	P	14 29 11.5	+3.2
ELDT				IAML_P			
	comp=Z,313nm,0.3s						
SWSC	Sam W. Stewart	75.66	58	P	P	14 29 08.5	+0.1
	baz=312,SNR=65						
IKP	In-Ko-Pah, Jac	75.66	59	P	P	14 29 09.0	+0.4
	baz=312,SNR=106						
CVDA	Cernavoda	75.69	318	⇓iP	P	14 29 10.0	+1.6
DELI	KIRIKKALE	75.70	312	i P	P	14 29 09.5	+0.8
CDAG	Cicekdag	75.71	311	i P	P	14 29 09.8	+1.1
CDAG				IAML_P			
	comp=Z,5µm,0.6s						
MORW	Morawa	75.73	204	eP	P	14 29 08.2	-0.5
	comp=Z,712nm,1.2s						
RAC	Raciborz	75.76	327	eP	P	14 29 09.6	+0.9
RAC				e*PP	pP	14 29 36.7	+1.2
RAC				eS	S	14 38 40.6	-1.2
RAC				MLR	MLR		
	comp=Z,50µm,26.5s						
DOPR	Dopca	75.77	320	⇓iP	P	14 29 10.0	+1.1
PDMCI	Parker Dam,Lak	75.78	56	P	P	14 29 09.6	+0.5
	baz=312,SNR=185						
PGOR	Pogoanele	75.79	319	⇑iP	P	14 29 10.5	+1.5
CEI	Carei	75.81	323	⇓iP	P	14 29 09.9	+0.8
AMRR	Amara	75.83	318	⇓iP	P	14 29 10.1	+0.9
ISR	Istrita	75.85	319	⇑iP	P	14 29 09.5	+0.1
MLR	Muntele Rosu	75.86	320	⇓iP	P	14 29 09.9	+0.3
SAIM	ADANA	75.88	309	i P	P	14 29 11.5	+1.7
SAIM				IAML_P			
	comp=Z,5µm,0.8s						
PV09	Paradox Valley	75.89	50	eP	P	14 29 11.0	+0.9
KSP	Ksiaz	75.91	328	eP	P	14 29 10.4	+0.8
KSP				i S	S	14 38 43.4	-0.1
KSP				eSKSac	SKKSac	14 39 11.8	+1.1
KSP				LMZ	LR	14 55 49.1	
	comp=Z,102µm,48.7s						
KSP	Ksiaz	75.91	328	eP	P	14 29 10.4	+0.8
KSP				i S	S	14 38 43.4	-0.1
KSP				e		14 39 11.8	
Y12C	Blythe	75.92	57	eP	P	14 29 11.6	+1.7
	comp=Z,512nm,1.0s						
Y12C	Blythe	75.92	57	P	P	14 29 10.6	+0.7
	baz=312,SNR=152						
IVI	Ivigtut	75.95	6	eP	P	14 29 10.1	+0.5
PHWY	Pilot Hill	75.96	46	eP	P	14 29 10.6	+0.2
	comp=Z,273nm,1.1s						
ICOR	Ion Corvin	75.97	318	⇑iP	P	14 29 11.1	+1.1
LANS	Liptovska Anna	75.97	326	eP	P	14 29 11.5	+1.5
LANS	Liptovska Anna	75.97	326	eP	P	14 29 11.5	+1.5
LANS				ePP	PP	14 31 54.6	-6.5
OKC	Ostrava-Krasne	75.97	327	eP	P	14 29 10.3	+0.4
OKC				ePP	PP	14 32 01.7	+0.7
OKC				eS	S	14 38 43.6	-0.6
OKC				AMS	AMS	15 06 00.0	
	comp=Z,27µm,17.7s						
OKC	Ostrava-Krasne	75.97	327	eP	P	14 29 10.3	+0.4
OKC				e		14 32 01.7	
OKC				eS	S	14 38 43.6	-0.6
OKC				MLR	MLR		
	comp=Z,27µm,17.7s						
N23A	Red Feather La	75.98	47	eP	P	14 29 11.4	+0.9
	comp=Z,400nm,1.0s						
N23A	Red Feather La	75.98	47	P	P	14 29 11.3	+0.7
	baz=315,SNR=109						
ANDN	Andirin	76.00	308	i P	P	14 29 11.2	+0.8
ANDN				IAML_P			
	comp=Z,8µm,1.0s						
AVNS	Nevsehir-Avano	76.01	310	i P	P	14 29 11.9	+1.4
AVNS				IAML_P			
	comp=Z,4µm,0.8s						
CJR	Cluj-Napoca	76.04	322	⇓iP	P	14 29 11.0	+0.5
BR101	Keskin Array S	76.04	311	eP	P	14 29 10.5	-0.2
BR131	Keskin Array S	76.04	311	eP	P	14 29 10.8	+0.1
BR131	Keskin Array S	76.04	311	P	P	14 29 10.9	+0.2
	SNR=97						
BRTR	Keskin Array B	76.04	311	P	P	14 29 10.5	-0.2
	comp=Z,80nm,0.8s,baz=64,slow=3.9,SNR=95						
BRTR				PP	PP	14 32 06.1	+4.0
	comp=Z,132nm,1.0s,baz=63,slow=6.6,SNR=6.2						
BRTR				S	S	14 38 46.1	+0.5
	comp=Z,1.2nm,0.9s,baz=48,slow=6.9,SNR=2.3						
BRTR				LR	LR	15 09 11.0	
	comp=Z,11µm,18.9s,baz=35,slow=41						
PSN	Preselentsi	76.09	317	i P	P	14 29 11.7	+1.0
MDB	Medias	76.11	321	⇓iP	P	14 29 11.9	+1.1
MCD	Coleburn Disti	76.12	342	eP	P	14 29 10.7	+0.1
KUZU	Kuzuini	76.13	307	i P	P	14 29 13.5	+2.4
KUZU				IAML_P			
	comp=Z,480nm,0.4s						
BCAM	Yenicaga	76.13	313	i P	P	14 29 12.6	+1.5
BCAM				IAML_P			
	comp=Z,2µm,0.9s						
SECR		76.14	319	⇑iP	P	14 29 12.6	+1.6
CMDR	Camlidere-ANKA	76.14	313	i P	P	14 29 12.8	+1.6
CMDR				IAML_P			
	comp=Z,2µm,0.6s						
NRS	Narsarsuaq	76.18	4	eP	P	14 29 11.4	+0.6
	comp=Z,463nm,1.1s						
NRS	Narsarsuaq	76.18	4	i P	P	14 29 11.5	+0.7
	comp=Z,376nm,1.0s						
NRS	Narsarsuaq	76.18	4	eP	P	14 29 11.4	+0.6
NRS				pmax	pmax		
	comp=Z,463nm,1.1s						
LEHL	Lehliu	76.19	319	⇑iP	P	14 29 12.2	+1.0
GLA	Glamis	76.20	58	eP	P	14 29 12.8	+1.2
GLA	Glamis	76.20	58	P	P	14 29 12.2	+0.7
	baz=312,SNR=65						
YAHY	KAYSERI_Yahyal	76.21	309	i P	P	14 29 13.1	+1.5
YAHY				IAML_P			
	comp=Z,3µm,0.8s						
RASA	Rasa	76.22	318	⇑iP	P	14 29 12.1	+0.7
PLAR	PLOIESTI	76.24	319	⇓iP	P	14 29 12.7	+1.1
MORC	Moravsky Berou	76.27	327	eP	P	14 29 12.3	+0.6
	comp=Z,809nm,1.0s						
MORC	Moravsky Berou	76.27	327	⇑iP	P	14 29 12.2	+0.5
MORC	Moravsky Berou	76.27	327	eP	P	14 29 12.3	+0.6
MORC				pmax	pmax		
	comp=Z,809nm,1.0s						
MORC	Moravsky Berou	76.27	327	⇑iP	P	14 29 11.9	+0.2
MORC				i S	S	14 38 46.9	-0.6
UPC	Upice	76.29	328	eP	P	14 29 12.2	+0.5
UPC				epP	pP	14 29 42.4	+3.9
UPC				ePP	PP	14 32 05.0	+1.3
UPC				eS	S	14 38 48.0	+0.4
UPC				AMS	AMS	15 02 50.0	
	comp=Z,44µm,23.4s						
UPC	Upice	76.29	328	eP	P	14 29 12.2	+0.5
UPC				e		14 29 42.4	
UPC				e		14 32 05.0	
UPC				eS	S	14 38 48.0	+0.4
UPC				MLR	MLR		
	comp=Z,44µm,23.4s						
LTVH	Ltavrtes, Hu	76.29	323	⇑iP	P	14 29 13.0	+1.3
LTVH				eS	S	14 38 48.0	+0.4
DPC	Dobruska-Polom	76.29	328	eP	P	14 29 12.5	+0.7
DPC				ex	x	14 29 43.7	
DPC				ePP	PP	14 32 05.5	+1.7
DPC				eS	S	14 38 48.6	+0.8
DPC				AMS	AMS	15 02 10.0	
	comp=Z,48µm,22.4s						
DPC	Dobruska-Polom	76.29	328	eP	P	14 29 12.5	+0.7
DPC				e		14 29 43.7	
DPC				e		14 32 05.5	
DPC				eS	S	14 38 48.6	+0.8
DPC				MLR	MLR		
	comp=Z,48µm,22.4s						
MME1	Meikle Cairn	76.30	342	⇑eP	P	14 29 12.4	+0.7
SULR		76.31	319	⇓iP	P	14 29 12.6	+0.7
VOIR		76.32	320	⇑iP	P	14 29 12.9	+0.8
KRLC	Kraliky	76.33	328	eP	P	14 29 12.9	+0.9
KRLC				ePP	PP	14 32 06.0	+1.9
KRLC				eS	S	14 38 46.8	-1.4
KRLC	Kraliky	76.33	328	eP	P	14 29 12.9	+0.9
KRLC				e		14 32 06.0	
KRLC				eS	S	14 38 46.8	-1.4
YIGI	Dzce	76.36	314	i P	P	14 29 12.1	-0.2
YIGI				IAML_P			
	comp=Z,2µm,0.5s						
DRGR		76.38	322	⇓iP	P	14 29 12.9	+0.5
ANTO	Ankara	76.41	312	eP	P	14 29 13.3	+0.6
	comp=Z,438nm,0.8s						
ANTO	Ankara	76.41	312	⇓iP	P	14 29 13.1	+0.4
ANTO	Ankara	76.41	312	eP	P	14 29 13.3	+0.6
ANTO				pmax	pmax		
	comp=Z,438nm,0.8s						
ANTO	Ankara	76.41	312	P	P	14 29 13.8	+1.1
	SNR=92						
BBAL	Bala	76.45	312	i P	P	14 29 13.5	+0.5
BBAL				IAML_P			
	comp=Z,3µm,0.7s						
PV01	Paradox Valley	76.46	50	eP	P	14 29 13.6	+0.3
	comp=Z,910nm,1.6s						
MTUR	Matau	76.47	320	⇑iP	P	14 29 13.3	+0.3
MDO	Dochfour	76.50	343	⇑eP	P	14 29 12.7	0.0
KIBS	BOLU	76.53	313	i P	P	14 29 14.6	+1.2
KIBS				IAML_P			
	comp=Z,8µm,0.7s						
DRUM	Mains of Drumt	76.55	341	eP	P	14 29 11.9	-1.1
DRUM				e		14 38 39.9	
DRUM				IAMs_20	IAMs_20	14 56 42.3	
	comp=Z,58µm,38.2s						
ARR	Arges	76.57	320	⇑iP	P	14 29 14.9	+1.4
SMCO	Snowmass	76.63	49	eP	P	14 29 14.6	+0.2
	comp=Z,339nm,0.8s						
WUAZ	Wupatki	76.64	54	eP	P	14 29 15.5	+1.4
	comp=Z,443nm,1.0s						
WUAZ	Wupatki	76.64	54	P	P	14 29 14.7	+0.5
	baz=313,SNR=157						
KAC	Achnashellach	76.64	343	eP	P	14 29 13.3	-0.3
AKSY	AKSARAY - Alti	76.73	311	i P	P	14 29 15.7	+1.2
AKSY				IAML_P			
	comp=Z,2µm,0.9s						
Y14A	Wickenburg	76.73	56	eP	P	14 29 15.4	+0.8
VYHS	Vyhne	76.74	326	eP	P	14 29 14.9	+0.5
VYHS				ePP	PP	14 31 55.2	-12
VYHS				eS	S	14 38 53.9	+1.2
VYHS				eL	L	14 54 41.4	
PSZ	Piszkesteto	76.75	325	eP	P	14 29 16.1	+1.6
PSZ	Piszkesteto	76.75	325	⇑iP	P	14 29 15.4	+0.9
PSZ	Piszkesteto	76.75	325	⇑iP	P	14 29 15.0	+0.6
PSZ				ePP	PP	14 32 09.1	+1.4
PSZ				eS	S	14 38 53.1	+0.2
CLL	Collm	76.77	330	eP	P	14 29 14.1	-0.3
	comp=Z,1µm,1.0s						
CLL	Collm	76.77	330	eP	P	14 29 14.0	-0.4
	comp=Z,569nm,0.8s						
CLL				i Pmax		14 29 19.6	
	comp=Z,1µm,1.0s						
CLL				i		14 29 24.0	
	comp=Z,1µm,1.0s						
CLL				epP	pP	14 29 45.0	+3.8
CLL				e		14 31 55.0	
CLL				ePP	PP	14 32 11.0	+3.4
CLL				e(pPP)		14 32 39.0	
CLL				ePPP	PPP	14 33 54.0	
CLL				eS	S	14 38 53.0	+0.2
CLL				e		14 39 03.0	
CLL				eScS	ScS	14 39 23.0	+1.8
CLL				eSP	SKKSac	14 39 29.0	+12
CLL				esSS		14 44 31.0	
CLL				e		14 48 36.0	
CLL				ePKPPKPdf		14 56 31.0	
CLL	Collm	76.77	330	eP	P	14 29 14.1	-0.3
CLL				pmax	pmax		
	comp=Z,1µm,1.0s						
BRG	Berggiesshubel	76.78	330	⇑iP	P	14 29 14.8	+0.3
	comp=Z,98nm,0.9s						
BRG				i		14 29 21.2	
	comp=Z,407nm,1.0s						
BRG				i sP	sP	14 29 49.7	-3.0
	comp=Z,180nm,0.9s						
BRG				i PP	PP	14 32 02.2	-5.5
	comp=Z,179nm,1.1s						
BRG				S	S	14 38 54.0	+1.1
BRG				SS	SS	14 43 46.0	-3.7
BRG				ePKPPKP		14 56 15.1	
	comp=Z,30nm,1.8s						
	comp=N,38µm,26.9s						
	comp=E,26µm,30.2s						
	comp=Z,48µm,29.2s						
BRG	Berggiesshubel	76.78	330	⇑iP	P	14 29 14.8	+0.3
BRG				i		14 29 21.2	
BRG				S	S	14 38 54.0	+1.1
BRG				SS	SS	14 43 46.0	-3.7
BRG				pmax	pmax		
	comp=Z,98nm,0.9s						
BRG				MLR	MLR		
	comp=N,38µm,26.9s						
SGRR	Singureni	76.78	319	⇑iP	P	14 29 15.0	+0.4
GOLR		76.81	320	⇑iP	P	14 29 15.6	+0.8
PVCC	Panska Ves	76.82	329	eP	P	14 29 15.0	+0.3
PVCC				ex	x	14 29 46.4	
PVCC				ePP	PP	14 32 09.5	+1.4
PVCC				eS	S	14 38 53.6	+0.2
PVCC				AMS	AMS	15 04 10.0	
	comp=N,33µm,19.6s						
PVCC	Panska Ves	76.82	329	eP	P	14 29 15.0	+0.3
PVCC				e		14 29 46.4	
PVCC				e		14 32 09.5	
PVCC				eS	S	14 38 53.6	+0.2
PVCC				MLR	MLR		
	comp=Z,33µm,19.6s						
KKUL	Konya-Kulu	76.83	311	i P	P	14 29 16.4	+1.3
KKUL				IAML_P			
	comp=Z,4µm,0.7s						
PRD	Provadia	76.83	317	i P	P	14 29 15.3	+0.4
KOLL	Kolacno	76.86	326	eP	P	14 29 16.0	+1.0
KOLL	Kolacno	76.86	326	eP	P	14 29 16.0	+1.0
KOLL				ePP	PP	14 31 58.3	-10
KPL	Plockton	76.87	343	eP	P	14 29 15.2	+0.4
KPL				e		14 38 50.6	
KPL				IAMs_20	IAMs_20	14 54 55.0	
	comp=Z,72µm,54.4s						
BTAS	Taskesti	76.88	314	i P	P	14 29 15.7	+0.4
BTAS				IAML_P			
	comp=Z,4µm,0.6s						
DMTO	DMTO	76.89	282	P	P	14 29 15.5	-0.2
DMTO				P	P	14 29 15.5	-0.2
LOT	Lotru	76.91	321	⇓iP	P	14 29 16.0	+0.5
YURE	YUREGIR	76.93	308	i P	P	14 29 17.6	+1.9
ISCO	Idaho Springs	76.94	47	eP	P	14 29 16.9	+0.9
	comp=Z,654nm,1.3s						
ISCO	Idaho Springs	76.94	47	P	P	14 29 16.6	+0.6
	baz=315,SNR=123						
SUSD	Miller	76.97	41	P	P	14 29 15.3	-0.4
	baz=318,SNR=55						
DEV	Deva	76.98	322	⇓iP	P	14 29 16.8	+1.1
EDU	Dundee	77.00	342	eP	P	14 29 15.4	-0.3
VRAC	Vranov	77.01	327	⇑iP	P	14 29 16.6	+0.7
VRAC	Vranov	77.01	327	⇑iP	P	14 29 16.4	+0.5
VRAC				i S	S	14 38 56.6	+1.0
HUMR	Humele	77.03	320	⇓iP	P	14 29 17.2	+1.2
113A	Mohawk Valley,	77.05	57	eP	P	14 29 16.6	+0.3
	comp=Z,286nm,1.0s						
GULE	Gulek	77.11	309	i P	P	14 29 17.8	+1.0
GULE				IAML_P			
	comp=Z,6µm,0.5s						
AUMIH	MIHALICIK	77.12	313	i P	P	14 29 17.9	+1.1
MVCO	Mesa Verde	77.15	51	eP	P	14 29 17.8	+0.7
	comp=Z,363nm,0.8s						
MVCO	Mesa Verde	77.15	51	P	P	14 29 17.5	+0.4
	baz=314,SNR=257						
YAYL	Yayladag	77.20	307	i P	P	14 29 18.5	+1.2
YAYL				IAML_P			
	comp=Z,12µm,0.9s						
PRA	Prague	77.24	329	eP	P	14 29 17.4	+0.3
PRA				epP	pP	14 29 46.4	+2.4
PRA				ePP	PP	14 32 14.1	+2.5
PRA				eS	S	14 38 58.3	+0.3
PRA				AMS	AMS	15 04 10.0	
	comp=Z,36µm,20.8s						
PRA	Prague	77.24	329	eP	P	14 29 17.4	+0.3
PRA				e		14 29 46.4	
PRA				e		14 32 14.1	
PRA				eS	S	14 38 58.3	+0.3
PRA				MLR	MLR		
	comp=Z,36µm,20.8s						
SIRR	Siria	77.25	323	⇑iP	P	14 29 16.2	-1.0
PRU	Pruhonice	77.27	329	eP	P	14 29 17.4	+0.2
PRU				epP	pP	14 29 47.0	+2.9
PRU				ePP	PP	14 32 13.4	+1.5
PRU				eS	S	14 38 57.8	-0.5
PRU				AMS	AMS	15 04 00.0	
	comp=Z,37µm,23.6s						
PRU	Pruhonice	77.27	329	eP	P	14 29 17.4	+0.2
PRU				e		14 29 47.0	
PRU				e		14 32 13.4	
PRU				eS	S	14 38 57.8	-0.5
PRU				MLR	MLR		
	comp=Z,37µm,23.6s						
KRUC	Moravsky	77.29	327	⇑iP	P	14 29 17.6	+0.2
KRUC				i S	S	14 38 59.5	+1.0
SMOL	Smolenice	77.31	326	eP	P	14 29 18.6	+1.1
SMOL	Smolenice	77.31	326	eP	P	14 29 18.6	+1.1
SMOL				ePP	PP	14 31 59.8	-12
X16A	Lo Mia Camp, P	77.35	55	eP	P	14 29 19.5	+1.3
	comp=Z,305nm,0.9s						
INVG	Invergeldie, C	77.35	342	eP	P	14 29 17.6	0.0
INVG				IAMs_20	IAMs_20	14 55 30.2	
	comp=Z,79µm,58.6s						
KERG	Konya-Eregli	77.39	310	i P	P	14 29 19.0	+0.7
KERG				IAML_P			
	comp=Z,1µm,0.8s						
AUSIV	SIVRIHISAR	77.39	312	i P	P	14 29 18.6	+0.4
GZR	Gura Zlata	77.41	321	⇑iP	P	14 29 18.1	-0.1
BUD	Budapest	77.45	325	⇑iP	P	14 29 18.0	-0.3
BUD				ePP	PP	14 32 13.1	-0.4
BUD				eS	S	14 39 02.1	+1.7
TREC	Trest	77.46	328	eP	P	14 29 19.8	+1.4
TREC				ex	x	14 29 52.4	
TREC				ePP	PP	14 32 16.0	+2.5
TREC				eS	S	14 39 03.3	+2.8
TREC				AMS	AMS	15 02 40.0	
	comp=Z,61µm,23.7s						
TREC	Trest	77.46	328	eP	P	14 29 19.8	+1.4
TREC				e		14 29 52.4	
TREC				e		14 32 16.0	
TREC				eS	S	14 39 03.3	+2.8
TREC				MLR	MLR		
	comp=Z,61µm,23.7s						
MODS	Modra-Piesok	77.48	326	eP	P	14 29 19.4	+0.9
MODS				ePP	PP	14 32 00.3	-13
MODS				eS	S	14 39 04.3	+3.6
MODS				eL	L	14 55 02.5	
ESY	Stoneypath	77.48	341	eP	P	14 29 17.9	-0.5
ZIMR		77.50	319	⇑iP	P	14 29 18.8	+0.2
SZH	Strazhica	77.51	318	i P	P	14 29 19.0	+0.3
RBK	Rabkut	77.57	282	P	P	14 29 20.0	+0.5
EYMN	Ely	77.61	34	eP	P	14 29 18.3	-0.9
	comp=Z,758nm,0.9s						
EYMN	Ely	77.61	34	P	P	14 29 18.9	-0.3
	baz=322,SNR=202						
WHFO	Wadi Hawf	77.61	283	P	P	14 29 19.7	0.0
	SNR=13						
EDI	Edinburgh	77.61	341	eP	P	14 29 18.4	-0.6
EDI				e		14 38 59.5	
EDI				IAMs_20	IAMs_20	14 56 49.3	
	comp=Z,68µm,45.3s						
EAB	Aberfoyle	77.64	342	eP	P	14 29 18.2	-1.0
ZST	Bratislava	77.69	326	eS	S	14 39 01.7	-1.2
VLAD	Vladila	77.70	320	⇑iP	P	14 29 20.0	+0.3
S22A	4UR Ranch, Cre	77.72	50	eP	P	14 29 20.9	+0.5
S22A	4UR Ranch, Cre	77.72	50	P	P	14 29 20.9	+0.5
	baz=315,SNR=180						
KDHN	Kadinhani	77.73	311	i P	P	14 29 20.2	+0.1
KDHN				IAML_P			
	comp=Z,1µm,0.9s						
CRAR	CRAIOVA	77.74	320	⇑iP	P	14 29 20.8	+0.8
BZS	Buzias	77.77	322	⇓iP	P	14 29 20.0	-0.1
SRE	Strehaia	77.77	321	⇑iP	P	14 29 19.5	-0.6
JMB	Yambol	77.78	317	i P	P	14 29 20.0	-0.2
Q24A	Divide	77.78	48	eP	P	14 29 21.2	+0.5
	comp=Z,275nm,1.0s						
Q24A	Divide	77.78	48	P	P	14 29 21.1	+0.4
	baz=316,SNR=146						
PVL	Pavlikeni	77.84	319	i P	P	14 29 21.8	+1.3
NKC	Novy Kostel	77.85	330	eP	P	14 29 20.9	+0.4
NKC				ex	x	14 29 55.3	
NKC				ePP	PP	14 32 13.9	-2.9
NKC				eS	S	14 39 05.0	+0.4
NKC				AMS	AMS	15 04 10.0	
	comp=Z,26µm,23.6s						
TIM	Timisoara	77.85	323	⇓iP	P	14 29 21.2	+0.7
W18A	Petrified Fore	77.88	53	eP	P	14 29 22.6	+1.4
W18A	Petrified Fore	77.88	53	P	P	14 29 21.8	+0.6
	baz=314,SNR=12						
CAN	Canberra	77.92	175	eP	P	14 29 21.6	+0.7
CAN	Canberra	77.92	175	eP	P	14 29 21.6	+0.7
HERR	Herculane	77.97	321	⇑iP	P	14 29 20.5	-0.7
KONT	Konya--Tatoy	78.00	311	i P	P	14 29 22.7	+1.1
PGBU	Gleniffferbraes	78.02	342	eP	P	14 29 21.3	+0.1
PGBU				IAMs_20	IAMs_20	14 55 53.2	
	comp=Z,62µm,50.1s						
KIZK	Mersin	78.03	309	i P	P	14 29 22.6	+0.9
KIZK				IAML_P			
	comp=Z,12µm,0.6s						
KMER	Konya-Meram	78.12	311	i P	P	14 29 22.8	+0.4
KMER				IAML_P			
	comp=Z,3µm,0.6s						
EKA	Eskdalemuir Ar	78.14	341	LR	LR	15 09 50.2	
	comp=Z,7µm,18.6s,baz=45,slow=40						
X18A	Snowflake	78.16	54	eP	P	14 29 23.4	+0.7
	comp=Z,254nm,1.0s						
BANR	Banloc	78.16	322	⇓iP	P	14 29 23.4	+1.1
ESK	Eskdalemuir	78.17	341	eP	P	14 29 22.4	+0.3
	comp=Z,321nm,0.7s						
ESK	Eskdalemuir	78.17	341	eP	P	14 29 20.8	-1.3
ESK				IAMs_20	IAMs_20	14 58 09.4	
	comp=Z,53µm,33.8s						
ESK	Eskdalemuir	78.17	341	i P	P	14 29 22.9	+0.8
PUNG	Punghina	78.19	321	⇑iP	P	14 29 22.9	+0.5
214A	Organ Pipe Nat	78.19	57	P	P	14 29 23.2	+0.4
	baz=313,SNR=100						
BOLV	Bolvadin	78.23	312	i P	P	14 29 23.1	+0.2
BOLV				IAML_P			
	comp=Z,8µm,0.6s						
DOGA	KONYA_Doganhis	78.27	311	i P	P	14 29 23.7	+0.5
DOGA				IAML_P			
	comp=Z,3µm,0.7s						
EDMD	Edmundbyers	78.31	340	eP	P	14 29 22.3	-0.6
EDMD				e		14 39 10.4	
EDMD				IAMs_20	IAMs_20	14 57 33.9	
	comp=Z,69µm,40.5s						
ABTO	Aybut	78.32	283	P	P	14 29 24.7	+1.1
	SNR=20						
SOP	Sopron	78.32	326	i P	P	14 29 23.1	0.0
SOP				⇓ePP	PP	14 32 21.1	+0.4

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SOP                                 eS        S         14 39 09.0 -0.6
KHC    Kasperske Hory      78.33 329 eP        P         14 29 23.8 +0.6
       comp=Z,258nm,1.0s
KHC    Kasperske Hory      78.33 329 eP        P         14 29 23.1 -0.1
KHC                                 epP       pP        14 29 54.3 +4.2
KHC                                 ex        x         14 29 57.1
KHC                                 ePP       PP        14 32 22.5 +1.7
KHC                                 eS        S         14 39 10.0 +0.2
KHC                                  AMS      AMS       15 06 40.0
       comp=Z,36µm,18.0s
KHC    Kasperske Hory      78.33 329 eP        P         14 29 23.1 -0.1
KHC                                 e                   14 29 54.3
KHC                                 e                   14 32 22.5
KHC                                 eS        S         14 39 10.0 +0.2
KHC                                  MLR      MLR
       comp=Z,36µm,18.0s
WTSB   Winterswijk         78.34 334 eP        P         14 29 22.7 -0.4
       comp=Z,2µm,1.6s
MDVR   Moldovita           78.36 322⇓iP        P         14 29 23.0 -0.5
BHH    Howats Hill         78.38 341⇑eP        P         14 29 23.7 +0.4
GDLE   Glaisdale, N Y      78.39 339 eP        P         14 29 22.8 -0.6
GDLE                                 IAMs_20  IAMs_20   14 59 11.1
       comp=Z,48µm,27.2s
TIH    Tihany              78.39 325⇑iP        P         14 29 22.1 -1.4
TIH                                 ePP       PP        14 32 15.0 -6.3
TIH                                 eS        S         14 39 10.1 -0.4
CONA   Conrad Observa      78.41 327 i P       P         14 29 24.4 +0.7
       comp=Z,442nm,1.0s,SNR=157
CONA                                i PKKPdf  PKKPdf    14 48 07.1 +1.9
       comp=Z,17nm,2.1s
SDCO   Great Sand Dun      78.46  49 eP        P         14 29 24.6 +0.1
       comp=Z,270nm,1.1s
SDCO   Great Sand Dun      78.46  49  P        P         14 29 25.0 +0.5
       baz=316,SNR=225
MPEP   Malo Peshtene       78.50 320 i P       P         14 29 24.5 +0.3
HWQ    Hawqa               78.51 306 eP        P         14 29 25.4 +0.9
GEC2   GERESS Array S      78.52 329 eP        P         14 29 24.2 -0.1
GEC2   GERESS Array S      78.52 329 eP        P         14 29 24.2 -0.1
GERES  GERESS Array B      78.52 329  P        P         14 29 24.2 -0.1
       comp=Z,81nm,0.6s,baz=35,slow=4.9,SNR=144
GERES                                PP       PP        14 32 25.6 +3.2
       comp=Z,122nm,1.1s,baz=45,slow=9.6,SNR=4.5
GERES                                S        S         14 39 10.7 -1.3
       comp=Z,5.1nm,1.1s,baz=46,slow=17,SNR=1.9
GERES                                PKKPbc   PKKPbc    14 48 21.4 +3.1
       comp=Z,2.6nm,0.7s,baz=204,slow=2.9,SNR=7.3
GERES                                LR       LR        15 07 28.9
       comp=Z,28µm,19.5s,baz=40,slow=38
GULN   MERSIN_Gulnar       78.58 309 i P       P         14 29 25.3 +0.5
GULN                                 IAML_P
       comp=Z,9µm,0.9s
C40A   Isle Royale Na      78.58  33 eP        P         14 29 24.4 -0.2
C40A   Isle Royale Na      78.58  33  P        P         14 29 23.4 -1.1
       baz=324
ECSD   EROS Data Cent      78.61  40 eP        P         14 29 24.5 -0.3
ECSD   EROS Data Cent      78.61  40  P        P         14 29 24.5 -0.3
       baz=320,SNR=220
DIM    Dimitrovgrad        78.61 318 i P       P         14 29 25.8 +1.0
MORH   Mrgy, Hungar        78.61 324⇑iP        P         14 29 24.5 -0.2
MORH   Mrgy, Hungar        78.61 324 i P       P         14 29 24.0 -0.7
MORH                                ePP       PP        14 32 23.0 -0.1
MORH                                eS        S         14 39 11.1 -1.7
ERMK   Ermenek             78.62 310 i P       P         14 29 25.1 -0.2
ERMK                                 IAML_P
       comp=Z,11µm,0.8s
E38A   The Farm, Brul      78.64  35 eP        P         14 29 24.5 -0.5
       comp=Z,800nm,0.9s
E38A   The Farm, Brul      78.64  35  P        P         14 29 24.4 -0.5
       baz=322,SNR=189
EREN   Erenkoy             78.68 308 i P       P         14 29 27.6 +2.3
EREN                                 IAML_P
       comp=Z,5µm,0.8s
BBO1   Bothel              78.71 341⇑eP        P         14 29 25.7 +0.6
GRA1   Grafenberg Arr      78.74 330 eP        P         14 29 26.1 +0.7
       comp=Z,854nm,0.9s
GRF    Grafenberg Arr      78.74 330 eP        P         14 29 26.2 +0.7
GRF                                  pmax     pmax
       comp=Z,854nm,0.9s
GRFO   Grafenberg          78.75 330 eP        P         14 29 26.1 +0.7
       comp=Z,792nm,0.9s
KESW   Keswick, Cumbr      78.81 341 eP        P         14 29 26.0 +0.4
KESW                                e                   14 39 13.2
KESW                                 IAMs_20  IAMs_20   14 57 24.9
       comp=Z,74µm,44.1s
QASN   Qassioun            78.83 305 eP        P         14 29 29.2 +2.9
BAGO   Egridir - ISPA      78.84 312 i P       P         14 29 27.1 +0.8
BAGO                                 IAML_P
       comp=Z,6µm,0.8s
TOTH   TOTAH               78.86 305 eP        P         14 29 27.6 +1.2
F37A   Hinrichs Farm,      78.88  36  P        P         14 29 25.2 -1.0
       baz=322
FRGS   Fruska Gora         78.93 323⇑iP        P         14 29 26.5  0.0
GAL1   Galloway            78.94 342 eP        P         14 29 25.6 -0.7
GAL1                                e                   14 39 08.1
GAL1                                 IAMs_20  IAMs_20   14 56 16.0
       comp=Z,37µm,53.4s
BHL    Bhannes             78.95 306 eP        P         14 29 27.3 +0.4
KDZ    Kurdzhali           78.97 317 i P       P         14 29 32.2 +5.4
PLD    Plovdiv             78.98 318 i P       P         14 29 27.6 +0.8
NWAO   Narrogin (SRO)      79.00 202 eP        P         14 29 26.7 -0.1
       comp=Z,468nm,0.9s
NWAO                                 S        S         14 39 17.3 +0.4
NWAO   Narrogin (SRO)      79.00 202 eP        P         14 29 26.7 -0.1
NWAO                                 S        S         14 39 17.3 +0.4
NWAO                                 pmax     pmax
       comp=Z,468nm,0.9s
NWAO   Narrogin (SRO)      79.00 202  P        P         14 29 27.2 +0.4
       SNR=31
NWAO   Narrogin (SRO)      79.00 202  P        P         14 29 27.0 +0.2
       comp=Z,390nm,0.8s,baz=264,slow=6.4,SNR=44
NWAO                                 S        S         14 39 17.3 +0.4
       comp=Z,7.2nm,0.9s,baz=1.9,slow=16,SNR=1.7
F38A   Pierce - Schro      79.02  36  P        P         14 29 26.9 -0.1
       baz=322,SNR=169
CLGH   Cloghs, Cushen      79.05 343 eP        P         14 29 26.9  0.0
CLGH                                e                   14 39 15.4
CLGH                                 IAMs_20  IAMs_20   14 55 44.5
       comp=Z,85µm,66.0s
ARSA   Arzberg             79.09 327 i P       P         14 29 27.8 +0.4
       comp=Z,180nm,1.0s,SNR=48
ARSA                                i PKKPbc  PKKPbc    14 48 20.4 +3.5
       comp=Z,14nm,1.4s
MOA    Molln               79.11 328 i P       P         14 29 27.9 +0.4
       comp=Z,152nm,0.8s,SNR=55
MOA                                 i PKKPbc  PKKPbc    14 48 21.2 +4.4
       comp=Z,14nm,1.9s
KSCO   Kaye Shedlock’      79.11  46 eP        P         14 29 28.7 +0.9
KSCO   Kaye Shedlock’      79.11  46  P        P         14 29 27.6 -0.2
       baz=317,SNR=49
BRBR   Barbar              79.11 306 eP        P         14 29 30.1 +2.1
RCY    Rachaya             79.12 306 eP        P         14 29 28.6 +0.6
QRWL   Qaraoun             79.18 306 eP        P         14 29 28.9 +0.8
SPMN   Marine on St.       79.19  37 eP        P         14 29 28.3 +0.3
SPMN   Marine on St.       79.19  37  P        P         14 29 27.6 -0.3
       baz=322,SNR=88
TUC    Tucson              79.19  56 eP        P         14 29 28.7 +0.4
       comp=Z,188nm,1.0s
TUC    Tucson              79.19  56 eP        P         14 29 28.7 +0.4
TUC                                  pmax     pmax
       comp=Z,188nm,1.0s
TUC    Tucson              79.19  56  P        P         14 29 28.6 +0.4
       baz=314
BEHE   Becsehely           79.20 325 eP        P         14 29 28.2 +0.2
BEHE   Becsehely           79.20 325⇑iP        P         14 29 27.0 -0.9
BEHE                               ⇓ePP       PP        14 32 27.1 -1.0
BEHE                                eS        S         14 39 23.1 +4.0
HKB    Herkenbosch         79.21 334  P        P         14 29 28.1 +0.3
       comp=Z,55nm,1.3s
HKB                                  PcP      PcP       14 29 34.1 -1.7
ALN    Alexandroupoli      79.21 317  P        P         14 29 28.5 +0.4
E39A   Mellen              79.24  35  P        P         14 29 27.9 -0.3
       baz=323,SNR=240
SHBL   Chebaa              79.28 306 eP        P         14 29 29.6 +0.8
RDO    Rodhopi             79.28 317 eP        P         14 29 29.4 +0.9
RDO    Rodhopi             79.28 317  P        P         14 29 29.4 +0.9
RZN    Rozhen              79.29 318 i P       P         14 29 29.7 +0.9
VTS    Vitosha             79.30 319 eP        P         14 29 29.4 +0.6
       comp=Z,479nm,1.0s
VTS    Vitosha             79.30 319⇑iP        P         14 29 29.3 +0.5
VTS    Vitosha             79.30 319  P        P         14 29 29.7 +0.9
VTS    Vitosha             79.30 319 eP        P         14 29 29.4 +0.6
VTS                                  pmax     pmax
       comp=Z,479nm,1.0s
VTS    Vitosha             79.30 319 i P       P         14 29 29.6 +0.8
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IDGL   Inch Island, C      79.36 343 i P       P         14 29 28.5 -0.2
IDGL                                i S       S         14 39 22.1 +1.7
IDGL   Inch Island, C      79.36 343 eP        P         14 29 28.5 -0.2
IDGL                                e                   14 39 18.8
IDGL                                 IAMs_20  IAMs_20   14 56 17.7
       comp=Z,83µm,59.1s
BOPT   Opiter              79.44 334  P        P         14 29 30.0 +0.8
       comp=Z,477nm,1.1s
BOPT                                 PcP      PcP       14 29 35.3 -1.5
SCHQ   Schefferville       79.45  17  P        P         14 29 29.2  0.0
       comp=Z,106nm,0.8s,baz=351,slow=5.9,SNR=74
SCHQ                                 S        S         14 39 21.9 +0.4
       comp=Z,17nm,1.1s,baz=230,slow=16,SNR=2.1
SCHQ                                 PKKPbc   PKKPbc    14 48 17.1 +0.8
       comp=Z,4.4nm,0.7s,baz=223,slow=5.0,SNR=5.2
SCHQ                                 LR       LR        15 06 08.2
       comp=Z,35µm,21.9s,baz=338,slow=37
F39A   Loretta             79.46  35  P        P         14 29 29.0 -0.4
       baz=323,SNR=62
IOMK   Kirk Michael        79.46 341 eP        P         14 29 28.5 -0.7
IOMK                                e                   14 39 16.9
IOMK                                 IAMs_20  IAMs_20   14 57 44.2
       comp=Z,66µm,43.6s
E40A   Wakefield           79.46  34  P        P         14 29 29.3 -0.1
       baz=323,SNR=414
MAMC   Mammari             79.48 308  P        P         14 29 29.4 -0.3
T25A   Trinidad            79.50  49 eP        P         14 29 30.4 +0.4
       comp=Z,492nm,0.9s
T25A   Trinidad            79.50  49  P        P         14 29 30.4 +0.4
       baz=316,SNR=203
D41A   Chassel             79.51  33 eP        P         14 29 29.2 -0.3
       comp=Z,785nm,0.8s
D41A   Chassel             79.51  33  P        P         14 29 29.3 -0.3
       baz=324,SNR=34
WACR   West Acre           79.52 338 eP        P         14 29 28.4 -1.1
WACR                                e                   14 39 17.1
WACR                                 IAMs_20  IAMs_20   14 59 42.1
       comp=Z,66µm,41.4s
BMOL   Mol                 79.53 335  P        P         14 29 29.6  0.0
       comp=Z,443nm,1.4s
BMOL                                 x        x         14 30 04.2
BMOL                                 S        S         14 39 23.1 +0.7
TEKS   Tekeris             79.53 323 eP        P         14 29 30.2 +0.4
BDSL   Dessel              79.53 335  P        P         14 29 29.8 +0.2
       comp=Z,522nm,1.3s
BDSL                                 PcP      PcP       14 29 37.2 -0.1
BDSL                                 sP       sP        14 30 06.2 -1.7
LBWR   Ladybower, Pea      79.54 339 eP        P         14 29 30.0 +0.3
LBWR                                 IAMs_20  IAMs_20   14 59 43.7
       comp=Z,62µm,36.5s
CSS    Mathiatis           79.57 308 eP        P         14 29 30.1 -0.1
       comp=Z,324nm,0.9s
CSS    Mathiatis           79.57 308  P        P         14 29 30.1 -0.1
WIM    Isle of Man         79.59 341⇑eP        P         14 29 29.7 -0.3
BGNE   Belgrade            79.63  42 eP        P         14 29 30.0 -0.5
       comp=Z,866nm,0.8s
BGNE   Belgrade            79.63  42  P        P         14 29 29.9 -0.5
       baz=319,SNR=55
G38A   Ridgeland           79.65  36  P        P         14 29 29.4 -1.0
       baz=322,SNR=89
HGN    Heimansgroeve       79.65 334 eP        P         14 29 30.3 +0.1
       comp=Z,339nm,0.9s
HGN                                 eS        S         14 39 27.4 +3.8
DIVS   Divibare            79.67 322 eP        P         14 29 30.2 -0.5
       comp=Z,206nm,0.8s
DIVS   Divibare            79.67 322⇑iP        P         14 29 30.6 -0.1
MANT   Manisa              79.68 314 eP        P         14 29 31.4 +0.3
BEBN   Eben Emael          79.70 334  P        P         14 29 30.6  0.0
       comp=Z,67nm,1.1s
BEBN                                 PcP      PcP       14 29 37.0 -1.0
BEBN                                 pP       pP        14 29 57.5 -0.1
BEBN                                 sP       sP        14 30 08.8 -0.1
BEBN                                 S        S         14 39 22.3 -1.8
BEBN   Eben Emael          79.70 334  ScS      SKSac     14 39 37.3 -0.2
BEBN   Eben Emael          79.70 334  sS       sS        14 40 13.0 +2.4
RAYN   Ar Rayn             79.71 292 eP        P         14 29 30.7 -0.4
       comp=Z,223nm,0.9s
RAYN   Ar Rayn             79.71 292 i P       P         14 29 30.3 -0.8
       SNR=47
RAYN   Ar Rayn             79.71 292 eP        P         14 29 30.7 -0.4
RAYN                                 pmax     pmax
       comp=Z,223nm,0.9s
LEF    Lefka               79.71 309 i P       P         14 29 30.8 -0.1
LEF                                  IAML_P
       comp=Z,4µm,0.8s
PERS   Pernice             79.75 327 eP        P         14 29 31.3 +0.3
PERS                                eS        S         14 39 25.8 +0.8
SOKA   Soboth              79.75 327 i P       P         14 29 31.4 +0.4
       comp=Z,657nm,1.0s,SNR=141
SOKA                                i SKSac   S         14 39 29.6 +4.5
       comp=Z,2.1nm,0.6s
MEM    Membach             79.76 334  P        P         14 29 30.7 -0.2
MEM                                  S        S         14 39 19.0 -5.9
MEM    Membach             79.76 334  ScS      SKSac     14 39 39.4 +1.4
MEM    Membach             79.76 334 ⇑P        P         14 29 30.8 -0.1
       comp=Z,398nm,1.1s
MEM                                  PcP      PcP       14 29 37.1 -1.2
MEM    Membach             79.76 334  ScS      ScS       14 39 42.2 -3.3
MEM    Membach             79.76 334  sS       sS        14 40 12.3 +1.1
F40A   Park Falls          79.79  35  P        P         14 29 30.7 -0.5
       baz=323,SNR=45
GMM    Mts of Mourne       79.80 342 eP        P         14 29 30.4 -0.6
E41A   Kenton              79.83  34  P        P         14 29 30.6 -0.8
       baz=324,SNR=139
MMB    Musomiste           79.85 318 i P       P         14 29 32.4 +0.8
ALFC   Alefka              79.85 309  P        P         14 29 32.0 +0.3
G39A   Holcombe            79.85  36  P        P         14 29 30.4 -1.1
       baz=323,SNR=46
H38A   Maiden Rock         79.85  37  P        P         14 29 30.9 -0.6
       baz=322,SNR=33
BLCH   La Chartreuse       79.86 334  P        P         14 29 31.9 +0.5
       comp=Z,452nm,1.1s
BLCH                                 PcP      PcP       14 29 37.4 -1.3
LAZ    Ladron              79.90  52 eP        P         14 29 34.0 +1.7
KAVA   Kavala              79.91 318  P        P         14 29 32.2 +0.3
ANMO   Albuquerque         79.91  51 eP        P         14 29 33.0 +0.7
       comp=Z,286nm,1.0s
ANMO   Albuquerque         79.91  51c iP       P         14 29 32.5 +0.2
ANMO                                 pmax     pmax
       comp=Z,292nm,1.5s
ANMO   Albuquerque         79.91  51  P        P         14 29 32.7 +0.5
       baz=316
BSTI   Sart Tilman         79.92 334  P        P         14 29 32.0 +0.2
BSTI                                 PcP      PcP       14 29 38.8 -0.2
BSTI                                 pP       pP        14 29 58.9 +0.1
BSTI                                 sP       sP        14 30 09.5 -0.6
KKB    Krupnik             79.95 319 i P       P         14 29 33.3 +1.2
NVR    Nevrokopi           79.96 318 eP        P         14 29 32.1 -0.1
NVR    Nevrokopi           79.96 318  P        P         14 29 32.1 -0.1
SZAC   Souni               79.97 308  P        P         14 29 31.1 -1.3
BHOU   Houvegnez           79.98 334  P        P         14 29 32.4 +0.3
       comp=Z,31nm,1.1s
BHOU                                 PcP      PcP       14 29 38.7 -0.6
BHOU                                 sP       sP        14 30 13.0 +2.5
BHOU                                 S        S         14 39 28.2 +1.0
BHOU   Houvegnez           79.98 334  ScS      ScS       14 39 43.6 -3.8
BHOU   Houvegnez           79.98 334  sS       sS        14 40 14.7 +1.1
TOO    Toolangi            80.01 178 eP        P         14 29 32.9 +0.7
TOO    Toolangi            80.01 178 eP        P         14 29 32.9 +0.7
DOB    Doboj               80.02 324 eP        P         14 29 32.9 +0.5
CWF    Charnwood Fore      80.03 339 eP        P         14 29 31.1 -1.2
CWF                                 e                   14 39 11.8
CWF                                  IAMs_20  IAMs_20   14 59 41.1
       comp=Z,51µm,33.5s
COWI   Conover             80.05  34 eP        P         14 29 31.9 -0.7
OBKA   Obir                80.08 327 i P       P         14 29 33.2 +0.4
       comp=Z,228nm,0.8s,SNR=41
OBKA                                 SKSac    S         14 39 33.3 +4.7
       comp=Z,0.9nm,0.3s
OBKA                                i PKKPbc  PKKPbc    14 48 17.7 +2.9
       comp=Z,28nm,1.6s
KBA    Koelnbreinsper      80.10 328 i P       P         14 29 33.5 +0.4
       comp=Z,504nm,0.9s,SNR=139
KBA                                 i SKSac   SKSac     14 39 35.0 -5.9
       comp=Z,16nm,0.9s
THAS   Thassos island      80.10 317  P        P         14 29 33.4 +0.5
UCC    Uccle               80.12 335  P        P         14 29 32.6 -0.2
UCC                                  PcP      PcP       14 29 38.8 -1.0
UCC                                  S        S         14 39 22.3 -6.2
UCC    Uccle               80.12 335  ScS      ScS       14 39 43.3 -5.1
UCC    Uccle               80.12 335  sS       sS        14 40 21.4 +6.4
BBLS   Lazi&#263;i         80.12 322⇑iP        P         14 29 33.5 +0.4
RAO    Raoul Island        80.13 146  LR       LR        15 01 30.6
       comp=Z,10µm,20.1s,baz=342,slow=33
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HAPS   Han Pijesak,Bl      80.15 323 eP        P         14 29 33.1 -0.2
LKLB   Kalborn             80.16 334  P        P         14 29 33.1  0.0
       comp=Z,143nm,1.0s
LKLB                                 PcP      PcP       14 29 38.0 -2.0
LENM   Lemitar             80.17  52 eP        P         14 29 34.5 +0.8
WME    Myndd Eilian        80.19 341⇑eP        P         14 29 33.3 +0.1
PPCY   Paphos              80.19 309  P        P         14 29 33.2 -0.3
BCES   Court-Saint-Et      80.22 335  P        P         14 29 33.4  0.0
BCES                                 PcP      PcP       14 29 39.6 -0.6
WPS    Cemaes, Angles      80.23 341⇑eP        P         14 29 32.4 -1.0
WPS                                  IAMs_20  IAMs_20   14 59 07.1
       comp=Z,53µm,33.5s
STU    Stuttgart           80.24 331 eP        P         14 29 33.7 +0.2
BGES   Gesves              80.25 334  P        P         14 29 33.3 -0.2
       comp=Z,269nm,1.0s
BGES                                 PcP      PcP       14 29 39.6 -0.9
BGES                                 pP       pP        14 30 01.5 +0.9
BGES                                 sP       sP        14 30 10.1 -1.8
LPM    Los Pinos Moun      80.26  52 eP        P         14 29 35.2 +1.0
PDKS   Podkum              80.26 326 i P       P         14 29 33.8 +0.1
CRES   Cresnjev            80.27 326⇑iP        P         14 29 33.2 -0.5
SRS    Serrai              80.27 318 eP        P         14 29 33.6 -0.3
SRS    Serrai              80.27 318  P        P         14 29 33.6 -0.3
SRS    Serrai              80.27 318 eP        P         14 29 33.6 -0.3
LVIA   Vianden             80.28 333  P        P         14 29 34.0 +0.3
LVIA                                 PcP      PcP       14 29 39.9 -0.7
G40A   Rib Lake            80.28  35 eP        P         14 29 33.2 -0.6
       comp=Z,441nm,0.9s
G40A   Rib Lake            80.28  35  P        P         14 29 33.3 -0.6
       baz=323,SNR=41
E42A   Champion            80.28  33  P        P         14 29 33.3 -0.6
       baz=325,SNR=63
H39A   Augusta             80.28  36  P        P         14 29 33.1 -0.8
       baz=323,SNR=42
WLF1   Llynfaes            80.31 341⇑eP        P         14 29 32.4 -1.4
WLF1                                e                   14 39 25.6
WLF1                                 IAMs_20  IAMs_20   14 59 08.7
       comp=Z,115µm,34.8s
PRK    Paraskevi           80.33 315 eP        P         14 29 35.6 +1.4
PRK    Paraskevi           80.33 315  P        P         14 29 35.6 +1.4
PRK    Paraskevi           80.33 315 eP        P         14 29 35.6 +1.4
BRQR   Ronquire            80.33 335  P        P         14 29 33.9  0.0
       comp=Z,240nm,1.2s
BSKQ   Steenkerk           80.34 335  P        P         14 29 33.7 -0.3
       comp=Z,231nm,1.4s
BSKQ                                 pP       pP        14 30 01.1  0.0
BSKQ                                 sP       sP        14 30 11.3 -1.0
MYKA   Terra Mystica       80.35 327 i P       P         14 29 34.3  0.0
       comp=Z,285nm,0.8s,SNR=53
MYKA                                i SKSac   SKSac     14 39 39.0 -3.4
       comp=Z,2.1nm,0.3s
MYKA                                i PKKPbc  PKKPbc    14 48 20.1 +5.9
       comp=Z,13nm,0.9s
F41A   Three Lakes         80.36  34 eP        P         14 29 34.0 -0.3
       comp=Z,633nm,0.9s
F41A   Three Lakes         80.36  34  P        P         14 29 33.5 -0.8
       baz=324,SNR=56
BNM    Barren Site         80.38  52 eP        P         14 29 35.8 +1.0
FOEL   Foel Wylfa          80.38 340 eP        P         14 29 33.0 -1.2
FOEL                                e                   14 39 29.8
FOEL                                 IAMs_20  IAMs_20   14 58 50.9
       comp=Z,60µm,36.3s
YRC    Rhoscolyn           80.39 341 eP        P         14 29 34.4 +0.2
YLL    Llanberis           80.39 341 eP        P         14 29 34.5 +0.3
SNF    Seneffe             80.40 335  P        P         14 29 33.7 -0.6
       comp=Z,335nm,1.2s
SNF                                  PcP      PcP       14 29 40.5 -0.5
SNF                                  pP       pP        14 30 00.2 -1.2
SNF                                  sP       sP        14 30 11.6 -1.1
LIA    Limnos Island       80.40 316  P        P         14 29 35.0 +0.5
BLY    Banja Luka          80.40 324 eP        P         14 29 34.6 +0.2
BLY    Banja Luka          80.40 324⇑iP        P         14 29 35.2 +0.7
BLY    Banja Luka          80.40 324⇑iP        P         14 29 34.2 -0.3
BMRD   Maredsous           80.42 334  P        P         14 29 34.2 -0.3
       comp=Z,445nm,1.0s
BMRD                                 PcP      PcP       14 29 40.8 -0.4
BMRD                                 pP       pP        14 30 01.5  0.0
BMRD                                 sP       sP        14 30 11.6 -1.2
BMRD                                 S        S         14 39 28.9 -2.9
BMRD   Maredsous           80.42 334  sS       sS        14 40 17.5 -0.7
OZLJ   Ozalj               80.43 326  P        P         14 29 34.2 -0.3
LJU    Ljubljana           80.47 327⇑iP        P         14 29 34.4 -0.4
STIP   Stip                80.51 319 i P       P         14 29 34.2 -0.9
WLF    Walferdange         80.53 333 eP        P         14 29 35.8 +0.8
WLF    Walferdange         80.53 333 eP        P         14 29 35.8 +0.8
WLF    Walferdange         80.53 333  P        P         14 29 35.4 +0.4
       comp=Z,208nm,1.3s
WLF                                  PcP      PcP       14 29 40.4 -1.3
LLW    Llanuwychllyn       80.53 340 eP        P         14 29 34.7 -0.3
PLE    Pljevlja            80.55 322⇓iP        P         14 29 35.4  0.0
SIGR   SIGRI               80.57 316  P        P         14 29 36.4 +1.0
WATA   Walderalm           80.57 329 i P       P         14 29 35.3 -0.2
       comp=Z,655nm,1.1s,SNR=181
WATA                                eSKSac    SKSac     14 39 40.6 -3.4
       comp=Z,3.4nm,0.6s
WATA                                i PKKPbc  PKKPbc    14 48 20.1 +6.3
       comp=Z,3.7nm,0.8s
KNT    Kendrikon           80.58 319  P        P         14 29 35.7 +0.2
WTTA   Wattenberg          80.61 329 i P       P         14 29 35.6 -0.1
       comp=Z,298nm,0.7s,SNR=145
WTTA                                i PKKPbc  PKKPbc    14 48 18.6 +4.9
       comp=Z,8.8nm,1.0s
BBOU   Bougnies            80.61 335  P        P         14 29 35.7 +0.3
       comp=Z,818nm,1.0s
BBOU                                 PcP      PcP       14 29 40.5 -1.5
BBOU                                 x        x         14 29 44.5
BBOU                                 pP       pP        14 30 03.0 +0.5
BOJS   Bojanci             80.61 326 i P       P         14 29 35.7 +0.1
BOJS                                eS        S         14 39 34.5 +0.6
BOJS                                e                   14 40 10.9
SOH    Sokhos              80.61 318 eP        P         14 29 35.8 +0.1
SOH    Sokhos              80.61 318  P        P         14 29 35.8 +0.1
SOH    Sokhos              80.61 318 eP        P         14 29 35.8 +0.1
VAY    Valandovo           80.61 319 i P       P         14 29 36.4 +0.7
HLM1   Long Mynd           80.64 340 eP        P         14 29 35.2 -0.4
HLM1                                 IAMs_20  IAMs_20   14 59 58.1
       comp=Z,27µm,36.3s
SKO    Skopje              80.65 320 eP        P         14 29 36.8 +0.9
SKO    Skopje              80.65 320  P        P         14 29 36.8 +0.9
SKO    Skopje              80.65 320 i P       P         14 29 37.0 +1.1
DOU    Dourbes             80.66 334  P        P         14 29 35.6 -0.1
       comp=Z,158nm,1.1s
DOU                                  PcP      PcP       14 29 41.1 -1.1
DOU                                  S        S         14 39 35.4 +1.1
DOU    Dourbes             80.66 334  ScS      ScS       14 39 50.3 -2.5
DOU    Dourbes             80.66 334  sS       sS        14 40 17.6 -3.1
OUR    Ouranopolis         80.67 317  P        P         14 29 36.0  0.0
ABTA   Abfaltersbach       80.69 328 i P       P         14 29 35.5 -0.6
       comp=Z,210nm,1.0s,SNR=47
ABTA                                i SKSac   SKSac     14 39 41.0 -3.8
       comp=Z,5.2nm,0.8s
ABTA                                i PKKPbc  PKKPbc    14 48 19.2 +5.8
       comp=Z,19nm,2.1s
E43A   Lone Tree Farm      80.69  33 eP        P         14 29 35.6 -0.4
       comp=Z,420nm,0.8s
E43A   Lone Tree Farm      80.69  33  P        P         14 29 35.4 -0.6
       baz=325,SNR=47
H40A   Chili               80.72  36  P        P         14 29 35.5 -0.7
       baz=323,SNR=44
MOTA   Moosalm             80.74 329 i P       P         14 29 36.5 +0.1
       comp=Z,733nm,0.8s,SNR=381
MOTA                                eSKSac    SKSac     14 39 42.2 -3.1
       comp=Z,2.5nm,0.6s
MOTA                                i PKKPbc  PKKPbc    14 48 16.5 +3.1
       comp=Z,8.6nm,0.8s
F42A   Maple Grove Fa      80.74  34  P        P         14 29 35.8 -0.4
       baz=324,SNR=29
RETA   Reutte              80.75 329 i P       P         14 29 37.1 +0.7
       comp=Z,523nm,1.1s,SNR=92
G41A   Antigo              80.75  35  P        P         14 29 35.6 -0.8
       baz=324,SNR=51
CEY    Cerknica            80.76 326⇑iP        P         14 29 36.1 -0.3
319A   Douglas             80.76  56 eP        P         14 29 37.7 +0.9
       comp=Z,491nm,0.9s
CBKS   Cedar Bluff         80.77  45 eP        P         14 29 35.8 -0.8
       comp=Z,758nm,1.0s
CBKS   Cedar Bluff         80.77  45  P        P         14 29 35.9 -0.7
       baz=318,SNR=69
JAVS   Javornik            80.78 327 eP        P         14 29 36.0 -0.6
JAVS                                eS        S         14 39 34.4 -1.5
ELSH   Elham, Standar      80.78 337 eP        P         14 29 35.8 -0.5
ELSH                                 IAMs_20  IAMs_20   14 57 01.4
       comp=Z,94µm,57.3s
SQTA   Sankt Quirin        80.80 329 i P       P         14 29 37.1 +0.3
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      comp=Z,377nm,0.9s,SNR=105
SQTA                             i PKKPbc PKKPbc  14 48 13.4 +0.1
      comp=Z,13nm,0.7s
DSB   Dublin           80.81 342 i P      P       14 29 37.0 +0.5
DSB                              eS       S       14 39 35.3 -0.5
DSB   Dublin           80.81 342 eP       P       14 29 36.8 +0.3
KSL   Kastellorizon    80.83 311 eP       P       14 29 36.3 -0.6
KSL   Kastellorizon    80.83 311  P       P       14 29 36.3 -0.6
I39A  Houston          80.83  37 eP       P       14 29 35.8 -1.0
I39A  Houston          80.83  37  P       P       14 29 35.9 -0.9
      baz=323,SNR=106
121A  Cookes Peak, D   80.85  54  P       P       14 29 37.9 +0.6
      baz=315,SNR=157
UPM   Unac-Piva        80.86 322 eP       P       14 29 37.2  0.0
HORT  Hortiatis        80.91 318  P       P       14 29 36.7 -0.7
PLG   Polygyros        80.91 318  P       P       14 29 37.0 -0.3
E44A  Grand Marais A   80.92  32 eP       P       14 29 37.2  0.0
      comp=Z,1µm,0.8s
E44A  Grand Marais A   80.92  32  P       P       14 29 35.9 -1.3
      baz=326,SNR=22
BFO   Black Forest     80.92 331 eP       P       14 29 37.0 -0.2
      comp=Z,426nm,1.0s
BFO   Black Forest     80.92 331 i P      P       14 29 37.4 +0.2
THE   Thessaloniki     80.95 318 eP       P       14 29 38.8 +1.4
THE   Thessaloniki     80.95 318  P       P       14 29 38.8 +1.4
GRG   Griva            80.97 319 eP       P       14 29 37.6  0.0
GRG   Griva            80.97 319  P       P       14 29 37.6  0.0
GRG   Griva            80.97 319 eP       P       14 29 37.6  0.0
H41A  Junction City    81.03  35 eP       P       14 29 37.5 -0.4
      comp=Z,335nm,0.9s
H41A  Junction City    81.03  35  P       P       14 29 37.4 -0.4
      baz=324,SNR=67
G42A  Mountain         81.04  34 eP       P       14 29 37.6 -0.3
      comp=Z,735nm,1.3s
G42A  Mountain         81.04  34  P       P       14 29 37.4 -0.4
      baz=324,SNR=53
F43A  Flat Rock, Esc   81.07  33  P       P       14 29 37.7 -0.3
      baz=325,SNR=37
CHOS  Chios island     81.08 315  P       P       14 29 38.7 +0.4
DGAR  Diego Garcia     81.10 251  P       P       14 29 41.3 +2.7
      SNR=5.7
STRD  Stroud           81.13 339 eP       P       14 29 38.0 -0.2
STRD                              IAMs_20 IAMs_20 15 00 30.1
      comp=Z,57µm,33.5s
NKY   Niksic           81.13 322⇓iP       P       14 29 38.3 -0.2
PAIG  Paliouri         81.13 317  P       P       14 29 38.2 -0.2
MCH1  Michaelchurch    81.14 340 eP       P       14 29 38.6 +0.3
MCH1                              IAMs_20 IAMs_20 15 00 29.1
      comp=Z,59µm,32.6s
FETA  Feichten         81.15 329 i P      P       14 29 39.0 +0.3
      comp=Z,371nm,0.9s,SNR=94
FETA                             eSKSac   SKSac   14 39 46.6 -1.5
      comp=Z,12nm,0.9s
FETA                             i PKKPbc PKKPbc  14 48 17.8 +5.3
      comp=Z,10nm,0.9s
MATQ  Matagami         81.16  25  P       P       14 29 37.9 -0.5
      baz=331,SNR=61
J39A  Decorah          81.17  37  P       P       14 29 37.5 -1.1
      baz=323,SNR=147
UDBI  Udbina           81.18 325  P       P       14 29 39.8 +1.1
NKME  Niksic           81.19 322⇓iP       P       14 29 38.1 -0.7
I40A  Norwalk          81.20  36  P       P       14 29 38.1 -0.7
      baz=323,SNR=56
KRUS  Krusevo          81.21 320 i P      P       14 29 39.1 +0.1
MONM  Monmouth         81.24 339 eP       P       14 29 39.0 +0.2
MONM                              IAMs_20 IAMs_20 15 00 30.8
      comp=Z,59µm,32.7s
DAVA  Damuels          81.24 330 i P      P       14 29 39.7 +0.6
      comp=Z,507nm,0.9s,SNR=95
DAVA                             eSKSac   S       14 39 44.7 +3.9
      comp=Z,2.4nm,0.3s
DAVA                             i PKKPbc PKKPbc  14 48 18.1 +5.8
      comp=Z,16nm,0.8s
F44A  Big Bay de Noc   81.25  32  P       P       14 29 38.7 -0.2
      baz=326,SNR=66
HMNX  Herstmonceux     81.26 337 eP       P       14 29 38.8  0.0
HMNX                              IAMs_20 IAMs_20 14 56 41.8
      comp=Z,81µm,54.6s
BRY   Bratogost        81.27 322⇓iP       P       14 29 38.6 -0.7
BRY   Bratogost        81.27 322 eP       P       14 29 38.6 -0.7
SWN1  Swindon          81.27 339 eP       P       14 29 39.0 +0.1
SWN1                              IAMs_20 IAMs_20 14 59 35.3
      comp=Z,62µm,41.6s
WOL   Wolverton        81.30 338 eP       P       14 29 38.5 -0.6
WOL                               IAMs_20 IAMs_20 14 59 12.1
      comp=Z,68µm,46.9s
IGLA  Glengowla, Co    81.30 344 eP       P       14 29 39.1 +0.1
IGLA                             eS       S       14 39 37.7 -3.0
LPW   Lampeter         81.31 340 eP       P       14 29 38.7 -0.4
LPW                               IAMs_20 IAMs_20 14 59 16.3
      comp=Z,64µm,38.3s
PDG   Podgorica        81.31 322⇑iP       P       14 29 38.8 -0.5
PDG   Podgorica        81.31 322 eP       P       14 29 39.0 -0.3
TTG   Podgorica        81.31 322⇓iP       P       14 29 39.1 -0.3
TTG   Podgorica        81.31 322 eP       P       14 29 39.1 -0.3
      comp=Z,513nm,0.8s
TTG   Podgorica        81.31 322 eP       P       14 29 39.1 -0.3
TTG                               pmax    pmax
      comp=Z,513nm,0.8s
G43A  Wallace          81.33  34 eP       P       14 29 39.0 -0.4
      comp=Z,476nm,0.9s
G43A  Wallace          81.33  34  P       P       14 29 38.9 -0.5
      baz=325,SNR=33
PHP   Peshkopia        81.35 320 eP       P       14 29 39.3 -0.3
PHP   Peshkopia        81.35 320  P       P       14 29 39.3 -0.3
PHP   Peshkopia        81.35 320 eP       P       14 29 39.3 -0.3
PHP   Peshkopia        81.35 320 i P      P       14 29 42.2 +2.6
PHP   Peshkopia        81.35 320 i P      P       14 29 44.6 +4.9
HSIG                   81.38  58 eP       P       14 29 40.6 +0.7
I41A  Arkdale          81.39  36 eP       P       14 29 39.2 -0.5
I41A  Arkdale          81.39  36  P       P       14 29 39.1 -0.6
      baz=324,SNR=38
D46A  Sault St. Mari   81.41  31  P       P       14 29 38.7 -1.1
      baz=327,SNR=90
E45A  Wooded Hills,    81.42  32  P       P       14 29 38.5 -1.4
      baz=326,SNR=31
ECH   Echery           81.43 332 eP       P       14 29 39.6 -0.3
      comp=Z,409nm,1.1s
ECH   Echery           81.43 332 eP       P       14 29 39.6 -0.3
ECH                               pmax    pmax
      comp=Z,409nm,1.1s
BIA   Bitola           81.44 319 eP       P       14 29 40.8 +0.7
BATH  Bath             81.47 339 eP       P       14 29 40.3 +0.3
BATH                              IAMs_20 IAMs_20 15 00 39.0
      comp=Z,56µm,32.5s
TREB  Trebinje         81.50 322⇑iP       P       14 29 40.3  0.0
NVLJ  Novalja          81.53 325  P       P       14 29 39.5 -0.9
DRME  Dracevica, Mon   81.54 321 eP       P       14 29 40.7 +0.1
J40A  Soldiers Grove   81.54  37  P       P       14 29 39.7 -0.9
      baz=323,SNR=28
BUM   Brajici-Budva    81.58 322⇓iP       P       14 29 41.3 +0.4
K39A  Oelwein          81.58  38  P       P       14 29 39.6 -1.2
      baz=322,SNR=110
ARG   Arkhangelos      81.59 312  P       P       14 29 41.2 +0.3
LIT   Litokhoron       81.59 318 eP       P       14 29 40.2 -0.7
      comp=Z,331nm,1.1s
LIT   Litokhoron       81.59 318  P       P       14 29 40.4 -0.5
LIT   Litokhoron       81.59 318 eP       P       14 29 40.2 -0.7
LIT                               pmax    pmax
      comp=Z,331nm,1.1s
H42A  Shiocton         81.59  35 eP       P       14 29 40.3 -0.4
      comp=Z,430nm,0.9s
H42A  Shiocton         81.59  35  P       P       14 29 40.4 -0.4
      baz=324,SNR=32
AOS   Alonnisos        81.61 317  P       P       14 29 40.9 -0.1
SCIA  State Center     81.61  39 eP       P       14 29 41.3 +0.3
      comp=Z,1µm,0.8s
SCIA  State Center     81.61  39  P       P       14 29 41.1 +0.2
      baz=322,SNR=35
D47A  Chapleau         81.62  30  P       P       14 29 39.9 -1.0
      baz=328
RSBS  Rosebush, Pemb   81.62 341 eP       P       14 29 40.7 -0.1
RSBS                              IAMs_20 IAMs_20 14 59 25.8
      comp=Z,24µm,30.4s
HCY   Herceg Novi      81.65 322⇓iP       P       14 29 41.0 -0.1
HCY   Herceg Novi      81.65 322 eP       P       14 29 38.1 -3.0
FUORN Ofenpass-Fuorn   81.66 329 eP       P       14 29 41.6 +0.2
      comp=Z,1µm,0.9s
STON  Ston             81.67 323  P       P       14 29 40.0 -1.2
DAVOX Davos/Dischmat   81.67 330 LR       LR      15 10 14.1
      comp=Z,18µm,19.9s,baz=18,slow=39
E46A  Sault Ste Mari   81.75  31  P       P       14 29 40.9 -0.7
      baz=327,SNR=50
KZN   Kozani           81.78 319 eP       P       14 29 41.3 -0.7
KZN   Kozani           81.78 319  P       P       14 29 41.3 -0.7
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KZN   Kozani           81.78 319 eP       P       14 29 41.3 -0.7
XOR   Xorichti         81.80 317  P       P       14 29 40.9 -1.1
SKIA  Skiathos         81.82 317  P       P       14 29 41.6 -0.5
NEO   Neokhori         81.83 317 eP       P       14 29 41.6 -0.6
NEO   Neokhori         81.83 317  P       P       14 29 41.6 -0.6
F45A  CMU Biological   81.85  32  P       P       14 29 41.5 -0.6
      baz=326,SNR=34
TIR   Tirane           81.88 321 eP       P       14 29 42.7 +0.4
TIR   Tirane           81.88 321⇑iP       P       14 29 42.7 +0.4
TIR   Tirane           81.88 321  P       P       14 29 43.0 +0.6
TIR   Tirane           81.88 321 i P      P       14 29 40.9 -1.5
J41A  Loganville       81.89  36  P       P       14 29 41.6 -0.8
      baz=324,SNR=29
FYTO  Fytoko, Volos    81.90 317  P       P       14 29 42.2 -0.3
K40A  Colesburg        81.92  37  P       P       14 29 41.6 -1.0
      baz=323,SNR=64
I42A  Draeger Farm,    81.93  35 eP       P       14 29 42.0 -0.5
      comp=Z,332nm,0.9s
I42A  Draeger Farm,    81.93  35  P       P       14 29 41.8 -0.8
      baz=324,SNR=27
H43A  Windswept, Lux   81.94  34 eP       P       14 29 42.2 -0.3
      comp=Z,652nm,0.8s
H43A  Windswept, Lux   81.94  34  P       P       14 29 42.3 -0.3
      baz=325,SNR=31
LRSO  Larissa Observ   81.97 318  P       P       14 29 45.2 +2.4
LSQQ  Lebel-sur-Quev   81.98  25  P       P       14 29 42.1 -0.6
      baz=332
D48A  Paudash Townsh   81.99  29  P       P       14 29 42.1 -0.7
      baz=328,SNR=23
L39A  Vinton           81.99  38  P       P       14 29 42.7 -0.3
      baz=322,SNR=63
CHGQ  Chibougamau      82.02  23  P       P       14 29 42.3 -0.7
      baz=333,SNR=86
NEST  Nestorio         82.05 319  P       P       14 29 43.4  0.0
E47A  Iron Bridge      82.06  30  P       P       14 29 42.4 -0.8
      baz=328,SNR=56
F46A  Macinaw City C   82.07  32  P       P       14 29 42.7 -0.6
      baz=327,SNR=54
TUE   Stuetta          82.13 330 eP       P       14 29 43.6 -0.2
JFWS  Jewell Farm      82.14  37 eP       P       14 29 42.4 -1.4
JFWS  Jewell Farm      82.14  37 eP       P       14 29 42.4 -1.4
JFWS  Jewell Farm      82.14  37  P       P       14 29 43.0 -0.8
      baz=324,SNR=42
KSU1  Kansas State U   82.15  43 eP       P       14 29 43.0 -0.8
      comp=Z,406nm,0.8s
KSU1  Kansas State U   82.15  43  P       P       14 29 43.3 -0.6
      baz=320,SNR=94
EREA  Eretria          82.15 316  P       P       14 29 44.3 +0.4
SMIA  Simia            82.17 317  P       P       14 29 43.6 -0.3
PENT  Pentalofos       82.17 319  P       P       14 29 43.8 -0.3
HEX   Exmoor           82.20 340 eP       P       14 29 44.1 +0.2
THL   Klokotos Trika   82.23 318  P       P       14 29 42.7 -1.5
KPRO  Kipourio         82.25 319  P       P       14 29 44.1 -0.3
I43A  Langenfeld Bro   82.26  35  P       P       14 29 43.7 -0.7
      baz=325,SNR=15
J42A  Columbus         82.31  36  P       P       14 29 44.2 -0.3
      baz=324,SNR=30
G45A  Suttons Bay      82.33  33  P       P       14 29 44.3 -0.3
      baz=326,SNR=15
AMGA  Amorgos Island   82.33 314  P       P       14 29 44.8  0.0
APE   Apeiranthos      82.34 314⇑iP       P       14 29 44.6 -0.4
APE   Apeiranthos      82.34 314  P       P       14 29 45.1 +0.2
APE   Apeiranthos      82.34 314c iP      P       14 29 44.5 -0.4
APE                               pmax    pmax
      comp=Z,291nm,1.9s
K41A  Shullsburg       82.37  37  P       P       14 29 44.5 -0.4
      baz=324,SNR=76
L40A  Anamosa          82.39  38 eP       P       14 29 44.1 -1.0
L40A  Anamosa          82.39  38  P       P       14 29 44.4 -0.6
      baz=323,SNR=79
ATAL  Atalanti         82.40 317 eP       P       14 29 44.5 -0.7
ATAL  Atalanti         82.40 317  P       P       14 29 44.5 -0.7
M39A  Webster          82.42  39  P       P       14 29 44.8 -0.4
      baz=322
HTL   Hartland         82.44 340 eP       P       14 29 44.8 -0.2
HTL                               IAMs_20 IAMs_20 15 00 07.3
      comp=Z,80µm,44.6s
LKR   Lokris           82.45 317 eP       P       14 29 43.0 -2.4
LKR   Lokris           82.45 317  P       P       14 29 43.0 -2.4
E48A  Lockeyer         82.45  30  P       P       14 29 44.2 -1.1
      baz=328
PTL   Penteli          82.47 316 eP       P       14 29 44.3 -1.2
PTL   Penteli          82.47 316  P       P       14 29 44.3 -1.2
OUZ   Omahuta          82.47 155 eP       P       14 29 48.1 +2.9
AGG   Agios Georgios   82.50 318  P       P       14 29 44.9 -0.8
AGG   Agios Georgios   82.50 318  P       P       14 29 44.9 -0.8
AGG   Agios Georgios   82.50 318  P       P       14 29 44.9 -0.8
RAR   Rarotonga        82.54 128 LR       LR      15 00 24.2
      comp=Z,11µm,21.5s,baz=316,slow=31
J43A  Natural Harves   82.56  35  P       P       14 29 45.1 -0.8
      baz=325,SNR=39
ATHU  Athens Univers   82.57 316 eP       P       14 29 45.5 -0.5
ATHU  Athens Univers   82.57 316  P       P       14 29 45.5 -0.5
ATH   Athens Observa   82.60 316 eP       P       14 29 46.8 +0.6
ATH   Athens Observa   82.60 316  P       P       14 29 46.8 +0.6
ATH   Athens Observa   82.60 316 eP       P       14 29 46.8 +0.6
KARP  Karpathos        82.61 312  P       P       14 29 46.6 +0.3
KARP  Karpathos        82.61 312  P       P       14 29 46.6 +0.3
TPE   Tepelena         82.64 320 eP       P       14 29 48.5 +2.2
TPE   Tepelena         82.64 320  P       P       14 29 48.5 +2.2
K42A  Prairie Point,   82.65  36  P       P       14 29 45.5 -0.9
      baz=324,SNR=55
AMTX  Amarillo         82.65  49 eP       P       14 29 46.9 +0.3
      comp=Z,347nm,0.8s
AMTX  Amarillo         82.65  49  P       P       14 29 46.4 -0.3
      baz=318
VLY   Voula,Athens     82.65 316 eP       P       14 29 44.6 -1.9
VLY   Voula,Athens     82.65 316  P       P       14 29 44.6 -1.9
VILL  Villia           82.66 316  P       P       14 29 45.3 -1.3
VLDQ  Val d'Or         82.66  26 eP       P       14 29 45.0 -1.2
L41A  Preston          82.71  37  P       P       14 29 45.7 -1.0
      baz=323,SNR=82
MSTX  Muleshoe         82.72  50 eP       P       14 29 47.4 +0.4
      comp=Z,238nm,1.0s
MSTX  Muleshoe         82.72  50  P       P       14 29 46.9 -0.2
      baz=318,SNR=99
JAN   Janina           82.73 319  P       P       14 29 47.5 +0.6
JAN   Janina           82.73 319  P       P       14 29 47.5 +0.6
JAN   Janina           82.73 319  P       P       14 29 47.5 +0.6
VLO   Vlora            82.74 320 i P      P       14 29 50.1 +3.3
CPRX  Cap Rock         82.78  51 eP       P       14 29 48.3 +0.9
M40A  Post Highland    82.78  38  P       P       14 29 46.6 -0.5
      baz=323,SNR=113
PROD  Prodromos        82.80 317  P       P       14 29 47.0 -0.2
F48A  Evansville       82.83  30  P       P       14 29 46.5 -0.7
      baz=328,SNR=14
EVR   Evrytania        82.83 318  P       P       14 29 47.2 -0.3
EVR   Evrytania        82.83 318  P       P       14 29 47.2 -0.3
MNTX  Cornudas Mount   82.86  53 eP       P       14 29 48.0 +0.3
      comp=Z,296nm,1.1s
MNTX  Cornudas Mount   82.86  53  P       P       14 29 48.2 +0.5
      baz=316,SNR=174
DSF   Desfina          82.87 317 eP       P       14 29 45.8 -1.8
DSF   Desfina          82.87 317  P       P       14 29 45.8 -1.8
VAL   Valentia         82.88 344 eP       P       14 29 47.9 +0.6
VAL   Valentia         82.88 344 eS       S       14 39 57.3 +0.4
D51A  Lot 18 Range I   82.91  28  P       P       14 29 46.8 -0.8
      baz=330,SNR=51
GLMI  Grayling         82.92  32 eP       P       14 29 47.5 -0.2
      comp=Z,1µm,0.8s
GLMI  Grayling         82.92  32  P       P       14 29 47.2 -0.5
      baz=327,SNR=36
G47A  Hillman          82.92  31  P       P       14 29 47.5 -0.2
      baz=327,SNR=15
H46A  Fife Lake        82.92  33  P       P       14 29 47.4 -0.4
      baz=326,SNR=80
I45A  Fountain         82.93  33  P       P       14 29 47.9 +0.1
      baz=326,SNR=29
SRN   Sarande          82.97 320 eP       P       14 29 47.8 -0.2
SRN   Sarande          82.97 320  P       P       14 29 47.8 -0.2
SRN   Sarande          82.97 320 i P      P       14 29 50.2 +2.2
LOUT  Loutraki         82.97 317  P       P       14 29 47.1 -1.0
SENIN Lac Senin/Sane   82.97 331 eP       P       14 29 48.0 -0.2
      comp=Z,448nm,0.9s
E50A  Wahnapitae       83.01  29  P       P       14 29 47.5 -0.6
      baz=329,SNR=26
ANX   Ano Chora        83.03 318  P       P       14 29 47.7 -0.8
KALE  Kalithea         83.08 317  P       P       14 29 47.5 -1.2
KALE  Kalithea         83.08 317  P       P       14 29 47.5 -1.2
IGT   Igoumenitsa      83.08 319  P       P       14 29 48.2 -0.4
IGT   Igoumenitsa      83.08 319  P       P       14 29 48.2 -0.4
IGT   Igoumenitsa      83.08 319  P       P       14 29 48.2 -0.4
GDL2  Guadalupe Moun   83.10  52 eP       P       14 29 49.7 +0.7
SERG  Sergoula         83.10 317  P       P       14 29 47.5 -1.3
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F49A  Sandfield        83.10  30  P       P       14 29 47.8 -0.8
      baz=328,SNR=20
TRIZ  Trizonia         83.13 317  P       P       14 29 47.4 -1.5
L42A  Oliver, Polo     83.13  37 eP       P       14 29 48.8 -0.1
L42A  Oliver, Polo     83.13  37  P       P       14 29 48.0 -0.9
      baz=324,SNR=50
K43A  Burlington       83.14  36 eP       P       14 29 49.2 +0.3
K43A  Burlington       83.14  36  P       P       14 29 48.2 -0.7
      baz=325,SNR=44
EFP   Efpalio          83.17 317  P       P       14 29 49.1  0.0
N40A  Mertquake, Sal   83.17  39  P       P       14 29 48.3 -0.7
      baz=323,SNR=126
KEK   Kerkira          83.19 320  P       P       14 29 48.9 -0.3
DID   Didima           83.20 316 eP       P       14 29 47.2 -2.1
DID   Didima           83.20 316  P       P       14 29 47.2 -2.1
PVO   Paravola         83.21 318  P       P       14 29 49.1 -0.2
CLF   Chambon-Foret    83.21 335 eP       P       14 29 49.5 +0.4
M41A  Milan            83.25  38  P       P       14 29 48.8 -0.6
      baz=323,SNR=83
H47A  Mio              83.27  32  P       P       14 29 49.5  0.0
      baz=327,SNR=29
LAKA  Lakka            83.27 317  P       P       14 29 48.9 -0.8
LAKA  Lakka            83.27 317  P       P       14 29 48.9 -0.8
GUR   Goura            83.33 317 eP       P       14 29 49.4 -0.7
GUR   Goura            83.33 317  P       P       14 29 49.4 -0.7
D52A  ZEK Kipawa Sen   83.34  27  P       P       14 29 49.1 -0.8
      baz=331,SNR=33
KLV   Kalavryta, Ach   83.34 317 eP       P       14 29 49.1 -1.0
KLV   Kalavryta, Ach   83.34 317  P       P       14 29 49.1 -1.0
KRND  KRANIDI          83.34 316  P       P       14 29 49.0 -1.0
E51A  G1948 Merrick    83.35  28  P       P       14 29 49.0 -0.9
      baz=330,SNR=24
J45A  Montague         83.36  34  P       P       14 29 49.3 -0.7
      baz=326,SNR=9.8
CCA1  Carnmenellis     83.37 340 eP       P       14 29 49.6 -0.3
CCA1                              IAMs_20 IAMs_20 15 00 33.1
      comp=Z,72µm,47.6s
L43A  Garden Prairie   83.39  36  P       P       14 29 49.0 -1.2
      baz=324,SNR=25
ZKR   Zakros           83.44 313  P       P       14 29 50.9 +0.3
BAI   Bari             83.44 322 eP       P       14 29 51.7 +1.3
STIA  Sitia Lasithi    83.44 313  P       P       14 29 52.0 +1.4
FASA  Fasano           83.46 322 eP       P       14 29 50.3 -0.3
JSA   Saint Aubin      83.48 338 eP       P       14 29 50.2 -0.3
JSA                              e                14 40 03.7
JSA                               IAMs_20 IAMs_20 15 03 01.9
      comp=Z,53µm,34.2s
D53A  Lac Vacive, Po   83.48  27  P       P       14 29 49.9 -0.6
      baz=331
LKD2  Lefkada island   83.50 318 eP       P       14 29 50.8  0.0
LKD2  Lefkada island   83.50 318  P       P       14 29 50.8  0.0
H48A  Harrisville      83.52  31  P       P       14 29 49.7 -1.0
      baz=328,SNR=14
CGL1  Ceglie Messapi   83.53 322 eP       P       14 29 50.6 -0.3
M42A  Sheffield        83.53  37  P       P       14 29 50.3 -0.6
      baz=324,SNR=13
DRO   Drossia          83.63 317  P       P       14 29 51.7 +0.2
I47A  Gladwin          83.63  32  P       P       14 29 50.8 -0.6
      baz=327
EVGI  Lefkada island   83.63 318  P       P       14 29 55.0 +3.5
N41A  Harden Midland   83.64  38 eP       P       14 29 51.0 -0.5
      comp=Z,933nm,1.1s
N41A  Harden Midland   83.64  38  P       P       14 29 51.2 -0.3
      baz=323,SNR=57
NPS   Neapolis         83.66 313  P       P       14 29 50.7 -1.0
NPS   Neapolis         83.66 313  P       P       14 29 50.7 -1.0
NPS   Neapolis         83.66 313  P       P       14 29 50.7 -1.0
RLS   Riolos of Patr   83.67 317 eP       P       14 29 51.6 -0.1
RLS   Riolos of Patr   83.67 317  P       P       14 29 51.6 -0.1
TRIP  Tripoli          83.68 317  P       P       14 29 50.9 -0.9
VLC   Villacollemand   83.68 328 eP       P       14 29 53.1 +1.4
MASS  Massafra         83.70 322 eP       P       14 29 52.4 +0.6
TAR1  Taranto          83.72 322 eP       P       14 29 51.9  0.0
F51A  Arnstein         83.73  29  P       P       14 29 50.6 -1.2
      baz=330,SNR=33
J46A  Howard City      83.73  34  P       P       14 29 51.8 -0.1
      baz=326,SNR=33
VLX   Vlachokerasia    83.74 316 eP       P       14 29 51.1 -1.1
VLX   Vlachokerasia    83.74 316  P       P       14 29 51.1 -1.1
SG1   Sgolgore (BA)    83.75 322 eP       P       14 29 52.5 +0.4
TOBO  Tobermory, Bru   83.75  30  P       P       14 29 50.9 -1.0
      baz=329
L44A  Lake County Fo   83.75  36  P       P       14 29 51.7 -0.3
      baz=325,SNR=16
D54A  Lac Fusel, La    83.76  26  P       P       14 29 51.3 -0.7
      baz=332,SNR=51
LAST  Lasithi          83.81 313 eP       P       14 29 52.6 +0.1
LAST  Lasithi          83.81 313  P       P       14 29 52.6 +0.1
I48A  Sherman Twp      83.81  32  P       P       14 29 52.1 -0.1
      baz=327,SNR=18
E52A  Mattawa          83.86  28  P       P       14 29 50.9 -1.5
      baz=330,SNR=24
MATE  Matera           83.89 322⇓iP       P       14 29 52.4 -0.3
M43A  Waltham Townsh   83.90  37  P       P       14 29 52.2 -0.6
      baz=324,SNR=46
IACM  Heraklion        83.92 313  P       P       14 29 54.4 +1.4
N42A  Yates City       83.92  38  P       P       14 29 52.2 -0.6
      baz=324,SNR=46
KSTL  Kastelli Herak   83.92 313  P       P       14 29 53.5 +0.5
VTN   Vitineika        83.92 318  P       P       14 29 53.8 +0.9
AQU   L'Aquila         83.95 325 eP       P       14 29 52.9 -0.2
AQU   L'Aquila         83.95 325 eP       P       14 29 52.9 -0.2
AQU   L'Aquila         83.95 325⇑iP       P       14 29 53.0 -0.1
AMT   Artemida-Makis   83.95 317  P       P       14 29 54.0 +0.8
VLI   Veliai           83.96 316 eP       P       14 29 51.3 -1.9
VLI   Veliai           83.96 316  P       P       14 29 51.3 -1.9
VLS   Valsamata        84.01 318  P       P       14 29 52.9 -0.5
VLS   Valsamata        84.01 318  P       P       14 29 52.9 -0.5
VLS   Valsamata        84.01 318  P       P       14 29 52.9 -0.5
IDI   Anoyia           84.03 314 eP       P       14 29 52.2 -1.4
IDI   Anoyia           84.03 314⇓iP       P       14 29 52.4 -1.2
F52A  Sundridge        84.05  28  P       P       14 29 52.6 -0.9
      baz=330,SNR=57
O41A  Passleys Farm,   84.10  39  P       P       14 29 53.1 -0.7
      baz=323,SNR=114
E53A  Dumoine, Ponti   84.11  27  P       P       14 29 52.7 -1.1
      baz=331
KLBO  Killbear Provi   84.11  29  P       P       14 29 53.2 -0.6
      baz=330,SNR=16
ITM   Ithomi           84.12 317  P       P       14 29 53.0 -1.0
ITM   Ithomi           84.12 317  P       P       14 29 53.0 -1.0
J47A  Sunmer           84.16  33  P       P       14 29 53.4 -0.7
      baz=327,SNR=61
PRNS  Prines Rethymn   84.17 314  P       P       14 29 56.5 +2.2
N43A  Stutzman Famil   84.21  37  P       P       14 29 53.7 -0.6
      baz=324,SNR=32
E54A  Lac Daplat, Po   84.22  27  P       P       14 29 53.3 -1.0
      baz=332
K46A  Dorr             84.23  34  P       P       14 29 53.6 -0.8
      baz=326,SNR=23
KYTH  Kithira          84.25 315  P       P       14 29 53.5 -1.2
KYTH  Kithira          84.25 315  P       P       14 29 53.5 -1.2
TMBK  Timbaki Herakl   84.25 314  P       P       14 29 56.9 +2.2
CHAN  Chania           84.30 314  P       P       14 29 55.8 +0.9
VAM   Vamos            84.30 314  P       P       14 29 54.9  0.0
VAM   Vamos            84.30 314  P       P       14 29 54.9  0.0
VAM   Vamos            84.30 314  P       P       14 29 54.9  0.0
BNI   Bardonecchia     84.31 331 eP       P       14 29 55.0  0.0
BNI   Bardonecchia     84.31 331 eP       P       14 29 55.0  0.0
BUKO  Buck Lake        84.33  29  P       P       14 29 53.8 -1.1
      baz=330
M44A  Midewin, Midew   84.34  36 eP       P       14 29 54.4 -0.6
      comp=Z,1µm,1.2s
M44A  Midewin, Midew   84.34  36  P       P       14 29 54.3 -0.8
      baz=325,SNR=34
WMOK  Wichita Mounta   84.34  47 eP       P       14 29 55.1 -0.1
      comp=Z,730nm,1.4s
WMOK  Wichita Mounta   84.34  47 eP       P       14 29 55.1 -0.1
WMOK                              pmax    pmax
      comp=Z,730nm,1.4s
WMOK  Wichita Mounta   84.34  47  P       P       14 29 55.3 +0.1
      baz=319,SNR=139
ALGO  Algonquin Park   84.35  28  P       P       14 29 54.0 -1.0
      baz=331,SNR=26
I49A  Point Hope       84.36  31  P       P       14 29 54.3 -0.7
      baz=328,SNR=17
P41A  Barry, Barry     84.37  39  P       P       14 29 55.1 -0.2
      baz=323,SNR=77
IMMV  Iera Moni Meta   84.38 314  P       P       14 29 55.1 -0.2
BMRO  Meriville Lake   84.40  30  P       P       14 29 55.0 -0.3
      baz=329,SNR=20
O42A  Bath             84.40  38  P       P       14 29 55.0 -0.4
      baz=324,SNR=15
ANKY  Antikythira Is   84.42 315  P       P       14 29 54.2 -1.3
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ANKY	Antikythira Is	84.42	315	P	P	14 29 54.2	-1.3
PYL	PYLOS	84.43	317	P	P	14 29 54.4	-1.2
PYL	PYLOS	84.43	317	P	P	14 29 54.4	-1.2
HDIL	Hopedale	84.47	37	*e*P	P	14 29 55.3	-0.3
	comp=Z,1µm,1.1s						
HDIL	Hopedale	84.47	37	P	P	14 29 55.5	-0.2
	baz=324,SNR=80						
J48A	Bridge Port	84.52	32	P	P	14 29 56.2	+0.4
	baz=327,SNR=62						
K47A	Vermontville	84.56	33	P	P	14 29 55.9	-0.2
	baz=327,SNR=21						
L46A	Eue Claire	84.57	35	P	P	14 29 56.0	-0.2
	baz=326,SNR=15						
BRCO	Bruce Peninsul	84.62	30	P	P	14 29 56.1	-0.3
	baz=329,SNR=12						
O43A	Sugar Creek Fa	84.68	38	P	P	14 29 56.1	-0.6
	baz=324,SNR=31						
M45A	Boilermakers S	84.68	36	P	P	14 29 56.0	-0.8
	baz=325,SNR=11						
J49A	Marlette	84.72	32	P	P	14 29 57.0	+0.1
	baz=328,SNR=36						
BASO	Ashfield	84.73	31	P	P	14 29 56.8	-0.1
	baz=329,SNR=12						
LATQ	La Tuque	84.75	24	P	P	14 29 56.7	-0.3
	baz=334,SNR=36						
P42A	Winchester	84.77	39	*e*P	P	14 29 56.5	-0.8
P42A	Winchester	84.77	39	P	P	14 29 56.8	-0.4
	baz=324,SNR=146						
N44A	Piper City	84.79	36	P	P	14 29 57.0	-0.3
	baz=325,SNR=60						
GVD	Gavdhos	84.79	314	*e*P	P	14 29 57.6	+0.2
GVD	Gavdhos	84.79	314	P	P	14 29 57.6	+0.2
K48A	Perry	84.81	33	P	P	14 29 57.1	-0.2
	baz=327,SNR=97						
BWLO	Walkerton	84.84	30	P	P	14 29 57.2	-0.3
	baz=329,SNR=17						
PEMO	Pembroke	84.86	27	P	P	14 29 56.4	-1.2
	baz=332,SNR=63						
Q41A	Truxton	84.87	40	P	P	14 29 57.5	-0.3
	baz=323,SNR=259						
SSB	Saint Sauveur	84.87	332	*e*P	P	14 29 57.7	0.0
	comp=Z,194nm,0.7s						
SSB	Saint Sauveur	84.87	332	*e*P	P	14 29 57.7	0.0
SSB				pmax	pmax		
	comp=Z,194nm,0.7s						
G53A	Haliburton	84.88	28	P	P	14 29 56.8	-0.9
	baz=331,SNR=60						
SADO	Sadowa	85.00	29	*e*P	P	14 29 57.9	-0.4
	comp=Z,196nm,1.0s						
N45A	Kentland	85.01	36	P	P	14 29 58.1	-0.3
	baz=325,SNR=41						
TUL1	Leonard	85.02	44	*e*P	P	14 29 58.9	+0.3
	comp=Z,649nm,0.8s						
TUL1	Leonard	85.02	44	P	P	14 29 58.8	+0.3
	baz=321,SNR=121						
F55A	Otter Lake	85.03	27	P	P	14 29 57.3	-1.1
	baz=332,SNR=25						
TIP	Timpagrande	85.05	321	*e*P	P	14 29 56.5	-2.2
TIP	Timpagrande	85.05	321	⇓*i*P	P	14 29 56.5	-2.2
TIP	Timpagrande	85.05	321	P	P	14 29 56.5	-2.2
M46A	Old House Fiel	85.05	35	*e*P	P	14 29 59.5	+0.9
M46A	Old House Fiel	85.05	35	P	P	14 29 57.2	-1.3
	baz=326,SNR=24						
L47A	Sherwood	85.06	34	P	P	14 29 58.3	-0.3
	baz=327,SNR=64						
K49A	Clarkson	85.09	32	P	P	14 29 59.0	+0.2
	baz=328,SNR=41						
P43A	Skaggs, Pawnee	85.11	38	P	P	14 29 58.6	-0.3
	baz=324,SNR=63						
I51A	Listowel	85.15	30	P	P	14 29 59.1	+0.1
	baz=329,SNR=21						
O44A	Mansfield	85.16	37	P	P	14 29 58.8	-0.4
	baz=325,SNR=45						
BANO	Bancroft	85.21	28	P	P	14 29 58.7	-0.6
	baz=331,SNR=49						
Q42A	Golden Eagle	85.23	39	P	P	14 29 59.4	-0.2
	baz=324,SNR=88						
I52A	Shelburne	85.24	30	P	P	14 29 59.1	-0.4
	baz=330,SNR=11						
TRQ	Mont Tremblant	85.26	25	*e*P	P	14 29 59.2	-0.4
N46A	Monticello	85.31	36	P	P	14 29 59.2	-0.7
	baz=326,SNR=16						
R41A	Rosebud	85.32	40	P	P	14 29 59.4	-0.6
	baz=323,SNR=118						
PMOR	Pomariorio Ree	85.33	115	*e*P	P	14 30 01.8	+1.6
	comp=Z,406nm,1.2s						
TOZ	Tahuroa Road	85.37	155	P	P	14 30 01.7	+1.8
TOZ				S	S	14 40 18.5	-3.3
TAU	Tasmania Unive	85.39	177	*e*P	P	14 30 00.4	+0.6
TAU	Tasmania Unive	85.39	177	*e*P	P	14 30 00.4	+0.6
M47A	Cromwell	85.40	35	P	P	14 30 00.2	-0.1
	baz=326,SNR=56						
L48A	N Adams	85.40	34	P	P	14 30 00.1	-0.2
	baz=327,SNR=107						
AAM	Ann Arbor	85.41	33	*e*P	P	14 30 00.6	+0.2
	comp=Z,491nm,0.8s						
AAM	Ann Arbor	85.41	33	*e*P	P	14 30 00.6	+0.2
AAM				pmax	pmax		
	comp=Z,491nm,0.8s						
AAM	Ann Arbor	85.41	33	P	P	14 30 00.2	-0.1
	baz=328,SNR=25						
O45A	Potomac	85.41	37	P	P	14 30 00.2	-0.2
	baz=325,SNR=51						
G55A	Calabogie	85.42	27	P	P	14 29 59.6	-0.7
	baz=332,SNR=21						
ABTX	Abilene, Hawle	85.47	49	*e*P	P	14 30 01.1	+0.3
	comp=Z,282nm,0.9s						
ABTX	Abilene, Hawle	85.47	49	P	P	14 30 00.8	-0.1
	baz=319,SNR=134						
PLVO	Plevna	85.48	27	*e*P	P	14 30 00.2	-0.5
	comp=Z,397nm,0.8s						
PLVO	Plevna	85.48	27	P	P	14 30 00.1	-0.5
	baz=332,SNR=45						
L49A	Milan	85.53	33	P	P	14 30 00.9	0.0
	baz=328,SNR=65						
ELFO	Elginfield	85.56	31	P	P	14 30 01.4	+0.3
	baz=329,SNR=22						
CCM	Cathedral Cave	85.58	40	*e*P	P	14 30 00.9	-0.4
	comp=Z,528nm,0.8s						
CCM	Cathedral Cave	85.58	40	*e*P	P	14 30 00.9	-0.4
CCM				pmax	pmax		
	comp=Z,528nm,0.8s						
CCM	Cathedral Cave	85.58	40	P	P	14 30 00.8	-0.4
	baz=323						
SFIN	Lafayette	85.58	36	*e*P	P	14 30 00.6	-0.7
	comp=Z,307nm,0.8s						
SFIN	Lafayette	85.58	36	P	P	14 30 00.8	-0.4
	baz=326,SNR=43						
SLM	Saint Louis	85.59	39	*e*P	P	14 30 00.7	-0.6
	comp=Z,413nm,0.8s						
SLM	Saint Louis	85.59	39	*e*P	P	14 30 00.7	-0.6
SLM				pmax	pmax		
	comp=Z,413nm,0.8s						
Q43A	New Douglas	85.59	39	P	P	14 30 01.1	-0.2
	baz=324,SNR=19						
LTX	Lajitas	85.60	54	*e*P	P	14 30 01.6	0.0
LTX	Lajitas	85.60	54	*e*P	P	14 30 01.6	0.0
TXAR	Lajitas Array	85.60	54	P	P	14 30 01.6	0.0
	comp=Z,110nm,0.6s,baz=294,slow=3.2,SNR=408						
TXAR				S	SKSac	14 40 14.8	-2.8
	comp=Z,0.7nm,0.9s,baz=305,slow=17,SNR=2.6						
TXAR				PKKPbc	PKKPbc	14 48 02.5	+0.5
	comp=Z,3.1nm,0.9s,baz=151,slow=5.0,SNR=9.1						
TXAR				PKPPKP		14 56 10.4	
	comp=Z,1.3nm,0.9s,baz=169,slow=1.3,SNR=7.0						
R42A	Luebbering	85.61	40	P	P	14 30 01.3	-0.2
	baz=324,SNR=82						
KMRZ	Kaimai	85.62	155	P	P	14 30 04.8	+3.6
ORHO	Orleans, Herit	85.62	26	P	P	14 30 00.3	-1.1
	baz=333						
ORIO	Orleans, Innes	85.64	26	P	P	14 30 00.7	-0.7
	baz=333,SNR=53						
P44A	Sand Creek, Wi	85.65	38	P	P	14 30 01.4	-0.2
	baz=325,SNR=33						
I53A	Kortright Cn E	85.66	30	P	P	14 30 01.2	-0.4
	baz=330,SNR=21						
HHAR	Hobbs	85.67	43	*e*P	P	14 30 01.1	-0.7
	comp=Z,291nm,0.8s						
M48A	Edgerton	85.67	34	*e*P	P	14 30 01.4	-0.3
	comp=Z,645nm,0.9s						
M48A	Edgerton	85.67	34	P	P	14 30 01.2	-0.5
	baz=327,SNR=52						
ACTO	Acton	85.68	30	P	P	14 30 00.9	-0.7
	baz=330,SNR=16						
ALFO	Alfred	85.68	26	P	P	14 30 00.7	-0.9
	baz=333,SNR=126						
S41A	Jillco Farms,	85.71	41	P	P	14 30 01.5	-0.5
	baz=323,SNR=126						
PKRO	Pickering	85.73	29	P	P	14 30 01.5	-0.4
	baz=330,SNR=24						
SLBS	Sierra La Lagu	85.75	62	*e*P	P	14 30 04.3	+1.8
DELO	Deloro Mine	85.75	28	P	P	14 30 01.2	-0.8
	baz=331,SNR=21						
N47A	Urbana	85.76	35	P	P	14 30 01.4	-0.8
	baz=326,SNR=46						
J52A	Paris	85.84	30	P	P	14 30 02.4	0.0
	baz=330,SNR=24						
H55A	Tweed	85.88	28	P	P	14 30 02.2	-0.4
	baz=332,SNR=19						
HIZ	Hauiti	85.89	156	*e*P	P	14 30 04.8	+2.3
HIZ	Hauiti	85.89	156	P	P	14 30 05.9	+3.4
HIZ				S	S	14 40 20.3	-6.6
K51A	Iona Station	85.89	31	P	P	14 30 02.2	-0.6
	baz=329,SNR=26						
DRWO	Darlington Wes	85.93	29	P	P	14 30 02.2	-0.7
	baz=331,SNR=16						
Q44A	Meyer Farm, Va	85.93	38	*e*P	P	14 30 02.4	-0.6
	comp=Z,502nm,1.0s						
Q44A	Meyer Farm, Va	85.93	38	P	P	14 30 02.1	-0.8
	baz=324,SNR=52						
TLZ	Tolley Road	85.93	155	P	P	14 30 06.1	+3.4
TLZ				S	S	14 40 22.9	-4.5
TORO	Toronto--Lesli	85.93	29	P	P	14 30 02.5	-0.4
	baz=330						
DRCO	St. Marys Ceme	85.94	29	P	P	14 30 01.9	-1.0
	baz=331,SNR=13						
L50A	Kingsville	85.97	32	P	P	14 30 02.3	-0.8
	baz=328,SNR=35						
M49A	Liberty Center	85.98	34	P	P	14 30 03.1	-0.1
	baz=327,SNR=54						
P45A	Graceland, Par	85.99	37	*e*P	P	14 30 03.0	-0.3
	comp=Z,304nm,0.8s						
P45A	Graceland, Par	85.99	37	P	P	14 30 02.7	-0.6
	baz=325,SNR=51						
I55A	Frankford	86.00	28	P	P	14 30 02.6	-0.6
	baz=331,SNR=13						
WLVO	Wesleyville	86.00	29	P	P	14 30 02.2	-1.0
	baz=331,SNR=10						
R43A	Red Bud	86.02	39	P	P	14 30 03.4	0.0
	baz=324,SNR=56						
S42A	Caledonia	86.02	40	P	P	14 30 03.4	-0.1
	baz=324,SNR=133						
N48A	Decatur	86.06	35	P	P	14 30 02.8	-0.8
	baz=327,SNR=45						
O47A	Sheridan	86.09	36	P	P	14 30 02.8	-1.0
	baz=326,SNR=41						
PPT2	Papeete2	86.10	118	*e*PP	PP	14 33 24.2	-1.9
	comp=Z,2µm,23.2s						
PPT2				*e*S	S	14 40 28.1	-1.9
	comp=Z,33µm,26.2s						
PPT2				*e*SS	SS	14 46 13.2	+2.0
	comp=Z,28µm,27.0s						
PPT2				*e*LQ	LQ	14 52 57.7	
	comp=Z,74µm,30.2s						
PPT2				*e*LR	LR	14 56 53.7	
	comp=Z,175µm,36.0s,baz=316						
HAZ	Te Kaha	86.13	153	P	P	14 30 05.4	+1.8
HPIG		86.14	57	*e*P	P	14 30 05.7	+1.2
T41A	Mountain View	86.14	41	P	P	14 30 03.6	-0.5
	baz=323,SNR=118						
K52A	Tillsonburg	86.15	31	P	P	14 30 04.1	+0.1
	baz=329,SNR=20						
U40A	Yellville	86.15	42	P	P	14 30 03.7	-0.5
	baz=322,SNR=352						
H56A	Elgin	86.15	27	P	P	14 30 03.1	-0.8
	baz=332,SNR=16						
P46A	Rosedale	86.16	37	P	P	14 30 04.1	0.0
	baz=326,SNR=123						
CEL	Celeste	86.19	321	*e*P	P	14 30 04.5	+0.2
TYNO	Tyneside	86.19	30	P	P	14 30 04.2	0.0
	baz=330,SNR=19						
RUGZ	Raukumara Rang	86.29	153	P	P	14 30 04.7	+0.1
Q45A	Warren Harvey,	86.33	38	P	P	14 30 04.5	-0.4
	baz=325,SNR=52						
TAOE	Nuku Hiva Isla	86.34	105	*e*PP	PP	14 33 26.7	-1.3
	comp=Z,2µm,23.3s						
TAOE				*e*S	S	14 40 30.9	-1.6
	comp=Z,37µm,25.8s						
TAOE				*e*SS	SS	14 46 15.8	+1.1
	comp=Z,25µm,27.4s						
TAOE				*e*LQ	LQ	14 53 04.0	
	comp=Z,34µm,33.6s						
TAOE				*e*LR	LR	14 56 43.4	
	comp=Z,26µm,24.4s,baz=313						
STCO	Saint Catharin	86.35	30	P	P	14 30 04.5	-0.5
	baz=330,SNR=12						
N49A	Columbus Grove	86.36	34	*e*P	P	14 30 04.8	-0.2
	comp=Z,426nm,0.8s						
N49A	Columbus Grove	86.36	34	P	P	14 30 04.8	-0.2
	baz=327,SNR=40						
URZ	Urewera	86.37	154	*e*P	P	14 30 04.8	0.0
URZ	Urewera	86.37	154	LR	LR	15 03 25.7	
	comp=Z,5µm,20.2s,baz=340,slow=32						
URZ	Urewera	86.37	154	P	P	14 30 04.1	-0.7
M50A	Fremont	86.42	33	*e*P	P	14 30 05.3	-0.1
	comp=Z,398nm,0.8s						
M50A	Fremont	86.42	33	P	P	14 30 04.9	-0.5
	baz=328,SNR=34						
R44A	Waltonville	86.43	39	P	P	14 30 04.9	-0.6
	baz=324,SNR=72						
T42A	Van Buren	86.47	41	*e*P	P	14 30 05.0	-0.7
	comp=Z,1µm,1.5s						
T42A	Van Buren	86.47	41	P	P	14 30 05.2	-0.5
	baz=323,SNR=150						
OLIL	Olney	86.48	38	*e*P	P	14 30 05.7	0.0
	comp=Z,1µm,1.3s						
O48A	Farmland	86.51	35	P	P	14 30 05.3	-0.6
	baz=327,SNR=46						
DAMY	Dhamar	86.52	287	*e*P	P	14 30 08.3	+1.7
S43A	Fulton Ridge,	86.52	40	P	P	14 30 05.2	-0.7
	baz=324,SNR=143						
DRLN	Deer Lake	86.56	13	*e*P	P	14 30 06.2	+0.4
MWZ	Matawai	86.57	154	P	P	14 30 06.5	+0.7
PUZ	Puketiti	86.58	153	P	P	14 30 05.4	-0.5
Q46A	CEJHS Indians,	86.58	37	P	P	14 30 05.9	-0.3
	baz=325,SNR=11						
W39A	Magazine	86.60	43	*e*P	P	14 30 06.1	-0.2
	comp=Z,453nm,1.4s						
W39A	Magazine	86.60	43	P	P	14 30 06.0	-0.3
	baz=322,SNR=42						
U41A	Viola	86.62	42	P	P	14 30 05.7	-0.7
	baz=323,SNR=61						
MEDO	Medina	86.64	29	P	P	14 30 05.5	-1.0
	baz=331						
BATG	Bathurst New B	86.67	19	*e*P	P	14 30 06.2	-0.3
P47A	Martinsville	86.67	36	P	P	14 30 06.4	-0.2
	baz=326,SNR=37						
LONY	Lake Ozonia	86.68	26	*e*P	P	14 30 06.0	-0.7
	comp=Z,267nm,1.2s						
LONY	Lake Ozonia	86.68	26	P	P	14 30 05.9	-0.7
	baz=333,SNR=18						
PQI	Presque Isle	86.73	21	*e*P	P	14 30 06.2	-0.6
	comp=Z,408nm,0.9s						
R45A	Skylar, Fairfi	86.76	38	P	P	14 30 06.3	-0.7
	baz=325,SNR=73						
J55A	Hilton	86.78	29	P	P	14 30 06.6	-0.5
	baz=331,SNR=21						
MOQ	Mont Orford	86.78	24	*e*P	P	14 30 07.0	-0.1
FRNY	Flat Rock	86.80	25	*e*P	P	14 30 06.4	-0.7
S44A	Carbondale	86.80	39	P	P	14 30 07.2	0.0
	baz=324,SNR=243						
SIUC	Southern Illin	86.80	39	*e*P	P	14 30 07.3	0.0
	comp=Z,1µm,1.1s						
T43A	Greenville	86.81	40	P	P	14 30 07.2	-0.1
	baz=324,SNR=202						
M51A	Elyria	86.82	32	P	P	14 30 07.1	-0.2
	baz=328,SNR=43						
BLO	Bloomington	86.82	36	*e*P	P	14 30 07.7	+0.3
BLO	Bloomington	86.82	36	*e*P	P	14 30 07.7	+0.3
N50A	Nevada	86.91	33	P	P	14 30 07.1	-0.7
	baz=328,SNR=83						
O49A	Covington	86.91	34	*e*P	P	14 30 07.5	-0.3
	comp=Z,327nm,1.0s						
O49A	Covington	86.91	34	P	P	14 30 07.3	-0.5
	baz=327,SNR=50						
U42A	Revenden	86.94	41	P	P	14 30 07.5	-0.5
	baz=323,SNR=72						
V41A	Mountainview	86.95	42	P	P	14 30 07.6	-0.5
	baz=323,SNR=249						
M52A	Chesterland	86.96	32	P	P	14 30 07.5	-0.5
	baz=329,SNR=49						
JCT	Junction City	86.99	50	*e*P	P	14 30 08.6	+0.2
	comp=Z,283nm,0.9s						
JCT	Junction City	86.99	50	*e*P	P	14 30 08.6	+0.2
JCT				pmax	pmax		
	comp=Z,283nm,0.9s						
JCT	Junction City	86.99	50	P	P	14 30 08.1	-0.3
	baz=319,SNR=48						
ERPA	Erie	86.99	31	*e*P	P	14 30 08.3	+0.1
	comp=Z,1µm,1.4s						
ERPA	Erie	86.99	31	P	P	14 30 08.1	0.0
	baz=330,SNR=17						
BKZ	Black Stump Fm	87.00	155	*e*P	P	14 30 08.9	+1.0
	comp=Z,196nm,1.2s						
L53A	Girard	87.03	31	P	P	14 30 07.8	-0.5
	baz=330,SNR=55						
P48A	Milroy	87.06	36	P	P	14 30 07.6	-0.9
	baz=327,SNR=67						
Q47A	Bedord North L	87.06	36	P	P	14 30 08.0	-0.5
	baz=326,SNR=156						
N51A	Ashland	87.09	33	*e*P	P	14 30 09.3	+0.6
	comp=Z,667nm,0.9s						
N51A	Ashland	87.09	33	P	P	14 30 07.8	-0.8
	baz=328,SNR=89						
S45A	Carrier Mills	87.13	39	P	P	14 30 08.9	+0.1
	baz=325,SNR=71						
WHTX	Lake Whitney,	87.15	48	*e*P	P	14 30 09.0	-0.1
	comp=Z,290nm,1.0s						
WHTX	Lake Whitney,	87.15	48	P	P	14 30 08.9	-0.1
	baz=320,SNR=26						
BHHZ	Black Hill Sta	87.16	155	P	P	14 30 09.2	+0.5
K55A	Perry	87.16	29	P	P	14 30 08.5	-0.4
	baz=331,SNR=29						
R46A	Gibon Southern	87.17	38	P	P	14 30 09.0	-0.1
	baz=325,SNR=17						
MIAR	Mount Ida	87.21	44	*e*P	P	14 30 09.6	+0.3
	comp=Z,295nm,0.8s						
MIAR	Mount Ida	87.21	44	*e*P	P	14 30 09.6	+0.3
MIAR				pmax	pmax		
	comp=Z,295nm,0.8s						
MIAR	Mount Ida	87.21	44	P	P	14 30 09.1	-0.2
	baz=322,SNR=126						
MMNY	Mt. Morris Dam	87.22	29	*e*P	P	14 30 08.9	-0.3
	comp=Z,376nm,1.0s						
O50A	Cable	87.24	34	P	P	14 30 08.7	-0.7
	baz=328						
WHAR	Wooly Hollow	87.27	42	*e*P	P	14 30 09.8	+0.1
P49A	Miami Univ. Ec	87.30	35	P	P	14 30 09.2	-0.4
	baz=327,SNR=58						
V42A	Cord	87.31	42	P	P	14 30 09.1	-0.7
	baz=323,SNR=93						
USIN	University of	87.31	38	*e*P	P	14 30 10.4	+0.7
M53A	WI Miller and	87.31	31	P	P	14 30 09.6	-0.2
	baz=329,SNR=32						
U43A	Rector	87.33	41	P	P	14 30 09.6	-0.2
	baz=324,SNR=182						
Q48A	North Vernon	87.37	36	P	P	14 30 09.8	-0.2
	baz=326,SNR=73						
NCB	Newcomb	87.37	26	*e*P	P	14 30 09.8	-0.2
	comp=Z,258nm,1.0s						
W41B	Gary Mavity, V	87.39	42	*e*P	P	14 30 10.0	-0.2
	comp=Z,347nm,1.0s						
W41B	Gary Mavity, V	87.39	42	P	P	14 30 09.8	-0.3
	baz=323,SNR=58						
PARMO	Parma	87.40	40	*e*P	P	14 30 10.3	+0.2
	comp=Z,2µm,0.7s						
ACSO	Alum Creek Sta	87.43	34	*e*P	P	14 30 09.8	-0.5
	comp=Z,658nm,0.8s						
ACSO	Alum Creek Sta	87.43	34	P	P	14 30 10.0	-0.2
	baz=328,SNR=113						
N52A	McGinn’s Farm,	87.46	32	P	P	14 30 10.3	-0.1
	baz=329,SNR=40						
L55A	Hinsdale	87.51	30	P	P	14 30 10.3	-0.3
	baz=331,SNR=15						
S46A	Don Dixon Farm	87.52	38	P	P	14 30 10.4	-0.3
	baz=325,SNR=47						
R47A	Wooly Knot Far	87.55	37	P	P	14 30 10.7	-0.2
	baz=326,SNR=118						
U44A	Portageville	87.56	40	P	P	14 30 10.5	-0.5
	baz=324						
P50A	Jamestown	87.62	34	P	P	14 30 11.2	0.0
	baz=328,SNR=54						
T45A	Paducah	87.63	39	*e*P	P	14 30 11.9	+0.6
	comp=Z,511nm,0.6s						
T45A	Paducah	87.63	39	P	P	14 30 10.9	-0.4
	baz=325						
X40A	Basin Creek Fa	87.64	43	*e*P	P	14 30 12.1	+0.7
	comp=Z,405nm,1.2s						
X40A	Basin Creek Fa	87.64	43	P	P	14 30 11.4	0.0
	baz=322,SNR=85						
M54A	Oil Creek Stat	87.64	31	*e*P	P	14 30 11.2	-0.1
	comp=Z,920nm,1.2s						
M54A	Oil Creek Stat	87.64	31	P	P	14 30 11.5	+0.3
	baz=330,SNR=27						
UALR	University of	87.65	43	*e*P	P	14 30 11.3	-0.1
O51A	Pataskala	87.66	33	P	P	14 30 11.3	0.0
	baz=328,SNR=50						
Q49A	Aurora	87.67	35	P	P	14 30 11.4	0.0
	baz=327,SNR=55						
W42A	Bald Knob	87.67	42	P	P	14 30 11.4	-0.1
	baz=323,SNR=11						
PKME	Peaks-Kenny Pk	87.69	22	*e*P	P	14 30 11.7	+0.3
	comp=Z,253nm,0.8s						
PKME	Peaks-Kenny Pk	87.69	22	P	P	14 30 10.8	-0.5
	baz=337,SNR=33						
WCI	Wyandotte Cave	87.70	37	*e*P	P	14 30 11.5	-0.1
	comp=Z,447nm,0.8s						
WCI	Wyandotte Cave	87.70	37	*e*P	P	14 30 11.5	-0.1
WCI				pmax	pmax		
	comp=Z,447nm,0.8s						
WCI	Wyandotte Cave	87.70	37	P	P	14 30 11.0	-0.6
	baz=326						
V43A	Jonesboro	87.73	41	P	P	14 30 11.5	-0.2
	baz=324,SNR=8.4						
R48A	Northridge Ran	87.75	36	P	P	14 30 11.4	-0.4
	baz=326,SNR=39						
X41A	Kaden, Bauxite	87.79	43	P	P	14 30 11.9	-0.2
	baz=323,SNR=18						
N53A	Lisbon	87.79	32	P	P	14 30 12.0	0.0
	baz=329,SNR=55						
GNAR	Gosnell	87.84	41	*e*P	P	14 30 13.3	+1.1
	comp=Z,1µm,1.3s						
LBNH	Lisbon	87.85	24	*e*P	P	14 30 13.1	+0.9
	comp=Z,236nm,0.8s						
LBNH	Lisbon	87.85	24	*e*P	P	14 30 13.1	+0.9
LBNH				pmax	pmax		
	comp=Z,236nm,0.8s						
LBNH	Lisbon	87.85	24	P	P	14 30 12.8	+0.6
	baz=335,SNR=24						
U44B	Burton Farm, H	87.86	40	P	P	14 30 12.2	-0.1
	baz=324,SNR=14						
HBAR	Harrisburg	87.86	41	*e*P	P	14 30 13.5	+1.1
	comp=Z,2µm,1.2s						
GLAT	Glass	87.94	40	*e*P	P	14 30 14.1	+1.4
T46A	Princeton	87.96	39	P	P	14 30 12.5	-0.4
	baz=325,SNR=130						
S47A	Hartford	87.97	38	P	P	14 30 12.6	-0.3
	baz=326,SNR=23						
N54A	Moraine State	87.99	31	*e*P	P	14 30 12.7	-0.2
	comp=Z,1µm,1.1s						
N54A	Moraine State	87.99	31	P	P	14 30 12.5	-0.4
	baz=330,SNR=88						
O52A	Adamsville	87.99	33	*e*P	P	14 30 12.5	-0.5
	comp=Z,672nm,1.0s						
O52A	Adamsville	87.99	33	P	P	14 30 12.5	-0.5
	baz=329,SNR=52						
435B	Jarrell	88.00	49	*e*P	P	14 30 13.7	+0.5
435B	Jarrell	88.00	49	P	P	14 30 12.8	-0.4
	baz=320						
M55A	Ridgway	88.01	30	P	P	14 30 12.6	-0.4
	baz=331,SNR=54						
V44A	Blytheville	88.01	41	P	P	14 30 12.7	-0.3
	baz=324						
P51A	Williamsport	88.03	34	*e*P	P	14 30 12.7	-0.5
	comp=Z,604nm,1.0s						
P51A	Williamsport	88.03	34	P	P	14 30 12.5	-0.7
	baz=328,SNR=54						
ACCN	Adirondack Com	88.08	26	*e*P	P	14 30 13.3	0.0
	comp=Z,404nm,1.1s						
UTMT	University of	88.08	40	*e*P	P	14 30 13.8	+0.3
	comp=Z,1µm,1.1s						
U45A	Rockin P Farm,	88.12	39	P	P	14 30 13.3	-0.4
	baz=325,SNR=14						
O53A	New Philadelph	88.12	32	P	P	14 30 13.2	-0.4
	baz=329,SNR=101						
R49A	Shelbyville	88.14	36	P	P	14 30 13.9	+0.2
	baz=327,SNR=23						
X42A	Stuttgart	88.19	42	P	P	14 30 13.5	-0.4
	baz=323						
Q50A	Georgetown	88.19	35	P	P	14 30 13.9	0.0
	baz=328,SNR=51						
W43A	Forest City	88.21	41	P	P	14 30 13.4	-0.7

	baz=324						
HNH	Hanover	88.22	25	*e*P	P	14 30 15.2	+1.2
WVL	Waterville	88.22	23	*e*P	P	14 30 14.2	+0.2
	comp=Z,1µm,1.8s						
Y41A	Eaglette Beard	88.23	43	P	P	14 30 14.1	-0.1
	baz=323,SNR=9.9						
S48A	Wiedeman Farm,	88.28	37	P	P	14 30 13.8	-0.5
	baz=326,SNR=63						
P52A	Corning	88.28	33	P	P	14 30 13.8	-0.6
	baz=329,SNR=30						
Q51A	Peebles	88.30	34	*e*P	P	14 30 14.8	+0.3
Q51A	Peebles	88.30	34	P	P	14 30 14.0	-0.5
	baz=328,SNR=150						
BFZ	Birch Farm	88.31	155	*e*P	P	14 30 16.0	+1.9
THZ	Tophouse	88.33	158	*e*P	P	14 30 14.4	+0.2
	comp=Z,640nm,1.5s						
BINY	Binghamton	88.36	28	*e*P	P	14 30 14.7	0.0
	comp=Z,275nm,1.1s						
BINY	Binghamton	88.36	28	P	P	14 30 14.6	-0.1
	baz=332,SNR=28						
T47A	Sharon Grove	88.36	38	*e*P	P	14 30 14.8	0.0
U46A	Springville	88.39	39	P	P	14 30 14.5	-0.4
	baz=325,SNR=28						
GGN	Saint George	88.48	21	*e*P	P	14 30 15.6	+0.5
O54A	Avella	88.51	32	P	P	14 30 15.4	0.0
	baz=330,SNR=173						
R50A	Paris	88.51	35	P	P	14 30 15.0	-0.4
	baz=327,SNR=50						
S49A	Springfield	88.51	36	P	P	14 30 15.6	+0.1
	baz=327,SNR=38						
N55A	Marion Center	88.52	31	P	P	14 30 15.5	0.0
	baz=330,SNR=153						
V45A	Humboldt	88.53	40	P	P	14 30 15.2	-0.4
	baz=325,SNR=12						
X43A	Marvell	88.58	42	P	P	14 30 15.9	+0.1
	baz=324,SNR=12						
T48A	Bowling Green	88.58	37	P	P	14 30 15.2	-0.6
	baz=326,SNR=43						
W44A	Shelby Farms P	88.60	41	P	P	14 30 15.9	0.0
	baz=324						
Z41A	Richland Creek	88.62	44	*e*P	P	14 30 17.1	+1.0
Z41A	Richland Creek	88.62	44	P	P	14 30 16.3	+0.3
	baz=323,SNR=14						
FFD	Franklin Falls	88.63	25	*e*P	P	14 30 16.4	+0.6
	comp=Z,291nm,0.7s						
TRY	Troy	88.66	26	*e*P	P	14 30 16.6	+0.6
	comp=Z,548nm,1.3s						
Y42A	Garnett, Star	88.68	43	P	P	14 30 16.8	+0.5
	baz=323,SNR=34						
EMMW	East Machias	88.70	21	*e*P	P	14 30 17.0	+0.8
P53A	Whipple	88.71	33	*e*P	P	14 30 16.6	+0.2
	comp=Z,497nm,0.9s						
P53A	Whipple	88.71	33	P	P	14 30 16.4	+0.1
	baz=329,SNR=61						
U47A	Clarksville	88.73	38	P	P	14 30 16.3	-0.2
	baz=326,SNR=50						
WVT	Waverly	88.74	39	*e*P	P	14 30 16.8	+0.3
	comp=Z,258nm,0.8s						
WVT	Waverly	88.74	39	*e*P	P	14 30 16.8	+0.3
WVT				pmax	pmax		
	comp=Z,258nm,0.8s						
WVT	Waverly	88.74	39	P	P	14 30 16.5	-0.1
	baz=325						
Q52A	Bidwell	88.80	34	P	P	14 30 16.2	-0.6
	baz=328,SNR=28						
R51A	Hillsboro	88.81	35	P	P	14 30 16.6	-0.2
	baz=328,SNR=113						
NATX	Nacogdoches	88.83	46	*e*P	P	14 30 18.1	+1.0
NATX	Nacogdoches	88.83	46	P	P	14 30 17.3	+0.3
	baz=322						
833A	Chaparral WMA,	88.84	51	*e*P	P	14 30 17.8	+0.6
833A	Chaparral WMA,	88.84	51	P	P	14 30 17.5	+0.4
	baz=319						
V46A	Holladay	88.87	39	P	P	14 30 16.8	-0.4
	baz=325,SNR=122						
W45A	Hickory Valley	88.89	40	P	P	14 30 17.2	0.0
	baz=324,SNR=53						
O55A	Ligonier	88.90	31	P	P	14 30 16.6	-0.6
	baz=330,SNR=102						
X44A	Crenshaw	88.96	41	P	P	14 30 17.1	-0.5
	baz=324						
P54A	Burton	88.97	32	P	P	14 30 17.8	+0.2
	baz=330,SNR=164						
T49A	Edmonton	88.97	37	*e*P	P	14 30 17.9	+0.3
	comp=Z,369nm,0.9s						
T49A	Edmonton	88.97	37	P	P	14 30 17.5	-0.1
	baz=327,SNR=69						
S50A	Richmond	88.99	36	P	P	14 30 17.1	-0.6
	baz=327,SNR=104						
KSPA	Keystone Colle	89.00	28	*e*P	P	14 30 18.0	+0.3
	comp=Z,384nm,1.0s						
U48A	Cassie Pea, Po	89.01	38	P	P	14 30 17.4	-0.4
	baz=326,SNR=95						
Y43A	Makayla and Ka	89.05	42	P	P	14 30 17.8	-0.2
	baz=324,SNR=19						
SSPA	Standing Stone	89.06	30	*e*P	P	14 30 18.0	+0.1
	comp=Z,577nm,0.9s						
SSPA	Standing Stone	89.06	30	P	P	14 30 17.6	-0.4
	baz=331						
LTZ	Lake Taylor	89.11	159	*e*P	P	14 30 19.3	+1.4
KHZ	Kahutara	89.12	158	*e*P	P	14 30 20.4	+2.7
O56A	Blue Knob Stat	89.13	31	*e*P	P	14 30 18.1	-0.2
O56A	Blue Knob Stat	89.13	31	P	P	14 30 17.9	-0.5
	baz=331,SNR=182						
V47A	Nunnelly	89.13	39	P	P	14 30 18.2	-0.2
	baz=325,SNR=125						
MCWV	Mont Chateau	89.17	32	*e*P	P	14 30 18.9	+0.4
	comp=Z,298nm,0.8s						
MCWV	Mont Chateau	89.17	32	P	P	14 30 18.7	+0.2
	baz=330,SNR=62						
R52A	Catlettsburg	89.18	34	P	P	14 30 18.0	-0.6
	baz=328,SNR=61						
FOZ	Fox Glacier	89.20	161	*e*P	P	14 30 19.4	+1.3
	comp=Z,533nm,1.3s						
W46A	Michie	89.29	40	P	P	14 30 18.9	-0.3
	baz=325,SNR=15						
P55A	Reedsville	89.31	32	P	P	14 30 18.9	-0.3
	baz=330,SNR=127						
OXF	Oxford	89.31	41	*e*P	P	14 30 18.9	-0.3
	comp=Z,625nm,0.9s						
OXF	Oxford	89.31	41	*e*P	P	14 30 18.9	-0.3
OXF				pmax	pmax		
	comp=Z,625nm,0.9s						
OXF	Oxford	89.31	41	P	P	14 30 18.6	-0.6
	baz=324,SNR=38						
T50A	Nancy	89.35	36	P	P	14 30 19.5	+0.1
	baz=327,SNR=141						
U49A	Red Boiling Sp	89.35	37	P	P	14 30 19.1	-0.3
	baz=326,SNR=93						
Q54A	Coxs Mills	89.36	33	P	P	14 30 19.4	0.0
	baz=329,SNR=84						
Y44A	Strider, Charl	89.36	42	P	P	14 30 19.5	0.0
	baz=324,SNR=18						
S51A	Beattyville	89.37	35	*e*P	P	14 30 19.1	-0.3
	comp=Z,240nm,0.8s						
S51A	Beattyville	89.37	35	P	P	14 30 19.1	-0.3
	baz=328,SNR=51						
X45A	UM Field Stati	89.39	41	P	P	14 30 19.3	-0.3
	baz=324,SNR=31						
Z43A	Armstrong Fami	89.45	43	P	P	14 30 19.7	-0.2
	baz=323						
R53A	Hurricane	89.47	34	P	P	14 30 20.0	+0.1
	baz=329,SNR=23						
GBN	Guysborough	89.48	17	*e*P	P	14 30 20.7	+0.9
	comp=Z,1µm,1.6s						
QUA2	Belchertown	89.49	26	*e*P	P	14 30 20.1	+0.2
	comp=Z,289nm,1.1s						
V48A	Smith Brothers	89.52	39	*e*P	P	14 30 19.5	-0.7
	comp=Z,349nm,1.0s						
V48A	Smith Brothers	89.52	39	P	P	14 30 20.1	-0.1
	baz=326,SNR=63						
HRV	Adam Dziewonsk	89.54	25	*e*P	P	14 30 20.3	+0.2
	comp=Z,446nm,1.0s						
HRV	Adam Dziewonsk	89.54	25	*e*P	P	14 30 20.3	+0.2
HRV				pmax	pmax		
	comp=Z,446nm,1.0s						
HRV	Adam Dziewonsk	89.54	25	P	P	14 30 19.8	-0.3
	baz=335						
S52A	Salyersville	89.55	35	P	P	14 30 20.2	-0.1
	baz=328,SNR=38						
PLAL	Pickwick Lake	89.56	40	*e*P	P	14 30 21.0	+0.6
OXZ	Oxford	89.56	159	*e*P	P	14 30 21.3	+1.4
W47A	Westpoint	89.57	39	P	P	14 30 20.1	-0.3
	baz=325,SNR=39						
N59A	State Game Lan	89.57	28	*e*P	P	14 30 20.5	0.0
	comp=Z,4µm,1.8s						
N59A	State Game Lan	89.57	28	P	P	14 30 20.4	0.0
	baz=333,SNR=71						
Q55A	Buckhannon	89.65	32	P	P	14 30 20.6	-0.2
	baz=330,SNR=45						
X46A	Booneville	89.67	40	P	P	14 30 20.3	-0.6
	baz=325,SNR=36						
MAHO	Mahon	89.67	330⇑	*i*P	P	14 30 22.4	+1.5
MAHO				*i* S	SKSac	14 40 43.7	+2.1
RPZ	Rata Peaks	89.67	160	S	SKSac	14 40 39.7	-1.1
	comp=Z,2.4nm,0.9s,baz=1.0,slow=22,SNR=1.0						
RPZ				LR	LR	15 05 30.8	
	comp=Z,6µm,22.0s,baz=331,slow=32						
ATD	Arta Tunnel	89.69	285⇑	*i*P	P	14 30 22.8	+1.4
ATD				*e*S	S	14 40 55.8	-8.6
ATD	Arta Tunnel	89.69	285⇑	*i*P	P	14 30 22.8	+1.4
ATD				*e*S	S	14 40 55.8	-8.6
WES	Weston	89.72	25	*e*P	P	14 30 21.5	+0.5
	comp=Z,538nm,0.9s						
WES	Weston	89.72	25	*e*P	P	14 30 21.5	+0.5
WES				pmax	pmax		
	comp=Z,538nm,0.9s						
HAL	Halifax	89.74	19	*e*P	P	14 30 22.2	+1.2
HAL	Halifax	89.74	19	*e*P	P	14 30 22.2	+1.2
Y45A	Yeager Farm, C	89.77	41	P	P	14 30 21.4	0.0
	baz=324,SNR=33						
T51A	Gray	89.78	36	P	P	14 30 21.3	-0.1
	baz=328,SNR=34						
BCX	Boston College	89.81	25	*e*P	P	14 30 21.8	+0.4
	comp=Z,283nm,0.9s						
ODNJ	Ogdensburg	89.83	28	*e*P	P	14 30 21.2	-0.3
	comp=Z,322nm,1.0s						
PAGS	Pennsylvania G	89.84	29	*e*P	P	14 30 21.3	-0.3
	comp=Z,2µm,1.9s						
U50A	Jamestown	89.85	37	P	P	14 30 21.4	-0.4
	baz=327,SNR=75						
V49A	McMinnville	89.92	38	P	P	14 30 21.6	-0.4
	baz=326,SNR=28						
S53A	Williamson	89.95	34	P	P	14 30 21.8	-0.4
	baz=329,SNR=34						
W48A	Pulaski	89.97	39	P	P	14 30 21.8	-0.5
	baz=326,SNR=75						
R54A	Victor	89.99	33	P	P	14 30 22.4	0.0
	baz=329,SNR=12						
LUPA	Lehigh Univers	89.99	28	*e*P	P	14 30 22.2	-0.1
	comp=Z,33nm,0.9s						
X47A	Russelville	90.04	40	P	P	14 30 22.0	-0.6
	baz=325,SNR=41						
T52A	Hallie	90.07	35	P	P	14 30 22.5	-0.3
	baz=328,SNR=46						
BRYW	Bryant College	90.08	25	*e*P	P	14 30 23.4	+0.7
	comp=Z,1µm,1.8s						
MQZ	McQueen's Vall	90.08	159	*e*P	P	14 30 24.7	+2.5
Y46A	Houston	90.08	41	P	P	14 30 22.5	-0.4
	baz=325,SNR=54						
Z45A	Winona	90.09	42	P	P	14 30 23.3	+0.4
	baz=324,SNR=23						
LBZ	Lake Benmore	90.09	161	*e*P	P	14 30 24.0	+1.6
	comp=Z,662nm,1.3s						
PAL	Palisades	90.13	27	*e*P	P	14 30 22.8	-0.1
PAL	Palisades	90.13	27	*e*P	P	14 30 22.8	-0.1
PAL	Palisades	90.13	27	P	P	14 30 23.2	+0.3
	baz=334,SNR=47						
YLE	Yale	90.17	26	*e*P	P	14 30 23.4	+0.3
	comp=Z,170nm,0.8s						
MVL	Millersville	90.18	29	*e*P	P	14 30 23.5	+0.3
	comp=Z,2µm,1.9s						
BRNJ	Basking Ridge	90.20	28	*e*P	P	14 30 23.3	+0.1
	comp=Z,508nm,0.9s						
WKZ	Wanaka	90.24	162	*e*P	P	14 30 25.7	+2.7
U51A	La Follette	90.25	36	P	P	14 30 23.5	-0.2
	baz=328,SNR=46						
R55A	Marlinton	90.25	33	P	P	14 30 23.5	-0.1
	baz=330,SNR=40						
W49A	Belvidere	90.29	39	P	P	14 30 23.2	-0.7
	baz=326,SNR=44						
KVTX	Kingsville	90.30	51	*e*P	P	14 30 26.4	+2.4
	comp=Z,349nm,0.8s						
CPNY	Central Park	90.31	27	*e*P	P	14 30 23.8	0.0
	comp=Z,2µm,2.0s						
TZTN	Tazewell	90.31	36	*e*P	P	14 30 24.2	+0.3
	comp=Z,166nm,0.8s						
TZTN	Tazewell	90.31	36	P	P	14 30 23.6	-0.3
	baz=328,SNR=90						
V50A	Pikevile	90.36	37	P	P	14 30 23.8	-0.3
	baz=327,SNR=28						
T53A	Wise	90.37	35	P	P	14 30 24.0	-0.2
	baz=328,SNR=45						
TBI	Tubuai	90.38	122	*e*PP	PP	14 34 00.4	+0.2
	comp=Z,3µm,26.8s						
TBI				*e*SKSac	SKSac	14 40 44.9	-0.9
	comp=Z,13µm,26.7s						
TBI				*e*S	S	14 41 07.6	-2.4
	comp=Z,22µm,29.8s						
TBI				*e*SP	SP	14 42 19.0	+1.4
	comp=Z,16µm,33.8s						
TBI				*e*SS	SS	14 47 13.2	0.0
	comp=Z,15µm,28.2s						
TBI				*e*LQ	LQ	14 54 49.4	
	comp=Z,31µm,36.5s						
TBI				*e*LR	LR	14 58 55.3	
	comp=Z,59µm,37.0s,baz=320						
DCZ	Deep Cove	90.43	163	*e*P	P	14 30 25.0	+1.2
	comp=Z,96nm,0.9s						
X48A	Hartselle	90.48	39	*e*P	P	14 30 24.1	-0.6
	comp=Z,164nm,0.9s						
X48A	Hartselle	90.48	39	P	P	14 30 24.1	-0.6
	baz=326,SNR=68						
U52A	Thorn Hill	90.51	36	P	P	14 30 24.9	+0.1
	baz=328,SNR=63						
SDMD	Soldier's Deli	90.52	30	*e*P	P	14 30 25.2	+0.4
S55A	Lewisburg	90.53	33	P	P	14 30 24.7	-0.2
	baz=330,SNR=17						
MLZ	Mavora Lakes	90.55	163	*e*P	P	14 30 26.0	+1.6
Y47A	UCPARC, Winfie	90.55	40	P	P	14 30 24.4	-0.6
	baz=325,SNR=21						
V51A	Loudon	90.58	37	*e*P	P	14 30 25.2	0.0
	comp=Z,335nm,0.9s						
V51A	Loudon	90.58	37	P	P	14 30 24.9	-0.2
	baz=327,SNR=31						
145A	Houston Renfro	90.59	42	P	P	14 30 25.2	0.0
	baz=324						
VBMS	Vicksburg	90.61	43	P	P	14 30 25.4	+0.1
	baz=324						
W50A	Signal Mountai	90.66	38	*e*P	P	14 30 25.5	-0.1
	comp=Z,162nm,0.8s						
W50A	Signal Mountai	90.66	38	P	P	14 30 25.2	-0.4
	baz=327,SNR=24						
M65A	Busby, Falmout	90.68	25	P	P	14 30 25.7	+0.2
	baz=336						
T54A	Tazewell	90.70	34	P	P	14 30 25.6	-0.2
	baz=329,SNR=47						
X49A	Woodville	90.76	39	P	P	14 30 25.4	-0.6
	baz=326,SNR=36						
CPCT	Cooper Cave	90.80	37	*e*P	P	14 30 26.2	0.0
	comp=Z,349nm,1.1s						
ODZ	Otahua Downs	90.82	161	*e*P	P	14 30 27.9	+2.2
	comp=Z,365nm,1.2s						
Y48A	Jasper	90.86	40	P	P	14 30 25.8	-0.7
	baz=326,SNR=17						
U53A	Fall Branch	90.88	35	P	P	14 30 26.5	-0.1
	baz=328,SNR=33						
V52A	Sevierville	90.88	36	*e*P	P	14 30 26.7	+0.2
	comp=Z,340nm,0.9s						
V52A	Sevierville	90.88	36	P	P	14 30 26.5	0.0
	baz=328,SNR=79						
W51A	Cleveland	90.94	37	P	P	14 30 26.4	-0.5
	baz=327,SNR=40						
TKL	Tuckaleechee C	90.96	37	*e*P	P	14 30 27.0	+0.1
	comp=Z,304nm,0.9s						
TKL	Tuckaleechee C	90.96	37	*e*P	P	14 30 27.0	+0.1
TKL				pmax	pmax		
	comp=Z,304nm,0.9s						
TKL	Tuckaleechee C	90.96	37	S	SKSac	14 40 45.2	-4.1
	comp=Z,7.6nm,1.0s,baz=126,slow=12,SNR=2.0						
PYZ	Puysegur Point	91.00	164	*e*P	P	14 30 29.9	+3.4
WHZ	Wether Hill Ro	91.01	163	*e*P	P	14 30 29.8	+3.2
BLA	Blacksburg	91.05	33	*e*P	P	14 30 27.5	+0.1
BLA	Blacksburg	91.05	33	*e*P	P	14 30 27.5	+0.1
BLA	Blacksburg	91.05	33	P	P	14 30 27.4	0.0
	baz=330,SNR=19						
ZAIG	Zacatecas	91.09	57	*e*P	P	14 30 28.2	+0.1
X50B	Fort Payne	91.12	38	P	P	14 30 27.5	-0.3
	baz=326,SNR=11						
Z48A	Northport	91.12	40	P	P	14 30 27.0	-0.7
	baz=325,SNR=10						
KEST	Kesra	91.21	324	P	P	14 30 26.9	-1.2
	comp=Z,71nm,0.9s,baz=306,slow=2.6,SNR=32						
KEST				PP	PP	14 34 07.3	+1.7
	comp=Z,90nm,0.9s,baz=338,slow=4.6,SNR=5.9						
KEST				S	SKSac	14 40 48.0	-2.8
	comp=Z,4.0nm,0.9s,baz=99,slow=22,SNR=1.5						
KEST				LR	LR	15 16 59.6	
	comp=Z,21µm,18.5s,baz=331,slow=39						
CMAH	Djebel Manchou	91.26	326	P	P	14 30 29.8	+1.4
Y49A	Blount Mountai	91.26	39	*e*P	P	14 30 28.1	-0.3
	comp=Z,165nm,0.9s						
Y49A	Blount Mountai	91.26	39	P	P	14 30 27.5	-0.9
	baz=326,SNR=24						
147A	Livingston	91.35	41	*e*P	P	14 30 29.1	+0.4
147A	Livingston	91.35	41	P	P	14 30 28.6	-0.1
	baz=325,SNR=18						
W52A	Murphy	91.36	37	*e*P	P	14 30 29.3	+0.4
W52A	Murphy	91.36	37	P	P	14 30 28.9	+0.1
	baz=328,SNR=20						
CAEH	'Ain El Ouahch	91.36	326	P	P	14 30 30.4	+1.6
V53A	Saluda	91.36	36	*e*P	P	14 30 29.2	+0.4
	comp=Z,166nm,1.1s						
V53A	Saluda	91.36	36	P	P	14 30 28.9	0.0
	baz=328,SNR=42						
CBN	Corbin Frederi	91.38	31	*e*P	P	14 30 28.7	0.0
	comp=Z,124nm,0.6s						
CBN	Corbin Frederi	91.38	31	P	P	14 30 28.8	+0.1
	baz=332,SNR=10						
LNIG	Linares	91.39	54	*e*P	P	14 30 28.4	-0.7
	comp=Z,85nm,0.8s						
X51A	Calhoun	91.39	38	*e*P	P	14 30 29.1	+0.2
X51A	Calhoun	91.39	38	P	P	14 30 28.7	-0.2
	baz=327						
R58B	Mineral	91.40	31	*e*P	P	14 30 29.3	+0.4
R58B	Mineral	91.40	31	P	P	14 30 28.8	-0.1
	baz=331,SNR=20						
246A	Jackson Lee, B	91.47	42	P	P	14 30 29.5	+0.2
	baz=324						
PBRG	Braganca	91.53	338	*e*P	P	14 30 29.2	-0.3
	comp=Z,211nm,1.2s						
PBRG	Braganca	91.53	338	*e*PP	PP	14 34 06.9	-0.9
ABSA	Djebel Ababsia	91.54	326	P	P	14 30 32.2	+2.5
Y50A	Piedmont	91.55	39	P	P	14 30 29.4	-0.3
	baz=326,SNR=13						
W53A	Cullowhee	91.64	36	P	P	14 30 30.2	-0.1
	baz=328,SNR=23						
LRAL	Lakeview Retre	91.67	40	*e*P	P	14 30 29.7	-0.5
	comp=Z,82nm,0.9s						
LRAL	Lakeview Retre	91.67	40	P	P	14 30 29.7	-0.5
	baz=326,SNR=20						
148A	Greensboro	91.71	41	P	P	14 30 30.2	-0.3
	baz=325,SNR=8.4						
Z49A	Columbiana	91.76	40	P	P	14 30 30.2	-0.4
	baz=326,SNR=33						
X52A	Dahlonega	91.79	37	P	P	14 30 30.4	-0.4
	baz=328,SNR=27						
PGAV	Gavieira, Arco	91.79	339	*e*P	P	14 30 31.0	+0.2
	comp=Z,182nm,1.1s						
PGAV	Gavieira, Arco	91.79	339	*e*PP	PP	14 34 09.2	-0.7
PGAV				*e*SKS	SKSac	14 40 54.6	+0.6
PGAV	Gavieira, Arco	91.79	339	*e*LR	LR	15 01 25.1	
PGAV				A	A	15 18 07.3	
	comp=Z,8µm,9.5s						
346A	Big Creek Wild	91.81	43	*e*P	P	14 30 31.9	+1.0
346A	Big Creek Wild	91.81	43	P	P	14 30 31.0	+0.1
	baz=324						
Y51A	Rockmart	91.85	38	P	P	14 30 30.6	-0.5
	baz=327,SNR=20						
UCM	Universidad Co	91.88	335⇑	*i*P	P	14 30 32.1	+1.0
UCM				*i* S	SKSac	14 40 54.3	-0.1
BG3	Lake Jocassee	91.89	36	*e*P	P	14 30 31.6	+0.4
DFRA	Djebel Bou Aff	91.96	327	P	P	14 30 38.7	+7.0
PCAB	Cabril	91.97	339	*e*P	P	14 30 31.7	+0.2
	comp=Z,204nm,1.6s						
PCAB	Cabril	91.97	339	*e*PP	PP	14 34 15.3	+4.1
544A	White Castle	91.97	45	P	P	14 30 32.3	+0.6
	baz=323						
Z50A	Ashland	91.99	39	*e*P	P	14 30 31.3	-0.5
	comp=Z,354nm,0.8s						
Z50A	Ashland	91.99	39	P	P	14 30 31.1	-0.7
	baz=326,SNR=94						
149A	Jones	92.12	40	P	P	14 30 31.6	-0.7
	baz=326,SNR=18						
X53A	Estanollee	92.14	37	P	P	14 30 32.5	+0.1
	baz=328,SNR=40						
MVO	Moncorvo	92.20	338	*e*P	P	14 30 33.0	+0.3
	comp=Z,187nm,1.0s						
MVO	Moncorvo	92.20	338	*e*PP	PP	14 34 15.0	+1.8
MVO				*e*SKS	SKSac	14 40 57.3	+1.0
MVO	Moncorvo	92.20	338	*e*LR	LR	15 01 10.8	
	comp=Z,10µm,33.2s						
POLO	Lamas de Olo	92.22	339	*e*P	P	14 30 33.0	+0.2
	comp=Z,126nm,0.9s						
POLO	Lamas de Olo	92.22	339	*e*PP	PP	14 34 12.1	-1.2
POLO				*e*SKS	SKSac	14 40 56.2	-0.2
POLO	Lamas de Olo	92.22	339	*e*LR	LR	15 01 48.3	
	comp=Z,5µm,23.7s						
PVRL	Vila Real	92.29	338	*e*P	P	14 30 33.4	+0.4
	comp=Z,273nm,1.3s						
Z51A	Franklin	92.29	39	P	P	14 30 32.3	-0.8
	baz=327,SNR=15						
Y52A	Lilburn	92.33	38	*e*P	P	14 30 33.4	+0.1
	comp=Z,113nm,0.9s						
Y52A	Lilburn	92.33	38	P	P	14 30 32.4	-0.9
	baz=327,SNR=25						
KMSC	Kings Mountain	92.44	35	*e*P	P	14 30 33.5	-0.3
	comp=Z,138nm,0.9s						
KMSC	Kings Mountain	92.44	35	P	P	14 30 32.4	-1.4
	baz=329,SNR=16						
249A	Camden	92.48	41	P	P	14 30 33.7	-0.3
	baz=326,SNR=26						
150A	Eclectic	92.48	40	P	P	14 30 33.3	-0.6
	baz=326,SNR=27						
PAULI	Pauline	92.51	36	*e*P	P	14 30 34.3	+0.2
	comp=Z,106nm,0.8s						
Y53A	Monroe	92.56	37	P	P	14 30 34.2	-0.1
	baz=328,SNR=18						
CKHR	Kef el Ahmar	92.57	327	P	P	14 30 35.1	+0.6
PTO	Porto	92.65	339	*e*P	P	14 30 35.0	+0.4
	comp=Z,165nm,1.3s						
ESDC	Sonseca Array	92.68	335	P	P	14 30 34.4	-0.5
	comp=Z,82nm,0.8s,baz=19,slow=3.7,SNR=107						
ESDC				PP	PP	14 34 18.8	+1.8
	comp=Z,54nm,0.9s,baz=21,slow=8.4,SNR=8.3						
ESDC				S	SKSac	14 40 58.4	-0.6
	comp=Z,0.5nm,0.6s,baz=352,slow=7.8,SNR=2.4						
ESDC				PKKPbc	PKKPbc	14 47 45.2	+0.3
	comp=Z,1.2nm,0.7s,baz=220,slow=1.1,SNR=4.5						
ESDC				LR	LR	15 17 58.5	
	comp=Z,9µm,19.4s,baz=20,slow=39						
Z52A	Williamson	92.74	38	P	P	14 30 34.8	-0.4
	baz=327,SNR=28						
HODGE	Hodges	92.82	36	*e*P	P	14 30 36.0	+0.5
	comp=Z,181nm,1.3s						
PVIS	Viseu	92.86	338	*e*P	P	14 30 35.8	+0.1
	comp=Z,150nm,1.3s						
151A	Opelika	92.87	39	P	P	14 30 34.9	-0.9
	baz=327,SNR=16						
250A	Grady	92.89	40	*e*P	P	14 30 36.6	+0.7
250A	Grady	92.89	40	P	P	14 30 35.6	-0.3
	baz=326,SNR=33						
PAB	San Pablo	92.92	335	*e*P	P	14 30 35.9	-0.1
	comp=Z,293nm,1.6s						
PAB	San Pablo	92.92	335	*e*P	P	14 30 35.9	-0.1
PAB				pmax	pmax		
	comp=Z,293nm,1.6s						
Y54A	Tignall	92.95	37	P	P	14 30 35.8	-0.4
	baz=328,SNR=74						
349A	Repton	92.96	41	P	P	14 30 35.8	-0.4
	baz=326						
448A	Bay Minette	92.97	42	P	P	14 30 36.2	0.0
	baz=325						
GOGA	Godfrey	92.98	37	*e*P	P	14 30 36.4	+0.1
	comp=Z,682nm,2.0s						
GOGA	Godfrey	92.98	37	*e*P	P	14 30 36.4	+0.1
GOGA				pmax	pmax		
	comp=Z,682nm,2.0s						
GOGA	Godfrey	92.98	37	P	P	14 30 35.7	-0.6
	baz=328,SNR=21						
152A	Waverly Hall	93.04	39	*e*P	P	14 30 36.1	-0.4
152A	Waverly Hall	93.04	39	P	P	14 30 35.9	-0.7
	baz=327,SNR=13						
Z53A	Monticello	93.05	38	P	P	14 30 36.2	-0.3
	baz=328,SNR=26						
MTE	Manteigas	93.06	338	*e*P	P	14 30 36.9	+0.3
	comp=Z,232nm,1.0s						
MTE	Manteigas	93.06	338	*e*PP	PP	14 34 20.4	+0.6
MTE				*e*SKS	SKSac	14 41 01.7	+0.7
MTE	Manteigas	93.06	338	*e*LR	LR	15 01 43.9	
	comp=Z,10µm,24.2s						
MTE	Manteigas	93.06	338	*e*P	P	14 30 36.4	-0.2

BRAL	Brewton	93.18	41	eP	P	14 30 39.3	+2.1
BRAL	Brewton	93.18	41	P	P	14 30 37.3	+0.1
	baz=326						
251A	Midway	93.20	40	P	P	14 30 37.1	-0.2
	baz=327,SNR=30						
JSC	Jenkinsville	93.21	35	eP	P	14 30 38.3	+1.0
JSC	Jenkinsville	93.21	35	eP	P	14 30 38.3	+1.0
ANKE	Ethiopia-Afar	93.23	286	iP	P	14 30 36.5	-1.7
ANKE	Ethiopia-Afar	93.23	286	iP	P	14 30 31.5	-6.7
ANKE				iS	SKSac	14 40 57.5	-5.9
350A	Dozier	93.31	41	P	P	14 30 36.5	-1.3
	baz=326						
Z54A	Sparta	93.41	37	P	P	14 30 37.7	-0.6
	baz=328,SNR=16						
449A	Pace	93.43	42	P	P	14 30 38.1	-0.3
	baz=326						
153A	Fort Valley	93.46	38	P	P	14 30 37.8	-0.7
	baz=328						
PCBR	Castelo Branco	93.56	338	eP	P	14 30 38.8	0.0
	comp=Z,107nm,1.3s						
PCBR	Castelo Branco	93.56	338	ePP	PP	14 34 27.7	+4.0
252A	Lumpkin	93.59	39	P	P	14 30 38.4	-0.7
	baz=327						
CART	Cartagena	93.61	332	eP	P	14 30 40.1	+1.0
CART	Cartagena	93.61	332⇑	iP	P	14 30 41.9	+2.8
CART				iS	SKSac	14 40 52.5	-11
PCAS	Casmilo, Conde	93.64	339	eP	P	14 30 39.2	0.0
	comp=Z,238nm,1.3s						
PCAS	Casmilo, Conde	93.64	339	ePP	PP	14 34 23.9	-0.4
PCAS				eSKS	SKSac	14 40 59.6	-4.5
PCAS	Casmilo, Conde	93.64	339	A	A	15 16 37.1	
	comp=Z,8µm,19.0s						
450A	Crestview	93.70	41	P	P	14 30 38.8	-0.9
	baz=326						
Z55A	Blythe	93.73	37	P	P	14 30 38.4	-1.4
	baz=328,SNR=12						
CNNC	Cliffs of the	93.77	33	eP	P	14 30 39.1	-0.8
	comp=Z,187nm,1.0s						
CNNC	Cliffs of the	93.77	33	P	P	14 30 39.4	-0.4
	baz=331						
351A	Pinckard	93.78	40	P	P	14 30 39.0	-1.0
	baz=326,SNR=13						
253A	Americus	93.82	39	eP	P	14 30 40.6	+0.5
	comp=Z,318nm,1.0s						
253A	Americus	93.82	39	P	P	14 30 39.6	-0.6
	baz=327,SNR=14						
154A	Montrose	93.82	38	P	P	14 30 40.1	0.0
	baz=328						
PMRV	Marv??o	93.92	338	eP	P	14 30 40.5	0.0
	comp=Z,123nm,2.3s						
PMRV	Marv??o	93.92	338	ePP	PP	14 34 26.7	+0.2
PMRV				eSKS	SKSac	14 41 06.5	+0.8
PMRV	Marv??o	93.92	338	eLR	LR	15 02 18.6	
	comp=Z,11µm,19.0s						
352A	Blakely	93.93	40	eP	P	14 30 40.2	-0.5
352A	Blakely	93.93	40	P	P	14 30 39.9	-0.8
	baz=327,SNR=16						
PTOM	Tomar	94.02	338	eP	P	14 30 41.3	+0.3
	comp=Z,176nm,1.2s						
155A	Kite	94.10	37	P	P	14 30 41.3	-0.1
	baz=328,SNR=11						
451A	Vernon	94.26	41	P	P	14 30 41.4	-0.8
	baz=326						
254A	Abbeville	94.30	38	P	P	14 30 41.1	-1.3
	baz=328,SNR=24						
AAE	Adis Abeba	94.31	286⇑	iP	P	14 30 42.7	-0.3
AAE				eS	SKSac	14 41 15.8	+6.7
AAE	Adis Abeba	94.31	286⇑	iP	P	14 30 42.7	-0.3
AAE				eS	SKSac	14 41 15.8	+6.7
452A	Marianna	94.34	40	P	P	14 30 41.9	-0.7
	baz=327						
353A	Camilla	94.37	39	P	P	14 30 41.8	-0.9
	baz=327,SNR=15						
FURI	Furi	94.46	286⇑	eP	P	14 30 44.6	+0.8
FURI	Furi	94.46	286⇑	eP	P	14 30 44.6	+0.8
FURI				eS	SKSac	14 41 23.7	+14
PMTG	Montargil	94.48	338	eP	P	14 30 42.8	-0.3
	comp=Z,110nm,1.8s						
PMTG	Montargil	94.48	338	ePP	PP	14 34 31.1	+0.2
PMTG				eSKS	SKSac	14 41 13.4	+4.7
PESTR	Estremoz	94.50	337	eP	P	14 30 43.0	-0.2
	comp=Z,96nm,1.2s						
PESTR	Estremoz	94.50	337	ePP	PP	14 34 31.6	+0.6
PESTR				eSKS	SKSac	14 41 14.6	+5.8
PESTR	Estremoz	94.50	337	eP	P	14 30 42.4	-0.7
	comp=Z,48nm,0.9s						
156A	Sylvania	94.50	36	P	P	14 30 43.2	0.0
	baz=329						
TIGA	Tifton	94.59	39	eP	P	14 30 44.1	+0.4
	comp=Z,210nm,0.9s						
TIGA	Tifton	94.59	39	P	P	14 30 43.8	+0.1
	baz=328,SNR=8.6						
NHSC	New Hope	94.68	35	P	P	14 30 43.7	-0.4
	baz=330						
255A	Hazlehurst	94.68	38	eP	P	14 30 44.7	+0.6
255A	Hazlehurst	94.68	38	P	P	14 30 43.9	-0.3
	baz=328,SNR=8.9						
453A	Whigham	94.74	39	P	P	14 30 44.4	0.0
	baz=327						
PMAFR	Mafra	94.88	339	eP	P	14 30 44.8	-0.1
	comp=Z,247nm,1.1s						
PMAFR	Mafra	94.88	339	ePP	PP	14 34 33.6	-0.4
PMAFR				eSKS	SKSac	14 41 18.2	+7.4
552A	Lynn Haven	94.88	41	P	P	14 30 45.3	+0.2
	baz=327						
256A	Glennville	94.90	37	P	P	14 30 45.1	0.0
	baz=329						
355A	Pearson	95.00	38	P	P	14 30 45.5	-0.1
	baz=328,SNR=11						
PMST	Lisbon--Monsan	95.06	339	eP	P	14 30 45.7	0.0
	comp=Z,222nm,1.3s						
PMST	Lisbon--Monsan	95.06	339	ePP	PP	14 34 35.8	+0.5
LIS	Lisbon	95.07	339	eP	P	14 30 45.9	+0.1
LIS				ePP	PP	14 34 36.5	+1.1
LIS				eSKSac	SKSac	14 41 11.8	0.0
LIS				AMS	AMS	15 14 46.6	
	comp=N,15µm,19.6s						
LIS	Lisbon	95.07	339	eP	P	14 30 45.8	+0.1
LIS				e		14 34 36.4	
LIS				e		14 41 11.7	
454A	Quitman	95.18	39	P	P	14 30 46.5	+0.1
	baz=328						
553A	Crawfordville	95.24	40	P	P	14 30 46.6	-0.1
	baz=327						
257A	Skidaway Islan	95.28	36	P	P	14 30 46.2	-0.6
	baz=329						
356A	Blackshear	95.35	38	P	P	14 30 46.3	-0.8
	baz=328,SNR=9.8						
PBEJ	Beja	95.36	337	eP	P	14 30 48.2	+1.1
	comp=N,112nm,1.7s						
PBEJ	Beja	95.36	337	ePP	PP	14 34 34.8	-2.9
455A	Stateville	95.43	39	P	P	14 30 47.5	0.0
	baz=328						
PNCL	Nicolau / Gran	95.46	338	eP	P	14 30 47.8	+0.2
	comp=N,103nm,1.2s						
PNCL	Nicolau / Gran	95.46	338	ePP	PP	14 34 39.7	+1.2
EMAL	Malaga-Limoner	95.49	334⇑	iP	P	14 30 48.3	+0.5
EMAL				iS	SKSac	14 41 04.0	-10
357A	Townsend	95.55	37	P	P	14 30 47.6	-0.5
	baz=329						
MESJ	Messejana	95.63	338	eP	P	14 30 48.4	+0.1
MESJ				ePP	PP	14 34 40.8	+1.0
MESJ				eSKSac	SKSac	14 41 14.9	+0.1
MESJ				eSS	SS	14 48 28.8	+3.2
MESJ				AMS	AMS	15 16 59.3	
	comp=Z,10µm,23.9s						
MESJ	Messejana	95.63	338	eP	P	14 30 48.4	+0.1
	comp=Z,102nm,1.3s						
MESJ	Messejana	95.63	338	ePP	PP	14 34 42.7	+2.9
MESJ	Messejana	95.63	338	eP	P	14 30 48.4	+0.1
MESJ				e		14 34 40.7	
MESJ				e		14 41 14.8	
MESJ				eSS	SS	14 48 28.7	+3.1
LIJA	Lijar	95.67	335	iP	P	14 30 49.0	+0.3
LIJA	Lijar	95.67	335	iPP	PP	14 34 43.8	+3.5
PVAQ	Vaqueiros	95.90	337	eP	P	14 30 49.4	-0.2
	comp=Z,90nm,1.1s						
PVAQ	Vaqueiros	95.90	337	eSKS	SKSac	14 41 15.2	-1.0
PVAQ	Vaqueiros	95.90	337	eLR	LR	15 04 09.4	
	comp=Z,8µm,18.6s						
456A	Hilliard	95.91	38	P	P	14 30 48.6	-1.1
	baz=328						
555A	McAlpin	95.98	39	eP	P	14 30 51.2	+1.1
555A	McAlpin	95.98	39	P	P	14 30 48.6	-1.5
	baz=328						
PTEO	Sao Teotonio	96.05	338	eP	P	14 30 50.0	-0.2
	comp=Z,208nm,2.1s						
ALJ	Aljibe	96.09	335	eP	P	14 30 51.0	+0.5
PBDV	Barranco-do-Ve	96.11	337	eP	P	14 30 50.9	+0.3
	comp=Z,66nm,0.9s						
PBDV	Barranco-do-Ve	96.11	337	ePP	PP	14 34 45.8	+2.3
PBDV				eSKS	SKSac	14 41 22.9	+5.5
457A	Yulee	96.20	38	P	P	14 30 50.2	-0.9
	baz=329						
MORF	Marmelete	96.25	338	eP	P	14 30 51.5	+0.2
MORF				ePP	PP	14 34 45.6	+0.9
MORF				eSKSac	SKSac	14 41 17.9	-0.3
MORF				AMS	AMS	15 17 05.6	
	comp=Z,16µm,22.1s						
MORF	Marmelete	96.25	338	eP	P	14 30 52.5	+1.3
	comp=Z,113nm,1.3s						
MORF	Marmelete	96.25	338	ePP	PP	14 34 47.5	+2.8
MORF				eSKS	SKSac	14 41 21.7	+3.5
MORF	Marmelete	96.25	338	eP	P	14 30 51.4	+0.2
MORF				e		14 34 45.6	
MORF				e		14 41 17.9	
SFS	San Fernando	96.32	336⇑	iP	P	14 30 53.5	+2.1
SFS				iS	SKSac	14 41 21.6	+3.2
MELI	Melilla	96.34	333⇑	iP	P	14 30 52.3	+0.7
MELI				iS	SKSac	14 41 23.0	+4.4
556A	Lake Butler	96.34	39	P	P	14 30 51.5	-0.2
	baz=328						
CNIL	Conil	96.36	335	eP	P	14 30 53.2	+1.6
CNIL	Conil	96.36	335	ePP	PP	14 34 54.0	+8.5
655A	Horseshoe Beac	96.36	39	P	P	14 30 51.4	-0.4
	baz=328						
PFVI	Vila Bisbo	96.46	338	ePP	PP	14 34 47.8	+1.6
CEU	Ceuta	96.58	335⇑	iP	P	14 30 52.6	-0.1
CEU				iS	SKSac	14 41 19.2	-0.6
557A	Orange Park	96.64	38	P	P	14 30 52.6	-0.4
	baz=329						
656A	Willston	96.82	39	P	P	14 30 52.1	-1.8
	baz=328						
657A	Interlachen	96.94	38	P	P	14 30 53.4	-1.0
	baz=328						
658A	Bunnell	97.36	38	P	P	14 30 55.1	-1.2
	baz=329						
757A	Oxford	97.39	39	P	P	14 30 54.2	-2.3
	baz=328						
758A	Lake Helen	97.78	38	P	P	14 30 57.4	-0.8
	baz=329						
857A	Zephyrhills	97.89	39	P	P	14 30 58.2	-0.6
	baz=328						
H07S1	FLORES T-PHASE	98.06	356	ePdif	Pdif	14 31 02.0	+2.7
H07S1	FLORES T-PHASE	98.06	356	ePP	PP	14 34 56.5	-1.8
H07S1				eSKS	SKSac	14 41 29.4	+2.0
H07S1				eSP	SP	14 43 37.7	-2.6
H07S1	FLORES T-PHASE	98.06	356	eLR	LR	15 04 40.0	
PGRA	Graciosa	98.17	353	ePdif	P	14 30 58.4	-1.4
PGRA	Graciosa	98.17	353	ePP	PP	14 34 52.3	-6.9
PGRA				eSKS	SKSac	14 41 29.4	+1.5
PGRA				eSP	SP	14 43 45.7	+4.2
PGRA	Graciosa	98.17	353	eLR	LR	15 04 40.0	
	comp=Z,3µm,21.8s						
858A	St. Cloud	98.34	39	P	P	14 31 00.1	-0.6
	baz=329						
DWPF	Disney Wildern	98.39	39	Pdiff	P	14 30 58.3	-2.6
	baz=329						
ROSA	Rosais	98.50	353	ePdif	P	14 30 59.3	-2.0
ROSA	Rosais	98.50	353	ePP	PP	14 34 55.8	-5.9
ROSA				eSKS	SKSac	14 41 35.1	+5.5
ROSA				eSP	SP	14 43 46.9	+1.8
ROSA	Rosais	98.50	353	eLR	LR	15 04 42.9	
	comp=Z,3µm,25.7s						
859A	Kempfer Cattle	98.68	38	Pdiff	P	14 30 59.6	-2.6
	baz=329						
958A	Wauchula	98.69	39	Pdiff	P	14 31 00.5	-1.8
	baz=328						
IFR	Ifrane	98.69	334⇑	iP	Pdif	14 31 03.0	+0.5
IFR				iS	SKSac	14 41 32.6	+1.5
058A	Arcadia	99.11	40	Pdiff	Pdif	14 31 02.5	-1.7
	baz=328						
PSET	Sete Cidades	99.13	351	ePdif	Pdif	14 30 57.6	-6.6
PSET	Sete Cidades	99.13	351	ePP	PP	14 34 55.1	-11
PSET				eSKS	SKSac	14 41 34.0	+1.2
PSET				eSP	SP	14 43 46.9	-5.1
PSET	Sete Cidades	99.13	351	eLR	LR	15 04 54.6	
	comp=Z,2µm,20.6s						
959A	Okeechobee	99.15	39	Pdiff	Pdif	14 31 01.6	-2.8
	baz=329						
CMLA	Cha da Macela	99.17	351	ePdif	Pdif	14 31 02.7	-1.6
CMLA	Cha da Macela	99.17	351	ePP	PP	14 35 01.4	-5.4
CMLA				eSKS	SKSac	14 41 32.3	-0.7
CMLA				eSP	SP	14 43 47.4	-5.0
CMLA	Cha da Macela	99.17	351	eLR	LR	15 04 56.1	
	comp=Z,2µm,19.3s						
059A	Moore Haven	99.50	39	Pdiff	Pdif	14 31 02.4	-3.6
	baz=329						
AVE	Averroes	99.62	335⇑	iP	Pdif	14 31 06.1	-0.3
AVE				iS	SKSac	14 41 30.1	-5.2
RKT	Rikitea	99.70	112	ePP	PP	14 35 12.7	+0.1
	comp=Z,2µm,29.2s						
RKT				eSKSac	SKSac	14 41 36.4	+0.9
	comp=Z,7µm,36.2s						
RKT				eS	ScS	14 42 28.4	-2.8
	comp=Z,25µm,29.5s						
RKT				eSP	SP	14 44 01.4	+1.6
	comp=Z,7µm,38.8s						
RKT				eSS	SS	14 49 26.4	+0.8
	comp=Z,14µm,30.5s						
RKT	Rikitea	99.70	112	eLR	LR	15 03 37.2	
	comp=Z,42µm,34.0s,baz=309						
060A	Indiantown	99.80	39	Pdiff	Pdif	14 31 05.1	-2.2
	baz=329						
PSMN	Pico do Norte,	99.86	350	ePdif	Pdif	14 30 59.3	-8.1
PSMN	Pico do Norte,	99.86	350	ePP	PP	14 34 58.6	-14
PSMN				eSKS	SKSac	14 41 34.0	-2.4
PSMN				eSP	SP	14 44 01.8	+1.9
PSMN	Pico do Norte,	99.86	350	eLR	LR	15 04 51.7	
	comp=Z,4µm,20.6s						
059Z	Ave Maria	99.89	40	Pdiff	Pdif	14 31 04.9	-2.8
	baz=328						
CMIG	Matias Romero	100.08	55	S	SKSac	14 41 35.9	-2.1
	comp=Z,2.8nm,1.0s,baz=277,slow=12,SNR=1.6						
060Z	West Palm Beac	100.25	39	Pdiff	Pdif	14 31 06.7	-2.5
	baz=329						
061Z	Ochoppi	100.55	40	Pdiff	Pdif	14 31 08.2	-2.4
	baz=329						
062Z	Marathon	101.44	40	Pdiff	Pdif	14 31 12.4	-2.2
	baz=329						
KMBO	Kilima Mbogo	102.40	280	P	Pdif	14 31 19.7	+0.4
	comp=Z,7.7nm,0.9s,baz=55,slow=7.4,SNR=12						
KMBO				PP	PP	14 35 33.6	+0.6
	comp=Z,9.5nm,0.9s,baz=19,slow=9.1,SNR=4.5						
KMBO				S	SKSac	14 41 53.6	+3.9
	comp=Z,0.4nm,0.3s,baz=222,slow=23,SNR=1.1						
PMOZ	Porto Moniz, M	102.63	343	ePP	PP	14 35 34.1	+0.9
PMOZ				eSKS	SKSac	14 41 53.4	+3.3
PMOZ	Porto Moniz, M	102.63	343	eLR	LR	15 05 40.9	
	comp=Z,6µm,32.3s						
PMAR	Madeira	102.66	343	ePP	PP	14 35 36.7	+3.2
JTS	JuntasAbangare	111.33	52	PKKPbc	PKKPbc	14 46 50.4	-0.1
	comp=Z,4.1nm,0.5s,baz=192,slow=19,SNR=1.6						
SJG	San Juan	113.67	31	PP	PP	14 36 53.8	0.0
	comp=Z,52nm,1.0s,baz=355,slow=6.6,SNR=8.8						
TORD	Torodi Ar. Bea	114.07	318	PKP	PKiKP	14 36 01.3	-0.7
	comp=Z,16nm,0.9s,baz=358,slow=4.3,SNR=16						
TORD				PP	PP	14 36 55.2	-1.7
	comp=Z,284nm,1.1s,baz=28,slow=8.1,SNR=15						
TORD				PKKPbc	PKKPbc	14 46 42.2	+0.7
	comp=Z,10nm,0.9s,baz=194,slow=3.0,SNR=9.6						
SMRT	St. Maarten	114.83	28	eP	pPKiKP	14 36 35.7	+3.6
SMRT	St. Maarten	114.83	28	eP	sPKiKP	14 36 47.5	+4.6
SMRT	St. Maarten	114.83	28	e	PKKPbc	14 46 23.7	-15
SEUS	St. Eustatius	115.38	28	eP	sPKiKP	14 36 41.5	-2.5
SEUS	St. Eustatius	115.38	28	e	PKKPbc	14 46 37.8	+0.7
ANWB	Willy Bob	115.61	26	eP	sPKiKP	14 36 40.0	-4.4
BPA	Boggy Peak	116.17	27	eP	PP	14 37 00.3	-11
BPA	Boggy Peak	116.17	27	eP	PKKPab	14 46 43.3	-0.2
MLYT	Lee's Yard	116.36	27	eP	PP	14 37 07.0	-5.7
MLYT	Lee's Yard	116.36	27	e	PKKPab	14 46 43.6	+1.0
MLYT				eS	SP	14 46 47.3	+3.0
DLPL	La Plaine	117.97	27	eP	PP	14 37 01.6	-22
LSZ	Lusaka	118.49	275	PKKPab	PKKPab	14 46 30.6	+0.2
	comp=Z,1.9nm,0.5s,baz=243,slow=5.5,SNR=2.9						
FDF	Fort de France	118.56	27	eP	PP	14 37 14.9	-13
FDF	Fort de France	118.56	27	e	PKKPdf	14 46 53.6	-0.7
ZAM	Aeronautique	118.75	27	eP	PKKPab	14 46 29.2	-2.8
TRMF	Trois Ilets	118.78	27	eP	PKKPab	14 46 29.5	-2.5
BIM	Bigot	118.79	27	eP	PKKPab	14 46 29.8	-2.1
SDV	Santo Domingo	120.05	39	eP	PKPdf	14 36 11.7	-2.1
SDV	Santo Domingo	120.05	39	eP	PKPdf	14 36 11.7	-2.1
SDV	Santo Domingo	120.05	39	PKP	PKPdf	14 36 12.9	-0.9
	comp=Z,73nm,0.7s,baz=76,slow=1.1,SNR=43						
SDV				PP	PP	14 37 44.7	+6.0
	comp=Z,40nm,0.8s,baz=350,slow=11,SNR=3.4						
SDV				PKKPbc	PKKPbc	14 46 19.3	-1.3
	comp=Z,2.2nm,0.6s,baz=180,slow=20,SNR=1.7						
PTBC	PUERTO BERRIO,	120.19	45	eP	PKPdf	14 36 12.6	-1.2
PTBC	PUERTO BERRIO,	120.19	45	eP	PKPdf	14 36 12.6	-1.2
PAMC	Pamplona, Colo	120.40	42	eP	PKPdf	14 36 13.1	-1.7
PAMC	Pamplona, Colo	120.40	42	eP	PKPdf	14 36 13.1	-1.7
VNDA	Vanda	120.59	175	ePKPdf	PKiKP	14 36 13.6	+0.9
VNDA				PKKPbc	PKKPbc	14 46 20.2	+0.5
VNDA	Vanda	120.59	175	PKP	PKiKP	14 36 14.2	+1.5
	comp=Z,13nm,0.7s,baz=307,slow=3.8,SNR=22						
VNDA				PKKPbc	PKKPbc	14 46 20.2	+0.5
	comp=Z,6.8nm,0.8s,baz=217,slow=4.9,SNR=5.2						
PLMC	San Jos del P	120.60	47	eP	PKPdf	14 36 13.4	-1.3
PLMC	San Jos del P	120.60	47	eP	PKPdf	14 36 13.4	-1.3
NORC	Norcasia	120.81	46	eP	PKPdf	14 36 11.8	-3.3
NORC	Norcasia	120.81	46	eP	PKPdf	14 36 11.8	-3.3
BLWY	Bulawayo	121.26	271	iP	PKiKP	14 36 16.6	+0.7
BLWY	Bulawayo	121.26	271	iP	PKiKP	14 36 16.3	+0.4
YOTC	Yotoco, Valle	121.34	48	eP	PKPdf	14 36 14.9	-1.2
YOTC	Yotoco, Valle	121.34	48	eP	PKPdf	14 36 14.9	-1.2
ANIL	Santa Ana	121.42	47	eP	PKPdf	14 36 16.5	-0.1
ANIL	Santa Ana	121.42	47	eP	PKPdf	14 36 16.5	-0.1
RUSC	La Rusia	121.45	44	eP	PKPdf	14 36 14.9	-2.0
RUSC	La Rusia	121.45	44	eP	PKPdf	14 36 14.9	-2.0
MATP	Matopo	121.52	271	iP	PKiKP	14 36 17.0	+0.7
MATP	Matopo	121.52	271	iP	PKiKP	14 36 17.9	+1.5
MATP	Matopo	121.52	271	PKKPab	PKKPab	14 46 17.9	+0.9
	comp=Z,5.7nm,0.6s,baz=230,slow=3.0,SNR=12						
ROSC	El Rosal	121.70	45	PKP	PKPdf	14 36 16.6	-0.5
	comp=Z,21nm,0.8s,baz=48,slow=18,SNR=3.4						
ROSC				PP	PP	14 37 56.9	+6.5
	comp=Z,63nm,1.2s,baz=13,slow=8.6,SNR=5.1						
CHIC	Chingaza	122.19	45	eP	PKPdf	14 36 17.4	-0.7
CHIC	Chingaza	122.19	45	eP	PKPdf	14 36 17.4	-0.7
VILC	Villavicencio,	122.65	45	eP	PKPdf	14 36 17.1	-1.6
VILC	Villavicencio,	122.65	45	eP	PKPdf	14 36 17.1	-1.6
PCON	Cinco Dias	122.68	49	eP	PKPdf	14 36 17.6	-1.7
PCON	Cinco Dias	122.68	49	eP	PKPdf	14 36 17.6	-1.7
SOTA	Rioblanco	122.72	49	eP	PKiKP	14 36 19.6	+0.1
SOTA	Rioblanco	122.72	49	eP	PKiKP	14 36 19.6	+0.1
DBIC	Dimbokro	122.83	321	PKP	PKPdf	14 36 18.0	-0.8
	comp=Z,46nm,0.8s,baz=25,slow=1.9,SNR=36						
DBIC				PP	PP	14 38 00.6	+3.2
	comp=Z,226nm,1.0s,baz=12,slow=9.5,SNR=8.0						
DBIC				PKKPab	PKKPab	14 46 17.3	+3.4
	comp=Z,3.3nm,0.8s,baz=246,slow=3.6,SNR=4.0						
TIC	Toumodi	122.92	321	ePKIKP	PKPdf	14 36 18.0	-1.1
CMBC	Cumbal	123.01	51	eP	PKPdf	14 36 19.2	-0.5
CMBC	Cumbal	123.01	51	eP	PKPdf	14 36 19.2	-0.5
KIC	Kosan Boka	123.04	321	ePKIKP	PKPdf	14 36 18.3	-1.0
	comp=Z,154nm,1.0s						
LIC	Lamto	123.30	321	ePKIKP	PKPdf	14 36 18.7	-1.1
	comp=Z,182nm,1.1s						
MAW	Mawson	125.27	208	PKP	PKiKP	14 36 22.7	+0.6
	comp=Z,40nm,0.8s,baz=38,slow=3.1,SNR=10						
BOSA	Boshof	128.70	265	iP	PKPpre	14 36 23.1	
BOSA	Boshof	128.70	265	iP	PKPpre	14 36 22.7	
BOSA	Boshof	128.70	265	PKhKP	PKPpre	14 36 20.2	
	comp=Z,2.4nm,0.9s,baz=0.7,slow=3.6,SNR=2.2						
BOSA				PKP	PKiKP	14 36 30.8	+0.4
	comp=Z,6.4nm,0.5s,baz=207,slow=1.1,SNR=11						
ATAH	Atahualpa	129.07	58	PKP	PKiKP	14 36 32.7	+0.7
	comp=Z,78nm,0.8s,baz=359,slow=2.1,SNR=30						
MDP	Montagnes des	130.23	21	PKP	PKiKP	14 36 33.7	-0.2
	comp=Z,26nm,0.9s,baz=94,slow=1.5,SNR=5.9						
MDP				PP	PP	14 38 46.9	+0.9
	comp=Z,53nm,1.1s,baz=326,slow=4.2,SNR=4.1						
QSPA	South Pole Qui	132.52	180	PKP	PKPdf	14 36 35.2	-0.5
	comp=Z,18nm,0.8s,baz=301,slow=1.2,SNR=1.9						
QSPA				PP	PP	14 39 04.4	+3.1
	comp=Z,53nm,1.0s,baz=14,slow=8.6,SNR=3.0						
QSPA				SKPbc	SKPab	14 39 55.3	+0.9
	comp=Z,42nm,1.0s,baz=303,slow=5.0,SNR=3.4						
PTGA	Pitinga	133.28	33	PKhKP	PKPpre	14 36 23.4	
	comp=Z,4.0nm,0.8s,baz=322,slow=23,SNR=2.2						
PTGA				PKP	PKPdf	14 36 39.3	+0.5
	comp=Z,34nm,0.7s,baz=336,slow=0.6,SNR=33						
PTGA				PP	PP	14 39 06.5	+0.6
	comp=Z,30nm,0.8s,baz=359,slow=9.0,SNR=4.7						
PTGA				SKPbc	SKPab	14 39 59.9	+0.5
	comp=Z,185nm,1.2s,baz=343,slow=4.1,SNR=12						
NNA	Nana	133.75	61	PKP	PKPdf	14 36 39.9	+0.3
	comp=Z,32nm,0.7s,baz=312,slow=2.9,SNR=5.7						
NNA				SKPbc	SKPbc	14 39 59.3	+0.4
	comp=Z,16nm,0.6s,baz=311,slow=4.7,SNR=3.0						
LPAZ	La Paz	142.46	55	eP	PKPdf	14 36 54.2	-2.0
LPAZ	La Paz	142.46	55	PKhKP	PKPpre	14 36 51.5	
	comp=Z,9.8nm,0.7s,baz=3.2,slow=4.9,SNR=27						
LPAZ				PP	PP	14 40 11.1	+7.0
	comp=Z,86nm,1.3s,baz=328,slow=7.2,SNR=3.8						
PB12	IPOC Station P	142.85	60	eP	PKPdf	14 36 54.5	-1.7
RCBR	Riachuelo	143.19	358	ePKPdf	PKPbc	14 36 55.1	+1.0
RCBR	Riachuelo	143.19	358	PKP	PKPbc	14 36 55.4	+1.2
	comp=Z,56nm,0.8s,baz=278,slow=3.2,SNR=8.2						
MNMCX	Minye Minye	143.70	60	eP	PKPbc	14 36 55.6	-0.1
PSGCX	Pisagua	143.70	61	eP	PKiKP	14 36 59.4	-1.7
PB11	IPOC Station P	144.12	61	ePKPdf	PKPdf	14 36 58.0	-0.5
PB11	IPOC Station P	144.12	61	eP	PKPbc	14 36 57.5	+0.6
PB08	IPOC Station P	144.72	60	eP	PKPdf	14 36 59.4	-0.4
PB02	IPOC Station P	145.09	63	eP	PKPdf	14 37 00.2	+0.2
PB01	IPOC Station P	145.16	62	ePKPbc	PKPdf	14 37 00.6	+0.4
PB07	IPOC Station P	145.38	63	eP	PKPbc	14 37 00.7	-0.1
PB04	IPOC Station P	145.63	64	eP	PKPdf	14 37 01.0	-0.1
PB03	IPOC Station P	145.69	63	eP	PKPdf	14 37 01.3	+0.2
PB09	IPOC Station P	145.85	62	eP	PKPbc	14 37 02.3	+0.1
PB05	IPOC Station P	145.96	65	eP	PKPbc	14 37 02.0	-0.5
PB10	IPOC Station P	146.17	66	ePKPdf	PKPbc	14 37 02.9	0.0
PB10	IPOC Station P	146.17	66	eP	PKPdf	14 36 58.4	-3.3
SIV	San Ignacio	146.20	45	PKPbc	PKPbc	14 37 02.7	-0.5
	comp=Z,357nm,0.7s,baz=316,slow=1.4,SNR=365						
PB06	IPOC Station P	146.27	64	eP	PKPbc	14 37 03.0	-0.5
SNAA	Sanae	146.62	199	PKP	PKPbc	14 37 02.2	-0.7
SNAA	Sanae	146.62	199	ePKPdf	PKPbc	14 37 02.8	-0.1
SNAA				PP	PP	14 40 34.7	+7.0
SNAA	Sanae	146.62	199	PKPbc	PKPbc	14 37 02.1	-0.8
	comp=Z,248nm,0.8s,baz=209,slow=6.2,SNR=105						
SNAA				PP	PP	14 40 34.7	+7.0
	comp=Z,39nm,0.9s,baz=158,slow=7.0,SNR=2.2						
LVC	Limon Verde	146.64	63	ePKPdf	PKPbc	14 37 04.5	-0.3
LVC	Limon Verde	146.64	63	eP	PKPbc	14 37 05.1	+0.3
LVC	Limon Verde	146.64	63	PKPbc	PKPbc	14 37 05.0	+0.3
	comp=Z,116nm,0.8s,baz=292,slow=4.5,SNR=41						
PB15	IPOC Station P	146.69	65	eP	PKPab	14 37 05.5	-0.5
PB14	IPOC Station P	147.02	68	eP	PKPbc	14 37 05.5	-0.2
GO02	Mina Guanaco	147.92	67	ePKPbc	PKPbc	14 37 07.6	-0.5
VNA2	Neumayer--Watz	148.20	198	PKP	PKiKP	14 37 07.9	-0.8
VNA3	Neumayer Olymp	148.46	196	PKP	PKPbc	14 37 07.1	-0.7
YJA	Yavi	148.51	58	eP	PKPdf	14 37 07.8	+1.5
VNA1	Neumayer--Stat	148.60	198	PKP	PKPbc	14 37 08.2	+0.1
GO03	Copiap	149.03	72	ePKPbc	PKPbc	14 37 10.8	+0.2
GO03	Copiap	149.03	72	eP	PKPbc	14 37 10.5	-0.1
HJA	Humahuaca	149.33	60	eP	PKPdf	14 37 09.3	+1.9
LCO	Las Campanas	149.55	74	ePKPbc	PKPbc	14 37 12.5	+0.3
LCO	Las Campanas	149.55	74	eP	PKPdf	14 37 09.6	+2.1
GO04	Tololo Observa	150.15	76	ePKPbc	PKPbc	14 37 13.6	+0.1
GO04	Tololo Observa	150.15	76	eP	PKPbc	14 37 13.3	-0.3
BDFB	Brasilia	151.31	23	PKP	PKPdf	14 37 10.1	-0.3
	comp=Z,22nm,0.7s,baz=140,slow=0.7,SNR=19						
BDFB				PKPbc	PKPbc	14 37 16.1	-0.3
	comp=Z,270nm,0.8s,baz=5.8,slow=1.9,SNR=80						
BDFB				PP	PP	14 41 00.1	+5.3
	comp=Z,101nm,1.1s,baz=347,slow=8.4,SNR=4.0						
AGUA	GUANDACOL	151.39	73	eP	PKPdf	14 37 09.9	-0.2
ROC1	El Roble	151.48	81	ePKPbc	PKPbc	14 37 16.3	-0.3
ROC1	El Roble	151.48	81	eP	PKPbc	14 37 16.1	-0.5
PEL	Peldehue	151.80	81	ePKPbc	PKPbc	14 37 16.6	-0.4
PEL	Peldehue	151.80	81	eP	PKPdf	14 37 13.2	+2.7
AHML	Horco Molle	151.86	65	eP	PKPdf	14 37 11.9	+1.0
AMOG	MOGNA	152.22	75	eP	PKPdf	14 37 12.8	+1.5
AUSP	Uspallata	152.28	78	eP	PKPdf	14 37 12.6	+1.0
ZON	Zonda	152.42	77	eP	PKPbc	14 37 15.5	-3.0
ACLC	CERRO LA CRUZ	152.43	71	eP	PKPdf	14 37 12.4	+0.6
RTLL	Cerro Villicun	152.45	76	eP	PKPbc	14 37 16.4	-2.2
CYA	Choya	152.62	68	eP	PKPdf	14 37 12.2	+0.2
RTCV	Cerro Valdivia	152.69	77	eP	PKPdf	14 37 12.8	+0.8
CFA	Coronel Fontan	152.77	76	eP	PKPdf	14 37 13.3	+1.3

ASAL	Salagasta	152.87	79	eP	PKPdf	14 37 12.6	+0.3
ARCO	CERRO ARCO	152.92	79	eP	PKPdf	14 37 12.7	+0.3
AAGR	Agrelo	153.12	80	eP	PKPdf	14 37 12.9	+0.3
PMSA	Palmer Station	153.14	154	PKPbc	PKiKP	14 37 19.4	+0.3
	comp=Z,20nm,0.9s,baz=299,slow=17,SNR=2.2						
GO07	Milladeo Hill,	153.19	103	ePKPbc	PKiKP	14 37 20.7	+0.8
APLL	PUNTA DE LOS L	153.30	72	eP	PKPdf	14 37 12.5	-0.3
AVIZ	Vizcacheras	153.54	80	eP	PKPbc	14 37 18.6	-2.4
MRA	San Martin	155.01	75	eP	PKPdf	14 37 14.9	-0.3
TCA	Tanti	155.20	72	eP	PKPdf	14 37 26.4	+11
SUCO	SUCO	156.09	76	eP	PKPdf	14 37 18.0	+1.4
USHA	Ushuaia	156.19	131	PKP	PKPdf	14 37 15.6	-0.3
	comp=Z,5.7nm,0.8s,baz=270,slow=5.1,SNR=1.7						
USHA				PKPab	PKPab	14 37 44.3	0.0
	comp=Z,19nm,0.8s,baz=316,slow=7.4,SNR=3.5						
CPUP	Villa Florida	156.56	52	PKP	PKPdf	14 37 16.8	-0.6
	comp=Z,12nm,0.8s,baz=354,slow=2.1,SNR=14						
CPUP				PKPab	PKPab	14 37 46.8	+0.1
	comp=Z,44nm,1.1s,baz=322,slow=4.4,SNR=5.2						

JMA 02 14:23:24.0±0.1, 42°.70N×143°.29E, h101^{km}±2^{km}, M4.0, 2C-2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCH	Churui	0.10	148	⇑P	Pn	14 23 38.2	+0.1
JCH				eS	Sn	14 23 48.7	+0.2
JTHR	Tokachihiroo	0.41	179	P	Pn	14 23 39.3	0.0
JTHR				eS	Sn	14 23 50.9	+0.2
JOB	Onbets	0.45	63	P	Pn	14 23 40.1	+0.6
JOB				eS	Sn	14 23 52.5	+1.4
JNBK	Urakawa-nobuka	0.58	224	⇑P	Pn	14 23 41.2	+0.7
JBT2	Biratori 2	0.69	277	P	Pn	14 23 41.5	+0.1
JBT2				eS	Sn	14 23 55.2	+0.8
JFR	Furan	0.69	312	P	Pn	14 23 41.8	+0.4
JFR				eS	Sn	14 23 55.4	+0.9
JEM	Erimo	0.69	188	P	Pn	14 23 42.2	+0.8
JAR	Ashorobuto	0.69	30	P	Pn	14 23 41.3	-0.1
JAR				eS	Sn	14 23 54.9	+0.4
JIAM	Iburiatsuma	1.01	266	P	Pn	14 23 46.0	+1.4
JAK	Akkeshi	1.08	74	eS	Sn	14 24 01.2	-0.1
JAB	Ashibetsu	1.12	316	⇓P	Pn	14 23 45.9	+0.1
JKK2	Kamakawa 2	1.24	342	P	Pn	14 23 47.3	+0.1
JMP	Maruseppu	1.31	2	P	Pn	14 23 48.0	0.0
JMP				eS	Sn	14 24 07.0	+0.8
JTKR	Abashiri--Toko	1.35	19	⇓P	Pn	14 23 48.2	-0.2
JTKR				eS	Sn	14 24 07.4	+0.5
JNK	Nakash	1.37	49	P	Pn	14 23 48.5	-0.2
JNK				eS	Sn	14 24 07.0	-0.4
JISS	Ishikarishitsu	1.49	293	P	Pn	14 23 50.4	+0.3
JISS				eS	Sn	14 24 11.0	+1.0
JHR	Hokuryu	1.55	313	P	Pn	14 23 51.3	+0.4
JHR				eS	Sn	14 24 12.6	+1.3
JKB	Kayabe	1.86	245	P	Pn	14 23 54.2	-0.6
JKB				eS	Sn	14 24 16.5	-1.8

JMA 02 14:24:07.7±0.2, 42°.78N×143°.37E, h104^{km}±2^{km}, M3.6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCH	Churui	0.17	182	P	Pn	14 24 22.2	-0.1
JCH				eS	Sn	14 24 32.9	-0.2
JOB	Onbets	0.36	70	P	Pn	14 24 23.5	+0.5
JOB				eS	Sn	14 24 35.3	+0.8
JTHR	Tokachihiroo	0.49	186	P	Pn	14 24 23.8	0.0
JAR	Ashorobuto	0.59	29	P	Pn	14 24 24.7	+0.1
JAR				eS	Sn	14 24 37.3	0.0
JNBK	Urakawa-nobuka	0.68	223	P	Pn	14 24 25.8	+0.5
JFR	Furan	0.69	304	eS	Sn	14 24 38.8	+0.1
JEM	Erimo	0.78	192	P	Pn	14 24 27.3	+1.1
JAK	Akkeshi	1.00	77	P	Pn	14 24 27.8	-0.5
JAK				eS	Sn	14 24 43.1	-0.8
JMP	Maruseppu	1.23	360	P	Pn	14 24 30.7	-0.2
JTKR	Abashiri--Toko	1.25	18	P	Pn	14 24 30.7	-0.5
JNK	Nakash	1.27	50	eS	Sn	14 24 48.6	-0.8
JKB	Kayabe	1.95	244	eS	Sn	14 25 03.6	-0.6

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*ISCJB **02** 14:39:23.3±0.9, 17°.02N±0°.10×120°.0E±0°.1, h10^{km}, mb3.7/6, Error ellipse: s-maj=20.6km s-min=14.3km az=175.2*

*MAN **02** 14:39:24.3, 16°.72N×119°.43E, h11^{km}, MS4.2*

*IDC **02** 14:39:30.6±2.7, 16°.73N×120°.19E, h85^{km}±28^{km}, mb3.3/7, mb1 3.6/8, mb1mx3.3/59, mbtmp3.7/8, Error ellipse: s-maj=29.2km s-min=13.8km az=73.0*

ISC 02 14:39:23.3±0.9, 16°.81N±0°.07×120°.0E±0°.1, h10^{km}, n10, σ2^{s}.23/10, mb3.7/6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVP	Callao Caves	1.96	63	eP	Pg	14 40 01.8	+0.8
TGY	Tagaytay City	2.84	161	P	Pb	14 40 12.6	-1.6
	149nm,0.3s,baz=141,slow=3.3,SNR=10						
TGY				S	Sg	14 40 58.6	+3.9
	21nm,0.3s,baz=64,slow=14,SNR=1.5						
JNU	Nakatsue	18.98	29	P	P	14 43 45.6	+0.5
	0.1nm,0.3s,baz=184,slow=19,SNR=1.7						
CMAR	Chiang Mai Arr	20.13	278	P	P	14 43 59.7	+2.1
	0.3nm,0.4s,baz=84,slow=8.5,SNR=2.6						
KSRS	Korea Array	21.72	17	P	P	14 44 14.2	-0.5
	1.2nm,0.7s,baz=201,slow=10,SNR=5.4						
SONM	Songino Array	32.90	343	P	P	14 45 58.0	+0.2
	0.2nm,0.4s,baz=166,slow=7.5,SNR=4.5						
WRA	Warramunga Arr	39.15	158	P	P	14 46 48.7	-2.7
	1.4nm,0.6s,baz=340,slow=9.2,SNR=15						
ASAR	Alice Springs	42.46	161	P	P	14 47 16.7	-2.1
	1.3nm,0.6s,baz=338,slow=6.2,SNR=12						
MKAR	Makanchi Array	43.15	322	P	P	14 47 24.5	+0.3
	0.9nm,0.9s,baz=121,slow=7.6,SNR=4.0						
STKA	Stephens Creek	52.66	157	P	P	14 48 34.8	-3.1
	1.4nm,0.5s,baz=339,slow=8.1,SNR=5.5						

SJA 02 14:49:30.9±0.4, 31°.39S×68°.18W, h71^{km}±6^{km}, ML2.7, MW3.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APLL	PUNTA DE LOS L	1.73	56	iP	Pn	14 50 00.4	+1.4
APLL				iS	Sn	14 50 22.5	+2.2
APLL				IAML		14 50 23.2	
	comp=Z,64nm,0.3s						
ACLC	CERRO LA CRUZ	2.22	29	iP	Pn	14 50 07.6	+1.8
CYA	Choya	3.58	36	iP	Pn	14 50 26.3	+2.1
CYA				iS	Sn	14 51 07.0	+1.6

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*IDC **02** 14:54:55.6±5.0, 17°.94S×178°.27W, h516^{km}±54^{km}, mb3.3/8, mb1 3.5/8, mb1mx3.1/35, mbtmp4.1/8, Error ellipse: s-maj=27.1km s-min=25.8km az=114.0*

*ISCJB **02** 14:54:59.4±0.9, 18°.1S±0°.2×178°.4W±0°.2, h579^{km}, mb3.6/7, Error ellipse: s-maj=27.7km s-min=18.0km az=26.3*

ISC 02 14:55:00.9±0.8, 18°.1S±0°.2×178°.4W±0°.2, h579^{km}, n22, σ0^{s}.78/24, mb3.7/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	20.51	190	P	P	14 58 58.6	-1.4
	2.0nm,0.3s,baz=290,slow=2.5,SNR=5.5						
WRA	Warramunga Arr	44.60	260	P	P	15 02 22.8	-0.1
	1.0nm,0.5s,baz=92,slow=6.9,SNR=43						
WRA				PcP	PcP	15 03 53.9	+0.8
	0.4nm,1.0s,baz=88,slow=3.6,SNR=3.7						
ASAR	Alice Springs	44.75	254	P	P	15 02 24.8	+0.8
	8.5nm,0.6s,baz=88,slow=8.3,SNR=155						
ASAR				PcP	PcP	15 03 54.6	+1.0
	0.4nm,0.6s,baz=104,slow=3.7,SNR=4.4						
MJAR	Matsushiro Arr	68.02	323	P	P	15 05 03.0	-0.4
	1.1nm,0.5s,baz=166,slow=6.3,SNR=5.8						
PETK	Petropavlovsk-	73.82	345	P	P	15 05 36.7	-0.2
	2.9nm,1.0s,baz=164,slow=9.2,SNR=2.3						
SEY	Seymchan	83.92	347	P	P	15 06 29.8	-0.4
	2.4nm,0.8s,baz=163,slow=5.2,SNR=6.5						
ILAR	Eielson Array	86.03	13	P	P	15 06 39.0	-1.3
	0.3nm,0.6s,baz=222,slow=5.5,SNR=6.5						
TXAR	Lajitas Array	86.08	58	P	P	15 06 42.6	+1.1
	0.4nm,0.7s,baz=205,slow=5.5,SNR=4.0						
MKAR	Makanchi Array	109.24	314	PKiKP	PKiKP	15 12 25.6	-0.1
	0.2nm,0.5s,baz=109,slow=0.6,SNR=4.8						
BVAR	Borovoye Array	116.96	321	PKP	PKiKP	15 12 40.6	+0.3
	0.5nm,0.4s,baz=121,slow=2.3,SNR=5.2						
ARCES	ARCESS Array B	126.46	350	PKP	PKiKP	15 12 58.5	0.0
	0.9nm,0.6s,baz=342,slow=0.7,SNR=6.4						
BRTR	Keskin Array B	144.88	315	PKP	PKPab	15 13 34.2	-0.4
	1.5nm,0.9s,baz=101,slow=2.5,SNR=7.6						
GERES	GERESS Array B	147.75	345	PKPbc	PKPbc	15 13 41.5	+0.3
	1.5nm,0.6s,baz=24,slow=2.6,SNR=14						
ARSA	Arzberg	148.71	342	i pPKiKP	PKiKP	15 13 46.7	+2.1
	1.1nm,0.3s						
KBA	Koelnbreinsper	149.48	344	i pPKiKP	PKPbc	15 13 45.7	+0.1
	1.2nm,0.5s						
WATA	Walderalm	149.67	346	i pPKiKP	PKPbc	15 13 45.5	-0.5
	1.2nm,0.4s						
WTTA	Wattenberg	149.72	346	i pPKiKP	PKiKP	15 13 47.2	+0.3
	3.0nm,0.4s						
MYKA	Terra Mystica	149.82	343	i pPKiKP	PKPbc	15 13 46.5	+0.2
	3.3nm,0.6s						
SQTA	Sankt Quirin	149.86	347	i pPKiKP	PKiKP	15 13 47.1	0.0
	2.2nm,0.6s						
ABTA	Abfaltersbach	150.00	345	i pPKiKP	PKPbc	15 13 46.3	-0.5
	2.5nm,0.6s						
FETA	Feichten	150.15	347	i pPKiKP	PKPbc	15 13 47.1	-0.1
	0.7nm,0.6s						
DAVOX	Davos/Dischmat	150.55	348	PKPbc	PKiKP	15 13 49.2	+0.6
	2.8nm,0.5s,baz=208,slow=6.7,SNR=6.4						

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*ISCJB **02** 14:56:55.6±0.4, 36°.05N±0°.03×28°.38E±0°.04, h86^{km}±7^{km}, Error ellipse: s-maj=5.7km s-min=4.8km az=141.0*

*ATH **02** 14:56:57.5, 36°.14N×28°.21E, h79^{km}±3^{km}, ML2.8/2, Error ellipse: s-maj=6.3km s-min=1.7km az=345.0*

*ISK **02** 14:56:58.1, 36°.22N×28°.16E, h73^{km}±1^{km}, ML2.9/17*

*GII **02** 14:56:59.9±0.5, 35°.90N×28°.47E, h68^{km}*

*DDA **02** 14:57:00.3, 36°.40N×28°.17E, h71^{km}±1^{km}, ML3.2*

ISC 02 14:56:56.8±1.3, 36°.12N±0°.04×28°.25E±0°.04, h81^{km}±9^{km}, n46, σ1^{s}.57/64, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.14	313	PG	Pn	14 57 09.4	+0.9
ARG				SG	Sn	14 57 16.9	-0.3
ARG	Arkhangelos	0.14	313	P	Pn	14 57 09.5	+0.9
ARG				S	Sn	14 57 17.3	+0.1
ARG				AML	AML	14 57 17.4	
	comp=N,701µm,0.3s						
ARG				AML	AML	14 57 18.0	
	comp=E,1559µm,0.3s						
ARG	Arkhangelos	0.14	313	P	Pn	14 57 09.5	+0.9
ARG				S	Sn	14 57 17.3	+0.1
BBRN	Bozburun-Marma	0.58	344	PG	Pn	14 57 11.4	0.0
MRSB	Marmaris-Mugla	0.60	356	PG	Pn	14 57 12.1	+0.5
DALY	Dalyan (Mula)	0.77	25	PG	Pn	14 57 14.2	+0.9
DALY	Dalyan (Mula)	0.77	25	iP	Pn	14 57 15.1	+1.8
DALY				iS	Sn	14 57 25.7	+0.2
DALY				IAML_P			
	comp=Z,4µm,0.2s						
DATC	Datca-Mugla	0.80	323	PG	Pn	14 57 13.6	0.0
TURN	Turunc	0.80	20	PG	Pn	14 57 12.9	-0.8
TURN	Turunc	0.80	20	iP	Pn	14 57 13.4	-0.3
TURN				iS	Sn	14 57 23.5	-2.7
TURN				IAML_P			
	comp=Z,5µm,0.1s						
DAT	Datca	0.82	318	PG	Pn	14 57 13.9	-0.1
DAT	Datca	0.82	318	iP	Pn	14 57 15.4	+1.4
DAT				iS	Sn	14 57 26.8	+0.1
DAT				IAML_P			
	comp=Z,969nm,0.1s						
FETY	Fethiye	0.84	52	PG	Pn	14 57 15.3	+1.1
FETY	Fethiye	0.84	52	iP	Pn	14 57 15.7	+1.5
FETY				IAML_P			
	comp=Z,1µm,0.2s						
KARP	Karpathos	1.06	238	P	Pn	14 57 18.1	+1.5
KARP				S	Sn	14 57 32.1	+0.6
KARP				AML	AML	14 57 32.7	
	comp=N,963µm,0.1s						
KARP				AML	AML	14 57 32.7	
	comp=E,993µm,0.1s						
KARP	Karpathos	1.06	238	P	Pn	14 57 18.1	+1.5
KARP				S	Sn	14 57 32.1	+0.6
KSL	Kastellorizon	1.08	88	P	Pn	14 57 18.8	+2.0
KSL				S	Sn	14 57 33.7	+1.8
KSL	Kastellorizon	1.08	88	P	Pn	14 57 18.8	+2.0
KSL				S	Sn	14 57 33.8	+2.0
BDRM	Kayabasi	1.15	326	iP	Pn	14 57 18.4	+0.7
BDRM				iS	Sn	14 57 32.1	-1.4
BDRM				IAML_P			
	comp=Z,3µm,0.2s						
BODT	Bodrum	1.21	321	PN	Pn	14 57 18.9	+0.4
MLSB	Milas	1.23	342	PN	Pn	14 57 19.1	+0.2
YKAV	Yalikavak-Bodr	1.27	322	PN	Pn	14 57 19.4	+0.1
TAVA	DENIZLI_Tavas	1.44	21	iP	Pn	14 57 23.7	+2.1
TAVA				iS	Sn	14 57 40.3	+0.1
TAVA				IAML_P			
	comp=Z,1µm,0.2s						
ELL	Elmali	1.47	64	PN	Pn	14 57 24.3	+2.3
AYDN	Tasoluk	1.57	349	iP	Pn	14 57 24.6	+1.4
AYDN				iS	Sn	14 57 41.6	-1.4
GCAM	G?zelcaml?	1.78	333	PN	Pn	14 57 26.4	+0.6
GCAM	G?zelcaml?	1.78	333	iP	Pn	14 57 27.3	+1.6
GCAM				iS	Sn	14 57 46.1	-1.6
GCAM				IAML_P			
	comp=Z,2µm,0.1s						
AYDB	Zeytinkoy-Aydi	1.85	351	PN	Pn	14 57 27.4	+0.6
KORT	Korkueli	1.90	62	PN	Pn	14 57 30.1	+2.5
ZKR	Zakros	1.94	239	PN	Pn	14 57 30.0	+2.1
SMG	Samos	1.95	325	P	Pn	14 57 28.7	+0.6
ANAF	Anafi Island	2.02	277	P	Pn	14 57 30.2	+1.2
NPS	Neapolis	2.31	249	P	Pn	14 57 34.1	+1.1
KULA	Kula-Manisa	2.41	8	PN	Pn	14 57 34.9	+0.6
KHAL	Karahalli	2.45	23	iP	Pn	14 57 36.3	+1.3
KHAL				iS	Sn	14 58 04.0	-0.1
KHAL				IAML_P			
	comp=Z,311nm,0.2s						
LAST	Lasithi	2.46	248	P	Pn	14 57 35.9	+1.0
BLCB	Balcova	2.46	337	PN	Pn	14 57 35.3	+0.4
SUTC	Sutluce-Ispart	2.59	58	PN	Pn	14 57 39.8	+3.1
KSDI	Kefar Szold	6.76	113	Pn	Pn	14 58 33.8	+0.4
KSDI				Sn	Sn	14 59 46.5	-2.5
NATI	Neve Ativ	6.79	113	Sn	Sn	14 59 47.4	-2.2
HMDT	Nahal Hemdat	7.15	121	Sn	Sn	14 59 56.7	-1.8
DSI	Dead Sea	7.46	125	Sn	Sn	15 00 04.2	-1.9
PRNI	Paran	8.06	134	Pn	Pn	14 58 50.9	-0.3
PRNI				Sn	Sn	15 00 16.9	-3.9
HRFI	Mount Harif	8.32	135	Sn	Sn	15 00 24.3	-2.7
MBRI	Mt Berech	8.43	137	Pn	Pn	14 58 55.8	-0.5
MBRI				Sn	Sn	15 00 27.3	-2.6
EIL	Elat	8.55	137	Sn	Sn	15 00 29.3	-3.3

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*NORS **02** 15:04:31.5±0.0, 43°.45N×44°.41E, h9^{km}, MPVA3.8*

*MOS **02** 15:04:31.4±0.0, 43°.46N×44°.39E, h11^{km}, MPVA3.8*

*DRS **02** 15:04:34.0±0.0, 43°.37N×43°.87E, h25^{km}*

MOS 02 15:04:32.5±0.6, 43°.46N×44°.40E, h8^{km}, mb3.8/1, 4C-9D, Error ellipse: s-maj=6.9km s-min=5.4km az=110.3, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTKR	Batakoyurt	0.14	132	⇓iPG	Pg	15 04 35.3	-0.2
BTKR	Batakoyurt	0.14	132	i Pg	Pg	15 04 35.3	-0.2
BTKR				eSg	Sg	15 04 38.6	+1.1
STDR	Stavd-Durt	0.27	249	ePG	Pb	15 04 39.0	-0.5
STDR				eS	Sb	15 04 43.3	-0.9
STDR	Stavd-Durt	0.27	249	ePg	Pb	15 04 39.0	-0.5
STDR				eSg	Sb	15 04 43.3	-0.9
ARNR	Ardon	0.30	197	ePG	Pg	15 04 39.2	+0.8
ARNR				eS	Sb	15 04 44.2	-0.9
ARNR	Ardon	0.30	197	ePg	Pg	15 04 39.1	+0.8
ARNR				eSg	Sb	15 04 44.2	-0.9
PRTR	Priterechnaya	0.30	343	ePG	Pb	15 04 40.2	+0.1
PRTR				eS	Sb	15 04 45.1	-0.2
PRTR	Priterechnaya	0.30	343	ePg	Pb	15 04 40.2	+0.1
PRTR				eSg	Sb	15 04 45.1	-0.2
TRKR	Terskaya	0.35	43	ePG	Pb	15 04 41.6	+0.6
TRKR				eS	Sb	15 04 47.0	+0.2
TRKR	Terskaya	0.35	43	ePg	Pb	15 04 41.6	+0.6
TRKR				eSg	Sb	15 04 47.0	+0.3
KORR	Kora	0.45	213	ePG	Pn	15 04 44.9	-0.4
KORR				eS	Sb	15 04 51.9	+2.3
KORR	Kora	0.45	213	ePg	Pn	15 04 44.1	-1.2
KORR				eSg	Sb	15 04 51.2	+1.6
LSNR	Lesken	0.46	246	ePG	Pb	15 04 43.2	+0.3
LSNR				eS	Sb	15 04 52.5	+2.6
LSNR	Lesken	0.46	246	ePg	Pb	15 04 43.0	+0.1
LSNR				eSg	Sb	15 04 52.5	+2.6
VLKR	Vladikavkaz	0.46	154	d iPG	Pb	15 04 43.4	+0.5
VLKR				pmax	pmax		
	comp=Z,43nm,0.5s						
VLKR	Vladikavkaz	0.46	154	ePg	Pb	15 04 43.5	+0.5
VLKR				ePg	Pb	15 04 43.5	+0.5
VLKR				eSg	Sb	15 04 51.9	+1.9
VLKR				eSg	Sg	15 04 52.5	+4.9
KMGR	Komgaron	0.53	140	ePG	Pb	15 04 43.5	-0.6
KMGR				eS	Sb	15 04 50.8	-1.1
KMGR	Komgaron	0.53	140	ePg	Pb	15 04 43.5	-0.6
KMGR				eSg	Sb	15 04 50.8	-1.1
NCK	Nalchik	0.59	273	⇓ePG	Pb	15 04 45.4	+0.3
NCK				pmax	pmax		
	comp=Z,156nm,0.2s						
NCK	Nalchik	0.59	273	ePg	Pb	15 04 45.2	+0.1
NCK				eSg	Sn	15 04 56.0	-1.0
LACR	Lac	0.64	187	d iPG	Pb	15 04 45.6	-0.4
LACR				pmax	pmax		
	comp=Z,167nm,0.2s						
LACR	Lac	0.64	187	ePg	Pb	15 04 45.7	-0.3
LACR				eSg	Sn	15 04 58.5	+0.1
ZEI	Tsey	0.77	209	ePG	Pg	15 04 47.5	+0.2
ZEI				pmax	pmax		
	comp=Z,82nm,0.2s						
ZEI	Tsey	0.77	209	ePg	Pg	15 04 47.6	+0.3
ZEI				eSg	Sb	15 04 59.1	+0.1
DIGR	Digorskoe uzhe	0.82	227	ePG	Pg	15 04 48.6	+0.2
DIGR				eS	Sb	15 05 00.5	0.0
DIGR	Digorskoe uzhe	0.82	227	ePg	Pg	15 04 48.6	+0.2
DIGR				eSg	Sb	15 05 00.5	-0.1
GROC	Groznyy	1.05	104	ePG	Pn	15 04 53.8	+0.3
GROC				eS	Sn	15 05 08.7	+0.4
GROC	Groznyy	1.05	104	ePg	Pn	15 04 53.9	+0.3
GROC				eSg	Sn	15 05 08.7	+0.4
PYA1	Pyatigorsk	1.12	303	⇓iPG	Pg	15 04 53.6	-0.4
PYA1				i S	Sn	15 05 10.1	-0.1
PYA1	Pyatigorsk	1.12	303	i Pg	Pg	15 04 53.6	-0.4
PYA1				i Sg	Sn	15 05 10.1	0.0
NEY	Neytrino	1.25	261	⇑iPG	Pb	15 04 55.6	-0.7
NEY				i S	Sn	15 05 13.5	+0.1
NEY	Neytrino	1.25	261	ePg	Pb	15 04 55.6	-0.7
NEY				eSg	Sn	15 05 13.4	0.0
BEYR	Belyy Ugol+	1.27	296	⇓iPG	Pn	15 04 56.0	-0.6
BEYR				i S	Sn	15 05 14.5	+0.6
BEYR	Belyy Ugol+	1.27	296	i Pg	Pn	15 04 56.0	-0.7
BEYR				i Sg	Sn	15 05 14.5	+0.5
SHA1	Shidzhatmaz	1.30	283	⇑iPG	Pn	15 04 56.5	-0.6
SHA1				eS	Sn	15 05 15.4	+0.6
SHA1	Shidzhatmaz	1.30	283	i Pg	Pn	15 04 56.5	-0.7
SHA1				i Sg	Sn	15 05 16.0	+1.2
KIV0	Kislovodsk Arr	1.33	292	i Pg	Pn	15 04 57.2	-0.3
KIV0				eSg	Sn	15 05 16.3	+0.8
KIV	Kislovodsk	1.34	292	⇑iPG	Pn	15 04 57.2	-0.4
KIV				eS	Sn	15 05 16.3	+0.7
DVE	Vedeno	1.36	111	ePG	Pn	15 04 57.4	-0.4
DVE				eS	Sg	15 05 16.9	+0.7
DVE	Vedeno	1.36	111	ePg	Pn	15 04 57.4	-0.4
DVE				eSg	Sg	15 05 16.9	+0.8
BTLR	Botlikh	1.56	120	ePG	Pn	15 05 00.6	+0.1
BTLR				eS	Sg	15 05 22.6	+0.1
BTLR	Botlikh	1.56	120	i Pg	Pn	15 05 00.9	+0.3
BTLR				eSg	Sg	15 05 22.6	+0.2
ALER	Alexandrovskoy	1.69	321	ePg	Pn	15 05 02.1	-0.2
ALER				eSg	Sg	15 05 26.4	-0.2
DBC	Dubki	1.83	103	ePN	Pb	15 05 05.8	-0.4
DBC				eS	Sg	15 05 31.1	-0.1
DBC	Dubki	1.83	103	ePg	Pb	15 05 05.8	-0.4
DBC				eSg	Sg	15 05 31.1	-0.1
GOF	Gofitskoye	1.87	329	ePN	Pb	15 05 07.2	+0.3
GOF				eS	Sg	15 05 34.3	+1.7
GOF				pmax	pmax		
	comp=Z,20nm,0.8s						
GOF				smax	smax		
	comp=E,100nm,0.5s						
GOF	Gofitskoye	1.87	329	ePg	Pb	15 05 05.9	-1.0
GOF				eSg	Sb	15 05 30.7	+0.3
KRNR	Karanay	1.94	108	PN	Pn	15 05 07.0	+1.1
KRNR				eS	Sg	15 05 34.0	-0.8
KRNR	Karanay	1.94	108	ePg	Pn	15 05 07.0	+1.1
KRNR				eSg	Sg	15 05 34.0	-0.8
DOMR	Dombai	2.03	266	⇓ePN	Pb	15 05 08.5	-1.3
DOMR	Dombai	2.03	266	ePg	Pb	15 05 08.5	-1.3
GNI	Garni	3.32	176	⇓ePN	Pn	15 05 27.6	+2.7
GNI	Garni	3.32	176	ePn	Pn	15 05 27.6	+2.7
VSR	Storozhevoye	8.53	337	⇓eP	Pn	15 06 37.8	+1.6
VSR	Storozhevoye	8.53	337	ePn	Pn	15 06 37.8	+1.6
OBN	Obninsk	12.72	339	eP	Pn	15 07 35.0	+1.5
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRVK	Borovoye	19.62	52	⇑eP	P	15 09 00.7	-0.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.1s						

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*ISCJB **02** 15:26:59.0±0.4, 38°.40N±0°.06×134°.77E±0°.07, h400^{km}, mb3.0/11, Error ellipse: s-maj=9.1km s-min=6.9km az=29.7*

*IDC **02** 15:27:00.4±1.0, 38°.34N×134°.75E, h413^{km}±12^{km}, mb2.6/10, mb1 3.0/15, mb1mx2.8/37, mbtmp3.5/15, Error ellipse: s-maj=16.3km s-min=11.7km az=108.0*

*JMA **02** 15:27:01.6±0.4, 38°.20N×135°.08E, h411^{km}, M3.5*

ISC 02 15:26:59.4±0.6, 38°.30N±0°.08×134°.87E±0°.07, h400^{km}, n26, σ1^{s}.64/28, mb3.1/11, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	3.19	122	P	Pn	15 28 07.1	+2.9
	0.1nm,0.3s,baz=280,slow=18,SNR=14						
JNG	Nsakai	3.19	125	P	Pn	15 28 06.3	+1.9
JAG	Ashikaga	4.11	116	P	Pn	15 28 14.6	+2.1
JIE	Ise	4.17	159	P	Pn	15 28 15.6	+2.4
JFT	Otama	4.40	99	P	Pn	15 28 17.6	+2.3
JOD2	Odawara 2	4.55	131	P	Pn	15 28 18.6	+1.8
JOD2				eS	S	15 29 19.6	-0.1
JRG	Rokugo	4.64	75	P	Pn	15 28 19.4	+1.8
JMM	Marumori	4.70	93	P	Pn	15 28 19.6	+1.4
JFK	Kawauchi	4.85	99	eS	S	15 29 22.5	-2.7
JMK	Ichinoseki	5.02	81	P	Pn	15 28 22.6	+1.1
KSRS	Korea Array	5.56	263	P	Pn	15 28 28.5	+1.3
	0.7nm,0.3s,baz=80,slow=11,SNR=22						
JNU	Nakatsue	6.10	213	P	Pn	15 28 34.8	+1.6
	0.6nm,0.3s,baz=55,slow=3.0,SNR=8.0						
BSO1	Boso 1	6.12	125	P	Pn	15 28 33.6	+0.8
BSO1				eS	S	15 29 45.7	-3.3
USRK	Ussuriysk Ar.	6.28	341	P	Pn	15 28 35.8	+0.9
	0.8nm,0.3s,baz=148,slow=10.0,SNR=16						
ASAJ	Asahikawa	8.23	43	P	P	15 28 58.0	+0.9
	5.7nm,0.3s,baz=244,slow=10.0,SNR=45						
SONM	Songino Array	22.77	304	P	P	15 31 27.8	-1.1
	0.5nm,0.9s,baz=123,slow=10,SNR=3.3						
SEY	Seymchan	26.86	18	P	P	15 32 04.9	-0.2
	3.8nm,0.4s,baz=162,slow=17,SNR=39						
CMAR	Chiang Mai Arr	36.96	248	P	P	15 33 32.6	0.0
	0.4nm,0.5s,baz=46,slow=7.7,SNR=5.6						
MKAR	Makanchi Array	39.02	300	P	P	15 33 47.6	-1.6
	0.1nm,0.5s,baz=85,slow=11,SNR=3.1						
ILAR	Eielson Array	51.22	33	P	P	15 35 24.0	+0.6
	0.2nm,0.6s,baz=262,slow=6.6,SNR=3.9						
WRA	Warramunga Arr	57.93	181	P	P	15 36 11.4	-0.2
	0.3nm,0.3s,baz=358,slow=7.5,SNR=17						
ASAR	Alice Springs	61.64	181	P	P	15 36 36.7	+0.3
	0.4nm,0.5s,baz=352,slow=6.1,SNR=6.3						
FINES	FINESS Array B	65.20	330	P	P	15 36 57.9	-1.0
	0.9nm,0.8s,baz=72,slow=6.2,SNR=3.5						
YKA	Yellowknife Ar	65.26	29	P	P	15 36 59.6	+0.2
	0.1nm,0.6s,baz=309,slow=4.8,SNR=3.2						
PDAR	Pinedale Array	80.36	42	P	P	15 38 27.8	+0.2
	0.3nm,0.7s,baz=289,slow=2.8,SNR=3.0						
TXAR	Lajitas Array	93.31	48	P	P	15 39 30.0	-0.2
	0.1nm,0.5s,baz=251,slow=1.6,SNR=2.7						

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*JMA **02** 15:37:55.7±0.1, 36°.15N×142°.55E, h75^{km}, M3.0*

*IDC **02** 15:38:01.0±2.8, 36°.39N×141°.90E, h0^{km}, mb3.3/4, mb1 3.4/5, mb1mx3.3/34, mbtmp3.2/5, ML2.2/1, Error ellipse: s-maj=75.3km s-min=27.2km az=57.0*

ISC 02 15:37:55.3±3.7, 36°.18N±0°.07×142°.4E±0°.1, h6^{km}±19^{km}, n18, σ0^{s}.77/19, mb3.4/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.37**	**250**	P	**Pn**	**15 38 20.3**	**-0.7**
CHOJ				*e*S	**Sg**	**15 38 39.2**	**-0.1**
JHYU	**Hitachinakayam**	**1.51**	**277**	P	**Pn**	**15 38 22.6**	**-0.3**
JHYU				*e*S	**Sn**	**15 38 42.8**	**-0.1**
JHO	**Hitachi**	**1.57**	**287**	P	**Pn**	**15 38 23.1**	**-0.7**
JHO				S	**Sn**	**15 38 43.7**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.61**	**305**	S	**Sn**	**15 38 44.8**	**-0.8**
BSO1	**Boso 1**	**1.93**	**219**	P	**Pn**	**15 38 27.7**	**-0.6**
JFT	**Otama**	**2.15**	**309**	P	**Pn**	**15 38 32.0**	**+0.2**
JFT				S	**Sn**	**15 38 58.6**	**-0.3**
JAG	**Ashikaga**	**2.43**	**277**	P	**Pn**	**15 38 35.6**	**0.0**
JRY	**Ryogami san**	**2.87**	**268**	P	**Pn**	**15 38 41.4**	**-0.3**
JRY				S	**Sn**	**15 39 15.9**	**-0.7**
JOD2	**Odawara 2**	**2.88**	**253**	P	**Pn**	**15 38 41.7**	**-0.1**
JOD2				*e*S	**Sn**	**15 39 16.1**	**-0.6**
JMK	**Ichinoseki**	**2.94**	**341**	S	**Sn**	**15 39 16.5**	**-1.6**
MJAR	**Matsushiro Arr**	**3.44**	**277**	Pn	**Pn**	**15 38 49.2**	**-0.2**
	0.3nm,0.3s,baz=91,slow=15,SNR=26						
MJAR				Sn	**Sn**	**15 39 31.4**	**+0.9**
	0.1nm,0.3s,baz=99,slow=8.4,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**27.00**	**121**	T	T	16 11 45.1	
	baz=312						
H11N1	**WAKE ISLAND Hy**	**27.01**	**121**	T	T	16 11 41.3	
	baz=312						
H11N3	**WAKE ISLAND Hy**	**27.02**	**121**	T	T	16 11 47.2	
	baz=312						
SONM	**Songino Array**	**28.95**	**305**	P	**P**	**15 43 56.8**	**+1.3**
	0.4nm,0.6s,baz=114,slow=8.4,SNR=2.7						
MKAR	**Makanchi Array**	**45.28**	**303**	P	P	15 46 17.1	+3.4
	0.3nm,0.6s,baz=90,slow=9.7,SNR=5.0						
WRA	**Warramunga Arr**	**56.34**	**189**	P	P	15 47 44.2	+7.0
	0.2nm,0.6s,baz=7.8,slow=7.1,SNR=3.1						
ASAR	**Alice Springs**	**60.06**	**189**	P	P	15 48 11.3	+8.0
	0.3nm,0.8s,baz=356,slow=6.3,SNR=3.6						

IDC 02 15:41:59.0±7.5**, 16°.71S**×**175°.00W, h0km, mb3.9**/3**, mb1 4.2**/3**, mb1mx3.7**/28**, mbtmp3.9**/3**, Error ellipse: s-maj=329.7km s-min=36.1km az=141.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.06**	**258**	P	P	15 50 40.1	-0.5
	0.7nm,0.7s,baz=93,slow=8.2,SNR=20						
ASAR	**Alice Springs**	**48.25**	**253**	P	P	15 50 42.5	+0.3
	2.2nm,0.3s,baz=88,slow=7.7,SNR=126						
ILAR	**Eielson Array**	**84.02**	**12**	P	P	15 54 31.0	0.0
	0.3nm,0.6s,baz=213,slow=5.2,SNR=6.3						

NEIC 02 15:49:48.9±0.0**, 51°.50N**×**178°.17W, h18km, ML3.6**(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**0.35**	**14**	P	Pb	15 49 57.1	+0.5
TAFP	**Tanaga Falls P**	**0.42**	**16**	P	Pb	15 49 58.0	+0.2
GAEA	**Gareloi East**	**0.46**	**309**	P	Pb	15 49 58.5	0.0
GALAA	**Gareloi Lava P**	**0.46**	**305**	P	Pb	15 49 58.4	-0.1
KIMD	**Kanaga Island**	**0.64**	**65**	P	Pb	15 50 01.3	-0.1
KIRH	**Kanaga Island**	**0.78**	**59**	P	Pb	15 50 03.7	-0.2
ADK	**Adak**	**1.00**	**67**	P	Pb	15 50 06.8	-0.8
ADK				S	Sg	15 50 21.0	-0.5
ADAG	**Mount Adagdak**	**1.09**	**63**	P	Pb	15 50 08.7	-0.4
ETKA	**Kagalaska Isla**	**1.16**	**71**	P	Pn	15 50 09.3	-0.8
GSTD	**Great Sitkin T**	**1.38**	**65**	P	Pn	15 50 13.1	-0.1
GSTD				S	Sb	15 50 31.9	+0.6
GSMY	**Great Sitkin M**	**1.42**	**67**	P	Pn	15 50 13.8	0.0
ATKA	**Atka Island**	**2.56**	**72**	P	Pn	15 50 30.0	+0.6
ATKA				S	Sn	15 51 00.9	+0.9
KOFP	**Korovin Flat P**	**2.64**	**71**	P	Pn	15 50 31.9	+1.3

IDC 02 15:51:46.7±4.3**, 11°.35S**×**166°.06E, h0km, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/26**, mbtmp3.6**/4**, Error ellipse: s-maj=172.5km s-min=33.9km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.67**	**250**	P	P	15 58 12.7	+0.5
	1.4nm,0.8s,baz=83,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**32.93**	**244**	P	P	15 58 23.0	-0.2
	0.3nm,0.8s,baz=74,slow=9.8,SNR=6.1						
ILAR	**Eielson Array**	**83.70**	**18**	P	P	16 04 17.8	+0.6
	0.4nm,0.7s,baz=226,slow=5.9,SNR=2.7						
MKAR	**Makanchi Array**	**93.95**	**317**	P	P	16 05 05.6	-1.1
	0.3nm,0.8s,baz=88,slow=5.5,SNR=3.3						

MEX 02 15:59:24.2±0.4**, 13°.71N**×**92°.75W, h11km**±157km**, MD3.7, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**2.03**	**347**	*e*P	Pn	15 59 55.0	-3.3
CCIG	**Comitan**	**2.62**	**13**	*e*P	Pn	16 00 04.0	-2.7

IDC 02 16:03:05.4±4.8**, 6°.46S**×**149°.28E, h0km, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.4**/27**, mbtmp3.3**/4**, ML3.2**/1**, Error ellipse: s-maj=125.8km s-min=37.2km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.75**	**226**	P	P	16 07 36.7	-0.4
	0.1nm,0.3s,baz=52,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**22.61**	**219**	P	P	16 08 09.1	+1.1
	0.7nm,0.6s,baz=55,slow=9.3,SNR=16						
FITZ	**Fitzroy Crossi**	**25.79**	**241**	P	P	16 08 37.4	-1.1
	0.8nm,0.5s,baz=65,slow=8.7,SNR=4.1						
MKAR	**Makanchi Array**	**79.30**	**320**	P	P	16 15 13.3	+0.3
	0.1nm,0.5s,baz=112,slow=7.0,SNR=2.5						

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*ISCJB **02** 16:13:17.9±0.8, 3°.69S±0°.05×131°.14E±0°.09, h30km, mb3.1/1, Error ellipse: s-maj=13.2km s-min=7.3km az=15.9*

*IDC **02** 16:13:17.3±1.7, 3°.70S×130°.92E, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.4/31, mbtmp3.5/5, ML3.0/3, Error ellipse: s-maj=74.6km s-min=23.4km az=86.0*

*DJA **02** 16:13:21.6±1.2, 3°S±6°×13°1E±°, h17km±18km, M3.7/6, MLv3.7/6*

ISC 02 16:13:19.0±0.8**, 3°.82S**±0°.06×**131°.27E**±0°.08**, h30km, n9, σ3s.88**/13**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.33**	**48**	P	**Pn**	**16 13 41.6**	**+0.1**
FAKI				S	**Sn**	**16 13 57.6**	**-0.6**
BNDI	**Bandanaira**	**1.53**	**243**	P	**Pb**	**16 13 50.3**	**+3.7**
SIJI	**Sorong**	**2.93**	**360**	Pn	**Pn**	**16 14 02.2**	**-1.4**
	1.1nm,0.3s,baz=228,slow=22,SNR=27						
SIJI				Sn	**Sn**	**16 14 35.1**	**-2.8**
	4.6nm,0.3s,baz=288,slow=23,SNR=8.0						
SWI	**Sorong**	**2.94**	**360**	P	**Pn**	**16 14 00.4**	**-3.3**
RKPI	**Ransiki, Papua**	**3.71**	**52**	P	**Pn**	**16 14 14.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**15.22**	**201**	Pn	**Pn**	**16 16 51.7**	**-0.2**
	0.1nm,0.3s,baz=21,slow=14,SNR=4.1						
FITZ				Sn	**Sn**	**16 19 32.1**	**-7.6**
	0.0nm,0.3s,baz=0.0,slow=17,SNR=1.8						
WRA	**Warramunga Arr**	**16.30**	**170**	Pn	**P**	**16 17 08.3**	**-0.2**
	0.1nm,0.3s,baz=350,slow=13,SNR=4.6						
WRA				Sn	**Sn**	**16 19 59.3**	**-6.6**
	0.1nm,0.3s,baz=355,slow=23,SNR=6.1						
ASAR	**Alice Springs**	**19.89**	**173**	P	**Pn**	**16 17 53.2**	**+3.3**
	2.0nm,0.7s,baz=356,slow=9.3,SNR=21						
MKAR	**Makanchi Array**	**66.31**	**326**	P	**P**	**16 24 06.7**	**+2.0**
	0.1nm,0.5s,baz=121,slow=7.8,SNR=3.8						

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*IDC **02** 16:13:29.8±2.4, 13°.73N×92°.63W, h0km, mb3.6/3, mb1 3.8/6, mb1mx3.6/41, mbtmp3.5/6, ML3.1/3, Error ellipse: s-maj=48.3km s-min=26.2km az=6.0*

*MEX **02** 16:13:30.5±0.5, 13°.60N×92°.73W, h9km±266km, MD3.8*

ISC 02 16:13:34.7±1.6**, 13°.7N**±0°.2×**92°.73W**±0°.08**, h35km, n10, σ1s.64**/13**, mb3.7**/3**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.28**	**20**	*i* P	**Pn**	**16 13 56.4**	**+0.3**
PCIG		**2.05**	**347**	*e*P	**Pn**	**16 14 03.3**	**-3.4**
APG	**El Apazote**	**2.54**	**59**	Pn	**Pn**	**16 14 12.4**	**-1.3**
	4.2nm,0.3s,baz=233,slow=15,SNR=43						
APG				Sn	**Sn**	**16 14 42.6**	**-1.0**
	5.9nm,0.3s,baz=318,slow=12,SNR=6.0						
CCIG	**Comitan**	**2.63**	**12**	*e*P	**Pn**	**16 14 14.7**	**-0.2**
CMIG	**Matias Romero**	**3.96**	**329**	Pn	**Pn**	**16 14 31.0**	**-2.0**
	0.5nm,0.3s,baz=152,slow=18,SNR=3.0						
CMIG				Sn	**Sn**	**16 15 19.8**	**+1.5**
	2.0nm,0.3s,baz=72,slow=14,SNR=3.5						
TXAR	**Lajitas Array**	**18.57**	**329**	P	**Pn**	**16 17 49.0**	**-0.2**
	0.0nm,0.3s,baz=140,slow=10,SNR=4.1						
NVAR	**Mina Array Bea**	**33.47**	**322**	P	**P**	**16 20 12.8**	**+1.9**
	0.3nm,0.6s,baz=137,slow=9.8,SNR=2.9						
YKA	**Yellowknife Ar**	**51.16**	**347**	P	**P**	**16 22 33.2**	**-0.8**
	1.4nm,0.7s,baz=150,slow=7.4,SNR=33						
YKA				PcP	**PcP**	**16 23 48.9**	**-0.2**
	0.3nm,0.9s,baz=154,slow=3.5,SNR=3.9						
ILAR	**Eielson Array**	**62.84**	**337**	P	**P**	**16 23 57.9**	**+1.2**
	0.5nm,0.9s,baz=126,slow=6.0,SNR=5.6						
CMAR	**Chiang Mai Arr**	**146.04**	**340**	PKPbc	**PKPdf**	**16 33 11.1**	**0.0**
	0.6nm,0.7s,baz=358,slow=1.8,SNR=6.9						

SJA 02 16:21:12.4±0.8**, 31°.22S**×**69°.87W, h118km**±10km**, ML3.3, MW3.5, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**1.08**	**158**	*i* P	Pn	16 21 36.8	+1.4
AUSP				*i* S	Sn	16 21 54.3	+1.4
AMOG	**MOGNA**	**1.22**	**77**	*i* P	Pn	16 21 37.5	+0.9
RTCV	**Cerro Valdivia**	**1.31**	**120**	*i* P	Pn	16 21 38.3	+0.7
RTCV				*i* S	Sn	16 21 57.4	+0.8
ASAL	**Salagasta**	**1.63**	**147**	*i* P	Pn	16 21 42.7	+1.4
ASAL				*i* S	Sn	16 22 04.6	+1.2
ARCO	**CERRO ARCO**	**1.81**	**154**	*i* P	Pn	16 21 44.8	+1.2
ARCO				*i* S	Sn	16 22 08.3	+1.0
ARCO				IAML		16 22 10.5	
	comp=Z,225nm,0.4s						
ROC1	**El Roble**	**2.00**	**209**	*i* P	Pn	16 21 47.1	+1.0
ROC1				*i* S	Sn	16 22 12.5	+0.7
ACAN	**Cantantal**	**2.52**	**115**	*i* P	Pn	16 21 52.8	+0.4

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*ISCJB **02** 16:44:44.4±0.6, 36°.57N±0°.04×70°.86E±0°.09, h200km, mb3.2/7, Error ellipse: s-maj=10.6km s-min=5.4km az=164.1*

*IDC **02** 16:44:46.8±4.6, 36°.60N×71°.23E, h217km±37km, mb3.1/7, mb1 3.1/12, mb1mx2.9/56, mbtmp3.6/12, Error ellipse: s-maj=38.5km s-min=18.6km az=38.0*

*NNC **02** 16:44:52.0±2.6, 37°.08N×71°.13E, h237km±32km, mb2.3, mpv3.6, Error ellipse: s-maj=30.1km s-min=22.4km az=76.0*

ISC 02 16:44:46.4±1.0**, 36°.67N**±0°.08×**71°.1E**±0°.1**, h200km, n31, σ1s.64**/32**, mb3.2**/7**, 6C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.85**	**29**	⇑P	**Pn**	**16 45 48.4**	**+1.9**
	4.1nm,0.2s						
SFK				⇑S	**Sn**	**16 46 35.6**	**+1.8**
	29nm,0.6s						
AML	**Almayashu**	**5.82**	**20**	P	**Pn**	**16 46 13.4**	**+1.8**
	SNR=34						
MNAS	**Manas**	**5.91**	**10**	⇓P	**Pn**	**16 46 13.8**	**+1.3**
	2.4nm,0.4s						
MNAS				⇓S	**Sn**	**16 47 19.7**	**-1.1**
	14nm,0.6s						
UCH	**Uchtor**	**6.16**	**25**	P	**Pn**	**16 46 17.8**	**+1.8**
	SNR=20						
EKS2	**Erkin-Say**	**6.34**	**19**	P	**Pn**	**16 46 20.3**	**+2.3**
	SNR=6.0						
KK31	**Karatay Array**	**6.43**	**356**	⇑P	**Pn**	**16 46 22.1**	**+2.9**
	0.3nm,0.3s,baz=177,slow=14,SNR=5.2						
KK31				⇓S	**Sn**	**16 47 29.8**	**-3.0**
	1.4nm,0.3s,baz=182,slow=19,SNR=14						
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**16 46 22.3**	**+1.9**
	SNR=12						
AAK	**Ala-Archa**	**6.52**	**23**	⇓P	**Pn**	**16 46 21.6**	**+1.2**
	4.1nm,0.4s						
AAK				⇑S	**Sn**	**16 47 34.9**	**-0.1**
	9.1nm,0.7s						
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**16 46 22.3**	**+1.9**
	3.9nm,0.3s,baz=146,slow=4.9,SNR=62						
AAK				S	**Sn**	**16 47 34.3**	**-0.7**
	0.4nm,0.3s,baz=190,slow=15,SNR=3.9						
KBK	**Karagaybulak**	**6.69**	**25**	P	**Pn**	**16 46 24.9**	**+2.3**
	SNR=7.9						
TKM2	**Tokmak 2**	**7.15**	**28**	P	**Pn**	**16 46 30.2**	**+1.5**
	SNR=13						
TKM2	**Tokmak 2**	**7.15**	**28**	⇑P	**Pn**	**16 46 29.5**	**+0.8**
	7.7nm,0.6s						
TKM2				⇑S	**Sn**	**16 47 46.5**	**-3.4**
	6.1nm,0.9s						
MKAR	**Makanchi Array**	**13.12**	**36**	P	**Pn**	**16 47 45.4**	**+0.1**
	0.1nm,0.3s,baz=228,slow=21,SNR=8.1						
PYUN	**Piuthan**	**13.21**	**127**	*e*P	Pn	16 47 46.1	-0.7
	4.4nm,0.5s						
DANN	**Dangsing**	**13.55**	**124**	*e*P	Pn	16 47 51.3	+0.3
	3.7nm,0.4s						
DMN	**Daman**	**14.93**	**123**	*e*P	**Pn**	**16 48 07.7**	**-0.4**
	2.7nm,0.3s						
AB31	**Akbulak array**	**14.95**	**331**	P	**P**	**16 48 10.4**	**+1.8**
	0.1nm,0.3s,baz=141,slow=12,SNR=8.0						
PKIN	**Phulchoki**	**15.15**	**123**	*e*P	**Pn**	**16 48 10.4**	**-0.3**
	3.0nm,0.4s						
PKI	**Pulchoki**	**15.16**	**123**	*e*P	Pn	16 48 10.1	-0.8
	3.9nm,0.4s						
GUN	**Gumba**	**15.27**	**121**	*e*P	**Pn**	**16 48 13.2**	**+1.0**
	3.3nm,0.4s						
JIRN	**Jiri**	**15.64**	**121**	*e*P	**P**	**16 48 16.6**	**-0.1**
	7.8nm,0.3s						
BVAR	**Borovoye Array**	**16.36**	**359**	P	**Pn**	**16 48 25.3**	**+0.5**
	0.2nm,0.3s,baz=162,slow=12,SNR=5.4						
AKTO	**Aktyubinsk**	**16.65**	**330**	P	**P**	**16 48 26.4**	**-0.8**
	0.3nm,0.3s,baz=139,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**19.74**	**25**	P	**P**	**16 49 00.7**	**0.0**
	0.2nm,0.3s,baz=214,slow=11,SNR=4.0						
FINES	**FINESS Array B**	**37.36**	**326**	P	**P**	**16 51 39.5**	**+0.1**
	0.9nm,0.6s,baz=116,slow=8.7,SNR=7.5						
ARCES	**ARCESS Array B**	**41.00**	**338**	P	**P**	**16 52 09.7**	**+0.3**
	1.5nm,0.8s,baz=96,slow=8.7,SNR=6.6						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**16 52 35.3**	**-0.5**
	0.5nm,0.8s,baz=104,slow=7.3,SNR=2.6						
INK	**Inuvik**	**73.73**	**9**	P	**P**	**16 55 55.8**	**-2.0**
	0.5nm,0.8s,baz=357,slow=8.0,SNR=5.1						
YKA	**Yellowknife Ar**	**81.07**	**3**	P	**P**	**16 56 37.9**	**-0.7**
	0.2nm,0.5s,baz=353,slow=5.1,SNR=4.6						
WRA	**Warramunga Arr**	**82.05**	**122**	P	P	16 56 41.9	-2.6
	0.1nm,0.3s,baz=328,slow=5.0,SNR=4.0						
ASAR	**Alice Springs**	**84.32**	**125**	P	P	16 56 53.8	-2.3
	0.3nm,0.7s,baz=306,slow=5.4,SNR=5.4						

IDC 02 17:08:01.5±3.3**, 11°.45S**×**165°.96E, h0km, mb3.7**/5**, mb1 3.9**/5**, mb1mx3.6**/30**, mbtmp3.6**/5**, Error ellipse: s-maj=116.9km s-min=32.4km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.54**	**251**	P	P	17 14 25.7	-0.1
	1.0nm,0.7s,baz=81,slow=9.0,SNR=9.3						
ASAR	**Alice Springs**	**32.80**	**244**	P	P	17 14 36.7	-0.2
	0.6nm,1.1s,baz=64,slow=10,SNR=3.3						
CMAR	**Chiang Mai Arr**	**72.47**	**294**	P	P	17 19 30.7	+0.2
	0.3nm,0.8s,baz=100,slow=4.6,SNR=4.5						
ILAR	**Eielson Array**	**83.83**	**18**	P	P	17 20 32.3	-0.2
	0.2nm,0.6s,baz=233,slow=6.2,SNR=4.5						
MKAR	**Makanchi Array**	**93.96**	**317**	P	P	17 21 21.6	+0.2
	0.3nm,0.8s,baz=103,slow=6.4,SNR=3.0						

IDC 02 17:14:17.5±2.0**, 4°.78S**×**152°.77E, h0km, mb3.4**/5**, mb1 3.7**/5**, mb1mx3.4**/31**, mbtmp3.4**/5**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx3.3**/19**, Error ellipse: s-maj=80.5km s-min=24.4km az=124.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**21.82**	**280**	LR	LR	17 28 34.0	
	comp=Z,257nm,18.2s,baz=358,slow=39						
WRA	**Warramunga Arr**	**23.44**	**228**	P	P	17 19 28.5	-0.2
	1.1nm,0.9s,baz=53,slow=9.8,SNR=11						
ASAR	**Alice Springs**	**26.15**	**222**	P	P	17 19 54.6	+0.9
	0.7nm,0.7s,baz=54,slow=9.0,SNR=6.4						
FITZ	**Fitzroy Crossi**	**29.64**	**241**	P	P	17 20 23.9	-1.1
	0.8nm,0.6s,baz=59,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	**80.29**	**319**	P	P	17 26 31.1	+0.6
	0.2nm,0.8s,baz=100,slow=6.9,SNR=2.7						
ILAR	**Eielson Array**	**82.15**	**22**	P	P	17 26 39.7	-0.3
	0.3nm,0.9s,baz=248,slow=5.3,SNR=3.0						

KRSC 02 17:18:15.3±0.5**, 53°.65N**×**160°.17E, h75km**±7km**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.56**	**189**	*e*P	Pn	17 18 30.3	+1.2
SPN				*e*S	Sn	17 18 40.4	+1.2
KII	**Karymskiy**	**0.58**	**313**	*e*P	Pn	17 18 30.3	+0.9
KII				*e*S	Sn	17 18 40.7	+0.9
NLC	**Nalytchevo**	**0.68**	**226**	*e*P	Pn	17 18 31.4	+1.1
NLC				*e*S	Sn	17 18 42.8	+1.3
SDLR	**Sedlovina**	**0.85**	**245**	*e*P	Pn	17 18 33.8	+1.4
SDLR				*e*S	Sn	17 18 46.9	+1.8
SMAR	**Somma**	**0.90**	**245**	*i* P	Pn	17 18 34.4	+1.3
SMAR				*e*S	Sn	17 18 47.2	+0.9
UGLR	**Uglovaya**	**0.91**	**242**	*i* P	Pn	17 18 34.8	+1.7
UGLR				*e*S	Sn	17 18 48.3	+1.9
AVH	**Avacha**	**0.94**	**246**	*i* P	Pn	17 18 35.1	+1.8
AVH				*e*S	Sn	17 18 49.1	+2.3
KRX	**Arik**	**0.95**	**253**	*e*P	Pn	17 18 35.1	+1.5
KRX				*e*S	Sn	17 18 48.5	+1.3
KOK	**Koryaka**	**0.98**	**249**	*i* P	Pn	17 18 35.4	+1.5
KOK				*e*S	Sn	17 18 49.4	+1.6
DALK	**Dalny**	**1.05**	**235**	*e*P	Pn	17 18 35.9	+1.3
DALK				*e*S	Sn	17 18 50.7	+1.7
PET	**Petropavlovsk**	**1.10**	**236**	*e*P	Pn	17 18 36.8	+1.6
PET				*e*S	Sn	17 18 51.9	+1.7
MKZ	**Mys Kozlova**	**1.30**	**45**	*e*P	Pn	17 18 39.1	+1.4
MKZ				*e*S	Sn	17 18 55.9	+1.3
GNL	**Ganaly**	**1.32**	**273**	*e*P	Pn	17 18 39.2	+1.0
GNL				*e*S	Sn	17 18 56.6	+1.2
KRMR	**Karymshinskiy**	**1.47**	**237**	*e*P	Pn	17 18 41.5	+1.5
KRMR				*e*S	Sn	17 19 00.2	+1.6
KZV	**Kizimen**	**1.47**	**3**	*e*P	Pn	17 18 41.9	+1.7
KZV				*e*S	Sn	17 19 00.3	+1.4
TUMD	**Tumrok D**	**1.57**	**5**	*e*P	Pn	17 18 42.7	+1.4
TUMD				*e*S	Sn	17 19 02.1	+1.2
RUS	**Russkaya**	**1.57**	**220**	*e*P	Pn	17 18 42.6	+1.3
RUS				*e*S	Sn	17 19 02.0	+1.0
TUMR	**Tumrok**	**1.64**	**360**	*e*P	Pn	17 18 44.3	+1.9
TUMR				*e*S	Sn	17 19 04.8	+2.0
MTVR	**Mutnovka**	**1.67**	**227**	*e*P	Pn	17 18 44.8	+2.0
MTVR				*e*S	Sn	17 19 05.8	+2.2
APC	**Apacha**	**1.94**	**249**	*e*P	Pn	17 18 48.2	+2.0
KDTR	**Khodutka, Kamc**	**2.24**	**215**	*e*P	Pn	17 18 52.1	+1.9
KDTR				*e*S	Sn	17 19 18.2	+1.4
KLY	**Klyuchi**	**2.69**	**6**	*e*P	Pn	17 18 59.1	+2.9
KBTR	**Krutoberegovo**	**2.99**	**30**	*e*P	Pn	17 19 02.1	+1.8
KBG	**Krutoberegovo**	**3.00**	**28**	*e*P	Pn	17 19 03.4	+3.0
SRKR	**Sorokina**	**3.07**	**10**	*e*P	Pn	17 19 05.4	+3.9

IDC 02 17:26:47.2±2.0**, 7°.45S**×**128°.59E, h157km**±25km**, mb2.8**/1**, mb1 2.9**/5**, mb1mx2.8**/26**, mbtmp3.4**/5**, Error ellipse: s-maj=25.4km s-min=19.0km az=121.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.59**	**240**	P	Pn	17 28 09.9	+1.3
	15nm,0.3s,baz=112,slow=5.1,SNR=29						
BATI				S	Sn	17 29 12.1	-0.2
	9.8nm,0.3s,baz=90,slow=20,SNR=7.2						
SIJI	**Sorong**	**7.06**	**22**	P	Pn	17 28 28.2	+0.1
	1.0nm,0.3s,baz=210,slow=20,SNR=17						
SIJI				S	Sn	17 29 42.8	-4.6
	0.3nm,0.3s,baz=180,slow=20,SNR=1.6						
FITZ	**Fitzroy Crossi**	**10.97**	**195**	P	Pn	17 29 18.4	-1.5
	0.1nm,0.3s,baz=19,slow=11,SNR=8.2						
FITZ				S	Sn	17 31 12.8	-8.7
	0.6nm,0.3s,baz=336,slow=20,SNR=8.2						
WRA	**Warramunga Arr**	**13.62**	**156**	P	Pn	17 29 53.4	-0.7
	0.1nm,0.3s,baz=341,slow=12,SNR=11						
WRA				S	Sn	17 32 13.7	-11
	0.5nm,0.3s,baz=328,slow=21,SNR=12						
ASAR	**Alice Springs**	**16.91**	**163**	P	Pn	17 30 36.1	+1.3
	0.0nm,0.3s,baz=341,slow=11,SNR=4.1						
ASAR				S	S	17 33 34.9	-7.7
	0.2nm,0.3s,baz=326,slow=23,SNR=5.7						
MKAR	**Makanchi Array**	**67.84**	**328**	P	P	17 37 28.3	-0.2
	0.1nm,0.7s,baz=125,slow=8.5,SNR=4.4						

MEX 02 17:37:25.0±0.4**, 18°.30N**×**101°.96W, h22km**±29km**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.83**	**146**	*i* P	Pb	17 37 38.3	-2.5
ZIIG				*i* S	Sb	17 37 48.6	-3.0
ARIG	**Puente Sto Nin**	**1.53**	**90**	*e*P	Pn	17 37 48.2	-2.8
CAIG	**El Cayaco**	**2.04**	**127**	*e*P	Pn	17 37 54.8	-3.2
PLIG	**Platanillo**	**2.33**	**87**	*e*P	Pn	17 38 00.4	-1.8

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*DDA **02** 17:38:24.8, 39°.74N×25°.68E, h7km±1km, ML2.8*

*ATH **02** 17:38:24.8, 39°.71N×25°.69E, h26km±3km, ML2.0/2, Error ellipse: s-maj=3.3km s-min=1.2km az=237.0*

*ISK **02** 17:38:24.8, 39°.70N×25°.72E, h9km, ML2.2/13*

*ISCJB **02** 17:38:25.1±0.4, 39°.71N±0°.02×25°.70E±0°.03, h9km±4km, Error ellipse: s-maj=3.8km s-min=3.5km az=152.3*

*THE **02** 17:38:25.2, 39°.67N×25°.62E, h12km±1km, ML2.0/3, Error ellipse: s-maj=1.0km s-min=0.4km az=257.0*

ISC 02 17:38:24.9±0.9**, 39°.72N**±0°.02×**25°.68E**±0°.02**, h14km**±8km**, n33, σ0s.38**/51**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.31**	**66**	PG	**Pg**	**17 38 31.2**	**-0.2**
BOZC				SG	**Sg**	**17 38 35.6**	**-0.2**
BOZC	**Bozcaada**	**0.31**	**66**	*i* P	**Pg**	**17 38 31.1**	**-0.3**
BOZC				*i* S	**Sg**	**17 38 36.0**	**+0.2**
BOZC				IAML_P			
	comp=Z,5µm,0.2s						
LIA	**Limnos Island**	**0.42**	**295**	P	**Pb**	**17 38 34.1**	**0.0**
LIA				S	**Sb**	**17 38 40.5**	**+0.1**
LIA	**Limnos Island**	**0.42**	**295**	P	**Pg**	**17 38 33.1**	**-0.3**
LIA				S	**Sg**	**17 38 39.4**	**+0.2**
GADA	**Gvkgeada**	**0.50**	**19**	PG	**Pg**	**17 38 35.1**	**+0.2**
GADA				SG	**Sb**	**17 38 42.7**	**0.0**
EZN	**Ezine**	**0.51**	**77**	PG	**Pg**	**17 38 34.7**	**-0.2**
EZN				SG	**Sg**	**17 38 41.8**	**+0.1**
SIGR	**SIGRI**	**0.52**	**165**	PG	**Pg**	**17 38 35.3**	**+0.1**
SIGR				SG	**Sg**	**17 38 42.0**	**-0.2**
SIGR	**SIGRI**	**0.52**	**165**	P	**Pg**	**17 38 34.9**	**-0.3**
SIGR				S	**Sg**	**17 38 42.4**	**+0.2**
SIGR				AML	AML	17 38 42.6	
	comp=E,720µm,0.5s						
SIGR				AML	AML	17 38 42.7	
	comp=N,890µm,0.3s						
SIGR	**SIGRI**	**0.52**	**165**	P	**Pg**	**17 38 34.9**	**-0.3**
SIGR				S	**Sg**	**17 38 42.2**	**0.0**
EFSA	**Agios Efstrati**	**0.56**	**252**	P	**Pb**	**17 38 37.3**	**+0.8**
EFSA				S	**Sb**	**17 38 45.2**	**+0.8**
PRK	**Paraskevi**	**0.66**	**136**	P	**Pb**	**17 38 38.2**	**+0.1**
PRK				S	**Sb**	**17 38 48.0**	**+1.0**
PRK	**Paraskevi**	**0.66**	**136**	P	**Pb**	**17 38 38.1**	**+0.1**
PRK				S	**Sb**	**17 38 47.3**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.67**	**88**	*i* P	**Pb**	**17 38 38.5**	**+0.1**
BAYC				*i* S	**Sb**	**17 38 47.4**	**0.0**
BAYC				IAML_P			
	comp=Z,1µm,0.1s						
SMTH	**Samothraki Isl**	**0.76**	**351**	P	**Pb**	**17 38 40.0**	**+0.1**
SMTH				S	**Sb**	**17 38 50.4**	**+0.2**
SMTH				AML	AML	17 38 53.0	
	comp=E,134µm,0.1s						
SMTH				AML	AML	17 38 53.2	
	comp=N,141µm,0.3s						
SMTH	**Samothraki Isl**	**0.76**	**351**	P	**Pb**	**17 38 40.2**	**+0.3**
SMTH				S	**Sn**	**17 38 51.8**	**-0.7**
AYVA	**Ayvalik**	**0.88**	**117**	*i* P	**Pn**	**17 38 42.9**	**+0.1**
AYVA				*i* S	**Sn**	**17 38 55.1**	**-0.2**
AYVA				IAML_P			
	comp=Z,352nm,0.1s						

GELI	Tayfur-Gelibol	0.91	42	PG	Pg	17 38 42.8	+0.2
LPK	Lapseki	1.05	51	PG	Pb	17 38 45.0	+0.1
ENEZ	Enez	1.08	19	PN	Pn	17 38 45.6	0.0
ERIK	Erikli-Kesan	1.15	33	PN	Pn	17 38 46.7	+0.2
ALN	Alexandroupoli	1.21	13	PN	Pb	17 38 47.9	+0.3
ALN	Alexandroupoli	1.21	13	P	Pb	17 38 47.9	+0.3
ALN	Alexandroupoli	1.21	13	P	Pb	17 38 47.8	+0.2
KESN	Edirne-Kesan	1.34	34	iP	Pn	17 38 49.0	-0.6
KESN				iS	Sg	17 39 08.7	+0.3
CHOS	Chios island	1.36	168	PN	Pb	17 38 50.2	+0.1
CHOS	Chios island	1.36	168	P	Pn	17 38 49.7	+0.3
CHOS	Chios island	1.36	168	P	Pn	17 38 48.7	-0.8
CHOS				S	Sn	17 39 06.6	-0.7
KRBG	Karabiga-Canak	1.41	61	PN	Pb	17 38 50.6	-0.4
RDO	Rodhopi	1.43	356	PN	Pb	17 38 51.3	-0.1
RDO	Rodhopi	1.43	356	P	Pb	17 38 51.3	-0.1
OUR	Ouranopolis	1.44	296	PN	Pg	17 38 52.2	-0.5
BALB	Balikesir	1.70	92	PN	Pn	17 38 54.6	+0.5
MRMT	Marmara Adasi	1.71	58	PN	Pn	17 38 54.9	+0.6

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*DDA **02** 17:56:29.9, 39°.14N×29°.02E, h7^{km}±1^{km}, ML2.7*
*ISCJB **02** 17:56:30.8±0.5, 39°.09N±0°.04×29°.02E±0°.04, h11^{km}±4^{km}, Error ellipse: s-maj=7.0km s-min=4.8km az=159.5*
*ISK **02** 17:56:30.5, 39°.08N×29°.02E, h11^{km}, ML1.8/5*
ISC 02 17:56:30.5±0.9, **39°.10N**±0°.04×**29°.02E**±0°.03, **h12**^{km}±6^{km}, **n11**, σ**0^{s}.42**/17, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.03	266	PG	Pg	17 56 32.6	-0.3
SMAA				SG	Sg	17 56 34.7	+0.1
SHAP	Saphane-Kutahy	0.17	117	PG	Pg	17 56 34.6	0.0
SHAP				SG	Sg	17 56 37.8	+0.4
DEMI	Demirci	0.25	256	iP	Pg	17 56 36.4	+0.6
DEMI				iS	Sg	17 56 39.7	+0.4
DEMI				IAML_P			
	comp=Z,2µm,0.1s						
GDZ	Gediz	0.36	92	iP	Pg	17 56 38.0	+0.2
GDZ				iS	Sg	17 56 43.3	+0.7
KULA	Kula-Manisa	0.65	206	PG	Pg	17 56 43.3	+0.1
KULA				SG	Sb	17 56 52.4	-0.5
MANT	Manisa	0.71	211	iP	Pb	17 56 44.7	-0.2
MANT				iS	Sg	17 56 54.0	+0.2
MANT				IAML_P			
	comp=Z,1µm,0.1s						
BALB	Balikesir	1.04	302	PG	Pn	17 56 50.9	+0.1
KCTX	Karacabey (Bur	1.27	336	PN	Pg	17 56 55.2	+0.2
BORA	Eskisehir	1.35	54	PN	Pb	17 56 55.7	-0.1
YLV	Yalova	1.49	10	PN	Pb	17 56 57.8	-0.3
GULT	Gulveren	1.76	40	PN	Pb	17 57 02.0	-0.7

IDC 02 18:11:09.6±5.7, **17°.62N**×**81°.85W**, **h0**^{km}, **mb3.2**/2, **mb1 3.8**/2, **mb1mx3.3**/33, **mbtmp3.3**/2, **Error ellipse: s-maj=275.2km s-min=50.8km az=54.0**, **North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	23.11	304	P	P	18 16 17.2	-0.3
	0.7nm,0.8s,baz=122,slow=9.8,SNR=6.7						
NVAR	Mina Array Bea	37.93	311	P	P	18 18 29.2	+0.1
	0.4nm,0.6s,baz=94,slow=8.2,SNR=2.5						
WRA	Warramunga Arr	145.70	260	PKPbc	PKPdf	18 30 50.0	-1.0
	0.3nm,0.7s,baz=87,slow=3.4,SNR=5.6						
ASAR	Alice Springs	146.06	254	PKPbc	PKPbc	18 30 52.2	-0.2
	0.3nm,0.8s,baz=76,slow=3.9,SNR=2.1						

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*NEIC **02** 18:16:51.5±0.0, 19°.89N×67°.60W, h56^{km}, MD3.1(RSPR), After RSPR.*
RSPR 02 18:16:51.5, **19°.89N**×**67°.60W**, **h56**^{km}±11^{km}, **MD3.1**/9, **7C-3D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.49	162	⇑eP	Pn	18 17 15.1	-0.9
AGPR	Aguadilla, PR	1.49	162	eS	Sn	18 17 33.4	-0.9
IDE	Isla Desecheo	1.50	176	⇓eP	Pn	18 17 15.6	-0.6
IDE	Isla Desecheo	1.50	176	eS	Sn	18 17 33.7	-0.9
AGP	Aguadilla	1.53	164	ePn	Pn	18 17 09.5	-7.1
MPR	Mayaguez	1.72	165	ePn	Pn	18 17 14.7	-4.5
EMPR	Esperanza - Ma	1.73	144	⇑eP	Pn	18 17 18.7	-0.5
LSP	Las Mesas	1.77	164	⇑eP	Pn	18 17 19.5	-0.4
LSP	Las Mesas	1.77	164	eS	Sn	18 17 40.5	-0.9
DR12	Loma Pena Alta	2.01	237	⇑eP	Pn	18 17 22.1	-1.0
CELP	Cerrillos	2.04	152	⇑eP	Pn	18 17 23.0	-0.6
CELP				eS	Sn	18 17 47.4	-0.6
SJG	San Juan	2.23	142	ePn	Pn	18 17 24.7	-1.5
CBYP	Canovanas	2.30	134	⇓eP	Pn	18 17 26.2	-1.0
CBYP	Canovanas	2.30	134	ePn	Pn	18 17 26.2	-1.0
HUMP	Col San Antoni	2.40	136	⇑eP	Pn	18 17 27.8	-0.6
HUMP	Col San Antoni	2.40	136	eS	Sn	18 17 55.9	-0.7
HUMP	Col San Antoni	2.40	136	ePn	Pn	18 17 27.4	-1.0
MTP	Monte Pirata	2.63	132	⇓eP	Pn	18 17 30.8	-0.8
MTP	Monte Pirata	2.63	132	eS	Sn	18 18 01.7	-0.6
MTP	Monte Pirata	2.63	132	ePn	Pn	18 17 30.6	-1.0
CUPR	Culebra, Puert	2.69	125	⇑eP	Pn	18 17 31.8	-0.6
CUPR	Culebra, Puert	2.69	125	ePn	Pn	18 17 31.2	-1.3
BANI	BANI	3.00	241	ePn	Pn	18 17 37.2	+0.4
SDDR	Presa de Saban	3.60	256	ePn	Pn	18 17 44.0	-0.9
SDDR				eSn	Sn	18 18 23.8	-2.3

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*ISCJB **02** 18:21:34.4±0.6, 44°.21N±0°.07×105°.32W±0°.07, h0^{km}, Error ellipse: s-maj=9.5km s-min=7.7km az=0.1*
*IDC **02** 18:21:37.0±1.1, 44°.41N×105°.78W, h0^{km}, mb1 3.3/5, mb1mx3.2/48, mbtmp2.9/5, ML3.0/5, Error ellipse: s-maj=29.4km s-min=9.4km az=143.0*
*NEIC **02** 18:21:36.1±0.6, 44°.19N×105°.33W, h0^{km}, ML2.9, Error ellipse: s-maj=9.4km s-min=7.2km az=177.0, Suspected Mining explosion.*
NEIC 18 km [11 miles] SE of Gillette.
ISC 02 18:21:35.8±0.9, **44°.17N**±0°.07×**105°.29W**±0°.07, **h0**^{km}, **n15**, σ**1^{s}.07**/15, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.90	93	ePg	Pb	18 21 55.0	+0.6
RLMT	Red Lodge	3.00	290	ePn	Pn	18 22 25.1	+0.4
BW06	Boulder Array	3.41	247	ePn	Pn	18 22 29.8	-0.6
PDAR	Pinedale Array	3.41	247	Pn	Pn	18 22 31.2	+0.8
	2.1nm,0.3s,baz=82,slow=16,SNR=66						
PDAR				Lg	Lg	18 23 16.3	
	5.5nm,0.3s,baz=85,slow=23,SNR=4.9						
LKWY	Lake	3.69	278	ePn	Pn	18 22 32.5	-1.8
OGNE	Ogallala	4.02	142	ePn	Pn	18 22 39.0	+0.3
ISCO	Idaho Springs	4.37	183	ePn	Pn	18 22 43.6	-0.2
BOZ	Bozeman (W)	4.73	290	ePn	Pn	18 22 47.9	-0.5
EGMT	Eagleton	4.95	323	ePn	Pn	18 22 52.7	+1.2
HWUT	Hardware Ranch	5.27	243	ePn	Pn	18 22 55.6	-0.4
	5.1nm,0.5s						
DUG	Dugway, Tooele	6.86	237	ePn	Pn	18 23 17.1	-0.6
	6.7nm,0.6s						
ULM	Lac du Bonnet	8.83	43	Pn	Pn	18 23 44.5	-0.1
	0.5nm,0.3s,baz=234,slow=12,SNR=10.0						
ULM				Lg	Lg	18 26 15.4	
	0.2nm,0.3s,baz=138,slow=9.0,SNR=3.2						
NVAR	Mina Array Bea	11.34	244	Pn	Pn	18 24 21.6	+2.3
	0.1nm,0.3s,baz=54,slow=12,SNR=2.1						
TXAR	Lajitas Array	14.86	174	Pn	P	18 25 13.6	+0.2
	0.0nm,0.3s,baz=353,slow=6.7,SNR=2.1						
YKA	Yellowknife Ar	19.14	347	P	P	18 25 59.2	-1.1
	0.0nm,0.3s,baz=156,slow=12,SNR=3.1						

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*IDC **02** 18:27:26.1±1.7, 39°.89N×142°.78E, h0^{km}, mb3.6/4, mb1 3.6/7, mb1mx3.4/40, mbtmp3.6/7, ML2.5/3, Error ellipse: s-maj=47.3km s-min=20.5km az=78.0*
*ISCJB **02** 18:27:27.6±1.3, 40°.07N±0°.04×142°.35E±0°.07, h5^{km}±7^{km}, mb3.6/4, Error ellipse: s-maj=9.4km s-min=6.0km az=175.8*
*JMA **02** 18:27:27.7±0.1, 40°.07N×142°.37E, h21^{km}±1^{km}, M3.3*
ISC 02 18:27:30.7±1.4, **39°.98N**±0°.03×**142°.15E**±0°.08, **h24**^{km}±8^{km}, **n23**, σ**1^{s}.91**/23, **mb3.7**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.23	259	P	Pb	18 27 36.3	-0.3
JTH				eS	Sb	18 27 42.3	+1.7
JKEN	Kujiedanarisaw	0.41	303	P	Pb	18 27 38.1	-1.2
JKEN				eS	Sb	18 27 45.2	+0.1
MIYJ	Miyakonagasawa	0.48	212	P	Pb	18 27 40.0	-0.5
MIYJ				eS	Sn	18 27 48.8	-0.8
JANG	Nango	0.62	309	P	Pb	18 27 41.2	-1.8
JANG				eS	Sb	18 27 50.5	-0.8
JOM	Ohasama	0.84	233	P	Pn	18 27 46.5	-0.4
OFUJ	Ofunato	0.97	203	P	Pb	18 27 47.6	-1.3
JTM	Tenmabayashi	1.15	314	P	Pn	18 27 49.7	-1.6
JTM				eS	Sb	18 28 05.7	-0.8
JAH	Hinai	1.18	281	P	Pb	18 27 51.9	-0.5
JAH				eS	Sn	18 28 09.3	+2.3
JARK	Aomorirokkasho	1.19	330	P	Pn	18 27 49.2	-2.5
ASAJ	Asahikawa	4.14	4	Pn	Pn	18 28 32.5	+0.1
	0.9nm,0.3s,baz=217,slow=15,SNR=4.4						
ASAJ				Sn	Sn	18 29 21.6	+1.6
	1.2nm,0.3s,baz=174,slow=19,SNR=2.8						
MAT	Matsushiro	4.63	223	P	Pb	18 28 44.7	-6.4
MAT				eS	Sb	18 29 41.8	-4.7
MJAR	Matsushiro Arr	4.63	223	Pn	Pn	18 28 41.2	+2.1
	0.0nm,0.3s,baz=40,slow=12,SNR=4.5						
USRK	Ussuriysk Ar.	8.65	302	Pn	Pn	18 29 40.3	+6.0
	0.1nm,0.3s,baz=124,slow=14,SNR=4.4						
H11N2	WAKE ISLAND Hy	29.29	126	T	T	19 04 08.6	
	baz=320,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	29.30	126	T	T	19 04 08.5	
	baz=320,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	29.31	126	T	T	19 04 09.2	
	baz=320,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	30.10	128	T	T	19 05 10.7	
	baz=321,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	30.10	128	T	T	19 05 09.2	
	baz=321,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	30.12	128	T	T	19 05 11.3	
	baz=321,slow=76,SNR=15						
ZALV	Zalesovo Beam	40.41	310	P	P	18 35 09.7	+3.1
	1.0nm,0.4s,baz=81,slow=8.1,SNR=5.8						
MKAR	Makanchi Array	43.11	300	P	P	18 35 30.5	+1.7
	0.8nm,0.7s,baz=82,slow=10,SNR=9.3						
WRA	Warramunga Arr	60.06	188	P	P	18 37 35.0	-0.6
	0.7nm,0.8s,baz=5.9,slow=6.6,SNR=8.1						
ASAR	Alice Springs	63.78	188	P	P	18 37 59.4	-1.2
	0.3nm,0.8s,baz=6.9,slow=8.5,SNR=2.8						

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*NIED **02** 18:31:00, 29°.40N×142°.50E, h5^{km}, Mw5.7 Best double couple: $M_0$3.38000×10^{17} NP1:ϕ_s152.00000°, δ10.00000°, λ66.00000°. NP2:ϕ_s356.00000°, δ81.00000°, λ94.00000°.*
*ISCJB **02** 18:31:29.6±0.8, 29°.32N±0°.01×141°.98E±0°.02, h2^{km}±4^{km}, mb5.5/524, MS5.4/182, Error ellipse: s-maj=2.5km s-min=2.2km az=152.2*
*IDC **02** 18:31:30.7±0.3, 29°.33N×142°.13E, h0^{km}, mb5.1/34, mb1 5.2/38, mb1mx5.2/41, mbtmp5.2/38, ML2.8/2, MS5.2/28, Ms1 5.2/28, ms1mx4.9/61, Error ellipse: s-maj=12.2km s-min=8.4km az=90.0*
*JMA **02** 18:31:31.7±0.3, 29°.44N×142°.50E, h37^{km}, M5.4*
*MOS **02** 18:31:32.5±1.0, 29°.32N×141°.94E, h24^{km}, mb5.7/125, MS5.2/53, Error ellipse: s-maj=6.1km s-min=3.5km az=113.8*
*BJI **02** 18:31:34.7, 29°.43N×141°.97E, h45^{km}, mB5.3/68, mb5.2/76, Ms5.5/88, Ms7 5.3/84*
*NEIC **02** 18:31:36.6±0.5, 29°.34N×141°.99E, h41^{km}±4^{km}, mb5.5/298, MS5.4/106, Error ellipse: s-maj=2.6km s-min=1.9km az=132.0*
*GCMT **02** 18:31:37.6±0.3, 29°.35N±0°.03×142°.24E±0°.03, h30^{km}±1^{km}, MW5.6/83, Moment Tensor Solution. s29,c34; s83,c104; Duration: 1^{s}.5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.63±.19; $M_{\theta\theta}$-0.46±.10; $M_{\phi\phi}$-2.17±.11; $M_{r\theta}$0.29±.17; $M_{\theta\phi}$0.61±.06; $M_{\phi r}$1.58±.13; Best double couple: $M_0$2.95800×10^{17} NP1:ϕ_s356.00000°, δ61.00000°, λ102.00000°. NP2:ϕ_s152.00000°, δ31.00000°, λ69.00000°. Principal axes: T 3.1610, Plg71.0000°, Azm293.0000°; N -0.4020, Plg10.0000°, Azm170.0000°; P -2.7550, Plg15.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 18:31:32.7±0.5, **29°.37N**±0°.03×**142°.01E**±0°.03, **h14**^{km}±3^{km}, **h14**^{km}**:pP-P**, **n1388**, σ**1^{s}.44**/1392, **mb5.5**/552, **MS5.4**/185, **90C-57D**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.27	176	P	Pn	18 32 09.1	-0.7
JCJ	Chichijima	2.27	176	Pn	Pn	18 32 09.4	-0.4
	113nm,0.3s,baz=343,slow=16,SNR=58						
JCJ				Sn	Sn	18 32 35.2	-2.4
	435nm,0.3s,baz=90,slow=20,SNR=12						
JHHJ	Haha-jima-NKT	2.73	177	P	Pn	18 32 15.9	-0.3
JAOM	Aogashimamukai	3.64	329	eS	Sn	18 33 14.2	+2.9
JHCJ	Hachijojimakas	4.15	333	P	Pn	18 32 36.2	+0.6
JHCJ				eS	Sn	18 33 24.6	+0.7
JHJ2	Mitsune	4.17	334	ePn	Pn	18 32 38.0	+2.0
JHJ2				eSn	Sn	18 33 24.3	-0.2
JHJ2	Mitsune	4.17	334	P	Pn	18 32 37.6	+1.6
JHJ	Hachijo jima 2	4.19	334	Pn	Pn	18 32 37.3	+1.0
	133nm,0.3s,baz=246,slow=21,SNR=21						
JHJ				Sn	Sn	18 33 24.9	-0.2
	68nm,0.3s,baz=114,slow=20,SNR=3.7						
JHJ				LR	LR	18 34 32.4	
	comp=Z,33µm,18.5s,baz=128,slow=43						
JMKN	Mikurajimanish	4.96	336	P	Pn	18 32 48.2	+1.5
BSO1	Boso 1	5.34	351	P	Pn	18 32 51.9	+0.4
JOD2	Odawara 2	6.37	338	P	Pn	18 33 06.9	+0.7
JOD2				eS	Sn	18 34 18.9	+0.1
JIE	Ise	6.74	319	P	Pn	18 33 14.9	+3.8
JTNC	Tanabenakahech	7.03	311	P	Pn	18 33 18.7	+3.5
JRY	Ryogami san	7.12	339	P	Pn	18 33 18.4	+1.9
JRY				eS	Sn	18 34 39.5	+2.2
INU	Inuyama	7.30	326	ePn	Pn	18 33 21.6	+2.6
MJAR	Matsushiro Arr	7.83	337	Pn	Pn	18 33 27.6	+1.4
	6.6nm,0.3s,baz=158,slow=8.7,SNR=322						
MJAR				Sn	Sn	18 34 52.9	-1.7
	baz=116,slow=14,SNR=2.6						
MJAR				LR	LR	18 36 36.0	
	comp=Z,15µm,19.2s,baz=165,slow=39						
MAJO	Matsushiro	7.83	337	ePn	Pn	18 33 28.7	+2.5
MAJO				eSn	Sn	18 34 52.9	-1.8
MAJO	Matsushiro	7.83	337	eP	Pn	18 33 28.7	+2.5
MAJO				e		18 34 52.9	
MAT	Matsushiro	7.83	337	P	Pn	18 33 27.6	+1.4
MAT				eS	Sn	18 34 52.8	-1.9
MJB9	Matsu-Tunnel	7.83	337	ePn	Pn	18 33 28.5	+2.2
JTO	Tosashimizu	8.62	296	P	Pn	18 33 41.9	+4.8
JMK	Ichinoseki	9.58	356	P	Pn	18 33 48.0	-2.1
JMK				eS	Sn	18 35 28.9	-8.7
JMZ	Minamidaito 2	10.20	252	P	Pn	18 34 03.8	+5.1
JNU	Nakatsue	10.23	294	ePn	Pn	18 34 01.7	+2.6
JNU	Nakatsue	10.23	294	Pn	Pn	18 34 04.4	+5.3
	1.1nm,0.3s,baz=68,slow=4.4,SNR=12						
JNU				LR	LR	18 38 06.7	
	comp=Z,21µm,18.1s,baz=120,slow=38						
JAMN	Amaminishikomi	11.31	267	P	Pn	18 34 20.2	+6.3
JOT	Ohata	12.01	357	P	Pn	18 34 22.7	-0.7
JOW	Kunigami	12.38	262	ePn	Pn	18 34 27.4	-1.3
JOW	Kunigami	12.38	262	Pn	Pn	18 34 30.9	+2.3
	0.1nm,0.3s,baz=105,slow=16,SNR=2.1						
JKB	Kayabe	12.52	357	P	Pn	18 34 28.5	-1.8
ERM	Erimo	12.65	4	ePn	Pn	18 34 29.6	-2.6
ERM	Erimo	12.65	4	⇑eP	Pn	18 34 31.6	-0.6
KSRS	Korea Array	14.25	308	Pn	P	18 34 58.6	-2.6
	1.6nm,0.3s,baz=114,slow=12,SNR=31						
KSRS				LR	LR	18 40 33.2	
	comp=Z,11µm,18.4s,baz=118,slow=38						
KS15	Wonju Array Si	14.27	308	ePn	Pn	18 34 56.8	+2.5
KSAR	Wonju Array Be	14.27	308	Pn	P	18 34 58.6	-2.9
KSAR	Wonju Array Be	14.27	308	P	P	18 34 58.7	-2.9
KS01	Wonju Array Si	14.28	308	ePn	Pn	18 34 57.1	+2.6
ASAJ	Asahikawa	14.72	2	Pn	Pn	18 34 57.9	-2.6
	7.0nm,0.3s,baz=217,slow=14,SNR=21						
ASAJ				Sn	Sn	18 37 33.9	-10
	1.3nm,0.3s,baz=233,slow=20,SNR=2.5						
ASAJ				LR	LR	18 42 41.1	
	comp=Z,4µm,20.7s,baz=160,slow=45						
YUK	Yuzh-Kuril'sk	14.96	11	eP	Pn	18 34 59.1	-4.5
YUK				pmax	pmax		
	comp=Z,116nm,0.5s						
YUK				pmax	pmax		
	comp=N,25nm,0.3s						
YUK				pmax	pmax		
	comp=E,19nm,0.2s						
YUK				pmax	pmax		
	comp=Z,463nm,2.2s						
YUK				MLR	MLR		
	comp=Z,3µm,16.0s						
YUK				MLR	MLR		
	comp=N,2µm,14.0s						
YUK				MLR	MLR		
	comp=E,2µm,13.0s						
SHO	Shikotan	14.97	14	eP	Pn	18 34 59.3	-4.6
SHO				pmax	pmax		
	comp=Z,48nm,0.5s						
SHO				pmax	pmax		
	comp=N,19nm,0.6s						
SHO				pmax	pmax		
	comp=E,23nm,0.6s						
SHO				pmax	pmax		
	comp=Z,546nm,2.7s						
SHO				MLR	MLR		
	comp=Z,3µm,14.0s						
SHO				MLR	MLR		
	comp=N,3µm,12.0s						
SHO				MLR	MLR		
	comp=E,2µm,12.0s						
MSHR	Mys Shultsa	15.82	329	⇑iP	Pn	18 35 15.4	+0.5
GUMO	Guam	15.93	170	Pn	Pn	18 35 16.6	+0.1
	comp=E,6.0nm,0.3s,baz=30,slow=20,SNR=2.6						
VLA	Vladivostok	15.95	332	ceP	Pn	18 35 17.2	+0.6
TEY	Ternei	16.21	346	⇑eP	Pn	18 35 18.8	-1.2
TEY				eS	Sn	18 38 15.3	-4.2
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,20nm,0.6s						
TEY				MLR	MLR		
	comp=N,4µm,13.0s						
TEY				MLR	MLR		
	comp=Z,4µm,15.0s						
KUR	Kuril'sk	16.50	15	eP	Pn	18 35 17.1	-6.5
KUR				pmax	pmax		
	comp=Z,46nm,0.7s						
KUR				pmax	pmax		
	comp=E,43nm,0.6s						
KUR				pmax	pmax		
	comp=N,23nm,0.4s						
KUR				pmax	pmax		
	comp=Z,431nm,2.0s						
KUR				MLR	MLR		
	comp=E,540nm,13.0s						
KUR				MLR	MLR		
	comp=Z,2µm,13.0s						
KUR				MLR	MLR		
	comp=N,2µm,12.0s						
USA0B	Ussuriysk Arra	16.82	334	ePn	Pn	18 35 26.9	-0.8
USRK	Ussuriysk Ar.	16.82	334	Pn	Pn	18 35 26.9	-0.7
	comp=N,0.6nm,0.3s,baz=155,slow=10,SNR=27						
USRK				LR	LR	18 41 49.5	
	comp=N,8µm,18.7s,baz=140,slow=37						
YSS	Yuzh-Sakhalins	17.57	2	ePn	Pn	18 35 36.9	-0.1
	comp=N,245nm,1.0s						
YSS	Yuzh-Sakhalins	17.57	2	⇑eP	P	18 35 37.5	-0.5
YSS				eS	Sn	18 38 44.8	-7.5
YSS				MLR	MLR		
	comp=N,3µm,14.0s						
YSS				MLR	MLR		
	comp=E,4µm,14.0s						
YSS				MLR	MLR		
	comp=Z,4µm,14.0s						
YOJ	Yonaguni jima	17.63	258	ePn	P	18 35 40.4	+1.5
	comp=Z,517nm,1.4s						
YOJ	Yonaguni jima	17.63	258	eP	P	18 35 40.4	+1.5
YOJ				pmax	pmax		
	comp=Z,517nm,1.4s						
SSE	Sheshan	18.07	281	ePn	P	18 35 44.8	+1.1
	comp=Z,139nm,0.9s						
MDJ	Mudanjiang	18.13	330	P	Pn	18 35 43.2	-0.8
MDJ				pP	pwP	18 35 54.5	+2.4
MDJ				sP	sP	18 36 01.1	+13
MDJ				pmax	pmax		
	comp=Z,130nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,2µm,7.9s						
MDJ				LR	LR		
	comp=Z,9µm,17.6s						
MDJ				LR	LR		
	comp=Z,7µm,16.6s						
MDJ				LR	LR		
	comp=Z,13µm,17.0s						
MDJ	Mudanjiang	18.13	330	ePn	Pn	18 35 43.3	-0.7
	comp=Z,160nm,1.0s						
TATO	Taipei	18.77	261	eP	P	18 35 51.4	-0.1
	comp=Z,330nm,0.9s						
NACB	Ninganchiao	18.94	259	eP	P	18 35 53.0	-0.4
	comp=Z,161nm,1.2s						
YHNB	Yeheng	18.96	261	eP	Pn	18 35 55.4	+1.0
	comp=Z,226nm,1.0s						
DL2	Dalian	19.33	305	⇑P	P	18 35 57.6	+0.1
DL2				sP	pwP	18 36 17.9	+12
DL2				S	Sn	18 39 36.2	+1.0
DL2				pmax	pmax		
	comp=Z,100nm,0.8s						
DL2				pmax	pmax		
	comp=Z,860nm,6.9s						
DL2				LR	LR		
	comp=Z,8µm,15.5s						
DL2				LR	LR		
	comp=Z,13µm,16.8s						
DL2				LR	LR		
	comp=Z,16µm,16.9s						
SNY	Shenyang	19.42	315	⇓P	P	18 35 59.0	+0.5
SNY				pmax	pmax		
	comp=Z,47nm,1.8s						
SNY				pmax	pmax		
	comp=Z,1µm,10.2s						
SNY				LR	LR		
	comp=Z,5µm,17.1s						
SNY				LR	LR		
	comp=Z,9µm,17.7s						
YULB	Yu-li	19.48	257	eP	Pn	18 36 02.1	+1.6
	comp=Z,188nm,1.0s						
CN2	Changchun	19.55	322	eP	P	18 35 59.8	-0.1
CN2				eS	Sn	18 39 40.2	-0.2
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,5µm,16.0s						
CN2				LR	LR		
	comp=Z,6µm,16.0s						
CN2				LR	LR		
	comp=Z,8µm,18.0s						
SSLB	Suanglung	19.62	258	eP	Pn	18 36 04.0	+1.7
	comp=Z,544nm,1.2s						
UGL	Uglegorsk	19.68	0	eP	Pn	18 36 02.0	-0.7
UGL				eS	S	18 39 35.5	-7.3
UGL				pmax	pmax		
	comp=N,132nm,2.1s						
UGL				pmax	pmax		
	comp=Z,307nm,0.9s						
UGL				pmax	pmax		
	comp=E,322nm,0.7s						
UGL				smax	smax		
	comp=E,6µm,11.1s						
UGL				MLR	MLR		
	comp=Z,5µm,14.0s						
UGL				MLR	MLR		
	comp=N,6µm,14.0s						
UGL				MLR	MLR		
	comp=E,5µm,17.0s						
TWG	Pinlang	19.89	256	eP	Pn	18 36 06.0	+0.6
	comp=E,849nm,1.1s						
TPUB	Ta-pu	20.08	257	eP	Pn	18 36 08.9	+1.3
	comp=E,236nm,1.0s						
NJ2	Nanjing	20.08	283	⇑iP	Pn	18 36 07.2	-0.4
NJ2				pP	pwP	18 36 21.3	+8.4
NJ2				S	S	18 39 50.5	-0.6
NJ2				SS	SnSn	18 40 12.3	+4.5
NJ2				pmax	pmax		
	comp=E,69nm,1.2s						
NJ2				LR	LR		
	comp=E,4µm,15.2s						
NJ2				LR	LR		
	comp=E,6µm,17.7s						
NJ2				LR	LR		

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       comp=E,8µm,17.2s
QZH    Quanzhou           21.29 264⇑iP   P      18 36 19.7 +0.8
QZH                                 sP   pwP    18 36 38.6  +12
QZH                                 S    S      18 40 16.4 +1.3
QZH                                 pmax pmax
       comp=E,62nm,0.5s
QZH                                 pmax pmax
       comp=E,1µm,8.4s
QZH                                 LR   LR
       comp=E,2µm,16.6s
QZH                                 LR   LR
       comp=E,6µm,17.5s
QZH                                 LR   LR
       comp=E,7µm,17.5s
KLR    Kul'dur            21.32 341d iP  P      18 36 21.6 +2.5
KLR    Kul'dur            21.32 341  P   P      18 36 20.1 +1.0
       comp=E,30nm,0.9s,baz=138,slow=14,SNR=27
TYV    Tymovskoe          21.47   1 eP   P      18 36 23.3 +2.7
TYV                                eS    Sn     18 40 24.4 -2.1
TYV                                 pmax pmax
       comp=Z,47nm,0.9s
TYV                                 MLR  MLR
       comp=N,4µm,15.0s
TYV                                 MLR  MLR
       comp=E,5µm,15.0s
TYV                                 MLR  MLR
       comp=Z,6µm,15.0s
GRNR   Gornyy             21.78 350 eP   P      18 36 25.2 +1.2
GRNR                                pmax pmax
       comp=Z,29nm,1.0s
TIA    Tai'an             21.97 295  P   P      18 36 25.4 -0.8
TIA                                 S    S      18 40 26.9 -1.5
TIA                                 pmax pmax
       comp=Z,310nm,8.9s
TIA                                 LR   LR
       comp=Z,2µm,16.9s
TIA                                 LR   LR
       comp=Z,3µm,20.2s
TIA                                 LR   LR
       comp=Z,3µm,20.2s
BJT    Baijiatuau         23.67 304 eP   P      18 36 42.2 -1.6
       comp=Z,64nm,0.7s
BJT                                 LR   LR
       comp=Z,13µm,19.0s
BJT    Baijiatuau         23.67 304 eP   P      18 36 42.2 -1.6
BJT                                 pmax pmax
       comp=Z,64nm,0.7s
BJT                                 MLR  MLR
       comp=Z,13µm,19.0s
NKL    Nikolayevsk        23.78 358 eP   P      18 36 44.0 -0.6
NKL                                eS    S      18 41 05.0 +5.4
NKL                                 pmax pmax
       comp=N,155nm,1.6s
NKL                                 pmax pmax
       comp=Z,460nm,1.6s
NKL                                 pmax pmax
       comp=Z,2µm,10.0s
NKL                                 smax smax
       comp=N,1µm,10.0s
NKL                                 smax smax
       comp=E,5µm,10.0s
SKR    Severo-Kuril's     23.79  23 eP   P      18 36 41.3 -3.5
SKR                                eS    S      18 41 01.5 +1.7
SKR                                 MLR  MLR
       comp=Z,2µm,10.0s
SKR                                 MLR  MLR
       comp=Z,4µm,11.0s
WHN    Wuhan              23.97 280  P   P      18 36 46.7  0.0
WHN                                 pmax pmax
       comp=Z,5µm,10.7s
WHN                                 LR   LR
       comp=Z,14µm,12.2s
WHN                                 LR   LR
       comp=Z,14µm,13.0s
WHN                                 LR   LR
       comp=Z,26µm,20.7s
H11N2  WAKE ISLAND Hy     24.55 107  T   T      19 02 17.9
       baz=297,slow=75,SNR=93
H11N1  WAKE ISLAND Hy     24.55 107  T   T      19 02 19.3
       baz=297,slow=75,SNR=71
WAKE   Wake Island        24.55 109 eP   P      18 36 53.6 +1.5
       comp=Z,1µm,1.8s
WAKE                                LR   LR
       comp=Z,4µm,20.0s
H11N3  WAKE ISLAND Hy     24.56 107  T   T      19 02 29.6
       baz=297,slow=75,SNR=70
TGY    Tagaytay City      24.71 237  P   P      18 36 55.5 +1.7
       comp=Z,529nm,0.8s,baz=143,slow=11,SNR=15
TGY                                 LR   LR     18 47 02.3
       comp=Z,5µm,18.6s,baz=89,slow=38
H11S3  WAKE ISLAND Hy     24.97 110  T   T      19 03 03.4
       baz=304,slow=76,SNR=12
H11S1  WAKE ISLAND Hy     24.97 110  T   T      19 03 07.1
       baz=304,slow=76,SNR=16
H11S2  WAKE ISLAND Hy     24.99 110  T   T      19 02 56.6
       baz=304,slow=76,SNR=9.5
RCP    Roxas              25.22 229⇓eP   P      18 37 00.3 +2.1
TIY    Taiyuan            25.93 296 eP   P      18 37 04.2 -0.5
TIY                                 pmax pmax
       comp=Z,18nm,0.6s
TIY                                 pmax pmax
       comp=Z,440nm,6.5s
TIY                                 LR   LR
       comp=Z,4µm,16.6s
TIY                                 LR   LR
       comp=Z,5µm,17.6s
TIY                                 LR   LR
       comp=Z,6µm,17.3s
HIA    Hailar             26.12 326 eP   P      18 37 07.5 +1.3
       comp=Z,119nm,0.9s
HIA                                 LR   LR
       comp=Z,3µm,20.0s
HIA    Hailar             26.12 326c iP  P      18 37 07.2 +1.0
HIA                                 pmax pmax
       comp=Z,149nm,1.0s
PEA0B  Petropavlovsk-     26.37  22 eP   P      18 37 10.3 +1.9
       comp=Z,65nm,1.0s
PETK   Petropavlovsk-     26.37  22 eP   P      18 37 09.4 +1.0
PETK   Petropavlovsk-     26.37  22 eP   P      18 37 09.4 +1.0
PETK   Petropavlovsk-     26.37  22  P   P      18 37 09.7 +1.3
       comp=Z,2.7nm,0.8s,baz=180,slow=10,SNR=3.0
PETK                                LR   LR     18 50 02.3
       comp=Z,2µm,18.9s,baz=203,slow=42
PEA1   Petropavlovsk-     26.38  22 eP   P      18 37 09.7 +1.3
PET    Petropavlovsk      26.61  23 eP   P      18 37 10.6 +0.1
       comp=Z,72nm,1.2s
PET                                 LR   LR
       comp=Z,3µm,19.0s
PET    Petropavlovsk      26.61  23 eP   P      18 37 12.3 +1.8
PET                                eS    S      18 41 43.7 -1.1
PET                                 pmax pmax
       comp=Z,59nm,1.1s
PET                                 pmax pmax
       comp=Z,500nm,11.3s
PET                                 MLR  MLR
       comp=Z,4µm,15.0s
PET                                 MLR  MLR
       comp=Z,3µm,17.0s
ZEA    Zeya               26.63 340 eP   P      18 37 11.7 +1.1
ZEA                                e            18 38 08.5
ZEA                                 pmax pmax
       comp=N,83nm,0.8s
ZEA                                 pmax pmax
       comp=Z,140nm,0.8s
ZEA                                 pmax pmax
       comp=Z,2µm,6.0s
ZEA                                 pmax pmax
       comp=E,600nm,9.0s
ZEA                                 pmax pmax
       comp=N,800nm,6.0s
ZEA                                 pmax pmax
       comp=Z,700nm,8.0s
ZEA                                 MLR  MLR
       comp=Z,4µm,14.0s
ZEA                                 MLR  MLR
       comp=E,800nm,12.0s
ZEA                                 MLR  MLR
       comp=N,3µm,14.0s
DAV    Davao City (W)     27.05 218 eP   P      18 37 15.3 +0.6
       comp=N,130nm,0.4s
DAV    Davao City (W)     27.05 218  P   P      18 37 15.1 +0.3
       comp=N,70nm,0.4s,baz=258,slow=9.9,SNR=3.5
DAV                                 LR   LR     18 47 04.9
       comp=N,3µm,21.1s,baz=48,slow=34
HHC    Hu-ho-hao-te       27.28 303 eP   P      18 37 16.7 -0.1
HHC                                 pP   pwP    18 37 31.4 +7.3
HHC                                 sP   sP     18 37 33.0  +12
HHC                                 PP   PnPn   18 38 01.6 +1.1
HHC                                 S    S      18 41 47.3 -8.5
HHC                                 pmax pmax
       comp=N,32nm,1.0s
HHC                                 pmax pmax
       comp=N,630nm,4.6s
HHC                                 LR   LR
       comp=N,7µm,11.5s
HHC                                 LR   LR
       comp=N,9µm,12.6s
HHC                                 LR   LR
       comp=N,12µm,12.4s
ENH    Enshi              28.18 280 eP   P      18 37 24.2 -0.6
       comp=N,46nm,0.9s
ENH                                 LR   LR
       comp=Z,5µm,19.0s
BTO    Baotou             28.36 302 eP   P      18 37 26.8 +0.4
BTO                                 S    S      18 42 04.4 -8.4
XAN    Xi'an              28.46 288  P   P      18 37 26.5 -0.8
XAN                                 pmax pmax
       comp=Z,17nm,0.9s
XAN                                 pmax pmax
       comp=Z,590nm,7.6s
XAN                                 LR   LR
       comp=Z,3µm,15.2s
XAN                                 LR   LR
       comp=Z,6µm,18.4s
XAN                                 LR   LR
       comp=Z,7µm,18.4s
XAN    Xi'an              28.46 288 eP   P      18 37 26.1 -1.2
       comp=Z,48nm,1.0s
XAN    Xi'an              28.46 288 eP   P      18 37 26.1 -1.2
XAN                                 pmax pmax
       comp=Z,49nm,1.0s
MA2    Magadan            30.79   9 eP   P      18 37 47.2 -0.3
       comp=Z,43nm,0.8s
MA2    Magadan            30.79   9⇑eP   P      18 37 48.2 +0.6
MA2                                 pmax pmax
       comp=Z,48nm,0.8s
MA2    Magadan            30.79   9  P   P      18 37 48.1 +0.6
       comp=Z,39nm,0.7s,baz=186,slow=8.1,SNR=18
CIT    Chita              30.92 325 eP   P      18 37 50.4 +1.4
CIT                                e            18 38 04.5
CIT                                e            18 38 54.1
CIT                                 pmax pmax
       comp=Z,134nm,2.6s
QIZ    Qiongzhong         31.00 258  P   P      18 37 52.1 +2.2
QIZ                                 S    S      18 42 54.7 +0.2
QIZ                                 pmax pmax
       comp=Z,29nm,1.8s
QIZ                                 LR   LR
       comp=Z,1µm,13.2s
QIZ                                 LR   LR
       comp=Z,3µm,17.2s
QIZ                                 LR   LR
       comp=Z,3µm,19.1s
QIZ    Qiongzhong         31.00 258 eP   P      18 37 52.4 +2.5
       comp=Z,30nm,1.1s
GYA    Guiyang            31.30 273⇑iP   P      18 37 52.6  0.0
GYA                                 pP   pwP    18 38 08.0 +7.9
GYA                                 PP   PnPn   18 38 58.7 +3.9
GYA                                 S    S      18 42 57.0 -2.2
GYA                                 sS   sS     18 43 18.2  +14
GYA                                 SS   SnSn   18 44 44.6 +2.3
GYA                                 pmax pmax
       comp=Z,30nm,0.9s
GYA                                 pmax pmax
       comp=Z,270nm,7.8s
GYA                                 LR   LR
       comp=Z,5µm,16.3s
GYA                                 LR   LR
       comp=Z,3µm,20.5s
GYA                                 LR   LR
       comp=Z,4µm,17.3s
KWAJ   Kwajalein Atol     31.55 125 eP   P      18 37 57.0 +2.2
       comp=Z,335nm,0.8s
KWAJ   Kwajalein Atol     31.55 125 eP   P      18 37 57.0 +2.2
KWAJ                                pmax pmax
       comp=Z,335nm,0.8s
TNTI   Ternate            31.68 209 eP   P      18 37 56.2 +0.3
       comp=Z,52nm,1.0s
TNTI   Ternate            31.68 209  P   P      18 38 06.8  +11
SIJI   Sorong             31.77 201  LR  LR     18 50 03.9
       comp=Z,3µm,18.6s,baz=38,slow=35
ULN    Ulaanbaatar        32.60 314 eP   P      18 38 04.7 +0.9
       comp=Z,85nm,1.2s
ULN    Ulaanbaatar        32.60 314c iP  P      18 38 04.9 +1.0
ULN                                 pmax pmax
       comp=Z,69nm,1.7s
ULN    Ulaanbaatar        32.60 314  P   P      18 38 05.5 +1.6
       SNR=20
LZH    Lanzhou            32.64 292 eP   P      18 38 07.6 +3.2
LZH                                 pP   pwP    18 38 16.1 +4.3
LZH                                 sP   sP     18 38 21.4  +12
LZH                                eS    S      18 43 23.1 +2.9
LZH                                 sS   sS     18 43 40.9  +16
LZH                                 SS   SS     18 45 17.2  -23
LZH                                 pmax pmax
       comp=Z,40nm,1.0s
LZH                                 pmax pmax
       comp=Z,400nm,5.5s
LZH                                 LR   LR
       comp=Z,5µm,14.6s
LZH                                 LR   LR
       comp=Z,11µm,15.4s
LZH                                 LR   LR
       comp=Z,14µm,15.4s
SONA0  Songino Array      33.00 314 eP   P      18 38 08.2 +0.8
SONA1  Songino Array      33.00 314 eP   P      18 38 08.7 +1.4
SONM   Songino Array      33.00 314  P   P      18 38 08.2 +0.8
       comp=Z,20nm,0.8s,baz=115,slow=8.1,SNR=51
SONM                                LR   LR     18 52 06.0
       comp=Z,4µm,18.1s,baz=110,slow=37
CD2    Chengdu            33.01 282  P   P      18 38 07.0 -0.5
CD2                                 pP   pwP    18 38 18.8 +3.8
CD2                                 sP   sP     18 38 24.4  +12
CD2                                 PP   PP     18 39 22.0 -0.2
CD2                                 S    S      18 43 23.8 -2.0
CD2                                 sS   sS     18 43 43.1  +12
CD2                                 pmax pmax
       comp=Z,60nm,0.5s
CD2                                 pmax pmax
       comp=Z,790nm,7.4s
CD2                                 LR   LR
       comp=Z,6µm,15.5s
CD2                                 LR   LR
       comp=Z,6µm,15.3s
CD2                                 LR   LR
       comp=Z,7µm,16.1s
SDKM   Sandakan           33.26 230  P   P      18 38 11.8 +2.0
KMSI   Cibinong           33.40 214  P   P      18 38 08.9 -2.1
FAKI   Fak Fak            33.44 198 eP   P      18 38 10.6 -0.7
       comp=Z,25nm,0.7s
FAKI   Fak Fak            33.44 198  P   P      18 38 10.6 -0.7
       comp=Z,45nm,0.9s
KKM    Kota Kinabalu      33.63 231 eP   P      18 38 12.7 -0.4
       comp=Z,54nm,0.9s
YAK    Yakutsk            33.66 350 eP   P      18 38 12.5 -0.2
YAK                                e*PP  pwP    18 38 21.5 +0.5
YAK                                e            18 39 22.9
YAK                                e            18 40 53.0
YAK                                eS    S      18 43 34.2 -0.8
YAK                                e*SS  sS     18 43 45.4 +5.6
YAK                                eSS   SnSn   18 45 40.4 +1.8
YAK                                e            18 48 33.1
YAK                                 pmax pmax
       comp=E,60nm,1.0s
YAK                                 pmax pmax
       comp=Z,230nm,0.8s
YAK                                 pmax pmax
       comp=N,102nm,1.2s
YAK                                 pmax pmax
       comp=Z,244nm,1.5s
YAK                                 smax smax
       comp=E,2µm,5.1s
YAK                                 smax smax
       comp=N,1µm,3.5s
YAK                                 MLR  MLR
       comp=Z,14µm,17.0s
YAK                                 MLR  MLR
       comp=N,11µm,15.0s
YAK                                 MLR  MLR
       comp=E,6µm,13.0s
TSM    Tawau              33.84 227  P   P      18 38 16.1 +1.3
SEY    Seymchan           34.24   8⇓iP   P      18 38 19.3 +1.5
SEY    Seymchan           34.24   8  P   P      18 38 18.7 +0.9
       comp=E,48nm,0.8s,baz=193,slow=7.1,SNR=47
BOD    Bodaibo            34.45 334 eP   P      18 38 20.7 +1.0
BOD                                 pmax pmax
       comp=Z,58nm,1.4s
MRSI   Marisa             34.52 217  P   P      18 38 19.4 -1.3
MRSI                                pP   pwP    18 38 38.8  +11
RABL   Rabaul             34.77 162 eP   P      18 38 21.6 -1.2
       comp=Z,98nm,1.1s
SANI   Sanana             34.80 209  P   P      18 38 22.1 -1.0
       comp=Z,62nm,0.8s,comp=Z,792nm
KMI    Kunming            35.05 273  P   P      18 38 26.0 +0.4
KMI                                 pP   pwP    18 38 40.1 +7.1
KMI                                 sP   sP     18 38 46.1  +16
KMI                                 PP   PP     18 39 47.3 +2.2
KMI                                 S    S      18 43 50.5 -7.3
KMI                                 sS   sS     18 44 17.2  +14
KMI                                 SS   SnSn   18 46 07.7 -6.0
KMI                                 pmax pmax
       comp=Z,38nm,1.0s
KMI                                 pmax pmax
       comp=Z,450nm,7.7s
KMI                                 LR   LR
       comp=Z,3µm,18.0s
KMI                                 LR   LR
       comp=Z,4µm,21.9s
KMI                                 LR   LR
       comp=Z,5µm,20.6s
KMI    Kunming            35.05 273 eP   P      18 38 24.7 -0.9
       comp=Z,28nm,0.8s
KMI    Kunming            35.05 273 eP   P      18 38 24.7 -0.9
KMI                                 pmax pmax
       comp=Z,28nm,0.8s
LUWI   Luwuk              35.39 215 eP   P      18 38 27.2 -1.0
       comp=Z,162nm,1.0s
LUWI   Luwuk              35.39 215  P   P      18 38 27.3 -1.0
       comp=Z,105nm,0.9s,comp=Z,2µm
NLAI   Namlea             35.44 206  P   P      18 38 28.2 -0.4
       comp=Z,36nm,1.0s
MIDW   Midway             35.49  82 eP   P      18 38 28.6 -0.4
       comp=Z,144nm,0.9s
MPSI   Mapaga             35.76 220  P   P      18 38 28.8 -2.5
ZAK    Zakamensk          35.83 317 eP   P      18 38 33.1 +1.3
ZAK                                 pmax pmax
       comp=Z,58nm,1.1s
APSI   Ampana             35.85 216  P   P      18 38 32.1 -0.1
       comp=Z,60nm,0.6s,comp=Z,603nm
GTA    Gaotai             35.95 298 eP   P      18 38 31.9 -1.1
GTA                                 pP   pwP    18 38 44.6 +4.2
GTA                                 sP   sP     18 38 49.2  +12
GTA                                 S    S      18 44 05.9 -5.2
GTA                                 sS   sS     18 44 24.1 +7.9
GTA                                 PcS  PcS    18 44 45.0 -2.2
GTA                                 ScS  ScS    18 48 47.2 -3.9
GTA                                 pmax pmax
       comp=Z,4.0nm,0.8s
GTA                                 pmax pmax
       comp=Z,370nm,7.9s
GTA                                 LR   LR
       comp=Z,3µm,16.8s
GTA                                 LR   LR
       comp=Z,4µm,19.9s
GTA                                 LR   LR
       comp=Z,4µm,21.0s
IRK    Irkutsk            35.98 320 eP   P      18 38 33.9 +1.0
IRK                                 pmax pmax
       comp=Z,220nm,2.5s
TLY    Talaya             36.10 319 eP   P      18 38 36.2 +2.2
       comp=Z,53nm,1.0s
TLY                                 LR   LR
       comp=Z,2µm,20.0s
TLY    Talaya             36.10 319c iP  P      18 38 36.1 +2.1
TLY    Talaya             36.10 319  P   P      18 38 36.2 +2.2
       SNR=31
TLY    Talaya             36.10 319  P   P      18 38 36.3 +2.2
       comp=Z,14nm,0.7s,baz=131,slow=6.5,SNR=22
PCI    Palu               36.81 219  P   P      18 38 39.6 -0.8
       comp=Z,192nm,1.0s,comp=Z,2µm
SKNT   Sakolnakorn        36.91 259  P   P      18 38 42.4 +1.1
       comp=Z,47nm,1.0s,comp=Z,919nm
NONG   Nongkai            37.16 261  P   P      18 38 44.5 +1.1
       comp=Z,3.9nm,0.8s
KIWB   Kanaga Island      37.60  42 eP   P      18 38 47.2 +0.5
MOY    Mondy              37.63 318 eP   P      18 38 48.3 +1.1
MOY                                 pmax pmax
       comp=Z,121nm,2.7s
BTM    Bintulu            37.83 232  P   P      18 38 51.1 +2.1
ADK    Adak               37.88  42 eP   P      18 38 49.5 +0.5
       comp=Z,128nm,1.0s
ADK                                 LR   LR
       comp=Z,3µm,19.0s
ADK    Adak               37.88  42 eP   P      18 38 49.5 +0.5
ADK                                 pmax pmax
       comp=Z,128nm,1.0s
ADK                                 MLR  MLR
       comp=Z,3µm,19.0s
GSTR   Great Sitkin T     38.31  42 eP   P      18 38 54.5 +1.8
SAUI   Saumlaki           38.54 197 eP   P      18 38 56.4 +1.4
       comp=Z,224nm,1.1s
SAUI   Saumlaki           38.54 197  P   P      18 38 56.1 +1.1
       comp=Z,225nm,0.9s,comp=Z,2µm
SBUM   Sibu               38.96 232 eP   P      18 38 58.0 -0.6
       comp=Z,40nm,1.3s
SBUM   Sibu               38.96 232  P   P      18 39 00.3 +1.7
CHAI   Chaiyaphum         39.10 259  P   P      18 39 00.4 +0.6
       comp=Z,135nm,0.8s,comp=Z,923nm
BBSI   Bau Bau            39.37 211  P   P      18 39 08.4 +6.4
SPSI   Sidrap Palu        39.42 216  P   P      18 39 01.7 -0.7
       comp=Z,31nm,0.6s
ATKA   Atka Island        39.44  42 eP   P      18 39 04.8 +2.6
       comp=Z,277nm,1.6s
PAYA   Payao              39.48 265  P   P      18 39 04.0 +1.1
       comp=Z,16nm,0.9s,comp=Z,122nm
UTTA   Uttaradit          39.53 262  P   P      18 39 03.9 +0.6
       comp=Z,36nm,0.8s,comp=Z,290nm
BNSI   Bone               39.62 216  P   P      18 39 04.6 +0.6
       comp=Z,68nm,0.8s,comp=Z,817nm
PBKT   Sadao Pong         39.67 260  P   P      18 39 05.3 +0.8
       comp=Z,73nm,0.7s,comp=Z,1µm
MTKI   Muara Teweh, K     39.75 225  P   P      18 39 06.7 +1.6
       comp=Z,168nm,0.9s
SRAK   Srakaew            39.94 256  P   P      18 39 03.8 -2.9
       comp=Z,477nm,0.8s,comp=Z,3µm
CHBT   CHBT               40.32 254  P   P      18 39 16.8 +6.9
KAPI   Kappang            40.32 216  PFAKE      18 39 20.0  +10
KAPI                                LR   LR
       comp=Z,956nm,19.0s
BKSI   Bulukumba          40.40 215  P   P      18 39 09.0 -1.5
       comp=Z,22nm,1.0s
BKSI                                pP   pwP    18 39 26.4 +8.8
       comp=Z,22nm,1.0s
SUKH   Sukhothai          40.44 263  P   P      18 39 12.1 +1.2
       comp=Z,11nm,1.4s
CMMT   Chiang Mai         40.49 265  P   P      18 39 11.5 +0.1
       comp=Z,75nm,0.9s,comp=Z,960nm
CHTO   Chiang Mai         40.49 265 eP   P      18 39 11.5 +0.2
       comp=Z,61nm,0.9s
CHTO                                LR   LR
       comp=Z,5µm,21.0s
CHTO   Chiang Mai         40.49 265 eP   P      18 39 11.5 +0.2
CHTO                                pmax pmax
       comp=Z,61nm,0.9s
CHTO                                MLR  MLR
       comp=Z,5µm,21.0s
CHTO   Chiang Mai         40.49 265  P   P      18 39 12.2 +0.8
       SNR=29
CHTO   Chiang Mai         40.49 265  P   P      18 39 11.6 +0.2
       comp=Z,357nm,1.0s,comp=Z,4µm
CM31   Chiang Mai Arr     40.64 264 eP   P      18 39 13.0 +0.4
       comp=Z,35nm,0.8s
CM31                               ePcP  PcP    18 41 16.1 +1.7
CM31   Chiang Mai Arr     40.64 264  P   P      18 39 13.4 +0.9
       SNR=21
CMAR   Chiang Mai Arr     40.64 264  P   P      18 39 13.1 +0.6
       comp=Z,15nm,0.8s,baz=44,slow=8.4,SNR=148
CMAR                                PcP  PcP    18 41 16.1 +1.7
       comp=Z,3.0nm,0.8s,baz=67,slow=1.2,SNR=5.1
CMAR                                LR   LR     18 56 21.0
       comp=Z,5µm,20.6s,baz=89,slow=37
CM01   Chiang Mai Arr     40.64 264 eP   P      18 39 13.0 +0.5
KSM    Kuching            40.99 233  P   P      18 39 17.2 +1.8
BILL   Bilibino           41.28  14 eP   P      18 39 17.2  0.0
       comp=Z,47nm,1.0s
BILL                                LR   LR
       comp=Z,2µm,19.0s
BILL   Bilibino           41.28  14ceP   P      18 39 17.6 +0.4
BILL                               e            18 40 53.4
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BILL                                 ePPP     PPP      18 41 19.6
BILL                                 eS       S        18 45 28.8  -1.9
BILL                                 eSS      SS       18 48 37.5  +3.6
BILL                                  pmax    pmax
      comp=Z,22nm,0.6s
BILL                                  MLR     MLR
      comp=Z,2µm,16.0s
UTHA  Uthaitani          41.44 260    P       P        18 39 20.2  +1.1
      comp=Z,29nm,0.8s,comp=Z,212nm
PATY  Pattaya            41.47 256    P       P        18 39 21.0  +1.6
      comp=Z,26nm,0.8s
UMPA  Umpang Tak         41.65 261    P       P        18 39 22.7  +1.8
      comp=Z,27nm,1.1s,comp=Z,207nm
HVS   Khovu-Aksy         41.86 315⇑eP         P        18 39 24.4  +2.0
HVS                                   pmax    pmax
      comp=Z,19nm,0.8s
SRDT  SRDT               42.27 259    P       P        18 39 26.8  +0.9
      comp=Z,45nm,0.8s,comp=Z,1µm
HNR   Honiara            42.28 153    PFAKE            18 39 40.0   +14
HNR                                   LR      LR
      comp=Z,164µm,20.0s
MMRI  Maumere            42.32 210   eP       P        18 39 25.7  -0.6
      comp=Z,139nm,0.9s
MMRI  Maumere            42.32 210    P       P        18 39 25.9  -0.3
      comp=Z,163nm,1.0s,comp=Z,1µm
SOEI  Soe                42.49 206   eP       P        18 39 27.3  -0.5
      comp=Z,89nm,0.9s
SOEI  Soe                42.49 206    P       P        18 39 26.4  -1.4
      comp=Z,100nm,1.0s
PHET  Kaeng Krachan      42.52 257    P       P        18 39 29.6  +1.6
      comp=Z,29nm,0.9s,comp=Z,246nm
EDFI  Ende, Flores       42.66 210    P       P        18 39 28.7  -0.4
      comp=Z,80nm,0.9s,comp=Z,827nm
TIXI  Tiksi              42.94 354   eP       P        18 39 31.0  +0.3
TIXI                                  LR      LR
      comp=Z,1µm,21.0s
TIXI  Tiksi              42.94 354c iP        P        18 39 30.8  +0.1
TIXI                                  pmax    pmax
      comp=Z,19nm,0.8s
TIXI  Tiksi              42.94 354    P       P        18 39 31.0  +0.3
      comp=Z,12nm,0.5s,baz=141,slow=5.8,SNR=26
COEN  Coen               43.09 178   eP       P        18 39 32.6  +0.2
      comp=Z,52nm,0.9s
BATI  Baumata            43.14 207    P       P        18 39 31.8  -1.2
      comp=Z,50nm,0.8s,comp=Z,540nm
BATI  Baumata            43.14 207    P       P        18 39 32.3  -0.7
      comp=Z,39nm,0.4s,baz=53,slow=2.6,SNR=20
KTGM  Kuala Trenggan     43.81 245    P       P        18 39 40.8  +2.4
LSA   Lhasa              43.95 284   eP       P        18 39 39.1  -0.9
      comp=Z,16nm,1.3s
LSA   Lhasa              43.95 284   eP       P        18 39 39.1  -0.9
LSA                                   pmax    pmax
      comp=Z,15nm,1.3s
UNV   Unalaska Valle     44.35  42   eP       P        18 39 42.3   0.0
      comp=Z,178nm,1.7s
SHL   Shillong           44.37 278   eP       P        18 39 42.0  -1.1
      comp=Z,19nm,0.8s
SHL   Shillong           44.37 278   eP       P        18 39 42.0  -1.1
SHL                                   pmax    pmax
      comp=Z,19nm,0.8s
SHL   Shillong           44.37 278   eP       P        18 39 42.2  -0.9
SHL                                   IAmb    IAmb     18 39 46.2
      comp=Z,278nm,3.7s
PLAI  Plampang           44.58 215    P       P        18 39 43.3  -1.2
      comp=Z,108nm,1.0s
SKLT  Songkhla           44.74 249    P       P        18 39 49.8  +3.9
      comp=Z,59nm,0.9s,comp=Z,918nm
AKUT  Akutan             44.83  41   eP       P        18 39 46.4  +0.3
      comp=Z,527nm,1.8s
TRTT  Trang              45.12 250    P       P        18 39 50.7  +1.8
      comp=Z,17nm,1.6s
WMQ   Urumqi             45.15 304    P       P        18 39 49.9  +1.0
WMQ                                   pP      pwP      18 40 04.0  +7.7
WMQ                                   ScP     ScP      18 45 17.8  -3.7
WMQ                                   sS      sS       18 46 49.0   +16
WMQ                                   SS      ScS      18 49 37.6  -8.1
WMQ                                   pmax    pmax
      comp=Z,43nm,1.5s
WMQ                                   pmax    pmax
      comp=Z,990nm,8.1s
WMQ                                   LR      LR
      comp=Z,5µm,15.1s
WMQ                                   LR      LR
      comp=Z,6µm,18.5s
WMQ                                   LR      LR
      comp=Z,6µm,20.7s
WMQ   Urumqi             45.15 304   eP       P        18 39 49.2  +0.3
      comp=Z,164nm,1.6s
WMQ   Urumqi             45.15 304   eP       P        18 39 49.2  +0.3
WMQ                                   pmax    pmax
      comp=Z,164nm,1.6s
KMMI  Kalianget          45.16 221    P       P        18 39 49.2  +0.1
      comp=Z,32nm,0.9s,comp=Z,356nm
GAMB  Gambell            45.16  27   eP       P        18 39 48.4  -0.2
      comp=Z,36nm,1.2s
SRBI  Singaraja          45.30 219    P       P        18 39 49.4  -0.9
      comp=Z,46nm,0.8s,comp=Z,713nm
KRAB  Krabi              45.32 251    P       P        18 39 51.9  +1.4
      comp=Z,181nm,0.8s,comp=Z,1µm
BRDH  Bariadhala         45.47 274    P       P        18 39 52.4  +0.8
      comp=Z,134nm,0.3s,baz=95,slow=9.5,SNR=7.4
MYKOM Kota Tinggi        45.48 240   eP       P        18 39 52.9  +1.2
      comp=Z,42nm,0.9s
TPRI  Tanjung Pinang     45.55 238    pP      pP       18 40 09.9   +14
DGZ   Jazzator, Alta     45.60 312c iP        P        18 39 54.0  +1.4
DGZ                                   pmax    pmax
      comp=Z,39nm,0.8s
DNP   Denpasar           45.80 218    P       P        18 40 02.5  +8.3
KULM  Kulim              45.80 247   eP       P        18 39 55.6  +1.3
      comp=Z,172nm,1.5s
KULM                                 ePcP     PcP      18 41 34.0  +2.2
GRJI  Gresik             45.92 223    P       P        18 39 54.6  -0.6
      comp=Z,29nm,0.9s
IGBI  Denpasar           45.95 218    P       P        18 39 53.5  -1.9
      comp=Z,92nm,0.7s
IPM   Ipoh               45.99 245   eP       P        18 39 55.7  -0.1
      comp=Z,146nm,1.6s
IPM                                  ePcP     PcP      18 41 33.9  +1.4
JOHN  Johnston Islan     46.03  95    PFAKE            18 40 10.0   +14
JOHN                                  LR      LR
      comp=Z,189nm,21.0s
JAGI  Jajag, Banyuwa     46.21 220   eP       P        18 39 55.8  -1.7
      comp=Z,118nm,1.0s
JAGI  Jajag, Banyuwa     46.21 220    P       P        18 39 56.0  -1.5
      comp=Z,133nm,1.0s,comp=Z,1µm
PKDT  Phuket             46.21 251    P       P        18 39 59.6  +2.1
      comp=Z,46nm,0.9s,comp=Z,641nm
FALS  False Pass         46.32  41   eP       P        18 39 59.5  +1.7
      comp=Z,100nm,1.2s
NGJI  Ngawi              46.89 224    P       P        18 40 02.2  -0.6
      comp=Z,79nm,0.9s
ZSN   Zaisan             47.17 309d iP        P        18 40 05.2  +0.5
ZSN                                   pmax    pmax
      comp=Z,74nm,1.2s
ZSN                                   MLR     MLR
      comp=Z,942nm,18.0s
ZSN   Zaisan             47.17 309⇓iP         P        18 40 05.3  +0.5
      comp=Z,74nm,1.2s
ZSN                                  eLRM     MLR      19 01 03.7
      comp=Z,942nm,18.0s
PWJI  Pagerwojo          47.20 223    P       P        18 40 03.8  -1.4
      comp=Z,82nm,0.9s,comp=Z,1µm
SMRI  Semarang           47.26 225   eP       P        18 40 05.0  -0.7
      comp=Z,140nm,1.1s
SMRI  Semarang           47.26 225    P       P        18 40 15.3   +10
WOJI  Wonogiri, Jawa     47.58 224    P       P        18 40 06.9  -1.3
      comp=Z,31nm,1.0s
ZAA0  Zalesovo Array     47.69 318   eP       P        18 40 09.1  +0.5
      comp=Z,81nm,1.0s
ZAA0                                 ePcP     PcP      18 41 36.6  -1.2
ZAA1  Zalesovo Array     47.69 318   eP       P        18 40 09.5  +0.9
ZAA1                                 ePcP     PcP      18 41 38.6  +0.8
ZALV  Zalesovo Beam      47.69 318   eP       P        18 40 09.1  +0.5
ZALV                                 ePcP     PcP      18 41 37.9   0.0
ZALV  Zalesovo Beam      47.69 318   eP       P        18 40 09.1  +0.5
ZALV                                 e                 18 41 37.9
ZALV  Zalesovo Beam      47.69 318    P       P        18 40 09.5  +0.9
      comp=Z,58nm,0.9s,baz=103,slow=6.5,SNR=138
ZALV                                  PcP     PcP      18 41 38.6  +0.8
      comp=Z,18nm,0.8s,baz=112,slow=3.1,SNR=5.0
ZALV                                  LR      LR       19 01 05.3
      comp=Z,4µm,18.1s,baz=94,slow=37
PCJI  Pacitan            47.71 223    P       P        18 40 06.7  -2.5
      comp=Z,58nm,0.9s
UGM   Wanagama           47.88 224   eP       P        18 40 09.3  -1.3
      comp=Z,170nm,1.2s
UGM   Wanagama           47.88 224    P       P        18 40 09.8  -0.8
      comp=Z,123nm,1.1s
JMBI  JAMBI              47.91 237    P       P        18 40 24.5   +14
ANM   Nome               48.01  27   eP       P        18 40 11.9  +0.9
      comp=Z,92nm,1.4s
ANM   Nome               48.01  27   eP       P        18 40 11.9  +0.9
ANM                                   pmax    pmax
      comp=Z,92nm,1.4s
SDPT  Sand Point         48.06  40   eP       P        18 40 11.5   0.0
      comp=Z,76nm,0.9s
KPJI  Karang Pucung      48.42 226    P       P        18 40 12.3  -2.4
      comp=Z,155nm,0.9s,comp=Z,2µm
RAMN  Ramite             48.52 281   eP       P        18 40 15.6  -0.2
      comp=Z,42nm,0.6s
BKNI  Bangkinang         48.56 241   eP       P        18 40 15.9   0.0
      comp=Z,63nm,0.5s
PSI   Prapat             48.67 245   eP       P        18 40 17.0  +0.2
      comp=Z,49nm,0.9s
PSI                                  ePcP     PcP      18 41 43.0  +0.9
PSI   Prapat             48.67 245   eP       P        18 40 17.0  +0.2
PSI                                  e                 18 41 43.1
PSI                                   pmax    pmax
      comp=Z,49nm,0.9s
JIRN  Jiri               48.68 282   eP       P        18 40 17.4  +0.3
      comp=Z,50nm,0.3s
NVS   Novosibirsk        48.72 319⇓iP         P        18 40 18.4  +1.9
NVS                                  eS       S        18 47 21.6  +3.1
NVS                                  e                 18 50 05.6
NVS                                   pmax    pmax
      comp=Z,442nm,2.3s
NVS                                   pmax    pmax
      comp=N,75nm,1.6s
NVS                                   pmax    pmax
      comp=E,302nm,2.2s
NVS                                   smax    smax
      comp=N,63nm,2.9s
NVS                                   smax    smax
      comp=E,51nm,3.5s
LHMI  Lhok Sumawe        48.84 249   eP       P        18 40 20.0  +2.0
      comp=E,195nm,1.2s
LHMI                                 ePcP     PcP      18 41 39.9  -2.7
GUN   Gumba              48.87 283   eP       P        18 40 18.7  +0.1
      comp=E,48nm,0.5s
MK01  Makanchi Array     48.92 308   eP       P        18 40 18.3  -0.1
MK01                                 ePcP     PcP      18 41 41.7  -0.8
MK31  Makanchi Array     48.93 308   eP       P        18 40 18.6  +0.2
      comp=E,30nm,0.8s
MK31  Makanchi Array     48.93 308   i P      P        18 40 19.0  +0.6
MK31                                  pmax    pmax
      comp=Z,27nm,0.7s
MK32  Makanchi Array     48.93 308   eP       P        18 40 18.9  +0.6
MKAR  Makanchi Array     48.93 308   eP       P        18 40 19.0  +0.6
      comp=Z,226nm,0.8s
MKAR  Makanchi Array     48.93 308   i P      P        18 40 19.0  +0.6
MKAR                                  pmax    pmax
      comp=Z,34nm,0.8s
MKAR  Makanchi Array     48.93 308    P       P        18 40 18.9  +0.6
      comp=Z,34nm,0.8s,baz=92,slow=9.3,SNR=262
MKAR                                  LR      LR       19 02 04.3
      comp=Z,4µm,18.6s,baz=91,slow=37
PBA   Port Blair         49.01 260   eP       P        18 40 20.6  +1.3
      comp=Z,233nm,1.2s
PBA   Port Blair         49.01 260   eP       P        18 40 18.7  -0.5
CBJI  Citeko             49.08 229    P       P        18 40 19.9  +0.1
      comp=Z,90nm,0.9s
MAKZ  Makanchi           49.15 308   eP       P        18 40 20.4  +0.4
      comp=Z,29nm,0.8s
MAKZ  Makanchi           49.15 308    P       P        18 40 20.6  +0.6
MAKZ                                  pmax    pmax
      comp=Z,34nm,0.8s
KCSI  Kotacane, Aceh     49.16 247    P       P        18 40 19.7  -0.8
      comp=Z,40nm,1.0s
DBJI  Dramaga            49.24 229    P       P        18 40 19.7  -1.4
      comp=Z,34nm,0.9s
KLI   Kotabumi           49.30 233    P       P        18 40 18.3  -3.1
CISI  Cisompet, Garu     49.30 227   eP       P        18 40 20.0  -1.5
      comp=Z,52nm,0.7s
CISI  Cisompet, Garu     49.30 227    P       P        18 40 19.8  -1.7
      comp=Z,75nm,0.8s
CTA   Charters Tower     49.34 175   eP       P        18 40 21.8  +0.1
CTA   Charters Tower     49.34 175    P       P        18 40 21.8  +0.1
      comp=Z,7.2nm,0.6s,baz=4.3,slow=8.9,SNR=4.8
CTAO  Charters Tower     49.34 175   eP       P        18 40 22.1  +0.5
      comp=Z,27nm,0.9s
CTAO                                  LR      LR
      comp=Z,54µm,22.0s
CTAO  Charters Tower     49.34 175   eP       P        18 40 22.1  +0.5
CTAO                                  pmax    pmax
      comp=Z,27nm,0.9s
CTAO                                  MLR     MLR
      comp=Z,54µm,22.0s
CHGN  Chignik            49.35  39   eP       P        18 40 21.0  -0.3
      comp=Z,86nm,1.4s
PKI   Pulchoki           49.37 282   eP       P        18 40 22.0  -0.3
      comp=Z,21nm,0.7s
PKIN  Phulchoki          49.38 282   eP       P        18 40 21.8  -0.5
      comp=Z,7.6nm,0.4s
MNSI  Mandailing Nat     49.39 243    P       P        18 40 21.2  -1.0
      comp=Z,59nm,1.1s,comp=Z,815nm
MDSI  Maura Dua          49.50 234    P       P        18 40 22.8  -0.2
      comp=Z,146nm,0.9s,comp=Z,1µm
LHSI  Lahat              49.50 235    P       P        18 40 35.3   +12
WRAB  Tennant Creek      49.57 189   eP       P        18 40 23.1  -0.3
      comp=Z,82nm,0.9s
WRAB                                  LR      LR
      comp=Z,2µm,19.0s
WRAB  Tennant Creek      49.57 189c iP        P        18 40 22.7  -0.7
WRAB                                  pmax    pmax
      comp=Z,63nm,1.0s
WB2   Warramunga Arr     49.58 189   eP       P        18 40 22.0  -1.5
WB2                                  ePcP     PcP      18 41 47.0  +1.9
WB2                                  eS       S        18 47 30.1  -1.1
WR1   Warramunga Arr     49.58 189   eP       P        18 40 22.8  -0.7
      comp=Z,117nm,1.1s
WR1                                  ePcP     PcP      18 41 45.2  +0.1
WR1                                  eScP     ScP      18 45 42.6  +2.4
WR1                                  eS       S        18 47 23.9  -7.4
WRA   Warramunga Arr     49.58 189   i P      P        18 40 22.7  -0.7
WRA                                   pmax    pmax
      comp=Z,49nm,0.9s
WRA   Warramunga Arr     49.58 189    P       P        18 40 22.8  -0.7
      comp=Z,36nm,0.8s,baz=12,slow=8.3,SNR=270
WRA                                   PcP     PcP      18 41 45.2  +0.1
      comp=Z,18nm,1.0s,baz=4.2,slow=4.0,SNR=2.5
WRA                                   ScP     ScP      18 45 42.6  +2.4
      comp=Z,1.7nm,0.8s,baz=3.2,slow=4.6,SNR=7.2
WRA                                   S       S        18 47 23.9  -7.4
      comp=Z,2.4nm,0.9s,baz=8.3,slow=15,SNR=6.9
DMN   Daman              49.61 283   eP       P        18 40 23.9  -0.2
      comp=Z,16nm,0.4s
FITZ  Fitzroy Crossi     49.77 201   eP       P        18 40 24.5  -0.4
      comp=Z,45nm,1.1s
FITZ                                 ePcP     PcP      18 41 48.8  +3.0
TPTI                     49.79 247    P       P        18 40 21.1  -4.1
      comp=Z,24nm,1.2s
PDSI  Padang             49.80 240    P       P        18 40 32.7  +7.4
KRJI  Kerinci            49.82 238    P       P        18 40 25.6   0.0
      comp=Z,84nm,2.3s,comp=Z,2µm
MASI  Maura Aman, Be     49.96 237    P       P        18 40 25.5  -1.1
      comp=Z,209nm,1.1s,comp=Z,3µm
LWLI  Liwa               49.96 233    P       P        18 40 25.6  -1.1
      comp=Z,73nm,0.7s,comp=Z,13µm
KASI  Kota Agung         50.02 232    P       P        18 40 24.8  -2.1
      comp=Z,51nm,0.9s,comp=Z,592nm
BOK   Bokaro             50.10 278   eP       P        18 40 28.0  +0.4
BOK                                   IAmb    IAmb     18 40 30.4
      comp=Z,17nm,0.8s
RDOG  Red Dog Mine       50.21  24   eP       P        18 40 29.1  +1.4
      comp=Z,39nm,0.9s
SEM   Semipalatinsk      50.26 313deP         P        18 40 27.0  -1.7
SEM                                   pmax    pmax
      comp=Z,627nm,0.8s
SEM                                   MLR     MLR
      comp=Z,1µm,16.0s
SEM   Semipalatinsk      50.26 313⇓eP         P        18 40 27.0  -1.7
      comp=Z,627nm,0.8s
SEM                                  eLRM     MLR      19 02 58.4
      comp=Z,1µm,16.1s
MNAI  Manna              50.28 235   eP       P        18 40 29.4  +0.5
      comp=Z,218nm,1.2s
MNAI  Manna              50.28 235    P       P        18 40 29.5  +0.5
      comp=Z,175nm,1.4s
NRIK  Noril'sk           50.48 338    P       P        18 40 31.1  +1.3
      comp=Z,51nm,0.9s,baz=112,slow=7.8,SNR=28
NRIK                                  LR      LR       19 03 09.3
      comp=Z,4µm,18.1s,baz=118,slow=38
DANN  Dangsing           50.55 284   eP       P        18 40 31.6  +0.3
      comp=Z,47nm,0.5s
GSI   Gunungsitoli       50.64 245   eP       P        18 40 31.7   0.0
      comp=Z,124nm,0.9s
GSI   Gunungsitoli       50.64 245    P       P        18 40 31.7   0.0
      comp=Z,146nm,1.2s
KOLN  Koldanda           50.85 283   eP       P        18 40 33.5  +0.1
      comp=Z,78nm,0.9s
SNSI  Sinabang, Aceh     50.97 247    P       P        18 40 32.0  -2.2
      comp=Z,155nm,1.3s,comp=Z,3µm
SISI  Saibi              51.11 241    P       P        18 40 34.5  -0.7
      comp=Z,34nm,0.9s
PDGK  Podgornoye         51.13 304    P       P        18 40 35.2   0.0
PDGK                                  pmax    pmax
      comp=Z,64nm,1.1s
SHLS  Shalkode           51.17 304c iP        P        18 40 31.9  -3.6
SHLS                                  pmax    pmax
      comp=Z,167nm,0.7s
SHLS                                  MLR     MLR
      comp=Z,3µm,25.0s
SHLS  Shalkode           51.17 304⇑iP         P        18 40 31.9  -3.6
      comp=Z,167nm,0.7s
SHLS                                 eLRM     MLR      19 03 44.2
      comp=Z,3µm,24.6s
PYUN  Piuthan            51.27 284   eP       P        18 40 36.9  +0.3
      comp=Z,112nm,0.5s
KURK  Kurchatov          51.30 313   eP       P        18 40 37.5  +1.3
      comp=Z,173nm,1.0s
KURK                                  LR      LR
      comp=Z,3µm,21.0s
KURK  Kurchatov          51.30 313c iP        P        18 40 37.0  +0.8
KURK                                  pmax    pmax
      comp=Z,150nm,1.0s
KURK  Kurchatov          51.30 313    P       P        18 40 37.0  +0.8
      SNR=89
SVW2  Sparrevohn         51.47  33   eP       P        18 40 39.0  +1.6
      comp=Z,22nm,0.6s
UZB   Uzynbulak          51.49 304deP         P        18 40 36.1  -1.9
UZB                                   pmax    pmax
      comp=Z,129nm,0.7s
UZB                                   MLR     MLR
      comp=Z,1µm,18.0s
UZB   Uzynbulak          51.49 304⇓eP         P        18 40 36.1  -1.9
      comp=Z,129nm,0.7s
UZB                                  eLRM     MLR      19 04 20.3
      comp=Z,1µm,18.0s
KPKS  Kokpek             51.70 304deP         P        18 40 37.7  -1.7
KPKS                                  pmax    pmax
      comp=Z,181nm,1.2s
KPKS                                  MLR     MLR
      comp=Z,756nm,11.0s
KPKS  Kokpek             51.70 304⇓eP         P        18 40 37.8  -1.7
      comp=Z,181nm,1.2s
KPKS                                 eLRM     MLR      19 05 42.2
      comp=Z,756nm,11.5s
TDK   Taldyqorghan       51.74 306d iP        P        18 40 39.3  -0.3
TDK                                   pmax    pmax
      comp=Z,337nm,0.8s
TDK                                   MLR     MLR
      comp=Z,4µm,25.0s
TDK   Taldyqorghan       51.74 306⇓iP         P        18 40 39.4  -0.3
      comp=Z,337nm,0.8s
TDK                                  eLRM     MLR      19 04 28.5
      comp=Z,4µm,24.6s
ZHN   Zhinishke          51.91 304d iP        P        18 40 39.6  -1.5
ZHN                                   pmax    pmax
      comp=Z,77nm,0.9s
ZHN                                   MLR     MLR
      comp=Z,977nm,18.0s
ZHN   Zhinishke          51.91 304⇓iP         P        18 40 39.6  -1.5
      comp=Z,77nm,0.9s
ZHN                                  eLRM     MLR      19 04 33.4
      comp=Z,977nm,18.0s
SATY  Saty               51.95 304c iP        P        18 40 40.0  -1.3
SATY                                  pmax    pmax
      comp=Z,207nm,0.9s
SATY                                  MLR     MLR
      comp=Z,2µm,20.0s
SATY  Saty               51.95 304⇑iP         P        18 40 40.0  -1.3
      comp=Z,207nm,0.9s
SATY                                 eLRM     MLR      19 04 36.7
      comp=Z,2µm,19.7s
FUNA  Funafuti           51.98 131   eP       P        18 40 42.2  +0.5
      comp=Z,635nm,1.9s
FUNA                                  LR      LR
      comp=Z,30µm,21.0s
PRZ   Przheval'sk        52.02 303   eP       P        18 40 43.3  +1.3
      comp=Z,89nm,1.2s
PRZ   Przheval'sk        52.02 303   eP       P        18 40 43.3  +1.3
PRZ                                   pmax    pmax
      comp=Z,89nm,1.2s
OHAK  Old Harbor         52.24  38   eP       P        18 40 42.7  -0.4
      comp=Z,401nm,2.0s
TARG  Taragay, Kyrgy     52.56 302   eP       P        18 40 46.4  +0.1
      comp=Z,62nm,1.2s
KDAK  Kodiak Island      52.66  38   eP       P        18 40 45.8  -0.4
KDAK                                 esP      P        18 40 46.0  -0.2
KDAK  Kodiak Island      52.66  38    P       P        18 40 46.0  -0.2
      comp=Z,51nm,0.9s,baz=284,slow=5.8,SNR=20
KDAK                                  LR      LR       19 02 32.2
      comp=Z,2µm,20.1s,baz=278,slow=35
RSO   Redoubt South      52.77  34   eP       P        18 40 48.1  +0.8
CHKK  Chushkaly          52.88 305c iP        P        18 40 47.1  -1.0
CHKK                                  pmax    pmax
      comp=Z,96nm,1.0s
CHKK  Chushkaly          52.88 305⇑iP         P        18 40 47.1  -1.0
      comp=Z,96nm,1.0s
MDOK  Medeo              52.92 304deP         P        18 40 46.8  -1.8
MDOK                                  pmax    pmax
      comp=Z,316nm,0.8s
MDOK                                  MLR     MLR
      comp=Z,1µm,18.0s
MDOK  Medeo              52.92 304⇓eP         P        18 40 46.9  -1.8
      comp=Z,316nm,0.8s
MDOK                                 eLRM     MLR      19 05 07.8
      comp=Z,1µm,18.4s
KDJ   Kajisay            52.97 303   eP       P        18 40 50.1  +1.1
      comp=Z,82nm,1.8s
KDJ   Kajisay            52.97 303   eP       P        18 40 50.1  +1.1
KDJ                                   pmax    pmax
      comp=Z,82nm,1.8s
AAA   Alma-Ata           53.01 304c iP        P        18 40 49.0  -0.1
AAA                                   pmax    pmax
      comp=Z,205nm,1.1s
AAA                                   MLR     MLR
      comp=Z,462nm,21.0s
AAA   Alma-Ata           53.01 304⇑iP         P        18 40 49.1  -0.1
      comp=Z,205nm,1.1s
AAA                                  eLRM     MLR      19 06 10.0
      comp=Z,462nm,21.3s
IM3   Indian Mountai     53.10  27   eP       P        18 40 49.2  -0.1
AS01  Alice Springs      53.30 189   eP       P        18 40 50.2  -1.1
PPLA  Purkeypile         53.30  31   eP       P        18 40 52.1  +1.0
      comp=Z,174nm,1.8s
AS31  Alice Springs      53.30 189   eP       P        18 40 50.3  -1.1
      comp=Z,4.6nm,0.6s
AS31                                 eScP     ScP      18 45 58.2  +2.0
AS31                                 eS       S        18 48 22.1  -0.5
ASAR  Alice Springs      53.30 189    P       P        18 40 50.8  -0.6
ASAR                                                   18 41 58.7
ASAR                                  S       S        18 48 22.1  -0.5
ASAR                                  pmax    pmax
      comp=Z,6.0nm,0.8s
ASAR                                  pmax    pmax
      comp=Z,6.0nm,0.8s
ASAR                                  smax    smax
      comp=N,1.0nm,0.8s
ASAR  Alice Springs      53.30 189    P       P        18 40 50.8  -0.6
      comp=N,6.7nm,0.8s,baz=3.2,slow=6.5,SNR=38
ASAR                                  PcP     PcP      18 41 58.7  -0.2
      comp=N,5.5nm,0.8s,baz=8.9,slow=5.3,SNR=2.6
ASAR                                  ScP     ScP      18 45 58.2  +2.0
      comp=N,0.3nm,0.7s,baz=0.4,slow=4.3,SNR=3.1
ASAR                                  S       S        18 48 22.1  -0.5
      comp=N,1.1nm,0.8s,baz=17,slow=20,SNR=4.7
CAST  Castle Rocks       53.41  31   eP       P        18 40 52.5  +0.7
      comp=N,45nm,1.1s
BRLK  Bradley Lake       53.65  35   eP       P        18 40 52.1  -1.4
      comp=N,61nm,1.1s
SUA   Susitna One        53.84  33   eP       P        18 40 55.0   0.0
      comp=N,30nm,0.8s
NRN   Naryn              53.95 302   eP       P        18 40 56.8  +0.4
      comp=N,52nm,1.3s
NRN   Naryn              53.95 302   eP       P        18 40 56.8  +0.4
NRN                                   pmax    pmax
      comp=Z,52nm,1.3s
BPAW  Bear Paw Mtn.      53.98  30   eP       P        18 40 57.3  +1.4
      comp=Z,86nm,1.7s
TKM2  Tokmak 2           54.01 304    P       P        18 40 57.8  +1.1
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	SNR=23						
TKM2	Tokmak 2	54.01	304	P	P	18 40 57.4	+0.7
TKM2				pmax	pmax		
	comp=Z,37nm,0.9s						
MLY	Manley	54.19	29	eP	P	18 40 56.5	-1.0
	comp=Z,57nm,1.4s						
TRF	Thorofare Moun	54.22	31	eP	P	18 40 58.1	+0.3
	comp=Z,52nm,1.2s						
RC01	Rabbit Creek A	54.30	34	eP	P	18 40 58.0	-0.2
	comp=Z,43nm,1.0s						
KSH	Kashi	54.30	299	P	P	18 41 02.6	+3.8
KSH				pP	pwP	18 41 15.5	+9.2
KSH				PP	PP	18 43 06.3	+5.8
KSH				S	S	18 48 35.6	-0.7
KSH				sS	sS	18 48 58.1	+17
KSH				SS	SS	18 52 20.1	+2.0
KSH				pmax	pmax		
	comp=Z,24nm,0.7s						
KSH				pmax	pmax		
	comp=Z,800nm,5.7s						
KSH				LR	LR		
	comp=Z,1µm,10.0s						
KSH				LR	LR		
	comp=Z,830nm,8.0s						
KSH				LR	LR		
	comp=Z,1µm,8.6s						
HON	Honolulu	54.31	84	eP	P	18 40 60.0	+1.1
	comp=Z,202nm,1.0s						
HON	Honolulu	54.31	84	eP	P	18 41 00.0	+1.1
HON				pmax	pmax		
	comp=Z,202nm,1.0s						
SEW	Seward	54.39	35	eP	P	18 40 59.9	+1.0
	comp=Z,62nm,0.8s						
KZA	Kyzart	54.39	303	P	P	18 41 01.4	+1.7
	SNR=19						
KBK	Karagaybulak	54.52	303	P	P	18 41 01.4	+1.0
	SNR=48						
KNTN	Kanton	54.61	118	eP	P	18 41 01.7	+0.7
	comp=Z,174nm,1.4s						
CHMS	Chumysh	54.61	304	P	P	18 41 01.5	+0.7
	SNR=10						
PMR	Palmer	54.61	33	eP	P	18 41 00.7	+0.2
	comp=Z,66nm,1.2s						
PMR	Palmer	54.61	33	eP	P	18 41 00.7	+0.2
PMR				pmax	pmax		
	comp=Z,66nm,1.2s						
MBWA	Marble Bar	54.63	206	eP	P	18 41 00.4	-0.7
	comp=Z,29nm,0.9s						
MBWA				LR	LR		
	comp=Z,2µm,20.0s						
BWN	Browne	54.65	30	eP	P	18 41 03.1	+2.4
	comp=Z,477nm,1.9s						
COLD	Coldfoot	54.70	26	eP	P	18 41 01.5	+0.5
	comp=Z,15nm,1.0s						
GHO	Glory Hole Cre	54.72	33	eP	P	18 41 01.4	0.0
	comp=Z,138nm,1.6s						
FRU1	Bishkek	54.73	304	eP	P	18 41 02.2	+0.4
	comp=Z,54nm,1.1s						
FRU	Bishkek	54.73	304	⇑eP	P	18 41 00.0	-1.7
FRU				pmax	pmax		
	comp=Z,70nm,2.1s						
USP	Ospenovka	54.75	304	P	P	18 41 02.5	+0.6
	SNR=37						
DDI	Dehra Dun	54.79	288	eP	P	18 41 02.4	0.0
DDI				IAmb	IAmb	18 41 03.0	
	comp=Z,85nm,0.2s						
BTLS	Baital	54.81	306	deP	P	18 41 01.0	-1.2
BTLS				pmax	pmax		
	comp=Z,249nm,1.1s						
BTLS				MLR	MLR		
	comp=Z,2µm,20.0s						
BTLS	Baital	54.81	306	⇓eP	P	18 41 01.1	-1.2
	comp=Z,249nm,1.1s						
BTLS				eLRM	MLR	19 05 48.7	
	comp=Z,2µm,19.6s						
MCK	McKinley	54.84	31	eP	P	18 41 02.2	0.0
	comp=Z,75nm,1.4s						
AAK	Ala-Archa	54.85	304	P	P	18 41 03.5	+0.7
	SNR=19						
AAK	Ala-Archa	54.85	304	eP	P	18 41 03.1	+0.3
	comp=Z,21nm,1.0s						
AAK				LR	LR		
	comp=Z,3µm,19.0s						
AAK	Ala-Archa	54.85	304	i P	P	18 41 03.1	+0.3
	SNR=26						
AAK	Ala-Archa	54.85	304	c iP	P	18 41 03.3	+0.5
AAK				pmax	pmax		
	comp=Z,16nm,0.8s						
RND	Reindeer	54.86	31	eP	P	18 41 02.0	-0.3
	comp=Z,23nm,0.9s						
RND	Reindeer	54.86	31	eP	P	18 41 02.0	-0.3
RND				pmax	pmax		
	comp=Z,23nm,0.9s						
UCH	Uchtor	54.91	303	P	P	18 41 04.0	+0.5
	SNR=33						
KNK	Knik Glacier	54.93	33	eP	P	18 41 02.7	-0.1
	comp=Z,38nm,0.9s						
SML	Sawmill	55.01	33	eP	P	18 41 03.1	-0.3
	comp=Z,52nm,0.9s						
SML	Sawmill	55.01	33	eP	P	18 41 03.1	-0.3
SML				pmax	pmax		
	comp=Z,52nm,0.9s						
EIDS	Eidsvold	55.12	170	eP	P	18 41 05.1	+0.6
	comp=Z,29nm,0.8s						
BRZS	Berezniki	55.14	313	d iP	P	18 41 03.4	-1.1
BRZS				pmax	pmax		
	comp=Z,2µm,1.0s						
BRZS				MLR	MLR		
	comp=Z,1µm,15.0s						
BRZS	Berezniki	55.14	313	⇓iP	P	18 41 03.4	-1.1
	comp=Z,2µm,1.0s						
BRZS				eLRM	MLR	19 07 17.2	
	comp=Z,1µm,14.7s						
MDM	Murphy Dome	55.24	29	eP	P	18 41 05.0	-0.1
	comp=Z,73nm,1.4s						
WRH	Wood River Hil	55.27	30	eP	P	18 41 05.8	+0.6
	comp=Z,37nm,1.4s						
SMLA	Simla	55.30	289	eP	P	18 41 05.7	-0.3
SMLA				IAmb	IAmb	18 41 07.8	
	comp=Z,26nm,0.7s						
EKS2	Erkin-Say	55.37	304	P	P	18 41 06.9	+0.4
	SNR=32						
TCOL	CIGO, UAF Yank	55.40	29	P	P	18 41 05.2	-0.9
	baz=266						
COLA	College	55.40	29	eP	P	18 41 05.2	-0.9
	comp=Z,19nm,0.7s						
COLA				LR	LR		
	comp=Z,1µm,20.0s						
COLA	College	55.40	29	⇑eP	P	18 41 07.4	+1.3
COLA				pmax	pmax		
	comp=Z,31nm,2.4s						
JBP	Jabalpur	55.41	279	⇑eP	P	18 41 07.6	+0.8
SCM	Sheep Creek Mo	55.48	33	eP	P	18 41 06.8	0.0
	comp=Z,71nm,1.0s						
SCM	Sheep Creek Mo	55.48	33	eP	P	18 41 06.9	0.0
SCM				pmax	pmax		
	comp=Z,71nm,1.0s						
DHY	Denali Highway	55.51	31	eP	P	18 41 07.3	+0.1
	comp=Z,19nm,0.9s						
AML	Almayashu	55.52	303	P	P	18 41 09.4	+1.4
	SNR=74						
OTUK	Ortayu	55.55	311	P	P	18 41 08.7	+1.1
OTUK				pmax	pmax		
	comp=Z,134nm,1.2s						
GLI	Glacier Island	55.58	34	eP	P	18 41 06.8	-0.6
	comp=Z,42nm,0.8s						
POKR	Poker Plat Res	55.59	29	P	P	18 41 08.2	+0.6
	baz=266						
DHRM	DHARAMSHALA	55.71	291	eP	P	18 41 08.4	-0.7
DHRM				IAmb	IAmb	18 41 12.4	
	comp=Z,2µm,5.0s						
HDA	Harding Lake	55.76	30	eP	P	18 41 08.1	-0.6
	comp=Z,137nm,1.9s						
HDA	Harding Lake	55.76	30	P	P	18 41 08.4	-0.4
	baz=267						
IL1	Eielson Array	55.80	29	eP	P	18 41 08.2	-0.9
ILAR	Eielson Array	55.80	29	P	P	18 41 08.5	-0.5
	comp=Z,11nm,0.8s,baz=262,slow=5.4,SNR=61						
ILAR				LR	LR	19 02 38.2	
	comp=Z,582nm,21.8s,baz=273,slow=34						
ILB	Eielson Array	55.80	29	eP	P	18 41 08.6	-0.5
	comp=Z,52nm,1.3s						
SFK	Sufi-Kurgan	56.07	301	P	P	18 41 12.0	+0.3
SFK				pmax	pmax		
	comp=Z,28nm,1.1s						
KLU	Klutina	56.15	33	eP	P	18 41 11.5	-0.2
	comp=Z,122nm,1.8s						
ARSB	Arslanbob	56.20	302	eP	P	18 41 12.7	+0.3
	comp=Z,60nm,1.1s						
DIV	Divide	56.22	34	eP	P	18 41 13.4	+1.2
	comp=Z,68nm,1.3s						
EYAK	Cordova Ski Ar	56.24	34	eP	P	18 41 13.2	+1.0
	comp=Z,46nm,0.9s						
BVA0	Borovoye Array	56.28	316	i P	P	18 41 13.9	+1.2
BVA0				pmax	pmax		
	comp=Z,130nm,0.9s						
DZM	Mont Dzumac	56.30	153	eP	P	18 41 14.1	+0.9
	comp=Z,34nm,1.0s						
DZM	Mont Dzumac	56.30	153	P	P	18 41 14.1	+0.9
	comp=Z,7.8nm,0.6s,baz=6.9,slow=7.3,SNR=13						
MNAS	Manas	56.33	304	P	P	18 41 14.1	+0.7
MNAS				pmax	pmax		
	comp=Z,18nm,1.0s						
BRVK	Borovoye	56.34	316	eP	P	18 41 14.0	+1.0
	comp=Z,157nm,0.9s						
BRVK				LR	LR		
	comp=Z,1µm,19.0s						
BRVK	Borovoye	56.34	316	d iP	P	18 41 13.8	+0.7
BRVK				pmax	pmax		
	comp=Z,132nm,1.0s						
BRVK	Borovoye	56.34	316	P	P	18 41 14.4	+1.3
	SNR=72						
PAX	Paxson	56.37	32	eP	P	18 41 12.8	-0.5
	comp=Z,79nm,1.6s						
PAX	Paxson	56.37	32	eP	P	18 41 12.8	-0.5
PAX				pmax	pmax		
	comp=Z,79nm,1.6s						
PRP	Porcupine Dome	56.42	28	eP	P	18 41 13.6	0.0
	comp=Z,12nm,1.0s						
MARNC	Mare, Loyalty	56.43	151	eP	P	18 41 14.2	+0.2
	comp=Z,268nm,1.6s						
HARP	HAARP	56.51	32	eP	P	18 41 14.5	+0.3
	comp=Z,50nm,0.9s						
FYU	Fort Yukon	56.59	27	eP	P	18 41 14.7	+0.1
	comp=Z,136nm,1.4s						
RIDG	Independ'e Rid	56.66	31	eP	P	18 41 15.2	0.0
	comp=Z,92nm,1.6s						
NGP	Nagpur	56.94	277	i P	P	18 41 17.6	-0.3
NGP				IAmb	IAmb	18 41 18.4	
	comp=Z,23nm,0.6s						
DOT	Dot Lake	57.01	31	eP	P	18 41 17.6	-0.2
	comp=Z,78nm,1.6s						
POHA	Pohakuloa	57.04	84	PFAKE		18 41 30.0	+11
POHA				LR	LR		
	comp=Z,5µm,19.0s						
SCRK	Sand Creek	57.04	30	eP	P	18 41 17.7	-0.4
	comp=Z,163nm,1.9s						
DZA	Taraz	57.10	304	eP	P	18 41 19.2	+0.5
DZA				pmax	pmax		
	comp=Z,335nm,0.9s						
DZA	Taraz	57.10	304	eP	P	18 41 19.3	+0.5
	comp=Z,335nm,0.9s						
KHU	Kahuku	57.16	85	eP	P	18 41 19.5	-0.2
	comp=Z,333nm,1.4s						
KHU	Kahuku	57.16	85	eP	P	18 41 19.5	-0.2
KHU				pmax	pmax		
	comp=Z,333nm,1.4s						
WRMHI	West Rim	57.38	85	eP	P	18 41 20.8	-0.2
	comp=Z,168nm,0.5s						
BHPL	Bhopal	57.59	280	eP	P	18 41 21.6	-0.8
BHPL				IAmb	IAmb	18 41 23.5	
	comp=Z,101nm,1.7s						
KK31	Karatay Array	57.65	305	eP	P	18 41 23.1	+0.5
	comp=Z,50nm,0.8s						
KK31	Karatay Array	57.65	305	i P	P	18 41 23.4	+0.9
KK31				pmax	pmax		
	comp=Z,20nm,0.5s						
KKAR	Karatay Array	57.65	305	eP	P	18 41 23.2	+0.7
	comp=Z,50nm,0.8s						
KKAR	Karatay Array	57.65	305	eP	P	18 41 23.2	+0.7
KKAR				pmax	pmax		
	comp=Z,51nm,0.8s						
NIL	Nilore	57.80	293	eP	P	18 41 23.9	+0.2
	comp=Z,49nm,1.1s						
NIL				LR	LR		
	comp=Z,967nm,19.0s						
NIL	Nilore	57.80	293	eP	P	18 41 23.9	+0.2
NIL				pmax	pmax		
	comp=Z,49nm,1.1s						
NIL				MLR	MLR		
	comp=Z,967nm,19.0s						
IUG	Iuzhnay	58.19	304	deP	P	18 41 25.6	-0.9
IUG				pmax	pmax		
	comp=Z,1µm,0.9s						
IUG				MLR	MLR		
	comp=Z,1µm,20.0s						
IUG	Iuzhnay	58.19	304	⇓eP	P	18 41 25.6	-0.9
	comp=Z,1µm,0.9s						
IUG				eLRM	MLR	19 07 45.0	
	comp=Z,1µm,19.6s						
MSVF	Nonsavu	58.34	139	PFAKE		18 41 40.0	+12
MSVF				LR	LR		
	comp=Z,944nm,20.0s						
GAR	Garm	58.70	300	eP	P	18 41 30.2	+0.1
	comp=Z,71nm,1.0s						
GAR	Garm	58.70	300	eP	P	18 41 30.2	+0.1
GAR				pmax	pmax		
	comp=Z,71nm,1.0s						
HYB	Hyderabad	58.83	273	i P	P	18 41 31.0	-0.2
HYB				eS	S	18 49 36.0	-0.6
HYB	Hyderabad	58.83	273	eP	P	18 41 30.9	-0.3
HYB				IAmb	IAmb	18 41 33.9	
	comp=Z,963nm,4.7s						
PCA	Pinnacle	58.99	35	eP	P	18 41 32.9	+1.2
	comp=Z,66nm,1.1s						
DAWY	Dawson	59.06	30	eP	P	18 41 32.4	+0.2
	comp=Z,111nm,1.6s						
MDRS	Chennai	59.20	268	eP	P	18 41 34.2	+0.5
MDRS				IAmb	IAmb	18 41 35.9	
	comp=Z,35nm,1.3s						
CHGR	Chuyangaron	59.66	300	eP	P	18 41 37.1	+0.4
COCO	West Island	60.05	233	PFAKE		18 41 50.0	+11
COCO				LR	LR		
	comp=Z,1µm,21.0s						
ARMA	Armidale	60.16	170	eP	P	18 41 40.7	+0.6
	comp=Z,144nm,1.8s						
HYT	Haines Junctio	60.26	34	eP	P	18 41 42.5	+2.0
	comp=Z,38nm,1.1s						
KBL	Kabul	60.89	295	eP	P	18 41 44.6	-0.8
	comp=Z,22nm,0.8s						
KBL	Kabul	60.89	295	eP	P	18 41 44.6	-0.8
KBL				pmax	pmax		
	comp=Z,22nm,0.8s						
STKA	Stephens Creek	60.91	180	eP	P	18 41 44.4	-0.6
	comp=Z,3.7nm,0.8s						
STKA	Stephens Creek	60.91	180	P	P	18 41 45.1	+0.1
	comp=Z,9.6nm,0.8s,baz=342,slow=7.1,SNR=21						
INK	Inuvik	61.04	25	eP	P	18 41 45.3	-0.2
	comp=Z,15nm,0.8s						
INK	Inuvik	61.04	25	P	P	18 41 45.3	-0.2
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	Inuvik	61.04	25	P	P	18 41 45.3	-0.2
	comp=Z,7.5nm,0.8s,baz=298,slow=7.9,SNR=26						
FORT	Forrest	61.27	194	eP	P	18 41 47.0	-0.5
	comp=Z,93nm,0.8s						
SVE	Sverdlovsk	61.34	322	d iP	P	18 41 49.3	+1.6
SVE				e		18 44 09.9	
SVE				eS	S	18 50 09.4	+1.7
SVE				pmax	pmax		
	comp=Z,119nm,1.4s						
SVE				MLR	MLR		
	comp=Z,2µm,18.0s						
PALK	Pallekele	61.50	262	eP	P	18 41 49.3	-0.3
	comp=Z,74nm,1.5s						
PALK	Pallekele	61.50	262	P	P	18 41 49.2	-0.3
PALK	Pallekele	61.50	262	eP	P	18 41 49.3	-0.3
PALK				pmax	pmax		
	comp=Z,74nm,1.5s						
WHY	Whitehorse	61.56	34	eP	P	18 41 49.0	-0.4
	comp=Z,38nm,1.1s						
BESE	Bessie Mountai	61.95	36	eP	P	18 41 52.1	+0.2
	comp=Z,46nm,1.2s						
SIT	Sitka	61.99	38	eP	P	18 41 53.2	+1.2
	comp=Z,88nm,1.4s						
SIT	Sitka	61.99	38	eP	P	18 41 53.3	+1.2
SIT				pmax	pmax		
	comp=Z,88nm,1.4s						
BBOO	Buckleboo	62.10	186	eP	P	18 41 52.8	-0.2
	comp=Z,40nm,0.9s						
JIS	Juneau Island	62.25	36	eP	P	18 41 52.4	-1.4
	comp=Z,88nm,1.3s						
POO	Poona	62.47	277	eP	P	18 41 55.2	-0.8
POO				IAmb	IAmb	18 41 57.0	
	comp=Z,53nm,1.0s						
ARU	Arti	62.54	322	eP	P	18 41 56.9	+1.1
	comp=Z,125nm,1.0s						
ARU				LR	LR		
	comp=Z,1µm,19.0s						
ARU	Arti	62.54	322	c iP	P	18 41 56.8	+1.0
ARU						18 42 34.2	
ARU						18 44 12.5	
ARU				S	S	18 50 24.4	+1.5
ARU				SS	SS	18 54 20.7	-5.8
ARU				pmax	pmax		
	comp=Z,64nm,0.8s						
ARU				MLR	MLR		
	comp=Z,2µm,17.0s						
MORW	Morawa	63.18	205	eP	P	18 41 58.8	-1.6
	comp=Z,70nm,1.8s						
AB31	Akbulak array	63.41	313	eP	P	18 42 02.8	+1.1
AB31				pmax	pmax		
	comp=Z,38nm,0.6s						
ABKAR	Akbulak array	63.41	313	eP	P	18 42 02.2	+0.5
	comp=Z,233nm,1.5s						
XMAS	Kiritimati	63.50	103	eP	P	18 42 02.0	-0.8
	comp=Z,485nm,1.7s						
CRAG	Craig	63.54	39	eP	P	18 42 02.9	+0.4
WRAK	Wrangell Islan	63.74	38	eP	P	18 42 05.2	+1.5
	comp=Z,145nm,1.8s						
WRAK				LR	LR		
	comp=Z,1µm,19.0s						
GOA	Goa	63.75	274	eP	P	18 42 04.7	+0.3
GOA				IAmb	IAmb	18 42 06.8	
	comp=Z,20nm,0.8s						
TRD	Trivandrum	64.16	265	eP	P	18 42 07.7	+0.6
BHJ	Bhuj	64.22	283	eP	P	18 42 08.2	+0.7
BHJ				IAmb	IAmb	18 42 08.9	
	comp=Z,103nm,0.2s						
AKTO	Aktyubinsk	64.31	315	P	P	18 42 08.1	+0.5
AKTO				pmax	pmax		
	comp=Z,63nm,0.8s						
AKTO	Aktyubinsk	64.31	315	LR	LR	19 11 33.0	
	comp=Z,2µm,20.2s,baz=79,slow=37						
DLBC	Dease Lake	64.45	36	eP	P	18 42 08.8	+0.3
	comp=Z,38nm,1.3s						
DIB	Dawson Inlet,	64.48	42	eP	P	18 42 08.7	+0.1
	comp=Z,205nm,1.7s						
CAN	Canberra	64.68	174	eP	P	18 42 10.9	+0.8
	comp=Z,96nm,1.4s						
CAN	Canberra	64.68	174	eP	P	18 42 10.9	+0.8
CAN				pmax	pmax		
	comp=Z,96nm,1.4s						
NWAO	Narrogin (SRO)	66.26	203	eP	P	18 42 20.2	-0.1
	comp=Z,60nm,1.1s						
NWAO				LR	LR		
	comp=Z,2µm,20.0s						
NWAO	Narrogin (SRO)	66.26	203	eP	P	18 42 20.2	-0.1
NWAO				pmax	pmax		
	comp=Z,60nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,2µm,20.0s						
TOO	Toolangi	66.67	177	eP	P	18 42 23.7	+0.8
	comp=Z,30nm,0.8s						
TOO	Toolangi	66.67	177	eP	P	18 42 23.7	+0.8
TOO				pmax	pmax		
	comp=Z,30nm,0.8s						
KIRV	Kirov	66.73	325	LR	LR	19 14 10.6	
	comp=Z,3µm,18.4s,baz=62,slow=38						
BBB	Bella Bella	67.32	42	eP	P	18 42 26.2	-0.8
	comp=Z,95nm,1.3s						
PRGR	Permogore	67.52	329	⇑iP	P	18 42 29.2	+1.1
PRGR				pmax	pmax		
	comp=Z,73nm,0.8s						
HOPEN	Hopen	67.59	347	eP	P	18 42 29.5	+1.2
SPA0	Spitsbergen Ar	68.12	350	eP	P	18 42 32.8	+1.1
SPA0	Spitsbergen Ar	68.12	350	eP	P	18 42 32.5	+0.8
GEYT	Alibeck	68.15	302	P	P	18 42 33.7	+1.1
	comp=Z,23nm,0.8s,baz=45,slow=2.7,SNR=42						
GEYT				LR	LR	19 15 18.9	
	comp=Z,3µm,18.4s,baz=50,slow=38						
GYA0B	ALIBECK ARRAY	68.15	302	eP	P	18 42 33.6	+1.0
	comp=Z,65nm,0.8s						
KBS	Kingsbay	68.28	351	eP	P	18 42 34.1	+1.5
	comp=Z,79nm,1.1s						
KBS				LR	LR		
	comp=Z,867nm,19.0s						
KBS	Kingsbay	68.28	351	deP	P	18 42 33.8	+1.2
KBS				pmax	pmax		
	comp=Z,244nm,0.8s						
KBS	Kingsbay	68.28	351	eP	P	18 42 33.5	+0.9
HSPB	Hornsund (broa	69.03	349	eP	P	18 42 38.2	+0.9
LVZ	Lovozero	69.32	337	eP	P	18 42 39.8	+0.5
	comp=Z,42nm,1.1s						
LVZ				LR	LR		
	comp=Z,841nm,19.0s						
LVZ	Lovozero	69.32	337	⇑eP	P	18 42 39.9	+0.5
LVZ				pmax	pmax		
	comp=Z,59nm,2.8s						
RAO	Raoul Island	69.73	143	PFAKE		18 42 50.0	+7.8
RAO				LR	LR		
	comp=Z,10µm,20.0s						
RES	Resolute Bay	69.89	14	eP	P	18 42 42.8	+0.1
	comp=Z,26nm,1.0s						
RES	Resolute Bay	69.89	14	eP	P	18 42 42.8	+0.1
RES				pmax	pmax		
	comp=Z,26nm,1.0s						
APA	Apatity	69.89	337	⇓iP	P	18 42 42.4	-0.4
APA				pmax	pmax		
	comp=Z,66nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
YKW3	Yellowknife Ar	70.19	29	eP	P	18 42 43.9	-0.8
YKA	Yellowknife Ar	70.22	29	P	P	18 42 44.9	0.0
	comp=Z,22nm,1.0s,baz=294,slow=6.3,SNR=45						
YKB5	Yellowknife Ar	70.22	29	eP	P	18 42 44.8	-0.1
KLMR	Klimovskoe	70.54	330	⇑iP	P	18 42 47.4	+0.6
KLMR				e		18 45 20.9	
KLMR				pmax	pmax		
	comp=Z,90nm,1.5s						
KLMR	Klimovskoe	70.54	330	⇑iP	P	18 42 47.5	+0.6
KLMR				⇑eP	P	18 42 47.5	+0.6
KLMR				⇑eP	P	18 42 47.5	+0.6
KLMR				AMP		18 43 03.9	
	comp=Z,90nm,1.5s						
KLMR				ePP	PP	18 45 21.0	-1.7
KEV	Kevo	70.79	340	eP	P	18 42 49.0	+0.8
	comp=Z,62nm,1.1s						
KEV				LR	LR		
	comp=Z,5µm,20.0s						
KEV	Kevo	70.79	340	eP	P	18 42 49.0	+0.8
KEV				pmax	pmax		
	comp=Z,62nm,1.1s						
KEV				MLR	MLR		
	comp=Z,5µm,20.0s						
HAMF	Hammerfest	71.22	342	eP	P	18 42 51.7	+0.9
ARA0	ARCESS Array S	71.35	341	eP	P	18 42 52.9	+1.2
ARCES	ARCESS Array B	71.35	341	eP	P	18 42 52.7	+1.0
ARCES	ARCESS Array B	71.35	341	eP	P	18 42 52.7	+1.0
ARCES	ARCESS Array B	71.35	341	P	P	18 42 52.9	+1.2
	comp=Z,22nm,0.8s,baz=60,slow=6.0,SNR=27						
ARCES				LR	LR	19 19 00.2	
	comp=Z,2µm,19.0s,baz=63,slow=40						
ARE0	ARCESS Array S	71.35	341	eP	P	18 42 52.4	+0.7
	comp=Z,2.8nm,0.9s						
ARE0	ARCESS Array S	71.35	341	eP	P	18 42 52.2	+0.5
PGC	Sidney	71.37	44	eP	P	18 42 52.6	+0.5
	comp=Z,58nm,1.1s						
LLLB	Lillooet	71.53	42	eP	P	18 42 53.8	+0.7
	comp=Z,52nm,1.3s						
NLWA	Neilton Lookou	71.62	46	eP	P	18 42 55.2	+1.5
	comp=Z,85nm,1.0s						
A04D	Lummi Island	71.80	44	P	P	18 42 53.8	-0.9
	baz=294						
TAU	Tasmania Unive	72.09	176	eP	P	18 42 57.5	+1.2
	comp=Z,44nm,1.2s						
TAU				LR	LR		
	comp=Z,5µm,19.0s						
TAU	Tasmania Unive	72.09	176	eP	P	18 42 57.5	+1.2
TAU				pmax	pmax		
	comp=Z,44nm,1.2s						
TAU				MLR	MLR		
	comp=Z,5µm,19.0s						
KTK1	Kautokeino	72.31	341	eP	P	18 42 58.9	+1.4
B05A	Bryant	72.36	44	P	P	18 42 57.5	-0.5
	baz=294						
D04E	Lakebay	72.39	45	P	P	18 42 57.6	-0.6
	baz=294						
TULEG	Thule	72.62	7	eP	P	18 42 59.3	+0.2
	comp=Z,41nm,1.0s						

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F04D  Rainier, OR        72.69  47   P      P       18 42 59.8  -0.3
      baz=294
E04D  Cinebar            72.77  46   P      P       18 43 00.1  -0.4
      baz=295
G03D  McMinnville, O     72.89  47   P      P       18 42 59.9  -1.3
      baz=294
I02D  Swisshome          72.96  49   P      P       18 43 01.7  -0.1
      baz=294
COR   Corvallis          73.12  48  eP      P       18 43 04.0  +1.3
      comp=Z,136nm,1.3s
TRO   Tromso             73.12 342  eP      P       18 43 03.1  +0.8
KEBM  Edson Butte        73.15  50  eP      P       18 43 03.4  +0.3
      comp=Z,152nm,1.0s
LON   Longmire           73.16  46  eP      P       18 43 02.9  -0.1
      comp=Z,28nm,1.0s
LON   Longmire           73.16  46  eP      P       18 43 02.9  -0.1
LON                                  pmax   pmax
      comp=Z,28nm,1.0s
J01E  Myrtle Point       73.30  50   P      P       18 43 03.8   0.0
      baz=295,SNR=9.9
DAG   Danmarks Havn      73.43 355⇑iP      P       18 43 05.0  +1.0
      comp=Z,52nm,1.0s
DAG   Danmarks Havn      73.43 355⇑iP      P       18 43 05.0  +1.0
DAG                                  pmax   pmax
      comp=Z,52nm,1.0s
I03D  Drain, OR          73.46  49   P      P       18 43 03.8  -1.0
      baz=295,SNR=13
H04D  Lebanon            73.51  48   P      P       18 43 04.7  -0.4
      baz=295
LTY   Liberty            73.65  45  eP      P       18 43 05.7  -0.2
      comp=Z,32nm,1.1s
VRH   Novokhopyorsk      73.67 320  eP      P       18 43 06.0  +0.2
VRH                                  pmax   pmax
      comp=Z,30nm,0.7s
VRH                                  MLR    MLR
      comp=Z,3µm,16.0s
K02D  Willamette Mer     73.67  50   P      P       18 43 06.1   0.0
      baz=295,SNR=23
MAK   Makhachkala        73.68 310  eP      P       18 43 03.6  -2.4
MAK                                 e               18 45 45.8
MAK                                 eS      SKiKP   18 52 31.9  -3.6
MAK                                 eSS     SS      18 57 14.9  -4.1
MAK                                  pmax   pmax
      comp=Z,131nm,1.2s
MAK                                  MLR    MLR
      comp=Z,4µm,17.0s
F05D  White Salmon       73.75  46   P      P       18 43 05.9  -0.5
      baz=296
MOS   Moscow             73.75 325  eP      P       18 43 05.5  -0.7
MOS                                 e               18 45 50.0
MOS                                 ePPP    PPP     18 47 32.5
MOS                                 eS      SKiKP   18 52 33.0  -2.3
MOS                                  pmax   pmax
      comp=Z,120nm,1.6s
MOS                                  MLR    MLR
      comp=Z,3µm,17.0s
MOS                                  MLR    MLR
      comp=E,2µm,17.0s
H04A  Detroit Lake       73.80  48  eP      P       18 43 06.5  -0.2
      comp=E,86nm,1.0s
L02E  Cave Junction      73.94  50   P      P       18 43 07.4  -0.2
      baz=295,SNR=11
B08A  Colville Reser     73.98  43  eP      P       18 43 08.4  +0.6
I04A  Tendick Farm,      74.03  49   P      P       18 43 07.9  -0.3
      baz=295,SNR=28
G05D  Wamic, OR          74.12  47   P      P       18 43 08.3  -0.3
      baz=296
HIZ   Hauiti             74.18 154  eP      P       18 43 09.0  +0.3
      comp=E,59nm,1.1s
HUMO  Hull Mountain      74.18  50  eP      P       18 43 10.3  +1.3
      comp=E,30nm,1.1s
JCC   Jacoby Creek,      74.22  52  eP      P       18 43 08.7  -0.5
      comp=E,116nm,1.4s
BANOM Banah              74.28 291   P      P       18 43 11.6  +1.8
KHMM  Horse Mountain     74.40  52  eP      P       18 43 10.4  -0.1
      comp=E,96nm,1.2s
J04D  Umpqua Nationa     74.47  49   P      P       18 43 10.4  -0.5
      baz=296,SNR=20
I05D  Terrebonne, OR     74.50  48   P      P       18 43 11.0  +0.1
      baz=296
LPSR  Galich'ya Gora     74.56 322  eP      P       18 43 11.5  +0.5
LPSR                                 pmax   pmax
      comp=Z,20nm,0.7s
OBN   Obninsk            74.58 325  eP      P       18 43 11.1  +0.1
      comp=Z,89nm,1.3s
OBN                                  LR     LR
      comp=Z,2µm,20.0s
OBN   Obninsk            74.58 325ceP      P       18 43 11.6  +0.6
OBN                                 e               18 43 23.3
OBN                                 e               18 45 58.3
OBN                                 ePPP    PPP     18 47 41.5
OBN                                 eS      S       18 52 46.8  +0.8
OBN                                 eSS     SS      18 57 35.2  +3.1
OBN                                  pmax   pmax
      comp=Z,56nm,1.7s
OBN                                  MLR    MLR
      comp=Z,5µm,17.0s
MSFE  Esma-Masafi        74.63 291   P      P       18 43 13.5  +1.6
KMRM  Mail Ridge         74.70  52  eP      P       18 43 12.9  +0.8
      comp=Z,44nm,1.2s
GROC  Groznyy            74.70 311  eP      P       18 43 10.0  -2.0
GROC                                e               18 43 25.4
GROC                                e               18 46 00.6
GROC                                 pmax   pmax
      comp=Z,44nm,0.8s
F07A  Phinny Hill Vi     74.71  46  eP      P       18 43 12.6  +0.6
YBH   Yreka Blue Hor     74.72  51  eP      P       18 43 12.6  +0.3
      comp=Z,57nm,1.1s
YBH   Yreka Blue Hor     74.72  51  eP      P       18 43 12.6  +0.3
YBH                                  pmax   pmax
      comp=Z,57nm,1.1s
HAWA  Hanford            74.73  45  eP      P       18 43 12.7  +0.5
HAWA                                 LR     LR
      comp=Z,1µm,19.0s
MXZ   Matakaoa Point     74.76 151  eP      P       18 43 11.9  -0.2
      comp=Z,123nm,1.2s
UOSS  Minazif            74.77 290  eP      P       18 43 11.7  -1.0
      comp=Z,36nm,1.0s
UOSS  Minazif            74.77 290   P      P       18 43 13.1  +0.3
UOSS  Minazif            74.77 290   P      P       18 43 12.8  +0.1
M02C  Callahan           74.78  51   P      P       18 43 12.4  -0.1
      baz=296,SNR=27
L04D  Klamath Falls      74.79  50   P      P       18 43 11.6  -1.1
      baz=296,SNR=16
D08A  Wollman Farm,      74.81  44  eP      P       18 43 13.1  +0.5
VORR  Voronezh           74.85 321   P      P       18 43 11.0  -1.6
VORR                                 pmax   pmax
      comp=Z,300nm,1.4s
SOHO  SOHO               74.85 289   P      P       18 43 13.6  +0.5
URZ   Urewera            74.86 152   P      P       18 43 12.5  -0.1
      comp=Z,14nm,0.9s,baz=264,slow=10,SNR=3.2
C09A  Chrisman Ranch     74.87  44  eP      P       18 43 13.2  +0.3
      comp=Z,107nm,1.6s
HATD  Hatta, Dubai       74.88 290   P      P       18 43 15.0  +1.6
HATD  Hatta, Dubai       74.88 290   P      P       18 43 14.5  +1.1
K04D  Chiloquin, OR      74.98  49   P      P       18 43 13.3  -0.4
      baz=296,SNR=8.2
E08A  Dider Farm, El     74.98  45  eP      P       18 43 13.1  -0.5
      comp=Z,68nm,1.5s
PINE  Pine Mountain      75.00  48  eP      P       18 43 14.6  +0.6
      comp=Z,159nm,1.1s
ASHO  Ashiyiah           75.00 290   P      P       18 43 15.0  +0.8
ASHO  Ashiyiah           75.00 290   P      P       18 43 15.2  +1.1
KCPM  Cahto Peak         75.02  53  eP      P       18 43 15.3  +1.3
      comp=Z,146nm,1.3s
MHTO  MHTO               75.02 286   P      P       18 43 14.3  +0.1
J05D  Fort Rock, OR      75.03  49   P      P       18 43 15.1  +1.0
      baz=296,SNR=41
N02D  Trinity Center     75.06  51   P      P       18 43 14.7  +0.5
      baz=296,SNR=25
PUL   Pulkovo            75.07 331⇓eP      P       18 43 14.5  +0.7
PUL                                  pmax   pmax
      comp=Z,34nm,0.5s
VSR   Storozhevoye       75.09 321c iP      P       18 43 14.2  +0.2
VSR                                  pmax   pmax
      comp=Z,65nm,1.0s
STEI  Steigen            75.27 342  eP      P       18 43 15.7  +1.0
M04C  Macdoel            75.29  50   P      P       18 43 14.7  -0.8
      baz=296,SNR=41
RAR   Rarotonga          75.32 125   PFAKE          18 43 30.0   +14
RAR                                  LR     LR
      comp=Z,7µm,22.0s
NEW   Newport            75.34  43  eP      P       18 43 16.1  +0.5
      comp=Z,72nm,1.2s
NEW   Newport            75.34  43  eP      P       18 43 16.1  +0.5
NEW                                  pmax   pmax
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      comp=Z,72nm,1.2s
NEW   Newport            75.34  43   P      P       18 43 14.9  -0.7
      baz=298
WDC   Whiskeytown Da     75.34  52  eP      P       18 43 15.7   0.0
      comp=Z,41nm,1.0s
WDC   Whiskeytown Da     75.34  52  eP      P       18 43 15.7   0.0
WDC                                  pmax   pmax
      comp=Z,41nm,1.0s
O02D  Mt. Diablo Mer     75.35  52   P      P       18 43 14.9  -1.0
      baz=296,SNR=24
FAQ   Al Faqa, Dubai     75.36 290   P      P       18 43 16.7  +0.6
FAQ   Al Faqa, Dubai     75.36 290   P      P       18 43 15.5  -0.6
BKZ   Black Stump Fm     75.38 153  eP      P       18 43 15.6  -0.1
      comp=Z,14nm,0.9s
E09A  Wood Farm, Sta     75.53  45  eP      P       18 43 17.7  +0.9
KULLO Kullorsuaq         75.54   5  i P     P       18 43 16.8  +0.6
KULLO Kullorsuaq         75.54   5  i P     P       18 43 16.8  +0.6
LOF   Lofoten            75.58 342  eP      P       18 43 17.0  +0.4
G08A  Pilot Rock         75.59  46  eP      P       18 43 17.6  +0.3
GOF   Gofitskoye         75.65 314⇑iP      P       18 43 18.9  +1.5
GOF                                  pmax   pmax
      comp=Z,70nm,0.8s
HOPS  Hopland Field      75.67  53  eP      P       18 43 18.6  +0.9
      comp=Z,33nm,1.2s
I07A  Izee               75.79  47  eP      P       18 43 19.3  +0.9
      comp=Z,32nm,1.2s
FIA1  FINESS Array S     75.84 334  eP      P       18 43 18.7  +0.5
FIA0  FINESS Array S     75.85 334  eP      P       18 43 18.9  +0.7
FIA0  FINESS Array S     75.85 334  eP      P       18 43 18.9  +0.7
FINES FINESS Array B     75.85 334   P      P       18 43 18.9  +0.7
      comp=Z,22nm,0.9s,baz=68,slow=4.6,SNR=127
FINES                                LR     LR      19 20 51.2
      comp=Z,934nm,18.3s,baz=54,slow=39
GDXM  Geysers            75.95  53  eP      P       18 43 21.0  +1.6
      comp=Z,43nm,1.2s
O03E  Paynes Creek       75.97  52   P      P       18 43 18.5  -0.9
      baz=297,SNR=33
NCK   Nalchik            76.01 312⇑eP      P       18 43 20.8  +1.3
NCK                                  pmax   pmax
      comp=Z,36nm,0.7s
TBLG  Delisi             76.06 310  eP      P       18 43 19.5  -0.3
      comp=Z,49nm,1.1s
TBLG  Delisi             76.06 310  eP      P       18 43 19.5  -0.3
TBLG                                 pmax   pmax
      comp=Z,49nm,1.1s
PYA1  Pyatigorsk         76.07 313⇑eP      P       18 43 21.0  +1.1
DGAR  Diego Garcia       76.12 253  eP      P       18 43 19.6  -0.9
      comp=Z,73nm,0.8s
DGAR                                 LR     LR
      comp=Z,415nm,19.0s
DGAR  Diego Garcia       76.12 253  eP      P       18 43 19.6  -0.9
DGAR                                 pmax   pmax
      comp=Z,73nm,0.8s
DGAR                                 MLR    MLR
      comp=Z,415nm,19.0s
ZEI   Tsey               76.13 311  eP      P       18 43 19.7  -0.8
ZEI                                  pmax   pmax
      comp=Z,41nm,0.8s
MCCM  Marconi Confer     76.18  54  eP      P       18 43 20.2  -0.3
      comp=Z,73nm,1.1s
MOD   Modoc Plateau      76.26  50  eP      P       18 43 21.2  +0.1
      comp=Z,55nm,1.1s
THZ   Tophouse           76.32 157  eP      P       18 43 20.8  -0.2
      comp=Z,64nm,1.4s
F10A  Beach Ranch, E     76.35  45  eP      P       18 43 21.4  -0.1
      comp=Z,21nm,1.1s
KBZ   Khabaz             76.35 313   P      P       18 43 23.0  +1.6
      comp=Z,85nm,0.8s,baz=84,slow=4.5,SNR=128
KBZ                                  LR     LR      19 18 38.2
      comp=Z,919nm,18.8s,baz=60,slow=37
KIV   Kislovodsk         76.38 313  eP      P       18 43 21.5  -0.3
      comp=Z,70nm,0.8s
KIV                                  LR     LR
      comp=Z,2µm,20.0s
KIV   Kislovodsk         76.38 313⇑iP      P       18 43 22.8  +1.0
KIV   Kislovodsk         76.38 313  i P     P       18 43 23.0  +1.2
      SNR=9.3
KIV   Kislovodsk         76.38 313  eP      P       18 43 23.4  +1.6
KIV                                 eS      S       18 53 08.3  +1.7
KIV                                  pmax   pmax
      comp=Z,90nm,0.9s
KIV                                  pmax   pmax
      comp=Z,284nm,4.6s
KIV                                  MLR    MLR
      comp=Z,1µm,18.0s
ORV   Oroville           76.52  52  eP      P       18 43 22.5   0.0
      comp=Z,74nm,1.0s
ORV   Oroville           76.52  52  eP      P       18 43 22.5   0.0
ORV                                  pmax   pmax
      comp=Z,74nm,1.0s
SNZO  South Karori       76.56 155  eP      P       18 43 21.9  -0.4
      comp=Z,159nm,1.4s
SNZO                                 LR     LR
      comp=Z,14µm,19.0s
NEY   Neytrino           76.69 312deP      P       18 43 26.1  +2.5
NEY                                  pmax   pmax
      comp=Z,6.0nm,0.8s
MOR8  Moi Rana           76.72 341  eP      P       18 43 22.7  -0.4
GNI   Garni              76.78 309  eP      P       18 43 23.6  -0.5
      comp=Z,146nm,1.3s
GNI                                  LR     LR
      comp=Z,880nm,19.0s
GNI   Garni              76.78 309  i P     P       18 43 25.9  +1.8
      SNR=16
GNI   Garni              76.78 309c iP      P       18 43 25.5  +1.4
GNI                                  pmax   pmax
      comp=Z,513nm,1.7s
GNI   Garni              76.78 309   P      P       18 43 26.1  +1.9
      SNR=16
J08A  Circle Bar Ran     76.79  48  eP      P       18 43 24.8  +0.7
      comp=Z,128nm,1.3s
BMO   Blue Mountains     76.83  46  eP      P       18 43 25.0  +0.7
      comp=Z,43nm,1.1s
BMO   Blue Mountains     76.83  46  eP      P       18 43 25.0  +0.7
BMO                                  pmax   pmax
      comp=Z,43nm,1.1s
WALA  Waterton Lakes     76.83  41  eP      P       18 43 24.9  +0.7
      comp=Z,91nm,1.0s
KONS  Konsvik            76.86 341  eP      P       18 43 24.3  +0.5
FOZ   Fox Glacier        76.90 160  eP      P       18 43 24.8  +0.6
      comp=Z,18nm,0.9s
LTZ   Lake Taylor        77.01 158  eP      P       18 43 25.7  +0.8
      comp=Z,51nm,1.3s
KHZ   Kahutara           77.11 157  eP      P       18 43 24.5  -0.9
      comp=Z,346nm,1.9s
WVOR  Wild Horse Val     77.11  49  eP      P       18 43 25.6  -0.3
      comp=Z,50nm,1.2s
WVOR  Wild Horse Val     77.11  49  eP      P       18 43 25.6  -0.3
WVOR                                 pmax   pmax
      comp=Z,50nm,1.2s
BEKR  Beckworth          77.16  51  eP      P       18 43 26.5  +0.2
      comp=Z,105nm,0.9s
AFDM  Forest Hills D     77.16  53  eP      P       18 43 26.5  +0.4
      comp=Z,64nm,1.4s
VSU   Vasula             77.33 331c iP      P       18 43 27.3  +0.6
VSU                                  pmax   pmax
      comp=Z,267nm,1.7s
VSU   Vasula             77.33 331  eP      P       18 43 27.5  +0.9
OXZ   Oxford             77.42 158  eP      P       18 43 26.6  -0.6
      comp=Z,138nm,1.9s
RPZ   Rata Peaks         77.45 159   P      P       18 43 27.7  +0.4
      comp=Z,13nm,0.9s,baz=125,slow=7.7,SNR=3.3
RUBR  Rubicon Trail      77.67  52  eP      P       18 43 27.5  -1.7
      comp=Z,97nm,1.0s
LBZ   Lake Benmore       77.79 160  eP      P       18 43 29.9  +0.7
      comp=Z,60nm,1.6s
SAO   San Andreas Ge     77.83  55  eP      P       18 43 29.1  -0.8
      comp=Z,43nm,1.2s
SAO   San Andreas Ge     77.83  55  eP      P       18 43 29.1  -0.8
SAO                                  pmax   pmax
      comp=Z,43nm,1.2s
WKZ   Wanaka             77.84 161  eP      P       18 43 29.8  +0.3
      comp=Z,151nm,2.0s
MZR   Muzera             77.86 290   P      P       18 43 31.4  +1.1
PAHR  Pah Rah Range      77.89  51  eP      P       18 43 30.9  +0.5
      comp=Z,82nm,1.1s
VCNR  Virginia City      77.91  52  eP      P       18 43 30.9  +0.3
      comp=Z,46nm,1.0s
DCZ   Deep Cove          77.91 162  eP      P       18 43 29.9  +0.1
      comp=Z,64nm,1.4s
MSO   Missoula           77.92  43  eP      P       18 43 30.9  +0.6
      comp=Z,46nm,1.2s
CMB   Columbia Colle     77.98  53  eP      P       18 43 31.3  +0.5
      comp=Z,98nm,1.2s
CMB   Columbia Colle     77.98  53  eP      P       18 43 31.3  +0.5
CMB                                  pmax   pmax
      comp=Z,98nm,1.2s
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PNTR  Pine Nut           78.04  52  eP      P       18 43 32.2  +1.0
      comp=Z,108nm,1.1s
MLZ   Mavora Lakes       78.09 162  eP      P       18 43 31.3  +0.4
      comp=Z,78nm,1.6s
SUMG  Summit             78.33   0  eP      P       18 43 33.9  +1.4
      comp=Z,121nm,1.4s
SUMG  Summit             78.33   0  i P     P       18 43 34.4  +1.9
SUMG  Summit             78.33   0  i P     P       18 43 34.4  +1.9
YERR  Yerington          78.33  52  eP      P       18 43 33.8  +0.8
      comp=Z,118nm,1.1s
WAKR  Walker             78.42  52  eP      P       18 43 34.8  +1.4
      comp=Z,53nm,1.0s
SOC   Sochi              78.45 314c iP      P       18 43 33.8  +0.6
SOC                                 e               18 46 27.7
SOC                                 ePPP    PPP     18 48 15.4
SOC                                 eS      S       18 53 28.7  -0.1
SOC                                 eSS     SS      18 58 35.2  +4.0
SOC                                 eSSS    SSS     19 01 50.6
SOC                                  pmax   pmax
      comp=Z,80nm,0.8s
MFID  Camas Ranch        78.45  47  eP      P       18 43 34.5  +1.1
      comp=Z,95nm,1.1s
WHZ   Wether Hill Ro     78.52 162  eP      P       18 43 32.9  -0.4
      comp=Z,130nm,2.0s
NSS   Namsos             78.63 340  eP      P       18 43 34.5  +0.8
RYN   Ryan               79.00  52  eP      P       18 43 37.1  +0.6
      comp=Z,79nm,1.1s
BMN   Battle Mountai     79.01  50  eP      P       18 43 37.3  +0.8
KVN   Kaiserville        79.08  51  eP      P       18 43 37.3  +0.3
      comp=Z,86nm,1.1s
KVN   Kaiserville        79.08  51  eP      P       18 43 37.3  +0.3
KVN                                  pmax   pmax
      comp=Z,86nm,1.1s
MDPB  Devils Postpil     79.09  53  eP      P       18 43 40.5  +3.4
      comp=Z,36nm,1.0s
MICGM Minsk              79.15 327  eP      P       18 43 27.0   -10
MICGM                               eLR     LR      19 19 45.0
MICGM                                LRM    MLR     19 21 43.0
      comp=Z,5.6nm,19.0s
MNK   Minsk              79.15 327  eP      P       18 43 37.0  +0.2
MNK                                  MLR    MLR
      comp=Z,6µm,19.0s
PAGB  Antelope Grade     79.16  55  eP      P       18 43 37.4  +0.1
      comp=Z,107nm,1.1s
IZAR  Zarasai            79.17 329  eP      P       18 43 38.0  +1.1
IZAR                                 IAmb   IAmb    18 43 44.7
      comp=Z,51nm,1.0s
IDID  Didziasalis        79.20 328  eP      P       18 43 38.2  +1.1
IDID                                 IAmb   IAmb    18 43 44.8
      comp=Z,60nm,1.1s
HRY   Holter Researc     79.23  42  eP      P       18 43 37.9  +0.3
NV01  Mina Array Sit     79.24  52  eP      P       18 43 37.9   0.0
NVAR  Mina Array Bea     79.24  52   P      P       18 43 38.8  +0.9
      comp=Z,37nm,0.8s,baz=294,slow=5.4,SNR=70
MLAC  Mammoth, Mammo79.26  53   P      P       18 43 37.7  -0.4
      baz=299
ANN   Anapa              79.26 315  eP      P       18 43 33.3  -4.3
ANN                                 e*PP    pwP     18 43 42.3  -2.9
ANN                                 e               18 43 44.7
ANN                                 ePPP    PPP     18 48 22.5
ANN                                 eS      S       18 53 29.9  -7.5
ANN                                  pmax   pmax
      comp=Z,87nm,1.3s
ANN                                  MLR    MLR
      comp=N,2µm,20.0s
ANN                                  MLR    MLR
      comp=Z,2µm,20.0s
ANN                                  MLR    MLR
      comp=E,236nm,20.0s
HLID  Hailey             79.27  46  eP      P       18 43 38.8  +0.8
      comp=E,30nm,1.0s
HLID                                 LR     LR
      comp=Z,1µm,19.0s
HLID  Hailey             79.27  46   P      P       18 43 37.3  -0.7
      baz=300
LRM   Limekiln Ridge     79.32  43  eP      P       18 43 38.2   0.0
ISAL  Salakas            79.33 329  eP      P       18 43 39.0  +1.2
ISAL                                 IAmb   IAmb    18 43 45.6
      comp=Z,78nm,1.1s
NV11  Mina Array Sit     79.34  52  eP      P       18 43 38.6  +0.2
      comp=Z,5.4nm,1.4s
IIGN  Ignalina           79.42 328  eP      P       18 43 39.4  +1.2
IIGN                                 IAmb   IAmb    18 43 46.1
      comp=Z,58nm,1.2s
NACGM Naroch             79.42 328  eP      P       18 43 39.0  +0.7
NACGM                                PM             18 43 45.0
      comp=Z,0.5nm,1.0s
NACGM                               eS      S       18 53 40.0  +1.2
NACGM                               eLR     LR      19 16 56.0
NACGM                                LRM    MLR     19 22 49.0
      comp=Z,5.9nm,16.0s
DLMT  Dillon             79.47  44  eP      P       18 43 40.4  +1.4
      comp=Z,51nm,1.1s
SMMC  Simmler            79.54  55   P      P       18 43 40.2  +0.8
      baz=299
MCMT  McKenzie Canyo     79.60  44  eP      P       18 43 42.0  +2.3
SIRT  Sirnak             79.61 307  eP      P       18 43 40.5  +0.8
      comp=Z,379nm,1.4s
SLIT  Slitere, Latvi     79.71 332  eP      P       18 43 39.7  -0.1
SLIT                                 IAmb   IAmb    18 43 49.1
      comp=Z,700nm,1.7s
EGMT  Eagleton           79.73  40  eP      P       18 43 40.6  +0.4
      comp=Z,68nm,0.9s
EGMT                                 LR     LR
      comp=Z,937nm,19.0s
EGMT  Eagleton           79.73  40   P      P       18 43 41.3  +1.1
      baz=303
BAYB  BAYBURT            79.74 310  i P     P       18 43 43.1  +2.4
BAYB                                 IAML_P
      comp=Z,697nm,0.6s
SCO   Scoresbysund       79.77 355  eP      P       18 43 41.2  +1.3
      comp=Z,58nm,1.3s
SCO   Scoresbysund       79.77 355  i P     P       18 43 45.3  +5.4
      comp=Z,50nm,1.2s
SCO   Scoresbysund       79.77 355  i P     P       18 43 45.3  +5.4
SCO                                  pmax   pmax
      comp=Z,50nm,1.2s
PKM   Mcpherson Peak     79.88  56   P      P       18 43 40.9  -0.6
      baz=299
FFC   Flin Flon          79.90  32  eP      P       18 43 41.3  +0.4
      comp=Z,62nm,0.9s
FFC                                  LR     LR
      comp=Z,1µm,19.0s
FFC   Flin Flon          79.90  32  eP      P       18 43 41.3  +0.4
FFC                                  pmax   pmax
      comp=Z,62nm,0.9s
FFC                                  MLR    MLR
      comp=Z,1µm,19.0s
BOZ   Bozeman (W)        79.93  43  eP      P       18 43 41.5   0.0
      comp=Z,47nm,1.3s
BOZ                                  LR     LR
      comp=Z,2µm,22.0s
BOZ   Bozeman (W)        79.93  43  eP      P       18 43 41.5   0.0
BOZ                                  pmax   pmax
      comp=Z,47nm,1.3s
BOZ                                  MLR    MLR
      comp=Z,2µm,22.0s
BOZ   Bozeman (W)        79.93  43   P      P       18 43 41.0  -0.5
      baz=302
VES   Vestal, Richgr     79.94  55   P      P       18 43 41.6  +0.1
      baz=299
TIN   Tinemaha, Big      79.96  53   P      P       18 43 42.4  +0.7
      baz=299
TBLU  Trondheim          80.09 340  eP      P       18 43 40.6  -1.1
ELK   Elko               80.16  49  eP      P       18 43 43.9  +1.0
      comp=Z,52nm,1.1s
ELK   Elko               80.16  49  eP      P       18 43 43.9  +1.0
ELK                                  pmax   pmax
      comp=Z,52nm,1.1s
SBC   Santa Barbara      80.16  56   P      P       18 43 43.4  +0.7
      baz=299
SCZ2  Santa Cruz Isl     80.44  56   P      P       18 43 42.9  -1.3
      baz=299
QLMT  Earthquake Lak     80.46  44  eP      P       18 43 45.4  +1.0
KELT  Kelkit             80.46 311  i P     P       18 43 46.6  +2.1
KELT                                 IAML_P
      comp=Z,337nm,0.6s
ISA   Isabella, Lake     80.46  55  eP      P       18 43 44.3  -0.1
      comp=Z,37nm,1.1s
ISA   Isabella, Lake     80.46  55  eP      P       18 43 44.3  -0.1
ISA                                  pmax   pmax
      comp=Z,37nm,1.1s
ISA   Isabella, Lake     80.46  55   P      P       18 43 45.1  +0.7
      baz=299
ARVC  Arvin              80.47  55   P      P       18 43 42.7  -1.7
      baz=299
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HANI	Diyarbakir_Han	80.56	309	i P	P	18 43 47.7	+2.8
HANI				IAML_P			
	comp=Z,300nm,0.5s						
FCC	Fort Churchill	80.64	26	eP	P	18 43 44.3	-0.4
	comp=Z,53nm,1.4s						
FCC	Fort Churchill	80.64	26	eP	P	18 43 44.3	-0.4
FCC				pmax	pmax		
	comp=Z,53nm,1.4s						
YHB	Horse Butte	80.64	44	eP	P	18 43 46.6	+1.2
	comp=Z,94nm,1.0s						
AKASG	Malin Array Be	80.70	324	P	P	18 43 45.5	+0.2
	comp=Z,11nm,0.8s,baz=49,slow=5.9,SNR=54						
AKASG				LR	LR	19 22 08.9	
	comp=Z,3µm,20.1s,baz=45,slow=38						
AKBB	Malin Array Si	80.70	324	eP	P	18 43 45.2	-0.1
	comp=Z,41nm,1.3s						
KIEV	Kiev	80.71	324	eP	P	18 43 44.8	-0.5
	comp=Z,44nm,1.3s						
KIEV				LR	LR		
	comp=Z,3µm,20.0s						
KIEV	Kiev	80.71	324	⇓iP	P	18 43 45.4	+0.1
KIEV	Kiev	80.71	324	i P	P	18 43 45.6	+0.4
	SNR=11						
KIEV	Kiev	80.71	324	⇑eP	P	18 43 45.7	+0.4
KIEV				pmax	pmax		
	comp=Z,20nm,0.9s						
AK11	Malin Array Si	80.74	324	eP	P	18 43 45.0	-0.5
DAC	Darwin (Calif)	80.78	54	eP	P	18 43 48.3	+2.0
	comp=Z,41nm,1.2s						
DAC	Darwin (Calif)	80.78	54	eP	P	18 43 48.3	+2.0
DAC				pmax	pmax		
	comp=Z,41nm,1.2s						
TNCL	Tunceli-Merkez	80.79	310	i P	P	18 43 52.5	+6.4
TNCL				IAML_P			
	comp=Z,128nm,0.5s						
BLG	Laguna Peak, P	80.79	56	P	P	18 43 46.4	+0.3
	baz=299						
OSI	Osito Audit: C	80.80	56	eP	P	18 43 47.3	+1.1
	comp=Z,80nm,1.4s						
OSI	Osito Audit: C	80.80	56	P	P	18 43 45.9	-0.3
	baz=299						
YMR	Madison River	80.82	44	eP	P	18 43 47.6	+1.3
	comp=Z,101nm,1.1s						
SNCC	San Nicolas Is	80.88	57	eP	P	18 43 47.9	+1.3
	comp=Z,100nm,1.2s						
SNCC	San Nicolas Is	80.88	57	P	P	18 43 48.2	+1.6
	baz=299						
PBUR	Paburg	80.90	331	eP	P	18 43 46.2	0.0
PBUR				IAmb	IAmb	18 43 52.3	
	comp=Z,105nm,0.9s						
MPMC	Manual Prospec	80.97	54	P	P	18 43 48.2	+0.9
	baz=300						
YNR	Norris Junctio	80.97	44	eP	P	18 43 48.4	+1.1
	comp=Z,87nm,1.2s						
GCMT	Greycliff	80.99	42	eP	P	18 43 46.4	-0.7
YFT	Old Faithful	81.02	44	eP	P	18 43 48.7	+1.3
	comp=Z,76nm,1.2s						
LRMC	Laurel Mtn Rad	81.11	54	P	P	18 43 48.6	+0.6
	baz=300						
SUSE	Susehri	81.13	311	i P	P	18 43 49.6	+1.6
SUSE				IAML_P			
	comp=Z,149nm,0.6s						
YPP	Pitchstone Pla	81.13	44	eP	P	18 43 49.4	+1.2
	comp=Z,48nm,1.3s						
R11A	Troy Canyon, C	81.14	51	eP	P	18 43 48.5	+0.4
	comp=Z,70nm,1.2s						
R11A	Troy Canyon, C	81.14	51	P	P	18 43 49.1	+0.9
	baz=300						
REFA	Refahiye_ERZN	81.17	310	i P	P	18 43 37.8	-10
REFA				IAML_P			
	comp=Z,598nm,0.1s						
EDW2	Edwards Air Fo	81.19	55	P	P	18 43 47.5	-0.8
	baz=300						
SIM	Simferopol'	81.19	317	ceP	P	18 43 48.9	+0.9
SIM				eS	S	18 54 00.0	+2.3
SIM				pmax	pmax		
	comp=Z,49nm,0.9s						
FURC	Furnace Creek,	81.20	53	P	P	18 43 48.7	+0.5
	baz=300						
H17A	Grant Village	81.20	44	eP	P	18 43 49.4	+0.9
	comp=Z,137nm,1.1s						
H17A	Grant Village	81.20	44	P	P	18 43 47.3	-1.2
	baz=303						
LKWY	Lake	81.22	44	eP	P	18 43 50.6	+2.1
	comp=Z,104nm,1.0s						
LKWY				LR	LR		
	comp=Z,4µm,22.0s						
HVU	Hansel Valley	81.23	47	eP	P	18 43 48.9	+0.3
	comp=Z,55nm,1.2s						
NC405	NORSAR Array S	81.23	338	eP	P	18 43 48.5	+0.5
	comp=Z,81nm,0.9s						
ILULI	Ilulissat	81.24	5	eP	P	18 43 48.4	+0.6
	comp=Z,60nm,1.1s						
ILULI	Ilulissat	81.24	5	eP	P	18 43 48.4	+0.6
ILULI				pmax	pmax		
	comp=Z,60nm,1.1s						
DECC	Green Verdugo	81.25	56	P	P	18 43 49.0	+0.4
	baz=300						
NC303	NORSAR Array S	81.26	338	eP	P	18 43 48.1	0.0
	comp=Z,73nm,1.1s						
FLWY	Flagg Ranch	81.30	44	eP	P	18 43 50.4	+1.4
	comp=Z,90nm,1.1s						
FXWY	Fox Creek	81.34	45	eP	P	18 43 49.6	+0.4
	comp=Z,59nm,1.1s						
DOMB	Dombas	81.37	340	eP	P	18 43 49.1	+0.5
TPNV	Topopah Spring	81.39	52	eP	P	18 43 49.6	+0.2
	comp=Z,89nm,1.0s						
TPNV	Topopah Spring	81.39	52	P	P	18 43 49.6	+0.2
	baz=300						
PASC	Pasadena Art C	81.40	56	eP	P	18 43 49.9	+0.5
	comp=Z,57nm,1.2s						
NB201	NORSAR Array S	81.41	338	eP	P	18 43 49.4	+0.5
	comp=Z,68nm,1.0s						
KEMA	Kemaliye	81.42	310	i P	P	18 43 51.5	+2.1
KEMA				IAML_P			
	comp=Z,452nm,0.7s						
NC204	NORSAR Array S	81.42	338	eP	P	18 43 49.0	+0.1
	comp=Z,79nm,0.9s						
NB2	NORSAR Subarra	81.45	338	P	P	18 43 49.5	+0.4
	comp=Z,62nm,1.0s,baz=41,slow=5.3						
NB2	NORSAR Subarra	81.45	338	P	P	18 43 49.5	+0.4
	baz=41,slow=5.3						
NB200	NORSAR Array S	81.45	338	eP	P	18 43 49.2	+0.1
NOA	NORSAR Array B	81.45	338	P	P	18 43 49.2	+0.1
	comp=Z,8.3nm,0.8s,baz=40,slow=5.1,SNR=20						
NOA				LR	LR	19 24 31.3	
	comp=Z,1µm,20.1s,baz=45,slow=39						
MOOW	Moose Ponds	81.45	44	eP	P	18 43 51.0	+1.2
	comp=Z,42nm,1.1s						
MWC	Mount Wilson	81.47	56	eP	P	18 43 50.9	+0.9
	comp=Z,82nm,1.3s						
ELZG	Elazig	81.48	309	i P	P	18 43 53.1	+3.2
ELZG				IAML_P			
	comp=Z,44nm,0.2s						
BGU	Big Grassy Mou	81.51	48	eP	P	18 43 50.4	+0.3
	comp=Z,46nm,1.3s						
FMP	Fort Macarthur	81.55	56	P	P	18 43 50.2	+0.1
	baz=300						
NC602	NORSAR Array S	81.57	338	eP	P	18 43 50.4	+0.7
NC602	NORSAR Array S	81.57	338	eP	P	18 43 50.2	+0.5
CUZAR	Zara_SIVAS	81.58	311	i P	P	18 43 52.9	+2.5
REDW	Red Top Meadow	81.59	45	eP	P	18 43 51.2	+0.7
	comp=Z,52nm,1.2s						
RLMT	Red Lodge	81.59	43	eP	P	18 43 51.1	+0.6
	comp=Z,118nm,1.4s						
RLMT				LR	LR		
	comp=Z,2µm,20.0s						
NBO00	NORSAR Array S	81.60	338	eP	P	18 43 48.8	-1.1
SNOW	Snow King Moun	81.60	45	eP	P	18 43 49.6	-0.9
	comp=Z,55nm,1.1s						
LOHW	Long Hollow	81.61	44	eP	P	18 43 51.5	+1.0
	comp=Z,44nm,1.2s						
CIS	Catalina Islan	81.61	56	P	P	18 43 51.3	+0.8
	baz=300						
SUW	Suwalki	81.63	328	eP	P	18 43 50.9	+0.7
SUW	Suwalki	81.63	328	eP	P	18 43 50.7	+0.5
	comp=Z,196nm,1.0s						
SUW	Suwalki	81.63	328	eP	P	18 43 50.9	+0.7
SPUT	South Promonto	81.68	47	eP	P	18 43 51.3	+0.3
	comp=Z,58nm,1.1s						
NAO01	NORSAR Array S	81.70	338	eP	P	18 43 49.4	-1.0
SCI2	San Clemente I	81.72	57	P	P	18 43 51.9	+0.8
	baz=300						
AHID	Auburn Hatcher	81.76	45	eP	P	18 43 51.6	+0.2
	comp=Z,52nm,1.0s						
AHID				LR	LR		
	comp=Z,1µm,20.0s						
ERBA	Erbaa	81.82	312	i P	P	18 43 53.2	+1.7
ERBA				IAML_P			
	comp=Z,45nm,0.1s						
GSC	Goldstone, Bar	81.82	54	eP	P	18 43 51.9	+0.2
	comp=Z,57nm,1.1s						
GSC	Goldstone, Bar	81.82	54	eP	P	18 43 51.9	+0.2
GSC				pmax	pmax		
	comp=Z,57nm,1.1s						
GSC	Goldstone, Bar	81.82	54	P	P	18 43 52.0	+0.2
	baz=300						
AKN	Aaknes	81.88	340	eP	P	18 43 52.0	+0.7
SHOC	Shoshone, Teco	81.90	53	P	P	18 43 52.3	+0.4
	baz=300						
RRX	Edison Barstow	81.90	55	P	P	18 43 52.3	+0.2
	baz=300						
DUG	Dugway, Tooele	82.03	48	eP	P	18 43 53.4	+0.6
DUG				LR	LR		
	comp=Z,2µm,19.0s						
DUG	Dugway, Tooele	82.03	48	eP	P	18 43 53.4	+0.6
DUG				MLR	MLR		
	comp=Z,2µm,19.0s						
DUG	Dugway, Tooele	82.03	48	P	P	18 43 54.1	+1.3
	baz=302						
CUKAN	kangal_SIVAS	82.07	311	i P	P	18 43 55.6	+2.6
HWUT	Hardware Ranch	82.09	47	eP	P	18 43 53.7	+0.6
	comp=Z,58nm,1.0s						
SNOP	Sinop	82.10	314	eP	P	18 43 52.7	-0.2
	comp=Z,361nm,1.8s						
PSUT	Pine Spring	82.21	50	eP	P	18 43 54.3	+0.5
	comp=Z,65nm,1.1s						
AKCD	Akcadag	82.30	310	i P	P	18 43 56.4	+2.2
AKCD				IAML_P			
	comp=Z,19nm,0.3s						
SHPR	Sheep Range	82.37	52	eP	P	18 43 55.2	+0.5
	comp=Z,64nm,1.2s						
TUQ	Turquoise Moun	82.38	54	P	P	18 43 55.6	+1.0
	baz=301						
HEC	Hector,Ludlow	82.39	54	P	P	18 43 55.1	+0.4
	baz=300						
MURC	Murrieta	82.40	56	P	P	18 43 53.5	-1.2
	baz=300						
TCUT	Toone Canyon	82.45	47	eP	P	18 43 55.7	+0.6
	comp=Z,69nm,1.0s						
CTU	Camp Tracy	82.46	47	eP	P	18 43 55.1	+0.1
	comp=Z,75nm,1.1s						
LAO	LASA Array	82.47	40	eP	P	18 43 54.9	0.0
	comp=Z,123nm,1.1s						
LAO				LR	LR		
	comp=Z,1µm,19.0s						
LAO	LASA Array	82.47	40	P	P	18 43 55.4	+0.6
	baz=305						
DGMT	Dagmar	82.54	38	eP	P	18 43 54.4	-0.7
	comp=Z,84nm,1.0s						
DGMT				LR	LR		
	comp=Z,976nm,19.0s						
DGMT	Dagmar	82.54	38	P	P	18 43 55.7	+0.6
	baz=306						
SURC	SANLIURFA_SURC	82.56	308	i P	P	18 43 58.8	+3.3
SURC				IAML_P			
	comp=Z,193nm,0.5s						
KLNR	Kaliningrad	82.57	330	deP	P	18 43 56.2	+1.1
KLNR				pmax	pmax		
	comp=Z,104nm,1.6s						
NLU	North Lily Min	82.64	48	eP	P	18 43 55.7	-0.3
	comp=Z,45nm,1.2s						
JLU	Jordanelle	82.70	47	eP	P	18 43 55.8	-0.6
	comp=Z,83nm,1.2s						
BW06	Boulder Array	82.71	45	eP	P	18 43 56.6	+0.2
	comp=Z,36nm,1.0s						
BW06				LR	LR		
	comp=Z,2µm,19.0s						
BW06	Boulder Array	82.71	45	P	P	18 43 57.5	+1.1
	baz=304						
PD31	Pinedale Array	82.71	45	eP	P	18 43 56.8	+0.4
	comp=Z,33nm,1.0s						
PDAR	Pinedale Array	82.71	45	eP	P	18 43 56.0	-0.4
PDAR	Pinedale Array	82.71	45	P	P	18 43 56.9	+0.5
	comp=Z,29nm,1.0s,baz=260,slow=2.4,SNR=38						
109C	Camp Elliot, M	82.82	56	P	P	18 43 56.1	-0.7
	baz=300						
CPE	Camp Elliot	82.82	56	eP	P	18 43 57.6	+0.7
	comp=Z,35nm,1.1s						
CUSAR	Sarkisla-SIVAS	82.82	311	i P	P	18 43 59.2	+2.2
MPU	Maple Canyon	82.89	48	eP	P	18 43 57.4	0.0
	comp=Z,59nm,1.2s						
GMRC	Granite Mounta	82.90	54	P	P	18 43 57.6	+0.2
	baz=301						
HYA	Hoyanger	82.92	340	eP	P	18 43 57.4	+0.7
PFO	Pinyon Flats O	82.92	55	eP	P	18 43 56.9	-0.6
	comp=Z,74nm,1.1s						
PFO				LR	LR		
	comp=Z,2µm,19.0s						
PFO	Pinyon Flats O	82.92	55	eP	P	18 43 56.9	-0.6
PFO				pmax	pmax		
	comp=Z,74nm,1.1s						
PFO				MLR	MLR		
	comp=Z,2µm,19.0s						
PFO	Pinyon Flats O	82.92	55	P	P	18 43 57.2	-0.3
	baz=301						
XPFO	Pion Flat	82.92	55	eP	P	18 43 57.8	+0.3
	comp=Z,79nm,1.1s						
KONO	Kongsberg	83.03	338	eP	P	18 43 58.4	+1.1
	comp=Z,143nm,2.0s						
KONO	Kongsberg	83.03	338	eP	P	18 43 58.4	+1.1
KONO				pmax	pmax		
	comp=Z,143nm,2.0s						
KONO	Kongsberg	83.03	338	eP	P	18 43 57.8	+0.5
GZT	Gaziantep	83.03	309	i P	P	18 44 00.6	+2.6
GZT				IAML_P			
	comp=Z,595nm,0.7s						
BELC	Belle Mtn. Jos	83.06	55	P	P	18 43 58.3	+0.1
	baz=301						
CCUT	Cedar City	83.06	51	eP	P	18 43 58.7	+0.4
	comp=Z,61nm,1.2s						
KIS	Kishinev	83.08	321	eP	P	18 43 57.0	-0.9
KIS				LRM	MLR	19 23 40.0	
	comp=Z,2µm,17.0s						
KIS	Kishinev	83.08	321	eP	P	18 43 57.0	-0.9
KIS				e		18 54 24.0	
KIS				MLR	MLR		
	comp=Z,3µm,19.0s						
KIS				MLR	MLR		
	comp=N,2µm,17.0s						
TCRU	Three Creeks R	83.11	49	eP	P	18 43 59.6	+1.0
	comp=N,43nm,1.2s						
LDFC	Landfair	83.13	54	eP	P	18 43 58.9	+0.3
	comp=N,112nm,1.3s						
SZCU	Shurtz Canyon	83.22	51	eP	P	18 43 59.6	+0.5
	comp=N,43nm,1.2s						
BAR	Barrett	83.24	56	eP	P	18 43 58.9	-0.1
	comp=N,54nm,1.4s						
MONP2	Monument Peak	83.31	56	P	P	18 43 58.6	-1.1
	baz=301						
MSU	Marysvale	83.34	49	eP	P	18 43 59.6	-0.1
MSU	Marysvale	83.34	49	eP	P	18 43 59.6	-0.1
LCMT	Little Creek M	83.42	51	eP	P	18 44 01.0	+1.0
	comp=N,82nm,1.2s						
SFJD	Kangerlussuaq	83.46	5	eP	P	18 44 00.0	+0.6
	comp=N,37nm,1.0s						
SFJD	Kangerlussuaq	83.46	5	eP	P	18 44 00.0	+0.6
SFJD				pmax	pmax		
	comp=Z,37nm,1.0s						
TMUT	Trail Mountain	83.56	48	eP	P	18 44 01.6	+0.7
	comp=Z,30nm,1.0s						
ILGA	Ilgaz	83.57	314	eP	P	18 44 01.4	+0.6
	comp=Z,78nm,1.0s						
IRM	Iron Mountain	83.58	54	P	P	18 44 01.1	+0.3
	baz=301						
SIRC	Yozgat	83.58	312	i P	P	18 44 02.6	+1.8
SIRC				IAML_P			
	comp=Z,646nm,0.8s						
MTPU	Mount Pierson	83.59	50	eP	P	18 44 01.9	+0.7
	comp=Z,58nm,1.1s						
BC3	Big Chuckawall	83.62	55	P	P	18 44 01.7	+0.6
	baz=301						
NEE2	Needles Airpor	83.64	54	P	P	18 44 01.4	+0.4
	baz=301						
IAS	Iasi	83.65	321	⇓iP	P	18 44 01.1	+0.3
IAS	Iasi	83.65	321	⇓P	P	18 44 01.1	+0.3
IKP	In-Ko-Pah, Jac	83.66	56	P	P	18 44 01.7	+0.4
	baz=301						
SAIM	ADANA	83.70	310	i P	P	18 44 03.2	+1.8
SAIM				IAML_P			
	comp=Z,580nm,0.5s						
KNB	Kanab	83.70	51	eP	P	18 44 02.5	+0.9
	comp=Z,179nm,1.2s						
KNB	Kanab	83.70	51	eP	P	18 44 02.5	+0.9
KNB				pmax	pmax		
	comp=Z,179nm,1.2s						
LEOM	Leova	83.71	320	⇓iP	P	18 44 00.6	-0.5
LEOM	Leova	83.71	320	⇓P	P	18 44 00.6	-0.5
ANDN	Andirin	83.73	310	i P	P	18 44 03.5	+1.9
ANDN				IAML_P			
	comp=Z,2µm,0.8s						
SWSC	Sam W. Stewart	83.74	56	P	P	18 44 01.5	0.0
	baz=301						
ASK	Askoy	83.75	340	eP	P	18 44 00.9	-0.1
P17A	Butcher Ranch,	83.77	48	eP	P	18 44 02.3	+0.4
	comp=Z,97nm,1.2s						
ODD1	Odda	83.77	339	eP	P	18 44 00.9	-0.3
Q16A	Castle Valley	83.79	49	eP	P	18 44 02.6	+0.7
	comp=Z,107nm,1.3s						
PKCU	Pink Cliffs	83.82	50	eP	P	18 44 02.6	+0.2
	comp=Z,94nm,1.6s						
LVV	L'vov	83.88	325	eP	P	18 44 02.0	0.0
LVV				e		18 47 21.0	
LVV				eS	S	18 54 22.2	-2.9
LVV				pmax	pmax		
	comp=Z,120nm,1.7s						
LVV				MLR	MLR		
	comp=N,3µm,18.0s						
LVV				MLR	MLR		
	comp=E,3µm,18.0s						
LVV				MLR	MLR		
	comp=Z,4µm,18.0s						
W13A	Hualapai Mount	83.98	53	eP	P	18 44 03.7	+0.6
	comp=Z,30nm,1.2s						
SRU	San Rafael Swe	84.10	48	eP	P	18 44 03.8	+0.2
	comp=Z,73nm,1.1s						
SRU	San Rafael Swe	84.10	48	eP	P	18 44 03.8	+0.2
SRU				pmax	pmax		
	comp=Z,73nm,1.1s						
YAHY	KAYSERI_Yahyal	84.11	311	i P	P	18 44 05.5	+2.0
YAHY				IAML_P			
	comp=Z,211nm,0.5s						
BEL	Belsk	84.15	328	eP	P	18 44 04.3	+1.0
BEL	Belsk	84.15	328	eP	P	18 44 04.3	+1.0
TLCR		84.15	319	⇑iP	P	18 44 03.9	+0.5
TLCR		84.15	319	⇑P	P	18 44 03.9	+0.5
BIR	Birlad	84.18	321	⇓iP	P	18 44 03.5	0.0
BIR	Birlad	84.18	321	⇓P	P	18 44 03.5	0.0
BLS5	Blasjo	84.21	339	eP	P	18 44 03.8	+0.3
PDMCI	Parker Dam,Lak	84.22	54	P	P	18 44 04.4	+0.5
	baz=302						
Y12C	Blythe	84.23	55	eP	P	18 44 03.6	-0.5
	comp=Z,71nm,1.3s						
Y12C	Blythe	84.23	55	P	P	18 44 04.8	+0.7
	baz=302						
PRAR	RASCA	84.27	322	⇓iP	P	18 44 04.8	+0.8
BR101	Keskin Array S	84.35	313	eP	P	18 44 05.5	+0.7
BR131	Keskin Array S	84.35	313	eP	P	18 44 05.5	+0.7
	comp=Z,54nm,0.8s						
BRTR	Keskin Array B	84.35	313	P	P	18 44 05.5	+0.7
	comp=Z,29nm,0.8s,baz=100,slow=3.5,SNR=149						
BRTR				LR	LR	19 26 11.0	
	comp=Z,541nm,18.2s,baz=70,slow=39						
U15A	North Rim	84.38	51	eP	P	18 44 05.5	+0.3
	comp=Z,55nm,1.1s						
GLA	Glamis	84.38	55	eP	P	18 44 05.0	+0.1
	comp=Z,92nm,1.4s						
GLA	Glamis	84.38	55	eP	P	18 44 05.0	+0.1
GLA				pmax	pmax		
	comp=Z,92nm,1.4s						
GLA	Glamis	84.38	55	P	P	18 44 05.6	+0.7
	baz=301						
CFR	Carcaliu	84.54	319	⇑iP	P	18 44 04.3	-1.1
CFR	Carcaliu	84.54	319	⇑P	P	18 44 04.3	-1.1
BIZ	Bicaz	84.60	322	⇑iP	P	18 44 05.7	0.0
K22A	Casper	84.62	44	eP	P	18 44 06.9	+0.8
	comp=Z,78nm,1.1s						
K22A	Casper	84.62	44	P	P	18 44 06.9	+0.8
	baz=305						
BUR08	Bucovina Ar. S	84.65	323	eP	P	18 44 06.3	+0.2
	comp=Z,20nm,0.9s						
BURAR	Bucovina Array	84.66	323	⇓iP	P	18 44 06.4	+0.3
BURAR	Bucovina Array	84.66	323	⇓P	P	18 44 06.4	+0.3
BUR04	Bucovina Ar. S	84.66	323	eP	P	18 44 06.2	+0.1
KWP	Kalwaria Pacla	84.67	325	eP	P	18 44 06.8	+0.8
KWP	Kalwaria Pacla	84.67	325	eP	P	18 44 05.9	0.0
	comp=Z,1µm,1.3s						
KWP	Kalwaria Pacla	84.67	325	eP	P	18 44 06.8	+0.8
PETR	Petresti	84.72	320	⇓iP	P	18 44 08.2	+1.9
RWWY	Rawlins	84.76	45	eP	P	18 44 06.8	-0.2
	comp=Z,132nm,1.1s						
ODBI	Odobesti	84.80	320	⇓iP	P	18 44 08.7	+2.0
ANTO	Ankara	84.81	313	eP	P	18 44 07.0	+0.1
	comp=Z,47nm,0.8s						
ANTO				LR	LR		
	comp=Z,705nm,19.0s						
ANTO	Ankara	84.81	313	⇑iP	P	18 44 07.9	+0.9
ANTO	Ankara	84.81	313	⇑P	P	18 44 07.9	+0.9
TIRR	Tirgusor	84.81	319	eP	P	18 44 07.2	+0.4
	comp=Z,27nm,0.9s						
TIRR	Tirgusor	84.81	319	eP	P	18 44 07.2	+0.4
TIRR				pmax	pmax		
	comp=Z,27nm,0.9s						
BR231	Keskin MP Arra	84.83	313	eP	P	18 44 06.9	-0.2
VRI	Vrincioaia	84.92	321	⇑iP	P	18 44 13.3	+6.0
VRI	Vrincioaia	84.92	321	⇑P	P	18 44 13.3	+6.0
TLB	Topalu	84.95	319	⇑iP	P	18 44 09.1	+1.6
TLB	Topalu	84.95	319	⇑P	P	18 44 09.1	+1.6
HARR	Harsova	84.95	319	⇑iP	P	18 44 06.4	-1.0
HARR	Harsova	84.95	319	⇑P	P	18 44 06.5	-1.0
PLOR	Plostina	84.97	321	⇑iP	P	18 44 06.7	-0.9
PLOR	Plostina	84.97	321	⇑P	P	18 44 06.7	-0.9
MFTR	Murfatlar	84.97	319	⇑iP	P	18 44 09.4	+1.8
O20A	White River Ci	85.00	46	eP	P	18 44 07.8	-0.3
	comp=Z,110nm,1.0s						
O20A	White River Ci	85.00	46	P	P	18 44 08.1	0.0
	baz=304						
Y14A	Wickenburg	85.21	54	eP	P	18 44 09.2	+0.1
	comp=Z,59nm,1.0s						
RSSD	Black Hills	85.22	41	eP	P	18 44 08.4	-0.8
	comp=Z,40nm,1.3s						
RSSD	Black Hills	85.22	41	eP	P	18 44 08.4	-0.8
RSSD				pmax	pmax		
	comp=Z,40nm,1.3s						
RSSD	Black Hills	85.22	41	P	P	18 44 09.9	+0.7
	baz=307						
113A	Mohawk Valley,	85.29	55	eP	P	18 44 10.1	+0.7
	comp=Z,42nm,1.1s						
OZUR		85.29	321	⇓iP	P	18 44 10.8	+1.6
MDND	Maddock	85.35	36	eP	P	18 44 09.8	+0.4
	comp=Z,222nm,1.5s						
MDND	Maddock	85.35	36	P	P	18 44 10.1	+0.6
	baz=310						
PV09	Paradox Valley	85.35	48	eP	P	18 44 10.3	+0.3
PGOR	Pogoanele	85.36	320	⇑iP	P	18 44 08.9	-0.6
ICOR	Ion Corvin	85.37	319	⇑iP	P	18 44 11.8	+2.2
PV21	Cone Mtn., Par	85.42	48	eP	P	18 44 10.5	+0.2
	comp=Z,114nm,1.1s						
ARCR	ARCALIA	85.44	323	⇑iP	P	18 44 15.2	+5.3
PV23	Carpenter Ridg	85.45	48	eP	P	18 44 10.8	+0.3
	comp=Z,177nm,1.0s						
PV10	Paradox Valley	85.48	48	eP	P	18 44 10.7	+0.1
	comp=Z,223nm,1.1s						
PV14	Lion Creek, Pa	85.49	48	eP	P	18 44 11.2	+0.6
	comp=Z,205nm,1.2s						
WUAZ	Wupatki	85.49	52	eP	P	18 44 11.4	+0.7
	comp=Z,108nm,1.1s						
WUAZ	Wupatki	85.49	52	P	P	18 44 11.8	+1.2
	baz=303						
UZH	Uzhgorod	85.52	325	eP	P	18 44 09.2	-1.0
UZH				e		18 44 12.2	
UZH				i		18 44 18.4	
UZH				i S	S	18 54 35.4	-6.0
UZH				MLR	MLR		
	comp=Z,400nm,16.0s						
PV20	West Nyswonger	85.54	48	eP	P	18 44 11.2	+0.3
	comp=Z,145nm,1.0s						
PV19	Morning Glory	85.55	48	eP	P	18 44 11.0	+0.1
	comp=Z,124nm,1.1s						
PV04	Paradox Valley	85.56	48	eP	P	18 44 10.2	-0.7
	comp=Z,125nm,1.2s						
MLR	Muntele Rosu	85.58	321	eP	P	18 44 09.6	-1.2
	comp=Z,15nm,0.9s						
MLR	Muntele Rosu	85.58	321	⇑iP	P	18 44 13.8	+3.0
MLR	Muntele Rosu	85.58	321	⇑P	P	18 44 13.8	+3.0
PV17	East Wray Mesa	85.58	48	eP	P	18 44 11.3	+0.2
	comp=Z,192nm,1.1s						
DOPR	Dopca	85.59	321	⇑iP	P	18 44 11.4	+0.7
PV16	Nyswonger Mesa	85.59	48	eP	P	18 44 11.0	-0.1

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      comp=Z,104nm,1.1s
PV05  Paradox Valley   85.61  48 eP     P      18 44 11.2  0.0
      comp=Z,131nm,1.1s
PV11  David Mesa, Pa   85.63  48 eP     P      18 44 11.2 -0.1
      comp=Z,143nm,0.9s
ULM   Lac du Bonnet    85.63  33 eP     P      18 44 10.9 +0.2
      comp=Z,42nm,1.0s
ULM   Lac du Bonnet    85.63  33  P     P      18 44 10.2 -0.6
      comp=Z,26nm,1.0s,baz=309,slow=5.9,SNR=30
PV12  Saucer Basin,    85.66  48 eP     P      18 44 11.5  0.0
      comp=Z,109nm,1.0s
PV03  Paradox Valley   85.67  48 eP     P      18 44 11.3 -0.2
      comp=Z,120nm,1.1s
OJC   Ojcow            85.69 327 eP     P      18 44 11.6 +0.5
OJC   Ojcow            85.69 327 eP     P      18 44 09.6 -1.5
      comp=Z,47nm,1.2s
OJC   Ojcow            85.69 327 eP     P      18 44 11.6 +0.5
PV07  Paradox Valley   85.70  48 eP     P      18 44 11.6 -0.1
      comp=Z,39nm,1.1s
TRPA  Tarpa            85.72 324⇑iP     P      18 44 12.0 +0.8
TRPA  Tarpa            85.72 324⇑eP     P      18 44 10.1 -1.2
PV13  Radium Mtn., P   85.74  48 eP     P      18 44 11.6 -0.3
      comp=Z,137nm,1.3s
PV02  Paradox Valley   85.77  48 eP     P      18 44 11.4 -0.7
      comp=Z,83nm,1.2s
SECR                   85.79 320⇓iP     P      18 44 17.6 +5.9
PV15  Paradox Valley   85.86  48 eP     P      18 44 11.8 -0.7
      comp=Z,50nm,1.0s
PV01  Paradox Valley   85.92  48 eP     P      18 44 13.2 +0.4
      comp=Z,90nm,1.2s
NIE   Niedzica         85.99 326 eP     P      18 44 13.5 +0.9
NIE   Niedzica         85.99 326 eP     P      18 44 13.5 +0.9
N23A  Red Feather La   86.00  45 eP     P      18 44 13.6 +0.4
      comp=Z,172nm,1.3s
N23A  Red Feather La   86.00  45  P     P      18 44 14.2 +1.1
      baz=306
X16A  Lo Mia Camp, P   86.05  53 eP     P      18 44 14.1 +0.7
      comp=Z,40nm,1.1s
PHWY  Pilot Hill       86.06  44 eP     P      18 44 11.8 -1.6
      comp=Z,68nm,1.2s
VOIR                   86.11 321⇓iP     P      18 44 12.1 -1.2
VOIR                   86.11 321 ⇓P     P      18 44 12.1 -1.2
MTUR  Matau            86.23 321⇓iP     P      18 44 26.5  +13
MTUR  Matau            86.23 321 ⇓P     P      18 44 26.5  +13
ASF   Jabal al Asfar   86.24 305  P     P      18 44 15.3 +1.0
SGRR  Singureni        86.35 320⇑iP     P      18 44 17.9 +3.5
SMCO  Snowmass         86.35  47 eP     P      18 44 14.8 -0.3
      comp=Z,72nm,1.1s
ARR   Arges            86.38 321⇑iP     P      18 44 15.4 +0.7
214A  Organ Pipe Nat   86.41  55  P     P      18 44 16.5 +1.4
      baz=302
MVCO  Mesa Verde       86.49  49 eP     P      18 44 16.2 +0.7
      comp=Z,42nm,1.1s
MVCO  Mesa Verde       86.49  49  P     P      18 44 16.3 +0.7
      baz=305
DRGR                   86.50 323⇑iP     P      18 44 15.7 +0.5
DRGR                   86.50 323 ⇑P     P      18 44 15.7 +0.5
LANS  Liptovska Anna   86.57 326 eP     P      18 44 17.2 +1.7
LANS  Liptovska Anna   86.57 326 eP     P      18 44 17.2 +1.7
HUMR  Humele           86.71 320⇓iP     P      18 44 14.1 -2.1
OKC   Ostrava-Krasne   86.73 327 eP     P      18 44 16.3 +0.1
OKC                               AMS   AMS    19 26 10.0
      comp=Z,2µm,14.8s
OKC   Ostrava-Krasne   86.73 327 eP     P      18 44 16.3 +0.1
OKC                               MLR   MLR
      comp=Z,2µm,14.8s
W18A  Petrified Fore   86.83  51 eP     P      18 44 18.4 +1.1
      comp=Z,21nm,0.9s
W18A  Petrified Fore   86.83  51  P     P      18 44 19.2 +2.0
      baz=304
ISCO  Idaho Springs    86.84  46 eP     P      18 44 18.3 +0.9
      comp=Z,35nm,1.1s
ISCO                              LR    LR
      comp=Z,1µm,21.0s
ISCO  Idaho Springs    86.84  46  P     P      18 44 19.1 +1.7
      baz=306
KSP   Ksiaz            86.89 329 eP     P      18 44 17.0  0.0
KSP   Ksiaz            86.89 329 eP     P      18 44 17.0  0.0
X18A  Snowflake        87.01  52 eP     P      18 44 18.6 +0.4
      comp=Z,35nm,1.3s
MORC  Moravsky Berou   87.06 328 eP     P      18 44 17.7 -0.2
      comp=Z,16nm,1.2s
MORC  Moravsky Berou   87.06 328⇓iP     P      18 44 17.9  0.0
MORC  Moravsky Berou   87.06 328 ⇓P     P      18 44 17.9  0.0
MORC  Moravsky Berou   87.06 328 eP     P      18 44 18.3 +0.4
PSZ   Piszkesteto      87.19 325 eP     P      18 44 18.2 -0.4
      comp=Z,71nm,1.7s
PSZ   Piszkesteto      87.19 325⇑iP     P      18 44 19.3 +0.7
PSZ   Piszkesteto      87.19 325 ⇑P     P      18 44 19.3 +0.7
PSZ   Piszkesteto      87.19 325⇑eP     P      18 44 18.0 -0.6
CSS   Mathiatis        87.20 309 eP     P      18 44 18.8  0.0
      comp=Z,40nm,0.8s
CSS   Mathiatis        87.20 309  P     P      18 44 16.3 -2.5
      comp=Z,14nm,0.9s
KRLC  Kraliky          87.20 328 eP     P      18 44 19.9 +1.3
KRLC  Kraliky          87.20 328 eP     P      18 44 19.9 +1.3
DPC   Dobruska-Polom   87.22 329 eP     P      18 44 19.3 +0.6
DPC                              ex     x      18 44 26.8
DPC                              eS     S      18 54 59.9 +1.8
DPC                               AMS   AMS    19 27 10.0
      comp=Z,3µm,17.5s
DPC   Dobruska-Polom   87.22 329 eP     P      18 44 19.3 +0.6
DPC                              e             18 44 26.8
DPC                              eS     S      18 54 59.9 +1.8
DPC                               MLR   MLR
      comp=Z,3µm,17.5s
UPC   Upice            87.25 329 eP     P      18 44 19.2 +0.5
UPC                              eS     S      18 55 02.7 +4.4
UPC                               AMS   AMS    19 27 20.0
      comp=Z,3µm,16.9s
UPC   Upice            87.25 329 eP     P      18 44 19.2 +0.5
UPC                              eS     S      18 55 02.7 +4.4
UPC                               MLR   MLR
      comp=Z,3µm,16.9s
S22A  4UR Ranch, Cre   87.27  48 eP     P      18 44 20.3 +0.9
      comp=Z,38nm,1.1s
S22A  4UR Ranch, Cre   87.27  48  P     P      18 44 20.5 +1.0
      baz=306
VYHS  Vyhne            87.33 326 eP     P      18 44 19.7 +0.5
VYHS                              pmax  pmax
      comp=Z,19nm,1.4s
VYHS  Vyhne            87.33 326 eP     P      18 44 19.7 +0.5
GZR   Gura Zlata       87.37 322⇓iP     P      18 44 18.9 -0.6
GZR   Gura Zlata       87.37 322 ⇓P     P      18 44 18.9 -0.6
VLAD  Vladila          87.37 320⇑iP     P      18 44 18.9 -0.5
ISP   Isparta          87.43 312 eP     P      18 44 19.9 -0.1
      comp=Z,13nm,0.7s
ISP   Isparta          87.43 312 eP     P      18 44 19.9 -0.1
ISP                               pmax  pmax
      comp=Z,13nm,0.7s
Q24A  Divide           87.63  46 eP     P      18 44 21.4 +0.2
      comp=Z,30nm,1.2s
Q24A  Divide           87.63  46  P     P      18 44 21.9 +0.7
      baz=306
TUC   Tucson           87.66  54 eP     P      18 44 21.5 +0.3
      comp=Z,29nm,1.3s
TUC                               LR    LR
      comp=Z,3µm,22.0s
TUC   Tucson           87.66  54 eP     P      18 44 21.5 +0.3
TUC                               pmax  pmax
      comp=Z,29nm,1.3s
TUC                               MLR   MLR
      comp=Z,3µm,22.0s
TUC   Tucson           87.66  54  P     P      18 44 22.2 +1.0
      baz=304
GHAJ  Ghor Haditha     87.66 305  P     P      18 44 18.8 -2.2
VRAC  Vranov           87.83 328⇑iP     P      18 44 21.1 -0.5
VRAC  Vranov           87.83 328 ⇑P     P      18 44 21.1 -0.5
VRAC  Vranov           87.83 328 eP     P      18 44 21.9 +0.3
BZS   Buzias           87.84 323⇑iP     P      18 44 21.4 -0.3
BZS   Buzias           87.84 323 ⇑P     P      18 44 21.4 -0.3
SUSD  Miller           87.88  39  P     P      18 44 23.6 +1.7
      baz=310
PVCC  Panska Ves       87.88 330 eP     P      18 44 23.7 +1.9
PVCC                              AMS   AMS    19 26 50.0
      comp=Z,2µm,19.0s
PVCC  Panska Ves       87.88 330 eP     P      18 44 23.7 +1.9
PVCC                              MLR   MLR
      comp=Z,2µm,19.0s
HERR  Herculane        87.90 322⇓iP     P      18 44 21.4 -0.5
JDRJ  Daraweish        87.90 304  P     P      18 44 24.0 +1.6
BRG   Berggiesshubel   87.91 330 eP     P      18 44 22.8 +0.9
      comp=Z,24nm,1.4s
BRG   Berggiesshubel   87.91 330  S     S      18 55 04.0 -0.5
BRG                               SS    SS     19 00 47.0 -3.5
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BRG   Berggiesshubel   87.91 330 eP     P      18 44 22.8 +0.9
BRG                               S     S      18 55 04.0 -0.5
BRG                               SS    SS     19 00 47.0 -3.5
BRG                               pmax  pmax
      comp=Z,25nm,1.4s
CLL   Collm            87.99 331 eP     P      18 44 21.8 -0.5
      comp=Z,16nm,1.0s
CLL   Collm            87.99 331 i P    P      18 44 21.9 -0.4
      comp=Z,14nm,1.3s
CLL                              i (PcP) pwP   18 44 27.0 -2.9
      comp=Z,20nm,1.1s
CLL                              ePP    PP     18 47 49.0 +1.1
CLL                              epPP          18 48 02.0
CLL                              eS     S      18 54 58.0 -7.3
CLL                              eSS    SS     19 00 58.0 +6.2
CLL                              eSSS   SSS    19 04 18.0
CLL                              e             19 05 42.0
CLL                               LmH          19 20 00.0
      comp=N,900nm,21.5s
CLL                               LmH          19 20 00.0
      comp=E,1µm,21.3s
CLL                               LmV          19 27 00.0
      comp=Z,2µm,18.4s
CLL   Collm            87.99 331 eP     P      18 44 21.8 -0.5
CLL                               pmax  pmax
      comp=Z,16nm,1.0s
PUNG  Punghina         88.00 321⇑iP     P      18 44 18.2 -4.3
KRUC  Moravsky         88.10 328 eP     P      18 44 23.0 +0.2
SDCO  Great Sand Dun   88.12  47 eP     P      18 44 24.3 +0.7
      comp=Z,31nm,1.2s
SDCO                              LR    LR
      comp=Z,1µm,21.0s
SDCO  Great Sand Dun   88.12  47  P     P      18 44 24.2 +0.7
      baz=306
MODS  Modra-Piesok     88.16 327 eP     P      18 44 24.5 +1.3
MODS                              pmax  pmax
      comp=Z,85nm,1.8s
MODS  Modra-Piesok     88.16 327 eP     P      18 44 24.5 +1.3
PRA   Prague           88.27 329  AMS   AMS    19 28 10.0
      comp=Z,2µm,14.6s
PRU   Pruhonice        88.28 329 eP     P      18 44 23.3 -0.4
PRU                              ex     x      18 44 28.6
PRU                              eS     S      18 55 10.0 +1.9
PRU                               AMS   AMS    19 28 20.0
      comp=Z,2µm,15.0s
PRU   Pruhonice        88.28 329 eP     P      18 44 23.3 -0.4
PRU                              e             18 44 28.6
PRU                              eS     S      18 55 10.0 +1.9
PRU                               MLR   MLR
      comp=Z,2µm,15.0s
MANT  Manisa           88.29 314 eP     P      18 44 23.6 -0.7
      comp=Z,56nm,0.9s
OGNE  Ogallala         88.33  43 eP     P      18 44 22.5 -1.7
      comp=Z,88nm,1.4s
OGNE  Ogallala         88.33  43  P     P      18 44 25.4 +1.2
      baz=308
TREC  Trest            88.35 328  AMS   AMS    19 28 00.0
      comp=Z,2µm,15.4s
ALN   Alexandroupoli   88.36 317 eP     P      18 44 23.8 -0.4
      comp=Z,26nm,1.1s
ALN   Alexandroupoli   88.36 317 eP     P      18 44 23.8 -0.4
ALN                               pmax  pmax
      comp=Z,26nm,1.1s
VTS   Vitosha          88.91 320 eP     P      18 44 26.5 -0.5
      comp=Z,18nm,1.2s
VTS   Vitosha          88.91 320⇑iP     P      18 44 26.6 -0.4
VTS   Vitosha          88.91 320 ⇑P     P      18 44 26.6 -0.4
MORH  Mrgy, Hungar     88.98 325 eP     P      18 44 22.1 -4.9
LAZ   Ladron           89.00  51 eP     P      18 44 28.3 +0.7
ANMO  Albuquerque      89.14  50 eP     P      18 44 29.5 +1.2
      comp=Z,18nm,1.2s
ANMO  Albuquerque      89.14  50⇓eP     P      18 44 32.1 +3.8
ANMO                              pmax  pmax
      comp=Z,16nm,1.2s
ANMO  Albuquerque      89.14  50  P     P      18 44 29.3 +1.0
      baz=306
ANMO  Albuquerque      89.14  50  LR    LR     19 18 08.8
      comp=Z,928nm,21.9s,baz=343,slow=31
CONA  Conrad Observa   89.15 327 i PcP  P      18 44 28.7 +0.7
      comp=Z,13nm,1.0s,SNR=7.0
KSCO  Kaye Shedlock'   89.16  45 eP     P      18 44 29.5 +1.2
      comp=Z,42nm,1.2s
KSCO  Kaye Shedlock'   89.16  45  P     P      18 44 29.0 +0.8
      baz=308
T25A  Trinidad         89.18  47 eP     P      18 44 28.2 -0.3
      comp=Z,45nm,1.2s
T25A  Trinidad         89.18  47  P     P      18 44 28.3 -0.1
      baz=307
319A  Douglas          89.24  54 eP     P      18 44 28.6 -0.1
      comp=Z,26nm,1.0s
LENM  Lemitar          89.25  51 eP     P      18 44 28.6 -0.2
EYMN  Ely              89.30  33 eP     P      18 44 28.2 -0.3
      comp=Z,53nm,1.0s
EYMN                              LR    LR
      comp=Z,2µm,20.0s
EYMN  Ely              89.30  33  P     P      18 44 28.6  0.0
      baz=316
KHC   Kasperske Hory   89.34 329 eP     P      18 44 28.5 -0.2
      comp=Z,3.8nm,0.9s
KHC   Kasperske Hory   89.34 329 eP     P      18 44 28.8 +0.1
KHC                              ex     x      18 44 33.7
KHC                               AMS   AMS    19 28 30.0
      comp=Z,3µm,19.0s
KHC   Kasperske Hory   89.34 329 eP     P      18 44 28.8 +0.1
KHC                              e             18 44 33.7
KHC                               MLR   MLR
      comp=Z,3µm,19.0s
HSIG                   89.34  57 eP     P      18 44 28.7 -0.4
      comp=Z,25nm,1.0s
DAMY  Dhamar           89.43 286 eP     P      18 44 29.1 -0.9
      comp=Z,49nm,1.1s
BNM   Barren Site      89.49  51 eP     P      18 44 30.2 +0.2
GEC2  GERESS Array S   89.49 329 eP     P      18 44 28.7 -0.8
      comp=Z,9.2nm,1.0s
GEC2  GERESS Array S   89.49 329 eP     P      18 44 28.7 -0.8
GEC2                              pmax  pmax
      comp=Z,9.0nm,1.0s
GERES GERESS Array B   89.49 329  P     P      18 44 29.0 -0.5
      comp=Z,7.0nm,0.9s,baz=36,slow=5.0,SNR=22
GERES                             PP    PP     18 48 00.1 +0.1
      comp=Z,1.3nm,0.8s,baz=55,slow=7.3,SNR=3.9
GERES                             LR    LR     19 29 21.6
      comp=Z,3µm,18.2s,baz=48,slow=39
GEA0  GERESS Array S   89.50 329 eP     P      18 44 28.8 -0.7
NRS   Narsarsuaq       89.59   4 eP     P      18 44 30.6 +1.0
      comp=Z,120nm,0.8s
NRS   Narsarsuaq       89.59   4 eP     P      18 44 30.6 +1.0
NRS                               pmax  pmax
      comp=Z,120nm,0.8s
ECSD  EROS Data Cent   89.62  38 eP     P      18 44 29.8 -0.3
      comp=Z,37nm,1.1s
ECSD                              LR    LR
      comp=Z,1µm,20.0s
ECSD  EROS Data Cent   89.62  38  P     P      18 44 30.4 +0.3
      baz=312
121A  Cookes Peak, D   89.63  52  P     P      18 44 31.3 +0.7
      baz=305
DIVS  Divibare         89.71 322 eP     P      18 44 30.5 -0.1
      comp=Z,18nm,1.1s
ARSA  Arzberg          89.79 327 i PcP  P      18 44 31.1 +0.2
      comp=Z,16nm,1.4s
MOA   Molln            89.95 328 i PcP  P      18 44 32.0 +0.4
      comp=Z,13nm,1.1s
GRA1  Grafenberg Arr   89.96 331 eP     P      18 44 32.5 +0.9
      comp=Z,55nm,1.4s
GRF   Grafenberg Arr   89.96 331 eP     P      18 44 32.5 +0.9
GRF                               pmax  pmax
      comp=Z,55nm,1.4s
GRFO  Grafenberg       89.96 331 eP     P      18 44 32.2 +0.7
      comp=Z,50nm,1.4s
GRFO  Grafenberg       89.96 331 eP     P      18 44 32.2 +0.7
GRFO                              pmax  pmax
      comp=Z,51nm,1.4s
E38A  The Farm, Brul   90.23  34  P     P      18 44 33.3 +0.4
      baz=316
BGNE  Belgrade         90.30  41  P     P      18 44 33.8 +0.4
      baz=311
F37A  Hinrichs Farm,   90.33  35  P     P      18 44 33.5 +0.1
      baz=315
C40A  Isle Royale Na   90.41  32  P     P      18 44 34.1 +0.4
      baz=317
SOKA  Soboth           90.44 327 i PcP  P      18 44 33.9  0.0
      comp=Z,24nm,1.0s,SNR=7.1
F38A  Pierce - Schro   90.53  34  P     P      18 44 34.7 +0.4
      baz=315
SPMN  Marine on St.    90.59  35  P     P      18 44 34.2 -0.4
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      baz=315
OBKA  Obir             90.79 327 i PcP  P      18 44 35.8 +0.2
      comp=Z,14nm,1.1s
E39A  Mellen           90.87  33  P     P      18 44 36.0 +0.1
      baz=316
KBA   Koelnbreinsper   90.94 328 i P    P      18 44 35.2 -1.2
      comp=Z,11nm,1.2s
F39A  Loretta          91.03  34  P     P      18 44 37.4 +0.7
      baz=316
CBKS  Cedar Bluff      91.04  43  PFAKE        18 44 50.0  +13
CBKS                              LR    LR
      comp=Z,918nm,20.0s
CBKS  Cedar Bluff      91.04  43  P     P      18 44 36.5 -0.4
      baz=310
G38A  Ridgeland        91.10  35  P     P      18 44 37.6 +0.6
      baz=315
MYKA  Terra Mystica    91.13 327 i PcP  P      18 44 36.7 -0.5
      comp=Z,20nm,1.0s
E40A  Wakefield        91.14  33  P     P      18 44 36.6 -0.5
      baz=317
H38A  Maiden Rock      91.24  35  P     P      18 44 36.4 -1.3
      baz=315
D41A  Chassel          91.31  32  P     P      18 44 38.1 +0.2
      baz=318
G39A  Holcombe         91.36  34  P     P      18 44 38.5 +0.3
      baz=316
F40A  Park Falls       91.41  33  P     P      18 44 39.3 +0.8
      baz=316
E41A  Kenton           91.57  32  P     P      18 44 40.3 +1.2
      baz=317
WATA  Walderalm        91.57 329 i PcP  P      18 44 38.3 -1.0
      comp=Z,3.0nm,0.6s
ABTA  Abfaltersbach    91.58 328 i PcP  P      18 44 38.3 -0.9
      comp=Z,19nm,1.1s
WTTA  Wattenberg       91.59 329 i PcP  P      18 44 39.7 +0.2
      comp=Z,1.7nm,0.4s
H39A  Augusta          91.74  35  P     P      18 44 41.8 +1.8
      baz=316
COWI  Conover          91.75  33  PFAKE        18 44 50.0  +10
COWI                              LR    LR
      comp=Z,1µm,19.0s
MNTX  Cornudas Mount   91.77  52 eP     P      18 44 41.0 +0.7
      comp=Z,26nm,1.1s
MNTX                              LR    LR
      comp=Z,1µm,21.0s
MNTX  Cornudas Mount   91.77  52  P     P      18 44 43.2 +2.9
      baz=306
MOTA  Moosalm          91.77 329 i P    P      18 44 38.9 -1.4
      comp=Z,6.4nm,0.9s
RETA  Reutte           91.82 329 i PcP  P      18 44 39.9 -0.5
      comp=Z,15nm,1.1s
SQTA  Sankt Quirin     91.82 329 i PcP  P      18 44 40.0 -0.4
      comp=Z,8.5nm,0.8s
G40A  Rib Lake         91.85  34  P     P      18 44 41.8 +1.3
      baz=316
F41A  Three Lakes      92.03  33  P     P      18 44 43.6 +2.3
      baz=317
E42A  Champion         92.08  32  P     P      18 44 43.4 +1.9
      baz=318
MSTX  Muleshoe         92.16  49  P     P      18 44 42.9 +0.7
      baz=308
FETA  Feichten         92.18 329 i PcP  P      18 44 42.0 -0.2
      comp=Z,12nm,1.0s
I39A  Houston          92.20  36  P     P      18 44 43.1 +0.9
      baz=316
H40A  Chili            92.22  34  P     P      18 44 43.1 +0.9
      baz=316
BFO   Black Forest     92.23 331 eP     P      18 44 41.8 -0.4
      comp=Z,27nm,1.1s
BFO                               LR    LR
      comp=Z,51nm,19.0s
BFO   Black Forest     92.23 331 i P    P      18 44 42.3 +0.1
AMTX  Amarillo         92.31  48  P     P      18 44 43.6 +0.7
      baz=309
DAVA  Damuels          92.36 330 i PcP  P      18 44 42.6 -0.4
      comp=Z,25nm,1.0s,SNR=4.7
J39A  Decorah          92.48  36  P     P      18 44 44.2 +0.8
      baz=315
E43A  Lone Tree Farm   92.54  32  P     P      18 44 43.8 +0.2
      baz=319
SCHQ  Schefferville    92.54  16  P     P      18 44 44.2 +0.7
      comp=Z,6.8nm,1.0s,baz=0.0,slow=3.0,SNR=2.9
H41A  Junction City    92.59  34  P     P      18 44 44.6 +0.7
      baz=317
I40A  Norwalk          92.63  35  P     P      18 44 45.2 +1.1
      baz=316
SCIA  State Center     92.69  38  P     P      18 44 45.7 +1.3
      baz=314
FUORN Ofenpass-Fuorn   92.70 329 eP     P      18 44 44.5 -0.1
      comp=Z,43nm,1.0s
KSU1  Kansas State U   92.70  42  PFAKE        18 45 00.0  +15
KSU1                              LR    LR
      comp=Z,1µm,20.0s
KSU1  Kansas State U   92.70  42  P     P      18 44 44.4 -0.1
      baz=312
G42A  Mountain         92.72  33  P     P      18 44 44.3 -0.2
      baz=318
K39A  Oelwein          92.83  37  P     P      18 44 46.2 +1.1
      baz=315
F43A  Flat Rock, Esc   92.87  32  P     P      18 44 46.3 +1.1
      baz=319
I41A  Arkdale          92.89  35  P     P      18 44 45.9 +0.7
      baz=317
J40A  Soldiers Grove   92.93  36  P     P      18 44 45.6 +0.2
      baz=316
G43A  Wallace          93.06  33  P     P      18 44 47.5 +1.5
      baz=318
F44A  Big Bay de Noc   93.11  32  P     P      18 44 47.7 +1.5
      baz=319
L39A  Vinton           93.18  37  P     P      18 44 47.1 +0.5
      baz=315
K40A  Colesburg        93.22  36  P     P      18 44 47.6 +0.8
      baz=316
J41A  Loganville       93.32  35  P     P      18 44 48.4 +1.1
      baz=316
E45A  Wooded Hills,    93.38  31  P     P      18 44 48.6 +1.1
      baz=320
D46A  Sault St. Mari   93.46  30  P     P      18 44 48.7 +0.9
      baz=321
I42A  Draeger Farm,    93.48  34  P     P      18 44 48.2 +0.2
      baz=317
JFWS  Jewell Farm      93.53  36  PFAKE        18 45 00.0  +12
JFWS                              LR    LR
      comp=Z,1µm,21.0s
JFWS  Jewell Farm      93.53  36  P     P      18 44 48.8 +0.5
      baz=316
M39A  Webster          93.55  38  P     P      18 44 49.8 +1.4
      baz=315
H43A  Windswept, Lux   93.61  33  P     P      18 44 48.8 +0.3
      baz=318
L40A  Anamosa          93.64  37  P     P      18 44 50.0 +1.3
      baz=316
MATQ  Matagami         93.70  24  P     P      18 44 49.2 +0.3
      baz=326
K41A  Shullsburg       93.72  36  P     P      18 44 49.2  0.0
      baz=316
D47A  Chapleau         93.73  29  P     P      18 44 49.7 +0.6
      baz=322
E46A  Sault Ste Mari   93.75  30  P     P      18 44 50.2 +1.0
      baz=321
M40A  Post Highland    93.95  37  P     P      18 44 51.5 +1.3
      baz=315
L41A  Preston          94.00  36  P     P      18 44 51.8 +1.4
      baz=316
F46A  Macinaw City C   94.01  31  P     P      18 44 51.1 +0.8
      baz=320
K42A  Prairie Point,   94.08  35  P     P      18 44 51.7 +0.9
      baz=317
J43A  Natural Harves   94.10  34  P     P      18 44 52.1 +1.3
      baz=318
E47A  Iron Bridge      94.13  30  P     P      18 44 52.3 +1.4
      baz=322
D48A  Paudash Townsh   94.18  28  P     P      18 44 52.4 +1.2
      baz=323
WMOK  Wichita Mounta   94.25  46  P     P      18 44 52.1 +0.3
      baz=310
N40A  Mertquake, Sal   94.28  38  P     P      18 44 52.5 +0.8
      baz=315
TX31  Lajitas Ar. Si   94.36  53 eP     P      18 44 52.8 +0.3
      comp=Z,52nm,1.0s
LTX   Lajitas          94.37  53 eP     P      18 44 53.5 +1.0
LTX   Lajitas          94.37  53 eP     P      18 44 53.5 +1.0
TXAR  Lajitas Array    94.37  53  P     P      18 44 53.5 +1.0
      comp=Z,39nm,0.9s,baz=298,slow=2.7,SNR=82
L42A  Oliver, Polo     94.48  36  P     P      18 44 52.6  0.0
      baz=317
M41A  Milan            94.48  37  P     P      18 44 54.4 +1.8
      baz=316
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LSQQ	Lebel-sur-Quev	94.52	25	P	P	18 44 53.7	+1.1
	baz=327						
E48A	Lockeyer	94.58	29	P	P	18 44 54.7	+1.7
	baz=322						
CHGQ	Chibougamau	94.71	23	P	P	18 44 54.2	+0.6
	baz=329						
H46A	Fife Lake	94.76	32	P	P	18 44 55.4	+1.6
	baz=320						
GLMI	Grayling	94.81	31	PFAKE		18 45 10.0	+16
GLMI				LR	LR		
	comp=Z,1µm,20.0s						
GLMI	Grayling	94.81	31	P	P	18 44 55.9	+1.8
	baz=320						
L43A	Garden Prairie	94.82	35	P	P	18 44 55.5	+1.4
	baz=317						
M42A	Sheffield	94.83	36	P	P	18 44 56.1	+1.9
	baz=317						
ABTX	Abilene, Hawle	95.05	48	P	P	18 44 56.5	+1.1
	baz=310						
N42A	Yates City	95.14	37	P	P	18 44 57.0	+1.4
	baz=316						
H47A	Mio	95.17	31	P	P	18 44 56.9	+1.2
	baz=321						
O41A	Passleys Farm,	95.20	38	P	P	18 44 56.5	+0.5
	baz=316						
E50A	Wahnapitae	95.22	28	P	P	18 44 57.1	+1.2
	baz=324						
M43A	Waltham Townsh	95.26	36	P	P	18 44 57.8	+1.6
	baz=317						
TUL1	Leonard	95.32	44	P	P	18 44 57.8	+1.2
	baz=312						
P41A	Barry, Barry	95.42	38	P	P	18 44 57.6	+0.6
	baz=316						
I47A	Gladwin	95.48	32	P	P	18 44 58.8	+1.7
	baz=321						
N43A	Stutzman Famil	95.51	36	P	P	18 44 59.1	+1.7
	baz=317						
HDIL	Hopedale	95.73	37	PFAKE		18 45 10.0	+12
HDIL				LR	LR		
	comp=Z,2µm,21.0s						
HDIL	Hopedale	95.73	37	P	P	18 44 59.7	+1.4
	baz=317						
Q41A	Truxton	95.84	39	P	P	18 45 00.0	+1.1
	baz=315						
P42A	Winchester	95.87	38	P	P	18 45 00.0	+1.0
	baz=316						
O43A	Sugar Creek Fa	95.91	37	P	P	18 45 02.2	+3.0
	baz=317						
R41A	Rosebud	96.23	39	P	P	18 45 02.3	+1.6
	baz=315						
D54A	Lac Fusel, La	96.23	25	P	P	18 45 02.6	+2.1
	baz=327						
Q42A	Golden Eagle	96.25	39	P	P	18 45 02.4	+1.6
	baz=316						
P43A	Skaggs, Pawnee	96.27	37	P	P	18 45 02.4	+1.6
	baz=317						
JCT	Junction City	96.30	50	PFAKE		18 45 10.0	+8.8
JCT				LR	LR		
	comp=Z,1µm,21.0s						
JCT	Junction City	96.30	50	P	P	18 45 01.9	+0.7
	baz=309						
F52A	Sundridge	96.31	28	P	P	18 45 03.4	+2.5
	baz=325						
J48A	Bridge Port	96.37	32	P	P	18 45 01.5	+0.3
	baz=321						
N45A	Kentland	96.43	35	P	P	18 45 02.6	+1.1
	baz=318						
CCM	Cathedral Cave	96.47	40	P	P	18 45 02.5	+0.7
	baz=315						
S41A	Jillco Farms,	96.52	40	P	P	18 45 03.4	+1.3
	baz=315						
J49A	Marlette	96.61	31	P	P	18 45 03.8	+1.5
	baz=322						
ALGO	Algonquin Park	96.69	27	P	P	18 45 03.3	+0.7
	baz=326						
U40A	Yellville	96.75	42	P	P	18 45 03.8	+0.7
	baz=314						
WHTX	Lake Whitney,	96.87	47	P	P	18 45 05.4	+1.7
	baz=311						
P44A	Sand Creek, Wi	96.87	37	P	P	18 45 04.9	+1.3
	baz=317						
T41A	Mountain View	96.90	41	P	P	18 45 04.1	+0.3
	baz=315						
BWLO	Walkerton	96.90	30	P	P	18 45 03.0	-0.6
	baz=323						
S42A	Caledonia	96.93	39	P	P	18 45 04.1	+0.2
	baz=316						
W39A	Magazine	97.00	43	P	P	18 45 06.9	+2.6
	baz=313						
R43A	Red Bud	97.04	39	P	Pdif	18 45 06.9	+2.5
	baz=316						
Q44A	Meyer Farm, Va	97.08	38	P	Pdif	18 45 05.9	+1.3
	baz=317						
L48A	N Adams	97.11	33	P	Pdif	18 45 05.6	+0.9
	baz=320						
AAM	Ann Arbor	97.20	32	PFAKE		18 45 20.0	+15
AAM				LR	LR		
	comp=Z,1µm,19.0s						
T42A	Van Buren	97.28	40	P	Pdif	18 45 05.8	+0.2
	baz=315						
U41A	Viola	97.30	41	P	Pdif	18 45 06.6	+1.0
	baz=315						
N47A	Urbana	97.31	34	P	Pdif	18 45 06.4	+0.8
	baz=320						
F55A	Otter Lake	97.45	26	P	Pdif	18 45 07.6	+1.5
	baz=327						
Q45A	Warren Harvey,	97.54	37	P	Pdif	18 45 08.4	+1.7
	baz=318						
V41A	Mountainview	97.55	42	P	Pdif	18 45 08.0	+1.2
	baz=315						
O47A	Sheridan	97.56	35	P	Pdif	18 45 08.3	+1.6
	baz=319						
MIAR	Mount Ida	97.57	43	P	Pdif	18 45 07.9	+1.0
	baz=314						
N48A	Decatur	97.66	34	P	Pdif	18 45 08.2	+1.1
	baz=320						
U42A	Revenden	97.68	41	P	Pdif	18 45 08.6	+1.3
	baz=315						
M49A	Liberty Center	97.69	33	P	Pdif	18 45 08.5	+1.2
	baz=321						
W41B	Gary Mavity, V	97.93	42	P	Pdif	18 45 09.1	+0.7
	baz=314						
833A	Chaparral WMA,	97.94	51	P	Pdif	18 45 10.4	+1.8
	baz=309						
V42A	Cord	97.98	41	P	Pdif	18 45 10.4	+1.8
	baz=315						
N49A	Columbus Grove	98.02	34	P	Pdif	18 45 09.8	+1.1
	baz=321						
CASY	Casey	98.34	192	PFAKE		18 45 20.0	+11
CASY				LR	LR		
	comp=Z,385nm,20.0s						
NATX	Nacogdoches	98.80	46	PFAKE		18 45 20.0	+7.6
NATX				LR	LR		
	comp=Z,2µm,20.0s						
ACSO	Alum Creek Sta	99.13	33	PFAKE		18 45 30.0	+16
ACSO				LR	LR		
	comp=Z,1µm,20.0s						
LONY	Lake Ozonia	99.14	26	PFAKE		18 45 30.0	+16
LONY				LR	LR		
	comp=Z,1µm,19.0s						
KVTX	Kingsville	99.45	51	PFAKE		18 45 30.0	+15
KVTX				LR	LR		
	comp=Z,2µm,20.0s						
PTCN	Pitcairn Islan	100.17	113	PFAKE		18 45 30.0	+12
PTCN				LR	LR		
	comp=Z,4µm,20.0s						
PKME	Peaks-Kenny Pk	100.44	22	PFAKE		18 45 30.0	+11
PKME				LR	LR		
	comp=Z,1µm,19.0s						
BLA	Blacksburg	102.74	34	PFAKE		18 45 40.0	+10
BLA				LR	LR		
	comp=Z,1µm,19.0s						
CBN	Corbin Frederi	103.36	31	PFAKE		18 45 40.0	+7.5
CBN				LR	LR		
	comp=Z,1µm,22.0s						
KMBO	Kilima Mbogo	103.40	276	PFAKE		18 45 40.0	+6.5
KMBO				LR	LR		
	comp=Z,864nm,21.0s						
BRAL	Brewton	103.83	42	PFAKE		18 45 50.0	+15
BRAL				LR	LR		
	comp=Z,1µm,20.0s						
GOGA	Godfrey	104.15	38	PFAKE		18 45 50.0	+14
GOGA				LR	LR		
	comp=Z,2µm,22.0s						
ESDC	Sonseca Array	104.36	334	PP	PP	18 49 55.9	+1.4
	comp=Z,1.3nm,0.8s,baz=22,slow=7.1,SNR=3.5						
PAB	San Pablo	104.62	334	PFAKE		18 45 50.0	+12
PAB				LR	LR		
	comp=Z,1µm,20.0s						
CNNC	Cliffs of the	105.54	33	PFAKE		18 50 10.0	+14
CNNC				LR	LR		
	comp=Z,1µm,19.0s						
NHSC	New Hope	106.12	36	PFAKE		18 50 10.0	+13
NHSC				LR	LR		
	comp=Z,1µm,21.0s						
SBA	Scott Base	108.00	175	PFAKE		18 50 10.0	+11
SBA				LR	LR		
	comp=Z,4µm,19.0s						
MBAR	Mbarara	108.77	280	PFAKE		18 50 10.0	+7.6
MBAR				LR	LR		
	comp=Z,301nm,19.0s						
LSZ	Lusaka	117.90	268	PFAKE		18 50 30.0	+10
LSZ				LR	LR		
	comp=Z,828nm,19.0s						
RPN	Rapa Nui	118.05	107	PFAKE		18 50 30.0	+11
RPN				LR	LR		
	comp=Z,2µm,21.0s						
QSPA	South Pole Qui	119.13	180	*e*PKPdf	PKPdf	18 50 19.3	-1.1
QSPA				LR	LR		
	comp=Z,2µm,19.0s						
MTDJ	Mount Denham	119.21	44	PFAKE		18 50 30.0	+7.8
MTDJ				LR	LR		
	comp=Z,1µm,22.0s						
GTBY	Guantanamo Bay	119.31	41	PFAKE		18 50 30.0	+7.8
GTBY				LR	LR		
	comp=Z,1µm,22.0s						
JTS	JuntasAbangare	119.98	56	PFAKE		18 50 40.0	+16
JTS				LR	LR		
	comp=Z,2µm,19.0s						
GRTK	Grand Turk	120.18	36	PFAKE		18 50 40.0	+16
GRTK				LR	LR		
	comp=Z,3µm,22.0s						
SDDR	Presa de Saban	122.18	38	PFAKE		18 50 40.0	+12
SDDR				LR	LR		
	comp=Z,2µm,20.0s						
TOA1	Torodi Ar. Sit	122.96	312	*e*PKPdf	PKPdf	18 50 28.9	-0.5
TOA1				*e*PP	PP	18 52 04.1	-3.2
TOA1				*e*PKKPbc	PKKPab	19 00 21.9	-0.9
TOA0	Torodi Ar. Sit	122.96	312	*e*PKPdf	PKPdf	18 50 29.0	-0.3
TORD	Torodi Ar. Bea	122.96	312	PKP	PKPdf	18 50 28.9	-0.5
	comp=Z,1.3nm,0.8s,baz=41,slow=1.8,SNR=10						
TORD				PP	PP	18 52 04.1	-3.3
	comp=Z,2.7nm,0.9s,baz=20,slow=9.0,SNR=4.5						
TORD				PKKPbc	PKKPab	19 00 21.9	-0.9
	comp=Z,0.7nm,0.8s,baz=230,slow=3.8,SNR=4.0						
LBTB	Lobatse	123.88	258	*e*PKPdf	PKiKP	18 50 31.5	+0.3
LBTB	Lobatse	123.88	258	*e*PKIKP	PKiKP	18 50 31.5	+0.3
BCIP	Isla Barro Col	124.39	53	PFAKE		18 50 40.0	+7.6
BCIP				LR	LR		
	comp=Z,1µm,22.0s						
BOSA	Boshof	125.30	254	PKP	PKiKP	18 50 34.6	+0.7
	comp=Z,1.5nm,0.9s,baz=110,slow=3.3,SNR=5.1						
SJG	San Juan	125.53	33	PFAKE		18 50 50.0	+15
SJG				LR	LR		
	comp=Z,1µm,22.0s						
ANWB	Willy Bob	127.90	29	PFAKE		18 50 50.0	+11
ANWB				LR	LR		
	comp=Z,956nm,21.0s						
TSUM	Tsumeb	128.75	268	PFAKE		18 50 50.0	+9.0
TSUM				LR	LR		
	comp=Z,9µm,22.0s						
SUR	Sutherland	129.99	251	PFAKE		18 50 50.0	+6.7
SUR				LR	LR		
	comp=Z,6µm,20.0s						
SDV	Santo Domingo	130.65	45	*e*PKPdf	PKPdf	18 50 42.6	-1.7
SDV				LR	LR		
	comp=Z,1µm,20.0s						
OTAV	Otavalo	131.46	60	PFAKE		18 51 00.0	+13
OTAV				LR	LR		
	comp=Z,2µm,19.0s						
DBIC	Dimbokro	132.05	313	*e*PKPdf	PKPdf	18 50 45.2	-1.5
DBIC	Dimbokro	132.05	313	*e*PKIKP	PKPdf	18 50 45.2	-1.5
DBIC	Dimbokro	132.05	313	PKP	PKPdf	18 50 46.9	+0.2
	comp=Z,3.1nm,0.8s,baz=23,slow=3.7,SNR=5.2						
TIC	Toumodi	132.17	313	*e*PKIKP	PKPpre	18 50 44.3	
KIC	Kosan Boka	132.21	313	*e*PKIKP	PKPpre	18 50 44.4	
	comp=Z,15nm,0.9s						
LIC	Lamto	132.50	313	*e*PKIKP	PKPpre	18 50 44.1	
	comp=Z,35nm,1.3s						
GRGR	Grenville	132.84	32	PFAKE		18 51 00.0	+11
GRGR				LR	LR		
	comp=Z,883nm,20.0s						
BBGH	Gun Hill	132.88	29	PFAKE		18 51 00.0	+11
BBGH				LR	LR		
	comp=Z,2µm,20.0s						
SNAA	Sanae	133.53	195	PKiKP	PKPdf	18 50 47.5	-0.3
SACV	Santiago Islan	133.78	341	PFAKE		18 51 00.0	+8.8
SACV				LR	LR		
	comp=Z,538nm,20.0s						
VNA2	Neumayer--Watz	135.06	194	PKiKP	PKiKP	18 50 54.7	+2.6
VNA3	Neumayer Olymp	135.26	193	PKiKP	PKiKP	18 50 52.0	-0.5
VNA1	Neumayer--Stat	135.46	194	PKiKP	PKiKP	18 50 59.7	+6.9
NNA	Nana	139.98	73	PFAKE		18 51 10.0	+6.1
NNA				LR	LR		
	comp=Z,844nm,21.0s						
PMSA	Palmer Station	140.98	163	PFAKE		18 51 10.0	+5.7
PMSA				LR	LR		
	comp=Z,3µm,21.0s						
PTGA	Pitinga	144.64	40	*e*PKPdf	PKPab	18 51 08.1	-0.2
PTGA				LR	LR		
	comp=Z,10µm,19.0s						
SHEL	Horse Pasture	147.51	287	PFAKE		18 51 30.0	+11
SHEL				LR	LR		
	comp=Z,1µm,20.0s						
LPAZ	La Paz	149.43	71	*e*PKPdf	PKPdf	18 51 18.6	+0.2
LPAZ	La Paz	149.43	71	PKPbc	PKPdf	18 51 20.0	+1.7
	comp=Z,19nm,0.8s,baz=220,slow=0.4,SNR=19						
MNMC	Minye Minye	149.52	78	*e*PKPdf	PKPdf	18 51 16.4	-1.6
MNMC				*e*PKPbc	sPKPbc	18 51 24.3	-3.0
PB11	IPOC Station P	149.74	79	*e*PKPbc	PKPbc	18 51 22.5	-0.4
PB11				*e*PKPab	PKPab	18 51 27.3	-1.0
PB01	IPOC Station P	150.39	81	*e*PKPbc	PKPbc	18 51 24.2	-0.2
GO06	Curarrehue	150.73	119	*e*PKPbc	PKiKP	18 51 25.4	+0.1
PLCA	Paso Flores	151.19	122	*e*PKPbc	PKiKP	18 51 26.0	-0.2
LVC	Limon Verde	151.46	84	PFAKE		18 51 30.0	+2.3
LVC				LR	LR		
	comp=Z,1µm,19.0s						
LCO	Las Campanas	151.49	97	*e*PKPbc	PKPbc	18 51 25.9	-1.1
LCO				LR	LR		
	comp=Z,2µm,20.0s						
LCO	Las Campanas	151.49	97	*e*PKIKP	PKPbc	18 51 25.9	-1.1
LCO				MLR	MLR		
	comp=Z,2µm,20.0s						
GO04	Tololo Observa	151.56	100	*e*PKPbc	PKPbc	18 51 27.0	-0.1
ROC1	El Roble	151.58	106	*e*PKPdf	PKPdf	18 51 19.4	-1.5
ROC1				*e*PKPbc	PKPbc	18 51 26.9	-0.2
GO02	Mina Guanaco	151.65	89	*e*PKPdf	PKPdf	18 51 20.2	-1.1
GO02				*e*PKPbc	PKiKP	18 51 27.8	-0.1
GO03	Copiap	151.65	94	*e*PKPdf	PKPdf	18 51 18.8	-2.0
GO03				*e*PKPbc	PKPbc	18 51 26.3	-0.8
EFI	East Falkland	153.17	152	PFAKE		18 51 30.0	+0.2
EFI				LR	LR		
	comp=Z,2µm,21.0s						
CPUP	Villa Florida	162.63	85	PKP	PKPdf	18 51 33.7	-0.9
CPUP				*e*PKPab	pPKPab	18 52 23.7	-2.9
CPUP	Villa Florida	162.63	85	PKP	PKPdf	18 51 33.7	-0.9
	comp=Z,1.1nm,0.8s,baz=194,slow=4.2,SNR=1.6						
CPUP				PKPab	PKPab	18 52 22.6	-0.5
	comp=Z,4.9nm,0.9s,baz=282,slow=5.6,SNR=5.2						
BDFB	Brasilia	163.51	36	PKPab	PKPab	18 52 27.6	+0.6
	comp=Z,4.7nm,0.8s,baz=144,slow=14,SNR=1.8						

IDC 02 18:44:14.9±1.6**, 27°.32N**×**140°.25E, h356**km±29km**, mb2.7**/3**, mb1 2.9**/4**, mb1mx2.6**/58**, mbtmp3.6**/4**, Error ellipse: s-maj=86.5km s-min=20.2km az=78.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.73	97	P	Pn	18 45 04.8	-0.2
	23nm,0.3s,baz=290,slow=23,SNR=30						
JCJ				S	S	18 45 41.2	-4.1
	16nm,0.3s,baz=12,slow=23,SNR=11						
USRK	Ussuriysk Ar.	18.11	341	P	P	18 48 03.2	+0.7
	0.2nm,0.3s,baz=146,slow=10,SNR=4.6						
WRA	Warramunga Arr	47.34	188	P	P	18 52 14.4	+0.1
	0.3nm,0.9s,baz=7.6,slow=8.7,SNR=6.9						
MKAR	Makanchi Array	49.00	309	P	P	18 52 26.4	-0.3
	0.1nm,0.4s,baz=96,slow=8.3,SNR=1.9						
FINES	FINESS Array B	76.98	333	P	P	18 55 28.6	-0.2
	0.6nm,0.3s,baz=68,slow=4.7,SNR=16						

IDC ***02*** *18:52:25.2±0.8, 11°.00N×139°.01E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.8/60, mbtmp3.9/12, Error ellipse: s-maj=28.8km s-min=17.4km az=86.0*

ISCJB ***02*** *18:52:28.2±0.5, 10°.95N±0°.07×138°.9E±0°.1, h31km, mb4.1/17, Error ellipse: s-maj=15.2km s-min=9.5km az=165.2*

NEIC ***02*** *18:52:30.4±0.4, 10°.99N×138°.94E, h35km, mb4.6/6, Error ellipse: s-maj=13.0km s-min=7.8km az=80.0*

ISC 02 18:52:29.7±0.7**, 11°.0N**±0°.1×**139°.0E**±0°.2**, h31**km**, n38, σ0s.82**/38**, mb4.2**/19**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WR1	Warramunga Arr	31.07	188	*e*P	P	18 58 45.2	0.0
	24nm,1.9s						
WRA	Warramunga Arr	31.07	188	P	P	18 58 45.2	0.0
	0.3nm,0.7s,baz=8.6,slow=9.6,SNR=3.0						
AS31	Alice Springs	34.79	188	*e*P	P	18 59 17.6	-0.1
	0.8nm,1.2s						
ASAR	Alice Springs	34.79	188	P	P	18 59 18.8	+1.0
	0.3nm,0.6s,baz=17,slow=12,SNR=9.9						
BJT	Baijiatuau	35.26	329	*e*P	P	18 59 19.5	-2.2
	8.4nm,1.1s						
KLR	Kul'dur	38.59	352	P	P	18 59 50.6	+0.8
	4.2nm,0.7s,baz=160,slow=5.2,SNR=12						
CM01	Chiang Mai Arr	39.31	286	*e*P	P	18 59 57.1	+0.8
CM31	Chiang Mai Arr	39.33	286	*e*P	P	18 59 56.6	+0.1
CMAR	Chiang Mai Arr	39.33	286	P	P	18 59 57.2	+0.7
	1.7nm,0.9s,baz=91,slow=7.1,SNR=14						
STKA	Stephens Creek	42.69	177	*e*P	P	19 00 23.0	-0.8
	14nm,1.5s						
STKA	Stephens Creek	42.69	177	P	P	19 00 23.1	-0.8
	1.3nm,0.9s,baz=338,slow=19,SNR=2.8						
SONA0	Songino Array	45.77	330	*e*P	P	19 00 49.0	+0.4
SONM	Songino Array	45.77	330	P	P	19 00 49.0	+0.4
	0.9nm,0.9s,baz=134,slow=5.5,SNR=4.0						
SONA1	Songino Array	45.77	330	*e*P	P	19 00 48.8	+0.2
JIRN	Jiri	52.09	296	*e*P	P	19 01 38.3	+0.7
GUN	Gumba	52.39	297	*e*P	P	19 01 40.5	+0.7
DMN	Daman	53.03	296	*e*P	P	19 01 45.0	+0.5
DANN	Dangsing	54.30	297	*e*P	P	19 01 54.7	+0.9
KOLN	Koldanda	54.38	296	*e*P	P	19 01 54.9	+0.6
	6.5nm,0.7s						
PYUN	Piuthan	54.95	297	*e*P	P	19 01 58.7	+0.3
	16nm,1.1s						
MK01	Makanchi Array	59.43	318	*e*P	P	19 02 30.1	+0.5
MK31	Makanchi Array	59.45	318	*e*P	P	19 02 30.2	+0.5
MK32	Makanchi Array	59.45	318	*e*P	P	19 02 30.4	+0.7
MKAR	Makanchi Array	59.45	318	*e*P	P	19 02 30.1	+0.4
	17nm,1.0s						
MKAR	Makanchi Array	59.45	318	P	P	19 02 30.4	+0.7
	2.0nm,0.7s,baz=103,slow=9.2,SNR=26						
MAKZ	Makanchi	59.66	318	*e*P	P	19 02 31.6	+0.5
	2.1nm,0.8s						
ZALV	Zalesovo Beam	60.48	327	*e*P	P	19 02 35.7	-0.8
ZALV	Zalesovo Beam	60.48	327	P	P	19 02 36.2	-0.3
	1.4nm,0.8s,baz=123,slow=5.3,SNR=5.0						
ZAA1	Zalesovo Array	60.48	327	*e*P	P	19 02 36.2	-0.3
KURK	Kurchatov	62.93	322	*e*P	P	19 02 52.9	-0.2
	4.9nm,0.9s						
ILAR	Eielson Array	73.39	25	P	P	19 03 57.9	-0.6
	0.8nm,0.7s,baz=253,slow=5.8,SNR=12						
ILB	Eielson Array	73.39	25	*e*P	P	19 03 57.5	-0.9
YKA	Yellowknife Ar	87.78	26	P	P	19 05 16.3	+0.8
	1.2nm,0.7s,baz=292,slow=5.1,SNR=17						
YKB5	Yellowknife Ar	87.78	26	*e*P	P	19 05 16.0	+0.4
FIA0	FINESS Array S	90.99	334	*e*P	P	19 05 29.4	-1.3
FINES	FINESS Array B	90.99	334	P	P	19 05 29.4	-1.3
	0.8nm,0.6s,baz=94,slow=5.6,SNR=3.4						
NV01	Mina Array Sit	93.03	50	*e*P	P	19 05 42.1	+1.2
NVAR	Mina Array Bea	93.03	50	P	P	19 05 42.5	+1.5
	0.7nm,0.7s,baz=259,slow=5.1,SNR=6.4						

IDC ***02*** *18:54:27.2±0.4, 10°.97S×165°.36E, h0km, mb4.8/27, mb1 4.9/29, mb1mx4.8/46, mbtmp4.8/29, ML4.7/2, Error ellipse: s-maj=14.1km s-min=11.6km az=106.0*

NEIC ***02*** *18:54:28.5±0.1, 10°.96S×165°.32E, h10km, mb5.1/154, Error ellipse: s-maj=3.0km s-min=2.5km az=130.0*

BJI ***02*** *18:54:28.7, 10°.72S×165°.43E, h19km, mB5.6/23, mb4.9/57, Ms5.6/14, Ms7 5.5/27*

ISCJB ***02*** *18:54:29.9±0.1, 11°.00S±0°.02×165°.27E±0°.02, h30km, mb5.0/198, Error ellipse: s-maj=3.5km s-min=3.1km az=158.9*

MOS ***02*** *18:54:30.7±0.8, 10°.97S×165°.25E, h34km, mb5.2/56, Error ellipse: s-maj=8.2km s-min=7.5km az=96.6*

ISC 02 18:54:31.5±0.3**, 10°.97S**±0°.05×**165°.33E**±0°.04**, h30**km**, n469, σ1s.12**/494**, mb5.1**/203**, 13C-13D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.51	286	*e*P	Pn	18 55 54.0	+2.5
HNR				*e*S	Sn	18 56 55.0	+1.1
HNR	Honiara	5.51	286	*e*Pn	Pn	18 55 52.2	+0.7
HNR				*e*Sn	Sn	18 56 55.6	+1.7
HNR	Honiara	5.51	286	*e*P	Pn	18 55 52.2	+0.7
HNR				*e*		18 56 55.6	
HNR	Honiara	5.51	286	Pn	Pn	18 55 52.8	+1.2
	39nm,0.3s,baz=146,slow=7.5,SNR=12						
HNR				Sn	Sn	18 56 55.6	+1.7
	baz=156,slow=19,SNR=2.1						
MARNC	Mare, Loyalty	10.77	166	*e*Pn	Pn	18 57 02.6	-1.1
DZM	Mont Dzumac	11.09	175	*e*Pn	Pn	18 57 07.8	-0.5
DZM	Mont Dzumac	11.09	175	Pn	Pn	18 57 08.4	+0.2
	3.8nm,0.3s,baz=316,slow=14,SNR=64						
PINNC	Pines Island,	11.76	170	*e*Pn	Pn	18 57 17.2	0.0
FUNA	Funafuti	13.88	81	*e*Pn	Pn	18 57 46.5	+0.2
MSVF	Nonsavu	14.04	120	*e*Pn	Pn	18 57 49.9	+1.4
MSVF	Nonsavu	14.04	120	*e*P	Pn	18 57 49.9	+1.4
TARA	Tarawa	14.38	32	*e*Pn	Pn	18 57 53.3	+0.1
RABL	Rabaul	14.68	296	*e*Pn	Pn	18 57 58.7	+1.5
PATS	Pohnpei	19.02	338	*e*P	P	18 58 50.5	-0.6
	327nm,1.4s						
EIDS	Eidsvold	19.68	221	*e*P	P	18 58 57.6	-0.7
	45nm,1.0s						
MANU	Manus Island	19.91	295	*e*P	Pn	18 59 02.0	-0.7
	707nm,1.2s						
CTA	Charters Tower	20.47	241	P	Pn	18 59 08.8	-0.4
	78nm,0.9s,baz=72,slow=12,SNR=34						
CTAO	Charters Tower	20.47	241	*e*P	Pn	18 59 08.3	-1.0
	143nm,1.0s						
CTAO	Charters Tower	20.47	241	*e*P	Pn	18 59 08.3	-0.9
CTAO				pmax	pmax		
	comp=Z,143nm,1.0s						
COEN	Coen	21.83	260	*e*P	P	18 59 21.7	+0.1
	comp=Z,46nm,1.1s						
ARMA	Armidale	23.17	211	*e*P	P	18 59 35.5	-0.2
	comp=Z,103nm,1.4s						
OUZ	Omahuta	25.29	164	*e*P	P	18 59 55.2	-0.1
	comp=Z,76nm,1.2s						
TGRZ	Tauranga	28.40	162	P	P	19 00 28.7	+5.4
CAN	Canberra	28.43	209	*e*P	P	19 00 22.8	-0.9
	comp=Z,39nm,1.3s						
CAN	Canberra	28.43	209	*e*P	P	19 00 22.8	-0.9
CAN				pmax	pmax		
	comp=Z,39nm,1.3s						
HIZ	Hauiti	28.72	164	P	P	19 00 36.6	+10
MXZ	Matakaoa Point	28.94	158	*e*P	P	19 00 27.5	-0.5
	comp=Z,142nm,1.3s						
RUGZ	Raukumara Rang	29.08	160	P	P	19 00 33.7	+4.3
URZ	Urewera	29.15	161	*e*P	P	19 00 29.3	-0.7
	comp=Z,94nm,1.2s						
URZ	Urewera	29.15	161	P	P	19 00 30.9	+0.9
	comp=Z,32nm,0.9s,baz=22,slow=3.2,SNR=9.5						
WMGZ	Waiomatatini S	29.20	158	P	P	19 00 32.0	+1.6
H11S2	WAKE ISLAND Hy	29.30	3	T	T	19 31 06.8	
	baz=183,slow=76,SNR=90						
H11S3	WAKE ISLAND Hy	29.31	3	T	T	19 31 07.0	
	baz=183,slow=76,SNR=56						
H11S1	WAKE ISLAND Hy	29.32	3	T	T	19 31 10.3	
	baz=183,slow=76,SNR=26						
TWGZ	Tauwhareparae	29.37	159	P	P	19 00 33.7	+1.7
PUZ	Puketiti	29.37	159	P	P	19 00 32.6	+0.6
RTZ	Ruatahuna	29.44	161	P	P	19 00 31.7	-0.9
MTHZ	Maungataniwha	29.61	162	P	P	19 00 36.4	+2.3
TRVZ	Turoa	29.65	164	P	P	19 00 42.7	+8.0
SNGZ	Shannon Statio	29.70	161	P	P	19 00 37.7	+2.8
BKZ	Black Stump Fm	29.79	162	*e*P	P	19 00 36.1	+0.3
	comp=Z,42nm,1.1s						
BKZ	Black Stump Fm	29.79	162	P	P	19 00 37.5	+1.7
NMHZ	Naumai	29.82	162	P	P	19 00 39.6	+3.6
BHHZ	Black Hill Sta	29.97	163	P	P	19 00 40.0	+2.7

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ARHZ  Aropaoanui       30.04 162   P     P        19 00 40.6 +2.8
WAKE  Wake Island      30.09   3  eP     P        19 00 39.0 +0.6
      comp=Z,163nm,1.1s
STKA  Stephens Creek   30.22 223  eP     P        19 00 39.8 +0.3
      comp=Z,3.3nm,1.0s
STKA  Stephens Creek   30.22 223  eP     P        19 00 39.8 +0.3
STKA                               pmax  pmax
      comp=Z,3.0nm,1.0s
STKA  Stephens Creek   30.22 223   P     P        19 00 40.5 +1.0
      comp=Z,5.0nm,0.6s,baz=39,slow=8.3,SNR=12
KAHZ  Kahuranaki       30.49 162   P     P        19 00 44.7 +2.9
WRAB  Tennant Creek    31.11 250  eP     P        19 00 46.8 -0.8
      comp=Z,73nm,1.4s
WRAB  Tennant Creek    31.11 250⇓iP     P        19 00 47.5 -0.1
WRAB                               pmax  pmax
      comp=Z,65nm,1.8s
WB2   Warramunga Arr   31.11 250  eP     P        19 00 47.0 -0.6
WR1   Warramunga Arr   31.12 250  eP     P        19 00 47.5 -0.1
      comp=Z,108nm,1.5s
WR1                               ePcP   PcP      19 03 43.0 +0.3
WRA   Warramunga Arr   31.12 250   P     P        19 00 47.5 -0.2
      comp=Z,8.9nm,0.8s,baz=80,slow=9.2,SNR=46
WRA                                PcP   PcP      19 03 43.0 +0.3
      comp=Z,6.0nm,1.1s,baz=74,slow=2.9,SNR=8.1
BFZ   Birch Farm       31.13 164  eP     P        19 00 47.5  0.0
      comp=Z,33nm,0.9s
THZ   Tophouse         31.39 169  eP     P        19 00 51.3 +1.5
      comp=Z,35nm,1.0s
GUMO  Guam             31.74 320  eP     P        19 00 53.0  0.0
      comp=Z,214nm,1.1s
GUMO  Guam             31.74 320  eP     P        19 00 53.0  0.0
GUMO                               pmax  pmax
      comp=Z,214nm,1.1s
TOO   Toolangi         31.93 211  eP     P        19 00 55.1 +0.5
      comp=Z,12nm,0.9s
TOO   Toolangi         31.93 211  eP     P        19 00 55.1 +0.5
TOO                                pmax  pmax
      comp=Z,12nm,0.9s
LTZ   Lake Taylor      32.27 170  eP     P        19 00 58.7 +1.2
      comp=Z,28nm,0.9s
AS01  Alice Springs    32.42 243  eP     P        19 00 58.1 -1.0
AS31  Alice Springs    32.46 243  eP     P        19 00 58.0 -1.4
      comp=Z,9.8nm,0.9s
ASAR  Alice Springs    32.46 243   P     P        19 00 58.2 -1.2
      comp=Z,25nm,0.8s,baz=73,slow=9.4,SNR=175
ASAR                               PcP   PcP      19 03 46.8 +0.5
      comp=Z,5.1nm,0.9s,baz=82,slow=3.1,SNR=11
FOZ   Fox Glacier      32.68 174  eP     P        19 01 00.8 -0.2
      comp=Z,19nm,1.1s
OXZ   Oxford           32.76 171  eP     P        19 01 00.8 -0.9
      comp=Z,28nm,1.0s
RPZ   Rata Peaks       33.00 172  eP     P        19 01 03.0 -0.9
      comp=Z,19nm,0.9s
RPZ   Rata Peaks       33.00 172   P     P        19 01 03.7 -0.2
      comp=Z,10nm,1.0s,baz=108,slow=0.7,SNR=6.8
MQZ   McQueen’s Vall   33.23 170  eP     P        19 01 05.5 -0.3
      comp=Z,54nm,1.3s
LBZ   Lake Benmore     33.56 174  eP     P        19 01 07.6 -1.2
FAKI  Fak Fak          33.76 281  eP     P        19 01 11.1 +0.3
      comp=Z,21nm,1.1s
MLZ   Mavora Lakes     34.36 177  eP     P        19 01 15.9 +0.2
DCZ   Deep Cove        34.41 178  eP     P        19 01 16.6 +0.5
      comp=Z,33nm,1.4s
BBOO  Buckleboo        34.58 226  eP     P        19 01 16.7 -1.1
      comp=Z,30nm,1.3s
WHZ   Wether Hill Ro   34.88 177  eP     P        19 01 19.4 -0.7
      comp=Z,36nm,1.4s
TAU   Tasmania Unive   35.48 203  eP     P        19 01 25.0 -0.3
      comp=Z,36nm,1.4s
TAU   Tasmania Unive   35.48 203  eP     P        19 01 25.0 -0.3
TAU                                pmax  pmax
      comp=Z,36nm,1.4s
FITZ  Fitzroy Crossi   39.00 255  eP     P        19 01 54.7 -0.8
      comp=Z,18nm,1.2s
FITZ  Fitzroy Crossi   39.00 255   P     P        19 01 54.2 -1.3
      comp=Z,6.8nm,0.8s,baz=94,slow=8.1,SNR=9.3
FORT  Forrest          39.75 235  eP     P        19 02 02.0 +0.3
      comp=Z,31nm,0.8s
SOEI  Soe              40.39 268  eP     P        19 02 07.8 +0.5
      comp=Z,12nm,1.0s
BATI  Baumata          40.94 267   P     P        19 02 12.3 +0.5
      comp=Z,11nm,1.0s
BATI  Baumata          40.94 267   P     P        19 02 12.3 +0.5
      comp=Z,19nm,0.8s,baz=236,slow=1.8,SNR=7.5
MIDW  Midway           42.40  23  eP     P        19 02 22.0 -1.4
      comp=Z,141nm,1.0s
MMRI  Maumere          42.50 269  eP     P        19 02 22.5 -2.0
      comp=Z,41nm,1.5s
MMRI  Maumere          42.50 269   P     P        19 02 23.0 -1.5
EDFI  Ende, Flores     43.02 269   P     P        19 02 26.7 -2.2
      comp=Z,11nm,0.9s
LUWI  Luwuk            43.39 280  eP     P        19 02 30.2 -1.6
      comp=Z,130nm,1.4s
MBWA  Marble Bar       44.83 251  eP     P        19 02 42.9 -0.3
      comp=Z,20nm,1.1s
BNSI  Bone             45.24 275   P     P        19 02 46.0 -0.6
BNSI                               pP    pwP      19 02 59.3 +0.6
KEKH  Kekaha           47.42  46  eP     P        19 03 02.8 -0.7
      comp=Z,119nm,1.2s
AIN   Ainahou          49.01  52  eP     P        19 03 16.9 +0.9
      comp=Z,158nm,1.2s
MHA   Mahukona         49.13  51  eP     P        19 03 17.0 +0.3
MLH   Mauna Loa        49.13  52  eP     P        19 03 17.3 +0.2
      comp=Z,125nm,1.2s
NWAO  Narrogin (SRO)   49.16 236  eP     P        19 03 16.5 -0.4
      comp=Z,68nm,1.4s
NWAO                              ePP    PP       19 05 08.8 -2.1
NWAO  Narrogin (SRO)   49.16 236   P     P        19 03 17.1 +0.2
      comp=Z,37nm,1.2s,baz=313,slow=5.7,SNR=7.7
MORW  Morawa           49.30 241  eP     P        19 03 18.5 +0.5
      comp=Z,68nm,1.0s
MORW                              ePP    PP       19 05 10.7 -1.5
TSM   Tawau            49.60 285   P     P        19 03 21.5 +1.0
INU   Inuyama          53.28 331  eP     P        19 03 46.9 -0.8
TAOE  Nuku Hiva Isla   53.70  93  eP     P        19 03 51.1 -0.1
      comp=Z,38nm,0.8s
MJAR  Matsushiro Arr   53.71 333   P     P        19 03 50.6 -0.2
      comp=Z,15nm,0.9s,baz=172,slow=8.7,SNR=24
MAJO  Matsushiro       53.72 333  eP     P        19 03 50.2 -0.6
      comp=Z,33nm,0.9s
MAJO  Matsushiro       53.72 333⇓iP     P        19 03 51.2 +0.4
MAJO                               pmax  pmax
      comp=Z,94nm,2.1s
MJB9  Matsu-Tunnel     53.72 333  eP     P        19 03 49.8 -1.0
      comp=Z,35nm,0.9s
UGM   Wanagama         54.09 268  eP     P        19 03 53.3 -0.7
      comp=Z,54nm,1.2s
SMRI  Semarang         54.29 269  eP     P        19 03 54.1 -1.4
      comp=Z,88nm,1.3s
SBUM  Sibu             54.48 281   P     P        19 03 57.7 +0.9
JNU   Nakatsue         54.78 324  eP     P        19 03 59.0 +0.4
      comp=Z,56nm,0.9s
JNU   Nakatsue         54.78 324   P     P        19 03 58.9 +0.2
      comp=Z,42nm,0.9s,baz=146,slow=3.2,SNR=16
TWG   Pinlang          54.83 308  eP     P        19 03 58.4 -0.8
      comp=Z,190nm,1.3s
TPUB  Ta-pu            55.43 308  eP     P        19 04 02.6 -0.9
      comp=Z,78nm,1.3s
SSLB  Suanglung        55.45 309  eP     P        19 04 04.5 +0.9
      comp=Z,54nm,1.5s
YHNB  Yeheng           55.62 310  eP     P        19 04 04.7 -0.3
      comp=Z,88nm,1.4s
KSM   Kuching          56.08 279  eP     P        19 04 09.2 +0.8
      comp=Z,36nm,1.2s
KSM   Kuching          56.08 279   P     P        19 04 09.2 +0.8
CISI  Cisompet, Garu   56.80 268  eP     P        19 04 12.2 -1.3
      comp=Z,83nm,1.5s
CISI  Cisompet, Garu   56.80 268   P     P        19 04 12.6 -1.0
TPI   Tanjungpandan    57.76 274   P     P        19 04 19.4 -0.9
CBJI  Citeko           57.91 269   P     P        19 04 19.9 -1.4
DBJI  Dramaga          57.99 269   P     P        19 04 20.8 -1.1
SKJI  Sukabumi         58.11 269   P     P        19 04 21.9 -0.9
ASAJ  Asahikawa        58.59 341   P     P        19 04 26.1 +0.7
      comp=Z,41nm,1.0s,baz=223,slow=13,SNR=8.5
KSRS  Korea Array      59.58 326   P     P        19 04 33.6 +1.1
      comp=Z,8.3nm,0.9s,baz=139,slow=6.4,SNR=15
KS15  Wonju Array Si   59.59 326  eP     P        19 04 32.8 +0.2
      comp=Z,60nm,1.4s
KSAR  Wonju Array Be   59.59 326   P     P        19 04 33.6 +1.0
KSAR  Wonju Array Be   59.59 326   P     P        19 04 33.6 +1.0
MDSI  Maura Dua        60.85 271   P     P        19 04 40.7 -1.0
YSS   Yuzh-Sakhalins   61.09 343⇑eP     P        19 04 43.6 +1.0
YSS                               e               19 05 00.5
YSS                                pmax  pmax
      comp=Z,40nm,1.0s
YSS                                pmax  pmax
      comp=N,20nm,1.2s
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YSS                                pmax  pmax
      comp=E,30µm,1.3s
YSS                                MLR   MLR
      comp=N,4µm,17.0s
YSS                                MLR   MLR
      comp=Z,5µm,17.0s
YSS                                MLR   MLR
      comp=E,5µm,15.0s
TEY   Ternei           61.49 337⇓eP     P        19 04 45.3  0.0
TEY                                pmax  pmax
      comp=N,10.0nm,2.1s
TEY                                pmax  pmax
      comp=Z,20nm,1.1s
TEY                                MLR   MLR
      comp=E,200nm,20.0s
TEY                                MLR   MLR
      comp=N,200nm,22.0s
TEY                                MLR   MLR
      comp=Z,200nm,23.0s
NJ2   Nanjing          61.68 316  eP     P        19 04 46.4 -0.5
NJ2                                pmax  pmax
      comp=Z,35nm,0.5s
QIZ   Qiongzhong       62.28 298   P     P        19 04 51.0 -0.2
QIZ                                S     S        19 13 16.5 +0.7
MYKOM Kota Tinggi      62.43 278   P     P        19 04 57.6 +5.3
USRK  Ussuriysk Ar.    62.69 334   P     P        19 04 54.9 +1.5
      comp=Z,19nm,1.0s,baz=140,slow=6.2,SNR=21
PET   Petropavlovsk    63.99 356  iP     P        19 05 00.3 -1.5
PET                                pmax  pmax
      comp=Z,34nm,1.3s
MDJ   Mudanjiang       64.09 332   P     P        19 05 04.1 +1.4
MDJ                                pmax  pmax
      comp=Z,27nm,1.2s
MDJ                                pmax  pmax
      comp=Z,220nm,3.1s
MDJ   Mudanjiang       64.09 332  eP     P        19 05 03.0 +0.4
      comp=Z,28nm,1.1s
MDJ                               ePP    PP       19 07 22.4 -1.7
PETK  Petropavlovsk-   64.15 355   P     P        19 05 03.6 +0.6
      comp=Z,5.0nm,0.8s,baz=180,slow=6.2,SNR=5.0
PEA1  Petropavlovsk-   64.16 355  eP     P        19 05 03.6 +0.6
DL2   Dalian           64.17 323   P     P        19 05 04.3 +1.0
DL2                                pmax  pmax
      comp=Z,41nm,1.2s
DL2                                LR    LR
      comp=Z,2µm,16.3s
DL2                                LR    LR
      comp=Z,1µm,12.2s
DL2                                LR    LR
      comp=Z,1µm,14.6s
CN2   Changchun        65.47 329  eP     P        19 05 12.0 +0.3
CN2                               eS     S        19 13 52.6 -1.8
CN2                                pmax  pmax
      comp=Z,30nm,1.1s
CN2                                LR    LR
      comp=Z,4µm,17.0s
IPM   Ipoh             65.80 280  eP     P        19 05 14.4 -0.1
      comp=Z,33nm,1.2s
IPM   Ipoh             65.80 280   P     P        19 05 15.4 +0.9
GRNR  Gornyy           66.43 340  eP     P        19 05 18.8 +1.0
GRNR                               pmax  pmax
      comp=Z,26nm,1.0s
VNDA  Vanda            66.56 181  eP     P        19 05 18.9 +0.6
      comp=Z,25nm,1.4s
VNDA  Vanda            66.56 181  eP     P        19 05 18.9 +0.6
VNDA                               pmax  pmax
      comp=Z,25nm,1.4s
VNDA  Vanda            66.56 181   P     P        19 05 19.2 +0.9
      comp=Z,16nm,1.3s,baz=355,slow=9.8,SNR=11
SKNT  Sakolnakorn      66.69 294   P     P        19 05 21.8 +1.7
      comp=Z,7.4nm,1.4s
KLR   Kul'dur          66.82 337c iP     P        19 05 21.2 +0.9
KLR   Kul'dur          66.82 337   P     P        19 05 21.4 +1.1
      comp=Z,15nm,0.9s,baz=126,slow=4.7,SNR=28
ENH   Enshi            67.53 309  eP     P        19 05 24.9 -0.3
      comp=Z,38nm,1.1s
NONG  Nongkai          67.81 295   P     P        19 05 28.9 +1.7
      comp=Z,0.3nm,1.2s
GYA   Guiyang          68.03 304   P     P        19 05 29.5 +0.9
GYA                                pP    sP       19 05 39.0 -1.2
GYA                                PP    PP       19 08 02.4 +3.3
GYA                                S     S        19 14 21.5 -5.0
GYA                                sS    sS       19 14 42.3 +2.4
GYA                                SKS   SKiKP    19 15 22.8 +0.1
GYA                                pmax  pmax
      comp=Z,20nm,1.0s
GYA                                pmax  pmax
      comp=Z,130nm,6.4s
GYA                                LR    LR
      comp=Z,470nm,18.0s
GYA                                LR    LR
      comp=Z,500nm,18.3s
GYA                                LR    LR
      comp=Z,460nm,17.8s
BJT   Baijiatuau       68.16 321  eP     P        19 05 29.4 +0.5
      comp=Z,29nm,1.3s
BJT   Baijiatuau       68.16 321  eP     P        19 05 29.4 +0.5
BJT                                pmax  pmax
      comp=Z,29nm,1.3s
BJI   Beijing          68.16 321   P     P        19 05 29.5 +0.6
BJI                                S     S        19 14 29.0 +1.8
BJI                                pmax  pmax
      comp=Z,12nm,1.2s
BJI                                LR    LR
      comp=Z,860nm,14.5s
BJI                                LR    LR
      comp=Z,2µm,14.0s
BJI                                LR    LR
      comp=Z,320nm,23.2s
PBKT  Sadao Pong       69.27 292   P     P        19 05 38.6 +2.3
      comp=Z,7.7nm,2.1s
XAN   Xi'an            69.77 313   P     P        19 05 39.4 +0.3
XAN                                pP    pwP      19 05 49.3 -1.1
XAN                                sP    sP       19 05 53.5 +2.3
XAN                                pmax  pmax
      comp=Z,14nm,1.4s
XAN                                pmax  pmax
      comp=Z,630nm,9.5s
XAN   Xi'an            69.77 313  eP     P        19 05 39.0 -0.1
      comp=Z,9.4nm,0.9s
XAN                               ePP    PP       19 08 06.2 -7.7
XAN   Xi'an            69.77 313  eP     P        19 05 39.0 -0.1
XAN                                pmax  pmax
      comp=Z,9.0nm,0.9s
NANT  Nan              70.24 295   P     P        19 05 44.4 +2.1
      comp=Z,4.4nm,1.2s
UTHA  Uthaitani        70.34 291   P     P        19 05 46.9 +4.0
      comp=Z,3.2nm,1.3s,comp=Z,51nm
KMI   Kunming          70.73 302   P     P        19 05 47.2 +1.8
KMI                                pP    sP       19 05 56.7 +0.2
KMI                                sP    pwP      19 06 00.4 +1.4
KMI                                pmax  pmax
      comp=Z,24nm,1.6s
KMI                                LR    LR
      comp=Z,2µm,28.5s
KMI                                LR    LR
      comp=Z,1µm,18.4s
KMI                                LR    LR
      comp=Z,2µm,22.8s
HHC   Hu-ho-hao-te     71.51 320  eP     P        19 05 50.8 +1.1
HHC                                PP    PP       19 08 26.7 -2.1
HHC                                S     S        19 15 13.0 +6.3
HHC                                SKS   SKSac    19 15 47.5 -3.6
HHC                                pmax  pmax
      comp=Z,21nm,1.2s
HHC                                pmax  pmax
      comp=Z,480nm,5.7s
CM01  Chiang Mai Arr   71.68 294  eP     P        19 05 51.7 +0.7
CMAR  Chiang Mai Arr   71.70 294ceP     P        19 05 52.7 +1.5
CMAR  Chiang Mai Arr   71.70 294   P     P        19 05 52.4 +1.2
      comp=Z,2.5nm,1.0s,baz=117,slow=4.1,SNR=17
CMMT  Chiang Mai       71.81 294   P     P        19 05 53.4 +1.6
CHTO  Chiang Mai       71.82 294   P     P        19 05 53.5 +1.6
      comp=Z,49nm,1.6s
HIA   Hailar           72.10 331  eP     P        19 05 53.3 +0.4
      comp=Z,36nm,1.2s
HIA                               ePP    PP       19 08 31.0 -2.6
HIA   Hailar           72.10 331d iP     P        19 05 54.3 +1.4
HIA                                pmax  pmax
      comp=Z,38nm,1.3s
ZEA   Zeya             72.11 337  eP     P        19 05 53.8 +0.9
ZEA                                pmax  pmax
      comp=N,65nm,1.4s
ZEA                                pmax  pmax
      comp=Z,83nm,1.4s
CD2   Chengdu          72.23 307   P     P        19 05 54.0 -0.2
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SEY   Seymchan         74.35 354⇓eP     P        19 06 06.5 +0.6
LZH   Lanzhou          74.40 312  eP     P        19 06 09.3 +2.3
LZH                                pP    sP       19 06 18.9 -0.3
LZH                                sP    PcP      19 06 23.7 +2.1
LZH                               eS     S        19 15 38.6 -1.4
LZH                                sS    sS       19 15 54.3 -0.3
LZH                                pmax  pmax
      comp=Z,56nm,1.1s
CIT   Chita            76.89 330  eP     P        19 06 22.3 +1.6
CIT                               e               19 06 30.4
CIT                                pmax  pmax
      comp=Z,73nm,1.7s
YAK   Yakutsk          77.91 344  eP     P        19 06 25.4 -0.7
YAK                                pmax  pmax
      comp=Z,48nm,0.9s
YAK                                pmax  pmax
      comp=N,21nm,1.2s
YAK                                pmax  pmax
      comp=E,9.0nm,1.2s
YAK                                pmax  pmax
      comp=Z,104nm,1.0s
YAK                                pmax  pmax
      comp=N,37nm,1.1s
YAK                                pmax  pmax
      comp=E,30nm,1.1s
ULN   Ulaanbaatar      78.00 324  eP     P        19 06 26.7 -0.5
      comp=E,15nm,1.1s
ULN   Ulaanbaatar      78.00 324c iP     P        19 06 28.2 +1.0
ULN                                pmax  pmax
      comp=Z,19nm,1.2s
SONA0 Songino Array    78.36 324  eP     P        19 06 29.9 +0.7
SONM  Songino Array    78.36 324   P     P        19 06 29.9 +0.7
      comp=Z,3.8nm,1.0s,baz=137,slow=6.8,SNR=7.0
GTA   Gaotai           78.71 314  eP     P        19 06 32.8 +1.5
GTA                                pP    sP       19 06 43.3 -0.2
GTA                                sP    pwP      19 06 47.2 +4.6
GTA                                pmax  pmax
      comp=Z,13nm,1.4s
GTA                                pmax  pmax
      comp=Z,480nm,9.3s
GTA                                LR    LR
      comp=Z,3µm,18.9s
BILL  Bilibino         78.80   0c iP     P        19 06 31.7 +0.7
BILL                               pmax  pmax
      comp=Z,26nm,1.0s
QSPA  South Pole Qui   79.04 180  eP     P        19 06 33.4 +0.8
      comp=Z,35nm,1.2s
BOD   Bodaibo          80.29 335  eP     P        19 06 39.2  0.0
BOD                                pmax  pmax
      comp=Z,11nm,1.9s
CAST  Castle Rocks     81.00  18  eP     P        19 06 42.5 -0.6
      comp=Z,10nm,0.9s
ZAK   Zakamensk        81.40 325  eP     P        19 06 45.3 -0.2
ZAK                                pmax  pmax
      comp=Z,7.0nm,1.4s
DIV   Divide           81.49  22  eP     P        19 06 45.9 +0.1
      comp=Z,28nm,1.0s
HMT   Hamilton         81.53  23  eP     P        19 06 45.5 -0.4
      comp=Z,29nm,0.6s
KLU   Klutina          81.68  21  eP     P        19 06 47.0 +0.3
      comp=Z,33nm,1.4s
TLY   Talaya           81.83 326  eP     P        19 06 47.6 -0.1
IM3   Indian Mountai   82.46  16  eP     P        19 06 50.6 -0.1
WRH   Wood River Hil   82.99  18  eP     P        19 06 53.3 -0.1
      comp=Z,8.9nm,1.0s
MDM   Murphy Dome      83.28  18  eP     P        19 06 54.6 -0.4
      comp=Z,13nm,1.2s
HDA   Harding Lake     83.30  19  eP     P        19 06 54.9 -0.1
      comp=Z,25nm,1.1s
HDA   Harding Lake     83.30  19   P     P        19 06 54.7 -0.3
      baz=227
TCOL  CIGO, UAF Yank   83.34  18   P     P        19 06 54.8 -0.4
      baz=226
COLA  College          83.34  18⇓iP     P        19 06 55.2  0.0
COLA                               pmax  pmax
      comp=Z,57nm,2.9s
O02D  Mt. Diablo Mer   83.54  47   P     P        19 06 55.8 -1.1
      baz=250,SNR=6.9
ILAR  Eielson Array    83.57  19   P     P        19 06 56.3 -0.1
      comp=Z,6.4nm,0.8s,baz=234,slow=5.0,SNR=53
ILB   Eielson Array    83.57  19  eP     P        19 06 55.9 -0.5
      comp=Z,9.2nm,0.9s
IL1   Eielson Array    83.57  19  eP     P        19 06 55.9 -0.5
POKR  Poker Plat Res   83.64  18   P     P        19 06 56.0 -0.8
      baz=226
L02E  Cave Junction    83.66  45   P     P        19 06 56.9 -0.5
      baz=249
J01E  Myrtle Point     83.79  44   P     P        19 06 57.1 -0.9
      baz=249
K02D  Willamette Mer   83.81  45   P     P        19 06 57.3 -0.9
      baz=249,SNR=5.4
SNCC  San Nicolas Is   83.81  55   P     P        19 06 56.3 -2.0
      baz=253
N02D  Trinity Center   83.88  46   P     P        19 06 58.3 -0.3
      baz=250,SNR=7.4
M02C  Callahan         83.91  46   P     P        19 06 59.4 +0.6
      baz=250,SNR=5.3
SCZ2  Santa Cruz Isl   83.95  54   P     P        19 06 58.7 -0.3
      baz=252
SCRK  Sand Creek       83.98  20  eP     P        19 06 59.2 +0.5
      comp=Z,13nm,1.1s
SMMC  Simmler          84.06  52   P     P        19 06 59.6 -0.1
      baz=252
PKM   Mcpherson Peak   84.08  53   P     P        19 06 59.5 -0.4
      baz=252
YBH   Yreka Blue Hor   84.13  46   P     P        19 07 00.8 +0.9
      baz=258,slow=3.9
I02D  Swisshome        84.19  43   P     P        19 06 59.4 -0.6
      baz=249
HUMO  Hull Mountain    84.27  45  eP     P        19 07 00.6 +0.1
      comp=Z,13nm,1.1s
O03E  Paynes Creek     84.29  47   P     P        19 07 00.6 -0.2
      baz=250,SNR=10
I03D  Drain, OR        84.38  44   P     P        19 07 01.0  0.0
      baz=249
BESE  Bessie Mountai   84.40  27  eP     P        19 07 01.2 +0.4
      comp=Z,25nm,1.3s
BLG   Laguna Peak, P   84.43  54   P     P        19 07 01.1 -0.4
      baz=253
JIS   Juneau Island    84.45  27  eP     P        19 07 00.8 -0.1
      comp=Z,22nm,1.4s
AFDM  Forest Hills D   84.46  49  eP     P        19 07 01.4 -0.2
      comp=Z,16nm,1.1s
WRAK  Wrangell Islan   84.47  30  eP     P        19 07 00.0 -1.1
      comp=Z,41nm,1.4s
HYT   Haines Junctio   84.49  24  eP     P        19 07 02.6 +1.2
      comp=Z,8.2nm,0.8s
PRP   Porcupine Dome   84.50  18  eP     P        19 07 01.5 +0.2
      comp=Z,4.4nm,1.1s
SCI2  San Clemente I   84.52  55   P     P        19 07 01.2 -0.8
      baz=253
L04D  Klamath Falls    84.58  45   P     P        19 07 02.0 -0.3
      baz=250
CMB   Columbia Colle   84.61  50  eP     P        19 07 02.2 -0.1
      comp=Z,5.5nm,0.8s
CMB   Columbia Colle   84.61  50  eP     P        19 07 02.2 -0.1
CMB                                pmax  pmax
      comp=Z,5.0nm,0.8s
MAW   Mawson           84.64 202  eP     P        19 07 02.6 +0.7
      comp=Z,19nm,1.2s
MAW   Mawson           84.64 202  eP     P        19 07 02.6 +0.7
MAW                                pmax  pmax
      comp=Z,19nm,1.2s
SKAG  Skagway          84.65  26  eP     P        19 07 03.3 +1.3
      comp=Z,18nm,1.0s
COR   Corvallis        84.73  43  eP     P        19 07 03.8 +1.1
      comp=Z,28nm,1.3s
COR   Corvallis        84.73  43  eP     P        19 07 03.8 +1.1
COR                                pmax  pmax
      comp=Z,28nm,1.3s
CIS   Catalina Islan   84.75  55   P     P        19 07 02.3 -0.8
      baz=253
M04C  Macdoel          84.76  46   P     P        19 07 02.6 -0.5
      baz=250,SNR=5.8
OSI   Osito Audit: C   84.85  53  eP     P        19 07 04.3 +0.6
      comp=Z,11nm,0.8s
OSI   Osito Audit: C   84.85  53   P     P        19 07 03.6  0.0
      baz=253
ARVC  Arvin            84.92  53   P     P        19 07 04.3 +0.4
      baz=253
VES   Vestal, Richgr   84.93  52   P     P        19 07 03.3 -0.7
      baz=253
FMP   Fort Macarthur   84.93  54   P     P        19 07 03.6 -0.4
      baz=253
G03D  McMinnville, O   84.97  42   P     P        19 07 04.1 +0.1
      baz=249
I04A  Tendick Farm,    85.05  44   P     P        19 07 04.2 -0.2
```

	baz=250						
DECC	**Green Verdugo**	**85.06**	**54**	P	**P**	**19 07 04.3**	**-0.4**
	baz=253						
J04D	**Umpqua Nationa**	**85.07**	**44**	P	**P**	**19 07 04.9**	**+0.1**
	baz=250						
H04D	**Lebanon**	**85.08**	**43**	P	**P**	**19 07 04.3**	**-0.2**
	baz=250						
RUBR	**Rubicon Trail**	**85.10**	**49**	*e*P	**P**	**19 07 05.8**	**+0.8**
	comp=Z,16nm,0.9s						
K04D	**Chiloquin, OR**	**85.11**	**45**	P	**P**	**19 07 04.8**	**0.0**
	baz=250						
PASC	**Pasadena Art C**	**85.15**	**54**	*e*P	**P**	**19 07 05.6**	**+0.5**
	comp=Z,15nm,1.4s						
BEKR	**Beckworth**	**85.20**	**48**	*e*P	**P**	**19 07 05.4**	**-0.1**
	comp=Z,10nm,1.1s						
MWC	**Mount Wilson**	**85.27**	**54**	*e*P	**P**	**19 07 05.9**	**0.0**
	comp=Z,14nm,1.1s						
MWC	**Mount Wilson**	**85.27**	**54**	*e*P	**P**	**19 07 05.9**	**0.0**
MWC				pmax	pmax		
	comp=Z,14nm,1.1s						
FYU	**Fort Yukon**	**85.29**	**18**	*e*P	**P**	**19 07 06.0**	**+1.0**
	comp=Z,14nm,1.2s						
ISA	**Isabella, Lake**	**85.35**	**53**	*e*P	**P**	**19 07 06.8**	**+0.6**
	comp=Z,11nm,1.1s						
ISA	**Isabella, Lake**	**85.35**	**53**	*e*P	**P**	**19 07 06.8**	**+0.6**
ISA				pmax	pmax		
	comp=Z,11nm,1.1s						
ISA	**Isabella, Lake**	**85.35**	**53**	P	**P**	**19 07 06.6**	**+0.4**
	baz=253,SNR=6.9						
F04D	**Rainier, OR**	**85.45**	**42**	P	**P**	**19 07 06.9**	**+0.6**
	baz=249						
WAKR	**Walker**	**85.46**	**50**	*e*P	**P**	**19 07 07.3**	**+0.5**
	comp=Z,33nm,1.4s						
MDPB	**Devils Postpil**	**85.47**	**50**	*e*P	**P**	**19 07 07.1**	**+0.1**
	comp=Z,16nm,1.1s						
WHY	**Whitehorse**	**85.48**	**25**	*e*P	**P**	**19 07 06.3**	**0.0**
	comp=Z,4.9nm,1.0s						
EDW2	**Edwards Air Fo**	**85.50**	**53**	P	**P**	**19 07 07.3**	**+0.4**
	baz=253,SNR=11						
H04A	**Detroit Lake**	**85.51**	**43**	*e*P	**P**	**19 07 06.8**	**+0.1**
	comp=Z,17nm,1.4s						
PNTR	**Pine Nut**	**85.52**	**49**	*e*P	**P**	**19 07 07.5**	**+0.3**
	comp=Z,14nm,1.2s						
OMMB	**Old Mammoth Mi**	**85.52**	**51**	*e*P	**P**	**19 07 07.5**	**+0.2**
	comp=Z,12nm,1.3s						
VCNR	**Virginia City**	**85.54**	**49**	*e*P	**P**	**19 07 07.3**	**+0.1**
	comp=Z,10nm,1.3s						
BFSC	**Mount Baldy Ra**	**85.59**	**54**	P	**P**	**19 07 07.5**	**+0.1**
	baz=254,SNR=5.4						
JIRN	**Jiri**	**85.59**	**299**	*e*P	**P**	**19 07 08.4**	**+0.5**
DAWY	**Dawson**	**85.63**	**21**	*e*P	**P**	**19 07 08.1**	**+1.2**
	comp=Z,17nm,1.1s						
MLAC	**Mammoth, Mammo**	**85.65**	**51**	P	**P**	**19 07 07.4**	**-0.4**
	baz=253						
109C	**Camp Elliot, M**	**85.66**	**55**	P	**P**	**19 07 06.8**	**-0.8**
	baz=254						
CPE	**Camp Elliot**	**85.66**	**55**	*e*P	**P**	**19 07 06.4**	**-1.3**
	comp=Z,5.9nm,0.8s						
J05D	**Fort Rock, OR**	**85.68**	**45**	P	**P**	**19 07 07.0**	**-0.8**
	baz=251						
YERR	**Yerington**	**85.75**	**49**	*e*P	**P**	**19 07 08.4**	**+0.1**
	comp=Z,12nm,1.4s						
MURC	**Murrieta**	**85.78**	**55**	P	**P**	**19 07 08.2**	**-0.1**
	baz=254						
PAHR	**Pah Rah Range**	**85.87**	**48**	*e*P	**P**	**19 07 08.8**	**0.0**
	comp=Z,29nm,1.5s						
CWC	**Cottonwood Cre**	**85.88**	**52**	P	**P**	**19 07 09.0**	**+0.1**
	baz=253						
MOD	**Modoc Plateau**	**85.89**	**46**	*e*P	**P**	**19 07 08.8**	**-0.1**
	comp=Z,11nm,1.1s						
E04D	**Cinebar**	**85.91**	**41**	P	**P**	**19 07 08.7**	**+0.2**
	baz=250						
LRMC	**Laurel Mtn Rad**	**85.92**	**53**	P	**P**	**19 07 08.9**	**-0.1**
	baz=254,SNR=7.3						
GUN	**Gumba**	**85.92**	**299**	*e*P	**P**	**19 07 10.1**	**+0.6**
TIXI	**Tiksi**	**85.94**	**349**	*e*P	**P**	**19 07 07.7**	**-0.4**
	comp=Z,9.6nm,1.2s						
TIXI	**Tiksi**	**85.94**	**349**	⇑*i*P	**P**	**19 07 07.3**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,17nm,1.8s						
TIN	**Tinemaha, Big**	**85.94**	**51**	P	**P**	**19 07 09.4**	**+0.3**
	baz=253						
BAR	**Barrett**	**85.95**	**56**	*e*P	**P**	**19 07 09.6**	**+0.4**
	comp=Z,8.2nm,1.3s						
I05D	**Terrebonne, OR**	**85.96**	**44**	P	**P**	**19 07 09.5**	**+0.5**
	baz=250						
D04E	**Lakebay**	**85.99**	**41**	P	**P**	**19 07 10.0**	**+1.0**
	baz=249						
PINE	**Pine Mountain**	**86.05**	**44**	*e*P	**P**	**19 07 09.7**	**+0.1**
	comp=Z,17nm,1.1s						
PGC	**Sidney**	**86.09**	**39**	*e*P	**P**	**19 07 09.8**	**+0.4**
	comp=Z,43nm,1.4s						
RYN	**Ryan**	**86.18**	**50**	*e*P	**P**	**19 07 10.5**	**+0.1**
	comp=Z,12nm,1.2s						
DAC	**Darwin (Calif)**	**86.21**	**52**	*e*P	**P**	**19 07 11.6**	**+1.0**
	comp=Z,12nm,1.2s						
MONP2	**Monument Peak**	**86.21**	**56**	P	**P**	**19 07 10.3**	**-0.3**
	baz=254,SNR=9.1						
MPMC	**Manual Prospec**	**86.23**	**52**	P	**P**	**19 07 10.9**	**+0.2**
	baz=254,SNR=8.9						
PKI	**Pulchoki**	**86.24**	**299**	*e*P	**P**	**19 07 11.3**	**+0.2**
	comp=Z,23nm,1.1s						
PKIN	**Phulchoki**	**86.25**	**299**	*e*P	**P**	**19 07 11.0**	**-0.1**
NV01	**Mina Array Sit**	**86.29**	**50**	*e*P	**P**	**19 07 11.1**	**+0.2**
NVAR	**Mina Array Bea**	**86.29**	**50**	P	**P**	**19 07 11.8**	**+0.9**
	comp=Z,7.3nm,1.0s,baz=233,slow=7.7,SNR=33						
PFO	**Pinyon Flats O**	**86.38**	**55**	*e*P	**P**	**19 07 11.0**	**-0.3**
	comp=Z,17nm,1.5s						
PFO	**Pinyon Flats O**	**86.38**	**55**	P	**P**	**19 07 11.4**	**0.0**
	baz=254						
XPFO	**Pion Flat**	**86.38**	**55**	*e*P	**P**	**19 07 11.0**	**-0.3**
	comp=Z,18nm,1.5s						
NV11	**Mina Array Sit**	**86.40**	**50**	*e*P	**P**	**19 07 11.3**	**-0.1**
	comp=Z,1.0nm,1.1s						
IKP	**In-Ko-Pah, Jac**	**86.40**	**56**	P	**P**	**19 07 11.5**	**0.0**
	baz=255,SNR=6.8						
LON	**Longmire**	**86.46**	**41**	*e*P	**P**	**19 07 11.0**	**-0.4**
	comp=Z,13nm,1.3s						
DMN	**Daman**	**86.51**	**299**	*e*P	**P**	**19 07 12.9**	**+0.6**
	comp=Z,39nm,1.1s						
DLBC	**Dease Lake**	**86.54**	**28**	*e*P	**P**	**19 07 11.8**	**+0.3**
GSC	**Goldstone, Bar**	**86.56**	**53**	*e*P	**P**	**19 07 10.8**	**-1.4**
	comp=Z,15nm,1.5s						
GSC	**Goldstone, Bar**	**86.56**	**53**	*e*P	**P**	**19 07 10.8**	**-1.4**
GSC				pmax	pmax		
	comp=Z,15nm,1.5s						
GSC	**Goldstone, Bar**	**86.56**	**53**	P	**P**	**19 07 12.5**	**+0.3**
	baz=254						
KVN	**Kaiserville**	**86.62**	**49**	*e*P	**P**	**19 07 12.4**	**-0.2**
	comp=Z,9.0nm,1.1s						
KVN	**Kaiserville**	**86.62**	**49**	*e*P	**P**	**19 07 12.4**	**-0.2**
KVN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SWSC	**Sam W. Stewart**	**86.73**	**56**	P	**P**	**19 07 13.4**	**+0.5**
	baz=255						
B05A	**Bryant**	**86.80**	**40**	P	**P**	**19 07 13.6**	**+0.7**
	baz=250						
HEC	**Hector,Ludlow**	**86.80**	**54**	P	**P**	**19 07 13.5**	**+0.1**
	baz=254						
FURC	**Furnace Creek,**	**86.83**	**52**	P	**P**	**19 07 14.0**	**+0.7**
	baz=254						
BELC	**Belle Mtn. Jos**	**86.85**	**55**	P	**P**	**19 07 13.8**	**+0.1**
	baz=255,SNR=12						
I07A	**Izee**	**87.13**	**44**	*e*P	**P**	**19 07 14.7**	**-0.1**
	comp=Z,9.4nm,1.0s						
BC3	**Big Chuckawall**	**87.19**	**55**	P	**P**	**19 07 15.8**	**+0.5**
	baz=255,SNR=5.2						
WVOR	**Wild Horse Val**	**87.23**	**46**	*e*P	**P**	**19 07 15.9**	**+0.6**
	comp=Z,20nm,1.3s						
WVOR	**Wild Horse Val**	**87.23**	**46**	*e*P	**P**	**19 07 15.9**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,20nm,1.3s						
B06A	**Marblemount**	**87.27**	**40**	*e*P	**P**	**19 07 15.4**	**+0.2**
	comp=Z,7.4nm,0.7s						
TUQ	**Turquoise Moun**	**87.29**	**53**	P	**P**	**19 07 16.4**	**+0.6**
	baz=255						
GMRC	**Granite Mounta**	**87.32**	**54**	P	**P**	**19 07 15.8**	**-0.2**
	baz=255,SNR=7.4						
LTY	**Liberty**	**87.37**	**41**	*e*P	**P**	**19 07 15.6**	**-0.2**
	comp=Z,16nm,1.4s						
F07A	**Phinny Hill Vi**	**87.41**	**42**	*e*P	**P**	**19 07 16.2**	**+0.3**
	comp=Z,16nm,1.4s						
TPNV	**Topopah Spring**	**87.44**	**52**	*e*P	**P**	**19 07 16.7**	**+0.2**
	comp=Z,2.5nm,1.2s						
TPNV	**Topopah Spring**	**87.44**	**52**	*e*P	**P**	**19 07 16.7**	**+0.2**
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TPNV	**Topopah Spring**	**87.44**	**52**	P	**P**	**19 07 16.7**	**+0.2**
	baz=254,SNR=7.5						
GLA	**Glamis**	**87.55**	**56**	*e*P	**P**	**19 07 17.7**	**+0.7**
	comp=Z,34nm,1.3s						
GLA	**Glamis**	**87.55**	**56**	*e*P	**P**	**19 07 17.7**	**+0.7**
GLA				pmax	pmax		
	comp=Z,34nm,1.3s						
GLA	**Glamis**	**87.55**	**56**	P	**P**	**19 07 17.9**	**+0.9**
	baz=255						
IRM	**Iron Mountain**	**87.57**	**55**	P	**P**	**19 07 17.4**	**+0.3**
	baz=255,SNR=16						
J08A	**Circle Bar Ran**	**87.62**	**45**	*e*P	**P**	**19 07 17.8**	**+0.6**
	comp=Z,17nm,1.3s						
BMN	**Battle Mountai**	**87.67**	**48**	*e*P	**P**	**19 07 17.7**	**+0.2**
	comp=Z,8.0nm,1.4s						
BMN	**Battle Mountai**	**87.67**	**48**	*e*P	**P**	**19 07 17.7**	**+0.2**
BMN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LLLB	**Lillooet**	**87.74**	**38**	*e*P	**P**	**19 07 18.1**	**+0.6**
	comp=Z,9.2nm,1.4s						
HAWA	**Hanford**	**87.83**	**42**	*e*P	**P**	**19 07 17.7**	**-0.3**
	comp=Z,15nm,1.4s						
LDFC	**Landfair**	**87.84**	**54**	*e*P	**P**	**19 07 18.7**	**+0.3**
	comp=Z,25nm,1.3s						
DANN	**Dangsing**	**87.84**	**299**	*e*P	**P**	**19 07 18.2**	**-0.6**
	comp=Z,23nm,1.0s						
KOLN	**Koldanda**	**87.84**	**299**	*e*P	**P**	**19 07 18.2**	**-0.5**
	comp=Z,33nm,1.6s						
G08A	**Pilot Rock**	**87.87**	**43**	*e*P	**P**	**19 07 18.4**	**+0.1**
	comp=Z,14nm,1.1s						
Y12C	**Blythe**	**87.97**	**55**	*e*P	**P**	**19 07 18.5**	**-0.4**
	comp=Z,19nm,1.1s						
Y12C	**Blythe**	**87.97**	**55**	P	**P**	**19 07 19.5**	**+0.6**
	baz=255						
SHPR	**Sheep Range**	**88.16**	**52**	*e*P	**P**	**19 07 19.9**	**-0.1**
	comp=Z,6.3nm,1.3s						
E08A	**Dider Farm, El**	**88.17**	**42**	*e*P	**P**	**19 07 20.1**	**+0.5**
	comp=Z,12nm,1.1s						
R11A	**Troy Canyon, C**	**88.32**	**51**	*e*P	**P**	**19 07 21.1**	**+0.4**
	comp=Z,9.8nm,1.3s						
R11A	**Troy Canyon, C**	**88.32**	**51**	P	**P**	**19 07 20.6**	**-0.1**
	baz=255,SNR=6.6						
113A	**Mohawk Valley,**	**88.34**	**56**	*e*P	**P**	**19 07 21.2**	**+0.5**
	comp=Z,18nm,1.4s						
SRIG	**Santa Rosalia**	**88.35**	**62**	*e*P	**P**	**19 07 19.5**	**-1.4**
	comp=Z,21nm,0.7s						
PDMCI	**Parker Dam,Lak**	**88.41**	**55**	P	**P**	**19 07 21.4**	**+0.4**
	baz=256,SNR=8.7						
D08A	**Wollman Farm,**	**88.44**	**42**	*e*P	**P**	**19 07 21.1**	**+0.3**
	comp=Z,4.4nm,1.0s						
PYUN	**Piuthan**	**88.45**	**299**	*e*P	**P**	**19 07 20.8**	**-0.8**
	comp=Z,19nm,1.0s						
B08A	**Colville Reser**	**88.57**	**40**	*e*P	**P**	**19 07 21.5**	**0.0**
	comp=Z,18nm,1.4s						
WMQ	**Urumqi**	**88.75**	**315**	*e*P	**P**	**19 07 22.8**	**+0.3**
WMQ				sP	pwP	19 07 39.0	+5.1
WMQ				PP	**PP**	**19 10 49.5**	**-2.3**
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				LR	LR		
	comp=Z,3µm,25.5s						
WMQ	**Urumqi**	**88.75**	**315**	*e*P	**P**	**19 07 21.5**	**-1.0**
	comp=Z,6.0nm,0.7s						
WMQ	**Urumqi**	**88.75**	**315**	*e*P	**P**	**19 07 21.5**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
E09A	**Wood Farm, Sta**	**88.78**	**42**	*e*P	**P**	**19 07 22.4**	**0.0**
	comp=Z,14nm,1.4s						
W13A	**Hualapai Mount**	**88.81**	**54**	*e*P	**P**	**19 07 22.1**	**-1.1**
	comp=Z,20nm,1.4s						
BMO	**Blue Mountains**	**88.86**	**44**	*e*P	**P**	**19 07 22.8**	**-0.2**
	comp=Z,8.4nm,1.3s						
BMO	**Blue Mountains**	**88.86**	**44**	*e*P	**P**	**19 07 22.8**	**-0.2**
BMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
214A	**Organ Pipe Nat**	**88.93**	**57**	P	**P**	**19 07 23.9**	**+0.3**
	baz=256						
ELK	**Elko**	**89.20**	**48**	*e*P	**P**	**19 07 25.2**	**+0.4**
	comp=Z,5.1nm,1.2s						
ELK	**Elko**	**89.20**	**48**	*e*P	**P**	**19 07 25.3**	**+0.4**
ELK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
F10A	**Beach Ranch, E**	**89.23**	**43**	*e*P	**P**	**19 07 24.7**	**0.0**
	comp=Z,9.4nm,1.2s						
Y14A	**Wickenburg**	**89.24**	**55**	*e*P	**P**	**19 07 25.4**	**+0.4**
	comp=Z,7.8nm,1.1s						
MFID	**Camas Ranch**	**89.49**	**46**	*e*P	**P**	**19 07 25.6**	**-0.4**
	comp=Z,17nm,1.5s						
PSUT	**Pine Spring**	**89.68**	**51**	*e*P	**P**	**19 07 27.6**	**+0.5**
	comp=Z,9.3nm,1.2s						
LCMT	**Little Creek M**	**89.78**	**52**	*e*P	**P**	**19 07 28.2**	**+0.7**
	comp=Z,13nm,1.2s						
CCUT	**Cedar City**	**89.82**	**52**	*e*P	**P**	**19 07 28.7**	**+0.8**
	comp=Z,13nm,1.2s						
HSIG		**89.84**	**61**	*e*P	**P**	**19 07 28.6**	**+0.8**
	comp=Z,7.1nm,0.8s						
NEW	**Newport**	**89.95**	**41**	*e*P	**P**	**19 07 27.3**	**-0.7**
	comp=Z,2.8nm,0.8s						
NEW	**Newport**	**89.95**	**41**	*e*P	**P**	**19 07 27.3**	**-0.7**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NEW	**Newport**	**89.95**	**41**	P	**P**	**19 07 27.9**	**0.0**
	baz=254						
NEW	**Newport**	**89.95**	**41**	P	**P**	**19 07 26.5**	**-1.5**
	comp=Z,1.5nm,0.6s,baz=139,slow=3.9,SNR=5.1						
U15A	**North Rim**	**90.39**	**53**	*e*P	**P**	**19 07 31.6**	**+1.0**
	comp=Z,16nm,1.1s						
HLID	**Hailey**	**90.52**	**46**	P	**P**	**19 07 31.4**	**+0.5**
	baz=255						
DGZ	**Jazzator, Alta**	**90.58**	**321**	*d i*P	**P**	**19 07 31.2**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
X16A	**Lo Mia Camp, P**	**90.61**	**55**	*e*P	**P**	**19 07 32.6**	**+1.1**
	comp=Z,11nm,1.2s						
TUC	**Tucson**	**90.69**	**57**	P	**P**	**19 07 31.6**	**-0.2**
	baz=258						
DUG	**Dugway, Tooele**	**90.86**	**49**	P	**P**	**19 07 32.8**	**+0.3**
	baz=256						
WUAZ	**Wupatki**	**90.91**	**54**	P	**P**	**19 07 33.1**	**+0.2**
	baz=257						
MSO	**Missoula**	**91.65**	**43**	P	**P**	**19 07 36.2**	**+0.2**
	baz=256						
SYO	**Syowa Base**	**91.74**	**197**	⇓*e*P	**P**	**19 07 35.0**	**-0.8**
SYO	**Syowa Base**	**91.74**	**197**	⇓*e*PcP	**PcP**	**19 07 36.4**	**-0.3**
W18A	**Petrified Fore**	**92.13**	**55**	P	**P**	**19 07 38.4**	**-0.2**
	baz=258						
WALA	**Waterton Lakes**	**92.22**	**41**	*e*P	**P**	**19 07 39.7**	**+1.1**
	comp=Z,18nm,1.3s						
BOZ	**Bozeman (W)**	**92.93**	**44**	P	**P**	**19 07 42.0**	**0.0**
	baz=257						
FXWY	**Fox Creek**	**92.93**	**46**	*e*P	**P**	**19 07 42.8**	**+0.7**
	comp=Z,6.9nm,1.4s						
HRY	**Holter Researc**	**93.04**	**43**	*e*P	**P**	**19 07 43.3**	**+0.9**
MK01	**Makanchi Array**	**93.17**	**317**	*e*P	**P**	**19 07 42.6**	**-0.3**
MK32	**Makanchi Array**	**93.18**	**317**	*e*P	**P**	**19 07 43.0**	**+0.1**
MKAR	**Makanchi Array**	**93.18**	**317**	*ce*P	**P**	**19 07 43.5**	**+0.5**
MKAR	**Makanchi Array**	**93.18**	**317**	P	**P**	**19 07 43.0**	**0.0**
	comp=Z,4.7nm,0.8s,baz=101,slow=6.3,SNR=44						
ZAA0	**Zalesovo Array**	**93.25**	**324**	*e*P	**P**	**19 07 41.8**	**-1.3**
	comp=Z,10nm,1.1s						
ZALV	**Zalesovo Beam**	**93.25**	**324**	*e*P	**P**	**19 07 40.8**	**-2.2**
ZALV	**Zalesovo Beam**	**93.25**	**324**	*ce*P	**P**	**19 07 42.5**	**-0.6**
ZALV	**Zalesovo Beam**	**93.25**	**324**	P	**P**	**19 07 43.2**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=108,slow=4.8,SNR=17						
ZAA1	**Zalesovo Array**	**93.25**	**324**	*e*P	**P**	**19 07 43.2**	**+0.2**
MAKZ	**Makanchi**	**93.40**	**317**	*e*P	**P**	**19 07 43.8**	**-0.1**
	comp=Z,10nm,1.1s						
MAKZ	**Makanchi**	**93.40**	**317**	*e*P	**P**	**19 07 43.8**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BW06	**Boulder Array**	**93.80**	**47**	P	**P**	**19 07 45.8**	**-0.4**
	baz=259						
PDAR	**Pinedale Array**	**93.80**	**47**	P	**P**	**19 07 45.7**	**-0.5**
	comp=Z,1.7nm,1.0s,baz=250,slow=3.0,SNR=8.9						
O20A	**White River Ci**	**94.27**	**50**	P	**P**	**19 07 47.8**	**-0.6**
	baz=259						
NVS	**Novosibirsk**	**94.36**	**325**	*e*P	**P**	**19 07 47.0**	**-1.1**
NVS				pmax	pmax		
	comp=Z,15nm,1.7s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.8s						
EGMT	**Eagleton**	**94.69**	**42**	P	**P**	**19 07 50.6**	**+0.6**
	baz=259						
ANMO	**Albuquerque**	**94.74**	**55**	⇓*e*P	**P**	**19 07 51.2**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,15nm,2.9s						
ANMO	**Albuquerque**	**94.74**	**55**	P	**P**	**19 07 49.9**	**-0.8**
	baz=260						
S22A	**4UR Ranch, Cre**	**94.93**	**53**	P	**P**	**19 07 51.3**	**-0.3**
	baz=260						
MNTX	**Cornudas Mount**	**95.08**	**59**	P	**P**	**19 07 51.8**	**-0.2**
	baz=260						
YKA	**Yellowknife Ar**	**95.09**	**27**	P	**P**	**19 07 50.2**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=256,slow=4.7,SNR=20						
YKB5	**Yellowknife Ar**	**95.09**	**27**	*e*P	**P**	**19 07 49.3**	**-2.0**
SDCO	**Great Sand Dun**	**95.97**	**53**	P	**P**	**19 07 56.2**	**-0.1**
	baz=261						
LTX	**Lajitas**	**96.15**	**61**	*e*P	**P**	**19 07 57.6**	**+0.5**
LTX	**Lajitas**	**96.15**	**61**	*e*P	**P**	**19 07 57.6**	**+0.5**
TXAR	**Lajitas Array**	**96.15**	**61**	P	**P**	**19 07 57.6**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=237,slow=3.1,SNR=3.3						
KURK	**Kurchatov**	**96.32**	**320**	⇑*e*P	**P**	**19 07 59.4**	**+2.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KSH	**Kashi**	**96.39**	**309**	*e*P	**P**	**19 08 01.1**	**+3.2**
KSH				*e*pP	pwP	19 08 11.5	+0.7
KSH				*e*PP	**PP**	**19 11 57.6**	**+5.6**
KSH				*e*S	**S**	**19 19 15.6**	**-0.9**
KSH				*e*sS	sS	19 19 35.9	+4.7
KSH				LR	LR		
	comp=Z,3µm,16.7s						
BRVK	**Borovoye**	**101.70**	**322**	⇑*e*P	**Pdif**	**19 08 19.6**	**-1.6**
ARA0	**ARCESS Array S**	**116.16**	**345**	*e*PKPdf	**PKPdf**	**19 13 11.3**	**+0.1**
ARCES	**ARCESS Array B**	**116.16**	**345**	PKIKP	**PKPdf**	**19 13 11.3**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**116.16**	**345**	PKP	**PKPdf**	**19 13 11.3**	**+0.1**
	comp=Z,6.0nm,1.2s,baz=348,slow=5.3,SNR=4.4						
LVC	**Limon Verde**	**117.26**	**122**	*c i*PKIKP	**PKPdf**	**19 13 14.0**	**-1.2**
LVC				pmax	pmax		
	comp=Z,49nm,1.7s						
VRH	**Novokhopyorsk**	**119.27**	**323**	*e*PKIKP	**PKPdf**	**19 13 14.7**	**-3.0**
VRH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LPSR	**Galich'ya Gora**	**120.34**	**325**	*e*PKIKP	**PKPdf**	**19 13 18.6**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NCK	**Nalchik**	**120.36**	**314**	⇓*i*PKIKP	**PKiKP**	**19 13 20.7**	**+0.5**
OBN	**Obninsk**	**120.52**	**329**	*i* PKIKP	**PKPdf**	**19 13 19.4**	**-0.6**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VSR	**Storozhevoye**	**120.75**	**324**	*e*PKIKP	**PKPdf**	**19 13 17.1**	**-3.5**
VSR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
NEY	**Neytrino**	**121.04**	**314**	⇑*i*PKIKP	**PKPdf**	**19 13 21.4**	**-0.2**
FIA0	**FINESS Array S**	**121.55**	**338**	*e*PKPdf	**PKiKP**	**19 13 22.8**	**+0.9**
FIA0	**FINESS Array S**	**121.55**	**338**	*e*PKIKP	**PKiKP**	**19 13 22.8**	**+0.9**
FINES	**FINESS Array B**	**121.55**	**338**	PKP	**PKiKP**	**19 13 22.8**	**+0.9**
	comp=Z,3.5nm,1.0s,baz=321,slow=4.9,SNR=3.6						
VSU	**Vasula**	**123.22**	**335**	⇓*i*PKIKP	**PKiKP**	**19 13 26.2**	**+0.9**
CPUP	**Villa Florida**	**124.38**	**133**	*e*PKPdf	**PKPdf**	**19 13 28.2**	**-0.2**
CPUP	**Villa Florida**	**124.38**	**133**	*e*PKIKP	**PKPdf**	**19 13 28.2**	**-0.2**
CPUP	**Villa Florida**	**124.38**	**133**	PKP	**PKiKP**	**19 13 28.6**	**0.0**
	comp=Z,5.0nm,1.0s,baz=47,slow=5.2,SNR=5.1						
BOSA	**Boshof**	**124.89**	**223**	PKP	**PKiKP**	**19 13 29.9**	**+0.1**
	comp=Z,4.4nm,0.9s,baz=40,slow=0.1,SNR=7.8						
SDV	**Santo Domingo**	**124.90**	**87**	*e*PKPdf	**PKPdf**	**19 13 29.2**	**-0.7**
SDV	**Santo Domingo**	**124.90**	**87**	PKP	**PKPdf**	**19 13 29.9**	**0.0**
	comp=Z,2.4nm,0.3s,baz=231,slow=6.4,SNR=8.4						
AKASG	**Malin Array Be**	**126.57**	**327**	PKP	**PKPdf**	**19 13 31.6**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=58,slow=2.1,SNR=9.2						
AKBB	**Malin Array Si**	**126.57**	**327**	*e*PKPdf	**PKPdf**	**19 13 31.7**	**0.0**
AKBB	**Malin Array Si**	**126.57**	**327**	*e*PKIKP	**PKPdf**	**19 13 31.7**	**0.0**
KIEV	**Kiev**	**126.58**	**327**	⇓*e*PKIKP	**PKPdf**	**19 13 31.0**	**-0.8**
AK11	**Malin Array Si**	**126.61**	**327**	*e*PKPdf	**PKPdf**	**19 13 30.8**	**-1.0**
KMBO	**Kilima Mbogo**	**127.00**	**260**	*c i*PKIKP	**PKiKP**	**19 13 35.9**	**+1.4**
BR101	**Keskin Array S**	**128.61**	**313**	*e*PKPdf	**PKiKP**	**19 13 37.0**	**+0.2**
BRTR	**Keskin Array B**	**128.61**	**313**	PKP	**PKiKP**	**19 13 37.0**	**+0.2**
	comp=Z,1.6nm,1.0s,baz=205,slow=2.6,SNR=7.0						
LSZ	**Lusaka**	**130.18**	**239**	*e*PKPdf	**PKiKP**	**19 13 40.8**	**+0.1**
LSZ	**Lusaka**	**130.18**	**239**	*e*PKIKP	**PKiKP**	**19 13 40.8**	**+0.1**
VYHS	**Vyhne**	**133.30**	**330**	*e*PKIKP	**PKiKP**	**19 13 45.7**	**-0.1**
VYHS				*e*		19 16 11.5	
VYHS	**Vyhne**	**133.30**	**330**	*e*PKP	**PKiKP**	**19 13 45.7**	**-0.1**
VYHS				*e*PP	**PP**	**19 16 11.5**	**+0.1**
CLL	**Collm**	**133.87**	**336**	*e*PKPdf	**PKiKP**	**19 13 48.0**	**+1.1**
CLL	**Collm**	**133.87**	**336**	*e*PKIKP	**PKiKP**	**19 13 48.0**	**+1.1**
GEC2	**GERESS Array S**	**135.45**	**333**	*e*PKPdf	**PKiKP**	**19 13 49.8**	**-0.5**
GEC2	**GERESS Array S**	**135.45**	**333**	*e*PKIKP	**PKiKP**	**19 13 49.8**	**-0.5**
GERES	**GERESS Array B**	**135.45**	**333**	PKP	**PKiKP**	**19 13 49.8**	**-0.5**
	comp=Z,1.8nm,1.0s,baz=349,slow=1.4,SNR=7.1						
BDFB	**Brasilia**	**137.71**	**128**	PKP	**PKiKP**	**19 13 55.5**	**-0.3**
	comp=Z,5.0nm,1.0s,baz=105,slow=9.5,SNR=3.8						
KEST	**Kesra**	**147.10**	**322**	*e*PKPbc	**PKPbc**	**19 14 12.7**	**+0.6**
KEST	**Kesra**	**147.10**	**322**	PKPbc	**PKPab**	**19 14 13.2**	**-0.5**
	comp=Z,11nm,0.9s,baz=292,slow=7.4,SNR=4.9						
ES19	**SONSECA Array**	**149.82**	**343**	*e*PKPdf	**PKPdf**	**19 14 13.9**	**-0.4**
ES19				*e*PKPbc	**PKiKP**	**19 14 20.0**	**0.0**
ESDC	**Sonseca Array**	**149.87**	**343**	PKPbc	**PKiKP**	**19 14 19.8**	**-0.3**
	comp=Z,3.5nm,1.0s,baz=56,slow=3.7,SNR=8.2						
PAB	**San Pablo**	**150.09**	**344**	*e*PKPdf	**PKPdf**	**19 14 15.6**	**+0.8**
PAB				*e*PKPbc	**PKiKP**	**19 14 20.7**	**+0.1**
PAB	**San Pablo**	**150.09**	**344**	*e*PKIKP	**PKPdf**	**19 14 15.6**	**+0.8**
PAB				*e*		19 14 20.7	
TOA0	**Torodi Ar. Sit**	**163.85**	**279**	*e*PKPdf	**PKPdf**	**19 14 32.6**	**-0.2**
TOA0				*e*PKPdf	**PKPdf**	**19 14 33.0**	**+0.3**
TOA0				*e*PKPab	**PKPab**	**19 15 23.2**	**-2.1**
TOA0				*e*PKPab	**PKPab**	**19 15 23.8**	**-1.6**
TORD	**Torodi Ar. Bea**	**163.85**	**279**	PKP	**PKPdf**	**19 14 32.8**	**+0.1**
	comp=Z,3.6nm,1.0s,baz=30,slow=0.6,SNR=16						
TORD				PKPab	**PKPab**	**19 15 24.1**	**-1.2**
	comp=Z,1.6nm,1.1s,baz=104,slow=4.6,SNR=2.3						
TOA1	**Torodi Ar. Sit**	**163.85**	**279**	*e*PKPdf	**PKPdf**	**19 14 32.8**	**+0.1**
TOA1				*e*PKPab	**PKPab**	**19 15 24.1**	**-1.2**
KIC	**Kosan Boka**	**169.17**	**246**	*e*PKIKP	**PKPdf**	**19 14 37.1**	**+0.2**
	comp=Z,43nm,1.4s						
LIC	**Lamto**	**169.36**	**244**	*e*PKIKP	**PKPdf**	**19 14 37.1**	**+0.1**
	comp=Z,17nm,0.8s						
DBIC	**Dimbokro**	**169.40**	**247**	*e*PKPdf	**PKPdf**	**19 14 37.1**	**+0.1**
DBIC				*e*PKPab	**PKPab**	**19 15 47.1**	**-2.8**
DBIC	**Dimbokro**	**169.40**	**247**	*e*PKIKP	**PKPdf**	**19 14 37.1**	**+0.1**
DBIC				*e*		19 15 47.1	
DBIC	**Dimbokro**	**169.40**	**247**	PKP	**PKPdf**	**19 14 37.8**	**+0.7**
	comp=Z,5.3nm,1.1s,baz=264,slow=2.0,SNR=5.5						
DBIC				PKPab	**PKPab**	**19 15 48.0**	**-1.9**
	comp=Z,2.0nm,0.7s,baz=153,slow=9.0,SNR=2.6						
TIC	**Toumodi**	**169.54**	**247**	*e*PKIKP	**PKPdf**	**19 14 36.6**	**-0.5**

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*BJI **02** 18:58:04.3, 10°.83S×166°.00E, h16^{km}, mB5.9/68, mb5.2/58, Ms6.0/81, Ms7 5.7/77*

*IDC **02** 18:58:05.5±0.3, 10°.94S×165°.36E, h0^{km}, mb5.1/35, mb1 5.2/37, mb1mx5.1/45, mbtmp5.1/37, ML5.5/2, MS5.6/28, Ms1 5.6/28, ms1mx5.5/37, Error ellipse: s-maj=10.8km s-min=9.6km az=114.0*

*ISCJB **02** 18:58:06.0±0.1, 10°.90S±0°.02×165°.23E±0°.02, h12^{km}, mb5.3/344, MS5.8/599, Error ellipse: s-maj=2.8km s-min=2.4km az=141.2*

*NEIC **02** 18:58:06.5±0.1, 10°.89S×165°.28E, h6^{km}, mb5.4/275, MS5.7/299, MW6.0, Error ellipse: s-maj=2.6km s-min=2.2km az=134.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{18}Nm; M_{rr}0.56; $M_{\theta\theta}$0.45; $M_{\phi\phi}$-1.01; $M_{r\theta}$0.77; $M_{\theta\phi}$0.09; $M_{\phi r}$-0.82; Best double couple: $M_0$1.40000×10^{18} NP1:ϕ_s144.00000°, δ77.00000°, λ62.00000°. NP2:ϕ_s30.00000°, δ31.00000°, λ153.00000°. Principal axes: T 1.4100, Plg50.0000°, Azm22.0000°; N 0.0400, Plg28.0000°, Azm151.0000°; P -1.4500, Plg26.0000°, Azm256.0000°;*

*MOS **02** 18:58:08.0±0.8, 10°.91S×165°.24E, h26^{km}, mb5.4/94, MS5.6/68 Error ellipse: s-maj=6.4km s-min=5.7km az=83.9*

*GCMT **02** 18:58:11.5±0.1, 11°.04S±0°.01×165°.19E±0°.01, h12^{km}, MW5.9/127, Moment Tensor Solution. s86,c143; s127,c317; Duration: 2^s.3 Moment tensor: Scale 10^{18} Nm; M_{rr}0.57±.01; $M_{\theta\theta}$0.21±.01; $M_{\phi\phi}$-0.77±.01; $M_{r\theta}$0.38±.04; $M_{\theta\phi}$0.44±.01; $M_{\phi r}$-0.48±.03; Best double couple: $M_0$0.98900×10^{18} NP1:ϕ_s141.00000°, δ67.00000°, λ69.00000°. NP2:ϕ_s5.00000°, δ31.00000°, λ129.00000°. Principal axes: T 0.8320, Plg63.0000°, Azm18.0000°; N 0.3140, Plg19.0000°, Azm150.0000°; P -1.1460, Plg19.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 02 18:58:09.8±0.6**, 11°.00S**±0°.04×**165°.35E**±0°.03**, h26**^{km}±3^{km}**, n1180, σ1^s.64**/883**, mb5.4**/344**, MS5.8**/601**, 12C-13D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.55	286	eP	Pn	18 59 30.0	-0.7
HNR				eS	Sn	19 00 26.0	-7.6
HNR	Honiara	5.55	286	Pn	Pn	18 59 29.7	-1.0
	232nm,0.3s,baz=130,slow=6.5,SNR=32						
HNR				Sn	Sn	19 00 34.3	+0.7
	99nm,0.3s,baz=162,slow=19,SNR=2.9						
HNR				LR	LR	19 01 43.7	
	comp=Z,171µm,20.8s,baz=120,slow=39						
MARNC	Mare, Loyalty	10.73	166	ePn	Pn	19 00 41.9	0.0
DZM	Mont Dzumac	11.06	175	eP	Pn	19 00 46.9	+0.5
	633nm,1.3s						
DZM				eLQ	LQ	19 02 45.6	
	64µm,23.9s						
DZM				eLR	LR	19 03 15.5	
	comp=Z,28µm,23.4s						
DZM	Mont Dzumac	11.06	175	ePn	Pn	19 00 47.0	+0.6
DZM				eSn	Sn	19 02 45.3	-4.0
DZM	Mont Dzumac	11.06	175	Pn	Pn	19 00 46.3	-0.1
	18nm,0.3s,baz=300,slow=13,SNR=41						
DZM				Sn	Sn	19 02 45.3	-4.0
	1.1nm,0.3s,baz=160,slow=19,SNR=1.5						
PINNC	Pines Island,	11.72	170	ePn	Pn	19 00 57.0	+1.6
FUNA	Funafuti	13.86	81	ePn	Pn	19 01 28.3	+3.6
MSVF	Nonsavu	14.00	120	ePn	Pn	19 01 29.3	+2.7
MSVF	Nonsavu	14.00	120	eP	Pn	19 01 29.3	+2.7
TARA	Tarawa	14.40	32	ePn	Pn	19 01 31.1	-1.0
RABL	Rabaul	14.72	296	eP	Pn	19 01 39.0	+2.6
PATS	Pohnpei	19.06	338	eP	Pn	19 02 31.4	+0.3
	249nm,1.2s						
EIDS	Eidsvold	19.67	221	P	Pn	19 02 39.9	+1.4
	baz=20,SNR=19						
EIDS	Eidsvold	19.67	221	eP	P	19 02 36.7	-0.3
	50nm,0.8s						
KWAJ	Kwajalein Atol	19.80	7	eP	Pn	19 02 39.3	-0.7
	274nm,0.7s						
KWAJ	Kwajalein Atol	19.80	7	eP	Pn	19 02 39.3	-0.7
KWAJ				pmax	pmax		
	comp=Z,274nm,0.7s						
MANU	Manus Island	19.95	295	eP	P	19 02 38.8	-1.2
	comp=Z,1µm,1.1s						
CTA	Charters Tower	20.48	242	P	P	19 02 46.9	+1.0
	comp=Z,240nm,1.1s,baz=69,slow=12,SNR=31						
CTA				S	Sn	19 06 37.9	-0.6
	comp=Z,11nm,1.0s,baz=150,slow=20,SNR=5.2						
CTA				LR	LR	19 09 40.2	
	comp=Z,27µm,18.3s,baz=66,slow=34						
CTAO	Charters Tower	20.48	242	eP	P	19 02 45.7	-0.1
	comp=Z,373nm,1.1s						
CTAO				LR	LR		
	comp=Z,38µm,22.0s						
CTAO	Charters Tower	20.48	242	eP	P	19 02 45.7	-0.1
CTAO				pmax	pmax		
	comp=Z,373nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,38µm,22.0s						
LHI	Lord Howe Isla	21.23	195	P	P	19 02 55.1	+1.3
	baz=21,SNR=3.5						
LHI	Lord Howe Isla	21.23	195	eP	P	19 02 50.8	-3.0
	comp=Z,185nm,1.3s						
MTSU	Mount Surprise	21.55	248	P	P	19 02 57.7	+0.4
	baz=22,SNR=120						
COEN	Coen	21.85	260	P	P	19 03 01.5	+0.9
	baz=22,SNR=34						
COEN	Coen	21.85	260	eP	P	19 02 59.0	-1.7
	comp=Z,140nm,1.0s						
COEN				LR	LR		
	comp=Z,39µm,20.0s						
RMQ	Roma	21.96	223	P	P	19 03 02.7	+0.9
	baz=22,SNR=34						
ARMA	Armidale	23.15	211	P	P	19 03 15.6	+1.2
	baz=23,SNR=7.9						
ARMA	Armidale	23.15	211	eP	P	19 03 14.5	+0.1
	comp=Z,80nm,1.1s						
ARMA				LR	LR		
	comp=Z,26µm,19.0s						
RAO	Raoul Island	23.95	142	PFAKE		19 03 30.0	+8.0
RAO				LR	LR		
	comp=Z,10µm,20.0s						
KNTN	Kanton	24.16	72	eP	P	19 03 25.9	+1.8
	comp=Z,182nm,1.3s						
KNTN				LR	LR		
	comp=Z,18µm,20.0s						
NIUE	Niue	25.16	112	eP	P	19 03 34.0	+0.8
QLP	Quilpie	25.23	229	P	P	19 03 34.1	+0.3
	baz=25,SNR=19						
OUZ	Omahuta	25.25	164	eP	P	19 03 36.0	+2.2
	comp=Z,125nm,1.2s						
OUZ				LR	LR		
	comp=Z,14µm,21.0s						
JAY	Jayapura	25.87	287	P	P	19 03 38.6	-1.1
	comp=Z,790nm,1.1s						
JAY	Jayapura	25.87	287	P	P	19 03 39.4	-0.3
	comp=Z,55nm,0.8s,baz=151,slow=3.2,SNR=8.3						
JAY				LR	LR	19 13 27.2	
	comp=Z,21µm,21.5s,baz=58,slow=36						
RIV	Riverview	26.18	208	P	P	19 03 44.3	+2.1
	baz=26,SNR=4.2						
GENI	Genyem	26.34	287	P	P	19 03 40.8	-3.1
QIS	Mount Isa	26.50	246	P	P	19 03 45.3	0.0
	baz=27,SNR=21						
KUZ	Kuaotunu	27.29	162	P	P	19 03 52.9	+0.7
CMSA	Cobar Meteorol	27.36	219	P	P	19 03 53.6	+0.7
	baz=28,SNR=34						
CAN	Canberra	28.41	209	eP	P	19 04 03.1	+0.8
	comp=Z,14nm,1.0s						
CAN				LR	LR		
	comp=Z,8µm,19.0s						
CAN	Canberra	28.41	209	eP	P	19 04 03.1	+0.8
CAN				pmax	pmax		
	comp=Z,14nm,1.0s						
CAN				MLR	MLR		
	comp=Z,8µm,19.0s						
HIZ	Hauiti	28.68	164	eP	P	19 04 05.7	+1.0
	comp=Z,178nm,1.5s						
HIZ				LR	LR		
	comp=Z,18µm,18.0s						
OMRZ	Omania	28.74	162	P	P	19 04 10.3	+5.1
HAZ	Te Kaha	28.88	159	P	P	19 04 10.0	+3.6
MXZ	Matakaoa Point	28.90	158	eP	P	19 04 08.2	+1.7
	comp=Z,102nm,0.8s						
MXZ				LR	LR		
	comp=Z,20µm,20.0s						
RUGZ	Raukumara Rang	29.04	160	P	P	19 04 11.0	+3.1
URZ	Urewera	29.11	161	P	P	19 04 08.4	0.0
	comp=Z,47nm,0.8s,baz=11,slow=4.6,SNR=15						
URZ				S	S	19 09 03.0	+4.2
	comp=Z,9.7nm,0.9s,baz=65,slow=19,SNR=3.4						
URZ				LR	LR	19 15 05.9	
	comp=Z,19µm,18.7s,baz=352,slow=35						
URZ	Urewera	29.11	161	P	P	19 04 09.7	+1.3
WMGZ	Waiomatatini S	29.16	158	P	P	19 04 10.4	+1.5
MWZ	Matawai	29.32	160	P	P	19 04 12.5	+2.2
TWGZ	Tauwhareparae	29.33	159	P	P	19 04 12.8	+2.4
PUZ	Puketiti	29.33	159	P	P	19 04 11.2	+0.8
H11S2	WAKE ISLAND Hy	29.33	3	T	T	19 34 47.0	
	baz=184,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.34	3	T	T	19 34 49.8	
	baz=184,slow=76,SNR=22						
KATZ	Kakaramea	29.35	163	P	P	19 04 14.8	+4.1
H11S1	WAKE ISLAND Hy	29.35	3	T	T	19 34 45.0	
	baz=184,slow=76,SNR=18						
TWVZ	Taurewa	29.36	164	P	P	19 04 15.2	+4.4
RTZ	Ruatahuna	29.40	161	P	P	19 04 12.9	+1.8
MRHZ	Matea Rd	29.42	162	P	P	19 04 14.9	+3.7
KRVZ	Karewarewa	29.44	164	P	P	19 04 15.8	+4.3
WTVZ	West Tongariro	29.45	164	P	P	19 04 16.2	+4.6
PKVZ	Pokaka	29.54	164	P	P	19 04 17.4	+5.0
FWVZ	Far West T-bar	29.57	164	P	P	19 04 17.1	+4.4
MTHZ	Maungataniwha	29.57	162	P	P	19 04 14.7	+2.2
TRVZ	Turoa	29.61	164	P	P	19 04 17.7	+4.6
SNGZ	Shannon Statio	29.66	161	P	P	19 04 15.1	+1.8
RIGZ	Rimuhau	29.73	160	P	P	19 04 15.4	+1.4
BKZ	Black Stump Fm	29.75	162	eP	P	19 04 15.3	+1.1
	comp=Z,86nm,0.8s						
BKZ				LR	LR		
	comp=Z,18µm,18.0s						
BKZ	Black Stump Fm	29.75	162	P	P	19 04 15.7	+1.5
MILA	Mila	29.77	207	P	P	19 04 15.9	+1.5
	baz=30,SNR=3.5						
NMHZ	Naumai	29.78	162	P	P	19 04 17.1	+2.6
KNZ	Kokohu	29.99	161	P	P	19 04 17.3	+1.2
WAKE	Wake Island	30.12	2	eP	P	19 04 16.2	-1.3
	comp=Z,338nm,1.3s						
WAKE				LR	LR		
	comp=Z,11µm,20.0s						
STKA	Stephens Creek	30.21	223	P	P	19 04 20.1	+1.8
	baz=30,SNR=28						
STKA	Stephens Creek	30.21	223	eP	P	19 04 18.8	+0.5
	comp=Z,15nm,1.4s						
STKA				LR	LR		
	comp=Z,7µm,20.0s						
STKA	Stephens Creek	30.21	223	eP	P	19 04 18.8	+0.5
STKA				pmax	pmax		
	comp=Z,15nm,1.4s						
STKA				MLR	MLR		
	comp=Z,7µm,20.0s						
STKA	Stephens Creek	30.21	223	P	P	19 04 18.6	+0.4
	comp=Z,17nm,0.8s,baz=53,slow=9.7,SNR=19						
STKA				LR	LR	19 15 58.9	
	comp=Z,28µm,19.1s,baz=45,slow=36						
BFZ	Birch Farm	31.09	164	eP	P	19 04 25.8	-0.1
	comp=Z,144nm,0.9s						
BFZ				LR	LR		
	comp=Z,24µm,19.0s						
WRAB	Tennant Creek	31.13	250	eP	P	19 04 25.8	-0.8
	comp=Z,217nm,1.4s						
WRAB				LR	LR		
	comp=Z,37µm,18.0s						
WRAB	Tennant Creek	31.13	250	d iP	P	19 04 26.5	0.0
WRAB				pmax	pmax		
	comp=Z,242nm,1.7s						
WB2	Warramunga Arr	31.13	250	eP	P	19 04 25.6	-0.9
WR1	Warramunga Arr	31.14	250	eP	P	19 04 25.5	-1.1
	comp=Z,152nm,1.3s						
WR1				ePcP	PcP	19 07 22.1	+0.4
WRA	Warramunga Arr	31.14	250	P	P	19 04 25.5	-1.1
	comp=Z,21nm,0.6s,baz=82,slow=8.6,SNR=43						
WRA				PcP	PcP	19 07 22.1	+0.4
	comp=Z,7.1nm,0.7s,baz=79,slow=3.0,SNR=6.3						
WRA				LR	LR	19 17 10.1	
	comp=Z,36µm,18.2s,baz=75,slow=37						
SNZO	South Karori	31.29	166	eP	P	19 04 29.4	+1.8
	comp=Z,88nm,0.8s						
SNZO				LR	LR		
	comp=Z,14µm,18.0s						
THZ	Tophouse	31.35	169	eP	P	19 04 29.2	+1.0
	comp=Z,57nm,0.9s						
THZ				LR	LR		
	comp=Z,11µm,18.0s						
GUMO	Guam	31.78	320	eP	P	19 04 30.5	-1.7
	comp=Z,643nm,1.5s						
GUMO				LR	LR		
	comp=Z,14µm,22.0s						
GUMO	Guam	31.78	320	eP	P	19 04 30.5	-1.7
GUMO				pmax	pmax		
	comp=Z,643nm,1.5s						
GUMO				MLR	MLR		
	comp=Z,14µm,22.0s						
TOO	Toolangi	31.91	211	P	P	19 04 35.6	+2.3
	baz=32,SNR=6.0						
TOO	Toolangi	31.91	211	eP	P	19 04 33.6	+0.4
	comp=Z,25nm,1.2s						
TOO				LR	LR		
	comp=Z,12µm,20.0s						
TOO	Toolangi	31.91	211	eP	P	19 04 33.6	+0.4
TOO				pmax	pmax		
	comp=Z,25nm,1.2s						
TOO				MLR	MLR		
	comp=Z,12µm,20.0s						
KHZ	Kahutara	32.10	169	eP	P	19 04 35.9	+1.1
	comp=Z,72nm,0.9s						
KHZ				LR	LR		
	comp=Z,10µm,20.0s						
KDU	Kakadu	32.21	264	P	P	19 04 35.7	-0.4
	baz=32,SNR=11						
LTZ	Lake Taylor	32.23	170	eP	P	19 04 38.4	+2.4
	comp=Z,106nm,0.8s						
LTZ				LR	LR		
	comp=Z,15µm,18.0s						
AS01	Alice Springs	32.43	243	eP	P	19 04 36.6	-1.3
AS31	Alice Springs	32.47	243	eP	P	19 04 36.9	-1.5
	comp=Z,26nm,0.8s						
AS31				LR	LR		
	comp=Z,300nm,18.0s						
ASAR	Alice Springs	32.47	243	P	P	19 04 36.6	-1.8
ASAR						19 07 25.4	
ASAR				pmax	pmax		
	comp=Z,93nm,0.9s						
ASAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ASAR				MLR	MLR		
	comp=Z,20µm,18.0s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	32.47	243	P	P	19 04 36.5	-1.8
	comp=Z,98nm,0.9s,baz=65,slow=8.3,SNR=54						
ASAR				PcP	PcP	19 07 25.4	+0.1
	comp=Z,8.9nm,0.8s,baz=88,slow=2.3,SNR=6.8						
ASAR				LR	LR	19 16 55.9	
	comp=Z,20µm,18.0s,baz=74,slow=35						
ASAR				P3KPbc		19 36 03.9	
	comp=Z,1.3nm,0.9s,baz=255,slow=4.6,SNR=7.5						
FOZ	Fox Glacier	32.64	174	eP	P	19 04 40.5	+1.1
	comp=Z,36nm,1.1s						
FOZ				LR	LR		
	comp=Z,16µm,18.0s						
OXZ	Oxford	32.73	171	eP	P	19 04 41.7	+1.4
	comp=Z,70nm,0.9s						
OXZ				LR	LR		
	comp=Z,13µm,18.0s						
HTT	Hallett	32.94	223	P	P	19 04 42.9	+0.5
	baz=33,SNR=14						
RPZ	Rata Peaks	32.97	172	eP	P	19 04 43.5	+1.1
	comp=Z,81nm,0.9s						
RPZ				LR	LR		
	comp=Z,11µm,19.0s						
RPZ	Rata Peaks	32.97	172	P	P	19 04 43.7	+1.4
	comp=Z,33nm,0.8s,baz=339,slow=2.6,SNR=13						
RPZ				LR	LR	19 16 58.8	
	comp=Z,7µm,18.9s,baz=328,slow=34						
CRLZ	Canterbury Las	33.06	170	eP	P	19 04 43.4	+0.3
	comp=Z,102nm,1.2s						
CRLZ				LR	LR		
	comp=Z,9µm,19.0s						
MQZ	McQueen's Vall	33.19	170	eP	P	19 04 46.3	+1.9
	comp=Z,62nm,0.9s						
MQZ				LR	LR		
	comp=Z,10µm,19.0s						
ARPS	Mount Arapiles	33.29	216	P	P	19 04 45.6	+0.3
	baz=34,SNR=12						
ANA2	Anatahan	33.40	324	eP	P	19 04 44.7	-1.7
	comp=Z,550nm,0.3s						
ANA2				LR	LR		
	comp=Z,8µm,20.0s						
MTN	Manton Dam	33.52	263	PFAKE		19 05 00.0	+12
MTN				LR	LR		
	comp=Z,19µm,19.0s						
LBZ	Lake Benmore	33.52	174	eP	P	19 04 48.7	+1.4
	comp=Z,18nm,0.8s						
LBZ				LR	LR		
	comp=Z,15µm,18.0s						
SAUI	Saumlaki	33.71	272	eP	P	19 04 50.0	+0.8
	comp=Z,56nm,1.1s						
SAUI				LR	LR		
	comp=Z,23µm,18.0s						
FAKI	Fak Fak	33.80	281	eP	P	19 04 48.7	-1.3
	comp=Z,15nm,1.0s						
FAKI				LR	LR		
	comp=Z,19µm,20.0s						
WKZ	Wanaka	33.85	175	eP	P	19 04 52.5	+2.4
	comp=Z,68nm,1.5s						
WKZ				LR	LR		
	comp=Z,11µm,20.0s						
ODZ	Otahua Downs	34.23	173	eP	P	19 04 54.8	+1.5
	comp=Z,49nm,1.4s						
ODZ				LR	LR		
	comp=Z,15µm,18.0s						
MLZ	Mavora Lakes	34.33	177	eP	P	19 04 56.0	+1.8
	comp=Z,19nm,1.0s						
MLZ				LR	LR		
	comp=Z,16µm,18.0s						
DCZ	Deep Cove	34.38	178	eP	P	19 04 55.3	+0.7
	comp=Z,56nm,1.4s						
DCZ				LR	LR		
	comp=Z,8µm,19.0s						
BBOO	Buckleboo	34.58	227	P	P	19 04 56.3	-0.2
	baz=35,SNR=10						
BBOO	Buckleboo	34.58	227	eP	P	19 04 56.0	-0.6
	comp=Z,82nm,1.2s						
BBOO				LR	LR		
	comp=Z,10µm,18.0s						
WHZ	Wether Hill Ro	34.84	177	eP	P	19 05 00.6	+2.0
	comp=Z,16nm,0.9s						
WHZ				LR	LR		
	comp=Z,12µm,19.0s						
RAR	Rarotonga	34.93	111	eP	P	19 05 00.9	+1.2
RAR	Rarotonga	34.93	111	eP	P	19 05 00.9	+1.2
RAR	Rarotonga	34.93	111	LR	LR	19 16 22.7	
	comp=Z,5µm,20.8s,baz=282,slow=31						
PYZ	Puysegur Point	35.06	178	eP	P	19 05 01.5	+1.0
	comp=Z,109nm,1.3s						
PYZ				LR	LR		
	comp=Z,4µm,20.0s						
SIJI	Sorong	35.32	284	P	P	19 05 02.1	-1.1
	comp=Z,6.9nm,0.6s,baz=115,slow=19,SNR=2.9						
TAU	Tasmania Unive	35.46	203	eP	P	19 05 04.2	+0.3
	comp=Z,24nm,1.0s						
TAU				LR	LR		
	comp=Z,7µm,18.0s						
TAU	Tasmania Unive	35.46	203	eP	P	19 05 04.2	+0.3
TAU				pmax	pmax		
	comp=Z,24nm,1.0s						
TAU				MLR	MLR		
	comp=Z,7µm,18.0s						
KNRA	Kununurra	35.88	258	P	P	19 05 07.6	-0.3
	baz=36,SNR=11						
JOHN	Johnston Islan	37.10	42	eP	P	19 05 16.2	-2.1
	comp=Z,104nm,0.9s						
JOHN				LR	LR		
	comp=Z,15µm,21.0s						
WRKA	Warakurna	37.76	243	P	P	19 05 22.6	-1.4
	baz=38,SNR=63						
NLAI	Namlea	38.70	279	P	P	19 05 31.5	-0.4
	comp=Z,46nm,1.0s,comp=Z,2µm						
FITZ	Fitzroy Crossi	39.02	255	P	P	19 05 34.8	+0.2
	baz=39,SNR=19						
FITZ	Fitzroy Crossi	39.02	255	eP	P	19 05 33.7	-0.8
	comp=Z,69nm,1.1s						
FITZ	Fitzroy Crossi	39.02	255	P	P	19 05 33.8	-0.8
	comp=Z,33nm,0.9s,baz=90,slow=5.9,SNR=17						
XMAS	Kiritimati	39.21	73	eP	P	19 05 36.3	+0.2
	comp=Z,93nm,0.9s						
XMAS				LR	LR		
	comp=Z,10µm,22.0s						
TNTI	Ternate	39.53	285	eP	P	19 05 38.1	-0.7
	comp=Z,28nm,1.2s						
TNTI				LR	LR		
	comp=Z,6µm,19.0s						
FORT	Forrest	39.76	235	P	P	19 05 41.7	+1.1
	baz=40,SNR=7.1						
FORT	Forrest	39.76	235	eP	P	19 05 40.2	-0.3
	comp=Z,256nm,1.5s						
FORT				LR	LR		
	comp=Z,25µm,18.0s						
SANI	Sanana	40.06	280	P	P	19 05 47.0	+3.7
SOEI	Soe	40.41	268	eP	P	19 05 45.3	-1.1
	comp=Z,16nm,1.0s						
SOEI				LR	LR		
	comp=Z,10µm,18.0s						
SOEI	Soe	40.41	268	P	P	19 05 45.4	-0.9
	comp=Z,48nm,1.5s,comp=Z,2µm						
BATI	Baumata	40.96	267	P	P	19 05 50.1	-0.7
	comp=Z,38nm,0.8s,comp=Z,1µm						
BATI	Baumata	40.96	267	P	P	19 05 50.2	-0.7
	comp=Z,69nm,0.9s,baz=143,slow=1.6,SNR=20						
MIDW	Midway	42.42	23	eP	P	19 06 02.8	+0.4
	comp=Z,139nm,1.0s						
MIDW				LR	LR		
	comp=Z,6µm,20.0s						
MMRI	Maumere	42.52	269	eP	P	19 06 02.6	-0.9
	comp=Z,51nm,1.0s						
MMRI				LR	LR		
	comp=Z,4µm,21.0s						
MMRI	Maumere	42.52	269	P	P	19 06 00.0	-3.5
EDFI	Ende, Flores	43.05	269	P	P	19 06 06.0	-1.9
	comp=Z,42nm,2.5s,comp=Z,2µm						
LUWI	Luwuk	43.43	280	eP	P	19 06 10.6	-0.3
	comp=Z,106nm,1.2s						
MCQ	Macquarie Isla	43.68	185	eP	P	19 06 13.2	+0.9
	comp=Z,167nm,1.2s						
MCQ	Macquarie Isla	43.68	185	eP	P	19 06 13.2	+0.9
MCQ				pmax	pmax		
	comp=Z,167nm,1.2s						
PPT	Papeete	44.08	104	eP	P	19 06 16.7	+0.6
PPT	Papeete	44.08	104	eP	P	19 06 16.7	+0.6
PPT	Papeete	44.08	104	LR	LR	19 20 45.9	
	comp=Z,9µm,19.6s,baz=276,slow=31						
PPT2	Papeete2	44.08	104	eS	S	19 12 46.0	-1.5
	comp=Z,6µm,25.8s						
PPT2				eLQ	LQ	19 16 39.2	
	comp=Z,24µm,28.0s						
PPT2				eLR	LR	19 18 30.4	
	comp=Z,12µm,22.2s,baz=269						
TBI	Tubuai	44.70	112	eS	S	19 12 55.6	-0.7
	comp=Z,5µm,26.2s						
TBI				eLQ	LQ	19 16 51.1	
	comp=Z,34µm,30.5s						
TBI				eLR	LR	19 18 48.0	
	comp=Z,17µm,29.2s,baz=290						
CTBH	Cotabato--PC H	44.74	292	⇑iP	P	19 06 22.3	+1.0
MBWA	Marble Bar	44.85	251	eP	P	19 06 22.4	+0.2
	comp=Z,69nm,1.4s						
MBWA				LR	LR		
	comp=Z,14µm,21.0s						
MBWA	Marble Bar	44.85	251	P	P	19 06 22.9	+0.7
	SNR=7.0						
BKSI	Bulukumba	45.09	273	P	P	19 06 22.4	-1.8
BNSI	Bone	45.27	275	P	P	19 06 24.3	-1.3
KAPI	Kappang	45.51	274	PFAKE		19 06 40.0	+13
KAPI				LR	LR		
	comp=Z,4µm,21.0s						
PCI	Palu	46.30	279	P	P	19 06 33.5	-0.3
	comp=Z,135nm,1.1s,comp=Z,3µm						
MPSI	Mapaga	46.56	281	P	P	19 06 34.1	-1.7
	comp=Z,20nm,1.0s,comp=Z,775nm						
MEEK	Meekatharra	46.62	244	P	P	19 06 35.8	-0.4
	baz=47,SNR=80						
PLAI	Plampang	46.88	268	P	P	19 06 35.6	-2.7
	comp=Z,70nm,1.9s,comp=Z,2µm						
KEKH	Kekaha	47.42	46	eP	P	19 06 42.4	+0.1
	comp=Z,278nm,1.3s						
HON	Honolulu	48.24	48	eP	P	19 06 47.6	-1.1
	comp=Z,133nm,1.0s						
HON	Honolulu	48.24	48	eP	P	19 06 47.6	-1.1
HON				pmax	pmax		
	comp=Z,133nm,1.0s						
KIP	Kipapa	48.30	48	eP	P	19 06 49.5	+0.4
	comp=Z,87nm,0.9s						
KIP	Kipapa	48.30	48	eP	P	19 06 49.5	+0.4
KIP				pmax	pmax		
	comp=Z,87nm,0.9s						
KLBR	Kellerberrin	48.41	237	P	P	19 06 49.4	-0.6
	baz=48,SNR=10						
OPA	Opana	48.46	48	eP	P	19 06 51.4	+1.0
	comp=Z,271nm,0.9s						
OPA	Opana	48.46	48	eP	P	19 06 51.4	+1.0
OPA				pmax	pmax		
	comp=Z,271nm,0.9s						
KHLU	Kahalu`u	48.80	52	eP	P	19 06 52.7	-0.4
	comp=Z,309nm,1.4s						
KHU	Kahuku	48.81	52	eP	P	19 06 51.8	-1.6
	comp=Z,125nm,1.0s						
KHU				LR	LR		
	comp=Z,9µm,22.0s						
KHU	Kahuku	48.81	52	eP	P	19 06 51.8	-1.6
KHU				pmax	pmax		
	comp=Z,125nm,1.0s						
KHU				MLR	MLR		
	comp=Z,9µm,22.0s						
HUH	Hualalai	48.89	52	eP	P	19 06 53.5	-0.6
	comp=Z,122nm,1.2s						
MWH	Moku'aweowe	48.96	52	eP	P	19 06 53.4	-1.6
	comp=Z,129nm,1.0s						
MWH				LR	LR		
	comp=Z,7µm,21.0s						
AIN	Ainahou	49.01	52	eP	P	19 06 53.5	-1.3
	comp=Z,221nm,1.1s						
AIN				LR	LR		
	comp=Z,8µm,20.0s						
MLOA	Mauna Loa Obse	49.01	52	eP	P	19 06 54.9	-0.2
	comp=Z,167nm,1.3s						
BLDU	Ballidu	49.05	239	P	P	19 06 54.8	-0.1
	baz=49,SNR=11						
HLP	Hilina Pali	49.08	52	eP	P	19 06 54.5	-0.8
	comp=Z,275nm,1.5s						
HLP				LR	LR		
	comp=Z,9µm,22.0s						
HMH	Humu'ula Sheep	49.12	52	eP	P	19 06 56.2	+0.3
	comp=Z,163nm,0.8s						
HMH				LR	LR		

	comp=Z,11µm,20.0s						
MHA	**Mahukona**	**49.13**	**51**	*e*P	**P**	**19 06 55.7**	**+0.1**
MHA	**Mahukona**	**49.13**	**51**	*e*P	**P**	**19 06 55.7**	**+0.1**
MLH	**Mauna Loa**	**49.13**	**52**	*e*P	**P**	**19 06 57.1**	**+1.2**
	comp=Z,164nm,1.3s						
MLH				LR	LR		
	comp=Z,7µm,19.0s						
SDHHI	**Sand Hill**	**49.15**	**52**	PFAKE		19 07 10.0	+14
SDHHI				LR	LR		
	comp=Z,7µm,19.0s						
KHLH	**Kahului Airpor**	**49.15**	**50**	*e*P	**P**	**19 06 54.9**	**-0.8**
	comp=Z,248nm,1.3s						
KHLH				LR	LR		
	comp=Z,7µm,20.0s						
RIM	**Rim**	**49.16**	**52**	*e*P	**P**	**19 06 56.1**	**+0.1**
	comp=Z,108nm,0.6s						
RIM				LR	LR		
	comp=Z,7µm,22.0s						
NWAO	**Narrogin (SRO)**	**49.17**	**236**	P	**P**	**19 06 56.1**	**+0.3**
	baz=49,SNR=6.7						
NWAO	**Narrogin (SRO)**	**49.17**	**236**	*e*P	**P**	**19 06 56.0**	**+0.2**
	comp=Z,171nm,1.4s						
NWAO				LR	LR		
	comp=Z,35µm,20.0s						
NWAO	**Narrogin (SRO)**	**49.17**	**236**	P	**P**	**19 06 59.8**	**+4.0**
	SNR=8.2						
NWAO				P	**P**	**19 06 59.8**	**+4.0**
	SNR=8.2						
NWAO	**Narrogin (SRO)**	**49.17**	**236**	P	**P**	**19 06 56.0**	**+0.2**
	comp=Z,47nm,1.0s,baz=310,slow=7.8,SNR=11						
NWAO				LR	LR	19 27 37.7	
	comp=Z,38µm,18.7s,baz=312,slow=36						
OBL	**Observatory Le**	**49.17**	**52**	PFAKE		19 07 10.0	+14
OBL				LR	LR		
	comp=Z,8µm,22.0s						
POHA	**Pohakuloa**	**49.17**	**52**	*e*P	**P**	**19 06 55.0**	**-1.1**
	comp=Z,149nm,0.8s						
POHA				LR	LR		
	comp=Z,6µm,18.0s						
KKO	**Keanakako`i**	**49.17**	**52**	PFAKE		19 07 10.0	+14
KKO				LR	LR		
	comp=Z,9µm,21.0s						
BYL	**Byron's Ledge**	**49.18**	**52**	*e*P	**P**	**19 06 56.1**	**0.0**
	comp=Z,112nm,1.0s						
SBLHI	**Steaming Bluff**	**49.19**	**52**	*e*P	**P**	**19 06 56.1**	**0.0**
	comp=Z,67nm,0.7s						
HATHI	**Halema‘uma‘u T**	**49.19**	**52**	*e*P	**P**	**19 06 54.9**	**-1.2**
	comp=Z,104nm,0.6s						
PUH	**Pauahi**	**49.20**	**52**	*e*P	**P**	**19 06 54.7**	**-1.5**
	comp=Z,115nm,1.0s						
PUH				LR	LR		
	comp=Z,5µm,20.0s						
HPAH	**Hawaii Prepara**	**49.20**	**51**	*e*P	**P**	**19 06 56.9**	**+0.7**
	comp=Z,180nm,1.0s						
HPAH				LR	LR		
	comp=Z,7µm,22.0s						
HLK	**Haleakala**	**49.20**	**50**	*e*P	**P**	**19 06 55.6**	**-0.9**
	comp=Z,245nm,1.1s						
HLK				LR	LR		
	comp=Z,9µm,21.0s						
STCH	**Steam Cracks**	**49.27**	**52**	PFAKE		19 07 10.0	+13
STCH				LR	LR		
	comp=Z,9µm,21.0s						
NPOC	**North of Pu‘u**	**49.29**	**52**	*e*P	**P**	**19 06 56.9**	**0.0**
	comp=Z,216nm,0.4s						
JCUZ	**Jacuzzi**	**49.29**	**52**	PFAKE		19 07 10.0	+13
JCUZ				LR	LR		
	comp=Z,6µm,20.0s						
MORW	**Morawa**	**49.31**	**241**	P	**P**	**19 06 56.4**	**-0.5**
	baz=49,SNR=50						
MORW	**Morawa**	**49.31**	**241**	*e*P	**P**	**19 06 56.0**	**-0.9**
	comp=Z,225nm,1.2s						
MORW				LR	LR		
	comp=Z,30µm,18.0s						
SRBI	**Singaraja**	**49.49**	**269**	P	**P**	**19 06 58.2**	**-0.3**
	comp=Z,21nm,1.1s,comp=Z,2µm						
TSM	**Tawau**	**49.64**	**285**	P	**P**	**19 06 59.7**	**+0.1**
MUN	**Mundaring**	**49.78**	**237**	P	**P**	**19 07 01.0**	**+0.5**
	baz=50,SNR=14						
GIRL	**Giralia**	**50.06**	**250**	*e*P	**P**	**19 07 02.0**	**-0.7**
	comp=Z,331nm,1.5s						
GIRL				LR	LR		
	comp=Z,19µm,18.0s						
JHJ2	**Mitsune**	**50.17**	**332**	*e*P	**P**	**19 07 01.6**	**-1.7**
	comp=Z,896nm,1.5s						
JAGI	**Jajag, Banyuwa**	**50.48**	**268**	*e*P	**P**	**19 07 05.4**	**-0.6**
	comp=Z,78nm,1.2s						
JAGI				LR	LR		
	comp=Z,4µm,22.0s						
TGY	**Tagaytay City**	**50.62**	**299**	P	**P**	**19 07 07.3**	**+0.3**
TGY				pmax	pmax		
	comp=Z,46nm,0.3s						
TGY	**Tagaytay City**	**50.62**	**299**	P	**P**	**19 07 07.2**	**+0.3**
	comp=Z,38nm,0.3s,baz=280,slow=0.8,SNR=5.3						
SDKM	**Sandakan**	**50.70**	**287**	P	**P**	**19 07 09.7**	**+2.0**
KKM	**Kota Kinabalu**	**51.76**	**287**	*e*P	**P**	**19 07 14.1**	**-1.6**
	comp=Z,155nm,1.2s						
KKM	**Kota Kinabalu**	**51.76**	**287**	P	**P**	**19 07 15.8**	**+0.1**
JOW	**Kunigami**	**52.06**	**317**	*e*P	**P**	**19 07 17.6**	**0.0**
PWJI	**Pagerwojo**	**52.84**	**268**	P	P	19 07 31.7	+8.0
NGJI	**Ngawi**	**53.27**	**269**	P	P	19 07 38.7	+12
INU	**Inuyama**	**53.33**	**331**	*e*P	**P**	**19 07 25.9**	**-0.9**
	comp=Z,123nm,1.4s						
INU				LR	LR		
	comp=Z,7µm,20.0s						
PCJI	**Pacitan**	**53.44**	**268**	P	**P**	**19 07 26.3**	**-1.7**
	comp=Z,146nm,1.6s,comp=Z,2µm						
TAOE	**Nuku Hiva Isla**	**53.67**	**93**	*e*S	**S**	**19 15 00.0**	**-2.6**
	comp=Z,6µm,25.0s						
TAOE				*e*LQ	LQ	19 20 42.9	
	comp=Z,5µm,22.5s						
TAOE				*e*LR	LR	19 22 38.0	
	comp=Z,10µm,30.2s,baz=271						
TAOE	**Nuku Hiva Isla**	**53.67**	**93**	PFAKE		19 07 40.0	+10
TAOE				LR	LR		
	comp=Z,4µm,18.0s						
WOJI	**Wonogiri, Jawa**	**53.73**	**268**	P	**P**	**19 07 29.2**	**-1.0**
MJAR	**Matsushiro Arr**	**53.76**	**333**	P	**P**	**19 07 28.4**	**-1.5**
	comp=Z,19nm,0.9s,baz=171,slow=8.7,SNR=21						
MAJO	**Matsushiro**	**53.76**	**333**	*e*P	**P**	**19 07 28.4**	**-1.6**
	comp=Z,63nm,1.2s						
MAJO				LR	LR		
	comp=Z,6µm,20.0s						
MAJO	**Matsushiro**	**53.76**	**333**	⇓*i*P	**P**	**19 07 29.1**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,36nm,1.3s						
MAT	**Matsushiro**	**53.76**	**333**	P	**P**	**19 07 27.8**	**-2.2**
MAT				S	**S**	**19 15 06.2**	**+3.3**
MJB9	**Matsu-Tunnel**	**53.76**	**333**	*e*P	**P**	**19 07 29.3**	**-0.7**
	comp=Z,62nm,1.2s						
BTM	**Bintulu**	**53.89**	**282**	P	**P**	**19 07 32.6**	**+1.2**
UGM	**Wanagama**	**54.12**	**268**	*e*P	**P**	**19 07 32.3**	**-0.8**
	comp=Z,60nm,1.0s						
UGM				LR	LR		
	comp=Z,4µm,22.0s						
UGM	**Wanagama**	**54.12**	**268**	P	**P**	**19 07 36.1**	**+3.0**
UGM				pP	**pwP**	**19 07 47.4**	**+2.3**
SMRI	**Semarang**	**54.32**	**269**	*e*P	**P**	**19 07 32.8**	**-1.7**
	comp=Z,105nm,1.2s						
YOJ	**Yonaguni jima**	**54.32**	**311**	*e*P	**P**	**19 07 33.1**	**-1.1**
	comp=Z,147nm,1.0s						
YOJ				LR	LR		
	comp=Z,7µm,20.0s						
YOJ	**Yonaguni jima**	**54.32**	**311**	*e*P	**P**	**19 07 33.1**	**-1.1**
YOJ				pmax	pmax		
	comp=Z,147nm,1.0s						
YOJ				MLR	MLR		
	comp=Z,7µm,20.0s						
SBUM	**Sibu**	**54.52**	**281**	*e*P	**P**	**19 07 34.9**	**-1.0**
	comp=Z,26nm,1.2s						
SBUM	**Sibu**	**54.52**	**281**	P	**P**	**19 07 40.0**	**+4.0**
JNU	**Nakatsue**	**54.82**	**324**	*e*P	**P**	**19 07 36.6**	**-1.2**
	comp=Z,170nm,1.3s						
JNU				LR	LR		
	comp=Z,4µm,19.0s						
JNU	**Nakatsue**	**54.82**	**324**	P	**P**	**19 07 36.8**	**-1.1**
	comp=Z,112nm,1.2s,baz=183,slow=3.2,SNR=23						
TWG	**Pinlang**	**54.87**	**308**	*e*P	**P**	**19 07 37.2**	**-1.1**
	comp=Z,126nm,1.0s						
YULB	**Yu-li**	**55.01**	**309**	*e*P	**P**	**19 07 38.4**	**-0.9**
	comp=Z,22nm,1.0s						
YULB				LR	LR		
	comp=Z,4µm,20.0s						
NACB	**Ninganchiao**	**55.22**	**310**	*e*P	**P**	**19 07 39.6**	**-1.2**
	comp=Z,104nm,1.3s						
NACB				LR	LR		
	comp=Z,5µm,20.0s						
TPUB	**Ta-pu**	**55.47**	**308**	*e*P	**P**	**19 07 41.9**	**-0.8**
	comp=Z,104nm,1.3s						
TPUB				LR	LR		
	comp=Z,6µm,20.0s						
SSLB	**Suanglung**	**55.49**	**309**	*e*P	**P**	**19 07 41.4**	**-1.4**
	comp=Z,53nm,1.5s						
SSLB				LR	LR		
	comp=Z,5µm,21.0s						
YHNB	**Yeheng**	**55.66**	**310**	*e*P	**P**	**19 07 43.2**	**-0.8**
	comp=Z,107nm,1.3s						
YHNB				LR	LR		
	comp=Z,8µm,19.0s						
TATO	**Taipei**	**55.75**	**310**	*e*P	**P**	**19 07 43.2**	**-1.4**
	comp=Z,67nm,1.1s						
TATO				LR	LR		
	comp=Z,8µm,20.0s						
KPJI	**Karang Pucung**	**55.76**	**269**	P	**P**	**19 07 41.4**	**-3.5**
KPJI				pP	**pwP**	**19 08 00.8**	**+3.8**
KSM	**Kuching**	**56.12**	**279**	*e*P	**P**	**19 07 46.6**	**-0.9**
	comp=Z,60nm,1.2s						
KSM				LR	LR		
	comp=Z,3µm,21.0s						
KSM	**Kuching**	**56.12**	**279**	P	**P**	**19 07 50.1**	**+2.6**
CMJI	**Cimerak**	**56.17**	**268**	P	**P**	**19 07 45.7**	**-2.1**
JCJI	**Jatiwangi**	**56.53**	**269**	P	**P**	**19 07 48.5**	**-1.9**
ERM	**Erimo**	**56.56**	**340**	*e*P	**P**	**19 07 48.6**	**-1.5**
	comp=Z,116nm,1.4s						
ERM				LR	LR		
	comp=Z,10µm,21.0s						
ERM	**Erimo**	**56.56**	**340**	*e*P	**P**	**19 07 48.6**	**-1.5**
ERM				pmax	pmax		
	comp=Z,116nm,1.4s						
ERM				MLR	MLR		
	comp=Z,10µm,21.0s						
CISI	**Cisompet, Garu**	**56.82**	**268**	*e*P	**P**	**19 07 49.9**	**-2.7**
	comp=Z,115nm,1.1s						
CISI				LR	LR		
	comp=Z,3µm,20.0s						
CISI	**Cisompet, Garu**	**56.82**	**268**	P	**P**	**19 07 48.3**	**-4.3**
QZH	**Quanzhou**	**57.92**	**309**	⇓*i*P	**P**	**19 08 02.6**	**+2.6**
QZH				S	**S**	**19 16 01.1**	**+2.4**
QZH				pmax	pmax		
	comp=Z,1µm,9.0s						
QZH				LR	LR		
	comp=Z,5µm,17.0s						
QZH				LR	LR		
	comp=Z,2µm,12.8s						
QZH				LR	LR		
	comp=Z,3µm,16.1s						
CBJI	**Citeko**	**57.94**	**269**	P	P	19 07 55.5	-4.9
RKT	**Rikitea**	**57.96**	**110**	*e*S	**S**	**19 15 57.3**	**-2.2**
	comp=Z,5µm,28.2s						
RKT				*e*LQ	LQ	19 22 29.6	
	comp=Z,13µm,31.2s						
RKT				*e*LR	LR	19 24 56.0	
	comp=Z,10µm,27.5s,baz=280						
DBJI	**Dramaga**	**58.02**	**269**	P	**P**	**19 07 57.6**	**-3.4**
SKJI	**Sukabumi**	**58.14**	**269**	P	**P**	**19 07 58.9**	**-2.9**
XMIS	**Christmas Isla**	**58.57**	**264**	*e*P	**P**	**19 08 03.3**	**-1.5**
	comp=Z,100nm,1.4s						
XMIS				LR	LR		
	comp=Z,4µm,21.0s						
ASAJ	**Asahikawa**	**58.63**	**341**	P	**P**	**19 08 04.8**	**+0.3**
	comp=Z,38nm,0.8s,baz=224,slow=14,SNR=8.3						
PPBI	**Pangkal Pinang**	**59.39**	**274**	P	P	19 08 05.3	-5.2
SSE	**Sheshan**	**59.55**	**316**	P	**P**	**19 08 13.4**	**+2.1**
SSE				S	**S**	**19 16 21.3**	**+1.6**
SSE				pmax	pmax		
	comp=Z,22nm,1.2s						
SSE				pmax	pmax		
	comp=Z,790nm,9.5s						
SSE				LR	LR		
	comp=Z,2µm,16.3s						
SSE				LR	LR		
	comp=Z,2µm,17.4s						
SSE	**Sheshan**	**59.55**	**316**	*e*P	**P**	**19 08 09.7**	**-1.6**
	comp=Z,109nm,1.2s						
SSE				LR	LR		
	comp=Z,6µm,20.0s						
KSRS	**Korea Array**	**59.62**	**326**	P	**P**	**19 08 11.6**	**0.0**
KSRS				pmax	pmax		
	comp=Z,22nm,1.2s						
KSRS				MLR	MLR		
	comp=Z,3µm,20.2s						
KSRS	**Korea Array**	**59.62**	**326**	P	**P**	**19 08 11.6**	**0.0**
	comp=Z,23nm,1.2s,baz=144,slow=6.7,SNR=16						
KSRS				LR	LR	19 31 26.1	
	comp=Z,3µm,20.2s,baz=140,slow=34						
KS15	**Wonju Array Si**	**59.64**	**326**	*e*P	**P**	**19 08 11.2**	**-0.5**
KS01	**Wonju Array Si**	**59.66**	**326**	*e*P	**P**	**19 08 11.0**	**-0.8**
BLSI	**Bandar Lampung**	**59.68**	**270**	P	**P**	**19 08 08.1**	**-4.4**
KASI	**Kota Agung**	**60.39**	**270**	P	P	19 08 11.1	-6.3
MDSI	**Maura Dua**	**60.88**	**271**	P	**P**	**19 08 18.0**	**-2.7**
YSS	**Yuzh-Sakhalins**	**61.13**	**343**	*e*P	**P**	**19 08 21.8**	**+0.1**
	comp=Z,220nm,1.5s						
YSS				LR	LR		
	comp=Z,4µm,18.0s						
YSS	**Yuzh-Sakhalins**	**61.13**	**343**	⇑*e*P	**P**	**19 08 21.8**	**+0.1**
YSS				*e*		19 09 09.2	
YSS				*e*S	**S**	**19 16 40.7**	**+1.4**
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				pmax	pmax		
	comp=Z,1µm,4.0s						
YSS				pmax	pmax		
	comp=N,2µm,5.0s						
YSS				MLR	MLR		
	comp=Z,3µm,16.0s						
YSS				MLR	MLR		
	comp=N,3µm,13.0s						
YSS				MLR	MLR		
	comp=E,2µm,17.0s						
TEY	**Ternei**	**61.53**	**337**	⇓*e*P	**P**	**19 08 22.6**	**-1.9**
TEY				pmax	pmax		
	comp=E,10.0nm,1.4s						
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
NJ2	**Nanjing**	**61.72**	**316**	*e*P	**P**	**19 08 26.6**	**+0.6**
NJ2				pP	**pP**	**19 08 31.6**	**-1.7**
NJ2				S	**S**	**19 16 50.5**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
NJ2				LR	LR		
	comp=Z,5µm,17.3s						
NJ2				LR	LR		
	comp=Z,4µm,15.7s						
NJ2				LR	LR		
	comp=Z,6µm,17.9s						
MSHR	**Mys Shultsa**	**61.84**	**332**	⇓*i*P	**P**	**19 08 28.0**	**+1.4**
VLA	**Vladivostok**	**61.93**	**333**	⇑*e*P	**P**	**19 08 27.2**	**0.0**
VLA				pmax	pmax		
	comp=Z,88nm,1.4s						
SKR	**Severo-Kuril’s**	**61.95**	**353**	*e*P	**P**	**19 08 29.4**	**+2.3**
SKR				*e*PPP	PPP	19 12 13.0	
SKR				*e*S	**S**	**19 16 50.3**	**+0.7**
SKR				*e*PS		19 17 01.3	
SKR				pmax	pmax		
	comp=Z,3µm,13.5s						
SKR				pmax	pmax		
	comp=Z,3µm,12.6s						
SKR				MLR	MLR		
	comp=Z,4µm,18.0s						
MNAI	**Manna**	**62.10**	**271**	*e*P	**P**	**19 08 29.2**	**+0.2**
	comp=Z,140nm,1.1s						
MNAI				LR	LR		
	comp=Z,3µm,21.0s						
QIZ	**Qiongzhong**	**62.32**	**298**	P	**P**	**19 08 33.1**	**+2.8**
QIZ				S	**S**	**19 17 00.3**	**+4.8**
QIZ				SS	**SS**	**19 21 03.0**	**+3.5**
QIZ				pmax	pmax		
	comp=Z,21nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,2µm,7.6s						
QIZ				LR	LR		
	comp=Z,3µm,15.7s						
QIZ				LR	LR		
	comp=Z,4µm,23.3s						
QIZ				LR	LR		
	comp=Z,7µm,24.0s						
QIZ	**Qiongzhong**	**62.32**	**298**	*e*P	**P**	**19 08 28.8**	**-1.5**
QIZ				LR	LR		
	comp=Z,5µm,22.0s						
PTCN	**Pitcairn Islan**	**62.45**	**113**	*e*P	**P**	**19 08 30.8**	**-0.3**
	comp=Z,362nm,1.1s						
MYKOM	**Kota Tinggi**	**62.46**	**278**	*e*P	**P**	**19 08 29.8**	**-1.6**
	comp=Z,73nm,1.5s						
MYKOM				LR	LR		
	comp=Z,2µm,18.0s						
MYKOM	**Kota Tinggi**	**62.46**	**278**	P	**P**	**19 08 35.3**	**+3.9**
USA0B	**Ussuriysk Arra**	**62.74**	**334**	*e*P	**P**	**19 08 32.5**	**-0.1**
	comp=Z,118nm,1.4s						
USRK	**Ussuriysk Ar.**	**62.74**	**334**	P	**P**	**19 08 33.0**	**+0.4**
	comp=Z,20nm,1.0s,baz=143,slow=6.7,SNR=20						
USRK				LR	LR	19 32 49.7	
	comp=Z,3µm,21.6s,baz=135,slow=33						
KRJI	**Kerinci**	**63.98**	**273**	P	**P**	**19 08 39.5**	**-2.1**
KTGM	**Kuala Trenggan**	**64.01**	**281**	P	**P**	**19 08 45.0**	**+3.3**
PET	**Petropavlovsk**	**64.03**	**356**	*e*P	**P**	**19 08 40.7**	**-0.2**
	comp=Z,45nm,1.5s						
PET				LR	LR		
	comp=Z,5µm,22.0s						
PET	**Petropavlovsk**	**64.03**	**356**	*e*P	**P**	**19 08 38.8**	**-2.1**
PET				*e*S	**S**	**19 17 09.2**	**-6.3**
PET				MLR	MLR		
	comp=Z,4µm,15.0s						
PET				MLR	MLR		
	comp=Z,4µm,15.0s						
WHN	**Wuhan**	**64.08**	**312**	P	P	19 08 34.5	-7.2
WHN				S	**S**	**19 17 13.7**	**-3.3**
WHN				LR	LR		
	comp=N,21µm,17.6s						
WHN				LR	LR		
	comp=E,7µm,11.0s						
WHN				LR	LR		
	comp=Z,25µm,17.9s						
MDJ	**Mudanjiang**	**64.13**	**332**	P	**P**	**19 08 41.9**	**+0.1**
MDJ				S	**S**	**19 17 22.2**	**+5.0**
MDJ				sS	pS	19 17 25.1	-1.6
MDJ				pmax	pmax		
	comp=Z,21nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,2µm,5.4s						
MDJ				LR	LR		
	comp=Z,3µm,11.8s						
MDJ				LR	LR		
	comp=Z,5µm,14.7s						
MDJ				LR	LR		
	comp=Z,4µm,16.3s						
MDJ	**Mudanjiang**	**64.13**	**332**	*e*P	**P**	**19 08 41.2**	**-0.6**
	comp=Z,72nm,1.3s						
MDJ				LR	LR		
	comp=Z,4µm,19.0s						
PEA0B	**Petropavlovsk-**	**64.19**	**355**	*e*P	**P**	**19 08 43.0**	**+1.0**
	comp=Z,54nm,1.3s						
PEA0B				LR	LR		
	comp=Z,4µm,20.0s						
PETK	**Petropavlovsk-**	**64.19**	**355**	*e*P	**P**	**19 08 41.1**	**-0.9**
PETK	**Petropavlovsk-**	**64.19**	**355**	*e*P	**P**	**19 08 41.1**	**-0.9**
PETK	**Petropavlovsk-**	**64.19**	**355**	P	**P**	**19 08 42.1**	**+0.1**
	comp=Z,7.1nm,0.8s,baz=182,slow=5.9,SNR=5.5						
PETK				LR	LR	19 31 10.6	
	comp=Z,4µm,21.5s,baz=175,slow=31						
PEA1	**Petropavlovsk-**	**64.19**	**355**	*e*P	**P**	**19 08 42.1**	**+0.1**
DL2	**Dalian**	**64.21**	**323**	P	**P**	**19 08 41.9**	**-0.6**
DL2				S	**S**	**19 17 22.2**	**+3.8**
DL2				pmax	pmax		
	comp=Z,64nm,1.1s						
DL2				pmax	pmax		
	comp=Z,970nm,6.7s						
DL2				LR	LR		
	comp=Z,2µm,15.8s						
DL2				LR	LR		
	comp=Z,3µm,17.0s						
DL2				LR	LR		
	comp=Z,5µm,21.2s						
SDSI	**Sungai Dareh**	**64.24**	**274**	P	**P**	**19 08 39.1**	**-4.1**
KIWB	**Kanaga Island**	**64.40**	**12**	*e*P	**P**	**19 08 43.3**	**-0.1**
KIWB				*e*PcP	**PcP**	**19 09 13.1**	**-4.5**
ADK	**Adak**	**64.52**	**12**	*e*P	**P**	**19 08 44.8**	**+0.6**
	comp=Z,74nm,1.4s						
ADK				LR	LR		
	comp=Z,7µm,22.0s						
ADK	**Adak**	**64.52**	**12**	*e*P	**P**	**19 08 44.8**	**+0.6**
ADK				pmax	pmax		
	comp=Z,75nm,1.4s						
ADK				MLR	MLR		
	comp=Z,7µm,22.0s						
TYV	**Tymovskoe**	**64.70**	**344**	*e*P	**P**	**19 08 48.1**	**+2.7**
TYV				pmax	pmax		
	comp=Z,1µm,5.2s						
TYV				pmax	pmax		
	comp=Z,27nm,1.4s						
GSTR	**Great Sitkin T**	**64.85**	**13**	*e*P	**P**	**19 08 47.7**	**+1.2**
BKNI	**Bangkinang**	**64.88**	**276**	*e*P	**P**	**19 08 47.4**	**0.0**
	comp=Z,239nm,1.2s						
BKNI				*e*PcP	**PcP**	**19 09 18.2**	**-2.4**
BKNI				LR	LR		
	comp=Z,2µm,20.0s						
BKNI	**Bangkinang**	**64.88**	**276**	P	**P**	**19 08 45.5**	**-1.9**
FRIM	**Kepong**	**64.96**	**279**	P	**P**	**19 08 49.9**	**+2.0**
SNY	**Shenyang**	**65.08**	**327**	⇓P	**P**	**19 08 50.1**	**+2.0**
SNY				S	**S**	**19 17 33.5**	**+4.5**
SNY				pmax	pmax		
	comp=Z,28nm,1.5s						
SNY				pmax	pmax		
	comp=Z,1µm,7.7s						
SNY				LR	LR		
	comp=Z,6µm,18.2s						
SNY				LR	LR		
	comp=Z,4µm,20.0s						
SNY				LR	LR		
	comp=Z,7µm,22.1s						
PDSI	**Padang**	**65.19**	**274**	P	**P**	**19 08 46.4**	**-3.0**
PPSI	**Pulau Pagai**	**65.28**	**272**	P	**P**	**19 08 49.8**	**-0.2**
PPI	**Padang Panjang**	**65.35**	**275**	P	**P**	**19 08 49.8**	**-0.6**
ATKA	**Atka Island**	**65.37**	**14**	*e*P	**P**	**19 08 50.6**	**+0.9**
	comp=Z,149nm,1.3s						
IPM	**Ipoh**	**65.84**	**280**	*e*P	**P**	**19 08 52.3**	**-1.2**
	comp=Z,61nm,1.1s						
IPM				LR	LR		
	comp=Z,3µm,22.0s						
IPM	**Ipoh**	**65.84**	**280**	P	**P**	**19 08 53.7**	**+0.2**
CASY	**Casey**	**66.28**	**201**	*e*P	**P**	**19 08 56.2**	**+0.7**
	comp=Z,61nm,1.1s						
CASY				LR	LR		
	comp=Z,2µm,19.0s						
KULM	**Kulim**	**66.40**	**281**	*e*P	**P**	**19 08 56.9**	**-0.3**
	comp=Z,41nm,1.3s						
KULM	**Kulim**	**66.40**	**281**	P	**P**	**19 08 59.6**	**+2.5**
MNSI	**Mandailing Nat**	**66.41**	**276**	P	**P**	**19 08 54.2**	**-3.0**
GRNR	**Gornyy**	**66.47**	**340**	*e*P	**P**	**19 08 57.2**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
VNDA	**Vanda**	**66.53**	**181**	*e*P	**P**	**19 08 56.8**	**-0.2**
VNDA	**Vanda**	**66.53**	**181**	P	**P**	**19 08 56.9**	**0.0**
	comp=Z,11nm,1.1s,baz=352,slow=6.5,SNR=12						
VNDA				LR	LR	19 35 17.7	
	comp=Z,4µm,18.8s,baz=357,slow=34						
SKNT	**Sakolnakorn**	**66.72**	**294**	P	**P**	**19 09 02.7**	**+3.5**
	comp=Z,22nm,1.2s,comp=Z,756nm						
SBA	**Scott Base**	**66.85**	**180**	*e*P	**P**	**19 09 00.0**	**+1.1**
	comp=Z,56nm,1.3s						
SBA				LR	LR		
	comp=Z,4µm,19.0s						
SBA	**Scott Base**	**66.85**	**180**	*e*P	**P**	**19 09 00.0**	**+1.1**
SBA				pmax	pmax		
	comp=Z,56nm,1.3s						
SBA				MLR	MLR		
	comp=Z,4µm,19.0s						
KLR	**Kul'dur**	**66.86**	**337**	P	**P**	**19 08 59.5**	**+0.1**
	comp=Z,19nm,0.9s,baz=123,slow=6.4,SNR=19						
COCO	**West Island**	**66.96**	**261**	*e*P	**P**	**19 09 00.1**	**-0.6**
	comp=Z,223nm,1.5s						
COCO				LR	LR		
	comp=Z,6µm,22.0s						
NIKH	**Nikolski High**	**67.44**	**17**	*e*P	**P**	**19 09 03.5**	**+0.6**
	comp=Z,166nm,1.2s						
PSI	**Prapat**	**67.48**	**278**	*e*P	**P**	**19 09 02.7**	**-1.5**
	comp=Z,48nm,1.2s						
PSI				LR	LR		
	comp=Z,3µm,22.0s						
PSI	**Prapat**	**67.48**	**278**	*e*P	**P**	**19 09 02.7**	**-1.5**
PSI				pmax	pmax		
	comp=Z,48nm,1.2s						
PSI				MLR	MLR		
	comp=Z,3µm,22.0s						
SRAK	**Srakaew**	**67.52**	**290**	P	**P**	**19 09 06.9**	**+2.7**
	comp=Z,45nm,1.3s,comp=Z,454nm						
ENH	**Enshi**	**67.57**	**309**	*e*P	**P**	**19 09 03.3**	**-1.1**
NONG	**Nongkai**	**67.85**	**295**	P	**P**	**19 09 09.7**	**+3.4**
	comp=Z,1.0nm,1.1s,comp=Z,202nm						
TRTT	**Trang**	**67.96**	**283**	P	**P**	**19 09 11.2**	**+4.1**

	comp=Z,13nm,1.3s						
GYA	**Guiyang**	**68.08**	**304**	P	**P**	**19 09 08.2**	**+0.5**
GYA				PP	**PP**	**19 11 41.0**	**+2.8**
GYA				S	**S**	**19 18 10.0**	**+3.8**
GYA				SKS	**SKiKP**	**19 19 03.0**	**+0.9**
GYA				SS	**SS**	**19 22 31.4**	**+2.2**
GYA				pmax	pmax		
	comp=Z,40nm,0.9s						
GYA				pmax	pmax		
	comp=Z,530nm,7.5s						
GYA				LR	LR		
	comp=Z,2µm,18.3s						
GYA				LR	LR		
	comp=Z,3µm,21.5s						
GYA				LR	LR		
	comp=Z,4µm,21.2s						
CHAI	**Chaiyaphum**	**68.17**	**292**	P	**P**	**19 09 11.7**	**+3.4**
	comp=Z,5.3nm,1.2s,comp=Z,66nm						
BJT	**Baijiatuau**	**68.20**	**321**	*e*P	**P**	**19 09 07.8**	**-0.2**
	comp=Z,62nm,1.3s						
BJT				LR	LR		
	comp=Z,6µm,20.0s						
BJT	**Baijiatuau**	**68.20**	**321**	*e*P	**P**	**19 09 07.8**	**-0.2**
BJT				pmax	pmax		
	comp=Z,62nm,1.3s						
BJT				MLR	MLR		
	comp=Z,6µm,20.0s						
BJI	**Beijing**	**68.21**	**321**	P	**P**	**19 09 09.6**	**+1.5**
BJI				S	**S**	**19 18 11.0**	**+4.1**
BJI				LR	LR		
	comp=Z,3µm,17.5s						
BJI				LR	LR		
	comp=Z,4µm,16.9s						
BJI				LR	LR		
	comp=Z,4µm,26.1s						
PATY	**Pattaya**	**68.27**	**289**	P	**P**	**19 09 13.4**	**+4.4**
	comp=Z,15nm,1.3s,comp=Z,666nm						
GSI	**Gunungsitoli**	**68.47**	**276**	*e*P	**P**	**19 09 09.1**	**-1.2**
	comp=Z,83nm,1.2s						
GSI				LR	LR		
	comp=Z,5µm,21.0s						
KRAB	**Krabi**	**68.53**	**283**	P	**P**	**19 09 14.4**	**+3.7**
	comp=Z,22nm,1.0s						
UNV	**Unalaska Valle**	**68.88**	**17**	*e*P	**P**	**19 09 13.0**	**+1.0**
	comp=Z,46nm,1.2s						
UNV				LR	LR		
	comp=Z,4µm,19.0s						
TIY	**Taiyuan**	**69.27**	**317**	*e*P	**P**	**19 09 17.4**	**+2.5**
TIY				S	**S**	**19 18 21.5**	**+1.7**
TIY				pmax	pmax		
	comp=Z,40nm,1.1s						
TIY				pmax	pmax		
	comp=Z,2µm,5.8s						
TIY				LR	LR		
	comp=Z,3µm,13.1s						
TIY				LR	LR		
	comp=Z,1µm,11.2s						
TIY				LR	LR		
	comp=Z,5µm,20.8s						
PBKT	**Sadao Pong**	**69.31**	**292**	*e*P	**P**	**19 09 14.4**	**-1.0**
	comp=Z,33nm,1.2s						
PBKT	**Sadao Pong**	**69.31**	**292**	P	**P**	**19 09 19.4**	**+4.0**
	comp=Z,27nm,1.8s,comp=Z,1µm						
PHET	**Kaeng Krachan**	**69.42**	**288**	P	**P**	**19 09 20.8**	**+4.7**
	comp=Z,7.5nm,1.4s						
XAN	**Xi'an**	**69.81**	**313**	P	**P**	**19 09 17.4**	**-0.8**
XAN				pP	pP	19 09 20.8	-4.9
XAN				PP	**PP**	**19 11 53.6**	**+0.6**
XAN				S	**S**	**19 18 27.7**	**+1.4**
XAN				sS	pS	19 18 36.8	+1.2
XAN				ScS	**SKSac**	**19 19 15.6**	**-2.1**
XAN				SS	**SS**	**19 22 53.1**	**-2.4**
XAN				pmax	pmax		
	comp=Z,28nm,1.0s						
XAN				pmax	pmax		
	comp=Z,1µm,7.6s						
XAN				LR	LR		
	comp=Z,3µm,16.5s						
XAN				LR	LR		
	comp=Z,3µm,19.0s						
XAN				LR	LR		
	comp=Z,4µm,19.5s						
XAN	**Xi'an**	**69.81**	**313**	*e*P	**P**	**19 09 18.2**	**0.0**
	comp=Z,33nm,1.1s						
XAN				LR	LR		
	comp=Z,5µm,20.0s						
XAN	**Xi'an**	**69.81**	**313**	*e*P	**P**	**19 09 18.2**	**0.0**
XAN				pmax	pmax		
	comp=Z,33nm,1.1s						
XAN				MLR	MLR		
	comp=Z,5µm,20.0s						
SNSI	**Sinabang, Aceh**	**69.93**	**277**	P	**P**	**19 09 19.7**	**+0.4**
LHMI	**Lhok Sumawe**	**69.96**	**280**	*e*P	**P**	**19 09 19.3**	**-0.2**
	comp=Z,102nm,1.1s						
UTTA	**Uttaradit**	**70.06**	**293**	P	**P**	**19 09 24.4**	**+4.4**
	comp=Z,5.6nm,1.4s,comp=Z,66nm						
NANT	**Nan**	**70.28**	**295**	P	**P**	**19 09 24.7**	**+3.3**
	comp=Z,9.0nm,1.1s,comp=Z,102nm						
SRDT	**SRDT**	**70.32**	**290**	P	**P**	**19 09 25.8**	**+4.2**
	comp=Z,36nm,1.8s,comp=Z,1µm						
UTHA	**Uthaitani**	**70.38**	**291**	P	**P**	**19 09 26.2**	**+4.2**
	comp=Z,6.0nm,1.3s,comp=Z,86nm						
FALS	**False Pass**	**70.68**	**19**	*e*P	**P**	**19 09 23.2**	**+0.1**
	comp=Z,52nm,0.8s						
KMI	**Kunming**	**70.77**	**302**	P	**P**	**19 09 27.5**	**+3.0**
KMI				pP	pP	19 09 29.9	-2.1
KMI				sP	sP	19 09 30.9	-4.0
KMI				S	**S**	**19 18 41.9**	**+3.7**
KMI				SS	**SS**	**19 23 14.9**	**+3.9**
KMI				pmax	pmax		
	comp=Z,58nm,1.3s						
KMI				pmax	pmax		
	comp=Z,2µm,8.8s						
KMI				LR	LR		
	comp=Z,2µm,17.3s						
KMI				LR	LR		
	comp=Z,3µm,20.6s						
KMI				LR	LR		
	comp=Z,5µm,20.6s						
KMI	**Kunming**	**70.77**	**302**	*e*P	**P**	**19 09 23.2**	**-1.3**
	comp=Z,82nm,1.3s						
KMI				LR	LR		
	comp=Z,5µm,21.0s						
KMI	**Kunming**	**70.77**	**302**	*e*P	**P**	**19 09 23.2**	**-1.3**
KMI				pmax	pmax		
	comp=Z,82nm,1.3s						
KMI				MLR	MLR		
	comp=Z,5µm,21.0s						
SUKH	**Sukhothai**	**70.81**	**293**	P	P	19 09 30.2	+5.6
	comp=Z,5.0nm,1.2s						
UMPA	**Umpang Tak**	**71.12**	**291**	P	P	19 09 31.4	+4.9
	comp=Z,6.0nm,1.2s,comp=Z,61nm						
PAYA	**Payao**	**71.21**	**295**	P	**P**	**19 09 31.2**	**+4.2**
	comp=Z,6.5nm,1.2s						
MA2	**Magadan**	**71.31**	**352**	*e*P	**P**	**19 09 26.1**	**-0.6**
	comp=Z,19nm,1.3s						
MA2				LR	LR		
	comp=Z,7µm,22.0s						
MA2	**Magadan**	**71.31**	**352**	*e*P	**P**	**19 09 26.2**	**-0.6**
MA2				pmax	pmax		
	comp=Z,19nm,1.3s						
MA2				MLR	MLR		
	comp=Z,7µm,22.0s						
HHC	**Hu-ho-hao-te**	**71.55**	**320**	*e*P	**P**	**19 09 30.2**	**+1.4**
HHC				S	**S**	**19 18 50.4**	**+4.0**
HHC				SS	**SS**	**19 23 23.5**	**+1.3**
HHC				pmax	pmax		
	comp=Z,16nm,1.3s						
HHC				pmax	pmax		
	comp=Z,1µm,5.8s						
HHC				LR	LR		
	comp=Z,5µm,15.9s						
HHC				LR	LR		
	comp=Z,3µm,16.5s						
HHC				LR	LR		
	comp=Z,5µm,17.4s						
CM01	**Chiang Mai Arr**	**71.72**	**294**	*e*P	**P**	**19 09 29.4**	**-0.7**
CM31	**Chiang Mai Arr**	**71.74**	**294**	*e*P	**P**	**19 09 29.4**	**-0.9**
CM31	**Chiang Mai Arr**	**71.74**	**294**	P	**P**	**19 09 32.1**	**+1.9**
	SNR=11						
CMAR	**Chiang Mai Arr**	**71.74**	**294**	P	**P**	**19 09 30.6**	**+0.4**
	comp=Z,11nm,1.1s,baz=116,slow=3.8,SNR=21						
CMAR				LR	LR	19 38 42.9	
	comp=Z,2µm,22.0s,baz=115,slow=34						
CMMT	**Chiang Mai**	**71.85**	**294**	P	**P**	**19 09 34.1**	**+3.2**
	comp=Z,25nm,1.4s,comp=Z,1µm						
CHTO	**Chiang Mai**	**71.86**	**294**	*e*P	**P**	**19 09 29.4**	**-1.6**
	comp=Z,45nm,1.4s						
CHTO				LR	LR		
	comp=Z,3µm,22.0s						
CHTO	**Chiang Mai**	**71.86**	**294**	*e*P	**P**	**19 09 29.4**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,45nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,3µm,22.0s						
CHTO	**Chiang Mai**	**71.86**	**294**	P	**P**	**19 09 34.4**	**+3.4**
	SNR=11						
CHTO				P	**P**	**19 09 34.4**	**+3.4**
	SNR=11						
CHTO	**Chiang Mai**	**71.86**	**294**	P	**P**	**19 09 34.2**	**+3.3**
	comp=Z,113nm,1.5s,comp=Z,5µm						
SDPT	**Sand Point**	**72.04**	**20**	PFAKE		19 09 40.0	+8.8
SDPT				LR	LR		
	comp=Z,4µm,20.0s						
HIA	**Hailar**	**72.14**	**331**	*e*P	**P**	**19 09 32.0**	**-0.1**
	comp=Z,29nm,1.0s						
HIA				LR	LR		
	comp=Z,4µm,18.0s						
HIA	**Hailar**	**72.14**	**331***c*	*i*P	**P**	**19 09 32.6**	**+0.5**
HIA				pmax	pmax		
	comp=Z,48nm,1.3s						
ZEA	**Zeya**	**72.15**	**337**	*e*P	**P**	**19 09 31.3**	**-0.7**
ZEA				*e*S	**S**	**19 18 58.0**	**+5.4**
ZEA				pmax	pmax		
	comp=N,93nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,140nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,2µm,9.0s						
ZEA				pmax	pmax		
	comp=E,700nm,6.0s						
ZEA				pmax	pmax		
	comp=N,500nm,5.0s						
ZEA				smax	smax		
	comp=E,2µm,15.0s						
CD2	**Chengdu**	**72.27**	**307**	P	**P**	**19 09 33.1**	**-0.2**
CD2				PP	**PP**	**19 12 13.4**	**-0.9**
CD2				S	**S**	**19 18 57.6**	**+2.6**
CD2				SKS	**ScS**	**19 19 38.2**	**-0.2**
CD2				SS	**SS**	**19 23 36.2**	**+2.7**
CD2				pmax	pmax		
	comp=E,70nm,0.6s						
CD2				pmax	pmax		
	comp=E,3µm,7.6s						
CD2				LR	LR		
	comp=E,5µm,15.9s						
CD2				LR	LR		
	comp=E,3µm,16.4s						
CD2				LR	LR		
	comp=E,4µm,22.9s						
SEY	**Seymchan**	**74.39**	**354**⇑	*e*P	**P**	**19 09 47.7**	**+2.7**
LZH	**Lanzhou**	**74.44**	**312**	*e*P	**P**	**19 09 47.8**	**+1.7**
LZH				pP	pP	19 09 50.1	-3.5
LZH				sP	sP	19 09 52.4	-4.0
LZH				pmax	pmax		
	comp=E,320nm,1.2s						
LZH				pmax	pmax		
	comp=E,2µm,4.1s						
LZH				LR	LR		
	comp=E,7µm,19.3s						
LZH				LR	LR		
	comp=E,5µm,18.7s						
LZH				LR	LR		
	comp=E,8µm,18.7s						
PBA	**Port Blair**	**75.56**	**285**	PFAKE		19 10 00.0	+7.3
PBA				LR	LR		
	comp=Z,3µm,21.0s						
OHAK	**Old Harbor**	**76.01**	**22**	*e*P	**P**	**19 09 54.1**	**-0.3**
	comp=Z,62nm,1.3s						
GAMB	**Gambell**	**76.59**	**10**	*e*P	**P**	**19 09 57.3**	**-0.3**
	comp=Z,17nm,1.0s						
GAMB				LR	LR		
	comp=Z,5µm,22.0s						
KDAK	**Kodiak Island**	**76.68**	**22**	*e*P	**P**	**19 09 58.0**	**-0.2**
	comp=Z,61nm,1.4s						
KDAK	**Kodiak Island**	**76.68**	**22**	P	**P**	**19 09 58.2**	**+0.1**
	comp=Z,19nm,1.1s,baz=22,slow=11,SNR=2.3						
KDAK				LR	LR	19 38 32.7	
	comp=Z,2µm,20.0s,baz=227,slow=32						
CIT	**Chita**	**76.93**	**330**	*e*P	**P**	**19 10 03.0**	**+3.2**
CIT				*e*		19 10 15.1	
CIT				pmax	pmax		
	comp=Z,131nm,1.6s						
YAK	**Yakutsk**	**77.94**	**344**	*e*P	**P**	**19 10 06.5**	**+1.3**
YAK				*e*		19 10 14.5	
YAK				*e**PP	**pwP**	**19 10 17.0**	**+0.4**
YAK				*e*		19 13 00.7	
YAK				*e*S	**S**	**19 19 56.9**	**+0.2**
YAK				*e**SS	**SKSac**	**19 20 16.5**	**-0.6**
YAK				*e*		19 20 28.6	
YAK				*e*SS	**SS**	**19 24 52.7**	**-5.6**
YAK				pmax	pmax		
	comp=Z,136nm,0.9s						
YAK				pmax	pmax		
	comp=N,36nm,1.0s						
YAK				pmax	pmax		
	comp=E,39nm,1.5s						
YAK				pmax	pmax		
	comp=Z,2µm,5.3s						
YAK				pmax	pmax		
	comp=N,2µm,4.7s						
YAK				pmax	pmax		
	comp=E,1µm,4.7s						
YAK				smax	smax		
	comp=E,2µm,5.3s						
YAK				smax	smax		
	comp=N,966nm,4.4s						
YAK				MLR	MLR		
	comp=Z,22µm,18.0s						
YAK				MLR	MLR		
	comp=N,13µm,18.0s						
YAK				MLR	MLR		
	comp=E,5µm,16.0s						
ULN	**Ulaanbaatar**	**78.04**	**324**	*e*P	**P**	**19 10 05.3**	**-1.0**
	comp=E,18nm,0.9s						
ULN				LR	LR		
	comp=Z,4µm,18.0s						
ULN	**Ulaanbaatar**	**78.04**	**324**⇑	*e*P	**P**	**19 10 06.1**	**-0.2**
ULN				pmax	pmax		
	comp=Z,31nm,1.3s						
SVW2	**Sparrevohn**	**78.19**	**18**	*e*P	**P**	**19 10 07.2**	**+0.6**
	comp=Z,14nm,0.7s						
SVW2				LR	LR		
	comp=Z,2µm,19.0s						
HOM	**Homer**	**78.39**	**21**	*e*P	**P**	**19 10 08.9**	**+1.2**
	comp=Z,147nm,1.0s						
SONA0	**Songino Array**	**78.40**	**324**	*e*P	**P**	**19 10 08.0**	**-0.3**
SONA0				*e*PP	**PP**	**19 13 04.5**	**-1.4**
SONM	**Songino Array**	**78.40**	**324**	P	**P**	**19 10 08.0**	**-0.3**
	comp=Z,8.3nm,1.0s,baz=137,slow=5.9,SNR=15						
SONM				PP	**PP**	**19 13 04.5**	**-1.4**
	comp=Z,1.9nm,0.9s,baz=134,slow=8.4,SNR=3.2						
SONM				LR	LR	19 43 42.2	
	comp=Z,4µm,19.8s,baz=118,slow=35						
SONA1	**Songino Array**	**78.41**	**324**	*e*P	**P**	**19 10 07.6**	**-0.7**
ANM	**Nome**	**78.53**	**12**	*e*P	**P**	**19 10 08.7**	**+0.3**
	comp=Z,21nm,1.3s						
ANM				LR	LR		
	comp=Z,4µm,20.0s						
ANM	**Nome**	**78.53**	**12**	*e*P	**P**	**19 10 08.7**	**+0.3**
ANM				pmax	pmax		
	comp=Z,21nm,1.3s						
ANM				MLR	MLR		
	comp=Z,4µm,20.0s						
RSO	**Redoubt South**	**78.61**	**20**	*e*P	**P**	**19 10 09.4**	**+0.3**
BRLK	**Bradley Lake**	**78.73**	**21**	*e*P	**P**	**19 10 09.8**	**+0.1**
	comp=Z,27nm,0.8s						
GTA	**Gaotai**	**78.75**	**314**	*e*P	**P**	**19 10 10.6**	**+0.2**
GTA				pP	pP	19 10 14.6	-3.3
GTA				sP	PcP	19 10 17.7	-1.5
GTA				S	**S**	**19 20 07.5**	**+0.9**
GTA				pmax	pmax		
	comp=Z,990nm,6.2s						
GTA				LR	LR		
	comp=Z,2µm,16.8s						
GTA				LR	LR		
	comp=Z,2µm,16.8s						
GTA				LR	LR		
	comp=Z,4µm,18.9s						
BILL	**Bilibino**	**78.84**	**0**	*e*P	**P**	**19 10 09.7**	**-0.3**
	comp=Z,31nm,1.1s						
BILL	**Bilibino**	**78.84**	**0**	*e*P	**P**	**19 10 10.1**	**+0.1**
BILL				*e*		19 10 17.7	
BILL				*e*		19 13 06.4	
BILL				*e*PPP	PPP	19 14 56.2	
BILL				pmax	pmax		
	comp=Z,36nm,1.2s						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s						
QSPA	**South Pole Qui**	**79.00**	**180**	*e*P	**P**	**19 10 11.2**	**-0.2**
	comp=Z,82nm,1.4s						
QSPA				LR	LR		
	comp=Z,4µm,18.0s						
SEW	**Seward**	**79.48**	**21**	*e*P	**P**	**19 10 13.6**	**-0.1**
	comp=Z,17nm,0.9s						
SUA	**Susitna One**	**80.01**	**20**	*e*P	**P**	**19 10 16.4**	**-0.3**
	comp=Z,22nm,1.1s						
SUA				LR	LR		
	comp=Z,3µm,20.0s						
RC01	**Rabbit Creek A**	**80.08**	**20**	*e*P	**P**	**19 10 16.7**	**-0.3**
	comp=Z,27nm,1.2s						
SHL	**Shillong**	**80.16**	**298**	*e*P	**P**	**19 10 16.9**	**-1.5**
	comp=Z,40nm,1.2s						
SHL				LR	LR		
	comp=Z,2µm,22.0s						
SHL	**Shillong**	**80.16**	**298**	*e*P	**P**	**19 10 16.9**	**-1.5**
SHL				pmax	pmax		
	comp=Z,40nm,1.2s						
SHL				MLR	MLR		
	comp=Z,2µm,22.0s						
BOD	**Bodaibo**	**80.33**	**335**	*e*P	**P**	**19 10 17.9**	**-0.4**
BOD				pmax	pmax		
	comp=Z,40nm,1.8s						
PPLA	**Purkeypile**	**80.60**	**18**	*e*P	**P**	**19 10 19.1**	**-0.8**
	comp=Z,9.5nm,1.1s						
PPLA				LR	LR		
	comp=Z,4µm,21.0s						
PMR	**Palmer**	**80.65**	**20**	*e*P	**P**	**19 10 20.8**	**+0.9**
	comp=Z,31nm,1.4s						
PMR				LR	LR		
	comp=Z,3µm,21.0s						
PMR	**Palmer**	**80.65**	**20**	*e*P	**P**	**19 10 20.8**	**+0.9**
PMR				pmax	pmax		
	comp=Z,31nm,1.4s						
PMR				MLR	MLR		
	comp=Z,3µm,21.0s						
KNK	**Knik Glacier**	**80.75**	**21**	*e*P	**P**	**19 10 20.7**	**+0.1**
	comp=Z,13nm,0.9s						
KNK				LR	LR		
	comp=Z,3µm,19.0s						
GHO	**Glory Hole Cre**	**80.84**	**20**	*e*P	**P**	**19 10 20.6**	**-0.5**
	comp=Z,22nm,1.0s						
GHO				LR	LR		
	comp=Z,3µm,21.0s						
GLI	**Glacier Island**	**80.86**	**21**	*e*P	**P**	**19 10 21.4**	**+0.3**
	comp=Z,33nm,1.0s						
GLI				LR	LR		
	comp=Z,2µm,18.0s						
RPN	**Rapa Nui**	**80.94**	**116**	*e*P	**P**	**19 10 23.0**	**+0.6**
	comp=Z,51nm,0.8s						
RPN				LR	LR		
	comp=Z,3µm,21.0s						
RPN	**Rapa Nui**	**80.94**	**116**	*e*P	**P**	**19 10 23.0**	**+0.6**
RPN				pmax	pmax		
	comp=Z,51nm,0.8s						
RPN				MLR	MLR		
	comp=Z,3µm,21.0s						
CAST	**Castle Rocks**	**81.02**	**18**	*e*P	**P**	**19 10 22.4**	**+0.4**
	comp=Z,11nm,0.8s						
SML	**Sawmill**	**81.07**	**20**	*e*P	**P**	**19 10 21.9**	**-0.4**
	comp=Z,28nm,1.2s						
SML				LR	LR		
	comp=Z,3µm,20.0s						
SML	**Sawmill**	**81.07**	**20**	*e*P	**P**	**19 10 21.9**	**-0.4**
SML				pmax	pmax		
	comp=Z,29nm,1.2s						
SML				MLR	MLR		
	comp=Z,3µm,20.0s						
EYAK	**Cordova Ski Ar**	**81.13**	**22**	*e*P	**P**	**19 10 24.1**	**+1.6**
	comp=Z,25nm,1.0s						
SCM	**Sheep Creek Mo**	**81.43**	**21**	*e*P	**P**	**19 10 24.5**	**+0.2**
	comp=Z,21nm,0.9s						
SCM				LR	LR		
	comp=Z,3µm,20.0s						
SCM	**Sheep Creek Mo**	**81.43**	**21**	*e*P	**P**	**19 10 24.5**	**+0.2**
SCM				pmax	pmax		
	comp=Z,21nm,0.9s						
SCM				MLR	MLR		
	comp=Z,3µm,20.0s						
ZAK	**Zakamensk**	**81.45**	**325**	*e*P	**P**	**19 10 23.2**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,21nm,1.3s						
DIV	**Divide**	**81.51**	**22**	*e*P	**P**	**19 10 23.5**	**-1.2**
	comp=Z,27nm,0.9s						
HMT	**Hamilton**	**81.55**	**23**	*e*P	**P**	**19 10 24.6**	**-0.3**
	comp=Z,84nm,1.4s						
TRF	**Thorofare Moun**	**81.60**	**19**	*e*P	**P**	**19 10 24.8**	**-0.5**
	comp=Z,13nm,1.1s						
TRF				LR	LR		
	comp=Z,3µm,20.0s						
KLU	**Klutina**	**81.70**	**21**	*e*P	**P**	**19 10 25.5**	**-0.2**
	comp=Z,61nm,1.4s						
KLU				LR	LR		
	comp=Z,2µm,19.0s						
BMRM	**Bremner River**	**81.83**	**22**	*e*P	**P**	**19 10 25.0**	**-1.4**
	comp=Z,3.9nm,1.3s						
BPAW	**Bear Paw Mtn.**	**81.86**	**18**	*e*P	**P**	**19 10 27.4**	**+1.0**
	comp=Z,8.0nm,1.1s						
BPAW				LR	LR		
	comp=Z,3µm,19.0s						
TLY	**Talaya**	**81.87**	**326**	*e*P	**P**	**19 10 25.3**	**-1.5**
	comp=Z,14nm,1.1s						
TLY				LR	LR		
	comp=Z,2µm,20.0s						
TLY	**Talaya**	**81.87**	**326**	*e*P	**P**	**19 10 25.3**	**-1.5**
TLY				pmax	pmax		
	comp=Z,14nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2µm,20.0s						
TLY	**Talaya**	**81.87**	**326**	P	**P**	**19 10 26.4**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=153,slow=5.2,SNR=7.8						
LSA	**Lhasa**	**82.00**	**302**	*e*P	**P**	**19 10 28.6**	**+0.1**
	comp=Z,4.7nm,0.9s						
LSA				LR	LR		
	comp=Z,3µm,21.0s						
RND	**Reindeer**	**82.02**	**19**	*e*P	**P**	**19 10 26.6**	**-0.7**
	comp=Z,29nm,1.4s						
RND				LR	LR		
	comp=Z,3µm,22.0s						
RND	**Reindeer**	**82.02**	**19**	*e*P	**P**	**19 10 26.6**	**-0.7**
RND				pmax	pmax		
	comp=Z,29nm,1.4s						
RND				MLR	MLR		
	comp=Z,3µm,22.0s						
RDOG	**Red Dog Mine**	**82.06**	**12**	*e*P	**P**	**19 10 26.7**	**-0.6**
	comp=Z,16nm,0.8s						
RDOG				LR	LR		
	comp=Z,4µm,19.0s						
MCK	**McKinley**	**82.22**	**19**	*e*P	**P**	**19 10 27.7**	**-0.7**
	comp=Z,36nm,1.3s						
MCK				LR	LR		
	comp=Z,4µm,20.0s						
MCK	**McKinley**	**82.22**	**19**	*e*P	**P**	**19 10 27.7**	**-0.7**
MCK				pmax	pmax		
	comp=Z,36nm,1.3s						
MCK				MLR	MLR		
	comp=Z,4µm,20.0s						
DHY	**Denali Highway**	**82.27**	**20**	*e*P	**P**	**19 10 28.2**	**-0.6**
	comp=Z,20nm,1.2s						
DHY				LR	LR		
	comp=Z,2µm,19.0s						
BWN	**Browne**	**82.37**	**18**	*e*P	**P**	**19 10 27.2**	**-1.9**
	comp=Z,98nm,1.4s						
BWN				LR	LR		
	comp=Z,4µm,20.0s						
IM3	**Indian Mountai**	**82.48**	**16**	*e*P	**P**	**19 10 28.3**	**-1.3**
HARP	**HAARP**	**82.58**	**21**	*e*P	**P**	**19 10 29.9**	**-0.3**
	comp=Z,32nm,0.9s						
MLY	**Manley**	**82.61**	**17**	*e*P	**P**	**19 10 29.8**	**-0.6**
	comp=Z,10nm,1.2s						
MLY				LR	LR		
	comp=Z,3µm,20.0s						
MCCM	**Marconi Confer**	**82.78**	**49**	*e*P	**P**	**19 10 31.8**	**0.0**
	comp=Z,41nm,1.0s						
MCCM				LR	LR		
	comp=Z,4µm,19.0s						
KCPM	**Cahto Peak**	**82.80**	**47**	*e*P	**P**	**19 10 30.7**	**-1.3**
	comp=Z,40nm,1.1s						
PAX	**Paxson**	**82.84**	**20**	*e*P	**P**	**19 10 31.9**	**+0.2**
	comp=Z,5.5nm,0.8s						
PAX	**Paxson**	**82.84**	**20**	*e*P	**P**	**19 10 31.9**	**+0.2**

PAX				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JCC	Jacoby Creek,	82.88	46	eP	P	19 10 33.6	+1.4
	comp=Z,67nm,1.1s						
KMRM	Mail Ridge	82.90	47	eP	P	19 10 32.6	+0.1
	comp=Z,35nm,0.9s						
HOPS	Hopland Field	82.93	48	eP	P	19 10 32.2	-0.3
	comp=Z,51nm,1.1s						
HOPS				LR	LR		
	comp=Z,4µm,20.0s						
PCA	Pinnacle	82.97	24	eP	P	19 10 30.5	-1.9
	comp=Z,47nm,1.0s						
PCA				LR	LR		
	comp=Z,5µm,19.0s						
WRH	Wood River Hil	83.01	18	eP	P	19 10 31.6	-0.7
	comp=Z,12nm,1.0s						
WRH				LR	LR		
	comp=Z,4µm,20.0s						
GDXM	Geysers	83.07	48	eP	P	19 10 32.7	-0.7
	comp=Z,24nm,1.0s						
GDXM				LR	LR		
	comp=Z,5µm,20.0s						
KHMM	Horse Mountain	83.12	46	eP	P	19 10 34.0	+0.3
	comp=Z,44nm,1.2s						
DHAK	Deception Hill	83.23	26	eP	P	19 10 33.8	+0.1
	comp=Z,102nm,1.3s						
DHAK				LR	LR		
	comp=Z,7µm,18.0s						
MDM	Murphy Dome	83.31	18	eP	P	19 10 33.3	-0.7
	comp=Z,23nm,1.2s						
MDM				LR	LR		
	comp=Z,3µm,18.0s						
MOY	Mondy	83.32	326	eP	P	19 10 35.7	+1.3
MOY				pmax	pmax		
	comp=Z,87nm,4.0s						
HDA	Harding Lake	83.33	19	eP	P	19 10 33.3	-0.7
	comp=Z,29nm,0.8s						
HDA				LR	LR		
	comp=Z,3µm,19.0s						
HDA	Harding Lake	83.33	19	P	P	19 10 33.3	-0.7
	baz=227						
TCOL	CIGO, UAF Yank	83.36	18	P	P	19 10 33.7	-0.4
	baz=226						
COLA	College	83.36	18	eP	P	19 10 32.8	-1.4
	comp=Z,18nm,0.7s						
COLA				LR	LR		
	comp=Z,3µm,19.0s						
COLA	College	83.36	18⇓	eP	P	19 10 33.1	-1.0
COLA				pmax	pmax		
	comp=Z,16nm,0.8s						
SAO	San Andreas Ge	83.40	51	eP	P	19 10 35.4	+0.3
	comp=Z,17nm,0.9s						
SAO				LR	LR		
	comp=Z,6µm,20.0s						
SAO	San Andreas Ge	83.40	51	eP	P	19 10 35.4	+0.3
SAO				pmax	pmax		
	comp=Z,17nm,0.9s						
SAO				MLR	MLR		
	comp=Z,6µm,20.0s						
SIT	Sitka	83.40	28	eP	P	19 10 33.8	-0.7
	comp=Z,15nm,1.0s						
SIT	Sitka	83.40	28	eP	P	19 10 33.8	-0.7
SIT				pmax	pmax		
	comp=Z,15nm,1.0s						
KEBM	Edson Butte	83.42	44	eP	P	19 10 34.4	-0.7
	comp=Z,37nm,1.1s						
KEBM				LR	LR		
	comp=Z,4µm,20.0s						
O02D	Mt. Diablo Mer	83.55	47	P	P	19 10 36.6	+0.8
	baz=250,SNR=7.6						
RIDG	Independ'e Rid	83.56	20	eP	P	19 10 34.9	-0.4
	comp=Z,22nm,1.0s						
RIDG				LR	LR		
	comp=Z,3µm,19.0s						
IL1	Eielson Array	83.59	19	eP	P	19 10 35.5	+0.1
ILAR	Eielson Array	83.59	19	P	P	19 10 34.8	-0.6
	comp=Z,13nm,0.8s,baz=230,slow=4.9,SNR=37						
ILAR				LR	LR	19 43 40.0	
	comp=Z,3µm,19.5s,baz=242,slow=33						
ILB	Eielson Array	83.59	19	eP	P	19 10 34.6	-0.7
POKR	Poker Plat Res	83.66	18	P	P	19 10 35.4	-0.4
	baz=226						
L02E	Cave Junction	83.66	45	P	P	19 10 37.0	+0.7
	baz=249						
PMPB	Monarch Peak	83.72	51	eP	P	19 10 36.6	-0.2
DOT	Dot Lake	83.77	20	eP	P	19 10 35.8	-0.5
	comp=Z,39nm,1.3s						
J01E	Myrtle Point	83.80	44	P	P	19 10 37.2	+0.4
	baz=249						
K02D	Willamette Mer	83.81	45	P	P	19 10 38.1	+1.0
	baz=249,SNR=9.0						
SNCC	San Nicolas Is	83.81	55	eP	P	19 10 36.8	-0.4
	comp=Z,37nm,1.0s						
SNCC				LR	LR		
	comp=Z,4µm,20.0s						
SNCC	San Nicolas Is	83.81	55	P	P	19 10 37.7	+0.5
	baz=253						
WDC	Whiskeytown Da	83.86	47	eP	P	19 10 36.9	-0.4
	comp=Z,21nm,1.1s						
WDC				LR	LR		
	comp=Z,4µm,20.0s						
WDC	Whiskeytown Da	83.86	47	eP	P	19 10 36.9	-0.4
WDC				pmax	pmax		
	comp=Z,21nm,1.1s						
WDC				MLR	MLR		
	comp=Z,4µm,20.0s						
N02D	Trinity Center	83.88	46	P	P	19 10 38.2	+0.7
	baz=250,SNR=14						
M02C	Callahan	83.92	46	P	P	19 10 38.8	+1.1
	baz=250,SNR=12						
SCZ2	Santa Cruz Isl	83.95	54	P	P	19 10 38.3	+0.4
	baz=253						
PAGB	Antelope Grade	83.99	52	eP	P	19 10 37.6	-0.5
	comp=Z,20nm,1.2s						
PAGB				LR	LR		
	comp=Z,6µm,18.0s						
SCRK	Sand Creek	84.01	20	eP	P	19 10 37.4	-0.2
	comp=Z,30nm,1.2s						
SBC	Santa Barbara	84.02	53	P	P	19 10 39.0	+0.8
	baz=252						
SMMC	Simmler	84.06	52	P	P	19 10 38.5	-0.1
	baz=252						
PKM	Mcpherson Peak	84.07	53	P	P	19 10 39.9	+1.1
	baz=252,SNR=7.9						
YBH	Yreka Blue Hor	84.14	46	eP	P	19 10 38.1	-0.7
	comp=Z,28nm,1.0s						
YBH	Yreka Blue Hor	84.14	46	eP	P	19 10 38.1	-0.7
YBH				pmax	pmax		
	comp=Z,28nm,1.0s						
I02D	Swisshome	84.19	43	P	P	19 10 39.6	+0.7
	baz=249						
HUMO	Hull Mountain	84.27	45	eP	P	19 10 39.0	-0.3
	comp=Z,26nm,1.0s						
HUMO				LR	LR		
	comp=Z,3µm,21.0s						
ORV	Oroville	84.27	48	eP	P	19 10 38.7	-0.7
	comp=Z,18nm,1.0s						
ORV				LR	LR		
	comp=Z,3µm,19.0s						
ORV	Oroville	84.27	48	eP	P	19 10 38.7	-0.7
ORV				pmax	pmax		
	comp=Z,18nm,1.0s						
ORV				MLR	MLR		
	comp=Z,3µm,19.0s						
O03E	Paynes Creek	84.30	47	P	P	19 10 39.1	-0.6
	baz=251,SNR=22						
COLD	Coldfoot	84.36	16	eP	P	19 10 39.6	+0.4
	comp=Z,4.6nm,1.1s						
COLD				LR	LR		
	comp=Z,3µm,22.0s						
I03D	Drain, OR	84.39	44	P	P	19 10 40.0	+0.1
	baz=249						
BESE	Bessie Mountai	84.42	27	eP	P	19 10 40.1	+0.4
	comp=Z,59nm,1.4s						
BESE				LR	LR		
	comp=Z,6µm,19.0s						
BLG	Laguna Peak, P	84.43	54	P	P	19 10 40.0	-0.4
	baz=253						
AFDM	Forest Hills D	84.46	49	eP	P	19 10 39.8	-0.6
	comp=Z,33nm,1.0s						
AFDM				LR	LR		
	comp=Z,2µm,18.0s						
JIS	Juneau Island	84.47	27	eP	P	19 10 38.9	-1.0
	comp=Z,36nm,1.4s						
JIS				LR	LR		
	comp=Z,7µm,18.0s						
WRAK	Wrangell Islan	84.49	30	eP	P	19 10 39.6	-0.5
	comp=Z,29nm,1.1s						
WRAK				LR	LR		
	comp=Z,5µm,20.0s						
HYT	Haines Junctio	84.50	24	eP	P	19 10 39.1	-1.2
	comp=Z,14nm,1.0s						
SCI2	San Clemente I	84.52	55	P	P	19 10 40.4	-0.4
	baz=253						
PRP	Porcupine Dome	84.52	18	eP	P	19 10 41.0	+0.7
	comp=Z,8.6nm,1.0s						
PRP				LR	LR		
	comp=Z,3µm,20.0s						
L04D	Klamath Falls	84.59	45	P	P	19 10 40.9	-0.3
	baz=250,SNR=8.1						
CMB	Columbia Colle	84.61	50	eP	P	19 10 40.5	-0.7
	comp=Z,18nm,0.9s						
CMB				LR	LR		
	comp=Z,4µm,20.0s						
MAW	Mawson	84.62	202	eP	P	19 10 40.5	-0.1
	comp=Z,16nm,1.1s						
MAW				LR	LR		
	comp=Z,600nm,20.0s						
MAW	Mawson	84.62	202	eP	P	19 10 40.5	-0.1
MAW				pmax	pmax		
	comp=Z,16nm,1.1s						
MAW				MLR	MLR		
	comp=Z,600nm,20.0s						
MAW	Mawson	84.62	202	P	P	19 10 43.3	+2.6
	comp=Z,33nm,0.9s,baz=67,slow=5.0,SNR=4.7						
MAW				LR	LR	19 45 02.1	
	comp=Z,2µm,18.6s,baz=96,slow=33						
SKAG	Skagway	84.67	26	eP	P	19 10 41.0	+0.1
	comp=Z,39nm,1.3s						
SKAG				LR	LR		
	comp=Z,6µm,18.0s						
COR	Corvallis	84.73	43	PFAKE		19 10 50.0	+8.4
COR				LR	LR		
	comp=Z,4µm,21.0s						
CIS	Catalina Islan	84.74	55	P	P	19 10 41.8	-0.2
	baz=253						
BBB	Bella Bella	84.76	35	eP	P	19 10 41.0	-0.5
	comp=Z,54nm,1.3s						
BBB	Bella Bella	84.76	35	LR	LR	19 39 27.4	
	comp=Z,249nm,20.1s,baz=252,slow=29						
M04C	Macdoel	84.77	46	P	P	19 10 42.0	0.0
	baz=250,SNR=15						
VOG	Valley Oaks Go	84.84	52	P	P	19 10 42.7	+0.4
	baz=252						
OSI	Osito Audit: C	84.85	53	eP	P	19 10 42.1	-0.4
	comp=Z,17nm,1.0s						
OSI				LR	LR		
	comp=Z,5µm,22.0s						
OSI	Osito Audit: C	84.85	53	P	P	19 10 43.3	+0.8
	baz=253						
ARVC	Arvin	84.92	53	P	P	19 10 43.6	+0.8
	baz=253						
VES	Vestal, Richgr	84.93	52	P	P	19 10 43.0	+0.2
	baz=253						
FMP	Fort Macarthur	84.93	54	P	P	19 10 42.6	-0.3
	baz=253						
G03D	McMinnville, O	84.98	42	P	P	19 10 43.1	+0.2
	baz=249						
DECC	Green Verdugo	85.05	54	P	P	19 10 43.7	+0.1
	baz=253						
I04A	Tendick Farm,	85.06	44	P	P	19 10 43.9	+0.6
	baz=250,SNR=8.1						
J04D	Umpqua Nationa	85.07	44	P	P	19 10 44.3	+0.7
	baz=250,SNR=8.2						
H04D	Lebanon	85.09	43	P	P	19 10 44.3	+0.9
	baz=250						
RUBR	Rubicon Trail	85.10	49	eP	P	19 10 43.4	-0.5
	comp=Z,32nm,1.0s						
RUBR				LR	LR		
	comp=Z,3µm,20.0s						
RAMN	Ramite	85.10	299	eP	P	19 10 43.6	-0.6
K04D	Chiloquin, OR	85.11	45	P	P	19 10 44.4	+0.7
	baz=250						
PASC	Pasadena Art C	85.15	54	eP	P	19 10 43.1	-0.9
	comp=Z,23nm,1.1s						
PASC				LR	LR		
	comp=Z,4µm,22.0s						
BEKR	Beckworth	85.20	48	eP	P	19 10 43.5	-0.8
	comp=Z,22nm,1.2s						
BEKR				LR	LR		
	comp=Z,3µm,19.0s						
MWC	Mount Wilson	85.26	54	eP	P	19 10 43.6	-1.1
	comp=Z,24nm,1.0s						
MWC				LR	LR		
	comp=Z,5µm,22.0s						
MWC	Mount Wilson	85.26	54	eP	P	19 10 43.7	-1.1
MWC				pmax	pmax		
	comp=Z,24nm,1.0s						
MWC				MLR	MLR		
	comp=Z,5µm,22.0s						
FYU	Fort Yukon	85.31	18	eP	P	19 10 43.9	-0.2
	comp=Z,14nm,1.1s						
FYU				LR	LR		
	comp=Z,2µm,20.0s						
ISA	Isabella, Lake	85.35	52	eP	P	19 10 44.9	-0.2
	comp=Z,35nm,1.4s						
ISA				LR	LR		
	comp=Z,6µm,22.0s						
ISA	Isabella, Lake	85.35	52	eP	P	19 10 44.9	-0.2
ISA				pmax	pmax		
	comp=Z,35nm,1.4s						
ISA				MLR	MLR		
	comp=Z,6µm,22.0s						
ISA	Isabella, Lake	85.35	52	P	P	19 10 45.6	+0.6
	baz=253,SNR=13						
NLWA	Neilton Lookou	85.38	40	eP	P	19 10 44.7	-0.1
	comp=Z,42nm,1.5s						
NLWA				LR	LR		
	comp=Z,5µm,20.0s						
F04D	Rainier, OR	85.46	42	P	P	19 10 45.9	+0.7
	baz=249						
WAKR	Walker	85.46	50	eP	P	19 10 45.5	-0.2
	comp=Z,46nm,1.3s						
WAKR				LR	LR		
	comp=Z,6µm,21.0s						
MDPB	Devils Postpil	85.47	50	eP	P	19 10 45.7	-0.1
	comp=Z,23nm,1.0s						
MDPB				LR	LR		
	comp=Z,6µm,22.0s						
WHY	Whitehorse	85.50	25	eP	P	19 10 46.4	+1.1
	comp=Z,6.8nm,0.8s						
WHY				LR	LR		
	comp=Z,5µm,20.0s						
EDW2	Edwards Air Fo	85.50	53	P	P	19 10 46.5	+0.7
	baz=254,SNR=22						
H04A	Detroit Lake	85.51	43	eP	P	19 10 44.7	-0.9
	comp=Z,25nm,1.2s						
PNTR	Pine Nut	85.52	49	eP	P	19 10 46.0	-0.1
	comp=Z,22nm,1.0s						
OMMB	Old Mammoth Mi	85.52	51	eP	P	19 10 46.5	+0.4
	comp=Z,21nm,1.2s						
OMMB				LR	LR		
	comp=Z,6µm,21.0s						
VCNR	Virginia City	85.55	49	eP	P	19 10 45.5	-0.6
	comp=Z,13nm,1.0s						
VCNR				LR	LR		
	comp=Z,3µm,19.0s						
BFSC	Mount Baldy Ra	85.58	54	P	P	19 10 46.8	+0.4
	baz=254,SNR=11						
JIRN	Jiri	85.63	299	eP	P	19 10 45.8	-1.2
	comp=Z,130nm,1.5s						
MLAC	Mammoth, Mammo	85.65	51	P	P	19 10 47.1	+0.4
	baz=253						
DAWY	Dawson	85.65	21	eP	P	19 10 46.4	+0.5
	comp=Z,13nm,0.8s						
109C	Camp Elliot, M	85.65	55	P	P	19 10 47.1	+0.6
	baz=254						
CPE	Camp Elliot	85.65	55	eP	P	19 10 46.8	+0.3
	comp=Z,38nm,1.3s						
CPE				LR	LR		
	comp=Z,4µm,20.0s						
J05D	Fort Rock, OR	85.69	45	P	P	19 10 47.6	+1.0
	baz=251,SNR=19						
YERR	Yerington	85.75	49	eP	P	19 10 45.7	-1.5
	comp=Z,8.7nm,1.0s						
YERR				LR	LR		
	comp=Z,3µm,19.0s						
MURC	Murrieta	85.78	55	P	P	19 10 47.1	0.0
	baz=254						
PAHR	Pah Rah Range	85.87	48	eP	P	19 10 46.9	-0.7
	comp=Z,24nm,1.1s						
MOD	Modoc Plateau	85.89	46	eP	P	19 10 47.2	-0.4
	comp=Z,13nm,0.8s						
MOD				LR	LR		
	comp=Z,2µm,19.0s						
E04D	Cinebar	85.91	41	P	P	19 10 47.5	0.0
	baz=250						
LRMC	Laurel Mtn Rad	85.92	53	P	P	19 10 48.9	+0.9
	baz=254,SNR=7.6						
TIN	Tinemaha, Big	85.94	51	P	P	19 10 48.5	+0.5
	baz=253						
BAR	Barrett	85.95	56	eP	P	19 10 46.6	-1.5
	comp=Z,8.4nm,1.0s						
BAR				LR	LR		
	comp=Z,4µm,19.0s						
GUN	Gumba	85.96	299	eP	P	19 10 47.4	-1.2
	comp=Z,442nm,2.1s						
I05D	Terrebonne, OR	85.97	44	P	P	19 10 47.7	-0.1
	baz=251						
TIXI	Tiksi	85.97	349	eP	P	19 10 46.3	-0.9
	comp=Z,12nm,1.1s						
TIXI				LR	LR		
	comp=Z,4µm,20.0s						
TIXI	Tiksi	85.97	349⇓	eP	P	19 10 46.5	-0.7
TIXI				pmax	pmax		
	comp=Z,16nm,1.2s						
D04E	Lakebay	86.00	41	P	P	19 10 48.7	+0.9
	baz=249						
PINE	Pine Mountain	86.06	44	eP	P	19 10 47.8	-0.8
	comp=Z,18nm,0.9s						
PINE				LR	LR		
	comp=Z,5µm,20.0s						
PGC	Sidney	86.10	39	eP	P	19 10 46.8	-1.5
	comp=Z,35nm,1.4s						
PALK	Pallekele	86.16	278	eP	P	19 10 47.4	-2.1
	comp=Z,42nm,1.5s						
PALK				LR	LR		
	comp=Z,2µm,18.0s						
PALK	Pallekele	86.16	278	eP	P	19 10 47.4	-2.1
PALK				pmax	pmax		
	comp=Z,42nm,1.5s						
PALK				MLR	MLR		
	comp=Z,2µm,18.0s						
BBRC	Big Bear Solar	86.18	54	P	P	19 10 49.4	0.0
	baz=254						
RYN	Ryan	86.18	50	eP	P	19 10 48.3	-0.9
	comp=Z,29nm,1.2s						
RYN				LR	LR		
	comp=Z,5µm,20.0s						
MONP2	Monument Peak	86.21	56	P	P	19 10 50.9	+1.3
	baz=254,SNR=19						
DAC	Darwin (Calif)	86.21	52	eP	P	19 10 49.5	0.0
	comp=Z,25nm,1.2s						
DAC				LR	LR		
	comp=Z,7µm,22.0s						
MPMC	Manual Prospec	86.23	52	P	P	19 10 50.3	+0.7
	baz=254,SNR=18						
PKI	Pulchoki	86.28	299	eP	P	19 10 48.9	-1.3
	comp=Z,76nm,1.4s						
G05D	Wamic, OR	86.28	43	P	P	19 10 49.9	+0.5
	baz=251						
RRX	Edison Barstow	86.29	54	P	P	19 10 49.5	-0.1
	baz=254						
NV01	Mina Array Sit	86.29	50	eP	P	19 10 48.9	-1.0
NVAR	Mina Array Bea	86.29	50	P	P	19 10 50.3	+0.5
	comp=Z,21nm,1.0s,baz=235,slow=6.4,SNR=28						
NVAR				LR	LR	19 41 54.3	
	comp=Z,4µm,20.3s,baz=256,slow=30						
PKIN	Phulchoki	86.29	299	eP	P	19 10 48.8	-1.3
	comp=Z,43nm,1.3s						
PFO	Pinyon Flats O	86.37	55	eP	P	19 10 49.3	-0.9
	comp=Z,24nm,1.1s						
PFO				LR	LR		
	comp=Z,4µm,20.0s						
PFO	Pinyon Flats O	86.37	55	eP	P	19 10 49.3	-0.9
PFO				pmax	pmax		
	comp=Z,25nm,1.1s						
PFO				MLR	MLR		
	comp=Z,4µm,20.0s						
PFO	Pinyon Flats O	86.37	55	P	P	19 10 50.6	+0.4
	baz=254,SNR=7.8						
XPFO	Pion Flat	86.37	55	eP	P	19 10 48.9	-1.3
	comp=Z,26nm,1.1s						
XPFO				LR	LR		
	comp=Z,4µm,20.0s						
IKP	In-Ko-Pah, Jac	86.40	56	P	P	19 10 50.2	-0.1
	baz=255						
NV11	Mina Array Sit	86.40	50	eP	P	19 10 49.9	-0.4
	comp=Z,2.2nm,1.0s						
NV11				LR	LR		
	comp=Z,400nm,20.0s						
F05D	White Salmon	86.40	42	P	P	19 10 51.1	+1.2
	baz=250						
LON	Longmire	86.47	41	eP	P	19 10 49.8	-0.5
	comp=Z,13nm,1.4s						
LON				LR	LR		
	comp=Z,4µm,19.0s						
LON	Longmire	86.47	41	eP	P	19 10 49.8	-0.5
LON				pmax	pmax		
	comp=Z,13nm,1.4s						
LON				MLR	MLR		
	comp=Z,4µm,19.0s						
DMN	Daman	86.55	299	eP	P	19 10 50.6	-0.8
	comp=Z,83nm,1.2s						
DLBC	Dease Lake	86.55	28	eP	P	19 10 49.5	-1.0
	comp=Z,21nm,1.4s						
DLBC				LR	LR		
	comp=Z,6µm,19.0s						
GSC	Goldstone, Bar	86.55	53	eP	P	19 10 49.8	-1.2
	comp=Z,17nm,1.1s						
GSC	Goldstone, Bar	86.55	53	eP	P	19 10 49.8	-1.2
GSC				pmax	pmax		
	comp=Z,17nm,1.1s						
GSC	Goldstone, Bar	86.55	53	P	P	19 10 51.8	+0.7
	baz=254						
A04D	Lummi Island	86.59	39	P	P	19 10 51.0	+0.3
	baz=249						
GRAC	Grapevine Rang	86.59	51	P	P	19 10 52.3	+1.2
	baz=254,SNR=5.1						
KVN	Kaiserville	86.62	49	eP	P	19 10 50.9	-0.5
	comp=Z,16nm,0.9s						
KVN				LR	LR		
	comp=Z,3µm,20.0s						
KVN	Kaiserville	86.62	49	eP	P	19 10 50.9	-0.5
KVN				pmax	pmax		
	comp=Z,16nm,0.9s						
KVN				MLR	MLR		
	comp=Z,3µm,20.0s						
SWSC	Sam W. Stewart	86.73	56	P	P	19 10 52.5	+0.7
	baz=255,SNR=11						
HEC	Hector,Ludlow	86.80	54	P	P	19 10 52.7	+0.5
	baz=254,SNR=13						
B05A	Bryant	86.81	40	P	P	19 10 52.5	+0.7
	baz=250						
FURC	Furnace Creek,	86.83	52	P	P	19 10 52.5	+0.3
	baz=254						
BELC	Belle Mtn. Jos	86.84	55	P	P	19 10 53.2	+0.6
	baz=255,SNR=21						
I07A	Izee	87.13	44	eP	P	19 10 53.5	-0.2
	comp=Z,21nm,1.0s						
I07A				LR	LR		
	comp=Z,5µm,20.0s						
BC3	Big Chuckawall	87.19	55	P	P	19 10 55.2	+1.0
	baz=255,SNR=14						
WVOR	Wild Horse Val	87.23	46	eP	P	19 10 53.8	-0.4
	comp=Z,30nm,1.2s						
WVOR				LR	LR		
	comp=Z,3µm,19.0s						
WVOR	Wild Horse Val	87.23	46	eP	P	19 10 53.8	-0.4
WVOR				pmax	pmax		
	comp=Z,30nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,3µm,19.0s						
B06A	Marblemount	87.28	40	eP	P	19 10 54.4	+0.3
TUQ	Turquoise Moun	87.28	53	P	P	19 10 55.0	+0.3
	baz=255						
GMRC	Granite Mounta	87.32	54	P	P	19 10 54.5	-0.4
	baz=255,SNR=12						
LTY	Liberty	87.37	41	eP	P	19 10 53.6	-1.1
	comp=Z,22nm,1.4s						
LTY				LR	LR		
	comp=Z,3µm,18.0s						
F07A	Phinny Hill Vi	87.42	42	eP	P	19 10 55.0	+0.1
TPNV	Topopah Spring	87.44	52	eP	P	19 10 55.0	-0.4
	comp=Z,14nm,1.4s						
TPNV				LR	LR		
	comp=Z,6µm,21.0s						
TPNV	Topopah Spring	87.44	52	eP	P	19 10 55.0	-0.4
TPNV				pmax	pmax		
	comp=Z,14nm,1.4s						
TPNV				MLR	MLR		
	comp=Z,6µm,21.0s						
TPNV	Topopah Spring	87.44	52	P	P	19 10 55.7	+0.3
	baz=254						

GLA	**Glamis**	**87.54**	**56**	*e*P	**P**	**19 10 55.7**	**-0.1**
	comp=Z,30nm,0.9s						
GLA				LR	LR		
	comp=Z,4µm,20.0s						
GLA	**Glamis**	**87.54**	**56**	*e*P	**P**	**19 10 55.7**	**-0.1**
GLA				pmax	pmax		
	comp=Z,30nm,0.9s						
GLA				MLR	MLR		
	comp=Z,4µm,20.0s						
GLA	**Glamis**	**87.54**	**56**	P	**P**	**19 10 56.1**	**+0.2**
	baz=255						
IRM	**Iron Mountain**	**87.57**	**55**	P	**P**	**19 10 55.9**	**-0.1**
	baz=255,SNR=26						
J08A	**Circle Bar Ran**	**87.62**	**45**	*e*P	**P**	**19 10 55.5**	**-0.6**
	comp=Z,35nm,1.2s						
BMN	**Battle Mountai**	**87.67**	**48**	*e*P	**P**	**19 10 56.8**	**+0.4**
BMN				LR	LR		
	comp=Z,2µm,21.0s						
BMN	**Battle Mountai**	**87.67**	**48**	*e*P	**P**	**19 10 56.8**	**+0.4**
BMN				MLR	MLR		
	comp=Z,2µm,21.0s						
LLLB	**Lillooet**	**87.75**	**38**	*e*P	**P**	**19 10 57.6**	**+1.2**
	comp=Z,9.6nm,1.0s						
LLLB				LR	LR		
	comp=Z,6µm,22.0s						
LDFC	**Landfair**	**87.83**	**54**	*e*P	**P**	**19 10 56.6**	**-0.7**
	comp=Z,62nm,1.2s						
LDFC				LR	LR		
	comp=Z,4µm,22.0s						
HAWA	**Hanford**	**87.84**	**42**	*e*P	**P**	**19 10 56.1**	**-0.7**
	comp=Z,27nm,1.3s						
HAWA				LR	LR		
	comp=Z,3µm,20.0s						
G08A	**Pilot Rock**	**87.88**	**43**	*e*P	**P**	**19 10 56.8**	**-0.5**
DANN	**Dangsing**	**87.88**	**299**	*e*P	**P**	**19 10 56.1**	**-1.8**
	comp=Z,48nm,1.2s						
KOLN	**Koldanda**	**87.89**	**299**	*e*P	**P**	**19 10 56.4**	**-1.4**
	comp=Z,46nm,1.4s						
Y12C	**Blythe**	**87.97**	**55**	*e*P	**P**	**19 10 57.5**	**-0.3**
	comp=Z,35nm,1.2s						
Y12C				LR	LR		
	comp=Z,3µm,20.0s						
Y12C	**Blythe**	**87.97**	**55**	P	**P**	**19 10 58.0**	**+0.2**
	baz=256,SNR=11						
NEE2	**Needles Airpor**	**88.14**	**54**	P	**P**	**19 10 58.8**	**+0.2**
	baz=255						
SHPR	**Sheep Range**	**88.16**	**52**	*e*P	**P**	**19 10 58.2**	**-0.6**
	comp=Z,23nm,1.3s						
SHPR				LR	LR		
	comp=Z,7µm,22.0s						
E08A	**Dider Farm, El**	**88.18**	**42**	*e*P	**P**	**19 10 58.3**	**-0.2**
R11A	**Troy Canyon, C**	**88.32**	**51**	*e*P	**P**	**19 10 58.4**	**-1.2**
	comp=Z,18nm,1.3s						
R11A				LR	LR		
	comp=Z,6µm,21.0s						
R11A	**Troy Canyon, C**	**88.32**	**51**	P	**P**	**19 10 60.0**	**+0.4**
	baz=255,SNR=5.9						
113A	**Mohawk Valley,**	**88.34**	**56**	*e*P	**P**	**19 10 59.2**	**-0.3**
	comp=Z,27nm,1.3s						
113A				LR	LR		
	comp=Z,4µm,20.0s						
SRIG	**Santa Rosalia**	**88.34**	**62**	*e*P	**P**	**19 10 59.7**	**+0.1**
	comp=Z,46nm,1.1s						
SRIG				LR	LR		
	comp=Z,4µm,21.0s						
PDMCI	**Parker Dam,Lak**	**88.41**	**55**	P	**P**	**19 11 00.7**	**+0.9**
	baz=256,SNR=16						
D08A	**Wollman Farm,**	**88.44**	**42**	*e*P	**P**	**19 10 59.3**	**-0.5**
PYUN	**Piuthan**	**88.49**	**299**	*e*P	**P**	**19 10 58.9**	**-1.7**
	comp=Z,40nm,1.2s						
B08A	**Colville Reser**	**88.58**	**40**	*e*P	**P**	**19 10 59.6**	**-0.8**
	comp=Z,24nm,1.4s						
E09A	**Wood Farm, Sta**	**88.79**	**42**	*e*P	**P**	**19 11 00.2**	**-1.1**
	comp=Z,5.4nm,0.8s						
WMQ	**Urumqi**	**88.79**	**315**	P	**P**	**19 11 02.8**	**+1.3**
WMQ				sP	sP	19 11 11.1	-0.9
WMQ				PP	**PP**	**19 14 30.5**	**-0.5**
WMQ				SKS	**SKSac**	**19 21 32.2**	**+2.8**
WMQ				S	**S**	**19 21 45.9**	**-1.5**
WMQ				SS	**SS**	**19 27 40.9**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,560nm,4.1s						
WMQ				LR	LR		
	comp=Z,5µm,18.9s						
WMQ				LR	LR		
	comp=Z,4µm,18.9s						
WMQ				LR	LR		
	comp=Z,3µm,18.9s						
WMQ	**Urumqi**	**88.79**	**315**	*e*P	**P**	**19 11 00.5**	**-1.0**
	comp=Z,8.0nm,0.8s						
WMQ				LR	LR		
	comp=Z,2µm,20.0s						
WMQ	**Urumqi**	**88.79**	**315**	*e*P	**P**	**19 11 00.5**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ				MLR	MLR		
	comp=Z,2µm,20.0s						
W13A	**Hualapai Mount**	**88.81**	**54**	*e*P	**P**	**19 11 01.2**	**-0.9**
	comp=Z,29nm,1.3s						
W13A				LR	LR		
	comp=Z,3µm,19.0s						
BMO	**Blue Mountains**	**88.86**	**44**	*e*P	**P**	**19 11 01.8**	**-0.1**
	comp=Z,24nm,1.4s						
BMO	**Blue Mountains**	**88.86**	**44**	*e*P	**P**	**19 11 01.8**	**-0.1**
BMO				pmax	pmax		
	comp=Z,24nm,1.4s						
214A	**Organ Pipe Nat**	**88.93**	**57**	P	**P**	**19 11 03.2**	**+0.8**
	baz=256						
C09A	**Chrisman Ranch**	**89.09**	**41**	*e*P	**P**	**19 11 02.8**	**0.0**
	comp=Z,4.9nm,0.8s						
ELK	**Elko**	**89.20**	**48**	*e*P	**P**	**19 11 03.0**	**-0.8**
	comp=Z,17nm,1.4s						
ELK				LR	LR		
	comp=Z,2µm,20.0s						
ELK	**Elko**	**89.20**	**48**	*e*P	**P**	**19 11 03.0**	**-0.8**
ELK				pmax	pmax		
	comp=Z,17nm,1.4s						
ELK				MLR	MLR		
	comp=Z,2µm,20.0s						
ELK	**Elko**	**89.20**	**48**	LR	LR	19 41 43.9	
	comp=Z,1µm,21.9s,baz=256,slow=29						
Y14A	**Wickenburg**	**89.24**	**55**	*e*P	**P**	**19 11 04.0**	**+0.2**
	comp=Z,17nm,1.2s						
Y14A				LR	LR		
	comp=Z,4µm,20.0s						
F10A	**Beach Ranch, E**	**89.24**	**43**	*e*P	**P**	**19 11 02.4**	**-1.2**
LPIG	**La Paz**	**89.34**	**65**	P	**P**	**19 11 05.8**	**+1.3**
	comp=Z,22nm,0.3s,baz=151,slow=3.3,SNR=2.2						
MFID	**Camas Ranch**	**89.49**	**46**	*e*P	**P**	**19 11 03.8**	**-1.1**
	comp=Z,22nm,1.4s						
MFID				LR	LR		
	comp=Z,3µm,22.0s						
SLBS	**Sierra La Lagu**	**89.58**	**66**	*e*P	**P**	**19 11 05.7**	**0.0**
	comp=Z,24nm,1.0s						
SLBS				LR	LR		
	comp=Z,4µm,21.0s						
PSUT	**Pine Spring**	**89.68**	**51**	*e*P	**P**	**19 11 05.0**	**-1.1**
	comp=Z,16nm,1.2s						
PSUT				LR	LR		
	comp=Z,5µm,21.0s						
LCMT	**Little Creek M**	**89.78**	**52**	*e*P	**P**	**19 11 05.3**	**-1.1**
	comp=Z,24nm,1.1s						
LCMT				LR	LR		
	comp=Z,6µm,22.0s						
CCUT	**Cedar City**	**89.82**	**52**	*e*P	**P**	**19 11 06.8**	**+0.1**
	comp=Z,28nm,1.2s						
CCUT				LR	LR		
	comp=Z,7µm,20.0s						
HSIG		**89.83**	**61**	*e*P	**P**	**19 11 06.9**	**+0.2**
	comp=Z,42nm,1.4s						
HSIG				LR	LR		
	comp=Z,4µm,20.0s						
NEW	**Newport**	**89.96**	**41**	*e*P	**P**	**19 11 06.0**	**-0.8**
	comp=Z,8.2nm,1.2s						
NEW				LR	LR		
	comp=Z,3µm,19.0s						
NEW	**Newport**	**89.96**	**41**	*e*P	**P**	**19 11 06.1**	**-0.8**
NEW				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NEW				MLR	MLR		
	comp=Z,3µm,19.0s						
NEW	**Newport**	**89.96**	**41**	P	**P**	**19 11 07.4**	**+0.5**
	baz=254						
INK	**Inuvik**	**89.98**	**19**	*e*P	**P**	**19 11 06.0**	**-0.4**
	comp=Z,3.9nm,1.3s						
INK				LR	LR		
	comp=Z,3µm,20.0s						
INK	**Inuvik**	**89.98**	**19**	*e*P	**P**	**19 11 06.0**	**-0.4**
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK				MLR	MLR		
	comp=Z,3µm,20.0s						
INK	**Inuvik**	**89.98**	**19**	P	**P**	**19 11 07.5**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=240,slow=6.9,SNR=4.5						
SZCU	**Shurtz Canyon**	**90.04**	**52**	PFAKE		19 11 20.0	+12
SZCU				LR	LR		
	comp=Z,7µm,22.0s						
KNB	**Kanab**	**90.11**	**52**	PFAKE		19 11 20.0	+12
KNB				LR	LR		
	comp=Z,6µm,22.0s						
U15A	**North Rim**	**90.39**	**53**	PFAKE		19 11 20.0	+11
U15A				LR	LR		
	comp=Z,2µm,19.0s						
HLID	**Hailey**	**90.52**	**46**	PFAKE		19 11 20.0	+10
HLID				LR	LR		
	comp=Z,3µm,18.0s						
HLID	**Hailey**	**90.52**	**46**	P	**P**	**19 11 09.7**	**-0.1**
	baz=256						
PKCU	**Pink Cliffs**	**90.60**	**52**	PFAKE		19 11 20.0	+9.5
PKCU				LR	LR		
	comp=Z,6µm,22.0s						
X16A	**Lo Mia Camp, P**	**90.61**	**55**	PFAKE		19 11 20.0	+10
X16A				LR	LR		
	comp=Z,4µm,20.0s						
DGZ	**Jazzator, Alta**	**90.62**	**321**⇓	*e*P	**P**	**19 11 09.2**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TUC	**Tucson**	**90.68**	**57**	PFAKE		19 11 20.0	+9.3
TUC				LR	LR		
	comp=Z,4µm,20.0s						
TUC	**Tucson**	**90.68**	**57**	P	**P**	**19 11 10.7**	**0.0**
	baz=258						
TCRU	**Three Creeks R**	**90.77**	**51**	PFAKE		19 11 20.0	+8.8
TCRU				LR	LR		
	comp=Z,5µm,21.0s						
MTPU	**Mount Pierson**	**90.84**	**52**	PFAKE		19 11 20.0	+8.4
MTPU				LR	LR		
	comp=Z,8µm,21.0s						
DUG	**Dugway, Tooele**	**90.86**	**49**	P	**P**	**19 11 12.0**	**+0.6**
	baz=256						
WUAZ	**Wupatki**	**90.91**	**54**	PFAKE		19 11 20.0	+8.2
WUAZ				LR	LR		
	comp=Z,3µm,21.0s						
WUAZ	**Wupatki**	**90.91**	**54**	P	**P**	**19 11 11.5**	**-0.3**
	baz=257						
HVU	**Hansel Valley**	**91.26**	**48**	*e*P	**P**	**19 11 13.9**	**+0.6**
	comp=Z,27nm,1.1s						
HVU	**Hansel Valley**	**91.26**	**48**	*e*P	**P**	**19 11 13.9**	**+0.6**
HVU				pmax	pmax		
	comp=Z,27nm,1.1s						
NLU	**North Lily Min**	**91.36**	**50**	PFAKE		19 11 20.0	+6.2
NLU				LR	LR		
	comp=Z,4µm,22.0s						
SPUT	**South Promonto**	**91.39**	**48**	PFAKE		19 11 20.0	+6.1
SPUT				LR	LR		
	comp=Z,2µm,21.0s						
DGAR	**Diego Garcia**	**91.43**	**262**	PFAKE		19 11 30.0	+16
DGAR				LR	LR		
	comp=Z,5µm,20.0s						
MSO	**Missoula**	**91.66**	**43**	PFAKE		19 11 30.0	+15
MSO				LR	LR		
	comp=Z,2µm,18.0s						
MSO	**Missoula**	**91.66**	**43**	P	**P**	**19 11 15.3**	**+0.3**
	baz=256						
MPU	**Maple Canyon**	**91.70**	**50**	PFAKE		19 11 30.0	+15
MPU				LR	LR		
	comp=Z,4µm,20.0s						
319A	**Douglas**	**91.74**	**59**	PFAKE		19 11 30.0	+14
319A				LR	LR		
	comp=Z,5µm,21.0s						
CTU	**Camp Tracy**	**91.77**	**49**	PFAKE		19 11 30.0	+14
CTU				LR	LR		
	comp=Z,2µm,19.0s						
Q16A	**Castle Valley**	**91.81**	**51**	PFAKE		19 11 30.0	+14
Q16A				LR	LR		
	comp=Z,4µm,20.0s						
X18A	**Snowflake**	**91.84**	**55**	PFAKE		19 11 30.0	+14
X18A				LR	LR		
	comp=Z,3µm,19.0s						
TMUT	**Trail Mountain**	**91.86**	**50**	PFAKE		19 11 30.0	+14
TMUT				LR	LR		
	comp=Z,3µm,20.0s						
W18A	**Petrified Fore**	**92.13**	**55**	PFAKE		19 11 30.0	+13
W18A				LR	LR		
	comp=Z,4µm,20.0s						
W18A	**Petrified Fore**	**92.13**	**55**	P	**P**	**19 11 17.6**	**+0.1**
	baz=258						
DLMT	**Dillon**	**92.22**	**44**	PFAKE		19 11 30.0	+12
DLMT				LR	LR		
	comp=Z,4µm,20.0s						
P17A	**Butcher Ranch,**	**92.26**	**50**	PFAKE		19 11 30.0	+12
P17A				LR	LR		
	comp=Z,4µm,20.0s						
SRU	**San Rafael Swe**	**92.34**	**51**	PFAKE		19 11 30.0	+12
SRU				LR	LR		
	comp=Z,3µm,18.0s						
AHID	**Auburn Hatcher**	**92.69**	**47**	PFAKE		19 11 30.0	+10
AHID				LR	LR		
	comp=Z,2µm,22.0s						
FXWY	**Fox Creek**	**92.93**	**46**	*e*P	**P**	**19 11 20.4**	**-0.6**
	comp=Z,4.9nm,0.9s						
BOZ	**Bozeman (W)**	**92.93**	**44**	PFAKE		19 11 30.0	+9.1
BOZ				LR	LR		
	comp=Z,4µm,20.0s						
BOZ	**Bozeman (W)**	**92.93**	**44**	P	**P**	**19 11 21.7**	**+0.8**
	baz=258						
YHB	**Horse Butte**	**93.05**	**45**	PFAKE		19 11 30.0	+8.4
YHB				LR	LR		
	comp=Z,4µm,20.0s						
MOOW	**Moose Ponds**	**93.16**	**46**	PFAKE		19 11 30.0	+7.9
MOOW				LR	LR		
	comp=Z,3µm,21.0s						
YMR	**Madison River**	**93.19**	**45**	PFAKE		19 11 30.0	+7.8
YMR				LR	LR		
	comp=Z,4µm,20.0s						
121A	**Cookes Peak, D**	**93.21**	**58**	P	**P**	**19 11 22.7**	**+0.1**
	baz=259						
MK01	**Makanchi Array**	**93.22**	**317**	*e*P	**P**	**19 11 20.5**	**-1.5**
YPP	**Pitchstone Pla**	**93.22**	**46**	PFAKE		19 11 30.0	+7.6
YPP				LR	LR		
	comp=Z,5µm,21.0s						
LOHW	**Long Hollow**	**93.23**	**46**	PFAKE		19 11 30.0	+7.6
LOHW				LR	LR		
	comp=Z,2µm,19.0s						
PV05	**Paradox Valley**	**93.23**	**52**	PFAKE		19 11 30.0	+7.5
PV05				LR	LR		
	comp=Z,4µm,22.0s						
MK31	**Makanchi Array**	**93.23**	**317**	*e*P	**P**	**19 11 20.1**	**-1.9**
MK31	**Makanchi Array**	**93.23**	**317**	*e*P	**P**	**19 11 20.1**	**-1.9**
MK32	**Makanchi Array**	**93.23**	**317**	*e*P	**P**	**19 11 21.4**	**-0.7**
MK32				*e*PP	**PP**	**19 15 08.8**	**+2.9**
MK32				*e*PKKPdf	**PKKPdf**	**19 28 29.9**	**-0.6**
MKAR	**Makanchi Array**	**93.23**	**317**	PFAKE		19 11 30.0	+7.9
MKAR				LR	LR		
	comp=Z,600nm,20.0s						
MKAR	**Makanchi Array**	**93.23**	**317**	P	**P**	**19 11 21.4**	**-0.7**
	comp=Z,8.9nm,0.9s,baz=104,slow=4.5,SNR=25						
MKAR				PP	**PP**	**19 15 08.8**	**+2.9**
	comp=Z,2.5nm,1.1s,baz=113,slow=6.0,SNR=4.9						
MKAR				PKKPbc	**PKKPdf**	**19 28 29.9**	**-0.6**
	comp=Z,6.1nm,0.9s,baz=290,slow=3.5,SNR=22						
MKAR				LR	LR	19 52 42.3	
	comp=Z,2µm,21.6s,baz=94,slow=35						
YFT	**Old Faithful**	**93.24**	**45**	PFAKE		19 11 30.0	+7.6
YFT				LR	LR		
	comp=Z,5µm,19.0s						
FLWY	**Flagg Ranch**	**93.26**	**46**	PFAKE		19 11 30.0	+7.5
FLWY				LR	LR		
	comp=Z,3µm,20.0s						
ZALV	**Zalesovo Beam**	**93.30**	**324**	P	**P**	**19 11 21.0**	**-1.1**
	comp=Z,7.9nm,1.0s,baz=108,slow=4.8,SNR=13						
ZALV				PP	**PP**	**19 15 07.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=101,slow=7.5,SNR=3.9						
ZALV				LR	LR	19 50 57.5	
	comp=Z,2µm,21.6s,baz=100,slow=34						
ZAA1	**Zalesovo Array**	**93.30**	**324**	*e*P	**P**	**19 11 21.0**	**-1.1**
ZAA1				*e*PP	**PP**	**19 15 07.3**	**+1.0**
PV10	**Paradox Valley**	**93.33**	**52**	PFAKE		19 11 30.0	+7.0
PV10				LR	LR		
	comp=Z,6µm,22.0s						
PV14	**Lion Creek, Pa**	**93.34**	**52**	PFAKE		19 11 30.0	+6.9
PV14				LR	LR		
	comp=Z,8µm,22.0s						
PV19	**Morning Glory**	**93.36**	**52**	PFAKE		19 11 30.0	+6.9
PV19				LR	LR		
	comp=Z,6µm,22.0s						
PV23	**Carpenter Ridg**	**93.37**	**52**	PFAKE		19 11 30.0	+6.8
PV23				LR	LR		
	comp=Z,8µm,21.0s						
PV17	**East Wray Mesa**	**93.37**	**52**	PFAKE		19 11 30.0	+6.8
PV17				LR	LR		
	comp=Z,6µm,21.0s						
PV20	**West Nyswonger**	**93.38**	**52**	PFAKE		19 11 30.0	+6.8
PV20				LR	LR		
	comp=Z,5µm,22.0s						
YNR	**Norris Junctio**	**93.40**	**45**	PFAKE		19 11 30.0	+6.8
YNR				LR	LR		
	comp=Z,4µm,21.0s						
H17A	**Grant Village**	**93.41**	**46**	PFAKE		19 11 30.0	+6.8
H17A				LR	LR		
	comp=Z,6µm,21.0s						
H17A	**Grant Village**	**93.41**	**46**	P	**P**	**19 11 22.5**	**-0.8**
	baz=258						
PV16	**Nyswonger Mesa**	**93.41**	**52**	PFAKE		19 11 30.0	+6.6
PV16				LR	LR		
	comp=Z,5µm,22.0s						
PV21	**Cone Mtn., Par**	**93.42**	**52**	PFAKE		19 11 30.0	+6.6
PV21				LR	LR		
	comp=Z,7µm,21.0s						
PV04	**Paradox Valley**	**93.44**	**52**	PFAKE		19 11 30.0	+6.6
PV04				LR	LR		
	comp=Z,7µm,22.0s						
MAKZ	**Makanchi**	**93.44**	**317**	*e*P	**P**	**19 11 21.2**	**-1.8**
	comp=Z,20nm,1.1s						
MAKZ				LR	LR		
	comp=Z,3µm,21.0s						
MAKZ	**Makanchi**	**93.44**	**317**	*e*P	**P**	**19 11 21.2**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,21nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,3µm,21.0s						
PV11	**David Mesa, Pa**	**93.44**	**52**	PFAKE		19 11 30.0	+6.5
PV11				LR	LR		
	comp=Z,6µm,22.0s						
PV03	**Paradox Valley**	**93.45**	**52**	PFAKE		19 11 30.0	+6.4
PV03				LR	LR		
	comp=Z,4µm,22.0s						
PV13	**Radium Mtn., P**	**93.46**	**52**	PFAKE		19 11 30.0	+6.4
PV13				LR	LR		
	comp=Z,4µm,21.0s						
PV12	**Saucer Basin,**	**93.50**	**52**	PFAKE		19 11 30.0	+6.2
PV12				LR	LR		
	comp=Z,6µm,22.0s						
MVCO	**Mesa Verde**	**93.53**	**53**	PFAKE		19 11 30.0	+6.1
MVCO				LR	LR		
	comp=Z,2µm,22.0s						
MVCO	**Mesa Verde**	**93.53**	**53**	P	**P**	**19 11 23.5**	**-0.4**
	baz=259						
LKWY	**Lake**	**93.57**	**45**	PFAKE		19 11 30.0	+6.0
LKWY				LR	LR		
	comp=Z,5µm,19.0s						
PV07	**Paradox Valley**	**93.64**	**52**	PFAKE		19 11 40.0	+16
PV07				LR	LR		
	comp=Z,5µm,20.0s						
PV01	**Paradox Valley**	**93.65**	**52**	PFAKE		19 11 40.0	+16
PV01				LR	LR		
	comp=Z,3µm,21.0s						
PV15	**Paradox Valley**	**93.75**	**52**	PFAKE		19 11 40.0	+15
PV15				LR	LR		
	comp=Z,5µm,22.0s						
MNCI	**Minicoy**	**93.79**	**278**	PFAKE		19 11 40.0	+15
MNCI				LR	LR		
	comp=Z,2µm,21.0s						
BW06	**Boulder Array**	**93.80**	**47**	PFAKE		19 11 40.0	+15
BW06				LR	LR		
	comp=Z,2µm,21.0s						
BW06	**Boulder Array**	**93.80**	**47**	P	**P**	**19 11 24.7**	**-0.4**
	baz=259						
PD31	**Pinedale Array**	**93.80**	**47**	*e*P	**P**	**19 11 23.4**	**-1.7**
	comp=Z,12nm,1.4s						
PDAR	**Pinedale Array**	**93.80**	**47**	*e*P	**P**	**19 11 23.5**	**-1.6**
PDAR	**Pinedale Array**	**93.80**	**47**	P	**P**	**19 11 23.8**	**-1.3**
	comp=Z,4.4nm,1.0s,baz=242,slow=2.5,SNR=13						
PDAR				LR	LR	19 46 31.2	
	comp=Z,2µm,21.5s,baz=254,slow=31						
HPIG		**94.00**	**63**	PFAKE		19 11 40.0	+14
HPIG				LR	LR		
	comp=Z,3µm,19.0s						
O20A	**White River Ci**	**94.27**	**50**	PFAKE		19 11 40.0	+13
O20A				LR	LR		
	comp=Z,4µm,19.0s						
O20A	**White River Ci**	**94.27**	**50**	P	**P**	**19 11 27.1**	**-0.1**
	baz=259						
NVS	**Novosibirsk**	**94.40**	**325**	*e*P	**P**	**19 11 26.4**	**-0.8**
NVS				*e*		19 22 01.5	
NVS				pmax	pmax		
	comp=Z,38nm,2.2s						
NVS				pmax	pmax		
	comp=N,12nm,2.1s						
NVS				pmax	pmax		
	comp=E,17nm,1.9s						
NVS				pmax	pmax		
	comp=Z,38nm,2.4s						
NVS				pmax	pmax		
	comp=E,14nm,2.0s						
RLMT	**Red Lodge**	**94.47**	**45**	PFAKE		19 11 40.0	+12
RLMT				LR	LR		
	comp=Z,4µm,21.0s						
RLMT	**Red Lodge**	**94.47**	**45**	P	**P**	**19 11 27.7**	**-0.4**
	baz=259						
EGMT	**Eagleton**	**94.69**	**42**	P	**P**	**19 11 29.5**	**+0.6**
	baz=259						
ANMO	**Albuquerque**	**94.74**	**55**	PFAKE		19 11 40.0	+10
ANMO				LR	LR		
	comp=Z,3µm,21.0s						
ANMO	**Albuquerque**	**94.74**	**55**⇑	*e*P	**P**	**19 11 29.9**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ANMO	**Albuquerque**	**94.74**	**55**	P	**P**	**19 11 29.6**	**+0.1**
	baz=260						
ANMO	**Albuquerque**	**94.74**	**55**	P	**P**	**19 11 29.6**	**+0.1**
	comp=Z,5.0nm,1.0s,baz=239,slow=5.9,SNR=9.9						
POO	**Poona**	**94.84**	**288**	*e*P	**P**	**19 11 28.0**	**-2.1**
S22A	**4UR Ranch, Cre**	**94.93**	**53**	PFAKE		19 11 40.0	+10
S22A				LR	LR		
	comp=Z,3µm,20.0s						
S22A	**4UR Ranch, Cre**	**94.93**	**53**	P	**P**	**19 11 30.2**	**-0.2**
	baz=260						
SMCO	**Snowmass**	**95.06**	**51**	PFAKE		19 11 40.0	+8.8
SMCO				LR	LR		
	comp=Z,7µm,20.0s						
MNTX	**Cornudas Mount**	**95.07**	**59**	PFAKE		19 11 40.0	+9.1
MNTX				LR	LR		
	comp=Z,5µm,20.0s						
MNTX	**Cornudas Mount**	**95.07**	**59**	P	**P**	**19 11 31.4**	**+0.5**
	baz=260						
PRZ	**Przheval'sk**	**95.11**	**312**	*e*P	**P**	**19 11 28.7**	**-2.3**
	comp=Z,11nm,1.2s						
PRZ	**Przheval'sk**	**95.11**	**312**	*e*P	**P**	**19 11 28.7**	**-2.3**
PRZ				pmax	pmax		
	comp=Z,11nm,1.2s						
YKA	**Yellowknife Ar**	**95.11**	**27**	P	**P**	**19 11 28.0**	**-2.3**
YKA						19 15 23.0	
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YKA				MLR	MLR		
	comp=Z,267nm,18.2s						
YKA	**Yellowknife Ar**	**95.11**	**27**	P	**P**	**19 11 28.0**	**-2.3**
	comp=Z,1.9nm,0.8s,baz=257,slow=4.6,SNR=15						
YKA				PP	**PP**	**19 15 23.0**	**+2.9**
	comp=Z,1.2nm,1.0s,baz=260,slow=6.7,SNR=5.4						
YKA				LR	LR	19 51 07.3	
	comp=Z,267nm,18.1s,baz=256,slow=34						
YKB5	**Yellowknife Ar**	**95.11**	**27**	*e*P	**P**	**19 11 28.8**	**-1.5**
YKW3	**Yellowknife Ar**	**95.12**	**27**	PFAKE		19 11 40.0	+10
YKW3				LR	LR		
	comp=Z,4µm,20.0s						
RWWY	**Rawlins**	**95.32**	**49**	PFAKE		19 11 40.0	+7.9
RWWY				LR	LR		
	comp=Z,2µm,22.0s						
TARG	**Taragay, Kyrgy**	**95.41**	**311**	*e*P	**P**	**19 11 31.2**	**-1.5**
	comp=Z,8.2nm,1.4s						
TARG				LR	LR		
	comp=Z,2µm,19.0s						
PMSA	**Palmer Station**	**95.88**	**161**	PFAKE		19 11 50.0	+16

PMSA				LR	LR		
	comp=Z,3µm,20.0s						
KDJ	**Kajisay**	**95.94**	**312**	PFAKE		19 11 50.0	+15
KDJ				LR	LR		
	comp=Z,2µm,18.0s						
NRIK	**Noril'sk**	**95.95**	**340**	P	**P**	**19 11 32.1**	**-1.8**
	comp=Z,6.3nm,0.6s,baz=125,slow=7.0,SNR=4.8						
NRIK				LR	LR	19 54 19.4	
	comp=Z,4µm,20.6s,baz=86,slow=35						
SDCO	**Great Sand Dun**	**95.97**	**53**	PFAKE		19 11 50.0	+15
SDCO				LR	LR		
	comp=Z,3µm,20.0s						
ZAIG	**Zacatecas**	**96.08**	**68**	PFAKE		19 11 50.0	+14
ZAIG				LR	LR		
	comp=Z,3µm,21.0s						
N23A	**Red Feather La**	**96.13**	**50**	PFAKE		19 11 50.0	+14
N23A				LR	LR		
	comp=Z,3µm,21.0s						
TX31	**Lajitas Ar. Si**	**96.14**	**61**	*e*P	**P**	**19 11 34.3**	**-1.6**
LTX	**Lajitas**	**96.14**	**61**	*e*P	**P**	**19 11 36.8**	**+0.9**
LTX				*e*PP	**PP**	**19 15 28.3**	**-0.9**
LTX	**Lajitas**	**96.14**	**61**	*e*P	**P**	**19 11 36.8**	**+0.9**
LTX				*e*		19 15 28.3	
TXAR	**Lajitas Array**	**96.14**	**61**	P	**P**	**19 11 36.8**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=224,slow=5.9,SNR=8.2						
TXAR				PP	**PP**	**19 15 28.3**	**-0.9**
	comp=Z,3.1nm,1.1s,baz=262,slow=6.2,SNR=8.3						
TXAR				LR	LR	19 45 57.6	
	comp=Z,4µm,21.9s,baz=0.0,slow=30						
ISCO	**Idaho Springs**	**96.21**	**51**	PFAKE		19 11 50.0	+14
ISCO				LR	LR		
	comp=Z,6µm,21.0s						
KURK	**Kurchatov**	**96.36**	**320**	PFAKE		19 11 50.0	+14
KURK				LR	LR		
	comp=Z,3µm,19.0s						
KURK	**Kurchatov**	**96.36**	**320**⇑	*e*P	**P**	**19 11 38.0**	**+1.8**
KURK				pmax	pmax		
	comp=Z,13nm,1.8s						
KSH	**Kashi**	**96.43**	**309**	P	**P**	**19 11 38.0**	**+1.0**
KSH				pP	pP	19 11 42.4	-2.3
KSH				PP	**PP**	**19 15 37.9**	**+6.7**
KSH				SKS	**SKSac**	**19 22 13.7**	**+1.4**
KSH				S	**S**	**19 22 52.5**	**-3.6**
KSH				LR	LR		
	comp=Z,2µm,11.7s						
KSH				LR	LR		
	comp=Z,870nm,9.6s						
KSH				LR	LR		
	comp=Z,2µm,17.1s						
Q24A	**Divide**	**96.43**	**52**	PFAKE		19 11 50.0	+13
Q24A				LR	LR		
	comp=Z,4µm,20.0s						
NVL	**N'lazarevskaya**	**96.45**	**189**	*e*P	**P**	**19 11 36.3**	**0.0**
NVL				*e*S	**SKSac**	**19 22 09.6**	**-1.5**
NVL				MLR	MLR		
	comp=Z,4µm,17.0s						
PHWY	**Pilot Hill**	**96.56**	**49**	PFAKE		19 11 50.0	+12
PHWY				LR	LR		
	comp=Z,2µm,20.0s						
T25A	**Trinidad**	**96.73**	**54**	PFAKE		19 11 50.0	+11
T25A				LR	LR		
	comp=Z,2µm,20.0s						
LAO	**LASA Array**	**96.83**	**44**	PFAKE		19 11 50.0	+11
LAO				LR	LR		
	comp=Z,4µm,21.0s						
SNAA	**Sanae**	**97.14**	**184**	P	Pdif	19 11 40.4	+0.8
SNAA	**Sanae**	**97.14**	**184**	*e*P	**P**	**19 11 39.3**	**-0.3**
	comp=Z,22nm,1.4s						
SNAA				LR	LR		
	comp=Z,5µm,18.0s						
SNAA	**Sanae**	**97.14**	**184**⇑	*e*P	Pdif	19 11 40.8	+1.2
MSTX	**Muleshoe**	**97.59**	**57**	PFAKE		19 11 50.0	+7.5
MSTX				LR	LR		
	comp=Z,4µm,21.0s						
MSTX	**Muleshoe**	**97.59**	**57**	P	Pdif	19 11 42.7	+0.2
	baz=262						
NIL	**Nilore**	**97.74**	**303**	PFAKE		19 11 50.0	+7.0
NIL				LR	LR		
	comp=Z,1µm,22.0s						
FRU	**Bishkek**	**97.92**	**312**	*e*P	P	19 11 34.0	-10
FRU				*e*		19 11 46.0	
AAK	**Ala-Archa**	**97.98**	**312**	PFAKE		19 11 50.0	+6.0
AAK				LR	LR		
	comp=Z,2µm,19.0s						
AAK	**Ala-Archa**	**97.98**	**312**⇑	*e*P	**P**	**19 11 43.2**	**-0.8**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RSSD	**Black Hills**	**97.99**	**47**	PFAKE		19 12 00.0	+16
RSSD				LR	LR		
	comp=Z,2µm,22.0s						
VNA2	**Neumayer--Watz**	**98.12**	**182**	P	Pdif	19 11 44.6	+0.7
	baz=172,slow=4.5						
KSCO	**Kaye Shedlock'**	**98.38**	**52**	PFAKE		19 12 00.0	+14
KSCO				LR	LR		
	comp=Z,5µm,20.0s						
DGMT	**Dagmar**	**98.43**	**42**	PFAKE		19 12 00.0	+14
DGMT				LR	LR		
	comp=Z,2µm,21.0s						
AMTX	**Amarillo**	**98.61**	**56**	PFAKE		19 12 00.0	+13
AMTX				LR	LR		
	comp=Z,3µm,20.0s						
UNM	**Universidad Na**	**98.67**	**72**	PFAKE		19 12 00.0	+12
UNM				LR	LR		
	comp=Z,2µm,18.0s						
ARSB	**Arslanbob**	**98.94**	**310**	PFAKE		19 12 00.0	+12
ARSB				LR	LR		
	comp=Z,2µm,22.0s						
OGNE	**Ogallala**	**99.07**	**50**	PFAKE		19 12 00.0	+11
OGNE				LR	LR		
	comp=Z,4µm,22.0s						
LNIG	**Linares**	**99.20**	**66**	PFAKE		19 12 00.0	+10
LNIG				LR	LR		
	comp=Z,3µm,22.0s						
JCT	**Junction City**	**99.63**	**61**	PFAKE		19 12 00.0	+8.5
JCT				LR	LR		
	comp=Z,5µm,22.0s						
833A	**Chaparral WMA,**	**99.71**	**63**	PFAKE		19 12 00.0	+8.1
833A				LR	LR		
	comp=Z,3µm,18.0s						
ABTX	**Abilene, Hawle**	**100.02**	**59**	PFAKE		19 12 00.0	+6.8
ABTX				LR	LR		
	comp=Z,5µm,21.0s						
FFC	**Flin Flon**	**100.42**	**36**	PFAKE		19 12 10.0	+16
FFC				LR	LR		
	comp=Z,3µm,19.0s						
BTK	**Batken**	**100.44**	**309**	PFAKE		19 12 10.0	+15
BTK				LR	LR		
	comp=Z,2µm,22.0s						
CBKS	**Cedar Bluff**	**100.60**	**52**	PFAKE		19 12 10.0	+14
CBKS				LR	LR		
	comp=Z,2µm,20.0s						
GAR	**Garm**	**100.72**	**308**	PFAKE		19 12 10.0	+14
GAR				LR	LR		
	comp=Z,7µm,20.0s						
U32A	**Winter Ranch,**	**100.95**	**55**	PFAKE		19 12 10.0	+13
U32A				LR	LR		
	comp=Z,4µm,20.0s						
WMOK	**Wichita Mounta**	**100.96**	**57**	PFAKE		19 12 10.0	+13
WMOK				LR	LR		
	comp=Z,5µm,21.0s						
LVIG	**Laguna Verde**	**101.30**	**72**	PFAKE		19 12 10.0	+11
LVIG				LR	LR		
	comp=Z,3µm,22.0s						
KBL	**Kabul**	**101.31**	**303**	PFAKE		19 12 10.0	+11
KBL				LR	LR		
	comp=Z,1µm,20.0s						
MDND	**Maddock**	**101.44**	**43**	PFAKE		19 12 10.0	+11
MDND				LR	LR		
	comp=Z,2µm,21.0s						
435B	**Jarrell**	**101.56**	**61**	PFAKE		19 12 10.0	+10
435B				LR	LR		
	comp=Z,4µm,19.0s						
BRVK	**Borovoye**	**101.75**	**322**	PFAKE		19 12 10.0	+10
BRVK				LR	LR		
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**101.75**	**322**⇓	*e*P	**Pdif**	**19 12 00.9**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,14nm,3.1s						
WHTX	**Lake Whitney,**	**101.79**	**59**	PFAKE		19 12 10.0	+9.0
WHTX				LR	LR		
	comp=Z,4µm,21.0s						
BGNE	**Belgrade**	**102.03**	**50**	PFAKE		19 12 10.0	+8.1
BGNE				LR	LR		
	comp=Z,3µm,19.0s						
KSU1	**Kansas State U**	**103.06**	**52**	PFAKE		19 12 20.0	+14
KSU1				LR	LR		
	comp=Z,3µm,20.0s						
RES	**Resolute Bay**	**103.12**	**16**	PFAKE		19 12 20.0	+14
RES				LR	LR		
	comp=Z,4µm,20.0s						
ECSD	**EROS Data Cent**	**103.30**	**48**	PFAKE		19 12 20.0	+13
ECSD				LR	LR		
	comp=Z,4µm,22.0s						
TUL1	**Leonard**	**103.50**	**56**	PFAKE		19 12 20.0	+11
TUL1				LR	LR		
	comp=Z,4µm,19.0s						
X37A	**Clayton**	**103.75**	**57**	PFAKE		19 12 20.0	+10
X37A				LR	LR		
	comp=Z,4µm,20.0s						
NATX	**Nacogdoches**	**104.14**	**60**	PFAKE		19 12 20.0	+8.5
NATX				LR	LR		
	comp=Z,4µm,22.0s						
HHAR	**Hobbs**	**105.02**	**55**	PFAKE		19 16 40.0	+10
HHAR				LR	LR		
	comp=Z,4µm,20.0s						
W39A	**Magazine**	**105.09**	**56**	PFAKE		19 16 40.0	+10
W39A				LR	LR		
	comp=Z,4µm,22.0s						
MIAR	**Mount Ida**	**105.23**	**57**	PFAKE		19 16 40.0	+10
MIAR				LR	LR		
	comp=Z,6µm,21.0s						
SCIA	**State Center**	**105.75**	**49**	PFAKE		19 16 40.0	+8.8
SCIA				LR	LR		
	comp=Z,2µm,18.0s						
Z41A	**Richland Creek**	**105.80**	**58**	PFAKE		19 16 40.0	+8.4
Z41A				LR	LR		
	comp=Z,5µm,20.0s						
X40A	**Basin Creek Fa**	**105.83**	**57**	PFAKE		19 16 40.0	+8.4
X40A				LR	LR		
	comp=Z,4µm,20.0s						
SPMN	**Marine on St.**	**106.05**	**46**	PFAKE		19 16 40.0	+8.3
SPMN				LR	LR		
	comp=Z,5µm,20.0s						
UALR	**University of**	**106.25**	**57**	PFAKE		19 16 40.0	+7.6
UALR				LR	LR		
	comp=Z,5µm,20.0s						
WHAR	**Wooly Hollow**	**106.32**	**56**	PFAKE		19 16 40.0	+7.5
WHAR				LR	LR		
	comp=Z,6µm,21.0s						
W41B	**Gary Mavity, V**	**106.34**	**56**	PFAKE		19 16 40.0	+7.5
W41B				LR	LR		
	comp=Z,8µm,20.0s						
EYMN	**Ely**	**106.89**	**43**	PFAKE		19 16 40.0	+6.8
EYMN				LR	LR		
	comp=Z,3µm,21.0s						
I39A	**Houston**	**106.99**	**47**	PFAKE		19 16 50.0	+17
I39A				LR	LR		
	comp=Z,2µm,20.0s						
CCM	**Cathedral Cave**	**107.22**	**54**	PFAKE		19 16 50.0	+16
CCM				LR	LR		
	comp=Z,3µm,20.0s						
L40A	**Anamosa**	**107.23**	**49**	PFAKE		19 16 50.0	+16
L40A				LR	LR		
	comp=Z,5µm,22.0s						
T42A	**Van Buren**	**107.33**	**55**	PFAKE		19 16 50.0	+16
T42A				LR	LR		
	comp=Z,5µm,21.0s						
X43A	**Marvell**	**107.45**	**57**	PFAKE		19 16 50.0	+15
X43A				LR	LR		
	comp=Z,3µm,21.0s						
N41A	**Harden Midland**	**107.52**	**51**	PFAKE		19 16 50.0	+15
N41A				LR	LR		
	comp=Z,5µm,22.0s						
MYIG	**Mrida**	**107.67**	**71**	PFAKE		19 16 50.0	+15
MYIG				LR	LR		
	comp=Z,2µm,21.0s						
VBMS	**Vicksburg**	**107.68**	**60**	PFAKE		19 16 50.0	+15
VBMS				LR	LR		
	comp=Z,4µm,22.0s						
PBMO	**Poplar Bluff**	**107.86**	**55**	PFAKE		19 16 50.0	+15
PBMO				LR	LR		
	comp=Z,5µm,20.0s						
G40A	**Rib Lake**	**107.89**	**46**	PFAKE		19 16 50.0	+15
G40A				LR	LR		
	comp=Z,5µm,20.0s						
P42A	**Winchester**	**107.92**	**52**	PFAKE		19 16 50.0	+15
P42A				LR	LR		
	comp=Z,4µm,21.0s						
SLM	**Saint Louis**	**108.01**	**53**	PFAKE		19 16 50.0	+14
SLM				LR	LR		
	comp=Z,3µm,21.0s						
GNAR	**Gosnell**	**108.18**	**56**	PFAKE		19 16 50.0	+14
GNAR				LR	LR		
	comp=Z,4µm,20.0s						
MET	**Memphis--Engin**	**108.24**	**57**	PFAKE		19 16 50.0	+14
MET				LR	LR		
	comp=Z,4µm,21.0s						
H41A	**Junction City**	**108.31**	**47**	PFAKE		19 16 50.0	+14
H41A				LR	LR		
	comp=Z,3µm,18.0s						
ARU	**Arti**	**108.38**	**326**	PFAKE		19 16 50.0	+14
ARU				LR	LR		
	comp=Z,3µm,20.0s						
L42A	**Oliver, Polo**	**108.39**	**49**	PFAKE		19 16 50.0	+14
L42A				LR	LR		
	comp=Z,5µm,21.0s						
PARMO	**Parma**	**108.40**	**55**	PFAKE		19 16 50.0	+14
PARMO				LR	LR		
	comp=Z,3µm,20.0s						
Z45A	**Winona**	**108.41**	**58**	PFAKE		19 16 50.0	+14
Z45A				LR	LR		
	comp=Z,4µm,20.0s						
PVMO	**Portageville**	**108.44**	**55**	PFAKE		19 16 50.0	+14
PVMO				LR	LR		
	comp=Z,2µm,19.0s						
346A	**Big Creek Wild**	**108.55**	**61**	PFAKE		19 16 50.0	+13
346A				LR	LR		
	comp=Z,3µm,21.0s						
COWI	**Conover**	**108.59**	**45**	PFAKE		19 16 50.0	+14
COWI				LR	LR		
	comp=Z,4µm,22.0s						
F41A	**Three Lakes**	**108.64**	**45**	PFAKE		19 16 50.0	+13
F41A				LR	LR		
	comp=Z,4µm,20.0s						
OXF	**Oxford**	**108.66**	**57**	PFAKE		19 16 50.0	+13
OXF				LR	LR		
	comp=Z,3µm,20.0s						
HDIL	**Hopedale**	**108.71**	**51**	PFAKE		19 16 50.0	+13
HDIL				LR	LR		
	comp=Z,6µm,22.0s						
GLAT	**Glass**	**108.77**	**55**	PFAKE		19 16 50.0	+13
GLAT				LR	LR		
	comp=Z,3µm,19.0s						
SIUC	**Southern Illin**	**108.82**	**54**	PFAKE		19 16 50.0	+13
SIUC				LR	LR		
	comp=Z,6µm,21.0s						
D41A	**Chassel**	**108.92**	**44**	PFAKE		19 16 50.0	+13
D41A				LR	LR		
	comp=Z,4µm,22.0s						
Q44A	**Meyer Farm, Va**	**108.96**	**53**	PFAKE		19 16 50.0	+13
Q44A				LR	LR		
	comp=Z,4µm,21.0s						
TEIG	**Tepich**	**108.97**	**72**	PFAKE		19 16 50.0	+12
TEIG				LR	LR		
	comp=Z,2µm,21.0s						
H42A	**Shiocton**	**109.11**	**47**	PFAKE		19 16 50.0	+13
H42A				LR	LR		
	comp=Z,4µm,20.0s						
G42A	**Mountain**	**109.14**	**46**	PFAKE		19 16 50.0	+13
G42A				LR	LR		
	comp=Z,5µm,19.0s						
TGUH	**Tegucigalpa,Un**	**109.28**	**79**	PFAKE		19 16 50.0	+11
TGUH				LR	LR		
	comp=Z,2µm,22.0s						
T45A	**Paducah**	**109.29**	**55**	PFAKE		19 16 50.0	+12
T45A				LR	LR		
	comp=Z,4µm,19.0s						
K43A	**Burlington**	**109.36**	**49**	PFAKE		19 16 50.0	+12
K43A				LR	LR		
	comp=Z,3µm,20.0s						
147A	**Livingston**	**109.59**	**59**	PFAKE		19 16 50.0	+11
147A				LR	LR		
	comp=Z,4µm,22.0s						
M44A	**Midewin, Midew**	**109.63**	**50**	PFAKE		19 16 50.0	+12
M44A				LR	LR		
	comp=Z,4µm,19.0s						
H43A	**Windswept, Lux**	**109.66**	**47**	PFAKE		19 16 50.0	+12
H43A				LR	LR		
	comp=Z,3µm,20.0s						
G43A	**Wallace**	**109.66**	**46**	PFAKE		19 16 50.0	+12
G43A				LR	LR		
	comp=Z,4µm,19.0s						
OLIL	**Olney**	**109.68**	**53**	PFAKE		19 16 50.0	+11
OLIL				LR	LR		
	comp=Z,4µm,20.0s						
PLAL	**Pickwick Lake**	**109.76**	**57**	PFAKE		19 16 50.0	+11
PLAL				LR	LR		
	comp=Z,4µm,21.0s						
P45A	**Graceland, Par**	**109.94**	**52**	PFAKE		19 16 50.0	+11
P45A				LR	LR		
	comp=Z,3µm,19.0s						
WVT	**Waverly**	**109.95**	**56**	PFAKE		19 16 50.0	+11
WVT				LR	LR		
	comp=Z,4µm,20.0s						
ESTN	**Estel**	**110.04**	**80**	PFAKE		19 16 50.0	+10
ESTN				LR	LR		
	comp=Z,2µm,19.0s						
USIN	**University of**	**110.05**	**54**	PFAKE		19 16 50.0	+11
USIN				LR	LR		
	comp=Z,6µm,21.0s						
E43A	**Lone Tree Farm**	**110.06**	**45**	PFAKE		19 16 50.0	+11
E43A				LR	LR		
	comp=Z,2µm,19.0s						
GYA0B	**ALIBECK ARRAY**	**110.25**	**306**	PFAKE		19 16 50.0	+10
GYA0B				LR	LR		
	comp=Z,2µm,22.0s						
SFIN	**Lafayette**	**110.40**	**51**	PFAKE		19 16 50.0	+10
SFIN				LR	LR		
	comp=Z,5µm,22.0s						
BRAL	**Brewton**	**110.61**	**61**	PFAKE		19 16 50.0	+9.4
BRAL				LR	LR		
	comp=Z,3µm,21.0s						
X48A	**Hartselle**	**110.62**	**57**	PFAKE		19 16 50.0	+9.4
X48A				LR	LR		
	comp=Z,3µm,21.0s						
LRAL	**Lakeview Retre**	**110.67**	**59**	PFAKE		19 16 50.0	+9.3
LRAL				LR	LR		
	comp=Z,4µm,20.0s						
V48A	**Smith Brothers**	**110.78**	**56**	PFAKE		19 16 50.0	+9.2
V48A				LR	LR		
	comp=Z,4µm,21.0s						
KBS	**Kingsbay**	**110.84**	**355**	PFAKE		19 16 50.0	+10
KBS				LR	LR		
	comp=Z,2µm,20.0s						
M46A	**Old House Fiel**	**110.90**	**50**	PFAKE		19 16 50.0	+9.1
M46A				LR	LR		
	comp=Z,4µm,22.0s						
JTS	**JuntasAbangare**	**111.06**	**83**	PFAKE		19 16 50.0	+8.0
JTS				LR	LR		
	comp=Z,2µm,18.0s						
WCI	**Wyandotte Cave**	**111.12**	**53**	PFAKE		19 16 50.0	+8.6
WCI				LR	LR		
	comp=Z,7µm,20.0s						
Y49A	**Blount Mountai**	**111.15**	**58**	PFAKE		19 16 50.0	+8.4
Y49A				LR	LR		
	comp=Z,3µm,20.0s						
250A	**Grady**	**111.28**	**60**	PFAKE		19 16 50.0	+8.1
250A				LR	LR		
	comp=Z,2µm,22.0s						
SWET	**Sewanee**	**111.52**	**56**	PFAKE		19 16 50.0	+7.7
SWET				LR	LR		
	comp=Z,4µm,22.0s						
Z50A	**Ashland**	**111.56**	**59**	PFAKE		19 16 50.0	+7.6
Z50A				LR	LR		
	comp=Z,4µm,20.0s						
451A	**Vernon**	**111.73**	**61**	PFAKE		19 16 50.0	+7.2
451A				LR	LR		
	comp=Z,2µm,18.0s						
T49A	**Edmonton**	**111.77**	**54**	PFAKE		19 16 50.0	+7.3
T49A				LR	LR		
	comp=Z,4µm,21.0s						
HDC	**Heredia**	**111.83**	**84**	PFAKE		19 17 00.0	+16
HDC				LR	LR		
	comp=Z,2µm,22.0s						
GLMI	**Grayling**	**111.87**	**46**	PFAKE		19 16 50.0	+7.4
GLMI				LR	LR		
	comp=Z,4µm,20.0s						
ESPN	**Las Esperanzas**	**111.94**	**81**	PFAKE		19 17 00.0	+16
ESPN				LR	LR		
	comp=Z,1µm,20.0s						
W50A	**Signal Mountai**	**112.03**	**56**	PFAKE		19 16 50.0	+6.7
W50A				LR	LR		
	comp=Z,4µm,21.0s						
M48A	**Edgerton**	**112.12**	**50**	PFAKE		19 16 50.0	+6.8
M48A				LR	LR		
	comp=Z,4µm,22.0s						
X51A	**Calhoun**	**112.42**	**57**	PFAKE		19 17 00.0	+16
X51A				LR	LR		
	comp=Z,4µm,22.0s						
352A	**Blakely**	**112.43**	**60**	PFAKE		19 17 00.0	+16
352A				LR	LR		
	comp=Z,2µm,21.0s						
O49A	**Covington**	**112.52**	**51**	PFAKE		19 17 00.0	+16
O49A				LR	LR		
	comp=Z,4µm,20.0s						
N49A	**Columbus Grove**	**112.57**	**50**	PFAKE		19 17 00.0	+16
N49A				LR	LR		
	comp=Z,4µm,21.0s						
152A	**Waverly Hall**	**112.59**	**59**	PFAKE		19 17 00.0	+16
152A				LR	LR		
	comp=Z,4µm,20.0s						
CPCT	**Cooper Cave**	**112.66**	**56**	PFAKE		19 17 00.0	+16
CPCT				LR	LR		
	comp=Z,4µm,20.0s						
V51A	**Loudon**	**112.78**	**56**	PFAKE		19 17 00.0	+15
V51A				LR	LR		
	comp=Z,4µm,20.0s						
AAM	**Ann Arbor**	**112.83**	**49**	PFAKE		19 17 00.0	+15
AAM				LR	LR		
	comp=Z,3µm,20.0s						
453A	**Whigham**	**112.96**	**61**	PFAKE		19 17 00.0	+15
453A				LR	LR		
	comp=Z,3µm,22.0s						
253A	**Americus**	**113.10**	**60**	PFAKE		19 17 00.0	+15
253A				LR	LR		
	comp=Z,2µm,20.0s						
Y52A	**Lilburn**	**113.10**	**58**	PFAKE		19 17 00.0	+15
Y52A				LR	LR		
	comp=Z,3µm,20.0s						
W52A	**Murphy**	**113.16**	**57**	PFAKE		19 17 00.0	+15
W52A				LR	LR		
	comp=Z,3µm,21.0s						
TKL	**Tuckaleechee C**	**113.26**	**56**	PFAKE		19 17 00.0	+14
TKL				LR	LR		
	comp=Z,3µm,20.0s						
S51A	**Beattyville**	**113.28**	**54**	PFAKE		19 17 00.0	+14
S51A				LR	LR		
	comp=Z,5µm,21.0s						
Q51A	**Peebles**	**113.37**	**52**	PFAKE		19 17 00.0	+14
Q51A				LR	LR		
	comp=Z,4µm,20.0s						
M50A	**Fremont**	**113.38**	**50**	PFAKE		19 17 00.0	+14
M50A				LR	LR		
	comp=Z,5µm,22.0s						
TZTN	**Tazewell**	**113.39**	**55**	PFAKE		19 17 00.0	+14
TZTN				LR	LR		
	comp=Z,3µm,19.0s						
V52A	**Sevierville**	**113.39**	**56**	PFAKE		19 17 00.0	+14
V52A				LR	LR		
	comp=Z,3µm,20.0s						
ACSO	**Alum Creek Sta**	**113.54**	**51**	PFAKE		19 17 00.0	+14
ACSO				LR	LR		
	comp=Z,3µm,20.0s						
P51A	**Williamsport**	**113.55**	**52**	PFAKE		19 17 00.0	+14
P51A				LR	LR		
	comp=Z,5µm,21.0s						
TIGA	**Tifton**	**113.57**	**60**	PFAKE		19 17 00.0	+14
TIGA				LR	LR		
	comp=Z,2µm,20.0s						
GOGA	**Godfrey**	**113.62**	**58**	PFAKE		19 17 00.0	+14
GOGA				LR	LR		
	comp=Z,4µm,22.0s						
N51A	**Ashland**	**113.93**	**50**	PFAKE		19 17 00.0	+13
N51A				LR	LR		
	comp=Z,5µm,20.0s						
154A	**Montrose**	**113.95**	**59**	PFAKE		19 17 00.0	+13
154A				LR	LR		
	comp=Z,5µm,20.0s						
BG3	**Lake Jocassee**	**113.98**	**57**	PFAKE		19 17 00.0	+13
BG3				LR	LR		
	comp=Z,4µm,21.0s						
V53A	**Saluda**	**114.04**	**56**	PFAKE		19 17 00.0	+13
V53A				LR	LR		
	comp=Z,3µm,20.0s						
555A	**McAlpin**	**114.14**	**62**	PFAKE		19 17 00.0	+13

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555A                                 LR       LR
       comp=Z,2µm,21.0s
O52A   Adamsville         114.43  51  PFAKE             19 17 00.0 +12
O52A                                 LR       LR
       comp=Z,3µm,18.0s
255A   Hazlehurst         114.51  60  PFAKE             19 17 00.0 +12
255A                                 LR       LR
       comp=Z,2µm,20.0s
656A   Willston           114.53  63  PFAKE             19 17 00.0 +12
656A                                 LR       LR
       comp=Z,2µm,19.0s
HODGE  Hodges             114.58  57  PFAKE             19 17 00.0 +12
HODGE                                LR       LR
       comp=Z,4µm,21.0s
LVZ    Lovozero           114.70 342  PFAKE             19 17 00.0 +13
LVZ                                  LR       LR
       comp=Z,4µm,22.0s
957A   Wimauma            114.81  65  PFAKE             19 17 00.0 +11
957A                                 LR       LR
       comp=Z,2µm,21.0s
P53A   Whipple            114.84  52  PFAKE             19 17 00.0 +12
P53A                                 LR       LR
       comp=Z,4µm,21.0s
PAULI  Pauline            114.91  57  PFAKE             19 17 00.0 +11
PAULI                                LR       LR
       comp=Z,5µm,21.0s
456A   Hilliard           114.94  61  PFAKE             19 17 00.0 +11
456A                                 LR       LR
       comp=Z,2µm,19.0s
APA    Apatity            115.28 342⇑iPKIKP   PKiKP     19 16 43.3 -5.1
APA                                  pmax     pmax
       comp=Z,4.0nm,1.0s
APA                                  MLR      MLR
       comp=Z,2µm,18.0s
KMSC   Kings Mountain     115.28  56  PFAKE             19 17 00.0 +11
KMSC                                 LR       LR
       comp=Z,4µm,21.0s
JSC    Jenkinsville       115.40  57  PFAKE             19 17 00.0 +10
JSC                                  LR       LR
       comp=Z,4µm,21.0s
DWPF   Disney Wildern     115.51  64  PFAKE             19 17 00.0 +10
DWPF                                 LR       LR
       comp=Z,1µm,21.0s
ERPA   Erie               115.56  49  PFAKE             19 17 00.0 +10
ERPA                                 LR       LR
       comp=Z,4µm,22.0s
658A   Bunnell            115.64  63  PFAKE             19 17 00.0 +10
658A                                 LR       LR
       comp=Z,2µm,20.0s
KEV    Kevo               115.66 345  PFAKE             19 17 00.0 +11
KEV                                  LR       LR
       comp=Z,2µm,20.0s
N54A   Moraine State      115.72  50  PFAKE             19 17 00.0 +10
N54A                                 LR       LR
       comp=Z,4µm,19.0s
OTAV   Otavalo            115.73  95  PFAKE             19 17 00.0 +8.5
OTAV                                 LR       LR
       comp=Z,2µm,19.0s
SADO   Sadowa             115.73  46  PFAKE             19 17 00.0 +10
SADO                                 LR       LR
       comp=Z,4µm,21.0s
257A   Skidaway Islan     115.74  60  PFAKE             19 17 00.0 +10
257A                                 LR       LR
       comp=Z,3µm,20.0s
059A   Moore Haven        115.78  65  PFAKE             19 17 00.0 +9.4
059A                                 LR       LR
       comp=Z,2µm,22.0s
BLA    Blacksburg         115.84  54  PFAKE             19 17 00.0 +9.5
BLA                                  LR       LR
       comp=Z,4µm,21.0s
M54A   Oil Creek Stat     115.89  49  PFAKE             19 17 00.0 +10
M54A                                 LR       LR
       comp=Z,5µm,21.0s
061Z   Ochoppi            116.00  67  PFAKE             19 17 00.0 +8.9
061Z                                 LR       LR
       comp=Z,2µm,21.0s
MCWV   Mont Chateau       116.00  51  PFAKE             19 17 00.0 +9.3
MCWV                                 LR       LR
       comp=Z,2µm,19.0s
VLDQ   Val d'Or           116.19  42  PFAKE             19 17 00.0 +9.2
VLDQ                                 LR       LR
       comp=Z,2µm,19.0s
ARA0   ARCESS Array S     116.19 345 ePKPdf   PKiKP     19 16 48.4 -1.8
ARCES  ARCESS Array B     116.19 345  PKP     PKiKP     19 16 48.4 -1.8
       comp=Z,2.9nm,0.8s,baz=100,slow=1.4,SNR=8.4
ARE0   ARCESS Array S     116.19 345  PFAKE             19 17 00.0 +10
ARE0                                 LR       LR
       comp=Z,100nm,20.0s
NHSC   New Hope           116.39  59  PFAKE             19 17 00.0 +8.4
NHSC                                 LR       LR
       comp=Z,3µm,20.0s
060A   Indiantown         116.48  65  PFAKE             19 17 00.0 +8.0
060A                                 LR       LR
       comp=Z,2µm,20.0s
KLMR   Klimovskoe         116.53 334 ePKIKP   PKPdf     19 16 48.0 -3.0
KLMR                                 pmax     pmax
       comp=Z,14nm,1.5s
KLMR   Klimovskoe         116.53 334 ePKPdf   PKPdf     19 16 48.0 -3.0
KLMR                                 AMP                19 16 55.7
       comp=Z,14nm,1.5s
O56A   Blue Knob Stat     116.89  50  PFAKE             19 17 00.0 +7.5
O56A                                 LR       LR
       comp=Z,4µm,21.0s
MMNY   Mt. Morris Dam     116.98  48  PFAKE             19 17 00.0 +7.5
MMNY                                 LR       LR
       comp=Z,4µm,22.0s
SSPA   Standing Stone     117.35  50  PFAKE             19 17 00.0 +6.7
SSPA                                 LR       LR
       comp=Z,4µm,22.0s
PB01   IPOC Station P     117.42 121  PFAKE             19 17 10.0 +16
PB01                                 LR       LR
       comp=Z,2µm,20.0s
R58B   Mineral            117.75  53  PFAKE             19 17 10.0 +16
R58B                                 LR       LR
       comp=Z,6µm,20.0s
PB11   IPOC Station P     117.81 119  PFAKE             19 17 10.0 +15
PB11                                 LR       LR
       comp=Z,2µm,22.0s
CNNC   Cliffs of the      118.08  56  PFAKE             19 17 10.0 +15
CNNC                                 LR       LR
       comp=Z,4µm,20.0s
CBN    Corbin Frederi     118.11  53  PFAKE             19 17 10.0 +15
CBN                                  LR       LR
       comp=Z,4µm,20.0s
MNMC   Minye Minye        118.12 119  PFAKE             19 17 10.0 +14
MNMC                                 LR       LR
       comp=Z,2µm,18.0s
SDMD   Soldier's Deli     118.34  51  PFAKE             19 17 10.0 +15
SDMD                                 LR       LR
       comp=Z,1µm,19.0s
MVL    Millersville       118.61  50  PFAKE             19 17 10.0 +14
MVL                                  LR       LR
       comp=Z,4µm,19.0s
N59A   State Game Lan     118.88  49  PFAKE             19 17 10.0 +14
N59A                                 LR       LR
       comp=Z,4µm,21.0s
LUPA   Lehigh Univers     119.24  50  PFAKE             19 17 10.0 +13
LUPA                                 LR       LR
       comp=Z,400nm,19.0s
VRH    Novokhopyorsk      119.31 323 ePKIKP   PKPdf     19 16 54.6 -2.1
VRH                                  pmax     pmax
       comp=Z,10.0nm,1.6s
NCB    Newcomb            119.35  46  PFAKE             19 17 10.0 +13
NCB                                  LR       LR
       comp=Z,2µm,20.0s
ODNJ   Ogdensburg         119.71  49  PFAKE             19 17 10.0 +12
ODNJ                                 LR       LR
       comp=Z,3µm,19.0s
BRNJ   Basking Ridge      119.83  49  PFAKE             19 17 10.0 +12
BRNJ                                 LR       LR
       comp=Z,5µm,22.0s
ACCN   Adirondack Com     119.88  46  PFAKE             19 17 10.0 +12
ACCN                                 LR       LR
       comp=Z,2µm,18.0s
PAL    Palisades          120.25  49  PFAKE             19 17 10.0 +11
PAL                                  LR       LR
       comp=Z,4µm,19.0s
GNI    Garni              120.33 310  PFAKE             19 17 10.0 +11
GNI                                  LR       LR
       comp=Z,1µm,19.0s
GNI    Garni              120.33 310⇓iPKIKP   PKiKP     19 17 01.1 +1.8
GOF    Gofitskoye         120.38 316 ePKIKP   PKPpre    19 16 50.0
LPSR   Galich'ya Gora     120.39 325 ePKIKP   PKPdf     19 16 57.1 -1.6
LPSR                                 pmax     pmax
       comp=Z,10.0nm,1.6s
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LPAZ   La Paz             120.55 116  PKIKP   PKPdf     19 17 00.9  0.0
LPAZ                                 pmax     pmax
       comp=Z,4.0nm,1.0s
LPAZ   La Paz             120.55 116  PKP     PKPdf     19 17 00.9  0.0
       comp=Z,3.3nm,0.9s,baz=271,slow=1.4,SNR=6.2
OBN    Obninsk            120.57 329  PFAKE             19 17 10.0 +11
OBN                                  LR       LR
       comp=Z,3µm,19.0s
OBN    Obninsk            120.57 329 i PKIKP  PKPdf     19 16 58.5 -0.4
OBN                                 e                   19 18 27.4
OBN                                 ePPP      PPP       19 20 57.3
OBN                                  pmax     pmax
       comp=Z,5.0nm,0.9s
VSR    Storozhevoye       120.80 324 ePKIKP   PKPdf     19 16 58.4 -1.1
VSR                                  pmax     pmax
       comp=Z,9.0nm,0.9s
YLE    Yale               120.89  48  PFAKE             19 17 10.0 +10
YLE                                  LR       LR
       comp=Z,4µm,19.0s
KIV    Kislovodsk         120.92 315  PFAKE             19 17 10.0 +10
KIV                                  LR       LR
       comp=Z,2µm,20.0s
KIV    Kislovodsk         120.92 315 i PKIKP  PKPdf     19 16 59.1 -1.1
KIV                                  pmax     pmax
       comp=Z,8.0nm,1.1s
KIV                                  MLR      MLR
       comp=Z,2µm,23.0s
NEY    Neytrino           121.08 314⇑iPKIKP   PKiKP     19 17 02.3 +1.6
FIA0   FINESS Array S     121.59 338 ePKPdf   PKPdf     19 16 59.9 -0.8
FIA0   FINESS Array S     121.59 338 ePKIKP   PKPdf     19 16 59.9 -0.8
FINES  FINESS Array B     121.59 338  PKP     PKPdf     19 16 59.9 -0.8
       comp=Z,5.1nm,1.0s,baz=17,slow=1.5,SNR=9.0
HRV    Adam Dziewonsk     121.60  47  PFAKE             19 17 10.0 +8.5
HRV                                  LR       LR
       comp=Z,3µm,20.0s
WES    Weston             121.80  47  PFAKE             19 17 10.0 +8.1
WES                                  LR       LR
       comp=Z,4µm,22.0s
PKME   Peaks-Kenny Pk     122.38  43  PFAKE             19 17 10.0 +7.1
PKME                                 LR       LR
       comp=Z,3µm,22.0s
DAMY   Dhamar             122.45 280  PFAKE             19 17 20.0 +16
DAMY                                 LR       LR
       comp=Z,2µm,19.0s
ATD    Arta Tunnel        123.70 277  PFAKE             19 17 20.0 +13
ATD                                  LR       LR
       comp=Z,3µm,19.0s
ANN    Anapa              124.25 317 i PKIKP  PKPdf     19 17 04.3 -2.0
ANN                                 e                   19 24 05.0
ANN                                  pmax     pmax
       comp=Z,73nm,1.4s
CPUP   Villa Florida      124.34 133  PKP     PKPdf     19 17 06.4 -0.8
       comp=Z,15nm,1.0s,baz=224,slow=1.5,SNR=13
SDV    Santo Domingo      124.88  87  PFAKE             19 17 20.0 +11
SDV                                  LR       LR
       comp=Z,1µm,20.0s
SDV    Santo Domingo      124.88  87  PKP     PKPdf     19 17 08.5 -0.2
       comp=Z,10nm,0.7s,baz=283,slow=3.8,SNR=12
BOSA   Boshof             124.89 223  PKIKP   PKPdf     19 17 07.8 -0.5
BOSA                                 pmax     pmax
       comp=Z,7.0nm,0.9s
BOSA   Boshof             124.89 223  PKP     PKPdf     19 17 07.8 -0.5
       comp=Z,8.9nm,1.0s,baz=146,slow=3.3,SNR=9.7
SDDR   Presa de Saban     124.90  75  PFAKE             19 17 20.0 +11
SDDR                                 LR       LR
       comp=Z,2µm,20.0s
SUR    Sutherland         125.15 217  PFAKE             19 17 20.0 +11
SUR                                  LR       LR
       comp=Z,4µm,20.0s
IDID   Didziasalis        125.22 332 eP       PKPdf     19 17 06.9 -1.0
IIGN   Ignalina           125.43 333 eP       PKiKP     19 17 13.2 +4.5
NACGM  Naroch             125.45 332 e        PKiKP     19 17 09.0 +0.3
NACGM                               eLR       LR        20 06 22.0
SDD    Santo Domingo      126.20  75  PFAKE             19 17 20.0 +8.7
SDD                                  LR       LR
       comp=Z,2µm,20.0s
HAL    Halifax            126.38  42  PFAKE             19 17 20.0 +9.1
HAL                                  LR       LR
       comp=Z,3µm,18.0s
NB2    NORSAR Subarra     126.56 345  PKPdf   PKPdf     19 17 10.0 -0.4
       comp=Z,2.8nm,1.0s,baz=31,slow=1.9
NB200  NORSAR Array S     126.56 345 ePKPdf   PKPdf     19 17 09.5 -0.9
NOA    NORSAR Array B     126.56 345  PKP     PKPdf     19 17 09.5 -0.9
       comp=Z,1.9nm,0.8s,baz=24,slow=1.1,SNR=5.0
AKASG  Malin Array Be     126.61 327  PKIKP   PKPdf     19 17 09.7 -1.0
AKASG                                pmax     pmax
       comp=Z,1.0nm,0.5s
AKASG  Malin Array Be     126.61 327  PKP     PKPdf     19 17 09.7 -1.0
       comp=Z,0.4nm,0.4s,baz=61,slow=2.0,SNR=13
AKBB   Malin Array Si     126.61 327  PFAKE             19 17 20.0 +8.8
AKBB                                 LR       LR
       comp=Z,3µm,20.0s
KIEV   Kiev               126.63 327  PFAKE             19 17 20.0 +8.8
KIEV                                 LR       LR
       comp=Z,3µm,21.0s
KIEV   Kiev               126.63 327⇓iPKIKP   PKiKP     19 17 11.3 +0.1
KMBO   Kilima Mbogo       127.02 260 ePKPpre  PKPpre    19 17 00.7
KMBO                                 LR       LR
       comp=Z,2µm,20.0s
KMBO   Kilima Mbogo       127.02 260  PKP     PKiKP     19 17 13.8 +0.4
       comp=Z,1.4nm,0.4s,baz=104,slow=1.6,SNR=8.2
FURI   Furi               127.49 273  PFAKE             19 17 30.0 +16
FURI                                 LR       LR
       comp=Z,3µm,20.0s
SUW    Suwalki            127.64 333  PFAKE             19 17 20.0 +6.9
SUW                                  LR       LR
       comp=Z,3µm,19.0s
KONO   Kongsberg          128.17 345  PFAKE             19 17 20.0 +6.0
KONO                                 LR       LR
       comp=Z,2µm,19.0s
KLNR   Kaliningrad        128.53 335⇓ePKIKP   PKPdf     19 17 13.8 -0.4
BR101  Keskin Array S     128.65 313 ePKPdf   PKPdf     19 17 14.7 -0.5
BRTR   Keskin Array B     128.65 313  PKIKP   PKPdf     19 17 14.7 -0.5
BRTR                                 pmax     pmax
       comp=Z,3.0nm,1.0s
BRTR   Keskin Array B     128.65 313  PKP     PKPdf     19 17 14.7 -0.5
       comp=Z,2.4nm,1.0s,baz=90,slow=2.5,SNR=8.6
MPR    Mayaguez           128.84  75  PFAKE             19 17 30.0 +13
MPR                                  LR       LR
       comp=Z,2µm,19.0s
ANTO   Ankara             129.21 313  PFAKE             19 17 30.0 +13
ANTO                                 LR       LR
       comp=Z,1µm,19.0s
EMPR   Esperanza - Ma     129.41  75  PFAKE             19 17 30.0 +12
EMPR                                 LR       LR
       comp=Z,1µm,19.0s
SJG    San Juan           129.78  76 ePKPdf   PKPdf     19 17 16.5 -1.2
SJG                                  LR       LR
       comp=Z,2µm,22.0s
SJG    San Juan           129.78  76  PKP     PKPdf     19 17 16.5 -1.2
       comp=Z,26nm,1.0s,baz=292,slow=1.3,SNR=5.5
LVV    L'vov              129.86 328 ePKIKP   PKiKP     19 17 19.5 +1.8
LVV                                  MLR      MLR
       comp=N,2µm,19.0s
LVV                                  MLR      MLR
       comp=E,2µm,19.0s
LVV                                  MLR      MLR
       comp=Z,1µm,19.0s
CBYP   Canovanas          130.06  75  PFAKE             19 17 30.0 +11
CBYP                                 LR       LR
       comp=Z,1µm,22.0s
HUMP   Col San Antoni     130.06  76  PFAKE             19 17 30.0 +11
HUMP                                 LR       LR
       comp=Z,2µm,22.0s
LSZ    Lusaka             130.19 239  PFAKE             19 17 30.0 +10
LSZ                                  LR       LR
       comp=Z,3µm,19.0s
TIRR   Tirgusor           130.25 320  PFAKE             19 17 30.0 +11
TIRR                                 LR       LR
       comp=Z,2µm,19.0s
CSS    Mathiatis          130.39 307  PFAKE             19 17 30.0 +11
CSS                                  LR       LR
       comp=Z,2µm,21.0s
CUPR   Culebra, Puert     130.60  75  PFAKE             19 17 30.0 +10
CUPR                                 LR       LR
       comp=Z,1µm,22.0s
MLR    Muntele Rosu       131.24 323  PFAKE             19 17 30.0 +9.2
MLR                                  LR       LR
       comp=Z,2µm,20.0s
RGN    Rugen              131.25 339  PFAKE             19 17 30.0 +10
RGN                                  LR       LR
       comp=Z,3µm,20.0s
UZH    Uzhgorod           131.49 328 ePKHKP   PKPpre    19 17 08.5
ABVI   Anegada Island     131.49  75  PFAKE             19 17 30.0 +8.1
ABVI                                 LR       LR
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       comp=Z,1µm,22.0s
SMRT   St. Maarten        132.71  76  PFAKE             19 17 40.0 +16
SMRT                                 LR       LR
       comp=Z,1µm,21.0s
OKC    Ostrava-Krasne     132.76 331  AMS     AMS       20 21 50.0
       comp=Z,2µm,18.0s
SEUS   St. Eustatius      132.81  76  PFAKE             19 17 40.0 +15
SEUS                                 LR       LR
       comp=Z,1µm,20.0s
SPB    Sao Paulo          132.99 137  PFAKE             19 17 40.0 +15
SPB                                  LR       LR
       comp=Z,1µm,18.0s
MORC   Moravsky Berou     133.08 332  PFAKE             19 17 30.0 +5.7
MORC                                 LR       LR
       comp=Z,3µm,19.0s
PSZ    Piszkesteto        133.18 328  PFAKE             19 17 30.0 +5.4
PSZ                                  LR       LR
       comp=Z,3µm,21.0s
DPC    Dobruska-Polom     133.23 333  AMS     AMS       20 21 20.0
       comp=Z,2µm,18.6s
UPC    Upice              133.25 333  AMS     AMS       20 19 00.0
       comp=Z,3µm,19.9s
VYHS   Vyhne              133.34 330 ePKIKP   PKiKP     19 17 25.5 +0.7
VYHS                                e                   19 17 34.3
VYHS   Vyhne              133.34 330 ePKP     PKiKP     19 17 25.5 +0.7
VYHS                                e                   19 17 34.3
MBAR   Mbarara            133.44 259  PFAKE             19 17 40.0 +14
MBAR                                 LR       LR
       comp=Z,4µm,19.0s
PVCC   Panska Ves         133.86 334  AMS     AMS       20 19 10.0
       comp=Z,3µm,18.1s
BRG    Berggiesshubel     133.86 335 ePKP     PKiKP     19 17 28.6 +2.8
       comp=Z,14nm,1.6s
BRG    Berggiesshubel     133.86 335 ePKIKP   PKiKP     19 17 28.6 +2.8
BRG                                  pmax     pmax
       comp=Z,14nm,1.6s
CLL    Collm              133.91 336  PFAKE             19 17 40.0 +14
CLL                                  LR       LR
       comp=Z,3µm,19.0s
CLL    Collm              133.91 336 ePKPdf   PKPdf     19 17 25.0 +0.5
CLL                                 e                   19 17 36.0
CLL                                 eSSS      SSS       19 42 36.0
CLL                                 eSSSS               19 45 54.0
CLL                                  LmV                20 22 00.0
       comp=N,2µm,19.6s
CLL                                  LmV                20 22 00.0
       comp=E,1µm,21.2s
CLL                                  LmV                20 22 00.0
       comp=Z,3µm,19.4s
CLL    Collm              133.91 336 ePKIKP   PKPdf     19 17 25.0 +0.5
CLL                                 e                   19 17 36.0
CLL                                  MLR      MLR
       comp=Z,3µm,19.4s
MODS   Modra-Piesok       134.18 331 ePKP     PKiKP     19 17 33.6 +7.1
MODS                                ePP       PP        19 19 54.4 -1.5
PRA    Prague             134.26 334  AMS     AMS       20 14 30.0
       comp=Z,3µm,18.0s
PRU    Pruhonice          134.28 334  AMS     AMS       20 14 20.0
       comp=Z,3µm,22.5s
VTS    Vitosha            134.42 321  PFAKE             19 17 40.0 +13
VTS                                  LR       LR
       comp=Z,2µm,22.0s
NKC    Novy Kostel        134.97 336  AMS     AMS       20 20 50.0
       comp=Z,2µm,16.6s
CONA   Conrad Observa     135.17 331 i PKiKP  PKPdf     19 17 27.8 +0.6
       comp=Z,17nm,1.8s
KHC    Kasperske Hory     135.33 334  PFAKE             19 17 40.0 +11
KHC                                  LR       LR
       comp=Z,1µm,20.0s
KHC    Kasperske Hory     135.33 334 ePKP     PKPdf     19 17 27.9 +0.5
KHC                                 ex        x         19 17 33.9
KHC                                  AMS      AMS       20 16 10.0
       comp=Z,2µm,18.5s
KHC    Kasperske Hory     135.33 334 ePKIKP   PKPdf     19 17 27.9 +0.5
KHC                                 e                   19 17 33.9
KHC                                  MLR      MLR
       comp=Z,2µm,18.5s
GEC2   GERESS Array S     135.49 333 ePKPdf   PKPdf     19 17 26.1 -1.6
GEC2                                 LR       LR
       comp=Z,3µm,19.0s
GEC2   GERESS Array S     135.49 333 ePKIKP   PKPdf     19 17 26.2 -1.6
GEC2                                 MLR      MLR
       comp=Z,3µm,19.0s
GERES  GERESS Array B     135.49 333  PKP     PKPdf     19 17 26.1 -1.6
       comp=Z,1.6nm,0.9s,baz=64,slow=3.1,SNR=6.4
ARSA   Arzberg            135.81 331 i P      PKiKP     19 17 32.2 +2.3
       comp=Z,14nm,1.7s
GRA1   Grafenberg Arr     135.88 336  PFAKE             19 17 40.0 +10
GRA1                                 LR       LR
       comp=Z,2µm,20.0s
GRFO   Grafenberg         135.88 336  PFAKE             19 17 40.0 +10
GRFO                                 LR       LR
       comp=Z,2µm,20.0s
LIT    Litokhoron         136.22 318  PFAKE             19 17 40.0 +9.0
LIT                                  LR       LR
       comp=Z,1µm,20.0s
TSUM   Tsumeb             136.30 227  PFAKE             19 17 40.0 +8.1
TSUM                                 LR       LR
       comp=Z,9µm,22.0s
SOKA   Soboth             136.46 330 i pPKPdf PKiKP     19 17 30.9 -0.4
       comp=Z,6.8nm,0.9s
IDI    Anoyia             136.76 311  PFAKE             19 17 40.0 +7.7
IDI                                  LR       LR
       comp=Z,900nm,21.0s
AGG    Agios Georgios     136.88 317  PFAKE             19 17 40.0 +7.7
AGG                                  LR       LR
       comp=Z,2µm,20.0s
KBA    Koelnbreinsper     136.97 332 i pPKPdf PKPdf     19 17 30.4 -0.2
       comp=Z,5.9nm,0.7s
MYKA   Terra Mystica      137.16 331 i P      PKiKP     19 17 32.7  0.0
       comp=Z,27nm,2.0s
UCC    Uccle              137.36 342  PFAKE             19 17 40.0 +7.1
UCC                                  LR       LR
       comp=Z,3µm,19.0s
STU    Stuttgart          137.42 337  PFAKE             19 17 40.0 +6.9
STU                                  LR       LR
       comp=Z,2µm,20.0s
WTTA   Wattenberg         137.60 333 i P      PKiKP     19 17 36.0 +2.2
       comp=Z,12nm,0.9s
BDFB   Brasilia           137.66 128  PKIKP   PKPdf     19 17 31.9 -0.9
BDFB                                 pmax     pmax
       comp=Z,17nm,1.1s
BDFB   Brasilia           137.66 128  PKP     PKPdf     19 17 31.9 -0.9
       comp=Z,14nm,0.9s,baz=77,slow=3.1,SNR=10
MOTA   Moosalm            137.77 334 i PKiKP  PKiKP     19 17 33.2 -0.9
       comp=Z,6.3nm,0.9s
WLF    Walferdange        137.78 340  PFAKE             19 17 40.0 +6.2
WLF                                  LR       LR
       comp=Z,13µm,19.0s
SQTA   Sankt Quirin       137.82 334 i P      PKiKP     19 17 34.2  0.0
       comp=Z,15nm,1.5s
ITM    Ithomi             138.06 315  PFAKE             19 17 40.0 +5.2
ITM                                  LR       LR
       comp=Z,1µm,22.0s
BFO    Black Forest       138.11 337  PFAKE             19 17 40.0 +5.4
BFO                                  LR       LR
       comp=Z,2µm,20.0s
DAVA   Damuels            138.33 335 i P      PKiKP     19 17 38.5 +3.3
       comp=Z,14nm,1.7s
FUORN  Ofenpass-Fuorn     138.69 334  PFAKE             19 17 50.0 +14
FUORN                                LR       LR
       comp=Z,4µm,21.0s
TUE    Stuetta            139.20 335  PFAKE             19 17 50.0 +13
TUE                                  LR       LR
       comp=Z,3µm,18.0s
TIP    Timpagrande        140.41 321  PFAKE             19 17 50.0 +10
TIP                                  LR       LR
       comp=Z,2µm,22.0s
CLF    Chambon-Foret      140.46 342  PFAKE             19 17 50.0 +11
CLF                                  LR       LR
       comp=Z,3µm,20.0s
VLC    Villacollemand     140.53 331  PFAKE             19 17 50.0 +10
VLC                                  LR       LR
       comp=Z,2µm,21.0s
CEL    Celeste            141.50 320  PFAKE             19 17 50.0 +8.2
CEL                                  LR       LR
       comp=Z,2µm,21.0s
KEST   Kesra              147.15 322 ePKPbc   PKPab     19 17 52.3 -0.4
KEST                                 LR       LR
       comp=Z,2µm,21.0s
KEST   Kesra              147.15 322  PKPbc   PKPbc     19 17 51.4 +0.2
       comp=Z,28nm,1.0s,baz=298,slow=3.5,SNR=8.9
H07S1  FLORES T-PHASE148.13  25 ePKP     PKiKP     19 17 55.7 +0.3
PBRG   Braganca           148.54 349 ePKPdf   PKPab     19 17 58.9 +0.9
PGAV   Gavieira, Arco     148.65 351 ePKPab   PKPab     19 17 58.3 -0.2
PGAV   Gavieira, Arco     148.65 351 ePKPdf   PKPab     19 18 00.1 +1.6
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POLO  Lamas de Olo      149.15 350  ePKPdf  PKiKP   19 17 57.1  -0.4
POLO  Lamas de Olo      149.15 350  ePKPab  PKPab   19 18 00.1  -0.4
MVO   Moncorvo          149.22 349  ePKPdf  PKPdf   19 17 51.7  -0.5
MVO   Moncorvo          149.22 349  ePKPab  PKPab   19 18 00.3  -0.5
PGRA  Graciosa          149.66  21  ePKP    PKPbc   19 17 57.8  +0.3
PCED  Cedros            149.76  22  ePKP    PKiKP   19 17 59.9  +1.2
ROSA  Rosais            149.84  21  ePKP    PKPdf   19 17 50.5  -2.7
ESDC  Sonseca Array     149.91 343   PKPbc  PKPbc   19 17 58.0  -0.2
      comp=Z,7.6nm,1.0s,baz=7.8,slow=3.2,SNR=11
ESLA  Sonseca Array     149.91 343   PFAKE          19 18 00.0  +0.9
ESLA                                 LR     LR
      comp=Z,2μm,20.0s
MTE   Manteigas         150.05 349  ePKPdf  PKiKP   19 17 59.7  +0.3
MTE   Manteigas         150.05 349  ePKPab  PKPab   19 18 05.0  +0.8
MTE   Manteigas         150.05 349   PFAKE          19 18 00.0  +0.6
MTE                                  LR     LR
      comp=Z,2μm,22.0s
PAB   San Pablo         150.13 344   PFAKE          19 18 00.0  +0.4
PAB                                  LR     LR
      comp=Z,2μm,20.0s
PCAS  Casmilo, Conde    150.56 350  ePKPdf  PKPab   19 18 04.0  -2.2
PMRV  Marv??o           150.96 348  ePKPdf  PKPbc   19 18 00.7  +0.1
PMTG  Montargil         151.47 350  ePKPdf  PKPdf   19 17 54.6  -1.1
PESTR Estremoz          151.54 348  ePKPdf  PKPpre  19 17 43.3
PESTR Estremoz          151.54 348   PFAKE          19 18 10.0  -0.3
PESTR                                LR     LR
      comp=Z,1μm,21.0s
CMLA  Cha da Macela     151.62  18  ePKP    PKPdf   19 17 53.7  -2.2
PMAFR Mafra             151.75 351  ePKPdf  PKPbc   19 18 01.0  -1.4
LIS   Lisbon            151.97 351  ePKPdf  PKPdf   19 17 55.4  -1.1
LIS                                  AMS    AMS     20 48 45.3
      comp=E,2μm,22.0s
LIS   Lisbon            151.97 351  ePKIKP  PKPdf   19 17 55.3  -1.1
PBEJ  Beja              152.41 348  ePKPab  PKPab   19 18 13.0  -1.0
PNCL  Nicolau / Gran    152.45 350  ePKPdf  PKPdf   19 17 56.6  -0.5
PSMN  Pico do Norte,    152.46  18  ePKP    PKPbc   19 18 03.0  -1.1
MESJ  Messejana         152.66 349  ePKPdf  PKPdf   19 17 56.4  -1.1
MESJ                                 AMS    AMS     20 28 20.3
      comp=Z,2μm,19.5s
MESJ  Messejana         152.66 349  ePKIKP  PKPdf   19 17 56.3  -1.1
RCBR  Riachuelo         153.03 127   PFAKE          19 18 10.0  +3.7
RCBR                                 LR     LR
      comp=Z,2μm,19.0s
PBDV  Barranco-do-Ve    153.18 348  ePKPab  PKPab   19 18 17.7  +0.4
PBDV  Barranco-do-Ve    153.18 348  ePKPdf  PKPab   19 18 21.7  +4.4
MORF  Marmelete         153.26 349  ePKPdf  PKPdf   19 17 57.2  -1.2
MORF                                 AMS    AMS     20 29 10.7
      comp=Z,2μm,11.2s
MORF  Marmelete         153.26 349  ePKPdf  PKPab   19 18 18.3  +0.7
MORF  Marmelete         153.26 349  ePKIKP  PKPdf   19 17 57.2  -1.2
PFVI  Vila Bisbo        153.46 350  ePKPdf  PKPdf   19 18 00.6  +1.9
PFVI  Vila Bisbo        153.46 350   PFAKE          19 18 10.0  +3.6
PFVI                                 LR     LR
      comp=Z,2μm,19.0s
SFS   San Fernando      153.52 345   PFAKE          19 18 10.0  +3.5
SFS                                  LR     LR
      comp=Z,2μm,21.0s
RTC   Rabat Centre      156.03 344   PFAKE          19 18 10.0  +7.7
RTC                                  LR     LR
      comp=Z,7μm,21.0s
TAM   Tamanrasset       157.45 304   PFAKE          19 18 20.0   +15
TAM                                  LR     LR
      comp=Z,2μm,21.0s
PMOZ  Porto Moniz, M    158.15   6  ePKPdf  PKPdf   19 18 11.9  +6.7
TOA0  Torodi Ar. Sit    163.88 279   P      PKPdf   19 18 16.3  +4.7
      SNR=6.9
TORD  Torodi Ar. Bea    163.88 279   PKP    PKPdf   19 18 10.8  -0.8
      comp=Z,6.0nm,1.0s,baz=353,slow=3.1,SNR=13
TORD                                 PKPab  PKPab   19 19 04.1  -0.2
      comp=Z,4.3nm,1.0s,baz=44,slow=2.8,SNR=2.5
TOA1  Torodi Ar. Sit    163.88 279  ePKPdf  PKPdf   19 18 10.8  -0.8
TOA1                                ePKPab  PKPab   19 19 04.1  -0.3
KIC   Kosan Boka        169.18 246  ePKP1   PKPdf   19 18 14.9  -0.9
      comp=Z,120nm,1.6s
LIC   Lamto             169.37 244  ePKP1   PKPdf   19 18 13.9  -2.0
      comp=Z,89nm,1.7s
DBIC  Dimbokro          169.41 247  ePKPdf  PKPdf   19 18 15.7  -0.2
DBIC  Dimbokro          169.41 247  ePKIKP  PKPdf   19 18 15.7  -0.2
DBIC  Dimbokro          169.41 247   PKP    PKPdf   19 18 15.2  -0.8
      comp=Z,8.7nm,0.9s,baz=133,slow=1.0,SNR=8.4
DBIC                                 PKPab  PKPab   19 19 29.0  +0.3
      comp=Z,14nm,1.3s,baz=112,slow=8.0,SNR=2.7
TIC   Toumodi           169.55 246  ePKP1   PKPdf   19 18 15.1  -0.9
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ATH ***02*** *18:59:26.7, 41°.95N×20°.29E, h7km±2km, ML3.1/4, Error ellipse: s-maj=4.4km s-min=1.2km az=316.0*
IDC ***02*** *18:59:26.8±1.9, 42°.01N×20°.22E, h0km, mb3.3/2, mb1 3.6/9, mb1mx3.4/58, mbtmp3.5/9, ML3.1/7, Error ellipse: s-maj=25.9km s-min=15.0km az=4.0*
ISCJB ***02*** *18:59:27.5±0.3, 41°.94N±0°.01×20°.22E±0°.02, h4km±2km, mb2.8/1, Error ellipse: s-maj=2.3km s-min=1.7km az=142.6*
TIR ***02*** *18:59:27.5, 41°.90N×20°.19E, h23km, Md3.5/5*
SKO ***02*** *18:59:28.9, 41°.88N×20°.21E, h10km, M2.6, ML3.3*
BEO ***02*** *18:59:28.7±0.3, 41°.92N×20°.23E, h5km±2km, ML3.0/16*
SAR ***02*** *18:59:28.2±0.7, 41°.88N×20°.23E, h5km±3km, ML3.5/1*
PRU ***02*** *18:59:28.4±0.0, 41°.66N×20°.23E, h10km*
THE ***02*** *18:59:28.1, 41°.92N×20°.20E, h0km±1km, ML3.1/3, Error ellipse: s-maj=1.4km s-min=0.5km az=322.0*
PDG ***02*** *18:59:29.0±1.1, 41°.96N×20°.19E, h12km±2km, MD3.3/7, ML3.4/10, Error ellipse: s-maj=1.5km s-min=1.7km az=0.0*
ISC 02 18:59:28.4±0.9**, 41°.90N**±0°.02×**20°.21E**±0°.02**, h13**km±7km**, n176, σ1s.39**/244**, 21C-19D, Albania**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
PHP   Peshkopia          0.28 140   P     Pg      18 59 33.9  -0.2
PHP                                 S     Sg      18 59 38.2  +0.1
PHP   Peshkopia          0.28 140  i PG   Pg      18 59 34.0  -0.2
PHP                                i SG   Sb      18 59 39.2  -0.5
PUK   Puka               0.28 302  i PG   Pg      18 59 33.8  -0.4
TIR   Tirane             0.60 205  ePg    Pg      18 59 40.0  -0.2
TIR                                eSg    Sb      18 59 49.2   0.0
TIR   Tirane             0.60 205   P     Pg      18 59 39.8  -0.4
TIR                                 S     Sb      18 59 49.1   0.0
TIR                                 AML   AML     18 59 56.1
      comp=N,4191μm,0.4s
TIR                                 AML   AML     18 59 57.8
      comp=E,4090μm,0.5s
TIR   Tirane             0.60 205⇑iP      Pg      18 59 40.5  +0.3
TIR   Tirane             0.60 205   P     Pg      18 59 39.9  -0.2
TIR                                 S     Sb      18 59 49.2   0.0
TIR   Tirane             0.60 205⇑iPg     Pg      18 59 40.0  -0.2
TIR   Tirane             0.60 205  i PG   Pg      18 59 39.8  -0.4
TIR                                i SG   Sb      18 59 49.1   0.0
ULC   Ulcinj             0.72 276⇑iPg     Pg      18 59 41.5  -0.8
ULC                                i Sg   Sb      18 59 52.7  +0.1
ULC   Ulcinj             0.72 276  i Pg   Pg      18 59 41.6  -0.8
PVY   Plav               0.72 345⇓iPg     Pg      18 59 42.3  -0.1
PVY                                i Sg   Sb      18 59 52.7   0.0
DRME  Dracevica, Mon     0.81 291⇑iPg     Pg      18 59 43.0  -1.2
DRME                               i Sg   Sb      18 59 55.6  +0.4
DRME  Dracevica, Mon     0.81 291⇑iPg     Pg      18 59 42.9  -1.2
DRME                               eSg    Sb      18 59 55.3  +0.1
PDG   Podgorica          0.89 307  ePg    Pg      18 59 44.0  -1.5
PDG                                eSg    Sb      18 59 57.3   0.0
PDG   Podgorica          0.89 307⇑iP      Pg      18 59 44.4  -1.1
PDG   Podgorica          0.89 307   S     Sb      18 59 57.8  +0.5
PDG   Podgorica          0.89 307  i Pg   Pg      18 59 44.5  -1.1
PDG                                i Sg   Sb      18 59 58.0  +0.8
PDG   Podgorica          0.89 307⇑iPg     Pg      18 59 44.0  -1.5
PDG                                eSg    Sg      18 59 57.1   0.0
TTG   Podgorica          0.89 307⇑iPg     Pg      18 59 44.1  -1.5
TTG                                i Sg   Sb      18 59 57.8  +0.5
SKO   Skopje             0.92  85  ePg    Pg      18 59 45.7  -0.5
SKO                                eSg    Sb      18 59 58.6  +0.2
SKO   Skopje             0.92  85  i Pg   Pg      18 59 45.6  -0.7
SKO                                i Sg   Sb      18 59 58.8  +0.4
SKO                                eLg    Lg      18 59 59.3
      comp=E,62nm,0.3s
SKO                                eLg    Lg      19 00 01.2
      comp=N,144nm,0.3s
KRUS  Krusevo            0.94 124  i Pg   Pg      18 59 45.4  -1.2
KRUS                               i Sg   Sb      18 59 59.3  +0.2
KRUS                               eLg    Lg      19 00 01.7
      comp=N,476nm,0.4s
KRUS                               eLg    Lg      19 00 01.7
      comp=E,638nm,0.5s
BEY   Berane             1.00 347  i Pg   Pg      18 59 47.3  -0.4
IVA   Berane             1.00 347⇓iPg     Pg      18 59 46.9  -0.8
IVA                                i Sg   Sn      19 00 02.3  +0.1
BUM   Brajici-Budva      1.06 293⇑iPg     Pb      18 59 47.8  -0.7
BUM                                i Sg   Sn      19 00 03.8  +0.3
BIA   Bitola             1.21 136  i Pg   Pn      18 59 50.5  -0.6
BIA                                i Sg   Sb      19 00 06.5  -0.3
BIA                                eLg    Lg      19 00 10.0
      comp=N,254nm,0.3s
BIA                                eLg    Lg      19 00 10.5
      comp=E,384nm,0.3s
NKME  Niksic             1.27 314⇓iPg     Pg      18 59 52.7  -0.2
NKME                               i Sg   Sg      19 00 10.7  +1.3
NKY   Niksic             1.28 316⇓iPg     Pg      18 59 53.3  +0.2
NKY                                i Sg   Sb      19 00 08.6  -0.3
HCY   Herceg Novi        1.39 294⇑iPg     Pn      18 59 53.2  -0.2
HCY                                i Sg   Sg      19 00 14.8  +1.8
HCY   Herceg Novi        1.39 294  ePg    Pn      18 59 52.8  -0.6
HCY                                eSg    Sg      19 00 13.0   0.0
SELS  Selova             1.48  27  ePg    Pn      18 59 55.1  +0.3
SELS                               eSg    Sb      19 00 14.6   0.0
STIP  Stip               1.50  97  i Pn   Pg      18 59 57.7  +0.7
STIP                               i Sn   Sg      19 00 19.9  +3.4
STIP                               eLg    Lg      19 00 23.8
      comp=N,76nm,0.5s
STIP                               eLg    Lg      19 00 24.5
      comp=E,103nm,0.5s
BARS  Barje              1.51  52  ePg    Pb      18 59 55.8  -0.4
BARS  Barje              1.51  52  ePn    Pg      19 00 09.5   +12
BARS                               eSg    Sb      19 00 15.8  +0.6
BARS  Barje              1.51  52⇓iPg     Pb      18 59 55.8  -0.4
BARS                               i Sg   Sg      19 00 16.7  -0.2
PLE   Pljevlja           1.55 337⇑iPg     Pg      18 59 57.7  -0.6
PLE                                i Sg   Sg      19 00 18.2  -0.3
TREB  Trebinje           1.60 301  ePn    Pb      18 59 57.2  -0.6
TREB                               eSn    Sg      19 00 20.0  +0.1
TREB  Trebinje           1.60 301⇑iPn     Pb      18 59 57.2  -0.6
TREB                               eSn    Sb      19 00 18.2  +0.3
TPE   Tepelena           1.61 185  i PN   Pb      18 59 57.6  -0.3
TPE                                i SN   Sg      19 00 20.0  -0.1
NEST  Nestorio           1.61 156   P     Pn      18 59 57.5  +0.9
NEST                                AML   AML     19 00 28.0
      comp=N,1196μm,0.5s
NEST                                AML   AML     19 00 29.6
      comp=E,810μm,0.8s
NEST  Nestorio           1.61 156   P     Pn      18 59 57.5  +0.9
NEST                                S     Sg      19 00 20.4  +0.2
IVAS  Ivanjica           1.68 359  ePg    Pn      18 59 58.2  +0.7
IVAS                               eSg    Sb      19 00 20.3  +0.1
PENT  Pentalofos         1.84 157   P     Pb      19 00 01.4  -0.5
PENT                                S     Sg      19 00 26.7  -0.8
PENT                                AML   AML     19 00 34.6
      comp=N,965μm,0.5s
PENT                                AML   AML     19 00 36.5
      comp=E,689μm,0.8s
PENT  Pentalofos         1.84 157   P     Pn      19 00 00.7  +1.0
VAY   Valandovo          1.86 107  ePn    Pn      19 00 00.8  +0.8
VAY                                eSn    Sb      19 00 24.8  -0.6
VAY   Valandovo          1.86 107   P     Pn      19 00 00.8  +0.8
VAY                                 S     Sb      19 00 25.8  +0.4
VAY   Valandovo          1.86 107⇑iPn     Pn      19 00 00.7  +0.8
VAY                                i Sn   Sn      19 00 24.4  +1.1
VAY                                eLg    Lg      19 00 28.4
      comp=E,199nm,0.6s
VAY                                eLg    Lg      19 00 29.3
      comp=N,263nm,0.6s
GRG   Griva              1.90 119   P     Pn      19 00 01.3  +0.8
GRG   Griva              1.90 119   P     Pn      19 00 01.2  +0.8
GRG   Griva              1.90 119  i Pn   Pn      19 00 01.3  +0.8
GRG                                i Sn   Sn      19 00 24.8  +0.6
KZN   Kozani             1.98 143   P     Pn      19 00 03.0  +1.3
KZN   Kozani             1.98 143   P     Pn      19 00 02.9  +1.3
SRN   Sarande            2.02 184  i PN   Pn      19 00 03.1  +1.1
SRN                                i SN   Sb      19 00 30.8  +0.9
GRUS  Gruza              2.03  10  ePn    Pn      19 00 02.7  +0.5
GRUS                               eSn    Sb      19 00 28.7  -1.4
BBLS  Lazi&#263;i        2.06 344  ePn    Pb      19 00 04.2  -1.4
BBLS                               eSn    Sn      19 00 29.0  +0.8
BBLS  Lazi&#263;i        2.06 344  ePn    Pn      19 00 03.4  +0.8
BBLS                               eSn    Sb      19 00 30.4  -0.6
BOVS  Bovan              2.06  32  ePn    Pn      19 00 03.1  +0.5
BOVS                               eSn    Sn      19 00 28.3  +0.2
STON  Ston               2.10 299  i Pn   Pn      19 00 03.8  +0.7
STON                                Sn    Sb      19 00 31.2  -0.9
KPRO  Kipourio           2.13 155   P     Pn      19 00 05.1  +1.4
KKB   Krupnik            2.15  90  i Pn   Pn      19 00 05.3  +1.4
KKB                                i Sn   Sn      19 00 31.4  +1.0
KKB   Krupnik            2.15  90   P     Pn      19 00 05.4  +1.5
KNT   Kendrikon          2.15 109   P     Pn      19 00 04.6  +0.7
KNT   Kendrikon          2.15 109   P     Pn      19 00 04.6  +0.7
KNT   Kendrikon          2.15 109  i Pn   Pn      19 00 04.6  +0.7
KEK   Kerkira            2.20 188   P     Pn      19 00 05.9  +1.3
DIVS  Divibare           2.21 356  ePn    Pn      19 00 05.4  +0.7
DIVS                               eSn    Sn      19 00 33.3  +1.3
DIVS  Divibare           2.21 356  ePn    Pn      19 00 05.5  +0.7
DIVS                               eSn    Sn      19 00 33.2  +1.3
ZAPS  Zavoj              2.26  52  ePn    Pn      19 00 06.9  +1.5
ZAPS                               eSn    Sn      19 00 34.5  +1.3
JAN   Janina             2.29 167   P     Pb      19 00 08.7  -0.8
TRUS  Trudelj            2.33   4  ePn    Pn      19 00 07.5  +1.1
TRUS                               eSn    Sn      19 00 36.7  +1.8
VTS   Vitosha            2.36  71  ePn    Pn      19 00 07.5  +0.6
VTS                                eSn    Sn      19 00 35.8   0.0
VTS   Vitosha            2.36  71⇓iP      Pn      19 00 07.8  +0.8
VTS   Vitosha            2.36  71   S     Sb      19 00 39.6  -0.3
VTS   Vitosha            2.36  71   P     Pn      19 00 07.0  +0.1
VTS   Vitosha            2.36  71   P     Pn      19 00 07.7  +0.8
IGT   Igoumenitsa        2.36 178   P     Pn      19 00 09.1  +2.3
IGT                                 AML   AML     19 00 53.8
      comp=E,370μm,0.8s
IGT                                 AML   AML     19 00 54.8
      comp=N,268μm,0.4s
HAPS  Han Pijesak,BI     2.37 338  ePn    Pn      19 00 08.7  +1.6
HAPS  Han Pijesak,BI     2.37 338⇓iPn     Pn      19 00 08.0  +0.9
HAPS                               eSn    Sn      19 00 38.1  +2.0
ZAGS  Zajecar            2.43  37  ePn    Pn      19 00 08.7  +1.0
ZAGS                               eSn    Sn      19 00 39.1  +1.9
LIT   Litokhoron         2.49 135   P     Pn      19 00 09.6  +1.0
LIT   Litokhoron         2.49 135   P     Pn      19 00 09.5  +0.9
HORT  Hortiatis          2.54 120   P     Pn      19 00 10.8  +1.5
SOH   Sokhos             2.60 113   P     Pn      19 00 11.2  +1.1
SOH   Sokhos             2.60 113   P     Pn      19 00 11.2  +1.1
BAI   Bari               2.62 254  ePn    Pn      19 00 11.7  +1.4
MMB   Musomiste          2.65  95   P     Pn      19 00 12.0  +1.2
SRS   Serrai             2.66 106   P     Pn      19 00 12.0  +1.1
SRS   Serrai             2.66 106   P     Pn      19 00 11.8  +0.9
TEKS  Tekeris            2.70 350  ePn    Pn      19 00 12.7  +1.3
TEKS                               eSn    Sn      19 00 45.9  +2.0
TEKS  Tekeris            2.70 350  ePn    Pn      19 00 12.6  +1.2
TEKS                               eSn    Sn      19 00 45.8  +1.9
THL   Klokotos Trika     2.71 149   P     Pn      19 00 12.4  +1.0
KUBS  Kucevo             2.73  23  ePn    Pn      19 00 11.9   0.0
NVR   Nevrokopi          2.79 100   P     Pn      19 00 13.9  +1.1
NVR   Nevrokopi          2.79 100   P     Pn      19 00 13.9  +1.1
DSL   Palaion Diasel     2.84 166   P     Pb      19 00 16.9  -2.0
SG1   Sgolgore (BA)      2.86 249  ePn    Pn      19 00 14.2  +0.6
PLG   Polygyros          2.88 121   P     Pn      19 00 15.1  +1.2
MATE  Matera             2.92 246⇓iP      Pn      19 00 13.9  -0.5
MDVR  Moldovita          3.09  20⇓iP      Pn      19 00 17.8  +1.0
PUNG  Punghina           3.11  39⇓iP      Pn      19 00 17.8  +0.8
PUNG  Punghina           3.11  39   S     Sn      19 00 57.0  +3.0
LKD2  Lefkada island     3.12 173   P     Pn      19 00 18.7  +1.4
DOB   Doboj              3.23 332  ePn    Pn      19 00 19.8  +1.2
FRGS  Fruska Gora        3.27 355  ePn    Pn      19 00 20.0  +0.7
FRGS                               eSn    Sn      19 00 58.2  +0.1
FRGS  Fruska Gora        3.27 355  ePn    Pn      19 00 20.0  +0.7
FRGS                               eSn    Sn      19 00 59.2  +1.1
PAIG  Paliouri           3.29 126   P     Pn      19 00 20.4  +1.0
AGG   Agios Georgios     3.30 150   P     Pn      19 00 20.9  +1.2
KAVA  Kavala             3.36 104   P     Pn      19 00 21.8  +1.3
HERR  Herculane          3.39  28⇓iP      Pn      19 00 21.3  +0.4
HERR  Herculane          3.39  28   S     Sn      19 00 58.8  -2.2
XOR   Xorichti           3.40 137   P     Pn      19 00 21.7  +0.6
PVO   Paravola           3.43 162   P     Pn      19 00 24.2  +2.8
ANX   Ano Chora          3.55 158   P     Pn      19 00 26.3  +3.1
BLY   Banja Luka         3.60 323⇑iP      Pn      19 00 26.0  +2.1
BLY   Banja Luka         3.60 323  ePn    Pn      19 00 25.1  +1.2
BLY                                eSn    Sn      19 01 07.4  +1.2
EFP   Efpalio            3.70 159   P     Pn      19 00 28.0  +2.8
KALE  Kalithea           3.80 156   P     Pn      19 00 29.7  +3.1
BZS   Buzias             3.86  15  ePn    Pn      19 00 28.0  +0.7
BZS   Buzias             3.86  15⇑iP      Pn      19 00 28.2  +0.9
BZS   Buzias             3.86  15   S     Sn      19 01 12.6  +0.1
LAKA  Lakka              3.90 159   P     Pn      19 00 30.7  +2.8
GZR   Gura Zlata         3.96  27⇓iP      Pn      19 00 30.1  +1.2
GZR   Gura Zlata         3.96  27   S     Sn      19 01 18.8  +3.6
UDBI  Udbina             4.18 311  ePn    Pn      19 00 34.5  +2.7
HUMR  Humele             4.37  51⇑iP      Pn      19 00 35.9  +1.5
LOT   Lotru              4.39  35⇓iP      Pn      19 00 36.1  +1.3
LOT   Lotru              4.39  35   S     Sn      19 01 24.1  -1.7
MORH  Mrgy, Hungar       4.46 346  ePn    Pn      19 00 36.4  +0.8
MORH                               eSn    Sn      19 01 27.6  +0.2
MORH  Mrgy, Hungar       4.46 346  ePn    Pn      19 00 36.1  +0.4
MORH                                Sn    Sn      19 01 27.1  -0.3
NVLJ  Novalja            4.72 306  i Pn   Pn      19 00 40.4  +1.2
NVLJ                                Sn    Sn      19 01 35.0  +1.3
ARR   Arges              4.73  41⇓iP      Pn      19 00 40.9  +1.5
ARR   Arges              4.73  41⇑iP      Pn      19 00 40.9  +1.5
VOIR                     4.99  43⇑iP      Pn      19 00 43.8  +0.9
AQU   L'Aquila           5.08 277⇑iPn     Pn      19 00 44.9  +0.7
DRGR                     5.21  19⇑iP      Pn      19 00 47.0  +1.0
DRGR                     5.21  19   S     Sn      19 01 43.8  -2.2
CRES  Cresnjev           5.22 320  ePn    Pn      19 00 46.8  +0.8
CRES                               eSn    Sn      19 01 45.9  -0.1
TIH   Tihany             5.27 342  ePn    Pn      19 00 48.1  +1.3
TIH                                 Sn    Sn      19 01 51.0  +3.8
MLR   Muntele Rosu       5.50  47⇓iP      Pn      19 00 52.5  +2.5
MLR   Muntele Rosu       5.50  47   Pn    Pn      19 00 50.2  +0.2
      comp=N,1.1nm,0.3s,baz=317,slow=3.8,SNR=12
MLR                                 Sn    Sn      19 01 53.3  +0.2
      comp=N,0.5nm,0.3s,baz=151,slow=19,SNR=2.8
DOPR  Dopca              5.53  41⇑iP      Pn      19 00 52.0  +1.7
DOPR  Dopca              5.53  41   S     Sn      19 01 57.8  +4.1
CEY   Cerknica           5.68 315  ePn    Pn      19 00 53.6  +1.2
CEY                                eSn    Sn      19 01 56.2  -1.2
LJU   Ljubljana          5.83 317  ePn    Pn      19 00 55.3  +0.9
PSZ   Piszkesteto        6.03 358⇓iP      Pn      19 00 58.7  +1.5
PSZ   Piszkesteto        6.03 358   S     Sn      19 02 02.1  -3.9
PSZ   Piszkesteto        6.03 358  ePn    Pn      19 00 58.1  +0.9
PSZ                                 Sn    Sn      19 02 05.0  -1.0
SOKA  Soboth             6.05 324  i Pn   Pn      19 00 59.7  +2.2
      comp=N,3.6nm,0.3s,SNR=8.8
OBKA  Obir               6.15 321  i Pn   Pn      19 01 01.0  +2.1
      comp=N,2.8nm,0.2s
ARSA  Arzberg            6.31 330  i Pn   Pn      19 01 03.4  +2.3
      comp=N,5.1nm,0.5s
TRPA  Tarpa              6.45  14⇓iP      Pn      19 01 04.8  +1.9
BIZ   Bicaz              6.58  38⇓iP      Pn      19 00 58.1  -6.6
VYHS  Vyhne              6.67 352  ePN    Pn      19 01 07.5  +1.5
VYHS                               eSN    Sn      19 02 16.8  -5.0
VYHS                               eLG    Lg      19 02 26.1
MYKA  Terra Mystica      6.68 317  i Pn   Pn      19 01 06.4  +0.3
      comp=N,14nm,0.9s
BURAR Bucovina Array     6.74  30⇓iP      Pn      19 01 08.7  +1.7
CONA  Conrad Observa     6.77 334  i Pn   Pn      19 01 11.4  +4.0
      comp=N,0.8nm,0.3s
KBA   Koelnbreinsper     7.13 319  i Pn   Pn      19 01 13.9  +1.4
      comp=N,14nm,0.4s
MOA   Molln              7.29 327  i Pn   Pn      19 01 17.9  +3.3
      comp=N,2.9nm,0.4s,SNR=5.4
ABTA  Abfaltersbach      7.34 314  i Pn   Pn      19 01 16.7  +1.4
      comp=N,7.4nm,0.5s,SNR=8.7
IDI   Anoyia             7.55 149   Pn    Pn      19 01 19.0  +0.9
      comp=N,0.2nm,0.3s,baz=349,slow=19,SNR=2.3
IDI                                 Sn    Sn      19 02 39.3  -4.3
      comp=N,0.2nm,0.3s,baz=93,slow=3.3,SNR=3.3
WTTA  Wattenberg         8.13 314  i Pn   Pn      19 01 28.9  +2.7
      comp=N,4.5nm,0.3s
WATA  Walderalm          8.21 314  i Pn   Pn      19 01 29.9  +2.6
      comp=N,3.5nm,0.2s
GERES GERESS Array B     8.32 329   Pn    Pn      19 01 27.9  -0.7
      comp=N,0.3nm,0.3s,baz=154,slow=14,SNR=4.8
SQTA  Sankt Quirin       8.34 313  i Pn   Pn      19 01 31.7  +2.7
      comp=N,9.8nm,0.5s,SNR=7.4
MOTA  Moosalm            8.47 313  i Pn   Pn      19 01 32.5  +1.7
      comp=N,6.6nm,0.5s,SNR=7.1
FETA  Feichten           8.49 310  i Pn   Pn      19 01 33.1  +2.0
      comp=N,3.2nm,0.6s
KHC   Kasperske Hory     8.60 330  ePN    Pn      19 01 34.8  +2.3
KHC                                eSN    Sn      19 03 10.1  +0.8
RETA  Reutte             8.74 313  i Pn   Pn      19 01 36.2  +1.7
      comp=N,0.9nm,0.3s
DAVOX Davos/Dischmat     8.86 307   Pn    Pn      19 01 37.5  +1.3
      comp=N,1.0nm,0.3s,baz=95,slow=9.4,SNR=11
DAVOX                               Sn    Sn      19 03 15.7  -0.3
      comp=N,0.4nm,0.3s,baz=282,slow=20,SNR=2.5
DAVA  Damuels            9.12 310  i Pn   Pn      19 01 41.1  +1.3
      comp=N,1.4nm,0.3s
HFS   Hagfors           18.70 350   P     P       19 03 45.0  -1.1
      comp=N,0.1nm,0.3s,baz=151,slow=13,SNR=3.3
FINES FINESS Array B    19.90   8   P     P       19 03 59.0  -0.2
      comp=N,0.1nm,0.3s,baz=177,slow=8.2,SNR=3.9
NOA   NORSAR Array B    19.94 347   P     P       19 03 58.8  -0.9
      comp=N,0.0nm,0.3s,baz=163,slow=10,SNR=2.5
EKA   Eskdalemuir Ar    20.35 319   P     P       19 04 04.2   0.0
      comp=N,5.3nm,1.1s,baz=114,slow=9.7,SNR=7.6
MKAR  Makanchi Array    43.65  62   P     P       19 07 32.8  +0.3
      comp=N,0.1nm,0.5s,baz=288,slow=6.8,SNR=6.0
```

IDC ***02*** *19:05:26.8±1.1, 10°.82S×165°.33E, h0km, mb4.1/7, mb1 4.3/9, mb1mx4.0/37, mbtmp4.1/9, ML4.3/2, Error ellipse: s-maj=35.2km s-min=21.1km az=147.0*
NEIC ***02*** *19:05:28.7±0.6, 10°.83S×165°.31E, h10km, mb4.4/5, Error ellipse: s-maj=11.5km s-min=9.6km az=62.0*
ISCJB ***02*** *19:05:29.6±0.6, 10°.96S±0°.08×165°.27E±0°.07, h30km, mb4.0/9, Error ellipse: s-maj=12.1km s-min=8.6km az=32.5*
ISC 02 19:05:31.3±0.8**, 10°.99S**±0°.08×**165°.33E**±0°.09**, h30km, n25, σ1s.46**/23**, mb4.0**/9**, Santa Cruz Islands**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
HNR   Honiara            5.52 286  ePn    Pn      19 06 51.6  +0.1
HNR                                eSn    Sn      19 07 53.9  -0.1
HNR   Honiara            5.52 286   Pn    Pn      19 06 51.3  -0.2
      13nm,0.3s,baz=116,slow=5.9,SNR=4.1
HNR                                 Sn    Sn      19 07 53.9  -0.1
      7.4nm,0.3s,baz=210,slow=20,SNR=2.3
DZM   Mont Dzumac       11.07 175  ePn    Pn      19 08 10.0  +2.2
DZM                                eSn    Sn      19 10 07.7  -3.0
DZM   Mont Dzumac       11.07 175   Pn    Pn      19 08 09.4  +1.6
      1.7nm,0.3s,baz=349,slow=13,SNR=10.0
DZM                                 Sn    Sn      19 10 07.7  -3.0
      0.2nm,0.3s,baz=323,slow=20,SNR=2.0
PINNC Pines Island,     11.74 170  ePn    Pn      19 08 19.8  +3.0
MANU  Manus Island      19.92 295  eP     P       19 10 00.3  -0.6
      50nm,0.9s
CTA   Charters Tower    20.47 241   P     P       19 10 08.6  +1.8
      16nm,0.9s,baz=68,slow=14,SNR=9.2
CTAO  Charters Tower    20.47 241  eP     P       19 10 07.0  +0.3
      22nm,0.9s
H11S2 WAKE ISLAND Hy    29.32   3   T     T       19 42 05.2
      baz=180
H11S3 WAKE ISLAND Hy    29.32   3   T     T       19 42 08.6
      baz=180
H11S1 WAKE ISLAND Hy    29.34   3   T     T       19 42 10.5
      baz=180
BKZ   Black Stump Fm    29.77 162  eP     P       19 11 35.8  +0.4
      6.6nm,1.1s
H11N1 WAKE ISLAND Hy    30.55   3   T     T       19 43 37.9
      baz=186
H11N3 WAKE ISLAND Hy    30.55   3   T     T       19 43 39.3
      baz=186
H11N2 WAKE ISLAND Hy    30.56   3   T     T       19 43 41.0
      baz=186
WR1   Warramunga Arr    31.12 250  eP     P       19 11 47.4  -0.1
      4.3nm,0.9s
WRA   Warramunga Arr    31.12 250   P     P       19 11 47.4  -0.1
      2.5nm,1.0s,baz=80,slow=9.7,SNR=4.7
AS31  Alice Springs     32.45 243  eP     P       19 11 58.8  -0.5
      1.1nm,0.8s
ASAR  Alice Springs     32.46 243   P     P       19 11 58.8  -0.4
      4.6nm,1.0s,baz=69,slow=10,SNR=13
ILAR  Eielson Array     83.59  19   P     P       19 17 55.8  -0.5
      0.5nm,0.6s,baz=236,slow=4.9,SNR=10
IL1   Eielson Array     83.59  19  eP     P       19 17 56.1  -0.2
NVAR  Mina Array Bea    86.30  50   P     P       19 18 11.4  +0.6
      1.0nm,0.9s,baz=239,slow=8.3,SNR=3.5
MK32  Makanchi Array    93.20 317  eP     P       19 18 43.1  +0.2
MKAR  Makanchi Array    93.20 317   P     P       19 18 43.1  +0.2
      0.9nm,0.8s,baz=78,slow=4.3,SNR=3.6
YKA   Yellowknife Ar    95.11  27   P     P       19 18 49.6  -1.6
      0.2nm,0.8s,baz=253,slow=4.6,SNR=3.2
```

IDC 02 19:09:57.6±1.9, 11°.12S×165°.14E, h0^{km}, mb3.6/3, mb1 4.0/5, mb1mx3.6/38, mbtmp3.9/5, ML4.1/2, Error ellipse: s-maj=41.7km s-min=33.6km az=133.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.38	288	Pn	Pn	19 11 21.1	+2.0
	8.5nm,0.3s,baz=146,slow=11,SNR=3.9						
DZM	Mont Dzumac	10.96	174	Pn	Pn	19 12 37.1	+1.2
	1.2nm,0.3s,baz=356,slow=18,SNR=2.5						
DZM				Sn	Sn	19 14 37.7	-1.7
	0.0nm,0.3s,baz=302,slow=19,SNR=1.7						
CTA	Charters Tower	20.24	242	P	Pn	19 14 38.0	+1.5
	2.7nm,0.9s,baz=72,slow=14,SNR=2.3						
WRA	Warramunga Arr	30.90	250	P	P	19 16 16.1	-0.1
	0.5nm,0.8s,baz=76,slow=9.3,SNR=2.9						
ASAR	Alice Springs	32.23	243	P	P	19 16 27.2	-0.7
	0.6nm,0.5s,baz=65,slow=10,SNR=16						
ILAR	Eielson Array	83.77	19	P	P	19 22 28.3	-0.1
	0.3nm,0.8s,baz=236,slow=5.4,SNR=4.2						

*IDC **02** 19:10:21.8±3.1, 13°.90N×92°.13W, h0^{km}, mb3.3/2, mb1 3.6/4, mb1mx3.4/31, mbtmp3.2/4, ML3.0/2, Error ellipse: s-maj=56.8km s-min=25.2km az=1.0*

ISC 02 19:10:27.0±2.2, 13°.9N±0°.2×92°.14W±0°.08, h54^{km}, n6, σ1^{s}.83/8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	El Apazote	1.99	54	Pn	Pn	19 10 57.0	-1.5
	11nm,0.3s,baz=236,slow=3.6,SNR=84						
APG				Sn	Sn	19 11 23.3	+0.9
	28nm,0.3s,baz=300,slow=13,SNR=26						
CMIG	Matias Romero	4.17	321	Pn	Pn	19 11 26.4	-1.7
	0.3nm,0.3s,baz=147,slow=13,SNR=4.7						
CMIG				Sn	Sn	19 12 15.4	-0.2
	2.6nm,0.3s,baz=78,slow=18,SNR=4.6						
TXAR	Lajitas Array	18.75	327	P	Pn	19 14 43.0	+0.4
	0.0nm,0.3s,baz=138,slow=11,SNR=2.9						
NVAR	Mina Array Bea	33.70	321	P	P	19 17 06.3	+2.9
	0.3nm,0.7s,baz=147,slow=8.4,SNR=2.0						
YKA	Yellowknife Ar	51.14	347	P	P	19 19 23.8	-0.4
	0.2nm,0.6s,baz=140,slow=8.0,SNR=3.8						
CMAR	Chiang Mai Arr	146.09	341	PKPbc	PKiKP	19 30 03.9	-1.4
	0.3nm,0.6s,baz=350,slow=2.8,SNR=4.4						

*IDC **02** 19:24:29.7±0.5, 11°.08S×165°.35E, h0^{km}, mb4.3/21, mb1 4.5/23, mb1mx4.4/42, mbtmp4.3/23, ML5.0/2, Error ellipse: s-maj=17.1km s-min=14.1km az=135.0*

*NEIC **02** 19:24:31.5±0.2, 11°.12S×165°.21E, h10^{km}, mb5.0/57, Error ellipse: s-maj=5.1km s-min=4.0km az=113.0*

*ISCJB **02** 19:24:32.9±0.2, 11°.22S±0°.03×165°.19E±0°.04, h30^{km}, mb4.8/73, Error ellipse: s-maj=5.0km s-min=4.7km az=7.6*

*BJI **02** 19:24:33.6, 11°.39S×165°.21E, h30^{km}, mB5.6/9, mb4.7/16, Ms5.4/7, Ms7 5.1/9*

ISC 02 19:24:34.4±0.4, 11°.21S±0°.06×165°.29E±0°.06, h30^{km}, n141, σ1^{s}.20/146, mb4.9/73, 1C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.54	288	*e*P	Pn	19 25 55.0	0.0
HNR				*e*S	Sn	19 26 56.0	-1.7
HNR	Honiara	5.54	288	*e*Pn	Pn	19 25 53.8	-1.2
HNR				*e*Sn	Sn	19 26 57.5	-0.2
HNR	Honiara	5.54	288	Pn	Pn	19 25 55.8	+0.9
	30nm,0.3s,baz=154,slow=6.6,SNR=8.0						
HNR				Sn	Sn	19 26 58.8	+1.1
	31nm,0.3s,baz=186,slow=23,SNR=6.2						
MARNC	Mare, Loyalty	10.55	166	*e*Pn	Pn	19 27 03.5	-0.1
DZM	Mont Dzumac	10.86	174	*e*Pn	Pn	19 27 08.2	+0.2
DZM	Mont Dzumac	10.86	174	Pn	Pn	19 27 08.6	+0.7
	18nm,0.3s,baz=45,slow=8.4,SNR=172						
OUENC	Ouen Island, N	11.25	173	*e*Pn	Pn	19 27 13.6	+0.4
PINNC	Pines Island,	11.53	170	*e*Pn	Pn	19 27 17.9	+0.9
TARA	Tarawa	14.61	32	*e*Pn	Pn	19 28 00.1	+0.9
TARA				*e*Pn	P	19 28 04.0	-1.2
PATS	Pohnpei	19.22	339	*e*P	P	19 28 56.1	-0.1
	444nm,1.6s						
EIDS	Eidsvold	19.48	222	*e*P	P	19 28 58.5	-0.5
	12nm,0.9s						
MANU	Manus Island	19.98	296	*e*P	P	19 29 04.0	-0.5
	218nm,1.2s						
KWAJ	Kwajalein Atol	20.01	7	*e*P	P	19 29 05.4	+0.6
	435nm,1.3s						
CTA	Charters Tower	20.33	242	P	Pn	19 29 10.2	-0.2
	28nm,1.1s,baz=70,slow=12,SNR=10						
CTAO	Charters Tower	20.33	242	*e*P	P	19 29 08.4	0.0
	82nm,1.4s						
COEN	Coen	21.75	260	*e*P	P	19 29 23.4	-0.3
	86nm,1.3s						
ARMA	Armidale	22.94	212	*e*P	P	19 29 37.0	+0.6
	37nm,1.3s						
KNTN	Kanton	24.29	72	*e*P	P	19 29 50.5	+1.1
	260nm,1.6s						
URZ	Urewera	28.94	161	*e*P	P	19 30 31.9	+0.8
	55nm,1.3s						
URZ	Urewera	28.94	161	P	P	19 30 32.1	+1.1
	18nm,1.1s,baz=280,slow=3.0,SNR=4.8						
H11S2	WAKE ISLAND Hy	29.54	3	T	T	20 01 23.1	
	baz=183,slow=76,SNR=6.0						
H11S3	WAKE ISLAND Hy	29.55	3	T	T	20 01 12.9	
	baz=183,slow=76,SNR=3.8						
H11S1	WAKE ISLAND Hy	29.56	3	T	T	20 01 11.8	
	baz=183,slow=76,SNR=3.1						
BKZ	Black Stump Fm	29.58	162	*e*P	P	19 30 37.9	+1.1
	73nm,1.4s						
STKA	Stephens Creek	30.02	223	*e*P	P	19 30 41.1	+0.4
	4.7nm,1.4s						
STKA	Stephens Creek	30.02	223	P	P	19 30 41.4	+0.6
	4.2nm,0.7s,baz=47,slow=9.6,SNR=17						
H11N1	WAKE ISLAND Hy	30.77	3	T	T	20 02 55.3	
	baz=182,slow=76,SNR=5.1						
H11N3	WAKE ISLAND Hy	30.77	3	T	T	20 02 44.4	
	baz=182,slow=76,SNR=4.1						
H11N2	WAKE ISLAND Hy	30.78	3	T	T	20 02 56.3	
	baz=182,slow=76,SNR=4.8						
BFZ	Birch Farm	30.91	164	*e*P	P	19 30 45.0	-3.5
	151nm,1.6s						
WRAB	Tennant Creek	31.00	250	*e*P	P	19 30 47.5	-2.0
	68nm,1.4s						
WB2	Warramunga Arr	31.00	250	*e*P	P	19 30 48.8	-0.7
	67nm,1.4s						
WR1	Warramunga Arr	31.01	250	*e*P	P	19 30 49.4	-0.2
	70nm,1.4s						
WR1				*e*PcP	PcP	19 33 45.9	+0.6
WRA	Warramunga Arr	31.01	250	P	P	19 30 49.4	-0.2
	20nm,1.1s,baz=79,slow=9.1,SNR=37						
WRA				PcP	PcP	19 33 45.9	+0.6
	1.3nm,1.0s,baz=74,slow=3.5,SNR=4.5						
SNZO	South Karori	31.11	166	*e*P	P	19 30 51.5	+1.4
	66nm,1.1s						
THZ	Tophouse	31.16	169	*e*P	P	19 30 52.1	+1.3
	45nm,1.4s						
TOO	Toolangi	31.70	211	*e*P	P	19 30 55.6	0.0
	26nm,1.4s						
GUMO	Guam	31.89	320	*e*P	P	19 30 58.0	+0.6
KHZ	Kahutara	31.91	168	*e*P	P	19 30 59.5	+2.3
	160nm,1.7s						
LTZ	Lake Taylor	32.04	170	*e*P	P	19 30 59.9	+1.5
AS01	Alice Springs	32.28	243	*e*P	P	19 30 59.0	-1.8
AS31	Alice Springs	32.32	243	*e*P	P	19 31 00.5	-0.7
	3.3nm,1.1s						
ASAR	Alice Springs	32.32	243	P	P	19 31 00.6	-0.6
	3.6nm,0.7s,baz=65,slow=10,SNR=36						
ASAR				PcP	PcP	19 33 49.3	+0.4
	1.3nm,0.8s,baz=107,slow=2.8,SNR=7.1						
FOZ	Fox Glacier	32.44	174	*e*P	P	19 31 03.7	+1.8
	38nm,1.6s						
OXZ	Oxford	32.53	171	*e*P	P	19 31 04.2	+1.5
	88nm,1.7s						
RPZ	Rata Peaks	32.77	172	P	P	19 31 05.1	+0.3
	8.1nm,0.8s,baz=301,slow=2.6,SNR=3.9						
MQZ	McQueen's Vall	33.00	170	*e*P	P	19 31 08.1	+1.3
	91nm,1.6s						
WKZ	Wanaka	33.65	175	*e*P	P	19 31 14.3	+1.8
	93nm,1.6s						
FAKI	Fak Fak	33.77	282	*e*P	P	19 31 11.6	-2.3
	26nm,1.2s						
BBOO	Buckleboo	34.39	227	*e*P	P	19 31 18.4	-0.7
	21nm,1.1s						
FITZ	Fitzroy Crossi	38.91	255	*e*P	P	19 31 57.4	-0.3
	13nm,1.5s						
FITZ	Fitzroy Crossi	38.91	255	P	P	19 31 57.5	-0.3
	4.0nm,0.7s,baz=102,slow=7.8,SNR=11						
FORT	Forrest	39.58	235	*e*P	P	19 32 01.9	-1.3
	13nm,0.9s						
BATI	Baumata	40.89	267	P	P	19 32 15.2	+1.0
	5.8nm,0.5s,baz=116,slow=20,SNR=3.8						
MBWA	Marble Bar	44.72	251	*e*P	P	19 32 45.5	+0.2
	30nm,1.4s						
MORW	Morawa	49.15	241	*e*P	P	19 33 19.8	0.0
	19nm,1.4s						
JAGI	Jajag, Banyuwa	50.41	268	*e*P	P	19 33 28.7	-0.9
	16nm,0.8s						
MJAR	Matsushiro Arr	53.91	333	P	P	19 33 53.5	-1.7
	2.0nm,0.9s,baz=173,slow=8.7,SNR=3.7						
MAJO	Matsushiro	53.91	333	*e*P	P	19 33 53.5	-1.7
NJ2	Nanjing	61.82	316	*e*P	P	19 34 51.6	+0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VNDA	Vanda	66.33	181	P	P	19 35 20.4	+0.7
	6.6nm,1.2s,baz=17,slow=4.0,SNR=5.5						
GYA	Guiyang	68.14	304	*e*P	P	19 35 34.0	+1.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
KMI	Kunming	70.82	302	P	P	19 35 50.8	+1.9
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	Hu-ho-hao-te	71.67	320	*e*P	P	19 35 55.0	+1.4
CM01	Chiang Mai Arr	71.74	294	*e*P	P	19 35 54.9	+0.6
CM31	Chiang Mai Arr	71.77	294	*e*P	P	19 35 53.4	-1.1
CMAR	Chiang Mai Arr	71.77	294	P	P	19 35 55.8	+1.3
	1.1nm,1.0s,baz=122,slow=4.2,SNR=8.6						
CMMT	Chiang Mai	71.88	294	P	P	19 35 57.8	+2.6
CHTO	Chiang Mai	71.88	294	P	P	19 35 57.9	+2.7
	21nm,1.6s						
CD2	Chengdu	72.34	308	*e*P	P	19 35 57.5	-0.3
LZH	Lanzhou	74.53	312	*e*P	P	19 36 17.5	+6.8
LZH				pP	pwP	19 36 25.4	+0.2
LZH				sP	PcP	19 36 29.6	+4.5
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
SONA0	Songino Array	78.53	324	*e*P	P	19 36 31.5	-1.5
SONM	Songino Array	78.53	324	P	P	19 36 31.5	-1.5
	0.6nm,0.6s,baz=136,slow=6.1,SNR=5.4						
QSPA	South Pole Qui	78.80	180	*e*P	P	19 36 34.1	-0.1
	19nm,1.4s						
GTA	Gaotai	78.85	314	*e*P	P	19 36 36.5	+1.5
GTA				pmax	pmax		
	comp=Z,660nm,6.5s						
GTA				LR	LR		
	comp=N,370nm,13.4s						
GTA				LR	LR		
	comp=E,560nm,16.8s						
GTA				LR	LR		
	comp=Z,800nm,16.1s						
BILL	Bilibino	79.04	0	*e*P	P	19 36 35.0	-0.3
	17nm,1.4s						
ILAR	Eielson Array	83.81	19	P	P	19 37 00.1	-0.5
	1.0nm,0.6s,baz=236,slow=5.1,SNR=31						
ILB	Eielson Array	83.81	19	*e*P	P	19 36 60.0	-0.6
IL1	Eielson Array	83.81	19	*e*P	P	19 36 59.3	-1.3
WDC	Whiskeytown Da	84.05	47	*e*P	P	19 37 03.9	+1.6
	8.2nm,1.3s						
SCRK	Sand Creek	84.22	20	*e*P	P	19 37 02.6	-0.2
	22nm,1.4s						
YBH	Yreka Blue Hor	84.33	46	*e*P	P	19 37 03.6	-0.3
	5.2nm,1.1s						
YBH	Yreka Blue Hor	84.33	46	P	P	19 37 03.9	+0.1
	2.0nm,0.9s,baz=192,slow=10,SNR=3.6						
ORV	Oroville	84.45	48	*e*P	P	19 37 02.5	-2.0
	6.9nm,1.4s						
AFDM	Forest Hills D	84.64	49	*e*P	P	19 37 04.1	-1.3
	12nm,1.4s						
MDPB	Devils Postpil	85.65	50	*e*P	P	19 37 09.8	-1.0
	17nm,1.6s						
OMMB	Old Mammoth Mi	85.70	51	*e*P	P	19 37 11.7	+0.5
	6.2nm,1.2s						
PAHR	Pah Rah Range	86.05	48	*e*P	P	19 37 12.0	-0.6
	12nm,1.3s						
NV01	Mina Array Sit	86.47	50	*e*P	P	19 37 13.6	-1.2
NVAR	Mina Array Bea	86.47	50	P	P	19 37 13.9	-0.9
	1.1nm,0.8s,baz=233,slow=6.2,SNR=7.3						
NV11	Mina Array Sit	86.58	50	*e*P	P	19 37 15.3	+0.1
	1.0nm,1.3s						
G08A	Pilot Rock	88.07	43	*e*P	P	19 37 23.9	+1.7
R11A	Troy Canyon, C	88.50	51	*e*P	P	19 37 25.9	+1.3
	3.7nm,1.3s						
WMQ	Urumqi	88.89	315	*e*P	P	19 37 26.4	+0.3
WMQ				pP	sP	19 37 35.4	-1.5
WMQ				sP	pwP	19 37 40.1	-0.7
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,280nm,9.5s						
WMQ				LR	LR		
	comp=N,1µm,16.5s						
WMQ				LR	LR		
	comp=E,430nm,16.5s						
WMQ				LR	LR		
	comp=Z,620nm,24.5s						
W13A	Hualapai Mount	88.98	54	*e*P	P	19 37 27.3	+0.4
	14nm,1.5s						
ELK	Elko	89.39	48	*e*P	P	19 37 29.2	+0.5
	1.4nm,1.3s						
ELK	Elko	89.39	48	P	P	19 37 28.4	-0.3
	0.3nm,0.3s,baz=194,slow=3.0,SNR=2.9						
PSUT	Pine Spring	89.86	51	*e*P	P	19 37 30.9	-0.1
	3.8nm,1.2s						
LCMT	Little Creek M	89.95	52	*e*P	P	19 37 30.0	-1.4
	6.3nm,1.2s						
CCUT	Cedar City	89.99	52	*e*P	P	19 37 32.6	+1.0
	6.3nm,1.1s						
SZCU	Shurtz Canyon	90.22	52	*e*P	P	19 37 33.6	+1.0
	10nm,1.3s						
KNB	Kanab	90.28	52	*e*P	P	19 37 33.7	+0.8
	22nm,1.5s						
U15A	North Rim	90.56	53	*e*P	P	19 37 34.4	+0.1
	8.5nm,1.3s						
PKCU	Pink Cliffs	90.78	52	*e*P	P	19 37 37.3	+1.9
	24nm,1.5s						
TUC	Tucson	90.85	57	*e*P	P	19 37 35.8	+0.2
	5.7nm,1.2s						
MTPU	Mount Pierson	91.02	52	*e*P	P	19 37 37.9	+1.4
	9.1nm,1.2s						
MSU	Marysvale	91.13	51	*e*P	P	19 37 37.5	+0.6
HVU	Hansel Valley	91.45	48	*e*P	P	19 37 38.9	+0.7
	12nm,1.4s						
SYO	Syowa Base	91.50	197	*e*P	P	19 37 35.4	-2.3
SYO	Syowa Base	91.50	197	*e*X	P	19 37 43.6	+5.9
DLMT	Dillon	92.41	44	*e*P	P	19 37 43.8	+1.2
	11nm,1.3s						
MK01	Makanchi Array	93.32	317	*e*P	P	19 37 46.2	-0.4
MK31	Makanchi Array	93.33	317	*e*P	P	19 37 46.1	-0.5
MK32	Makanchi Array	93.33	317	*e*P	P	19 37 46.7	+0.1
MKAR	Makanchi Array	93.33	317	*e*P	P	19 37 46.2	-0.4
	24nm,1.4s						
MKAR	Makanchi Array	93.33	317	P	P	19 37 46.7	+0.1
	1.1nm,0.6s,baz=93,slow=6.4,SNR=13						
MKAR				PKKPbc	PKKPdf	19 54 53.4	-1.0
	1.3nm,1.0s,baz=328,slow=1.8,SNR=8.0						
ZALV	Zalesovo Beam	93.42	324	P	P	19 37 46.0	-0.8
	0.6nm,0.6s,baz=127,slow=9.6,SNR=4.1						
ZAA1	Zalesovo Array	93.43	324	*e*P	P	19 37 46.0	-0.8
MAKZ	Makanchi	93.55	317	*e*P	P	19 37 47.5	-0.1
	6.3nm,1.4s						
PD31	Pinedale Array	93.99	47	*e*P	P	19 37 49.8	-0.2
PDAR	Pinedale Array	93.99	47	P	P	19 37 50.0	0.0
	0.5nm,0.9s,baz=222,slow=1.2,SNR=3.1						
YKA	Yellowknife Ar	95.32	27	P	P	19 37 53.9	-1.4
	0.4nm,0.8s,baz=259,slow=4.8,SNR=4.7						
YKB5	Yellowknife Ar	95.32	27	*e*P	P	19 37 55.2	-0.1
LTX	Lajitas	96.30	61	*e*P	P	19 38 00.1	-0.6
TXAR	Lajitas Array	96.30	61	P	P	19 38 00.1	-0.6
	0.1nm,0.7s,baz=259,slow=0.9,SNR=2.7						
KSH	Kashi	96.51	309	*e*P	P	19 38 04.1	+2.7
KSH				*e*pP	sP	19 38 13.3	+1.0
KSH				*e*PP	PP	19 42 01.3	+5.4
KSH				*e*SKS	SKSac	19 48 39.9	+3.5
KSH				*e*S	ScS	19 49 20.7	-0.2
KSH				*e*sS	sS	19 49 37.6	+3.7
KSH				LR	LR		
	comp=Z,1µm,15.9s						
ARA0	ARCESS Array S	116.38	345	*e*PKPdf	PKPdf	19 43 13.5	-1.1
ARCES	ARCESS Array B	116.38	345	PKP	PKPdf	19 43 13.5	-1.1
	1.4nm,0.5s,baz=93,slow=2.3,SNR=18						
FIA0	FINESS Array S	121.76	338	*e*PKPdf	PKPdf	19 43 25.1	0.0
FINES	FINESS Array B	121.76	338	PKP	PKPdf	19 43 25.1	0.0
	1.1nm,0.7s,baz=225,slow=0.8,SNR=4.7						
NB200	NORSAR Array S	126.74	345	*e*PKPdf	PKPdf	19 43 34.4	-0.4
NOA	NORSAR Array B	126.74	345	PKP	PKPdf	19 43 34.4	-0.4
	0.4nm,0.7s,baz=53,slow=2.6,SNR=2.9						
GERES	GERESS Array B	135.65	333	PKP	PKPdf	19 43 51.7	-0.4
	0.7nm,0.9s,baz=131,slow=5.4,SNR=2.9						
BDFB	Brasilia	137.59	128	PKP	PKPdf	19 43 56.9	+0.3
	0.7nm,0.3s,baz=252,slow=8.0,SNR=3.2						
KEST	Kesra	147.27	322	PKPbc	PKPbc	19 44 15.8	+0.3
	8.3nm,0.8s,baz=251,slow=3.6,SNR=4.8						
ES19	SONSECA Array	150.04	343	*e*PKPbc	PKPbc	19 44 22.4	-0.2
ESDC	Sonseca Array	150.09	343	PKPbc	PKPbc	19 44 22.7	+0.1
	0.7nm,0.8s,baz=359,slow=3.1,SNR=3.3						
TOA0	Torodi Ar. Sit	163.85	279	*e*PKPdf	PKPdf	19 44 35.1	-0.6
TOA0				*e*PKPab	PKPab	19 45 27.2	-1.1
TORD	Torodi Ar. Bea	163.85	279	PKP	PKPdf	19 44 35.4	-0.3
	1.0nm,0.9s,baz=338,slow=3.2,SNR=6.3						
TORD				PKPab	PKPab	19 45 28.4	+0.1
	0.6nm,0.9s,baz=104,slow=5.5,SNR=3.6						
TOA1	Torodi Ar. Sit	163.85	279	*e*PKPdf	PKPdf	19 44 35.4	-0.3
TOA1				*e*PKPab	PKPab	19 45 28.4	+0.1
DBIC	Dimbokro	169.27	246	PKPab	PKPab	19 45 52.8	+0.6
	1.7nm,0.6s,baz=225,slow=7.1,SNR=2.5						

IDC 02 19:25:47.1±2.5, 11°.09S×165°.30E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/38, mbtmp4.1/7, Error ellipse: s-maj=56.4km s-min=34.5km az=102.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.97	174	Pn	Pn	19 28 25.7	+0.2
	baz=18,slow=20,SNR=1.8						
CTA	Charters Tower	20.39	242	P	Pn	19 30 27.3	-0.5
	12nm,0.9s,baz=64,slow=11,SNR=2.5						
WRA	Warramunga Arr	31.06	250	P	P	19 32 06.5	-0.6
	3.4nm,0.9s,baz=81,slow=8.7,SNR=2.7						
ASAR	Alice Springs	32.38	243	P	P	19 32 18.1	-0.8
	1.6nm,0.9s,baz=69,slow=9.7,SNR=1.7						
FITZ	Fitzroy Crossi	38.95	255	P	P	19 33 15.2	0.0
	2.3nm,0.8s,baz=84,slow=9.0,SNR=1.9						
SONM	Songino Array	78.45	324	P	P	19 37 50.0	-0.1
	0.9nm,1.0s,baz=108,slow=3.2,SNR=1.5						
MKAR	Makanchi Array	93.26	317	P	P	19 39 04.2	+0.3
	0.6nm,0.9s,baz=85,slow=6.8,SNR=1.8						

*IDC **02** 19:40:50.7±1.6, 10°.96S×165°.09E, h0^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.8/32, mbtmp3.9/8, ML3.8/1, MS4.5/4, Ms1 4.5/4, ms1mx3.8/38, Error ellipse: s-maj=47.0km s-min=24.7km az=120.0*

*NEIC **02** 19:40:51.5±0.7, 11°.01S×165°.25E, h10^{km}, mb4.1/4, Error ellipse: s-maj=13.6km s-min=9.1km az=68.0*

*ISCJB **02** 19:40:52.9±0.8, 11°.16S±0°.08×165°.2E±0°.1, h31^{km}, mb3.9/10, MS4.6/4, Error ellipse: s-maj=16.3km s-min=10.3km az=156.3*

ISC 02 19:40:54.8±1.1, 11°.1S±0°.1×165°.2E±0°.1, h31^{km}, n25, σ0^{s}.85/21, mb4.0/10, MS4.6/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.46	287	*e*Pn	Pn	19 42 14.6	+0.5
DZM	Mont Dzumac	10.99	174	Pn	Pn	19 43 30.3	+0.1
	0.7nm,0.3s,baz=297,slow=13,SNR=18						
ONTNC	Ouen Toro	11.23	174	*e*Pn	Pn	19 43 33.6	+0.3
PINNC	Pines Island,	11.66	170	*e*Pn	Pn	19 43 38.9	-0.4
CTA	Charters Tower	20.34	242	P	P	19 45 29.9	+1.1
	4.5nm,0.9s,baz=53,slow=13,SNR=3.8						
CTAO	Charters Tower	20.34	242	*e*P	P	19 45 29.2	+0.4
	13nm,1.3s						
COEN	Coen	21.72	260	*e*P	P	19 45 44.5	+0.7
	6.0nm,0.8s						
STKA	Stephens Creek	30.08	223	*e*P	P	19 47 01.8	+0.3
STKA	Stephens Creek	30.08	223	P	P	19 47 01.6	+0.1
	1.6nm,0.7s,baz=37,slow=12,SNR=4.6						
WB2	Warramunga Arr	30.99	250	*e*P	P	19 47 08.7	-1.1
WR1	Warramunga Arr	31.00	250	*e*P	P	19 47 09.5	-0.4
	9.9nm,1.5s						
WRA	Warramunga Arr	31.00	250	P	P	19 47 09.5	-0.4
	1.9nm,0.7s,baz=80,slow=9.0,SNR=21						
AS01	Alice Springs	32.29	243	*e*P	P	19 47 20.3	-0.9
AS31	Alice Springs	32.33	243	*e*P	P	19 47 20.7	-0.9
	0.5nm,0.8s						
ASAR	Alice Springs	32.33	243	P	P	19 47 20.9	-0.6
	3.3nm,1.0s,baz=66,slow=9.8,SNR=31						
BBOO	Buckleboo	34.44	227	*e*P	P	19 47 39.8	-0.1
	28nm,1.5s						
BATI	Baumata	40.84	267	LR	LR	20 06 51.4	
	comp=Z,374nm,18.4s,baz=154,slow=38						
SONA0	Songino Array	78.40	324	*e*P	P	19 52 51.0	-1.6
SONM	Songino Array	78.40	324	P	P	19 52 51.0	-1.6
	0.3nm,0.8s,baz=111,slow=3.6,SNR=2.1						
RPN	Rapa Nui	81.01	116	LR	LR	20 23 56.2	
	comp=Z,295nm,18.2s,baz=287,slow=32						
ILAR	Eielson Array	83.70	19	P	P	19 53 21.7	+1.4
	0.3nm,0.8s,baz=245,slow=4.8,SNR=4.9						
BBB	Bella Bella	84.89	35	LR	LR	20 27 41.4	
	comp=Z,246nm,18.0s,baz=82,slow=33						
LPIG	La Paz	89.48	65	LR	LR	20 30 59.0	
	comp=Z,226nm,18.5s,baz=152,slow=34						
MK32	Makanchi Array	93.20	317	*e*P	P	19 54 06.3	0.0
MKAR	Makanchi Array	93.20	317	P	P	19 54 06.3	0.0
	0.2nm,0.8s,baz=82,slow=10,SNR=2.3						

IDC 02 19:58:48.6±1.6, 11°.03S×165°.45E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.6/33, mbtmp3.7/6, ML4.1/1, MS3.9/1, Ms1 3.9/1, ms1mx3.2/39, Error ellipse: s-maj=49.0km s-min=26.5km az=121.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.02	175	Pn	Pn	20 01 26.3	-1.4
	1.4nm,0.3s,baz=325,slow=10,SNR=20						
STKA	Stephens Creek	30.26	223	P	P	20 05 02.1	+0.7
	1.2nm,0.8s,baz=50,slow=12,SNR=4.7						
WRA	Warramunga Arr	31.22	250	P	P	20 05 10.7	+0.6
	1.5nm,0.6s,baz=82,slow=9.1,SNR=21						
GUMO	Guam	31.86	320	LR	LR	20 19 30.8	
	comp=Z,187nm,18.8s,baz=182,slow=39						
ASAR	Alice Springs	32.54	243	P	P	20 05 21.4	-0.3
	0.4nm,0.8s,baz=63,slow=9.9,SNR=6.6						
ILAR	Eielson Array	83.59	19	P	P	20 11 19.4	+1.0
	0.6nm,1.1s,baz=230,slow=5.6,SNR=3.3						
MKAR	Makanchi Array	93.31	317	P	P	20 12 03.5	-2.1
	0.3nm,0.8s,baz=86,slow=4.5,SNR=2.4						

SJA 02 20:08:24.0±0.7, 30°.60S×67°.35W, h25^{km}±3^{km}, ML3.1, MW3.6, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLL	PUNTA DE LOS L	0.74	74	*i* P	Pn	20 08 38.8	-0.2
APLL				*i* S	Sn	20 08 49.8	+0.4
AMOG	MOGNA	1.04	251	*i* P	Pb	20 08 43.6	+0.2
RTLL	Cerro Villicun	1.21	233	*i* P	Pb	20 08 47.5	+1.3
RTLL				*i* S	Sb	20 09 04.4	+3.0
RTLL				IAML		20 09 06.2	
	comp=Z,334nm,0.3s						
AGUA	GUANDACOL	1.48	318	*i* P	Pb	20 08 51.5	+0.5
RTCV	Cerro Valdivia	1.62	219	*i* P	Pb	20 08 53.0	-0.2
ACAN	Cantantal	1.68	175	*i* P	Pb	20 08 54.0	-0.2
MRA	San Martin	2.29	143	*i* P	Pb	20 09 02.9	-1.8
MRA				IAML		20 09 35.9	
	comp=Z,147nm,0.3s						
ASAL	Salagasta	2.35	212	*i* P	Pb	20 09 03.5	-2.3
AUSP	Uspallata	2.38	227	*i* P	Pb	20 09 04.5	-1.8

IDC 02 20:09:29.2±1.8, 11°.01S×165°.35E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/44, mbtmp3.8/5, ML4.1/1, Error ellipse: s-maj=50.5km s-min=32.1km az=120.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.05	175	Pn	Pn	20 12 09.6	+0.9
	1.2nm,0.3s,baz=307,slow=23,SNR=29						
H11S2	WAKE ISLAND Hy	29.34	3	T	T	20 46 48.4	
	baz=188						
H11S3	WAKE ISLAND Hy	29.35	3	T	T	20 46 58.0	
	baz=188						
H11S1	WAKE ISLAND Hy	29.36	3	T	T	20 46 40.5	
	baz=188						

H11N1	WAKE ISLAND Hy	30.57	3	T	T	20 47 49.6	
	baz=183						
H11N3	WAKE ISLAND Hy	30.57	3	T	T	20 47 47.5	
	baz=183						
H11N2	WAKE ISLAND Hy	30.58	3	T	T	20 47 44.0	
	baz=183						
WRA	Warramunga Arr	31.13	250	P	P	20 15 49.7	-0.2
	0.4nm,0.5s,baz=82,slow=8.8,SNR=6.4						
ASAR	Alice Springs	32.46	243	P	P	20 16 01.4	-0.2
	1.0nm,0.7s,baz=71,slow=9.9,SNR=16						
ILAR	Eielson Array	83.60	19	P	P	20 21 58.7	-0.4
	0.5nm,0.9s,baz=235,slow=7.6,SNR=1.6						
MKAR	Makanchi Array	93.23	317	P	P	20 22 46.4	+0.6
	0.3nm,0.8s,baz=93,slow=7.2,SNR=1.8						

DJA 02 20:14:41.9±0.4,**9°S**±5°×**11°9E**±°,**h45**^{km}±43^{km},**M3.9**/10,**mb4.5**/1,**MLv3.6**/10,**Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.51	295	P	Pn	20 15 06.2	-0.3
BASI	Baing, Sumba	1.58	118	P	Pn	20 15 07.7	+0.2
EDFI	Ende, Flores	2.60	74	P	Pn	20 15 20.7	-0.9
IGBI	Denpasar	4.02	279	P	Pn	20 15 40.4	-0.5
BKSI	Bulukumba	4.23	13	P	Pn	20 15 44.0	+0.1
BATI	Baumata	4.50	100	P	Pn	20 15 47.6	0.0
JAGI	Jajag, Banyuwa	5.05	281	P	Pn	20 15 54.3	-0.8

*SJA **02** 20:16:04.2±0.8, 31°.16S×71°.56W, h17^{km}±13^{km}, ML4.7, MW4.7*
*NEIC **02** 20:16:05.0±0.0, 31°.13S×71°.43W, h53^{km}, mb4.6/18, ML4.7(GUC), After GUC.*
NEIC Felt [IV] at Canela, Combarbala, Hurtado, Monte Patria and Salamanca; [III] at Illapel and Zapallar; [II] at Andacollo, Los Vilos, Ovalle and Punitaqui.
*GUC **02** 20:16:05.0±0.6, 31°.13S×71°.43W, h56^{km}±10^{km}, ML4.7*
*ISCJB **02** 20:16:07.4±0.6, 31°.14S±0°.02×71°.46W±0°.09, h64^{km}±6^{km}, mb4.4/26, Error ellipse: s-maj=12.2km s-min=3.8km az=179.4*
*IDC **02** 20:16:07.1±0.6, 31°.22S×71°.29W, h46^{km}±4^{km}, mb4.1/15, mb1 4.2/19, mb1mx4.1/37, mbtmp4.3/19, Error ellipse: s-maj=18.5km s-min=14.4km az=65.0*
ISC 02 20:16:07.0±0.5,**31°.14S**±0°.03×**71°.39W**±0°.06,**h44**^{km}±4^{km},**h44**^{km}**:pP-P,n119,**σ**1**^{s}**.62**/141,**mb4.6**/25,**2C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	1.09	28	ePn	Pn	20 16 27.2	+1.2
GO04				eSn	Sn	20 16 41.2	+1.1
GO04	Tololo Observa	1.09	28	i P	Pn	20 16 27.1	+1.0
GO04				i S	Sn	20 16 43.5	+3.3
GO04	Tololo Observa	1.09	28	eP	Pn	20 16 26.2	+0.2
GO04				eS	Sn	20 16 41.9	+1.8
GO04				IAML		20 16 45.1	
	comp=N,54µm,0.4s						
ROCH	El Roble	1.85	170	eP	Pn	20 16 37.1	+0.6
ROCH				eS	Sn	20 17 01.2	+2.4
ROCH				IAML		20 17 07.9	
	comp=N,7µm,0.4s						
ROC1	El Roble	1.86	170	ePn	Pn	20 16 37.3	+0.8
ROC1				eSn	Sn	20 17 00.2	+1.3
ROC1	El Roble	1.86	170	i P	Pn	20 16 38.2	+1.7
AUSP	Uspallata	2.02	123	i P	Pn	20 16 42.1	+3.3
PEL	Peldehue	2.08	164	ePn	Pn	20 16 40.7	+1.2
PEL	Peldehue	2.08	164	i P	Pn	20 16 40.4	+0.9
PEL	Peldehue	2.08	164⇑	eP	Pn	20 16 39.5	0.0
PEL				eS	Sn	20 17 06.0	+1.8
PEL				IAML		20 17 09.4	
	comp=E,5µm,0.2s						
LCO	Las Campanas	2.21	16	ePn	Pn	20 16 42.9	+1.6
LCO	Las Campanas	2.21	16	eP	Pn	20 16 42.0	+0.6
LCO				eS	Sn	20 17 09.1	+1.6
LCO				IAML		20 17 16.9	
	comp=N,4µm,0.4s						
CLCH	Cerro Calan	2.36	162	eP	Pn	20 16 44.5	+1.2
CLCH				eS	Sn	20 17 13.1	+2.0
CLCH				IAML		20 17 26.2	
	comp=E,4µm,0.5s						
FCH	Farellones	2.37	157	eP	Pn	20 16 44.6	+1.0
FCH				eS	Sn	20 17 14.8	+3.2
FCH				IAML		20 17 20.8	
	comp=E,3µm,0.2s						
AMOG	MOGNA	2.49	86	i P	Pn	20 16 48.9	+3.8
RTLL	Cerro Villicun	2.50	95	i P	Pn	20 16 48.5	+3.3
RTLL				IAML		20 17 39.1	
	comp=Z,3µm,0.4s						
RTCV	Cerro Valdivia	2.54	107	i P	Pn	20 16 49.0	+3.3
LMEL	Las Melosas	2.88	160	eP	Pn	20 16 51.0	+0.5
LMEL				eS	Sn	20 17 25.9	+1.9
LMEL				IAML		20 17 32.3	
	comp=N,3µm,0.2s						
AAGR	Agrelo	2.91	132	i P	Pn	20 16 54.1	+3.2
AGUA	GUANDACOL	3.00	57	i P	Pn	20 16 55.6	+3.5
GO03	Copiap	3.68	16	ePn	Pn	20 17 03.4	+2.0
GO02	Mina Guanaco	6.17	15	ePn	Pn	20 17 35.7	-0.1
GO06	Curarrehue	8.42	180	ePn	Pn	20 18 05.7	-0.8
LVC	Limon Verde	8.78	15	ePn	Pn	20 18 11.7	0.0
LVC	Limon Verde	8.78	15	P	Pn	20 18 11.0	-0.7
	comp=N,0.9nm,0.3s,baz=190,slow=17,SNR=8.0						
PB04	IPOC Station P	8.84	7	ePn	Pn	20 18 14.6	+2.2
PLCA	Paso Flores	9.60	176	ePn	Pn	20 18 22.2	-0.3
PB01	IPOC Station P	10.20	10	ePn	Pn	20 18 29.0	-1.9
PB11	IPOC Station P	11.44	8	ePn	Pn	20 18 44.5	-3.4
CPUP	Villa Florida	13.23	72	ePn	Pn	20 19 10.9	-1.3
CPUP				eSn	Sn	20 21 34.7	-3.3
CPUP	Villa Florida	13.23	72	P	Pn	20 19 10.7	-1.6
	comp=N,0.7nm,0.3s,baz=249,slow=12,SNR=7.7						
CPUP				S	Sn	20 21 29.8	-8.2
	comp=N,0.1nm,0.3s,baz=199,slow=18,SNR=1.7						
LPAZ	La Paz	15.08	12	ePn	Pn	20 19 39.8	+2.1
	comp=N,7.9nm,0.9s						
LPAZ	La Paz	15.08	12	P	Pn	20 19 39.8	+2.1
	comp=N,0.6nm,0.3s,baz=182,slow=7.3,SNR=15						
SIV	San Ignacio	17.78	34	P	P	20 20 12.0	+0.3
	comp=N,1.2nm,0.3s,baz=224,slow=10,SNR=30						
USHA	Ushuaia	23.77	176	P	P	20 21 14.0	-1.1
	comp=N,13nm,0.8s,baz=13,slow=8.5,SNR=10						
BDFB	Brasilia	26.34	59	eP	P	20 21 38.0	-1.1
	comp=N,18nm,1.1s						
BDFB	Brasilia	26.34	59	P	P	20 21 38.7	-0.4
	comp=N,13nm,0.9s,baz=204,slow=7.6,SNR=14						
NORC	Norcasia	36.65	354	eP	P	20 23 11.7	+2.3
NORC	Norcasia	36.65	354	eP	P	20 23 11.7	+2.3
RUSC	La Rusia	36.86	357	eP	P	20 23 13.1	+1.3
RUSC	La Rusia	36.86	357	eP	P	20 23 13.1	+1.3
HELC	Santa Helena	37.33	353	eP	P	20 23 16.5	+0.9
HELC	Santa Helena	37.33	353	eP	P	20 23 16.5	+0.9
PTBC	PUERTO BERRIO,	37.58	355	eP	P	20 23 14.4	-2.9
PTBC	PUERTO BERRIO,	37.58	355	eP	P	20 23 14.4	-2.9
DBBC	Dabeiba	38.22	352	eP	P	20 23 25.3	+2.5
DBBC	Dabeiba	38.22	352	eP	P	20 23 25.3	+2.5
ZARC	Zaragoza, Cauc	38.56	354	eP	P	20 23 25.8	+0.3
ZARC	Zaragoza, Cauc	38.56	354	eP	P	20 23 25.8	+0.3
SDV	Santo Domingo	39.81	1	eP	P	20 23 35.8	-0.3
	comp=N,6.0nm,0.8s						
TEIG	Tepich	53.59	340	eP	P	20 25 23.3	-0.4
	comp=N,13nm,0.7s						
SNAA	Sanae	54.03	159	eP	P	20 25 25.8	-0.6
	comp=N,7.2nm,0.9s						
SNAA	Sanae	54.03	159	P	P	20 25 26.1	-0.3
	comp=N,6.7nm,0.9s,baz=272,slow=8.4,SNR=12						
QSPA	South Pole Qui	59.09	180	eP	P	20 26 02.6	+0.1
	comp=N,8.0nm,1.4s						
H06S1	SOCORRO T	62.48	317	T	T	21 34 12.0	
H06E1	SOCORRO T-PHAS	62.50	317	T	T	21 34 12.1	
	SNR=9.7						
X48A	Hartselle	66.89	346	eP	P	20 26 54.4	0.0
	comp=N,4.9nm,0.8s						
JCT	Junction City	66.96	333	eP	P	20 26 54.5	-0.5
	comp=N,14nm,1.4s						
TKL	Tuckaleechee C	67.46	349	eP	P	20 26 58.0	0.0
	comp=N,4.1nm,0.8s						
TKL	Tuckaleechee C	67.46	349	P	P	20 26 58.2	+0.2
	comp=N,1.6nm,0.6s,baz=170,slow=7.2,SNR=4.2						
TKL				pP	pP	20 27 11.1	+0.1
	comp=N,6.3nm,0.8s,baz=164,slow=5.8,SNR=5.4						
LTX	Lajitas	67.53	330	eP	P	20 26 59.3	+0.6
LTX				epP	pP	20 27 13.5	+1.7
TXAR	Lajitas Array	67.53	330	P	P	20 26 59.3	+0.6
	comp=N,0.7nm,0.6s,baz=152,slow=7.7,SNR=9.0						
TXAR				pP	pP	20 27 13.5	+1.7
	comp=N,0.5nm,0.7s,baz=140,slow=7.9,SNR=5.6						
V48A	Smith Brothers	68.09	347	eP	P	20 27 02.2	+0.2
	comp=N,11nm,1.3s						
SYO	Syowa Base	68.32	159⇑	esP	sP	20 27 18.2	-3.2
WVT	Waverly	68.67	346	eP	P	20 27 05.7	+0.1
	comp=N,9.9nm,1.0s						
W39A	Magazine	69.27	341	eP	P	20 27 09.5	+0.2
	comp=N,6.7nm,0.9s						
MSTX	Muleshoe	71.21	333	eP	P	20 27 20.8	-0.6
	comp=N,6.7nm,0.9s						
ANMO	Albuquerque	73.56	331	eP	P	20 27 35.9	+0.4
	comp=N,1.9nm,0.9s						
ANMO	Albuquerque	73.56	331	P	P	20 27 37.2	+1.7
	comp=N,0.7nm,0.5s,baz=142,slow=10,SNR=3.8						
DBIC	Dimbokro	73.75	72	eP	P	20 27 35.8	-1.0
	comp=N,8.4nm,0.7s						
DBIC	Dimbokro	73.75	72	P	P	20 27 36.9	+0.1
	comp=N,6.2nm,0.5s,baz=211,slow=6.5,SNR=18						
DBIC				pP	pP	20 27 49.9	-0.3
	comp=N,6.5nm,1.0s,baz=236,slow=6.8,SNR=4.1						
SADO	Sadowa	75.88	354	P	P	20 27 48.8	+0.4
	comp=N,4.5nm,0.7s,baz=109,slow=23,SNR=3.6						
ECSD	EROS Data Cent	78.01	342	eP	P	20 28 00.7	+0.3
	comp=N,6.9nm,0.8s						
BOSA	Boshof	80.91	118	eP	P	20 28 16.5	-0.5
	comp=N,7.2nm,1.1s						
BOSA	Boshof	80.91	118	P	P	20 28 17.0	0.0
	comp=N,2.7nm,0.8s,baz=264,slow=3.8,SNR=4.0						
PDAR	Pinedale Array	81.47	333	P	P	20 28 20.1	+0.6
	comp=N,0.5nm,0.7s,baz=138,slow=7.1,SNR=3.9						
NV01	Mina Array Sit	81.87	325	eP	P	20 28 21.7	0.0
NVAR	Mina Array Bea	81.87	325	P	P	20 28 22.9	+1.2
	comp=N,1.3nm,0.9s,baz=146,slow=5.9,SNR=6.8						
ELK	Elko	82.23	328	P	P	20 28 23.6	0.0
	comp=N,1.5nm,0.9s,baz=158,slow=6.0,SNR=7.0						
TOA0	Torodi Ar. Sit	82.72	70	eP	P	20 28 25.5	-0.9
TORD	Torodi Ar. Bea	82.72	70	P	P	20 28 24.8	-1.7
	comp=N,6.8nm,0.9s,baz=265,slow=5.4,SNR=28						
TORD				pP	pP	20 28 40.0	0.0
	comp=N,2.8nm,0.6s,baz=283,slow=5.7,SNR=9.0						
TOA1	Torodi Ar. Sit	82.72	70	eP	P	20 28 24.8	-1.7
LBTB	Lobatse	83.00	115	eP	P	20 28 27.1	-0.9
	comp=N,6.2nm,1.3s						
ULM	Lac du Bonnet	83.89	344	P	P	20 28 31.6	0.0
	comp=N,2.4nm,0.7s,baz=136,slow=5.9,SNR=6.1						
YKA	Yellowknife Ar	99.54	341	P	Pdif	20 29 44.2	-0.3
	comp=N,0.2nm,0.5s,baz=144,slow=4.7,SNR=6.6						
AKASG	Malin Array Be	119.84	46	PKP	PKPdf	20 34 50.8	-1.1
	comp=N,0.8nm,0.5s,baz=264,slow=3.1,SNR=4.8						
FIA0	FINESS Array S	120.32	34	ePKPdf	PKiKP	20 34 52.5	-0.1
FINES	FINESS Array B	120.32	34	PKP	PKiKP	20 34 52.5	-0.1
	comp=N,0.5nm,0.7s,baz=130,slow=6.0,SNR=4.3						
ASAR	Alice Springs	120.36	207	PKP	PKPdf	20 34 52.6	-1.3
	comp=N,0.3nm,0.4s,baz=125,slow=1.5,SNR=9.0						
ASAR				pPKP	pPKPdf	20 35 06.3	-1.7
	comp=N,0.4nm,0.8s,baz=180,slow=1.3,SNR=3.3						
WR1	Warramunga Arr	123.52	209	ePKPdf	PKPdf	20 34 59.0	-1.1
WRA	Warramunga Arr	123.52	209	PKP	PKPdf	20 34 59.0	-1.1
	comp=N,1.1nm,0.5s,baz=155,slow=1.7,SNR=38						
WRA				pPKP	pPKPdf	20 35 12.9	-1.2
	comp=N,1.0nm,0.7s,baz=165,slow=1.4,SNR=6.0						
H11S2	WAKE ISLAND Hy	126.32	271	T	T	22 53 57.8	
	baz=116,slow=75,SNR=151						
H11S1	WAKE ISLAND Hy	126.33	271	T	T	22 53 54.2	
	baz=116,slow=75,SNR=254						
H11S3	WAKE ISLAND Hy	126.34	271	T	T	22 53 54.6	
	baz=116,slow=75,SNR=267						
H11N3	WAKE ISLAND Hy	126.66	272	T	T	22 54 23.9	
	baz=116,slow=75,SNR=45						
H11N1	WAKE ISLAND Hy	126.67	272	T	T	22 54 26.3	
	baz=116,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy	126.68	272	T	T	22 54 27.5	
	baz=116,slow=75,SNR=70						
SEY	Seymchan	137.80	332	PKP	PKPdf	20 35 26.3	+0.7
	comp=N,2.3nm,0.8s,baz=254,slow=22,SNR=6.7						
GEYT	Alibeck	138.27	66	PKP	PKPdf	20 35 28.1	+0.7
	comp=N,0.7nm,0.6s,baz=259,slow=2.9,SNR=2.4						
BRVK	Borovoye	144.72	40	ePKPdf	PKPdf	20 35 38.2	-0.1
CHGR	Chuyangaron	146.98	66	ePKPdf	PKPdf	20 35 43.1	+0.3
KK31	Karatay Array	147.63	58	ePKPbc	PKPbc	20 35 46.8	+0.4
KKAR	Karatay Array	147.63	58	ePKPbc	PKPbc	20 35 46.8	+0.4
GAR	Garm	147.88	65	ePKPbc	PKiKP	20 35 48.1	-1.1
HYB	Hyderabad	149.50	110	i PKP	PKPbc	20 35 52.0	0.0
HYB				epPKP	pPKPbc	20 36 06.0	0.0
NIL	Nilore	150.13	76	ePKPbc	PKPbc	20 35 53.0	-0.1
AAK	Ala-Archa	150.59	57	ePKPbc	PKiKP	20 35 54.9	+0.2
ZAA1	Zalesovo Array	151.50	30	ePKPdf	PKPdf	20 35 49.4	0.0
ZAA1				ePKPbc	PKPbc	20 35 55.7	+0.1
ZALV	Zalesovo Beam	151.50	30	ePKPbc	PKPbc	20 35 55.6	0.0
ZALV	Zalesovo Beam	151.50	30	PKP	PKPdf	20 35 49.4	0.0
	comp=N,13nm,0.4s,baz=335,slow=5.6,SNR=9.8						
ZALV				PKPbc	PKPbc	20 35 55.7	+0.1
	comp=N,14nm,0.4s,baz=307,slow=3.3,SNR=69						
ZALV				pPKPbc	pPKPbc	20 36 10.5	+0.9
	comp=N,5.8nm,0.8s,baz=304,slow=3.4,SNR=5.1						
KSH	Kashi	152.21	63	PKPbc	PKiKP	20 35 58.0	-0.2
KSH				sPKP		20 36 07.7	
KSH				PP	PP	20 39 44.6	+4.2
KSH				SKS	SKSdf	20 42 54.8	-0.2
KSH	Kashi	152.21	63	SKKS	SKKSac	20 46 26.8	-0.2
MK32	Makanchi Array	154.42	45	ePKPdf	PKPdf	20 35 53.1	-0.8
MK32				ePKPbc	PKPbc	20 36 02.0	-0.3
MK32				ePKPab	PKPab	20 36 16.6	-0.1
MKAR	Makanchi Array	154.42	45	PKP	PKPdf	20 35 53.1	-0.8
	comp=N,0.4nm,0.7s,baz=262,slow=2.5,SNR=5.2						
MKAR				PKPbc	PKPbc	20 36 02.0	-0.3
	comp=N,1.2nm,0.7s,baz=288,slow=1.5,SNR=17						
MKAR				PKPab	PKPab	20 36 16.6	-0.1
	comp=N,2.5nm,0.8s,baz=285,slow=3.6,SNR=13						
MKAR				pPKPab	pPKPab	20 36 29.8	-0.7
	comp=N,2.3nm,0.8s,baz=295,slow=4.1,SNR=7.0						
KLR	Kul'dur	154.89	323	PKP	PKPdf	20 35 54.5	0.0
	comp=N,1.1nm,0.8s,baz=326,slow=7.3,SNR=3.6						
SONA0	Songino Array	163.24	5	ePKPab	PKPab	20 36 54.5	-0.5
SONM	Songino Array	163.24	5	PKPab	PKPab	20 36 54.5	-0.5
	comp=N,0.5nm,0.7s,baz=343,slow=1.5,SNR=3.5						
LZH	Lanzhou	173.67	38	ePKP	PKPdf	20 36 13.5	+1.7
LZH				pPKP	pPKPdf	20 36 24.0	-1.9
LZH				sPKP		20 36 27.5	
LZH				PKP	PKPab	20 37 42.4	+0.9
LZH	Lanzhou	173.67	38	SKKS	SKKSac	20 48 19.5	+3.1

IDC 02 20:19:35.7±6.4,**9°.29S**×**127°.86E,h0**^{km}**,mb3.9**/1,**mb1 4.1**/3,**mb1mx3.5**/23,**mbtmp3.9**/3,**ML4.0**/2,**Error ellipse: s-maj=126.4km s-min=73.5km az=65.0,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.30	150	Pn	Pn	20 22 31.8	-0.6
	1.1nm,0.3s,baz=323,slow=14,SNR=62						
WRA				Sn	Sn	20 24 51.8	+1.5
	0.5nm,0.3s,baz=331,slow=23,SNR=6.9						
ASAR	Alice Springs	15.42	159	Pn	Pn	20 23 15.4	+0.6
	0.4nm,0.3s,baz=334,slow=10,SNR=43						
ASAR				Sn	Sn	20 26 07.6	+1.1
	0.1nm,0.3s,baz=348,slow=26,SNR=2.4						
STKA	Stephens Creek	25.84	152	P	P	20 25 09.0	0.0
	2.0nm,0.9s,baz=324,slow=14,SNR=3.4						

KRSC 02 20:26:42.4±1.5,**50°.29N**×**157°.12E,h31**^{km}±23^{km}**,ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.75	302	eP	Pn	20 26 56.8	-0.1
SKR				eS	Sb	20 27 06.8	-0.1
PAU	Pauzhetka	1.19	351	eS	Sb	20 27 20.5	+1.0
KDTR	Khodutka, Kamc	1.64	21	eP	Pb	20 27 11.1	-0.8
KDTR				eS	Sb	20 27 31.7	-0.4
MTVR	Mutnovka	2.29	16	eP	Pb	20 27 21.2	-2.0
MTVR				eS	Sb	20 27 49.0	-2.2
RUS	Russkaya	2.32	22	eP	Pn	20 27 20.5	+2.1
RUS				eS	Sn	20 27 47.9	+2.1
DALK	Dalny	2.93	20	eP	Pn	20 27 29.8	+3.0
UGLR	Uglovaya	3.11	19	eP	Pn	20 27 32.9	+3.5
AVH	Avacha	3.14	18	eP	Pb	20 27 34.6	-3.0
KOK	Koryaka	3.15	17	eP	Pb	20 27 34.4	-3.3
SDLR	Sedlovina	3.19	19	eP	Pn	20 27 33.4	+2.9
SPN	Mys Shipunski	3.34	32	eS	Sn	20 28 13.6	+2.5

*IDC **02** 20:44:15.4±1.0, 29°.25N×142°.07E, h0^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.6/57, mbtmp3.7/10, ML3.3/3, Error ellipse: s-maj=38.2km s-min=18.8km az=74.0*
*ISCJB **02** 20:44:18.6±0.7, 29°.33N±0°.08×141°.8E±0°.2, h30^{km}, mb3.6/9, Error ellipse: s-maj=29.2km s-min=7.7km az=160.4*
ISC 02 20:44:20.2±0.8,**29°.28N**±0°.10×**141°.9E**±0°.2,**h30**^{km}**,n12,**σ**1**^{s}**.80**/14,**mb3.6**/9,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.18	174	Pn	Pn	20 44 53.8	-0.7
	11nm,0.3s,baz=0.3,slow=24,SNR=14						
JHJ	Hachijo jima 2	4.25	335	Pn	Pn	20 45 22.6	-0.4
	6.4nm,0.3s,baz=53,slow=20,SNR=2.0						
JHJ				Sn	Sn	20 46 07.7	-3.9
	3.0nm,0.3s,baz=36,slow=17,SNR=1.8						
MJAR	Matsushiro Arr	7.89	338	Pn	Pn	20 46 12.5	-0.4
	0.2nm,0.3s,baz=160,slow=8.6,SNR=4.6						
MJAR				Sn	Sn	20 47 40.3	-0.9
	0.0nm,0.3s,baz=241,slow=4.9,SNR=2.1						
KLR	Kul'dur	21.39	341	P	P	20 49 08.6	+3.3
	1.0nm,0.9s,baz=216,slow=8.7,SNR=2.3						
SONM	Songino Array	33.02	314	P	P	20 50 55.2	+2.4
	0.3nm,0.7s,baz=102,slow=5.0,SNR=2.7						
MKAR	Makanchi Array	48.94	308	P	P	20 53 02.8	-0.8
	0.1nm,0.5s,baz=98,slow=6.0,SNR=2.3						
WRA	Warramunga Arr	49.48	189	P	P	20 53 07.0	-0.9
	1.6nm,0.7s,baz=11,slow=8.3,SNR=18						
BVAR	Borovoye Array	56.30	316	P	P	20 53 58.6	+0.6
	1.0nm,0.8s,baz=93,slow=7.4,SNR=3.0						
FINES	FINESS Array B	75.90	334	P	P	20 56 03.2	-0.4
	0.6nm,0.7s,baz=359,slow=11,SNR=1.0						
NVAR	Mina Array Bea	79.35	52	P	P	20 56 23.3	-0.4
	0.3nm,0.6s,baz=304,slow=6.4,SNR=2.4						
BRTR	Keskin Array B	84.36	313	P	P	20 56 50.5	+0.6
	0.5nm,0.8s,baz=112,slow=6.7,SNR=2.0						
TXAR	Lajitas Array	94.48	53	P	P	20 57 37.9	-0.2
	0.2nm,0.8s,baz=311,slow=4.2,SNR=2.6						

*IDC **02** 20:46:27.6±0.9, 10°.73S×166°.63E, h0^{km}, mb4.1/14, mb1 4.3/16, mb1mx4.1/38, mbtmp4.1/16, ML3.7/2, MS3.8/1, Ms1 3.8/1, ms1mx3.1/38, Error ellipse: s-maj=29.7km s-min=16.9km az=134.0*
*NEIC **02** 20:46:30.3±0.1, 10°.40S×166°.49E, h10^{km}, mb4.7/67, Error ellipse: s-maj=5.4km s-min=3.4km az=136.0*
*BJI **02** 20:46:30.1, 10°.07S×166°.32E, h8^{km}, mB5.3/9, mb4.7/22, Ms5.0/5, Ms7 4.8/5*
*ISCJB **02** 20:46:32.5±0.2, 10°.54S±0°.05×166°.44E±0°.04, h36^{km}, mb4.6/86, MS4.6/2, Error ellipse: s-maj=7.6km s-min=5.4km az=143.7*
ISC 02 20:46:34.0±0.5,**10°.47S**±0°.07×**166°.54E**±0°.09,**h36**^{km}**,n120,**σ**0**^{s}**.94**/116,**mb4.7**/86,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.58	278	Pn	Pn	20 48 06.9	-1.3
	4.9nm,0.3s,baz=127,slow=7.1,SNR=2.1						
HNR				LR	LR	20 50 42.7	
	comp=Z,753nm,20.0s,baz=108,slow=38						
MARNC	Mare, Loyalty	11.04	173	ePn	Pn	20 49 09.7	+0.2
DZM	Mont Dzumac	11.54	180	ePn	Pn	20 49 16.3	-0.1
DZM				Sn	Sn	20 51 13.4	-11
DZM	Mont Dzumac	11.54	180	Pn	Pn	20 49 12.1	-4.2
	0.2nm,0.3s,baz=61,slow=19,SNR=3.4						
DZM				Sn	Sn	20 51 13.4	-11
	0.1nm,0.3s,baz=210,slow=13,SNR=1.5						
OUENC	Ouen Island, N	11.89	179	ePn	Pn	20 49 22.1	+1.1
PINNC	Pines Island,	12.11	176	ePn	Pn	20 49 25.4	+1.4
TARA	Tarawa	13.35	29	ePn	Pn	20 49 39.4	-1.7
EIDS	Eidsvold	20.85	223	eP	P	20 51 12.1	-0.7
	17nm,0.8s						
CTA	Charters Tower	21.76	242	P	P	20 51 21.1	-1.6
	4.3nm,1.0s,baz=67,slow=7.7,SNR=2.4						
CTAO	Charters Tower	21.76	242	eP	P	20 51 22.1	-0.7
	9.1nm,0.9s						
H11S2	WAKE ISLAND Hy	28.77	0	T	T	21 22 50.9	
	baz=182						
H11S3	WAKE ISLAND Hy	28.78	0	T	T	21 22 51.2	
	baz=182						
H11S1	WAKE ISLAND Hy	28.79	0	T	T	21 22 52.0	
	baz=182						
URZ	Urewera	29.25	163	eP	P	20 52 33.0	+0.4
	40nm,1.6s						
H11N1	WAKE ISLAND Hy	29.99	1	T	T	21 24 22.5	
	baz=181						
H11N3	WAKE ISLAND Hy	30.00	1	T	T	21 24 22.4	
	baz=181						
H11N2	WAKE ISLAND Hy	30.01	1	T	T	21 24 23.8	
	baz=181						
STKA	Stephens Creek	31.40	224	P	P	20 52 49.9	-1.8
	0.6nm,0.2s,baz=41,slow=14,SNR=2.5						
WB2	Warramunga Arr	32.41	249	eP	P	20 53 00.7	-0.1
	11nm,1.1s						
WRAB	Tennant Creek	32.41	249	eP	P	20 53 00.7	0.0
	20nm,1.0s						
WR1	Warramunga Arr	32.42	249	eP	P	20 52 59.5	-1.4
	7.3nm,0.8s						
WRA	Warramunga Arr	32.42	249	P	P	20 52 59.5	-1.4
	4.2nm,1.0s,baz=80,slow=9.1,SNR=22						
AS01	Alice Springs	33.71	243	eP	P	20 53 11.9	-0.2
AS31	Alice Springs	33.75	243	eP	P	20 53 11.7	-0.8
	1.4nm,0.8s						
ASAR	Alice Springs	33.75	243	P	P	20 53 09.7	-2.8
	3.1nm,1.0s,baz=72,slow=9.4,SNR=16						
ASAR				PcP	PcP	20 55 49.0	-2.6
	0.5nm,1.0s,baz=90,slow=0.1,SNR=4.5						
BBOO	Buckleboo	35.79	227	eP	P	20 53 31.9	+1.9
	22nm,1.4s						
FITZ	Fitzroy Crossi	40.29	254	eP	P	20 54 06.8	-1.2
	9.3nm,1.0s						
MMRI	Maumere	43.70	268	eP	P	20 54 36.8	+0.8
	11nm,0.9s						
USRK	Ussuriysk Ar.	62.79	333	P	P	20 56 57.3	+1.5
	1.6nm,0.8s,baz=151,slow=3.3,SNR=5.5						
KLR	Kul'dur	66.85	336	P	P	20 57 23.3	+1.1
	3.4nm,1.0s,baz=133,slow=5.9,SNR=7.5						
GYA	Guiyang	68.75	304	eP	P	20 57 35.0	+0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN	Xi'an	70.32	312	P	P	20 57 43.0	-1.2
XAN				pmax	pmax		
	comp=Z,15nm,1.2s						
XAN				pmax	pmax		
	comp=Z,200nm,6.2s						
KMI	Kunming	71.50	301	P	P	20 57 51.9	+0.1
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC	Hu-ho-hao-te	71.91	319	eP	P	20 57 55.2	+1.4
HHC				S	S	21 07 11.6	-0.9
HHC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,240nm,6.1s						
HHC				LR	LR		
	comp=N,230nm,13.8s						
HHC				LR	LR		
	comp=E,190nm,15.3s						
HHC				LR	LR		
	comp=Z,260nm,13.6s						
CM31	Chiang Mai Arr	72.61	293	eP	P	20 57 58.6	+0.4
CMAR	Chiang Mai Arr	72.61	293	P	P	20 57 59.5	+1.2
	0.8nm,0.8s,baz=117,slow=4.1,SNR=6.6						
CD2	Chengdu	72.88	307	eP	P	20 57 59.5	-0.2
LZH	Lanzhou	74.95	312	eP	P	20 58 11.6	-0.3
LZH				pP	pP	20 58 16.3	-6.4
LZH				sP	PcP	20 58 19.0	-6.6
LZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GAMB	Gambell	75.87	10	eP	P	20 58 16.3	0.0
	7.7nm,1.2s						
ULN	Ulaanbaatar	78.30	324	eP	P	20 58 30.7	+0.2
	2.7nm,0.9s						
BILL	Bilibino	78.30	360	eP	P	20 58 29.5	-0.4
	10nm,1.1s						
SONA0	Songino Array	78.67	323	eP	P	20 58 33.5	+1.0
SONM	Songino Array	78.67	323	P	P	20 58 33.6	+1.0
	0.9nm,0.9s,baz=122,slow=5.4,SNR=3.2						
GTA	Gaotai	79.23	314	eP	P	20 58 37.0	+1.2
GTA				pP	PcP	20 58 42.2	-1.8
GTA				sP	pP	20 58 45.9	-0.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
HDA	Harding Lake	82.45	19	eP	P	20 58 52.0	-0.3

	24nm,1.4s						
WDC	Whiskeytown Da	82.65	47	*e*P	P	20 58 54.2	+0.4
	7.8nm,1.5s						
RIDG	Independ'e Rid	82.67	20	*e*P	P	20 58 54.1	+0.6
	12nm,1.1s						
LSA	Lhasa	82.71	302	*e*P	P	20 58 55.0	-0.1
	2.4nm,1.3s						
IL1	Eielson Array	82.72	18	*e*P	P	20 58 53.4	-0.3
ILAR	Eielson Array	82.72	18	P	P	20 58 53.9	+0.2
	3.5nm,0.9s,baz=234,slow=5.9,SNR=18						
ILB	Eielson Array	82.72	18	*e*P	P	20 58 53.1	-0.6
PAGB	Antelope Grade	82.75	52	*e*P	P	20 58 53.7	-0.9
	4.6nm,0.9s						
DOT	Dot Lake	82.87	20	*e*P	P	20 58 54.6	0.0
	4.4nm,0.9s						
YBH	Yreka Blue Hor	82.93	45	*e*P	P	20 58 56.1	+0.6
	3.3nm,1.0s						
ORV	Oroville	83.05	48	*e*P	P	20 58 55.8	-0.2
	2.2nm,1.0s						
SCRK	Sand Creek	83.11	20	*e*P	P	20 58 56.4	+0.5
	4.7nm,0.8s						
AFDM	Forest Hills D	83.23	48	*e*P	P	20 58 56.9	-0.1
	7.9nm,1.1s						
CMB	Columbia Colle	83.37	50	*e*P	P	20 58 57.9	+0.2
	3.8nm,1.0s						
BEKR	Beckworth	83.98	48	*e*P	P	20 59 00.8	-0.1
	8.0nm,1.3s						
ISA	Isabella, Lake	84.10	52	*e*P	P	20 59 01.4	-0.1
	3.1nm,1.0s						
MDPB	Devils Postpil	84.23	50	*e*P	P	20 59 01.7	-0.7
	7.1nm,1.0s						
WAKR	Walker	84.23	49	*e*P	P	20 59 03.1	+0.8
	8.9nm,1.2s						
OMMB	Old Mammoth Mi	84.28	50	*e*P	P	20 59 03.1	+0.3
	7.6nm,1.3s						
PNTR	Pine Nut	84.29	49	*e*P	P	20 59 02.9	+0.2
	7.5nm,1.0s						
YERR	Yerington	84.52	49	*e*P	P	20 59 03.8	0.0
	6.0nm,1.3s						
PAHR	Pah Rah Range	84.64	48	*e*P	P	20 59 04.6	+0.3
	4.5nm,0.9s						
DAWY	Dawson	84.74	21	*e*P	P	20 59 04.5	+0.4
	5.0nm,1.2s						
RYN	Ryan	84.95	49	*e*P	P	20 59 06.4	+0.5
	3.0nm,0.9s						
DAC	Darwin (Calif)	84.96	52	*e*P	P	20 59 05.6	-0.4
	6.9nm,1.4s						
NV01	Mina Array Sit	85.05	50	*e*P	P	20 59 06.3	-0.2
NVAR	Mina Array Bea	85.05	50	P	P	20 59 06.5	0.0
	3.4nm,0.8s,baz=241,slow=10,SNR=19						
NV11	Mina Array Sit	85.17	50	*e*P	P	20 59 06.8	-0.1
	0.5nm,1.0s						
KVN	Kaiserville	85.39	49	*e*P	P	20 59 08.4	+0.2
	2.7nm,0.8s						
TIXI	Tiksi	85.68	349	*e*P	P	20 59 08.5	0.0
	5.8nm,1.1s						
LLLB	Lillooet	86.62	37	*e*P	P	20 59 14.0	+0.2
	3.2nm,0.9s						
G08A	Pilot Rock	86.69	43	*e*P	P	20 59 14.6	+0.3
	4.2nm,1.1s						
Y12C	Blythe	86.70	55	*e*P	P	20 59 14.9	+0.5
	4.6nm,0.9s						
SHPR	Sheep Range	86.91	52	*e*P	P	20 59 16.3	+0.6
	6.2nm,1.3s						
D08A	Wollman Farm,	87.27	41	*e*P	P	20 59 16.5	-0.4
W13A	Hualapai Mount	87.55	54	*e*P	P	20 59 19.1	+0.2
	7.2nm,1.5s						
F10A	Beach Ranch, E	88.06	43	*e*P	P	20 59 20.7	-0.2
	6.1nm,1.3s						
MFID	Camas Ranch	88.28	45	*e*P	P	20 59 22.3	+0.3
	3.8nm,1.1s						
LCMT	Little Creek M	88.53	52	*e*P	P	20 59 24.0	+0.6
	5.7nm,1.2s						
CCUT	Cedar City	88.57	52	*e*P	P	20 59 23.5	-0.2
	12nm,1.4s						
SZCU	Shurtz Canyon	88.79	52	*e*P	P	20 59 25.8	+1.0
	14nm,1.5s						
KNB	Kanab	88.86	52	*e*P	P	20 59 25.6	+0.7
	18nm,1.5s						
U15A	North Rim	89.13	53	*e*P	P	20 59 26.8	+0.4
	11nm,1.2s						
WMQ	Urumqi	89.25	315	*e*P	P	20 59 26.1	-0.4
WMQ				pP	PcP	20 59 30.5	+2.6
WMQ				sP	pP	20 59 33.9	-3.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				LR	LR		
	comp=N,340nm,32.9s						
WMQ				LR	LR		
	comp=E,220nm,31.5s						
WMQ				LR	LR		
	comp=Z,230nm,31.5s						
HLID	Hailey	89.31	46	*e*P	P	20 59 27.5	+0.5
X16A	Lo Mia Camp, P	89.35	55	*e*P	P	20 59 27.7	+0.3
	5.2nm,1.1s						
PKCU	Pink Cliffs	89.36	52	*e*P	P	20 59 28.9	+1.4
	26nm,1.4s						
TUC	Tucson	89.41	57	*e*P	P	20 59 27.0	-0.6
	8.2nm,1.4s						
MTPU	Mount Pierson	89.59	51	*e*P	P	20 59 29.5	+0.9
	12nm,1.2s						
DUG	Dugway, Tooele	89.63	49	*e*P	P	20 59 29.0	+0.5
	6.8nm,1.4s						
BGU	Big Grassy Mou	89.65	48	*e*P	P	20 59 28.8	+0.2
	6.7nm,1.3s						
WUAZ	Wupatki	89.65	54	*e*P	P	20 59 29.5	+0.8
	13nm,1.3s						
MSU	Marysvale	89.71	51	*e*P	P	20 59 30.0	+1.0
HVU	Hansel Valley	90.04	48	*e*P	P	20 59 30.8	+0.4
	14nm,1.2s						
NLU	North Lily Min	90.12	49	*e*P	P	20 59 31.0	+0.1
	6.1nm,1.1s						
SPUT	South Promonto	90.17	48	*e*P	P	20 59 31.3	+0.4
	9.7nm,1.5s						
Q16A	Castle Valley	90.57	51	*e*P	P	20 59 33.4	+0.4
	13nm,1.3s						
X18A	Snowflake	90.57	55	*e*P	P	20 59 33.5	+0.5
	12nm,1.4s						
TMUT	Trail Mountain	90.62	50	*e*P	P	20 59 33.5	+0.1
	3.4nm,0.8s						
JLU	Jordanelle	90.74	49	*e*P	P	20 59 34.4	+0.6
	6.5nm,1.1s						
TCUT	Toone Canyon	90.88	48	*e*P	P	20 59 34.5	+0.1
DLMT	Dillon	91.02	44	*e*P	P	20 59 35.6	+0.7
	11nm,1.4s						
BOZ	Bozeman (W)	91.74	44	*e*P	P	20 59 38.8	+0.7
	11nm,1.6s						
PDAR	Pinedale Array	92.59	47	P	P	20 59 41.8	-0.5
	0.3nm,0.7s,baz=226,slow=3.6,SNR=3.9						
ZALV	Zalesovo Beam	93.55	324	P	P	20 59 45.9	-0.2
	0.6nm,0.7s,baz=125,slow=7.6,SNR=3.6						
ZAA1	Zalesovo Array	93.55	324	*e*P	P	20 59 45.9	-0.2
MK01	Makanchi Array	93.63	317	*e*P	P	20 59 46.1	-0.6
MK31	Makanchi Array	93.64	317	*e*P	P	20 59 46.3	-0.5
MK32	Makanchi Array	93.64	317	*e*P	P	20 59 46.6	-0.2
MKAR	Makanchi Array	93.64	317	*e*P	P	20 59 46.0	-0.7
	6.8nm,0.8s						
MKAR	Makanchi Array	93.64	317	P	P	20 59 46.6	-0.2
	1.1nm,0.8s,baz=90,slow=5.9,SNR=10						
MAKZ	Makanchi	93.85	317	*e*P	P	20 59 47.8	+0.1
	4.1nm,1.3s						
YKA	Yellowknife Ar	94.10	27	P	P	20 59 47.2	-1.2
	0.3nm,0.6s,baz=256,slow=4.5,SNR=5.3						
YKB5	Yellowknife Ar	94.10	27	*e*P	P	20 59 47.1	-1.4
KSH	Kashi	97.00	309	P	P	21 00 02.5	+0.1
KSH				PP	PP	21 04 03.8	+5.3
ESDC	Sonseca Array	149.71	345	PKPbc	PKiKP	21 06 21.8	+0.4
	0.7nm,0.7s,baz=20,slow=4.2,SNR=3.6						

IDC 02 20:48:45.9±3.8, 10°.42S×165°.97E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.5/33, mbtmp3.6/3, Error ellipse: s-maj=133.5km s-min=40.9km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	33.28	243	P	P	20 55 25.2	-0.2
	0.3nm,0.6s,baz=59,slow=11,SNR=4.1						
SONM	Songino Array	78.29	324	P	P	21 00 48.3	+0.3
	0.4nm,0.8s,baz=134,slow=4.2,SNR=2.3						
ILAR	Eielson Array	82.85	18	P	P	21 01 11.7	-0.3
	0.9nm,1.1s,baz=234,slow=5.5,SNR=3.3						

*ISCJB **02** 21:00:21.0±0.4, 61°.38S±0°.05×154°.2E±0°.1, h10^{km}, mb4.8/26, MS4.6/11, Error ellipse: s-maj=10.0km s-min=7.2km az=25.3*

*IDC **02** 21:00:21.3±0.8, 61°.28S×154°.05E, h0^{km}, mb4.7/8, mb1 4.8/9, mb1mx4.6/25, mbtmp4.6/9, ML4.1/1, MS4.7/12, Ms1 4.6/12, ms1mx4.4/27, Error ellipse: s-maj=29.4km s-min=18.5km az=91.0*

*NEIC **02** 21:00:22.5±0.3, 61°.37S×154°.13E, h10^{km}, mb4.8/30, Error ellipse: s-maj=9.1km s-min=6.7km az=113.0*

*GCMT **02** 21:00:28.5±0.2, 61°.12S±0°.01×153°.76E±0°.03, h16^{km}±1^{km}, MW5.4/94, Moment Tensor Solution. s40,c49; s94,c154; Duration: 1^s.2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.12±.05; $M_{\theta\theta}$1.14±.04; $M_{\phi\phi}$-1.02±.04; $M_{r\theta}$0.09±.11; $M_{\theta\phi}$-0.94±.04; $M_{\phi r}$0.60±.14; Best double couple: $M_0$1.55900×10^{17} NP1:ϕ_s154.00000°, δ78.00000°, λ-19.00000°. NP2:ϕ_s248.00000°, δ71.00000°, λ-168.00000°. Principal axes: T 1.5060, Plg5.0000°, Azm202.0000°; N 0.1030, Plg68.0000°, Azm304.0000°; P -1.6130, Plg22.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 21:00:22.8±0.5, 61°.40S±0°.07×154°.2E±0°.1, h10^{km}, n80, σ1^s.58/68, mb4.9/26, MS4.6/11, 1C, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	7.36	22	*e*Pn	Pn	21 02 04.8	-5.3
VNDA	Vanda	16.39	174	*e*Pn	Pn	21 04 10.7	-1.8
	11nm,1.1s						
VNDA	Vanda	16.39	174	Pn	Pn	21 04 12.0	-0.4
	0.7nm,0.3s,baz=348,slow=13,SNR=33						
VNDA				LR	LR	21 09 52.4	
	comp=Z,4μm,20.0s,baz=354,slow=35						
PYZ	Puysegur Point	16.89	31	*e*Pn	Pn	21 04 19.7	+0.7
	68nm,1.0s						
SBA	Scott Base	17.02	171	*e*Pn	Pn	21 04 19.3	-1.1
	13nm,1.1s						
WHZ	Wether Hill Ro	17.47	33	*e*Pn	Pn	21 04 26.1	-0.2
	21nm,0.9s						
DCZ	Deep Cove	17.66	31	*e*Pn	Pn	21 04 28.9	+0.3
	80nm,1.1s						
MLZ	Mavora Lakes	18.00	33	*e*P	P	21 04 33.8	+0.4
	60nm,1.2s						
WKZ	Wanaka	18.74	34	*e*P	P	21 04 41.3	-0.3
	49nm,1.0s						
TAU	Tasmania Unive	18.98	344	*e*P	P	21 04 41.7	-2.4
	85nm,1.1s						
ODZ	Otahua Downs	19.00	38	*e*P	Pn	21 04 45.1	+0.1
	73nm,1.1s						
LBZ	Lake Benmore	19.47	36	*e*P	P	21 04 46.3	-3.2
	27nm,1.0s						
FOZ	Fox Glacier	20.16	35	*e*P	P	21 04 55.3	-1.6
	48nm,1.2s						
RPZ	Rata Peaks	20.34	37	*e*P	P	21 04 57.6	-1.4
	68nm,1.1s						
RPZ	Rata Peaks	20.34	37	P	P	21 04 58.4	-0.5
	44nm,1.0s,baz=190,slow=9.7,SNR=10.0						
RPZ				LR	LR	21 11 42.5	
	comp=Z,2μm,18.1s,baz=187,slow=34						
LTZ	Lake Taylor	21.55	38	*e*P	P	21 05 12.4	+0.4
	6.2nm,0.8s						
THZ	Tophouse	22.67	38	*e*P	P	21 05 25.4	+1.3
	83nm,1.1s						
TOO	Toolangi	24.47	343	*e*P	P	21 05 41.2	-0.5
	32nm,0.9s						
BKZ	Black Stump Fm	26.16	42	*e*P	P	21 05 57.5	+0.4
	29nm,1.1s						
URZ	Urewera	27.18	42	*e*P	P	21 06 05.4	-0.7
	36nm,1.2s						
URZ	Urewera	27.18	42	P	P	21 06 05.9	-0.3
	22nm,1.0s,baz=264,slow=5.4,SNR=7.5						
URZ				LR	LR	21 17 21.3	
	comp=Z,2μm,18.1s,baz=194,slow=38						
QSPA	South Pole Qui	28.69	180	*e*P	P	21 06 21.0	+1.3
QSPA	South Pole Qui	28.69	180	P	P	21 06 21.0	+1.3
	1.5nm,0.9s,baz=292,slow=4.1,SNR=3.9						
QSPA				LR	LR	21 17 55.7	
	comp=Z,1μm,21.3s,baz=20,slow=37						
STKA	Stephens Creek	30.67	339	*e*P	P	21 06 37.0	-0.2
	4.7nm,1.0s						
STKA	Stephens Creek	30.67	339	P	P	21 06 36.5	-0.7
	17nm,0.9s,baz=165,slow=8.5,SNR=29						
STKA				LR	LR	21 16 06.2	
	comp=Z,1μm,21.7s,baz=160,slow=31						
BBOO	Buckleboo	30.94	329	*e*P	P	21 06 38.4	-1.2
	28nm,0.8s						
MAW	Mawson	36.36	220	LR	LR	21 22 26.0	
	comp=Z,2μm,19.7s,baz=118,slow=36						
H01W1	Cape Leeuwin H	36.69	298	T	T	21 46 24.6	
	baz=147,slow=76,SNR=309						
H01W2	Cape Leeuwin H	36.70	298	T	T	21 46 24.2	
	baz=147,slow=76,SNR=236						
H01W3	Cape Leeuwin H	36.71	298	T	T	21 46 22.3	
	baz=147,slow=76,SNR=262						
DZM	Mont Dzumac	40.20	18	*e*S	S	21 14 09.6	+3.5
	936nm,28.9s						
DZM				*e*LR	LR	21 19 01.7	
	comp=Z,3μm,25.7s						
DZM	Mont Dzumac	40.20	18	*e*P	P	21 07 59.3	0.0
	35nm,1.1s						
DZM	Mont Dzumac	40.20	18	P	P	21 07 58.4	-0.8
	23nm,1.0s,baz=193,slow=9.0,SNR=8.4						
AS01	Alice Springs	40.21	331	*e*P	P	21 07 57.8	-1.4
AS01				*e*PcP	PcP	21 10 01.1	-2.0
ASAR	Alice Springs	40.22	330	P	P	21 07 58.1	-1.2
	14nm,0.9s,baz=165,slow=8.6,SNR=84						
ASAR				PcP	PcP	21 10 02.3	-0.9
	3.1nm,1.0s,baz=166,slow=3.2,SNR=5.0						
AS31	Alice Springs	40.22	330	*e*P	P	21 07 58.3	-1.0
	5.0nm,1.0s						
MORW	Morawa	40.99	304	*e*P	P	21 08 06.1	+0.4
	9.2nm,0.9s						
CTAO	Charters Tower	41.65	349	*e*P	P	21 08 10.9	-0.2
	39nm,1.1s						
SYO	Syowa Base	41.80	209	⇑*i*P	P	21 08 10.0	-1.8
WB2	Warramunga Arr	43.70	332	*e*P	P	21 08 26.1	-1.8
WRA	Warramunga Arr	43.71	332	P	P	21 08 26.0	-1.9
	14nm,0.9s,baz=166,slow=6.9,SNR=61						
WRA				PcP	PcP	21 10 12.9	-1.8
	3.4nm,1.0s,baz=159,slow=3.6,SNR=6.7						
WRAB	Tennant Creek	43.71	332	*e*P	P	21 08 26.5	-1.3
	25nm,1.1s						
FITZ	Fitzroy Crossi	47.74	322	*e*P	P	21 08 59.5	-0.2
	11nm,1.0s						
COEN	Coen	48.04	345	*e*P	P	21 09 01.6	-0.4
	31nm,1.1s						
TBI	Tubuai	53.78	71	*e*LQ	LQ	21 22 17.4	
	1μm,27.8s						
TBI				*e*LR	LR	21 25 16.9	
	comp=Z,769nm,26.8s,baz=199						
PPT2	Papeete2	58.76	68	*e*LQ	LQ	21 24 58.9	
	1μm,25.2s						
PPT2				*e*LR	LR	21 27 44.3	
	comp=Z,630nm,24.5s,baz=207						
JAY	Jayapura	59.63	344	LR	LR	21 36 08.8	
	comp=Z,994nm,19.4s,baz=234,slow=36						
FAKI	Fak Fak	60.66	335	*e*P	P	21 10 33.6	-0.3
	56nm,1.0s						
TAOE	Nuku Hiva Isla	70.71	72	*e*LR	LR	21 32 45.9	
	comp=Z,505nm,28.1s						
PSI	Prapat	76.65	302	*e*P	P	21 12 13.2	-0.6
	2.6nm,1.0s						
PSI	Prapat	76.65	302	LR	LR	21 40 58.5	
	comp=Z,306nm,20.5s,baz=90,slow=32						
KULM	Kulim	78.22	305	*e*P	P	21 12 21.3	-1.1
	23nm,1.1s						
H08S2	Diego Garcia H	79.38	274	T	T	22 39 58.4	
	baz=151,slow=76,SNR=34						
H08S1	Diego Carcia H	79.39	274	T	T	22 39 54.1	
	baz=151,slow=76,SNR=24						
H08S3	Diego Garcia H	79.40	274	T	T	22 40 00.8	
	baz=151,slow=76,SNR=71						
BOSA	Boshof	81.28	224	LR	LR	21 46 54.6	
	comp=Z,233nm,18.7s,baz=158,slow=34						
UTHA	Uthaitani	88.07	308	P	P	21 13 14.8	+1.7
	3.5nm,1.1s,0.0nm						
UMPA	Umpang Tak	88.88	308	P	P	21 13 20.5	+3.5
	3.1nm,1.0s,0.0nm						
CPUP	Villa Florida	88.92	152	LR	LR	21 49 56.9	
	comp=Z,247nm,19.1s,baz=195,slow=33						
UTTA	Uttaradit	89.65	310	P	P	21 13 22.1	+1.6
CM01	Chiang Mai Arr	90.87	309	*e*P	P	21 13 26.6	+0.4
CMAR	Chiang Mai Arr	90.91	309	P	P	21 13 25.9	-0.4
	1.5nm,0.9s,baz=188,slow=4.3,SNR=14						
CMAR				LR	LR	21 53 24.1	
	comp=Z,178nm,18.7s,baz=147,slow=35						
CMMT	Chiang Mai	91.23	309	P	P	21 13 29.4	+1.5
CHTO	Chiang Mai	91.23	309	*e*P	P	21 13 28.9	+1.1
	4.4nm,0.9s						
CHTO	Chiang Mai	91.23	309	P	P	21 13 29.4	+1.5
CHTO	Chiang Mai	91.23	309	P	P	21 13 29.4	+1.5
	26nm,1.1s,0.1nm						
KMI	Kunming	95.66	315	P	P	21 13 49.9	+1.5
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2	Nanjing	97.46	330	*e*P	Pdif	21 13 57.0	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MJAR	Matsushiro Arr	98.47	347	LR	LR	21 57 41.1	
	comp=Z,139nm,18.6s,baz=170,slow=35						
KSH	Kashi	118.67	300	PKP	PKiKP	21 19 13.1	+2.8
KSH				PP	PP	21 20 34.6	+5.7
KSH				SKS	SKSdf	21 26 25.9	+3.9
KSH				AMB	AMB		
	comp=Z,360nm,6.3s						
NVAR	Mina Array Bea	121.73	67	PKP	PKiKP	21 19 17.0	+0.6
	comp=Z,0.2nm,0.3s,baz=202,slow=4.2,SNR=3.2						
MK01	Makanchi Array	122.28	309	*e*PKPdf	PKPdf	21 19 16.0	-0.8
MKAR	Makanchi Array	122.31	309	PKP	PKPdf	21 19 16.1	-0.7
	comp=Z,1.0nm,1.1s,baz=129,slow=3.3,SNR=5.3						
TORD	Torodi Ar. Bea	127.88	215	PKP	PKPdf	21 19 29.0	+0.6
	comp=Z,0.7nm,1.0s,baz=184,slow=3.8,SNR=2.8						
YKA	Yellowknife Ar	141.34	48	PKP	PKPdf	21 19 50.9	-1.1
	comp=Z,0.1nm,0.5s,baz=226,slow=2.6,SNR=3.7						
MLR	Muntele Rosu	146.39	266	*e*PKPdf	PKPdf	21 20 01.8	+0.1
FCC	Fort Churchill	147.22	63	*e*PKPdf	PKPbc	21 20 04.5	-0.2
AKASG	Malin Array Be	148.44	276	PKPbc	PKPbc	21 20 08.5	+0.3
	comp=Z,0.5nm,0.4s,baz=105,slow=2.8,SNR=5.2						
KLMR	Klimovskoe	149.64	298	*e*PKPdf	PKPbc	21 20 10.5	-0.4
KLMR				AMP		21 20 13.6	
	comp=Z,37nm,1.2s						
VYHS	Vyhne	151.94	263	*e*PKP	PKPab	21 20 26.3	+0.1

IDC 02 21:20:23.2±1.8, 11°.08S×165°.19E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.7/31, mbtmp4.0/5, ML4.2/1, MS4.4/1, Ms1 4.4/1, ms1mx3.7/21, Error ellipse: s-maj=50.4km s-min=30.6km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.00	174	Pn	Pn	21 23 00.8	-1.2
	1.7nm,0.3s,baz=56,slow=19,SNR=15						
STKA	Stephens Creek	30.05	223	P	P	21 26 35.6	+1.4
	0.4nm,0.3s,baz=25,slow=13,SNR=3.4						
WRA	Warramunga Arr	30.96	250	P	P	21 26 42.8	+0.4
	2.5nm,0.9s,baz=79,slow=9.1,SNR=12						
ASAR	Alice Springs	32.29	243	P	P	21 26 52.9	-1.3
	0.9nm,0.8s,baz=70,slow=9.8,SNR=9.2						
SIJI	Sorong	35.19	284	LR	LR	21 41 32.1	
	comp=Z,576nm,21.4s,baz=152,slow=36						
ILAR	Eielson Array	83.72	19	P	P	21 32 53.8	+0.1
	0.3nm,0.6s,baz=234,slow=5.1,SNR=4.8						

*IDC **02** 21:20:33.1±0.4, 11°.14S×165°.41E, h0^{km}, mb4.8/22, mb1 5.0/24, mb1mx4.9/32, mbtmp4.8/24, ML5.2/2, MS4.8/7, Ms1 4.8/7, ms1mx4.3/20, Error ellipse: s-maj=16.1km s-min=12.3km az=90.0*

*BJI **02** 21:20:33.9, 10°.79S×165°.50E, h7^{km}, mB5.4/42, mb4.9/57, Ms5.1/30, Ms7 4.8/30*

*NEIC **02** 21:20:34.8±2.2, 11°.14S×165°.35E, h8^{km}±13^{km}, mb5.1/96, Error ellipse: s-maj=5.0km s-min=4.2km az=154.0*

*ISCJB **02** 21:20:36.4±0.1, 11°.20S±0°.02×165°.34E±0°.03, h30^{km}, mb5.0/142, MS4.8/13, Error ellipse: s-maj=3.8km s-min=3.2km az=30.5*

*MOS **02** 21:20:36.8±1.3, 11°.10S×165°.25E, h26^{km}, mb5.1/51, MS4.6/4, Error ellipse: s-maj=8.8km s-min=8.5km az=131.2*

*GCMT **02** 21:20:37.8±0.4, 11°.28S±0°.04×165°.34E±0°.04, h28^{km}±1^{km}, MW5.3/63, Moment Tensor Solution. s24,c27; s63,c80; Duration: 1^s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.19±.08; $M_{\theta\theta}$0.50±.05; $M_{\phi\phi}$0.68±.05; $M_{r\theta}$0.22±.09; $M_{\theta\phi}$-0.26±.03; $M_{\phi r}$-0.54±.08; Best double couple: $M_0$1.18300×10^{17} NP1:ϕ_s331.00000°, δ60.00000°, λ-86.00000°. NP2:ϕ_s142.00000°, δ31.00000°, λ-97.00000°. Principal axes: T 1.0210, Plg15.0000°, Azm58.0000°; N 0.3210, Plg4.0000°, Azm149.0000°; P -1.3450, Plg75.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 21:20:38.2±0.3, 11°.20S±0°.05×165°.38E±0°.05, h30^{km}, n455, σ1^s.19/478, mb5.1/142, MS4.7/15, 11C-9D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.62	288	*e*P	Pn	21 21 59.0	-0.8
HNR				*e*S	Sn	21 22 59.0	-4.5
HNR	Honiara	5.62	288	*e*Pn	Pn	21 21 59.6	-0.2
HNR				Sn	Sn	21 23 03.6	+0.1
HNR	Honiara	5.62	288	Pn	Pn	21 21 58.5	-1.3
	36nm,0.3s,baz=190,slow=3.9,SNR=10						
HNR				Sn	Sn	21 23 03.6	+0.1
	38nm,0.3s,baz=19,slow=20,SNR=3.8						
MARNC	Mare, Loyalty	10.53	166	*e*Pn	Pn	21 23 07.7	+0.5
DZM	Mont Dzumac	10.86	175	*e*Pn	Pn	21 23 10.9	-0.8
	388nm,1.4s						
DZM				*e*LR	LR	21 25 42.6	
	comp=Z,3μm,24.0s						
DZM	Mont Dzumac	10.86	175	*e*Pn	Pn	21 23 11.6	-0.2
DZM				Sn	Sn	21 25 13.7	+1.4
DZM	Mont Dzumac	10.86	175	Pn	Pn	21 23 10.9	-0.8
	35nm,0.3s,baz=23,slow=11,SNR=103						
DZM				Sn	Sn	21 25 13.7	+1.4
	1.7nm,0.3s,baz=319,slow=19,SNR=2.6						
ONTNC	Ouen Toro	11.09	175	*e*Pn	Pn	21 23 14.8	-0.1
OUENC	Ouen Island, N	11.24	173	*e*Pn	Pn	21 23 16.4	-0.5
PINNC	Pines Island,	11.52	170	*e*Pn	Pn	21 23 19.9	-0.8
TARA	Tarawa	14.56	31	*e*P	Pn	21 24 01.0	-1.3
	16nm,1.0s						
EIDS	Eidsvold	19.54	222	P	Pn	21 25 04.8	-0.1
	baz=20,SNR=9.9						
EIDS	Eidsvold	19.54	222	*e*P	Pn	21 25 04.8	-0.1
	51nm,1.0s						
CTA	Charters Tower	20.40	242	P	P	21 25 13.0	0.0
CTA				pmax	pmax		
	comp=Z,73nm,1.0s						
CTA				MLR	MLR		
	comp=Z,3μm,18.3s						
CTA	Charters Tower	20.40	242	P	P	21 25 13.0	0.0
	comp=Z,72nm,1.0s,baz=68,slow=12,SNR=32						
CTA				LR	LR	21 32 28.4	
	comp=Z,3μm,18.3s,baz=83,slow=35						
CTAO	Charters Tower	20.40	242	*e*P	P	21 25 13.9	+0.9
	comp=Z,135nm,1.3s						
CTAO	Charters Tower	20.40	242	*e*P	P	21 25 13.9	+0.9
CTAO				pmax	pmax		
	comp=Z,135nm,1.3s						
MTSU	Mount Surprise	21.49	249	P	P	21 25 24.4	-0.4
	baz=22,SNR=22						
RMQ	Roma	21.83	224	P	P	21 25 28.9	+0.6
	baz=22,SNR=23						
COEN	Coen	21.84	260	P	P	21 25 27.5	-0.9
	baz=22,SNR=28						
ARMA	Armidale	22.99	212	P	P	21 25 41.7	+1.0
	baz=23,SNR=7.6						
ARMA	Armidale	22.99	212	*e*P	P	21 25 41.3	+0.6
	comp=Z,93nm,1.1s						
OUZ	Omahuta	25.05	164	*e*P	P	21 26 00.4	+0.5
	comp=Z,49nm,1.1s						
QLP	Quilpie	25.12	230	P	P	21 26 00.1	-0.5
	baz=25,SNR=7.5						
QIS	Mount Isa	26.44	246	P	P	21 26 12.3	-0.4
	baz=27,SNR=13						
CMSA	Cobar Meteorol	27.21	219	P	P	21 26 19.7	+0.2
	baz=27,SNR=14						
HAZ	Te Kaha	28.69	159	P	P	21 26 34.3	+1.7
RUGZ	Raukumara Rang	28.84	160	P	P	21 26 35.5	+1.3
PKGZ	Pakihiroa	28.91	159	P	P	21 26 35.9	+1.2
URZ	Urewera	28.92	161	*e*P	P	21 26 34.6	0.0
	comp=Z,100nm,1.2s						
URZ	Urewera	28.92	161	P	P	21 26 34.3	-0.3
	comp=Z,55nm,1.0s,baz=12,slow=6.8,SNR=14						
URZ	Urewera	28.92	161	P	P	21 26 36.0	+1.4
WMGZ	Waiomatatini S	28.97	158	P	P	21 26 36.5	+1.4
MUGZ	Murupara	29.01	161	P	P	21 26 38.3	+2.9
MWZ	Matawai	29.12	160	P	P	21 26 37.5	+1.0
TWGZ	Tauwhareparae	29.14	159	P	P	21 26 38.6	+2.0

PUZ	Puketiti	29.14	159	P	P	21 26 36.8	+0.2
RTZ	Ruatahuna	29.20	161	P	P	21 26 38.6	+1.4
MTHZ	Maungataniwha	29.37	162	P	P	21 26 41.4	+2.6
SNGZ	Shannon Statio	29.47	161	P	P	21 26 40.7	+1.1
BKZ	Black Stump Fm	29.56	162	eP	P	21 26 40.9	+0.5
	comp=Z,179nm,1.4s						
BKZ	Black Stump Fm	29.56	162	P	P	21 26 41.2	+0.8
NMHZ	Naumai	29.59	162	P	P	21 26 42.7	+2.0
BHHZ	Black Hill Sta	29.73	163	P	P	21 26 43.7	+1.8
KWHZ	Kaweka Forest	29.77	163	P	P	21 26 43.9	+1.6
KNZ	Kokohu	29.79	160	P	P	21 26 42.7	+0.3
STKA	Stephens Creek	30.08	223	P	P	21 26 44.7	-0.3
	baz=30,SNR=26						
STKA	Stephens Creek	30.08	223	eP	P	21 26 44.9	-0.1
	comp=Z,4.8nm,0.8s						
STKA	Stephens Creek	30.08	223	eP	P	21 26 44.9	-0.1
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	Stephens Creek	30.08	223	P	P	21 26 44.5	-0.6
	comp=Z,19nm,0.8s,baz=44,slow=9.3,SNR=47						
STKA				LR	LR	21 38 26.6	
	comp=Z,2µm,18.1s,baz=37,slow=36						
TSZ	Takapari Road	30.23	164	P	P	21 26 46.5	+0.2
WRAB	Tennant Creek	31.07	250	eP	P	21 26 53.3	-0.7
	comp=Z,134nm,1.4s						
WRAB	Tennant Creek	31.07	250	d iP	P	21 26 52.3	-1.7
WRAB				pmax	pmax		
	comp=Z,119nm,1.5s						
WB2	Warramunga Arr	31.08	250	eP	P	21 26 53.0	-1.0
WRA	Warramunga Arr	31.09	250	P	P	21 26 52.8	-1.3
	comp=Z,67nm,1.1s,baz=80,slow=9.0,SNR=91						
WRA				PcP	PcP	21 29 49.8	+0.4
	comp=Z,4.7nm,0.8s,baz=81,slow=2.7,SNR=10						
THZ	Tophouse	31.15	169	eP	P	21 26 55.4	+0.9
	comp=Z,28nm,0.8s						
TOO	Toolangi	31.75	211	P	P	21 27 01.1	+1.3
	baz=32,SNR=15						
TOO	Toolangi	31.75	211	eP	P	21 26 60.0	+0.2
	comp=Z,47nm,1.4s						
TOO	Toolangi	31.75	211	eP	P	21 27 00.0	+0.2
TOO				pmax	pmax		
	comp=Z,47nm,1.4s						
LTZ	Lake Taylor	32.03	170	eP	P	21 27 03.6	+1.4
	comp=Z,43nm,1.1s						
KDU	Kakadu	32.21	264	P	P	21 27 02.2	-1.8
	baz=32,SNR=14						
AS01	Alice Springs	32.35	243	eP	P	21 27 04.0	-1.3
AS31	Alice Springs	32.40	243	eP	P	21 27 05.0	-0.7
	comp=Z,4.7nm,0.6s						
ASAR	Alice Springs	32.40	243	P	P	21 27 04.5	-1.2
	comp=Z,8.3nm,0.5s,baz=64,slow=10,SNR=82						
ASAR				PcP	PcP	21 29 52.8	-0.1
	comp=Z,6.3nm,0.8s,baz=71,slow=2.8,SNR=15						
RPZ	Rata Peaks	32.76	172	P	P	21 27 07.8	-0.7
	comp=Z,13nm,0.7s,baz=298,slow=1.0,SNR=8.0						
HTT	Hallett	32.81	223	P	P	21 27 09.9	+0.8
	baz=33,SNR=15						
ARPS	Mount Arapiles	33.14	216	P	P	21 27 12.9	+1.1
	baz=33,SNR=5.7						
BBOO	Buckleboo	34.46	227	P	P	21 27 23.4	0.0
	baz=35,SNR=5.3						
BBOO	Buckleboo	34.46	227	eP	P	21 27 22.9	-0.6
	comp=Z,91nm,1.5s						
KNRA	Kununurra	35.85	259	P	P	21 27 35.3	-0.4
	baz=36,SNR=14						
WRKA	Warakurna	37.69	243	P	P	21 27 50.8	-0.5
	baz=38,SNR=35						
FITZ	Fitzroy Crossi	38.99	255	P	P	21 28 01.0	-1.2
	baz=39,SNR=24						
FITZ	Fitzroy Crossi	38.99	255	eP	P	21 28 01.4	-0.9
	comp=Z,19nm,0.8s						
FORT	Forrest	39.66	235	eP	P	21 28 07.1	-0.5
	comp=Z,33nm,1.0s						
SOEI	Soe	40.42	268	P	P	21 28 17.3	+2.9
	comp=Z,30nm,1.1s						
BATI	Baumata	40.97	267	P	P	21 28 20.0	+1.2
	comp=Z,16nm,1.0s						
MMRI	Maumere	42.54	269	P	P	21 28 29.3	-2.3
PPT2	Papeete2	44.01	104	eLQ	LQ	21 39 16.6	
	comp=Z,1µm,26.5s						
PPT2				eLR	LR	21 41 08.3	
	comp=Z,1µm,24.0s,baz=273						
TBI	Tubuai	44.61	112	eLQ	LQ	21 39 34.8	
	comp=Z,1µm,28.0s						
TBI				eLR	LR	21 41 24.7	
	comp=Z,811nm,28.8s,baz=286						
MBWA	Marble Bar	44.80	251	eP	P	21 28 49.4	-0.3
	comp=Z,34nm,0.8s						
MEEK	Meekatharra	46.55	244	P	P	21 29 03.4	-0.2
	baz=47,SNR=13						
PLAI	Plampang	46.90	268	P	P	21 29 02.6	-3.7
KLBR	Kellerberrin	48.32	238	P	P	21 29 17.2	0.0
	baz=48,SNR=5.2						
BLDU	Ballidu	48.97	239	P	P	21 29 22.3	+0.1
	baz=49,SNR=7.8						
NWAO	Narrogin (SRO)	49.07	236	P	P	21 29 22.4	-0.6
	baz=49,SNR=5.1						
NWAO	Narrogin (SRO)	49.07	236	eP	P	21 29 22.8	-0.2
	comp=Z,32nm,1.2s						
NWAO	Narrogin (SRO)	49.07	236	eP	P	21 29 22.8	-0.2
NWAO				pmax	pmax		
	comp=Z,32nm,1.2s						
NWAO	Narrogin (SRO)	49.07	236	LR	LR	21 49 58.4	
	comp=Z,3µm,18.6s,baz=320,slow=36						
MORW	Morawa	49.23	241	P	P	21 29 23.9	-0.3
	baz=49,SNR=9.0						
MORW	Morawa	49.23	241	eP	P	21 29 23.9	-0.3
	comp=Z,17nm,0.8s						
MUN	Mundaring	49.69	237	P	P	21 29 27.9	+0.2
	baz=50,SNR=5.0						
TGY	Tagaytay City	50.73	299	LR	LR	21 49 48.6	
	comp=Z,356nm,19.5s,baz=110,slow=35						
TAOE	Nuku Hiva Isla	53.64	93	eLR	LR	21 45 33.4	
	comp=Z,482nm,29.0s						
MJAR	Matsushiro Arr	53.94	333	P	P	21 29 57.7	-1.5
	comp=Z,6.6nm,0.9s,baz=172,slow=7.8,SNR=12						
MAJO	Matsushiro	53.95	333	⇑eP	P	21 29 58.6	-0.7
MAJO				pmax	pmax		
	comp=Z,33nm,1.2s						
MAT	Matsushiro	53.95	333	P	P	21 29 58.3	-1.0
UGM	Wanagama	54.13	268	eP	P	21 30 00.7	-0.4
	comp=Z,90nm,1.1s						
JNU	Nakatsue	55.00	325	eP	P	21 30 07.1	+0.1
	comp=Z,30nm,1.0s						
CISI	Cisompet, Garu	56.84	268	eP	P	21 30 19.1	-1.5
	comp=Z,54nm,0.9s						
CISI	Cisompet, Garu	56.84	268	P	P	21 30 18.6	-2.0
KSRS	Korea Array	59.80	326	P	P	21 30 40.8	+0.1
	comp=Z,3.3nm,0.8s,baz=148,slow=7.1,SNR=8.1						
KSAR	Wonju Array Be	59.81	326	P	P	21 30 40.8	0.0
KSAR	Wonju Array Be	59.81	326	P	P	21 30 40.8	0.0
YSS	Yuzh-Sakhalins	61.33	343	eP	P	21 30 42.0	-8.9
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
NJ2	Nanjing	61.88	316	eP	P	21 30 54.0	-1.0
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
QIZ	Qiongzhong	62.43	298	P	P	21 30 58.9	-0.1
QIZ				S	S	21 39 27.4	+2.9
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
QIZ				LR	LR		
	comp=Z,170nm,14.8s						
QIZ				LR	LR		
	comp=Z,250nm,21.4s						
QIZ				LR	LR		
	comp=Z,280nm,22.6s						
USRK	Ussuriysk Ar.	62.92	334	P	P	21 31 00.4	-1.3
	comp=Z,6.2nm,1.0s,baz=141,slow=7.3,SNR=10						
PETK	Petropavlovsk-	64.39	355	P	P	21 31 10.9	-0.3
	comp=Z,4.5nm,0.8s,baz=150,slow=9.9,SNR=3.7						
CN2	Changchun	65.69	329	eP	P	21 31 19.9	0.0
VNDA	Vanda	66.33	181	P	P	21 31 24.1	+0.6
	comp=Z,8.8nm,1.1s,baz=339,slow=7.3,SNR=10						
SKNT	Sakolnakorn	66.82	294	P	P	21 31 28.6	+0.9
	comp=Z,11nm,1.7s						
KLR	Kul'dur	67.06	337	⇑iP	P	21 31 28.3	-0.2
KLR	Kul'dur	67.06	337	P	P	21 31 28.6	+0.1
	comp=Z,6.5nm,1.0s,baz=164,slow=4.1,SNR=14						
ENH	Enshi	67.71	309	eP	P	21 31 32.7	-0.4
	comp=Z,22nm,1.1s						
NONG	Nongkai	67.95	295	P	P	21 31 35.3	+0.5
	comp=Z,0.5nm,1.1s,comp=Z,152nm						
TRTT	Trang	68.03	283	P	P	21 31 38.1	+2.7
	comp=Z,7.4nm,1.6s						
GYA	Guiyang	68.21	304	P	P	21 31 37.2	+0.8
GYA				PP	PP	21 34 10.2	+2.9
GYA				SKS	SKiKP	21 41 32.6	+2.9
GYA				SS	SS	21 45 01.5	+2.7
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=Z,470nm,17.0s						
GYA				LR	LR		
	comp=Z,470nm,17.6s						
GYA				LR	LR		
	comp=Z,450nm,17.1s						
PATY	Pattaya	68.36	289	P	P	21 31 39.0	+1.6
	comp=Z,14nm,1.1s						
BJI	Beijing	68.38	321	P	P	21 31 37.6	+0.6
BJI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GSI	Gunungsitoli	68.51	276	eP	P	21 31 38.0	-0.5
	comp=Z,39nm,0.8s						
PBKT	Sadao Pong	69.40	292	P	P	21 31 45.0	+1.1
	comp=Z,15nm,1.3s						
XAN	Xi'an	69.96	313	P	P	21 31 47.5	+0.4
XAN				pP	pP	21 31 52.0	-3.0
XAN				sP	sP	21 31 54.3	-3.7
XAN				S	S	21 40 57.2	+1.6
XAN				sS	pS	21 41 05.2	-0.3
XAN				SKS	SKSac	21 41 43.7	-2.6
XAN				SS	SS	21 45 28.6	+3.1
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
XAN				pmax	pmax		
	comp=Z,180nm,7.3s						
XAN				LR	LR		
	comp=Z,290nm,15.2s						
XAN				LR	LR		
	comp=Z,300nm,16.5s						
XAN				LR	LR		
	comp=Z,340nm,19.0s						
XAN	Xi'an	69.96	313	eP	P	21 31 47.2	+0.2
	comp=Z,46nm,0.9s						
XAN	Xi'an	69.96	313	eP	P	21 31 47.3	+0.2
XAN				pmax	pmax		
	comp=Z,46nm,0.9s						
NANT	Nan	70.38	295	P	P	21 31 50.8	+0.9
	comp=Z,2.9nm,1.4s,comp=Z,82nm						
SRDT	SRDT	70.40	290	P	P	21 31 51.9	+1.8
	comp=Z,20nm,1.2s						
UTHA	Uthaitani	70.47	291	P	P	21 31 52.2	+1.7
	comp=Z,4.6nm,1.2s,comp=Z,51nm						
KMI	Kunming	70.89	302	P	P	21 31 55.0	+1.8
KMI				pP	pP	21 31 58.6	-2.6
KMI				sP	sP	21 31 59.8	-4.4
KMI				S	S	21 41 08.3	+1.1
KMI				sS	pS	21 41 14.0	-2.7
KMI				pmax	pmax		
	comp=Z,29nm,1.0s						
KMI				pmax	pmax		
	comp=Z,150nm,3.1s						
KMI				LR	LR		
	comp=Z,140nm,4.1s						
KMI				LR	LR		
	comp=Z,100nm,4.5s						
KMI				LR	LR		
	comp=Z,170nm,6.4s						
HHC	Hu-ho-hao-te	71.72	320	eP	P	21 31 55.7	-2.0
HHC				S	S	21 41 19.1	+3.2
HHC				ScS	SKSac	21 41 57.4	-2.0
HHC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,430nm,5.9s						
HHC				LR	LR		
	comp=Z,320nm,15.6s						
HHC				LR	LR		
	comp=Z,320nm,17.9s						
HHC				LR	LR		
	comp=Z,270nm,17.2s						
CMAR	Chiang Mai Arr	71.84	294	P	P	21 31 59.5	+0.7
	comp=Z,5.8nm,0.8s,baz=121,slow=4.2,SNR=32						
CMMT	Chiang Mai	71.95	294	P	P	21 32 00.2	+0.8
	comp=Z,15nm,1.3s						
CHTO	Chiang Mai	71.96	294	eP	P	21 31 59.5	+0.1
	comp=Z,36nm,1.6s						
CHTO	Chiang Mai	71.96	294	eP	P	21 31 59.5	+0.1
CHTO				pmax	pmax		
	comp=Z,36nm,1.6s						
CHTO	Chiang Mai	71.96	294	P	P	21 32 00.3	+0.9
	comp=Z,66nm,1.6s						
HIA	Hailar	72.33	331	⇓eP	P	21 32 01.5	+0.4
HIA				pmax	pmax		
	comp=Z,35nm,2.2s						
ZEA	Zeya	72.35	337	eP	P	21 32 00.5	-0.5
ZEA				pmax	pmax		
	comp=Z,96nm,1.8s						
CD2	Chengdu	72.41	308	eP	P	21 32 01.6	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
LZH	Lanzhou	74.59	312	eP	P	21 32 16.8	+1.9
LZH				pP	pP	21 32 20.4	-2.5
LZH				sP	sP	21 32 22.7	-3.2
LZH				PP	PP	21 35 06.1	+4.1
LZH				eS	S	21 41 52.1	+3.2
LZH				sS	sS	21 42 05.0	+2.7
LZH				SS	SS	21 46 35.2	-1.4
LZH				pmax	pmax		
	comp=Z,32nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,5.0s						
LZH				LR	LR		
	comp=Z,1µm,14.3s						
LZH				LR	LR		
	comp=Z,2µm,16.0s						
LZH				LR	LR		
	comp=Z,2µm,17.1s						
YAK	Yakutsk	78.14	344	eP	P	21 32 32.4	-1.8
YAK				pmax	pmax		
	comp=N,19nm,1.1s						
YAK				pmax	pmax		
	comp=E,13nm,1.1s						
YAK				pmax	pmax		
	comp=Z,54nm,1.1s						
ULN	Ulaanbaatar	78.22	324	eP	P	21 32 34.4	-0.7
	comp=Z,11nm,1.0s						
ULN	Ulaanbaatar	78.22	324	deP	P	21 32 35.1	0.0
ULN				pmax	pmax		
	comp=Z,26nm,1.8s						
SONM	Songino Array	78.58	324	P	P	21 32 36.5	-0.7
	comp=Z,2.8nm,0.7s,baz=142,slow=6.0,SNR=19						
SONM				LR	LR	22 05 45.8	
	comp=Z,139nm,21.1s,baz=173,slow=34						
SONA1	Songino Array	78.58	324	eP	P	21 32 37.5	+0.3
QSPA	South Pole Qui	78.80	180	eP	P	21 32 38.0	-0.1
	comp=Z,133nm,1.1s						
GTA	Gaotai	78.91	314	eP	P	21 32 39.5	+0.4
GTA				pP	pP	21 32 44.0	-3.2
GTA				sP	PcP	21 32 46.8	-0.9
GTA				pmax	pmax		
	comp=Z,14nm,1.4s						
GTA				pmax	pmax		
	comp=Z,160nm,5.8s						
GTA				LR	LR		
	comp=Z,270nm,17.9s						
GTA				LR	LR		
	comp=Z,250nm,16.2s						
GTA				LR	LR		
	comp=Z,280nm,17.5s						
BILL	Bilibino	79.04	0	eP	P	21 32 37.9	-1.1
	comp=Z,20nm,1.0s						
BILL	Bilibino	79.04	0	eP	P	21 32 39.2	+0.2
BILL				e		21 32 46.4	
BILL				e		21 35 41.7	
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
SUA	Susitna One	80.20	20	eP	P	21 32 45.8	+0.2
	comp=Z,14nm,1.1s						
SHL	Shillong	80.27	299	eP	P	21 32 46.0	-0.9
BOD	Bodaibo	80.52	335	eP	P	21 32 46.9	-0.3
BOD				pmax	pmax		
	comp=Z,12nm,1.8s						
ZAK	Zakamensk	81.62	325	eP	P	21 32 53.3	-0.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TRF	Thorofare Moun	81.78	19	eP	P	21 32 54.5	+0.4
	comp=Z,18nm,1.3s						
TLY	Talaya	82.05	326	⇓eP	P	21 32 56.7	+1.1
LSA	Lhasa	82.13	302	eP	P	21 32 57.4	+0.3
	comp=Z,16nm,1.4s						
LSA	Lhasa	82.13	302	eP	P	21 32 57.4	+0.3
LSA				pmax	pmax		
	comp=Z,16nm,1.4s						
DHY	Denali Highway	82.45	20	eP	P	21 32 58.7	+1.0
	comp=Z,16nm,1.3s						
IM3	Indian Mountai	82.67	16	eP	P	21 32 58.0	-0.4
MDM	Murphy Dome	83.49	18	eP	P	21 33 02.4	-0.4
	comp=Z,17nm,1.2s						
HDA	Harding Lake	83.51	19	eP	P	21 33 03.0	+0.2
	comp=Z,19nm,0.9s						
HDA	Harding Lake	83.51	19	P	P	21 33 04.4	+1.6
	baz=227						
COLA	College	83.55	18	eP	P	21 33 02.6	-0.4
	comp=Z,22nm,1.0s						
COLA	College	83.55	18	⇓iP	P	21 33 02.9	-0.1
COLA				pmax	pmax		
	comp=Z,15nm,1.0s						
O02D	Mt. Diablo Mer	83.67	47	P	P	21 33 02.7	-1.6
	baz=250						
IL1	Eielson Array	83.78	19	eP	P	21 33 03.1	-1.1
ILAR	Eielson Array	83.78	19	P	P	21 33 02.5	-1.7
	comp=Z,2.8nm,0.7s,baz=234,slow=4.5,SNR=29						
ILB	Eielson Array	83.78	19	eP	P	21 33 03.4	-0.9
L02E	Cave Junction	83.79	45	P	P	21 33 03.3	-1.5
	baz=249						
J01E	Myrtle Point	83.93	44	P	P	21 33 03.9	-1.5
	baz=249						
K02D	Willamette Mer	83.94	44	P	P	21 33 04.1	-1.6
	baz=249						
N02D	Trinity Center	84.00	46	P	P	21 33 04.4	-1.6
	baz=250,SNR=7.2						
M02C	Callahan	84.04	46	P	P	21 33 04.6	-1.7
	baz=250						
SCRK	Sand Creek	84.19	20	eP	P	21 33 06.1	-0.4
	comp=Z,41nm,1.3s						
I02D	Swisshome	84.33	43	P	P	21 33 05.5	-1.9
	baz=249						
HUMO	Hull Mountain	84.40	45	eP	P	21 33 06.3	-1.6
	comp=Z,14nm,1.0s						
O03E	Paynes Creek	84.42	47	P	P	21 33 06.1	-2.0
	baz=250,SNR=9.9						
I03D	Drain, OR	84.52	44	P	P	21 33 06.9	-1.5
	baz=249						
L04D	Klamath Falls	84.72	45	P	P	21 33 08.3	-1.4
	baz=250						
CMB	Columbia Colle	84.72	50	eP	P	21 33 08.5	-1.2
	comp=Z,51nm,1.1s						
CMB	Columbia Colle	84.72	50	eP	P	21 33 08.5	-1.2
CMB				pmax	pmax		
	comp=Z,51nm,1.1s						
CIS	Catalina Islan	84.84	55	P	P	21 33 08.5	-1.9
	baz=253						
M04C	Macdoel	84.89	46	P	P	21 33 08.9	-1.7
	baz=250,SNR=5.7						
VES	Vestal, Richgr	85.04	52	P	P	21 33 09.0	-2.2
	baz=252						
I04A	Tendick Farm,	85.19	44	P	P	21 33 10.0	-1.9
	baz=250						
J04D	Umpqua Nationa	85.20	44	P	P	21 33 10.9	-1.3
	baz=250						
H04D	Lebanon	85.22	43	P	P	21 33 11.0	-0.9
	baz=249						
ISA	Isabella, Lake	85.46	52	P	P	21 33 11.7	-1.8
	baz=253,SNR=6.9						
EDW2	Edwards Air Fo	85.61	53	P	P	21 33 12.2	-2.0
	baz=253,SNR=10						
PNTR	Pine Nut	85.64	49	eP	P	21 33 14.7	+0.2
	comp=Z,18nm,1.3s						
BFSC	Mount Baldy Ra	85.69	54	P	P	21 33 12.6	-2.1
	baz=254,SNR=7.7						
JIRN	Jiri	85.75	299	eP	P	21 33 15.1	-0.4
	comp=Z,144nm,1.6s						
J05D	Fort Rock, OR	85.82	45	P	P	21 33 13.7	-1.5
	baz=250,SNR=10						
DAWY	Dawson	85.83	21	eP	P	21 33 14.6	-0.1
	comp=Z,13nm,1.1s						
MURC	Murrieta	85.88	55	P	P	21 33 14.1	-1.5
	baz=254						
CWC	Cottonwood Cre	85.99	52	P	P	21 33 14.4	-1.8
	baz=253						
LRMC	Laurel Mtn Rad	86.02	53	P	P	21 33 14.5	-1.9
	baz=253,SNR=8.5						
E04D	Cinebar	86.05	41	P	P	21 33 15.5	-0.5
	baz=249						
GUN	Gumba	86.08	299	eP	P	21 33 16.6	-0.5
	comp=Z,52nm,1.1s						
TIXI	Tiksi	86.17	349	eP	P	21 33 15.9	-0.1
	comp=Z,7.1nm,0.4s						
TIXI	Tiksi	86.17	349	⇓eP	P	21 33 15.1	-1.0
TIXI				pmax	pmax		
	comp=Z,15nm,1.5s						
MONP2	Monument Peak	86.31	56	P	P	21 33 16.5	-1.4
	baz=254,SNR=7.7						
DAC	Darwin (Calif)	86.32	52	eP	P	21 33 17.1	-0.8
	comp=Z,11nm,1.3s						
DAC	Darwin (Calif)	86.32	52	eP	P	21 33 17.1	-0.8
DAC				pmax	pmax		
	comp=Z,11nm,1.3s						
MPMC	Manual Prospec	86.34	52	P	P	21 33 16.9	-1.0
	baz=253,SNR=7.7						
PKI	Pulchoki	86.39	299	eP	P	21 33 18.7	+0.1
	comp=Z,86nm,1.4s						
NV01	Mina Array Sit	86.40	50	eP	P	21 33 16.9	-1.4
NVAR	Mina Array Bea	86.40	50	P	P	21 33 17.4	-0.9
	comp=Z,5.7nm,0.9s,baz=236,slow=6.6,SNR=26						
NVAR				LR	LR	22 06 36.9	
	comp=Z,643nm,18.9s,baz=258,slow=32						
PKIN	Phulchoki	86.41	299	eP	P	21 33 18.6	0.0
	comp=Z,70nm,1.5s						
G05D	Wamic, OR	86.42	43	P	P	21 33 17.2	-0.7
	baz=250						
PFO	Pinyon Flats O	86.47	55	P	P	21 33 17.0	-1.6
	baz=254						
IKP	In-Ko-Pah, Jac	86.49	56	P	P	21 33 17.6	-1.1
	baz=254						
NV11	Mina Array Sit	86.51	50	eP	P	21 33 18.2	-0.5
	comp=Z,1.2nm,1.2s						
F05D	White Salmon	86.54	42	P	P	21 33 18.0	-0.5
	baz=250						
GSC	Goldstone, Bar	86.66	53	P	P	21 33 18.4	-1.1
	baz=254						
DMN	Daman	86.66	299	eP	P	21 33 20.3	+0.5
	comp=Z,84nm,1.2s						
GRAC	Grapevine Rang	86.70	51	P	P	21 33 18.3	-1.3
	baz=254,SNR=9.1						
A04D	Lummi Island	86.73	39	P	P	21 33 18.8	-0.5
	baz=249						
KVN	Kaiserville	86.74	49	eP	P	21 33 19.0	-0.9
	comp=Z,8.6nm,1.1s						
KVN	Kaiserville	86.74	49	eP	P	21 33 19.0	-0.9
KVN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SWSC	Sam W. Stewart	86.82	56	P	P	21 33 19.1	-1.1
	baz=255						
HEC	Hector,Ludlow	86.90	54	P	P	21 33 19.2	-1.5
	baz=254						
FURC	Furnace Creek,	86.94	52	P	P	21 33 19.8	-0.8
	baz=254						
BELC	Belle Mtn. Jos	86.94	55	P	P	21 33 19.7	-1.2
	baz=254,SNR=12						
B05A	Bryant	86.95	40	P	P	21 33 20.9	+0.5
	baz=250						
SHOC	Shoshone, Teco	87.24	53	P	P	21 33 21.3	-0.9
	baz=254						
BC3	Big Chuckawall	87.29	55	P	P	21 33 21.6	-1.0
	baz=255,SNR=5.4						
WVOR	Wild Horse Val	87.36	46	eP	P	21 33 21.7	-1.0
	comp=Z,12nm,1.2s						
WVOR	Wild Horse Val	87.36	46	eP	P	21 33 21.7	-1.0
WVOR				pmax	pmax		
	comp=Z,12nm,1.2s						
TUQ	Turquoise Moun	87.39	53	P	P	21 33 22.2	-0.9
	baz=254						
GMRC	Granite Mounta	87.42	54	P	P	21 33 22.2	-1.0
	baz=255						
TPNV	Topopah Spring	87.54	52	eP	P	21 33 22.0	-1.8
	comp=Z,9.9nm,1.5s						
TPNV	Topopah Spring	87.54	52	eP	P	21 33 22.0	-1.8
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.5s						
TPNV	Topopah Spring	87.54	52	P	P	21 33 23.0	-0.8
	baz=254						
GLA	Glamis	87.64	56	eP	P	21 33 22.4	-1.8
	comp=Z,17nm,0.9s						
GLA	Glamis	87.64	56	eP	P	21 33 22.4	-1.8

GLA				pmax	pmax		
	comp=Z,17nm,0.9s						
GLA	**Glamis**	**87.64**	**56**	P	**P**	**21 33 23.0**	**-1.2**
	baz=255						
IRM	**Iron Mountain**	**87.67**	**55**	P	**P**	**21 33 23.5**	**-0.8**
	baz=255,SNR=14						
HAWA	**Hanford**	**87.97**	**42**	eP	**P**	**21 33 25.8**	**+0.4**
	comp=Z,15nm,1.3s						
DANN	**Dangsing**	**88.00**	**299**	eP	**P**	**21 33 25.8**	**-0.5**
	comp=Z,40nm,1.1s						
KOLN	**Koldanda**	**88.00**	**299**	eP	**P**	**21 33 25.7**	**-0.5**
	comp=Z,31nm,1.2s						
G08A	**Pilot Rock**	**88.01**	**43**	eP	**P**	**21 33 25.2**	**-0.6**
	comp=Z,12nm,1.1s						
Y12C	**Blythe**	**88.06**	**55**	eP	**P**	**21 33 27.5**	**+1.3**
	comp=Z,15nm,1.0s						
Y12C	**Blythe**	**88.06**	**55**	P	**P**	**21 33 25.3**	**-0.8**
	baz=255						
SHPR	**Sheep Range**	**88.27**	**52**	eP	**P**	**21 33 27.8**	**+0.5**
	comp=Z,18nm,1.4s						
E08A	**Dider Farm, El**	**88.31**	**42**	eP	**P**	**21 33 28.1**	**+1.1**
	comp=Z,12nm,1.0s						
R11A	**Troy Canyon, C**	**88.43**	**51**	eP	**P**	**21 33 28.1**	**+0.1**
	comp=Z,13nm,1.4s						
R11A	**Troy Canyon, C**	**88.43**	**51**	P	**P**	**21 33 27.2**	**-0.8**
	baz=254,SNR=9.4						
113A	**Mohawk Valley,**	**88.43**	**56**	eP	**P**	**21 33 28.0**	**+0.1**
	comp=Z,10.0nm,1.1s						
PDMCI	**Parker Dam,Lak**	**88.51**	**55**	P	**P**	**21 33 27.4**	**-0.8**
	baz=256,SNR=6.0						
D08A	**Wollman Farm,**	**88.58**	**42**	eP	**P**	**21 33 28.5**	**+0.2**
	comp=Z,11nm,1.2s						
PYUN	**Piuthan**	**88.60**	**299**	eP	**P**	**21 33 28.3**	**-0.8**
	comp=Z,42nm,1.1s						
B08A	**Colville Reser**	**88.72**	**40**	eP	**P**	**21 33 28.7**	**-0.2**
	comp=Z,9.3nm,1.3s						
W13A	**Hualapai Mount**	**88.91**	**54**	eP	**P**	**21 33 29.9**	**-0.5**
	comp=Z,20nm,1.4s						
WMQ	**Urumqi**	**88.95**	**315**	P	**P**	**21 33 30.9**	**+0.7**
WMQ				pP	PcP	21 33 34.1	+2.4
WMQ				sP	pP	21 33 38.9	+0.6
WMQ				pmax	pmax		
	comp=Z,30nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,74nm,3.6s						
WMQ				LR	LR		
	comp=Z,460nm,37.9s						
WMQ				LR	LR		
	comp=Z,320nm,29.9s						
WMQ				LR	LR		
	comp=Z,540nm,29.9s						
WMQ	**Urumqi**	**88.95**	**315**	eP	**P**	**21 33 30.3**	**+0.1**
	comp=Z,14nm,1.1s						
WMQ	**Urumqi**	**88.95**	**315**	eP	**P**	**21 33 30.3**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
BMO	**Blue Mountains**	**89.00**	**44**	eP	**P**	**21 33 30.4**	**0.0**
	comp=Z,12nm,1.3s						
BMO	**Blue Mountains**	**89.00**	**44**	eP	**P**	**21 33 30.4**	**0.0**
BMO				pmax	pmax		
	comp=Z,12nm,1.3s						
214A	**Organ Pipe Nat**	**89.02**	**57**	P	**P**	**21 33 30.1**	**-0.6**
	baz=256						
ELK	**Elko**	**89.32**	**48**	eP	**P**	**21 33 32.5**	**+0.3**
ELK	**Elko**	**89.32**	**48**	eP	**P**	**21 33 32.5**	**+0.3**
Y14A	**Wickenburg**	**89.33**	**55**	eP	**P**	**21 33 32.1**	**-0.1**
	comp=Z,15nm,1.4s						
F10A	**Beach Ranch, E**	**89.37**	**43**	eP	**P**	**21 33 31.3**	**-0.8**
	comp=Z,22nm,1.3s						
MFID	**Camas Ranch**	**89.62**	**46**	eP	**P**	**21 33 32.5**	**-0.9**
PSUT	**Pine Spring**	**89.79**	**51**	eP	**P**	**21 33 34.2**	**-0.2**
	comp=Z,8.2nm,1.1s						
LCMT	**Little Creek M**	**89.89**	**52**	eP	**P**	**21 33 34.8**	**0.0**
	comp=Z,15nm,1.2s						
CCUT	**Cedar City**	**89.92**	**52**	eP	**P**	**21 33 35.4**	**+0.3**
	comp=Z,13nm,1.1s						
NEW	**Newport**	**90.10**	**41**	P	**P**	**21 33 35.8**	**+0.4**
	baz=253						
SZCU	**Shurtz Canyon**	**90.15**	**52**	eP	**P**	**21 33 36.4**	**+0.2**
	comp=Z,13nm,1.1s						
KNB	**Kanab**	**90.22**	**52**	eP	**P**	**21 33 37.1**	**+0.7**
	comp=Z,28nm,1.3s						
KNB	**Kanab**	**90.22**	**52**	eP	**P**	**21 33 37.1**	**+0.7**
KNB				pmax	pmax		
	comp=Z,28nm,1.3s						
U15A	**North Rim**	**90.49**	**53**	eP	**P**	**21 33 37.8**	**-0.1**
	comp=Z,14nm,1.0s						
HLID	**Hailey**	**90.65**	**46**	eP	**P**	**21 33 38.2**	**-0.1**
	comp=Z,11nm,1.3s						
HLID	**Hailey**	**90.65**	**46**	P	**P**	**21 33 38.0**	**-0.2**
	baz=255						
X16A	**Lo Mia Camp, P**	**90.71**	**55**	eP	**P**	**21 33 38.8**	**0.0**
	comp=Z,6.6nm,0.9s						
PKCU	**Pink Cliffs**	**90.71**	**52**	eP	**P**	**21 33 39.8**	**+0.9**
	comp=Z,42nm,1.4s						
TUC	**Tucson**	**90.78**	**57**	eP	**P**	**21 33 39.0**	**0.0**
	comp=Z,7.8nm,1.0s						
TUC	**Tucson**	**90.78**	**57**	eP	**P**	**21 33 39.0**	**0.0**
TUC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TUC	**Tucson**	**90.78**	**57**	P	**P**	**21 33 38.7**	**-0.3**
	baz=257						
DGZ	**Jazzator, Alta**	**90.79**	**321**	c iP	**P**	**21 33 38.8**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MTPU	**Mount Pierson**	**90.95**	**52**	eP	**P**	**21 33 40.7**	**+0.7**
	comp=Z,12nm,1.1s						
DUG	**Dugway, Tooele**	**90.98**	**49**	eP	**P**	**21 33 39.5**	**-0.3**
	comp=Z,6.3nm,1.1s						
DUG	**Dugway, Tooele**	**90.98**	**49**	eP	**P**	**21 33 39.5**	**-0.3**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DUG	**Dugway, Tooele**	**90.98**	**49**	P	**P**	**21 33 39.3**	**-0.5**
	baz=256						
BGU	**Big Grassy Mou**	**90.99**	**49**	eP	**P**	**21 33 40.2**	**+0.3**
	comp=Z,8.8nm,1.2s						
WUAZ	**Wupatki**	**91.01**	**54**	eP	**P**	**21 33 40.4**	**+0.2**
	comp=Z,8.9nm,0.9s						
WUAZ	**Wupatki**	**91.01**	**54**	P	**P**	**21 33 39.8**	**-0.3**
	baz=257						
MSU	**Marysvale**	**91.06**	**51**	eP	**P**	**21 33 40.5**	**+0.2**
MSU	**Marysvale**	**91.06**	**51**	eP	**P**	**21 33 40.6**	**+0.2**
HVU	**Hansel Valley**	**91.38**	**48**	eP	**P**	**21 33 41.8**	**+0.1**
	comp=Z,20nm,1.4s						
HVU	**Hansel Valley**	**91.38**	**48**	eP	**P**	**21 33 41.8**	**+0.1**
HVU				pmax	pmax		
	comp=Z,20nm,1.4s						
NLU	**North Lily Min**	**91.47**	**50**	eP	**P**	**21 33 42.6**	**+0.3**
	comp=Z,9.6nm,1.1s						
SPUT	**South Promonto**	**91.51**	**48**	eP	**P**	**21 33 42.1**	**-0.2**
	comp=Z,9.8nm,1.3s						
SYO	**Syowa Base**	**91.53**	**197**	⇓iP	**P**	**21 33 41.0**	**-0.6**
SYO	**Syowa Base**	**91.53**	**197**	⇑esP	**P**	**21 33 46.0**	**+4.4**
MSO	**Missoula**	**91.79**	**43**	P	**P**	**21 33 43.7**	**+0.3**
	baz=256						
CTU	**Camp Tracy**	**91.88**	**49**	eP	**P**	**21 33 45.1**	**+1.0**
	comp=Z,12nm,1.3s						
Q16A	**Castle Valley**	**91.92**	**51**	eP	**P**	**21 33 45.3**	**+1.0**
	comp=Z,18nm,1.4s						
TMUT	**Trail Mountain**	**91.98**	**50**	eP	**P**	**21 33 46.1**	**+1.4**
	comp=Z,10nm,1.2s						
MCMT	**McKenzie Canyo**	**92.05**	**45**	eP	**P**	**21 33 45.4**	**+0.6**
TCUT	**Toone Canyon**	**92.23**	**49**	eP	**P**	**21 33 46.2**	**+0.5**
	comp=Z,13nm,1.0s						
DLMT	**Dillon**	**92.35**	**44**	eP	**P**	**21 33 46.4**	**+0.3**
	comp=Z,13nm,1.1s						
WALA	**Waterton Lakes**	**92.36**	**41**	eP	**P**	**21 33 47.0**	**+1.0**
	comp=Z,21nm,1.3s						
P17A	**Butcher Ranch,**	**92.37**	**50**	eP	**P**	**21 33 47.5**	**+1.2**
	comp=Z,9.3nm,1.4s						
FXWY	**Fox Creek**	**93.06**	**46**	eP	**P**	**21 33 53.4**	**+3.9**
	comp=Z,1.5nm,0.9s						
BOZ	**Bozeman (W)**	**93.06**	**44**	P	**P**	**21 33 50.4**	**+1.0**
	baz=257						
REDW	**Red Top Meadow**	**93.12**	**47**	eP	**P**	**21 33 51.4**	**+1.6**
	comp=Z,11nm,1.5s						
MOOW	**Moose Ponds**	**93.28**	**46**	eP	**P**	**21 33 50.4**	**-0.1**
	comp=Z,2.9nm,1.4s						
121A	**Cookes Peak, D**	**93.30**	**58**	P	**P**	**21 33 51.0**	**+0.2**
	baz=259						
MK01	**Makanchi Array**	**93.38**	**317**	eP	**P**	**21 33 50.7**	**+0.1**
MK31	**Makanchi Array**	**93.39**	**317**	eP	**P**	**21 33 50.0**	**-0.7**
MK31	**Makanchi Array**	**93.39**	**317**	eP	**P**	**21 33 50.0**	**-0.7**
MKAR	**Makanchi Array**	**93.39**	**317**	eP	**P**	**21 33 50.0**	**-0.7**
	comp=Z,76nm,1.0s						
MKAR				PKKPbc	**PKKPdf**	**21 50 57.3**	**-0.8**
MKAR	**Makanchi Array**	**93.39**	**317**	P	**P**	**21 33 50.5**	**-0.2**
	comp=Z,9.7nm,0.9s,baz=92,slow=6.1,SNR=64						
MKAR				PKKPbc	**PKKPdf**	**21 50 57.3**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=286,slow=2.6,SNR=20						
ZAA0	**Zalesovo Array**	**93.47**	**324**	eP	**P**	**21 33 50.2**	**-0.6**
	comp=Z,17nm,1.1s						
ZALV	**Zalesovo Beam**	**93.47**	**324**	eP	**P**	**21 33 50.1**	**-0.7**
ZALV	**Zalesovo Beam**	**93.47**	**324**	eP	**P**	**21 33 50.1**	**-0.7**
ZALV	**Zalesovo Beam**	**93.47**	**324**	P	**P**	**21 33 50.0**	**-0.9**
	comp=Z,12nm,1.1s,baz=108,slow=4.8,SNR=27						
PV17	**East Wray Mesa**	**93.48**	**52**	eP	**P**	**21 33 53.9**	**+2.4**
	comp=Z,7.2nm,1.2s						
H17A	**Grant Village**	**93.53**	**46**	P	**P**	**21 33 52.5**	**+0.8**
	baz=258						
MAKZ	**Makanchi**	**93.60**	**317**	eP	**P**	**21 33 52.1**	**+0.5**
	comp=Z,26nm,1.2s						
MAKZ	**Makanchi**	**93.60**	**317**	eP	**P**	**21 33 52.1**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,26nm,1.2s						
MVCO	**Mesa Verde**	**93.63**	**53**	P	**P**	**21 33 52.3**	**0.0**
	baz=259						
BW06	**Boulder Array**	**93.93**	**47**	P	**P**	**21 33 54.0**	**+0.5**
	baz=258						
PD31	**Pinedale Array**	**93.93**	**47**	eP	**P**	**21 33 54.2**	**+0.7**
PDAR	**Pinedale Array**	**93.93**	**47**	eP	**P**	**21 33 52.5**	**-1.0**
PDAR	**Pinedale Array**	**93.93**	**47**	P	**P**	**21 33 53.0**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=242,slow=3.2,SNR=8.3						
NVS	**Novosibirsk**	**94.58**	**325**	eP	**P**	**21 33 56.1**	**+0.2**
NVS				pmax	pmax		
	comp=Z,13nm,1.4s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.5s						
RLMT	**Red Lodge**	**94.59**	**45**	P	**P**	**21 33 57.0**	**+0.5**
	baz=259						
EGMT	**Eagleton**	**94.83**	**42**	eP	**P**	**21 34 01.1**	**+3.8**
	comp=E,14nm,1.3s						
EGMT	**Eagleton**	**94.83**	**42**	P	**P**	**21 33 58.3**	**+1.0**
	baz=259						
ANMO	**Albuquerque**	**94.84**	**55**	eP	**P**	**21 34 00.5**	**+2.6**
	comp=E,2.3nm,1.0s						
ANMO	**Albuquerque**	**94.84**	**55**	⇑eP	**P**	**21 33 57.7**	**-0.1**
ANMO	**Albuquerque**	**94.84**	**55**	P	**P**	**21 33 58.2**	**+0.3**
	baz=260						
S22A	**4UR Ranch, Cre**	**95.03**	**53**	P	**P**	**21 33 59.2**	**+0.4**
	baz=260						
MNTX	**Cornudas Mount**	**95.16**	**59**	eP	**P**	**21 33 59.4**	**+0.3**
	comp=E,3.2nm,1.0s						
MNTX	**Cornudas Mount**	**95.16**	**59**	P	**P**	**21 33 59.2**	**+0.1**
	baz=260						
YKA	**Yellowknife Ar**	**95.28**	**27**	P	**P**	**21 33 56.8**	**-2.1**
	comp=E,1.9nm,0.9s,baz=253,slow=4.5,SNR=13						
YKB5	**Yellowknife Ar**	**95.28**	**27**	eP	**P**	**21 33 56.5**	**-2.4**
NRIK	**Noril'sk**	**96.14**	**340**	P	**P**	**21 34 02.1**	**-0.6**
	comp=E,2.8nm,0.6s,baz=156,slow=2.7,SNR=4.9						
TXAR	**Lajitas Array**	**96.22**	**61**	P	**P**	**21 34 04.0**	**-0.1**
	comp=E,0.7nm,0.8s,baz=237,slow=4.3,SNR=6.3						
TXAR				PP	**PP**	**21 38 04.1**	**+6.3**
	comp=E,0.9nm,1.1s,baz=258,slow=6.3,SNR=4.1						
TXAR				LR	LR	22 13 55.9	
	comp=E,565nm,18.0s,baz=0.0,slow=33						
NVL	**N'lazarevskaya**	**96.26**	**189**	eP	**P**	**21 33 58.7**	**-4.6**
NVL				eS	**SKSac**	**21 44 36.2**	**-1.4**
NVL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	**Kurchatov**	**96.53**	**320**	eP	**P**	**21 34 04.7**	**-0.1**
	comp=Z,9.5nm,1.4s						
KURK	**Kurchatov**	**96.53**	**320**	⇑eP	**P**	**21 34 04.1**	**-0.8**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KSH	**Kashi**	**96.57**	**309**	P	**P**	**21 34 06.1**	**+0.6**
KSH				pP	pP	21 34 10.9	-2.9
KSH				S	**S**	**21 45 23.9**	**-0.9**
KSH				sS	pS	21 45 33.6	-1.8
KSH				SS	**SS**	**21 52 04.4**	**+5.0**
KSH				LR	LR		
	comp=Z,170nm,4.8s						
KSH				LR	LR		
	comp=Z,170nm,4.0s						
KSH				LR	LR		
	comp=Z,370nm,6.9s						
PHWY	**Pilot Hill**	**96.67**	**49**	eP	**P**	**21 34 03.9**	**-2.3**
	comp=Z,11nm,1.0s						
AAK	**Ala-Archa**	**98.13**	**312**	⇓eP	**P**	**21 34 12.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KK31	**Karatay Array**	**101.09**	**312**	ePdif	**Pdif**	**21 34 25.6**	**0.0**
KK31	**Karatay Array**	**101.09**	**312**	eP	**Pdif**	**21 34 25.6**	**0.0**
KKAR	**Karatay Array**	**101.09**	**312**	ePdif	**Pdif**	**21 34 25.6**	**0.0**
KKAR	**Karatay Array**	**101.09**	**312**	eP	**Pdif**	**21 34 25.6**	**0.0**
BRVK	**Borovoye**	**101.92**	**322**	⇑eP	**Pdif**	**21 34 28.6**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,10.0nm,3.1s						
ARCES	**ARCESS Array B**	**116.39**	**345**	PKIKP	**PKPdf**	**21 39 17.7**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**116.39**	**345**	PKP	**PKPdf**	**21 39 17.7**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=68,slow=2.3,SNR=28						
VRH	**Novokhopyorsk**	**119.48**	**323**	ePKIKP	**PKPdf**	**21 39 23.3**	**-1.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MOS	**Moscow**	**119.93**	**329**	ePKIKP	**PKPdf**	**21 39 24.2**	**-1.4**
LPAZ	**La Paz**	**120.44**	**116**	ePKPdf	**PKiKP**	**21 39 29.7**	**+1.1**
LPAZ	**La Paz**	**120.44**	**116**	PKP	**PKPdf**	**21 39 28.1**	**-0.5**
	comp=Z,1.9nm,1.0s,baz=26,slow=8.4,SNR=5.3						
LPSR	**Galich'ya Gora**	**120.56**	**325**	ePKIKP	**PKiKP**	**21 39 27.9**	**+0.9**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	**Obninsk**	**120.75**	**329**	i PKIKP	**PKPdf**	**21 39 26.0**	**-1.2**
OBN				e		21 40 52.8	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VSR	**Storozhevoye**	**120.97**	**324**	ePKIKP	**PKPdf**	**21 39 26.5**	**-1.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NEY	**Neytrino**	**121.24**	**314**	⇑iPKIKP	**PKiKP**	**21 39 30.1**	**+1.2**
FIA1	**FINESS Array S**	**121.78**	**338**	ePKPdf	**PKiKP**	**21 39 29.1**	**-0.1**
FINES	**FINESS Array B**	**121.78**	**338**	PKP	**PKPdf**	**21 39 28.3**	**-0.7**
	comp=Z,5.8nm,1.0s,baz=100,slow=7.9,SNR=11						
VSU	**Vasula**	**123.46**	**335**	⇑iPKIKP	**PKiKP**	**21 39 32.7**	**+0.2**
VSU	**Vasula**	**123.46**	**335**	eP	**PKPdf**	**21 39 31.7**	**-0.6**
VSU				IAmb	IAmb	21 39 35.6	
	comp=Z,47nm,1.2s						
CPUP	**Villa Florida**	**124.19**	**133**	PKP	**PKPdf**	**21 39 34.8**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=266,slow=3.9,SNR=3.5						
BOSA	**Boshof**	**124.75**	**223**	PKP	**PKiKP**	**21 39 36.2**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=130,slow=1.1,SNR=5.5						
SDV	**Santo Domingo**	**124.87**	**87**	ePKPdf	**PKiKP**	**21 39 37.9**	**+1.0**
NB2	**NORSAR Subarra**	**126.76**	**345**	PKPdf	**PKPdf**	**21 39 38.1**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**126.76**	**345**	PKP	**PKPdf**	**21 39 38.0**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=34,slow=2.0,SNR=8.4						
AKASG	**Malin Array Be**	**126.79**	**327**	c iPKIKP	**PKPdf**	**21 39 39.0**	**+0.1**
AKASG	**Malin Array Be**	**126.79**	**327**	PKP	**PKPdf**	**21 39 38.4**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=58,slow=2.3,SNR=17						
AKBB	**Malin Array Si**	**126.79**	**327**	ePKPdf	**PKiKP**	**21 39 39.7**	**+0.3**
AKBB	**Malin Array Si**	**126.79**	**327**	ePKIKP	**PKiKP**	**21 39 39.7**	**+0.3**
KIEV	**Kiev**	**126.81**	**327**	⇑iPKIKP	**PKiKP**	**21 39 39.5**	**+0.1**
AK11	**Malin Array Si**	**126.84**	**327**	ePKPdf	**PKPdf**	**21 39 39.0**	**0.0**
PBUR	**Paburg**	**127.03**	**335**	eP	**PKPdf**	**21 39 38.4**	**-0.8**
PBUR				IAmb	IAmb	21 39 41.4	
	comp=Z,65nm,1.2s						
KLNR	**Kaliningrad**	**128.72**	**335**	⇓ePKIKP	**PKPdf**	**21 39 41.3**	**-1.2**
BR131	**Keskin Array S**	**128.80**	**312**	ePKPdf	**PKiKP**	**21 39 44.4**	**+0.4**
BRTR	**Keskin Array B**	**128.80**	**312**	PKP	**PKiKP**	**21 39 44.0**	**0.0**
	comp=Z,2.5nm,1.0s,baz=188,slow=2.5,SNR=11						
ANTO	**Ankara**	**129.36**	**313**	ePKPdf	**PKiKP**	**21 39 46.5**	**+1.5**
ANTO	**Ankara**	**129.36**	**313**	ePKIKP	**PKiKP**	**21 39 46.5**	**+1.5**
BUR04	**Bucovina Ar. S**	**130.68**	**325**	ePKPdf	**PKiKP**	**21 39 47.2**	**-0.3**
MLR	**Muntele Rosu**	**131.41**	**322**	ePKPdf	**PKiKP**	**21 39 49.8**	**+0.8**
MLR	**Muntele Rosu**	**131.41**	**322**	ePKIKP	**PKiKP**	**21 39 49.8**	**+0.8**
LANS	**Liptovska Anna**	**132.77**	**330**	ePKIKP	**PKiKP**	**21 39 52.0**	**+0.4**
LANS	**Liptovska Anna**	**132.77**	**330**	ePKP	**PKiKP**	**21 39 52.0**	**+0.4**
MORC	**Moravsky Berou**	**133.27**	**332**	ePKPdf	**PKPdf**	**21 39 51.5**	**+0.2**
MORC	**Moravsky Berou**	**133.27**	**332**	ePKIKP	**PKPdf**	**21 39 51.5**	**+0.2**
PTGA	**Pitinga**	**133.41**	**102**	ePKPdf	**PKiKP**	**21 39 53.9**	**+0.1**
DPC	**Dobruska-Polom**	**133.42**	**333**	ePKP	**PKPdf**	**21 39 52.1**	**+0.5**
DPC	**Dobruska-Polom**	**133.42**	**333**	ePKIKP	**PKPdf**	**21 39 52.1**	**+0.5**
UPC	**Upice**	**133.44**	**333**	ePKP	**PKiKP**	**21 39 53.6**	**+0.8**
UPC	**Upice**	**133.44**	**333**	ePKIKP	**PKiKP**	**21 39 53.6**	**+0.8**
VYHS	**Vyhne**	**133.52**	**330**	eP	**Pdif**	**21 36 48.9**	**-0.8**
VYHS				e		21 39 53.5	
VYHS	**Vyhne**	**133.52**	**330**	ePKP	**PKiKP**	**21 39 53.5**	**+0.4**
VYHS	**Vyhne**	**133.52**	**330**	ePDIFF	**Pdif**	**21 36 48.9**	**-0.8**
PVCC	**Panska Ves**	**134.05**	**334**	ePKP	**PKiKP**	**21 39 54.7**	**+0.7**
PVCC	**Panska Ves**	**134.05**	**334**	ePKIKP	**PKiKP**	**21 39 54.7**	**+0.7**
BRG	**Berggiesshubel**	**134.05**	**335**	ePKP	**PKiKP**	**21 39 53.8**	**-0.2**
	comp=Z,31nm,2.0s						
BRG	**Berggiesshubel**	**134.05**	**335**	ePKIKP	**PKiKP**	**21 39 53.8**	**-0.2**
BRG				pmax	pmax		
	comp=Z,31nm,2.0s						
CLL	**Collm**	**134.10**	**336**	ePKPdf	**PKiKP**	**21 39 54.0**	**0.0**
CLL	**Collm**	**134.10**	**336**	i PKPdf	**PKiKP**	**21 39 53.8**	**-0.3**
	comp=Z,7.0nm,1.0s						
CLL				LmV		22 42 00.0	
	comp=Z,200nm,22.0s						
CLL	**Collm**	**134.10**	**336**	ePKIKP	**PKiKP**	**21 39 54.1**	**0.0**
MODS	**Modra-Piesok**	**134.37**	**330**	ePKIKP	**PKiKP**	**21 39 54.7**	**-0.1**
MODS	**Modra-Piesok**	**134.37**	**330**	ePKP	**PKiKP**	**21 39 54.7**	**-0.1**
PRU	**Pruhonice**	**134.46**	**334**	ePKP	**PKiKP**	**21 39 55.6**	**+0.7**
PRU	**Pruhonice**	**134.46**	**334**	ePKIKP	**PKiKP**	**21 39 55.6**	**+0.7**
CONA	**Conrad Observa**	**135.36**	**331**	i PKiKP	**PKPdf**	**21 39 55.5**	**+0.1**
	comp=Z,4.6nm,0.7s						
KHC	**Kasperske Hory**	**135.52**	**334**	ePKPdf	**PKiKP**	**21 39 56.9**	**-0.2**
KHC	**Kasperske Hory**	**135.52**	**334**	ePKP	**PKiKP**	**21 39 56.7**	**-0.4**
KHC	**Kasperske Hory**	**135.52**	**334**	ePKIKP	**PKiKP**	**21 39 56.7**	**-0.4**
GEC2	**GERESS Array S**	**135.68**	**333**	ePKPdf	**PKiKP**	**21 39 57.9**	**+0.4**
GEC2	**GERESS Array S**	**135.68**	**333**	ePKIKP	**PKiKP**	**21 39 57.9**	**+0.4**
GERES	**GERESS Array B**	**135.68**	**333**	PKP	**PKPdf**	**21 39 55.6**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=48,slow=2.0,SNR=13						
GEA0	**GERESS Array S**	**135.69**	**333**	ePKPdf	**PKPdf**	**21 39 56.6**	**+0.6**
ARSA	**Arzberg**	**136.00**	**330**	i PKPdf	**PKPdf**	**21 39 53.9**	**-2.6**
	comp=Z,17nm,1.8s						
MOA	**Molln**	**136.16**	**332**	i PKiKP	**PKPdf**	**21 39 57.3**	**+0.5**
	comp=Z,6.9nm,1.0s						
SOKA	**Soboth**	**136.64**	**330**	i PKiKP	**PKiKP**	**21 39 59.2**	**-0.4**
	comp=Z,12nm,1.3s						
MYKA	**Terra Mystica**	**137.34**	**331**	i P	**PKiKP**	**21 40 02.0**	**+1.0**
	comp=Z,18nm,1.2s						
BDFB	**Brasilia**	**137.53**	**128**	PKP	**PKPdf**	**21 40 00.5**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=169,slow=11,SNR=3.9						
WATA	**Walderalm**	**137.76**	**333**	i PKPdf	**PKPdf**	**21 40 00.0**	**+0.1**
	comp=Z,1.9nm,0.6s						
ABTA	**Abfaltersbach**	**137.78**	**332**	i PKiKP	**PKPdf**	**21 40 00.8**	**+0.9**
	comp=Z,15nm,1.6s						
WTTA	**Wattenberg**	**137.78**	**333**	i P	**PKiKP**	**21 40 02.6**	**+0.6**
	comp=Z,10nm,1.0s						
MOTA	**Moosalm**	**137.96**	**334**	i PKPdf	**PKPdf**	**21 40 00.5**	**+0.2**
	comp=Z,4.0nm,0.9s						
RETA	**Reutte**	**137.99**	**334**	i PKPdf	**PKPdf**	**21 39 60.0**	**-0.3**
	comp=Z,8.7nm,1.2s						
SQTA	**Sankt Quirin**	**138.01**	**334**	i PKiKP	**PKPdf**	**21 40 01.3**	**+1.0**
	comp=Z,9.0nm,1.0s						
FETA	**Feichten**	**138.37**	**334**	i PKPdf	**PKPdf**	**21 40 00.0**	**-1.0**
	comp=Z,12nm,1.4s						
DAVA	**Damuels**	**138.52**	**335**	i PKPdf	**PKPdf**	**21 39 59.2**	**-2.1**
	comp=Z,10nm,1.5s						
FUORN	**Ofenpass-Fuorn**	**138.88**	**334**	ePKPdf	**PKiKP**	**21 40 05.3**	**+0.9**
KEST	**Kesra**	**147.32**	**322**	ePKPdf	**PKPbc**	**21 40 19.8**	**+0.3**
KEST	**Kesra**	**147.32**	**322**	PKPbc	**PKPbc**	**21 40 19.4**	**-0.1**
	comp=Z,40nm,0.8s,baz=223,slow=1.4,SNR=19						
PBRG	**Braganca**	**148.74**	**349**	ePKPdf	**PKPab**	**21 40 26.6**	**-0.1**
POLO	**Lamas de Olo**	**149.35**	**350**	ePKPdf	**PKPbc**	**21 40 24.8**	**+0.2**
MVO	**Moncorvo**	**149.42**	**349**	ePKPdf	**PKiKP**	**21 40 26.0**	**+0.1**
PVRL	**Vila Real**	**149.43**	**350**	ePKPdf	**PKiKP**	**21 40 25.6**	**-0.3**
PTO	**Porto**	**149.71**	**351**	ePKPdf	**PKiKP**	**21 40 25.9**	**-0.5**
PVIS	**Viseu**	**150.01**	**350**	ePKPdf	**PKPbc**	**21 40 26.6**	**+0.4**
ES19	**SONSECA Array**	**150.06**	**343**	ePKPdf	**PKPdf**	**21 40 22.8**	**+1.3**
ESDC	**Sonseca Array**	**150.10**	**343**	PKPbc	**PKPbc**	**21 40 25.7**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=9.3,slow=3.7,SNR=14						
MTE	**Manteigas**	**150.25**	**349**	ePKPdf	**PKiKP**	**21 40 27.8**	**+0.1**
PCBR	**Castelo Branco**	**150.78**	**349**	ePKPdf	**PKiKP**	**21 40 29.3**	**+0.6**
PMRV	**Marv??o**	**151.16**	**348**	ePKPdf	**PKiKP**	**21 40 29.5**	**0.0**
PTOM	**Tomar**	**151.17**	**350**	ePKPdf	**PKPbc**	**21 40 28.4**	**-0.5**
PMTG	**Montargil**	**151.67**	**349**	ePKPdf	**PKPbc**	**21 40 30.2**	**+0.1**
MESJ	**Messejana**	**152.86**	**349**	ePKPdf	**PKiKP**	**21 40 32.9**	**-0.1**
MORF	**Marmelete**	**153.46**	**349**	ePKPdf	**PKiKP**	**21 40 37.1**	**+2.8**
TOA0	**Torodi Ar. Sit**	**163.93**	**279**	ePKPdf	**PKPdf**	**21 40 38.7**	**-0.8**
TOA0				ePKPdf	**PKPdf**	**21 40 40.2**	**+0.7**
TORD	**Torodi Ar. Bea**	**163.93**	**279**	PKP	**PKPdf**	**21 40 38.2**	**-1.4**
	comp=Z,5.5nm,1.0s,baz=155,slow=1.3,SNR=22						
TORD				PKPab	**PKPab**	**21 41 31.9**	**-0.5**
	comp=Z,4.4nm,1.1s,baz=45,slow=4.2,SNR=7.4						
KIC	**Kosan Boka**	**169.11**	**245**	ePKIKP	**PKPdf**	**21 40 42.9**	**-0.7**
	comp=Z,84nm,1.6s						
LIC	**Lamto**	**169.30**	**243**	ePKIKP	**PKPdf**	**21 40 43.0**	**-0.7**
	comp=Z,62nm,1.5s						
LIC	**Lamto**	**169.30**	**243**	eP	**PKPab**	**21 41 56.8**	**+0.7**
	comp=Z,46nm,1.2s						
DBIC	**Dimbokro**	**169.35**	**246**	PKP	**PKPdf**	**21 40 43.0**	**-0.7**
	comp=Z,3.0nm,0.9s,baz=149,slow=5.0,SNR=3.4						
DBIC				PKPab	**PKPab**	**21 41 56.8**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=111,slow=4.8,SNR=4.9						
TIC	**Toumodi**	**169.49**	**245**	ePKIKP	**PKPdf**	**21 40 43.6**	**-0.3**
TIC	**Toumodi**	**169.49**	**245**	eP	**PKPab**	**21 41 57.8**	**+0.8**

SOME ***02*** *21:22:55.7, 44°.00N×77°.00E, h20^{km}*
KRNET ***02*** *21:22:55.9±0.1, 43°.95N×76°.98E, h21^{km}, mb2.5*
NNC ***02*** *21:22:55.7±0.6, 43°.94N×77°.07E, h0^{km}, mb2.7, mpv2.9,*
Error ellipse: s-maj=5.2km s-min=2.9km az=153.0
ISC 02 21:22:55.0±1.0**, 43°.97N**±0°.03×**77°.00E**±0°.02**, h12^{km}**±8^{km}**,**
n46, σ0^{s}68/84**, 28C-13D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKK	**Chushkaly**	**0.12**	**184**	eP	**Pb**	**21 22 58.9**	**-0.3**
	100nm,0.1s						
CHKK				eS	**Sg**	**21 23 01.1**	**+0.8**
	3µm,0.2s						
KTBS	**Karatobe**	**0.35**	**222**	P	**Pb**	**21 23 03.2**	**+0.1**
	55nm,0.2s						
KTBS				S	**Sb**	**21 23 08.6**	**0.0**
	116nm,0.2s						
KTBS	**Karatobe**	**0.35**	**222**	eP	**Pb**	**21 23 03.2**	**+0.1**
	55nm,0.2s						
KTBS				eS	**Sb**	**21 23 08.6**	**0.0**
	116nm,0.2s						
ARXS	**Arharly**	**0.64**	**68**	P	**Pg**	**21 23 07.2**	**-0.3**
	16nm,0.1s						
ARXS				S	**Sg**	**21 23 15.5**	**-0.5**
	116nm,0.2s						
ARXS	**Arharly**	**0.64**	**68**	eP	**Pg**	**21 23 07.2**	**-0.3**
	16nm,0.1s						
ARXS				eS	**Sg**	**21 23 15.5**	**-0.5**
	116nm,0.2s						
KOTS	**Kotyrbulak**	**0.74**	**174**	P	**Pb**	**21 23 09.8**	**-0.1**
	25nm,0.2s						
KOTS				S	**Sb**	**21 23 20.3**	**+0.3**
	11nm,0.2s						
KOTS	**Kotyrbulak**	**0.74**	**174**	eP	**Pb**	**21 23 09.8**	**-0.1**
	25nm,0.2s						
KOTS				eS	**Sb**	**21 23 20.3**	**+0.3**
	11nm,0.2s						
KNDC	**Almaty**	**0.75**	**182**	⇓P	**Pb**	**21 23 10.1**	**0.0**
	4.3nm,0.2s						
KNDC				⇑S	**Sb**	**21 23 20.4**	**0.0**
	11nm,0.4s						
MDOK	**Medeo**	**0.81**	**177**	⇑P	**Pg**	**21 23 10.4**	**-0.2**
	0.9nm,0.2s						
MDOK				⇑S	**Sb**	**21 23 21.7**	**-0.3**
	2.9nm,0.2s						
MDOK	**Medeo**	**0.81**	**177**	eP	**Pb**	**21 23 10.8**	**-0.2**
	8.1nm,0.1s						
MDOK				eS	**Sb**	**21 23 21.8**	**-0.1**
	18nm,0.2s						
MTBS	**Maitube**	**0.94**	**206**	eP	**Pb**	**21 23 13.5**	**+0.3**
	8.0nm,0.2s						
MTBS				eS	**Sb**	**21 23 26.2**	**+0.6**
	32nm,0.1s						
KURS	**Kuram**	**0.98**	**119**	P	**Pg**	**21 23 13.4**	**-0.4**
	2.1nm,0.1s						
KURS				S	**Sg**	**21 23 26.0**	**-0.5**
	34nm,0.3s						
KURS	**Kuram**	**0.98**	**119**	eP	**Pg**	**21 23 13.3**	**-0.4**
	2.2nm,0.2s						
KURS				eS	**Sg**	**21 23 26.1**	**-0.5**
	18nm,0.2s						
DGS	**Degeres**	**1.15**	**231**	P	**Pn**	**21 23 17.4**	**+0.4**
	8.5nm,0.3s						
DGS				S	**Sn**	**21 23 32.9**	**+0.1**
	26nm,0.2s						
DGS	**Degeres**	**1.15**	**231**	eP	**Pn**	**21 23 17.4**	**+0.4**
	8.5nm,0.3s						
DGS				eS	**Sn**	**21 23 32.9**	**+0.1**
	26nm,0.2s						
KST	**Kastek**	**1.20**	**219**	eP	**Pg**	**21 23 18.1**	**+0.2**
	4.8nm,0.2s						
KST				eS	**Sn**	**21 23 34.2**	**+0.3**
	16nm,0.2s						
SATY	**Saty**	**1.37**	**131**	P	**Pb**	**21 23 20.4**	**-0.2**

	5.4nm,0.1s						
SATY				S	**Sb**	**21 23 37.9**	**-0.2**
	70nm,0.1s						
SATY	**Saty**	**1.37**	**131**	eP	**Pb**	**21 23 20.2**	**-0.4**
	4.3nm,0.1s						
SATY				eS	**Sb**	**21 23 37.8**	**-0.3**
	68nm,0.1s						
TKM2	**Tokmak 2**	**1.47**	**225**	⇑Pn	**Pg**	**21 23 22.9**	**-0.3**
	0.6nm,0.2s						
TKM2				⇑Sn	**Sg**	**21 23 42.5**	**+0.3**
	4.7nm,0.2s						
TKM2	**Tokmak 2**	**1.47**	**225**	⇑iP	**Pg**	**21 23 22.8**	**-0.3**
	baz=25						
TKM2				⇑iS	**Sg**	**21 23 42.6**	**+0.5**
	baz=25						
BOOM	**Boomskoye usch**	**1.67**	**208**	⇑eP	**Pg**	**21 23 26.4**	**-0.6**
	baz=8.0						
BOOM				⇑iS	**Sg**	**21 23 48.5**	**-0.2**
	baz=8.0						
UZB	**Uzynbulak**	**1.69**	**119**	P	**Pb**	**21 23 25.6**	**-0.4**
	3.0nm,0.2s						
UZB				S	**Sb**	**21 23 46.9**	**-0.3**
	25nm,0.2s						
UZB	**Uzynbulak**	**1.69**	**119**	eP	**Pb**	**21 23 25.5**	**-0.4**
	2.7nm,0.2s						
UZB				eS	**Sb**	**21 23 46.8**	**-0.4**
	15nm,0.1s						
PRZ	**Przheval'sk**	**1.81**	**145**	⇓iP	**Pg**	**21 23 29.3**	**-0.3**
	baz=44						
PRZ				⇓iS	**Sg**	**21 23 53.6**	**+0.6**
	baz=44						
ULHL	**Ulahol**	**1.81**	**198**	⇓iP	**Pg**	**21 23 29.0**	**-0.7**
	baz=98						
ULHL				⇓iS	**Sg**	**21 23 52.9**	**-0.3**
	baz=98						
KDJ	**Kajisay**	**1.84**	**176**	⇑iP	**Pg**	**21 23 29.9**	**-0.5**
	baz=75						
KDJ				⇑iS	**Sg**	**21 23 54.1**	**-0.2**
	baz=75						
CHMS	**Chumysh**	**1.90**	**240**	⇑iP	**Pb**	**21 23 30.4**	**+0.8**
	baz=40						
CHMS				⇑iS	**Sg**	**21 23 55.5**	**-0.6**
	baz=40						
PDGK	**Podgornoye**	**1.92**	**109**	P	**Pb**	**21 23 29.3**	**-0.7**
	3.1nm,0.2s						
PDGK				S	**Sb**	**21 23 53.3**	**-0.7**
	7.0nm,0.2s						
PDGK	**Podgornoye**	**1.92**	**109**	⇓Pn	**Pb**	**21 23 28.7**	**-1.2**
	1.5nm,0.2s						
PDGK				⇑Sn	**Sb**	**21 23 53.8**	**-0.1**
	8.4nm,0.4s						
USP	**Ospenovka**	**1.95**	**250**	⇓iP	**Pb**	**21 23 30.9**	**+0.5**
	baz=50						
USP				⇓iS	**Sg**	**21 23 57.0**	**-0.5**
	baz=50						
SHLS	**Shalkode**	**1.97**	**114**	Pg	**Pg**	**21 23 35.8**	**+3.2**
	1.9nm,0.1s						
SHLS				Lg	Lg	21 24 04.9	
	34nm,0.2s						
KBK	**Karagaybulak**	**1.99**	**229**	⇑iP	**Pg**	**21 23 32.3**	**-0.9**
	baz=30						
KBK				⇑iS	**Sg**	**21 23 58.7**	**-0.3**
	baz=30						
DJR	**Jarkent**	**2.04**	**79**	eP	**Pb**	**21 23 31.6**	**-0.5**
	5.3nm,0.3s						
DJR				eS	**Sb**	**21 23 57.7**	**+0.3**
	5.3nm,0.2s						
KAPS	**Kapalarasan**	**2.13**	**51**	Pg	**Pb**	**21 23 33.2**	**-0.4**
	1.8nm,0.1s						
KAPS				Lg	Lg	21 24 00.4	
	13nm,0.2s						
KAPS	**Kapalarasan**	**2.13**	**51**	eP	**Pb**	**21 23 33.0**	**-0.6**
	1.9nm,0.1s						
KAPS				eS	**Sb**	**21 24 00.5**	**+0.4**
	13nm,0.2s						
AAK	**Ala-Archa**	**2.26**	**235**	⇓Pn	**Pg**	**21 23 38.5**	**+0.1**
	1.9nm,0.5s						
AAK				⇓Sn	**Sg**	**21 24 06.6**	**-1.1**
	5.5nm,0.4s						
AAK	**Ala-Archa**	**2.26**	**235**	⇑iP	**Pb**	**21 23 36.3**	**+0.4**
	baz=35						
AAK				⇑iS	**Sb**	**21 24 05.2**	**+1.3**
	baz=35						
KZA	**Kyzart**	**2.29**	**215**	⇑iP	**Pb**	**21 23 36.9**	**+0.5**
	baz=15						
KZA				⇑iS	**Sg**	**21 24 06.5**	**-2.0**
	baz=15						
TARG	**Taragay, Kyrgy**	**2.32**	**165**	⇓iP	**Pb**	**21 23 37.5**	**+0.6**
	baz=64						
TARG				⇓iS	**Sg**	**21 24 07.9**	**-1.6**
	baz=64						
UCH	**Uchtor**	**2.52**	**227**	⇑iP	**Pb**	**21 23 39.9**	**-0.5**
	baz=27						
UCH				⇑iS	**Sb**	**21 24 11.9**	**+0.3**
	baz=27						
NRN	**Naryn**	**2.64**	**197**	⇑iP	**Pb**	**21 23 41.9**	**-0.5**
	baz=97						
NRN				⇑iS	**Sb**	**21 24 15.3**	**+0.4**
	baz=97						
EKS2	**Erkin-Say**	**2.69**	**242**	⇑iP	**Pb**	**21 23 42.2**	**-0.9**
	baz=42						
EKS2				⇑iS	**Sb**	**21 24 15.6**	**-0.6**
	baz=42						
MNAS	**Manas**	**3.60**	**247**	⇓Lg	Lg	21 24 47.7	
	1.2nm,0.6s						
MAKZ	**Makanchi**	**4.51**	**49**	⇑Lg	Lg	21 25 14.4	
	0.1nm,0.2s						
MK31	**Makanchi Array**	**4.67**	**51**	Pn	**Pn**	**21 24 06.6**	**+1.2**
	baz=225,slow=16,SNR=6.6						
MK31				Lg	Lg	21 25 21.5	
	0.2nm,0.3s,baz=233,slow=28,SNR=6.6						
KK31	**Karatay Array**	**4.80**	**262**	⇑Pg	**Pg**	**21 24 25.7**	**-1.0**
	0.1nm,0.3s,baz=69,slow=14						
KK31				Lg	Lg	21 25 25.6	
	0.5nm,0.5s,baz=74,slow=28,SNR=11						

IDC 02 21:33:59.9±10.0**, 11.°29S**×**166.°42E, h0^{km}, mb3.7**/3**,**
mb1 3.8/3**, mb1mx3.5**/38**, mbtmp3.6**/3**, Error ellipse:**
s-maj=316.8km s-min=52.7km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.03**	**250**	P	P	21 40 28.0	-0.5
	0.6nm,0.8s,baz=82,slow=8.8,SNR=4.0						
ASAR	**Alice Springs**	**33.28**	**244**	P	P	21 40 39.9	+0.4
	0.8nm,0.8s,baz=74,slow=9.8,SNR=6.9						
MKAR	**Makanchi Array**	**94.15**	**317**	P	P	21 47 20.7	-0.1
	0.2nm,0.7s,baz=96,slow=6.4,SNR=2.3						

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*IDC **02** 21:57:59.7±1.1, 11.°24S×165.°32E, h0^{km}, mb4.0/7,*
mb1 4.2/9, mb1mx3.8/43, mbtmp4.1/9, ML4.3/2, MS3.5/1,
Ms1 3.5/1, ms1mx2.9/40, Error ellipse: s-maj=31.9km
s-min=21.5km az=142.0
*ISCJB **02** 21:58:02.6±0.9, 11.°4S±0.°1×165.°27E±0.°09, h30^{km},*
mb3.9/6, MS3.5/1, Error ellipse: s-maj=16.5km
s-min=10.8km az=31.1
ISC 02 21:58:04.3±1.0**, 11.°3S**±0.°1×**165.°3E**±0.°1**, h30^{km}, n13,**
σ0.^{s}93/10**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.61**	**289**	Pn	**Pn**	**21 59 24.7**	**-1.0**
	7.2nm,0.3s,baz=24,slow=20,SNR=2.4						
HNR				Sn	**Sn**	**22 00 30.1**	**+0.9**
	7.3nm,0.3s,baz=180,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	**10.79**	**174**	Pn	**Pn**	**22 00 37.0**	**+0.1**
	2.9nm,0.3s,baz=207,slow=12,SNR=32						
CTA	**Charters Tower**	**20.34**	**242**	P	**P**	**22 02 39.5**	**+1.1**
	14nm,1.2s,baz=52,slow=9.9,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**29.60**	**3**	T	T	22 34 48.6	
	baz=182						
H11S3	**WAKE ISLAND Hy**	**29.61**	**3**	T	T	22 34 41.4	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**29.62**	**3**	T	T	22 34 43.2	
	baz=182						
STKA	**Stephens Creek**	**30.00**	**223**	P	**P**	**22 04 10.7**	**+0.3**
	1.7nm,0.6s,baz=102,slow=8.0,SNR=3.9						
WRA	**Warramunga Arr**	**31.03**	**250**	P	**P**	**22 04 19.0**	**-0.7**
	3.1nm,0.9s,baz=80,slow=9.0,SNR=14						
GUMO	**Guam**	**31.97**	**320**	LR	LR	22 17 21.2	
	comp=Z,84nm,18.1s,baz=68,slow=36						
ASAR	**Alice Springs**	**32.33**	**243**	P	**P**	**22 04 29.9**	**-1.2**
	0.7nm,0.5s,baz=64,slow=10,SNR=13						
ILAR	**Eielson Array**	**83.85**	**19**	P	**P**	**22 10 31.4**	**+0.7**
	0.2nm,0.7s,baz=233,slow=6.2,SNR=3.1						
NVAR	**Mina Array Bea**	**86.47**	**50**	P	**P**	**22 10 44.1**	**-0.5**
	0.7nm,0.8s,baz=233,slow=8.7,SNR=4.7						
MKAR	**Makanchi Array**	**93.41**	**317**	P	**P**	**22 11 17.2**	**+0.4**
	0.6nm,0.9s,baz=100,slow=5.7,SNR=4.7						

IDC 02 22:04:10.9±1.8**, 10.°73S**×**165.°26E, h0^{km}, mb3.4**/3**,**
mb1 3.7/4**, mb1mx3.4**/33**, mbtmp3.5**/4**, ML3.5**/1**, MS3.7**/1**,**
Ms1 3.7/1**, ms1mx2.9**/22**, Error ellipse: s-maj=52.3km**
s-min=32.2km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.34**	**174**	Pn	Pn	22 06 53.5	-0.8
	0.3nm,0.3s,baz=270,slow=20,SNR=5.4						
WRA	**Warramunga Arr**	**31.15**	**249**	P	P	22 10 31.4	-0.4
	0.1nm,0.5s,baz=79,slow=8.8,SNR=2.4						
ASAR	**Alice Springs**	**32.51**	**243**	P	P	22 10 44.2	+0.4
	0.4nm,0.5s,baz=63,slow=10,SNR=7.9						
BATI	**Baumata**	**40.89**	**267**	LR	LR	22 27 07.4	
	comp=Z,106nm,21.9s,baz=116,slow=34						
ILAR	**Eielson Array**	**83.36**	**19**	P	P	22 16 39.6	+0.1
	0.2nm,0.7s,baz=228,slow=5.6,SNR=5.1						

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*ISCJB **02** 22:04:19.0±0.6, 42.°45N±0.°02×41.°07E±0.°04, h0^{km}±8^{km},*
Error ellipse: s-maj=5.2km s-min=3.7km az=150.2
*ISK **02** 22:04:20.6, 42.°35N×40.°94E, h10^{km}±1^{km}, ML2.5/4*
*MOS **02** 22:04:22.1±0.0, 42.°51N×41.°06E, h11^{km}, MPVA3.6*
*NORS **02** 22:04:24.0±0.0, 42.°61N×41.°39E, h4^{km}, MPVA3.0*
ISC 02 22:04:21.1±1.2**, 42.°42N**±0.°02×**41.°10E**±0.°04**, h10^{km}**±10^{km}**,**
n20, σ0.^{s}86/35**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.93**	**151**	PG	**Pg**	**22 04 39.2**	**+0.2**
BATM				SG	**Sg**	**22 04 52.8**	**+1.8**
DOMR	**Dombai**	**0.95**	**24**	i Pg	**Pb**	**22 04 40.3**	**+0.6**
DOMR				i Sg	**Sb**	**22 04 52.9**	**+0.5**
BCA	**Borcka**	**1.05**	**158**	PG	**Pg**	**22 04 40.5**	**-0.8**
BCA				SG	**Sg**	**22 04 55.1**	**+0.2**
ARXR	**Arkhyz**	**1.15**	**6**	i Pg	**Pg**	**22 04 42.8**	**-0.4**
ARXR				i Sg	**Sb**	**22 04 57.7**	**-0.4**
DBOC	**Borcka**	**1.16**	**158**	i P	**Pg**	**22 04 44.3**	**+1.0**
DBOC				i S	**Sg**	**22 04 58.6**	**+0.3**
DBOC				IAML_P			
	comp=Z,970nm,0.1s						
CHOM	**Cayeli-Rize**	**1.35**	**191**	PN	**Pn**	**22 04 44.7**	**-1.2**
ARTV	**Artvin**	**1.38**	**153**	i P	**Pn**	**22 04 46.8**	**+0.2**
ARTV				IAML_P			
	comp=Z,2μm,0.1s						
RPOR	**Krasnaya Polya**	**1.42**	**335**	ePg	**Pn**	**22 04 46.8**	**-0.1**
RPOR				i Sg	**Sb**	**22 05 05.2**	**-0.5**
NEY	**Neytrino**	**1.45**	**55**	i Pg	**Pb**	**22 04 48.5**	**+0.2**
NEY				eSg	**Sn**	**22 05 07.6**	**+0.9**
DAGI	**Agillar**	**1.47**	**155**	i P	**Pn**	**22 04 47.2**	**-0.6**
DAGI				i S	**Sn**	**22 05 06.8**	**-0.4**
SOC	**Sochi**	**1.54**	**319**	ePg	**Pn**	**22 04 48.3**	**-0.3**
SOC				i Sg	**Sn**	**22 05 08.9**	**+0.2**
DDEM	**Demirkent**	**1.60**	**162**	i P	**Pn**	**22 04 49.2**	**-0.4**
DDEM				i S	**Sn**	**22 05 09.4**	**-0.9**
DDEM				IAML_P			
	comp=Z,804nm,0.1s						
SHA1	**Shidzhatmaz**	**1.74**	**40**	i Pg	**Pb**	**22 04 53.7**	**+0.5**
SHA1				eSg	**Sg**	**22 05 16.1**	**-1.0**
KTUT	**Trabzon**	**1.75**	**215**	PN	**Pn**	**22 04 49.8**	**-1.6**
KIV	**Kislovodsk**	**1.92**	**37**	PN	**Pb**	**22 04 56.0**	**-0.3**
LZRR	**Lazarevskoye**	**1.97**	**321**	ePg	**Pn**	**22 04 56.4**	**+1.9**
LZRR				eSg	**Sn**	**22 05 19.8**	**+0.6**
ZEI	**Tsey**	**2.10**	**79**	ePg	**Pg**	**22 05 00.7**	**-0.7**
ZEI				eSg	**Sg**	**22 05 27.6**	**-1.0**
BAYT	**Aydıntepe-Bayb**	**2.15**	**200**	PN	**Pn**	**22 04 56.3**	**-0.8**
LSNR	**Lesken**	**2.18**	**66**	ePg	**Pg**	**22 05 02.4**	**-0.5**
LSNR				eSg	**Sg**	**22 05 30.3**	**-0.8**
LACR	**Lac**	**2.39**	**79**	ePg	**Pb**	**22 05 05.1**	**+0.8**
LACR				eSg	**Sb**	**22 05 35.0**	**+1.2**

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*ISCJB **02** 22:04:31.6±0.4, 47.°05N±0.°04×147.°08E±0.°09, h346^{km},*
mb3.4/20, Error ellipse: s-maj=8.0km s-min=6.0km az=1.9
*MOS **02** 22:04:31.7±1.2, 47.°00N×147.°11E, h353^{km}, mb3.7/13,*
Error ellipse: s-maj=13.4km s-min=9.3km az=90.0
*SKHL **02** 22:04:32.3±0.6, 46.°78N×147.°07E, h354^{km}±16^{km}, mb4.9/4,*
msh4.7/4
*IDC **02** 22:04:34.0±1.7, 47.°13N×146.°87E, h352^{km}±18^{km},*
mb3.1/15, mb1 3.3/20, mb1mx3.2/49, mbtmp3.9/20, Error
ellipse: s-maj=14.1km s-min=12.3km az=127.0
ISC 02 22:04:32.4±0.5**, 46.°95N**±0.°05×**147.°09E**±0.°07**, h346^{km}, n68,**
σ1.^{s}47/75**, mb3.6**/27**, 5C-4D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.80**	**162**	eP	**Pn**	**22 05 22.6**	**+0.6**
KUR				AMB	AMB	22 05 23.4	
	130nm,0.4s						
KUR				AMB	AMB	22 05 23.4	
	180nm,0.4s						
KUR				eS	**S**	**22 06 02.3**	**+0.5**
KUR				A	A	22 06 26.0	
	80nm,0.4s						
KUR				A	A	22 06 26.0	
	90nm,0.4s						
KUR	**Kuril'sk**	**1.80**	**162**	ePN	Pn	22 05 13.0	-9.0
KUR				pmax	pmax		
	comp=Z,120nm,0.5s						
YSS	**Yuzh-Sakhalins**	**2.97**	**272**	i P	**Pn**	**22 05 32.3**	**+1.2**
YSS				AMB	AMB	22 05 33.0	
	comp=Z,50nm,0.9s						
YSS				AMB	AMB	22 05 33.0	
	comp=Z,60nm,0.9s						
YSS				AMB	AMB	22 05 33.0	
	comp=Z,120nm,0.9s						
YSS				AMB	AMB	22 05 37.4	
	comp=Z,450nm,3.0s						
YSS				eS	**S**	**22 06 18.6**	**+0.2**
YSS				A	A	22 06 19.7	
	comp=Z,20nm,0.7s						
YSS				A	A	22 06 30.0	
	comp=Z,500nm,4.0s						
YSS				A	A	22 06 30.0	
	comp=Z,400nm,4.0s						
YSS	**Yuzh-Sakhalins**	**2.97**	**272**	⇑iPN	**Pn**	**22 05 32.6**	**+1.5**
YSS				pmax	pmax		
	comp=Z,100nm,0.7s						
YSS				pmax	pmax		
	comp=N,50nm,0.6s						
YSS				pmax	pmax		
	comp=E,60nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**3.04**	**197**	eP	**Pn**	**22 05 32.0**	**+0.1**
YUK				AMB	AMB	22 05 34.3	
	comp=E,50nm,0.2s						
YUK				AMB	AMB	22 05 34.7	
	comp=E,700nm,2.0s						
YUK				eS	**S**	**22 06 19.0**	**-0.6**
YUK				A	A	22 06 26.3	
	comp=E,200nm,0.4s						
YUK				A	A	22 06 26.3	
	comp=E,140nm,0.4s						
YUK				A	A	22 06 29.0	
	comp=E,2μm,3.0s						
YUK				A	A	22 06 29.0	
	comp=E,2μm,3.0s						
YUK	**Yuzh-Kuril'sk**	**3.04**	**197**	ePN	**Pn**	**22 05 33.7**	**+1.8**
YUK				eS	**S**	**22 06 20.8**	**+1.2**
YUK				pmax	pmax		
	comp=Z,48nm,0.2s						
YUK				smax	smax		
	comp=E,135nm,0.3s						
YUK				smax	smax		
	comp=N,203nm,0.5s						
SHO	**Shikotan**	**3.08**	**184**	eP	**Pn**	**22 05 30.2**	**-2.1**
SHO				AMB	AMB	22 05 32.4	
	comp=N,30nm,0.2s						
SHO				AMB	AMB	22 05 32.4	
	comp=N,20nm,0.2s						
SHO				AMB	AMB	22 05 32.4	
	comp=N,40nm,0.2s						
SHO				AMB	AMB	22 05 33.5	
	comp=N,1μm,4.0s						
SHO				eS	**S**	**22 06 15.1**	**-5.3**
SHO				A	A	22 06 16.6	
	comp=N,260nm,0.4s						
SHO				A	A	22 06 19.0	
	comp=N,2μm,4.0s						
SHO				A	A	22 06 19.0	
	comp=N,2μm,4.0s						
SHO	**Shikotan**	**3.08**	**184**	ePN	**Pn**	**22 05 30.2**	**-2.1**
SHO				pmax	pmax		
	comp=N,19nm,0.2s						
SHO				pmax	pmax		
	comp=E,19nm,0.2s						
SHO				pmax	pmax		
	comp=Z,36nm,0.2s						
JKA	**Kamikawa-asahi**	**4.24**	**230**	eP	**Pn**	**22 05 45.1**	**+1.4**
ASAJ	**Asahikawa**	**4.24**	**230**	P	**Pn**	**22 05 45.1**	**+1.4**
	comp=Z,2.9nm,0.3s,baz=66,slow=13,SNR=8.2						
TYV	**Tymovskoe**	**4.89**	**325**	eP	**Pn**	**22 05 51.0**	**+0.6**
TYV				AMB	AMB	22 05 51.2	
	comp=Z,30nm,0.7s						
TYV				AMB	AMB	22 05 52.9	
	comp=Z,500nm,4.0s						
TYV				eS	**S**	**22 06 56.5**	**+2.9**
TYV				A	A	22 06 59.8	
	comp=Z,720nm,5.0s						
TYV				A	A	22 06 59.8	
	comp=Z,790nm,5.0s						
TYV				A	A	22 07 01.7	
	comp=Z,20nm,0.6s						
TYV				A	A	22 07 01.7	
	comp=Z,30nm,0.6s						
TYV	**Tymovskoe**	**4.89**	**325**	ePN	**Pn**	**22 05 50.2**	**-0.2**
TYV				eS	**S**	**22 06 48.4**	**-5.2**
TYV				pmax	pmax		
	comp=Z,13nm,1.2s						
TYV				smax	smax		
	comp=E,9.0nm,1.7s						
MYR	**Moyori**	**5.39**	**212**	eP	**Pn**	**22 05 54.0**	**-2.2**
ERM	**Erimo**	**5.68**	**211**	eP	**Pn**	**22 05 58.8**	**-0.6**
ERM	**Erimo**	**5.68**	**211**	⇓ePN	**Pn**	**22 05 58.8**	**-0.6**
ERM				pmax	pmax		
	comp=Z,60nm,1.3s						
KLR	**Kul'dur**	**10.52**	**288**	eP	**P**	**22 06 58.0**	**+0.4**
KLR	**Kul'dur**	**10.52**	**288**	⇓iPN	**P**	**22 06 58.0**	**+0.4**
KLR	**Kul'dur**	**10.52**	**288**	P	**Pn**	**22 06 56.6**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=117,slow=15,SNR=12						
USRK	**Ussuriysk Ar.**	**10.94**	**261**	P	**P**	**22 07 02.4**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=64,slow=13,SNR=11						
EKMR	**Ekimchan**	**10.96**	**309**	eP	**P**	**22 07 03.0**	**+0.5**
MJA0	**Matsu Arr-Jizo**	**12.31**	**216**	ePN	**Pn**	**22 07 19.1**	**+1.2**
MJAR	**Matsushiro Arr**	**12.32**	**216**	eP	**P**	**22 07 17.1**	**-0.7**
MJAR	**Matsushiro Arr**	**12.32**	**216**	P	**Pn**	**22 07 19.1**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=11,slow=11,SNR=14						
KROS	**Kirovskiy**	**14.75**	**308**	eP	**P**	**22 07 43.2**	**-1.1**
KROS				AMB	AMB	22 07 44.2	
	comp=Z,10.0nm,0.8s						
KSRS	**Korea Array**	**17.04**	**243**	P	**P**	**22 08 10.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=50,slow=11,SNR=5.4						
JNU	**Nakatsue**	**18.52**	**228**	P	**P**	**22 08 27.1**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=232,slow=4.2,SNR=4.2						
ULN	**Ulaanbaatar**	**26.91**	**287**	eP	**P**	**22 09 43.8**	**+0.9**
ULN	**Ulaanbaatar**	**26.91**	**287**	⇓eP	**P**	**22 09 43.8**	**+0.9**
SONM	**Songino Array**	**27.34**	**287**	eP	**P**	**22 09 46.6**	**-0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM	**Songino Array**	**27.34**	**287**	P	**P**	**22 09 44.9**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=82,slow=7.6,SNR=4.9						
DGZ	**Jazzator, Alta**	**38.86**	**297**	c iP	**P**	**22 11 26.0**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**38.97**	**39**	eP	**P**	**22 11 26.1**	**+0.2**
ILAR	**Eielson Array**	**38.97**	**39**	eP	**P**	**22 11 26.2**	**+0.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**38.97**	**39**	P	**P**	**22 11 25.5**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=270,slow=5.7,SNR=6.4						
ZALV	**Zalesovo Beam**	**39.11**	**304**	eP	**P**	**22 11 27.4**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**39.11**	**304**	P	**P**	**22 11 24.7**	**-2.4**
	comp=Z,0.7nm,0.3s,baz=80,slow=7.0,SNR=5.1						
MKAR	**Makanchi Array**	**43.14**	**295**	P	**P**	**22 11 59.3**	**-0.5**
	comp=Z,3.3nm,0.5s,baz=70,slow=6.9,SNR=68						
INK	**Inuvik**	**43.69**	**32**	P	**P**	**22 12 04.3**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=305,slow=5.5,SNR=4.7						
KURK	**Kurchatov**	**43.77**	**301**	eP	**P**	**22 12 03.7**	**-0.9**
KURK	**Kurchatov**	**43.77**	**301**	d iP	**P**	**22 12 03.7**	**-0.9**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRVK	**Borovoye**	**47.53**	**307**	eP	**P**	**22 12 33.2**	**-0.6**
BRVK	**Borovoye**	**47.53**	**307**	⇑eP	**P**	**22 12 33.2**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AAK	**Ala-Archa**	**50.00**	**293**	eP	**P**	**22 12 53.1**	**+0.4**
AAK	**Ala-Archa**	**50.00**	**293**	⇑eP	**P**	**22 12 53.1**	**+0.4**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JIRN	**Jiri**	**50.81**	**270**	eP	**P**	**22 12 59.7**	**+0.6**
	comp=Z,7.7nm,0.3s						
GUN	**Gumba**	**50.86**	**271**	eP	**P**	**22 12 59.6**	**+0.1**
	comp=Z,2.1nm,0.2s						
RAMN	**Ramite**	**50.98**	**269**	eP	**P**	**22 13 00.5**	**+0.2**
	comp=Z,11nm,0.5s						
PKI	**Pulchoki**	**51.40**	**271**	eP	**P**	**22 13 03.4**	**0.0**
	comp=Z,2.6nm,0.5s						
PKIN	**Phulchoki**	**51.41**	**271**	eP	**P**	**22 13 03.4**	**0.0**
DMN	**Daman**	**51.58**	**271**	eP	**P**	**22 13 05.0**	**+0.3**
	comp=Z,4.0nm,0.5s						
ARU	**Arti**	**52.02**	**315**	c iP	**P**	**22 13 06.0**	**-1.1**
ARU						22 14 12.1	
ARU						22 15 06.4	
ARU				SS	**SS**	**22 23 40.5**	**-4.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
DANN	**Dangsing**	**52.04**	**273**	eP	**P**	**22 13 08.7**	**+0.6**
	comp=Z,4.0nm,0.2s						
KOLN	**Koldanda**	**52.51**	**272**	eP	**P**	**22 13 11.8**	**+0.4**
	comp=Z,1.9nm,0.3s						
PYUN	**Piuthan**	**52.72**	**273**	eP	**P**	**22 13 13.0**	**+0.1**
YKA	**Yellowknife Ar**	**53.19**	**35**	eP	**P**	**22 13 15.5**	**0.0**
YKA	**Yellowknife Ar**	**53.19**	**35**	P	**P**	**22 13 15.9**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=297,slow=6.7,SNR=3.5						
ARCES	**ARCESS Array B**	**56.24**	**339**	P	**P**	**22 13 36.1**	**-1.0**
	comp=Z,4.3nm,1.1s,baz=50,slow=7.2,SNR=3.0						
FINES	**FINESS Array B**	**62.02**	**332**	P	**P**	**22 14 15.5**	**-0.9**
	comp=Z,3.1nm,0.5s,baz=39,slow=7.7,SNR=51						
NVAR	**Mina Array Bea**	**65.94**	**59**	P	**P**	**22 14 43.5**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=289,slow=5.3,SNR=5.0						
NB2	**NORSAR Subarra**	**66.61**	**338**	P	**P**	**22 14 45.0**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**66.61**	**338**	P	**P**	**22 14 45.4**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=31,slow=6.8,SNR=7.8						
WRA	**Warramunga Arr**	**67.56**	**193**	P	**P**	**22 14 53.0**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=11,slow=6.4,SNR=2.6						
KBZ	**Khabaz**	**67.67**	**311**	P	**P**	**22 14 53.7**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=85,slow=3.0,SNR=8.9						
PALK	**Pallekele**	**68.66**	**257**	i P	**P**	**22 14 57.8**	**-1.6**
AKASG	**Malin Array Be**	**68.99**	**323**	P	**P**	**22 15 00.0**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=37,slow=6.2,SNR=7.9						
ASAR	**Alice Springs**	**71.29**	**193**	P	**P**	**22 15 17.3**	**+2.3**
	comp=Z,0.2nm,0.7s,baz=7.3,slow=6.0,SNR=3.9						
BRTR	**Keskin Array B**	**75.32**	**313**	i P	**P**	**22 15 39.9**	**+1.5**
TXAR	**Lajitas Array**	**80.92**	**57**	P	**P**	**22 16 10.8**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=278,slow=3.2,SNR=9.1						

IDC 02 22:07:59.8±3.4**, 10.°44S**×**166.°23E, h0^{km}, mb3.8**/5**,**
mb1 4.0/5**, mb1mx3.6**/39**, mbtmp3.7**/5**, MS3.6**/2**, Ms1 3.6**/2**,**
ms1mx3.0/36**, Error ellipse: s-maj=142.7km**
s-min=28.5km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**28.75**	**1**	T	T	22 44 14.2	
	baz=181,slow=76,SNR=9.3						
H11S3	**WAKE ISLAND Hy**	**28.76**	**1**	T	T	22 44 15.1	
	baz=181,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**28.77**	**1**	T	T	22 44 13.8	
	baz=181,slow=76,SNR=9.3						
WRA	**Warramunga Arr**	**32.14**	**249**	P	P	22 14 29.4	0.0
	2.1nm,1.0s,baz=77,slow=9.0,SNR=4.5						
ASAR	**Alice Springs**	**33.49**	**243**	P	P	22 14 40.2	-1.0
	0.7nm,0.9s,baz=73,slow=9.1,SNR=5.1						
RAR	**Rarotonga**	**34.34**	**112**	LR	LR	22 27 39.8	
	comp=Z,78nm,19.1s,baz=158,slow=34						
FITZ	**Fitzroy Crossi**	**40.00**	**254**	P	P	22 15 37.1	+0.4
	1.5nm,0.8s,baz=95,slow=11,SNR=4.3						
ILAR	**Eielson Array**	**82.79**	**18**	P	P	22 20 25.4	-0.2
	0.4nm,0.7s,baz=227,slow=4.3,SNR=9.9						

ZALV	Zalesovo Beam	93.35	324	LR	LR	23 03 44.3	
	comp=Z,26nm,18.3s,baz=261,slow=36						
MKAR	Makanchi Array	93.41	317	P	P	22 21 17.7	+0.5
	0.3nm,0.5s,baz=88,slow=5.1,SNR=7.4						

IDC 02 22:16:34.6±1.6**, 3°.24S**×**127°.57E, h0^{km}, mb3.8**/2**, mb1 4.1**/4**, mb1mx3.6**/46**, mbtmp3.9**/4**, ML3.6**/2**, Error ellipse: s-maj=35.0km s-min=25.9km az=83.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.38	58	Pn	Pn	22 17 43.8	+1.3
	4.8nm,0.3s,baz=218,slow=14,SNR=15						
SIJI				Sn	Sn	22 18 35.9	+1.7
	2.3nm,0.3s,baz=323,slow=23,SNR=6.9						
WRA	Warramunga Arr	17.87	159	P	Pn	22 20 43.7	-1.2
	0.1nm,0.3s,baz=342,slow=12,SNR=10						
ASAR	Alice Springs	21.21	164	P	P	22 21 22.2	0.0
	5.9nm,0.6s,baz=344,slow=11,SNR=96						
MKAR	Makanchi Array	63.77	327	P	P	22 27 08.4	-0.1
	0.5nm,0.8s,baz=132,slow=7.2,SNR=5.2						

IDC 02 22:17:59.1±3.6**, 10°.38S**×**166°.13E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.6**/45**, mbtmp3.8**/4**, Error ellipse: s-maj=149.6km s-min=33.1km az=135.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.07	249	P	P	22 24 28.0	0.0
	1.7nm,1.0s,baz=78,slow=9.0,SNR=4.7						
ASAR	Alice Springs	33.43	243	P	P	22 24 39.5	-0.4
	0.8nm,0.9s,baz=79,slow=9.0,SNR=5.8						
ILAR	Eielson Array	82.77	18	P	P	22 30 24.4	-0.2
	0.5nm,1.0s,baz=231,slow=5.7,SNR=4.6						
MKAR	Makanchi Array	93.30	317	P	P	22 31 16.4	+0.5
	0.5nm,0.7s,baz=90,slow=6.4,SNR=4.9						

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*IDC **02** 22:31:54.5±0.5, 11°.01S×165°.35E, h0^{km}, mb4.4/20, mb1 4.6/22, mb1mx4.4/38, mbtmp4.4/22, ML4.8/2, Error ellipse: s-maj=17.7km s-min=13.6km az=96.0*

*ISCJB **02** 22:31:57.3±0.3, 11°.15S±0°.05×165°.32E±0°.05, h30^{km}, mb4.5/36, MS4.3/1, Error ellipse: s-maj=8.0km s-min=6.3km az=147.0*

*NEIC **02** 22:31:58.3±2.9, 11°.06S×165°.34E, h24^{km}±20^{km}, mb4.7/17, Error ellipse: s-maj=9.6km s-min=6.6km az=49.0*

ISC 02 22:31:59.4±0.4**, 11°.09S**±0°.07×**165°.40E**±0°.07**, h30^{km}, n65, σ1^{s}55**/66**, mb4.5**/36**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.61	287	eP	Pn	22 33 20.0	-0.9
HNR	Honiara	5.61	287	eP	Sn	22 34 24.0	-0.4
HNR	Honiara	5.61	287	ePn	Pn	22 33 20.4	-0.5
HNR				Sn	Sn	22 34 24.7	+0.2
HNR	Honiara	5.61	287	Pn	Pn	22 33 18.9	-2.0
	32nm,0.3s,baz=229,slow=4.9,SNR=6.8						
HNR				Sn	Sn	22 34 24.7	+0.2
	12nm,0.3s,baz=76,slow=17,SNR=6.1						
MARNC	Mare, Loyalty	10.63	167	ePn	Pn	22 34 23.7	-6.0
DZM	Mont Dzumac	10.96	175	Pn	Pn	22 34 33.4	-1.0
	7.0nm,0.3s,baz=13,slow=17,SNR=66						
OUENC	Ouen Island, N	11.35	173	ePn	Pn	22 34 38.8	-0.7
PINNC	Pines Island,	11.62	171	ePn	Pn	22 34 43.5	+0.2
EIDS	Eidsvold	19.63	222	eP	P	22 36 25.6	-0.1
	21nm,0.9s						
EIDS				ePcP	PcP	22 40 45.1	+0.4
MANU	Manus Island	20.03	295	eP	Pn	22 36 31.6	-0.4
	197nm,1.0s						
CTA	Charters Tower	20.48	242	P	P	22 36 34.1	-0.8
	19nm,0.9s,baz=71,slow=13,SNR=15						
CTAO	Charters Tower	20.48	242	eP	P	22 36 33.5	-1.4
	28nm,1.0s						
COEN	Coen	21.88	260	eP	P	22 36 49.2	-0.9
	38nm,1.1s						
URZ	Urewera	29.01	161	eP	P	22 37 57.5	+0.8
	23nm,1.0s						
URZ	Urewera	29.01	161	P	P	22 37 56.8	+0.1
	16nm,0.9s,baz=28,slow=6.2,SNR=6.9						
H11S2	WAKE ISLAND Hy	29.43	3	T	T	23 08 27.1	
	baz=182,slow=76,SNR=9.5						
H11S3	WAKE ISLAND Hy	29.43	2	T	T	23 08 33.7	
	baz=182,slow=76,SNR=6.6						
H11S1	WAKE ISLAND Hy	29.44	3	T	T	23 08 33.4	
	baz=182,slow=76,SNR=6.2						
BKZ	Black Stump Fm	29.65	162	eP	P	22 38 03.4	+1.0
	23nm,0.7s						
STKA	Stephens Creek	30.17	223	eP	P	22 38 07.0	-0.1
	1.2nm,0.8s						
STKA	Stephens Creek	30.17	223	P	P	22 38 06.0	-1.0
	5.1nm,0.8s,baz=32,slow=8.5,SNR=14						
WB2	Warramunga Arr	31.14	250	eP	P	22 38 14.7	-1.0
WRAB	Tennant Creek	31.14	250	eP	P	22 38 14.5	-1.3
	22nm,1.3s						
WRA	Warramunga Arr	31.15	250	P	P	22 38 14.4	-1.5
	7.5nm,0.9s,baz=79,slow=9.1,SNR=34						
THZ	Tophouse	31.25	169	eP	P	22 38 17.8	+1.3
	16nm,0.7s						
LTZ	Lake Taylor	32.13	170	eP	P	22 38 25.0	+0.8
	22nm,0.8s						
AS01	Alice Springs	32.42	243	eP	P	22 38 25.1	-2.0
AS31	Alice Springs	32.47	243	eP	P	22 38 25.3	-2.1
	1.9nm,0.9s						
ASAR	Alice Springs	32.47	243	P	P	22 38 26.1	-1.4
	5.4nm,0.9s,baz=75,slow=9.4,SNR=43						
ASAR				PcP	PcP	22 41 14.4	+0.2
	1.1nm,0.6s,baz=78,slow=2.3,SNR=5.6						
RPZ	Rata Peaks	32.87	172	eP	P	22 38 30.2	-0.4
	14nm,0.9s						
RPZ	Rata Peaks	32.87	172	P	P	22 38 30.1	-0.6
	12nm,0.7s,baz=94,slow=0.1,SNR=7.7						
FITZ	Fitzroy Crossi	39.04	255	eP	P	22 39 22.5	-1.3
	5.6nm,0.8s						
MJAR	Matsushiro Arr	53.86	333	P	P	22 41 18.0	-1.8
	1.9nm,0.7s,baz=177,slow=7.6,SNR=5.8						
JNU	Nakatsue	54.92	324	P	P	22 41 25.6	-2.0
	5.2nm,0.8s,baz=135,slow=19,SNR=3.2						
USRK	Ussuriysk Ar.	62.84	334	P	P	22 42 21.1	-1.3
	0.7nm,0.5s,baz=130,slow=8.5,SNR=2.9						
PETK	Petropavlovsk-	64.28	355	P	P	22 42 31.1	-0.7
	8.2nm,1.1s,baz=157,slow=7.8,SNR=2.4						
VNDA	Vanda	66.44	181	P	P	22 42 47.5	+2.1
	3.7nm,1.0s,baz=40,slow=4.9,SNR=6.2						
KMI	Kunming	70.86	302	P	P	22 43 17.1	+3.0
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HHC	Hu-ho-hao-te	71.65	320	eP	P	22 43 21.5	+3.0
HHC				pmax	pmax		
	comp=Z,5.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,200nm,6.4s						
CMAR	Chiang Mai Arr	71.82	294	P	P	22 43 20.9	+1.0
	comp=Z,0.7nm,0.4s,baz=134,slow=4.5,SNR=5.4						
CD2	Chengdu	72.36	307	eP	P	22 43 24.8	+1.9
LZH	Lanzhou	74.54	312	eP	P	22 43 41.5	+5.8
LZH				pP	pP	22 43 44.9	+1.0
LZH				sP	sP	22 43 46.8	-0.1
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
ULN	Ulaanbaatar	78.14	324	eP	P	22 43 56.0	+0.1
	comp=Z,4.3nm,0.8s						
SONM	Songino Array	78.50	324	P	P	22 43 57.9	0.0
	comp=Z,1.3nm,0.8s,baz=143,slow=7.4,SNR=6.9						
GTA	Gaotai	78.85	314	eP	P	22 44 00.8	+0.8
GTA				pP	pP	22 44 05.1	-3.3
GTA				sP	PcP	22 44 08.0	-0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	78.91	180	eP	P	22 44 00.1	+0.2
	comp=Z,5.9nm,0.9s						
BILL	Bilibino	78.93	0	eP	P	22 43 59.5	-0.1
	comp=Z,7.1nm,0.9s						
COLA	College	83.44	18	eP	P	22 44 23.7	+0.1
	comp=Z,6.6nm,0.8s						
ILAR	Eielson Array	83.67	19	P	P	22 44 24.6	-0.2
	comp=Z,2.6nm,0.6s,baz=236,slow=5.2,SNR=54						
CMB	Columbia Colle	84.63	50	eP	P	22 44 29.5	-0.9
	comp=Z,20nm,0.8s						
TIXI	Tiksi	86.07	349	P	P	22 44 36.0	-0.8
	comp=Z,0.5nm,0.3s,baz=150,slow=3.6,SNR=4.0						
NVAR	Mina Array Bea	86.31	50	P	P	22 44 39.0	0.0
	comp=Z,2.9nm,0.8s,baz=230,slow=8.0,SNR=22						
WMQ	Urumqi	88.89	315	eP	P	22 44 55.1	+4.0
WMQ				sP	sP	22 45 01.1	-1.6
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.1s						
WMQ				LR	LR		
	comp=N,98nm,18.7s						
WMQ				LR	LR		
	comp=E,76nm,17.1s						
WMQ				LR	LR		
	comp=Z,72nm,17.9s						
SYO	Syowa Base	91.64	197⇑	ePcP	PcP	22 45 05.4	+1.2
MKAR	Makanchi Array	93.33	317	P	P	22 45 11.1	-0.4
	comp=Z,1.1nm,0.7s,baz=92,slow=6.0,SNR=14						
MKAR				PKKPbc	PKKPbc	23 02 20.0	-0.6
	comp=Z,0.4nm,0.7s,baz=270,slow=3.1,SNR=5.3						
ZALV	Zalesovo Beam	93.40	324	P	P	22 45 09.8	-1.9
	comp=Z,0.9nm,0.8s,baz=98,slow=5.1,SNR=3.7						
YKA	Yellowknife Ar	95.17	27	P	P	22 45 18.0	-1.6
	comp=Z,0.8nm,0.8s,baz=255,slow=4.6,SNR=14						
TXAR	Lajitas Array	96.15	61	P	P	22 45 24.1	-0.9
	comp=Z,0.3nm,0.7s,baz=212,slow=6.5,SNR=3.8						
KSH	Kashi	96.52	309	P	P	22 45 30.2	+3.7
KSH				sP	pwP	22 45 38.8	-0.7
KSH				PP	PP	22 49 27.3	+6.3
KSH				pmax	pmax		
	comp=Z,320nm,5.0s						
ARCES	ARCESS Array B	116.30	345	PKP	PKPdf	22 50 39.4	-0.1
	comp=Z,1.3nm,0.6s,baz=45,slow=0.3,SNR=11						
FINES	FINESS Array B	121.69	338	PKP	PKPdf	22 50 49.0	-1.0
	comp=Z,1.4nm,0.9s,baz=270,slow=0.4,SNR=5.3						
NOA	NORSAR Array B	126.66	345	PKP	PKPdf	22 50 59.4	-0.3
	comp=Z,0.9nm,0.8s,baz=89,slow=2.0,SNR=3.6						
GERES	GERESS Array B	135.60	333	PKP	PKiKP	22 51 17.7	-0.8
	comp=Z,0.2nm,0.5s,baz=120,slow=4.8,SNR=3.5						
KEST	Kesra	147.25	322	PKPbc	PKPbc	22 51 40.9	+0.4
	comp=Z,8.3nm,0.9s,baz=224,slow=1.4,SNR=5.7						
TORD	Torodi Ar. Bea	163.94	279	PKP	PKPdf	22 52 00.6	-0.2
	comp=Z,1.0nm,0.9s,baz=356,slow=4.5,SNR=5.8						
TORD				PKPab	PKPab	22 52 53.4	-0.3
	comp=Z,1.1nm,1.0s,baz=95,slow=6.5,SNR=4.0						

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*IDC **02** 22:36:00.6±0.9, 10°.60S×166°.58E, h0^{km}, mb4.3/13, mb1 4.4/14, mb1mx4.3/31, mbtmp4.2/14, MS4.1/11, Ms1 4.2/11, ms1mx3.7/31, Error ellipse: s-maj=32.1km s-min=17.4km az=133.0*

*NEIC **02** 22:36:02.1±0.2, 10°.59S×166°.53E, h10^{km}, mb4.7/35, Error ellipse: s-maj=9.0km s-min=5.1km az=141.0*

*ISCJB **02** 22:36:04.5±0.2, 10°.68S±0°.06×166°.46E±0°.05, h36^{km}, mb4.5/60, MS4.2/10, Error ellipse: s-maj=9.3km s-min=6.4km az=151.9*

ISC 02 22:36:06.0±0.5**, 10°.66S**±0°.09×**166°.53E**±0°.10**, h36^{km}, n98, σ0^{s}94**/84**, mb4.6**/60**, MS4.1**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.60	280	LR	LR	22 40 14.0	
	comp=Z,2µm,21.1s,baz=118,slow=38						
DZM	Mont Dzumac	11.35	180	ePn	Pn	22 38 37.8	-8.0
	50nm,1.2s						
DZM				eLR	LR	22 41 08.2	
	comp=Z,1µm,26.6s						
DZM	Mont Dzumac	11.35	180	Pn	Pn	22 38 45.5	-0.4
	baz=47,slow=15,SNR=2.0						
PINNC	Pines Island,	11.92	176	ePn	Pn	22 38 58.4	+4.9
EIDS	Eidsvold	20.70	223	eP	Pn	22 40 44.5	-1.3
	23nm,0.8s						
CTA	Charters Tower	21.66	242	P	P	22 40 54.3	+0.6
	4.3nm,0.8s,baz=76,slow=11,SNR=4.1						
CTAO	Charters Tower	21.66	242	eP	P	22 40 55.5	+1.8
	21nm,1.1s						
ARMA	Armidale	24.06	213	eP	P	22 41 16.1	-2.1
OUZ	Omahuta	25.29	166	eP	P	22 41 29.9	+0.9
	20nm,1.2s						
H11S2	WAKE ISLAND Hy	28.96	0	T	T	23 12 20.7	
	baz=181,slow=76,SNR=216						
H11S3	WAKE ISLAND Hy	28.96	0	T	T	23 12 18.5	
	baz=181,slow=76,SNR=210						
H11S1	WAKE ISLAND Hy	28.98	0	T	T	23 12 19.6	
	baz=181,slow=76,SNR=229						
STKA	Stephens Creek	31.25	224	P	P	22 42 23.4	+0.9
	0.4nm,0.4s,baz=294,slow=10.0,SNR=2.1						
STKA				LR	LR	22 54 08.5	
	comp=Z,662nm,19.4s,baz=35,slow=35						
WB2	Warramunga Arr	32.33	250	eP	P	22 42 31.8	-0.3
	24nm,1.1s						
WRAB	Tennant Creek	32.33	250	eP	P	22 42 31.7	-0.4
WRA	Warramunga Arr	32.34	250	P	P	22 42 31.9	-0.3
	8.3nm,1.0s,baz=79,slow=8.8,SNR=14						
WRA				LR	LR	22 55 44.8	
	comp=Z,644nm,18.1s,baz=60,slow=36						
AS01	Alice Springs	33.62	243	eP	P	22 42 41.9	-1.4
AS31	Alice Springs	33.66	243	eP	P	22 42 43.5	-0.2
	2.6nm,0.8s						
ASAR	Alice Springs	33.66	243	P	P	22 42 43.2	-0.5
	5.2nm,0.8s,baz=74,slow=9.7,SNR=15						
ASAR				LR	LR	22 55 30.4	
	comp=Z,466nm,20.2s,baz=76,slow=35						
FITZ	Fitzroy Crossi	40.23	255	eP	P	22 43 38.2	-1.4
	6.9nm,0.7s						
PPT	Papeete	43.04	104	LR	LR	22 59 01.7	
	comp=Z,192nm,18.7s,baz=196,slow=32						
PPT2	Papeete2	43.04	104	eS	S	22 50 28.8	+2.4
	496nm,26.8s						
PPT2				eLR	LR	22 55 51.9	
	comp=Z,251nm,22.0s						
TBI	Tubuai	43.76	113	eS	S	22 50 36.3	-0.4
	461nm,31.0s						
TBI				eLR	LR	22 56 14.0	
	comp=Z,338nm,29.8s						
KSRS	Korea Array	60.00	325	P	P	22 46 09.4	+0.4
	3.0nm,1.1s,baz=153,slow=8.4,SNR=4.2						
KSAR	Wonju Array Be	60.01	325	P	P	22 46 09.4	+0.3
NJ2	Nanjing	62.29	315	eP	P	22 46 24.2	-0.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CN2	Changchun	65.81	329	eP	P	22 46 48.6	+1.0
VNDA	Vanda	66.89	181	LR	LR	23 12 03.2	
	comp=Z,85nm,19.2s,baz=306,slow=32						
BJT	Baijiatuau	68.66	321	eP	P	22 47 06.2	+0.4
	comp=Z,8.2nm,0.9s						
XAN	Xi'an	70.43	312	P	P	22 47 17.4	+0.4
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,88nm,6.0s						
XAN	Xi'an	70.43	312	eP	P	22 47 16.5	-0.5
	comp=Z,5.8nm,0.8s						
MA2	Magadan	71.14	352	LR	LR	23 15 22.3	
	comp=Z,70nm,18.2s,baz=114,slow=33						
KMI	Kunming	71.58	301	P	P	22 47 26.0	+1.7
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	Hu-ho-hao-te	72.04	319	eP	P	22 47 28.3	+1.7
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,200nm,6.9s						
CM01	Chiang Mai Arr	72.64	293	eP	P	22 47 29.9	-0.6
CMAR	Chiang Mai Arr	72.67	293	P	P	22 47 31.6	+1.0
	comp=Z,1.4nm,0.9s,baz=106,slow=4.8,SNR=9.3						
LZH	Lanzhou	75.07	312	eP	P	22 47 46.7	+2.1
LZH				pP	pP	22 47 50.5	-4.5
LZH				sP	PcP	22 47 52.7	-5.5
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
ULN	Ulaanbaatar	78.44	324	eP	P	22 48 03.5	+0.1
	comp=Z,8.9nm,1.0s						
BILL	Bilibino	78.49	360	eP	P	22 48 03.4	+0.5
	comp=Z,12nm,1.1s						
SONM	Songino Array	78.81	323	P	P	22 48 05.6	+0.2
	comp=Z,2.7nm,1.0s,baz=134,slow=5.8,SNR=9.5						
SONA1	Songino Array	78.81	323	eP	P	22 48 04.4	-1.0
GTA	Gaotai	79.35	314	eP	P	22 48 08.7	+0.2
GTA				pP	PcP	22 48 13.1	-3.5
GTA				sP	pP	22 48 16.3	-2.7
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CAST	Castle Rocks	80.34	18	eP	P	22 48 14.1	+0.9
	comp=Z,3.9nm,1.0s						
BRDH	Bariadhala	80.43	295	LR	LR	23 22 06.6	
	comp=Z,48nm,21.0s,baz=160,slow=34						
TLY	Talaya	82.23	326	eP	P	22 48 23.6	+0.1
	comp=Z,11nm,0.8s						
MDM	Murphy Dome	82.62	18	eP	P	22 48 26.3	+1.0
	comp=Z,6.0nm,1.1s						
HDA	Harding Lake	82.63	19	eP	P	22 48 24.6	-0.7
	comp=Z,13nm,1.1s						
IL1	Eielson Array	82.90	18	eP	P	22 48 26.5	-0.1
ILAR	Eielson Array	82.90	18	P	P	22 48 26.8	+0.1
	comp=Z,2.3nm,0.8s,baz=242,slow=4.6,SNR=16						
ILAR				LR	LR	23 19 35.3	
	comp=Z,57nm,20.6s,baz=168,slow=32						
ILB	Eielson Array	82.90	18	eP	P	22 48 26.0	-0.7
SCRK	Sand Creek	83.29	20	eP	P	22 48 29.8	+0.9
	comp=Z,3.8nm,0.8s						
AFDM	Forest Hills D	83.36	48	eP	P	22 48 30.5	+0.8
	comp=Z,5.1nm,1.2s						
CMB	Columbia Colle	83.50	49	eP	P	22 48 30.5	+0.1
	comp=Z,3.9nm,1.1s						
MDPB	Devils Postpil	84.36	50	eP	P	22 48 35.6	+0.5
	comp=Z,6.8nm,1.1s						
WAKR	Walker	84.36	49	eP	P	22 48 35.6	+0.6
	comp=Z,4.8nm,1.1s						
OMMB	Old Mammoth Mi	84.41	50	eP	P	22 48 36.3	+0.9
	comp=Z,3.7nm,1.1s						
PAHR	Pah Rah Range	84.78	48	eP	P	22 48 37.4	+0.4
	comp=Z,3.2nm,1.1s						
DAC	Darwin (Calif)	85.09	52	eP	P	22 48 38.3	-0.4
	comp=Z,2.2nm,1.1s						
NV01	Mina Array Sit	85.18	50	eP	P	22 48 38.3	-0.9
NVAR	Mina Array Bea	85.18	50	P	P	22 48 39.6	+0.4
	comp=Z,2.6nm,1.0s,baz=236,slow=7.2,SNR=10						
NVAR				LR	LR	23 21 18.1	
	comp=Z,219nm,18.6s,baz=232,slow=32						
NV11	Mina Array Sit	85.30	50	eP	P	22 48 39.5	-0.1
	comp=Z,0.4nm,1.1s						
KVN	Kaiserville	85.52	49	eP	P	22 48 40.7	-0.2
	comp=Z,2.9nm,1.1s						
TIXI	Tiksi	85.86	349	eP	P	22 48 41.9	+0.4
	comp=Z,4.9nm,1.1s						
G08A	Pilot Rock	86.83	43	eP	P	22 48 46.4	-0.7
	comp=Z,0.2nm,0.6s						
LCMT	Little Creek M	88.65	52	eP	P	22 48 56.4	+0.4
	comp=Z,2.5nm,1.0s						
CCUT	Cedar City	88.69	52	eP	P	22 48 57.5	+1.2
	comp=Z,3.6nm,1.1s						
SZCU	Shurtz Canyon	88.92	52	eP	P	22 48 55.1	-2.2
	comp=Z,1.7nm,1.0s						
U15A	North Rim	89.25	53	eP	P	22 48 59.5	+0.5
	comp=Z,5.8nm,1.1s						
WMQ	Urumqi	89.37	315	eP	P	22 48 59.7	+0.6
WMQ				pmax	pmax		
	comp=Z,14nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,340nm,5.3s						
X16A	Lo Mia Camp, P	89.46	55	eP	P	22 49 00.7	+0.7
	comp=Z,4.3nm,1.1s						
PKCU	Pink Cliffs	89.48	52	eP	P	22 49 00.3	+0.2
	comp=Z,1.7nm,0.9s						
TUC	Tucson	89.53	57	eP	P	22 48 59.1	-1.0
	comp=Z,4.3nm,1.0s						
MTPU	Mount Pierson	89.72	51	eP	P	22 49 01.6	+0.4
	comp=Z,7.1nm,1.2s						
WUAZ	Wupatki	89.77	54	eP	P	22 49 00.9	-0.4
	comp=Z,8.2nm,1.1s						
BGU	Big Grassy Mou	89.78	48	eP	P	22 49 01.2	0.0
	comp=Z,0.5nm,0.7s						
MSU	Marysvale	89.84	51	eP	P	22 49 00.8	-0.8
HVU	Hansel Valley	90.17	48	eP	P	22 49 03.1	0.0
	comp=Z,3.9nm,1.1s						
X18A	Snowflake	90.69	55	eP	P	22 49 05.4	-0.2
	comp=Z,5.2nm,0.9s						
Q16A	Castle Valley	90.69	51	eP	P	22 49 04.8	-0.8
JLU	Jordanelle	90.87	49	eP	P	22 49 04.9	-1.5
	comp=Z,3.3nm,1.0s						
BOZ	Bozeman (W)	91.88	44	eP	P	22 49 09.9	-1.0
	comp=Z,2.0nm,1.0s						
PDAR	Pinedale Array	92.72	47	P	P	22 49 15.2	+0.3
	comp=Z,1.3nm,1.1s,baz=251,slow=4.5,SNR=3.7						
ZAA0	Zalesovo Array	93.69	324	eP	P	22 49 17.6	-1.2
	comp=Z,5.5nm,1.1s						
ZALV	Zalesovo Beam	93.69	324	eP	P	22 49 17.1	-1.7
ZALV	Zalesovo Beam	93.69	324	P	P	22 49 18.1	-0.7
	comp=Z,12nm,1.3s,baz=104,slow=6.3,SNR=9.6						
MK01	Makanchi Array	93.76	317	eP	P	22 49 19.5	+0.2
MK31	Makanchi Array	93.77	317	eP	P	22 49 19.2	-0.2
MKAR	Makanchi Array	93.77	317	eP	P	22 49 18.7	-0.6
	comp=Z,23nm,0.9s						
MKAR	Makanchi Array	93.77	317	P	P	22 49 19.7	+0.3
	comp=Z,3.7nm,0.9s,baz=92,slow=6.4,SNR=15						
MAKZ	Makanchi	93.98	317	eP	P	22 49 18.8	-1.6
	comp=Z,6.0nm,1.1s						
YKA	Yellowknife Ar	94.28	27	P	P	22 49 19.1	-2.2
	comp=Z,0.1nm,0.6s,baz=255,slow=4.6,SNR=3.1						
TXAR	Lajitas Array	94.97	61	LR	LR	23 26 47.2	
	comp=Z,139nm,18.7s,baz=0.0,slow=32						
PHWY	Pilot Hill	95.45	49	eP	P	22 49 26.1	-1.5
	comp=Z,13nm,1.0s						
KSH	Kashi	97.11	309	P	Pdif	22 49 36.8	+1.8
KSH				pP	pP	22 49 41.3	-4.3
KSH				pmax	pmax		
	comp=Z,390nm,5.6s						
CLL	Collm	134.05	337	e(PKP)	PKiKP	22 55 30.0	+9.1
ES19	SONSECA Array	149.85	345	ePKPbc	PKPbc	22 55 52.1	-0.7
ESDC	Sonseca Array	149.89	345	PKPbc	PKPbc	22 55 52.5	-0.4
	comp=Z,0.2nm,0.3s,baz=5.5,slow=5.6,SNR=3.8						
TORD	Torodi Ar. Bea	164.96	281	PKPab	PKPab	22 57 03.5	-0.4
	comp=Z,1.0nm,1.0s,baz=62,slow=3.5,SNR=4.1						

IDC 02 22:40:54.4±5.1**, 11°.50S**×**165°.83E, h0^{km}, mb3.7**/4**, mb1 4.0**/4**, mb1mx3.6**/26**, mbtmp3.8**/4**, Error ellipse: s-maj=263.6km s-min=29.1km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.66	243	P	Pn	22 45 37.8	-0.4
	7.4nm,1.0s,baz=80,slow=11,SNR=2.7						
WRA	Warramunga Arr	31.41	251	P	P	22 47 16.8	-0.7
	0.3nm,0.4s,baz=82,slow=9.5,SNR=3.6						
ASAR	Alice Springs	32.66	244	P	P	22 47 28.0	-0.5
	1.8nm,0.8s,baz=75,slow=10.0,SNR=10						
ILAR	Eielson Array	83.92	18	P	P	22 53 26.0	+0.1
	0.3nm,0.8s,baz=238,slow=5.2,SNR=3.6						

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*NEIC **02** 23:13:37.2±0.0, 18°.40N×101°.72W, h50^{km}, MD4.0(MEX), After MEX.*

MEX 02 23:13:37.2±0.8**, 18°.40N**×**101°.72W, h50^{km}, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.83	163	eP	Pn	23 13 50.4	-2.3
ZIIG				eS	Sn	23 14 02.4	-1.5
ZIIG	Zihuatanejo	0.83	163	eP	Pn	23 13 50.4	-2.3
ZIIG				eS	Sn	23 14 02.4	-1.5
ARIG	Puente Sto Nin	1.31	95	eP	Pn	23 13 57.0	-2.2
ARIG				eS	Sn	23 14 13.9	-1.8
ARIG	Puente Sto Nin	1.31	95	eP	Pn	23 13 57.0	-2.2
ARIG				eS	Sn	23 14 13.9	-1.8
CAIG	El Cayaco	1.93	134	i P	Pn	23 14 05.5	-2.2
CAIG				i S	Sn	23 14 28.8	-1.9
CAIG	El Cayaco	1.93	134	i P	Pn	23 14 05.5	-2.2
CAIG				i S	Sn	23 14 28.8	-1.9
MEIG	Mezcala	2.06	103	i P	Pn	23 14 07.2	-2.2
MEIG				eS	Sn	23 14 30.4	-3.5
MEIG	Mezcala	2.06	103	i P	Pn	23 14 07.2	-2.2
MEIG				eS	Sn	23 14 30.4	-3.5
EZ5V		2.08	301	eP	Pn	23 14 09.3	-0.6
PLIG	Platanillo	2.11	90	eP	Pn	23 14 09.1	-1.0
PLIG				i S	Sn	23 14 32.5	-2.8
PLIG	Platanillo	2.11	90	eP	Pn	23 14 09.1	-1.0
PLIG				i S	Sn	23 14 32.5	-2.8
R15V		2.27	290	eP	Pn	23 14 11.0	-1.3
R15V				i S	Sn	23 14 38.2	-1.0
YAIG	Yautepec	2.56	79	i P	Pn	23 14 16.8	+0.4
YAIG				eS	Sn	23 14 46.6	+0.1
YAIG	Yautepec	2.56	79	i P	Pn	23 14 16.8	+0.4
YAIG				eS	Sn	23 14 46.6	+0.1

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*ISK **02** 23:14:57.6, 38°.86N×43°.80E, h16^{km}, ML2.1/5*

*ISCJB **02** 23:15:00.1±1.4, 38°.84N±0°.04×43°.7E±0°.1, h24^{km}±9^{km}, Error ellipse: s-maj=16.8km s-min=5.5km az=11.1*

*DDA **02** 23:15:01.0, 38°.86N×43°.53E, h7^{km}±6^{km}, ML2.5*

ISC 02 23:14:59.3±1.7**, 38°.84N**±0°.04×**43°.68E**±0°.09**, h20^{km}**±3^{km}**,**

n8,σ0^{s}.72/15,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.17	329	i P	Pb	23 15 04.9	-0.2
VMUR				i S	Sb	23 15 08.9	-0.3
VMUR				IAML_P			
	comp=Z,3μm,0.2s						
ERCV	ERCIS-VAN	0.32	304	PG	Pb	23 15 06.3	-0.2
ERCV				SG	Sb	23 15 12.1	+0.7
VANB	Van	0.34	223	PG	Pb	23 15 06.7	0.0
VANB				SG	Sn	23 15 14.6	-0.9
TVAN	Van	0.38	215	i P	Pb	23 15 07.9	+0.4
TVAN				i S	Sb	23 15 14.5	+1.5
TVAN				IAML_P			
	comp=Z,1μm,0.1s						
DYDN	Diyadin	0.70	0	i P	Pn	23 15 14.1	-0.2
DYDN				i S	Sn	23 15 25.3	+0.7
DYDN				IAML_P			
	comp=Z,679nm,0.1s						
AKDM	Akdamar-Van	0.75	227	PG	Pn	23 15 14.2	-0.8
AKDM				SG	Sn	23 15 26.1	+0.3
AGRB	Hanur-Agry	0.91	324	PG	Pn	23 15 16.6	-0.5
AGRB				SG	Sn	23 15 30.2	+0.5
GURO	Guroymak-BITLI	1.32	258	PN	Pb	23 15 23.3	-0.3

IDC 02 23:15:35.7±2.4,**8°.93N×92°.22E,h0^{km},mb3.4**/4,**mb1 3.6**/5,**mb1mx3.4**/52,**mbtmp3.4**/5,**ML3.9**/1,**Error ellipse: s-maj=76.5km s-min=24.0km az=69.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.50	34	Pn	Pn	23 18 22.2	+0.8
	0.2nm,0.3s,baz=223,slow=13,SNR=5.8						
MKAR	Makanchi Array	38.67	349	P	P	23 23 01.4	+0.3
	0.3nm,0.7s,baz=169,slow=7.4,SNR=7.0						
SONM	Songino Array	40.59	15	P	P	23 23 16.5	-0.7
	0.4nm,0.5s,baz=214,slow=10.0,SNR=2.3						
WRA	Warramunga Arr	50.42	125	P	P	23 24 35.2	-0.2
	0.4nm,0.5s,baz=305,slow=8.5,SNR=6.8						
ASAR	Alice Springs	52.05	129	P	P	23 24 47.7	+0.1
	0.2nm,0.5s,baz=301,slow=6.9,SNR=5.0						

*ISK **02** 23:30:04.9,37°.94N×37°.93E,h5^{km},ML2.1/9*
*DDA **02** 23:30:06.1,37°.93N×37°.96E,h7^{km}±2^{km},ML2.9*
ISC 02 23:30:05.7±1.4,**38°.00N**±0°.03×**37°.98E**±0°.03,**h2**^{km}±13^{km},**n18,σ0^{s}.58**/28,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	Akcadag	0.30	351	i P	Pb	23 30 13.9	0.0
AKCD				i S	Sb	23 30 19.8	+0.5
AKCD				IAML_P			
	comp=Z,3μm,0.1s						
ATAB	Bozova	0.58	155	i P	Pg	23 30 17.4	+0.5
ATAB				i S	Sg	23 30 24.8	+0.3
ATAB				IAML_P			
	comp=Z,5μm,0.1s						
DARE	Darende-Malaty	0.69	325	PG	Pb	23 30 19.9	-0.7
DARE				SG	Sb	23 30 30.9	+0.3
GZT	Gaziantep	0.72	207	i P	Pg	23 30 19.7	+0.1
GZT				i S	Sg	23 30 28.2	-0.8
URFA	Urfa	0.87	130	PG	Pg	23 30 22.5	+0.2
URFA				SG	Sb	23 30 36.1	+0.5
ELZG	Elazig	0.93	58	i P	Pn	23 30 25.0	-0.9
ELZG				i S	Sn	23 30 39.6	-0.4
ELZG				IAML_P			
	comp=Z,647nm,0.1s						
KMRS	Kahramanmaras	0.99	240	PG	Pg	23 30 24.1	-0.6
KMRS				SG	Sg	23 30 37.5	0.0
GAZ	Gaziantep	1.03	217	PG	Pg	23 30 24.8	-0.6
SANL	SANLIURFA_Merk	1.15	136	i P	Pb	23 30 28.1	-0.2
SANL				i S	Sg	23 30 43.1	+0.5
SANL				IAML_P			
	comp=Z,2μm,0.2s						
SURC	SANLIURFA_SURC	1.23	156	i P	Pb	23 30 29.9	+0.2
SURC				i S	Sb	23 30 46.0	+0.1
SURC				IAML_P			
	comp=Z,424nm,0.1s						
ANDN	Andirin	1.36	253	i P	Pb	23 30 32.6	+0.6
ANDN				IAML_P			
	comp=Z,358nm,0.1s						
PTK	Pertek	1.42	51	PN	Pb	23 30 34.3	+1.3
KUZU	Kuzuini	1.42	211	i P	Pn	23 30 32.6	0.0
KUZU				i S	Sg	23 30 51.4	0.0
SAIM	ADANA	1.50	270	i P	Pb	23 30 34.7	+0.3
SAIM				IAML_P			
	comp=Z,533nm,0.2s						
KOZT	Kozan	1.79	254	PN	Pn	23 30 37.6	0.0
BNN	Bunyan	1.88	298	PN	Pn	23 30 39.7	+0.7
MAZI	Mazidag	2.03	105	PN	Pb	23 30 42.1	-1.2
TAHT	Tahtakopru-Hat	2.17	222	PN	Pn	23 30 42.8	0.0

*DDA **02** 23:31:35.7,38°.88N×43°.55E,h7^{km}±2^{km},ML2.7*
*ISK **02** 23:31:35.5,38°.87N×43°.44E,h3^{km},ML2.2/7*
*ISCJB **02** 23:31:36.8±0.5,38°.91N±0°.02×43°.44E±0°.05,h10^{km}±4^{km}, Error ellipse: s-maj=6.9km s-min=3.8km az=13.7*
ISC 02 23:31:36.4±1.0,**38°.89N**±0°.03×**43°.49E**±0°.04,**h13**^{km}±7^{km},**n16,σ0^{s}.80**/24,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.12	33	i P	Pg	23 31 39.7	-0.1
VMUR				i S	Sg	23 31 42.6	+0.4
VMUR				IAML_P			
	comp=Z,8μm,0.1s						
ERCV	ERCIS-VAN	0.18	319	PG	Pg	23 31 40.1	-0.5
VANB	Van	0.30	195	PG	Pb	23 31 43.1	-0.6
VANB				SG	Sb	23 31 49.2	+0.6
TVAN	Van	0.36	190	i P	Pg	23 31 43.1	-0.6
TVAN				i S	Sb	23 31 51.5	+1.0
TVAN				IAML_P			
	comp=Z,5μm,0.2s						
ADCV	BITLIS_Adilcev	0.60	263	i P	Pb	23 31 48.3	-0.5
ADCV				i S	Sb	23 31 58.5	+1.2
ADCV				IAML_P			
	comp=Z,474nm,0.1s						
GEVA	Gevas	0.66	210	i P	Pg	23 31 48.9	-0.5
GEVA				i S	Sb	23 31 59.9	+0.8
GEVA				IAML_P			
	comp=Z,539nm,0.1s						
DYDN	Diyadin	0.68	13	i P	Pb	23 31 49.7	-0.4
DYDN				i S	Sb	23 31 59.5	-0.1
DYDN				IAML_P			
	comp=Z,1μm,0.1s						
AKDM	Akdamar-Van	0.68	216	PG	Pg	23 31 48.5	-1.2
TUTA	Tutak	0.73	315	i P	Pg	23 31 50.1	-0.6
MLAZ	Malazgirt-MUS	0.77	290	PG	Pg	23 31 50.7	-0.7
AGRB	Hanur-Agry	0.79	331	PG	Pg	23 31 51.0	-0.7
AGRB				SG	Sb	23 32 02.7	-0.1
IGDI	IGDIR	1.08	25	i P	Pg	23 31 56.3	-0.9
IGDI				IAML_P			
	comp=Z,83nm,0.2s						
GURO	Guroymak-BITLI	1.19	254	PN	Pg	23 31 58.0	-1.2
GURO				SN	Sb	23 32 14.5	+0.4
EATA	Eleskirt	1.24	322	i P	Pn	23 32 00.9	+1.1
EATA				IAML_P			
	comp=Z,316nm,0.1s						
GNI	Garni	1.59	37	PN	Pg	23 32 06.1	-0.8
CUKT	Cukurca	1.64	177	PN	Pb	23 32 05.9	-0.6

IDC 02 23:37:02.6±2.0,**10°.12S×165°.59E,h0^{km},mb3.8**/4,**mb1 4.1**/4,**mb1mx3.7**/36,**mbtmp3.8**/4,**MS3.6**/5,**Ms1 3.6**/5,**ms1mx3.2**/23,**Error ellipse: s-maj=112.4km s-min=31.1km az=146.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.92	176	LR	LR	23 43 45.6	
	comp=Z,270nm,21.5s,baz=72,slow=34						
H11S2	WAKE ISLAND Hy	28.45	2	T	T	00 13 13.7	
	baz=181,slow=76,SNR=66						
H11S3	WAKE ISLAND Hy	28.45	2	T	T	00 13 17.1	
	baz=181,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	28.46	2	T	T	00 13 14.2	
	baz=181,slow=76,SNR=61						
STKA	Stephens Creek	31.02	222	LR	LR	23 55 15.3	
	comp=Z,115nm,18.7s,baz=26,slow=35						
WRA	Warramunga Arr	31.67	248	P	P	23 43 28.5	+0.4
	1.6nm,1.0s,baz=83,slow=9.0,SNR=3.9						
ASAR	Alice Springs	33.09	242	P	P	23 43 40.3	-0.2
	2.4nm,0.9s,baz=68,slow=8.7,SNR=13						
NVAR	Mina Array Bea	85.54	50	P	P	23 49 43.6	+0.4
	0.4nm,0.7s,baz=248,slow=6.6,SNR=4.3						
NVAR				LR	LR	00 22 07.3	
	comp=Z,112nm,18.4s,baz=200,slow=32						
MKAR	Makanchi Array	92.74	317	P	P	23 50 15.9	-1.0
	0.6nm,0.9s,baz=107,slow=4.1,SNR=3.8						
YKA	Yellowknife Ar	94.22	27	LR	LR	00 28 34.3	
	comp=Z,6.3nm,20.1s,baz=205,slow=33						
TXAR	Lajitas Array	95.52	61	LR	LR	00 30 39.6	
	comp=Z,48nm,18.1s,baz=0.0,slow=34						

IDC 02 23:39:25.0±11.0,**24°.91S×179°.61E,h328**^{km}±112^{km},**mb3.4**/4,**mb1 3.6**/5,**mb1mx3.3**/31,**mbtmp4.2**/5,**Error ellipse: s-maj=66.2km s-min=45.6km az=26.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.48	188	P	P	23 42 23.6	-0.3
	1.2nm,0.3s,baz=216,slow=0.2,SNR=9.3						
URZ				S	S	23 44 43.2	-8.8
	0.3nm,0.3s,baz=244,slow=23,SNR=5.7						
CTA	Charters Tower	31.14	272	P	P	23 45 16.3	+1.9
	2.6nm,0.5s,baz=113,slow=9.9,SNR=4.5						
ASAR	Alice Springs	41.53	262	P	P	23 46 40.5	-1.1
	1.0nm,0.6s,baz=89,slow=6.5,SNR=6.1						
WRA	Warramunga Arr	41.99	267	P	P	23 46 44.6	-0.7
	0.7nm,0.3s,baz=102,slow=7.8,SNR=10						
MJAR	Matsushiro Arr	72.52	326	P	P	23 50 16.4	-0.3
	2.6nm,0.9s,baz=155,slow=6.4,SNR=4.1						
BRTR	Keskin Array B	147.88	306	PKPbc	PKPbc	23 58 31.9	-0.2
	0.9nm,0.8s,baz=100,slow=3.1,SNR=4.6						

*MOS **03** 00:01:45.1±2.1,49°.37N×156°.74E,h15^{km},mb4.4/1,Error ellipse: s-maj=44.8km s-min=5.3km az=80.4*
KRSC 03 00:01:45.2±1.6,**49°.37N×156°.74E,h15**^{km}±22^{km},**ML4.3,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.38	343	eP	Pn	00 02 07.7	-2.1
SKR				eS	Sn	00 02 26.1	-1.6
SKR	Severo-Kuril's	1.38	343	ePN	Pn	00 02 07.8	-2.0
SKR				eS	Sn	00 02 26.2	-1.5
SKR				pmax	pmax		
	comp=Z,20nm,0.2s						
SKR				smax	smax		
	comp=N,282nm,0.2s						
SKR				smax	smax		
	comp=E,219nm,0.2s						
PAU	Pauzhetka	2.10	1	eP	Pn	00 02 21.3	+1.5
PAU				eS	Sb	00 02 48.6	-0.2
PAU	Pauzhetka	2.10	1	PN	Pn	00 02 21.3	+1.5
PAU				S	Sb	00 02 48.6	-0.2
KDTR	Khodutka, Kamc	2.59	19	eP	Pb	00 02 29.3	-1.9
KDTR				eS	Sb	00 03 00.6	-2.2
KDTR	Khodutka, Kamc	2.59	19	PN	Pb	00 02 29.3	-1.9
KDTR				S	Sb	00 03 00.6	-2.2
MTVR	Mutnovka	3.25	16	eP	Pb	00 02 39.3	-3.3
MTVR				eS	Sb	00 03 18.3	-3.7
MTVR	Mutnovka	3.25	16	PN	Pb	00 02 39.3	-3.3
MTVR				S	Sb	00 03 18.3	-3.7
RUS	Russkaya	3.27	19	eP	Pn	00 02 38.7	+3.0
RUS				eS	Sn	00 03 17.9	+3.6
RUS	Russkaya	3.27	19	PN	Pn	00 02 38.7	+3.0
RUS				S	Sn	00 03 17.9	+3.6
APC	Apacha	3.57	4	P	Pn	00 02 43.5	+3.6
APC	Apacha	3.57	4	PN	Pn	00 02 43.5	+3.6
KRMR	Karymshinskiy	3.58	14	eP	Pb	00 02 44.1	-3.9
KRMR				eS	Sn	00 03 25.4	+3.5
KRMR	Karymshinskiy	3.58	14	PN	Pb	00 02 44.1	-3.9
KRMR				S	Sn	00 03 25.4	+3.5
PET	Petropavlovsk	3.85	17	eP	Pn	00 02 47.9	+4.1
PET	Petropavlovsk	3.85	17	PN	Pn	00 02 47.9	+4.1
DALK	Dalny	3.88	18	eP	Pn	00 02 47.8	+3.6
DALK				eS	Sn	00 03 33.9	+4.5
DALK	Dalny	3.88	18	PN	Pn	00 02 47.8	+3.6
DALK				S	Sn	00 03 33.9	+4.5
UGLR	Uglovaya	4.06	18	eP	Pn	00 02 51.3	+4.5
UGLR	Uglovaya	4.06	18	PN	Pn	00 02 51.3	+4.5
AVH	Avacha	4.10	17	eP	Pn	00 02 51.9	+4.6
AVH				eS	Sn	00 03 39.7	+4.8
AVH	Avacha	4.10	17	PN	Pn	00 02 51.9	+4.6
AVH				S	Sn	00 03 39.7	+4.8
KOK	Koryaka	4.11	16	eP	Pn	00 02 52.0	+4.6
KOK	Koryaka	4.11	16	PN	Pn	00 02 52.0	+4.6
SMAR	Somma	4.11	18	eP	Pn	00 02 52.0	+4.5
SMAR	Somma	4.11	18	PN	Pn	00 02 52.0	+4.5
SDLR	Sedlovina	4.14	18	eP	Pn	00 02 51.2	+3.3
SDLR	Sedlovina	4.14	18	PN	Pn	00 02 51.2	+3.3
NLC	Nalytchevo	4.14	22	eP	Pn	00 02 50.1	+2.3
NLC				eS	Sn	00 03 40.6	+4.7
NLC	Nalytchevo	4.14	22	PN	Pn	00 02 50.1	+2.3
NLC				S	Sn	00 03 40.6	+4.7
KRX	Arik	4.17	16	eP	Pn	00 02 52.2	+3.9
KRX	Arik	4.17	16	PN	Pn	00 02 52.2	+3.9
SPN	Mys Shipunski	4.27	28	eP	Pn	00 02 53.3	+3.8
SPN				eS	Sn	00 03 44.2	+5.3
SPN	Mys Shipunski	4.27	28	PN	Pn	00 02 53.3	+3.8
SPN				S	Sn	00 03 44.2	+5.3
GNL	Ganaly	4.40	9	eP	Pn	00 02 55.0	+3.6
GNL	Ganaly	4.40	9	PN	Pn	00 02 55.0	+3.6
KII	Karymskiy	4.97	19	P	Pn	00 03 04.2	+5.0
KII	Karymskiy	4.97	19	PN	Pn	00 03 04.2	+5.0
KBTR	Krutoberegovo	7.78	26	eP	Pn	00 03 41.6	+4.0
KBTR	Krutoberegovo	7.78	26	PN	Pn	00 03 41.6	+4.0

MEX 03 00:03:47.9±0.7,**16°.35N×97°.86W,h5^{km},MD3.6,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.26	279	eP	Pg	00 03 52.5	-0.5
PNIG				eS	Sg	00 03 56.6	+0.1

IDC 03 00:26:00.7±1.7,**12°.74N×143°.80E,h0^{km},mb3.8**/7,**mb1 3.9**/7,**mb1mx3.6**/44,**mbtmp3.8**/7,**MS4.0**/1,**Ms1 4.0**/1,**ms1mx2.7**/43,**Error ellipse: s-maj=58.6km s-min=19.4km az=86.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11N1	WAKE ISLAND Hy	23.22	70	T	T	00 55 33.8	
	baz=255,slow=75						
H11N2	WAKE ISLAND Hy	23.23	70	T	T	00 55 36.6	
	baz=255,slow=75						
H11N3	WAKE ISLAND Hy	23.23	70	T	T	00 55 34.8	
	baz=255,slow=75						
ASAJ	Asahikawa	31.28	358	P	P	00 32 21.6	-0.7
	6.8nm,0.6s,baz=163,slow=9.6,SNR=5.5						
WRA	Warramunga Arr	33.79	196	P	P	00 32 44.2	-0.4
	1.6nm,0.8s,baz=20,slow=9.8,SNR=14						
ASAR	Alice Springs	37.46	195	P	P	00 33 16.6	+0.4
	0.6nm,0.8s,baz=19,slow=12,SNR=8.2						
DZM	Mont Dzumac	41.12	147	LR	LR	00 49 02.5	
	comp=Z,204nm,21.8s,baz=12,slow=34						
CMAR	Chiang Mai Arr	43.49	283	P	P	00 34 05.2	-1.1
	0.5nm,0.6s,baz=83,slow=7.4,SNR=3.4						
SONM	Songino Array	46.83	326	P	P	00 34 32.8	+0.2
	0.8nm,0.7s,baz=141,slow=9.3,SNR=3.1						
MKAR	Makanchi Array	61.38	317	P	P	00 36 19.1	+0.5
	0.3nm,0.7s,baz=105,slow=8.2,SNR=4.1						
KURBB	Kurchatov Arra	64.60	320	P	P	00 36 40.8	+0.8
	1.8nm,0.6s,baz=103,slow=6.6,SNR=7.9						
BVAR	Borovoye Array	69.94	322	P	P	00 37 13.4	-0.4
	0.5nm,0.6s,baz=100,slow=7.5,SNR=5.8						

*IDC **03** 00:52:57.2±1.5,0°.29N×97°.73E,h0^{km},mb4.1/6,mb1 4.2/7,mb1mx3.8/53,mbtmp4.1/7,ML3.6/2,MS3.1/3,Ms1 3.2/3,ms1mx2.8/38,Error ellipse: s-maj=42.9km s-min=18.4km az=68.0*
*ISCJB **03** 00:52:59.7±0.8,0°.34N±0°.06×97°.58E±0°.08,h29^{km},mb4.1/6,MS3.4/1,Error ellipse: s-maj=13.3km s-min=5.6km az=150.6*
*DJA **03** 00:53:00.9±1.1,0°N±5°×9°8E±°,h30^{km}±8^{km},M4.2/12,mb4.3/3,MLv4.1/12*
ISC 03 00:53:01.8±1.0,**0°.38N**±0°.06×**97°.70E**±0°.10,**h29**^{km},**n27,σ0^{s}.98**/22,**mb4.2**/6,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.72	127	P	Pb	00 53 15.7	-0.1
PBSI				S	Sb	00 53 26.8	+1.4
GSI	Gunungsitoli	0.93	352	P	Pn	00 53 19.6	+0.7
MNSI	Mandailing Nat	1.92	78	P	Pn	00 53 33.8	+1.3
SISI	Saibi	2.19	141	P	Pn	00 53 35.9	-0.3
SNSI	Sinabang, Aceh	2.44	326	P	Pn	00 53 30.6	-9.1
PSI	Prapat	2.70	27	Pn	Pn	00 53 42.8	-0.5
	2.0nm,0.3s,baz=180,slow=10,SNR=17						
PSI				Sn	Sn	00 54 15.2	+0.2
	7.7nm,0.3s,baz=180,slow=10,SNR=7.2						
PSI				LR	LR	00 54 34.3	
	comp=Z,144nm,20.4s,baz=149,slow=36						
PPI	Padang Panjang	2.82	107	P	Pn	00 53 45.8	+0.9
TPTI		2.91	350	P	Pn	00 53 46.0	-0.1
PDSI	Padang	3.04	115	P	Pn	00 53 47.8	-0.2
KCSI	Kotacane, Aceh	3.12	1	P	Pn	00 53 49.6	+0.5
TSI	Tuntungan	3.22	15	P	Pn	00 53 51.7	+1.3
BKNI	Bangkinang	3.34	91	P	Pb	00 53 58.4	-1.9
PPSI	Pulau Pagai	3.88	144	P	Pb	00 54 24.9	+15
MDSI	Maura Dua	8.07	127	P	Pn	00 54 57.4	+0.2
PBKI	Pangkalan Bun	14.29	102	pP	P	00 56 36.9	+7.7
CMAR	Chiang Mai Arr	18.01	4	P	Pn	00 57 08.5	-1.6
	0.3nm,0.3s,baz=195,slow=13,SNR=12						
CMAR				LR	LR	01 04 16.9	
	comp=Z,74nm,18.2s,baz=190,slow=38						
H08S2	Diego Garcia H	26.37	252	T	T	01 25 57.4	
	baz=73						
H08S3	Diego Garcia H	26.38	252	T	T	01 25 56.2	
	baz=73						
H08S1	Diego Carcia H	26.39	252	T	T	01 25 57.2	
	baz=73						
WRA	Warramunga Arr	41.18	122	P	P	01 00 42.9	-1.2
	1.6nm,0.7s,baz=302,slow=9.0,SNR=17						
ASAR	Alice Springs	42.50	127	P	P	01 00 54.5	-0.4
	2.0nm,0.8s,baz=302,slow=7.6,SNR=19						
KSRS	Korea Array	46.24	34	P	P	01 01 24.1	-0.4
	2.3nm,0.8s,baz=218,slow=9.7,SNR=6.6						
SONM	Songino Array	47.87	8	P	P	01 01 38.0	+0.8
	2.4nm,0.9s,baz=192,slow=8.9,SNR=6.3						
MKAR	Makanchi Array	48.15	346	P	P	01 01 39.8	+0.5
	1.7nm,0.7s,baz=155,slow=7.6,SNR=23						
USRK	Ussuriysk Ar.	53.21	30	LR	LR	01 27 36.7	
	comp=Z,32nm,19.0s,baz=231,slow=39						
ZALV	Zalesovo Beam	54.44	351	P	P	01 02 27.0	+0.7
	3.6nm,0.6s,baz=184,slow=6.2,SNR=17						
TXAR	Lajitas Array	144.09	33	PKP	PKPab	01 12 34.3	+1.2
	0.2nm,0.8s,baz=219,slow=1.2,SNR=2.0						

*ISCJB **03** 01:20:32.6±0.3,5°.09S±0°.05×152°.43E±0°.06,h55^{km},mb4.6/48,MS3.4/15,Error ellipse: s-maj=8.5km s-min=6.1km az=21.4*
*IDC **03** 01:20:34.0±2.5,5°.09S×152°.46E,h55^{km}±23^{km},mb4.1/24,mb1 4.3/26,mb1mx4.1/47,mbtmp4.4/26,ML4.9/1,MS3.4/17,Ms1 3.4/17,ms1mx3.3/35,Error ellipse: s-maj=17.2km s-min=11.3km az=117.0*
*NEIC **03** 01:20:35.4±0.6,5°.12S×152°.42E,h69^{km}±5^{km},mb4.9/25,Error ellipse: s-maj=5.9km s-min=4.0km az=111.0*
ISC 03 01:20:34.2±0.4,**5°.06S**±0°.06×**152°.47E**±0°.08,**h55**^{km},**n127,σ1^{s}.10**/128,**mb4.6**/47,**MS3.4**/15,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.92	340	ePn	Pn	01 20 53.1	+2.0
HNR	Honiara	8.59	121	ePn	Pn	01 22 37.5	+1.5
HNR	Honiara	8.59	121	P	Pn	01 22 37.5	+1.5
	14nm,0.3s,baz=284,slow=4.2,SNR=3.1						
HNR				LR	LR	01 26 16.2	
	comp=Z,210nm,19.2s,baz=302,slow=40						
JAY	Jayapura	12.01	282	LR	LR	01 27 45.7	
	comp=Z,187nm,19.1s,slow=36						
CTA	Charters Tower	16.11	202	ePn	Pn	01 24 17.9	+0.6
CTA	Charters Tower	16.11	202	P	Pn	01 24 17.9	+0.6
	baz=15,slow=18,SNR=3.3						
CTAO	Charters Tower	16.11	202	ePn	Pn	01 24 18.6	+1.3
GUMO	Guam	20.01	338	LR	LR	01 31 54.8	
	comp=Z,43nm,21.4s,baz=100,slow=34						
SIJI	Sorong	21.58	280	P	P	01 25 19.9	+0.4
	5.1nm,0.3s,baz=332,slow=23,SNR=5.0						
DZM	Mont Dzumac	21.65	143	eP	P	01 25 19.7	-0.7
	37nm,1.0s						
DZM	Mont Dzumac	21.65	143	P	P	01 25 20.3	0.0
	32nm,1.0s,baz=322,slow=12,SNR=16						
DZM				LR	LR	01 32 21.5	
	comp=Z,256nm,21.7s,baz=320,slow=33						
WRAB	Tennant Creek	23.01	228	eP	P	01 25 33.6	-1.1
	3.9nm,0.6s						
WB2	Warramunga Arr	23.02	228	eP	P	01 25 33.3	-1.5
WR1	Warramunga Arr	23.03	228	eP	P	01 25 33.5	-1.4
	34nm,1.3s						
WR1				eS	S	01 29 42.7	+1.1
WRA	Warramunga Arr	23.03	228	P	P	01 25 33.5	-1.4
WRA				S	S	01 29 42.7	+1.1
WRA	Warramunga Arr	23.03	228	P	P	01 25 33.5	-1.4
	2.9nm,0.3s,baz=53,slow=9.8,SNR=35						
WRA				S	S	01 29 42.7	+1.1
	3.0nm,1.1s,baz=48,slow=17,SNR=4.7						
AS01	Alice Springs	25.70	222	eP	P	01 25 58.7	-0.8
AS31	Alice Springs	25.73	222	eP	P	01 25 59.0	-0.8
	2.2nm,0.9s						
ASAR	Alice Springs	25.74	222	P	P	01 25 59.0	-0.8
ASAR				S	S	01 30 30.4	+5.3
ASAR	Alice Springs	25.74	222	P	P	01 25 59.0	-0.8
	3.5nm,0.8s,baz=55,slow=8.5,SNR=22						
ASAR				S	S	01 30 30.4	+5.3
	0.4nm,0.8s,baz=36,slow=17,SNR=3.2						
STKA	Stephens Creek	28.56	200	eP	P	01 26 23.8	-1.2
	1.2nm,0.9s						
STKA	Stephens Creek	28.56	200	P	P	01 26 23.8	-1.2
	0.9nm,0.6s,baz=156,slow=20,SNR=2.5						
STKA				LR	LR	01 37 13.2	
	comp=Z,57nm,21.6s,baz=26,slow=35						
BATI	Baumata	29.00	258	eP	P	01 26 28.5	-0.6
BATI	Baumata	29.00	258	P	P	01 26 28.5	-0.6
	9.2nm,0.6s,baz=122,slow=12,SNR=4.3						
BATI				LR	LR	01 40 26.0	
	comp=Z,162nm,21.0s,baz=93,slow=41						
FITZ	Fitzroy Crossi	29.25	241	eP	P	01 26 29.6	-1.6
FITZ	Fitzroy Crossi	29.25	241	P	P	01 26 29.6	-1.6
	16nm,1.0s,baz=60,slow=5.2,SNR=31						
FITZ				LR	LR	01 38 12.4	
	comp=Z,46nm,18.7s,baz=70,slow=36						
DAV	Davao City (W)	29.42	294	LR	LR	01 37 54.7	
	comp=Z,70nm,18.5s,baz=322,slow=35						
FORT	Forrest	34.38	219	eP	P	01 27 14.9	-1.3
	33nm,1.3s						
MBWA	Marble Bar	35.56	240	eP	P	01 27 25.2	-1.3
JNU	Nakatsue	43.15	333	eP	P	01 28 29.4	-0.2
	33nm,1.1s						
JNU	Nakatsue	43.15	333	P	P	01 28 29.3	-0.2
	14nm,0.8s,baz=150,slow=3.3,SNR=5.1						
MJAR	Matsushiro Arr	43.49	343	P	P	01 28 30.8	-1.4
MJAR	Matsushiro Arr	43.49	343	P	P	01 28 30.8	-1.4
	0.8nm,0.4s,baz=150,slow=9.9,SNR=3.6						
MJAR				LR	LR	01 44 59.7	
	comp=Z,42nm,22.0s,baz=325,slow=34						
MAJO	Matsushiro	43.49	343	eP	P	01 28 30.8	-1.4
KSRS	Korea Array	48.09	334	P	P	01 29 08.0	-0.5
	2.0nm,0.9s,baz=150,slow=9.7,SNR=6.1						
KSRS				LR	LR	01 47 31.3	
	comp=Z,32nm,20.1s,baz=130,slow=34						
KS15	Wonju Array Si	48.09	334	eP	P	01 29 08.8	+0.3
KSAR	Wonju Array Be	48.09	334	P	P	01 29 08.0	-0.6
USRK	Ussuriysk Ar.	52.39	341	P	P	01 29 41.2	+0.3
USRK	Ussuriysk Ar.	52.39	341	P	P	01 29 41.2	+0.3
	1.5nm,0.7s,baz=156,slow=7.3,SNR=3.9						
ENH	Enshi	54.09	313	eP	P	01 29 54.2	+0.4
XAN	Xi'an	56.59	317	P	P	01 30 11.7	+0.1
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,160nm,5.7s						
XAN	Xi'an	56.59	317	eP	P	01 30 11.2	-0.5
	comp=Z,12nm,1.1s						
KLR	Kul'dur	57.00	344	eP	P	01 30 13.5	-0.8
KLR	Kul'dur	57.00	344	P	P	01 30 13.5	-0.8
	comp=Z,2.1nm,0.8s,baz=39,slow=2.2,SNR=6.0						
CM01	Chiang Mai Arr	57.67	295	eP	P	01 30 19.0	-0.5
CMAR	Chiang Mai Arr	57.69	295	P	P	01 30 20.2	+0.5
CMAR	Chiang Mai Arr	57.69	295	P	P	01 30 20.2	+0.5

	comp=Z,4.4nm,0.9s,baz=112,slow=5.4,SNR=23						
CMAR				LR	LR	01 55 48.5	
	comp=Z,15nm,18.6s,baz=116,slow=37						
CHTO	Chiang Mai	57.80	296	eP	P	01 30 20.7	+0.2
	comp=Z,9.3nm,1.3s						
PETK	Petropavlovsk-	58.12	4	P	P	01 30 22.2	+0.2
PETK	Petropavlovsk-	58.12	4	P	P	01 30 22.2	+0.2
	comp=Z,1.8nm,0.5s,baz=164,slow=7.9,SNR=9.7						
PETK				LR	LR	01 51 11.3	
	comp=Z,44nm,20.2s,baz=231,slow=32						
PEA1	Petropavlovsk-	58.13	4	eP	P	01 30 22.2	+0.1
GTA	Gaotai	65.63	317	eP	P	01 31 13.7	+0.8
GTA				pP	pP	01 31 18.4	-10
GTA				sP	sP	01 31 21.5	-13
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ULN	Ulaanbaatar	66.05	328	eP	P	01 31 14.8	-0.7
	comp=Z,1.3nm,0.5s						
SONA0	Songino Array	66.37	328	eP	P	01 31 18.9	+1.3
SONM	Songino Array	66.37	328	P	P	01 31 18.9	+1.3
SONM	Songino Array	66.37	328	P	P	01 31 18.9	+1.3
	comp=Z,1.4nm,0.5s,baz=144,slow=5.5,SNR=9.0						
SONM				LR	LR	02 01 18.7	
	comp=Z,43nm,18.5s,baz=352,slow=37						
SONA1	Songino Array	66.38	328	eP	P	01 31 17.6	0.0
LSA	Lhasa	68.12	305	eP	P	01 31 30.3	+0.9
JIRN	Jiri	71.64	301	eP	P	01 31 51.0	0.0
	comp=Z,3.4nm,0.3s						
GUN	Gumba	71.98	301	eP	P	01 31 53.4	+0.5
	comp=Z,6.5nm,0.4s						
PKI	Pulchoki	72.28	301	eP	P	01 31 54.7	-0.1
	comp=Z,26nm,1.1s						
PKIN	Phulchoki	72.30	301	eP	P	01 31 54.7	-0.1
	comp=Z,25nm,1.2s						
DMN	Daman	72.56	301	eP	P	01 31 56.6	+0.3
	comp=Z,56nm,1.1s						
BILL	Bilibino	73.58	5	eP	P	01 32 01.7	+0.5
	comp=Z,4.2nm,0.8s						
GAMB	Gambell	73.72	16	eP	P	01 32 02.6	+0.6
	comp=Z,22nm,1.1s						
KOLN	Koldanda	73.89	301	eP	P	01 32 04.1	0.0
	comp=Z,34nm,1.1s						
DANN	Dangsing	73.90	301	eP	P	01 32 03.5	-0.7
	comp=Z,9.0nm,0.5s						
PYUN	Piuthan	74.49	301	eP	P	01 32 07.3	-0.3
	comp=Z,36nm,1.0s						
ANM	Nome	76.12	17	eP	P	01 32 16.4	+0.5
	comp=Z,19nm,1.2s						
RDOG	Red Dog Mine	79.32	16	eP	P	01 32 34.4	+0.7
	comp=Z,67nm,1.3s						
RC01	Rabbit Creek A	79.55	25	eP	P	01 32 35.5	+0.4
	comp=Z,30nm,1.2s						
CAST	Castle Rocks	79.87	22	eP	P	01 32 36.8	0.0
	comp=Z,17nm,1.2s						
MK01	Makanchi Array	80.29	319	eP	P	01 32 39.4	-0.1
MK31	Makanchi Array	80.31	319	eP	P	01 32 39.2	-0.3
	comp=Z,4.0nm,1.0s						
MK32	Makanchi Array	80.31	319	eP	P	01 32 39.4	-0.1
MKAR	Makanchi Array	80.31	319	P	P	01 32 39.4	-0.1
MKAR	Makanchi Array	80.31	319	P	P	01 32 39.4	-0.1
	comp=Z,2.4nm,0.7s,baz=97,slow=7.4,SNR=33						
MKAR				LR	LR	02 09 27.3	
	comp=Z,27nm,19.6s,baz=42,slow=36						
MAKZ	Makanchi	80.52	319	eP	P	01 32 40.3	-0.3
	comp=Z,7.1nm,1.0s						
IM3	Indian Mountai	80.74	20	eP	P	01 32 41.8	+0.4
RND	Reindeer	81.09	23	eP	P	01 32 43.5	+0.1
	comp=Z,37nm,1.4s						
ZAA0	Zalesovo Array	81.19	326	eP	P	01 32 43.9	-0.1
	comp=Z,4.7nm,1.2s						
ZALV	Zalesovo Beam	81.19	326	eP	P	01 32 43.0	-1.0
ZALV	Zalesovo Beam	81.19	326	P	P	01 32 43.0	-1.0
	comp=Z,1.7nm,0.4s,baz=122,slow=6.1,SNR=14						
ZALV				LR	LR	02 09 36.7	
	comp=Z,18nm,20.1s,baz=210,slow=36						
ZAA1	Zalesovo Array	81.19	326	eP	P	01 32 43.0	-1.0
MCK	McKinley	81.23	23	eP	P	01 32 44.2	+0.2
	comp=Z,49nm,1.2s						
MLY	Manley	81.24	21	eP	P	01 32 44.3	+0.2
	comp=Z,12nm,0.8s						
BWN	Browne	81.26	22	eP	P	01 32 45.0	+0.9
	comp=Z,42nm,1.3s						
COLA	College	82.22	22	eP	P	01 32 48.4	-0.7
	comp=Z,5.6nm,0.5s						
IL1	Eielson Array	82.52	22	eP	P	01 32 49.9	-0.9
ILAR	Eielson Array	82.52	22	P	P	01 32 50.0	-0.8
ILAR	Eielson Array	82.52	22	P	P	01 32 50.0	-0.8
	comp=Z,5.7nm,0.8s,baz=253,slow=5.0,SNR=31						
ILAR				LR	LR	02 10 21.1	
	comp=Z,43nm,18.0s,baz=152,slow=36						
KURK	Kurchatov	83.77	322	eP	P	01 32 57.8	+0.2
KURBB	Kurchatov Arra	83.80	322	P	P	01 32 57.3	-0.3
	comp=Z,4.0nm,0.9s,baz=109,slow=4.1,SNR=19						
NIL	Nilore	83.85	304	eP	P	01 32 57.7	-0.7
TKM2	Tokmak 2	83.88	314	P	P	01 32 59.9	+1.3
	SNR=6.8						
KZA	Kyzart	83.94	313	P	P	01 33 01.0	+1.9
	SNR=15						
KBK	Karagaybulak	84.28	314	P	P	01 33 02.0	+1.4
	SNR=9.3						
CHMS	Chumysh	84.50	314	P	P	01 33 02.6	+1.2
	SNR=13						
UCH	Uchtor	84.51	313	P	P	01 33 03.0	+0.9
	SNR=19						
AAK	Ala-Archa	84.61	314	P	P	01 33 03.7	+1.5
	SNR=9.3						
AAK	Ala-Archa	84.61	314	eP	P	01 33 02.6	+0.4
	comp=Z,14nm,1.0s						
AAK	Ala-Archa	84.61	314	P	P	01 33 02.7	+0.5
	comp=Z,7.6nm,0.8s,baz=115,slow=6.0,SNR=33						
USP	Ospenovka	84.73	314	P	P	01 33 03.6	+1.0
	SNR=23						
QSPA	South Pole Qui	84.90	180	eP	P	01 33 02.8	-0.4
AML	Almayashu	85.09	313	P	P	01 33 05.8	+0.9
	SNR=32						
EKS2	Erkin-Say	85.13	313	P	P	01 33 06.0	+1.2
	SNR=15						
MAW	Mawson	85.20	203	LR	LR	02 07 34.5	
	comp=Z,59nm,20.5s,baz=185,slow=33						
INK	Inuvik	88.82	21	eP	P	01 33 21.8	-0.1
	comp=Z,21nm,1.4s						
BVAR	Borovoye Array	89.25	323	P	P	01 33 23.4	-0.9
BVAR	Borovoye Array	89.25	323	P	P	01 33 23.4	-0.9
	comp=Z,1.9nm,0.6s,baz=113,slow=6.4,SNR=14						
BRVK	Borovoye	89.32	323	eP	P	01 33 22.7	-1.9
	comp=Z,24nm,1.6s						
NVAR	Mina Array Bea	92.50	52	P	P	01 33 40.1	+0.1
NVAR	Mina Array Bea	92.50	52	P	P	01 33 40.1	+0.1
	comp=Z,1.2nm,0.9s,baz=256,slow=6.4,SNR=6.7						
YKA	Yellowknife Ar	95.81	28	P	P	01 33 54.0	-0.3
YKA	Yellowknife Ar	95.81	28	P	P	01 33 54.0	-0.3
	comp=Z,0.8nm,0.5s,baz=271,slow=4.6,SNR=18						
PD31	Pinedale Array	99.27	48	eP	Pdif	01 34 09.8	-1.0
PDAR	Pinedale Array	99.27	48	P	Pdif	01 34 09.8	-1.0
PDAR	Pinedale Array	99.27	48	P	Pdif	01 34 09.8	-1.0
	comp=Z,0.5nm,0.8s,baz=235,slow=3.2,SNR=4.2						
GERES	GERESS Array B	124.11	328	PKP	PKPdf	01 39 26.4	-0.5
GERES	GERESS Array B	124.11	328	PKP	PKPdf	01 39 26.4	-0.5
	comp=Z,1.4nm,0.8s,baz=11,slow=1.0,SNR=6.8						
SJG	San Juan	140.11	68	ePKPdf	PKPdf	01 39 57.9	+0.2
TOA0	Torodi Ar. Sit	150.07	288	ePKPbc	PKPbc	01 40 18.3	-1.6
TORD	Torodi Ar. Bea	150.07	288	PKPbc	PKPbc	01 40 18.7	-1.2
TORD	Torodi Ar. Bea	150.07	288	PKPbc	PKPbc	01 40 18.7	-1.2
	comp=Z,1.8nm,0.3s,baz=76,slow=2.4,SNR=43						
TOA1	Torodi Ar. Sit	150.08	288	ePKPbc	PKPbc	01 40 18.7	-1.2
DBIC	Dimbokro	157.39	275	ePKPab	PKPab	01 40 56.5	-0.4
DBIC	Dimbokro	157.39	275	PKPab	PKPab	01 40 56.5	-0.4
	comp=Z,3.5nm,0.5s,baz=107,slow=2.7,SNR=7.3						

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*ISCJB **03** 01:22:50.4±0.6, 25°.02N±0°.06×94°.90E±0°.05, h104^{km}, mb3.5/12, Error ellipse: s-maj=9.2km s-min=5.8km az=8.0*

*IDC **03** 01:22:52.0±2.2, 24°.76N×95°.06E, h123^{km}±22^{km}, mb3.3/12, mb1 3.5/14, mb1mx3.3/60, mbtmp3.7/14, MS2.4/1, Ms1 2.4/1, ms1mx2.2/34, Error ellipse: s-maj=20.0km s-min=13.6km az=51.0*

ISC 03 01:22:50.7±0.7**, 24°.97N**±0°.10×**94°.98E**±0°.08**, h104**^{km}**, n26, σ1^s.77**/37**, mb3.5**/12**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	2.87	283	ePN	Pn	01 23 35.0	+0.1
SHL				i SN	Sn	01 24 07.5	-1.4
BRDH	Bariadhala	3.81	234	P	Pn	01 23 48.3	+0.9
	33nm,0.3s,baz=94,slow=16,SNR=5.4						
BRDH				S	Sn	01 24 32.1	+0.9
	110nm,0.3s,baz=91,slow=23,SNR=22						
BRDH				LR	LR	01 25 51.7	
	comp=Z,44nm,18.2s,baz=6.0,slow=48						
CMAR	Chiang Mai Arr	7.45	150	P	Pn	01 24 36.5	-0.3
	0.3nm,0.3s,baz=328,slow=12,SNR=9.2						
RAMN	Ramite	7.79	286	ePn	Pn	01 24 44.8	+3.2
RAMN				eSn	Sn	01 26 10.8	+2.4
	55nm,0.3s						
JIRN	Jiri	8.33	291	ePn	Pn	01 24 49.0	0.0
JIRN				eSn	Sn	01 26 19.8	-1.7
	64nm,0.3s						
GUN	Gumba	8.66	292	ePn	Pn	01 24 53.6	+0.1
GUN				eSn	Sn	01 26 26.8	-2.9
	58nm,0.6s						
PKI	Pulchoki	8.97	289	ePn	Pn	01 24 59.0	+1.3
PKI				eSn	Sn	01 26 35.8	-1.3
	11nm,0.2s						
PKIN	Phulchoki	8.98	289	ePn	Pn	01 24 58.8	+1.0
PKIN				eSn	Sn	01 26 35.5	-1.8
	18nm,0.4s						
DMN	Daman	9.24	289	ePn	Pn	01 25 02.1	+0.8
DMN				eSn	Sn	01 26 42.1	-1.5
	28nm,0.5s						
KOLN	Koldanda	10.58	288	ePn	Pn	01 25 20.2	+0.8
KOLN				eSn	Sn	01 27 14.4	-1.6
	36nm,0.6s						
DANN	Dangsing	10.58	291	ePn	Pn	01 25 18.9	-0.6
DANN				eSn	Sn	01 27 10.7	-5.6
	12nm,0.3s						
PYUN	Piuthan	11.18	289	ePn	Pn	01 25 27.5	0.0
PYUN				eSn	Sn	01 27 27.8	-2.8
	27nm,0.6s						
MKAR	Makanchi Array	24.02	338	P	P	01 27 58.0	+2.2
	1.9nm,0.4s,baz=152,slow=9.1,SNR=62						
SONM	Songino Array	24.55	19	P	P	01 28 01.0	+0.3
	0.3nm,0.4s,baz=227,slow=7.1,SNR=3.2						
KURBB	Kurchatov Arra	28.59	338	P	P	01 28 38.2	+1.4
	0.5nm,0.5s,baz=146,slow=9.4,SNR=5.0						
ZALV	Zalesovo Beam	29.93	348	P	P	01 28 50.1	+1.5
	0.3nm,0.3s,baz=145,slow=8.8,SNR=3.5						
BVAR	Borovoye Array	33.59	333	PcP	PcP	01 31 58.5	-0.2
	0.4nm,0.6s,baz=114,slow=1.7,SNR=4.4						
BRTR	Keskin Array B	52.92	302	P	P	01 31 57.4	+1.0
	0.3nm,0.6s,baz=116,slow=6.1,SNR=3.7						
FINES	FINESS Array B	58.32	328	P	P	01 32 35.3	+0.9
	0.4nm,0.4s,baz=107,slow=7.7,SNR=6.6						
WRA	Warramunga Arr	58.81	136	P	P	01 32 35.9	-2.5
	0.4nm,0.6s,baz=324,slow=7.3,SNR=7.2						
ARCES	ARCESS Array B	59.68	338	P	P	01 32 44.6	+0.8
	1.8nm,0.9s,baz=114,slow=5.5,SNR=5.7						
ASAR	Alice Springs	61.32	139	P	P	01 32 53.5	-2.1
	0.7nm,0.8s,baz=324,slow=7.4,SNR=6.8						
NB2	NORSAR Subarra	65.50	328	P	P	01 33 23.0	+0.4
	comp=Z,0.3nm,0.5s,baz=84,slow=6.5						
NOA	NORSAR Array B	65.50	328	P	P	01 33 22.3	-0.3
	comp=Z,0.5nm,0.4s,baz=83,slow=6.3,SNR=4.2						
GERES	GERESS Array B	66.04	314	P	P	01 33 26.7	+0.3
	comp=Z,0.2nm,0.4s,baz=34,slow=5.9,SNR=3.3						
TORD	Torodi Ar. Bea	87.46	283	P	P	01 35 27.3	+0.1
	comp=Z,0.2nm,0.5s,baz=48,slow=5.1,SNR=4.5						

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*ISK **03** 01:27:58.6, 38°.69N×43°.33E, h17^{km}, ML1.9/3*

*DDA **03** 01:27:59.9, 38°.71N×43°.30E, h7^{km}±5^{km}, ML2.6*

ISC 03 01:27:59.1±1.4**, 38°.71N**±0°.04×**43°.31E**±0°.05**, h15**^{km}±12^{km}**, n8, σ0^s.46**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.13	151	PG	Pb	01 28 03.7	+0.3
TVAN	Van	0.20	157	i P	Pb	01 28 04.7	+0.1
TVAN				i S	Sb	01 28 08.3	+0.1
TVAN				IAML_P			
	comp=Z,4μm,0.1s						
ERCV	ERCIS-VAN	0.31	4	PG	Pg	01 28 05.8	0.0
ERCV				SG	Sb	01 28 11.4	-0.1
VMUR	Van-Muradiye	0.35	36	i P	Pb	01 28 07.0	-0.2
VMUR				i S	Sb	01 28 13.4	+0.9
VMUR				IAML_P			
	comp=Z,750nm,0.1s						
ADCV	BITLIS_Adilcev	0.47	282	i P	Pn	01 28 10.8	-0.7
TUTA	Tutak	0.79	331	i P	Pb	01 28 15.3	+0.6
TUTA				IAML_P			
	comp=Z,945nm,0.1s						
AGRB	Hanur-Agry	0.90	344	PG	Pg	01 28 16.5	-0.1
AGRB				SG	Sn	01 28 30.2	-0.1
GURO	Guroymak-BITLI	1.01	261	PG	Pb	01 28 18.6	+0.2
GURO				SG	Sn	01 28 33.4	+0.4

NNC 03 01:42:39.6±5.9**, 36°.98N**×**70°.60E, h211**^{km}±88^{km}**, mb2.5, mpv3.6, 5C-5D, Error ellipse: s-maj=58.3km s-min=48.1km az=54.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.79	36	⇓P	Pn	01 43 39.1	-0.2
	6.9nm,0.4s						
SFK				⇑S	S	01 44 26.9	+0.9
	5.5nm,0.3s						
AML	Almayashu	5.67	24	P	Pn	01 44 03.5	+0.4
	SNR=32						
MNAS	Manas	5.69	14	⇓P	Pn	01 44 04.0	+0.9
	1.2nm,0.4s						
MNAS				⇑S	S	01 45 10.9	+1.9
	8.0nm,0.6s						
UCH	Uchtor	6.05	29	P	Pn	01 44 08.2	+0.2
	SNR=14						
KK31	Karatay Array	6.11	359	⇑P	Pn	01 44 09.9	+1.5
	1.0nm,0.3s,baz=182,slow=13,SNR=35						
KK31				⇓S	S	01 45 20.0	+1.2
	6.0nm,0.6s,baz=186,slow=23,SNR=13						
EKS2	Erkin-Say	6.18	22	P	Pn	01 44 10.2	+0.9
	SNR=14						
AAK	Ala-Archa	6.39	27	P	Pn	01 44 12.4	+0.3
	SNR=6.9						
AAK	Ala-Archa	6.39	27	⇓P	Pn	01 44 12.1	0.0
	5.6nm,0.6s						
AAK				⇑S	S	01 45 26.8	+1.4
	2.1nm,0.6s						
KBK	Karagaybulak	6.58	29	P	Pn	01 44 14.8	+0.3
	SNR=7.1						
ULHL	Ulahol	6.83	38	P	Pn	01 44 17.1	-0.6
	SNR=9.6						
TKM2	Tokmak 2	7.06	31	P	Pn	01 44 20.8	0.0
	SNR=5.6						
TKM2	Tokmak 2	7.06	31	⇑P	Pn	01 44 20.2	-0.6
	8.7nm,0.8s						
TKM2				⇓S	S	01 45 37.5	-3.8
	1.6nm,0.9s						

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*ISCJB **03** 01:46:23.2±0.6, 19°.48S±0°.03×69°.36W±0°.09, h116^{km}±5^{km}, mb3.5/2, Error ellipse: s-maj=13.3km s-min=5.6km az=178.0*

*GUC **03** 01:46:23.7±0.5, 19°.48S×69°.29W, h104^{km}±2^{km}, ML3.4*

*IDC **03** 01:46:28.7±8.0, 19°.23S×68°.97W, h148^{km}±53^{km}, mb3.3/2, mb1 3.4/3, mb1mx3.1/21, mbtmp3.6/3, Error ellipse: s-maj=82.7km s-min=50.0km az=26.0*

ISC 03 01:46:23.6±1.0**, 19°.48S**±0°.04×**69°.36W**±0°.09**, h109**^{km}±7^{km}**, n16, σ0^s.76**/25**, 7C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	IPOC Station P	0.40	225	⇓iP	Pn	01 46 40.0	0.0
PB11				i S	Sn	01 46 52.3	0.0
PB11				IAML		01 46 53.0	
	comp=E,4μm,0.2s						
MNMC	Minye Minye	0.42	327	⇑iP	Pn	01 46 40.4	+0.1
MNMC				i S	Sn	01 46 53.0	+0.3
MNMC				IAML		01 46 55.1	
	comp=N,3μm,0.2s						
PB08	IPOC Station P	0.68	164	⇑iP	Pn	01 46 42.2	-0.1
PB08				i S	Sn	01 46 56.1	-0.1
PB08				IAML		01 46 57.7	
	comp=E,1μm,0.2s						
PSGC	Pisagua	0.73	261	⇑iP	Pn	01 46 42.6	+0.3
PSGC				i S	Sn	01 46 56.7	+0.2
PSGC				IAML		01 46 58.0	
	comp=N,1μm,0.1s						
PB12	IPOC Station P	1.26	313	⇑iP	Pn	01 46 48.1	+0.3
PB12				i S	Sn	01 47 06.7	+0.8
PB12				IAML		01 47 10.3	
	comp=E,598nm,0.5s						
PB01	IPOC Station P	1.56	185	⇑iP	Pn	01 46 51.6	+0.3
PB01				i S	Sn	01 47 12.7	+0.5
PB01				IAML		01 47 14.0	
	comp=E,573nm,0.2s						
PB02	IPOC Station P	1.90	195	⇑iP	Pn	01 46 55.9	+0.5
PB02				i S	Sn	01 47 20.3	+0.7
PB02				IAML		01 47 26.7	
	comp=E,568nm,0.4s						
PB07	IPOC Station P	2.29	192	eP	Pn	01 47 01.3	+0.8
PB07				IAML		01 47 34.5	
	comp=E,273nm,0.6s						
PB09	IPOC Station P	2.31	177	⇑iP	Pn	01 47 01.8	+1.1
PB09				i S	Sn	01 47 30.1	+1.0
PB09				IAML		01 47 35.5	
	comp=E,126nm,0.6s						
PB03	IPOC Station P	2.58	188	⇓iP	Pn	01 47 04.9	+0.6
PB03				IAML		01 47 45.7	
	comp=E,167nm,0.8s						
PB04	IPOC Station P	2.93	195	eP	Pn	01 47 09.6	+0.6
PB04				IAML		01 47 53.2	
	comp=E,105nm,0.3s						
PB06	IPOC Station P	3.21	184	eP	Pn	01 47 13.3	+0.7
PB06				IAML		01 47 59.7	
	comp=N,81nm,0.4s						
LPAZ	La Paz	3.38	20	P	Pn	01 47 17.1	+1.8
	comp=N,1.0nm,0.3s,baz=188,slow=8.5,SNR=20						
LPAZ				S	Sn	01 47 55.0	-0.2
	baz=222,slow=16,SNR=2.0						
PB05	IPOC Station P	3.45	193	eP	Pn	01 47 15.9	+0.2
PB05				IAML		01 48 09.1	
	comp=N,45nm,0.6s						
TORD	Torodi Ar. Bea	77.08	71	P	P	01 58 03.8	-1.7
	comp=N,0.2nm,0.3s,baz=250,slow=5.0,SNR=8.2						
YKA	Yellowknife Ar	89.15	341	P	P	01 59 06.4	+0.1
	comp=N,0.4nm,0.6s,baz=132,slow=4.7,SNR=8.0						

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*ISCJB **03** 01:49:27.0±0.5, 36°.53N±0°.04×70°.71E±0°.06, h50^{km}, mb3.5/8, MS3.5/1, Error ellipse: s-maj=6.9km s-min=5.2km az=165.8*

*IDC **03** 01:49:28.0±3.2, 36°.48N×70°.97E, h45^{km}±28^{km}, mb3.4/8, mb1 3.5/15, mb1mx3.4/48, mbtmp3.6/15, ML3.3/7, MS3.5/1, Ms1 3.5/1, ms1mx2.4/34, Error ellipse: s-maj=27.2km s-min=20.3km az=7.0*

*NNC **03** 01:49:31.3±2.1, 37°.18N×70°.17E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=20.8km s-min=11.3km az=149.0*

ISC 03 01:49:28.2±0.7**, 36°.53N**±0°.07×**70°.72E**±0°.06**, h50**^{km}**, n36, σ2^s.37**/41**, mb3.5**/8**, 12C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	4.11	31	⇓Pn	Pn	01 50 31.9	+3.3
	8.2nm,0.4s						
SFK				⇑Lg	Lg	01 51 30.9	
	19nm,0.4s						
AML	Almayashu	6.05	21	P	Pn	01 50 57.0	+1.6
	SNR=12						
MNAS	Manas	6.11	12	⇑Pn	Pn	01 50 57.0	+1.1
	1.2nm,0.5s						
MNAS				⇑Sn	Sn	01 52 05.2	+0.6
	13nm,0.6s						
MNAS				⇑Lg	Lg	01 52 31.1	
	40nm,1.2s						
UCH	Uchtor	6.40	26	P	Pn	01 51 02.1	+1.8
	SNR=15						
KZA	Kyzart	6.56	31	P	Pn	01 51 03.8	+1.5
	SNR=9.1						
EKS2	Erkin-Say	6.56	20	P	Pn	01 51 04.0	+1.8
	SNR=13						
KK31	Karatay Array	6.57	359	⇓Pn	Pn	01 51 01.7	-0.4
	0.5nm,0.3s,baz=177,slow=15,SNR=3.8						
KK31				⇓Pg		01 51 16.3	
	3.8nm,0.4s						
KK31				⇑Sn	Sn	01 52 08.7	-7.0
	1.1nm,0.3s,baz=178,slow=30,SNR=16						
KK31				⇑Lg	Lg	01 52 41.0	
	32nm,0.8s,baz=178,slow=30,SNR=16						
AAK	Ala-Archa	6.76	24	⇓Pn	Pn	01 51 06.8	+1.9
	4.1nm,0.9s						
AAK				⇓Sn	Sn	01 52 22.0	+1.4
	13nm,0.7s						
AAK				⇑Lg	Lg	01 52 54.8	
	14nm,0.9s						
AAK	Ala-Archa	6.76	24	P	Pn	01 51 05.4	+0.5
	1.4nm,0.3s,baz=162,slow=5.3,SNR=24						
AAK				S	Sn	01 52 15.9	-4.7
	baz=204,slow=10,SNR=3.6						
CHMS	Chumysh	7.17	24	P	Pn	01 51 12.1	+1.7
	SNR=8.9						
TKM2	Tokmak 2	7.41	29	⇑Pn	Pn	01 51 15.2	+1.4
	3.0nm,0.6s						
TKM2				⇓Sn	Sn	01 52 37.5	+1.0
	5.9nm,0.9s						
GEYT	Alibeck	10.15	282	P	Pn	01 51 52.0	+0.8
	1.7nm,0.3s,baz=108,slow=8.8,SNR=18						
GEYT				S	Sn	01 53 39.8	-3.8
	1.4nm,0.3s,baz=279,slow=28,SNR=5.1						
GYA0B	ALIBECK ARRAY	10.15	282	⇑Pn	Pn	01 51 51.4	+0.1
	2.3nm,0.5s						
GYA0B				⇓Sn	Sn	01 53 39.0	-4.6
	6.8nm,0.4s						
PYUN	Piuthan	13.34	126	eP	Pn	01 52 35.6	+0.6
	12nm,0.4s						
MKAR	Makanchi Array	13.40	36	P	Pn	01 52 36.3	+0.8
	0.0nm,0.3s,baz=224,slow=15,SNR=3.4						
DANN	Dangsing	13.69	123	eP	Pn	01 52 40.6	+0.7
	27nm,0.6s						
KOLN	Koldanda	13.96	125	eP	Pn	01 52 43.6	+0.1
	9.3nm,0.5s						
AB31	Akbulak array	14.95	332	⇑P	Pn	01 52 55.6	-0.6
	0.4nm,0.3s,baz=170,slow=12,SNR=4.1						
AB31				⇑S	Sn	01 55 29.1	-11
	0.5nm,0.5s						
DMN	Daman	15.08	122	eP	P	01 52 58.3	-4.3
	14nm,0.7s						
KURBB	Kurchatov Arra	15.17	19	P	Pn	01 53 00.2	+1.2
	0.0nm,0.3s,baz=207,slow=10,SNR=5.5						
PKIN	Phulchoki	15.30	122	eP	P	01 53 02.1	-3.0
	10.0nm,0.4s						
PKI	Pulchoki	15.31	122	eP	P	01 53 01.8	-3.5
	12nm,0.6s						
JIRN	Jiri	15.79	120	eP	P	01 53 06.8	-3.9
	18nm,0.3s						
BVAR	Borovoye Array	16.50	359	P	Pn	01 53 15.2	-0.8
	0.1nm,0.3s,baz=163,slow=12,SNR=4.0						
AKTO	Aktyubinsk	16.64	331	⇑P	Pn	01 53 17.8	-0.1
	3.0nm,0.8s						
AKTO	Aktyubinsk	16.64	331	P	Pn	01 53 17.9	+0.1
	0.2nm,0.3s,baz=139,slow=13,SNR=9.2						
ZALV	Zalesovo Beam	19.98	25	P	P	01 53 54.5	-1.7
	0.5nm,0.3s,baz=218,slow=11,SNR=9.3						
BRTR	Keskin Array B	29.21	288	P	P	01 55 28.5	+3.3
	0.5nm,0.6s,baz=98,slow=9.1,SNR=4.3						
FINES	FINESS Array B	37.34	326	P	P	01 56 37.9	+2.5
	0.6nm,0.8s,baz=124,slow=12,SNR=4.6						
ARCES	ARCESS Array B	41.03	338	P	P	01 57 06.7	+0.6
	3.8nm,1.1s,baz=118,slow=7.6,SNR=3.4						
NOA	NORSAR Array B	44.22	323	P	P	01 57 35.3	+3.2
	0.4nm,0.6s,baz=100,slow=7.7,SNR=2.9						
VAE	Valguarnera	44.40	289	LR	LR	02 18 41.1	
	comp=Z,55nm,20.2s,baz=116,slow=39						
TORD	Torodi Ar. Bea	65.50	268	P	P	02 00 07.4	+0.9
	0.2nm,0.5s,baz=56,slow=6.7,SNR=3.4						
YKA	Yellowknife Ar	81.23	3	P	P	02 01 38.3	0.0
	0.5nm,0.5s,baz=349,slow=5.4,SNR=13						
WRA	Warramunga Arr	82.19	122	P	P	02 01 43.7	-0.4
	0.2nm,0.4s,baz=327,slow=4.9,SNR=6.7						
ASAR	Alice Springs	84.45	125	P	P	02 01 55.1	-0.5
	0.3nm,0.6s,baz=313,slow=5.2,SNR=6.7						

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*SOME **03** 02:00:53.9, 42°.52N×79°.58E, h20^{km}*

*NNC **03** 02:00:53.5±1.1, 42°.57N×79°.58E, h0^{km}, mb2.6, mpv2.3, Error ellipse: s-maj=6.5km s-min=4.2km az=142.0*

*KRNET **03** 02:00:54.6±0.1, 42°.58N×79°.58E, h22^{km}, mb2.0*

ISC 03 02:00:52.8±1.6**, 42°.50N**±0°.05×**79°.64E**±0°.05**, h24**^{km}±14^{km}**, n30, σ1^s.04**/58**, 10C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.67	349	P	Pn	02 01 06.7	-0.3
	2.6nm,0.2s						
SHLS				S	Sn	02 01 16.0	-0.9
	22nm,0.2s						
SHLS	Shalkode	0.67	349	eP	Pn	02 01 06.7	-0.3
	baz=21						
SHLS				eS	Sn	02 01 16.0	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=21						
SHLS	Shalkode	0.67	349	*e*P	Pn	02 01 06.7	-0.3
	2.6nm,0.2s						
SHLS				*e*S	Sn	02 01 16.0	-0.9
	22nm,0.2s						
UZB	Uzynbulak	0.79	325	P	Pb	02 01 07.7	-0.3
	2.8nm,0.1s						
UZB				S	Sb	02 01 18.1	-0.4
	6.1nm,0.2s						
UZB	Uzynbulak	0.79	325	*e*P	Pb	02 01 07.8	-0.3
	baz=24						
UZB				*e*S	Sb	02 01 17.9	-0.5
	baz=24						
UZB	Uzynbulak	0.79	325	*e*P	Pb	02 01 07.8	-0.3
	1.6nm,0.2s						
UZB				*e*S	Sb	02 01 17.9	-0.5
	7.4nm,0.2s						
PDGK	Podgornoye	0.84	352	P	Pb	02 01 08.5	-0.3
	0.6nm,0.1s						
PDGK				S	Sb	02 01 19.2	-0.5
	2.1nm,0.2s						
PDGK	Podgornoye	0.84	352	⇑P	Pb	02 01 08.0	-0.8
	0.9nm,0.6s						
PDGK				⇑S	Sb	02 01 18.8	-0.9
	2.6nm,0.4s						
PDGK	Podgornoye	0.84	352	⇑*i*P	Pb	02 01 08.5	-0.3
	baz=55						
PDGK				⇑*i*S	Sb	02 01 19.1	-0.6
	baz=55						
PRZ	Przheval'sk	0.92	269	⇑*i*P	Pb	02 01 10.9	+0.7
	baz=64						
PRZ				⇑*i*S	Sn	02 01 23.6	+0.5
	baz=64						
SATY	Saty	1.07	302	P	Pb	02 01 12.9	+0.2
	2.5nm,0.3s						
SATY				S	Sb	02 01 26.7	+0.4
	7.0nm,0.2s						
SATY	Saty	1.07	302	*e*P	Pb	02 01 12.9	+0.2
	0.9nm,0.1s						
SATY				*e*S	Sb	02 01 26.7	+0.4
	3.7nm,0.1s						
KTMS	Ketmen	1.08	29	P	Pb	02 01 13.3	+0.4
	1.4nm,0.1s						
KTMS				S	Sb	02 01 27.0	+0.3
	2.0nm,0.2s						
KURS	Kuram	1.46	313	*e*P	Pb	02 01 20.4	+0.9
	baz=12						
KURS				*e*S	Sb	02 01 39.3	+1.6
	baz=12						
KURS	Kuram	1.46	313	*e*P	Pb	02 01 20.4	+0.9
	0.3nm,0.1s						
KURS				*e*S	Sb	02 01 39.2	+1.6
	1.9nm,0.3s						
DJR	Jarkent	1.83	3	P	Pb	02 01 26.7	+0.9
	0.4nm,0.2s						
DJR				S	Sb	02 01 50.3	+2.0
	1.4nm,0.2s						
DJR	Jarkent	1.83	3	*e*P	Pb	02 01 26.7	+0.9
	0.3nm,0.1s						
DJR				*e*S	Sb	02 01 50.3	+2.0
	0.8nm,0.2s						
KDJ	Kajisay	1.86	259	⇓*i*P	Pb	02 01 27.8	+1.5
	baz=57						
KDJ				⇓*i*S	Sb	02 01 52.8	+3.6
	baz=57						
KOTS	Kotyrbulak	2.00	292	P	Pb	02 01 28.5	-0.1
	1.3nm,0.2s						
KOTS				S	Sb	02 01 53.4	+0.3
	2.2nm,0.3s						
KOTS	Kotyrbulak	2.00	292	*e*P	Pb	02 01 28.5	-0.1
	baz=91						
KOTS				*e*S	Sb	02 01 53.4	+0.3
	baz=91						
KOTS	Kotyrbulak	2.00	292	*e*P	Pb	02 01 28.5	-0.1
	1.1nm,0.3s						
KOTS				*e*S	Sb	02 01 53.4	+0.3
	1.0nm,0.4s						
ARXS	Arharly	2.16	323	Pg	Pb	02 01 31.9	+0.5
	0.8nm,0.3s						
ARXS				Lg	Lg	02 01 59.2	
	3.4nm,0.4s						
ARXS	Arharly	2.16	323	*e*P	Pb	02 01 31.9	+0.5
	0.8nm,0.3s						
ARXS				*e*S	Sb	02 01 59.2	+1.4
	1.4nm,0.2s						
CHKK	Chushkaly	2.37	306	*e*P	Pb	02 01 35.4	+0.6
	baz=5.0						
CHKK				*e*S	Sb	02 02 05.1	+1.6
	baz=5.0						
CHKK	Chushkaly	2.37	306	*e*P	Pb	02 01 35.4	+0.6
	0.4nm,0.1s						
CHKK				*e*S	Sb	02 02 05.2	+1.6
	1.8nm,0.3s						
ULHL	Ulahol	2.53	265	⇓*i*P	Pb	02 01 37.4	-0.3
	baz=64						
ULHL				⇓*i*S	Sb	02 02 09.3	+0.8
	baz=64						
BOOM	Boomskoye usch	2.74	271	⇓*i*P	Pb	02 01 40.0	-1.2
	baz=69						
BOOM				⇓*i*S	Sb	02 02 14.0	-0.4
	baz=69						
NRN	Naryn	2.92	250	⇑*e*P	Pb	02 01 43.2	-1.1
	baz=48						
NRN				⇑*i*S	Sb	02 02 19.3	-0.4
	baz=48						
TKM2	Tokmak 2	3.01	279	⇑Pg	Pb	02 01 46.1	+0.3
	0.2nm,0.3s						
TKM2				⇑Lg	Lg	02 02 26.5	
	0.3nm,0.5s						
TKM2	Tokmak 2	3.01	279	⇓*i*P	Pb	02 01 43.8	-2.1
	baz=78						
TKM2				⇓*i*S	Sb	02 02 20.5	-1.8
	baz=78						

*ISCJB **03** 02:00:50.8±0.4, 17°.29N±0°.04×147°.30E±0°.08, h26^{km}, mb4.4/46, MS3.1/1, Error ellipse: s-maj=10.9km s-min=5.2km az=6.8*

*IDC **03** 02:00:55.8±3.1, 17°.30N×147°.23E, h50^{km}±28^{km}, mb4.0/23, mb1 4.1/24, mb1mx4.0/60, mbtmp4.3/24, ML4.3/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/47, Error ellipse: s-maj=20.1km s-min=11.2km az=96.0*

*BJI **03** 02:00:56.5, 17°.30N×147°.20E, h70^{km}, mB5.1/19, mb4.6/28, Ms4.5/7, Ms7 4.4/7*

*NEIC **03** 02:00:57.5±0.8, 17°.25N×147°.18E, h68^{km}±6^{km}, mb4.6/17, Error ellipse: s-maj=7.3km s-min=3.7km az=89.0*

ISC 03 02:00:52.8±0.5**, 17°.31N**±0°.06×**147°.33E**±0°.09**, h26**^{km}**, n89, σ1^{s}.55**/87**, mb4.5**/46**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	1.60	248	*e*Pn	Pb	02 01 21.8	0.0
GUMO	Guam	4.40	213	*e*Pn	Pn	02 01 59.9	+2.0
GUMO	Guam	4.40	213	P	Pn	02 01 57.6	-0.3
	16nm,0.3s,baz=9.0,slow=19,SNR=4.3						
GUMO				S	Sn	02 02 50.1	+1.7
	12nm,0.3s,baz=67,slow=15,SNR=2.4						
H11S3	WAKE ISLAND Hy	18.46	83	T	T	02 23 46.8	
	baz=275,slow=74,SNR=6.9						
H11S1	WAKE ISLAND Hy	18.47	83	T	T	02 24 10.8	
	baz=275,slow=74,SNR=4.4						
H11S2	WAKE ISLAND Hy	18.48	83	T	T	02 23 49.2	
	baz=275,slow=74,SNR=5.9						
H11N1	WAKE ISLAND Hy	18.70	80	T	T	02 24 10.0	
	baz=265,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	18.71	80	T	T	02 24 08.6	
	baz=265,slow=74,SNR=11						
H11N3	WAKE ISLAND Hy	18.72	80	T	T	02 24 10.7	
	baz=265,slow=74,SNR=10						
INU	Inuyama	20.17	335	*e*P	Pn	02 05 26.9	-0.4
	22nm,0.9s						
MJAR	Matsushiro Arr	20.78	339	P	P	02 05 32.9	+0.9
	7.3nm,0.6s,baz=169,slow=11,SNR=18						
MAJO	Matsushiro	20.79	339	*e*P	Pn	02 05 33.9	-0.6
	114nm,1.9s						
MAT	Matsushiro	20.79	339	P	P	02 05 33.0	+1.0
MJB9	Matsu-Tunnel	20.79	339	*e*P	P	02 05 33.6	+1.6
	119nm,1.9s						
SIJI	Sorong	24.02	223	P	P	02 06 05.5	-0.3
	20nm,0.7s,baz=5.6,slow=16,SNR=7.4						
SIJI				LR	LR	02 14 40.0	
	comp=Z,64nm,19.0s,slow=34						
KSRS	Korea Array	26.35	323	P	P	02 06 26.0	-0.7
	2.0nm,0.7s,baz=137,slow=9.3,SNR=7.8						
KS15	Wonju Array Si	26.36	323	*e*P	P	02 06 26.8	0.0
KSAR	Wonju Array Be	26.36	323	P	P	02 06 26.0	-0.8
ASAJ	Asahikawa	27.02	352	P	P	02 06 32.9	+0.2
	12nm,0.6s,baz=289,slow=32,SNR=7.1						
NJ2	Nanjing	29.63	305	*e*P	P	02 06 57.1	+1.0
NJ2				pmax	pmax		
	comp=Z,15nm,0.9s						
USRK	Ussuriysk Ar.	29.76	337	P	P	02 06 57.8	+0.6
	2.6nm,0.8s,baz=93,slow=8.3,SNR=5.5						
CN2	Changchun	32.24	330	*e*P	P	02 07 20.1	+1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	34.25	342	P	P	02 07 37.3	+0.8
	4.4nm,0.7s,baz=158,slow=7.7,SNR=7.2						
XAN	Xi'an	38.15	303	P	P	02 08 12.8	+2.7
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,57nm,5.7s						
HHC	Hu-ho-hao-te	38.67	315	*e*P	P	02 08 16.4	+1.9
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,5.0s						
WRAB	Tennant Creek	39.15	200	*e*P	P	02 08 17.3	-1.2
	6.2nm,0.5s						
WB2	Warramunga Arr	39.16	200	*e*P	P	02 08 17.5	-1.1
WR1	Warramunga Arr	39.16	200	*e*P	P	02 08 17.9	-0.7
	19nm,0.8s						
WR1				*e*PcP	PcP	02 10 27.4	-0.4
WRA	Warramunga Arr	39.16	200	P	P	02 08 17.9	-0.7
	11nm,0.8s,baz=22,slow=9.2,SNR=31						
WRA				PcP	PcP	02 10 27.4	-0.4
	1.2nm,0.9s,baz=20,slow=3.6,SNR=4.5						
FITZ	Fitzroy Crossi	41.16	212	P	P	02 08 34.5	-0.7
	2.3nm,0.5s,baz=30,slow=10.0,SNR=15						
CD2	Chengdu	41.75	297	*e*P	P	02 08 38.6	-1.5
KMI	Kunming	42.13	288	P	P	02 08 44.8	+1.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LZH	Lanzhou	42.70	305	*e*P	P	02 08 47.6	-0.3
LZH				pP	pwP	02 09 04.5	+4.1
LZH				sP	sP	02 09 13.6	+17
LZH				*e*PP	PP	02 10 28.0	+0.8
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,6.8s						
LZH				LR	LR		
	comp=N,380nm,14.3s						
LZH				LR	LR		
	comp=E,400nm,14.6s						
LZH				LR	LR		
	comp=Z,540nm,17.5s						
AS01	Alice Springs	42.77	198	*e*P	P	02 08 47.6	-0.7
AS31	Alice Springs	42.79	198	*e*P	P	02 08 48.4	-0.1
	1.3nm,0.6s						
ASAR	Alice Springs	42.79	198	P	P	02 08 48.1	-0.4
	1.7nm,0.7s,baz=18,slow=7.5,SNR=20						
CHAI	Chaiyaphum	43.40	275	P	P	02 08 57.2	+3.6
	3.3nm,0.7s,380nm						
ULN	Ulaanbaatar	44.81	322	*e*P	P	02 09 04.3	-0.4
	1.3nm,0.6s						
SONA0	Songino Array	45.19	322	*e*P	P	02 09 07.9	+0.3
SONM	Songino Array	45.19	322	P	P	02 09 07.9	+0.3
	1.5nm,0.6s,baz=136,slow=8.2,SNR=6.1						
CHTO	Chiang Mai	45.91	280	*e*P	P	02 09 13.1	-0.6
	1.5nm,0.5s						
CMAR	Chiang Mai Arr	45.95	279	P	P	02 09 14.1	+0.1
	3.2nm,0.6s,baz=69,slow=7.1,SNR=18						
MBWA	Marble Bar	46.84	216	*e*P	P	02 09 19.5	-1.3
PSI	Prapat	49.63	259	P	P	02 09 42.5	-0.2
	6.0nm,0.7s,baz=1.8,slow=1.9,SNR=8.1						
BBOO	Buckleboo	50.99	192	*e*P	P	02 09 51.8	-0.7
	33nm,1.6s						
FORT	Forrest	51.28	201	*e*P	P	02 09 54.3	-0.3
	42nm,0.6s						
GSI	Gunungsitoli	51.41	257	*e*P	P	02 09 54.8	-1.3
	48nm,0.8s						
MORW	Morawa	55.13	214	*e*P	P	02 10 22.2	-0.9
	46nm,1.9s						
WMQ	Urumqi	56.38	311	P	P	02 10 34.6	+2.6
WMQ				pP	pwP	02 10 51.0	+6.6
WMQ				sP	sP	02 10 59.0	+18
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,410nm,4.7s						
WMQ				LR	LR		
	comp=N,97nm,18.5s						
WMQ				LR	LR		
	comp=E,79nm,20.5s						
WMQ				LR	LR		
	comp=Z,68nm,15.1s						
ZAA0	Zalesovo Array	60.05	323	*e*P	P	02 10 56.4	-1.0
	3.0nm,0.8s						
ZAA1	Zalesovo Array	60.05	323	*e*P	P	02 10 56.5	-0.9
ZALV	Zalesovo Beam	60.05	323	*e*P	P	02 10 56.1	-1.3
ZALV				*e*S	S	02 19 04.2	-4.4
ZALV	Zalesovo Beam	60.05	323	P	P	02 10 56.5	-0.9
	3.7nm,0.8s,baz=104,slow=6.8,SNR=16						
MK01	Makanchi Array	60.52	314	*e*P	P	02 11 00.5	-0.3
MK31	Makanchi Array	60.53	314	*e*P	P	02 11 00.6	-0.3
MK32	Makanchi Array	60.53	314	*e*P	P	02 11 00.8	0.0
MKAR	Makanchi Array	60.53	314	P	P	02 11 00.8	0.0
	2.1nm,0.6s,baz=93,slow=7.1,SNR=33						
MAKZ	Makanchi	60.75	314	*e*P	P	02 11 01.6	-0.7
	3.8nm,0.6s						
KURK	Kurchatov	63.33	318	*e*P	P	02 11 18.6	-0.9
NRIK	Noril'sk	63.44	340	P	P	02 11 20.4	+0.5
	4.2nm,0.7s,baz=116,slow=9.0,SNR=6.9						
ILAR	Eielson Array	64.20	26	P	P	02 11 25.1	+0.1
	0.8nm,0.9s,baz=247,slow=3.8,SNR=6.4						
KSH	Kashi	64.93	306	P	P	02 11 32.6	+2.1
KSH				pP	pwP	02 11 53.6	+11
KSH				PP	PP	02 14 01.1	+7.8
KSH				S	S	02 20 05.1	-5.7
KSH				sS	sS	02 20 42.4	+20
KSH				pmax	pmax		
	comp=Z,360nm,5.2s						
KSH				LR	LR		
	comp=N,230nm,6.0s						
KSH				LR	LR		
	comp=E,170nm,4.0s						
KSH				LR	LR		
	comp=Z,450nm,6.3s						
AAK	Ala-Archa	65.94	309	*e*P	P	02 11 35.6	-1.4
	0.7nm,0.5s						
NIL	Nilore	67.56	300	*e*P	P	02 11 46.8	-0.6
	9.0nm,0.8s						
BRVK	Borovoye	68.59	321	*e*P	P	02 11 52.8	-0.6
	5.2nm,0.7s						
KK31	Karatay Array	68.84	310	*e*P	P	02 11 53.8	-1.4
KKAR	Karatay Array	68.84	310	*e*P	P	02 11 54.1	-1.1
INK	Inuvik	70.04	23	*e*P	P	02 12 02.4	+0.4
	2.7nm,1.1s						
INK	Inuvik	70.04	23	P	P	02 12 02.9	+0.9
	2.3nm,1.0s,baz=266,slow=5.2,SNR=4.7						
ARU	Arti	75.09	325	*e*P	P	02 12 31.8	-0.5
	6.1nm,0.6s						
ABKAR	Akbulak array	75.40	317	*e*P	P	02 12 33.5	-0.8
YKA	Yellowknife Ar	78.48	28	P	P	02 12 51.4	+0.1
	0.7nm,0.7s,baz=286,slow=5.5,SNR=9.6						
YKB5	Yellowknife Ar	78.48	28	*e*P	P	02 12 51.1	-0.2
GEYT	Alibeck	78.96	306	P	P	02 12 53.3	-1.3
	1.9nm,0.8s,baz=79,slow=9.0,SNR=3.6						
NV01	Mina Array Sit	82.76	52	*e*P	P	02 13 15.1	0.0
NVAR	Mina Array Bea	82.76	52	P	P	02 13 14.8	-0.3
	1.4nm,0.6s,baz=274,slow=5.5,SNR=12						
KLMR	Klimovskoe	83.40	332	*e*P	P	02 13 17.5	-0.1
KLMR				AMP		02 13 22.4	
	comp=Z,13nm,1.2s						
ARA0	ARCESS Array S	84.28	343	*e*P	P	02 13 23.1	+1.1
ARCES	ARCESS Array B	84.28	343	P	P	02 13 23.1	+1.1
	comp=Z,2.1nm,0.8s,baz=14,slow=6.2,SNR=5.9						
PD31	Pinedale Array	87.68	46	*e*P	P	02 13 40.0	+0.4
PDAR	Pinedale Array	87.68	46	P	P	02 13 40.8	+1.2
	comp=Z,0.3nm,0.6s,baz=261,slow=3.6,SNR=4.9						
FIA0	FINESS Array S	88.78	336	*e*P	P	02 13 43.0	-1.1
FINES	FINESS Array B	88.78	336	P	P	02 13 43.0	-1.1
	comp=Z,1.5nm,0.7s,baz=57,slow=4.3,SNR=10						
BR101	Keskin Array S	96.18	315	*e*P	P	02 14 17.9	-1.1
BRTR	Keskin Array B	96.18	315	P	P	02 14 17.9	-1.1
	comp=Z,0.6nm,0.8s,baz=72,slow=6.2,SNR=3.5						
OTAV	Otavalo	131.68	74	*e*PKPdf	PKPdf	02 20 04.5	-0.5
DBIC	Dimbokro	143.62	309	PKP	PKPbc	02 20 24.6	+0.9
	comp=Z,4.2nm,1.1s,baz=217,slow=3.2,SNR=2.7						
LPAZ	La Paz	146.07	94	*e*PKPdf	PKPbc	02 20 32.2	+0.1
LPAZ	La Paz	146.07	94	PKPbc	PKPab	02 20 33.5	+0.8
	comp=Z,1.0nm,0.5s,baz=327,slow=6.8,SNR=5.0						

*SOME **03** 02:04:26.7, 42°.63N×78°.92E, h15^{km}*

*KRNET **03** 02:04:26.7±0.1, 42°.63N×78°.92E, h18^{km}, mb2.6*

*NNC **03** 02:04:27.1±0.9, 42°.69N×78°.92E, h0^{km}, mb2.9, mpv2.9, Error ellipse: s-maj=7.0km s-min=2.3km az=159.0*

ISC 03 02:04:26.2±1.2**, 42°.61N**±0°.03×**78°.91E**±0°.03**, h4**^{km}±10^{km}**, n54, σ0^{s}.95**/101**, 22C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.40	251	⇑*i*P	Pg	02 04 35.0	+1.0
	baz=48						
PRZ				⇑*i*S	Sg	02 04 41.3	+2.1
	baz=48						
UZB	Uzynbulak	0.54	9	P	Pg	02 04 36.7	+0.1
	18nm,0.2s						
UZB				S	Sg	02 04 44.2	+0.5
	75nm,0.2s						
UZB	Uzynbulak	0.54	9	*e*P	Pg	02 04 36.7	+0.1
	baz=8.0						
UZB				*e*S	Sg	02 04 44.2	+0.5
	baz=8.0						
UZB	Uzynbulak	0.54	9	*e*P	Pg	02 04 36.7	+0.1
	18nm,0.2s						
UZB				*e*S	Sg	02 04 44.2	+0.5
	75nm,0.2s						
SATY	Saty	0.58	320	P	Pg	02 04 37.5	+0.1
	40nm,0.1s						
SATY				S	Sg	02 04 45.4	+0.5
	122nm,0.1s						
SATY	Saty	0.58	320	*e*P	Pg	02 04 37.5	+0.1
	32nm,0.1s						
SATY				*e*S	Sg	02 04 45.4	+0.5
	122nm,0.1s						
SHLS	Shalkode	0.68	37	P	Pn	02 04 43.5	+0.8
	7.6nm,0.1s						
SHLS				S	Sn	02 04 55.8	+2.0
	38nm,0.4s						
PDGK	Podgornoye	0.83	31	P	Pg	02 04 41.8	-0.4
	5.1nm,0.1s						
PDGK				S	Sg	02 04 52.9	-0.1
	8.8nm,0.3s						
PDGK	Podgornoye	0.83	31	⇓P	Pg	02 04 41.6	-0.7
	0.8nm,0.3s						
PDGK				⇑S	Sg	02 04 52.7	-0.3
	22nm,0.6s						
PDGK	Podgornoye	0.83	31	⇓*i*P	Pg	02 04 41.9	-0.4
	baz=30						
PDGK				⇓*i*S	Sg	02 04 52.9	-0.1
	baz=30						
KURS	Kuram	1.03	328	P	Pb	02 04 45.7	-1.0
	5.0nm,0.1s						
KURS				S	Sg	02 04 59.6	+0.3
	5.0nm,0.2s						
KURS	Kuram	1.03	328	*e*P	Pb	02 04 45.7	-1.0
	baz=27						
KURS				*e*S	Sg	02 04 59.6	+0.3
	baz=27						
KURS	Kuram	1.03	328	*e*P	Pb	02 04 45.7	-1.0
	5.0nm,0.1s						
KURS				*e*S	Sg	02 04 59.6	+0.3
	5.0nm,0.2s						
TARG	Taragay, Kyrgy	1.21	223	⇓*i*P	Pn	02 04 48.7	-1.6
	baz=23						
TARG				⇓*i*S	Sb	02 05 04.7	-1.3
	baz=23						
KDJ	Kajisay	1.37	250	⇑*i*P	Pb	02 04 52.7	+0.2
	baz=49						
KDJ				⇑*i*S	Sg	02 05 10.9	+0.7
	baz=49						
KOTS	Kotyrbulak	1.46	296	P	Pb	02 04 53.4	-0.6
	3.4nm,0.2s						
KOTS				S	Sb	02 05 12.7	-0.3
	13nm,0.2s						
KOTS	Kotyrbulak	1.46	296	*e*P	Pb	02 04 53.4	-0.6
	baz=95						
KOTS				*e*S	Sb	02 05 12.7	-0.3
	baz=95						
KOTS	Kotyrbulak	1.46	296	*e*P	Pb	02 04 53.4	-0.6
	3.4nm,0.2s						
KOTS				*e*S	Sb	02 05 12.7	-0.3
	13nm,0.2s						
MDOK	Medeo	1.47	292	P	Pn	02 04 53.2	-0.5
	2.5nm,0.5s						
MDOK				S	Sb	02 05 12.6	-0.8
	5.1nm,0.4s						
MDOK	Medeo	1.47	292	Pg	Pb	02 04 53.6	-0.7
	2.8nm,0.2s						
MDOK				Lg	Lg	02 05 12.8	
	9.1nm,0.3s						
MDOK	Medeo	1.47	292	*e*P	Pb	02 04 53.6	-0.7
	baz=92						
MDOK				*e*S	Sb	02 05 12.8	-0.6
	baz=92						
MDOK	Medeo	1.47	292	*e*P	Pb	02 04 53.6	-0.7
	2.8nm,0.2s						
MDOK				*e*S	Sb	02 05 12.8	-0.6
	9.1nm,0.3s						
TNSS	Tian-Shan	1.50	287	P	Pb	02 04 54.3	-0.6
	3.1nm,0.2s						
TNSS				S	Sb	02 05 14.0	-0.5
	13nm,0.3s						
TNSS	Tian-Shan	1.50	287	*e*P	Pb	02 04 54.3	-0.6
	baz=86						
TNSS				*e*S	Sb	02 05 14.0	-0.5
	baz=86						
TNSS	Tian-Shan	1.50	287	*e*P	Pb	02 04 54.3	-0.6
	3.1nm,0.2s						
TNSS				*e*S	Sb	02 05 14.1	-0.5
	13nm,0.3s						
ARXS	Arharly	1.78	334	P	Pb	02 04 59.6	+0.1
	3.2nm,0.2s						
ARXS				S	Sg	02 05 22.7	-0.8
	11nm,0.4s						
ARXS	Arharly	1.78	334	*e*P	Pb	02 04 59.4	-0.2
	3.2nm,0.2s						
ARXS				*e*S	Sg	02 05 22.8	-0.8
	11nm,0.4s						
DJR	Jarkent	1.83	20	P	Pb	02 05 00.1	-0.3
	1.3nm,0.1s						
DJR				S	Sg	02 05 24.0	-1.1
	11nm,0.3s						
DJR	Jarkent	1.83	20	*e*P	Pb	02 05 00.1	-0.3
	1.3nm,0.1s						
DJR				*e*S	Sg	02 05 24.0	-1.1
	11nm,0.3s						
CHKK	Chushkaly	1.87	312	P	Pb	02 05 01.0	0.0
	1.9nm,0.1s						
CHKK				S	Sg	02 05 25.5	-0.8
	32nm,0.3s						
CHKK	Chushkaly	1.87	312	*e*P	Pb	02 05 01.0	0.0
	baz=12						
CHKK				*e*S	Sg	02 05 25.6	-0.8
	baz=12						
CHKK	Chushkaly	1.87	312	*e*P	Pb	02 05 01.0	0.0
	1.9nm,0.1s						
CHKK				*e*S	Sg	02 05 25.5	-0.8
	32nm,0.3s						
MTBS	Maitube	1.89	287	P	Pb	02 05 01.6	+0.2
	2.7nm,0.1s						
MTBS				S	Sg	02 05 26.5	-0.6
	9.2nm,0.2s						
MTBS	Maitube	1.89	287	*e*P	Pb	02 05 01.6	+0.2
	baz=86						
MTBS				*e*S	Sg	02 05 26.5	-0.6
	baz=86						
MTBS	Maitube	1.89	287	*e*P	Pb	02 05 01.6	+0.2
	2.7nm,0.1s						
MTBS				*e*S	Sg	02 05 26.5	-0.6
	9.2nm,0.2s						
KTBS	Karatobe	1.96	305	Pg	Pb	02 05 02.7	+0.1
	3.7nm,0.1s						
KTBS				Lg	Lg	02 05 28.7	
	19nm,0.2s						
KTBS	Karatobe	1.96	305	*e*P	Pb	02 05 02.7	+0.1
	3.7nm,0.1s						
KTBS				*e*S	Sg	02 05 28.7	-0.7
	19nm,0.2s						
ULHL	Ulahol	2.01	260	⇑*i*P	Pb	02 05 02.8	-0.6
	baz=60						
ULHL				⇑*i*S	Sb	02 05 29.0	+0.1
	baz=60						
BOOM	Boomskoye usch	2.20	268	⇓*i*P	Pb	02 05 05.3	-1.3
	baz=67						
BOOM				⇓*i*S	Sb	02 05 34.0	-0.3

	baz=67						
KST	**Kastek**	**2.21**	**282**	Pg	**Pb**	**02 05 07.3**	**+0.5**
	3.2nm,0.3s						
KST				Lg	Lg	02 05 36.3	
	6.3nm,0.4s						
KST	**Kastek**	**2.21**	**282**	*e*P	**Pb**	**02 05 07.3**	**+0.5**
	3.2nm,0.3s						
KST				*e*S	**Sg**	**02 05 36.3**	**-0.9**
	6.3nm,0.4s						
DGS	**Degeres**	**2.39**	**286**	Pg	**Pb**	**02 05 10.3**	**+0.5**
	7.3nm,0.5s						
DGS				Lg	Lg	02 05 41.5	
	23nm,0.5s						
DGS	**Degeres**	**2.39**	**286**	*e*P	**Pb**	**02 05 10.3**	**+0.5**
	7.3nm,0.5s						
DGS				*e*S	**Sg**	**02 05 41.5**	**-1.5**
	23nm,0.5s						
TKM2	**Tokmak 2**	**2.46**	**278**	⇑Pn	**Pb**	**02 05 11.5**	**+0.4**
	1.4nm,0.4s						
TKM2				⇑Sn	**Sg**	**02 05 43.9**	**-1.3**
	1.2nm,0.3s						
TKM2	**Tokmak 2**	**2.46**	**278**	⇑*i*P	**Pb**	**02 05 09.2**	**-1.9**
	baz=78						
TKM2				⇑*i*S	**Sb**	**02 05 39.5**	**-2.3**
	baz=78						
NRN	**Naryn**	**2.47**	**242**	⇑*i*P	**Pb**	**02 05 09.8**	**-1.5**
	baz=42						
NRN				⇑*i*S	**Sb**	**02 05 40.7**	**-1.5**
	baz=42						
KAPS	**Kapalarasan**	**2.69**	**7**	Pg	**Pb**	**02 05 15.2**	**+0.2**
	0.9nm,0.3s						
KAPS				Lg	Lg	02 05 49.9	
	5.5nm,0.3s						
KAPS	**Kapalarasan**	**2.69**	**7**	*e*P	**Pb**	**02 05 15.2**	**+0.2**
	0.9nm,0.3s						
KAPS				*e*S	**Sg**	**02 05 49.9**	**-2.7**
	5.5nm,0.3s						
KZA	**Kyzart**	**2.77**	**260**	⇑*i*P	**Pn**	**02 05 13.5**	**+1.8**
	baz=60						
KZA				⇑*i*S	**Sb**	**02 05 47.5**	**-3.3**
	baz=60						
AAK	**Ala-Archa**	**3.26**	**272**	⇓Pg	**Pb**	**02 05 25.3**	**+0.6**
	1.3nm,0.8s						
AAK				⇓Lg	Lg	02 06 08.5	
	1.8nm,0.5s						
UCH	**Uchtor**	**3.28**	**265**	⇑*i*P	**Pn**	**02 05 20.4**	**+1.6**
	baz=64						
UCH				⇑*e*S	**Sn**	**02 05 59.7**	**+1.3**
	baz=64						
ARLS	**Aral**	**3.49**	**259**	⇑*i*P	**Pn**	**02 05 22.9**	**+1.5**
	baz=59						
ARLS				⇑*i*S	**Sn**	**02 06 04.2**	**+1.0**
	baz=59						
MAKZ	**Makanchi**	**4.73**	**26**	⇑Pg	**Pb**	**02 05 50.6**	**+0.9**
	0.4nm,0.7s						
MAKZ				⇑Lg	Lg	02 06 52.2	
	0.6nm,0.8s						
MK31	**Makanchi Array**	**4.82**	**29**	⇓Pg	**Pb**	**02 05 52.2**	**+0.8**
	0.1nm,0.3s,baz=208,slow=14						
MK31				⇑Sn	**Sn**	**02 06 36.0**	**+0.1**
	0.6nm,0.7s,baz=209,slow=25,SNR=5.1						
MK31				⇓Lg	Lg	02 06 55.5	
	0.2nm,0.3s,baz=208,slow=28,SNR=4.0						

IDC ***03*** *02:05:09.9±2.0, 11°.79N×126°.74E, h0^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.6/52, mbtmp3.9/5, Error ellipse: s-maj=102.9km s-min=25.8km az=68.0*

MAN ***03*** *02:05:14.3, 11°.92N×126°.45E, h21^{km}, MS3.4*

ISC 03 02:05:12.2±3.5, **11°.80N**±0°.06×**126°.52E**±0°.08, **h16**^{km}±22^{km}, **n12,** σ**1^{s}.53**/18, **mb3.9**/5, **1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.08**	**259**	*e*P	**Pn**	**02 05 32.9**	**+0.2**
BESP				*e*S	**Sn**	**02 05 48.3**	**+1.0**
PLP	**Palo**	**1.64**	**247**	⇑*e*P	**Pn**	**02 05 41.1**	**+0.7**
PLP				*e*S	**Sn**	**02 06 01.4**	**+0.2**
CNP	**Catarman**	**1.95**	**291**	*e*P	**Pn**	**02 05 45.2**	**+0.6**
CNP				*e*S	**Sn**	**02 06 07.9**	**-0.9**
OCLP	**Ormoc**	**2.02**	**248**	*e*P	**Pb**	**02 05 49.0**	**+0.5**
OCLP				*e*S	**Sn**	**02 06 06.4**	**-4.1**
MSLP	**Maasin**	**2.33**	**225**	*e*P	**Pb**	**02 05 52.6**	**-1.2**
MSLP				*e*S	**Sb**	**02 06 22.4**	**+0.1**
PVCP	**Virac**	**2.92**	**308**	*e*P	**Pb**	**02 06 02.3**	**-1.5**
PVCP				*e*S	**Sn**	**02 06 31.9**	**-0.8**
RCP	**Roxas**	**3.71**	**267**	⇓*e*P	**Pn**	**02 06 11.3**	**+2.4**
BATI	**Baumata**	**22.05**	**188**	P	**P**	**02 10 06.8**	**+0.4**
	8.2nm,0.4s,baz=233,slow=5.1,SNR=2.5						
WRA	**Warramunga Arr**	**32.47**	**166**	P	**P**	**02 11 41.0**	**-1.1**
	0.7nm,0.7s,baz=348,slow=9.6,SNR=4.2						
ASAR	**Alice Springs**	**35.98**	**168**	P	**P**	**02 12 12.3**	**-0.2**
	0.7nm,0.5s,baz=350,slow=7.6,SNR=9.5						
STKA	**Stephens Creek**	**45.77**	**162**	P	**P**	**02 13 33.1**	**0.0**
	0.9nm,0.4s,baz=340,slow=7.2,SNR=2.9						
MKAR	**Makanchi Array**	**50.97**	**322**	P	**P**	**02 14 14.4**	**+1.2**
	0.6nm,0.7s,baz=114,slow=8.8,SNR=4.8						

IDC ***03*** *02:08:00.1±0.7, 37°.51N×17°.56W, h0^{km}, mb4.0/25, mb1 4.1/26, mb1mx4.0/51, mbtmp4.0/26, ML4.7/1, MS3.6/10, Ms1 3.6/10, ms1mx3.3/40, Error ellipse: s-maj=16.5km s-min=13.1km az=7.0*

NEIC ***03*** *02:08:01.6±0.3, 37°.52N×17°.39W, h10^{km}, mb4.6/16, Error ellipse: s-maj=6.9km s-min=4.5km az=161.0*

MDD ***03*** *02:08:02.9±1.4, 37°.58N×17°.43W, h20^{km}±14^{km}, mb4.9/36, Error ellipse: s-maj=11.5km s-min=6.1km az=120.0, PRXIMO*

LDG ***03*** *02:08:04.8±0.2, 37°.66N×17°.45W, h30^{km}, Ml4.4/23, Error ellipse: s-maj=4.2km s-min=3.5km az=137.0*

IGIL ***03*** *02:08:04.3, 37°.39N×17°.20W, h0^{km}, ML4.6*

INMG ***03*** *02:08:06.8±3.4, 37°.49N×17°.40W, h8^{km}±23^{km}, MD4.1, ML4.4, Error ellipse: s-maj=8.8km s-min=4.1km az=119.0*

ISC 03 02:08:01.6±0.4, **37°.54N**±0°.05×**17°.30W**±0°.04, **h10**^{km}, **n346,** σ**2^{s}.05**/368, **mb4.2**/35, **MS3.5**/10, **1C-2D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPS	**Porto Santo**	**4.55**	**170**	*e*Pn	**Pn**	**02 09 11.0**	**+0.6**
PMPS				*e*Sn	Sn	02 09 55.2	-8.1
PMPS				A	A	02 09 59.7	
	510nm,0.5s						
PMPS	**Porto Santo**	**4.55**	**170**	Pn	**Pn**	**02 09 11.0**	**+0.6**
PMPS				Sn	Sn	02 09 55.2	-8.1
	255nm,0.5s						
PMOZ	**Porto Moniz, M**	**4.71**	**179**	*e*Pn	**Pn**	**02 09 13.6**	**+0.8**
PMOZ				*e*Sn	Sn	02 09 59.8	-7.8
PMOZ				A	A	02 10 05.7	
	3µm,0.4s						
PMOZ	**Porto Moniz, M**	**4.71**	**179**	⇑Pn	**Pn**	**02 09 13.7**	**+0.9**
	1µm,0.5s,SNR=18						
PMOZ				Sn	Sn	02 09 59.7	-7.8
	4µm,0.8s,SNR=7.9						
PMOZ	**Porto Moniz, M**	**4.71**	**179**	P	**Pn**	**02 09 13.9**	**+1.1**
PMOZ				S	Sn	02 10 00.4	-7.1
PMAR	**Madeira**	**4.82**	**176**	*e*Pn	**Pn**	**02 09 14.8**	**+0.4**
PMAR				*e*Sn	Sn	02 10 02.1	-8.3
PMAR				A	A	02 10 09.6	
	1µm,0.3s						
PMAR	**Madeira**	**4.82**	**176**	Pn	**Pn**	**02 09 14.8**	**+0.4**
PMAR				Sn	Sn	02 10 02.1	-8.3
	685nm,0.3s						
PMAR	**Madeira**	**4.82**	**176**	P	**Pn**	**02 09 15.1**	**+0.7**
PMAR				S	**Sn**	**02 10 04.9**	**-5.4**
FUL	**Funchal**	**4.90**	**176**	*e*Pn	**Pn**	**02 09 15.7**	**+0.5**
FUL				*e*Sn	Sn	02 10 03.0	-9.0
FUL				A	A	02 10 05.7	
	998nm,0.2s						
FUL	**Funchal**	**4.90**	**176**	Pn	**Pn**	**02 09 15.7**	**+0.5**
FUL				Sn	Sn	02 10 03.0	-9.0
	499nm,0.2s						
PSMN	**Pico do Norte,**	**6.21**	**267**	*e*P	**Pn**	**02 09 28.8**	**-4.6**
BART	**Pico Bartolome**	**6.25**	**275**	*e*P	**Pn**	**02 09 30.6**	**-3.3**
PMAFR	**Mafra**	**6.47**	**75**	*e*Pn	**Pn**	**02 09 38.3**	**+1.5**
PMAFR				*e*Sn	**Sn**	**02 10 45.4**	**-5.3**
PMAFR				A	A	02 10 52.2	
	546nm,0.2s						
PMAFR	**Mafra**	**6.47**	**75**	Pn	**Pn**	**02 09 38.0**	**+1.2**
	5.0nm,0.3s,SNR=35						
PMAFR				Sn	Sn	02 10 45.0	-5.7
	438nm,0.4s,SNR=13						
PMST	**Lisbon--Monsan**	**6.51**	**77**	*e*Pn	**Pn**	**02 09 38.0**	**+0.6**
PMST				*e*Sn	Sn	02 10 45.7	-6.0
PMST				A	A	02 10 56.4	
	284nm,0.2s						
CMLA	**Cha da Macela**	**6.53**	**274**	*e*P	**Pn**	**02 09 36.1**	**-1.6**
CMLA	**Cha da Macela**	**6.53**	**274**	*e*Pn	**Pn**	**02 09 35.4**	**-2.2**
LIS	**Lisbon**	**6.53**	**77**	*e*S	**Sn**	**02 10 46.7**	**-5.5**
LIS				AML	AML	02 10 54.9	
	comp=N,1µm,0.6s						
LIS	**Lisbon**	**6.53**	**77**	Sn	**Sn**	**02 10 46.7**	**-5.5**
	comp=N,1µm,0.6s						
GRON	**Grota Negra**	**6.53**	**274**	*e*P	**Pn**	**02 09 33.9**	**-3.9**
PDA	**Ponta Delgada**	**6.64**	**274**	*e*P	**Pn**	**02 09 36.7**	**-2.4**
PSET	**Sete Cidades**	**6.68**	**275**	*e*P	**Pn**	**02 09 37.4**	**-2.4**
PFVI	**Vila Bisbo**	**6.77**	**91**	*e*Pn	**Pn**	**02 09 41.0**	**+0.1**
PFVI				*e*Sn	Sn	02 10 51.1	-6.9
PFVI				A	A	02 10 57.8	
	comp=N,113nm,0.4s						
PFVI	**Vila Bisbo**	**6.77**	**91**	*e*Pn	**Pn**	**02 09 41.0**	**+0.1**
PFVI				*e*Sn	Sn	02 10 52.5	-5.5
PFVI	**Vila Bisbo**	**6.77**	**91**	Pn	**Pn**	**02 09 41.0**	**+0.1**
	comp=N,62nm,0.4s,SNR=18						
PFVI				Sn	Sn	02 10 51.4	-6.6
	comp=N,183nm,0.2s,SNR=5.8						
PFVI	**Vila Bisbo**	**6.77**	**91**	P	**Pn**	**02 09 41.1**	**+0.1**
PFVI				S	**Sn**	**02 10 56.2**	**-1.8**
PTEO	**Sao Teotonio**	**6.82**	**87**	*e*Pn	**Pn**	**02 09 42.2**	**+0.6**
PTEO				*e*Sn	Sn	02 10 51.1	-8.1
PTEO				A	A	02 10 59.0	
	comp=N,341nm,0.6s						
PTEO	**Sao Teotonio**	**6.82**	**87**	Pn	**Pn**	**02 09 42.2**	**+0.6**
PTEO				Sn	Sn	02 10 51.1	-8.1
	comp=N,170nm,0.6s						
MORF	**Marmelete**	**6.89**	**89**	*e*P	**Pn**	**02 09 42.5**	**-0.1**
MORF				*e*S	Sn	02 10 54.5	-6.7
MORF				AML	AML	02 11 02.8	
	comp=N,312nm,0.2s						
MORF	**Marmelete**	**6.89**	**89**	*e*Pn	**Pn**	**02 09 42.6**	**-0.1**
MORF				*e*Sn	Sn	02 10 55.1	-6.0
MORF				A	A	02 11 02.1	
	comp=N,114nm,0.3s						
MORF	**Marmelete**	**6.89**	**89**	Pn	**Pn**	**02 09 42.5**	**-0.1**
MORF				Sn	Sn	02 10 54.5	-6.7
	comp=N,312nm,0.2s						
PNCL	**Nicolau / Gran**	**6.97**	**83**	*e*Pn	**Pn**	**02 09 44.1**	**+0.4**
PNCL				*e*Sn	Sn	02 10 54.8	-8.2
PNCL				A	A	02 11 01.4	
	comp=N,182nm,0.9s						
PNCL	**Nicolau / Gran**	**6.97**	**83**	Pn	**Pn**	**02 09 44.1**	**+0.4**
PNCL				Sn	Sn	02 10 54.8	-8.2
	comp=N,182nm,0.9s						
MESJ	**Messejana**	**7.21**	**85**	*e*P	**Pn**	**02 09 47.2**	**+0.2**
MESJ				*e*S	Sn	02 11 02.7	-6.2
MESJ				AML	AML	02 11 08.2	
	comp=E,247nm,0.7s						
MESJ	**Messejana**	**7.21**	**85**	*e*Pn	**Pn**	**02 09 47.4**	**+0.4**
MESJ				*e*Sn	Sn	02 11 03.3	-5.6
MESJ				A	A	02 11 09.3	
	comp=E,202nm,0.5s						
MESJ	**Messejana**	**7.21**	**85**	Pn	**Pn**	**02 09 47.2**	**+0.2**
MESJ				Sn	Sn	02 11 02.7	-6.2
	comp=E,247nm,0.7s						
PTOM	**Tomar**	**7.27**	**71**	*e*Pn	**Pn**	**02 09 47.6**	**-0.2**
PTOM				*e*Sn	Sn	02 11 04.2	-6.1
PTOM				A	A	02 11 16.9	
	comp=E,178nm,0.3s						
PTOM	**Tomar**	**7.27**	**71**	Pn	**Pn**	**02 09 47.6**	**-0.2**
PTOM				Sn	Sn	02 11 04.2	-6.1
	comp=E,89nm,0.3s						
PMTG	**Montargil**	**7.30**	**75**	*e*Pn	**Pn**	**02 09 48.4**	**+0.2**
PMTG				*e*Sn	Sn	02 11 04.3	-6.8
PMTG				A	A	02 11 08.9	
	comp=E,126nm,0.5s						
PMTG	**Montargil**	**7.30**	**75**	Pn	**Pn**	**02 09 48.4**	**+0.2**
PMTG				Sn	Sn	02 11 04.3	-6.8
	comp=E,126nm,0.5s						
PCAS	**Casmilo, Conde**	**7.32**	**67**	*e*Pn	**Pn**	**02 09 48.1**	**-0.4**
PCAS				*e*Sn	**Sn**	**02 11 05.9**	**-5.7**
PCAS				A	A	02 11 15.4	
	comp=E,86nm,0.6s						
PCAS	**Casmilo, Conde**	**7.32**	**67**	Pn	**Pn**	**02 09 48.1**	**-0.4**
PCAS				Sn	**Sn**	**02 11 05.9**	**-5.7**
	comp=E,86nm,0.6s						
COI	**Coimbra**	**7.43**	**66**	Pn	**Pn**	**02 09 50.5**	**+0.5**
COI				Sn	Sn	02 11 08.3	-6.0
	comp=E,126nm,0.3s						
PBDV	**Barranco-do-Ve**	**7.47**	**89**	*e*Pn	**Pn**	**02 09 50.7**	**+0.1**
PBDV				*e*Sn	**Sn**	**02 11 10.9**	**-4.4**
PBDV				A	A	02 11 24.7	
	comp=E,75nm,0.3s						
PBDV	**Barranco-do-Ve**	**7.47**	**89**	Pn	**Pn**	**02 09 50.7**	**+0.1**
PBDV				Sn	**Sn**	**02 11 10.9**	**-4.4**
	comp=E,75nm,0.3s						
PBEJ	**Beja**	**7.49**	**83**	*e*Pn	**Pn**	**02 09 52.8**	**+2.0**
PBEJ				*e*Sn	Sn	02 11 09.9	-5.9
PBEJ				A	A	02 11 17.1	
	comp=E,142nm,0.6s						
PBEJ	**Beja**	**7.49**	**83**	Pn	**Pn**	**02 09 52.8**	**+2.0**
PBEJ				Sn	Sn	02 11 09.9	-5.9
	comp=E,71nm,0.6s						
PVAQ	**Vaqueiros**	**7.62**	**88**	*e*Pn	**Pn**	**02 09 53.0**	**+0.3**
PVAQ				*e*Sn	Sn	02 11 09.5	-10
PVAQ	**Vaqueiros**	**7.62**	**88**	Pn	**Pn**	**02 09 53.0**	**+0.3**
PVAQ				Sn	Sn	02 11 09.5	-10
PVAQ	**Vaqueiros**	**7.62**	**88**	P	**Pn**	**02 09 53.9**	**+1.2**
PVAQ				S	**Sn**	**02 11 16.2**	**-3.0**
PTO	**Porto**	**7.64**	**59**	*e*Pn	**Pn**	**02 09 52.3**	**-0.5**
PTO				*e*Sn	Sn	02 11 11.0	-8.4
PTO				A	A	02 11 16.9	
	comp=E,214nm,0.2s						
PTO	**Porto**	**7.64**	**59**	Pn	**Pn**	**02 09 52.3**	**-0.5**
PTO				Sn	Sn	02 11 11.0	-8.4
	comp=E,107nm,0.2s						
PESTR	**Estremoz**	**7.76**	**77**	*e*Pn	**Pn**	**02 09 54.8**	**+0.2**
PESTR				*e*Sn	Sn	02 11 14.9	-7.6
PESTR				A	A	02 11 28.6	
	comp=E,122nm,0.5s						
PESTR	**Estremoz**	**7.76**	**77**	*e*Pn	**Pn**	**02 09 55.5**	**+0.9**
PESTR				*e*Sn	Sn	02 11 14.8	-7.7
PESTR	**Estremoz**	**7.76**	**77**	P	**Pn**	**02 09 56.5**	**+1.9**
PESTR				S	**Sn**	**02 11 20.3**	**-2.2**
EGRO	**El Granado**	**7.80**	**87**	Pn	**Pn**	**02 09 55.8**	**+0.7**
	comp=E,4.8nm,0.2s,SNR=21						
EGRO				Sn	Sn	02 11 17.7	-5.8
	comp=E,131nm,0.2s,SNR=6.7						
PSCM	**Serra do Cume**	**7.82**	**281**	*e*P	**Pn**	**02 09 53.4**	**-2.0**
ADH	**Angra Heroismo**	**7.91**	**281**	*e*P	**Pn**	**02 09 55.0**	**-1.6**
PVIS	**Viseu**	**7.97**	**64**	*e*Pn	**Pn**	**02 09 56.8**	**-0.7**
PVIS				*e*Sn	Sn	02 11 18.7	-9.0
PVIS				A	A	02 11 27.6	
	comp=E,78nm,0.8s						
PVIS	**Viseu**	**7.97**	**64**	Pn	**Pn**	**02 09 56.8**	**-0.7**
PVIS				Sn	Sn	02 11 18.7	-9.0
	comp=E,39nm,0.8s						
PMRV	**Marv??o**	**8.00**	**73**	*e*Pn	**Pn**	**02 09 58.0**	**+0.2**
PMRV				*e*Sn	Sn	02 11 20.9	-7.5
PMRV				A	A	02 11 29.1	
	comp=E,127nm,0.3s						
PMRV	**Marv??o**	**8.00**	**73**	Pn	**Pn**	**02 09 58.0**	**+0.2**
PMRV				Sn	Sn	02 11 20.9	-7.5
	comp=E,127nm,0.3s						
PCBR	**Castelo Branco**	**8.02**	**70**	*e*Pn	**Pn**	**02 09 57.7**	**-0.4**
PCBR				*e*Sn	Sn	02 11 21.1	-7.7
PCBR				A	A	02 11 26.2	
	comp=E,105nm,0.9s						
PCBR	**Castelo Branco**	**8.02**	**70**	Pn	**Pn**	**02 09 57.7**	**-0.4**
PCBR				Sn	Sn	02 11 21.1	-7.7
	comp=E,53nm,0.9s						
EZAM	**Zamans**	**8.06**	**53**	Pn	**Pn**	**02 09 57.9**	**-0.8**
	comp=E,18nm,0.4s,SNR=7.9						
EZAM				Sn	Sn	02 11 22.5	-7.3
	comp=E,127nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**8.12**	**66**	*e*Pn	**Pn**	**02 09 59.4**	**-0.2**
MTE				*e*Sn	Sn	02 11 25.0	-6.4
MTE				A	A	02 11 31.6	
	comp=E,119nm,0.3s						
MTE	**Manteigas**	**8.12**	**66**	*e*Pn	**Pn**	**02 09 59.4**	**-0.2**
MTE				*e*Sn	Sn	02 11 24.7	-6.7
MTE	**Manteigas**	**8.12**	**66**	Pn	**Pn**	**02 09 59.4**	**-0.2**
MTE				Sn	Sn	02 11 25.0	-6.4
	comp=E,60nm,0.3s						
PBAR	**Barrancos**	**8.14**	**82**	*e*Pn	**Pn**	**02 10 01.1**	**+1.3**
PBAR				*e*Sn	Sn	02 11 25.8	-6.1
PBAR				A	A	02 11 29.8	
	comp=E,63nm,0.2s						
PBAR	**Barrancos**	**8.14**	**82**	Pn	**Pn**	**02 10 01.1**	**+1.3**
PBAR				Sn	Sn	02 11 25.8	-6.1
	comp=E,63nm,0.2s						
EBAD	**Badajoz**	**8.20**	**78**	Pn	**Pn**	**02 09 60.0**	**-0.6**
	comp=E,2.3nm,0.2s,SNR=49						
EBAD				Sn	Sn	02 11 27.5	-5.8
	comp=E,142nm,0.2s,SNR=9.6						
PGAV	**Gavieira, Arco**	**8.24**	**55**	*e*Pn	**Pn**	**02 10 00.7**	**-0.5**
PGAV				*e*Sn	Sn	02 11 27.0	-7.4
PGAV				A	A	02 11 32.8	
	comp=E,155nm,0.5s						
PGAV	**Gavieira, Arco**	**8.24**	**55**	Pn	**Pn**	**02 10 00.7**	**-0.5**
PGAV				Sn	Sn	02 11 27.0	-7.4
	comp=E,155nm,0.5s						
PCAB	**Cabril**	**8.28**	**57**	*e*Pn	**Pn**	**02 10 01.3**	**-0.4**
PCAB				*e*Sn	Sn	02 11 28.5	-6.7
PCAB				A	A	02 11 33.9	
	comp=E,99nm,0.4s						
PCAB	**Cabril**	**8.28**	**57**	Pn	**Pn**	**02 10 01.3**	**-0.4**
PCAB				Sn	Sn	02 11 28.5	-6.7
	comp=E,49nm,0.4s						
POLO	**Lamas de Olo**	**8.29**	**60**	*e*Pn	**Pn**	**02 10 01.2**	**-0.7**
POLO				*e*Sn	Sn	02 11 27.8	-7.8
POLO				A	A	02 11 42.0	
	comp=E,27nm,0.4s						
POLO	**Lamas de Olo**	**8.29**	**60**	Pn	**Pn**	**02 10 01.2**	**-0.7**
POLO				Sn	Sn	02 11 27.8	-7.8
	comp=E,27nm,0.4s						
PVRL	**Vila Real**	**8.30**	**60**	*e*Pn	**Pn**	**02 10 02.6**	**+0.6**
PVRL				*e*Sn	Sn	02 11 29.4	-6.5
PVRL				A	A	02 11 36.0	
	comp=E,82nm,0.2s						
PVRL	**Vila Real**	**8.30**	**60**	Pn	**Pn**	**02 10 02.6**	**+0.6**
PVRL				Sn	Sn	02 11 29.4	-6.5
	comp=E,41nm,0.2s						
ELOB	**Lobios**	**8.33**	**56**	Pn	**Pn**	**02 10 01.9**	**-0.5**
	comp=E,18nm,0.2s,SNR=54						
ELOB				Sn	Sn	02 11 30.3	-6.3
	comp=E,80nm,0.3s,SNR=7.7						
EMAZ	**Mazaricos**	**8.35**	**47**	Pn	**Pn**	**02 10 01.1**	**-1.5**
	comp=E,4.3nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	02 11 29.0	-7.8
	comp=E,75nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**8.44**	**85**	Pn	**Pn**	**02 10 04.4**	**+0.6**
	comp=E,13nm,0.5s,SNR=59						
EMIN				Sn	Sn	02 11 33.1	-6.0
	comp=E,48nm,0.2s,SNR=7.8						
PGRA	**Graciosa**	**8.53**	**283**	*e*P	**Pn**	**02 10 03.3**	**-1.8**
PMAN	**Manadas**	**8.57**	**281**	*e*P	**Pn**	**02 10 03.8**	**-1.9**
ROSA	**Rosais**	**8.70**	**281**	*e*P	**Pn**	**02 10 05.2**	**-2.3**
ROSA	**Rosais**	**8.70**	**281**	*e*Pn	**Pn**	**02 10 05.1**	**-2.4**
ROSA	**Rosais**	**8.70**	**281**	Pn	**Pn**	**02 10 05.4**	**-2.1**
	comp=E,526nm,0.3s,SNR=7.9						
ROSA				Sn	Sn	02 11 34.9	-11
	comp=E,120nm,0.5s,SNR=7.9						
MVO	**Moncorvo**	**8.74**	**62**	*e*Pn	**Pn**	**02 10 07.6**	**-0.5**
MVO				*e*Sn	Sn	02 11 36.5	-10
MVO				A	A	02 11 45.7	
	comp=E,135nm,0.4s						
MVO	**Moncorvo**	**8.74**	**62**	Pn	**Pn**	**02 10 07.0**	**-1.0**
	comp=E,4.7nm,0.1s,SNR=4.0						
MVO				Sn	Sn	02 11 37.0	-10
	comp=E,150nm,0.3s,SNR=8.8						
EAGO	**Agolada(Pontev**	**8.79**	**50**	Pn	**Pn**	**02 10 07.0**	**-1.7**
	comp=E,28nm,0.1s,SNR=7.9						
EAGO				Sn	Sn	02 11 39.1	-8.7
	comp=E,20nm,0.1s,SNR=7.9						
PICO	**Pico**	**8.83**	**280**	*e*P	**Pn**	**02 10 07.3**	**-2.0**
TBT	**Taburiente**	**8.86**	**183**	Pn	**Pn**	**02 10 07.6**	**-2.0**
	comp=E,230nm,0.4s,SNR=7.9						
TBT				Sn	Sn	02 11 33.5	-16
	comp=E,881nm,0.3s,SNR=7.9						
PCAN	**Candelaria**	**8.88**	**279**	*e*P	**Pn**	**02 10 07.9**	**-2.0**
EFAM	**Famara**	**8.97**	**158**	Pn	**Pn**	**02 10 11.7**	**+0.6**
	comp=E,24nm,0.4s,SNR=7.9						
EFAM				Sn	Sn	02 11 43.7	-8.5
	comp=E,16nm,0.2s,SNR=7.9						
EHIG	**Higuera**	**8.97**	**183**	Sn	Sn	02 11 37.9	-15
	comp=E,348nm,0.4s,SNR=5.6						
HOR	**Horta**	**8.99**	**280**	*e*P	**Pn**	**02 10 09.1**	**-2.3**
EBAJ	**Bajamar**	**9.02**	**175**	Pn	**Pn**	**02 10 11.6**	**-0.2**
	comp=E,30nm,0.4s,SNR=11						
EBAJ				Sn	Sn	02 11 40.0	-13
	comp=E,5.3nm,0.2s						
CALA	**Caldeira**	**9.05**	**280**	*e*P	**Pn**	**02 10 11.6**	**-0.8**
PCED	**Cedros**	**9.05**	**280**	*e*P	**Pn**	**02 10 10.3**	**-2.0**
GIBL	**Gibalbin**	**9.07**	**91**	Pn	**Pn**	**02 10 16.2**	**+3.6**
GIBL				Sn	**Sn**	**02 11 50.5**	**-4.3**
GIBL	**Gibalbin**	**9.07**	**91**	*e*P	**Pn**	**02 10 16.2**	**+3.6**
GIBL				*e*S	**Sn**	**02 11 50.5**	**-4.3**
CNIL	**Conil**	**9.08**	**94**	Pn	Pn	02 10 17.5	+4.8
CNIL	**Conil**	**9.08**	**94**	*e*P	Pn	02 10 17.5	+4.8
AVE	**Averroes**	**9.11**	**115**	*e*P	**Pn**	**02 10 14.6**	**+1.5**
AVE				*e*S	**Sn**	**02 11 51.4**	**-4.4**
AVE	**Averroes**	**9.11**	**115**	P	**Pn**	**02 10 12.7**	**-0.4**
AVE				S	**Sn**	**02 11 50.7**	**-5.1**
EPLA	**Plasencia**	**9.12**	**71**	Pn	**Pn**	**02 10 12.6**	**-0.6**
	comp=E,6.8nm,0.2s,SNR=51						
EPLA				Sn	Sn	02 11 48.5	-7.3
	comp=E,83nm,0.3s,SNR=6.8						
ESPR	**Espera**	**9.16**	**91**	Pn	**Pn**	**02 10 14.1**	**+0.4**
	comp=E,3.9nm,0.2s,SNR=24						
ESPR				Sn	**Sn**	**02 11 52.6**	**-4.3**
	comp=E,167nm,0.3s,SNR=5.7						
PBRG	**Braganca**	**9.19**	**59**	*e*Pn	**Pn**	**02 10 14.1**	**-0.1**
PBRG				*e*Sn	Sn	02 11 48.1	-9.5
PBRG				A	A	02 11 57.8	
	comp=E,55nm,0.2s						
PBRG	**Braganca**	**9.19**	**59**	Pn	**Pn**	**02 10 14.1**	**-0.1**
PBRG				Sn	Sn	02 11 48.1	-9.5
	comp=E,27nm,0.2s						
SRHM	**Skhour des Reh**	**9.22**	**120**	P	**Pn**	**02 10 14.7**	**0.0**
SRHM				S	**Sn**	**02 11 55.3**	**-3.3**
ECAL	**Calabor**	**9.24**	**58**	Pn	**Pn**	**02 10 14.1**	**-0.9**
	comp=E,0.9nm,0.4s,SNR=31						
ECAL				Sn	Sn	02 11 52.1	-7.0
	comp=E,104nm,0.4s,SNR=8.2						
CRAJ	**Montana Rajada**	**9.27**	**176**	Sn	Sn	02 11 51.4	-8.7
	comp=E,243nm,0.3s,SNR=4.0						
MACI	**Morro de la Ar**	**9.29**	**176**	*e*Pn	**Pn**	**02 10 14.3**	**-1.5**
CFUE	**Fuerteventura**	**9.31**	**161**	Pn	**Pn**	**02 10 14.7**	**-1.1**
	comp=E,2.9nm,0.3s,SNR=7.9						
CFUE				Sn	Sn	02 11 49.2	-11
	comp=E,47nm,0.2s,SNR=7.9						
CCAN	**Las Canadas**	**9.31**	**176**	Pn	**Pn**	**02 10 15.2**	**-1.0**
	comp=E,0.5nm,0.3s,SNR=15						
CCAN				Sn	Sn	02 11 50.2	-11
	comp=E,12nm,0.6s						
EGOM	**La Gomera**	**9.36**	**179**	Pn	**Pn**	**02 10 14.8**	**-1.7**
	comp=E,7.8nm,0.2s,SNR=7.9						
EGOM				Sn	Sn	02 11 47.6	-14
	comp=E,119nm,0.3s,SNR=7.4						
ALJ	**Aljibe**	**9.37**	**93**	Pn	**Pn**	**02 10 20.0**	**+3.3**
ALJ				Sn	Sn	02 11 53.0	-9.2
ALJ	**Aljibe**	**9.37**	**93**	*e*P	**Pn**	**02 10 20.0**	**+3.3**
ALJ				*e*S	Sn	02 11 53.0	-9.2
ECAB	**El Cabril**	**9.42**	**83**	Pn	**Pn**	**02 10 17.3**	**-0.1**
	comp=E,22nm,0.4s,SNR=72						
ECAB				Sn	Sn	02 11 55.4	-8.0
	comp=E,41nm,0.2s,SNR=6.3						
CFTV	**Fuerteventura**	**9.50**	**163**	Pn	**Pn**	**02 10 19.2**	**+0.7**
	comp=E,5.5nm,0.2s,SNR=7.9						
CFTV				Sn	Sn	02 11 53.1	-12
	comp=E,14nm,0.4s,SNR=7.9						
LIJA	**Lijar**	**9.51**	**90**	Pn	**Pn**	**02 10 20.0**	**+1.3**
LIJA				Sn	**Sn**	**02 12 02.0**	**-3.7**
LIJA	**Lijar**	**9.51**	**90**	*i* P	**Pn**	**02 10 20.0**	**+1.3**
LIJA				*e*S	**Sn**	**02 12 02.0**	**-3.7**
EJIF	**Jimena Fronter**	**9.53**	**93**	Pn	**Pn**	**02 10 21.3**	**+2.4**
	comp=E,7.9nm,0.4s,SNR=7.9						
EJIF				Sn	**Sn**	**02 12 01.6**	**-4.5**
	SNR=7.9						
HORN	**Hornachuelos**	**9.55**	**85**	P	**Pn**	**02 10 19.8**	**+0.7**
HORN				S	**Sn**	**02 12 04.8**	**-1.7**
EOSO	**Osorio**	**9.56**	**171**	Pn	**Pn**	**02 10 19.3**	**-0.1**
	comp=E,9.0nm,0.3s,SNR=8.1						
EOSO				Sn	Sn	02 11 54.5	-12
	comp=E,20nm,0.3s						
RSA	**Sarsar**	**9.65**	**103**	P	**Pn**	**02 10 20.8**	**+0.3**
RSA				S	**Sn**	**02 12 06.4**	**-2.7**
EPON	**Pontenova**	**9.65**	**50**	Pn	**Pn**	**02 10 19.6**	**-1.0**
	comp=E,43nm,0.5s,SNR=29						
EPON				Sn	Sn	02 11 59.8	-9.2
	comp=E,22nm,0.2s,SNR=6.2						
ECEU	**Ceuta**	**9.71**	**96**	Sn	**Sn**	**02 12 08.0**	**-2.5**
	comp=E,2.7nm,0.1s,SNR=7.9						

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CEU   Ceuta              9.72  96  Pn    Pn    02 10 26.6 +5.2
CEU                                Sn    Sn    02 11 59.4  -11
CEU   Ceuta              9.72  96 eP     Pn    02 10 26.6 +5.2
CEU                               eS     Sn    02 11 59.4  -11
CTIG  El Hierro          9.74 183  Sn    Sn    02 11 57.0  -14
      comp=E,68nm,0.3s,SNR=4.0
CEUT  Ceuta              9.76  96  P     Pn    02 10 22.2 +0.2
CEUT                               S     Sn    02 12 09.3 -2.3
SMIR  Smir Dam           9.76  97  P     Pn    02 10 22.2 +0.1
SMIR                               S     Sn    02 12 08.3 -3.4
CCUM  Cumbre, El Hie     9.79 184  Sn    Sn    02 11 56.3  -16
      comp=E,125nm,0.3s,SNR=7.9
CHIE  El Hierro          9.80 183  Sn    Sn    02 11 57.6  -15
      comp=E,24nm,0.3s,SNR=7.9
CMCL  Mercadel, El H     9.82 184  Pn    Pn    02 10 24.0 +1.0
      comp=E,13nm,0.2s,SNR=7.9
CMCL                               Sn    Sn    02 12 01.8  -12
      SNR=7.9
CORC  Orchilla, El H     9.84 184  Sn    Sn    02 12 00.2  -13
      comp=E,94nm,0.2s,SNR=7.9
CRST  La Restinga, E     9.89 184  Sn    Sn    02 12 00.7  -14
      comp=E,21nm,0.2s,SNR=7.9
CHEFC Chefchaouen        9.95 101  P     Pn    02 10 24.6 -0.2
CHEFC                              S     Sn    02 12 12.6 -3.9
OUK   Oukaimeden        10.04 126  P     Pn    02 10 28.0 +1.9
OUK                                S     Sn    02 12 12.4 -6.6
EMIJ  Mijas             10.06  92  Pn    Pn    02 10 28.2 +2.0
      comp=E,9.7nm,0.4s,SNR=5.1
EMIJ                               Sn    Sn    02 12 12.3 -6.9
      comp=E,13nm,0.3s,SNR=7.9
EADA  Adamuz            10.08  83  Pn    Pn    02 10 26.5 +0.1
      comp=E,5.3nm,0.3s,SNR=54
EADA                               Sn    Sn    02 12 12.0 -7.7
      comp=E,23nm,0.2s,SNR=5.6
TTIG  Tnine Tigouga,    10.13 131  P     Pn    02 10 25.9 -1.3
TTIG                               S     Sn    02 12 14.8 -6.2
EMAL  Malaga-Limoner    10.31  90  Pn    Pn    02 10 32.5 +3.1
EMAL                               Sn    Sn    02 12 20.6 -4.5
EMAL  Malaga-Limoner    10.31  90 eP     Pn    02 10 32.5 +3.1
EMAL                              eS     Sn    02 12 20.6 -4.5
PAB   San Pablo         10.34  75 ePn    Pn    02 10 29.5 -0.6
PAB   San Pablo         10.34  75  Pn    Pn    02 10 29.3 -0.7
      comp=E,17nm,0.5s,SNR=7.9
PAB                                Sn    Sn    02 12 20.5 -5.5
      comp=E,16nm,0.3s,SNR=7.9
EGOR  Sierra Gorda,     10.52  88  Pn    Pn    02 10 34.6 +2.1
      comp=E,7.8nm,0.4s,SNR=7.9
EGOR                               Sn    Sn    02 12 25.5 -4.9
      comp=E,50nm,0.6s,SNR=7.9
ESDC  Sonseca Array     10.65  74 ⇓Pn    Pn    02 10 33.6 -0.7
      comp=E,4.6nm,0.3s,baz=270,slow=13,SNR=18
ESDC                               Sn    Sn    02 12 26.1 -7.5
      comp=E,15nm,0.3s,baz=264,slow=23,SNR=8.6
ESDC  Sonseca Array     10.65  74  Pn    Pn    02 10 33.4 -0.9
      comp=E,5.2nm,0.3s,baz=267,slow=13,SNR=46
ESDC                               Sn    Sn    02 12 26.3 -7.4
      comp=E,12nm,0.3s,baz=263,slow=24,SNR=12
ESLA  Sonseca Array     10.65  74 ePn    Pn    02 10 34.1 -0.2
ESLA                              eSn    Sn    02 12 25.5 -8.2
GUD   Guadarrama        10.68  69  Pn    Pn    02 10 33.8 -0.9
      comp=E,17nm,0.7s,SNR=11
GUD                                Sn    Sn    02 12 25.7 -8.7
      comp=E,14nm,0.6s,SNR=6.1
IFR   Ifrane            10.70 108 eP     Pn    02 10 35.2 +0.1
IFR                               eS     Sn    02 12 26.5 -8.5
ES19  SONSECA Array     10.71  74 ePn    Pn    02 10 33.1 -1.9
ES19                              eSn    Sn    02 12 24.7  -10
LCRM  LCR               10.84 107  P     Pn    02 10 36.5 -0.4
LCRM                               S     Sn    02 12 34.1 -4.2
EARI  Arriondas         10.86  54  Pn    Pn    02 10 37.5 +0.5
      comp=E,3.6nm,0.4s,SNR=22
EARI                               Sn    Sn    02 12 31.6 -7.1
      comp=E,119nm,0.8s,SNR=4.7
ELGU  Los Guajares,     10.93  89  Pn    Pn    02 10 41.7 +3.6
      comp=E,1.6nm,0.2s,SNR=7.9
ELGU                               Sn    Sn    02 12 35.6 -4.9
      comp=E,7.7nm,0.3s,SNR=7.9
OUZM  OUZ               10.95 124  P     Pn    02 10 40.4 +2.0
OUZM                               S     Sn    02 12 34.1 -6.9
CZD   Col de Zad        10.98 111  P     Pn    02 10 39.6 +0.6
CZD                                S     Sn    02 12 35.7 -6.4
EQUE  Quentar           11.04  88  Pn    Pn    02 10 40.8 +1.2
      comp=E,3.0nm,0.3s,SNR=14
EQUE                               Sn    Sn    02 12 36.4 -6.8
      comp=E,17nm,0.3s,SNR=5.1
MD31  MD31              11.27 111  P     Pn    02 10 42.7  0.0
MD31                               S     Sn    02 12 44.1 -4.7
EQES  Quesada           11.29  84  Pn    Pn    02 10 42.8 -0.2
      comp=E,3.5nm,0.2s,SNR=20
EQES                               Sn    Sn    02 12 43.5 -5.7
      comp=E,36nm,0.4s,SNR=6.6
UCM   Universidad Co    11.29  72⇓eP     Pn    02 10 43.0  0.0
UCM                               eS     Sn    02 12 41.2 -8.1
GORA  Gorafe            11.33  86  Pn    Pn    02 10 45.3 +1.7
      comp=E,12nm,0.4s,SNR=7.9
GORA                               Sn    Sn    02 12 44.1 -6.2
      comp=E,38nm,0.7s,SNR=7.9
MDT   Midelt            11.41 111  Pn    Pn    02 10 44.9 +0.2
      comp=E,5.1nm,0.3s,baz=305,slow=12,SNR=95
MDT                                Sn    Sn    02 12 44.2 -8.0
      comp=E,14nm,0.3s,baz=81,slow=14,SNR=16
MDT                                LR    LR    02 14 45.9
      comp=E,217nm,20.5s,baz=311,slow=35
MDT   Midelt            11.41 111  P     Pn    02 10 43.6 -1.0
MDT                                S     Sn    02 12 46.8 -5.4
EBER  Berja             11.51  89  Pn    Pn    02 10 51.1 +4.9
      comp=E,2.5nm,0.3s,SNR=5.8
EBER                               Sn    Sn    02 12 52.0 -2.9
      comp=E,110nm,1.0s,SNR=4.5
SESP  Santiago Espad    11.69  83  Sn    Sn    02 12 51.6 -7.5
      comp=E,9.4nm,0.6s,SNR=7.9
SESP  Santiago Espad    11.69  83  P     Pn    02 10 49.5 +0.9
SESP                               S     Sn    02 12 57.5 -1.6
ELAN  Lanestosa         12.00  57  Pn    Pn    02 10 54.0 +1.4
      comp=E,1.1nm,0.1s,SNR=4.0
ELAN                               Sn    Sn    02 13 00.6 -5.9
      comp=E,22nm,0.5s,SNR=5.0
ETOB  Tobarra           12.46  80  Pn    Pn    02 10 59.8 +0.8
      comp=E,1.9nm,0.2s,SNR=9.2
ETOB                               Sn    Sn    02 13 11.9 -6.1
      comp=E,31nm,0.7s,SNR=4.8
EMUR  La Murta          12.73  84  Pn    Pn    02 11 02.5 -0.1
      comp=E,3.8nm,0.4s,SNR=4.0
EMUR                               Sn    Sn    02 13 18.8 -5.7
      comp=E,55nm,1.0s,SNR=4.6
EARA  Aranguren         13.11  62  Pn    Pn    02 11 09.7 +1.9
      comp=E,0.1nm,0.1s,SNR=7.9
EARA                               Sn    Sn    02 13 28.3 -5.3
      comp=E,6.1nm,0.2s,SNR=7.9
EALK  Alkurruntz        13.30  60  Pn    Pn    02 11 11.7 +1.2
      comp=E,5.2nm,0.4s,SNR=7.0
EALK                               Sn    Sn    02 13 31.1 -7.4
      comp=E,20nm,0.5s,SNR=4.6
EORO  Oroz-Betelu       13.33  61  Sn    Sn    02 13 31.8 -7.4
      comp=E,4.5nm,0.1s,SNR=4.0
IELO  Elcoad            13.37  62  Pn    Pn    02 11 12.2 +0.9
      comp=E,0.1nm,0.1s,SNR=4.0
IELO                               Sn    Sn    02 13 31.8 -8.2
      comp=E,13nm,0.4s,SNR=7.9
EMOS  Mosqueruela       13.40  73  Pn    Pn    02 11 13.5 +1.6
      comp=E,0.4nm,0.1s,SNR=4.0
EMOS                               Sn    Sn    02 13 32.5 -8.5
      comp=E,2.2nm,0.1s,SNR=7.9
SJPF  Ste Jean          13.46  61 ePn    Pn    02 11 12.1 -0.5
SJPF                              eSn    Sn    02 13 32.5  -10
      comp=E,11nm,0.3s
SJPF  Ste Jean          13.46  61 ePn    Pn    02 11 12.1 -0.5
SJPF                              eSn    Sn    02 13 32.5  -10
SJPF  Ste Jean          13.46  61  Pn    Pn    02 11 12.1 -0.5
SJPF                               Sn    Sn    02 13 32.5  -10
      comp=E,5.6nm,0.3s
ESAC  San Caprasio      13.63  67  Sn    Sn    02 13 39.8 -6.5
      comp=E,50nm,0.6s,SNR=7.9
ATE   Arette            13.82  61  Pn    Pn    02 11 18.3 +0.9
      comp=E,12nm,0.4s,SNR=7.9
ATE                                Sn    Sn    02 13 40.8  -10
      comp=E,7.1nm,0.6s,SNR=7.9
ETSF  Etsaut            13.86  62 ePn    Pn    02 11 18.3 +0.2
ETSF                              eSn    Sn    02 13 42.5  -10
      comp=E,20nm,0.4s
ETSF  Etsaut            13.86  62 ePn    Pn    02 11 18.3 +0.2
ETSF                              eSn    Sn    02 13 42.5  -10
ETSF  Etsaut            13.86  62  Pn    Pn    02 11 18.3 +0.2
ETSF                               Sn    Sn    02 13 42.5  -10
      comp=E,10.0nm,0.4s
FIGM  Figuig            14.23 108  P     Pn    02 11 22.2 -1.1
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ECHI  Chisagues Biel    14.33  64  Pn    Pn    02 11 25.6 +1.0
      comp=E,1.8nm,0.2s,SNR=7.9
ECHI                               Sn    Sn    02 13 54.5 -9.1
      comp=E,3.6nm,0.4s,SNR=7.9
EPF   Esparros          14.53  62 ePn    Pn    02 11 26.6 -0.7
EPF                               eSn    Sn    02 13 58.3  -10
      comp=E,16nm,0.4s
EPF   Esparros          14.53  62 ePn    Pn    02 11 26.6 -0.7
EPF                               eSn    Sn    02 13 58.3  -10
EPF   Esparros          14.53  62  Pn    Pn    02 11 26.6 -0.7
EPF                                Sn    Sn    02 13 58.3  -10
      comp=E,7.9nm,0.4s
QUIF  Quistinic         14.65  41 ePn    Pn    02 11 27.3 -1.5
QUIF                              eSn    Sn    02 13 57.2  -14
      comp=E,27nm,0.2s
QUIF  Quistinic         14.65  41 ePn    Pn    02 11 27.3 -1.5
QUIF                              eSn    Sn    02 13 57.2  -14
QUIF  Quistinic         14.65  41  Pn    Pn    02 11 27.3 -1.5
QUIF                               Sn    Sn    02 13 57.2  -14
      comp=E,14nm,0.2s
EPOB  Poblet            14.70  69  Sn    Sn    02 14 04.1 -8.4
      comp=E,0.2nm,0.1s,SNR=7.9
ROSF  Rostrenen         14.87  39 ePn    Pn    02 11 30.6 -1.2
ROSF                              eSn    Sn    02 14 04.2  -12
      comp=E,25nm,0.4s
ROSF  Rostrenen         14.87  39 ePn    Pn    02 11 30.6 -1.2
ROSF                              eSn    Sn    02 14 04.2  -12
ROSF  Rostrenen         14.87  39  Pn    Pn    02 11 30.6 -1.2
ROSF                               Sn    Sn    02 14 04.2  -12
      comp=E,12nm,0.4s
CSOR  Sort              14.93  65  Pn    Pn    02 11 35.6 +2.8
      comp=E,0.2nm,0.1s,SNR=7.9
CSOR                               Sn    Sn    02 14 11.2 -7.1
      comp=E,0.6nm,0.2s,SNR=7.9
SGMF  Saint Gilles      15.18  41 ePn    Pn    02 11 34.3 -1.6
SGMF                              eSn    Sn    02 14 11.8  -12
      comp=E,18nm,0.4s
SGMF  Saint Gilles      15.18  41 ePn    Pn    02 11 34.3 -1.6
SGMF                              eSn    Sn    02 14 11.8  -12
SGMF  Saint Gilles      15.18  41  Pn    Pn    02 11 34.3 -1.6
SGMF                               Sn    Sn    02 14 11.8  -12
      comp=E,9.0nm,0.4s
LFF   La Frestale       15.43  56 ePn    Pn    02 11 38.0 -1.3
LFF                               eSn    Sn    02 14 19.5  -11
      comp=E,8.5nm,0.4s
LFF   La Frestale       15.43  56 ePn    Pn    02 11 38.0 -1.3
LFF                               eSn    Sn    02 14 19.5  -11
LFF   La Frestale       15.43  56  Pn    Pn    02 11 38.0 -1.3
LFF                                Sn    Sn    02 14 19.5  -11
      comp=E,4.2nm,0.4s
CLLI  Llivia            15.56  66  Sn    Sn    02 14 25.5 -8.2
      comp=E,0.0nm,0.1s,SNR=7.9
MFF   Saint Martin d    15.60  49 ePn    Pn    02 11 40.7 -0.8
MFF                               eSn    Sn    02 14 22.3  -12
      comp=E,18nm,0.4s
MFF   Saint Martin d    15.60  49 ePn    Pn    02 11 40.7 -0.8
MFF                               eSn    Sn    02 14 22.3  -12
MFF   Saint Martin d    15.60  49  Pn    Pn    02 11 40.7 -0.8
MFF                                Sn    Sn    02 14 22.3  -12
      comp=E,8.9nm,0.4s
CFON  Fontmartina       15.77  68  Pn    Pn    02 11 44.4 +0.6
      comp=E,0.3nm,0.2s,SNR=4.0
CFON                               Sn    Sn    02 14 29.3 -9.3
      comp=E,4.4nm,0.2s,SNR=7.9
MTLF  Montolieu         15.94  63 ePn    Pn    02 11 45.1 -0.7
MTLF  Montolieu         15.94  63 ePn    Pn    02 11 45.1 -0.7
MTLF  Montolieu         15.94  63  Pn    Pn    02 11 45.1 -0.7
RJF   Les Rejaudoux     16.08  55 ePn    Pn    02 11 47.1 -0.6
RJF                               eSn    Sn    02 14 35.1  -11
      comp=E,10nm,0.5s
RJF   Les Rejaudoux     16.08  55 ePn    Pn    02 11 47.1 -0.6
RJF                               eSn    Sn    02 14 35.1  -11
RJF   Les Rejaudoux     16.08  55  Pn    Pn    02 11 47.1 -0.6
RJF                                Sn    Sn    02 14 35.1  -11
      comp=E,5.2nm,0.5s
GRR   Gorron            16.16  43 ePn    Pn    02 11 48.4 -0.3
GRR                               eSn    Sn    02 14 35.5  -12
      comp=E,19nm,0.3s
GRR   Gorron            16.16  43 ePn    Pn    02 11 48.4 -0.3
GRR                               eSn    Sn    02 14 35.5  -12
GRR   Gorron            16.16  43  Pn    Pn    02 11 48.4 -0.3
GRR                                Sn    Sn    02 14 35.5  -12
      comp=E,9.4nm,0.3s
CAF   Calviac           16.31  57 ePn    Pn    02 11 50.5 -0.1
CAF                               eSn    Sn    02 14 40.7  -11
      comp=E,3.7nm,0.4s
CAF   Calviac           16.31  57 ePn    Pn    02 11 50.5 -0.1
CAF                               eSn    Sn    02 14 40.7  -11
CAF   Calviac           16.31  57  Pn    Pn    02 11 50.5 -0.1
CAF                                Sn    Sn    02 14 40.7  -11
      comp=E,1.9nm,0.4s
FLN   La Foliniere      16.58  42 ePn    Pn    02 11 54.3 +0.2
      baz=212
FLN                               eSn    Sn    02 14 46.4  -12
      comp=E,18nm,0.4s
FLN   La Foliniere      16.58  42 ePn    Pn    02 11 54.3 +0.2
FLN                               eSn    Sn    02 14 46.4  -12
FLN   La Foliniere      16.58  42  Pn    Pn    02 11 54.3 +0.2
FLN                                Sn    Sn    02 14 46.4  -12
      comp=E,8.9nm,0.4s
LDF   La Druitiere      16.68  43 ePn    Pn    02 11 55.3  0.0
LDF                               eSn    Sn    02 14 47.4  -13
      comp=E,8.7nm,0.4s
LDF   La Druitiere      16.68  43 ePn    Pn    02 11 55.3  0.0
LDF                               eSn    Sn    02 14 47.4  -13
TCF   Toulx Ste Croi    16.91  53 ePn    Pn    02 11 58.2 -0.1
TCF                               eSn    Sn    02 14 50.9  -15
      comp=E,6.5nm,0.3s
TCF   Toulx Ste Croi    16.91  53 ePn    Pn    02 11 58.2 -0.1
TCF                               eSn    Sn    02 14 50.9  -15
TCF   Toulx Ste Croi    16.91  53  Pn    Pn    02 11 58.2 -0.1
TCF                                Sn    Sn    02 14 50.9  -15
      comp=E,3.2nm,0.3s
BGF   Bois d'Agland     17.43  53 ePn    Pn    02 12 05.8 +1.1
BGF                               eSn    Sn    02 15 04.9  -14
      comp=E,14nm,0.3s
BGF   Bois d'Agland     17.43  53 ePn    Pn    02 12 05.8 +1.1
BGF                               eSn    Sn    02 15 04.9  -14
BGF   Bois d'Agland     17.43  53  Pn    Pn    02 12 05.8 +1.1
BGF                                Sn    Sn    02 15 04.9  -14
      comp=E,7.1nm,0.3s
HYF   Humbligny         17.60  50 ePn    Pn    02 12 08.0 +1.2
HYF                               eSn    Sn    02 15 08.2  -15
HYF   Humbligny         17.60  50 ePn    Pn    02 12 08.0 +1.2
HYF                               eSn    Sn    02 15 08.2  -15
HYF   Humbligny         17.60  50  Pn    Pn    02 12 08.0 +1.2
HYF                                Sn    Sn    02 15 08.2  -15
AVF   Avril sur Loir    17.84  52 ePn    Pn    02 12 10.6 +0.8
AVF                               eSn    Sn    02 15 16.1  -12
      comp=E,3.5nm,0.4s
AVF   Avril sur Loir    17.84  52 ePn    Pn    02 12 10.6 +0.8
AVF                               eSn    Sn    02 15 16.1  -12
AVF   Avril sur Loir    17.84  52  Pn    Pn    02 12 10.6 +0.8
AVF                                Sn    Sn    02 15 16.1  -12
      comp=E,1.8nm,0.4s
SSF   Saint Saulge      18.05  52 ePn    Pn    02 12 13.4 +1.1
SSF                               eSn    Sn    02 15 19.0  -15
      comp=E,3.2nm,0.3s
SSF   Saint Saulge      18.05  52 ePn    Pn    02 12 13.4 +1.1
SSF                               eSn    Sn    02 15 19.0  -15
SSF   Saint Saulge      18.05  52  Pn    Pn    02 12 13.4 +1.1
SSF                                Sn    Sn    02 15 19.0  -15
      comp=E,1.6nm,0.3s
VIVF  Saint-Julien-l    18.05  59 ePn    P     02 12 16.0 +3.2
VIVF  Saint-Julien-l    18.05  59 ePn    P     02 12 16.0 +3.2
VIVF  Saint-Julien-l    18.05  59  Pn    P     02 12 16.0 +3.2
SMF   Signal de Mont    18.09  53 ePn    P     02 12 15.6 +2.3
SMF   Signal de Mont    18.09  53 ePn    P     02 12 15.6 +2.3
SMF   Signal de Mont    18.09  53  Pn    P     02 12 15.6 +2.3
LOR   Lormes            18.35  51 ePn    Pn    02 12 18.5 +2.4
      baz=242
LOR   Lormes            18.35  51 ePn    Pn    02 12 18.5 +2.4
LOR   Lormes            18.35  51  Pn    Pn    02 12 18.5 +2.4
SFTF  Sexfontaines      19.46  50 ePn    Pn    02 12 31.3 +1.7
SFTF                              eSn    Sn    02 16 04.4 -3.5
      comp=E,2.1nm,0.3s
SFTF  Sexfontaines      19.46  50 ePn    Pn    02 12 31.3 +1.7
SFTF                              eSn    Sn    02 16 04.4 -3.5
SFTF  Sexfontaines      19.46  50  Pn    Pn    02 12 31.3 +1.7
SFTF                               Sn    Sn    02 16 04.4 -3.5
      comp=E,2.1nm,0.3s
CABF  La Chapelle       19.52  55 ePn    Pn    02 12 32.5 +2.1
CABF  La Chapelle       19.52  55 ePn    Pn    02 12 32.5 +2.1
CABF  La Chapelle       19.52  55  Pn    Pn    02 12 32.5 +2.1
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MEZF  Maizieres J'vi    19.60  49 ePn    Pn    02 12 33.0 +1.9
      baz=232
MEZF                              eSn    S     02 16 05.9 -5.0
      comp=E,3.0nm,0.3s
MEZF  Maizieres J'vi    19.60  49 ePn    Pn    02 12 33.0 +1.9
MEZF                              eSn    S     02 16 05.9 -5.0
MEZF  Maizieres J'vi    19.60  49  Pn    Pn    02 12 33.0 +1.9
MEZF                               Sn    S     02 16 05.9 -5.0
      comp=E,3.0nm,0.3s
BAIF  Baives            19.85  44 ePn    Pn    02 12 35.7 +1.6
BAIF                              eSn    S     02 16 01.2  -15
      comp=E,2.2nm,0.3s
BAIF  Baives            19.85  44 ePn    Pn    02 12 35.7 +1.6
BAIF                              eSn    S     02 16 01.2  -15
BAIF  Baives            19.85  44  Pn    Pn    02 12 35.7 +1.6
BAIF                               Sn    S     02 16 01.2  -15
      comp=E,1.1nm,0.3s
PAGF  Fort de Pagny     20.03  49 ePn    P     02 12 37.0 +2.5
      baz=234
PAGF  Fort de Pagny     20.03  49 ePn    P     02 12 37.0 +2.5
HAU   Haudompre         20.19  51 ePn    P     02 12 38.5 +2.2
HAU   Haudompre         20.19  51 ePn    P     02 12 38.5 +2.2
HAU   Haudompre         20.19  51  P     P     02 12 38.5 +2.2
GIVF  Givet             20.22  45 ePn    P     02 12 39.2 +2.7
GIVF                              eSn    S     02 16 12.5  -11
      comp=E,7.4nm,0.4s
GIVF  Givet             20.22  45 ePn    P     02 12 39.2 +2.7
GIVF                              eSn    S     02 16 12.5  -11
GIVF  Givet             20.22  45  P     P     02 12 39.2 +2.7
GIVF                               S     S     02 16 12.5  -11
      comp=E,3.7nm,0.4s
EKA   Eskdalemuir Ar    20.22  24  P     P     02 12 37.4 +1.0
      comp=E,1.0nm,0.4s,baz=213,slow=8.5,SNR=8.1
EKA                                S     S     02 16 08.7  -14
      comp=E,0.8nm,0.5s,baz=210,slow=22,SNR=3.1
HINF  Hinteralfeld      20.43  52 ePn    P     02 12 41.7 +2.7
HINF  Hinteralfeld      20.43  52 ePn    P     02 12 41.7 +2.7
HINF  Hinteralfeld      20.43  52  P     P     02 12 41.7 +2.7
WLF   Walferdange       20.76  47 eP     P     02 12 44.6 +2.2
      comp=E,204nm,1.0s
ECH   Echery            20.77  51 eP     P     02 12 44.8 +2.2
      comp=E,37nm,1.5s
CDF   Champ du Feu      20.92  51 ePn    P     02 12 46.8 +2.6
CDF   Champ du Feu      20.92  51 ePn    P     02 12 46.8 +2.6
CDF   Champ du Feu      20.92  51  P     P     02 12 46.8 +2.6
KEST  Kesra             21.44  87  P     P     02 12 51.0 +1.0
      comp=E,13nm,0.7s,baz=288,slow=4.9,SNR=11
BFO   Black Forest      21.54  52 eP     P     02 12 52.1 +1.2
      comp=E,17nm,0.9s
DAVOX Davos/Dischmat    22.07  57  P     P     02 12 58.6 +1.9
      comp=E,9.0nm,0.9s,baz=332,slow=21,SNR=5.6
DAVOX                              LR    LR    02 21 43.0
      comp=E,160nm,18.3s,baz=265,slow=37
GRFO  Grafenberg        23.80  50 eP     P     02 13 14.6 +0.3
      comp=E,6.8nm,0.8s
GEA0  GERESS Array S    25.09  53 eP     P     02 13 27.4 +1.1
KHC   Kasperske Hory    25.09  53 eP     P     02 13 29.8 +3.5
KHC                               epP    pwP   02 13 41.7 +8.3
KHC                               ex     x     02 13 47.8
GEC2  GERESS Array S    25.09  53 eP     P     02 13 28.5 +2.1
      comp=E,44nm,1.6s
GERES GERESS Array B    25.09  53  P     P     02 13 28.7 +2.3
      comp=E,3.4nm,0.6s,baz=263,slow=7.6,SNR=24
CLL   Collm             25.43  48 i P    P     02 13 33.5 +4.3
      comp=Z,10.0nm,1.2s
CLL                               ePPPP        02 14 25.0
CLL                               eS     S     02 17 58.0 +2.1
CLL                                Lm    MLR   02 22 00.0
      comp=Z,100nm,18.0s
VRAC  Vranov            27.05  53  P     P     02 13 45.4 +1.4
      comp=Z,1.4nm,0.3s,baz=291,slow=8.6,SNR=3.2
VRAC                               LR    LR    02 23 50.0
      comp=Z,44nm,21.2s,baz=270,slow=35
NB2   NORSAR Subarra    29.54  28  P     P     02 14 08.1 +2.0
      comp=Z,0.6nm,0.6s,baz=231,slow=9.3
NB200 NORSAR Array S    29.54  28 eP     P     02 14 07.5 +1.4
NOA   NORSAR Array B    29.54  28  P     P     02 14 07.5 +1.4
      comp=Z,0.8nm,0.8s,baz=231,slow=9.1,SNR=3.0
TOA1  Torodi Ar. Sit    29.62 140 eP     P     02 14 08.7 +1.5
TOA0  Torodi Ar. Sit    29.63 140 eP     P     02 14 07.6 +0.4
      comp=Z,17nm,1.6s
TORD  Torodi Ar. Bea    29.63 140  P     P     02 14 08.7 +1.5
      comp=Z,1.1nm,0.8s,baz=318,slow=9.6,SNR=7.6
TORD                               LR    LR    02 26 08.6
      comp=Z,339nm,18.6s,baz=320,slow=37
HFS   Hagfors           29.96  31  P     P     02 14 11.9 +2.1
      comp=Z,1.7nm,0.8s,baz=233,slow=7.0,SNR=7.6
HFS                                LR    LR    02 25 12.1
      comp=Z,71nm,20.8s,baz=254,slow=34
DBIC  Dimbokro          32.75 157 eP     P     02 14 35.5 +0.8
      comp=Z,13nm,1.1s
DBIC  Dimbokro          32.75 157  P     P     02 14 36.0 +1.3
      comp=Z,4.8nm,0.8s,baz=322,slow=9.9,SNR=5.5
DBIC                               LR    LR    02 27 14.7
      comp=Z,83nm,19.5s,baz=316,slow=35
AKASG Malin Array Be    35.31  53  P     P     02 14 58.3 +1.7
      comp=Z,2.0nm,0.7s,baz=262,slow=9.2,SNR=8.0
AKBB  Malin Array Si    35.31  53 eP     P     02 14 57.6 +1.1
      comp=Z,45nm,1.9s
FIA0  FINESS Array S    35.93  34 eP     P     02 15 03.2 +1.4
FINES FINESS Array B    35.93  34  P     P     02 15 03.2 +1.4
      comp=Z,3.7nm,0.6s,baz=250,slow=6.3,SNR=14
FINES                              LR    LR    02 29 30.9
      comp=Z,110nm,19.3s,baz=260,slow=36
FIA1  FINESS Array S    35.93  34 eP     P     02 15 02.7 +0.9
SCHQ  Schefferville     37.49 314 eP     P     02 15 13.7 -1.6
      comp=Z,38nm,1.8s
SCHQ  Schefferville     37.49 314  P     P     02 15 14.7 -0.5
      comp=Z,4.3nm,0.8s,baz=95,slow=8.3,SNR=5.5
ARA0  ARCESS Array S    39.37  22 eP     P     02 15 31.6 +0.8
ARCES ARCESS Array B    39.37  22  P     P     02 15 31.6 +0.8
      comp=Z,4.9nm,1.1s,baz=243,slow=5.3,SNR=5.6
BR101 Keskin Array S    39.42  71 eP     P     02 15 34.1 +2.3
BRTR  Keskin Array B    39.42  71  P     P     02 15 34.1 +2.3
      comp=Z,1.2nm,0.8s,baz=260,slow=5.0,SNR=6.3
FRB   Frobisher Bay     40.11 327  P     P     02 15 36.6 -0.4
      comp=Z,2.5nm,0.6s,baz=94,slow=3.9,SNR=8.7
H05S1 Guadeloupe/Mar    44.89 251  T     T     03 03 47.5
      SNR=16
KBZ   Khabaz            45.22  62  P     P     02 16 21.2 +2.4
      comp=Z,1.6nm,0.8s,baz=251,slow=13,SNR=2.6
ARU   Arti              52.24  43 eP     P     02 17 12.4 -0.2
ULM   Lac du Bonnet     55.50 310  P     P     02 17 35.7 -0.8
      comp=Z,1.0nm,0.8s,baz=30,slow=11,SNR=3.0
SDV   Santo Domingo     55.79 253 eP     P     02 17 38.0 -1.3
      comp=Z,9.7nm,0.9s
FFC   Flin Flon         57.52 317 eP     P     02 17 50.7 -0.1
      comp=Z,7.0nm,1.4s
BRVK  Borovoye          59.73  44 eP     P     02 18 07.2 +0.9
BDFB  Brasilia          60.28 215  LR    LR    02 42 17.4
      comp=Z,59nm,18.6s,baz=202,slow=34
YKA   Yellowknife Ar    60.62 328  P     P     02 18 11.3 -0.9
      comp=Z,0.7nm,0.7s,baz=67,slow=7.0,SNR=7.7
YKB5  Yellowknife Ar    60.62 328 eP     P     02 18 11.3 -0.9
KMBO  Kilima Mbogo      63.32 114  LR    LR    02 46 19.3
      comp=Z,50nm,18.8s,baz=93,slow=36
KURK  Kurchatov         65.40  44 eP     P     02 18 44.4 +0.2
ZAA1  Zalesovo Array    66.99  39 eP     P     02 18 55.0 +0.7
ZAA0  Zalesovo Array    67.00  39 eP     P     02 18 55.6 +1.3
      comp=Z,3.0nm,1.0s
ZALV  Zalesovo Beam     67.00  39 eP     P     02 18 55.6 +1.3
ZALV  Zalesovo Beam     67.00  39  P     P     02 18 55.0 +0.7
      comp=Z,1.9nm,0.8s,baz=300,slow=6.5,SNR=8.9
PD31  Pinedale Array    67.20 307 eP     P     02 18 55.7 -0.4
      comp=Z,4.3nm,1.2s
PDAR  Pinedale Array    67.20 307 eP     P     02 18 55.2 -1.0
PDAR  Pinedale Array    67.20 307  P     P     02 18 54.2 -1.9
      comp=Z,0.2nm,0.5s,baz=57,slow=9.8,SNR=2.9
LSZ   Lusaka            67.73 132 eP     P     02 18 59.4 -0.2
      comp=Z,1.5nm,0.6s
MK32  Makanchi Array    69.52  46 eP     P     02 19 11.1 +0.8
MKAR  Makanchi Array    69.52  46  P     P     02 19 11.1 +0.8
      comp=Z,0.7nm,0.7s,baz=292,slow=5.2,SNR=9.8
MK01  Makanchi Array    69.54  46 eP     P     02 19 11.3 +0.9
LTX   Lajitas           70.14 292 eP     P     02 19 14.2 -0.3
TXAR  Lajitas Array     70.14 292  P     P     02 19 14.2 -0.3
      comp=Z,0.4nm,0.6s,baz=69,slow=4.9,SNR=3.0
BGU   Big Grassy Mou    70.38 307 eP     P     02 19 15.8 -0.1
      comp=Z,3.7nm,1.0s
ILAR  Eielson Array     70.66 340  P     P     02 19 17.2 +0.2
      comp=Z,0.5nm,0.9s,baz=26,slow=6.5,SNR=5.2
ILB   Eielson Array     70.66 340 eP     P     02 19 17.2 +0.2
CPUP  Villa Florida     73.83 217 eP     P     02 19 35.2 -1.1
      comp=Z,27nm,1.8s
CPUP  Villa Florida     73.83 217  P     P     02 19 35.7 -0.6
      comp=Z,1.7nm,0.8s,baz=121,slow=5.3,SNR=3.3
```

CPUP				LR	LR	02 50 23.5	
	comp=Z,52nm,19.0s,baz=36,slow=34						
SONA0	**Songino Array**	**81.30**	**35**	*e*P	**P**	**02 20 19.7**	**+1.6**
SONM	**Songino Array**	**81.30**	**35**	P	**P**	**02 20 19.7**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=317,slow=6.1,SNR=3.2						
ULN	**Ulaanbaatar**	**81.57**	**34**	*e*P	**P**	**02 20 20.3**	**+0.7**
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**149.74**	**62**	PKPbc	**PKPbc**	**02 27 51.3**	**-0.8**
	comp=Z,1.1nm,1.0s,baz=328,slow=2.2,SNR=8.4						
AS31	**Alice Springs**	**151.75**	**69**	*e*PKPbc	**PKPbc**	**02 27 56.6**	**-0.1**
ASAR	**Alice Springs**	**151.75**	**69**	PKPbc	**PKPbc**	**02 27 56.6**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=310,slow=1.4,SNR=14						

*TIR **03** 02:08:19.4, 43.°01N×18.°01E, h32^{km}, Md3.5/3*
*ISCJB **03** 02:08:28.8±0.3, 43.°27N±0.°01×18.°69E±0.°02, h9^{km}±2^{km}, Error ellipse: s-maj=2.6km s-min=2.2km az=6.0*
*SAR **03** 02:08:30.2±0.2, 43.°25N×18.°68E, h6^{km}±3^{km}, ML3.1/1*
*PDG **03** 02:08:30.1±0.3, 43.°21N×18.°73E, h16^{km}, MD3.2/6, ML3.0/9, Error ellipse: s-maj=0.5km s-min=1.0km az=0.0*
*BEO **03** 02:08:30.4±0.3, 43.°25N×18.°70E, h8^{km}±2^{km}, ML3.0/14*
*PRU **03** 02:08:32.1±0.0, 43.°25N×18.°76E, h18^{km}*
ISC 03 02:08:29.4±1.0, **43.°26N**±0.°01×**18.°67E**±0.°02, **h10**^{km}±8^{km}, **n101**, σ**1.^{s}25**/154, **23C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKY	**Niksic**	**0.51**	**152**⇑	*i*Pg	**Pg**	**02 08 38.5**	**-0.8**
NKY				*i* Sg	**Sg**	**02 08 45.8**	**-0.2**
PLE	**Pljevlja**	**0.53**	**83**⇓	*i*Pg	**Pg**	**02 08 39.9**	**+0.2**
PLE				*i* Sg	**Sb**	**02 08 47.5**	**-1.1**
NKME	**Niksic**	**0.54**	**157**⇑	*i*Pg	**Pg**	**02 08 39.2**	**-0.6**
NKME				*i* Sg	**Sg**	**02 08 47.0**	**+0.1**
TREB	**Trebinje**	**0.60**	**203**	*e*Pg	**Pg**	**02 08 40.4**	**-0.5**
TREB				*e*Sg	**Sb**	**02 08 50.1**	**-0.3**
TREB	**Trebinje**	**0.60**	**203**	*e*Pg	**Pg**	**02 08 40.2**	**-0.7**
TREB				*e*Sg	**Sb**	**02 08 49.8**	**-0.6**
KOME	**Kolasin**	**0.74**	**123**⇑	*i*Pg	**Pg**	**02 08 43.6**	**-0.2**
KOME				*i* Sg	**Sg**	**02 08 53.6**	**+0.1**
BBLS	**Lazići**	**0.80**	**41**	*e*Pg	**Pb**	**02 08 45.6**	**+0.1**
BBLS				*e*Sg	**Sb**	**02 08 56.5**	**0.0**
BBLS	**Lazići**	**0.80**	**41**	*e*Pg	**Pg**	**02 08 45.0**	**+0.1**
BBLS				*e*Sg	**Sb**	**02 08 56.5**	**0.0**
STON	**Ston**	**0.81**	**241**	*e*Pg	**Pg**	**02 08 44.1**	**-1.0**
STON				Sg	**Sb**	**02 08 57.5**	**+0.8**
HCY	**Herceg Novi**	**0.83**	**189**⇑	*i*Pg	**Pg**	**02 08 45.1**	**-0.2**
HCY				*i* Sg	**Sb**	**02 08 57.3**	**+0.2**
HCY	**Herceg Novi**	**0.83**	**189**	*e*Pg	**Pg**	**02 08 45.1**	**-0.2**
HCY				*e*Sg	**Sg**	**02 08 56.2**	**+0.1**
HAPS	**Han Pijesak,BI**	**0.85**	**14**	*e*Pg	**Pb**	**02 08 46.3**	**0.0**
HAPS				*e*Sg	**Sb**	**02 08 58.2**	**+0.4**
HAPS	**Han Pijesak,BI**	**0.85**	**14**	*e*Pg	**Pg**	**02 08 45.6**	**-0.1**
HAPS				*e*Sg	**Sb**	**02 08 57.7**	**-0.1**
PDG	**Podgorica**	**0.94**	**153**	*e*Pg	**Pg**	**02 08 46.1**	**-1.3**
PDG				*e*Sg	**Sb**	**02 09 00.1**	**-0.1**
PDG	**Podgorica**	**0.94**	**153**⇑	*i*P	**Pg**	**02 08 45.6**	**-1.8**
PDG				S	**Sg**	**02 08 59.8**	**+0.1**
PDG	**Podgorica**	**0.94**	**153**⇓	*i*Pg	**Pg**	**02 08 45.9**	**-1.5**
PDG				*e*Sg	**Sg**	**02 08 59.7**	**+0.1**
TTG	**Podgorica**	**0.94**	**153**⇑	*i*Pg	**Pg**	**02 08 45.7**	**-1.7**
TTG				*i* Sg	**Sb**	**02 09 00.1**	**-0.1**
BUM	**Brajici-Budva**	**0.98**	**170**⇑	*i*Pg	**Pg**	**02 08 47.3**	**-0.9**
BUM				*i* Sg	**Sb**	**02 09 01.9**	**+0.5**
IVA	**Berane**	**0.98**	**113**⇓	*i*Pg	**Pg**	**02 08 47.8**	**-0.4**
IVA				*i* Sg	**Sb**	**02 09 01.7**	**+0.2**
IVAS	**Ivanjica**	**1.12**	**73**	*e*Pg	**Pg**	**02 08 50.6**	**-0.4**
IVAS				*e*Sg	**Sn**	**02 09 06.3**	**-0.6**
DRME	**Dracevica, Mon**	**1.14**	**160**⇑	*i*Pg	**Pb**	**02 08 50.2**	**-1.0**
DRME				*i* Sg	**Sn**	**02 09 07.1**	**-0.1**
DRME	**Dracevica, Mon**	**1.14**	**160**⇓	*i*Pg	**Pb**	**02 08 50.5**	**-0.7**
DRME				*e*Sg	**Sb**	**02 09 06.4**	**+0.3**
PVY	**Plav**	**1.16**	**125**⇓	*i*Pg	**Pb**	**02 08 51.4**	**-0.2**
PVY				*i* Sg	**Sn**	**02 09 07.7**	**-0.1**
DIVS	**Divibare**	**1.27**	**49**	*e*Pg	**Pg**	**02 08 53.7**	**-0.1**
DIVS				*e*Sg	**Sb**	**02 09 09.6**	**-0.3**
DIVS	**Divibare**	**1.27**	**49**	*e*Pg	**Pb**	**02 08 53.5**	**0.0**
DIVS				*e*Sg	**Sn**	**02 09 10.9**	**+0.4**
ULC	**Ulcinj**	**1.37**	**162**⇑	*i*Pg	**Pn**	**02 08 54.6**	**0.0**
ULC				*i* Sg	**Sg**	**02 09 14.8**	**+1.5**
TEKS	**Tekeris**	**1.43**	**25**	*e*Pg	**Pb**	**02 08 56.4**	**+0.3**
TEKS				*e*Sg	**Sb**	**02 09 14.9**	**+0.5**
TEKS	**Tekeris**	**1.43**	**25**	*e*Pg	**Pb**	**02 08 55.9**	**-0.2**
TEKS				*e*Sg	**Sg**	**02 09 16.1**	**+0.8**
PUK	**Puka**	**1.52**	**143**	*i* PN	**Pg**	**02 09 00.2**	**+1.7**
PUK				*i* SN	**Sg**	**02 09 23.0**	**+4.8**
DOB	**Doboj**	**1.52**	**345**	*e*Pn	**Pn**	**02 08 57.1**	**+0.4**
DOB				*e*Sn	**Sg**	**02 09 18.6**	**+0.2**
TRUS	**Trudelj**	**1.58**	**52**	*e*Pn	**Pn**	**02 08 57.7**	**+0.2**
TRUS				*e*Sg	**Sg**	**02 09 20.9**	**+0.7**
GRUS	**Gruza**	**1.61**	**67**	*e*Pg	**Pn**	**02 08 58.4**	**+0.5**
GRUS				*e*Sg	**Sg**	**02 09 21.4**	**+0.2**
SELS	**Selova**	**1.79**	**91**	*e*Pn	**Pn**	**02 09 00.9**	**+0.5**
SELS				*e*Sn	**Sn**	**02 09 23.7**	**+0.5**
BLY	**Banja Luka**	**1.83**	**325**	*e*Pn	**Pb**	**02 09 02.4**	**-0.6**
BLY				*e*Sn	**Sg**	**02 09 27.9**	**-0.4**
BLY	**Banja Luka**	**1.83**	**325**⇑	*i*P	**Pn**	**02 09 01.3**	**+0.3**
BLY	**Banja Luka**	**1.83**	**325**⇑	*i*Pn	**Pb**	**02 09 02.5**	**-0.6**
BLY				*e*Sn	**Sb**	**02 09 26.1**	**+0.1**
PHP	**Peshkopia**	**2.05**	**140**	*i* PN	**Pg**	**02 09 07.9**	**-0.8**
PHP				*i* SN	**Sg**	**02 09 37.0**	**+1.7**
FRGS	**Fruska Gora**	**2.06**	**23**	*e*Pn	**Pn**	**02 09 04.8**	**+0.6**
FRGS				*e*Sn	**Sb**	**02 09 32.3**	**-0.4**
FRGS	**Fruska Gora**	**2.06**	**23**	*e*Pn	**Pn**	**02 09 05.1**	**+0.9**
FRGS				*e*Sn	**Sn**	**02 09 31.2**	**+1.2**
TIR	**Tirane**	**2.11**	**155**	*e*Pn	**Pn**	**02 09 06.0**	**+1.2**
TIR				*e*Sn	**Sb**	**02 09 33.0**	**-1.0**
TIR	**Tirane**	**2.11**	**155**⇑	*i*P	**Pn**	**02 09 04.6**	**-0.2**
TIR	**Tirane**	**2.11**	**155**	S	**Sn**	**02 09 29.4**	**-1.7**
TIR	**Tirane**	**2.11**	**155**	*i* PN	**Pb**	**02 09 08.4**	**+0.6**
TIR				*i* SN	**Sb**	**02 09 35.4**	**+1.4**
BOVS	**Bovan**	**2.24**	**79**	*e*Pn	**Pn**	**02 09 07.5**	**+0.9**
BARS	**Barje**	**2.35**	**100**	*e*Pn	**Pn**	**02 09 08.8**	**+0.7**
BARS	**Barje**	**2.35**	**100**	*e*Pn	**Pb**	**02 09 10.2**	**-1.6**
BARS				*e*Sn	**Sn**	**02 09 38.1**	**+1.1**
SKO	**Skopje**	**2.42**	**121**	*i* Pn	**Pb**	**02 09 12.8**	**-0.1**
KUBS	**Kucevo**	**2.46**	**61**	*e*Pn	**Pn**	**02 09 11.1**	**+1.5**
ZAGS	**Zajecar**	**2.65**	**77**	*e*Pn	**Pn**	**02 09 13.1**	**+0.9**
MDVR	**Moldovita**	**2.67**	**54**⇑	*i*P	**Pn**	**02 09 12.7**	**+0.2**
KRUS	**Krusevo**	**2.69**	**134**	*i* Pn	**Pn**	**02 09 15.2**	**+2.4**
BANR	**Banloc**	**2.76**	**39**⇑	*i*P	**Pn**	**02 09 13.1**	**-0.6**
ZAPS	**Zavoj**	**2.89**	**88**	*e*Pn	**Pn**	**02 09 17.0**	**+1.4**
ZAPS				*e*Sn	**Sn**	**02 09 50.2**	**-0.3**
MORH	**Mrgy, Hungar**	**2.95**	**360**	*e*Pn	**Pn**	**02 09 16.0**	**-0.3**
MORH				Sn	**Sn**	**02 09 52.0**	**+0.2**
BIA	**Bitola**	**2.99**	**138**	*i* Pn	**Pb**	**02 09 20.7**	**-2.0**
MATE	**Matera**	**3.00**	**210**⇓	*i*P	**Pn**	**02 09 16.7**	**-0.2**
MATE	**Matera**	**3.00**	**210**	S	**Sn**	**02 09 51.7**	**-1.2**
STIP	**Stip**	**3.04**	**120**	*i* Pn	**Pg**	**02 09 27.2**	**-0.4**
HERR	**Herculane**	**3.15**	**58**⇑	*i*P	**Pn**	**02 09 19.3**	**+0.3**
BZS	**Buzias**	**3.16**	**41**⇑	*i*P	**Pn**	**02 09 19.1**	**-0.1**
PUNG	**Punghina**	**3.25**	**70**⇑	*i*P	**Pn**	**02 09 19.7**	**-0.7**
BOJS	**Bojanci**	**3.32**	**314**	*i* Pn	**Pn**	**02 09 23.1**	**+1.7**
VTS	**Vitosha**	**3.41**	**99**⇑	*i*P	**Pn**	**02 09 22.9**	**+0.1**
VTS	**Vitosha**	**3.41**	**99**	S	**Sn**	**02 10 02.5**	**-0.9**
CRES	**Cresnjev**	**3.44**	**319**	*e*Pn	**Pn**	**02 09 24.1**	**+1.0**
BEHE	**Becsehely**	**3.48**	**338**	*e*Pn	**Pn**	**02 09 24.9**	**+1.3**
VAY	**Valandovo**	**3.48**	**123**	*e*Pn	**Pn**	**02 09 26.9**	**+3.2**
GZR	**Gura Zlata**	**3.63**	**53**⇑	*i*P	**Pn**	**02 09 26.1**	**+0.3**
TIH	**Tihany**	**3.68**	**352**	*e*Pn	**Pn**	**02 09 27.0**	**+0.7**
TIH				Sn	**Sn**	**02 10 11.1**	**+1.3**
SIRR	**Siria**	**3.68**	**34**⇓	*i*P	**Pn**	**02 09 25.1**	**-1.3**
SIRR	**Siria**	**3.68**	**34**	S	**Sn**	**02 10 08.4**	**-1.5**
VISS	**Visnje**	**3.73**	**314**	*i* Pn	**Pn**	**02 09 29.3**	**+2.1**
CEY	**Cerknica**	**3.92**	**311**	*e*Pn	**Pn**	**02 09 31.2**	**+1.5**
AQU	**L'Aquila**	**3.98**	**259**	*e*Sn	**Sn**	**02 10 18.3**	**+0.9**
DEV	**Deva**	**4.00**	**48**⇑	*i*P	**Pn**	**02 09 30.1**	**-0.7**
PERS	**Pernice**	**4.21**	**324**	*i* Pn	**Pn**	**02 09 35.3**	**+1.6**
JAVS	**Javornik**	**4.21**	**310**	*i* Pn	**Pn**	**02 09 35.7**	**+1.9**
SOKA	**Soboth**	**4.28**	**324**	*e*Pg	**Pn**	**02 09 36.4**	**+1.7**
	3.7nm,0.2s,SNR=5.4						
TIP	**Timpagrande**	**4.33**	**200**⇑	*i*P	**Pn**	**02 09 35.1**	**-0.3**
TIP	**Timpagrande**	**4.33**	**200**	S	**Sn**	**02 10 23.5**	**-2.4**
OBKA	**Obir**	**4.37**	**319**	*e*Pn	**Pn**	**02 09 38.5**	**+2.5**
	1.4nm,0.4s						
OBKA				Pg	**Pg**	**02 09 51.4**	**-1.7**
	2.2nm,0.2s						
DRGR		**4.54**	**38**⇑	*i*P	**Pn**	**02 09 38.2**	**-0.1**
ARSA	**Arzberg**	**4.56**	**332**	*e*Pn	**Pn**	**02 09 40.0**	**+1.5**
	5.9nm,0.3s,SNR=12						
ARSA				*e*Sn	**Sn**	**02 10 30.9**	**-0.8**
	2.4nm,0.3s						
SOP	**Sopron**	**4.66**	**342**	*e*Pn	**Pn**	**02 09 40.0**	**+0.2**
SOP				Sn	**Sn**	**02 10 32.1**	**-1.9**
PSZ	**Piszkesteto**	**4.73**	**10**⇑	*i*P	**Pn**	**02 09 41.7**	**+0.8**
PSZ	**Piszkesteto**	**4.73**	**10**	*e*Pn	**Pn**	**02 09 42.1**	**+1.2**
PSZ				Sn	**Sn**	**02 10 32.0**	**-3.9**
ARR	**Arges**	**4.77**	**62**⇓	*i*P	**Pn**	**02 09 41.1**	**-0.3**
MYKA	**Terra Mystica**	**4.91**	**315**	Pg	**Pg**	**02 10 03.4**	**0.0**
	5.2nm,0.7s						
VOIR		**5.06**	**62**⇓	*i*P	**Pn**	**02 09 46.0**	**+0.5**
CONA	**Conrad Observa**	**5.06**	**338**	*e*Pn	**Pn**	**02 09 47.1**	**+1.6**
	1.9nm,0.4s,SNR=4.7						
CONA				*e*Sn	**Sn**	**02 10 43.9**	**-0.2**
	1.2nm,0.3s						
MODS	**Modra-Piesok**	**5.20**	**350**	*e*SN	**Sn**	**02 10 45.6**	**-1.8**
MODS				*e*LG	Lg	02 10 48.2	
VYHS	**Vyhne**	**5.23**	**1**	*e*PN	**Pn**	**02 09 49.4**	**+1.7**
VYHS				*e*SN	**Sn**	**02 10 46.2**	**-1.9**
VYHS				*e*LG	Lg	02 10 49.4	
MOA	**Molln**	**5.53**	**328**	*e*Pn	**Pn**	**02 09 54.6**	**+2.8**
	0.6nm,0.2s						
MOA				*e*Sn	**Sn**	**02 10 56.9**	**+1.4**
	7.3nm,0.4s						
ABTA	**Abfaltersbach**	**5.58**	**311**	*e*Pn	**Pn**	**02 09 55.1**	**+2.4**
	0.4nm,0.2s						
ABTA				Pg	**Pg**	**02 10 14.8**	**-1.5**
	3.1nm,0.5s						
MLR	**Muntele Rosu**	**5.67**	**64**⇓	*i*P	**Pn**	**02 09 53.4**	**-0.4**
SQTA	**Sankt Quirin**	**6.59**	**309**	*e*Pn	**Pn**	**02 10 09.1**	**+2.7**
	0.7nm,0.3s						
MOTA	**Moosalm**	**6.72**	**310**	*e*Pn	**Pn**	**02 10 10.1**	**+1.9**
	1.3nm,0.4s						
KHC	**Kasperske Hory**	**6.85**	**331**	*e*PN	**Pn**	**02 10 12.6**	**+2.7**
KHC				*e*SN	**Sn**	**02 11 26.4**	**-1.5**
RETA	**Reutte**	**6.99**	**310**	*e*Pn	**Pn**	**02 10 14.6**	**+2.7**
	0.9nm,0.4s						
DPC	**Dobruska-Polom**	**7.27**	**348**	*e*SN	**Sn**	**02 11 36.0**	**-2.3**
PRU	**Pruhonice**	**7.30**	**339**	*e*SN	**Sn**	**02 11 37.9**	**-1.1**

*IDC **03** 02:29:11.6±0.5, 10.°90S×165.°37E, h0^{km}, mb4.5/19, mb1 4.7/21, mb1mx4.7/30, mbtmp4.6/21, ML4.8/2, MS4.3/25, Ms1 4.4/25, ms1mx4.2/38, Error ellipse: s-maj=17.3km s-min=14.0km az=94.0*
*BJI **03** 02:29:11.6, 10.°75S×165.°57E, h10^{km}, mB5.2/32, mb4.8/45, Ms5.0/25, Ms7 4.7/18*
*NEIC **03** 02:29:13.3±2.1, 10.°94S×165.°29E, h11^{km}±13^{km}, mb4.9/48, Error ellipse: s-maj=4.7km s-min=4.0km az=183.0*
*ISCJB **03** 02:29:14.6±0.2, 11.°00S±0.°03×165.°27E±0.°04, h30^{km}, mb4.8/73, MS4.4/31, Error ellipse: s-maj=5.5km s-min=4.6km az=35.5*
*GCMT **03** 02:29:16.3±0.2, 10.°92S±0.°02×165.°15E±0.°01, h12^{km}, MW5.0/87, Moment Tensor Solution. s26,c29; s87,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.47±.14; $M_{\theta\theta}$1.48±.13; $M_{\phi\phi}$-3.96±.11; $M_{r\theta}$1.47±.42; $M_{\theta\phi}$2.05±.12; $M_{\phi r}$-1.48±.35; Best double couple: $M_0$4.32000×10^{16} NP1:ϕ_s135.00000°, δ66.00000°, λ55.00000°. NP2: ϕ_s15.00000°, δ42.00000°, λ143.00000°. Principal axes: T 3.5260, Plg54.0000°, Azm0.0000°; N 1.5780, Plg32.0000°, Azm151.0000°; P -5.1140, Plg14.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 02:29:16.4±0.3, **11.°00S**±0.°06×**165.°34E**±0.°05, **h30**^{km}, **n169**, σ**1.^{s}35**/171, **mb4.9**/73, **MS4.4**/32, **1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.53**	**286**	*e*P	**Pn**	**02 30 35.0**	**-1.8**
HNR				*e*S	**Sn**	**02 31 33.0**	**-6.4**
HNR	**Honiara**	**5.53**	**286**	*e*Pn	**Pn**	**02 30 33.6**	**-3.2**
HNR	**Honiara**	**5.53**	**286**	Pn	**Pn**	**02 30 36.1**	**-0.7**
	48nm,0.3s,baz=144,slow=10,SNR=6.1						
HNR				Sn	**Sn**	**02 31 39.4**	**0.0**
	44nm,0.3s,baz=102,slow=19,SNR=5.5						
HNR				LR	LR	02 32 47.5	
	comp=Z,9µm,20.9s,baz=120,slow=39						
DZM	**Mont Dzumac**	**11.06**	**175**	*e*Pn	**Pn**	**02 31 53.1**	**+0.4**
	215nm,1.3s						
DZM				*e*LR	LR	02 34 26.3	
	comp=Z,2µm,23.9s						
DZM	**Mont Dzumac**	**11.06**	**175**	Pn	**Pn**	**02 31 52.2**	**-0.5**
	3.3nm,0.3s,baz=302,slow=10,SNR=33						
ONTNC	**Ouen Toro**	**11.29**	**175**	*e*Pn	**Pn**	**02 31 55.4**	**-0.5**
OUENC	**Ouen Island, N**	**11.45**	**173**	*e*Pn	**Pn**	**02 31 58.0**	**0.0**
PINNC	**Pines Island,**	**11.72**	**170**	*e*Pn	**Pn**	**02 32 01.9**	**+0.2**
FUNA	**Funafuti**	**13.88**	**81**	*e*Pn	**Pn**	**02 32 30.3**	**-1.0**
EIDS	**Eidsvold**	**19.66**	**221**	P	**Pn**	**02 33 44.5**	**0.0**
	baz=20,SNR=4.8						
EIDS	**Eidsvold**	**19.66**	**221**	*e*P	**P**	**02 33 43.1**	**+0.1**
	106nm,1.4s						
MANU	**Manus Island**	**19.93**	**295**	*e*P	**P**	**02 33 45.9**	**-0.2**
	230nm,1.0s						
CTA	**Charters Tower**	**20.47**	**241**	P	**P**	**02 33 52.1**	**+0.2**
	42nm,1.1s,baz=69,slow=12,SNR=18						
CTA				LR	LR	02 40 52.9	
	comp=Z,1µm,18.5s,baz=64,slow=34						
CTAO	**Charters Tower**	**20.47**	**241**	*e*P	**P**	**02 33 51.4**	**-0.5**
MTSU	**Mount Surprise**	**21.53**	**248**	P	**P**	**02 34 03.5**	**+0.2**
	baz=21,SNR=20						
COEN	**Coen**	**21.83**	**260**	P	**P**	**02 34 07.2**	**+0.5**
	baz=22,SNR=9.8						
COEN	**Coen**	**21.83**	**260**	*e*P	**P**	**02 34 05.5**	**-1.1**
	75nm,1.3s						
RMQ	**Roma**	**21.95**	**223**	P	**P**	**02 34 08.9**	**+1.1**
	baz=22,SNR=39						
ARMA	**Armidale**	**23.14**	**211**	P	**P**	**02 34 21.1**	**+0.6**
	baz=23,SNR=4.3						
ARMA	**Armidale**	**23.14**	**211**	*e*P	**P**	**02 34 19.9**	**-0.6**
	189nm,1.7s						
QLP	**Quilpie**	**25.22**	**229**	P	**P**	**02 34 40.1**	**+0.3**
	baz=25,SNR=16						
JAY	**Jayapura**	**25.85**	**287**	LR	LR	02 44 31.0	
	comp=Z,956nm,21.6s,baz=352,slow=36						
QIS	**Mount Isa**	**26.49**	**246**	P	**P**	**02 34 51.2**	**-0.1**
	baz=26,SNR=5.0						
CMSA	**Cobar Meteorol**	**27.35**	**219**	P	**P**	**02 35 00.3**	**+1.3**
	baz=27,SNR=14						
URZ	**Urewera**	**29.12**	**161**	P	**P**	**02 35 15.5**	**+0.8**
	32nm,1.1s,baz=19,slow=6.2,SNR=7.7						
H11S2	**WAKE ISLAND Hy**	**29.33**	**3**	T	T	03 05 47.1	
	baz=183,slow=76,SNR=68						
H11S3	**WAKE ISLAND Hy**	**29.34**	**3**	T	T	03 05 50.5	
	baz=183,slow=76,SNR=48						
H11S1	**WAKE ISLAND Hy**	**29.35**	**3**	T	T	03 05 49.9	
	baz=183,slow=76,SNR=55						
BKZ	**Black Stump Fm**	**29.76**	**162**	*e*P	**P**	**02 35 21.9**	**+1.5**
	108nm,1.6s						
STKA	**Stephens Creek**	**30.20**	**223**	P	**P**	**02 35 26.8**	**+2.4**
	baz=30,SNR=8.8						
STKA	**Stephens Creek**	**30.20**	**223**	P	**P**	**02 35 24.4**	**0.0**
	9.7nm,0.8s,baz=30,slow=10,SNR=14						
STKA				LR	LR	02 46 32.6	
	comp=Z,1µm,20.1s,baz=44,slow=34						
WRAB	**Tennant Creek**	**31.11**	**250**	*e*P	**P**	**02 35 32.2**	**-0.4**
	8.1nm,0.8s						
WB2	**Warramunga Arr**	**31.11**	**250**	*e*P	**P**	**02 35 31.5**	**-1.1**
WR1	**Warramunga Arr**	**31.12**	**250**	*e*P	**P**	**02 35 31.7**	**-1.0**
	42nm,1.1s						
WR1				*e*PcP	**PcP**	**02 38 28.1**	**+0.4**
WRA	**Warramunga Arr**	**31.12**	**250**	P	**P**	**02 35 31.7**	**-1.0**
	15nm,0.9s,baz=78,slow=9.4,SNR=51						
WRA				PcP	**PcP**	**02 38 28.1**	**+0.4**
	4.2nm,1.0s,baz=77,slow=2.7,SNR=8.7						
WRA				LR	LR	02 48 14.0	
	comp=Z,2µm,18.0s,baz=75,slow=37						
THZ	**Tophouse**	**31.36**	**169**	*e*P	**P**	**02 35 34.0**	**-0.5**
	22nm,0.9s						
AS01	**Alice Springs**	**32.41**	**243**	*e*P	**P**	**02 35 42.4**	**-1.6**
AS31	**Alice Springs**	**32.45**	**243**	*e*P	**P**	**02 35 43.0**	**-1.3**
	7.1nm,0.8s						
AS31				*e*PcP	**PcP**	**02 38 31.6**	**+0.4**
ASAR	**Alice Springs**	**32.45**	**243**	P	**P**	**02 35 42.9**	**-1.5**
	23nm,0.8s,baz=71,slow=9.6,SNR=58						
ASAR				PcP	**PcP**	**02 38 31.6**	**+0.4**
	3.5nm,0.8s,baz=77,slow=2.8,SNR=11						
ASAR				LR	LR	02 47 60.0	
	comp=Z,1µm,18.2s,baz=72,slow=35						
OXZ	**Oxford**	**32.73**	**171**	*e*P	**P**	**02 35 46.0**	**-0.5**
	20nm,0.7s						
HTT	**Hallett**	**32.93**	**223**	P	**P**	**02 35 49.1**	**+0.6**
	baz=33,SNR=4.4						
RPZ	**Rata Peaks**	**32.97**	**172**	P	**P**	**02 35 48.2**	**-0.3**
	7.2nm,0.8s,baz=309,slow=6.5,SNR=2.7						
ARPS	**Mount Arapiles**	**33.28**	**216**	P	**P**	**02 35 53.3**	**+2.0**
	baz=33,SNR=5.0						
BBOO	**Buckleboo**	**34.57**	**227**	P	**P**	**02 36 03.9**	**+1.3**
	baz=34,SNR=10						
BBOO	**Buckleboo**	**34.57**	**227**	*e*P	**P**	**02 36 02.4**	**-0.2**
	21nm,1.0s						
WRKA	**Warakurna**	**37.75**	**243**	P	**P**	**02 36 28.9**	**-1.1**
	baz=38,SNR=34						
FITZ	**Fitzroy Crossi**	**39.00**	**255**	P	**P**	**02 36 40.1**	**-0.5**
	baz=39,SNR=8.5						
FITZ	**Fitzroy Crossi**	**39.00**	**255**	*e*P	**P**	**02 36 39.8**	**-0.8**
	29nm,1.3s						
PPT	**Papeete**	**44.10**	**104**	LR	LR	02 51 49.1	
	comp=Z,533nm,19.1s,baz=275,slow=31						
PPT2	**Papeete2**	**44.10**	**104**	*e*S	S	02 44 03.5	+10
	252nm,26.0s						
PPT2				*e*LQ	LQ	02 48 00.6	
	1µm,28.2s						
PPT2				*e*LR	LR	02 49 53.8	
	comp=Z,724nm,22.2s,baz=276						
TBI	**Tubuai**	**44.72**	**112**	*e*LQ	LQ	02 48 15.5	
	2µm,29.8s						
TBI				*e*LR	LR	02 50 09.7	
	comp=Z,848nm,29.0s,baz=288						
MBWA	**Marble Bar**	**44.83**	**251**	*e*P	**P**	**02 37 27.1**	**-1.1**
MEEK	**Meekatharra**	**46.61**	**244**	P	**P**	**02 37 42.1**	**-0.1**
	baz=46,SNR=26						
KLBR	**Kellerberrin**	**48.39**	**237**	P	**P**	**02 37 57.4**	**+1.4**
	baz=48,SNR=6.7						
NWAO	**Narrogin (SRO)**	**49.16**	**236**	*e*P	**P**	**02 38 00.7**	**-1.1**
MORW	**Morawa**	**49.29**	**241**	P	**P**	**02 38 03.2**	**+0.3**
	baz=49,SNR=16						
MORW	**Morawa**	**49.29**	**241**	*e*P	**P**	**02 38 03.2**	**+0.3**
	47nm,1.0s						
MUN	**Mundaring**	**49.76**	**237**	P	**P**	**02 38 07.8**	**+1.3**
	baz=50,SNR=3.6						
TAOE	**Nuku Hiva Isla**	**53.68**	**93**	*e*S	S	02 46 19.3	+11
	237nm,25.7s						
TAOE				*e*LR	LR	02 53 54.9	
	comp=Z,540nm,30.7s						
MJAR	**Matsushiro Arr**	**53.75**	**333**	P	**P**	**02 38 34.9**	**-1.1**
	6.8nm,1.0s,baz=172,slow=8.3,SNR=9.8						
MAJO	**Matsushiro**	**53.75**	**333**	*e*P	**P**	**02 38 34.8**	**-1.2**
	7.5nm,0.8s						
MAT	**Matsushiro**	**53.75**	**333**	P	**P**	**02 38 34.6**	**-1.4**
MAT				S	**S**	**02 46 10.0**	**+1.4**
JNU	**Nakatsue**	**54.81**	**324**	*e*P	**P**	**02 38 43.7**	**-0.1**
	44nm,1.2s						
JNU	**Nakatsue**	**54.81**	**324**	LR	LR	02 57 37.8	
	comp=Z,159nm,19.9s,baz=123,slow=31						
RKT	**Rikitea**	**57.98**	**110**	*e*LR	LR	02 56 18.7	
	comp=Z,643nm,23.2s						
ASAJ	**Asahikawa**	**58.62**	**341**	LR	LR	02 59 35.6	
	comp=Z,316nm,21.6s,baz=126,slow=31						
KSRS	**Korea Array**	**59.61**	**326**	P	**P**	**02 39 17.6**	**-0.1**
	5.9nm,1.1s,baz=144,slow=6.4,SNR=13						
KSRS				LR	LR	03 02 30.5	
	comp=Z,117nm,20.1s,baz=144,slow=34						
KS15	**Wonju Array Si**	**59.63**	**326**	*e*P	**P**	**02 39 17.6**	**-0.2**
KSAR	**Wonju Array Be**	**59.63**	**326**	P	**P**	**02 39 17.6**	**-0.2**
KS01	**Wonju Array Si**	**59.65**	**326**	*e*P	**P**	**02 39 17.4**	**-0.5**
NJ2	**Nanjing**	**61.71**	**316**	*e*P	**P**	**02 39 32.9**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
QIZ	**Qiongzhong**	**62.30**	**298**	P	**P**	**02 39 36.6**	**+0.3**
QIZ				S	**S**	**02 48 04.2**	**+3.1**
QIZ				pmax	pmax		
	comp=Z,14nm,1.1s						
QIZ				LR	LR		
	comp=N,280nm,12.3s						
QIZ				LR	LR		
	comp=E,260nm,24.0s						
USRK	**Ussuriysk Ar.**	**62.73**	**334**	P	**P**	**02 39 38.6**	**0.0**
	6.7nm,1.0s,baz=157,slow=5.4,SNR=7.6						
USRK				LR	LR	03 03 53.3	
	comp=Z,148nm,21.5s,baz=147,slow=33						
MDJ	**Mudanjiang**	**64.12**	**332**	*e*P	**P**	**02 39 47.0**	**-0.9**
	4.0nm,0.4s						
PETK	**Petropavlovsk-**	**64.19**	**355**	LR	LR	03 02 13.7	
	comp=Z,221nm,20.7s,baz=178,slow=31						
MNSI	**Mandailing Nat**	**66.39**	**276**	P	P	02 40 14.7	+11
VNDA	**Vanda**	**66.53**	**181**	*e*P	**P**	**02 40 04.2**	**+1.2**
	28nm,1.4s						
VNDA	**Vanda**	**66.53**	**181**	P	**P**	**02 40 05.0**	**+2.0**
	7.0nm,1.1s,baz=356,slow=6.4,SNR=7.1						
VNDA				LR	LR	03 06 31.2	
	comp=Z,182nm,18.7s,baz=0.5,slow=34						
ENH	**Enshi**	**67.56**	**309**	*e*P	**P**	**02 40 09.2**	**-1.1**
GYA	**Guiyang**	**68.06**	**304**	P	**P**	**02 40 13.2**	**-0.5**
GYA				PP	**PP**	**02 42 41.0**	**-3.3**
GYA				S	**S**	**02 49 14.6**	**+2.9**
GYA				SKS	**SKSac**	**02 50 09.2**	**-1.4**
GYA				SS	**SS**	**02 53 38.6**	**+3.8**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=N,490nm,17.2s						
GYA				LR	LR		
	comp=E,510nm,17.6s						
GYA				LR	LR		
	comp=Z,460nm,17.4s						
BJT	**Baijiatuau**	**68.19**	**321**	*e*P	**P**	**02 40 13.3**	**-0.8**
	3.2nm,0.5s						
BJI	**Beijing**	**68.19**	**321**⇓	*e*P	**P**	**02 40 14.1**	**0.0**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN	**Xi'an**	**69.79**	**313**	P	**P**	**02 40 24.1**	**-0.2**
XAN				pP	pP	02 40 28.8	-3.9
XAN				sP	sP	02 40 31.2	-4.6
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,130nm,5.4s						
XAN	**Xi'an**	**69.79**	**313**	*e*P	**P**	**02 40 24.0**	**-0.2**
	15nm,1.4s						
KMI	**Kunming**	**70.75**	**302**	P	**P**	**02 40 32.3**	**+1.7**
KMI				pP	pP	02 40 36.7	-2.3
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				LR	LR		
	comp=N,190nm,9.5s						
KMI				LR	LR		
	comp=E,220nm,7.5s						
KMI				LR	LR		
	comp=Z,360nm,19.5s						
HHC	**Hu-ho-hao-te**	**71.54**	**320**	*e*P	**P**	**02 40 35.2**	**+0.4**
HHC				S	**S**	**02 49 53.0**	**+1.0**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
HHC				LR	LR		
	comp=N,340nm,16.4s						
HHC				LR	LR		
	comp=E,190nm,15.6s						
HHC				LR	LR		
	comp=Z,560nm,16.4s						
CM01	**Chiang Mai Arr**	**71.70**	**294**	*e*P	**P**	**02 40 35.8**	**-0.3**
CM31	**Chiang Mai Arr**	**71.73**	**294**	*e*P	**P**	**02 40 35.6**	**-0.7**
	16nm,1.3s						
CMAR	**Chiang Mai Arr**	**71.73**	**294**	P	**P**	**02 40 36.9**	**+0.6**
	1.7nm,0.7s,baz=114,slow=4.4,SNR=11						
CMAR				LR	LR	03 09 46.8	
	comp=Z,95nm,21.9s,baz=105,slow=34						
CHTO	**Chiang Mai**	**71.84**	**294**	*e*P	**P**	**02 40 37.3**	**+0.4**
	10nm,1.1s						
CHTO	**Chiang Mai**	**71.84**	**294**	P	**P**	**02 40 40.6**	**+3.6**
	40nm,1.6s						
CD2	**Chengdu**	**72.26**	**307**	*e*P	**P**	**02 40 39.4**	**+0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH	**Lanzhou**	**74.43**	**312**	*e*P	**P**	**02 40 53.1**	**+1.0**
LZH				pP	pP	02 40 56.3	-4.3
LZH				sP	sP	02 40 57.9	-5.9
LZH				PP	**PP**	**02 43 41.8**	**+2.9**
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,170nm,7.2s						
LZH				LR	LR		

	comp=N,520nm,15.2s						
LZH				LR	LR		
	comp=E,470nm,14.6s						
LZH				LR	LR		
	comp=Z,540nm,17.9s						
GAMB	**Gambell**	**76.60**	**10**	*e*P	**P**	**02 41 05.1**	**+1.5**
	12nm,1.0s						
ULN	**Ulaanbaatar**	**78.03**	**324**	*e*P	**P**	**02 41 11.0**	**-1.3**
	10nm,1.0s						
SONA0	**Songino Array**	**78.39**	**324**	*e*P	**P**	**02 41 14.3**	**0.0**
SONM	**Songino Array**	**78.39**	**324**	P	**P**	**02 41 14.3**	**0.0**
	2.0nm,0.9s,baz=142,slow=5.6,SNR=9.1						
SONM				LR	LR	03 14 56.5	
	comp=Z,181nm,19.8s,baz=84,slow=35						
GTA	**Gaotai**	**78.74**	**314**	*e*P	**P**	**02 41 16.9**	**+0.5**
GTA				pP	pP	02 41 21.2	-3.7
GTA				sP	PcP	02 41 23.9	-1.3
GTA				pmax	pmax		
	comp=Z,75nm,5.5s						
GTA				LR	LR		
	comp=N,180nm,17.5s						
GTA				LR	LR		
	comp=E,170nm,17.5s						
GTA				LR	LR		
	comp=Z,220nm,16.8s						
BILL	**Bilibino**	**78.84**	**0**	*e*P	**P**	**02 41 16.0**	**-0.1**
	14nm,1.1s						
SHL	**Shillong**	**80.14**	**299**	*e*x	**P**	**02 41 26.0**	**+1.6**
IM3	**Indian Mountai**	**82.49**	**16**	*e*P	**P**	**02 41 35.4**	**-0.3**
GDXM	**Geysers**	**83.08**	**48**	*e*P	**P**	**02 41 41.4**	**+1.8**
	7.4nm,1.0s						
HDA	**Harding Lake**	**83.33**	**19**	*e*P	**P**	**02 41 39.6**	**-0.5**
	12nm,1.0s						
COLA	**College**	**83.37**	**18**	*e*P	**P**	**02 41 38.7**	**-1.6**
	8.5nm,0.9s						
SAO	**San Andreas Ge**	**83.41**	**51**	*e*P	**P**	**02 41 40.4**	**-0.8**
IL1	**Eielson Array**	**83.60**	**19**	*e*P	**P**	**02 41 41.5**	**0.0**
ILAR	**Eielson Array**	**83.60**	**19**	P	**P**	**02 41 40.0**	**-1.5**
	2.8nm,0.7s,baz=232,slow=5.0,SNR=22						
ILAR				LR	LR	03 14 52.2	
	comp=Z,153nm,19.0s,baz=240,slow=33						
SCRK	**Sand Creek**	**84.01**	**20**	*e*P	**P**	**02 41 43.4**	**-0.4**
	15nm,1.2s						
HUMO	**Hull Mountain**	**84.28**	**45**	*e*P	**P**	**02 41 45.6**	**+0.1**
MAW	**Mawson**	**84.61**	**202**	LR	LR	03 13 48.7	
	comp=Z,95nm,18.9s,baz=50,slow=32						
CMB	**Columbia Colle**	**84.62**	**50**	*e*P	**P**	**02 41 47.1**	**-0.3**
	22nm,0.9s						
DAWY	**Dawson**	**85.66**	**21**	*e*P	**P**	**02 41 52.0**	**0.0**
	25nm,1.6s						
PAHR	**Pah Rah Range**	**85.88**	**48**	*e*P	**P**	**02 41 53.4**	**-0.4**
	7.3nm,1.1s						
MOD	**Modoc Plateau**	**85.90**	**46**	*e*P	**P**	**02 41 53.5**	**-0.4**
	3.1nm,0.9s						
TIXI	**Tiksi**	**85.97**	**349**	*e*P	**P**	**02 41 52.6**	**-0.7**
	1.1nm,0.5s						
DAC	**Darwin (Calif)**	**86.22**	**52**	*e*P	**P**	**02 41 55.4**	**-0.3**
	5.0nm,1.1s						
NV01	**Mina Array Sit**	**86.30**	**50**	*e*P	**P**	**02 41 55.5**	**-0.4**
NVAR	**Mina Array Bea**	**86.30**	**50**	P	**P**	**02 41 55.7**	**-0.3**
	3.7nm,0.9s,baz=233,slow=7.2,SNR=20						
NVAR				LR	LR	03 13 19.0	
	comp=Z,240nm,19.7s,baz=274,slow=31						
PFO	**Pinyon Flats O**	**86.39**	**55**	*e*P	**P**	**02 41 56.4**	**0.0**
NV11	**Mina Array Sit**	**86.41**	**50**	*e*P	**P**	**02 41 56.6**	**+0.1**
	0.9nm,1.2s						
WVOR	**Wild Horse Val**	**87.24**	**46**	*e*P	**P**	**02 42 00.8**	**+0.4**
	12nm,1.3s						
HAWA	**Hanford**	**87.85**	**42**	*e*P	**P**	**02 42 02.9**	**-0.1**
	6.6nm,1.2s						
WMQ	**Urumqi**	**88.78**	**315**	P	**P**	**02 42 07.9**	**+0.3**
WMQ				pP	PcP	02 42 12.3	+3.2
WMQ				sP	pP	02 42 16.6	+0.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,350nm,5.3s						
WMQ				LR	LR		
	comp=N,220nm,22.9s						
WMQ				LR	LR		
	comp=E,170nm,20.3s						
WMQ				LR	LR		
	comp=Z,210nm,24.1s						
W13A	**Hualapai Mount**	**88.83**	**54**	*e*P	**P**	**02 42 09.3**	**+1.1**
	6.6nm,1.1s						
BMO	**Blue Mountains**	**88.88**	**44**	*e*P	**P**	**02 42 06.8**	**-1.3**
	2.4nm,0.9s						
U15A	**North Rim**	**90.40**	**53**	*e*P	**P**	**02 42 16.4**	**+0.8**
	9.1nm,1.1s						
HLID	**Hailey**	**90.53**	**46**	*e*P	**P**	**02 42 16.1**	**+0.2**
	8.7nm,1.4s						
X16A	**Lo Mia Camp, P**	**90.62**	**55**	*e*P	**P**	**02 42 17.9**	**+1.4**
	4.5nm,1.0s						
TUC	**Tucson**	**90.70**	**57**	*e*P	**P**	**02 42 17.4**	**+0.6**
	13nm,1.5s						
DUG	**Dugway, Tooele**	**90.87**	**49**	*e*P	**P**	**02 42 17.7**	**+0.1**
	1.2nm,0.6s						
WUAZ	**Wupatki**	**90.92**	**54**	*e*P	**P**	**02 42 17.6**	**-0.3**
	20nm,1.7s						
SYO	**Syowa Base**	**91.71**	**197**	⇑*e*P	P	02 42 31.4	+11
BOZ	**Bozeman (W)**	**92.95**	**44**	*e*P	**P**	**02 42 27.6**	**+0.5**
	6.0nm,1.1s						
MK01	**Makanchi Array**	**93.20**	**317**	*e*P	**P**	**02 42 27.1**	**-0.9**
MK31	**Makanchi Array**	**93.21**	**317**	*e*P	**P**	**02 42 27.6**	**-0.5**
MK32	**Makanchi Array**	**93.21**	**317**	*e*P	**P**	**02 42 27.2**	**-0.9**
MKAR	**Makanchi Array**	**93.21**	**317**	P	**P**	**02 42 27.2**	**-0.9**
	3.0nm,0.9s,baz=101,slow=6.3,SNR=13						
MKAR				PKKP	**PKKPdf**	**02 59 36.6**	**0.0**
	1.1nm,0.9s,baz=270,slow=2.4,SNR=8.2						
MKAR				LR	LR	03 23 35.1	
	comp=Z,113nm,21.9s,baz=94,slow=35						
ZAA0	**Zalesovo Array**	**93.28**	**324**	*e*P	**P**	**02 42 27.3**	**-0.9**
	6.1nm,1.2s						
ZALV	**Zalesovo Beam**	**93.28**	**324**	*e*P	**P**	**02 42 26.2**	**-1.9**
ZALV	**Zalesovo Beam**	**93.28**	**324**	P	**P**	**02 42 26.8**	**-1.4**
	1.8nm,0.9s,baz=108,slow=3.3,SNR=6.0						
ZALV				LR	LR	03 22 01.6	
	comp=Z,100nm,21.9s,baz=100,slow=34						
ZAA1	**Zalesovo Array**	**93.29**	**324**	*e*P	**P**	**02 42 26.8**	**-1.4**
BW06	**Boulder Array**	**93.82**	**47**	*e*P	**P**	**02 42 31.9**	**+0.7**
	2.4nm,1.2s						
PD31	**Pinedale Array**	**93.82**	**47**	*e*P	**P**	**02 42 30.6**	**-0.6**
PDAR	**Pinedale Array**	**93.82**	**47**	*e*P	**P**	**02 42 26.7**	**-4.5**
PDAR	**Pinedale Array**	**93.82**	**47**	P	**P**	**02 42 30.6**	**-0.6**
	0.8nm,0.9s,baz=270,slow=1.5,SNR=6.0						
PDAR				LR	LR	03 17 34.4	
	comp=Z,122nm,20.1s,baz=269,slow=31						
ANMO	**Albuquerque**	**94.75**	**55**	LR	LR	03 18 54.2	
	comp=Z,99nm,18.4s,baz=205,slow=32						
MNTX	**Cornudas Mount**	**95.08**	**59**	*e*P	**P**	**02 42 37.2**	**+0.2**
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	**95.12**	**27**	P	**P**	**02 42 34.4**	**-2.0**
	0.4nm,0.7s,baz=256,slow=4.8,SNR=10.0						
YKA				LR	LR	03 21 15.2	
	comp=Z,12nm,18.4s,baz=240,slow=33						
YKB5	**Yellowknife Ar**	**95.12**	**27**	*e*P	**P**	**02 42 34.4**	**-2.0**
PMSA	**Palmer Station**	**95.89**	**161**	LR	LR	03 20 34.5	
	comp=Z,158nm,20.0s,baz=312,slow=32						
NRIK	**Noril'sk**	**95.94**	**340**	LR	LR	03 25 23.3	
	comp=Z,174nm,20.7s,baz=79,slow=35						
LTX	**Lajitas**	**96.16**	**61**	*e*P	**P**	**02 42 40.5**	**-1.5**
LTX				*e*PP	**PP**	**02 46 36.9**	**+1.4**
TXAR	**Lajitas Array**	**96.16**	**61**	P	**P**	**02 42 40.5**	**-1.5**
	0.4nm,0.9s,baz=233,slow=4.2,SNR=2.5						
TXAR				PP	**PP**	**02 46 36.9**	**+1.4**
	0.8nm,1.0s,baz=225,slow=8.7,SNR=3.6						
TXAR				LR	LR	03 17 01.5	
	comp=Z,235nm,21.9s,baz=0.0,slow=30						
KSH	**Kashi**	**96.41**	**309**	P	**P**	**02 42 46.7**	**+3.7**
KSH				sP	pP	02 42 52.4	+0.6
KSH				S	**S**	**02 54 01.8**	**+0.1**
KSH				sS	pS	02 54 11.3	-1.7
KSH				SS	**SS**	**03 00 40.7**	**+5.3**
KSH				LR	LR		
	comp=N,140nm,6.0s						
KSH				LR	LR		
	comp=E,120nm,4.6s						
KSH				LR	LR		
	comp=Z,280nm,7.6s						
OTAV	**Otavalo**	**115.75**	**95**	*e*PKPdf	**PKPdf**	**02 47 57.5**	**-0.1**
LPAZ	**La Paz**	**120.56**	**116**	PKP	**PKPdf**	**02 48 06.8**	**-0.2**
	0.7nm,0.6s,baz=263,slow=8.1,SNR=2.3						
CPUP	**Villa Florida**	**124.35**	**133**	PKP	**PKPdf**	**02 48 12.9**	**-0.4**
	2.5nm,0.9s,baz=216,slow=5.3,SNR=4.1						
BOSA	**Boshof**	**124.87**	**223**	PKP	**PKiKP**	**02 48 14.6**	**-0.1**
	6.1nm,1.1s,baz=132,slow=5.8,SNR=4.8						
SDV	**Santo Domingo**	**124.89**	**87**	*e*PKPdf	**PKPdf**	**02 48 14.4**	**-0.4**
SJG	**San Juan**	**129.80**	**76**	*e*PKPdf	**PKPdf**	**02 48 23.2**	**-0.6**
LSZ	**Lusaka**	**130.17**	**239**	*e*PKPdf	**PKPdf**	**02 48 24.2**	**-0.6**
GEC2	**GERESS Array S**	**135.49**	**333**	*e*PKPdf	**PKPdf**	**02 48 34.0**	**+0.2**
GERES	**GERESS Array B**	**135.49**	**333**	PKP	**PKPdf**	**02 48 34.0**	**+0.2**
	0.2nm,0.3s,baz=267,slow=5.3,SNR=3.5						
BDFB	**Brasilia**	**137.68**	**128**	PKhKP	PKPpre	02 48 32.7	
	3.1nm,1.0s,baz=180,slow=3.9,SNR=3.7						
BDFB				PKP	**PKiKP**	**02 48 39.9**	**-0.9**
	2.8nm,0.9s,baz=181,slow=6.6,SNR=4.8						
DAVOX	**Davos/Dischmat**	**138.72**	**334**	PKP	**PKiKP**	**02 48 41.4**	**-0.7**
	3.5nm,1.0s,baz=297,slow=6.8,SNR=3.4						
TOA0	**Torodi Ar. Sit**	**163.86**	**279**	*e*PKPdf	**PKPdf**	**02 49 17.6**	**-0.1**
TOA0				*e*PKPdf	**PKPdf**	**02 49 20.1**	**+2.4**
TORD	**Torodi Ar. Bea**	**163.86**	**279**	PKP	**PKPdf**	**02 49 17.6**	**-0.1**
	2.9nm,1.0s,baz=348,slow=1.2,SNR=13						
TOA1	**Torodi Ar. Sit**	**163.86**	**279**	*e*PKPdf	**PKPdf**	**02 49 17.6**	**-0.1**
DBIC	**Dimbokro**	**169.40**	**247**	PKP	**PKPdf**	**02 49 22.1**	**+0.1**
	4.8nm,1.0s,baz=320,slow=3.6,SNR=3.4						

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*NNC **03** 02:39:46.1±4.7, 36°.91N×70°.51E, h52^{km}±165^{km}, mb3.9, mpv3.8, Error ellipse: s-maj=44.2km s-min=30.1km az=142.0*

ISC 03 02:39:45.8±2.9**, 36°.9N**±0°.2×**70°.68E**±0°.10**, h64**^{km}**, n14,** σ**1^{s}.57**/21**, 9C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.85**	**34**	⇑P	**Pn**	**02 40 43.0**	**+0.2**
	5.0nm,0.3s						
SFK				⇑S	**Sn**	**02 41 29.8**	**+3.0**
	4.6nm,0.5s						
AML	**Almayashu**	**5.75**	**23**	P	**Pn**	**02 41 08.9**	**-0.1**
	SNR=30						
MNAS	**Manas**	**5.79**	**14**	⇓P	**Pn**	**02 41 10.2**	**+1.0**
	2.2nm,0.4s						
MNAS				⇑S	**Sn**	**02 42 14.9**	**+0.7**
	1.2nm,0.4s						
UCH	**Uchtor**	**6.12**	**28**	P	**Pn**	**02 41 13.2**	**-0.8**
	SNR=9.4						
KK31	**Karatay Array**	**6.23**	**359**	⇓P	**Pn**	**02 41 17.0**	**+1.9**
	8.4nm,0.4s,baz=178,slow=13,SNR=282						
KK31				⇑S	**Sn**	**02 42 26.0**	**+1.1**
	1.8nm,0.5s,baz=186,slow=25						
EKS2	**Erkin-Say**	**6.26**	**21**	P	**Pn**	**02 41 15.9**	**+0.3**
	SNR=15						
AAK	**Ala-Archa**	**6.47**	**26**	P	**Pn**	**02 41 18.3**	**-0.2**
	SNR=6.8						
AAK	**Ala-Archa**	**6.47**	**26**	⇓P	**Pn**	**02 41 18.2**	**-0.3**
	4.1nm,0.4s						
AAK				⇓S	**Sn**	**02 42 28.9**	**-2.1**
	3.1nm,1.1s						
CHMS	**Chumysh**	**6.88**	**26**	P	**Pn**	**02 41 23.1**	**-0.9**
	SNR=6.7						
USP	**Ospenovka**	**7.03**	**23**	P	**Pn**	**02 41 25.9**	**-0.3**
	SNR=8.3						
TKM2	**Tokmak 2**	**7.13**	**31**	P	**Pn**	**02 41 26.4**	**-1.2**
	SNR=5.7						
TKM2	**Tokmak 2**	**7.13**	**31**	⇑P	**Pn**	**02 41 26.0**	**-1.7**
	2.4nm,0.5s						
TKM2				⇓S	**Sn**	**02 42 48.9**	**+1.6**
	0.7nm,0.7s						
AB31	**Akbulak array**	**14.64**	**331**	⇑P	**Pn**	**02 43 10.0**	**+0.7**
	0.3nm,0.3s,baz=141,slow=14,SNR=19						
AB31				⇑S	**Sn**	**02 45 46.2**	**-3.9**
	0.6nm,0.8s						
AKTO	**Aktyubinsk**	**16.33**	**330**	⇑P	**P**	**02 43 32.7**	**0.0**
	2.0nm,1.1s						
AKTO				⇑S	**Sn**	**02 46 30.8**	**-0.3**
	0.6nm,0.7s						

PGC 03 02:51:03.1±0.1**, 65°.30N**×**133°.53W, h5**^{km}**, ML3.8**/10**, 241km Sse of Fort McPherson, Nt Northern Yukon Territory, Canada, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAWY	**Dawson**	**2.81**	**247**	Pn	Pn	02 51 47.6	-1.0
DAWY				Sn	Sn	02 52 22.9	0.0
INK	**Inuvik**	**3.02**	**0**	Pn	Pn	02 51 50.8	-0.8
INK				Sn	Sn	02 52 27.1	-0.9
BVCY	**Beaver Creek**	**4.34**	**232**	Pn	Pn	02 52 08.1	-1.6
BVCY				Sn	Sn	02 52 59.1	-1.6
YUK4	**Talbot Arm**	**4.59**	**213**	Pn	Pn	02 52 10.1	-3.1
YUK5	**Granite Creek**	**4.62**	**207**	Pn	Pn	02 52 12.3	-1.2
YUK5				Sn	Sn	02 53 06.6	-0.9
WHY	**Whitehorse**	**4.70**	**188**	Pn	Pn	02 52 13.2	-1.4
WHY				Sn	Sn	02 53 06.7	-2.8
YUK3	**Moose Creek**	**4.70**	**224**	Pn	Pn	02 52 13.6	-1.2
YUK2	**White River**	**4.80**	**226**	Pn	Pn	02 52 14.8	-1.3
YUK2				Sn	Sn	02 53 10.0	-2.1
HYT	**Haines Junctio**	**4.84**	**204**	Pn	Pn	02 52 15.1	-1.5
HYT				Sn	Sn	02 53 11.9	-1.1
DOT	**Dot Lake**	**4.85**	**255**	Pn	Pn	02 52 15.6	-1.1
YUK6	**Outpost Mounta**	**4.89**	**209**	Pn	Pn	02 52 16.0	-1.4
YUK6				Sn	Sn	02 53 14.0	-0.4
YUK7	**Dusty Glacier**	**5.22**	**206**	Pn	Pn	02 52 21.1	-0.9
YUK7				Sn	Sn	02 53 17.9	-4.8
PAX	**Paxson**	**5.72**	**251**	Sn	Sn	02 53 31.4	-3.4
HARP	**HAARP**	**5.90**	**246**	Pn	Pn	02 52 30.8	-0.3
HARP				Sn	Sn	02 53 36.1	-2.9
PLBC	**Pleasant Camp**	**6.01**	**194**	Pn	Pn	02 52 33.0	+0.4
PLBC				Sn	Sn	02 53 37.4	-4.2
BESE	**Bessie Mountai**	**6.77**	**186**	Pn	Pn	02 52 43.1	0.0
BESE				Sn	Sn	02 53 57.2	-3.3
COLD	**Coldfoot**	**7.00**	**294**	Pn	Pn	02 52 45.2	-0.9
COLD				Sn	Sn	02 53 59.8	-6.2
DLBC	**Dease Lake**	**7.08**	**165**	Pn	Pn	02 52 46.8	-0.5
DLBC				Sn	Sn	02 54 02.1	-6.0
KUKN	**Kugluktuk,NWT**	**7.77**	**63**	Pn	Pn	02 52 54.5	-2.1
KUKN				Sn	Sn	02 54 18.3	-6.5
YKW3	**Yellowknife Ar**	**8.76**	**100**	Pn	Pn	02 53 07.8	-2.5
YKW3				Sn	Sn	02 54 40.2	-9.0
YKW1	**Yellowknife Ar**	**8.83**	**100**	Pn	Pn	02 53 09.0	-2.2
YKW1				Sn	Sn	02 54 41.8	-9.2

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*IDC **03** 02:51:02.3±1.1, 11°.08S×165°.24E, h0^{km}, mb4.0/7, mb1 4.3/8, mb1mx3.9/42, mbtmp4.1/8, ML4.5/1, Error ellipse: s-maj=44.1km s-min=21.6km az=135.0*

*ISCJB **03** 02:51:05.3±0.9, 11°.3S±0°.1×165°.3E±0°.2, h31^{km}, mb4.0/6, Error ellipse: s-maj=23.8km s-min=17.3km az=26.7*

ISC 03 02:51:07.0±1.0**, 11°.2S**±0°.1×**165°.3E**±0°.2**, h31**^{km}**, n8,** σ**0^{s}.85**/9**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.90**	**174**	Pn	**Pn**	**02 53 40.9**	**-0.1**
	3.5nm,0.3s,baz=37,slow=10,SNR=18						
CTA	**Charters Tower**	**20.34**	**242**	P	**P**	**02 55 41.9**	**+0.9**
	7.9nm,0.9s,baz=71,slow=14,SNR=9.1						
STKA	**Stephens Creek**	**30.04**	**223**	P	**P**	**02 57 13.3**	**-0.1**
	2.2nm,0.6s,baz=24,slow=8.6,SNR=6.0						
WRA	**Warramunga Arr**	**31.01**	**250**	P	**P**	**02 57 21.6**	**-0.6**
	6.1nm,1.0s,baz=80,slow=9.3,SNR=28						
ASAR	**Alice Springs**	**32.33**	**243**	P	**P**	**02 57 33.0**	**-0.7**
	2.0nm,1.0s,baz=69,slow=9.2,SNR=13						
ASAR				PcP	**PcP**	**03 00 21.5**	**+0.1**
	0.4nm,0.8s,baz=64,slow=2.2,SNR=4.2						
ILAR	**Eielson Array**	**83.77**	**19**	P	**P**	**03 03 31.6**	**-1.2**
	0.3nm,0.7s,baz=238,slow=5.2,SNR=4.8						
NVAR	**Mina Array Bea**	**86.45**	**50**	P	**P**	**03 03 48.0**	**+0.9**
	0.4nm,0.8s,baz=224,slow=2.5,SNR=3.3						
MKAR	**Makanchi Array**	**93.30**	**317**	P	**P**	**03 04 19.5**	**+0.6**
	0.8nm,0.9s,baz=113,slow=3.7,SNR=4.8						

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*DDA **03** 02:57:41.5, 38°.94N×43°.68E, h14^{km}, ML2.7*

*ISK **03** 02:57:42.4, 38°.91N×43°.53E, h3^{km}, ML2.2/11*

*ISCJB **03** 02:57:43.2±0.6, 38°.96N±0°.03×43°.59E±0°.06, h9^{km}±4^{km}, Error ellipse: s-maj=8.2km s-min=4.2km az=7.2*

ISC 03 02:57:42.5±1.0**, 38°.93N**±0°.03×**43°.59E**±0°.05**, h11**^{km}±6^{km}**, n18,** σ**0^{s}.80**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.06**	**349**	*i* P	**Pg**	**02 57 44.0**	**-0.9**
VMUR				*i* S	**Sg**	**02 57 47.6**	**+0.8**
ERCV	**ERCIS-VAN**	**0.21**	**294**	PG	**Pg**	**02 57 47.4**	**+0.3**
VANB	**Van**	**0.37**	**205**	PG	**Pb**	**02 57 51.3**	**+0.1**
VANB				SG	**Sb**	**02 57 57.8**	**+0.8**
TVAN	**Van**	**0.43**	**199**	*i* P	**Pb**	**02 57 51.8**	**-0.4**
TVAN				*i* S	**Sb**	**02 58 00.4**	**+1.6**
TVAN				IAML_P			
	comp=Z,3µm,0.2s						
DYDN	**Diyadin**	**0.61**	**7**	*i* P	**Pg**	**02 57 53.5**	**-0.9**
DYDN				*i* S	**Sb**	**02 58 03.6**	**-0.6**
DYDN				IAML_P			
	comp=Z,2µm,0.1s						
ADCV	**BITLIS_Adilcev**	**0.68**	**260**	*i* P	**Pb**	**02 57 56.4**	**-0.1**
ADCV				IAML_P			
	comp=Z,264nm,0.1s						
TUTA	**Tutak**	**0.76**	**308**	*i* P	**Pb**	**02 57 57.6**	**-0.3**
TUTA				*i* S	**Sn**	**02 58 10.3**	**-0.8**
TUTA				IAML_P			
	comp=Z,2µm,0.1s						
AKDM	**Akdamar-Van**	**0.77**	**218**	PG	**Pb**	**02 57 57.7**	**-0.3**
AGRB	**Hanur-Agry**	**0.79**	**324**	PG	**Pg**	**02 57 57.7**	**-0.1**
AGRB				SG	**Sb**	**02 58 09.9**	**+0.7**
MLAZ	**Malazgirt-MUS**	**0.83**	**285**	PG	**Pb**	**02 57 58.7**	**-0.4**
IGDI	**IGDIR**	**1.01**	**22**	*i* P	**Pg**	**02 58 00.8**	**-1.2**
IGDI				IAML_P			
	comp=Z,86nm,0.2s						
TASB	**TASBURUN-IGDIR**	**1.17**	**26**	PN	**Pn**	**02 58 06.0**	**+1.2**
EATA	**Eleskirt**	**1.26**	**318**	*i* P	**Pn**	**02 58 06.1**	**-0.2**
EATA				IAML_P			
	comp=Z,215nm,0.1s						
GURO	**Guroymak-BITLI**	**1.27**	**253**	PN	**Pn**	**02 58 06.1**	**-0.2**
GNI	**Garni**	**1.51**	**36**	PN	**Pg**	**02 58 12.1**	**+0.7**
CUKT	**Cukurca**	**1.68**	**179**	PN	**Pg**	**02 58 13.6**	**-1.2**
SIRT	**Sirnak**	**1.69**	**213**	PN	**Pb**	**02 58 13.4**	**-0.3**
KOPR	**Koprukoy-ERZUR**	**1.71**	**309**	PN	**Pb**	**02 58 13.9**	**-0.1**

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*IDC **03** 03:08:21.9±1.2, 21°.28S×178°.73W, h562^{km}±12^{km}, mb3.7/16, mb1 4.0/18, mb1mx3.9/31, mbtmp4.6/18, Error ellipse: s-maj=14.8km s-min=11.5km az=109.0*

*NEIC **03** 03:08:22.4±0.4, 21°.40S×178°.68W, h578^{km}±5^{km}, mb4.5/46, Error ellipse: s-maj=6.0km s-min=4.6km az=122.0*

*ISCJB **03** 03:08:23.5±0.2, 21°.47S±0°.04×178°.80W±0°.05, h602^{km}, mb4.5/65, Error ellipse: s-maj=7.0km s-min=5.4km az=29.7*

ISC 03 03:08:24.8±0.4**, 21°.42S**±0°.07×**178°.81W**±0°.08**, h602**^{km}**, n170,** σ**1^{s}.27**/172**, mb4.5**/64**, 21C-14D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.71**	**321**	*e*P	**P**	**03 09 53.1**	**-2.7**
RAO	**Raoul Island**	**7.84**	**174**	P	**P**	**03 10 20.2**	**-2.4**
	476nm,0.3s,baz=52,slow=21,SNR=6.5						
NIUE	**Niue**	**8.66**	**76**	*e*P	P	03 10 25.7	-4.9
MARNC	**Mare, Loyalty**	**12.26**	**267**	*e*P	**P**	**03 11 04.6**	**-1.5**
PINNC	**Pines Island,**	**12.80**	**262**	*e*P	**P**	**03 11 11.0**	**-0.6**
DZM	**Mont Dzumac**	**13.72**	**265**	*e*P	**P**	**03 11 19.7**	**-1.3**
DZM	**Mont Dzumac**	**13.72**	**265**	P	**P**	**03 11 18.4**	**-2.6**
	0.9nm,0.3s,baz=134,slow=23,SNR=17						
OUZ	**Omahuta**	**15.28**	**204**	*e*P	**P**	**03 11 35.2**	**-0.1**
	22nm,0.8s						
URZ	**Urewera**	**17.15**	**191**	*e*P	**P**	**03 11 50.0**	**-2.4**
	12nm,0.7s						
URZ	**Urewera**	**17.15**	**191**	P	**P**	**03 11 51.0**	**-1.4**
	2.2nm,0.3s,baz=356,slow=0.7,SNR=19						
BKZ	**Black Stump Fm**	**18.15**	**192**	*e*P	**P**	**03 11 59.7**	**-1.8**
	3.9nm,0.7s						
BFZ	**Birch Farm**	**19.66**	**191**	*e*P	**P**	**03 12 13.2**	**-2.0**
	8.0nm,0.7s						
THZ	**Tophouse**	**21.46**	**197**	*e*P	**P**	**03 12 30.9**	**-0.4**
	17nm,1.2s						
KHZ	**Kahutara**	**21.90**	**195**	*e*P	**P**	**03 12 33.9**	**-1.3**
	15nm,1.1s						
OXZ	**Oxford**	**23.14**	**197**	*e*P	**P**	**03 12 45.7**	**-0.6**
	12nm,0.6s						
RPZ	**Rata Peaks**	**23.78**	**198**	*e*P	**P**	**03 12 51.9**	**-0.1**
	7.4nm,0.6s						
RPZ	**Rata Peaks**	**23.78**	**198**	P	**P**	**03 12 51.9**	**-0.1**
	7.6nm,0.5s,baz=305,slow=1.0,SNR=9.0						
FOZ	**Fox Glacier**	**24.00**	**201**	*e*P	**P**	**03 12 53.4**	**-0.5**
	10nm,0.8s						
TARA	**Tarawa**	**24.03**	**339**	*e*P	**P**	**03 12 53.0**	**-1.6**
WKZ	**Wanaka**	**25.42**	**200**	*e*P	**P**	**03 13 04.9**	**-1.5**
MLZ	**Mavora Lakes**	**26.19**	**201**	*e*P	**P**	**03 13 12.1**	**-1.1**
EIDS	**Eidsvold**	**27.88**	**256**	*e*P	**P**	**03 13 28.0**	**-0.2**
	20nm,0.6s						
ARMA	**Armidale**	**27.99**	**245**	*e*P	**P**	**03 13 29.6**	**+0.4**
	12nm,0.6s						
CTAO	**Charters Tower**	**32.66**	**266**	*e*P	**P**	**03 14 09.5**	**+0.3**
STKA	**Stephens Creek**	**36.71**	**245**	*e*P	**P**	**03 14 43.1**	**+0.4**
	4.1nm,1.1s						
STKA	**Stephens Creek**	**36.71**	**245**	P	**P**	**03 14 43.8**	**+1.1**
	8.0nm,0.5s,baz=92,slow=11,SNR=28						
STKA				ScP	**S**	**03 19 43.6**	**-1.1**
	0.6nm,0.4s,baz=108,slow=6.4,SNR=3.2						
COEN	**Coen**	**36.90**	**275**	*e*P	**P**	**03 14 44.3**	**-0.1**
	22nm,0.8s						
BBOO	**Buckleboo**	**41.47**	**244**	*e*P	**P**	**03 15 20.8**	**+0.1**
	18nm,0.8s						
AS01	**Alice Springs**	**43.53**	**258**	*e*P	**P**	**03 15 37.1**	**+0.1**
AS31	**Alice Springs**	**43.58**	**258**	*e*P	**P**	**03 15 37.7**	**+0.3**
	13nm,1.1s						
ASAR	**Alice Springs**	**43.58**	**258**	P	**P**	**03 15 37.6**	**+0.2**
	29nm,0.7s,baz=96,slow=7.7,SNR=485						
ASAR				ScP	**ScP**	**03 20 11.0**	**+4.8**
	1.4nm,0.7s,baz=99,slow=4.5,SNR=6.8						
ASAR				S	**S**	**03 21 24.4**	**0.0**
	2.3nm,0.8s,baz=95,slow=16,SNR=14						
JAY	**Jayapura**	**43.63**	**290**	P	**P**	**03 15 37.0**	**-0.9**
	665nm,0.8s						
WB2	**Warramunga Arr**	**43.72**	**263**	*e*P	**P**	**03 15 37.7**	**-0.8**
WRAB	**Tennant Creek**	**43.72**	**263**	*e*P	**P**	**03 15 38.1**	**-0.5**
	8.8nm,0.4s						
WRA	**Warramunga Arr**	**43.73**	**263**	P	**P**	**03 15 38.2**	**-0.4**
	22nm,0.7s,baz=96,slow=8.1,SNR=316						
WRA				ScP	**ScP**	**03 20 11.7**	**+4.9**
	1.8nm,0.9s,baz=91,slow=4.2,SNR=6.3						
WRA				S	**S**	**03 21 24.5**	**-2.1**
	0.7nm,0.7s,baz=95,slow=14,SNR=6.2						
FORT	**Forrest**	**48.24**	**247**	*e*P	**P**	**03 16 12.6**	**+0.1**
	29nm,0.6s						
MTN	**Manton Dam**	**48.42**	**272**	*e*P	**P**	**03 16 13.2**	**-0.9**
	33nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.16**	**263**	*e*P	**P**	**03 16 41.5**	**+0.4**
	8.3nm,0.7s						
SOEI	**Soe**	**55.78**	**273**	*e*P	**P**	**03 17 07.3**	**+0.5**
	86nm,0.8s						
SOEI	**Soe**	**55.78**	**273**	P	**P**	**03 17 08.4**	**+1.6**
	117nm,1.0s						
BATI	**Baumata**	**56.19**	**272**	P	**P**	**03 17 11.0**	**+1.5**
	26nm,0.7s						
SBA	**Scott Base**	**56.91**	**184**	*e*P	**P**	**03 17 16.3**	**+3.0**
	9.3nm,0.6s						
MBWA	**Marble Bar**	**56.92**	**258**	*e*P	**P**	**03 17 14.4**	**+0.1**
	29nm,0.7s						
VNDA	**Vanda**	**56.94**	**185**	*e*P	**P**	**03 17 14.8**	**+1.3**
	3.6nm,0.8s						
VNDA	**Vanda**	**56.94**	**185**	P	**P**	**03 17 15.1**	**+1.6**
	2.8nm,0.6s,baz=357,slow=6.6,SNR=24						
SANI	**Sanana**	**57.02**	**282**	P	**P**	**03 17 14.5**	**-0.6**
	36nm,1.0s						
EDFI	**Ende, Flores**	**58.51**	**273**	P	**P**	**03 17 24.9**	**-0.4**
	33nm,0.8s						
MORW	**Morawa**	**58.78**	**248**	*e*P	**P**	**03 17 27.4**	**+0.6**
	7.9nm,0.6s						
BASI	**Baing, Sumba**	**59.06**	**271**	P	**P**	**03 17 29.3**	**+0.4**
	73nm,0.8s						
GIRL	**Giralia**	**61.58**	**255**	*e*P	**P**	**03 17 45.9**	**+0.5**
	39nm,0.8s						
QSPA	**South Pole Qui**	**68.66**	**180**	*e*P	**P**	**03 18 29.4**	**+0.5**
UGM	**Wanagama**	**69.19**	**269**	*e*P	**P**	**03 18 32.5**	**-0.4**
	38nm,0.7s						
MJAR	**Matsushiro Arr**	**70.50**	**324**	P	**P**	**03 18 39.7**	**-0.5**
	8.0nm,0.6s,baz=164,slow=5.7,SNR=36						
MAJO	**Matsushiro**	**70.50**	**324**	*e*P	**P**	**03 18 39.6**	**-0.6**
	7.9nm,0.6s						
MAT	**Matsushiro**	**70.50**	**324**	P	**P**	**03 18 39.7**	**-0.5**
NACB	**Ninganchiao**	**73.57**	**305**	*e*P	**P**	**03 18 57.9**	**-0.2**
	22nm,1.0s						
PETK	**Petropavlovsk-**	**76.96**	**346**	*e*P	**P**	**03 19 15.0**	**-1.3**
PETK	**Petropavlovsk-**	**76.96**	**346**	P	**P**	**03 19 15.5**	**-0.8**
	12nm,0.7s,baz=135,slow=5.5,SNR=22						
KSRS	**Korea Array**	**77.07**	**319**	P	**P**	**03 19 17.9**	**+0.7**
	1.9nm,0.7s,baz=136,slow=6.2,SNR=8.4						
KS01	**Wonju Array Si**	**77.11**	**319**	*e*P	**P**	**03 19 17.2**	**-0.2**
USA0B	**Ussuriysk Arra**	**79.30**	**326**	*e*P	**P**	**03 19 29.3**	**+0.4**
	17nm,0.9s						
USRK	**Ussuriysk Ar.**	**79.30**	**326**	P	**P**	**03 19 30.2**	**+1.3**
	10.0nm,0.7s,baz=112,slow=3.3,SNR=18						
NJ2	**Nanjing**	**79.88**	**310**	*e*P	**P**	**03 19 33.5**	**+1.2**
NJ2				pmax	pmax		

	comp=Z,13nm,0.5s						
CMB	Columbia Colle	80.64	43	eP	P	03 19 35.1	-1.1
MDJ	Mudanjiang	80.83	325	P	P	03 19 37.8	+0.9
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.7s						
MDJ	Mudanjiang	80.83	325	eP	P	03 19 37.5	+0.5
	comp=Z,3.7nm,0.4s						
PNTR	Pine Nut	81.77	42	eP	P	03 19 42.2	0.0
	comp=Z,5.1nm,0.7s						
HUMO	Hull Mountain	81.88	38	eP	P	03 19 41.2	-1.2
NV01	Mina Array Sit	82.21	44	eP	P	03 19 44.0	-0.4
NVAR	Mina Array Bea	82.21	44	P	P	03 19 44.7	+0.3
	comp=Z,1.4nm,0.6s,baz=226,slow=8.2,SNR=18						
IPM	Ipoh	82.50	278	eP	P	03 19 46.3	+0.2
	comp=Z,20nm,0.6s						
CN2	Changchun	82.56	323	eP	P	03 19 46.3	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOD	Modoc Plateau	83.00	40	eP	P	03 19 48.5	+0.3
	comp=Z,1.0nm,0.6s						
PSI	Prapat	83.82	275	eP	P	03 19 52.8	-0.1
	comp=Z,10nm,0.8s						
GSI	Gunungsitoli	84.53	274	eP	P	03 19 57.2	+1.0
	comp=Z,35nm,0.7s						
U15A	North Rim	85.14	48	eP	P	03 19 59.1	+0.2
	comp=Z,3.4nm,0.7s						
SYO	Syowa Base	85.67	193	⇓iPcP	PcP	03 20 02.4	0.0
BJT	Baijiatuau	86.00	316	eP	P	03 20 02.1	-0.6
	comp=Z,4.0nm,0.5s						
SNAA	Sanae	87.12	179	P	P	03 20 07.4	0.0
CAST	Castle Rocks	87.12	12	eP	P	03 20 05.9	-1.5
	comp=Z,6.6nm,0.7s						
VNA3	Neumayer Olymp	87.28	177	P	P	03 20 08.5	+0.3
TRF	Thorofare Moun	87.50	12	eP	P	03 20 08.6	-0.8
	comp=Z,13nm,0.8s						
VNA2	Neumayer--Watz	87.71	177	P	P	03 20 10.5	+0.3
MNTX	Cornudas Mount	87.90	55	eP	P	03 20 11.9	+0.1
	comp=Z,2.9nm,0.9s						
XAN	Xi'an	88.09	308	P	P	03 20 13.6	+1.0
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN				pmax	pmax		
	comp=Z,110nm,4.9s						
XAN	Xi'an	88.09	308	eP	P	03 20 13.3	+0.7
	comp=Z,9.3nm,0.8s						
TX31	Lajitas Ar. Si	88.18	58	eP	P	03 20 12.8	-0.4
TXAR	Lajitas Array	88.19	58	P	P	03 20 14.5	+1.2
	comp=Z,1.9nm,0.8s,baz=201,slow=6.7,SNR=11						
HDA	Harding Lake	89.04	13	eP	P	03 20 15.8	-0.4
	comp=Z,4.3nm,0.6s						
KMI	Kunming	89.09	297	P	P	03 20 19.7	+2.0
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
COLA	College	89.26	13	eP	P	03 20 16.2	-1.0
	comp=Z,3.4nm,0.7s						
IL1	Eielson Array	89.37	13	eP	P	03 20 16.3	-1.5
ILAR	Eielson Array	89.37	13	P	P	03 20 16.9	-0.8
	comp=Z,1.0nm,0.4s,baz=217,slow=5.2,SNR=29						
HHC	Hu-ho-hao-te	89.45	315	eP	P	03 20 18.9	0.0
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
CM01	Chiang Mai Arr	89.68	290	eP	P	03 20 21.8	+1.5
CMAR	Chiang Mai Arr	89.71	290	P	P	03 20 22.7	+2.3
	comp=Z,4.6nm,0.8s,baz=128,slow=3.2,SNR=28						
CHTO	Chiang Mai	89.84	290	eP	P	03 20 22.4	+1.4
	comp=Z,3.7nm,0.6s						
PDAR	Pinedale Array	90.14	44	P	P	03 20 22.2	0.0
	comp=Z,0.8nm,0.7s,baz=215,slow=3.6,SNR=10						
DAWY	Dawson	90.55	16	eP	P	03 20 22.9	-0.4
	comp=Z,1.2nm,0.4s						
LZH	Lanzhou	92.72	308	⇑P	P	03 20 35.7	+1.6
LZH				pP	pP	03 22 42.3	-1.1
LZH				sP	sP	03 23 38.6	-4.1
LZH				PP	PP	03 24 11.0	-16
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				pmax	pmax		
	comp=Z,76nm,7.5s						
ULN	Ulaanbaatar	95.56	319	eP	P	03 20 46.7	0.0
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	95.94	319	P	P	03 20 48.7	+0.3
	comp=Z,0.3nm,0.4s,baz=82,slow=3.1,SNR=3.8						
YKA	Yellowknife Ar	97.66	25	P	Pdif	03 20 54.7	-0.8
	comp=Z,0.2nm,0.8s,baz=240,slow=5.0,SNR=3.1						
MKAR	Makanchi Array	111.27	313	PKiKP	PKiKP	03 25 50.3	-0.9
	comp=Z,0.2nm,0.4s,baz=206,slow=0.8,SNR=5.8						
MKAR				PKKPbc	PKKPbc	03 36 49.1	-0.5
	comp=Z,0.4nm,0.7s,baz=279,slow=3.1,SNR=4.7						
KSH	Kashi	114.79	305	PKP	PKPdf	03 25 57.0	-1.3
KSH				PP	PP	03 27 13.4	+4.9
KSH				AMB	AMB		
	comp=Z,140nm,4.9s						
ARU	Arti	125.52	325	ePKPdf	PKPdf	03 26 17.9	-0.2
ARCES	ARCESS Array B	129.68	349	PKP	PKPdf	03 26 25.4	-0.4
	comp=Z,1.9nm,0.6s,baz=43,slow=0.7,SNR=16						
ARCES				SKPbc	SKPab	03 28 55.7	+3.0
	comp=Z,6.3nm,1.0s,baz=68,slow=5.2,SNR=6.1						
FINES	FINESS Array B	136.43	343	PKhKP	PKPpre	03 26 28.2	
	comp=Z,1.5nm,1.0s,baz=132,slow=2.1,SNR=4.0						
FINES				PKP	PKPdf	03 26 37.8	-0.9
	comp=Z,0.7nm,0.4s,baz=97,slow=2.4,SNR=9.1						
FINES				SKPbc	SKiKP	03 29 18.0	-2.2
	comp=Z,4.0nm,0.9s,baz=70,slow=2.2,SNR=8.8						
NB2	NORSAR Subarra	139.79	352	PKP	PKPpre	03 26 37.7	
	comp=Z,0.3nm,0.5s,baz=7.8,slow=4.0						
NB2	NORSAR Subarra	139.79	352	PKP	PKPpre	03 26 38.0	
	comp=Z,0.2nm,0.5s,baz=10,slow=3.2						
NOA	NORSAR Array B	139.79	352	PKhKP	PKPpre	03 26 36.6	
	comp=Z,0.2nm,0.5s,baz=15,slow=1.7,SNR=6.8						
ELZG	Elazig	143.40	306	iP	PKPdf	03 26 52.3	+0.2
SUW	Suwalki	143.41	338	ePKPbc	PKPab	03 26 49.6	-0.5
AKASG	Malin Array Be	143.43	330	PKP	PKPab	03 26 49.7	-0.6
	comp=Z,11nm,0.6s,baz=43,slow=4.4,SNR=98						
AKASG				SKPbc	SKiKP	03 29 36.6	+1.7
	comp=Z,0.2nm,0.2s,baz=48,slow=2.7,SNR=7.4						
AKBB	Malin Array Si	143.43	330	ePKPbc	PKPab	03 26 49.4	-0.8
KIEV	Kiev	143.44	330	ePKPdf	PKPab	03 26 49.6	-0.7
KIEV	Kiev	143.44	330	⇓iP	PKPab	03 26 49.5	-0.8
AK11	Malin Array Si	143.47	330	ePKPbc	PKPab	03 26 49.3	-1.1
KEMA	Kemaliye	143.53	308	iP	PKPdf	03 26 52.5	+0.2
SANL	SANLIURFA_Merk	143.75	304	iP	PKPdf	03 26 53.5	+0.9
ATAB	Bozova	144.21	305	iP	PKPab	03 26 54.7	+0.9
AKCD	Akcadag	144.25	306	iP	PKPab	03 26 55.6	+1.5
ASF	Jabal al Asfar	146.51	296	PKPbc	PKPbc	03 27 00.7	+0.5
	comp=Z,3.7nm,0.8s,baz=23,slow=2.9,SNR=4.7						
BR131	Keskin Array S	146.88	311	ePKPbc	PKPbc	03 27 00.7	-0.3
BRTR	Keskin Array B	146.88	311	PKPbc	PKPbc	03 27 00.8	-0.2
	comp=Z,2.4nm,0.7s,baz=136,slow=4.9,SNR=17						
KWP	Kalwaria Pacla	147.08	334	ePKPbc	PKPbc	03 27 01.3	+0.2
TLCR		147.19	323	⇑iP	PKPbc	03 27 01.7	+0.3
ANTO	Ankara	147.41	312	⇑iP	PKPbc	03 27 03.0	+0.7
BUR08	Bucovina Ar. S	147.46	329	ePKPbc	PKPbc	03 27 02.6	+0.4
BUR04	Bucovina Ar. S	147.47	329	ePKPbc	PKPbc	03 27 02.0	-0.2
BURAR	Bucovina Array	147.47	329	⇓iP	PKPbc	03 27 02.5	+0.3
BIZ	Bicaz	147.51	327	⇑iP	PKiKP	03 27 03.0	-0.7
MMAI	Mount Meron Ar	147.59	298	PKPbc	PKPbc	03 27 03.5	+0.5
	comp=Z,4.3nm,0.5s,baz=70,slow=7.3,SNR=17						
MMAI				PKPab	PKPab	03 27 08.8	+1.3
	comp=Z,5.6nm,0.6s,baz=52,slow=6.8,SNR=8.4						
ODBI	Odobesti	147.79	325	⇑iP	PKPab	03 27 09.1	+1.4
VRI	Vrincioaia	147.90	325	⇑iP	PKPbc	03 27 01.9	-1.4
EFOR	EFORIE	147.95	321	⇑iP	PKiKP	03 27 05.3	+0.6
TLB	Topalu	147.99	322	⇓iP	PKPab	03 27 09.3	+0.8
CVDA	Cernavoda	148.15	322	⇑iP	PKPdf	03 26 55.8	-3.9
TRPA	Tarpa	148.31	332	⇑iP	PKPbc	03 27 04.7	+0.6
DOPR	Dopca	148.53	327	⇑iP	PKiKP	03 27 05.5	-0.4
EIL	Elat	148.53	292	PKPbc	PKiKP	03 27 06.1	-0.3
	comp=Z,3.2nm,0.6s,baz=35,slow=20,SNR=5.1						
MLR	Muntele Rosu	148.56	326	⇓iP	PKiKP	03 27 05.8	-0.3
MLR	Muntele Rosu	148.56	326	PKPbc	PKiKP	03 27 05.7	-0.5
	baz=315,slow=7.1						
UPC	Upice	148.71	342	⇑ePKP	PKiKP	03 27 05.9	-0.2
LANS	Liptovska Anna	148.73	337	ePKP	PKiKP	03 27 06.6	+0.4
LANS				e		03 27 12.0	
DPC	Dobruska-Polom	148.76	341	⇑ePKP	PKiKP	03 27 06.0	-0.3
DPC				ePKPAB	PKPab	03 27 12.4	+0.9
CLL	Collm	148.77	346	⇓iPKPbc	PKPbc	03 27 05.4	+0.2
CLL				iPKPab	PKPab	03 27 11.2	-0.3
CLL				epPKPab	pPKPdf	03 29 19.0	-0.4
CLL				Lm	MLR	03 53 00.0	
	comp=N,100nm,18.9s						
CLL				Lm	MLR	03 53 00.0	
	comp=E,100nm,22.0s						
CJR	Cluj-Napoca	148.89	329	⇓iP	PKiKP	03 27 06.2	-0.4
SULR		148.93	324	⇑iP	PKPdf	03 27 01.3	+0.3
BRG	Berggiesshubel	148.94	344	ePKP	PKPbc	03 27 05.7	0.0
	comp=E,2.5nm,0.7s						
VOIR		149.07	326	⇓iP	PKiKP	03 27 07.0	-0.1
PVCC	Panska Ves	149.09	343	⇑ePKP	PKiKP	03 27 06.8	-0.1
DRGR		149.24	330	⇓iP	PKPbc	03 27 06.9	+0.3
SGRR	Singureni	149.38	324	⇑iP	PKPab	03 27 19.1	+4.9
VYHS	Vyhne	149.51	337	ePKP	PKiKP	03 27 07.7	-0.1
VYHS				e		03 27 15.3	
PSZ	Piszkesteto	149.57	335	⇓iP	PKPab	03 27 13.9	-1.2
VRAC	Vranov	149.59	340	⇑iP	PKPab	03 27 15.1	+0.1
PRU	Pruhonice	149.59	343	⇑ePKP	PKPbc	03 27 07.4	+0.2
DEV	Deva	149.82	329	⇓iP	PKiKP	03 27 08.5	0.0
KRUC	Moravsky	149.87	340	ePKP	PKiKP	03 27 08.4	-0.1
KRUC				e		03 27 16.5	
NKC	Novy Kostel	149.90	346	⇑ePKP	PKiKP	03 27 08.7	+0.1
NKC				ePKPAB	PKPab	03 27 16.3	0.0
SIRR	Siria	150.12	331	⇓iP	PKPbc	03 27 08.6	0.0
GZR	Gura Zlata	150.24	329	⇑iP	PKPbc	03 27 08.8	-0.2
VLAD	Vladila	150.38	325	⇓iP	PKPab	03 27 14.8	-3.6
KHC	Kasperske Hory	150.63	343	⇑ePKP	PKiKP	03 27 10.1	-0.1
KHC				ex	x	03 27 19.9	
HERR	Herculane	150.78	328	⇑iP	PKiKP	03 27 10.4	-0.1
GERES	GERESS Array B	150.86	343	PKPbc	PKiKP	03 27 10.6	-0.1
	comp=E,1.9nm,0.7s,baz=29,slow=3.0,SNR=9.9						
VTS	Vitosha	151.93	324	⇓iP	PKPbc	03 27 10.5	-2.5
KEST	Kesra	164.05	335	PKPab	PKPab	03 28 17.6	-0.4
	comp=E,4.7nm,1.0s,baz=243,slow=8.1,SNR=3.8						
TORD	Torodi Ar. Bea	171.76	183	PKPab	PKPab	03 28 52.6	+0.3
	comp=E,0.4nm,0.7s,baz=204,slow=1.5,SNR=5.1						

ISCJB ***03*** *03:20:33.1±0.1, 29°.95S±0°.02×179°.11W±0°.04, h250km, mb4.5/81, Error ellipse: s-maj=5.1km s-min=2.2km az=24.6*

NEIC ***03*** *03:20:35.1±0.5, 29°.95S×179°.01W, h261km±5km, mb4.5/63, Error ellipse: s-maj=6.2km s-min=4.6km az=126.0*

WEL ***03*** *03:20:35.0, 29°.95S×179°.01W, h261km, ML5.5/5*

MOS ***03*** *03:20:35.5±1.0, 29°.78S×179°.09W, h268km, mb4.7/20, Error ellipse: s-maj=11.6km s-min=10.3km az=82.0*

IDC ***03*** *03:20:36.8±0.9, 29°.75S×179°.08W, h271km±7km, mb4.2/21, mb1 4.3/22, mb1mx4.2/47, mbtmp4.8/22, Error ellipse: s-maj=15.5km s-min=9.8km az=166.0*

ISC 03 03:20:34.2±0.3**, 29°.90S**±0°.04×**179°.08W**±0°.06**, h250**km**, n445, σ1°.55**/475**, mb4.6**/81**, 10C-14D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.19	58	P	Pn	03 21 13.8	+3.4
GLKZ	Green Lake	1.19	58	P	Pn	03 21 13.8	+3.4
GLKZ				S	S	03 21 34.7	-4.1
RIZ	Raoul Island	1.20	57	P	Pn	03 21 13.8	+3.3
RIZ	Raoul Island	1.20	57	P	Pn	03 21 13.8	+3.3
RIZ				S	S	03 21 36.3	-2.6
RAO	Raoul Island	1.20	58	P	Pn	03 21 13.8	+3.4
	1μm,0.3s,baz=197,slow=2.5,SNR=23						
RAO				S	S	03 21 41.5	+2.6
	2μm,0.3s,baz=93,slow=19,SNR=8.0						
GRZ	Great Barrier	7.81	214	P	Pn	03 22 32.9	+7.8
GRZ	Great Barrier	7.81	214	P	Pn	03 22 32.9	+7.8
MXZ	Matakaoa Point	7.94	195	ePn	Pn	03 22 27.5	+0.8
MXZ	Matakaoa Point	7.94	195	P	Pn	03 22 27.5	+0.8
MXZ				S	S	03 23 58.3	+1.0
KUZ	Kuaotunu	8.09	211	P	Pn	03 22 35.2	+6.6
KUZ	Kuaotunu	8.09	211	P	Pn	03 22 35.2	+6.6
OUZ	Omahuta	8.14	227	ePn	Pn	03 22 36.1	+6.9
OUZ	Omahuta	8.14	227	P	Pn	03 22 37.8	+8.6
WMGZ	Waiomatatini S	8.17	194	P	Pn	03 22 30.5	+1.0
WMGZ	Waiomatatini S	8.17	194	P	Pn	03 22 30.5	+1.0
WMGZ	Waiomatatini S	8.17	194	S	S	03 24 03.8	+1.3
HAZ	Te Kaha	8.26	198	P	Pn	03 22 31.6	+1.0
HAZ				S	S	03 24 06.0	+1.4
WIAZ	Waiheke Island	8.40	214	P	Pn	03 22 37.8	+5.2
PUZ	Puketiti	8.44	194	P	Pn	03 22 33.0	-0.1
RUGZ	Raukumara Rang	8.48	198	P	Pn	03 22 34.0	+0.4
MKAZ	Moumakai	8.64	212	P	Pn	03 22 42.7	+7.1
OPRZ	Ohinepanea	8.71	203	P	Pn	03 22 38.5	+2.1
AWAZ	Awhitu Peninsu	8.86	215	P	Pn	03 22 45.9	+7.6
URZ	Urewera	8.91	200	P	Pn	03 22 39.3	+0.3
	1.4nm,0.3s,baz=253,slow=4.1,SNR=43						
URZ				S	S	03 24 21.3	+1.5
	34nm,0.3s,baz=217,slow=6.1,SNR=15						
TOZ	Tahuroa Road	9.02	209	P	P	03 22 45.3	-2.3
BKZ	Black Stump Fm	9.94	200	ePn	Pn	03 22 50.9	-1.1
BKZ				eS	S	03 24 44.2	+0.6
HIZ	Hauiti	9.95	209	ePn	P	03 22 55.7	-2.2
HIZ	Hauiti	9.95	209	P	P	03 22 57.3	-0.5
NGZ	Ngauruhoe	10.24	204	P	Pn	03 22 55.9	+0.1
NGZ				S	S	03 24 53.7	+2.9
TUVZ	Tukino	10.30	203	P	Pn	03 22 56.4	-0.3
FWVZ	Far West T-bar	10.32	204	P	Pn	03 22 57.6	+0.6
MOVZ	Moawhango	10.39	203	P	Pn	03 22 56.9	-0.8
PKVZ	Pokaka	10.43	205	P	Pn	03 22 59.7	+1.6
VRZ	Vera Road	10.51	207	P	P	03 23 02.6	-1.5
PKE	Pukeiti	10.89	210	P	P	03 23 08.9	+0.5
WAZ	Wanganui	10.97	205	P	Pn	03 23 04.3	-0.6
POWZ	Post Office Ro	11.28	201	P	Pn	03 23 07.1	-1.7
POWZ	Post Office Ro	11.28	201	P	Pn	03 23 07.1	-1.7
POWZ	Post Office Ro	11.28	201	P	S	03 25 10.9	-3.9
PRWZ	Pori Road	11.37	199	P	Pn	03 23 08.8	-1.1
PRWZ				S	S	03 25 12.6	-4.3
BFZ	Birch Farm	11.41	198	ePn	Pn	03 23 08.3	-2.1
BFZ				eS	S	03 25 15.4	-2.4
BFZ	Birch Farm	11.41	198	P	Pn	03 23 07.1	-3.2
BFZ				S	S	03 25 12.9	-4.9
MRZ	Mangatainoka R	11.58	201	P	Pn	03 23 09.0	-3.5
MRZ	Mangatainoka R	11.58	201	P	Pn	03 23 09.0	-3.5
MRZ	Mangatainoka R	11.58	201	S	S	03 25 15.8	-6.1
TIWZ	Tintock	11.60	199	P	Pn	03 23 10.0	-2.7
TIWZ	Tintock	11.60	199	P	Pn	03 23 10.0	-2.7
TIWZ	Tintock	11.60	199	S	S	03 25 17.9	-4.3
CPWZ	Castlepoint	11.64	198	P	Pn	03 23 11.8	-1.4
CPWZ				S	S	03 25 20.3	-2.7
HOWZ	Holdsworth Sta	11.82	200	P	Pn	03 23 12.1	-3.4
HOWZ	Holdsworth Sta	11.82	200	P	Pn	03 23 12.1	-3.4
TMWZ	Te Maipa	11.90	199	P	Pn	03 23 12.9	-3.6
KIW	Kapiti Island	11.98	203	P	Pn	03 23 14.1	-3.3
KIW	Kapiti Island	11.98	203	P	Pn	03 23 14.1	-3.3
MTW	Mount Morrison	12.06	200	P	Pn	03 23 14.7	-3.8
MTW				S	S	03 25 26.3	-6.6
TRWZ	Traveller	12.23	199	P	Pn	03 23 17.6	-3.0
DUWZ	D'Urville Isla	12.28	206	P	Pn	03 23 18.5	-2.7
DUWZ	D'Urville Isla	12.28	206	P	Pn	03 23 18.5	-2.7
PAWZ	Paruwai Farm	12.29	200	P	Pn	03 23 20.1	-1.3
MSWZ	Moikau Station	12.38	200	P	Pn	03 23 19.0	-3.4
MSVF	Nonsavu	12.39	347	ePn	Pn	03 23 22.9	0.0
MSVF	Nonsavu	12.39	347	eP	Pn	03 23 22.9	0.0
SNZO	South Karori	12.45	202	ePn	Pn	03 23 22.2	-1.0
BHW	Baring Head	12.49	202	P	Pn	03 23 19.5	-4.2
TCW	Tory Channel	12.51	204	P	Pn	03 23 20.4	-3.5
TCW	Tory Channel	12.51	204	P	Pn	03 23 20.4	-3.5
PLWZ	Palliser	12.51	200	P	Pn	03 23 21.8	-2.3
PLWZ				S	S	03 25 36.8	-6.6
TUWZ	Tuamarina	12.82	204	P	Pn	03 23 24.6	-3.2
NNZ	Nelson	12.84	206	P	Pn	03 23 26.1	-2.0
NNZ	Nelson	12.84	206	P	Pn	03 23 26.1	-2.0
QRZ	Quartz Range	12.86	210	P	Pn	03 23 26.9	-1.4
QRZ	Quartz Range	12.86	210	P	Pn	03 23 26.9	-1.4
BSWZ	Blackbirch Sta	13.09	204	P	Pn	03 23 28.5	-2.6
THZ	Tophouse	13.49	207	ePn	Pn	03 23 34.6	-1.6
THZ	Tophouse	13.49	207	P	Pn	03 23 33.4	-2.7
KHZ	Kahutara	13.83	203	eP	Pn	03 23 38.5	-1.7
KHZ	Kahutara	13.83	203	P	Pn	03 23 37.8	-2.3
DSZ	Denniston Nort	13.93	210	P	Pn	03 23 39.1	-2.3
CTZ	Chatham Island	13.95	173	P	P	03 23 52.1	+10
CTZ				S	S	03 26 19.3	+3.5
PINNC	Pines Island,	14.10	298	eP	P	03 23 45.9	+1.8
MARNC	Mare, Loyalty	14.32	303	eP	P	03 23 49.2	+2.6
LTZ	Lake Taylor	14.61	206	eP	Pn	03 23 47.9	-1.7
LTZ	Lake Taylor	14.61	206	P	Pn	03 23 46.5	-3.2
AMCZ	Amberley	14.81	204	P	P	03 23 50.0	-1.8
INZ	Inchbonnie	14.89	208	P	P	03 23 52.7	0.0
OXZ	Oxford	15.16	206	eP	P	03 23 53.0	-2.8
	41nm,0.5s						
OXZ	Oxford	15.16	206	P	P	03 23 54.1	-1.6
DZM	Mont Dzumac	15.17	298	eP	Pn	03 23 59.7	+3.1
	284nm,1.4s						
DZM	Mont Dzumac	15.17	298	eP	Pn	03 23 58.7	+2.1
	49nm,0.7s						
DZM	Mont Dzumac	15.17	298	P	Pn	03 23 58.5	+1.9
	15nm,0.3s,baz=116,slow=11,SNR=161						
CRLZ	Canterbury Las	15.17	204	eP	P	03 23 53.9	-1.9
	14nm,0.6s						
MQZ	McQueen's Vall	15.27	203	eP	P	03 23 54.3	-2.5
	17nm,0.9s						
MQZ	McQueen's Vall	15.27	203	P	P	03 23 55.9	-0.9
AKCZ	Akaroa Harbour	15.33	202	P	P	03 23 56.0	-1.6
WVZ	Waitaha Valley	15.47	209	P	P	03 23 59.3	+0.2
RPZ	Rata Peaks	15.87	207	P	P	03 24 03.6	+0.1
	2.9nm,0.3s,baz=334,slow=2.9,SNR=12						
RPZ				S	S	03 26 46.7	-11
	2.9nm,0.3s,baz=166,slow=2.2,SNR=3.5						
RPZ	Rata Peaks	15.87	207	P	P	03 24 02.8	-0.7
FOZ	Fox Glacier	16.24	210	eP	P	03 24 07.9	+0.4
	19nm,0.9s						
LBZ	Lake Benmore	16.78	208	eP	Pn	03 24 14.6	-0.7
	9.1nm,1.2s						
ODZ	Otahua Downs	17.15	205	eP	P	03 24 18.1	+0.6
	8.4nm,0.6s						
WKZ	Wanaka	17.62	209	eP	P	03 24 22.9	+0.3
	6.9nm,0.7s						
MLZ	Mavora Lakes	18.43	210	eP	P	03 24 33.0	+1.6
	5.0nm,0.6s						
MLZ				eS	S	03 27 51.9	+3.5
WHZ	Wether Hill Ro	18.92	209	eP	P	03 24 38.1	+1.5
	7.1nm,1.2s						
FUNA	Funafuti	21.33	355	eP	P	03 24 59.6	-2.5
	71nm,0.8s						
ARMA	Armidale	25.30	261	eP	P	03 25 41.7	+3.3
EIDS	Eidsvold	26.78	272	eP	P	03 25 52.7	+1.3
	6.3nm,0.9s						
TBI	Tubuai	27.22	83	eLR	LR	03 31 39.4	
	comp=Z,302nm,31.8s						
TBI	Tubuai	27.22	83	eT	T	03 54 06.0	
	13nm,0.3s						
CAN	Canberra	27.36	250	eP	P	03 25 59.0	+2.4
	19nm,0.9s						
CAN	Canberra	27.36	250	eP	P	03 25 59.0	+2.4
CAN				pmax	pmax		
	comp=Z,19nm,0.9s						
PAE	Paea	29.52	72	eT	T	03 57 08.8	
	comp=Z,5.4nm,0.3s						
PPT2	Papeete2	29.56	72	eLR	LR	03 32 49.5	
	comp=Z,156nm,27.2s						
TOO	Toolangi	30.31	246	eP	P	03 26 25.4	+2.9
	comp=Z,14nm,1.0s						
TOO	Toolangi	30.31	246	eP	P	03 26 25.4	+2.9
TOO				pmax	pmax		
	comp=Z,14nm,1.0s						
TARA	Tarawa	32.01	345	eP	P	03 26 36.3	-1.3
VAH	Vaihoa	32.37	70	eT	T	04 00 43.6	
	comp=Z,25nm,0.3s						
CTA	Charters Tower	32.80	279	P	P	03 26 45.8	+1.3
	comp=Z,8.5nm,0.5s,baz=102,slow=11,SNR=14						
CTAO	Charters Tower	32.80	279	eP	P	03 26 45.7	+1.3
	comp=Z,12nm,0.8s						
CTAO	Charters Tower	32.80	279	eP	P	03 26 45.7	+1.3
CTAO				pmax	pmax		
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	33.68	256	eP	P	03 26 53.4	+1.4
	comp=Z,1.6nm,0.6s						
STKA				ScP	ScP	03 32 44.7	-1.4
STKA	Stephens Creek	33.68	256	eP	P	03 26 54.6	+2.7
STKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
STKA	Stephens Creek	33.68	256	P	P	03 26 53.5	+1.6
	comp=Z,6.3nm,0.6s,baz=96,slow=11,SNR=24						
STKA				ScP	ScP	03 32 44.7	-1.4
	comp=Z,0.8nm,0.4s,baz=78,slow=2.2,SNR=3.2						
BBOO	Buckleboo	38.21	254	eP	P	03 27 30.8	+0.6
	comp=Z,16nm,0.9s						
AS01	Alice Springs	42.16	267	eP	P	03 28 02.8	0.0
AS31	Alice Springs	42.20	267	eP	P	03 28 03.6	+0.6
	comp=Z,1.9nm,0.6s						
ASAR	Alice Springs	42.20	267	P	P	03 28 03.5	+0.4
	comp=Z,5.6nm,0.7s,baz=109,slow=7.9,SNR=52						
ASAR				PcP	PcP	03 29 51.1	-1.1
	comp=Z,3.5nm,0.6s,baz=109,slow=5.8,SNR=6.6						
ASAR				ScP	ScP	03 33 17.2	-1.5
	comp=Z,7.4nm,1.1s,baz=124,slow=4.6,SNR=18						
ASAR				S	S	03 34 03.1	-1.1
	comp=Z,0.7nm,0.9s,baz=107,slow=19,SNR=5.0						
ASAR				PKiKP	PKiKP	03 36 55.6	-1.5
	comp=Z,0.4nm,0.5s,baz=90,slow=1.7,SNR=6.4						
WC3	Warramunga Arr	43.11	272	eP	P	03 28 10.1	-0.2
	comp=Z,26nm,0.5s						
WB2	Warramunga Arr	43.13	272	eP	P	03 28 10.4	-0.1
WB2				eS	S	03 34 16.2	-1.6
WRAB	Tennant Creek	43.14	272	eP	P	03 28 10.2	-0.3
	comp=Z,17nm,0.6s						
WRAB	Tennant Creek	43.14	272	d iP	P	03 28 10.8	+0.2
WRAB				pmax	pmax		
	comp=Z,16nm,0.7s						
WR1	Warramunga Arr	43.15	272	eP	P	03 28 10.6	0.0
	comp=Z,26nm,0.6s						
WR1				ePcP	PcP	03 29 54.8	-0.7
WR1				eScP	ScP	03 33 20.8	-1.8
WR1				eS	S	03 34 16.1	-1.9
WRA	Warramunga Arr	43.15	272	P	P	03 28 10.6	0.0
	comp=Z,16nm,0.5s,baz=113,slow=6.6,SNR=188						
WRA				PcP	PcP	03 29 54.8	-0.7
	comp=Z,3.7nm,0.7s,baz=116,slow=3.1,SNR=9.6						
WRA				ScP	ScP	03 33 20.8	-1.8
	comp=Z,2.5nm,0.7s,baz=100,slow=4.0,SNR=9.2						
WRA				S	S	03 34 16.1	-1.9
	comp=Z,3.5nm,0.9s,baz=109,slow=14,SNR=12						
WRA				PKiKP	PKiKP	03 36 56.4	-1.6
	comp=Z,0.6nm,0.5s,baz=94,slow=0.6,SNR=14						
FORT	Forrest	45.27	255	eP	P	03 28 27.3	+0.1
	comp=Z,24nm,0.6s						
SBA	Scott Base	48.46	184	eP	P	03 28 55.1	+3.9
VNDA	Vanda	48.50	185	eP	P	03 28 53.1	+1.6
VNDA				ScP	ScP	03 33 43.0	-0.7
VNDA	Vanda	48.50	185	eP	P	03 28 53.1	+1.6
VNDA	Vanda	48.50	185	P	P	03 28 53.8	+2.4
	comp=Z,2.7nm,0.8s,baz=1.7,slow=7.3,SNR=7.3						
VNDA				ScP	ScP	03 33 43.0	-0.7
	comp=Z,3.3nm,1.0s,baz=13,slow=3.8,SNR=5.0						
FITZ	Fitzroy Crossi	51.43	270	eP	P	03 29 14.3	+0.1
	comp=Z,15nm,1.0s						
FITZ				PcP	PcP	03 30 25.3	+0.2
FITZ				ScP	ScP	03 33 55.8	-1.6
FITZ	Fitzroy Crossi	51.43	270	P	P	03 29 14.7	+0.4
	comp=Z,6.9nm,0.8s,baz=169,slow=5.0,SNR=16						
FITZ				PcP	PcP	03 30 25.3	+0.2
	comp=Z,7.6nm,1.1s,baz=105,slow=8.4,SNR=4.4						
FITZ				ScP	ScP	03 33 55.8	-1.6
	comp=Z,5.6nm,1.2s,baz=114,slow=20,SNR=3.3						
CASY	Casey	55.14	208	eP	P	03 29 41.1	+0.6
	comp=Z,8.1nm,0.6s						
MBWA	Marble Bar	55.35	264	eP	P	03 29 42.5	-0.2
QSPA	South Pole Qui	60.20	180	eP	P	03 30 18.7	+2.9
KSM	Kuching	74.01	281	eP	P	03 31 42.1	-1.0
	comp=Z,9.1nm,1.0s						
MJA0	Matsu Arr-Jizo	77.29	326	eP	P	03 32 00.2	-0.9
MJA0				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR	Matsushiro Arr	77.31	326	P	P	03 32 00.2	-0.9
	comp=Z,5.5nm,1.0s,baz=171,slow=5.4,SNR=7.0						
MAJO	Matsushiro	77.31	326	eP	P	03 31 59.9	-1.3
	comp=Z,34nm,1.6s						
MAJO	Matsushiro	77.31	326	eP	P	03 32 00.2	-0.9
MAJO				pmax	pmax		
	comp=Z,33nm,1.4s						
MAT	Matsushiro	77.31	326	P	P	03 32 00.3	-0.8
SYO	Syowa Base	77.39	193	⇑iP	P	03 32 00.4	-0.7
SYO	Syowa Base	77.39	193	⇓iX	P	03 32 08.4	+7.3
SNAA	Sanae	78.67	179	P	P	03 32 09.9	+1.6
SNAA	Sanae	78.67	179	eP	P	03 32 09.3	+1.0
	comp=Z,25nm,1.1s						
SNAA	Sanae	78.67	179	⇓iP	P	03 32 10.1	+1.8
VNA3	Neumayer Olymp	78.86	177	P	P	03 32 11.0	+1.7
VNA2	Neumayer--Watz	79.28	177	P	P	03 32 13.6	+2.0
	baz=187,slow=5.0						
NVL	N'lazarevskaya	79.31	184	eP	P	03 32 12.4	+0.7
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VNA1	Neumayer--Stat	79.52	177	P	P	03 32 14.7	+1.9
ASAJ	Asahikawa	81.57	333	P	P	03 32 24.2	+0.4
	comp=Z,25nm,0.8s,baz=97,slow=1.3,SNR=7.9						
SKR	Severo-Kuril's	83.18	344	⇓eP	P	03 32 34.0	+2.0
KSRS	Korea Array	83.37	320	P	P	03 32 33.9	+0.6
	comp=Z,3.1nm,0.8s,baz=134,slow=5.5,SNR=11						

KS15	Wonju Array Si	83.38	320	*e*P	P	03 32 33.3	-0.1
KSAR	Wonju Array Be	83.38	320	P	P	03 32 33.9	+0.5
KSAR	Wonju Array Be	83.38	320	P	P	03 32 33.9	+0.5
KS01	Wonju Array Si	83.40	320	*e*P	P	03 32 33.0	-0.5
IPM	Ipoh	83.49	279	*e*P	P	03 32 33.8	-0.8
	comp=Z,25nm,0.8s						
YSS	Yuzh-Sakhalins	83.90	335	*e*P	P	03 32 35.9	+0.2
YSS	Yuzh-Sakhalins	83.90	335⇑	*e*P	P	03 32 36.9	+1.2
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
SNCC	San Nicolas Is	84.37	47	P	P	03 32 39.2	+0.7
	baz=229						
PSI	Prapat	84.45	276	*e*P	P	03 32 37.4	-2.2
	comp=Z,8.7nm,0.8s						
PSI	Prapat	84.45	276	*e*P	P	03 32 37.4	-2.2
PSI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PET	Petropavlovsk	84.83	347	*e*P	P	03 32 39.9	-0.3
PET				pmax	pmax		
	comp=Z,60nm,0.6s						
GSI	Gunungsitoli	84.87	274	*e*P	P	03 32 41.6	+0.1
	comp=Z,44nm,0.7s						
PETK	Petropavlovsk-	85.10	346	*e*P	P	03 32 41.0	-0.6
PETK	Petropavlovsk-	85.10	346	*e*P	P	03 32 41.1	-0.6
PETK	Petropavlovsk-	85.10	346	P	P	03 32 41.0	-0.6
	comp=Z,38nm,0.6s,baz=123,slow=7.8,SNR=120						
PEA1	Petropavlovsk-	85.11	346	*e*P	P	03 32 41.0	-0.7
CIS	Catalina Islan	85.17	47	P	P	03 32 42.2	-0.3
	baz=229						
NJ2	Nanjing	85.21	311	*e*P	P	03 32 44.3	+1.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MSHR	Mys Shultsa	85.42	326⇑	*e*P	P	03 32 43.7	+0.3
MWC	Mount Wilson	85.93	47	*e*P	P	03 32 46.3	-0.1
	comp=Z,8.3nm,1.0s						
MWC	Mount Wilson	85.93	47	*e*P	P	03 32 46.3	-0.1
MWC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARVC	Arvin	86.04	46	P	P	03 32 46.6	-0.1
	baz=229						
MURC	Murrieta	86.08	48	P	P	03 32 47.2	+0.3
	baz=230						
MONP2	Monument Peak	86.13	49	P	P	03 32 47.8	+0.4
	baz=230,SNR=6.7						
IKP	In-Ko-Pah, Jac	86.18	49	P	P	03 32 47.7	+0.2
	baz=231						
BFSC	Mount Baldy Ra	86.20	47	P	P	03 32 47.6	0.0
	baz=230,SNR=6.2						
USRK	Ussuriysk Ar.	86.23	327	P	P	03 32 48.1	+0.7
	comp=Z,8.4nm,0.8s,baz=112,slow=4.1,SNR=15						
USA0B	Ussuriysk Arra	86.23	327	*e*P	P	03 32 47.2	-0.2
	comp=Z,19nm,1.0s						
VES	Vestal, Richgr	86.35	45	P	P	03 32 48.4	+0.2
	baz=229						
EDW2	Edwards Air Fo	86.40	46	P	P	03 32 48.6	+0.1
	baz=229,SNR=9.1						
PFO	Pinyon Flats O	86.56	48	*e*P	P	03 32 49.7	+0.2
	comp=Z,4.9nm,1.3s						
PFO	Pinyon Flats O	86.56	48	*i* P	P	03 32 50.7	+1.3
PFO	Pinyon Flats O	86.56	48	P	P	03 32 49.3	-0.1
	baz=230						
PFO	Pinyon Flats O	86.56	48	P	P	03 32 49.6	+0.2
	comp=Z,6.0nm,0.8s,baz=104,slow=4.4,SNR=7.5						
XPFO	Pion Flat	86.56	48	*e*P	P	03 32 49.3	-0.2
	comp=Z,11nm,1.1s						
SWSC	Sam W. Stewart	86.57	49	P	P	03 32 49.9	+0.6
	baz=231						
ISA	Isabella, Lake	86.61	45	*e*P	P	03 32 49.5	-0.1
	comp=Z,15nm,1.1s						
ISA	Isabella, Lake	86.61	45	*e*P	P	03 32 49.5	-0.1
ISA				pmax	pmax		
	comp=Z,15nm,1.1s						
ISA	Isabella, Lake	86.61	45	P	P	03 32 49.7	+0.2
	baz=229,SNR=12						
LRMC	Laurel Mtn Rad	86.98	46	P	P	03 32 51.5	+0.1
	baz=230,SNR=14						
CMB	Columbia Colle	87.02	42	*e*P	P	03 32 51.2	-0.2
	comp=Z,24nm,0.8s						
CMB	Columbia Colle	87.02	42	*e*P	P	03 32 51.2	-0.2
CMB				pmax	pmax		
	comp=Z,24nm,0.8s						
BELC	Belle Mtn. Jos	87.10	48	P	P	03 32 52.5	+0.4
	baz=231,SNR=11						
O02D	Mt. Diablo Mer	87.11	40	P	P	03 32 52.7	+0.9
	baz=226						
TYV	Tymovskoe	87.23	337	*e*P	P	03 32 52.8	+0.8
TYV				pmax	pmax		
	comp=Z,27nm,1.0s						
TYV				pmax	pmax		
	comp=Z,300nm,4.9s						
BC3	Big Chuckawall	87.24	48	P	P	03 32 53.3	+0.7
	baz=231,SNR=8.4						
GLA	Glamis	87.27	49	P	P	03 32 53.5	+0.8
	baz=231						
AFDM	Forest Hills D	87.29	42	*e*P	P	03 32 52.8	+0.2
	comp=Z,2.2nm,1.2s						
CWC	Cottonwood Cre	87.35	45	P	P	03 32 53.0	-0.2
	baz=229						
ORV	Oroville	87.40	41	*e*P	P	03 32 52.9	-0.2
	comp=Z,3.6nm,0.9s						
ORV	Oroville	87.40	41	*e*P	P	03 32 52.9	-0.2
ORV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HEC	Hector,Ludlow	87.41	47	P	P	03 32 53.5	+0.1
	baz=230						
GSC	Goldstone, Bar	87.42	46	P	P	03 32 53.5	+0.1
	baz=230,SNR=9.1						
MPMC	Manual Prospec	87.47	46	P	P	03 32 53.9	+0.1
	baz=230,SNR=7.3						
MDPB	Devils Postpil	87.53	43	*e*P	P	03 32 53.7	-0.4
	comp=Z,1.6nm,0.9s						
MLAC	Mammoth, Mammo	87.67	44	P	P	03 32 55.2	+0.4
	baz=229						
MDJ	Mudanjiang	87.69	326	*e*P	P	03 32 55.0	+0.6
	comp=Z,3.4nm,0.4s						
N02D	Trinity Center	87.70	39	P	P	03 32 54.9	+0.3
	baz=226						
O03E	Paynes Creek	87.73	40	P	P	03 32 54.7	0.0
	baz=227						
IRM	Iron Mountain	87.75	48	P	P	03 32 55.6	+0.6
	baz=231,SNR=13						
113A	Mohawk Valley,	87.80	50	*e*P	P	03 32 55.4	+0.3
	comp=Z,10nm,1.1s						
GMRC	Granite Mounta	87.81	47	P	P	03 32 55.5	+0.1
	baz=231,SNR=5.7						
WAKR	Walker	87.89	43	*e*P	P	03 32 55.6	-0.1
	comp=Z,6.9nm,1.0s						
Y12C	Blythe	87.91	49	*e*P	P	03 32 55.8	+0.2
	comp=Z,8.4nm,0.9s						
Y12C	Blythe	87.91	49	P	P	03 32 56.3	+0.6
	baz=232						
M02C	Callahan	87.91	39	P	P	03 32 56.0	+0.5
	baz=226						
214A	Organ Pipe Nat	87.95	51	P	P	03 32 56.4	+0.5
	baz=232						
TUQ	Turquoise Moun	88.06	47	P	P	03 32 56.8	+0.3
	baz=231						
FURC	Furnace Creek,	88.12	46	P	P	03 32 57.0	+0.5
	baz=230						
SHOC	Shoshone, Teco	88.13	46	P	P	03 32 56.6	-0.1
	baz=230						
GRAC	Grapevine Rang	88.15	45	P	P	03 32 57.0	+0.2
	baz=230,SNR=7.7						
PNTR	Pine Nut	88.18	42	*e*P	P	03 32 56.8	-0.4
	comp=Z,5.8nm,0.9s						
YBH	Yreka Blue Hor	88.22	39	P	P	03 32 56.6	-0.5
	comp=Z,1.4nm,0.8s,baz=218,slow=4.3,SNR=4.1						
K02D	Willamette Mer	88.38	37	P	P	03 32 57.8	+0.1
	baz=226						
PDMCI	Parker Dam,Lak	88.50	49	P	P	03 32 59.4	+1.0
	baz=232						
NV01	Mina Array Sit	88.51	43	*e*P	P	03 32 58.2	-0.5
NVAR	Mina Array Bea	88.51	43	P	P	03 32 58.6	0.0
	comp=Z,4.7nm,0.8s,baz=221,slow=7.6,SNR=25						
NV11	Mina Array Sit	88.60	43	*e*P	P	03 32 58.7	-0.3
	comp=Z,0.4nm,1.0s						
HUMO	Hull Mountain	88.69	38	*e*P	P	03 32 59.1	-0.1
L04D	Klamath Falls	88.78	38	P	P	03 32 59.9	+0.2
	baz=226						
TPNV	Topopah Spring	88.81	45	*e*P	P	03 32 59.7	-0.3
	comp=Z,5.7nm,0.9s						
TPNV	Topopah Spring	88.81	45	*e*P	P	03 32 59.7	-0.3
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TPNV	Topopah Spring	88.81	45	P	P	03 33 00.3	+0.3
	baz=230,SNR=7.3						
Y14A	Wickenburg	89.02	49	*e*P	P	03 33 00.9	-0.1
	comp=Z,8.3nm,0.8s						
KVN	Kaiserville	89.04	43	*e*P	P	03 33 00.9	-0.2
	comp=Z,4.0nm,0.8s						
KVN	Kaiserville	89.04	43	*e*P	P	03 33 00.9	-0.2
KVN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
W13A	Hualapai Mount	89.15	48	*e*P	P	03 33 01.8	0.0
	comp=Z,4.1nm,0.8s						
I03D	Drain, OR	89.24	37	P	P	03 33 02.3	+0.7
	baz=226						
GRNR	Gornyy	89.42	334	*e*P	P	03 33 03.0	+0.7
GRNR				pmax	pmax		
	comp=Z,38nm,1.0s						
TUC	Tucson	89.53	52	*e*P	P	03 33 03.6	+0.2
	comp=Z,10nm,0.9s						
TUC	Tucson	89.53	52	*e*P	P	03 33 03.6	+0.2
TUC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TUC	Tucson	89.53	52	P	P	03 33 04.2	+0.8
	baz=234						
J04D	Umpqua Nationa	89.58	38	P	P	03 33 03.4	-0.2
	baz=226,SNR=5.7						
I04A	Tendick Farm,	89.80	37	P	P	03 33 03.9	-0.4
	baz=226						
319A	Douglas	90.03	53	*e*P	P	03 33 05.9	+0.1
	comp=Z,7.4nm,0.8s						
J05D	Fort Rock, OR	90.08	38	P	P	03 33 05.9	+0.1
	baz=227,SNR=7.0						
H04D	Lebanon	90.13	37	P	P	03 33 06.1	+0.3
	baz=226						
KLR	Kul'dur	90.14	330	P	P	03 33 06.7	+1.0
	comp=Z,13nm,0.6s,baz=124,slow=3.4,SNR=47						
X16A	Lo Mia Camp, P	90.34	50	*e*P	P	03 33 07.2	-0.1
	comp=Z,7.4nm,1.0s						
BMN	Battle Mountai	90.45	42	*e*P	P	03 33 07.5	-0.1
	comp=Z,2.2nm,0.8s						
BMN	Battle Mountai	90.45	42	*e*P	P	03 33 07.5	-0.1
BMN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
H04A	Detroit Lake	90.53	37	*e*P	P	03 33 07.4	-0.3
	comp=Z,3.0nm,0.8s						
PINE	Pine Mountain	90.58	38	*e*P	P	03 33 07.5	-0.7
	comp=Z,12nm,0.9s						
I05D	Terrebonne, OR	90.74	37	P	P	03 33 09.6	+0.9
	baz=227						
U15A	North Rim	90.99	48	*e*P	P	03 33 10.8	+0.5
	comp=Z,6.9nm,0.8s						
WUAZ	Wupatki	91.04	49	P	P	03 33 10.9	+0.4
	baz=233						
G05D	Wamic, OR	91.36	37	P	P	03 33 11.6	+0.1
	baz=227						
I07A	Izee	91.54	38	*e*P	P	03 33 12.2	-0.3
	comp=Z,6.1nm,1.0s						
J08A	Circle Bar Ran	91.63	39	*e*P	P	03 33 12.5	-0.4
	comp=Z,2.6nm,1.0s						
BJT	Baijiatuau	91.91	316	*e*P	P	03 33 14.5	+0.4
	comp=Z,4.2nm,0.6s						
BJT	Baijiatuau	91.91	316	*e*P	P	03 33 14.5	+0.4
BJT				pmax	pmax		
	comp=Z,4.0nm,0.6s						
D03D	Eldon	92.04	34	P	P	03 33 15.1	+0.5
	baz=226						
CMAR	Chiang Mai Arr	92.36	290	P	P	03 33 17.7	+1.0
	comp=Z,1.3nm,0.6s,baz=136,slow=3.9,SNR=7.8						
MA2	Magadan	92.57	345⇑	*e*P	P	03 33 17.0	+0.3
MA2	Magadan	92.57	345	P	P	03 33 16.3	-0.4
	comp=Z,8.7nm,0.7s,baz=130,slow=6.8,SNR=4.7						
KMI	Kunming	92.77	297	P	P	03 33 21.9	+3.2
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
LTX	Lajitas	92.91	58	*e*P	P	03 33 19.9	+0.8
TXAR	Lajitas Array	92.91	58	P	P	03 33 19.9	+0.8
	comp=Z,0.6nm,0.8s,baz=217,slow=7.9,SNR=5.5						
DUG	Dugway, Tooele	92.93	45	P	P	03 33 19.0	-0.1
	baz=233						
MNTX	Cornudas Mount	92.96	55	P	P	03 33 19.0	-0.2
	baz=236						
BMO	Blue Mountains	93.24	39	*e*P	P	03 33 19.6	-0.7
BMO	Blue Mountains	93.24	39	*e*P	P	03 33 19.6	-0.7
TMUT	Trail Mountain	93.39	46	*e*P	P	03 33 21.1	-0.3
	comp=Z,4.3nm,0.6s						
GAMB	Gambell	93.54	3	*e*P	P	03 33 21.0	0.0
	comp=Z,11nm,1.1s						
HVU	Hansel Valley	93.91	43	*e*P	P	03 33 22.9	-0.6
	comp=Z,4.6nm,0.7s						
HVU	Hansel Valley	93.91	43	*e*P	P	03 33 22.9	-0.6
HVU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ANMO	Albuquerque	94.00	52⇑	*e*P	P	03 33 24.4	+0.3
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ANMO	Albuquerque	94.00	52	P	P	03 33 24.4	+0.3
	baz=236						
F10A	Beach Ranch, E	94.00	38	*e*P	P	03 33 22.9	-0.9
HLID	Hailey	94.04	41	*e*P	P	03 33 23.5	-0.6
	comp=Z,1.3nm,0.8s						
HLID	Hailey	94.04	41	P	P	03 33 24.2	+0.1
	baz=232						
HHC	Hu-ho-hao-te	95.22	315	*e*P	P	03 33 29.0	-0.5
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
SEY	Seymchan	95.28	347⇓	*i*P	P	03 33 29.0	0.0
SEY	Seymchan	95.28	347	P	P	03 33 28.7	-0.4
	comp=Z,5.0nm,0.6s,baz=172,slow=4.5,SNR=14						
S22A	4UR Ranch, Cre	95.31	49	P	P	03 33 30.1	-0.1
	baz=236						
PD31	Pinedale Array	96.42	44	*e*P	P	03 33 34.9	-0.1
PDAR	Pinedale Array	96.42	44	P	P	03 33 34.9	-0.1
	comp=Z,0.4nm,0.7s,baz=227,slow=7.3,SNR=4.3						
BOZ	Bozeman (W)	96.86	41	*e*P	P	03 33 36.8	0.0
	comp=Z,0.6nm,0.4s						
BOZ	Bozeman (W)	96.86	41	*e*P	P	03 33 36.8	0.0
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BOZ	Bozeman (W)	96.86	41	P	P	03 33 38.0	+1.1
	baz=234						
ILAR	Eielson Array	97.66	13	P	P	03 33 39.2	-0.6
	comp=Z,0.8nm,0.9s,baz=215,slow=4.4,SNR=4.5						
ILAR				PKiKP	PKiKP	03 38 11.6	-0.9
	comp=Z,0.3nm,0.6s,baz=280,slow=3.1,SNR=5.6						
ILB	Eielson Array	97.66	13	*e*P	P	03 33 39.2	-0.6
ILB				*e*PKiKP	PKiKP	03 38 11.6	-0.9
LZH	Lanzhou	97.68	307 ⇑	P	P	03 33 39.8	-1.0
LZH				pP	pP	03 34 29.1	-12
LZH				sP	sP	03 34 50.0	-17
LZH				PP	PP	03 37 42.1	-0.4
LZH				pmax	pmax		
	comp=Z,20nm,1.5s						
LZH				pmax	pmax		
	comp=Z,78nm,5.6s						
BILL	Bilibino	98.26	354⇓	*e*P	P	03 33 44.2	+1.8
BILL				*e*		03 37 48.3	
BILL				pmax	pmax		
	comp=Z,12nm,1.9s						
RSSD	Black Hills	100.53	45	P	Pdif	03 33 53.0	-0.3
	baz=238						
ULN	Ulaanbaatar	101.79	319⇓	*e*P	Pdif	03 34 01.8	+3.0
ULN				pmax	pmax		
	comp=Z,8.0nm,2.8s						
INK	Inuvik	103.56	16	PKiKP	PKiKP	03 38 22.4	-0.5
	comp=Z,0.7nm,0.5s,baz=105,slow=5.7,SNR=8.1						
YKA	Yellowknife Ar	105.40	26	PKiKP	PKiKP	03 38 25.2	-1.2
	comp=Z,0.3nm,0.5s,baz=263,slow=1.7,SNR=14						
YKA				PKKPbc	PKKPbc	03 49 52.2	-2.2
	comp=Z,0.1nm,0.5s,baz=43,slow=2.9,SNR=4.3						
DGZ	Jazzator, Alta	114.30	315⇑	*i*PKIKP	PKPdf	03 38 42.8	-1.1
MK32	Makanchi Array	116.74	310	*e*PKPdf	PKPdf	03 38 47.0	-1.5
MKAR	Makanchi Array	116.74	310	PKP	PKPdf	03 38 47.0	-1.5
	comp=Z,1.7nm,0.6s,baz=113,slow=0.2,SNR=18						
MKAR				PKKPbc	PKKPbc	03 49 17.0	+0.4
	comp=Z,0.6nm,0.4s,baz=280,slow=3.0,SNR=19						
ZALV	Zalesovo Beam	117.04	319	*e*PKIKP	PKPdf	03 38 48.6	-0.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	117.04	319	PKP	PKPdf	03 38 47.3	-1.5
	comp=Z,1.1nm,0.6s,baz=184,slow=1.8,SNR=6.3						
ZAA1	Zalesovo Array	117.04	319	*e*PKPdf	PKPdf	03 38 47.3	-1.5
BOSA	Boshof	117.34	204	PKP	PKiKP	03 38 51.4	+0.8
	comp=Z,1.2nm,0.5s,baz=228,slow=2.0,SNR=9.2						
NRIK	Noril'sk	118.80	336	PKP	PKPdf	03 38 51.2	-0.6
	comp=Z,3.2nm,0.5s,baz=56,slow=4.4,SNR=4.7						
KSH	Kashi	119.18	301	PKP	PKiKP	03 38 54.2	+0.5
KSH				sPKP		03 40 13.7	
KSH				PP	sPKPdf	03 40 21.1	-0.4
KSH				AMB	AMB		
	comp=Z,350nm,6.2s						
KURK	Kurchatov	120.03	314	*e*PKPdf	PKPdf	03 38 53.0	-1.7
KURK	Kurchatov	120.03	314*c*	*i*PKIKP	PKPdf	03 38 52.9	-1.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAK	Ala-Archa	121.06	304	*e*PKPdf	PKPdf	03 38 56.3	-0.8
AAK	Ala-Archa	121.06	304⇑	*i*PKIKP	PKPdf	03 38 56.2	-1.0
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BRVK	Borovoye	125.47	316	*e*PKPdf	PKPdf	03 39 04.4	-0.6
BRVK	Borovoye	125.47	316	*e*PKIKP	PKPdf	03 39 04.4	-0.6
LSZ	Lusaka	127.95	214	PKP	PKPdf	03 39 11.4	+0.3
	comp=Z,1.3nm,0.4s,baz=130,slow=2.5,SNR=7.2						
LSZ				SKPbc	SKPbc	03 42 03.1	
	comp=Z,5.1nm,1.0s,baz=161,slow=3.8,SNR=8.2						
ARU	Arti	132.12	321	*e*PKPdf	PKPdf	03 39 17.0	-0.6
ARU	Arti	132.12	321	*i* PKIKP	PKPdf	03 39 17.2	-0.4
ARU						03 41 41.6	
GEYT	Alibeck	132.50	296	PKP	PKiKP	03 39 19.7	-0.4
	comp=Z,4.4nm,0.7s,baz=356,slow=4.5,SNR=6.2						
GEYT				SKPbc	SKPbc	03 42 19.9	-2.3
	comp=Z,8.6nm,0.9s,baz=252,slow=0.9,SNR=10						
KMBO	Kilima Mbogo	133.61	235	*e*PKPdf	PKPdf	03 39 21.9	-0.1
KMBO	Kilima Mbogo	133.61	235	*e*PKIKP	PKiKP	03 39 24.3	+0.9
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMBO	Kilima Mbogo	133.61	235	PKP	PKiKP	03 39 23.5	+0.1
	comp=Z,0.9nm,0.5s,baz=67,slow=5.3,SNR=4.3						
KMBO				SKPbc	SKPbc	03 42 23.8	-3.1
	comp=Z,4.6nm,1.1s,baz=206,slow=1.8,SNR=6.1						
PRGR	Permogore	136.93	331	*e*PKIKP	PKPdf	03 39 23.3	-3.1
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LVZ	Lovozero	137.09	342	*e*PKPdf	PKPdf	03 39 26.2	-0.4
LVZ	Lovozero	137.09	342⇓	*i*PKIKP	PKPdf	03 39 26.5	-0.1
HAMF	Hammerfest	137.27	349	*e*PKPdf	PKPdf	03 39 25.2	-1.6
ARA0	ARCESS Array S	137.90	347	*e*PKPdf	PKPdf	03 39 28.7	+0.6
ARA0				*e*SKPbc	SKPbc	03 42 33.8	-4.3
ARCES	ARCESS Array B	137.90	347	PKhKP	PKPpre	03 39 18.1	
	comp=Z,2.9nm,0.6s,baz=79,slow=2.8,SNR=34						
ARCES				PKP	PKPdf	03 39 28.7	+0.7
	comp=Z,5.7nm,0.5s,baz=18,slow=1.1,SNR=18						
ARCES				SKPbc	SKPbc	03 42 33.8	-4.3
	comp=Z,4.0nm,0.8s,baz=40,slow=4.7,SNR=5.0						
KTK1	Kautokeino	138.77	348	*e*PKPdf	PKPdf	03 39 30.1	+0.5
TRO	Tromso	138.91	351	*e*PKPdf	PKPdf	03 39 30.0	+0.2
KLMR	Klimovskoe	139.88	332	*e*PKHKP	PKPpre	03 39 23.0	
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	Klimovskoe	139.88	332	*e*PKPdf	PKPpre	03 39 23.0	
KLMR				AMP		03 39 32.3	
	comp=Z,10.0nm,0.8s						
STEI	Steigen	141.00	351	*e*PKPdf	PKPdf	03 39 32.7	-1.0
MOR8	Moi Rana	142.77	351	*e*PKPdf	PKPdf	03 39 35.8	-1.2
GNI	Garni	143.01	298	*e*PKPdf	PKPdf	03 39 37.8	-0.5
GNI	Garni	143.01	298⇓	*i*PKIKP	PKPdf	03 39 40.1	+1.7
VRH	Novokhopyorsk	143.04	317	*e*PKHKP	PKPpre	03 39 33.4	
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEI	Tsey	143.45	303	*i* PKIKP	PKPbc	03 39 36.9	-0.2
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NCK	Nalchik	143.59	304⇑	*i*PKIKP	PKPbc	03 39 37.3	+0.1
KBZ	Khabaz	144.06	304	PKP	PKPbc	03 39 38.7	+0.2
	comp=Z,7.6nm,0.7s,baz=152,slow=1.9,SNR=28						
LPSR	Galich'ya Gora	144.13	320	*e*PKIKP	PKPab	03 39 37.5	-0.5
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
PUL	Pulkovo	144.16	335⇓	*i*PKIKP	PKPab	03 39 38.0	+0.1
PUL				pmax	pmax		
	comp=Z,91nm,0.6s						
KVAR	Kislovodsk Arr	144.17	305	PKP	PKPdf	03 39 40.4	+0.2
	comp=Z,6.2nm,0.8s,baz=281,slow=16,SNR=5.5						
KIV	Kislovodsk	144.18	305	*e*PKPdf	PKPbc	03 39 39.2	+0.1
KIV	Kislovodsk	144.18	305	*e*PKIKP	PKPab	03 39 39.0	+0.3
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
OBN	Obninsk	144.23	325*d*	*e*PKIKP	PKPab	03 39 37.5	-0.8
OBN				*e*		03 42 59.6	
OBN				pmax	pmax		
	comp=Z,57nm,0.5s						
OBN	Obninsk	144.23	325	PKP	PKPab	03 39 37.8	-0.5
	comp=Z,19nm,0.5s,baz=179,slow=2.6,SNR=11						
NEY	Neytrino	144.25	304⇓	*i*PKIKP	PKPdf	03 39 40.5	+0.1
FIA0	FINESS Array S	144.36	339	*e*PKPdf	PKPab	03 39 37.4	-1.2
FIA0	FINESS Array S	144.36	339	*e*PKIKP	PKPab	03 39 37.4	-1.2
FINES	FINESS Array B	144.36	339	PKP	PKPab	03 39 37.4	-1.2
	comp=Z,67nm,0.5s,baz=60,slow=3.8,SNR=813						
VSR	Storozhevoye	144.54	318*d*	*i*PKIKP	PKPab	03 39 37.8	-1.9
NSS	Namsos	144.66	352	*e*PKPbc	PKPbc	03 39 38.3	-1.4
TBLU	Trondheim	146.10	352	*e*PKPdf	PKPdf	03 39 42.5	-0.2
KOPT	Kop Dagi	146.27	298	*i* P	PKPab	03 39 47.2	+0.2
KOPT				IAML_P			
	comp=Z,477nm,0.6s						
VSU	Vasula	146.39	336*d*	*i*PKP2	PKPdf	03 39 44.0	+0.7
VSU	Vasula	146.39	336	*e*P	PKPdf	03 39 44.2	+0.9
VSU				IAmb	IAmb	03 39 46.3	
	comp=Z,320nm,0.6s						
BAYB	BAYBURT	146.43	299	*i* P	PKPab	03 39 47.9	+0.3
BAYB				IAML_P			
	comp=Z,669nm,1.0s						
MOL	Molde	147.04	354	*e*PKPab	PKPbc	03 39 48.0	+1.2
TNCL	Tunceli-Merkez	147.08	297	*i* P	PKPab	03 39 52.6	+2.5
TNCL				IAML_P			
	comp=Z,240nm,0.6s						
DOMB	Dombas	147.41	353	*e*PKPbc	PKPbc	03 39 46.8	-1.1
AKN	Aaknes	147.47	355	*e*PKPbc	PKPbc	03 39 47.7	-0.3
REFA	Refahiye_ERZN	147.66	297	*i* P	PKPbc	03 39 50.3	+0.9
REFA				IAML_P			
	comp=Z,699nm,0.5s						
KEMA	Kemaliye	147.88	297	*i* P	PKiKP	03 39 51.5	-0.1
KEMA				IAML_P			
	comp=Z,690nm,0.7s						
SUSE	Susehri	148.00	299	*i* P	PKiKP	03 39 51.5	-0.4
SUSE				IAML_P			
	comp=Z,370nm,0.8s						
NB2	NORSAR Subarra	148.11	351	PKP	PKPbc	03 39 48.5	-1.3
	comp=Z,20nm,0.6s,baz=14,slow=2.8						
NB2	NORSAR Subarra	148.11	351	PKP	PKPbc	03 39 48.5	-1.3
	baz=14,slow=2.8						
NB200	NORSAR Array S	148.11	351	*e*PKPdf	PKPdf	03 39 45.4	-0.9
NB200				*e*PKPbc	PKPbc	03 39 48.4	-1.3
NOA	NORSAR Array B	148.11	351	*e*PKIKP	PKPdf	03 39 45.3	-0.9
NOA				pmax	pmax		
	comp=Z,16nm,0.5s						
NOA	NORSAR Array B	148.11	351	PKP	PKPdf	03 39 45.4	-0.9
	comp=Z,5.6nm,0.5s,baz=14,slow=4.2,SNR=103						
NOA				PKPbc	PKPbc	03 39 48.4	-1.3
	comp=Z,14nm,0.5s,baz=16,slow=4.2,SNR=100						
FOO	Floro	148.18	356	*e*PKPbc	PKPbc	03 39 49.1	-0.7
NC602	NORSAR Array S	148.36	350	*e*PKPbc	PKPbc	03 39 49.1	-1.3
IZAR	Zarasai	148.53	332	*e*P	PKPbc	03 39 50.6	-0.3
IZAR				IAmb	IAmb	03 39 52.5	
	comp=Z,15nm,0.7s						
HYA	Hoyanger	148.54	355	*e*PKPbc	PKPbc	03 39 50.3	-0.5
SLIT	Slitere, Latvi	148.55	338	*e*P	PKPdf	03 39 49.0	+2.1
SLIT				IAmb	IAmb	03 39 50.3	
	comp=Z,91nm,0.5s						
HFS	Hagfors	148.57	348	PKPbc	PKPbc	03 39 49.5	-1.4
	comp=Z,29nm,0.5s,baz=54,slow=2.6,SNR=120						
IDID	Didziasalis	148.63	331	*e*P	PKPbc	03 39 50.6	-0.6
IDID				IAmb	IAmb	03 39 51.8	
	comp=Z,10nm,0.8s						
CUKAN	kangal_SIVAS	148.67	297	*i* P	PKPbc	03 39 52.8	+0.8
ISAL	Salakas	148.70	332	*e*P	PKPbc	03 39 51.1	-0.2
ISAL				IAmb	IAmb	03 39 52.0	
	comp=Z,12nm,0.8s						
SUE	Sulen	148.74	356	*e*PKPbc	PKPbc	03 39 50.7	-0.6
IIGN	Ignalina	148.82	332	*e*P	PKPbc	03 39 51.1	-0.6
IIGN				IAmb	IAmb	03 39 52.4	
	comp=Z,19nm,0.8s						
ASF	Jabal al Asfar	149.18	284	PKPbc	PKPbc	03 39 53.3	-0.2
	comp=Z,6.5nm,0.6s,baz=169,slow=0.8,SNR=16						
ASK	Askoy	149.28	356	*e*PKPbc	PKPbc	03 39 52.1	-0.5
BER	Bergen	149.37	356	*e*PKPbc	PKPbc	03 39 52.3	-0.6
KONO	Kongsberg	149.68	351	*e*PKPbc	PKPbc	03 39 52.7	-0.9
ODD1	Odda	149.74	354	*e*PKPbc	PKPbc	03 39 53.3	-0.5
BLS5	Blasjo	150.24	354	*e*PKPbc	PKPbc	03 39 54.9	-0.2
AKASG	Malin Array Be	150.34	322	PKPbc	PKPbc	03 39 54.5	-0.9
	comp=Z,20nm,0.6s,baz=49,slow=3.0,SNR=92						
KIEV	Kiev	150.35	322	*e*PKPbc	PKPbc	03 39 54.7	-0.8
KIEV				*e*PKPab	PKPab	03 40 01.9	-0.9
KMY	Karmoy	150.54	355	*e*PKPbc	PKPbc	03 39 55.4	-0.3
SUW	Suwalki	151.01	333	*e*PKP	PKPbc	03 39 56.1	-0.8
SUW	Suwalki	151.01	333	*e*PKIKP	PKPbc	03 39 56.1	-0.8
HOMB	Homborsund	151.16	352	*e*PKPbc	PKPbc	03 39 56.7	-0.4

SNART	**Snartemo**	**151.24**	**353**	*e*PKPbc	**PKPbc**	**03 39 57.0**	**-0.4**
BR101	**Keskin Array S**	**151.54**	**299**	*e*PKPdf	**PKPdf**	**03 39 52.5**	**0.0**
BR101				*e*PKPbc	**PKPbc**	**03 39 58.0**	**-0.9**
BRTR	**Keskin Array B**	**151.54**	**299**	*e*PKIKP	**PKPdf**	**03 39 54.0**	**+1.6**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	**Keskin Array B**	**151.54**	**299**	PKP	**PKPdf**	**03 39 52.5**	**0.0**
	comp=Z,0.5nm,0.9s,baz=160,slow=3.9,SNR=3.6						
BRTR				PKPbc	**PKPbc**	**03 39 58.0**	**-0.9**
	comp=Z,10.0nm,1.1s,baz=145,slow=6.5,SNR=40						
ANTO	**Ankara**	**152.16**	**300**	*e*PKPbc	**PKPbc**	**03 39 60.0**	**-0.2**
MUD	**Monsted U'grnd**	**152.83**	**350**	*i* P	**PKPbc**	**03 40 00.5**	**-0.4**
MUD	**Monsted U'grnd**	**152.83**	**350**	*i* PKIKP	**PKPbc**	**03 40 00.5**	**-0.4**
BSD	**Bornholm Skovb**	**152.88**	**342**	*i* P	**PKPbc**	**03 40 00.2**	**-0.9**
BSD	**Bornholm Skovb**	**152.88**	**342**	*i* PKIKP	**PKPbc**	**03 40 00.2**	**-0.9**
COP	**Copenhagen**	**152.96**	**346**	*i* P	**PKPbc**	**03 40 00.7**	**-0.5**
COP	**Copenhagen**	**152.96**	**346**	*e*PKIKP	**PKPbc**	**03 40 00.7**	**-0.5**
LVV	**L'vov**	**153.53**	**325**	*e*PKP2	**PKPab**	**03 40 15.5**	**-0.8**
BEL	**Belsk**	**153.60**	**332**	*e*PKP	**PKPbc**	**03 40 02.5**	**-0.3**
KWP	**Kalwaria Pacla**	**154.31**	**326**	*e*PKP	**PKPab**	**03 40 18.2**	**-1.4**
KWP	**Kalwaria Pacla**	**154.31**	**326**	*e*PKP2	**PKPab**	**03 40 18.2**	**-1.4**
OJC	**Ojcow**	**155.22**	**330**	*e*PKP	**PKPab**	**03 40 22.1**	**-1.3**
OJC	**Ojcow**	**155.22**	**330**	*e*PKP2	**PKPab**	**03 40 22.1**	**-1.3**
RUE	**Ruedersdorf**	**155.53**	**341**	*e*P	**PKPab**	**03 40 23.7**	**-0.9**
RUE				IAmb	IAmb	03 40 24.6	
	comp=Z,12nm,0.8s						
NIE	**Niedzica**	**155.58**	**328**	*e*PKP	**PKPab**	**03 40 25.6**	**+0.5**
NIE	**Niedzica**	**155.58**	**328**	*e*PKP2	**PKPab**	**03 40 25.6**	**+0.5**
LIC	**Lamto**	**155.79**	**165**	*e*P	**PKPab**	**03 40 28.0**	**+1.3**
	comp=Z,34nm,0.8s						
KIC	**Kosan Boka**	**155.98**	**166**	*e*P	**PKPab**	**03 40 29.0**	**+1.5**
	comp=Z,17nm,0.6s						
KSP	**Ksiaz**	**156.12**	**335**	*e*PKP	**PKPab**	**03 40 26.6**	**-0.6**
KSP	**Ksiaz**	**156.12**	**335**	*e*PKP2	**PKPab**	**03 40 26.6**	**-0.6**
LANS	**Liptovska Anna**	**156.15**	**329**	*e*PKP2	**PKPab**	**03 40 27.9**	**+0.4**
LANS	**Liptovska Anna**	**156.15**	**329**	*e*PKP	**PKPab**	**03 40 27.9**	**+0.4**
TIC	**Toumodi**	**156.20**	**165**	*e*P	**PKPab**	**03 40 29.9**	**+1.4**
DBIC	**Dimbokro**	**156.26**	**166**	PKP	**PKPdf**	**03 39 59.8**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=139,slow=4.1,SNR=6.3						
CLL	**Collm**	**156.79**	**341**	*e*PKPdiff	PKPdf	03 40 11.0	+12
CLL				*i* PKPab	**PKPab**	**03 40 28.8**	**-1.3**
	comp=Z,24nm,0.6s						
CLL	**Collm**	**156.79**	**341**	*i* PKP2	**PKPab**	**03 40 28.8**	**-1.3**
CLL				pmax	pmax		
	comp=Z,24nm,0.6s						
BRG	**Berggiesshubel**	**156.89**	**339**	*i* PKP	**PKPab**	**03 40 30.0**	**-0.6**
	comp=Z,13nm,0.7s						
BRG	**Berggiesshubel**	**156.89**	**339**	*i* PKP2	**PKPab**	**03 40 30.0**	**-0.6**
BRG				pmax	pmax		
	comp=Z,13nm,0.7s						
VYHS	**Vyhne**	**156.92**	**329**	*e*PKP	**PKPab**	**03 40 30.9**	**+0.1**
VYHS				*e*		03 41 06.1	
WTSB	**Winterswijk**	**157.53**	**350**	*e*PKP	**PKPab**	**03 40 32.3**	**-0.9**
	comp=Z,62nm,1.5s						
GERES	**GERESS Array B**	**158.71**	**336**	PKIKP	**PKPdf**	**03 40 01.0**	**-0.8**
GERES	**GERESS Array B**	**158.71**	**336**	PKP	**PKPdf**	**03 40 01.0**	**-0.8**
	comp=Z,5.2nm,0.4s,baz=145,slow=25,SNR=12						
GRFO	**Grafenberg**	**158.75**	**341**	*e*PKPab	**PKPab**	**03 40 38.0**	**-0.7**
GRFO	**Grafenberg**	**158.75**	**341**	*e*PKP2	**PKPab**	**03 40 38.0**	**-0.7**
HGN	**Heimansgroeve**	**158.82**	**351**	*e*PKP	**PKPab**	**03 40 37.3**	**-1.6**
	comp=Z,23nm,0.9s						
DAVOX	**Davos/Dischmat**	**161.76**	**340**	PKPab	**PKPab**	**03 40 51.3**	**-0.9**
	comp=Z,28nm,0.6s,baz=346,slow=21,SNR=8.6						
TORD	**Torodi Ar. Bea**	**163.31**	**183**	PKP	**PKPdf**	**03 40 07.8**	**+0.3**
	comp=Z,2.3nm,1.1s,baz=357,slow=1.0,SNR=8.7						
TORD				PKPab	**PKPab**	**03 40 59.6**	**+0.3**
	comp=Z,4.8nm,0.6s,baz=183,slow=2.0,SNR=24						
TORD				PP	**PP**	**03 44 45.1**	**+1.5**
	comp=Z,1.4nm,1.0s,baz=222,slow=1.7,SNR=3.8						
TOA1	**Torodi Ar. Sit**	**163.32**	**183**	*e*PKPdf	**PKPdf**	**03 40 07.8**	**+0.3**
TOA1				*e*PKPab	**PKPab**	**03 40 59.6**	**+0.2**
TOA1				*e*PP	**PP**	**03 44 45.1**	**+1.4**
ESDC	**Sonseca Array**	**169.46**	**21**	PKP	**PKPdf**	**03 40 12.4**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=346,slow=4.3,SNR=3.8						
MDT	**Midelt**	**174.45**	**57**	PKP	**PKPdf**	**03 40 14.6**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=205,slow=4.1,SNR=4.6						

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*ANF **03** 03:27:27.6±1.1, 62°.73N×152°.41W, ML4.1/3, Error ellipse: s-maj=27.4km s-min=9.7km az=132.0*
*ISCJB **03** 03:27:36.1±0.7, 63°.09N±0°.02×151°.55W±0°.07, h10^{km}±6^{km}, mb3.5/2, Error ellipse: s-maj=5.1km s-min=3.6km az=177.7*
*AEIC **03** 03:27:36.6, 63°.09N×151°.59W, h12^{km}, ML3.4*
*NEIC **03** 03:27:36.6±0.0, 63°.09N×151°.59W, h12^{km}, ML3.4(AEIC), After AEIC.*
*IDC **03** 03:27:38.4±1.9, 63°.01N×151°.16W, h0^{km}, mb3.4/2, mb1 3.7/6, mb1mx3.4/54, mbtmp3.3/6, ML3.0/4, MS2.7/1, Ms1 2.8/1, ms1mx2.4/29, Error ellipse: s-maj=33.9km s-min=12.5km az=114.0*
ISC 03 03:27:36.7±1.1, **63°.09N**±0°.03×**151°.57W**±0°.03, **h8**^{km}±10^{km}, **n61**, σ**0^{s}.83**/69, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPLA	**Purkeypile**	**0.34**	**236**	P	**Pg**	**03 27 43.2**	**-0.3**
PPLA				S	**Sg**	**03 27 47.6**	**-0.3**
CAST	**Castle Rocks**	**0.41**	**325**	P	**Pg**	**03 27 45.1**	**+0.5**
CAST				S	**Sg**	**03 27 50.5**	**+0.5**
TRF	**Thorofare Moun**	**0.68**	**57**	P	**Pg**	**03 27 50.0**	**+0.2**
TRF				S	**Sg**	**03 27 59.3**	**+0.5**
CHUM	**Lake Minchumin**	**0.86**	**338**	P	**Pb**	**03 27 53.8**	**-0.2**
CHUM				S	**Sb**	**03 28 05.1**	**-0.5**
HUR	**Hurricane**	**0.89**	**96**	P	**Pg**	**03 27 53.2**	**-0.5**
BPAW	**Bear Paw Mtn.**	**1.05**	**14**	P	**Pb**	**03 27 56.6**	**-0.5**
BPAW				S	**Sg**	**03 28 10.6**	**+0.1**
RND	**Reindeer**	**1.27**	**74**	P	**Pn**	**03 27 59.9**	**-0.9**
MCK	**McKinley**	**1.35**	**60**	P	**Pn**	**03 28 01.5**	**-0.4**
BWN	**Browne**	**1.44**	**40**	P	**Pn**	**03 28 02.8**	**-0.3**
SUA	**Susitna One**	**1.68**	**166**	P	**Pn**	**03 28 06.0**	**-0.4**
GHO	**Glory Hole Cre**	**1.81**	**136**	P	**Pn**	**03 28 07.6**	**-0.5**
SPNN	**North Nagishla**	**1.81**	**198**	P	**Pn**	**03 28 07.9**	**-0.4**
SPCP	**Crater Peak Br**	**1.85**	**189**	P	**Pn**	**03 28 08.5**	**-0.3**
NEA	**Nenana**	**1.86**	**35**	P	**Pn**	**03 28 07.5**	**-1.3**
SPWE	**Spurr West**	**1.88**	**195**	P	**Pn**	**03 28 09.3**	**+0.1**
PMR	**Palmer**	**1.88**	**142**	P	**Pn**	**03 28 08.4**	**-0.7**
DHY	**Denali Highway**	**1.91**	**89**	P	**Pn**	**03 28 09.5**	**-0.1**
SML	**Sawmill**	**1.98**	**129**	P	**Pn**	**03 28 09.9**	**-0.6**
MLY	**Manley**	**1.98**	**10**	P	**Pn**	**03 28 09.9**	**-0.7**
TT01	**Tatalina**	**2.04**	**267**	P	**Pn**	**03 28 10.1**	**-1.2**
WRH	**Wood River Hil**	**2.08**	**47**	P	**Pn**	**03 28 10.5**	**-1.3**
RC01	**Rabbit Creek A**	**2.18**	**156**	P	**Pn**	**03 28 13.2**	**-0.1**
KNK	**Knik Glacier**	**2.23**	**138**	P	**Pn**	**03 28 13.9**	**0.0**
SCM	**Sheep Creek Mo**	**2.34**	**121**	P	**Pn**	**03 28 15.3**	**-0.2**
MDM	**Murphy Dome**	**2.38**	**37**	P	**Pn**	**03 28 14.8**	**-1.3**
TCOL	**CIGO, UAF Yank**	**2.42**	**41**	P	**Pn**	**03 28 15.6**	**-1.0**
	baz=224						
TCOL				S	**Sb**	**03 28 51.7**	**+1.2**
	baz=224						
I53US	**FAIRBANKS INFR**	**2.43**	**41**	*i*		03 42 10.0	
	baz=216,slow=324,SNR=0.2						
COLA	**College**	**2.43**	**41**	P	**Pn**	**03 28 15.4**	**-1.2**
HDA	**Harding Lake**	**2.44**	**55**	P	**Pn**	**03 28 15.8**	**-1.1**
HDA	**Harding Lake**	**2.44**	**55**	P	**Pn**	**03 28 15.8**	**-1.1**
	baz=239						
HDA				S	**Sg**	**03 28 53.2**	**-1.9**
	baz=239						
PS08	**TAPS Pump Stn8**	**2.56**	**53**	P	**Pn**	**03 28 17.4**	**-1.1**
SLKM	**Skilak Lake**	**2.67**	**166**	P	**Pn**	**03 28 20.2**	**+0.3**
ILAR	**Eielson Array**	**2.67**	**49**	Pn	**Pn**	**03 28 18.6**	**-1.4**
	1.3nm,0.3s,baz=232,slow=14,SNR=29						
ILAR				Pg	**Pb**	**03 28 25.9**	**+1.2**
	7.4nm,0.3s,baz=236,slow=16,SNR=48						
ILAR				Lg	Lg	03 28 60.0	
	20nm,0.3s,baz=228,slow=29,SNR=16						
ILAR				LR	LR	03 29 26.2	
	comp=Z,147nm,19.6s,baz=150,slow=42						
PWL	**Port Wells**	**2.71**	**144**	P	**Pn**	**03 28 21.1**	**+0.6**
POKR	**Poker Plat Res**	**2.73**	**40**	P	**Pn**	**03 28 19.8**	**-1.0**
	baz=224						
POKR				S	**Sb**	**03 29 00.7**	**+1.4**
	baz=224						
PAX	**Paxson**	**2.78**	**90**	P	**Pn**	**03 28 21.9**	**+0.3**
GCSA	**Galena City Sc**	**2.88**	**308**	P	**Pn**	**03 28 24.1**	**+1.3**
PS06	**TAPS Pump Stn6**	**2.89**	**15**	P	**Pn**	**03 28 22.8**	**-0.1**
HARP	**HAARP**	**3.03**	**100**	P	**Pn**	**03 28 25.8**	**+0.9**
IM3	**Indian Mountai**	**3.06**	**343**	P	**Pn**	**03 28 25.2**	**-0.1**
GLI	**Glacier Island**	**3.06**	**134**	P	**Pn**	**03 28 26.2**	**+0.8**
KLU	**Klutina**	**3.09**	**119**	P	**Pn**	**03 28 26.6**	**+0.8**
RIDG	**Independ'e Rid**	**3.10**	**75**	P	**Pn**	**03 28 26.1**	**+0.2**
JPK	**Jack Peak**	**3.10**	**129**	P	**Pn**	**03 28 27.0**	**+1.0**
DIV	**Divide**	**3.36**	**123**	P	**Pn**	**03 28 29.6**	**+0.1**
DOT	**Dot Lake**	**3.43**	**77**	P	**Pn**	**03 28 30.4**	**0.0**
SCRK	**Sand Creek**	**3.51**	**72**	P	**Pn**	**03 28 31.3**	**-0.3**
PRP	**Porcupine Dome**	**3.59**	**45**	P	**Pn**	**03 28 32.0**	**-0.7**
PS05	**TAPS Pump Stn5**	**3.76**	**5**	P	**Pn**	**03 28 35.7**	**+0.8**
COLD	**Coldfoot**	**4.20**	**7**	P	**Pn**	**03 28 41.3**	**+0.4**
BCA3	**Beaver Creek A**	**4.45**	**86**	P	**Pn**	**03 28 45.2**	**+0.8**
BVCY	**Beaver Creek**	**4.97**	**93**	P	**Pn**	**03 28 53.6**	**+2.0**
KULT	**Kultieth River**	**5.09**	**120**	P	**Pn**	**03 28 54.1**	**+0.9**
BM3	**Burnt Mountain**	**5.24**	**31**	P	**Pn**	**03 28 54.2**	**-1.0**
KDAK	**Kodiak Island**	**5.35**	**186**	Pn	**Pn**	**03 28 56.4**	**-0.3**
	0.2nm,0.3s,baz=27,slow=6.8,SNR=4.0						
DAWY	**Dawson**	**5.53**	**74**	P	**Pn**	**03 28 59.0**	**-0.2**
ANM	**Nome**	**6.29**	**290**	P	**Pn**	**03 29 09.8**	**+0.3**
INK	**Inuvik**	**9.07**	**47**	Pn	**Pn**	**03 29 48.1**	**+0.4**
	0.2nm,0.3s,baz=242,slow=12,SNR=5.7						
YKA	**Yellowknife Ar**	**16.77**	**75**	Pn	**P**	**03 31 32.2**	**-1.6**
	0.1nm,0.3s,baz=289,slow=9.7,SNR=10						
NVAR	**Mina Array Bea**	**31.79**	**125**	P	**P**	**03 34 02.0**	**+0.4**
	0.4nm,0.7s,baz=304,slow=6.4,SNR=2.3						
TXAR	**Lajitas Array**	**45.54**	**115**	P	**P**	**03 35 56.9**	**+0.2**
	0.3nm,0.4s,baz=327,slow=4.3,SNR=3.4						

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*JMA **03** 03:29:19.8±0.5, 32°.97N×138°.68E, h307^{km}, M3.1*
*ISCJB **03** 03:29:22.5±0.7, 33°.3N±0°.1×138°.54E±0°.10, h300^{km}, mb2.8/2, Error ellipse: s-maj=15.1km s-min=11.0km az=175.5*
*IDC **03** 03:29:23.9±0.8, 33°.12N×138°.33E, h287^{km}±22^{km}, mb2.6/2, mb1 2.7/4, mb1mx2.6/52, mbtmp3.2/4, Error ellipse: s-maj=67.1km s-min=18.8km az=58.0*
ISC 03 03:29:23.5±1.1, **33°.3N**±0°.1×**138°.52E**±0°.10, **h300**^{km}, **n12**, σ**1^{s}.09**/14, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK02	**Tokai 2**	**0.91**	**316**	P	**Pn**	**03 30 02.8**	**-0.4**
JHJ	**Hachijo jima 2**	**1.07**	**99**	P	**Pn**	**03 30 05.3**	**+1.1**
	4.2nm,0.3s,baz=68,slow=19,SNR=3.2						
JHJ				S	**S**	**03 30 36.1**	**-0.5**
	9.1nm,0.3s,baz=73,slow=19,SNR=3.8						
JIE	**Ise**	**1.87**	**307**	P	**Pn**	**03 30 08.3**	**-0.9**
JOD2	**Odawara 2**	**2.03**	**13**	P	**Pn**	**03 30 10.4**	**0.0**
BSO1	**Boso 1**	**2.46**	**56**	P	**Pn**	**03 30 12.0**	**-1.4**
BSO1				S	**S**	**03 30 51.9**	**-1.5**
JTNC	**Tanabenakahech**	**2.48**	**283**	P	**Pn**	**03 30 12.6**	**-1.8**
JRY	**Ryogami san**	**2.74**	**7**	P	**Pn**	**03 30 17.4**	**+0.7**
JAG	**Ashikaga**	**3.22**	**14**	P	**Pn**	**03 30 20.9**	**-0.5**
MJAR	**Matsushiro Arr**	**3.26**	**356**	P	**Pn**	**03 30 21.7**	**-0.1**
	0.1nm,0.3s,baz=167,slow=10,SNR=6.9						
KSRS	**Korea Array**	**9.60**	**299**	P	**Pn**	**03 31 36.5**	**0.0**
	0.2nm,0.3s,baz=115,slow=14,SNR=6.4						
MKAR	**Makanchi Array**	**44.21**	**305**	P	**P**	**03 37 05.0**	**+1.6**
	0.1nm,0.3s,baz=87,slow=8.5,SNR=3.0						
WRA	**Warramunga Arr**	**53.08**	**185**	P	**P**	**03 38 10.7**	**-0.1**
	0.2nm,0.3s,baz=0.3,slow=7.6,SNR=7.3						

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*IDC **03** 03:29:52.6±3.2, 34°.65N×22°.89E, h0^{km}, mb3.8/7, mb1 3.7/12, mb1mx3.5/49, mbtmp3.6/12, ML3.5/5, MS4.2/1, Ms1 4.2/1, ms1mx2.6/51, Error ellipse: s-maj=58.5km s-min=20.4km az=31.0*
*ATH **03** 03:30:01.0, 35°.07N×23°.34E, h11^{km}±1^{km}, ML3.2/9, Error ellipse: s-maj=3.3km s-min=1.3km az=46.0*
*THE **03** 03:30:01.6, 35°.09N×23°.39E, h2^{km}±2^{km}, ML3.4/3, Error ellipse: s-maj=2.3km s-min=0.4km az=200.0*
ISC 03 03:29:55.9±2.2, **34°.93N**±0°.07×**23°.10E**±0°.07, **h4**^{km}±12^{km}, **n42**, σ**1^{s}.43**/48, **mb3.7**/7, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.82**	**96**	P	**Pb**	**03 30 13.7**	**+1.0**
GVD				AML	AML	03 30 31.9	
	comp=N,18074μm,0.7s						
GVD				AML	AML	03 30 33.3	
	comp=E,11314μm,0.4s						
GVD	**Gavdhos**	**0.82**	**96**	P	**Pb**	**03 30 13.6**	**+1.0**
GVD				S	**Sg**	**03 30 22.8**	**+0.7**
IMMV	**Iera Moni Meta**	**0.90**	**53**	P	**Pg**	**03 30 13.4**	**+0.3**
IMMV				S	**Sg**	**03 30 23.1**	**-1.6**
IMMV				AML	AML	03 30 32.6	
	comp=N,3663μm,0.5s						
IMMV				AML	AML	03 30 35.4	
	comp=E,4953μm,0.6s						
IMMV	**Iera Moni Meta**	**0.90**	**53**	P	**Pg**	**03 30 13.4**	**+0.3**
ANKY	**Antikythira Is**	**0.95**	**10**	P	**Pn**	**03 30 16.4**	**+0.3**
ANKY				S	**Sg**	**03 30 26.8**	**+0.3**
ANKY				AML	AML	03 30 30.0	
	comp=E,5473μm,0.6s						
ANKY				AML	AML	03 30 36.3	
	comp=N,3410μm,0.7s						
ANKY	**Antikythira Is**	**0.95**	**10**	P	**Pn**	**03 30 16.4**	**+0.3**
ANKY				S	**Sb**	**03 30 27.7**	**-0.2**
CHAN	**Chania**	**0.97**	**52**	P	**Pg**	**03 30 14.6**	**+0.1**
VAM	**Vamos**	**1.02**	**62**	P	**Pg**	**03 30 15.4**	**0.0**
VAM				AML	AML	03 30 37.4	
	comp=E,5030μm,0.6s						
VAM				AML	AML	03 30 40.0	
	comp=N,5343μm,0.7s						
VAM	**Vamos**	**1.02**	**62**	P	**Pg**	**03 30 15.5**	**0.0**
VAM				S	**Sg**	**03 30 26.6**	**-2.1**
KTHR	**Kythira**	**1.33**	**357**	P	**Pb**	**03 30 23.8**	**+2.3**
KTHR				S	**Sn**	**03 30 41.1**	**+1.6**
KYTH	**Kithira**	**1.34**	**358**	P	**Pb**	**03 30 24.1**	**+2.5**
KYTH				AML	AML	03 30 49.5	
	comp=E,1424μm,0.8s						
KYTH				AML	AML	03 30 55.5	
	comp=N,1568μm,0.5s						
KYTH	**Kithira**	**1.34**	**358**	P	**Pb**	**03 30 24.0**	**+2.5**
IDI	**Anoyia**	**1.51**	**76**	Pn	**Pg**	**03 30 25.2**	**+0.4**
	comp=N,10nm,0.3s,baz=247,slow=14,SNR=32						
IDI				Sn	**Sg**	**03 30 45.5**	**+1.1**
	comp=N,19nm,0.3s,baz=333,slow=14,SNR=7.2						
IDI				LR	LR	03 31 14.0	
	comp=N,166nm,18.5s,baz=174,slow=46						
VLI	**Veliai**	**1.79**	**356**	P	**Pg**	**03 30 31.8**	**+1.6**
VLI				AML	AML	03 31 01.1	
	comp=E,1026μm,0.7s						
VLI				AML	AML	03 31 08.0	
	comp=N,774μm,0.5s						
LAST	**Lasithi**	**1.96**	**83**	P	**Pg**	**03 30 33.5**	**-0.1**
LAST				AML	AML	03 31 19.0	
	comp=E,617μm,0.8s						
LAST				AML	AML	03 31 21.2	
	comp=N,619μm,0.9s						
MHLO	**Agia Marina, M**	**2.05**	**31**	P	**Pb**	**03 30 34.3**	**+0.6**
MHLO				AML	AML	03 31 14.2	
	comp=N,2301μm,0.6s						
MHLO				AML	AML	03 31 17.2	
	comp=E,2064μm,0.7s						
MHLO	**Agia Marina, M**	**2.05**	**31**	P	**Pn**	**03 30 32.4**	**+1.2**
NPS	**Neapolis**	**2.09**	**80**	P	**Pb**	**03 30 34.3**	**0.0**
NPS				AML	AML	03 31 19.3	
	comp=N,870μm,0.7s						
NPS				AML	AML	03 31 30.1	
	comp=E,746μm,0.9s						
MHLA	**Plaka, Milos I**	**2.11**	**30**	P	**Pg**	**03 30 36.0**	**-0.2**
KRND	**KRANIDI**	**2.45**	**1**	P	**Pg**	**03 30 42.0**	**-0.8**
ZKR	**Zakros**	**2.56**	**85**	P	**Pb**	**03 30 42.0**	**-0.4**
DID	**Didima**	**2.58**	**2**	P	**Pb**	**03 30 42.9**	**+0.2**
ANAF	**Anafi Island**	**2.60**	**56**	P	**Pn**	**03 30 40.2**	**+1.4**
VIL2	**Platees**	**3.28**	**2**	P	**Pn**	**03 30 51.3**	**+3.2**
PROD	**Prodromos**	**3.33**	**357**	P	**Pb**	**03 30 53.1**	**-2.4**
LAKA	**Lakka**	**3.43**	**345**	P	**Pb**	**03 30 56.4**	**-0.8**
KALE	**Kalithea**	**3.54**	**348**	P	**Pb**	**03 30 57.9**	**-1.3**
ATAL	**Atalanti**	**3.76**	**359**	P	**Pb**	**03 30 58.9**	**-3.9**
ANX	**Ano Chora**	**3.78**	**346**	P	**Pb**	**03 31 01.7**	**-1.6**
BRTR	**Keskin Array B**	**9.66**	**57**	Pn	**Pn**	**03 32 17.9**	**+2.1**
	comp=E,0.1nm,0.3s,baz=236,slow=10,SNR=3.5						
MMAI	**Mount Meron Ar**	**10.39**	**97**	Pn	**Pn**	**03 32 25.8**	**0.0**
	comp=E,1.0nm,0.3s,baz=289,slow=10,SNR=8.3						
EIL	**Elat**	**11.31**	**114**	Pn	**Pn**	**03 32 36.9**	**-1.4**
	comp=E,0.4nm,0.3s,baz=274,slow=2.0,SNR=7.1						
AKASG	**Malin Array Be**	**16.38**	**14**	Pn	**P**	**03 33 49.1**	**-0.4**
	comp=E,1.2nm,0.3s,baz=207,slow=10,SNR=4.7						
KBZ	**Khabaz**	**17.63**	**54**	P	**P**	**03 34 04.9**	**+1.6**
	comp=E,0.1nm,0.3s,baz=242,slow=19,SNR=3.0						
HFS	**Hagfors**	**25.95**	**349**	P	**P**	**03 35 29.3**	**+0.1**
	comp=E,0.7nm,0.4s,baz=140,slow=9.5,SNR=15						
FINES	**FINESS Array B**	**26.60**	**3**	P	**P**	**03 35 33.8**	**-1.2**
	comp=E,1.1nm,0.9s,baz=174,slow=8.8,SNR=3.8						
NOA	**NORSAR Array B**	**27.22**	**347**	P	**P**	**03 35 41.3**	**+0.6**
	comp=E,0.9nm,1.1s,baz=165,slow=11,SNR=4.4						
GEYT	**Alibeck**	**28.23**	**74**	P	**P**	**03 35 49.7**	**-0.3**
	comp=E,1.7nm,0.4s,baz=246,slow=14,SNR=3.5						
ARCES	**ARCESS Array B**	**34.69**	**1**	P	**P**	**03 36 45.1**	**-1.2**
	comp=E,1.6nm,1.0s,baz=174,slow=9.6,SNR=3.7						
MKAR	**Makanchi Array**	**45.31**	**56**	P	**P**	**03 38 14.3**	**-0.5**
	comp=E,0.3nm,0.7s,baz=277,slow=3.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**46.38**	**46**	P	**P**	**03 38 21.6**	**-1.5**
	comp=E,0.3nm,0.4s,baz=249,slow=12,SNR=2.1						
MJAR	**Matsushiro Arr**	**86.73**	**47**	LR	LR	04 24 34.0	
	comp=E,115nm,20.2s,baz=165,slow=38						

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*LDG **03** 03:37:15.5±0.1, 43°.26N×18°.75E, h10^{km}, Ml4.1/12, Error ellipse: s-maj=3.0km s-min=2.1km az=27.0*
*NEIC **03** 03:37:15.1±0.0, 43°.27N×18°.72E, h10^{km}, ML4.0(PDG), After PDG.*
*ROM **03** 03:37:16.0±1.5, 43°.19N±0°.09×18°.9E±0°.1, h20^{km}, ML3.9/18*
*ISCJB **03** 03:37:15.8±0.3, 43°.29N±0°.01×18°.69E±0°.01, h17^{km}±3^{km}, Error ellipse: s-maj=1.9km s-min=1.7km az=153.5*
*SAR **03** 03:37:15.6±0.2, 43°.25N×18°.68E, h6^{km}±3^{km}, ML3.8/1*
*BEO **03** 03:37:15.8±0.3, 43°.25N×18°.73E, h11^{km}±1^{km}, ML3.4/18*
*PDG **03** 03:37:15.3±0.2, 43°.23N×18°.68E, h12^{km}, MD4.0/9, ML3.9/9, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
*PRU **03** 03:37:17.3±0.0, 43°.29N×18°.77E, h14^{km}*
*TIR **03** 03:37:22.8, 43°.22N×18°.86E, h10^{km}, Md3.6/3*
ISC 03 03:37:15.1±0.9, **43°.27N**±0°.01×**18°.65E**±0°.02, **h17**^{km}±7^{km}, **n232**, σ**2^{s}.28**/329, **29C-10D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NKY	**Niksic**	**0.52**	**151**	⇑*i*Pg	**Pg**	**03 37 24.3**	**-1.1**
NKY				*i* Sg	**Sg**	**03 37 32.0**	**-0.4**
NKY	**Niksic**	**0.52**	**151**	P	**Pg**	**03 37 25.1**	**-0.3**
PLE	**Pljevlja**	**0.54**	**83**	⇓*i*Pg	**Pg**	**03 37 25.6**	**-0.3**
PLE				*i* Sg	**Sb**	**03 37 33.5**	**-0.4**
PLE	**Pljevlja**	**0.54**	**83**	P	**Pg**	**03 37 25.8**	**-0.1**
NKME	**Niksic**	**0.55**	**156**	⇑*i*Pg	**Pg**	**03 37 24.8**	**-1.1**
NKME				*i* Sg	**Sg**	**03 37 33.0**	**-0.3**
TREB	**Trebinje**	**0.59**	**202**	*e*Pg	**Pg**	**03 37 26.0**	**-0.8**
TREB				*e*Sg	**Sb**	**03 37 35.8**	**+0.7**
TREB	**Trebinje**	**0.59**	**202**	*e*Pg	**Pg**	**03 37 25.8**	**-1.0**
TREB				*e*Sg	**Sg**	**03 37 35.3**	**+0.7**
KOME	**Kolasin**	**0.76**	**123**	⇑*i*Pg	**Pg**	**03 37 29.1**	**-0.8**
KOME				*i* Sg	**Sb**	**03 37 40.0**	**0.0**
STON	**Ston**	**0.80**	**241**	*i* Pg	**Pb**	**03 37 29.8**	**-0.7**
STON				Sg	**Sn**	**03 37 43.2**	**+0.1**
BBLS	**Lazići**	**0.81**	**42**	*e*Pg	**Pg**	**03 37 31.1**	**+0.2**
BBLS				*e*Sg	**Sg**	**03 37 41.9**	**+0.2**
HCY	**Herceg Novi**	**0.83**	**188**	⇑*i*Pg	**Pb**	**03 37 30.0**	**-1.0**
HCY				*i* Sg	**Sn**	**03 37 43.4**	**-0.4**
HCY	**Herceg Novi**	**0.83**	**188**	*e*Pg	**Pb**	**03 37 30.4**	**-0.6**
HCY				*e*Sg	**Sb**	**03 37 41.1**	**-0.8**
HAPS	**Han Pijesak,BI**	**0.85**	**15**	*e*Pg	**Pb**	**03 37 31.3**	**-0.2**
HAPS				*e*Sg	**Sn**	**03 37 43.7**	**-0.9**
HAPS	**Han Pijesak,BI**	**0.85**	**15**	⇑*i*Pg	**Pb**	**03 37 31.2**	**-0.2**
HAPS				*e*Sg	**Sb**	**03 37 42.4**	**-0.2**
PDG	**Podgorica**	**0.95**	**152**	*e*Pg	**Pb**	**03 37 31.3**	**-1.7**
PDG				*e*Sg	**Sb**	**03 37 45.5**	**+0.2**
PDG	**Podgorica**	**0.95**	**152**	⇑*i*P	**Pb**	**03 37 31.3**	**-1.7**
PDG				S	**Sb**	**03 37 43.0**	**-2.3**
PDG	**Podgorica**	**0.95**	**152**	*e*Pg	**Pb**	**03 37 31.4**	**-1.6**
PDG				*e*Sg	**Sb**	**03 37 45.0**	**-0.3**
TTG	**Podgorica**	**0.95**	**152**	⇑*i*Pg	**Pb**	**03 37 31.3**	**-1.7**
TTG				*i* Sg	**Sn**	**03 37 46.5**	**-0.3**
BUM	**Brajici-Budva**	**0.98**	**169**	⇓*i*Pg	**Pb**	**03 37 32.6**	**-1.1**
BUM				*i* Sg	**Sn**	**03 37 47.7**	**0.0**
BUM	**Brajici-Budva**	**0.98**	**169**	P	**Pb**	**03 37 33.1**	**-0.6**
IVA	**Berane**	**0.99**	**113**	⇓*i*Pg	**Pb**	**03 37 33.5**	**-0.4**
IVA				*i* Sg	**Sn**	**03 37 48.1**	**0.0**
IVAS	**Ivanjica**	**1.14**	**74**	*e*Pg	**Pb**	**03 37 35.7**	**-0.7**
IVAS				*e*Sg	**Sb**	**03 37 49.3**	**-1.6**
DRME	**Dracevica, Mon**	**1.15**	**160**	⇑*i*Pg	**Pn**	**03 37 35.8**	**-0.6**
DRME				*i* Sg	**Sg**	**03 37 53.5**	**+1.2**
DRME	**Dracevica, Mon**	**1.15**	**160**	⇓*i*Pg	**Pn**	**03 37 35.6**	**-0.8**
DRME				*e*Sg	**Sb**	**03 37 51.6**	**+0.5**
PVY	**Plav**	**1.17**	**124**	*e*Pg	**Pn**	**03 37 36.6**	**-0.3**
PVY				*i* Sg	**Sg**	**03 37 54.4**	**+1.3**
PVY	**Plav**	**1.17**	**124**	P	**Pg**	**03 37 37.9**	**+0.2**
DIVS	**Divibare**	**1.28**	**49**	*e*Pg	**Pg**	**03 37 39.2**	**-0.6**
DIVS				*e*Sg	**Sg**	**03 37 57.4**	**+0.9**
DIVS	**Divibare**	**1.28**	**49**	⇓*i*Pg	**Pg**	**03 37 39.2**	**-0.6**
DIVS				*e*Sg	**Sg**	**03 37 56.2**	**-0.3**
ULC	**Ulcinj**	**1.37**	**161**	⇓*i*Pg	**Pn**	**03 37 40.1**	**+0.6**
ULC				*i* Sg	**Sg**	**03 38 01.0**	**+1.6**
ULC	**Ulcinj**	**1.37**	**161**	P	**Pb**	**03 37 40.7**	**+0.3**
TEKS	**Tekeris**	**1.43**	**26**	*e*Pg	**Pb**	**03 37 41.6**	**+0.2**
TEKS				*e*Sg	**Sg**	**03 38 01.2**	**-0.1**
TEKS	**Tekeris**	**1.43**	**26**	*e*Pg	**Pb**	**03 37 41.5**	**+0.2**
TEKS				*e*Sg	**Sg**	**03 38 01.4**	**+0.1**
DOB	**Doboj**	**1.52**	**345**	P	**Pb**	**03 37 43.5**	**+0.7**
DOB	**Doboj**	**1.52**	**345**	*e*Pn	**Pb**	**03 37 42.5**	**-0.3**
DOB				*e*Sn	**Sg**	**03 38 03.1**	**-1.0**
TRUS	**Trudelj**	**1.59**	**52**	*e*Pn	**Pb**	**03 37 43.5**	**-0.6**
TRUS				*e*Sn	**Sb**	**03 38 04.5**	**+0.6**
GRUS	**Gruza**	**1.62**	**67**	*e*Pg	**Pb**	**03 37 44.1**	**-0.5**
GRUS				*e*Sg	**Sb**	**03 38 04.8**	**-0.1**
SELS	**Selova**	**1.81**	**91**	*e*Pn	**Pn**	**03 37 46.4**	**+0.9**
SELS				*e*Sn	**Sn**	**03 38 08.6**	**+0.6**
BLY	**Banja Luka**	**1.82**	**325**	*e*Pn	**Pb**	**03 37 48.2**	**+0.2**
BLY				*e*Sn	**Sb**	**03 38 11.4**	**+0.9**
BLY	**Banja Luka**	**1.82**	**325**	P	**Pb**	**03 37 48.1**	**+0.1**
BLY	**Banja Luka**	**1.82**	**325**	⇑*i*P	**Pb**	**03 37 48.2**	**+0.2**
BLY	**Banja Luka**	**1.82**	**325**	S	**Sg**	**03 38 13.3**	**-0.4**
BLY	**Banja Luka**	**1.82**	**325**	⇑*i*Pn	**Pb**	**03 37 48.2**	**+0.2**
BLY				*e*Sn	**Sb**	**03 38 12.1**	**+1.6**
BEO	**Beograd**	**2.03**	**40**	*e*Pn	**Pn**	**03 37 47.7**	**-0.8**
BEO				*e*Sn	**Sb**	**03 38 15.2**	**-1.2**
PHP	**Peshkopia**	**2.06**	**139**	P	**Pg**	**03 37 53.5**	**-1.2**
PHP	**Peshkopia**	**2.06**	**139**	*i* PN	**Pb**	**03 37 53.0**	**+0.8**
PHP				*i* SN	**Sb**	**03 38 18.2**	**+0.7**
FRGS	**Fruska Gora**	**2.07**	**23**	*e*Pn	**Pn**	**03 37 49.5**	**+0.4**
FRGS				*e*Sn	**Sb**	**03 38 16.5**	**-1.1**
FRGS	**Fruska Gora**	**2.07**	**23**	*e*Sn	**Sb**	**03 38 17.4**	**-0.2**
SVIS	**Svilajnac**	**2.11**	**61**	*e*Pn	**Pn**	**03 37 49.2**	**-0.4**
TIR	**Tirane**	**2.12**	**154**	*e*Pn	**Pb**	**03 37 52.5**	**-0.5**
TIR				*e*Sn	**Sb**	**03 38 17.9**	**-1.2**
TIR	**Tirane**	**2.12**	**154**	⇑*i*P	**Pn**	**03 37 51.1**	**+1.3**
TIR	**Tirane**	**2.12**	**154**	S	**Sn**	**03 38 16.0**	**+0.3**
TIR	**Tirane**	**2.12**	**154**	P	**Pb**	**03 37 53.5**	**+0.5**
TIR	**Tirane**	**2.12**	**154**	*i* PN	**Pb**	**03 37 51.9**	**-1.2**
TIR				*i* SN	**Sn**	**03 38 17.3**	**+1.6**
MRAK	**Mrakovica**	**2.15**	**325**	*e*Pn	**Pb**	**03 37 52.5**	**-1.2**
MRAK				*e*Sn	**Sb**	**03 38 19.0**	**-1.1**
BOVS	**Bovan**	**2.26**	**80**	*e*Pn	**Pn**	**03 37 52.3**	**+0.7**
BOVS	**Bovan**	**2.26**	**80**	*e*Pn	**Pn**	**03 37 52.7**	**+1.1**
BOVS				*e*Sn	**Sn**	**03 38 18.7**	**-0.4**
BARS	**Barje**	**2.36**	**100**	*e*Pn	**Pb**	**03 37 55.8**	**-1.4**
BARS				*e*Sn	**Sn**	**03 38 22.4**	**+0.6**
BARS				*e*Sn	**Sb**	**03 38 25.9**	**-0.2**
SKO	**Skopje**	**2.43**	**121**	P	**Pn**	**03 37 56.2**	**+2.1**
SKO	**Skopje**	**2.43**	**121**	*i* Pn	**Pn**	**03 37 56.0**	**+2.0**
UDBI	**Udbina**	**2.44**	**302**	*e*Pn	**Pb**	**03 37 57.5**	**-1.0**
KUBS	**Kucevo**	**2.47**	**61**	*e*Pn	**Pn**	**03 37 54.6**	**0.0**
BAI	**Bari**	**2.53**	**212**	⇑*i*Pn	**Pn**	**03 37 56.5**	**+1.2**
BAI				Sn	**Sn**	**03 38 28.3**	**+2.6**
FASA	**Fasano**	**2.63**	**202**	*e*Pn	**Pn**	**03 37 57.8**	**+1.0**
ZAGS	**Zajecar**	**2.66**	**77**	*e*Pn	**Pn**	**03 37 58.3**	**+1.1**
ZAGS				*e*Sn	**Sn**	**03 38 29.3**	**+0.2**
MDVR	**Moldovita**	**2.68**	**55**	⇑*i*P	**Pn**	**03 37 58.4**	**+0.9**
MDVR	**Moldovita**	**2.68**	**55**	S	**Sn**	**03 38 29.8**	**+0.2**
KRUS	**Krusevo**	**2.70**	**134**	*i* Pn	**Pb**	**03 38 02.2**	**-0.8**
NOCI	**Noci**	**2.74**	**206**	P	**Sn**	**03 38 32.3**	**+1.1**
BANR	**Banloc**	**2.77**	**39**	⇑*i*P	**Pn**	**03 37 59.5**	**+0.8**
SG1	**Sgolgore (BA)**	**2.83**	**212**	⇑*i*Pn	**Pn**	**03 38 00.7**	**+1.1**
SG1				Sn	**Sn**	**03 38 34.9**	**+1.5**
ZAPS	**Zavoj**	**2.91**	**88**	*e*Pn	**Pn**	**03 38 02.6**	**+1.9**
ZAPS				*e*Sn	**Sn**	**03 38 36.1**	**+0.8**
MORH	**Mrgy, Hungar**	**2.95**	**360**	*e*Pn	**Pn**	**03 38 02.3**	**+1.2**
MORH				*e*Sn	**Sn**	**03 38 38.1**	**+1.9**
MORH	**Mrgy, Hungar**	**2.95**	**360**	*e*Pn	**Pn**	**03 38 01.1**	**-0.1**
MORH				Sn	**Sn**	**03 38 38.0**	**+1.9**
MATE	**Matera**	**2.99**	**210**	⇓*i*P	**Pn**	**03 38 03.2**	**+1.5**
MATE	**Matera**	**2.99**	**210**	S	**Sn**	**03 38 38.6**	**+1.4**
BIA	**Bitola**	**3.00**	**138**	*i* Pn	**Pb**	**03 38 06.5**	**-1.6**
STIP	**Stip**	**3.05**	**120**	*i* Pn	**Pb**	**03 38 06.7**	**-2.3**
HERR	**Herculane**	**3.16**	**58**	⇑*i*P	**Pn**	**03 38 05.2**	**+1.2**
BZS	**Buzias**	**3.17**	**41**	⇑*i*P	**Pn**	**03 38 04.7**	**+0.5**
BZS	**Buzias**	**3.17**	**41**	S	**Sn**	**03 38 42.9**	**+1.3**

PUNG	Punghina	3.26	70	⇑*i*P	Pn	03 38 06.0	+0.5
GATE	Gambatesa	3.28	239	P	Pb	03 38 09.8	-3.0
GATE				AML	AML		
	comp=E,335µm,0.7s						
GATE				AML	AML		
	comp=N,398µm,0.6s						
GATE				AML	AML		
	comp=N,398µm,0.6s						
GATE				AML	AML		
	comp=E,335µm,0.7s						
BOJS	Bojanci	3.31	314	*i* Pn	Pn	03 38 08.8	+2.7
NEST	Nestorio	3.37	147	P	Pn	03 38 10.7	+3.7
CRES	Cresnjev	3.43	319	*e*Pn	Pn	03 38 09.8	+2.0
CRES				*e*Sn	Sn	03 38 50.8	+2.8
VTS	Vitosha	3.43	99	⇑*i*P	Pn	03 38 08.6	+0.7
VTS	Vitosha	3.43	99	S	Sn	03 38 47.7	-0.6
VTS	Vitosha	3.43	99	P	Pn	03 38 09.4	+1.5
MRLC	Muro Lucano	3.44	224	P	Pn	03 38 10.1	+2.1
MRLC				AML	AML		
	comp=E,295µm,1.0s						
MRLC				AML	AML		
	comp=N,324µm,1.4s						
MRLC				AML	AML		
	comp=E,295µm,1.0s						
MRLC				AML	AML		
	comp=N,324µm,1.4s						
BSSO	Busso	3.46	242	P	Pn	03 38 10.9	+2.7
BSSO				AML	AML		
	comp=E,314µm,1.2s						
BSSO				AML	AML		
	comp=N,442µm,1.6s						
BSSO				AML	AML		
	comp=E,314µm,1.2s						
BSSO				AML	AML		
	comp=N,442µm,1.6s						
BEHE	Becsehely	3.47	338	*e*Pn	Pn	03 38 10.1	+1.8
BEHE	Becsehely	3.47	338	⇑*i*Pn	Pn	03 38 10.7	+2.4
BEHE				*e*Sn	Sn	03 38 51.4	+2.4
VAY	Valandovo	3.50	122	P	Pn	03 38 11.3	+2.6
VAY	Valandovo	3.50	122	*i* Pn	Pn	03 38 12.2	+3.5
LPEL	Lama dei Pelig	3.51	251	P	Pn	03 38 11.8	+2.8
LPEL				S	Sb	03 38 55.4	-3.8
LPEL				AML	AML		
	comp=E,489µm,0.9s						
LPEL				AML	AML		
	comp=N,320µm,0.9s						
LPEL				AML	AML		
	comp=N,320µm,0.9s						
LPEL				AML	AML		
	comp=E,489µm,0.9s						
SRN	Sarande	3.53	163	P	Pn	03 38 11.0	+1.8
SRN	Sarande	3.53	163	*i* PN	Pn	03 38 10.6	+1.4
SRN				*i* SN	Sn	03 38 47.4	-3.1
SRE	Strehaia	3.57	65	⇓*i*P	Pn	03 38 10.8	+1.1
GRG	Griva	3.62	128	P	Pn	03 38 13.0	+2.5
MIDA	Miranda	3.63	245	P	Pn	03 38 12.9	+2.2
MIDA				AML	AML		
	comp=E,346µm,1.3s						
MIDA				AML	AML		
	comp=N,289µm,1.5s						
MIDA				AML	AML		
	comp=N,289µm,1.5s						
MIDA				AML	AML		
	comp=E,346µm,1.3s						
GZR	Gura Zlata	3.65	53	⇓*i*P	Pn	03 38 11.6	+0.8
SLCN	Sala Consilina	3.65	219	P	Pn	03 38 12.9	+2.0
SLCN				S	Sn	03 38 56.6	+3.0
SLCN				AML	AML		
	comp=E,646µm,0.4s						
SLCN				AML	AML		
	comp=N,436µm,1.3s						
SLCN				AML	AML		
	comp=E,709µm,0.4s						
SLCN				AML	AML		
	comp=N,372µm,1.3s						
SLCN				AML	AML		
	comp=N,436µm,1.3s						
SLCN				AML	AML		
	comp=N,372µm,1.3s						
SLCN				AML	AML		
	comp=E,709µm,0.4s						
SLCN				AML	AML		
	comp=E,646µm,0.4s						
KEK	Kerkira	3.65	166	P	Pn	03 38 12.9	+2.0
TIH	Tihany	3.67	352	*e*Pn	Pn	03 38 13.0	+1.9
TIH				Sn	Sn	03 38 56.1	+2.1
SIRR	Siria	3.69	35	⇑*i*P	Pn	03 38 11.4	+0.1
SIRR	Siria	3.69	35	S	Sn	03 38 54.2	-0.2
INTR	Introdacqua	3.72	252	P	Pn	03 38 14.2	+2.4
INTR				AML	AML		
	comp=E,406µm,0.7s						
INTR				AML	AML		
	comp=N,732µm,0.9s						
INTR				AML	AML		
	comp=E,406µm,0.7s						
INTR				AML	AML		
	comp=N,732µm,0.9s						
VISS	Visnje	3.72	314	*i* Pn	Pn	03 38 14.8	+3.0
VAGA	Valle Agricola	3.76	242	P	Pn	03 38 15.8	+3.4
VAGA				AML	AML		
	comp=E,332µm,0.6s						
VAGA				AML	AML		
	comp=N,533µm,0.5s						
VAGA				AML	AML		
	comp=E,332µm,0.6s						
VAGA				AML	AML		
	comp=N,533µm,0.5s						
KZN	Kozani	3.77	141	P	Pn	03 38 15.8	+3.3
PAOL	Paolisi	3.77	235	P	Pn	03 38 15.3	+2.8
PAOL				S	Sn	03 38 59.1	+2.7
PAOL				AML	AML		
	comp=E,280µm,0.8s						
PAOL				AML	AML		
	comp=N,348µm,1.6s						
PAOL				AML	AML		
	comp=N,348µm,1.6s						
PAOL				AML	AML		
	comp=E,280µm,0.8s						
KNT	Kendrikon	3.79	122	P	Pn	03 38 16.6	+3.8
FAGN	Fagnano	3.86	257	P	Pn	03 38 17.1	+3.3
FAGN				AML	AML		
	comp=E,1220µm,0.6s						
FAGN				AML	AML		
	comp=N,968µm,0.4s						
FAGN				AML	AML		
	comp=E,1220µm,0.6s						
FAGN				AML	AML		
	comp=N,968µm,0.4s						
CEY	Cerknica	3.90	311	*e*Pn	Pn	03 38 16.6	+2.3
CEY				*e*Sn	Sn	03 39 01.7	+1.9
CAMP	Campotosto	3.92	261	P	Pn	03 38 17.5	+2.9
CAMP				S	Sn	03 39 04.8	+4.5
CAMP				AML	AML		
	comp=E,284µm,1.1s						
CAMP				AML	AML		
	comp=N,275µm,0.7s						
CAMP				AML	AML		
	comp=E,284µm,1.1s						
CAMP				AML	AML		
	comp=N,275µm,0.7s						
IGT	Igoumenitsa	3.94	161	P	Pn	03 38 16.8	+2.0
SMA1	SAN MARTINO	3.95	263	P	Pn	03 38 18.3	+3.2
SMA1				S	Sn	03 39 05.4	+4.3
SMA1				AML	AML		
	comp=E,472µm,0.5s						
SMA1				AML	AML		
	comp=N,449µm,0.8s						
SMA1				AML	AML		
	comp=E,472µm,0.5s						
SMA1				AML	AML		
	comp=N,449µm,0.8s						
VVLD	Villa Vallelon	3.97	251	P	Pn	03 38 17.6	+2.4
VVLD				AML	AML		
	comp=E,250µm,0.9s						
VVLD				AML	AML		
	comp=N,294µm,0.5s						
VVLD				AML	AML		
	comp=N,294µm,0.5s						
VVLD				AML	AML		
	comp=E,250µm,0.9s						
AQU	L'Aquila	3.97	258	*e*Pn	Pn	03 38 17.1	+1.9
AQU				*e*Sn	Sn	03 39 03.2	+1.8
JAN	Janina	3.97	155	P	Pn	03 38 18.1	+2.9
DEV	Deva	4.01	48	⇓*i*P	Pn	03 38 16.4	+0.7
LJU	Ljubljana	4.04	315	*e*Pn	Pn	03 38 18.1	+1.9
LJU				*e*Sn	Sn	03 39 05.5	+2.3
PTQR	Pietraquaria	4.07	254	P	Pn	03 38 20.3	+3.7
FDMO	Fiordimonte	4.08	269	P	Pn	03 38 20.0	+3.3
FDMO				S	Sn	03 39 07.9	+3.9
FDMO				AML	AML		
	comp=E,210µm,0.5s						
FDMO				AML	AML		
	comp=N,207µm,0.7s						
FDMO				AML	AML		
	comp=E,210µm,0.5s						
FDMO				AML	AML		
	comp=N,207µm,0.7s						
THE	Thessaloniki	4.16	128	P	Pn	03 38 20.4	+2.6
FIAM	Fiamignano	4.19	258	P	Pn	03 38 22.1	+3.7
FIAM				S	Sn	03 39 12.6	+5.6
FIAM				AML	AML		
	comp=E,289µm,0.8s						
FIAM				AML	AML		
	comp=N,244µm,0.5s						
FIAM				AML	AML		
	comp=E,289µm,0.8s						
FIAM				AML	AML		
	comp=N,244µm,0.5s						
JAVS	Javornik	4.20	310	*i* Pn	Pn	03 38 21.1	+2.6
PERS	Pernice	4.20	325	*i* Pn	Pn	03 38 20.7	+2.3
BUD	Budapest	4.23	3	*e*Pn	Pn	03 38 20.0	+1.3
BUD				Sn	Sn	03 39 10.0	+2.4
VLAD	Vladila	4.24	78	⇑*i*P	Pn	03 38 18.7	-0.2
CET2	Cetraro	4.25	209	S	Sn	03 39 05.0	-3.3
SRS	Serrai	4.25	119	P	Pn	03 38 21.0	+1.9
HORT	Hortiatis	4.26	127	P	Pn	03 38 21.9	+2.7
SOKA	Soboth	4.27	324	*e*Pn	Pn	03 38 21.7	+2.3
	comp=N,20nm,0.3s,SNR=19						
SOH	Sokhos	4.27	123	P	Pn	03 38 21.7	+2.3
LIT	Litokhoron	4.28	136	P	Pn	03 38 22.5	+3.1
NVR	Nevrokopi	4.31	115	P	Pn	03 38 21.7	+1.7
TIP	Timpagrande	4.33	200	⇑*i*P	Pn	03 38 20.2	0.0
TIP	Timpagrande	4.33	200	S	Sn	03 39 10.0	-0.3
OBKA	Obir	4.36	319	*e*Pn	Pn	03 38 23.4	+2.8
	comp=N,9.2nm,0.7s,SNR=4.9						
OBKA				Pg	Pg	03 38 37.2	-1.3
	comp=N,33nm,0.5s						
ARRO	Arrone	4.38	263	P	Pn	03 38 24.3	+3.6
ASSB	Assisi San Ben	4.39	269	P	Pn	03 38 24.5	+3.5
ASSB				S	Sn	03 39 16.3	+4.5
ASSB				AML	AML		
	comp=E,315µm,0.7s						
ASSB				AML	AML		
	comp=N,389µm,0.7s						
ASSB				AML	AML		
	comp=E,315µm,0.7s						
ASSB				AML	AML		
	comp=N,389µm,0.7s						
PIEI	Pieia	4.46	276	P	Pn	03 38 25.9	+3.9
PIEI				S	Sn	03 39 17.0	+3.4
MURB	Monte Urbino	4.47	272	P	Pn	03 38 25.8	+3.6
MURB				S	Sn	03 39 18.7	+4.8
THL	Klokotos Trika	4.48	144	P	Pn	03 38 24.8	+2.6
MTCE	Montecelio	4.53	256	P	Pn	03 38 26.1	+3.2
DRGR		4.55	38	⇑*i*P	Pn	03 38 23.8	+0.5
ARSA	Arzberg	4.55	332	*e*Pn	Pn	03 38 25.6	+2.4
	comp=N,18nm,0.3s						
ARSA				*e*Sn	Sn	03 39 17.3	+1.5
	comp=N,12nm,0.3s						
PLG	Polygyros	4.60	127	P	Pn	03 38 26.7	+2.7
SOP	Sopron	4.66	342	*e*Pn	Pn	03 38 26.1	+1.5
SOP				Sn	Sn	03 39 18.1	-0.2
BADI	Badiali	4.67	275	P	Pn	03 38 29.2	+4.3
BADI				S	Sn	03 39 23.6	+4.8
BADI				AML	AML		
	comp=E,346µm,0.8s						
BADI				AML	AML		
	comp=N,546µm,0.6s						
BADI				AML	AML		
	comp=N,546µm,0.6s						
BADI				AML	AML		
	comp=E,346µm,0.8s						
LTVH	Ltavrtes, Hu	4.71	28	*e*Pn	Pg	03 38 51.0	+5.7
PSZ	Piszkesteto	4.73	10	*e*Pn	Pn	03 38 26.0	+0.2
PSZ				Sn	Sn	03 39 19.1	-1.2
MYKA	Terra Mystica	4.89	315	*e*Pn	Pn	03 38 30.9	+3.0
	comp=E,3.5nm,0.4s						
MYKA				Pg	Pg	03 38 48.7	0.0
	comp=E,19nm,0.6s						
KAVA	Kavala	4.92	115	P	Pn	03 38 29.8	+1.6
EVR	Evrytania	4.96	150	P	Pn	03 38 32.7	+3.8
FYTO	Fytoko, Volos	5.03	139	P	Pn	03 38 32.4	+2.7
CONA	Conrad Observa	5.06	338	*e*Pn	Pn	03 38 32.6	+2.5
	comp=E,3.8nm,0.3s						
CONA				*e*Sn	Sn	03 39 29.3	+1.0
	comp=E,31nm,0.6s						
AGG	Agios Georgios	5.07	146	P	Pn	03 38 32.8	+2.5
VOIR		5.08	62	⇑*i*P	Pn	03 38 31.8	+1.3
VOIR		5.08	62	S	Sn	03 39 30.0	+1.2
PLAC	Placanica	5.09	200	P	Pn	03 38 33.6	+2.9
MODS	Modra-Piesok	5.20	350	*e*PN	Pn	03 38 33.8	+1.7
MODS				*e*SN	Sn	03 39 30.4	-1.2
MODS				*e*LG	Lg	03 39 34.4	
VYHS	Vyhne	5.23	1	*e*PN	Pn	03 38 33.4	+0.9
VYHS				*e*SN	Sn	03 39 30.9	-1.5
VYHS				*e*LG	Lg	03 39 34.9	
ANX	Ano Chora	5.29	151	P	Pn	03 38 36.7	+3.3
KOLL	Kolacno	5.32	358	*e*SN	Sn	03 39 33.4	-1.1
FIU	Minerbio Fiu	5.35	287	P	Pg	03 38 58.4	+1.0
KBA	Koelnbreinsper	5.35	317	*e*Pn	Pn	03 38 37.2	+3.0
	comp=E,5.1nm,0.3s						
DOPR	Dopca	5.52	58	⇑*i*P	Pn	03 38 36.2	-0.3
MOA	Molln	5.52	328	*i* Pn	Pn	03 38 39.7	+3.2
	comp=E,3.6nm,0.3s,SNR=15						
MOA				Sn	Sn	03 39 42.8	+3.2
	comp=E,23nm,0.4s						
RDO	Rodhopi	5.54	110	P	Pn	03 38 38.5	+1.8
ABTA	Abfaltersbach	5.57	311	*e*Pn	Pn	03 38 40.1	+2.8
	comp=E,1.8nm,0.3s						
ABTA				Pg	Pb	03 38 56.5	+4.6
	comp=E,8.6nm,0.5s						
TRPA	Tarpa	5.58	28	⇑*i*P	Pn	03 38 38.3	+1.1
ATAL	Atalanti	5.64	143	P	Pn	03 38 40.9	+2.7
ALIK	Aliki, Aigiali	5.65	151	P	Pn	03 38 41.6	+3.3
MLR	Muntele Rosu	5.68	64	⇑*i*P	Pn	03 38 40.0	+1.2
BRES	Bressanone	5.99	307	P	Pg	03 39 28.7	+19
ALN	Alexandroupoli	5.99	111	P	Pn	03 38 44.9	+2.0
KRUC	Moravsky	6.00	346	*e*PN	Pn	03 38 44.4	+1.3
KRUC				*e*SN	Sn	03 39 49.5	-2.0
AMT	Artemida-Makis	6.18	157	P	Pn	03 38 47.8	+2.1
VRAC	Vranov	6.21	347	⇑*i*P	Pn	03 38 48.3	+2.3
VRAC	Vranov	6.21	347	*e*PN	Pn	03 38 48.3	+2.3
VRAC				*e*SN	Sn	03 39 54.1	-2.4
WTTA	Wattenberg	6.36	311	*e*Pn	Pn	03 38 51.6	+3.4
	comp=E,2.7nm,0.2s						
WATA	Walderalm	6.44	312	*e*Pn	Pn	03 38 53.1	+3.9
	comp=E,3.9nm,0.3s,SNR=8.4						
ATH	Athens Observa	6.54	142	P	Pn	03 38 53.1	+2.6
SQTA	Sankt Quirin	6.57	310	*e*Pn	Pn	03 38 54.7	+3.7
	comp=E,3.6nm,0.3s,SNR=7.5						
ATHU	Athens Univers	6.58	142	P	Pn	03 38 53.3	+2.3
MOTA	Moosalm	6.70	310	*e*Pn	Pn	03 38 56.6	+3.7
	comp=E,3.0nm,0.4s,SNR=8.3						
FETA	Feichten	6.74	307	*e*Pn	Pn	03 38 57.5	+4.1
	comp=E,1.0nm,0.2s						
KHC	Kasperske Hory	6.84	331	*e*PN	Pn	03 38 57.4	+2.8
KHC				*e*SN	Sn	03 40 12.4	+0.3
KRLC	Kraliky	6.93	350	*e*SN	Sn	03 40 13.3	-1.1
RETA	Reutte	6.97	310	*e*Pn	Pn	03 38 59.8	+3.3
	comp=E,1.5nm,0.3s						
DPC	Dobruska-Polom	7.26	348	*e*SN	Sn	03 40 21.3	-1.2
UPC	Upice	7.46	347	*e*SN	Sn	03 40 26.8	-0.6
MBDF	Montbardon	8.69	284	*e*Pn	Pn	03 39 20.3	+0.2
MBDF				*e*Sn	Sn	03 40 53.3	-4.4
	comp=E,19nm,0.6s						
MBDF	Montbardon	8.69	284	*e*Pn	Pn	03 39 20.3	+0.2
MBDF				*e*Sn	Sn	03 40 53.3	-4.4
FRF	La Foret Royal	8.74	276	*e*Sn	Sn	03 40 54.4	-4.5
	comp=E,20nm,0.7s						
FRF	La Foret Royal	8.74	276	*e*Sn	Sn	03 40 54.4	-4.5
LPG	La Plagne	8.81	289	*e*Pn	Pn	03 39 22.1	+0.2
LPG				*e*Sn	Sn	03 40 56.4	-4.5
	comp=E,25nm,0.6s						
LPG	La Plagne	8.81	289	*e*Pn	Pn	03 39 22.1	+0.2
LPG				*e*Sn	Sn	03 40 56.4	-4.5
LPL	La Plagne	8.82	289	*e*Pn	Pn	03 39 22.2	+0.1
LPL				*e*Sn	Sn	03 40 56.6	-4.6
	comp=E,44nm,0.7s						
LPL	La Plagne	8.82	289	*e*Pn	Pn	03 39 22.2	+0.1
LPL				*e*Sn	Sn	03 40 56.6	-4.6
CLL	Collm	8.91	337	*e*(Sb)	Sn	03 41 26.0	+23
CLL				*e*Sg		03 42 04.0	
CLL				LmV		05 23 00.0	
	comp=Z,100nm,18.0s						
ORIF	Oris-en-Rattie	9.34	285	*e*Pn	Pn	03 39 29.1	+0.1
ORIF				*e*Sn	Sn	03 41 09.0	-4.6
	comp=Z,15nm,0.6s						
ORIF	Oris-en-Rattie	9.34	285	*e*Pn	Pn	03 39 29.1	+0.1
ORIF				*e*Sn	Sn	03 41 09.0	-4.6
HINF	Hinteralfeld	9.44	303	*e*Pn	Pn	03 39 30.7	+0.4
HINF				*e*Sn	Sn	03 41 11.7	-4.4
	comp=Z,16nm,0.8s						
HINF	Hinteralfeld	9.44	303	*e*Pn	Pn	03 39 30.7	+0.4
HINF				*e*Sn	Sn	03 41 11.7	-4.4
CDF	Champ du Feu	9.46	307	*e*Pn	Pn	03 39 30.8	+0.2
CDF	Champ du Feu	9.46	307	*e*Pn	Pn	03 39 30.8	+0.2
SMRF	Simiane la Rot	9.51	279	*e*Pn	Pn	03 39 31.3	0.0
SMRF	Simiane la Rot	9.51	279	*e*Pn	Pn	03 39 31.3	0.0
HAU	Haudompre	9.83	303	*e*Pn	Pn	03 39 35.6	0.0
HAU				*e*Sn	Sn	03 41 21.1	-4.5
	comp=Z,25nm,0.8s						
HAU	Haudompre	9.83	303	*e*Pn	Pn	03 39 35.6	0.0
HAU				*e*Sn	Sn	03 41 21.1	-4.5
VIVF	Saint-Julien-l	10.19	284	*e*Pn	Pn	03 39 40.4	-0.1
VIVF	Saint-Julien-l	10.19	284	*e*Pn	Pn	03 39 40.4	-0.1
SMF	Signal de Mont	11.02	293	*e*Pn	Pn	03 39 51.8	-0.2
SMF				*e*Sn	Sn	03 41 49.1	-5.7
	comp=Z,5.0nm,0.5s						
SMF	Signal de Mont	11.02	293	*e*Pn	Pn	03 39 51.8	-0.2
SMF				*e*Sn	Sn	03 41 49.1	-5.7
LOR	Lormes	11.16	296	*e*Pn	Pn	03 39 54.1	+0.2
LOR				*e*Sn	Sn	03 41 52.6	-5.6
	comp=Z,8.8nm,0.6s						
LOR	Lormes	11.16	296	*e*Pn	Pn	03 39 54.1	+0.2
LOR				*e*Sn	Sn	03 41 52.6	-5.6
SSF	Saint Saulge	11.34	295	*e*Pn	Pn	03 39 56.5	+0.2
SSF				*e*Sn	Sn	03 41 56.6	-6.0
	comp=Z,7.8nm,0.5s						
SSF	Saint Saulge	11.34	295	*e*Pn	Pn	03 39 56.5	+0.2
SSF				*e*Sn	Sn	03 41 56.6	-6.0
AVF	Avril sur Loir	11.38	293	*e*Pn	Pn	03 39 56.7	-0.1
AVF	Avril sur Loir	11.38	293	*e*Pn	Pn	03 39 56.7	-0.1
BGF	Bois d'Agland	11.68	292	*e*Pn	Pn	03 40 00.9	0.0
BGF				*e*Sn	Sn	03 42 04.6	-6.2
	comp=Z,17nm,0.6s						
BGF	Bois d'Agland	11.68	292	*e*Pn	Pn	03 40 00.9	0.0
BGF				*e*Sn	Sn	03 42 04.6	-6.2
RGN	Rugen	11.82	345	*e*P	Pn	03 40 00.9	-1.8
RGN				IAmb	IAmb	03 40 02.1	
	comp=Z,144nm,1.2s						
CAF	Calviac	12.04	284	*e*Pn	Pn	03 40 06.1	+0.2
CAF	Calviac	12.04	284	*e*Pn	Pn	03 40 06.1	+0.2
TCF	Toulx Ste Croi	12.07	290	*e*Pn	Pn	03 40 05.7	-0.5
TCF	Toulx Ste Croi	12.07	290	*e*Pn	Pn	03 40 05.7	-0.5
RJF	Les Rejaudoux	12.45	285	*e*Pn	Pn	03 40 11.5	+0.1
RJF	Les Rejaudoux	12.45	285	*e*Pn	Pn	03 40 11.5	+0.1

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*PDG **03** 03:38:49.5±0.1, 43°.22N×18°.75E, h2^{km}±11^{km}, MD3.1/3, ML3.1/7, Error ellipse: s-maj=0.3km s-min=0.7km az=0.0*
*BEO **03** 03:38:49.6±0.3, 43°.24N×18°.74E, h8^{km}±2^{km}, ML2.9/13*
*SAR **03** 03:38:49.4±0.2, 43°.26N×18°.65E, h5^{km}±3^{km}, ML3.1/9*
ISC 03 03:38:49.1±1.1, **43°.24N**±0°.02×**18°.72E**±0°.02, **h6**^{km}±9^{km}, **n38**, σ**0.^{s}76**/73, **6C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKY	Niksic	0.47	155	⇓*i*Pg	Pg	03 38 57.7	-0.5
NKY				*i* Sg	Sg	03 39 04.8	+0.4
PLE	Pljevlja	0.49	80	⇑*i*Pg	Pg	03 38 58.9	+0.3
PLE				*i* Sg	Sg	03 39 06.0	+0.9
NKME	Niksic	0.51	160	⇓*i*Pg	Pg	03 38 57.8	-1.0
NKME				*i* Sg	Sg	03 39 05.7	+0.4
TREB	Trebinje	0.59	208	*e*Pg	Pg	03 38 59.9	-0.5
TREB				*e*Sg	Sg	03 39 08.9	+0.8
TREB	Trebinje	0.59	208	⇓*i*Pg	Pg	03 38 59.6	-0.8
TREB				*e*Sg	Sg	03 39 08.6	+0.5
KOME	Kolasin	0.70	124	⇑*i*Pg	Pg	03 39 02.1	-0.4
KOME				*i* Sg	Sg	03 39 12.6	+0.9
BBLS	Lazići	0.80	38	*e*Pg	Pg	03 39 04.5	+0.1
BBLS				*e*Sg	Sg	03 39 15.3	+0.6
BBLS	Lazići	0.80	38	⇓*i*Pg	Pg	03 39 04.4	+0.1
BBLS				*e*Sg	Sb	03 39 15.9	-0.6
HCY	Herceg Novi	0.81	192	⇓*i*Pg	Pg	03 39 04.2	-0.4
HCY				*i* Sg	Sg	03 39 16.4	+1.2
HCY	Herceg Novi	0.81	192	*e*Pg	Pg	03 39 04.1	-0.5
HCY				*e*Sg	Sb	03 39 16.6	-0.2
STON	Ston	0.83	244	*i* Pg	Pg	03 39 03.0	-2.1
STON				Sg	Sg	03 39 16.5	+0.6
HAPS	Han Pijesak,BI	0.86	11	*e*Pg	Pg	03 39 05.8	+0.2
HAPS				*e*Sg	Sg	03 39 17.2	+0.4
HAPS	Han Pijesak,BI	0.86	11	*e*Pg	Pg	03 39 04.9	-0.7
HAPS				*e*Sg	Sg	03 39 16.5	-0.3
PDG	Podgorica	0.90	154	*e*Pg	Pg	03 39 05.2	-1.1
PDG				*e*Sg	Sg	03 39 18.8	+0.8
PDG	Podgorica	0.90	154	*e*Pg	Pg	03 39 05.6	-0.7
PDG				*e*Sg	Sb	03 39 19.5	+0.1
TTG	Podgorica	0.90	154	⇑*i*Pg	Pg	03 39 04.9	-1.4
TTG				*i* Sg	Sb	03 39 19.1	-0.3
IVA	Berane	0.94	113	⇑*i*Pg	Pg	03 39 06.2	-0.8
IVA				*i* Sg	Sb	03 39 20.1	-0.4
BUM	Brajici-Budva	0.95	172	⇓*i*Pg	Pg	03 39 07.0	-0.3
BUM				*i* Sg	Sb	03 39 20.8	0.0
IVAS	Ivanjica	1.09	72	*e*Pg	Pg	03 39 09.2	-0.9
IVAS				*e*Sg	Sg	03 39 23.0	-1.3
DRME	Dracevica, Mon	1.11	162	⇑*i*Pg	Pg	03 39 09.3	-1.0
DRME				*i* Sg	Sn	03 39 26.5	-0.3
DRME	Dracevica, Mon	1.11	162	*e*Pg	Pg	03 39 10.1	-0.2
DRME				*e*Sg	Sb	03 39 26.0	+0.6
PVY	Plav	1.12	125	⇑*i*Pg	Pg	03 39 09.6	-0.9
PVY				*i* Sg	Sn	03 39 26.8	-0.3
DIVS	Divibare	1.26	47	*e*Pg	Pg	03 39 12.1	-1.1
DIVS				*e*Sg	Sg	03 39 29.7	+0.2
DIVS	Divibare	1.26	47	*e*Pg	Pg	03 39 12.2	-1.0
DIVS				*e*Sg	Sb	03 39 30.3	+0.5
DIVS	Divibare	1.26	47	P	Pg	03 39 12.6	-0.6
ULC	Ulcinj	1.33	163	⇓*i*Pg	Pn	03 39 13.7	-0.6
ULC				*i* Sg	Sn	03 39 34.0	+1.6
TEKS	Tekeris	1.43	24	*e*Pg	Pn	03 39 15.4	-0.2
TEKS				*e*Sg	Sb	03 39 33.5	-1.2
TEKS	Tekeris	1.43	24	*e*Pg	Pn	03 39 15.6	0.0
TEKS				*e*Sg	Sg	03 39 35.7	+0.7
DOB	Doboj	1.56	343	*e*Pn	Pn	03 39 17.4	+0.1
TRUS	Trudelj	1.57	51	*e*Pn	Pn	03 39 17.5	0.0
TRUS				*e*Sn	Sn	03 39 38.4	+0.3
GRUS	Gruza	1.59	65	*e*Pg	Pb	03 39 19.1	+0.3
GRUS				*e*Sg	Sg	03 39 39.9	-0.1
SELS	Selova	1.75	90	*e*Pn	Pn	03 39 20.7	+0.7
SELS				*e*Sn	Sn	03 39 42.6	-0.1
BLY	Banja Luka	1.87	324	*e*Pn	Pn	03 39 23.1	+1.5
BLY				*e*Sn	Sn	03 39 46.4	+0.8
BLY	Banja Luka	1.87	324	*e*Pn	Pn	03 39 21.1	-0.5
BLY				*e*Sn	Sn	03 39 45.1	-0.5
FRGS	Fruska Gora	2.07	22	*e*Pn	Pn	03 39 25.3	+0.9
FRGS				*e*Sn	Sn	03 39 49.5	-1.0
FRGS	Fruska Gora	2.07	22	*e*Pn	Pn	03 39 25.1	+0.7
FRGS				*e*Sn	Sn	03 39 50.5	0.0
BOVS	Bovan	2.21	79	*e*Pn	Pn	03 39 26.6	+0.3
BOVS				*e*Sn	Sn	03 39 52.9	-1.0
UDBI	Udbina	2.49	302	Sn	Sb	03 40 06.0	+0.7

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*IDC **03** 03:41:31.4±0.7, 10°.85S×165°.11E, h0^{km}, mb4.0/14, mb1 4.2/16, mb1mx4.2/31, mbtmp4.1/16, ML4.4/2, MS3.8/4, Ms1 3.8/4, ms1mx3.2/35, Error ellipse: s-maj=21.4km s-min=17.5km az=120.0*
*ISCJB **03** 03:41:33.8±0.4, 11°.05S±0°.05×165°.12E±0°.06, h31^{km}, mb4.2/19, MS3.9/2, Error ellipse: s-maj=8.1km s-min=7.4km az=152.5*
*NEIC **03** 03:41:34.6±2.7, 10°.87S×165°.10E, h22^{km}±19^{km}, mb4.4/5, Error ellipse: s-maj=9.6km s-min=7.9km az=167.0*
ISC 03 03:41:35.7±0.5, **10°.93S**±0°.07×**165°.16E**±0°.07, **h31**^{km}, **n47**, σ**1.^{s}21**/43, **mb4.2**/19, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.35	286	Pn	Pn	03 42 52.2	-1.1
	36nm,0.3s,baz=148,slow=6.3,SNR=6.1						
HNR				Sn	Sn	03 43 56.9	+2.9

	23nm,0.3s,baz=60,slow=20,SNR=2.9						
HNR				LR	LR	03 45 12.6	
	comp=Z,956nm,18.1s,baz=95,slow=42						
DZM	Mont Dzumac	11.15	174	ePn	Pn	03 44 13.1	+0.1
DZM	Mont Dzumac	11.15	174	Pn	Pn	03 44 13.3	+0.3
	1.0nm,0.3s,baz=320,slow=9.2,SNR=33						
DZM				Sn	Sn	03 46 14.5	-2.3
	0.4nm,0.3s,baz=187,slow=18,SNR=3.5						
DZM				LR	LR	03 47 46.6	
	comp=Z,297nm,18.5s,baz=26,slow=33						
FUNA	Funafuti	14.04	81	ePn	Pn	03 44 53.2	+0.6
MANU	Manus Island	19.75	295	eP	P	03 46 03.1	-0.1
	168nm,1.5s						
CTA	Charters Tower	20.35	241	P	P	03 46 09.9	+0.2
	19nm,1.0s,baz=64,slow=13,SNR=17						
CTAO	Charters Tower	20.35	241	eP	P	03 46 10.5	+0.8
RAO	Raoul Island	24.12	142	P	P	03 46 51.5	+2.6
	704nm,0.3s,baz=238,slow=23,SNR=4.6						
H11S2	WAKE ISLAND Hy	29.27	3	T	T	04 18 10.5	
	baz=184,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	29.28	3	T	T	04 18 13.6	
	baz=184,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.29	3	T	T	04 18 14.0	
	baz=184,slow=76,SNR=17						
STKA	Stephens Creek	30.14	223	P	P	03 47 43.0	+0.1
	0.8nm,0.3s,baz=7.2,slow=11,SNR=3.8						
STKA				LR	LR	03 59 20.5	
	comp=Z,272nm,18.2s,baz=30,slow=36						
H11N1	WAKE ISLAND Hy	30.50	3	T	T	04 19 47.5	
	baz=183,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	30.50	3	T	T	04 19 46.5	
	baz=183,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	30.52	3	T	T	04 19 46.9	
	baz=183,slow=76,SNR=19						
WRAB	Tennant Creek	30.98	249	eP	P	03 47 49.9	-0.5
	2.9nm,0.7s						
WB2	Warramunga Arr	30.98	249	eP	P	03 47 49.9	-0.6
	15nm,1.4s						
WRA	Warramunga Arr	30.99	249	P	P	03 47 50.1	-0.4
	2.8nm,1.0s,baz=78,slow=9.3,SNR=11						
WRA				LR	LR	04 00 59.3	
	comp=Z,178nm,18.1s,baz=65,slow=38						
AS01	Alice Springs	32.29	243	eP	P	03 48 01.7	-0.4
AS31	Alice Springs	32.33	243	eP	P	03 48 01.4	-1.0
	1.2nm,0.9s						
ASAR	Alice Springs	32.34	243	P	P	03 48 01.4	-1.0
	2.4nm,0.7s,baz=71,slow=9.3,SNR=15						
MJAR	Matsushiro Arr	53.61	333	P	P	03 50 51.6	-2.5
	2.9nm,0.9s,baz=165,slow=10.0,SNR=4.9						
MAJO	Matsushiro	53.61	333	eP	P	03 50 51.6	-2.5
KSRS	Korea Array	59.46	326	P	P	03 51 36.5	+0.8
	1.6nm,0.9s,baz=139,slow=7.0,SNR=6.1						
KS15	Wonju Array Si	59.47	326	eP	P	03 51 36.5	+0.7
KSAR	Wonju Array Be	59.47	326	P	P	03 51 36.5	+0.7
KS01	Wonju Array Si	59.49	326	eP	P	03 51 36.2	+0.3
USRK	Ussuriysk Ar.	62.59	334	P	P	03 51 57.8	+1.0
	2.0nm,0.8s,baz=92,slow=4.3,SNR=3.7						
XAN	Xi'an	69.62	313	eP	P	03 52 41.9	-0.4
ULN	Ulaanbaatar	77.87	324	eP	P	03 53 28.2	-2.4
	3.6nm,1.0s						
SONA0	Songino Array	78.24	324	eP	P	03 53 32.9	+0.4
SONM	Songino Array	78.24	324	P	P	03 53 32.9	+0.4
	1.0nm,1.0s,baz=123,slow=5.5,SNR=6.5						
QSPA	South Pole Qui	79.07	180	eP	P	03 53 37.7	+0.8
RDOG	Red Dog Mine	82.03	12	eP	P	03 53 53.5	+1.1
	10nm,1.3s						
ILAR	Eielson Array	83.59	19	P	P	03 54 00.6	0.0
	0.9nm,0.9s,baz=238,slow=4.4,SNR=7.7						
ILB	Eielson Array	83.59	19	eP	P	03 54 00.6	0.0
NV01	Mina Array Sit	86.39	50	eP	P	03 54 15.8	+0.4
NVAR	Mina Array Bea	86.39	50	P	P	03 54 15.8	+0.3
	1.6nm,1.1s,baz=242,slow=6.9,SNR=5.2						
MK32	Makanchi Array	93.05	317	eP	P	03 54 46.9	+0.5
MKAR	Makanchi Array	93.05	317	P	P	03 54 46.9	+0.5
	0.5nm,0.8s,baz=90,slow=6.2,SNR=5.1						
ZALV	Zalesovo Beam	93.13	324	P	P	03 54 48.2	+1.7
	0.3nm,0.3s,baz=85,slow=3.3,SNR=3.1						
ZAA1	Zalesovo Array	93.13	324	eP	P	03 54 48.2	+1.7
PD31	Pinedale Array	93.89	47	eP	P	03 54 51.0	+0.3
PDAR	Pinedale Array	93.89	47	P	P	03 54 51.0	+0.3
	0.3nm,0.8s,baz=260,slow=2.7,SNR=4.0						
YKA	Yellowknife Ar	95.13	27	P	P	03 54 53.9	-1.7
	0.2nm,0.6s,baz=254,slow=4.9,SNR=3.8						
TORD	Torodi Ar. Bea	163.68	279	PKP	PKPdf	04 01 36.6	0.0
	0.3nm,0.7s,baz=297,slow=1.3,SNR=3.6						
TOA1	Torodi Ar. Sit	163.68	279	ePKPdf	PKPdf	04 01 36.6	0.0

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*NAO **03** 03:43:32.4±2.8, 78°.40N×8°.03E, h8^{km}±13^{km}, ML3.1*
*BER **03** 03:43:32.5±2.2, 78°.40N×7°.44E, h14^{km}±14^{km}, ML2.5, Confirmed Earthquake*
*IEPN **03** 03:43:35.0, 78°.44N×8°.09E, h15^{km}, station ZFI2 has station magnitude of 2.97*
ISC 03 03:43:30.4±2.7**, 78°.42N**±0°.07×**7°.5E**±0°.1**, h16**^{km}±11^{km}**, n17, σ1^{s}42**/28**, 1C-2D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.01	58	Pg	Pn	03 43 51.3	+1.5
KBS				Lg	Lg	03 44 03.4	
KBS	Kingsbay	1.01	58	⇓iP	Pn	03 43 51.2	+1.4
KBS				i S	Sg	03 44 03.1	+0.1
KBS	Kingsbay	1.01	58	eP	Pn	03 43 51.3	+1.5
KBS				eS	Sg	03 44 03.2	+0.1
KBS				IAML		03 44 05.4	
	comp=Z,552nm,0.3s						
BRBA	Barentsburg A	1.42	102	Pg	Pg	03 43 56.6	-1.0
BRBA				Lg	Lg	03 44 16.5	
BRBA	Barentsburg A	1.42	102	Pg	Pg	03 43 56.6	-1.0
BRBA				Sg	Sg	03 44 16.5	+0.4
SPA0	Spitsbergen Ar	1.82	93	Pg	Pb	03 44 03.5	+0.3
	baz=274,slow=14						
SPA0				Lg	Lg	03 44 26.6	
	baz=275,slow=28						
SPA0	Spitsbergen Ar	1.82	93	⇑iP	Pb	03 44 03.4	+0.3
SPA0				i S	Sn	03 44 24.8	+1.2
SPA0	Spitsbergen Ar	1.82	93	Pg	Pb	03 44 03.5	+0.3
	baz=274,slow=14						
SPA0				Sg	Sb	03 44 26.6	+0.9
	baz=275,slow=28						
HSP	Hornsund	2.23	126	Pn	Pn	03 44 07.2	+0.7
HSP				Sn	Sn	03 44 33.2	-0.4
HSPB	Hornsund (broa	2.23	126	eP	Pn	03 44 07.3	+0.7
HSPB				eS	Sn	03 44 32.9	-0.8
HSPB				IAML		03 44 38.7	
	comp=Z,20nm,0.3s						
HOPEN	Hopen	4.25	108	Pn	Pn	03 44 35.7	+1.3
HOPEN				Sn	Sn	03 45 22.6	-1.0
HOPEN	Hopen	4.25	108	⇓iP	Pn	03 44 35.8	+1.5
HOPEN				eS	Sn	03 45 22.2	-1.4
HOPEN				IAML		03 45 26.5	
	comp=Z,24nm,0.3s						
BJO	Bjornoya	4.79	139	eP	Pn	03 44 43.3	+1.7
BJO				eS	Sn	03 45 33.8	-2.8
BJO				IAML		03 45 48.0	
	comp=Z,16nm,0.8s						
ZFI2	Zemlya Franca-	7.49	53	eP	Pn	03 45 20.4	+1.8
	comp=Z,2µm,1.0s						
ZFI2				eS	Sn	03 46 39.2	-3.8
ARA0	ARCESS Array S	10.14	142	Pn	Pn	03 45 55.5	+0.6
	baz=348,slow=14						
ARA0	ARCESS Array S	10.14	142	Pn	Pn	03 45 55.5	+0.6
	baz=348,slow=14						
LSH	Leshukonskoye	17.56	119	eP	Pn	03 47 33.5	-0.4

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*IDC **03** 03:57:30.7±0.4, 10°.85S×165°.43E, h0^{km}, mb4.6/21, mb1 4.8/23, mb1mx4.7/37, mbtmp4.6/23, ML5.0/2, MS4.3/24, Ms1 4.3/24, ms1mx4.2/37, Error ellipse: s-maj=16.3km s-min=13.3km az=99.0*
*BJI **03** 03:57:31.7, 10°.90S×165°.40E, h10^{km}, mB5.2/38, mb4.8/51, Ms5.0/26, Ms7 4.7/18*
*ISCJB **03** 03:57:31.7±0.1, 10°.92S±0°.03×165°.36E±0°.03, h15^{km}, mb4.9/111, MS4.4/32, Error ellipse: s-maj=4.5km s-min=3.6km az=139.9*
*MOS **03** 03:57:34.8±0.9, 10°.80S×165°.29E, h34^{km}, mb5.1/39, MS4.4/6, Error ellipse: s-maj=9.2km s-min=8.3km az=136.1*
*NEIC **03** 03:57:34.3±1.0, 10°.88S×165°.40E, h24^{km}±7^{km}, mb5.0/73, Error ellipse: s-maj=3.0km s-min=2.8km az=156.0*
*GCMT **03** 03:57:35.3±0.2, 10°.96S±0°.01×165°.18E±0°.01, h19^{km}, MW5.2/93, Moment Tensor Solution. s54,c68; s93,c147; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.89±.25; $M_{\theta\theta}$-4.35±.17; $M_{\phi\phi}$-0.54±.16; $M_{r\theta}$0.45±.31; $M_{\theta\phi}$4.04±.12; $M_{\phi r}$-4.89±.43; Best double couple: $M_0$7.87000×10^{16} NP1:ϕ_s152.00000°, δ66.00000°, λ123.00000°. NP2:ϕ_s274.00000°, δ40.00000°, λ39.00000°.*
Principal axes: T 8.0130, Plg56.0000°, Azm105.0000°; N -0.2910, Plg30.0000°, Azm317.0000°; P -7.7270, Plg15.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 03 03:57:35.2±1.5**, 10°.93S**±0°.05×**165°.43E**±0°.05**, h29**^{km}±10^{km}**, n353, σ1^{s}11**/354**, mb4.9**/111**, MS4.4**/33**, 8C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.60	285	eP	Pn	03 58 55.0	-1.6
HNR				eS	Sn	04 00 04.0	+4.0
HNR	Honiara	5.60	285	ePn	Pn	03 58 55.1	-1.6
HNR				eSn	Sn	04 00 00.1	+0.1
HNR	Honiara	5.60	285	eP	Pn	03 58 55.1	-1.6
HNR				e		04 00 00.1	
HNR	Honiara	5.60	285	Pn	Pn	03 58 57.0	+0.4
	51nm,0.3s,baz=65,slow=2.1,SNR=9.9						
HNR				Sn	Sn	04 00 00.1	+0.1
	40nm,0.3s,baz=37,slow=20,SNR=3.4						
HNR				LR	LR	04 01 05.7	
	comp=Z,8µm,18.7s,baz=100,slow=38						
MARNC	Mare, Loyalty	10.79	167	ePn	Pn	04 00 08.0	+0.2
DZM	Mont Dzumac	11.12	175	ePn	Pn	04 00 12.7	+0.2
	292nm,1.4s						
DZM				eSn	Sn	04 02 09.8	-6.3
	7.5nm,0.3s						
DZM				eLR	LR	04 02 46.3	
	comp=Z,2µm,33.0s						
DZM	Mont Dzumac	11.12	175	Pn	Pn	04 00 12.7	+0.2
	9.7nm,0.3s,baz=6.9,slow=17,SNR=102						
DZM				Sn	Sn	04 02 11.8	-4.3
	2.2nm,0.3s,baz=138,slow=19,SNR=4.1						
DZM				LR	LR	04 03 47.9	
	comp=Z,2µm,18.8s,baz=22,slow=34						
ONTNC	Ouen Toro	11.36	175	ePn	Pn	04 00 15.8	+0.2
PINNC	Pines Island,	11.78	171	ePn	Pn	04 00 21.7	+0.3
MSVF	Nonsavu	13.97	120	ePn	Pn	04 00 51.0	-0.4
MSVF	Nonsavu	13.97	120	eP	Pn	04 00 51.1	-0.4
TARA	Tarawa	14.30	32	ePn	Pn	04 00 55.4	-0.4
	12nm,0.8s						
EIDS	Eidsvold	19.78	222	P	Pn	04 02 05.1	+0.3
	baz=20,SNR=4.4						
EIDS	Eidsvold	19.78	222	eP	P	04 02 03.5	+0.3
	36nm,1.0s						
CTA	Charters Tower	20.58	241	P	P	04 02 12.5	+0.4
CTA				pmax	pmax		
	comp=Z,35nm,0.8s						
CTA				MLR	MLR		
	comp=Z,1µm,20.6s						
CTA	Charters Tower	20.58	241	P	P	04 02 12.4	+0.4
	comp=Z,43nm,1.1s,baz=67,slow=13,SNR=25						
CTA				LR	LR	04 09 30.5	
	comp=Z,1µm,20.6s,baz=52,slow=35						
CTAO	Charters Tower	20.58	241	eP	P	04 02 12.5	+0.4
CTAO	Charters Tower	20.58	241	eP	P	04 02 12.5	+0.4
MTSU	Mount Surprise	21.64	248	P	P	04 02 24.0	+0.4
	baz=22,SNR=25						
COEN	Coen	21.94	260	P	P	04 02 26.8	+0.1
	baz=22,SNR=16						
COEN	Coen	21.94	260	eP	P	04 02 26.9	+0.2
	comp=Z,20nm,0.9s						
RMQ	Roma	22.07	223	P	P	04 02 30.5	+2.5
	baz=22,SNR=6.8						
ARMA	Armidale	23.25	211	P	P	04 02 42.2	+1.6
	baz=23,SNR=3.6						
ARMA	Armidale	23.25	211	eP	P	04 02 40.8	+0.3
	comp=Z,14nm,0.9s						
KNTN	Kanton	24.07	72	eP	P	04 02 47.4	-1.0
	comp=Z,163nm,0.7s						
OUZ	Omahuta	25.30	164	eP	P	04 02 59.8	+0.5
	comp=Z,78nm,1.2s						
QLP	Quilpie	25.34	229	P	P	04 03 00.4	+0.5
	baz=25,SNR=8.9						
JAY	Jayapura	25.92	287	LR	LR	04 14 30.6	
	comp=Z,804nm,18.6s,baz=356,slow=39						
QIS	Mount Isa	26.60	246	P	P	04 03 11.6	+0.2
	baz=27,SNR=8.8						
CMSA	Cobar Meteorol	27.46	219	P	P	04 03 20.0	+1.1
	baz=28,SNR=8.0						
URZ	Urewera	29.16	161	P	P	04 03 35.0	+1.0
	comp=Z,40nm,1.0s,baz=358,slow=4.6,SNR=12						
URZ				LR	LR	04 14 13.1	
	comp=Z,979nm,18.2s,baz=348,slow=34						
H11S2	WAKE ISLAND Hy	29.26	2	T	T	04 34 06.2	
	baz=183,slow=76,SNR=94						
H11S3	WAKE ISLAND Hy	29.26	2	T	T	04 34 13.0	
	baz=183,slow=76,SNR=62						
H11S1	WAKE ISLAND Hy	29.28	2	T	T	04 34 07.5	
	baz=183,slow=76,SNR=73						
BKZ	Black Stump Fm	29.80	163	eP	P	04 03 40.0	+0.3
	comp=Z,53nm,0.9s						
STKA	Stephens Creek	30.32	223	P	P	04 03 45.3	+1.0
	baz=30,SNR=5.3						
STKA	Stephens Creek	30.32	223	eP	P	04 03 45.2	+0.9
STKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
STKA	Stephens Creek	30.32	223	P	P	04 03 44.6	+0.3
	comp=Z,3.0nm,0.6s,baz=32,slow=11,SNR=11						
STKA				PcP	PcP	04 06 44.9	+0.6
	comp=Z,1.2nm,0.5s,baz=359,slow=5.1,SNR=3.5						
STKA				LR	LR	04 15 56.2	
	comp=Z,1µm,18.3s,baz=41,slow=36						
BFZ	Birch Farm	31.14	164	eP	P	04 03 51.1	-0.3
	comp=Z,50nm,0.9s						
WRAB	Tennant Creek	31.22	250	eP	P	04 03 51.7	-0.8
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	31.22	250	ceP	P	04 03 52.2	-0.3
WRAB				pmax	pmax		
	comp=Z,43nm,1.7s						
WB2	Warramunga Arr	31.22	250	eP	P	04 03 51.2	-1.3
WR1	Warramunga Arr	31.23	250	eP	P	04 03 51.2	-1.4
	comp=Z,30nm,1.1s						
WR1				ePcP	PcP	04 06 47.6	+0.7
WRA	Warramunga Arr	31.23	250	eP	P	04 03 51.7	-0.9
WRA				i		04 14 16.2	
WRA				pmax	pmax		
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	31.23	250	P	P	04 03 51.2	-1.4
	comp=Z,16nm,1.2s,baz=81,slow=9.1,SNR=31						
WRA				PcP	PcP	04 06 47.6	+0.7
	comp=Z,2.9nm,0.8s,baz=76,slow=3.2,SNR=9.0						
WRA				PKiKP	PKiKP	04 14 16.2	-0.8
	comp=Z,0.3nm,0.7s,baz=334,slow=0.4,SNR=7.1						
WRA				LR	LR	04 16 14.9	
	comp=Z,991nm,18.1s,baz=75,slow=36						
SNZO	South Karori	31.35	167	eP	P	04 03 53.3	0.0
THZ	Tophouse	31.41	169	eP	P	04 03 54.7	+0.8
	comp=Z,22nm,0.7s						
TOO	Toolangi	32.01	211	P	P	04 04 00.5	+1.3
	baz=32,SNR=4.9						
TOO	Toolangi	32.01	211	eP	P	04 04 00.3	+1.0
	comp=Z,9.7nm,0.9s						
TOO	Toolangi	32.01	211	eP	P	04 04 00.3	+1.0
TOO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LTZ	Lake Taylor	32.29	171	eP	P	04 04 02.2	+0.6
	comp=Z,35nm,0.7s						
AS01	Alice Springs	32.53	243	eP	P	04 04 02.1	-1.8
AS31	Alice Springs	32.57	243	eP	P	04 04 03.1	-1.2
	comp=Z,4.9nm,0.8s						
AS31				ePcP	PcP	04 06 50.9	+0.3
ASAR	Alice Springs	32.57	243	P	P	04 04 03.0	-1.3
	comp=Z,15nm,0.9s,baz=70,slow=10.0,SNR=149						
ASAR				PcP	PcP	04 06 50.9	+0.3
	comp=Z,3.8nm,0.7s,baz=61,slow=2.4,SNR=13						
ASAR				LR	LR	04 16 07.0	
	comp=Z,750nm,19.8s,baz=74,slow=34						
FOZ	Fox Glacier	32.71	174	eP	P	04 04 06.5	+1.3
	comp=Z,15nm,0.9s						
OXZ	Oxford	32.78	171	eP	P	04 04 06.9	+1.0
	comp=Z,25nm,0.7s						
RPZ	Rata Peaks	33.03	173	P	P	04 04 07.9	-0.1
	comp=Z,6.7nm,0.5s,baz=300,slow=5.2,SNR=5.4						
RPZ				LR	LR	04 14 59.4	
	comp=Z,601nm,21.9s,baz=340,slow=32						
HTT	Hallett	33.05	223	P	P	04 04 09.6	+1.2
	baz=33,SNR=4.0						
BBOO	Buckleboo	34.68	227	P	P	04 04 22.4	-0.2
	baz=35,SNR=4.9						
WRKA	Warakurna	37.86	243	P	P	04 04 49.0	-0.9
	baz=38,SNR=31						
FITZ	Fitzroy Crossi	39.11	255	P	P	04 04 59.4	-1.0
	baz=39,SNR=7.6						
FITZ	Fitzroy Crossi	39.11	255	eP	P	04 04 59.7	-0.7
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	39.11	255	P	P	04 04 59.7	-0.7
	comp=Z,6.3nm,0.9s,baz=76,slow=6.9,SNR=12						
FITZ				LR	LR	04 19 48.2	
	comp=Z,423nm,20.8s,baz=76,slow=34						
FORT	Forrest	39.86	235	eP	P	04 05 06.0	-0.5
	comp=Z,32nm,0.8s						
SANI	Sanana	40.12	280	P	P	04 05 10.6	+1.7
PPT	Papeete	44.02	104	LR	LR	04 21 34.3	
	comp=Z,365nm,18.1s,baz=267,slow=33						
PPT2	Papeete2	44.02	104	eS	S	04 12 17.3	+5.7
	comp=Z,218nm,24.5s						
PPT2				eLQ	LQ	04 16 09.8	
	comp=Z,2µm,26.5s						
PPT2				eLR	LR	04 18 02.8	
	comp=Z,648nm,22.8s,baz=266						
TBI	Tubuai	44.66	112	eLQ	LQ	04 16 24.3	
	comp=Z,816nm,33.2s						
TBI				eLR	LR	04 18 19.2	
	comp=Z,1µm,26.8s,baz=279						
MBWA	Marble Bar	44.94	251	eP	P	04 05 47.7	-0.3
MEEK	Meekatharra	46.72	244	P	P	04 06 02.1	+0.1
	baz=47,SNR=17						
KIP	Kipapa	48.19	48	ceP	P	04 06 12.9	-0.5
KIP				pmax	pmax		
	comp=Z,56nm,1.2s						
POHA	Pohakuloa	49.07	52	eP	P	04 06 20.5	0.0
NWAO	Narrogin (SRO)	49.27	236	P	P	04 06 22.8	+1.1
	baz=49,SNR=4.4						
NWAO	Narrogin (SRO)	49.27	236	eP	P	04 06 21.2	-0.4
NWAO	Narrogin (SRO)	49.27	236	eP	P	04 06 21.2	-0.4
NWAO	Narrogin (SRO)	49.27	236	LR	LR	04 27 26.4	
	comp=Z,1µm,18.1s,baz=317,slow=36						
MORW	Morawa	49.41	241	P	P	04 06 22.8	0.0
	baz=49,SNR=5.6						
MORW	Morawa	49.41	241	eP	P	04 06 22.3	-0.5
	comp=Z,26nm,1.0s						
MUN	Mundaring	49.88	237	P	P	04 06 26.9	+0.6
	baz=50,SNR=3.2						
KKM	Kota Kinabalu	51.81	287	eP	P	04 06 41.1	-0.1
	comp=Z,32nm,1.1s						
TAOE	Nuku Hiva Isla	53.59	93	eS	S	04 14 31.5	+4.9
	comp=Z,313nm,24.6s						
TAOE				eLR	LR	04 22 21.8	
	comp=Z,375nm,25.2s						
MJA0	Matsu Arr-Jizo	53.71	333	eP	P	04 06 54.2	-0.6
MJA0				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MJAR	Matsushiro Arr	53.72	333	P	P	04 06 54.2	-0.6
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJAR	Matsushiro Arr	53.72	333	P	P	04 06 54.2	-0.6
	comp=Z,7.2nm,0.7s,baz=172,slow=8.5,SNR=18						
MAJO	Matsushiro	53.73	333	eP	P	04 06 54.2	-0.6
MAJO	Matsushiro	53.73	333	eP	P	04 06 54.2	-0.6
MAT	Matsushiro	53.73	333	P	P	04 06 54.0	-0.8
MAT				S	S	04 14 45.4	+18
JNU	Nakatsue	54.80	324	eP	P	04 07 02.5	-0.3
	comp=Z,39nm,1.0s						
KPJI	Karang Pucung	55.84	269	P	P	04 07 27.3	+17
RKT	Rikitea	57.92	110	eLR	LR	04 24 29.2	
	comp=Z,1µm,25.8s						
KSRS	Korea Array	59.61	326	P	P	04 07 36.5	0.0
	comp=Z,3.5nm,0.8s,baz=142,slow=7.0,SNR=12						
KSRS				LR	LR	04 31 46.9	
	comp=Z,137nm,19.0s,baz=132,slow=34						
KS15	Wonju Array Si	59.62	326	eP	P	04 07 36.5	-0.1
	comp=Z,7.1nm,0.9s						
KSAR	Wonju Array Be	59.62	326	P	P	04 07 36.5	-0.1
KSAR	Wonju Array Be	59.62	326	P	P	04 07 36.6	-0.1
KS01	Wonju Array Si	59.64	326	eP	P	04 07 36.7	-0.1
YSS	Yuzh-Sakhalins	61.08	342	eP	P	04 07 46.1	-0.4
YSS	Yuzh-Sakhalins	61.08	342	eP	P	04 07 47.6	+1.1
YSS				e		04 07 54.9	
YSS				e		04 08 01.9	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
NJ2	Nanjing	61.72	316	eP	P	04 07 51.2	+0.1
NJ2				pmax	pmax		
	comp=Z,21nm,1.0s						
QIZ	Qiongzhong	62.35	298	P	P	04 07 55.8	+0.2
QIZ				S	S	04 16 23.1	+2.3
QIZ				pmax	pmax		
	comp=Z,17nm,1.1s						
QIZ				LR	LR		
	comp=Z,170nm,16.9s						
QIZ				LR	LR		
	comp=Z,240nm,25.1s						
USA0B	Ussuriysk Arra	62.70	334	eP	P	04 07 58.0	+0.6
	comp=Z,33nm,1.1s						
USRK	Ussuriysk Ar.	62.70	334	P	P	04 07 58.2	+0.8
	comp=Z,6.0nm,0.8s,baz=144,slow=6.8,SNR=9.0						
PET	Petropavlovsk	63.96	355	eP	P	04 08 01.1	-4.5
PET				eS	S	04 16 32.0	-7.6
MDJ	Mudanjiang	64.10	332	P	P	04 08 07.5	+0.8
MDJ				pmax	pmax		
	comp=Z,15nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,220nm,4.5s						
MDJ	Mudanjiang	64.10	332	eP	P	04 08 06.8	0.0
	comp=Z,12nm,1.1s						
PETK	Petropavlovsk-	64.12	355	LR	LR	04 29 50.4	
	comp=Z,122nm,21.8s,baz=179,slow=30						
CN2	Changchun	65.48	329	eP	P	04 08 16.1	+0.4
CN2				esP	pP	04 08 23.0	-0.9
CN2				eS	S	04 16 59.0	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
GRNR	Gornyy	66.43	340	eP	P	04 08 21.8	+0.1
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
VNDA	Vanda	66.61	181	eP	P	04 08 23.1	+0.6
VNDA	Vanda	66.61	181	eP	P	04 08 23.1	+0.6
VNDA	Vanda	66.61	181	P	P	04 08 23.6	+1.1
	comp=Z,3.7nm,1.0s,baz=360,slow=9.2,SNR=9.7						
VNDA				LR	LR	04 35 03.9	
	comp=Z,262nm,18.3s,baz=335,slow=34						
ENH	Enshi	67.58	309	eP	P	04 08 28.5	-1.0
GYA	Guiyang	68.10	304	⇑iP	P	04 08 45.0	+12
GYA				PP	PP	04 11 07.0	+3.5
GYA				S	S	04 17 32.4	+1.1
GYA				SKS	SKSac	04 18 29.8	-0.2
GYA	Guiyang	68.10	304	SS	SS	04 21 57.5	+3.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=N,530nm,17.2s						
GYA				LR	LR		
	comp=E,510nm,17.6s						
GYA				LR	LR		
	comp=Z,480nm,17.4s						
BJT	Baijiatuau	68.19	321	eP	P	04 08 32.6	-0.4
	comp=Z,19nm,1.3s						
BJT	Baijiatuau	68.19	321	eP	P	04 08 32.6	-0.4
BJT				pmax	pmax		
	comp=Z,19nm,1.3s						
BJI	Beijing	68.20	321	⇓iP	P	04 08 33.5	+0.4
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN	Xi'an	69.81	312	P	P	04 08 42.9	-0.4
XAN				pP	pP	04 08 47.6	-4.0
XAN				sP	sP	04 08 50.0	-4.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,160nm,4.2s						
XAN	Xi'an	69.81	312	eP	P	04 08 43.0	-0.4
	comp=Z,11nm,0.9s						
XAN	Xi'an	69.81	312	eP	P	04 08 43.0	-0.4

XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
UTTA	**Uttaradit**	**70.10**	**293**	P	P	04 09 01.6	+16
KMI	**Kunming**	**70.80**	**301**	P	P	04 08 55.0	+5.2
KMI				pP	pP	04 08 58.5	+0.4
KMI				sP	pwP	04 08 59.9	-1.0
KMI				pmax	pmax		
	comp=Z,20nm,1.4s						
HHC	**Hu-ho-hao-te**	**71.54**	**320**	*e*P	P	04 08 48.5	-5.3
HHC				S	**S**	**04 18 06.0**	**-5.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
HHC				LR	LR		
	comp=N,390nm,19.0s						
HHC				LR	LR		
	comp=E,230nm,18.1s						
HHC				LR	LR		
	comp=Z,190nm,16.4s						
CM01	**Chiang Mai Arr**	**71.76**	**294**	*e*P	**P**	**04 08 54.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**71.78**	**294**	P	**P**	**04 08 56.4**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=118,slow=4.7,SNR=6.1						
CMAR				LR	LR	04 39 19.3	
	comp=Z,72nm,20.4s,baz=103,slow=35						
CHTO	**Chiang Mai**	**71.89**	**294**	*e*P	**P**	**04 08 55.7**	**-0.6**
	comp=Z,18nm,1.3s						
CHTO	**Chiang Mai**	**71.89**	**294**	*e*P	**P**	**04 08 55.7**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,18nm,1.3s						
CHTO	**Chiang Mai**	**71.89**	**294**	P	P	04 09 04.4	+8.1
HIA	**Hailar**	**72.11**	**330**	*e*P	**P**	**04 08 56.5**	**-0.4**
	comp=Z,17nm,0.8s						
HIA	**Hailar**	**72.11**	**330**	*e*P	**P**	**04 08 56.6**	**-0.4**
HIA				pmax	pmax		
	comp=Z,17nm,0.8s						
ZEA	**Zeya**	**72.11**	**337**	*e*P	**P**	**04 08 56.3**	**-0.5**
ZEA				pmax	pmax		
	comp=Z,55nm,1.4s						
CD2	**Chengdu**	**72.29**	**307**	*e*P	**P**	**04 08 58.0**	**-0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH	**Lanzhou**	**74.45**	**312**	*e*P	**P**	**04 09 12.1**	**+0.9**
LZH				pP	pP	04 09 15.3	-4.3
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
LZH				pmax	pmax		
	comp=Z,170nm,6.2s						
LZH				LR	LR		
	comp=Z,470nm,16.3s						
LZH				LR	LR		
	comp=Z,520nm,16.3s						
LZH				LR	LR		
	comp=Z,450nm,18.4s						
GAMB	**Gambell**	**76.51**	**10**	*e*P	**P**	**04 09 22.4**	**+0.3**
	comp=Z,25nm,1.0s						
YAK	**Yakutsk**	**77.90**	**344**	*e*P	**P**	**04 09 33.0**	**+3.0**
YAK				pmax	pmax		
	comp=Z,57nm,1.0s						
YAK				pmax	pmax		
	comp=N,29nm,1.3s						
YAK				pmax	pmax		
	comp=E,41nm,1.3s						
ULN	**Ulaanbaatar**	**78.03**	**324**	*e*P	**P**	**04 09 30.7**	**-0.6**
	comp=E,9.5nm,0.9s						
ULN	**Ulaanbaatar**	**78.03**	**324**	*ce*P	**P**	**04 09 31.9**	**+0.6**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SONA0	**Songino Array**	**78.39**	**324**	*e*P	**P**	**04 09 32.9**	**-0.4**
SONM	**Songino Array**	**78.39**	**324**	*e*P	**P**	**04 09 33.6**	**+0.3**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**78.39**	**324**	P	**P**	**04 09 32.9**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=141,slow=6.5,SNR=11						
SONM				LR	LR	04 40 05.1	
	comp=Z,107nm,21.7s,baz=104,slow=33						
SONA1	**Songino Array**	**78.39**	**324**	*e*P	**P**	**04 09 33.0**	**-0.3**
ANM	**Nome**	**78.44**	**12**	*e*P	**P**	**04 09 32.9**	**-0.1**
	comp=Z,9.8nm,1.0s						
ANM	**Nome**	**78.44**	**12**	*e*P	**P**	**04 09 32.9**	**-0.1**
ANM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA	**Gaotai**	**78.75**	**314**	*e*P	**P**	**04 09 36.5**	**+1.0**
GTA				pP	pP	04 09 40.8	-3.1
GTA				sP	PcP	04 09 44.1	-0.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,97nm,5.8s						
GTA				LR	LR		
	comp=Z,210nm,14.8s						
GTA				LR	LR		
	comp=Z,240nm,16.8s						
BILL	**Bilibino**	**78.76**	**0**	*e*P	**P**	**04 09 34.5**	**-0.2**
	comp=Z,16nm,1.0s						
BILL	**Bilibino**	**78.76**	**0**	⇓*i*P	**P**	**04 09 34.9**	**+0.2**
BILL				*e*		04 09 44.2	
BILL				*e*		04 12 29.3	
BILL				pmax	pmax		
	comp=Z,17nm,1.0s						
BILL				MLR	MLR		
	comp=Z,119nm,17.0s						
QSPA	**South Pole Qui**	**79.08**	**180**	*e*P	**P**	**04 09 37.0**	**+0.3**
BRDH	**Bariadhala**	**79.57**	**296**	LR	LR	04 42 47.6	
	comp=Z,107nm,21.7s,baz=142,slow=34						
SHL	**Shillong**	**80.19**	**298**	*e*P	P	04 09 50.0	+6.3
BOD	**Bodaibo**	**80.29**	**335**	*e*P	**P**	**04 09 42.0**	**-1.2**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.9s						
CAST	**Castle Rocks**	**80.93**	**18**	*e*P	**P**	**04 09 46.5**	**-0.1**
	comp=Z,6.7nm,0.7s						
ZAK	**Zakamensk**	**81.43**	**325**	*e*P	**P**	**04 09 48.1**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY	**Talaya**	**81.85**	**326**	*e*P	**P**	**04 09 50.8**	**-0.9**
	comp=Z,6.7nm,0.6s						
TLY	**Talaya**	**81.85**	**326**	*i* P	**P**	**04 09 52.0**	**+0.3**
IM3	**Indian Mountai**	**82.39**	**16**	*e*P	**P**	**04 09 54.4**	**+0.1**
HOPS	**Hopland Field**	**82.83**	**48**	*e*P	**P**	**04 09 57.1**	**0.0**
	comp=Z,13nm,0.9s						
MDM	**Murphy Dome**	**83.22**	**18**	*e*P	**P**	**04 09 57.8**	**-0.7**
	comp=Z,9.5nm,1.1s						
HDA	**Harding Lake**	**83.23**	**19**	*e*P	**P**	**04 09 58.5**	**-0.1**
	comp=Z,14nm,0.8s						
HDA	**Harding Lake**	**83.23**	**19**	P	**P**	**04 09 58.1**	**-0.5**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.27**	**18**	P	**P**	**04 09 58.5**	**-0.2**
	baz=226						
COLA	**College**	**83.27**	**18**	*e*P	**P**	**04 09 57.7**	**-1.1**
	comp=Z,10nm,0.8s						
COLA	**College**	**83.27**	**18**	*e*P	**P**	**04 09 57.7**	**-1.1**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SAO	**San Andreas Ge**	**83.30**	**51**	*e*P	**P**	**04 09 58.7**	**-0.9**
SAO	**San Andreas Ge**	**83.30**	**51**	*e*P	**P**	**04 09 58.7**	**-0.9**
O02D	**Mt. Diablo Mer**	**83.44**	**47**	P	**P**	**04 10 01.1**	**+0.7**
	baz=250,SNR=9.3						
ILAR	**Eielson Array**	**83.50**	**19**	P	**P**	**04 09 59.2**	**-0.7**
	comp=Z,5.9nm,0.7s,baz=235,slow=5.0,SNR=135						
ILB	**Eielson Array**	**83.50**	**19**	*e*P	**P**	**04 09 59.6**	**-0.4**
	comp=Z,6.8nm,0.6s						
IL1	**Eielson Array**	**83.50**	**19**	*e*P	**P**	**04 09 59.9**	**-0.1**
L02E	**Cave Junction**	**83.56**	**45**	P	**P**	**04 10 01.2**	**+0.4**
	baz=249						
POKR	**Poker Plat Res**	**83.57**	**18**	P	**P**	**04 09 59.5**	**-0.9**
	baz=226						
J01E	**Myrtle Point**	**83.69**	**44**	P	**P**	**04 10 01.6**	**+0.2**
	baz=249						
K02D	**Willamette Mer**	**83.71**	**44**	P	**P**	**04 10 01.7**	**+0.1**
	baz=249						
N02D	**Trinity Center**	**83.78**	**46**	P	**P**	**04 10 02.4**	**+0.3**
	baz=250,SNR=6.1						
M02C	**Callahan**	**83.81**	**46**	P	**P**	**04 10 03.0**	**+0.7**
	baz=250,SNR=6.2						
SCZ2	**Santa Cruz Isl**	**83.84**	**54**	P	**P**	**04 10 03.2**	**+0.7**
	baz=252						
SMMC	**Simmler**	**83.96**	**52**	P	**P**	**04 10 03.4**	**+0.4**
	baz=252						
PKM	**Mcpherson Peak**	**83.97**	**53**	P	**P**	**04 10 03.5**	**+0.1**
	baz=252						
HUMO	**Hull Mountain**	**84.17**	**45**	*e*P	**P**	**04 10 04.3**	**+0.4**
O03E	**Paynes Creek**	**84.19**	**47**	P	**P**	**04 10 03.9**	**-0.3**
	baz=250,SNR=12						
I03D	**Drain, OR**	**84.28**	**44**	P	**P**	**04 10 04.3**	**-0.1**
	baz=249						
HYT	**Haines Junctio**	**84.41**	**24**	*e*P	**P**	**04 10 05.5**	**+0.6**
	comp=Z,14nm,1.2s						
L04D	**Klamath Falls**	**84.48**	**45**	P	**P**	**04 10 05.5**	**-0.2**
	baz=250,SNR=6.1						
CMB	**Columbia Colle**	**84.50**	**50**	*e*P	**P**	**04 10 05.3**	**-0.5**
CMB	**Columbia Colle**	**84.50**	**50**	*e*P	**P**	**04 10 05.3**	**-0.5**
CIS	**Catalina Islan**	**84.64**	**55**	P	**P**	**04 10 05.9**	**-0.6**
	baz=253						
M04C	**Macdoel**	**84.66**	**46**	P	**P**	**04 10 06.2**	**-0.4**
	baz=250,SNR=7.8						
MAW	**Mawson**	**84.71**	**202**	LR	LR	04 41 55.2	
	comp=Z,186nm,18.4s,baz=92,slow=31						
VES	**Vestal, Richgr**	**84.83**	**52**	P	**P**	**04 10 07.1**	**-0.3**
	baz=253,SNR=5.3						
G03D	**McMinnville, O**	**84.88**	**42**	P	**P**	**04 10 08.5**	**+1.1**
	baz=249						
I04A	**Tendick Farm,**	**84.95**	**44**	P	**P**	**04 10 07.8**	**-0.1**
	baz=250						
H04D	**Lebanon**	**84.98**	**43**	P	**P**	**04 10 08.3**	**+0.3**
	baz=250						
RUBR	**Rubicon Trail**	**84.99**	**49**	*e*P	**P**	**04 10 08.2**	**-0.3**
	comp=Z,14nm,0.7s						
ISA	**Isabella, Lake**	**85.25**	**52**	*e*P	**P**	**04 10 09.3**	**-0.3**
	comp=Z,10nm,0.9s						
ISA	**Isabella, Lake**	**85.25**	**52**	*e*P	**P**	**04 10 09.3**	**-0.3**
ISA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ISA	**Isabella, Lake**	**85.25**	**52**	P	**P**	**04 10 09.7**	**+0.1**
	baz=253,SNR=11						
EDW2	**Edwards Air Fo**	**85.40**	**53**	P	**P**	**04 10 10.3**	**-0.1**
	baz=253,SNR=13						
H04A	**Detroit Lake**	**85.41**	**43**	*e*P	**P**	**04 10 10.2**	**+0.1**
	comp=Z,9.2nm,1.1s						
OMMB	**Old Mammoth Mi**	**85.42**	**50**	*e*P	**P**	**04 10 10.6**	**-0.1**
	comp=Z,7.8nm,1.0s						
VCNR	**Virginia City**	**85.44**	**49**	*e*P	**P**	**04 10 10.7**	**0.0**
	comp=Z,6.3nm,1.0s						
BFSC	**Mount Baldy Ra**	**85.48**	**54**	P	**P**	**04 10 10.7**	**-0.2**
	baz=254,SNR=8.3						
MLAC	**Mammoth, Mammo**	**85.55**	**51**	P	**P**	**04 10 11.4**	**+0.1**
	baz=253						
109C	**Camp Elliot, M**	**85.55**	**55**	P	**P**	**04 10 11.0**	**0.0**
	baz=254						
DAWY	**Dawson**	**85.56**	**21**	*e*P	**P**	**04 10 10.4**	**0.0**
	comp=Z,9.3nm,0.9s						
J05D	**Fort Rock, OR**	**85.58**	**45**	P	**P**	**04 10 11.2**	**0.0**
	baz=251,SNR=14						
YERR	**Yerington**	**85.65**	**49**	*e*P	**P**	**04 10 11.5**	**-0.2**
	comp=Z,7.4nm,1.0s						
MURC	**Murrieta**	**85.67**	**55**	P	**P**	**04 10 11.4**	**-0.3**
	baz=254						
CWC	**Cottonwood Cre**	**85.78**	**52**	P	**P**	**04 10 12.1**	**-0.3**
	baz=253						
MOD	**Modoc Plateau**	**85.79**	**46**	*e*P	**P**	**04 10 11.7**	**-0.6**
	comp=Z,9.9nm,1.2s						
E04D	**Cinebar**	**85.81**	**41**	P	**P**	**04 10 12.7**	**+0.7**
	baz=250						
LRMC	**Laurel Mtn Rad**	**85.81**	**53**	P	**P**	**04 10 12.3**	**-0.2**
	baz=254,SNR=15						
D03D	**Eldon**	**85.82**	**40**	P	**P**	**04 10 12.6**	**+0.5**
	baz=249						
TIN	**Tinemaha, Big**	**85.84**	**51**	P	**P**	**04 10 12.7**	**+0.1**
	baz=253,SNR=5.1						
I05D	**Terrebonne, OR**	**85.86**	**44**	P	**P**	**04 10 12.5**	**+0.1**
	baz=250						
TIXI	**Tiksi**	**85.92**	**349**	*e*P	**P**	**04 10 10.7**	**-1.3**
	comp=Z,24nm,1.4s						
TIXI	**Tiksi**	**85.92**	**349**	*ce*P	**P**	**04 10 12.1**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,13nm,2.5s						
RYN	**Ryan**	**86.08**	**50**	*e*P	**P**	**04 10 13.2**	**-0.6**
	comp=Z,9.4nm,1.0s						
MONP2	**Monument Peak**	**86.11**	**56**	P	**P**	**04 10 14.6**	**+0.5**
	baz=254,SNR=11						
DAC	**Darwin (Calif)**	**86.11**	**52**	*e*P	**P**	**04 10 13.8**	**-0.2**
	comp=Z,9.3nm,1.0s						
DAC	**Darwin (Calif)**	**86.11**	**52**	*e*P	**P**	**04 10 13.8**	**-0.2**
DAC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MPMC	**Manual Prospec**	**86.13**	**52**	P	**P**	**04 10 14.0**	**-0.1**
	baz=254,SNR=8.4						
G05D	**Wamic, OR**	**86.18**	**43**	P	**P**	**04 10 14.1**	**+0.1**
	baz=250						
NV01	**Mina Array Sit**	**86.19**	**50**	*e*P	**P**	**04 10 13.8**	**-0.6**
NVAR	**Mina Array Bea**	**86.19**	**50**	P	**P**	**04 10 14.8**	**+0.4**
	comp=Z,11nm,0.9s,baz=232,slow=8.4,SNR=45						
NVAR				LR	LR	04 43 35.2	
	comp=Z,242nm,18.5s,baz=259,slow=32						
PFO	**Pinyon Flats O**	**86.27**	**55**	*e*P	**P**	**04 10 14.2**	**-0.6**
	comp=Z,6.3nm,0.8s						
PFO	**Pinyon Flats O**	**86.27**	**55**	*e*P	**P**	**04 10 14.2**	**-0.6**
PFO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PFO	**Pinyon Flats O**	**86.27**	**55**	P	**P**	**04 10 14.6**	**-0.2**
	baz=254,SNR=6.7						
XPFO	**Pion Flat**	**86.27**	**55**	*e*P	**P**	**04 10 13.9**	**-0.9**
	comp=Z,6.7nm,0.8s						
IKP	**In-Ko-Pah, Jac**	**86.30**	**56**	P	**P**	**04 10 15.4**	**+0.5**
	baz=255						
F05D	**White Salmon**	**86.30**	**42**	P	**P**	**04 10 14.9**	**+0.4**
	baz=250						
GSC	**Goldstone, Bar**	**86.45**	**53**	P	**P**	**04 10 15.4**	**-0.3**
	baz=254,SNR=6.7						
A04D	**Lummi Island**	**86.48**	**39**	P	**P**	**04 10 16.4**	**+1.1**
	baz=249						
GRAC	**Grapevine Rang**	**86.49**	**51**	P	**P**	**04 10 15.9**	**+0.2**
	baz=254,SNR=11						
SWSC	**Sam W. Stewart**	**86.62**	**56**	P	**P**	**04 10 16.8**	**+0.4**
	baz=255,SNR=8.0						
HEC	**Hector,Ludlow**	**86.69**	**54**	P	**P**	**04 10 17.1**	**+0.3**
	baz=254						
B05A	**Bryant**	**86.70**	**40**	P	**P**	**04 10 16.8**	**+0.4**
	baz=250						
FURC	**Furnace Creek,**	**86.73**	**52**	P	**P**	**04 10 17.0**	**+0.2**
	baz=254,SNR=6.6						
BELC	**Belle Mtn. Jos**	**86.74**	**55**	P	**P**	**04 10 17.3**	**+0.2**
	baz=255,SNR=20						
SHOC	**Shoshone, Teco**	**87.03**	**53**	P	**P**	**04 10 18.5**	**+0.2**
	baz=254						
BC3	**Big Chuckawall**	**87.09**	**55**	P	**P**	**04 10 19.2**	**+0.4**
	baz=255,SNR=9.6						
WVOR	**Wild Horse Val**	**87.13**	**46**	*e*P	**P**	**04 10 18.7**	**-0.1**
	comp=Z,16nm,1.3s						
WVOR	**Wild Horse Val**	**87.13**	**46**	*e*P	**P**	**04 10 18.7**	**-0.1**
WVOR				pmax	pmax		
	comp=Z,16nm,1.3s						
TUQ	**Turquoise Moun**	**87.18**	**53**	P	**P**	**04 10 19.3**	**+0.1**
	baz=255,SNR=6.3						
GMRC	**Granite Mounta**	**87.22**	**54**	P	**P**	**04 10 19.3**	**-0.1**
	baz=255,SNR=5.3						
TPNV	**Topopah Spring**	**87.33**	**52**	*e*P	**P**	**04 10 19.9**	**-0.1**
	comp=Z,8.3nm,1.1s						
TPNV	**Topopah Spring**	**87.33**	**52**	*e*P	**P**	**04 10 19.9**	**-0.1**
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TPNV	**Topopah Spring**	**87.33**	**52**	P	**P**	**04 10 20.0**	**-0.1**
	baz=254,SNR=5.8						
GLA	**Glamis**	**87.44**	**56**	P	**P**	**04 10 21.3**	**+0.9**
	baz=255						
IRM	**Iron Mountain**	**87.47**	**55**	P	**P**	**04 10 20.9**	**+0.3**
	baz=255,SNR=15						
BMN	**Battle Mountai**	**87.56**	**48**	*e*P	**P**	**04 10 20.4**	**-0.6**
	comp=Z,7.1nm,1.1s						
BMN	**Battle Mountai**	**87.56**	**48**	*e*P	**P**	**04 10 20.4**	**-0.6**
BMN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HAWA	**Hanford**	**87.73**	**42**	*e*P	**P**	**04 10 21.2**	**-0.2**
	comp=Z,20nm,1.4s						
Y12C	**Blythe**	**87.86**	**55**	P	**P**	**04 10 22.9**	**+0.5**
	baz=255,SNR=8.9						
R11A	**Troy Canyon, C**	**88.21**	**51**	P	**P**	**04 10 24.2**	**+0.1**
	baz=255,SNR=8.5						
PDMCI	**Parker Dam,Lak**	**88.31**	**55**	P	**P**	**04 10 25.1**	**+0.7**
	baz=256,SNR=13						
W13A	**Hualapai Mount**	**88.71**	**54**	*e*P	**P**	**04 10 26.3**	**-0.3**
	comp=Z,8.6nm,1.1s						
BMO	**Blue Mountains**	**88.76**	**44**	*e*P	**P**	**04 10 25.8**	**-0.7**
	comp=Z,10.0nm,1.4s						
BMO	**Blue Mountains**	**88.76**	**44**	*e*P	**P**	**04 10 25.8**	**-0.7**
BMO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
WMQ	**Urumqi**	**88.79**	**315**	*e*P	**P**	**04 10 26.4**	**-0.2**
WMQ				pP	pP	04 10 34.7	-0.4
WMQ				sP	sP	04 10 40.0	+1.7
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,280nm,3.7s						
WMQ				LR	LR		
	comp=Z,160nm,26.7s						
WMQ				LR	LR		
	comp=Z,170nm,22.7s						
WMQ				LR	LR		
	comp=Z,200nm,22.7s						
214A	**Organ Pipe Nat**	**88.83**	**57**	P	**P**	**04 10 27.8**	**+0.8**
	baz=256						
NEW	**Newport**	**89.86**	**41**	*e*P	**P**	**04 10 30.8**	**-0.7**
	comp=Z,8.4nm,1.4s						
NEW	**Newport**	**89.86**	**41**	*e*P	**P**	**04 10 30.8**	**-0.7**
NEW				pmax	pmax		
	comp=Z,8.0nm,1.4s						
NEW	**Newport**	**89.86**	**41**	P	**P**	**04 10 31.3**	**-0.2**
	baz=254						
HLID	**Hailey**	**90.42**	**46**	*e*P	**P**	**04 10 34.3**	**-0.1**
	comp=Z,7.1nm,1.0s						
HLID	**Hailey**	**90.42**	**46**	P	**P**	**04 10 34.9**	**+0.5**
	baz=255						
TUC	**Tucson**	**90.58**	**57**	*e*P	**P**	**04 10 35.0**	**-0.3**
	comp=Z,13nm,1.3s						
TUC	**Tucson**	**90.58**	**57**	*e*P	**P**	**04 10 35.0**	**-0.3**
TUC				pmax	pmax		
	comp=Z,13nm,1.3s						
TUC	**Tucson**	**90.58**	**57**	P	**P**	**04 10 36.0**	**+0.7**
	baz=258						
DUG	**Dugway, Tooele**	**90.76**	**49**	*e*P	**P**	**04 10 36.4**	**+0.4**
	comp=Z,11nm,1.4s						
DUG	**Dugway, Tooele**	**90.76**	**49**	*e*P	**P**	**04 10 36.4**	**+0.4**
DUG				pmax	pmax		
	comp=Z,11nm,1.4s						
DUG	**Dugway, Tooele**	**90.76**	**49**	P	**P**	**04 10 36.5**	**+0.4**
	baz=256						
WUAZ	**Wupatki**	**90.80**	**54**	*e*P	**P**	**04 10 36.7**	**+0.3**
	comp=Z,10nm,1.0s						
WUAZ	**Wupatki**	**90.80**	**54**	P	**P**	**04 10 37.0**	**+0.7**
	baz=257						
HVU	**Hansel Valley**	**91.16**	**48**	*e*P	**P**	**04 10 37.9**	**0.0**
	comp=Z,14nm,1.0s						
HVU	**Hansel Valley**	**91.16**	**48**	*e*P	**P**	**04 10 37.9**	**0.0**
HVU				pmax	pmax		
	comp=Z,14nm,1.0s						
MSO	**Missoula**	**91.56**	**43**	P	**P**	**04 10 39.5**	**0.0**
	baz=256						
319A	**Douglas**	**91.64**	**59**	*e*P	**P**	**04 10 40.0**	**-0.3**
	comp=Z,10nm,1.1s						
SYO	**Syowa Base**	**91.81**	**197**	⇑*e*pP	**P**	**04 10 44.6**	**+4.5**
W18A	**Petrified Fore**	**92.03**	**55**	P	**P**	**04 10 42.5**	**+0.4**
	baz=258						
AHID	**Auburn Hatcher**	**92.59**	**47**	*e*P	**P**	**04 10 44.5**	**0.0**
FXWY	**Fox Creek**	**92.83**	**46**	*e*P	**P**	**04 10 46.0**	**+0.3**
	comp=Z,3.9nm,0.8s						
BOZ	**Bozeman (W)**	**92.83**	**44**	*e*P	**P**	**04 10 45.3**	**-0.2**
	comp=Z,19nm,1.5s						
BOZ	**Bozeman (W)**	**92.83**	**44**	*e*P	**P**	**04 10 45.3**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,19nm,1.5s						
BOZ	**Bozeman (W)**	**92.83**	**44**	P	**P**	**04 10 46.2**	**+0.7**
	baz=257						
HRY	**Holter Researc**	**92.94**	**43**	*e*P	**P**	**04 10 45.4**	**-0.5**
YMR	**Madison River**	**93.09**	**45**	*e*P	**P**	**04 10 46.6**	**-0.2**
	comp=Z,5.3nm,1.0s						
121A	**Cookes Peak, D**	**93.11**	**58**	P	**P**	**04 10 47.8**	**+0.6**
	baz=259						
MK01	**Makanchi Array**	**93.21**	**317**	*e*P	**P**	**04 10 46.8**	**-0.3**
MK31	**Makanchi Array**	**93.22**	**317**	*e*P	**P**	**04 10 46.9**	**-0.2**
	comp=Z,3.8nm,1.0s						
MK32	**Makanchi Array**	**93.22**	**317**	*e*P	**P**	**04 10 46.9**	**-0.2**
MK32				*e*PKKPdf	**PKKPdf**	**04 27 54.8**	**-0.9**
MKAR	**Makanchi Array**	**93.22**	**317**	P	**P**	**04 10 46.9**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=97,slow=5.7,SNR=25						
MKAR				PKKPbc	**PKKPdf**	**04 27 54.8**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=286,slow=2.2,SNR=7.6						
MKAR				LR	LR	04 51 54.9	
	comp=Z,47nm,20.6s,baz=98,slow=35						
ZALV	**Zalesovo Beam**	**93.28**	**324**	P	**P**	**04 10 45.9**	**-1.2**
	comp=Z,2.2nm,0.7s,baz=120,slow=3.9,SNR=10						
ZAA1	**Zalesovo Array**	**93.28**	**324**	*e*P	**P**	**04 10 45.9**	**-1.2**
H17A	**Grant Village**	**93.30**	**46**	P	**P**	**04 10 49.0**	**+1.1**
	baz=258						
MVCO	**Mesa Verde**	**93.42**	**53**	P	**P**	**04 10 48.9**	**+0.3**
	baz=259						
BW06	**Boulder Array**	**93.70**	**47**	*e*P	**P**	**04 10 49.0**	**-0.7**
	comp=Z,1.2nm,0.5s						
BW06	**Boulder Array**	**93.70**	**47**	P	**P**	**04 10 49.7**	**0.0**
	baz=259						
PDAR	**Pinedale Array**	**93.70**	**47**	P	**P**	**04 10 49.0**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=246,slow=2.6,SNR=14						
EGMT	**Eagleton**	**94.59**	**42**	*e*P	**P**	**04 10 52.6**	**-0.8**
	comp=Z,4.7nm,0.8s						
EGMT	**Eagleton**	**94.59**	**42**	P	**P**	**04 10 53.5**	**0.0**
	baz=259						
ANMO	**Albuquerque**	**94.64**	**55**	*e*P	**P**	**04 10 53.8**	**-0.3**
	comp=Z,2.5nm,1.0s						
ANMO	**Albuquerque**	**94.64**	**55**	*ce*P	**P**	**04 10 54.7**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	**Albuquerque**	**94.64**	**55**	P	**P**	**04 10 54.4**	**+0.3**
	baz=260						
S22A	**4UR Ranch, Cre**	**94.83**	**53**	P	**P**	**04 10 55.7**	**+0.7**
	baz=260						
MNTX	**Cornudas Mount**	**94.97**	**59**	*e*P	**P**	**04 10 55.1**	**-0.4**
	comp=Z,1.7nm,0.8s						
MNTX	**Cornudas Mount**	**94.97**	**59**	P	**P**	**04 10 55.7**	**+0.2**
	baz=260						
YKA	**Yellowknife Ar**	**95.01**	**27**	P	**P**	**04 10 53.4**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=257,slow=4.6,SNR=24						
YKA				LR	LR	04 53 07.4	
	comp=Z,18nm,18.0s,baz=241,slow=35						
NRIK	**Noril'sk**	**95.90**	**340**	LR	LR	04 55 01.6	
	comp=Z,67nm,19.0s,baz=82,slow=36						
LTX	**Lajitas**	**96.05**	**61**	*e*P	**P**	**04 11 00.2**	**-0.4**
LTX	**Lajitas**	**96.05**	**61**	*e*P	**P**	**04 11 00.2**	**-0.4**
TXAR	**Lajitas Array**	**96.05**	**61**	P	**P**	**04 11 00.2**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=224,slow=4.2,SNR=6.8						
TXAR				LR	LR	04 46 16.3	
	comp=Z,246nm,20.5s,baz=0.0,slow=30						
KURK	**Kurchatov**	**96.35**	**320**	*e*P	**P**	**04 11 00.7**	**-0.6**
KURK				*e*PKKPbc	**PKKPbc**	**04 27 46.9**	**-1.7**
KURK	**Kurchatov**	**96.35**	**320**	*i* P	**P**	**04 11 01.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURBB	**Kurchatov Arra**	**96.39**	**320**	P	**P**	**04 11 00.7**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=74,slow=3.3,SNR=3.3						
KURBB				PKKPbc	**PKKPbc**	**04 27 46.9**	**-1.6**
	comp=Z,1.3nm,1.1s,baz=275,slow=2.7,SNR=5.0						
KSH	**Kashi**	**96.44**	**309**	P	**P**	**04 11 02.9**	**+0.7**
KSH				pP	pP	04 11 08.6	-2.1
KSH				PP	**PP**	**04 15 00.4**	**+4.0**
NVL	**N'lazarevskaya**	**96.53**	**189**	*e*P	P	04 11 08.0	+6.2
NVL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
T25A	**Trinidad**	**96.63**	**54**	P	**P**	**04 11 03.4**	**+0.2**
	baz=261						
LAO	**LASA Array**	**96.72**	**44**	P	**P**	**04 11 03.5**	**+0.3**
	baz=261						
AAK	**Ala-Archa**	**97.99**	**312**	*i* P	**P**	**04 11 07.7**	**-1.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BVAR	**Borovoye Array**	**101.67**	**322**	P	**Pdif**	**04 11 24.3**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=103,slow=3.3,SNR=4.3						
ARA0	**ARCESS Array S**	**116.14**	**345**	*e*PKPdf	**PKiKP**	**04 16 14.9**	**-0.3**
ARCES	**ARCESS Array B**	**116.14**	**345**	*e*PKIKP	**PKiKP**	**04 16 14.9**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**116.14**	**345**	PKP	**PKiKP**	**04 16 14.9**	**-0.3**
	comp=Z,2.7nm,1.0s,baz=46,slow=3.5,SNR=5.1						
ARCES				PKKPbc	**PKKPbc**	**04 26 44.8**	**-3.0**
	comp=Z,3.1nm,1.0s,baz=282,slow=4.4,SNR=4.1						
LPAZ	**La Paz**	**120.51**	**116**	PKP	**PKPdf**	**04 16 25.9**	**0.0**
	comp=Z,1.0nm,0.7s,baz=295,slow=1.8,SNR=3.6						
OBN	**Obninsk**	**120.54**	**329**	*ce*PKIKP	**PKPdf**	**04 16 24.0**	**0.0**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,125nm,17.0s						
KIV	**Kislovodsk**	**120.92**	**315**	*i* PKIKP	**PKPdf**	**04 16 24.4**	**-0.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,100nm,23.0s						
FIA0	**FINESS Array S**	**121.55**	**338**	*e*PKPdf	**PKPdf**	**04 16 25.3**	**-0.4**
FIA0	**FINESS Array S**	**121.55**	**338**	*e*PKIKP	**PKPdf**	**04 16 25.3**	**-0.4**
FINES	**FINESS Array B**	**121.55**	**338**	PKP	**PKPdf**	**04 16 25.3**	**-0.4**
	comp=Z,3.4nm,1.1s,baz=151,slow=3.2,SNR=4.3						
CPUP	**Villa Florida**	**124.33**	**132**	PKIKP	**PKPdf**	**04 16 32.2**	**0.0**

CPUP	comp=Z,2.0nm,0.8s			pmax	pmax		
CPUP	Villa Florida comp=Z,2.8nm,0.8s,baz=232,slow=1.7,SNR=5.1	124.33	132	PKP	PKPdf	04 16 32.2	0.0
SDV	Santo Domingo	124.80	87	*e*PKPdf	PKPdf	04 16 32.9	-0.8
BOSA	Boshof comp=Z,7.6nm,0.8s,baz=145,slow=2.6,SNR=17	124.99	223	PKP	PKPdf	04 16 33.7	+0.1
NB2	NORSAR Subarra comp=Z,1.4nm,0.8s,baz=21,slow=1.6	126.51	345	PKPdf	PKPdf	04 16 22.4	-13
NB200	NORSAR Array S	126.51	345	*e*PKPdf	PKPdf	04 16 35.2	-0.1
NOA	NORSAR Array B comp=Z,0.7nm,0.7s,baz=27,slow=1.9,SNR=3.8	126.51	345	PKP	PKPdf	04 16 35.2	-0.1
AKASG	Malin Array Be comp=Z,0.2nm,0.3s,baz=45,slow=3.1,SNR=6.5	126.59	327	PKP	PKPdf	04 16 35.4	-0.3
AKBB	Malin Array Si	126.59	327	*e*PKPdf	PKPdf	04 16 35.4	-0.3
AKBB	Malin Array Si	126.59	327	*e*PKIKP	PKPdf	04 16 35.4	-0.3
MATP	Matopo comp=Z,3.5nm,0.9s,baz=113,slow=3.9,SNR=5.2	127.41	234	PKP	PKPdf	04 16 39.0	+0.5
BR101	Keskin Array S	128.66	313	*e*PKPdf	PKPdf	04 16 39.9	-0.4
BRTR	Keskin Array B comp=Z,0.5nm,0.9s,baz=222,slow=3.9,SNR=2.9	128.66	313	PKP	PKPdf	04 16 39.9	-0.4
HUMP	Col San Antoni	129.97	75	*e*PKPdf	PKPdf	04 16 43.0	-0.1
LSZ	Lusaka	130.29	239	PKIKP	PKPdf	04 16 45.0	+1.0
LSZ	comp=Z,2.0nm,0.6s			pmax	pmax		
LSZ	Lusaka comp=Z,1.9nm,0.6s,baz=87,slow=4.6,SNR=6.1	130.29	239	PKP	PKPdf	04 16 45.0	+1.0
GEC2	GERESS Array S	135.46	334	*e*PKPdf	PKPdf	04 16 53.2	+0.5
GEC2	GERESS Array S	135.46	334	*e*PKIKP	PKPdf	04 16 53.2	+0.5
GERES	GERESS Array B comp=Z,1.0nm,0.9s,baz=204,slow=2.9,SNR=4.7	135.46	334	PKP	PKPdf	04 16 53.2	+0.5
BDFB	Brasilia comp=Z,2.3nm,1.0s,baz=92,slow=5.5,SNR=3.7	137.65	128	PKP	PKPdf	04 16 59.1	+1.4
KEST	Kesra comp=Z,7.1nm,0.9s,baz=269,slow=5.6,SNR=4.9	147.13	323	PKPbc	PKPbc	04 17 16.4	+0.3
ES19	SONSECA Array	149.82	343	*e*PKPbc	PKPbc	04 17 23.2	+0.2
ESDC	Sonseca Array comp=Z,1.8nm,0.9s,baz=70,slow=4.9,SNR=5.5	149.86	344	PKPbc	PKPbc	04 17 22.7	-0.4
TOA0	Torodi Ar. Sit	163.94	280	*e*PKPdf	PKPdf	04 17 35.2	-1.6
TORD	Torodi Ar. Bea comp=Z,1.5nm,1.0s,baz=104,slow=1.0,SNR=8.1	163.94	280	PKP	PKPdf	04 17 35.1	-1.7
TOA1	Torodi Ar. Sit	163.94	280	*e*PKPdf	PKPdf	04 17 35.1	-1.7

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*KRNET **03** 04:00:16.6±0.1, 42°.55N×79°.59E, h10^{km}, mb2.3*
*SOME **03** 04:00:17.1, 42°.53N×79°.68E, h20^{km}*
*NNC **03** 04:00:17.9±0.9, 42°.62N×79°.61E, h0^{km}, mb2.5, mpv2.4, Error ellipse: s-maj=5.5km s-min=3.5km az=133.0*
ISC 03 04:00:17.2±1.5, 42°.57N±0°.04×79°.51E±0°.06, h5^{km}±12^{km}, n23, σ1^{s}05/49, 12C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode 19nm,0.1s	0.59	357	P	Pb	04 00 29.2	-0.9
SHLS	34nm,0.4s			S	Sb	04 00 38.4	-0.3
SHLS	Shalkode baz=19	0.59	357	*e*P	Pb	04 00 29.3	-0.7
SHLS	baz=19			*e*S	Sb	04 00 38.4	-0.3
SHLS	Shalkode 19nm,0.1s	0.59	357	*e*P	Pb	04 00 29.3	-0.7
SHLS	34nm,0.4s			*e*S	Sb	04 00 38.4	-0.3
UZB	Uzynbulak 3.9nm,0.1s	0.68	328	P	Pb	04 00 31.3	-0.3
UZB	3.9nm,0.1s			P	Pb	04 00 31.3	-0.3
UZB	10nm,0.2s			S	Sb	04 00 41.5	+0.2
UZB	10nm,0.2s			S	Sb	04 00 41.6	+0.2
UZB	Uzynbulak baz=26	0.68	328	*e*P	Pb	04 00 31.3	-0.3
UZB	baz=26			*e*S	Sb	04 00 41.5	+0.2
UZB	Uzynbulak 3.9nm,0.1s	0.68	328	*e*P	Pb	04 00 31.3	-0.3
UZB	10nm,0.2s			*e*S	Sb	04 00 41.5	+0.2
PDGK	Podgornoye 0.6nm,0.1s	0.76	359	P	Pg	04 00 31.5	-0.2
PDGK	0.6nm,0.1s			P	Pg	04 00 31.5	-0.2
PDGK	3.8nm,0.2s			S	Sg	04 00 42.0	+0.4
PDGK	3.6nm,0.1s			S	Sg	04 00 42.0	+0.4
PDGK	Podgornoye 0.7nm,0.5s	0.76	359	⇑P	Pg	04 00 31.5	-0.2
PDGK	8.0nm,0.6s			⇑S	Sg	04 00 41.6	0.0
PDGK	Podgornoye baz=55	0.76	359	⇓*i*P	Pg	04 00 31.4	-0.4
PDGK	baz=55			⇓*i*S	Sg	04 00 42.1	+0.4
PRZ	Przheval'sk baz=66	0.82	264	⇑*i*P	Pg	04 00 33.2	+0.2
PRZ	baz=66			⇑*i*S	Sg	04 00 44.9	+1.2
SATY	Saty 1.2nm,0.2s	0.95	301	P	Pb	04 00 36.4	+0.3
SATY	8.7nm,0.1s			S	Sn	04 00 50.6	-0.6
TARG	Taragay, Kyrgy baz=39	1.52	237	⇓*i*P	Pg	04 00 46.3	-0.1
TARG	baz=39			⇓*i*S	Sg	04 01 07.8	+1.7
DJR	Jarkent 0.4nm,0.2s	1.77	7	P	Pb	04 00 49.9	-0.3
DJR	2.1nm,0.3s			S	Sg	04 01 13.3	-0.9
DJR	Jarkent 0.3nm,0.1s	1.77	7	*e*P	Pb	04 00 49.9	-0.3
DJR	1.5nm,0.3s			*e*S	Sg	04 01 13.3	-0.9
KDJ	Kajisay baz=58	1.78	256	⇓*e*P	Pg	04 00 51.1	-0.2
KDJ	baz=58			⇓*i*S	Sg	04 01 15.8	+1.4
CHKK	Chushkaly baz=6.0	2.24	306	*e*P	Pg	04 00 59.6	-0.6
CHKK	baz=6.0			*e*S	Sg	04 01 30.0	+0.7
CHKK	Chushkaly 0.3nm,0.1s	2.24	306	*e*P	Pg	04 00 59.6	-0.6
CHKK	3.3nm,0.3s			*e*S	Sg	04 01 30.0	+0.7
ULHL	Ulahol baz=64	2.44	263	⇓*i*P	Pb	04 01 00.9	-0.8
ULHL	baz=64			⇓*i*S	Sb	04 01 32.4	+0.3
BOOM	Boomskoye usch baz=70	2.64	269	⇑*i*P	Pb	04 01 03.2	-1.8
BOOM	baz=70			⇑*e*S	Sb	04 01 37.3	-0.5
NRN	Naryn baz=49	2.85	248	⇑*i*P	Pb	04 01 06.6	-2.1
NRN	baz=49			⇑*i*S	Sb	04 01 43.0	-1.0
TKM2	Tokmak 2 1.3nm,1.0s	2.90	278	⇑Pg	Pg	04 01 12.0	-0.8
TKM2	1.1nm,0.7s			⇑Lg	Lg	04 01 50.0	
TKM2	Tokmak 2 baz=79	2.90	278	⇓*i*P	Pb	04 01 06.9	-2.6
TKM2	baz=79			⇓*i*S	Sb	04 01 43.6	-1.8
KZA	Kyzart baz=63	3.20	263	⇑*e*P	Pn	04 01 11.2	+2.8
KZA	baz=63			⇑*i*S	Sb	04 01 51.2	-2.8

IDC 03 04:12:46.7±1.7, 11°.05S×165°.10E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/39, mbtmp3.8/5, ML4.1/1, Error ellipse: s-maj=48.6km s-min=30.2km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.5nm,0.3s,baz=42,slow=17,SNR=20	11.04	173	Pn	Pn	04 15 25.5	-0.4
WRA	Warramunga Arr 1.0nm,0.8s,baz=79,slow=8.9,SNR=6.4	30.89	250	P	P	04 19 05.3	+0.1
ASAR	Alice Springs 0.5nm,0.5s,baz=65,slow=10,SNR=7.6	32.23	243	P	P	04 19 16.4	-0.6
FITZ	Fitzroy Crossi 1.3nm,0.9s,baz=91,slow=5.9,SNR=3.6	38.77	255	P	P	04 20 13.8	+0.5
ILAR	Eielson Array 0.3nm,0.5s,baz=229,slow=5.4,SNR=7.4	83.72	19	P	P	04 25 17.2	+0.1

IDC 03 04:20:59.7±6.6, 18°.66S×138°.55E, h0^{km}, mb1 2.5/2, mb1mx2.5/24, mbtmp2.2/2, ML1.9/2, Error ellipse: s-maj=49.5km s-min=33.5km az=58.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=71,slow=12,SNR=9.7	4.18	251	Pn	Pn	04 22 05.2	+0.4
WRA	0.1nm,0.3s,baz=70,slow=22,SNR=3.9			Sn	Sn	04 22 53.7	-0.8
WRA	0.2nm,0.3s,baz=75,slow=28,SNR=5.5			Lg	Lg	04 23 12.9	
I07AU	WARRAMUNGA INF baz=70,slow=306,SNR=0.8	4.19	252	*i*		04 48 24.7	
ASAR	Alice Springs 0.0nm,0.3s,baz=43,slow=15,SNR=4.2	6.61	220	Pn	Pn	04 22 38.1	-0.1

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*KRNET **03** 04:23:12.7±0.1, 42°.75N×76°.43E, h22^{km}, mb2.8*
*NNC **03** 04:23:12.8±0.4, 42°.77N×76°.43E, h0^{km}, mb3.0, mpv3.1, Error ellipse: s-maj=3.8km s-min=1.2km az=164.0*
*SOME **03** 04:23:13.3, 42°.78N×76°.47E, h15^{km}*
*KNET **03** 04:23:13.4±0.4, 42°.71N×76°.38E, h13^{km}±1^{km}, ml1.9, Error ellipse: s-maj=3.4km s-min=1.0km az=77.0*
ISC 03 04:23:13.1±0.9, 42°.75N±0°.02×76°.42E±0°.01, h11^{km}±7^{km}, n90, σ0^{s}99/163, 44C-40D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IZV	Izvestkoviy 117nm,0.1s	0.32	26	P	Pg	04 23 19.4	-0.1
IZV	179nm,0.2s			S	Sg	04 23 24.2	+0.4
IZV	Izvestkoviy baz=25	0.32	26	*e*P	Pg	04 23 19.4	-0.1
IZV	baz=25			*e*S	Sg	04 23 24.2	+0.4
IZV	Izvestkoviy 117nm,0.1s	0.32	26	*e*P	Pg	04 23 19.4	-0.1
IZV	179nm,0.2s			*e*S	Sg	04 23 24.1	+0.4
MTBS	Maitube 58nm,0.1s	0.38	1	P	Pg	04 23 20.6	0.0
MTBS	111nm,0.2s			S	Sg	04 23 26.1	+0.4
MTBS	Maitube baz=60	0.38	1	⇓*i*P	Pg	04 23 20.6	0.0
MTBS	baz=60			⇓*i*S	Sg	04 23 26.1	+0.4
MTBS	Maitube 58nm,0.1s	0.38	1	⇓*i*P	Pg	04 23 20.6	0.0
MTBS	111nm,0.2s			⇓*i*S	Sg	04 23 26.1	+0.4
BOOM	Boomskoye usch baz=35	0.44	234	⇑*i*P	Pg	04 23 21.5	-0.4
BOOM	baz=35			⇑*i*S	Sg	04 23 27.7	-0.1
KST	Kastek 18nm,0.1s	0.45	311	P	Pg	04 23 22.0	+0.1
KST	112nm,0.4s			S	Sg	04 23 28.6	+0.8
KST	Kastek baz=11	0.45	311	*e*P	Pg	04 23 22.0	+0.1
KST	baz=11			*e*S	Sg	04 23 28.6	+0.8
KST	Kastek 18nm,0.1s	0.45	311	*e*P	Pg	04 23 22.0	+0.1
KST	112nm,0.4s			*e*S	Sg	04 23 28.6	+0.8
TNSS	Tian-Shan 34nm,0.3s	0.48	53	P	Pg	04 23 22.1	-0.4
TNSS	151nm,0.4s			S	Sg	04 23 28.9	0.0
TNSS	Tian-Shan baz=53	0.48	53	*e*P	Pg	04 23 22.1	-0.4
TNSS	baz=53			*e*S	Sg	04 23 28.8	-0.2
TNSS	Tian-Shan 34nm,0.3s	0.48	53	⇓*i*P	Pg	04 23 22.1	-0.4
TNSS	151nm,0.4s			*e*S	Sg	04 23 28.7	-0.2
ULHL	Ulahol 26nm,0.1s,SNR=243	0.53	195	⇓P	Pg	04 23 23.1	-0.3
ULHL	60nm,0.1s			⇑S	Sg	04 23 30.2	-0.1
ULHL	Ulahol baz=96	0.53	195	⇑*i*P	Pg	04 23 23.0	-0.3
ULHL	baz=96			⇑*i*S	Sg	04 23 30.2	-0.1
AAA	Alma-Ata 145nm,0.1s	0.58	38	P	Pg	04 23 24.4	0.0
AAA	277nm,0.2s			S	Sb	04 23 32.7	-0.9
AAA	Alma-Ata baz=38	0.58	38	*e*P	Pg	04 23 24.4	0.0
AAA	baz=38			*e*S	Sb	04 23 32.7	-0.9
AAA	Alma-Ata 145nm,0.1s	0.58	38	*e*P	Pg	04 23 24.4	0.0
AAA	277nm,0.2s			*e*S	Sb	04 23 32.7	-0.9
KNDC	Almaty 34nm,0.3s	0.61	40	⇓P	Pg	04 23 24.5	-0.4
KNDC	34nm,0.3s			⇑S	Sg	04 23 33.4	+0.3
MDOK	Medeo 15nm,0.4s	0.61	48	P	Pg	04 23 24.2	-0.9
MDOK	30nm,0.5s			S	Sg	04 23 32.4	-0.8
MDOK	Medeo 26nm,0.3s	0.61	48	Pg	Pg	04 23 24.4	-0.7
MDOK	41nm,0.3s			Lg	Lg	04 23 32.8	
MDOK	Medeo baz=47	0.61	48	⇑*i*P	Pg	04 23 24.4	-0.7
MDOK	baz=47			⇑*e*S	Sg	04 23 32.8	-0.4
MDOK	Medeo 26nm,0.3s	0.61	48	⇑*i*P	Pg	04 23 24.4	-0.7
MDOK	41nm,0.3s			⇑*e*S	Sg	04 23 32.8	-0.4
TKM2	Tokmak 2 4.2nm,0.1s,SNR=5.5	0.63	286	⇑P	Pg	04 23 25.5	+0.1
TKM2	78nm,0.1s			⇑S	Sg	04 23 34.5	+0.8
TKM2	Tokmak 2 0.9nm,0.3s	0.63	286	⇑P	Pg	04 23 25.1	-0.3
TKM2	18nm,0.3s			⇑S	Sg	04 23 33.7	0.0
TKM2	Tokmak 2 baz=86	0.63	286	⇑*i*P	Pg	04 23 25.5	+0.1
TKM2	baz=86			⇑*i*S	Sg	04 23 34.3	+0.6
DGS	Degeres 5.9nm,0.1s	0.68	316	P	Pg	04 23 26.2	-0.1
DGS	110nm,0.2s			S	Sg	04 23 35.5	+0.2
DGS	Degeres baz=16	0.68	316	*e*P	Pg	04 23 26.2	-0.1
DGS	baz=16			*e*S	Sg	04 23 35.5	+0.2
DGS	Degeres 5.9nm,0.1s	0.68	316	*e*P	Pg	04 23 26.2	-0.1
DGS	110nm,0.2s			*e*S	Sg	04 23 35.5	+0.2
KOTS	Kotyrbulak 43nm,0.2s	0.70	46	P	Pg	04 23 26.2	-0.4
KOTS	60nm,0.3s			S	Sg	04 23 35.6	-0.2
KOTS	Kotyrbulak baz=46	0.70	46	*e*P	Pg	04 23 26.2	-0.4
KOTS	baz=46			*e*S	Sg	04 23 35.6	-0.2
KOTS	Kotyrbulak 43nm,0.2s	0.70	46	*e*P	Pg	04 23 26.2	-0.4
KOTS	60nm,0.3s			*e*S	Sg	04 23 35.6	-0.2
KDJ	Kajisay baz=38	0.84	138	⇑*i*P	Pg	04 23 29.3	0.0
KDJ	baz=38			⇑*i*S	Sg	04 23 40.5	+0.3
KTBS	Karatobe 16nm,0.1s	0.98	11	P	Pb	04 23 31.2	-0.8
KTBS	54nm,0.2s			S	Sb	04 23 44.0	-1.0
KTBS	Karatobe baz=3.0	0.98	11	*e*P	Pb	04 23 31.2	-0.8
KTBS	baz=3.0			*e*S	Sb	04 23 44.0	-1.0
KTBS	Karatobe 16nm,0.1s	0.98	11	*e*P	Pb	04 23 31.2	-0.8
KTBS	54nm,0.2s			*e*S	Sb	04 23 44.0	-1.0
KBK	Karagaybulak 6.6nm,0.1s,SNR=14	1.09	265	⇓P	Pb	04 23 33.8	-0.3
KBK	28nm,0.2s			⇑S	Sn	04 23 49.3	-0.4
KBK	Karagaybulak baz=66	1.09	265	⇓*i*P	Pb	04 23 33.6	-0.5
KBK	baz=66			⇓*i*S	Sb	04 23 47.8	-0.6
KZA	Kyzart 5.1nm,0.1s,SNR=32	1.10	233	⇓P	Pb	04 23 33.9	-0.5
KZA	12nm,0.2s			⇓S	Sg	04 23 49.7	+1.0
KZA	Kyzart baz=33	1.10	233	⇓*i*P	Pb	04 23 33.5	-0.9
KZA	baz=33			⇓*i*S	Sb	04 23 47.5	-1.4
CHKK	Chushkaly 17nm,0.3s	1.17	20	P	Pn	04 23 34.6	-0.9
CHKK	80nm,0.2s			S	Sg	04 23 50.9	-0.1
CHKK	Chushkaly baz=20	1.17	20	*e*P	Pn	04 23 34.6	-0.9
CHKK	baz=20			*e*S	Sb	04 23 50.0	-0.7
CHKK	Chushkaly 17nm,0.3s	1.17	20	⇓*i*P	Pn	04 23 34.6	-0.9
CHKK	80nm,0.3s			*e*S	Sb	04 23 50.0	-0.7
CHMS	Chumysh 2.1nm,0.1s,SNR=9.0	1.25	282	⇓P	Pn	04 23 36.2	-0.4
CHMS	Chumysh baz=82	1.25	282	⇑*i*P	Pn	04 23 36.1	-0.4
CHMS	baz=82			⇑*i*S	Sb	04 23 52.7	-0.2
NRN	Naryn baz=95	1.36	194	⇑*i*P	Pn	04 23 37.9	-0.3
NRN	baz=95			⇑*i*S	Sn	04 23 55.9	-0.5
AAK	Ala-Archa 4.3nm,0.2s	1.43	266	⇑P	Pb	04 23 39.7	-0.1
AAK	Ala-Archa 1.6nm,0.3s	1.43	266	⇑P	Pn	04 23 39.3	+0.3
AAK	6.3nm,0.4s			⇓S	Sb	04 23 58.7	+0.7
AAK	Ala-Archa baz=66	1.43	266	⇑*i*P	Pn	04 23 39.0	-0.1
AAK	baz=66			⇑*i*S	Sb	04 23 57.8	-0.2
TARG	Taragay, Kyrgy baz=35	1.45	134	⇓*i*P	Pn	04 23 39.0	-0.6
TARG	baz=35			⇓*i*S	Sn	04 23 58.0	-0.8
KURS	Kuram 2.9nm,0.5s	1.47	60	P	Pn	04 23 39.2	-0.4
KURS	16nm,0.6s			S	Sn	04 23 57.6	-1.3
KURS	Kuram baz=59	1.47	60	⇓*i*P	Pn	04 23 39.2	-0.4
KURS	baz=59			⇓*i*S	Sb	04 23 58.7	-0.6
KURS	Kuram 2.9nm,0.5s	1.47	60	⇓*i*P	Pn	04 23 39.2	-0.4
KURS	16nm,0.6s			⇓*i*S	Sn	04 23 57.6	-1.3
PRZ	Przheval'sk baz=0.0	1.48	100	⇑*i*P	Pb	04 23 40.6	-0.2
PRZ	baz=0.0			⇑*i*S	Sb	04 24 00.0	+0.3
SATY	Saty 10nm,0.4s	1.49	77	P	Pb	04 23 40.3	-0.5
SATY	67nm,0.1s			S	Sb	04 23 59.8	0.0
SATY	Saty 10nm,0.4s	1.49	77	⇑*i*P	Pb	04 23 40.3	-0.5
SATY	67nm,0.1s			⇑*i*S	Sb	04 23 59.8	0.0
SGDS	Sogindy 14nm,0.2s	1.49	299	P	Pb	04 23 40.7	-0.1
SGDS	30nm,0.2s			S	Sb	04 24 00.1	+0.4
USP	Ospenovka 5.5nm,0.1s,SNR=33	1.50	291	⇓P	Pb	04 23 40.8	-0.3
USP	Ospenovka baz=91	1.50	291	⇓*i*P	Pb	04 23 40.7	-0.3
USP	baz=91			⇓*i*S	Sb	04 24 00.4	+0.3
UCH	Uchtor baz=50	1.51	250	⇓*i*P	Pn	04 23 40.6	+0.2
UCH	baz=50			⇓*i*S	Sn	04 24 00.2	-0.1
ARXS	Arharly 9.8nm,0.1s	1.78	35	P	Pb	04 23 45.5	-0.3
ARXS	83nm,0.3s			S	Sb	04 24 08.5	+0.4
ARXS	Arharly 9.8nm,0.1s	1.78	35	*e*P	Pb	04 23 45.5	-0.3
ARXS	83nm,0.3s			*e*S	Sb	04 24 08.5	+0.4
ARLS	Aral baz=41	1.80	241	⇑*i*P	Pn	04 23 45.1	+1.0
ARLS	baz=41			⇑*i*S	Sb	04 24 07.8	-0.8
UZB	Uzynbulak 4.1nm,0.3s	1.95	77	P	Pb	04 23 47.9	-0.8
UZB	16nm,0.3s			S	Sb	04 24 12.6	-0.4
UZB	Uzynbulak baz=77	1.95	77	*e*P	Pb	04 23 47.9	-0.8
UZB	baz=77			*e*S	Sb	04 24 12.6	-0.4
UZB	Uzynbulak 4.1nm,0.3s	1.95	77	*e*P	Pb	04 23 47.9	-0.8
UZB	16nm,0.3s			*e*S	Sb	04 24 12.6	-0.4
EKS2	Erkin-Say 2.0nm,0.1s,SNR=18	1.95	268	⇑P	Pb	04 23 48.9	+0.2
EKS2	Erkin-Say baz=68	1.95	268	⇓*i*P	Pn	04 23 47.4	+1.1
EKS2	baz=68			⇓*i*S	Sb	04 24 12.3	-0.8
MNBS	Baschi 4.6nm,0.2s	1.96	47	P	Pb	04 23 48.1	-0.7
MNBS	30nm,0.3s			S	Sb	04 24 12.9	-0.3
MNBS	Baschi 4.6nm,0.2s	1.96	47	*e*P	Pb	04 23 48.1	-0.7
MNBS	30nm,0.3s			*e*S	Sb	04 24 12.9	-0.3
AML	Almayashu baz=54	2.11	254	⇓*i*P	Pn	04 23 50.0	+1.3
AML	baz=54			⇓*i*S	Sn	04 24 16.2	+1.0
SHLS	Shalkode 4.2nm,0.2s	2.27	79	Pg	Pg	04 23 59.3	+2.8
SHLS	18nm,0.5s			Lg	Lg	04 24 32.1	
SHLS	Shalkode 4.2nm,0.2s	2.27	79	*e*P	Pg	04 23 59.3	+2.8
SHLS	18nm,0.5s			*e*S	Sg	04 24 32.1	+6.2
PDGK	Podgornoye 1.5nm,0.3s	2.32	75	Pg	Pb	04 23 54.3	-0.7
PDGK	8.1nm,0.5s			Lg	Lg	04 24 23.5	
PDGK	Podgornoye 1.1nm,0.3s	2.32	75	⇑Pn	Pb	04 23 53.5	-1.5
PDGK	4.1nm,0.3s			⇑Sn	Sb	04 24 23.5	-0.2
PDGK	Podgornoye baz=75	2.32	75	⇓*i*P	Pb	04 23 53.1	-1.9
PDGK	baz=75			⇓*i*S	Sn	04 24 21.1	+1.2
MRKS	Merke 4.2nm,0.3s	2.35	271	Pg	Pb	04 23 56.2	+0.7
MRKS	9.3nm,0.2s			Lg	Lg	04 24 27.0	

MRKS	Merke	2.35	271	eP	Pb	04 23 56.2	+0.7
	4.2nm,0.3s						
MRKS				eS	Sg	04 24 27.0	-1.8
	9.3nm,0.2s						
BTLS	Baital	2.86	324	Pg	Pb	04 24 05.2	+1.1
	2.0nm,0.3s						
BTLS				Lg	Lg	04 24 41.7	
	5.2nm,0.3s						
BTLS	Baital	2.86	324	eP	Pb	04 24 05.2	+1.1
	0.5nm,0.1s						
BTLS				eS	Sg	04 24 42.3	-2.7
	5.2nm,0.3s						
MNAS	Manas	2.91	266	⇑Pn	Pb	04 24 03.8	-1.2
	0.6nm,0.7s						
MNAS				⇑Lg	Lg	04 24 43.4	
	3.1nm,0.7s						
MNAS	Manas	2.91	266	⇑iP	Pn	04 24 00.4	+1.0
	baz=66						
MNAS				⇑iS	Sn	04 24 34.7	+0.3
	baz=66						
DJR	Jarkent	2.91	56	Pg	Pb	04 24 05.8	+0.7
	1.8nm,0.4s						
DJR				Lg	Lg	04 24 42.1	
	5.8nm,0.5s						
DJR	Jarkent	2.91	56	eP	Pb	04 24 05.8	+0.7
	0.2nm,0.1s						
DJR				eS	Sg	04 24 43.7	-2.9
	5.8nm,0.5s						
KAPS	Kapalarasan	3.30	39	Pg	Pb	04 24 11.4	-0.2
	2.5nm,0.3s						
KAPS				Lg	Lg	04 24 53.0	
	7.8nm,0.3s						
SFK	Sufi-Kurgan	3.51	220	⇓Pn	Pb	04 24 13.3	-2.1
	1.8nm,0.7s						
SFK				⇓Lg	Lg	04 25 04.3	
	1.5nm,0.5s						
KK31	Karatay Array	4.36	277	⇑Pn	Pn	04 24 21.5	+2.3
	0.5nm,0.6s,baz=96,slow=14,SNR=2.9						
KK31				⇓Lg	Lg	04 25 27.4	
	1.1nm,0.5s,baz=93,slow=30,SNR=14						
MAKZ	Makanchi	5.66	42	⇓Pn	Pn	04 24 39.7	+2.5
	0.3nm,0.6s						
MAKZ				⇑Lg	Lg	04 26 10.6	
	1.0nm,1.0s						
MK31	Makanchi Array	5.81	44	⇓Pn	Pn	04 24 41.9	+2.7
	0.2nm,0.5s,baz=220,slow=15,SNR=5.5						
MK31				⇓Lg	Lg	04 26 14.3	
	0.5nm,0.7s,baz=223,slow=27,SNR=4.2						
OTUK	Ortayu	6.20	334	⇑Pn	Pn	04 24 43.4	-1.1
	0.3nm,0.6s						
OTUK				⇑Lg	Lg	04 26 25.2	
	2.4nm,0.7s						

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*SOF **03** 04:25:11.2, 39°.56N×25°.65E, h10^{km}, MD3.3*
*DDA **03** 04:25:13.2, 39°.70N×25°.29E, h19^{km}±1^{km}, ML3.4*
*BEO **03** 04:25:15.5±1.2, 39°.48N×25°.28E, h0^{km}, ML3.2/5*
*ISCJB **03** 04:25:16.7±0.4, 39°.75N±0°.01×25°.52E±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=2.2km az=10.4*
*ATH **03** 04:25:16.5, 39°.76N×25°.54E, h29^{km}, ML3.1/11, Error ellipse: s-maj=1.1km s-min=0.7km az=79.0*
*ISK **03** 04:25:16.1, 39°.75N×25°.52E, h7^{km}, ML3.5/31*
*THE **03** 04:25:17.4, 39°.76N×25°.54E, h8^{km}, ML3.1/6, Error ellipse: s-maj=0.8km s-min=0.3km az=239.0*
ISC 03 04:25:16.4±1.0**, 39°.71N**±0°.02×**25°.58E**±0°.02**, h11**^{km}±8^{km}**, n137, σ1^{s}07**/167**, 8C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.36	301	P	Pg	04 25 23.5	-0.1
LIA				S	Sg	04 25 28.6	+0.3
LIA				AML	AML	04 25 34.0	
	comp=E,5498μm,0.5s						
LIA				AML	AML	04 25 35.5	
	comp=N,4981μm,0.4s						
LIA	Limnos Island	0.36	301	P	Pg	04 25 23.5	-0.1
LIA				S	Sg	04 25 28.3	0.0
BOZC	Bozcaada	0.38	70	PG	Pb	04 25 24.9	-0.3
BOZC	Bozcaada	0.38	70	iP	Pn	04 25 26.7	-1.2
BOZC				iS	Sb	04 25 31.6	+0.5
EFSA	Agios Efstrati	0.49	250	P	Pb	04 25 27.7	+0.7
EFSA				S	Sb	04 25 34.4	+0.2
EFSA				AML	AML	04 25 42.1	
	comp=N,7982μm,0.7s						
EFSA				AML	AML	04 25 43.0	
	comp=E,8336μm,0.6s						
GADA	Gvkgeada	0.54	27	PG	Pg	04 25 27.1	+0.3
GADA				SG	Sb	04 25 34.8	-0.7
SIGR	SIGRI	0.54	157	PG	Pb	04 25 28.3	+0.4
SIGR				SG	Sn	04 25 37.1	-2.0
SIGR	SIGRI	0.54	157	P	Pb	04 25 28.3	+0.4
SIGR				S	Sn	04 25 37.2	-2.0
SIGR				AML	AML	04 25 37.3	
	comp=N,7745μm,0.4s						
SIGR				AML	AML	04 25 37.7	
	comp=E,5262μm,0.4s						
SIGR	SIGRI	0.54	157	P	Pb	04 25 28.3	+0.4
SIGR				S	Sn	04 25 37.2	-1.9
EZN	Ezine	0.58	79	PG	Pb	04 25 28.6	0.0
EZN				SG	Sb	04 25 36.9	+0.1
PRK	Paraskevi	0.71	131	P	Pn	04 25 32.4	+0.1
PRK				S	Sn	04 25 42.9	-0.3
PRK				AML	AML	04 25 47.5	
	comp=N,7920μm,0.5s						
PRK				AML	AML	04 25 47.6	
	comp=E,12714μm,0.4s						
PRK	Paraskevi	0.71	131	P	Pn	04 25 32.3	0.0
PRK				S	Sn	04 25 42.8	-0.3
BAYC	CANAKKALE_Bayr	0.74	88	iP	Pn	04 25 31.9	-0.9
BAYC				iS	Sn	04 25 43.0	-1.1
SMTH	Samothraki Isl	0.76	357	P	Pg	04 25 31.0	-0.1
SMTH				S	Sg	04 25 40.6	-0.3
SMTH				AML	AML	04 25 44.0	
	comp=E,2123μm,0.3s						
SMTH				AML	AML	04 25 44.1	
	comp=N,2206μm,0.2s						
SMTH	Samothraki Isl	0.76	357	P	Pg	04 25 31.1	+0.1
SMTH				S	Sg	04 25 41.2	+0.2
AYVA	Ayvalik	0.95	115	iP	Pn	04 25 36.5	+0.9
AYVA				iS	Sn	04 25 51.4	+2.4
AYVA				IAML_P			
	comp=Z,873nm,0.2s						
GELI	Tayfur-Gelibol	0.97	45	PG	Pb	04 25 34.9	-0.2
GELI				SG	Sn	04 25 49.2	-0.4
ENEZ	Enez	1.11	23	PN	Pg	04 25 37.6	-0.2
THAS	Thassos island	1.11	324	P	Pb	04 25 37.5	-0.1
THAS				S	Sb	04 25 51.3	-0.7
THAS				AML	AML	04 25 54.1	
	comp=N,1627μm,0.3s						
THAS				AML	AML	04 25 54.2	
	comp=E,2146μm,0.3s						
THAS	Thassos island	1.11	324	P	Pb	04 25 37.2	-0.4
THAS				S	Sg	04 25 52.5	+0.3
LPK	Lapseki	1.12	54	PN	Pn	04 25 38.4	+0.4
PSRA	Psara	1.17	181	P	Pg	04 25 40.2	+1.3
ERIK	Erikli-Kesan	1.19	36	PN	Pn	04 25 38.9	-0.1
ALN	Alexandroupoli	1.23	17	PN	Pb	04 25 39.6	-0.1
ALN	Alexandroupoli	1.23	17	P	Pn	04 25 39.1	-0.4
ALN				S	Sb	04 25 54.9	-0.7
ALN				AML	AML	04 25 56.7	
	comp=E,858μm,0.3s						
ALN				AML	AML	04 25 57.4	
	comp=N,1030μm,0.5s						
ALN	Alexandroupoli	1.23	17	P	Pn	04 25 39.4	-0.1
ALN				S	Sg	04 25 56.1	-0.1
FOCM	Foa	1.34	138	PN	Pg	04 25 42.3	+0.2
CHOS	Chios island	1.38	164	PN	Pg	04 25 42.4	-0.4
CHOS	Chios island	1.38	164	P	Pg	04 25 42.3	-0.5
CHOS				S	Sg	04 26 02.0	+1.4
CHOS				AML	AML	04 26 09.8	
	comp=E,3913μm,0.7s						
CHOS				AML	AML	04 26 09.8	
	comp=N,2410μm,0.5s						
CHOS	Chios island	1.38	164	P	Pg	04 25 42.4	-0.4
CHOS				S	Sg	04 26 02.1	+1.4
OUR	Ouranopolis	1.38	297	PN	Pn	04 25 41.2	-0.3
OUR	Ouranopolis	1.38	297	P	Pn	04 25 41.2	-0.3
KESN	Edirne-Kesan	1.39	37	iP	Pb	04 25 42.6	-0.1
KESN				iS	Sg	04 26 02.6	+1.3
KESN				IAML_P			
	comp=Z,1μm,0.3s						
AOS	Alonnisos	1.43	248	PN	Pb	04 25 42.6	-0.4
AOS	Alonnisos	1.43	248	P	Pb	04 25 42.5	-0.4
AOS				S	Sb	04 26 01.2	+0.1
AOS				AML	AML	04 26 04.0	
	comp=E,812μm,0.6s						
AOS				AML	AML	04 26 09.5	
	comp=N,1002μm,0.5s						
RDO	Rodhopi	1.43	359	PN	Pn	04 25 42.2	-0.1
RDO	Rodhopi	1.43	359	P	Pn	04 25 42.1	-0.2
RDO				S	Sn	04 25 59.7	-1.3
RDO				AML	AML	04 26 04.8	
	comp=N,584μm,0.5s						
RDO				AML	AML	04 26 07.4	
	comp=E,322μm,0.6s						
RDO	Rodhopi	1.43	359	P	Pn	04 25 42.2	-0.1
KRBG	Karabiga-Canak	1.48	62	PN	Pg	04 25 44.3	-0.5
PAIG	Paliouri	1.48	279	P	Pn	04 25 42.5	-0.5
KAVA	Kavala	1.52	328	P	Pn	04 25 43.1	-0.4
KAVA				S	Sn	04 26 01.6	-1.6
KAVA	Kavala	1.52	328	P	Pn	04 25 43.1	-0.4
KVLA	Kavala	1.53	324	P	Pn	04 25 43.1	-0.4
KVLA				S	Sn	04 26 01.7	-1.7
SART	Tekirdag	1.56	51	iP	Pb	04 25 45.1	-0.2
SART				IAML_P			
	comp=Z,5μm,0.2s						
URLA	Izmir	1.56	149	PN	Pg	04 25 45.5	-0.9
BALY	Balya	1.57	88	iP	Pg	04 25 46.6	0.0
BALY				IAML_P			
	comp=Z,2μm,0.3s						
STEP	BALIKESIR_Sava	1.69	101	iP	Pg	04 25 48.4	-0.3
STEP				IAML_P			
	comp=Z,4μm,0.3s						
SKIA	Skiathos	1.73	252	P	Pn	04 25 46.8	+0.5
SKIA				AML	AML	04 26 15.0	
	comp=N,802μm,0.5s						
SKIA				AML	AML	04 26 17.0	
	comp=E,759μm,0.5s						
BLCB	Balcova	1.75	139	PN	Pb	04 25 48.2	-0.2
PLG	Polygyros	1.77	293	P	Pn	04 25 46.8	-0.1
PLG	Polygyros	1.77	293	P	Pn	04 25 46.8	-0.1
BALB	Balikesir	1.77	92	PN	Pb	04 25 48.3	-0.6
MRKA	Markates	1.85	238	P	Pn	04 25 48.0	-0.1
EDC	Edincik	1.86	69	PN	Pb	04 25 49.7	-0.7
XOR	Xorichti	1.88	260	P	Pn	04 25 48.9	+0.4
AKHS	Akhisar	1.92	115	iP	Pb	04 25 51.4	0.0
AKHS				IAML_P			
	comp=Z,795nm,0.2s						
KDZ	Kurdzhali	1.94	356	PN	Pn	04 25 49.5	+0.2
KDZ	Kurdzhali	1.94	356	P	Pg	04 25 53.1	-0.5
TKR	Tekirdag	1.96	49	PN	Pb	04 25 50.8	-1.3
SOH	Sokhos	2.03	304	P	Pn	04 25 49.7	-0.9
SOH	Sokhos	2.03	304	P	Pn	04 25 50.7	+0.1
FYTO	Fytoko, Volos	2.07	262	P	Pn	04 25 50.1	-0.9
SRS	Serrai	2.07	313	ePn	Pn	04 25 50.7	-0.3
SRS				eSn	Sn	04 26 18.4	+1.6
SRS	Serrai	2.07	313	P	Pn	04 25 50.7	-0.3
SRS	Serrai	2.07	313	P	Pn	04 25 50.7	-0.3
DION	Dionisos Attik	2.08	219	P	Pn	04 25 51.0	-0.2
RZN	Rozhen	2.08	342	P	Pn	04 25 49.1	-2.3
NVR	Nevrokopi	2.10	322	P	Pn	04 25 51.5	0.0
NVR	Nevrokopi	2.10	322	P	Pn	04 25 51.5	0.0
HORT	Hortiatis	2.10	296	PN	Pn	04 25 51.6	+0.1
PTL	Penteli	2.13	219	P	Pn	04 25 51.6	-0.4
CRLT	Corlu	2.17	49	PN	Pn	04 25 53.7	+1.3
KCTX	Karacabey (Bur	2.20	75	PN	Pb	04 25 54.4	-1.8
SMG	Samos	2.23	153	P	Pn	04 25 54.5	+1.3
DURS	Dursunbey	2.23	92	iP	Pb	04 25 55.8	-1.0
DURS				IAML_P			
	comp=Z,910nm,0.2s						
EDRB	Edirne	2.31	22	PN	Pn	04 25 55.3	+1.0
VLY	Voula,Athens	2.33	218	P	Pn	04 25 56.1	+1.6
DST	Dursunbey	2.35	92	PN	Pb	04 25 56.8	-1.9
MMB	Musomiste	2.35	324	P	Pn	04 25 55.3	+0.4
VIL2	Platees	2.35	231	P	Pn	04 25 55.7	+0.9
GCAM	G?zelcaml?	2.39	147	PN	Pb	04 25 57.6	-1.8
PHSR	Pinarhisar	2.42	37	PN	Pn	04 25 57.0	+1.2
PLD	Plovdiv	2.48	345	ePn	Pb	04 26 00.0	-0.9
PLD				eSn	Sb	04 26 32.2	+0.7
PLD	Plovdiv	2.48	345	P	Pg	04 26 04.1	+0.2
KNT	Kendrikon	2.51	306	P	Pn	04 25 57.7	+0.5
KNT	Kendrikon	2.51	306	P	Pn	04 25 57.6	+0.5
SLVT	Silivri	2.51	52	PN	Pn	04 25 58.7	+1.6
DEMI	Demirci	2.52	104	iP	Pb	04 25 59.8	-1.9
DEMI				IAML_P			
	comp=Z,144nm,0.1s						
AYDB	Zeytinkoy-Aydi	2.52	134	PN	Pn	04 25 59.1	+1.7
PROD	Prodromos	2.54	236	P	Pn	04 25 57.4	-0.2
ORLT	Orhaneli	2.57	82	PN	Pn	04 25 59.8	+1.8
AGG	Agios Georgios	2.61	256	P	Pn	04 25 59.5	+0.9
MDNY	Mudanya-Bursa	2.62	74	PN	Pn	04 26 00.4	+1.8
APE	Apeiranthos	2.64	181	⇑iP	Pg	04 26 13.5	+6.5
LTK	Loutraki	2.65	231	P	Pn	04 25 59.6	+0.5
LOUT	Loutraki	2.67	231	P	Pn	04 26 00.1	+0.8
KULA	Kula-Manisa	2.68	116	PN	Pn	04 26 01.1	+1.6
SBT5	Esenkoy-Cinarc	2.69	69	PN	Pn	04 26 01.5	+2.0
CTKS	Kestanelik-??a	2.70	55	PN	Pn	04 26 01.3	+1.6
CTYL	Yalikoy Yolu	2.71	49	PN	Pn	04 26 01.4	+1.6
DSF	Desfina	2.71	242	P	Pn	04 25 60.0	0.0
GRG	Griva	2.73	298	P	Pn	04 26 01.0	+0.9
THL	Klokotos Trika	2.76	268	P	Pn	04 25 59.7	-0.8
VAY	Valandovo	2.80	306	iPn	Pg	04 26 09.7	-0.3
BGKT	Bogazkoy	2.84	58	PN	Pn	04 26 02.8	+1.2
JMB	Yambol	2.85	15	P	Pg	04 26 11.1	+0.1
KKB	Krupnik	2.87	319	P	Pb	04 26 07.1	-0.5
KALE	Kalithea	2.99	245	P	Pn	04 26 03.7	0.0
TRIZ	Trizonia	3.05	245	P	Pn	04 26 04.7	+0.2
ANX	Ano Chora	3.06	250	P	Pn	04 26 05.9	+1.2
GUR	Goura	3.09	236	P	Pn	04 26 05.3	+0.1
EFP	Efpalio	3.14	247	P	Pn	04 26 07.2	+1.5
KLV	Kalavryta, Ach	3.15	239	P	Pn	04 26 06.5	+0.4
LAKA	Lakka	3.17	244	P	Pn	04 26 07.2	+1.0
STIP	Stip	3.25	309	iPn	Pn	04 26 06.6	-0.7
VTS	Vitosha	3.40	329	ePn	Pn	04 26 11.1	+1.6
VTS				eSn	Sn	04 26 52.0	+2.1
VTS	Vitosha	3.40	329	⇑iP	Pb	04 26 13.3	-3.4
VTS	Vitosha	3.40	329	S	Sn	04 26 52.0	+2.1
VTS	Vitosha	3.40	329	P	Pg	04 26 22.1	+0.6
MPEP	Malo Peshtene	3.89	340	P	Pn	04 26 18.0	+1.9
ZAPS	Zavoj	4.19	329	ePn	Pn	04 26 22.1	+1.9
ZAPS				eSn	Sn	04 27 11.7	+2.5
IDI	Anoyia	4.45	187	⇑iP	Pg	04 26 38.8	-2.8
BOVS	Bovan	4.88	325	ePn	Pn	04 26 30.0	+0.4
BOVS				eSn	Sn	04 27 26.5	+0.5
HERR	Herculane	5.67	337	⇑iP	Pn	04 26 42.4	+1.9
VOIR		5.73	356	⇓iP	Pn	04 26 40.2	-1.3
VOIR		5.73	356	S	Sb	04 28 04.5	-0.6
MLR	Muntele Rosu	5.78	3	⇑iP	Pn	04 26 42.5	+0.3
MDVR	Moldovita	5.82	332	⇓iP	Pn	04 26 44.7	+2.1
MDVR	Moldovita	5.82	332	S	Sb	04 28 09.2	+1.6
GZR	Gura Zlata	6.04	341	⇑iP	Pn	04 26 46.6	+0.9
PLOR	Plostina	6.18	7	⇑iP	Pn	04 26 47.1	-0.5
VRI	Vrincioaia	6.21	7	⇑iP	Pn	04 26 46.5	-1.4
DOPR	Dopca	6.25	359	⇓iP	Pn	04 26 48.1	-0.4
BZS	Buzias	6.58	335	⇓iP	Pn	04 26 55.3	+2.3
BZS	Buzias	6.58	335	S	Sn	04 28 17.3	+9.2
DRGR		7.38	344	⇓iP	Pn	04 27 05.2	+1.2
BURAR	Bucovina Array	7.90	358	⇓iP	Pn	04 27 13.2	+1.9

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*KRSC **03** 04:53:59.1±0.8, 55°.71N×162°.33E, h54^{km}±17^{km}, ML3.9*
*MOS **03** 04:54:00.0±0.5, 55°.77N×162°.39E, h45^{km}, mb4.1/1, Error ellipse: s-maj=9.6km s-min=6.3km az=73.8*
*IDC **03** 04:54:02.4±4.3, 55°.71N×162°.11E, h54^{km}±41^{km}, mb3.1/3, mb1 3.3/4, mb1mx2.9/56, mbtmp3.3/4, ML2.1/1, Error ellipse: s-maj=46.9km s-min=26.0km az=117.0*
ISC 03 04:53:59.3±0.8**, 55°.72N**±0°.02×**162°.35E**±0°.04**, h22**^{km}±7^{km}**, n68, σ1^{s}29**/109**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.56	28	eP	Pn	04 54 12.3	+0.3
KBTR				eS	Sn	04 54 22.1	+1.5
KBTR	Krutoberegovo	0.56	28	PN	Pn	04 54 12.3	+0.3
KBTR				S	Sn	04 54 22.1	+1.5
KBG	Krutoberegovo	0.58	20	eP	Pn	04 54 12.2	0.0
KBG				eS	Sn	04 54 21.9	+1.0
KBG	Krutoberegovo	0.58	20	PN	Pn	04 54 12.2	0.0
KBG				S	Sn	04 54 21.9	+1.0
ZLN	Zelenaya	0.92	290	eP	Pb	04 54 16.9	+0.3
ZLN	Zelenaya	0.92	290	PN	Pb	04 54 16.9	+0.3
BZGR	Bezymyannyi-Gr	0.96	284	eP	Pb	04 54 17.3	0.0
BZGR				eS	Sb	04 54 29.8	+0.3
BZGR	Bezymyannyi-Gr	0.96	284	PN	Pb	04 54 17.3	0.0
BZGR				S	Sb	04 54 29.8	+0.3
CIRR	Tsirk	0.98	295	eP	Pb	04 54 17.7	0.0
CIRR				eS	Sb	04 54 30.6	+0.3
CIRR	Tsirk	0.98	295	PN	Pb	04 54 17.7	0.0
CIRR				S	Sb	04 54 30.6	+0.3
SMKR	Semkarok	1.00	331	eP	Pb	04 54 18.1	+0.2
SMKR				eS	Sn	04 54 31.8	+0.3
SMKR	Semkarok	1.00	331	PN	Pb	04 54 18.1	+0.2
SMKR				S	Sn	04 54 31.8	+0.3
LGNR	Loginova	1.00	292	eP	Pn	04 54 19.0	+0.7
LGNR				eS	Sb	04 54 31.7	+0.7
LGNR	Loginova	1.00	292	PN	Pn	04 54 19.0	+0.7
LGNR				S	Sb	04 54 31.7	+0.7
BDR	Baidarnaya	1.06	324	eP	Pb	04 54 19.3	+0.2
BDR				eS	Sn	04 54 35.7	+2.6
BDR	Baidarnaya	1.06	324	PN	Pb	04 54 19.3	+0.2
BDR				S	Sn	04 54 35.7	+2.6
BZMR	Bezymyannaya	1.07	283	eP	Pb	04 54 18.8	-0.4
BZMR	Bezymyannaya	1.07	283	PN	Pb	04 54 18.8	-0.4
BZWR	Bezymyannyi-We	1.07	284	eP	Pb	04 54 19.2	-0.1
BZWR	Bezymyannyi-We	1.07	284	PN	Pb	04 54 19.2	-0.1
KRSR	Krestovskiy	1.12	297	eP	Pn	04 54 19.1	-0.6
KRSR				eS	Sb	04 54 33.5	-0.7
KRSR	Krestovskiy	1.12	297	PN	Pn	04 54 19.1	-0.6
KRSR				S	Sb	04 54 33.5	-0.7
KLY	Klyuchi	1.12	303	eP	Pn	04 54 18.1	-1.6
KLY				eS	Sb	04 54 31.9	-2.3
KLY	Klyuchi	1.12	303	PN	Pn	04 54 18.1	-1.6
KLY				S	Sb	04 54 31.9	-2.3
SRKR	Sorokina	1.15	326	eP	Pn	04 54 20.3	+0.2
SRKR				eS	Sb	04 54 35.1	+0.1
SRKR	Sorokina	1.15	326	PN	Pn	04 54 20.3	+0.2
SRKR				S	Sb	04 54 35.1	+0.1
KIRR	Kirishev	1.16	283	eP	Pn	04 54 20.4	+0.1
KIRR				eS	Sn	04 54 35.8	+0.4
KIRR	Kirishev	1.16	283	PN	Pn	04 54 20.4	+0.1
KIRR				S	Sn	04 54 35.8	+0.4
MKZ	Mys Kozlova	1.22	197	iP	Pn	04 54 21.3	+0.4
MKZ				eS	Sb	04 54 36.7	-0.1
MKZ	Mys Kozlova	1.22	197	PN	Pn	04 54 21.3	+0.4
MKZ				S	Sb	04 54 36.7	-0.1
TUMD	Tumrok D	1.22	246	eP	Pn	04 54 21.3	+0.2
TUMD				eS	Sb	04 54 36.7	-0.3
KPT	Kopyto	1.22	283	eP	Pn	04 54 21.5	+0.4
KPT				eS	Sn	04 54 37.6	+0.6
KPT	Kopyto	1.22	283	PN	Pn	04 54 21.5	+0.4
KPT				S	Sn	04 54 37.6	+0.6
KZV	Kizimen	1.32	244	iP	Pb	04 54 23.4	0.0
KZV				eS	Sb	04 54 40.1	+0.2
KZV	Kizimen	1.32	244	PN	Pb	04 54 23.4	0.0
KZV				S	Sb	04 54 40.1	+0.2
TUMR	Tumrok	1.32	252	iP	Pb	04 54 23.6	+0.1
TUMR				eS	Sb	04 54 40.2	+0.1
TUMR	Tumrok	1.32	252	PN	Pb	04 54 23.6	+0.1
TUMR				S	Sb	04 54 40.2	+0.1
KOZ	Kozyrevsk	1.43	285	eP	Pb	04 54 25.2	-0.1
KOZ				eS	Sb	04 54 44.3	+1.2
KOZ	Kozyrevsk	1.43	285	PN	Pb	04 54 25.2	-0.1
KOZ				S	Sb	04 54 44.3	+1.2
ESO	Esso	2.07	277	eP	Pn	04 54 32.9	+0.2
ESO	Esso	2.07	277	PN	Pn	04 54 32.9	+0.2
KII	Karymskiy	2.37	226	eP	Pn	04 54 39.3	+2.4
KII	Karymskiy	2.37	226	PN	Pn	04 54 39.3	+2.4
SPN	Mys Shipunski	2.95	208	eP	Pn	04 54 45.4	+0.6
SPN				eS	Sn	04 55 18.3	-1.2
SPN	Mys Shipunski	2.95	208	PN	Pn	04 54 45.4	+0.6
SPN				S	Sn	04 55 18.3	-1.2
NLC	Nalytchevo	3.09	216	eS	Sn	04 55 23.1	+0.1
SDLR	Sedlovina	3.17	221	iP	Pn	04 54 49.4	+1.5
SDLR	Sedlovina	3.17	221	PN	Pn	04 54 49.4	+1.5
SMAR	Somma	3.21	222	eP	Pn	04 54 50.4	+1.8
SMAR	Somma	3.21	222	PN	Pn	04 54 50.4	+1.8
AVH	Avacha	3.23	222	eP	Pn	04 54 51.7	+2.9
AVH	Avacha	3.23	222	PN	Pn	04 54 51.7	+2.9
UGLR	Uglovaya	3.25	221	eP	Pn	04 54 51.0	+2.1
UGLR	Uglovaya	3.25	221	PN	Pn	04 54 51.0	+2.1
KOK	Koryaka	3.25	223	eP	Pn	04 54 51.0	+2.0
KOK	Koryaka	3.25	223	PN	Pn	04 54 51.0	+2.0
GNL	Ganaly	3.26	233	eP	Pn	04 54 50.5	+1.4
GNL	Ganaly	3.26	233	PN	Pn	04 54 50.5	+1.4
DALK	Dalny	3.41	219	eP	Pn	04 54 52.8	+1.7
DALK				eS	Sn	04 55 30.5	-0.3
DALK	Dalny	3.41	219	PN	Pn	04 54 52.8	+1.7
DALK				S	Sn	04 55 30.5	-0.3
PET	Petropavlovsk	3.46	220	ePN	Pb	04 54 58.5	-1.2
PET				eS	Sn	04 55 33.7	+1.8
PET				smax	smax		
	comp=N,70nm,0.5s						
PET				smax	smax		
	comp=E,61nm,0.5s						
PETK	Petropavlovsk-	3.77	228	P	Pn	04 54 56.5	+0.5
	comp=E,0.7nm,0.3s,baz=54,slow=16,SNR=11						
PETK				S	Sb	04 55 46.1	-4.1
	comp=E,0.5nm,0.3s,baz=46,slow=36,SNR=2.8						
KRMR	Karymshinskiy	3.80	222	eP	Pn	04 54 59.6	+3.1
KRMR				eS	Sn	04 55 42.9	+2.4
KRMR	Karymshinskiy	3.80	222	PN	Pn	04 54 59.6	+3.1
KRMR				S	Sn	04 55 42.9	+2.4
MTVR	Mutnovka	4.06	219	eP	Pn	04 55 02.0	+1.8
YKA	Yellowknife Ar	40.36	45	P	P	05 01 35.3	+0.5
	comp=E,0.1nm,0.5s,baz=299,slow=8.4,SNR=3.3						
FINES	FINESS Array B	58.22	337	P	P	05 03 49.8	-1.4
	comp=E,0.7nm,0.5s,baz=39,slow=9.1,SNR=12						
WRA	Warramunga Arr	79.02	207	P	P	05 06 00.3	-1.0
	comp=E,0.2nm,0.9s,baz=22,slow=5.7,SNR=2.8						

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*ISCJB **03** 05:01:05.7±0.2, 64°.80N±0°.03×123°.21W±0°.05, h10^{km}, mb4.0/36, MS4.7/1, Error ellipse: s-maj=4.5km s-min=2.8km az=20.9*
*NEIC **03** 05:01:06.0±0.0, 64°.93N×123°.15W, h10^{km}, mb4.0/29, MN3.9(OTT), After OTT.*
*PGC **03** 05:01:08.7±0.0, 64°.84N×123°.12W, h10^{km}, mb4.0, ML4.8/2, 177km east of Norman Wells, Nt Nw Territories - Nunavut, Canada*
*IDC **03** 05:01:10.9±1.7, 64°.84N×123°.04W, h24^{km}±12^{km}, mb3.5/14, mb1 3.8/17, mb1mx3.6/51, mbtmp3.7/17, ML4.2/4, Error ellipse: s-maj=11.1km s-min=7.6km az=30.0*
ISC 03 05:01:06.8±0.4**, 64°.78N**±0°.04×**123°.25W**±0°.04**, h10**^{km}**, n148, σ2^{s}84**/156**, mb4.0**/36**, Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKW3	Yellowknife Ar	4.44	116	ePn	Pn	05 02 15.0	+0.9
YKW3	Yellowknife Ar	4.44	116	Pn	Pn	05 02 14.9	+0.7
YKW3				Sn	Sn	05 03 04.0	-1.8
YKA	Yellowknife Ar	4.48	117	Pn	Pn	05 02 15.3	+0.6
	8.5nm,0.3s,baz=302,slow=13,SNR=423						
YKA				Pg	Pg	05 02 31.3	-1.3
	37nm,0.3s,baz=303,slow=17,SNR=64						
YKA				Sn	Sn	05 03 04.5	-2.4
	31nm,0.3s,baz=300,slow=24,SNR=11						
YKA				Lg	Lg	05 03 26.3	
	134nm,0.3s,baz=301,slow=30,SNR=21						
YKB5	Yellowknife Ar	4.48	117	ePn	Pn	05 02 14.1	-0.7
KUKN	Kugluktuk,NWT	4.49	43	Pn	Pn	05 02 16.4	+1.6
YKW1	Yellowknife Ar	4.52	116	Pn	Pn	05 02 16.3	+1.0
YKW1				Sn	Sn	05 03 05.5	-2.3
INK	Inuvik	5.42	315	ePn	Pn	05 02 28.2	+0.7
INK				Pg	Pg	05 02 49.8	-0.6
INK				eSn	Sn	05 03 28.8	-1.0
INK				Lg	Lg	05 03 51.7	
INK	Inuvik	5.42	315	Pn	Pn	05 02 27.7	+0.2
INK				Sn	Sn	05 03 25.5	-4.3
INK	Inuvik	5.42	315	Pn	Pn	05 02 28.2	+0.7
	17nm,0.3s,baz=121,slow=15,SNR=239						
INK				Pg	Pg	05 02 49.8	-0.6
	57nm,0.3s,baz=120,slow=14,SNR=29						
INK				Sn	Sn	05 03 27.4	-2.5
	48nm,0.3s,baz=149,slow=4.8,SNR=7.5						
INK				Lg	Lg	05 03 51.7	
	21nm,0.3s,baz=204,slow=19,SNR=2.8						
FNBB	Fort Nelson	5.91	179	Pn	Pn	05 02 35.9	+1.6
FNBB				Sn	Sn	05 03 40.7	-1.3
WHY	Whitehorse	6.75	238	ePn	Pn	05 02 48.0	+2.0
WHY	Whitehorse	6.75	238	Pn	Pn	05 02 47.9	+1.9
HILA	High Level	6.91	152	Pn	Pn	05 02 47.4	-0.6
HILA				Sn	Sn	05 04 01.7	-4.8

DAWY	Dawson	7.02	272	*e*Pn	Pn	05 02 51.6	+2.0
DAWY	Dawson	7.02	272	Pn	Pn	05 02 50.5	+0.8
DLBC	Dease Lake	7.13	210	*e*Pn	Pn	05 02 54.1	+3.0
DLBC				Pg	Pg	05 03 21.9	-1.3
DLBC				Lg	Lg	05 04 51.9	
DLBC	Dease Lake	7.13	210	Pn	Pn	05 02 53.5	+2.3
DLBC	Dease Lake	7.13	210	Pn	Pn	05 02 53.7	+2.5
	1.8nm,0.3s,baz=37,slow=7.3,SNR=36						
DLBC				Pg	Pg	05 03 21.9	-1.3
	3.5nm,0.3s,baz=38,slow=16,SNR=8.2						
DLBC				Lg	Lg	05 04 51.9	
	2.8nm,0.3s,baz=115,slow=20,SNR=5.4						
FSMA	Fort Smith	7.16	127	Pn	Pn	05 02 52.0	+0.6
FSMA				Sn	Sn	05 04 05.3	-7.3
YUK5	Granite Creek	7.59	248	Pn	Pn	05 02 59.2	+1.6
YUK5				Sn	Sn	05 04 19.4	-4.2
HYT	Haines Junctio	7.63	245	Pn	Pn	05 02 59.4	+1.3
HYT				Sn	Sn	05 04 22.8	-1.8
SKAG	Skagway	7.77	232	*e*Pn	Pn	05 03 02.1	+2.3
YUK4	Talbot Arm	7.79	251	Pn	Pn	05 03 00.4	+0.1
YUK6	Outpost Mounta	7.90	248	Pn	Pn	05 03 02.6	+0.7
YUK6				Sn	Sn	05 04 28.2	-3.1
YUK7	Dusty Glacier	8.06	245	Pn	Pn	05 03 05.4	+1.4
YUK7				Sn	Sn	05 04 31.1	-4.1
PLBC	Pleasant Camp	8.13	235	Pn	Pn	05 03 07.1	+2.4
PLBC				Sn	Sn	05 04 34.0	-2.5
BVCY	Beaver Creek	8.19	261	Pn	Pn	05 03 06.8	+1.1
BVCY				Sn	Sn	05 04 32.5	-5.7
BESE	Bessie Mountai	8.30	227	*e*Pn	Pn	05 03 10.4	+3.3
BESE	Bessie Mountai	8.30	227	Pn	Pn	05 03 09.3	+2.2
YUK3	Moose Creek	8.31	257	Pn	Pn	05 03 08.9	+1.5
YUK3				Sn	Sn	05 04 35.1	-6.2
JIS	Juneau Island	8.40	224	*e*Pn	Pn	05 03 12.8	+4.3
YUK2	White River	8.47	257	Pn	Pn	05 03 10.7	+1.2
BMBC	Bull Mountain	8.78	176	Pn	Pn	05 03 14.0	+0.3
BMBC				Sn	Sn	05 04 48.8	-3.9
SCRK	Sand Creek	9.01	274	*e*Pn	Pn	05 03 19.2	+2.2
PNL	Peninsula	9.10	243	Pn	Pn	05 03 21.1	+3.0
RDEA	Red Earth Cree	9.12	151	Pn	Pn	05 03 18.9	+0.7
RDEA				Sn	Sn	05 04 52.9	-7.8
DOT	Dot Lake	9.13	272	*e*Pn	Pn	05 03 21.8	+3.3
DOT	Dot Lake	9.13	272	Pn	Pn	05 03 20.4	+1.9
FYU	Fort Yukon	9.23	291	*e*Pn	Pn	05 03 21.2	+1.5
PRP	Porcupine Dome	9.39	285	*e*Pn	Pn	05 03 22.4	+0.3
RIDG	Independ’e Rid	9.44	274	*e*Pn	Pn	05 03 25.2	+2.5
SIT	Sitka	9.70	223	*e*Pn	Pn	05 03 29.8	+3.5
PAX	Paxson	9.95	270	Sn	Sn	05 05 16.2	-5.1
IL1	Eielson Array	10.07	281	*e*Pn	Pn	05 03 32.0	+0.7
ILAR	Eielson Array	10.07	281	Pn	Pn	05 03 31.6	+0.3
	1.6nm,0.3s,baz=82,slow=12,SNR=57						
ILB	Eielson Array	10.07	281	*e*Pn	Pn	05 03 32.2	+0.8
HDA	Harding Lake	10.17	279	*e*Pn	Pn	05 03 34.3	+1.6
FSB	Fort Saint Jam	10.35	184	Pn	Pn	05 03 37.1	+2.0
COLA	College	10.46	282	*e*Pn	Pn	05 03 37.9	+1.3
MDM	Murphy Dome	10.60	282	*e*Pn	Pn	05 03 39.2	+0.6
WRH	Wood River Hil	10.64	280	*e*Pn	Pn	05 03 40.7	+1.6
HMT	Hamilton	10.64	255	*e*Pn	Pn	05 03 38.9	-0.3
DHY	Denali Highway	10.73	272	*e*Pn	Pn	05 03 42.9	+2.5
KLU	Klutina	10.75	263	*e*Pn	Pn	05 03 43.8	+3.2
MCK	McKinley	11.19	276	*e*Pn	Pn	05 03 48.9	+2.3
SCM	Sheep Creek Mo	11.19	266	*e*Pn	Pn	05 03 51.5	+4.8
COLD	Coldfoot	11.20	295	*e*Pn	Pn	05 03 47.3	+0.6
COLD	Coldfoot	11.20	295	Pn	Pn	05 03 46.9	+0.2
ATHA	Athabasca	11.25	149	Pn	Pn	05 03 45.1	-2.4
ATHA				Sn	Sn	05 05 44.0	-9.2
RND	Reindeer	11.25	275	*e*Pn	Pn	05 03 50.3	+2.7
MLY	Manley	11.63	284	*e*Pn	Pn	05 03 52.7	0.0
SML	Sawmill	11.63	267	*e*Pn	Pn	05 03 58.1	+5.3
TRF	Thorofare Moun	11.85	276	*e*Pn	Pn	05 03 58.4	+2.6
KNK	Knik Glacier	11.86	265	*e*Pn	Pn	05 04 01.0	+5.2
BPAW	Bear Paw Mtn.	11.96	279	*e*Pn	Pn	05 03 58.5	+1.4
IM3	Indian Mountai	12.71	289	*e*Pn	Pn	05 04 08.1	+0.8
SUA	Susitna One	12.82	268	*e*Pn	Pn	05 04 12.6	+3.7
PPLA	Purkeypile	12.85	275	*e*Pn	Pn	05 04 12.7	+3.3
RES	Resolute Bay	13.77	32	Pn	Pn	05 04 18.7	-3.0
RES				Sn	Sn	05 06 39.6	-15
RES	Resolute Bay	13.77	32	Pn	Pn	05 04 19.6	-2.0
	3.1nm,0.3s,baz=227,slow=13,SNR=44						
RES				Sn	Sn	05 06 40.5	-14
	3.5nm,0.3s,baz=142,slow=19,SNR=9.1						
RES				Lg	Lg	05 08 07.9	
	3.7nm,0.3s,baz=289,slow=16,SNR=4.2						
SLEB	Sale Mountain	13.91	166	Pn	Pn	05 04 21.7	-2.3
LLLB	Lillooet	14.22	176	*e*Pn	Pn	05 04 30.6	+2.4
LLLB	Lillooet	14.22	176	Pn	Pn	05 04 29.9	+1.7
FFC	Flin Flon	14.62	124	*e*Pn	Pn	05 04 30.0	-3.5
	5.6nm,0.4s						
FFC				*e*Sn	Sn	05 07 02.1	-13
PRDA	Priddis	14.71	157	Pn	Pn	05 04 31.4	-3.5
PRDA				Sn	Sn	05 07 06.2	-12
FCC	Fort Churchill	14.95	100	*e*Pn	Pn	05 04 35.4	-2.5
FCC	Fort Churchill	14.95	100	Pn	Pn	05 04 33.5	-4.4
FCC				Sn	Sn	05 07 05.2	-18
WPB	Watts Point	15.16	180	Pn	P	05 04 44.4	-1.5
PNT	Penticton	15.62	171	Pn	P	05 04 50.7	-0.4
MGB	Mount Grey	15.84	183	Pn	P	05 04 54.2	+0.7
YOUB	Youbou, Lake C	15.93	182	Pn	P	05 04 54.5	+0.1
RDOG	Red Dog Mine	15.99	299	*e*Pn	Pn	05 04 51.8	+0.2
	5.7nm,0.6s						
B926	Mesachie Lake	16.00	182	Pn	P	05 04 56.0	+0.8
LZB	Mount Lazard	16.21	181	Pn	P	05 04 58.6	+1.0
NEW	Newport	16.88	166	*e*Pn	P	05 05 04.4	-0.6
	5.6nm,0.8s						
NEW	Newport	16.88	166	Pn	Pn	05 05 04.0	+1.0
	0.2nm,0.3s,baz=2.3,slow=15,SNR=3.0						
ANM	Nome	17.79	289	*e*Pn	P	05 05 23.0	+8.2
	7.3nm,1.1s						
LON	Longmire	18.09	177	*e*P	P	05 05 21.3	+3.0
	12nm,1.8s						
EGMT	Eagleton	18.30	150	*e*P	Pn	05 05 18.7	-1.9
	12nm,0.6s						
MSO	Missoula	18.70	160	*e*P	Pn	05 05 26.2	+0.7
	4.8nm,0.7s						
F10A	Beach Ranch, E	19.14	167	*e*P	Pn	05 05 36.8	+6.0
	19nm,1.8s						
HRY	Holter Researc	19.16	155	*e*P	Pn	05 05 32.4	+1.4
DGMT	Dagmar	19.27	139	*e*P	Pn	05 05 31.6	-0.7
	14nm,0.6s						
BMO	Blue Mountains	20.24	168	*e*P	Pn	05 05 45.8	+1.8
	9.4nm,1.6s						
BOZ	Bozeman (W)	20.27	156	*e*P	Pn	05 05 43.8	-0.5
	24nm,1.8s						
DLMT	Dillon	20.33	158	*e*P	Pn	05 05 46.0	+1.0
	5.5nm,1.0s						
ULM	Lac du Bonnet	20.44	122	*e*P	Pn	05 05 45.0	-1.1
	5.2nm,0.7s						
ULM				S	S	05 09 17.1	-15
ULM	Lac du Bonnet	20.44	122	P	P	05 05 42.6	-1.4
ULM	Lac du Bonnet	20.44	122	P	P	05 05 43.9	-0.1
	1.8nm,0.3s,baz=330,slow=12,SNR=9.4						
ULM				S	S	05 09 17.1	-15
	6.8nm,0.5s,baz=218,slow=13,SNR=6.3						
ULM				Lg	Lg	05 11 38.2	
	19nm,0.8s,baz=230,slow=22,SNR=3.4						
MCMT	McKenzie Canyo	20.82	159	*e*P	Pn	05 05 52.8	+2.0
CLRN	Clyde River	20.89	50	P	Pn	05 05 48.6	-2.6
QLMT	Earthquake Lak	21.05	156	*e*P	P	05 05 57.5	+6.7
YHB	Horse Butte	21.16	156	*e*P	P	05 05 58.1	+6.0
	11nm,1.1s						
RLMT	Red Lodge	21.17	152	*e*P	P	05 05 57.3	+5.0
	5.0nm,0.8s						
YMR	Madison River	21.29	155	*e*P	P	05 05 59.4	+5.9
	33nm,1.9s						
PKLO	Pickle Lake	21.54	112	P	P	05 05 54.7	-1.2
YPP	Pitchstone Pla	21.70	155	*e*P	P	05 06 06.3	+8.4
	9.3nm,1.6s						
EPLO	Experimental L	21.70	120	P	P	05 05 56.8	-0.8
MFID	Camas Ranch	21.81	165	*e*P	P	05 06 02.0	+3.0
	13nm,1.1s						
HLID	Hailey	21.83	163	*e*P	P	05 06 01.8	+2.5
	2.6nm,0.8s						
IMW	Indian Meadow	22.04	156	*e*P	P	05 06 10.2	+8.6
	7.1nm,1.2s						
SOLO	Sioux Lookout	22.04	117	P	P	05 06 02.1	+0.9
MOOW	Moose Ponds	22.21	155	*e*P	P	05 06 09.1	+5.7
	4.1nm,1.1s						
FXWY	Fox Creek	22.27	156	*e*P	P	05 06 10.2	+6.1
	3.8nm,1.3s						
LOHW	Long Hollow	22.37	155	*e*P	P	05 06 08.8	+3.7
	3.4nm,0.6s						
WVOR	Wild Horse Val	22.54	171	*e*P	P	05 06 11.2	+4.5
	7.0nm,1.3s						
REDW	Red Top Meadow	22.57	156	*e*P	P	05 06 11.6	+4.4
	16nm,1.7s						
FRB	Frobisher Bay	23.16	67	P	P	05 06 12.7	-0.2
FRB	Frobisher Bay	23.16	67	P	P	05 06 13.2	+0.2
	1.2nm,0.4s,baz=300,slow=12,SNR=8.5						
FRB				Lg	Lg	05 13 00.4	
	43nm,0.9s,baz=15,slow=22,SNR=12						
VIMO	Victor Mine	23.25	102	P	P	05 06 14.0	0.0
RSSD	Black Hills	23.33	143	*e*P	P	05 06 17.6	+2.5
	4.9nm,0.8s						
BW06	Boulder Array	23.38	154	*e*P	P	05 06 20.8	+5.1
	6.1nm,1.0s						
PD31	Pinedale Array	23.38	154	*e*P	P	05 06 22.6	+7.0
PDAR	Pinedale Array	23.38	154	*e*P	P	05 06 17.8	+2.1
PDAR	Pinedale Array	23.38	154	P	P	05 06 17.6	+2.0
	1.1nm,0.7s,baz=9.5,slow=6.9,SNR=7.1						
HVU	Hansel Valley	23.81	160	*e*P	P	05 06 24.2	+4.4
	3.0nm,0.7s						
K22A	Casper	24.12	149	*e*P	P	05 06 24.9	+2.3
	10nm,0.9s						
TBO	Thunder Bay	24.18	116	P	P	05 06 22.7	-0.3
ELK	Elko	24.52	165	P	P	05 06 30.0	+3.6
	0.6nm,0.6s,baz=180,slow=20,SNR=2.0						
NVAR	Mina Array Bea	26.55	171	P	P	05 06 48.3	+3.6
	0.6nm,0.6s,baz=358,slow=8.1,SNR=4.6						
GLA	Glamis	32.17	167	*e*P	P	05 07 35.1	+0.6
	6.4nm,0.8s						
SEY	Seymchan	34.65	307	P	P	05 07 58.3	+2.6
	1.6nm,0.5s,baz=61,slow=7.0,SNR=7.4						
TIXI	Tiksi	35.38	329	P	P	05 08 06.6	+4.7
	1.3nm,0.4s,baz=256,slow=1.1,SNR=4.1						
TXAR	Lajitas Array	37.54	151	P	P	05 08 22.5	+1.5
	0.5nm,0.7s,baz=23,slow=7.8,SNR=2.6						
ARCES	ARCESS Array B	44.20	15	P	P	05 09 16.1	+0.8
	1.9nm,0.8s,baz=343,slow=5.8,SNR=3.9						
NOA	NORSAR Array B	49.97	27	P	P	05 10 01.0	+0.6
	0.2nm,0.6s,baz=334,slow=7.9,SNR=3.0						
FINES	FINESS Array B	52.03	18	P	P	05 10 16.8	+1.0
	0.9nm,0.7s,baz=355,slow=8.7,SNR=9.0						
ZALV	Zalesovo Beam	59.65	341	P	P	05 11 16.0	+5.5
	0.5nm,0.5s,baz=0.0,slow=6.1,SNR=3.5						
SONM	Songino Array	61.27	324	P	P	05 11 29.7	+7.8
	0.9nm,0.9s,baz=26,slow=3.5,SNR=5.4						
GERES	GERESS Array B	61.87	31	P	P	05 11 27.6	+1.8
	0.3nm,0.5s,baz=351,slow=12,SNR=2.8						
AKASG	Malin Array Be	62.89	19	P	P	05 11 34.3	+1.8
	0.2nm,0.4s,baz=343,slow=6.6,SNR=2.7						
KURK	Kurchatov	63.60	345	P	P	05 11 40.2	+3.0
KURBB	Kurchatov Arra	63.70	345	P	P	05 11 40.2	+2.3
	0.9nm,0.7s,baz=7.8,slow=6.2,SNR=3.3						
HHC	Hu-ho-hao-te	66.33	317	*e*P	P	05 11 51.0	-4.3
HHC				S	S	05 20 36.2	-8.5
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
HHC				LR	LR		
	comp=N,220nm,15.6s						
HHC				LR	LR		
	comp=E,230nm,17.3s						
HHC				LR	LR		
	comp=Z,590nm,17.3s						
MKAR	Makanchi Array	66.99	341	P	P	05 12 01.8	+2.5
	comp=Z,0.1nm,0.6s,baz=28,slow=6.5,SNR=2.9						
WMQ	Urumqi	69.06	337	*e*P	P	05 12 15.1	+2.7
KMI	Kunming	83.59	319	P	P	05 13 34.9	-0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MANU	Manus Island	91.57	269	*e*P	P	05 14 17.1	+3.4
	comp=Z,335nm,0.1s						

IDC 03 05:06:16.8±3.2**, 3°.51S×151°.59E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/43**, mbtmp3.4**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.6**/18**, Error ellipse: s-maj=119.1km s-min=43.7km az=121.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.45	225	P	P	05 11 26.2	-1.9
	0.4nm,0.4s,baz=52,slow=10,SNR=13						
ASAR	Alice Springs	26.34	219	P	P	05 11 56.3	+1.6
	0.2nm,0.4s,baz=50,slow=9.3,SNR=3.7						
FITZ	Fitzroy Crossi	29.26	238	P	P	05 12 22.0	+1.1
	0.5nm,0.3s,baz=47,slow=11,SNR=8.7						
TGY	Tagaytay City	35.08	301	LR	LR	05 27 30.7	
	comp=Z,26nm,19.3s,baz=120,slow=36						
TORD	Torodi Ar. Bea	148.75	290	PKPbc	PKPbc	05 26 05.5	-1.7
	0.1nm,0.3s,baz=73,slow=2.1,SNR=4.9						

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*IDC **03** 05:13:37.9±1.2, 62°.88N×150°.88W, h85^{km}±13^{km}, mb3.7/18, mb1 3.9/23, mb1mx3.7/59, mbtmp4.1/23, Error ellipse: s-maj=16.0km s-min=9.1km az=122.0*

*ISCJB **03** 05:13:38.6±0.2, 62°.88N±0°.02×150°.67W±0°.04, h110^{km}±2^{km}, mb4.0/19, Error ellipse: s-maj=3.1km s-min=2.6km az=19.7*

*NEIC **03** 05:13:40.0±0.0, 62°.86N×150°.70W, h97^{km}, ML3.9(AEIC), After AEIC.*

ISC 03 05:13:39.4±0.6**, 62°.88N**±0°.03×**150°.70W**±0°.04**, h100**^{km}±5^{km}**, n137, σ0^{s}95**/159**, mb4.0**/20**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUR	Hurricane	0.50	78	P	Pn	05 13 55.8	+0.8
HUR				S	Sn	05 14 07.5	+0.7
TRF	Thorofare Moun	0.60	18	P	Pn	05 13 56.8	+0.7
TRF				S	Sn	05 14 09.6	+1.0
PPLA	Purkeypile	0.68	272	P	Pn	05 13 57.4	+0.6
PPLA				S	Sn	05 14 10.1	+0.4
CAST	Castle Rocks	0.83	311	P	Pn	05 13 58.3	+0.4
CAST				S	Sn	05 14 11.4	-0.6
RND	Reindeer	0.99	57	P	Pn	05 14 00.7	+1.0
RND				S	Sn	05 14 15.8	+0.8
MCK	McKinley	1.17	42	P	Pn	05 14 02.5	+0.9
BPAW	Bear Paw Mtn.	1.23	354	P	Pn	05 14 02.9	+0.6
BPAW				S	Sn	05 14 19.7	0.0
CHUM	Lake Minchumin	1.24	325	P	Pn	05 14 03.2	+0.8
GHO	Glory Hole Cre	1.39	143	P	Pn	05 14 05.3	+1.0
BWN	Browne	1.41	23	P	Pn	05 14 05.8	+1.3
SUA	Susitna One	1.42	181	P	Pn	05 14 05.3	+0.6
PMR	Palmer	1.49	150	P	Pn	05 14 05.7	+0.4
DHY	Denali Highway	1.53	81	P	Pn	05 14 06.8	+0.7
DHY				S	Sn	05 14 27.2	+0.8
SML	Sawmill	1.54	133	P	Pn	05 14 06.7	+0.6
SPCP	Crater Peak Br	1.76	204	P	Pn	05 14 09.2	+0.2
SPCP				S	Sn	05 14 31.5	+0.1
SPNN	North Nagishla	1.79	213	P	Pn	05 14 09.6	+0.2
KNK	Knik Glacier	1.81	143	P	Pn	05 14 09.8	+0.3
CKT	Bend	1.83	204	P	Pn	05 14 10.0	+0.2
SPWE	Spurr West	1.83	209	P	Pn	05 14 10.2	+0.4
NEA	Nenana	1.85	22	P	Pn	05 14 10.7	+0.8
NEA				S	Sn	05 14 32.9	-0.4
RC01	Rabbit Creek A	1.85	165	P	Pn	05 14 09.8	-0.2
RC01				S	Sn	05 14 33.2	-0.2
SCM	Sheep Creek Mo	1.89	122	P	Pn	05 14 10.9	+0.4
WRH	Wood River Hil	1.98	35	P	Pn	05 14 12.2	+0.7
WRH				S	Sn	05 14 35.4	-0.7
MLY	Manley	2.16	360	P	Pn	05 14 14.7	+0.7
MLY				S	Sn	05 14 39.6	-0.8
HDA	Harding Lake	2.27	46	P	Pn	05 14 16.0	+0.7
HDA				S	Sn	05 14 42.3	-0.6
PS10	TAPS Pump St10	2.30	74	P	Pn	05 14 17.8	+2.0
PWL	Port Wells	2.32	150	P	Pn	05 14 15.9	-0.1
MDM	Murphy Dome	2.35	26	P	Pn	05 14 17.3	+0.8
MDM				S	Sn	05 14 44.2	-0.8
COLA	College	2.37	31	P	Pn	05 14 17.4	+0.9
SLKM	Skilak Lake	2.39	174	P	Pn	05 14 17.4	+0.3
PAX	Paxson	2.39	86	P	Pn	05 14 18.5	+1.4
PS08	TAPS Pump Stn8	2.40	44	P	Pn	05 14 17.7	+0.6
PS08				S	Sn	05 14 45.5	-0.5
TT01	Tatalina	2.44	273	P	Pn	05 14 17.6	0.0
RDJH	Redoubt Jeurge	2.51	204	P	Pn	05 14 18.8	+0.2
ILAR	Eielson Array	2.54	40	P	Pn	05 14 19.6	+0.7
	29nm,0.3s,baz=221,slow=14,SNR=1069						
ILAR				S	Sn	05 14 49.0	-0.4
	21nm,0.3s,baz=207,slow=9.9,SNR=8.2						
ILB	Eielson Array	2.54	40	*e*Pn	Pn	05 14 19.6	+0.7
ILB				*e*Sn	Sn	05 14 50.0	+0.7
IL1	Eielson Array	2.54	40	*e*Pn	Pn	05 14 18.9	0.0
IL1				*e*Sn	Sn	05 14 49.9	+0.6
PS11	TAPS Pump St11	2.56	106	P	Pn	05 14 20.4	+1.3
RDN	Redoubt North	2.57	203	P	Pn	05 14 19.8	+0.4
HARP	HAARP	2.60	98	P	Pn	05 14 21.1	+1.3
RDWB	Redoubt West	2.61	204	P	Pn	05 14 20.1	+0.1
RSO	Redoubt South	2.62	203	*e*Pn	Pn	05 14 20.6	+0.4
GLI	Glacier Island	2.63	138	P	Pn	05 14 19.9	-0.3
KLU	Klutina	2.64	120	P	Pn	05 14 20.0	-0.3
KLU				S	Sn	05 14 51.5	-0.2
JPK	Jack Peak	2.67	132	P	Pn	05 14 20.2	-0.4
VMT	TAPS Tl Valdez	2.73	129	P	Pn	05 14 20.7	-0.7
RIDG	Independ’e Rid	2.78	69	P	Pn	05 14 23.4	+1.2
SEW	Seward	2.85	167	P	Pn	05 14 22.9	-0.1
DIV	Divide	2.91	125	P	Pn	05 14 23.2	-0.8
SVW2	Sparrevohn	2.92	234	P	Pn	05 14 23.8	-0.1
PS06	TAPS Pump Stn6	3.02	8	P	Pn	05 14 26.1	+0.9
ILW	Iliamna West	3.06	204	P	Pn	05 14 26.7	+0.7
IVE	Iliamna Volcan	3.08	202	P	Pn	05 14 27.4	+1.1
DOT	Dot Lake	3.10	73	P	Pn	05 14 27.1	+0.8
BRLK	Bradley Lake	3.13	182	P	Pn	05 14 27.5	+0.7
SCRK	Sand Creek	3.21	67	P	Pn	05 14 28.5	+0.6
HOM	Homer	3.27	188	*e*Pn	Pn	05 14 30.1	+1.5
GCSA	Galena City Sc	3.32	307	P	Pn	05 14 30.1	+0.9
EYAK	Cordova Ski Ar	3.32	133	P	Pn	05 14 29.2	-0.1
IM3	Indian Mountai	3.38	338	P	Pn	05 14 30.8	+0.7
PRP	Porcupine Dome	3.48	38	P	Pn	05 14 32.1	+0.6
SGAM	Sherman Glacie	3.54	130	P	Pn	05 14 31.7	-0.6
AUL	Augustine Lava	3.75	202	P	Pn	05 14 36.6	+1.5
PS05	TAPS Pump Stn5	3.95	0	P	Pn	05 14 39.0	+1.3
HMT	Hamilton	4.00	127	*e*Pn	Pn	05 14 38.0	-0.4
MID	Middleton Isla	4.06	147	*e*Pn	Pn	05 14 40.1	+1.0
BCA3	Beaver Creek A	4.07	83	P	Pn	05 14 39.9	+0.5
FONW	Fourpeaked Sta	4.35	203	P	Pn	05 14 44.5	+1.2
COLD	Coldfoot	4.37	3	P	Pn	05 14 44.8	+1.4
FYU	Fort Yukon	4.38	30	P	Pn	05 14 44.5	+1.0
BVCY	Beaver Creek	4.56	92	P	Pn	05 14 47.1	+1.0
KULT	Kultieth River	4.64	121	P	Pn	05 14 46.9	-0.2
YUK2	White River	4.72	99	P	Pn	05 14 49.0	+0.6
KAHG	Katmai Hook Gl	4.79	205	P	Pn	05 14 50.5	+1.3
YUK3	Moose Creek	4.90	98	P	Pn	05 14 51.6	+0.8
MESA	MESA	4.99	119	P	Pn	05 14 52.2	+0.2
KABU	Katmai Buttres	5.15	208	P	Pn	05 14 55.2	+1.2
RKAV	Rock Avalanche	5.16	116	P	Pn	05 14 54.3	0.0
KDAK	Kodiak Island	5.20	191	P	Pn	05 14 53.1	-1.5
	5.6nm,0.3s,baz=48,slow=14,SNR=91						
KDAK				S	Sn	05 15 50.1	-3.2
	12nm,0.3s,baz=127,slow=22,SNR=12						
DAWY	Dawson	5.21	72	P	Pn	05 14 55.3	+0.5
BM3	Burnt Mountain	5.23	27	P	Pn	05 14 56.0	+0.9
ANCK	Angle Creek	5.26	209	P	Pn	05 14 57.0	+1.4
CNTC	Contact Creek	5.29	211	P	Pn	05 14 57.4	+1.4
CAHL	Cahill	5.35	207	P	Pn	05 14 57.7	+0.9
KJL	Kejulik	5.41	209	P	Pn	05 14 58.8	+1.3
SAMH	Samovar Hills	5.49	116	P	Pn	05 14 59.3	+0.6
OHAK	Old Harbor	5.82	194	P	Pn	05 15 01.3	-1.8
YUK4	Talbot Arm	5.86	100	P	Pn	05 15 04.6	+0.7
PLK1	Peulik 1	5.88	213	P	Pn	05 15 05.2	+1.3
BCPM	Bancas Point	6.07	114	P	Pn	05 15 05.9	-0.5
YUK6	Outpost Mounta	6.14	103	P	Pn	05 15 07.6	-0.1
YUK5	Granite Creek	6.29	100	P	Pn	05 15 09.6	-0.1
PNL	Peninsula	6.33	116	P	Pn	05 15 09.6	-0.3
YUK7	Dusty Glacier	6.42	106	P	Pn	05 15 12.1	+0.7
HYT	Haines Junctio	6.57	102	P	Pn	05 15 13.2	-0.2
ANM	Nome	6.73	291	P	Pn	05 15 16.3	+0.9
RDOG	Red Dog Mine	7.25	321	*e*Pn	Pn	05 15 24.2	+1.7
CHGN	Chignik	7.67	214	*e*Pn	Pn	05 15 29.6	+1.5
PLBC	Pleasant Camp	7.73	110	P	Pn	05 15 28.6	-0.3
WHY	Whitehorse	7.82	99	P	Pn	05 15 29.9	-0.4
SKAG	Skagway	8.18	108	*e*Pn	Pn	05 15 35.2	+0.2
BESE	Bessie Mountai	8.87	112	P	Pn	05 15 43.6	-0.9
INK	Inuvik	8.93	45	P	Pn	05 15 46.4	+1.1
INK	Inuvik	8.93	45	P	Pn	05 15 46.0	+0.8
	1.8nm,0.3s,baz=235,slow=16,SNR=65						
INK				S	Sn	05 17 21.9	-1.9
	0.3nm,0.3s,baz=306,slow=19,SNR=1.7						
JIS	Juneau Island	9.25	113	P	Pn	05 15 48.8	-0.8
GAMB	Gambell	9.48	285	*e*Pn	Pn	05 15 54.6	+1.9
SIT	Sitka	9.65	120	*e*Pn	Pn	05 15 54.9	-0.2
DLBC	Dease Lake	11.05	104	*e*Pn	Pn	05 16 14.2	0.0
DLBC	Dease Lake	11.05	104	P	Pn	05 16 13.5	-0.7
	0.3nm,0.3s,baz=294,slow=10.0,SNR=5.5						
YKA	Yellowknife Ar	16.44	75	P	Pn	05 17 23.5	-0.1
	0.6nm,0.3s,baz=287,slow=9.7,SNR=17						
RES	Resolute Bay	22.29	35	P	P	05 18 28.3	+0.5
	3.1nm,0.4s,baz=260,slow=7.1,SNR=9.7						
SEY	Seymchan	25.21	296	P	P	05 18 54.9	-0.3
	5.0nm,0.7s,baz=87,slow=8.5,SNR=9.0						
PETK	Petropavlovsk-	28.27	274	P	P	05 19 22.1	-0.7
	6.4nm,1.0s,baz=64,slow=10,SNR=2.5						
PDAR	Pinedale Array	31.19	111	P	P	05 19 50.8	+1.8
	0.3nm,0.8s,baz=319,slow=2.6,SNR=3.2						
PDAR				pP	pP	05 20 11.3	-0.2
	0.9nm,0.8s,baz=347,slow=3.7,SNR=6.3						
NVAR	Mina Array Bea	31.34	126	pP	pP	05 20 12.9	+0.1
	1.4nm,0.7s,baz=331,slow=9.2,SNR=10						
X18A	Snowflake	37.99	119	*e*P	P	05 20 49.5	+2.0
SCHQ	Schefferville	41.12	61	P	P	05 21 14.0	+0.9
	3.9nm,0.5s,baz=305,slow=8.6,SNR=6.7						
ARCES	ARCESS Array B	47.84	2	P	P	05 22 05.8	-0.4
	2.1nm,0.9s,baz=351,slow=6.4,SNR=7.3						
KSRS	Korea Array	53.64	282	P	P	05 22 50.8	+0.7
	0.8nm,0.6s,baz=28,slow=7.4,SNR=4.4						
KSAR	Wonju Array Be	53.66	282	P	P	05 22 50.8	+0.5
SONM	Songino Array	54.00	306	P	P	05 22 53.9	+1.2
	1.6nm,0.8s,baz=13,slow=6.8,SNR=8.9						
NOA	NORSAR Array B	55.64	11	P	P	05 23 04.5	+0.2
	0.7nm,0.9s,baz=326,slow=4.0,SNR=3.0						
ZALV	Zalesovo Beam	55.70	324	*e*P	P	05 23 04.2	-0.6
ZALV	Zalesovo Beam	55.70	324	P	P	05 23 04.0	-0.8
	1.0nm,0.6s,baz=28,slow=6.0,SNR=5.3						
FINES	FINESS Array B	55.97	2	P	P	05 23 05.6	-0.9
	1.7nm,0.9s,baz=354,slow=7.7,SNR=5.7						
HHC	Hu-ho-hao-te	57.84	297	*e*P	P	05 23 19.7	-0.5
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARU	Arti	58.87	342	*e*P	P	05 23 27.1	0.0
BVAR	Borovoye Array	60.02	333	P	P	05 23 34.8	-0.2
	comp=Z,1.9nm,0.4s,baz=55,slow=7.9,SNR=14						
KURK	Kurchatov	60.25	326	P	P	05 23 36.5	-0.1
KURBB	Kurchatov Arra	60.36	326	P	P	05 23 36.5	-0.9
	comp=Z,0.8nm,0.6s,baz=28,slow=7.0,SNR=8.7						
MKAR	Makanchi Array	62.85	322	P	P	05 23 53.1	-1.1
	comp=Z,0.7nm,0.5s,baz=44,slow=6.3,SNR=15						
MAKZ	Makanchi	62.93	322	*e*P	P	05 23 53.9	-0.8
AKTO	Aktyubinsk	64.77	340	P	P	05 24 06.9	+0.3
	comp=Z,2.9nm,0.4s,baz=24,slow=6.7,SNR=15						
ABKAR	Akbulak array	65.60	338	*e*P	P	05 24 12.3	+0.3
AKASG	Malin Array Be	66.76	0	P	P	05 24 18.7	-0.7
	comp=Z,1.4nm,0.4s,baz=1.9,slow=6.7,SNR=14						
AKASG				pP	pP	05 24 40.1	-4.6
	comp=Z,0.7nm,0.4s,baz=4.2,slow=6.0,SNR=6.0						
BRTR	Keskin Array B	77.68	357	P	P	05 25 25.1	+0.4
	comp=Z,0.5nm,0.6s,baz=328,slow=3.6,SNR=4.3						
CMAR	Chiang Mai Arr	82.62	296	P	P	05 25 51.0	-0.4
	comp=Z,0.5nm,0.3s,baz=11,slow=7.1,SNR=4.8						

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*MDD **03** 05:17:56.5±0.2, 41°.71N×1°.84W, h11^{km}, mbLg3.3/44, Error ellipse: s-maj=2.7km s-min=1.9km az=144.0, PRXIMO*

MDD EMS: III INTENSIDAD MAXIMA.

*SFS **03** 05:17:56.0, 41°.69N×1°.83W, h8^{km}, ML3.3, BERATON (SORIA)*

*LDG **03** 05:17:56.7±0.0, 41°.72N×1°.82W, h8^{km}, Md3.4/2, Ml3.6/28, Error ellipse: s-maj=1.3km s-min=0.8km az=142.0*

*IGIL **03** 05:17:56.3, 41°.69N×1°.83W, h8^{km}, ML2.8*

*INMG **03** 05:17:57.0±2.2, 41°.69N×1°.83W, h14^{km}±5^{km}, ML3.3, Error ellipse: s-maj=2.5km s-min=2.3km az=104.0*

*STR **03** 05:17:58.2±1.0, 42°N±5°×°±°, h10^{km}, M3.6/6, mb3.5/2, MLv3.7/6*

ISC 03 05:17:54.7±1.0**, 41°.71N**±0°.02×**1°.86W**±0°.02**, h20**^{km}±8^{km}**, n183, σ1^{s}82**/355**, 13C-6D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESAC	San Caprasio	1.04	89	⇑Pg	Pb	05 18 15.2	+1.1
	106nm,0.1s,SNR=18						
ESAC				Lg	Lg	05 18 29.5	
	192nm,0.4s,SNR=41						
EARA	Aranguren	1.08	11	⇓Pg	Pn	05 18 16.5	+1.7
	53nm,0.1s,SNR=18						
EARA				Lg	Lg	05 18 31.6	
	416nm,0.1s,SNR=15						
EARA	Aranguren	1.08	11	Pg	Pn	05 18 16.5	+1.7
EARA				Sg	Sb	05 18 30.5	+2.1
IELO	Elcoad	1.22	22	⇓Pg	Pg	05 18 18.8	+0.4

	95nm,0.2s,SNR=18						
IELO				Lg	Lg	05 18 35.6	
	460nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	1.25	19	Pg	Pg	05 18 19.4	+0.6
	0.7nm,0.3s,SNR=6.4						
EORO				Lg	Lg	05 18 36.8	
	358nm,0.2s,SNR=6.3						
SJPF	**Ste Jean**	1.48	18	*e*Pn	Pn	05 18 22.1	+1.9
	SNR=1.0						
SJPF				*e*Sn	Sn	05 18 39.4	+0.4
	317nm,0.3s,SNR=1.0						
SJPF	**Ste Jean**	1.48	18	Pn	Pn	05 18 22.1	+1.9
SJPF				Sn	Sn	05 18 39.4	+0.4
	159nm,0.3s						
EALK	**Alkurruntz**	1.53	10	Pn	Pn	05 18 23.1	+2.1
	14nm,0.3s,SNR=54						
EALK				Lg	Lg	05 18 44.2	
	414nm,0.3s,SNR=16						
EALK	**Alkurruntz**	1.53	10	Pg	Pn	05 18 23.1	+2.1
EALK				Pg	Pg	05 18 25.1	+0.9
ETSF	**Etsaut**	1.53	39	*e*Pn	Pn	05 18 22.8	+1.8
	SNR=1.0						
ETSF				*e*Sn	Sn	05 18 41.4	+1.1
	326nm,0.3s,SNR=1.0						
ETSF	**Etsaut**	1.53	39	Pn	Pn	05 18 22.8	+1.8
ETSF				Sn	Sn	05 18 41.4	+1.1
	163nm,0.3s						
OSSF	**Osses**	1.60	16	Pg	Pg	05 18 25.8	+0.2
OSSF				Sg	Sb	05 18 46.1	+2.6
ATE	**Arette**	1.62	32	⇓Pn	Pn	05 18 24.2	+2.0
	1.1nm,0.1s,SNR=18						
ATE				Pg	Pg	05 18 26.7	+0.8
	16nm,0.1s,SNR=7.9						
ATE				Lg	Lg	05 18 46.8	
	513nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	1.71	142	Pg	Pb	05 18 26.9	+1.3
	34nm,0.2s,SNR=49						
EMOS				Lg	Lg	05 18 49.4	
	162nm,0.1s,SNR=11						
REYF	**Montagne du Re**	1.74	38	Pn	Pn	05 18 25.9	+2.0
REYF				Pg	Pg	05 18 28.3	+0.1
REYF				Sn	Sn	05 18 47.5	+2.0
UCM	**Universidad Co**	1.75	217	⇑*i*P	Pg	05 18 28.7	+0.3
UCM				*e*S	Sg	05 18 51.1	-0.1
ECHI	**Chisagues Biel**	1.80	57	⇓Pn	Pn	05 18 26.7	+1.9
	23nm,0.3s,SNR=18						
ECHI				Pg	Pg	05 18 29.6	+0.2
	43nm,0.2s,SNR=7.9						
ECHI				Sn	Sn	05 18 48.4	+1.3
	19nm,0.2s,SNR=7.9						
ECHI				Lg	Lg	05 18 52.3	
	76nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	1.82	114	⇓Pn	Pn	05 18 26.5	+1.6
	15nm,0.2s,SNR=18						
ERTA				Pg	Pg	05 18 29.6	-0.1
	22nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	05 18 51.5	
	405nm,0.2s,SNR=21						
VIEF	**Viey**	1.82	49	Pn	Pn	05 18 26.9	+1.9
VIEF				Pg	Pg	05 18 30.1	+0.3
VIEF				Sn	Sn	05 18 48.7	+1.1
VIEF				Sg	Sb	05 18 52.4	+2.5
ELAN	**Lanestosa**	1.91	323	Pn	Pn	05 18 29.3	+3.1
	46nm,0.1s,SNR=94						
ELAN				Sn	Sn	05 18 51.8	+2.1
	36nm,0.2s,SNR=7.9						
ELAN				Lg	Lg	05 18 54.7	
	48nm,0.4s,SNR=7.9						
PYLO	**Lourdes**	1.93	44	Pn	Pn	05 18 29.1	+2.7
PYLO				Pg	Pg	05 18 31.6	-0.2
LABF	**Labassere**	1.96	46	Pn	Pn	05 18 28.9	+2.1
LABF				Pg	Pg	05 18 32.2	-0.1
LABF				Sn	Sn	05 18 52.3	+1.4
LABF				Sg	Sb	05 18 56.2	+2.5
EBR	**Ebro Roquetas**	1.99	116	Pn	Pn	05 18 28.9	+1.7
	110nm,0.1s,SNR=7.9						
EBR				Pg	Pg	05 18 32.4	-0.5
	86nm,0.2s,SNR=7.9						
EBR				Sn	Sn	05 18 52.0	+0.6
	796nm,0.2s,SNR=7.9						
EBR				Lg	Lg	05 18 56.8	
	4µm,0.3s,SNR=7.9						
GUD	**Guadarrama**	2.03	239	⇑Pn	Pn	05 18 30.3	+2.3
	8.6nm,0.2s,SNR=18						
GUD				Pg	Pb	05 18 33.6	+2.5
	50nm,0.3s,SNR=7.9						
GUD				Sn	Sn	05 18 55.3	+2.5
	51nm,0.4s,SNR=7.9						
GUD				Lg	Lg	05 18 59.7	
	114nm,0.2s,SNR=17						
TERF	**Tercis-les-Bai**	2.04	15	Pn	Pn	05 18 30.8	+2.9
TERF				Sn	Sb	05 18 56.9	+0.9
EPF	**Esparros**	2.10	50	*e*Pn	Pn	05 18 30.7	+1.9
	SNR=1.0						
EPF	**Esparros**	2.10	50	Pn	Pn	05 18 30.7	+1.9
EPF				Pg	Pg	05 18 35.1	+0.1
EPF				Sn	Sn	05 18 54.8	+0.5
	101nm,0.2s						
ECHE	**Chera**	2.23	162	Pn	Pn	05 18 31.3	+0.7
	2.0nm,0.1s,SNR=7.9						
ECHE				Pg	Pb	05 18 36.3	+2.0
	2.6nm,0.0s,SNR=7.9						
ECHE				Lg	Lg	05 19 06.2	
	10.0nm,0.2s,SNR=7.9						
EPOB	**Poblet**	2.24	98	⇓Pn	Pn	05 18 32.0	+1.3
	4.2nm,0.1s,SNR=18						
EPOB				Pg	Pg	05 18 36.7	-1.0
	23nm,0.1s,SNR=18						
EPOB				Sn	Sn	05 18 58.5	+0.7
	27nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	05 19 03.9	
	60nm,0.2s,SNR=7.7						
MELF	**Melles**	2.26	58	Pn	Pn	05 18 33.2	+2.2
MELF				Pg	Pg	05 18 37.9	-0.3
MELF				Sg	Sb	05 19 05.6	+3.0
CSOR	**Sort**	2.33	72	Pn	Pn	05 18 33.9	+1.9
	6.0nm,0.2s,SNR=48						
CSOR				Pg	Pb	05 18 38.3	+2.3
	69nm,0.3s,SNR=18						
CSOR				Sn	Sn	05 19 02.0	+1.9
	58nm,0.2s,SNR=7.9						
CSOR				Lg	Lg	05 19 07.6	
	115nm,0.2s,SNR=8.8						
MLS	**Moulis**	2.52	59	Pn	Pn	05 18 37.1	+2.5
MLS				Pg	Pg	05 18 42.5	-0.6
ESDC	**Sonseca Array**	2.59	219	⇑Pn	Pn	05 18 36.9	+1.4
	22nm,0.1s,baz=42,slow=14,SNR=18						
ESDC				Pg	Pg	05 18 44.5	+0.1
	4.3nm,0.2s,baz=39,slow=17,SNR=7.9						
ESDC				Sn	Sn	05 19 07.1	+0.7
	45nm,0.3s,baz=42,slow=25,SNR=5.2						
ESDC				Lg	Lg	05 19 17.5	
	93nm,0.4s,baz=40,slow=29,SNR=21						
PAB	**San Pablo**	2.88	222	⇑Pn	Pn	05 18 40.9	+1.5
	10nm,0.2s,SNR=18						
PAB				Pg	Pg	05 18 50.1	+0.2
	17nm,0.2s,SNR=7.9						
PAB				Sn	Sn	05 19 15.1	+1.6
	24nm,0.3s,SNR=7.9						
PAB				Lg	Lg	05 19 26.2	
	108nm,0.3s,SNR=7.9						
EARI	**Arriondas**	2.94	304	Pn	Pn	05 18 43.3	+2.9
	15nm,0.5s,SNR=36						
EARI				Sn	Sn	05 19 17.7	+2.6
	3.0nm,0.2s,SNR=4.5						
EARI				Lg	Lg	05 19 29.8	
	51nm,0.4s						
CLLI	**Llivia**	2.96	74	Pn	Pn	05 18 42.7	+2.0
	4.8nm,0.2s,SNR=7.9						
CLLI				Pg	Pg	05 18 50.0	-1.4
	12nm,0.2s,SNR=7.9						
CLLI				Sn	Sn	05 19 15.9	+0.3
	17nm,0.5s,SNR=7.9						
CLLI				Lg	Lg	05 19 27.7	
	28nm,0.2s,SNR=7.9						
VALF	**Valcebollere**	2.97	75	Pn	Pn	05 18 42.7	+1.8
VALF				Pg	Pg	05 18 50.5	-1.1
VALF				Sn	Sn	05 19 17.4	+1.5
VALF				Sg	Sg	05 19 28.3	-1.9
ETOB	**Tobarra**	3.08	175	Pn	Pn	05 18 45.5	+3.2
	1.9nm,0.2s,SNR=5.6						
ETOB				Lg	Lg	05 19 33.2	
	129nm,0.7s,SNR=5.0						
FNEB	**Nbias**	3.18	67	Pn	Pn	05 18 46.7	+3.1
AFON	**Font Roja**	3.21	161	Pg	Pg	05 18 56.1	-0.1
	498nm,0.2s,SNR=4.0						
CFON	**Fontmartina**	3.22	88	Pn	Pn	05 18 45.7	+1.5
	60nm,0.2s,SNR=93						
CFON				Pg	Pg	05 18 56.1	-0.2
	28nm,0.2s,SNR=4.0						
CFON				Sn	Sn	05 19 23.0	+1.0
	121nm,0.3s,SNR=7.9						
CFON				Lg	Lg	05 19 32.5	
	331nm,0.3s,SNR=6.1						
EBEN2	**Beniarda presa**	3.29	157	Pn	Pn	05 18 46.9	+1.8
	0.9nm,0.1s,SNR=7.9						
EBEN2				Lg	Lg	05 19 38.9	
	2.3nm,0.4s,SNR=4.0						
MTLF	**Montolieu**	3.43	60	*e*Pn	Pn	05 18 48.9	+1.9
	SNR=1.0						
MTLF	**Montolieu**	3.43	60	*e*Pg	Pg	05 18 59.2	-1.1
MTLF				*e*Sn	Sn	05 19 27.0	0.0
	SNR=1.0						
MTLF				*e*Sg	Sg	05 19 41.8	-2.9
	42nm,0.2s,SNR=1.0						
MTLF	**Montolieu**	3.43	60	Pn	Pn	05 18 48.9	+1.9
MTLF				Pg	Pg	05 18 59.2	-1.1
MTLF				Sn	Sn	05 19 27.0	0.0
MTLF				Lg	Lg	05 19 41.8	
	21nm,0.2s						
EPLA	**Plasencia**	3.60	244	Pn	Pn	05 18 51.4	+2.1
	14nm,0.4s,SNR=72						
EPLA				Pg	Pg	05 19 03.5	-0.1
	9.3nm,0.3s,SNR=11						
EPLA				Sn	Sn	05 19 31.7	+0.4
	13nm,0.3s,SNR=7.9						
EPLA				Lg	Lg	05 19 49.3	
	60nm,0.4s,SNR=5.0						
EJON	**La Jonquera**	3.61	77	Pn	Pn	05 18 51.3	+1.7
	8.1nm,0.4s,SNR=13						
EJON				Pg	Pg	05 19 02.2	-1.7
	31nm,0.2s,SNR=34						
EJON				Sn	Sn	05 19 33.4	+1.8
	8.3nm,0.2s,SNR=7.9						
EJON				Lg	Lg	05 19 46.2	
	5.8nm,0.4s,SNR=7.0						
SJAF	**Saint Jean de**	3.61	76	Pn	Pn	05 18 51.3	+1.7
	5.7nm,0.2s,SNR=7.9						
SJAF				Pg	Pg	05 19 02.4	-1.6
	22nm,0.5s,SNR=7.9						
SJAF				Lg	Lg	05 19 46.1	
	33nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	3.63	189	Pn	Pn	05 18 53.5	+3.6
	2.3nm,0.2s,SNR=7.9						
SESP				Pg	Pg	05 19 04.2	0.0
	4.0nm,0.2s,SNR=7.9						
SESP				Lg	Lg	05 19 49.6	
	38nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	3.63	189	P	Pg	05 19 03.6	-0.7
SESP				S	Sg	05 19 50.8	-0.4
EIBI	**Ibiza**	3.63	137	Lg	Lg	05 19 51.0	
	60nm,0.2s,SNR=4.0						
ECAL	**Calabor**	3.65	275	⇑Pn	Pn	05 18 52.1	+2.0
	10nm,0.1s,SNR=18						
ECAL				Pg	Pg	05 19 03.6	-1.0
	54nm,0.3s,SNR=17						
ECAL				Sn	Sn	05 19 34.8	+2.2
	102nm,0.3s,SNR=7.9						
ECAL				Lg	Lg	05 19 52.3	
	115nm,0.3s,SNR=9.3						
PBRG	**Braganca**	3.65	273	⇑*e*Pn	Pn	05 18 52.0	+1.9
PBRG				*e*Sn	Sn	05 19 34.3	+1.7
PBRG				*e*Sg	Sg	05 19 50.9	-1.0
PBRG				A	A	05 20 01.6	
	40nm,0.7s						
PBRG	**Braganca**	3.65	273	Pn	Pn	05 18 52.0	+1.9
PBRG				Sn	Sn	05 19 34.3	+1.7
PBRG				Lg	Lg	05 19 50.9	
	20nm,0.7s						
LFF	**La Frestale**	3.74	30	*e*Pn	Pn	05 18 52.6	+1.3
	SNR=1.0						
LFF				*e*Sn	Sn	05 19 33.3	-1.5
	42nm,0.3s,SNR=1.0						
LFF	**La Frestale**	3.74	30	Pn	Pn	05 18 52.6	+1.3
LFF				Sn	Sn	05 19 33.3	-1.5
	21nm,0.3s						
ETRV	**Los Montesinos**	3.79	167	Lg	Lg	05 19 54.2	
	4.2nm,0.1s,SNR=4.0						
EMUR	**La Murta**	3.90	173	Pn	Pn	05 18 55.5	+2.1
	0.9nm,0.5s,SNR=7.1						
EMUR				Pg	Pg	05 19 09.4	0.0
	18nm,0.6s,SNR=6.3						
EMUR				Lg	Lg	05 20 00.6	
	67nm,0.8s,SNR=4.0						
MVO	**Moncorvo**	3.92	264	*e*Pn	Pn	05 18 55.7	+1.8
MVO				*e*Sn	Sn	05 19 41.3	+1.9
MVO				*e*Sg	Sg	05 19 59.9	-0.7
MVO				A	A	05 20 11.3	
	77nm,0.4s						
MVO	**Moncorvo**	3.92	264	⇑Pn	Pn	05 18 55.7	+1.8
	2.7nm,0.2s,SNR=18						
MVO				Pg	Pg	05 19 09.8	-0.1
	23nm,0.2s,SNR=11						
MVO				Sn	Sn	05 19 41.3	+1.9
	21nm,0.1s,SNR=5.9						
MVO				Lg	Lg	05 19 59.9	
	73nm,0.3s,SNR=6.8						
EQES	**Quesada**	4.01	194	Pn	Pn	05 18 58.3	+3.2
	0.4nm,0.2s,SNR=20						
EQES				Pg	Pg	05 19 11.4	-0.2
	22nm,0.5s,SNR=7.9						
EQES				Lg	Lg	05 20 01.8	
	27nm,0.3s,SNR=5.4						
EADA	**Adamuz**	4.11	211	Pn	Pn	05 18 57.7	+1.3
	1.7nm,0.2s,SNR=18						
EADA				Lg	Lg	05 20 05.5	
	32nm,0.2s,SNR=5.0						
EPON	**Pontenova**	4.23	294	Pn	Pn	05 19 00.6	+2.6
	4.4nm,0.3s,SNR=20						
EPON				Lg	Lg	05 20 07.4	
	53nm,0.3s,SNR=68						
CAF	**Calviac**	4.30	40	*e*Pn	Pn	05 19 00.0	+0.9
	SNR=1.0						
CAF				*e*Sn	Sn	05 19 46.8	-1.9
	42nm,0.2s						
CAF	**Calviac**	4.30	40	Pn	Pn	05 19 00.0	+0.9
CAF				Sn	Sn	05 19 46.8	-1.9
	21nm,0.2s						
GORA	**Gorafe**	4.33	193	Pn	Pn	05 19 01.8	+2.4
	0.6nm,0.2s,SNR=7.9						
GORA				Sn	Sn	05 19 49.0	-0.3
	72nm,0.4s,SNR=7.9						
GORA				Lg	Lg	05 20 13.7	
	137nm,0.4s,SNR=7.9						
RJF	**Les Rejaudoux**	4.35	33	*e*Pn	Pn	05 19 00.5	+0.8
	SNR=1.0						
RJF				*e*Sn	Sn	05 19 48.4	-1.4
	29nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	4.35	33	Pn	Pn	05 19 00.5	+0.8
RJF				Sn	Sn	05 19 48.4	-1.4
	14nm,0.2s						
PVRL	**Vila Real**	4.42	266	*e*Pn	Pn	05 19 02.2	+1.5
PVRL				*e*Sn	Sn	05 19 52.7	+1.2
PVRL				A	A	05 20 18.4	
	40nm,0.3s						
PVRL	**Vila Real**	4.42	266	Pn	Pn	05 19 02.2	+1.5
PVRL				Sn	Sn	05 19 52.7	+1.2
	20nm,0.3s						
POLO	**Lamas de Olo**	4.46	268	⇑*e*Pn	Pn	05 19 02.9	+1.6
POLO				*e*Sn	Sn	05 19 54.1	+1.3
POLO				*e*Sg	Sg	05 20 15.9	-2.1
POLO				A	A	05 20 32.3	
	14nm,0.5s						
POLO	**Lamas de Olo**	4.46	268	Pn	Pn	05 19 02.9	+1.6
POLO				Sn	Sn	05 19 54.1	+1.3
POLO				Lg	Lg	05 20 15.9	
	14nm,0.5s						
MTE	**Manteigas**	4.49	255	*e*Pn	Pn	05 19 03.0	+1.3
MTE				*e*Sn	Sn	05 19 54.1	+0.7
MTE				*e*Sg	Sg	05 20 16.6	-2.3
MTE				A	A	05 20 24.4	
	55nm,0.7s						
MTE	**Manteigas**	4.49	255	Pn	Pn	05 19 03.0	+1.3
MTE				Sn	Sn	05 19 54.1	+0.7
MTE				Lg	Lg	05 20 16.6	
	28nm,0.7s						
ECAB	**El Cabril**	4.55	218	Pn	Pn	05 19 03.6	+1.2
	1.4nm,0.3s,SNR=39						
ECAB				Sn	Sn	05 19 54.7	0.0
	7.7nm,0.3s,SNR=7.9						
ECAB				Lg	Lg	05 20 19.6	
	26nm,0.4s,SNR=6.1						
PCAB	**Cabril**	4.61	272	*e*Pn	Pn	05 19 05.0	+1.7
PCAB				A	A	05 20 23.7	
	35nm,0.5s						
PCAB	**Cabril**	4.61	272	Pn	Pn	05 19 05.0	+1.7
ELOB	**Lobios**	4.64	274	⇑Pn	Pn	05 19 05.2	+1.5
	4.9nm,0.2s,SNR=18						
ELOB				Sn	Sn	05 19 57.8	+0.8
	10nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	05 20 22.9	
	58nm,0.7s,SNR=5.1						
PCBR	**Castelo Branco**	4.66	248	*e*Pn	Pn	05 19 05.0	+1.1
PCBR				*e*Sn	Sn	05 19 56.7	-0.6
PCBR				*e*Sg	Sg	05 20 21.9	-2.2
PCBR				A	A	05 20 38.4	
	36nm,0.4s						
PCBR	**Castelo Branco**	4.66	248	Pn	Pn	05 19 05.0	+1.1
PCBR				Sn	Sn	05 19 56.7	-0.6
PCBR				Lg	Lg	05 20 21.9	
	18nm,0.4s						
PVIS	**Viseu**	4.66	260	*e*Pn	Pn	05 19 05.1	+1.1
PVIS				*e*Sn	Sn	05 19 55.7	-1.8
PVIS				*e*Sg	Sg	05 20 22.0	-2.2
PVIS				A	A	05 20 26.8	
	34nm,0.3s						
PVIS	**Viseu**	4.66	260	Pn	Pn	05 19 05.1	+1.1
PVIS				Sn	Sn	05 19 55.7	-1.8
PVIS				Lg	Lg	05 20 22.0	
	17nm,0.3s						
HORN	**Hornachuelos**	4.66	215	P	Pb	05 19 13.2	-2.6
HORN				S	Sb	05 20 12.1	+0.6
EQUE	**Quentar**	4.67	196	Pn	Pn	05 19 07.0	+2.9
	0.7nm,0.2s,SNR=4.0						
EQUE				Lg	Lg	05 20 22.1	
	25nm,0.4s,SNR=6.6						
ENIJ	**Nijar**	4.74	183	Lg	Lg	05 20 26.2	
	22nm,0.7s,SNR=4.0						
EAGO	**Agolada(Pontev**	4.75	285	Pn	Pn	05 19 06.8	+1.6
	2.9nm,0.1s,SNR=7.9						
EAGO				Pg	Pg	05 19 24.4	-1.2
	5.1nm,0.3s,SNR=7.9						
EAGO				Sn	Sn	05 20 01.0	+1.3
	2.6nm,0.2s,SNR=7.9						
EAGO				Lg	Lg	05 20 26.2	
	49nm,0.7s,SNR=7.9						
PMRV	**Marv??o**	4.79	243	⇑*e*Pn	Pn	05 19 07.6	+1.9
PMRV				*e*Sn	Sn	05 19 59.5	-1.2
PMRV				A	A	05 20 02.7	
	26nm,0.3s						
PMRV				*e*Sg	Sg	05 20 26.8	-1.6
PMRV	**Marv??o**	4.79	243	Pn	Pn	05 19 07.6	+1.9
PMRV				Sn	Sn	05 19 59.5	-1.2
	26nm,0.3s						
PMRV				Lg	Lg	05 20 26.8	
PGAV	**Gavieira, Arco**	4.79	275	*e*Pn	Pn	05 19 07.3	+1.4
PGAV				*e*Sn	Sn	05 20 02.2	+1.3
PGAV				*e*Sg	Sg	05 20 27.4	-1.1
PGAV				A	A	05 20 34.0	
	24nm,0.5s						
PGAV	**Gavieira, Arco**	4.79	275	Pn	Pn	05 19 07.3	+1.4
PGAV				Sn	Sn	05 20 02.2	+1.3
PGAV				Lg	Lg	05 20 27.4	
	24nm,0.5s						
LASF	**Ste Croix**	4.82	59	*e*Pn	Pn	05 19 07.6	+1.5
	SNR=1.0						
LASF				*e*Sn	Sn	05 20 00.1	-1.3
	14nm,0.2s						
LASF	**Ste Croix**	4.82	59	Pn	Pn	05 19 07.6	+1.5
LASF				Sn	Sn	05 20 00.1	-1.3
	7.1nm,0.2s						
EBER	**Berja**	4.88	190	Lg	Lg	05 20 31.1	
	23nm,0.8s,SNR=7.9						
EGOR	**Sierra Gorda,**	4.92	201	Pn	Pn	05 19 09.5	+1.9
	0.4nm,0.3s,SNR=7.9						
EGOR				Lg	Lg	05 20 32.2	
	19nm,0.7s,SNR=7.9						
EBAD	**Badajoz**	4.93	235	⇑Pn	Pn	05 19 08.6	+1.0
	1.7nm,0.2s,SNR=18						
EBAD				Sn	Sn	05 20 03.0	-1.0
	24nm,0.2s,SNR=7.0						
EBAD				Lg	Lg	05 20 31.0	
	19nm,0.7s,SNR=8.4						
ELGU	**Los Guajares,**	5.03	196	Lg	Lg	05 20 36.9	
	9.5nm,1.1s,SNR=4.0						
MFF	**Saint Martin d**	5.04	14	*e*Pn	Pn	05 19 09.9	+0.7
	SNR=1.0						
MFF				*e*Sn	Sn	05 20 04.5	-2.3
	4.9nm,0.2s,SNR=1.0						
MFF	**Saint Martin d**	5.04	14	Pn	Pn	05 19 09.9	+0.7
MFF				Sn	Sn	05 20 04.5	-2.3
	2.5nm,0.2s						
EZAM	**Zamans**	5.12	277	Pg	Pg	05 19 31.4	-1.2
	8.6nm,0.3s,SNR=7.9						
EZAM				Sn	Sn	05 20 10.1	+1.4
	6.8nm,0.2s,SNR=7.9						
EZAM				Lg	Lg	05 20 38.9	
	19nm,0.5s,SNR=7.9						
COI	**Coimbra**	5.18	255	Pn	Pn	05 19 13.0	+1.9
COI				Lg	Lg	05 20 37.3	
	36nm,0.7s						
PESTR	**Estremoz**	5.22	239	*e*Pn	Pn	05 19 12.8	+1.1
PESTR				*e*Sn	Sn	05 20 10.4	-0.9
PESTR				*e*Sg	Sg	05 20 40.2	-2.0
PESTR				A	A	05 20 45.1	
	26nm,0.5s						
PESTR	**Estremoz**	5.22	239	P	Pn	05 19 13.6	+1.9
PESTR				S	Sn	05 20 15.6	+4.3
PCAS	**Casmilo, Conde**	5.30	254	*e*Pn	Pn	05 19 14.2	+1.5
PCAS				*e*Sn	Sn	05 20 12.4	-0.7
PCAS				*e*Sg	Sg	05 20 42.6	-2.0
PCAS				A	A	05 20 55.2	
	35nm,0.7s						
PCAS	**Casmilo, Conde**	5.30	254	Pn	Pn	05 19 14.2	+1.5
PCAS				Sn	Sn	05 20 12.4	-0.7
PCAS				Lg	Lg	05 20 42.6	
	35nm,0.7s						
PYM	**Petit Puy Mans**	5.36	40	Pn	Pn	05 19 15.5	+1.9
PTOM	**Tomar**	5.40	249	*e*Pn	Pn	05 19 15.9	+1.8
PTOM				*e*Sn	Sn	05 20 14.9	-0.8
PTOM				*e*Sg	Sg	05 20 47.5	-0.5
PTOM				A	A	05 21 04.4	
	44nm,0.6s						
PTOM	**Tomar**	5.40	249	Pn	Pn	05 19 15.9	+1.8
PTOM				Sn	Sn	05 20 14.9	-0.8
PTOM				Lg	Lg	05 20 47.5	
	22nm,0.6s						
EMIN	**Mina Concepcio**	5.41	225	Pn	Pn	05 19 15.4	+1.2
	0.7nm,0.1s,SNR=20						
EMIN				Sn	Sn	05 20 12.9	-3.0
	9.8nm,0.6s,SNR=7.9						
EMIN				Lg	Lg	05 20 46.3	
	14nm,0.4s,SNR=6.9						
EMAZ	**Mazaricos**	5.42	286	⇑Pn	Pn	05 19 16.6	+2.3
	2.9nm,0.1s,SNR=18						
EMAZ				Sn	Sn	05 20 16.7	+0.7
	13nm,0.3s,SNR=7.9						
EMAZ				Lg	Lg	05 20 46.8	
	10nm,0.3s,SNR=7.9						
TCF	**Toulx Ste Croi**	5.43	31	*e*Pn	Pn	05 19 15.3	+0.7
	SNR=1.0						
TCF				*e*Sn	Sn	05 20 13.9	-2.6
	11nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	5.43	31	Pn	Pn	05 19 15.3	+0.7
TCF				Sn	Sn	05 20 13.9	-2.6
	5.3nm,0.2s						
PMTG	**Montargil**	5.53	244	*e*Pn	Pn	05 19 17.1	+1.2
PMTG				*e*Sn	Sn	05 20 18.0	-0.8
PMTG				*e*Sg	Sg	05 20 50.4	-1.7
PMTG				A	A	05 20 55.2	
	29nm,0.8s						
PMTG	**Montargil**	5.53	244	Pn	Pn	05 19 17.1	+1.2
PMTG				Sn	Sn	05 20 18.0	-0.8
PMTG				Lg	Lg	05 20 50.4	
	29nm,0.8s						
EMIJ	**Mijas**	5.62	205	Lg	Lg	05 20 56.1	
	22nm,0.8s,SNR=7.9						
AGO	**Saint Agoulin**	5.64	38	Pn	Pn	05 19 19.2	+1.8
VIVF	**Saint-Julien-l**	5.71	54	*e*Pn	Pn	05 19 19.7	+1.3
	SNR=1.0						
VIVF				*e*Sn	Sn	05 20 21.2	-2.2
	4.9nm,0.3s						
VIVF				*e*Sg	Sg	05 20 54.6	-3.3
	10nm,0.3s						
VIVF	**Saint-Julien-l**	5.71	54	Pn	Pn	05 19 19.7	+1.3
VIVF				Sn	Sn	05 20 21.2	-2.2
	2.5nm,0.3s						
VIVF				Lg	Lg	05 20 54.6	
	5.1nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ESPR	Espera	5.74	214	Sn	Sn	05 20 24.3	+0.1
	2.7nm,0.3s,SNR=7.9						
ESPR				Lg	Lg	05 21 00.4	
	14nm,0.4s,SNR=7.9						
PBEJ	Beja	5.91	233	*e*Pn	Pn	05 19 22.8	+1.7
PBEJ				*e*Sn	Sn	05 20 26.6	-1.6
PBEJ				*e*Sg	Sg	05 21 02.6	-1.6
PBEJ				A	A	05 21 09.3	
	18nm,0.4s						
PBEJ	Beja	5.91	233	Pn	Pn	05 19 22.8	+1.7
PBEJ				Sn	Sn	05 20 26.6	-1.6
PBEJ				Lg	Lg	05 21 02.6	
	9.2nm,0.4s						
BGF	Bois d'Agland	5.91	33	*e*Pn	Pn	05 19 21.0	-0.1
	SNR=1.0						
BGF				*e*Sn	Sn	05 20 25.7	-2.5
	38nm,0.4s						
BGF	Bois d'Agland	5.91	33	Pn	Pn	05 19 21.0	-0.1
BGF				Sn	Sn	05 20 25.7	-2.5
	19nm,0.4s						
SMRF	Simiane la Rot	5.92	65	*e*Pn	Pn	05 19 22.6	+1.4
SMRF	Simiane la Rot	5.92	65	Pn	Pn	05 19 22.6	+1.4
EGRO	El Granado	6.02	228	Pn	Pn	05 19 23.3	+0.7
	5.7nm,0.2s,SNR=12						
EGRO				Sn	Sn	05 20 27.9	-3.0
	3.2nm,0.3s,SNR=7.9						
EGRO				Lg	Lg	05 21 07.5	
	14nm,0.3s,SNR=5.1						
MESJ	Messejana	6.24	234	*e*P	Pn	05 19 26.3	+0.7
MESJ				*e*S	Sn	05 20 31.9	-4.5
MESJ				AML	AML	05 20 36.0	
	comp=E,10nm,0.5s						
MESJ	Messejana	6.24	234	*e*Pn	Pn	05 19 26.6	+1.0
MESJ				*e*Sn	Sn	05 20 33.6	-2.7
MESJ				*e*Sg	Sg	05 21 15.3	+0.4
MESJ				A	A	05 21 24.6	
	comp=E,15nm,0.9s						
MESJ	Messejana	6.24	234	Pn	Pn	05 19 26.6	+1.0
MESJ				Sn	Sn	05 20 33.6	-2.7
MESJ				Lg	Lg	05 21 15.3	
	comp=E,15nm,0.9s						
PVAQ	Vaqueiros	6.24	228	*e*Pn	Pn	05 19 26.1	+0.4
PVAQ				*e*Sn	Sn	05 20 33.6	-2.8
PVAQ				A	A	05 21 18.9	
	comp=E,12nm,0.6s						
PVAQ	Vaqueiros	6.24	228	Pn	Pn	05 19 26.1	+0.4
PVAQ				Sn	Sn	05 20 33.6	-2.8
	comp=E,12nm,0.6s						
PNCL	Nicolau / Gran	6.26	237	*e*Pn	Pn	05 19 26.9	+1.0
PNCL				*e*Sn	Sn	05 20 34.8	-2.0
PNCL				*e*Sg	Sg	05 21 13.4	-2.1
PNCL				A	A	05 21 26.9	
	comp=E,15nm,0.5s						
PNCL	Nicolau / Gran	6.26	237	Pn	Pn	05 19 26.9	+1.0
PNCL				Sn	Sn	05 20 34.8	-2.0
PNCL				Lg	Lg	05 21 13.4	
	comp=E,15nm,0.5s						
QUIF	Quistinic	6.27	352	*e*Pn	Pn	05 19 27.5	+1.5
	SNR=1.0						
QUIF				*e*Sn	Sn	05 20 33.7	-3.4
	comp=E,9.5nm,0.3s,SNR=1.0						
QUIF	Quistinic	6.27	352	Pn	Pn	05 19 27.5	+1.5
QUIF				Sn	Sn	05 20 33.7	-3.4
	comp=E,4.8nm,0.3s						
PMAFR	Mafra	6.30	247	*e*Pn	Pn	05 19 28.3	+1.8
PMAFR				*e*Sn	Sn	05 20 37.5	-0.4
PMAFR	Mafra	6.30	247	Pn	Pn	05 19 27.2	+0.7
	comp=E,0.5nm,0.3s,SNR=7.9						
PMAFR				Sn	Sn	05 20 35.9	-2.1
	comp=E,115nm,0.7s,SNR=7.8						
PMAFR				Lg	Lg	05 21 16.9	
	comp=E,30nm,0.4s,SNR=7.9						
AVF	Avril sur Loir	6.31	35	*e*Pn	Pn	05 19 26.8	+0.3
	SNR=1.0						
AVF				*e*Sn	Sn	05 20 34.7	-3.2
	comp=E,11nm,0.5s,SNR=1.0						
AVF	Avril sur Loir	6.31	35	Pn	Pn	05 19 26.8	+0.3
AVF				Sn	Sn	05 20 34.7	-3.2
	comp=E,5.4nm,0.5s						
PMST	Lisbon--Monsan	6.34	244	*e*Pn	Pn	05 19 28.9	+1.9
LMR	La Mourre	6.39	73	*e*Pn	Pn	05 19 28.6	+0.9
	SNR=1.0						
LMR	La Mourre	6.39	73	Pn	Pn	05 19 28.6	+0.9
SMF	Signal de Mont	6.41	38	*e*Pn	Pn	05 19 28.5	+0.5
	SNR=1.0						
SMF				*e*Sn	Sn	05 20 37.6	-3.0
	comp=E,3.5nm,0.3s						
SMF	Signal de Mont	6.41	38	Pn	Pn	05 19 28.5	+0.5
SMF				Sn	Sn	05 20 37.6	-3.0
	comp=E,1.8nm,0.3s						
HYF	Humbligny	6.42	29	*e*Pn	Pn	05 19 28.9	+0.8
HYF				*e*Sn	Sn	05 20 37.3	-3.4
HYF	Humbligny	6.42	29	Pn	Pn	05 19 28.9	+0.8
HYF				Sn	Sn	05 20 37.3	-3.4
PBDV	Barranco-do-Ve	6.48	228	*e*Pn	Pn	05 19 29.6	+0.7
PBDV				*e*Sn	Sn	05 20 40.6	-1.7
PBDV				A	A	05 21 37.3	
	comp=E,18nm,0.6s						
PBDV	Barranco-do-Ve	6.48	228	Pn	Pn	05 19 29.6	+0.7
PBDV				Sn	Sn	05 20 40.6	-1.7
	comp=E,18nm,0.6s						
ORIF	Oris-en-Rattie	6.49	58	*e*Pn	Pn	05 19 30.3	+1.1
	SNR=1.0						
ORIF				*e*Sn	Sn	05 20 40.2	-2.5
	comp=E,2.1nm,0.3s						
ORIF	Oris-en-Rattie	6.49	58	Pn	Pn	05 19 30.3	+1.1
ORIF				Sn	Sn	05 20 40.2	-2.5
	comp=E,1.1nm,0.3s						
FRF	La Foret Royal	6.54	71	*e*Pn	Pn	05 19 31.2	+1.4
	SNR=1.0						
FRF	La Foret Royal	6.54	71	Pn	Pn	05 19 31.2	+1.4
SGMF	Saint Gilles	6.56	356	*e*Pn	Pn	05 19 30.8	+0.8
	SNR=1.0						
SGMF				*e*Sn	Sn	05 20 40.5	-3.6
	comp=E,4.4nm,0.2s,SNR=1.0						
SGMF	Saint Gilles	6.56	356	Pn	Pn	05 19 30.8	+0.8
SGMF				Sn	Sn	05 20 40.5	-3.6
	comp=E,2.2nm,0.2s						
SSF	Saint Saulge	6.58	34	*e*Pn	Pn	05 19 31.0	+0.6
	SNR=1.0						
SSF	Saint Saulge	6.58	34	Pn	Pn	05 19 31.0	+0.6
ROSF	Rostrenen	6.70	352	*e*Pn	Pn	05 19 33.5	+1.6
	SNR=1.0						
ROSF				*e*Sn	Sn	05 20 44.2	-3.4
	comp=E,7.1nm,0.2s,SNR=1.0						
ROSF	Rostrenen	6.70	352	Pn	Pn	05 19 33.5	+1.6
ROSF				Sn	Sn	05 20 44.2	-3.4
	comp=E,3.6nm,0.2s						
GRR	Gorron	6.71	6	*e*Pn	Pn	05 19 33.3	+1.2
	SNR=1.0						
GRR				*e*Sn	Sn	05 20 43.8	-4.1
	comp=E,3.7nm,0.2s,SNR=1.0						
GRR	Gorron	6.71	6	Pn	Pn	05 19 33.3	+1.2
GRR				Sn	Sn	05 20 43.8	-4.1
	comp=E,1.9nm,0.2s						
PTEO	Sao Teotonio	6.74	234	*e*Pn	Pn	05 19 33.5	+1.1
PTEO				*e*Sn	Sn	05 20 45.6	-2.9
PTEO				*e*Sg	Sg	05 21 30.5	-0.2
PTEO				A	A	05 21 35.9	
	comp=E,18nm,0.7s						
PTEO	Sao Teotonio	6.74	234	Pn	Pn	05 19 33.5	+1.1
PTEO				Sn	Sn	05 20 45.6	-2.9
PTEO				Lg	Lg	05 21 30.5	
	comp=E,8.8nm,0.7s						
MORF	Marmelete	6.85	232	*e*P	Pn	05 19 34.6	+0.5
MORF	Marmelete	6.85	232	*e*Pn	Pn	05 19 34.7	+0.7
MORF				*e*Sn	Sn	05 20 49.6	-1.8
MORF	Marmelete	6.85	232	P	Pn	05 19 34.6	+0.5
MORF				Pn	Pn	05 19 34.7	+0.7
MORF				Sn	Sn	05 20 49.6	-1.8
LOR	Lormes	6.90	34	*e*Pn	Pn	05 19 35.1	+0.5
	baz=215						
LOR				*e*Sn	Sn	05 20 48.8	-3.7
	comp=E,5.9nm,0.4s,SNR=1.0						
LOR	Lormes	6.90	34	Pn	Pn	05 19 35.1	+0.5
LOR				Sn	Sn	05 20 48.8	-3.7
	comp=E,3.0nm,0.4s						
LDF	La Druitiere	6.99	10	*e*Pn	Pn	05 19 36.6	+0.7
	SNR=1.0						
LDF				*e*Sn	Sn	05 20 50.8	-3.9
	comp=E,3.2nm,0.3s,SNR=1.0						
MBDF	Montbardon	6.99	62	*e*Pn	Pn	05 19 36.6	+0.6
MBDF	Montbardon	6.99	62	Pn	Pn	05 19 36.6	+0.6
PFVI	Vila Bisbo	7.07	232	*e*Pn	Pn	05 19 38.3	+1.3
PFVI				*e*Sn	Sn	05 20 54.0	-2.8
PFVI	Vila Bisbo	7.07	232	Pn	Pn	05 19 38.2	+1.1
	comp=E,16nm,0.5s,SNR=8.4						
PFVI				Sn	Sn	05 20 53.9	-2.9
	comp=E,9.9nm,0.4s,SNR=7.9						
FLN	La Foliniere	7.12	7	*e*Pn	Pn	05 19 38.4	+0.8
	baz=188,SNR=1.0						
FLN				*e*Sn	Sn	05 20 54.0	-3.9
	comp=E,1.5nm,0.2s						
FLN	La Foliniere	7.12	7	Pn	Pn	05 19 38.4	+0.8
FLN				Sn	Sn	05 20 54.0	-3.9
	comp=E,0.8nm,0.2s						
LPL	La Plagne	7.30	56	*e*Pn	Pn	05 19 41.6	+1.2
LPL	La Plagne	7.30	56	Pn	Pn	05 19 41.6	+1.2
LPG	La Plagne	7.31	56	*e*Pn	Pn	05 19 41.9	+1.4
LPG	La Plagne	7.31	56	Pn	Pn	05 19 41.9	+1.4
CABF	La Chapelle	7.52	47	*e*Pn	Pn	05 19 43.2	-0.1
CABF	La Chapelle	7.52	47	Pn	Pn	05 19 43.2	-0.1
MEZF	Maizieres J'vi	8.36	33	*e*Pn	Pn	05 19 55.3	+0.6
MEZF	Maizieres J'vi	8.36	33	Pn	Pn	05 19 55.3	+0.6
BAIF	Baives	9.36	25	*e*Pn	Pn	05 20 08.4	+0.1
	SNR=1.0						
BAIF				*e*Sn	Sn	05 21 47.7	-5.2
	comp=E,1.3nm,0.3s						
BAIF	Baives	9.36	25	Pn	Pn	05 20 08.4	+0.1
BAIF				Sn	Sn	05 21 47.7	-5.2
	comp=E,0.6nm,0.3s						

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*NEIC **03** 05:22:09.0±0.0, 35°.58S×72°.94W, h42^{km}, mb4.4/7, ML4.5(GUC), After GUC.*

NEIC Felt [IV] at Pelluhue; [III] at Cobquecura and San Javier; [II] at Constitucion, Curico, Duao, Iloca, Maule, Parral and Talca.

*GUC **03** 05:22:09.7±0.7, 35°.58S×72°.94W, h42^{km}±11^{km}, ML4.5*

*IDC **03** 05:22:17.5±6.2, 35°.51S×72°.79W, h75^{km}±56^{km}, mb3.9/10, mb1 4.0/11, mb1mx3.8/28, mbtmp4.2/11, ML3.8/1, MS3.7/8, Ms1 3.6/8, ms1mx3.4/22, Error ellipse: s-maj=29.3km s-min=16.1km az=87.0*

ISC 03 05:22:07.5±2.3**, 35°.58S**±0°.04×**72°.88W**±0°.07**, h3**^{km}±13^{km}**, n74, σ1^{s}.86**/81**, mb4.3**/15**, MS3.8**/6**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	1.21	148	⇑*i*P	Pb	05 22 30.8	-0.3
CCHI				*i* S	Sb	05 22 46.7	-0.4
CCHI				IAML		05 22 51.4	
	comp=E,7μm,0.3s						
CHPI	Pichilemu	1.38	32	*e*P	Pb	05 22 34.9	+0.9
CHPI				*i* S	Sn	05 22 53.5	+1.1
AGCH	Angol	2.23	176	*e*P	Pn	05 22 44.1	-1.2
AGCH				*e*S	Sn	05 23 11.3	-2.2
LMEL	Las Melosas	2.80	53	*e*P	Pb	05 22 56.9	-1.3
LMEL				*i* S	Sn	05 23 30.3	+2.7
LMEL				IAML		05 23 41.0	
	comp=N,3μm,0.5s						
CLCH	Cerro Calan	2.91	42	*e*P	Pn	05 22 56.9	+2.1
CLCH				*e*S	Sn	05 23 28.7	-1.6
ROC1	El Roble	3.02	31	*e*Pn	Pn	05 22 57.7	+1.3
ROC1	El Roble	3.02	31	*i* P	Pn	05 22 58.1	+1.7
ROC1				*i* S	Sg	05 23 45.8	+1.4
ROCH	El Roble	3.02	31	*e*P	Pn	05 22 56.9	+0.4
ROCH				*i* S	Sn	05 23 32.1	-1.2
ROCH				IAML		05 23 53.3	
	comp=E,2μm,0.5s						
PEL	Peldehue	3.03	37	*e*Pn	Pn	05 22 58.2	+1.8
PEL	Peldehue	3.03	37	*e*P	Pn	05 22 58.3	+1.9
PEL				*e*S	Sg	05 23 45.2	+0.4
FCH	Farellones	3.10	44	*e*P	Pn	05 22 58.5	+1.0
FCH				*e*S	Sn	05 23 34.6	-0.6
FCH				IAML		05 23 50.0	
	comp=E,838nm,0.6s						
GO06	Curarrehue	4.15	165	*e*Pn	Pn	05 23 12.4	+0.5
AVIZ	Vizcacheras	4.17	61	⇑*i* P	Pb	05 23 19.2	-2.3
AAGR	Agrelo	4.17	55	*i* P	Pn	05 23 16.0	+3.9
ARCO	CERRO ARCO	4.26	51	*i* P	Pn	05 23 16.5	+3.1
ARCO				IAML		05 23 50.0	
	comp=Z,142nm,0.5s						
AUSP	Uspallata	4.43	42	*i* P	Pn	05 23 18.2	+2.3
ASAL	Salagasta	4.49	50	*e*P	Pn	05 23 19.3	+2.9
RTLS	Leoncito	4.81	39	*i* P	Pn	05 23 23.0	+2.0
RTLS				*e*S	Sg	05 24 37.6	-4.4
RTLS				IAML		05 24 47.9	
	comp=Z,202nm,0.6s						
RTCV	Cerro Valdivia	5.17	46	*i* P	Pn	05 23 27.4	+1.5
ZON	Zonda	5.33	42	*e*P	Pn	05 23 31.9	+3.9
SJA	San Juan	5.41	43	*e*S	Sn	05 24 28.0	-3.9
PLCA	Paso Flores	5.46	161	*e*Pn	Pn	05 23 30.9	+1.0
CFA	Coronel Fontan	5.54	46	*e*P	Pn	05 23 32.8	+2.0
RTLL	Cerro Villicun	5.61	42	*e*P	Pn	05 23 35.2	+3.3
RTLL				*e*P	Pn	05 23 35.5	+3.6
GO04	Tololo Observa	5.66	19	*e*Pn	Pn	05 23 33.0	+0.3
GO04	Tololo Observa	5.66	19	*e*P	Pn	05 23 32.7	-0.1
ACAN	Cantantal	5.76	57	*e*P	Pn	05 23 35.9	+1.9
AMOG	MOGNA	5.91	40	*i* P	Pn	05 23 36.7	+0.8
ACCO	Cerro Coronel	5.91	34	*e*P	Pn	05 23 37.3	+1.0
AROD	Rodeo	6.11	29	*e*P	Pn	05 23 40.7	+1.7
ACDV	Cuesta del Vie	6.25	31	*e*P	Pn	05 23 42.3	+1.6
MRA	San Martin	6.73	64	*e*P	Pn	05 23 49.0	+1.8
LCO	Las Campanas	6.80	16	*e*Pn	Pn	05 23 48.2	-0.2
LCO	Las Campanas	6.80	16	*e*P	Pn	05 23 45.4	-3.0
SUCO	SUCO	6.97	74	*e*P	Pn	05 23 55.5	+5.0
SUCO				*e*S	Sg	05 25 51.0	-0.3
AGUA	GUANDACOL	7.11	33	*e*P	Pn	05 23 53.6	+1.1
APLL	PUNTA DE LOS L	7.42	48	*e*P	Pn	05 23 55.6	-1.1
ACLC	CERRO LA CRUZ	7.91	41	*e*P	Pn	05 24 05.2	+1.6
GO03	Copiap	8.27	17	*e*Pn	Pn	05 24 07.4	-1.0
CYA	Choya	9.31	42	*e*P	Pn	05 24 19.5	-3.1
LVC	Limon Verde	13.38	16	LR	LR	05 30 44.9	
	comp=Z,126nm,20.9s,baz=211,slow=38						
PB01	IPOC Station P	14.78	13	*e*Pn	Pn	05 25 38.7	+1.1
PB11	IPOC Station P	16.01	11	*e*Pn	Pn	05 25 54.1	+0.3
	comp=Z,17nm,0.9s						
CPUP	Villa Florida	16.20	60	P	P	05 26 02.7	+3.4
	comp=Z,0.2nm,0.3s,baz=242,slow=6.2,SNR=3.1						
CPUP				LR	LR	05 32 40.4	
	comp=Z,345nm,19.4s,baz=233,slow=39						
MNMC	Minye Minye	16.64	11	*e*Pn	Pn	05 26 03.0	+1.0
	comp=Z,23nm,0.8s						
LPAZ	La Paz	19.67	14	*e*P	Pn	05 26 39.1	-0.6
	comp=Z,9.3nm,0.9s						
LPAZ	La Paz	19.67	14	P	Pn	05 26 40.9	+1.2
	comp=Z,0.1nm,0.3s,baz=184,slow=6.5,SNR=15						
NNA	Nana	23.76	350	LR	LR	05 34 38.7	
	comp=Z,73nm,18.8s,baz=174,slow=31						
PMSA	Palmer Station	29.71	172	P	P	05 28 18.2	+3.8
	comp=Z,19nm,0.8s,baz=336,slow=4.4,SNR=12						
BDFB	Brasilia	29.80	55	*e*P	P	05 28 14.6	-1.2
	comp=Z,10.0nm,1.3s						
BDFB	Brasilia	29.80	55	P	P	05 28 18.1	+2.3
	comp=Z,2.4nm,0.7s,baz=219,slow=1.6,SNR=3.0						
BDFB				LR	LR	05 41 49.0	
	comp=Z,86nm,18.3s,baz=191,slow=39						
RPN	Rapa Nui	32.11	275	LR	LR	05 37 58.5	
	comp=Z,197nm,19.1s,baz=124,slow=29						
SDV	Santo Domingo	44.27	3	P	P	05 30 17.3	-1.3
	comp=Z,2.7nm,0.8s,baz=29,slow=4.5,SNR=4.6						
SNAA	Sanae	50.40	157	P	P	05 31 05.5	-0.1
	comp=Z,2.3nm,0.9s,baz=285,slow=9.5,SNR=3.6						
QSPA	South Pole Qui	54.66	180	P	P	05 31 37.9	+0.5
	comp=Z,2.8nm,0.9s,baz=170,slow=3.6,SNR=5.8						
TXAR	Lajitas Array	70.78	332	P	P	05 33 25.0	-0.3
	comp=Z,0.4nm,0.5s,baz=157,slow=9.0,SNR=5.9						
V48A	Smith Brothers	72.13	348	*e*P	P	05 33 32.8	-0.4
	comp=Z,7.4nm,0.5s						
WVT	Waverly	72.69	347	*e*P	P	05 33 35.9	-0.5
	comp=Z,6.5nm,1.0s						
LIC	Lamto	75.93	72	*e*P	P	05 33 55.3	-0.6
	comp=Z,32nm,1.5s						
TIC	Toumodi	76.19	71	*e*P	P	05 33 57.0	-0.4
KIC	Kosan Boka	76.23	72	*e*P	P	05 33 57.3	-0.3
	comp=Z,11nm,0.7s						
DBIC	Dimbokro	76.34	71	P	P	05 33 57.9	-0.3
	comp=Z,3.5nm,0.6s,baz=204,slow=5.3,SNR=11						
DBIC				LR	LR	06 06 16.1	
	comp=Z,55nm,18.4s,baz=221,slow=35						
BOSA	Boshof	79.95	118	P	P	05 34 17.9	-0.4
	comp=Z,2.9nm,0.8s,baz=277,slow=7.7,SNR=3.4						
ECSD	EROS Data Cent	81.84	343	*e*P	P	05 34 27.6	-0.1
	comp=Z,4.3nm,1.0s						
RPZ	Rata Peaks	82.00	221	LR	LR	06 02 03.7	
	comp=Z,41nm,19.1s,baz=174,slow=29						
NVAR	Mina Array Bea	84.79	326	P	P	05 34 44.9	+1.6
	comp=Z,0.2nm,0.4s,baz=122,slow=8.6,SNR=2.7						
TOA0	Torodi Ar. Sit	85.39	70	*e*P	P	05 34 43.8	-2.8
TORD	Torodi Ar. Bea	85.39	70	P	P	05 34 45.7	-0.9
	comp=Z,1.6nm,0.8s,baz=299,slow=6.0,SNR=11						
TORD				LR	LR	06 12 43.4	
	comp=Z,58nm,18.1s,baz=275,slow=36						
RSO	Redoubt South	115.60	327	*e*PKPdf	PKPdf	05 40 49.2	-1.2
BVAR	Borovoye Array	148.90	44	PKPbc	PKPbc	05 41 56.1	+0.1
	comp=Z,0.8nm,0.6s,baz=304,slow=3.4,SNR=7.5						
NRN	Naryn	155.03	67	*e*PKPdf	PKPdf	05 42 00.4	-1.7
NRN				*e*PKPab	PKPab	05 42 26.1	-0.5
ZALV	Zalesovo Beam	155.92	33	PKPbc	PKPbc	05 42 11.2	
	comp=Z,0.4nm,0.6s,baz=339,slow=3.7,SNR=3.8						
ZALV				PKPab	pPKPab	05 42 29.7	-0.8
	comp=Z,0.2nm,0.3s,baz=286,slow=6.9,SNR=3.7						
MKAR	Makanchi Array	158.30	51	PKPab	PKPab	05 42 41.3	+1.2
	comp=Z,0.2nm,0.8s,baz=298,slow=3.1,SNR=3.6						
LZH	Lanzhou	177.29	78	*e*PKP	PKPdf	05 42 18.3	-1.2
LZH				pPKP	sPKPdf	05 42 30.1	+9.1
LZH				sPKP		05 42 33.5	
LZH				PKP	PKPab	05 44 04.6	+0.2

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*IDC **03** 05:22:33.4±0.9, 39°.43N×73°.76E, h0^{km}, mb3.5/8, mb1 3.6/11, mb1mx3.5/47, mbtmp3.5/11, ML3.3/3, MS2.4/1, Ms1 2.4/1, ms1mx2.1/35, Error ellipse: s-maj=23.2km s-min=15.4km az=86.0*

*KRNET **03** 05:22:35.5±0.1, 39°.55N×73°.60E, mb3.6*

*SOME **03** 05:22:36.5, 39°.75N×73°.35E, h20^{km}*

*NNC **03** 05:22:37.4±1.6, 39°.65N×73°.73E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=14.7km s-min=7.3km az=46.0*

ISC 03 05:22:34.1±2.4**, 39°.39N**±0°.06×**73°.52E**±0°.04**, h1**^{km}±13^{km}**, n69, σ1^{s}.54**/80**, mb3.6**/8**, 31C-26D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.62	359	⇑P	Pg	05 22 44.8	-1.2
	59nm,0.3s						
SFK				⇑S	Sg	05 22 51.3	-2.7
	972nm,0.4s						
SFK	Sufi-Kurgan	0.62	359	Pg	Pg	05 22 44.9	-1.1
	126nm,0.2s						
SFK				Lg	Lg	05 22 50.7	
	1μm,0.2s						
SFK	Sufi-Kurgan	0.62	359	⇓*i*P	Pg	05 22 44.9	-1.1
	baz=51						
SFK				⇓*i*S	Sg	05 22 51.6	-2.4
	baz=51						
ARSB	Arslanbob	1.97	348	⇑*i*P	Pn	05 23 09.9	+1.1
	baz=45						
ARSB				⇑*i*S	Sn	05 23 35.1	+0.8
	baz=45						
BTK	Batken	2.19	289	⇑*i*P	Pn	05 23 15.3	+3.6
	baz=84						
BTK				⇑*i*S	Sb	05 23 44.3	+2.2
	baz=84						
ARLS	Aral	2.54	14	⇑*i*P	Pn	05 23 17.8	+1.2
	baz=13						
ARLS				⇑*i*S	Sn	05 23 48.7	+0.4
	baz=13						
ARK	Arkit	2.68	334	⇑*e*P	Pn	05 23 20.1	+1.6
	baz=32						
ARK				⇑*i*S	Sn	05 23 53.0	+1.3
	baz=32						
AML	Almayashu	2.74	3	P	Pn	05 23 22.0	+2.4
	SNR=60						
AML	Almayashu	2.74	3	⇑*i*P	Pn	05 23 20.7	+1.1
	baz=2.0						
AML				⇑*i*S	Sn	05 23 53.8	+0.3
	baz=2.0						
NRN	Naryn	2.78	42	⇓*i*P	Pn	05 23 20.4	+0.3
	baz=43						
NRN				⇓*i*S	Sn	05 23 54.3	-0.2
	baz=43						
UCH	Uchtor	2.93	15	P	Pn	05 23 23.6	+1.4
	SNR=112						
UCH	Uchtor	2.93	15	⇓*i*P	Pn	05 23 23.2	+1.0
	baz=14						
UCH				⇓*i*S	Sn	05 23 58.6	+0.3
	baz=14						
KZA	Kyzart	2.99	26	P	Pn	05 23 23.8	+0.8
	SNR=20						
KZA	Kyzart	2.99	26	⇑*i*P	Pn	05 23 23.7	+0.7
	baz=26						
KZA				⇑*i*S	Sn	05 23 59.4	-0.3
	baz=26						
MNAS	Manas	3.19	346	⇓Pn	Pn	05 23 27.4	+1.9
	14nm,0.5s						
MNAS				⇓Lg	Lg	05 24 12.8	
	116nm,0.8s						
MNAS	Manas	3.19	346	Pg	Pn	05 23 27.6	+2.1
	12nm,0.3s						
MNAS				Lg	Lg	05 24 04.6	
	46nm,0.7s						
MNAS	Manas	3.19	346	⇓*i*P	Pn	05 23 27.1	+1.6
	baz=45						
MNAS				⇓*i*S	Sn	05 24 05.0	+0.8
	baz=45						
EKS2	Erkin-Say	3.27	3	P	Pn	05 23 29.0	+2.4
	SNR=19						
EKS2	Erkin-Say	3.27	3	⇑*i*P	Pn	05 23 28.1	+1.5
	baz=2.0						
EKS2				⇑*e*S	Sn	05 24 06.4	+0.1
	baz=2.0						
AAK	Ala-Archa	3.33	12	P	Pn	05 23 29.4	+2.0
	SNR=22						
AAK	Ala-Archa	3.33	12	⇓Pn	Pn	05 23 29.5	+2.1
	10.0nm,0.3s						
AAK				⇓Lg	Lg	05 24 12.1	
	73nm,0.6s						
AAK	Ala-Archa	3.33	12	⇓*i*P	Pn	05 23 28.4	+1.0
	baz=12						
AAK				⇓*i*S	Sn	05 24 07.3	-0.3
	baz=12						
AAK	Ala-Archa	3.33	12	Pn	Pn	05 23 29.0	+1.6
	7.0nm,0.3s,baz=141,slow=8.3,SNR=48						
AAK				Lg	Lg	05 24 15.1	
	7.8nm,0.3s,baz=340,slow=18,SNR=14						
AAK				LR	LR	05 25 00.4	
	comp=Z,60nm,21.4s,baz=136,slow=45						
MRKS	Merke	3.36	356	Pg	Pn	05 23 31.4	+3.6
	26nm,0.3s						
MRKS				Lg	Lg	05 24 10.4	
	65nm,0.6s						
MRKS	Merke	3.36	356	*e*P	Pn	05 23 31.4	+3.6
	26nm,0.3s						
MRKS				*e*S	Sn	05 24 10.4	+2.1
	67nm,0.7s						
KBK	Karagaybulak	3.44	18	P	Pn	05 23 31.6	+2.7
	SNR=11						
KBK	Karagaybulak	3.44	18	⇓*i*P	Pn	05 23 30.0	+1.1
	baz=18						
KBK				⇓*i*S	Sn	05 24 09.6	-0.8
	baz=18						
FRU1	Bishkek	3.52	13	⇑*e*P	Pn	05 23 31.1	+1.2
	baz=13						
FRU1				⇑*i*S	Sn	05 24 11.9	-0.3
	baz=13						
ULHL	Ulahol	3.52	35	P	Pn	05 23 31.9	+1.8
	SNR=13						
ULHL	Ulahol	3.52	35	⇓*i*P	Pn	05 23 31.2	+1.1
	baz=36						
ULHL				⇓*i*S	Sn	05 24 12.1	-0.4
	baz=36						
CHMS	Chumysh	3.72	14	P	Pn	05 23 34.5	+1.8
	SNR=12						
CHMS	Chumysh	3.72	14	⇑*i*P	Pn	05 23 33.8	+1.1
	baz=14						
CHMS				⇑*i*S	Sn	05 24 17.1	-0.1
	baz=14						
IUG	Iuzhnay	3.82	317	Pg	Pn	05 23 39.3	+5.2
	45nm,0.4s						
IUG				Lg	Lg	05 24 24.5	
	126nm,0.6s						
IUG	Iuzhnay	3.82	317	*e*P	Pn	05 23 39.3	+5.2
	45nm,0.4s						
IUG				*e*S	Sn	05 24 24.5	+4.8
	126nm,0.6s						
TKM2	Tokmak 2	3.86	23	P	Pn	05 23 36.2	+1.5
	SNR=10						
TKM2	Tokmak 2	3.86	23	⇓Pn	Pn	05 23 36.1	+1.3
	8.8nm,0.6s						
TKM2				⇓Lg	Lg	05 24 30.1	
	27nm,0.5s						
TKM2	Tokmak 2	3.86	23	⇓*i*P	Pn	05 23 35.9	+1.1
	baz=23						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2				⇓iS	Sn	05 24 19.8	-1.0
	baz=23						
KDJ	Kajisay	3.90	44	⇓eP	Pn	05 23 37.1	+1.8
	baz=45						
KDJ				⇓iS	Sn	05 24 21.8	0.0
	baz=45						
USP	Ospenovka	3.94	10	P	Pn	05 23 37.5	+1.7
	SNR=6.3						
USP	Ospenovka	3.94	10	⇑iP	Pn	05 23 37.1	+1.4
	baz=10.0						
USP				⇑iS	Sn	05 24 22.1	-0.6
	baz=10.0						
KST	Kastek	4.09	26	Pg	Pb	05 23 46.8	-0.1
	15nm,0.5s						
KST				Lg	Lg	05 24 37.3	
	62nm,0.6s						
KST	Kastek	4.09	26	eP	Pb	05 23 46.8	-0.1
	15nm,0.5s						
KST				eS	Sb	05 24 37.3	+0.4
	62nm,0.6s						
SGDS	Sogindy	4.14	11	Pg	Pb	05 23 47.5	-0.3
	24nm,0.4s						
SGDS				Lg	Lg	05 24 38.1	
	30nm,0.5s						
MTBS	Maitube	4.33	29	Pg	Pb	05 23 52.0	+1.0
	14nm,0.4s						
MTBS				Lg	Lg	05 24 45.8	
	36nm,0.5s						
MTBS	Maitube	4.33	29	eP	Pb	05 23 52.0	+1.0
	14nm,0.4s						
MTBS				⇑iS	Sb	05 24 45.8	+1.9
	36nm,0.5s						
KK31	Karatay Array	4.35	330	⇑Pn	Pn	05 23 44.8	+3.5
	1.5nm,0.3s,baz=136,slow=14,SNR=45						
KK31				⇑Lg	Lg	05 24 49.9	
	28nm,0.6s,baz=131,slow=28,SNR=7.7						
TNSS	Tian-Shan	4.46	34	Pg	Pb	05 23 55.9	+2.4
	20nm,0.6s						
TNSS				Lg	Lg	05 24 52.1	
	28nm,0.5s						
TNSS	Tian-Shan	4.46	34	eP	Pb	05 23 55.9	+2.4
	20nm,0.6s						
TNSS				⇑iS	Sb	05 24 52.1	+4.1
	28nm,0.5s						
MDOK	Medeo	4.61	34	Pg	Pb	05 23 55.8	0.0
	7.4nm,0.6s						
MDOK				Lg	Lg	05 24 52.2	
	49nm,0.8s						
MDOK	Medeo	4.61	34	Pg	Pb	05 23 56.5	+0.7
	11nm,0.5s						
MDOK				Lg	Lg	05 24 53.5	
	39nm,0.7s						
MDOK	Medeo	4.61	34	eP	Pb	05 23 56.5	+0.7
	11nm,0.5s						
MDOK				eS	Sb	05 24 53.5	+1.5
	39nm,0.7s						
KNDC	Almaty	4.62	33	⇑Pg	Pb	05 23 56.8	+0.8
	20nm,0.5s						
KNDC				⇑Lg	Lg	05 24 55.6	
	99nm,0.8s						
CHKK	Chushkaly	5.16	29	Pg	Pb	05 24 06.7	+1.6
	9.5nm,0.4s						
CHKK				Lg	Lg	05 25 10.8	
	28nm,0.5s						
CHKK	Chushkaly	5.16	29	eP	Pb	05 24 06.2	+1.1
	1.6nm,0.3s						
CHKK				⇑iS	Sb	05 25 10.8	+3.2
	28nm,0.5s						
KAPS	Kapalarasan	7.30	34	Lg	Lg	05 26 16.4	
MKAR	Makanchi Array	9.79	38	Pn	Pn	05 24 59.5	+3.6
	baz=228,slow=17,SNR=2.2						
BVAR	Borovoye Array	13.81	352	Pn	Pn	05 25 49.8	-1.0
	0.2nm,0.3s,baz=152,slow=9.6,SNR=6.9						
AB31	Akbulak array	13.82	320	⇑P	Pn	05 25 50.7	-0.4
	1.9nm,0.9s,baz=124,slow=15,SNR=10						
AB31				⇓S	Sn	05 28 24.8	-0.4
	1.9nm,1.0s						
AKTO	Aktyubinsk	15.54	320	⇓P	Pn	05 26 14.3	+0.1
	2.5nm,0.9s						
AKTO				⇑S	Sn	05 29 06.0	-0.9
	1.7nm,1.1s						
AKTO	Aktyubinsk	15.54	320	Pn	Pn	05 26 15.9	+1.7
	0.1nm,0.3s,baz=124,slow=15,SNR=3.4						
ZALV	Zalesovo Beam	16.46	24	Pn	Pn	05 26 25.3	-0.8
	0.2nm,0.3s,baz=227,slow=10.0,SNR=4.6						
SONM	Songino Array	25.10	60	P	P	05 27 58.3	-2.1
	0.1nm,0.3s,baz=261,slow=9.6,SNR=3.2						
FINES	FINESS Array B	36.28	323	P	P	05 29 39.1	+0.5
	0.4nm,0.4s,baz=115,slow=11,SNR=4.6						
ARCES	ARCESS Array B	39.28	336	P	P	05 30 04.2	+0.1
	0.7nm,0.5s,baz=105,slow=9.0,SNR=12						
NOA	NORSAR Array B	43.33	321	P	P	05 30 36.6	-0.8
	0.2nm,0.5s,baz=90,slow=7.8,SNR=2.5						
TORD	Torodi Ar. Bea	67.77	269	P	P	05 33 33.7	0.0
	0.3nm,0.6s,baz=47,slow=5.7,SNR=4.2						
YKA	Yellowknife Ar	78.25	4	P	P	05 34 34.1	-1.0
	0.2nm,0.6s,baz=351,slow=5.3,SNR=3.3						
WRA	Warramunga Arr	81.89	124	P	P	05 34 54.3	-1.0
	0.3nm,0.4s,baz=327,slow=5.2,SNR=8.3						
ASAR	Alice Springs	84.33	127	P	P	05 35 06.8	-1.1
	0.3nm,0.6s,baz=300,slow=4.8,SNR=4.3						

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*IDC **03** 05:25:24.8±8.0, 34°.52S×179°.67E, h90^{km}±57^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.6/28, mbtmp4.2/4, ML4.3/1, Error ellipse: s-maj=77.1km s-min=24.8km az=45.0*
*WEL **03** 05:25:27.8±1.2, 35°S±8°×18°0E±1°7, h33^{km}, ML4.6/12*
ISC 03 05:25:17.7±1.3**, 34°.44S**±0°.09×**179°.7W**±0°.1**, h35^{km}, n56, σ2^{s}.60**/65**, mb3.9**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.50	206	P	Pn	05 26 13.5	+4.0
MXZ				S	Sn	05 26 48.3	-1.4
WMGZ	Waiomatatini S	3.69	203	P	Pn	05 26 16.6	+4.5
WMGZ				S	Sn	05 26 54.3	-0.1
PKGZ	Pakihiroa	3.87	207	P	Pn	05 26 18.4	+3.7
PKGZ				S	Sn	05 26 57.7	-1.3
HAZ	Te Kaha	3.87	211	P	Pn	05 26 18.4	+3.8
HAZ				S	Sn	05 26 57.8	-1.1
PUZ	Puketiti	3.97	204	P	Pn	05 26 19.5	+3.5
PUZ				S	Sn	05 27 00.6	-0.8
RUGZ	Raukumara Rang	4.09	210	P	Pn	05 26 21.0	+3.1
TWGZ	Tauwhareparae	4.16	206	P	Pn	05 26 22.1	+3.5
TWGZ				S	Sn	05 27 05.7	-0.4
KUZ	Kuaotunu	4.36	237	P	Pn	05 26 24.8	+3.5
CNGZ	Carnagh Statio	4.36	202	P	Pn	05 26 25.4	+4.0
TKGZ	Te Karaka	4.44	205	P	Pn	05 26 25.3	+2.8
TKGZ				S	Sn	05 27 12.0	-0.9
MWZ	Matawai	4.47	209	P	Pn	05 26 25.7	+2.8
MWZ				S	Sn	05 27 12.5	-1.2
OPRZ	Ohinepanea	4.53	220	P	Pn	05 26 27.4	+3.7
URZ	Urewera	4.58	213	P	Pn	05 26 26.9	+2.5
	17nm,0.3s,baz=270,slow=4.1,SNR=103						
URZ				S	Sn	05 27 12.6	-3.8
	14nm,0.3s,baz=171,slow=22,SNR=12						
URZ	Urewera	4.58	213	P	Pn	05 26 26.6	+2.2
URZ				S	Sn	05 27 12.4	-4.0
TGRZ	Tauranga	4.61	224	P	Pn	05 26 29.0	+4.2
RAGZ	Rawiri	4.65	209	P	Pn	05 26 28.3	+2.8
RIGZ	Rimuhau	4.71	205	P	Pn	05 26 28.4	+2.2
RIGZ				S	Sn	05 27 18.1	-1.5
WIAZ	Waiheke Island	4.79	239	P	Pn	05 26 29.9	+2.5
TARZ	Mount Tarawera	4.85	218	P	Pn	05 26 32.4	+4.1
PRGZ	Paritu Road	4.86	203	P	Pn	05 26 31.3	+2.9
MUGZ	Murupara	4.91	214	P	Pn	05 26 31.2	+2.1
MKAZ	Moumakai	4.93	236	P	Pn	05 26 33.6	+4.4
SNGZ	Shannon Statio	4.93	208	P	Pn	05 26 31.6	+2.4
RTZ	Ruatahuna	4.93	211	P	Pn	05 26 31.3	+1.9
KNZ	Kokohu	5.02	204	P	Pn	05 26 32.1	+1.6
TOZ	Tahuroa Road	5.07	228	P	Pn	05 26 34.6	+3.5
MHGZ	Mahia Peninsul	5.07	201	P	Pn	05 26 33.7	+2.5
WCZ	Waipu Caves	5.08	251	P	Pn	05 26 34.1	+2.9
RAHZ	Arahi	5.14	209	P	Pn	05 26 34.5	+2.3
ALRZ	Allen Road	5.19	216	P	Pn	05 26 35.1	+2.4
MTHZ	Maungataniwha	5.19	211	P	Pn	05 26 35.3	+2.5
NMHZ	Naumai	5.41	210	P	Pn	05 26 37.9	+1.9
ARHZ	Aropaoanui	5.48	208	P	Pn	05 26 38.2	+1.5
BKZ	Black Stump Fm	5.60	212	P	Pn	05 26 39.7	+1.2
WATZ	Wairara	5.61	219	P	Pn	05 26 41.3	+2.8
MCHZ	McNeill Hill	5.75	209	P	Pn	05 26 42.1	+1.6
CKHZ	Cape Kidnapper	5.80	205	P	Pn	05 26 42.9	+1.8
KWHZ	Kaweka Forest	5.85	211	P	Pn	05 26 42.3	+0.4
KRVZ	Karewarewa	5.94	217	P	Pn	05 26 45.7	+2.4
WTVZ	West Tongariro	5.99	217	P	Pn	05 26 45.6	+1.8
KAHZ	Kahuranaki	5.99	206	P	Pn	05 26 44.4	+0.6
NGZ	Ngauruhoe	6.03	217	P	Pn	05 26 46.8	+2.4
TWVZ	Taurewa	6.03	219	P	Pn	05 26 47.3	+2.9
BHHZ	Black Hill Sta	6.06	213	P	Pn	05 26 45.3	+0.5
FWVZ	Far West T-bar	6.11	217	P	Pn	05 26 47.5	+1.9
MOVZ	Moawhango	6.13	215	P	Pn	05 26 46.5	+0.7
TRVZ	Turoa	6.15	217	P	Pn	05 26 47.8	+1.6
PXZ	Pawanui	6.20	205	P	Pn	05 26 46.7	0.0
MTVZ	Mangateitei	6.25	217	P	Pn	05 26 45.2	-2.2
RPZ	Rata Peaks	11.70	215	S	Sn	05 29 52.8	-18
	0.3nm,0.3s,baz=344,slow=19,SNR=3.6						
ASAR	Alice Springs	41.61	272	P	P	05 33 00.3	-2.2
	1.3nm,0.7s,baz=114,slow=7.5,SNR=25						
WRA	Warramunga Arr	42.97	277	P	P	05 33 10.9	-2.7
	1.2nm,0.5s,baz=120,slow=7.5,SNR=26						
QSPA	South Pole Qui	55.68	180	P	P	05 34 52.0	+1.9
	5.1nm,0.8s,baz=33,slow=0.9,SNR=10						
FINES	FINESS Array B	148.35	337	PKPbc	PKPbc	05 44 59.9	+0.5
	0.6nm,0.7s,baz=66,slow=3.4,SNR=3.7						
DBIC	Dimbokro	151.96	169	PKPbc	PKPbc	05 45 08.7	-0.9
	1.6nm,0.8s,baz=90,slow=1.0,SNR=4.5						
TORD	Torodi Ar. Bea	158.76	184	PKPab	PKPab	05 45 46.0	-1.7
	0.3nm,0.6s,baz=169,slow=3.8,SNR=4.5						

IDC 03 05:28:36.1±3.0**, 10°.38S×165°.47E, h0^{km}, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.7**/33**, mbtmp3.7**/5**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.6**/24**, Error ellipse: s-maj=107.4km s-min=29.5km az=133.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.67	176	LR	LR	05 34 55.3	
	comp=Z,94nm,19.3s,baz=0.0,slow=32						
H11S2	WAKE ISLAND Hy	28.71	2	T	T	06 04 48.3	
	baz=181,slow=76,SNR=53						
H11S3	WAKE ISLAND Hy	28.71	2	T	T	06 04 49.3	
	baz=181,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	28.73	2	T	T	06 04 52.3	
	baz=181,slow=76,SNR=49						
H11N1	WAKE ISLAND Hy	29.93	3	T	T	06 06 22.1	
	baz=182,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	29.94	3	T	T	06 06 22.9	
	baz=182,slow=76,SNR=6.6						
H11N2	WAKE ISLAND Hy	29.95	3	T	T	06 06 23.9	
	baz=182,slow=76,SNR=7.0						
WRA	Warramunga Arr	31.46	249	P	P	05 34 59.6	-0.1
	1.7nm,1.0s,baz=79,slow=9.1,SNR=6.6						
ASAR	Alice Springs	32.85	242	P	P	05 35 12.3	+0.4
	1.1nm,0.9s,baz=74,slow=9.0,SNR=8.0						
SONM	Songino Array	77.97	324	P	P	05 40 36.6	+0.2
	0.3nm,0.6s,baz=134,slow=6.2,SNR=2.8						
ILAR	Eielson Array	82.97	19	P	P	05 41 03.2	+0.4
	0.6nm,0.9s,baz=229,slow=5.5,SNR=3.5						
MKAR	Makanchi Array	92.85	317	P	P	05 41 49.5	-1.3
	0.4nm,0.7s,baz=83,slow=8.0,SNR=4.3						

UCR 03 05:28:40.9±1.6**, 9°.49N×83°.60W, h15^{km}**±6^{km}**, MD3.8, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDDO	Dominical	0.35	228	eP	Pg	05 28 48.5	+0.3
DRK0	Durika	0.42	123	eS	Sb	05 28 56.0	-0.4
EDBA	Buenos Aires	0.46	135	eP	Pg	05 28 49.6	-0.4
LCR2	La Lucha 2	0.47	302	eP	Pg	05 28 50.0	-0.3
LCR2				eS	Sg	05 28 57.2	+0.5
EDPN	Palmar Norte	0.54	165	eP	Pg	05 28 51.6	0.0
CVTR	Volcan Turrial	0.55	343	eP	Pb	05 28 52.3	-0.2
CVTR				eS	Sb	05 29 00.1	-0.3
SJS	Escuela Geolog	0.63	315	eP	Pg	05 28 53.3	0.0
HDC	Heredia	0.72	315	eP	Pg	05 28 54.4	-0.6
HDC				eS	Sb	05 29 05.2	+0.2
SRA1	San Ramn	1.05	304	eP	Pb	05 28 59.5	-1.4
BRU2	Volcan	1.13	128	eP	Pb	05 29 01.4	-1.0
FORC	Fortuna	1.43	313	i P	Pn	05 29 06.1	-0.3
FORC				i S	Sb	05 29 25.6	+0.2
ARE1	Arenal 1	1.46	311	eP	Pn	05 29 06.5	-0.4
CEDE	Laguna Cedeo	1.47	312	eP	Pn	05 29 07.2	+0.2
DVD	David	1.55	133	i P	Pn	05 29 07.3	-0.6
DVD				i S	Sn	05 29 27.1	-0.6
JTS	JuntasAbangare	1.55	301	eP	Pn	05 29 06.7	-1.4
PTEN	Parque Tenorio	1.83	312	i P	Pn	05 29 12.1	+0.1
PLVR	Palo Verde	1.92	296	eP	Pn	05 29 13.7	+0.4
GBS3	Finca Las Img	2.23	305	i P	Pn	05 29 18.5	+1.1

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*ISCJB **03** 05:43:27.3±0.3, 24°.45N±0°.01×122°.01E±0°.01, h7^{km}±2^{km}, Error ellipse: s-maj=2.3km s-min=2.0km az=135.3*
*JMA **03** 05:43:27.3±0.1, 24°.42N×121°.97E, h13^{km}, M3.3*
*TAP **03** 05:43:27.6, 24°.45N×121°.96E, h13^{km}, ML3.6, B*
ISC 03 05:43:27.1±0.8**, 24°.43N**±0°.02×**122°.00E**±0°.02**, h13^{km}**±6^{km}**, n114, σ0^{s}.70**/166**, 10C-20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.17	46	⇑P	Pg	05 43 32.0	+1.0
	baz=50						
EOS1				S	Sb	05 43 35.7	+0.3
	baz=50						
TWC	Suao	0.22	323	⇑iP	Pg	05 43 32.0	0.0
	baz=336						
TWC				S	Sg	05 43 34.4	-0.9
	baz=336						
NANB	Nanao	0.22	269	⇓P	Pg	05 43 32.1	+0.1
	baz=270						
NANB				S	Sg	05 43 35.0	-0.3
	baz=270						
ENA	Nanau	0.23	270	⇓iP	Pg	05 43 32.2	0.0
	baz=269						
ENA				S	Sg	05 43 34.9	-0.6
	baz=269						
ILA	Ilan	0.40	326	eP	Pg	05 43 35.1	-0.1
	baz=328						
ILA				S	Sg	05 43 41.0	+0.4
	baz=328						
TWE	Neicheng	0.42	314	P	Pg	05 43 35.7	+0.3
	baz=319						
TWE				eS	Sg	05 43 39.7	-1.3
	baz=319						
EGS		0.42	352	⇑iP	Pg	05 43 35.9	+0.4
	baz=349						
EGS				eS	Sg	05 43 41.5	+0.4
	baz=349						
ENTT	Nioudou	0.44	298	⇓iP	Pg	05 43 36.1	+0.2
	baz=297						
ENTT				S	Sg	05 43 41.6	-0.3
	baz=297						
NACB	Ninganchiao	0.45	235	⇓P	Pg	05 43 36.2	+0.2
	baz=231						
NACB				eS	Sg	05 43 41.9	0.0
	baz=231						
NTC	Toucheng	0.45	340	eP	Pg	05 43 36.2	+0.2
	baz=342						
NTC				eS	Sg	05 43 42.6	+0.6
	baz=342						
NDT	Datong Townshi	0.47	291	⇓iP	Pb	05 43 36.8	-0.5
	baz=290						
NDT				S	Sg	05 43 42.3	-0.5
	baz=290						
TWD	Chiawan	0.50	226	⇑iP	Pg	05 43 37.2	+0.2
	baz=228						
TWD				eS	Sg	05 43 43.9	+0.2
	baz=228						
NNSB	Datong	0.56	270	⇓P	Pg	05 43 38.2	+0.1
	baz=268						
NNSB				S	Sg	05 43 45.4	-0.1
	baz=268						
TIPB	Shuangxi	0.56	344	⇑P	Pg	05 43 38.4	+0.3
	baz=352						
TIPB				S	Sg	05 43 45.9	+0.2
	baz=352						
NWLT	Wulai	0.57	308	eP	Pb	05 43 38.8	-0.1
	baz=299						
NWLT				eS	Sg	05 43 45.8	0.0
	baz=299						
NNS	Nan Shan	0.57	271	⇓P	Pg	05 43 38.3	0.0
	baz=269						
NNS				S	Sg	05 43 45.6	-0.2
	baz=269						
HWA	Hwalien	0.57	218	eP	Pb	05 43 39.9	+0.9
	baz=222						
TWB1	Santiao Chiao	0.58	359	⇑P	Pg	05 43 38.6	+0.1
	baz=354						
TWB1				eS	Sg	05 43 45.9	-0.2
	baz=354						
YHNB	Yeheng	0.61	293	⇓P	Pb	05 43 39.5	-0.2
	baz=297						
YHNB				S	Sg	05 43 46.4	-0.8
	baz=297						
NSK	Sanguang	0.63	293	⇓iP	Pb	05 43 39.7	-0.3
	baz=297						
NSK				S	Sg	05 43 47.1	-0.7
	baz=297						
ENLB	Shoufeng	0.64	214	eP	Pn	05 43 42.0	+0.2
	baz=225						
TWA	Mucha	0.66	326	⇑P	Pb	05 43 40.6	0.0
	baz=326						
TWA				S	Sg	05 43 48.5	-0.4
	baz=326						
NWF	Wu-fen Shan	0.67	343	⇑eP	Pb	05 43 40.7	0.0
	baz=333						
NWF				S	Sb	05 43 49.7	-0.2
	baz=333						
WFSB	Wu-fen Shan	0.67	343	⇑eP	Pb	05 43 40.7	+0.1
	baz=333						
WFSB				S	Sb	05 43 49.4	-0.4
	baz=333						
NHDH	Xindian Distri	0.68	321	eP	Pb	05 43 41.3	+0.4
	baz=310						
NHDH				eS	Sb	05 43 49.5	-0.7
	baz=310						
TATO	Taipei	0.71	320	eP	Pb	05 43 41.9	+0.5
	baz=309						
TATO				S	Sg	05 43 50.0	-0.3
	baz=309						
WHF	Hehuan Shan	0.72	247	⇓iP	Pg	05 43 41.4	+0.1
	baz=255						
WHF				S	Sg	05 43 50.8	0.0
	baz=255						
TWT	Tachien	0.77	257	⇓P	Pb	05 43 42.3	-0.2
	baz=255						
TWT				eS	Sb	05 43 52.9	+0.1
	baz=255						
TDCB	Techi	0.78	257	P	Pb	05 43 42.6	-0.1
	baz=255						
TDCB				eS	Sg	05 43 52.1	-0.6
	baz=255						
WLTB	Daxi	0.80	302	⇓eP	Pn	05 43 43.9	-0.2
	baz=301						
WLTB				eS	Sb	05 43 53.9	+0.4
	baz=301						
ESL	Shilin	0.80	220	eP	Pg	05 43 42.6	0.0
	baz=223						
ESL				eS	Sb	05 43 53.8	+0.2
	baz=223						
YM01	YM01	0.81	332	eP	Pn	05 43 43.8	-0.5
	baz=331						
YM01				S	Sg	05 43 53.5	-0.1
	baz=331						
YM11	YM11	0.83	333	⇑eP	Pb	05 43 43.9	+0.5
	baz=333						
YM05	YM05	0.83	332	eP	Pn	05 43 44.1	-0.5
	baz=331						
YM05				eS	Sg	05 43 53.5	-0.6
	baz=331						
YM04	YM04	0.83	330	eP	Pb	05 43 43.9	+0.4
	baz=330						
CHGB	Renai	0.83	244	⇓P	Pg	05 43 43.4	0.0
	baz=251						
CHGB				S	Sb	05 43 54.5	-0.3
	baz=251						
YM08	YM08	0.84	334	eP	Pb	05 43 44.0	+0.4
	baz=334						
TWS1	Kuangyinshan	0.85	322	eP	Pn	05 43 44.8	0.0
	baz=314						
TWS1				eS	Sb	05 43 55.6	+0.5
	baz=314						
JYNG	Yonagunijimaku	0.87	88	P	Pg	05 43 44.2	+0.3
JYNG				S	Sg	05 43 55.7	+0.5
NTST	Danshui	0.88	326	eP	Pn	05 43 45.5	+0.2
	baz=326						
OWD	Renai	0.89	238	eP	Pg	05 43 44.3	0.0
	baz=236						
OWD				eS	Sg	05 43 55.4	-0.5
	baz=236						
NCU	National Centr	0.91	306	eP	Pn	05 43 45.9	+0.3
	baz=296						
NCUH	Zhongli	0.91	306	eP	Pn	05 43 45.6	0.0
	baz=295						
TWY	Chenhua	0.92	337	S	Sg	05 43 56.6	-0.3
	baz=337						
LIOB	Emei	0.92	284	⇓eP	Pn	05 43 45.5	-0.2
	baz=283						
LIOB				eS	Sb	05 43 57.1	0.0
	baz=283						
EGFH	Guangfu	0.92	215	eP	Pg	05 43 44.4	-0.5
	baz=230						
NSTT	Nanjuang	0.93	283	⇓eP	Pn	05 43 45.6	-0.2
	baz=281						
NSTT				eS	Sb	05 43 56.9	-0.4
	baz=281						
YOJ	Yonaguni jima	0.93	88	P	Pb	05 43 45.1	+0.1
	baz=89						
YOJ	Yonaguni jima	0.93	88	P	Pb	05 43 45.1	+0.1
YOJ				eS	Sg	05 43 57.9	+0.7
WHP	Taichung City	0.97	261	⇓eP	Pn	05 43 46.5	0.0
	baz=260						
WHP				S	Sb	05 43 58.9	+0.3
	baz=260						
SBCB	Hsinchu	0.99	292	⇓eP	Pn	05 43 47.9	+1.2
	baz=284						
HSN	Hsinchu	1.00	292	eP	Pn	05 43 46.8	-0.1
	baz=288						
HSN				eS	Sn	05 44 00.8	-0.1
	baz=288						
VWDT	VWDT	1.03	229	⇓eP	Pg	05 43 47.0	0.0
	baz=232						
VWDT				eS	Sn	05 44 01.1	-0.5
	baz=232						
HGSD	Ruisui	1.07	209	eP	Pn	05 43 48.5	+0.7
	baz=226						
NMLH	Miaoli	1.10	276	eP	Pn	05 43 49.4	+1.1
	baz=275						
EHY	Hungye	1.11	214	eP	Pb	05 43 48.1	0.0
	baz=213						
TWQ1	Liyutan	1.12	266	eP	Pg	05 43 49.3	+0.6
	baz=265						
NSY	Sanyi	1.12	270	⇓eP	Pg	05 43 49.8	+1.0
	baz=268						
SMLT	Sun Moon Lake	1.14	242	eP	Pg	05 43 49.2	+0.1
	baz=247						
SMLT				eS	Sb	05 44 02.7	-0.8
	baz=247						
SSLB	Suanglung	1.15	236	⇓P	Pg	05 43 49.2	-0.1
	baz=242						
SSLB				eS	Sb	05 44 03.5	-0.2
	baz=242						
TYC	Yuchr	1.16	243	eP	Pg	05 43 49.5	-0.1
	baz=249						
TYC				eS	Sn	05 44 04.8	0.0
	baz=249						
PTSB	Yuanli	1.18	271	eP	Pg	05 43 51.4	+1.6
	baz=282						
PCYT	Pengchaiyu	1.20	3	eP	Pn	05 43 49.2	-0.3
	baz=4.0						
YULB	Yu-li	1.21	212	eP	Pb	05 43 50.1	+0.1
	baz=212						
TCU	Taichung	1.24	257	eP	Pg	05 43 52.9	+2.0
	baz=256						
WDJ	Dajia District	1.24	266	eP	Pg	05 43 52.5	+1.5
	baz=265						
TWF1	Yuli	1.25	211	eP	Pn	05 43 50.1	-0.2
	baz=226						
WHYT	Xinyi Township	1.27	235	eP	Pg	05 43 51.5	-0.1
	baz=235						
WJS	Zhushan	1.31	243	eP	Pg	05 43 53.4	+1.1
	baz=243						
WNT	Mingjian	1.32	246	eP	Pg	05 43 54.0	+1.6
	baz=245						
WCHH	Zhanghua	1.36	255	eP	Pg	05 43 54.0	+0.8
	baz=255						
CHN5	Tsauling	1.46	236	eP	Pg	05 43 56.0	+0.8
	baz=238						
CHN5				eS	Sg	05 44 16.3	+2.0
	baz=238						
WGK	Gukeng	1.50	241	eP	Pg	05 43 57.9	+1.8
	baz=241						
WDLH	Douliu	1.52	241	eP	Pg	05 43 56.9	+0.5
	baz=242						
ELDTW	Lidau	1.53	216	eP	Pb	05 43 55.8	+0.4
	baz=204						
IRIF	Iriomote-Funau	1.58	93	P	Pn	05 43 54.5	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
IRIF				eS	Sn	05 44 14.2	-1.0
RLNB	Erlin	1.59	251	eP	Pg	05 43 58.1	+0.5
	baz=262						
CHN2	Minshiung	1.65	238	eP	Pg	05 43 59.1	+0.3
	baz=224						
CHN4	Tsaushan	1.67	230	eP	Pg	05 43 59.2	0.0
	baz=233						
CHN4				eS	Sg	05 44 22.6	+1.6
	baz=233						
TPUB	Ta-pu	1.68	228	eP	Pb	05 43 58.5	+0.6
	baz=229						
HATJ	Hateruma jima	1.69	102	P	Pn	05 43 57.6	+1.2
STYT	Tauyuan	1.70	222	eP	Pb	05 43 58.8	+0.5
	baz=223						
CHY	Chiayi	1.71	237	eP	Pg	05 44 00.1	+0.1
	baz=224						
WTP	Ta-pu	1.73	227	eP	Pg	05 43 59.7	-0.6
	baz=229						
TWK	Hsinying	1.80	230	eP	Pg	05 44 01.3	-0.4
	baz=232						
TWGBT	Beinan	1.81	208	eP	Pn	05 43 56.8	-1.2
	baz=192						
TWG	Pinlang	1.81	208	eP	Pn	05 43 58.2	+0.1
	baz=192						
SNST	Tainan City	1.82	229	eP	Pg	05 44 01.5	-0.6
	baz=231						
CHN1	Nanshi	1.83	228	eP	Pg	05 44 01.8	-0.4
	baz=231						
CHN1				eS	Sg	05 44 27.1	+1.1
	baz=231						
JKRS	Kuro-shima	1.85	96	P	Pn	05 43 58.7	+0.2
JKRS				eS	Sn	05 44 21.9	+0.2
SGST	Jiashian	1.86	224	eP	Pb	05 44 01.9	+0.8
	baz=226						
SLGT	Liugui	1.89	221	eP	Pb	05 44 02.2	+0.7
	baz=223						
JIJ	Ishigaki jima	1.96	92	P	Pn	05 43 59.7	-0.3
JIJ				eS	Sn	05 44 22.8	-1.7
SSD	Sandimen	2.09	217	eP	Pb	05 44 05.8	+0.9
	baz=219						
JISG	Ishigakijimahi	2.12	85	P	Pn	05 44 01.8	-0.4
JISG				S	Sn	05 44 27.4	-0.9
MASBT	Mashibuluo	2.20	215	eP	Pb	05 44 06.6	-0.2
	baz=221						
MASBT				eS	Sg	05 44 36.1	-1.7
	baz=221						
PTTC	Pingtan	2.28	298	eP	Pn	05 44 05.5	+1.0
	baz=297						
EAST	Anshuo	2.29	208	eP	Pn	05 44 05.2	+0.5
	baz=194						
VWUC	VWUC	2.38	284	eP	Pn	05 44 06.0	+0.2
	baz=283						
PNG	Penghu	2.39	249	eP	Pn	05 44 06.3	+0.4
	baz=251						
PHUB	P'eng-hu	2.40	248	eP	Pn	05 44 07.7	+1.6
	baz=250						
SCZT	Fangliau	2.41	212	eP	Pb	05 44 09.7	-0.6
	baz=215						
LAY	Lan-yu	2.42	190	eP	Pn	05 44 05.0	-1.4
	baz=187						
WDGT	Dungji	2.44	242	eP	Pb	05 44 09.2	-1.6
	baz=244						
JTJ	Tarama	2.47	85	P	Pn	05 44 07.5	+0.4
MATB	Ma-tsu	2.53	313	eP	Pn	05 44 08.2	+0.4
	baz=311						
VCHM	Qimei	2.65	243	eP	Pb	05 44 12.7	-1.7
	baz=246						
PTMZ	Houxiangcun	2.68	284	eP	Pn	05 44 10.9	+0.9
	baz=282						
JIRB	Irabujima	2.92	82	P	Pn	05 44 13.9	+0.7
LYJJ	Jianjiangzhen	2.92	317	eP	Pn	05 44 13.2	-0.1
	baz=315						
XPSS	Dashiqiu	2.98	327	eP	Pn	05 44 13.2	-0.8
	baz=325						
MHZQ	Yeshan	3.16	302	eP	Pn	05 44 17.6	+1.1
	baz=300						
KNMB	Chin-men Tao	3.29	271	eP	Pn	05 44 19.5	+1.2
	baz=270						
AXDP	Jialang	3.69	278	eP	Pn	05 44 25.5	+1.6
	baz=276						

KRNET 03 05:49:55.1±0.1**,39°.28N**×**71°.96E,h6^{km},mb2.2,10C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.24	329	⇑iP	Pg	05 50 00.0	+0.1
	baz=30						
DRK				⇑iS	Sg	05 50 03.2	+0.1
	baz=30						
BTK	Batken	1.18	312	⇑iP	Pg	05 50 17.6	-0.1
	baz=12						
BTK				⇑iS	Sn	05 50 34.2	-0.4
	baz=12						
SFK	Sufi-Kurgan	1.40	58	⇓iP	Pb	05 50 21.7	-0.2
	baz=58						
SFK				⇓iS	Sn	05 50 41.5	+1.1
	baz=58						
ARSB	Arslanbob	2.19	21	⇑iP	Pb	05 50 34.8	-0.5
	baz=21						
ARSB				⇑iS	Sb	05 51 03.9	+1.2
	baz=21						
ARK	Arkit	2.52	0	⇑iP	Pb	05 50 39.5	-1.3
	baz=0.0						
ARK				⇑iS	Sb	05 51 11.2	-0.9
	baz=0.0						
AML	Almayashu	3.14	24	⇓eP	Pn	05 50 48.5	+3.0
	baz=24						
AML				⇓iS	Sb	05 51 27.0	-3.3
	baz=24						
ARLS	Aral	3.15	34	⇑eP	Pn	05 50 48.5	+3.1
	baz=34						
ARLS				⇑iS	Sb	05 51 27.2	-3.1
	baz=34						
MNAS	Manas	3.23	7	⇓eP	Pn	05 50 49.7	+3.1
	baz=7.0						
MNAS				⇓eS	Sn	05 51 29.1	+3.6
	baz=7.0						

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*IDC **03** 05:50:44.9±8.1, 37°.38N×84°.95E, h0^{km}, mb1 3.3/3, mb1mx3.1/36, mbtmp3.3/3, ML3.0/3, Error ellipse: s-maj=111.7km s-min=39.9km az=50.0*

*NNC **03** 05:50:45.7±4.3, 37°.62N×85°.12E, h2^{km}±24^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=31.4km s-min=28.7km az=69.0*

ISC 03 05:50:46.8±2.7**,37°.5N**±0°.2×**85°.0E**±0°.1**,h10^{km},n7, σ1ˢ22**/11**,5C-6D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.17	326	⇓Pn	Pn	05 52 30.5	-1.2
	2.3nm,0.5s						
PDGK				⇓Sn	Sn	05 53 52.5	-0.7
	11nm,0.8s						
PDGK				⇑Lg	Lg	05 54 30.2	
	20nm,0.7s						
TKM2	Tokmak 2	8.99	310	⇓Pn	Pn	05 52 57.7	+0.9
	2.0nm,0.9s						
TKM2				⇑Lg	Lg	05 55 33.3	
	6.4nm,0.8s						
MK31	Makanchi Array	9.48	349	⇓Pn	Pn	05 53 02.1	-1.3
	0.4nm,0.5s,baz=165,slow=14,SNR=14						
MK31				⇑Sn	Sn	05 54 49.8	-0.1
	1.4nm,0.7s						
MK31				⇓Lg	Lg	05 55 48.0	
	2.1nm,0.7s,baz=164,slow=26,SNR=3.5						
MKAR	Makanchi Array	9.48	349	Pn	Pn	05 53 04.0	+0.6
	0.2nm,0.3s,baz=164,slow=14,SNR=14						
MKAR				Sn	Sn	05 54 50.5	+0.5
	0.1nm,0.3s,baz=155,slow=21,SNR=2.5						
MKAR				Lg	Lg	05 55 51.0	
	0.3nm,0.3s,baz=166,slow=30,SNR=2.5						
MAKZ	Makanchi	9.55	347	⇑Pn	Pn	05 53 03.2	-1.0
	1.9nm,0.9s						
MAKZ				⇑Sn	Sn	05 54 53.9	+2.3
	2.1nm,0.9s						
MAKZ				⇓Lg	Lg	05 55 44.7	
	2.9nm,1.1s						
ZALV	Zalesovo Beam	16.43	360	Pn	P	05 54 39.5	-0.5
	0.2nm,0.3s,baz=182,slow=11,SNR=7.5						
SONM	Songino Array	18.74	50	P	Pn	05 55 06.7	+0.6
	0.0nm,0.3s,baz=261,slow=9.5,SNR=4.7						

NNC 03 05:50:54.6±3.1**,39°.29N**×**71°.95E,h0^{km},mb2.7,mpv2.5, 3C-3D,Error ellipse: s-maj=29.0km s-min=13.0km az=177.0,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.40	58	⇑P	Pg	05 51 20.4	-1.0
	1.1nm,0.5s						
SFK				⇓S	Sb	05 51 40.2	-0.1
	2.7nm,0.3s						
MNAS	Manas	3.22	7	⇓Pn	Pn	05 51 48.1	+1.5
	0.7nm,0.5s						
MNAS				⇓Lg	Lg	05 52 35.0	
	0.7nm,0.5s						
KK31	Karatay Array	3.96	345	⇑Pg	Pb	05 52 07.2	+1.9
	2.2nm,0.8s,baz=164,slow=11,SNR=4.8						
KK31				⇑Lg	Lg	05 52 59.0	
	0.4nm,0.3s,baz=166,slow=27,SNR=4.0						

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*SJA **03** 06:18:01.0±0.7, 32°.28S×70°.54W, h11^{km}±5^{km}, ML2.5, MW3.2*

*GUC **03** 06:18:03.0±0.3, 32°.40S×70°.53W, h29^{km}±6^{km}, ML2.5*

ISC 03 06:18:01.9±1.2**,32°.34S**±0°.03×**70°.54W**±0°.04**,h19^{km}**±3^{km}**, n13,σ0ˢ47**/25**,2C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.75	212	⇑iP	Pg	06 18 16.8	+0.1
ROCH				i S	Sg	06 18 27.2	+0.5
ROCH				IAML		06 18 30.1	
	comp=E,227nm,0.6s						
ROC1	El Roble	0.76	212	i P	Pg	06 18 16.9	+0.1
ROC1				i S	Sn	06 18 28.4	-0.6
PEL	Peldehue	0.81	189	eP	Pn	06 18 18.3	-0.2
PEL				i S	Sg	06 18 29.0	+0.3
PEL				IAML		06 18 36.0	
	comp=E,96nm,0.6s						
AUSP	Uspallata	0.98	84	i P	Pb	06 18 20.1	-0.4
AUSP				i S	Sn	06 18 34.5	0.0
FCH	Farellones	1.01	168	eP	Pb	06 18 20.6	-0.4
FCH				i S	Sb	06 18 34.3	+0.2
FCH				IAML		06 18 35.1	
	comp=E,561nm,0.2s						
CLCH	Cerro Calan	1.05	180	eP	Pg	06 18 23.4	+0.9
CLCH				i S	Sg	06 18 36.2	-0.1
CLCH				IAML		06 18 48.1	
	comp=E,123nm,0.6s						
RTLS	Leoncito	1.18	63	i P	Pn	06 18 23.7	-0.1
RTLS				IAML		06 18 39.7	
	comp=Z,65nm,0.3s						
RTLS				i S	Sg	06 18 40.3	-0.1
CMCH	Combarbala	1.23	341	⇓iP	Pn	06 18 24.2	0.0
CMCH				eS	Sn	06 18 40.2	-0.1
CMCH				IAML		06 18 41.2	
	comp=N,781nm,0.4s						
ARCO	CERRO ARCO	1.44	111	i P	Pb	06 18 28.7	+0.3
ARCO				IAML		06 18 51.6	
	comp=Z,115nm,0.7s						
ASAL	Salagasta	1.46	100	i P	Pb	06 18 28.7	+0.2
ASAL				i S	Sg	06 18 49.0	-0.2
LMEL	Las Melosas	1.53	170	⇑iP	Pg	06 18 31.5	0.0
LMEL				i S	Sg	06 18 50.9	-0.6
LMEL				IAML		06 18 59.7	
	comp=N,148nm,0.2s						
AAGR	Agrelo	1.62	118	i P	Pg	06 18 32.7	-0.5
AAGR				i S	Sg	06 18 55.2	+0.9
GO04	Tololo Observa	2.17	354	eP	Pb	06 18 40.2	-0.6
GO04				i S	Sb	06 19 08.4	+1.0

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*ISCJB **03** 06:20:46.7±0.4, 0°.61N±0°.05×67°.29E±0°.07, h10^{km}, mb4.3/21, MS3.6/18, Error ellipse: s-maj=10.3km s-min=7.6km az=169.6*

*IDC **03** 06:20:47.5±0.9, 0°.63N×67°.19E, h0^{km}, mb3.9/10, mb1 4.1/10, mb1mx3.8/52, mbtmp3.9/10, ML5.2/1, MS3.7/19, Ms1 3.7/19, ms1mx3.5/39, Error ellipse: s-maj=25.8km s-min=19.5km az=146.0*

*NEIC **03** 06:20:49.0±0.4, 0°.67N×67°.22E, h10^{km}, mb4.6/8, Error ellipse: s-maj=10.1km s-min=7.0km az=155.0*

ISC 03 06:20:49.1±0.6**,0°.65N**±0°.08×**67°.34E**±0°.09**,h10^{km},n56, σ1ˢ27**/39**,mb4.3**/21**,MS3.7**/18**,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	7.84	152	Pn	Pn	06 22 42.9	0.0
	baz=319,slow=13,SNR=4.3						
H08N2				T	T	06 30 36.0	
	baz=330,slow=76,SNR=2077						
H08N3	Diego Garcia H	7.85	152	Pn	Pn	06 22 43.6	+0.5
	baz=319,slow=13,SNR=4.8						
H08N3				T	T	06 30 37.1	
	baz=330,slow=76,SNR=1727						
H08N1	Diego Carcia H	7.86	152	Pn	Pn	06 22 42.4	-0.9
	baz=319,slow=13,SNR=4.4						
H08N1				T	T	06 30 37.7	
	baz=330,slow=76,SNR=1400						
HMDM	Hanimaadhoo	8.43	44	ePn	Pn	06 22 51.2	-0.1
HMDM				eSn	Sn	06 24 23.3	-3.4
MNCI	Minicoy	9.49	37	ePn	Pn	06 23 07.0	+1.1
PALK	Pallekele	14.86	63	ePn	Pn	06 24 19.8	+0.2
	48nm,0.5s						
PALK	Pallekele	14.86	63	Pn	Pn	06 24 19.3	-0.3
	11nm,0.3s,baz=296,slow=9.6,SNR=36						
PALK				LR	LR	06 28 53.3	
	comp=Z,587nm,20.5s,baz=295,slow=32						
WSAR	Wadi Sarin	23.99	340	LR	LR	06 33 45.8	
	comp=Z,184nm,19.3s,baz=185,slow=32						
UOSS	Minazif	26.44	337	eP	P	06 26 25.4	-1.0
	50nm,1.5s						
ATD	Arta Tunnel	26.61	295	LR	LR	06 35 13.2	
	comp=Z,88nm,19.4s,baz=133,slow=33						
OPO	Ambohidratompo	27.51	225	LR	LR	06 34 21.5	
	comp=Z,188nm,19.7s,baz=28,slow=30						
KMBO	Kilima Mbogo	30.13	267	LR	LR	06 37 57.9	
	comp=Z,167nm,18.6s,baz=93,slow=34						
CM31	Chiang Mai Arr	35.72	58	eP	P	06 27 49.6	+1.4
	6.5nm,0.4s						
CMAR	Chiang Mai Arr	35.72	58	P	P	06 27 49.6	+1.4
	0.6nm,0.3s,baz=243,slow=9.9,SNR=6.3						
CMAR				LR	LR	06 42 22.0	
	comp=Z,102nm,18.1s,baz=221,slow=36						
CHTO	Chiang Mai	35.88	58	eP	P	06 27 50.4	+0.8
	19nm,1.5s						
GEYT	Alibeck	38.06	348	LR	LR	06 43 01.5	
	comp=Z,144nm,21.0s,baz=115,slow=35						
GAR	Garm	38.26	4	eP	P	06 28 10.1	+0.3
	17nm,1.3s						
LSZ	Lusaka	41.80	246	eP	P	06 28 37.2	-2.3
	10nm,1.2s						
LSZ	Lusaka	41.80	246	P	P	06 28 37.0	-2.5
	4.7nm,0.9s,baz=72,slow=5.7,SNR=4.8						
MATP	Matopo	43.40	239	P	P	06 28 51.3	-1.2
	2.4nm,0.8s,baz=27,slow=2.3,SNR=3.4						
MAKZ	Makanchi	47.72	14	eP	P	06 29 26.1	0.0
	7.4nm,1.4s						
MK01	Makanchi Array	47.76	14	eP	P	06 29 26.6	+0.1
MK31	Makanchi Array	47.78	14	eP	P	06 29 26.6	0.0
	2.5nm,1.1s						
MK32	Makanchi Array	47.78	14	eP	P	06 29 26.9	+0.2
MKAR	Makanchi Array	47.78	14	eP	P	06 29 26.7	+0.1
	6.9nm,0.7s						
MKAR	Makanchi Array	47.78	14	P	P	06 29 26.9	+0.2
	0.8nm,1.0s,baz=190,slow=6.2,SNR=6.5						
GTA	Gaotai	48.65	34	eP	P	06 29 27.9	-5.7
GTA				pP	pP	06 29 32.3	-3.6
GTA				sP	sP	06 29 35.5	-1.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ABKAR	Akbulak array	48.83	354	eP	P	06 29 34.0	-0.7
	comp=Z,8.8nm,1.4s						
BR101	Keskin Array S	49.55	326	eP	P	06 29 40.3	-0.2
BRTR	Keskin Array B	49.55	326	P	P	06 29 40.3	-0.2
	comp=Z,0.9nm,0.9s,baz=147,slow=8.2,SNR=3.0						
BRTR				LR	LR	06 50 43.5	
	comp=Z,79nm,18.5s,baz=133,slow=36						
BOSA	Boshof	49.67	231	LR	LR	06 47 11.6	
	comp=Z,104nm,21.4s,baz=30,slow=32						
AKTO	Aktyubinsk	50.23	352	P	P	06 29 44.4	-1.0
	comp=Z,1.8nm,0.7s,baz=166,slow=9.6,SNR=5.6						
XAN	Xi'an	51.15	45	P	P	06 29 52.1	-0.5
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,98nm,3.8s						
BVAR	Borovoye Array	52.26	2	P	P	06 30 01.2	+0.7
	comp=Z,0.2nm,0.3s,baz=169,slow=8.2,SNR=2.6						
ZALV	Zalesovo Beam	55.05	13	eP	P	06 30 19.9	-1.0
ZALV	Zalesovo Beam	55.05	13	P	P	06 30 19.8	-1.2
	comp=Z,0.6nm,0.6s,baz=209,slow=10,SNR=3.9						
ZALV				LR	LR	06 53 11.9	
	comp=Z,54nm,18.8s,baz=241,slow=35						
ZAA1	Zalesovo Array	55.05	13	eP	P	06 30 19.8	-1.2
H01W3	Cape Leeuwin H	56.20	134	T	T	07 30 55.3	
	baz=299,slow=75,SNR=9.1						
H01W2	Cape Leeuwin H	56.20	134	T	T	07 30 58.0	
	baz=299,slow=75,SNR=8.8						
H01W1	Cape Leeuwin H	56.22	134	T	T	07 30 58.4	
	baz=299,slow=75,SNR=7.9						
BATI	Baumata	57.06	103	LR	LR	06 53 13.4	
	comp=Z,110nm,21.7s,baz=265,slow=34						
AKASG	Malin Array Be	59.40	333	LR	LR	06 58 52.7	
	comp=Z,24nm,19.1s,baz=30,slow=38						
FITZ	Fitzroy Crossi	60.25	111	LR	LR	06 50 48.5	
	comp=Z,47nm,21.4s,baz=281,slow=30						
TORD	Torodi Ar. Bea	66.15	284	LR	LR	07 01 16.5	
	comp=Z,45nm,18.8s,baz=320,slow=37						
KSRS	Korea Array	66.57	49	LR	LR	07 04 09.8	
	comp=Z,30nm,18.2s,baz=256,slow=39						
FIA0	FINESS Array S	68.22	340	eP	P	06 31 52.7	+3.0
FINES	FINESS Array B	68.22	340	P	P	06 31 52.7	+3.0
	comp=Z,0.9nm,0.8s,baz=177,slow=2.8,SNR=4.1						
WR1	Warramunga Arr	68.67	112	eP	P	06 31 54.3	+0.9
	comp=Z,9.5nm,1.0s						
WRA	Warramunga Arr	68.67	112	P	P	06 31 54.3	+0.9
	comp=Z,3.2nm,0.9s,baz=284,slow=6.4,SNR=2.5						
WRA				LR	LR	07 00 48.5	
	comp=Z,34nm,18.8s,baz=225,slow=35						
USRK	Ussuriysk Ar.	71.59	43	LR	LR	07 04 17.0	
	comp=Z,34nm,21.4s,baz=168,slow=36						
DBIC	Dimbokro	72.24	277	LR	LR	07 03 28.1	
	comp=Z,52nm,18.1s,baz=80,slow=36						
MJAR	Matsushiro Arr	74.30	52	LR	LR	07 08 11.7	
	comp=Z,39nm,18.2s,baz=270,slow=38						
ESDC	Sonseca Array	75.25	311	P	P	06 32 32.4	-0.2
	comp=Z,1.7nm,0.9s,baz=101,slow=6.7,SNR=3.7						
OXZ	Oxford	101.12	134	ePdif	Pdif	06 34 39.8	-0.1
LTX	Lajitas	148.97	345	ePKPbc	PKPbc	06 40 38.6	+0.4
TXAR	Lajitas Array	148.97	345	PKPbc	PKPbc	06 40 38.6	+0.4
	comp=Z,2.5nm,0.9s,baz=96,slow=3.8,SNR=6.3						

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*IDC **03** 06:20:48.4±1.9, 6°.58S×130°.24E, h117^{km}±18^{km}, mb4.0/16, mb1 4.2/20, mb1mx4.1/41, mbtmp4.5/20, MS2.7/2, Ms1 2.7/2, ms1mx2.4/33, Error ellipse: s-maj=21.8km s-min=10.0km az=89.0*

*ISCJB **03** 06:20:49.4±0.2, 6°.59S±0°.03×130°.27E±0°.03, h146^{km}, mb4.5/36, Error ellipse: s-maj=4.9km s-min=3.6km az=3.4*

*NEIC **03** 06:20:51.7±0.7, 6°.61S×130°.15E, h153^{km}±7^{km}, mb4.6/20, Error ellipse: s-maj=7.4km s-min=5.7km az=83.0*

*DJA **03** 06:20:52.5±0.2, 7°S±2°×13°0E±°, h140^{km}±4^{km}, M4.9/23, mB5.3/14, mb4.9/23, MLv5.4/12, Mw(mB)4.8/14*

ISC 03 06:20:51.2±0.4**,6°.58S**±0°.04×**130°.18E**±0°.05**,h146^{km},n97, σ1ˢ89**/105**,mb4.6**/39**,1C-1D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.78	142	ePn	Pn	06 21 26.8	+3.3
SAUI	Saumlaki	1.78	142	P	Pn	06 21 25.6	+2.1
SAUI				S	Sn	06 21 48.9	+0.6
BNDI	Bandanaira	2.06	352	P	Pn	06 21 29.5	+2.6
FAKI	Fak Fak	4.18	30	ePn	Pn	06 21 54.2	+0.4
FAKI				eSn	Sn	06 22 39.9	-2.5
FAKI	Fak Fak	4.18	30	P	Pn	06 21 54.1	+0.4
FAKI				S	Sn	06 22 41.3	-1.1
SIJI	Sorong	5.78	11	P	Pn	06 22 13.2	-1.8
	34nm,0.3s,baz=308,slow=22,SNR=79						
SIJI				S	Sn	06 23 15.8	-4.6
	66nm,0.3s,baz=97,slow=23,SNR=20						
SWI	Sorong	5.78	11	P	Pn	06 22 14.9	-0.1
SWI				S	Sn	06 23 16.8	-3.7
SANI	Sanana	6.14	317	P	Pn	06 22 20.3	+0.5
	210nm,0.7s,2µm0.7nm						
RKPI	Ransiki, Papua	6.42	39	P	Pn	06 22 25.9	+2.3
SOEI	Soe	6.65	241	ePn	Pn	06 22 27.5	+0.8
SOEI				eSn	Sn	06 23 40.0	-1.5
SOEI	Soe	6.65	241	P	Pn	06 22 27.8	+1.1
BATI	Baumata	7.39	240	P	Pn	06 22 38.0	+1.5
	128nm,0.5s,2µm0.9nm						
BATI	Baumata	7.39	240	P	Pn	06 22 37.3	+0.8
	102nm,0.3s,baz=78,slow=5.3,SNR=54						
BATI				S	Sn	06 23 54.5	-4.5
	59nm,0.3s,baz=124,slow=22,SNR=10						
BBSI	Bau Bau	7.65	278	P	Pn	06 22 48.3	+8.4
EDFI	Ende, Flores	8.69	255	P	Pn	06 22 55.1	+1.2
	58nm,1.0s,876nm0.2nm						
BKSI	Bulukumba	10.08	277	P	Pn	06 23 14.1	+1.7
	15nm,1.0s						
BASI	Baing, Sumba	10.16	249	P	Pn	06 23 15.0	+1.5
APSI	Ampana	10.21	303	P	Pn	06 23 16.5	+2.4
	28nm,0.9s						
BNSI	Bone	10.26	282	P	Pn	06 23 28.4	+14
SPSI	Sidrap Palu	10.69	284	P	Pn	06 23 34.0	+14
MRSI	Marisa	10.81	310	P	Pn	06 23 24.3	+2.3
	71nm,0.8s						
FITZ	Fitzroy Crossi	12.27	201	ePn	Pn	06 23 38.5	-2.7
FITZ				S	Sn	06 25 46.1	-11
FITZ	Fitzroy Crossi	12.27	201	P	Pn	06 23 38.0	-3.2
	7.5nm,0.3s,baz=24,slow=9.9,SNR=183						
FITZ				S	Sn	06 25 46.1	-11
	13nm,0.3s,baz=266,slow=18,SNR=7.1						
FITZ				LR	LR	06 29 36.1	
	comp=Z,20nm,21.2s,baz=71,slow=43						
PLAI	Plampang	12.49	259	P	Pn	06 23 43.1	-1.0
	88nm,0.5s,2µm						
WRAB	Tennant Creek	13.88	163	ePn	Pn	06 23 59.7	-2.0
WRA	Warramunga Arr	13.88	163	P	Pn	06 23 58.6	-3.2
	7.2nm,0.3s,baz=350,slow=13,SNR=189						
WRA				S	Sn	06 26 24.2	-11
	9.6nm,0.3s,baz=348,slow=22,SNR=6.5						
WRA				LR	LR	06 29 35.4	
	comp=Z,45nm,18.4s,baz=345,slow=38						
WB2	Warramunga Arr	13.88	163	ePn	Pn	06 23 59.7	-2.2
COEN	Coen	14.73	121	ePn	Pn	06 24 12.8	+0.3
JAGI	Jajag, Banyuwa	16.00	262	ePn	Pn	06 24 27.2	-1.1
	35nm,0.6s						
AS31	Alice Springs	17.36	168	eP	Pn	06 24 44.5	-0.2
	12nm,0.6s						
ASAR	Alice Springs	17.36	168	P	Pn	06 24 44.4	-0.3
	4.7nm,0.3s,baz=332,slow=9.4,SNR=113						
ASAR				S	S	06 27 49.9	-7.4
	3.8nm,0.3s,baz=352,slow=26,SNR=5.2						
AS01	Alice Springs	17.37	168	eP	P	06 24 44.3	+0.4
MBWA	Marble Bar	17.67	214	eP	P	06 24 47.0	-0.3
	21nm,0.6s						
MANU	Manus Island	17.71	76	eP	P	06 24 46.5	-1.3
	77nm,1.4s						
PWJI	Pagerwojo	18.29	264	P	P	06 24 55.8	+1.8
	28nm,0.8s						
PCJI	Pacitan	18.92	264	P	P	06 25 03.1	+2.2
	80nm,1.1s						
WOJI	Wonogiri, Jawa	19.15	265	P	P	06 25 05.5	+2.1
	27nm,1.0s						
CTA	Charters Tower	20.58	132	P	P	06 25 20.6	+1.8
	7.0nm,0.6s,baz=303,slow=11,SNR=13						
CTA				S	S	06 29 04.0	+2.9
	1.7nm,0.6s,baz=72,slow=20,SNR=2.4						
CTAO	Charters Tower	20.58	132	eP	P	06 25 19.8	+1.0
	9.7nm,0.8s						
KPJI	Karang Pucung	21.11	267	P	P	06 25 26.6	+2.1
	20nm,0.7s,2µm						
GIRL	Giralia	22.17	222	eP	P	06 25 34.1	-1.4
	113nm,1.5s						
FORT	Forrest	24.15	184	eP	P	06 25 53.3	-0.5
	48nm,0.7s						
MORW	Morawa	26.05	209	eP	P	06 26 09.9	-1.1
	6.8nm,0.6s						
BBOO	Buckleboo	26.66	169	eP	P	06 26 17.3	+0.8
	15nm,0.6s						
STKA	Stephens Creek	27.33	158	eP	P	06 26 22.5	+0.1
	1.6nm,0.7s						
STKA	Stephens Creek	27.33	158	P	P	06 26 22.5	+0.1
	1.3nm,0.3s,baz=338,slow=10,SNR=6.3						
EIDS	Eidsvold	27.35	135	eP	P	06 26 23.0	+0.3
	29nm,1.5s						
ANA2	Anatahan	27.48	34	eP	P	06 26 20.3	-3.6
	625nm,0.2s						
NWAO	Narrogin (SRO)	28.85	203	eP	P	06 26 36.0	0.0
	13nm,0.8s						
NWAO	Narrogin (SRO)	28.85	203	P	P	06 26 36.2	+0.3
	1.6nm,0.3s,baz=42,slow=15,SNR=6.2						

MNSI	Mandailing Nat	31.41	282	P	P	06 26 54.8	-4.0
PSI	Prapat	32.57	286	P	P	06 27 08.5	-0.5
	4.1nm,0.5s,baz=179,slow=8.8,SNR=4.0						
CMAR	Chiang Mai Arr	39.61	309	P	P	06 28 10.2	+1.4
	2.0nm,0.7s,baz=124,slow=7.7,SNR=3.7						
NJ2	Nanjing	39.91	345	*e*P	P	06 28 09.4	-1.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI	Kunming	41.31	321	P	P	06 28 25.4	+2.5
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
MJAR	Matsushiro Arr	43.55	9	P	P	06 28 39.4	-1.2
	comp=Z,6.8nm,0.7s,baz=193,slow=10,SNR=17						
MAJO	Matsushiro	43.55	9	*e*P	P	06 28 39.8	-0.8
	comp=Z,18nm,1.0s						
MAT	Matsushiro	43.55	9	P	P	06 28 39.3	-1.3
MJB9	Matsu-Tunnel	43.55	9	*e*P	P	06 28 39.8	-0.8
	comp=Z,19nm,1.0s						
KSAR	Wonju Array Be	43.85	357	P	P	06 28 43.8	+0.9
KSRS	Korea Array	43.86	357	P	P	06 28 43.8	+0.8
	comp=Z,2.5nm,0.6s,baz=175,slow=9.3,SNR=16						
KS01	Wonju Array Si	43.88	357	*e*P	P	06 28 43.1	0.0
BJT	Baijiatuau	48.14	346	*e*P	P	06 29 16.8	+0.3
	comp=Z,14nm,0.6s						
BJI	Beijing	48.16	346	⇓*e*P	P	06 29 16.4	-0.2
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
LZH	Lanzhou	49.12	332	⇑P	P	06 29 26.7	+2.4
LZH				pP	pwP	06 30 01.2	0.0
LZH				sP	sP	06 30 18.0	+5.8
LZH				PP	PP	06 31 23.5	+4.0
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,6.5s						
HHC	Hu-ho-hao-te	50.21	342	*e*P	P	06 29 35.3	+3.0
HHC				S	S	06 36 35.5	+2.2
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
USRK	Ussuriysk Ar.	50.57	2	P	P	06 29 35.3	+0.5
	comp=Z,3.1nm,0.6s,baz=182,slow=6.8,SNR=10						
RAMN	Ramite	53.77	310	*e*P	P	06 29 59.1	0.0
	comp=Z,15nm,0.6s						
JIRN	Jiri	54.45	311	*e*P	P	06 30 04.0	-0.2
	comp=Z,6.5nm,0.3s						
GUN	Gumba	54.82	311	*e*P	P	06 30 06.6	-0.2
	comp=Z,8.3nm,0.4s						
PKIN	Phulchoki	55.01	310	*e*P	P	06 30 08.8	+0.7
DMN	Daman	55.24	310	*e*P	P	06 30 09.6	-0.2
KLR	Kul'dur	55.59	1	P	P	06 30 12.3	+0.8
	comp=Z,1.5nm,0.7s,baz=240,slow=5.0,SNR=5.1						
KOLN	Koldanda	56.48	309	*e*P	P	06 30 18.4	-0.1
PYUN	Piuthan	57.11	309	*e*P	P	06 30 22.9	0.0
ULN	Ulaanbaatar	57.93	342	*e*P	P	06 30 26.9	-1.3
	comp=Z,7.4nm,0.7s						
SONM	Songino Array	58.11	341	P	P	06 30 30.2	+0.8
	comp=Z,1.8nm,0.3s,baz=162,slow=6.4,SNR=18						
SONA1	Songino Array	58.11	341	*e*P	P	06 30 29.3	-0.2
WMQ	Urumqi	63.15	327	*e*P	P	06 31 04.8	+1.2
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.7s						
PETK	Petropavlovsk-	63.87	18	P	P	06 31 09.3	+1.2
	comp=Z,3.5nm,0.6s,baz=178,slow=5.2,SNR=13						
KSH	Kashi	67.83	317	P	P	06 31 35.8	+1.9
KSH				pP	pwP	06 32 16.1	+3.5
KSH				PP	PP	06 34 10.0	+4.5
MK01	Makanchi Array	67.96	327	*e*P	P	06 31 35.0	+0.6
MK31	Makanchi Array	67.98	327	*e*P	P	06 31 35.2	+0.7
MKAR	Makanchi Array	67.98	327	*e*P	P	06 31 35.1	+0.6
	comp=Z,78nm,0.4s						
MKAR	Makanchi Array	67.98	327	P	P	06 31 35.1	+0.6
	comp=Z,12nm,0.5s,baz=114,slow=8.3,SNR=237						
MAKZ	Makanchi	68.16	327	*e*P	P	06 31 35.7	+0.1
	comp=Z,7.7nm,0.6s						
AAK	Ala-Archa	70.34	320	*e*P	P	06 31 49.6	+0.3
	comp=Z,3.9nm,0.7s						
AAK	Ala-Archa	70.34	320	P	P	06 31 50.6	+1.2
	comp=Z,2.2nm,0.3s,baz=89,slow=12,SNR=9.7						
ZALV	Zalesovo Beam	71.29	334	P	P	06 31 54.0	-0.6
	comp=Z,2.2nm,0.5s,baz=136,slow=5.9,SNR=8.5						
KURK	Kurchatov	72.26	328	*e*P	P	06 31 58.6	-1.8
	comp=Z,3.6nm,0.8s						
VNDA	Vanda	72.84	173	P	P	06 32 04.1	+0.7
	comp=Z,1.2nm,0.8s,baz=344,slow=7.6,SNR=4.5						
TIXI	Tiksi	78.08	360	*e*P	P	06 32 30.6	-2.7
	comp=Z,4.4nm,0.5s						
AKTO	Aktyubinsk	83.86	322	P	P	06 33 04.4	0.0
	comp=Z,0.8nm,0.5s,baz=129,slow=6.5,SNR=3.4						
ILAR	Eielson Array	92.89	25	P	P	06 33 46.0	-1.2
	comp=Z,0.6nm,0.6s,baz=255,slow=4.5,SNR=11						
ARCES	ARCESS Array B	101.25	340	P	Pdif	06 34 24.5	-0.4
	comp=Z,2.1nm,0.9s,baz=68,slow=8.0,SNR=4.0						
TORD	Torodi Ar. Bea	128.91	282	PKP	PKPdf	06 39 41.5	-1.1
	comp=Z,0.4nm,0.8s,baz=108,slow=3.2,SNR=2.3						
CPUP	Villa Florida	146.48	168	PKPbc	PKPbc	06 40 16.1	+0.2
	comp=Z,1.0nm,0.5s,baz=247,slow=3.7,SNR=4.8						

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*JMA **03** 06:22:18.1±0.2, 36°.37N×142°.20E, h62^{km}, M2.9*
*IDC **03** 06:22:24.0±13.0, 36°.95N×141°.51E, h0^{km}, mb3.5/2, mb1 3.3/3, mb1mx3.2/43, mbtmp3.3/3, ML2.1/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/33, Error ellipse: s-maj=223.7km s-min=63.7km az=131.0*
ISC 03 06:22:19.6±1.8**, 36°.38N**±0°.07×**142°.1E**±0°.1**, h19^{km}, n14, σ1^{s}30**/15**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.20	236	P	Pn	06 22 40.3	-1.1
JHYU	Hitachinakayam	1.21	268	P	Pn	06 22 40.7	-0.8
JHO	Hitachi	1.24	281	P	Pn	06 22 40.8	-1.1
JFK	Kawauchi	1.38	316	P	Pn	06 22 42.7	-1.2
JMM	Marumori	1.80	325	P	Pn	06 22 48.3	-1.4
JMM				*e*S	Sn	06 23 10.3	-1.7
BSO1	Boso 1	1.95	208	P	Pn	06 22 49.7	-1.4
BSO3	Boso 3	2.03	220	P	Pn	06 22 51.7	-0.9
JAG	Ashikaga	2.12	272	P	Pn	06 22 53.9	-0.1
JRY	Ryogami san	2.60	263	P	Pn	06 23 00.0	-0.6
MJAR	Matsushiro Arr	3.13	274	Pn	Pn	06 23 08.1	+0.2
	0.3nm,0.3s,baz=83,slow=8.7,SNR=18						
MAT	Matsushiro	3.13	274	P	Pn	06 23 08.6	+0.7
MAT				*e*S	Sn	06 23 43.2	-1.6
KSRS	Korea Array	11.39	280	LR	LR	06 29 27.1	
	comp=Z,18nm,18.8s,baz=120,slow=39						
SONM	Songino Array	28.60	305	P	P	06 28 15.1	+0.5
	0.4nm,0.5s,baz=99,slow=9.0,SNR=3.3						
MKAR	Makanchi Array	44.92	303	P	P	06 30 35.2	+2.1
	0.3nm,0.5s,baz=87,slow=10,SNR=4.6						

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*IDC **03** 06:35:06.3±1.5, 53°.80N×163°.23W, h0^{km}, mb3.6/9, mb1 3.8/11, mb1mx3.5/68, mbtmp3.6/11, ML3.2/2, Error ellipse: s-maj=32.4km s-min=21.2km az=8.0*
*ISCJB **03** 06:35:08.7±0.9, 53°.53N±0°.07×163°.15W±0°.06, h37^{km}±8^{km}, mb3.6/8, Error ellipse: s-maj=11.4km s-min=5.7km az=165.6*
*NEIC **03** 06:35:08.8±0.0, 53°.57N×163°.20W, h57^{km}, ML3.3(AEIC), After AEIC.*
ISC 03 06:35:08.4±1.0**, 53°.6N**±0°.1×**163°.11W**±0°.05**, h21**^{km}±5^{km}**, n38, σ1^{s}36**/42**, mb3.7**/8**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.21	315	P	Pn	06 35 30.3	+0.1
FALS	False Pass	1.24	352	P	Pb	06 35 31.1	0.0
FALS				S	Sb	06 35 48.3	+1.6
WESP	Westdahl Peak	1.29	313	P	Pn	06 35 31.4	+0.2
WESP				S	Sb	06 35 49.2	+1.3
SSBA	Shishaldin	1.29	333	P	Pb	06 35 31.8	-0.2
SSBA				S	Sb	06 35 48.7	+0.6
SSLN	Shishaldin Nor	1.29	337	P	Pb	06 35 32.5	+0.5
DRIA	Deer Island	1.43	20	P	Pn	06 35 33.2	+0.1
DT1	Dutton Round H	1.56	18	P	Pn	06 35 35.3	+0.4
AKSA	Akutan Strait	1.61	289	P	Pn	06 35 35.2	-0.4
AKSA				S	Sn	06 35 55.8	0.0
AKUT	Akutan	1.66	289	P	Pn	06 35 35.9	-0.3
AKUT				S	Sb	06 35 57.1	-1.4
AHB	Akutan Harbor	1.68	288	P	Pn	06 35 36.2	-0.3
ZRO	Akutan Zero	1.76	286	P	Pn	06 35 37.3	-0.3
AKLV	Akutan Long Va	1.77	289	P	Pn	06 35 37.4	-0.4
AKLV				S	Sn	06 35 59.8	+0.1
AKMO	Akutan Morgan	1.78	286	P	Pn	06 35 37.6	-0.3
AKGG	Akutan Green G	1.80	290	P	Pn	06 35 38.0	-0.1
AKGG				S	Sn	06 35 59.9	-0.4
PS4A	Pavlof South-4	1.87	23	P	Pn	06 35 40.5	+1.4
UNV	Unalaska Valle	2.03	278	P	Pn	06 35 40.4	-0.9
UNV				S	Sn	06 36 04.7	-1.2
MTBL	Makushin Table	2.14	281	P	Pn	06 35 43.1	+0.1
MREP	Makushin Rep't	2.17	276	P	Pn	06 35 43.0	-0.3
MSW	Makushin Switc	2.20	279	P	Pn	06 35 43.1	-0.6
MSW				S	Sn	06 36 09.1	-1.2
MCIR	Makushin Cirqu	2.27	280	P	Pn	06 35 44.7	0.0
SDPT	Sand Point	2.31	41	P	Pn	06 35 46.4	+1.2
KDAK	Kodiak Island	7.26	51	Pn	Pn	06 36 52.3	-0.7
	1.0nm,0.3s,baz=203,slow=10,SNR=6.1						
KDAK				Sn	Sn	06 38 09.0	-5.7
	0.1nm,0.3s,baz=86,slow=16,SNR=2.0						
ILAR	Eielson Array	13.86	30	Pn	Pn	06 38 20.1	-3.4
	0.0nm,0.3s,baz=228,slow=11,SNR=2.9						
INK	Inuvik	20.24	32	P	P	06 39 40.5	-1.3
	0.9nm,0.7s,baz=237,slow=11,SNR=7.3						
YKA	Yellowknife Ar	26.53	51	P	P	06 40 45.4	+1.2
	0.5nm,0.5s,baz=271,slow=8.8,SNR=14						
NVAR	Mina Array Bea	33.99	98	P	P	06 41 52.8	+2.1
	0.5nm,0.8s,baz=335,slow=6.6,SNR=4.3						
H11N2	WAKE ISLAND Hy	40.93	226	T	T	07 26 42.8	
	baz=26,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	40.94	226	T	T	07 26 53.3	
	baz=26,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	40.95	226	T	T	07 26 52.9	
	baz=26,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	42.10	225	T	T	07 28 09.1	
	baz=26,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	42.11	225	T	T	07 28 01.0	
	baz=26,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	42.12	225	T	T	07 28 04.8	
	baz=26,slow=76,SNR=12						
TXAR	Lajitas Array	49.01	95	P	P	06 43 54.9	+1.3
	0.3nm,0.5s,baz=299,slow=5.0,SNR=5.3						
BVAR	Borovoye Array	64.78	328	P	P	06 45 45.7	+0.8
	0.6nm,0.7s,baz=36,slow=6.3,SNR=5.1						
FINES	FINESS Array B	65.04	355	P	P	06 45 46.5	0.0
	1.0nm,0.8s,baz=19,slow=12,SNR=4.3						
MKAR	Makanchi Array	65.59	317	P	P	06 45 49.6	-0.7
	0.1nm,0.4s,baz=41,slow=7.2,SNR=4.6						
AKTO	Aktyubinsk	70.69	334	P	P	06 46 23.0	+0.8
	0.8nm,0.6s,baz=359,slow=5.4,SNR=3.9						
AKASG	Malin Array Be	75.53	352	P	P	06 46 50.4	-0.3
	0.3nm,0.4s,baz=15,slow=6.4,SNR=4.5						

MEX 03 06:37:57.1±0.9**, 15°.84N**×**96°.56W, h30**^{km}±17^{km}**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.44	99	*e*P	Pb	06 38 04.8	-1.7
HUIG				*e*S	Sb	06 38 11.4	-1.6
VHO	Vista Hermosa	1.24	352	*e*P	Pn	06 38 16.0	-2.6
VHO				*i* S	Sn	06 38 31.2	-3.2
PNIG	Pinotepa	1.61	290	*e*P	Pn	06 38 21.4	-2.1
PNIG				*e*S	Sn	06 38 41.0	-2.3
CMIG	Matias Romero	2.03	52	*e*P	Pn	06 38 27.1	-2.3

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*IDC **03** 06:41:32.7±1.5, 60°.89S×26°.14W, h0^{km}, mb3.9/3, mb1 3.9/3, mb1mx3.7/17, mbtmp3.8/3, Error ellipse: s-maj=84.7km s-min=39.4km az=70.0*
ISC 03 06:41:39.7±2.0**, 61°.1S**±0°.2×**21°.4W**±0°.6**, h10^{km}, n11, σ2^{s}52**/11**, mb3.8**/3**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	10.90	156	P	Pn	06 44 18.1	+2.6
VNA1				S	Sn	06 46 18.7	+1.3
VNA3	Neumayer Olymp	11.15	160	P	Pn	06 44 21.2	+2.2
VNA3				S	Sn	06 46 19.1	-4.4
VNA2	Neumayer--Watz	11.30	156	P	Pn	06 44 23.1	+2.2
	baz=320,slow=14						
VNA2				S	Sn	06 46 24.4	-2.7
	baz=316,slow=19						
SNAA	Sanae	12.82	153	P	Pn	06 44 43.7	+2.0
SNAA				S	Sn	06 47 03.4	-0.9
BDFB	Brasilia	49.31	325	P	P	06 50 12.2	-17
	0.6nm,0.3s,baz=148,slow=9.6,SNR=3.6						
H10S2	ASCENSION HYDR	52.32	8	T	T	07 47 28.5	
	baz=185,slow=74,SNR=3.4						
H10S3	ASCENSION HYDR	52.33	8	T	T	07 47 27.2	
	baz=185,slow=74,SNR=5.0						
H10S1	ASCENSION HYDR	52.34	8	T	T	07 47 28.0	
	baz=185						
TORD	Torodi Ar. Bea	76.28	23	P	P	06 53 27.4	-1.0
	0.7nm,0.8s,baz=194,slow=4.6,SNR=4.3						
ASAR	Alice Springs	93.15	157	P	P	06 54 53.3	-0.6
	0.2nm,0.6s,baz=193,slow=3.8,SNR=3.9						
SONM	Songino Array	147.81	90	PKPbc	PKPbc	07 01 24.0	+0.2
	1.0nm,0.7s,baz=222,slow=3.6,SNR=7.4						

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*ISCJB **03** 07:02:36.2±0.7, 29°.74S±0°.05×179°.5W±0°.1, h300^{km}, mb3.2/2, Error ellipse: s-maj=16.2km s-min=6.3km az=15.0*
*IDC **03** 07:02:38.6±5.5, 30°.18S×178°.95W, h366^{km}±48^{km}, mb3.0/2, mb1 3.3/4, mb1mx3.0/20, mbtmp4.0/4, Error ellipse: s-maj=58.0km s-min=37.8km az=54.0*
*WEL **03** 07:02:43.4±0.9, 30°S±18°×17°9W±4°7, h258^{km}±14^{km}*
ISC 03 07:02:36.4±1.1**, 29°.85S**±0°.08×**179°.3W**±0°.1**, h300^{km}, n48, σ1^{s}61**/59**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.35	65	P	Pn	07 03 21.5	+2.8
GLKZ				S	S	07 03 51.1	-1.2
MXZ	Matakaoa Point	7.94	194	P	Pn	07 04 33.3	+4.1
MXZ				S	S	07 06 00.3	-0.3
WMGZ	Waiomatatini S	8.17	193	P	Pn	07 04 34.5	+2.5
WMGZ				S	S	07 06 04.0	-1.7
HAZ	Te Kaha	8.25	196	P	Pn	07 04 36.1	+3.2
HAZ				S	S	07 06 08.9	+1.5
PKGZ	Pakihiroa	8.30	194	P	Pn	07 04 38.5	+4.9
PKGZ				S	S	07 06 08.9	0.0
PUZ	Puketiti	8.45	193	P	Pn	07 04 39.1	+3.7
PUZ				S	S	07 06 12.4	+0.4
RUGZ	Raukumara Rang	8.47	196	P	Pn	07 04 36.1	+0.4
RUGZ				S	S	07 06 11.3	-1.4
MWZ	Matawai	8.86	196	P	P	07 04 44.3	-1.0
MWZ				S	S	07 06 21.0	-0.3
URZ	Urewera	8.89	198	P	Pn	07 04 41.1	+0.2
	4.2nm,0.3s,baz=267,slow=4.4,SNR=35						
URZ				S	S	07 06 21.6	-0.5
	4.1nm,0.3s,baz=226,slow=21,SNR=16						
URZ	Urewera	8.89	198	P	Pn	07 04 43.1	+2.2
URZ				S	S	07 06 22.9	+0.8
RIGZ	Rimuhau	9.16	194	P	P	07 04 47.0	-1.7
RIGZ				S	S	07 06 27.1	-1.0
MUGZ	Murupara	9.20	200	P	Pn	07 04 46.9	+2.3
MUGZ				S	S	07 06 29.5	+0.6
SNGZ	Shannon Statio	9.33	196	P	P	07 04 49.5	-1.1
PRGZ	Paritu Road	9.34	194	P	P	07 04 51.0	+0.3
TLZ	Tolley Road	9.47	205	P	P	07 04 55.2	+3.0
KNZ	Kokohu	9.48	194	P	P	07 04 51.2	-1.0
RAHZ	Arahi	9.52	197	P	P	07 04 51.3	-1.4
MTHZ	Maungataniwha	9.52	198	P	P	07 04 51.7	-1.1
NMHZ	Naumai	9.76	198	P	P	07 04 53.8	-1.6
ARHZ	Aropaoanui	9.87	197	P	P	07 04 55.2	-1.3
BKZ	Black Stump Fm	9.91	199	P	Pn	07 04 55.1	+1.7
MCHZ	McNeill Hill	10.12	198	P	P	07 04 58.0	-1.3
KWHZ	Kaweka Forest	10.17	199	P	Pn	07 04 57.7	+1.1
NGZ	Ngauruhoe	10.20	203	P	P	07 04 60.0	-0.4
CKHZ	Cape Kidnapper	10.22	196	P	P	07 04 59.6	-0.9
TRVZ	Turoa	10.33	203	P	P	07 05 01.0	-0.9
BHHZ	Black Hill Sta	10.34	200	P	Pn	07 04 59.8	+1.1
MOVZ	Moawhango	10.36	202	P	P	07 05 00.8	-1.3
KAHZ	Kahuranaki	10.40	196	P	Pn	07 05 00.2	+0.8
PXZ	Pawanui	10.63	196	P	Pn	07 05 03.2	+1.1
PRHZ	Porangahau	10.91	197	P	Pn	07 05 06.1	+0.6
DVHZ	Dannevirke	11.06	198	P	Pn	07 05 06.9	-0.5
PRWZ	Pori Road	11.35	199	P	Pn	07 05 11.7	+0.8
BFZ	Birch Farm	11.40	197	P	Pn	07 05 11.8	+0.4
MRZ	Mangatainoka R	11.56	200	P	Pn	07 05 12.6	-0.9
TIWZ	Tintock	11.58	198	P	Pn	07 05 13.6	-0.1
CPWZ	Castlepoint	11.62	197	P	P	07 05 15.4	-0.6
HOWZ	Holdsworth Sta	11.80	200	P	Pn	07 05 15.6	-0.8
OGWZ	Otaki Gorge	11.83	201	P	Pn	07 05 15.8	-0.9
TMWZ	Te Maipa	11.89	198	P	Pn	07 05 17.5	0.0
KIW	Kapiti Island	11.95	202	P	Pn	07 05 17.5	-0.8
MTW	Mount Morrison	12.04	199	P	Pn	07 05 19.3	-0.1
TRWZ	Traveller	12.21	198	P	Pn	07 05 21.4	-0.1
TCW	Tory Channel	12.47	203	P	Pn	07 05 24.1	-0.5
DZM	Mont Dzumac	14.96	298	P	Pn	07 05 57.5	+3.0
	0.2nm,0.3s,baz=151,slow=13,SNR=4.1						
ASAR	Alice Springs	42.00	267	P	P	07 09 57.8	-1.3
	0.3nm,0.4s,baz=105,slow=7.5,SNR=5.7						
WRA	Warramunga Arr	42.93	272	P	P	07 10 05.5	-1.1
	1.4nm,0.4s,baz=110,slow=7.5,SNR=43						
FINES	FINESS Array B	144.23	339	PKP	PKPab	07 21 30.8	-3.9
	1.9nm,0.4s,baz=50,slow=4.3,SNR=30						

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*INMG **03** 07:04:41.7±2.7, 30°.74N×5°.38W, h55^{km}±26^{km}, ML3.3, Error ellipse: s-maj=20.9km s-min=15.5km az=121.0*
*IGIL **03** 07:04:43.4, 30°.81N×5°.67W, h20^{km}*
*CNRM **03** 07:04:44.1, 30°.95N×5°.26W, h5^{km}, ml4.3*
ISC 03 07:04:44.5±2.5**, 31°.18N**±0°.09×**5°.43W**±0°.06**, h15**^{km}±13^{km}**, n30, σ1^{s}50**/54**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLM	Goulmima	0.66	38	P	Pb	07 04 56.0	-1.7
GOLM				S	Sn	07 05 09.8	+0.2
MDT	Midelt	1.77	23	S	Sg	07 05 40.8	-0.7
MD31	MD31	1.77	19	S	Sb	07 05 40.5	+1.7
CZD	Col de Zad	1.87	10	P	Pb	07 05 18.1	-0.5
CZD				S	Sg	07 05 45.6	+0.7
IFR	Ifrane	2.34	6	*e*P	Pn	07 05 22.9	+0.4
IFR				*e*S	Sn	07 05 51.4	+0.3
SRHM	Skhour des Reh	2.46	302	P	Pn	07 05 23.9	-0.2
SRHM				S	Sn	07 05 56.6	+2.7
TTIG	Tnine Tigouga,	2.67	257	P	Pn	07 05 26.1	-0.8
TTIG				S	Sb	07 06 04.6	+0.1
AVE	Averroes	2.69	322	*e*P	Pn	07 05 27.6	+0.3
AVE				*e*S	Sn	07 06 01.8	+2.2
AVE	Averroes	2.69	322	P	Pb	07 05 32.2	-0.2
AVE				S	Sg	07 06 11.9	+0.8
RSA	Sarsar	3.71	355	P	Pn	07 05 43.8	+2.6
RSA				S	Sg	07 06 42.8	-0.6
CHEFC	Chefchaouen	3.91	1	P	Pn	07 05 46.7	+2.6
CHEFC				S	Sg	07 06 50.4	+0.2
CEU	Ceuta	4.70	1	*e*P	Pn	07 05 56.8	+1.9
CEU				*e*S	Sn	07 06 53.3	+4.3
PBDV	Barranco-do-Ve	6.39	342	*e*P	Pn	07 06 17.3	-0.7
PBDV				*e*S	Sn	07 07 30.3	-0.4
PBDV				A	A	07 07 33.9	
	10nm,0.9s						
PVAQ	Vaqueiros	6.49	344	*e*P	Pn	07 06 18.0	-1.4
PVAQ				*e*S	Sn	07 07 31.9	-1.2
PFVI	Vila Bisbo	6.57	336	*e*P	Pn	07 06 20.5	0.0
PFVI				*e*S	Sn	07 07 33.8	-1.2
PFVI				A	A	07 07 47.1	
	14nm,0.3s						
MORF	Marmelete	6.66	337	*e*P	Pn	07 06 21.3	-0.5
MORF	Marmelete	6.66	337	*e*P	Pn	07 06 21.7	-0.1
MORF				*e*S	Sn	07 07 37.3	-0.2
MORF				A	A	07 07 51.5	
	11nm,0.2s						
PTEO	Sao Teotonio	6.91	338	*e*P	Pn	07 06 25.1	0.0
PTEO				*e*S	Sn	07 07 42.6	-0.8
PTEO				A	A	07 07 48.0	
	13nm,0.4s						
MESJ	Messejana	7.03	342	*e*P	Pn	07 06 26.5	-0.3
MESJ	Messejana	7.03	342	*e*P	Pn	07 06 26.3	-0.5
MESJ				*e*S	Sn	07 07 45.2	-1.2
MESJ				A	A	07 07 52.7	
	12nm,0.3s						
PBEJ	Beja	7.12	344	*e*P	Pn	07 06 30.1	+2.1
PBEJ				*e*S	Sn	07 07 48.3	-0.2
PBEJ				A	A	07 07 52.8	
	6.7nm,0.3s						
PNCL	Nicolau / Gran	7.37	341	*e*P	Pn	07 06 31.1	-0.3
PNCL				*e*S	Sn	07 07 52.8	-1.9
PNCL				A	A	07 07 56.1	
	8.1nm,0.5s						
PESTR	Estremoz	7.87	348	*e*P	Pn	07 06 37.2	-1.1
PESTR				*e*S	Sn	07 08 04.8	-2.3
PESTR				A	A	07 08 12.0	
	6.1nm,0.6s						
PMTG	Montargil	8.19	345	*e*P	Pn	07 06 43.1	+0.3
PMTG				*e*S	Sn	07 08 11.3	-3.7
PMTG				A	A	07 08 27.1	
	5.1nm,0.5s						
PMAFR	Mafra	8.37	339	*e*P	Pn	07 06 46.1	+0.9
PMAFR				*e*S	Sn	07 08 19.8	+0.4
PMAFR				A	A	07 08 24.5	
	20nm,0.6s						
PMRV	Marv??o	8.38	350	*e*P	Pn	07 06 45.6	+0.2
PMRV				*e*S	Sn	07 08 17.7	-2.0
PMRV				A	A	07 08 22.4	
	6.8nm,0.5s						
PTOM	Tomar	8.76	345	*e*P	Pn	07 06 50.2	-0.3
PCBR	Castelo Branco	8.80	350	*e*P	Pn	07 06 51.2	+0.2
PCBR				*e*S	Sn	07 08 27.0	-2.9
PCBR				A	A	07 08 41.3	
	4.3nm,0.6s						
MVO	Moncorvo	10.04	353	*e*P	Pn	07 07 08.8	+0.6
MVO				*e*S	Sn	07 08 58.5	-2.1
MVO				A	A	07 09 03.0	
	7.2nm,0.5s						
PBRG	Braganca	10.65	355	*e*P	Pn	07 07 16.9	+0.4

NNC 03 07:04:58.0±1.5**, 41°.84N**×**78°.19E, h0^{km}, mb3.0, mpv2.7, 3C-1D, Error ellipse: s-maj=10.7km s-min=5.7km az=174.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	1.23	7	P	Pg	07 05 19.8	-1.7
	1.7nm,0.2s						
SATY				S	Sg	07 05 36.7	-0.8
	2.9nm,0.2s						
TNSS	Tian-Shan	1.51	323	P	Pn	07 05 26.0	-0.7
	4.3nm,0.2s						
TNSS				S	Sn	07 05 47.5	+0.3
	2.4nm,0.2s						
PDGK	Podgornoye	1.77	32	P	Pn	07 05 30.4	+0.4
	0.9nm,0.2s						
PDGK				S	Sg	07 05 55.1	+0.2
	0.7nm,0.3s						
PDGK	Podgornoye	1.77	32	⇑Pn	Pn	07 05 29.6	-0.4
	0.6nm,0.4s						
PDGK				⇑Sn	Sb	07 05 54.5	+0.2
	0.5nm,0.5s						
KTBS	Karatobe	2.17	330	Pg	Pb	07 05 38.0	-0.2
	2.6nm,0.2s						
KTBS				Lg	Lg	07 06 07.9	
	6.8nm,0.3s						
TKM2	Tokmak 2	2.20	300	⇓Pg	Pb	07 05 38.0	-0.8
	1.7nm,0.8s						
TKM2				⇑Lg	Lg	07 06 08.4	
	0.9nm,0.4s						
ARXS	Arharly	2.39	354	Pg	Pb	07 05 40.8	-1.1
	4.0nm,0.2s						
ARXS				Lg	Lg	07 06 12.8	
	3.2nm,0.3s						

IDC 03 07:35:13.4±1.9**, 5°.71S**×**151°.34E, h0^{km}, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.5**/28**, mbtmp3.7**/3**, Error ellipse: s-maj=132.2km s-min=27.6km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.76	228	P	P	07 40 06.2	-0.6
	0.9nm,0.6s,baz=54,slow=11,SNR=12						
ASAR	Alice Springs	24.51	221	P	P	07 40 35.0	+0.2
	1.8nm,0.8s,baz=56,slow=9.0,SNR=17						
ILAR	Eielson Array	83.54	22	P	P	07 47 42.6	-0.5
	0.5nm,0.8s,baz=253,slow=4.8,SNR=6.0						
GERES	GERESS Array B	124.05	328	PKP	PKiKP	07 54 14.3	-0.1
	0.4nm,0.7s,baz=111,slow=2.5,SNR=2.7						
TORD	Torodi Ar. Bea	149.18	286	PKPbc	PKPbc	07 55 04.8	-0.3
	1.2nm,0.7s,baz=65,slow=2.8,SNR=7.0						

SJA 03 07:36:14.5±0.7**, 32°.20S**×**71°.42W, h22**^{km}±81^{km}**, ML2.2,**

MW3.5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	1.72	91	*i* P	Pb	07 36 45.6	-0.1
RTLS	**Leoncito**	1.85	78	*i* P	Pb	07 36 48.1	+0.3
RTLS	comp=Z,25nm,0.6s			IAML		07 37 27.6	
ARCO	**CERRO ARCO**	2.20	108	*i* P	Pb	07 36 52.1	-1.5
ARCO	comp=Z,16nm,0.5s			IAML		07 36 57.6	
ARCO				*i* S	Sb	07 37 20.2	-0.3
ASAL	**Salagasta**	2.22	101	*i* P	Pb	07 36 53.0	-1.0
AAGR	**Agrelo**	2.36	113	*i* P	Pb	07 36 54.7	-1.7
AMOG	**MOGNA**	2.79	64	*i* P	Pn	07 37 00.6	+2.7

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*ISCJB **03** 07:37:19.6±0.3, 24°.26N±0°.01×121°.83E±0°.02, h12^{km}±2^{km},*
Error ellipse: s-maj=2.4km s-min=1.8km az=27.7
*JMA **03** 07:37:19.2±0.1, 24°.25N×121°.82E, h10^{km}±2^{km}, M2.8*
*TAP **03** 07:37:19.6, 24°.27N×121°.81E, h16^{km}, ML3.5, B*
ISC 03 07:37:19.6±0.8, **24°.26N**±0°.02×**121°.82E**±0°.02, **h15**^{km}±6^{km},
n111, σ**0^{s}57**/155, **1C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau** baz=339	0.18	337	⇓*i*P	Pg	07 37 23.9	0.0
ENA	baz=339			*i* S	Sg	07 37 27.0	+0.1
NACB	**Ninganchiao** baz=241	0.22	247	⇓P	Pg	07 37 24.4	-0.2
NACB	baz=241			S	Sg	07 37 28.2	+0.2
TWD	**Chiawan** baz=231	0.27	228	⇓*i*P	Pg	07 37 25.5	+0.1
TWD	baz=231			S	Sb	07 37 30.0	-0.7
HWA	**Hwalien** baz=220	0.34	215	*e*P	Pb	07 37 27.4	0.0
TWC	**Suao** baz=10.0	0.35	5	⇓*i*P	Pg	07 37 26.8	0.0
TWC	baz=10.0			*e*S	Sg	07 37 31.6	0.0
EOS1	**EOS1** baz=38	0.40	45	*e*P	Pb	07 37 28.7	+0.2
EOS1	baz=38			*e*S	Sb	07 37 35.7	+1.3
ENLB	**Shoufeng** baz=217	0.41	209	*e*P	Pb	07 37 29.0	+0.5
ENLB	baz=217			*e*S	Sb	07 37 35.7	+1.2
NNSB	**Datong** baz=292	0.43	293	⇓P	Pg	07 37 28.4	+0.1
NNSB	baz=292			S	Sg	07 37 34.3	+0.1
NDT	**Datong Townshi** baz=320	0.44	321	⇓*i*P	Pb	07 37 28.6	-0.5
NDT	baz=320			S	Sg	07 37 34.5	+0.1
ENTT	**Nioudou** baz=328	0.44	329	⇓*i*P	Pb	07 37 28.6	-0.6
ENTT	baz=328			S	Sb	07 37 34.9	-0.7
NNS	**Nan Shan** baz=293	0.44	294	⇓*i*P	Pg	07 37 28.5	0.0
NNS	baz=293			S	Sg	07 37 34.3	-0.3
TWE	**Neicheng** baz=344	0.48	343	⇓*i*P	Pb	07 37 29.3	-0.5
TWE	baz=344			*i* S	Sg	07 37 35.8	+0.2
ILA	**Ilan** baz=347	0.51	353	*e*P	Pb	07 37 30.3	0.0
ILA	baz=347			*e*S	Sb	07 37 37.8	+0.4
WHF	**Hehuan Shan** baz=258	0.52	257	⇓P	Pg	07 37 29.8	-0.3
WHF	baz=258			*e*S	Sg	07 37 37.2	+0.2
ESL	**Shilin** baz=225	0.57	218	⇓P	Pg	07 37 30.7	-0.1
YHNB	**Yeheng** baz=315	0.57	315	⇓P	Pb	07 37 31.0	-0.4
YHNB	baz=315			S	Sg	07 37 38.8	+0.2
TWT	**Tachien** baz=269	0.59	269	P	Pb	07 37 31.5	-0.2
TWT	baz=269			S	Sb	07 37 39.4	-0.5
NSK	**Sanguang** baz=314	0.59	315	⇓P	Pg	07 37 31.1	-0.1
NSK	baz=314			S	Sg	07 37 39.2	+0.1
NWLT	**Wulai** baz=330	0.59	331	*e*P	Pb	07 37 31.3	-0.4
NWLT	baz=330			*e*S	Sb	07 37 39.4	-0.5
EGS	baz=17	0.59	10	*e*P	Pb	07 37 31.8	+0.1
NTC	**Toucheng** baz=9.0	0.59	1	⇓*e*P	Pg	07 37 31.2	-0.1
TDCB	**Techi** baz=269	0.60	269	⇓P	Pb	07 37 31.5	-0.4
TDCB	baz=269			S	Sg	07 37 39.5	-0.1
CHGB	**Renai** baz=247	0.62	251	*e*P	Pg	07 37 31.8	-0.1
CHGB	baz=247			S	Sb	07 37 40.6	-0.3
OWD	**Renai** baz=243	0.66	243	*e*P	Pg	07 37 32.3	-0.3
EGFH	**Guangfu** baz=225	0.69	211	*e*P	Pb	07 37 33.7	+0.3
TIPB	**Shuangxi** baz=359	0.71	1	⇓*e*P	Pg	07 37 33.4	0.0
TIPB	baz=359			*e*S	Sg	07 37 42.6	-0.2
NHDH	**Xindian Distri** baz=333	0.75	339	*e*P	Pb	07 37 34.2	-0.2
TWA	**Mucha** baz=344	0.75	343	*e*P	Pg	07 37 33.9	-0.3
TWB1	**Santiao Chiao** baz=12	0.76	12	*e*P	Pg	07 37 33.5	-0.9
TATO	**Taipei** baz=331	0.77	337	*e*P	Pb	07 37 34.5	-0.2
WLTB	**Daxi** baz=319	0.78	319	*e*P	Pn	07 37 35.6	-0.5
WHP	**Taichung City** baz=272	0.80	271	*e*P	Pb	07 37 35.3	0.0
WHP	baz=272			*e*S	Sg	07 37 45.4	-0.3
VWDT	**VWDT** baz=238	0.80	231	*e*P	Pg	07 37 34.8	-0.4
VWDT	baz=238			*e*S	Sb	07 37 46.4	+0.6
NWF	**Wu-fen Shan** baz=357	0.81	358	*e*P	Pb	07 37 35.3	-0.1
WFSB	**Wu-fen Shan** baz=349	0.81	358	⇓*e*P	Pb	07 37 35.4	0.0
WFSB	baz=349			*e*S	Sb	07 37 46.3	+0.2
LIOB	**Emei** baz=298	0.82	298	*e*P	Pb	07 37 35.9	+0.2
LIOB	baz=298			*e*S	Sb	07 37 46.9	+0.2
NSTT	**Nanjuang** baz=296	0.83	296	⇓P	Pb	07 37 35.8	0.0
NSTT	baz=296			*e*S	Sb	07 37 47.0	+0.2
HGSD	**Ruisui** baz=197	0.85	205	*e*P	Pb	07 37 36.0	-0.1
HGSD	baz=197			*e*S	Sn	07 37 49.5	+0.3
EHY	**Hungye** baz=224	0.88	211	*e*P	Pg	07 37 35.6	-1.1
NCUH	**Zhongli** baz=321	0.91	321	*e*P	Pb	07 37 37.3	+0.1
YM01	**YM01** baz=344	0.91	346	*e*P	Pb	07 37 37.5	+0.3
YM01	baz=344			*e*S	Sb	07 37 49.8	+0.7
NCU	**National Centr** baz=317	0.91	321	*e*P	Pb	07 37 37.0	-0.1
NCU	baz=317			*e*S	Sn	07 37 50.4	-0.4
TWS1	**Kuangyinshan** baz=335	0.91	337	*e*P	Pb	07 37 37.4	+0.2
TWS1	baz=335			*e*S	Sn	07 37 51.4	+0.6
SMLT	**Sun Moon Lake** baz=241	0.92	246	*e*P	Pb	07 37 37.2	-0.2
SMLT	baz=241			*e*S	Sb	07 37 50.2	+0.7
SSLB	**Suanglung** baz=249	0.92	239	*e*P	Pg	07 37 37.0	-0.4
SSLB	baz=249			*e*S	Sb	07 37 49.4	0.0
YM04	**YM04** baz=342	0.92	344	*e*P	Pb	07 37 37.6	+0.2
YM04	baz=342			*e*S	Sb	07 37 50.3	+0.8
SBCB	**Hsinchu** baz=305	0.93	305	*e*P	Pn	07 37 37.7	-0.4
YM05	**YM05** baz=345	0.93	346	*e*P	Pb	07 37 37.5	0.0
YM11	**YM11** baz=345	0.93	346	*e*P	Pn	07 37 37.9	-0.4
YM11	baz=345			*e*S	Sn	07 37 50.7	-0.6
HSN	**Hsinchu** baz=308	0.94	305	*e*P	Pn	07 37 38.4	+0.1
YM08	**YM08** baz=347	0.94	347	*e*P	Pg	07 37 37.5	-0.4
TYC	**Yuchr** baz=249	0.95	248	*e*P	Pb	07 37 37.4	-0.4
TWQ1	**Liyutan** baz=276	0.96	275	⇓P	Pn	07 37 38.8	+0.3
TWQ1	baz=276			*e*S	Sn	07 37 51.3	-0.7
NTST	**Danshui** baz=327	0.96	340	*e*P	Pn	07 37 38.5	-0.1
NMLH	**Miaoli** baz=287	0.98	287	*e*P	Pn	07 37 39.0	+0.2
YULB	**Yu-li** baz=221	0.99	209	*e*P	Pb	07 37 37.7	-0.8
YULB	baz=221			*e*S	Sb	07 37 51.3	-0.1
TWF1	**Yuli** baz=222	1.02	208	*e*P	Pb	07 37 37.5	-1.6
TWY	**Chenhua** baz=349	1.03	349	*e*P	Pn	07 37 39.7	+0.2
JYNG	**Yonagunijimaku**	1.04	79	P	Pb	07 37 38.8	-0.6
JYNG				S	Sb	07 37 52.7	-0.2
WHYT	**Xinyi Township** baz=239	1.05	238	*e*P	Pb	07 37 38.8	-0.7
TCU	**Taichung** baz=265	1.05	264	*e*P	Pn	07 37 40.2	+0.4
WDJ	**Dajia District** baz=276	1.08	275	*e*P	Pn	07 37 40.8	+0.6
WDJ	baz=276			*e*S	Sn	07 37 56.8	+1.9
WJS	**Zhushan** baz=241	1.09	247	*e*P	Pn	07 37 41.0	+0.6
WNT	**Mingjian** baz=242	1.10	250	*e*P	Pn	07 37 40.5	0.0
YOJ	**Yonaguni jima** baz=69	1.10	79	⇑*e*P	Pg	07 37 40.7	-0.3
YOJ	baz=69			*e*S	Sn	07 37 57.2	+1.6
YOJ	**Yonaguni jima**	1.10	79	P	Pn	07 37 40.6	0.0
YOJ				*e*S	Sg	07 37 55.4	0.0
WCHH	**Zhanghua** baz=263	1.17	261	*e*P	Pg	07 37 42.4	+0.3
CHKT	**Chengkung** baz=186	1.23	200	*e*P	Pn	07 37 41.1	-1.2
CHN5	**Tsauling** baz=242	1.24	238	*e*P	Pg	07 37 43.1	-0.3
CHN5	baz=242			*e*S	Sg	07 38 01.0	+1.4
WGK	**Gukeng** baz=246	1.28	244	*e*P	Pg	07 37 44.1	-0.3
ELDTW	**Lidau** baz=204	1.30	215	*e*P	Pn	07 37 43.3	0.0
WDLH	**Douliu** baz=247	1.30	244	*e*P	Pg	07 37 44.2	-0.5
PCYT	**Pengchaiyu** baz=6.0	1.38	10	*e*P	Pn	07 37 44.4	0.0
PCYT	baz=6.0			*e*S	Sg	07 38 03.5	-0.8
RLNB	**Erlin** baz=257	1.38	255	*e*P	Pn	07 37 44.1	-0.2
CHN2	**Minshiung** baz=228	1.43	240	*e*P	Pg	07 37 47.6	+0.5
CHN4	**Tsaushan** baz=235	1.44	231	*e*P	Pb	07 37 46.5	+0.3
TPUB	**Ta-pu** baz=232	1.45	229	*e*P	Pb	07 37 45.8	-0.6
STYT	**Tauyuan** baz=225	1.46	222	*e*P	Pn	07 37 45.3	-0.3
CHY	**Chiayi** baz=229	1.49	239	*e*P	Pg	07 37 47.5	-0.7
WTP	**Ta-pu** baz=231	1.50	228	*e*P	Pb	07 37 46.9	-0.2
TWK	**Hsinying** baz=234	1.57	231	*e*P	Pb	07 37 47.7	-0.7
TWGBT	**Beinan** baz=195	1.59	205	*e*P	Pn	07 37 47.1	-0.1
TWG	**Pinlang** baz=195	1.59	206	*e*P	Pn	07 37 46.2	-1.0
SNST	**Tainan City** baz=233	1.59	230	*e*P	Pb	07 37 49.3	+0.5
CHN1	**Nanshi** baz=231	1.60	228	*e*P	Pn	07 37 48.0	+0.6
SGST	**Jiashian** baz=228	1.63	224	*e*P	Pb	07 37 48.7	-0.7
SLGT	**Liugui** baz=224	1.66	221	*e*P	Pn	07 37 48.8	+0.6
IRIF	**Iriomote-Funau**	1.75	87	P	Pn	07 37 49.2	-0.2
IRIF				*e*S	Sn	07 38 12.1	+0.7
SSD	**Sandimen** baz=231	1.86	216	*e*P	Pn	07 37 51.4	+0.4
MASBT	**Mashibuluo** baz=217	1.97	214	*e*P	Pn	07 37 52.9	+0.4
JKRS	**Kuro-shima**	2.00	90	P	Pn	07 37 53.6	+0.7
JKRS				*e*S	Sb	07 38 19.9	-0.5
EAST	**Anshuo** baz=199	2.07	206	*e*P	Pn	07 37 54.6	+0.7
JIJ	**Ishigaki jima**	2.12	87	P	Pn	07 37 54.5	-0.1
JIJ				*e*S	Sn	07 38 21.1	+0.4
SCZT	**Fangliau** baz=199	2.18	211	*e*P	Pn	07 37 56.5	+1.2
PNG	**Penghu** baz=254	2.18	252	*e*P	Pn	07 37 55.0	-0.4
PHUB	**P'eng-hu** baz=253	2.19	251	*e*P	Pn	07 37 54.7	-0.8
WDGT	**Dungji** baz=246	2.21	244	*e*P	Pn	07 37 56.1	+0.2
LAY	**Lan-yu** baz=192	2.23	186	*e*P	Pn	07 37 54.0	-2.0
PTTC	**Pingtan** baz=302	2.23	304	*e*P	Pn	07 37 55.5	-0.6
VWUC	**VWUC** baz=288	2.27	289	*e*P	Pn	07 37 56.2	-0.5
JISG	**Ishigakijimahi**	2.29	81	S	Sn	07 38 25.8	+0.9
VCHM	**Qimei** baz=248	2.43	245	*e*P	Pn	07 37 59.6	+0.8
MATB	**Ma-tsu** baz=315	2.53	318	*e*P	Pn	07 37 59.9	-0.3
PTMZ	**Houxiangcun** baz=287	2.58	288	*e*P	Pn	07 38 00.5	-0.3
LYJJ	**Jianjiangzhen** baz=318	2.94	321	*e*P	Pn	07 38 05.6	-0.3
XPSS	**Dashiqiu** baz=328	3.04	331	*e*P	Pn	07 38 06.1	-1.0
KNM	**Kinmen** baz=272	3.09	274	*e*P	Pn	07 38 09.3	+1.4
MHZQ	**Yeshan** baz=304	3.12	307	*e*P	Pn	07 38 07.6	-0.6
KNMB	**Chin-men Tao** baz=273	3.13	274	*e*P	Pn	07 38 08.3	-0.2
AXDP	**Jialang** baz=280	3.56	281	*e*P	Pn	07 38 14.2	-0.2
ZPLA	**Ao Xicun** baz=265	3.73	266	*e*P	Pn	07 38 17.0	+0.3

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*JMA **03** 07:38:43.6±0.1, 24°.11N×121°.66E, h34^{km}±1^{km}, M2.8*
*ISCJB **03** 07:38:44.8±0.3, 24°.26N±0°.01×121°.83E±0°.02, h8^{km}±2^{km},*
Error ellipse: s-maj=2.9km s-min=2.1km az=28.6
*TAP **03** 07:38:44.6, 24°.27N×121°.81E, h16^{km}, ML3.3, B*
ISC 03 07:38:44.1±0.9, **24°.24N**±0°.02×**121°.84E**±0°.02, **h14**^{km}±7^{km},
n91, σ**0^{s}68**/118, **9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau** baz=339	0.21	334	⇓*i*P	Pg	07 38 48.9	+0.1
ENA	baz=339			*i* S	Sg	07 38 52.1	+0.1
NACB	**Ninganchiao** baz=246	0.23	253	P	Pg	07 38 49.6	+0.3
NACB	baz=246			S	Sg	07 38 53.3	+0.5
TWD	**Chiawan** baz=232	0.28	234	⇓P	Pb	07 38 50.6	-0.2
TWD	baz=232			S	Sb	07 38 55.0	-0.3
HWA	**Hwalien** baz=221	0.34	219	*e*P	Pb	07 38 52.0	+0.1
TWC	**Suao** baz=10.0	0.36	1	⇓*i*P	Pb	07 38 51.9	-0.5
TWC	baz=10.0			*i* S	Sb	07 38 56.9	-1.0
ENLB	**Shoufeng** baz=216	0.40	213	*e*P	Pn	07 38 54.2	-1.3
EOS1	**EOS1** baz=35	0.40	41	*e*P	Pb	07 38 53.6	+0.6
NNSB	**Datong** baz=292	0.46	294	⇓P	Pb	07 38 53.5	-0.5
NNSB	baz=292			S	Sg	07 38 59.4	-0.1
NDT	**Datong Townshi** baz=320	0.47	320	⇓*i*P	Pb	07 38 53.7	-0.5
NDT	baz=320			S	Sg	07 38 59.7	0.0
ENTT	**Nioudou** baz=328	0.47	328	⇓*i*P	Pb	07 38 53.7	-0.5
ENTT	baz=328			S	Sg	07 38 59.9	+0.1
NNS	**Nan Shan** baz=293	0.47	295	⇓*i*P	Pb	07 38 53.7	-0.6
NNS	baz=293			*i* S	Sg	07 38 59.8	-0.1
TWE	**Neicheng** baz=344	0.50	342	⇓*i*P	Pb	07 38 54.2	-0.5
TWE	baz=344			S	Sg	07 39 00.7	-0.1
ILA	**Ilan** baz=345	0.53	351	*e*P	Pb	07 38 55.2	0.0
WHF	**Hehuan Shan** baz=258	0.54	260	*e*P	Pb	07 38 54.6	-0.9
WHF	baz=258			*e*S	Sb	07 39 02.0	-1.2
ESL	**Shilin** baz=225	0.57	221	*e*P	Pb	07 38 55.8	-0.1
YHNB	**Yeheng** baz=314	0.60	315	P	Pb	07 38 55.9	-0.6
YHNB	baz=314			S	Sb	07 39 04.0	-0.8
EGS	baz=16	0.61	8	*e*P	Pb	07 38 57.0	+0.6
TWT	**Tachien** baz=269	0.61	271	*e*P	Pb	07 38 56.6	0.0
TWT	baz=269			S	Sb	07 39 04.5	-0.6
NTC	**Toucheng** baz=8.0	0.61	359	*e*P	Pb	07 38 56.4	-0.2
NWLT	**Wulai** baz=331	0.61	330	*e*P	Pb	07 38 56.5	-0.1
NSK	**Sanguang** baz=314	0.62	315	P	Pb	07 38 56.3	-0.4
NSK	baz=314			S	Sg	07 39 04.2	-0.3
TDCB	**Techi** baz=269	0.62	271	⇓P	Pb	07 38 56.7	-0.1
TDCB	baz=269			S	Sb	07 39 04.6	-0.9
CHGB	**Renai** baz=247	0.64	254	*e*P	Pb	07 38 57.0	-0.2
CHGB	baz=247			S	Sb	07 39 05.9	-0.1
OWD	**Renai** baz=243	0.67	245	*e*P	Pb	07 38 57.9	+0.2
EGFH	**Guangfu** baz=225	0.69	214	*e*P	Pn	07 38 59.1	-0.3
TIPB	**Shuangxi** baz=359	0.73	359	*e*P	Pb	07 38 58.6	0.0
TIPB	baz=359			*e*S	Sg	07 39 07.5	-0.4
TWA	**Mucha** baz=342	0.77	342	*e*P	Pn	07 38 59.8	-0.8
TWA	baz=342			*e*S	Sb	07 39 09.2	-0.4
NHDH	**Xindian Distri** baz=333	0.77	338	*e*P	Pn	07 39 00.3	-0.3
TWB1	**Santiao Chiao** baz=12	0.77	10	*e*P	Pn	07 39 00.2	-0.4
TATO	**Taipei** baz=331	0.80	336	*e*P	Pb	07 39 00.0	+0.3
VWDT	**VWDT** baz=237	0.80	233	*e*P	Pn	07 39 00.6	-0.4
WLTB	**Daxi** baz=319	0.81	319	*e*P	Pn	07 39 01.0	-0.1
WHP	**Taichung City** baz=272	0.82	273	*e*P	Pb	07 39 00.3	+0.2
WHP	baz=272			S	Sb	07 39 10.9	-0.1
NWF	**Wu-fen Shan** baz=348	0.83	356	*e*P	Pn	07 39 01.0	-0.4
NWF	baz=348			*e*S	Sb	07 39 11.3	0.0
WFSB	**Wu-fen Shan** baz=348	0.83	356	*e*P	Pn	07 39 01.3	0.0
WFSB	baz=348			*e*S	Sb	07 39 11.6	+0.3
HGSD	**Ruisui** baz=195	0.84	207	*e*P	Pn	07 39 03.0	+1.6
LIOB	**Emei** baz=298	0.85	298	*e*P	Pn	07 39 01.2	-0.5
LIOB	baz=298			*e*S	Sb	07 39 12.1	+0.1
NSTT	**Nanjuang** baz=296	0.86	297	*e*P	Pn	07 39 01.1	-0.6
NSTT	baz=296			S	Sb	07 39 12.6	+0.4
EHY	**Hungye** baz=224	0.87	213	*e*P	Pn	07 39 01.7	-0.3
SSLB	**Suanglung** baz=241	0.93	241	*e*P	Pn	07 39 02.6	-0.2
SMLT	**Sun Moon Lake** baz=247	0.93	248	*e*P	Pn	07 39 02.6	-0.2
YM01	**YM01** baz=345	0.93	345	*e*P	Pn	07 39 02.6	-0.3
NCU	**National Centr** baz=317	0.94	321	*e*P	Pn	07 39 02.6	-0.2
NCU	baz=317			*e*S	Sn	07 39 16.3	+0.2
NCUH	**Zhongli** baz=320	0.94	321	*e*P	Pn	07 39 02.8	0.0
TWS1	**Kuangyinshan** baz=328	0.94	336	*e*P	Pb	07 39 02.2	+0.1
YM04	**YM04** baz=343	0.95	343	*e*P	Pn	07 39 02.7	-0.3
YM05	**YM05** baz=345	0.95	345	*e*P	Pg	07 39 01.7	-0.8
YM11	**YM11** baz=345	0.95	345	*e*P	Pn	07 39 03.2	+0.1
SBCB	**Hsinchu** baz=305	0.95	305	*e*P	Pn	07 39 03.6	+0.6
TYC	**Yuchr** baz=249	0.96	250	*e*P	Pn	07 39 03.2	+0.1
YM08	**YM08** baz=347	0.97	346	*e*P	Pb	07 39 02.6	-0.1
TWQ1	**Liyutan** baz=276	0.98	276	*e*P	Pn	07 39 03.5	+0.1
YULB	**Yu-li** baz=211	0.98	211	*e*P	Pn	07 39 02.9	-0.6
NTST	**Danshui** baz=339	0.98	339	*e*P	Pn	07 39 03.5	0.0
NMLH	**Miaoli** baz=287	1.00	287	*e*P	Pn	07 39 04.8	+1.0
TWF1	**Yuli** baz=222	1.02	209	*e*P	Pn	07 39 04.4	+0.4
JYNG	**Yonagunijimaku**	1.03	78	P	Pn	07 39 05.1	+1.0
JYNG				S	Sn	07 39 21.0	+2.7
TWY	**Chenhua** baz=332	1.05	348	*e*P	Pn	07 39 05.4	+1.0
WHYT	**Xinyi Township** baz=239	1.05	239	*e*P	Pn	07 39 04.5	0.0
TCU	**Taichung** baz=265	1.07	265	*e*P	Pn	07 39 05.7	+1.1

YOJ	**Yonaguni jima** baz=68	1.09	78	*e*P	Pn	07 39 05.4	+0.5
YOJ	**Yonaguni jima**	1.09	78	P	Pn	07 39 05.6	+0.7
YOJ				*e*S	Sn	07 39 20.7	+0.9
WDJ	**Dajia District** baz=276	1.10	276	*e*P	Pn	07 39 06.2	+1.1
WJS	**Zhushan** baz=241	1.10	248	*e*P	Pn	07 39 06.6	+1.5
WNT	**Mingjian** baz=242	1.12	251	*e*P	Pn	07 39 05.7	+0.3
WCHH	**Zhanghua** baz=263	1.18	262	*e*P	Pn	07 39 07.2	+1.0
CHN5	**Tsauling** baz=241	1.24	239	*e*P	Pg	07 39 09.2	+1.1
ELDTW	**Lidau** baz=204	1.29	216	*e*P	Pn	07 39 07.3	-0.5
WGK	**Gukeng** baz=246	1.29	245	*e*P	Pg	07 39 09.3	+0.2
WDLH	**Douliu** baz=247	1.31	245	*e*P	Pg	07 39 09.8	+0.4
PCYT	**Pengchaiyu** baz=7.0	1.40	9	*e*P	Pb	07 39 09.8	-0.2
RLNB	**Erlin** baz=257	1.40	256	*e*P	Pb	07 39 09.6	-0.4
CHN4	**Tsaushan** baz=235	1.45	232	*e*P	Pg	07 39 12.1	+0.1
TPUB	**Ta-pu** baz=232	1.45	230	*e*P	Pg	07 39 12.5	+0.4
STYT	**Tauyuan** baz=225	1.46	223	*e*P	Pg	07 39 12.1	-0.2
TWK	**Hsinying** baz=234	1.57	232	*e*P	Pg	07 39 13.3	-1.1
TWGBT	**Beinan** baz=195	1.58	206	*e*P	Pg	07 39 13.3	-1.2
SNST	**Tainan City** baz=233	1.60	231	*e*P	Pg	07 39 15.4	+0.6
CHN1	**Nanshi** baz=231	1.60	229	*e*P	Pg	07 39 15.0	+0.1
SGST	**Jiashian** baz=228	1.63	225	*e*P	Pb	07 39 13.4	-0.6
SLGT	**Liugui** baz=224	1.66	222	*e*P	Pb	07 39 14.2	-0.2
IRIF	**Iriomote-Funau**	1.73	87	*e*S	Sb	07 39 37.2	+0.1
SSD	**Sandimen** baz=204	1.86	217	*e*P	Pb	07 39 16.9	-1.0
MASBT	**Mashibuluo** baz=217	1.97	215	*e*P	Pb	07 39 19.0	-0.7
JKRS	**Kuro-shima**	1.98	90	P	Pg	07 39 20.5	-1.6
JKRS				*e*S	Sb	07 39 44.4	0.0
EAST	**Anshuo** baz=199	2.06	206	*e*P	Pn	07 39 19.0	+0.6
JIJ	**Ishigaki jima**	2.10	86	P	Pn	07 39 19.7	+0.8
JIJ				*e*S	Sn	07 39 46.0	+1.2
PHUB	**P'eng-hu** baz=253	2.20	251	*e*P	Pb	07 39 22.4	-1.3
WDGT	**Dungji** baz=246	2.23	244	*e*P	Pn	07 39 21.1	+0.6
JISG	**Ishigakijimahi**	2.28	81	P	Pb	07 39 23.2	-1.8
VWUC	**VWUC** baz=288	2.30	289	*e*P	Pn	07 39 21.3	-0.3

IDC 03 07:44:52.0±2.8, 10°.81N×87°.00W, h0^{km}, mb3.3/1, mb1 3.8/3, mb1mx3.4/45, mbtmp3.5/3, ML3.4/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/21, Error ellipse: s-maj=118.2km s-min=21.9km az=27.0, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**JuntasAbangare** 12nm,0.3s,baz=19,slow=16,SNR=46	2.07	104	Pn	Pn	07 45 28.5	+0.4
JTS	 17nm,0.3s,baz=3.4,slow=22,SNR=7.2			Sn	Sn	07 45 55.6	+1.0
CMIG	**Matias Romero** 0.3nm,0.3s,baz=158,slow=12,SNR=8.3	9.88	310	Pn	Pn	07 47 17.3	+2.0
ATAH	**Atahualpa** comp=Z,60nm,18.8s,baz=164,slow=33	19.78	154	LR	LR	07 55 48.5	
TXAR	**Lajitas Array** 0.5nm,0.6s,baz=144,slow=9.2,SNR=4.9	24.13	322	P	P	07 50 08.7	-1.1
NNA	**Nana** comp=Z,39nm,18.0s,baz=322,slow=33	24.79	156	LR	LR	07 58 28.9	
TKL	**Tuckaleechee C** comp=Z,68nm,19.8s,baz=275,slow=35	24.91	6	LR	LR	07 59 15.7	
ASAR	**Alice Springs** 0.2nm,0.7s,baz=84,slow=2.9,SNR=2.9	139.05	246	PKP	PKPdf	08 04 20.8	-0.8
WRA	**Warramunga Arr** 0.5nm,1.0s,baz=82,slow=1.4,SNR=4.6	139.22	252	PKP	PKPdf	08 04 22.3	+0.4

TAP 03 07:45:26.9, 24°.27N×121°.81E, h16^{km}, ML3.0, 8D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau** baz=338	0.17	337	⇓*i*P	Pg	07 45 31.2	+0.1
ENA	 baz=338			S	Sb	07 45 34.5	-0.4
NACB	**Ninganchiao** baz=241	0.22	244	P	Pg	07 45 31.8	-0.2
NACB	 baz=241			S	Sg	07 45 35.7	+0.2
TWD	**Chiawan** baz=231	0.28	226	P	Pg	07 45 32.9	0.0
TWD	 baz=231			S	Sg	07 45 37.3	+0.4
TWC	**Suao** baz=10.0	0.34	6	⇓*i*P	Pg	07 45 34.2	+0.2
TWC	 baz=10.0			S	Sg	07 45 38.9	+0.2
HWA	**Hwalien** baz=220	0.35	213	*e*P	Pb	07 45 35.1	+0.2
EOS1	**EOS1** baz=38	0.40	46	*e*P	Pb	07 45 35.9	+0.3
EOS1	 baz=38			*e*S	Sb	07 45 43.1	+1.6
ENLB	**Shoufeng** baz=216	0.41	208	*e*P	Pb	07 45 36.6	+0.7
NNSB	**Datong** baz=292	0.42	292	⇓P	Pg	07 45 35.8	+0.3
NDT	**Datong Townshi** baz=319	0.43	320	⇓*i*P	Pb	07 45 36.0	-0.1
NDT	 baz=319			*e*S	Sb	07 45 42.1	-0.3
ENTT	**Nioudou** baz=328	0.43	328	⇓*i*P	Pb	07 45 36.0	-0.2
ENTT	 baz=328			S	Sb	07 45 42.1	-0.4
NNS	**Nan Shan** baz=293	0.43	293	⇓*i*P	Pg	07 45 36.0	+0.3
NNS	 baz=293			S	Sg	07 45 42.1	+0.4
TWE	**Neicheng** baz=343	0.47	343	⇓*i*P	Pb	07 45 36.6	-0.2
TWE	 baz=343			S	Sg	07 45 43.0	+0.4
ILA	**Ilan** baz=345	0.49	353	*e*P	Pb	07 45 38.1	+0.8
WHF	**Hehuan Shan** baz=258	0.52	256	*e*P	Pg	07 45 37.1	-0.2
WHF	 baz=258			*e*S	Sg	07 45 44.4	0.0
YHNB	**Yeheng** baz=314	0.56	315	P	Pb	07 45 38.5	0.0
YHNB	 baz=314			*e*S	Sg	07 45 46.0	+0.4
ESL	**Shilin** baz=225	0.57	217	*e*P	Pg	07 45 38.1	-0.2
NSK	**Sanguang** baz=314	0.58	314	P	Pb	07 45 38.7	-0.1
NSK	 baz=314			*e*S	Sg	07 45 46.1	0.0
NTC	**Toucheng** baz=8.0	0.58	2	*e*P	Pb	07 45 38.6	-0.1
EGS	 baz=16	0.58	11	*e*P	Pb	07 45 39.4	+0.6
TWT	**Tachien** baz=269	0.58	268	P	Pb	07 45 39.1	+0.2
TWT	 baz=269			S	Sb	07 45 47.3	+0.3
TDCB	**Techi** baz=269	0.60	268	*e*P	Pb	07 45 39.0	-0.1
TDCB	 baz=269			*e*S	Sg	07 45 46.8	0.0
CHGB	**Renai** baz=247	0.62	250	⇓P	Pg	07 45 39.3	0.0
CHGB	 baz=247			S	Sg	07 45 47.8	+0.2
OWD	**Renai** baz=243	0.66	242	*e*P	Pb	07 45 40.3	0.0
OWD	 baz=243			*e*S	Sb	07 45 49.3	0.0
TIPB	**Shuangxi** baz=7.0	0.70	1	*e*P	Pb	07 45 40.9	+0.1
EGFH	**Guangfu** baz=218	0.70	210	*e*P	Pb	07 45 40.7	-0.1
TWA	**Mucha** baz=343	0.73	344	*e*P	Pb	07 45 42.0	+0.6
NHDH	**Xindian Distri** baz=332	0.73	339	*e*P	Pb	07 45 41.8	+0.4
TWB1	**Santiao Chiao** baz=12	0.75	12	*e*P	Pg	07 45 41.6	0.0
TATO	**Taipei** baz=331	0.76	337	*e*P	Pg	07 45 41.2	-0.6
WLTB	**Daxi** baz=318	0.77	319	*e*P	Pb	07 45 42.3	+0.3
WHP	**Taichung City** baz=272	0.79	271	*e*P	Pn	07 45 43.0	-0.5
WHP	 baz=272			*e*S	Sb	07 45 53.6	+0.6
NWF	**Wu-fen Shan** baz=348	0.80	358	*e*P	Pn	07 45 43.2	-0.5
NWF	 baz=348			S	Sb	07 45 53.5	+0.5
WFSB	**Wu-fen Shan** baz=348	0.80	358	*e*P	Pn	07 45 43.2	-0.3
WFSB	 baz=348			*e*S	Sb	07 45 53.7	+0.7
VWDT	**VWDT** baz=238	0.80	230	*e*P	Pb	07 45 42.3	-0.2
VWDT	 baz=238			*e*S	Sb	07 45 54.2	+1.0
LIOB	**Emei** baz=298	0.82	297	*e*P	Pg	07 45 43.2	+0.3
NSTT	**Nanjuang** baz=296	0.82	296	*e*P	Pg	07 45 43.1	+0.1
NSTT	 baz=296			*e*S	Sg	07 45 54.5	+0.7
HGSD	**Ruisui** baz=195	0.85	205	*e*P	Pg	07 45 43.9	+0.3
EHY	**Hungye** baz=224	0.89	211	*e*P	Pb	07 45 43.3	-0.7
YM01	**YM01** baz=345	0.90	346	*e*P	Pn	07 45 44.8	-0.2
NCU	**National Centr** baz=321	0.90	321	*e*P	Pn	07 45 45.1	+0.1
TWS1	**Kuangyinshan** baz=335	0.90	337	*e*P	Pn	07 45 45.4	+0.4
TWS1	 baz=335			*e*S	Sn	07 45 58.8	+1.1
YM04	**YM04** baz=343	0.91	344	*e*P	Pg	07 45 44.9	+0.2
SBCB	**Hsinchu** baz=305	0.91	305	*e*P	Pb	07 45 44.1	-0.4
YM05	**YM05** baz=345	0.92	346	*e*P	Pb	07 45 44.5	0.0
YM11	**YM11** baz=345	0.92	346	*e*P	Pn	07 45 45.4	+0.1
SMLT	**Sun Moon Lake** baz=241	0.92	245	*e*P	Pg	07 45 44.8	0.0
SMLT	 baz=241			*e*S	Sn	07 45 58.7	+0.4
SSLB	**Suanglung** baz=249	0.92	239	*e*P	Pb	07 45 44.2	-0.4
SSLB	 baz=249			*e*S	Sb	07 45 56.4	-0.3
YM08	**YM08** baz=347	0.93	347	*e*P	Pg	07 45 45.1	+0.1
TYC	**Yuchr** baz=249	0.95	247	*e*P	Pb	07 45 45.1	+0.1
TWQ1	**Liyutan** baz=276	0.95	275	*e*P	Pn	07 45 46.1	+0.4
TWQ1	 baz=276			*e*S	Sn	07 45 59.5	+0.5
NMLH	**Miaoli** baz=287	0.97	286	*e*P	Pn	07 45 47.0	+1.1
NSY	**Sanyi** baz=280	0.97	279	*e*P	Pn	07 45 47.1	+1.1
NSY	 baz=280			*e*S	Sn	07 46 01.7	+2.2
YULB	**Yu-li** baz=223	1.00	208	*e*P	Pb	07 45 44.8	-1.0
YULB	 baz=223			*e*S	Sn	07 46 01.4	+1.4
TWF1	**Yuli** baz=222	1.03	207	*e*P	Pb	07 45 44.7	-1.7
WHYT	**Xinyi Township** baz=239	1.05	237	*e*P	Pg	07 45 48.5	+1.3
WDJ	**Dajia District** baz=275	1.07	274	*e*P	Pg	07 45 48.6	+0.9
WJS	**Zhushan** baz=241	1.09	246	*e*P	Pg	07 45 48.7	+0.7
WNT	**Mingjian** baz=242	1.10	249	*e*P	Pg	07 45 49.4	+1.1
YOJ	**Yonaguni jima** baz=69	1.11	80	*e*P	Pn	07 45 47.8	0.0
YOJ	 baz=69			*e*S	Sg	07 46 04.7	+1.9
WCHH	**Zhanghua** baz=263	1.16	261	*e*P	Pb	07 45 48.8	+0.2
ALS	**Alishan** baz=233	1.20	231	*e*P	Pg	07 45 49.9	-0.2
CHN5	**Tsauling** baz=242	1.24	237	*e*P	Pg	07 45 51.4	+0.6
CHN5	 baz=242			*e*S	Sg	07 46 10.1	+3.1
ELDTW	**Lidau** baz=204	1.30	214	*e*P	Pb	07 45 51.1	0.0
CHN4	**Tsaushan** baz=236	1.45	231	*e*P	Pg	07 45 54.4	-0.4
CHN4	 baz=236			*e*S	Sg	07 46 16.1	+2.5
TPUB	**Ta-pu** baz=232	1.45	228	*e*P	Pg	07 45 54.9	-0.1
CHN1	**Nanshi** baz=231	1.60	228	*e*P	Pb	07 45 56.4	+0.2
MASBT	**Mashibuluo** baz=217	1.98	213	*e*P	Pn	07 46 01.1	+1.3
EAST	**Anshuo** baz=199	2.08	205	*e*P	Pn	07 46 00.4	-0.8
VWUC	**VWUC** baz=288	2.27	289	*e*P	Pn	07 46 03.6	-0.2
PTMZ	**Houxiangcun** baz=287	2.57	288	*e*P	Pn	07 46 08.2	+0.2

TAP 03 07:45:32.3, 24°.28N×121°.77E, h12^{km}, ML3.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau** baz=351	0.15	349	P	Pg	07 45 36.4	+0.4
ENA	 baz=351			S	Sg	07 45 39.7	+1.2
NACB	**Ninganchiao** baz=237	0.19	238	*e*P	Pb	07 45 37.5	-0.2
NACB	 baz=237			S	Sg	07 45 40.9	+1.4
TWD	**Chiawan** baz=218	0.26	220	*e*P	Pb	07 45 38.3	-0.5
TWC	**Suao** baz=13	0.34	12	*e*P	Pg	07 45 39.6	+0.5
NNSB	**Datong** baz=292	0.39	293	*e*P	Pb	07 45 40.8	-0.3
NNSB	 baz=292			*e*S	Sb	07 45 46.9	-0.2
NNSB	**Datong** baz=292	0.39	293	S	Pb	07 45 40.8	-0.4
NNS	**Nan Shan** baz=293	0.40	294	*e*P	Pb	07 45 41.3	-0.1
ENTT	**Nioudou** baz=332	0.41	332	P	Pb	07 45 41.3	-0.1
ENTT	 baz=332			*e*S	Sb	07 45 47.2	-0.4
TWE	**Neicheng** baz=349	0.45	348	*e*P	Pb	07 45 41.9	-0.3

AUST 03 08:09:28.5±0.1, 30°.60S×117°.45E, h0^{km}, Error ellipse: s-maj=1.4km s-min=0.8km az=242.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLDU	**Ballidu** baz=0.6,SNR=32	0.64	268	P	Pb	08 09 41.8	-0.7
BLDU	 baz=0.6,SNR=18			S	Sg	08 09 49.7	+0.7
KLBR	**Kellerberrin** baz=1.0,SNR=10	1.02	165	P	Pb	08 09 48.9	-0.3
KLBR	 baz=1.0,SNR=23			S	Sg	08 10 01.4	0.0
MUN	**Mundaring** baz=1.7,SNR=3.2	1.74	217	P	Pn	08 10 00.1	+0.1
MUN	 baz=1.7,SNR=6.4			S	Sn	08 10 22.7	-0.1
MUN	 baz=1.7,SNR=6.4			S	Sn	08 10 22.7	-0.1
MORW	**Morawa** baz=2.0,SNR=5.0	1.96	321	P	Pn	08 10 03.7	+0.7
MORW	 baz=2.0,SNR=12			S	Sn	08 10 28.0	-0.2
MEEK	**Meekatharra** baz=4.1,SNR=4.7	4.08	15	P	Pn	08 10 32.4	+0.2
JAGI	**Jajag, Banyuwa** baz=22,SNR=16	22.23	351	P	P	08 14 22.6	-4.3

IDC 03 08:15:33.2±1.1, 10°.97S×165°.26E, h0^{km}, mb3.7/4, mb1 4.1/5, mb1mx3.7/35, mbtmp3.8/5, ML4.1/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/26, Error ellipse: s-maj=48.4km s-min=24.7km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 1.4nm,0.3s,baz=326,slow=9.1,SNR=24	11.10	174	Pn	Pn	08 18 12.7	-0.6
DZM	 0.1nm,0.3s,baz=216,slow=18,SNR=2.5			Sn	Sn	08 20 11.3	-7.0
CTA	**Charters Tower** 3.0nm,0.8s,baz=64,slow=13,SNR=2.9	20.41	241	P	Pn	08 20 15.5	+1.3
STKA	**Stephens Creek** comp=Z,41nm,19.9s,baz=25,slow=32	30.17	223	LR	LR	08 31 40.0	
WRA	**Warramunga Arr** 1.9nm,0.9s,baz=79,slow=9.3,SNR=10	31.06	250	P	P	08 21 53.9	+0.6
WRA	 comp=Z,45nm,19.2s,baz=180,slow=36			LR	LR	08 34 08.5	
ASAR	**Alice Springs** 0.4nm,0.4s,baz=63,slow=10,SNR=14	32.40	243	P	P	08 22 04.2	-0.8
ASAR	 0.6nm,1.1s,baz=83,slow=2.5,SNR=4.1			PcP	PcP	08 24 53.2	+0.4
ASAR	 comp=Z,42nm,18.2s,baz=95,slow=36			LR	LR	08 34 44.6	
SONM	**Songino Array** comp=Z,20nm,21.1s,baz=150,slow=33	78.33	324	LR	LR	08 58 23.5	
ILAR	**Eielson Array** 0.2nm,0.6s,baz=224,slow=5.0,SNR=3.2	83.60	19	P	P	08 28 03.2	+0.1
NVAR	**Mina Array Bea** 0.5nm,0.9s,baz=239,slow=6.2,SNR=3.1	86.34	50	P	P	08 28 17.5	-0.3

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*ISCJB **03** 08:24:17.9±0.6, 33°.60N±0°.06×138°.79E±0°.05, h238^{km}±3^{km}, mb3.1/9, Error ellipse: s-maj=10.2km s-min=7.3km az=168.8*

*JMA **03** 08:24:17.4±0.4, 33°.52N×138°.86E, h238^{km}±4^{km}, M3.3*

*IDC **03** 08:24:18.5±1.1, 33°.55N×138°.68E, h228^{km}±9^{km}, mb3.0/9, mb1 3.2/13, mb1mx3.1/41, mbtmp3.6/13, Error ellipse: s-maj=17.8km s-min=14.0km az=60.0*

ISC 03 08:24:17.7±0.8, 33°.48N±0°.06×138°.84E±0°.05, h226^{km}±7^{km}, n33, σ1^{s}.61/43, mb3.1/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2** 71nm,0.3s,baz=74,slow=22,SNR=3.7	0.87	114	P	Pn	08 24 52.0	+2.5
TK02	**Tokai 2**	1.01	298	P	Pn	08 24 51.7	+1.7
TK01	**Tokai 1**	1.08	286	P	Pn	08 24 51.6	+1.3
TTO4	**TONANKAI O.B.S**	1.20	296	P	Pn	08 24 52.5	+1.3
TK04	**Tokai 4**	1.20	319	P	Pn	08 24 52.9	+1.5
TTO1	**TONANKAI O.B.S**	1.72	275	P	Pn	08 24 56.7	+1.4
JOD2	**Odawara 2**	1.79	7	P	Pn	08 24 57.3	+1.0
JIE	**Ise**	1.99	298	P	Pn	08 24 58.8	+0.7
JIE				*e*S	S	08 25 29.4	-0.2
JYN	**Shimob**	2.02	353	P	Pn	08 24 59.5	+1.0
BSO1	**Boso 1**	2.13	56	P	Pn	08 24 59.6	+0.8
BSO1				*e*S	S	08 25 32.8	+1.7
JRY	**Ryogami san**	2.53	1	P	Pn	08 25 04.8	+1.2
JTNC	**Tanabenakahech**	2.71	278	P	Pn	08 25 05.9	+0.3
JTNC				*e*S	S	08 25 43.9	+0.9
JYTA	**Yamagatataniai**	2.73	321	P	Pn	08 25 05.9	+0.2
JYTA				*e*S	S	08 25 42.8	-0.5
JWY	**Kouya**	2.80	286	P	Pn	08 25 07.1	+0.5
JWY				*e*S	S	08 25 45.0	+0.2
JAG	**Ashikaga**	2.98	10	P	Pn	08 25 08.2	-0.3
MJAR	**Matsushiro Arr** 0.6nm,0.3s,baz=174,slow=10,SNR=40	3.10	351	P	Pn	08 25 09.6	-0.2
MJAR	 0.1nm,0.3s,baz=338,slow=20,SNR=4.2			S	S	08 25 49.7	-1.1
MAT	**Matsushiro**	3.10	351	P	Pn	08 25 09.9	+0.1
MAT				S	S	08 25 48.7	-2.1
MAT	**Matsushiro**	3.10	351	P	Pn	08 25 10.0	+0.1
MAT				*e*S	S	08 25 50.5	-0.3
JWT	**Wachi**	3.36	303	P	Pn	08 25 13.7	+0.9
JWT				S	S	08 25 56.3	+0.2
JAI	**Aioi**	3.67	276	P	Pn	08 25 16.7	+0.2
JCJ	**Chichijima** 15nm,0.3s,baz=272,slow=22,SNR=15	6.99	155	P	Pn	08 25 55.5	-2.7
JCJ	 8.3nm,0.3s,baz=270,slow=20,SNR=4.3			S	S	08 27 11.5	-6.7
KSRS	**Korea Array** 0.2nm,0.3s,baz=119,slow=13,SNR=15	9.74	297	P	Pn	08 26 34.1	+0.9
USRK	**Ussuriysk Ar.** 0.1nm,0.3s,baz=138,slow=15,SNR=3.0	11.95	336	P	Pn	08 26 59.9	-1.2
KLR	**Kul'dur** 0.5nm,0.3s,baz=172,slow=12,SNR=10	16.59	344	P	P	08 27 54.7	-1.6
SONM	**Songino Array** 0.2nm,0.3s,baz=119,slow=9.0,SNR=4.1	28.24	310	P	P	08 29 50.0	+0.3
MKAR	**Makanchi Array** 0.7nm,0.4s,baz=85,slow=9.6,SNR=14	44.31	305	P	P	08 32 04.7	-0.5
KURBB	**Kurchatov Arra** 0.5nm,0.5s,baz=91,slow=7.0,SNR=6.9	46.60	310	P	P	08 32 21.9	-1.1
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=0.3,slow=7.6,SNR=6.8	53.30	185	P	P	08 33 13.5	0.0
ILAR	**Eielson Array** 0.4nm,0.9s,baz=252,slow=6.1,SNR=4.4	53.62	31	P	P	08 33 14.9	-0.4
YKA	**Yellowknife Ar** 0.2nm,0.7s,baz=300,slow=6.2,SNR=4.6	67.93	29	P	P	08 34 52.4	+0.7
FINES	**FINESS Array B** 0.6nm,0.7s,baz=22,slow=5.2,SNR=4.2	70.96	332	P	P	08 35 09.5	-0.7
NVAR	**Mina Array Bea** 0.3nm,0.7s,baz=299,slow=5.6,SNR=3.0	78.83	51	P	P	08 35 57.9	+1.9
TXAR	**Lajitas Array** 0.3nm,0.5s,baz=337,slow=4.1,SNR=4.2	93.97	51	P	P	08 37 12.2	+2.0

MEX 03 08:42:39.0±0.7, 15°.26N×91°.85W, h213^{km}±7^{km}, MD3.8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.53	229	*e*P	Pn	08 43 05.3	-2.4
THIG				*e*S	S	08 43 27.3	-2.8
CCIG	**Comitan**	1.05	345	*e*P	Pn	08 43 09.5	-1.1
CCIG				*i* S	S	08 43 32.3	-3.1
PCIG		1.39	289	*i* P	Pn	08 43 11.8	-1.1
PCIG				*i* S	S	08 43 36.7	-2.4

MEX 03 08:53:52.8±0.3, 16°.59N×98°.42W, h2^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.34	124	*i* P	Pg	08 53 58.9	-0.4
PNIG				*i* S	Sg	08 54 04.3	+0.5
VHO	**Vista Hermosa**	1.69	73	*e*P	Pn	08 54 21.9	-1.6

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*MOS **03** 09:10:50.3±0.5, 52°.18N×157°.97E, h190^{km}, mb4.1/1, Error ellipse: s-maj=35.5km s-min=9.7km az=73.9*

*ISCJB **03** 09:10:53.9±0.8, 52°.38N±0°.07×158°.0E±0°.1, h166^{km}±4^{km}, mb3.2/3, Error ellipse: s-maj=13.9km s-min=9.2km az=34.3*

*KRSC **03** 09:10:53.0±1.2, 52°.38N×158°.05E, h168^{km}±8^{km}, ML3.8*

*IDC **03** 09:10:54.4±3.6, 52°.56N×157°.29E, h169^{km}±11^{km}, mb2.8/3, mb1 3.1/3, mb1mx2.7/44, mbtmp3.3/3, Error ellipse: s-maj=126.3km s-min=22.8km az=4.0*

ISC 03 09:10:53.1±1.0, 52°.36N±0°.06×157°.94E±0°.07, h173^{km}±6^{km}, n43, σ1^{s}.09/77, mb3.1/3, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

MTVR	Mutnovka	0.19	51	eP	Pn	09 11 17.3	+1.1
MTVR				eS	Sn	09 11 34.7	+0.6
MTVR	Mutnovka	0.19	51	PN	Pn	09 11 17.3	+1.1
MTVR				S	Sn	09 11 34.7	+0.6
RUS	Russkaya	0.36	78	eP	Pn	09 11 16.8	+0.4
RUS				eS	Sn	09 11 33.8	-0.6
RUS	Russkaya	0.36	78	PN	Pn	09 11 16.8	+0.4
RUS				S	Sn	09 11 33.8	-0.6
KRMR	Karymshinskiy	0.48	14	eP	Pn	09 11 17.3	+0.4
KRMR				eS	Sn	09 11 34.9	-0.4
KRMR	Karymshinskiy	0.48	14	PN	Pn	09 11 17.3	+0.4
KRMR				S	Sn	09 11 34.9	-0.4
KDTR	Khodutka, Kamc	0.56	171	eP	Pn	09 11 17.0	-0.3
KDTR				eS	Sn	09 11 34.2	-1.6
KDTR	Khodutka, Kamc	0.56	171	PN	Pn	09 11 17.0	-0.3
KDTR				S	Sn	09 11 34.2	-1.6
APC	Apacha	0.74	320	eP	Pn	09 11 18.1	-0.1
APC				eS	Sn	09 11 36.3	-1.3
PETK	Petropavlovsk-	0.76	349	P	Pn	09 11 18.8	+0.4
	15nm,0.3s,baz=119,slow=9.5,SNR=225						
PETK				S	Sn	09 11 37.9	-0.1
	2.0nm,0.3s,baz=217,slow=27,SNR=3.7						
PET	Petropavlovsk	0.79	33	eP	Pn	09 11 19.1	+0.5
PET				eS	Sn	09 11 37.5	-0.7
PET	Petropavlovsk	0.79	33	ePN	Pn	09 11 19.0	+0.5
PET				eS	Sn	09 11 37.5	-0.7
PET				pmax	pmax		
	comp=Z,37nm,0.4s						
PET				smax	smax		
	comp=N,153nm,0.4s						
PET				smax	smax		
	comp=E,118nm,0.5s						
DALK	Dalny	0.83	36	eP	Pn	09 11 19.3	+0.5
DALK				eS	Sn	09 11 38.1	-0.6
DALK	Dalny	0.83	36	PN	Pn	09 11 19.3	+0.5
DALK				S	Sn	09 11 38.1	-0.6
UGLR	Uglovaya	1.00	32	eP	Pn	09 11 21.2	+1.0
UGLR				eS	Sn	09 11 41.3	+0.1
UGLR	Uglovaya	1.00	32	PN	Pn	09 11 21.2	+1.0
UGLR				S	Sn	09 11 41.3	+0.1
KOK	Koryaka	1.02	24	eP	Pn	09 11 21.3	+1.0
KOK				eS	Sn	09 11 41.6	+0.2
KOK	Koryaka	1.02	24	PN	Pn	09 11 21.3	+1.0
KOK				S	Sn	09 11 41.6	+0.2
AVH	Avacha	1.03	28	eP	Pn	09 11 20.7	+0.4
AVH				eS	Sn	09 11 40.6	-0.8
AVH	Avacha	1.03	28	PN	Pn	09 11 20.7	+0.4
AVH				S	Sn	09 11 40.6	-0.8
SMAR	Somma	1.04	30	eP	Pn	09 11 21.6	+1.0
SMAR	Somma	1.04	30	PN	Pn	09 11 21.6	+1.0
SDLR	Sedlovina	1.08	32	eP	Pn	09 11 21.4	+0.6
SDLR				eS	Sn	09 11 41.8	-0.5
SDLR	Sedlovina	1.08	32	PN	Pn	09 11 21.4	+0.6
SDLR				S	Sn	09 11 41.8	-0.5
KRX	Arik	1.09	23	eP	Pn	09 11 21.7	+0.9
KRX				eS	Sn	09 11 41.6	-0.8
KRX	Arik	1.09	23	PN	Pn	09 11 21.7	+0.9
KRX				S	Sn	09 11 41.6	-0.8
NLC	Nalytchevo	1.18	46	eP	Pn	09 11 21.2	-0.2
NLC				eS	Sn	09 11 41.2	-2.1
NLC	Nalytchevo	1.18	46	PN	Pn	09 11 21.2	-0.2
NLC				S	Sn	09 11 41.2	-2.1
GNL	Ganaly	1.34	0	iP	Pn	09 11 23.1	+0.2
GNL				eS	Sn	09 11 44.8	-1.4
GNL	Ganaly	1.34	0	PN	Pn	09 11 23.1	+0.2
GNL				S	Sn	09 11 44.8	-1.4
SPN	Mys Shipunski	1.47	59	eP	Pn	09 11 24.1	+0.1
SPN				eS	Sn	09 11 46.3	-1.7
SPN	Mys Shipunski	1.47	59	PN	Pn	09 11 24.1	+0.1
SPN				S	Sn	09 11 46.3	-1.7
KII	Karymskiy	1.91	28	eP	Pn	09 11 29.5	+0.9
KII				eS	Sn	09 11 55.4	-0.9
KII	Karymskiy	1.91	28	PN	Pn	09 11 29.5	+0.9
KII				S	Sn	09 11 55.4	-0.9
MKZ	Mys Kozlova	3.16	44	eP	Pn	09 11 43.3	+0.1
MKZ				eS	Sn	09 12 19.8	-2.5
MKZ	Mys Kozlova	3.16	44	PN	Pn	09 11 43.3	+0.1
MKZ				S	Sn	09 12 19.8	-2.5
KBTR	Krutoberegovo	4.80	35	eP	Pn	09 12 04.3	+0.2
KBTR	Krutoberegovo	4.80	35	PN	Pn	09 12 04.3	+0.2
KURK	Kurchatov	47.00	301	P	P	09 19 05.2	-1.2
KURBB	Kurchatov Arra	47.10	301	P	P	09 19 05.2	-2.0
	comp=E,0.4nm,0.6s,baz=62,slow=7.6,SNR=2.7						
MKAR	Makanchi Array	47.28	295	P	P	09 19 07.0	-1.7
MKAR	Makanchi Array	47.28	295	P	P	09 19 07.0	-1.7
	comp=E,0.2nm,0.4s,baz=55,slow=7.6,SNR=4.9						
NVAR	Mina Array Bea	57.23	68	P	P	09 20 26.0	+3.7
	comp=E,0.2nm,0.5s,baz=285,slow=8.3,SNR=2.5						

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*MEX **03** 09:16:34.3±0.7, 14°.91N×92°.64W, h94^{km}±10^{km}, MD3.6*
*UCR **03** 09:16:35.6±1.4, 14°.76N×92°.75W, h20^{km}±428^{km}, MD3.9, ML3.8*
ISC 03 09:16:37.6±2.6, **15°.10N**±0°.10×**92°.64W**±0°.09, **h26**^{km}±22^{km}, **n19**, σ**1^{s}.67**/27, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.40	117	eP	Pn	09 16 46.9	-0.9
THIG				iS	Sn	09 16 57.5	+3.0
PCIG		0.83	317	eP	Pn	09 16 52.9	-0.7
PCIG				iS	Sn	09 17 06.5	+1.5
CCIG	Comitan	1.27	22	iP	Pb	09 17 01.6	+0.5
CCIG				iS	Sn	09 17 15.3	-1.0
FUG	Fuego 3	1.85	110	eP	Pn	09 17 07.3	-0.6
FUG				eS	Sn	09 17 30.7	+0.1
NBG	Las Nubes	2.27	103	eP	Pn	09 17 13.4	-0.3
IXG	Ixpaco	2.30	113	eP	Pn	09 17 13.3	-0.8
IXG				eS	Sn	09 17 41.4	-0.2
MRL	Marmol	2.84	90	eP	Pn	09 17 21.6	0.0
RTR	El Retiro	3.13	112	eP	Pn	09 17 24.2	-1.3
SBLS	San Blas	3.17	113	eP	Pn	09 17 25.7	-0.4
SNJE	San Jose	3.18	112	eP	Pn	09 17 24.4	-1.8
BOQS	Boqueron	3.52	112	eP	Pn	09 17 31.8	+0.9
SNET	Serv Nac Est T	3.58	113	eP	Pn	09 17 30.1	-1.5
SNET				eS	Sn	09 18 13.3	+0.1
SNET				IAML		09 18 20.4	
	comp=Z,346nm,0.3s						
LFU	La Fuente	3.67	111	eP	Pn	09 17 31.1	-1.6
LBRS	Las Brisas	3.73	111	eP	Pn	09 17 33.3	-0.3
LFRS	El Faro	3.76	112	eP	Pn	09 17 33.3	-0.7
PACA	Pacayal	4.48	111	eP	Pn	09 17 45.0	+1.0
PACA				eS	Sn	09 18 40.0	+4.5
PACA				IAML		09 18 55.6	
	comp=Z,869nm,0.4s						
CNCH	Conchagua	5.00	111	eP	Pn	09 17 49.2	-1.9
MOMN	Momotombo	6.50	114	eP	Pn	09 18 09.3	-2.3
COPN	Copaltepe	6.55	116	eP	Pn	09 18 09.9	-2.5
COPN				eS	Sn	09 19 25.4	-0.9
COPN				IAML		09 19 33.3	
	comp=Z,45nm,0.6s						

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*DDA **03** 09:24:08.5, 39°.18N×26°.33E, h7^{km}±5^{km}, ML2.6*
*ISCJB **03** 09:24:09.2±0.6, 39°.16N±0°.02×26°.37E±0°.06, h8^{km}±6^{km}, Error ellipse: s-maj=7.2km s-min=3.8km az=2.5*
*ISK **03** 09:24:09.3, 39°.15N×26°.47E, h9^{km}, ML2.5/6*
ISC 03 09:24:08.3±1.5, **39°.17N**±0°.03×**26°.41E**±0°.05, **h1**^{km}±15^{km}, **n13**, σ**0^{s}.80**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.26	58	iP	Pb	09 24 15.2	-0.5
AYVA				iS	Sb	09 24 19.8	-0.9
AYVA				IAML_P			
	comp=Z,2μm,0.1s						
BAYC	CANAKKALE_Bayr	0.58	11	iP	Pg	09 24 19.6	+0.2
BAYC				IAML_P			
	comp=Z,478nm,0.2s						
EZN	Ezine	0.66	354	PG	Pb	09 24 23.0	+0.5
EZN				SG	Sb	09 24 33.2	+1.1
BOZC	Bozcaada	0.72	338	iP	Pg	09 24 20.1	-2.1
BOZC				iS	Sg	09 24 33.0	+1.4
BOZC				IAML_P			
	comp=Z,727nm,0.2s						
URLA	Izmir	0.82	170	PG	Pb	09 24 25.3	0.0
URLA				SG	Sb	09 24 36.7	-0.2
URLA	Izmir	0.82	170	iP	Pn	09 24 26.7	-0.3
URLA				iS	Sb	09 24 36.3	-0.6
URLA				IAML_P			
	comp=Z,2μm,0.3s						
CHOS	Chios island	0.83	200	PG	Pb	09 24 25.3	-0.2
CHOS				SG	Sb	09 24 37.8	+0.6
BLCB	Balcova	0.93	148	PG	Pg	09 24 26.5	+0.5
BLCB				SG	Sb	09 24 39.3	-0.6
STEP	BALIKESIR_Sava	1.04	78	iP	Pn	09 24 29.6	-0.3
STEP				iS	Sn	09 24 45.5	+0.4
STEP				IAML_P			
	comp=Z,827nm,0.1s						
BALY	Balya	1.10	58	iP	Pn	09 24 31.1	+0.3
BALY				IAML_P			
	comp=Z,1μm,0.2s						
BALB	Balikesir	1.23	67	PN	Pn	09 24 32.2	-0.4
DURS	Dursunbey	1.66	74	iP	Pn	09 24 38.5	0.0
AYDB	Zeytinkoy-Aydi	1.69	136	PN	Pn	09 24 39.0	+0.1

IDC 03 09:25:05.5±2.0, **5°.44S**×**151°.25E**, **h0**^{km}, **mb3.5**/4, **mb1 3.8**/4, **mb1mx3.5**/26, **mbtmp3.6**/4, **MS3.0**/2, **Ms1 3.0**/2, **ms1mx2.4**/36, **Error ellipse: s-maj=106.5km s-min=27.9km az=128.0**, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.87	227	P	P	09 30 00.1	-0.1
	0.4nm,0.5s,baz=54,slow=10,SNR=12						
WRA				LR	LR	09 39 25.1	
	comp=Z,34nm,18.4s,baz=45,slow=39						
ASAR	Alice Springs	24.64	221	P	P	09 30 28.3	+0.2
	0.7nm,0.7s,baz=53,slow=9.2,SNR=12						
FITZ	Fitzroy Crossi	28.00	241	P	P	09 30 58.5	+0.1
	0.9nm,0.3s,baz=78,slow=9.3,SNR=3.7						
PETK	Petropavlovsk-	58.59	5	LR	LR	09 56 18.3	
	comp=Z,15nm,20.5s,baz=261,slow=32						
ILAR	Eielson Array	83.34	22	P	P	09 37 34.3	+0.1
	0.4nm,0.9s,baz=249,slow=4.7,SNR=4.3						
TORD	Torodi Ar. Bea	149.02	286	PKPbc	PKPbc	09 44 55.9	-0.9
	0.5nm,0.7s,baz=79,slow=3.1,SNR=6.0						

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*IDC **03** 09:37:32.6±1.9, 6°.10S×154°.10E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/37, mbtmp3.8/8, MS3.2/1, Ms1 3.2/1, ms1mx2.5/30, Error ellipse: s-maj=62.8km s-min=23.3km az=121.0*
*ISCJB **03** 09:37:38.1±1.9, 6°.1S±0°.2×154°.0E±0°.4, h48^{km}, mb3.6/8, Error ellipse: s-maj=57.9km s-min=19.3km az=29.7*
ISC 03 09:37:39.3±2.0, **6°.1S**±0°.3×**154°.0E**±0°.4, **h48**^{km}, **n10**, σ**0^{s}.76**/9, **mb3.7**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	13.78	285	LR	LR	09 46 45.0	
	comp=Z,106nm,20.2s,baz=288,slow=40						
WRA	Warramunga Arr	23.56	233	P	P	09 42 45.4	-0.3
	0.4nm,0.5s,baz=56,slow=9.5,SNR=8.0						
ASAR	Alice Springs	26.06	226	P	P	09 43 08.8	+0.3
	0.9nm,0.9s,baz=61,slow=8.6,SNR=10						
FITZ	Fitzroy Crossi	30.15	244	P	P	09 43 44.4	-0.6
	1.0nm,0.7s,baz=83,slow=11,SNR=3.4						
CMAR	Chiang Mai Arr	59.56	295	P	P	09 47 38.6	+0.1
	0.4nm,0.3s,baz=96,slow=5.5,SNR=3.0						
SONM	Songino Array	68.11	328	P	P	09 48 33.6	-0.7
	0.4nm,0.4s,baz=72,slow=2.3,SNR=3.5						
MKAR	Makanchi Array	82.14	319	P	P	09 49 56.4	+1.3
	1.0nm,0.7s,baz=101,slow=6.4,SNR=14						
ILAR	Eielson Array	82.93	22	P	P	09 49 58.3	-0.4
	0.3nm,0.9s,baz=243,slow=6.0,SNR=2.5						
ZALV	Zalesovo Beam	82.94	326	P	P	09 49 59.4	+0.4
	1.3nm,0.7s,baz=104,slow=6.3,SNR=5.7						
TORD	Torodi Ar. Bea	151.88	286	PKPbc	PKiKP	09 57 31.0	+0.6
	1.3nm,0.7s,baz=66,slow=1.5,SNR=8.9						

IDC 03 09:41:55.4±1.9, **11°.31S**×**165°.55E**, **h0**^{km}, **mb3.6**/5, **mb1 3.9**/5, **mb1mx3.6**/33, **mbtmp3.6**/5, **MS3.2**/2, **Ms1 3.3**/2, **ms1mx2.7**/22, **Error ellipse: s-maj=122.6km s-min=24.3km az=145.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.21	250	P	P	09 48 17.2	+0.4
	0.4nm,0.5s,baz=82,slow=9.2,SNR=9.2						
ASAR	Alice Springs	32.50	244	P	P	09 48 27.7	-0.4
	0.3nm,0.9s,baz=64,slow=10,SNR=3.5						
JNU	Nakatsue	55.18	324	LR	LR	10 11 10.4	
	comp=Z,18nm,21.3s,baz=123,slow=32						
CMAR	Chiang Mai Arr	72.04	294	LR	LR	10 26 04.4	
	comp=Z,17nm,19.0s,baz=185,slow=37						
ILAR	Eielson Array	83.82	19	P	P	09 54 27.1	+0.6
	0.7nm,0.7s,baz=236,slow=5.4,SNR=9.9						
NVAR	Mina Array Bea	86.34	50	P	P	09 54 40.5	+0.6
	0.3nm,0.6s,baz=227,slow=6.1,SNR=3.1						
YKA	Yellowknife Ar	95.30	27	P	P	09 55 19.2	-1.8
	0.2nm,0.8s,baz=259,slow=4.4,SNR=3.7						

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*ISK **03** 09:51:32.7, 42°.34N×40°.91E, h10^{km}, ML2.6/3*
*NORS **03** 09:51:34.9±0.0, 42°.51N×41°.08E, h5^{km}, MPVA3.5*
*DDA **03** 09:51:34.0, 42°.17N×40°.84E, h5^{km}±2^{km}, ML3.0*
ISC 03 09:51:32.1±1.5, **42°.40N**±0°.04×**40°.92E**±0°.06, **h9**^{km}±12^{km}, **n17**, σ**0^{s}.45**/30, **Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.98	144	PG	Pn	09 51 51.8	-0.3
BATM				SG	Sb	09 52 04.9	+0.5
BCA	Borcka	1.09	151	PG	Pn	09 51 53.4	-0.2
BCA				SG	Sn	09 52 08.0	-0.8
DBOC	Borcka	1.19	152	iP	Pg	09 51 55.2	+0.2
DBOC				iS	Sn	09 52 11.6	+0.2
CHOM	Cayeli-Rize	1.31	185	PN	Pg	09 51 57.1	-0.1
CHOM				SN	Sg	09 52 14.3	+0.2
ARTV	Artvin	1.43	148	iP	Pg	09 51 59.4	-0.1
ARTV				iS	Sb	09 52 17.5	0.0
ARTV				IAML_P			
	comp=Z,3μm,0.1s						
DBAD	Bademkaya	1.50	157	iP	Pb	09 52 00.1	0.0
DBAD				iS	Sb	09 52 19.3	0.0
DBAD				IAML_P			
	comp=Z,935nm,0.1s						
DAGI	Agillar	1.52	150	iP	Pb	09 52 00.4	-0.1
DAGI				IAML_P			
	comp=Z,390nm,0.3s						
NEY	Neytrino	1.57	57	ePg	Pb	09 52 01.3	-0.2
NEY				eSg	Sn	09 52 21.1	+0.1
DDEM	Demirkent	1.63	157	iP	Pn	09 52 01.6	+0.5
DDEM				iS	Sg	09 52 23.9	-0.6
DDEM				IAML_P			
	comp=Z,1μm,0.2s						
SHA1	Shidzhatmaz	1.85	43	iPg	Pb	09 52 06.5	+0.3
SHA1				eSg	Sb	09 52 29.7	+0.2
KIV	Kislovodsk	2.02	39	PN	Pb	09 52 08.4	-0.7
KIV				SN	Sb	09 52 34.7	+0.3
DIGR	Digorskoe uzhe	2.02	75	ePg	Pb	09 52 09.1	-0.1
DIGR				eSg	Sb	09 52 34.1	-0.5
BAYT	Aydıntepe-Bayb	2.09	197	PN	Pn	09 52 07.8	+0.3
BAYB	BAYBURT	2.20	193	iP	Pg	09 52 15.0	+0.8
ZEI	Tsey	2.23	79	ePg	Pb	09 52 12.4	-0.4
ZEI				eSg	Sb	09 52 40.8	+0.1
TRLG	Trialeti	2.52	109	P	Pb	09 52 17.6	-0.1
TRLG				S	Sb	09 52 49.9	+1.0
KELT	Kelkit	2.58	210	iP	Pb	09 52 17.8	-0.8

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*KRNET **03** 09:54:02.6±0.1, 42°.56N×79°.62E, h16^{km}, mb2.9*
*SOME **03** 09:54:02.7, 42°.58N×79°.57E, h10^{km}*
*NNC **03** 09:54:03.3±0.6, 42°.62N×79°.60E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=4.0km s-min=2.2km az=140.0*
ISC 03 09:54:01.2±1.4, **42°.53N**±0°.04×**79°.63E**±0°.03, **h2**^{km}±10^{km}, **n64**, σ**1^{s}.23**/116, **28C-13D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.64	349	P	Pb	09 54 15.1	-0.2
	31nm,0.1s						
SHLS				S	Sb	09 54 24.3	-0.5
	260nm,0.2s						
SHLS	Shalkode	0.64	349	eP	Pb	09 54 15.1	-0.2
	baz=18						
SHLS				eS	Sb	09 54 24.3	-0.5
	baz=18						
SHLS	Shalkode	0.64	349	eP	Pb	09 54 15.1	-0.2
	21nm,0.1s						
SHLS				eS	Sb	09 54 24.3	-0.5
	260nm,0.2s						
UZB	Uzynbulak	0.77	324	P	Pg	09 54 16.5	+0.6
	3.9nm,0.1s						
UZB				S	Sg	09 54 26.7	+0.8
	67nm,0.2s						
UZB	Uzynbulak	0.77	324	eP	Pg	09 54 16.5	+0.6
	baz=23						
UZB				eS	Sg	09 54 26.7	+0.8
	baz=23						
UZB	Uzynbulak	0.77	324	eP	Pg	09 54 16.5	+0.6
	3.9nm,0.1s						
UZB				eS	Sg	09 54 26.7	+0.8
	67nm,0.2s						
PDGK	Podgornoye	0.81	353	P	Pg	09 54 17.1	+0.3
	3.1nm,0.1s						
PDGK				S	Sg	09 54 27.6	+0.4
	9.4nm,0.2s						
PDGK	Podgornoye	0.81	353	⇑P	Pg	09 54 17.1	+0.3
	0.6nm,0.3s						
PDGK				⇓S	Sg	09 54 27.3	0.0
	8.1nm,0.5s						
PDGK	Podgornoye	0.81	353	⇑iP	Pg	09 54 17.0	+0.2
	baz=53						
PDGK				⇑iS	Sg	09 54 27.7	+0.4
	baz=53						
PRZ	Przheval'sk	0.91	268	⇑iP	Pb	09 54 19.5	-0.4
	baz=65						
PRZ				⇑iS	Sb	09 54 31.6	-1.0
	baz=65						
SATY	Saty	1.05	301	P	Pb	09 54 21.7	-0.5
	12nm,0.1s						
SATY				S	Sg	09 54 35.7	+0.7
	49nm,0.1s						
SATY	Saty	1.05	301	eP	Pb	09 54 21.9	-0.3
	1.3nm,0.1s						
SATY				eS	Sg	09 54 35.7	+0.7
	49nm,0.1s						
KTMS	Ketmen	1.06	30	P	Pb	09 54 21.7	-0.7
	14nm,0.1s						
KTMS				S	Sb	09 54 35.4	-1.4
	19nm,0.3s						
KTMS	Ketmen	1.06	30	eP	Pb	09 54 21.7	-0.7
	baz=30						
KTMS				eS	Sb	09 54 35.4	-1.4
	baz=30						
KTMS	Ketmen	1.06	30	eP	Pb	09 54 21.7	-0.7
	14nm,0.1s						
KTMS				eS	Sb	09 54 35.4	-1.4
	19nm,0.3s						
KURS	Kuram	1.44	312	P	Pn	09 54 28.0	-0.4
	1.4nm,0.3s						
KURS				S	Sb	09 54 46.6	-1.1
	5.7nm,0.3s						
KURS	Kuram	1.44	312	eP	Pb	09 54 28.2	-0.6
	baz=11						
KURS				eS	Sb	09 54 46.6	-1.1
	baz=11						
KURS	Kuram	1.44	312	eP	Pb	09 54 28.2	-0.6
	0.5nm,0.3s						
KURS				eS	Sb	09 54 46.6	-1.1
	5.7nm,0.3s						
TARG	Taragay, Kyrgy	1.58	240	⇑iP	Pb	09 54 31.1	-0.2
	baz=39						
TARG				⇑iS	Sg	09 54 53.2	+1.3
	baz=39						
MNBS	Baschi	1.79	330	P	Pn	09 54 33.0	-0.3
	8.3nm,0.2s						
MNBS				S	Sn	09 54 55.3	-1.5
	41nm,0.3s						
MNBS	Baschi	1.79	330	eP	Pn	09 54 33.0	-0.3
	baz=30						
MNBS				eS	Sn	09 54 54.9	-1.9
	baz=30						
MNBS	Baschi	1.79	330	eP	Pn	09 54 33.0	-0.3
	1.4nm,0.2s						
MNBS				eS	Sn	09 54 54.8	-1.9
	41nm,0.3s						
DJR	Jarkent	1.81	4	P	Pb	09 54 35.3	+0.2
	3.1nm,0.2s						
DJR				S	Sg	09 54 58.7	-0.7
	7.6nm,0.3s						
DJR	Jarkent	1.81	4	eP	Pb	09 54 35.3	+0.2
	3.1nm,0.2s						
DJR				eS	Sg	09 54 58.6	-0.7
	7.6nm,0.3s						
KDJ	Kajisay	1.86	259	⇑eP	Pb	09 54 36.7	+0.6
	baz=57						
KDJ				⇑iS	Sg	09 55 01.1	+0.1
	baz=57						
KOTS	Kotyrbulak	1.98	292	Pg	Pg	09 54 39.2	-0.1
	5.2nm,0.2s						
KOTS				Lg	Lg	09 55 05.3	
	53nm,0.4s						
KOTS	Kotyrbulak	1.98	292	eP	Pg	09 54 39.2	-0.1
	baz=91						
KOTS				eS	Sg	09 55 05.3	+0.3
	baz=91						
KOTS	Kotyrbulak	1.98	292	eP	Pg	09 54 39.1	-0.1
	5.2nm,0.2s						
KOTS				eS	Sg	09 55 05.3	+0.3
	53nm,0.4s						
MDOK	Medeo	2.01	289	Pn	Pb	09 54 38.2	-0.3
	2.7nm,0.6s						
MDOK				Sn	Sb	09 55 04.5	+0.6
	17nm,0.7s						
TNSS	Tian-Shan	2.04	285	Pg	Pb	09 54 39.4	+0.1
	6.5nm,0.3s						
TNSS				Lg	Lg	09 55 06.4	
	16nm,0.4s						
TNSS	Tian-Shan	2.04	285	⇓iP	Pb	09 54 39.4	+0.1
	baz=84						
TNSS				⇓eS	Sb	09 55 05.6	+0.3
	baz=84						
TNSS	Tian-Shan	2.04	285	⇓iP	Pb	09 54 39.4	+0.1
	6.5nm,0.3s						
TNSS				eS	Sb	09 55 05.6	+0.3
	14nm,0.3s						
ARXS	Arharly	2.14	323	Pg	Pb	09 54 41.0	+0.2
	3.1nm,0.4s						
ARXS				Lg	Lg	09 55 08.3	
	30nm,0.4s						
ARXS	Arharly	2.14	323	eP	Pb	09 54 41.0	+0.2
	3.1nm,0.4s						
ARXS				eS	Sg	09 55 08.3	-1.7
	30nm,0.4s						
IZV	Izvestkoviy	2.28	284	Pg	Pb	09 54 44.3	+1.1
	11nm,0.2s						
IZV				Lg	Lg	09 55 14.0	
	41nm,0.3s						
IZV	Izvestkoviy	2.28	284	eP	Pb	09 54 44.3	+1.1
	baz=83						
IZV				eS	Sg	09 55 14.1	-0.5
	baz=83						
IZV	Izvestkoviy	2.28	284	eP	Pb	09 54 44.3	+1.1
	11nm,0.2s						
IZV				eS	Sg	09 55 14.0	-0.5
	41nm,0.3s						
CHKK	Chushkaly	2.35	305	Pg	Pb	09 54 44.7	+0.5
	3.2nm,0.1s						
CHKK				Lg	Lg	09 55 15.1	
	30nm,0.2s						
CHKK	Chushkaly	2.35	305	⇑iP	Pb	09 54 44.7	+0.5
	baz=5.0						
CHKK				⇑iS	Sg	09 55 15.1	-1.5
	baz=5.0						
CHKK	Chushkaly	2.35	305	⇑iP	Pb	09 54 44.7	+0.5
	3.2nm,0.1s						
CHKK				⇑iS	Sg	09 55 15.1	-1.5
	30nm,0.2s						
KTBS	Karatobe	2.47	300	Pg	Pb	09 54 46.9	+0.6
	5.0nm,0.2s						
KTBS				Lg	Lg	09 55 18.6	
	50nm,0.4s						
KTBS	Karatobe	2.47	300	eP	Pb	09 54 46.9	+0.6
	baz=98						
KTBS				eS	Sg	09 55 18.6	-1.8
	baz=98						
KTBS	Karatobe	2.47	300	eP	Pb	09 54 46.9	+0.6
	1.5nm,0.2s						
KTBS				eS	Sg	09 55 18.6	-1.8
	50nm,0.4s						
ULHL	Ulahol	2.53	265	⇑iP	Pb	09 54 46.4	-1.0
	baz=64						
ULHL				⇑iS	Sb	09 55 18.3	-0.8
	baz=64						
BOOM	Boomskoye usch	2.73	271	⇓iP	Pb	09 54 49.2	-1.7
	baz=70						
BOOM				⇓eS	Sb	09 55 22.9	-2.0
	baz=70						

KST	**Kastek**	**2.75**	**282**	Pg	**Pb**	**09 54 52.4**	**+1.2**
	7.5nm,0.3s						
KST				Lg	Lg	09 55 28.1	
	10nm,0.3s						
KST	**Kastek**	**2.75**	**282**	*e*P	**Pb**	**09 54 52.4**	**+1.2**
	baz=81						
KST				⇑*i*S	**Sg**	**09 55 28.1**	**-1.5**
	baz=81						
KST	**Kastek**	**2.75**	**282**	*e*P	**Pb**	**09 54 52.4**	**+1.2**
	7.5nm,0.3s						
KST				⇑*i*S	**Sg**	**09 55 28.1**	**-1.5**
	10nm,0.3s						
KAPS	**Kapalarasan**	**2.77**	**356**	Pg	**Pb**	**09 54 52.2**	**+0.8**
	1.4nm,0.3s						
KAPS				Lg	Lg	09 55 27.6	
	4.3nm,0.3s						
KAPS	**Kapalarasan**	**2.77**	**356**	*e*P	**Pb**	**09 54 52.2**	**+0.8**
	1.4nm,0.3s						
KAPS				*e*S	**Sg**	**09 55 27.6**	**-2.5**
	4.3nm,0.3s						
KUU	**Kurty**	**2.77**	**301**	Pg	**Pb**	**09 54 51.6**	**+0.2**
	1.0nm,0.2s						
KUU				Lg	Lg	09 55 26.7	
	18nm,0.2s						
KUU	**Kurty**	**2.77**	**301**	*e*P	**Pb**	**09 54 51.7**	**+0.2**
	baz=0.0						
KUU				*e*S	**Sb**	**09 55 26.7**	**+0.9**
	baz=0.0						
KUU	**Kurty**	**2.77**	**301**	*e*P	**Pb**	**09 54 51.6**	**+0.2**
	1.0nm,0.2s						
KUU				*e*S	**Sb**	**09 55 26.7**	**+0.9**
	18nm,0.2s						
NRN	**Naryn**	**2.92**	**249**	⇑*e*P	**Pb**	**09 54 52.6**	**-1.6**
	baz=48						
NRN				⇑*e*S	**Sb**	**09 55 28.8**	**-1.6**
	baz=48						
DGS	**Degeres**	**2.93**	**285**	Pg	**Pb**	**09 54 54.9**	**+0.7**
	6.7nm,0.3s						
DGS				Lg	Lg	09 55 32.3	
	20nm,0.5s						
DGS	**Degeres**	**2.93**	**285**	*e*P	**Pb**	**09 54 54.9**	**+0.7**
	baz=85						
DGS				*e*S	**Sb**	**09 55 32.3**	**+1.9**
	baz=85						
DGS	**Degeres**	**2.93**	**285**	*e*P	**Pb**	**09 54 54.9**	**+0.7**
	6.7nm,0.3s						
DGS				*e*S	**Sb**	**09 55 32.3**	**+1.9**
	20nm,0.5s						
TKM2	**Tokmak 2**	**3.00**	**279**	⇑Pn	**Pb**	**09 54 54.5**	**-1.0**
	1.1nm,0.4s						
TKM2				⇓Lg	Lg	09 55 35.9	
	4.9nm,0.6s						
TKM2	**Tokmak 2**	**3.00**	**279**	⇓*i*P	**Pb**	**09 54 52.5**	**-3.0**
	baz=78						
TKM2				⇓*i*S	**Sb**	**09 55 29.3**	**-3.4**
	baz=78						
KZA	**Kyzart**	**3.28**	**264**	⇑*e*P	**Pb**	**09 54 57.5**	**-2.9**
	baz=63						
KZA				⇑*i*S	**Sb**	**09 55 36.5**	**-4.5**
	baz=63						
AAK	**Ala-Archa**	**3.80**	**273**	⇑Pg	**Pb**	**09 55 10.3**	**+1.3**
	1.7nm,0.8s						
AAK				⇑Lg	Lg	09 56 02.3	
	3.4nm,0.7s						
ARLS	**Aral**	**4.00**	**262**	⇑*i*P	**Pn**	**09 55 07.1**	**+3.4**
	baz=62						
ARLS				⇑*i*S	**Sn**	**09 55 53.2**	**+2.0**
	baz=62						
MAKZ	**Makanchi**	**4.60**	**21**	⇓Pn	**Pn**	**09 55 13.7**	**+2.0**
	0.9nm,0.8s						
MAKZ				⇓Sn	**Sn**	**09 56 07.7**	**+2.0**
	0.4nm,0.5s						
MAKZ				⇓Lg	Lg	09 56 23.2	
	0.6nm,0.7s						
MK31	**Makanchi Array**	**4.67**	**23**	⇓Pn	**Pn**	**09 55 14.1**	**+1.3**
	0.5nm,0.6s,baz=205,slow=12,SNR=15						
MK31				⇑Sn	**Sn**	**09 56 08.1**	**+0.7**
	0.2nm,0.4s,baz=207,slow=27,SNR=5.1						
MK31				⇑Lg	Lg	09 56 26.3	
	0.4nm,0.5s,baz=199,slow=26,SNR=4.7						

NNC 03 09:54:17.6±2.1**, 37°.02N×70°.92E, h0^{km}, mb3.9, mpv3.6, 4C-2D, Error ellipse: s-maj=16.3km s-min=14.7km az=156.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.61**	**33**	⇑Pn	Pn	09 55 15.2	+0.3
	12nm,0.3s						
SFK				⇑Sn	Sn	09 55 59.5	+1.1
	4.4nm,0.4s						
MNAS	**Manas**	**5.59**	**12**	⇑Pn	Pn	09 55 41.5	-0.6
	1.1nm,0.3s						
MNAS				⇓Sn	Sn	09 56 48.5	+1.4
	4.4nm,0.6s						
KK31	**Karatay Array**	**6.08**	**357**	⇓Pn	Pn	09 55 49.0	+0.3
	1.7nm,0.4s,baz=176,slow=12,SNR=17						
KK31				⇑Sn	Sn	09 57 00.3	+1.3
	2.1nm,0.6s,baz=188,slow=26,SNR=6.8						

KRSC 03 09:56:18.6±0.8**, 54°.52N×161°.58E, h39^{km}**±7^{km}**, ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.09**	**65**	*i* P	Pn	09 56 25.8	+0.8
MKZ				*e*S	Sn	09 56 30.4	+0.9
KZV	**Kizimen**	**0.96**	**309**	*e*P	Pn	09 56 37.2	+1.6
KZV				*e*S	Sn	09 56 49.6	+1.5
TUMD	**Tumrok D**	**0.97**	**316**	*e*P	Pn	09 56 36.8	+1.1
TUMD				*e*S	Sn	09 56 48.6	+0.3
TUMR	**Tumrok**	**1.13**	**313**	*e*P	Pn	09 56 39.6	+1.6
KII	**Karymskiy**	**1.34**	**250**	*e*P	Pn	09 56 43.0	+2.2
KII				*e*S	Sn	09 56 59.2	+1.8
BZGR	**Bezymyannyi-Gr**	**1.51**	**341**	*e*P	Pn	09 56 44.3	+1.1
ZLN	**Zelenaya**	**1.57**	**344**	*e*P	Pn	09 56 46.5	+2.5
ZLN				*e*S	Sn	09 57 05.7	+2.6
LGNR	**Loginova**	**1.65**	**342**	*e*P	Pn	09 56 47.5	+2.2
CIRR	**Tsirk**	**1.67**	**344**	*e*P	Pn	09 56 46.6	+1.2
SPN	**Mys Shipunski**	**1.70**	**214**	*e*P	Pn	09 56 46.1	+0.5
SPN				*e*S	Sn	09 57 05.6	-0.4
KOZ	**Kozyrevsk**	**1.83**	**328**	*e*P	Pn	09 56 49.8	+2.3
KBTR	**Krutoberegovo**	**1.84**	**22**	*e*P	Pn	09 56 49.5	+2.0
KLY	**Klyuchi**	**1.88**	**344**	*e*P	Pn	09 56 49.6	+1.5
KLY				*e*S	Sn	09 57 11.6	+1.1
NLC	**Nalytchevo**	**1.89**	**225**	*e*P	Pn	09 56 50.1	+1.8
NLC				*e*S	Sn	09 57 12.7	+1.9
SDLR	**Sedlovina**	**2.02**	**233**	*e*P	Pn	09 56 53.0	+2.8
BDR	**Baidarnaya**	**2.07**	**354**	*e*P	Pn	09 56 53.1	+2.3
SMAR	**Somma**	**2.07**	**234**	*e*P	Pn	09 56 53.7	+2.7
SMAR				*e*S	Sn	09 57 18.4	+2.8
SMKR	**Semkarok**	**2.07**	**358**	*e*P	Pn	09 56 53.8	+2.9
KRX	**Arik**	**2.09**	**237**	*e*P	Pn	09 56 54.0	+2.9
KRX				*e*S	Sn	09 57 18.7	+2.8
UGLR	**Uglovaya**	**2.09**	**232**	*e*P	Pn	09 56 54.2	+3.0
SRDR	**Sredinnyy**	**2.10**	**330**	*e*P	Pn	09 56 52.9	+1.7
AVH	**Avacha**	**2.10**	**234**	*e*P	Pn	09 56 54.3	+3.1
AVH				*e*S	Sn	09 57 20.3	+4.2
KOK	**Koryaka**	**2.13**	**236**	*e*P	Pn	09 56 54.0	+2.3
SRKR	**Sorokina**	**2.15**	**354**	*e*P	Pn	09 56 54.4	+2.4
ESO	**Esso**	**2.17**	**312**	*e*P	Pn	09 56 54.4	+2.2
DALK	**Dalny**	**2.24**	**230**	*e*P	Pn	09 56 55.8	+2.7
DALK				*e*S	Sn	09 57 22.1	+2.6
PET	**Petropavlovsk**	**2.29**	**230**	*e*P	Pn	09 56 57.0	+3.2
GNL	**Ganaly**	**2.30**	**250**	*e*P	Pn	09 56 56.7	+2.7
KRMR	**Karymshinskiy**	**2.66**	**232**	*e*P	Pn	09 57 02.0	+3.2
KRMR				*e*S	Sn	09 57 33.5	+3.7
RUS	**Russkaya**	**2.78**	**223**	*e*P	Pn	09 57 05.2	+4.7
RUS				*e*S	Sn	09 57 35.6	+2.9
MTVR	**Mutnovka**	**2.88**	**226**	*e*P	Pn	09 57 05.4	+3.4
MTVR				*e*S	Sn	09 57 38.2	+2.8

IDC 03 10:05:12.9±1.6**, 6°.27S×150°.51E, h0^{km}, mb3.9**/4**, mb1 4.2**/4**, mb1mx3.6**/34**, mbtmp3.9**/4**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.6**/27**, Error ellipse: s-maj=72.4km s-min=30.2km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.77**	**228**	P	P	10 09 56.5	+0.9
	3.1nm,0.5s,baz=53,slow=11,SNR=59						
ASAR	**Alice Springs**	**23.54**	**221**	P	P	10 10 24.9	-0.1
	1.0nm,0.6s,baz=55,slow=8.4,SNR=19						
STKA	**Stephens Creek**	**26.80**	**197**	P	P	10 10 53.8	-1.0
	2.0nm,0.8s,baz=358,slow=14,SNR=3.0						
PSI	**Prapat**	**52.28**	**278**	LR	LR	10 40 27.2	
	comp=Z,43nm,19.1s,baz=85,slow=40						
NVAR	**Mina Array Bea**	**94.78**	**52**	P	P	10 18 38.2	+1.1
	0.4nm,0.7s,baz=257,slow=6.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**148.53**	**285**	PKPbc	PKPbc	10 25 01.4	-1.4
	0.6nm,0.5s,baz=66,slow=2.8,SNR=5.0						

DJA ***03*** *10:11:42.3*±*1.0, 4°S*±*7°×15°6E*±*1°2, h31^{km}*±*3^{km}, M4.9/19, mB5.5/2, mb4.9/19, Mw(mB)4.9/2*

ISCJB ***03*** *10:12:07.1*±*0.2, 5°.48S*±*0°.03×154°.23E*±*0°.04, h150^{km}, mb4.5/108, Error ellipse: s-maj=5.0km s-min=4.3km az=11.9*

IDC ***03*** *10:12:10.0*±*1.6, 5°.50S×154°.23E, h164^{km}*±*15^{km}, mb4.0/17, mb1 4.1/19, mb1mx4.1/31, mbtmp4.5/19, MS3.0/1, Ms1 3.0/1, ms1mx2.5/31, Error ellipse: s-maj=14.9km s-min=9.4km az=104.0*

NEIC ***03*** *10:12:09.0*±*0.7, 5°.46S×154°.23E, h154^{km}*±*6^{km}, mb4.6/84, Error ellipse: s-maj=5.0km s-min=4.0km az=97.0*

ISC 03 10:12:08.9±0.3**, 5°.44S**±0°.05**×154°.16E**±0°.06**, h150^{km}, n173, σ1^{s}19**/181**, mb4.5**/113**, 2C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.35**	**302**	*e*Pn	**Pn**	**10 12 47.2**	**-1.1**
RABL				*e*Sn	**Sn**	**10 13 20.2**	**+1.7**
HNR	**Honiara**	**6.97**	**125**	P	**Pn**	**10 13 50.3**	**+1.6**
	11nm,0.3s,baz=191,slow=10.0,SNR=2.7						
HNR				LR	LR	10 16 18.2	
	comp=Z,132nm,20.7s,baz=345,slow=36						
PATS	**Pohnpei**	**12.88**	**19**	*e*Pn	**Pn**	**10 15 05.0**	**-1.7**
COEN	**Coen**	**13.74**	**231**	*e*P	**Pn**	**10 15 20.1**	**+2.4**
GENI	**Genyem**	**14.24**	**281**	P	Pn	10 15 19.6	-4.5
	55nm,1.3s						
CTA	**Charters Tower**	**16.47**	**207**	P	**P**	**10 15 53.2**	**+1.7**
	2.4nm,0.3s,baz=29,slow=13,SNR=30						
CTAO	**Charters Tower**	**16.47**	**207**	*e*Pn	**P**	**10 15 52.7**	**+1.2**
	29nm,0.7s						
KWAJ	**Kwajalein Atol**	**19.49**	**44**	*e*P	**P**	**10 16 23.9**	**-0.7**
	162nm,0.8s						
EIDS	**Eidsvold**	**20.04**	**188**	*e*P	**P**	**10 16 30.2**	**-0.2**
	39nm,1.0s						
DZM	**Mont Dzumac**	**20.36**	**145**	*e*P	**P**	**10 16 32.5**	**-1.5**
	19nm,1.4s						
DZM	**Mont Dzumac**	**20.36**	**145**	P	**P**	**10 16 32.3**	**-1.7**
	5.3nm,0.6s,baz=280,slow=5.5,SNR=20						
MARNC	**Mare, Loyalty**	**20.86**	**141**	*e*P	**P**	**10 16 36.8**	**-2.3**
	45nm,1.2s						
FAKI	**Fak Fak**	**22.00**	**276**	*e*P	**P**	**10 16 51.5**	**+0.1**
	20nm,1.1s						
FAKI	**Fak Fak**	**22.00**	**276**	P	**P**	**10 16 49.1**	**-2.3**
	19nm,1.4s						
SIJI	**Sorong**	**23.30**	**280**	P	**P**	**10 17 04.7**	**+1.0**
	6.8nm,0.5s,baz=326,slow=6.8,SNR=4.1						
WRAB	**Tennant Creek**	**24.06**	**231**	*e*P	**P**	**10 17 10.6**	**0.0**
	9.9nm,0.6s						
WB2	**Warramunga Arr**	**24.07**	**231**	*e*P	**P**	**10 17 09.7**	**-0.9**
WB2				*e*PcP	**PcP**	**10 20 47.5**	**-0.8**
WR1	**Warramunga Arr**	**24.08**	**231**	*e*P	**P**	**10 17 10.9**	**+0.2**
	8.6nm,0.8s						
WR1				*e*PcP	**PcP**	**10 20 47.2**	**-1.1**
WR1				*e*S	**S**	**10 21 17.5**	**0.0**
WR1				*e*ScP	**ScP**	**10 24 12.3**	**-0.7**
WRA	**Warramunga Arr**	**24.08**	**231**	P	**P**	**10 17 10.9**	**+0.2**
	4.9nm,0.4s,baz=56,slow=9.8,SNR=160						
WRA				PcP	**PcP**	**10 20 47.2**	**-1.1**
	0.2nm,0.5s,baz=91,slow=6.5,SNR=3.1						
WRA				S	**S**	**10 21 17.5**	**0.0**
	1.1nm,0.7s,baz=55,slow=15,SNR=4.9						
WRA				ScP	**ScP**	**10 24 12.3**	**-0.7**
	0.6nm,0.8s,baz=58,slow=3.0,SNR=4.6						
BNDI	**Bandanaira**	**24.18**	**271**	P	**P**	**10 17 12.8**	**+1.1**
	111nm,1.0s						
ARMA	**Armidale**	**24.96**	**185**	*e*P	**P**	**10 17 18.9**	**+0.2**
	40nm,1.4s						
AS01	**Alice Springs**	**26.60**	**225**	*e*P	**P**	**10 17 32.5**	**-1.0**
AS31	**Alice Springs**	**26.63**	**225**	*e*P	**P**	**10 17 33.2**	**-0.6**
	1.3nm,0.3s						
ASAR	**Alice Springs**	**26.63**	**225**	P	**P**	**10 17 33.2**	**-0.5**
	1.4nm,0.3s,baz=55,slow=9.1,SNR=93						
ASAR				S	**S**	**10 21 56.1**	**-1.8**
	0.9nm,0.7s,baz=55,slow=14,SNR=5.7						
ASAR				ScP	**ScP**	**10 24 19.5**	**-0.7**
	0.5nm,0.8s,baz=56,slow=3.5,SNR=3.8						
H11S3	**WAKE ISLAND Hy**	**26.80**	**27**	T	T	10 45 47.9	
	baz=207,slow=72,SNR=18						
H11S2	**WAKE ISLAND Hy**	**26.80**	**27**	T	T	10 45 42.9	
	baz=207,slow=72,SNR=16						
H11S1	**WAKE ISLAND Hy**	**26.81**	**27**	T	T	10 45 55.6	
	baz=207,slow=72,SNR=3.8						
STKA	**Stephens Creek**	**28.82**	**203**	*e*P	**P**	**10 17 51.7**	**-1.4**
	1.0nm,0.8s						
STKA	**Stephens Creek**	**28.82**	**203**	P	**P**	**10 17 52.0**	**-1.1**
	4.1nm,0.6s,baz=37,slow=13,SNR=11						
FITZ	**Fitzroy Crossi**	**30.57**	**243**	*e*P	**P**	**10 18 08.3**	**-0.4**
	2.9nm,0.6s						
DAV	**Davao City (W)**	**31.11**	**293**	*e*P	**P**	**10 18 11.6**	**-2.0**
	236nm,0.3s						
BBOO	**Buckleboo**	**32.05**	**210**	*e*P	**P**	**10 18 20.1**	**-1.4**
	6.6nm,0.8s						
EDFI	**Ende, Flores**	**32.38**	**262**	P	**P**	**10 18 23.0**	**-1.8**
	12nm,0.6s,801nm						
BNSI	**Bone**	**33.95**	**270**	P	**P**	**10 18 39.2**	**+0.9**
	17nm,0.8s						
SPSI	**Sidrap Palu**	**34.31**	**271**	P	**P**	**10 18 41.0**	**-0.4**
	9.8nm,0.7s						
MPSI	**Mapaga**	**34.70**	**278**	P	**P**	**10 18 44.4**	**-0.3**
	29nm,0.6s,352nm						
FORT	**Forrest**	**35.18**	**221**	*e*P	**P**	**10 18 47.9**	**-0.7**
	19nm,1.1s						
MBWA	**Marble Bar**	**36.85**	**242**	*e*P	**P**	**10 19 02.2**	**-0.8**
	15nm,1.4s						
TAU	**Tasmania Unive**	**37.81**	**188**	*e*P	**P**	**10 19 14.2**	**+3.5**
	47nm,1.3s						
URZ	**Urewera**	**38.76**	**151**	*e*P	**P**	**10 19 21.4**	**+2.6**
	15nm,1.2s						
BKZ	**Black Stump Fm**	**39.18**	**152**	*e*P	**P**	**10 19 20.8**	**-1.5**
	11nm,1.3s						
THZ	**Tophouse**	**39.85**	**158**	*e*P	**P**	**10 19 26.9**	**-0.9**
	9.6nm,1.0s						
BFZ	**Birch Farm**	**40.30**	**154**	*e*P	**P**	**10 19 30.1**	**-1.4**
	73nm,1.4s						
LTZ	**Lake Taylor**	**40.51**	**159**	*e*P	**P**	**10 19 32.7**	**-0.5**
	16nm,1.3s						
KHZ	**Kahutara**	**40.65**	**158**	*e*P	**P**	**10 19 33.7**	**-0.6**
	32nm,1.5s						
WKZ	**Wanaka**	**41.33**	**164**	*e*P	**P**	**10 19 39.1**	**-0.9**
	46nm,1.5s						
MQZ	**McQueen’s Vall**	**41.45**	**160**	*e*P	**P**	**10 19 40.4**	**-0.5**
	30nm,1.3s						
MLZ	**Mavora Lakes**	**41.59**	**165**	*e*P	**P**	**10 19 40.6**	**-1.5**
GIRL	**Giralia**	**42.16**	**242**	*e*P	**P**	**10 19 47.8**	**+0.9**
	112nm,1.5s						
YOJ	**Yonaguni jima**	**42.47**	**316**	*e*P	**P**	**10 19 50.7**	**+1.3**
	74nm,1.0s						
TWG	**Pinlang**	**42.84**	**312**	*e*P	**P**	**10 19 49.5**	**-3.0**
	48nm,0.9s						
MORW	**Morawa**	**43.02**	**232**	*e*P	**P**	**10 19 53.4**	**-0.4**
	13nm,1.4s						
NACB	**Ninganchiao**	**43.28**	**314**	*e*P	**P**	**10 19 56.8**	**+0.8**
	24nm,1.0s						
TPUB	**Ta-pu**	**43.45**	**312**	*e*P	**P**	**10 19 57.5**	**+0.2**
	64nm,1.4s						
SSLB	**Suanglung**	**43.51**	**313**	*e*P	**P**	**10 19 58.4**	**+0.6**
	16nm,1.3s						
YHNB	**Yeheng**	**43.75**	**315**	*e*P	**P**	**10 20 01.3**	**+1.5**
	18nm,1.0s						
JNU	**Nakatsue**	**44.26**	**332**	*e*P	**P**	**10 20 03.1**	**-0.6**
	16nm,0.8s						
KSM	**Kuching**	**44.34**	**278**	*e*P	**P**	**10 20 05.1**	**+0.5**
	30nm,0.7s						
MJAR	**Matsushiro Arr**	**44.35**	**342**	P	**P**	**10 20 02.9**	**-1.4**
	1.3nm,0.6s,baz=173,slow=9.0,SNR=5.2						
MAJO	**Matsushiro**	**44.35**	**342**	*e*P	**P**	**10 20 03.7**	**-0.7**
	12nm,1.1s						
MAT	**Matsushiro**	**44.35**	**342**	P	**P**	**10 20 03.2**	**-1.1**
MJB9	**Matsu-Tunnel**	**44.36**	**342**	*e*P	**P**	**10 20 03.5**	**-0.9**
	13nm,1.1s						
CISI	**Cisompet, Garu**	**46.08**	**265**	*e*P	**P**	**10 20 17.7**	**-0.7**
	53nm,0.5s						
CISI	**Cisompet, Garu**	**46.08**	**265**	P	**P**	**10 20 17.1**	**-1.3**
	65nm,0.6s						
KSRS	**Korea Array**	**49.18**	**332**	P	**P**	**10 20 42.2**	**+0.4**
	5.5nm,0.7s,baz=147,slow=7.3,SNR=29						
KS15	**Wonju Array Si**	**49.19**	**332**	*e*P	**P**	**10 20 42.5**	**+0.6**
KSAR	**Wonju Array Be**	**49.19**	**332**	P	**P**	**10 20 42.2**	**+0.3**
KS01	**Wonju Array Si**	**49.22**	**332**	*e*P	**P**	**10 20 41.7**	**-0.3**
NJ2	**Nanjing**	**50.20**	**320**	*e*P	**P**	**10 20 49.3**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
USA0B	**Ussuriysk Arra**	**53.30**	**340**	*e*P	**P**	**10 21 11.3**	**-1.0**
	comp=Z,3.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.30**	**340**	P	**P**	**10 21 12.2**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=178,slow=6.2,SNR=5.6						
NONG	**Nongkai**	**55.47**	**296**	P	**P**	**10 21 29.4**	**+0.8**
	comp=Z,0.6nm,0.6s						
LPH	**Laupahoehoe**	**55.64**	**61**	*e*P	**P**	**10 21 34.0**	**+4.3**
PBKT	**Sadao Pong**	**56.95**	**294**	*e*P	**P**	**10 21 41.2**	**+2.1**
UTTA	**Uttaradit**	**57.70**	**295**	P	**P**	**10 21 45.8**	**+1.5**
	comp=Z,3.2nm,0.9s						
NANT	**Nan**	**57.91**	**296**	P	**P**	**10 21 46.6**	**+0.8**
	comp=Z,10nm,0.7s,comp=Z,122nm						
XAN	**Xi'an**	**58.02**	**316**	P	**P**	**10 21 46.1**	**-0.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,170nm,6.5s						
XAN	**Xi'an**	**58.02**	**316**	*e*P	**P**	**10 21 46.4**	**0.0**
	comp=Z,7.4nm,0.5s						
PETK	**Petropavlovsk-**	**58.40**	**3**	P	**P**	**10 21 49.9**	**+1.3**
	comp=Z,2.5nm,0.5s,baz=168,slow=8.7,SNR=5.8						
PEA1	**Petropavlovsk-**	**58.41**	**2**	*e*P	**P**	**10 21 49.9**	**+1.3**
SUKH	**Sukhothai**	**58.45**	**294**	P	**P**	**10 21 51.8**	**+2.2**
	comp=Z,4.0nm,0.9s						
KMI	**Kunming**	**58.47**	**304**	P	**P**	**10 21 51.4**	**+1.6**
KMI				pmax	pmax		
	comp=Z,16nm,0.7s						
PAYA	**Payao**	**58.83**	**296**	P	**P**	**10 21 53.6**	**+1.4**
	comp=Z,7.2nm,0.7s						
CM01	**Chiang Mai Arr**	**59.35**	**295**	*e*P	**P**	**10 21 57.3**	**+1.5**
CMAR	**Chiang Mai Arr**	**59.38**	**295**	P	**P**	**10 21 57.2**	**+1.3**
	comp=Z,7.1nm,0.8s,baz=109,slow=4.9,SNR=35						
CHTO	**Chiang Mai**	**59.49**	**295**	*e*P	**P**	**10 21 57.4**	**+0.7**
	comp=Z,11nm,1.3s						
CHTO	**Chiang Mai**	**59.49**	**295**	P	**P**	**10 21 58.4**	**+1.7**
	comp=Z,31nm,1.0s						
HHC	**Hu-ho-hao-te**	**60.36**	**324**	*e*P	**P**	**10 22 03.8**	**+1.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZH	**Lanzhou**	**62.63**	**315**	⇑P	**P**	**10 22 19.2**	**+1.4**
LZH				pP	pwP	10 22 58.5	+1.0
LZH				sP	sP	10 23 07.8	-0.2
LZH				PP	**PP**	**10 24 40.3**	**+2.8**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,75nm,7.8s						
GTA	**Gaotai**	**67.05**	**317**	*e*P	**P**	**10 22 47.3**	**+1.0**
GTA				pP	pP	10 23 21.2	+0.2
GTA				sP	sP	10 23 36.9	+0.2
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ULN	**Ulaanbaatar**	**67.25**	**328**	*e*P	**P**	**10 22 48.5**	**+1.1**
	comp=Z,9.1nm,1.0s						
SONA0	**Songino Array**	**67.59**	**327**	*e*P	**P**	**10 22 50.0**	**+0.5**
SONM	**Songino Array**	**67.59**	**327**	P	**P**	**10 22 50.0**	**+0.5**
	comp=Z,3.3nm,0.4s,baz=142,slow=4.5,SNR=24						
SONA1	**Songino Array**	**67.59**	**327**	*e*P	**P**	**10 22 50.2**	**+0.6**
SHL	**Shillong**	**67.80**	**300**	*e*P	**P**	**10 22 52.0**	**+0.6**
	comp=Z,30nm,1.0s						
LSA	**Lhasa**	**69.72**	**304**	*e*P	**P**	**10 23 04.5**	**+1.0**
	comp=Z,5.7nm,0.8s						
SDPT	**Sand Point**	**71.20**	**25**	*e*P	**P**	**10 23 10.9**	**-0.4**
	comp=Z,68nm,1.1s						
VNDA	**Vanda**	**72.15**	**178**	*e*P	**P**	**10 23 16.4**	**-0.3**
	comp=Z,6.8nm,1.2s						
VNDA	**Vanda**	**72.15**	**178**	P	**P**	**10 23 16.3**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=327,slow=6.2,SNR=8.5						
RAMN	**Ramite**	**72.74**	**300**	*e*P	**P**	**10 23 21.6**	**+0.1**
	comp=Z,6.5nm,0.4s						
JIRN	**Jiri**	**73.28**	**301**	*e*P	**P**	**10 23 25.1**	**+0.3**
GUN	**Gumba**	**73.61**	**301**	*e*P	**P**	**10 23 26.8**	**+0.1**
GAMB	**Gambell**	**73.63**	**15**	*e*P	**P**	**10 23 27.1**	**+1.6**
	comp=Z,3.2nm,0.9s						
BILL	**Bilibino**	**73.80**	**5**	*e*P	**P**	**10 23 27.0**	**+0.5**
	comp=Z,4.9nm,0.7s						
PKI	**Pulchoki**	**73.92**	**301**	*e*P	**P**	**10 23 28.5**	**0.0**
PKIN	**Phulchoki**	**73.94**	**301**	*e*P	**P**	**10 23 28.5**	**0.0**
KKN	**Kakani**	**74.09**	**301**	*e*P	**P**	**10 23 29.5**	**+0.2**
DMN	**Daman**	**74.19**	**301**	*e*P	**P**	**10 23 30.3**	**+0.3**
	comp=Z,26nm,0.8s						
PALK	**Pallekele**	**74.38**	**279**	*e*P	**P**	**10 23 31.7**	**+0.7**
	comp=Z,12nm,0.8s						
OHAK	**Old Harbor**	**75.50**	**26**	*e*P	**P**	**10 23 36.9**	**+0.4**
	comp=Z,58nm,1.4s						
KOLN	**Koldanda**	**75.53**	**300**	*e*P	**P**	**10 23 37.4**	**-0.2**
	comp=Z,25nm,0.6s						
DANN	**Dangsing**	**75.53**	**301**	*e*P	**P**	**10 23 37.4**	**-0.3**
	comp=Z,29nm,0.6s						
ANM	**Nome**	**75.98**	**17**	*e*P	**P**	**10 23 39.9**	**+0.8**
	comp=Z,3.0nm,0.6s						
PYUN	**Piuthan**	**76.13**	**301**	*e*P	**P**	**10 23 40.6**	**-0.4**
	comp=Z,35nm,0.8s						
WMQ	**Urumqi**	**77.13**	**317**	*e*P	**P**	**10 23 47.0**	**+0.9**
HYB	**Hyderabad**	**77.98**	**289**	*i* P	**P**	**10 23 50.5**	**-0.8**
SEW	**Seward**	**78.78**	**25**	*e*P	**P**	**10 23 54.8**	**+0.1**
	comp=Z,33nm,1.4s						
SUA	**Susitna One**	**78.99**	**24**	*e*P	**P**	**10 23 55.6**	**-0.4**
	comp=Z,11nm,0.8s						
RC01	**Rabbit Creek A**	**79.19**	**24**	*e*P	**P**	**10 23 57.2**	**+0.3**
	comp=Z,17nm,1.0s						
RDOG	**Red Dog Mine**	**79.23**	**15**	*e*P	**P**	**10 23 57.5**	**+0.4**
	comp=Z,5.7nm,0.6s						
PPLA	**Purkeypile**	**79.24**	**22**	*e*P	**P**	**10 23 56.8**	**-0.6**
	comp=Z,29nm,1.4s						
CAST	**Castle Rocks**	**79.59**	**22**	*e*P	**P**	**10 23 58.9**	**-0.3**
	comp=Z,11nm,1.4s						
PMR	**Palmer**	**79.71**	**24**	*e*P	**P**	**10 23 59.4**	**-0.4**
	comp=Z,23nm,1.4s						
SML	**Sawmill**	**80.14**	**24**	*e*P	**P**	**10 24 01.4**	**-0.8**
	comp=Z,17nm,1.0s						
GLI	**Glacier Island**	**80.18**	**25**	*e*P	**P**	**10 24 01.8**	**-0.5**
	comp=Z,22nm,1.1s						
TRF	**Thorofare Moun**	**80.27**	**22**	*e*P	**P**	**10 24 02.1**	**-0.9**
	comp=Z,1.0nm,0.7s						
IM3	**Indian Mountai**	**80.53**	**19**	*e*P	**P**	**10 24 03.9**	**-0.2**
SCM	**Sheep Creek Mo**	**80.56**	**24**	*e*P	**P**	**10 24 05.0**	**+0.6**
	comp=Z,14nm,1.1s						
RND	**Reindeer**	**80.79**	**22**	*e*P	**P**	**10 24 05.0**	**-0.7**
	comp=Z,5.0nm,0.8s						
MCK	**McKinley**	**80.93**	**22**	*e*P	**P**	**10 24 05.5**	**-0.8**
	comp=Z,7.7nm,0.8s						
KLU	**Klutina**	**80.97**	**25**	*e*P	**P**	**10 24 06.7**	**+0.1**
	comp=Z,21nm,1.4s						
MLY	**Manley**	**80.99**	**21**	*e*P	**P**	**10 24 06.1**	**-0.5**
	comp=Z,4.1nm,0.6s						
DHY	**Denali Highway**	**81.19**	**23**	*e*P	**P**	**10 24 07.5**	**-0.3**
	comp=Z,5.5nm,0.7s						
WRH	**Wood River Hil**	**81.64**	**22**	*e*P	**P**	**10 24 09.2**	**-0.7**
	comp=Z,4.1nm,1.0s						
MK01	**Makanchi Array**	**81.68**	**319**	*e*P	**P**	**10 24 10.1**	**-0.5**
MK31	**Makanchi Array**	**81.70**	**319**	*e*P	**P**	**10 24 10.4**	**-0.3**
MK32	**Makanchi Array**	**81.70**	**319**	*e*P	**P**	**10 24 10.5**	**-0.2**
MKAR	**Makanchi Array**	**81.70**	**319**	*e*P	**P**	**10 24 10.3**	**-0.4**
	comp=Z,20nm,0.8s						
MKAR	**Makanchi Array**	**81.70**	**319**	P	**P**	**10 24 10.5**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=94,slow=8.3,SNR=46						
MDM	**Murphy Dome**	**81.85**	**21**	*e*P	**P**	**10 24 11.0**	**-0.1**
	comp=Z,3.0nm,1.0s						
MAKZ	**Makanchi**	**81.91**	**319**	*e*P	**P**	**10 24 11.2**	**-0.6**
	comp=Z,4.4nm,0.8s						
COLA	**College**	**81.94**	**21**	*e*P	**P**	**10 24 10.4**	**-1.1**
	comp=Z,10nm,0.6s						
HDA	**Harding Lake**	**82.03**	**22**	*e*P	**P**	**10 24 11.4**	**-0.7**
	comp=Z,2.9nm,0.6s						
IL1	**Eielson Array**	**82.24**	**22**	*e*P	**P**	**10 24 11.8**	**-1.3**
ILAR	**Eielson Array**	**82.24**	**22**	P	**P**	**10 24 11.6**	**-1.5**
	comp=Z,3.0nm,0.6s,baz=243,slow=5.2,SNR=73						
ILB	**Eielson Array**	**82.24**	**22**	*e*P	**P**	**10 24 11.3**	**-1.8**
ZAA0	**Zalesovo Array**	**82.44**	**326**	*e*P	**P**	**10 24 13.2**	**-1.2**
	comp=Z,5.6nm,1.1s						
ZALV	**Zalesovo Beam**	**82.44**	**326**	*e*P	**P**	**10 24 12.5**	**-1.8**
ZALV	**Zalesovo Beam**	**82.44**	**326**	P	**P**	**10 24 13.1**	**-1.3**
	comp=Z,3.3nm,0.4s,baz=118,slow=5.6,SNR=22						
ZAA1	**Zalesovo Array**	**82.44**	**326**	*e*P	**P**	**10 24 13.1**	**-1.3**
RIDG	**Independ’e Rid**	**82.50**	**23**	*e*P	**P**	**10 24 15.9**	**+1.3**
	comp=Z,5.7nm,0.8s						
SCRK	**Sand Creek**	**82.95**	**23**	*e*P	**P**	**10 24 16.1**	**-0.8**
	comp=Z,2.2nm,0.7s						

PRP	Porcupine Dome	83.11	21	*e*P	P	10 24 17.1	-0.7
	comp=Z,1.4nm,1.0s						
FYU	Fort Yukon	83.73	21	*e*P	P	10 24 21.1	+0.3
	comp=Z,12nm,1.5s						
HYT	Haines Junctio	84.37	27	*e*P	P	10 24 24.6	+0.3
	comp=Z,7.7nm,0.8s						
QSPA	South Pole Qui	84.53	180	*e*P	P	10 24 24.0	-1.0
	comp=Z,3.4nm,0.6s						
DAWY	Dawson	84.81	24	*e*P	P	10 24 26.6	+0.3
	comp=Z,6.8nm,1.3s						
KURK	Kurchatov	85.11	322	*e*P	P	10 24 27.0	-0.9
	comp=Z,10nm,1.4s						
WHY	Whitehorse	85.52	28	*e*P	P	10 24 30.6	+0.6
	comp=Z,13nm,1.4s						
INK	Inuvik	88.56	21	*e*P	P	10 24 43.2	-1.1
	comp=Z,3.0nm,1.0s						
NV01	Mina Array Sit	91.41	52	*e*P	P	10 24 58.0	-0.6
NVAR	Mina Array Bea	91.41	52	P	P	10 24 58.8	+0.2
	comp=Z,1.5nm,1.0s,baz=266,slow=6.9,SNR=5.7						
SYO	Syowa Base	93.52	199⇑	*e*pP	pP	10 25 41.0	-3.7
YKA	Yellowknife Ar	95.35	28	P	P	10 25 15.1	-0.7
	comp=Z,0.5nm,0.7s,baz=270,slow=4.7,SNR=14						
YKB5	Yellowknife Ar	95.35	28	*e*P	P	10 25 14.5	-1.3
PV23	Carpenter Ridg	98.69	52	*e*P	P	10 25 29.2	-2.6
	comp=Z,4.6nm,1.2s						
AKASG	Malin Array Be	115.80	325	PKP	PKPdf	10 30 33.1	-0.6
	comp=Z,0.5nm,0.5s,baz=44,slow=2.1,SNR=3.1						
AKBB	Malin Array Si	115.80	325	*e*PKPdf	PKPdf	10 30 33.1	-0.5
GERES	GERESS Array B	125.30	329	PKP	PKPdf	10 30 52.4	+0.2
	comp=Z,0.9nm,0.6s,baz=48,slow=2.0,SNR=5.6						
GEA0	GERESS Array S	125.31	329	*e*PKPdf	PKPdf	10 30 52.5	+0.3
PTGA	Pitinga	145.37	99	*e*PKPdf	PKPdf	10 31 29.6	-0.6
TORD	Torodi Ar. Bea	151.79	288	PKPbc	PKPbc	10 31 44.9	-2.1
	comp=Z,0.5nm,0.3s,baz=92,slow=2.3,SNR=7.7						
TORD				PKPab	PKPab	10 31 55.3	-1.2
	comp=Z,0.4nm,0.4s,baz=98,slow=4.6,SNR=5.0						
TOA1	Torodi Ar. Sit	151.80	288	*e*PKPbc	PKPdf	10 31 44.9	+4.4
TOA1				*e*PKPab	PKPab	10 31 55.3	-1.2

ISC 03 10:14:60.0±1.6**, 45°.19N**±0°.05×**15°.77E**±0°.09**, h8^{km}, n9,**
σ**0^s.77**/12**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZLJ	Ozalj	0.47	333	*e*Pg	Pg	10 15 09.4	+0.3
OZLJ				Sg	Sg	10 15 16.6	+1.2
BOJS	Bojanci	0.48	311	*i* Pg	Pg	10 15 09.8	+0.5
BOJS				*i* Sg	Sb	10 15 17.2	-0.8
UDBI	Udbina	0.67	180	Sg	Sg	10 15 22.1	+0.7
CRES	Cresnjev	0.67	341⇑	*i*Pg	Pg	10 15 12.9	0.0
GCIS	Gornji Cirnik	0.68	352	*i* Pg	Pg	10 15 13.5	+0.4
GCIS				*i* Sg	Sn	10 15 25.7	-1.1
GBRS	Gornja Briga	0.76	297	*i* Pg	Pg	10 15 15.1	+0.5
VISS	Visnje	0.90	313	*i* Pg	Pg	10 15 17.2	0.0
NVLJ	Novalja	0.90	226	Sg	Sn	10 15 31.1	-0.9
KNDS	Knezji Dol	1.04	289	*i* Pg	Pg	10 15 20.1	+0.3

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*IDC **03** 10:22:34.1±0.8, 10°.64S×166°.56E, h0^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.3/31, mbtmp4.2/17, ML3.5/2, MS4.0/13, Ms1 4.0/13, ms1mx3.6/36, Error ellipse: s-maj=26.5km s-min=16.5km az=131.0*

*NEIC **03** 10:22:36.4±0.1, 10°.53S×166°.48E, h10^{km}, mb4.7/90, Error ellipse: s-maj=6.0km s-min=3.3km az=149.0*

*GCMT **03** 10:22:37.4±0.4, 10°.51S±0°.04×166°.49E±0°.03, h28^{km}, MW5.0/69, Moment Tensor Solution. s28,c31; s69,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.27±.27; $M_{\theta\theta}$2.25±.17; $M_{\phi\phi}$2.02±.16; $M_{r\theta}$0.89±.27; $M_{\theta\phi}$-1.01±.09; $M_{\phi r}$0.49±.26; Best double couple: $M_0$3.80900×10^{16} NP1:ϕ_s301.00000°, δ49.00000°, λ-103.00000°. NP2: ϕ_s141.00000°, δ43.00000°, λ-76.00000°. Principal axes: T 3.1680, Plg3.0000°, Azm40.0000°; N 1.2830, Plg10.0000°, Azm310.0000°; P -4.4500, Plg80.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **03** 10:22:38.8±0.2, 10°.60S±0°.06×166°.41E±0°.04, h36^{km}, mb4.7/107, MS4.0/14 Error ellipse: s-maj=9.2km s-min=5.5km az=156.1*

ISC 03 10:22:40.3±0.5**, 10°.60S**±0°.08×**166°.53E**±0°.10**, h36^{km}, n159,**
σ**0^s.98**/142**, mb4.7**/107**, MS4.1**/14**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.58	280	*e*P	Pn	10 24 20.0	+5.4
HNR	Honiara	6.58	280	*e*Pn	Pn	10 24 17.3	+2.7
HNR	Honiara	6.58	280	Pn	Pn	10 24 11.9	-2.7
	1.9nm,0.3s,baz=113,slow=3.5,SNR=3.3						
HNR				LR	LR	10 26 49.2	
	comp=Z,2μm,21.4s,baz=118,slow=38						
DZM	Mont Dzumac	11.41	180	*e*Pn	Pn	10 25 19.3	-1.6
	41nm,1.6s						
DZM				*e*LR	LR	10 27 58.7	
	comp=Z,1μm,26.9s						
DZM	Mont Dzumac	11.41	180	*e*Pn	Pn	10 25 21.2	+0.3
DZM	Mont Dzumac	11.41	180	Pn	Pn	10 25 19.7	-1.2
	0.2nm,0.3s,baz=0.5,slow=12,SNR=3.0						
EIDS	Eidsvold	20.75	223	*e*P	P	10 27 18.9	+0.8
	26nm,0.9s						
MANU	Manus Island	20.84	293	*e*P	Pn	10 27 21.5	-0.2
	33nm,0.6s						
CTA	Charters Tower	21.69	242	P	P	10 27 28.0	-0.2
	6.2nm,0.8s,baz=92,slow=15,SNR=7.5						
CTAO	Charters Tower	21.69	242	*e*P	P	10 27 29.1	+0.9
	14nm,0.9s						
COEN	Coen	23.06	259	*e*P	P	10 27 42.6	-0.2
	6.6nm,1.0s						
JAY	Jayapura	26.86	286	LR	LR	10 39 28.8	
	comp=Z,206nm,18.5s,baz=32,slow=38						
H11S2	WAKE ISLAND Hy	28.90	0	T	T	10 58 54.6	
	baz=181,slow=76,SNR=146						
H11S3	WAKE ISLAND Hy	28.91	0	T	T	10 58 55.2	
	baz=181,slow=76,SNR=133						
H11S1	WAKE ISLAND Hy	28.92	0	T	T	10 58 56.5	
	baz=181,slow=76,SNR=110						
URZ	Urewera	29.13	163	LR	LR	10 37 14.2	
	comp=Z,108nm,20.9s,baz=341,slow=30						
BKZ	Black Stump Fm	29.81	164	*e*P	P	10 28 44.8	+0.9
	9.1nm,1.1s						
H11N1	WAKE ISLAND Hy	30.12	1	T	T	11 00 26.1	
	baz=182,slow=76,SNR=49						
H11N3	WAKE ISLAND Hy	30.13	1	T	T	11 00 27.3	
	baz=182,slow=76,SNR=31						
H11N2	WAKE ISLAND Hy	30.14	1	T	T	11 00 29.2	
	baz=182,slow=76,SNR=32						
STKA	Stephens Creek	31.30	224	*e*P	P	10 28 56.2	-0.9
	0.9nm,1.1s						
STKA	Stephens Creek	31.30	224	P	P	10 28 56.5	-0.6
	1.5nm,0.8s,baz=204,slow=20,SNR=2.5						
STKA				LR	LR	10 40 41.7	
	comp=Z,410nm,20.8s,baz=26,slow=35						
WRAB	Tennant Creek	32.35	249	*e*P	P	10 29 05.0	-1.5
	14nm,1.0s						
WR1	Warramunga Arr	32.36	249	*e*P	P	10 29 04.9	-1.8
	19nm,1.1s						
WR1				*e*PcP	PcP	10 31 53.0	-1.0
WRA	Warramunga Arr	32.36	249	P	P	10 29 04.9	-1.8
	8.7nm,1.1s,baz=81,slow=9.0,SNR=24						
WRA				PcP	PcP	10 31 53.0	-1.0
	0.3nm,0.9s,baz=89,slow=2.4,SNR=3.0						
WRA				LR	LR	10 42 19.0	
	comp=Z,414nm,18.0s,baz=70,slow=37						
RPZ	Rata Peaks	33.23	174	*e*P	P	10 29 17.6	+3.7
	5.5nm,0.8s						
AS01	Alice Springs	33.64	243	*e*P	P	10 29 18.1	+0.2
AS31	Alice Springs	33.68	243	*e*P	P	10 29 18.4	+0.3
	1.9nm,0.8s						
ASAR	Alice Springs	33.68	243	P	P	10 29 16.2	-2.0
	4.0nm,0.9s,baz=73,slow=9.6,SNR=18						
ASAR				PcP	PcP	10 31 56.1	-1.6
	0.5nm,0.8s,baz=41,slow=3.1,SNR=3.5						
ASAR				LR	LR	10 42 03.9	
	comp=Z,341nm,19.9s,baz=80,slow=35						
SIJI	Sorong	36.35	283	LR	LR	10 46 51.5	
	comp=Z,165nm,18.4s,slow=40						
FITZ	Fitzroy Crossi	40.24	255	*e*P	P	10 30 13.2	-0.7
	12nm,0.9s						
FITZ	Fitzroy Crossi	40.24	255	LR	LR	10 46 09.2	
	comp=Z,265nm,20.3s,baz=90,slow=35						
BATI	Baumata	42.14	266	LR	LR	10 47 47.1	
	comp=Z,123nm,21.7s,baz=124,slow=36						
PPT	Papeete	43.06	104	LR	LR	10 46 15.6	
	comp=Z,121nm,19.6s,baz=282,slow=33						
PPT2	Papeete2	43.06	104	*e*LR	LR	10 42 39.4	
	comp=Z,258nm,27.2s						
TBI	Tubuai	43.79	113	*e*LR	LR	10 42 58.7	
	comp=Z,236nm,29.8s						
MBWA	Marble Bar	46.07	251	*e*P	P	10 31 00.1	-1.0
	61nm,1.0s						
NWAO	Narrogin (SRO)	50.35	236	LR	LR	10 52 54.0	
	comp=Z,664nm,18.8s,baz=314,slow=36						
TAOE	Nuku Hiva Isla	52.53	93	*e*LR	LR	10 46 50.4	
	comp=Z,175nm,26.0s						
MJAR	Matsushiro Arr	53.94	332	P	P	10 31 59.7	-0.8
	3.3nm,1.0s,baz=173,slow=8.3,SNR=6.7						
MAJO	Matsushiro	53.94	332	*e*P	P	10 31 59.7	-0.8
JNU	Nakatsue	55.17	323	*e*P	P	10 32 10.1	+0.5
	21nm,1.1s						
KSRS	Korea Array	59.95	325	P	P	10 32 42.6	-0.4
	1.9nm,0.8s,baz=137,slow=7.1,SNR=7.1						
KS15	Wonju Array Si	59.96	325	*e*P	P	10 32 43.0	-0.2
KSAR	Wonju Array Be	59.96	325	P	P	10 32 42.6	-0.5
USRK	Ussuriysk Ar.	62.90	333	P	P	10 33 03.5	+0.6
	8.1nm,1.1s,baz=130,slow=6.0,SNR=9.0						
MDJ	Mudanjiang	64.32	332	*e*P	P	10 33 13.1	+0.9
	3.2nm,0.6s						
CN2	Changchun	65.76	329	*e*P	P	10 33 27.6	+6.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VNDA	Vanda	66.95	181	LR	LR	10 59 41.8	
	comp=Z,43nm,18.6s,baz=302,slow=33						
XAN	Xi'an	70.39	312	P	P	10 33 50.5	-0.5
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,46nm,3.8s						
KMI	Kunming	71.55	301	P	P	10 34 00.5	+2.1
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
HHC	Hu-ho-hao-te	71.99	319	*e*P	P	10 34 00.2	-0.4
HHC				S	S	10 43 18.1	-1.7
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,88nm,5.2s						
HHC				LR	LR		
	comp=N,160nm,20.7s						
HHC				LR	LR		
	comp=E,240nm,20.7s						
HHC				LR	LR		
	comp=Z,240nm,18.1s						
CMAR	Chiang Mai Arr	72.64	293	P	P	10 34 05.0	+0.2
	comp=Z,0.5nm,0.3s,baz=134,slow=6.4,SNR=6.5						
BRLK	Bradley Lake	77.95	20	*e*P	P	10 34 35.0	+0.5
	comp=Z,34nm,1.2s						
ULN	Ulaanbaatar	78.39	324	*e*P	P	10 34 37.9	+0.5
	comp=Z,6.3nm,1.0s						
BILL	Bilibino	78.43	360	*e*P	P	10 34 37.3	+0.4
	comp=Z,17nm,1.1s						
SONA0	Songino Array	78.76	323	*e*P	P	10 34 39.7	+0.3
SONM	Songino Array	78.76	323	P	P	10 34 39.7	+0.3
	comp=Z,1.5nm,1.0s,baz=135,slow=5.3,SNR=8.3						
GTA	Gaotai	79.31	314	*e*P	P	10 34 43.6	+1.0
GTA				pP	pP	10 34 54.3	+1.4
GTA				sP	sP	10 34 58.3	+0.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
HMT	Hamilton	80.74	22	*e*P	P	10 34 49.0	-0.7
	comp=Z,67nm,1.1s						
RND	Reindeer	81.27	19	*e*P	P	10 34 52.3	-0.2
	comp=Z,5.8nm,1.1s						
IM3	Indian Mountai	81.79	15	*e*P	P	10 34 55.4	+0.2
MDM	Murphy Dome	82.57	18	*e*P	P	10 34 59.5	+0.2
	comp=Z,11nm,1.2s						
HDA	Harding Lake	82.58	19	*e*P	P	10 34 59.1	-0.2
	comp=Z,14nm,1.0s						
IL1	Eielson Array	82.85	18	*e*P	P	10 34 59.4	-1.2
ILAR	Eielson Array	82.85	18	P	P	10 34 59.6	-1.1
	comp=Z,4.6nm,0.9s,baz=228,slow=5.6,SNR=25						
ILB	Eielson Array	82.85	18	*e*P	P	10 35 00.4	-0.2
ORV	Oroville	83.14	48	*e*P	P	10 35 02.3	-0.5
	comp=Z,3.2nm,0.9s						
SCRK	Sand Creek	83.24	20	*e*P	P	10 35 02.9	+0.1
	comp=Z,6.3nm,0.9s						
AFDM	Forest Hills D	83.33	48	*e*P	P	10 35 03.2	-0.5
	comp=Z,11nm,1.1s						
CMB	Columbia Colle	83.47	50	*e*P	P	10 35 04.1	-0.4
	comp=Z,8.8nm,1.1s						
BEKR	Beckworth	84.08	48	*e*P	P	10 35 07.4	-0.4
	comp=Z,11nm,1.2s						
ISA	Isabella, Lake	84.19	52	*e*P	P	10 35 08.3	0.0
	comp=Z,5.0nm,1.1s						
MDPB	Devils Postpil	84.32	50	*e*P	P	10 35 09.3	+0.1
	comp=Z,12nm,1.1s						
WAKR	Walker	84.32	49	*e*P	P	10 35 09.6	+0.5
	comp=Z,12nm,1.2s						
PNTR	Pine Nut	84.39	49	*e*P	P	10 35 09.6	+0.2
	comp=Z,12nm,1.1s						
VCNR	Virginia City	84.41	48	*e*P	P	10 35 09.6	0.0
	comp=Z,4.3nm,1.2s						
YERR	Yerington	84.62	49	*e*P	P	10 35 10.4	-0.2
	comp=Z,6.8nm,1.2s						
PAHR	Pah Rah Range	84.74	48	*e*P	P	10 35 10.8	-0.3
	comp=Z,9.1nm,1.1s						
MOD	Modoc Plateau	84.78	46	*e*P	P	10 35 10.9	-0.4
	comp=Z,3.0nm,0.9s						
DAWY	Dawson	84.86	21	*e*P	P	10 35 11.7	+0.7
	comp=Z,5.7nm,1.0s						
RYN	Ryan	85.04	49	*e*P	P	10 35 12.8	+0.1
	comp=Z,4.3nm,1.1s						
NV01	Mina Array Sit	85.15	50	*e*P	P	10 35 12.7	-0.6
NVAR	Mina Array Bea	85.15	50	P	P	10 35 13.2	-0.1
	comp=Z,4.1nm,0.8s,baz=230,slow=8.3,SNR=25						
NVAR				LR	LR	11 07 41.5	
	comp=Z,170nm,18.7s,baz=240,slow=32						
NV11	Mina Array Sit	85.26	50	*e*P	P	10 35 13.6	-0.2
	comp=Z,0.9nm,1.1s						
KVN	Kaiserville	85.49	49	*e*P	P	10 35 14.8	-0.2
	comp=Z,6.8nm,1.1s						
TIXI	Tiksi	85.80	349	*e*P	P	10 35 15.4	0.0
	comp=Z,6.6nm,1.1s						
I07A	Izee	86.04	44	*e*P	P	10 35 17.8	+0.3
	comp=Z,3.2nm,1.0s						
WVOR	Wild Horse Val	86.12	46	*e*P	P	10 35 18.0	0.0
	comp=Z,2.8nm,1.0s						
TPNV	Topopah Spring	86.28	52	*e*P	P	10 35 18.5	-0.4
	comp=Z,4.3nm,1.0s						
GLA	Glamis	86.36	56	*e*P	P	10 35 19.8	+0.5
	comp=Z,9.9nm,1.1s						
J08A	Circle Bar Ran	86.52	45	*e*P	P	10 35 19.8	-0.1
	comp=Z,5.8nm,1.0s						
LDFC	Landfair	86.67	54	*e*P	P	10 35 20.8	0.0
	comp=Z,20nm,1.1s						
Y12C	Blythe	86.79	55	*e*P	P	10 35 21.2	0.0
	comp=Z,4.4nm,1.0s						
SHPR	Sheep Range	87.00	52	*e*P	P	10 35 22.6	+0.1
	comp=Z,4.9nm,1.2s						
E08A	Dider Farm, El	87.11	42	*e*P	P	10 35 22.2	-0.2
	comp=Z,5.3nm,1.0s						
R11A	Troy Canyon, C	87.17	50	*e*P	P	10 35 22.8	-0.5
	comp=Z,1.1nm,1.0s						
W13A	Hualapai Mount	87.64	54	*e*P	P	10 35 25.6	0.0
	comp=Z,3.9nm,1.0s						
E09A	Wood Farm, Sta	87.72	42	*e*P	P	10 35 25.4	0.0
	comp=Z,2.8nm,1.1s						
Y14A	Wickenburg	88.06	55	*e*P	P	10 35 27.6	+0.1
	comp=Z,2.1nm,1.0s						
ELK	Elko	88.08	48	*e*P	P	10 35 27.5	-0.1
	comp=Z,3.7nm,1.1s						
MFID	Camas Ranch	88.39	45	*e*P	P	10 35 28.3	-0.5
	comp=Z,3.9nm,1.1s						
PSUT	Pine Spring	88.53	51	*e*P	P	10 35 29.9	+0.1
	comp=Z,4.4nm,1.2s						
LCMT	Little Creek M	88.62	52	*e*P	P	10 35 30.6	+0.5
	comp=Z,3.7nm,1.1s						
CCUT	Cedar City	88.66	52	*e*P	P	10 35 31.1	+0.7
	comp=Z,3.9nm,1.1s						
SZCU	Shurtz Canyon	88.89	52	*e*P	P	10 35 31.2	-0.3
	comp=Z,6.1nm,1.2s						
KNB	Kanab	88.95	52	*e*P	P	10 35 32.1	+0.4
	comp=Z,2.1nm,1.0s						
U15A	North Rim	89.22	53	*e*P	P	10 35 33.7	+0.6
	comp=Z,11nm,1.1s						
WMQ	Urumqi	89.33	315	*e*P	P	10 35 34.8	+1.6
WMQ				pP	pwP	10 35 45.4	-1.8
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,470nm,4.3s						
WMQ				LR	LR		
	comp=N,93nm,22.3s						
WMQ				LR	LR		
	comp=E,28nm,14.1s						
WMQ				LR	LR		
	comp=Z,75nm,19.5s						
HLID	Hailey	89.42	46	*e*P	P	10 35 33.9	+0.2
	comp=Z,2.0nm,1.0s						
X16A	Lo Mia Camp, P	89.43	55	*e*P	P	10 35 34.6	+0.6
	comp=Z,9.7nm,1.1s						
PKCU	Pink Cliffs	89.45	52	*e*P	P	10 35 35.4	+1.2
	comp=Z,17nm,1.2s						
TUC	Tucson	89.50	57	*e*P	P	10 35 34.9	+0.6
	comp=Z,3.3nm,1.1s						
TCRU	Three Creeks R	89.62	51	*e*P	P	10 35 35.4	+0.5
	comp=Z,12nm,1.0s						
MTPU	Mount Pierson	89.69	51	*e*P	P	10 35 36.2	+0.8
	comp=Z,16nm,1.2s						
DUG	Dugway, Tooele	89.72	49	*e*P	P	10 35 35.2	0.0
	comp=Z,4.1nm,1.1s						
WUAZ	Wupatki	89.74	54	*e*P	P	10 35 35.4	-0.1
	comp=Z,5.0nm,1.1s						
BGU	Big Grassy Mou	89.74	48	*e*P	P	10 35 35.5	+0.1
	comp=Z,4.4nm,1.2s						
MSU	Marysvale	89.80	51	*e*P	P	10 35 36.7	+1.0
HVU	Hansel Valley	90.14	48	*e*P	P	10 35 37.6	+0.5
	comp=Z,6.1nm,1.2s						
NLU	North Lily Min	90.22	49	*e*P	P	10 35 37.7	+0.1
	comp=Z,7.1nm,1.1s						
SPUT	South Promonto	90.26	48	*e*P	P	10 35 38.1	+0.4
	comp=Z,5.2nm,1.0s						
319A	Douglas	90.55	58	*e*P	P	10 35 40.3	+1.1
	comp=Z,13nm,1.1s						
MPU	Maple Canyon	90.56	49	*e*P	P	10 35 39.8	+0.6
	comp=Z,5.1nm,1.2s						
CTU	Camp Tracy	90.63	49	*e*P	P	10 35 39.5	0.0
	comp=Z,10nm,1.1s						
X18A	Snowflake	90.66	55	*e*P	P	10 35 40.5	+0.7
	comp=Z,12nm,1.1s						
Q16A	Castle Valley	90.66	51	*e*P	P	10 35 40.7	+1.0
	comp=Z,4.7nm,1.0s						
TMUT	Trail Mountain	90.72	50	*e*P	P	10 35 40.5	+0.4
	comp=Z,7.1nm,1.0s						
MCMT	McKenzie Canyo	90.82	45	*e*P	P	10 35 40.7	+0.4
JLU	Jordanelle	90.83	49	*e*P	P	10 35 40.2	-0.3
	comp=Z,6.0nm,1.0s						
TCUT	Toone Canyon	90.98	48	*e*P	P	10 35 41.6	+0.4
	comp=Z,12nm,1.0s						
P17A	Butcher Ranch,	91.11	50	*e*P	P	10 35 42.0	+0.3
	comp=Z,3.7nm,1.1s						
DLMT	Dillon	91.13	44	*e*P	P	10 35 42.0	+0.4
	comp=Z,4.7nm,1.1s						
SRU	San Rafael Swe	91.20	51	*e*P	P	10 35 42.4	+0.2
	comp=Z,2.4nm,0.9s						
BOZ	Bozeman (W)	91.84	44	*e*P	P	10 35 44.0	-1.0
	comp=Z,3.2nm,0.8s						
REDW	Red Top Meadow	91.89	46	*e*P	P	10 35 45.7	+0.3
	comp=Z,3.0nm,1.1s						
IMW	Indian Meadow	91.94	46	*e*P	P	10 35 46.2	+0.6
	comp=Z,3.5nm,1.1s						
HRY	Holter Researc	91.96	43	*e*P	P	10 35 45.7	+0.3
YMR	Madison River	92.09	45	*e*P	P	10 35 46.6	+0.3
	comp=Z,5.2nm,1.1s						
LOHW	Long Hollow	92.11	46	*e*P	P	10 35 46.7	+0.3
	comp=Z,0.5nm,0.8s						
SYO	Syowa Base	92.43	197⇓	*e*X	P	10 35 42.0	-5.0
BW06	Boulder Array	92.69	47	*e*P	P	10 35 48.8	-0.2
	comp=Z,1.6nm,1.0s						
PD31	Pinedale Array	92.69	47	*e*P	P	10 35 48.3	-0.7
PDAR	Pinedale Array	92.69	47	*e*P	P	10 35 48.3	-0.7
PDAR	Pinedale Array	92.69	47	P	P	10 35 47.8	-1.2
	comp=Z,0.9nm,0.9s,baz=252,slow=3.0,SNR=7.5						
LAZ	Ladron	92.91	56	*e*P	P	10 35 50.5	+0.3
ZALV	Zalesovo Beam	93.64	324	*e*P	P	10 35 51.7	-1.1
ZALV	Zalesovo Beam	93.64	324	P	P	10 35 51.6	-1.2
	comp=Z,0.4nm,0.3s,baz=119,slow=1.9,SNR=5.1						
ZAA1	Zalesovo Array	93.65	324	*e*P	P	10 35 51.6	-1.2
MK01	Makanchi Array	93.71	317	*e*P	P	10 35 52.7	-0.7
MK31	Makanchi Array	93.72	317	*e*P	P	10 35 52.7	-0.7
MK32	Makanchi Array	93.72	317	*e*P	P	10 35 53.1	-0.3
MKAR	Makanchi Array	93.72	317	*e*P	P	10 35 53.0	-0.5
	comp=Z,15nm,1.0s						
MKAR	Makanchi Array	93.72	317	P	P	10 35 53.1	-0.3
	comp=Z,1.5nm,0.8s,baz=95,slow=6.4,SNR=11						
MAKZ	Makanchi	93.94	317	*e*P	P	10 35 54.2	-0.2
	comp=Z,3.4nm,1.1s						
YKA	Yellowknife Ar	94.22	27	P	P	10 35 53.7	-1.6
	comp=Z,0.3nm,0.8s,baz=256,slow=4.2,SNR=5.4						
YKB5	Yellowknife Ar	94.22	27	*e*P	P	10 35 52.9	-2.4
KSH	Kashi	97.08	309	P	Pdif	10 36 11.9	+2.7
KSH				pP	sP	10 36 24.1	-0.2
KSH				PP	PP	10 40 10.8	+5.4
KSH				pmax	pmax		
	comp=Z,450nm,4.8s						
ESDC	Sonseca Array	149.83	345	PKPbc	PKiKP	10 42 28.0	0.0
	comp=Z,1.4nm,0.8s,baz=8.4,slow=2.8,SNR=4.9						

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*NNC **03** 10:24:10.4±5.7, 39°.87N×77°.05E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=40.6km s-min=25.7km az=172.0*

*KRNET **03** 10:24:13.2±0.1, 39°.99N×77°.26E, mb2.6*

*SOME **03** 10:24:13.4, 40°.00N×77°.27E, h5^{km}*

ISC 03 10:24:08.7±1.9**, 39°.83N**±0°.07×**77°.12E**±0°.06**, h1**^{km}±17^{km}**,**
n18, σ**1^s.40**/31**, 16C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.94	251	P	Pg	10 24 26.2	-0.5
KSH				pP	Pn	10 25 03.9	+35
KSH				PP		10 27 46.3	
KSH				pmax	pmax		
	comp=Z,290nm,4.6s						
NRN	Naryn	1.81	332⇑	*i*P	Pg	10 24 45.3	+1.8
	baz=26						
NRN			⇑	*i*S	Sg	10 25 09.2	+2.2
	baz=26						
TARG	Taragay, Kyrgy	1.97	15⇑	*i*P	Pg	10 24 47.0	+0.6
	baz=13						
TARG			⇑	*i*S	Sb	10 25 11.2	+0.5
	baz=13						
KDJ	Kajisay	2.30	1⇑	*i*P	Pb	10 24 52.1	+1.1
	baz=59						
KDJ			⇑	*i*S	Sb	10 25 20.8	+0.8
	baz=59						
ULHL	Ulahol	2.50	345⇑	*i*P	Pb	10 24 55.8	+1.2
	baz=42						
ULHL			⇑	*i*S	Sb	10 25 26.9	+0.9
	baz=42						
KZA	Kyzart	2.66	328⇑	*i*P	Pg	10 24 58.8	-0.8
	baz=25						
KZA			⇑	*i*S	Sb	10 25 31.5	+1.0
	baz=25						
BOOM	Boomskoye usch	2.80	342⇓	*e*P	Pb	10 24 59.8	+0.2
	baz=39						
BOOM			⇓	*i*S	Sb	10 25 33.9	-0.6
	baz=39						
PRZ	Przheval'sk	2.82	20⇓	*i*P	Pb	10 24 59.1	-0.8
	baz=19						
PRZ			⇓	*i*S	Sb	10 25 32.7	-2.3
	baz=19						
UCH	Uchtor	3.10	321⇑	*e*P	Pb	10 25 05.0	+0.1
	baz=18						
UCH			⇑	*i*S	Sb	10 25 42.9	-0.6
	baz=18						
TKM2	Tokmak 2	3.29	340	⇓Pg	Pb	10 25 06.9	-1.1
	comp=Z,1.7nm,0.7s						
TKM2				⇓Lg	Lg	10 25 54.5	
	comp=Z,2.8nm,0.6s						
TKM2	Tokmak 2	3.29	340⇑	*i*P	Pb	10 25 06.7	-1.3
	baz=37						
TKM2			⇑	*i*S	Sb	10 25 46.1	-2.6
	baz=37						
MDOK	Medeo	3.33	359	*e*P	Pg	10 25 12.5	0.0
	comp=Z,0.9nm,0.1s						
MDOK				*e*S	Sg	10 25 55.1	-0.5
	comp=Z,5.3nm,0.7s						
SATY	Saty	3.37	16	Pg	Pg	10 25 13.1	-0.1
	comp=Z,2.5nm,0.7s						
SATY				Lg	Lg	10 25 56.2	
	comp=Z,5.2nm,0.4s						
SATY	Saty	3.37	16	*e*P	Pg	10 25 13.1	-0.1
	comp=Z,1.7nm,0.6s						
SATY				*e*S	Sg	10 25 56.2	-0.6
	comp=Z,6.6nm,0.5s						
AAK	Ala-Archa	3.44	326	⇑Pg	Pb	10 25 12.1	+1.7
	comp=Z,2.3nm,0.8s						
AAK				⇑Lg	Lg	10 26 00.0	
	comp=Z,6.4nm,1.0s						

PDGK	Podgornoye comp=Z,0.4nm,0.3s	3.92	26	Pg	Pb	10 25 22.0	+3.3
PDGK	comp=Z,1.0nm,0.5s			Lg	Lg	10 26 11.9	
CHKK	Chushkaly comp=Z,0.3nm,0.1s	4.02	359	eP	Pg	10 25 25.2	-0.5
CHKK	comp=Z,7.9nm,0.5s			eS	Sg	10 26 16.8	-1.0
ARXS	Arharly comp=Z,1.4nm,0.9s	4.41	7	eP	Pg	10 25 32.0	-1.1
ARXS	comp=Z,1.7nm,0.5s			eS	Sg	10 26 28.4	-1.9

ISCJB 03 10:34:41.3±1.0, 52°.69N±0°.04×132°.33W±0°.09, h13^{km}±5^{km}, mb3.6/4, Error ellipse: s-maj=10.0km s-min=5.2km az=150.3

IDC 03 10:34:41.8±1.2, 52°.69N×132°.58W, h0^{km}, mb3.7/4, mb1 3.6/6, mb1mx3.4/35, mbtmp3.5/6, ML3.2/2, Error ellipse: s-maj=27.5km s-min=10.2km az=91.0

PGC 03 10:34:42.8±1.1, 52°.73N×132°.29W, h20^{km}, ML3.6/13, 66km southwest of Sandspit, Bc Haida Gwaii Region

ISC 03 10:34:43.2±1.5, 52°.74N±0°.06×132°.26W±0°.07, h10^{km}±9^{km}, n28, σ1^{s}20/31, mb3.8/4, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG1B	Mitchell Dam	0.21	22	P	Pg	10 34 47.9	+0.2
HG1B				S	Sg	10 34 51.7	+1.0
BNB	Barry Inlet	0.35	117	P	Pg	10 34 50.1	0.0
MOBC	Moresby Island	0.45	23	P	Pg	10 34 51.8	-0.2
MOBC				S	Sg	10 34 57.6	-0.3
DIB	Dawson Inlet,	0.49	345	P	Pg	10 34 52.2	-0.5
DIB				S	Sg	10 34 58.9	-0.2
H02S1	DAWSON INLET T	0.49	345	Pg	Pg	10 34 52.4	-0.3
H02S1				Lg	Lg	10 34 58.8	
HG3B	Hotspring	0.52	107	P	Pg	10 34 52.8	-0.6
HG3B				S	Sb	10 35 00.5	-1.5
NDB	Naden	1.29	342	Pn	Pn	10 35 05.1	-2.1
MASB	Masset	1.29	6	Pn	Pn	10 35 06.0	-1.3
RUBB	Prince Rupert	2.00	36	Pn	Pn	10 35 15.3	-1.6
RUBB				Sn	Sb	10 35 43.9	-0.5
BBB	Bella Bella	2.60	101	Pn	Pn	10 35 23.1	-2.1
BBB				Sn	Sb	10 36 01.5	-0.2
PHC	Port Hardy	3.62	122	Pn	Pn	10 35 36.7	-2.5
TLCB	Telegraph Cove	4.03	121	Pn	Pn	10 35 43.0	-1.8
WOSB	Woss	4.39	124	Pn	Pn	10 35 49.1	-0.8
NCRB	Newcastle Ridg	4.52	119	Pn	Pn	10 35 50.7	-1.0
FSB	Fort Saint Jam	5.04	67	Pn	Pn	10 35 58.1	-0.6
TXB	Texada	5.78	119	Pn	Pn	10 36 08.9	0.0
DLBC	Dease Lake	5.86	12	Pn	Pn	10 36 11.8	+1.9
FNBB	Fort Nelson	8.07	36	Pn	Pn	10 36 41.0	+0.7
WHY	Whitehorse	8.07	351	Pn	Pn	10 36 40.5	0.0
YKA	Yellowknife Ar 0.0nm,0.3s,baz=226,slow=13,SNR=12	13.55	37	Pn	Pn	10 37 54.2	-1.0
PDAR	Pinedale Array 0.0nm,0.3s,baz=317,slow=9.2,SNR=2.2	18.16	114	P	P	10 38 57.3	+1.5
TXAR	Lajitas Array 0.3nm,0.8s,baz=334,slow=10,SNR=3.1	31.45	127	P	P	10 41 06.2	+1.5
H11N2	WAKE ISLAND Hy baz=38	56.94	259	T	T	11 46 14.4	
H11N3	WAKE ISLAND Hy baz=38	56.94	259	T	T	11 46 13.3	
H11N1	WAKE ISLAND Hy baz=38	56.96	259	T	T	11 46 12.4	
ZALV	Zalesovo Beam 0.7nm,0.7s,baz=20,slow=4.6,SNR=4.2	69.29	338	P	P	10 45 50.0	-0.1
KURBB	Kurchatov Arra 1.2nm,0.9s,baz=18,slow=5.3,SNR=5.9	73.78	340	P	P	10 46 17.5	+0.3
MKAR	Makanchi Array 0.5nm,0.8s,baz=32,slow=4.8,SNR=5.2	76.54	336	P	P	10 46 33.2	0.0

KRSC 03 10:35:02.8±1.9, 49°.57N×156°.71E, h8^{km}±25^{km}, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.18	341	eP	Pg	10 35 22.8	-2.6
SKR				eS	Sg	10 35 39.1	-1.6
PAU	Pauzhetka	1.90	2	eP	Pn	10 35 36.1	+0.5
PAU				eS	Sb	10 36 01.0	-0.6
KDTR	Khodutka, Kamc	2.41	21	eP	Pb	10 35 45.2	-1.1
KDTR				eS	Sb	10 36 15.0	-1.1
MTVR	Mutnovka	3.06	17	eP	Pn	10 35 54.5	+2.8
MTVR				eS	Sb	10 36 32.0	-3.2
RUS	Russkaya	3.08	21	eS	Sb	10 36 33.1	-2.6
KRMR	Karymshinskiy	3.38	15	eP	Pb	10 35 59.8	-3.2
KRMR				eS	Sn	10 36 39.5	+3.2
PET	Petropavlovsk	3.67	19	eP	Pn	10 36 03.8	+4.0
DALK	Dalny	3.70	20	eP	Pn	10 36 03.3	+3.1
UGLR	Uglovaya	3.88	19	eP	Pn	10 36 06.9	+4.1
AVH	Avacha	3.91	18	eP	Pn	10 36 07.5	+4.2
SMAR	Somma	3.92	19	eP	Pb	10 36 08.4	-3.9
SDLR	Sedlovina	3.96	19	eP	Pn	10 36 07.4	+3.5
KRX	Arik	3.98	17	eP	Pb	10 36 09.0	-4.3
SPN	Mys Shipunski	4.10	29	P	Pn	10 36 08.5	+2.8
GNL	Ganaly	4.20	10	eP	Pn	10 36 11.6	+4.3
KBTR	Krutoberegovo	7.61	27	eP	Pn	10 36 58.8	+5.0

DJA 03 10:35:34.8±0.8, 9°S±5°×11°0E±°, h17^{km}±9^{km}, M3.6/10, MLv3.6/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	Wanagama	0.91	41	P	Pb	10 35 51.7	-0.4
UGM				S	Sn	10 36 05.2	-0.3
WOJI	Wonogiri, Jawa	1.25	53	P	Pn	10 35 55.9	-1.6
WOJI				S	Sb	10 36 12.7	-1.1
PCJI	Pacitan	1.31	72	P	Pn	10 35 56.9	-1.4
PCJI				S	Sn	10 36 14.2	-1.2
KPJI	Karang Pucung	1.59	322	P	Pn	10 36 00.8	-1.5
SMRI	Semarang	1.62	19	P	Pn	10 36 02.0	-0.7
CMJI	Cimerak	1.67	299	P	Pn	10 35 59.1	-4.1
CMJI				S	Sn	10 36 19.3	-5.0
PWJI	Pagerwojo	1.95	73	P	Pn	10 36 05.3	-1.9
PWJI				S	Sn	10 36 29.4	-1.9
NGJI	Ngawi	1.96	51	P	Pg	10 36 12.2	-0.2
CISI	Cisompet, Garu	2.33	296	P	Pb	10 36 14.5	-1.9

IDC 03 10:47:10.9±1.9, 8°.81S×109°.96E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/47, mbtmp3.7/6, Error ellipse: s-maj=83.4km s-min=19.5km az=52.0

ISCJB 03 10:47:15.0±0.8, 9°.19S±0°.07×109°.85E±0°.04, h33^{km}, mb3.6/6, Error ellipse: s-maj=9.7km s-min=5.9km az=13.7

DJA 03 10:47:16.5±1.0, 9°S±6°×11°0E±°, h18^{km}±10^{km}, M3.7/11, MLv3.7/11

ISC 03 10:47:15.9±1.0, 9°.1S±0°.1×109°.85E±0°.05, h35^{km}, n15, σ1^{s}50/19, mb3.8/6, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	Wanagama	1.39	29	P	Pn	10 47 38.0	-0.9
PCJI	Pacitan	1.62	55	P	Pn	10 47 41.8	-0.2
WOJI	Wonogiri, Jawa	1.68	40	P	Pn	10 47 42.4	-0.4
WOJI				S	Sn	10 48 02.9	-0.2
CMJI	Cimerak	1.93	314	P	Pn	10 47 46.5	+0.2
CMJI				S	Sn	10 48 08.9	-0.5
KPJI	Karang Pucung	2.01	333	P	Pn	10 47 49.1	+1.7
SMRI	Semarang	2.16	16	P	Pn	10 47 51.8	+2.3
PWJI	Pagerwojo	2.23	60	P	Pn	10 47 51.0	+0.6
PWJI				S	Sn	10 48 17.6	+0.8
NGJI	Ngawi	2.38	42	P	Pn	10 47 55.7	+3.2
CISI	Cisompet, Garu	2.55	308	P	Pn	10 47 55.3	+0.4
CISI				S	Sn	10 48 26.9	+2.1
WRA	Warramunga Arr 0.5nm,0.8s,baz=291,slow=11,SNR=10	25.99	117	P	P	10 52 46.3	+0.6
ASAR	Alice Springs 0.2nm,0.5s,baz=298,slow=9.1,SNR=7.5	27.16	125	P	P	10 52 57.2	+1.0
STKA	Stephens Creek 1.3nm,0.7s,baz=280,slow=14,SNR=3.4	37.12	132	P	P	10 54 24.4	+1.0
MKAR	Makanchi Array 0.3nm,0.4s,baz=154,slow=8.0,SNR=8.5	60.87	339	P	P	10 57 23.6	-1.3
KLR	Kul'dur 0.6nm,0.4s,baz=209,slow=4.7,SNR=3.7	61.22	16	P	P	10 57 25.3	-2.0
KURBB	Kurchatov Arra 0.5nm,0.2s,baz=151,slow=5.9,SNR=7.1	65.44	339	P	P	10 57 53.6	-1.5

KRNET 03 10:47:21.7±0.1, 42°.57N×79°.56E, h17^{km}, mb3.7

SOME 03 10:47:21.5, 42°.50N×79°.63E, h20^{km}

NNC 03 10:47:22.9±0.8, 42°.62N×79°.57E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=5.6km s-min=2.8km az=135.0

ISC 03 10:47:20.2±1.6, 42°.53N±0°.04×79°.59E±0°.04, h2^{km}±10^{km}, n84, σ2^{s}13/138, 31C-31D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode 786nm,0.1s	0.63	351	P	Pb	10 47 34.3	+0.2
SHLS	3μm,0.3s			S	Sn	10 47 43.7	-3.3
SHLS	Shalkode baz=22	0.63	351	eP	Pb	10 47 34.3	+0.2
SHLS	baz=22			eS	Sn	10 47 43.7	-3.3
SHLS	Shalkode 786nm,0.1s	0.63	351	eP	Pb	10 47 34.3	+0.2
SHLS	3μm,0.3s			eS	Sn	10 47 43.7	-3.3
UZB	Uzynbulak 80nm,0.2s	0.74	326	P	Pb	10 47 35.6	-0.4
UZB	314nm,0.3s			S	Sb	10 47 45.8	-0.9
UZB	Uzynbulak baz=26	0.74	326	eP	Pb	10 47 35.6	-0.4
UZB	baz=26			eS	Sb	10 47 45.8	-0.9
UZB	Uzynbulak 80nm,0.2s	0.74	326	eP	Pb	10 47 35.6	-0.4
UZB	314nm,0.3s			eS	Sb	10 47 45.8	-0.9
PDGK	Podgornoye 57nm,0.1s	0.80	355	P	Pb	10 47 36.2	-0.7
PDGK	46nm,0.2s			S	Sg	10 47 47.0	+1.1
PDGK	Podgornoye 50nm,0.4s	0.80	355	⇑P	Pb	10 47 36.1	-0.7
PDGK	29nm,0.4s			⇑S	Sb	10 47 46.7	-1.5
PDGK	Podgornoye baz=56	0.80	355	⇑iP	Pb	10 47 36.2	-0.7
PDGK	baz=56			⇑iS	Sb	10 47 46.7	-1.5
PRZ	Przheval'sk baz=65	0.88	267	⇓eP	Pb	10 47 38.1	-0.2
PRZ	baz=65			⇓iS	Sg	10 47 50.1	+1.5
SATY	Saty 23nm,0.1s	1.02	302	P	Pg	10 47 40.6	+0.9
SATY	660nm,0.1s			S	Sn	10 47 54.4	-2.1
SATY	Saty 23nm,0.1s	1.02	302	eP	Pg	10 47 40.6	+0.9
SATY	660nm,0.1s			eS	Sn	10 47 54.4	-2.1
KURS	Kuram 12nm,0.4s	1.41	313	P	Pg	10 47 48.1	+0.8
KURS	96nm,0.4s			S	Sg	10 48 06.5	+0.8
KURS	Kuram baz=13	1.41	313	eP	Pg	10 47 48.2	+0.8
KURS	baz=13			eS	Sg	10 48 07.3	+1.6
KURS	Kuram 4.1nm,0.2s	1.41	313	eP	Pg	10 47 48.2	+0.8
KURS	56nm,0.4s			eS	Sg	10 48 07.3	+1.6
DJR	Jarkent 11nm,0.2s	1.81	5	P	Pb	10 47 54.0	-0.1
DJR	40nm,0.3s			S	Sg	10 48 18.5	+0.3
DJR	Jarkent 11nm,0.2s	1.81	5	eP	Pb	10 47 54.0	-0.1
DJR	47nm,0.3s			eS	Sb	10 48 17.3	+0.2
KDJ	Kajisay baz=57	1.83	258	⇓eP	Pg	10 47 55.8	+0.5
KDJ	baz=57			⇓iS	Sg	10 48 20.3	+1.2
KOTS	Kotyrbulak 50nm,0.2s	1.95	292	Pg	Pb	10 47 57.3	+0.7
KOTS	278nm,0.3s			Lg	Lg	10 48 23.4	
KOTS	Kotyrbulak baz=91	1.95	292	eP	Pb	10 47 57.3	+0.7
KOTS	baz=91			eS	Sg	10 48 23.4	+0.5
KOTS	Kotyrbulak 50nm,0.2s	1.95	292	eP	Pb	10 47 57.3	+0.7
KOTS	278nm,0.3s			eS	Sg	10 48 23.4	+0.5
MDOK	Medeo 43nm,0.2s	1.97	289	Pg	Pb	10 47 57.3	+0.4
MDOK	99nm,0.5s			Lg	Lg	10 48 24.1	
MDOK	Medeo baz=89	1.97	289	eP	Pb	10 47 57.1	+0.2
MDOK	baz=89			eS	Sg	10 48 23.2	-0.4
MDOK	Medeo 43nm,0.2s	1.97	289	eP	Pb	10 47 57.1	+0.2
MDOK	87nm,0.4s			eS	Sg	10 48 23.3	-0.4
TNSS	Tian-Shan 51nm,0.4s	2.01	285	Pg	Pb	10 47 58.1	+0.4
TNSS	104nm,0.4s			Lg	Lg	10 48 25.3	
TNSS	Tian-Shan baz=85	2.01	285	eP	Pb	10 47 57.9	+0.2
TNSS	baz=85			eS	Sg	10 48 24.2	-0.7
TNSS	Tian-Shan 40nm,0.5s	2.01	285	eP	Pb	10 47 57.9	+0.2
TNSS	76nm,0.3s			eS	Sg	10 48 24.1	-0.7
KNDC	Almaty 43nm,0.3s	2.05	290	⇓Pn	Pg	10 47 59.8	+0.3
KNDC	110nm,0.6s			⇓Sn	Sg	10 48 27.4	+1.4
AAA	Alma-Ata 142nm,0.4s	2.08	290	Pg	Pg	10 48 00.0	-0.1
AAA	132nm,0.5s			Lg	Lg	10 48 27.8	
AAA	Alma-Ata baz=89	2.08	290	eP	Pg	10 48 00.0	-0.1
AAA	baz=89			eS	Sg	10 48 27.8	+0.8
AAA	Alma-Ata 142nm,0.4s	2.08	290	eP	Pg	10 48 00.0	-0.1
AAA	132nm,0.5s			eS	Sg	10 48 27.8	+0.8
ARXS	Arharly 15nm,0.2s	2.12	323	Pg	Pb	10 47 60.0	+0.6
ARXS	127nm,0.5s			Lg	Lg	10 48 27.5	
ARXS	Arharly 15nm,0.2s	2.12	323	eP	Pb	10 47 60.0	+0.6
ARXS	127nm,0.5s			eS	Sg	10 48 27.6	-0.7
CHKK	Chushkaly 12nm,0.1s	2.32	306	Pg	Pg	10 48 04.0	-0.6
CHKK	187nm,0.2s			Lg	Lg	10 48 34.0	
CHKK	Chushkaly baz=5.0	2.32	306	eP	Pb	10 48 03.3	+0.6
CHKK	baz=5.0			eS	Sg	10 48 33.2	-1.5
CHKK	Chushkaly 6.0nm,0.1s	2.32	306	eP	Pb	10 48 03.3	+0.6
CHKK	187nm,0.3s			eS	Sg	10 48 33.2	-1.5
KTBS	Karatobe 15nm,0.2s	2.43	300	Pg	Pb	10 48 05.0	+0.2
KTBS	213nm,0.3s			Lg	Lg	10 48 36.1	
KTBS	Karatobe baz=98	2.43	300	eP	Pb	10 48 05.0	+0.2
KTBS	baz=98			eS	Sb	10 48 36.1	+0.9
KTBS	Karatobe 15nm,0.2s	2.43	300	eP	Pb	10 48 05.0	+0.2
KTBS	213nm,0.3s			eS	Sb	10 48 36.1	+0.9
ULHL	Ulahol SNR=33	2.50	265	P	Pb	10 48 07.0	+1.1
ULHL	Ulahol baz=64	2.50	265	⇓eP	Pb	10 48 05.3	-0.6
ULHL	baz=64			⇓iS	Sb	10 48 37.2	0.0
BOOM	Boomskoye usch baz=70	2.70	270	⇑eP	Pb	10 48 08.1	-1.2
BOOM	baz=70			⇑iS	Sb	10 48 42.1	-0.8
KST	Kastek 43nm,0.3s	2.72	282	Pg	Pb	10 48 10.8	+1.1
KST	75nm,0.4s			Lg	Lg	10 48 46.5	
KST	Kastek baz=81	2.72	282	eP	Pb	10 48 10.8	+1.1
KST	baz=81			⇑iS	Sg	10 48 46.6	-1.0
KST	Kastek 43nm,0.3s	2.72	282	eP	Pb	10 48 10.8	+1.1
KST	75nm,0.4s			⇑iS	Sg	10 48 46.5	-1.0
KUU	Kurty 5.8nm,0.2s	2.74	301	Pg	Pb	10 48 10.8	+1.0
KUU	76nm,0.3s			Lg	Lg	10 48 46.0	
KUU	Kurty baz=0.0	2.74	301	⇓iP	Pb	10 48 10.9	+1.0
KUU	baz=0.0			⇓iS	Sg	10 48 46.1	-2.1
KUU	Kurty 3.4nm,0.2s	2.74	301	⇓iP	Pb	10 48 10.8	+1.0
KUU	76nm,0.3s			⇓iS	Sg	10 48 46.0	-2.1
KAPS	Kapalarasan 8.4nm,0.2s	2.76	357	Pg	Pb	10 48 10.9	+0.6
KAPS	23nm,0.4s			Lg	Lg	10 48 46.3	
KAPS	Kapalarasan 8.4nm,0.2s	2.76	357	eP	Pb	10 48 10.9	+0.6
KAPS	23nm,0.4s			eS	Sg	10 48 46.3	-2.5
NRN	Naryn baz=48	2.89	249	⇓eP	Pb	10 48 11.6	-1.1
NRN	baz=48			⇓eS	Sb	10 48 47.6	-1.1
DGS	Degeres 21nm,0.3s	2.90	285	Pg	Pb	10 48 13.5	+0.9
DGS	79nm,0.3s			Lg	Lg	10 48 50.8	
DGS	Degeres baz=85	2.90	285	eP	Pb	10 48 13.5	+0.9
DGS	baz=85			eS	Sg	10 48 50.8	-2.4
DGS	Degeres 21nm,0.3s	2.90	285	eP	Pb	10 48 13.5	+0.9
DGS	79nm,0.3s			eS	Sg	10 48 50.8	-2.4
TKM2	Tokmak 2 SNR=22	2.97	279	P	Pb	10 48 12.0	-1.9
TKM2	Tokmak 2 6.4nm,0.5s	2.97	279	⇓Pn	Pb	10 48 12.4	-1.6
TKM2	19nm,0.4s			⇑Lg	Lg	10 48 55.1	
TKM2	Tokmak 2 baz=78	2.97	279	⇓iP	Pb	10 48 11.8	-2.1
TKM2	baz=78			⇓iS	Sb	10 48 48.2	-2.5
KZA	Kyzart SNR=6.9	3.25	263	P	Pb	10 48 21.1	+2.3
KZA	Kyzart baz=63	3.25	263	⇑eP	Pb	10 48 16.0	-2.9
KZA	baz=63			⇑eS	Sb	10 48 55.7	-3.4
KBK	Karagaybulak baz=73	3.43	274	⇑eP	Pb	10 48 18.1	-3.7
KBK	baz=73			⇑eS	Sb	10 48 59.3	-4.7
CHMS	Chumysh SNR=5.6	3.59	279	P	Sg	10 49 14.8	-0.8
CHMS	Chumysh baz=79	3.59	279	⇑eP	Pb	10 48 20.5	-4.0
CHMS	baz=79			⇑eS	Sb	10 49 02.8	-5.7
FRU1	Bishkek baz=76	3.67	276	⇑iP	Pb	10 48 21.6	-4.2
FRU1	baz=76			⇑iS	Sb	10 49 04.9	-5.8
AAK	Ala-Archa 5.4nm,0.5s	3.77	273	⇓Pn	Pb	10 48 24.1	-3.4
AAK	14nm,0.5s			⇓Lg	Lg	10 49 20.8	
AAK	Ala-Archa baz=73	3.77	273	⇓eP	Pn	10 48 22.9	+3.5
AAK	baz=73			⇓eS	Sb	10 49 07.5	-6.1
UCH	Uchtor SNR=8.3	3.77	267	P	Pb	10 48 26.6	-1.2
UCH	Uchtor baz=67	3.77	267	⇑eP	Pn	10 48 23.2	+3.4
UCH	baz=67			⇑iS	Sb	10 49 08.2	-5.9
USP	Ospenovka SNR=5.9	3.81	283	P	Pb	10 48 25.7	-2.5
USP	Ospenovka baz=82	3.81	283	⇑eP	Pn	10 48 23.2	+3.3
USP	baz=82			⇑eS	Sn	10 49 08.2	+2.9
ARLS	Aral baz=62	3.97	262	⇓iP	Pn	10 48 25.9	+3.7
ARLS	baz=62			⇓iS	Sn	10 49 12.6	+3.2
EKS2	Erkin-Say SNR=9.2	4.29	274	P	Pb	10 48 39.8	+3.3
EKS2	Erkin-Say baz=73	4.29	274	⇓eP	Pn	10 48 30.2	+3.6
EKS2	baz=73			⇓eS	Sn	10 49 20.1	+2.8
AML	Almayashu SNR=14	4.39	267	P	Pg	10 48 42.1	-2.2
AML	Almayashu baz=66	4.39	267	⇓eP	Pn	10 48 31.8	+3.6
AML	baz=66			⇓eS	Sn	10 49 23.0	+2.9
MAKZ	Makanchi 0.7nm,0.3s	4.60	21	⇑Pn	Pn	10 48 32.1	+1.4
MAKZ	3.5nm,0.6s			⇓Lg	Lg	10 49 44.5	
MK31	Makanchi Array 0.5nm,0.3s,baz=205,slow=13,SNR=32	4.68	23	⇓Pn	Pn	10 48 34.2	+2.4
MK31	0.9nm,0.3s,baz=198,slow=23,SNR=8.2			⇑Lg	Lg	10 49 46.4	
MRKS	Merke 6.9nm,0.3s	4.70	275	Pg	Pb	10 48 46.9	+3.5
MRKS	11nm,0.3s			Lg	Lg	10 49 48.1	
MRKS	Merke baz=74	4.70	275	eP	Pb	10 48 46.9	+3.5
MRKS	baz=74			eS	Sg	10 49 48.1	-3.1
MRKS	Merke 3.7nm,0.4s	4.70	275	eP	Pb	10 48 46.9	+3.5
MRKS	11nm,0.3s			eS	Sg	10 49 48.1	-3.1
SFK	Sufi-Kurgan 0.8nm,0.3s	5.23	243	⇑Pg	Pg	10 48 58.9	-1.6
SFK	0.4nm,0.4s			⇑Lg	Lg	10 50 09.3	
MNAS	Manas 3.0nm,0.5s	5.24	272	⇑Pg	Pb	10 48 56.1	+3.5
MNAS	5.5nm,0.9s			⇓Lg	Lg	10 50 09.6	
KK31	Karatay Array 0.4nm,0.4s,baz=93,slow=15,SNR=12	6.70	278	⇑Pg	Pg	10 49 24.1	-4.5
KK31	1.8nm,0.5s,baz=94,slow=28,SNR=5.9			⇓Lg	Lg	10 50 55.0	
KURBB	Kurchatov Arra 0.5nm,0.7s	8.13	355	⇑Pn	Pn	10 49 21.7	+2.6
KURBB	4.3nm,0.6s			⇑Lg	Lg	10 51 34.7	
KURK	Kurchatov 1.1nm,0.8s	8.21	356	⇑Pn	Pn	10 49 18.2	-2.1
KURK	3.7nm,0.9s			⇑Lg	Lg	10 51 38.2	

GEN 03 10:47:43.6, 44°.21N×10°.50E, h14^{km}±1^{km}, Ml1.7

ROM 03 10:47:43.2±0.1, 44°.19N±0°.01×10°.498E±0°.007, h16^{km}±1^{km}, ML2.2/4, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

SARO	**Sassorosso**	**0.07**	**269**	P	Pg	10 47 46.6	+0.1
SARO				S	Sg	10 47 48.7	+0.1
VLC	**Villacollemand**	**0.08**	**252**	P	Pg	10 47 46.8	+0.3
VLC				S	Sg	10 47 49.1	+0.5
VLC				AML	AML		
	comp=E,1137µm,0.1s						
VLC				AML	AML		
	comp=N,1170µm,0.2s						
VLC				AML	AML		
	comp=E,1217µm,0.1s						
VLC				AML	AML		
	comp=N,1175µm,0.2s						
VLC				AML	AML		
	comp=E,1137µm,0.1s						
VLC				AML	AML		
	comp=N,1171µm,0.2s						
VLC				AML	AML		
	comp=E,1217µm,0.1s						
VLC				AML	AML		
	comp=N,1175µm,0.2s						
VLC				AML	AML		
	comp=N,1171µm,0.2s						
VLC				AML	AML		
	comp=N,1175µm,0.2s						
VLC				AML	AML		
	comp=E,1137µm,0.1s						
VLC				AML	AML		
	comp=E,1217µm,0.1s						
VLC				END			
VLC				END			
BDI	**Bagni Di Lucca**	**0.14**	**150**	P	Pg	10 47 47.4	+0.2
BDI				S	Sb	10 47 50.3	-0.2
BDI				AML	AML		
	comp=E,2265µm,0.8s						
BDI				AML	AML		
	comp=N,994µm,0.2s						
BDI				AML	AML		
	comp=E,2330µm,0.8s						
BDI				AML	AML		
	comp=N,1070µm,0.1s						
BDI				AML	AML		
	comp=E,2265µm,0.8s						
BDI				AML	AML		
	comp=N,992µm,0.2s						
BDI				AML	AML		
	comp=E,2330µm,0.8s						
BDI				AML	AML		
	comp=N,1070µm,0.1s						
BDI				AML	AML		
	comp=N,992µm,0.2s						
BDI				AML	AML		
	comp=E,2330µm,0.8s						
BDI				AML	AML		
	comp=E,2265µm,0.8s						
BDI				AML	AML		
	comp=N,1070µm,0.1s						
BDI				END			
BDI				END			
POPM	**Popiglio**	**0.23**	**127**	P	Pg	10 47 48.8	+0.3
POPM				S	Sb	10 47 52.8	-0.2
POPM	**Popiglio**	**0.23**	**127**	P	Pg	10 47 48.7	+0.2
POPM				S	Sb	10 47 52.8	-0.3
POPM				AML	AML		
	comp=E,1265µm,0.3s						
POPM				AML	AML		
	comp=N,1490µm,0.2s						
POPM				AML	AML		
	comp=E,1265µm,0.3s						
POPM				AML	AML		
	comp=N,1490µm,0.2s						
POPM				AML	AML		
	comp=E,1265µm,0.3s						
POPM				AML	AML		
	comp=N,1490µm,0.2s						
POPM				END			
POPM				END			
EQUI	**Equi**	**0.25**	**266**	P	Pg	10 47 48.8	+0.1
EQUI				S	Sg	10 47 52.6	+0.1
EQUI	**Equi**	**0.25**	**266**	P	Pg	10 47 48.9	+0.1
EQUI				S	Sg	10 47 52.6	+0.1
EQUI				END			
EQUI				END			
MAIM	**Mastiano**	**0.27**	**181**	P	Pg	10 47 49.3	+0.2
MAIM				S	Sb	10 47 53.9	-0.2
MAIM	**Mastiano**	**0.27**	**181**	P	Pg	10 47 49.4	+0.3
MAIM				S	Sb	10 47 54.0	-0.1
MAIM				AML	AML		
	comp=E,168µm,1.5s						
MAIM				AML	AML		
	comp=N,240µm,0.5s						
MAIM				AML	AML		
	comp=E,168µm,1.5s						
MAIM				AML	AML		
	comp=N,240µm,0.5s						
MAIM				AML	AML		
	comp=N,240µm,0.5s						
MAIM				AML	AML		
	comp=E,168µm,1.5s						
MAIM				END			
MAIM				END			
GRAM	**Graiana**	**0.43**	**315**	P	Pg	10 47 52.2	+0.2
GRAM				S	Sb	10 47 58.8	-0.1
GRAM	**Graiana**	**0.43**	**315**	P	Pg	10 47 52.1	0.0
GRAM				S	Sb	10 47 59.0	0.0
GRAM				END			
GRAM				END			
PLMA	**Palmaria, Port**	**0.48**	**254**	P	Pb	10 47 53.3	0.0
PLMA				S	Sb	10 48 00.1	-0.2
PLMA				END			
PLMA				END			

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*GEN **03** 10:48:09.9, 44°.21N×10°.51E, h14^{km}±1^{km}, Ml1.4*

ROM 03 10:48:09.7±0.2**, 44°.18N**±0°.01×**10°.487E**±0°.007**, h15**^{km}±1^{km}**,**
ML1.7/1**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARO	**Sassorosso**	**0.06**	**273**	P	Pg	10 48 13.1	+0.3
SARO				S	Sg	10 48 14.9	+0.1
VLC	**Villacollemand**	**0.08**	**253**	P	Pg	10 48 13.2	+0.3
VLC				S	Sg	10 48 15.5	+0.6
VLC				AML	AML		
	comp=E,472µm,0.1s						
VLC				AML	AML		
	comp=N,499µm,0.2s						
VLC				AML	AML		
	comp=E,524µm,0.1s						
VLC				AML	AML		
	comp=N,502µm,0.2s						
VLC				AML	AML		
	comp=N,499µm,0.2s						
VLC				AML	AML		
	comp=N,502µm,0.2s						
VLC				AML	AML		
	comp=E,524µm,0.1s						
VLC				AML	AML		
	comp=E,472µm,0.1s						
BDI	**Bagni Di Lucca**	**0.14**	**146**	P	Pg	10 48 13.8	+0.1
BDI				S	Sb	10 48 16.8	-0.3
POPM	**Popiglio**	**0.24**	**125**	P	Pg	10 48 15.1	+0.1
POPM				S	Sb	10 48 19.2	-0.5
POPM	**Popiglio**	**0.24**	**125**	P	Pg	10 48 15.2	+0.2
POPM				S	Sb	10 48 19.2	-0.5
EQUI	**Equi**	**0.24**	**266**	P	Pg	10 48 15.1	0.0
EQUI				S	Sg	10 48 18.8	+0.2
EQUI	**Equi**	**0.24**	**266**	P	Pg	10 48 15.2	+0.2
EQUI				S	Sg	10 48 18.9	+0.3
MAIM	**Mastiano**	**0.27**	**179**	P	Pg	10 48 15.8	+0.3
MAIM				S	Sb	10 48 20.1	-0.4
MAIM	**Mastiano**	**0.27**	**179**	P	Pb	10 48 16.0	-0.2
MAIM				S	Sb	10 48 20.5	0.0
GRAM	**Graiana**	**0.43**	**316**	P	Pg	10 48 18.6	+0.2
PLMA	**Palmaria, Port**	**0.48**	**254**	P	Pb	10 48 19.6	-0.1
PLMA				S	Sg	10 48 25.9	+0.3

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*BJI **03** 11:08:06.3, 5°.11S×153°.67E, h13^{km}, mB5.1/26, mb4.7/37, Ms5.1/10, Ms7 4.8/8*

*IDC **03** 11:08:08.5±0.5, 5°.01S×153°.06E, h0^{km}, mb4.5/24, mb1 4.6/26, mb1mx4.4/55, mbtmp4.5/26, ML4.1/2, Error ellipse: s-maj=17.5km s-min=11.5km az=76.0*

*NEIC **03** 11:08:10.6±0.7, 5°.01S×153°.09E, h12^{km}±4^{km}, mb4.8/36, Error ellipse: s-maj=5.6km s-min=4.2km az=86.0*

*ISCJB **03** 11:08:13.1±0.2, 5°.08S±0°.04×153°.14E±0°.05, h43^{km}, mb4.6/57, Error ellipse: s-maj=6.9km s-min=5.0km az=165.3*

ISC 03 11:08:14.8±0.4**, 5°.10S**±0°.06×**153°.19E**±0°.07**, h43**^{km}**, n123,**
σ**1^s.18**/130**, mb4.7**/61**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.36**	**311**	*e*Pn	**Pn**	**11 08 37.2**	**-0.2**
RABL				*e*Sn	**Sn**	**11 08 56.6**	**+2.2**
MANU	**Manus Island**	**6.56**	**297**	*e*Pn	**Pn**	**11 09 52.4**	**+3.6**
HNR	**Honiara**	**7.96**	**123**	*e*Pn	**Pn**	**11 10 08.0**	**-0.2**
HNR				*e*Sn	Sn	11 11 47.5	+11
HNR	**Honiara**	**7.96**	**123**	Pn	**Pn**	**11 10 08.7**	**+0.6**
	11nm,0.3s,baz=205,slow=21,SNR=8.7						
HNR				Sn	Sn	11 11 47.5	+11
	4.2nm,0.3s,baz=184,slow=19,SNR=1.8						
PATS	**Pohnpei**	**12.91**	**23**	*e*Pn	**Pn**	**11 11 15.7**	**-0.2**
COEN	**Coen**	**13.22**	**228**	*e*Pn	**Pn**	**11 11 18.6**	**-1.5**
CTA	**Charters Tower**	**16.36**	**204**	Pn	**Pn**	**11 12 01.4**	**-0.1**
	0.2nm,0.3s,baz=339,slow=7.5,SNR=4.7						
CTAO	**Charters Tower**	**16.36**	**204**	*e*Pn	**Pn**	**11 12 02.6**	**+1.1**
	13nm,1.1s						
EIDS	**Eidsvold**	**20.25**	**186**	*e*P	**P**	**11 12 47.7**	**+1.0**
	14nm,1.1s						
FAKI	**Fak Fak**	**21.00**	**275**	*e*P	**P**	**11 12 53.7**	**-1.2**
	22nm,1.0s						
DZM	**Mont Dzumac**	**21.20**	**144**	*e*P	**P**	**11 12 58.1**	**+1.1**
	45nm,1.1s						
DZM	**Mont Dzumac**	**21.20**	**144**	P	**P**	**11 12 57.8**	**+0.8**
	28nm,0.8s,baz=329,slow=12,SNR=41						
ONTNC	**Ouen Toro**	**21.39**	**144**	*e*P	**P**	**11 13 00.2**	**+1.3**
	22nm,0.8s						
OUENC	**Ouen Island, N**	**21.70**	**144**	*e*P	**P**	**11 13 02.9**	**+0.6**
	14nm,0.6s						
MARNC	**Mare, Loyalty**	**21.73**	**140**	*e*P	**P**	**11 13 02.0**	**-0.6**
	85nm,1.0s						
PINNC	**Pines Island,**	**22.20**	**143**	*e*P	**P**	**11 13 09.0**	**+1.3**
	28nm,0.9s						
SIJI	**Sorong**	**22.29**	**280**	P	**P**	**11 13 07.7**	**-1.0**
	23nm,0.4s,baz=91,slow=23,SNR=16						
WRAB	**Tennant Creek**	**23.53**	**230**	*e*P	**P**	**11 13 20.6**	**-0.8**
	17nm,0.7s						
WB2	**Warramunga Arr**	**23.53**	**230**	*e*P	**P**	**11 13 20.5**	**-0.9**
	25nm,1.1s						
WR1	**Warramunga Arr**	**23.54**	**230**	*e*P	**P**	**11 13 20.2**	**-1.3**
	24nm,0.9s						
WR1				*e*PcP	**PcP**	**11 17 06.5**	**+0.3**
WRA	**Warramunga Arr**	**23.54**	**230**	P	**P**	**11 13 20.2**	**-1.3**
	7.0nm,0.6s,baz=51,slow=10.0,SNR=106						
WRA				PcP	**PcP**	**11 17 06.5**	**+0.3**
	0.5nm,0.6s,baz=57,slow=3.1,SNR=2.6						
AS01	**Alice Springs**	**26.16**	**223**	*e*P	**P**	**11 13 45.3**	**-0.1**
AS31	**Alice Springs**	**26.19**	**223**	*e*P	**P**	**11 13 45.0**	**-0.7**
	2.5nm,0.6s						
ASAR	**Alice Springs**	**26.19**	**223**	P	**P**	**11 13 44.3**	**-1.4**
	6.3nm,0.6s,baz=57,slow=8.8,SNR=66						
ASAR				PcP	**PcP**	**11 17 12.7**	**+0.7**
	0.7nm,0.6s,baz=67,slow=3.1,SNR=2.4						
TNTI	**Ternate**	**26.44**	**282**	*e*P	**P**	**11 13 50.0**	**+2.0**
	13nm,0.8s						
STKA	**Stephens Creek**	**28.77**	**201**	*e*P	**P**	**11 14 07.5**	**-1.1**
	1.5nm,1.0s						
STKA	**Stephens Creek**	**28.77**	**201**	P	**P**	**11 14 07.5**	**-1.1**
	3.3nm,0.6s,baz=32,slow=12,SNR=13						
BATI	**Baumata**	**29.69**	**258**	P	**P**	**11 14 16.4**	**-0.7**
	8.3nm,0.6s,baz=16,slow=7.1,SNR=3.9						
FITZ	**Fitzroy Crossi**	**29.86**	**242**	*e*P	**P**	**11 14 17.3**	**-1.1**
	15nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.86**	**242**	P	**P**	**11 14 17.1**	**-1.3**
	14nm,0.6s,baz=75,slow=7.0,SNR=62						
FORT	**Forrest**	**34.80**	**220**	*e*P	**P**	**11 15 00.7**	**-1.0**
	38nm,0.6s						
MBWA	**Marble Bar**	**36.16**	**241**	*e*P	**P**	**11 15 12.8**	**-0.6**
	20nm,1.0s						
URZ	**Urewera**	**39.53**	**150**	*e*P	**P**	**11 15 43.4**	**+1.7**
	16nm,1.0s						
URZ	**Urewera**	**39.53**	**150**	P	**P**	**11 15 43.0**	**+1.4**
	4.6nm,0.6s,baz=343,slow=5.6,SNR=3.9						
KHZ	**Kahutara**	**41.33**	**157**	*e*P	**P**	**11 15 58.3**	**+1.9**
	13nm,1.0s						
RPZ	**Rata Peaks**	**41.56**	**160**	P	**P**	**11 15 59.5**	**+1.1**
	7.5nm,0.7s,baz=230,slow=8.1,SNR=6.1						
YULB	**Yu-li**	**42.08**	**314**	*e*P	**P**	**11 16 03.1**	**+0.2**
	14nm,1.0s						
NACB	**Ninganchiao**	**42.36**	**315**	*e*P	**P**	**11 16 04.8**	**-0.3**
	23nm,1.0s						
JNU	**Nakatsue**	**43.51**	**332**	*e*P	**P**	**11 16 13.2**	**-1.1**
	22nm,1.1s						
JNU	**Nakatsue**	**43.51**	**332**	P	**P**	**11 16 12.7**	**-1.6**
	13nm,0.9s,baz=88,slow=3.2,SNR=6.5						
CISI	**Cisompet, Garu**	**45.15**	**264**	*e*P	**P**	**11 16 28.0**	**+0.2**
	29nm,0.5s						
KSRS	**Korea Array**	**48.44**	**333**	P	**P**	**11 16 52.0**	**-1.0**
	1.4nm,0.7s,baz=164,slow=8.7,SNR=6.0						
KS15	**Wonju Array Si**	**48.45**	**333**	*e*P	**P**	**11 16 53.0**	**-0.1**
KSAR	**Wonju Array Be**	**48.45**	**333**	P	**P**	**11 16 52.0**	**-1.1**
USRK	**Ussuriysk Ar.**	**52.66**	**341**	P	**P**	**11 17 23.9**	**-0.9**
	3.5nm,0.8s,baz=130,slow=6.6,SNR=5.9						
CN2	**Changchun**	**54.73**	**336**	*e*P	**P**	**11 17 42.7**	**+2.7**
GYA	**Guiyang**	**54.88**	**307**	*e*P	**P**	**11 17 43.9**	**+2.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**57.10**	**316**	P	**P**	**11 17 55.9**	**-1.3**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,140nm,4.1s						
XAN	**Xi'an**	**57.10**	**316**	*e*P	**P**	**11 17 55.7**	**-1.5**
	6.4nm,0.7s						
KMI	**Kunming**	**57.47**	**304**	P	**P**	**11 18 02.9**	**+2.7**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
PETK	**Petropavlovsk-**	**58.12**	**3**	*e*P	**P**	**11 18 03.9**	**0.0**
PETK	**Petropavlovsk-**	**58.12**	**3**	P	**P**	**11 18 04.2**	**+0.3**
	2.9nm,0.7s,baz=147,slow=7.0,SNR=4.3						
PEA1	**Petropavlovsk-**	**58.12**	**3**	*e*P	**P**	**11 18 04.2**	**+0.3**
CM01	**Chiang Mai Arr**	**58.33**	**295**	*e*P	**P**	**11 18 05.8**	**-0.3**
CM31	**Chiang Mai Arr**	**58.35**	**295**	*e*P	**P**	**11 18 06.2**	**0.0**
CMAR	**Chiang Mai Arr**	**58.35**	**295**	P	**P**	**11 18 06.0**	**-0.2**
	2.0nm,0.5s,baz=110,slow=5.1,SNR=12						
CD2	**Chengdu**	**59.23**	**311**	*e*P	**P**	**11 18 12.0**	**-0.1**
HHC	**Hu-ho-hao-te**	**59.52**	**324**	*e*P	**P**	**11 18 13.8**	**-0.2**
HHC				S	**S**	**11 26 21.8**	**+1.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
LZH	**Lanzhou**	**61.71**	**316**	*e*P	**P**	**11 18 29.4**	**+0.2**
LZH				pP	pP	11 18 33.0	-8.1
LZH				sP	sP	11 18 34.5	-11
LZH				*e*PP	**PP**	**11 20 45.6**	**+0.1**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,6.7s						
LZH				LR	LR		
	comp=N,400nm,14.5s						
LZH				LR	LR		
	comp=E,400nm,14.6s						
LZH				LR	LR		
	comp=Z,580nm,17.8s						
GTA	**Gaotai**	**66.14**	**317**	*e*P	**P**	**11 18 58.3**	**+0.1**
GTA				pP	pP	11 19 02.4	-7.9
GTA				sP	sP	11 19 05.5	-10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,85nm,5.2s						
GTA				LR	LR		
	comp=N,800nm,16.8s						
GTA				LR	LR		
	comp=E,950nm,19.2s						
GTA				LR	LR		
	comp=Z,2µm,21.6s						
SONA0	**Songino Array**	**66.78**	**328**	*e*P	**P**	**11 19 01.9**	**-0.2**
SONM	**Songino Array**	**66.78**	**328**	P	**P**	**11 19 01.9**	**-0.2**
	0.7nm,0.5s,baz=148,slow=5.7,SNR=5.9						
SONA1	**Songino Array**	**66.79**	**328**	*e*P	**P**	**11 19 01.4**	**-0.7**
JIRN	**Jiri**	**72.27**	**301**	*e*P	**P**	**11 19 35.3**	**-1.4**
VNDA	**Vanda**	**72.52**	**178**	*e*P	**P**	**11 19 37.1**	**+0.4**
VNDA	**Vanda**	**72.52**	**178**	P	**P**	**11 19 37.4**	**+0.6**
	1.7nm,0.8s,baz=357,slow=9.5,SNR=5.4						
KKN	**Kakani**	**73.09**	**301**	*e*P	**P**	**11 19 41.1**	**-0.3**
DMN	**Daman**	**73.19**	**301**	*e*P	**P**	**11 19 42.0**	**0.0**
	25nm,0.8s						
KOLN	**Koldanda**	**74.52**	**300**	*e*P	**P**	**11 19 49.4**	**-0.3**
	18nm,0.7s						
DANN	**Dangsing**	**74.53**	**301**	*e*P	**P**	**11 19 49.2**	**-0.7**
	11nm,0.7s						
PYUN	**Piuthan**	**75.12**	**301**	*e*P	**P**	**11 19 52.5**	**-0.7**
	37nm,0.8s						
ANM	**Nome**	**75.95**	**17**	*e*P	**P**	**11 19 56.8**	**-0.1**
	1.9nm,1.1s						
WMQ	**Urumqi**	**76.22**	**317**	P	**P**	**11 19 59.4**	**+0.4**
WMQ				pP	PcP	11 20 07.7	-3.2
WMQ				pmax	pmax		
	comp=Z,22nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,490nm,6.1s						
WMQ				LR	LR		
	comp=N,2µm,27.5s						
WMQ				LR	LR		
	comp=E,880nm,19.7s						
WMQ				LR	LR		
	comp=Z,1µm,21.7s						
TIXI	**Tiksi**	**78.25**	**352**	*e*P	**P**	**11 20 09.6**	**-0.1**
	7.1nm,1.1s						
TIXI	**Tiksi**	**78.25**	**352**	P	**P**	**11 20 09.3**	**-0.3**
	1.6nm,0.4s,baz=124,slow=5.6,SNR=3.8						
SUA	**Susitna One**	**79.08**	**24**	*e*P	**P**	**11 20 15.2**	**+0.6**
	6.7nm,1.0s						
IM3	**Indian Mountai**	**80.54**	**19**	*e*P	**P**	**11 20 22.3**	**0.0**
MK01	**Makanchi Array**	**80.79**	**319**	*e*P	**P**	**11 20 23.0**	**-1.1**
MK31	**Makanchi Array**	**80.81**	**319**	*e*P	**P**	**11 20 23.4**	**-0.7**
MK32	**Makanchi Array**	**80.81**	**319**	*e*P	**P**	**11 20 23.4**	**-0.7**
MKAR	**Makanchi Array**	**80.81**	**319**	*e*P	**P**	**11 20 23.3**	**-0.9**
	47nm,1.0s						
MKAR	**Makanchi Array**	**80.81**	**319**	P	**P**	**11 20 23.5**	**-0.7**
	5.9nm,0.9s,baz=105,slow=6.6,SNR=25						
MAKZ	**Makanchi**	**81.02**	**319**	*e*P	**P**	**11 20 24.6**	**-0.6**
	11nm,1.0s						
ZAA0	**Zalesovo Array**	**81.62**	**326**	*e*P	**P**	**11 20 27.0**	**-1.3**
	7.8nm,0.9s						
ZALV	**Zalesovo Beam**	**81.62**	**326**	P	**P**	**11 20 26.6**	**-1.7**
	6.5nm,0.8s,baz=113,slow=5.7,SNR=24						
ZAA1	**Zalesovo Array**	**81.62**	**326**	*e*P	**P**	**11 20 26.6**	**-1.7**
ILAR	**Eielson Array**	**82.29**	**22**	P	**P**	**11 20 29.2**	**-2.3**
	0.5nm,0.8s,baz=260,slow=4.6,SNR=5.3						
ILB	**Eielson Array**	**82.29**	**22**	*e*P	**P**	**11 20 30.1**	**-1.5**
KDJ	**Kajisay**	**83.10**	**313**	*e*P	**P**	**11 20 36.7**	**+0.1**
	6.3nm,0.9s						
KSH	**Kashi**	**83.42**	**311**	P	**P**	**11 20 41.2**	**+3.0**
KSH				sP	pP	11 20 47.9	-2.6
KSH				PP	**PP**	**11 23 54.0**	**+3.3**
KSH				pmax	pmax		
	comp=Z,180nm,4.3s						
KURK	**Kurchatov**	**84.24**	**322**	*e*P	**P**	**11 20 40.9**	**-1.0**
	14nm,1.1s						
KURBB	**Kurchatov Arra**	**84.27**	**322**	P	**P**	**11 20 40.6**	**-1.5**
	6.3nm,1.0s,baz=106,slow=4.2,SNR=17						
TKM2	**Tokmak 2**	**84.42**	**314**	P	**P**	**11 20 43.1**	**-0.1**
	SNR=8.2						
NIL	**Nilore**	**84.46**	**304**	*e*P	**P**	**11 20 43.0**	**-0.5**
	13nm,0.9s						
KZA	**Kyzart**	**84.49**	**313**	P	**P**	**11 20 44.6**	**+0.7**
	SNR=14						
QSPA	**South Pole Qui**	**84.86**	**180**	*e*P	**P**	**11 20 44.9**	**-0.1**
	4.9nm,0.7s						
CHMS	**Chumysh**	**85.04**	**314**	P	**P**	**11 20 46.0**	**-0.2**
	SNR=8.7						
UCH	**Uchtor**	**85.06**	**313**	P	**P**	**11 20 47.0**	**+0.1**
	SNR=12						
AAK	**Ala-Archa**	**85.15**	**313**	P	**P**	**11 20 47.1**	**+0.2**
	SNR=6.3						
AAK	**Ala-Archa**	**85.15**	**313**	*e*P	**P**	**11 20 46.8**	**-0.2**
	6.6nm,0.8s						
AAK	**Ala-Archa**	**85.15**	**313**	P	**P**	**11 20 47.0**	**0.0**
	6.3nm,0.8s,baz=126,slow=6.5,SNR=12						
USP	**Ospenovka**	**85.27**	**314**	P	**P**	**11 20 47.0**	**-0.4**
	SNR=12						
MAW	**Mawson**	**85.44**	**203**	*e*P	**P**	**11 20 48.9**	**+1.3**
	6.8nm,1.0s						
MAW	**Mawson**	**85.44**	**203**	P	**P**	**11 20 48.3**	**+0.6**
	21nm,1.0s,baz=263,slow=22,SNR=3.3						
AML	**Almayashu**	**85.64**	**313**	P	**P**	**11 20 50.1**	**+0.5**
	SNR=18						
EKS2	**Erkin-Say**	**85.68**	**313**	P	**P**	**11 20 49.8**	**+0.3**
	SNR=14						
NRIK	**Noril'sk**	**86.37**	**341**	P	**P**	**11 20 52.5**	**+0.3**
	3.3nm,0.5s,baz=83,slow=5.7,SNR=3.4						
BVAR	**Borovoye Array**	**89.71**	**323**	P	**P**	**11 21 06.8**	**-1.7**
	3.0nm,0.7s,baz=91,slow=5.9,SNR=14						
MOD	**Modoc Plateau**	**90.77**	**48**	*e*P	**P**	**11 21 13.2**	**-0.7**
	8.0nm,0.8s						
YKA	**Yellowknife Ar**	**95.51**	**28**	P	**P**	**11 21 34.8**	**-0.2**
	0.2nm,0.8s,baz=272,slow=5.0,SNR=2.6						
YKB5	**Yellowknife Ar**	**95.51**	**28**	*e*P	**P**	**11 21 35.5**	**+0.5**
FIA0	**FINESS Array S**	**111.48**	**336**	*e*Pdif	**Pdif**	**11 22 44.1**	**-2.1**
FINES	**FINESS Array B**	**111.48**	**336**	Pdiff	**Pdif**	**11 22 44.2**	**-2.1**
	1.5nm,1.0s,baz=51,slow=5.5,SNR=4.3						
AKASG	**Malin Array Be**	**114.96**	**324**	PKP	**PKiKP**	**11 26 49.8**	**-1.4**
	0.3nm,0.4s,baz=60,slow=2.3,SNR=3.9						
AKBB	**Malin Array Si**	**114.96**	**324**	*e*PKiKP	PKPdf	11 26 51.4	+0.2
VYHS	**Vyhne**	**121.95**	**326**	*e*PKP	**PKiKP**	**11 27 07.0**	**+2.1**
GERES	**GERESS Array B**	**124.51**	**329**	PKP	**PKPdf**	**11 27 09.3**	**-0.5**
	0.5nm,0.4s,baz=72,slow=1.7,SNR=6.1						
BDFB	**Brasilia**	**150.58**	**135**	PKP	**PKPdf**	**11 27 58.5**	**+0.7**
	3.3nm,0.6s,baz=63,slow=2.3,SNR=3.3						
BDFB				PKPbc	**PKPbc**	**11 28 03.5**	**+0.2**
	3.1nm,0.6s,baz=268,slow=1.3,SNR=6.0						
TOA0	**Torodi Ar. Sit**	**150.77**	**288**	*e*PKPbc	**PKPbc**	**11 28 02.3**	**-1.4**
TORD	**Torodi Ar. Bea**	**150.77**	**288**	PKPbc	**PKPbc**	**11 28 01.6**	**-2.0**
	7.1nm,0.6s,baz=58,slow=2.8,SNR=32						
TOA1	**Torodi Ar. Sit**	**150.77**	**288**	*e*pPKPdf	**PKPbc**	**11 28 01.6**	**-2.0**
DBIC	**Dimbokro**	**158.11**	**275**	*e*PKPab	**PKPab**	**11 28 40.8**	**-1.2**
DBIC	**Dimbokro**	**158.11**	**275**	PKPab	**PKPab**	**11 28 40.6**	**-1.4**
	2.2nm,0.6s,baz=68,slow=5.8,SNR=3.9						

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*IDC **03** 11:10:26.0±4.1, 36°.08N×70°.85E, h154^{km}±27^{km}, mb3.8/8, mb1 3.7/13, mb1mx3.3/62, mbtmp4.2/13, MS3.2/2, Ms1 3.2/2, ms1mx2.5/57, Error ellipse: s-maj=45.4km s-min=19.5km az=152.0*

*ISCJB **03** 11:10:30.4±0.2, 36°.51N±0°.02×70°.80E±0°.04, h188^{km}, mb4.0/14, Error ellipse: s-maj=4.0km s-min=2.9km az=165.1*

*BJI **03** 11:10:30.1, 36°.44N×70°.79E, h184^{km}, mb3.9/7*

*NEIC **03** 11:10:31.1±0.5, 36°.48N×70°.80E, h180^{km}±4^{km}, mb4.1/5, Error ellipse: s-maj=7.9km s-min=5.6km az=141.0*

*NNC **03** 11:10:35.7±2.1, 36°.93N×70°.58E, h185^{km}±21^{km}, mb3.4, mpv4.6, Error ellipse: s-maj=19.9km s-min=14.8km az=47.0*

ISC 03 11:10:31.6±0.5**, 36°.54N**±0°.04×**70°.77E**±0°.05**, h188**^{km}**, n104,**
σ**1^s.52**/120**, mb4.0**/14**, 12C-9D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.44**	**216**	*e*Pn	**Pn**	**11 11 13.6**	**-0.8**
KBL				*e*Sn	**Sn**	**11 11 45.4**	**-2.2**
CHGR	**Chuyangaron**	**2.47**	**329**	*e*Pn	**Pn**	**11 11 14.2**	**-0.3**
CHGR				*e*Sn	**Sn**	**11 11 45.4**	**-2.6**
GAR	**Garm**	**2.48**	**352**	*e*Pn	**Pn**	**11 11 14.8**	**+0.1**
GAR				*e*Sn	**Sn**	**11 11 47.3**	**-1.1**
CEP	**Cherat**	**2.87**	**161**	⇓P	**Pn**	**11 11 19.0**	**-0.3**
CEP				S	**Sn**	**11 11 54.0**	**-2.4**
BTK	**Batken**	**3.51**	**1**	*e*Pn	**Pn**	**11 11 28.9**	**+2.0**
CHCP	**Chirah Chowk**	**3.53**	**144**	⇓P	**Pn**	**11 11 27.1**	**-0.1**
NIL	**Nilore**	**3.53**	**144**	*e*Pn	**Pn**	**11 11 27.2**	**+0.1**
NIL				*e*Sn	**Sn**	**11 12 07.5**	**-3.1**
THW	**Thamme Wali**	**3.82**	**168**	⇓P	**Pn**	**11 11 30.1**	**-0.8**
SFK	**Sufi-Kurgan**	**4.08**	**31**	⇑P	**Pn**	**11 11 34.4**	**+0.2**
	54nm,0.3s						
SFK				⇓S	**Sn**	**11 12 22.5**	**-0.8**
	48nm,0.4s						
SARP	**Sargodha**	**4.87**	**161**	P	**Pn**	**11 11 42.9**	**-1.2**
KSH	**Kashi**	**5.07**	**53**	P	**Pn**	**11 11 42.1**	**-4.6**
KSH				S	Sn	11 12 34.1	-12
KSH				smax	smax		
	comp=N,220nm,0.4s						
KSH				smax	smax		
	comp=E,220nm,0.5s						
AML	**Almayashu**	**6.02**	**21**	P	**Pn**	**11 11 59.1**	**-0.2**
	SNR=128						
MNAS	**Manas**	**6.09**	**12**	⇓P	**Pn**	**11 11 59.9**	**0.0**
	32nm,0.4s						
MNAS				⇑S	**Sn**	**11 13 07.0**	**-2.6**
	29nm,0.5s						
NRN	**Naryn**	**6.36**	**38**	*e*Pn	**Pn**	**11 12 02.1**	**-1.6**

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UCH   Uchtor            6.37  26 P      Pn     11 12 03.4 -0.6
      SNR=65
KZA   Kyzart            6.53  31 P      Pn     11 12 05.2 -0.8
      SNR=27
EKS2  Erkin-Say         6.54  20 P      Pn     11 12 05.9 +0.1
      SNR=55
KK31  Karatay Array     6.56 358 ePn    Pn     11 12 05.6 -0.3
KK31  Karatay Array     6.56 358 ⇑P     Pn     11 12 05.6 -0.3
      26nm,0.6s,baz=181,slow=12,SNR=578
KK31                             ⇑S     Sn     11 13 16.1 -4.4
      34nm,0.5s,baz=187,slow=19,SNR=14
KKAR  Karatay Array     6.56 358 ePn    Pn     11 12 05.6 -0.4
AAK   Ala-Archa         6.73  24 P      Pn     11 12 08.4 +0.1
      SNR=38
AAK   Ala-Archa         6.73  24 P      Pn     11 12 08.5 +0.1
      10.0nm,0.3s
AAK                              ⇓S     Sn     11 13 22.1 -2.8
      17nm,0.6s
AAK   Ala-Archa         6.73  24 P      Pn     11 12 08.4 +0.1
      14nm,0.3s,baz=176,slow=5.8,SNR=127
AAK                              S      Sn     11 13 22.6 -2.2
      2.1nm,0.3s,baz=321,slow=22,SNR=11
KBK   Karagaybulak      6.91  27 P      Pn     11 12 10.9 +0.3
      SNR=24
FRU1  Bishkek           6.93  24 ePn    Pn     11 12 11.4 +0.5
CHMS  Chumysh           7.14  24 P      Pn     11 12 13.2 -0.3
      SNR=20
USP   Ospenovka         7.30  22 P      Pn     11 12 14.8 -0.9
      SNR=40
TKM2  Tokmak 2          7.38  29 P      Pn     11 12 16.8 -0.1
      SNR=72
TKM2  Tokmak 2          7.38  29 ⇑P     Pn     11 12 16.6 -0.2
      22nm,0.4s
TKM2                             ⇑S     Sn     11 13 37.9 -2.3
      10nm,0.8s
KDJ   Kajisay           7.47  40 ePn    Pn     11 12 18.4 +0.3
TARG  Taragay, Kyrgy    7.53  44 ePn    Pn     11 12 18.3 -0.7
GEYT  Alibeck          10.19 282 P      Pn     11 12 51.1 -2.4
      0.0nm,0.3s,baz=101,slow=9.7,SNR=2.2
GEYT                             S      Sn     11 14 44.5 -2.5
      0.9nm,0.3s,baz=140,slow=19,SNR=2.9
MAKZ  Makanchi         13.23  36 ePn    Pn     11 13 31.9 -0.3
MAKZ                             eP     P      11 13 36.2 +0.7
MAKZ  Makanchi         13.23  36 ⇓P     P      11 13 35.5  0.0
      5.4nm,0.6s
PYUN  Piuthan          13.32 126 eP     Pn     11 13 30.7 -3.0
      16nm,0.3s
MK01  Makanchi Array   13.35  37 ePn    Pn     11 13 33.3 -0.5
MK01                             eP     P      11 13 37.1 +0.2
MK31  Makanchi Array   13.37  36 ePn    Pn     11 13 33.9 -0.1
MK31                             eP     P      11 13 37.3 +0.3
MK31  Makanchi Array   13.37  36 ⇓P     P      11 13 36.6 -0.4
      2.3nm,0.7s,baz=217,slow=9.9,SNR=22
MK32  Makanchi Array   13.37  36 ePn    Pn     11 13 32.8 -1.1
MKAR  Makanchi Array   13.37  36 ePn    Pn     11 13 33.8 -0.1
MKAR                             eP     P      11 13 37.2 +0.2
MKAR  Makanchi Array   13.37  36 P      Pn     11 13 32.8 -1.1
      0.1nm,0.3s,baz=224,slow=14,SNR=5.5
DANN  Dangsing         13.66 123 eP     Pn     11 13 36.2 -2.0
      29nm,0.4s
KOLN  Koldanda         13.94 125 eP     Pn     11 13 39.3 -2.2
      8.2nm,0.3s
WMQ   Urumqi           14.82  55 P      Pn     11 13 52.4 +0.2
WMQ                              sP     P      11 14 37.2  +44
WMQ                              pmax   pmax
      comp=Z,14nm,0.9s
AB31  Akbulak array    14.96 332 ⇓P     Pn     11 13 54.3 +0.6
      1.6nm,0.3s,baz=143,slow=13,SNR=119
AB31                             ⇑S     Sn     11 16 29.7  -11
      1.3nm,0.5s,baz=156,slow=23,SNR=6.1
ABKAR Akbulak array    14.96 332 ePn    Pn     11 13 53.6  0.0
DMN   Daman            15.05 122 eP     Pn     11 13 54.4 -0.9
      28nm,0.4s
KKN   Kakani           15.06 121 eP     Pn     11 13 54.1 -1.2
      32nm,0.4s
KURBB Kurchatov Arra   15.14  19 ⇑P     Pn     11 13 55.8 -0.1
      2.6nm,0.7s
KURBB Kurchatov Arra   15.14  19 P      Pn     11 13 53.9 -2.0
      0.1nm,0.3s,baz=208,slow=10,SNR=13
KURK  Kurchatov        15.25  19 ePn    Pn     11 13 53.9 -3.3
KURK  Kurchatov        15.25  19 ⇑P     Pn     11 13 55.2 -2.0
      1.8nm,1.1s
PKIN  Phulchoki        15.27 122 eP     Pn     11 13 57.2 -0.8
      65nm,0.5s
PKI   Pulchoki         15.28 122 eP     Pn     11 13 57.0 -1.2
      79nm,0.4s
GUN   Gumba            15.40 120 eP     Pn     11 13 58.3 -1.3
      21nm,0.3s
JIRN  Jiri             15.77 120 eP     Pn     11 14 02.7 -1.4
      33nm,0.4s
BVA0  Borovoye Array   16.48 359 P      Pn     11 14 12.6 +0.5
      1.1nm,0.5s,baz=210,slow=40,SNR=18
BVAR  Borovoye Array   16.48 359 P      P      11 14 12.3 +0.8
      1.1nm,0.3s,baz=155,slow=9.0,SNR=18
BVAR                             S      S      11 17 13.2 -0.5
      0.2nm,0.3s,baz=170,slow=20,SNR=5.1
RAMN  Ramite           16.50 121 eP     P      11 14 11.3 -0.8
      22nm,0.5s
BRVK  Borovoye         16.52 359 eP     Pn     11 14 13.2 +0.6
      3.2nm,0.6s
BRVK  Borovoye         16.52 359 ⇑P     P      11 14 12.5 +0.7
      2.3nm,0.6s
AKTO  Aktyubinsk       16.65 330 ⇑P     Pn     11 14 14.4 +0.2
      16nm,1.4s
AKTO                             ⇑S     S      11 17 12.8 -4.5
      6.9nm,1.2s
AKTO  Aktyubinsk       16.65 330 P      Pn     11 14 14.8 +0.6
      0.9nm,0.3s,baz=144,slow=8.5,SNR=16
AKTO                             S      S      11 17 11.9 -5.4
      0.2nm,0.3s,baz=342,slow=20,SNR=3.2
WSAR  Wadi Sarin       16.91 222 LR     LR     11 21 01.7
      comp=Z,14nm,18.2s,baz=18,slow=38
ZAA0  Zalesovo Array   19.95  25 eP     P      11 14 49.5 +0.4
      9.1nm,0.6s
ZALV  Zalesovo Beam    19.95  25 eP     P      11 14 49.3 +0.2
ZALV  Zalesovo Beam    19.95  25 P      P      11 14 49.8 +0.7
      8.1nm,0.3s,baz=221,slow=12,SNR=52
ZAA1  Zalesovo Array   19.96  25 eP     P      11 14 49.8 +0.7
HYB   Hyderabad        20.26 158 i P    P      11 14 54.0 +1.3
ARU   Arti             21.53 341 eP     P      11 15 07.4 +1.6
      6.9nm,1.0s
GTA   Gaotai           23.03  74 eP     P      11 15 28.5 +8.2
GTA                              pP     pP     11 15 32.6  -24
GTA                              sP     PP     11 15 35.7  -41
GTA                              pmax   pmax
      comp=Z,3.0nm,0.6s
KMI   Kunming          29.59 104 P      P      11 16 20.2 +0.9
KMI                              pmax   pmax
      comp=Z,10.0nm,0.5s
HHC   Hu-ho-hao-te     31.92  70 eP     P      11 16 39.5 -0.1
HHC                              pmax   pmax
      comp=Z,12nm,0.8s
AKASG Malin Array Be   32.78 309 P      P      11 16 47.3 +0.6
      comp=Z,1.6nm,0.4s,baz=81,slow=7.3,SNR=4.1
AKBB  Malin Array Si   32.78 309 eP     P      11 16 47.2 +0.5
      comp=Z,2.6nm,0.5s
AK11  Malin Array Si   32.81 309 eP     P      11 16 47.3 +0.3
NRIK  Noril'sk         34.12  11 P      P      11 16 59.9 +1.8
      comp=Z,2.9nm,0.4s,baz=168,slow=4.9,SNR=3.5
BUR04 Bucovina Ar. S   35.11 303 eP     P      11 17 08.5 +1.5
BUR08 Bucovina Ar. S   35.12 303 eP     P      11 17 08.5 +1.4
FIA1  FINESS Array S   37.34 326 eP     P      11 17 27.1 +1.5
FIA0  FINESS Array S   37.35 326 eP     P      11 17 26.5 +0.9
FINES FINESS Array B   37.35 326 P      P      11 17 26.5 +0.9
      comp=Z,1.3nm,0.4s,baz=122,slow=9.1,SNR=21
ARA0  ARCESS Array S   41.04 338 eP     P      11 17 57.3 +1.2
ARCES ARCESS Array B   41.04 338 eP     P      11 17 57.8 +1.8
ARCES ARCESS Array B   41.04 338 P      P      11 17 57.3 +1.2
      comp=Z,2.5nm,0.6s,baz=112,slow=7.9,SNR=23
ARE0  ARCESS Array S   41.04 338 eP     P      11 17 57.9 +1.9
      comp=Z,0.3nm,1.0s
NC405 NORSAR Array S   44.00 323 eP     P      11 18 21.1 +1.0
NC602 NORSAR Array S   44.05 323 eP     P      11 18 21.1 +0.7
NC303 NORSAR Array S   44.18 323 eP     P      11 18 22.8 +1.4
NB201 NORSAR Array S   44.20 323 eP     P      11 18 22.5 +0.8
NB2   NORSAR Subarra   44.24 323 P      P      11 18 22.3 +0.3
      comp=Z,1.6nm,0.5s,baz=95,slow=7.9
NB200 NORSAR Array S   44.24 323 eP     P      11 18 22.6 +0.6
NOA   NORSAR Array B   44.24 323 P      P      11 18 22.6 +0.6
      comp=Z,2.1nm,0.6s,baz=97,slow=7.8,SNR=11
NBO00 NORSAR Array S   44.45 323 eP     P      11 18 24.4 +0.8
NC204 NORSAR Array S   44.48 323 eP     P      11 18 24.7 +0.8
TIXI  Tiksi            45.80  22 eP     P      11 18 35.2 +1.2
      comp=Z,3.8nm,0.9s
SPA0  Spitsbergen Ar   47.41 347 eP     P      11 18 48.9 +2.4
SPITS Spitsbergen Ar   47.41 347 LR     LR     11 41 53.1
      comp=Z,107nm,18.2s,baz=320,slow=39
TOA1  Torodi Ar. Sit   65.53 268 eP     P      11 20 53.4 -1.9
TOA0  Torodi Ar. Sit   65.53 268 eP     P      11 20 55.2 -0.1
TORD  Torodi Ar. Bea   65.53 268 P      P      11 20 53.4 -1.9
      comp=Z,0.6nm,0.4s,baz=53,slow=5.8,SNR=8.1
YKA   Yellowknife Ar   81.21   3 P      P      11 22 26.9 +0.9
      comp=Z,0.9nm,0.5s,baz=351,slow=5.4,SNR=21
YKB5  Yellowknife Ar   81.21   3 eP     P      11 22 27.1 +1.1
GO06  Curarrehue      150.26 253 ePKPbc PKPbc  11 30 00.6 +0.2
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*PGC **03** 11:13:04.8±1.5,48°.90N×129°.79W,h10^{km},MLSn3.2/27,Mw3.8/27,263km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*

*ISCJB **03** 11:13:06.5±0.7,49°.03N±0°.04×129°.41W±0°.05,h10^{km},mb3.6/4,MS3.7/4,Error ellipse: s-maj=6.7km s-min=3.8km az=38.4*

*IDC **03** 11:13:09.2±1.6,49°.23N×129°.22W,h0^{km},mb3.7/3,mb1 3.8/11,mb1mx3.6/62,mbtmp3.7/11,ML3.2/7,MS3.6/9,Ms1 3.6/9,ms1mx3.4/66,Error ellipse: s-maj=31.2km s-min=12.2km az=61.0*

ISC 03 11:13:05.4±1.0,**48°.93N**±0°.05×**129°.66W**±0°.08,**h10**^{km}**,n64,**σ**1^{s}.75**/78,**mb3.5**/4,**MS3.4**/4,**Vancouver Island region**

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Code  Station Name        Δ°  AZ°  Phase ID        Time      Res
                                 Op     ISC      h  m  s     ISC
KEMF  NEPTUNE Canada    1.05 159 P      Pb     11 13 23.0 -2.5
KEMF                             S      Sb     11 13 35.5 -3.6
NC89  ODP889            1.88  97 Pn     Pn     11 13 35.5 -1.8
NC89                             Sn     Sn     11 13 58.5 -2.4
EDB   Eliza Dome        1.91  59 Pn     Pn     11 13 36.3 -1.7
EDB                              Sn     Sn     11 13 58.9 -3.1
PACB  Port Alice, BC    2.06  42 Pn     Pn     11 13 38.9 -1.2
PACB                             Sn     Sn     11 14 02.1 -3.7
PHC   Port Hardy        2.29  38 Pn     Pn     11 13 42.0 -1.2
PHC                              Sn     Sn     11 14 09.2 -2.2
WOSB  Woss              2.36  57 Pn     Pn     11 13 43.2 -1.0
NCBC  Barkley Canyon    2.36 101 Sn     Sn     11 14 12.0 -1.1
TLCB  Telegraph Cove    2.44  48 Pn     Pn     11 13 44.5 -0.8
TLCB                             Sn     Sn     11 14 13.3 -1.9
TOFB  Tofino            2.48  83 Pn     Pn     11 13 44.3 -1.4
TOFB                             Sn     Sn     11 14 14.5 -1.6
GDR   Gold River        2.52  69 Pn     Pn     11 13 45.2 -1.1
BTB   Buttle Lake       2.77  77 Pn     Pn     11 13 49.2 -0.7
BTB                              Sn     Sn     11 14 21.9 -1.6
NCRB  Newcastle Ridg    2.77  56 Pn     Pn     11 13 49.5 -0.4
B928  Bamfield          2.99  90 Pn     Pn     11 13 52.7  0.0
B928                             Sn     Sn     11 14 26.1 -2.4
CBB   Campbell River    3.01  67 Pn     Pn     11 13 52.9 -0.2
B927  Port Alberni      3.20  83 Pn     Pn     11 13 55.2 -0.4
MGB   Mount Grey        3.27  87 Pn     Pn     11 13 56.6 -0.2
MGB                              Sn     Sn     11 14 34.4 -1.5
BBB   Bella Bella       3.41  16 Pn     Pn     11 13 57.5 -1.0
BBB   Bella Bella       3.41  16 Pn     Pn     11 13 57.5 -1.0
      2.7nm,0.3s,baz=203,slow=11,SNR=17
BBB                              Sn     Sn     11 14 34.6 -4.3
      4.4nm,0.3s,baz=290,slow=20,SNR=3.8
BBB                              LR     LR     11 15 02.0
      comp=Z,257nm,21.6s,baz=246,slow=37
PFB   Port Renfrew      3.47  94 Sn     Sn     11 14 38.1 -2.6
TXB   Texada            3.50  75 Pn     Pn     11 13 59.7 -0.2
YOUB  Youbou, Lake C    3.56  88 Pn     Pn     11 14 00.8 +0.1
YOUB                             Sn     Sn     11 14 42.4 -0.5
GHNB  Nanoose           3.58  82 Pn     Pn     11 14 01.6 +0.7
GHNB                             Sn     Sn     11 14 44.5 +1.2
B926  Mesachie Lake     3.65  90 Pn     Pn     11 14 01.5 -0.4
B926                             Sn     Sn     11 14 43.0 -2.0
NLLB  Nanaimo Lost L    3.74  83 Pn     Pn     11 14 03.8 +0.7
NLLB                             Sn     Sn     11 14 47.9 +0.7
SHB   Sechelt           3.85  78 Pn     Pn     11 14 05.2 +0.5
LZB   Mount Lazard      3.87  93 Sn     Sn     11 14 48.9 -1.7
B009  North Saanich     4.12  92 Sn     Sn     11 14 55.2 -1.2
B010  North Saanich     4.12  92 Sn     Sn     11 14 54.4 -2.0
PGC   Sidney            4.12  92 Pn     Pn     11 14 08.8 +0.5
PGC                              Sn     Sn     11 14 54.7 -1.6
B011  North Saanich     4.12  92 Pn     Pn     11 14 08.4 +0.1
B011                             Sn     Sn     11 14 56.4  0.0
BIB   Bowen Island      4.20  81 Pn     Pn     11 14 09.9 +0.6
VGZ   Gonzales          4.23  95 Pn     Pn     11 14 09.9  0.0
VGZ                              Sn     Sn     11 14 57.6 -1.7
WPB   Watts Point       4.28  78 Pn     Pn     11 14 11.6 +1.0
SNB   Saturna Island    4.29  90 Pn     Pn     11 14 11.2 +0.5
SNB                              Sn     Sn     11 15 00.7  0.0
BLN   Blyn Mountain     4.54  99 Sn     Sn     11 15 07.8 +0.8
WSLR  Whistler          4.55  72 Pn     Pn     11 14 16.4 +2.0
HDW   Hoodsport         4.59 104 Sn     Sn     11 15 07.7 -0.7
GNW   Green Mountain    4.77 104 Sn     Sn     11 15 11.6 -0.8
VDB   Vedder Mountai    4.98  86 Pn     Pn     11 14 21.0 +0.8
MBW   Mount Baker       5.12  89 Pn     Pn     11 14 23.5 +1.2
LLLB  Lillooet          5.31  69 Pn     Pn     11 14 26.5 +1.8
HOPB  Hope              5.43  82 Pn     Pn     11 14 27.0 +0.8
LON   Longmire          5.72 109 Pn     Pn     11 14 32.7 +2.4
LON                              Sn     Sn     11 15 35.6 -0.5
FMW   Mount Fremont     5.73 107 Pn     Pn     11 14 32.6 +2.0
LTY   Liberty           6.25 102 Pn     Pn     11 14 39.7 +2.0
LTY                              Sn     Sn     11 15 48.4 -0.8
FSB   Fort Saint Jam    6.47  29 Pn     Pn     11 14 41.3 +0.7
PNT   Penticton         6.60  83 Pn     Pn     11 14 42.2 -0.2
NEW   Newport           8.34  90 Pn     Pn     11 15 07.4 +1.1
      0.2nm,0.3s,baz=286,slow=14,SNR=3.6
NEW                              LR     LR     11 18 12.1
      comp=Z,417nm,20.1s,baz=266,slow=38
YBH   Yreka Blue Hor    8.70 143 Pn     Pn     11 15 18.6 +7.2
      0.1nm,0.3s,baz=334,slow=15,SNR=17
DLBC  Dease Lake        9.53 359 Pn     Pn     11 15 24.0 +1.4
      0.1nm,0.3s,baz=188,slow=14,SNR=2.3
NVAR  Mina Array Bea   13.31 138 Pn     P      11 16 21.4 -3.0
      0.1nm,0.3s,baz=316,slow=12,SNR=6.3
PDAR  Pinedale Array   15.28 106 Pn     P      11 16 45.8 -0.4
      0.0nm,0.3s,baz=310,slow=14,SNR=4.5
PDAR                             LR     LR     11 22 50.6
      comp=Z,207nm,19.9s,baz=294,slow=38
YKA   Yellowknife Ar   15.96  26 Pn     Pn     11 16 49.2 -0.4
      0.1nm,0.3s,baz=216,slow=11,SNR=18
ILAR  Eielson Array    18.35 336 P      P      11 17 22.4 +2.6
      baz=149,slow=12,SNR=4.2
ILAR                             LR     LR     11 23 23.9
      comp=Z,153nm,18.1s,baz=154,slow=34
INK   Inuvik           19.53 356 P      Pn     11 17 35.4 +1.6
      0.0nm,0.3s,baz=165,slow=12,SNR=5.6
INK                              LR     LR     11 25 05.6
      comp=Z,225nm,22.0s,baz=197,slow=37
ULM   Lac du Bonnet    21.84  74 P      P      11 18 00.6 +2.8
      13nm,0.8s,baz=284,slow=11,SNR=23
ULM                              LR     LR     11 26 36.2
      comp=Z,249nm,21.8s,baz=267,slow=38
ANMO  Albuquerque      22.09 121 P      P      11 18 06.7 +5.9
      1.3nm,0.6s,baz=335,slow=11,SNR=6.7
ANMO                             LR     LR     11 27 35.5
      comp=Z,85nm,20.7s,baz=269,slow=39
TXAR  Lajitas Array    27.87 125 P      P      11 18 56.9 +1.6
      0.3nm,0.6s,baz=317,slow=6.4,SNR=2.7
LPIG  La Paz           29.09 141 LR     LR     11 28 45.1
      comp=Z,66nm,21.7s,baz=337,slow=32
H11N2 WAKE ISLAND Hy   57.99 264 T      T      12 25 45.7
      baz=43,slow=75,SNR=15
H11N3 WAKE ISLAND Hy   57.99 264 T      T      12 25 40.4
      baz=43,slow=75,SNR=18
H11N1 WAKE ISLAND Hy   58.01 264 T      T      12 25 41.5
      baz=43,slow=75,SNR=13
MKAR  Makanchi Array   80.69 338 P      P      11 25 23.3 +4.9
      0.2nm,0.5s,baz=7.1,slow=5.8,SNR=2.3
URZ   Urewera          98.79 220 LR     LR     12 05 26.9
      comp=Z,238nm,19.5s,baz=194,slow=32
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*ISCJB **03** 11:14:52.5±1.0,5°.02S±0°.02×153°.12E±0°.02,h7^{km}±6^{km},mb5.2/217,MS5.4/456,Error ellipse: s-maj=4.1km s-min=3.7km az=169.9*

*BJI **03** 11:14:54.1,4°.89S×153°.44E,h24^{km},mB5.4/59,mb5.2/69,Ms5.3/70,Ms7 5.1/68*

*NEIC **03** 11:14:55.7±0.1,5°.02S×153°.10E,h16^{km},mb5.3/135,MS5.5/299,MW5.4,Error ellipse: s-maj=3.5km s-min=2.8km az=83.0,Moment Tensor Solution. s37 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.04; M$_{\theta\theta}$-0.36; M$_{\phi\phi}$-0.68; M$_{r\theta}$-0.16; M$_{\theta\phi}$0.98; M$_{\phi r}$0.97; Best double couple: M$_0$1.70000×10^{17} NP1:φ$_s$113.00000°,δ34.00000°,λ46.00000°. NP2:φ$_s$342.00000°,δ66.00000°,λ115.00000°. Principal axes: T 1.5200, Plg61.0000°, Azm290.0000°; N 0.2500, Plg23.0000°, Azm151.0000°; P -1.7700, Plg17.0000°, Azm54.0000°;*

*MOS **03** 11:14:56.9±1.0,4°.91S×153°.09E,h33^{km},mb5.5/52,MS5.1/28 Error ellipse: s-maj=9.3km s-min=5.7km az=107.1*

*IDC **03** 11:15:00.1±1.2,5°.06S×153°.05E,h51^{km}±10^{km},mb4.8/36,mb1 4.8/38,mb1mx4.8/50,mbtmp5.1/38,MS5.0/34,Ms1 5.0/34,ms1mx4.9/43,Error ellipse: s-maj=11.2km s-min=8.1km az=78.0*

*GCMT **03** 11:15:00.7±0.1,5°.23S±0°.01×153°.28E±0°.01,h32^{km},MW5.5/124,Moment Tensor Solution. s118,c221; s124,c240; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.54±.02; M$_{\theta\theta}$0.11±.02; M$_{\phi\phi}$-1.66±.02; M$_{r\theta}$-0.28±.03; M$_{\theta\phi}$-0.54±.02; M$_{\phi r}$1.24±.03; Best double couple: M$_0$2.11500×10^{17} NP1:φ$_s$358.00000°,δ64.00000°,λ72.00000°. NP2:φ$_s$214.00000°,δ31.00000°,λ122.00000°. Principal axes: T 2.0650, Plg66.0000°, Azm236.0000°; N 0.0950, Plg16.0000°, Azm6.0000°; P -2.1650, Plg17.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **03** 11:15:01.7±0.7,5°S±3°×15°3E±°,h61^{km}±6^{km},M5.4/54,mb5.4/54,mB5.8/37,Mw(mB)5.4/37*

ISC 03 11:14:57.7±0.5,**5°.12S**±0°.04×**153°.21E**±0°.04,**h32**^{km}±3^{km}**,h33**^{km}**:pP-P,n852,**σ**1^{s}.48**/616,**mb5.3**/217,**MS5.5**/456,**19C-7D,New Ireland region**

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Code  Station Name        Δ°  AZ°  Phase ID        Time      Res
                                 Op     ISC      h  m  s     ISC
RABL  Rabaul            1.40 311 ePn    Pb     11 15 22.2 -1.0
RABL                             eSn    Sb     11 15 41.5 +0.7
MANU  Manus Island      6.59 297 ePn    Pn     11 16 36.5 +4.1
HNR   Honiara           7.93 123 eP     Pn     11 16 48.0 -2.9
HNR                              eS     Sn     11 18 30.0  +10
HNR   Honiara           7.93 123 ePn    Pn     11 16 58.1 +7.2
HNR   Honiara           7.93 123 eP     Pn     11 16 58.1 +7.2
HNR   Honiara           7.93 123 P      Pn     11 16 56.8 +6.0
      32nm,0.3s,baz=255,slow=5.8,SNR=17
HNR                              S      Sn     11 18 25.9 +6.3
      baz=194,slow=19,SNR=1.4
JAY   Jayapura         12.75 281 P      Pn     11 17 59.2 +2.3
      752nm,1.0s,27µm
JAY   Jayapura         12.75 281 P      Pn     11 17 59.0 +2.1
      1.2nm,0.3s,baz=108,slow=13,SNR=2.4
JAY                              LR     LR     11 22 54.0
      comp=Z,12µm,19.7s,baz=70,slow=38
PATS  Pohnpei          12.92  23 P      Pn     11 17 59.4 +0.2
      baz=13,SNR=6.7
PATS  Pohnpei          12.92  23 ePn    Pn     11 17 59.6 +0.4
COEN  Coen             13.22 228 P      Pn     11 18 04.5 +1.1
      baz=13,SNR=17
COEN  Coen             13.22 228 ePn    Pn     11 18 02.5 -0.9
GENI  Genyem           13.26 280 P      Pn     11 18 05.7 +1.9
      205nm,2.5s,8µm
MTSU  Mount Surprise   15.58 213 P      P      11 18 37.6 -1.5
      baz=16,SNR=14
CTA   Charters Tower   16.35 204 P      Pn     11 18 46.4 +1.5
      1.1nm,0.3s,baz=33,slow=13,SNR=20
CTA                              LR     LR     11 24 10.9
      comp=Z,7µm,21.9s,baz=21,slow=34
CTAO  Charters Tower   16.35 204 ePn    P      11 18 46.6 -0.9
      68nm,1.1s
CTAO  Charters Tower   16.35 204 eP     P      11 18 46.6 -0.9
CTAO                             pmax   pmax
      comp=Z,68nm,1.1s
RKPI  Ransiki, Papua   19.34 280 P      P      11 19 20.7 +0.1
      comp=Z,320nm,1.0s,comp=Z,5µm
EIDS  Eidsvold         20.24 186 P      Pn     11 19 31.8 -0.6
      baz=20,SNR=16
EIDS  Eidsvold         20.24 186 eP     P      11 19 31.2 +1.0
      comp=Z,102nm,1.1s
EIDS                             LR     LR
      comp=Z,6µm,20.0s
QIS   Mount Isa        20.26 220 P      P      11 19 31.6 +1.0
      baz=20,SNR=24
GUMO  Guam             20.35 336 eP     P      11 19 30.4 -1.2
      comp=Z,1µm,1.3s
GUMO  Guam             20.35 336 eP     P      11 19 30.4 -1.2
GUMO                             pmax   pmax
      comp=Z,1µm,1.3s
GUMO  Guam             20.35 336 P      P      11 19 30.2 -1.3
      comp=Z,78nm,0.5s,baz=13,slow=22,SNR=4.8
GUMO                             LR     LR     11 28 02.5
      comp=Z,3µm,18.9s,baz=155,slow=39
TARA  Tarawa           20.71  72 eP     Pn     11 19 38.5 +0.4
      comp=Z,374nm,1.1s
TARA                             LR     LR
      comp=Z,23µm,19.0s
FAKI  Fak Fak          21.03 275 eP     P      11 19 38.2 -0.8
      comp=Z,227nm,1.4s
FAKI                             LR     LR
      comp=Z,8µm,20.0s
FAKI  Fak Fak          21.03 275 P      P      11 19 40.6 +1.6
      comp=Z,3µmcomp=Z,73nm,1.1s
DZM   Mont Dzumac      21.16 144 eP     P      11 19 42.4 +1.9
      comp=Z,298nm,1.0s
DZM                              eLQ    LQ     11 23 55.0
      comp=Z,13µm,28.1s
DZM                              eLR    LR     11 24 47.9
      comp=Z,13µm,22.6s
DZM   Mont Dzumac      21.16 144 eP     P      11 19 42.8 +2.3
      comp=Z,109nm,0.7s
DZM   Mont Dzumac      21.16 144 P      P      11 19 42.1 +1.6
      comp=Z,94nm,0.5s,baz=294,slow=10,SNR=213
DZM                              LR     LR     11 27 03.5
      comp=Z,8µm,21.1s,baz=314,slow=34
ONTNC Ouen Toro        21.35 144 eP     P      11 19 44.3 +1.9
      comp=Z,197nm,1.0s
ONTNC                            LR     LR
      comp=Z,9µm,22.0s
OUENC Ouen Island, N   21.67 144 eP     P      11 19 47.6 +1.9
      comp=Z,94nm,0.8s
OUENC                            LR     LR
      comp=Z,8µm,19.0s
RMQ   Roma             21.67 191 P      P      11 19 46.2 +0.5
      baz=22,SNR=21
MARNC Mare, Loyalty    21.70 140 eP     P      11 19 47.2 +1.1
      comp=Z,309nm,1.0s
KDU   Kakadu           21.81 248 P      P      11 19 46.4 -0.9
      baz=22,SNR=89
SAUI  Saumlaki         21.95 261 PFAKE         11 20 00.0  +11
SAUI                             LR     LR
      comp=Z,18µm,19.0s
PINNC Pines Island,    22.17 143 eP     P      11 19 53.2 +2.1
      comp=Z,110nm,0.9s
PINNC                            LR     LR
      comp=Z,8µm,18.0s
SIJI  Sorong           22.32 280 P      P      11 19 51.5 -1.3
      baz=269,slow=22,SNR=42
SIJI                             LR     LR     11 27 45.4
      comp=Z,9µm,20.6s,baz=112,slow=35
SWI   Sorong           22.32 280 P      P      11 19 53.5 +0.6
      comp=Z,147nm,0.8s,comp=Z,2µm
PALU  Palau            22.43 303 P      P      11 19 53.9 -0.1
      baz=22,SNR=5.5
SARN  Sarigan          22.89 341 eP     P      11 20 00.3 +1.4
      comp=Z,234nm,1.4s
QLP   Quilpie          23.00 201 P      P      11 20 00.1 +0.2
      baz=23,SNR=88
WC3   Warramunga Arr   23.53 230 eP     P      11 20 04.8 -0.5
      comp=Z,85nm,0.8s
WRAB  Tennant Creek    23.53 230 eP     P      11 20 05.0 -0.3
      comp=Z,99nm,1.0s
WRAB  Tennant Creek    23.53 230ceP     P      11 20 04.8 -0.5
WRAB                             pmax   pmax
      comp=Z,161nm,1.7s
WB2   Warramunga Arr   23.54 230 eP     P      11 20 05.0 -0.3
      comp=Z,106nm,0.8s
WR1   Warramunga Arr   23.55 230 eP     P      11 20 04.8 -0.6
      comp=Z,144nm,0.9s
WR1                              ePcP   PcP    11 23 49.2 -1.3
WR1                              eS     S      11 24 14.7 -2.9
WR1                              eScP   ScP    11 27 28.8 +2.3
WRA   Warramunga Arr   23.55 230 P      P      11 20 04.8 -0.6
      comp=Z,49nm,0.8s,baz=55,slow=10,SNR=73
WRA                              PcP    PcP    11 23 49.2 -1.3
      comp=Z,5.9nm,0.8s,baz=36,slow=2.1,SNR=2.8
WRA                              S      S      11 24 14.7 -2.9
      comp=Z,1.6nm,0.7s,baz=53,slow=17,SNR=2.6
WRA                              ScP    ScP    11 27 28.8 +2.3
      comp=Z,1.7nm,0.8s,baz=48,slow=3.0,SNR=6.0
WRA                              LR     LR     11 28 53.7
      comp=Z,6µm,22.0s,baz=55,slow=36
WRA                              PKiKP  PKiKP  11 31 34.1 -0.2
      comp=Z,0.5nm,0.5s,baz=336,slow=0.9,SNR=12
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ARMA  Armidale          25.21 183  P       P       11 20 22.7 +2.0
      baz=25,SNR=5.8
ARMA  Armidale          25.21 183  eP      P       11 20 22.6 +1.9
      comp=Z,67nm,1.3s
ARMA                               LR      LR
      comp=Z,8µm,19.0s
AS01  Alice Springs     26.16 223  eP      P       11 20 29.2 -0.1
AS31  Alice Springs     26.19 223  eP      P       11 20 29.2 -0.5
      comp=Z,13nm,0.7s
AS31                               LR      LR
      comp=Z,100nm,20.0s
ASAR  Alice Springs     26.20 223  P       P       11 20 29.3 -0.4
      comp=Z,26nm,0.5s,baz=56,slow=9.2,SNR=80
ASAR                               PcP     PcP     11 23 56.1 -0.2
      comp=Z,2.9nm,0.7s,baz=43,slow=3.3,SNR=2.4
ASAR                               ScP     ScP     11 27 38.1 +4.3
      comp=Z,2.6nm,0.9s,baz=53,slow=2.8,SNR=4.4
ASAR                               LR      LR      11 30 36.3
      comp=Z,4µm,21.5s,baz=49,slow=36
ASAR                               PKiKP   PKiKP   11 31 34.4 -1.4
      comp=Z,0.2nm,0.6s,baz=46,slow=1.2,SNR=4.9
KNRA  Kununurra         26.20 245  P       P       11 20 29.4 -0.3
      baz=26,SNR=25
TNTI  Ternate           26.47 282  eP      P       11 20 31.6 -0.6
      comp=Z,63nm,1.1s
TNTI                               LR      LR
      comp=Z,3µm,22.0s
TNTI  Ternate           26.47 282  P       P       11 20 33.2 +1.0
      comp=Z,65nm,1.1s,comp=Z,1µm
CMSA  Cobar Meteorol    27.21 194  P       P       11 20 38.7 +0.1
      baz=27,SNR=24
SANI  Sanana            27.34 275  P       P       11 20 38.4 -1.6
      comp=Z,108nm,0.9s,comp=Z,1µm
STKA  Stephens Creek    28.76 201  P       P       11 20 51.9 -0.5
      baz=29,SNR=21
STKA  Stephens Creek    28.76 201  eP      P       11 20 52.0 -0.5
      comp=Z,4.5nm,0.8s
STKA  Stephens Creek    28.76 201  eP      P       11 20 52.0 -0.5
STKA                               pmax    pmax
      comp=Z,5.0nm,0.8s
STKA  Stephens Creek    28.76 201  P       P       11 20 51.6 -0.8
      comp=Z,13nm,0.7s,baz=40,slow=13,SNR=28
STKA                               LR      LR      11 32 42.3
      comp=Z,4µm,19.3s,baz=13,slow=37
SOEI  Soe               29.06 259  eP      P       11 20 55.5  0.0
      comp=Z,117nm,1.2s
SOEI                               LR      LR
      comp=Z,10µm,22.0s
SOEI  Soe               29.06 259  P       P       11 20 55.5  0.0
      comp=Z,68nm,1.4s,comp=Z,1µm
BATI  Baumata           29.71 258  P       P       11 21 01.7 +0.5
      comp=Z,30nm,0.7s,comp=Z,538nm
BATI  Baumata           29.71 258  P       P       11 21 01.2  0.0
      comp=Z,57nm,0.9s,baz=144,slow=1.2,SNR=20
BATI                               LR      LR      11 35 21.3
      comp=Z,13µm,20.4s,baz=99,slow=41
KMSI  Cibinong          29.74 280  P       P       11 20 59.8 -1.6
      comp=Z,285nm,0.8s
FITZ  Fitzroy Crossi    29.87 242  P       P       11 21 01.8 -0.7
      baz=30,SNR=88
FITZ  Fitzroy Crossi    29.87 242  eP      P       11 21 01.3 -1.2
      comp=Z,172nm,1.2s
FITZ  Fitzroy Crossi    29.87 242  P       P       11 21 01.8 -0.7
      comp=Z,130nm,1.0s,baz=50,slow=7.6,SNR=118
FITZ                               LR      LR      11 34 43.8
      comp=Z,7µm,18.1s,baz=64,slow=40
DAV   Davao City (W)    30.12 293  LR      LR      11 33 05.0
      comp=Z,5µm,18.1s,baz=100,slow=36
CNB   Canberra Magne    30.26 186  P       P       11 21 07.5 +1.7
      baz=30
CAN   Canberra          30.30 187  eP      P       11 21 07.4 +1.2
      comp=Z,68nm,1.4s
CAN                                LR      LR
      comp=Z,4µm,20.0s
CAN   Canberra          30.30 187  eP      P       11 21 07.4 +1.2
CAN                                pmax    pmax
      comp=Z,68nm,1.4s
CAN                                MLR     MLR
      comp=Z,4µm,20.0s
LUWI  Luwuk             30.66 277  eP      P       11 21 08.7 -0.8
      comp=Z,78nm,0.8s
LUWI  Luwuk             30.66 277  P       P       11 21 09.7 +0.1
      comp=Z,107nm,0.9s
MMRI  Maumere           30.94 262  eP      P       11 21 11.8 -0.3
      comp=Z,55nm,1.0s
MMRI                               LR      LR
      comp=Z,4µm,22.0s
MMRI  Maumere           30.94 262  P       P       11 21 09.8 -2.3
      comp=Z,54nm,0.9s
WRKA  Warakurna         31.05 228  P       P       11 21 11.7 -1.2
      baz=31,SNR=58
HTT   Hallett           31.15 204  P       P       11 21 13.5 -0.2
      baz=31,SNR=26
EDFI  Ende, Flores      31.49 262  P       P       11 21 14.7 -2.3
      comp=Z,35nm,0.8s,comp=Z,771nm
MRSI  Marisa            31.73 279  P       P       11 21 18.1 -0.9
      comp=Z,23nm,1.0s
APSI  Ampana            31.79 277  P       P       11 21 19.9 +0.4
      comp=Z,68nm,1.0s,comp=Z,778nm
BBOO  Buckleboo         31.86 208  eP      P       11 21 19.4 -0.6
      comp=Z,32nm,1.0s
BBOO                               LR      LR
      comp=Z,4µm,18.0s
BKSI  Bulukumba         32.95 268  P       P       11 21 28.9 -0.8
      comp=Z,13nm,1.0s
BNSI  Bone              33.00 270  P       P       11 21 29.6 -0.5
      comp=Z,38nm,1.6s,comp=Z,805nm
TOO   Toolangi          33.06 191  P       P       11 21 30.6 +0.2
      baz=33
TOO   Toolangi          33.06 191  eP      P       11 21 32.2 +1.8
      comp=Z,28nm,1.3s
TOO                                LR      LR
      comp=Z,6µm,19.0s
TOO   Toolangi          33.06 191  eP      P       11 21 32.2 +1.8
TOO                                pmax    pmax
      comp=Z,28nm,1.3s
TOO                                MLR     MLR
      comp=Z,6µm,19.0s
ARPS  Mount Arapiles    33.18 197  P       P       11 21 31.9 +0.5
      baz=33,SNR=13
KAPI  Kappang           33.33 269  PFAKE           11 21 40.0 +7.0
KAPI                               LR      LR
      comp=Z,2µm,21.0s
SPSI  Sidrap Palu       33.36 271  P       P       11 21 31.5 -1.8
      comp=Z,17nm,0.9s
TTSI  Tana Toraja       33.37 272  P       P       11 21 32.1 -1.3
      comp=Z,25nm,0.8s
PCI   Palu              33.58 276  P       P       11 21 36.1 +0.8
      comp=Z,245nm,1.0s,comp=Z,2µm
MPSI  Mapaga            33.71 278  P       P       11 21 34.5 -1.9
      comp=Z,27nm,0.9s,comp=Z,337nm
JCJ   Chichijima        33.76 342  LR      LR      11 33 47.4
      comp=Z,2µm,21.9s,baz=157,slow=34
FORT  Forrest           34.80 220  P       P       11 21 45.3 -0.3
      baz=35,SNR=120
FORT  Forrest           34.80 220  eP      P       11 21 45.3 -0.3
      comp=Z,183nm,0.7s
FORT                               LR      LR
      comp=Z,4µm,21.0s
PLAI  Plampang          35.35 262  P       P       11 21 48.9 -1.7
      comp=Z,50nm,0.9s
OUZ   Omahuta           35.37 150  eP      P       11 21 53.9 +3.5
      comp=Z,49nm,1.2s
OUZ                                LR      LR
      comp=Z,4µm,18.0s
MBWA  Marble Bar        36.17 241  eP      P       11 21 56.1 -1.4
      comp=Z,130nm,1.0s
MBWA                               LR      LR
      comp=Z,6µm,18.0s
MBWA  Marble Bar        36.17 241  P       P       11 21 56.7 -0.8
      SNR=12
MBWA                               P       P       11 21 56.7 -0.8
      SNR=12
RAO   Raoul Island      36.35 135  PFAKE           11 22 10.0  +11
RAO                                LR      LR
      comp=Z,7µm,21.0s
TSM   Tawau             36.52 284  P       P       11 21 60.0 -0.6
MOO   Moorlands         37.55 187  P       P       11 22 11.7 +2.8
      baz=38
KDM   Kudat             38.23 288  P       P       11 22 12.0 -3.0
KKM   Kota Kinabalu     38.57 286  eP      P       11 22 18.2 +0.2
      comp=Z,64nm,1.2s
KKM                                LR      LR
      comp=Z,3µm,21.0s
KKM   Kota Kinabalu     38.57 286  P       P       11 22 12.0 -6.0
HIZ   Hauiti            38.62 152  eP      P       11 22 21.4 +3.4
      comp=Z,89nm,1.4s
HIZ                                LR      LR
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      comp=Z,3µm,18.0s
JAGI  Jajag, Banyuwa    38.92 263  eP      P       11 22 18.6 -2.3
      comp=Z,54nm,1.0s
JAGI                               LR      LR
      comp=Z,3µm,21.0s
MEEK  Meekatharra       39.34 233  P       P       11 22 23.5 -0.8
      baz=39,SNR=22
URZ   Urewera           39.50 150  eP      P       11 22 27.5 +2.2
      comp=Z,68nm,1.2s
URZ                                LR      LR
      comp=Z,2µm,19.0s
URZ   Urewera           39.50 150  P       P       11 22 27.3 +1.9
      comp=Z,23nm,0.6s,baz=276,slow=2.7,SNR=23
URZ                                PcP     PcP     11 24 31.4 -1.3
      comp=Z,16nm,0.7s,baz=297,slow=4.5,SNR=3.6
MXZ   Matakaoa Point    39.59 148  PFAKE           11 22 40.0  +14
MXZ                                LR      LR
      comp=Z,3µm,18.0s
JOW   Kunigami          39.89 324  eP      P       11 22 29.3 +0.5
      comp=Z,68nm,1.1s
JOW   Kunigami          39.89 324  P       P       11 22 29.0 +0.2
      comp=Z,13nm,1.1s,baz=139,slow=13,SNR=12
BKZ   Black Stump Fm    39.91 151  eP      P       11 22 31.0 +2.2
      comp=Z,22nm,0.6s
BKZ                                LR      LR
      comp=Z,3µm,22.0s
JHJ   Hachijo jima 2    40.11 342  LR      LR      11 36 37.3
      comp=Z,1µm,21.8s,baz=188,slow=32
THZ   Tophouse          40.50 157  eP      P       11 22 34.9 +1.3
      comp=Z,46nm,0.8s
THZ                                LR      LR
      comp=Z,4µm,19.0s
SNZO  South Karori      40.84 155  eP      P       11 22 38.2 +1.8
      comp=Z,258nm,1.8s
SNZO                               LR      LR
      comp=Z,4µm,20.0s
BTM   Bintulu           40.93 281  P       P       11 22 38.9 +1.3
FOZ   Fox Glacier       40.97 162  eP      P       11 22 40.4 +3.0
      comp=Z,51nm,1.2s
FOZ                                LR      LR
      comp=Z,6µm,20.0s
BFZ   Birch Farm        41.00 153  eP      P       11 22 39.2 +1.4
      comp=Z,212nm,1.9s
BFZ                                LR      LR
      comp=Z,3µm,19.0s
LTZ   Lake Taylor       41.14 159  eP      P       11 22 40.0 +1.1
      comp=Z,27nm,0.7s
LTZ                                LR      LR
      comp=Z,5µm,19.0s
PWJI  Pagerwojo         41.23 264  P       P       11 22 38.3 -1.7
      comp=Z,75nm,0.9s
KHZ   Kahutara          41.30 157  eP      P       11 22 40.7 +0.5
      comp=Z,43nm,1.0s
KHZ                                LR      LR
      comp=Z,5µm,20.0s
GIRL  Giralia           41.47 241  P       P       11 22 42.2 +0.3
      baz=42,SNR=7.0
GIRL  Giralia           41.47 241  eP      P       11 22 42.8 +0.9
      comp=Z,160nm,1.0s
GIRL                               LR      LR
      comp=Z,6µm,18.0s
OXZ   Oxford            41.53 159  eP      P       11 22 42.8 +0.8
      comp=Z,25nm,0.7s
RPZ   Rata Peaks        41.53 160  eP      P       11 22 43.5 +1.4
      comp=Z,72nm,1.0s
RPZ                                ePcP    PcP     11 24 39.4 +0.2
RPZ   Rata Peaks        41.53 160  P       P       11 22 43.5 +1.4
      comp=Z,33nm,0.7s,baz=309,slow=3.0,SNR=23
RPZ                                PcP     PcP     11 24 39.4 +0.2
      comp=Z,11nm,0.6s,baz=353,slow=2.6,SNR=4.2
RPZ                                LR      LR      11 38 24.9
      comp=Z,7µm,19.9s,baz=325,slow=34
SBUM  Sibu              41.64 279  eP      P       11 22 43.1 -0.3
      comp=Z,33nm,1.3s
SBUM  Sibu              41.64 279  P       P       11 22 43.6 +0.2
PCJI  Pacitan           41.85 263  P       P       11 22 44.1 -1.0
      comp=Z,178nm,0.9s,comp=Z,1µm
LBZ   Lake Benmore      41.85 162  eP      P       11 22 45.4 +0.7
      comp=Z,25nm,0.9s
LBZ                                LR      LR
      comp=Z,6µm,19.0s
WKZ   Wanaka            41.90 163  eP      P       11 22 46.2 +1.0
      comp=Z,171nm,1.7s
WKZ                                LR      LR
      comp=Z,5µm,19.0s
TWG   Pinlang           41.93 313  PFAKE           11 23 00.0  +14
TWG                                LR      LR
      comp=Z,10µm,21.0s
CRLZ  Canterbury Las    41.95 159  eP      P       11 22 47.3 +1.8
      comp=Z,65nm,1.1s
CRLZ                               LR      LR
      comp=Z,4µm,19.0s
DCZ   Deep Cove         41.98 165  eP      P       11 22 47.0 +1.3
      comp=Z,28nm,0.9s
MQZ   McQueen's Vall    42.08 159  eP      P       11 22 48.3 +1.8
      comp=Z,127nm,1.6s
MQZ                                LR      LR
      comp=Z,4µm,21.0s
WOJI  Wonogiri, Jawa    42.09 264  P       P       11 22 46.6 -0.5
      comp=Z,35nm,1.0s
YULB  Yu-li             42.12 314  eP      P       11 22 46.4 -0.8
      comp=Z,77nm,1.5s
YULB                               LR      LR
      comp=Z,2µm,21.0s
MLZ   Mavora Lakes      42.15 164  eP      P       11 22 48.5 +1.4
      comp=Z,57nm,0.9s
MLZ                                LR      LR
      comp=Z,4µm,19.0s
KLBR  Kellerberrin      42.39 227  P       P       11 22 48.1 -1.2
      baz=42,SNR=10.0
NACB  Ninganchiao       42.39 315  eP      P       11 22 49.7 +0.4
      comp=Z,59nm,1.0s
NACB                               LR      LR
      comp=Z,2µm,20.0s
MORW  Morawa            42.47 232  P       P       11 22 49.0 -1.0
      baz=42,SNR=21
MORW  Morawa            42.47 232  eP      P       11 22 48.4 -1.6
      comp=Z,51nm,0.9s
MORW                               LR      LR
      comp=Z,3µm,20.0s
UGM   Wanagama          42.49 264  PFAKE           11 23 00.0  +10
UGM                                LR      LR
      comp=Z,2µm,22.0s
TPUB  Ta-pu             42.54 313  eP      P       11 22 49.4 -1.3
      comp=Z,120nm,1.6s
TPUB                               LR      LR
      comp=Z,3µm,21.0s
SMRI  Semarang          42.56 265  eP      P       11 22 51.4 +0.4
      comp=Z,73nm,1.0s
SMRI  Semarang          42.56 265  P       P       11 22 53.1 +2.1
      comp=Z,81nm,1.0s
ODZ   Otahua Downs      42.59 162  eP      P       11 22 52.2 +1.5
      comp=Z,99nm,1.7s
ODZ                                LR      LR
      comp=Z,5µm,19.0s
WHZ   Wether Hill Ro    42.59 165  eP      P       11 22 51.9 +1.3
      comp=Z,24nm,0.8s
SSLB  Suanglung         42.61 314  eP      P       11 22 51.3 +0.2
      comp=Z,93nm,1.7s
SSLB                               LR      LR
      comp=Z,3µm,22.0s
BLDU  Ballidu           42.68 229  P       P       11 22 50.5 -1.2
      baz=43,SNR=12
YHNB  Yeheng            42.86 315  eP      P       11 22 53.0 -0.3
      comp=Z,156nm,1.5s
YHNB                               LR      LR
      comp=Z,4µm,21.0s
TATO  Taipei            42.97 316  PFAKE           11 23 00.0 +5.9
TATO                               LR      LR
      comp=Z,4µm,21.0s
INU   Inuyama           43.04 340  PFAKE           11 23 10.0  +16
INU                                LR      LR
      comp=Z,1µm,20.0s
KSM   Kuching           43.36 278  eP      P       11 22 56.4 -1.0
      comp=Z,41nm,1.2s
KSM                                LR      LR
      comp=Z,1µm,22.0s
NWAO  Narrogin (SRO)    43.46 226  PFAKE           11 23 10.0  +12
NWAO                               LR      LR
      comp=Z,4µm,22.0s
JNU   Nakatsue          43.54 332  eP      P       11 22 57.7 -0.9
      comp=Z,81nm,1.0s
JNU   Nakatsue          43.54 332  P       P       11 22 57.8 -0.7
      comp=Z,46nm,0.8s,baz=123,slow=4.2,SNR=31
JNU                                LR      LR      11 38 18.3
      comp=Z,641nm,20.2s,baz=123,slow=32
MUN   Mundaring         43.72 228  P       P       11 22 59.2 -0.9
      baz=44,SNR=5.0
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MUN                                P       P       11 22 59.2 -0.9
      baz=44,SNR=11
MJAR  Matsushiro Arr    43.76 342  P       P       11 22 58.2 -2.0
      comp=Z,4.0nm,1.0s,baz=176,slow=6.8,SNR=8.0
MJAR                               PcP     PcP     11 24 46.3 -0.4
      comp=Z,6.9nm,0.8s,baz=174,slow=3.4,SNR=7.0
MJAR                               LR      LR      11 39 23.6
      comp=Z,1µm,21.8s,baz=180,slow=34
MAJO  Matsushiro        43.76 342  eP      P       11 22 58.2 -2.1
MAJO                               ePP     PcP     11 24 46.3 -0.4
MAJO                               LR      LR
      comp=Z,1µm,18.0s
MAJO  Matsushiro        43.76 342  i P     P       11 22 58.5 -1.8
MAJO                               pmax    pmax
      comp=Z,5.0nm,0.9s
MAT   Matsushiro        43.76 342  P       P       11 22 57.2 -3.1
MAT                                S       S       11 29 35.4 +6.7
MJB9  Matsu-Tunnel      43.77 342  PFAKE           11 23 10.0  +10
MJB9                               LR      LR
      comp=Z,1µm,18.0s
KPJI  Karang Pucung     44.06 265  P       P       11 23 03.2 +0.1
      comp=Z,67nm,0.8s,comp=Z,1µm
RKGY  Rocky Gully       44.54 224  P       P       11 23 06.9 +0.4
      baz=45,SNR=4.2
CMJI  Cimerak           44.54 264  P       P       11 23 06.2 -0.7
      comp=Z,152nm,0.9s,comp=Z,1µm
QZH   Quanzhou          45.02 313⇓iP       P       11 23 11.3 +0.8
QZH                                S       S       11 29 48.3 +1.1
QZH                                pmax    pmax
      comp=Z,42nm,1.1s
QZH                                LR      LR
      comp=Z,1µm,14.6s
QZH                                LR      LR
      comp=Z,1µm,19.5s
QZH                                LR      LR
      comp=Z,2µm,21.4s
CISI  Cisompet, Garu    45.17 264  eP      P       11 23 10.6 -1.4
      comp=Z,90nm,0.7s
CISI                               LR      LR
      comp=Z,600nm,21.0s
CISI  Cisompet, Garu    45.17 264  P       P       11 23 10.7 -1.3
      comp=Z,173nm,1.1s,comp=Z,2µm
TPI   Tanjungpandan     45.51 271  P       P       11 23 14.3 -0.3
      comp=Z,60nm,0.9s,comp=Z,759nm
PPBI  Pangkal Pinang    47.06 272  P       P       11 23 27.4 +0.6
      comp=Z,16nm,1.0s,comp=Z,23µm
SSE   Sheshan           47.25 322  eP      P       11 23 27.9  0.0
      comp=Z,68nm,1.0s
SSE                                LR      LR
      comp=Z,4µm,21.0s
XMIS  Christmas Isla    47.38 261  eP      P       11 23 29.2 -0.1
      comp=Z,88nm,1.3s
XMIS                               LR      LR
      comp=Z,1µm,22.0s
RAR   Rarotonga         48.27 114  LR      LR      11 42 20.4
      comp=Z,974nm,18.9s,baz=298,slow=34
KSRS  Korea Array       48.47 333  P       P       11 23 36.7 -0.6
      comp=Z,11nm,0.9s,baz=149,slow=8.2,SNR=29
KSRS                               LR      LR      11 43 28.5
      comp=Z,630nm,18.2s,baz=138,slow=35
KS15  Wonju Array Si    48.48 333  eP      P       11 23 37.3  0.0
KSAR  Wonju Array Be    48.48 333  P       P       11 23 36.7 -0.7
KSAR  Wonju Array Be    48.48 333  P       P       11 23 36.7 -0.7
KASI  Kota Agung        48.50 267  P       P       11 23 35.8 -2.2
      comp=Z,80nm,0.9s
KS01  Wonju Array Si    48.50 333  eP      P       11 23 37.4 -0.2
MDSI  Maura Dua         48.86 269  P       P       11 23 38.7 -2.0
      comp=Z,50nm,0.9s,comp=Z,613nm
LWLI  Liwa              48.95 268  P       P       11 23 42.1 +0.5
      comp=Z,64nm,0.8s,comp=Z,23µm
QIZ   Qiongzhong        48.99 301  P       P       11 23 41.4 -0.2
QIZ                                sP      pwP     11 23 50.8 -2.4
QIZ                                S       S       11 30 44.1  0.0
QIZ                                sS      sS      11 30 57.4 -2.1
QIZ                                pmax    pmax
      comp=Z,23nm,0.8s
QIZ                                pmax    pmax
      comp=Z,320nm,5.5s
QIZ                                LR      LR
      comp=Z,700nm,21.4s
QIZ                                LR      LR
      comp=Z,1µm,18.6s
QIZ                                LR      LR
      comp=Z,2µm,24.5s
QIZ   Qiongzhong        48.99 301  eP      P       11 23 42.0 +0.4
      comp=Z,33nm,1.0s
QIZ                                LR      LR
      comp=Z,3µm,21.0s
NJ2   Nanjing           49.35 321  eP      P       11 23 45.2 +1.0
NJ2                                S       S       11 30 49.2 +0.3
NJ2                                pmax    pmax
      comp=Z,21nm,0.8s
NJ2                                pmax    pmax
      comp=Z,590nm,4.3s
NJ2                                LR      LR
      comp=Z,1µm,22.8s
NJ2                                LR      LR
      comp=Z,1µm,18.4s
NJ2                                LR      LR
      comp=Z,2µm,21.7s
YUK   Yuzh-Kuril'sk     49.38 353  i P     P       11 23 44.0 -0.1
YUK                                e               11 25 03.9
YUK                                e               11 25 39.5
YUK                                ePPP    PPP     11 26 30.7
YUK                                eS      S       11 30 48.8  0.0
YUK                                e               11 33 33.9
YUK                                eSSS    SSS     11 35 36.4
LHSI  Lahat             49.55 269  P       P       11 23 47.7 +1.7
      comp=Z,48nm,1.0s
MYKOM Kota Tinggi       49.79 277  eP      P       11 23 48.6 +0.8
      comp=Z,63nm,1.4s
MYKOM                              LR      LR
      comp=Z,2µm,22.0s
XMAS  Kiritimati        49.80  83  PFAKE           11 24 00.0  +12
XMAS                               LR      LR
      comp=Z,7µm,20.0s
ASAJ  Asahikawa         49.94 350  P       P       11 23 48.0 -0.4
      comp=Z,7.1nm,0.6s,baz=242,slow=16,SNR=2.5
MNAI  Manna             50.08 269  PFAKE           11 24 00.0  +10
MNAI                               LR      LR
      comp=Z,2µm,22.0s
WHN   Wuhan             51.37 316 ⇓P       P       11 24 00.1 +0.6
WHN                                LR      LR
      comp=Z,11µm,23.3s
WHN                                LR      LR
      comp=Z,7µm,18.4s
WHN                                LR      LR
      comp=Z,12µm,27.3s
FRIM  Kepong            52.20 278  P       P       11 24 04.7 -1.2
DL2   Dalian            52.66 329  P       P       11 24 11.8 +2.9
DL2                                S       S       11 31 39.0 +4.6
DL2                                pmax    pmax
      comp=Z,140nm,7.0s
DL2                                LR      LR
      comp=Z,1µm,20.8s
DL2                                LR      LR
      comp=Z,750nm,25.1s
DL2                                LR      LR
      comp=Z,1µm,21.8s
YSS   Yuzh-Sakhalins    52.67 351⇑eP       P       11 24 08.9 +0.1
YSS                                e*SP    pwP     11 24 21.5 +0.1
YSS                                eS      S       11 31 33.6 -0.7
YSS                                ePS     PKiKP   11 31 46.4  -11
YSS                                pmax    pmax
      comp=Z,20nm,1.2s
YSS                                pmax    pmax
      comp=E,10.0nm,1.0s
YSS                                MLR     MLR
      comp=E,500nm,16.0s
YSS                                MLR     MLR
      comp=Z,300nm,16.0s
USA0B Ussuriysk Arra    52.68 341  eP      P       11 24 08.7 -0.3
      comp=Z,19nm,0.8s
USA0B                              LR      LR
      comp=Z,900nm,20.0s
USRK  Ussuriysk Ar.     52.68 341  P       P       11 24 08.4 -0.6
      comp=Z,16nm,0.8s,baz=173,slow=7.7,SNR=29
USRK                               LR      LR      11 42 52.6
      comp=Z,694nm,21.8s,baz=148,slow=32
PDSI  Padang            52.83 273  P       P       11 24 09.9 -0.8
      comp=Z,19nm,1.6s,comp=Z,1µm
SKNT  Sakolnakorn       53.37 295  P       P       11 24 14.4 -0.1
      comp=Z,11nm,0.8s,comp=Z,340nm
KULM  Kulim             53.50 280  PFAKE           11 24 30.0  +14
KULM                               LR      LR
      comp=Z,2µm,22.0s
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MDJ	Mudanjiang	53.87	339	P	P	11 24 17.1	-0.6
MDJ				pP	pP	11 24 24.5	-2.3
MDJ				sP	pwP	11 24 27.6	-2.2
MDJ				PcP	PcP	11 25 20.7	-2.3
MDJ				S	S	11 31 53.7	+3.1
MDJ				sS	sS	11 32 06.4	+0.6
MDJ				ScS	ScS	11 34 04.3	-0.4
MDJ				pmax	pmax		
	comp=Z,39nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,400nm,2.9s						
MDJ				LR	LR		
	comp=Z,1µm,25.5s						
MDJ				LR	LR		
	comp=Z,1µm,26.3s						
MDJ				LR	LR		
	comp=Z,1µm,19.9s						
MDJ	Mudanjiang	53.87	339	eP	P	11 24 17.3	-0.4
	comp=Z,33nm,1.0s						
MDJ				LR	LR		
	comp=Z,900nm,20.0s						
MNSI	Mandailing Nat	53.89	275	P	P	11 24 18.5	0.0
	comp=Z,32nm,0.8s						
SNY	Shenyang	53.98	333	⇓P	P	11 24 25.2	+6.7
SNY				S	S	11 32 09.2	+17
SNY				pmax	pmax		
	comp=Z,13nm,1.8s						
SNY				pmax	pmax		
	comp=Z,340nm,6.3s						
SNY				LR	LR		
	comp=N,1µm,22.8s						
SNY				LR	LR		
	comp=E,1µm,21.1s						
SNY				LR	LR		
	comp=Z,2µm,19.4s						
SISI	Saibi	54.15	272	P	P	11 24 29.3	+8.9
NONG	Nongkai	54.49	296	P	P	11 24 22.5	-0.2
	comp=Z,1.1nm,1.0s						
ENH	Enshi	54.67	313	eP	P	11 24 23.3	-0.6
	comp=Z,65nm,1.0s						
ENH				LR	LR		
	comp=Z,2µm,21.0s						
CN2	Changchun	54.76	336	⇑P	P	11 24 22.8	-1.4
CN2				esP	pP	11 24 32.6	-0.9
CN2				eS	S	11 31 59.8	-2.9
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,800nm,17.0s						
CN2				LR	LR		
	comp=Z,700nm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
PSI	Prapat	54.80	277	PFAKE		11 24 40.0	+15
PSI				LR	LR		
	comp=Z,2µm,22.0s						
GYA	Guiyang	54.91	307	⇑iP	P	11 24 26.0	+0.2
GYA				pP	pP	11 24 34.0	-1.1
GYA				PP	PP	11 26 32.6	+3.5
GYA				S	S	11 32 07.0	+1.3
GYA				sS	sS	11 32 17.2	-3.8
GYA				SS	SS	11 35 49.7	0.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,290nm,7.5s						
GYA				LR	LR		
	comp=Z,850nm,20.8s						
GYA				LR	LR		
	comp=Z,2µm,21.0s						
GYA				LR	LR		
	comp=Z,2µm,22.4s						
PATY	Pattaya	55.00	290	P	P	11 24 28.4	+1.9
	comp=Z,9.3nm,0.8s						
GSI	Gunungsitoli	55.94	275	eP	P	11 24 31.4	-1.9
	comp=Z,36nm,1.0s						
GSI				LR	LR		
	comp=Z,2µm,22.0s						
PBKT	Sadao Pong	55.96	294	eP	P	11 24 33.8	+0.5
	comp=Z,26nm,1.2s						
PBKT	Sadao Pong	55.96	294	P	P	11 24 34.1	+0.8
	comp=Z,18nm,0.9s,comp=Z,920nm						
COCO	West Island	56.09	259	PFAKE		11 24 50.0	+16
COCO				LR	LR		
	comp=Z,2µm,20.0s						
PHET	Kaeng Krachan	56.16	289	P	P	11 24 36.2	+1.4
	comp=Z,9.3nm,0.8s,comp=Z,225nm						
SDHHI	Sand Hill	56.21	63	eP	P	11 24 38.4	+3.1
	comp=Z,70nm,0.5s						
WRMHI	West Rim	56.21	63	PFAKE		11 24 50.0	+15
WRMHI				LR	LR		
	comp=Z,1µm,21.0s						
UWE	Uwekahuna	56.22	63	eP	P	11 24 38.4	+3.0
	comp=Z,211nm,1.5s						
OBL	Observatory Le	56.23	63	eP	P	11 24 35.9	+0.5
	comp=Z,104nm,0.5s						
OBL				LR	LR		
	comp=Z,2µm,20.0s						
NPH	North Pit	56.23	63	eP	P	11 24 34.9	-0.5
	comp=Z,216nm,1.5s						
NPH	North Pit	56.23	63	eP	P	11 24 34.9	-0.5
NPH				pmax	pmax		
	comp=Z,216nm,1.5s						
RIM	Rim	56.23	63	eP	P	11 24 36.2	+0.8
	comp=Z,90nm,1.0s						
BYL	Byron's Ledge	56.25	63	eP	P	11 24 36.7	+1.2
	comp=Z,72nm,1.0s						
HATHI	Halema‘uma‘u T	56.25	63	PFAKE		11 24 50.0	+14
HATHI				LR	LR		
	comp=Z,2µm,21.0s						
PUH	Pauahi	56.27	63	eP	P	11 24 35.8	+0.1
	comp=Z,80nm,1.0s						
BJT	Baijiatuau	56.38	326	eP	P	11 24 36.4	+0.5
	comp=Z,6.6nm,0.8s						
BJT				LR	LR		
	comp=Z,2µm,22.0s						
JCUZ	Jacuzzi	56.38	63	PFAKE		11 24 50.0	+14
JCUZ				LR	LR		
	comp=Z,4µm,21.0s						
TYV	Tymovskoe	56.50	352	eP	P	11 24 35.9	-0.7
TYV				eS	S	11 32 26.1	+0.5
TYV				pmax	pmax		
	comp=Z,400nm,4.6s						
TYV				pmax	pmax		
	comp=Z,15nm,1.3s						
TYV				smax	smax		
	comp=N,600nm,6.4s						
UTTA	Uttaradit	56.71	295	P	P	11 24 39.0	+0.3
	comp=N,16nm,0.9s,comp=N,127nm						
NANT	Nan	56.92	296	P	P	11 24 40.2	0.0
	comp=N,15nm,0.9s,comp=N,3µm						
SRDT	SRDT	57.02	291	P	P	11 24 41.8	+0.9
	comp=N,46nm,1.0s,comp=N,4µm						
UTHA	Uthaitani	57.06	292	P	P	11 24 41.9	+0.7
	comp=N,13nm,0.8s,comp=N,121nm						
XAN	Xi'an	57.14	316	P	P	11 24 40.7	-0.8
XAN				pP	pP	11 24 48.2	-2.6
XAN				sP	sP	11 24 51.6	-2.8
XAN				PP	PP	11 26 50.2	+1.4
XAN				S	S	11 32 34.3	-0.5
XAN				sS	sS	11 32 47.3	-2.9
XAN				ScS	ScS	11 34 24.4	-4.4
XAN				SS	SS	11 36 25.2	+0.9
XAN				pmax	pmax		
	comp=N,22nm,0.9s						
XAN				pmax	pmax		
	comp=N,410nm,4.4s						
XAN				LR	LR		
	comp=N,900nm,20.6s						
XAN				LR	LR		
	comp=N,2µm,20.6s						
XAN				LR	LR		
	comp=N,2µm,21.7s						
XAN	Xi'an	57.14	316	eP	P	11 24 40.5	-1.0
	comp=N,18nm,0.8s						
XAN				LR	LR		
	comp=Z,2µm,20.0s						
XAN	Xi'an	57.14	316	eP	P	11 24 40.5	-1.0
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN				MLR	MLR		
	comp=Z,2µm,20.0s						
PPT	Papeete	57.24	108	LR	LR	11 47 02.6	
	comp=Z,1µm,18.0s,baz=269,slow=34						
PPT2	Papeete2	57.24	108	eS	S	11 32 35.4	-1.3
	comp=Z,502nm,25.5s						
PPT2				eLR	LR	11 41 31.5	
	comp=Z,2µm,29.2s						
KLR	Kul'dur	57.27	343c	iP	P	11 24 41.2	-0.9
KLR	Kul'dur	57.27	343	P	P	11 24 41.4	-0.7
	comp=Z,20nm,0.9s,baz=151,slow=5.6,SNR=38						
KLR				PcP	PcP	11 25 36.5	+0.4
	comp=Z,9.3nm,0.9s,baz=133,slow=4.5,SNR=4.1						
KLR				LR	LR	11 47 31.3	
	comp=Z,678nm,21.4s,baz=164,slow=34						
KMI	Kunming	57.51	304	P	P	11 24 45.2	+0.7
KMI				pP	pP	11 24 52.8	-1.1
KMI				sP	sP	11 24 55.4	-2.0
KMI				S	S	11 32 41.5	+1.2
KMI				pmax	pmax		
	comp=Z,14nm,0.7s						
KMI				pmax	pmax		
	comp=Z,260nm,4.0s						
KMI				LR	LR		
	comp=Z,650nm,20.3s						
KMI				LR	LR		
	comp=Z,1µm,20.3s						
KMI				LR	LR		
	comp=Z,2µm,21.4s						
KMI	Kunming	57.51	304	PFAKE		11 25 00.0	+15
KMI				LR	LR		
	comp=Z,2µm,21.0s						
GRNR	Gornyy	57.52	347	eP	P	11 24 42.0	-1.8
UMPA	Umpang Tak	57.78	293	P	P	11 24 47.6	+1.3
	comp=Z,12nm,0.9s,comp=Z,2µm						
PAYA	Payao	57.84	297	P	P	11 24 47.2	+0.5
	comp=Z,16nm,0.9s,comp=Z,168nm						
TBI	Tubuai	58.05	114	eS	S	11 32 44.9	-2.2
	comp=Z,914nm,33.2s						
TBI				eLQ	LQ	11 39 27.4	
	comp=Z,4µm,28.8s						
TBI				eLR	LR	11 41 55.8	
	comp=Z,3µm,30.8s						
PET	Petropavlovsk	58.11	4	eP	P	11 24 53.6	+5.7
PET				eS	S	11 32 49.6	+2.9
PEA0B	Petropavlovsk-	58.13	3	eP	P	11 24 48.4	+0.3
	comp=Z,483nm,1.9s						
PETK	Petropavlovsk-	58.13	3	eP	P	11 24 47.6	-0.5
PETK	Petropavlovsk-	58.13	3	eP	P	11 24 47.6	-0.5
PETK	Petropavlovsk-	58.13	3	P	P	11 24 48.6	+0.5
	comp=Z,23nm,1.0s,baz=169,slow=7.6,SNR=11						
PETK				LR	LR	11 45 39.6	
	comp=Z,662nm,21.8s,baz=191,slow=32						
PEA1	Petropavlovsk-	58.14	3	eP	P	11 24 48.6	+0.5
CM01	Chiang Mai Arr	58.36	295	eP	P	11 24 50.1	-0.2
CM31	Chiang Mai Arr	58.38	295	eP	P	11 24 50.7	+0.2
CM31	Chiang Mai Arr	58.38	295	P	P	11 24 50.8	+0.3
	SNR=25						
CMAR	Chiang Mai Arr	58.38	295	P	P	11 24 50.9	+0.4
	comp=Z,27nm,0.9s,baz=113,slow=5.1,SNR=80						
CMAR				LR	LR	11 49 40.3	
	comp=Z,778nm,19.0s,baz=114,slow=36						
CMAR				PKPPKP		11 54 31.7	
	comp=Z,0.5nm,0.7s,baz=267,slow=3.6,SNR=3.3						
CMMT	Chiang Mai	58.49	296	P	P	11 24 51.4	+0.1
	comp=Z,26nm,1.1s,comp=Z,775nm						
CHTO	Chiang Mai	58.50	296	eP	P	11 24 51.2	0.0
	comp=Z,27nm,1.0s						
CHTO				LR	LR		
	comp=Z,1µm,20.0s						
CHTO	Chiang Mai	58.50	296	eP	P	11 24 51.2	0.0
CHTO				pmax	pmax		
	comp=Z,27nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,1µm,20.0s						
CHTO	Chiang Mai	58.50	296	P	P	11 24 51.3	0.0
	SNR=12						
CHTO				P	P	11 24 51.3	0.0
	SNR=12						
CHTO	Chiang Mai	58.50	296	P	P	11 24 51.5	+0.2
	comp=Z,113nm,1.7s,comp=Z,3µm						
NKL	Nikolayevsk	59.01	351	eP	P	11 24 53.0	-1.1
NKL				pmax	pmax		
	comp=Z,180nm,1.8s						
CD2	Chengdu	59.26	311	P	P	11 24 56.2	-0.2
CD2				pP	pP	11 25 03.5	-2.3
CD2				sP	sP	11 25 06.5	-2.9
CD2				PP	PP	11 27 07.2	-0.5
CD2				S	S	11 33 02.5	-0.2
CD2				sS	sS	11 33 15.8	-2.3
CD2				SS	SS	11 36 59.4	+1.6
CD2				pmax	pmax		
	comp=Z,90nm,0.7s						
CD2				pmax	pmax		
	comp=Z,560nm,5.8s						
CD2				LR	LR		
	comp=Z,2µm,17.4s						
CD2				LR	LR		
	comp=Z,2µm,24.3s						
CD2				LR	LR		
	comp=Z,2µm,20.9s						
HHC	Hu-ho-hao-te	59.55	324	eP	P	11 24 57.7	-0.6
HHC				S	S	11 33 00.6	-5.6
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,240nm,4.9s						
HHC				LR	LR		
	comp=Z,960nm,19.9s						
HHC				LR	LR		
	comp=Z,760nm,19.9s						
HHC				LR	LR		
	comp=Z,1µm,19.9s						
BTO	Baotou	60.30	323	eP	P	11 25 03.0	-0.5
HIA	Hailar	61.49	336	eP	P	11 25 11.1	-0.2
	comp=Z,28nm,1.3s						
HIA				LR	LR		
	comp=Z,1µm,19.0s						
HIA	Hailar	61.49	336	eP	P	11 25 11.1	-0.2
HIA				pmax	pmax		
	comp=Z,28nm,1.3s						
HIA				MLR	MLR		
	comp=Z,1µm,19.0s						
LZH	Lanzhou	61.75	316	⇑P	P	11 25 14.2	+0.7
LZH				pP	pwP	11 25 22.2	-3.1
LZH				sP	sP	11 25 25.5	-0.8
LZH				PP	PP	11 27 32.6	+2.9
LZH				S	S	11 33 33.9	-0.7
LZH				sS	sS	11 33 47.4	-2.7
LZH				SS	SS	11 37 37.3	+0.4
LZH				pmax	pmax		
	comp=Z,48nm,1.3s						
LZH				pmax	pmax		
	comp=Z,360nm,6.2s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
LZH				LR	LR		
	comp=Z,3µm,16.8s						
LZH				LR	LR		
	comp=Z,3µm,19.0s						
KIWB	Kanaga Island	62.13	20	eP	P	11 25 15.4	-0.1
ZEA	Zeya	62.57	343	eP	P	11 25 17.5	-0.9
ZEA				pmax	pmax		
	comp=N,52nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,47nm,1.0s						
MA2	Magadan	64.52	359	eP	P	11 25 31.2	+0.1
	comp=Z,31nm,1.0s						
MA2	Magadan	64.52	359	iP	P	11 25 30.8	-0.4
MA2				pmax	pmax		
	comp=Z,13nm,0.9s						
MA2	Magadan	64.52	359	P	P	11 25 30.6	-0.6
	comp=Z,15nm,0.9s,baz=165,slow=4.1,SNR=6.8						
GTA	Gaotai	66.17	317	P	P	11 25 42.9	+0.4
GTA				pP	pP	11 25 50.0	-1.9
GTA				sP	sP	11 25 54.1	-1.2
GTA				ScP		11 30 15.6	
GTA				S	S	11 34 27.8	-1.5
GTA				sS	sS	11 34 41.9	-3.0
GTA				pmax	pmax		
	comp=Z,24nm,1.0s						
GTA				pmax	pmax		
	comp=Z,350nm,7.2s						
GTA				LR	LR		
	comp=Z,680nm,21.3s						
GTA				LR	LR		
	comp=Z,950nm,19.2s						
GTA				LR	LR		
	comp=Z,2µm,19.9s						
TAOE	Nuku Hiva Isla	66.18	97	eS	S	11 34 26.8	-3.4
	comp=Z,348nm,28.4s						
TAOE	Nuku Hiva Isla	66.18	97	eLR	LR	11 45 45.2	
	comp=Z,1µm,21.9s						
ULN	Ulaanbaatar	66.48	328	eP	P	11 25 44.5	+0.1
	comp=Z,16nm,1.1s						
ULN				LR	LR		
	comp=Z,1µm,18.0s						
ULN	Ulaanbaatar	66.48	328c	eP	P	11 25 44.3	0.0
ULN				pmax	pmax		
	comp=Z,54nm,2.5s						
ULN	Ulaanbaatar	66.48	328	P	P	11 25 44.4	+0.1
	SNR=12						
ULN				P	P	11 25 44.4	+0.1
	SNR=12						
SONA0	Songino Array	66.81	328	eP	P	11 25 46.5	+0.1
SONM	Songino Array	66.81	328	P	P	11 25 46.5	+0.1
	comp=Z,4.4nm,0.7s,baz=130,slow=5.5,SNR=22						
SONM				PKP2bc		11 54 18.7	
	comp=Z,1.4nm,0.9s,baz=276,slow=2.7,SNR=7.2						
SONM				LR	LR	11 54 37.8	
	comp=Z,609nm,19.6s,baz=128,slow=36						
SONA1	Songino Array	66.82	328	eP	P	11 25 45.9	-0.5
SHL	Shillong	66.82	300	eP	P	11 25 46.0	-1.0
	comp=Z,52nm,1.1s						
SHL				LR	LR		
	comp=Z,1µm,21.0s						
SHL	Shillong	66.82	300	eP	P	11 25 46.0	-1.0
SHL				pmax	pmax		
	comp=Z,52nm,1.1s						
SHL				MLR	MLR		
	comp=Z,1µm,21.0s						
CASY	Casey	67.83	197	eP	P	11 25 53.0	+0.7
	comp=Z,69nm,1.4s						
CASY				LR	LR		
	comp=Z,1µm,19.0s						
SEY	Seymchan	67.87	360	iP	P	11 25 52.7	+0.1
SEY	Seymchan	67.87	360	P	P	11 25 52.5	-0.1
	comp=Z,2.4nm,0.4s,baz=195,slow=5.1,SNR=19						
LSA	Lhasa	68.76	304	eP	P	11 25 60.0	+0.5
	comp=Z,11nm,0.8s						
LSA				LR	LR		
	comp=Z,2µm,22.0s						
LSA	Lhasa	68.76	304	eP	P	11 26 00.0	+0.5
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
LSA				MLR	MLR		
	comp=Z,2µm,22.0s						
YAK	Yakutsk	69.37	348	eP	P	11 26 01.2	-0.7
YAK				e*PP	pwP	11 26 17.9	+3.7
YAK				e		11 26 25.5	
YAK				eS	S	11 35 02.6	-3.8
YAK				e*SS	SKiKP	11 35 39.8	-9.2
YAK				e		11 35 56.2	
YAK				eSS	SS	11 39 38.5	+4.4
YAK				pmax	pmax		
	comp=Z,118nm,1.1s						
YAK				pmax	pmax		
	comp=N,71nm,1.1s						
YAK				pmax	pmax		
	comp=E,73nm,1.5s						
YAK				pmax	pmax		
	comp=Z,1µm,3.7s						
YAK				pmax	pmax		
	comp=N,351nm,3.8s						
YAK				pmax	pmax		
	comp=E,1µm,3.9s						
YAK				smax	smax		
	comp=N,1µm,4.3s						
YAK				smax	smax		
	comp=E,659nm,3.3s						
ZAK	Zakamensk	69.98	329	eP	P	11 26 05.1	-1.0
ZAK				pmax	pmax		
	comp=Z,22nm,1.0s						
BOD	Bodaibo	70.24	339	eP	P	11 26 06.0	-1.4
BOD				pmax	pmax		
	comp=Z,28nm,1.6s						
TLY	Talaya	70.56	330	eP	P	11 26 09.8	+0.3
	comp=Z,28nm,0.9s						
TLY				LR	LR		
	comp=Z,2µm,19.0s						
TLY	Talaya	70.56	330c	iP	P	11 26 09.0	-0.5
RKT	Rikitea	71.29	113	eLR	LR	11 48 01.3	
	comp=Z,3µm,25.5s						
RAMN	Ramite	71.76	300	eP	P	11 26 17.2	-0.4
MOY	Mondy	71.90	329	eP	P	11 26 17.9	+0.1
MOY				pmax	pmax		
	comp=Z,72nm,3.4s						
JIRN	Jiri	72.31	301	eP	P	11 26 20.8	-0.2
	comp=Z,78nm,0.9s						
VNDA	Vanda	72.50	178	eP	P	11 26 21.6	+0.9
	comp=Z,18nm,0.9s						
VNDA	Vanda	72.50	178	eP	P	11 26 21.6	+0.9
VNDA				pmax	pmax		
	comp=Z,18nm,0.9s						
VNDA	Vanda	72.50	178	P	P	11 26 21.9	+1.2
	comp=Z,15nm,0.8s,baz=334,slow=6.5,SNR=36						
GUN	Gumba	72.64	301	eP	P	11 26 22.9	-0.1
	comp=Z,165nm,0.9s						
PKI	Pulchoki	72.95	301	eP	P	11 26 24.3	-0.5
	comp=Z,78nm,1.0s						
PKIN	Phulchoki	72.96	301	eP	P	11 26 24.2	-0.6
SBA	Scott Base	73.03	177	eP	P	11 26 26.4	+2.5
	comp=Z,128nm,1.6s						
SBA	Scott Base	73.03	177	eP	P	11 26 26.4	+2.5
SBA				pmax	pmax		
	comp=Z,129nm,1.6s						
KKN	Kakani	73.12	301	eP	P	11 26 25.4	-0.3
	comp=Z,64nm,0.8s						
DMN	Daman	73.22	301	eP	P	11 26 26.2	-0.1
	comp=Z,191nm,1.0s						
PALK	Pallekele	73.39	279	PFAKE		11 26 40.0	+13
PALK				LR	LR		
	comp=Z,900nm,22.0s						
BILL	Bilibino	73.57	5	eP	P	11 26 27.1	0.0
	comp=Z,17nm,0.9s						
BILL	Bilibino	73.57	5	⇓iP	P	11 26 27.2	0.0
BILL				e		11 26 39.4	
BILL				e		11 29 12.9	
BILL				iS	S	11 35 53.7	-1.1
BILL				eSS	SS	11 40 31.7	-6.6
BILL				pmax	pmax		
	comp=Z,17nm,1.0s						
GAMB	Gambell	73.58	15	eP	P	11 26 28.1	+0.9
	comp=Z,17nm,1.1s						
GAMB				LR	LR		
	comp=Z,500nm,20.0s						
KOLN	Koldanda	74.55	300	eP	P	11 26 33.6	-0.5
	comp=Z,133nm,1.0s						
DANN	Dangsing	74.56	301	eP	P	11 26 33.5	-0.7
	comp=Z,89nm,0.9s						
PYUN	Piuthan	75.16	301	eP	P	11 26 36.7	-0.8
	comp=Z,232nm,0.9s						
HVS	Khovu-Aksy	75.55	326	iP	P	11 26 38.5	-0.7
ANM	Nome	75.96	17	eP	P	11 26 41.0	-0.1
	comp=Z,54nm,1.7s						
ANM				LR	LR		
	comp=Z,1µm,21.0s						
ANM	Nome	75.96	17	eP	P	11 26 41.0	-0.1
ANM				pmax	pmax		
	comp=Z,54nm,1.7s						
ANM				MLR	MLR		
	comp=Z,1µm,21.0s						
WMQ	Urumqi	76.26	317	P	P	11 26 43.6	+0.3
WMQ				sP	sP	11 26 54.1	-2.2
WMQ				PP	PP	11 29 37.2	+2.2
WMQ				S	S	11 36 25.4	-0.4
WMQ				SS	SS	11 41 24.4	+4.1
WMQ				pmax	pmax		
	comp=Z,80nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,950nm,4.3s						
WMQ				LR	LR		
	comp=Z,2µm,32.7s						
WMQ				LR	LR		
	comp=Z,930nm,23.1s						
WMQ				LR	LR		
	comp=Z,1µm,25.1s						
WMQ	Urumqi	76.26	317	eP	P	11 26 43.6	+0.3
	comp=Z,59nm,1.2s						
WMQ				LR	LR		
	comp=Z,701nm,20.0s						
WMQ	Urumqi	76.26	317	eP	P	11 26 43.6	+0.3
WMQ				pmax	pmax		
	comp=Z,59nm,1.2s						
WMQ				MLR	MLR		
	comp=Z,701nm,20.0s						

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JBP   Jabalpur         76.71 295⇑eP     P       11 26 46.5 +0.3
HYB   Hyderabad        76.99 289⇑iP     P       11 26 47.0 -0.9
      comp=Z,50nm,1.0s
HYB                              e              11 26 58.0
HYB                              eS     S       11 36 36.0 +1.3
BRLK  Bradley Lake     78.10  25  PFAKE         11 27 10.0  +17
BRLK                              LR    LR
      comp=Z,3µm,22.0s
TIXI  Tiksi            78.27 352 eP     P       11 26 53.0 -0.9
      comp=Z,29nm,1.2s
TIXI  Tiksi            78.27 352ceP     P       11 26 53.2 -0.7
TIXI                              pmax  pmax
      comp=Z,38nm,1.7s
TIXI  Tiksi            78.27 352  P     P       11 26 53.0 -0.9
      comp=Z,9.3nm,0.5s,baz=130,slow=5.3,SNR=20
DGZ   Jazzator, Alta   78.59 323 i P    P       11 26 56.2 -0.2
DGZ                               pmax  pmax
      comp=Z,30nm,0.9s
SEW   Seward           78.90  25  PFAKE         11 27 10.0  +12
SEW                               LR    LR
      comp=Z,2µm,20.0s
SUA   Susitna One      79.08  24 eP     P       11 26 58.4 -0.3
      comp=Z,14nm,0.8s
SUA                               LR    LR
      comp=Z,1µm,20.0s
RDOG  Red Dog Mine     79.18  15 eP     P       11 27 00.6 +1.6
      comp=Z,62nm,1.3s
RDOG                              LR    LR
      comp=Z,1µm,21.0s
RC01  Rabbit Creek A   79.29  25 eP     P       11 26 58.7 -1.0
      comp=Z,36nm,1.0s
RC01                              LR    LR
      comp=Z,2µm,22.0s
PPLA  Purkeypile       79.31  22 eP     P       11 27 00.3 +0.3
      comp=Z,52nm,1.6s
PPLA                              LR    LR
      comp=Z,1µm,20.0s
CAST  Castle Rocks     79.65  22 eP     P       11 27 01.5 -0.2
      comp=Z,18nm,0.9s
CAST                              LR    LR
      comp=Z,1µm,20.0s
PMR   Palmer           79.81  24 eP     P       11 27 02.0 -0.5
      comp=Z,65nm,1.5s
PMR                               LR    LR
      comp=Z,1µm,20.0s
PMR   Palmer           79.81  24 eP     P       11 27 02.0 -0.5
PMR                               pmax  pmax
      comp=Z,65nm,1.5s
PMR                               MLR   MLR
      comp=Z,1µm,20.0s
GHO   Glory Hole Cre   79.98  24  PFAKE         11 27 20.0  +16
GHO                               LR    LR
      comp=Z,1µm,21.0s
KNK   Knik Glacier     79.99  25  PFAKE         11 27 20.0  +16
KNK                               LR    LR
      comp=Z,2µm,22.0s
DGAR  Diego Garcia     80.21 263 eP     P       11 27 06.5 +0.8
      comp=Z,118nm,1.4s
SML   Sawmill          80.25  24 eP     P       11 27 05.4 +0.4
      comp=Z,58nm,1.1s
SML                               LR    LR
      comp=Z,2µm,22.0s
SML   Sawmill          80.25  24 eP     P       11 27 05.4 +0.4
SML                               pmax  pmax
      comp=Z,58nm,1.1s
SML                               MLR   MLR
      comp=Z,2µm,22.0s
GLI   Glacier Island   80.30  25  PFAKE         11 27 20.0  +15
GLI                               LR    LR
      comp=Z,2µm,22.0s
TRF   Thorofare Moun   80.34  22 eP     P       11 27 04.9 -0.7
      comp=Z,15nm,0.9s
TRF                               LR    LR
      comp=Z,2µm,20.0s
IM3   Indian Mountai   80.55  19 eP     P       11 27 06.0 -0.4
SCM   Sheep Creek Mo   80.67  24 eP     P       11 27 08.1 +0.8
      comp=Z,49nm,1.2s
SCM                               LR    LR
      comp=Z,2µm,21.0s
EYAK  Cordova Ski Ar   80.72  26  PFAKE         11 27 20.0  +13
EYAK                              LR    LR
      comp=Z,4µm,19.0s
MK01  Makanchi Array   80.82 319 eP     P       11 27 08.4  0.0
MK31  Makanchi Array   80.84 319 eP     P       11 27 08.6 +0.1
MK31  Makanchi Array   80.84 319 i P    P       11 27 08.4 -0.1
MK31                              pmax  pmax
      comp=Z,53nm,1.0s
MK32  Makanchi Array   80.84 319 eP     P       11 27 08.4  0.0
MKAR  Makanchi Array   80.84 319 eP     P       11 27 08.7 +0.2
      comp=Z,212nm,0.9s
MKAR                              PKKPbc PKKPbc 11 45 47.5 -1.5
MKAR  Makanchi Array   80.84 319  P     P       11 27 08.4 -0.1
MKAR                                            11 45 47.5
MKAR                              pmax  pmax
      comp=Z,42nm,0.9s
MKAR                              pmax  pmax
      comp=Z,1.0nm,0.7s
MKAR                              MLR   MLR
      comp=Z,597nm,19.4s
MKAR  Makanchi Array   80.84 319  P     P       11 27 08.4 -0.1
      comp=Z,41nm,0.9s,baz=104,slow=5.2,SNR=140
MKAR                              PKKPbc PKKPbc 11 45 47.5 -1.5
      comp=Z,0.6nm,0.7s,baz=269,slow=2.2,SNR=6.4
MKAR                              LR    LR      12 03 16.8
      comp=Z,597nm,19.4s,baz=102,slow=36
RND   Reindeer         80.86  23 eP     P       11 27 07.1 -1.2
      comp=Z,27nm,1.0s
RND                               LR    LR
      comp=Z,1µm,20.0s
RND   Reindeer         80.86  23 eP     P       11 27 07.1 -1.2
RND                               pmax  pmax
      comp=Z,27nm,1.0s
RND                               MLR   MLR
      comp=Z,1µm,20.0s
DIV   Divide           80.98  25  PFAKE         11 27 20.0  +11
DIV                               LR    LR
      comp=Z,2µm,22.0s
MCK   McKinley         81.00  22 eP     P       11 27 07.5 -1.5
      comp=Z,59nm,1.2s
MCK                               LR    LR
      comp=Z,2µm,21.0s
MCK   McKinley         81.00  22 eP     P       11 27 07.5 -1.5
MCK                               pmax  pmax
      comp=Z,59nm,1.2s
MCK                               MLR   MLR
      comp=Z,2µm,21.0s
BWN   Browne           81.03  22  PFAKE         11 27 20.0  +11
BWN                               LR    LR
      comp=Z,2µm,19.0s
MLY   Manley           81.03  21 eP     P       11 27 08.7 -0.4
      comp=Z,26nm,1.2s
MAKZ  Makanchi         81.05 319 eP     P       11 27 09.4 -0.2
      comp=Z,56nm,0.9s
MAKZ                              LR    LR
      comp=Z,800nm,20.0s
MAKZ  Makanchi         81.05 319  P     P       11 27 09.1 -0.5
MAKZ                              pmax  pmax
      comp=Z,61nm,1.0s
KLU   Klutina          81.09  25 eP     P       11 27 10.7 +1.2
      comp=Z,46nm,1.3s
KLU                               LR    LR
      comp=Z,2µm,22.0s
DHY   Denali Highway   81.27  23 eP     P       11 27 11.0 +0.4
      comp=Z,20nm,1.0s
DHY                               LR    LR
      comp=Z,1µm,19.0s
HMT   Hamilton         81.28  27  PFAKE         11 27 20.0 +9.5
HMT                               LR    LR
      comp=Z,3µm,21.0s
ZAA0  Zalesovo Array   81.65 326 eP     P       11 27 11.1 -1.5
      comp=Z,37nm,0.8s
ZAA0                              LR    LR
      comp=Z,700nm,21.0s
ZALV  Zalesovo Beam    81.65 326 eP     P       11 27 11.2 -1.3
ZALV  Zalesovo Beam    81.65 326 eP     P       11 27 11.3 -1.3
ZALV  Zalesovo Beam    81.65 326  P     P       11 27 11.5 -1.0
      comp=Z,61nm,0.9s,baz=112,slow=5.3,SNR=90
ZALV                              LR    LR      12 04 53.4
      comp=Z,516nm,18.6s,baz=88,slow=37
ZAA1  Zalesovo Array   81.65 326 eP     P       11 27 11.5 -1.1
WRH   Wood River Hil   81.70  22 eP     P       11 27 11.8 -0.8
      comp=Z,25nm,1.1s
WRH                               LR    LR
      comp=Z,1µm,20.0s
HARP  HAARP            81.84  24 eP     P       11 27 13.7 +0.2
      comp=Z,116nm,1.7s
HARP                              LR    LR
      comp=Z,3µm,22.0s
MDM   Murphy Dome      81.90  22 eP     P       11 27 12.9 -0.8
      comp=Z,36nm,1.4s
MDM                               LR    LR
      comp=Z,1µm,19.0s
COLA  College          82.00  22 eP     P       11 27 13.3 -0.8
      comp=Z,21nm,0.9s
COLA                              LR    LR
      comp=Z,1µm,19.0s
COLA  College          82.00  22 i P    P       11 27 12.4 -1.7
COLA                              pmax  pmax
      comp=Z,9.0nm,0.9s
HDA   Harding Lake     82.10  22 eP     P       11 27 15.1 +0.4
      comp=Z,15nm,1.1s
HDA                               LR    LR
      comp=Z,2µm,19.0s
IL1   Eielson Array    82.30  22 eP     P       11 27 14.0 -1.8
ILAR  Eielson Array    82.30  22  P     P       11 27 14.4 -1.4
      comp=Z,4.1nm,0.8s,baz=250,slow=5.4,SNR=18
ILAR                              PKKPbc PKKPbc 11 45 44.7 -1.7
      comp=Z,0.3nm,0.6s,baz=15,slow=1.8,SNR=6.4
ILAR                              LR    LR      12 01 51.2
      comp=Z,1µm,19.7s,baz=242,slow=34
ILB   Eielson Array    82.30  22 eP     P       11 27 14.6 -1.1
COLD  Coldfoot         82.42  19  PFAKE         11 27 30.0  +14
COLD                              LR    LR
      comp=Z,1µm,22.0s
TARG  Taragay, Kyrgy   82.59 313 eP     P       11 27 18.6 +0.3
      comp=Z,27nm,1.2s
RIDG  Independ'e Rid   82.59  23  PFAKE         11 27 30.0  +13
RIDG                              LR    LR
      comp=Z,2µm,19.0s
NVS   Novosibirsk      82.82 327⇓iP     P       11 27 18.6 -0.1
NVS                              eS     S       11 37 34.6 -0.1
NVS                               pmax  pmax
      comp=N,23nm,1.8s
NVS                               pmax  pmax
      comp=Z,76nm,1.8s
NVS                               pmax  pmax
      comp=E,50nm,1.7s
NVS                               smax  smax
      comp=E,30nm,2.3s
DOT   Dot Lake         82.86  24  PFAKE         11 27 30.0  +11
DOT                               LR    LR
      comp=Z,2µm,20.0s
SCRK  Sand Creek       83.04  23 eP     P       11 27 19.4 -0.4
      comp=Z,12nm,0.9s
SCRK                              LR    LR
      comp=Z,1µm,18.0s
KDJ   Kajisay          83.13 313 eP     P       11 27 22.4 +1.5
      comp=Z,51nm,1.0s
KDJ   Kajisay          83.13 313 eP     P       11 27 22.4 +1.5
KDJ                               pmax  pmax
      comp=Z,51nm,1.0s
PRP   Porcupine Dome   83.17  22  PFAKE         11 27 30.0  +10
PRP                               LR    LR
      comp=Z,1µm,20.0s
KSH   Kashi            83.45 311  P     P       11 27 24.5 +2.0
KSH                               pP    pwP     11 27 32.8  -1.9
KSH                               PP    PP      11 30 40.6 +5.6
KSH                               S     S       11 37 43.2 +1.1
KSH                               sS    ScS     11 37 58.2 +2.7
KSH                               SS    SS      11 43 14.9 +6.5
KSH                               pmax  pmax
      comp=Z,18nm,0.7s
KSH                               pmax  pmax
      comp=Z,1µm,5.8s
KSH                               LR    LR
      comp=Z,290nm,5.0s
KSH                               LR    LR
      comp=Z,140nm,4.0s
KSH                               LR    LR
      comp=Z,2µm,21.2s
FYU   Fort Yukon       83.77  21  PFAKE         11 27 30.0 +6.7
FYU                               LR    LR
      comp=Z,1µm,19.0s
ULHL  Ulahol           83.84 313  P     P       11 27 25.1 +0.6
      SNR=10
NRN   Naryn            83.84 312 eP     P       11 27 24.7  0.0
      comp=Z,13nm,1.0s
NRN                               LR    LR
      comp=Z,1µm,22.0s
NRN   Naryn            83.84 312 eP     P       11 27 24.7  0.0
NRN                               pmax  pmax
      comp=Z,13nm,1.0s
NRN                               MLR   MLR
      comp=Z,1µm,22.0s
KURK  Kurchatov        84.27 322 eP     P       11 27 25.8 -0.4
      comp=Z,63nm,1.0s
KURK                              LR    LR
      comp=Z,900nm,20.0s
KURK  Kurchatov        84.27 322ceP     P       11 27 25.7 -0.5
KURK                              pmax  pmax
      comp=Z,61nm,1.0s
KURK  Kurchatov        84.27 322  P     P       11 27 25.4 -0.8
      SNR=23
KURK                              P     P       11 27 25.4 -0.8
      SNR=23
KURBB Kurchatov Arra   84.30 322  P     P       11 27 25.7 -0.7
      comp=Z,27nm,0.9s,baz=108,slow=4.2,SNR=70
SIT   Sitka            84.33  31 eP     P       11 27 25.9 -0.4
      comp=Z,180nm,1.7s
SIT   Sitka            84.33  31 eP     P       11 27 25.9 -0.4
SIT                               pmax  pmax
      comp=Z,181nm,1.7s
TKM2  Tokmak 2         84.45 314  P     P       11 27 27.8 +0.2
      SNR=35
NIL   Nilore           84.50 304 eP     P       11 27 27.5 -0.3
      comp=Z,45nm,0.9s
NIL                               LR    LR
      comp=Z,1µm,20.0s
NIL   Nilore           84.50 304 eP     P       11 27 27.5 -0.3
NIL                               pmax  pmax
      comp=Z,45nm,0.9s
NIL                               MLR   MLR
      comp=Z,1µm,20.0s
KZA   Kyzart           84.52 313  P     P       11 27 29.5 +1.3
      SNR=55
QSPA  South Pole Qui   84.84 180 eP     P       11 27 29.8 +0.8
      comp=Z,58nm,1.0s
QSPA                              LR    LR
      comp=Z,1µm,19.0s
KBK   Karagaybulak     84.86 314  P     P       11 27 30.1 +0.5
      SNR=24
DAWY  Dawson           84.91  24 eP     P       11 27 29.8 +0.5
      comp=Z,18nm,1.1s
DAWY                              LR    LR
      comp=Z,2µm,21.0s
CHMS  Chumysh          85.07 314  P     P       11 27 30.9 +0.3
      SNR=30
UCH   Uchtor           85.09 313  P     P       11 27 32.1 +1.0
      SNR=54
SKAG  Skagway          85.09  29  PFAKE         11 27 40.0  +10
SKAG                              LR    LR
      comp=Z,2µm,20.0s
FRU1  Bishkek          85.12 314 eP     P       11 27 31.7 +0.9
      comp=Z,79nm,1.4s
FRU1                              LR    LR
      comp=Z,700nm,20.0s
FRU   Bishkek          85.14 314⇑iP     P       11 27 30.0 -0.8
FRU                               pmax  pmax
      comp=Z,170nm,2.1s
AAK   Ala-Archa        85.19 313  P     P       11 27 31.8 +0.5
      SNR=22
AAK   Ala-Archa        85.19 313 eP     P       11 27 31.6 +0.3
      comp=Z,35nm,1.0s
AAK                               LR    LR
      comp=Z,701nm,19.0s
AAK   Ala-Archa        85.19 313ceP     P       11 27 31.6 +0.3
AAK                               pmax  pmax
      comp=Z,32nm,1.0s
AAK   Ala-Archa        85.19 313  P     P       11 27 31.3 +0.1
      SNR=19
AAK                               P     P       11 27 31.3 +0.1
      SNR=19
AAK   Ala-Archa        85.19 313  P     P       11 27 31.3 +0.1
      comp=Z,24nm,0.7s,baz=111,slow=4.9,SNR=46
USP   Ospenovka        85.31 314  P     P       11 27 31.9 +0.2
      SNR=49
MAW   Mawson           85.43 203  P     P       11 27 32.6 +0.8
      baz=85
MAW   Mawson           85.43 203 eP     P       11 27 32.3 +0.6
      comp=Z,26nm,1.3s
MAW   Mawson           85.43 203 eP     P       11 27 32.3 +0.6
MAW                               pmax  pmax
      comp=Z,26nm,1.3s
MAW   Mawson           85.43 203  P     P       11 27 31.9 +0.2
      comp=Z,32nm,0.6s,baz=115,slow=5.0,SNR=14
MAW                               LR    LR      12 02 28.0
      comp=Z,645nm,20.3s,baz=75,slow=33
AML   Almayashu        85.67 313  P     P       11 27 34.7 +0.7
      SNR=68
EKS2  Erkin-Say        85.71 313  P     P       11 27 34.5 +0.7
      SNR=44
NRIK  Noril'sk         86.40 341  P     P       11 27 35.7 -0.8
      comp=Z,21nm,0.8s,baz=118,slow=5.1,SNR=20
NRIK                              LR    LR      12 07 46.3
      comp=Z,538nm,18.5s,baz=114,slow=37
BTK   Batken           87.46 310 eP     P       11 27 43.2 +0.8
      comp=Z,24nm,0.9s
BTK   Batken           87.46 310 eP     P       11 27 43.2 +0.8
BTK                               pmax  pmax
      comp=Z,24nm,0.9s
KCPM  Cahto Peak       88.02  50  PFAKE         11 28 00.0  +15
KCPM                              LR    LR
      comp=Z,4µm,19.0s
KBL   Kabul            88.08 305  PFAKE         11 28 00.0  +14
KBL                               LR    LR
      comp=Z,1µm,21.0s
KK31  Karatay Array    88.15 313 eP     P       11 27 45.0 -0.5
KK31  Karatay Array    88.15 313 eP     P       11 27 45.0 -0.5
KKAR  Karatay Array    88.15 313 eP     P       11 27 45.5  0.0
KKAR  Karatay Array    88.15 313 eP     P       11 27 45.5  0.0
HOPS  Hopland Field    88.31  51  PFAKE         11 28 00.0  +14
HOPS                              LR    LR
      comp=Z,4µm,18.0s
MCCM  Marconi Confer   88.35  52  PFAKE         11 28 00.0  +13
MCCM                              LR    LR
      comp=Z,4µm,20.0s
GDXM  Geysers          88.50  51  PFAKE         11 28 00.0  +13
GDXM                              LR    LR
      comp=Z,5µm,19.0s
INK   Inuvik           88.61  21 eP     P       11 27 46.2 -0.8
      comp=Z,12nm,1.0s
INK                               PKKP  PKKPdf  11 45 25.9 -0.1
INK                               LR    LR
      comp=Z,2µm,21.0s
INK   Inuvik           88.61  21  P     P       11 27 47.1  0.0
      comp=Z,3.0nm,0.9s,baz=252,slow=3.7,SNR=12
INK                               PKKP  PKKPdf  11 45 25.9 -0.1
      comp=Z,1.8nm,1.0s,baz=11,slow=2.1,SNR=6.0
WDC   Whiskeytown Da   88.93  49  PFAKE         11 28 00.0  +11
WDC                               LR    LR
      comp=Z,4µm,19.0s
ORV   Oroville         89.60  50  PFAKE         11 28 00.0 +7.6
ORV                               LR    LR
      comp=Z,2µm,20.0s
BVA0  Borovoye Array   89.74 323 i P    P       11 27 51.2 -1.6
BVA0                              pmax  pmax
      comp=Z,45nm,1.1s
BVAR  Borovoye Array   89.74 323  P     P       11 27 51.4 -1.4
      comp=Z,32nm,0.9s,baz=109,slow=5.0,SNR=82
BRVK  Borovoye         89.81 323 eP     P       11 27 51.7 -1.3
      comp=Z,39nm,1.0s
BRVK                              LR    LR
      comp=Z,1µm,22.0s
BRVK  Borovoye         89.81 323c iP    P       11 27 51.8 -1.3
BRVK                              pmax  pmax
      comp=Z,33nm,0.8s
BRVK  Borovoye         89.81 323  P     P       11 27 51.5 -1.6
      SNR=12
BRVK                              P     P       11 27 51.5 -1.6
      SNR=12
AFDM  Forest Hills D   89.93  51  PFAKE         11 28 10.0  +16
AFDM                              LR    LR
      comp=Z,2µm,19.0s
PAGB  Antelope Grade   90.15  54  PFAKE         11 28 10.0  +15
PAGB                              LR    LR
      comp=Z,2µm,20.0s
LON   Longmire         90.25  43  PFAKE         11 28 10.0  +15
LON                               LR    LR
      comp=Z,2µm,22.0s
BEKR  Beckworth        90.51  50  PFAKE         11 28 10.0  +13
BEKR                              LR    LR
      comp=Z,3µm,20.0s
RUBR  Rubicon Trail    90.58  51  PFAKE         11 28 10.0  +13
RUBR                              LR    LR
      comp=Z,3µm,21.0s
MOD   Modoc Plateau    90.77  48  PFAKE         11 28 10.0  +12
MOD                               LR    LR
      comp=Z,3µm,18.0s
VCNR  Virginia City    90.99  51  PFAKE         11 28 10.0  +11
VCNR                              LR    LR
      comp=Z,3µm,21.0s
PNTR  Pine Nut         91.01  51  PFAKE         11 28 10.0  +11
PNTR                              LR    LR
      comp=Z,3µm,19.0s
WAKR  Walker           91.08  52  PFAKE         11 28 10.0  +10
WAKR                              LR    LR
      comp=Z,3µm,20.0s
LTY   Liberty          91.09  43  PFAKE         11 28 10.0  +11
LTY                               LR    LR
      comp=Z,2µm,22.0s
PAHR  Pah Rah Range    91.24  50  PFAKE         11 28 10.0  +10
PAHR                              LR    LR
      comp=Z,2µm,19.0s
MDPB  Devils Postpil   91.28  53  PFAKE         11 28 10.0 +9.4
MDPB                              LR    LR
      comp=Z,3µm,22.0s
YERR  Yerington        91.28  51  PFAKE         11 28 10.0 +9.5
YERR                              LR    LR
      comp=Z,3µm,18.0s
ISA   Isabella, Lake   91.58  55  PFAKE         11 28 10.0 +8.2
ISA                               LR    LR
      comp=Z,1µm,20.0s
HAWA  Hanford          91.78  44  PFAKE         11 28 10.0 +7.6
HAWA                              LR    LR
      comp=Z,3µm,18.0s
MWC   Mount Wilson     91.80  56  PFAKE         11 28 10.0 +7.0
MWC                               LR    LR
      comp=Z,2µm,21.0s
RYN   Ryan             91.81  52  PFAKE         11 28 10.0 +7.1
RYN                               LR    LR
      comp=Z,2µm,21.0s
NV01  Mina Array Sit   91.96  52 eP     P       11 28 05.1 +1.4
NVAR  Mina Array Bea   91.96  52  P     P       11 28 03.2 -0.5
      comp=Z,1.0nm,0.9s,baz=265,slow=6.4,SNR=7.1
NVAR                              LR    LR      12 02 55.9
      comp=Z,2µm,20.7s,baz=277,slow=31
WVOR  Wild Horse Val   92.05  48  PFAKE         11 28 20.0  +16
WVOR                              LR    LR
      comp=Z,2µm,20.0s
NV11  Mina Array Sit   92.08  52 eP     P       11 28 05.7 +1.5
      comp=Z,1.4nm,1.3s
KVN   Kaiserville      92.17  51  PFAKE         11 28 20.0  +15
KVN                               LR    LR
      comp=Z,2µm,21.0s
BMN   Battle Mountai   92.95  50  PFAKE         11 28 20.0  +12
BMN                               LR    LR
      comp=Z,2µm,21.0s
PFO   Pinyon Flats O   93.07  57  PFAKE         11 28 20.0  +11
PFO                               LR    LR
      comp=Z,1µm,20.0s
XPFO  Pion Flat        93.08  57  PFAKE         11 28 20.0  +11
XPFO                              LR    LR
      comp=Z,2µm,20.0s
F10A  Beach Ranch, E   93.34  44 eP     P       11 28 09.8  0.0
      comp=Z,8.4nm,1.1s
SYO   Syowa Base       93.50 199⇑iP     P       11 28 08.6 -1.3
SYO   Syowa Base       93.50 199⇓ipP    pP      11 28 17.8 -1.6
R11A  Troy Canyon, C   94.08  52  PFAKE         11 28 30.0  +17
R11A                              LR    LR
      comp=Z,2µm,20.0s
GLA   Glamis           94.40  57  PFAKE         11 28 30.0  +15
GLA                               LR    LR
      comp=Z,1µm,18.0s
ELK   Elko             94.48  50  PFAKE         11 28 30.0  +15
ELK                               LR    LR
      comp=Z,2µm,21.0s
Y12C  Blythe           94.69  57  PFAKE         11 28 30.0  +14
Y12C                              LR    LR
      comp=Z,1µm,18.0s
HLID  Hailey           95.21  47  PFAKE         11 28 30.0  +11
HLID                              LR    LR
      comp=Z,2µm,20.0s
W13A  Hualapai Mount   95.28  55  PFAKE         11 28 30.0  +11
W13A                              LR    LR
      comp=Z,1µm,19.0s
PSUT  Pine Spring      95.45  52  PFAKE         11 28 30.0  +10
PSUT                              LR    LR
      comp=Z,2µm,22.0s
YKA   Yellowknife Ar   95.52  28  P     P       11 28 18.1 -1.0
      comp=Z,0.5nm,0.6s,baz=269,slow=4.7,SNR=11
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YKA                                PKKPbc  PKKPbc  11 45 10.8 -2.5
       comp=Z,0.3nm,0.6s,baz=91,slow=2.5,SNR=5.2
YKA                                LR      LR      12 05 42.3
       comp=Z,126nm,21.5s,baz=276,slow=32
YKB5   Yellowknife Ar     95.52  28 ePP      P       11 28 18.1 -1.1
MSO    Missoula           95.65  44  PFAKE           11 28 30.0 +10
MSO                                LR      LR
       comp=Z,2µm,19.0s
SVE    Sverdlovsk         95.66 327 eP      P       11 28 18.8 -1.2
SVE                                pmax    pmax
       comp=Z,24nm,2.0s
SVE                                MLR     MLR
       comp=Z,1µm,20.0s
CCUT   Cedar City         95.80  53  PFAKE           11 28 30.0 +8.6
CCUT                               LR      LR
       comp=Z,2µm,21.0s
LCMT   Little Creek M     95.88  53  PFAKE           11 28 30.0 +8.3
LCMT                               LR      LR
       comp=Z,2µm,22.0s
Y14A   Wickenburg         95.96  57  PFAKE           11 28 30.0 +8.0
Y14A                               LR      LR
       comp=Z,2µm,18.0s
AB31   Akbulak array      95.98 319 i P     P       11 28 18.4 -3.2
AB31                               pmax    pmax
       comp=Z,3.0nm,0.7s
ABKAR  Akbulak array      95.98 319 eP      P       11 28 19.4 -2.2
SZCU   Shurtz Canyon      96.02  53  PFAKE           11 28 30.0 +7.6
SZCU                               LR      LR
       comp=Z,2µm,21.0s
BGU    Big Grassy Mou     96.16  50  PFAKE           11 28 30.0 +7.1
BGU                                LR      LR
       comp=Z,2µm,21.0s
KNB    Kanab              96.22  53  PFAKE           11 28 40.0 +17
KNB                                LR      LR
       comp=Z,1µm,22.0s
DUG    Dugway, Tooele     96.31  50  PFAKE           11 28 40.0 +16
DUG                                LR      LR
       comp=Z,2µm,20.0s
SRIG   Santa Rosalia      96.36  63  PFAKE           11 28 40.0 +16
SRIG                               LR      LR
       comp=Z,2µm,21.0s
HVU    Hansel Valley      96.37  49  PFAKE           11 28 40.0 +16
HVU                                LR      LR
       comp=Z,2µm,20.0s
U15A   North Rim          96.63  54  PFAKE           11 28 40.0 +15
U15A                               LR      LR
       comp=Z,2µm,20.0s
MTPU   Mount Pierson      96.75  52  PFAKE           11 28 40.0 +14
MTPU                               LR      LR
       comp=Z,2µm,20.0s
ARU    Arti               96.81 326  P      P       11 28 23.1 -2.1
ARU                                                11 32 18.3
ARU                                S       SKSac   11 38 57.2 -2.5
ARU                                SS      SS      11 46 15.7 -4.7
ARU                                MLR     MLR
       comp=Z,968nm,22.0s
NLU    North Lily Min     96.87  50  PFAKE           11 28 40.0 +14
NLU                                LR      LR
       comp=Z,2µm,20.0s
CTU    Camp Tracy         97.13  50  PFAKE           11 28 40.0 +13
CTU                                LR      LR
       comp=Z,2µm,22.0s
GEYT   Alibeck            97.14 307  P      P       11 28 26.9 -0.3
       comp=Z,1.5nm,0.6s,baz=106,slow=4.7,SNR=3.3
GEYT                               LR      LR      12 13 24.7
       comp=Z,555nm,21.4s,baz=100,slow=36
GYA0B  ALIBECK ARRAY      97.14 307  PFAKE           11 28 40.0 +13
GYA0B                              LR      LR
       comp=Z,600nm,21.0s
MPU    Maple Canyon       97.21  50  PFAKE           11 28 40.0 +12
MPU                                LR      LR
       comp=Z,2µm,20.0s
AKTO   Aktyubinsk         97.23 320  LR     LR      12 11 47.5
       comp=Z,580nm,21.8s,baz=81,slow=35
BOZ    Bozeman (W)        97.24  45  PFAKE           11 28 40.0 +12
BOZ                                LR      LR
       comp=Z,2µm,19.0s
WUAZ   Wupatki            97.35  55  PFAKE           11 28 40.0 +12
WUAZ                               LR      LR
       comp=Z,1µm,21.0s
JLU    Jordanelle         97.36  50  PFAKE           11 28 40.0 +12
JLU                                LR      LR
       comp=Z,2µm,20.0s
TMUT   Trail Mountain     97.53  51  PFAKE           11 28 40.0 +11
TMUT                               LR      LR
       comp=Z,2µm,20.0s
YHB    Horse Butte        97.55  46  PFAKE           11 28 40.0 +11
YHB                                LR      LR
       comp=Z,1µm,19.0s
Q16A   Castle Valley      97.56  52  PFAKE           11 28 40.0 +11
Q16A                               LR      LR
       comp=Z,2µm,20.0s
HSIG                      97.56  62  PFAKE           11 28 40.0 +11
HSIG                               LR      LR
       comp=Z,2µm,21.0s
AHID   Auburn Hatcher     97.62  48  PFAKE           11 28 40.0 +10
AHID                               LR      LR
       comp=Z,3µm,20.0s
TUC    Tucson             97.78  58  PFAKE           11 28 40.0 +10
TUC                                LR      LR
       comp=Z,1µm,19.0s
REDW   Red Top Meadow     97.80  47  PFAKE           11 28 40.0 +10
REDW                               LR      LR
       comp=Z,3µm,21.0s
YPP    Pitchstone Pla     97.83  46  PFAKE           11 28 40.0 +9.4
YPP                                LR      LR
       comp=Z,1µm,20.0s
P17A   Butcher Ranch,     97.89  51  PFAKE           11 28 40.0 +9.2
P17A                               LR      LR
       comp=Z,2µm,20.0s
LOHW   Long Hollow        97.98  47  PFAKE           11 28 40.0 +8.8
LOHW                               LR      LR
       comp=Z,3µm,21.0s
H17A   Grant Village      97.99  46  PFAKE           11 28 40.0 +8.7
H17A                               LR      LR
       comp=Z,2µm,18.0s
SRU    San Rafael Swe     98.06  51  PFAKE           11 28 40.0 +8.4
SRU                                LR      LR
       comp=Z,2µm,22.0s
LKWY   Lake               98.12  46  PFAKE           11 28 40.0 +8.2
LKWY                               LR      LR
       comp=Z,2µm,18.0s
SLBS   Sierra La Lagu     98.29  67  PFAKE           11 28 40.0 +7.2
SLBS                               LR      LR
       comp=Z,2µm,21.0s
EGMT   Eagleton           98.49  42  PFAKE           11 28 40.0 +6.9
EGMT                               LR      LR
       comp=Z,2µm,20.0s
W18A   Petrified Fore     98.69  55  PFAKE           11 28 50.0 +16
W18A                               LR      LR
       comp=Z,1µm,21.0s
BW06   Boulder Array      98.76  48  PFAKE           11 28 50.0 +15
BW06                               LR      LR
       comp=Z,2µm,19.0s
PDAR   Pinedale Array     98.76  48  P      Pdif    11 28 36.0 +1.3
       comp=Z,0.4nm,0.8s,baz=290,slow=2.7,SNR=3.2
PDAR                               LR      LR      12 09 41.8
       comp=Z,2µm,18.9s,baz=276,slow=33
319A   Douglas            99.05  59  PFAKE           11 28 50.0 +14
319A                               LR      LR
       comp=Z,2µm,20.0s
PV10   Paradox Valley     99.23  52  PFAKE           11 28 50.0 +13
PV10                               LR      LR
       comp=Z,3µm,22.0s
PV14   Lion Creek, Pa     99.24  52  PFAKE           11 28 50.0 +13
PV14                               LR      LR
       comp=Z,3µm,20.0s
PV19   Morning Glory      99.27  52  PFAKE           11 28 50.0 +13
PV19                               LR      LR
       comp=Z,2µm,20.0s
PV21   Cone Mtn., Par     99.28  52  PFAKE           11 28 50.0 +13
PV21                               LR      LR
       comp=Z,2µm,20.0s
PV20   West Nyswonger     99.28  52  PFAKE           11 28 50.0 +13
PV20                               LR      LR
       comp=Z,2µm,20.0s
PV16   Nyswonger Mesa     99.33  52  PFAKE           11 28 50.0 +13
PV16                               LR      LR
       comp=Z,2µm,21.0s
PV11   David Mesa, Pa     99.36  52  PFAKE           11 28 50.0 +13
PV11                               LR      LR
       comp=Z,3µm,21.0s
PV12   Saucer Basin,      99.42  52  PFAKE           11 28 50.0 +12
PV12                               LR      LR
       comp=Z,3µm,20.0s
PV01   Paradox Valley     99.60  52  PFAKE           11 28 50.0 +11
PV01                               LR      LR
       comp=Z,2µm,20.0s
PV15   Paradox Valley     99.67  52  PFAKE           11 28 50.0 +11
PV15                               LR      LR
       comp=Z,2µm,20.0s
O20A   White River Ci     99.81  50  PFAKE           11 28 50.0 +11
O20A                               LR      LR
       comp=Z,2µm,20.0s
SMCO   Snowmass          100.82  51  PFAKE           11 29 00.0 +16
SMCO                               LR      LR
       comp=Z,3µm,22.0s
LAO    LASA Array        100.95  44  PFAKE           11 29 00.0 +16
LAO                                LR      LR
       comp=Z,2µm,21.0s
S22A   4UR Ranch, Cre    100.99  53  PFAKE           11 29 00.0 +15
S22A                               LR      LR
       comp=Z,2µm,21.0s
K22A   Casper            101.00  48  PFAKE           11 29 00.0 +15
K22A                               LR      LR
       comp=Z,2µm,20.0s
Y22D   IRIS PASSCAL I    101.02  56  PFAKE           11 29 00.0 +15
Y22D                               LR      LR
       comp=Z,1µm,19.0s
N23A   Red Feather La    101.53  49  PFAKE           11 29 00.0 +13
N23A                               LR      LR
       comp=Z,900nm,19.0s
SNAA   Sanae             101.77 188  PFAKE           11 29 00.0 +13
SNAA                               LR      LR
       comp=Z,2µm,20.0s
ISCO   Idaho Springs     101.84  51  PFAKE           11 29 00.0 +11
ISCO                               LR      LR
       comp=Z,2µm,20.0s
PHWY   Pilot Hill        101.87  49  PFAKE           11 29 00.0 +11
PHWY                               LR      LR
       comp=Z,900nm,19.0s
SDCO   Great Sand Dun    102.04  53  PFAKE           11 29 00.0 +11
SDCO                               LR      LR
       comp=Z,2µm,22.0s
DGMT   Dagmar            102.16  42  PFAKE           11 29 00.0 +11
DGMT                               LR      LR
       comp=Z,1µm,20.0s
HPIG                     102.21  64  PFAKE           11 29 00.0 +10
HPIG                               LR      LR
       comp=Z,2µm,19.0s
Q24A   Divide            102.25  51  PFAKE           11 29 00.0 +10
Q24A                               LR      LR
       comp=Z,2µm,22.0s
MNTX   Cornudas Mount    102.37  59  PFAKE           11 29 00.0 +9.3
MNTX                               LR      LR
       comp=Z,1µm,20.0s
RSSD   Black Hills       102.70  46  PFAKE           11 29 00.0 +7.9
RSSD                               LR      LR
       comp=Z,1µm,20.0s
PRGR   Permogore         102.80 332 eP      Pdif    11 28 51.1 -0.8
PRGR                               pmax    pmax
       comp=Z,11nm,0.9s
T25A   Trinidad          102.94  53  PFAKE           11 29 10.0 +17
T25A                               LR      LR
       comp=Z,2µm,21.0s
VNA3   Neumayer Olymp    102.95 186  P      Pdif    11 28 52.5  0.0
VNA2   Neumayer--Watz    103.01 186  P      Pdif    11 28 52.5 -0.2
VNA1   Neumayer--Stat    103.37 186  P      Pdif    11 28 49.8 -4.4
LTX    Lajitas           103.92  61 ePKKPbc PKKPbc  11 44 47.8 -0.6
TXAR   Lajitas Array     103.92  61  PKKPbc PKKPbc  11 44 47.8 -0.6
       comp=Z,0.3nm,0.7s,baz=69,slow=5.1,SNR=3.1
KSCO   Kaye Shedlock'    104.21  51  PFAKE           11 29 10.0 +11
KSCO                               LR      LR
       comp=Z,3µm,21.0s
MSTX   Muleshoe          104.47  56  PFAKE           11 29 10.0 +10
MSTX                               LR      LR
       comp=Z,900nm,20.0s
OGNE   Ogallala          104.48  49  PFAKE           11 29 10.0 +10
OGNE                               LR      LR
       comp=Z,900nm,20.0s
ZAIG   Zacatecas         105.07  68  PFAKE           11 33 30.0 +12
ZAIG                               LR      LR
       comp=Z,2µm,19.0s
AMTX   Amarillo          105.30  55  PFAKE           11 33 30.0 +12
AMTX                               LR      LR
       comp=Z,1µm,20.0s
APA    Apatity           105.78 340⇑iP      Pdif    11 29 09.3 +4.3
APA                                pmax    pmax
       comp=Z,4.0nm,0.8s
KLMR   Klimovskoe        105.86 332 eP      Pdif    11 29 04.8 -0.7
KLMR                               pmax    pmax
       comp=Z,14nm,1.2s
KLMR   Klimovskoe        105.86 332 ePdif   Pdif    11 29 04.8 -0.7
KLMR                               AMP             11 29 14.9
       comp=Z,14nm,1.2s
CBKS   Cedar Bluff       106.47  51  PFAKE           11 33 30.0 +10
CBKS                               LR      LR
       comp=Z,2µm,21.0s
ABTX   Abilene, Hawle    107.18  58  PFAKE           11 33 30.0 +8.7
ABTX                               LR      LR
       comp=Z,1µm,21.0s
JCT    Junction City     107.21  60  PFAKE           11 33 30.0 +8.6
JCT                                LR      LR
       comp=Z,2µm,22.0s
ARA0   ARCESS Array S    107.29 343 ePKiKP  PKiKP   11 33 20.4  0.0
ARA0                              ePKKPbc PKKPbc  11 44 36.4 -2.8
ARCES  ARCESS Array B    107.29 343  PKiKP  PKiKP   11 33 20.4  0.0
       comp=Z,1.0nm,0.6s,baz=60,slow=3.6,SNR=6.4
ARCES                              PKKPbc  PKKPbc  11 44 36.4 -2.8
       comp=Z,4.6nm,1.1s,baz=225,slow=1.1,SNR=9.9
BGNE   Belgrade          107.33  48  PFAKE           11 33 30.0 +8.7
BGNE                               LR      LR
       comp=Z,1µm,20.0s
U32A   Winter Ranch,     107.33  54  PFAKE           11 33 30.0 +8.6
U32A                               LR      LR
       comp=Z,1µm,20.0s
833A   Chaparral WMA,    107.72  62  PFAKE           11 33 30.0 +7.7
833A                               LR      LR
       comp=Z,2µm,19.0s
LNIG   Linares           107.84  66  PFAKE           11 33 30.0 +7.3
LNIG                               LR      LR
       comp=Z,2µm,19.0s
ECSD   EROS Data Cent    108.06  46  PFAKE           11 33 30.0 +7.4
ECSD                               LR      LR
       comp=Z,1µm,20.0s
KIV    Kislovodsk        108.28 315  PFAKE           11 33 30.0 +7.0
KIV                                LR      LR
       comp=Z,500nm,19.0s
KIV    Kislovodsk        108.28 315 eP      Pdif    11 29 16.7 -0.1
KIV                                pmax    pmax
       comp=Z,4.0nm,0.9s
UNM    Universidad Na    108.28  71  PFAKE           11 33 40.0 +16
UNM                                LR      LR
       comp=Z,2µm,20.0s
KSU1   Kansas State U    108.85  51  PFAKE           11 33 40.0 +16
KSU1                               LR      LR
       comp=Z,2µm,19.0s
WHTX   Lake Whitney,     109.08  58  PFAKE           11 33 40.0 +15
WHTX                               LR      LR
       comp=Z,2µm,19.0s
435B   Jarrell           109.09  59  PFAKE           11 33 40.0 +15
435B                               LR      LR
       comp=Z,2µm,20.0s
KVTX   Kingsville        109.10  63  PFAKE           11 33 40.0 +15
KVTX                               LR      LR
       comp=Z,2µm,20.0s
SIRT   Sirnak            109.56 308  PFAKE           11 33 40.0 +14
SIRT                               LR      LR
       comp=Z,400nm,18.0s
TUL1   Leonard           109.97  54  PFAKE           11 33 40.0 +14
TUL1                               LR      LR
       comp=Z,1µm,20.0s
SPMN   Marine on St.     110.42  44  PFAKE           11 33 40.0 +13
SPMN                               LR      LR
       comp=Z,2µm,21.0s
SCIA   State Center      110.88  47  PFAKE           11 33 40.0 +12
SCIA                               LR      LR
       comp=Z,2µm,20.0s
LVIG   Laguna Verde      110.88  71  PFAKE           11 33 40.0 +12
LVIG                               LR      LR
       comp=Z,2µm,21.0s
E38A   The Farm, Brul    110.92  42  PFAKE           11 33 40.0 +12
E38A                               LR      LR
       comp=Z,2µm,20.0s
ATD    Arta Tunnel       110.94 280  PFAKE           11 33 40.0 +11
ATD                                LR      LR
       comp=Z,400nm,20.0s
NATX   Nacogdoches       111.47  58  PFAKE           11 33 40.0 +11
NATX                               LR      LR
       comp=Z,1µm,19.0s
FIA0   FINESS Array S    111.51 336 ePdif   Pdif    11 29 29.3 -1.3
FIA0                              ePKiKP  PKiKP   11 33 27.0 -1.4
FIA0                              ePKKPbc PKKPbc  11 44 22.5 -2.9
FIA0   FINESS Array S    111.51 336 eP      Pdif    11 29 29.3 -1.3
FIA0                              i               11 33 27.0
FINES  FINESS Array B    111.51 336  Pdiff  Pdif    11 29 29.3 -1.3
       comp=Z,0.6nm,0.4s,baz=70,slow=6.1,SNR=16
FINES                              PKiKP   PKiKP   11 33 27.0 -1.4
       comp=Z,0.5nm,0.3s,baz=29,slow=3.2,SNR=7.5
FINES                              PKKPbc  PKKPbc  11 44 22.5 -2.9
       comp=Z,1.4nm,0.6s,baz=262,slow=2.8,SNR=7.8
I39A   Houston           111.64  45  PFAKE           11 33 40.0 +11
I39A                               LR      LR
       comp=Z,2µm,20.0s
W39A   Magazine          111.69  54  PFAKE           11 33 40.0 +10
W39A                               LR      LR
       comp=Z,1µm,18.0s
C40A   Isle Royale Na    112.11  40  PFAKE           11 33 40.0 +10
C40A                               LR      LR
       comp=Z,1µm,20.0s
G40A   Rib Lake          112.18  43  PFAKE           11 33 40.0 +10
G40A                               LR      LR
       comp=Z,1µm,21.0s
X40A   Basin Creek Fa    112.58  55  PFAKE           11 33 40.0 +8.7
X40A                               LR      LR
       comp=Z,1µm,20.0s
COWI   Conover           112.66  42  PFAKE           11 33 40.0 +8.8
COWI                               LR      LR
       comp=Z,2µm,20.0s
H41A   Junction City     112.74  44  PFAKE           11 33 40.0 +8.7
H41A                               LR      LR
       comp=Z,3µm,22.0s
I41A   Arkdale           112.74  44  PFAKE           11 33 40.0 +8.7
I41A                               LR      LR
       comp=Z,3µm,20.0s
JFWS   Jewell Farm       112.78  45  PFAKE           11 33 40.0 +8.5
JFWS                               LR      LR
       comp=Z,2µm,20.0s
F41A   Three Lakes       112.79  42  PFAKE           11 33 40.0 +8.6
F41A                               LR      LR
       comp=Z,2µm,19.0s
Z41A   Richland Creek    112.81  56  PFAKE           11 33 40.0 +8.2
Z41A                               LR      LR
       comp=Z,900nm,19.0s
N41A   Harden Midland    112.88  48  PFAKE           11 33 40.0 +8.3
N41A                               LR      LR
       comp=Z,2µm,20.0s
CCM    Cathedral Cave    113.17  51  PFAKE           11 33 40.0 +7.7
CCM                                LR      LR
       comp=Z,2µm,21.0s
G42A   Mountain          113.39  43  PFAKE           11 33 40.0 +7.4
G42A                               LR      LR
       comp=Z,2µm,19.0s
L42A   Oliver, Polo      113.42  46  PFAKE           11 33 40.0 +7.3
L42A                               LR      LR
       comp=Z,1µm,20.0s
I42A   Draeger Farm,     113.45  44  PFAKE           11 33 40.0 +7.3
I42A                               LR      LR
       comp=Z,3µm,20.0s
T42A   Van Buren         113.50  52  PFAKE           11 33 50.0 +17
T42A                               LR      LR
       comp=Z,2µm,21.0s
H42A   Shiocton          113.54  43  PFAKE           11 33 50.0 +17
H42A                               LR      LR
       comp=Z,2µm,21.0s
SLM    Saint Louis       113.82  50  PFAKE           11 33 50.0 +16
SLM                                LR      LR
       comp=Z,2µm,22.0s
G43A   Wallace           113.89  42  PFAKE           11 33 50.0 +17
G43A                               LR      LR
       comp=Z,1µm,19.0s
E43A   Lone Tree Farm    113.99  41  PFAKE           11 33 50.0 +16
E43A                               LR      LR
       comp=Z,2µm,20.0s
HDIL   Hopedale          114.06  48  PFAKE           11 33 50.0 +16
HDIL                               LR      LR
       comp=Z,1µm,18.0s
H43A   Windswept, Lux    114.07  43  PFAKE           11 33 50.0 +16
H43A                               LR      LR
       comp=Z,2µm,21.0s
PBMO   Poplar Bluff      114.07  52  PFAKE           11 33 50.0 +16
PBMO                               LR      LR
       comp=Z,2µm,22.0s
K43A   Burlington        114.19  45  PFAKE           11 33 50.0 +16
K43A                               LR      LR
       comp=Z,2µm,19.0s
E44A   Grand Marais A    114.61  41  PFAKE           11 33 50.0 +15
E44A                               LR      LR
       comp=Z,1µm,19.0s
PARMO  Parma             114.63  52  PFAKE           11 33 50.0 +15
PARMO                              LR      LR
       comp=Z,2µm,21.0s
Q44A   Meyer Farm, Va    114.68  49  PFAKE           11 33 50.0 +15
Q44A                               LR      LR
       comp=Z,1µm,20.0s
PVMO   Portageville      114.72  52  PFAKE           11 33 50.0 +15
PVMO                               LR      LR
       comp=Z,2µm,20.0s
M44A   Midewin, Midew    114.76  47  PFAKE           11 33 50.0 +15
M44A                               LR      LR
       comp=Z,2µm,21.0s
MET    Memphis--Engin    114.81  54  PFAKE           11 33 50.0 +14
MET                                LR      LR
       comp=Z,1µm,20.0s
SIUC   Southern Illin    114.81  51  PFAKE           11 33 50.0 +15
SIUC                               LR      LR
       comp=Z,2µm,22.0s
FURI   Furi              114.98 277  PFAKE           11 33 50.0 +13
FURI                               LR      LR
       comp=Z,600nm,20.0s
AKASG  Malin Array Be    114.99 324  PKP    PKiKP   11 33 34.8 -0.7
       comp=Z,1.7nm,0.4s,baz=50,slow=2.7,SNR=12
KIEV   Kiev              115.01 324  PFAKE           11 33 50.0 +15
KIEV                               LR      LR
       comp=Z,1µm,22.0s
CCIG   Comitan           115.07  75  PFAKE           11 33 50.0 +13
CCIG                               LR      LR
       comp=Z,1µm,20.0s
Z45A   Winona            115.35  56  PFAKE           11 33 50.0 +13
Z45A                               LR      LR
       comp=Z,1µm,19.0s
OXF    Oxford            115.36  54  PFAKE           11 33 50.0 +13
OXF                                LR      LR
       comp=Z,900nm,20.0s
T45A   Paducah           115.42  51  PFAKE           11 33 50.0 +13
T45A                               LR      LR
       comp=Z,1µm,21.0s
OLIL   Olney             115.42  49  PFAKE           11 33 50.0 +13
OLIL                               LR      LR
       comp=Z,1µm,21.0s
P45A   Graceland, Par    115.48  49  PFAKE           11 33 50.0 +13
P45A                               LR      LR
       comp=Z,1µm,21.0s
SFIN   Lafayette         115.73  47  PFAKE           11 33 50.0 +13
SFIN                               LR      LR
       comp=Z,1µm,18.0s
KMBO   Kilima Mbogo      115.74 266  PFAKE           11 33 50.0 +12
KMBO                               LR      LR
       comp=Z,500nm,18.0s
BR101  Keskin Array S    115.82 312 ePKPdf  PKiKP   11 33 36.5 -1.0
BRTR   Keskin Array B    115.82 312  PKP    PKiKP   11 33 36.5 -1.0
       comp=Z,0.7nm,0.6s,baz=90,slow=1.4,SNR=3.1
346A   Big Creek Wild    115.91  58  PFAKE           11 33 50.0 +12
346A                               LR      LR
       comp=Z,1µm,21.0s
USIN   University of     115.94  50  PFAKE           11 33 50.0 +12
USIN                               LR      LR
       comp=Z,2µm,21.0s
M46A   Old House Fiel    115.97  46  PFAKE           11 33 50.0 +12
M46A                               LR      LR
       comp=Z,1µm,20.0s
GLMI   Grayling          116.08  42  PFAKE           11 33 50.0 +12
GLMI                               LR      LR
       comp=Z,2µm,18.0s
WVT    Waverly           116.26  52  PFAKE           11 33 50.0 +12
WVT                                LR      LR
       comp=Z,2µm,20.0s
147A   Livingston        116.66  56  PFAKE           11 33 50.0 +11
147A                               LR      LR
       comp=Z,1µm,22.0s
WCI    Wyandotte Cave    116.92  50  PFAKE           11 33 50.0 +10
WCI                                LR      LR
       comp=Z,2µm,20.0s
MYIG   Mrida             117.06  69  PFAKE           11 33 50.0 +10
MYIG                               LR      LR
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	comp=Z,1µm,20.0s						
M48A	**Edgerton**	**117.12**	**46**	PFAKE		11 33 50.0	+10
M48A				LR	LR		
	comp=Z,1µm,19.0s						
V48A	**Smith Brothers**	**117.15**	**52**	PFAKE		11 33 50.0	+10
V48A				LR	LR		
	comp=Z,2µm,19.0s						
X48A	**Hartselle**	**117.28**	**54**	PFAKE		11 33 50.0	+10
X48A				LR	LR		
	comp=Z,900nm,18.0s						
NB2	**NORSAR Subarra**	**117.35**	**340**	PKPdf	**PKPdf**	**11 33 39.6**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=43,slow=1.8						
NB200	**NORSAR Array S**	**117.35**	**340**	*e*PKPdf	**PKPdf**	**11 33 39.0**	**-0.8**
NB200				*e*PKKPbc	**PKKPbc**	**11 44 04.7**	**-0.8**
NOA	**NORSAR Array B**	**117.35**	**340**	PKIKP	**PKPdf**	**11 33 39.0**	**-0.8**
NOA				pmax	pmax		
	comp=Z,11nm,0.5s						
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**117.35**	**340**	PKP	**PKPdf**	**11 33 39.0**	**-0.8**
	comp=Z,11nm,0.5s,baz=75,slow=1.8,SNR=4.9						
NOA				PKKPbc	**PKKPbc**	**11 44 04.7**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=44,slow=3.7,SNR=6.5						
AAM	**Ann Arbor**	**117.60**	**45**	PFAKE		11 33 50.0	+9.3
AAM				LR	LR		
	comp=Z,2µm,20.0s						
LRAL	**Lakeview Retre**	**117.63**	**55**	PFAKE		11 33 50.0	+8.9
LRAL				LR	LR		
	comp=Z,1µm,20.0s						
N49A	**Columbus Grove**	**117.68**	**46**	PFAKE		11 33 50.0	+9.0
N49A				LR	LR		
	comp=Z,2µm,19.0s						
T49A	**Edmonton**	**117.80**	**51**	PFAKE		11 33 50.0	+8.7
T49A				LR	LR		
	comp=Z,2µm,22.0s						
O49A	**Covington**	**117.80**	**47**	*e*PKPdf	**PKPdf**	**11 33 41.3**	**+0.1**
O49A				LR	LR		
	comp=Z,1µm,20.0s						
M50A	**Fremont**	**118.34**	**45**	PFAKE		11 33 50.0	+7.8
M50A				LR	LR		
	comp=Z,2µm,20.0s						
Z50A	**Ashland**	**118.46**	**55**	PFAKE		11 33 50.0	+7.3
Z50A				LR	LR		
	comp=Z,1µm,22.0s						
250A	**Grady**	**118.46**	**56**	PFAKE		11 33 50.0	+7.3
250A				LR	LR		
	comp=Z,2µm,22.0s						
W50A	**Signal Mountai**	**118.48**	**53**	PFAKE		11 33 50.0	+7.3
W50A				LR	LR		
	comp=Z,2µm,20.0s						
TEIG	**Tepich**	**118.49**	**70**	PFAKE		11 34 00.0	+17
TEIG				LR	LR		
	comp=Z,900nm,21.0s						
BUR08	**Bucovina Ar. S**	**118.69**	**323**	*e*PKPdf	**PKiKP**	**11 33 43.8**	**+0.9**
BUR04	**Bucovina Ar. S**	**118.70**	**323**	*e*PKPdf	**PKiKP**	**11 33 43.6**	**+0.8**
Q51A	**Peebles**	**118.89**	**48**	PFAKE		11 34 00.0	+17
Q51A				LR	LR		
	comp=Z,2µm,19.0s						
P51A	**Williamsport**	**118.96**	**47**	PFAKE		11 34 00.0	+17
P51A				LR	LR		
	comp=Z,1µm,19.0s						
N51A	**Ashland**	**118.98**	**46**	*e*PKPdf	**PKiKP**	**11 33 43.8**	**+0.3**
N51A				LR	LR		
	comp=Z,1µm,20.0s						
X51A	**Calhoun**	**119.00**	**53**	PFAKE		11 34 00.0	+16
X51A				LR	LR		
	comp=Z,2µm,20.0s						
CPCT	**Cooper Cave**	**119.03**	**52**	PFAKE		11 34 00.0	+16
CPCT				LR	LR		
	comp=Z,1µm,18.0s						
V51A	**Loudon**	**119.07**	**52**	PFAKE		11 34 00.0	+16
V51A				LR	LR		
	comp=Z,900nm,19.0s						
MLR	**Muntele Rosu**	**119.16**	**320**	*e*PKPdf	**PKPdf**	**11 33 42.2**	**-1.6**
MLR				PKKPbc	**PKKPbc**	**11 43 58.7**	**+0.1**
MLR				LR	LR		
	comp=Z,900nm,21.0s						
MLR	**Muntele Rosu**	**119.16**	**320**	*e*PKIKP	**PKPdf**	**11 33 42.2**	**-1.6**
MLR				MLR	MLR		
	comp=Z,900nm,21.0s						
MLR	**Muntele Rosu**	**119.16**	**320**	PKP	**PKPdf**	**11 33 42.1**	**-1.6**
	comp=Z,1.9nm,0.5s,baz=359,slow=14,SNR=4.1						
MLR				PKKPbc	**PKKPbc**	**11 43 58.7**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=180,slow=7.1,SNR=3.5						
KWP	**Kalwaria Pacla**	**119.21**	**325**	*e*PKPdf	**PKPdf**	**11 33 43.8**	**+0.2**
KWP	**Kalwaria Pacla**	**119.21**	**325**	*e*PKIKP	**PKPdf**	**11 33 43.8**	**+0.2**
VLDQ	**Val d'Or**	**119.27**	**36**	*e*PKPdf	**PKPdf**	**11 33 43.3**	**-0.5**
PLCA	**Paso Flores**	**119.28**	**143**	*e*PKPdf	**PKiKP**	**11 33 45.1**	**+0.9**
PLCA	**Paso Flores**	**119.28**	**143**	*e*PKIKP	**PKiKP**	**11 33 45.1**	**+0.9**
TZTN	**Tazewell**	**119.49**	**51**	PFAKE		11 34 00.0	+15
TZTN				LR	LR		
	comp=Z,2µm,22.0s						
TKL	**Tuckaleechee C**	**119.56**	**52**	PFAKE		11 34 00.0	+15
TKL				LR	LR		
	comp=Z,1µm,20.0s						
152A	**Waverly Hall**	**119.58**	**55**	PFAKE		11 34 00.0	+15
152A				LR	LR		
	comp=Z,1µm,19.0s						
W52A	**Murphy**	**119.60**	**52**	PFAKE		11 34 00.0	+15
W52A				LR	LR		
	comp=Z,1µm,19.0s						
O52A	**Adamsville**	**119.64**	**46**	PFAKE		11 34 00.0	+15
O52A				LR	LR		
	comp=Z,1µm,21.0s						
V52A	**Sevierville**	**119.65**	**51**	PFAKE		11 34 00.0	+15
V52A				LR	LR		
	comp=Z,900nm,20.0s						
352A	**Blakely**	**119.69**	**57**	PFAKE		11 34 00.0	+15
352A				LR	LR		
	comp=Z,800nm,19.0s						
Y52A	**Lilburn**	**119.82**	**54**	PFAKE		11 34 00.0	+15
Y52A				LR	LR		
	comp=Z,2µm,20.0s						
TGUH	**Tegucigalpa,Un**	**119.84**	**77**	PFAKE		11 34 00.0	+14
TGUH				LR	LR		
	comp=Z,2µm,20.0s						
P53A	**Whipple**	**120.17**	**47**	*e*PKPdf	**PKiKP**	**11 33 47.1**	**+1.3**
ERPA	**Erie**	**120.21**	**44**	PFAKE		11 34 00.0	+14
ERPA				LR	LR		
	comp=Z,2µm,21.0s						
253A	**Americus**	**120.21**	**56**	PFAKE		11 34 00.0	+14
253A				LR	LR		
	comp=Z,900nm,21.0s						
HOPE	**Hope Point**	**120.26**	**173**	*e*PKPdf	**PKiKP**	**11 33 47.0**	**+1.4**
V53A	**Saluda**	**120.31**	**51**	PFAKE		11 34 00.0	+14
V53A				LR	LR		
	comp=Z,1µm,22.0s						
GOGA	**Godfrey**	**120.42**	**54**	PFAKE		11 34 00.0	+14
GOGA				LR	LR		
	comp=Z,1µm,22.0s						
N54A	**Moraine State**	**120.65**	**45**	PFAKE		11 34 00.0	+13
N54A				LR	LR		
	comp=Z,2µm,20.0s						
M54A	**Oil Creek Stat**	**120.67**	**44**	PFAKE		11 34 00.0	+13
M54A				LR	LR		
	comp=Z,2µm,20.0s						
SCHQ	**Schefferville**	**120.90**	**26**	*e*PKPdf	**PKPdf**	**11 33 47.0**	**+0.3**
SCHQ	**Schefferville**	**120.90**	**26**	PKP	**PKPdf**	**11 33 46.8**	**+0.1**
	comp=Z,2.9nm,1.0s,baz=277,slow=8.1,SNR=5.1						
PLVO	**Plevna**	**120.91**	**39**	*e*PKPdf	**PKPdf**	**11 33 47.3**	**+0.3**
154A	**Montrose**	**120.91**	**55**	PFAKE		11 34 00.0	+12
154A				LR	LR		
	comp=Z,1µm,19.0s						
HODGE	**Hodges**	**121.16**	**53**	PFAKE		11 34 00.0	+12
HODGE				LR	LR		
	comp=Z,1µm,19.0s						
MMNY	**Mt. Morris Dam**	**121.37**	**42**	PFAKE		11 34 00.0	+12
MMNY				LR	LR		
	comp=Z,2µm,21.0s						
255A	**Hazlehurst**	**121.61**	**56**	PFAKE		11 34 00.0	+11
255A				LR	LR		
	comp=Z,1µm,22.0s						
OKC	**Ostrava-Krasne**	**121.61**	**328**	AMS	AMS	12 29 30.0	
	comp=Z,800nm,19.2s						
KMSC	**Kings Mountain**	**121.62**	**52**	PFAKE		11 34 00.0	+11
KMSC				LR	LR		
	comp=Z,1µm,20.0s						
555A	**McAlpin**	**121.64**	**58**	PFAKE		11 34 00.0	+11
555A				LR	LR		
	comp=Z,900nm,19.0s						
BLA	**Blacksburg**	**121.66**	**49**	PFAKE		11 34 00.0	+11
BLA				LR	LR		
	comp=Z,2µm,22.0s						
PSZ	**Piszkesteto**	**121.69**	**325**	PFAKE		11 34 00.0	+11
PSZ				LR	LR		
	comp=Z,900nm,21.0s						
LSZ	**Lusaka**	**121.91**	**249**	PFAKE		11 34 00.0	+10
LSZ				LR	LR		
	comp=Z,1µm,20.0s						
O56A	**Blue Knob Stat**	**121.91**	**45**	*e*PKPdf	**PKPdf**	**11 33 49.4**	**+0.3**
O56A				LR	LR		
	comp=Z,2µm,19.0s						
VYHS	**Vyhne**	**121.98**	**326**	*e*PKIKP	**PKPdf**	**11 33 48.5**	**-0.5**
VYHS	**Vyhne**	**121.98**	**326**	*e*PKP	**PKPdf**	**11 33 48.5**	**-0.5**
656A	**Willston**	**122.18**	**58**	PFAKE		11 34 00.0	+10
656A				LR	LR		
	comp=Z,900nm,20.0s						
JTS	**JuntasAbangare**	**122.19**	**81**	PFAKE		11 34 00.0	+9.5
JTS				LR	LR		
	comp=Z,2µm,22.0s						
SSPA	**Standing Stone**	**122.24**	**44**	PFAKE		11 34 00.0	+10
SSPA				LR	LR		
	comp=Z,2µm,20.0s						
DPC	**Dobruska-Polom**	**122.27**	**329**	*e*PKP	**PKiKP**	**11 33 52.3**	**+2.6**
DPC				*e*pPKP	**pPKPdf**	**11 33 58.7**	**-0.7**
DPC				AMS	AMS	12 28 30.0	
	comp=Z,600nm,18.6s						
DPC	**Dobruska-Polom**	**122.27**	**329**	*e*PKIKP	**PKiKP**	**11 33 52.3**	**+2.6**
DPC				*e*		11 33 58.7	
DPC				MLR	MLR		
	comp=Z,600nm,18.6s						
VRAC	**Vranov**	**122.74**	**328**	*e*PKP	**PKiKP**	**11 33 52.3**	**+1.7**
257A	**Skidaway Islan**	**122.78**	**55**	PFAKE		11 34 00.0	+8.8
257A				LR	LR		
	comp=Z,2µm,22.0s						
957A	**Wimauma**	**122.82**	**60**	PFAKE		11 34 00.0	+8.6
957A				LR	LR		
	comp=Z,700nm,22.0s						
KRUC	**Moravsky**	**122.99**	**328**	*e*PKP	**PKiKP**	**11 33 51.6**	**+0.5**
HDC	**Heredia**	**123.02**	**81**	PFAKE		11 34 00.0	+7.7
HDC				LR	LR		
	comp=Z,1µm,20.0s						
PVCC	**Panska Ves**	**123.06**	**330**	*e*PKP	**PKiKP**	**11 33 53.5**	**+2.3**
PVCC				AMS	AMS	12 33 10.0	
	comp=Z,1µm,18.8s						
PVCC	**Panska Ves**	**123.06**	**330**	*e*PKIKP	**PKiKP**	**11 33 53.5**	**+2.3**
PVCC				MLR	MLR		
	comp=Z,1µm,18.8s						
NHSC	**New Hope**	**123.14**	**54**	PFAKE		11 34 00.0	+8.1
NHSC				LR	LR		
	comp=Z,1µm,19.0s						
BRG	**Berggiesshubel**	**123.15**	**330**	*e*PKP	**PKiKP**	**11 33 52.3**	**+0.9**
	comp=Z,8.7nm,0.9s						
BRG	**Berggiesshubel**	**123.15**	**330**	*e*PKIKP	**PKiKP**	**11 33 52.3**	**+0.9**
BRG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FRNY	**Flat Rock**	**123.19**	**38**	*e*PKPdf	**PKPdf**	**11 33 51.6**	**+0.2**
PAGS	**Pennsylvania G**	**123.22**	**44**	*e*PKPdf	**PKiKP**	**11 33 52.7**	**+0.8**
PAGS				LR	LR		
	comp=Z,2µm,20.0s						
658A	**Bunnell**	**123.25**	**58**	PFAKE		11 34 00.0	+7.8
658A				LR	LR		
	comp=Z,800nm,20.0s						
R58B	**Mineral**	**123.28**	**47**	PFAKE		11 34 00.0	+8.0
R58B				LR	LR		
	comp=Z,1µm,19.0s						
KSPA	**Keystone Colle**	**123.31**	**43**	PFAKE		11 34 00.0	+8.0
KSPA				LR	LR		
	comp=Z,2µm,21.0s						
CLL	**Collm**	**123.33**	**331**	*i* PKPdf	**PKiKP**	**11 33 52.7**	**+1.0**
	comp=Z,22nm,1.5s						
CLL				*e*		11 34 01.0	
CLL				*e*		11 34 05.0	
CLL				*e*		11 34 09.0	
CLL				*e*PP	**PP**	**11 35 36.0**	**+4.2**
CLL				*e*Sdif	Sdif	11 43 36.0	+9.3
CLL				*e*PSKS		11 45 30.0	
CLL				*e*SS	SS	11 52 12.0	-3.2
CLL				*e*SSS	SSS	11 57 00.0	
CLL				*e*SSSS		12 00 18.0	
CLL				Lm	MLR	12 32 00.0	
	comp=N,600nm,19.1s						
CLL				Lm	MLR	12 32 00.0	
	comp=E,400nm,21.6s						
CLL				Lm	MLR	12 32 00.0	
	comp=Z,1µm,19.4s						
CLL	**Collm**	**123.33**	**331**	*i* PKIKP	**PKiKP**	**11 33 52.7**	**+1.0**
CLL				*e*		11 34 01.0	
CLL				pmax	pmax		
	comp=Z,22nm,1.5s						
CLL				MLR	MLR		
	comp=Z,1µm,19.4s						
TREC	**Trest**	**123.34**	**328**	AMS	AMS	12 32 30.0	
	comp=Z,700nm,16.6s						
PRU	**Pruhonice**	**123.40**	**329**	*e*PKP	**PKPdf**	**11 33 50.0**	**-1.7**
PRU				AMS	AMS	12 26 30.0	
	comp=Z,700nm,18.8s						
PRU	**Pruhonice**	**123.40**	**329**	*e*PKIKP	**PKPdf**	**11 33 50.0**	**-1.7**
PRU				MLR	MLR		
	comp=Z,700nm,18.8s						
DWPF	**Disney Wildern**	**123.41**	**60**	PFAKE		11 34 00.0	+7.5
DWPF				LR	LR		
	comp=Z,700nm,20.0s						
SDMD	**Soldier's Deli**	**123.47**	**45**	PFAKE		11 34 00.0	+7.6
SDMD				LR	LR		
	comp=Z,600nm,20.0s						
ROC1	**El Roble**	**123.50**	**135**	*e*PKPdf	**PKiKP**	**11 33 54.2**	**+1.3**
CBN	**Corbin Frederi**	**123.56**	**47**	PFAKE		11 34 00.0	+7.5
CBN				LR	LR		
	comp=Z,2µm,19.0s						
N59A	**State Game Lan**	**123.59**	**43**	*e*PKPdf	**PKiKP**	**11 33 53.9**	**+1.3**
N59A				LR	LR		
	comp=Z,2µm,20.0s						
PEL	**Peldehue**	**123.64**	**136**	*e*PKPdf	**PKiKP**	**11 33 53.6**	**+0.6**
PEL	**Peldehue**	**123.64**	**136**	*e*PKIKP	**PKiKP**	**11 33 53.6**	**+0.6**
MOQ	**Mont Orford**	**123.76**	**37**	*e*PKPdf	**PKiKP**	**11 33 53.1**	**+0.3**
059A	**Moore Haven**	**123.92**	**61**	PFAKE		11 34 10.0	+16
059A				LR	LR		
	comp=Z,700nm,20.0s						
CONA	**Conrad Observa**	**123.94**	**327**	*e*PKiKP	**PKiKP**	**11 33 53.9**	**+0.8**
	comp=Z,2.1nm,0.6s						
LUPA	**Lehigh Univers**	**124.00**	**44**	PFAKE		11 34 10.0	+17
LUPA				LR	LR		
	comp=Z,200nm,20.0s						
CNNC	**Cliffs of the**	**124.26**	**50**	PFAKE		11 34 10.0	+16
CNNC				LR	LR		
	comp=Z,2µm,20.0s						
ODNJ	**Ogdensburg**	**124.31**	**43**	PFAKE		11 34 10.0	+16
ODNJ				LR	LR		
	comp=Z,2µm,21.0s						
061Z	**Ochoppi**	**124.36**	**62**	PFAKE		11 34 10.0	+16
061Z				LR	LR		
	comp=Z,1µm,20.0s						
KHC	**Kasperske Hory**	**124.43**	**329**	*e*PKPdf	**PKPdf**	**11 33 53.8**	**+0.1**
KHC	**Kasperske Hory**	**124.43**	**329**	*e*PKP	**PKPdf**	**11 33 54.0**	**+0.3**
KHC				*e*pPKP	**pPKPdf**	**11 34 00.1**	**-3.5**
KHC	**Kasperske Hory**	**124.43**	**329**	*e*PKIKP	**PKPdf**	**11 33 53.8**	**+0.1**
BRNJ	**Basking Ridge**	**124.51**	**43**	PFAKE		11 34 10.0	+16
BRNJ				LR	LR		
	comp=Z,2µm,20.0s						
ARSA	**Arzberg**	**124.52**	**326**	*e*PKiKP	**PKiKP**	**11 33 55.8**	**+1.6**
	comp=Z,4.5nm,1.3s						
GEC2	**GERESS Array S**	**124.54**	**329**	*e*PKPdf	**PKPdf**	**11 33 54.2**	**+0.2**
GEC2	**GERESS Array S**	**124.54**	**329**	*e*PKIKP	**PKPdf**	**11 33 54.2**	**+0.2**
GERES	**GERESS Array B**	**124.54**	**329**	PKP	**PKPdf**	**11 33 53.9**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=71,slow=1.8,SNR=18						
GEA0	**GERESS Array S**	**124.55**	**329**	*e*PKPdf	**PKiKP**	**11 33 54.4**	**0.0**
060A	**Indiantown**	**124.58**	**61**	PFAKE		11 34 10.0	+15
060A				LR	LR		
	comp=Z,900nm,19.0s						
PAL	**Palisades**	**124.81**	**42**	PFAKE		11 34 10.0	+15
PAL				LR	LR		
	comp=Z,2µm,22.0s						
MOA	**Molln**	**124.85**	**327**	*e*PKiKP	**PKiKP**	**11 33 56.3**	**+1.4**
	comp=Z,1.0nm,0.5s						
SOKA	**Soboth**	**125.13**	**326**	*e*PKiKP	**PKPdf**	**11 33 55.5**	**+0.3**
	comp=Z,7.2nm,1.2s						
GO04	**Tololo Observa**	**125.17**	**133**	*e*PKPdf	**PKiKP**	**11 33 56.6**	**+0.3**
WES	**Weston**	**125.84**	**40**	PFAKE		11 34 10.0	+13
WES				LR	LR		
	comp=Z,1µm,20.0s						
LCO	**Las Campanas**	**125.85**	**131**	*e*PKPdf	**PKiKP**	**11 33 58.2**	**+0.4**
LCO	**Las Campanas**	**125.85**	**131**	*e*PKIKP	**PKiKP**	**11 33 58.2**	**+0.4**
ABTA	**Abfaltersbach**	**126.47**	**327**	*e*PKiKP	**PKiKP**	**11 33 58.5**	**+0.3**
	comp=Z,5.5nm,0.9s						
WATA	**Walderalm**	**126.60**	**328**	*e*PKiKP	**PKPdf**	**11 33 58.2**	**+0.1**
	comp=Z,3.1nm,0.6s						
WTTA	**Wattenberg**	**126.61**	**328**	*e*PKiKP	**PKiKP**	**11 33 58.6**	**0.0**
	comp=Z,3.4nm,0.5s						
MOTA	**Moosalm**	**126.84**	**329**	*e*PKiKP	**PKPdf**	**11 33 58.7**	**+0.2**
	comp=Z,8.3nm,0.8s						
SQTA	**Sankt Quirin**	**126.86**	**328**	*e*PKiKP	**PKiKP**	**11 33 60.0**	**+0.9**
	comp=Z,12nm,1.0s						
MEM	**Membach**	**127.00**	**334**	⇑PKiKP	**PKPdf**	**11 33 58.7**	**+0.2**
ATAH	**Atahualpa**	**127.08**	**103**	PKP	**PKiKP**	**11 34 02.7**	**+1.9**
	comp=Z,11nm,0.8s,baz=135,slow=1.4,SNR=5.9						
FETA	**Feichten**	**127.24**	**328**	*e*PKiKP	**PKPdf**	**11 33 59.5**	**+0.2**
	comp=Z,10nm,1.0s						
BCIP	**Isla Barro Col**	**127.25**	**82**	PFAKE		11 34 10.0	+9.5
BCIP				LR	LR		
	comp=Z,1µm,20.0s						
DAVA	**Damuels**	**127.51**	**329**	*e*PKiKP	**PKiKP**	**11 34 00.4**	**+0.1**
	comp=Z,7.2nm,0.8s						
WLF	**Walferdange**	**127.63**	**334**	⇓PKiKP	**PKiKP**	**11 34 00.2**	**-0.1**
DOU	**Dourbes**	**127.99**	**335**	⇑PKiKP	**PKiKP**	**11 34 02.6**	**+1.6**
OTAV	**Otavalo**	**128.18**	**94**	PFAKE		11 34 10.0	+6.9
OTAV				LR	LR		
	comp=Z,700nm,21.0s						
LVC	**Limon Verde**	**130.45**	**125**	PKIKP	**PKPdf**	**11 34 05.6**	**-0.8**
LVC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LVC				pmax	pmax		
	comp=N,3.0nm,0.7s						
LVC	**Limon Verde**	**130.45**	**125**	PKP	**PKPdf**	**11 34 05.6**	**-0.8**
	comp=N,6.5nm,1.0s,baz=212,slow=2.9,SNR=3.9						
LVC				SKPbc	**SKPab**	**11 37 28.5**	**+1.0**
	comp=N,3.0nm,0.7s,baz=236,slow=3.6,SNR=2.5						
YOTC	**Yotoco, Valle**	**130.59**	**89**	*e*P	**PKPdf**	**11 34 06.9**	**+0.3**
YOTC	**Yotoco, Valle**	**130.59**	**89**	*e*P	**PKPdf**	**11 34 06.9**	**+0.3**
PB01	**IPOC Station P**	**130.70**	**123**	PFAKE		11 34 20.0	+13
PB01				LR	LR		
	comp=Z,700nm,21.0s						
PB11	**IPOC Station P**	**131.13**	**122**	*e*PKPdf	**PKPdf**	**11 34 07.2**	**-0.3**
ZARC	**Zaragoza, Cauc**	**132.18**	**85**	*e*P	PKPpre	11 34 06.2	
ZARC	**Zaragoza, Cauc**	**132.18**	**85**	*e*P	PKPpre	11 34 06.2	
ROSC	**El Rosal**	**132.65**	**88**	PKP	**PKPdf**	**11 34 09.7**	**-1.1**
	comp=Z,3.5nm,0.3s,baz=139,slow=14,SNR=4.3						
SMLC	**San Martn de**	**132.95**	**83**	*e*P	PKPpre	11 34 07.7	
SMLC	**San Martn de**	**132.95**	**83**	*e*P	PKPpre	11 34 07.7	
BARC	**Barichara**	**133.84**	**86**	*e*P	PKPpre	11 34 08.5	
BARC	**Barichara**	**133.84**	**86**	*e*P	PKPpre	11 34 08.5	
LPAZ	**La Paz**	**133.90**	**118**	*e*PKPdf	**PKiKP**	**11 34 14.8**	**+0.1**
LPAZ				SKP		11 37 42.7	
LPAZ	**La Paz**	**133.90**	**118**	PKP	**PKPdf**	**11 34 12.4**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=136,slow=0.9,SNR=6.2						
LPAZ				SKP		11 37 42.7	
	comp=Z,7.5nm,1.1s,baz=245,slow=2.0,SNR=8.7						
PAMC	**Pamplona, Colo**	**134.32**	**85**	*e*P	PKPpre	11 34 08.5	
PAMC	**Pamplona, Colo**	**134.32**	**85**	*e*P	PKPpre	11 34 08.5	
SDDR	**Presa de Saban**	**134.50**	**68**	PFAKE		11 34 30.0	+15
SDDR				LR	LR		
	comp=Z,1µm,20.0s						
SDV	**Santo Domingo**	**136.34**	**83**	*e*PKPdf	**PKPdf**	**11 34 17.9**	**+0.4**
SDV				SKP		11 37 49.0	
SDV				LR	LR		
	comp=Z,800nm,21.0s						
SDV	**Santo Domingo**	**136.34**	**83**	PKP	**PKPdf**	**11 34 17.5**	**+0.1**
	comp=Z,7.4nm,0.8s,baz=326,slow=3.6						
SDV				SKP		11 37 49.0	
	comp=Z,7.5nm,1.0s,baz=292,slow=2.5,SNR=3.7						
CPUP	**Villa Florida**	**136.95**	**138**	*e*PKPpre	PKPpre	11 34 08.3	
CPUP				*e*PKPdf	**PKiKP**	**11 34 20.4**	**+0.6**
CPUP				SKP		11 37 49.9	
CPUP	**Villa Florida**	**136.95**	**138**	*e*PKHKP	PKPpre	11 34 08.3	
CPUP	**Villa Florida**	**136.95**	**138**	PKhKP	PKPpre	11 34 08.2	
	comp=Z,1.1nm,0.6s,baz=250,slow=4.8,SNR=5.4						
CPUP				PKP	**PKiKP**	**11 34 19.6**	**-0.3**
	comp=Z,5.0nm,0.7s,baz=194,slow=1.2,SNR=12						
CPUP				SKP		11 37 49.9	
	comp=Z,4.7nm,1.0s,baz=276,slow=4.4,SNR=4.4						
MPR	**Mayaguez**	**138.51**	**68**	PFAKE		11 34 30.0	+6.8
MPR				LR	LR		
	comp=Z,1µm,20.0s						
SJG	**San Juan**	**139.45**	**68**	PFAKE		11 34 40.0	+15
SJG				LR	LR		
	comp=Z,800nm,20.0s						
CBYP	**Canovanas**	**139.68**	**68**	PFAKE		11 34 40.0	+14
CBYP				LR	LR		
	comp=Z,800nm,19.0s						
MVO	**Moncorvo**	**139.99**	**337**	*e*PKPdf	**PKiKP**	**11 34 25.9**	**+0.2**
POLO	**Lamas de Olo**	**140.10**	**338**	*i* LQ	LQ	11 34 37.7	
CUPR	**Culebra, Puert**	**140.20**	**67**	PFAKE		11 34 40.0	+13
CUPR				LR	LR		
	comp=Z,1µm,21.0s						
STVI	**Saint Thomas**	**140.49**	**67**	PFAKE		11 34 40.0	+13
STVI				LR	LR		
	comp=Z,1µm,21.0s						
PVIS	**Viseu**	**140.71**	**337**	*e*PKPdf	**PKPdf**	**11 34 22.5**	**-2.1**
MTE	**Manteigas**	**140.84**	**337**	*e*PKPdf	**PKPdf**	**11 34 26.1**	**+1.3**
PMRV	**Marv??o**	**141.61**	**336**	*e*PKPdf	**PKPdf**	**11 34 26.6**	**+0.4**
PTOM	**Tomar**	**141.85**	**337**	*i* LQ	LQ	11 34 49.8	
SMRT	**St. Maarten**	**142.29**	**67**	PFAKE		11 34 40.0	+9.0
SMRT				LR	LR		
	comp=Z,1µm,21.0s						
SEUS	**St. Eustatius**	**142.53**	**68**	PFAKE		11 34 40.0	+8.6
SEUS				LR	LR		
	comp=Z,1µm,21.0s						
PBEJ	**Beja**	**142.99**	**335**	*e*PKPdf	PKPpre	11 34 24.1	
PNCL	**Nicolau / Gran**	**143.19**	**336**	*e*PKPdf	PKPab	11 34 25.3	+0.7
PTEO	**Sao Teotonio**	**143.76**	**335**	*i* LQ	LQ	11 34 36.5	
SVB	**Belmont**	**145.06**	**74**	*e*PKPbc	**PKPab**	**11 34 32.7**	**+0.3**
SPB	**Sao Paulo**	**145.07**	**146**	PFAKE		11 34 40.0	+3.5
SPB				LR	LR		
	comp=Z,700nm,19.0s						
MDT	**Midelt**	**145.54**	**326**	PKPbc	**PKPab**	**11 34 34.0**	**+0.2**
	comp=Z,13nm,0.4s,baz=26,slow=2.3,SNR=47						
PTGA	**Pitinga**	**146.35**	**99**	*e*PKPdf	**PKPdf**	**11 34 36.0**	**+0.8**
PTGA				LR	LR		
	comp=Z,600nm,21.0s						
PTGA	**Pitinga**	**146.35**	**99**	PKPbc	**PKPdf**	**11 34 36.0**	**+0.8**
	comp=Z,14nm,0.7s,baz=233,slow=4.5,SNR=24						
BDFB	**Brasilia**	**150.55**	**135**	*e*PKPbc	**PKPbc**	**11 34 48.1**	**+0.6**
BDFB				LR	LR		
	comp=Z,900nm,22.0s						
BDFB	**Brasilia**	**150.55**	**135**	PKP	**PKPdf**	**11 34 43.0**	**+0.9**
	comp=Z,9.3nm,0.7s,baz=86,slow=2.3,SNR=14						
BDFB				PKPbc	**PKPbc**	**11 34 48.1**	**+0.6**
	comp=Z,37nm,0.6s,baz=306,slow=1.1,SNR=51						
TOC2	**Torodi Ar. Sit**	**150.77**	**288**	PFAKE		11 34 50.0	+1.5
TOC2				LR	LR		
	comp=Z,600nm,19.0s						
TOC3	**Torodi Ar. Sit**	**150.78**	**288**	PFAKE		11 34 50.0	+1.5
TOC3				LR	LR		
	comp=Z,700nm,21.0s						
TOB2	**Torodi Ar. Sit**	**150.78**	**288**	PFAKE		11 34 50.0	+1.5
TOB2				LR	LR		
	comp=Z,700nm,19.0s						
TOB3	**Torodi Ar. Sit**	**150.79**	**288**	PFAKE		11 34 50.0	+1.5
TOB3				LR	LR		
	comp=Z,600nm,19.0s						
TOA0	**Torodi Ar. Sit**	**150.80**	**288**	*e*PKPdf	**PKPdf**	**11 34 41.1**	**-1.2**
TOA0				LR	LR		
	comp=Z,600nm,18.0s						
TORD	**Torodi Ar. Bea**	**150.80**	**288**	PKP	**PKPdf**	**11 34 43.1**	**+0.8**
	comp=Z,42nm,1.0s,baz=69,slow=1.7,SNR=28						
TORD				PKPbc	**PKPbc**	**11 34 47.4**	**-0.6**
	comp=Z,39nm,0.9s,baz=73,slow=2.7,SNR=86						
TOA1	**Torodi Ar. Sit**	**150.80**	**288**	*e*PKPdf	**PKPdf**	**11 34 43.1**	**+0.8**
TOA1				*e*PKPbc	**PKPbc**	**11 34 47.4**	**-0.6**
TOA1				LR	LR		
	comp=Z,600nm,18.0s						
TOC4	**Torodi Ar. Sit**	**150.80**	**288**	PFAKE		11 34 50.0	+1.4
TOC4				LR	LR		
	comp=Z,700nm,19.0s						
TOA3	**Torodi Ar. Sit**	**150.80**	**288**	PFAKE		11 34 50.0	+1.4
TOA3				LR	LR		
	comp=Z,600nm,19.0s						
TOC7	**Torodi Ar. Sit**	**150.81**	**288**	PFAKE		11 34 50.0	+1.4
TOC7				LR	LR		
	comp=Z,600nm,18.0s						
TOB4	**Torodi Ar. Sit**	**150.81**	**288**	PFAKE		11 34 50.0	+1.4
TOB4				LR	LR		
	comp=Z,600nm,20.0s						
TOB5	**Torodi Ar. Sit**	**150.81**	**288**	PFAKE		11 34 50.0	+1.4
TOB5				LR	LR		
	comp=Z,600nm,18.0s						
TOC5	**Torodi Ar. Sit**	**150.82**	**288**	PFAKE		11 34 50.0	+1.4
TOC5				LR	LR		
	comp=Z,700nm,20.0s						
KIC	**Kosan Boka**	**158.03**	**274**	*e*PKIKP	**PKPab**	**11 35 25.3**	**-0.6**
	comp=Z,46nm,0.8s						
DBIC	**Dimbokro**	**158.13**	**275**	*e*PKPdf	**PKPdf**	**11 34 51.8**	**-0.8**
DBIC				*e*PKPab	**PKPab**	**11 35 25.7**	**-0.6**
DBIC	**Dimbokro**	**158.13**	**275**	*e*PKIKP	**PKPdf**	**11 34 51.8**	**-0.8**
DBIC				*e*		11 35 25.7	

DBIC	**Dimbokro**	**158.13**	**275**	PKP	**PKPdf**	**11 34 52.7**	**+0.1**
	comp=Z,5.9nm,1.0s,baz=117,slow=2.3,SNR=3.8						
DBIC				PKPab	**PKPab**	**11 35 25.0**	**-1.3**
	comp=Z,15nm,0.8s,baz=74,slow=5.6,SNR=9.8						
TIC	**Toumodi**	**158.30**	**275**	*e*PKIKP	**PKPab**	**11 35 25.9**	**-1.2**
LIC	**Lamto**	**158.32**	**274**	*e*PKIKP	**PKPab**	**11 35 25.8**	**-1.4**
	comp=Z,47nm,0.9s						

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*IDC **03** 11:31:19.4±6.5, 36°.32N×66°.69E, h0^{km}, mb3.4/1, mb1 3.2/5, mb1mx3.1/58, mbtmp3.2/5, ML3.1/4, Error ellipse: s-maj=101.2km s-min=28.1km az=167.0*

ISC 03 11:31:21.6±2.7, **36°.3N**±0°.2×**66°.9E**±0°.1, **h35**^{km}, **n7**, σ**2**^{s}**.70**/9, **3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEYT	**Alibeck**	**7.18**	**286**	Pn	**Pn**	**11 33 03.5**	**-0.5**
	0.9nm,0.3s,baz=98,slow=10,SNR=4.1						
GEYT				Sn	**Sn**	**11 34 26.4**	**+2.0**
	0.4nm,0.3s,baz=71,slow=11,SNR=2.5						
KK31	**Karatay Array**	**7.40**	**21**	⇑Pn	**Pn**	**11 33 06.2**	**-0.9**
	2.4nm,1.1s,baz=218,slow=14,SNR=8.0						
KK31				⇑Sn	**Sn**	**11 34 31.4**	**+1.6**
	0.4nm,0.4s,baz=208,slow=24						
MNAS	**Manas**	**7.61**	**33**	⇑Pn	**Pn**	**11 33 12.3**	**+2.2**
	2.0nm,0.6s						
MNAS				⇓Sn	Sn	11 34 42.5	+7.4
	1.8nm,0.6s						
MKAR	**Makanchi Array**	**15.61**	**43**	Pn	**Pn**	**11 34 59.9**	**+1.0**
	0.0nm,0.3s,baz=235,slow=10,SNR=2.0						
KURBB	**Kurchatov Arra**	**16.65**	**27**	Pn	**Pn**	**11 35 07.6**	**-4.4**
	0.0nm,0.3s,baz=221,slow=9.7,SNR=2.6						
BVAR	**Borovoye Array**	**16.96**	**7**	Pn	**Pn**	**11 35 12.7**	**-3.2**
	0.2nm,0.3s,baz=192,slow=9.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**21.66**	**30**	P	**P**	**11 36 09.5**	**+0.7**
	1.2nm,0.7s,baz=230,slow=9.3,SNR=5.7						

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*BJI **03** 11:36:35.7, 5°.04S×153°.72E, h13^{km}, mB5.3/19, mb4.7/49, Ms5.0/7, Ms7 4.7/7*

*ISCJB **03** 11:36:36.9±2.3, 4°.97S±0°.03×153°.17E±0°.04, h2^{km}±14^{km}, mb4.8/86, MS4.4/8, Error ellipse: s-maj=6.9km s-min=4.6km az=164.4*

*NEIC **03** 11:36:39.5±0.1, 4°.98S×153°.17E, h10^{km}, mb4.9/62, Error ellipse: s-maj=5.3km s-min=3.4km az=85.0*

*DJA **03** 11:36:42.0±0.4, 5°S±5°×15°3E±°, h10^{km}, M4.9/12, mb4.9/12*

*IDC **03** 11:36:45.3±2.7, 5°.05S×153°.08E, h54^{km}±24^{km}, mb4.4/27, mb1 4.5/29, mb1mx4.3/42, mbtmp4.7/29, ML4.3/2, MS4.3/6, Ms1 4.3/6, ms1mx3.8/36, Error ellipse: s-maj=15.3km s-min=9.6km az=74.0*

ISC 03 11:36:42.2±1.2, **5°.05S**±0°.05×**153°.22E**±0°.06, **h27**^{km}±8^{km}, **n217**, σ**1**^{s}**.33**/239, **mb4.9**/91, **MS4.4**/8, **1C-1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.36**	**309**	*e*Pn	**Pn**	**11 37 05.8**	**+0.4**
MANU	**Manus Island**	**6.56**	**297**	*e*Pn	**Pn**	**11 38 21.2**	**+4.2**
HNR	**Honiara**	**7.96**	**123**	*e*P	**Pn**	**11 38 40.0**	**+3.7**
HNR				*e*S	**Sn**	**11 40 06.0**	**+0.4**
HNR	**Honiara**	**7.96**	**123**	P	Pn	11 38 42.0	+5.8
	9.4nm,0.3s,baz=171,slow=1.9,SNR=4.4						
HNR				S	Sn	11 40 16.3	+11
	1.4nm,0.3s,baz=128,slow=19,SNR=3.3						
PATS	**Pohnpei**	**12.86**	**23**	*e*Pn	**Pn**	**11 39 44.1**	**+0.7**
COEN	**Coen**	**13.28**	**228**	*e*Pn	**Pn**	**11 39 50.1**	**+1.0**
CTA	**Charters Tower**	**16.41**	**204**	P	**P**	**11 40 32.4**	**-1.0**
	0.5nm,0.3s,baz=32,slow=12,SNR=12						
CTAO	**Charters Tower**	**16.41**	**204**	*e*Pn	**P**	**11 40 32.3**	**-1.0**
	16nm,0.8s						
GUMO	**Guam**	**20.29**	**336**	LR	LR	11 50 02.1	
	comp=Z,352nm,18.0s,baz=166,slow=39						
EIDS	**Eidsvold**	**20.30**	**186**	*e*P	**P**	**11 41 17.1**	**+0.9**
	36nm,1.1s						
FAKI	**Fak Fak**	**21.03**	**275**	*e*P	**P**	**11 41 23.3**	**-0.9**
	34nm,1.0s						
FAKI	**Fak Fak**	**21.03**	**275**	P	P	11 41 32.6	+8.5
DZM	**Mont Dzumac**	**21.21**	**144**	*e*P	**P**	**11 41 27.5**	**+1.4**
	168nm,1.0s						
DZM	**Mont Dzumac**	**21.21**	**144**	P	**P**	**11 41 27.2**	**+1.0**
	149nm,0.9s,baz=328,slow=12,SNR=156						
DZM				LR	LR	11 48 42.4	
	comp=Z,900nm,19.3s,baz=324,slow=34						
ONTNC	**Ouen Toro**	**21.40**	**144**	*e*P	**P**	**11 41 29.3**	**+1.2**
	82nm,0.8s						
MARNC	**Mare, Loyalty**	**21.75**	**140**	*e*P	**P**	**11 41 32.5**	**+0.7**
	196nm,0.9s						
PINNC	**Pines Island,**	**22.22**	**143**	*e*P	**P**	**11 41 37.6**	**+0.8**
	90nm,0.8s						
SIJI	**Sorong**	**22.31**	**280**	P	**P**	**11 41 37.3**	**-0.6**
	41nm,0.6s,baz=136,slow=6.5,SNR=20						
SIJI				LR	LR	11 49 03.2	
	comp=Z,821nm,21.4s,baz=356,slow=33						
SWI	**Sorong**	**22.32**	**280**	P	**P**	**11 41 38.3**	**+0.3**
	59nm,0.6s						
WRAB	**Tennant Creek**	**23.58**	**230**	*e*P	**P**	**11 41 50.1**	**-0.9**
	36nm,0.8s						
WB2	**Warramunga Arr**	**23.59**	**230**	*e*P	**P**	**11 41 50.1**	**-0.9**
	40nm,0.8s						
WR1	**Warramunga Arr**	**23.59**	**230**	*e*P	**P**	**11 41 49.9**	**-1.2**
	42nm,0.9s						
WR1				*e*PcP	**PcP**	**11 45 33.0**	**-2.9**
WR1				*e*S	**S**	**11 46 02.9**	**-1.1**
WR1				*e*ScP	**ScP**	**11 49 13.9**	**+1.3**
WRA	**Warramunga Arr**	**23.59**	**230**	P	**P**	**11 41 49.9**	**-1.2**
	24nm,1.0s,baz=54,slow=9.7,SNR=72						
WRA				PcP	**PcP**	**11 45 33.0**	**-2.9**
	2.8nm,0.9s,baz=54,slow=2.5,SNR=4.1						
WRA				S	**S**	**11 46 02.9**	**-1.1**
	1.8nm,1.0s,baz=51,slow=16,SNR=4.2						
WRA				ScP	**ScP**	**11 49 13.9**	**+1.3**
	1.7nm,1.0s,baz=59,slow=3.2,SNR=5.6						
WRA				PKiKP	**PKiKP**	**11 53 19.0**	**-0.7**
	0.1nm,0.3s,baz=330,slow=1.1,SNR=6.2						
ARMA	**Armidale**	**25.27**	**183**	*e*P	**P**	**11 42 08.0**	**+1.5**
	18nm,1.0s						
AS01	**Alice Springs**	**26.22**	**223**	*e*P	**P**	**11 42 14.2**	**-0.9**
AS01				*e*PcP	**PcP**	**11 45 44.1**	**+2.4**
AS31	**Alice Springs**	**26.25**	**223**	*e*P	**P**	**11 42 14.2**	**-1.2**
	3.4nm,0.6s						
ASAR	**Alice Springs**	**26.25**	**223**	P	**P**	**11 42 14.3**	**-1.0**
	5.2nm,0.7s,baz=58,slow=8.8,SNR=73						
ASAR				PcP	**PcP**	**11 45 42.0**	**+0.2**
	3.7nm,0.9s,baz=63,slow=2.5,SNR=6.0						
ASAR				ScP	**ScP**	**11 49 21.0**	**+1.0**
	1.9nm,1.0s,baz=57,slow=3.4,SNR=4.7						
STKA	**Stephens Creek**	**28.82**	**201**	*e*P	**P**	**11 42 36.0**	**-2.3**
	1.9nm,0.8s						
STKA	**Stephens Creek**	**28.82**	**201**	P	**P**	**11 42 37.1**	**-1.2**
	9.4nm,0.8s,baz=34,slow=13,SNR=9.3						
BATI	**Baumata**	**29.73**	**258**	P	P	11 42 57.6	+11
FITZ	**Fitzroy Crossi**	**29.91**	**242**	*e*P	**P**	**11 42 47.2**	**-0.9**
	14nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.91**	**242**	P	**P**	**11 42 46.8**	**-1.3**
	15nm,0.7s,baz=82,slow=7.4,SNR=39						
CAN	**Canberra**	**30.37**	**187**	*e*P	**P**	**11 42 52.6**	**+0.5**
	30nm,1.4s						
EDFI	**Ende, Flores**	**31.51**	**262**	P	P	11 43 16.9	+14
BBOO	**Buckleboo**	**31.93**	**208**	*e*P	**P**	**11 43 05.8**	**+0.1**
	15nm,1.1s						
FORT	**Forrest**	**34.86**	**220**	*e*P	**P**	**11 43 30.4**	**-0.9**
	69nm,0.7s						
MBWA	**Marble Bar**	**36.21**	**241**	*e*P	**P**	**11 43 42.1**	**-1.0**
	17nm,1.0s						
HIZ	**Hauiti**	**38.67**	**152**	*e*P	**P**	**11 44 06.5**	**+2.8**
	22nm,1.0s						
OMRZ	**Omania**	**39.07**	**151**	P	**P**	**11 44 10.9**	**+3.8**
HAZ	**Te Kaha**	**39.51**	**149**	P	**P**	**11 44 12.0**	**+1.3**
URZ	**Urewera**	**39.56**	**150**	*e*P	**P**	**11 44 12.1**	**+1.0**
	95nm,1.5s						
URZ				*e*PcP	**PcP**	**11 46 16.4**	**-1.8**
URZ	**Urewera**	**39.56**	**150**	P	**P**	**11 44 11.7**	**+0.7**
	21nm,0.7s,baz=264,slow=2.8,SNR=15						
URZ				PcP	**PcP**	**11 46 16.4**	**-1.8**
	8.5nm,0.7s,baz=315,slow=2.9,SNR=4.0						
URZ	**Urewera**	**39.56**	**150**	P	**P**	**11 44 12.4**	**+1.4**
RUGZ	**Raukumara Rang**	**39.62**	**149**	P	**P**	**11 44 13.0**	**+1.2**
PKGZ	**Pakihiroa**	**39.77**	**149**	P	**P**	**11 44 14.8**	**+1.9**
RTZ	**Ruatahuna**	**39.77**	**150**	P	**P**	**11 44 14.3**	**+1.4**
MWZ	**Matawai**	**39.82**	**150**	P	**P**	**11 44 15.0**	**+1.7**
WMGZ	**Waiomatatini S**	**39.89**	**148**	P	**P**	**11 44 15.1**	**+1.2**
TWGZ	**Tauwhareparae**	**39.93**	**149**	P	**P**	**11 44 16.0**	**+1.7**
BKZ	**Black Stump Fm**	**39.96**	**151**	*e*P	**P**	**11 44 15.2**	**+0.7**
	24nm,1.1s						
PUZ	**Puketiti**	**40.00**	**149**	P	**P**	**11 44 15.7**	**+0.9**
TKGZ	**Te Karaka**	**40.07**	**149**	P	**P**	**11 44 16.6**	**+1.3**
SNGZ	**Shannon Statio**	**40.08**	**150**	P	**P**	**11 44 16.8**	**+1.4**
THZ	**Tophouse**	**40.55**	**157**	*e*P	**P**	**11 44 19.7**	**+0.3**
	63nm,1.3s						
BFZ	**Birch Farm**	**41.06**	**153**	*e*P	**P**	**11 44 24.5**	**+1.0**
	64nm,1.4s						
LTZ	**Lake Taylor**	**41.20**	**159**	*e*P	**P**	**11 44 26.0**	**+1.3**
KHZ	**Kahutara**	**41.36**	**157**	*e*P	**P**	**11 44 25.9**	**0.0**
	25nm,0.9s						
OXZ	**Oxford**	**41.59**	**159**	*e*P	**P**	**11 44 28.1**	**+0.3**
	17nm,0.6s						
OXZ				*e*PcP	**PcP**	**11 46 24.4**	**-0.3**
RPZ	**Rata Peaks**	**41.59**	**160**	*e*P	**P**	**11 44 28.9**	**+1.1**
	29nm,0.8s						
RPZ				*e*PcP	**PcP**	**11 46 23.8**	**-1.0**
RPZ	**Rata Peaks**	**41.59**	**160**	P	**P**	**11 44 28.4**	**+0.6**
	26nm,0.7s,baz=322,slow=2.6,SNR=14						
RPZ				PcP	**PcP**	**11 46 23.7**	**-1.0**
	7.3nm,0.7s,baz=284,slow=4.8,SNR=4.1						
LBZ	**Lake Benmore**	**41.91**	**162**	*e*P	**P**	**11 44 31.2**	**+0.8**
	15nm,0.7s						
WKZ	**Wanaka**	**41.96**	**163**	*e*P	**P**	**11 44 31.8**	**+0.9**
	26nm,1.2s						
CRLZ	**Canterbury Las**	**42.01**	**159**	*e*P	**P**	**11 44 32.0**	**+0.8**
	80nm,1.2s						
DCZ	**Deep Cove**	**42.05**	**165**	*e*P	**P**	**11 44 32.3**	**+0.8**
	21nm,0.9s						
MQZ	**McQueen's Vall**	**42.14**	**159**	*e*P	**P**	**11 44 33.3**	**+1.1**
	15nm,0.8s						
MLZ	**Mavora Lakes**	**42.21**	**164**	*e*P	**P**	**11 44 33.3**	**+0.4**
	51nm,1.0s						
MORW	**Morawa**	**42.51**	**232**	*e*P	**P**	**11 44 34.6**	**-1.0**
	9.2nm,0.8s						
ODZ	**Otahua Downs**	**42.65**	**162**	*e*P	**P**	**11 44 36.6**	**+0.2**
	51nm,1.5s						
WHZ	**Wether Hill Ro**	**42.65**	**165**	*e*P	**P**	**11 44 37.1**	**+0.6**
	21nm,0.9s						
JNU	**Nakatsue**	**43.48**	**332**	*e*P	**P**	**11 44 42.7**	**-0.6**
	29nm,0.9s						
JNU	**Nakatsue**	**43.48**	**332**	P	**P**	**11 44 42.4**	**-1.0**
	18nm,1.0s,baz=101,slow=3.0,SNR=9.1						
MJAR	**Matsushiro Arr**	**43.70**	**342**	P	**P**	**11 44 43.5**	**-1.5**
	1.4nm,1.0s,baz=172,slow=9.8,SNR=3.2						
MJAR				PcP	**PcP**	**11 46 31.6**	**-0.2**
	3.1nm,0.8s,baz=161,slow=3.1,SNR=6.0						
MAJO	**Matsushiro**	**43.70**	**342**	*e*P	**P**	**11 44 43.5**	**-1.5**
MAJO				*e*PP	**PcP**	**11 46 31.6**	**-0.2**
KSRS	**Korea Array**	**48.41**	**333**	P	**P**	**11 45 21.4**	**-0.8**
	2.8nm,0.8s,baz=150,slow=8.7,SNR=10						
KSRS				LR	LR	12 04 34.5	
	comp=Z,187nm,19.1s,baz=163,slow=34						
KSAR	**Wonju Array Be**	**48.42**	**333**	P	**P**	**11 45 21.4**	**-0.8**
NJ2	**Nanjing**	**49.30**	**321**	*e*P	**P**	**11 45 28.7**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**52.62**	**341**	P	**P**	**11 45 53.5**	**-0.3**
	3.6nm,0.8s,baz=156,slow=6.0,SNR=8.3						
MDJ	**Mudanjiang**	**53.80**	**339**	P	**P**	**11 46 00.2**	**-2.3**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,300nm,3.4s						
CN2	**Changchun**	**54.70**	**336**	*e*P	**P**	**11 46 11.0**	**+1.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	**54.88**	**307**	*e*P	**P**	**11 46 14.5**	**+3.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**57.09**	**316**	P	**P**	**11 46 25.8**	**-0.7**
XAN				pP	pP	11 46 30.2	-3.9
XAN				sP	pwP	11 46 32.8	-4.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN	**Xi'an**	**57.09**	**316**	*e*P	**P**	**11 46 26.3**	**-0.2**
	7.8nm,1.0s						
KLR	**Kul'dur**	**57.21**	**343**	P	**P**	**11 46 26.2**	**-0.7**
	6.0nm,1.0s,baz=126,slow=5.3,SNR=12						
KLR				PcP	**PcP**	**11 47 20.6**	**-0.7**
	2.0nm,0.5s,baz=182,slow=4.3,SNR=7.0						
KMI	**Kunming**	**57.48**	**304**	P	**P**	**11 46 32.3**	**+2.7**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PEA0B	**Petropavlovsk-**	**58.07**	**3**	*e*P	**P**	**11 46 34.4**	**+1.5**
	51nm,1.4s						
PETK	**Petropavlovsk-**	**58.07**	**3**	*e*P	**P**	**11 46 34.2**	**+1.3**
PETK	**Petropavlovsk-**	**58.07**	**3**	P	**P**	**11 46 32.6**	**-0.3**
	5.3nm,0.8s,baz=179,slow=6.8,SNR=6.4						
PEA1	**Petropavlovsk-**	**58.07**	**3**	*e*P	**P**	**11 46 32.6**	**-0.4**
CM31	**Chiang Mai Arr**	**58.36**	**295**	*e*P	**P**	**11 46 35.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**58.36**	**295**	P	**P**	**11 46 36.1**	**+0.5**
	4.7nm,0.9s,baz=114,slow=5.4,SNR=18						
CD2	**Chengdu**	**59.22**	**311**	P	**P**	**11 46 41.5**	**+0.1**
HHC	**Hu-ho-hao-te**	**59.50**	**324**	*e*P	**P**	**11 46 44.2**	**+1.0**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
LZH	**Lanzhou**	**61.70**	**316**	*e*P	**P**	**11 46 59.0**	**+0.5**
LZH				pP	pP	11 47 02.3	-3.8
LZH				sP	pwP	11 47 03.8	-5.0
LZH				*e*PP	**PP**	**11 49 17.2**	**+2.6**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,6.4s						
LZH				LR	LR		
	comp=N,430nm,14.7s						
LZH				LR	LR		
	comp=E,460nm,15.0s						
LZH				LR	LR		
	comp=Z,560nm,18.3s						
MA2	**Magadan**	**64.46**	**359**	*e*P	**P**	**11 47 16.0**	**0.0**
	8.9nm,0.9s						
MA2	**Magadan**	**64.46**	**359**	P	**P**	**11 47 15.7**	**-0.3**
	7.6nm,0.8s,baz=139,slow=9.5,SNR=4.5						
GTA	**Gaotai**	**66.13**	**317**	*e*P	**P**	**11 47 27.7**	**+0.2**
GTA				pP	pP	11 47 32.1	-3.1
GTA				sP	pwP	11 47 35.6	-2.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONA0	**Songino Array**	**66.76**	**328**	*e*P	**P**	**11 47 31.7**	**+0.4**
SONM	**Songino Array**	**66.76**	**328**	P	**P**	**11 47 31.7**	**+0.4**
	1.9nm,0.5s,baz=142,slow=5.9,SNR=13						
SONA1	**Songino Array**	**66.77**	**328**	*e*P	**P**	**11 47 31.9**	**+0.6**
SHL	**Shillong**	**66.80**	**300**	*e*P	**P**	**11 47 32.0**	**-0.1**
SEY	**Seymchan**	**67.80**	**360**	P	**P**	**11 47 37.2**	**-0.2**
	0.8nm,0.3s,baz=156,slow=9.5,SNR=5.1						
JIRN	**Jiri**	**72.28**	**301**	*e*P	**P**	**11 48 06.2**	**0.0**
VNDA	**Vanda**	**72.56**	**178**	*e*P	**P**	**11 48 07.3**	**+0.8**
	7.7nm,0.8s						
VNDA	**Vanda**	**72.56**	**178**	P	**P**	**11 48 07.1**	**+0.6**
	5.8nm,0.7s,baz=328,slow=6.4,SNR=17						
VNDA				LR	LR	12 18 04.3	
	comp=Z,301nm,18.6s,baz=344,slow=34						
GUN	**Gumba**	**72.61**	**301**	*e*P	**P**	**11 48 08.2**	**+0.1**
	19nm,0.8s						
PKI	**Pulchoki**	**72.92**	**301**	*e*P	**P**	**11 48 09.6**	**-0.4**
PKIN	**Phulchoki**	**72.94**	**301**	*e*P	**P**	**11 48 09.6**	**-0.3**
KKN	**Kakani**	**73.09**	**301**	*e*P	**P**	**11 48 10.7**	**-0.1**
DMN	**Daman**	**73.19**	**301**	*e*P	**P**	**11 48 11.7**	**+0.2**
	42nm,1.0s						
BILL	**Bilibino**	**73.50**	**5**	*e*P	**P**	**11 48 11.9**	**-0.2**
	9.5nm,1.2s						
KOLN	**Koldanda**	**74.52**	**300**	*e*P	**P**	**11 48 18.8**	**-0.4**
	23nm,0.9s						
DANN	**Dangsing**	**74.53**	**301**	*e*P	**P**	**11 48 18.8**	**-0.5**
PYUN	**Piuthan**	**75.13**	**301**	*e*P	**P**	**11 48 22.0**	**-0.7**
	39nm,0.9s						
ANM	**Nome**	**75.89**	**17**	*e*P	**P**	**11 48 25.9**	**-0.1**
	4.7nm,1.0s						
WMQ	**Urumqi**	**76.21**	**317**	P	**P**	**11 48 28.9**	**+0.5**
WMQ				pP	pP	11 48 35.2	-0.6
WMQ				sP	PcP	11 48 40.4	0.0
WMQ				pmax	pmax		
	comp=Z,28nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,600nm,7.5s						
WMQ				LR	LR		
	comp=N,450nm,20.7s						
WMQ				LR	LR		
	comp=E,430nm,22.7s						
WMQ				LR	LR		
	comp=Z,310nm,17.1s						
TIXI	**Tiksi**	**78.20**	**352**	*e*P	**P**	**11 48 38.5**	**-0.3**
	6.9nm,1.0s						
TIXI	**Tiksi**	**78.20**	**352**	P	**P**	**11 48 38.1**	**-0.7**
	4.2nm,0.7s,baz=174,slow=3.9,SNR=8.1						
SUA	**Susitna One**	**79.02**	**24**	*e*P	**P**	**11 48 42.1**	**-1.6**
	18nm,1.4s						
IM3	**Indian Mountai**	**80.48**	**19**	*e*P	**P**	**11 48 50.8**	**-0.6**
MK01	**Makanchi Array**	**80.78**	**319**	*e*P	**P**	**11 48 53.2**	**-0.2**
MK31	**Makanchi Array**	**80.79**	**319**	*e*P	**P**	**11 48 53.5**	**-0.1**
MK32	**Makanchi Array**	**80.79**	**319**	*e*P	**P**	**11 48 53.3**	**-0.2**
MKAR	**Makanchi Array**	**80.79**	**319**	*e*P	**P**	**11 48 53.5**	**-0.1**
	56nm,0.9s						
MKAR	**Makanchi Array**	**80.79**	**319**	P	**P**	**11 48 53.3**	**-0.2**
	8.9nm,0.9s,baz=104,slow=6.3,SNR=55						
RND	**Reindeer**	**80.80**	**23**	*e*P	**P**	**11 48 51.3**	**-2.0**
	11nm,1.2s						
MCK	**McKinley**	**80.94**	**22**	*e*P	**P**	**11 48 52.8**	**-1.1**
	19nm,1.2s						
MLY	**Manley**	**80.97**	**21**	*e*P	**P**	**11 48 53.1**	**-1.0**
	5.2nm,1.0s						
MAKZ	**Makanchi**	**81.00**	**319**	*e*P	**P**	**11 48 54.6**	**-0.1**
	15nm,0.8s						
DHY	**Denali Highway**	**81.21**	**23**	*e*P	**P**	**11 48 55.9**	**+0.3**
	11nm,1.3s						
ZAA0	**Zalesovo Array**	**81.60**	**326**	*e*P	**P**	**11 48 56.8**	**-0.8**
	12nm,0.7s						
ZALV	**Zalesovo Beam**	**81.60**	**326**	*e*P	**P**	**11 48 56.5**	**-1.1**
ZALV	**Zalesovo Beam**	**81.60**	**326**	P	**P**	**11 48 56.4**	**-1.2**
	12nm,0.6s,baz=113,slow=5.5,SNR=54						
ZAA1	**Zalesovo Array**	**81.60**	**326**	*e*P	**P**	**11 48 56.4**	**-1.2**
ILAR	**Eielson Array**	**82.24**	**22**	P	**P**	**11 48 58.2**	**-2.6**
	1.3nm,0.8s,baz=244,slow=5.5,SNR=12						
ILB	**Eielson Array**	**82.24**	**22**	*e*P	**P**	**11 48 58.0**	**-2.7**
IL1	**Eielson Array**	**82.24**	**22**	*e*P	**P**	**11 48 58.6**	**-2.1**
DOT	**Dot Lake**	**82.79**	**24**	*e*P	**P**	**11 49 03.3**	**-0.4**
	4.1nm,0.9s						
SCRK	**Sand Creek**	**82.97**	**23**	*e*P	**P**	**11 49 03.7**	**-1.0**
	10nm,1.4s						
KDJ	**Kajisay**	**83.09**	**313**	*e*P	**P**	**11 49 06.9**	**+1.0**
	13nm,1.1s						
KSH	**Kashi**	**83.42**	**311**	P	**P**	**11 49 11.3**	**+3.7**
KSH				pP	pP	11 49 15.4	-0.1
KSH				PP	**PP**	**11 52 21.0**	**+1.1**
KSH				S	**S**	**11 59 31.2**	**+3.6**
KSH				SS	**SS**	**12 05 01.3**	**+7.7**
KSH				pmax	pmax		
	comp=Z,460nm,6.1s						
KSH				LR	LR		
	comp=N,200nm,5.0s						
KSH				LR	LR		
	comp=E,210nm,6.1s						
KSH				LR	LR		
	comp=Z,300nm,6.7s						
NRN	**Naryn**	**83.80**	**312**	*e*P	**P**	**11 49 09.3**	**-0.5**
	3.3nm,1.1s						
KURK	**Kurchatov**	**84.23**	**322**	*e*P	**P**	**11 49 10.5**	**-0.8**
	20nm,1.0s						
TKM2	**Tokmak 2**	**84.41**	**314**	P	**P**	**11 49 12.7**	**0.0**
	SNR=13						
NIL	**Nilore**	**84.46**	**304**	*e*P	**P**	**11 49 12.6**	**-0.4**
	15nm,0.7s						
KZA	**Kyzart**	**84.48**	**313**	P	**P**	**11 49 14.3**	**+0.9**
	SNR=20						
KBK	**Karagaybulak**	**84.82**	**314**	P	**P**	**11 49 15.1**	**+0.3**
	SNR=5.6						
QSPA	**South Pole Qui**	**84.91**	**180**	*e*P	**P**	**11 49 14.9**	**+0.3**
	21nm,0.6s						
CHMS	**Chumysh**	**85.03**	**314**	P	**P**	**11 49 15.7**	**+0.1**
	SNR=10						
UCH	**Uchtor**	**85.05**	**313**	P	**P**	**11 49 16.9**	**+0.6**
	SNR=15						
AAK	**Ala-Archa**	**85.14**	**313**	P	**P**	**11 49 16.8**	**+0.4**
	SNR=7.0						
AAK	**Ala-Archa**	**85.14**	**313**	*e*P	**P**	**11 49 16.3**	**0.0**
	9.4nm,0.8s						
USP	**Ospenovka**	**85.27**	**314**	P	**P**	**11 49 17.0**	**+0.1**
	SNR=16						
MAW	**Mawson**	**85.50**	**203**	*e*P	**P**	**11 49 18.1**	**+0.7**
	14nm,1.3s						
MAW	**Mawson**	**85.50**	**203**	P	**P**	**11 49 17.0**	**-0.3**
	34nm,1.0s,baz=117,slow=4.5,SNR=4.9						
AML	**Almayashu**	**85.63**	**313**	P	**P**	**11 49 19.5**	**+0.4**
	SNR=27						
EKS2	**Erkin-Say**	**85.67**	**313**	P	**P**	**11 49 19.3**	**+0.3**
	SNR=13						
NRIK	**Noril'sk**	**86.34**	**341**	P	**P**	**11 49 21.0**	**-0.5**
	5.7nm,0.6s,baz=134,slow=6.7,SNR=8.4						
KK31	**Karatay Array**	**88.11**	**313**	*e*P	**P**	**11 49 30.7**	**0.0**
KKAR	**Karatay Array**	**88.11**	**313**	*e*P	**P**	**11 49 30.1**	**-0.6**
INK	**Inuvik**	**88.54**	**21**	*e*P	**P**	**11 49 32.7**	**+0.6**
	8.4nm,1.4s						
INK	**Inuvik**	**88.54**	**21**	P	**P**	**11 49 32.3**	**+0.2**
	0.5nm,0.6s,baz=282,slow=5.0,SNR=4.8						
BRVK	**Borovoye**	**89.76**	**323**	*e*P	**P**	**11 49 37.0**	**-1.2**
	11nm,0.9s						
NV01	**Mina Array Sit**	**91.91**	**52**	*e*P	**P**	**11 49 47.4**	**-1.4**
NVAR	**Mina Array Bea**	**91.91**	**52**	P	**P**	**11 49 48.2**	**-0.6**
	0.9nm,0.8s,baz=251,slow=7.4,SNR=5.8						
NVAR				LR	LR	12 24 51.7	
	comp=Z,233nm,20.2s,baz=292,slow=31						
NV11	**Mina Array Sit**	**92.03**	**52**	*e*P	**P**	**11 49 49.2**	**0.0**
	0.3nm,1.4s						
SYO	**Syowa Base**	**93.57**	**199**	⇓*e*P	**P**	**11 49 53.0**	**-2.5**
SYO	**Syowa Base**	**93.57**	**199**	⇑*e*pP	**P**	**11 49 57.4**	**+1.9**
YKB5	**Yellowknife Ar**	**95.45**	**28**	*e*P	**P**	**11 50 03.3**	**-0.9**
YKA	**Yellowknife Ar**	**95.45**	**28**	P	**P**	**11 50 03.4**	**-0.8**
	0.5nm,0.8s,baz=272,slow=4.9,SNR=8.4						
YKA				PKKPbc	**PKKPbc**	**12 06 56.2**	**-2.6**
	0.3nm,0.6s,baz=81,slow=2.8,SNR=6.3						
KLMR	**Klimovskoe**	**105.80**	**332**	*e*Pdif	**Pdif**	**11 50 48.5**	**-2.0**
KLMR				AMP		11 50 51.1	
	comp=Z,11nm,1.4s						
ARA0	**ARCESS Array S**	**107.23**	**343**	*e*PKKPbc	PKKPbc	12 06 20.4	-4.3
ARCES	**ARCESS Array B**	**107.23**	**343**	PKKPbc	PKKPbc	12 06 20.4	-4.3
	comp=Z,1.8nm,0.8s,baz=285,slow=3.5,SNR=5.4						
FIA0	**FINESS Array S**	**111.45**	**336**	*e*Pdif	**Pdif**	**11 51 13.6**	**-2.1**
FIA0				*e*PKiKP	**PKiKP**	**11 55 13.1**	**-0.6**
FINES	**FINESS Array B**	**111.45**	**336**	Pdiff	**Pdif**	**11 51 13.6**	**-2.1**
	comp=Z,1.1nm,0.9s,baz=33,slow=5.8,SNR=3.6						
FINES				PKiKP	**PKiKP**	**11 55 13.1**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=48,slow=2.1,SNR=4.0						
AKASG	**Malin Array Be**	**114.94**	**324**	PKP	**PKiKP**	**11 55 19.4**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=65,slow=2.2,SNR=9.9						
BR101	**Keskin Array S**	**115.78**	**312**	*e*PKPdf	**PKiKP**	**11 55 21.9**	**-0.9**
BRTR	**Keskin Array B**	**115.78**	**312**	PKP	**PKiKP**	**11 55 21.9**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=116,slow=3.4,SNR=3.4						
NC602	**NORSAR Array S**	**117.40**	**340**	*e*PKPdf	**PKPdf**	**11 55 24.5**	**-0.7**
BUR04	**Bucovina Ar. S**	**118.65**	**323**	*e*PKPdf	**PKiKP**	**11 55 28.5**	**+0.4**
N51A	**Ashland**	**118.92**	**46**	*e*PKPdf	**PKiKP**	**11 55 28.8**	**0.0**
PLCA	**Paso Flores**	**119.32**	**143**	*e*PKPdf	**PKiKP**	**11 55 30.2**	**+0.5**
O56A	**Blue Knob Stat**	**121.86**	**45**	*e*PKPdf	**PKPdf**	**11 55 34.4**	**0.0**
JSC	**Jenkinsville**	**121.89**	**53**	*e*PKPdf	**PKPdf**	**11 55 34.6**	**0.0**
VYHS	**Vyhne**	**121.93**	**326**	*e*PKP	**PKPdf**	**11 55 30.3**	**-4.0**
SSPA	**Standing Stone**	**122.19**	**44**	*e*PKPdf	**PKiKP**	**11 55 35.3**	**+0.2**
PVCC	**Panska Ves**	**123.00**	**330**	*e*PKPdf	**PKiKP**	**11 55 37.2**	**+0.8**
BRG	**Berggiesshubel**	**123.10**	**330**	*e*PKP	**PKPdf**	**11 55 36.5**	**+0.1**
	comp=Z,6.2nm,0.9s						
CLL	**Collm**	**123.27**	**331**	*e*PKPdf	**PKiKP**	**11 55 37.0**	**+0.1**
	comp=Z,8.0nm,0.8s						
CLL				*e*		11 55 44.0	
PRU	**Pruhonice**	**123.35**	**329**	*e*PKPdf	**PKiKP**	**11 55 37.5**	**+0.4**
ROC1	**El Roble**	**123.54**	**135**	*e*PKPdf	**PKiKP**	**11 55 39.2**	**+0.8**
CONA	**Conrad Observa**	**123.89**	**327**	*e*PKiKP	**PKPdf**	**11 55 38.2**	**0.0**
	comp=Z,2.3nm,0.7s						
KHC	**Kasperske Hory**	**124.37**	**329**	*e*PKPdf	**PKPdf**	**11 55 39.0**	**0.0**
KHC				*e*pPKP	**pPKPdf**	**11 55 46.7**	**-0.5**
KHC				*e*x	x	11 55 52.8	
GEC2	**GERESS Array S**	**124.49**	**329**	*e*PKPdf	**PKiKP**	**11 55 39.6**	**0.0**
GERES	**GERESS Array B**	**124.49**	**329**	PKP	**PKPdf**	**11 55 39.0**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=48,slow=2.0,SNR=17						
GEA0	**GERESS Array S**	**124.49**	**329**	*e*PKPdf	**PKPdf**	**11 55 39.2**	**-0.1**
GO04	**Tololo Observa**	**125.21**	**133**	*e*PKPdf	**PKPdf**	**11 55 41.5**	**0.0**
PQI	**Presque Isle**	**125.40**	**34**	*e*PKPdf	**PKiKP**	**11 55 41.8**	**+0.5**
LCO	**Las Campanas**	**125.89**	**131**	*e*PKPdf	**PKiKP**	**11 55 43.2**	**0.0**
BATG	**Bathurst New B**	**126.10**	**32**	*e*PKPdf	**PKiKP**	**11 55 42.6**	**-0.1**
ABTA	**Abfaltersbach**	**126.42**	**327**	*e*PKiKP	**PKiKP**	**11 55 43.4**	**-0.1**
	comp=Z,2.5nm,0.8s						
WATA	**Walderalm**	**126.55**	**328**	*e*PKiKP	**PKPdf**	**11 55 42.6**	**-0.8**
	comp=Z,2.8nm,0.8s						
WTTA	**Wattenberg**	**126.56**	**328**	*e*pPKPdf	**PKiKP**	**11 55 44.5**	**+0.6**
	comp=Z,7.0nm,1.0s						
MOTA	**Moosalm**	**126.79**	**329**	*e*PKiKP	**PKPdf**	**11 55 43.9**	**+0.1**
	comp=Z,2.3nm,0.7s						
SQTA	**Sankt Quirin**	**126.81**	**328**	*e*pPKPdf	**PKiKP**	**11 55 45.0**	**+0.7**
	comp=Z,12nm,1.8s						
FETA	**Feichten**	**127.19**	**328**	*e*PKiKP	**PKPdf**	**11 55 44.8**	**+0.2**
	comp=Z,3.6nm,0.9s						
LPAZ	**La Paz**	**133.93**	**118**	PKP	**PKPdf**	**11 55 59.4**	**+0.6**

	comp=Z,3.3nm,0.7s,baz=257,slow=2.4,SNR=12						
CPUP	Villa Florida	136.99	138	PKP	PKPdf	11 56 04.2	+0.8
	comp=Z,4.2nm,0.9s,baz=277,slow=3.2,SNR=6.5						
SVB	Belmont	145.04	74	ePKPbc	PKPbc	11 56 17.6	0.0
SPB	Sao Paulo	145.12	146	ePKPbc	PKPab	11 56 17.7	+0.1
MDT	Midelt	145.49	326	PKPbc	PKPbc	11 56 18.8	+0.1
	comp=Z,6.8nm,0.6s,baz=68,slow=2.9,SNR=13						
PTGA	Pitinga	146.36	99	ePKPdf	PKPdf	11 56 20.4	-0.1
PTGA	Pitinga	146.36	99	PKPbc	PKPdf	11 56 20.2	-0.4
	comp=Z,9.0nm,0.8s,baz=276,slow=4.4,SNR=13						
BDFB	Brasilia	150.59	135	PKP	PKPdf	11 56 27.1	-0.4
	comp=Z,6.6nm,0.8s,baz=210,slow=3.7,SNR=9.4						
BDFB				PKPbc	PKPbc	11 56 33.0	+0.1
	comp=Z,24nm,0.6s,baz=256,slow=1.7,SNR=36						
TOA0	Torodi Ar. Sit	150.78	288	ePKPdf	PKPdf	11 56 27.6	-0.1
TOA0				ePKPbc	PKPbc	11 56 31.1	-2.2
TORD	Torodi Ar. Bea	150.78	288	PKPbc	PKPbc	11 56 30.9	-2.4
	comp=Z,11nm,0.9s,baz=55,slow=2.9,SNR=78						
DBIC	Dimbokro	158.13	275	ePKPab	PKPab	11 57 10.6	-1.1
DBIC	Dimbokro	158.13	275	PKPab	PKPab	11 57 10.3	-1.4
	comp=Z,3.5nm,0.7s,baz=94,slow=5.6,SNR=4.3						

DJA 03 11:37:11.8±0.8**, 9°S**±6°×**11°0E**±°**, h14**^{km}±7^{km}**, M3.8**/12, **MLv3.8**/12**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	1.32	29	P	Pn	11 37 33.9	-2.0
UGM				S	Sb	11 37 51.1	-2.1
PCJI	Pacitan	1.56	56	P	Pn	11 37 37.5	-1.6
WOJI	Wonogiri, Jawa	1.61	40	P	Pn	11 37 38.4	-1.4
WOJI				S	Sn	11 37 59.0	-1.4
CMJI	Cimerak	1.90	312	P	Pn	11 37 42.4	-1.4
CMJI				S	Sn	11 38 06.7	-0.9
KPJI	Karang Pucung	1.96	332	P	Pn	11 37 45.3	+0.7
SMRI	Semarang	2.09	16	P	Pn	11 37 47.3	+0.9
PWJI	Pagerwojo	2.18	62	P	Pn	11 37 46.2	-1.4
PWJI				S	Sn	11 38 12.9	-1.5
NGJI	Ngawi	2.31	43	P	Pb	11 37 52.2	-1.1
CISI	Cisompet, Garu	2.53	306	P	Pn	11 37 51.8	-0.7

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*SJA **03** 11:38:30.5±0.7, 27°.97S×66°.63W, h182^{km}±4^{km}, ML3.5, MW3.6*

*ISCJB **03** 11:38:31.2±0.4, 27°.99S±0°.03×66°.73W±0°.04, h172^{km}±5^{km}, mb3.9/2, Error ellipse: s-maj=5.3km s-min=4.7km az=176.8*

*IDC **03** 11:38:31.8±2.6, 27°.92S×66°.65W, h158^{km}±23^{km}, mb3.7/2, mb1 3.6/5, mb1mx3.3/30, mbtmp4.0/5, Error ellipse: s-maj=32.0km s-min=20.6km az=57.0*

*GUC **03** 11:38:32.9±0.6, 28°.05S×66°.81W, h160^{km}±8^{km}, ML3.5*

ISC 03 11:38:32.0±0.8**, 27°.98S**±0°.04×**66°.72W**±0°.04**, h168**^{km}±7^{km}**, n31, σ1^{s}.07**/49**, 3C-5D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	Choya	0.93	120	iP	Pn	11 38 58.3	+0.2
CYA				IAML		11 38 59.3	
	comp=Z,463nm,0.4s						
CYA				iS	Sn	11 39 18.2	+0.1
CYA	Choya	0.93	120⇓	iP	Pn	11 38 58.8	+0.8
CYA				iS	Sn	11 39 17.5	-0.6
CYA				IAML		11 39 19.0	
	comp=N,1µm,0.8s						
ACLC	CERRO LA CRUZ	1.45	188	iP	Pn	11 39 03.2	+0.5
ACLC				iS	Sn	11 39 27.0	+0.5
AHML	Horco Molle	1.72	46	iP	Pn	11 39 04.8	-0.5
AHML				iS	Sn	11 39 29.7	-1.2
AHML				IAML		11 39 30.7	
	comp=Z,201nm,0.4s						
AHML	Horco Molle	1.72	46⇑	iP	Pn	11 39 05.6	+0.4
AHML				iS	Sn	11 39 29.3	-1.6
AHML				IAML		11 39 31.0	
	comp=E,274nm,0.4s						
AGUA	GUANDACOL	2.16	226	iP	Pn	11 39 11.3	+1.1
AGUA				iS	Sn	11 39 41.1	+1.4
APLL	PUNTA DE LOS L	2.41	176	iP	Pn	11 39 13.6	+0.6
APLL				IAML		11 39 14.0	
	comp=Z,457nm,0.2s						
APLL				iS	Sn	11 39 44.8	-0.1
GO03	Copiap	3.13	276	eP	Pn	11 39 22.1	+0.3
GO03				iS	Sn	11 39 58.8	-1.7
SLA	San Lorenzo	3.43	19	eP	Pn	11 39 27.4	+1.7
VACH	Vallenar	3.61	260⇓	iP	Pn	11 39 28.0	+0.3
VACH				iS	Sn	11 40 09.6	-1.5
LCO	Las Campanas	3.65	253⇑	iP	Pn	11 39 28.8	+0.4
LCO				iS	Sn	11 40 10.9	-1.6
RTLL	Cerro Villicun	3.67	204	iP	Pn	11 39 28.8	+0.3
RTLL				iS	Sn	11 40 11.8	-0.9
RTLL				IAML		11 40 14.7	
	comp=Z,228nm,0.7s						
RTLL	Cerro Villicun	3.67	204⇓	iP	Pn	11 39 28.8	+0.3
RTLL				iS	Sn	11 40 11.8	-0.9
GO02	Mina Guanaco	3.80	317⇑	iP	Pn	11 39 32.0	+1.5
GO02				iS	Sn	11 40 16.8	+0.6
TCA	Tanti	3.82	152	iP	Pn	11 39 30.1	-0.5
TCA				IAML		11 39 31.4	
	comp=Z,2.7nm,0.4s						
TCA				iS	Sn	11 40 13.7	-2.5
CRCH	Chaqaral	3.84	294	eP	Pn	11 39 32.2	+1.6
CRCH				iS	Sn	11 40 15.2	-1.1
RTCV	Cerro Valdivia	4.18	202	iP	Pn	11 39 35.1	+0.1
GO04	Tololo Observa	4.18	238⇓	iP	Pn	11 39 35.4	+0.1
GO04				iS	Sn	11 40 22.6	-2.1
RTLS	Leoncito	4.41	210	iP	Pn	11 39 38.9	+0.6
RTLS				iS	Sn	11 40 29.4	-0.7
RTLS				IAML		11 40 34.0	
	comp=Z,67nm,0.5s						
PB14	IPOC Station P	4.70	314	eP	Pn	11 39 43.0	+0.9
CMCH	Combarbala	4.90	228⇓	iP	Pn	11 39 44.0	-0.4
ARCO	CERRO ARCO	5.21	201	iP	Pn	11 39 48.5	-0.1
ARCO				IAML		11 40 53.0	
	comp=Z,51nm,0.3s						
LVC	Limon Verde	5.70	339	P	Pn	11 39 56.1	+0.8
	comp=Z,4.3nm,0.3s,baz=158,slow=9.3,SNR=67						
LVC				S	Sn	11 40 58.3	-2.3
	comp=Z,22nm,0.3s,baz=316,slow=15,SNR=47						
CPUP	Villa Florida	8.53	81	P	Pn	11 40 31.6	-0.7
	comp=Z,0.2nm,0.3s,baz=252,slow=14,SNR=2.9						
LPAZ	La Paz	11.71	353	P	Pn	11 41 13.3	-1.3
	comp=Z,0.7nm,0.3s,baz=148,slow=6.9,SNR=9.9						
SNAA	Sanae	55.53	160	P	P	11 47 50.2	+0.9
	comp=Z,1.7nm,0.5s,baz=276,slow=8.7,SNR=9.6						
TORD	Torodi Ar. Bea	77.80	68	P	P	11 50 10.7	-0.3
	comp=Z,1.2nm,0.7s,baz=255,slow=4.7,SNR=8.2						
ASAR	Alice Springs	124.93	203	PKP	PKiKP	11 57 13.4	+0.4
	comp=Z,0.5nm,0.4s,baz=134,slow=1.7,SNR=20						
WRA	Warramunga Arr	128.18	205	PKP	PKiKP	11 57 19.6	0.0
	comp=Z,0.5nm,0.3s,baz=153,slow=1.8,SNR=28						
ZALV	Zalesovo Beam	146.73	31	PKPbc	PKPbc	11 57 54.1	+0.5
	comp=Z,1.6nm,0.3s,baz=304,slow=3.5,SNR=8.9						
MKAR	Makanchi Array	149.32	44	PKPbc	PKiKP	11 58 02.0	+0.2
	comp=Z,2.1nm,0.8s,baz=290,slow=2.7,SNR=14						

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*IDC **03** 11:52:52.7±2.8, 8°.44S×110°.22E, h0^{km}, mb3.2/3, mb1 3.5/4, mb1mx3.3/53, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=143.3km s-min=25.3km az=48.0*

*DJA **03** 11:52:54.7±0.9, 9°S±7°×11°0E±°, h10^{km}, M3.7/11, MLv3.7/11*

*ISCJB **03** 11:52:56.0±0.9, 9°.14S±0°.08×109°.86E±0°.05, h33^{km}, mb3.2/3, Error ellipse: s-maj=11.7km s-min=6.8km az=20.7*

ISC 03 11:52:56.8±1.2**, 9°.1S**±0°.1×**109°.84E**±0°.06**, h35**^{km}**, n13, σ1^{s}.59**/15**, mb3.2**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	1.38	29	P	Pn	11 53 18.3	-1.4
PCJI	Pacitan	1.61	55	P	Pn	11 53 22.0	-0.8
WOJI	Wonogiri, Jawa	1.67	40	P	Pn	11 53 23.1	-0.5
CMJI	Cimerak	1.92	314	P	Pn	11 53 26.3	-0.7
CMJI				S	Sn	11 53 50.2	+0.2
KPJI	Karang Pucung	2.00	333	P	Pn	11 53 29.1	+1.0
SMRI	Semarang	2.15	16	P	Pn	11 53 31.3	+1.1
PWJI	Pagerwojo	2.23	61	P	Pn	11 53 30.2	-1.1
PWJI				S	Sn	11 53 57.8	+0.2
NGJI	Ngawi	2.37	43	P	Pn	11 53 36.7	+3.5
CISI	Cisompet, Garu	2.54	308	P	Pn	11 53 36.4	+0.7
FITZ	Fitzroy Crossi	17.74	122	P	P	11 57 02.0	+0.3
	0.1nm,0.3s,baz=300,slow=14,SNR=3.3						
FITZ				S	Sn	12 00 05.4	-13
	0.1nm,0.3s,baz=330,slow=14,SNR=3.2						
WRA	Warramunga Arr	26.00	117	P	P	11 58 26.9	+0.2
	0.4nm,0.6s,baz=291,slow=11,SNR=9.0						
ASAR	Alice Springs	27.17	125	P	P	11 58 39.7	+2.5
	0.2nm,0.5s,baz=305,slow=8.8,SNR=5.3						
MKAR	Makanchi Array	60.86	339	P	P	12 03 03.5	-2.2
	0.2nm,0.4s,baz=138,slow=8.1,SNR=6.7						

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*IDC **03** 12:00:57.8±0.8, 43°.21N×18°.66E, h0^{km}, mb3.5/5, mb1 3.7/14, mb1mx3.5/45, mbtmp3.6/14, ML3.3/8, Error ellipse: s-maj=15.3km s-min=12.8km az=57.0*

*TIR **03** 12:00:58.0, 43°.13N×18°.54E, h3^{km}, Md4.0/3*

*LDG **03** 12:00:58.8±0.1, 43°.27N×18°.71E, h10^{km}, Ml4.2/10, Error ellipse: s-maj=2.2km s-min=1.5km az=33.0*

*SAR **03** 12:00:59.6±0.2, 43°.22N×18°.67E, h7^{km}±3^{km}, ML4.1/1*

*NEIC **03** 12:00:59.9±0.0, 43°.18N×18°.73E, h13^{km}, mb3.7/1, ML4.0(PDG), After PDG.*

*PDG **03** 12:00:59.9±0.3, 43°.18N×18°.73E, h13^{km}, MD4.0/8, ML4.0/7, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*

*BEO **03** 12:00:59.8±0.3, 43°.20N×18°.72E, h2^{km}±1^{km}, ML3.5/13*

*PRU **03** 12:01:01.2±0.0, 43°.24N×18°.72E, h19^{km}, M3.7*

ISC 03 12:00:59.3±0.9**, 43°.24N**±0°.01×**18°.66E**±0°.02**, h16**^{km}±6^{km}**, n227, σ2^{s}.27**/322**, mb3.6**/6**, 29C-17D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKY	Niksic	0.49	149⇑	iPg	Pg	12 01 08.0	-1.1
NKME	Niksic	0.52	155⇑	iPg	Pg	12 01 08.5	-1.1
NKME				iSg	Sg	12 01 15.7	-0.8
PLE	Pljevlja	0.54	80⇓	iPg	Pg	12 01 09.6	-0.5
PLE				iSg	Sg	12 01 17.1	-0.3
TREB	Trebinje	0.56	204	ePg	Pg	12 01 09.8	-0.7
TREB				eSg	Sb	12 01 18.7	+0.1
TREB	Trebinje	0.56	204⇓	iPg	Pg	12 01 09.4	-1.1
TREB				eSg	Sb	12 01 18.5	-0.1
KOME	Kolasin	0.74	121⇑	iPg	Pg	12 01 12.4	-1.3
KOME				iSg	Sg	12 01 22.8	-0.7
STON	Ston	0.79	243	ePg	Pg	12 01 13.1	-1.6
STON				Sg	Sb	12 01 25.4	+0.3
HCY	Herceg Novi	0.80	189⇑	iPg	Pg	12 01 14.2	-0.6
HCY				iSg	Sb	12 01 26.1	+0.8
HCY	Herceg Novi	0.80	189	ePg	Pg	12 01 13.9	-0.9
HCY				eSg	Sb	12 01 25.6	+0.3
BBLS	Lazići	0.83	41	ePg	Pb	12 01 15.0	-0.5
BBLS				eSg	Sb	12 01 26.3	-0.2
BBLS	Lazići	0.83	41⇓	iPg	Pb	12 01 15.0	-0.5
BBLS				eSg	Sb	12 01 26.6	+0.1
HAPS	Han Pijesak,BI	0.88	14	ePg	Pg	12 01 15.5	-0.9
HAPS				eSg	Sn	12 01 29.6	0.0
HAPS	Han Pijesak,BI	0.88	14⇓	iPg	Pg	12 01 14.8	-1.6
HAPS				eSg	Sb	12 01 28.2	+0.4
PDG	Podgorica	0.92	151	ePg	Pg	12 01 15.0	-2.0
PDG				eSg	Sg	12 01 27.6	-1.5
PDG	Podgorica	0.92	151⇑	iP	Pg	12 01 15.1	-2.0
PDG				S	Sb	12 01 28.9	+0.2
PDG	Podgorica	0.92	151⇑	iPg	Pg	12 01 15.1	-2.0
PDG				eSg	Sg	12 01 28.8	-0.3
TTG	Podgorica	0.92	151⇑	iPg	Pg	12 01 15.1	-2.0
TTG				iSg	Sg	12 01 28.4	-0.7
TTG	Podgorica	0.92	151	ePg	Pg	12 01 15.1	-2.0
TTG				eSg	Sb	12 01 29.1	+0.4
BUM	Brajici-Budva	0.95	169⇓	iPg	Pg	12 01 16.3	-1.4
BUM				iSg	Sb	12 01 30.8	+1.0
IVA	Berane	0.98	111⇑	iPg	Pg	12 01 17.3	-0.9
IVA				iSg	Sb	12 01 30.8	+0.2
DRME	Dracevica, Mon	1.12	159⇓	iPg	Pb	12 01 19.0	-1.2
DRME				iSg	Sn	12 01 36.1	+0.8
DRME	Dracevica, Mon	1.12	159	ePg	Pb	12 01 19.3	-0.9
DRME				eSg	Sb	12 01 34.7	+0.2
IVAS	Ivanjica	1.14	72	ePg	Pb	12 01 19.7	-1.0
IVAS				eSg	Sg	12 01 35.6	-0.7
PVY	Plav	1.15	123⇓	iPg	Pb	12 01 20.4	-0.5
PVY				iSg	Sn	12 01 37.2	+0.8
DIVS	Divibare	1.30	48	ePg	Pb	12 01 23.0	-0.4
DIVS				eSg	Sg	12 01 40.7	-0.6
DIVS	Divibare	1.30	48	ePn	Pb	12 01 23.1	-0.3
DIVS				eSg	Sg	12 01 44.5	+3.2
DIVS	Divibare	1.30	48⇓	iPg	Pb	12 01 22.9	-0.4
DIVS				eSg	Sg	12 01 41.4	+0.1
ULC	Ulcinj	1.34	161⇓	iPg	Pb	12 01 23.9	-0.2
ULC				iSg	Sg	12 01 43.4	+0.7
BCI	Bajram Curri	1.35	129	iPN	Pb	12 01 24.0	-0.3
BCI				iSN	Sg	12 01 45.6	+2.6
TEKS	Tekeris	1.46	25	ePg	Pg	12 01 27.3	-0.1
TEKS				eSg	Sg	12 01 46.0	-0.4
TEKS	Tekeris	1.46	25	ePg	Pb	12 01 25.9	-0.2
TEKS				eSg	Sg	12 01 46.3	-0.1
DOB	Doboj	1.55	345	ePn	Pb	12 01 27.3	-0.3
TRUS	Trudelj	1.61	51	ePg	Pn	12 01 27.4	+0.3
TRUS				eSg	Sg	12 01 50.4	-0.8
GRUS	Gruza	1.63	66	ePg	Pn	12 01 27.8	+0.4
GRUS				eSg	Sg	12 01 51.5	-0.4
SELS	Selova	1.80	90	ePg	Pn	12 01 30.3	+0.6
SELS				eSg	Sg	12 01 55.7	-1.6
BLY	Banja Luka	1.85	325	ePn	Pb	12 01 32.0	-0.7
BLY				eSn	Sg	12 01 59.1	+0.3
BLY	Banja Luka	1.85	325	ePn	Pb	12 01 32.0	-0.7
BLY	Banja Luka	1.85	325⇑	iP	Pb	12 01 32.0	-0.7
BLY	Banja Luka	1.85	325⇑	iPn	Pb	12 01 32.0	-0.7
BLY				eSn	Sb	12 01 55.5	-0.1
PHP	Peshkopia	2.04	139	P	Pg	12 01 37.0	-1.4
PHP	Peshkopia	2.04	139	iPN	Pg	12 01 37.2	-1.2
PHP				iSN	Sg	12 02 05.9	+1.1
BEO	Beograd	2.05	39	ePn	Pb	12 01 35.7	-0.4
BEO				eSn	Sb	12 02 01.5	+0.2
TIR	Tirane	2.09	154	ePn	Pb	12 01 36.0	-0.8
TIR				eSn	Sn	12 02 01.0	+1.7
TIR	Tirane	2.09	154	ePn	Pb	12 01 36.9	+0.1
TIR	Tirane	2.09	154	P	Pb	12 01 37.1	+0.3
TIR	Tirane	2.09	154	iPN	Pb	12 01 37.2	+0.4
TIR				iSN	Sg	12 02 06.9	+0.4
FRGS	Fruska Gora	2.09	23	ePn	Pb	12 01 36.7	-0.2
FRGS				eSn	Sb	12 02 02.8	+0.1
FRGS	Fruska Gora	2.09	23	ePn	Pn	12 01 34.8	+1.0
FRGS				eSn	Sb	12 02 01.7	-1.0
SVIS	Svilajnac	2.12	60	ePn	Pb	12 01 35.8	-1.6
BOVS	Bovan	2.26	79	ePg	Pb	12 01 39.0	-0.7
BOVS				eSg	Sg	12 02 10.5	-1.4
BARS	Barje	2.35	99	ePn	Pn	12 01 38.5	+1.2
BARS	Barje	2.35	99	ePn	Pb	12 01 41.9	+0.6
BARS				eSn	Sn	12 02 07.7	+1.8
BARS				eSn	Sg	12 02 13.3	-1.7
SKO	Skopje	2.41	121	ePg	Pb	12 01 41.4	-0.9
SKO				eSg	Sb	12 02 14.1	+2.3
SKO	Skopje	2.41	121	P	Pn	12 01 39.7	+1.6
SKO	Skopje	2.41	121	iPn	Pn	12 01 39.8	+1.6
UDBI	Udbina	2.46	303	iPn	Pb	12 01 42.8	-0.4
UDBI				Sn	Sb	12 02 14.5	+1.3
KUBS	Kucevo	2.48	61	ePn	Pb	12 01 41.8	-1.7
BAI	Bari	2.50	212⇑	iPn	Pn	12 01 40.1	+0.8
BAI				Sn	Sn	12 02 11.9	+2.4
FASA	Fasano	2.60	202	ePn	Pn	12 01 41.0	+0.3
ZAGS	Zajecar	2.67	76	ePn	Pn	12 01 42.4	+0.8
ZAGS				eSn	Sb	12 02 16.6	-2.5
KRUS	Krusevo	2.68	133	iPn	Pb	12 01 45.9	-1.0
KRUS				iSn	Sb	12 02 20.8	+1.2
MDVR	Moldovita	2.69	54⇑	iP	Pn	12 01 42.4	+0.4
MDVR	Moldovita	2.69	54	S	Sn	12 02 16.7	+2.4
CGL1	Ceglie Messapi	2.72	199	ePn	Pn	12 01 43.5	+1.1
SG1	Sgolgore (BA)	2.81	212⇓	iPn	Pn	12 01 44.3	+0.7
SG1				Sn	Sn	12 02 18.5	+1.4
MASS	Massafra	2.83	204	ePn	Pn	12 01 46.3	+2.4
ZAPS	Zavoj	2.91	88	ePn	Pn	12 01 46.5	+1.6
MATE	Matera	2.96	210⇑	iP	Pn	12 01 46.9	+1.2
MATE	Matera	2.96	210	S	Sn	12 02 22.7	+1.8
BIA	Bitola	2.97	137	P	Pb	12 01 50.2	-1.7
BIA	Bitola	2.97	137	iPn	Pb	12 01 50.1	-1.7
MORH	Mrgy, Hungar	2.98	360	ePn	Pn	12 01 46.9	+1.0
MORH				eSn	Sn	12 02 23.4	+2.1
NVLJ	Novalja	3.04	297	iPn	Pb	12 01 51.0	-2.0
TIM	Timisoara	3.10	35⇑	iP	Pn	12 01 48.7	+1.1
HERR	Herculane	3.17	57⇑	iP	Pn	12 01 49.1	+0.6
BZS	Buzias	3.19	41	ePn	Pn	12 01 48.4	-0.4
BZS	Buzias	3.19	41⇑	iP	Pn	12 01 48.8	0.0
OZLJ	Ozalj	3.30	317	ePn	Pn	12 01 52.0	+1.7
BOJS	Bojanci	3.33	314	iPn	Pn	12 01 52.5	+1.7
NEST	Nestorio	3.34	147	P	Pn	12 01 54.4	+3.5
VTS	Vitosha	3.42	99	ePn	Pn	12 01 53.1	+1.0
VTS				eSn	Sn	12 02 33.4	+1.1
VTS	Vitosha	3.42	99	ePn	Pn	12 01 52.9	+0.9
VTS				eSn	Sn	12 02 35.4	+3.1
VTS	Vitosha	3.42	99⇑	iP	Pn	12 01 53.3	+1.2
VTS	Vitosha	3.42	99	P	Pn	12 01 53.2	+1.2
CRES	Cresnjev	3.46	320⇑	iPn	Pn	12 01 54.2	+1.7
CRES				eSn	Sn	12 02 34.9	+1.9
VAY	Valandovo	3.48	122	ePn	Pn	12 01 54.0	+1.3
VAY	Valandovo	3.48	122	P	Pn	12 01 56.1	+3.4
VAY	Valandovo	3.48	122	iPn	Pn	12 01 56.0	+3.2
SRN	Sarande	3.50	163	P	Pn	12 01 54.9	+1.9
BEHE	Becsehely	3.50	338⇑	iPn	Pn	12 01 54.5	+1.5
BEHE				eSn	Sn	12 02 36.1	+2.0
BEHE	Becsehely	3.50	338	ePn	Pn	12 01 53.1	0.0
BEHE				eSg	Pg	12 02 06.0	-0.3
BEHE				Sn	Sn	12 02 38.1	+3.9
SRE	Strehaia	3.58	65⇓	iP	Pn	12 01 55.6	+1.4
GRG	Griva	3.60	128	P	Pn	12 01 57.8	+3.4
KEK	Kerkira	3.62	166	P	Pn	12 01 56.4	+1.7
GZR	Gura Zlata	3.66	52⇑	iP	Pn	12 01 55.7	+0.4
SIRR	Siria	3.71	34⇓	iP	Pn	12 01 56.4	+0.4
SIRR	Siria	3.71	34	S	Sn	12 02 38.2	-1.2
KZN	Kozani	3.74	140	P	Pn	12 01 59.7	+3.3
VISS	Visnje	3.75	315	iPn	Pn	12 01 58.6	+2.1
KNT	Kendrikon	3.77	122	P	Pn	12 02 00.3	+3.5
IGT	Igoumenitsa	3.91	161	P	Pn	12 02 00.6	+1.9
CEY	Cerknica	3.93	311⇑	iPn	Pn	12 02 00.3	+1.4
CEY				eSn	Sn	12 02 46.1	+1.4
JAN	Janina	3.94	154	P	Pn	12 02 02.0	+2.9
AQU	L'Aquila	3.96	259	ePn	Pn	12 02 02.5	+3.0
AQU	L'Aquila	3.96	259	ePn	Pn	12 02 01.5	+2.0
AQU				eSn	Sn	12 02 46.7	+1.0
DEV	Deva	4.03	47⇑	iP	Pn	12 02 01.2	+0.9
DEV	Deva	4.03	47	S	Sn	12 02 49.4	+2.3
LJU	Ljubljana	4.07	315⇑	iPn	Pn	12 02 02.6	+1.7
LJU				eSn	Sn	12 02 49.2	+1.0
THE	Thessaloniki	4.13	128	P	Pn	12 02 05.5	+3.8
JAVS	Javornik	4.22	311	iPn	Pn	12 02 04.8	+1.7
PERS	Pernice	4.23	325	iPn	Pn	12 02 04.5	+1.4
SRS	Serrai	4.24	118	P	Pn	12 02 05.3	+2.1
VLAD	Vladila	4.24	78⇑	iP	Pn	12 02 04.4	+1.2
LIT	Litokhoron	4.25	136	ePn	Pn	12 02 06.1	+2.8
LIT	Litokhoron	4.25	136	P	Pn	12 02 06.2	+2.8
BUD	Budapest	4.26	3	ePn	Pn	12 02 03.1	-0.4
BUD				Sn	Sn	12 02 55.1	+2.3
BUD				eSg	Sg	12 03 17.1	+1.2
LOT	Lotru	4.28	57⇑	iP	Pn	12 02 05.9	+2.0
NVR	Nevrokopi	4.30	114	P	Pn	12 02 05.5	+1.5
SOKA	Soboth	4.30	325	ePn	Pn	12 02 05.4	+1.4
	57nm,0.4s,SNR=90						
SOKA				Pg	Pg	12 02 20.8	-0.7
	54nm,0.8s						
TIP	Timpagrande	4.30	200	ePn	Pn	12 02 05.0	+0.9
TIP	Timpagrande	4.30	200⇑	iP	Pn	12 02 05.3	+1.2
OBKA	Obir	4.39	320	ePn	Pn	12 02 07.0	+1.6
	9.6nm,0.4s,SNR=7.1						
OBKA				Pg	Pg	12 02 21.2	-2.1
	83nm,0.8s						
THL	Klokotos Trika	4.45	144	P	Pn	12 02 08.8	+2.7
DRGR		4.57	38⇓	iP	Pn	12 02 09.0	+1.1
PLG	Polygyros	4.58	127	P	Pn	12 02 11.8	+3.9
ARSA	Arzberg	4.58	332	iPn	Pn	12 02 09.3	+1.4
	73nm,0.4s,SNR=81						
ARSA				eSn	Sn	12 03 00.6	-0.3
	39nm,0.5s						
SOP	Sopron	4.69	342	ePn	Pn	12 02 10.0	+0.7
SOP				Sn	Sn	12 03 01.0	-2.3
LTVH	Ltavrtes, Hu	4.74	28	ePn	Pb	12 02 23.1	+1.1
LTVH				Sn	Sn	12 03 02.0	-2.6
PSZ	Piszkesteto	4.76	10	ePn	Pn	12 02 10.5	+0.1
MYKA	Terra Mystica	4.92	315	ePn	Pn	12 02 15.4	+2.8
	3.4nm,0.3s						
MYKA				Pg	Pg	12 02 32.6	-0.8
	SNR=5.7						
EVR	Evrytania	4.93	150	P	Pn	12 02 16.5	+3.7
CJR	Cluj-Napoca	4.94	44⇓	iP	Pn	12 02 13.6	+0.7
AGG	Agios Georgios	5.04	145	ePn	Pn	12 02 16.6	+2.3
AGG				eSn	Sn	12 03 17.4	+5.2
AGG	Agios Georgios	5.04	145	P	Pn	12 02 16.7	+2.4
CONA	Conrad Observa	5.09	338	ePn	Pn	12 02 16.1	+1.2
	12nm,0.5s						
MODS	Modra-Piesok	5.23	350	ePN	Pn	12 02 17.6	+0.8
MODS				eSN	Sn	12 03 14.5	-2.3
MODS				eLG	Lg	12 03 17.6	
ANX	Ano Chora	5.25	151	P	Pn	12 02 20.5	+3.2
VYHS	Vyhne	5.26	1	ePN	Pn	12 02 18.0	+0.7
VYHS				eSN	Sn	12 03 17.6	0.0
VYHS				eLG	Lg	12 03 21.0	
KOLL	Kolacno	5.35	358	ePN	Pn	12 02 18.0	-0.4
KOLL				eSN	Sn	12 03 18.0	-1.6
KBA	Koelnbreinsper	5.37	318	ePn	Pn	12 02 21.0	+2.0
	5.9nm,0.3s,SNR=12						
DOPR	Dopca	5.53	58⇑	iP	Pn	12 02 22.4	+1.5
MOA	Molln	5.55	328	ePn	Pn	12 02 23.5	+2.3
	12nm,0.4s,SNR=17						
MOA				eSn	Sn	12 03 25.5	+0.9
	38nm,0.7s						
ARCR	ARCALIA	5.57	44⇓	iP	Pn	12 02 22.3	+0.8
ABTA	Abfaltersbach	5.59	311	ePn	Pn	12 02 23.8	+1.9
	0.6nm,0.2s,SNR=8.5						
ABTA				Pg	Pg	12 02 40.8	-5.6
	22nm,0.6s						
MLR	Muntele Rosu	5.69	64	ePn	Pn	12 02 25.7	+2.4
MLR	Muntele Rosu	5.69	64⇑	iP	Pn	12 02 24.4	+1.1
MLR	Muntele Rosu	5.69	64	Pn	Pn	12 02 25.3	+2.0
	0.2nm,0.3s,baz=189,slow=19,SNR=3.2						
MLR				Sn	Sn	12 03 29.5	+1.2
	0.2nm,0.3s,baz=308,slow=19,SNR=2.4						
OZUR		5.83	58⇑	iP	Pn	12 02 26.5	+1.4
ALN	Alexandroupoli	5.97	111	ePn	Pn	12 02 28.7	+1.7
ALN	Alexandroupoli	5.97	111	P	Pn	12 02 28.7	+1.7
KRUC	Moravsky	6.04	346	ePN	Pn	12 02 28.2	+0.3
KRUC				eSN	Sn	12 03 33.5	-3.1
VLC	Villacollemand	6.07	282	ePn	Pn	12 02 31.0	+2.7
VLC				eSn	Sn	12 03 41.4	+4.0
VRAC	Vranov	6.24	347	ePN	Pn	12 02 30.9	+0.2
VRAC				eSN	Sn	12 03 38.9	-2.8
VRAC	Vranov	6.24	347	Pn	Pn	12 02 31.1	+0.4
	0.6nm,0.3s,baz=166,slow=12,SNR=6.1						
VRAC				Sn	Sn	12 03 37.6	-4.1
	0.7nm,0.3s,baz=166,slow=16,SNR=1.9						
NIE	Niedzica	6.29	10	ePn	Pn	12 02 34.4	+3.0
BUR04	Bucovina Ar. S	6.36	44	ePn	Pn	12 02 33.7	+1.2
BURAR	Bucovina Array	6.36	44⇓	iP	Pn	12 02 34.3	+1.8
BUR08	Bucovina Ar. S	6.37	44	ePn	Pn	12 02 34.4	+1.8
WTTA	Wattenberg	6.38	312	ePn	Pn	12 02 35.4	+2.6
	2.6nm,0.3s						
WATA	Walderalm	6.46	312	ePn	Pn	12 02 36.7	+2.8
	7.2nm,0.4s,SNR=15						
ITM	Ithomi	6.54	156	ePn	Pn	12 02 36.6	+1.7
GEA0	GERESS Array S	6.58	330	ePn	Pn	12 02 37.2	+1.8
GEC2	GERESS Array S	6.58	330	ePn	Pn	12 02 37.5	+2.0
GERES	GERESS Array B	6.58	330	Pn	Pn	12 02 36.9	+1.4
	2.6nm,0.3s,baz=158,slow=14,SNR=49						
GERES				Sn	Sn	12 03 46.4	-3.8
	2.0nm,0.3s,baz=142,slow=21,SNR=3.7						
MORC	Moravsky Berou	6.59	354	ePn	Pn	12 02 37.0	+1.5
MORC	Moravsky Berou	6.59	354⇓	iP	Pn	12 02 37.2	+1.7
MORC	Moravsky Berou	6.59	354	ePN	Pn	12 02 36.9	+1.4
MORC				eSN	Sn	12 03 47.4	-2.9
SQTA	Sankt Quirin	6.60	310	ePn	Pn	12 02 38.5	+2.8
	11nm,0.5s,SNR=13						
OKC	Ostrava-Krasne	6.61	357	eSN	Sn	12 03 48.2	-2.6
MOTA	Moosalm	6.73	310	ePn	Pn	12 02 40.5	+3.0
	6.6nm,0.4s,SNR=12						
FETA	Feichten	6.76	307	ePn	Pn	12 02 41.4	+3.4
	1.2nm,0.3s						
FETA				Pg	Pg	12 03 08.4	-0.3
	29nm,0.8s						
FUORN	Ofenpass-Fuorn	6.85	303	ePn	Pn	12 02 41.9	+2.6
KHC	Kasperske Hory	6.87	331	ePn	Pn	12 02 41.4	+2.0
KHC	Kasperske Hory	6.87	331	ePN	Pn	12 02 40.9	+1.6
KHC				eSN	Sn	12 03 56.3	-0.8
PGF	Pioggiola	7.13	268	ePn	Pn	12 02 42.0	-0.9
PGF	Pioggiola	7.13	268	ePn	Pn	12 02 42.0	-0.9
DAVOX	Davos/Dischmat	7.16	303	Pn	Pn	12 02 46.0	+2.5
	2.3nm,0.3s,baz=190,slow=10,SNR=18						
DAVOX				Sn	Sn	12 04 05.8	+1.3
	0.8nm,0.3s,baz=149,slow=19,SNR=3.0						
DPC	Dobruska-Polom	7.30	348	ePN	Pn	12 02 45.3	+0.1

DPC				*e*x	x	12 02 54.0	
DPC				*e*SN	Sn	12 04 05.1	-2.6
PRU	Pruhonice	7.32	339	*e*PN	Pn	12 02 46.8	+1.3
PRU				*e*x	x	12 02 55.1	
TUE	Stuetta	7.36	299	*e*Pn	Pn	12 02 51.0	+4.7
UPC	Upice	7.50	347	*e*PN	Pn	12 02 49.2	+1.3
UPC				*e*x	x	12 02 56.7	
APE	Apeiranthos	8.10	137	P	Pn	12 02 58.0	+1.7
GRA1	Grafenberg Arr	8.25	324	*e*Pn	Pn	12 03 00.1	+1.9
BRG	Berggiesshubel	8.29	339	PN	Pn	12 03 06.6	+7.9
BRG				*e*		12 03 28.4	
BRG				*e*		12 04 54.1	
	14nm,1.2s						
	comp=N,516nm,18.8s						
	comp=E,406nm,16.3s						
	comp=Z,853nm,21.6s						
SENIN	Lac Senin/Sane	8.66	295	*e*Pn	Pn	12 03 06.7	+2.6
SENIN				*e*Sn	Sn	12 04 42.9	+1.4
MBDF	Montbardon	8.70	284	*e*Pn	Pn	12 03 03.3	-1.3
MBDF				*e*Sn	Sn	12 04 32.4	-10
	comp=Z,31nm,0.6s						
MBDF	Montbardon	8.70	284	*e*Pn	Pn	12 03 03.3	-1.3
MBDF				*e*Sn	Sn	12 04 32.4	-10
FRF	La Foret Royal	8.75	276	*e*Pn	Pn	12 03 03.1	-2.0
FRF	La Foret Royal	8.75	276	*e*Pn	Pn	12 03 03.1	-2.0
BNI	Bardonecchia	8.80	286	*e*Pn	Pn	12 03 06.4	+0.4
BNI				*e*Sn	Sn	12 04 43.9	-1.0
LPG	La Plagne	8.82	289	*e*Pn	Pn	12 03 05.5	-0.9
LPG	La Plagne	8.82	289	*e*Pn	Pn	12 03 05.5	-0.9
BFO	Black Forest	8.83	309	*e*Pn	Pn	12 03 08.6	+2.4
LPL	La Plagne	8.84	289	*e*Pn	Pn	12 03 05.2	-1.4
LPL				*e*Sn	Sn	12 04 39.5	-6.4
	comp=Z,37nm,0.5s						
LPL	La Plagne	8.84	289	*e*Pn	Pn	12 03 05.2	-1.4
LPL				*e*Sn	Sn	12 04 39.5	-6.4
LMR	La Mourre	8.86	275	*e*Pn	Pn	12 03 04.5	-2.2
LMR				*e*Sn	Sn	12 04 38.3	-7.8
	comp=Z,4.7nm,0.3s						
LMR	La Mourre	8.86	275	*e*Pn	Pn	12 03 04.5	-2.2
LMR				*e*Sn	Sn	12 04 38.3	-7.8
CLL	Collm	8.94	337	*e*(Pn)	Pn	12 03 11.0	+3.3
CLL				*i*		12 03 16.7	
CLL				*e*Pg		12 03 47.0	
CLL				*e*Sn	Sn	12 04 34.0	-14
CLL				*e*Sg		12 05 47.0	
IDI	Anoyia	9.29	147	*e*Pn	Pn	12 03 11.8	-0.7
IDI	Anoyia	9.29	147	Pn	Pn	12 03 10.5	-2.1
	comp=Z,2.2nm,0.3s,baz=328,slow=12,SNR=9.2						
IDI				Sn	Sn	12 04 53.2	-3.6
	comp=Z,3.0nm,0.3s,baz=75,slow=20,SNR=7.1						
ORIF	Oris-en-Rattie	9.35	285	*e*Pn	Pn	12 03 11.8	-1.6
ORIF				*e*Sn	Sn	12 04 51.2	-7.1
	comp=Z,27nm,0.5s						
ORIF	Oris-en-Rattie	9.35	285	*e*Pn	Pn	12 03 11.8	-1.6
ORIF				*e*Sn	Sn	12 04 51.2	-7.1
ECH	Echery	9.46	306	*e*Pn	Pn	12 03 15.5	+0.7
SMRF	Simiane la Rot	9.52	279	*e*Pn	Pn	12 03 13.5	-2.2
SMRF	Simiane la Rot	9.52	279	*e*Pn	Pn	12 03 13.5	-2.2
VIVF	Saint-Julien-l	10.20	284	*e*Pn	Pn	12 03 23.3	-1.7
VIVF	Saint-Julien-l	10.20	284	*e*Pn	Pn	12 03 23.3	-1.7
SSB	Saint Sauveur	10.33	286	*e*Pn	Pn	12 03 27.9	+1.0
SMF	Signal de Mont	11.04	293	*e*Pn	Pn	12 03 34.0	-2.5
SMF				*e*Sn	Sn	12 05 31.6	-8.0
	comp=Z,9.8nm,0.4s						
SMF	Signal de Mont	11.04	293	*e*Pn	Pn	12 03 34.0	-2.5
SMF				*e*Sn	Sn	12 05 31.6	-8.0
AVF	Avril sur Loir	11.40	293	*e*Pn	Pn	12 03 38.8	-2.6
AVF				*e*Sn	Sn	12 05 39.7	-8.6
	comp=Z,4.2nm,0.5s						
AVF	Avril sur Loir	11.40	293	*e*Pn	Pn	12 03 38.8	-2.6
AVF				*e*Sn	Sn	12 05 39.7	-8.6
BGF	Bois d'Agland	11.70	292	*e*Sn	Sn	12 05 47.2	-8.4
	comp=Z,13nm,0.5s						
BGF	Bois d'Agland	11.70	292	*e*Sn	Sn	12 05 47.2	-8.4
TCF	Toulx Ste Croi	12.08	290	*e*Pn	Pn	12 03 48.7	-2.1
TCF				*e*Sn	Sn	12 05 55.5	-10
	comp=Z,5.6nm,0.4s						
TCF	Toulx Ste Croi	12.08	290	*e*Pn	Pn	12 03 48.7	-2.1
TCF				*e*Sn	Sn	12 05 55.5	-10
MMAI	Mount Meron Ar	16.64	122	Pn	P	12 04 53.5	-0.7
	comp=Z,1.8nm,0.3s,baz=320,slow=15,SNR=2.8						
HFS	Hagfors	17.19	352	Pn	P	12 04 59.3	-0.8
	comp=Z,0.1nm,0.3s,baz=145,slow=14,SNR=4.6						
NOA	NORSAR Array B	18.39	348	Pn	P	12 05 15.2	+1.9
	comp=Z,0.0nm,0.3s,baz=172,slow=12,SNR=2.5						
FINES	FINESS Array B	18.77	11	Pn	P	12 05 17.5	0.0
	comp=Z,0.1nm,0.3s,baz=207,slow=11,SNR=2.8						
FIA1	FINESS Array S	18.77	11	*e*P	Pn	12 05 17.8	-0.1
ARU	Arti	28.48	48	*e*P	P	12 06 53.5	+0.1
	comp=Z,1.0nm,0.7s						
TORD	Torodi Ar. Bea	33.36	211	P	P	12 07 36.9	+0.1
	comp=Z,0.7nm,0.6s,baz=24,slow=10,SNR=6.9						
DBIC	Dimbokro	41.89	216	P	P	12 08 50.4	+1.5
	comp=Z,1.7nm,0.7s,baz=13,slow=8.8,SNR=2.9						
MKAR	Makanchi Array	44.03	62	P	P	12 09 05.8	-0.2
	comp=Z,0.2nm,0.5s,baz=283,slow=7.1,SNR=2.6						
SONM	Songino Array	58.41	52	P	P	12 10 56.0	+2.0
	comp=Z,0.2nm,0.4s,baz=305,slow=10,SNR=2.8						
YKA	Yellowknife Ar	68.16	339	P	P	12 11 59.2	+1.0
	comp=Z,0.1nm,0.6s,baz=41,slow=5.7,SNR=3.0						

IDC 03 12:01:14.8±1.6**, 17°.76S**×**179°.66W, h0**^{km}**, mb3.8**/7**, mb1 4.2**/7**, mb1mx3.9**/30**, mbtmp3.8**/7**, Error ellipse: s-maj=109.9km s-min=20.7km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.66	241	P	P	12 08 33.1	+1.3
	0.9nm,0.5s,baz=70,slow=8.9,SNR=3.0						
WRA	Warramunga Arr	43.48	260	P	P	12 09 19.3	-1.0
	0.3nm,0.5s,baz=97,slow=7.6,SNR=8.9						
ASAR	Alice Springs	43.68	254	P	P	12 09 21.5	-0.3
	3.2nm,0.6s,baz=90,slow=7.7,SNR=105						
NVAR	Mina Array Bea	80.15	44	P	P	12 13 28.2	+0.9
	0.7nm,0.7s,baz=228,slow=8.2,SNR=6.5						
ILAR	Eielson Array	86.01	13	P	P	12 13 57.5	+0.7
	0.2nm,0.4s,baz=219,slow=5.1,SNR=8.5						
TXAR	Lajitas Array	86.93	58	P	P	12 14 01.6	-0.6
	0.7nm,0.7s,baz=220,slow=4.6,SNR=6.5						
PDAR	Pinedale Array	88.07	44	P	P	12 14 06.2	-1.4
	0.4nm,0.6s,baz=204,slow=3.3,SNR=4.3						

IDC 03 12:02:00.5±11.0**, 17°.11S**×**176°.29W, h550**^{km}±121^{km}**, mb3.3**/6**, mb1 3.4**/7**, mb1mx3.1**/30**, mbtmp4.2**/7**, Error ellipse: s-maj=106.8km s-min=50.3km az=134.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	17.00	250	P	P	12 05 28.0	-1.3
	0.4nm,0.3s,baz=90,slow=19,SNR=4.1						
CTA	Charters Tower	35.58	259	P	P	12 08 11.1	-1.1
	2.7nm,0.6s,baz=104,slow=9.5,SNR=8.4						
STKA	Stephens Creek	40.78	241	P	P	12 08 54.5	+0.1
	2.2nm,0.5s,baz=86,slow=10,SNR=8.8						
WRA	Warramunga Arr	46.77	259	P	P	12 09 40.4	-0.5
	2.1nm,0.5s,baz=95,slow=7.0,SNR=62						
ASAR	Alice Springs	46.95	253	P	P	12 09 42.3	0.0
	14nm,0.6s,baz=88,slow=8.6,SNR=114						
FITZ	Fitzroy Crossi	55.16	260	P	P	12 10 43.3	+1.5
	0.6nm,0.4s,baz=115,slow=6.4,SNR=6.0						
ILAR	Eielson Array	84.67	12	P	P	12 13 37.8	+1.8
	0.7nm,1.1s,baz=216,slow=5.9,SNR=5.1						
GERES	GERESS Array B	147.32	348	PKPbc	PKPdf	12 20 40.1	+0.9
	0.4nm,0.6s,baz=37,slow=2.9,SNR=3.1						

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*ISK **03** 12:03:44.3, 39°.83N×40°.49E, h7^{km}, ML2.0/4*

*DDA **03** 12:03:45.9, 39°.79N×40°.28E, h7^{km}±2^{km}, ML2.5*

*ISCJB **03** 12:03:46.9±0.6, 39°.87N±0°.05×40°.45E±0°.06, h25^{km}±6^{km}, Error ellipse: s-maj=7.8km s-min=7.1km az=36.2*

ISC 03 12:03:46.9±1.0**, 39°.93N**±0°.04×**40°.42E**±0°.04**, h31**^{km}±7^{km}**, n10, σ1ˢ.69**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.11	32	*i* P	Pb	12 03 52.8	0.0
KOPT				*i* S	Sb	12 03 57.2	+0.4
BAYB	BAYBURT	0.36	339	*i* P	Pn	12 03 55.7	-0.5
BAYB				*i* S	Sn	12 04 01.1	-1.3
BAYT	Aydıntepe-Bayb	0.52	335	PG	Pb	12 03 57.0	-0.8
BAYT				SG	Sn	12 04 05.7	-0.6
ECAT	Cat-ERZURUM	0.53	127	*i* P	Pb	12 03 57.1	-0.9
KELT	Kelkit	0.92	284	*i* P	Pb	12 04 03.9	-0.6
TNCL	Tunceli-Merkez	1.06	220	*i* P	Pb	12 04 09.7	+3.0
KOPR	Koprukoy-ERZUR	1.10	86	PG	Pn	12 04 04.9	-1.5
KOPR				SG	Sn	12 04 20.1	-0.6
CHOM	Cayeli-Rize	1.20	12	PN	Pb	12 04 09.0	-0.1
CHOM				SN	Sb	12 04 27.4	+3.2
PTK	Pertek	1.30	218	PN	Pn	12 04 08.9	-0.3
PTK				SN	Sb	12 04 26.9	-0.5
DBAD	Bademkaya	1.46	41	*i* P	Pb	12 04 16.3	+2.8
DBAD				IAML_P			
	comp=Z,228nm,0.2s						

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*ISCJB **03** 12:03:47.0±0.7, 18°.7S±0°.2×177°.7W±0°.2, h600^{km}, mb3.7/11, Error ellipse: s-maj=27.0km s-min=12.9km az=143.5*

*IDC **03** 12:03:49.8±4.8, 18°.73S×177°.71W, h624^{km}±66^{km}, mb3.2/11, mb1 3.4/13, mb1mx3.2/30, mbtmp4.1/13, Error ellipse: s-maj=34.1km s-min=20.4km az=4.0*

ISC 03 12:03:48.1±0.9**, 18°.6S**±0°.2×**177°.7W**±0°.2**, h600**^{km}**, n14, σ0ˢ.83**/14**, mb3.5**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.26	254	P	P	12 06 59.9	+1.1
	0.5nm,0.3s,baz=110,slow=20,SNR=6.9						
URZ	Urewera	20.07	192	P	P	12 07 41.5	-0.8
	0.6nm,0.3s,baz=16,slow=19,SNR=5.2						
CTA	Charters Tower	34.00	262	P	P	12 09 44.3	+0.4
	4.1nm,0.4s,baz=90,slow=9.1,SNR=16						
STKA	Stephens Creek	38.88	242	P	P	12 10 23.8	+0.1
	1.8nm,0.4s,baz=83,slow=8.7,SNR=6.3						
WRA	Warramunga Arr	45.17	260	P	P	12 11 12.8	-0.3
	3.4nm,0.3s,baz=97,slow=7.7,SNR=43						
ASAR	Alice Springs	45.25	255	P	P	12 11 13.7	0.0
	4.5nm,0.5s,baz=87,slow=8.3,SNR=24						
FITZ	Fitzroy Crossi	53.58	261	P	P	12 12 14.3	-0.4
	0.7nm,0.3s,baz=108,slow=3.4,SNR=7.0						
PETK	Petropavlovsk-	74.56	345	P	P	12 14 26.5	0.0
	5.9nm,0.9s,baz=177,slow=10,SNR=3.2						
NVAR	Mina Array Bea	79.48	43	P	P	12 14 54.3	+0.5
	0.4nm,0.6s,baz=219,slow=8.0,SNR=3.9						
TXAR	Lajitas Array	85.81	57	P	P	12 15 27.3	+1.6
	0.6nm,0.7s,baz=227,slow=7.7,SNR=5.8						
ILAR	Eielson Array	86.44	13	P	P	12 15 26.6	-1.1
	0.3nm,0.3s,baz=225,slow=4.9,SNR=14						
PDAR	Pinedale Array	87.41	43	P	P	12 15 33.2	+0.2
	0.2nm,0.5s,baz=194,slow=2.5,SNR=2.6						
YKA	Yellowknife Ar	94.71	25	P	P	12 16 05.2	-0.6
	0.1nm,0.6s,baz=241,slow=5.4,SNR=3.7						
ARCES	ARCESS Array B	127.15	350	PKP	PKPdf	12 21 43.6	-0.9
	1.1nm,0.8s,baz=32,slow=3.2,SNR=6.3						

IDC 03 12:08:51.2±2.1**, 28°.98N**×**140°.82E, h0**^{km}**, mb3.2**/2**, mb1 3.4**/4**, mb1mx3.2**/36**, mbtmp3.3**/4**, ML3.0**/2**, Error ellipse: s-maj=76.8km s-min=29.9km az=72.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.23	147	Pn	Pn	12 09 29.1	-0.3
	5.6nm,0.3s,baz=285,slow=20,SNR=7.2						
JCJ				Sn	Sn	12 09 51.5	-6.3
	8.6nm,0.3s,baz=315,slow=20,SNR=5.2						
MJAR	Matsushiro Arr	7.85	344	Pn	Pn	12 10 46.4	-0.4
	0.1nm,0.3s,baz=165,slow=15,SNR=12						
WRA	Warramunga Arr	49.04	188	P	P	12 17 39.6	-0.4
	0.1nm,0.4s,baz=10.0,slow=7.8,SNR=2.6						
ASAR	Alice Springs	52.77	188	P	P	12 18 08.4	+0.3
	0.2nm,0.8s,baz=0.1,slow=5.4,SNR=3.0						

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*IDC **03** 12:09:42.7±1.0, 5°.01S×152°.99E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.7/35, mbtmp3.9/6, Error ellipse: s-maj=31.2km s-min=26.1km az=99.0*

*ISCJB **03** 12:09:47.3±1.2, 5°.1S±0°.2×153°.0E±0°.2, h43^{km}, mb3.7/6, Error ellipse: s-maj=26.2km s-min=23.0km az=153.9*

ISC 03 12:09:49.0±1.1**, 5°.1S**±0°.2×**153°.0E**±0°.2**, h43**^{km}**, n9, σ0ˢ.97**/10**, mb3.8**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	21.32	144	P	P	12 14 32.5	0.0
	5.5nm,0.7s,baz=328,slow=15,SNR=10						
WRA	Warramunga Arr	23.39	229	P	P	12 14 53.8	-0.3
	1.0nm,0.8s,baz=52,slow=10,SNR=9.1						
ASAR	Alice Springs	26.05	223	P	P	12 15 18.6	0.0
	0.5nm,0.5s,baz=56,slow=9.1,SNR=11						
ASAR				PcP	PcP	12 18 48.0	+2.2
	0.3nm,0.8s,baz=67,slow=2.7,SNR=3.3						
FITZ	Fitzroy Crossi	29.68	242	P	P	12 15 50.6	-0.3
	1.9nm,0.7s,baz=59,slow=7.5,SNR=5.8						
MKAR	Makanchi Array	80.67	319	P	P	12 21 58.2	+0.6
	0.6nm,0.8s,baz=107,slow=5.8,SNR=6.0						
ZALV	Zalesovo Beam	81.50	326	P	P	12 22 01.3	-0.5
	1.1nm,0.6s,baz=120,slow=5.4,SNR=6.1						
GERES	GERESS Array B	124.40	329	PKP	PKPdf	12 28 43.1	-0.6
	0.3nm,0.5s,baz=66,slow=2.5,SNR=2.8						
TORD	Torodi Ar. Bea	150.57	288	PKPbc	PKPbc	12 29 36.9	-0.4
	1.4nm,0.8s,baz=59,slow=2.7,SNR=8.3						
BDFB	Brasilia	150.73	135	PKPbc	PKPbc	12 29 37.1	-0.7
	1.7nm,0.5s,baz=157,slow=7.7,SNR=3.3						

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*IDC **03** 12:21:19.4±0.7, 47°.58N×150°.87E, h0^{km}, mb3.6/11, mb1 3.9/16, mb1mx3.7/50, mbtmp3.7/16, ML3.1/5, Error ellipse: s-maj=22.7km s-min=13.6km az=133.0*

*ISCJB **03** 12:21:22.2±0.5, 47°.60N±0°.05×150°.79E±0°.07, h33^{km}, mb3.6/10, Error ellipse: s-maj=7.6km s-min=5.5km az=135.1*

*SKHL **03** 12:21:24.3±0.6, 47°.45N×150°.56E, h151^{km}±10^{km}, mb5.2/5, mbh5.5/1, msh5.0/3*

ISC 03 12:21:24.2±0.6**, 47°.54N**±0°.06×**150°.80E**±0°.07**, h35**^{km}**, n33, σ1ˢ.83**/30**, mb3.6**/10**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.07	222	*e*P	Pn	12 22 11.0	+0.8
KUR				AMB	AMB	12 22 13.2	
	90nm,1.0s						
KUR				AMB	AMB	12 22 13.2	
	130nm,1.0s						
KUR				AMB	AMB	12 22 13.2	
	200nm,1.0s						
KUR				AMB	AMB	12 22 14.9	
	1μm,4.0s						
KUR				*e*S	Sn	12 22 47.4	+1.8
KUR				A	A	12 22 51.7	
	320nm,0.5s						
KUR				A	A	12 22 51.7	
	260nm,0.5s						
KUR				A	A	12 23 03.5	
	2μm,4.0s						
KUR				A	A	12 23 03.5	
	4μm,4.0s						
SHO	Shikotan	4.60	219	*e*P	Pn	12 22 30.4	-0.8
SHO				AMB	AMB	12 22 31.9	
	10.0nm,1.0s						
SHO				AMB	AMB	12 22 31.9	
	50nm,1.0s						
SHO				AMB	AMB	12 22 31.9	
	80nm,1.0s						
SHO				AMB	AMB	12 22 32.5	
	800nm,4.0s						
SHO				AMB	AMB	12 22 32.5	
	2μm,4.0s						
SHO				AMB	AMB	12 22 32.5	
	2μm,4.0s						
SHO				*e*S	Sn	12 23 22.1	-1.3
SHO				A	A	12 23 27.9	
	60nm,0.4s						
SHO				A	A	12 23 27.9	
	80nm,0.4s						
YSS	Yuzh-Sakhalins	5.51	267	*e*P	Pn	12 22 44.5	+0.8
YSS				AMB	AMB	12 22 47.3	
	40nm,0.7s						
YSS				*e*S	Sn	12 23 46.6	+0.9
YSS				A	A	12 23 50.0	
	80nm,0.4s						
YSS				A	A	12 23 50.0	
	140nm,0.4s						
PAU	Pauzhetka	5.55	43	*e*P	Pn	12 22 48.3	+4.0
TYV	Tymovskoe	6.29	305	*e*P	Pn	12 22 54.1	-0.3
TYV				AMB	AMB	12 22 55.3	
	20nm,0.8s						
TYV				AMB	AMB	12 22 55.3	
	70nm,0.8s						
TYV				AMB	AMB	12 22 55.3	
	40nm,0.8s						
TYV				AMB	AMB	12 22 57.3	
	900nm,5.0s						
TYV				*e*S	Sn	12 24 05.9	+1.0
TYV				A	A	12 24 06.5	
	70nm,0.3s						
TYV				A	A	12 24 06.5	
	30nm,0.3s						
TYV				A	A	12 24 17.9	
	1μm,6.0s						
TYV				A	A	12 24 17.9	
	580nm,6.0s						
ASAJ	Asahikawa	6.67	242	Pn	Pn	12 23 01.3	+1.6
	0.8nm,0.3s,baz=18,slow=23,SNR=6.0						
PETK	Petropavlovsk-	7.11	36	Pn	Pn	12 23 04.8	-0.9
	0.2nm,0.3s,baz=206,slow=12,SNR=4.4						
OKH	Okha	7.83	323	*e*P	Pn	12 23 15.9	+0.4
TEY	Ternei	10.14	261	*e*P	Pn	12 23 43.7	-3.5
EKMR	Ekimchan	12.67	303	*e*P	Pn	12 24 21.0	-0.8
EKMR				AMB	AMB	12 24 24.5	
	6.0nm,0.8s						
USRK	Ussuriysk Ar.	13.52	263	Pn	Pn	12 24 36.9	+3.5
	0.1nm,0.3s,baz=75,slow=10,SNR=6.1						
MJAR	Matsushiro Arr	14.41	225	Pn	Pn	12 24 44.0	-1.5
	0.0nm,0.3s,baz=28,slow=14,SNR=3.5						
SEY	Seymchan	15.46	3	Pn	Pn	12 24 57.8	-1.6
	0.1nm,0.3s,baz=174,slow=19,SNR=4.3						
BMKR	Bomnak	15.50	306	*e*P	Pn	12 24 55.4	-4.6
BMKR				AMB	AMB	12 25 06.0	
	8.0nm,1.0s						
KROS	Kirovskiy	16.46	304	*e*P	Pn	12 25 04.8	-7.5
KROS				AMB	AMB	12 25 11.5	
	6.0nm,0.8s						
KSRS	Korea Array	19.58	247	P	P	12 25 50.2	+1.2
	0.1nm,0.3s,baz=57,slow=11,SNR=9.7						
JNU	Nakatsue	20.84	233	P	P	12 26 04.7	+1.9
	6.5nm,0.8s,baz=346,slow=4.5,SNR=6.3						
H11N2	WAKE ISLAND Hy	30.68	149	T	T	12 59 09.2	
	baz=339,slow=76,SNR=82						
H11N1	WAKE ISLAND Hy	30.69	149	T	T	12 59 10.4	
	baz=339,slow=76,SNR=52						
H11N3	WAKE ISLAND Hy	30.69	149	T	T	12 59 10.5	
	baz=339,slow=76,SNR=46						
H11S1	WAKE ISLAND Hy	31.74	150	T	T	13 00 27.2	
	baz=340,slow=76,SNR=46						
H11S3	WAKE ISLAND Hy	31.75	150	T	T	13 00 32.5	
	baz=340,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	31.76	150	T	T	13 00 29.0	
	baz=340,slow=76,SNR=22						
ILAR	Eielson Array	36.93	39	P	P	12 28 29.1	-0.2
	0.3nm,0.9s,baz=263,slow=5.7,SNR=3.4						
ZALV	Zalesovo Beam	40.87	304	P	P	12 29 03.1	+0.7
	0.3nm,0.5s,baz=76,slow=6.1,SNR=2.7						
MKAR	Makanchi Array	45.18	296	P	P	12 29 38.0	+0.6
	0.3nm,0.6s,baz=64,slow=8.2,SNR=3.9						
YKA	Yellowknife Ar	51.23	36	P	P	12 30 23.1	-0.7
	0.4nm,0.7s,baz=300,slow=6.9,SNR=3.5						
FINES	FINESS Array B	62.64	334	P	P	12 31 43.5	-1.1
	0.8nm,0.8s,baz=76,slow=6.4,SNR=2.3						
NVAR	Mina Array Bea	63.46	61	P	P	12 31 52.2	+1.5
	0.4nm,0.6s,baz=310,slow=5.8,SNR=3.6						
PDAR	Pinedale Array	65.55	53	P	P	12 32 04.3	+0.1
	0.6nm,0.7s,baz=299,slow=1.9,SNR=2.7						
WRA	Warramunga Arr	68.78	197	P	P	12 32 24.4	-0.1
	0.9nm,0.9s,baz=16,slow=6.8,SNR=6.5						
ASAR	Alice Springs	72.49	196	P	P	12 32 48.3	+1.2
	1.6nm,0.8s,baz=7.6,slow=5.5,SNR=22						
TXAR	Lajitas Array	78.46	59	P	P	12 33 22.0	+0.3
	0.4nm,0.7s,baz=292,slow=4.8,SNR=2.9						

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*ISCJB **03** 12:24:54.3±0.6, 22°.13N±0°.06×143°.8E±0°.2, h105^{km}, mb3.7/15, Error ellipse: s-maj=22.3km s-min=8.2km az=169.5*

*IDC **03** 12:24:57.9±3.0, 22°.15N×143°.80E, h124^{km}±27^{km}, mb3.4/16, mb1 3.5/18, mb1mx3.4/47, mbtmp3.8/18, Error ellipse: s-maj=23.8km s-min=11.8km az=88.0*

ISC 03 12:24:56.2±0.7**, 22°.13N**±0°.08×**143°.7E**±0°.2**, h105**^{km}**, n21, σ1ˢ.13**/21**, mb3.7**/15**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	5.14	344	P	Pn	12 26 12.1	+1.3
	2.5nm,0.3s,baz=66,slow=23,SNR=9.3						
JCJ				S	Sn	12 27 07.2	-1.8
	18nm,0.3s,baz=289,slow=23,SNR=20						
MJAR	Matsushiro Arr	15.14	343	P	Pn	12 28 24.3	-0.2
	0.1nm,0.3s,baz=167,slow=10,SNR=3.6						
KSRS	Korea Array	20.48	322	P	P	12 29 26.2	+0.5
	0.8nm,0.5s,baz=138,slow=11,SNR=3.5						
H11S3	WAKE ISLAND Hy	21.82	95	T	T	12 52 33.6	
	baz=285						
H11S1	WAKE ISLAND Hy	21.83	95	T	T	12 52 37.9	
	baz=285						
H11S2	WAKE ISLAND Hy	21.84	95	T	T	12 52 26.2	
	baz=285						
KLR	Kul'dur	28.67	344	P	P	12 30 43.8	+0.8
	4.4nm,0.7s,baz=164,slow=8.5,SNR=15						
SONM	Songino Array	39.34	320	P	P	12 32 15.8	+0.6
	0.4nm,0.7s,baz=125,slow=9.0,SNR=3.5						
SEY	Seymchan	41.20	6	P	P	12 32 31.1	+0.9
	1.3nm,0.7s,baz=197,slow=19,SNR=4.3						
CTA	Charters Tower	42.03	176	P	P	12 32 38.5	+1.0
	1.8nm,0.7s,baz=0.0,slow=6.1,SNR=3.6						
WRA	Warramunga Arr	42.81	193	P	P	12 32 43.8	0.0
	0.4nm,0.5s,baz=14,slow=8.9,SNR=13						
ASAR	Alice Springs	46.52	192	P	P	12 33 11.9	-1.3
	0.3nm,0.7s,baz=15,slow=7.0,SNR=4.3						
STKA	Stephens Creek	53.74	182	P	P	12 34 07.1	-0.5
	1.0nm,0.6s,baz=27,slow=11,SNR=2.8						
ZALV	Zalesovo Beam	54.19	321	P	P	12 34 10.5	-0.2
	1.2nm,0.6s,baz=106,slow=9.5,SNR=6.0						
MKAR	Makanchi Array	54.78	312	P	P	12 34 15.8	+0.7
	0.4nm,0.5s,baz=87,slow=9.8,SNR=7.5						
MKAR				PcP	PcP	12 35 15.7	-0.6
	0.4nm,0.5s,baz=74,slow=4.1,SNR=5.0						
ILAR	Eielson Array	61.42	27	P	P	12 34 59.0	-2.1
	0.4nm,0.6s,baz=257,slow=5.2,SNR=8.1						
INK	Inuvik	66.97	24	P	P	12 35 36.6	-0.6
	0.7nm,0.7s,baz=243,slow=3.1,SNR=5.3						
YKA	Yellowknife Ar	75.83	28	P	P	12 36 30.2	-0.3
	0.3nm,0.5s,baz=292,slow=5.7,SNR=5.4						
ARCES	ARCESS Array B	78.67	342	P	P	12 36 45.9	-0.5
	4.9nm,1.1s,baz=72,slow=8.9,SNR=7.1						
NVAR	Mina Array Bea	82.47	52	P	P	12 37 08.0	+0.4
	0.7nm,0.7s,baz=270,slow=6.1,SNR=5.1						
NVAR				pP	pwP	12 37 39.4	+1.7
	0.2nm,0.5s,baz=280,slow=6.2,SNR=2.0						
FINES	FINESS Array B	83.01	335	P	P	12 37 07.4	-2.1
	0.6nm,0.4s,baz=74,slow=5.4,SNR=10						

IDC 03 12:27:14.7±7.3**, 20°.83S**×**172°.65E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.4**/20**, mbtmp3.3**/2**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx3.0**/14**, Error ellipse: s-maj=345.6km s-min=52.6km az=151.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.91	257	LR	LR	12 30 33.9	
	comp=Z,119nm,18.1s,baz=26,slow=34						
WRA	Warramunga Arr	35.87	264	P	P	12 34 16.6	0.0
	0.4nm,0.9s,baz=97,slow=7.9,SNR=2.8						
WRA				LR	LR	12 49 23.4	
	comp=Z,91nm,18.1s,baz=65,slow=37						
ASAR	Alice Springs	35.90	258	P	P	12 34 16.8	-0.2
	0.6nm,0.8s,baz=90,slow=8.8,SNR=5.3						
GERES	GERESS Array B	147.36	334	PKPbc	PKPbc	12 46 59.6	-0.8
	1.3nm,0.8s,baz=35,slow=2.4,SNR=9.8						

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*ISCJB **03** 12:49:24.4±0.6, 14°.68S±0°.09×73°.66W±0°.09, h87^{km}, mb3.5/4, Error ellipse: s-maj=17.4km s-min=5.7km az=42.2*

*IDC **03** 12:49:26.5±1.5, 14°.43S×73°.48W, h89^{km}±13^{km}, mb3.4/4, mb1 3.8/9, mb1mx3.6/29, mbtmp4.0/9, MS3.1/1, Ms1 3.3/1, ms1mx2.8/14, Error ellipse: s-maj=35.7km s-min=10.2km az=31.0*

ISC 03 12:49:25.8±0.8, 14°.63S±0°.09×73°.63W±0°.09, h87^{km}, n13, σ2^s.48/17, mb3.6/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.08	310	P	Pn	12 50 24.8	-1.1
	26nm,0.3s,baz=140,slow=10,SNR=46						
NNA				S	Sn	12 51 14.0	+1.4
	27nm,0.3s,baz=216,slow=19,SNR=6.1						
LPAZ	La Paz	5.55	108	P	Pn	12 50 47.9	+1.3
	1.7nm,0.3s,baz=293,slow=8.7,SNR=27						
LPAZ				S	Sn	12 51 49.7	+0.3
	0.4nm,0.3s,baz=214,slow=25,SNR=21						
LPAZ				LR	LR	12 52 36.0	
	comp=Z,185nm,18.2s,baz=62,slow=35						
ATAH	Atahualpa	8.79	327	P	Pn	12 51 32.1	+1.7
	1.5nm,0.3s,baz=116,slow=7.0,SNR=11						
ATAH				S	Sn	12 53 03.7	-4.4
	0.4nm,0.3s,baz=58,slow=19,SNR=3.0						
LVC	Limon Verde	9.12	151	P	Pn	12 51 35.0	+0.2
	1.2nm,0.3s,baz=335,slow=12,SNR=8.0						
LVC				S	Sn	12 53 16.1	+0.1
	0.7nm,0.3s,baz=270,slow=20,SNR=4.2						
SOTA	Rioblanco	16.91	350	*e*P	P	12 53 20.9	+2.7
PCON	Cinco Dias	17.07	351	*e*P	P	12 53 26.2	+6.2
PTGA	Pitinga	19.31	46	P	P	12 53 41.0	-3.1
	2.2nm,0.3s,baz=226,slow=13,SNR=18						
TXAR	Lajitas Array	52.45	327	P	P	12 58 30.1	+0.2
	0.3nm,0.8s,baz=146,slow=9.8,SNR=3.6						
TORD	Torodi Ar. Bea	79.50	73	P	P	13 01 21.9	-1.6
	2.1nm,0.7s,baz=271,slow=5.5,SNR=13						
YKA	Yellowknife Ar	83.28	342	P	P	13 01 41.9	-0.5
	0.3nm,0.8s,baz=134,slow=5.6,SNR=5.8						
ESDC	Sonseca Array	84.26	47	P	P	13 01 47.7	-0.4
	0.4nm,0.4s,baz=260,slow=5.8,SNR=3.9						
WRA	Warramunga Arr	135.99	219	PKP	PKiKP	13 08 39.4	+0.1
	0.4nm,0.9s,baz=147,slow=2.9,SNR=2.4						
SONM	Songino Array	146.89	360	PKPbc	PKPab	13 08 59.3	-0.5
	0.5nm,0.8s,baz=307,slow=2.7,SNR=3.9						

IDC 03 13:05:13.8±1.4, 18°.00S×175°.92W, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.6/33, mbtmp3.7/4, MS4.4/1, Ms1 4.4/1, ms1mx2.9/29, Error ellipse: s-maj=51.9km s-min=27.4km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	11.35	189	LR	LR	13 11 01.1	
	comp=Z,2µm,21.6s,baz=337,slow=31						
URZ	Urewera	21.09	195	P	P	13 10 00.1	+0.3
	1.5nm,0.3s,baz=343,slow=14,SNR=4.1						
WRA	Warramunga Arr	46.94	259	P	P	13 13 47.1	+0.3
	0.1nm,0.3s,baz=96,slow=7.7,SNR=20						
ASAR	Alice Springs	47.04	254	P	P	13 13 46.9	-0.7
	0.7nm,0.6s,baz=97,slow=7.4,SNR=18						
NVAR	Mina Array Bea	77.87	43	P	P	13 17 13.8	0.0
	0.4nm,0.7s,baz=230,slow=6.5,SNR=3.2						

ISCJB ***03*** *13:15:32.7±0.4, 3°.32N±0°.02×77°.78W±0°.04, h74^{km}±5^{km}, mb3.4/7, Error ellipse: s-maj=6.5km s-min=3.7km az=20.2*
RSNC ***03*** *13:15:34.2±0.9, 3°.27N×77°.77W, h62^{km}±7^{km}, ML3.7, Mw3.8*
IDC ***03*** *13:15:35.6±2.4, 3°.26N×77°.59W, h86^{km}±22^{km}, mb3.2/7, mb1 3.6/11, mb1mx3.5/29, mbtmp3.7/11, Error ellipse: s-maj=25.6km s-min=18.6km az=57.0*
ISC 03 13:15:33.7±0.9, 3°.31N±0°.04×77°.71W±0°.05, h64^{km}±8^{km}, n40, σ1^s.29/56, mb3.4/7, 3C-5D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRGC	Isla de Gorgon	0.55	236	*e*P	Pn	13 15 45.2	-1.2
GRGC				*e*S	Sn	13 15 54.8	-1.0
GRGC				*i*		13 15 58.8	
	comp=Z,1µm,0.2s						
MALC	Bahia Malaga	0.80	28⇑	*i*P	Pn	13 15 49.5	+0.1
MALC				*e*S	Sn	13 16 02.7	+1.8
YOTC	Yotoco, Valle	1.52	64⇓	*i*P	Pn	13 15 57.1	-1.8
YOTC				*e*S	Sn	13 16 14.9	-3.0
YOTC				*i*		13 16 17.7	
	comp=Z,299nm,0.5s						
SOTA	Rioblanco	1.60	137⇑	*i*P	Pn	13 16 00.0	-0.3
SOTA				*e*S	Sn	13 16 21.7	+1.3
SOTA				*i*		13 16 24.3	
	comp=Z,2µm,0.7s						
PCON	Cinco Dias	1.64	126	*e*P	Pn	13 16 00.9	+0.1
PCON				*e*S	Sn	13 16 21.8	+0.6
PCON				*i*		13 16 25.5	
	comp=Z,487nm,0.5s						
MARP	Paez Belalcaza	1.82	105	*e*P	Pn	13 16 03.8	+0.8
MARP				*e*S	Sn	13 16 26.2	+1.1
MARP				*i*		13 16 27.9	
	comp=Z,367nm,0.2s						
CRUC	La Cruz	1.89	156	*e*P	Pn	13 16 04.2	+0.1
CRUC				*e*S	Sn	13 16 26.6	-0.4
CRUC				*i*		13 16 30.8	
	comp=Z,580nm,0.3s						
GCUF	Volcan Galeras	2.10	170⇓	*i*P	Pn	13 16 07.1	+0.1
GCUF				*e*S	Sn	13 16 31.8	-0.5
GCUF				*i*		13 16 34.0	
	comp=Z,736nm,0.3s						
GCUF				*i*		13 16 36.4	
	comp=E,2µm,0.4s						
CPAS2	Pasto	2.12	167	*e*P	Pn	13 16 08.6	+1.3
CPAS2	Pasto	2.12	167	*e*S	Sn	13 16 33.4	+0.7
CPAS2				IAML		13 16 39.1	
	comp=Z,1µm,0.3s						
PLMC	San Jos del P	2.13	42⇑	*i*P	Pn	13 16 05.9	-1.2
PLMC				*e*S	Sn	13 16 34.4	+1.8
PLMC				*i*		13 16 35.0	
	comp=Z,578nm,0.1s						
CPAS1	Pasto	2.14	169	*e*P	Pn	13 16 07.6	+0.1
CPAS1	Pasto	2.14	169	*e*S	Sn	13 16 33.0	-0.2
BETC	Betania	2.35	105	*e*P	Pn	13 16 11.1	+1.0
ANIL	Santa Ana	2.59	63⇓	*i*P	Pn	13 16 14.1	+0.6
ANIL				*i*		13 16 50.8	
	comp=Z,228nm,0.3s						
RREF	El Recreo	2.84	56	*e*P	Pn	13 16 17.7	+0.5
OTAV	Otavalo	3.14	194⇓	*i*P	Pn	13 16 20.3	-0.9
HELC	Santa Helena	3.60	37	*e*S	Sn	13 17 09.2	+0.4
NORC	Norcasia	3.61	52	*e*P	Pn	13 16 28.5	+1.2
NORC				*e*S	Sn	13 17 10.0	+1.2
NORC				*i*		13 17 12.2	
	comp=Z,33nm,0.4s						
ROSC	El Rosal	3.71	66	P	Pn	13 16 31.4	+2.4
	comp=Z,13nm,0.3s,baz=327,slow=3.1,SNR=14						
ROSC				S	Sn	13 17 09.2	-2.4
	comp=Z,4.3nm,0.3s,baz=150,slow=20,SNR=2.0						
CHIC	Chingaza	4.18	72⇓	*i*P	Pn	13 16 37.1	+1.7
CHIC				*i*		13 16 38.1	
	comp=Z,126nm,0.5s						
CHIC				*e*S	Sn	13 17 24.4	+1.2
PTBC	PUERTO BERRIO,	4.56	45	*e*P	Pn	13 16 40.7	+0.4
PTBC				*e*S	Sn	13 17 33.4	+1.3
RUSC	La Rusia	5.28	61	*e*P	Pn	13 16 52.3	+1.8
BARC	Barichara	5.57	54	*e*P	Pn	13 16 55.4	+1.2
BARC				*i*		13 17 03.9	
	comp=Z,34nm,0.5s						
PAMC	Pamplona, Colo	6.40	51	*e*P	Pn	13 17 07.2	+1.4
PAMC				*e*S	Sn	13 18 19.8	+2.0
SMLC	San Martn de	6.55	33	*e*P	Pn	13 17 08.8	+1.4
SDV	Santo Domingo	8.96	51	P	Pn	13 17 40.5	-0.1
	comp=Z,1.1nm,0.3s,baz=232,slow=11,SNR=4.3						
SDV				S	Sn	13 19 17.6	-2.5
	comp=Z,0.6nm,0.3s,baz=252,slow=20,SNR=2.7						
ATAH	Atahualpa	10.40	184	P	Pn	13 18 01.1	+0.7
	comp=Z,0.7nm,0.3s,baz=11,slow=16,SNR=5.0						
PTGA	Pitinga	18.19	102	P	P	13 19 41.8	+0.3
	comp=Z,0.3nm,0.3s,baz=312,slow=20,SNR=3.3						
LPAZ	La Paz	21.65	154	P	P	13 20 18.1	-1.5
	comp=Z,0.9nm,0.8s,baz=337,slow=15,SNR=4.2						
TXAR	Lajitas Array	35.73	319	P	P	13 22 28.0	+1.4
	comp=Z,0.3nm,0.7s,baz=153,slow=6.1,SNR=4.0						
TXAR				PcP	PcP	13 24 54.9	+1.3
	comp=Z,0.5nm,0.8s,baz=141,slow=4.6,SNR=5.1						
PDAR	Pinedale Array	48.45	329	P	P	13 24 09.9	-0.1
	comp=Z,0.2nm,0.4s,baz=115,slow=10.0,SNR=4.2						
NVAR	Mina Array Bea	50.88	319	P	P	13 24 29.9	+1.3
	comp=Z,1.1nm,0.7s,baz=128,slow=6.8,SNR=9.0						
NVAR				PcP	PcP	13 25 44.7	+0.2
	comp=Z,0.3nm,0.6s,baz=122,slow=4.4,SNR=3.7						
YKA	Yellowknife Ar	65.07	342	P	P	13 26 05.8	-1.4
	comp=Z,0.9nm,0.6s,baz=136,slow=6.1,SNR=25						
ILAR	Eielson Array	78.23	336	P	P	13 27 25.8	-0.4
	comp=Z,0.4nm,0.8s,baz=119,slow=4.5,SNR=5.7						
TORD	Torodi Ar. Bea	78.95	77	P	P	13 27 29.4	-1.8
	comp=Z,0.2nm,0.4s,baz=287,slow=6.9,SNR=5.7						
KURBB	Kurchatov Arra	122.54	18	PKP	PKPdf	13 34 21.9	-0.1
	comp=Z,0.3nm,0.5s,baz=318,slow=2.0,SNR=4.9						
MKAR	Makanchi Array	127.08	17	PKP	PKPdf	13 34 30.2	-0.7
	comp=Z,0.1nm,0.5s,baz=339,slow=2.2,SNR=4.9						
ASAR	Alice Springs	143.36	234	PKhKP	PKPpre	13 34 57.6	
	comp=Z,0.4nm,0.5s,baz=123,slow=3.7,SNR=13						
WRA	Warramunga Arr	144.63	240	PKP	PKPab	13 35 02.2	-0.6
	comp=Z,0.6nm,0.4s,baz=109,slow=3.0,SNR=23						

GUC 03 13:21:02.4±0.6, 20°.88S×67°.97W, h216^{km}±6^{km}, ML3.7, 6C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.33	303⇑	*e*P	Pn	13 21 37.6	+0.9
PB08				*e*S	S	13 22 05.0	+1.9
PB01	IPOC Station P	1.43	263	*e*P	Pn	13 21 38.1	+1.0
PB01				*e*S	S	13 22 05.5	+1.6
PB01				IAML		13 22 07.4	
	comp=E,222nm,0.1s						
PB09	IPOC Station P	1.50	232	*e*P	Pn	13 21 39.1	+1.4
PB09				*e*S	S	13 22 06.8	+1.6
PB02	IPOC Station P	1.86	256	*e*P	Pn	13 21 42.5	+1.7
PB02				*e*S	S	13 22 12.6	+2.0
PB02				IAML		13 22 13.7	
	comp=N,540nm,0.2s						
PB11	IPOC Station P	1.94	305⇑	*e*P	Pn	13 21 42.9	+1.2
PB11				*e*S	S	13 22 14.1	+2.0
PB11				IAML		13 22 16.2	
	comp=N,377nm,0.5s						
PB07	IPOC Station P	1.98	244⇑	*e*P	Pn	13 21 43.7	+1.6
PB07				*e*S	S	13 22 14.6	+1.7
PB07				IAML		13 22 15.4	
	comp=N,388nm,0.2s						
PB03	IPOC Station P	2.03	235	*e*P	Pn	13 21 44.1	+1.5
PB03				*e*S	S	13 22 15.5	+1.8
PB03				IAML		13 22 16.0	
	comp=E,429nm,0.2s						
MNMC	Minye Minye	2.32	318	*e*P	Pn	13 21 47.2	+1.5
MNMC				*e*S	S	13 22 21.3	+2.1
MNMC				IAML		13 22 23.5	
	comp=E,244nm,0.3s						
PB06	IPOC Station P	2.35	219	*e*P	Pn	13 21 47.6	+1.7
PB06				*e*S	S	13 22 21.4	+1.8
PB06				IAML		13 22 22.3	
	comp=E,204nm,0.2s						
PSGC	Pisagua	2.39	302⇑	*e*P	Pn	13 21 47.5	+1.2
PSGC				*e*S	S	13 22 22.2	+1.9
PSGC				IAML		13 22 24.3	
	comp=N,78nm,0.2s						
PB04	IPOC Station P	2.50	234	*e*P	Pn	13 21 49.5	+2.1
PB04				*e*S	S	13 22 23.8	+1.5
PB04				IAML		13 22 28.6	
	comp=E,152nm,0.2s						
PB05	IPOC Station P	2.86	226⇑	*e*P	Pn	13 21 53.2	+1.8
PB05				*e*S	S	13 22 30.7	+1.2
PB05				IAML		13 22 32.7	
	comp=N,83nm,0.2s						
PB12	IPOC Station P	3.17	315⇑	*e*P	Pn	13 21 55.6	+0.7
PB12				*e*S	S	13 22 36.9	+1.0
PB12				IAML		13 22 42.2	
	comp=E,54nm,0.3s						

ISCJB ***03*** *13:29:55.6±0.5, 56°.79S±0°.07×30°.5W±0°.2, h10^{km}, mb4.3/11, MS4.1/12, Error ellipse: s-maj=16.3km s-min=8.2km az=151.2*
IDC ***03*** *13:29:55.6±0.6, 56°.87S×30°.42W, h0^{km}, mb4.2/9, mb1 4.3/10, mb1mx4.2/23, mbtmp4.2/10, ML4.0/1, MS4.1/14, Ms1 4.1/14, ms1mx4.0/22, Error ellipse: s-maj=25.5km s-min=17.1km az=77.0*
NEIC ***03*** *13:30:01.0±2.1, 56°.89S×30°.54W, h41^{km}±19^{km}, mb4.8/7, Error ellipse: s-maj=19.5km s-min=11.7km az=65.0*
GCMT ***03*** *13:30:02.0±0.3, 57°.07S±0°.02×30°.42W±0°.03, h12^{km}, MW5.0/81, Moment Tensor Solution. s15,c18; s81,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.97±.12; $M_{\theta\theta}$-0.65±.13; $M_{\phi\phi}$1.63±.10; $M_{r\theta}$-1.33±.34; $M_{\theta\phi}$-2.74±.08; $M_{\phi r}$-0.37±.31; Best double couple: $M_0$3.37300×10^{16} NP1:ϕ_s106.00000°, δ73.00000°, λ-153.00000°. NP2: ϕ_s7.00000°, δ65.00000°, λ-18.00000°. Principal axes: T 3.5020, Plg6.0000°, Azm235.0000°; N -0.2520, Plg59.0000°, Azm135.0000°; P -3.2440, Plg30.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 13:29:57.4±0.5, 56°.85S±0°.10×30°.5W±0°.1, h10^{km}, n55, σ1^s.47/42, mb4.4/11, MS4.1/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	4.28	304	*e*Pn	Pn	13 31 03.2	+0.7
VNA1	Neumayer--Stat	16.80	154	P	Pn	13 33 54.4	+2.0
VNA3	Neumayer Olymp	16.91	157	P	P	13 33 56.1	+0.3
VNA2	Neumayer--Watz	17.20	154	P	Pn	13 33 59.0	+1.6
	baz=306,slow=11						
PMSA	Palmer Station	18.00	230	LR	LR	13 39 38.0	
	comp=Z,1µm,21.8s,baz=70,slow=32						
SNAA	Sanae	18.80	153	P	P	13 34 16.1	-0.6
SNAA	Sanae	18.80	153	*e*P	P	13 34 15.2	-1.5
	122nm,1.8s						
SNAA	Sanae	18.80	153	P	P	13 34 15.7	-1.1
	0.5nm,0.3s,baz=291,slow=9.9,SNR=16						
SNAA				LR	LR	13 40 02.6	
	comp=Z,292nm,19.7s,baz=326,slow=32						
USHA	Ushuaia	21.24	259	P	P	13 34 41.9	-1.4
	22nm,1.1s,baz=111,slow=12,SNR=2.3						
USHA				LR	LR	13 40 48.4	
	comp=Z,1µm,21.5s,baz=96,slow=31						
QSPA	South Pole Qui	33.40	180	*e*P	P	13 36 35.6	-0.2
	17nm,1.1s						
QSPA	South Pole Qui	33.40	180	P	P	13 36 35.7	-0.2
	7.4nm,1.1s,baz=145,slow=7.3,SNR=30						
CPUP	Villa Florida	36.05	316	*e*P	P	13 36 59.1	+0.3
	10nm,1.1s						
CPUP	Villa Florida	36.05	316	P	P	13 36 59.2	+0.4
	4.3nm,0.9s,baz=157,slow=10.0,SNR=7.5						
CPUP				LR	LR	13 49 56.4	
	comp=Z,143nm,21.9s,baz=172,slow=33						
MAW	Mawson	40.58	144	*e*P	P	13 37 38.1	+1.7
	65nm,1.9s						
MAW	Mawson	40.58	144	LR	LR	13 54 13.2	
	comp=Z,170nm,18.0s,baz=254,slow=36						
BDFB	Brasilia	43.23	335	P	P	13 37 59.4	+0.6
	2.5nm,0.7s,baz=164,slow=8.3,SNR=3.4						
BDFB				LR	LR	13 52 49.5	
	comp=Z,179nm,21.7s,baz=232,slow=32						
VNDA	Vanda	45.68	184	*e*P	P	13 38 17.8	+0.2
VNDA	Vanda	45.68	184	P	P	13 38 18.1	+0.6
	2.1nm,0.9s,baz=210,slow=6.0,SNR=6.3						
BOSA	Boshof	47.92	78	LR	LR	13 54 14.5	
	comp=Z,522nm,21.4s,baz=219,slow=30						
H10S2	ASCENSION HYDR	49.34	21	T	T	14 32 16.2	
	baz=191,slow=75,SNR=31						
H10S3	ASCENSION HYDR	49.34	21	T	T	14 32 16.4	
	baz=191,slow=75,SNR=51						
H10S1	ASCENSION HYDR	49.35	21	T	T	14 32 17.5	
	baz=191,slow=75,SNR=39						
LPAZ	La Paz	49.42	309	*e*P	P	13 38 47.7	-0.4
	3.8nm,1.1s						
LPAZ	La Paz	49.42	309	P	P	13 38 47.6	-0.4
	1.3nm,0.8s,baz=167,slow=5.6,SNR=3.7						
LPAZ				LR	LR	14 03 26.2	
	comp=Z,85nm,18.1s,baz=158,slow=41						
H10N1	ASCENSION HYDR	50.45	21	T	T	14 33 44.1	
	baz=191,slow=75,SNR=25						
H10N3	ASCENSION HYDR	50.45	21	T	T	14 33 40.1	
	baz=191,slow=75,SNR=53						
H10N2	ASCENSION HYDR	50.47	21	T	T	14 33 41.2	
	baz=191,slow=75,SNR=36						
DBIC	Dimbokro	66.68	28	*e*P	P	13 40 47.9	-0.4
	25nm,1.6s						
DBIC	Dimbokro	66.68	28	P	P	13 40 48.6	+0.3
	2.2nm,0.8s,baz=170,slow=6.1,SNR=3.0						
DBIC				LR	LR	14 04 28.5	
	comp=Z,68nm,19.1s,baz=178,slow=31						
ROSC	El Rosal	71.05	313	LR	LR	14 14 44.5	
	comp=Z,39nm,19.2s,baz=122,slow=38						
TOA0	Torodi Ar. Sit	74.67	33	*e*P	P	13 41 35.7	-1.2
TORD	Torodi Ar. Bea	74.67	33	P	P	13 41 36.5	-0.4
	2.5nm,0.8s,baz=202,slow=5.7,SNR=12						
TORD				LR	LR	14 07 39.5	
	comp=Z,263nm,21.5s,baz=280,slow=30						
TOA1	Torodi Ar. Sit	74.68	33	*e*P	P	13 41 36.5	-0.4
TOA1				*e*		14 07 39.5	
RPZ	Rata Peaks	78.19	196	LR	LR	14 11 22.0	
	comp=Z,188nm,21.7s,baz=178,slow=32						
TBI	Tubuai	85.16	234	*e*LR	LR	14 09 39.4	
	comp=Z,459nm,29.0s						
PPT2	Papeete2	90.24	236	*e*LR	LR	14 11 57.4	
	comp=Z,434nm,29.2s						
PPT	Papeete	90.25	236	LR	LR	14 16 32.8	
	comp=Z,80nm,19.0s,baz=125,slow=31						
TAOE	Nuku Hiva Isla	93.17	249	*e*LR	LR	14 13 21.4	
	comp=Z,180nm,27.0s						
KEST	Kesra	98.18	32	LR	LR	14 22 15.6	
	comp=Z,317nm,20.2s,baz=202,slow=32						
ASAR	Alice Springs	98.72	166	P	P	13 43 34.8	-2.3
	0.3nm,0.7s,baz=185,slow=4.1,SNR=5.0						
AS31	Alice Springs	98.72	166	*e*P	P	13 43 34.0	-3.1
	1.2nm,1.2s						
BOZ	Bozeman (W)	122.39	305	*e*PKPdf	PKPdf	13 48 49.1	-2.9
CMAR	Chiang Mai Arr	126.44	114	PKP	PKPdf	13 49 01.2	+0.8
	1.1nm,0.9s,baz=234,slow=3.1,SNR=2.4						
YKA	Yellowknife Ar	135.56	319	PKP	PKPdf	13 49 15.7	-0.5
	0.1nm,0.7s,baz=123,slow=2.3,SNR=3.0						
YKA				PP	PP	13 51 55.5	+0.9
	0.3nm,0.9s,baz=111,slow=6.7,SNR=4.3						
YKB5	Yellowknife Ar	135.56	319	*e*PKPdf	PKPdf	13 49 15.2	-1.0
BVAR	Borovoye Array	136.74	60	PKP	PKPdf	13 49 20.1	+1.3
	0.2nm,0.6s,baz=304,slow=2.2,SNR=2.7						
ZALV	Zalesovo Beam	144.35	67	PKP	PKPab	13 49 30.0	-0.6
	0.4nm,0.4s,baz=243,slow=4.1,SNR=3.1						
ZAA1	Zalesovo Array	144.35	66	*e*PKPdf	PKPab	13 49 30.0	-0.6
INK	Inuvik	145.26	321	*e*PKPbc	PKPbc	13 49 32.4	-0.9
INK	Inuvik	145.26	321	PKPbc	PKPbc	13 49 33.1	-0.3
	2.2nm,1.0s,baz=123,slow=4.3,SNR=5.7						
IL1	Eielson Array	149.28	311	*e*PKPbc	PKPdf	13 49 43.6	+3.2
IL1				*e*PKPab	sPKPbc	13 49 49.9	+2.2
ILAR	Eielson Array	149.28	311	PKPbc	PKPdf	13 49 43.3	+2.9
	0.5nm,0.7s,baz=135,slow=1.2,SNR=9.3						
ILB	Eielson Array	149.28	311	*e*PKPbc	PKPbc	13 49 45.0	+0.2
ILB				*e*PKPab	sPKPbc	13 49 49.9	+2.1
SONA0	Songino Array	152.56	91	*e*PKPbc	PKPbc	13 49 51.3	-1.9
SONM	Songino Array	152.56	91	PKPbc	PKPbc	13 49 51.3	-1.9
	0.4nm,0.6s,baz=251,slow=4.4,SNR=3.5						

ISN ***03*** *13:36:18.1±0.9, 35°.66N×45°.42E, h0^{km}±3^{km}, ML3.3*
TEH ***03*** *13:36:19.7, 35°.67N×45°.50E, h10^{km}, ML3.4*
ISK ***03*** *13:36:23.3, 35°.78N×45°.48E, h68^{km}±1^{km}, ML3.6/4*
DDA ***03*** *13:36:50.1, 37°.24N×44°.06E, h7^{km}±8^{km}, ML3.0*
ISC 03 13:36:21.1±3.1, 35°.62N±0°.03×45°.45E±0°.04, h14^{km}±23^{km}, n47, σ1^s.43/55, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	Kirkuk	0.93	256	*e*Pg	Pb	13 36 38.0	-1.0
IKRK				AML	AML	13 36 44.5	
	comp=Z,142nm,0.2s						
IKRK				*e*Sg	Sb	13 36 52.0	+0.8
ILIN	Lien	1.43	119	*e*Pn	Pn	13 36 44.8	-2.0
ILIN				IAMB	IAmb	13 37 11.1	
	comp=Z,3µm,0.2s						
IGHG	Ghaleghazi	1.59	144	*e*Pn	Pn	13 36 49.2	+0.2
IGHG				IAMB	IAmb	13 37 16.8	
	comp=Z,7µm,0.4s						
IVIS	Veis	1.59	133	*e*Pn	Pn	13 36 48.2	-0.7
IVIS				IAMB	IAmb	13 37 15.8	
	comp=Z,4µm,0.2s						
MSL	Mosul	2.05	293	*e*Pn	Pn	13 36 54.0	-1.1
MSL				AML	AML	13 36 59.0	
	comp=Z,763nm,0.4s						
MSL				*e*Sn	Sn	13 37 20.0	-0.5
IAZR	Azarshahr	2.09	12	*e*Pn	Pn	13 36 55.1	-0.9
IAZR				IAMB	IAmb	13 37 28.7	
	comp=Z,10µm,0.7s						
YOVA	Hakkari_Yksek	2.17	335	*i* P	Pn	13 36 58.7	+1.7
YOVA	Hakkari_Yksek	2.17	335	*e*Pn	Pn	13 36 58.3	+1.3
CUKT	Cukurca	2.20	318	PN	Pn	13 36 57.9	+0.6
CUKT				SN	Sn	13 37 22.5	-1.9
CUKT	Cukurca	2.20	318	*i* P	Pn	13 36 59.2	+1.8
CUKT				*i* S	Sb	13 37 29.1	+1.3
CUKT	Cukurca	2.20	318	*e*Pn	Pn	13 36 58.5	+1.2
IKOM	Komasi	2.23	130	*e*Pn	Pn	13 36 59.1	+1.3
IKOM				IAMB	IAmb	13 37 32.8	
	comp=Z,0.0nm,0.4s						
IBZA	Bozab	2.29	119	*e*Pn	Pn	13 36 59.3	+0.5
IBZA				IAMB	IAmb	13 37 40.5	
	comp=Z,0.0nm,0.6s						
HSRG	Sareghieh	2.34	99	*e*Pn	Pn	13 37 00.6	+1.1
HSRG				IAMB	IAmb	13 37 41.4	
	comp=N,0.0nm,1.2s						
BHD	Baghdad	2.51	201	*e*Pn	Pn	13 37 01.0	-0.5
BHD				AML	AML	13 37 14.6	
	comp=Z,9µm,0.5s						
BHD				*e*Sn	Sn	13 37 32.0	+0.2
IBDR	Badra	2.54	171	*e*Pn	Pn	13 37 02.0	+0.1
IBDR				AML	AML	13 37 12.8	
	comp=Z,65nm,0.2s						
IBDR				*e*Sn	Sn	13 37 33.0	+0.4
ITBZ	Tabriz	2.66	12	IAMB	IAmb	13 37 11.1	
	comp=Z,1µm,0.5s						
ITBZ				*e*Pn	Pn	13 37 04.5	+0.7
BASK	Baskale_VAN	2.69	335	*i* P	Pb	13 37 09.1	0.0
BASK	Baskale_VAN	2.69	335	*e*Pn	Pb	13 37 08.5	-0.6
IKFM	Kafar-mosalman	2.88	136	IAMB	IAmb	13 37 09.5	
	comp=Z,0.0nm,0.2s						
IKFM				*e*Pn	Pn	13 37 08.1	+1.5
HSAM	Samen	2.95	118	IAMB	IAmb	13 37 57.6	
	comp=N,0.0nm,0.5s						
HSAM				*e*Pn	Pn	13 37 09.4	+1.6
SIRT	Sirnak	3.06	309	PN	Pn	13 37 10.1	+0.9
SIRN	Sırnak	3.08	308	*i* P	Pb	13 37 15.9	+0.2
SIRN				IAML_P			
	comp=Z,1µm,0.1s						
SIRN	Sırnak	3.08	308	*e*Pn	Pb	13 37 14.9	-0.8
IMRD	Marand	3.09	4	*e*Pn	Pn	13 37 10.5	+0.8
IMRD				IAMB	IAmb	13 37 31.5	
	comp=Z,1µm,0.6s						
IKMR	Kamar-syah	3.21	130	*e*Pn	Pn	13 37 13.3	+2.3
IKMR				IAMB	IAmb	13 37 58.9	
	comp=Z,0.0nm,0.6s						
GEVA	Gevas	3.29	325	*i* P	Pn	13 37 14.2	+1.8
GEVA	Gevas	3.29	325	*e*Pn	Pn	13 37 14.1	+1.6
TVAN	Van	3.33	331	*i* P	Pb	13 37 18.2	-1.8
TVAN	Van	3.33	331	*e*Pn	Pb	13 37 17.5	-2.5
VANB	Van	3.39	332	PN	Pn	13 37 11.9	-1.8
VMUR	Van-Muradiye	3.68	337	*i* P	Pn	13 37 21.6	+3.9
VMUR	Van-Muradiye	3.68	337	*e*Pn	Pn	13 37 20.8	+3.1
SRTM	Siirt_Merkez	3.69	311	*i* P	Pn	13 37 18.4	+0.6
SRTM				IAML_P			
	comp=Z,469nm,0.3s						
SRTM	Siirt_Merkez	3.69	311	*e*Pn	Pn	13 37 18.1	+0.3
BTMN	Batman	4.04	305	*i* P	Pn	13 37 24.7	+2.0
BTMN				IAML_P			
	comp=Z,159nm,0.3s						
BTMN	Batman	4.04	305	*e*Pn	Pn	13 37 23.8	+1.1
AGRB	Hanur-Agry	4.40	334	PN	Pn	13 37 28.2	+0.5
MAZI	Mazidag	4.42	296	PN	Pn	13 37 29.1	+1.2
GNI	Garni	4.55	353	PN	Pn	13 37 29.9	+0.2
NSR	Nassriya	4.64	173	*e*Pn	Pn	13 37 31.5	+0.7
NSR				AML	AML	13 37 40.2	
	comp=Z,166nm,0.3s						
NSR				*e*Sn	Sn	13 38 23.5	-0.9
RTB	Rutbah	4.98	240	*e*Pn	Pn	13 37 36.5	+1.0
RTB				AML	AML	13 37 51.2	
	comp=Z,73nm,0.5s						
RTB				*e*Sn	Sn	13 38 31.0	-1.9
IKLH	Kolahrood	5.56	113	*e*Pn	Pn	13 37 45.1	+1.4
IKLH				IAMB	IAmb	13 37 50.5	
	comp=Z,118nm,0.2s						
ZNGN	Zangian	5.70	126	*e*Pn	Pn	13 37 47.3	+1.7
KIC	Kosan Boka	54.39	250	*e*P	P	13 45 47.2	-0.7
	comp=Z,17nm,1.0s						
TIC	Toumodi	54.42	250	*e*P	P	13 45 49.6	+1.5
LIC	Lamto	54.69	250	*e*P	P	13 45 49.3	-0.8
	comp=Z,48nm,1.9s						

MAN 03 13:40:00.9, 11°.97N×125°.76E, h14^{km}, MS3.1, 2C-1D,

Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.48**	**221**	*e*P	Pb	13 40 11.0	-0.2
BESP				*e*S	Sb	13 40 17.6	-0.5
PLP	**Palo**	**1.11**	**224**	⇓*e*P	Pb	13 40 19.7	-2.2
PLP				*i* S	Sb	13 40 32.8	-3.4
CNP	**Catarman**	**1.20**	**297**	*e*P	Pn	13 40 22.1	-1.2
CNP				*e*S	Sb	13 40 35.9	-2.9
OCLP	**Ormoc**	**1.45**	**231**	*e*P	Pn	13 40 26.2	-0.6
OCLP				*e*S	Sb	13 40 46.3	+0.2
MSLP	**Maasin**	**2.03**	**206**	*e*P	Pn	13 40 35.8	+1.1
MSLP				*e*S	Sb	13 41 03.1	+0.4
SCPH	**Surigao**	**2.19**	**187**	⇑*e*P	Pn	13 40 37.2	+0.3
PVCP	**Virac**	**2.25**	**316**	*e*P	Pb	13 40 40.4	-1.0
RCP	**Roxas**	**2.98**	**262**	⇑*e*P	Pn	13 40 48.8	+0.9

IDC 03 13:40:54.6±2.8, 0°.44N×123°.46E, h257^{km}±27^{km}, mb2.9/5, mb1 2.9/6, mb1mx2.7/53, mbtmp3.4/6, Error ellipse: s-maj=82.9km s-min=12.4km az=67.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.55**	**173**	P	P	13 44 53.2	+0.5
	0.1nm,0.3s,baz=355,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**22.89**	**153**	P	P	13 45 35.6	-0.7
	0.5nm,0.3s,baz=337,slow=9.8,SNR=41						
ASAR	**Alice Springs**	**26.02**	**158**	P	P	13 46 04.8	+0.3
	0.2nm,0.4s,baz=332,slow=8.4,SNR=13						
ASAR				PcP	PcP	13 49 25.6	+0.1
	0.1nm,0.5s,baz=347,slow=3.0,SNR=3.3						
ASAR				ScP	ScP	13 52 40.1	-0.5
	0.2nm,0.9s,baz=336,slow=2.8,SNR=3.5						
SONM	**Songino Array**	**49.48**	**345**	P	P	13 49 19.9	+0.7
	0.2nm,0.5s,baz=162,slow=5.7,SNR=2.9						
MKAR	**Makanchi Array**	**58.48**	**328**	P	P	13 50 23.1	-0.9
	0.2nm,0.3s,baz=124,slow=6.6,SNR=11						
KURBB	**Kurchatov Arra**	**62.82**	**330**	P	P	13 50 53.0	0.0
	0.5nm,0.8s,baz=125,slow=5.9,SNR=3.9						

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*ISCJB **03** 13:46:43.9±0.4, 42°.70N±0°.04×143°.27E±0°.05, h119^{km}±2^{km}, mb3.6/12, Error ellipse: s-maj=6.7km s-min=5.3km az=144.0*

*JMA **03** 13:46:45.8±0.1, 42°.73N×143°.24E, h104^{km}±1^{km}, M3.2*

*IDC **03** 13:46:46.5±1.3, 42°.79N×143°.32E, h127^{km}±9^{km}, mb3.3/12, mb1 3.4/13, mb1mx3.2/69, mbtmp3.7/13, Error ellipse: s-maj=21.3km s-min=13.9km az=90.0*

ISC 03 13:46:44.9±0.7, 42°.70N±0°.05×143°.28E±0°.04, h113^{km}±5^{km}, n38, σ0^{s}.96/47, mb3.6/12, 4C-9D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCH	**Churui**	**0.10**	**145**	⇑P	**Pn**	**13 47 00.3**	**-0.2**
JCH				S	**Sn**	**13 47 10.9**	**-1.2**
JTHR	**Tokachihiroo**	**0.41**	**178**	⇑P	**Pn**	**13 47 01.5**	**0.0**
JTHR				S	**Sn**	**13 47 13.2**	**-0.8**
JOB	**Onbets**	**0.46**	**63**	⇓P	**Pn**	**13 47 02.2**	**+0.4**
JOB				S	**Sn**	**13 47 14.7**	**+0.2**
JNBK	**Urakawa-nobuka**	**0.57**	**223**	⇑P	**Pn**	**13 47 03.2**	**+0.6**
JNBK				*e*S	**Sn**	**13 47 16.4**	**+0.6**
JBT2	**Biratori 2**	**0.68**	**277**	⇓P	**Pn**	**13 47 03.2**	**-0.2**
JBT2				*e*S	**Sn**	**13 47 16.9**	**-0.4**
JFR	**Furan**	**0.69**	**313**	*e*S	**Sn**	**13 47 16.4**	**-1.1**
JEM	**Erimo**	**0.69**	**188**	⇑P	**Pn**	**13 47 04.4**	**+1.0**
JAR	**Ashorobuto**	**0.70**	**31**	⇓P	**Pn**	**13 47 03.6**	**+0.1**
JIAM	**Iburiatsuma**	**1.01**	**266**	P	**Pn**	**13 47 07.9**	**+1.6**
JIAM				*e*S	**Sn**	**13 47 25.2**	**+2.6**
JAK	**Akkeshi**	**1.08**	**74**	P	**Pn**	**13 47 07.0**	**-0.1**
JAK				S	**Sn**	**13 47 24.0**	**0.0**
JAB	**Ashibetsu**	**1.12**	**316**	⇓P	**Pn**	**13 47 07.4**	**-0.1**
JAB				*e*S	**Sn**	**13 47 24.8**	**+0.1**
JKK2	**Kamakawa 2**	**1.24**	**342**	⇓P	**Pn**	**13 47 08.8**	**-0.1**
JMP	**Maruseppu**	**1.31**	**2**	⇓P	**Pn**	**13 47 09.8**	**+0.1**
JMP				*e*S	**Sn**	**13 47 28.4**	**-0.1**
JTKR	**Abashiri--Toko**	**1.35**	**20**	⇓P	**Pn**	**13 47 10.1**	**0.0**
JTKR				*e*S	**Sn**	**13 47 29.0**	**-0.2**
JEW	**Eniwo**	**1.36**	**277**	⇓P	**Pn**	**13 47 10.2**	**0.0**
JEW				*e*S	**Sn**	**13 47 28.8**	**-0.6**
ASAJ	**Asahikawa**	**1.50**	**341**	P	**Pn**	**13 47 12.4**	**+0.5**
	40nm,0.3s,baz=206,slow=8.8,SNR=277						
ASAJ				S	**Sn**	**13 47 34.8**	**+2.4**
	5.3nm,0.3s,baz=150,slow=25,SNR=4.8						
JHR	**Hokuryu**	**1.54**	**313**	⇓P	**Pn**	**13 47 12.5**	**+0.1**
JHR				*e*S	**Sn**	**13 47 33.9**	**+0.6**
JRA	**Rausu**	**1.83**	**47**	P	**Pn**	**13 47 16.3**	**+0.5**
JRA				*e*S	**Sn**	**13 47 41.4**	**+2.0**
JKB	**Kayabe**	**1.86**	**245**	P	**Pn**	**13 47 15.5**	**-0.7**
JKB				*e*S	**Sn**	**13 47 38.7**	**-1.3**
MJAR	**Matsushiro Arr**	**7.29**	**214**	P	**Pn**	**13 48 29.9**	**+1.2**
	0.1nm,0.3s,baz=32,slow=11,SNR=6.4						
SONM	**Songino Array**	**26.29**	**294**	P	**P**	**13 52 10.8**	**+1.0**
	0.5nm,0.5s,baz=78,slow=9.7,SNR=4.3						
TIXI	**Tiksi**	**29.88**	**351**	P	**P**	**13 52 39.7**	**-1.5**
	2.5nm,0.3s,baz=120,slow=10,SNR=9.4						
H11N2	**WAKE ISLAND Hy**	**30.34**	**132**	T	T	14 24 27.2	
	baz=326,slow=75,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**30.35**	**132**	T	T	14 24 22.2	
	baz=326,slow=75,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**30.36**	**132**	T	T	14 24 26.6	
	baz=326,slow=75,SNR=3.2						
H11S1	**WAKE ISLAND Hy**	**31.23**	**133**	T	T	14 25 36.6	
	baz=326,slow=76,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**31.23**	**133**	T	T	14 25 31.0	
	baz=326,slow=76,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**31.25**	**133**	T	T	14 25 38.2	
	baz=326,slow=76,SNR=4.4						
ZALV	**Zalesovo Beam**	**39.38**	**307**	P	**P**	**13 54 03.5**	**+0.4**
	0.4nm,0.3s,baz=69,slow=7.9,SNR=2.9						
MKAR	**Makanchi Array**	**42.56**	**297**	P	**P**	**13 54 28.9**	**-0.4**
	0.2nm,0.4s,baz=86,slow=10.0,SNR=4.6						
KURBB	**Kurchatov Arra**	**43.85**	**304**	P	**P**	**13 54 39.5**	**0.0**
	2.7nm,0.5s,baz=72,slow=8.8,SNR=17						
ILAR	**Eielson Array**	**43.99**	**35**	P	**P**	**13 54 40.0**	**-0.5**
	0.5nm,0.9s,baz=255,slow=5.5,SNR=4.8						
BVAR	**Borovoye Array**	**47.97**	**309**	P	**P**	**13 55 11.8**	**-0.1**
	0.7nm,0.4s,baz=70,slow=9.0,SNR=8.4						
INK	**Inuvik**	**48.72**	**29**	P	**P**	**13 55 17.3**	**-0.1**
	0.4nm,0.5s,baz=309,slow=3.3,SNR=5.1						
WRA	**Warramunga Arr**	**62.87**	**189**	P	**P**	**13 56 58.7**	**-0.1**
	0.3nm,0.8s,baz=7.8,slow=6.3,SNR=3.5						
FINES	**FINESS Array B**	**64.49**	**332**	P	**P**	**13 57 08.0**	**-0.9**
	0.4nm,0.4s,baz=49,slow=5.8,SNR=5.5						
ASAR	**Alice Springs**	**66.60**	**189**	P	**P**	**13 57 25.2**	**+2.3**
	0.2nm,0.7s,baz=2.0,slow=5.6,SNR=3.2						
HFS	**Hagfors**	**69.52**	**336**	P	**P**	**13 57 40.2**	**-0.6**
	0.5nm,0.5s,baz=50,slow=5.0,SNR=4.1						

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*IDC **03** 13:47:15.8±1.8, 9°.13N×127°.01E, h0^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.2/57, mbtmp3.4/4, ML3.9/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/17, Error ellipse: s-maj=44.2km s-min=26.4km az=82.0*

*ISCJB **03** 13:47:21.6±1.3, 9°.04N±0°.04×125°.90E±0°.05, h6^{km}±7^{km}, mb3.1/3, Error ellipse: s-maj=8.8km s-min=5.4km az=155.8*

*MAN **03** 13:47:24.0, 8°.98N×125°.67E, h13^{km}, MS3.8*

ISC 03 13:47:20.3±1.3, 9°.11N±0°.03×125°.97E±0°.06, h17^{km}±8^{km}, n17, σ2^{s}.61/26, mb3.1/3, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.38**	**248**	*e*P	**Pg**	**13 47 27.2**	**-1.0**
BUTP				*e*S	**Sg**	**13 47 31.1**	**-2.4**
SCPH	**Surigao**	**0.82**	**324**	⇓*e*P	**Pn**	**13 47 39.4**	**+2.3**
BIPH	**Bislig**	**1.00**	**157**	⇓*e*P	**Pg**	**13 47 41.1**	**+1.4**
BIPH				*e*S	**Sn**	**13 47 51.9**	**-1.4**
CGP	**Cagayan de Oro**	**1.42**	**243**	⇓*i*P	**Pn**	**13 47 43.7**	**-1.8**
CGP				*i* S	**Sn**	**13 48 00.3**	**-3.5**
MSLP	**Maasin**	**1.50**	**313**	*e*P	**Pg**	**13 47 48.6**	**-0.6**
MSLP				*e*S	**Sg**	**13 48 10.1**	**+1.4**
BUKP	**Musuan**	**1.52**	**216**	*e*P	**Pn**	**13 47 46.0**	**-0.8**
BUKP				*e*S	**Sn**	**13 48 08.4**	**+2.1**
DAV	**Davao City (W)**	**2.07**	**191**	Pn	**Pb**	**13 47 57.6**	**+0.2**
	26nm,0.3s,baz=65,slow=14,SNR=2.0						
DAV				Sn	**Sg**	**13 48 31.6**	**+4.6**
	69nm,0.3s,baz=90,slow=20,SNR=4.3						
DAV				LR	LR	13 49 00.4	
	comp=Z,114nm,19.3s,baz=318,slow=42						
DMPH	**Davao City--Mi**	**2.07**	**193**	*e*P	**Pg**	**13 48 00.3**	**+0.1**
MATI	**Mati**	**2.17**	**173**	*e*P	**Pg**	**13 47 59.6**	**-2.5**
KCP	**Kidapawan**	**2.27**	**203**	⇓*e*P	**Pn**	**13 47 57.9**	**+0.8**
KCP				*e*S	**Sb**	**13 48 33.2**	**+4.5**
OCLP	**Ormoc**	**2.35**	**325**	*e*P	**Pb**	**13 48 02.6**	**+0.3**
OCLP				*e*S	**Sb**	**13 48 30.5**	**-0.5**
CTBH	**Cotabato--PC H**	**2.54**	**222**	⇑*i*P	**Pn**	**13 48 02.8**	**+2.0**
PAGZ	**Pagadian**	**2.86**	**244**	*e*P	**Pn**	**13 48 06.6**	**+1.5**
PAGZ				*e*S	**Sn**	**13 48 41.8**	**+2.6**
DDMP	**Don Marcelino,**	**3.00**	**185**	*e*P	**Sn**	**13 48 40.0**	**-2.7**
WRA	**Warramunga Arr**	**30.03**	**164**	P	**P**	**13 53 24.1**	**-4.5**
	0.4nm,1.1s,baz=341,slow=9.6,SNR=2.7						
ASAR	**Alice Springs**	**33.49**	**167**	P	**P**	**13 53 55.2**	**-3.8**
	0.1nm,0.7s,baz=341,slow=7.3,SNR=3.4						
MKAR	**Makanchi Array**	**52.77**	**323**	P	**P**	**13 56 37.2**	**+2.6**
	0.6nm,0.9s,baz=114,slow=7.0,SNR=4.2						

IDC 03 13:51:30.5±5.2, 29°.03N×141°.24E, h0^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.1/55, mbtmp3.2/3, ML2.6/1, Error ellipse: s-maj=317.7km s-min=33.8km az=81.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**7.91**	**342**	Pn	Pn	13 53 26.5	-0.4
	0.1nm,0.3s,baz=162,slow=12,SNR=6.7						
WRA	**Warramunga Arr**	**49.14**	**189**	P	P	14 00 20.1	-0.1
	0.2nm,0.5s,baz=7.3,slow=8.4,SNR=7.6						
ASAR	**Alice Springs**	**52.87**	**188**	P	P	14 00 48.1	-0.1
	0.2nm,0.9s,baz=2.7,slow=6.5,SNR=2.7						

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*IDC **03** 13:51:32.7±1.8, 60°.18N×24°.98E, h0^{km}, mb1 3.1/3, mb1mx2.8/56, mbtmp3.0/3, ML2.1/3, Error ellipse: s-maj=20.2km s-min=8.0km az=147.0*

*HEL **03** 13:51:33.1±0.1, 60°.21N×24°.84E, h1^{km}, ML1.7, ML1.6(UPP), Confirmed Earthquake*

*UPP **03** 13:51:34.4±2.1, 60°.16N×24°.69E, h0^{km}, ML1.6, Suspected explosion*

ISC 03 13:51:31.9±1.2, 60°.21N±0°.03×24°.91E±0°.03, h5^{km}±9^{km}, n31, σ1^{s}.37/54, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.26**	**271**	*e*P	**Pg**	**13 51 36.8**	**-0.1**
MEF				*e*S	**Sg**	**13 51 39.7**	**-0.6**
NUR	**Nurmijrvi**	**0.32**	**336**	*e*P	**Pg**	**13 51 38.7**	**+0.5**
NUR				*e*S	**Sg**	**13 51 42.9**	**+0.4**
PVF	**Pernaja**	**0.58**	**54**	*e*P	**Pb**	**13 51 43.9**	**-0.7**
PVF				*e*S	**Sb**	**13 51 51.7**	**-1.4**
VJF	**Virojoki**	**1.35**	**75**	*e*P	**Pn**	**13 51 57.6**	**+0.1**
VJF				*e*S	**Sn**	**13 52 15.8**	**+0.1**
VJF				MSG		13 52 20.0	
	comp=Z,8.6nm,0.1s						
FIA0	**FINESS Array S**	**1.36**	**24**	*e*P	**Pb**	**13 51 58.0**	**+0.1**
FIA0				*e*S	**Sb**	**13 52 15.8**	**+0.3**
FINES	**FINESS Array B**	**1.36**	**24**	Pg	**Pb**	**13 51 58.0**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=203,slow=16,SNR=87						
FINES				Lg	Lg	13 52 15.7	
	comp=Z,0.5nm,0.3s,baz=204,slow=27,SNR=3.9						
FIA1	**FINESS Array S**	**1.36**	**24**	*e*P	**Pb**	**13 51 58.0**	**+0.2**
MTSE	**Matsula**	**1.60**	**201**	*e*P	**Pn**	**13 52 01.1**	**+0.2**
MTSE				*e*S	**Sn**	**13 52 21.5**	**-0.4**
RAF	**Rauma**	**1.75**	**299**	*e*P	**Pn**	**13 52 03.8**	**+0.9**
RAF				*e*S	**Sn**	**13 52 26.0**	**+0.5**
RAF				MSG		13 52 30.5	
	comp=Z,2.3nm,0.1s						
KEF	**Keuruu**	**1.96**	**359**	*e*PG	**Pb**	**13 52 08.4**	**+0.3**
KEF				*e*S	**Sb**	**13 52 32.9**	**+0.1**
KEF				MSG		13 52 37.9	
	comp=Z,5.9nm,0.1s						
VSU	**Vasula**	**1.99**	**151**	*e*PG	**Pg**	**13 52 09.4**	**-0.6**
VSU				*e*S	**Sb**	**13 52 34.0**	**+0.4**
KAF	**Kangasniemi**	**2.02**	**19**	*e*PG	**Pb**	**13 52 09.5**	**+0.3**
KAF				*e*S	**Sb**	**13 52 33.9**	**-0.7**
KAF				MSG		13 52 39.5	
	comp=Z,2.8nm,0.1s						
AAL	**Aland**	**2.46**	**271**	P	**Pn**	**13 52 13.6**	**+1.1**
AAL				S	**Sb**	**13 52 45.6**	**-1.4**
AAL	**Aland**	**2.46**	**271**	*e*P	**Pn**	**13 52 13.7**	**+1.1**
AAL				*e*S	**Sn**	**13 52 43.5**	**+0.6**
SUF	**Sumiainen**	**2.58**	**13**	*e*PB	**Pb**	**13 52 17.6**	**-1.0**
SUF				*e*S	**Sn**	**13 52 48.3**	**+2.2**
SUF				MSG		13 52 53.4	
	comp=Z,4.1nm,0.1s						
VAF	**Ylistaro**	**3.03**	**340**	*e*P	**Pn**	**13 52 22.4**	**+1.9**
VAF				*e*PB	**Pb**	**13 52 24.4**	**-1.9**
VAF				*e*SB	**Sb**	**13 53 02.4**	**-1.2**
VAF				MSG		13 53 05.5	
	comp=Z,1.1nm,0.1s						
GRAU	**Graesoe**	**3.18**	**275**	P	**Pn**	**13 52 23.2**	**+0.7**
GRAU				S	**Sn**	**13 53 01.4**	**+0.8**
GRAU	**Graesoe**	**3.18**	**275**	*e*P	**Pn**	**13 52 23.2**	**+0.7**
GRAU				*e*S	**Sn**	**13 53 01.4**	**+0.8**
NRTU	**Norrtaelje**	**3.21**	**263**	P	**Pn**	**13 52 25.0**	**+2.1**
NRTU				S	**Sn**	**13 53 02.8**	**+1.4**
NRTU	**Norrtaelje**	**3.21**	**263**	*e*P	**Pn**	**13 52 25.0**	**+2.1**
NRTU				*e*S	**Sn**	**13 53 02.8**	**+1.4**
FIBU	**Brunna**	**3.80**	**269**	P	**Pn**	**13 52 33.2**	**+2.1**
FIBU				S	**Sn**	**13 53 16.5**	**+0.4**
BACU	**Backbrunna**	**3.93**	**268**	P	**Pn**	**13 52 34.6**	**+1.8**
BACU	**Backbrunna**	**3.93**	**268**	*e*P	**Pn**	**13 52 34.6**	**+1.8**
ARNU	**Arnoeviken**	**3.96**	**295**	P	**Pn**	**13 52 34.9**	**+1.6**
ARNU	**Arnoeviken**	**3.96**	**295**	*e*P	**Pn**	**13 52 34.9**	**+1.6**
HUDU	**Hudiksvall**	**4.09**	**295**	P	**Pn**	**13 52 36.6**	**+1.6**
HUDU	**Hudiksvall**	**4.09**	**295**	*e*P	**Pn**	**13 52 36.6**	**+1.6**
HEMU	**Hemsoen**	**4.12**	**310**	P	**Pn**	**13 52 38.1**	**+2.7**
HFS	**Hagfors**	**5.60**	**274**	Pn	**Pn**	**13 52 56.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=108,slow=14,SNR=4.1						
HFS				Sn	**Sn**	**13 53 58.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=87,slow=29,SNR=4.1						
HFS				Lg	Lg	13 54 20.3	
	comp=Z,0.2nm,0.3s,baz=90,slow=32,SNR=5.1						
NOA	**NORSAR Array B**	**6.79**	**283**	Pn	**Pn**	**13 53 11.6**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=100,slow=7.6,SNR=3.8						
NOA				Sn	**Sn**	**13 54 27.3**	**-2.4**
	comp=Z,0.0nm,0.3s,baz=126,slow=19,SNR=2.5						
NOA				Lg	Lg	13 54 58.7	
	comp=Z,0.0nm,0.3s,baz=108,slow=18,SNR=2.9						
ARCES	**ARCESS Array B**	**9.36**	**1**	Pn	**Pn**	**13 53 47.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=5.2						
ARCES				Sn	**Sn**	**13 55 28.8**	**-4.0**
	comp=Z,0.0nm,0.3s,baz=179,slow=23,SNR=3.3						

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*ISCJB **03** 14:03:53.1±0.6, 35°.51N±0°.04×140°.13E±0°.05, h74^{km}±4^{km}, mb3.2/3, Error ellipse: s-maj=7.7km s-min=5.1km az=148.0*

*JMA **03** 14:03:53.5±0.2, 35°.59N×140°.11E, h66^{km}±2^{km}, M2.8*

*IDC **03** 14:03:56.6±2.9, 35°.35N×139°.85E, h75^{km}±17^{km}, mb2.9/3, mb1 3.2/5, mb1mx3.0/42, mbtmp3.6/5, Error ellipse: s-maj=53.5km s-min=7.0km az=66.0*

ISC 03 14:03:54.4±1.0, 35°.49N±0°.05×140°.11E±0°.05, h65^{km}±8^{km}, n23, σ1^{s}.16/31, mb3.2/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.10**	**133**	P	**Pn**	**14 04 04.1**	**+0.1**
JCN				S	**Sn**	**14 04 12.5**	**+1.5**
JSMT	**Sammumatsuo**	**0.32**	**61**	P	**Pn**	**14 04 04.6**	**-0.5**
TOK	**Tokyo**	**0.35**	**305**	*e*S	**Sn**	**14 04 14.7**	**+1.4**
BSO3	**Boso 3**	**0.76**	**154**	P	**Pn**	**14 04 09.4**	**0.0**
JOD2	**Odawara 2**	**0.86**	**255**	P	**Pn**	**14 04 10.7**	**-0.2**
JOD2				S	**Sn**	**14 04 23.1**	**-0.1**
JIM2	**Oshima 3**	**0.95**	**216**	P	**Pn**	**14 04 11.7**	**-0.3**
JIM2				S	**Sn**	**14 04 25.4**	**+0.3**
JAG	**Ashikaga**	**1.08**	**331**	P	**Pn**	**14 04 12.1**	**-1.5**
BSO1	**Boso 1**	**1.10**	**139**	P	**Pn**	**14 04 13.0**	**-0.3**
BSO1				*e*S	**Sn**	**14 04 29.2**	**+1.7**
JRY	**Ryogami san**	**1.11**	**299**	P	**Pn**	**14 04 13.9**	**-0.3**
JFNN	**Fujinakano**	**1.20**	**256**	P	**Pn**	**14 04 15.3**	**+0.1**
JFNN				S	**Sn**	**14 04 31.4**	**+0.6**
JIZS	**Izushimoda**	**1.27**	**233**	P	**Pn**	**14 04 16.1**	**0.0**
JIZS				*e*S	**Sn**	**14 04 32.5**	**+0.1**
JYN	**Shimob**	**1.28**	**271**	P	**Pn**	**14 04 16.1**	**-0.2**
JKT	**Katashina**	**1.45**	**332**	P	**Pn**	**14 04 17.0**	**-1.7**
JKT				*e*S	**Sn**	**14 04 35.0**	**-1.9**
MJAR	**Matsushiro Arr**	**1.86**	**305**	P	**Pn**	**14 04 23.9**	**-0.2**
	2.0nm,0.3s,baz=141,slow=15,SNR=117						
MJAR				S	**Sn**	**14 04 47.0**	**+0.3**
	0.8nm,0.3s,baz=158,slow=22,SNR=6.3						
MAT	**Matsushiro**	**1.87**	**305**	P	**Pn**	**14 04 24.0**	**-0.2**
MAT				S	**Sn**	**14 04 45.7**	**-1.1**
JHJ	**Hachijo jima 2**	**2.38**	**187**	P	**Pn**	**14 04 31.7**	**+0.6**
	12nm,0.3s,baz=44,slow=18,SNR=4.5						
JHJ				S	**Sn**	**14 04 59.0**	**-0.1**
	41nm,0.3s,baz=251,slow=24,SNR=4.8						
JCJ	**Chichijima**	**8.55**	**167**	P	**Pn**	**14 05 55.5**	**-0.1**
	3.9nm,0.3s,baz=279,slow=19,SNR=3.8						
JCJ				S	**Sn**	**14 07 26.4**	**-4.1**
	2.1nm,0.3s,baz=273,slow=18,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	**28.33**	**117**	T	T	14 39 13.6	
	baz=310						
H11N1	**WAKE ISLAND Hy**	**28.34**	**117**	T	T	14 39 25.5	
	baz=310						
H11N3	**WAKE ISLAND Hy**	**28.35**	**117**	T	T	14 39 22.3	
	baz=310						
MKAR	**Makanchi Array**	**44.06**	**303**	P	**P**	**14 11 56.9**	**+1.1**
	0.2nm,0.7s,baz=92,slow=7.1,SNR=3.8						
KURBB	**Kurchatov Arra**	**46.14**	**309**	P	**P**	**14 12 12.1**	**0.0**
	0.8nm,1.0s,baz=82,slow=7.6,SNR=4.6						
WRA	**Warramunga Arr**	**55.40**	**187**	P	**P**	**14 13 21.8**	**-0.3**
	0.1nm,0.4s,baz=6.1,slow=7.6,SNR=5.1						

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*ISCJB **03** 14:04:16.9±0.2, 43°.20N±0°.01×0°.23W±0°.01, h13^{km}±1^{km}, Error ellipse: s-maj=2.0km s-min=1.7km az=168.3*

*MRB **03** 14:04:18.9±0.5, 43°.06N×0°.23W, h5^{km}±6^{km}, ML2.6/11, Error ellipse: s-maj=2.2km s-min=1.2km az=184.0*

*STR **03** 14:04:19.3±0.3, 43°N±3°×°±°, h2^{km}, M2.7/6, MLv2.7/6*

*MDD **03** 14:04:19.3±0.3, 43°.08N×0°.21W, h2^{km}±3^{km}, mbLg2.9/24, Error ellipse: s-maj=3.2km s-min=1.8km az=1.0, PRXIMO*

*LDG **03** 14:04:19.1±0.1, 43°.08N×0°.21W, h2^{km}, Md3.2/5, Ml3.5/26, Error ellipse: s-maj=1.2km s-min=1.1km az=147.0*

*INMG **03** 14:04:21.3±1.8, 42°.96N×0°.23W, h11^{km}±6^{km}, ML2.6, Error ellipse: s-maj=3.8km s-min=2.7km az=21.0*

ISC 03 14:04:18.0±0.8, 43°.11N±0°.02×0°.22W±0°.01, h15^{km}±5^{km}, n137, σ1^{s}.41/236, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYLO	**Lourdes**	**0.13**	**93**	Pg	**Pg**	**14 04 21.9**	**+0.1**
PYLO				Sg	**Sg**	**14 04 24.0**	**-0.2**
PYLO	**Lourdes**	**0.13**	**93**	P	**Pg**	**14 04 21.4**	**-0.3**
PYLO				S	**Sg**	**14 04 23.6**	**-0.6**
	973nm,0.2s						
REYF	**Montagne du Re**	**0.13**	**254**	Pg	**Pg**	**14 04 21.4**	**-0.4**
LABF	**Labassere**	**0.23**	**105**	Pg	**Pg**	**14 04 22.8**	**-0.4**
VIEF	**Viey**	**0.29**	**141**	Pg	**Pg**	**14 04 23.7**	**-0.4**
ETSF	**Etsaut**	**0.32**	**230**	*e*Pg	**Pg**	**14 04 24.6**	**-0.2**
ETSF				*e*Sg	**Sg**	**14 04 28.4**	**-1.0**
	2μm,0.2s						
ETSF	**Etsaut**	**0.32**	**230**	Pg	**Pg**	**14 04 24.6**	**-0.2**
ETSF				Lg	Lg	14 04 28.4	
	1μm,0.2s						
ETSF	**Etsaut**	**0.32**	**230**	Pg	**Pg**	**14 04 24.6**	**-0.2**
ETSF				Sg	**Sg**	**14 04 28.4**	**-1.0**
ATE	**Arette**	**0.35**	**267**	Pg	**Pb**	**14 04 25.4**	**-0.5**
	37nm,0.1s,SNR=7.9						
ATE				Lg	Lg	14 04 30.7	
	428nm,0.1s,SNR=7.9						
ATE	**Arette**	**0.35**	**267**	P	**Pb**	**14 04 25.4**	**-0.5**
ATE				S	**Sb**	**14 04 30.8**	**-0.4**
	463nm,0.2s						
EPF	**Esparros**	**0.42**	**100**	*e*Pg	**Pb**	**14 04 26.8**	**-0.3**
EPF				*e*Sg	**Sb**	**14 04 33.0**	**-0.3**
	354nm,0.2s						
EPF	**Esparros**	**0.42**	**100**	Pg	**Pb**	**14 04 26.8**	**-0.3**
EPF				Lg	Lg	14 04 33.0	
	177nm,0.2s						
EPF	**Esparros**	**0.42**	**100**	Pg	**Pb**	**14 04 26.8**	**-0.3**
EPF				Sg	**Sb**	**14 04 33.0**	**-0.3**
URDF	**Urds**	**0.43**	**321**	Pg	**Pb**	**14 04 28.5**	**+1.3**
URDF				Sg	**Sb**	**14 04 34.6**	**+1.1**
FMON	**Montouss**	**0.47**	**95**	P	**Pb**	**14 04 28.1**	**+0.1**
FMON				S	**Sb**	**14 04 34.9**	**+0.2**
	130nm,0.2s						
ECHI	**Chisagues Biel**	**0.54**	**145**	Pg	**Pg**	**14 04 28.3**	**-0.4**
	48nm,0.1s,SNR=7.9						
ECHI				Lg	Lg	14 04 34.9	
	337nm,0.1s,SNR=7.9						
ECHI	**Chisagues Biel**	**0.54**	**145**	P	**Pg**	**14 04 28.2**	**-0.4**
ECHI				S	**Sg**	**14 04 35.2**	**-0.7**
	577nm,0.2s						
SJPF	**Ste Jean**	**0.73**	**271**	*e*Pg	**Pb**	**14 04 32.9**	**+0.4**
SJPF				*e*Sg	**Sb**	**14 04 42.4**	**+0.1**
	145nm,0.2s						
SJPF	**Ste Jean**	**0.73**	**271**	Pg	**Pb**	**14 04 32.9**	**+0.4**
SJPF				Lg	Lg	14 04 42.4	
	72nm,0.2s						
SJPF	**Ste Jean**	**0.73**	**271**	Pg	**Pb**	**14 04 32.9**	**+0.4**
SJPF				Sg	**Sb**	**14 04 42.4**	**+0.1**
MELF	**Melles**	**0.76**	**108**	Pg	**Pg**	**14 04 32.3**	**-0.5**
MELF				Sg	**Sg**	**14 04 42.9**	**0.0**
OSSF	**Osses**	**0.77**	**282**	Pg	**Pg**	**14 04 32.7**	**-0.3**
OSSF				Sg	**Sb**	**14 04 45.1**	**+1.7**
IELO	**Elcoad**	**0.79**	**251**	Pg	**Pb**	**14 04 33.6**	**+0.2**
	8.4nm,0.1s,SNR=7.9						
IELO				Lg	Lg	14 04 44.8	
	272nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**0.79**	**251**	Pg	**Pb**	**14 04 33.6**	**+0.2**
EORO	**Oroz-Betelu**	**0.82**	**255**	Pg	**Pn**	**14 04 35.5**	**+0.4**
	3.6nm,0.1s,SNR=7.9						
EORO				Lg	Lg	14 04 45.5	
	215nm,0.2s,SNR=7.9						
CARA	**Val d'Aran**	**0.86**	**117**	P	**Pg**	**14 04 34.6**	**-0.2**
CARA				S	**Sb**	**14 04 46.9**	**+0.8**
	251nm,0.3s						
TERF	**Tercis-les-Bai**	**0.86**	**312**	Pg	**Pn**	**14 04 36.5**	**+0.9**
TERF				Sg	**Sn**	**14 04 48.9**	**+1.0**
EALK	**Alkurruntz**	**0.95**	**277**	Pg	**Pb**	**14 04 36.8**	**+0.6**
	12nm,0.2s,SNR=26						
EALK				Lg	Lg	14 04 50.3	
	118nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**0.95**	**277**	Pg	**Pb**	**14 04 36.6**	**+0.5**
EALK				Sg	**Sb**	**14 04 49.9**	**+1.4**
EALK	**Alkurruntz**	**0.95**	**277**	Pg	**Pb**	**14 04 36.8**	**+0.6**
MLS	**Moulis**	**0.98**	**98**	Pg	**Pb**	**14 04 37.0**	**+0.4**
MLS				Lg	Lg	14 04 50.9	
	40nm,0.3s						
MLS	**Moulis**	**0.98**	**98**	Pg	**Pn**	**14 04 37.6**	**+0.5**
MLS	**Moulis**	**0.98**	**98**	P	**Pb**	**14 04 37.0**	**+0.4**
MLS				S	**Sb**	**14 04 50.9**	**+1.6**
	40nm,0.3s						
EARA	**Aranguren**	**1.05**	**252**	Pg	**Pn**	**14 04 40.0**	**+1.8**
	4.5nm,0.1s,SNR=7.9						
EARA				Lg	Lg	14 04 54.7	
	105nm,0.2s,SNR=7.9						
EARA	**Aranguren**	**1.05**	**252**	Pn	**Pn**	**14 04 39.6**	**+1.5**
CTRE	**Tremp**	**1.07**	**136**	Pg	**Pg**	**14 04 38.4**	**-0.4**
CTRE				Lg	Lg	14 04 52.9	
	113nm,0.3s						
CTRE	**Tremp**	**1.07**	**136**	P	**Pg**	**14 04 38.4**	**-0.4**
CTRE				S	**Sb**	**14 04 53.0**	**+0.8**
	113nm,0.3s						
CEST	**Esterri de Car**	**1.20**	**114**	Pg	**Pg**	**14 04 40.6**	**-0.6**
CEST				Lg	Lg	14 04 56.9	
	90nm,0.3s						
CEST	**Esterri de Car**	**1.20**	**114**	P	**Pg**	**14 04 40.6**	**-0.6**
CEST				S	**Sb**	**14 04 57.0**	**+1.2**
	90nm,0.3s						
CSOR	**Sort**	**1.24**	**126**	Pg	**Pn**	**14 04 41.6**	**+0.8**
	5.6nm,0.2s,SNR=40						
CSOR				Lg	Lg	14 04 57.5	
	128nm,0.3s,SNR=20						
CSOR	**Sort**	**1.24**	**126**	P	**Pg**	**14 04 41.4**	**-0.5**
CSOR				S	**Sn**	**14 04 58.3**	**+1.0**
	174nm,0.3s						
ESAC	**San Caprasio**	**1.40**	**188**	Pg	**Pg**	**14 04 44.8**	**-0.1**
	170nm,0.3s,SNR=28						
ESAC				Lg	Lg	14 05 03.4	
	1μm,0.3s,SNR=7.9						
CAVN	**Les Avellanes**	**1.42**	**149**	Pn	**Pn**	**14 04 44.0**	**+0.8**
CAVN				Sn	**Sb**	**14 05 03.0**	**+1.0**
	245nm,0.2s						
CAVN	**Les Avellanes**	**1.42**	**149**	P	**Pn**	**14 04 44.0**	**+0.8**
CAVN				S	**Sb**	**14 05 03.0**	**+1.0**
	490nm,0.2s						
CORG	**Organya**	**1.44**	**127**	Pn	**Pb**	**14 04 44.6**	**+0.2**
CORG				Sn	**Sg**	**14 05 04.1**	**-0.2**
	0.4nm,0.3s						
CORG	**Organya**	**1.44**	**127**	P	**Pb**	**14 04 44.6**	**+0.2**
CORG				S	**Sg**	**14 05 04.2**	**-0.2**
MONQ	**Montcuq**	**1.63**	**39**	Pg	**Pg**	**14 04 50.0**	**+0.7**
MONQ				Sg	**Sg**	**14 05 11.8**	**+1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FNEB	Nbias	1.72	96	Pn	Pg	14 04 50.2	-0.9
FNEB				Sg	Sg	14 05 14.5	+1.0
CLLI	Llivia	1.73	110	Pn	Pg	14 04 51.4	+0.1
	20nm,0.3s,SNR=28						
CLLI				Lg	Lg	14 05 13.9	
	39nm,0.2s,SNR=7.9						
CLLI	Llivia	1.73	110	P	Pb	14 04 49.8	+0.2
CLLI				S	Sb	14 05 12.2	+0.9
	94nm,0.3s						
VALF	Valcebollere	1.79	112	Pg	Pg	14 04 52.8	+0.3
VALF				Sg	Sg	14 05 17.0	+1.2
MTLF	Montolieu	1.80	82	*e*Pn	Pn	14 04 49.3	+0.8
MTLF	Montolieu	1.80	82	*e*Pg	Pg	14 04 52.7	+0.1
MTLF				*e*Sg	Sg	14 05 16.1	+0.1
	52nm,0.3s						
MTLF	Montolieu	1.80	82	Pn	Pn	14 04 49.3	+0.8
MTLF				Pg	Pg	14 04 52.7	+0.1
MTLF				Lg	Lg	14 05 16.1	
	26nm,0.3s						
LFF	La Frestale	1.96	20	*e*Pn	Pn	14 04 51.6	+0.9
LFF	La Frestale	1.96	20	*e*Pg	Pg	14 04 56.1	+0.5
LFF				*e*Sn	Sn	14 05 16.0	+1.0
LFF				*e*Sg	Sg	14 05 22.0	+0.9
	346nm,0.3s						
LFF	La Frestale	1.96	20	Pn	Pn	14 04 51.6	+0.9
LFF				Pg	Pg	14 04 56.1	+0.5
LFF				Sn	Sn	14 05 16.0	+1.0
LFF				Lg	Lg	14 05 22.0	
	173nm,0.3s						
EPOB	Poblet	2.00	151	Pg	Pb	14 04 55.2	+1.1
	10nm,0.3s,SNR=38						
EPOB				Lg	Lg	14 05 20.7	
	41nm,0.3s,SNR=7.9						
ERTA	Horta de San J	2.19	169	Pg	Pg	14 04 59.0	-1.0
	7.5nm,0.3s,SNR=15						
ERTA				Lg	Lg	14 05 25.9	
	65nm,0.2s,SNR=7.9						
EBR	Ebro Roquetas	2.34	167	Pg	Pg	14 05 02.6	-0.3
	6.6nm,0.3s,SNR=7.9						
EBR				Lg	Lg	14 05 31.1	
	442nm,0.2s,SNR=7.9						
ELAN	Lanestosa	2.35	274	Pn	Pb	14 05 00.7	+0.7
	3.6nm,0.3s,SNR=4.0						
ELAN				Lg	Lg	14 05 29.5	
	9.5nm,0.3s,SNR=4.0						
SJAF	Saint Jean de	2.37	104	Pg	Pg	14 05 03.4	0.0
	4.2nm,0.2s,SNR=7.9						
SJAF				Lg	Lg	14 05 33.9	
	16nm,0.2s,SNR=7.9						
SJAF	Saint Jean de	2.37	104	Pg	Pb	14 05 01.7	+1.3
SJAF				Sg	Sg	14 05 33.5	-0.7
CFON	Fontmartina	2.38	123	Pn	Pb	14 04 59.6	-1.0
	16nm,0.3s,SNR=20						
CFON				Lg	Lg	14 05 33.2	
	304nm,0.3s,SNR=5.0						
EJON	La Jonquera	2.38	105	Pg	Pg	14 05 03.2	-0.6
	10nm,0.3s,SNR=9.3						
EJON				Lg	Lg	14 05 34.8	
	SNR=7.9						
CAF	Calviac	2.46	41	*e*Pn	Pn	14 04 58.5	+1.0
CAF	Calviac	2.46	41	*e*Pg	Pg	14 05 05.2	+0.1
CAF				*e*Sn	Sn	14 05 27.0	-0.3
CAF				*e*Sg	Sg	14 05 37.6	+0.6
	64nm,0.2s						
CAF	Calviac	2.46	41	Pn	Pn	14 04 58.5	+1.0
CAF				Pg	Pg	14 05 05.2	+0.1
CAF				Sn	Sn	14 05 27.0	-0.3
CAF				Lg	Lg	14 05 37.6	
	32nm,0.2s						
RJF	Les Rejaudoux	2.53	29	*e*Pn	Pn	14 04 58.9	+0.4
RJF	Les Rejaudoux	2.53	29	*e*Pg	Pg	14 05 06.2	-0.3
RJF				*e*Sg	Sg	14 05 39.5	+0.2
	86nm,0.3s						
RJF	Les Rejaudoux	2.53	29	Pn	Pn	14 04 58.9	+0.4
RJF				Pg	Pg	14 05 06.2	-0.3
RJF				Lg	Lg	14 05 39.5	
	43nm,0.3s						
EMOS	Mosqueruela	2.75	184	Pn	Pb	14 05 05.3	-1.6
	7.9nm,0.6s,SNR=14						
EMOS				Sn	Sn	14 05 33.6	-1.0
	29nm,0.8s,SNR=5.7						
EMOS				Lg	Lg	14 05 42.1	
	28nm,0.4s,SNR=9.5						
LASF	Ste Croix	3.12	70	*e*Pn	Pn	14 05 07.8	+1.2
LASF	Ste Croix	3.12	70	*e*Pg	Pg	14 05 17.2	-0.6
LASF				*e*Sn	Sn	14 05 43.4	-0.2
	12nm,0.3s						
LASF				*e*Sg	Sg	14 05 57.6	-0.6
	20nm,0.2s						
LASF	Ste Croix	3.12	70	Pn	Pn	14 05 07.8	+1.2
LASF				Pg	Pg	14 05 17.2	-0.6
LASF				Sn	Sn	14 05 43.4	-0.2
	6.2nm,0.3s						
LASF				Lg	Lg	14 05 57.6	
	10nm,0.2s						
MFF	Saint Martin d	3.50	1	*e*Pn	Pn	14 05 12.4	+0.6
MFF	Saint Martin d	3.50	1	*e*Pg	Pg	14 05 24.3	-0.7
MFF				*e*Sg	Sg	14 06 09.8	-0.5
	38nm,0.3s						
TCF	Toulx Ste Croi	3.62	28	*e*Pn	Pn	14 05 14.9	+1.3
TCF	Toulx Ste Croi	3.62	28	*e*Pg	Pg	14 05 26.6	-0.8
TCF				*e*Sg	Sg	14 06 13.3	-1.1
	30nm,0.2s						
EARI	Arriondas	3.65	275	Pn	Pn	14 05 16.8	+2.9
	7.5nm,0.9s,SNR=8.5						
EARI				Sn	Sn	14 05 59.0	+2.3
	8.3nm,0.7s,SNR=5.6						
GUD	Guadarrama	3.83	231	Pn	Pn	14 05 20.0	+3.5
	1.7nm,0.3s,SNR=7.2						
GUD				Sn	Sn	14 06 02.5	+1.2
	6.2nm,0.2s,SNR=7.1						
GUD				Lg	Lg	14 06 16.6	
	4.6nm,0.3s,SNR=5.0						
VIVF	Saint-Julien-l	3.94	62	*e*Pn	Pn	14 05 18.7	+0.8
VIVF	Saint-Julien-l	3.94	62	*e*Pg	Pg	14 05 32.4	-1.1
VIVF				*e*Sn	Sn	14 06 03.0	-0.9
VIVF				*e*Sg	Sg	14 06 23.7	-0.9
	13nm,0.3s						
BGF	Bois d'Agland	4.08	31	*e*Pn	Pn	14 05 19.9	0.0
BGF	Bois d'Agland	4.08	31	*e*Pg	Pg	14 05 35.4	-0.8
BGF				*e*Sn	Sn	14 06 05.9	-1.4
	22nm,0.4s						
BGF				*e*Sg	Sg	14 06 27.9	-1.2
	138nm,0.3s						
ESDC	Sonseca Array	4.43	221	Pn	Pn	14 05 25.6	+0.9
	0.9nm,0.3s,baz=42,slow=14,SNR=14						
ESDC				Sn	Sn	14 06 13.6	-2.4
	0.1nm,0.6s,baz=40,slow=23,SNR=7.2						
ESDC				Lg	Lg	14 06 36.5	
	1.1nm,0.2s,baz=42,slow=29,SNR=7.2						
AVF	Avril sur Loir	4.47	33	*e*Pn	Pn	14 05 25.7	+0.5
AVF	Avril sur Loir	4.47	33	*e*Pg	Pg	14 05 42.0	-1.7
AVF				*e*Sg	Sg	14 06 40.6	-1.0
	28nm,0.4s						
ETOB	Tobarra	4.57	193	Pn	Pn	14 05 28.8	+2.2
	0.4nm,0.7s,SNR=7.9						
ETOB				Lg	Lg	14 06 39.7	
	3.8nm,0.4s,SNR=7.9						
SMF	Signal de Mont	4.57	38	*e*Pn	Pn	14 05 26.5	0.0
SMF	Signal de Mont	4.57	38	*e*Pg	Pg	14 05 44.4	-1.1
SMF				*e*Sg	Sg	14 06 43.1	-1.5
	13nm,0.3s						
HYF	Humbligny	4.63	25	*e*Pn	Pn	14 05 28.8	+1.5
HYF	Humbligny	4.63	25	*e*Pg	Pg	14 05 45.1	-1.5
HYF				*e*Sg	Sg	14 06 44.9	-1.6
PAB	San Pablo	4.72	223	Pn	Pn	14 05 30.1	+1.4
	1.2nm,0.2s,SNR=7.9						
PAB				Sn	Sn	14 06 22.0	-1.2
	SNR=7.9						
PAB				Lg	Lg	14 06 45.6	
	4.0nm,0.3s,SNR=7.9						
SSF	Saint Saulge	4.76	32	*e*Pn	Pn	14 05 29.8	+0.7
SSF	Saint Saulge	4.76	32	*e*Pg	Pg	14 05 47.7	-1.4
SSF				*e*Sn	Sn	14 06 20.0	-3.9
	6.4nm,0.4s						
SSF				*e*Sg	Sg	14 06 48.7	-1.9
	16nm,0.3s						
ECAL	Calabor	4.95	259	Pn	Pn	14 05 33.8	+2.0
	5.0nm,0.5s,SNR=8.1						
ECAL				Sn	Sn	14 06 29.9	+1.0
	7.6nm,0.3s,SNR=8.2						
ECAL				Lg	Lg	14 06 50.2	
	4.6nm,0.2s,SNR=4.0						
PBRG	Braganca	4.99	257	*e*Pn	Pn	14 05 34.9	+2.5
PBRG				*e*Sn	Sn	14 06 30.6	+0.8
PBRG				A	A	14 07 05.0	
	4.7nm,0.3s						
PBRG	Braganca	4.99	257	Pn	Pn	14 05 34.9	+2.5
PBRG				Sn	Sn	14 06 30.6	+0.8
	2.3nm,0.3s						
LOR	Lormes	5.06	33	*e*Pn	Pn	14 05 34.1	+0.8
	baz=222						
LOR	Lormes	5.06	33	*e*Pg	Pg	14 05 53.5	-1.5
	baz=226						
LOR				*e*Sn	Sn	14 06 29.5	-2.0
	3.8nm,0.3s						
LOR				*e*Sg	Sg	14 06 58.4	-2.1
	12nm,0.3s,baz=212						
EPON	Pontenova	5.07	275	Pn	Pn	14 05 36.4	+3.0
	3.0nm,0.5s,SNR=6.5						
EPON				Sn	Sn	14 06 35.0	+3.4
	SNR=7.9						
QUIF	Quistinic	5.24	338	*e*Pn	Pn	14 05 36.8	+1.2
QUIF	Quistinic	5.24	338	*e*Pg	Pg	14 05 56.4	-1.8
QUIF				*e*Sn	Sn	14 06 33.2	-2.5
QUIF				*e*Sg	Sg	14 07 04.4	-1.6
	9.0nm,0.2s						
GRR	Gorron	5.30	355	*e*Pn	Pn	14 05 37.0	+0.4
GRR				*e*Sn	Sn	14 06 35.7	-1.6
GRR				*e*Sg	Sg	14 07 06.1	-2.0
	9.3nm,0.3s						
EMUR	La Murta	5.32	189	Pn	Pn	14 05 38.7	+1.9
	3.3nm,0.4s,SNR=5.9						
EMUR				Lg	Lg	14 06 59.5	
	3.4nm,0.4s,SNR=4.0						
EPLA	Plasencia	5.34	237	Pn	Pn	14 05 37.9	+0.7
	0.6nm,0.4s,SNR=7.9						
EPLA				Sn	Sn	14 06 37.8	-0.6
	0.7nm,0.3s,SNR=7.9						
EPLA				Lg	Lg	14 07 06.6	
	2.1nm,0.3s,SNR=7.9						
SGMF	Saint Gilles	5.40	343	*e*Pn	Pn	14 05 39.1	+1.2
SGMF				*e*Sn	Sn	14 06 37.8	-2.0
SGMF				*e*Sg	Sg	14 07 09.1	-2.2
	9.8nm,0.3s						
MVO	Moncorvo	5.42	251	*e*Pn	Pn	14 05 40.3	+2.0
MVO				*e*Sn	Sn	14 06 39.9	-0.4
MVO				*e*Sg	Sg	14 07 06.6	-5.3
MVO				A	A	14 07 12.7	
	7.7nm,0.4s						
MVO	Moncorvo	5.42	251	Pn	Pn	14 05 39.9	+1.6
	1.9nm,0.3s,SNR=8.2						
MVO				Sn	Sn	14 06 39.7	-0.7
	SNR=7.9						
MVO				Lg	Lg	14 07 06.7	
	5.9nm,0.3s,SNR=5.0						
LDF	La Druitiere	5.49	1	*e*Pn	Pn	14 05 39.3	+0.2
LDF				*e*Sn	Sn	14 06 39.0	-2.9
LDF				*e*Sg	Sg	14 07 12.3	-1.8
	8.0nm,0.3s						
ROSF	Rostrenen	5.65	339	*e*Pn	Pn	14 05 41.7	+0.4
ROSF				*e*Sn	Sn	14 06 43.5	-2.4
ROSF				*e*Sg	Sg	14 07 17.1	-2.1
	5.9nm,0.3s						
ROSF	Rostrenen	5.65	339	Pn	Pn	14 05 41.7	+0.4
ROSF				Sn	Sn	14 06 43.5	-2.4
ROSF				Lg	Lg	14 07 17.1	
	3.0nm,0.3s						
FLN	La Foliniere	5.66	358	*e*Sn	Sn	14 06 44.2	-1.9
FLN				*e*Sg	Sg	14 07 17.7	-1.9
	7.4nm,0.2s,baz=199						
FLN	La Foliniere	5.66	358	Sn	Sn	14 06 44.2	-1.9
FLN				Lg	Lg	14 07 17.7	
	3.7nm,0.2s						
EAGO	Agolada(Pontev	5.78	270	Pn	Pn	14 05 45.7	+2.5
	2.6nm,0.2s,SNR=7.9						
EAGO				Sn	Sn	14 06 50.4	+1.2
	SNR=7.9						
POLO	Lamas de Olo	5.88	255	*e*Pn	Pn	14 05 46.6	+2.0
POLO				*e*Sn	Sn	14 06 51.9	+0.2
POLO				A	A	14 07 24.6	
	2.3nm,0.5s						
POLO	Lamas de Olo	5.88	255	Pn	Pn	14 05 46.6	+2.0
POLO				Sn	Sn	14 06 51.9	+0.2
	2.3nm,0.5s						
ELOB	Lobios	5.92	261	Pn	Pn	14 05 47.4	+2.1
	0.5nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	14 06 52.7	-0.1
	1.5nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	14 07 26.3	
	1.2nm,0.2s,SNR=7.9						
EADA	Adamuz	5.94	215	Pn	Pn	14 05 46.7	+1.3
	0.6nm,0.2s,SNR=7.9						
EADA				Sn	Sn	14 06 51.5	-1.6
	0.8nm,0.3s,SNR=7.9						
EADA				Lg	Lg	14 07 25.0	
	2.5nm,0.3s,SNR=7.9						
PCAB	Cabril	5.94	259	*e*Sn	Sn	14 06 53.3	+0.1
PCAB	Cabril	5.94	259	Sn	Sn	14 06 53.3	+0.1
PGAV	Gavieira, Arco	6.05	262	*e*Pn	Pn	14 05 50.9	+3.9
PGAV				*e*Sn	Sn	14 06 56.7	+0.7
PGAV	Gavieira, Arco	6.05	262	Pn	Pn	14 05 50.9	+3.9
PGAV				Sn	Sn	14 06 56.7	+0.7
ECAB	El Cabril	6.39	220	Pn	Pn	14 05 52.7	+1.1
	0.2nm,0.1s,SNR=5.6						
ECAB				Sn	Sn	14 07 01.0	-3.3
	SNR=7.9						
ECAB				Lg	Lg	14 07 40.0	
	0.8nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	6.42	272	Pn	Pn	14 05 54.0	+2.1
	1.3nm,0.2s,SNR=7.9						
EMAZ				Sn	Sn	14 07 03.4	-1.5
	SNR=7.9						
PMRV	Marv??o	6.53	238	*e*Pn	Pn	14 05 54.9	+1.4
PMRV				*e*Sn	Sn	14 07 05.9	-1.8
PMRV				A	A	14 07 51.5	
	3.9nm,0.5s						
PMRV	Marv??o	6.53	238	Pn	Pn	14 05 54.9	+1.4
PMRV				Sn	Sn	14 07 05.9	-1.8
	3.9nm,0.5s						
EBAD	Badajoz	6.73	232	Pn	Pn	14 05 57.1	+0.9
	0.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	14 07 10.5	-2.1
	SNR=7.9						
PCAS	Casmilo, Conde	6.91	247	*e*Sn	Sn	14 07 16.2	-0.8
PCAS	Casmilo, Conde	6.91	247	Sn	Sn	14 07 16.2	-0.8
PESTR	Estremoz	7.00	235	*e*Pn	Pn	14 06 01.1	+1.2
PESTR				*e*Sn	Sn	14 07 15.9	-3.3
PESTR				A	A	14 08 16.9	
	2.8nm,0.5s						
EMIN	Mina Concepcio	7.25	225	Sn	Sn	14 07 21.6	-3.8
	0.6nm,0.8s,SNR=7.9						
PMTG	Montargil	7.26	239	*e*Pn	Pn	14 06 06.8	+3.3
PMTG				*e*Sn	Sn	14 07 23.8	-1.9
PMTG	Montargil	7.26	239	Pn	Pn	14 06 06.8	+3.3
PMTG				Sn	Sn	14 07 23.8	-1.9
PNCL	Nicolau / Gran	8.05	234	*e*Sn	Sn	14 07 43.8	-1.1
PNCL	Nicolau / Gran	8.05	234	Sn	Sn	14 07 43.8	-1.1

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*IDC **03** 14:10:38.6±3.9, 12°.14N×126°.31E, h0^{km}, mb3.2/4, mb1 3.4/4, mb1mx3.1/40, mbtmp3.2/4, MS3.4/1, Ms1 3.4/1, ms1mx2.7/17, Error ellipse: s-maj=320.8km s-min=22.5km az=66.0*

*ISCJB **03** 14:10:40.7±1.8, 12°.01N±0°.04×125°.86E±0°.09, h18^{km}±10^{km}, mb3.2/4, MS3.2/1, Error ellipse: s-maj=14.5km s-min=7.2km az=170.8*

*MAN **03** 14:10:44.0, 11°.99N×125°.59E, h11^{km}, MS3.2*

MAN INTENSITY III - TAFT & CAN-AVID EASTERN SAMAR; INTENSITY II - BORONGAN CITY.

ISC 03 14:10:43.6±2.2**, 11°.94N**±0°.06×**125°.7E**±0°.1**, h26**^{km}±14^{km}**, n13, σ1^{s}.17**/18**, mb3.3**/4**, 1C-1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.43	220	*e*P	Pb	14 10 52.6	-0.1
BESP				*e*S	Sn	14 11 00.1	-1.0
PLP	Palo	1.06	224⇑	*e*P	Pn	14 11 01.4	-1.3
PLP				*i* S	Sb	14 11 15.7	-1.0
CNP	Catarman	1.18	299	*e*P	Pn	14 11 04.0	-0.4
CNP				*e*S	Sn	14 11 18.7	-0.9
OCLP	Ormoc	1.40	231	*e*P	Pn	14 11 08.4	+1.0
OCLP				*e*S	Sb	14 11 27.0	+0.4
MSLP	Maasin	1.98	205	*e*P	Pn	14 11 17.5	+2.1
MSLP				*e*S	Sb	14 11 43.1	-0.1
PVCP	Virac	2.25	317	*e*P	Pn	14 11 19.8	+0.7
PVCP				*e*S	Sn	14 11 46.1	+0.1
RCP	Roxas	2.94	263⇓	*e*P	Pn	14 11 30.5	+1.9
GUIM	Jordan	3.34	247	*e*P	Pn	14 11 35.7	+1.6
JHJ	Hachijo jima 2	24.71	29	LR	LR	14 23 40.4	
	comp=Z,90nm,20.9s,baz=46,slow=32						
WRA	Warramunga Arr	32.79	165	P	P	14 17 13.4	-1.5
	0.1nm,0.6s,baz=346,slow=9.5,SNR=2.5						
ASAR	Alice Springs	36.28	167	P	P	14 17 45.3	+0.3
	0.2nm,0.5s,baz=354,slow=7.8,SNR=5.4						
MKAR	Makanchi Array	50.39	322	P	P	14 19 38.9	+0.2
	0.2nm,0.6s,baz=126,slow=7.3,SNR=2.5						
KURBB	Kurchatov Arra	54.41	325	P	P	14 20 08.6	+0.2
	0.2nm,0.5s,baz=128,slow=6.6,SNR=4.3						

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*IDC **03** 14:12:28.9±2.2, 3°.81N×126°.88E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.4/43, mbtmp3.7/4, Error ellipse: s-maj=215.5km s-min=21.3km az=67.0*

*MAN **03** 14:12:33.1, 3°.23N×125°.95E, h4^{km}, MS3.3*

ISC 03 14:12:32.7±1.3**, 3°.1N**±0°.1×**125°.9E**±0°.3**, h10**^{km}**, n8, σ2^{s}.14**/10**, mb3.8**/4**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	3.64	338	*e*P	Pn	14 13 30.7	+1.6
SKMP				*e*S	Sn	14 14 11.4	-0.8
MATI	Mati	3.81	5	*e*P	Pn	14 13 32.6	+1.1
KCP	Kidapawan	3.94	348⇓	*e*P	Pn	14 13 33.5	+0.1
KCP				*i* S	Sn	14 14 20.9	+1.1
CTBH	Cotabato--PC H	4.39	338⇑	*i*P	Pn	14 13 42.6	+3.0
WRA	Warramunga Arr	24.37	160	P	P	14 17 51.5	+0.3
	1.7nm,0.8s,baz=342,slow=10,SNR=9.7						
ASAR	Alice Springs	27.74	164	P	P	14 18 23.7	+2.0
	0.4nm,0.7s,baz=343,slow=9.6,SNR=6.8						
MKAR	Makanchi Array	57.59	326	P	P	14 22 20.4	-2.5
	0.5nm,0.5s,baz=122,slow=7.5,SNR=9.1						
KURBB	Kurchatov Arra	61.81	328	P	P	14 22 49.1	-2.7
	0.7nm,0.5s,baz=130,slow=6.4,SNR=8.7						

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*IDC **03** 14:23:00.2±0.8, 10°.92S×165°.49E, h0^{km}, mb4.1/11, mb1 4.3/13, mb1mx4.1/37, mbtmp4.1/13, ML4.7/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/29, Error ellipse: s-maj=31.5km s-min=18.0km az=140.0*

*NEIC **03** 14:23:02.0±0.4, 10°.98S×165°.46E, h10^{km}, mb4.6/10, Error ellipse: s-maj=9.3km s-min=7.9km az=122.0*

*ISCJB **03** 14:23:03.3±0.4, 11°.11S±0°.05×165°.41E±0°.05, h30^{km}, mb4.3/24, MS3.8/7, Error ellipse: s-maj=7.5km s-min=7.0km az=135.6*

ISC 03 14:23:05.2±0.5**, 11°.08S**±0°.06×**165°.49E**±0°.07**, h30**^{km}**, n51, σ1^{s}.24**/46**, mb4.4**/24**, MS3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.69	286	*e*P	Pn	14 24 27.0	-0.8
HNR				*e*S	Sn	14 25 33.0	+0.9
HNR	Honiara	5.69	286	*e*Pn	Pn	14 24 27.3	-0.5
HNR				Sn	Sn	14 25 30.8	-1.4
HNR	Honiara	5.69	286	Pn	Pn	14 24 27.7	-0.1
	39nm,0.3s,baz=144,slow=5.7,SNR=14						
HNR				Sn	Sn	14 25 30.8	-1.4
	baz=197,slow=19,SNR=1.9						
HNR				LR	LR	14 26 35.8	
	comp=Z,302nm,19.6s,baz=113,slow=38						
DZM	Mont Dzumac	10.97	175	*e*Pn	Pn	14 25 41.1	+0.8
	39nm,1.2s						
DZM				*e*LR	LR	14 28 14.0	
	comp=Z,316nm,24.8s						
DZM	Mont Dzumac	10.97	175	Pn	Pn	14 25 41.8	+1.5
	3.6nm,0.3s,baz=14,slow=17,SNR=64						
DZM				Sn	Sn	14 27 39.7	-2.5
	baz=143,slow=20,SNR=1.8						
DZM				LR	LR	14 29 26.6	
	comp=Z,301nm,18.0s,baz=18,slow=35						
ONTNC	Ouen Toro	11.21	175	*e*Pn	Pn	14 25 45.0	+1.5
PINNC	Pines Island,	11.63	171	*e*Pn	Pn	14 25 50.7	+1.5
TARA	Tarawa	14.39	31	*e*Pn	Pn	14 26 26.7	-0.3
RABL	Rabaul	14.87	296	*e*Pn	Pn	14 26 34.1	+0.6
EIDS	Eidsvold	19.70	222	*e*P	P	14 27 31.0	-1.3
	18nm,1.2s						
MANU	Manus Island	20.10	295	*e*P	P	14 27 36.9	+0.2
	79nm,1.1s						
CTA	Charters Tower	20.56	242	P	P	14 27 42.0	+0.3
	3.7nm,0.7s,baz=63,slow=16,SNR=4.0						
CTAO	Charters Tower	20.56	242	*e*P	P	14 27 41.0	-0.6
	19nm,0.9s						
H11S2	WAKE ISLAND Hy	29.40	2	T	T	14 59 39.7	
	baz=183,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.41	2	T	T	14 59 38.9	
	baz=183,slow=76,SNR=7.9						
H11S1	WAKE ISLAND Hy	29.42	2	T	T	14 59 43.5	
	baz=183,slow=76,SNR=5.3						
BKZ	Black Stump Fm	29.64	163	*e*P	P	14 29 09.7	+1.6
	46nm,1.6s						
STKA	Stephens Creek	30.25	223	P	P	14 29 14.1	+0.6
	1.5nm,0.8s,baz=42,slow=12,SNR=3.4						
STKA				LR	LR	14 40 49.2	
	comp=Z,153nm,18.6s,baz=27,slow=35						
H11N1	WAKE ISLAND Hy	30.63	3	T	T	15 01 13.3	
	baz=182,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	30.63	3	T	T	15 01 09.4	
	baz=182,slow=76,SNR=4.5						
H11N2	WAKE ISLAND Hy	30.64	3	T	T	15 01 12.0	
	baz=182,slow=76,SNR=6.3						
WRAB	Tennant Creek	31.22	250	*e*P	P	14 29 21.4	-0.9
	16nm,1.6s						
WB2	Warramunga Arr	31.22	250	*e*P	P	14 29 20.8	-1.5
WRA	Warramunga Arr	31.23	250	P	P	14 29 21.4	-1.0
	4.0nm,0.8s,baz=81,slow=9.1,SNR=35						
WRA				PcP	PcP	14 32 16.9	+0.2
	0.9nm,0.9s,baz=73,slow=3.2,SNR=6.6						
AS01	Alice Springs	32.51	243	*e*P	P	14 29 32.2	-1.4
AS31	Alice Springs	32.55	243	*e*P	P	14 29 33.0	-1.0
	2.4nm,0.6s						
ASAR	Alice Springs	32.55	243	P	P	14 29 33.1	-0.9
	9.0nm,0.8s,baz=64,slow=10,SNR=137						
ASAR				PcP	PcP	14 32 20.2	-0.1
	1.0nm,0.7s,baz=69,slow=2.5,SNR=8.8						
ASAR				LR	LR	14 41 48.0	
	comp=Z,109nm,20.2s,baz=66,slow=35						
PPT2	Papeete2	43.94	104	*e*LR	LR	14 43 39.7	
	comp=Z,92nm,24.0s						
NJ2	Nanjing	61.86	316	*e*P	P	14 33 22.1	+0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2	Changchun	65.64	329	*e*P	P	14 33 48.2	+1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLR	Kul'dur	66.98	337	LR	LR	15 00 23.2	
	comp=Z,36nm,19.0s,baz=261,slow=34						
XAN	Xi'an	69.95	312	P	P	14 34 19.5	+5.5
XAN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,100nm,5.2s						
KMI	Kunming	70.92	301	P	P	14 34 21.3	+1.0
KMI				pP	pwP	14 34 35.8	+2.4
KMI				sP	PcP	14 34 40.9	+0.1
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC	Hu-ho-hao-te	71.69	320	*e*P	P	14 34 25.2	+0.7
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
CMAR	Chiang Mai Arr	71.89	294	P	P	14 34 26.7	+0.7
	comp=Z,0.5nm,0.3s,baz=124,slow=4.7,SNR=6.4						
CMAR				LR	LR	15 08 13.3	
	comp=Z,15nm,18.1s,baz=195,slow=38						
LZH	Lanzhou	74.59	312	*e*P	P	14 34 42.5	+0.7
LZH				pP	PcP	14 34 56.1	0.0
LZH				sP	pwP	14 35 01.2	+6.7
LZH				*e*PP	PP	14 37 31.6	+2.6
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,74nm,7.2s						
LZH				LR	LR		
	comp=N,330nm,15.2s						
LZH				LR	LR		
	comp=E,340nm,15.6s						
LZH				LR	LR		
	comp=Z,410nm,18.4s						
SONM	Songino Array	78.54	324	P	P	14 35 01.7	-2.2
	comp=Z,0.3nm,0.5s,baz=160,slow=4.7,SNR=3.6						
GTA	Gaotai	78.90	314	*e*P	P	14 35 15.5	+9.4
GTA				pP	pwP	14 35 29.0	+10
GTA				sP	sP	14 35 34.0	+16

GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	83.62	19	P	P	14 35 29.6	-0.8
	comp=Z,0.9nm,0.8s,baz=231,slow=5.5,SNR=12						
AFDM	Forest Hills D	84.41	49	*e*P	P	14 35 33.3	-1.8
	comp=Z,3.3nm,0.9s						
MDPB	Devils Postpil	85.41	50	*e*P	P	14 35 40.4	0.0
	comp=Z,4.1nm,1.0s						
NVAR	Mina Array Bea	86.24	50	P	P	14 35 44.1	-0.3
	comp=Z,1.6nm,0.9s,baz=226,slow=8.7,SNR=8.3						
WMQ	Urumqi	88.94	315	*e*P	P	14 35 57.7	+0.6
U15A	North Rim	90.33	53	*e*P	P	14 36 04.0	0.0
	comp=Z,5.3nm,1.0s						
HVU	Hansel Valley	91.21	48	*e*P	P	14 36 07.5	-0.4
	comp=Z,3.4nm,1.1s						
MKAR	Makanchi Array	93.37	317	P	P	14 36 16.4	-1.1
	comp=Z,0.6nm,0.8s,baz=73,slow=4.1,SNR=4.8						
PDAR	Pinedale Array	93.76	47	P	P	14 36 19.3	-0.4
	comp=Z,0.2nm,0.6s,baz=241,slow=3.0,SNR=3.0						
YKA	Yellowknife Ar	95.12	27	P	P	14 36 23.0	-2.2
	comp=Z,0.3nm,0.8s,baz=257,slow=4.7,SNR=4.8						
NRIK	Noril'sk	96.06	340	LR	LR	15 18 12.9	
	comp=Z,36nm,20.9s,baz=40,slow=34						
TXAR	Lajitas Array	96.07	61	LR	LR	15 16 08.6	
	comp=Z,41nm,18.0s,baz=0.0,slow=33						
KSH	Kashi	96.58	309	P	P	14 36 35.1	+2.5
KSH				pP	sP	14 36 48.1	+3.8
KSH				pmax	pmax		
	comp=Z,360nm,5.0s						

IDC 03 14:35:47.8±2.9, 6°.61S×129°.47E, h135km±39km, mb3.3/1, mb1 3.1/5, mb1mx2.9/33, mbtmp3.4/5, Error ellipse: s-maj=68.3km s-min=20.7km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.98	18	P	Pn	14 37 14.2	0.0
	0.5nm,0.3s,baz=146,slow=22,SNR=8.5						
SIJI				S	Sn	14 38 15.9	-5.7
	0.5nm,0.3s,baz=73,slow=19,SNR=6.3						
FITZ	Fitzroy Crossi	12.02	198	P	Pn	14 38 35.8	+1.0
	0.1nm,0.3s,baz=26,slow=11,SNR=6.8						
FITZ				S	Sn	14 40 41.0	-6.5
	0.2nm,0.3s,baz=65,slow=23,SNR=6.0						
WRA	Warramunga Arr	14.07	161	P	Pn	14 38 59.5	-1.8
	0.2nm,0.3s,baz=341,slow=12,SNR=7.7						
WRA				S	Sn	14 41 24.6	-13
	0.3nm,0.3s,baz=336,slow=22,SNR=7.3						
ASAR	Alice Springs	17.49	166	P	P	14 39 43.1	+0.4
	0.1nm,0.3s,baz=341,slow=9.5,SNR=16						
ASAR				S	S	14 42 48.1	-10
	0.0nm,0.3s,baz=348,slow=23,SNR=3.5						
MKAR	Makanchi Array	67.61	327	P	P	14 46 30.1	0.0
	0.4nm,0.5s,baz=116,slow=7.3,SNR=9.0						

ISCJB ***03*** *14:49:43.3±0.5, 37°.13N±0°.04×71°.80E±0°.05, h109km, mb3.3/1, Error ellipse: s-maj=6.3km s-min=5.0km az=157.5*

IDC ***03*** *14:49:45.6±6.4, 37°.14N×71°.86E, h128km±36km, mb3.2/1, mb1 3.1/8, mb1mx2.9/56, mbtmp3.6/8, MS3.5/1, Ms1 3.5/1, ms1mx2.4/30, Error ellipse: s-maj=84.8km s-min=27.5km az=155.0*

NNC ***03*** *14:49:50.5±2.5, 37°.60N×71°.51E, h110km±53km, mb3.4, mpv3.9, Error ellipse: s-maj=23.6km s-min=18.0km az=136.0*

ISC 03 14:49:44.8±1.0, 37°.29N±0°.07×71°.68E±0°.06, h109km, n31, σ2ˢ99/38, 8C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.07	27	⇑P	Pn	14 50 35.5	+3.6
	10nm,0.3s						
SFK				⇓S	Sn	14 51 09.7	+1.5
	25nm,0.3s						
AML	Almayashu	5.08	17	P	Pn	14 51 01.7	+2.7
	SNR=28						
MNAS	Manas	5.23	7	⇓P	Pn	14 51 03.5	+2.7
	24nm,0.4s						
MNAS				⇑S	Sn	14 51 59.5	-0.4
	25nm,0.6s						
UCH	Uchtor	5.39	23	P	Pn	14 51 05.7	+2.4
	SNR=17						
EKS2	Erkin-Say	5.60	16	P	Pn	14 51 08.5	+2.7
	SNR=8.0						
AAK	Ala-Archa	5.76	21	P	Pn	14 51 10.7	+2.7
	SNR=11						
AAK	Ala-Archa	5.76	21	⇓P	Pn	14 51 10.6	+2.7
	4.9nm,0.5s						
AAK				⇑S	Sn	14 52 12.0	-0.8
	6.6nm,0.4s						
AAK	Ala-Archa	5.76	21	P	Pn	14 51 10.7	+2.7
	1.7nm,0.3s,baz=175,slow=7.6,SNR=43						
AAK				S	Sn	14 52 11.8	-1.1
	1.7nm,0.3s,baz=130,slow=22,SNR=18						
KK31	Karatay Array	5.88	352	⇓P	Pn	14 51 12.6	+3.2
	14nm,0.4s,baz=182,slow=13,SNR=154						
KK31				⇑S	Sn	14 52 15.3	-0.1
	12nm,0.3s,baz=171,slow=22,SNR=21						
CHMS	Chumysh	6.17	21	P	Pn	14 51 15.7	+2.4
	SNR=5.7						
USP	Ospenovka	6.35	19	P	Pn	14 51 17.7	+1.9
	SNR=5.8						
TKM2	Tokmak 2	6.37	27	⇑P	Pn	14 51 18.0	+1.7
	2.3nm,0.6s						
TKM2				⇓S	Sn	14 52 28.9	+1.1
	2.3nm,0.7s						
GEYT	Alibeck	10.78	278	P	Pn	14 52 18.1	+2.1
	0.8nm,0.3s,baz=89,slow=13,SNR=13						
GEYT				S	Sn	14 54 11.1	-3.5
	0.2nm,0.3s,baz=105,slow=15,SNR=2.3						
GYA0B	ALIBECK ARRAY	10.78	278	⇓P	Pn	14 52 17.9	+2.0
	2.6nm,0.7s						
GYA0B				⇑S	Sn	14 54 15.6	+0.9
	10nm,0.8s						
MKAR	Makanchi Array	12.33	36	P	Pn	14 52 37.2	+0.7
	0.1nm,0.3s,baz=224,slow=12,SNR=2.1						
PYUN	Piuthan	13.20	131	*e*P	Pn	14 52 44.8	-3.4
	51nm,1.1s						
DANN	Dangsing	13.50	128	*e*P	Pn	14 52 49.6	-2.5
KOLN	Koldanda	13.81	130	*e*P	Pn	14 52 52.9	-3.2
KURBB	Kurchatov Arra	14.20	18	P	Pn	14 53 02.4	+1.7
	0.0nm,0.3s,baz=207,slow=11,SNR=3.4						
AB31	Akbulak array	14.68	328	⇓P	Pn	14 53 08.5	+1.7
	1.8nm,0.6s,baz=131,slow=14,SNR=49						
AB31				⇑S	Sn	14 55 45.7	-3.0
	2.3nm,0.8s,baz=152,slow=22,SNR=5.2						
KKN	Kakani	14.86	126	*e*P	Pn	14 53 06.4	-3.1
	6.8nm,0.5s						
PKIN	Phulchoki	15.08	126	*e*P	Pn	14 53 08.5	-3.8
	5.5nm,0.4s						
PKI	Pulchoki	15.09	126	*e*P	Pn	14 53 09.8	-2.7
	8.9nm,0.6s						
GUN	Gumba	15.17	124	*e*P	Pn	14 53 10.5	-3.0
	26nm,1.0s						
JIRN	Jiri	15.54	124	*e*P	Pn	14 53 15.7	-2.5
	32nm,0.8s						
BVAR	Borovoye Array	15.76	357	P	Pn	14 53 20.3	-0.1
	0.2nm,0.3s,baz=173,slow=12,SNR=3.5						
BVAR				S	Sn	14 56 09.1	-5.7
	0.1nm,0.3s,baz=153,slow=23,SNR=5.1						
AKTO	Aktyubinsk	16.39	328	⇓P	P	14 53 32.1	+3.0
	6.1nm,0.9s						
AKTO				⇑S	Sn	14 56 24.4	-5.6
	3.3nm,1.1s						
AKTO	Aktyubinsk	16.39	328	P	P	14 53 32.0	+3.0
	0.5nm,0.3s,baz=133,slow=13,SNR=18						
AKTO				S	Sn	14 56 21.9	-8.1
	0.0nm,0.3s,baz=156,slow=20,SNR=2.7						
ZALV	Zalesovo Beam	18.97	24	P	P	14 53 57.1	-0.2
	0.2nm,0.3s,baz=216,slow=11,SNR=4.7						
PALK	Pallekele	30.98	162	LR	LR	15 08 16.0	
	comp=Z,101nm,21.4s,baz=119,slow=36						
YKA	Yellowknife Ar	80.43	3	P	P	15 01 43.5	-0.4
	0.3nm,0.6s,baz=350,slow=5.4,SNR=7.4						

IDC 03 14:56:17.0±3.9, 5°.13S×151°.66E, h0km, mb3.1/2, mb1 3.4/2, mb1mx3.1/30, mbtmp3.1/2, Error ellipse: s-maj=169.1km s-min=47.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.38	227	P	P	15 01 17.6	+0.6
	0.2nm,0.5s,baz=53,slow=10,SNR=3.8						
ASAR	Alice Springs	25.14	221	P	P	15 01 43.5	-0.6
	0.4nm,0.5s,baz=53,slow=8.7,SNR=8.9						
TORD	Torodi Ar. Bea	149.32	287	PKPbc	PKPbc	15 16 08.6	-0.4
	0.4nm,0.8s,baz=87,slow=3.4,SNR=2.5						

IDC 03 15:13:16.8±2.9, 6°.87S×129°.66E, h146km±40km, mb2.8/1, mb1 2.9/4, mb1mx2.7/32, mbtmp3.3/4, Error ellipse: s-maj=67.1km s-min=21.2km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.17	15	P	Pn	15 14 46.1	+0.3
	0.5nm,0.3s,baz=286,slow=23,SNR=8.7						
SIJI				S	Sn	15 15 50.0	-5.4
	1.1nm,0.3s,baz=270,slow=23,SNR=7.4						
FITZ	Fitzroy Crossi	11.83	199	P	Pn	15 16 01.1	-0.1
	0.1nm,0.3s,baz=16,slow=7.4,SNR=3.2						
FITZ				S	Sn	15 18 02.2	-10
	0.0nm,0.3s,baz=352,slow=14,SNR=2.2						
WRA	Warramunga Arr	13.77	161	P	Pn	15 16 24.2	-1.8
	0.2nm,0.3s,baz=341,slow=9.7,SNR=18						
WRA				S	Sn	15 18 50.1	-8.5
	0.1nm,0.3s,baz=336,slow=22,SNR=3.7						
ASAR	Alice Springs	17.20	167	P	Pn	15 17 09.4	+1.0
	0.1nm,0.3s,baz=341,slow=9.0,SNR=23						
ASAR				S	S	15 20 11.6	-8.0
	0.0nm,0.3s,baz=355,slow=29,SNR=3.1						
MKAR	Makanchi Array	67.93	327	P	P	15 23 59.7	-0.2
	0.1nm,0.5s,baz=116,slow=6.0,SNR=2.4						

IDC ***03*** *15:16:10.7±1.2, 11°.35S×165°.09E, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.7/33, mbtmp3.8/6, ML4.0/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/23, Error ellipse: s-maj=33.7km s-min=24.0km az=155.0*

ISCJB ***03*** *15:16:13.7±1.1, 11°.6S±0°.1×165°.1E±0°.1, h34km, mb3.6/4, Error ellipse: s-maj=21.4km s-min=11.4km az=34.5*

ISC 03 15:16:15.6±1.1, 11°.5S±0°.1×165°.1E±0°.1, h34km, n6, σ1ˢ53/7, mb3.7/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.49	291	Pn	Pn	15 17 33.7	-1.3
	3.6nm,0.3s,baz=90,slow=3.0,SNR=2.4						
HNR				Sn	Sn	15 18 38.7	+1.8
	1.6nm,0.3s,baz=174,slow=18,SNR=2.6						
HNR				LR	LR	15 19 48.5	
	comp=Z,262nm,20.5s,baz=144,slow=40						
DZM	Mont Dzumac	10.61	173	Pn	Pn	15 18 45.6	+0.1
	1.3nm,0.3s,baz=9.0,slow=19,SNR=28						
WRA	Warramunga Arr	30.77	250	P	P	15 22 28.2	0.0
	1.4nm,0.7s,baz=79,slow=9.0,SNR=9.9						
ASAR	Alice Springs	32.06	244	P	P	15 22 39.3	-0.3
	0.5nm,0.9s,baz=64,slow=11,SNR=5.5						
ILAR	Eielson Array	84.11	19	P	P	15 28 41.4	-1.3
	0.3nm,0.5s,baz=230,slow=4.7,SNR=8.4						
NVAR	Mina Array Bea	86.76	50	P	P	15 28 58.5	+1.7
	0.3nm,0.7s,baz=235,slow=7.6,SNR=3.1						

SOME ***03*** *15:23:29.4, 42°.55N×79°.63E, h15km*

KRNET ***03*** *15:23:30.3±0.1, 42°.58N×79°.58E, h15km, mb2.8*

NNC ***03*** *15:23:30.6±1.0, 42°.61N×79°.61E, h0km, mb3.0, mpv3.0, Error ellipse: s-maj=6.6km s-min=3.6km az=139.0*

ISC 03 15:23:28.7±1.6, 42°.52N±0°.04×79°.60E±0°.04, h1km±14km, n62, σ1ˢ32/110, 19C-12D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.64	351	P	Pb	15 23 42.5	-0.4
	79nm,0.1s						
SHLS				S	Sb	15 23 51.9	-0.5
	44nm,0.2s						
SHLS	Shalkode	0.64	351	*e*P	Pb	15 23 42.5	-0.4
	baz=21						
SHLS				*e*S	Sb	15 23 52.0	-0.5
	baz=21						
SHLS	Shalkode	0.64	351	*e*P	Pb	15 23 42.5	-0.4
	79nm,0.1s						
SHLS				*e*S	Sb	15 23 51.9	-0.5
	44nm,0.2s						
UZB	Uzynbulak	0.76	326	P	Pg	15 23 43.7	+0.5
	5.6nm,0.1s						
UZB				S	Sb	15 23 53.8	-1.9
	58nm,0.2s						
UZB	Uzynbulak	0.76	326	*e*P	Pg	15 23 43.7	+0.5
	baz=25						
UZB				*e*S	Sb	15 23 53.9	-1.8
	baz=25						
UZB	Uzynbulak	0.76	326	*e*P	Pg	15 23 43.7	+0.5
	4.4nm,0.1s						
UZB				*e*S	Sb	15 23 53.9	-1.8
	58nm,0.2s						
PDGK	Podgornoye	0.81	354	P	Pg	15 23 44.4	+0.1
	6.2nm,0.2s						
PDGK				S	Sg	15 23 55.0	+0.2
	16nm,0.2s						
PDGK	Podgornoye	0.81	354	⇑P	Pg	15 23 44.3	+0.1
	3.3nm,0.3s						
PDGK				⇓S	Sg	15 23 54.7	-0.2
	17nm,0.4s						
PDGK	Podgornoye	0.81	354	⇓*i*P	Pg	15 23 44.4	+0.1
	baz=55						
PDGK				⇓*i*S	Sg	15 23 55.0	+0.2
	baz=55						
PRZ	Przheval'sk	0.89	268	⇑*i*P	Pb	15 23 47.2	+0.1
	baz=64						
PRZ				⇑*i*S	Sb	15 23 59.6	+0.1
	baz=64						
SATY	Saty	1.03	302	P	Pb	15 23 48.8	-0.7
	5.8nm,0.2s						
SATY				S	Sg	15 24 02.7	+0.9
	49nm,0.1s						
SATY	Saty	1.03	302	⇑*i*P	Pb	15 23 48.8	-0.7
	5.8nm,0.2s						
SATY				*e*S	Sg	15 24 02.7	+0.9
	49nm,0.1s						
KTMS	Ketmen	1.08	31	P	Pb	15 23 49.6	-0.7
	7.7nm,0.1s						
KTMS				S	Sg	15 24 03.9	+0.6
	7.1nm,0.2s						
KURS	Kuram	1.43	313	P	Pb	15 23 55.6	-0.5
	2.2nm,0.6s						
KURS				S	Sg	15 24 15.2	+0.6
	12nm,0.6s						
KURS	Kuram	1.43	313	*e*P	Pb	15 23 55.9	-0.3
	baz=12						
KURS				*e*S	Sg	15 24 15.2	+0.6
	baz=12						
KURS	Kuram	1.43	313	*e*P	Pb	15 23 55.9	-0.3
	0.3nm,0.3s						
KURS				*e*S	Sg	15 24 15.2	+0.6
	9.4nm,0.4s						
MNBS	Baschi	1.79	331	P	Pb	15 24 02.0	-0.4
	3.1nm,0.2s						
MNBS				S	Sg	15 24 25.5	-0.7
	28nm,0.3s						
MNBS	Baschi	1.79	331	*e*P	Pb	15 24 01.9	-0.4
	baz=31						
MNBS				*e*S	Sg	15 24 25.6	-0.5
	baz=31						
MNBS	Baschi	1.79	331	*e*P	Pb	15 24 01.9	-0.4
	3.1nm,0.2s						
MNBS				*e*S	Sg	15 24 25.6	-0.5
	28nm,0.3s						
DJR	Jarkent	1.82	4	P	Pb	15 24 02.2	-0.6
	1.5nm,0.2s						
DJR				S	Sg	15 24 26.6	-0.5
	3.6nm,0.4s						
DJR	Jarkent	1.82	4	*e*P	Pb	15 24 02.5	-0.3
	1.0nm,0.2s						
DJR				*e*S	Sg	15 24 26.2	-0.9
	3.5nm,0.2s						
KDJ	Kajisay	1.84	259	⇓*i*P	Pg	15 24 04.7	+0.8
	baz=56						
KDJ				⇓*i*S	Sg	15 24 29.9	+2.2
	baz=56						
KOTS	Kotyrbulak	1.96	292	Pg	Pb	15 24 05.4	+0.1
	8.8nm,0.2s						
KOTS				Lg	Lg	15 24 31.4	
	21nm,0.3s						
KOTS	Kotyrbulak	1.96	292	*e*P	Pb	15 24 05.4	+0.1
	baz=91						
KOTS				*e*S	Sg	15 24 31.3	-0.5
	baz=91						
KOTS	Kotyrbulak	1.96	292	*e*P	Pb	15 24 05.4	+0.1
	8.8nm,0.2s						
KOTS				*e*S	Sg	15 24 31.4	-0.5
	21nm,0.3s						
MDOK	Medeo	1.98	290	Pn	Pb	15 24 05.4	-0.3
	3.3nm,0.5s						
MDOK				Sn	Sg	15 24 34.8	+2.3
	8.2nm,0.6s						
MDOK	Medeo	1.98	290	Pg	Pb	15 24 05.8	+0.1
	6.6nm,0.2s						
MDOK				Lg	Lg	15 24 32.4	
	8.3nm,0.5s						
MDOK	Medeo	1.98	290	*e*P	Pb	15 24 05.4	-0.3
	baz=88						
MDOK				*e*S	Sb	15 24 31.4	+0.4
	baz=88						
MDOK	Medeo	1.98	290	*e*P	Pb	15 24 05.4	-0.3
	2.0nm,0.5s						
MDOK				*e*S	Sb	15 24 31.4	+0.4
	6.6nm,0.2s						
TNSS	Tian-Shan	2.02	286	Pg	Pb	15 24 06.4	-0.1
	8.1nm,0.5s						
TNSS				Lg	Lg	15 24 34.1	
	6.7nm,0.5s						
TNSS	Tian-Shan	2.02	286	*e*P	Pb	15 24 06.1	-0.4
	baz=84						
TNSS				*e*S	Sb	15 24 32.7	+0.4
	baz=84						
TNSS	Tian-Shan	2.02	286	*e*P	Pb	15 24 06.1	-0.4
	8.1nm,0.5s						
TNSS				*e*S	Sb	15 24 32.7	+0.4
	7.5nm,0.2s						
ARXS	Arharly	2.13	323	Pg	Pb	15 24 07.9	-0.2
	5.0nm,0.6s						
ARXS				Lg	Lg	15 24 35.7	
	24nm,0.5s						
ARXS	Arharly	2.13	323	*e*P	Pb	15 24 07.9	-0.2
	5.0nm,0.6s						
ARXS				*e*S	Sg	15 24 35.7	-1.4
	24nm,0.5s						
IZV	Izvestkoviy	2.26	284	Pg	Pb	15 24 10.9	+0.4
	12nm,0.2s						
IZV				Lg	Lg	15 24 40.7	
	12nm,0.2s						
IZV	Izvestkoviy	2.26	284	*e*P	Pb	15 24 10.8	+0.4
	baz=83						
IZV				*e*S	Sg	15 24 40.7	-0.6
	baz=83						
IZV	Izvestkoviy	2.26	284	*e*P	Pb	15 24 10.8	+0.4
	3.7nm,0.1s						
IZV				*e*S	Sg	15 24 40.7	-0.6
	12nm,0.2s						
CHKK	Chushkaly	2.33	306	Pg	Pb	15 24 11.0	-0.5
	1.9nm,0.3s						
CHKK				Lg	Lg	15 24 41.9	
	19nm,0.1s						
CHKK	Chushkaly	2.33	306	*e*P	Pb	15 24 11.0	-0.5
	baz=5.0						
CHKK				*e*S	Sb	15 24 40.9	+0.1
	baz=5.0						
CHKK	Chushkaly	2.33	306	*e*P	Pb	15 24 11.0	-0.5
	0.7nm,0.2s						
CHKK				*e*S	Sb	15 24 40.9	+0.1
	13nm,0.3s						
MTBS	Maitube	2.41	286	Pg	Pb	15 24 12.9	-0.1
	8.8nm,0.6s						
MTBS				Lg	Lg	15 24 45.4	
	10nm,0.5s						
MTBS	Maitube	2.41	286	*e*P	Pb	15 24 12.9	-0.1
	baz=84						
MTBS				*e*S	Sb	15 24 44.3	+1.1
	baz=84						
MTBS	Maitube	2.41	286	*e*P	Pb	15 24 12.9	-0.1
	4.3nm,0.3s						
MTBS				*e*S	Sb	15 24 44.3	+1.1
	11nm,0.3s						
KTBS	Karatobe	2.45	300	Pg	Pb	15 24 13.7	+0.2
	1.7nm,0.2s						
KTBS				Lg	Lg	15 24 45.7	
	22nm,0.3s						
KTBS	Karatobe	2.45	300	*e*P	Pb	15 24 13.7	+0.2
	baz=98						
KTBS				*e*S	Sg	15 24 45.6	-1.7
	baz=98						
KTBS	Karatobe	2.45	300	*e*P	Pb	15 24 13.7	+0.2
	1.7nm,0.2s						
KTBS				*e*S	Sg	15 24 45.6	-1.7
	22nm,0.3s						
ULHL	Ulahol	2.50	265	⇑*i*P	Pb	15 24 13.6	-1.0
	baz=63						
ULHL				⇑*i*S	Sb	15 24 46.3	+0.3
	baz=63						
BOOM	Boomskoye usch	2.71	271	⇓*i*P	Pb	15 24 16.7	-1.3
	baz=69						
BOOM				⇓*i*S	Sb	15 24 50.7	-1.1
	baz=69						
KUU	Kurty	2.75	301	Pg	Pb	15 24 18.9	+0.2
	0.9nm,0.2s						
KUU				Lg	Lg	15 24 54.6	
	7.9nm,0.2s						
KUU	Kurty	2.75	301	*e*P	Pb	15 24 18.9	+0.2
	baz=0.0						
KUU				*e*S	Sg	15 24 54.6	-2.5
	baz=0.0						
KUU	Kurty	2.75	301	*e*P	Pb	15 24 18.9	+0.2
	0.9nm,0.2s						
KUU				*e*S	Sg	15 24 54.6	-2.5
	7.9nm,0.2s						
KAPS	Kapalarasan	2.77	356	Pg	Pb	15 24 19.1	0.0
	0.9nm,0.3s						
KAPS				Lg	Lg	15 24 54.6	
	6.6nm,0.4s						
KAPS	Kapalarasan	2.77	356	*e*P	Pb	15 24 19.1	0.0
	0.9nm,0.3s						
KAPS				*e*S	Sg	15 24 54.6	-3.1
	6.6nm,0.4s						
NRN	Naryn	2.90	249	⇑*i*P	Pb	15 24 20.0	-1.4
	baz=48						
NRN				⇑*i*S	Sb	15 24 56.8	-0.6
	baz=48						
TKM2	Tokmak 2	2.98	279	⇓Pg	Pb	15 24 22.3	-0.4
	0.7nm,0.5s						
TKM2				⇑Lg	Lg	15 25 03.8	
	1.8nm,0.5s						
TKM2	Tokmak 2	2.98	279	⇑*i*P	Pb	15 24 20.6	-2.1
	baz=78						
TKM2				⇑*i*S	Sb	15 24 57.6	-2.0
	baz=78						
KZA	Kyzart	3.26	264	⇑*e*P	Pb	15 24 25.1	-2.5
	baz=63						
KZA				⇑*i*S	Sb	15 25 04.8	-3.1
	baz=63						
KBK	Karagaybulak	3.44	274	⇓*i*P	Pb	15 24 27.1	-3.4
	baz=73						
KBK				⇓*i*S	Sb	15 25 08.3	-4.6
	baz=73						
AAK	Ala-Archa	3.77	273	⇑Pn	Pb	15 24 32.8	-3.4
	1.4nm,0.8s						
AAK				⇓Lg	Lg	15 25 31.0	
	2.7nm,0.8s						
UCH	Uchtor	3.78	267	⇑*e*P	Pn	15 24 31.9	+3.4
	baz=66						
UCH				⇑*i*S	Sb	15 25 17.6	-5.4
	baz=66						
MAKZ	Makanchi	4.61	21	⇓Pn	Pn	15 24 40.8	+1.3
	0.4nm,0.7s						
MAKZ				⇑Lg	Lg	15 25 53.1	
	0.2nm,0.6s						
MK31	Makanchi Array	4.68	23	⇑Pn	Pn	15 24 42.0	+1.4
	0.2nm,0.4s,baz=208,slow=14,SNR=8.4						
MK31				⇑Lg	Lg	15 25 56.6	
	0.2nm,0.3s,baz=204,slow=24						

SOME ***03*** *15:26:13.8, 42°.52N×79°.67E, h20km*

KRNET ***03*** *15:26:14.4±0.1, 42°.57N×79°.62E, h15km, mb2.2*

NNC ***03*** *15:26:14.5±0.8, 42°.56N×79°.57E, h1km±5km, mpv2.7, Error ellipse: s-maj=5.6km s-min=3.4km az=168.0*

ISC 03 15:26:12.4±2.2, 42°.64N±0°.06×79°.64E±0°.08, h9km±11km, n20, σ0ˢ58/39, 8C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.53	346	P	Pn	15 26 27.1	+0.8
	9.5nm,0.1s						
SHLS				S	Sn	15 26 36.7	+1.1
	30nm,0.2s						
SHLS	Shalkode	0.53	346	*e*P	Pn	15 26 26.3	-0.1

	baz=18						
SHLS	baz=18			eS	Sn	15 26 35.3	-0.3
SHLS	**Shalkode** 9.5nm,0.1s	0.53	346	eP	Pn	15 26 26.3	-0.1
SHLS	30nm,0.2s			eS	Sn	15 26 35.3	-0.3
UZB	**Uzynbulak** 1.6nm,0.1s	0.68	318	P	Pn	15 26 28.3	-0.1
UZB	7.4nm,0.2s			S	Sn	15 26 38.7	-0.5
UZB	**Uzynbulak** baz=23	0.68	318	eP	Pn	15 26 28.3	-0.1
UZB	baz=23			eS	Sn	15 26 38.7	-0.5
UZB	**Uzynbulak** 1.6nm,0.1s	0.68	318	eP	Pn	15 26 28.3	-0.1
UZB	7.4nm,0.2s			eS	Sn	15 26 38.7	-0.5
PDGK	**Podgornoye** 1.1nm,0.2s	0.69	351	P	Pn	15 26 29.1	+0.5
PDGK	0.8nm,0.2s			S	Sn	15 26 40.0	+0.3
PDGK	**Podgornoye** baz=53	0.69	351	⇑iP	Pn	15 26 29.1	+0.5
PDGK	baz=53			⇑iS	Sn	15 26 39.6	0.0
PRZ	**Przheval'sk** baz=65	0.93	261	⇑iP	Pn	15 26 31.5	-0.4
PRZ	baz=65			⇑iS	Sb	15 26 44.3	+1.0
SATY	**Saty** 0.7nm,0.1s	1.00	295	P	Pn	15 26 33.4	+0.6
SATY	11nm,0.1s			S	Sn	15 26 47.6	+0.6
SATY	**Saty** 0.4nm,0.1s	1.00	295	eP	Pn	15 26 33.4	+0.6
SATY	11nm,0.1s			eS	Sn	15 26 47.6	+0.6
KDJ	**Kajisay** baz=57	1.89	255	⇑iP	Pg	15 26 48.9	+0.2
KDJ	baz=57			⇑iS	Sg	15 27 13.8	+0.6
IZV	**Izvestkoviy** 1.8nm,0.1s	2.26	281	Pg	Pg	15 26 55.4	-0.3
IZV	1.4nm,0.2s			Lg	Lg	15 27 25.6	
IZV	**Izvestkoviy** baz=83	2.26	281	eP	Pg	15 26 55.4	-0.3
IZV	baz=83			eS	Sg	15 27 25.6	+0.6
IZV	**Izvestkoviy** 0.5nm,0.1s	2.26	281	eP	Pg	15 26 55.4	-0.3
IZV	2.2nm,0.2s			eS	Sg	15 27 25.6	+0.6
CHKK	**Chushkaly** baz=5.0	2.28	303	eP	Pg	15 26 55.9	-0.3
CHKK	baz=5.0			eS	Sg	15 27 25.9	+0.1
CHKK	**Chushkaly** 0.3nm,0.1s	2.28	303	eP	Pg	15 26 55.9	-0.3
CHKK	2.5nm,0.3s			eS	Sg	15 27 25.9	+0.1
ULHL	**Ulahol** baz=64	2.54	262	⇓iP	Pb	15 26 59.1	+0.7
ULHL	baz=64			⇓iS	Sb	15 27 30.7	+0.8
NRN	**Naryn** baz=48	2.97	247	⇑iP	Pb	15 27 04.7	-0.9
NRN	baz=48			⇑iS	Sb	15 27 41.2	-0.9
TKM2	**Tokmak 2** baz=78	2.99	277	⇓iP	Pb	15 27 05.0	-0.9
TKM2	baz=78			⇓iS	Sb	15 27 41.8	-0.8

*SOME **03** 15:28:46.7, 42°.57N×79°.65E, h20^{km}*
*KRNET **03** 15:28:46.0±0.1, 42°.57N×79°.65E, h15^{km}, mb2.4*
*NNC **03** 15:28:46.5±1.2, 42°.61N×79°.65E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=7.9km s-min=4.4km az=136.0*
ISC 03 15:28:43.6±1.7**, 42°.48N**±0°.05×**79°.72E**±0°.04**, h9**^{km}±14^{km}**, n38, σ1ˢ.15**/71**, 8C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHLS	**Shalkode** 9.5nm,0.1s	0.71	345	P	Pb	15 28 58.6	+0.4
SHLS	60nm,0.2s			S	Sb	15 29 07.7	-0.3
SHLS	**Shalkode** baz=16	0.71	345	eP	Pb	15 28 58.6	+0.4
SHLS	baz=16			eS	Sb	15 29 07.0	-1.1
SHLS	**Shalkode** 2.6nm,0.1s	0.71	345	eP	Pb	15 28 58.6	+0.4
SHLS	60nm,0.2s			eS	Sb	15 29 06.9	-1.1
UZB	**Uzynbulak** 5.6nm,0.1s	0.84	323	P	Pg	15 29 00.3	+0.4
UZB	3.5nm,0.3s			S	Sg	15 29 10.2	-0.7
UZB	**Uzynbulak** baz=21	0.84	323	eP	Pg	15 29 00.3	+0.4
UZB	baz=21			eS	Sg	15 29 10.2	-0.7
UZB	**Uzynbulak** 5.6nm,0.1s	0.84	323	eP	Pg	15 29 00.3	+0.4
UZB	3.5nm,0.3s			eS	Sg	15 29 10.2	-0.7
PDGK	**Podgornoye** 1.6nm,0.1s	0.87	349	P	Pg	15 29 00.7	+0.3
PDGK	2.4nm,0.1s			S	Sg	15 29 11.2	-0.4
PDGK	**Podgornoye** 1.6nm,0.4s	0.87	349	⇑P	Pg	15 29 00.2	-0.2
PDGK	1.8nm,0.4s			⇑S	Sg	15 29 10.8	-0.9
PDGK	**Podgornoye** baz=51	0.87	349	⇑iP	Pg	15 29 00.6	+0.3
PDGK	baz=51			⇑iS	Sg	15 29 11.3	-0.4
PRZ	**Przheval'sk** baz=65	0.97	271	⇓iP	Pb	15 29 03.4	+0.6
PRZ	baz=65			⇓iS	Sb	15 29 16.0	+0.2
KTMS	**Ketmen** 3.1nm,0.1s	1.07	25	P	Pb	15 29 05.2	+0.7
KTMS	8.5nm,0.2s			S	Sb	15 29 18.5	-0.2
KTMS	**Ketmen** baz=29	1.07	25	eP	Pb	15 29 05.2	+0.7
KTMS	baz=29			eS	Sb	15 29 18.5	-0.2
KTMS	**Ketmen** 3.1nm,0.1s	1.07	25	eP	Pb	15 29 05.2	+0.7
KTMS	8.5nm,0.2s			eS	Sb	15 29 18.5	-0.2
SATY	**Saty** 2.8nm,0.1s	1.13	302	P	Pg	15 29 06.0	+0.8
SATY	11nm,0.1s			S	Sg	15 29 19.8	-0.1
SATY	**Saty** 2.8nm,0.1s	1.13	302	eP	Pg	15 29 06.0	+0.8
SATY	11nm,0.1s			eS	Sg	15 29 19.8	-0.1
DJR	**Jarkent** 0.5nm,0.1s	1.86	2	P	Pb	15 29 18.9	+1.2
DJR	2.3nm,0.3s			S	Sg	15 29 42.1	-1.1
DJR	**Jarkent** 0.5nm,0.1s	1.86	2	eP	Pb	15 29 18.9	+1.2
DJR	2.3nm,0.3s			eS	Sg	15 29 42.1	-1.1
MNBS	**Baschi** 3.0nm,0.2s	1.87	329	P	Pb	15 29 18.4	+0.4
MNBS	7.9nm,0.2s			S	Sb	15 29 41.0	-0.5
KDJ	**Kajisay** baz=57	1.92	260	⇓iP	Pb	15 29 21.0	+2.2
KDJ	baz=57			⇓iS	Sg	15 29 46.0	+0.9
MDOK	**Medeo** 1.5nm,0.6s	2.08	290	Pn	Pb	15 29 22.3	+0.7
MDOK	2.7nm,0.6s			Sn	Sg	15 29 49.8	-0.6
TNSS	**Tian-Shan** 1.6nm,0.4s	2.12	286	Pg	Pb	15 29 23.3	+1.0
TNSS	1.7nm,0.3s			Lg	Lg	15 29 50.8	
TNSS	**Tian-Shan** baz=84	2.12	286	eP	Pb	15 29 23.3	+1.0
TNSS	baz=84			eS	Sb	15 29 50.1	+1.2
TNSS	**Tian-Shan** 0.3nm,0.2s	2.12	286	eP	Pb	15 29 23.3	+1.0
TNSS	1.7nm,0.3s			eS	Sb	15 29 50.1	+1.2
IZV	**Izvestkoviy** 1.3nm,0.1s	2.35	285	Pg	Pb	15 29 27.4	+1.2
IZV	3.5nm,0.2s			Lg	Lg	15 29 58.2	
IZV	**Izvestkoviy** baz=83	2.35	285	eP	Pb	15 29 28.4	+2.2
IZV	baz=83			eS	Sg	15 29 58.2	-1.0
IZV	**Izvestkoviy** 0.6nm,0.2s	2.35	285	eP	Pb	15 29 28.4	+2.2
IZV	2.7nm,0.2s			eS	Sg	15 29 58.2	-1.0
CHKK	**Chushkaly** 0.8nm,0.1s	2.43	306	Pg	Pb	15 29 28.1	+0.7
CHKK	2.0nm,0.2s			Lg	Lg	15 29 58.1	
CHKK	**Chushkaly** baz=4.0	2.43	306	eP	Pb	15 29 28.1	+0.7
CHKK	baz=4.0			eS	Sb	15 29 58.0	+0.6
CHKK	**Chushkaly** 0.8nm,0.1s	2.43	306	eP	Pb	15 29 28.1	+0.7
CHKK	2.0nm,0.2s			eS	Sb	15 29 58.1	+0.6
ULHL	**Ulahol** baz=64	2.59	266	⇓iP	Pb	15 29 30.5	+0.2
ULHL	baz=64			⇓iS	Sb	15 30 02.4	+0.2
BOOM	**Boomskoye usch** baz=70	2.79	272	⇓iP	Pb	15 29 33.3	-0.5
BOOM	baz=70			⇓iS	Sb	15 30 07.8	-0.4
NRN	**Naryn** baz=49	2.96	251	⇑iP	Pb	15 29 36.7	0.0
NRN	baz=49			⇑iS	Sb	15 30 13.3	+0.2
DGS	**Degeres** 0.7nm,0.4s	3.00	286	Pg	Pb	15 29 38.2	+0.9
DGS	2.6nm,0.5s			Lg	Lg	15 30 16.5	
DGS	**Degeres** baz=85	3.00	286	eP	Pb	15 29 39.9	+2.6
DGS	baz=85			eS	Sg	15 30 17.9	-2.1
DGS	**Degeres** 0.5nm,0.4s	3.00	286	eP	Pb	15 29 39.9	+2.6
DGS	2.6nm,0.5s			eS	Sg	15 30 17.9	-2.1
TKM2	**Tokmak 2** 1.0nm,0.8s	3.07	280	⇓Pg	Pb	15 29 38.5	+0.1
TKM2	0.9nm,0.6s			⇓Lg	Lg	15 30 18.8	
TKM2	**Tokmak 2** baz=78	3.07	280	⇓iP	Pb	15 29 36.9	-1.6
TKM2	baz=78			⇓iS	Sb	15 30 13.7	-2.4
KZA	**Kyzart** baz=63	3.34	265	⇑iP	Pb	15 29 41.4	-1.8
KZA	baz=63			⇑iS	Sb	15 30 21.0	-3.1

*IDC **03** 15:32:21.0±1.4, 35°.80N×139°.72E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.2/29, mbtmp3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/16, Error ellipse: s-maj=35.2km s-min=21.5km az=52.0*
*ISCJB **03** 15:32:26.0±0.6, 35°.94N±0°.04×139°.58E±0°.08, h52^{km}±5^{km}, mb3.5/3, MS3.0/1, Error ellipse: s-maj=10.9km s-min=5.8km az=171.9*
*JMA **03** 15:32:27.1±0.1, 35°.95N×139°.58E, h35^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s51.00000°, δ62.00000°, λ93.00000°. NP2: ϕ_s225.00000°, δ28.00000°, λ84.00000°. Principal axes: T Plg73.0000°, Azm329.0000°; N Plg3.0000°, Azm230.0000°; P Plg17.0000°, Azm139.0000°;*
JMA Felt I J1.
ISC 03 15:32:26.9±1.0**, 35°.93N**±0°.04×**139°.61E**±0°.06**, h41**^{km}±8^{km}**, n14, σ1ˢ.52**/22**, mb3.5**/3**, 1C-4D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TOK	**Tokyo**	0.28	153	P	Pn	15 32 35.7	+0.8
TOK				eS	Sn	15 32 42.8	+2.3
JHU	**Hanno**	0.28	253	⇑P	Pn	15 32 34.3	-0.7
JHU				eS	Sn	15 32 39.4	-1.2
JAG	**Ashikaga**	0.51	346	⇓P	Pn	15 32 37.4	-0.3
JAG				eS	Sn	15 32 44.5	-0.9
JRY	**Ryogami san**	0.58	278	⇓P	Pn	15 32 38.2	-0.5
JRY				eS	Sn	15 32 46.2	-0.9
JOD2	**Odawara 2**	0.79	212	P	Pn	15 32 41.7	+0.1
JOD2				eS	Sn	15 32 52.6	+0.4
JKT	**Katashina**	0.88	341	⇓P	Pn	15 32 42.7	-0.2
JKT				eS	Sn	15 32 54.3	-0.2
JYN	**Shimob**	0.97	244	⇓P	Pn	15 32 44.5	+0.5
JIM2	**Oshima 3**	1.22	187	P	Pn	15 32 47.4	-0.1
JIM2				eS	Sn	15 33 01.9	-0.9
MJAR	**Matsushiro Arr** 5.3nm,0.3s,baz=131,slow=13,SNR=278	1.28	299	Pn	Pn	15 32 47.9	-0.4
MJAR	3.6nm,0.3s,baz=146,slow=22,SNR=12			Sn	Sn	15 33 07.7	+3.4
MAT	**Matsushiro**	1.28	299	P	Pn	15 32 48.7	+0.4
MAT				S	Sn	15 33 08.4	+4.0
PETK	**Petropavlovsk-** comp=Z,68nm,19.9s,baz=291,slow=38	21.37	31	LR	LR	15 46 03.7	
ILAR	**Eielson Array** 0.4nm,0.9s,baz=264,slow=5.3,SNR=3.6	51.20	32	P	P	15 41 25.9	+0.2
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=0.5,slow=7.5,SNR=6.4	55.79	186	P	P	15 41 58.5	-1.4
ASAR	**Alice Springs** 0.2nm,0.5s,baz=357,slow=6.5,SNR=3.4	59.52	186	P	P	15 42 25.7	-0.3

*NNC **03** 15:33:38.6±1.1, 42°.57N×79°.61E, h0^{km}, mb2.5, mpv2.6, Error ellipse: s-maj=6.8km s-min=3.6km az=137.0*
*SOME **03** 15:33:39.7, 42°.58N×79°.60E, h20^{km}*
*KRNET **03** 15:33:39.0±0.1, 42°.56N×79°.61E, h16^{km}, mb2.4*
ISC 03 15:33:39.1±1.1**, 42°.55N**±0°.04×**79°.62E**±0°.04**, h10**^{km}**, n36, σ1ˢ.15**/66**, 17C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHLS	**Shalkode** 5.3nm,0.1s	0.61	349	P	Pb	15 33 51.6	-0.5
SHLS	70nm,0.2s			S	Sb	15 34 00.7	-0.2
SHLS	**Shalkode** baz=19	0.61	349	eP	Pb	15 33 51.6	-0.5
SHLS	baz=19			eS	Sb	15 34 00.5	-0.4
SHLS	**Shalkode** 1.7nm,0.1s	0.61	349	eP	Pb	15 33 51.6	-0.5
SHLS	70nm,0.2s			eS	Sb	15 34 00.5	-0.4
UZB	**Uzynbulak** 5.9nm,0.1s	0.74	324	P	Pg	15 33 52.8	-0.6
UZB	4.6nm,0.1s			S	Sg	15 34 02.9	-0.2
UZB	**Uzynbulak** baz=24	0.74	324	eP	Pg	15 33 52.8	-0.6
UZB	baz=24			eS	Sg	15 34 02.5	-0.6
UZB	**Uzynbulak** 5.9nm,0.1s	0.74	324	eP	Pg	15 33 52.8	-0.6
UZB	4.6nm,0.1s			eS	Sg	15 34 02.5	-0.6
PDGK	**Podgornoye** 1.9nm,0.1s	0.78	353	P	Pg	15 33 53.5	-0.8
PDGK	3.6nm,0.2s			S	Sg	15 34 04.3	-0.2
PDGK	**Podgornoye** 0.5nm,0.5s	0.78	353	⇓P	Pg	15 33 53.4	-0.9
PDGK	3.6nm,0.4s			⇑S	Sg	15 34 04.0	-0.5
PDGK	**Podgornoye** baz=53	0.78	353	⇑iP	Pg	15 33 53.5	-0.8
PDGK	baz=53			⇑iS	Sg	15 34 04.4	-0.1
PRZ	**Przheval'sk** baz=65	0.90	266	⇑iP	Pg	15 33 55.9	-0.6
PRZ	baz=65			⇑iS	Sg	15 34 08.2	-0.1
SATY	**Saty** 1.5nm,0.1s	1.02	300	P	Pg	15 33 58.2	-0.7
SATY	11nm,0.1s			S	Sg	15 34 11.6	-0.6
SATY	**Saty** 1.5nm,0.1s	1.02	300	eP	Pg	15 33 58.2	-0.7
SATY	11nm,0.1s			eS	Sg	15 34 11.6	-0.6
KTMS	**Ketmen** 2.2nm,0.1s	1.04	31	P	Pg	15 33 58.6	-0.7
KTMS	2.4nm,0.2s			S	Sg	15 34 12.1	-0.8
KTMS	**Ketmen** baz=31	1.04	31	eP	Pg	15 33 58.6	-0.7
KTMS	baz=31			eS	Sb	15 34 12.8	-0.4
KTMS	**Ketmen** 2.2nm,0.1s	1.04	31	eP	Pg	15 33 58.6	-0.7
KTMS	2.4nm,0.2s			eS	Sg	15 34 12.1	-0.8
MNBS	**Baschi**	1.77	330	P	Pb	15 34 10.7	-0.9
MNBS				S	Sb	15 34 33.1	-0.8
DJR	**Jarkent** 0.1nm,0.1s	1.78	4	eP	Pb	15 34 11.7	-0.3
DJR	1.4nm,0.1s			eS	Sb	15 34 34.6	+0.1
KDJ	**Kajisay** baz=57	1.85	258	⇑iP	Pb	15 34 12.8	-0.4
KDJ	baz=57			⇑iS	Sg	15 34 37.9	-0.9
MDOK	**Medeo** 0.4nm,0.5s	1.98	289	Pn	Pn	15 34 12.0	-1.0
MDOK	1.9nm,0.5s			Sn	Sb	15 34 41.1	+0.8
TNSS	**Tian-Shan** 1.0nm,0.2s	2.02	285	Pg	Pb	15 34 15.8	-0.5
TNSS	3.2nm,0.2s			Lg	Lg	15 34 41.8	
TNSS	**Tian-Shan** baz=84	2.02	285	eP	Pb	15 34 15.8	-0.5
TNSS	baz=84			eS	Sb	15 34 41.9	+0.2
TNSS	**Tian-Shan** 1.0nm,0.2s	2.02	285	eP	Pb	15 34 15.8	-0.5
TNSS	3.2nm,0.2s			eS	Sb	15 34 41.8	+0.2
IZV	**Izvestkoviy**	2.26	283	Pg	Pb	15 34 19.5	-0.7
IZV				Lg	Lg	15 34 49.0	
IZV	**Izvestkoviy** 0.8nm,0.2s	2.26	283	eP	Pb	15 34 20.0	-0.1
IZV	6.3nm,0.4s			eS	Sb	15 34 49.0	+0.8
CHKK	**Chushkaly** 0.7nm,0.1s	2.32	305	Pg	Pb	15 34 21.7	+0.6
CHKK	6.1nm,0.2s			Lg	Lg	15 34 51.4	
CHKK	**Chushkaly** 0.7nm,0.1s	2.32	305	eP	Pb	15 34 21.3	+0.2
CHKK	6.1nm,0.2s			eS	Sb	15 34 50.9	+1.1
KTBS	**Karatobe**	2.44	299	Pg	Pb	15 34 23.6	+0.4
KTBS				Lg	Lg	15 34 55.2	
KTBS	**Karatobe** 0.2nm,0.2s	2.44	299	eP	Pb	15 34 23.6	+0.4
KTBS	6.3nm,0.3s			eS	Sg	15 34 55.2	-2.4
ULHL	**Ulahol** baz=64	2.52	264	⇑eP	Pn	15 34 21.9	+1.6
ULHL	baz=64			⇑iS	Sb	15 34 54.3	-1.4
BOOM	**Boomskoye usch** baz=70	2.72	270	⇑iP	Pn	15 34 24.9	+1.9
BOOM	baz=70			⇑iS	Sb	15 34 58.5	-2.9
DGS	**Degeres** 0.7nm,0.3s	2.91	285	Pg	Pb	15 34 31.4	+0.3
DGS	8.0nm,0.6s			Lg	Lg	15 35 08.4	
DGS	**Degeres** 0.7nm,0.3s	2.91	285	eP	Pb	15 34 31.4	+0.3
DGS	8.0nm,0.6s			eS	Sb	15 35 08.4	+1.7
NRN	**Naryn** baz=48	2.92	249	⇑iP	Pn	15 34 28.0	+2.1
NRN	baz=48			⇑iS	Sb	15 35 04.6	-2.7
TKM2	**Tokmak 2** 0.8nm,0.7s	2.98	278	⇑Pg	Pb	15 34 30.8	-1.7
TKM2	1.2nm,0.5s			⇑Lg	Lg	15 35 10.5	
TKM2	**Tokmak 2** baz=78	2.98	278	⇑iP	Pn	15 34 28.8	+2.1
TKM2	baz=78			⇑iS	Sb	15 35 05.7	-3.4
KZA	**Kyzart** baz=63	3.27	263	⇓iP	Pn	15 34 32.9	+2.0
KZA	baz=63			⇓eS	Sn	15 35 12.6	+2.5

*SOME **03** 15:34:29.7, 42°.48N×79°.58E, h15^{km}*
*NNC **03** 15:34:29.8±1.0, 42°.58N×79°.61E, h0^{km}, mb2.6, mpv2.6, Error ellipse: s-maj=6.3km s-min=3.3km az=138.0*
*KRNET **03** 15:34:30.7±0.1, 42°.58N×79°.54E, h13^{km}, mb2.1*
ISC 03 15:34:29.0±1.7**, 42°.53N**±0°.06×**79°.60E**±0°.06**, h16**^{km}±10^{km}**, n23, σ1ˢ.01**/41**, 14C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHLS	**Shalkode** 5.6nm,0.1s	0.64	351	P	Pb	15 34 42.8	+1.0
SHLS	96nm,0.2s			S	Sn	15 34 52.1	-1.3
SHLS	**Shalkode** 4.7nm,0.1s	0.64	351	eP	Pb	15 34 42.8	+1.0
SHLS	97nm,0.2s			eS	Sn	15 34 52.3	-1.1
UZB	**Uzynbulak** 8.2nm,0.1s	0.75	326	P	Pb	15 34 44.1	+0.3
UZB	6.2nm,0.3s			S	Sb	15 34 54.2	+0.3
UZB	**Uzynbulak** 8.2nm,0.1s	0.75	326	eP	Pb	15 34 44.1	+0.3
UZB	5.2nm,0.1s			eS	Sb	15 34 54.4	+0.5
PDGK	**Podgornoye** 2.7nm,0.1s	0.81	354	P	Pb	15 34 44.8	+0.1
PDGK	4.3nm,0.2s			S	Sb	15 34 55.6	+0.2
PDGK	**Podgornoye** 0.4nm,0.3s	0.81	354	⇓P	Pg	15 34 44.1	-0.7
PDGK	3.6nm,0.4s			⇑S	Sb	15 34 55.2	-0.2
PDGK	**Podgornoye** baz=57	0.81	354	⇑iP	Pb	15 34 44.8	+0.1
PDGK	baz=57			⇑iS	Sb	15 34 55.6	+0.2
PRZ	**Przheval'sk** baz=63	0.89	268	⇑iP	Pg	15 34 46.6	+0.4
PRZ	baz=63			⇑iS	Sg	15 34 58.2	+0.2
SATY	**Saty** 1.3nm,0.1s	1.03	302	P	Pn	15 34 49.7	+0.8
SATY	17nm,0.1s			S	Sn	15 35 02.9	-0.1
SATY	**Saty** 1.7nm,0.1s	1.03	302	eP	Pb	15 34 48.9	+0.5
SATY	17nm,0.1s			eS	Sn	15 35 02.8	-0.1
KTMS	**Ketmen** 3.2nm,0.1s	1.07	31	P	Pb	15 34 49.8	+0.5
KTMS	2.6nm,0.1s			S	Sb	15 35 03.3	+0.2
KDJ	**Kajisay** baz=56	1.84	258	⇑iP	Pb	15 35 04.0	+1.7
KDJ	baz=56			⇑iS	Sg	15 35 28.7	+0.6
MDOK	**Medeo** 0.6nm,0.5s	1.98	290	Pn	Pb	15 35 05.4	+0.6
MDOK				Sn	Sg	15 35 31.4	-1.3

	2.3nm,0.6s						
TNSS	**Tian-Shan**	**2.02**	**286**	Pg	**Pb**	**15 35 07.1**	**+1.6**
	1.0nm,0.2s						
TNSS				Lg	Lg	15 35 33.5	
	3.3nm,0.2s						
CHKK	**Chushkaly**	**2.33**	**306**	Pg	**Pg**	**15 35 13.0**	**-0.6**
	0.7nm,0.1s						
CHKK				Lg	Lg	15 35 42.7	
	7.5nm,0.2s						
KTBS	**Karatobe**	**2.44**	**300**	Pg	**Pb**	**15 35 14.3**	**+1.8**
	0.6nm,0.2s						
KTBS				Lg	Lg	15 35 46.3	
	8.7nm,0.4s						
ULHL	**Ulahol**	**2.50**	**265**	⇑*i*P	**Pb**	**15 35 14.0**	**+0.4**
	baz=63						
ULHL				⇑*i*S	**Sb**	**15 35 45.3**	**+1.0**
	baz=63						
BOOM	**Boomskoye usch**	**2.71**	**270**	⇑*i*P	**Pb**	**15 35 17.0**	**-0.1**
	baz=69						
BOOM				⇑*i*S	**Sb**	**15 35 50.2**	**+0.2**
	baz=69						
NRN	**Naryn**	**2.90**	**249**	⇑*i*P	**Pb**	**15 35 20.0**	**-0.4**
	baz=48						
NRN				⇑*i*S	**Sb**	**15 35 56.1**	**+0.4**
	baz=48						
DGS	**Degeres**	**2.90**	**286**	Pg	**Pb**	**15 35 22.5**	**+2.1**
	1.3nm,0.3s						
DGS				Lg	Lg	15 35 60.0	
	5.2nm,0.5s						
TKM2	**Tokmak 2**	**2.98**	**279**	⇑Pg	**Pb**	**15 35 20.7**	**-1.0**
	0.6nm,0.6s						
TKM2				⇓Lg	Lg	15 36 01.6	
	1.2nm,0.5s						
TKM2	**Tokmak 2**	**2.98**	**279**	⇓*e*P	**Pb**	**15 35 20.1**	**-1.6**
	baz=78						
TKM2				⇓*i*S	**Sb**	**15 35 56.5**	**-1.4**
	baz=78						
KZA	**Kyzart**	**3.26**	**264**	⇓*i*P	**Pb**	**15 35 24.7**	**-1.9**
	baz=62						
KZA				⇓*i*S	**Sb**	**15 36 04.1**	**-2.0**
	baz=62						

*ISCJB **03** 15:41:42.4±0.8, 0°.95N±0°.06×97°.01E±0°.06, h25^{km}, mb3.3/5, Error ellipse: s-maj=10.3km s-min=5.7km az=42.7*

*IDC **03** 15:41:43.8±6.4, 1°.46N×97°.81E, h0^{km}, mb3.3/5, mb1 3.3/5, mb1mx3.2/45, mbtmp3.3/5, Error ellipse: s-maj=325.7km s-min=23.4km az=55.0*

*DJA **03** 15:41:44.7±0.9, 1°N±6°×9°7E±°, h33^{km}±6^{km}, M3.3/6, MLv3.3/6*

ISC 03 15:41:43.7±1.1, **1°.01N**±0°.08×**97°.10E**±0°.07, **h25**^{km}, **n17, σ1^{s}66**/15, **mb3.2**/5, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.56**	**58**	P	**Pn**	**15 41 55.9**	**-0.3**
GSI				S	**Sn**	**15 42 05.3**	**+0.6**
PBSI	**Pulau Batu**	**1.58**	**132**	P	**Pb**	**15 42 11.8**	**-0.5**
PBSI				S	**Sn**	**15 42 28.4**	**-1.5**
SNSI	**Sinabang, Aceh**	**1.59**	**331**	P	**Pn**	**15 42 08.0**	**-2.3**
SNSI				S	**Sn**	**15 42 29.6**	**-0.5**
TPTI		**2.24**	**2**	P	**Pn**	**15 42 18.6**	**-0.7**
MNSI	**Mandailing Nat**	**2.49**	**95**	P	**Pb**	**15 42 24.3**	**-3.5**
MNSI				S	**Sn**	**15 42 52.8**	**+0.5**
KCSI	**Kotacane, Aceh**	**2.59**	**15**	P	**Pn**	**15 42 24.3**	**+0.2**
H08S2	**Diego Garcia H**	**26.00**	**250**	T	T	16 14 19.3	
	baz=71,slow=76,SNR=156						
H08S3	**Diego Garcia H**	**26.00**	**250**	T	T	16 14 19.6	
	baz=71,slow=76,SNR=176						
H08S1	**Diego Carcia H**	**26.02**	**250**	T	T	16 14 20.7	
	baz=71,slow=76,SNR=107						
H08N1	**Diego Carcia H**	**27.04**	**254**	T	T	16 15 46.2	
	baz=319,slow=76,SNR=8.2						
H08N2	**Diego Garcia H**	**27.05**	**254**	T	T	16 15 42.5	
	baz=319,slow=76,SNR=10						
H08N3	**Diego Garcia H**	**27.06**	**254**	T	T	16 15 50.7	
	baz=319,slow=76,SNR=10						
WRA	**Warramunga Arr**	**42.02**	**122**	P	**P**	**15 49 34.7**	**+1.2**
	0.2nm,0.6s,baz=302,slow=9.1,SNR=4.6						
ASAR	**Alice Springs**	**43.36**	**127**	P	**P**	**15 49 45.2**	**+0.9**
	0.5nm,1.2s,baz=296,slow=7.8,SNR=3.4						
MKAR	**Makanchi Array**	**47.41**	**346**	P	**P**	**15 50 18.1**	**+2.1**
	0.4nm,0.8s,baz=159,slow=8.3,SNR=5.3						
KURBB	**Kurchatov Arra**	**51.89**	**345**	P	**P**	**15 50 51.8**	**+1.7**
	0.2nm,0.7s,baz=174,slow=7.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**53.73**	**351**	P	**P**	**15 51 05.1**	**+1.5**
	0.5nm,0.6s,baz=156,slow=7.3,SNR=2.8						

*DDA **03** 15:54:26.6, 37°.46N×38°.61E, h7^{km}±1^{km}, ML2.5*

*ISK **03** 15:54:26.6, 37°.42N×38°.62E, h7^{km}, ML1.9/7*

*ISCJB **03** 15:54:27.3±0.6, 37°.46N±0°.03×38°.61E±0°.03, h5^{km}±5^{km}, Error ellipse: s-maj=5.8km s-min=4.2km az=170.1*

ISC 03 15:54:27.0±0.9, **37°.44N**±0°.03×**38°.63E**±0°.03, **h11**^{km}±8^{km}, **n14, σ0^{s}50**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.15**	**90**	PG	**Pg**	**15 54 30.4**	**-0.1**
URFA				SG	**Sg**	**15 54 33.2**	**+0.3**
ATAB	**Bozova**	**0.27**	**276**	*i* P	**Pg**	**15 54 32.5**	**0.0**
ATAB				*i* S	**Sg**	**15 54 36.0**	**-0.2**
ATAB				IAML_P			
	comp=Z,6μm,0.1s						
SANL	**SANLIURFA_Merk**	**0.39**	**133**	*i* P	**Pb**	**15 54 35.3**	**-0.7**
SANL				*i* S	**Sb**	**15 54 41.6**	**-0.5**
SANL				IAML_P			
	comp=Z,2μm,0.1s						
SURC	**SANLIURFA_SURC**	**0.56**	**181**	*i* P	**Pb**	**15 54 39.0**	**+0.1**
SURC				*i* S	**Sb**	**15 54 46.9**	**0.0**
SURC				IAML_P			
	comp=Z,171nm,0.1s						
GZT	**Gaziantep**	**0.85**	**265**	*i* P	**Pb**	**15 54 43.4**	**-0.5**
GZT				*i* S	**Sb**	**15 54 55.0**	**-0.4**
GZT				IAML_P			
	comp=Z,718nm,0.1s						
AKCD	**Akcadag**	**1.02**	**327**	*i* P	**Pb**	**15 54 46.6**	**-0.2**
ELZG	**Elazig**	**1.09**	**15**	*i* P	**Pn**	**15 54 48.6**	**+0.2**
ELZG				*i* S	**Sb**	**15 55 03.0**	**+0.6**
ELZG				IAML_P			
	comp=Z,250nm,0.1s						
GAZ	**Gaziantep**	**1.16**	**257**	PN	**Pn**	**15 54 49.1**	**-0.2**
GAZ				SN	**Sn**	**15 55 05.4**	**+0.1**
KMRS	**Kahramanmaras**	**1.38**	**273**	PN	**Pg**	**15 54 52.7**	**-0.8**
KUZU	**Kuzuini**	**1.41**	**242**	*i* P	**Pg**	**15 54 54.2**	**+0.1**
KUZU				*i* S	**Sg**	**15 55 13.7**	**+1.3**
MAZI	**Mazidag**	**1.45**	**89**	PN	**Pb**	**15 54 53.9**	**-0.1**
DARE	**Darende-Malaty**	**1.45**	**322**	PN	**Pb**	**15 54 53.9**	**-0.2**
DARE				SN	**Sg**	**15 55 14.0**	**+0.4**
PTK	**Pertek**	**1.57**	**22**	PN	**Pb**	**15 54 55.8**	**-0.4**
TAHT	**Tahtakopru-Hat**	**2.23**	**242**	PN	**Pn**	**15 55 04.5**	**+0.6**

*SOME **03** 16:16:04.1, 42°.52N×79°.72E, h20^{km}*

*KRNET **03** 16:16:04.6±0.1, 42°.55N×79°.62E, h18^{km}, mb2.4*

*NNC **03** 16:16:04.6±1.0, 42°.57N×79°.63E, h0^{km}, mb2.7, mpv2.7, Error ellipse: s-maj=6.4km s-min=3.2km az=134.0*

ISC 03 16:16:03.9±1.6, **42°.52N**±0°.05×**79°.63E**±0°.04, **h13**^{km}±11^{km}, **n37, σ1^{s}24**/66, **19C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.65**	**349**	P	**Pb**	**16 16 17.5**	**+0.2**
	11nm,0.1s						
SHLS				S	**Sn**	**16 16 27.2**	**-2.0**
	25nm,0.2s						
SHLS	**Shalkode**	**0.65**	**349**	*e*P	**Pb**	**16 16 17.5**	**+0.2**
	baz=18						
SHLS				*e*S	**Sb**	**16 16 26.2**	**-0.1**
	baz=18						
SHLS	**Shalkode**	**0.65**	**349**	*e*P	**Pb**	**16 16 17.5**	**+0.2**
	11nm,0.1s						
SHLS				*e*S	**Sn**	**16 16 27.2**	**-2.0**
	25nm,0.2s						
PDGK	**Podgornoye**	**0.82**	**353**	P	**Pb**	**16 16 19.5**	**-0.5**
	1.0nm,0.1s						
PDGK				S	**Sg**	**16 16 30.4**	**-0.1**
	7.1nm,0.2s						
PDGK	**Podgornoye**	**0.82**	**353**	⇓P	**Pb**	**16 16 18.9**	**-1.1**
	1.5nm,0.7s						
PDGK				⇑S	**Sb**	**16 16 30.3**	**-0.8**
	5.1nm,0.3s						
PDGK	**Podgornoye**	**0.82**	**353**	⇑*i*P	**Pb**	**16 16 19.6**	**-0.5**
	baz=53						
PDGK				⇑*i*S	**Sb**	**16 16 30.1**	**-1.0**
	baz=53						
PRZ	**Przheval'sk**	**0.91**	**268**	⇑*i*P	**Pb**	**16 16 21.4**	**-0.2**
	baz=66						
PRZ				⇑*i*S	**Sb**	**16 16 33.9**	**+0.2**
	baz=66						
KTMS	**Ketmen**	**1.07**	**29**	P	**Pb**	**16 16 24.1**	**-0.3**
	3.8nm,0.1s						
KTMS				S	**Sg**	**16 16 38.3**	**-0.2**
	10nm,0.1s						
KTMS	**Ketmen**	**1.07**	**29**	*e*P	**Pb**	**16 16 24.1**	**-0.3**
	baz=30						
KTMS				*e*S	**Sg**	**16 16 38.3**	**-0.2**
	baz=30						
KTMS	**Ketmen**	**1.07**	**29**	*e*P	**Pb**	**16 16 24.1**	**-0.3**
	1.0nm,0.1s						
KTMS				*e*S	**Sg**	**16 16 38.3**	**-0.2**
	10nm,0.1s						
DJR	**Jarkent**	**1.82**	**4**	P	**Pb**	**16 16 37.4**	**+0.3**
	0.6nm,0.2s						
DJR				S	**Sg**	**16 17 01.9**	**-0.5**
	2.9nm,0.3s						
DJR	**Jarkent**	**1.82**	**4**	*e*P	**Pb**	**16 16 37.8**	**+0.7**
	0.3nm,0.2s						
DJR				*e*S	**Sg**	**16 17 01.9**	**-0.5**
	2.9nm,0.3s						
KDJ	**Kajisay**	**1.86**	**259**	⇑*i*P	**Pb**	**16 16 38.7**	**+1.0**
	baz=58						
KDJ				⇑*i*S	**Sg**	**16 17 03.2**	**-0.4**
	baz=58						
KOTS	**Kotyrbulak**	**1.98**	**292**	Pg	**Pg**	**16 16 41.9**	**-0.1**
	1.9nm,0.1s						
KOTS				Lg	Lg	16 17 10.1	
	6.4nm,0.3s						
KOTS	**Kotyrbulak**	**1.98**	**292**	*e*P	**Pg**	**16 16 41.9**	**-0.1**
	1.3nm,0.3s						
KOTS				*e*S	**Sg**	**16 17 08.9**	**+1.2**
	6.4nm,0.3s						
MDOK	**Medeo**	**2.00**	**290**	⇑Pn	**Pb**	**16 16 40.2**	**0.0**
	0.7nm,0.4s						
MDOK				Sn	**Sg**	**16 17 07.2**	**-1.1**
	2.9nm,0.7s						
MDOK	**Medeo**	**2.00**	**290**	Pg	**Pb**	**16 16 41.4**	**+1.1**
	1.1nm,0.1s						
MDOK				Lg	Lg	16 17 07.9	
	3.7nm,0.3s						
MDOK	**Medeo**	**2.00**	**290**	*e*P	**Pb**	**16 16 41.3**	**+1.1**
	baz=89						
MDOK				*e*S	**Sg**	**16 17 08.0**	**-0.4**
	baz=89						
MDOK	**Medeo**	**2.00**	**290**	*e*P	**Pb**	**16 16 41.3**	**+1.0**
	1.1nm,0.1s						
MDOK				*e*S	**Sg**	**16 17 07.9**	**-0.4**
	3.7nm,0.3s						
TNSS	**Tian-Shan**	**2.04**	**286**	Pg	**Pb**	**16 16 41.7**	**+0.7**
	1.3nm,0.2s						
TNSS				Lg	Lg	16 17 08.6	
	4.5nm,0.4s						
TNSS	**Tian-Shan**	**2.04**	**286**	*e*P	**Pb**	**16 16 41.7**	**+0.7**
	baz=85						
TNSS				*e*S	**Sg**	**16 17 08.5**	**-1.0**
	baz=85						
TNSS	**Tian-Shan**	**2.04**	**286**	*e*P	**Pb**	**16 16 41.7**	**+0.7**
	1.3nm,0.2s						
TNSS				*e*S	**Sg**	**16 17 08.6**	**-1.0**
	4.5nm,0.4s						
IZV	**Izvestkoviy**	**2.28**	**284**	Pg	**Pb**	**16 16 45.9**	**+0.9**
	1.7nm,0.1s						
IZV				Lg	Lg	16 17 16.2	
	7.1nm,0.3s						
IZV	**Izvestkoviy**	**2.28**	**284**	*e*P	**Pb**	**16 16 45.9**	**+0.9**
	1.7nm,0.1s						
IZV				*e*S	**Sg**	**16 17 16.2**	**-1.0**
	7.1nm,0.3s						
CHKK	**Chushkaly**	**2.35**	**306**	Pg	**Pb**	**16 16 46.8**	**+0.7**
	1.0nm,0.1s						
CHKK				Lg	Lg	16 17 17.5	
	5.5nm,0.2s						
CHKK	**Chushkaly**	**2.35**	**306**	*e*P	**Pb**	**16 16 46.8**	**+0.7**
	1.0nm,0.1s						
CHKK				*e*S	**Sg**	**16 17 17.5**	**-1.9**
	5.5nm,0.2s						
KTBS	**Karatobe**	**2.47**	**300**	Pg	**Pb**	**16 16 49.2**	**+1.1**
	0.7nm,0.2s						
KTBS				Lg	Lg	16 17 21.7	
	8.8nm,0.4s						
KTBS	**Karatobe**	**2.47**	**300**	*e*P	**Pb**	**16 16 49.2**	**+1.1**
	baz=98						
KTBS				*e*S	**Sg**	**16 17 21.7**	**-1.4**
	baz=98						
KTBS	**Karatobe**	**2.47**	**300**	*e*P	**Pb**	**16 16 49.2**	**+1.1**
	0.7nm,0.2s						
KTBS				*e*S	**Sg**	**16 17 21.7**	**-1.4**
	8.8nm,0.4s						
ULHL	**Ulahol**	**2.52**	**265**	⇑*e*P	**Pb**	**16 16 48.5**	**-0.6**
	baz=64						
ULHL				⇑*i*S	**Sb**	**16 17 20.4**	**+0.2**
	baz=64						
BOOM	**Boomskoye usch**	**2.73**	**271**	⇑*i*P	**Pb**	**16 16 51.2**	**-1.4**
	baz=70						
BOOM				⇑*i*S	**Sb**	**16 17 24.5**	**-1.5**
	baz=70						
NRN	**Naryn**	**2.91**	**249**	⇑*i*P	**Pb**	**16 16 54.3**	**-1.6**
	baz=49						
NRN				⇑*i*S	**Sb**	**16 17 30.8**	**-0.7**
	baz=49						
DGS	**Degeres**	**2.93**	**286**	Pg	**Pb**	**16 16 56.7**	**+0.7**
	1.5nm,0.3s						
DGS				Lg	Lg	16 17 34.8	
	5.9nm,0.2s						
DGS	**Degeres**	**2.93**	**286**	*e*P	**Pb**	**16 16 56.7**	**+0.7**
	1.5nm,0.3s						
DGS				*e*S	**Sb**	**16 17 34.8**	**+3.1**
	5.9nm,0.2s						
TKM2	**Tokmak 2**	**3.00**	**279**	⇓Pg	**Pb**	**16 16 57.7**	**+0.5**
	1.0nm,0.8s						
TKM2				⇑Lg	Lg	16 17 35.9	
	1.1nm,0.5s						
TKM2	**Tokmak 2**	**3.00**	**279**	⇑*e*P	**Pb**	**16 16 54.6**	**-2.6**
	baz=78						
TKM2				⇑*i*S	**Sb**	**16 17 31.5**	**-2.3**
	baz=78						
KZA	**Kyzart**	**3.28**	**264**	⇑*i*P	**Pn**	**16 16 58.9**	**+3.6**
	baz=63						
KZA				⇑*i*S	**Sb**	**16 17 38.7**	**-3.4**
	baz=63						

*SOME **03** 16:22:16.5, 42°.53N×79°.62E, h20^{km}*

*KRNET **03** 16:22:16.9±0.1, 42°.61N×79°.58E, h17^{km}, mb2.2*

*NNC **03** 16:22:16.5±1.1, 42°.61N×79°.60E, h0^{km}, mb2.5, mpv2.5, Error ellipse: s-maj=7.3km s-min=3.6km az=137.0*

ISC 03 16:22:14.1±1.8, **42°.46N**±0°.06×**79°.72E**±0°.05, **h15**^{km}±12^{km}, **n29, σ1^{s}11**/52, **6C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.72**	**345**	P	**Pg**	**16 22 28.4**	**+0.2**
	5.7nm,0.1s						
SHLS				S	**Sg**	**16 22 37.7**	**-0.2**
	59nm,0.2s						
SHLS	**Shalkode**	**0.72**	**345**	*e*P	**Pg**	**16 22 28.5**	**+0.2**
	baz=22						
SHLS				*e*S	**Sg**	**16 22 37.4**	**-0.4**
	baz=22						
SHLS	**Shalkode**	**0.72**	**345**	*e*P	**Pg**	**16 22 28.4**	**+0.2**
	5.7nm,0.1s						
SHLS				*e*S	**Sg**	**16 22 37.4**	**-0.4**
	59nm,0.2s						
PDGK	**Podgornoye**	**0.89**	**349**	⇑P	**Pb**	**16 22 30.0**	**-1.2**
	0.4nm,0.4s						
PDGK				⇑S	**Sb**	**16 22 40.8**	**-2.2**
	0.7nm,0.3s						
PDGK	**Podgornoye**	**0.89**	**349**	⇓*i*P	**Pb**	**16 22 30.3**	**-1.0**
	baz=55						
PDGK				⇓*i*S	**Sb**	**16 22 40.7**	**-2.2**
	baz=55						
PRZ	**Przheval'sk**	**0.98**	**272**	⇑*i*P	**Pb**	**16 22 33.1**	**+0.3**
	baz=62						
PRZ				⇑*i*S	**Sb**	**16 22 46.0**	**+0.4**
	baz=62						
KTMS	**Ketmen**	**1.09**	**25**	P	**Pn**	**16 22 35.2**	**+0.2**
	1.3nm,0.1s						
KTMS				S	**Sb**	**16 22 48.5**	**-0.4**
	1.8nm,0.2s						
KTMS	**Ketmen**	**1.09**	**25**	*e*P	**Pn**	**16 22 35.2**	**+0.2**
	1.3nm,0.1s						
KTMS				*e*S	**Sb**	**16 22 48.5**	**-0.4**
	1.8nm,0.2s						
SATY	**Saty**	**1.14**	**302**	P	**Pn**	**16 22 35.4**	**-0.2**
	1.3nm,0.1s						
SATY				S	**Sb**	**16 22 48.9**	**-1.3**
	14nm,0.1s						
SATY	**Saty**	**1.14**	**302**	*e*P	**Pn**	**16 22 35.4**	**-0.2**
	1.3nm,0.1s						
SATY				*e*S	**Sb**	**16 22 48.9**	**-1.3**
	14nm,0.1s						
DJR	**Jarkent**	**1.87**	**2**	P	**Pb**	**16 22 49.3**	**+1.3**
	0.5nm,0.2s						
DJR				S	**Sb**	**16 23 12.6**	**+1.3**
	1.2nm,0.2s						
DJR	**Jarkent**	**1.87**	**2**	*e*P	**Pb**	**16 22 49.2**	**+1.1**
	0.4nm,0.2s						
DJR				*e*S	**Sb**	**16 23 12.6**	**+1.3**
	1.2nm,0.2s						
KDJ	**Kajisay**	**1.91**	**261**	⇑*i*P	**Pb**	**16 22 49.9**	**+1.1**
	baz=56						
KDJ				⇑*i*S	**Sg**	**16 23 15.2**	**-0.4**
	baz=56						
KOTS	**Kotyrbulak**	**2.07**	**293**	Pg	**Pb**	**16 22 52.3**	**+0.8**
	1.0nm,0.1s						
KOTS				Lg	Lg	16 23 18.4	
	9.6nm,0.3s						
KOTS	**Kotyrbulak**	**2.07**	**293**	*e*P	**Pb**	**16 22 52.3**	**+0.8**
	1.0nm,0.1s						
KOTS				*e*S	**Sb**	**16 23 18.4**	**+1.3**
	9.6nm,0.3s						
MDOK	**Medeo**	**2.09**	**291**	Pn	**Pb**	**16 22 53.0**	**+1.3**
	1.5nm,1.0s						
MDOK				Sn	**Sb**	**16 23 17.9**	**+0.3**
	1.4nm,0.5s						
TNSS	**Tian-Shan**	**2.12**	**287**	Pg	**Pb**	**16 22 53.4**	**+0.9**
	0.7nm,0.2s						
TNSS				Lg	Lg	16 23 20.0	
	1.8nm,0.3s						
TNSS	**Tian-Shan**	**2.12**	**287**	*e*P	**Pb**	**16 22 53.4**	**+0.9**
	baz=83						
TNSS				*e*S	**Sb**	**16 23 19.0**	**+0.2**
	baz=83						
TNSS	**Tian-Shan**	**2.12**	**287**	*e*P	**Pb**	**16 22 53.4**	**+0.9**
	0.7nm,0.2s						
TNSS				*e*S	**Sb**	**16 23 20.0**	**+1.2**
	1.8nm,0.3s						
IZV	**Izvestkoviy**	**2.36**	**285**	Pg	**Pb**	**16 22 56.6**	**+0.2**
	1.0nm,0.1s						
IZV				Lg	Lg	16 23 26.5	
	4.1nm,0.3s						
IZV	**Izvestkoviy**	**2.36**	**285**	*e*P	**Pb**	**16 22 57.2**	**+0.8**
	0.9nm,0.2s						
IZV				*e*S	**Sb**	**16 23 26.5**	**+1.1**
	4.1nm,0.3s						
CHKK	**Chushkaly**	**2.44**	**306**	Pg	**Pb**	**16 22 58.0**	**+0.3**
	1.1nm,0.1s						
CHKK				Lg	Lg	16 23 27.7	
	3.3nm,0.2s						
CHKK	**Chushkaly**	**2.44**	**306**	*e*P	**Pb**	**16 22 58.0**	**+0.3**
	1.1nm,0.1s						
CHKK				*e*S	**Sb**	**16 23 27.7**	**+0.2**
	3.3nm,0.2s						
ULHL	**Ulahol**	**2.59**	**266**	⇓*i*P	**Pb**	**16 22 59.7**	**-0.6**
	baz=63						
ULHL				⇓*i*S	**Sb**	**16 23 31.8**	**-0.2**
	baz=63						
NRN	**Naryn**	**2.96**	**251**	⇓*i*P	**Pb**	**16 23 05.8**	**-0.9**
	baz=47						
NRN				⇓*i*S	**Sb**	**16 23 42.1**	**-0.6**
	baz=47						
DGS	**Degeres**	**3.01**	**286**	Pg	**Pb**	**16 23 08.4**	**+1.0**
	0.5nm,0.2s						
DGS				Lg	Lg	16 23 45.6	
	2.9nm,0.5s						
DGS	**Degeres**	**3.01**	**286**	*e*P	**Pb**	**16 23 08.4**	**+1.0**
	0.5nm,0.2s						
DGS				*e*S	**Sb**	**16 23 45.6**	**+1.6**
	2.9nm,0.5s						
TKM2	**Tokmak 2**	**3.08**	**280**	⇓Pg	**Pb**	**16 23 09.0**	**+0.4**
	1.0nm,1.1s						
TKM2				⇓Lg	Lg	16 23 47.3	
	0.5nm,0.6s						
TKM2	**Tokmak 2**	**3.08**	**280**	⇓*i*P	**Pb**	**16 23 06.1**	**-2.5**
	baz=77						
TKM2				⇓*i*S	**Sb**	**16 23 42.7**	**-3.3**
	baz=77						

*IDC **03** 16:31:29.1±1.5, 10°.97S×165°.37E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.6/35, mbtmp3.8/6, ML4.1/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/20, Error ellipse: s-maj=49.5km s-min=26.9km az=130.0*

*ISCJB **03** 16:31:31.6±1.4, 11°.2S±0°.2×165°.5E±0°.2, h30^{km}, mb3.5/4, MS3.3/1, Error ellipse: s-maj=27.5km s-min=22.5km az=2.6*

ISC 03 16:31:33.6±1.4, **11°.1S**±0°.2×**165°.5E**±0°.2, **h30**^{km}, **n7, σ1^{s}16**/7, **mb3.6**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.95**	**175**	Pn	**Pn**	**16 34 08.2**	**-0.2**
	1.2nm,0.3s,baz=343,slow=12,SNR=25						
CTA	**Charters Tower**	**20.55**	**242**	P	**P**	**16 36 11.1**	**+1.2**
	4.3nm,1.0s,baz=80,slow=17,SNR=2.5						
URZ	**Urewera**	**28.98**	**161**	LR	LR	16 47 39.1	
	comp=Z,62nm,18.3s,baz=328,slow=33						
STKA	**Stephens Creek**	**30.23**	**223**	P	**P**	**16 37 42.5**	**+0.8**
	0.9nm,0.6s,baz=63,slow=9.0,SNR=3.2						
WRA	**Warramunga Arr**	**31.22**	**250**	P	**P**	**16 37 49.6**	**-1.1**
	1.1nm,0.9s,baz=81,slow=9.1,SNR=8.2						
ASAR	**Alice Springs**	**32.54**	**243**	P	**P**	**16 38 00.8**	**-1.4**
	0.6nm,0.8s,baz=62,slow=10,SNR=13						
ASAR				PcP	**PcP**	**16 40 48.8**	**+0.2**
	0.2nm,0.6s,baz=79,slow=2.2,SNR=4.8						
ILAR	**Eielson Array**	**83.64**	**19**	P	**P**	**16 43 59.0**	**+0.1**
	0.2nm,0.7s,baz=211,slow=6.9,SNR=5.1						

*IDC **03** 16:52:28.1±0.8, 57°.91S×25°.15W, h0^{km}, mb4.0/5, mb1 4.2/6, mb1mx3.9/25, mbtmp4.0/6, ML4.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/24, Error ellipse: s-maj=37.2km s-min=21.8km az=73.0*

*ISCJB **03** 16:52:31.9±0.7, 57°.93S±0°.09×25°.1W±0°.2, h40^{km}, mb4.0/5, MS3.1/1, Error ellipse: s-maj=17.5km s-min=8.7km az=143.9*

*NEIC **03** 16:52:33.7±1.6, 57°.90S×25°.04W, h37^{km}±14^{km}, mb4.7/4, Error ellipse: s-maj=14.9km s-min=8.8km az=57.0*

ISC 03 16:52:33.7±0.7, **57°.9S**±0°.1×**25°.1W**±0°.1, **h40**^{km}, **n31, σ0^{s}62**/28, **mb4.1**/5, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.34**	**295**	*e*Pn	**Pn**	**16 54 18.4**	**+0.2**
VNA1	**Neumayer--Stat**	**14.62**	**158**	P	**Pn**	**16 55 57.7**	**+0.3**
VNA3	**Neumayer Olymp**	**14.84**	**160**	P	**Pn**	**16 55 59.8**	**-0.6**
VNA2	**Neumayer--Watz**	**15.02**	**157**	P	**Pn**	**16 56 02.4**	**-0.4**
	baz=326,slow=13						
SNAA	**Sanae**	**16.56**	**155**	P	**Pn**	**16 56 23.0**	**+0.4**
SNAA	**Sanae**	**16.56**	**155**	*e*Pn	**Pn**	**16 56 22.5**	**-0.1**
	41nm,2.0s						
SNAA	**Sanae**	**16.56**	**155**	Pn	**Pn**	**16 56 21.4**	**-1.2**
	0.6nm,0.3s,baz=21,slow=22,SNR=21						
PMSA	**Palmer Station**	**19.62**	**233**	*e*P	**P**	**16 56 58.8**	**+0.5**
	142nm,1.5s						
EFI	**East Falkland**	**19.86**	**274**	*e*P	**Pn**	**16 57 03.1**	**+0.2**
	73nm,1.4s						
QSPA	**South Pole Qui**	**32.33**	**180**	P	**P**	**16 58 59.8**	**+1.2**
	1.2nm,0.7s,baz=279,slow=4.5,SNR=9.4						
CPUP	**Villa Florida**	**38.91**	**310**	*e*P	**P**	**16 59 54.2**	**-1.0**
	18nm,1.8s						
CPUP	**Villa Florida**	**38.91**	**310**	P	**P**	**16 59 54.1**	**-1.1**
	0.4nm,0.3s,baz=180,slow=14,SNR=3.1						
CPUP				LR	LR	17 17 22.2	
	comp=Z,28nm,18.3s,baz=297,slow=38						
VNDA	**Vanda**	**44.75**	**182**	*e*P	**P**	**17 00 41.6**	**-0.7**
VNDA	**Vanda**	**44.75**	**182**	P	**P**	**17 00 41.0**	**-1.4**
	4.7nm,1.2s,baz=163,slow=7.1,SNR=2.7						
H10S2	**ASCENSION HYDR**	**49.51**	**14**	T	T	17 55 00.9	
	baz=188,slow=74,SNR=2.5						
H10S3	**ASCENSION HYDR**	**49.51**	**14**	T	T	17 55 02.0	
	baz=188,slow=74,SNR=2.7						
H10S1	**ASCENSION HYDR**	**49.52**	**14**	T	T	17 55 01.4	
	baz=188,slow=74,SNR=4.4						
LPAZ	**La Paz**	**52.39**	**304**	*e*P	**P**	**17 01 42.1**	**-0.4**
LPAZ	**La Paz**	**52.39**	**304**	P	**P**	**17 01 42.8**	**+0.3**
	0.8nm,0.3s,baz=101,slow=3.5,SNR=7.2						

TORD	Torodi Ar. Bea	74.16	27	P	P	17 04 06.3	+0.5
	0.8nm,0.5s,baz=200,slow=6.0,SNR=8.5						
TOA1	Torodi Ar. Sit	74.17	27	eP	P	17 04 06.2	+0.4
CMAR	Chiang Mai Arr	123.34	110	PKP	PKPdf	17 11 25.8	-0.3
	0.2nm,0.6s,baz=228,slow=3.4,SNR=3.1						
FIA0	FINESS Array S	125.51	27	ePKPdf	PKiKP	17 11 29.1	0.0
FINES	FINESS Array B	125.51	27	PKP	PKiKP	17 11 29.1	0.0
	0.9nm,0.7s,baz=266,slow=7.6,SNR=3.8						
ARA0	ARCESS Array S	132.26	22	ePKPdf	PKPdf	17 11 41.7	+0.3
ARCES	ARCESS Array B	132.26	22	PKP	PKPdf	17 11 41.7	+0.3
	1.2nm,0.9s,baz=204,slow=2.0,SNR=2.6						
YKA	Yellowknife Ar	138.32	316	PKP	PKPdf	17 11 53.2	+0.3
	0.2nm,0.3s,baz=136,slow=1.9,SNR=4.2						
YKB5	Yellowknife Ar	138.32	316	ePKPdf	PKPdf	17 11 53.1	+0.1
SONA0	Songino Array	149.67	88	ePKPbc	PKiKP	17 12 19.0	-0.1
SONM	Songino Array	149.67	88	PKPbc	PKiKP	17 12 19.0	-0.1
	0.9nm,0.8s,baz=221,slow=3.6,SNR=5.5						
ILAR	Eielson Array	152.20	309	PKPbc	PKiKP	17 12 24.1	+0.5
	1.0nm,1.0s,baz=160,slow=1.4,SNR=13						

IDC 03 16:54:05.1±3.5**, 17°.81N×81°.69W, h0^{km}, mb3.3**/2**, mb1 3.8**/2**, mb1mx3.3**/27**, mbtmp3.3**/2**, Error ellipse: s-maj=147.8km s-min=47.7km az=58.0, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	23.14	304	P	P	16 59 13.7	+0.5
	1.2nm,0.8s,baz=114,slow=11,SNR=14						
PDAR	Pinedale Array	34.32	322	P	P	17 00 53.3	-0.5
	0.2nm,0.5s,baz=116,slow=8.2,SNR=2.7						
WRA	Warramunga Arr	145.88	261	PKPbc	PKPdf	17 13 46.0	-0.7
	0.5nm,0.7s,baz=87,slow=3.6,SNR=9.3						
ASAR	Alice Springs	146.27	254	PKPbc	PKPbc	17 13 48.1	-0.4
	0.7nm,1.0s,baz=102,slow=3.9,SNR=3.9						

IDC 03 17:18:11.1±3.2**, 4°.91S×153°.06E, h0^{km}, mb3.5**/6**, mb1 3.7**/6**, mb1mx3.5**/38**, mbtmp3.6**/6**, Error ellipse: s-maj=93.4km s-min=27.7km az=109.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.57	229	P	P	17 23 24.1	+0.5
	0.4nm,0.7s,baz=52,slow=9.9,SNR=4.4						
ASAR	Alice Springs	26.25	223	P	P	17 23 48.3	+0.1
	0.4nm,0.7s,baz=59,slow=8.7,SNR=7.1						
FITZ	Fitzroy Crossi	29.84	242	P	P	17 24 19.7	-0.6
	2.3nm,1.1s,baz=61,slow=10,SNR=3.3						
CMAR	Chiang Mai Arr	58.16	295	P	P	17 28 07.3	0.0
	0.3nm,0.9s,baz=99,slow=5.6,SNR=3.3						
MKAR	Makanchi Array	80.58	319	P	P	17 30 26.0	+0.4
	0.7nm,0.9s,baz=98,slow=5.0,SNR=6.8						
ZALV	Zalesovo Beam	81.39	326	P	P	17 30 29.5	-0.2
	0.8nm,0.6s,baz=107,slow=5.1,SNR=5.1						
TORD	Torodi Ar. Bea	150.59	288	PKPbc	PKPbc	17 38 05.6	-0.5
	0.7nm,0.8s,baz=50,slow=3.5,SNR=4.8						

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*IDC **03** 17:19:10.9±2.9, 6°.72N×72°.70W, h148^{km}±26^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.0/24, mbtmp3.6/4, Error ellipse: s-maj=35.2km s-min=27.5km az=60.0*

*ISCJB **03** 17:19:13.5±0.6, 6°.86N±0°.03×73°.16W±0°.04, h151^{km}±4^{km}, Error ellipse: s-maj=6.2km s-min=4.8km az=12.5*

*RSNC **03** 17:19:14.7±1.1, 6°.83N×73°.16W, h146^{km}±4^{km}, ML3.5, Mw3.7*

ISC 03 17:19:12.8±0.8**, 6°.85N**±0°.04×**73°.12W**±0°.04**, h156**^{km}±6^{km}**, n30, σ1§15**/48**, 3C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	193	iP	Pn	17 19 34.5	+0.2
BARC				i		17 19 35.0	
	comp=Z,474nm,0.1s						
BARC				eS	Sn	17 19 49.5	-1.3
BRRC	Barranca, Sant	0.64	293	⇑iP	Pn	17 19 36.3	+0.8
BRRC				eS	Sn	17 19 53.0	0.0
BRRC				i		17 19 53.6	
	comp=N,797nm,0.3s						
PAMC	Pamplona, Colo	0.64	41	eP	Pn	17 19 37.3	+1.1
PAMC				eS	Sn	17 19 54.1	0.0
PAMC				i		17 19 56.2	
	comp=N,588nm,0.5s						
RUSC	La Rusia	0.95	178	⇑iP	Pn	17 19 38.5	+0.1
RUSC				i		17 19 39.2	
	comp=Z,161nm,0.3s						
RUSC				eS	Sn	17 19 57.0	-1.0
PTBC	PUERTO BERRIO,	1.36	257	eP	Pn	17 19 41.0	-0.5
PTBC				eS	Sn	17 20 02.1	-1.3
PTBC				i		17 20 07.9	
	comp=E,702nm,0.3s						
TAMC	Tame, Arauca	1.39	107	⇓iP	Pn	17 19 43.0	+1.2
TAMC				eS	Sn	17 20 04.5	+0.5
TAMC				i		17 20 05.7	
	comp=E,488nm,0.6s						
OCAC	Ocana	1.39	352	eP	Pn	17 19 42.9	+0.9
OCAC				eS	Sn	17 20 04.7	+0.4
OCAC				i		17 20 07.5	
	comp=N,935nm,0.3s						
ZARC	Zaragoza, Cauc	1.83	290	eP	Pn	17 19 46.9	+0.5
ZARC				eS	Sn	17 20 12.2	-0.2
ZARC				i		17 20 18.5	
	comp=E,887nm,0.2s						
CTAB	Cerro Tablazo,	2.12	211	eP	Pn	17 19 52.0	+1.8
CTAB				eS	Sn	17 20 21.6	+2.6
CTAB				i		17 20 26.1	
	comp=Z,154nm,0.4s						
SMLC	San Martn de	2.15	334	eP	Pn	17 19 51.0	+0.9
SMLC				eS	Sn	17 20 19.4	+0.5
SMLC				i		17 20 31.4	
	comp=E,305nm,0.1s						
NORC	Norcasia	2.16	234	eP	Pn	17 19 50.6	+0.4
NORC				eS	Sn	17 20 18.6	-0.4
NORC				i		17 20 23.4	
	comp=N,381nm,0.1s						
CHIC	Chingaza	2.29	195	⇑iP	Pn	17 19 52.6	+0.5
CHIC				eS	Sn	17 20 22.2	-0.2
CHIC				i		17 20 24.9	
	comp=N,255nm,0.3s						
ROSC	El Rosal	2.33	211	eP	Pn	17 19 53.4	+0.8
ROSC				eS	Sn	17 20 23.2	+0.1
ROSC				i		17 20 32.1	
	comp=Z,91nm,0.3s						
ROSC	El Rosal	2.33	211	P	Pn	17 19 53.6	+1.0
	comp=Z,19nm,0.3s,baz=98,slow=20,SNR=18						
ROSC				S	Sn	17 20 23.6	+0.4
	comp=Z,27nm,0.3s,baz=30,slow=21,SNR=13						
HELC	Santa Helena	2.48	255	eP	Pn	17 19 54.6	+0.3
HELC				eS	Sn	17 20 26.5	+0.2
HELC				i		17 20 33.7	
	comp=N,111nm,0.3s						
UREC	San Jos de Ur	2.55	291	eP	Pn	17 19 54.4	-0.4
UREC				eS	Sn	17 20 26.4	-1.0
UREC				i		17 20 38.4	
	comp=E,372nm,0.3s						
VILC	Villavicencio,	2.78	192	eP	Pn	17 19 58.4	+0.5
VILC				eS	Sn	17 20 32.3	-0.4
VILC				i		17 20 40.1	
	comp=N,329nm,0.5s						
DBBC	Dabeiba	3.07	273	iP	Pn	17 20 02.2	+0.9
DBBC				i		17 20 44.0	
	comp=Z,62nm,0.4s						
SDV	Santo Domingo	3.19	51	eP	Pn	17 20 04.1	+1.1
SDV				i		17 20 04.9	
	comp=Z,33nm,0.1s						
ANIL	Santa Ana	3.26	224	eP	Pn	17 20 06.1	+2.1
ANIL				eS	Sn	17 20 44.1	+0.4
ANIL				i		17 20 53.7	
	comp=N,223nm,0.4s						
PLMC	San Jos del P	3.69	239	eP	Pn	17 20 10.3	+1.0
YOTC	Yotoco, Valle	4.29	229	eP	Pn	17 20 17.5	+0.4
SMRC	Santa Marta, M	4.42	346	eP	Pn	17 20 19.7	+1.0
POPC	Popayan, Colom	5.56	220	⇓iP	Pn	17 20 34.9	+1.0
SOTA	Rioblanco	5.83	217	eP	Pn	17 20 39.3	+1.5
TXAR	Lajitas Array	36.44	312	P	P	17 26 05.0	+2.2
	comp=N,0.1nm,0.5s,baz=136,slow=9.0,SNR=3.0						
YKA	Yellowknife Ar	63.23	340	P	P	17 29 24.7	+0.5
	comp=N,0.4nm,0.6s,baz=132,slow=6.6,SNR=8.8						
DBIC	Dimbokro	67.73	86	P	P	17 29 50.1	-3.9
	comp=N,2.2nm,0.7s,baz=308,slow=15,SNR=3.1						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	17 38 43.2	-0.3
	comp=N,0.2nm,0.7s,baz=112,slow=3.5,SNR=5.0						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	17 38 46.1	-0.4
	comp=N,0.2nm,0.5s,baz=101,slow=4.0,SNR=7.6						

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*ISCJB **03** 17:44:30.0±0.7, 13°.77S±0°.06×166°.7E±0°.1, h33^{km}, mb4.0/10, MS3.5/6, Error ellipse: s-maj=14.8km s-min=8.4km az=172.8*

*IDC **03** 17:44:32.2±3.0, 13°.73S×166°.79E, h38^{km}±23^{km}, mb3.9/11, mb1 4.2/13, mb1mx3.9/45, mbtmp4.2/13, ML4.4/2, MS3.5/7, Ms1 3.5/7, ms1mx3.1/33, Error ellipse: s-maj=27.2km s-min=18.2km az=128.0*

ISC 03 17:44:31.9±0.7**, 13°.67S**±0°.08×**166°.7E**±0°.1**, h35**^{km}**, n20, σ1§28**/22**, mb4.2**/10**, MS3.5**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.87	302	eP	Pn	17 46 26.0	+2.0
HNR				eS	Sn	17 47 44.0	-7.8
HNR	Honiara	7.87	302	Pn	Pn	17 46 24.7	+0.8
	26nm,0.3s,baz=198,slow=4.3,SNR=21						
HNR				Sn	Sn	17 47 49.0	-2.8
	20nm,0.3s,baz=151,slow=19,SNR=11						
HNR				LR	LR	17 49 25.3	
	comp=Z,158nm,20.9s,baz=189,slow=37						
DZM	Mont Dzumac	8.36	182	Pn	Pn	17 46 31.5	+0.7
	1.1nm,0.3s,baz=336,slow=9.3,SNR=24						
DZM				Sn	Sn	17 48 02.7	-1.4
	baz=18,slow=19,SNR=1.3						
CTA	Charters Tower	20.60	249	P	P	17 49 09.1	+0.8
	6.2nm,0.7s,baz=77,slow=13,SNR=11						
RAO	Raoul Island	21.05	140	LR	LR	17 55 13.4	
	comp=Z,948nm,18.2s,baz=103,slow=31						
URZ	Urewera	26.17	161	LR	LR	17 58 40.5	
	comp=Z,73nm,19.5s,baz=336,slow=32						
STKA	Stephens Creek	29.30	228	P	P	17 50 32.3	+1.1
	3.4nm,0.6s,baz=56,slow=9.9,SNR=12						
STKA				LR	LR	18 01 24.6	
	comp=Z,91nm,18.8s,baz=27,slow=35						
WRA	Warramunga Arr	31.59	254	P	P	17 50 50.9	-0.8
	2.1nm,0.6s,baz=85,slow=9.5,SNR=57						
WRA				PcP	PcP	17 53 41.8	-1.9
	0.3nm,0.6s,baz=81,slow=3.6,SNR=3.4						
WRA				LR	LR	18 03 29.9	
	comp=Z,187nm,20.8s,baz=285,slow=36						
ASAR	Alice Springs	32.58	247	P	P	17 50 59.5	-0.7
	2.5nm,0.6s,baz=74,slow=9.4,SNR=58						
ASAR				PcP	PcP	17 53 44.3	-2.0
	0.7nm,1.0s,baz=84,slow=2.9,SNR=2.4						
ASAR				ScP	ScP	17 57 27.5	-0.3
	0.4nm,0.8s,baz=90,slow=3.8,SNR=4.2						
ASAR				LR	LR	18 03 49.4	
	comp=Z,109nm,18.5s,baz=84,slow=36						
MJAR	Matsushiro Arr	56.73	333	LR	LR	18 13 31.9	
	comp=Z,9.5nm,21.9s,baz=80,slow=31						
CMAR	Chiang Mai Arr	74.04	294	P	P	17 56 06.1	+1.3
	2.6nm,0.8s,baz=126,slow=4.9,SNR=24						
SEY	Seymchan	77.17	353	P	P	17 56 22.7	+1.0
	2.3nm,0.8s,baz=170,slow=22,SNR=7.2						
SONM	Songino Array	81.34	324	P	P	17 56 45.5	+0.5
	0.4nm,0.9s,baz=125,slow=4.0,SNR=3.4						
ILAR	Eielson Array	85.69	18	P	P	17 57 05.8	-1.0
	1.4nm,0.7s,baz=240,slow=4.6,SNR=15						
NVAR	Mina Array Bea	86.98	49	P	P	17 57 14.1	0.0
	0.4nm,0.7s,baz=229,slow=8.2,SNR=3.3						
MKAR	Makanchi Array	96.08	317	P	P	17 57 55.8	-0.1
	0.3nm,0.6s,baz=92,slow=7.6,SNR=3.7						
YKA	Yellowknife Ar	96.85	27	P	P	17 57 58.2	-0.8
	0.2nm,0.5s,baz=264,slow=5.5,SNR=5.5						
ARCES	ARCESS Array B	119.10	345	PKP	PKiKP	18 03 17.1	+0.5
	2.1nm,0.7s,baz=71,slow=1.7,SNR=14						
FINES	FINESS Array B	124.55	338	PKP	PKiKP	18 03 28.2	+0.7
	0.6nm,0.7s,baz=318,slow=1.9,SNR=3.8						
ESDC	Sonseca Array	152.83	344	PKPbc	PKPbc	18 04 25.2	-0.5
	0.6nm,0.7s,baz=7.7,slow=2.5,SNR=4.5						

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*IDC **03** 17:45:53.8±11.0, 4°.24N×95°.52E, h0^{km}, mb3.3/2, mb1 3.4/3, mb1mx3.1/57, mbtmp3.2/3, ML2.9/1, Error ellipse: s-maj=300.8km s-min=47.5km az=80.0*

*DJA **03** 17:45:55.9±0.6, 5°N±10°×9°6E±°, h17^{km}±23^{km}, M3.7/2, MLv3.7/2*

*ISCJB **03** 17:45:56.4±0.8, 5°.07N±0°.08×95°.81E±0°.07, h35^{km}, mb3.3/2, Error ellipse: s-maj=13.4km s-min=6.4km az=35.1*

ISC 03 17:45:57.0±1.2**, 5°.14N**±0°.10×**95°.83E**±0°.07**, h35**^{km}**, n10, σ1§15**/9**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	Banda Aceh	0.64	304	P	Pn	17 46 09.3	-0.3
BSI				S	Sn	17 46 19.7	+1.1
LHMI	Lhok Sumawe	1.12	85	P	Pn	17 46 15.3	-0.9
LHMI				S	Sn	17 46 31.4	+1.1
TPTI		2.30	144	P	Pn	17 46 31.3	-1.2
TPTI				S	Sn	17 47 00.0	+0.4
KCSI	Kotacane, Aceh	2.51	130	P	Pn	17 46 36.9	+1.5
CMAR	Chiang Mai Arr	13.59	13	Pn	P	17 49 20.7	+4.9
	0.0nm,0.3s,baz=207,slow=11,SNR=3.2						
H08S2	Diego Garcia H	26.52	242	T	T	18 18 35.6	
	baz=62,slow=75,SNR=4.8						
H08S3	Diego Garcia H	26.52	242	T	T	18 18 33.4	
	baz=62,slow=75,SNR=6.2						
H08S1	Diego Carcia H	26.54	242	T	T	18 18 34.8	
	baz=62,slow=75,SNR=3.3						
WRA	Warramunga Arr	45.33	125	P	P	17 54 11.0	-1.0
	0.3nm,0.8s,baz=302,slow=9.4,SNR=3.0						
ASAR	Alice Springs	46.89	129	P	P	17 54 24.6	+0.2
	0.2nm,0.4s,baz=299,slow=7.7,SNR=9.9						

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*NIED **03** 17:46:00, 36°.30N×143°.70E, h8^{km}, Mw4.0 Best double couple: $M_0$1.15000×10^{15} NP1:ϕ_s30.00000°, δ33.00000°, λ-72.00000°. NP2:ϕ_s189.00000°, δ58.00000°, λ-101.00000°.*

*IDC **03** 17:46:04.3±0.6, 36°.16N×144°.05E, h0^{km}, mb4.0/20, mb1 4.2/27, mb1mx4.0/55, mbtmp4.0/27, ML3.9/7, MS2.8/4, Ms1 2.8/4, ms1mx2.6/31, Error ellipse: s-maj=15.7km s-min=13.5km az=107.0*

*ISCJB **03** 17:46:07.9±0.4, 36°.29N±0°.05×143°.82E±0°.04, h33^{km}, mb3.9/20, Error ellipse: s-maj=6.7km s-min=4.1km az=166.8*

*JMA **03** 17:46:09.2±0.3, 36°.32N×143°.74E, h92^{km}, M4.1*

ISC 03 17:46:10.0±0.6**, 36°.28N**±0°.06×**143°.86E**±0°.07**, h35**^{km}**, n54, σ1§89**/62**, mb4.0**/20**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	2.50	257	P	Pn	17 46 48.0	-0.1
CHOJ				S	Sn	17 47 17.2	-0.2
ONAJ	Iwakimizuishiy	2.59	289	P	Pn	17 46 48.5	-0.9
ONAJ				S	Sn	17 47 18.6	-1.1
JFK	Kawauchi	2.63	295	P	Pn	17 46 48.9	-1.0
JFK				S	Sn	17 47 18.7	-1.9
JHYU	Hitachinakayam	2.64	272	P	Pn	17 46 49.6	-0.5
JHYU				S	Sn	17 47 19.4	-1.5
JHO	Hitachi	2.67	278	P	Pn	17 46 49.7	-0.8
BSO1	Boso 1	2.86	236	P	Pn	17 46 51.5	-1.1
JFT	Otama	3.08	295	P	Pn	17 46 56.1	0.0
JFT				S	Sn	17 47 31.3	-0.4
JMK	Ichinoseki	3.39	323	P	Pn	17 46 59.5	-0.8
JAG	Ashikaga	3.56	274	P	Pn	17 47 02.3	-0.4
JAG				S	Sn	17 47 41.2	-2.3
JOD2	Odawara 2	4.01	257	P	Pn	17 47 08.7	-0.2
JOD2				S	Sn	17 47 53.5	-1.2
JRY	Ryogami san	4.02	268	P	Pn	17 47 08.5	-0.6
JRY				S	Sn	17 47 52.5	-2.5
MJAR	Matsushiro Arr	4.56	275	Pn	Pn	17 47 16.6	+0.1
	2.3nm,0.3s,baz=91,slow=14,SNR=143						
MJAR				Sn	Sn	17 48 08.5	+0.1
	1.0nm,0.3s,baz=105,slow=32,SNR=5.6						
MJAR				LR	LR	17 49 12.8	
	comp=Z,110nm,20.9s,baz=50,slow=40						
MAT	Matsushiro	4.56	275	P	Pn	17 47 17.3	+0.7
MAT				S	Sn	17 48 06.9	-1.5
JHJ	Hachijo jima 2	4.61	228	Pn	Pn	17 47 14.9	-2.2
	45nm,0.3s,baz=89,slow=20,SNR=18						
JHJ				Sn	Sn	17 48 02.9	-6.5
	179nm,0.3s,baz=90,slow=20,SNR=13						
JOT	Ohata	5.54	338	P	Pn	17 47 29.4	-0.5
JKB	Kayabe	6.01	339	P	Pn	17 47 35.6	-0.8
JIE	Ise	6.14	254	P	Pn	17 47 38.7	+0.5
JCH	Churui	6.33	357	P	Pn	17 47 38.0	-2.8
JTNC	Tanabenakahech	7.20	252	P	Pn	17 47 53.1	+0.4
JHR	Hokuryu	7.63	348	P	Pn	17 47 56.9	-1.7
JTKR	Abashiri--Toko	7.68	0	P	Pn	17 47 56.4	-2.8
ASAJ	Asahikawa	7.88	353	Pn	Pn	17 48 00.1	-1.9
	7.4nm,0.3s,baz=209,slow=5.9,SNR=66						
ASAJ				Sn	Sn	17 49 21.0	-9.0
	0.7nm,0.3s,baz=90,slow=19,SNR=1.7						
JCJ	Chichijima	9.27	189	Pn	Pn	17 48 16.1	-5.0
	4.5nm,0.3s,baz=299,slow=21,SNR=6.1						
JCJ				Sn	Sn	17 49 53.7	-10
	8.0nm,0.3s,baz=287,slow=19,SNR=5.8						
JNU	Nakatsue	11.14	257	Pn	Pn	17 48 47.0	+0.2
	0.3nm,0.3s,baz=9.1,slow=19,SNR=2.5						
JNU				LR	LR	17 53 25.8	
	comp=Z,52nm,20.1s,baz=124,slow=39						
USRK	Ussuriysk Ar.	12.02	315	Pn	Pn	17 48 59.0	+0.2
	0.8nm,0.3s,baz=115,slow=14,SNR=11						
KSRS	Korea Array	12.82	280	Pn	Pn	17 49 11.1	+1.5
	0.2nm,0.3s,baz=87,slow=14,SNR=5.5						
KSRS				LR	LR	17 54 08.2	
	comp=Z,42nm,18.5s,baz=64,slow=37						
KLR	Kul'dur	15.67	329	Pn	Pn	17 49 45.6	-2.4
	0.2nm,0.3s,baz=129,slow=13,SNR=6.9						
KLR				LR	LR	17 55 23.0	
	comp=Z,38nm,19.7s,baz=144,slow=35						
H11N2	WAKE ISLAND Hy	26.08	123	T	T	18 18 40.0	
	baz=314,slow=75,SNR=48						
H11N1	WAKE ISLAND Hy	26.09	123	T	T	18 18 49.7	
	baz=314,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	26.10	123	T	T	18 18 56.3	
	baz=314,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	26.81	125	T	T	18 19 41.9	
	baz=316,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	26.81	125	T	T	18 19 43.5	
	baz=316,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	26.83	125	T	T	18 19 45.3	
	baz=316,slow=76,SNR=14						
SEY	Seymchan	27.19	9	P	P	17 51 50.6	+0.6
	3.5nm,1.1s,baz=230,slow=12,SNR=5.1						
SONM	Songino Array	29.83	305	P	P	17 52 16.8	+3.0
	2.4nm,0.8s,baz=99,slow=8.2,SNR=13						
ZALV	Zalesovo Beam	43.87	313	P	P	17 54 12.1	-0.6
	1.1nm,0.5s,baz=98,slow=10,SNR=2.3						
ZALV				PcP	PcP	17 55 58.7	+0.3
	2.0nm,0.6s,baz=91,slow=3.7,SNR=4.7						
MKAR	Makanchi Array	46.18	303	P	P	17 54 32.9	+1.7
	0.4nm,0.7s,baz=85,slow=11,SNR=2.4						
MKAR				PcP	PcP	17 56 07.1	+0.5
	1.0nm,1.0s,baz=64,slow=3.4,SNR=2.4						
KURBB	Kurchatov Arra	48.01	309	P	P	17 54 46.9	+1.5
	2.1nm,0.8s,baz=82,slow=8.2,SNR=9.2						
KURBB				PcP	PcP	17 56 12.9	0.0
	0.7nm,0.8s,baz=54,slow=4.7,SNR=2.7						
ILAR	Eielson Array	49.08	32	P	P	17 54 52.9	-0.5
	1.6nm,0.8s,baz=262,slow=6.7,SNR=13						
INK	Inuvik	54.16	27	P	P	17 55 30.7	-0.5
	1.5nm,0.8s,baz=299,slow=7.8,SNR=5.6						
WRA	Warramunga Arr	56.64	191	P	P	17 55 48.3	-1.3
	1.8nm,0.5s,baz=11,slow=7.3,SNR=23						
ASAR	Alice Springs	60.36	191	P	P	17 56 14.4	-1.1
	0.7nm,0.6s,baz=6.3,slow=6.9,SNR=19						
AKTO	Aktyubinsk	60.63	313	P	P	17 56 18.2	+1.0
	1.0nm,0.7s,baz=68,slow=15,SNR=2.9						
YKA	Yellowknife Ar	63.46	31	P	P	17 56 36.0	+0.1
	0.7nm,0.9s,baz=299,slow=6.5,SNR=7.2						
STKA	Stephens Creek	67.84	182	P	P	17 57 04.2	-0.3
	1.0nm,0.7s,baz=326,slow=9.6,SNR=2.9						
FINES	FINESS Array B	70.38	333	P	P	17 57 21.1	+1.2
	4.4nm,0.7s,baz=52,slow=7.5,SNR=12						
NVAR	Mina Array Bea	73.85	54	P	P	17 57 41.6	+0.2
	0.7nm,0.7s,baz=288,slow=5.4,SNR=5.4						
NB2	NORSAR Subarra	75.62	338	P	P	17 57 51.5	+0.5
	comp=Z,1.2nm,0.6s,baz=38,slow=5.9						
NOA	NORSAR Array B	75.62	338	P	P	17 57 51.8	+0.8
	comp=Z,2.0nm,0.7s,baz=38,slow=5.7,SNR=9.2						
AKASG	Malin Array Be	76.08	323	P	P	17 57 54.2	+0.4
	comp=Z,1.5nm,0.6s,baz=46,slow=6.2,SNR=10						
PDAR	Pinedale Array	76.77	46	P	P	17 57 57.7	-0.4
	comp=Z,0.3nm,0.6s,baz=277,slow=1.5,SNR=3.4						
BRTR	Keskin Array B	80.81	313	P	P	17 58 21.2	+0.9
	comp=Z,0.9nm,0.9s,baz=91,slow=1.7,SNR=4.2						
GERES	GERESS Array B	84.37	330	P	P	17 58 38.5	-0.1
	comp=Z,0.7nm,0.6s,baz=26,slow=7.6,SNR=3.1						
TXAR	Lajitas Array	89.00	54	P	P	17 59 01.8	+0.3
	comp=Z,0.4nm,0.8s,baz=279,slow=2.4,SNR=4.1						

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*IDC **03** 17:46:52.6±0.6, 27°.53N×56°.55E, h0^{km}, mb4.3/27, mb1 4.3/30, mb1mx4.2/51, mbtmp4.2/30, ML3.7/3, MS3.6/9, Ms1 3.6/9, ms1mx3.3/35, Error ellipse: s-maj=15.3km s-min=12.2km az=170.0*

*MOS **03** 17:46:55.7±1.0, 27°.59N×56°.59E, h30^{km}, mb4.5/33, Error ellipse: s-maj=7.4km s-min=4.4km az=93.4*

*DSN **03** 17:46:57.4±0.9, 27°.89N×56°.71E, h50^{km}, ML4.6/11, Error ellipse: s-maj=20.0km s-min=8.1km az=105.0*

*NEIC **03** 17:46:58.0±0.0, 27°.68N×56°.50E, h20^{km}, mb4.6/18, MN4.3(TEH), After TEH.*

*THR **03** 17:46:58.5, 27°.72N×56°.42E, h18^{km}, ML4.4*

*TEH **03** 17:46:58.7, 27°.68N×56°.50E, h20^{km}, ML4.3*

*OMAN **03** 17:46:59.0±0.3, 27°.75N×56°.89E, h45^{km}, ml4.8/13, Error ellipse: s-maj=7.1km s-min=4.5km az=320.0*

*ISCJB **03** 17:46:59.7±0.3, 27°.74N±0°.02×56°.52E±0°.03, h60^{km}±3^{km}, mb4.4/73, MS3.8/12, Error ellipse: s-maj=4.0km s-min=3.0km az=2.6*

ISC 03 17:46:59.2±0.7**, 27°.68N**±0°.03×**56°.54E**±0°.04**, h41**^{km}±7^{km}**, n248, σ1§78**/264**, mb4.4**/77**, MS3.7**/12**, 7C-3D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.43	229	IAMB	IAmb	17 47 18.2	
	comp=N,0.0nm,0.2s						
GENO				ePg	Pn	17 47 07.5	-1.7
SHME	Shamm	1.66	192	eP	Pn	17 47 26.9	+0.9
	SNR=196						
SHME				S	Sn	17 47 51.0	+4.9
SHME	Shamm	1.66	192	ePn	Pn	17 47 27.2	+1.3
BANOM	Banah	1.76	187	eP	Pn	17 47 28.7	+1.4
	SNR=214						
BANOM				eP	Pn	17 47 28.7	+1.4
	SNR=120						
BANOM	Banah	1.76	187	P	Pn	17 47 28.6	+1.4
	SNR=214						
BANOM				S	Sn	17 47 54.2	+5.7
NGRK	Negar Kerman	1.96	5	ePn	Pn	17 47 31.3	+1.0
NGRK				IAMB	IAmb	17 47 59.7	
	comp=Z,0.0nm,0.2s						
UMQ	Umm Al-Quwin	2.29	200	P	Pn	17 47 37.1	+2.6
UMQ	Umm Al-Quwin	2.29	200	ePn	Pn	17 47 37.0	+2.6
KRBR	Kerman	2.30	5	eAML	AML	17 48 12.4	
	comp=E,3µm,0.4s						
KRBR				ePn	Pn	17 47 37.5	+2.6
KRBR				eSg	Sn	17 48 10.1	+7.9
KRBR				eAML	AML	17 48 13.2	
	comp=N,1µm,0.3s						
TVBK	TV Kerman	2.31	5	ePn	Pn	17 47 37.1	+2.1
MSFE	Esma-Masafi	2.34	188	eP	Pn	17 47 36.5	+1.4
	SNR=40						
MSFE	Esma-Masafi	2.34	188	ePn	Pn	17 47 36.6	+1.4
CHMN	Cheshme madani	2.34	22	ePn	Pn	17 47 37.2	+1.7
CHMN				IAMB	IAmb	17 48 15.8	
	comp=Z,0.0nm,0.4s						
MDH	Madha	2.38	185	P	Pn	17 47 35.6	-0.2
	SNR=6.3						
MDH				S	Sn	17 48 06.3	+2.5
MDH	Madha	2.38	185	ePn	Pn	17 47 35.5	-0.2
KHGB	Koh Gabri	2.69	359	ePn	Pn	17 47 42.3	+2.2
KHGB				IAMB	IAmb	17 48 31.1	
	comp=Z,0.0nm,0.3s						
UOSS	Minazif	2.74	186	ePn	Pn	17 47 41.6	+0.9
UOSS	Minazif	2.74	186	eP	Pn	17 47 41.4	+0.7
	SNR=23						
UOSS	Minazif	2.74	186	P	Pn	17 47 41.3	+0.7
	SNR=12						
UOSS	Minazif	2.74	186	ePn	Pn	17 47 40.8	+0.1
JHRM	Jahrom	2.74	288	ePn	Pn	17 47 42.5	+1.7
JHRM				IAMB	IAmb	17 48 44.6	
	comp=E,0.0nm,0.6s						
NAZ	Nazwa, Dubai	2.79	197	iP	Pn	17 47 43.9	+2.5
	SNR=13						
NAZ	Nazwa, Dubai	2.79	197	P	Pn	17 47 44.0	+2.6
	SNR=13						
NAZ				S	Sn	17 48 19.6	+5.7
NAZ	Nazwa, Dubai	2.79	197	ePn	Pn	17 47 43.6	+2.2

HATD	Hatta, Dubai	2.87	187	P	Pn	17 47 44.4	+2.0
HATD	Hatta, Dubai	2.87	187	P	Pn	17 47 43.8	+1.4
	SNR=7.4						
HATD				S	Sn	17 48 21.1	+5.4
HATD	Hatta, Dubai	2.87	187	ePn	Pn	17 47 43.8	+1.4
ASHO	Ashiyiah	3.02	188	iP	Pn	17 47 46.0	+1.5
	SNR=23						
ASHO	Ashiyiah	3.02	188	P	Pn	17 47 45.9	+1.5
	SNR=12						
ASHO				S	Sn	17 48 24.9	+5.5
ASHO	Ashiyiah	3.02	188	ePn	Pn	17 47 45.9	+1.5
FAQ	Al Faqa, Dubai	3.04	196	iP	Pn	17 47 46.6	+1.8
	SNR=118						
FAQ	Al Faqa, Dubai	3.04	196	P	Pn	17 47 46.5	+1.6
	SNR=118						
FAQ				S	Sn	17 48 25.1	+5.1
FAQ	Al Faqa, Dubai	3.04	196	ePn	Pn	17 47 46.7	+1.8
GHIR	Ghir-Karzin	3.20	282	ePn	Pn	17 47 48.7	+1.6
GHIR	Ghir-Karzin	3.20	282	ePn	Pn	17 47 48.6	+1.6
ASUD	Al Ashush, Dub	3.23	200	iP	Pn	17 47 49.7	+2.3
	SNR=137						
ASUD	Al Ashush, Dub	3.23	200	P	Pn	17 47 49.7	+2.3
	SNR=137						
ASUD				S	Sn	17 48 29.8	+5.2
ASUD	Al Ashush, Dub	3.23	200	ePn	Pn	17 47 49.8	+2.3
AJN	Ajban	3.40	205	iP	Pn	17 47 51.9	+2.1
	SNR=25						
AJN	Ajban	3.40	205	P	Pn	17 47 51.9	+2.1
	SNR=25						
AJN				S	Sn	17 48 34.4	+5.5
AJN	Ajban	3.40	205	ePn	Pn	17 47 52.2	+2.4
SOHO	SOHO	3.53	180	P	Pn	17 47 50.2	-1.4
ALNE	Al Ain	3.68	191	iP	Pn	17 47 54.9	+1.3
	SNR=46						
ALNE	Al Ain	3.68	191	ePn	Pn	17 47 54.6	+1.0
IMEH	Mehriz	4.06	336	ePn	Pn	17 48 00.6	+1.6
IMEH				IAMB	IAmb	17 48 14.8	
	comp=Z,2µm,0.4s						
HOQ	Hoqain	4.14	170	ePn	Pn	17 48 01.4	+1.5
SZD1	Zahaedan-tmp	4.21	64	ePn	Pn	17 48 03.4	+2.4
BIDO	Bidbid	4.38	161	ePn	Pn	17 48 02.4	-0.9
IKAZ	Kazeroun	4.62	298	ePn	Pn	17 48 08.5	+1.6
ISAD	Sadrabad	4.89	330	ePn	Pn	17 48 12.3	+1.8
ISAD				IAMB	IAmb	17 48 15.7	
	comp=Z,3µm,0.2s						
IKOO	Kooshah	5.19	24	ePn	Pn	17 48 16.2	+1.7
IKOO				IAMB	IAmb	17 49 58.0	
	comp=Z,3µm,0.8s						
TPRV	Parvadeh(Tabas	5.33	1	ePn	Pn	17 48 17.7	+1.4
MZR	Muzera	5.42	211	iP	Pn	17 48 18.6	+1.2
	SNR=12						
MZR	Muzera	5.42	211	P	Pn	17 48 18.4	+0.9
	SNR=13						
MZR	Muzera	5.42	211	ePn	Pn	17 48 18.1	+0.6
IRAM	Ramesheh	5.47	320	ePn	Pn	17 48 19.5	+1.1
IRAM				IAMB	IAmb	17 48 25.0	
	comp=Z,1µm,0.2s						
TKDS	Koohdasht(Taba	5.94	5	ePn	Pn	17 48 26.6	+1.9
TABS	Tabas	5.97	5	ePn	Pn	17 48 27.8	+2.7
TABS	Tabas	5.97	5	ePn	Pn	17 48 27.8	+2.7
JLN	Jalan Bani Buh	6.09	154	P	Pn	17 48 25.9	-0.8
IMON	Monand	6.12	25	ePn	Pn	17 48 30.4	+3.1
IZEF	Zefreh	6.34	326	ePn	Pn	17 48 30.6	+0.2
IZEF				IAMB	IAmb	17 48 34.5	
	comp=Z,514nm,0.4s						
ZNGN	Zangian	6.62	313	ePn	Pn	17 48 35.8	+1.5
ROKH	ROKH	6.66	316	ePn	Pn	17 48 35.6	+0.9
IPIR	Pirpir	6.98	317	ePn	Pn	17 48 40.3	+1.1
IPIR				IAMB	IAmb	17 48 43.2	
	comp=Z,1µm,0.3s						
IKLH	Kolahrood	7.06	324	ePn	Pn	17 48 41.0	+0.7
IKLH				IAMB	IAmb	17 48 43.9	
	comp=Z,753nm,0.3s						
KRSH	Karshahi	7.32	330	ePn	Pn	17 48 45.4	+1.7
KRSH				IAMB	IAmb	17 51 31.0	
	comp=N,0.0nm,1.1s						
IPAY	Payeh	8.99	13	IAMB	IAmb	17 49 43.2	
	comp=Z,90nm,0.4s						
IPAY				ePn	Pn	17 49 08.5	+1.9
IAKL	Akhelmad	9.09	11	ePn	Pn	17 49 10.8	+2.7
GEYT	Alibeck	10.31	7	Pn	Pn	17 49 24.9	+0.4
	comp=Z,0.1nm,0.3s,baz=218,slow=19,SNR=4.6						
GEYT				LR	LR	17 53 58.3	
	comp=Z,482nm,19.4s,baz=180,slow=41						
GYA0B	ALIBECK ARRAY	10.31	7	ePn	Pn	17 49 26.1	+1.6
THW	Thamme Wali	14.09	65	P	Pn	17 50 14.3	-2.0
CUKT	Cukurca	14.48	314	P	Pn	17 50 17.9	-3.7
CHGR	Chuyangaron	15.20	41	ePn	Pn	17 50 30.0	-1.0
	comp=Z,31nm,1.3s						
SIRT	Sirnak	15.38	313	P	Pn	17 50 28.9	-4.5
SIRT	Sirnak	15.38	313	ePn	Pn	17 50 30.3	-3.1
	comp=Z,102nm,1.3s						
AKDM	Akdamar-Van	15.54	317	eP	Pn	17 50 32.9	-2.7
GNI	Garni	15.81	325	ePn	Pn	17 50 37.2	-1.8
	comp=Z,40nm,1.2s						
GNI	Garni	15.81	325	iP	Pn	17 50 39.6	+0.6
GAR	Garm	16.10	42	ePn	Pn	17 50 42.6	-0.1
	comp=Z,46nm,1.0s						
GAR	Garm	16.10	42	eP	Pn	17 50 42.6	-0.1
GAR				pmax	pmax		
	comp=Z,46nm,1.0s						
AGRB	Hanur-Agry	16.35	320	P	Pn	17 50 45.9	0.0
GNBR	Gunib	16.62	334	iP	Pn	17 50 50.0	+0.9
MAZI	Mazidag	16.68	310	eP	Pn	17 50 45.2	-4.9
BTLR	Botlikh	17.14	333	iP	P	17 50 57.5	+0.6
GROC	Groznyy	17.76	333	eP	P	17 51 04.0	+0.3
GROC				eS	S	17 54 23.5	-2.3
GROC				pmax	pmax		
	comp=Z,13nm,0.8s						
URFA	Urfa	17.80	308	P	Pn	17 51 00.8	-3.1
PTK	Pertek	18.15	312	P	P	17 51 06.4	-1.8
ZEI	Tsey	18.23	329	eP	Pn	17 51 09.7	+0.4
ZEI				pmax	pmax		
	comp=Z,14nm,0.9s						
SFK	Sufi-Kurgan	18.67	44	P	P	17 51 13.7	-0.2
SFK				pmax	pmax		
	comp=Z,22nm,0.9s						
NCK	Nalchik	18.93	330	iP	Pn	17 51 17.7	+0.2
NCK				pmax	pmax		
	comp=Z,18nm,1.1s						
MMAI	Mount Meron Ar	18.99	291	P	Pn	17 51 18.5	+0.2
	comp=Z,1.2nm,0.3s,baz=99,slow=18,SNR=8.5						
KK31	Karatay Array	19.10	33	eP	Pn	17 51 19.3	-0.3
KK31	Karatay Array	19.10	33	eP	Pn	17 51 19.3	-0.3
KKAR	Karatay Array	19.10	33	eP	Pn	17 51 19.4	-0.2
KKAR	Karatay Array	19.10	33	eP	Pn	17 51 19.4	-0.2
NEY	Neytrino	19.14	328	iP	Pn	17 51 20.6	+0.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARSB	Arslanbob	19.16	41	eP	P	17 51 19.4	+0.1
	comp=Z,9.6nm,0.8s						
KBZ	Khabaz	19.43	329	P	Pn	17 51 23.6	+0.2
	comp=Z,0.2nm,0.3s,baz=139,slow=7.1,SNR=8.9						
SHA1	Shidzhatmaz	19.55	329	iP	P	17 51 24.1	+0.6
PYA1	Pyatigorsk	19.60	330	iP	Pn	17 51 25.1	-0.4
MNAS	Manas	19.67	37	P	P	17 51 23.8	-1.0
MNAS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KIV	Kislovodsk	19.70	329	eP	P	17 51 26.1	+1.0
	comp=Z,19nm,0.9s						
KIV	Kislovodsk	19.70	329	eP	P	17 51 25.8	+0.7
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,26nm,14.0s						
DOMR	Dombai	19.70	326	iP	Pn	17 51 26.9	0.0
KSH	Kashi	19.99	49	P	P	17 51 25.2	-3.1
KSH				pP	Pn	17 51 31.5	+1.2
KSH				sP	pP	17 51 42.9	+4.2
KSH				PP	PnPn	17 51 45.8	+0.6
KSH				S	S	17 54 52.6	-18
KSH				sS	Sn	17 55 16.1	+1.9
KSH				SS	SnSn	17 55 29.8	+0.9
KSH				pmax	pmax		
	comp=Z,40nm,0.9s						
KSH				pmax	pmax		
	comp=Z,490nm,6.5s						
KSH				LR	LR		
	comp=N,510nm,6.3s						
KSH				LR	LR		
	comp=E,280nm,5.0s						
KSH				LR	LR		
	comp=Z,450nm,6.9s						
AML	Almayashu	20.09	40	P	P	17 51 29.6	0.0
	SNR=13						
GOF	Gofitskoye	20.42	332	eP	P	17 51 31.9	-0.8
GOF				pmax	pmax		
	comp=Z,50nm,1.0s						
EKS2	Erkin-Say	20.48	39	P	P	17 51 34.5	+0.9
	SNR=23						
UCH	Uchtor	20.62	41	P	P	17 51 33.3	-2.2
	SNR=8.8						
AAK	Ala-Archa	20.87	40	P	P	17 51 38.4	+0.5
	SNR=6.2						
AAK	Ala-Archa	20.87	40	eP	P	17 51 38.4	+0.5
	comp=Z,7.1nm,0.8s						
AAK	Ala-Archa	20.87	40c	iP	P	17 51 38.1	+0.2
AAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AAK	Ala-Archa	20.87	40	P	P	17 51 38.3	+0.5
	comp=Z,5.1nm,0.8s,baz=213,slow=6.9,SNR=32						
KZA	Kyzart	20.96	42	P	Pn	17 51 40.8	-1.1
	SNR=18						
NRN	Naryn	21.03	44	eP	P	17 51 39.9	+0.1
	comp=Z,23nm,0.9s						
NRN	Naryn	21.03	44	eP	P	17 51 39.9	+0.1
NRN				pmax	pmax		
	comp=Z,23nm,0.9s						
FRU	Bishkek	21.06	39	eP	P	17 51 40.0	+0.2
KBK	Karagaybulak	21.14	40	P	P	17 51 41.7	+0.9
	SNR=5.5						
ULHL	Ulahol	21.65	43	P	P	17 51 47.2	+0.9
	SNR=11						
TKM2	Tokmak 2	21.68	40	P	P	17 51 46.7	+0.1
	SNR=6.0						
TKM2	Tokmak 2	21.68	40	P	P	17 51 45.7	-0.9
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AB31	Akbulak array	21.70	6	P	P	17 51 44.3	-2.2
AB31				pmax	pmax		
	comp=Z,28nm,1.0s						
ABKAR	Akbulak array	21.70	6	eP	P	17 51 46.6	+0.1
KDJ	Kajisay	22.16	44	eP	P	17 51 54.0	+2.4
	comp=Z,31nm,1.0s						
KDJ	Kajisay	22.16	44	eP	P	17 51 54.1	+2.4
KDJ				pmax	pmax		
	comp=Z,31nm,1.0s						
BR131	Keskin Array S	22.45	308	eP	P	17 51 56.3	+1.4
BR131	Keskin Array S	22.45	308	P	P	17 51 56.7	+1.9
	SNR=7.6						
BRTR	Keskin Array B	22.45	308	P	P	17 51 55.8	+0.9
	comp=Z,12nm,0.9s,baz=130,slow=11,SNR=44						
BRTR				LR	LR	18 02 24.1	
	comp=Z,183nm,19.0s,baz=100,slow=41						
AKTO	Aktyubinsk	22.75	2	P	P	17 51 55.7	-2.0
AKTO				pmax	pmax		
	comp=Z,51nm,1.2s						
AKTO	Aktyubinsk	22.75	2	P	P	17 51 57.9	+0.1
	comp=Z,22nm,0.8s,baz=193,slow=10,SNR=63						
PYUN	Piuthan	23.37	83	eP	P	17 52 06.6	+2.1
OTUK	Ortayu	23.92	27	P	P	17 52 09.5	+0.2
OTUK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KOLN	Koldanda	23.94	83	eP	P	17 52 10.8	+0.9
DANN	Dangsing	24.03	82	eP	P	17 52 12.1	+1.4
	comp=Z,47nm,0.8s						
PDGK	Podgornoye	24.24	44	P	P	17 52 10.8	-1.5
PDGK				pmax	pmax		
	comp=Z,11nm,1.1s						
DMN	Daman	25.29	83	eP	P	17 52 23.3	+1.1
PKIN	Phulchoki	25.55	83	eP	P	17 52 25.3	+0.8
	comp=Z,14nm,0.8s						
PKI	Pulchoki	25.56	83	eP	P	17 52 25.5	+0.8
	comp=Z,27nm,0.9s						
GUN	Gumba	25.93	83	eP	P	17 52 29.1	+1.0
	comp=Z,37nm,0.7s						
VRH	Novokhopyorsk	26.03	338	eP	P	17 52 28.6	+0.3
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KARP	Karpathos	26.15	295	eP	P	17 52 30.4	+0.8
	comp=Z,99nm,0.9s						
JIRN	Jiri	26.23	83	eP	P	17 52 31.6	+0.7
RAMN	Ramite	26.69	85	eP	P	17 52 35.2	+0.3
VSR	Storozhevoye	26.93	336	eP	P	17 52 35.1	-1.3
VSR				pmax	pmax		
	comp=Z,20nm,1.4s						
BRVK	Borovoye	27.33	18	eP	P	17 52 40.3	+0.3
	comp=Z,6.6nm,0.9s						
BRVK	Borovoye	27.33	18d	iP	P	17 52 40.5	+0.5
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BVA0	Borovoye Array	27.33	18	iP	P	17 52 39.8	-0.2
BVA0				pmax	pmax		
	comp=Z,12nm,0.9s						
BVAR	Borovoye Array	27.33	18	P	P	17 52 40.2	+0.1
	comp=Z,3.1nm,0.3s,baz=201,slow=7.9,SNR=37						
MAKZ	Makanchi	27.63	40	eP	P	17 52 43.4	+0.5
	comp=Z,8.6nm,1.1s						
MAKZ	Makanchi	27.63	40	eP	P	17 52 43.4	+0.5
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MK01	Makanchi Array	27.80	40	eP	P	17 52 44.8	+0.4
MK31	Makanchi Array	27.80	40	eP	P	17 52 44.1	-0.2
MK31	Makanchi Array	27.80	40	eP	P	17 52 44.2	-0.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	27.80	40	eP	P	17 52 44.7	+0.3
	comp=Z,19nm,0.3s						
MKAR	Makanchi Array	27.80	40	P	P	17 52 44.8	+0.4
	comp=Z,1.4nm,0.3s,baz=227,slow=8.8,SNR=58						
IDI	Anoyia	27.95	294	P	P	17 52 46.2	+0.4
	comp=Z,26nm,1.1s,baz=184,slow=9.4,SNR=5.4						
LPSR	Galich'ya Gora	28.15	337	eP	P	17 52 46.6	-0.7
LPSR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURBB	Kurchatov Arra	28.36	30	P	P	17 52 49.8	+0.6
	comp=Z,5.7nm,0.8s,baz=229,slow=8.6,SNR=52						
KURK	Kurchatov	28.46	30	eP	P	17 52 50.6	+0.5
	comp=Z,6.3nm,0.8s						
KURK	Kurchatov	28.46	30c	eP	P	17 52 50.9	+0.7
KURK				pmax	pmax		
	comp=Z,99nm,1.7s						
ARU	Arti	28.77	2	P	P	17 52 53.4	+0.6
ARU						17 53 42.4	
ARU				S	S	17 57 42.5	+3.2
ARU				SS	SnSn	17 59 04.7	+1.7
WMQ	Urumqi	29.75	49	eP	P	17 53 04.8	+3.0
WMQ				pP	pP	17 53 14.9	+1.6
WMQ				sP	sP	17 53 24.6	+6.3
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.3s						
WMQ				LR	LR		
	comp=N,84nm,16.5s						
WMQ				LR	LR		
	comp=E,150nm,20.9s						
WMQ				LR	LR		
	comp=Z,190nm,19.3s						
AKASG	Malin Array Be	30.94	325	P	P	17 53 11.8	-0.2
	comp=Z,1.6nm,0.3s,baz=127,slow=8.1,SNR=30						
AKASG				LR	LR	18 08 29.4	
	comp=Z,59nm,19.8s,baz=265,slow=42						
AKBB	Malin Array Si	30.94	325	eP	P	17 53 11.5	-0.6
	comp=Z,14nm,0.8s						
KIEV	Kiev	30.95	325	eP	P	17 53 11.1	-1.0
	comp=Z,13nm,0.8s						
KIEV	Kiev	30.95	325d	iP	P	17 53 11.3	-0.8
KIEV				pmax	pmax		
	comp=Z,11nm,1.0s						
AK11	Malin Array Si	30.95	325	eP	P	17 53 11.4	-0.8
OBN	Obninsk	31.01	338⇓	iP	P	17 53 13.4	+0.8
OBN				e		17 54 22.6	
OBN				eSS	SS	18 00 17.3	-11
OBN				pmax	pmax		
	comp=Z,19nm,1.0s						
DGZ	Jazzator, Alta	32.27	39	iP	P	17 53 24.1	+0.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LVV	L'vov	33.23	321	eP	P	17 53 19.3	-13
NVS	Novosibirsk	33.36	28⇑	iP	P	17 53 34.3	+1.1
NVS				eS	S	17 58 50.4	-0.8
NVS				pmax	pmax		
	comp=N,8.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,20nm,1.2s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.1s						
NVS				smax	smax		
	comp=E,5.0nm,1.3s						
ZAA0	Zalesovo Array	33.45	31	eP	P	17 53 34.0	-0.1
	comp=E,21nm,0.9s						
ZALV	Zalesovo Beam	33.45	31	eP	P	17 53 33.8	-0.3
ZALV	Zalesovo Beam	33.45	31	eP	P	17 53 33.8	-0.3
ZALV	Zalesovo Beam	33.45	31	P	P	17 53 33.9	-0.1
	comp=E,9.3nm,0.3s,baz=243,slow=9.7,SNR=89						
ZALV				LR	LR	18 08 59.0	
	comp=E,108nm,18.4s,baz=252,slow=40						
LANS	Liptovska Anna	35.60	317	eP	P	17 53 54.3	+1.5
LANS	Liptovska Anna	35.60	317	eP	P	17 53 54.3	+1.5
VYHS	Vyhne	35.73	316	eP	P	17 53 55.9	+2.0
VYHS	Vyhne	35.73	316	eP	P	17 53 55.9	+2.0
SOP	Sopron	36.89	314	P	P	17 54 04.9	+1.2
VSU	Vasula	37.10	334	iP	P	17 54 05.4	+0.1
VSU				pmax	pmax		
	comp=Z,16nm,0.8s						
CONA	Conrad Observa	37.41	314	eP	P	17 54 09.1	+0.8
	comp=Z,1.7nm,0.8s						
ARSA	Arzberg	37.43	313	eP	P	17 54 09.4	+1.0
	comp=Z,3.8nm,1.0s						
GTA	Gaotai	37.59	61	eP	P	17 54 10.2	+0.2
GTA				pP	pP	17 54 22.7	+1.1
GTA				sP	sP	17 54 28.0	+1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DPC	Dobruska-Polom	37.94	318	eP	P	17 54 14.0	+1.3
DPC				epP	pP	17 54 21.1	-3.6
DPC	Dobruska-Polom	37.94	318	eP	P	17 54 14.0	+1.3
DPC				e		17 54 21.1	
MOA	Molln	38.41	313	eP	P	17 54 17.4	+0.7
	comp=Z,8.6nm,0.8s						
KBA	Koelnbreinsper	38.81	312	eP	P	17 54 20.8	+0.6
	comp=Z,9.3nm,1.1s,SNR=4.6						
KBA	Koelnbreinsper	38.81	312	P	P	17 54 21.9	+1.7
GEA0	GERESS Array S	39.05	315	eP	P	17 54 21.6	-0.5
GERES	GERESS Array B	39.06	315	P	P	17 54 21.1	-1.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	39.06	315	P	P	17 54 21.1	-1.1
	comp=Z,1.9nm,0.8s,baz=119,slow=7.8,SNR=8.5						
KHC	Kasperske Hory	39.22	315	eP	P	17 54 23.6	+0.2
KHC				epP	pP	17 54 30.0	-5.1
KHC	Kasperske Hory	39.22	315	eP	P	17 54 23.6	+0.2
KHC				e		17 54 32.8	
ABTA	Abfaltersbach	39.29	311	eP	P	17 54 23.9	-0.2
	comp=Z,8.3nm,0.9s,SNR=5.9						
FINES	FINESS Array B	39.41	337	P	P	17 54 25.0	+0.2
	comp=Z,1.6nm,0.5s,baz=138,slow=7.7,SNR=13						
WTTA	Wattenberg	39.99	312	eP	P	17 54 30.2	+0.2
	comp=Z,11nm,0.9s						
WATA	Walderalm	40.04	312	eP	P	17 54 30.3	-0.2
	comp=Z,17nm,1.2s						
CLL	Collm	40.25	318	eP	P	17 54 32.0	+0.1
	comp=Z,6.0nm,1.1s						
CLL	Collm	40.25	318	eP	P	17 54 32.0	+0.1
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SQTA	Sankt Quirin	40.26	311	eP	P	17 54 31.8	-0.4
	comp=Z,5.3nm,0.5s						
MOTA	Moosalm	40.36	312	eP	P	17 54 32.7	-0.4
	comp=Z,4.1nm,0.6s						
FETA	Feichten	40.54	311	eP	P	17 54 34.4	-0.2
	comp=Z,16nm,0.8s						
RETA	Reutte	40.62	312	eP	P	17 54 34.7	-0.4
	comp=Z,5.6nm,0.8s						
LZH	Lanzhou	40.70	66	eP	P	17 54 35.4	-0.7
LZH				pP	pP	17 54 47.8	0.0
LZH				sP	sP	17 54 52.1	-0.7
LZH				ePP	PnPn	17 56 13.5	-1.1
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,65nm,5.4s						
LZH				LR	LR		
	comp=N,320nm,13.2s						
LZH				LR	LR		
	comp=E,330nm,13.5s						
LZH				LR	LR		
	comp=Z,390nm,16.8s						
MOY	Mondy	40.91	42	eP	P	17 54 38.9	+1.4
MOY				pmax	pmax		
	comp=Z,12nm,1.8s						
DAVA	Damuels	41.16	311	eP	P	17 54 39.3	-0.4
	comp=Z,22nm,0.7s						
KMI	Kunming	41.28	83	P	P	17 54 42.2	+1.2
KMI				pP	pP	17 54 53.7	+1.0
KMI				sP	sP	17 54 58.7	+1.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
APA	Apatity	42.30	347⇑	iP	P	17 54 48.5	+0.1
APA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,800nm,13.0s						
TLY	Talaya	42.49	42	iP	P	17 54 52.9	+2.6
SONM	Songino Array	43.39	49	P	P	17 54 58.1	+0.3
	comp=Z,2.1nm,0.8s,baz=263,slow=9.6,SNR=14						
SONA1	Songino Array	43.40	49	eP	P	17 54 57.9	+0.1
ULN	Ulaanbaatar	43.83	49	eP	P	17 55 01.5	+0.1
	comp=Z,3.6nm,0.9s						
ULN	Ulaanbaatar	43.83	49c	eP	P	17 55 02.1	+0.7
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
WLF	Walferdange	44.05	314	P	P	17 55 02.5	-0.4
MEM	Membach	44.33	315	P	P	17 55 06.2	+1.1
NB2	NORSAR Subarra	45.00	331	P	P	17 55 09.5	-0.8
	comp=Z,1.1nm,0.5s,baz=120,slow=7.9						
NOA	NORSAR Array B	45.00	331	P	P	17 55 09.8	-0.6
	comp=Z,3.3nm,0.7s,baz=116,slow=7.9,SNR=10						
NOA				LR	LR	18 16 28.2	
	comp=Z,39nm,18.6s,baz=295,slow=39						
BMRD	Maredsous	45.05	315	P	P	17 55 11.9	+1.1
DOU	Dourbes	45.12	314	P	P	17 55 16.2	+4.7
NRIK	Noril'sk	45.43	15	LR	LR	18 17 42.5	
	comp=Z,103nm,18.5s,baz=243,slow=41						
ARCES	ARCESS Array B	45.59	345	P	P	17 55 15.2	+0.4
	comp=Z,2.2nm,0.8s,baz=133,slow=9.0,SNR=12						
ARCES				LR	LR	18 16 43.5	
	comp=Z,158nm,20.9s,baz=284,slow=39						
HHC	Hu-ho-hao-te	46.63	59	eP	P	17 55 21.7	-1.9
HHC				S	S	18 02 06.3	-3.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
HHC				LR	LR		
	comp=N,210nm,14.7s						
HHC				LR	LR		
	comp=E,150nm,14.7s						
HHC				LR	LR		
	comp=Z,420nm,15.6s						
BOD	Bodaibo	49.79	36	eP	P	17 55 46.9	-0.7
BOD				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ES19	SONSECA Array	50.83	300	eP	P	17 55 56.5	+0.6
ESDC	Sonseca Array	50.89	300	P	P	17 55 56.3	+0.1
	comp=Z,0.3nm,0.3s,baz=66,slow=7.9,SNR=9.4						
HIA	Hailar	52.34	48c	eP	P	17 56 08.0	+1.1
TOA0	Torodi Ar. Sit	52.99	266	P	P	17 56 11.4	-0.7
TORD	Torodi Ar. Bea	52.99	266	P	P	17 56 10.9	-1.3
	comp=Z,3.2nm,0.4s,baz=322,slow=9.4,SNR=32						
NJ2	Nanjing	53.56	69	eP	P	17 56 16.8	+0.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZEA	Zeya	56.92	42	eP	P	17 56 39.8	-0.2
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
KSAR	Wonju Array Be	59.63	61	P	P	17 56 58.2	-0.9
KSAR	Wonju Array Be	59.63	61	P	P	17 56 58.3	-0.9
KSRS	Korea Array	59.66	61	P	P	17 56 58.2	-1.1
	comp=Z,1.3nm,0.8s,baz=270,slow=6.0,SNR=4.9						
KSRS				LR	LR	18 25 38.3	
	comp=Z,24nm,18.5s,baz=55,slow=39						
KLR	Kul'dur	60.18	47	P	P	17 57 02.5	-0.3
	comp=Z,4.2nm,0.9s,baz=280,slow=8.4,SNR=10						
LBTB	Lobatse	60.28	212	LR	LR	18 24 45.6	
	comp=Z,41nm,21.0s,baz=60,slow=38						
DBIC	Dimbokro	61.63	262	P	P	17 57 12.0	-1.1
	comp=Z,0.9nm,0.3s,baz=46,slow=2.2,SNR=5.8						
BOSA	Boshof	63.50	211	P	P	17 57 24.0	-1.4
	comp=Z,1.4nm,0.8s,baz=346,slow=4.2,SNR=3.7						
SEY	Seymchan	68.31	29	P	P	17 57 55.5	-0.3
	comp=Z,1.1nm,0.4s,baz=312,slow=5.3,SNR=5.9						
BILL	Bilibino	71.61	22⇑	eP	P	17 58 18.0	+2.1
BILL				e		18 00 56.8	

BILL				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BATI	Baumata	75.05	110	P	P	17 58 36.5	-0.6
	comp=Z,2.9nm,0.5s,baz=243,slow=9.0,SNR=3.3						
INK	Inuvik	84.01	4	P	P	17 59 24.4	-0.5
	comp=Z,1.3nm,1.0s,baz=13,slow=11,SNR=3.5						
ILAR	Eielson Array	86.06	10	P	P	17 59 34.7	-0.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	86.06	10	P	P	17 59 34.6	-0.6
	comp=Z,0.3nm,0.6s,baz=317,slow=4.5,SNR=5.1						
WRA	Warramunga Arr	88.88	113	P	P	17 59 48.9	-0.7
	comp=Z,1.0nm,0.8s,baz=313,slow=4.0,SNR=9.1						
YKA	Yellowknife Ar	89.86	356	P	P	17 59 54.1	+0.7
	comp=Z,1.6nm,0.8s,baz=2.1,slow=4.9,SNR=25						
ASAR	Alice Springs	90.38	117	P	P	17 59 56.9	+0.4
	comp=Z,0.6nm,0.9s,baz=304,slow=5.0,SNR=6.5						

ISK 03 18:10:41.8, 42°.34N×41°.12E, h4^{km}, ML2.5/5

ISCJB 03 18:10:42.1±1.7, 42°.34N±0°.04×41°.10E±0°.10, h2^{km}±10^{km}, Error ellipse: s-maj=12.2km s-min=7.1km az=10.7

DDA 03 18:10:43.3, 41°.63N×40°.38E, h6^{km}±4^{km}, ML2.7

ISC 03 18:10:41.9±1.7, 42°.35N±0°.06×41°.10E±0°.08, h12^{km}±13^{km}, n10, σ0^{s}69/15, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCA	Borcka	0.99	156	PG	Pn	18 11 01.1	-0.5
BCA				SG	Sn	18 11 15.2	-0.3
DBOC	Borcka	1.09	157	iP	Pn	18 11 03.3	+0.2
DBOC				iS	Sn	18 11 18.0	-0.1
DBOC				IAML_P			
	comp=Z,551nm,0.1s						
CHOM	Cayeli-Rize	1.28	191	PN	Pg	18 11 06.3	-0.1
ARTV	Artvin	1.32	152	iP	Pg	18 11 07.9	+0.6
ARTV				iS	Sn	18 11 24.1	0.0
ARTV				IAML_P			
	comp=Z,953nm,0.1s						
DBAD	Bademkaya	1.41	161	iP	Pb	18 11 08.0	-0.2
DBAD				IAML_P			
	comp=Z,501nm,0.1s						
DAGI	Agillar	1.41	154	iP	Pg	18 11 08.7	-0.3
KTUT	Trabzon	1.69	217	PN	Pb	18 11 13.2	+0.3
KIV	Kislovodsk	1.98	35	PN	Pb	18 11 17.4	-0.5
KIV				SN	Sb	18 11 42.8	+0.2
BAYT	Aydıntepe-Bayb	2.08	200	PN	Pb	18 11 18.8	-0.9
BAYT				SN	Sb	18 11 45.2	-0.5
KOPR	Koprukoy-ERZUR	2.43	166	PN	Pn	18 11 23.2	+1.7

ISCJB 03 18:11:05.8±1.0, 48°.7S±0°.1×106°.8E±0°.4, h10^{km}, mb4.0/7, MS3.7/9, Error ellipse: s-maj=38.1km s-min=14.7km az=21.1

IDC 03 18:11:06.2±0.9, 48°.68S×106°.78E, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx3.9/27, mbtmp4.0/6, MS3.7/9, Ms1 3.7/9, ms1mx3.4/20, Error ellipse: s-maj=43.8km s-min=18.7km az=108.0

NEIC 03 18:11:07.9±0.7, 48°.71S×106°.85E, h10^{km}, mb4.0/1, Error ellipse: s-maj=29.6km s-min=11.6km az=111.0

ISC 03 18:11:07.5±0.9, 48°.7S±0°.2×106°.9E±0°.3, h10^{km}, n24, σ0^{s}64/14, mb4.0/7, MS3.6/9, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.80	24	T	T	18 29 40.0	
	baz=198,slow=74,SNR=41						
H01W1	Cape Leeuwin H	14.81	24	T	T	18 29 41.1	
	baz=198,slow=74,SNR=50						
H01W3	Cape Leeuwin H	14.81	24	T	T	18 29 41.1	
	baz=198,slow=74,SNR=45						
STKA	Stephens Creek	31.03	70	LR	LR	18 27 37.6	
	comp=Z,157nm,21.6s,baz=207,slow=32						
ASAR	Alice Springs	32.85	50	P	P	18 17 41.8	+0.3
	1.7nm,0.8s,baz=211,slow=8.3,SNR=20						
ASAR				PcP	PcP	18 20 24.9	-1.2
	0.4nm,0.9s,baz=236,slow=1.2,SNR=4.0						
ASAR				LR	LR	18 29 24.2	
	comp=Z,127nm,20.4s,baz=234,slow=33						
VNDA	Vanda	35.53	162	P	P	18 18 04.5	+0.5
	3.3nm,0.9s,baz=271,slow=12,SNR=3.9						
VNDA				LR	LR	18 31 21.0	
	comp=Z,199nm,19.8s,baz=297,slow=34						
WRA	Warramunga Arr	36.20	47	P	P	18 18 10.8	+0.4
	2.7nm,0.7s,baz=210,slow=8.1,SNR=23						
WRA				PcP	PcP	18 20 35.4	-0.3
	0.5nm,0.8s,baz=221,slow=2.4,SNR=4.4						
WRAB	Tennant Creek	36.21	47	eP	P	18 18 10.8	+0.3
	1.4nm,0.6s						
QSPA	South Pole Qui	41.44	180	P	P	18 18 53.6	-0.4
	1.5nm,0.9s,baz=319,slow=5.1,SNR=3.1						
H08S2	Diego Garcia H	50.13	313	T	T	19 13 38.4	
	baz=151,slow=76,SNR=5.4						
H08S1	Diego Carcia H	50.14	313	T	T	19 13 39.5	
	baz=151,slow=76,SNR=5.7						
H08S3	Diego Garcia H	50.15	313	T	T	19 13 37.3	
	baz=151,slow=76,SNR=5.1						
SNAA	Sanae	50.22	203	P	P	18 20 03.6	+0.5
	3.2nm,1.0s,baz=141,slow=13,SNR=3.2						
DZM	Mont Dzumac	53.77	83	LR	LR	18 41 16.6	
	comp=Z,67nm,18.4s,baz=52,slow=34						
HNR	Honiara	59.03	67	LR	LR	18 44 18.2	
	comp=Z,65nm,20.1s,baz=177,slow=34						
BOSA	Boshof	63.78	256	LR	LR	18 46 01.3	
	comp=Z,40nm,18.0s,baz=206,slow=33						
CMAR	Chiang Mai Arr	67.22	352	P	P	18 22 02.1	+0.4
	0.6nm,0.7s,baz=194,slow=5.5,SNR=6.9						
CMAR				LR	LR	18 51 01.7	
	comp=Z,37nm,18.0s,baz=184,slow=36						
SONM	Songino Array	96.15	360	LR	LR	19 10 22.3	
	comp=Z,21nm,18.0s,baz=358,slow=37						
GEYT	Alibeck	96.49	323	LR	LR	19 03 52.0	
	comp=Z,16nm,18.9s,baz=220,slow=33						
INK	Inuvik	144.79	34	PKP	PKPdf	18 30 42.7	-0.4
	2.5nm,1.0s,baz=233,slow=0.7,SNR=4.3						
NVAR	Mina Array Bea	146.15	90	PKPbc	PKiKP	18 30 49.7	-1.2
	1.0nm,0.7s,baz=213,slow=4.6,SNR=7.5						
TXAR	Lajitas Array	149.70	118	PKPbc	PKPbc	18 30 57.6	+0.2
	0.7nm,0.8s,baz=196,slow=5.6,SNR=8.4						
YKA	Yellowknife Ar	153.36	43	PKPbc	PKiKP	18 31 05.0	+0.3
YKA	Yellowknife Ar	153.36	43	PKPbc	PKiKP	18 31 05.0	+0.3
	0.6nm,0.7s,baz=290,slow=2.2,SNR=10						

ISCJB 03 18:11:24.6±0.4, 35°.77N±0°.03×140°.21E±0°.05, h72^{km}±3^{km}, mb3.4/9, Error ellipse: s-maj=6.3km s-min=4.9km az=160.6

IDC 03 18:11:24.8±1.9, 35°.74N×140°.35E, h61^{km}±17^{km}, mb3.1/8, mb1 3.4/11, mb1mx3.2/36, mbtmp3.5/11, Error ellipse: s-maj=23.4km s-min=11.8km az=79.0

JMA 03 18:11:25.6±0.1, 35°.81N×140°.19E, h61^{km}±2^{km}, M2.8

ISC 03 18:11:25.6±0.7, 35°.78N±0°.04×140°.22E±0°.05, h66^{km}±6^{km}, n27, σ1^{s}10/42, mb3.4/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.23	127	P	Pn	18 11 36.5	+0.5
JSMT				eS	Sn	18 11 44.1	+0.6
JIHU	Itakohorinouch	0.31	54	P	Pn	18 11 36.3	-0.2
JIHU				eS	Sn	18 11 44.1	-0.3
JCN	Nagara	0.36	182	P	Pn	18 11 37.4	+0.5
JCN				eS	Sn	18 11 45.9	+0.8
JYT	Yasato	0.44	357	P	Pn	18 11 36.9	-0.7
JYT				S	Sn	18 11 45.2	-1.1
JAG	Ashikaga	0.89	316	P	Pn	18 11 42.4	-0.2
JAG				eS	Sn	18 11 54.8	-0.3
BSO3	Boso 3	1.01	166	P	Pn	18 11 43.6	-0.2
BSO3				eS	Sn	18 11 58.0	+0.7
JOD2	Odawara 2	1.06	241	P	Pn	18 11 44.3	-0.4
JOD2				S	Sn	18 11 57.8	-1.1
JRY	Ryogami san	1.09	283	P	Pn	18 11 45.6	+0.4
JIM2	Oshima 3	1.24	211	P	Pn	18 11 46.0	-1.1
JIM2				S	Sn	18 12 01.3	-1.9
JKT	Katashina	1.25	322	P	Pn	18 11 47.3	0.0
JKT				eS	Sn	18 12 03.1	-0.5
BSO1	Boso 1	1.29	151	P	Pn	18 11 46.9	-0.2
JFNN	Fujinakano	1.38	245	S	Sn	18 12 05.7	-0.7
JYN	Shimob	1.39	259	P	Pn	18 11 49.3	+0.2
JYN				S	Sn	18 12 06.6	-0.2
MJAR	Matsushiro Arr	1.79	296	P	Pn	18 11 55.3	+0.9
	2.1nm,0.3s,baz=100,slow=14,SNR=134						
MJAR				S	Sn	18 12 19.9	+3.6
	1.9nm,0.3s,baz=137,slow=27,SNR=11						
MAT	Matsushiro	1.79	296	P	Pn	18 11 55.7	+1.3
MAT				S	Sn	18 12 13.7	-2.6
JHJ	Hachijo jima 2	2.68	188	P	Pn	18 12 05.3	-1.2
	3.7nm,0.3s,baz=67,slow=18,SNR=4.8						
JHJ				S	Sn	18 12 36.8	-1.1
	17nm,0.3s,baz=102,slow=19,SNR=4.1						
ASAJ	Asahikawa	8.52	12	P	Pn	18 13 24.4	-1.8
	0.6nm,0.3s,baz=207,slow=18,SNR=3.2						
ASAJ				S	Sn	18 14 45.0	-16
	0.2nm,0.3s,baz=120,slow=16,SNR=2.5						
KSRS	Korea Array	10.02	283	P	Pn	18 13 48.5	+1.8
	0.0nm,0.3s,baz=96,slow=14,SNR=4.0						
SONM	Songino Array	27.71	306	P	P	18 17 08.1	+0.4
	0.2nm,0.6s,baz=95,slow=7.2,SNR=2.4						
MKAR	Makanchi Array	43.98	303	P	P	18 19 26.6	+0.4
	0.4nm,0.8s,baz=92,slow=8.6,SNR=3.6						
MKAR				PcP	PcP	18 21 10.7	-0.2
	0.1nm,0.4s,baz=155,slow=4.8,SNR=3.5						
KURBB	Kurchatov Arra	46.02	309	P	P	18 19 42.9	+0.6
	1.7nm,0.2s,baz=84,slow=8.0,SNR=2.9						
ILAR	Eielson Array	51.06	32	P	P	18 20 19.8	-1.0
	0.5nm,0.9s,baz=269,slow=6.1,SNR=4.2						
WRA	Warramunga Arr	55.70	187	P	P	18 20 54.1	-1.1
	0.3nm,0.5s,baz=1.0,slow=7.4,SNR=9.5						
WRA				pP	pP	18 21 12.0	-0.5
	0.8nm,1.0s,baz=2.9,slow=7.8,SNR=4.8						
ASAR	Alice Springs	59.43	187	P	P	18 21 22.1	+0.7
	0.2nm,0.6s,baz=6.8,slow=9.3,SNR=3.1						
AKASG	Malin Array Be	74.69	322	P	P	18 22 57.8	0.0
	0.1nm,0.3s,baz=51,slow=5.8,SNR=3.8						
PDAR	Pinedale Array	79.23	45	P	P	18 23 24.4	+0.5
	0.4nm,0.7s,baz=318,slow=2.0,SNR=3.6						
TXAR	Lajitas Array	91.65	52	P	P	18 24 26.0	+0.1
	0.2nm,0.7s,baz=338,slow=2.1,SNR=2.9						

IDC 03 18:19:48.4±5.0, 48°.12N×153°.28E, h151^{km}±57^{km}, mb3.0/5, mb1 3.1/6, mb1mx2.8/41, mbtmp3.4/6, Error ellipse: s-maj=60.1km s-min=25.0km az=67.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.73	28	P	Pn	18 21 11.4	0.0
	0.2nm,0.3s,baz=210,slow=10.0,SNR=2.9						
H11N2	WAKE ISLAND Hy	30.39	154	T	T	18 57 46.6	
	baz=346						
H11N1	WAKE ISLAND Hy	30.41	154	T	T	18 57 44.9	
	baz=346						
H11N3	WAKE ISLAND Hy	30.41	154	T	T	18 57 46.6	
	baz=346						
H11S1	WAKE ISLAND Hy	31.49	155	T	T	18 59 05.0	
	baz=348						
H11S3	WAKE ISLAND Hy	31.50	155	T	T	18 59 01.8	
	baz=348						
H11S2	WAKE ISLAND Hy	31.51	155	T	T	18 59 07.2	
	baz=348						
MKAR	Makanchi Array	46.42	296	P	P	18 27 59.1	-0.5
	0.2nm,0.7s,baz=59,slow=5.6,SNR=3.3						
KURBB	Kurchatov Arra	46.80	303	P	P	18 28 02.6	+0.2
	0.5nm,0.5s,baz=72,slow=8.7,SNR=3.2						
BVAR	Borovoye Array	50.08	309	P	P	18 28 27.6	+0.1
	0.4nm,0.4s,baz=57,slow=7.1,SNR=6.1						
FINES	FINESS Array B	62.85	335	P	P	18 29 57.3	-0.2
	0.4nm,0.4s,baz=37,slow=8.8,SNR=6.1						
WRA	Warramunga Arr	69.84	199	P	P	18 30 42.4	-0.1
	0.4nm,1.0s,baz=21,slow=7.8,SNR=3.2						
ASAR	Alice Springs	73.54	198	P	P	18 31 04.8	+0.3
	0.3nm,0.9s,baz=7.8,slow=7.5,SNR=2.5						

SOME 03 18:21:39.7, 42°.58N×79°.72E, h20^{km}

KRNET 03 18:21:39.2±0.1, 42°.59N×79°.68E, h20^{km}, mb2.5

NNC 03 18:21:39.2±1.9, 42°.60N×79°.70E, h0^{km}, mb2.4, mpv2.4, Error ellipse: s-maj=11.5km s-min=7.6km az=132.0

ISC 03 18:21:39.7±1.6, 42°.60N±0°.06×79°.69E±0°.05, h2^{km}±11^{km}, n22, σ1^{s}25/42, 10C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	0.75	349	⇑P	Pg	18 21 53.4	-0.7
	0.5nm,0.4s						
PDGK				⇓S	Sg	18 22 04.0	+0.3
	2.3nm,0.4s						
PDGK	Podgornoye	0.75	349	⇑iP	Pg	18 21 53.6	-0.5
	baz=49						
PDGK				⇑iS	Sg	18 22 04.1	+0.3
	baz=49						
PRZ	Przheval'sk	0.96	264	⇑iP	Pg	18 21 56.7	-1.5
	baz=64						
PRZ				⇑iS	Sg	18 22 09.8	-0.9
	baz=64						
KTMS	Ketmen	0.98	29	P	Pg	18 21 58.2	-0.3
	1.8nm,0.1s						
KTMS				S	Sg	18 22 11.4	+0.3
	1.4nm,0.1s						
KTMS	Ketmen	0.98	29	eP	Pg	18 21 58.2	-0.3
	baz=29						
KTMS				eS	Sg	18 22 11.4	+0.3
	baz=29						
KTMS	Ketmen	0.98	29	eP	Pg	18 21 58.2	-0.3
	0.4nm,0.1s						
KTMS				eS	Sg	18 22 11.4	+0.3
	1.4nm,0.1s						
SATY	Saty	1.05	296	P	Pb	18 21 59.3	-1.5
	1.6nm,0.1s						
SATY				S	Sb	18 22 13.2	-1.8
	3.6nm,0.1s						
SATY	Saty	1.05	296	eP	Pb	18 21 59.3	-1.5
	1.6nm,0.1s						
SATY				eS	Sb	18 22 13.2	-1.8
	3.6nm,0.1s						
DJR	Jarkent	1.74	2	P	Pn	18 22 11.3	+0.4
	0.3nm,0.2s						
DJR				S	Sn	18 22 34.3	+0.6
	1.9nm,0.3s						
DJR	Jarkent	1.74	2	eP	Pn	18 22 11.3	+0.4
	0.3nm,0.2s						
DJR				⇑iS	Sn	18 22 34.3	+0.6
	1.9nm,0.3s						
MNBS	Baschi	1.76	328	P	Pn	18 22 11.6	+0.3
	1.3nm,0.1s						
MNBS				S	Sn	18 22 35.2	+0.9
	5.3nm,0.3s						
KDJ	Kajisay	1.92	257	⇑iP	Pn	18 22 13.8	+0.2
	baz=57						
KDJ				⇑iS	Sn	18 22 38.7	+0.3
	baz=57						
TNSS	Tian-Shan	2.07	283	Pg	Pn	18 22 17.1	+1.3
	0.9nm,0.2s						
TNSS				Lg	Lg	18 22 44.8	
	1.4nm,0.4s						
TNSS	Tian-Shan	2.07	283	eP	Pn	18 22 17.5	+1.7
	baz=83						
TNSS				eS	Sb	18 22 44.8	+0.3
	baz=83						
TNSS	Tian-Shan	2.07	283	eP	Pn	18 22 17.5	+1.7
	0.3nm,0.1s						
TNSS				eS	Sb	18 22 44.8	+0.3
	1.4nm,0.4s						
IZV	Izvestkoviy	2.31	282	eP	Pb	18 22 21.5	-0.7
	baz=82						
IZV				eS	Sb	18 22 51.5	+0.3
	baz=82						
IZV	Izvestkoviy	2.31	282	eP	Pb	18 22 21.5	-0.7
	0.9nm,0.2s						
IZV				eS	Sb	18 22 51.5	+0.3
	1.7nm,0.2s						
ULHL	Ulahol	2.58	263	⇓iP	Pn	18 22 23.1	+0.4
	baz=63						
ULHL				⇓iS	Sn	18 22 54.6	-0.1
	baz=63						
KAPS	Kapalarasan	2.70	355	eP	Pb	18 22 28.4	-0.3
	0.3nm,0.2s						
KAPS				eS	Sb	18 23 03.3	+1.0
	1.7nm,0.5s						
BOOM	Boomskoye usch	2.78	269	⇓eP	Pg	18 22 37.6	+4.7
	baz=69						
BOOM				⇓eS	Sn	18 22 56.7	-2.8
	baz=69						
TKM2	Tokmak 2	3.03	278	⇑Pg	Pb	18 22 33.0	-1.6
	1.1nm,0.9s						
TKM2				⇑Lg	Lg	18 23 12.0	
	0.5nm,0.6s						
TKM2	Tokmak 2	3.03	278	⇓iP	Pn	18 22 29.1	+0.2
	baz=78						
TKM2				⇓iS	Sn	18 23 05.8	-0.1
	baz=78						

DJA 03 18:23:46.9±0.9, 1°S±22°×13°2E±1°5, h18^{km}±27^{km}, M3.5/5, MLv3.5/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	0.61	255	P	Pb	18 23 58.8	-0.2
SWI				S	Sn	18 24 10.2	+0.1
FAKI	Fak Fak	2.24	170	P	Pn	18 24 23.2	+0.1
RKPI	Ransiki, Papua	2.46	109	P	Pn	18 24 26.4	+0.2

GUC 03 18:27:28.4±0.6, 29°.01S×70°.49W, h140^{km}±5^{km}, ML3.2

ISCJB 03 18:27:29.7±0.9, 29°.06S±0°.04×69°.96W±0°.10, h122^{km}±12^{km}, Error ellipse: s-maj=14.3km s-min=5.9km az=179.8

SJA 03 18:27:29.3±0.7, 29°.05S×70°.00W, h122^{km}±11^{km}, ML3.2, MW3.7

ISC 03 18:27:30.3±1.6, 29°.06S±0°.04×69°.99W±0°.08, h120^{km}±15^{km}, n13, σ0^{s}51/20, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.62	274	iP	Pn	18 27 49.5	+0.1
LCO				iS	Sn	18 28 03.5	-0.1
GO04	Tololo Observa	1.32	212	iP	Pn	18 27 55.6	-0.2
GO04				iS	Sn	18 28 15.4	+0.1
GO04	Tololo Observa	1.32	212	eP	Pn	18 27 55.4	-0.4
GO04				eS	Sn	18 28 15.5	+0.2
GO04				IAML		18 28 17.4	
	comp=N,1µm,0.5s						
AGUA	GUANDACOL	1.38	108	iP	Pn	18 27 56.9	+0.5
GO03	Copiap	1.47	352	⇑eP	Pn	18 27 57.2	-0.3
GO03				eS	Sn	18 28 18.5	+0.4
GO03				IAML		18 28 20.4	
	comp=E,167nm,0.1s						
RTLL	Cerro Villicun	2.62	150	eP	Pn	18 28 10.9	-0.7
RTLL				eS	Sn	18 28 42.4	-1.1
RTLL				IAML		18 28 45.0	
	comp=N,86nm,0.4s						
ACLC	CERRO LA CRUZ	2.68	99	iP	Pn	18 28 12.4	-0.2
RTLS	Leoncito	2.80	168	iP	Pn	18 28 15.0	+0.8
RTLS				IAML		18 28 15.3	
	comp=Z,68nm,0.2s						
RTCV	Cerro Valdivia	3.06	156	iP	Pn	18 28 18.0	+0.5
AUSP	Uspallata	3.20	171	iP	Pn	18 28 20.2	+0.7
ASAL	Salagasta	3.66	165	iP	Pn	18 28 25.6	+0.3
GO02	Mina Guanaco	3.90	5	⇑eP	Pn	18 28 28.6	-0.2
GO02				eS	Sn	18 29 14.2	+0.3
GO02				IAML		18 29 16.2	
	comp=E,17nm,0.1s						
FCH	Farellones	4.26	183	eP	Pn	18 28 33.5	-0.1
FCH				eS	Sn	18 29 22.7	-0.1
FCH				IAML		18 29 26.8	
	comp=E,10nm,0.2s						

SOME 03 18:31:08.9, 42°.53N×79°.68E, h15^{km}

KRNET 03 18:31:09.0±0.1, 42°.56N×79°.67E, h14^{km}, mb2.2

NNC 03 18:31:09.4±1.6, 42°.59N×79°.68E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=9.6km s-min=6.6km az=130.0

ISC 03 18:31:08.2±1.5, 42°.52N±0°.05×79°.67E±0°.04, h17^{km}±13^{km}, n28, σ1^{s}02/52, 16C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.79	323	P	Pg	18 31 23.9	+0.3
	4.3nm,0.1s						
UZB				S	Sb	18 31 34.1	+0.1
	4.7nm,0.2s						
UZB	Uzynbulak	0.79	323	eP	Pg	18 31 23.6	-0.1
	baz=21						
UZB				eS	Sb	18 31 34.1	+0.1
	baz=21						
UZB	Uzynbulak	0.79	323	eP	Pg	18 31 23.6	-0.1
	4.3nm,0.1s						
UZB				eS	Sb	18 31 34.1	+0.1
	4.7nm,0.2s						
PDGK	Podgornoye	0.82	351	P	Pg	18 31 24.2	0.0
	0.4nm,0.2s						
PDGK				S	Sb	18 31 34.8	-0.2
	3.0nm,0.3s						
PDGK	Podgornoye	0.82	351	⇑P	Pg	18 31 23.8	-0.4
	0.5nm,0.4s						
PDGK				⇑S	Sg	18 31 34.5	-0.7
	5.9nm,0.6s						
PDGK	Podgornoye	0.82	351	⇑iP	Pb	18 31 24.4	+0.3
	baz=50						
PDGK				⇑iS	Sb	18 31 34.8	-0.2
	baz=50						
PRZ	Przheval'sk	0.94	268	⇑eP	Pg	18 31 27.3	+0.8
	baz=66						
PRZ				⇑iS	Sg	18 31 39.6	+0.7
	baz=66						
KTMS	Ketmen	1.05	28	P	Pb	18 31 28.6	+0.6
	2.6nm,0.1s						
KTMS				S	Sg	18 31 42.5	0.0
	4.9nm,0.1s						
KTMS	Ketmen	1.05	28	eP	Pb	18 31 28.6	+0.6
	baz=28						
KTMS				eS	Sg	18 31 42.5	0.0
	baz=28						
KTMS	Ketmen	1.05	28	eP	Pb	18 31 28.6	+0.6
	1.5nm,0.1s						
KTMS				eS	Sg	18 31 42.5	0.0
	4.9nm,0.1s						
DJR	Jarkent	1.82	3	P	Pb	18 31 41.8	+0.8
	0.4nm,0.2s						
DJR				S	Sg	18 32 05.8	-0.9
	2.9nm,0.3s						
DJR	Jarkent	1.82	3	eP	Pb	18 31 42.1	+1.1
	0.2nm,0.1s						
DJR				eS	Sg	18 32 05.8	-0.9
	2.9nm,0.3s						
MNBS	Baschi	1.82	330	P	Pb	18 31 42.0	+1.0
	1.1nm,0.2s						
MNBS				S	Sg	18 32 05.8	-0.9
	6.9nm,0.3s						
KDJ	Kajisay	1.89	259	⇑iP	Pg	18 31 44.5	0.0
	baz=58						
KDJ				⇑iS	Sg	18 32 09.6	+0.6
	baz=58						
TNSS	Tian-Shan	2.07	285	Pg	Pb	18 31 47.2	+1.6
	1.3nm,0.2s						
TNSS				Lg	Lg	18 32 15.0	
	1.5nm,0.3s						
TNSS	Tian-Shan	2.07	285	eP	Pb	18 31 47.2	+1.6
	baz=84						
TNSS				eS	Sg	18 32 15.0	0.0
	baz=84						
TNSS	Tian-Shan	2.07	285	eP	Pb	18 31 47.2	+1.6
	1.3nm,0.2s						
TNSS				eS	Sg	18 32 15.0	0.0
	1.5nm,0.3s						
IZV	Izvestkoviy	2.31	284	Pg	Pb	18 31 51.2	+1.7
	2.5nm,0.2s						
IZV				Lg	Lg	18 32 21.8	
	2.6nm,0.2s						
IZV	Izvestkoviy	2.31	284	eP	Pb	18 31 51.2	+1.7
	baz=83						
IZV				eS	Sg	18 32 21.9	-0.7
	baz=83						
IZV	Izvestkoviy	2.31	284	eP	Pb	18 31 51.2	+1.7
	2.5nm,0.2s						
IZV				eS	Sg	18 32 21.8	-0.7
	2.6nm,0.2s						
CHKK	Chushkaly	2.38	305	Pg	Pb	18 31 51.8	+1.3
	0.7nm,0.1s						
CHKK				Lg	Lg	18 32 23.0	
	2.3nm,0.2s						
CHKK	Chushkaly	2.38	305	eP	Pb	18 31 51.8	+1.3
	baz=4.0						
CHKK				eS	Sg	18 32 23.0	-1.6
	baz=4.0						
CHKK	Chushkaly	2.38	305	eP	Pb	18 31 51.8	+1.3
	0.3nm,0.1s						
CHKK				eS	Sg	18 32 23.0	-1.6
	2.3nm,0.2s						
ULHL	Ulahol	2.56	265	⇓eP	Pb	18 31 54.1	+0.4
	baz=64						
ULHL				⇓iS	Sb	18 32 26.2	+1.3
	baz=64						
NRN	Naryn	2.94	250	⇑iP	Pb	18 31 59.9	-0.5
	baz=49						
NRN				⇑iS	Sb	18 32 36.5	+0.3

	baz=49						
TKM2	Tokmak 2	3.03	279	⇑Pg	Pb	18 32 01.9	+0.1
	0.5nm,0.6s						
TKM2				⇑Lg	Lg	18 32 42.8	
	0.4nm,0.3s						
TKM2	Tokmak 2	3.03	279	⇑*i*P	Pb	18 32 00.5	-1.3
	baz=78						
TKM2				⇑*i*S	Sb	18 32 37.2	-1.3
	baz=78						
KZA	Kyzart	3.31	264	⇑*i*P	Pb	18 32 04.7	-1.9
	baz=63						
KZA				⇑*i*S	Sb	18 32 44.6	-2.2
	baz=63						

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*IDC **03** 18:35:07.6±2.2, 25°.12S×177°.88W, h0^{km}, mb4.0/4, mb1 4.2/5, mb1mx3.9/21, mbtmp4.1/5, ML4.3/1, Error ellipse: s-maj=60.8km s-min=43.1km az=141.0*

ISC 03 18:35:10.6±2.1, **26°.0S**±0°.2×**177°.5W**±0°.3, **h35**^{km}, **n7**, σ**0ˢ.73**/7, **mb4.1**/4, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.07	199	Pn	P	18 38 23.5	0.0
	1.4nm,0.3s,baz=90,slow=2.0,SNR=5.6						
CTA	Charters Tower	33.76	272	P	P	18 41 49.9	+0.7
	1.9nm,0.4s,baz=95,slow=9.8,SNR=9.0						
ASAR	Alice Springs	43.93	262	P	P	18 43 14.6	+0.2
	0.6nm,0.6s,baz=92,slow=6.9,SNR=7.7						
WRA	Warramunga Arr	44.52	267	P	P	18 43 18.1	-1.1
	1.8nm,0.6s,baz=103,slow=8.1,SNR=20						
CMAR	Chiang Mai Arr	92.32	289	P	P	18 48 17.4	-0.4
	0.5nm,0.8s,baz=154,slow=3.5,SNR=4.9						
AKASG	Malin Array Be	147.90	327	PKPbc	PKPbc	18 54 51.9	+0.1
	0.5nm,0.4s,baz=43,slow=4.7,SNR=4.7						
BRTR	Keskin Array B	150.59	306	PKPbc	PKPbc	18 54 59.6	+0.4
	0.4nm,0.6s,baz=68,slow=3.5,SNR=3.3						

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*NNC **03** 18:41:52.7±3.6, 40°.09N×78°.45E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=26.1km s-min=23.0km az=41.0*

*SOME **03** 18:41:53.2, 40°.03N×78°.25E, h10^{km}*

*KRNET **03** 18:41:56.6±0.1, 40°.20N×78°.17E, mb2.4*

ISC 03 18:41:52.9±3.5, **40°.1N**±0°.1×**78°.23E**±0°.08, **h13**^{km}±18^{km}, **n15**, σ**1ˢ.05**/24, **10C-6D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.68	349	⇑*e*P	Pg	18 42 25.9	+0.7
	baz=50						
TARG				⇑*i*S	Sg	18 42 47.5	+0.3
	baz=50						
NRN	Naryn	2.17	309	⇑*i*P	Pg	18 42 34.9	+0.3
	baz=7.0						
NRN				⇑*i*S	Sg	18 43 02.7	-0.1
	baz=7.0						
KDJ	Kajisay	2.20	339	⇑*e*P	Pg	18 42 34.8	-0.3
	baz=40						
KDJ				⇑*i*S	Sg	18 43 03.0	-0.7
	baz=40						
BOOM	Boomskoye usch	2.97	325	⇑*i*P	Pb	18 42 45.6	-0.1
	baz=25						
BOOM				⇑*i*S	Sb	18 43 21.5	-0.5
	baz=25						
SATY	Saty	2.98	2	*e*P	Pg	18 42 49.4	-0.6
	1.9nm,0.4s						
SATY				*e*S	Sg	18 43 29.9	+1.1
	5.1nm,0.7s						
KZA	Kyzart	3.02	313	⇓*i*P	Pb	18 42 46.9	+0.2
	baz=11						
KZA				⇓*i*S	Sb	18 43 22.9	-0.6
	baz=11						
TNSS	Tian-Shan	3.11	342	Pg	Pg	18 42 51.5	-1.1
	2.6nm,0.7s						
TNSS				Lg	Lg	18 43 32.9	
	4.6nm,0.5s						
TNSS	Tian-Shan	3.11	342	*e*P	Pg	18 42 51.3	-1.2
	0.5nm,0.4s						
TNSS				*e*S	Sg	18 43 33.2	+0.3
	3.1nm,0.5s						
IZV	Izvestkoviy	3.20	338	Pg	Pg	18 42 53.5	-0.7
	1.5nm,0.4s						
IZV				Lg	Lg	18 43 36.0	
	8.7nm,0.4s						
IZV	Izvestkoviy	3.20	338	*e*P	Pg	18 42 53.2	-1.0
	1.2nm,0.4s						
IZV				*e*S	Sg	18 43 36.3	+0.7
	8.7nm,0.4s						
MDOK	Medeo	3.21	344	⇑Pg	Pb	18 42 51.9	+2.0
	0.9nm,0.5s						
MDOK				⇓Lg	Lg	18 43 35.3	
	4.6nm,0.6s						
MDOK	Medeo	3.21	344	*e*P	Pb	18 42 52.4	+2.5
	0.3nm,0.2s						
MDOK				*e*S	Sg	18 43 35.0	-1.0
	4.1nm,0.6s						
KOTS	Kotyrbulak	3.27	345	Pg	Pg	18 42 54.1	-1.4
	3.0nm,0.4s						
KOTS				Lg	Lg	18 43 38.6	
	3.7nm,0.4s						
PDGK	Podgornoye	3.38	16	⇑Pg	Pb	18 42 52.4	-0.4
	0.9nm,1.1s						
PDGK				⇓Lg	Lg	18 43 36.6	
	2.0nm,0.9s						
TKM2	Tokmak 2	3.46	326	⇓Pg	Pb	18 42 54.7	+0.5
	0.7nm,0.9s						
TKM2				⇓Lg	Lg	18 43 44.2	
	1.4nm,0.8s						

MAN 03 18:45:39.7, 17°.57N×122°.40E, h31^{km}, MS3.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALP	Palanan	0.51	177	*e*P	Pn	18 45 51.0	+0.2
PALP				*e*S	Sn	18 46 00.2	+1.7
CVP	Callao Caves	0.56	283	⇓*i*P	Pb	18 45 50.3	-0.9
CVP				*i* S	Sb	18 45 58.0	-1.0
SGCP	Mt. Cagua	0.74	333	*e*P	Pb	18 45 54.2	0.0
SGCP				*e*S	Sn	18 46 05.4	+1.1
CAUP	Cauayan	0.83	221	*e*P	Pb	18 45 55.8	+0.1
CAUP				*e*S	Sb	18 46 08.5	+2.0
APYP	Conner	1.14	285	*e*P	Pn	18 45 59.1	-0.4
APYP				*e*S	Sn	18 46 13.8	-0.2

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*ISK **03** 19:10:01.1, 37°.96N×37°.92E, h5^{km}, ML2.0/8*

*DDA **03** 19:10:02.5, 37°.94N×37°.96E, h7^{km}±5^{km}, ML2.7*

ISC 03 19:10:02.7±1.1, **37°.95N**±0°.03×**37°.98E**±0°.03, **h8**^{km}±11^{km}, **n15**, σ**1ˢ.00**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	Akcadag	0.35	353	*i* P	Pb	19 10 10.3	-1.0
AKCD				*i* S	Sb	19 10 16.9	-0.1
AKCD				IAML_P			
	comp=Z,4μm,0.1s						
ATAB	Bozova	0.54	152	*i* P	Pg	19 10 13.1	0.0
ATAB				*i* S	Sb	19 10 21.9	-0.3
ATAB				IAML_P			
	comp=Z,2μm,0.1s						
GZT	Gaziantep	0.67	209	*i* P	Pg	19 10 15.4	-0.3
GZT				*i* S	Sg	19 10 24.7	+0.2
DARE	Darende-Malaty	0.73	328	PG	Pg	19 10 15.4	-1.5
DARE				SG	Sb	19 10 26.6	-1.4
URFA	Urfa	0.84	127	PG	Pg	19 10 18.9	+0.1
KMRS	Kahramanmaras	0.96	243	PG	Pg	19 10 20.1	-1.0
KMRS				SG	Sg	19 10 33.7	+0.1
ELZG	Elazig	0.97	55	*i* P	Pb	19 10 21.7	-0.1
ELZG				*i* S	Sn	19 10 36.4	-0.3
ELZG				IAML_P			
	comp=Z,762nm,0.1s						
GAZ	Gaziantep	0.98	218	PG	Pg	19 10 21.1	-0.5
SANL	SANLIURFA_Merk	1.12	134	*i* P	Pn	19 10 25.3	+0.7
SANL				*i* S	Sn	19 10 40.9	+0.8
SANL				IAML_P			
	comp=Z,858nm,0.2s						
ANDN	Andirin	1.34	255	*i* P	Pg	19 10 29.4	+0.9
ANDN				*i* S	Sg	19 10 47.8	+1.9
ANDN				IAML_P			
	comp=Z,259nm,0.1s						
CUKAN	kangal_SIVAS	1.43	344	*i* P	Pg	19 10 31.9	+1.9
CUKAN				*i* S	Sg	19 10 49.6	+1.1
PTK	Pertek	1.46	49	PN	Pg	19 10 30.1	-0.6
KOZT	Kozan	1.77	255	PN	Pn	19 10 33.5	0.0
MAZI	Mazidag	2.02	103	PN	Pb	19 10 38.4	-1.3
TAHT	Tahtakopru-Hat	2.12	223	PN	Pn	19 10 39.3	+0.9

IDC 03 19:12:54.9±2.3, **3°.13N**×**128°.81E**, **h0**^{km}, **mb3.1**/4, **mb1 3.3**/4, **mb1mx3.1**/32, **mbtmp3.1**/4, **Error ellipse: s-maj=119.7km s-min=27.3km az=71.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.32	188	P	P	19 17 43.9	+0.3
	1.2nm,0.8s,baz=355,slow=11,SNR=1.8						
WRA	Warramunga Arr	23.56	167	P	P	19 18 07.5	+0.2
	0.1nm,0.4s,baz=346,slow=10,SNR=8.5						
ASAR	Alice Springs	27.09	170	P	P	19 18 38.9	-0.7
	0.1nm,0.3s,baz=354,slow=7.4,SNR=4.8						
MKAR	Makanchi Array	59.24	325	P	P	19 22 58.5	+0.3
	0.1nm,0.5s,baz=113,slow=7.3,SNR=3.1						

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*KRNET **03** 19:26:38.9±0.1, 42°.56N×79°.60E, h13^{km}, mb1.7*

*SOME **03** 19:26:41.5, 42°.62N×79°.57E, h20^{km}*

*NNC **03** 19:26:41.0±3.2, 42°.72N×79°.60E, h17^{km}±20^{km}, mb3.5, mpv2.2, Error ellipse: s-maj=27.6km s-min=8.0km az=165.0*

ISC 03 19:26:37.2±2.0, **42°.50N**±0°.06×**79°.65E**±0°.06, **h11**^{km}±14^{km}, **n11**, σ**0ˢ.78**/22, **8C-4D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.80	325	P	Pb	19 26 53.6	+0.3
	0.6nm,0.2s						
UZB				S	Sg	19 27 03.4	+0.3
	4.7nm,0.2s						
UZB	Uzynbulak	0.80	325	*e*P	Pn	19 26 54.2	-0.3
	0.3nm,0.1s						
UZB				*e*S	Sg	19 27 03.5	+0.4
	4.7nm,0.2s						
PDGK	Podgornoye	0.84	352	⇑*i*P	Pb	19 26 53.9	0.0
	baz=54						
PDGK				⇑*i*S	Sg	19 27 04.4	-0.1
	baz=54						
PRZ	Przheval'sk	0.93	270	⇑*i*P	Pb	19 26 55.5	+0.1
	baz=65						
PRZ				⇑*i*S	Sb	19 27 08.1	+0.3
	baz=65						
SATY	Saty	1.07	302	P	Pn	19 26 59.5	+1.2
	1.6nm,0.4s						
SATY				S	Sb	19 27 12.2	+0.1
	5.3nm,0.1s						
SATY	Saty	1.07	302	*e*P	Pn	19 26 59.0	+0.6
	0.4nm,0.2s						
SATY				*e*S	Sg	19 27 11.6	-0.3
	3.9nm,0.1s						
KTMS	Ketmen	1.08	28	P	Pn	19 26 58.8	+0.3
	0.8nm,0.1s						
KTMS				S	Sb	19 27 11.9	-0.3
	1.0nm,0.2s						
KDJ	Kajisay	1.87	259	⇑*i*P	Pg	19 27 13.0	-0.1
	baz=57						
KDJ				⇑*i*S	Sg	19 27 38.1	+0.8
	baz=57						
ULHL	Ulahol	2.54	265	⇑*e*P	Pb	19 27 23.1	+0.2
	baz=64						
ULHL				⇑*i*S	Sb	19 27 55.2	+1.0
	baz=64						
NRN	Naryn	2.92	250	⇓*i*P	Pb	19 27 28.8	-0.7
	baz=48						
NRN				⇓*i*S	Sb	19 28 05.2	-0.2
	baz=48						
TKM2	Tokmak 2	3.02	279	⇓*i*P	Pb	19 27 29.4	-1.7
	baz=78						
TKM2				⇓*i*S	Sb	19 28 06.2	-1.8
	baz=78						

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*ISCJB **03** 19:38:15.2±0.8, 22°.9S±0°.1×176°.1W±0°.2, h10^{km}, mb3.9/8, Error ellipse: s-maj=23.8km s-min=11.1km az=27.6*

*IDC **03** 19:38:15.6±0.8, 22°.49S×176°.30W, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx4.0/39, mbtmp4.1/10, ML3.5/2, Error ellipse: s-maj=39.7km s-min=18.3km az=153.0*

ISC 03 19:38:16.3±0.6, **22°.8S**±0°.1×**176°.1W**±0°.1, **h10**^{km}, **n17**, σ**1ˢ.50**/19, **mb4.0**/7, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	15.24	87	Pn	P	19 41 56.4	-0.2
	0.8nm,0.3s,baz=258,slow=9.3,SNR=3.4						
RAR				Sn	Sn	19 44 31.8	-8.8
	2.1nm,0.3s,baz=29,slow=21,SNR=1.9						
URZ	Urewera	16.44	199	Pn	P	19 42 11.1	+1.3
	0.4nm,0.3s,baz=326,slow=7.3,SNR=2.6						
URZ				Sn	Sn	19 45 07.1	-2.5
	0.1nm,0.3s,baz=151,slow=19,SNR=2.1						
CTA	Charters Tower	35.07	267	P	P	19 45 11.2	+1.4
	3.1nm,0.5s,baz=83,slow=8.3,SNR=6.9						
STKA	Stephens Creek	38.43	247	P	P	19 45 40.0	+1.7
	0.6nm,0.4s,baz=102,slow=13,SNR=3.5						
ASAR	Alice Springs	45.74	259	P	P	19 46 38.4	+0.3
	0.6nm,0.4s,baz=95,slow=7.0,SNR=15						
ASAR				PcP	PcP	19 48 14.7	-1.2
	0.2nm,0.5s,baz=106,slow=4.1,SNR=2.9						
WRA	Warramunga Arr	46.06	264	P	P	19 46 39.8	-0.8
	1.2nm,0.7s,baz=95,slow=8.5,SNR=32						
WRA				PcP	PcP	19 48 16.8	-0.3
	0.3nm,0.7s,baz=86,slow=3.4,SNR=3.0						
YBH	Yreka Blue Hor	81.03	37	P	P	19 50 32.7	+1.2
	0.8nm,0.6s,baz=225,slow=4.3,SNR=3.8						
TXAR	Lajitas Array	86.85	56	P	P	19 51 03.4	+1.8
	0.8nm,0.9s,baz=201,slow=6.7,SNR=9.1						
ILAR	Eielson Array	90.20	12	P	P	19 51 15.6	-0.8
	0.3nm,0.6s,baz=229,slow=4.5,SNR=4.9						
YKA	Yellowknife Ar	97.89	24	P	Pdif	19 51 51.2	-0.6
	0.2nm,0.7s,baz=240,slow=4.7,SNR=3.7						
ARCES	ARCESS Array B	131.51	350	PKP	PKPdf	19 57 27.1	-1.4
	2.6nm,0.9s,baz=331,slow=0.4,SNR=11						
FINES	FINESS Array B	138.49	344	PKP	PKiKP	19 57 42.3	-1.5
	0.6nm,0.5s,baz=101,slow=1.9,SNR=6.2						
MBAR	Mbarara	144.99	232	PKPbc	PKPdf	19 57 54.6	-0.4
	1.9nm,0.2s,baz=73,slow=12,SNR=3.8						
AKASG	Malin Array Be	145.89	331	PKPbc	PKPab	19 57 54.1	-2.1
	1.8nm,0.4s,baz=41,slow=4.3,SNR=22						
BRTR	Keskin Array B	149.69	311	PKPbc	PKiKP	19 58 05.9	-1.8
	0.5nm,0.6s,baz=133,slow=3.4,SNR=4.4						
GERES	GERESS Array B	152.89	346	PKPbc	PKiKP	19 58 13.3	-0.7
	0.3nm,0.4s,baz=16,slow=4.3,SNR=2.9						
TORD	Torodi Ar. Bea	170.15	167	PKPab	PKPab	19 59 42.0	+1.5
	0.4nm,0.9s,baz=204,slow=3.2,SNR=2.8						

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*IDC **03** 19:46:54.3±1.2, 6°.48S×106°.88W, h0^{km}, mb3.7/8, mb1 4.0/8, mb1mx3.8/32, mbtmp3.7/8, MS3.6/8, Ms1 3.6/8, ms1mx3.4/18, Error ellipse: s-maj=84.4km s-min=26.9km az=90.0*

ISC 03 19:46:55.9±1.2, **6°.5S**±0°.2×**106°.9W**±0°.5, **h10**^{km}, **n22**, σ**0ˢ.72**/11, **mb3.8**/8, **MS3.6**/8, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	26.28	27	LR	LR	20 00 34.2	
	comp=Z,114nm,19.5s,baz=200,slow=31						
LPIG	La Paz	30.57	354	LR	LR	20 02 08.7	
	comp=Z,121nm,19.9s,baz=156,slow=30						
RKT	Rikitea	31.66	236	*e*LR	LR	20 00 52.8	
	comp=Z,383nm,28.0s						
RKT	Rikitea	31.66	236	*e*T	T	20 24 47.3	
	3.6nm,0.4s						
ROSC	El Rosal	34.44	72	LR	LR	20 05 35.5	
	comp=Z,88nm,18.3s,baz=43,slow=33						
TXAR	Lajitas Array	35.75	5	P	P	19 53 55.3	+0.1
	0.3nm,0.8s,baz=193,slow=11,SNR=3.1						
TXAR				LR	LR	20 05 45.0	
	comp=Z,99nm,18.9s,baz=0.0,slow=32						
PPT	Papeete	43.04	251	LR	LR	20 07 33.1	
	comp=Z,173nm,21.0s,baz=116,slow=29						
PPT2	Papeete2	43.04	251	*e*LR	LR	20 06 17.5	
	comp=Z,247nm,24.8s						
TBI	Tubuai	44.17	243	*e*LR	LR	20 06 45.4	
	comp=Z,195nm,28.8s						
NVAR	Mina Array Bea	45.91	348	P	P	19 55 19.3	+0.2
	1.0nm,0.7s,baz=157,slow=9.6,SNR=5.7						
NVAR				LR	LR	20 09 36.9	
	comp=Z,117nm,18.6s,baz=169,slow=30						
PDAR	Pinedale Array	49.07	357	P	P	19 55 43.8	+0.1
	0.4nm,0.7s,baz=187,slow=5.4,SNR=2.5						
PDAR				LR	LR	20 12 14.4	
	comp=Z,63nm,18.1s,baz=214,slow=31						
YBH	Yreka Blue Hor	50.10	345	P	P	19 55 51.2	-0.1
	0.7nm,0.7s,baz=141,slow=6.1,SNR=2.8						
SADO	Sadowa	56.81	23	P	P	19 56 40.2	-0.2
	3.9nm,0.9s,baz=335,slow=20,SNR=1.6						
YKA	Yellowknife Ar	69.03	356	P	P	19 58 00.5	-0.9
	0.8nm,0.9s,baz=165,slow=6.1,SNR=9.4						
YKA				LR	LR	20 25 17.2	
	comp=Z,6.8nm,18.4s,baz=174,slow=33						
INK	Inuvik	76.92	350	P	P	19 58 49.8	+1.7
	1.3nm,1.0s,baz=153,slow=4.5,SNR=2.7						
ILAR	Eielson Array	76.99	344	P	P	19 58 48.7	+0.1
	0.6nm,0.9s,baz=158,slow=3.2,SNR=3.4						
QSPA	South Pole Qui	83.58	180	P	P	19 59 24.5	+0.2
	baz=121,slow=4.0						
H11N3	WAKE ISLAND Hy	88.56	290	T	T	21 37 09.4	
	baz=98,slow=74,SNR=3.8						
H11N2	WAKE ISLAND Hy	88.57	290	T	T	21 37 11.7	
	baz=98,slow=74,SNR=4.9						
H11N1	WAKE ISLAND Hy	88.58	290	T	T	21 37 09.0	
	baz=98,slow=74,SNR=4.0						
MKAR	Makanchi Array	139.06	350	PKP	PKPdf	20 06 22.9	-0.3
	0.4nm,0.9s,baz=27,slow=1.6,SNR=2.8						
CMAR	Chiang Mai Arr	152.12	298	PKPbc	PKiKP	20 06 52.5	-0.5
	0.7nm,0.9s,baz=11,slow=0.9,SNR=2.3						

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*NORS **03** 19:49:28.2±0.0, 42°.48N×47°.66E, h7^{km}, MPVA3.7*

*DRS **03** 19:49:28.3±0.0, 42°.52N×47°.73E, h10^{km}*

*MOS **03** 19:49:29.2±0.8, 42°.51N×47°.69E, h7^{km}, mb3.9/1, Error ellipse: s-maj=9.2km s-min=5.7km az=40.8*

ISC 03 19:49:30.2±1.1, **42°.49N**±0°.03×**47°.70E**±0°.03, **h10**^{km}±9^{km}, **n51**, σ**1ˢ.42**/73, **8C-3D**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URKR	Urkarakh	0.33	189	⇑*i*PG	Pg	19 49 36.0	-0.7
URKR				*e*		19 49 41.3	
URKR	Urkarakh	0.33	189	*e*Pg	Pg	19 49 36.1	-0.7
URKR				*e*Sg	Sg	19 49 41.3	+0.2
MAK	Makhachkala	0.49	343	⇑*i*PG	Pb	19 49 39.5	-1.5
MAK				*e*		19 49 48.9	
MAK				pmax	pmax		
	comp=Z,298nm,0.4s						
MAK				smax	smax		
	comp=N,652nm,0.4s						
MAK				smax	smax		
	comp=N,698nm,0.4s						
MAK	Makhachkala	0.49	343	*e*Pg	Pb	19 49 39.5	-1.5
MAK				*e*Sg	Sb	19 49 49.0	+0.7
ARKR	Arakani	0.53	283	⇓*i*PG	Pg	19 49 40.0	-0.6
ARKR				*e*S	Sb	19 49 49.0	-0.5
ARKR				pmax	pmax		
	comp=Z,99nm,0.2s						
ARKR	Arakani	0.53	283	*i* Pg	Pg	19 49 40.0	-0.6
ARKR				*e*Sg	Sb	19 49 49.0	-0.5
BUJR	Buynaksk	0.55	308	*e*PG	Pg	19 49 40.0	-0.9
BUJR				*e*S	Sb	19 49 50.0	0.0
BUJR				pmax	pmax		
	comp=Z,68nm,0.2s						
BUJR	Buynaksk	0.55	308	*e*Pg	Pg	19 49 40.0	-0.9
BUJR				*e*Sg	Sb	19 49 50.0	0.0
GNBR	Gunib	0.55	260	⇓*e*PG	Pg	19 49 40.1	-0.9
GNBR				*e*		19 49 50.6	
GNBR				pmax	pmax		
	comp=Z,312nm,0.6s						
GNBR				smax	smax		
	comp=N,500nm,1.0s						
GNBR	Gunib	0.55	260	*e*Pg	Pg	19 49 40.1	-0.9
GNBR				*e*Sg	Sg	19 49 49.3	+1.0
KMKR	Kumukh	0.57	231	⇓*i*PG	Pg	19 49 41.5	+0.1
KMKR				*e*S	Sg	19 49 49.5	+0.6
KMKR				pmax	pmax		
	comp=Z,83nm,0.3s						
KMKR	Kumukh	0.57	231	*i* Pg	Pg	19 49 41.5	+0.1
KMKR				*e*Sg	Sg	19 49 49.5	+0.6
DRN	Derbent	0.66	134	⇑*i*PG	Pb	19 49 43.4	-0.3
DRN				*i*		19 49 54.0	
DRN				pmax	pmax		
	comp=Z,138nm,0.5s						
DRN				smax	smax		
	comp=N,1μm,0.5s						
DRN	Derbent	0.66	134	*i* Pg	Pb	19 49 43.5	-0.3
DRN				*e*Sg	Sn	19 49 54.0	-1.9
KRNR	Karanay	0.68	300	*e*PG	Pb	19 49 43.0	-1.2
KRNR				*e*S	Sb	19 49 53.0	-0.7
KRNR				pmax	pmax		
	comp=Z,36nm,0.2s						
KRNR	Karanay	0.68	300	*e*Pg	Pb	19 49 43.0	-1.2
KRNR				*e*Sg	Sb	19 49 53.0	-0.7
UNCR	Uncukul	0.70	289	PG	Pg	19 49 43.0	-0.9
UNCR				*e*S	Sb	19 49 54.0	-0.5
UNCR				pmax	pmax		
	comp=Z,67nm,0.4s						
UNCR	Uncukul	0.70	289	*e*Pg	Pg	19 49 43.0	-0.9
UNCR				*e*Sg	Sb	19 49 54.0	-0.5
XNZR	Khunzakh	0.74	274	⇑*e*PG	Pg	19 49 43.8	-0.7
XNZR				*e*		19 49 56.2	
XNZR	Khunzakh	0.74	274	*e*Pg	Pg	19 49 43.9	-0.7
XNZR				*e*Sg	Sb	19 49 54.9	-0.6
DBC	Dubki	0.83	310	⇑*e*PG	Pg	19 49 45.3	-1.0
DBC				*e*		19 49 58.3	
DBC	Dubki	0.83	310	*i* Pg	Pb	19 49 45.7	-1.1
DBC				*e*Sg	Sb	19 49 57.5	-0.6
KSMR	Kasumkent	0.94	160	*e*PG	Pb	19 49 48.0	-0.7
KSMR				*e*S	Sn	19 50 03.5	+0.3
KSMR				pmax	pmax		
	comp=Z,236nm,0.1s						
KSMR	Kasumkent	0.94	160	*e*Pg	Pb	19 49 48.0	-0.7
KSMR				*e*Sg	Sn	19 50 03.5	+0.3
BTLR	Botlikh	1.10	280	⇑*e*PG	Pb	19 49 50.1	-1.4
BTLR				*e*		19 50 05.8	
BTLR				pmax	pmax		
	comp=Z,29nm,0.6s						
BTLR				smax	smax		
	comp=N,72nm,0.7s						
BTLR	Botlikh	1.10	280	*e*Pg	Pb	19 49 50.4	-1.1
BTLR				*e*Sg	Sb	19 50 05.8	-0.2
DVE	Vedeno	1.25	293	*e*PG	Pg	19 49 53.5	-0.7
DVE				*e*S	Sn	19 50 11.0	+0.2
DVE	Vedeno	1.25	293	*e*Pg	Pg	19 49 53.5	-0.7
DVE				*e*Sg	Sn	19 50 11.0	+0.2
GROC	Groznyy	1.57	298	*e*PG	Pn	19 49 57.2	-1.0
GROC				*e*		19 50 18.5	
GROC				pmax	pmax		
	comp=Z,13nm,0.6s						
GROC				smax	smax		
	comp=N,117nm,0.8s						
GROC				smax	smax		
	comp=N,54nm,0.6s						
GROC	Groznyy	1.57	298	*e*Pg	Pg	19 50 00.1	-0.3
GROC				*e*Sg	Sg	19 50 21.6	+0.9
DDFL	Dedoflistskaro	1.57	229	P	Pg	19 50 02.5	+2.1
DDFL				S	Sg	19 50 26.6	+5.8
LACR	Lac	2.53	279	*i* PN	Pb	19 50 14.1	-1.8
LACR				pmax	pmax		
	comp=Z,20nm,0.3s						
LACR	Lac	2.53	279	*e*Pn	Pb	19 50 14.1	-1.8
KORR	Kora	2.74	284	*ce*PN	Pn	19 50 15.3	+1.0
KORR	Kora	2.74	284	*e*Pn	Pn	19 50 15.3	+1.0
PRTR	Priterechnaya	2.80	298	*i* PN	Pn	19 50 15.4	+0.3
PRTR	Priterechnaya	2.80	298	*e*Pn	Pn	19 50 15.4	+0.3
TRLG	Trialeti	2.84	252	P	Pb	19 50 18.5	-2.7
GNI	Garni	3.23	225	*i* PN	Pn	19 50 18.9	-2.2
GNI	Garni	3.23	225	*e*Pn	Pn	19 50 18.9	-2.2
PYA1	Pyatigorsk	3.71	297	*i* PN	Pn	19 50 28.2	+0.5
PYA1	Pyatigorsk	3.71	297	*e*Pn	Pn	19 50 28.2	+0.5
SHA1	Shidzhatmaz	3.90	290	*i* PN	Pn	19 50 30.5	+0.1
SHA1	Shidzhatmaz	3.90	290	*e*Pn	Pn	19 50 30.5	+0.1
KIV	Kislovodsk	3.95	294	*i* PN	Pn	19 50 32.5	+1.6
KIV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KIV	Kislovodsk	3.95	294	*e*Pn	Pn	19 50 32.5	+1.6
GOF	Gofitskoye	4.24	309	*e*PG	Pg	19 51 00.2	+8.8
GOF				*e*S	Sg	19 51 52.2	+5.9
GOF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GOF				smax	smax		
	comp=E,30nm,0.7s						
KIEV	Kiev	15.10	309	*e*P	Pn	19 53 04.9	+1.4
KIEV				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARU	Arti	15.61	23	*i* P	Pn	19 53 09.5	-0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	22.65	58	*i* P	P	19 54 31.5	+0.2
CMAR	Chiang Mai Arr	49.36	103	*ce*P	P	19 58 23.7	+3.7

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*IDC **03** 19:50:12.4±0.6, 11°.58N×143°.99E, h0^{km}, mb4.2/18, mb1 4.4/19, mb1mx4.2/45, mbtmp4.2/19, ML4.3/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/42, Error ellipse: s-maj=19.4km s-min=13.6km az=88.0*

*ISCJB **03** 19:50:15.9±0.4, 11°.58N±0°.06×143°.90E±0°.07, h33^{km}, mb4.2/23, MS2.8/3, Error ellipse: s-maj=10.9km s-min=7.4km az=19.6*

*NEIC **03** 19:50:17.6±0.4, 11°.61N×143°.90E, h35^{km}, mb4.1/3, Error ellipse: s-maj=14.3km s-min=9.4km az=86.0*

ISC 03 19:50:17.9±0.5, **11°.61N**±0°.08×**144°.0E**±0°.1, **h35**^{km}, **n46**, σ1^{s}**04**/43, **mb4.4**/28, **MS2.7**/3, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.16	24	Pn	Pn	19 50 51.7	+0.2
	99nm,0.3s,baz=186,slow=9.5,SNR=22						
GUMO				Sn	Sn	19 51 17.8	+0.8
	157nm,0.3s,baz=175,slow=21,SNR=5.8						
H11S3	WAKE ISLAND Hy	22.98	70	T	T	20 18 48.4	
	baz=254,slow=75,SNR=9.2						
H11S1	WAKE ISLAND Hy	23.00	70	T	T	20 18 53.6	
	baz=254,slow=75,SNR=4.2						
H11S2	WAKE ISLAND Hy	23.00	70	T	T	20 18 56.1	
	baz=254,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	23.49	67	T	T	20 20 28.6	
	baz=255,slow=75,SNR=4.3						
H11N2	WAKE ISLAND Hy	23.50	67	T	T	20 20 29.2	
	baz=255,slow=75,SNR=3.8						
H11N3	WAKE ISLAND Hy	23.51	67	T	T	20 20 32.9	
	baz=255,slow=75,SNR=4.0						
JNU	Nakatsue	24.54	333	P	P	19 55 34.0	-0.4
	5.7nm,0.5s,baz=106,slow=2.5,SNR=11						
JNU				LR	LR	20 04 02.9	
	comp=Z,15nm,19.6s,baz=116,slow=34						
MJAR	Matsushiro Arr	25.36	349	P	P	19 55 39.7	-2.0
	2.0nm,0.6s,baz=167,slow=9.1,SNR=8.5						
MJAR				PcP	PcP	19 59 13.4	-0.5
	0.8nm,0.8s,baz=170,slow=3.8,SNR=2.6						
MJAR				LR	LR	20 05 36.9	
	comp=Z,64nm,18.1s,baz=185,slow=36						
KSRS	Korea Array	29.48	333	P	P	19 56 18.0	-0.7
	1.2nm,0.7s,baz=144,slow=9.7,SNR=7.0						
KSRS				LR	LR	20 08 07.1	
	comp=Z,18nm,18.0s,baz=130,slow=36						
KSAR	Wonju Array Be	29.49	333	P	P	19 56 18.0	-0.8
CTAO	Charters Tower	31.58	176	*e*P	P	19 56 39.7	+2.3
WRAB	Tennant Creek	32.74	197	*e*P	P	19 56 46.4	-1.2
	0.8nm,0.6s						
WRA	Warramunga Arr	32.75	197	P	P	19 56 46.2	-1.5
	1.6nm,0.7s,baz=20,slow=9.8,SNR=17						
WRA				PcP	PcP	19 59 32.9	+0.2
	0.2nm,0.7s,baz=12,slow=3.4,SNR=2.8						
ASAR	Alice Springs	36.41	196	P	P	19 57 18.1	-1.3
	0.9nm,0.7s,baz=19,slow=10,SNR=14						
ENH	Enshi	36.95	305	*e*P	P	19 57 24.3	+0.4
DZM	Mont Dzumac	40.09	147	P	P	19 57 50.1	-0.3
	3.6nm,0.7s,baz=8.6,slow=19,SNR=8.0						
PBKT	Sadao Pong	41.92	282	P	P	19 58 11.8	+6.3
	5.3nm,0.8s,1µm						
CMAR	Chiang Mai Arr	43.91	285	P	P	19 58 23.1	+1.5
	3.9nm,0.7s,baz=85,slow=6.4,SNR=31						
ULN	Ulaanbaatar	47.51	327	*e*P	P	19 58 48.3	-1.6
	0.9nm,0.4s						
GTA	Gaotai	47.84	313	*e*P	P	19 58 53.4	+0.9
GTA				pP	pP	19 59 00.5	+0.4
GTA				sP	sP	19 59 04.0	+0.8
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONM	Songino Array	47.85	326	P	P	19 58 53.3	+0.9
	comp=Z,2.8nm,0.5s,baz=148,slow=7.7,SNR=26						
SONM				PcP	PcP	20 00 21.4	+0.6
	comp=Z,0.7nm,0.9s,baz=111,slow=3.2,SNR=2.4						
LSA	Lhasa	52.12	299	*e*P	P	19 59 23.9	-1.8
	comp=Z,3.2nm,0.8s						
RAMN	Ramite	55.81	295	*e*P	P	19 59 53.1	+0.8
JIRN	Jiri	56.23	295	*e*P	P	19 59 56.3	+0.9
	comp=Z,7.1nm,0.5s						
GUN	Gumba	56.52	296	*e*P	P	19 59 58.3	+0.8
	comp=Z,28nm,0.9s						
PKI	Pulchoki	56.91	295	*e*P	P	20 00 00.5	+0.2
PKIN	Phulchoki	56.92	295	*e*P	P	20 00 00.4	+0.1
DMN	Daman	57.18	295	*e*P	P	20 00 02.7	+0.6
	comp=Z,11nm,0.9s						
DANN	Dangsing	58.42	296	*e*P	P	20 00 11.4	+0.6
	comp=Z,11nm,0.5s						
PYUN	Piuthan	59.08	296	*e*P	P	20 00 15.7	+0.4
	comp=Z,9.6nm,0.8s						
MKAR	Makanchi Array	62.30	317	P	P	20 00 37.6	+0.9
	comp=Z,3.0nm,0.7s,baz=92,slow=8.9,SNR=38						
ZALV	Zalesovo Beam	62.72	325	P	P	20 00 39.3	0.0
	comp=Z,0.8nm,0.4s,baz=102,slow=7.6,SNR=6.3						
KURK	Kurchatov	65.52	321	P	P	20 00 55.9	-1.9
NRIK	Noril'sk	67.70	341	P	P	20 01 11.8	+0.5
	comp=Z,4.3nm,0.7s,baz=121,slow=5.1,SNR=3.7						
ILAR	Eielson Array	70.73	25	P	P	20 01 28.9	-1.3
	comp=Z,0.8nm,0.5s,baz=248,slow=5.9,SNR=8.6						
INK	Inuvik	76.53	22	P	P	20 02 04.0	-0.1
	comp=Z,2.8nm,1.1s,baz=258,slow=8.2,SNR=5.5						
YBH	Yreka Blue Hor	84.84	49	P	P	20 02 50.6	+1.3
	comp=Z,2.4nm,0.7s,baz=285,slow=4.9,SNR=10						
YKA	Yellowknife Ar	85.02	27	P	P	20 02 49.7	+0.1
	comp=Z,0.7nm,0.6s,baz=285,slow=4.9,SNR=11						
NEW	Newport	87.29	41	P	P	20 03 01.4	+0.2
	baz=268,slow=15						
ARCES	ARCESS Array B	88.68	342	P	P	20 03 06.9	-0.4
	comp=Z,1.1nm,0.5s,baz=74,slow=8.9,SNR=7.5						
NVAR	Mina Array Bea	88.85	51	P	P	20 03 10.2	+1.1
	comp=Z,2.4nm,0.7s,baz=273,slow=5.2,SNR=20						
FINES	FINESS Array B	92.57	335	P	P	20 03 24.8	-0.7
	comp=Z,0.8nm,0.5s,baz=54,slow=3.5,SNR=12						
TORD	Torodi Ar. Bea	135.20	302	PKP	PKPdf	20 09 34.3	-0.5
	comp=Z,0.4nm,0.9s,baz=72,slow=3.0,SNR=3.2						
DBIC	Dimbokro	144.05	299	PKP	PKPdf	20 09 49.2	-1.7
	comp=Z,4.3nm,0.6s,baz=42,slow=4.6,SNR=8.5						
LPAZ	La Paz	148.54	102	PKPbc	PKPbc	20 10 01.9	-0.9
	comp=Z,1.3nm,0.5s,baz=278,slow=4.8,SNR=4.0						

IDC 03 19:55:46.9±3.3, **32°.04N**×**141°.14E**, **h0**^{km}, **mb3.2**/2, **mb1 3.3**/3, **mb1mx3.1**/38, **mbtmp3.1**/3, **ML1.5**/1, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.4**/18, **Error ellipse: s-maj=104.2km s-min=24.7km az=63.0**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.57	314	Pn	Pn	19 56 16.0	0.0
	5.4nm,0.3s,baz=127,slow=20,SNR=1.4						
JHJ				Sn	Sn	19 56 37.0	-0.1
	11nm,0.3s,baz=84,slow=24,SNR=1.4						
MJAR	Matsushiro Arr	5.10	332	Pn	Pn	19 57 03.7	-0.9
	0.0nm,0.3s,baz=158,slow=9.8,SNR=1.5						
MJAR				Sn	Sn	19 57 59.8	-4.4
	0.0nm,0.3s,baz=166,slow=9.6,SNR=2.1						
BATI	Baumata	45.21	205	LR	LR	20 25 03.0	
	comp=Z,30nm,18.2s,baz=355,slow=39						
MKAR	Makanchi Array	46.72	306	P	P	20 04 17.8	+0.1
	0.1nm,0.4s,baz=87,slow=9.4,SNR=1.1						
WRA	Warramunga Arr	52.10	188	P	P	20 04 58.6	-0.3
	0.6nm,1.2s,baz=5.7,slow=7.6,SNR=1.7						

IDC 03 20:09:43.5±1.6, **34°.75N**×**140°.13E**, **h295**^{km}±11^{km}, **mb2.8**/2, **mb1 2.9**/3, **mb1mx2.6**/36, **mbtmp3.2**/3, **Error ellipse: s-maj=38.4km s-min=25.0km az=59.0**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.66	190	P	Pn	20 10 26.9	-0.4
	9.6nm,0.3s,baz=57,slow=17,SNR=1.5						
JHJ				S	S	20 11 02.2	0.0
	3.8nm,0.3s,baz=54,slow=10,SNR=2.0						
MJAR	Matsushiro Arr	2.37	319	P	Pn	20 10 33.5	+0.6
	0.1nm,0.3s,baz=123,slow=7.4,SNR=11						
MJAR				S	S	20 11 11.9	-0.3
	0.1nm,0.3s,baz=112,slow=16,SNR=1.3						
MKAR	Makanchi Array	44.48	304	P	P	20 17 25.7	-0.2
	0.3nm,0.5s,baz=97,slow=8.1,SNR=6.9						
ILAR	Eielson Array	51.98	31	P	P	20 18 22.5	-0.1
	0.9nm,1.1s,baz=260,slow=8.1,SNR=3.0						

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*TAP **03** 20:09:59.9, 24°.01N×122°.42E, h18^{km}, ML3.5, D*

*ISCJB **03** 20:10:00.8±0.3, 24°.01N±0°.01×122°.43E±0°.01, h24^{km}±2^{km}, Error ellipse: s-maj=2.6km s-min=2.0km az=141.5*

*JMA **03** 20:10:00.2±0.2, 23°.99N×122°.41E, h21^{km}±4^{km}, M2.8*

ISC 03 20:10:00.0±1.1, **24°.00N**±0°.02×**122°.41E**±0°.02, **h19**^{km}±3^{km}, **n90**, σ0^{s}**52**/171, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.61	335	P	Pg	20 10 12.2	0.0
	baz=334						
EOS1				*e*S	Sn	20 10 21.9	-1.0
	baz=334						
JYNG	Yonagunijimaku	0.66	47	P	Pb	20 10 12.9	-0.1
JYNG				*e*S	Sg	20 10 22.4	+0.3
YOJ	Yonaguni jima	0.72	50	P	Pb	20 10 14.0	+0.1
	baz=49						
YOJ				S	Sg	20 10 24.5	+0.7
	baz=49						
YOJ	Yonaguni jima	0.72	50	P	Pb	20 10 13.9	+0.1
YOJ				S	Sg	20 10 24.3	+0.6
ENLB	Shoufeng	0.75	263	*e*P	Pg	20 10 15.0	+0.3
	baz=262						
ENLB				*e*S	Sn	20 10 27.0	+0.6
	baz=262						
ENA	Nanau	0.75	305	P	Pg	20 10 14.8	0.0
	baz=304						
ENA				S	Sg	20 10 25.4	+0.6
	baz=304						
TWD	Chiawan	0.75	276	P	Pg	20 10 14.8	0.0
	baz=275						
TWD				S	Sg	20 10 25.3	+0.4
	baz=275						
NACB	Ninganchiao	0.77	283	P	Pg	20 10 15.0	-0.1
	baz=282						
NACB				*e*S	Sg	20 10 26.1	+0.7
	baz=282						
TWC	Suao	0.80	320	P	Pb	20 10 15.3	0.0
	baz=319						
TWC				*e*S	Sg	20 10 26.6	+0.3
	baz=319						
ESL	Shilin	0.92	259	*e*P	Pb	20 10 17.1	-0.2
	baz=257						
ESL				*e*S	Sn	20 10 30.6	+0.1
	baz=257						
EGS		0.95	333	P	Pb	20 10 18.0	+0.1
	baz=332						
EGS				*e*S	Sg	20 10 30.9	-0.3
	baz=332						
EGFH	Guangfu	0.96	250	*e*P	Pn	20 10 18.3	-0.2
	baz=249						
EGFH				*e*S	Sn	20 10 32.0	+0.4
	baz=249						
ILA	Ilan	0.98	322	*e*S	Sg	20 10 32.1	+0.2
	baz=321						
TWE	Neicheng	0.99	317	P	Pn	20 10 18.7	-0.2
	baz=316						
TWE				S	Sn	20 10 32.3	-0.1
	baz=316						
ENTT	Nioudou	1.00	310	P	Pn	20 10 19.1	0.0
	baz=309						
ENTT				*e*S	Sg	20 10 32.8	0.0
	baz=309						
NTC	Toucheng	1.00	328	P	Pn	20 10 19.0	-0.1
	baz=327						
NTC				*e*S	Sg	20 10 32.9	0.0
	baz=327						
NDT	Datong Townshi	1.02	306	*e*P	Pg	20 10 19.9	0.0
	baz=305						
NDT				*e*S	Sg	20 10 33.4	+0.1
	baz=305						
NNSB	Datong	1.03	295	P	Pn	20 10 19.5	-0.1
	baz=294						
NNSB				*e*S	Sg	20 10 33.9	0.0
	baz=294						
HGSD	Ruisui	1.04	241	*e*P	Pb	20 10 19.2	-0.1
	baz=240						
HGSD				*e*S	Sg	20 10 34.0	+0.2
	baz=240						
NNS	Nan Shan	1.05	295	P	Pb	20 10 19.6	0.0
	baz=294						
NNS				*e*S	Sn	20 10 34.0	0.0
	baz=294						
WHF	Hehuan Shan	1.06	278	P	Pb	20 10 19.8	-0.2
	baz=277						
WHF				S	Sn	20 10 34.4	-0.3
	baz=277						
TWB1	Santiao Chiao	1.08	339	*e*P	Pb	20 10 19.9	-0.1
	baz=339						
TWB1				*e*S	Sn	20 10 34.2	-0.3
	baz=339						
TIPB	Shuangxi	1.11	331	P	Pn	20 10 20.5	0.0
	baz=330						
TIPB				S	Sn	20 10 35.1	-0.2
	baz=330						
EHY	Hungye	1.11	244	P	Pb	20 10 20.7	0.0
	baz=243						
EHY				S	Sn	20 10 35.8	+0.4
	baz=243						
OWD	Renai	1.13	268	P	Pn	20 10 20.9	-0.1
	baz=267						
OWD				*e*S	Sn	20 10 36.3	+0.2
	baz=267						
CHGB	Renai	1.13	273	P	Pn	20 10 21.0	-0.1
	baz=272						
CHGB				S	Sn	20 10 36.4	+0.2
	baz=272						
NWLT	Wulai	1.14	313	*e*S	Sn	20 10 36.1	+0.1
	baz=312						
TWT	Tachien	1.16	283	P	Pb	20 10 21.8	+0.2
	baz=281						
TWT				S	Sg	20 10 37.4	-0.4
	baz=281						
YHNB	Yeheng	1.16	306	P	Pn	20 10 21.3	0.0
	baz=304						
YHNB				S	Sn	20 10 36.6	0.0
	baz=304						
TDCB	Techi	1.17	283	P	Pb	20 10 21.8	-0.1
	baz=282						
TDCB				*e*S	Sn	20 10 37.2	+0.1
	baz=282						
NSK	Sanguang	1.18	305	P	Pb	20 10 21.6	-0.2
	baz=304						
NSK				S	Sn	20 10 37.2	+0.2
	baz=304						
YULB	Yu-li	1.19	240	P	Pn	20 10 21.5	-0.1
	baz=239						
YULB				*e*S	Sn	20 10 37.7	+0.5
	baz=239						
VWDT	VWDT	1.19	258	P	Pb	20 10 21.9	-0.1
	baz=257						
VWDT				S	Sg	20 10 38.1	-0.6
	baz=257						
TWF1	Yuli	1.21	238	P	Pn	20 10 21.9	0.0
	baz=237						
TWF1				S	Sn	20 10 38.2	+0.5
	baz=237						
NWF	Wu-fen Shan	1.21	332	P	Pn	20 10 21.9	-0.1
	baz=331						
NWF				S	Sn	20 10 38.6	+0.6
	baz=331						
WFSB	Wu-fen Shan	1.21	332	P	Pn	20 10 21.9	-0.1
	baz=331						
WFSB				S	Sn	20 10 38.5	+0.6
	baz=331						
TWA	Mucha	1.24	323	P	Pb	20 10 22.8	0.0
	baz=322						
TWA				S	Sn	20 10 38.7	+0.3
	baz=322						
IRIF	Iriomote-Funau	1.25	74	P	Pb	20 10 22.9	-0.1
IRIF				*e*S	Sn	20 10 39.4	+0.7
NHDH	Xindian Distri	1.26	320	P	Pb	20 10 23.2	+0.1
	baz=319						
NHDH				*e*S	Sn	20 10 39.4	+0.5
	baz=319						
HATJ	Hateruma jima	1.27	87	P	Pg	20 10 24.1	-0.6
HATJ				*e*S	Sg	20 10 41.0	-0.4
TATO	Taipei	1.29	319	P	Pb	20 10 23.8	+0.2
	baz=319						
TATO				*e*S	Sb	20 10 40.0	+0.2
	baz=319						
CHKT	Chengkung	1.31	227	*e*P	Pn	20 10 22.0	-1.4
	baz=226						
CHKT				*e*S	Sb	20 10 41.0	+0.5
	baz=226						
SSLB	Suanglung	1.35	261	P	Pn	20 10 24.2	+0.3
	baz=260						
SSLB				*e*S	Sb	20 10 41.9	+0.2
	baz=260						
WLTB	Daxi	1.36	309	*e*P	Pn	20 10 24.2	+0.2
	baz=308						
WLTB				*e*S	Sg	20 10 43.1	-1.0
	baz=308						
WHP	Taichung City	1.37	282	*e*P	Pg	20 10 26.3	-0.2
	baz=281						
WHP				*e*S	Sb	20 10 42.3	+0.1
	baz=281						
YM01	YM01	1.38	326	P	Pn	20 10 24.4	+0.1
	baz=325						
YM01				S	Sb	20 10 42.4	0.0
	baz=325						
YM07	YM07	1.38	329	*e*P	Pn	20 10 24.2	0.0
	baz=328						
YM07				*e*S	Sn	20 10 40.5	-1.5
	baz=328						
SMLT	Sun Moon Lake	1.39	266	P	Pb	20 10 25.0	-0.5
	baz=264						
SMLT				S	Sb	20 10 42.6	-0.2
	baz=264						
YM10	YM10	1.39	326	*e*P	Pn	20 10 24.2	-0.3
	baz=325						
YM10				*e*S	Sb	20 10 42.6	-0.2
	baz=325						
YM11	YM11	1.39	327	P	Pn	20 10 24.6	+0.1
	baz=326						
YM11				S	Sb	20 10 42.7	-0.1
	baz=326						
YM05	YM05	1.39	327	*e*P	Pn	20 10 24.3	-0.3
	baz=326						
YM05				*e*S	Sb	20 10 42.8	-0.2
	baz=326						
YM04	YM04	1.40	325	P	Pn	20 10 24.5	-0.1
	baz=325						
YM04				S	Sn	20 10 42.3	-0.3
	baz=325						
YM08	YM08	1.40	328	*e*P	Pn	20 10 25.0	+0.4
	baz=327						
YM08				*e*S	Sb	20 10 43.1	0.0
	baz=327						
TWS1	Kuangyinshan	1.42	321	P	Pn	20 10 25.1	+0.2
	baz=320						
TWS1				*e*S	Sb	20 10 43.6	-0.1
	baz=320						
TYC	Yuchr	1.43	267	P	Pb	20 10 25.4	-0.6
	baz=265						
TYC				*e*S	Sb	20 10 43.4	-0.4
	baz=265						
LIOB	Emei	1.43	297	*e*P	Pb	20 10 26.0	-0.1
	baz=296						
LIOB				*e*S	Sb	20 10 43.7	-0.2
	baz=296						
NSTT	Nanjuang	1.43	296	*e*P	Pb	20 10 26.3	+0.1
	baz=295						
NSTT				*e*S	Sb	20 10 43.6	-0.4
	baz=295						
NTST	Danshui	1.46	323	*e*S	Sb	20 10 45.5	+0.8
	baz=322						
WHYT	Xinyi Township	1.46	258	*e*P	Pb	20 10 26.2	-0.4
	baz=257						
WHYT				*e*S	Sb	20 10 44.6	-0.2
	baz=257						
TWY	Chenhua	1.47	330	*e*S	Sb	20 10 44.9	-0.2
	baz=329						
JKRS	Kuro-shima	1.48	80	P	Pb	20 10 26.2	-0.7
JKRS				*e*S	Sb	20 10 45.5	+0.2
ELDTW	Lidau	1.51	238	*e*P	Pn	20 10 25.9	-0.3
	baz=237						
ELDTW				*e*S	Sb	20 10 45.8	-0.5
	baz=237						
TWQ1	Liyutan	1.54	283	*e*P	Pb	20 10 27.9	-0.1
	baz=282						
TWQ1				*e*S	Sb	20 10 46.4	-0.6
	baz=282						
WJS	Zhushan	1.55	264	*e*P	Pn	20 10 27.1	+0.5
	baz=263						
WJS				*e*S	Sb	20 10 46.8	-0.6
	baz=263						
NSY	Sanyi	1.56	286	*e*P	Pn	20 10 27.1	+0.3
	baz=285						
WNT	Mingjian	1.59	266	*e*P	Pb	20 10 28.9	+0.1
	baz=265						
WNT				*e*S	Sb	20 10 49.4	+1.0
	baz=265						
JIJ	Ishigaki jima	1.62	77	P	Pn	20 10 27.6	0.0
JIJ				*e*S	Sn	20 10 48.3	+0.3
CHN5	Tsauling	1.64	256	*e*P	Pb	20 10 29.1	-0.6
	baz=255						
PCYT	Pengchaiyu	1.65	349	*e*P	Pn	20 10 27.7	-0.3
	baz=349						
TWGBT	Beinan	1.70	226	P	Pn	20 10 28.9	+0.3
	baz=226						
TWGBT				*e*S	Sn	20 10 50.6	+0.8
	baz=226						
TWG	Pinlang	1.70	227	P	Pn	20 10 28.9	+0.2
	baz=226						
TWG				S	Sb	20 10 50.8	-0.8
	baz=226						
WGK	Gukeng	1.72	260	*e*P	Pn	20 10 29.5	+0.5
	baz=259						
WGK				*e*S	Sn	20 10 50.9	+0.5
	baz=259						
STYT	Tauyuan	1.73	242	P	Pn	20 10 30.0	+0.8
	baz=240						
STYT				*e*S	Sn	20 10 51.3	+0.5
	baz=240						
WDLH	Douliu	1.74	260	*e*P	Pb	20 10 30.4	-1.0
	baz=259						
WDLH				*e*S	Sb	20 10 53.1	+0.2
	baz=259						
TPUB	Ta-pu	1.78	247	*e*P	Pb	20 10 31.5	-0.5
	baz=246						
TPUB				*e*S	Sb	20 10 55.1	+1.2
	baz=246						
CHN4	Tsaushan	1.79	249	*e*P	Pb	20 10 32.2	0.0
	baz=248						
CHN4				*e*S	Sb	20 10 55.6	+1.4
	baz=248						
WTP	Ta-pu	1.81	246	*e*P	Pb	20 10 32.1	-0.6
	baz=245						
WTP				*e*S	Sn	20 10 53.2	+0.5
	baz=245						
JISG	Ishigakijimahi	1.83	71	P	Pn	20 10 31.1	+0.7
JISG				S	Sn	20 10 53.6	+0.5
RLNB	Erlin	1.88	267	*e*P	Pn	20 10 31.8	+0.7
	baz=266						
RLNB				*e*S	Sb	20 10 57.1	+0.2
	baz=266						
SLGT	Liugui	1.91	239	*e*P	Pn	20 10 32.7	+1.2
	baz=238						
SLGT				*e*S	Sb	20 10 57.9	+0.3
	baz=238						
CHN1	Nanshi	1.91	245	*e*P	Pb	20 10 33.8	-0.5
	baz=244						
CHN1				*e*S	Sb	20 10 58.7	+1.0
	baz=244						
TWK	Hsinying	1.91	248	*e*P	Pb	20 10 33.6	-0.6
	baz=247						
TWK				*e*S	Sb	20 10 58.5	+0.8
	baz=247						
SGST	Jiashian	1.91	242	*e*P	Pb	20 10 33.9	-0.4
	baz=241						
SGST				*e*S	Sb	20 10 59.0	+1.2
	baz=241						
SNST	Tainan City	1.92	247	*e*P	Pb	20 10 33.7	-0.8
	baz=246						
SNST				*e*S	Sb	20 10 59.3	+1.3
	baz=246						
ECL	Taimali	1.93	224	*e*P	Pn	20 10 31.5	-0.4
	baz=223						
ECL				*e*S	Sn	20 10 56.4	+0.7
	baz=223						
WSF	Szhu	2.04	260	*e*P	Pb	20 10 35.7	-0.8
	baz=259						
WSF				*e*S	Sb	20 11 01.6	+0.2
	baz=259						
SSD	Sandimen	2.06	233	*e*P	Pb	20 10 35.5	-1.2
	baz=232						
SSD				*e*S	Sb	20 11 01.3	-0.6
	baz=232						
LAY	Lan-yu	2.10	202	*e*P	Pn	20 10 34.4	+0.1
	baz=201						
MASBT	Mashibuluo	2.14	230	*e*P	Pn	20 10 35.6	+0.9
	baz=229						
MASBT				*e*S	Sn	20 10 58.7	-2.1
	baz=229						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EAST	Anshuo	2.16	222	*e*P	Pn	20 10 35.2	+0.2
	baz=221						

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*ISCJB **03** 20:14:32.5±0.7, 22°.82N±0°.09×94°.39E±0°.08, h105^{km}, mb3.7/6, Error ellipse: s-maj=13.7km s-min=8.1km az=34.1*

*IDC **03** 20:14:33.7±2.6, 22°.77N×94°.36E, h96^{km}±29^{km}, mb3.4/6, mb1 3.4/8, mb1mx3.1/50, mbtmp3.7/8, Error ellipse: s-maj=34.6km s-min=14.3km az=46.0*

ISC 03 20:14:34.1±0.9**, 22°.80N**±0°.10×**94°.35E**±0°.10**, h105^{km}, n9, σ1^{s}02**/11**, mb3.8**/6**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	2.50	268	P	Pn	20 15 13.4	-0.1
	36nm,0.3s,baz=153,slow=9.0,SNR=1.8						
BRDH				S	Sn	20 15 43.4	-0.2
	51nm,0.3s,baz=262,slow=19,SNR=3.9						
SHL	Shillong	3.56	321	*e*PN	Pn	20 15 28.0	+0.3
SHL				*e*SN	Sn	20 16 07.0	-2.1
CMAR	Chiang Mai Arr	6.09	134	P	Pn	20 16 00.7	-1.0
	0.3nm,0.3s,baz=314,slow=14,SNR=7.4						
MKAR	Makanchi Array	25.85	341	P	P	20 19 56.8	+1.1
	0.6nm,0.5s,baz=148,slow=10.0,SNR=20						
ZALV	Zalesovo Beam	31.93	349	P	P	20 20 50.1	+0.5
	0.8nm,0.3s,baz=163,slow=8.9,SNR=5.6						
WRA	Warramunga Arr	57.69	134	P	P	20 24 13.8	-0.2
	0.3nm,0.8s,baz=322,slow=7.4,SNR=9.3						
FINES	FINESS Array B	59.87	329	P	P	20 24 29.1	+0.6
	1.0nm,0.8s,baz=74,slow=5.9,SNR=3.4						
ASAR	Alice Springs	60.09	138	P	P	20 24 31.6	+1.0
	0.3nm,0.5s,baz=323,slow=7.4,SNR=6.8						
ARCES	ARCESS Array B	61.46	338	P	P	20 24 39.3	+0.1
	1.3nm,0.9s,baz=116,slow=6.1,SNR=3.5						

NNC 03 20:18:13.5±10.0**, 37°.04N**×**70°.48E, h0^{km}**±344^{km}**, mb3.6, mpv3.3, 5C-4D, Error ellipse: s-maj=363.7km s-min=47.7km az=15.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.80	38	⇑P	Pn	20 19 14.9	+1.3
	2.6nm,0.3s						
SFK				⇓S	Sn	20 20 03.0	+3.9
	4.1nm,0.3s						
MNAS	Manas	5.66	15	⇓P	Pn	20 19 40.4	+1.4
	1.3nm,0.3s						
MNAS				⇑S	Sn	20 20 47.7	+2.8
	6.2nm,0.6s						
KK31	Karatay Array	6.06	0	⇑P	Pn	20 19 46.3	+1.9
	0.5nm,0.3s,baz=178,slow=13,SNR=9.2						
KK31				⇓S	Sn	20 20 56.9	+2.5
	1.5nm,0.3s,baz=183,slow=21,SNR=15						
AAK	Ala-Archa	6.39	28	⇓P	Pn	20 19 48.0	-1.0
	1.5nm,0.8s						
AAK				S	Sn	20 21 01.6	-1.2
	1.6nm,0.4s						
TKM2	Tokmak 2	7.07	32	⇑P	Pn	20 19 55.9	-2.5
	1.8nm,0.6s						
TKM2				⇑S	Sn	20 21 17.8	-1.7
	1.5nm,0.8s						

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*IDC **03** 20:22:47.6±5.0, 10°.73N×127°.37E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.4/63, mbtmp3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.4/45, Error ellipse: s-maj=279.2km s-min=105.6km az=43.0*

*MAN **03** 20:22:55.1, 10°.68N×126°.76E, h32^{km}, MS3.2*

ISC 03 20:22:53.3±2.6**, 10°.68N**±0°.05×**126°.8E**±0°.1**, h23^{km}**±16^{km}**, n16, σ1^{s}29**/23**, mb3.5**/5**, 1C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.56	235	⇑*e*P	Pn	20 23 20.1	+0.3
BESP	Borongan	1.62	305	*e*P	Pb	20 23 21.9	-0.6
BESP				*e*S	Sb	20 23 43.2	+0.7
PLP	Palo	1.85	285	⇓*i*P	Pn	20 23 24.2	+0.6
PLP				*i* S	Sn	20 23 46.4	0.0
MSLP	Maasin	1.98	254	*e*P	Pn	20 23 26.7	+1.3
MSLP				*e*S	Sn	20 23 50.4	+0.9
BUTP	Butuan	2.06	214	*e*P	Pn	20 23 27.1	+0.6
BUTP				*e*S	Sn	20 23 52.6	+1.2
OCLP	Ormoc	2.18	280	*e*P	Pb	20 23 30.6	-1.5
CNP	Catarman	2.77	311	*e*P	Pn	20 23 37.1	+0.7
CNP				*e*S	Sn	20 24 09.8	+0.7
CGP	Cagayan de Oro	3.03	223	⇓*e*P	Pn	20 23 41.2	+1.3
CGP				*e*S	Sn	20 24 14.3	-1.2
BUKP	Musuan	3.27	212	*e*P	Pn	20 23 45.4	+2.2
BUKP				*e*S	Sn	20 24 23.1	+1.7
PVCP	Virac	3.88	319	*e*P	Pn	20 23 54.6	+3.0
ASAR	Alice Springs	34.83	169	LR	LR	20 46 43.5	
	comp=Z,37nm,19.3s,baz=98,slow=41						
MKAR	Makanchi Array	52.02	322	P	P	20 32 01.2	+0.1
	0.2nm,0.6s,baz=114,slow=8.2,SNR=4.3						
MKAR				PcP	PcP	20 33 12.2	-1.0
	0.3nm,0.9s,baz=108,slow=4.7,SNR=2.7						
KURBB	Kurchatov Arra	56.03	325	P	P	20 32 30.1	-0.2
	0.3nm,0.6s,baz=126,slow=6.9,SNR=4.5						
BVAR	Borovoye Array	61.63	325	P	P	20 33 09.0	-0.1
	0.2nm,0.6s,baz=123,slow=5.3,SNR=2.2						
ARCES	ARCESS Array B	83.99	340	P	P	20 35 20.4	-1.1
	5.3nm,1.1s,baz=74,slow=6.7,SNR=5.5						
FINES	FINESS Array B	85.78	332	P	P	20 35 29.7	-0.9
	0.4nm,0.4s,baz=58,slow=4.7,SNR=4.6						

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*NIED **03** 20:27:00, 36°.20N×141°.90E, h14^{km}, Mw4.0 Best double couple: $M_0$1.03000×10^{15} NP1:ϕ_s193.00000°, δ39.00000°, λ70.00000°. NP2:ϕ_s39.00000°, δ54.00000°, λ106.00000°.*

*IDC **03** 20:27:32.8±0.6, 36°.09N×141°.97E, h0^{km}, mb4.0/24, mb1 4.2/30, mb1mx4.1/65, mbtmp4.1/30, ML2.9/4, MS3.0/7, Ms1 3.0/7, ms1mx2.8/51, Error ellipse: s-maj=15.0km s-min=14.3km az=141.0*

*ISCJB **03** 20:27:34.3±0.4, 36°.09N±0°.04×142°.02E±0°.04, h23^{km}, mb4.0/31, MS3.9/4, Error ellipse: s-maj=5.5km s-min=4.8km az=154.5*

*JMA **03** 20:27:36.3±0.2, 36°.19N×141°.89E, h66^{km}, M3.9*

*NEIC **03** 20:27:36.7±2.1, 36°.02N×141°.92E, h27^{km}±15^{km}, mb4.1/3, Error ellipse: s-maj=8.2km s-min=6.5km az=57.0*

ISC 03 20:27:36.2±0.5**, 36°.07N**±0°.05×**141°.95E**±0°.06**, h23^{km}, n74, σ1^{s}04**/73**, mb4.2**/35**, MS3.7**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.95	248	P	Pn	20 27 54.3	+0.1
CHOJ				*e*S	Sn	20 28 07.9	+0.9
JHYU	Hitachinakayam	1.13	284	P	Pn	20 27 55.5	-1.1
JHYU				*e*S	Sb	20 28 10.0	-1.4
JIHU	Itakohorinouch	1.16	266	P	Pb	20 27 56.9	-0.6
JHO	Hitachi	1.24	297	P	Pn	20 27 56.2	-1.9
JSMT	Sammumatsuo	1.29	251	P	Pb	20 27 59.1	-0.6
ONAJ	Iwakimizuishiy	1.39	319	P	Pn	20 27 58.0	-2.2
JYT	Yasato	1.43	277	P	Pn	20 27 59.8	-0.9
JFK	Kawauchi	1.56	327	P	Pn	20 28 00.7	-1.8
BSO1	Boso 1	1.61	210	P	Pb	20 28 04.1	-0.9
BSO3	Boso 3	1.72	223	P	Pb	20 28 05.6	-1.4
JFT	Otama	1.94	319	P	Pn	20 28 07.0	-0.8
JMM	Marumori	2.02	333	P	Pn	20 28 07.0	-1.8
MJAR	Matsushiro Arr	3.06	280	Pn	Pn	20 28 23.2	+0.1
	3.7nm,0.3s,baz=117,slow=7.6,SNR=261						
MJAR				Sn	Sn	20 29 00.8	+1.8
	1.7nm,0.3s,baz=145,slow=3.0,SNR=2.0						
MJAR				LR	LR	20 29 15.1	
	comp=Z,58nm,21.1s,baz=135,slow=34						
MAJO	Matsushiro	3.06	280	*e*Pn	Pn	20 28 23.3	+0.2
MAT	Matsushiro	3.06	280	P	Pn	20 28 23.8	+0.7
MAT				S	Sn	20 29 00.4	+1.4
JHJ	Hachijo jima 2	3.44	212	Pn	Pn	20 28 28.9	+0.5
	53nm,0.3s,baz=353,slow=20,SNR=17						
JHJ				Sn	Sn	20 29 07.6	-0.7
	135nm,0.3s,baz=70,slow=20,SNR=11						
CBIJ	Chichi jima	8.94	179	Pn	Pn	20 29 43.1	-0.9
CBIJ				Sn	Sn	20 31 15.2	-8.8
JCJ	Chichijima	8.95	179	Pn	Pn	20 29 43.1	-0.9
	6.8nm,0.3s,baz=330,slow=16,SNR=6.4						
JCJ				Sn	Sn	20 31 15.2	-8.8
	6.4nm,0.3s,baz=273,slow=22,SNR=1.9						
JNU	Nakatsue	9.58	255	Pn	Pn	20 29 51.6	-1.2
	0.1nm,0.3s,baz=22,slow=19,SNR=2.0						
JNU				LR	LR	20 33 06.2	
	comp=Z,17nm,21.9s,baz=115,slow=35						
USRK	Ussuriysk Ar.	11.13	320	Pn	Pn	20 30 14.7	+0.8
	0.2nm,0.3s,baz=131,slow=12,SNR=2.9						
KSRS	Korea Array	11.34	281	Pn	Pn	20 30 17.8	+1.1
	0.1nm,0.3s,baz=92,slow=14,SNR=9.1						
KSRS				LR	LR	20 34 29.9	
	comp=Z,51nm,18.7s,baz=80,slow=37						
KSAR	Wonju Array Be	11.37	281	Pn	Pn	20 30 17.8	+0.7
KLR	Kul'dur	15.12	334	Pn	Pn	20 31 04.3	-4.0
	0.1nm,0.3s,baz=161,slow=11,SNR=4.2						
KLR				LR	LR	20 36 52.8	
	comp=Z,62nm,18.3s,baz=110,slow=37						
HHC	Hu-ho-hao-te	24.20	291	*e*P	P	20 32 51.8	+0.7
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.4s						
XAN	Xi'an	27.04	275	P	P	20 33 15.9	-0.9
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,120nm,4.6s						
H11N2	WAKE ISLAND Hy	27.29	120	T	T	21 01 59.4	
	baz=312,slow=75,SNR=7.4						
H11N1	WAKE ISLAND Hy	27.30	120	T	T	21 01 56.2	
	baz=312,slow=75,SNR=5.8						
H11N3	WAKE ISLAND Hy	27.31	120	T	T	21 01 57.8	
	baz=312,slow=75,SNR=7.1						
ENH	Enshi	27.70	267	*e*P	P	20 33 21.4	-1.2
	comp=Z,3.7nm,0.5s						
H11S1	WAKE ISLAND Hy	27.98	122	T	T	21 02 44.9	
	baz=314,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	27.98	122	T	T	21 02 44.2	
	baz=314,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	27.99	122	T	T	21 02 45.8	
	baz=314,slow=76,SNR=11						
ULN	Ulaanbaatar	28.26	306	*e*P	P	20 33 27.5	-0.2
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	28.69	305	P	P	20 33 31.7	+0.2
	comp=Z,3.0nm,0.6s,baz=106,slow=8.6,SNR=22						
TLY	Talaya	31.29	312	P	P	20 33 55.1	+0.8
	comp=Z,1.2nm,0.4s,baz=31,slow=3.8,SNR=4.0						
GTA	Gaotai	33.27	289	*e*P	P	20 34 12.4	+0.5
GTA				pP	pP	20 34 16.6	-1.7
GTA				sP	sP	20 34 19.6	-1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PBKT	Sadao Pong	41.17	253	P	P	20 35 21.6	+2.6
	comp=Z,4.9nm,1.6s,comp=Z,828nm						
CMAR	Chiang Mai Arr	41.68	257	P	P	20 35 23.1	-0.1
	comp=Z,1.0nm,0.9s,baz=45,slow=5.3,SNR=9.3						
LSA	Lhasa	42.73	277	*e*P	P	20 35 31.4	-0.8
	comp=Z,4.2nm,0.9s						
ZALV	Zalesovo Beam	42.89	313	P	P	20 35 32.5	-0.1
	comp=Z,2.2nm,0.7s,baz=92,slow=6.1,SNR=11						
ZALV				PcP	PcP	20 37 23.2	+0.1
	comp=Z,0.9nm,0.5s,baz=92,slow=2.8,SNR=3.5						
MKAR	Makanchi Array	45.00	303	P	P	20 35 49.9	+0.2
	comp=Z,2.1nm,0.6s,baz=88,slow=9.8,SNR=24						
KURK	Kurchatov	46.87	309	P	P	20 36 04.5	+0.2
KURBB	Kurchatov Arra	46.94	309	P	P	20 36 04.5	-0.4
	comp=Z,2.8nm,0.5s,baz=82,slow=7.7,SNR=31						
RAMN	Ramite	47.51	275	*e*P	P	20 36 10.4	+0.4
	comp=Z,19nm,0.6s						
JIRN	Jiri	47.54	276	*e*P	P	20 36 11.1	+0.7
	comp=Z,14nm,0.6s						
GUN	Gumba	47.69	277	*e*P	P	20 36 13.0	+1.5
PKI	Pulchoki	48.21	277	*e*P	P	20 36 15.4	-0.1
PKIN	Phulchoki	48.21	277	*e*P	P	20 36 15.3	-0.2
DMN	Daman	48.44	277	*e*P	P	20 36 17.1	0.0
	comp=Z,12nm,1.1s						
DANN	Dangsing	49.21	278	*e*P	P	20 36 23.8	+0.7
	comp=Z,15nm,0.6s						
KOLN	Koldanda	49.58	278	*e*P	P	20 36 27.0	+1.2
PYUN	Piuthan	49.93	278	*e*P	P	20 36 28.9	+0.4
ILAR	Eielson Array	50.09	32	P	P	20 36 29.2	+0.3
	comp=Z,1.3nm,0.8s,baz=258,slow=5.3,SNR=5.5						
AAK	Ala-Archa	51.33	299	P	P	20 36 39.2	+0.3
	comp=Z,0.6nm,0.4s,baz=98,slow=5.7,SNR=4.2						
BVAR	Borovoye Array	51.54	313	P	P	20 36 40.1	0.0
	comp=Z,1.5nm,0.8s,baz=77,slow=7.8,SNR=9.0						
BVAR				PcP	PcP	20 37 54.4	+0.5
	comp=Z,0.8nm,0.6s,baz=62,slow=2.8,SNR=3.7						
INK	Inuvik	55.05	27	P	P	20 37 06.0	+0.4
	comp=Z,1.3nm,0.5s,baz=295,slow=7.5,SNR=4.0						
WRA	Warramunga Arr	56.16	189	P	P	20 37 14.2	0.0
	comp=Z,1.2nm,0.5s,baz=6.3,slow=7.3,SNR=11						
AKTO	Aktyubinsk	59.64	313	P	P	20 37 38.0	-0.3
	comp=Z,1.6nm,0.7s,baz=81,slow=12,SNR=7.3						
AKTO				LR	LR	21 05 32.5	
	comp=Z,40nm,18.3s,baz=306,slow=38						
ASAR	Alice Springs	59.89	189	P	P	20 37 40.9	+0.7
	comp=Z,0.5nm,0.7s,baz=20,slow=9.3,SNR=6.7						
RES	Resolute Bay	63.43	14	P	P	20 38 01.8	-1.7
	comp=Z,1.0nm,0.5s,baz=341,slow=8.0,SNR=4.0						
YKA	Yellowknife Ar	64.43	30	P	P	20 38 10.3	+0.1
	comp=Z,1.2nm,1.0s,baz=294,slow=6.4,SNR=7.9						
ARCES	ARCESS Array B	65.05	340	P	P	20 38 14.4	+0.2
	comp=Z,2.0nm,0.8s,baz=57,slow=7.4,SNR=4.3						
FINES	FINESS Array B	69.87	333	P	P	20 38 44.9	+0.1
	comp=Z,2.5nm,0.8s,baz=54,slow=6.8,SNR=8.4						
KBZ	Khabaz	71.86	311	P	P	20 38 57.9	+0.8
	comp=Z,1.9nm,0.9s,baz=45,slow=7.1,SNR=3.1						
KVAR	Kislovodsk Arr	71.86	311	LR	LR	21 14 37.0	
	comp=Z,53nm,19.6s,baz=94,slow=39						
RAO	Raoul Island	75.15	144	LR	LR	21 07 12.1	
	comp=Z,380nm,19.5s,baz=136,slow=32						
NVAR	Mina Array Bea	75.22	53	P	P	20 39 18.8	+1.4
	comp=Z,0.3nm,0.5s,baz=282,slow=9.9,SNR=3.0						
NB2	NORSAR Subarra	75.24	338	P	P	20 39 16.7	-0.1
	comp=Z,0.8nm,0.6s,baz=39,slow=5.9						
NOA	NORSAR Array B	75.24	338	P	P	20 39 16.9	+0.1
	comp=Z,3.6nm,1.0s,baz=39,slow=5.7,SNR=6.0						
NOA				LR	LR	21 14 59.1	
	comp=Z,19nm,18.9s,baz=255,slow=38						
AKASG	Malin Array Be	75.33	323	P	P	20 39 17.0	-0.4
	comp=Z,1.3nm,0.4s,baz=48,slow=6.1,SNR=15						
PDAR	Pinedale Array	78.04	46	P	P	20 39 33.5	+0.3
	comp=Z,0.3nm,0.6s,baz=329,slow=1.7,SNR=3.8						
BRTR	Keskin Array B	79.81	312	P	P	20 39 43.2	+0.4
	comp=Z,6.3nm,1.3s,baz=64,slow=2.9,SNR=6.1						
TXAR	Lajitas Array	90.37	53	P	P	20 40 36.2	+0.3
	comp=Z,0.4nm,0.7s,baz=305,slow=2.8,SNR=3.8						
LPAZ	La Paz	146.79	62	PKPbc	PKPbc	20 47 16.9	-0.7
	comp=Z,2.1nm,0.5s,baz=319,slow=1.2,SNR=8.6						

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*DDA **03** 20:28:47.5, 36°.49N×41°.82E, h7^{km}±4^{km}, ML2.7*

*ISN **03** 20:28:48.5±0.3, 36°.52N×42°.08E, h0^{km}, ML2.4*

*ISK **03** 20:28:48.8, 36°.53N×41°.85E, h9^{km}, ML2.5/6*

ISC 03 20:28:48.4±1.7**, 36°.48N**±0°.08×**41°.87E**±0°.05**, h7^{km}**±13^{km}**, n11, σ0^{s}72**/17**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSL	Mosul	1.00	94	*e*Pg	Pg	20 29 07.2	-0.4
	baz=278						
MSL				AML	AML	20 29 07.8	
	comp=Z,148nm,0.4s						
MSL				*e*Sg	Sg	20 29 20.3	-0.3
SIRN	Sırnak	1.10	23	*i* P	Pn	20 29 10.4	+0.1
SIRN				*i* S	Sn	20 29 26.1	+0.3
SIRT	Sirnak	1.11	24	PG	Pb	20 29 09.9	-0.1
SIRT				SG	Sn	20 29 25.2	-0.9
BTMN	Batman	1.49	341	*i* P	Pb	20 29 15.9	-0.5
BTMN				*i* S	Sg	20 29 36.5	+0.3
BTMN				IAML_P			
	comp=Z,150nm,0.2s						
MAZI	Mazidag	1.50	311	PN	Pn	20 29 15.1	-0.7
SRTM	Siirt_Merkez	1.51	1	*i* P	Pb	20 29 15.9	-0.8
SRTM				*i* S	Sg	20 29 37.3	+0.4
SRTM				IAML_P			
	comp=Z,393nm,0.1s						
CUKT	Cukurca	1.59	61	PN	Pb	20 29 17.7	-0.4
CUKT	Cukurca	1.59	61	*i* P	Pb	20 29 18.4	+0.3
CUKT				*i* S	Sg	20 29 40.3	+0.9
CUKT				IAML_P			
	comp=Z,448nm,0.2s						
GURO	Guroymak-BITLI	2.07	3	PN	Pn	20 29 24.2	+0.5
URFA	Urfa	2.63	292	PN	Pn	20 29 32.3	+1.1
PTK	Pertek	3.11	321	PN	Pn	20 29 39.1	+1.1

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*IDC **03** 20:28:48.3±8.0, 31°.39S×179°.95W, h306^{km}±88^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.2/31, mbtmp4.1/5, Error ellipse: s-maj=103.1km s-min=37.4km az=2.0*

*WEL **03** 20:28:58.0±0.9, 32°S±7°×18°0W±1°9, h290^{km}±15^{km}*

ISC 03 20:28:52.7±1.0**, 31°.89S**±0°.07×**179°.9W**±0°.1**, h350^{km}, n44, σ2^{s}03**/59**, mb3.4**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.14	34	P	Pn	20 29 55.8	+2.4
GLKZ				S	S	20 30 40.3	-1.9
MXZ	Matakaoa Point	5.85	194	P	Pn	20 30 25.3	+3.7
MXZ				S	S	20 31 33.5	-0.3
KUZ	Kuaotunu	6.04	215	P	Pn	20 30 28.5	+4.6
WMGZ	Waiomatatini S	6.07	193	P	Pn	20 30 25.9	+1.6
WMGZ				S	S	20 31 39.5	+1.0
HAZ	Te Kaha	6.15	197	P	Pn	20 30 28.4	+3.3
HAZ				S	S	20 31 41.1	+1.0
PKGZ	Pakihiroa	6.21	195	P	Pn	20 30 27.8	+1.9
PKGZ				S	S	20 31 41.0	-0.5
WCZ	Waipu Caves	6.25	228	P	Pn	20 30 30.4	+4.1
PUZ	Puketiti	6.35	193	P	Pn	20 30 31.6	+4.1
PUZ				S	S	20 31 44.1	-0.2
RUGZ	Raukumara Rang	6.38	197	P	Pn	20 30 30.2	+2.4
RUGZ				S	S	20 31 43.8	-1.3
TWGZ	Tauwhareparae	6.51	195	P	Pn	20 30 31.5	+2.2
TWGZ				S	S	20 31 48.4	+0.7
CNGZ	Carnagh Statio	6.76	193	P	Pn	20 30 34.1	+2.0
MWZ	Matawai	6.76	197	P	Pn	20 30 33.8	+1.6
MWZ				S	S	20 31 53.9	+0.7
TKGZ	Te Karaka	6.79	195	P	Pn	20 30 34.1	+1.7
TKGZ				S	S	20 31 52.7	-0.9
URZ	Urewera	6.81	200	P	Pn	20 30 32.8	+0.1
	8.2nm,0.3s,baz=87,slow=18,SNR=64						
URZ				S	S	20 31 52.3	-1.7
	4.9nm,0.3s,baz=87,slow=21,SNR=13						
URZ	Urewera	6.81	200	P	Pn	20 30 33.4	+0.7
URZ				S	S	20 31 52.3	-1.7
TOZ	Tahuroa Road	6.94	212	P	Pn	20 30 36.8	+2.5
RIGZ	Rimuhau	7.06	195	P	Pn	20 30 38.1	+2.4
RIGZ				S	S	20 31 58.2	-1.4
SNGZ	Shannon Statio	7.23	197	P	Pn	20 30 40.9	+3.2
SNGZ				S	S	20 32 03.0	-0.1
PRGZ	Paritu Road	7.24	194	P	Pn	20 30 41.5	+3.6
PRGZ				S	S	20 32 04.0	+0.6
KNZ	Kokohu	7.38	195	P	Pn	20 30 40.9	+1.4
TLZ	Tolley Road	7.42	209	P	Pn	20 30 44.6	+4.6
RAHZ	Arahi	7.42	198	P	Pn	20 30 41.4	+1.4
MTHZ	Maungataniwha	7.43	200	P	Pn	20 30 41.3	+1.2
MHGZ	Mahia Peninsul	7.46	193	P	Pn	20 30 42.9	+2.5
WHHZ	Waihua	7.54	197	P	Pn	20 30 44.3	+3.0
NMHZ	Naumai	7.67	199	P	Pn	20 30 46.1	+3.2
ARHZ	Aropaoanui	7.78	198	P	Pn	20 30 45.2	+1.1
MCHZ	McNeill Hill	8.03	199	P	P	20 30 49.7	-0.4
KRVZ	Karewarewa	8.05	205	P	P	20 30 50.1	-0.4
FWVZ	Far West T-bar	8.22	205	P	P	20 30 52.0	-0.5
WHVZ	Whangaehu Hut	8.23	205	P	P	20 30 52.1	-0.6
BHHZ	Black Hill Sta	8.26	202	P	Pn	20 30 49.4	-0.5
MOVZ	Moawhango	8.29	204	P	Pn	20 30 51.0	+0.8
KAHZ	Kahuranaki	8.31	197	P	Pn	20 30 51.3	+0.9
VRZ	Vera Road	8.42	209	P	P	20 30 53.9	-0.6
PXZ	Pawanui	8.53	197	P	Pn	20 30 53.5	+0.4
BFZ	Birch Farm	9.30	198	P	Pn	20 31 02.0	-0.3
MRZ	Mangatainoka R	9.48	201	P	Pn	20 31 03.2	-1.1
KIW	Kapiti Island	9.87	203	P	Pn	20 31 07.4	-1.6
CTA	Charters Tower	32.46	283	P	P	20 34 50.8	-1.0
	2.2nm,0.3s,baz=96,slow=8.8,SNR=4.0						
STKA	Stephens Creek	32.56	260	P	P	20 34 52.5	0.0
	1.6nm,0.9s,baz=103,slow=14,SNR=3.0						
ASAR	Alice Springs	41.41	270	P	P	20 36 05.2	-1.2
	0.7nm,0.7s,baz=110,slow=7.9,SNR=6.7						
WRA	Warramunga Arr	42.54	275	P	P	20 36 13.5	-1.9
	1.0nm,0.4s,baz=113,slow=7.7,SNR=9.2						
FINES	FINESS Array B	145.93	338	PKPbc	PKPdf	20 47 49.1	-0.3
	0.4nm,0.4s,baz=48,slow=4.5,SNR=8.6						

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*ISCJB **03** 20:30:44.1±0.4, 67°.57N±0°.05×166°.5W±0°.1, h10^{km}, mb3.7/14, MS3.7/1, Error ellipse: s-maj=7.4km s-min=5.7km az=25.7*

*IDC **03** 20:30:45.0±1.0, 67°.75N×166°.48W, h0^{km}, mb3.7/14, mb1 3.9/16, mb1mx3.6/55, mbtmp3.7/16, ML3.6/2, MS3.7/1, Ms1 3.7/1, ms1mx2.5/50, Error ellipse: s-maj=35.3km s-min=14.3km az=19.0*

*NEIC **03** 20:30:46.1±0.0, 67°.49N×166°.43W, h10^{km}, ML3.5(AEIC), After AEIC.*

ISC 03 20:30:45.7±0.6**, 67°.59N**±0°.07×**166°.41W**±0°.05**, h10^{km}, n28, σ1^{s}58**/30**, mb3.7**/14**, Bering Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	1.41	69	P	Pn	20 31 11.9	+0.4
RDOG				S	Sg	20 31 31.8	+0.7
ANM	Nome	3.06	172	P	Pn	20 31 34.0	-0.1
ANM				S	Sn	20 32 10.1	-0.7
GAMB	Gambell	4.41	212	P	Pn	20 31 50.7	-1.8
GCSA	Galena City Sc	4.80	122	P	Pn	20 31 59.9	+1.9
IM3	Indian Mountai	5.26	102	P	Pn	20 32 05.0	+0.7
COLD	Coldfoot	6.26	86	P	Pn	20 32 19.1	+1.1
TT01	Tatalina	6.41	132	P	Pn	20 32 21.4	+1.4
CAST	Castle Rocks	7.27	118	P	Pn	20 32 32.9	+1.0
PPLA	Purkeypile	7.59	122	P	Pn	20 32 38.0	+1.6
BM3	Burnt Mountain	8.35	81	P	Pn	20 32 47.3	+0.6
ILAR	Eielson Array	8.38	101	Pn	Pn	20 32 47.1	+0.1
	0.5nm,0.3s,baz=297,slow=13,SNR=18						
ILAR				Sn	Sn	20 34 15.7	-5.9
	baz=310,slow=20,SNR=2.2						
ILAR				Lg	Lg	20 35 11.0	
	baz=303,slow=29,SNR=2.8						
INK	Inuvik	12.29	71	Pn	Pn	20 33 38.6	-2.0
	0.2nm,0.3s,baz=308,slow=11,SNR=16						
INK				Sn	Sn	20 35 47.4	-10
	0.2nm,0.3s,baz=160,slow=10.0,SNR=2.6						
SEY	Seymchan	17.59	274	P	P	20 34 52.1	+0.5
	0.1nm,0.3s,baz=24,slow=16,SNR=2.3						
YKA	Yellowknife Ar	21.87	78	P	P	20 35 38.7	+0.5
	0.7nm,0.6s,baz=304,slow=10,SNR=9.3						
TIXI	Tiksi	21.89	310	P	P	20 35 39.0	+0.6
	1.4nm,0.5s,baz=81,slow=9.9,SNR=4.5						
PDAR	Pinedale Array	38.81	100	P	P	20 38 11.8	+1.2
	0.3nm,0.7s,baz=325,slow=7.8,SNR=3.1						
NVAR	Mina Array Bea	39.40	113	P	P	20 38 18.1	+2.6
	0.6nm,0.7s,baz=328,slow=7.5,SNR=4.3						
TLY	Talaya	43.70	296	LR	LR	20 57 49.3	
	comp=Z,86nm,18.4s,baz=40,slow=37						
SONM	Songino Array	45.96	291	P	P	20 39 09.5	+0.9
	0.4nm,0.8s,baz=49,slow=6.6,SNR=3.5						
ZALV	Zalesovo Beam	47.78	311	P	P	20 39 22.4	-0.1
	1.5nm,0.7s,baz=34,slow=6.6,SNR=5.7						
FINES	FINESS Array B	50.95	352	P	P	20 39 46.9	+0.3
	1.6nm,0.7s,baz=20,slow=7.0,SNR=8.0						
BVAR	Borovoye Array	52.47	320	P	P	20 39 58.0	-0.1
	1.1nm,0.7s,baz=39,slow=9.6,SNR=7.3						
KURBB	Kurchatov Arra	52.52	313	P	P	20 39 58.4	-0.1
	2.4nm,0.6s,baz=29,slow=6.9,SNR=13						
TXAR	Lajitas Array	52.88	103	P	P	20 40 02.1	+0.5
	0.5nm,0.8s,baz=330,slow=5.2,SNR=4.9						
MKAR	Makanchi Array	54.88	308	P	P	20 40 14.9	-0.9
	0.6nm,0.7s,baz=47,slow=7.6,SNR=7.4						
AKASG	Malin Array Be	61.45	349	P	P	20 41 00.4	-1.3
	0.5nm,0.6s,baz=6.1,slow=6.7,SNR=6.5						
ESDC	Sonseca Array	72.24	14	P	P	20 42 11.1	+0.5
	0.5nm,0.7s,baz=346,slow=5.2,SNR=3.3						
CMAR	Chiang Mai Arr	74.86	281	P	P	20 42 25.7	-0.6
	0.3nm,0.7s,baz=13,slow=5.9,SNR=4.9						

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*SOME **03** 20:33:30.1, 42°.55N×79°.65E, h20^{km}*

*KRNET **03** 20:33:30.7±0.1, 42°.58N×79°.64E, h20^{km}, mb2.4*

*NNC **03** 20:33:30.4±1.0, 42°.59N×79°.62E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=6.6km s-min=3.7km az=135.0*

ISC 03 20:33:31.3±1.1**, 42°.60N**±0°.05×**79°.63E**±0°.03**, h10^{km}, n45, σ0^{s}96**/80**, 19C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.71	321	P	Pg	20 33 44.2	-0.8
	4.8nm,0.1s						
UZB				S	Sg	20 33 54.4	+0.2
	26nm,0.2s						
UZB	Uzynbulak	0.71	321	*e*P	Pg	20 33 44.2	-0.8
	baz=21						
UZB				*e*S	Sg	20 33 54.5	+0.2
	baz=21						

UZB	Uzynbulak	0.71	321	*e*P	Pg	20 33 44.2	-0.8
	4.8nm,0.1s						
UZB				*e*S	Sg	20 33 54.5	+0.2
	26nm,0.2s						
PDGK	Podgornoye	0.74	352	P	Pg	20 33 45.0	-0.6
	3.6nm,0.2s						
PDGK				S	Sg	20 33 55.7	+0.4
	4.8nm,0.2s						
PDGK	Podgornoye	0.74	352	⇓P	Pg	20 33 44.7	-0.8
	2.4nm,0.3s						
PDGK				⇑S	Sg	20 33 55.3	+0.1
	3.1nm,0.4s						
PDGK	Podgornoye	0.74	352	⇑*i*P	Pg	20 33 45.0	-0.6
	baz=51						
PDGK				⇑*i*S	Sg	20 33 55.6	+0.4
	baz=51						
PRZ	Przheval'sk	0.91	263	⇑*i*P	Pg	20 33 47.8	-1.1
	baz=64						
PRZ				⇑*i*S	Sg	20 34 00.5	-0.3
	baz=64						
KTMS	Ketmen	1.00	32	P	Pg	20 33 49.7	-0.9
	7.3nm,0.1s						
KTMS				S	Sb	20 34 03.7	-0.4
	21nm,0.2s						
KTMS	Ketmen	1.00	32	*e*P	Pg	20 33 49.7	-0.9
	baz=30						
KTMS				*e*S	Sb	20 34 03.7	-0.4
	baz=30						
KTMS	Ketmen	1.00	32	*e*P	Pg	20 33 49.7	-0.9
	7.3nm,0.1s						
KTMS				*e*S	Sb	20 34 03.7	-0.4
	21nm,0.2s						
SATY	Saty	1.01	298	P	Pg	20 33 49.6	-1.1
	2.4nm,0.1s						
SATY				S	Sg	20 34 03.1	-0.8
	16nm,0.1s						
SATY	Saty	1.01	298	*e*P	Pg	20 33 49.1	-1.6
	1.3nm,0.1s						
SATY				*e*S	Sg	20 34 03.1	-0.8
	16nm,0.1s						
KURS	Kuram	1.39	310	P	Pb	20 33 56.9	-0.5
	0.9nm,0.2s						
KURS				S	Sb	20 34 15.5	+0.3
	7.3nm,0.4s						
KURS	Kuram	1.39	310	*e*P	Pn	20 33 56.4	-0.4
	baz=10.0						
KURS				*e*S	Sb	20 34 15.6	+0.3
	baz=10.0						
KURS	Kuram	1.39	310	*e*P	Pn	20 33 56.4	-0.4
	0.2nm,0.1s						
KURS				*e*S	Sb	20 34 15.6	+0.3
	7.3nm,0.4s						
MNBS	Baschi	1.73	329	P	Pb	20 34 02.6	-0.7
	4.4nm,0.3s						
MNBS				S	Sg	20 34 26.1	-0.9
	17nm,0.3s						
DJR	Jarkent	1.74	4	P	Pb	20 34 02.8	-0.6
	1.1nm,0.2s						
DJR				S	Sg	20 34 26.7	-0.5
	2.5nm,0.2s						
DJR	Jarkent	1.74	4	*e*P	Pb	20 34 02.8	-0.6
	1.1nm,0.2s						
DJR				*e*S	Sg	20 34 26.7	-0.5
	2.5nm,0.2s						
KDJ	Kajisay	1.87	256	⇓*i*P	Pb	20 34 04.6	-1.1
	baz=57						
KDJ				⇓*i*S	Sb	20 34 28.9	-0.3
	baz=57						
MDOK	Medeo	1.98	287	⇓Pn	Pb	20 34 06.0	-1.5
	0.5nm,0.4s						
MDOK				⇑Sn	Sb	20 34 32.9	+0.7
	4.2nm,0.5s						
MDOK	Medeo	1.98	287	Pg	Pb	20 34 06.5	-1.0
	1.2nm,0.2s						
MDOK				Lg	Lg	20 34 32.5	
	5.1nm,0.4s						
MDOK	Medeo	1.98	287	*e*P	Pb	20 34 06.5	-1.0
	baz=88						
MDOK				*e*S	Sb	20 34 32.5	+0.3
	baz=88						
MDOK	Medeo	1.98	287	*e*P	Pb	20 34 06.5	-1.0
	1.2nm,0.2s						
MDOK				*e*S	Sb	20 34 32.5	+0.3
	5.1nm,0.4s						
TNSS	Tian-Shan	2.02	283	Pg	Pn	20 34 06.7	+0.9
	2.4nm,0.3s						
TNSS				Lg	Lg	20 34 32.8	
	4.7nm,0.3s						
TNSS	Tian-Shan	2.02	283	*e*P	Pn	20 34 06.7	+0.9
	2.4nm,0.3s						
TNSS				*e*S	Sb	20 34 32.8	-0.9
	4.7nm,0.3s						
IZV	Izvestkoviy	2.26	282	Pg	Pb	20 34 11.3	-1.0
	2.8nm,0.2s						
IZV				Lg	Lg	20 34 40.8	
	5.6nm,0.3s						
IZV	Izvestkoviy	2.26	282	*e*P	Pb	20 34 11.3	-1.0
	2.8nm,0.2s						
IZV				*e*S	Sb	20 34 40.8	+0.4
	5.6nm,0.3s						
CHKK	Chushkaly	2.30	304	Pg	Pb	20 34 11.9	-1.0
	0.8nm,0.1s						
CHKK				Lg	Lg	20 34 42.5	
	9.5nm,0.2s						
CHKK	Chushkaly	2.30	304	*e*P	Pb	20 34 12.1	-0.8
	0.8nm,0.1s						
CHKK				*e*S	Sb	20 34 42.5	+1.1
	9.5nm,0.2s						
KTBS	Karatobe	2.43	298	Pg	Pb	20 34 14.0	-1.0
	0.9nm,0.2s						
KTBS				Lg	Lg	20 34 45.6	
	9.5nm,0.4s						
KTBS	Karatobe	2.43	298	*e*P	Pb	20 34 14.0	-1.0
	baz=98						
KTBS				*e*S	Sb	20 34 45.6	+0.6
	baz=98						
KTBS	Karatobe	2.43	298	*e*P	Pb	20 34 14.0	-1.0
	0.9nm,0.2s						
KTBS				*e*S	Sb	20 34 45.6	+0.6
	9.5nm,0.4s						
ULHL	Ulahol	2.53	263	⇑*i*P	Pn	20 34 13.6	+1.0
	baz=64						
ULHL				⇑*i*S	Sn	20 34 45.5	+1.9
	baz=64						
KAPS	Kapalarasan	2.69	356	Pg	Pb	20 34 19.7	0.0
	0.8nm,0.3s						
KAPS				Lg	Lg	20 34 55.2	
	1.5nm,0.3s						
KAPS	Kapalarasan	2.69	356	*e*P	Pb	20 34 19.7	0.0
	0.8nm,0.3s						
KAPS				*e*S	Sg	20 34 55.2	-2.6
	1.5nm,0.3s						
BOOM	Boomskoye usch	2.73	269	⇓*i*P	Pn	20 34 16.4	+1.1
	baz=69						
BOOM				⇓*i*S	Sn	20 34 49.7	+1.3
	baz=69						
DGS	Degeres	2.90	284	Pg	Pb	20 34 22.5	-0.8
	1.2nm,0.3s						
DGS				Lg	Lg	20 35 00.9	
	5.4nm,0.6s						
DGS	Degeres	2.90	284	*e*P	Pb	20 34 22.8	-0.4
	0.9nm,0.3s						
DGS				*e*S	Sb	20 35 00.9	+2.1
	5.4nm,0.6s						
NRN	Naryn	2.94	248	⇑*i*P	Pn	20 34 19.2	+0.8
	baz=48						
NRN				⇑*e*S	Sn	20 34 56.0	+2.1
	baz=48						
TKM2	Tokmak 2	2.99	278	⇓Pg	Pb	20 34 22.7	-2.0
	0.5nm,0.5s						
TKM2				⇓Lg	Lg	20 35 04.4	
	2.1nm,0.6s						
TKM2	Tokmak 2	2.99	278	⇑*e*P	Pn	20 34 19.8	+0.9
	baz=78						
TKM2				⇑*i*S	Sn	20 34 56.2	+1.3
	baz=78						
KZA	Kyzart	3.29	262	⇑*i*P	Pn	20 34 24.0	+0.8
	baz=63						
KZA				⇑*i*S	Sn	20 35 03.2	+0.6
	baz=63						
KBK	Karagaybulak	3.45	273	⇑*i*P	Pn	20 34 26.7	+1.4
	baz=73						
KBK				⇑*i*S	Sn	20 35 07.0	+0.7
	baz=73						
MAKZ	Makanchi	4.53	21	⇓Pn	Pn	20 34 41.5	+1.6
	0.3nm,0.3s						
MAKZ				⇑Lg	Lg	20 35 55.4	
	0.2nm,0.3s						
MK31	Makanchi Array	4.61	23	⇑Pn	Pn	20 34 41.8	+0.9
	0.1nm,0.5s,baz=207,slow=14,SNR=5.8						
MK31				⇑Lg	Lg	20 35 57.3	
	0.1nm,0.5s,baz=198,slow=25,SNR=25						

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*IDC **03** 20:40:30.2±1.4, 28°.48N×142°.95E, h0^{km}, mb3.3/6, mb1 3.5/6, mb1mx3.4/37, mbtmp3.3/6, Error ellipse: s-maj=43.5km s-min=21.3km az=87.0*

*ISCJB **03** 20:40:33.8±1.1, 28°.46N±0°.08×142°.8E±0°.2, h34^{km}, mb3.4/6, Error ellipse: s-maj=30.1km s-min=10.3km az=9.2*

ISC 03 20:40:35.4±1.2**, 28°.4N**±0°.1×**142°.9E**±0°.2**, h34^{km}, n7, σ0^{s}.32**/8**, mb3.3**/6**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.44	204	Pn	Pn	20 40 59.0	-0.2
	3.9nm,0.3s,baz=348,slow=20,SNR=10						
JCJ				Sn	Sn	20 41 16.7	-0.2
	22nm,0.3s,baz=95,slow=23,SNR=7.3						
SONM	Songino Array	34.19	315	P	P	20 47 17.8	+0.2
	0.2nm,0.5s,baz=101,slow=7.5,SNR=3.0						
WRA	Warramunga Arr	48.78	191	P	P	20 49 17.3	+0.2
	0.4nm,0.5s,baz=13,slow=8.6,SNR=7.1						
ZALV	Zalesovo Beam	48.88	318	P	P	20 49 17.6	0.0
	0.3nm,0.3s,baz=87,slow=9.4,SNR=3.0						
MKAR	Makanchi Array	50.09	309	P	P	20 49 26.9	-0.2
	0.2nm,0.7s,baz=87,slow=8.0,SNR=2.9						
ASAR	Alice Springs	52.50	190	P	P	20 49 45.7	+0.5
	0.2nm,0.8s,baz=17,slow=6.8,SNR=3.0						
PDAR	Pinedale Array	82.86	45	P	P	20 52 56.5	-0.3
	0.1nm,0.5s,baz=324,slow=5.6,SNR=2.3						

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*IDC **03** 20:54:37.0±0.9, 32°.55S×71°.60W, h0^{km}, mb4.3/8, mb1 4.4/10, mb1mx4.2/27, mbtmp4.2/10, ML3.6/2, MS3.5/7, Ms1 3.5/7, ms1mx3.3/23, Error ellipse: s-maj=33.9km s-min=24.0km az=28.0*

*ISCJB **03** 20:54:43.2±0.8, 32°.46S±0°.04×71°.79W±0°.08, h54^{km}±7^{km}, mb4.5/19, MS3.6/4, Error ellipse: s-maj=10.9km s-min=6.6km az=171.6*

*GUC **03** 20:54:43.8±0.6, 32°.34S×71°.38W, h33^{km}±4^{km}, ML4.3*

*NEIC **03** 20:54:43.0±0.0, 32°.34S×71°.38W, h33^{km}, mb4.6/10, ML4.3(GUC), After GUC.*

NEIC Felt [IV] at La Ligua, Papudo, Puchuncavi, Villa Alemana, Vina del Mar and Zapallar; [III] at Catemu, Lampa, Los Vilos, Petorca, Quillota, Tiltil and Valparaiso; [II] at Los Andes, Salamanca and Santiago.

*SJA **03** 20:54:49.0±0.5, 32°.25S×71°.17W, h14^{km}±4^{km}, ML3.9, MW4.4*

ISC 03 20:54:43.1±1.4**, 32°.47S**±0°.06×**71°.85W**±0°.10**, h40**^{km}±12^{km}**, n68, σ1^{s}.38**/73**, mb4.4**/19**, MS3.6**/4**, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	0.87	126	*e*Pn	Pn	20 54 58.8	-0.2
ROC1				*e*Sn	Sn	20 55 10.0	-0.6
ROCH	El Roble	0.87	125	⇓*e*P	Pn	20 54 58.7	-0.3
ROCH				*i* S	Sn	20 55 09.6	-1.0
ROCH				IAML		20 55 10.7	
	comp=N,27μm,0.4s						
PEL	Peldehue	1.19	124	*e*Pn	Pn	20 55 03.4	+0.1
PEL	Peldehue	1.19	124	*e*P	Pn	20 55 02.9	-0.4
PEL				*e*S	Sn	20 55 17.4	-0.9
PEL				IAML		20 55 19.1	
	comp=N,24μm,0.7s						
CLCH	Cerro Calan	1.44	130	*e*P	Pn	20 55 07.1	+0.4
CLCH				*e*S	Sn	20 55 24.7	+0.2
CLCH				IAML		20 55 31.0	
	comp=N,8μm,0.5s						
FCH	Farellones	1.57	123	⇓*i*P	Pn	20 55 08.7	0.0
FCH				*i* S	Sn	20 55 27.7	-0.2
FCH				IAML		20 55 28.7	
	comp=E,9μm,0.3s						
LMEL	Las Melosas	1.95	135	⇓*e*P	Pn	20 55 15.0	+1.2
LMEL				*e*S	Sn	20 55 39.1	+2.0
LMEL				IAML		20 55 41.5	
	comp=N,7μm,0.1s						
AUSP	Uspallata	2.10	84	*i* P	Pn	20 55 17.9	+1.8
RTLS	Leoncito	2.27	73	*i* P	Pn	20 55 20.6	+2.3
RTLS				*i* S	Sn	20 55 43.5	-1.8
RTLS				IAML		20 55 52.6	
	comp=Z,2μm,0.7s						
GO04	Tololo Observa	2.46	22	*e*Pn	Pn	20 55 20.3	-0.7
ARCO	CERRO ARCO	2.49	99	*i* P	Pn	20 55 24.5	+3.2
ARCO				IAML		20 56 03.3	
	comp=Z,748nm,0.4s						
ASAL	Salagasta	2.55	93	*i* P	Pn	20 55 25.1	+3.0
AAGR	Agrelo	2.62	104	*i* P	Pn	20 55 26.6	+3.6
RTCV	Cerro Valdivia	2.88	79	*i* P	Pn	20 55 28.2	+1.8
RTLL	Cerro Villicun	3.09	69	*i* P	Pn	20 55 31.2	+1.8
AMOG	MOGNA	3.25	63	*i* P	Pn	20 55 33.5	+2.0
LCO	Las Campanas	3.59	16	*e*Pn	Pn	20 55 35.3	-1.2
GO03	Copiap	5.06	17	*e*Pn	Pn	20 55 55.0	-1.5
GO06	Curarrehue	7.10	178	*e*Pn	Pn	20 56 25.5	+1.0
GO02	Mina Guanaco	7.55	16	*e*Pn	Pn	20 56 28.2	-2.7
PLCA	Paso Flores	8.31	173	*e*Pn	Pn	20 56 43.2	+2.2
LVC	Limon Verde	10.17	16	Pn	Pn	20 57 04.8	-2.1
	comp=Z,0.2nm,0.3s,baz=207,slow=9.0,SNR=1.3						
LVC				LR	LR	21 01 12.8	
	comp=Z,222nm,20.3s,baz=192,slow=39						
CPUP	Villa Florida	14.06	68	LR	LR	21 03 41.5	
	comp=Z,95nm,19.4s,baz=216,slow=39						
LPAZ	La Paz	16.47	13	*e*Pn	Pn	20 58 31.3	-0.5
	comp=Z,16nm,1.5s						
LPAZ	La Paz	16.47	13	Pn	Pn	20 58 31.6	-0.1
	comp=Z,0.2nm,0.3s,baz=210,slow=12,SNR=3.3						
LPAZ				LR	LR	21 05 01.2	
	comp=Z,124nm,18.2s,baz=209,slow=38						
BDFB	Brasilia	27.37	58	P	P	21 00 23.1	-1.7
	comp=Z,5.5nm,1.0s,baz=273,slow=4.6,SNR=5.1						
BDFB				LR	LR	21 12 42.5	
	comp=Z,121nm,18.3s,baz=145,slow=40						
VNDA	Vanda	65.62	191	LR	LR	21 30 41.3	
	comp=Z,28nm,18.9s,baz=217,slow=33						
SYO	Syowa Base	67.23	159	⇑*e*P	P	21 05 30.8	-1.9
TXAR	Lajitas Array	68.48	330	P	P	21 05 42.8	+1.5
	comp=Z,0.9nm,0.6s,baz=156,slow=8.2,SNR=16						
TX31	Lajitas Ar. Si	68.49	330	*e*P	P	21 05 42.5	+1.3
WVT	Waverly	69.87	346	*e*P	P	21 05 49.5	0.0
	comp=Z,13nm,0.7s						
W39A	Magazine	70.39	341	*e*P	P	21 05 52.6	-0.1
	comp=Z,8.7nm,0.8s						
CCM	Cathedral Cave	72.46	344	*e*P	P	21 06 05.6	+0.4
	comp=Z,7.7nm,0.8s						
ACSO	Alum Creek Sta	73.07	351	*e*P	P	21 06 08.8	0.0
	comp=Z,15nm,0.6s						
LIC	Lamto	74.15	72	*e*P	P	21 06 14.9	-0.8
	comp=Z,51nm,1.6s						
TIC	Toumodi	74.40	71	*e*P	P	21 06 16.4	-0.8
KIC	Kosan Boka	74.46	72	*e*P	P	21 06 16.9	-0.6
	comp=Z,15nm,0.8s						
DBIC	Dimbokro	74.55	72	P	P	21 06 17.5	-0.6
	comp=Z,4.8nm,0.6s,baz=205,slow=5.5,SNR=10						
SDCO	Great Sand Dun	76.58	333	*e*P	P	21 06 30.9	+1.4
	comp=Z,6.9nm,1.7s						
ISCO	Idaho Springs	78.42	334	*e*P	P	21 06 39.7	0.0
	comp=Z,2.8nm,0.8s						
ECSD	EROS Data Cent	79.15	342	*e*P	P	21 06 44.0	+0.8
	comp=Z,12nm,0.8s						
BOSA	Boshof	80.64	118	P	P	21 06 52.1	0.0
	comp=Z,1.3nm,0.6s,baz=333,slow=3.3,SNR=3.6						
BOSA				LR	LR	21 39 27.6	
	comp=Z,33nm,18.2s,baz=209,slow=34						
DAC	Darwin (Calif)	80.68	324	*e*P	P	21 06 52.7	+0.7
	comp=Z,3.0nm,0.8s						
HWUT	Hardware Ranch	82.29	331	*e*P	P	21 07 01.1	+0.7
	comp=Z,2.3nm,0.6s						
PDAR	Pinedale Array	82.48	333	P	P	21 07 02.1	+0.7
	comp=Z,0.5nm,0.6s,baz=127,slow=4.7,SNR=5.9						
NV01	Mina Array Sit	82.72	325	*e*P	P	21 07 04.6	+1.9
NVAR	Mina Array Bea	82.72	325	P	P	21 07 04.4	+1.7
	comp=Z,1.7nm,0.7s,baz=158,slow=6.2,SNR=12						
NVAR				LR	LR	21 37 35.8	
	comp=Z,44nm,18.6s,baz=276,slow=31						
TOA0	Torodi Ar. Sit	83.55	70	*e*P	P	21 07 05.4	-1.8
TORD	Torodi Ar. Bea	83.55	70	P	P	21 07 05.3	-2.0
	comp=Z,2.2nm,0.6s,baz=235,slow=3.7,SNR=17						
ULM	Lac du Bonnet	85.07	345	P	P	21 07 13.8	-0.3
	comp=Z,4.2nm,0.8s,baz=151,slow=5.9,SNR=8.8						
MCMT	McKenzie Canyo	85.50	332	*e*P	P	21 07 18.8	+2.0
YKA	Yellowknife Ar	100.67	341	P	Pdif	21 08 25.9	-0.3
	comp=Z,0.3nm,0.5s,baz=148,slow=4.2,SNR=7.3						
BRTR	Keskin Array B	120.95	60	PKP	PKPdf	21 13 30.4	-0.8
	comp=Z,0.9nm,0.9s,baz=321,slow=1.6,SNR=4.4						
AKASG	Malin Array Be	121.04	47	PKP	PKPdf	21 13 29.9	-0.9
	comp=Z,0.3nm,0.5s,baz=256,slow=3.7,SNR=2.5						
WRA	Warramunga Arr	122.17	209	PKP	PKPdf	21 13 34.1	+0.1
	comp=Z,0.8nm,0.4s,baz=152,slow=1.8,SNR=6.4						
ARCES	ARCESS Array B	122.57	24	PKP	PKPdf	21 13 32.9	-0.3
	comp=Z,1.2nm,0.8s,baz=235,slow=3.2,SNR=2.9						
H11S2	WAKE ISLAND Hy	125.94	270	T	T	23 32 46.4	
	baz=118,slow=75,SNR=84						
H11S1	WAKE ISLAND Hy	125.95	270	T	T	23 32 47.4	
	baz=118,slow=75,SNR=106						
H11S3	WAKE ISLAND Hy	125.95	270	T	T	23 32 47.8	
	baz=118,slow=75,SNR=98						
SEY	Seymchan	138.78	331	PKP	PKiKP	21 14 05.7	-0.5
	comp=Z,1.6nm,0.5s,baz=62,slow=17,SNR=5.7						
ARSB	Arslanbob	150.69	62	*e*PKPbc	PKiKP	21 14 31.9	+0.4
NIL	Nilore	150.81	78	*e*PKPbc	PKPbc	21 14 31.5	+0.2
AAK	Ala-Archa	151.62	59	*e*PKPbc	PKiKP	21 14 34.2	+0.7
KURK	Kurchatov	151.65	41	*e*PKPbc	PKiKP	21 14 33.3	+0.3
ZAA0	Zalesovo Array	152.85	31	*e*PKPbc	PKiKP	21 14 35.8	+0.4
ZALV	Zalesovo Beam	152.85	31	PKPbc	PKPbc	21 14 35.3	+0.1
	comp=Z,7.4nm,0.6s,baz=301,slow=3.3,SNR=36						
ZALV				PKPab	PKPab	21 14 46.0	-0.3
	comp=Z,2.6nm,0.6s,baz=297,slow=3.2,SNR=7.3						
KSH	Kashi	153.14	66	PKPbc	PKPbc	21 14 36.6	+0.1
KSH				sPKP		21 14 47.5	
KSH				PP	PP	21 18 25.3	+3.0
KSH				SKS	SKSdf	21 21 33.4	+0.4
MKAR	Makanchi Array	155.63	47	PKPbc	PKPdf	21 14 41.8	+10
	comp=Z,0.5nm,0.8s,baz=294,slow=1.4,SNR=3.7						
MKAR				PKPab	PKPab	21 14 58.3	-0.2
	comp=Z,0.9nm,0.5s,baz=288,slow=3.3,SNR=10						

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*KRNET **03** 20:55:16.9±0.1, 42°.58N×79°.66E, h20^{km}, mb2.8*

*ISCJB **03** 20:55:17.7±0.7, 42°.57N±0°.03×79°.71E±0°.04, h10^{km}, Error ellipse: s-maj=6.1km s-min=2.8km az=138.4*

*SOME **03** 20:55:17.4, 42°.57N×79°.65E, h20^{km}*

*NNC **03** 20:55:18.4±1.3, 42°.66N×79°.70E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=8.2km s-min=4.6km az=133.0*

ISC 03 20:55:17.0±1.1**, 42°.56N**±0°.04×**79°.71E**±0°.03**, h10^{km}, n62, σ1^{s}.13**/105**, 27C-21D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.78	320	P	Pg	20 55 31.2	-0.9
	6.9nm,0.1s						
UZB				S	Sg	20 55 41.3	-0.9
	82nm,0.2s						
UZB	Uzynbulak	0.78	320	*e*P	Pg	20 55 31.0	-1.0
	baz=20						
UZB				*e*S	Sg	20 55 40.7	-1.5
	baz=20						
UZB	Uzynbulak	0.78	320	*e*P	Pg	20 55 31.0	-1.0
	6.9nm,0.1s						
UZB				*e*S	Sg	20 55 40.8	-1.5
	82nm,0.2s						
PDGK	Podgornoye	0.79	348	P	Pg	20 55 31.4	-0.9
	14nm,0.2s						
PDGK				S	Sg	20 55 42.0	-0.7
	32nm,0.1s						
PDGK	Podgornoye	0.79	348	⇑P	Pg	20 55 31.3	-1.0
	9.3nm,0.4s						
PDGK				⇑S	Sg	20 55 41.6	-1.0
	34nm,0.5s						
PDGK	Podgornoye	0.79	348	⇓*i*P	Pg	20 55 31.4	-0.9
	baz=50						
PDGK				⇓*i*S	Sg	20 55 41.9	-0.7
	baz=50						
PRZ	Przheval'sk	0.97	266	⇑*i*P	Pg	20 55 35.0	-0.7
	baz=64						
PRZ				⇑*i*S	Sg	20 55 47.6	-0.7
	baz=64						
KTMS	Ketmen	1.01	28	P	Pg	20 55 35.8	-0.7
	28nm,0.1s						
KTMS				S	Sg	20 55 48.9	-0.6
	119nm,0.3s						
KTMS	Ketmen	1.01	28	*e*P	Pg	20 55 35.8	-0.7
	baz=29						
KTMS				*e*S	Sg	20 55 49.0	-0.6
	baz=29						
KTMS	Ketmen	1.01	28	*e*P	Pg	20 55 35.8	-0.7
	28nm,0.1s						
KTMS				*e*S	Sg	20 55 48.9	-0.6
	119nm,0.3s						
SATY	Saty	1.08	298	P	Pg	20 55 36.7	-1.1
	6.0nm,0.1s						
SATY				S	Sg	20 55 49.8	-2.0
	49nm,0.1s						
SATY	Saty	1.08	298	*e*P	Pg	20 55 37.0	-0.8
	0.8nm,0.1s						
SATY				*e*S	Sg	20 55 50.9	-1.0
	24nm,0.1s						
TARG	Taragay, Kyrgy	1.64	240	⇑*i*P	Pn	20 55 46.0	-0.3
	baz=39						
TARG				⇑*i*S	Sb	20 56 07.6	-0.8
	baz=39						
DJR	Jarkent	1.78	2	P	Pg	20 55 49.9	-1.2
	2.9nm,0.1s						
DJR				S	Sg	20 56 12.9	-1.2
	24nm,0.3s						
DJR	Jarkent	1.78	2	*e*P	Pg	20 55 49.9	-1.2
	2.9nm,0.1s						
DJR				*e*S	Sg	20 56 12.9	-1.2
	24nm,0.3s						
MNBS	Baschi	1.80	328	P	Pb	20 55 49.3	-0.8
	8.0nm,0.2s						
MNBS				S	Sb	20 56 12.8	0.0
	75nm,0.3s						
KDJ	Kajisay	1.92	258	⇓*i*P	Pb	20 55 51.6	-0.6
	baz=57						
KDJ				⇓*i*S	Sb	20 56 16.5	+0.2
	baz=57						
KOTS	Kotyrbulak	2.02	290	Pg	Pg	20 55 55.2	-0.6
	7.1nm,0.2s						
KOTS				Lg	Lg	20 56 22.5	
	33nm,0.4s						
KOTS	Kotyrbulak	2.02	290	*e*P	Pb	20 55 53.0	-1.0
	baz=90						
KOTS				*e*S	Sb	20 56 18.4	-0.9
	baz=90						
KOTS	Kotyrbulak	2.02	290	*e*P	Pb	20 55 53.0	-1.0
	1.4nm,0.5s						
KOTS				*e*S	Sb	20 56 18.4	-0.9
	33nm,0.4s						
MDOK	Medeo	2.05	288	Pn	Pb	20 55 53.0	-1.4
	3.6nm,0.5s						
MDOK				Sn	Sb	20 56 20.1	+0.1
	7.7nm,0.4s						
MDOK	Medeo	2.05	288	Pg	Pb	20 55 54.1	-0.3
	2.8nm,0.1s						
MDOK				Lg	Lg	20 56 19.7	
	14nm,0.4s						
MDOK	Medeo	2.05	288	*e*P	Pb	20 55 53.6	-0.8
	baz=88						
MDOK				*e*S	Sb	20 56 19.7	-0.2
	baz=88						
MDOK	Medeo	2.05	288	*e*P	Pb	20 55 53.6	-0.8
	0.9nm,0.3s						
MDOK				*e*S	Sb	20 56 19.7	-0.2
	14nm,0.4s						
TNSS	Tian-Shan	2.09	284	Pg	Pb	20 55 55.4	+0.2
	8.4nm,0.2s						
TNSS				Lg	Lg	20 56 21.9	
	17nm,0.3s						
TNSS	Tian-Shan	2.09	284	*e*P	Pb	20 55 55.4	+0.2
	3.5nm,0.1s						
TNSS				*e*S	Sg	20 56 22.7	-1.5
	7.5nm,0.3s						
KNDC	Almaty	2.12	289	⇑Pn	Pg	20 55 59.2	+1.5
	5.4nm,0.3s						
KNDC				⇑Sn	Sg	20 56 26.6	+1.5
	22nm,0.6s						
ARXS	Arharly	2.15	321	Pg	Pb	20 55 55.9	-0.2
	5.2nm,0.2s						
ARXS				Lg	Lg	20 56 23.1	
	25nm,0.3s						
ARXS	Arharly	2.15	321	*e*P	Pb	20 55 55.5	-0.6
	1.9nm,0.3s						
ARXS				*e*S	Sb	20 56 23.1	+0.2
	25nm,0.3s						
IZV	Izvestkoviy	2.33	283	Pg	Pb	20 55 58.4	-0.8
	9.1nm,0.1s						
IZV				Lg	Lg	20 56 28.2	

	35nm,0.5s						
IZV	Izvestkoviy	2.33	283	eP	Pb	20 55 58.4	-0.8
	9.1nm,0.1s						
IZV				eS	Sb	20 56 28.2	+0.2
	35nm,0.5s						
CHKK	Chushkaly	2.37	304	Pg	Pb	20 55 59.0	-0.9
	2.9nm,0.2s						
CHKK				Lg	Lg	20 56 29.5	
	28nm,0.2s						
CHKK	Chushkaly	2.37	304	eP	Pb	20 55 59.2	-0.6
	1.1nm,0.1s						
CHKK				eS	Sb	20 56 29.5	+0.3
	28nm,0.2s						
MTBS	Maitube	2.48	285	Pg	Pb	20 56 01.7	0.0
	6.7nm,0.3s						
MTBS				Lg	Lg	20 56 33.1	
	13nm,0.4s						
MTBS	Maitube	2.48	285	eP	Pb	20 56 01.7	0.0
	6.7nm,0.3s						
MTBS				eS	Sb	20 56 33.1	+0.8
	13nm,0.4s						
KTBS	Karatobe	2.50	299	Pg	Pb	20 56 01.3	-0.7
	2.9nm,0.2s						
KTBS				Lg	Lg	20 56 33.1	
	16nm,0.3s						
KTBS	Karatobe	2.50	299	eP	Pb	20 56 01.3	-0.7
	baz=97						
KTBS				eS	Sb	20 56 33.2	+0.3
	baz=97						
KTBS	Karatobe	2.50	299	eP	Pb	20 56 01.3	-0.7
	2.9nm,0.2s						
KTBS				eS	Sb	20 56 33.1	+0.3
	16nm,0.3s						
ULHL	Ulahol	2.58	264	⇑iP	Pb	20 56 00.9	-2.7
	baz=64						
ULHL				⇑iS	Sn	20 56 32.2	+1.5
	baz=64						
TDK	Taldyqorghan	2.62	339	Pg	Pb	20 56 03.3	-0.8
	13nm,0.3s						
TDK				Lg	Lg	20 56 37.5	
	22nm,0.6s						
TDK	Taldyqorghan	2.62	339	eP	Pb	20 56 03.3	-0.8
	9.7nm,0.4s						
TDK				eS	Sb	20 56 36.5	+0.1
	22nm,0.6s						
KAPS	Kapalarasan	2.74	355	Pg	Pb	20 56 04.8	-1.3
	1.6nm,0.3s						
KAPS				Lg	Lg	20 56 38.6	
	19nm,0.5s						
BOOM	Boomskoye usch	2.79	270	⇓iP	Pn	20 56 03.1	+1.3
	baz=69						
BOOM				⇓iS	Sn	20 56 37.5	+1.9
	baz=69						
KST	Kastek	2.80	281	Pg	Pb	20 56 07.8	+0.6
	6.1nm,0.3s						
KST				Lg	Lg	20 56 43.4	
	13nm,0.6s						
KST	Kastek	2.80	281	eP	Pb	20 56 06.9	-0.2
	1.6nm,0.2s						
KST				eS	Sb	20 56 42.3	+0.8
	13nm,0.6s						
DGS	Degeres	2.97	285	Pg	Pb	20 56 11.3	+1.2
	6.7nm,0.5s						
DGS				Lg	Lg	20 56 49.9	
	28nm,0.3s						
NRN	Naryn	2.98	249	⇑iP	Pn	20 56 06.6	+1.9
	baz=48						
NRN				⇑iS	Sn	20 56 42.4	+1.8
	baz=48						
TKM2	Tokmak 2	3.05	278	⇑Pn	Pb	20 56 09.4	-2.1
	2.2nm,0.5s						
TKM2				⇑Lg	Lg	20 56 53.4	
	3.4nm,0.4s						
TKM2	Tokmak 2	3.05	278	⇑iP	Pn	20 56 07.0	+1.5
	baz=78						
TKM2				⇑iS	Sn	20 56 43.2	+1.0
	baz=78						
KZA	Kyzart	3.34	263	⇑iP	Pn	20 56 11.5	+1.8
	baz=63						
KZA				⇑iS	Sn	20 56 50.8	+1.2
	baz=63						
KBK	Karagaybulak	3.51	273	⇓iP	Pn	20 56 13.4	+1.5
	baz=73						
KBK				⇓iS	Sn	20 56 54.9	+1.3
	baz=73						
CHMS	Chumysh	3.67	279	⇓iP	Pn	20 56 15.5	+1.6
	baz=78						
CHMS				⇓eS	Sn	20 56 58.1	+0.8
	baz=78						
FRU1	Bishkek	3.75	276	⇑iP	Pn	20 56 16.7	+1.7
	baz=75						
FRU1				⇑iS	Sn	20 57 00.3	+1.0
	baz=75						
AAK	Ala-Archa	3.85	273	⇑Pg	Pg	20 56 29.7	-1.0
	1.1nm,0.5s						
AAK				⇓Lg	Lg	20 57 19.5	
	3.5nm,0.5s						
UCH	Uchtor	3.86	267	⇓iP	Pn	20 56 18.9	+2.0
	baz=66						
UCH				⇓iS	Sn	20 57 03.3	+0.8
	baz=66						
ARLS	Aral	4.06	262	⇓iP	Pn	20 56 20.6	+1.3
	baz=62						
ARLS				⇓iS	Sn	20 57 07.2	+0.2
	baz=62						
AML	Almayashu	4.48	267	⇓eP	Pn	20 56 27.3	+2.0
	baz=66						
AML				⇓iS	Sn	20 57 18.2	+0.6
	baz=66						
MAKZ	Makanchi	4.55	20	⇑Pn	Pn	20 56 27.8	+1.8
	0.5nm,0.4s						
MAKZ				⇓Sn	Sn	20 57 19.9	+1.0
	0.6nm,0.3s						
MAKZ				⇓Lg	Lg	20 57 36.3	
	0.6nm,0.3s						
MK31	Makanchi Array	4.62	23	⇓Pn	Pn	20 56 28.8	+1.9
	0.3nm,0.3s,baz=207,slow=10,SNR=17						
MK31				⇑Sn	Sn	20 57 21.5	+0.9
	1.7nm,0.7s,baz=200,slow=22,SNR=8.5						
MK31				⇑Lg	Lg	20 57 40.5	
	0.6nm,0.3s,baz=208,slow=28,SNR=4.7						
MNAS	Manas	5.32	272	⇓Pg	Pg	20 56 56.0	-2.9
	0.8nm,0.6s						
MNAS				⇑Lg	Lg	20 58 09.7	
	0.7nm,0.5s						
KURBB	Kurchatov Arra	8.11	355	⇑Lg	Lg	20 59 30.4	
	2.9nm,0.6s						
KURK	Kurchatov	8.20	355	⇑Lg	Lg	20 59 36.2	
	1.0nm,0.6s						

NIED ***03*** *21:03:00, 29°.40N×142°.40E, h5^{km}, Mw4.1 Best double couple: M$_0$1.87000×10^{15} NP1:φ$_s$176.00000°, δ15.00000°, λ53.00000°. NP2:φ$_s$34.00000°, δ78.00000°, λ99.00000°.*
JMA ***03*** *21:03:55.8±0.1, 29°.39N×142°.37E, h41^{km}, M4.1*
ISCJB ***03*** *21:03:57.5±0.5, 29°.35N±0°.04×142°.0E±0°.1, h35^{km}, mb3.7/14, MS3.4/4, Error ellipse: s-maj=18.1km s-min=4.1km az=167.2*
IDC ***03*** *21:03:59.5±2.6, 29°.23N×142°.07E, h38^{km}±23^{km}, mb3.6/14, mb1 3.8/17, mb1mx3.6/52, mbtmp3.8/17, ML3.2/4, MS3.3/8, Ms1 3.3/8, ms1mx3.0/41, Error ellipse: s-maj=23.6km s-min=13.9km az=76.0*
ISC 03 21:03:59.5±0.6**, 29°.30N**±0°.06×**142°.0E**±0°.1**, h35**^{km}**, n33, σ1^s.34**/35**, mb3.7**/14**, MS3.4**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.21	175	P	Pn	21 04 32.3	-1.3
JCJ	Chichijima	2.21	175	Pn	Pn	21 04 32.4	-1.2
	11nm,0.3s,baz=311,slow=20,SNR=9.1						
JCJ				Sn	Sn	21 04 58.7	-1.0
	32nm,0.3s,baz=291,slow=21,SNR=8.6						
JHJ	Hachijo jima 2	4.24	334	Pn	Pn	21 05 02.4	+0.8
	7.6nm,0.3s,baz=79,slow=23,SNR=3.3						
JHJ				Sn	Sn	21 05 46.0	-3.9
	18nm,0.3s,baz=292,slow=22,SNR=3.5						
JHJ				LR	LR	21 06 37.1	
	comp=Z,242nm,20.3s,baz=204,slow=36						
BSO1	Boso 1	5.40	351	eS	Sn	21 06 16.7	-1.0
JOD2	Odawara 2	6.42	338	P	Pn	21 05 31.6	0.0
JHU	Hanno	6.91	342	P	Pn	21 05 38.1	-0.2
JHU				eS	Sn	21 06 54.4	-1.3
JRY	Ryogami san	7.17	340	P	Pn	21 05 42.1	+0.2
JRY				eS	Sn	21 07 01.8	-0.4
JHO	Hitachi	7.38	351	P	Pn	21 05 44.0	-0.7
JAG	Ashikaga	7.41	344	P	Pn	21 05 44.8	-0.3
JAG				eS	Sn	21 07 05.0	-2.9
MJAR	Matsushiro Arr	7.88	337	Pn	Pn	21 05 52.4	+0.8
	0.4nm,0.3s,baz=140,slow=16,SNR=19						
MJAR				Sn	Sn	21 07 19.7	+0.2
	0.1nm,0.3s,baz=178,slow=30,SNR=3.4						
MJAR				LR	LR	21 08 58.8	
	comp=Z,101nm,19.0s,baz=165,slow=38						
MAT	Matsushiro	7.88	337	P	Pn	21 05 52.3	+0.7
MAT				S	Sn	21 07 20.8	+1.3
JNU	Nakatsue	10.22	295	LR	LR	21 10 21.3	
	comp=Z,168nm,18.7s,baz=117,slow=37						
KSRS	Korea Array	14.26	308	Pn	P	21 07 23.6	-2.0
	0.1nm,0.3s,baz=117,slow=11,SNR=2.8						
KSRS				LR	LR	21 12 57.0	
	comp=Z,98nm,18.7s,baz=111,slow=37						
USRK	Ussuriysk Ar.	16.86	335	Pn	Pn	21 07 54.4	+1.7
	0.2nm,0.3s,baz=236,slow=48,SNR=4.8						
KLR	Kul'dur	21.38	341	P	P	21 08 45.6	+1.8
	0.4nm,0.4s,baz=149,slow=14,SNR=3.0						
H11N2	WAKE ISLAND Hy	24.56	107	T	T	21 35 01.6	
	baz=299						
H11N1	WAKE ISLAND Hy	24.57	107	T	T	21 34 50.5	
	baz=299						
H11N3	WAKE ISLAND Hy	24.58	107	T	T	21 35 00.4	
	baz=299						
SONM	Songino Array	33.02	314	P	P	21 10 31.9	+0.5
	0.5nm,0.5s,baz=123,slow=8.7,SNR=6.6						
SONM				LR	LR	21 23 15.2	
	comp=Z,47nm,19.2s,baz=292,slow=35						
CMAR	Chiang Mai Arr	40.59	264	P	P	21 11 36.5	+0.4
	0.9nm,0.7s,baz=53,slow=7.9,SNR=12						
CMAR				LR	LR	21 30 19.1	
	comp=Z,44nm,18.3s,baz=88,slow=39						
ZALV	Zalesovo Beam	47.71	318	P	P	21 12 32.6	0.0
	1.6nm,0.8s,baz=101,slow=7.9,SNR=7.9						
MKAR	Makanchi Array	48.94	308	P	P	21 12 42.0	-0.2
	1.7nm,0.8s,baz=90,slow=10,SNR=18						
MKAR				LR	LR	21 34 19.8	
	comp=Z,45nm,18.4s,baz=70,slow=37						
WRA	Warramunga Arr	49.51	189	P	P	21 12 45.7	-1.0
	1.4nm,0.5s,baz=11,slow=8.2,SNR=11						
ASAR	Alice Springs	53.23	189	P	P	21 13 13.8	-0.8
	0.2nm,0.4s,baz=354,slow=5.7,SNR=4.1						
YKA	Yellowknife Ar	70.30	29	P	P	21 15 08.2	-0.8
	0.3nm,0.6s,baz=296,slow=6.5,SNR=5.0						
FINES	FINESS Array B	75.89	334	P	P	21 15 42.2	+0.1
	0.4nm,0.4s,baz=62,slow=9.5,SNR=4.9						
KBZ	Khabaz	76.37	313	P	P	21 15 46.0	+0.8
	3.3nm,0.8s,baz=71,slow=8.2,SNR=7.6						
NVAR	Mina Array Bea	79.31	52	P	P	21 16 01.9	-0.1
	0.4nm,0.6s,baz=296,slow=4.8,SNR=4.4						
AKASG	Malin Array Be	80.73	324	P	P	21 16 09.2	+0.1
	0.1nm,0.3s,baz=56,slow=5.1,SNR=3.1						
NOA	NORSAR Array B	81.50	338	LR	LR	21 55 39.4	
	comp=Z,20nm,18.6s,baz=295,slow=38						
BRTR	Keskin Array B	84.37	313	P	P	21 16 29.4	+0.9
	1.2nm,0.9s,baz=117,slow=3.3,SNR=5.5						
TXAR	Lajitas Array	94.44	53	P	P	21 17 16.1	-0.3
	0.4nm,0.8s,baz=302,slow=2.4,SNR=4.3						
LPAZ	La Paz	149.48	71	PKPbc	PKPdf	21 23 44.8	+2.8
	0.7nm,0.5s,baz=317,slow=4.5,SNR=2.1						

ISCJB ***03*** *21:04:03.4±0.5, 7°.25S±0°.06×155°.74E±0°.07, h200^{km}, mb4.1/20, Error ellipse: s-maj=10.2km s-min=8.0km az=151.9*
IDC ***03*** *21:04:03.9±2.8, 7°.17S×155°.65E, h182^{km}±29^{km}, mb3.8/8, mb1 3.8/10, mb1mx3.5/41, mbtmp4.2/10, MS3.4/4, Ms1 3.4/4, ms1mx2.9/33, Error ellipse: s-maj=25.0km s-min=19.5km az=123.0*
NEIC ***03*** *21:04:04.3±0.9, 7°.24S×155°.72E, h193^{km}±8^{km}, mb4.3/10, Error ellipse: s-maj=11.9km s-min=8.7km az=100.0*
ISC 03 21:04:04.3±0.6**, 7°.23S**±0°.10×**155°.77E**±0°.08**, h200**^{km}**, n53, σ1^s.51**/49**, mb4.2**/26**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.67	118	eP	Pn	21 05 20.0	+5.4
HNR				eS	Sn	21 06 07.0	-3.0
HNR	Honiara	4.67	118	ePn	Pn	21 05 15.5	+0.9
HNR				eSn	Sn	21 05 58.6	-11
HNR	Honiara	4.67	118	P	Pn	21 05 16.1	+1.5
	12nm,0.3s,baz=293,slow=7.7,SNR=2.5						
HNR				S	Sn	21 06 09.1	-0.8
	11nm,0.3s,baz=232,slow=4.2,SNR=5.2						
HNR				LR	LR	21 06 50.2	
	comp=Z,153nm,18.8s,baz=274,slow=35						
RABL	Rabaul	4.69	310	ePn	Pn	21 05 14.0	-0.9
RABL				eSn	Sn	21 06 06.5	-3.9
CTA	Charters Tower	15.76	215	P	Pn	21 07 35.9	+0.1
	0.3nm,0.3s,baz=34,slow=17,SNR=3.0						
WRAB	Tennant Creek	24.31	237	eP	P	21 09 04.5	+0.8
	7.9nm,0.7s						
WB2	Warramunga Arr	24.31	237	eP	P	21 09 04.6	+0.8
WB2				ePcP	PcP	21 12 41.3	+3.1
WR1	Warramunga Arr	24.32	237	eP	P	21 09 04.4	+0.5
	8.3nm,0.9s						
WRA	Warramunga Arr	24.32	237	P	P	21 09 04.4	+0.5
	6.7nm,0.7s,baz=60,slow=9.8,SNR=60						
MTN	Manton Dam	24.88	255	eP	P	21 09 08.1	-0.9
	25nm,1.5s						
SIJI	Sorong	25.23	283	P	P	21 09 11.8	-0.4
	5.7nm,0.6s,baz=99,slow=9.2,SNR=4.4						
AS31	Alice Springs	26.59	230	eP	P	21 09 24.3	-0.1
	0.4nm,0.6s						
ASAR	Alice Springs	26.60	230	P	P	21 09 24.3	-0.1
	0.6nm,0.5s,baz=58,slow=9.5,SNR=10						
H11S3	WAKE ISLAND Hy	27.74	23	T	T	21 37 53.3	
	baz=202,slow=76,SNR=46						
H11S2	WAKE ISLAND Hy	27.75	23	T	T	21 37 47.5	
	baz=202,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	27.76	23	T	T	21 37 54.6	
	baz=202,slow=76,SNR=24						
STKA	Stephens Creek	27.86	206	LR	LR	21 20 30.1	
	comp=Z,66nm,18.5s,baz=25,slow=35						
H11N1	WAKE ISLAND Hy	28.93	22	T	T	21 39 24.7	
	baz=204,slow=74						
H11N3	WAKE ISLAND Hy	28.94	22	T	T	21 39 25.9	
	baz=204,slow=74						
H11N2	WAKE ISLAND Hy	28.95	22	T	T	21 39 27.5	
	baz=204						
FITZ	Fitzroy Crossi	31.26	247	eP	P	21 10 05.6	0.0
	2.5nm,0.6s						
TOO	Toolangi	31.61	196	eP	P	21 10 07.5	-1.0
WHZ	Wether Hill Ro	39.93	167	eP	P	21 11 16.4	-2.5
	41nm,0.3s						
MJAR	Matsushiro Arr	46.56	340	P	P	21 12 09.5	-2.6
	0.9nm,0.9s,baz=170,slow=9.6,SNR=3.1						
MAJO	Matsushiro	46.56	340	eP	P	21 12 09.5	-2.6
KSRS	Korea Array	51.51	332	P	P	21 12 48.4	-1.3
	1.3nm,0.7s,baz=154,slow=8.3,SNR=6.6						
KS15	Wonju Array Si	51.52	332	eP	P	21 12 48.4	-1.3
	8.5nm,1.0s						
KSAR	Wonju Array Be	51.52	332	P	P	21 12 48.4	-1.3
CM01	Chiang Mai Arr	61.55	295	eP	P	21 14 02.2	+1.4
CM31	Chiang Mai Arr	61.58	295	eP	P	21 14 02.5	+1.5
	9.1nm,1.4s						
CMAR	Chiang Mai Arr	61.58	295	P	P	21 14 02.5	+1.5
	2.8nm,1.0s,baz=119,slow=5.1,SNR=17						
ULN	Ulaanbaatar	69.62	327	eP	P	21 14 53.5	+1.4
	3.7nm,0.8s						
SONA0	Songino Array	69.95	327	eP	P	21 14 55.3	+1.2
SONM	Songino Array	69.95	327	P	P	21 14 55.3	+1.2
	4.3nm,0.8s,baz=139,slow=6.7,SNR=28						
SONA1	Songino Array	69.95	327	eP	P	21 14 55.0	+0.9
JIRN	Jiri	75.56	301	eP	P	21 15 29.2	+1.3
	8.2nm,0.7s						
GUN	Gumba	75.90	301	eP	P	21 15 30.9	+1.2
	16nm,0.8s						
PKIN	Phulchoki	76.22	301	eP	P	21 15 32.1	+0.7
DMN	Daman	76.47	301	eP	P	21 15 34.2	+1.3
	12nm,0.7s						
KOLN	Koldanda	77.81	300	eP	P	21 15 41.1	+0.9
	7.3nm,0.7s						
DANN	Dangsing	77.82	301	eP	P	21 15 41.0	+0.6
	7.0nm,0.6s						
PYUN	Piuthan	78.41	301	eP	P	21 15 44.1	+0.6
	15nm,1.1s						
MK32	Makanchi Array	84.09	319	eP	P	21 16 14.1	+1.3
MKAR	Makanchi Array	84.09	319	P	P	21 16 14.1	+1.3
	3.4nm,0.7s,baz=101,slow=6.0,SNR=27						
MAKZ	Makanchi	84.30	318	eP	P	21 16 15.2	+1.3
	4.4nm,0.8s						
ZALV	Zalesovo Beam	84.81	326	P	P	21 16 15.9	-0.2
	1.2nm,0.5s,baz=114,slow=6.0,SNR=4.9						
ZAA1	Zalesovo Array	84.81	326	eP	P	21 16 15.9	-0.2
KDJ	Kajisay	86.42	313	eP	P	21 16 27.5	+2.9
	3.0nm,1.0s						
DLBC	Dease Lake	87.96	30	LR	LR	21 49 41.1	
	comp=Z,56nm,18.9s,baz=310,slow=31						
NEW	Newport	93.42	42	LR	LR	21 51 43.5	
	comp=Z,17nm,20.9s,baz=262,slow=31						
BDFB	Brasilia	147.26	134	PKPbc	PKiKP	21 23 26.7	-0.8
	2.2nm,0.6s,baz=316,slow=0.8,SNR=4.7						
TORD	Torodi Ar. Bea	153.83	285	PKPbc	PKiKP	21 23 41.3	+0.4
	0.8nm,0.9s,baz=20,slow=3.8,SNR=4.4						
TORD				PKPab	PKPab	21 23 56.1	+1.5
	0.2nm,0.4s,baz=95,slow=4.7,SNR=4.4						
TOA1	Torodi Ar. Sit	153.83	285	ePKPbc	PKiKP	21 23 41.3	+0.5
TOA1				ePKPab	PKPab	21 23 56.1	+1.4

IDC ***03*** *21:05:53.9±5.0, 24°.50S×179°.85E, h555^{km}±51^{km}, mb3.4/5, mb1 3.5/7, mb1mx3.1/36, mbtmp4.4/7, Error ellipse: s-maj=48.5km s-min=37.6km az=40.0*
ISC 03 21:05:49.9±1.8**, 24°.2S**±0°.2×**179°.9W**±0°.2**, h517**^{km}**, n10, σ1^s.28**/9**, mb3.8**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.77	277	P	P	21 08 37.5	+0.8
	0.6nm,0.3s,baz=75,slow=18,SNR=6.4						
URZ	Urewera	14.24	190	P	P	21 08 52.1	+0.4
	0.6nm,0.3s,baz=76,slow=4.2,SNR=3.0						
URZ				S	S	21 11 11.7	-10
	0.1nm,0.3s,baz=96,slow=19,SNR=2.0						
CTA	Charters Tower	31.59	271	P	P	21 11 30.1	0.0
	9.0nm,0.3s,baz=92,slow=11,SNR=25						
STKA	Stephens Creek	34.72	249	P	P	21 11 56.2	-0.1
	1.4nm,0.6s,baz=76,slow=11,SNR=3.9						
ASAR	Alice Springs	42.10	261	P	P	21 12 55.9	-0.6
	0.6nm,0.3s,baz=90,slow=9.1,SNR=12						
WRA	Warramunga Arr	42.50	266	P	P	21 12 57.3	-2.4
	1.3nm,0.4s,baz=96,slow=8.3,SNR=25						
JAY	Jayapura	43.74	293	P	P	21 13 10.6	+1.0
	15nm,0.7s,baz=99,slow=19,SNR=3.8						
ARCES	ARCESS Array B	132.21	348	PKP	PKPdf	21 24 03.0	-1.0
	1.1nm,0.7s,baz=74,slow=4.0,SNR=4.5						
FINES	FINESS Array B	138.78	341	PKhKP	PKPpre	21 24 06.3	
	1.3nm,0.8s,baz=46,slow=6.0,SNR=3.2						
FINES				PKP	sPdif	21 24 18.0	+1.0
	0.7nm,0.8s,baz=35,slow=5.1,SNR=3.4						
AKASG	Malin Array Be	145.29	327	PKPbc	PKPdf	21 24 29.1	+0.8
	0.2nm,0.3s,baz=44,slow=4.1,SNR=5.0						

IDC 03 21:10:46.1±4.1**, 7°.05S**×**148°.51E, h0**^{km}**, mb2.9**/1**, mb1 3.3**/2**, mb1mx3.0**/32**, mbtmp3.0**/2**, ML3.2**/1**, Error ellipse: s-maj=169.8km s-min=47.5km az=117.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.79	226	P	P	21 15 06.1	-1.2
	0.1nm,0.3s,baz=50,slow=11,SNR=2.8						
ASAR	Alice Springs	21.67	219	P	P	21 15 38.9	+0.3
	0.3nm,0.5s,baz=53,slow=8.8,SNR=5.5						
TORD	Torodi Ar. Bea	146.80	283	PKPbc	PKPbc	21 30 30.7	-0.6
	0.3nm,0.7s,baz=89,slow=3.7,SNR=2.5						

KRNET ***03*** *21:16:40.1±0.1, 42°.53N×79°.65E, h13^{km}, mb2.5*
SOME ***03*** *21:16:41.6, 42°.58N×79°.70E, h20^{km}*
NNC ***03*** *21:16:41.6±0.9, 42°.61N×79°.67E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=6.0km s-min=3.6km az=136.0*
ISC 03 21:16:41.5±1.2**, 42°.59N**±0°.05×**79°.68E**±0°.04**, h10**^{km}**, n43, σ1^s.03**/77**, 17C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.74	320	P	Pg	21 16 55.5	-0.3
	6.8nm,0.1s						
UZB				S	Sb	21 17 05.8	-1.1
	19nm,0.3s						
UZB	Uzynbulak	0.74	320	eP	Pg	21 16 55.5	-0.3
	baz=23						
UZB				eS	Sb	21 17 05.8	-1.1
	baz=23						
UZB	Uzynbulak	0.74	320	eP	Pg	21 16 55.5	-0.3
	6.8nm,0.1s						
UZB				eS	Sb	21 17 05.8	-1.1
	19nm,0.3s						
PDGK	Podgornoye	0.76	350	P	Pg	21 16 55.8	-0.3
	0.8nm,0.1s						
PDGK				S	Sb	21 17 06.3	-1.0
	7.1nm,0.1s						
PDGK	Podgornoye	0.76	350	⇓P	Pg	21 16 55.6	-0.5
	0.5nm,0.3s						
PDGK				⇓S	Sb	21 17 05.9	-1.3
	9.2nm,0.7s						
PDGK	Podgornoye	0.76	350	⇑iP	Pg	21 16 55.8	-0.3
	baz=52						
PDGK				⇑iS	Sb	21 17 06.5	-0.8
	baz=52						
PRZ	Przheval'sk	0.95	264	⇑eP	Pg	21 16 56.7	-3.1
	baz=67						
PRZ				⇑iS	Sg	21 17 09.0	-3.2
	baz=67						
KTMS	Ketmen	0.99	30	P	Pg	21 17 00.1	-0.5
	3.8nm,0.1s						
KTMS				S	Sb	21 17 13.4	-0.7
	2.8nm,0.2s						
KTMS	Ketmen	0.99	30	eP	Pg	21 17 00.1	-0.5
	baz=28						
KTMS				eS	Sb	21 17 13.4	-0.7
	baz=28						
KTMS	Ketmen	0.99	30	eP	Pg	21 17 00.1	-0.5
	3.8nm,0.1s						
KTMS				eS	Sb	21 17 13.4	-0.7
	2.8nm,0.2s						
SATY	Saty	1.05	297	P	Pg	21 17 01.0	-0.7
	2.4nm,0.1s						
SATY				S	Sg	21 17 14.7	-0.6
	12nm,0.1s						
SATY	Saty	1.05	297	eP	Pg	21 17 01.0	-0.7
	2.4nm,0.1s						
SATY				eS	Sg	21 17 14.7	-0.6
	12nm,0.1s						
KURS	Kuram	1.43	310	P	Pb	21 17 08.1	-0.2
	1.5nm,0.5s						
KURS				S	Sg	21 17 26.8	-0.6
	3.5nm,0.4s						
KURS	Kuram	1.43	310	eP	Pb	21 17 08.1	-0.2
	baz=12						
KURS				eS	Sg	21 17 26.8	-0.6
	baz=12						
KURS	Kuram	1.43	310	eP	Pb	21 17 08.1	-0.2
	1.5nm,0.5s						
KURS				eS	Sg	21 17 26.8	-0.6
	3.5nm,0.4s						
DJR	Jarkent	1.75	3	P	Pb	21 17 13.8	+0.1
	1.5nm,0.1s						
DJR				S	Sg	21 17 37.0	-0.7
	3.8nm,0.3s						
DJR	Jarkent	1.75	3	eP	Pb	21 17 13.8	+0.1
	1.5nm,0.1s						
DJR				eS	Sg	21 17 37.0	-0.7
	3.8nm,0.3s						
MNBS	Baschi	1.76	328	P	Pb	21 17 14.0	0.0
	1.5nm,0.1s						
MNBS				S	Sg	21 17 37.2	-0.9
	20nm,0.2s						
KDJ	Kajisay	1.91	257	⇑iP	Pn	21 17 14.9	+0.7
	baz=58						
KDJ				⇑iS	Sn	21 17 39.4	+1.0
	baz=58						
KOTS	Kotyrbulak	1.99	290	Pg	Pg	21 17 19.1	-0.7
	1.9nm,0.2s						
KOTS				Lg	Lg	21 17 46.5	
	10.0nm,0.3s						
MDOK	Medeo	2.02	288	Pn	Pn	21 17 16.9	+1.1
	1.2nm,0.5s						
MDOK				Sn	Sb	21 17 43.7	+0.1
	4.1nm,0.7s						
MDOK	Medeo	2.02	288	Pg	Pb	21 17 17.9	-0.4
	1.1nm,0.3s						
MDOK				Lg	Lg	21 17 43.9	
	3.7nm,0.4s						
MDOK	Medeo	2.02	288	eP	Pb	21 17 17.9	-0.4
	baz=89						
MDOK				eS	Sb	21 17 43.9	+0.3
	baz=89						

MDOK	**Medeo** 1.1nm,0.3s	2.02	288	eP	Pb	21 17 17.9	-0.4
MDOK	3.7nm,0.4s			eS	Sb	21 17 43.9	+0.3
TNSS	**Tian-Shan** 1.9nm,0.3s	2.06	284	Pg	Pb	21 17 18.3	-0.9
TNSS	4.6nm,0.3s			Lg	Lg	21 17 45.5	
TNSS	**Tian-Shan** baz=85	2.06	284	eP	Pb	21 17 18.3	-0.9
TNSS	baz=85			eS	Sb	21 17 44.8	-0.3
TNSS	**Tian-Shan** 1.9nm,0.3s	2.06	284	eP	Pb	21 17 18.3	-0.9
TNSS	4.6nm,0.3s			eS	Sb	21 17 44.8	-0.3
IZV	**Izvestkoviy**	2.30	282	Pg	Pb	21 17 22.9	-0.2
IZV	6.0nm,0.3s			Lg	Lg	21 17 52.5	
IZV	**Izvestkoviy** baz=84	2.30	282	eP	Pb	21 17 23.2	0.0
IZV	baz=84			eS	Sb	21 17 53.1	+1.3
IZV	**Izvestkoviy** 1.0nm,0.1s	2.30	282	eP	Pb	21 17 23.2	0.0
IZV	6.0nm,0.3s			eS	Sb	21 17 53.1	+1.3
CHKK	**Chushkaly** 1.2nm,0.2s	2.34	304	Pg	Pb	21 17 23.1	-0.7
CHKK	6.9nm,0.2s			Lg	Lg	21 17 53.5	
CHKK	**Chushkaly** baz=5.0	2.34	304	eP	Pb	21 17 23.2	-0.6
CHKK	baz=5.0			eS	Sb	21 17 53.5	+0.8
CHKK	**Chushkaly** 1.2nm,0.1s	2.34	304	eP	Pb	21 17 23.2	-0.6
CHKK	6.9nm,0.2s			eS	Sb	21 17 53.5	+0.8
ULHL	**Ulahol** baz=65	2.57	264	⇑iP	Pn	21 17 24.8	+1.4
ULHL	baz=65			⇑iS	Sn	21 17 56.4	+1.7
KAPS	**Kapalarasan** 0.3nm,0.3s	2.71	355	Pg	Pb	21 17 29.9	-0.2
KAPS	5.8nm,0.4s			Lg	Lg	21 18 05.4	
KAPS	**Kapalarasan** 0.3nm,0.3s	2.71	355	eP	Pb	21 17 30.2	+0.1
KAPS	5.8nm,0.4s			eS	Sg	21 18 05.4	-3.1
BOOM	**Boomskoye usch** baz=70	2.76	269	⇑iP	Pn	21 17 27.0	+1.0
BOOM	baz=70			⇑iS	Sn	21 18 01.0	+1.4
NRN	**Naryn** baz=49	2.97	248	⇑iP	Pn	21 17 30.4	+1.4
NRN	baz=49			⇑iS	Sn	21 18 06.9	+2.0
TKM2	**Tokmak 2** 1.0nm,0.7s	3.02	278	⇑Pg	Pb	21 17 36.5	+0.9
TKM2	1.4nm,0.5s			⇑Lg	Lg	21 18 14.3	
TKM2	**Tokmak 2** baz=79	3.02	278	⇓iP	Pn	21 17 30.7	+1.1
TKM2	baz=79			⇓iS	Sn	21 18 07.4	+1.4
KZA	**Kyzart** baz=64	3.32	263	⇓eP	Pn	21 17 34.9	+1.0
KZA	baz=64			⇓iS	Sn	21 18 14.6	+0.9
MAKZ	**Makanchi** 0.4nm,0.8s	4.53	20	⇑Pn	Pn	21 17 51.0	+0.9
MAKZ	0.3nm,0.7s			⇑Lg	Lg	21 19 02.0	
MK31	**Makanchi Array** 0.1nm,0.3s,baz=210,slow=15,SNR=5.3	4.60	23	⇓Pn	Pn	21 17 52.3	+1.2
MK31	0.3nm,0.6s,baz=206,slow=27			⇑Lg	Lg	21 19 06.2	

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*IDC **03** 21:18:01.8±1.7, 44°.17N×105°.40W, h0^{km}, mb1 3.0/3, mb1mx2.9/56, mbtmp2.7/3, ML2.4/3, Error ellipse: s-maj=44.5km s-min=8.7km az=146.0*

*NEIC **03** 21:18:08.2±0.7, 43°.95N×105°.22W, h0^{km}, ML2.7, Error ellipse: s-maj=11.2km s-min=7.8km az=156.0, Suspected Mining explosion.*

NEIC 44 km [27 miles] SSE of Gillette.

ISC 03 21:18:01.1±0.8, **44°.17N**±0°.03×**105°.44W**±0°.04, **h0^{km}, n23, σ1^{s}.79**/33, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	1.01	92	ePg	Pn	21 18 24.2	+1.4
RSSD				eSb	Sn	21 18 37.4	-0.4
K22A	**Casper**	1.71	208	ePn	Pg	21 18 38.0	+4.2
K22A				eSn	Sg	21 18 58.2	+2.2
N23A	**Red Feather La**	3.29	187	ePn	Pb	21 18 59.5	-1.0
N23A				eSn	Sn	21 19 32.6	-1.5
PD31	**Pinedale Array**	3.31	246	ePn	Pb	21 18 58.5	-2.2
PD31				ePb	Pg	21 19 04.8	+0.4
PD31				eSn	Sb	21 19 41.3	-0.3
PD31				eLg	Lg	21 19 46.0	
PDAR	**Pinedale Array**	3.31	246	ePn	Pb	21 18 59.1	-1.7
PDAR				Pg	Pg	21 19 04.8	+0.4
PDAR				eSn	Sb	21 19 42.6	+0.9
PDAR	**Pinedale Array** 0.3nm,0.3s,baz=67,slow=12,SNR=9.2	3.31	246	Pn	Pb	21 18 59.0	-1.7
PDAR	1.9nm,0.3s,baz=76,slow=17,SNR=25			Pg	Pg	21 19 04.8	+0.4
PDAR	4.3nm,0.3s,baz=66,slow=33,SNR=19			Lg	Lg	21 19 46.0	
BW06	**Boulder Array**	3.31	246	ePn	Pb	21 18 59.3	-1.5
BW06				eSn	Sb	21 19 42.9	+1.2
LKWY	**Lake**	3.58	278	ePn	Pg	21 19 08.0	-1.6
LOHW	**Long Hollow**	3.77	263	ePn	Pb	21 19 07.0	-1.7
LOHW				eSn	Sb	21 19 55.3	+0.2
FLWY	**Flagg Ranch**	3.79	271	ePn	Pb	21 19 05.3	-3.7
MOOW	**Moose Ponds**	3.85	266	ePn	Pb	21 19 08.9	-1.1
IMW	**Indian Meadow**	3.98	268	ePn	Pb	21 19 13.9	+1.7
REDW	**Red Top Meadow**	4.00	260	ePn	Pb	21 19 12.1	-0.5
TPAW	**Teton Pass**	4.04	262	ePn	Pb	21 19 15.2	+1.9
FXWY	**Fox Creek**	4.07	264	ePn	Pb	21 19 16.2	+2.4
DGMT	**Dagmar**	4.39	11	ePn	Pb	21 19 19.4	+0.3
DGMT				eSn	Sg	21 20 20.7	-1.4
EGMT	**Eagleton**	4.89	324	ePn	Pb	21 19 27.9	+0.3
EGMT				eSn	Sb	21 20 31.8	+4.9
EGMT				eSb	Sg	21 20 38.5	+0.5
HRY	**Holter Researc**	5.17	302	ePn	Pb	21 19 30.6	-1.8
HWUT	**Hardware Ranch**	5.18	242	ePn	Pb	21 19 26.1	-6.5
HWUT				ePb	Pg	21 19 42.1	+1.8
TCUT	**Toone Canyon**	5.35	237	ePg	Pg	21 19 51.3	+7.6
I10CA	**LAC DU BONNET** baz=223,slow=332,SNR=1.0	8.80	43	i		22 14 10.0	
ULM	**Lac du Bonnet** 0.3nm,0.3s,baz=226,slow=14,SNR=5.1	8.91	44	Pn	Pn	21 20 09.2	-1.7
ULM	0.2nm,0.3s,baz=269,slow=12,SNR=4.0			Lg	Lg	21 22 39.2	
YKA	**Yellowknife Ar** 0.0nm,0.3s,baz=167,slow=12,SNR=2.8	19.12	347	P	P	21 22 24.4	-0.9

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*SOME **03** 21:19:40.7, 42°.62N×79°.67E, h15^{km}*

*KRNET **03** 21:19:40.1±0.1, 42°.58N×79°.65E, h15^{km}, mb2.5*

*NNC **03** 21:19:40.7±1.1, 42°.62N×79°.68E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=7.0km s-min=4.2km az=135.0*

ISC 03 21:19:41.0±1.1, **42°.61N**±0°.04×**79°.67E**±0°.04, **h10^{km}, n49, σ1^{s}.02**/88, **15C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak** 5.5nm,0.1s	0.72	319	P	Pg	21 19 54.2	-0.8
UZB	28nm,0.2s			S	Sg	21 20 04.4	0.0
UZB	**Uzynbulak** baz=21	0.72	319	eP	Pg	21 19 54.2	-0.8
UZB	baz=21			eS	Sg	21 20 04.2	-0.2
UZB	**Uzynbulak** 5.5nm,0.1s	0.72	319	eP	Pg	21 19 54.2	-0.8
UZB	28nm,0.2s			eS	Sg	21 20 04.1	-0.2
PDGK	**Podgornoye** 3.2nm,0.2s	0.73	350	P	Pg	21 19 54.6	-0.5
PDGK	7.5nm,0.1s			S	Sb	21 20 05.1	-1.1
PDGK	**Podgornoye** 0.4nm,0.4s	0.73	350	⇑P	Pg	21 19 54.3	-0.9
PDGK	6.9nm,0.5s			⇑S	Sb	21 20 04.7	-1.4
PDGK	**Podgornoye** baz=51	0.73	350	⇓iP	Pg	21 19 54.7	-0.5
PDGK	baz=51			⇓iS	Sb	21 20 05.3	-0.8
PRZ	**Przheval'sk** baz=64	0.94	263	⇑iP	Pg	21 19 57.3	-2.0
PRZ	baz=64			⇑iS	Sg	21 20 10.1	-1.5
KTMS	**Ketmen** 2.2nm,0.1s	0.97	31	P	Pg	21 19 59.0	-0.8
KTMS	7.2nm,0.2s			S	Sb	21 20 12.4	-0.7
KTMS	**Ketmen** baz=30	0.97	31	eP	Pg	21 19 59.0	-0.8
KTMS	baz=30			eS	Sb	21 20 12.4	-0.7
KTMS	**Ketmen** 2.2nm,0.1s	0.97	31	eP	Pg	21 19 59.0	-0.8
KTMS	7.2nm,0.2s			eS	Sb	21 20 12.4	-0.7
SATY	**Saty** 4.4nm,0.1s	1.03	296	P	Pg	21 19 59.7	-1.2
SATY	14nm,0.1s			S	Sg	21 20 13.4	-0.9
SATY	**Saty** 4.4nm,0.1s	1.03	296	eP	Pg	21 19 59.7	-1.2
SATY	14nm,0.1s			eS	Sg	21 20 13.4	-0.9
KURS	**Kuram** 1.0nm,0.2s	1.41	309	P	Pn	21 20 06.4	-0.4
KURS	2.4nm,0.3s			S	Sn	21 20 25.2	-0.2
KURS	**Kuram** baz=10.0	1.41	309	eP	Pn	21 20 06.4	-0.4
KURS	baz=10.0			eS	Sb	21 20 24.7	-0.7
KURS	**Kuram** 1.0nm,0.2s	1.41	309	eP	Pn	21 20 06.4	-0.4
KURS	2.4nm,0.3s			eS	Sb	21 20 24.7	-0.7
DJR	**Jarkent** 1.5nm,0.2s	1.73	3	P	Pg	21 20 13.1	-1.0
DJR	2.1nm,0.3s			S	Sg	21 20 36.6	+0.1
DJR	**Jarkent** 1.5nm,0.2s	1.73	3	eP	Pg	21 20 13.1	-1.0
DJR	2.1nm,0.3s			eS	Sg	21 20 36.6	+0.1
MNBS	**Baschi** 1.6nm,0.2s	1.74	328	P	Pb	21 20 13.2	+0.1
MNBS	22nm,0.3s			S	Sg	21 20 36.3	-0.6
KDJ	**Kajisay** baz=57	1.91	256	⇓iP	Pb	21 20 14.7	-1.3
KDJ	baz=57			⇓iS	Sb	21 20 39.6	-0.3
KOTS	**Kotyrbulak** 2.5nm,0.3s	1.98	289	Pg	Pb	21 20 17.1	-0.1
KOTS	14nm,0.3s			Lg	Lg	21 20 44.0	
KOTS	**Kotyrbulak** baz=90	1.98	289	eP	Pb	21 20 17.2	-0.1
KOTS	baz=90			eS	Sg	21 20 43.4	-1.3
KOTS	**Kotyrbulak** 2.5nm,0.3s	1.98	289	eP	Pb	21 20 17.1	-0.1
KOTS	14nm,0.3s			eS	Sg	21 20 43.4	-1.3
MDOK	**Medeo** 1.0nm,0.5s	2.00	287	Pn	Pn	21 20 15.5	+0.5
MDOK	2.0nm,0.5s			Sn	Sg	21 20 44.5	-0.9
MDOK	**Medeo** 1.7nm,0.2s	2.00	287	Pg	Pb	21 20 16.7	-1.0
MDOK	3.5nm,0.5s			Lg	Lg	21 20 43.1	
MDOK	**Medeo** baz=88	2.00	287	eP	Pb	21 20 16.7	-1.0
MDOK	baz=88			eS	Sb	21 20 42.7	0.0
MDOK	**Medeo** 1.7nm,0.2s	2.00	287	eP	Pb	21 20 16.7	-1.0
MDOK	3.5nm,0.5s			eS	Sb	21 20 42.7	0.0
TNSS	**Tian-Shan** 1.4nm,0.1s	2.05	283	Pg	Pb	21 20 18.2	-0.4
TNSS	3.6nm,0.3s			Lg	Lg	21 20 45.1	
TNSS	**Tian-Shan** baz=84	2.05	283	eP	Pb	21 20 18.2	-0.4
TNSS	baz=84			eS	Sb	21 20 45.1	+0.9
TNSS	**Tian-Shan** 1.4nm,0.1s	2.05	283	eP	Pb	21 20 18.2	-0.4
TNSS	3.6nm,0.3s			eS	Sb	21 20 45.1	+0.9
IZV	**Izvestkoviy** 3.2nm,0.2s	2.29	282	Pg	Pb	21 20 21.9	-0.6
IZV	6.3nm,0.3s			Lg	Lg	21 20 51.5	
IZV	**Izvestkoviy** baz=82	2.29	282	eP	Pb	21 20 21.9	-0.6
IZV	baz=82			eS	Sb	21 20 51.5	+0.6
IZV	**Izvestkoviy** 3.2nm,0.2s	2.29	282	eP	Pb	21 20 21.9	-0.6
IZV	6.3nm,0.3s			eS	Sb	21 20 51.5	+0.6
CHKK	**Chushkaly** 1.0nm,0.1s	2.32	303	Pg	Pb	21 20 22.3	-0.7
CHKK	8.4nm,0.3s			Lg	Lg	21 20 52.4	
CHKK	**Chushkaly** baz=4.0	2.32	303	eP	Pb	21 20 22.3	-0.7
CHKK	baz=4.0			eS	Sb	21 20 52.4	+0.7
CHKK	**Chushkaly** 0.5nm,0.1s	2.32	303	eP	Pb	21 20 22.3	-0.7
CHKK	8.4nm,0.3s			eS	Sb	21 20 52.4	+0.7
KTBS	**Karatobe** 0.9nm,0.2s	2.45	298	Pg	Pb	21 20 24.8	-0.3
KTBS	8.7nm,0.4s			Lg	Lg	21 20 56.5	
KTBS	**Karatobe** baz=97	2.45	298	eP	Pb	21 20 24.8	-0.3
KTBS	baz=97			eS	Sb	21 20 56.4	+1.0
KTBS	**Karatobe** 0.9nm,0.2s	2.45	298	eP	Pb	21 20 24.8	-0.3
KTBS	8.7nm,0.4s			eS	Sb	21 20 56.5	+1.0
TDK	**Taldyqorghan** 2.9nm,0.1s	2.56	340	Pg	Pb	21 20 26.8	-0.3
TDK	12nm,0.3s			Lg	Lg	21 20 59.7	
TDK	**Taldyqorghan** 2.9nm,0.1s	2.56	340	eP	Pb	21 20 26.8	-0.3
TDK	12nm,0.3s			eS	Sb	21 20 59.7	+1.1
ULHL	**Ulahol** baz=64	2.56	263	⇑iP	Pn	21 20 24.4	+1.6
ULHL	baz=64			⇑iS	Sb	21 20 56.4	-2.5
BOOM	**Boomskoye usch** baz=69	2.76	269	⇓iP	Pn	21 20 26.9	+1.4
BOOM	baz=69			⇓iS	Sn	21 21 00.7	+1.8
NRN	**Naryn** baz=48	2.98	248	⇑eP	Pn	21 20 29.9	+1.3
NRN	baz=48			⇑iS	Sn	21 21 06.7	+2.2
TKM2	**Tokmak 2** 1.6nm,1.0s	3.01	277	⇑Pn	Pn	21 20 30.9	+1.9
TKM2	1.5nm,0.7s			⇑Lg	Lg	21 21 15.4	
TKM2	**Tokmak 2** baz=78	3.01	277	⇓iP	Pn	21 20 30.5	+1.5
TKM2	baz=78			⇓iS	Sn	21 21 07.6	+2.3
KZA	**Kyzart** baz=63	3.32	262	⇑iP	Pn	21 20 34.9	+1.5
KZA	baz=63			⇑iS	Sn	21 21 14.7	+1.6
KBK	**Karagaybulak** baz=73	3.48	272	⇑eP	Pn	21 20 37.0	+1.5
KBK	baz=73			⇑iS	Sn	21 21 18.8	+2.0
MAKZ	**Makanchi** 0.3nm,0.3s	4.51	21	⇓Pn	Pn	21 20 50.5	+1.1
MAKZ	0.2nm,0.6s			⇓Lg	Lg	21 22 04.9	
MK31	**Makanchi Array** 0.3nm,0.7s,baz=202,slow=12,SNR=6.1	4.58	23	⇓Pn	Pn	21 20 51.2	+0.8
MK31	0.2nm,0.6s,baz=200,slow=25			⇑Lg	Lg	21 22 01.5	

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*IDC **03** 21:23:51.8±1.2, 11°.53N×143°.98E, h0^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.5/55, mbtmp3.5/8, ML3.4/1, Error ellipse: s-maj=37.1km s-min=22.8km az=96.0*

*ISCJB **03** 21:23:54.9±0.9, 11°.5N±0°.1×144°.0E±0°.2, h33^{km}, mb3.5/7, Error ellipse: s-maj=26.5km s-min=9.8km az=25.3*

ISC 03 21:23:56.9±1.1, **11°.6N**±0°.1×**144°.0E**±0°.2, **h35^{km}, n8, σ0^{s}.69**/9, **mb3.5**/7, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam** 11nm,0.3s,baz=180,slow=20,SNR=3.1	2.19	22	Pn	Pn	21 24 30.2	-0.5
GUMO	24nm,0.3s,baz=216,slow=18,SNR=8.2			Sn	Sn	21 24 56.4	-0.2
WRA	**Warramunga Arr** 0.3nm,1.0s,baz=19,slow=9.9,SNR=2.7	32.72	197	P	P	21 30 25.2	-1.2
ASAR	**Alice Springs** 0.2nm,0.8s,baz=19,slow=8.8,SNR=2.5	36.38	196	P	P	21 30 58.2	+0.2
CMAR	**Chiang Mai Arr** 0.4nm,0.6s,baz=89,slow=6.1,SNR=7.5	44.00	285	P	P	21 32 01.6	+0.3
SONM	**Songino Array** 0.3nm,0.6s,baz=141,slow=6.7,SNR=4.3	47.94	326	P	P	21 32 32.2	+0.1
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=95,slow=7.8,SNR=5.6	62.40	317	P	P	21 34 16.3	0.0
BVAR	**Borovoye Array** 0.4nm,0.4s,baz=99,slow=7.9,SNR=7.0	71.02	322	P	P	21 35 11.0	-0.2
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=270,slow=6.3,SNR=3.2	88.83	51	P	P	21 36 49.0	+1.0

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*IDC **03** 21:29:32.0±1.2, 11°.46N×143°.92E, h0^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.6/57, mbtmp3.6/9, ML3.7/1, Error ellipse: s-maj=36.1km s-min=20.3km az=96.0*

*ISCJB **03** 21:29:34.7±0.9, 11°.49N±0°.09×144°.0E±0°.2, h33^{km}, mb3.6/8, Error ellipse: s-maj=26.3km s-min=9.5km az=23.3*

ISC 03 21:29:37.0±1.1, **11°.5N**±0°.1×**144°.0E**±0°.2, **h35^{km}, n12, σ1^{s}.01**/10, **mb3.7**/8, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam** 18nm,0.3s,baz=177,slow=18,SNR=4.0	2.22	22	Pn	Pn	21 30 11.3	-0.1
GUMO	35nm,0.3s,baz=108,slow=20,SNR=9.0			Sn	Sn	21 30 36.3	-1.3
H11S3	**WAKE ISLAND Hy** baz=254	22.96	70	T	T	21 58 01.6	
H11S1	**WAKE ISLAND Hy** baz=254	22.98	70	T	T	21 58 18.6	
H11S2	**WAKE ISLAND Hy** baz=254	22.98	70	T	T	21 58 10.3	
MJAR	**Matsushiro Arr** 1.2nm,0.7s,baz=168,slow=10.0,SNR=3.9	25.45	349	P	P	21 35 02.1	+0.3
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=20,slow=9.7,SNR=4.7	32.68	197	P	P	21 36 05.2	-1.0
ASAR	**Alice Springs** 0.2nm,0.5s,baz=32,slow=13,SNR=3.3	36.34	196	P	P	21 36 37.0	-0.9
CMAR	**Chiang Mai Arr** 0.9nm,0.8s,baz=84,slow=6.1,SNR=9.1	43.98	285	P	P	21 37 41.6	+0.2
SONM	**Songino Array** 0.6nm,0.5s,baz=145,slow=6.9,SNR=7.2	47.95	326	P	P	21 38 12.3	-0.1
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=94,slow=8.3,SNR=9.0	62.40	317	P	P	21 39 56.9	+0.4
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=112,slow=3.9,SNR=2.7	62.81	325	P	P	21 39 58.5	-0.6
NVAR	**Mina Array Bea** 0.3nm,0.5s,baz=285,slow=5.2,SNR=3.3	88.87	51	P	P	21 42 30.0	+1.7

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*ISCJB **03** 21:37:55.6±0.3, 63°.01N±0°.02×150°.61W±0°.06, h115^{km}±3^{km}, mb3.8/9, Error ellipse: s-maj=4.5km s-min=3.7km az=7.9*

*IDC **03** 21:37:55.9±2.1, 63°.03N×150°.93W, h97^{km}±21^{km}, mb3.4/9, mb1 3.5/13, mb1mx3.2/67, mbtmp3.7/13, Error ellipse: s-maj=22.8km s-min=20.5km az=86.0*

*NEIC **03** 21:37:57.1±0.0, 63°.00N×150°.58W, h105^{km}, ML3.2(AEIC), After AEIC.*

ISC 03 21:37:56.6±0.8, **62°.97N**±0°.04×**150°.61W**±0°.04, **h109^{km}**±6^{km}, **n70, σ0^{s}.84**/82, **mb3.8**/9, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUR	**Hurricane**	0.45	89	P	Pn	21 38 12.9	-0.1
TRF	**Thorofare Moun**	0.50	17	P	Pn	21 38 13.5	-0.1
TRF				S	Sn	21 38 26.3	-0.1
PPLA	**Purkeypile**	0.72	265	P	Pn	21 38 15.8	+0.5
PPLA				S	Sn	21 38 29.2	0.0
CAST	**Castle Rocks**	0.80	305	P	Pn	21 38 15.7	-0.2
CAST				S	Sn	21 38 29.3	-1.0
RND	**Reindeer**	0.91	60	P	Pn	21 38 16.9	+0.1
RND				S	Sn	21 38 31.4	-0.7
MCK	**McKinley**	1.07	44	P	Pn	21 38 18.6	0.0
MCK				S	Sn	21 38 34.3	-0.8
BPAW	**Bear Paw Mtn.**	1.15	352	P	Pn	21 38 19.2	-0.1
BPAW				S	Sn	21 38 35.3	-1.2
CHUM	**Lake Minchumin**	1.19	321	P	Pn	21 38 20.0	+0.3
CHUM				S	Sn	21 38 36.7	-0.6
BWN	**Browne**	1.31	23	P	Pn	21 38 21.5	+0.4
GHO	**Glory Hole Cre**	1.44	146	P	Pn	21 38 23.4	+0.8
DHY	**Denali Highway**	1.48	84	P	Pn	21 38 23.4	+0.2
SUA	**Susitna One**	1.51	182	P	Pn	21 38 24.1	+0.5
PMR	**Palmer**	1.55	153	P	Pn	21 38 24.1	+0.2
SML	**Sawmill**	1.58	137	P	Pn	21 38 24.5	+0.2
NEA	**Nenana**	1.75	22	P	Pn	21 38 26.3	-0.1
NEA				S	Sn	21 38 47.2	-1.8
SPCP	**Crater Peak Br**	1.86	204	P	Pn	21 38 28.4	+0.5
KNK	**Knik Glacier**	1.86	146	P	Pn	21 38 28.0	+0.2
WRH	**Wood River Hil**	1.88	36	P	Pn	21 38 27.8	-0.1
SPNN	**North Nagishla**	1.88	212	P	Pn	21 38 28.9	+0.7
SPCN	**Chakachatna No**	1.90	204	P	Pn	21 38 29.0	+0.7
SCM	**Sheep Creek Mo**	1.91	125	P	Pn	21 38 28.4	0.0
CKT	**Bend**	1.93	204	P	Pn	21 38 29.1	+0.5
RC01	**Rabbit Creek A**	1.93	167	P	Pn	21 38 28.6	0.0
SPWE	**Spurr West**	1.93	209	P	Pn	21 38 29.6	+0.8
MLY	**Manley**	2.07	359	P	Pn	21 38 30.3	-0.1
MLY				S	Sn	21 38 54.0	-2.2
HDA	**Harding Lake**	2.18	47	P	Pn	21 38 31.6	-0.2
PS10	**TAPS Pump St10**	2.24	76	P	Pn	21 38 32.5	-0.2
MDM	**Murphy Dome**	2.26	27	P	Pn	21 38 32.6	-0.1
COLA	**College**	2.27	31	P	Pn	21 38 32.8	-0.1
PS08	**TAPS Pump Stn8**	2.31	45	P	Pn	21 38 33.1	-0.3
PAX	**Paxson**	2.35	88	P	Pn	21 38 34.9	+0.8
PWL	**Port Wells**	2.38	152	P	Pn	21 38 34.2	-0.1
ILAR	**Eielson Array** 9.8nm,0.3s,baz=222,slow=13,SNR=648	2.45	41	P	Pn	21 38 35.0	-0.3
ILAR	5.6nm,0.3s,baz=221,slow=17,SNR=8.6			S	Sn	21 39 02.7	-2.2
TT01	**Tatalina**	2.47	271	P	Pn	21 38 35.6	+0.1
SLKM	**Skilak Lake**	2.48	176	P	Pn	21 38 36.1	+0.4
PS11	**TAPS Pump St11**	2.54	108	P	Pn	21 38 37.5	+1.0
HARP	**HAARP**	2.58	100	P	Pn	21 38 37.7	+0.7
KLU	**Klutina**	2.65	122	P	Pn	21 38 37.4	-0.5
GLI	**Glacier Island**	2.68	140	P	Pn	21 38 37.8	-0.5
JPK	**Jack Peak**	2.70	134	P	Pn	21 38 38.0	-0.6
RDWB	**Redoubt West**	2.71	204	P	Pn	21 38 39.3	+0.5
RIDG	**Independ'e Rid**	2.71	71	P	Pn	21 38 38.8	0.0
SEW	**Seward**	2.93	169	P	Pn	21 38 41.4	-0.1
DIV	**Divide**	2.93	127	P	Pn	21 38 40.7	-1.0
DOT	**Dot Lake**	3.03	74	P	Pn	21 38 42.8	-0.2
SCRK	**Sand Creek**	3.14	68	P	Pn	21 38 44.1	-0.3
BRLK	**Bradley Lake**	3.22	182	P	Pn	21 38 46.0	+0.5
IM3	**Indian Mountai**	3.32	337	P	Pn	21 38 46.5	-0.1
EYAK	**Cordova Ski Ar**	3.35	134	P	Pn	21 38 47.0	-0.1
PRP	**Porcupine Dome**	3.39	39	P	Pn	21 38 47.5	-0.3
BCA3	**Beaver Creek A**	4.02	85	P	Pn	21 38 55.8	-0.4
COLD	**Coldfoot**	4.28	2	P	Pn	21 38 59.9	+0.4

BVCY	**Beaver Creek**	**4.53**	**93**	P	**Pn**	**21 39 03.1**	**+0.2**
YUK3	**Moose Creek**	**4.88**	**100**	P	**Pn**	**21 39 08.5**	**+0.7**
BM3	**Burnt Mountain**	**5.13**	**27**	P	**Pn**	**21 39 11.1**	**0.0**
DAWY	**Dawson**	**5.14**	**73**	P	**Pn**	**21 39 11.0**	**-0.2**
KDAK	**Kodiak Island**	**5.30**	**192**	P	**Pn**	**21 39 12.4**	**-0.9**
	2.8nm,0.3s,baz=14,slow=8.3,SNR=54						
KDAK				S	**Sn**	**21 40 09.0**	**-4.0**
	3.5nm,0.3s,baz=127,slow=20,SNR=11						
INK	**Inuvik**	**8.84**	**45**	P	**Pn**	**21 40 02.5**	**+1.4**
	0.3nm,0.3s,baz=233,slow=16,SNR=25						
INK				S	**Sn**	**21 41 40.5**	**+1.7**
	0.1nm,0.3s,baz=250,slow=18,SNR=2.1						
YKA	**Yellowknife Ar**	**16.38**	**76**	P	**Pn**	**21 41 39.3**	**-0.3**
	0.2nm,0.3s,baz=287,slow=10,SNR=8.6						
SPITS	**Spitsbergen Ar**	**38.87**	**4**	P	**P**	**21 45 10.7**	**+0.3**
	8.1nm,1.0s,baz=343,slow=4.5,SNR=5.1						
TXAR	**Lajitas Array**	**45.10**	**116**	P	**P**	**21 46 03.9**	**+2.2**
	0.1nm,0.3s,baz=332,slow=7.5,SNR=6.8						
ARCES	**ARCESS Array B**	**47.75**	**2**	P	**P**	**21 46 22.0**	**+0.2**
	1.6nm,0.8s,baz=357,slow=7.3,SNR=3.6						
SONM	**Songino Array**	**53.98**	**306**	P	**P**	**21 47 09.0**	**+0.1**
	0.4nm,0.7s,baz=22,slow=4.7,SNR=4.9						
ZALV	**Zalesovo Beam**	**55.65**	**324**	P	**P**	**21 47 20.2**	**-0.4**
	0.5nm,0.5s,baz=40,slow=5.6,SNR=4.6						
FINES	**FINESS Array B**	**55.88**	**2**	P	**P**	**21 47 21.7**	**-0.4**
	0.6nm,0.7s,baz=340,slow=7.4,SNR=3.1						
BVAR	**Borovoye Array**	**59.96**	**333**	P	**P**	**21 47 51.1**	**+0.4**
	baz=23,slow=4.8						
KURK	**Kurchatov**	**60.20**	**326**	P	**P**	**21 47 52.7**	**+0.3**
KURBB	**Kurchatov Arra**	**60.31**	**326**	P	**P**	**21 47 52.7**	**-0.5**
	0.5nm,0.5s,baz=30,slow=6.8,SNR=4.6						
MKAR	**Makanchi Array**	**62.81**	**322**	P	**P**	**21 48 09.2**	**-0.8**
	0.5nm,0.4s,baz=42,slow=6.9,SNR=14						
AKASG	**Malin Array Be**	**66.67**	**0**	P	**P**	**21 48 34.7**	**-0.2**
	0.3nm,0.3s,baz=357,slow=5.9,SNR=2.9						

IDC 03 21:45:21.0±3.1**, 9°.99N**×**145°.38E, h0^{km}, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.4**/52**, mbtmp3.5**/5**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.5**/26**, Error ellipse: s-maj=95.6km s-min=35.0km az=86.0, Eastern Caroline Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.67**	**200**	P	P	21 51 46.1	-0.2
	0.2nm,0.5s,baz=22,slow=9.2,SNR=3.0						
CMAR	**Chiang Mai Arr**	**45.69**	**286**	P	P	21 53 44.3	+0.2
	0.2nm,0.4s,baz=82,slow=6.1,SNR=5.9						
RAO	**Raoul Island**	**52.67**	**139**	LR	LR	22 13 03.8	
	comp=Z,196nm,19.0s,baz=164,slow=32						
MKAR	**Makanchi Array**	**64.44**	**317**	P	P	21 55 58.8	-0.5
	0.2nm,0.5s,baz=100,slow=7.2,SNR=3.7						
KURBB	**Kurchatov Arra**	**67.70**	**321**	P	P	21 56 19.8	-0.3
	0.5nm,0.6s,baz=102,slow=6.4,SNR=5.2						
BVAR	**Borovoye Array**	**73.06**	**322**	P	P	21 56 53.5	+0.5
	0.4nm,0.4s,baz=110,slow=8.1,SNR=7.0						

NIED ***03*** *21:46:00, 23°.50N×121°.60E, h47^{km}, Mw4.0 Best double couple: M₀1.12000×10^{15} NP1:φs125.00000°, δ28.00000°, λ1.00000°. NP2:φs34.00000°, δ89.00000°, λ118.00000°.*

IDC ***03*** *21:46:08.1±2.6, 23°.08N×121°.49E, h0^{km}, mb3.4/8, mb1 3.6/10, mb1mx3.4/56, mbtmp3.5/10, ML3.3/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/32, Error ellipse: s-maj=59.3km s-min=26.1km az=166.0*

ASIES ***03*** *21:46:14.4, 23°.45N×121°.69E, h31^{km}, MW3.5*

JMA ***03*** *21:46:14.3, 23°.50N×121°.55E, h40^{km}±1^{km}, M3.9*

ISCJB ***03*** *21:46:14.9±0.2, 23°.50N±0°.01×121°.63E±0°.01, h29^{km}±1^{km}, mb3.3/8, MS3.0/1, Error ellipse: s-maj=2.5km s-min=1.7km az=138.1*

BJI ***03*** *21:46:15.5, 23°.52N×121°.64E, h32^{km}, ML3.6/3*

TAP ***03*** *21:46:15.2, 23°.52N×121°.56E, h34^{km}, ML4.2, B*

ISC 03 21:46:15.2±0.7**, 23°.50N**±0°.02×**121°.59E**±0°.02**, h33^{km}**±4^{km}**, n148, σ0.^{s}90**/215**, mb3.5**/8**, 5C-41D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.15**	**266**	⇑P	**Pn**	**21 46 21.7**	**+1.3**
	baz=259						
HGSD				*e*S	**Sb**	**21 46 27.0**	**+1.5**
	baz=259						
EGFH	**Guangfu**	**0.22**	**318**	P	**Pb**	**21 46 22.1**	**+0.1**
	baz=309						
EGFH				*e*S	**Sb**	**21 46 27.0**	**+0.4**
	baz=309						
EHY	**Hungye**	**0.24**	**271**	⇓*i*P	**Pb**	**21 46 22.1**	**-0.2**
	baz=267						
EHY				S	**Sb**	**21 46 26.6**	**-0.5**
	baz=267						
YULB	**Yu-li**	**0.29**	**248**	⇓P	**Pb**	**21 46 22.7**	**-0.1**
	baz=254						
YULB				S	**Sb**	**21 46 27.5**	**-0.4**
	baz=254						
TWF1	**Yuli**	**0.31**	**241**	⇓*i*P	**Pb**	**21 46 23.0**	**0.0**
	baz=246						
TWF1				S	**Sb**	**21 46 28.2**	**-0.2**
	baz=246						
ESL	**Shilin**	**0.34**	**335**	⇓*i*P	**Pb**	**21 46 23.1**	**-0.4**
	baz=333						
ESL				*e*S	**Sb**	**21 46 28.4**	**-0.8**
	baz=333						
ENLB	**Shoufeng**	**0.40**	**2**	⇑P	**Pb**	**21 46 24.4**	**+0.2**
	baz=17						
ENLB				S	**Sn**	**21 46 31.3**	**+0.3**
	baz=17						
CHKT	**Chengkung**	**0.45**	**207**	*e*P	**Pb**	**21 46 25.1**	**0.0**
	baz=192						
CHKT				*e*S	**Sn**	**21 46 32.9**	**+0.6**
	baz=192						
HWA	**Hwalien**	**0.47**	**2**	⇑P	**Pb**	**21 46 25.5**	**+0.2**
	baz=17						
HWA				*e*S	**Sn**	**21 46 33.1**	**+0.3**
	baz=17						
VWDT	**VWDT**	**0.48**	**301**	⇓P	**Pb**	**21 46 25.3**	**-0.1**
	baz=306						
TWD	**Chiawan**	**0.57**	**1**	⇓*i*P	**Pb**	**21 46 26.5**	**-0.5**
	baz=353						
TWD				*e*S	**Sb**	**21 46 35.4**	**+0.4**
	baz=353						
OWD	**Renai**	**0.59**	**320**	P	**Pb**	**21 46 26.6**	**-0.6**
	baz=322						
OWD				S	**Sb**	**21 46 34.0**	**-1.5**
	baz=322						
ELDTW	**Lidau**	**0.61**	**239**	⇓*i*P	**Pb**	**21 46 26.8**	**-0.9**
	baz=235						
ELDTW				S	**Sb**	**21 46 34.7**	**-1.5**
	baz=235						
SSLB	**Suanglung**	**0.65**	**296**	⇓P	**Pb**	**21 46 27.4**	**-0.7**
	baz=291						
SSLB				S	**Sb**	**21 46 35.9**	**-1.1**
	baz=291						
NACB	**Ninganchiao**	**0.67**	**0**	⇓P	**Pb**	**21 46 27.3**	**-1.2**
	baz=354						
NACB				S	**Sb**	**21 46 37.0**	**-0.6**
	baz=354						
CHGB	**Renai**	**0.67**	**326**	⇓P	**Pb**	**21 46 28.1**	**-0.7**
	baz=336						
CHGB				*e*S	**Sb**	**21 46 36.0**	**-1.9**
	baz=336						
WHYT	**Xinyi Township**	**0.70**	**286**	⇓P	**Pb**	**21 46 28.9**	**-0.2**
	baz=288						
WHF	**Hehuan Shan**	**0.70**	**335**	⇓*i*P	**Pb**	**21 46 28.3**	**-1.1**
	baz=338						
WHF				S	**Sb**	**21 46 37.4**	**-1.6**
	baz=338						
SMLT	**Sun Moon Lake**	**0.74**	**301**	⇓*i*P	**Pb**	**21 46 29.2**	**-0.5**
	baz=306						
SMLT				S	**Sn**	**21 46 39.9**	**+0.4**
	baz=306						
TYC	**Yuchr**	**0.78**	**301**	⇓*i*P	**Pb**	**21 46 29.9**	**-0.5**
	baz=302						
TYC				S	**Sb**	**21 46 40.4**	**-0.3**
	baz=302						
TWGBT	**Beinan**	**0.83**	**215**	⇓P	**Pn**	**21 46 29.3**	**-1.2**
	baz=211						
TWGBT				*e*S	**Sb**	**21 46 39.6**	**-2.4**
	baz=211						
TWG	**Pinlang**	**0.83**	**215**	⇓*i*P	**Pn**	**21 46 29.3**	**-1.2**
	baz=211						
STYT	**Tauyuan**	**0.84**	**246**	⇓*i*P	**Pn**	**21 46 30.9**	**+0.2**
	baz=241						
STYT				S	**Sb**	**21 46 41.9**	**-0.4**
	baz=241						
CHN5	**Tsauling**	**0.84**	**277**	⇓P	**Pb**	**21 46 31.4**	**0.0**
	baz=279						
CHN5				*e*S	**Sn**	**21 46 43.1**	**+1.1**
	baz=279						
TDCB	**Techi**	**0.84**	**332**	⇓P	**Pn**	**21 46 30.7**	**-0.2**
	baz=335						
TDCB				S	**Sb**	**21 46 40.7**	**-1.9**
	baz=335						
TTN	**Taitung**	**0.85**	**209**	*e*P	**Pn**	**21 46 29.2**	**-1.6**
	baz=204						
WJS	**Zhushan**	**0.85**	**292**	⇓P	**Pb**	**21 46 31.8**	**+0.2**
	baz=292						
WJS				S	**Sn**	**21 46 43.6**	**+1.5**
	baz=292						
TPUB	**Ta-pu**	**0.90**	**257**	⇓P	**Pb**	**21 46 32.4**	**0.0**
	baz=255						
TPUB				S	**Sn**	**21 46 44.9**	**+1.3**
	baz=255						
WNT	**Mingjian**	**0.91**	**294**	⇓*i*P	**Pb**	**21 46 32.7**	**+0.2**
	baz=294						
WNT				S	**Sn**	**21 46 45.2**	**+1.6**
	baz=294						
CHN4	**Tsaushan**	**0.93**	**261**	⇓*i*P	**Pb**	**21 46 32.8**	**0.0**
	baz=252						
CHN4				S	**Sn**	**21 46 45.9**	**+1.9**
	baz=252						
ENA	**Nanau**	**0.93**	**9**	P	**Pn**	**21 46 31.5**	**-0.5**
	baz=22						
WTP	**Ta-pu**	**0.93**	**254**	⇓*i*P	**Pb**	**21 46 32.8**	**-0.1**
	baz=251						
WTP				S	**Sn**	**21 46 45.0**	**+0.8**
	baz=251						
NNSB	**Datong**	**0.94**	**348**	*e*P	**Pn**	**21 46 30.9**	**-1.3**
	baz=1.0						
NNS	**Nan Shan**	**0.95**	**348**	P	**Pn**	**21 46 32.0**	**-0.4**
	baz=1.0						
NNS				*e*S	**Sn**	**21 46 43.7**	**-1.2**
	baz=1.0						
WGK	**Gukeng**	**0.96**	**281**	⇓*i*P	**Pb**	**21 46 33.3**	**0.0**
	baz=280						
WGK				S	**Sb**	**21 46 45.9**	**+0.1**
	baz=280						
WHP	**Taichung City**	**0.97**	**323**	*e*P	**Pn**	**21 46 33.1**	**+0.6**
	baz=328						
WDLH	**Douliu**	**0.98**	**281**	⇓P	**Pb**	**21 46 33.7**	**0.0**
	baz=280						
SLGT	**Liugui**	**1.00**	**240**	⇓P	**Pb**	**21 46 33.8**	**-0.3**
	baz=232						
SLGT				*e*S	**Sb**	**21 46 47.0**	**0.0**
	baz=232						
SGST	**Jiashian**	**1.01**	**246**	*e*P	**Pb**	**21 46 34.1**	**-0.2**
	baz=233						
SGST				*e*S	**Sb**	**21 46 48.5**	**+1.2**
	baz=233						
CHN2	**Minshiung**	**1.02**	**272**	P	**Pb**	**21 46 34.8**	**+0.4**
	baz=270						
CHN2				S	**Sb**	**21 46 48.7**	**+1.2**
	baz=270						
CHN1	**Nanshi**	**1.02**	**252**	⇓*i*P	**Pb**	**21 46 34.4**	**0.0**
	baz=259						
CHN1				S	**Sb**	**21 46 48.5**	**+0.8**
	baz=259						
TWK	**Hsinying**	**1.04**	**257**	P	**Pb**	**21 46 34.5**	**-0.2**
	baz=254						
TWK				*e*S	**Sb**	**21 46 48.2**	**+0.2**
	baz=254						
SNST	**Tainan City**	**1.04**	**254**	⇓P	**Pb**	**21 46 34.5**	**-0.2**
	baz=252						
SNST				*e*S	**Sb**	**21 46 48.2**	**+0.1**
	baz=252						
TCU	**Taichung**	**1.05**	**308**	⇓P	**Pb**	**21 46 35.1**	**+0.2**
	baz=308						
TCU				*e*S	**Sb**	**21 46 49.2**	**+0.8**
	baz=308						
CHY	**Chiayi**	**1.07**	**270**	*e*P	**Pb**	**21 46 34.9**	**-0.2**
	baz=268						
ECL	**Taimali**	**1.07**	**213**	*e*P	**Pn**	**21 46 32.7**	**-1.3**
	baz=209						
NDT	**Datong Townshi**	**1.10**	**356**	*e*P	**Pn**	**21 46 33.9**	**-0.4**
	baz=360						
WCHH	**Zhanghua**	**1.10**	**301**	⇓*e*P	**Pb**	**21 46 35.7**	**-0.1**
	baz=301						
WCHH				*e*S	**Sb**	**21 46 50.9**	**+1.0**
	baz=301						
TWQ1	**Liyutan**	**1.12**	**319**	⇓P	**Pb**	**21 46 36.1**	**0.0**
	baz=320						
TWQ1				S	**Sb**	**21 46 51.0**	**+0.6**
	baz=320						
TWC	**Suao**	**1.13**	**12**	*e*P	**Pn**	**21 46 34.2**	**-0.4**
	baz=24						
ENTT	**Nioudou**	**1.13**	**359**	P	**Pn**	**21 46 34.4**	**-0.3**
	baz=3.0						
EOS1	**EOS1**	**1.15**	**25**	*e*P	**Pn**	**21 46 35.6**	**+0.6**
	baz=42						
SSD	**Sandimen**	**1.16**	**230**	*e*P	**Pn**	**21 46 35.6**	**+0.5**
	baz=223						
SSD				*e*S	**Sb**	**21 46 51.3**	**-0.1**
	baz=223						
YHNB	**Yeheng**	**1.18**	**351**	⇓P	**Pn**	**21 46 35.5**	**+0.1**
	baz=5.0						
YHNB				*e*S	**Sn**	**21 46 49.3**	**-1.0**
	baz=5.0						
NSY	**Sanyi**	**1.18**	**320**	⇑P	**Pb**	**21 46 37.1**	**0.0**
	baz=336						
NSY				*e*S	**Sb**	**21 46 52.9**	**+0.8**
	baz=336						
WLGB	**Puzi**	**1.18**	**269**	*e*P	**Pb**	**21 46 36.8**	**-0.3**
	baz=267						
WLGB				*e*S	**Sb**	**21 46 52.4**	**+0.3**
	baz=267						
NSK	**Sanguang**	**1.19**	**350**	*e*P	**Pn**	**21 46 35.6**	**0.0**
	baz=354						
NSK				S	**Sn**	**21 46 49.7**	**-0.9**
	baz=354						
RLNB	**Erlin**	**1.19**	**289**	P	**Pb**	**21 46 36.6**	**-0.6**
	baz=278						
RLNB				S	**Sb**	**21 46 53.0**	**+0.6**
	baz=278						
CHN3	**Shinhua**	**1.20**	**250**	*e*P	**Pb**	**21 46 37.9**	**+0.5**
	baz=260						
CHN3				*e*S	**Sb**	**21 46 55.4**	**+2.8**
	baz=260						
WDJ	**Dajia District**	**1.21**	**314**	*e*P	**Pb**	**21 46 37.2**	**-0.3**
	baz=315						
WDJ				*e*S	**Sb**	**21 46 53.8**	**+1.0**
	baz=315						
TWE	**Neicheng**	**1.21**	**3**	*e*P	**Pn**	**21 46 35.2**	**-0.6**
	baz=8.0						
PTSB	**Yuanli**	**1.24**	**319**	⇓*e*P	**Pb**	**21 46 37.4**	**-0.7**
	baz=320						
PTSB				*e*S	**Sb**	**21 46 53.5**	**-0.2**
	baz=320						
NSTT	**Nanjuang**	**1.25**	**335**	*e*P	**Pb**	**21 46 37.5**	**-0.6**
	baz=349						
NSTT				*e*S	**Sn**	**21 46 52.8**	**+0.9**
	baz=349						
MASBT	**Mashibuluo**	**1.25**	**225**	*e*P	**Pn**	**21 46 36.3**	**-0.1**
	baz=221						
MASBT				*e*S	**Sb**	**21 46 54.3**	**+0.3**
	baz=221						
WTCT	**Ta-ch'eng**	**1.25**	**287**	*e*P	**Pn**	**21 46 37.3**	**+1.0**
	baz=275						
WTCT				S	**Sb**	**21 46 54.1**	**+0.1**
	baz=275						
LIOB	**Emei**	**1.25**	**335**	⇓P	**Pn**	**21 46 37.6**	**+1.2**
	baz=323						
NMLH	**Miaoli**	**1.26**	**325**	*e*P	**Pb**	**21 46 37.8**	**-0.6**
	baz=326						
NMLH				*e*S	**Sb**	**21 46 54.5**	**+0.1**
	baz=326						
ILA	**Ilan**	**1.27**	**7**	*e*P	**Pn**	**21 46 37.5**	**+0.9**
TWM1	**Shoushan**	**1.27**	**238**	*e*P	**Pb**	**21 46 40.0**	**+1.4**
	baz=234						
TWM1				*e*S	**Sb**	**21 46 57.2**	**+2.6**
	baz=234						
SGLT	**Jiouru**	**1.27**	**233**	*e*P	**Pb**	**21 46 39.3**	**+0.7**
	baz=230						
CHN8	**Yiju**	**1.27**	**263**	*e*P	**Pn**	**21 46 37.8**	**+1.1**
	baz=261						
CHN8				S	**Sb**	**21 46 54.7**	**0.0**
	baz=261						
EAST	**Anshuo**	**1.31**	**212**	*e*P	**Pn**	**21 46 36.4**	**-0.8**
	baz=200						
TAW	**Tawu**	**1.31**	**209**	*e*P	**Pn**	**21 46 36.2**	**-0.9**
	baz=205						
SCLT	**Jiali**	**1.32**	**256**	*e*P	**Pb**	**21 46 39.4**	**0.0**
	baz=253						
SCLT				*e*S	**Sb**	**21 46 56.6**	**+0.5**
	baz=253						
TAI1	**Yung-k'ang**	**1.33**	**250**	*e*P	**Pb**	**21 46 39.6**	**0.0**
	baz=247						
NTC	**Toucheng**	**1.36**	**9**	*e*P	**Pn**	**21 46 38.5**	**+0.7**
	baz=24						
EGS		**1.37**	**13**	*e*P	**Pb**	**21 46 40.5**	**+0.2**
	baz=6.0						
SNJT	**Kaohsiung City**	**1.37**	**237**	*e*P	**Pb**	**21 46 40.4**	**+0.1**
	baz=234						
WLTB	**Daxi**	**1.38**	**347**	⇑*e*P	**Pb**	**21 46 39.7**	**-0.7**
	baz=357						
WLTB				*e*S	**Sn**	**21 46 56.6**	**+1.4**
	baz=357						
SSPT	**Xinbi**	**1.38**	**223**	*e*P	**Pb**	**21 46 39.9**	**-0.6**
	baz=220						
SBCB	**Hsinchu**	**1.40**	**337**	*e*P	**Pb**	**21 46 40.6**	**-0.1**
	baz=323						
HSN	**Hsinchu**	**1.41**	**337**	*e*P	**Pb**	**21 46 40.2**	**-0.7**
	baz=325						
SCZT	**Fangliau**	**1.44**	**219**	*e*P	**Pb**	**21 46 41.0**	**-0.4**
	baz=205						
NHDH	**Xindian Distri**	**1.45**	**358**	*e*P	**Pn**	**21 46 39.6**	**+0.5**
	baz=3.0						
NHDH				*e*S	**Sn**	**21 46 58.0**	**+0.9**
	baz=3.0						
LAY	**Lan-yu**	**1.46**	**181**	*e*P	**Pn**	**21 46 38.3**	**-0.9**
	baz=171						
TATO	**Taipei**	**1.47**	**356**	*e*P	**Pn**	**21 46 40.2**	**+0.8**
	baz=11						
TATO				*e*S	**Sn**	**21 46 57.9**	**+0.5**
	baz=11						
TWA	**Mucha**	**1.47**	**360**	*e*P	**Pn**	**21 46 39.5**	**+0.1**
	baz=4.0						
TIPB	**Shuangxi**	**1.48**	**8**	*e*P	**Pn**	**21 46 39.7**	**+0.2**
	baz=3.0						
NCUH	**Zhongli**	**1.50**	**346**	*e*P	**Pn**	**21 46 40.9**	**+1.1**
	baz=349						
NCU	**National Centr**	**1.50**	**346**	*e*P	**Pn**	**21 46 40.6**	**+0.7**
	baz=349						
TWB1	**Santiao Chiao**	**1.54**	**14**	*e*P	**Pn**	**21 46 41.0**	**+0.7**
	baz=3.0						
JYNG	**Yonagunijimaku**	**1.56**	**52**	P	**Pn**	**21 46 41.3**	**+0.7**
JYNG				*e*S	**Sn**	**21 47 00.7**	**+1.1**
NWF	**Wu-fen Shan**	**1.57**	**6**	*e*P	**Pn**	**21 46 41.5**	**+0.7**
	baz=10.0						
WFSB	**Wu-fen Shan**	**1.57**	**6**	*e*P	**Pn**	**21 46 41.4**	**+0.6**
	baz=10.0						
TWS1	**Kuangyinshan**	**1.60**	**354**	*e*P	**Pn**	**21 46 41.3**	**+0.2**
	baz=13						
WLCH	**Liuqiu**	**1.60**	**224**	*e*P	**Pb**	**21 46 44.7**	**+0.6**
	baz=221						
YOJ	**Yonaguni jima**	**1.61**	**53**	⇓P	**Pn**	**21 46 42.1**	**+0.8**
	baz=56						
YOJ				S	**Sn**	**21 47 01.3**	**+0.3**
	baz=56						
YOJ	**Yonaguni jima**	**1.61**	**53**	P	**Pn**	**21 46 42.1**	**+0.8**
YOJ				S	**Sn**	**21 47 02.1**	**+1.1**
TWP	**Hsiaoliuchiu**	**1.61**	**225**	*e*P	**Pb**	**21 46 45.0**	**+0.6**
	baz=221						
YM01	**YM01**	**1.64**	**359**	*e*P	**Pn**	**21 46 41.5**	**-0.2**
	baz=3.0						
YM04	**YM04**	**1.64**	**358**	*e*P	**Pn**	**21 46 42.0**	**+0.3**
	baz=2.0						
YM05	**YM05**	**1.65**	**359**	*e*P	**Pn**	**21 46 42.2**	**+0.2**
	baz=3.0						
YM11	**YM11**	**1.66**	**360**	*e*P	**Pn**	**21 46 42.0**	**+0.1**
	baz=3.0						
NTST	**Danshui**	**1.66**	**356**	*e*P	**Pn**	**21 46 43.6**	**+1.6**
	baz=14						
YM08	**YM08**	**1.68**	**0**	*e*P	**Pn**	**21 46 41.8**	**-0.5**
	baz=3.0						
HEN	**Hengchun**	**1.69**	**208**	*e*P	**Pb**	**21 46 44.6**	**-1.0**
	baz=193						
TWKBT	**Hengchun**	**1.71**	**205**	*e*P	**Pn**	**21 46 43.7**	**+1.0**
	baz=192						
TWK1	**Hengchun**	**1.71**	**205**	*e*P	**Pn**	**21 46 43.4**	**+0.7**
	baz=202						
TWK1				*e*S	**Sn**	**21 47 03.2**	**-0.3**
	baz=202						
TSEB	**Hengchuen, Pin**	**1.72**	**202**	*e*P	**Pb**	**21 46 45.3**	**-0.8**
	baz=192						
TWY	**Chenhua**	**1.77**	**0**	*e*P	**Pn**	**21 46 44.9**	**+1.5**
	baz=4.0						
WDGT	**Dungji**	**1.79**	**263**	⇓*e*P	**Pn**	**21 46 44.1**	**+0.4**
	baz=259						
WDGT				*e*S	**Sn**	**21 47 04.8**	**-0.5**
	baz=259						
PHUB	**P'eng-hu**	**1.85**	**271**	⇓P	**Pn**	**21 46 44.5**	**-0.1**
	baz=268						
PHUB				*e*S	**Sn**	**21 47 06.0**	**-0.8**
	baz=268						
PNG	**Penghu**	**1.87**	**272**	⇓P	**Pn**	**21 46 45.1**	**+0.3**
	baz=271						
VCHM	**Qimei**	**2.01**	**262**	P	**Pn**	**21 46 47.1**	**+0.4**
	baz=259						
VCHM				*e*S	**Sn**	**21 47 09.6**	**-1.0**
	baz=259						
HATJ	**Hateruma jima**	**2.10**	**74**	P	**Pn**	**21 46 48.6**	**+0.5**
HATJ				*e*S	**Sn**	**21 47 13.4**	**+0.3**
IRIF	**Iriomote-Funau**	**2.13**	**67**	P	**Pn**	**21 46 49.3**	**+0.9**
IRIF				*e*S	**Sn**	**21 47 15.3**	**+1.6**
PCYT	**Pengchaiyu**	**2.16**	**12**	*e*P	**Pn**	**21 46 50.4**	**+1.5**
	baz=3.0						
JKRS	**Kuro-shima**	**2.33**	**71**	P	**Pn**	**21 46 52.1**	**+0.9**
JKRS				*e*S	**Sn**	**21 47 20.5**	**+1.7**
VWUC	**VWUC**	**2.45**	**308**	*e*P	**Pn**	**21 46 52.7**	**-0.1**
	baz=307						
JIJ	**Ishigaki jima**	**2.49**	**69**	P	**Pn**	**21 46 53.6**	**+0.2**
JIJ				S	**Sn**	**21 47 22.4**	**-0.2**
JISG	**Ishigakijimahi**	**2.71**	**66**	P	**Pn**	**21 46 56.6**	**+0.2**
JISG				*e*S	**Sn**	**21 47 27.8**	**-0.3**
KNM	**Kinmen**	**3.03**	**288**	*e*P	**Pn**	**21 47 02.4**	**+1.6**
	baz=286						
MATB	**Ma-tsu**	**3.03**	**331**	*e*P	**Pn**	**21 47 00.3**	**-0.5**
	baz=331						
JTJ	**Tarama**	**3.06**	**68**	P	**Pn**	**21 47 01.7**	**+0.4**
JTJ				*e*S	**Sn**	**21 47 38.0**	**+1.2**
KNMB	**Chin-men Tao**	**3.08**	**289**	⇓*e*P	**Pn**	**21 47 01.1**	**-0.4**
	baz=288						
QZH	**Quanzhou**	**3.09**	**298**	⇓*i*Pn	**Pn**	**21 47 01.6**	**0.0**
QZH				Sn	**Sn**	**21 47 35.6**	**-1.8**
QZH				smax	smax		
	comp=N,270nm,0.2s						
QZH				smax	smax		
	comp=E,220nm,0.3s						
JIRB	**Irabujima**	**3.53**	**67**	P	**Pn**	**21 47 08.0**	**+0.3**
JIRB				*e*S	**Sn**	**21 47 48.1**	**-0.2**
JMJ	**Miyako jima 2**	**3.63**	**68**	P	**Pn**	**21 47 10.0**	**+1.0**
JIKM	**Ikemajima**	**3.63**	**66**	P	**Pn**	**21 47 09.7**	**+0.7**
JIKM				*e*S	**Sn**	**21 47 51.0**	**+0.3**
JOGS	**Gusukube**	**3.71**	**69**	P	**Pn**	**21 47 11.0**	**+0.9**
JOW	**Kunigami**	**6.90**	**60**	Pn	**Pn**	**21 47 52.5**	**-1.5**
	1.0nm,0.3s,baz=208,slow=15,SNR=14						
KSRS	**Korea Array**	**14.93**	**20**	Pn	**P**	**21 49 47.7**	**-1.4**
	0.2nm,0.3s,baz=192,slow=11,SNR=6.7						
KSRS				LR	LR	21 56 09.2	
	comp=Z,26nm,18.2s,baz=125,slow=39						
HHC	**Hu-ho-hao-te**	**19.24**	**336**	*e*P	**Pn**	**21 50 39.8**	**+1.9**
CMAR	**Chiang Mai Arr**	**21.72**	**261**	P	**P**	**21 50 59.5**	**-4.2**
	0.2nm,0.3s,baz=72,slow=8.8,SNR=3.7						
SONM	**Songino Array**	**27.14**	**337**	P	**P**	**21 51 56.1**	**+0.8**
	0.3nm,0.8s,baz=153,slow=9.5,SNR=2.6						
SONM				LR	LR	22 03 36.4	
	comp=Z,41nm,18.3s,baz=286,slow=38						
WMQ	**Urumqi**	**34.39**	**314**	*e*P	**P**	**21 53 00.5**	**+1.2**
MKAR	**Makanchi Array**	**39.08**	**316**	P	**P**	**21 53 39.2**	**+0.1**
	0.9nm,0.8s,baz=115,slow=9.0,SNR=9.2						
ZALV	**Zalesovo Beam**	**41.02**	**327**	P	**P**	**21 53 54.3**	**-0.8**
	0.6nm,0.4s,baz=117,slow=8.3,SNR=3.2						
H11N1	**WAKE ISLAND Hy**	**42.16**	**86**	T	T	22 39 14.3	
	baz=283,slow=75,SNR=33						
H11N2	**WAKE ISLAND Hy**	**42.16**	**86**	T	T	22 39 14.3	
	baz=283,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**42.17**	**86**	T	T	22 39 14.3	
	baz=283,slow=75,SNR=24						
H11S3	**WAKE ISLAND Hy**	**42.27**	**88**	T	T	22 39 25.6	
	baz=284,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**42.28**	**88**	T	T	22 39 25.0	
	baz=284,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**42.29**	**88**	T	T	22 39 24.5	
	baz=284,slow=75,SNR=24						
KURBB	**Kurchatov Arra**	**42.87**	**320**	P	**P**	**21 54 10.1**	**-0.1**
	0.3nm,0.5s,baz=108,slow=9.6,SNR=3.2						
ILAR	**Eielson Array**	**69.65**	**27**	P	**P**	**21 57 22.8**	**+1.8**
	0.1nm,0.6s,baz=293,slow=6.9,SNR=4.1						
FINES	**FINESS Array B**	**72.22**	**330**	P	**P**	**21 57 36.1**	**-0.6**
	0.4nm,0.4s,baz=60,slow=6.6,SNR=6.7						
YKA	**Yellowknife Ar**	**83.45**	**23**	P	**P**	**21 58 39.5**	**+0.4**
	0.3nm,0.6s,baz=313,slow=4.8,SNR=5.4						

IDC ***03*** *21:48:53.8±0.8, 5°.05S×153°.12E, h0^{km}, mb4.4/18, mb1 4.5/18, mb1mx4.3/45, mbtmp4.4/18, MS3.4/8, Ms1 3.4/8, ms1mx3.1/31, Error ellipse: s-maj=22.6km s-min=15.5km az=101.0*

NEIC ***03*** *21:48:55.3±0.4, 5°.08S×153°.18E, h10^{km}, mb4.7/24, Error ellipse: s-maj=10.5km s-min=6.7km az=97.0*

ISCJB ***03*** *21:48:58.4±0.4, 5°.11S±0°.05×153°.15E±0°.07, h43^{km}, mb4.5/40, MS3.3/7, Error ellipse: s-maj=10.5km s-min=6.5km az=177.0*

ISC 03 21:49:00.1±0.6**, 5°.11S**±0°.07×**153°.1E**±0°.1**, h43^{km}, n81, σ0^{s}.82**/80**, mb4.6**/48**, MS3.3**/7**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.32**	**314**	*e*Pn	**Pn**	**21 49 22.1**	**0.0**
RABL				*e*Sn	**Sn**	**21 49 38.5**	**0.0**
HNR	**Honiara**	**8.02**	**123**	LR	LR	21 53 58.9	
	comp=Z,222nm,21.2s,baz=314,slow=38						
COEN	**Coen**	**13.17**	**227**	*e*Pn	**Pn**	**21 52 05.8**	**+1.2**
CTA	**Charters Tower**	**16.32**	**204**	Pn	**P**	**21 52 48.8**	**0.0**
	0.1nm,0.3s,baz=27,slow=14,SNR=3.9						
GUMO	**Guam**	**20.30**	**336**	LR	LR	22 00 01.8	
	comp=Z,75nm,21.6s,baz=109,slow=33						
FAKI	**Fak Fak**	**20.94**	**275**	*e*P	**P**	**21 53 39.5**	**+0.1**
	16nm,1.1s						
DZM	**Mont Dzumac**	**21.23**	**144**	*e*P	**P**	**21 53 43.6**	**+1.1**
	11nm,0.8s						
DZM	**Mont Dzumac**	**21.23**	**144**	P	**P**	**21 53 43.4**	**+0.8**
	8.8nm,0.5s,baz=338,slow=14,SNR=16						
DZM				LR	LR	22 01 00.8	
	comp=Z,150nm,21.9s,baz=228,slow=34						
SIJI	**Sorong**	**22.23**	**280**	P	**P**	**21 53 53.1**	**-0.2**
	27nm,0.6s,baz=80,slow=6.3,SNR=17						
WRAB	**Tennant Creek**	**23.47**	**229**	*e*P	**P**	**21 54 05.1**	**-0.9**
	8.6nm,0.6s						
WB2	**Warramunga Arr**	**23.48**	**229**	*e*P	**P**	**21 54 06.1**	**0.0**
	7.2nm,0.7s						
WR1	**Warramunga Arr**	**23.49**	**229**	*e*P	**P**	**21 54 05.7**	**-0.5**
	9.4nm,0.6s						
WRA	**Warramunga Arr**	**23.49**	**229**	P	**P**	**21 54 05.7**	**-0.5**
	2.9nm,0.5s,baz=53,slow=10,SNR=56						
AS01	**Alice Springs**	**26.11**	**223**	*e*P	**P**	**21 54 30.2**	**0.0**
AS31	**Alice Springs**	**26.14**	**223**	*e*P	**P**	**21 54 30.8**	**+0.3**
	1.2nm,0.6s						
ASAR	**Alice Springs**	**26.14**	**223**	P	**P**	**21 54 30.4**	**0.0**
	3.3nm,0.6s,baz=56,slow=8.9,SNR=24						
ASAR				LR	LR	22 04 55.7	
	comp=Z,75nm,18.2s,baz=64,slow=37						
LHI	**Lord Howe Isla**	**26.86**	**169**	*e*P	**P**	**21 54 36.1**	**-0.7**
	76nm,1.0s						
STKA	**Stephens Creek**	**28.74**	**201**	*e*P	**P**	**21 54 52.9**	**-0.7**
	0.7nm,1.0s						
STKA	**Stephens Creek**	**28.74**	**201**	P	**P**	**21 54 52.9**	**-0.7**
	1.6nm,0.6s,baz=358,slow=10,SNR=4.1						
STKA				LR	LR	22 06 01.9	
	comp=Z,60nm,20.7s,baz=25,slow=36						
BATI	**Baumata**	**29.62**	**258**	P	**P**	**21 55 00.9**	**-0.7**
	6.4nm,0.5s,baz=72,slow=5.3,SNR=2.6						
BATI				LR	LR	22 09 00.9	
	comp=Z,202nm,19.3s,baz=116,slow=41						
FITZ	**Fitzroy Crossi**	**29.80**	**242**	*e*P	**P**	**21 55 03.1**	**0.0**
	14nm,0.7s						
FITZ	**Fitzroy Crossi**	**29.80**	**242**	P	**P**	**21 55 02.7**	**-0.4**
	14nm,0.7s,baz=74,slow=7.4,SNR=49						
FITZ				LR	LR	22 08 34.3	
	comp=Z,67nm,18.7s,baz=69,slow=40						
MBWA	**Marble Bar**	**36.10**	**241**	*e*P	**P**	**21 55 57.0**	**-1.2**
CISI	**Cisompet, Garu**	**45.08**	**264**	*e*P	**P**	**21 57 11.5**	**-1.0**
	20nm,0.7s						
KSRS	**Korea Array**	**48.42**	**333**	P	**P**	**21 57 37.4**	**-0.6**
	0.8nm,0.4s,baz=153,slow=8.7,SNR=5.9						
KSRS				LR	LR	22 15 51.0	
	comp=Z,15nm,21.7s,baz=113,slow=33						
KS15	**Wonju Array Si**	**48.43**	**333**	*e*P	**P**	**21 57 37.4**	**-0.7**
	22nm,1.4s						
KSAR	**Wonju Array Be**	**48.43**	**333**	P	**P**	**21 57 37.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**52.64**	**341**	P	**P**	**21 58 09.9**	**+0.1**
	2.2nm,0.8s,baz=176,slow=8.0,SNR=6.7						
ENH	**Enshi**	**54.60**	**313**	*e*P	**P**	**21 58 24.0**	**-0.5**
	12nm,1.1s						
UTTA	**Uttaradit**	**56.62**	**295**	P	**P**	**21 58 41.2**	**+2.0**
	2.1nm,0.8s						
XAN	**Xi'an**	**57.07**	**316**	*e*P	**P**	**21 58 42.1**	**0.0**
	4.0nm,0.8s						
KLR	**Kul'dur**	**57.23**	**343**	P	**P**	**21 58 42.4**	**-0.6**
	2.3nm,0.8s,baz=174,slow=4.3,SNR=8.5						
CM01	**Chiang Mai Arr**	**58.27**	**295**	*e*P	**P**	**21 58 50.9**	**+0.1**
CM31	**Chiang Mai Arr**	**58.30**	**295**	*e*P	**P**	**21 58 52.0**	**+1.0**
	5.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**58.30**	**295**	P	**P**	**21 58 51.1**	**0.0**
	1.8nm,0.3s,baz=115,slow=5.5,SNR=22						
GTA	**Gaotai**	**66.10**	**317**	*e*P	**P**	**21 59 44.0**	**+0.9**
GTA				pP	pP	21 59 48.2	-6.9
GTA				sP	pwP	21 59 51.4	-6.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SHL	**Shillong**	**66.74**	**300**	*e*P	**P**	**21 59 48.3**	**+0.7**
	comp=Z,3.7nm,0.7s						
SONA0	**Songino Array**	**66.76**	**328**	*e*P	**P**	**21 59 47.0**	**-0.1**
SONM	**Songino Array**	**66.76**	**328**	P	**P**	**21 59 47.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=145,slow=5.0,SNR=6.2						
LSA	**Lhasa**	**68.68**	**304**	*e*P	**P**	**22 00 00.9**	**+0.9**
	comp=Z,1.7nm,0.8s						
JIRN	**Jiri**	**72.22**	**301**	*e*P	**P**	**22 00 21.7**	**+0.1**
	comp=Z,7.9nm,0.6s						
GUN	**Gumba**	**72.56**	**301**	*e*P	**P**	**22 00 24.2**	**+0.6**
	comp=Z,16nm,0.9s						
PKI	**Pulchoki**	**72.87**	**301**	*e*P	**P**	**22 00 25.3**	**-0.1**
	comp=Z,12nm,1.0s						
PKIN	**Phulchoki**	**72.88**	**301**	*e*P	**P**	**22 00 25.1**	**-0.3**
	comp=Z,6.3nm,0.8s						
DMN	**Daman**	**73.14**	**301**	*e*P	**P**	**22 00 27.2**	**+0.3**
	comp=Z,18nm,0.8s						
KOLN	**Koldanda**	**74.47**	**301**	*e*P	**P**	**22 00 34.5**	**-0.2**
	comp=Z,16nm,0.8s						
DANN	**Dangsing**	**74.48**	**301**	*e*P	**P**	**22 00 34.4**	**-0.4**
	comp=Z,9.5nm,0.7s						
PYUN	**Piuthan**	**75.07**	**301**	*e*P	**P**	**22 00 37.6**	**-0.6**
	comp=Z,26nm,0.8s						
TIXI	**Tiksi**	**78.24**	**352**	*e*P	**P**	**22 00 54.8**	**0.0**
MK32	**Makanchi Array**	**80.77**	**319**	*e*P	**P**	**22 01 09.4**	**+0.2**
MKAR	**Makanchi Array**	**80.77**	**319**	*e*P	**P**	**22 01 08.0**	**-1.2**
	comp=Z,32nm,0.9s						
MKAR	**Makanchi Array**	**80.77**	**319**	P	**P**	**22 01 09.4**	**+0.2**
	comp=Z,4.7nm,0.9s,baz=104,slow=6.2,SNR=37						
MAKZ	**Makanchi**	**80.98**	**319**	*e*P	**P**	**22 01 10.5**	**+0.2**
	comp=Z,8.6nm,0.9s						
ZAA0	**Zalesovo Array**	**81.59**	**326**	*e*P	**P**	**22 01 13.0**	**-0.3**
	comp=Z,5.0nm,0.7s						
ZALV	**Zalesovo Beam**	**81.59**	**326**	*e*P	**P**	**22 01 12.5**	**-0.8**
ZALV	**Zalesovo Beam**	**81.59**	**326**	P	**P**	**22 01 12.9**	**-0.4**
	comp=Z,5.0nm,0.6s,baz=112,slow=5.4,SNR=25						
ZAA1	**Zalesovo Array**	**81.59**	**326**	*e*P	**P**	**22 01 12.9**	**-0.4**
ILAR	**Eielson Array**	**82.32**	**22**	P	**P**	**22 01 16.0**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=250,slow=5.0,SNR=6.2						
KDJ	**Kajisay**	**83.06**	**313**	*e*P	**P**	**22 01 23.7**	**+2.2**
	comp=Z,4.9nm,0.9s						
KURK	**Kurchatov**	**84.21**	**322**	*e*P	**P**	**22 01 26.9**	**-0.1**
	comp=Z,10nm,1.1s						
KURBB	**Kurchatov Arra**	**84.24**	**322**	P	**P**	**22 01 26.7**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=107,slow=4.0,SNR=21						
NIL	**Nilore**	**84.42**	**304**	*e*P	**P**	**22 01 27.8**	**-0.7**
	comp=Z,6.7nm,0.4s						
CHMS	**Chumysh**	**85.00**	**314**	P	**P**	**22 01 31.8**	**+0.6**
	SNR=7.9						
UCH	**Uchtor**	**85.02**	**313**	P	**P**	**22 01 33.5**	**+1.7**
	SNR=8.8						
AAK	**Ala-Archa**	**85.11**	**313**	*e*P	**P**	**22 01 32.7**	**+0.7**
	comp=Z,4.2nm,0.8s						
USP	**Ospenovka**	**85.23**	**314**	P	**P**	**22 01 33.0**	**+0.6**
	SNR=13						
AML	**Almayashu**	**85.59**	**313**	P	**P**	**22 01 36.0**	**+1.3**
	SNR=12						
EKS2	**Erkin-Say**	**85.64**	**313**	P	**P**	**22 01 35.6**	**+1.1**
	SNR=6.6						
ARSB	**Arslanbob**	**85.97**	**312**	*e*P	**P**	**22 01 37.5**	**+1.2**
	comp=Z,13nm,1.1s						
NRIK	**Noril'sk**	**86.36**	**341**	P	**P**	**22 01 37.8**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=99,slow=1.9,SNR=4.0						
BVAR	**Borovoye Array**	**89.68**	**323**	P	**P**	**22 01 52.9**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=109,slow=6.4,SNR=18						
BRVK	**Borovoye**	**89.75**	**323**	*e*P	**P**	**22 01 53.4**	**-0.4**
	comp=Z,5.2nm,1.1s						
AKASG	**Malin Array Be**	**114.93**	**324**	PKP	**PKiKP**	**22 07 35.9**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=46,slow=2.2,SNR=2.6						
AKBB	**Malin Array Si**	**114.93**	**324**	*e*PKiKP	**PKiKP**	**22 07 35.9**	**-0.4**
NB200	**NORSAR Array S**	**117.31**	**340**	*e*PKPdf	**PKiKP**	**22 07 42.8**	**+2.2**
NOA	**NORSAR Array B**	**117.31**	**340**	PKP	**PKiKP**	**22 07 42.8**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=46,slow=2.0,SNR=2.7						
BDFB	**Brasilia**	**150.62**	**135**	PKPbc	**PKiKP**	**22 08 48.9**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=251,slow=3.1,SNR=3.7						
TOA0	**Torodi Ar. Sit**	**150.71**	**288**	*e*PKPbc	**PKPbc**	**22 08 48.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**150.71**	**288**	PKPbc	**PKPbc**	**22 08 47.4**	**-1.3**
	comp=Z,4.8nm,0.8s,baz=40,slow=2.4,SNR=26						
TOA1	**Torodi Ar. Sit**	**150.71**	**288**	*e*PKPbc	**PKPbc**	**22 08 47.4**	**-1.3**
DBIC	**Dimbokro**	**158.04**	**275**	PKPab	**PKPab**	**22 09 26.2**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=94,slow=5.0,SNR=3.3						

IDC 03 22:40:13.9±63.0**, 20°.18S**×**178°.27W, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/26**, mbtmp3.8**/3**, Error ellipse: s-maj=1159.0km s-min=159.5km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.70**	**244**	P	P	22 47 30.2	-1.2
	1.4nm,0.5s,baz=78,slow=10,SNR=5.3						
ASAR	**Alice Springs**	**44.35**	**256**	P	P	22 48 26.1	-0.2
	1.1nm,0.7s,baz=91,slow=7.9,SNR=10						
WRA	**Warramunga Arr**	**44.40**	**262**	P	P	22 48 27.4	+0.7
	0.3nm,0.3s,baz=93,slow=8.1,SNR=18						

NIED ***03*** *22:56:00, 29°.30N×142°.40E, h5^{km}, Mw5.4 Best double couple: M$_0$1.43000×10^{17} NP1:φ$_s$161.00000°, δ13.00000°, λ51.00000°. NP2:φ$_s$21.00000°, δ80.00000°, λ98.00000°.*

ISCJB ***03*** *22:56:06.8±0.8, 29°.34N±0°.01×141°.99E±0°.02, h12^{km}±4^{km}, mb5.4/409, MS5.0/82, Error ellipse: s-maj=2.6km s-min=2.3km az=138.7*

BJI ***03*** *22:56:08.7, 29°.35N×142°.05E, h36^{km}, mB5.1/64, mb5.2/83, Ms5.2/91, Ms7 5.1/87*

JMA ***03*** *22:56:08.0±0.2, 29°.34N×142°.38E, h52^{km}, M5.4*

IDC ***03*** *22:56:08.5±2.1, 29°.33N×142°.10E, h13^{km}±12^{km}, mb5.0/37, mb1 5.1/41, mb1mx5.1/47, mbtmp5.1/41, ML4.7/4, MS4.9/34, Ms1 4.9/34, ms1mx4.6/56, Error ellipse: s-maj=12.2km s-min=8.6km az=84.0*

MOS ***03*** *22:56:10.6±1.1, 29°.34N×141°.99E, h39^{km}, mb5.6/112, MS4.8/35, Error ellipse: s-maj=6.2km s-min=3.6km az=114.4*

NEIC ***03*** *22:56:10.2±1.2, 29°.33N×142°.02E, h23^{km}±8^{km}, mb5.4/296, Error ellipse: s-maj=3.2km s-min=2.4km az=127.0*

GCMT ***03*** *22:56:11.2±0.2, 29°.21N±0°.01×142°.26E±0°.01, h24^{km}, MW5.2/109, Moment Tensor Solution. s72,c121; s109,c196; Duration: 1^s.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.63±.02; M$_{θθ}$0.17±.01; M$_{φφ}$-0.80±.01; M$_{rθ}$0.22±.02; M$_{θφ}$-0.16±.01; M$_{φr}$0.35±.02; Best double couple: M$_0$0.84600×10^{17} NP1:φ$_s$23.00000°, δ61.00000°, λ107.00000°. NP2:φ$_s$172.00000°, δ33.00000°, λ63.00000°. Principal axes: T 0.7690, Plg70.0000°, Azm329.0000°; N 0.1540, Plg15.0000°, Azm195.0000°; P -0.9230, Plg14.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 22:56:10.9±0.5**, 29°.33N**±0°.03×**142°.12E**±0°.04**, h32^{km}**±3^{km}**, h32^{km}:pP-P, n1219, σ1^{s}.44**/1300**, mb5.4**/436**, MS5.0**/82**, 83C-37D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.22**	**178**	*e*Pn	**Pn**	**22 56 44.2**	**-1.4**
CBIJ				*e*Sn	**Sn**	**22 57 08.2**	**-3.7**
CBIJ	**Chichi jima**	**2.22**	**178**	P	**Pn**	**22 56 43.9**	**-1.7**
CBIJ				*e*S	**Sn**	**22 57 09.3**	**-2.6**
JCJ	**Chichijima**	**2.22**	**178**	Pn	**Pn**	**22 56 44.2**	**-1.4**
	109nm,0.3s,baz=350,slow=4.2,SNR=40						
JCJ				Sn	**Sn**	**22 57 08.2**	**-3.8**
	522nm,0.3s,baz=330,slow=20,SNR=9.3						
JHHJ	**Haha-jima-NKT**	**2.69**	**179**	P	**Pn**	**22 56 50.1**	**-1.9**
JAOM	**Aogashimamukai**	**3.72**	**328**	P	**Pn**	**22 57 06.5**	**+0.3**
JHCJ	**Hachijojimakas**	**4.23**	**333**	P	**Pn**	**22 57 12.4**	**-0.7**
JHJ2	**Mitsune**	**4.26**	**333**	*e*Pn	**Pn**	**22 57 12.6**	**-0.8**
JHJ2				*e*Sn	**Sn**	**22 58 01.4**	**-0.7**
JHJ2	**Mitsune**	**4.26**	**333**	P	**Pn**	**22 57 13.7**	**+0.2**
JHJ	**Hachijo jima 2**	**4.28**	**333**	Pn	**Pn**	**22 57 12.9**	**-0.8**
	94nm,0.3s,baz=128,slow=4.7,SNR=16						
JHJ				Sn	**Sn**	**22 58 00.7**	**-1.8**
	155nm,0.3s,baz=252,slow=19,SNR=7.5						
JMKN	**Mikurajimanish**	**5.04**	**335**	P	**Pn**	**22 57 23.4**	**-0.8**
BSO1	**Boso 1**	**5.40**	**350**	P	**Pn**	**22 57 27.7**	**-1.0**
BSO1				*e*S	**Sn**	**22 58 29.2**	**-0.2**
TTO1	**TONANKAI O.B.S**	**6.25**	**315**	P	**Pn**	**22 57 43.0**	**+2.4**
JOD2	**Odawara 2**	**6.45**	**337**	P	**Pn**	**22 57 42.8**	**-0.9**
JTNC	**Tanabenakahech**	**7.13**	**311**	P	**Pn**	**22 57 55.0**	**+2.0**
JRY	**Ryogami san**	**7.20**	**339**	P	**Pn**	**22 57 54.2**	**+0.2**
JRY				*e*S	**Sn**	**22 59 14.2**	**-0.4**
INU	**Inuyama**	**7.39**	**326**	*e*Pn	**Pn**	**22 57 57.9**	**+1.3**
MJAR	**Matsushiro Arr**	**7.91**	**336**	Pn	**Pn**	**22 58 03.8**	**+0.1**
	5.5nm,0.3s,baz=155,slow=9.8,SNR=204						
MJAR				Sn	**Sn**	**22 59 33.9**	**+1.8**
	1.0nm,0.3s,baz=154,slow=15,SNR=3.4						
MAJO	**Matsushiro**	**7.91**	**336**	*e*Pn	**Pn**	**22 58 03.0**	**-0.7**
MAJO				*e*Sn	**Sn**	**22 59 30.4**	**-1.7**
MAJO	**Matsushiro**	**7.91**	**336**	*c i*P	**Pn**	**22 58 04.1**	**+0.4**
MAT	**Matsushiro**	**7.91**	**336**	P	**Pn**	**22 58 03.4**	**-0.3**
MAT				S	**Sn**	**22 59 29.3**	**-2.8**
MJB9	**Matsu-Tunnel**	**7.91**	**336**	*e*Pn	**Pn**	**22 58 04.1**	**+0.3**
MJB9				*e*Sn	**Sn**	**22 59 30.7**	**-1.5**
JMK	**Ichinoseki**	**9.63**	**356**	P	**Pn**	**22 58 24.0**	**-3.2**
JMK				*e*S	**Sn**	**23 00 05.8**	**-8.5**
JMZ	**Minamidaito 2**	**10.28**	**253**	P	**Pn**	**22 58 38.8**	**+2.6**
JNU	**Nakatsue**	**10.34**	**294**	*e*Pn	**Pn**	**22 58 41.0**	**+4.0**
JNU	**Nakatsue**	**10.34**	**294**	Pn	**Pn**	**22 58 41.1**	**+4.1**
	1.0nm,0.3s,baz=137,slow=6.3,SNR=8.6						
JAMN	**Amaminishikomi**	**11.40**	**268**	P	Pn	22 58 56.4	+4.8
JTU	**Tsushima**	**11.98**	**299**	P	**Pn**	**22 59 02.8**	**+3.4**
JOT	**Ohata**	**12.06**	**356**	P	**Pn**	**22 58 58.2**	**-2.3**
JKB	**Kayabe**	**12.56**	**356**	P	**Pn**	**22 59 04.9**	**-2.5**
ERM	**Erimo**	**12.69**	**4**	*e*Pn	Pn	22 59 04.3	-4.7
ERM				*e*Sn	**Sn**	**23 01 22.2**	**-7.0**
ERM	**Erimo**	**12.69**	**4**	*ce*P	**Pn**	**22 59 06.7**	**-2.4**
ERM				pmax	pmax		
	comp=Z,91nm,1.0s						
KSRS	**Korea Array**	**14.35**	**308**	Pn	**Pn**	**22 59 34.0**	**+2.3**
	comp=Z,1.5nm,0.3s,baz=114,slow=12,SNR=28						
KSRS				PcP	**PcP**	**23 04 47.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=96,slow=1.4,SNR=3.3						
KS15	**Wonju Array Si**	**14.37**	**308**	*e*Pn	**P**	**22 59 36.1**	**-2.6**
KS15				*e*PcP	**PcP**	**23 04 47.6**	**+0.4**
KSAR	**Wonju Array Be**	**14.37**	**308**	Pn	**Pn**	**22 59 34.0**	**+2.0**
KSAR	**Wonju Array Be**	**14.37**	**308**	P	**Pn**	**22 59 34.1**	**+2.0**
KS01	**Wonju Array Si**	**14.38**	**308**	*e*Pn	**Pn**	**22 59 32.6**	**+0.4**
ASAJ	**Asahikawa**	**14.77**	**1**	Pn	**Pn**	**22 59 33.6**	**-3.8**
	comp=Z,6.1nm,0.3s,baz=233,slow=11,SNR=11						
ASAJ				Sn	Sn	23 02 10.3	-10
	comp=Z,1.7nm,0.3s,baz=215,slow=15,SNR=3.7						
ASAJ				LR	LR	23 07 04.7	
	comp=Z,1µm,20.6s,baz=171,slow=44						
YUK	**Yuzh-Kuril'sk**	**14.98**	**11**	P	Pn	22 59 34.2	-6.0
YUK				pmax	pmax		
	comp=Z,161nm,0.6s						
YUK				pmax	pmax		
	comp=N,96nm,0.5s						
YUK				pmax	pmax		
	comp=E,76nm,0.5s						
SHO	**Shikotan**	**14.99**	**13**	*d i*P	**Pn**	**22 59 37.3**	**-3.1**
SHO				pmax	pmax		
	comp=Z,46nm,0.7s						
SHO				pmax	pmax		
	comp=N,25nm,0.4s						
SHO				MLR	MLR		
	comp=N,2µm,14.0s						
SHO				MLR	MLR		
	comp=E,2µm,14.0s						
SHO				MLR	MLR		
	comp=Z,2µm,14.0s						
GUMO	**Guam**	**15.87**	**170**	Pn	**Pn**	**22 59 52.8**	**+0.8**
	comp=Z,8.9nm,0.3s,baz=252,slow=5.0,SNR=6.6						
MSHR	**Mys Shultsa**	**15.90**	**329**	*i* P	**Pn**	**22 59 50.2**	**-2.1**
VLA	**Vladivostok**	**16.03**	**332**	*i* P	**Pn**	**22 59 53.3**	**-0.6**
TEY	**Ternei**	**16.28**	**346**	⇓*e*P	**Pn**	**22 59 54.3**	**-2.7**
TEY				pmax	pmax		
	comp=N,30nm,1.0s						
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
KUR	**Kuril'sk**	**16.52**	**14**	*e*P	**Pn**	**22 59 57.1**	**-2.9**
KUR				pmax	pmax		
	comp=Z,95nm,0.9s						
KUR				pmax	pmax		
	comp=N,33nm,0.7s						
USA0B	**Ussuriysk Arra**	**16.89**	**334**	*e*Pn	**Pn**	**23 00 02.9**	**-2.0**
	comp=N,58nm,0.9s						
USRK	**Ussuriysk Ar.**	**16.89**	**334**	Pn	**Pn**	**23 00 02.9**	**-2.0**
	comp=N,0.6nm,0.3s,baz=155,slow=10.0,SNR=31						
YSS	**Yuzh-Sakhalins**	**17.61**	**1**	*e*Pn	**Pn**	**23 00 12.1**	**-1.6**
	comp=N,293nm,1.2s						
YSS	**Yuzh-Sakhalins**	**17.61**	**1**	⇑*e*P	**Pn**	**23 00 12.0**	**-1.6**
YSS				*e*S	Sn	23 03 17.3	-11
YSS				pmax	pmax		
	comp=Z,100nm,1.0s						
YSS				pmax	pmax		
	comp=N,90nm,0.7s						
YSS				pmax	pmax		
	comp=Z,2µm,3.2s						
YSS				MLR	MLR		
	comp=N,2µm,16.0s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YOJ	**Yonaguni jima**	**17.71**	**259**	*e*Pn	**Pn**	**23 00 15.1**	**-0.1**
	comp=Z,507nm,1.4s						
YOJ	**Yonaguni jima**	**17.71**	**259**	*e*P	**Pn**	**23 00 15.1**	**-0.1**
YOJ				pmax	pmax		
	comp=Z,507nm,1.4s						
SSE	**Sheshan**	**18.18**	**281**	*e*Pn	**P**	**23 00 21.1**	**+0.3**
	comp=Z,75nm,0.8s						
MDJ	**Mudanjiang**	**18.21**	**330**	P	**Pn**	**23 00 19.1**	**-2.1**
MDJ				pP	pP	23 00 27.6	-0.8
MDJ				sP	sP	23 00 32.5	+0.4
MDJ				S	**Sn**	**23 03 42.6**	**-0.9**
MDJ				sS	S	23 03 55.4	+7.5
MDJ				pmax	pmax		
	comp=Z,870nm,1.8s						
MDJ				LR	LR		
	comp=Z,4µm,17.5s						
MDJ				LR	LR		
	comp=Z,5µm,16.3s						
MDJ				LR	LR		
	comp=Z,8µm,17.1s						
MDJ	**Mudanjiang**	**18.21**	**330**	*e*Pn	**Pn**	**23 00 19.7**	**-1.5**
	comp=Z,155nm,1.0s						
TATO	**Taipei**	**18.86**	**262**	*e*P	**P**	**23 00 28.3**	**-0.1**
	comp=Z,468nm,0.9s						
TATO	**Taipei**	**18.86**	**262**	P	**Pn**	**23 00 30.0**	**+0.9**
	SNR=6.0						
NACB	**Ninganchiao**	**19.02**	**259**	*e*P	**P**	**23 00 29.8**	**-0.5**
NACB				*e*Pn	**Pn**	**23 00 30.7**	**-0.5**
YHNB	**Yeheng**	**19.05**	**261**	*e*P	**Pn**	**23 00 31.7**	**+0.1**
YHNB				*e*Pn	**P**	**23 00 31.9**	**+1.2**
DL2	**Dalian**	**19.43**	**305**	P	**Pn**	**23 00 35.5**	**-0.4**
DL2				*e*S	**Sn**	**23 04 13.8**	**+0.8**
DL2				pmax	pmax		
	comp=Z,76nm,1.3s						
DL2				pmax	pmax		
	comp=Z,430nm,5.0s						
DL2				LR	LR		
	comp=Z,4µm,16.1s						
DL2				LR	LR		
	comp=Z,7µm,16.3s						
DL2				LR	LR		
	comp=Z,8µm,17.3s						
SNY	**Shenyang**	**19.52**	**315**	⇑P	**P**	**23 00 33.7**	**-1.8**
SNY				S	**Sn**	**23 04 15.4**	**+0.4**
SNY				pmax	pmax		
	comp=Z,34nm,1.1s						
SNY				pmax	pmax		
	comp=Z,640nm,4.0s						
SNY				LR	LR		
	comp=Z,3µm,14.7s						
SNY				LR	LR		
	comp=Z,3µm,13.7s						
SNY				LR	LR		
	comp=Z,5µm,19.1s						
YULB	**Yu-li**	**19.56**	**257**	*e*P	**Pn**	**23 00 37.5**	**-0.1**
	comp=Z,193nm,0.9s						
CN2	**Changchun**	**19.64**	**322**	⇑P	**P**	**23 00 36.8**	**0.0**
CN2				*e*sP	pwP	23 00 50.6	+1.8
CN2				*e*S	**S**	**23 04 10.5**	**-6.2**
CN2				pmax	pmax		
	comp=Z,40nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,3µm,17.0s						
CN2				LR	LR		
	comp=Z,4µm,17.0s						
CN2				LR	LR		
	comp=Z,5µm,18.0s						
SSLB	**Suanglung**	**19.71**	**259**	*e*P	**Pn**	**23 00 38.8**	**-0.6**
	comp=Z,432nm,1.3s						
SSLB				*e*S	**Sn**	**23 04 22.1**	**+2.2**
UGL	**Uglegorsk**	**19.72**	**360**	⇑*i*P	**Pn**	**23 00 39.4**	**+0.1**
UGL				S	**Sn**	**23 04 19.8**	**0.0**
UGL				pmax	pmax		
	comp=Z,2µm,4.1s						
UGL				pmax	pmax		
	comp=Z,263nm,1.0s						
UGL				pmax	pmax		
	comp=E,193nm,0.7s						
UGL				pmax	pmax		
	comp=Z,211nm,1.2s						
UGL				smax	smax		
	comp=E,2µm,6.2s						
UGL				MLR	MLR		
	comp=E,3µm,17.0s						
UGL				MLR	MLR		
	comp=Z,2µm,16.0s						
TWG	**Pinlang**	**19.97**	**256**	*e*P	**Pn**	**23 00 43.2**	**+0.8**
	comp=Z,809nm,1.2s						
TPUB	**Ta-pu**	**20.16**	**258**	*e*P	Pn	23 00 44.5	-0.3
	comp=Z,241nm,1.1s						
NJ2	**Nanjing**	**20.18**	**284**	*e*P	**P**	**23 00 42.8**	**0.0**
NJ2				pmax	pmax		
	comp=Z,88nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,690nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,15.2s						
NJ2				LR	LR		
	comp=Z,3µm,16.8s						
NJ2				LR	LR		
	comp=Z,4µm,16.3s						
QZH	**Quanzhou**	**21.38**	**264**	⇑*i*P	**P**	**23 00 55.9**	**+0.1**
QZH				S	**S**	**23 04 50.7**	**-0.7**
QZH				pmax	pmax		
	comp=Z,67nm,0.6s						
QZH				LR	LR		
	comp=Z,1µm,15.8s						
QZH				LR	LR		
	comp=Z,2µm,16.1s						
QZH				LR	LR		
	comp=Z,3µm,17.7s						
SGCP	**Mt. Cagua**	**21.39**	**243**	*e*P	**P**	**23 00 52.5**	**-3.5**
KLR	**Kul'dur**	**21.39**	**341**	*c i*P	**P**	**23 00 53.5**	**-2.3**
KLR	**Kul'dur**	**21.39**	**341**	P	**P**	**23 00 55.4**	**-0.4**
	comp=Z,40nm,1.0s,baz=142,slow=9.8,SNR=54						
TYV	**Tymovskoe**	**21.52**	**1**	*e*P	**P**	**23 00 57.6**	**+0.6**
TYV				*e*S	**S**	**23 04 55.9**	**+2.1**
TYV				pmax	pmax		
	comp=Z,400nm,4.3s						
TYV				pmax	pmax		
	comp=Z,86nm,1.2s						
TYV				smax	smax		
	comp=E,3µm,9.2s						
TYV				MLR	MLR		
	comp=N,3µm,17.0s						
TYV				MLR	MLR		
	comp=Z,3µm,17.0s						
PALP	**Palanan**	**21.79**	**240**	*e*P	**P**	**23 01 01.0**	**+0.7**
GRNR	**Gornyy**	**21.84**	**350**	*e*P	**P**	**23 01 01.0**	**+0.4**
GRNR				pmax	pmax		
	comp=Z,50nm,1.0s						
TIA	**Tai'an**	**22.07**	**295**	P	**P**	**23 01 01.1**	**-2.1**
TIA				S	**S**	**23 05 04.6**	**-0.3**
TIA				sS	Sn	23 05 18.9	+2.3
TIA				pmax	pmax		
	comp=Z,170nm,3.5s						
TIA				LR	LR		
	comp=Z,1µm,14.9s						
TIA				LR	LR		

	comp=Z,780nm,19.2s						
TIA				LR	LR		
	comp=Z,1µm,18.5s						
APYP	Conner	22.23	244	eP	P	23 01 05.4	+0.3
CAUP	Cauayan	22.32	241	eP	P	23 01 07.4	+1.4
PVCP	Virac	22.85	231	eP	P	23 01 13.5	+1.9
BESP	Borongan	23.51	225	eP	P	23 01 19.6	+1.4
POLP	Polilio Island	23.63	236	eP	P	23 01 18.9	-0.5
SMPP	San Manuel, Pa	23.67	241	eP	P	23 01 18.9	-0.9
BJT	Baijiatuau	23.78	304	eP	P	23 01 18.8	-1.8
	comp=Z,54nm,0.9s						
BJT	Baijiatuau	23.78	304	eP	P	23 01 18.8	-1.8
BJT				pmax	pmax		
	comp=Z,54nm,0.9s						
SKR	Severo-Kuril's	23.80	22	eP	P	23 01 17.6	-3.0
SKR				pmax	pmax		
	comp=Z,492nm,0.6s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,1µm,13.0s						
NKL	Nikolayevsk	23.83	358	eP	P	23 01 16.0	-4.9
NKL				pmax	pmax		
	comp=Z,320nm,1.0s						
NKL				pmax	pmax		
	comp=N,1µm,11.0s						
NKL				pmax	pmax		
	comp=Z,2µm,11.0s						
WHN	Wuhan	24.07	280	⇓P	P	23 01 22.5	-0.9
WHN				LR	LR		
	comp=Z,11µm,15.5s						
WHN				LR	LR		
	comp=Z,21µm,26.9s						
WHN				LR	LR		
	comp=Z,12µm,18.9s						
H11N2	WAKE ISLAND Hy	24.44	107	T	T	23 26 57.7	
	baz=297,slow=74,SNR=69						
H11N1	WAKE ISLAND Hy	24.45	107	T	T	23 26 56.6	
	baz=297,slow=74,SNR=73						
OCLP	Ormoc	24.45	226	eP	P	23 01 26.3	-0.6
H11N3	WAKE ISLAND Hy	24.46	107	T	T	23 26 59.0	
	baz=297,slow=74,SNR=75						
BOAC	Boac	24.54	234	eP	P	23 01 28.1	+0.2
TGY	Tagaytay City	24.77	237	P	P	23 01 30.0	+0.1
	comp=Z,794nm,0.7s,baz=2.7,slow=1.6,SNR=14						
H11S3	WAKE ISLAND Hy	24.87	110	T	T	23 27 36.5	
	baz=301,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	24.87	110	T	T	23 27 30.0	
	baz=301,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	24.88	110	T	T	23 27 26.2	
	baz=301,slow=75,SNR=15						
MSLP	Maasin	25.00	224	eP	P	23 01 31.4	-0.6
OTRP	Odiongan	25.18	232	eP	P	23 01 34.2	+0.6
BUTP	Butuan	25.49	221	eP	P	23 01 37.2	+0.9
SJMP	San Jose	25.74	234	eP	P	23 01 39.1	+0.4
TIY	Taiyuan	26.04	297	eP	P	23 01 39.7	-1.7
TIY				pmax	pmax		
	comp=Z,23nm,0.7s						
TIY				pmax	pmax		
	comp=Z,270nm,8.3s						
TIY				LR	LR		
	comp=Z,2µm,15.3s						
TIY				LR	LR		
	comp=Z,3µm,16.1s						
TIY				LR	LR		
	comp=Z,3µm,16.6s						
GUIM	Jordan	26.06	228	eP	P	23 01 41.6	0.0
HIA	Hailar	26.21	326	eP	P	23 01 43.5	+0.8
	comp=Z,180nm,0.9s						
HIA	Hailar	26.21	326	c iP	P	23 01 43.6	+0.8
HIA				pmax	pmax		
	comp=Z,135nm,0.8s						
PETK	Petropavlovsk-	26.38	21	P	P	23 01 43.7	-0.4
	comp=Z,13nm,1.0s,baz=234,slow=8.7,SNR=5.2						
PEA1	Petropavlovsk-	26.38	21	eP	P	23 01 43.7	-0.5
PET	Petropavlovsk	26.62	23	eP	P	23 01 46.5	+0.2
PET				eS	S	23 06 17.3	-1.6
PET				pmax	pmax		
	comp=Z,46nm,0.8s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
BUKP	Musuan	26.69	220	eP	P	23 01 46.5	-0.8
ZEA	Zeya	26.70	340	ceP	P	23 01 47.4	+0.4
ZEA				pmax	pmax		
	comp=N,120nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,230nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,11.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,14.0s						
ZEA				MLR	MLR		
	comp=N,1µm,15.0s						
ZEA				MLR	MLR		
	comp=E,400nm,15.0s						
BUSP	Coron	26.70	234	eP	P	23 01 47.6	+0.2
MATI	Mati	26.82	217	eP	P	23 01 42.0	-6.4
CUYO	Cuyo Island	26.94	231	eP	P	23 01 50.2	+0.6
HHC	Hu-ho-hao-te	27.38	303	eP	P	23 01 50.8	-2.7
HHC				pP	pP	23 02 00.2	-1.6
HHC				sP	sP	23 02 04.0	-1.1
HHC				S	S	23 06 24.9	-6.6
HHC				sS	pS	23 06 41.1	+1.0
HHC				pmax	pmax		
	comp=E,14nm,1.0s						
HHC				pmax	pmax		
	comp=E,270nm,5.2s						
HHC				LR	LR		
	comp=E,3µm,18.0s						
HHC				LR	LR		
	comp=E,4µm,17.1s						
HHC				LR	LR		
	comp=E,6µm,16.8s						
KCP	Kidapawan	27.39	219	⇓eP	P	23 01 57.8	+4.2
CTBH	Cotabato--PC H	27.69	221	⇑iP	P	23 01 56.8	+0.5
PAGZ	Pagadian	27.70	223	eP	P	23 01 56.1	-0.2
ENPP	El Nido	27.80	234	eP	P	23 01 57.8	+0.6
SKMP	Bagumbayan, Su	28.10	220	eP	P	23 02 01.6	+1.7
IPIL	Ipil	28.23	224	eP	P	23 02 00.2	-0.9
ENH	Enshi	28.28	280	eP	P	23 02 00.0	-1.5
	comp=E,67nm,0.8s						
BTO	Baotou	28.46	302	eP	P	23 01 59.5	-3.6
BTO				S	S	23 06 41.3	-7.2
XAN	Xi'an	28.56	288	P	P	23 02 02.1	-1.9
XAN				pP	pP	23 02 11.5	-0.8
XAN				sP	sP	23 02 15.7	+0.1
XAN				pmax	pmax		
	comp=E,23nm,1.0s						
XAN				pmax	pmax		
	comp=E,200nm,3.8s						
XAN				LR	LR		
	comp=E,1µm,16.3s						
XAN				LR	LR		
	comp=E,3µm,17.3s						
XAN				LR	LR		
	comp=E,3µm,18.2s						
XAN	Xi'an	28.56	288	eP	P	23 02 02.1	-1.9
	comp=E,43nm,0.7s						
XAN	Xi'an	28.56	288	eP	P	23 02 02.1	-1.9
XAN				pmax	pmax		
	comp=Z,43nm,0.7s						
BATP	Bataraza	30.62	233	eP	P	23 02 23.5	+1.2
MA2	Magadan	30.81	9	eP	P	23 02 21.8	-1.8
	comp=Z,35nm,0.9s						
MA2	Magadan	30.81	9	ceP	P	23 02 23.1	-0.5
MA2				pmax	pmax		
	comp=Z,103nm,2.5s						
MA2	Magadan	30.81	9	P	P	23 02 23.8	+0.2
	comp=Z,31nm,0.9s,baz=179,slow=8.1,SNR=10						
CIT	Chita	31.01	325	eP	P	23 02 25.7	+0.2
CIT				e		23 02 32.4	
CIT				e		23 02 43.9	
CIT				pmax	pmax		
	comp=Z,112nm,1.7s						
QIZ	Qiongzhong	31.08	258	P	P	23 02 27.2	+0.8
QIZ				sP	pwP	23 02 39.0	+0.5
QIZ				S	S	23 07 31.2	+1.3
QIZ				pmax	pmax		
	comp=Z,16nm,0.9s						
QIZ				LR	LR		
	comp=Z,650nm,19.6s						
QIZ				LR	LR		
	comp=Z,1µm,19.6s						
QIZ				LR	LR		
	comp=Z,1µm,16.7s						
QIZ	Qiongzhong	31.08	258	eP	P	23 02 27.7	+1.3
QIZ				epP	pP	23 02 35.8	+1.0
GYA	Guiyang	31.39	273	⇑iP	P	23 02 28.2	-1.0
GYA				pP	sP	23 02 40.4	-0.6
GYA				sP	pwP	23 02 45.3	+3.5
GYA				PP	PnPn	23 03 34.8	+2.4
GYA				S	S	23 07 33.7	-1.1
GYA				sS	sS	23 07 50.0	+1.4
GYA				SS	ScP	23 09 21.6	+18
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,250nm,7.3s						
GYA				LR	LR		
	comp=Z,3µm,17.1s						
GYA				LR	LR		
	comp=Z,1µm,17.4s						
GYA				LR	LR		
	comp=Z,2µm,17.2s						
KDM	Kudat	32.63	232	P	P	23 02 40.3	+0.4
ULN	Ulaanbaatar	32.70	314	eP	P	23 02 39.8	-0.6
	comp=Z,36nm,0.8s						
ULN	Ulaanbaatar	32.70	314	ceP	P	23 02 40.6	+0.1
ULN				pmax	pmax		
	comp=Z,89nm,1.7s						
ULN	Ulaanbaatar	32.70	314	P	P	23 02 40.8	+0.4
	SNR=27						
ULN				P	P	23 02 40.8	+0.4
	SNR=27						
LZH	Lanzhou	32.75	292	⇑P	P	23 02 39.3	-1.8
LZH				pP	pP	23 02 50.8	+1.4
LZH				sP	pwP	23 02 54.9	+1.4
LZH				PP	PnPn	23 03 50.3	+0.6
LZH				eS	S	23 07 52.9	-3.0
LZH				sS	sS	23 08 10.8	+1.0
LZH				SS	SnSn	23 09 50.4	-2.4
LZH				pmax	pmax		
	comp=Z,37nm,1.0s						
LZH				pmax	pmax		
	comp=Z,410nm,6.2s						
LZH				LR	LR		
	comp=Z,3µm,15.7s						
LZH				LR	LR		
	comp=Z,6µm,14.6s						
LZH				LR	LR		
	comp=Z,8µm,17.4s						
SONA1	Songino Array	33.10	314	eP	P	23 02 43.5	-0.4
SONA0	Songino Array	33.10	314	eP	P	23 02 44.0	0.0
SONA0				ePcP	PcP	23 05 27.8	+1.1
SONA0				eScP	ScP	23 09 09.3	+0.7
SONM	Songino Array	33.10	314	P	P	23 02 44.0	0.0
	comp=Z,23nm,0.7s,baz=126,slow=8.9,SNR=87						
SONM				PcP	PcP	23 05 27.8	+1.1
	comp=Z,1.5nm,0.5s,baz=121,slow=4.4,SNR=2.1						
SONM				ScP	ScP	23 09 09.3	+0.7
	comp=Z,2.5nm,0.9s,baz=131,slow=4.6,SNR=5.4						
SONM				LR	LR	23 16 42.7	
	comp=Z,2µm,19.1s,baz=112,slow=37						
CD2	Chengdu	33.11	282	P	P	23 02 42.4	-1.8
CD2				pP	pP	23 02 52.3	-0.2
CD2				sP	pwP	23 02 56.8	+0.1
CD2				PP	PP	23 03 57.3	-2.0
CD2				S	S	23 08 05.1	+3.7
CD2				sS	sS	23 08 16.0	+0.8
CD2				pmax	pmax		
	comp=Z,80nm,0.7s						
CD2				pmax	pmax		
	comp=Z,350nm,5.2s						
CD2				LR	LR		
	comp=Z,3µm,17.3s						
CD2				LR	LR		
	comp=Z,4µm,14.7s						
CD2				LR	LR		
	comp=Z,4µm,15.5s						
SDKM	Sandakan	33.31	230	P	P	23 02 45.7	-0.3
KMSI	Cibinong	33.42	214	P	P	23 02 56.3	+9.5
FAKI	Fak Fak	33.43	198	eP	P	23 02 45.4	-1.5
	comp=Z,26nm,0.7s						
FAKI	Fak Fak	33.43	198	P	P	23 02 45.5	-1.5
	comp=Z,37nm,0.7s						
KKM	Kota Kinabalu	33.68	232	eP	P	23 02 50.7	+1.5
	comp=Z,84nm,1.0s						
KKM	Kota Kinabalu	33.68	232	P	P	23 02 49.0	-0.3
KKM	Kota Kinabalu	33.68	232	P	P	23 02 51.1	+1.8
YAK	Yakutsk	33.72	349	c iP	P	23 02 48.8	-0.2
YAK				e*PP	pwP	23 03 02.6	-0.6
YAK				e		23 04 06.2	
YAK				eS	S	23 08 08.4	-1.5
YAK				pmax	pmax		
	comp=Z,298nm,0.8s						
YAK				pmax	pmax		
	comp=N,214nm,1.1s						
YAK				pmax	pmax		
	comp=E,82nm,1.1s						
YAK				pmax	pmax		
	comp=Z,561nm,2.8s						
YAK				pmax	pmax		
	comp=N,671nm,2.6s						
YAK				pmax	pmax		
	comp=E,413nm,2.6s						
YAK				smax	smax		
	comp=E,1µm,4.4s						
YAK				smax	smax		
	comp=N,2µm,4.4s						
YAK				MLR	MLR		
	comp=Z,7µm,17.0s						
YAK				MLR	MLR		
	comp=N,6µm,17.0s						
TSM	Tawau	33.87	227	P	P	23 02 50.9	0.0
SEY	Seymchan	34.27	8	ceP	P	23 02 52.2	-1.6
SEY	Seymchan	34.27	8	P	P	23 02 54.1	+0.3
	comp=N,24nm,0.9s,baz=194,slow=6.8,SNR=26						
BOD	Bodaibo	34.53	334	⇓iP	P	23 02 56.5	+0.4
BOD				pmax	pmax		
	comp=Z,80nm,1.1s						
MRSI	Marisa	34.55	217	P	P	23 02 56.7	+0.1
SANI	Sanana	34.81	209	P	P	23 02 56.7	-2.2
KMI	Kunming	35.15	273	P	P	23 03 01.6	-0.5
KMI				pP	pP	23 03 09.3	-1.1
KMI				sP	sP	23 03 12.4	-1.5
KMI				PP	PnPn	23 04 20.7	+0.6
KMI				PcP	PcP	23 05 33.7	+0.6
KMI				S	S	23 08 33.5	+0.1
KMI				sS	sS	23 08 49.9	+2.7
KMI				pmax	pmax		
	comp=Z,41nm,0.9s						
KMI				pmax	pmax		
	comp=Z,120nm,3.1s						
KMI				LR	LR		
	comp=Z,770nm,16.6s						
KMI				LR	LR		
	comp=Z,2µm,20.8s						
KMI				LR	LR		
	comp=Z,2µm,19.8s						
KMI	Kunming	35.15	273	eP	P	23 03 01.9	-0.2
	comp=Z,40nm,0.9s						
KMI	Kunming	35.15	273	eP	P	23 03 01.9	-0.2
KMI				pmax	pmax		
	comp=Z,40nm,0.9s						
LUWI	Luwuk	35.41	215	eP	P	23 03 03.0	-1.2
	comp=Z,61nm,0.7s						
BNDI	Bandanaira	35.64	201	P	P	23 03 11.4	+5.4
MPSI	Mapaga	35.78	220	P	P	23 03 06.1	-1.2
APSI	Ampana	35.87	217	P	P	23 03 06.8	-1.3
ZAK	Zakamensk	35.92	317	eP	P	23 03 08.6	+0.3
ZAK				pmax	pmax		
	comp=Z,50nm,1.2s						
GTA	Gaotai	36.05	298	P	P	23 03 07.7	-1.9
GTA				pP	pP	23 03 16.7	-1.3
GTA				sP	sP	23 03 21.3	0.0
GTA				S	S	23 08 41.1	-5.7
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,6.2s						
GTA				LR	LR		
	comp=Z,1µm,15.1s						
GTA				LR	LR		
	comp=Z,2µm,15.8s						
GTA				LR	LR		
	comp=Z,3µm,15.8s						
TLY	Talaya	36.20	319	eP	P	23 03 10.8	+0.2
	comp=Z,146nm,0.9s						
TLY	Talaya	36.20	319	c iP	P	23 03 10.2	-0.4
TLY	Talaya	36.20	319	P	P	23 03 11.5	+1.0
	SNR=53						
TLY				P	P	23 03 11.5	+1.0
	SNR=53						
TLY	Talaya	36.20	319	P	P	23 03 12.1	+1.5
	comp=Z,17nm,0.7s,baz=132,slow=6.1,SNR=120						
PCI	Palu	36.84	219	P	P	23 03 15.4	-1.0
SKNT	Sakolnakorn	36.99	259	P	P	23 03 17.7	0.0
	comp=Z,70nm,1.1s,comp=Z,710nm						
NONG	Nongkai	37.24	261	P	P	23 03 20.0	+0.2
	comp=Z,7.2nm,0.9s						
KIWB	Kanaga Island	37.57	42	eP	P	23 03 25.5	+3.4
MOY	Mondy	37.73	318	eP	P	23 03 24.2	+0.5
MOY				pmax	pmax		
	comp=Z,110nm,1.9s						
ADK	Adak	37.85	42	eP	P	23 03 22.3	-2.2
	comp=Z,71nm,1.1s						
ADK	Adak	37.85	42	eP	P	23 03 22.3	-2.2
ADK				pmax	pmax		
	comp=Z,71nm,1.1s						
BTM	Bintulu	37.88	232	P	P	23 03 25.6	+0.5
SMKI	Samarinda	37.98	223	P	P	23 03 34.9	+8.9
KDI	Kendari	38.02	213	P	P	23 03 25.5	-0.8
SAUI	Saumlaki	38.53	197	eP	P	23 03 33.6	+3.0
	comp=Z,200nm,1.0s						
SAUI	Saumlaki	38.53	197	P	P	23 03 31.2	+0.6
TTSI	Tana Toraja	38.64	217	P	P	23 03 42.3	+11
SBUM	Sibu	39.01	232	eP	P	23 03 35.3	+0.6
	comp=Z,25nm,1.0s						
SBUM	Sibu	39.01	232	P	P	23 03 34.8	+0.2
CHAI	Chaiyaphum	39.18	259	P	P	23 03 35.9	-0.2
	comp=Z,197nm,0.8s,comp=Z,1µm						
SPSI	Sidrap Palu	39.44	217	P	P	23 03 37.5	-0.7
PAYA	Payao	39.57	265	P	P	23 03 39.5	+0.1
	comp=Z,20nm,0.8s,comp=Z,188nm						
UTTA	Uttaradit	39.62	263	P	P	23 03 39.4	-0.4
	comp=Z,54nm,0.8s,comp=Z,371nm						
BNSI	Bone	39.64	216	P	P	23 03 40.0	+0.1
PBKT	Sadao Pong	39.76	261	eP	P	23 03 41.1	+0.2
	comp=Z,90nm,0.7s						
PBKT	Sadao Pong	39.76	261	P	P	23 03 40.8	-0.1
	comp=Z,156nm,0.8s,comp=Z,2µm						
MTKI	Muara Teweh, K	39.78	226	P	P	23 03 41.1	0.0
SRAK	Srakaew	40.02	256	P	P	23 03 39.3	-3.8
	comp=Z,798nm,0.8s,comp=Z,6µm						
BKSI	Bulukumba	40.42	215	P	P	23 03 43.9	-2.4
SUKH	Sukhothai	40.53	263	P	P	23 03 47.4	+0.1
	comp=Z,12nm,0.9s						
CMMT	Chiang Mai	40.58	265	P	P	23 03 47.1	-0.7
	comp=Z,148nm,1.0s,comp=Z,1µm						
CHTO	Chiang Mai	40.58	265	eP	P	23 03 47.3	-0.5
	comp=Z,111nm,0.8s						
CHTO	Chiang Mai	40.58	265	eP	P	23 03 47.3	-0.5
CHTO				pmax	pmax		
	comp=Z,111nm,0.8s						
CHTO	Chiang Mai	40.58	265	P	P	23 03 47.5	-0.3
	SNR=62						
CHTO				P	P	23 03 47.5	-0.3
	SNR=62						
CHTO	Chiang Mai	40.58	265	P	P	23 03 47.1	-0.7
	comp=Z,660nm,1.0s,comp=Z,6µm						
CM31	Chiang Mai Arr	40.73	265	eP	P	23 03 48.5	-0.4
CM31				ePcP	PcP	23 05 52.0	+1.9
CM31				eScP	PcS	23 09 39.1	-2.1
CM31	Chiang Mai Arr	40.73	265	P	P	23 03 49.0	0.0
	SNR=28						
CMAR	Chiang Mai Arr	40.73	265	P	P	23 03 48.8	-0.2
	comp=Z,25nm,0.8s,baz=46,slow=8.5,SNR=169						
CMAR				PcP	PcP	23 05 52.0	+1.9
	comp=Z,12nm,1.0s,baz=4.6,slow=0.6,SNR=4.6						
CMAR				ScP	PcS	23 09 39.1	-2.1
	comp=Z,0.4nm,0.3s,baz=54,slow=1.6,SNR=2.6						
CMAR				LR	LR	23 22 39.4	
	comp=Z,2µm,18.2s,baz=90,slow=39						
CM01	Chiang Mai Arr	40.73	264	eP	P	23 03 47.8	-1.1
KBKI	Kotabaru	40.88	222	P	P	23 03 48.5	-1.7
KSM	Kuching	41.04	233	P	P	23 03 51.8	+0.3
BILL	Bilibino	41.30	13	eP	P	23 03 53.2	+0.2
	comp=Z,32nm,1.0s						
BILL	Bilibino	41.30	13	ceP	P	23 03 53.3	+0.2
BILL				e		23 05 28.2	
BILL				eS	S	23 10 05.5	+0.5
BILL				pmax	pmax		
	comp=Z,83nm,2.5s						
BILL				MLR	MLR		
	comp=Z,791nm,16.0s						
UTHA	Uthaitani	41.52	260	P	P	23 03 55.7	+0.2
	comp=Z,45nm,0.8s,comp=Z,324nm						
PATY	Pattaya	41.55	256	P	P	23 03 56.2	+0.5
	comp=Z,36nm,0.8s,comp=Z,518nm						
UMPA	Umpang Tak	41.74	261	P	P	23 03 58.2	+0.9
	comp=Z,40nm,0.9s,comp=Z,333nm						
HVS	Khovu-Aksy	41.96	315	c iP	P	23 04 00.5	+1.7
HVS				pmax	pmax		
	comp=Z,22nm,0.9s						
HNR	Honiara	42.20	153	LR	LR	23 20 40.2	
	comp=Z,895nm,20.4s,baz=326,slow=35						
MMRI	Maumere	42.33	210	eP	P	23 04 01.8	-0.2
	comp=Z,106nm,0.8s						
MMRI	Maumere	42.33	210	P	P	23 04 01.3	-0.7
SRDT	SRDT	42.35	259	P	P	23 04 02.3	0.0
	comp=Z,83nm,0.9s,comp=Z,1µm						
SOEI	Soe	42.50	207	eP	P	23 04 02.0	-1.5
	comp=Z,39nm,0.8s						
SOEI	Soe	42.50	207	P	P	23 04 02.8	-0.7
PHET	Kaeng Krachan	42.60	257	P	P	23 04 05.0	+0.7
	comp=Z,42nm,0.9s,comp=Z,335nm						
EDFI	Ende, Flores	42.67	211	P	P	23 04 03.3	-1.6
TIXI	Tiksi	42.99	354	ceP	P	23 04 06.6	-0.1
TIXI				pmax	pmax		
	comp=Z,17nm,0.8s						
TIXI	Tiksi	42.99	354	P	P	23 04 06.7	-0.1
	comp=Z,11nm,0.7s,baz=140,slow=6.4,SNR=19						
COEN	Coen	43.04	178	eP	P	23 04 08.0	+0.3
COEN				epP	P	23 04 08.8	+1.0
BATI	Baumata	43.15	207	P	P	23 04 05.7	-3.0
KTGM	Kuala Trenggan	43.87	245	P	P	23 04 12.8	-1.8
LSA	Lhasa	44.05	284	eP	P	23 04 16.9	+0.5
LSA	Lhasa	44.05	284	eP	P	23 04 17.0	+0.5
SHL	Shillong	44.47	278	eP	P	23 04 17.6	-1.9
	comp=Z,15nm,0.7s						
SHL	Shillong	44.47	278	eP	P	23 04 17.6	-1.9
SHL				pmax	pmax		
	comp=Z,15nm,0.7s						
SHL	Shillong	44.47	278	eP	P	23 04 19.0	-0.5
BASI	Baing, Sumba	44.47	211	P	P	23 04 16.3	-3.0
PLAI	Plampang	44.60	215	P	P	23 04 18.2	-2.1
SKLT	Songkhla	44.81	249	P	P	23 04 27.5	+5.4
GAMB	Gambell	45.16	27	eP	P	23 04 24.8	+0.6
	comp=Z,13nm,1.0s						
KMMI	Kalianget	45.19	221	P	P	23 04 24.4	-0.6
TRTT	Trang	45.20	250	P	P	23 04 26.1	+0.9
	comp=Z,38nm,1.2s						
WMQ	Urumqi	45.25	304	P	P	23 04 25.5	+0.1
WMQ				pP	pP	23 04 33.9	-0.1
WMQ				PcP	PcP	23 06 06.3	+1.3
WMQ				S	S	23 11 04.6	+1.0
WMQ				sS	sS	23 11 20.5	+3.3
WMQ				pmax	pmax		
	comp=Z,87nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,860nm,8.3s						
WMQ				LR	LR		
	comp=Z,3µm,15.3s						
WMQ				LR	LR		
	comp=Z,3µm,17.3s						
WMQ				LR	LR		
	comp=Z,3µm,20.5s						
WMQ	Urumqi	45.25	304	eP	P	23 04 25.4	-0.1
	comp=Z,32nm,0.8s						
WMQ	Urumqi	45.25	304	eP	P	23 04 25.4	+0.1
WMQ				pmax	pmax		
	comp=Z,32nm,0.8s						
SRBI	Singaraja	45.33	219	P	P	23 04 25.4	-0.8
MYKOM	Kota Tinggi	45.54	240	eP	P	23 04 29.8	+1.9
	comp=Z,50nm,0.9s						
MYKOM	Kota Tinggi	45.54	240	P	P	23 04 26.2	-1.6
DGZ	Jazzator, Alta	45.70	312	c iP	P	23 04 29.8	+0.8
DGZ				pmax	pmax		
	comp=Z,25nm,0.8s						
KGM	Kluang	45.80	241	P	P	23 04 31.5	+1.6
KULM	Kulim	45.87	247	eP	P	23 04 31.0	+0.4
	comp=Z,92nm,0.8s						
KULM	Kulim	45.87	247	P	P	23 04 31.0	+0.4
TPI	Tanjungpandan	45.90	232	P	P	23 04 29.6	-1.1
IPM	Ipoh	46.06	246	eP	P	23 04 32.2	+0.2

	comp=Z,58nm,0.9s						
IPM				ePcP	PcP	23 06 09.6	+1.5
IPM	Ipoh	46.06	246	P	P	23 04 31.4	-0.6
JAGI	Jajag, Banyuwa	46.24	220	eP	P	23 04 31.3	-2.0
	comp=Z,116nm,0.9s						
JAGI	Jajag, Banyuwa	46.24	220	P	P	23 04 30.9	-2.4
PKDT	Phuket	46.29	251	P	P	23 04 34.6	+0.8
	comp=Z,71nm,0.9s,comp=Z,792nm						
FRIM	Kepong	46.34	244	P	P	23 04 33.9	-0.3
PPBI	Pangkal Pinang	46.54	234	P	P	23 04 36.0	+0.3
NGJI	Ngawi	46.92	224	P	P	23 04 37.9	-0.8
PWJI	Pagerwojo	47.23	223	P	P	23 04 39.0	-2.1
ZSN	Zaisan	47.27	309	c iP	P	23 04 40.6	-0.6
ZSN				pmax	pmax		
	comp=Z,133nm,1.4s						
ZSN				MLR	MLR		
	comp=Z,387nm,15.0s						
ZSN	Zaisan	47.27	309	⇑iP	P	23 04 40.6	-0.6
	comp=Z,133nm,1.4s						
ZSN				eLRM	MLR	23 25 45.9	
	comp=Z,387nm,15.4s						
SMRI	Semarang	47.30	225	eP	P	23 04 43.7	+2.0
	comp=Z,122nm,1.2s						
SMRI	Semarang	47.30	225	P	P	23 04 46.8	+5.2
WOJI	Wonogiri, Jawa	47.62	224	P	P	23 04 42.3	-1.8
PCJI	Pacitan	47.74	223	P	P	23 04 42.3	-2.8
ZAA0	Zalesovo Array	47.78	318	eP	P	23 04 45.2	+0.2
	comp=Z,143nm,1.1s						
ZAA1	Zalesovo Array	47.78	318	eP	P	23 04 45.2	+0.2
ZAA1				ePcP	PcP	23 06 13.9	+0.3
ZALV	Zalesovo Beam	47.78	318	eP	P	23 04 44.2	-0.8
ZALV	Zalesovo Beam	47.78	318	eP	P	23 04 44.2	-0.8
ZALV	Zalesovo Beam	47.78	318	P	P	23 04 45.2	+0.2
	comp=Z,70nm,0.9s,baz=102,slow=6.2,SNR=244						
ZALV				PcP	PcP	23 06 13.9	+0.3
	comp=Z,12nm,0.8s,baz=103,slow=4.6,SNR=2.4						
ZALV				LR	LR	23 25 50.4	
	comp=Z,3µm,18.0s,baz=80,slow=37						
UGM	Wanagama	47.92	224	eP	P	23 04 44.8	-1.7
	comp=Z,79nm,0.8s						
UGM	Wanagama	47.92	224	P	P	23 04 44.2	-2.3
JMBI	JAMBI	47.97	237	P	P	23 04 56.0	+9.1
ANM	Nome	48.01	27	eP	P	23 04 47.7	+1.1
	comp=Z,31nm,0.8s						
ANM	Nome	48.01	27	eP	P	23 04 47.7	+1.1
ANM				pmax	pmax		
	comp=Z,31nm,0.8s						
SDPT	Sand Point	48.04	40	eP	P	23 04 45.9	-1.0
	comp=Z,64nm,0.9s						
KPJI	Karang Pucung	48.46	226	P	P	23 04 49.5	-1.1
RAMN	Ramite	48.62	281	eP	P	23 04 51.4	-0.8
	comp=Z,35nm,0.5s						
PSI	Prapat	48.73	245	eP	P	23 04 52.9	-0.1
	comp=Z,48nm,0.9s						
PSI				ePcP	PcP	23 06 18.6	+0.8
PSI	Prapat	48.73	245	eP	P	23 04 52.9	-0.1
PSI				e		23 06 18.6	
PSI				pmax	pmax		
	comp=Z,49nm,0.9s						
JIRN	Jiri	48.78	282	eP	P	23 04 53.1	-0.4
	comp=Z,94nm,0.6s						
NVS	Novosibirsk	48.81	319	⇓iP	P	23 04 54.1	+1.2
NVS				eS	S	23 11 54.7	+0.9
NVS				pmax	pmax		
	comp=Z,196nm,1.5s						
NVS				pmax	pmax		
	comp=N,37nm,1.4s						
NVS				pmax	pmax		
	comp=E,170nm,1.6s						
NVS				smax	smax		
	comp=N,26nm,2.3s						
GUN	Gumba	48.97	283	eP	P	23 04 54.4	-0.6
	comp=N,118nm,0.8s						
MK32	Makanchi Array	49.03	308	eP	P	23 04 54.6	-0.1
MK32				ePcP	PcP	23 06 19.9	+1.7
MK32				eScP	ScP	23 10 13.0	+1.9
MKAR	Makanchi Array	49.03	308	eP	P	23 04 54.2	-0.5
	comp=N,273nm,0.8s						
MKAR	Makanchi Array	49.03	308	P	P	23 04 54.6	-0.1
	comp=N,40nm,0.7s,baz=92,slow=9.6,SNR=361						
MKAR				PcP	PcP	23 06 20.0	+1.7
	comp=N,17nm,1.0s,baz=87,slow=5.9,SNR=2.4						
MKAR				ScP	ScP	23 10 13.0	+1.9
	comp=N,2.2nm,0.7s,baz=90,slow=4.3,SNR=4.2						
MKAR				LR	LR	23 26 40.7	
	comp=N,2µm,19.0s,baz=90,slow=37						
PBA	Port Blair	49.09	260	eP	P	23 04 55.6	+0.1
CBJI	Citeko	49.12	229	P	P	23 04 55.3	-0.4
KCSI	Kotacane, Aceh	49.23	247	P	P	23 04 55.1	-1.5
MAKZ	Makanchi	49.25	308	eP	P	23 04 56.5	+0.1
	comp=N,26nm,0.8s						
MAKZ	Makanchi	49.25	308	eP	P	23 04 56.5	+0.1
MAKZ				pmax	pmax		
	comp=Z,26nm,0.8s						
CTA	Charters Tower	49.29	175	P	P	23 04 57.6	+0.7
	comp=Z,6.8nm,0.8s,baz=356,slow=8.9,SNR=9.6						
CTAO	Charters Tower	49.29	175	eP	P	23 04 57.0	+0.1
	comp=Z,17nm,0.9s						
CTAO	Charters Tower	49.29	175	eP	P	23 04 57.0	+0.1
CTAO				pmax	pmax		
	comp=Z,17nm,0.9s						
CHGN	Chignik	49.32	39	eP	P	23 04 54.5	-2.3
	comp=Z,36nm,1.0s						
CISI	Cisompet, Garu	49.34	227	eP	P	23 04 54.5	-3.0
	comp=Z,57nm,0.8s						
CISI	Cisompet, Garu	49.34	227	P	P	23 04 54.3	-3.2
KLI	Kotabumi	49.34	233	P	P	23 04 56.7	-0.7
BLSI	Bandar Lampung	49.44	232	P	P	23 05 02.1	+3.9
MNSI	Mandailing Nat	49.45	243	P	P	23 04 57.1	-1.2
PKI	Pulchoki	49.47	283	eP	P	23 04 57.6	-1.1
	comp=Z,62nm,1.2s						
PKIN	Phulchoki	49.48	283	eP	P	23 04 57.5	-1.2
WRAB	Tennant Creek	49.54	190	eP	P	23 04 57.4	-1.4
	comp=Z,76nm,1.0s						
WRAB	Tennant Creek	49.54	190	ceP	P	23 04 57.8	-1.0
WRAB				pmax	pmax		
	comp=Z,126nm,1.7s						
MDSI	Maura Dua	49.55	234	P	P	23 04 58.5	-0.5
WB2	Warramunga Arr	49.55	190	eP	P	23 04 58.1	-0.8
	comp=Z,58nm,0.9s						
WR1	Warramunga Arr	49.55	190	eP	P	23 04 58.0	-0.9
	comp=Z,58nm,0.9s						
WR1				ePcP	PcP	23 06 21.4	+1.1
WR1				eScP	ScP	23 10 15.2	+1.8
WRA	Warramunga Arr	49.55	190	P	P	23 04 58.0	-0.9
	comp=Z,43nm,0.7s,baz=10,slow=8.0,SNR=93						
WRA				PcP	PcP	23 06 21.4	+1.1
	comp=Z,19nm,0.9s,baz=360,slow=3.4,SNR=2.6						
WRA				ScP	ScP	23 10 15.2	+1.8
	comp=Z,1.8nm,0.6s,baz=359,slow=4.3,SNR=5.6						
WRA				S	S	23 12 01.3	-3.6
	comp=Z,6.4nm,0.9s,baz=7.9,slow=14,SNR=11						
LHSI	Lahat	49.55	235	P	P	23 04 58.2	-0.9
	comp=Z,113nm,0.8s						
DMN	Daman	49.72	283	eP	P	23 04 59.6	-0.9
FITZ	Fitzroy Crossi	49.76	201	eP	P	23 05 00.1	-0.4
	comp=Z,34nm,0.9s						
PDSI	Padang	49.86	240	P	P	23 04 59.0	-2.4
KRJI	Kerinci	49.88	238	P	P	23 05 02.0	+0.3
LWLI	Liwa	50.01	233	P	P	23 05 00.8	-1.9
MASI	Maura Aman, Be	50.01	237	P	P	23 05 02.0	-0.6
KASI	Kota Agung	50.06	232	P	P	23 04 59.3	-3.6
BSI	Banda Aceh	50.12	251	P	P	23 05 00.8	-2.6
BOK	Bokaro	50.20	278	eP	P	23 05 04.0	0.0
BOK				IAmb	IAmb	23 05 05.5	
	comp=Z,164nm,2.0s						
RDOG	Red Dog Mine	50.21	24	eP	P	23 05 04.8	+1.4
	comp=Z,30nm,0.9s						
MNAI	Manna	50.33	235	eP	P	23 05 03.7	-1.3
	comp=Z,123nm,0.9s						
SEM	Semipalatinsk	50.36	313	d iP	P	23 05 02.4	-2.6
SEM				pmax	pmax		
	comp=Z,1µm,1.4s						
SEM				MLR	MLR		
	comp=Z,1µm,18.0s						
SEM	Semipalatinsk	50.36	313	⇓iP	P	23 05 02.5	-2.6
	comp=Z,1µm,1.4s						
SEM				eLRM	MLR	23 27 48.7	
	comp=Z,1µm,18.0s						
CMBY	CAMPBELL BAY	50.44	254	eP	P	23 05 05.5	-0.3
NRIK	Noril'sk	50.56	338	P	P	23 05 06.8	+0.8
	comp=Z,57nm,0.9s,baz=111,slow=8.7,SNR=62						
NRIK				LR	LR	23 27 45.1	
	comp=Z,2µm,18.3s,baz=120,slow=38						
DANN	Dangsing	50.66	284	eP	P	23 05 07.2	-0.5
	comp=Z,147nm,1.0s						
GSI	Gunungsitoli	50.71	245	eP	P	23 05 07.1	-0.7
	comp=Z,224nm,1.3s						
GSI	Gunungsitoli	50.71	245	P	P	23 05 06.8	-1.1
KOLN	Koldanda	50.95	283	eP	P	23 05 09.2	-0.6
	comp=Z,127nm,1.0s						
SNSI	Sinabang, Aceh	51.04	247	P	P	23 05 11.9	+1.5
PYUN	Piuthan	51.38	284	eP	P	23 05 12.6	-0.4
	comp=Z,169nm,0.6s						
KURK	Kurchatov	51.40	313	eP	P	23 05 12.7	+0.2
	comp=Z,201nm,0.9s						
KURK	Kurchatov	51.40	313	ceP	P	23 05 12.4	-0.2
KURK				pmax	pmax		
	comp=Z,214nm,1.0s						
KURK	Kurchatov	51.40	313	P	P	23 05 12.4	-0.2
	SNR=77						
KURK				P	P	23 05 12.4	-0.2
	SNR=77						
KURBB	Kurchatov Arra	51.46	313	P	P	23 05 13.4	+0.4
	comp=Z,107nm,0.7s,baz=90,slow=6.9,SNR=321						
UZB	Uzynbulak	51.59	304	c iP	P	23 05 12.1	-2.2
UZB				pmax	pmax		
	comp=Z,217nm,1.4s						
UZB				MLR	MLR		
	comp=Z,581nm,17.0s						
UZB	Uzynbulak	51.59	304	⇑iP	P	23 05 12.2	-2.2
	comp=Z,217nm,1.4s						
UZB				eLRM	MLR	23 29 00.1	
	comp=Z,581nm,16.7s						
KPKS	Kokpek	51.80	304	c iP	P	23 05 13.7	-2.1
KPKS				pmax	pmax		
	comp=Z,258nm,1.7s						
KPKS				MLR	MLR		
	comp=Z,984nm,17.0s						
KPKS	Kokpek	51.80	304	⇑iP	P	23 05 13.8	-2.1
	comp=Z,258nm,1.7s						
KPKS				eLRM	MLR	23 29 16.2	
	comp=Z,984nm,16.8s						
TDK	Taldyqorghan	51.84	306	c iP	P	23 05 14.3	-1.7
TDK				pmax	pmax		
	comp=Z,486nm,0.9s						
TDK				MLR	MLR		
	comp=Z,2µm,17.0s						
TDK	Taldyqorghan	51.84	306	⇑iP	P	23 05 14.3	-1.7
	comp=Z,486nm,0.9s						
TDK				eLRM	MLR	23 29 30.1	
	comp=Z,2µm,16.6s						
ZHN	Zhinishke	52.02	304	c iP	P	23 05 15.7	-1.8
ZHN				pmax	pmax		
	comp=Z,126nm,1.3s						
ZHN				MLR	MLR		
	comp=Z,599nm,17.0s						
ZHN	Zhinishke	52.02	304	⇑iP	P	23 05 15.7	-1.8
	comp=Z,126nm,1.3s						
ZHN				eLRM	MLR	23 29 14.4	
	comp=Z,599nm,16.8s						
SATY	Saty	52.05	304	c iP	P	23 05 15.8	-1.9
SATY				pmax	pmax		
	comp=Z,332nm,1.7s						
SATY				MLR	MLR		
	comp=Z,857nm,16.0s						
SATY	Saty	52.05	304	⇑iP	P	23 05 15.8	-1.9
	comp=Z,332nm,1.7s						
SATY				eLRM	MLR	23 29 12.2	
	comp=Z,857nm,16.2s						
PRZ	Przheval'sk	52.12	303	eP	P	23 05 19.2	+0.8
	comp=Z,144nm,1.4s						
PRZ	Przheval'sk	52.12	303	eP	P	23 05 19.2	+0.8
PRZ				pmax	pmax		
	comp=Z,144nm,1.4s						
KDAK	Kodiak Island	52.63	38	eP	P	23 05 21.7	+0.1
	comp=Z,92nm,1.1s						
KDAK	Kodiak Island	52.63	38	i P	P	23 05 21.2	-0.4
KDAK	Kodiak Island	52.63	38	P	P	23 05 21.4	-0.2
	comp=Z,37nm,0.8s,baz=244,slow=0.5,SNR=14						
TARG	Taragay, Kyrgy	52.66	302	eP	P	23 05 22.9	+0.3
	comp=Z,47nm,1.2s						
RSO	Redoubt South	52.75	34	eP	P	23 05 23.3	+0.5
CHKK	Chushkaly	52.98	305	d iP	P	23 05 23.1	-1.4
CHKK				pmax	pmax		
	comp=Z,235nm,1.0s						
CHKK	Chushkaly	52.98	305	⇓iP	P	23 05 23.1	-1.4
	comp=Z,235nm,1.0s						
MDOK	Medeo	53.02	304	d iP	P	23 05 23.4	-1.5
MDOK				pmax	pmax		
	comp=Z,502nm,1.4s						
MDOK				MLR	MLR		
	comp=Z,654nm,19.0s						
MDOK	Medeo	53.02	304	⇓iP	P	23 05 23.5	-1.5
	comp=Z,502nm,1.4s						
MDOK				eLRM	MLR	23 29 57.2	
	comp=Z,654nm,19.3s						
KDJ	Kajisay	53.07	303	eP	P	23 05 26.5	+1.1
	comp=Z,17nm,0.9s						
IM3	Indian Mountai	53.09	27	eP	P	23 05 24.5	-0.4
AAA	Alma-Ata	53.11	304	ceP	P	23 05 23.5	-2.0
AAA				pmax	pmax		
	comp=Z,324nm,1.3s						
AAA				MLR	MLR		
	comp=Z,306nm,17.0s						
AAA	Alma-Ata	53.11	304	⇑eP	P	23 05 23.5	-2.0
	comp=Z,324nm,1.2s						
AAA				eLRM	MLR	23 30 00.2	
	comp=Z,306nm,16.7s						
AS01	Alice Springs	53.27	189	eP	P	23 05 25.4	-1.3
AS31	Alice Springs	53.28	189	eP	P	23 05 26.1	-0.7
	comp=Z,13nm,1.4s						
AS31				eScP	ScP	23 10 33.2	+3.8
ASAR	Alice Springs	53.28	189	P	P	23 05 26.1	-0.7
	comp=Z,6.1nm,0.6s,baz=11,slow=11,SNR=40						
ASAR				ScP	ScP	23 10 33.2	+3.7
	comp=Z,1.4nm,0.7s,baz=6.3,slow=4.5,SNR=4.6						
ASAR				S	S	23 12 49.2	-6.9
	comp=Z,0.6nm,0.8s,baz=5.2,slow=13,SNR=3.1						
ASAR				LR	LR	23 27 26.2	
	comp=Z,640nm,20.6s,baz=28,slow=35						
PPLA	Purkeypile	53.29	31	eP	P	23 05 27.5	+0.9
	comp=Z,73nm,1.4s						
CAST	Castle Rocks	53.40	31	eP	P	23 05 28.2	+0.9
	comp=Z,18nm,0.8s						
KUU	Kurty	53.44	305	d iP	P	23 05 25.2	-2.6
KUU				pmax	pmax		
	comp=Z,317nm,1.2s						
KUU				MLR	MLR		
	comp=Z,510nm,18.0s						
KUU	Kurty	53.44	305	⇓iP	P	23 05 25.3	-2.6
	comp=Z,317nm,1.2s						
KUU				eLRM	MLR	23 29 26.9	
	comp=Z,510nm,17.6s						
ULHL	Ulahol	53.74	303	P	P	23 05 30.3	0.0
	SNR=12						
SUA	Susitna One	53.82	33	eP	P	23 05 29.3	-1.1
	comp=Z,22nm,0.8s						
BPAW	Bear Paw Mtn.	53.97	30	eP	P	23 05 32.5	+1.1
	comp=Z,39nm,1.5s						
NRN	Naryn	54.05	302	eP	P	23 05 32.7	0.0
	comp=Z,39nm,1.3s						
NRN	Naryn	54.05	302	eP	P	23 05 32.7	0.0
NRN				pmax	pmax		
	comp=Z,39nm,1.3s						
TKM2	Tokmak 2	54.11	304	P	P	23 05 33.4	+0.3
	SNR=43						
MLY	Manley	54.18	29	eP	P	23 05 34.0	+1.0
	comp=Z,20nm,0.8s						
TRF	Thorofare Moun	54.20	31	eP	P	23 05 34.3	+1.0
	comp=Z,15nm,0.8s						
SEW	Seward	54.37	35	eP	P	23 05 35.1	+0.8
	comp=Z,72nm,1.0s						
KSH	Kashi	54.41	300	P	P	23 05 38.2	+3.1
KSH				pP	sP	23 05 46.6	-0.5
KSH				PP	PP	23 07 44.7	+7.5
KSH				S	S	23 13 12.5	+0.9
KSH				sS	sS	23 13 31.4	+5.3
KSH				SS	SS	23 16 59.2	+5.3
KSH				pmax	pmax		
	comp=Z,60nm,1.1s						
KSH				LR	LR		
	comp=Z,560nm,8.7s						
KSH				LR	LR		
	comp=Z,630nm,6.5s						
KSH				LR	LR		
	comp=Z,2µm,13.4s						
KZA	Kyzart	54.50	303	P	P	23 05 36.9	+0.8
	SNR=40						
PMR	Palmer	54.60	33	eP	P	23 05 35.3	-0.7
	comp=Z,29nm,0.9s						
PMR	Palmer	54.60	33	eP	P	23 05 35.3	-0.7
PMR				pmax	pmax		
	comp=Z,29nm,0.9s						
KBK	Karagaybulak	54.62	304	P	P	23 05 37.0	+0.2
	SNR=86						
MBWA	Marble Bar	54.63	206	eP	P	23 05 35.7	-0.9
	comp=Z,25nm,0.9s						
BWN	Browne	54.64	30	eP	P	23 05 37.5	+1.3
	comp=Z,57nm,0.9s						
COLD	Coldfoot	54.69	26	eP	P	23 05 37.7	+1.1
	comp=Z,13nm,1.0s						
CHMS	Chumysh	54.71	304	P	P	23 05 37.2	0.0
	SNR=23						
FRU1	Bishkek	54.83	304	eP	P	23 05 38.5	+0.4
	comp=Z,48nm,1.0s						
MCK	McKinley	54.83	31	eP	P	23 05 38.0	+0.3
	comp=Z,32nm,1.0s						
FRU	Bishkek	54.84	304	⇑iP	P	23 05 34.5	-3.6
FRU				e		23 06 39.0	
FRU				pmax	pmax		
	comp=Z,57nm,1.4s						
FRU				MLR	MLR		
	comp=Z,1µm,16.0s						
FRU				MLR	MLR		
	comp=E,1µm,16.0s						
RND	Reindeer	54.84	31	eP	P	23 05 37.4	-0.4
	comp=E,47nm,1.2s						
RND	Reindeer	54.84	31	eP	P	23 05 37.4	-0.4
RND				pmax	pmax		
	comp=Z,47nm,1.2s						
USP	Ospenovka	54.85	304	P	P	23 05 38.2	0.0
	SNR=42						
DDI	Dehra Dun	54.90	288	eP	P	23 05 37.4	-1.4
DDI				IAmb	IAmb	23 05 38.8	
	comp=Z,134nm,0.2s						
BTLS	Baital	54.91	307	c iP	P	23 05 37.1	-1.4
BTLS				pmax	pmax		
	comp=Z,463nm,0.9s						
BTLS				MLR	MLR		
	comp=Z,496nm,15.0s						
BTLS	Baital	54.91	307	⇑iP	P	23 05 37.1	-1.4
	comp=Z,463nm,0.9s						
BTLS				eLRM	MLR	23 30 35.1	
	comp=Z,496nm,15.3s						
KNK	Knik Glacier	54.91	33	eP	P	23 05 38.5	+0.2
	comp=Z,41nm,0.8s						
AAK	Ala-Archa	54.96	304	P	P	23 05 39.2	0.0
	SNR=22						
AAK	Ala-Archa	54.96	304	eP	P	23 05 39.2	0.0
	comp=Z,30nm,1.1s						
AAK	Ala-Archa	54.96	304	i P	P	23 05 38.8	-0.4
	SNR=40						
AAK	Ala-Archa	54.96	304	ceP	P	23 05 39.1	0.0
AAK				pmax	pmax		
	comp=Z,22nm,0.8s						
AAK	Ala-Archa	54.96	304	P	P	23 05 38.7	-0.4
	SNR=9.0						
AAK				P	P	23 05 38.7	-0.4
	SNR=9.0						
AAK	Ala-Archa	54.96	304	LR	LR	23 31 05.6	
	comp=Z,749nm,18.3s,baz=59,slow=38						
SML	Sawmill	54.99	33	eP	P	23 05 39.2	+0.3
	comp=Z,76nm,1.1s						
SML	Sawmill	54.99	33	eP	P	23 05 39.2	+0.3
SML				pmax	pmax		
	comp=Z,76nm,1.1s						
UCH	Uchtor	55.01	303	P	P	23 05 40.6	+0.8
	SNR=42						
EIDS	Eidsvold	55.06	170	eP	P	23 05 40.3	+0.6
	comp=Z,36nm,0.9s						
MDM	Murphy Dome	55.24	29	eP	P	23 05 41.6	+1.0
	comp=Z,43nm,1.3s						
BRZS	Berezniki	55.24	313	ceP	P	23 05 38.1	-2.7
BRZS				pmax	pmax		
	comp=Z,3µm,0.8s						
BRZS				MLR	MLR		
	comp=Z,426nm,15.0s						
BRZS	Berezniki	55.24	313	⇑eP	P	23 05 38.2	-2.7
	comp=Z,3µm,0.8s						
BRZS				eLRM	MLR	23 31 55.1	
	comp=Z,426nm,14.8s						
WRH	Wood River Hil	55.26	30	eP	P	23 05 41.7	+1.0
	comp=Z,19nm,1.3s						
TCOL	CIGO, UAF Yank	55.39	29	P	P	23 05 42.4	+0.8
	baz=266						
COLA	College	55.39	29	eP	P	23 05 41.9	+0.3
	comp=Z,21nm,0.9s						
COLA	College	55.39	29	i P	P	23 05 41.7	+0.1
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SMLA	Simla	55.41	289	eP	P	23 05 42.1	-0.2
EKS2	Erkin-Say	55.47	304	P	P	23 05 43.0	+0.2
	SNR=22						
DHY	Denali Highway	55.49	31	eP	P	23 05 44.3	+1.7
	comp=Z,16nm,1.3s						
JBP	Jabalpur	55.51	279	eP	P	23 05 43.3	+0.2
GLI	Glacier Island	55.56	34	eP	P	23 05 43.5	+0.6
	comp=Z,27nm,0.7s						
POKR	Poker Plat Res	55.59	29	P	P	23 05 43.2	+0.1
	baz=266						
AML	Almayashu	55.63	303	P	P	23 05 44.9	+0.6
	SNR=124						
HDA	Harding Lake	55.75	30	eP	P	23 05 43.7	-0.6
	comp=Z,21nm,0.9s						
HDA	Harding Lake	55.75	30	P	P	23 05 43.7	-0.6
	baz=267						
IL1	Eielson Array	55.80	29	eP	P	23 05 43.8	-0.8
ILAR	Eielson Array	55.80	29	P	P	23 05 44.0	-0.6
ILAR				pmax	pmax		
	comp=Z,17nm,1.1s						
ILAR	Eielson Array	55.80	29	P	P	23 05 44.0	-0.6
	comp=Z,16nm,1.1s,baz=262,slow=5.4,SNR=51						
ILB	Eielson Array	55.80	29	eP	P	23 05 44.0	-0.6
DHRM	DHARAMSHALA	55.81	291	eP	P	23 05 44.6	-0.9
DHRM				IAmb	IAmb	23 05 46.0	
	comp=Z,29nm,1.0s						
NDI	New Delhi	56.07	286	eP	P	23 05 47.0	-0.1
KLU	Klutina	56.13	33	eP	P	23 05 47.9	+0.8
	comp=Z,22nm,0.8s						
DIV	Divide	56.20	34	eP	P	23 05 48.9	+1.3
	comp=Z,62nm,1.4s						
DZM	Mont Dzumac	56.22	153	eP	P	23 05 49.0	+0.9
	comp=Z,98nm,1.3s						
DZM	Mont Dzumac	56.22	153	eLR	LR	23 22 12.7	
	comp=Z,1µm,24.5s						
DZM	Mont Dzumac	56.22	153	eP	P	23 05 49.2	+1.0
	comp=Z,48nm,1.2s						
DZM	Mont Dzumac	56.22	153	P	P	23 05 49.1	+0.9
	comp=Z,19nm,0.8s,baz=26,slow=7.9,SNR=11						
BVAR	Borovoye Array	56.38	316	LR	LR	23 31 09.7	
	comp=Z,2µm,18.3s,baz=83,slow=37						
PRP	Porcupine Dome	56.41	28	eP	P	23 05 49.1	-0.1
	comp=Z,15nm,1.0s						
BRVK	Borovoye	56.44	317	eP	P	23 05 50.0	+0.6
	comp=Z,190nm,1.1s						
BRVK	Borovoye	56.44	317	ceP	P	23 05 50.0	+0.6
BRVK				pmax	pmax		
	comp=Z,227nm,1.3s						
BRVK	Borovoye	56.44	317	P	P	23 05 49.7	+0.4
	SNR=62						
BRVK				P	P	23 05 49.7	+0.4
	SNR=62						
HARP	HAARP	56.50	32	eP	P	23 05 50.7	+1.0
	comp=Z,34nm,0.9s						
FYU	Fort Yukon	56.58	27	eP	P	23 05 52.0	+1.9
	comp=Z,55nm,1.0s						
RIDG	Independ'e Rid	56.65	31	eP	P	23 05 51.7	+0.9
	comp=Z,48nm,1.4s						
SCRK	Sand Creek	57.03	30	eP	P	23 05 54.0	+0.4
	comp=Z,24nm,0.8s						
NGP	Nagpur	57.04	277	eP	P	23 05 53.5	-0.6
DZA	Taraz	57.20	304	deP	P	23 05 54.5	-0.5
DZA				pmax	pmax		
	comp=Z,507nm,0.8s						
DZA	Taraz	57.20	304	⇓eP	P	23 05 54.5	-0.5
	comp=Z,507nm,0.8s						
BHPL	Bhopal	57.69	280	eP	P	23 05 57.7	-1.0
BHPL				IAmb	IAmb	23 05 58.6	
	comp=Z,36nm,0.6s						
KKAR	Karatay Array	57.75	305	eP	P	23 05 59.1	+0.3
KKAR	Karatay Array	57.75	305	eP	P	23 05 59.1	+0.3
NIL	Nilore	57.90	293	eP	P	23 06 00.2	+0.1
	comp=Z,42nm,0.8s						
NIL	Nilore	57.90	293	eP	P	23 06 00.2	+0.1
NIL				pmax	pmax		
	comp=Z,42nm,0.8s						
BTK	Batken	58.18	301	eP	P	23 06 02.9	+0.9
	comp=Z,43nm,1.2s						
BTK	Batken	58.18	301	eP	P	23 06 02.9	+0.9

BTK				pmax	pmax		
	comp=Z,43nm,1.2s						
IUG	**Iuzhnay**	**58.30**	**304**	*d* *i*P	**P**	**23 06 00.8**	**-2.0**
IUG				pmax	pmax		
	comp=Z,2µm,1.0s						
IUG				MLR	MLR		
	comp=Z,470nm,18.0s						
IUG	**Iuzhnay**	**58.30**	**304**	⇓*i*P	**P**	**23 06 00.8**	**-2.0**
	comp=Z,2µm,1.0s						
IUG				*e*LRM	MLR	23 32 31.7	
	comp=Z,470nm,18.0s						
GAR	**Garm**	**58.80**	**300**	*e*P	**P**	**23 06 06.3**	**-0.1**
	comp=Z,56nm,0.7s						
GAR	**Garm**	**58.80**	**300**	*e*P	**P**	**23 06 06.3**	**-0.1**
GAR				pmax	pmax		
	comp=Z,57nm,0.7s						
HYB	**Hyderabad**	**58.93**	**274**	⇑*i*P	**P**	**23 06 06.5**	**-0.9**
HYB				*e*PcP	**PcP**	**23 06 56.0**	**-0.5**
HYB	**Hyderabad**	**58.93**	**274**	*e*P	**P**	**23 06 06.7**	**-0.7**
DAWY	**Dawson**	**59.05**	**30**	*e*P	**P**	**23 06 08.4**	**+0.7**
	comp=Z,36nm,1.0s						
MDRS	**Chennai**	**59.29**	**268**	*e*P	**P**	**23 06 10.1**	**+0.2**
CHGR	**Chuyangaron**	**59.77**	**300**	*e*P	**P**	**23 06 13.1**	**0.0**
	comp=Z,211nm,0.7s						
ARMA	**Armidale**	**60.10**	**171**	*e*P	**P**	**23 06 19.2**	**+4.0**
	comp=Z,36nm,1.0s						
HYT	**Haines Junctio**	**60.24**	**34**	*e*P	**P**	**23 06 18.2**	**+2.2**
	comp=Z,36nm,1.0s						
STKA	**Stephens Creek**	**60.87**	**181**	*e*P	**P**	**23 06 20.2**	**-0.1**
	comp=Z,4.2nm,0.8s						
STKA	**Stephens Creek**	**60.87**	**181**	P	**P**	**23 06 20.0**	**-0.3**
	comp=Z,15nm,0.9s,baz=333,slow=8.6,SNR=17						
STKA				LR	LR	23 32 50.1	
	comp=Z,591nm,20.0s,baz=3.7,slow=36						
INK	**Inuvik**	**61.04**	**25**	*e*P	**P**	**23 06 21.4**	**+0.4**
	comp=Z,19nm,1.0s						
INK	**Inuvik**	**61.04**	**25**	P	**P**	**23 06 21.4**	**+0.4**
	comp=Z,4.6nm,0.5s,baz=299,slow=5.1,SNR=28						
FORT	**Forrest**	**61.25**	**194**	*e*P	**P**	**23 06 23.0**	**+0.1**
	comp=Z,66nm,0.7s						
SVE	**Sverdlovsk**	**61.43**	**322**	*d* *i*P	**P**	**23 06 24.8**	**+0.9**
SVE				pmax	pmax		
	comp=Z,79nm,0.9s						
SVE				MLR	MLR		
	comp=Z,1µm,18.0s						
WHY	**Whitehorse**	**61.54**	**34**	*e*P	**P**	**23 06 25.8**	**+1.0**
	comp=Z,25nm,0.9s						
PALK	**Pallekele**	**61.59**	**262**	*e*P	**P**	**23 06 25.8**	**+0.1**
	comp=Z,24nm,0.9s						
PALK	**Pallekele**	**61.59**	**262**	P	**P**	**23 06 25.1**	**-0.6**
PALK	**Pallekele**	**61.59**	**262**	*i* P	**P**	**23 06 26.2**	**+0.5**
BBOO	**Buckleboo**	**62.06**	**186**	*e*P	**P**	**23 06 28.2**	**-0.1**
	comp=Z,51nm,1.0s						
POO	**Poona**	**62.57**	**277**	*e*P	**P**	**23 06 31.7**	**-0.5**
ARU	**Arti**	**62.64**	**322**	*e*P	**P**	**23 06 32.4**	**+0.4**
	comp=Z,137nm,1.0s						
ARU	**Arti**	**62.64**	**322**	*c* *i*P	**P**	**23 06 32.5**	**+0.4**
ARU						23 07 12.9	
ARU						23 08 49.6	
ARU				S	**S**	**23 14 59.5**	**+1.6**
ARU				SS	**SS**	**23 19 00.7**	**-1.3**
ARU				pmax	pmax		
	comp=Z,103nm,0.7s						
ARU				MLR	MLR		
	comp=Z,1µm,18.0s						
ABKAR	**Akbulak array**	**63.51**	**314**	*e*P	**P**	**23 06 38.6**	**+0.6**
GOA	**Goa**	**63.85**	**274**	*e*P	**P**	**23 06 40.2**	**-0.5**
TRD	**Trivandrum**	**64.25**	**265**	*e*P	**P**	**23 06 42.4**	**-0.9**
BHJ	**Bhuj**	**64.32**	**283**	*e*P	**P**	**23 06 43.0**	**-0.6**
BHJ				IAmb	IAmb	23 06 44.8	
	comp=Z,40nm,0.9s						
DLBC	**Dease Lake**	**64.43**	**36**	*e*P	**P**	**23 06 45.6**	**+1.7**
	comp=Z,30nm,1.1s						
DLBC	**Dease Lake**	**64.43**	**36**	P	**P**	**23 06 45.1**	**+1.1**
	comp=Z,5.9nm,1.0s,baz=314,slow=7.1,SNR=5.1						
CAN	**Canberra**	**64.63**	**174**	*e*P	**P**	**23 06 47.0**	**+1.7**
	comp=Z,39nm,1.1s						
CAN	**Canberra**	**64.63**	**174**	*e*P	**P**	**23 06 47.0**	**+1.7**
CAN				pmax	pmax		
	comp=Z,39nm,1.1s						
NWAO	**Narrogin (SRO)**	**66.26**	**203**	*e*P	**P**	**23 06 56.5**	**+0.6**
	comp=Z,50nm,0.9s						
NWAO	**Narrogin (SRO)**	**66.26**	**203**	*e*P	**P**	**23 06 56.5**	**+0.6**
NWAO				pmax	pmax		
	comp=Z,50nm,0.9s						
TOO	**Toolangi**	**66.62**	**177**	*e*P	**P**	**23 06 59.4**	**+1.2**
	comp=Z,32nm,1.0s						
TOO	**Toolangi**	**66.62**	**177**	*e*P	**P**	**23 06 59.4**	**+1.2**
TOO				pmax	pmax		
	comp=Z,32nm,1.0s						
KIRV	**Kirov**	**66.82**	**325**	LR	LR	23 36 57.5	
	comp=Z,3µm,21.6s,baz=245,slow=37						
PRGR	**Permogore**	**67.60**	**329**	⇑*i*P	**P**	**23 07 04.8**	**+0.7**
PRGR				*e*		23 09 32.5	
PRGR				pmax	pmax		
	comp=Z,94nm,0.8s						
MNCI	**Minicoy**	**67.75**	**267**	*e*P	**P**	**23 07 06.2**	**+0.4**
	comp=Z,129nm,1.1s						
MNCY	**Minicoy**	**67.78**	**267**	*e*P	**P**	**23 07 05.3**	**-0.7**
MNCY				*e*P	**P**	**23 07 05.3**	**-0.7**
SPA0	**Spitsbergen Ar**	**68.18**	**350**	*e*P	**P**	**23 07 09.0**	**+1.4**
GEYT	**Alibeck**	**68.25**	**302**	P	**P**	**23 07 09.3**	**+0.6**
	comp=Z,36nm,0.8s,baz=49,slow=3.2,SNR=72						
GEYT				LR	LR	23 39 55.0	
	comp=Z,1µm,18.4s,baz=45,slow=38						
KBS	**Kingsbay**	**68.33**	**351**	*e*P	**P**	**23 07 10.4**	**+1.9**
	comp=Z,62nm,0.9s						
KBS	**Kingsbay**	**68.33**	**351**	*c* *e*P	**P**	**23 07 10.4**	**+1.9**
KBS				pmax	pmax		
	comp=Z,722nm,2.5s						
LVZ	**Lovozero**	**69.40**	**337**	*e*P	**P**	**23 07 15.9**	**+0.6**
	comp=Z,36nm,1.1s						
LVZ	**Lovozero**	**69.40**	**337**	*c* *e*P	**P**	**23 07 16.5**	**+1.2**
LVZ				pmax	pmax		
	comp=Z,92nm,2.5s						
RES	**Resolute Bay**	**69.91**	**14**	*e*P	**P**	**23 07 18.7**	**+0.4**
	comp=Z,18nm,1.0s						
RES	**Resolute Bay**	**69.91**	**14**	*e*P	**P**	**23 07 18.7**	**+0.4**
RES				pmax	pmax		
	comp=Z,18nm,1.0s						
RES	**Resolute Bay**	**69.91**	**14**	P	**P**	**23 07 18.4**	**+0.1**
	comp=Z,11nm,0.9s,baz=318,slow=5.9,SNR=27						
APA	**Apatity**	**69.97**	**337**	⇓*i*P	**P**	**23 07 18.5**	**-0.3**
APA				pmax	pmax		
	comp=Z,40nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,17.0s						
YKW3	**Yellowknife Ar**	**70.18**	**29**	*e*P	**P**	**23 07 17.7**	**-2.5**
	comp=Z,20nm,1.0s						
YKA	**Yellowknife Ar**	**70.22**	**29**	P	**P**	**23 07 20.4**	**+0.1**
	comp=Z,8.0nm,0.7s,baz=294,slow=6.3,SNR=130						
YKB5	**Yellowknife Ar**	**70.22**	**29**	*e*P	**P**	**23 07 19.8**	**-0.6**
KLMR	**Klimovskoe**	**70.63**	**330**	⇑*i*P	**P**	**23 07 23.1**	**+0.2**
KLMR				*e*		23 09 56.4	
KLMR				pmax	pmax		
	comp=Z,42nm,0.9s						
KLMR	**Klimovskoe**	**70.63**	**330**	⇑*i*P	**P**	**23 07 23.2**	**+0.3**
KLMR				*e*P	**P**	**23 07 23.2**	**+0.3**
KLMR				*e*P	**P**	**23 07 23.2**	**+0.3**
KLMR				AMP		23 07 24.2	
	comp=Z,42nm,0.9s						
KLMR				*e*PP	**PP**	**23 09 56.5**	**-2.6**
KEV	**Kevo**	**70.86**	**341**	*e*P	**P**	**23 07 25.1**	**+0.9**
	comp=Z,82nm,1.2s						
KEV	**Kevo**	**70.86**	**341**	*e*P	**P**	**23 07 25.1**	**+0.9**
KEV				pmax	pmax		
	comp=Z,82nm,1.2s						
PGC	**Sidney**	**71.34**	**44**	*e*P	**P**	**23 07 28.9**	**+1.4**
	comp=Z,18nm,0.7s						
ARA0	**ARCESS Array S**	**71.42**	**341**	*e*P	**P**	**23 07 28.6**	**+1.0**
ARCES	**ARCESS Array B**	**71.42**	**341**	*e*P	**P**	**23 07 28.3**	**+0.7**
ARCES	**ARCESS Array B**	**71.42**	**341**	*e*P	**P**	**23 07 28.3**	**+0.7**
ARCES	**ARCESS Array B**	**71.42**	**341**	P	**P**	**23 07 28.6**	**+1.0**
	comp=Z,26nm,0.8s,baz=210,slow=14,SNR=6.3						
ARCES				LR	LR	23 43 36.4	
	comp=Z,1µm,19.0s,baz=65,slow=40						
ARE0	**ARCESS Array S**	**71.42**	**341**	*e*P	**P**	**23 07 29.0**	**+1.3**
	comp=Z,3.2nm,1.0s						
LLLB	**Lillooet**	**71.50**	**42**	*e*P	**P**	**23 07 29.4**	**+0.9**
	comp=Z,23nm,1.0s						
NLWA	**Neilton Lookou**	**71.58**	**46**	*e*P	**P**	**23 07 31.0**	**+2.0**
	comp=Z,22nm,0.8s						
A04D	**Lummi Island**	**71.76**	**44**	P	**P**	**23 07 30.6**	**+0.6**
	baz=294						
D03D	**Eldon**	**72.01**	**45**	P	**P**	**23 07 32.8**	**+1.2**
	baz=294						
B05A	**Bryant**	**72.32**	**44**	P	**P**	**23 07 34.4**	**+1.0**
	baz=294						
TULEG	**Thule**	**72.65**	**7**	*e*P	**P**	**23 07 35.1**	**+0.3**
	comp=Z,25nm,0.7s						
E04D	**Cinebar**	**72.73**	**46**	P	**P**	**23 07 36.9**	**+1.0**
	baz=295						
D05A	**Enumclaw**	**72.83**	**45**	*e*P	**P**	**23 07 38.3**	**+1.9**
	comp=Z,43nm,1.0s						
G03D	**McMinnville, O**	**72.84**	**48**	P	**P**	**23 07 37.0**	**+0.4**
	baz=294						
KEBM	**Edson Butte**	**73.11**	**50**	*e*P	**P**	**23 07 40.0**	**+1.7**
	comp=Z,68nm,1.0s						
LON	**Longmire**	**73.13**	**46**	*e*P	**P**	**23 07 39.2**	**+0.9**
	comp=Z,12nm,0.9s						
LON	**Longmire**	**73.13**	**46**	*e*P	**P**	**23 07 39.2**	**+0.9**
LON				pmax	pmax		
	comp=Z,12nm,0.9s						
C06D	**Leavenworth**	**73.19**	**44**	P	**P**	**23 07 38.3**	**-0.3**
	baz=295						
J01E	**Myrtle Point**	**73.26**	**50**	P	**P**	**23 07 39.8**	**+0.8**
	baz=295						
I03D	**Drain, OR**	**73.42**	**49**	P	**P**	**23 07 41.0**	**+1.0**
	baz=295						
H04D	**Lebanon**	**73.47**	**48**	P	**P**	**23 07 40.5**	**+0.2**
	baz=295						
K02D	**Willamette Mer**	**73.63**	**50**	P	**P**	**23 07 40.9**	**-0.5**
	baz=295,SNR=12						
F05D	**White Salmon**	**73.71**	**46**	P	**P**	**23 07 42.2**	**+0.5**
	baz=295						
VRH	**Novokhopyorsk**	**73.76**	**320**	*e*P	**P**	**23 07 41.5**	**-0.3**
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
H04A	**Detroit Lake**	**73.76**	**48**	*e*P	**P**	**23 07 42.8**	**+0.8**
	comp=Z,44nm,1.0s						
MAK	**Makhachkala**	**73.78**	**310**	*e*P	**P**	**23 07 40.9**	**-1.2**
MAK				*e*S	**S**	**23 17 11.5**	**+0.4**
MAK				pmax	pmax		
	comp=Z,220nm,0.9s						
MOS	**Moscow**	**73.84**	**325**	*e*P	**P**	**23 07 40.1**	**-2.1**
MOS				*e*		23 08 00.3	
MOS				*e*		23 10 22.9	
MOS				pmax	pmax		
	comp=Z,69nm,1.1s						
MOS				MLR	MLR		
	comp=N,700nm,17.0s						
MOS				MLR	MLR		
	comp=E,1µm,17.0s						
MOS				MLR	MLR		
	comp=Z,2µm,17.0s						
L02E	**Cave Junction**	**73.90**	**51**	P	**P**	**23 07 43.5**	**+0.6**
	baz=295						
B08A	**Colville Reser**	**73.95**	**43**	*e*P	**P**	**23 07 43.8**	**+0.7**
	comp=Z,15nm,0.9s						
I04A	**Tendick Farm,**	**73.99**	**49**	P	**P**	**23 07 43.8**	**+0.3**
	baz=295,SNR=8.9						
G05D	**Wamic, OR**	**74.08**	**47**	P	**P**	**23 07 44.1**	**+0.2**
	baz=296						
HUMO	**Hull Mountain**	**74.14**	**50**	*e*P	**P**	**23 07 45.8**	**+1.6**
	comp=Z,29nm,1.4s						
KHMM	**Horse Mountain**	**74.35**	**52**	*e*P	**P**	**23 07 47.6**	**+1.9**
	comp=Z,34nm,1.0s						
GNBR	**Gunib**	**74.38**	**310**	*e*P	**P**	**23 07 44.3**	**-1.4**
J04D	**Umpqua Nationa**	**74.43**	**49**	P	**P**	**23 07 46.2**	**0.0**
	baz=296,SNR=6.7						
I05D	**Terrebonne, OR**	**74.46**	**48**	P	**P**	**23 07 46.6**	**+0.4**
	baz=296						
SHME	**Shamm**	**74.46**	**291**	P	**P**	**23 07 47.2**	**+0.8**
MDH	**Madha**	**74.65**	**291**	P	**P**	**23 07 47.2**	**-0.3**
LPSR	**Galich'ya Gora**	**74.65**	**322**	*e*P	**P**	**23 07 47.0**	**0.0**
LPSR				pmax	pmax		
	comp=Z,60nm,0.9s						
OBN	**Obninsk**	**74.67**	**325**	*e*P	**P**	**23 07 47.3**	**+0.3**
	comp=Z,122nm,1.5s						
OBN	**Obninsk**	**74.67**	**325**	⇓*e*P	**P**	**23 07 46.5**	**-0.5**
OBN				*e*		23 08 01.5	
OBN				*e*		23 10 35.6	
OBN				pmax	pmax		
	comp=Z,85nm,1.5s						
OBN				MLR	MLR		
	comp=Z,3µm,18.0s						
OBN	**Obninsk**	**74.67**	**325**	LR	LR	23 43 41.2	
	comp=Z,713nm,18.4s,baz=46,slow=38						
F07A	**Phinny Hill Vi**	**74.67**	**46**	*e*P	**P**	**23 07 48.9**	**+1.6**
	comp=Z,20nm,0.8s						
YBH	**Yreka Blue Hor**	**74.68**	**51**	*e*P	**P**	**23 07 49.1**	**+1.6**
	comp=Z,19nm,0.9s						
YBH	**Yreka Blue Hor**	**74.68**	**51**	*e*P	**P**	**23 07 49.1**	**+1.6**
YBH				pmax	pmax		
	comp=Z,19nm,0.9s						
HAWA	**Hanford**	**74.70**	**45**	*e*P	**P**	**23 07 48.4**	**+1.0**
	comp=Z,14nm,1.0s						
M02C	**Callahan**	**74.73**	**51**	P	**P**	**23 07 48.1**	**+0.3**
	baz=296,SNR=8.0						
SEKA	**Sheki**	**74.73**	**309**	P	**P**	**23 07 48.6**	**+0.8**
MSFE	**Esma-Masafi**	**74.73**	**291**	P	**P**	**23 07 48.6**	**+0.6**
L04D	**Klamath Falls**	**74.74**	**50**	P	**P**	**23 07 48.6**	**+0.7**
	baz=296,SNR=10						
URZ	**Urewera**	**74.77**	**152**	P	**P**	**23 07 47.4**	**-0.3**
	comp=Z,9.9nm,0.8s,baz=265,slow=12,SNR=3.1						
D08A	**Wollman Farm,**	**74.78**	**44**	*e*P	**P**	**23 07 48.5**	**+0.6**
	comp=Z,13nm,0.8s						
GROC	**Groznyy**	**74.80**	**311**	*e*P	**P**	**23 07 45.8**	**-2.3**
GROC				*e*		23 08 00.0	
GROC				*e*		23 10 35.2	
GROC				pmax	pmax		
	comp=Z,54nm,0.9s						
C09A	**Chrisman Ranch**	**74.83**	**44**	*e*P	**P**	**23 07 49.0**	**+0.8**
	comp=Z,14nm,0.8s						
UOSS	**Minazif**	**74.88**	**290**	P	**P**	**23 07 48.2**	**-0.6**
K04D	**Chiloquin, OR**	**74.93**	**49**	P	**P**	**23 07 49.4**	**+0.3**
	baz=296						
ZKTA	**Zakatala**	**74.94**	**309**	P	**P**	**23 07 50.1**	**+1.2**
VORR	**Voronezh**	**74.94**	**321**	P	**P**	**23 07 48.0**	**-0.7**
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
PINE	**Pine Mountain**	**74.95**	**48**	*e*P	**P**	**23 07 50.6**	**+1.4**
	comp=Z,45nm,0.9s						
KCPM	**Cahto Peak**	**74.97**	**53**	*e*P	**P**	**23 07 51.9**	**+2.7**
	comp=Z,42nm,1.0s						
J05D	**Fort Rock, OR**	**74.98**	**49**	P	**P**	**23 07 49.0**	**-0.4**
	baz=296,SNR=18						
HATD	**Hatta, Dubai**	**74.99**	**290**	P	**P**	**23 07 50.0**	**+0.6**
MNGR	**Mingechevir, A**	**75.00**	**308**	P	**P**	**23 07 50.5**	**+1.3**
N02D	**Trinity Center**	**75.01**	**51**	P	**P**	**23 07 49.6**	**+0.2**
	baz=296,SNR=8.8						
PUL	**Pulkovo**	**75.16**	**331**	*c* *e*P	**P**	**23 07 50.7**	**+1.0**
PUL				pmax	pmax		
	comp=Z,86nm,0.7s						
VSR	**Storozhevoye**	**75.18**	**321**	*e*P	**P**	**23 07 49.4**	**-0.7**
VSR				pmax	pmax		
	comp=Z,60nm,0.8s						
M04C	**Macdoel**	**75.24**	**50**	P	**P**	**23 07 50.8**	**0.0**
	baz=296,SNR=14						
WDC	**Whiskeytown Da**	**75.30**	**52**	*e*P	**P**	**23 07 52.2**	**+1.2**
	comp=Z,29nm,1.3s						
BKZ	**Black Stump Fm**	**75.30**	**153**	*e*P	**P**	**23 07 54.0**	**+3.2**
	comp=Z,16nm,0.8s						
O02D	**Mt. Diablo Mer**	**75.30**	**52**	P	**P**	**23 07 52.2**	**+1.1**
	baz=296						
NEW	**Newport**	**75.31**	**43**	*e*P	**P**	**23 07 51.3**	**+0.3**
	comp=Z,17nm,0.8s						
NEW	**Newport**	**75.31**	**43**	*e*P	**P**	**23 07 51.3**	**+0.3**
NEW				pmax	pmax		
	comp=Z,17nm,0.8s						
NEW	**Newport**	**75.31**	**43**	P	**P**	**23 07 50.5**	**-0.5**
	baz=298,SNR=18						
E09A	**Wood Farm, Sta**	**75.50**	**45**	*e*P	**P**	**23 07 53.0**	**+0.9**
	comp=Z,16nm,0.9s						
G08A	**Pilot Rock**	**75.55**	**46**	*e*P	**P**	**23 07 53.7**	**+1.2**
	comp=Z,23nm,1.3s						
GANJ	**Ganja**	**75.58**	**309**	P	**P**	**23 07 53.7**	**+1.1**
KULLO	**Kullorsuaq**	**75.58**	**5**	⇑*i*P	**P**	**23 07 52.6**	**+0.7**
	comp=Z,30nm,0.9s						
KULLO	**Kullorsuaq**	**75.58**	**5**	⇑*i*P	**P**	**23 07 52.6**	**+0.7**
KULLO				pmax	pmax		
	comp=Z,30nm,0.9s						
GOF	**Gofitskoye**	**75.75**	**314**	⇑*i*P	**P**	**23 07 54.5**	**+1.0**
GOF				pmax	pmax		
	comp=Z,80nm,0.8s						
I07A	**Izee**	**75.75**	**47**	*e*P	**P**	**23 07 54.6**	**+0.9**
	comp=Z,8.8nm,0.9s						
FIA1	**FINESS Array S**	**75.92**	**334**	*e*P	**P**	**23 07 54.5**	**+0.3**
FIA0	**FINESS Array S**	**75.93**	**334**	*e*P	**P**	**23 07 54.5**	**+0.3**
FIA0	**FINESS Array S**	**75.93**	**334**	*e*P	**P**	**23 07 54.5**	**+0.3**
FINES	**FINESS Array B**	**75.93**	**334**	P	**P**	**23 07 54.5**	**+0.3**
	comp=Z,21nm,0.7s,baz=67,slow=5.2,SNR=77						
FINES				LR	LR	23 45 27.7	
	comp=Z,561nm,18.9s,baz=55,slow=39						
O03E	**Paynes Creek**	**75.93**	**52**	P	**P**	**23 07 54.4**	**-0.3**
	baz=297,SNR=15						
NCK	**Nalchik**	**76.11**	**312**	*i* P	**P**	**23 07 56.5**	**+0.9**
NCK				pmax	pmax		
	comp=Z,23nm,0.4s						
TBLG	**Delisi**	**76.16**	**310**	*e*P	**P**	**23 07 55.9**	**0.0**
TBLG	**Delisi**	**76.16**	**310**	*e*P	**P**	**23 07 57.3**	**+1.4**
	comp=Z,67nm,1.4s						
TBLG	**Delisi**	**76.16**	**310**	*e*P	**P**	**23 07 57.3**	**+1.4**
TBLG				pmax	pmax		
	comp=Z,67nm,1.4s						
MOD	**Modoc Plateau**	**76.22**	**50**	*e*P	**P**	**23 07 57.5**	**+1.0**
	comp=Z,14nm,1.0s						
ZEI	**Tsey**	**76.23**	**311**	*e*P	**P**	**23 07 55.8**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,37nm,0.7s						
THZ	**Tophouse**	**76.24**	**157**	*e*P	**P**	**23 07 58.9**	**+2.8**
	comp=Z,28nm,0.8s						
F10A	**Beach Ranch, E**	**76.31**	**45**	*e*P	**P**	**23 07 58.4**	**+1.5**
	comp=Z,6.3nm,0.8s						
KBZ	**Khabaz**	**76.45**	**313**	P	**P**	**23 07 58.7**	**+1.2**
	comp=Z,90nm,0.8s,baz=92,slow=4.0,SNR=157						
KBZ				LR	LR	23 44 43.0	
	comp=Z,780nm,20.3s,baz=58,slow=38						
ORV	**Oroville**	**76.47**	**52**	*e*P	**P**	**23 07 57.9**	**+0.2**
	comp=Z,28nm,1.0s						
ORV	**Oroville**	**76.47**	**52**	*e*P	**P**	**23 07 57.9**	**+0.2**
ORV				pmax	pmax		
	comp=Z,28nm,1.0s						
KVAR	**Kislovodsk Arr**	**76.48**	**313**	LR	LR	23 44 54.4	
	comp=Z,683nm,19.2s,baz=282,slow=38						
KIV	**Kislovodsk**	**76.48**	**313**	*e*P	**P**	**23 07 58.0**	**+0.2**
KIV	**Kislovodsk**	**76.48**	**313**	*e*P	**P**	**23 07 58.8**	**+0.9**
	comp=Z,73nm,0.8s						
KIV	**Kislovodsk**	**76.48**	**313**	⇓*i*P	**P**	**23 07 58.7**	**+0.9**
KIV	**Kislovodsk**	**76.48**	**313**	*i* P	**P**	**23 07 58.4**	**+0.6**
	SNR=40						
KIV				*i* P	**P**	**23 07 58.7**	**+0.9**
	SNR=13						
KIV	**Kislovodsk**	**76.48**	**313**	*e*P	**P**	**23 07 58.8**	**+0.9**
KIV				*e*S	**S**	**23 17 41.9**	**+0.5**
KIV				pmax	pmax		
	comp=Z,84nm,1.0s						
KIV				pmax	pmax		
	comp=Z,85nm,4.1s						
KIV				MLR	MLR		
	comp=Z,832nm,18.0s						
KIV	**Kislovodsk**	**76.48**	**313**	P	**P**	**23 07 58.2**	**+0.4**
	SNR=18						
KIV				P	**P**	**23 07 58.2**	**+0.4**
	SNR=18						
BFZ	**Birch Farm**	**76.51**	**154**	*e*P	**P**	**23 08 00.4**	**+2.8**
	comp=Z,36nm,1.0s						
J08A	**Circle Bar Ran**	**76.75**	**48**	*e*P	**P**	**23 08 00.6**	**+1.2**
	comp=Z,34nm,0.9s						
NEY	**Neytrino**	**76.79**	**312**	*d* *i*P	**P**	**23 08 01.7**	**+2.0**
NEY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BMO	**Blue Mountains**	**76.79**	**46**	*e*P	**P**	**23 08 00.4**	**+0.9**
	comp=Z,20nm,1.1s						
BMO	**Blue Mountains**	**76.79**	**46**	*e*P	**P**	**23 08 00.4**	**+0.9**
BMO				pmax	pmax		
	comp=Z,20nm,1.1s						
WALA	**Waterton Lakes**	**76.80**	**41**	*e*P	**P**	**23 08 00.7**	**+1.2**
	comp=Z,32nm,0.8s						
NAX	**Nakhchivan**	**76.80**	**308**	P	**P**	**23 08 00.5**	**+0.8**
GNI	**Garni**	**76.88**	**309**	*e*P	**P**	**23 08 00.1**	**-0.1**
GNI	**Garni**	**76.88**	**309**	*e*P	**P**	**23 08 01.7**	**+1.5**
	comp=Z,100nm,1.3s						
GNI	**Garni**	**76.88**	**309**	*i* P	**P**	**23 08 02.4**	**+2.2**
	SNR=18						
GNI	**Garni**	**76.88**	**309**	*c* *e*P	**P**	**23 08 01.1**	**+0.9**
GNI				pmax	pmax		
	comp=Z,288nm,1.3s						
GNI	**Garni**	**76.88**	**309**	P	**P**	**23 08 00.8**	**+0.6**
	SNR=15						
GNI				P	**P**	**23 08 00.8**	**+0.6**
	SNR=15						
GNI	**Garni**	**76.88**	**309**	LR	LR	23 45 30.4	
	comp=Z,990nm,18.6s,baz=72,slow=38						
KHZ	**Kahutara**	**77.04**	**157**	*e*P	**P**	**23 08 02.5**	**+2.0**
	comp=Z,32nm,0.9s						
WVOR	**Wild Horse Val**	**77.07**	**49**	*e*P	**P**	**23 08 02.1**	**+0.9**
	comp=Z,30nm,1.3s						
WVOR	**Wild Horse Val**	**77.07**	**49**	*e*P	**P**	**23 08 02.1**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,30nm,1.3s						
AFDM	**Forest Hills D**	**77.11**	**53**	*e*P	**P**	**23 08 02.2**	**+0.9**
	comp=Z,25nm,1.1s						
BEKR	**Beckworth**	**77.11**	**52**	*e*P	**P**	**23 08 02.5**	**+1.0**
	comp=Z,43nm,0.8s						
TASB	**TASBURUN-IGDIR**	**77.30**	**309**	*e*P	**P**	**23 08 03.0**	**+0.6**
RPZ	**Rata Peaks**	**77.38**	**159**	P	**P**	**23 08 04.4**	**+2.0**
	comp=Z,11nm,0.8s,baz=304,slow=3.6,SNR=2.5						
VSU	**Vasula**	**77.42**	**331**	*c* *e*P	**P**	**23 08 03.4**	**+0.8**
VSU				pmax	pmax		
	comp=Z,196nm,1.3s						
VSU	**Vasula**	**77.42**	**331**	*e*P	**P**	**23 08 02.7**	**+0.1**
VSU				IAmb	IAmb	23 08 03.8	
	comp=Z,139nm,1.1s						
RUBR	**Rubicon Trail**	**77.62**	**52**	*e*P	**P**	**23 08 05.8**	**+1.3**
	comp=Z,61nm,0.9s						
PAHR	**Pah Rah Range**	**77.85**	**51**	*e*P	**P**	**23 08 06.6**	**+1.0**
	comp=Z,37nm,1.0s						
VCNR	**Virginia City**	**77.86**	**52**	*e*P	**P**	**23 08 07.0**	**+1.2**
	comp=Z,25nm,0.9s						
MSO	**Missoula**	**77.89**	**43**	*e*P	**P**	**23 08 06.4**	**+0.7**
	comp=Z,29nm,1.3s						
MSO	**Missoula**	**77.89**	**43**	P	**P**	**23 08 05.1**	**-0.6**
	baz=300,SNR=12						
CMB	**Columbia Colle**	**77.94**	**53**	*e*P	**P**	**23 08 07.0**	**+1.0**
	comp=Z,25nm,0.9s						
CMB	**Columbia Colle**	**77.94**	**53**	*e*P	**P**	**23 08 07.0**	**+1.0**
CMB				pmax	pmax		
	comp=Z,25nm,0.9s						
PNTR	**Pine Nut**	**77.99**	**52**	*e*P	**P**	**23 08 07.8**	**+1.3**
	comp=Z,26nm,0.9s						
YERR	**Yerington**	**78.28**	**52**	*e*P	**P**	**23 08 09.1**	**+1.0**
	comp=Z,36nm,1.0s						
AGRB	**Hanur-Agry**	**78.33**	**309**	*e*P	**P**	**23 08 08.7**	**+0.3**
BCA	**Borcka**	**78.36**	**311**	*e*P	**P**	**23 08 08.7**	**+0.4**
SUMG	**Summit**	**78.37**	**0**	*e*P	**P**	**23 08 09.8**	**+1.7**
	comp=Z,78nm,1.0s						
SUMG	**Summit**	**78.37**	**0**	⇑*i*P	**P**	**23 08 09.9**	**+1.7**
	comp=Z,107nm,0.8s						
SUMG	**Summit**	**78.37**	**0**	⇑*i*P	**P**	**23 08 09.9**	**+1.7**
SUMG				pmax	pmax		
	comp=Z,110nm,0.8s						
WAKR	**Walker**	**78.38**	**52**	*e*P	**P**	**23 08 10.0**	**+1.4**
	comp=Z,22nm,0.9s						
MFID	**Camas Ranch**	**78.42**	**47**	*e*P	**P**	**23 08 09.7**	**+1.0**
	comp=Z,43nm,1.1s						
SOC	**Sochi**	**78.55**	**314**	*c* *i*P	**P**	**23 08 09.5**	**+0.3**
SOC				*e**PP	**pP**	**23 08 18.9**	**+0.7**
SOC				*e**SP	**pwP**	**23 08 22.3**	**-0.3**
SOC				*e*		23 11 03.6	
SOC				*e*PPP	PPP	23 12 51.4	
SOC				*e*S	**S**	**23 18 02.5**	**-1.1**
SOC				*e*SS	**SS**	**23 23 04.7**	**-2.0**
SOC				*e*SSS	SSS	23 26 32.9	
SOC				pmax	pmax		
	comp=Z,88nm,0.8s						
SOC				MLR	MLR		
	comp=Z,887nm,18.0s						
MLAZ	**Malazgirt-MUS**	**78.84**	**309**	*e*P	**P**	**23 08 12.8**	**+1.6**
KOPR	**Koprukoy-ERZUR**	**78.91**	**310**	*e*P	**P**	**23 08 10.4**	**-1.1**
AKDM	**Akdamar-Van**	**78.94**	**308**	*e*P	**P**	**23 08 11.8**	**+0.1**
RYN	**Ryan**	**78.95**	**52**	*e*P	**P**	**23 08 12.6**	**+0.9**
	comp=Z,38nm,0.9s						
BMN	**Battle Mountai**	**78.96**	**50**	*e*P	**P**	**23 08 13.1**	**+1.3**
	comp=Z,27nm,1.1s						
CUKT	**Cukurca**	**79.01**	**306**	*e*P	**P**	**23 08 12.8**	**+0.7**
KVN	**Kaiserville**	**79.03**	**51**	*e*P	**P**	**23 08 13.0**	**+0.7**
	comp=Z,42nm,0.9s						
KVN	**Kaiserville**	**79.03**	**51**	*e*P	**P**	**23 08 13.0**	**+0.7**
KVN				pmax	pmax		
	comp=Z,42nm,0.9s						
MDPB	**Devils Postpil**	**79.04**	**53**	*e*P	**P**	**23 08 13.9**	**+1.5**
	comp=Z,19nm,1.1s						
OMMB	**Old Mammoth Mi**	**79.10**	**53**	*e*P	**P**	**23 08 14.0**	**+1.2**
	comp=Z,27nm,1.2s						
PAGB	**Antelope Grade**	**79.11**	**55**	*e*P	**P**	**23 08 16.3**	**+3.8**
	comp=Z,40nm,0.9s						
NV01	**Mina Array Sit**	**79.19**	**52**	*e*P	**P**	**23 08 13.8**	**+0.7**

NVAR	Mina Array Bea	79.19	52	P	P	23 08 14.0	+0.9
	comp=Z,12nm,0.8s,baz=289,slow=5.6,SNR=54						
NVAR				LR	LR	23 35 55.4	
	comp=Z,433nm,21.8s,baz=294,slow=30						
HRY	Holter Researc	79.20	42	*e*P	P	23 08 13.9	+1.0
HLID	Hailey	79.24	46	*e*P	P	23 08 14.0	+0.8
	comp=Z,16nm,0.9s						
HLID	Hailey	79.24	46	P	P	23 08 13.7	+0.4
	baz=300						
IZAR	Zarasai	79.25	329	*e*P	P	23 08 13.4	+0.6
IZAR				IAmb	IAmb	23 08 15.2	
	comp=Z,36nm,1.0s						
IDID	Didziasalis	79.29	328	*e*P	P	23 08 13.4	+0.4
IDID				IAmb	IAmb	23 08 15.4	
	comp=Z,31nm,0.9s						
LRM	Limekiln Ridge	79.29	43	*e*P	P	23 08 14.5	+0.9
NV11	Mina Array Sit	79.30	52	*e*P	P	23 08 14.8	+1.1
	comp=Z,1.6nm,0.9s						
ANN	Anapa	79.36	316	*e*P	P	23 08 11.8	-1.8
ANN				pmax	pmax		
	comp=Z,151nm,1.3s						
ISAL	Salakas	79.41	329	*e*P	P	23 08 14.2	+0.4
ISAL				IAmb	IAmb	23 08 16.1	
	comp=Z,42nm,1.0s						
DLMT	Dillon	79.44	44	*e*P	P	23 08 14.7	+0.5
	comp=Z,47nm,1.4s						
GURO	Guroymak-BITLI	79.48	308	*e*P	P	23 08 15.1	+0.5
IIGN	Ignalina	79.50	328	*e*P	P	23 08 14.6	+0.4
IIGN				IAmb	IAmb	23 08 16.5	
	comp=Z,23nm,0.8s						
NACGM	Naroch	79.51	328	*e*	P	23 08 14.0	-0.3
MCMT	McKenzie Canyo	79.56	44	*e*P	P	23 08 15.9	+0.8
EGMT	Eagleton	79.70	40	*e*P	P	23 08 16.3	+0.7
	comp=Z,63nm,1.4s						
EGMT	Eagleton	79.70	40	P	P	23 08 16.1	+0.5
	baz=303						
SIRT	Sirnak	79.71	307	*e*P	P	23 08 15.7	-0.1
SIRT	Sirnak	79.71	307	*e*P	P	23 08 16.6	+0.8
	comp=Z,131nm,1.1s						
SLIT	Slitere, Latvi	79.80	332	*e*P	P	23 08 15.2	-0.5
SLIT				IAmb	IAmb	23 08 22.0	
	comp=Z,170nm,0.9s						
SCO	Scoresbysund	79.82	355	*i* P	P	23 08 16.5	+0.9
	comp=Z,17nm,1.0s						
SCO	Scoresbysund	79.82	355	*i* P	P	23 08 16.5	+0.9
SCO				pmax	pmax		
	comp=Z,17nm,1.0s						
PKM	Mcpherson Peak	79.82	56	P	P	23 08 17.2	+0.6
	baz=299						
BAYT	Aydıntepe-Bayb	79.85	311	*e*P	P	23 08 17.9	+1.2
FFC	Flin Flon	79.89	32	*e*P	P	23 08 16.8	+0.5
	comp=Z,33nm,0.8s						
FFC	Flin Flon	79.89	32	*e*P	P	23 08 16.8	+0.5
FFC				pmax	pmax		
	comp=Z,33nm,0.8s						
VES	Vestal, Richgr	79.89	55	P	P	23 08 17.1	+0.4
	baz=299						
BOZ	Bozeman (W)	79.90	43	*e*P	P	23 08 17.6	+0.8
	comp=Z,22nm,1.0s						
BOZ	Bozeman (W)	79.90	43	*e*P	P	23 08 17.6	+0.8
BOZ				pmax	pmax		
	comp=Z,22nm,1.0s						
BOZ	Bozeman (W)	79.90	43	P	P	23 08 16.6	-0.2
	baz=302,SNR=15						
ELK	Elko	80.12	49	*e*P	P	23 08 19.2	+1.0
	comp=Z,17nm,1.0s						
ELK	Elko	80.12	49	*e*P	P	23 08 19.2	+1.0
ELK				pmax	pmax		
	comp=Z,17nm,1.0s						
CWC	Cottonwood Cre	80.31	54	P	P	23 08 19.6	+0.3
	baz=299						
ISA	Isabella, Lake	80.41	55	*e*P	P	23 08 22.5	+2.8
	comp=Z,12nm,1.0s						
ARVC	Arvin	80.42	55	P	P	23 08 20.0	+0.5
	baz=299						
QLMT	Earthquake Lak	80.42	44	*e*P	P	23 08 21.0	+1.3
GRAC	Grapevine Rang	80.54	53	P	P	23 08 20.9	+0.6
	baz=300						
YHB	Horse Butte	80.61	44	*e*P	P	23 08 20.9	+0.2
	comp=Z,36nm,0.9s						
FCC	Fort Churchill	80.63	26	*e*P	P	23 08 19.9	-0.3
	comp=Z,33nm,1.0s						
FCC	Fort Churchill	80.63	26	*e*P	P	23 08 19.9	-0.3
FCC				pmax	pmax		
	comp=Z,33nm,1.0s						
PPT	Papeete	80.69	116	LR	LR	23 35 48.2	
	comp=Z,356nm,21.1s,baz=298,slow=30						
PPT2	Papeete2	80.71	116	*e*S	S	23 18 25.8	-1.3
	comp=Z,80nm,24.0s						
PPT2	Papeete2	80.71	116	*e*LR	LR	23 33 28.1	
	comp=Z,764nm,23.8s,baz=301						
DAC	Darwin (Calif)	80.73	54	*e*P	P	23 08 23.4	+1.9
	comp=Z,13nm,1.0s						
DAC	Darwin (Calif)	80.73	54	*e*P	P	23 08 23.4	+1.9
DAC				pmax	pmax		
	comp=Z,13nm,1.0s						
OSI	Osito Audit: C	80.74	56	*e*P	P	23 08 25.2	+3.8
	comp=Z,43nm,1.2s						
AKASG	Malin Array Be	80.79	324	P	P	23 08 21.1	-0.2
	comp=Z,22nm,0.8s,baz=49,slow=5.6,SNR=101						
AKASG				PP	PP	23 11 25.4	+0.4
	comp=Z,1.8nm,0.7s,baz=50,slow=9.8,SNR=4.5						
AKASG				LR	LR	23 46 44.3	
	comp=Z,2µm,20.1s,baz=45,slow=38						
AKBB	Malin Array Si	80.79	324	*e*P	P	23 08 21.1	-0.1
	comp=Z,35nm,0.9s						
AKBB				*e*PP	PP	23 11 25.4	+0.4
AKBB	Malin Array Si	80.79	324	*e*P	P	23 08 21.1	-0.1
AKBB				*e*		23 11 25.4	
AKBB				pmax	pmax		
	comp=Z,35nm,0.9s						
YMR	Madison River	80.79	44	*e*P	P	23 08 23.8	+2.1
	comp=Z,41nm,0.8s						
KIEV	Kiev	80.80	324	*e*P	P	23 08 21.1	-0.2
	comp=Z,37nm,1.0s						
KIEV	Kiev	80.80	324	⇑*i*P	P	23 08 21.1	-0.2
KIEV	Kiev	80.80	324	*i* P	P	23 08 21.3	+0.1
	SNR=22						
KIEV	Kiev	80.80	324	*c i*P	P	23 08 19.4	-1.9
KIEV				pmax	pmax		
	comp=Z,23nm,0.9s						
AK11	Malin Array Si	80.83	324	*e*P	P	23 08 21.1	-0.3
MPMC	Manual Prospec	80.92	54	P	P	23 08 22.6	+0.1
	baz=300,SNR=11						
YNR	Norris Junctio	80.94	44	*e*P	P	23 08 25.1	+2.6
	comp=Z,29nm,1.0s						
GCMT	Greycliff	80.96	42	*e*P	P	23 08 23.9	+1.5
PBUR	Paburg	80.98	331	*e*P	P	23 08 21.3	-0.8
PBUR				IAmb	IAmb	23 08 23.0	
	comp=Z,68nm,0.7s						
YFT	Old Faithful	80.98	44	*e*P	P	23 08 26.1	+3.3
	comp=Z,38nm,1.1s						
LRMC	Laurel Mtn Rad	81.06	54	P	P	23 08 22.8	-0.4
	baz=300,SNR=16						
R11A	Troy Canyon, C	81.09	51	*e*P	P	23 08 24.0	+0.7
	comp=Z,34nm,1.0s						
R11A	Troy Canyon, C	81.09	51	P	P	23 08 23.4	+0.1
	baz=300,SNR=38						
YPP	Pitchstone Pla	81.10	44	*e*P	P	23 08 26.1	+2.7
	comp=Z,17nm,0.9s						
PTK	Pertek	81.11	310	*e*P	P	23 08 27.9	+4.5
MAZI	Mazidag	81.11	308	*e*P	P	23 08 23.3	-0.1
EDW2	Edwards Air Fo	81.14	55	P	P	23 08 22.6	-0.9
	baz=300,SNR=12						
FURC	Furnace Creek,	81.15	53	P	P	23 08 23.3	-0.1
	baz=300,SNR=9.5						
H17A	Grant Village	81.17	44	*e*P	P	23 08 26.8	+3.0
	comp=Z,33nm,0.8s						
H17A	Grant Village	81.17	44	P	P	23 08 26.1	+2.3
	baz=303,SNR=36						
LKWY	Lake	81.19	44	*e*P	P	23 08 27.1	+3.2
	comp=Z,30nm,0.8s						
HVU	Hansel Valley	81.19	47	*e*P	P	23 08 25.4	+1.6
	comp=Z,21nm,0.8s						
IMW	Indian Meadow	81.22	44	*e*P	P	23 08 25.8	+1.7
	comp=Z,28nm,0.8s						
FLWY	Flagg Ranch	81.26	44	*e*P	P	23 08 26.2	+2.0
	comp=Z,33nm,0.9s						
SIM	Simferopol'	81.29	317	*d i*P	P	23 08 24.7	+0.7
SIM				pmax	pmax		
	comp=Z,58nm,0.9s						
SIM				MLR	MLR		
	comp=Z,370nm,18.0s						
FXWY	Fox Creek	81.30	45	*e*P	P	23 08 25.9	+1.4
	comp=Z,30nm,1.1s						
NC405	NORSAR Array S	81.31	338	*e*P	P	23 08 24.4	+0.5
NC303	NORSAR Array S	81.33	338	*e*P	P	23 08 24.5	+0.5
TPNV	Topopah Spring	81.34	53	*e*P	P	23 08 25.2	+0.6
	comp=Z,40nm,0.9s						
TPNV	Topopah Spring	81.34	53	P	P	23 08 24.8	+0.1
	baz=300,SNR=31						
HFS	Hagfors	81.36	337	LR	LR	23 46 51.9	
	comp=Z,436nm,19.2s,baz=38,slow=37						
ILIC	ilic-Erzincan	81.37	310	*e*P	P	23 08 24.3	-0.5
MWC	Mount Wilson	81.41	56	*e*P	P	23 08 24.9	-0.2
	comp=Z,36nm,1.1s						
MWC	Mount Wilson	81.41	56	*e*P	P	23 08 24.9	-0.2
MWC				pmax	pmax		
	comp=Z,36nm,1.1s						
MOOW	Moose Ponds	81.41	44	*e*P	P	23 08 26.5	+1.4
	comp=Z,13nm,0.9s						
TPAW	Teton Pass	81.43	45	*e*P	P	23 08 25.7	+0.5
	comp=Z,34nm,0.9s						
BGU	Big Grassy Mou	81.47	48	*e*P	P	23 08 26.6	+1.3
	comp=Z,17nm,1.0s						
NB201	NORSAR Array S	81.49	338	*e*P	P	23 08 24.9	+0.1
NC204	NORSAR Array S	81.49	338	*e*P	P	23 08 25.4	+0.6
NB2	NORSAR Subarra	81.52	338	P	P	23 08 24.7	-0.3
	comp=Z,6.1nm,0.8s,baz=41,slow=5.3						
NB200	NORSAR Array S	81.52	338	*e*P	P	23 08 24.9	-0.1
NOA	NORSAR Array B	81.52	338	P	P	23 08 24.9	-0.1
	comp=Z,10nm,0.9s,baz=40,slow=5.1,SNR=33						
NOA				LR	LR	23 47 53.7	
	comp=Z,692nm,20.9s,baz=45,slow=38						
REDW	Red Top Meadow	81.56	45	*e*P	P	23 08 27.4	+1.6
	comp=Z,48nm,1.3s						
RLMT	Red Lodge	81.56	43	*e*P	P	23 08 27.2	+1.4
	comp=Z,31nm,0.8s						
RLMT	Red Lodge	81.56	43	P	P	23 08 26.4	+0.6
	baz=303,SNR=25						
SNOW	Snow King Moun	81.56	45	*e*P	P	23 08 27.8	+1.9
	comp=Z,17nm,0.9s						
LOHW	Long Hollow	81.57	45	*e*P	P	23 08 27.5	+1.6
	comp=Z,19nm,1.0s						
SPUT	South Promonto	81.64	47	*e*P	P	23 08 27.7	+1.5
	comp=Z,26nm,1.1s						
BFSC	Mount Baldy Ra	81.69	55	P	P	23 08 26.3	-0.3
	baz=300						
RSDY	Resadiye-TOKAT	81.70	312	*e*P	P	23 08 27.2	+0.9
SUW	Suwalki	81.72	329	*e*P	P	23 08 26.2	+0.2
SUW	Suwalki	81.72	329	*e*P	P	23 08 25.9	-0.2
	comp=Z,165nm,1.1s						
SUW	Suwalki	81.72	329	*e*P	P	23 08 25.9	-0.2
SUW				pmax	pmax		
	comp=Z,165nm,1.1s						
AHID	Auburn Hatcher	81.72	45	*e*P	P	23 08 28.0	+1.4
	comp=Z,25nm,0.9s						
GSC	Goldstone, Bar	81.77	54	*e*P	P	23 08 27.8	+0.9
	comp=Z,24nm,0.9s						
GSC	Goldstone, Bar	81.77	54	*e*P	P	23 08 27.8	+0.9
GSC				pmax	pmax		
	comp=Z,25nm,0.9s						
GSC	Goldstone, Bar	81.77	54	P	P	23 08 26.4	-0.5
	baz=300,SNR=11						
NAO01	NORSAR Array S	81.78	338	*e*P	P	23 08 26.5	+0.2
SHOC	Shoshone, Teco	81.85	53	P	P	23 08 27.6	+0.4
	baz=300						
DUG	Dugway, Tooele	81.99	48	*e*P	P	23 08 29.0	+1.0
	comp=Z,53nm,1.2s						
DUG	Dugway, Tooele	81.99	48	*e*P	P	23 08 29.0	+1.0
DUG				pmax	pmax		
	comp=Z,53nm,1.2s						
DUG	Dugway, Tooele	81.99	48	P	P	23 08 28.2	+0.2
	baz=302						
HWUT	Hardware Ranch	82.05	47	*e*P	P	23 08 29.7	+1.4
	comp=Z,29nm,0.9s						
PSUT	Pine Spring	82.17	50	*e*P	P	23 08 30.1	+1.0
	comp=Z,34nm,1.0s						
SVSK	Karacayir	82.17	311	*e*P	P	23 08 29.2	+0.5
KVT	Kavak	82.17	313	*e*P	P	23 08 29.6	+0.8
SNOP	Sinop	82.20	314	*e*P	P	23 08 28.2	-0.7
URFA	Urfa	82.23	309	*e*P	P	23 08 33.1	+3.8
SHPR	Sheep Range	82.32	52	*e*P	P	23 08 31.1	+1.3
	comp=Z,30nm,1.0s						
TUQ	Turquoise Moun	82.33	54	P	P	23 08 30.6	+0.7
	baz=301,SNR=18						
HEC	Hector,Ludlow	82.34	54	P	P	23 08 30.4	+0.5
	baz=300,SNR=16						
MURC	Murrieta	82.34	56	P	P	23 08 30.2	+0.4
	baz=300,SNR=6.0						
TCUT	Toone Canyon	82.41	47	*e*P	P	23 08 31.7	+1.3
	comp=Z,36nm,0.9s						
CTU	Camp Tracy	82.42	47	*e*P	P	23 08 31.6	+1.3
	comp=Z,30nm,0.9s						
LAO	LASA Array	82.44	40	*e*P	P	23 08 31.7	+1.6
	comp=Z,34nm,0.9s						
LAO	LASA Array	82.44	40	P	P	23 08 30.9	+0.7
	baz=305						
DGMT	Dagmar	82.52	38	*e*P	P	23 08 30.9	+0.4
	comp=Z,33nm,1.0s						
DGMT	Dagmar	82.52	38	P	P	23 08 30.4	-0.1
	baz=306						
DARE	Darende-Malaty	82.55	310	*e*P	P	23 08 32.5	+1.6
NLU	North Lily Min	82.60	48	*e*P	P	23 08 32.5	+1.2
	comp=Z,18nm,0.9s						
JLU	Jordanelle	82.66	47	*e*P	P	23 08 32.6	+1.0
	comp=Z,40nm,1.0s						
BW06	Boulder Array	82.67	45	*e*P	P	23 08 32.0	+0.3
	comp=Z,13nm,0.8s						
BW06	Boulder Array	82.67	45	P	P	23 08 31.4	-0.3
	baz=304,SNR=14						
PD31	Pinedale Array	82.67	45	*e*P	P	23 08 32.1	+0.4
PDAR	Pinedale Array	82.67	45	*e*P	P	23 08 31.5	-0.2
PDAR	Pinedale Array	82.67	45	P	P	23 08 32.0	+0.4
	comp=Z,7.0nm,0.8s,baz=273,slow=3.0,SNR=42						
PDAR				LR	LR	23 42 01.1	
	comp=Z,165nm,19.5s,baz=314,slow=33						
GMRC	Granite Mounta	82.84	54	P	P	23 08 32.7	+0.1
	baz=301,SNR=18						
MPU	Maple Canyon	82.85	48	*e*P	P	23 08 33.9	+1.3
	comp=Z,21nm,1.0s						
PFO	Pinyon Flats O	82.87	56	*e*P	P	23 08 33.4	+0.7
	comp=Z,38nm,1.1s						
PFO	Pinyon Flats O	82.87	56	*e*P	P	23 08 33.4	+0.7
PFO				pmax	pmax		
	comp=Z,38nm,1.1s						
PFO	Pinyon Flats O	82.87	56	P	P	23 08 32.9	+0.1
	baz=301						
PFO	Pinyon Flats O	82.87	56	LR	LR	23 37 53.9	
	comp=Z,219nm,21.5s,baz=278,slow=30						
XPFO	Pion Flat	82.87	56	*e*P	P	23 08 33.4	+0.7
	comp=Z,41nm,1.1s						
BELC	Belle Mtn. Jos	83.00	55	P	P	23 08 33.1	-0.3
	baz=301,SNR=12						
CCUT	Cedar City	83.01	51	*e*P	P	23 08 34.8	+1.3
	comp=Z,42nm,1.1s						
LDFC	Landfair	83.08	54	*e*P	P	23 08 33.3	-0.5
	comp=Z,44nm,1.2s						
KONO	Kongsberg	83.10	338	*c e*P	P	23 08 32.5	-0.7
KONO				pmax	pmax		
	comp=Z,89nm,2.5s						
SZCU	Shurtz Canyon	83.17	51	*e*P	P	23 08 35.4	+1.0
	comp=Z,18nm,1.0s						
MSU	Marysvale	83.30	50	*e*P	P	23 08 36.5	+1.5
MSU	Marysvale	83.30	50	*e*P	P	23 08 36.5	+1.5
LCMT	Little Creek M	83.37	51	*e*P	P	23 08 36.5	+1.3
	comp=Z,34nm,0.9s						
GAZ	Gaziantep	83.47	309	*e*P	P	23 08 36.2	+0.5
BNN	Bunyan	83.49	311	*e*P	P	23 08 35.1	-0.7
SFJD	Kangerlussuaq	83.49	5	*i* P	P	23 08 35.3	+0.2
SFJD	Kangerlussuaq	83.49	5	*i* P	P	23 08 35.3	+0.2
KMRS	Kahramanmaras	83.50	309	*e*P	P	23 08 35.9	+0.1
TMUT	Trail Mountain	83.52	48	*e*P	P	23 08 37.3	+1.1
	comp=Z,15nm,1.1s						
IRM	Iron Mountain	83.53	54	P	P	23 08 36.0	0.0
	baz=301,SNR=6.0						
MTPU	Mount Pierson	83.54	50	*e*P	P	23 08 37.9	+1.5
	comp=Z,33nm,1.1s						
BC3	Big Chuckawall	83.57	55	P	P	23 08 36.3	0.0
	baz=301,SNR=18						
IKP	In-Ko-Pah, Jac	83.61	56	P	P	23 08 36.5	0.0
	baz=301						
KNB	Kanab	83.66	51	*e*P	P	23 08 38.3	+1.5
	comp=Z,88nm,1.0s						
KNB	Kanab	83.66	51	*e*P	P	23 08 38.3	+1.5
KNB				pmax	pmax		
	comp=Z,88nm,1.0s						
ILGA	Ilgaz	83.66	314	*e*P	P	23 08 38.7	+1.9
	comp=Z,72nm,0.9s						
SWSC	Sam W. Stewart	83.68	56	P	P	23 08 36.9	+0.2
	baz=301						
P17A	Butcher Ranch,	83.72	48	*e*P	P	23 08 38.4	+1.3
	comp=Z,31nm,1.0s						
Q16A	Castle Valley	83.74	49	*e*P	P	23 08 38.6	+1.4
	comp=Z,40nm,1.2s						
IAS	Iasi	83.75	321	⇓*i*P	P	23 08 37.4	+0.6
TAOE	Nuku Hiva Isla	83.75	104	*e*LR	LR	23 34 47.7	
	comp=Z,746nm,23.2s						
PKCU	Pink Cliffs	83.78	50	*e*P	P	23 08 39.8	+2.3
	comp=Z,28nm,1.4s						
LEOM	Leova	83.80	321	⇑*i*P	P	23 08 37.2	+0.1
W13A	Hualapai Mount	83.93	53	*e*P	P	23 08 39.1	+0.8
	comp=Z,16nm,1.2s						
LVV	L'vov	83.97	325	*e*P	P	23 08 36.9	-1.0
SRU	San Rafael Swe	84.06	48	*e*P	P	23 08 39.5	+0.7
	comp=Z,27nm,0.8s						
SRU	San Rafael Swe	84.06	48	*e*P	P	23 08 39.5	+0.7
SRU				pmax	pmax		
	comp=Z,27nm,0.8s						
TBI	Tubuai	84.08	121	*e*LR	LR	23 34 55.2	
	comp=Z,853nm,25.2s,baz=312						
PDMCI	Parker Dam,Lak	84.17	54	P	P	23 08 39.5	+0.3
	baz=302						
Y12C	Blythe	84.18	55	*e*P	P	23 08 40.2	+1.0
	comp=Z,28nm,1.1s						
Y12C	Blythe	84.18	55	P	P	23 08 39.1	-0.2
	baz=302,SNR=6.2						
BEL	Belsk	84.24	328	*e*P	P	23 08 39.8	+0.6
BEL	Belsk	84.24	328	*e*P	P	23 08 39.8	+0.6
KOZT	Kozan	84.24	310	*e*P	P	23 08 40.1	+0.6
TLCR		84.25	319	⇓*i*P	P	23 08 40.1	+0.8
BIR	Birlad	84.27	321	⇑*i*P	P	23 08 40.5	+1.0
GLA	Glamis	84.33	55	P	P	23 08 40.3	+0.2
	baz=301						
U15A	North Rim	84.33	51	*e*P	P	23 08 41.2	+0.8
	comp=Z,22nm,0.9s						
PRAR	RASCA	84.37	322	⇓*i*P	P	23 08 39.5	-0.5
GIUM	Giurgiulesti	84.41	320	⇓*i*P	P	23 08 41.7	+1.5
BR101	Keskin Array S	84.45	313	*e*P	P	23 08 41.0	+0.3
BR131	Keskin Array S	84.45	313	*e*P	P	23 08 41.7	+1.0
BR131	Keskin Array S	84.45	313	P	P	23 08 41.1	+0.4
	SNR=28						
BRTR	Keskin Array B	84.45	313	P	P	23 08 41.0	+0.4
	comp=Z,48nm,0.9s,baz=95,slow=3.5,SNR=205						
BRTR				LR	LR	23 50 48.2	
	comp=Z,300nm,19.5s,baz=64,slow=39						
BSD	Bornholm Skovb	84.52	333	*i* P	P	23 08 40.8	+0.3
BSD	Bornholm Skovb	84.52	333	*e*P	P	23 08 40.8	+0.3
TAHT	Tahtakopru-Hat	84.59	309	*e*P	P	23 08 41.5	+0.2
K22A	Casper	84.59	44	P	P	23 08 41.5	+0.1
	baz=305						
CFR	Carcaliu	84.64	320	⇑*i*P	P	23 08 42.1	+0.8
BIZ	Bicaz	84.69	322	⇑*i*P	P	23 08 42.3	+0.7
RWWY	Rawlins	84.72	45	*e*P	P	23 08 40.7	-1.5
	comp=Z,70nm,1.1s						
BUR08	Bucovina Ar. S	84.74	323	*e*P	P	23 08 42.6	+0.6
BUR04	Bucovina Ar. S	84.75	323	*e*P	P	23 08 41.7	-0.3
BURAR	Bucovina Array	84.75	323	⇓*i*P	P	23 08 42.4	+0.4
KWP	Kalwaria Pacla	84.75	325	*e*P	P	23 08 42.3	+0.4
KWP	Kalwaria Pacla	84.75	325	*e*P	P	23 08 42.5	+0.6
	comp=Z,862nm,1.1s						
KWP	Kalwaria Pacla	84.75	325	*e*P	P	23 08 42.3	+0.4
YAYX	Yaylak	84.77	312	*e*P	P	23 08 39.4	-2.9
PETR	Petresti	84.82	320	⇑*i*P	P	23 08 43.5	+1.3
GKP	Gorka Klasztor	84.86	330	*e*P	P	23 08 42.5	+0.2
GKP	Gorka Klasztor	84.86	330	*e*P	P	23 08 42.5	+0.2
KARA	Karaisali	84.87	310	*e*P	P	23 08 42.9	+0.2
ODBI	Odobesti	84.89	320	⇓*i*P	P	23 08 43.5	+0.9
ANTO	Ankara	84.91	313	*e*P	P	23 08 44.4	+1.5
ANTO	Ankara	84.91	313	*e*P	P	23 08 44.2	+1.2
	comp=Z,50nm,0.8s						
ANTO	Ankara	84.91	313	⇑*i*P	P	23 08 44.2	+1.2
ANTO	Ankara	84.91	313	*e*P	P	23 08 44.2	+1.2
ANTO				pmax	pmax		
	comp=Z,50nm,0.8s						
LOD	Lodumlu	84.92	313	*e*P	P	23 08 40.9	-2.1
BR231	Keskin MP Arra	84.93	313	*e*P	P	23 08 44.5	+1.3
O20A	White River Ci	84.96	46	*e*P	P	23 08 44.0	+0.6
	comp=Z,56nm,1.1s						
O20A	White River Ci	84.96	46	P	P	23 08 43.4	0.0
	baz=304,SNR=21						
AFSR	Afar-Bala (An	84.97	313	*e*P	P	23 08 43.3	0.0
VRI	Vrincioaia	85.01	321	*e*P	P	23 08 43.3	0.0
VRI	Vrincioaia	85.01	321	⇓*i*P	P	23 08 44.3	+1.0
TLB	Topalu	85.05	319	⇑*i*P	P	23 08 43.5	+0.1
PLOR	Plostina	85.06	321	⇓*i*P	P	23 08 43.6	+0.1
Y14A	Wickenburg	85.16	54	*e*P	P	23 08 44.9	+0.6
	comp=Z,33nm,1.0s						
RSSD	Black Hills	85.19	41	P	P	23 08 44.4	-0.1
	baz=307						
KULU	Kulu	85.24	312	*e*P	P	23 08 43.5	-1.1
PV09	Paradox Valley	85.31	48	*e*P	P	23 08 46.4	+1.1
MDND	Maddock	85.33	37	*e*P	P	23 08 46.0	+1.2
	comp=Z,52nm,0.9s						
MDND	Maddock	85.33	37	P	P	23 08 45.3	+0.5
	baz=310						
PV21	Cone Mtn., Par	85.37	48	*e*P	P	23 08 46.6	+1.1
	comp=Z,50nm,0.8s						
PV23	Carpenter Ridg	85.41	48	*e*P	P	23 08 46.5	+0.8
	comp=Z,89nm,0.8s						
PV10	Paradox Valley	85.44	48	*e*P	P	23 08 47.2	+1.4
	comp=Z,92nm,1.0s						
WUAZ	Wupatki	85.45	52	*e*P	P	23 08 47.0	+1.2
	comp=Z,58nm,1.1s						
WUAZ	Wupatki	85.45	52	P	P	23 08 46.5	+0.7
	baz=303						
PV14	Lion Creek, Pa	85.45	48	*e*P	P	23 08 46.6	+0.7
	comp=Z,87nm,0.9s						
PV20	West Nyswonger	85.50	48	*e*P	P	23 08 47.0	+0.9
	comp=Z,69nm,1.0s						
PV19	Morning Glory	85.51	48	*e*P	P	23 08 47.1	+1.0
	comp=Z,67nm,0.9s						
PV04	Paradox Valley	85.51	48	*e*P	P	23 08 47.2	+1.1
	comp=Z,53nm,1.1s						
PV16	Nyswonger Mesa	85.55	48	*e*P	P	23 08 47.0	+0.6
	comp=Z,50nm,0.9s						
PV05	Paradox Valley	85.56	49	*e*P	P	23 08 47.6	+1.1
	comp=Z,63nm,1.0s						
MDUB	Mudurnu	85.57	314	*e*P	P	23 08 44.2	-2.1
PV11	David Mesa, Pa	85.59	48	*e*P	P	23 08 47.3	+0.8
	comp=Z,58nm,0.9s						
UZH	Uzhgorod	85.61	325	*e*P	P	23 08 47.5	+1.4
UZH				*e*		23 09 05.2	
ULM	Lac du Bonnet	85.61	33	*e*P	P	23 08 46.0	-0.1
	comp=Z,25nm,1.3s						
ULM	Lac du Bonnet	85.61	33	*e*P	P	23 08 46.1	-0.1
ULM				pmax	pmax		
	comp=Z,25nm,1.3s						
ULM	Lac du Bonnet	85.61	33	P	P	23 08 46.0	-0.1
	comp=Z,11nm,0.9s,baz=293,slow=3.8,SNR=12						
PV12	Saucer Basin,	85.62	48	*e*P	P	23 08 47.8	+1.0
	comp=Z,58nm,0.8s						
PV03	Paradox Valley	85.63	48	*e*P	P	23 08 47.5	+0.7
	comp=Z,59nm,1.1s						
PV07	Paradox Valley	85.66	48	*e*P	P	23 08 48.2	+1.3
	comp=Z,12nm,0.8s						
DOPR	Dopca	85.68	321	⇑*i*P	P	23 08 47.2	+0.6
PV13	Radium Mtn., P	85.70	48	*e*P	P	23 08 47.8	+0.6
	comp=Z,32nm,0.8s						
PV02	Paradox Valley	85.73	48	*e*P	P	23 08 48.2	+0.9
	comp=Z,30nm,0.9s						
AUMIH	MIHALICIK	85.74	314	*e*P	P	23 08 46.6	-0.6
OJC	Ojcow	85.78	327	*e*P	P	23 08 47.0	0.0
OJC	Ojcow	85.78	327	*e*P	P	23 08 47.1	0.0
	comp=Z,29nm,1.0s						
OJC	Ojcow	85.78	327	*e*P	P	23 08 47.0	0.0
TRPA	Tarpa	85.81	324	⇓*i*P	P	23 08 47.8	+0.7
TRPA	Tarpa	85.81	324	*e*P	P	23 08 47.0	-0.1
PV15	Paradox Valley	85.82	48	*e*P	P	23 08 48.7	+1.0
	comp=Z,24nm,0.9s						
PV01	Paradox Valley	85.88	48	*e*P	P	23 08 48.6	+0.6
	comp=Z,30nm,0.9s						
KIZK	Mersin	85.91	310	*e*P	P	23 08 45.6	-2.3
AUSIV	SIVRIHISAR	85.95	313	*e*P	P	23 08 47.4	-0.8
SVRH	Sivrihisar-ESK	85.95	313	*e*P	P	23 08 48.0	-0.2
N23A	Red Feather La	85.96	45	*e*P	P	23 08 48.4	-0.1
	comp=Z,74nm,1.0s						
N23A	Red Feather La	85.96	45	P	P	23 08 48.2	-0.2
	baz=306,SNR=30						
X16A	Lo Mia Camp, P	86.00	53	*e*P	P	23 08 49.6	+0.9
	comp=Z,22nm,1.2s						
GULT	Gulveren	86.02	315	*e*P	P	23 08 47.0	-1.5
NIE	Niedzica	86.08	326	*e*P	P	23 08 48.9	+0.4
NIE	Niedzica	86.08	326	*e*P	P	23 08 48.9	+0.4
LADK	Ladik-KONYA	86.12	312	*e*P	P	23 08 47.8	-1.3
VOIR		86.20	321	⇑*i*P	P	23 08 49.8	+0.5
KEBE	Keben-Mersin	86.22	310	*e*P	P	23 08 49.1	-0.4
KONT	Konya--Tatoy	86.27	312	*e*P	P	23 08 48.7	-1.0
SMCO	Snowmass	86.31	47	*e*P	P	23 08 51.3	+1.0

	comp=Z,36nm,1.0s						
214A	Organ Pipe Nat	86.35	55	P	P	23 08 50.6	+0.4
	baz=302						
IKL	Isikli	86.35	310	*e*P	P	23 08 48.4	-1.7
BORA	Eskisehir	86.38	314	*e*P	P	23 08 49.1	-1.2
TEVE	Tevekalti-Mers	86.41	310	*e*P	P	23 08 49.5	-0.9
MVCO	Mesa Verde	86.44	49	*e*P	P	23 08 51.7	+0.8
	comp=Z,26nm,1.2s						
MVCO	Mesa Verde	86.44	49	P	P	23 08 50.7	-0.1
	baz=305						
AKKU	Akkuyu-Mersin	86.49	310	*e*P	P	23 08 54.2	+3.5
DRGR		86.59	323	⇑*i*P	P	23 08 51.9	+0.7
BERE	Bereket-Mersin	86.60	310	*e*P	P	23 08 50.9	-0.6
LANS	Liptovska Anna	86.66	326	*e*P	P	23 08 52.6	+1.1
LANS	Liptovska Anna	86.66	326	*e*P	P	23 08 52.5	+1.1
W18A	Petrified Fore	86.78	51	P	P	23 08 52.7	+0.2
	baz=304						
ISCO	Idaho Springs	86.81	46	*e*P	P	23 08 53.5	+0.9
	comp=Z,18nm,1.1s						
ISCO	Idaho Springs	86.81	46	*e*P	P	23 08 53.5	+0.9
ISCO				pmax	pmax		
	comp=Z,18nm,1.1s						
ISCO	Idaho Springs	86.81	46	P	P	23 08 52.4	-0.2
	baz=306,SNR=19						
OKC	Ostrava-Krasne	86.82	327	*e*P	P	23 08 52.0	-0.1
OKC				*e*x	x	23 09 05.1	
OKC				AMS	AMS	23 51 10.0	
	comp=Z,1µm,17.4s						
OKC	Ostrava-Krasne	86.82	327	*e*P	P	23 08 52.0	-0.1
OKC				*e*		23 09 05.1	
OKC				MLR	MLR		
	comp=Z,1µm,17.4s						
MMAI	Mount Meron Ar	86.95	306	LR	LR	23 52 29.1	
	comp=Z,748nm,18.2s,baz=45,slow=39						
X18A	Snowflake	86.96	52	*e*P	P	23 08 56.7	+3.3
	comp=Z,13nm,1.0s						
KSP	Ksiaz	86.97	329	*e*P	P	23 08 52.8	0.0
KSP	Ksiaz	86.97	329	*e*P	P	23 08 52.8	0.0
MORC	Moravsky Berou	87.15	328	*e*P	P	23 08 53.6	-0.1
	comp=Z,8.3nm,1.0s						
MORC	Moravsky Berou	87.15	328	⇓*i*P	P	23 08 53.7	-0.1
MORC	Moravsky Berou	87.15	328	*e*P	P	23 08 53.6	-0.1
MORC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MORC	Moravsky Berou	87.15	328	*e*P	P	23 08 53.5	-0.3
S22A	4UR Ranch, Cre	87.23	48	*e*P	P	23 08 56.0	+1.2
	comp=Z,23nm,1.2s						
S22A	4UR Ranch, Cre	87.23	48	P	P	23 08 54.9	+0.1
	baz=306,SNR=14						
MMLI	Mount Malkishu	87.25	306	*e*P	P	23 08 53.9	-0.7
PSZ	Piszkesteto	87.28	325	*e*P	P	23 08 54.8	+0.3
	comp=Z,21nm,1.3s						
PSZ	Piszkesteto	87.28	325	*e*P	P	23 08 54.8	+0.3
PSZ				pmax	pmax		
	comp=Z,21nm,1.3s						
PSZ	Piszkesteto	87.28	325	*e*P	P	23 08 54.0	-0.5
KRLC	Kraliky	87.29	328	*e*P	P	23 08 55.0	+0.5
KRLC				*e*pP	sP	23 09 05.3	-1.0
KRLC	Kraliky	87.29	328	*e*P	P	23 08 55.0	+0.5
KRLC				*e*		23 09 05.3	
CSS	Mathiatis	87.31	309	*e*P	P	23 08 52.5	-2.3
CSS	Mathiatis	87.31	309	*e*P	P	23 08 54.6	-0.2
	comp=Z,31nm,0.7s						
DPC	Dobruska-Polom	87.31	329	*e*P	P	23 08 54.9	+0.4
DPC				AMS	AMS	23 51 50.0	
	comp=Z,2µm,19.1s						
DPC	Dobruska-Polom	87.31	329	*e*P	P	23 08 54.9	+0.4
DPC				MLR	MLR		
	comp=Z,2µm,19.1s						
UPC	Upice	87.34	329	*e*P	P	23 08 54.6	0.0
UPC				AMS	AMS	23 52 00.0	
	comp=Z,2µm,17.6s						
UPC	Upice	87.34	329	*e*P	P	23 08 54.6	0.0
UPC				MLR	MLR		
	comp=Z,2µm,17.6s						
VYHS	Vyhne	87.41	326	*e*P	P	23 08 55.1	+0.1
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VYHS	Vyhne	87.41	326	*e*P	P	23 08 55.1	+0.1
VYHS				*e*PP	PP	23 12 24.7	+5.6
SUTC	Sutluce-Ispart	87.42	312	*e*P	P	23 08 54.4	-1.1
EDRB	Edirne	87.46	317	*e*P	P	23 08 53.9	-1.5
GZR	Gura Zlata	87.46	322	⇑*i*P	P	23 08 55.0	-0.4
LEF	Lefka	87.52	309	*e*P	P	23 08 53.8	-2.0
Q24A	Divide	87.59	46	P	P	23 08 56.2	-0.3
	baz=306						
TUC	Tucson	87.61	54	*e*P	P	23 08 57.5	+1.1
	comp=Z,8.1nm,1.1s						
TUC	Tucson	87.61	54	P	P	23 08 56.0	-0.3
	baz=304						
SUSD	Miller	87.85	39	P	P	23 08 57.3	+0.1
	baz=310						
VRAC	Vranov	87.92	328	⇑*i*P	P	23 08 57.5	0.0
VRAC	Vranov	87.92	328	*e*P	P	23 08 57.4	0.0
VRAC	Vranov	87.92	328	LR	LR	23 51 59.8	
	comp=Z,978nm,18.1s,baz=43,slow=38						
BZS	Buzias	87.93	323	⇑*i*P	P	23 08 57.0	-0.6
PVCC	Panska Ves	87.97	330	*e*P	P	23 08 59.5	+1.9
PVCC	Panska Ves	87.97	330	*e*P	P	23 08 59.5	+1.9
BRG	Berggiesshubel	87.99	330	*e*P	P	23 08 57.1	-0.6
	comp=Z,8.3nm,1.1s						
BRG				*e*PP	PP	23 12 18.8	-4.8
	comp=Z,32nm,1.6s						
BRG	Berggiesshubel	87.99	330	*e*P	P	23 08 57.1	-0.6
BRG				*e*		23 12 18.8	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,32nm,1.6s						
CLL	Collm	88.08	331	*e*P	P	23 08 57.5	-0.7
	comp=Z,13nm,1.0s						
CLL	Collm	88.08	331	*i* P	P	23 08 57.4	-0.7
	comp=Z,14nm,1.3s						
CLL				*i* PcP	PcP	23 09 01.6	+1.7
	comp=Z,13nm,1.0s						
CLL				*e*		23 09 12.0	
CLL				*e*(PP)		23 12 20.0	
CLL				*e*		23 12 38.0	
CLL				*e*S	S	23 19 41.0	+1.3
CLL	Collm	88.08	331	*i* P	P	23 08 57.4	-0.7
CLL				*e*		23 09 12.0	
CLL				*e*S	S	23 19 41.0	+1.3
CLL				pmax	pmax		
	comp=Z,14nm,1.3s						
SDCO	Great Sand Dun	88.08	47	*e*P	P	23 08 59.9	+1.1
	comp=Z,12nm,1.0s						
SDCO	Great Sand Dun	88.08	47	P	P	23 08 58.4	-0.5
	baz=306,SNR=12						
BALB	Balikesir	88.12	315	*e*P	P	23 08 57.0	-1.5
KORT	Korkueli	88.12	312	*e*P	P	23 08 57.0	-1.8
KRUC	Moravsky	88.18	328	*e*P	P	23 08 58.4	-0.3
MODS	Modra-Piesok	88.25	327	*e*P	P	23 08 59.0	0.0
MODS				pmax	pmax		
	comp=Z,88nm,2.1s						
MODS	Modra-Piesok	88.25	327	*e*P	P	23 08 59.0	0.0
OGNE	Ogallala	88.30	43	P	P	23 08 58.5	-1.0
	baz=308						
PRA	Prague	88.36	329	AMS	AMS	23 53 00.0	
	comp=Z,1µm,18.9s						
PRU	Pruhonice	88.37	329	*e*P	P	23 08 59.2	-0.3
PRU				AMS	AMS	23 52 40.0	
	comp=Z,1µm,19.3s						
PRU	Pruhonice	88.37	329	*e*P	P	23 08 59.2	-0.3
PRU				MLR	MLR		
	comp=Z,1µm,19.3s						
MDVR	Moldovita	88.43	322	⇑*i*P	P	23 08 59.7	-0.3
TREC	Trest	88.44	328	*e*P	P	23 08 59.9	0.0
TREC				AMS	AMS	23 52 40.0	
	comp=Z,2µm,17.0s						
TREC	Trest	88.44	328	*e*P	P	23 08 59.9	0.0
TREC				MLR	MLR		
	comp=Z,2µm,17.0s						
ELL	Elmali	88.56	312	*e*P	P	23 09 00.3	-0.6
KZIT	Kziot	88.82	305	*e*P	P	23 09 00.5	-1.5
HRFI	Mount Harif	88.84	304	*e*P	P	23 09 01.1	-1.1
EZN	Ezine	88.95	316	*e*P	P	23 08 57.2	-5.3
VTS	Vitosha	89.00	320	*e*P	P	23 09 03.3	+0.4
	comp=Z,14nm,1.0s						
VTS	Vitosha	89.00	320	⇓*i*P	P	23 09 02.8	-0.1
VTS	Vitosha	89.00	320	*e*P	P	23 09 03.3	+0.4
VTS				pmax	pmax		
	comp=Z,14nm,1.0s						
MORH	Mrgy, Hungar	89.07	325	⇑*e*P	P	23 09 02.0	-0.9
ANMO	Albuquerque	89.09	50	*e*P	P	23 09 04.6	+1.0
	comp=Z,6.9nm,1.0s						
ANMO	Albuquerque	89.09	50	*ce*P	P	23 09 04.2	+0.7
ANMO				pmax	pmax		
	comp=Z,15nm,2.5s						
EIL	Elat	89.10	304	LR	LR	23 54 03.0	
	comp=Z,492nm,19.5s,baz=53,slow=39						
NKC	Novy Kostel	89.11	330	*e*P	P	23 09 04.1	+1.0
NKC	Novy Kostel	89.11	330	*e*P	P	23 09 04.1	+1.0
KSCO	Kaye Shedlock'	89.13	45	P	P	23 09 02.1	-1.4
	baz=308						
AYDB	Zeytinkoy-Aydi	89.13	314	*e*P	P	23 09 01.9	-1.6
T25A	Trinidad	89.14	47	*e*P	P	23 09 04.6	+0.9
	comp=Z,19nm,1.0s						
T25A	Trinidad	89.14	47	P	P	23 09 04.5	+0.7
	baz=307						
CONA	Conrad Observa	89.24	327	*e*PcP	P	23 09 04.0	+0.2
	comp=Z,5.8nm,0.8s,SNR=5.6						
CONA				*e*PP	PP	23 12 37.1	+3.4
	comp=Z,15nm,1.4s						
EYMN	Ely	89.29	33	*e*P	P	23 09 04.5	+0.6
	comp=Z,25nm,0.9s						
EYMN	Ely	89.29	33	P	P	23 09 03.4	-0.6
	baz=316						
KHC	Kasperske Hory	89.42	329	*e*P	P	23 09 03.9	-0.7
	comp=Z,2.4nm,0.8s						
KHC	Kasperske Hory	89.42	329	*e*P	P	23 09 04.3	-0.3
KHC				*e*x	x	23 09 20.3	
KHC				*e*x	x	23 09 27.9	
KHC				*e*PP	PP	23 12 42.6	+7.5
KHC				AMS	AMS	23 53 20.0	
	comp=Z,2µm,16.1s						
KHC	Kasperske Hory	89.42	329	*e*P	P	23 09 03.9	-0.7
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DAMY	Dhamar	89.53	286	*e*P	P	23 09 05.3	-0.7
	comp=Z,33nm,1.0s						
GEC2	GERESS Array S	89.58	329	*e*P	P	23 09 05.1	-0.3
	comp=Z,7.1nm,1.0s						
GEC2	GERESS Array S	89.58	329	*e*P	P	23 09 05.1	-0.3
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GERES	GERESS Array B	89.58	329	P	P	23 09 05.0	-0.3
	comp=Z,4.2nm,0.8s,baz=36,slow=7.1,SNR=7.0						
GERES				PP	PP	23 12 39.2	+2.8
	comp=Z,1.0nm,0.6s,baz=54,slow=8.6,SNR=2.2						
GERES				LR	LR	23 52 40.5	
	comp=Z,1µm,18.4s,baz=84,slow=38						
121A	Cookes Peak, D	89.58	52	P	P	23 09 05.6	-0.2
	baz=305						
GEA0	GERESS Array S	89.58	329	*e*P	P	23 09 04.6	-0.8
ECSD	EROS Data Cent	89.59	38	*e*P	P	23 09 05.6	+0.1
	comp=Z,16nm,1.0s						
ECSD	EROS Data Cent	89.59	38	P	P	23 09 04.7	-0.8
	baz=312						
MLSB	Milas	89.60	313	*e*P	P	23 09 04.8	-0.8
DIVS	Divibare	89.81	322	*e*P	P	23 09 06.2	-0.3
	comp=Z,11nm,1.0s						
ARSA	Arzberg	89.88	327	*e*PcP	P	23 09 06.6	-0.1
	comp=Z,7.5nm,1.1s						
MOA	Molln	90.04	328	*e*PcP	P	23 09 07.5	0.0
	comp=Z,4.4nm,0.8s						
KNT	Kendrikon	90.13	319	*e*P	P	23 09 06.9	-1.1
STIP	Stip	90.19	320	*i* P	P	23 09 07.0	-1.3
E38A	The Farm, Brul	90.21	34	*e*P	P	23 09 08.6	+0.4
	comp=Z,27nm,0.9s						
E38A	The Farm, Brul	90.21	34	P	P	23 09 08.3	0.0
	baz=315						
HORT	Hortiatis	90.38	318	*e*P	P	23 09 05.8	-3.5
F38A	Pierce - Schro	90.51	34	P	P	23 09 10.1	+0.5
	baz=315						
PERS	Pernice	90.51	327	*i* P	P	23 09 09.2	-0.5
SOKA	Soboth	90.52	327	*i* PcP	P	23 09 09.5	-0.4
	comp=Z,17nm,1.0s,SNR=6.9						
SPMN	Marine on St.	90.57	35	*e*P	P	23 09 10.8	+0.9
	comp=Z,29nm,1.1s						
SPMN	Marine on St.	90.57	35	P	P	23 09 10.2	+0.2
	baz=315						
E39A	Mellen	90.86	33	P	P	23 09 11.1	-0.1
	baz=316						
OBKA	Obir	90.88	327	*e*P	P	23 09 10.2	-1.3
	comp=Z,9.5nm,0.9s						
OBKA				*e*PP	PP	23 12 48.1	+1.3
	comp=Z,21nm,1.4s						
KRUS	Krusevo	90.94	320	*i* P	P	23 09 11.0	-0.9
PDKS	Podkum	90.98	326	*i* P	P	23 09 11.3	-0.7
CBKS	Cedar Bluff	91.01	44	*e*P	P	23 09 12.5	+0.3
	comp=Z,35nm,1.1s						
CBKS	Cedar Bluff	91.01	44	*e*P	P	23 09 12.5	+0.3
CBKS				pmax	pmax		
	comp=Z,35nm,1.1s						
CBKS	Cedar Bluff	91.01	44	P	P	23 09 12.0	-0.2
	baz=310						
KBA	Koelnbreinsper	91.03	328	*e*P	P	23 09 11.5	-0.8
	comp=Z,6.1nm,0.8s						
KBA				*e*PP	PP	23 12 50.8	+2.7
	comp=Z,31nm,1.9s						
G38A	Ridgeland	91.08	35	P	P	23 09 12.6	+0.2
	baz=315						
E40A	Wakefield	91.12	33	P	P	23 09 11.8	-0.7
	baz=317						
H38A	Maiden Rock	91.22	35	P	P	23 09 12.7	-0.2
	baz=315						
MYKA	Terra Mystica	91.22	327	*e*P	P	23 09 11.9	-1.1
	comp=Z,7.8nm,0.7s						
MYKA				*e*PP	PP	23 12 53.3	+3.8
	comp=Z,20nm,1.5s						
LJU	Ljubljana	91.22	326	*i* P	P	23 09 12.2	-0.8
G39A	Holcombe	91.34	34	P	P	23 09 13.5	0.0
	baz=316						
MEM	Membach	91.45	334	⇓P	P	23 09 13.4	-0.6
E41A	Kenton	91.55	33	P	P	23 09 14.5	0.0
	baz=317						
BLCH	La Chartreuse	91.59	334	P	P	23 09 18.1	+3.5
WATA	Walderalm	91.65	329	*e*PcP	P	23 09 14.4	-0.8
	comp=Z,4.4nm,0.7s,SNR=6.0						
WATA				*e*PP	PP	23 12 54.3	+1.3
	comp=Z,11nm,1.4s						
ABTA	Abfaltersbach	91.66	328	*e*P	P	23 09 14.1	-1.0
	comp=Z,9.9nm,0.8s,SNR=6.0						
WTTA	Wattenberg	91.68	329	PP	PP	23 12 54.9	+1.7
	comp=Z,14nm,1.1s						
MNTX	Cornudas Mount	91.72	52	*e*P	P	23 09 16.4	+0.8
	comp=Z,8.9nm,0.9s						
MNTX	Cornudas Mount	91.72	52	P	P	23 09 15.8	+0.2
	baz=306,SNR=16						
G40A	Rib Lake	91.83	34	P	P	23 09 15.4	-0.4
	baz=316						
MOTA	Moosalm	91.86	329	*e*PcP	P	23 09 15.4	-0.7
	comp=Z,2.6nm,0.6s						
MOTA				*e*PP	PP	23 12 57.4	+2.8
	comp=Z,25nm,1.7s						
RETA	Reutte	91.90	329	*e*PcP	P	23 09 15.8	-0.4
	comp=Z,14nm,1.1s						
RETA				*i* PP	PP	23 12 56.6	+1.8
	comp=Z,7.3nm,1.5s						
SQTA	Sankt Quirin	91.90	329	*e*P	P	23 09 15.4	-0.8
	comp=Z,6.2nm,0.9s						
SQTA				*e*PP	PP	23 12 57.7	+2.8
	comp=Z,29nm,1.7s						
BGES	Gesves	91.99	334	P	P	23 09 20.5	+4.1
MSTX	Muleshoe	92.12	49	*e*P	P	23 09 21.4	+3.9
	comp=Z,29nm,1.3s						
MSTX	Muleshoe	92.12	49	P	P	23 09 17.2	-0.3
	baz=308						
WLF	Walferdange	92.15	333	⇑P	P	23 09 17.3	+0.2
I39A	Houston	92.18	36	P	P	23 09 16.9	-0.6
	baz=315						
AMTX	Amarillo	92.27	48	*e*P	P	23 09 19.5	+1.3
	comp=Z,57nm,1.0s						
AMTX	Amarillo	92.27	48	P	P	23 09 18.7	+0.5
	baz=309						
FETA	Feichten	92.27	329	*e*PcP	P	23 09 17.1	-0.9
	comp=Z,10nm,0.9s						
FETA				*e*PP	PP	23 13 00.1	+2.3
	comp=Z,14nm,1.5s						
BFO	Black Forest	92.31	331	*e*P	P	23 09 17.1	-0.9
	comp=Z,18nm,1.0s						
BFO	Black Forest	92.31	331	*e*P	P	23 09 17.1	-0.9
BFO				pmax	pmax		
	comp=Z,18nm,1.0s						
DOU	Dourbes	92.41	334	⇑P	P	23 09 21.1	+2.8
BBOU	Bougnies	92.42	335	P	P	23 09 19.1	+0.7
BBOU				sP	pwP	23 09 31.9	+0.2
DAVA	Damuels	92.44	330	*e*PcP	P	23 09 18.5	-0.3
	comp=Z,17nm,1.0s,SNR=5.0						
DAVA				PP	PP	23 13 00.1	+0.9
	comp=Z,20nm,1.8s						
J39A	Decorah	92.46	36	P	P	23 09 18.1	-0.6
	baz=315						
SCHQ	Schefferville	92.56	16	*e*P	P	23 09 19.9	+0.9
	comp=Z,8.8nm,0.9s						
SCHQ	Schefferville	92.56	16	P	P	23 09 18.5	-0.5
	comp=Z,8.2nm,0.9s,baz=296,slow=5.9,SNR=6.5						
SCHQ				LR	LR	23 56 14.7	
	comp=Z,207nm,19.5s,baz=328,slow=39						
SCIA	State Center	92.67	38	*e*P	P	23 09 21.5	+1.8
	comp=Z,53nm,1.1s						
IDI	Anoyia	92.67	313	*e*P	P	23 09 16.1	-3.9
IDI	Anoyia	92.67	313	LR	LR	23 56 27.3	
	comp=Z,194nm,18.2s,baz=68,slow=39						
KSU1	Kansas State U	92.67	42	*e*P	P	23 09 20.5	+0.6
	comp=Z,69nm,1.1s						
KSU1	Kansas State U	92.67	42	P	P	23 09 20.2	+0.3
	baz=312						
FUORN	Ofenpass-Fuorn	92.78	329	*e*P	P	23 09 20.3	-0.2
	comp=Z,29nm,0.9s						
K39A	Oelwein	92.81	37	P	P	23 09 19.9	-0.5
	baz=315						
DAVOX	Davos/Dischmat	92.83	329	LR	LR	23 53 29.4	
	comp=Z,374nm,20.5s,baz=32,slow=37						
F43A	Flat Rock, Esc	92.86	32	P	P	23 09 20.5	-0.1
	baz=319						
I41A	Arkdale	92.87	35	P	P	23 09 19.9	-0.7
	baz=317						
ECH	Echery	92.89	332	*e*P	P	23 09 20.3	-0.4
	comp=Z,19nm,1.1s						
ECH	Echery	92.89	332	*e*P	P	23 09 20.3	-0.4
ECH				pmax	pmax		
	comp=Z,19nm,1.1s						
IMMV	Iera Moni Meta	93.14	314	*e*P	P	23 09 20.2	-1.8
L39A	Vinton	93.16	37	P	P	23 09 21.6	-0.4
	baz=315						
K40A	Colesburg	93.20	36	P	P	23 09 21.4	-0.7
	baz=316						
ITM	Ithomi	93.30	316	*e*P	P	23 09 20.9	-1.8
J41A	Loganville	93.30	35	P	P	23 09 22.3	-0.3
	baz=316						
M39A	Webster	93.52	38	P	P	23 09 23.6	0.0
	baz=315						
L40A	Anamosa	93.61	37	P	P	23 09 23.9	-0.2
	baz=316						
MATQ	Matagami	93.70	25	P	P	23 09 23.9	-0.4
	baz=326						
K41A	Shullsburg	93.70	36	P	P	23 09 24.3	-0.2
	baz=316						
D47A	Chapleau	93.72	29	P	P	23 09 24.0	-0.5
	baz=322						
E46A	Sault Ste Mari	93.74	30	P	P	23 09 24.5	-0.1
	baz=321						
L41A	Preston	93.98	36	P	P	23 09 25.1	-0.6
	baz=316						
K42A	Prairie Point,	94.06	35	P	P	23 09 25.5	-0.7
	baz=317						
WMOK	Wichita Mounta	94.21	46	*e*P	P	23 09 27.5	+0.5
WMOK	Wichita Mounta	94.21	46	*e*P	P	23 09 27.5	+0.5
WMOK	Wichita Mounta	94.21	46	P	P	23 09 27.2	+0.2
	baz=310						
N40A	Mertquake, Sal	94.26	38	P	P	23 09 27.0	-0.1
	baz=315						
LTX	Lajitas	94.32	53	*e*P	P	23 09 29.0	+1.3
LTX	Lajitas	94.32	53	*e*P	P	23 09 29.0	+1.3
TX31	Lajitas Ar. Si	94.32	53	*e*P	P	23 09 28.5	+0.8
TXAR	Lajitas Array	94.32	53	P	P	23 09 29.0	+1.3
TXAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TXAR	Lajitas Array	94.32	53	P	P	23 09 29.0	+1.3
	comp=Z,9.5nm,0.7s,baz=306,slow=3.1,SNR=40						
L42A	Oliver, Polo	94.46	36	*e*P	P	23 09 32.2	+4.2
	comp=Z,22nm,1.0s						
L42A	Oliver, Polo	94.46	36	P	P	23 09 26.9	-1.1
	baz=317						
M41A	Milan	94.46	37	P	P	23 09 28.0	0.0
	baz=316						
CHGQ	Chibougamau	94.71	23	P	P	23 09 28.3	-0.7
	baz=329						
ABTX	Abilene, Hawle	95.00	48	*e*P	P	23 09 31.8	+1.1
	comp=Z,58nm,1.2s						
ABTX	Abilene, Hawle	95.00	48	P	P	23 09 31.0	+0.3
	baz=310						
O41A	Passleys Farm,	95.18	38	P	P	23 09 31.2	-0.1
	baz=316						
RKT	Rikitea	95.22	113	*e*LR	LR	23 40 05.8	
	comp=Z,582nm,26.0s						
M43A	Waltham Townsh	95.24	36	P	P	23 09 31.9	+0.3
	baz=317						
TUL1	Leonard	95.28	44	P	P	23 09 32.1	+0.3
	baz=312						
P41A	Barry, Barry	95.40	38	P	P	23 09 32.7	+0.4
	baz=316						
E51A	G1948 Merrick	95.64	27	P	P	23 09 33.5	+0.2
	baz=324						
HDIL	Hopedale	95.70	37	P	P	23 09 33.1	-0.6
	baz=317						
Q41A	Truxton	95.82	39	P	P	23 09 34.6	+0.3
	baz=315						
P42A	Winchester	95.85	38	*e*P	P	23 09 34.8	+0.4
	comp=Z,17nm,0.8s						
P42A	Winchester	95.85	38	P	P	23 09 34.8	+0.4
	baz=316						
R41A	Rosebud	96.20	40	P	P	23 09 35.6	-0.4
	baz=315						
JCT	Junction City	96.25	50	P	P	23 09 36.4	-0.1
	baz=309						
CCM	Cathedral Cave	96.44	40	P	P	23 09 37.1	0.0
	baz=315						
U40A	Yellville	96.72	42	P	P	23 09 37.6	-0.8
	baz=314						
S42A	Caledonia	96.90	40	P	P	23 09 39.0	-0.2
	baz=316						
V41A	Mountainview	97.52	42	P	P	23 09 41.9	-0.2
	baz=314						
MIAR	Mount Ida	97.54	43	*e*P	Pdif	23 09 42.5	+0.3
	comp=Z,21nm,1.4s						
MIAR	Mount Ida	97.54	43	*e*P	Pdif	23 09 42.5	+0.3
MIAR				pmax	pmax		
	comp=Z,21nm,1.4s						
MIAR	Mount Ida	97.54	43	P	P	23 09 42.2	+0.1
	baz=314						
O50A	Cable	98.87	34	P	P	23 09 48.0	0.0
	baz=321						
KMBO	Kilima Mbogo	103.50	276	Pdiff	Pdif	23 10 08.8	-0.6
	comp=Z,0.8nm,0.4s,baz=43,slow=6.8,SNR=4.9						
ESDC	Sonseca Array	104.44	334	PP	PP	23 14 27.0	-3.7
	comp=Z,1.3nm,0.9s,baz=29,slow=7.8,SNR=4.1						
QSPA	South Pole Qui	119.09	180	*e*PKPdf	PKPdf	23 14 55.3	-0.5
SYO	Syowa Base	121.52	204	⇓*i*PKiKP	PKiKP	23 15 02.2	+1.9
SYO	Syowa Base	121.52	204	⇑*e*X	PKiKP	23 15 10.0	+10
TOA1	Torodi Ar. Sit	123.06	312	*e*PKPdf	PKPdf	23 15 04.1	-0.8
TOA1				*e*PP	PP	23 16 42.7	-0.9
TOA0	Torodi Ar. Sit	123.06	312	*e*PKPdf	PKPdf	23 15 03.7	-1.2
TOA0				*e*PKPdf	PKiKP	23 15 04.8	-0.3
TORD	Torodi Ar. Bea	123.06	312	PKP	PKPdf	23 15 04.1	-0.8
	comp=Z,1.9nm,0.8s,baz=2.1,slow=3.5,SNR=12						
TORD				PP	PP	23 16 42.7	-0.9
	comp=Z,6.0nm,1.1s,baz=78,slow=6.4,SNR=7.4						
LBTB	Lobatse	123.96	258	*e*PKPdf	PKiKP	23 15 07.4	+0.7
LBTB	Lobatse	123.96	258	*e*PKIKP	PKiKP	23 15 07.4	+0.7
BOSA	Boshof	125.38	254	PKP	PKiKP	23 15 09.8	+0.3
	comp=Z,2.9nm,0.9s,baz=75,slow=3.1,SNR=4.1						
SMLC	San Martn de	128.50	48	*e*P	PKPdf	23 15 15.5	+0.2
SMLC	San Martn de	128.50	48	*e*P	PKPdf	23 15 15.5	+0.2
ZARC	Zaragoza, Cauc	128.95	50	*e*P	PKiKP	23 15 17.1	+0.2
ZARC	Zaragoza, Cauc	128.95	50	*e*P	PKiKP	23 15 17.1	+0.2
PTBC	PUERTO BERRIO,	129.92	51	*e*P	PKPdf	23 15 17.2	-0.8
PTBC	PUERTO BERRIO,	129.92	51	*e*P	PKPdf	23 15 17.2	-0.8
YOTC	Yotoco, Valle	130.43	55	*e*P	PKPdf	23 15 19.3	+0.1
YOTC	Yotoco, Valle	130.43	55	*e*P	PKPdf	23 15 19.3	+0.1
SDV	Santo Domingo	130.61	45	*e*PKPdf	PKiKP	23 15 20.1	-0.3
SDV	Santo Domingo	130.61	45	*e*P	PKPdf	23 15 19.9	+0.3
SDV	Santo Domingo	130.61	45	*e*P	PKPdf	23 15 19.9	+0.3
POPC	Popayan, Colom	131.19	56	*e*P	PKPdf	23 15 17.2	-3.5
POPC	Popayan, Colom	131.19	56	*e*P	PKPdf	23 15 17.2	-3.5
ROSC	El Rosal	131.24	52	PKP	PKiKP	23 15 21.7	-0.3
	comp=Z,3.1nm,0.3s,baz=310,slow=3.3,SNR=5.7						
RUSC	La Rusia	131.31	50	*e*P	PKPdf	23 15 20.1	-1.1
RUSC	La Rusia	131.31	50	*e*P	PKPdf	23 15 20.1	-1.1
SOTA	Rioblanco	131.51	57	*e*P	PKPdf	23 15 20.4	-1.3
SOTA	Rioblanco	131.51	57	*e*P	PKPdf	23 15 20.4	-1.3
PCON	Cinco Dias	131.53	56	*e*P	PKiKP	23 15 24.9	+2.1
PCON	Cinco Dias	131.53	56	*e*P	PKiKP	23 15 24.9	+2.1
GCUF	Volcan Galeras	131.58	58	*e*P	PKPdf	23 15 15.2	-6.7
GCUF	Volcan Galeras	131.58	58	*e*P	PKPdf	23 15 15.2	-6.7
CHIC	Chingaza	131.80	52	*e*P	PKPdf	23 15 22.5	+0.4
CHIC	Chingaza	131.80	52	*e*P	PKPdf	23 15 22.5	+0.4

DBIC	Dimbokro	132.15	313	PKP	PKiKP	23 15 23.0	-0.3
	comp=Z,4.1nm,0.8s,baz=56,slow=2.9,SNR=5.1						
DBIC				PP	PP	23 17 42.2	-1.2
	comp=Z,5.4nm,1.0s,baz=15,slow=7.3,SNR=4.3						
VILC	Villavicencio,	132.19	52	*e*P	PKPdf	23 15 22.1	-0.4
VILC	Villavicencio,	132.19	52	*e*P	PKPdf	23 15 22.1	-0.4
TIC	Toumodi	132.27	313	*e*P	PKPdf	23 15 19.8	-2.7
KIC	Kosan Boka	132.31	313	*e*P	PKPdf	23 15 20.3	-2.3
	comp=Z,81nm,1.8s						
LIC	Lamto	132.59	313	*e*P	PKPdf	23 15 18.4	-4.7
	comp=Z,31nm,1.0s						
SNAA	Sanae	133.51	195	PKP	PKiKP	23 15 24.2	-0.2
VNA2	Neumayer--Watz	135.04	194	PKP	PKiKP	23 15 27.0	-0.4
VNA3	Neumayer Olymp	135.24	193	PKP	PKPdf	23 15 23.5	-2.8
PTGA	Pitinga	144.62	40	*e*PKPdf	PKPbc	23 15 44.2	+0.4
LPAZ	La Paz	149.35	72	PKP	PKPdf	23 15 55.0	+1.4
	comp=Z,12nm,0.9s,baz=11,slow=2.3,SNR=20						
LPAZ				PKPbc	PKiKP	23 15 59.3	+0.1
	comp=Z,15nm,0.8s,baz=355,slow=3.5,SNR=22						
PB11	IPOC Station P	149.65	79	*e*PKPdf	PKPdf	23 15 54.2	+0.8
PB04	IPOC Station P	150.20	84	*e*PKPbc	PKiKP	23 16 00.5	+0.3
PB01	IPOC Station P	150.31	81	*e*PKPbc	PKiKP	23 16 00.1	-0.3
GO06	Curarrehue	150.62	119	*e*PKPbc	PKPbc	23 15 59.8	-0.1
PLCA	Paso Flores	151.09	122	*e*PKPbc	PKiKP	23 16 02.2	+0.8
PLCA	Paso Flores	151.09	122	*e*PKIKP	PKiKP	23 16 02.2	+0.8
LVC	Limon Verde	151.37	84	*e*PKPbc	PKiKP	23 16 03.5	+0.7
LCO	Las Campanas	151.39	98	*e*PKPbc	PKiKP	23 16 02.9	+0.3
LCO	Las Campanas	151.39	98	*e*PKIKP	PKiKP	23 16 02.9	+0.3
GO04	Tololo Observa	151.46	100	*e*PKPbc	PKiKP	23 16 02.7	0.0
ROC1	El Roble	151.48	106	*e*PKPbc	PKiKP	23 16 02.8	+0.1
GO03	Copiap	151.55	94	*e*PKPdf	PKPdf	23 15 57.3	+1.2
GO02	Mina Guanaco	151.56	89	*e*PKPbc	PKiKP	23 16 03.7	+0.6
PEL	Peldehue	151.76	106	*e*PKPbc	PKiKP	23 16 03.0	+0.1
PEL	Peldehue	151.76	106	*e*PKIKP	PKiKP	23 16 03.0	+0.1
CPUP	Villa Florida	162.54	85	PKIKP	PKPdf	23 16 11.8	+1.9
CPUP						23 16 58.8	
CPUP				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CPUP	Villa Florida	162.54	85	PKP	PKPdf	23 16 11.8	+1.9
	comp=Z,6.0nm,1.2s,baz=288,slow=0.6,SNR=2.9						
CPUP				PKPab	PKPab	23 16 58.8	+0.6
	comp=Z,2.2nm,0.7s,baz=336,slow=7.2,SNR=3.7						
BDFB	Brasilia	163.49	37	PKIKP	PKPdf	23 16 13.6	+2.4
BDFB						23 17 03.0	
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BDFB	Brasilia	163.49	37	PKP	PKPdf	23 16 13.6	+2.4
	comp=Z,1.5nm,0.7s,baz=45,slow=13,SNR=3.0						
BDFB				PKPab	PKPab	23 17 03.0	+0.6
	comp=Z,1.5nm,0.7s,baz=331,slow=10,SNR=2.2						

*NEIC **03** 23:03:23.2±0.0, 16°.39N×94°.18W, h111^{km}, MD4.2(MEX), After MEX.*

MEX 03 23:03:23.2±1.1**, 16°.39N×94°.18W, h111**^{km}±14^{km}**, MD4.2, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.97	316	*i* P	Pn	23 03 43.1	-1.1
CMIG				*i* S	Sn	23 03 58.4	-1.7
CMIG	Matias Romero	0.97	316	*i* P	Pn	23 03 43.1	-1.1
CMIG				*i* S	Sn	23 03 58.4	-1.7
PCIG		1.15	126	*e*P	Pn	23 03 45.0	-1.0
PCIG		1.15	126	*e*P	Pn	23 03 45.0	-1.0
TUIG	Tuzandepetl	1.66	352	*e*P	Pn	23 03 50.1	-1.8
TUIG	Tuzandepetl	1.66	352	*e*P	Pn	23 03 50.1	-1.8
HUIG	Huatulco	1.95	252	*e*P	Pn	23 03 53.1	-2.6
HUIG	Huatulco	1.95	252	*e*P	Pn	23 03 53.1	-2.6
CCIG	Comitan	1.97	93	*e*P	Pn	23 03 55.0	-1.0
CCIG	Comitan	1.97	93	*e*P	Pn	23 03 55.0	-1.0
VHO	Vista Hermosa	2.54	286	*e*P	Pn	23 04 03.4	0.0
VHO	Vista Hermosa	2.54	286	*e*P	Pn	23 04 03.4	0.0
PNIG	Pinotepa	3.79	271	*e*P	Pn	23 04 18.0	-1.7
PNIG	Pinotepa	3.79	271	*e*P	Pn	23 04 18.0	-1.7

*NIED **03** 23:04:00, 29°.30N×142°.30E, h5^{km}, Mw5.2   Best double couple: M$_0$7.92000×10^{16} NP1:ϕ$_s$151.00000°, δ17.00000°, λ55.00000°.   NP2:ϕ$_s$7.00000°, δ76.00000°, λ100.00000°.*

*IDC **03** 23:04:10.0±0.4, 29°.33N×142°.13E, h0^{km}, mb4.8/39, mb1 4.9/42, mb1mx4.9/52, mbtmp4.8/42, ML2.5/2, MS4.5/1, Ms1 4.5/1, ms1mx3.5/54, Error ellipse: s-maj=11.8km s-min=11.0km az=108.0*

*JMA **03** 23:04:10.7±0.2, 29°.29N×142°.30E, h23^{km}, M5.1*

*ISCJB **03** 23:04:11.3±1.0, 29°.31N±0°.02×141°.90E±0°.02, h13^{km}±6^{km}, mb5.1/281, MS4.8/23, Error ellipse: s-maj=3.4km s-min=3.1km az=18.1*

*MOS **03** 23:04:13.7±1.1, 29°.33N×141°.93E, h37^{km}, mb5.4/82, MS4.4/15, Error ellipse: s-maj=9.3km s-min=4.7km az=117.1*

*BJI **03** 23:04:14.1, 29°.33N×142°.01E, h49^{km}, mB5.1/37, mb4.9/68, Ms5.0/53, Ms7 4.9/50*

*NEIC **03** 23:04:14.5±2.1, 29°.31N×141°.87E, h22^{km}±14^{km}, mb5.2/192, Error ellipse: s-maj=5.8km s-min=4.6km az=141.0*

*GCMT **03** 23:04:15.5±0.3, 29°.30N±0°.02×142°.32E±0°.02, h28^{km}, MW5.2/95, Moment Tensor Solution.   s49,c55;   s95,c153; Duration: 0   Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.51±.27; M$_{\theta\theta}$-0.45±.15; M$_{\phi\phi}$-5.06±.17; M$_{r\theta}$0.06±.22; M$_{\theta\phi}$0.59±.09; M$_{\phi r}$4.29±.22;   Best double couple: M$_0$6.83500×10^{16} NP1:ϕ$_s$358.00000°, δ64.00000°, λ94.00000°.   NP2: ϕ$_s$169.00000°, δ26.00000°, λ82.00000°.   Principal axes: T 7.0410, Plg70.0000°, Azm276.0000°; N -0.4110, Plg4.0000°, Azm176.0000°; P -6.6280, Plg19.0000°, Azm85.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 23:04:14.5±0.5**, 29°.30N**±0°.03×**142°.02E**±0°.04**, h29**^{km}±3^{km}**, h30**^{km}**:pP-P, n701, σ1**^{s}**46**/742**, mb5.1**/289**, MS4.7**/23**, 66C-29D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.20	176	Pn	Pn	23 04 48.4	-0.6
CBIJ				Sn	Sn	23 05 12.0	-3.3
CBIJ	Chichi jima	2.20	176	P	Pn	23 04 46.6	-2.5
CBIJ				S	Sn	23 05 12.9	-2.4
JCJ	Chichijima	2.20	176	Pn	Pn	23 04 48.4	-0.6
	63nm,0.3s,baz=271,slow=22,SNR=22						
JCJ				Sn	Sn	23 05 12.0	-3.3
	292nm,0.3s,baz=110,slow=23,SNR=13						
JHHJ	Haha-jima-NKT	2.66	177	P	Pn	23 04 53.6	-1.8
JAOM	Aogashimamukai	3.71	329	P	Pn	23 05 10.2	+0.4
JAOM				S	Sn	23 05 55.3	+2.7
JHCJ	Hachijojimakas	4.22	334	P	Pn	23 05 17.5	+0.6
JHCJ				S	Sn	23 06 07.6	+2.4
JHJ2	Mitsune	4.25	334	*e*Pn	Pn	23 05 16.8	-0.5
JHJ2				*e*Sn	Sn	23 06 01.5	-4.3
JHJ	Hachijo jima 2	4.27	334	Pn	Pn	23 05 16.4	-1.1
	66nm,0.3s,baz=125,slow=12,SNR=9.8						
JHJ				Sn	Sn	23 06 05.2	-1.2
	60nm,0.3s,baz=65,slow=21,SNR=5.7						
JMKN	Mikurajimanish	5.03	336	P	Pn	23 05 28.6	+0.6
JMKN				S	Sn	23 06 27.6	+2.5
BSO4	Boso 4	5.85	346	P	Pn	23 05 40.2	+1.0
BSO4				S	Sn	23 06 47.7	+2.4
JOD2	Odawara 2	6.45	338	P	Pn	23 05 48.6	+1.1
JOD2				S	Sn	23 07 03.2	+3.1
HMMJ	Hamamatsu 2	6.64	328	P	Pn	23 05 50.4	+0.3
INU	Inuyama	7.37	326	*e*Pn	Pn	23 06 01.5	+1.3
MJAR	Matsushiro Arr	7.90	337	Pn	Pn	23 06 07.2	-0.3
	2.2nm,0.3s,baz=150,slow=11,SNR=70						
MJAR				Sn	Sn	23 07 36.4	+0.5
	0.8nm,0.3s,baz=146,slow=24,SNR=3.3						
MAJO	Matsushiro	7.91	337	*e*Pn	Pn	23 06 07.7	+0.2
MAJO				*e*Sn	Sn	23 07 33.4	-2.6
MAJO	Matsushiro	7.91	337	*i* P	Pn	23 06 07.4	-0.1
MAT	Matsushiro	7.91	337	P	Pn	23 06 07.4	-0.1
MAT				S	Sn	23 07 34.3	-1.7
MJB9	Matsu-Tunnel	7.91	337	*e*Pn	Pn	23 06 07.8	+0.3
JNU	Nakatsue	10.28	295	Pn	Pn	23 06 44.5	+4.4
	0.6nm,0.3s,baz=65,slow=9.2,SNR=7.0						
JOW	Kunigami	12.39	262	Pn	Pn	23 07 11.1	+2.1
	0.0nm,0.3s,baz=93,slow=17,SNR=2.2						
ERM	Erimo	12.72	4	*e*Pn	Pn	23 07 09.2	-4.2
ERM				*e*Sn	Sn	23 09 23.7	-10
ERM	Erimo	12.72	4	*i* P	Pn	23 07 13.5	+0.1
KSRS	Korea Array	14.31	308	Pn	Pn	23 07 38.1	+3.1
	0.6nm,0.3s,baz=116,slow=10,SNR=23						
KSAR	Wonju Array Be	14.33	308	Pn	Pn	23 07 38.1	+2.8
KSAR	Wonju Array Be	14.33	308	P	Pn	23 07 38.2	+2.8
KS01	Wonju Array Si	14.34	308	*e*Pn	Pn	23 07 37.9	+2.4
ASAJ	Asahikawa	14.80	2	Pn	Pn	23 07 37.8	-3.9
	2.2nm,0.3s,baz=230,slow=14,SNR=6.0						
ASAJ				Sn	Sn	23 10 11.8	-13
	1.0nm,0.3s,baz=198,slow=20,SNR=2.5						
YUK	Yuzh-Kuril'sk	15.03	11	*e*P	Pn	23 07 36.7	-8.0
YUK				pmax	pmax		
	comp=Z,119nm,0.6s						
YUK				pmax	pmax		
	comp=E,101nm,0.7s						
YUK				pmax	pmax		
	comp=N,31nm,0.4s						
SHO	Shikotan	15.04	14	*e*P	Pn	23 07 36.1	-8.9
SHO				pmax	pmax		
	comp=Z,47nm,0.9s						
SHO				pmax	pmax		
	comp=N,16nm,0.7s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.5s						
MSHR	Mys Shultsa	15.89	329	*i* P	Pn	23 07 54.0	-2.0
VLA	Vladivostok	16.02	332	*i* P	Pn	23 07 56.1	-1.6
TEY	Ternei	16.29	346	⇓*e*P	Pn	23 07 57.2	-3.8
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,200nm,10.3s						
TEY				MLR	MLR		
	comp=N,200nm,16.0s						
TEY				MLR	MLR		
	comp=Z,200nm,16.0s						
USA0B	Ussuriysk Arra	16.89	334	*e*Pn	Pn	23 08 07.2	-1.5
	comp=Z,39nm,0.9s						
USRK	Ussuriysk Ar.	16.89	334	Pn	Pn	23 08 06.5	-2.2
	comp=Z,0.3nm,0.3s,baz=155,slow=9.3,SNR=25						
YSS	Yuzh-Sakhalins	17.64	2	*e*Pn	Pn	23 08 16.3	-1.7
	comp=Z,76nm,0.9s						
YSS	Yuzh-Sakhalins	17.64	2	⇑*e*P	Pn	23 08 17.0	-1.0
YSS				*e*S	Sn	23 11 25.7	-7.8
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=Z,1μm,17.0s						
YSS				MLR	MLR		
	comp=N,800nm,18.0s						
SSE	Sheshan	18.10	281	*e*Pn	P	23 08 25.3	+1.3
	comp=N,50nm,0.9s						
MDJ	Mudanjiang	18.20	331	P	P	23 08 25.3	+0.3
MDJ				pP	sP	23 08 33.8	-1.0
MDJ				sP	pwP	23 08 38.7	+2.3
MDJ				S	Sn	23 11 46.6	-0.6
MDJ				PcP	PcP	23 12 58.7	+1.8
MDJ				pmax	pmax		
	comp=N,94nm,0.7s						
MDJ				pmax	pmax		
	comp=N,1μm,6.8s						
MDJ				LR	LR		
	comp=N,4μm,17.1s						
MDJ				LR	LR		
	comp=N,2μm,14.7s						
MDJ	Mudanjiang	18.20	331	*e*P	Pn	23 08 23.2	-1.7
	comp=N,72nm,0.9s						
TATO	Taipei	18.77	262	*e*P	Pn	23 08 34.0	+2.0
	comp=N,341nm,1.0s						
TATO	Taipei	18.77	262	P	P	23 08 31.4	0.0
	SNR=5.5						
NACB	Ninganchiao	18.94	259	*e*P	Pn	23 08 35.7	+1.7
	comp=N,73nm,0.9s						
YHNB	Yeheng	18.96	261	*e*P	Pn	23 08 34.9	+0.4
	comp=N,124nm,1.0s						
DL2	Dalian	19.39	305	P	P	23 08 37.9	-0.1
DL2				pP	sP	23 08 46.6	-1.6
DL2				*e*S	S	23 12 15.2	-0.4
DL2				pmax	pmax		
	comp=N,46nm,0.8s						
DL2				LR	LR		
	comp=N,2μm,15.3s						
DL2				LR	LR		
	comp=N,4μm,15.7s						
DL2				LR	LR		
	comp=N,5μm,16.3s						
YULB	Yu-li	19.47	257	*e*P	Pn	23 08 41.4	+0.9
	comp=N,257nm,1.3s						
SNY	Shenyang	19.48	315	⇑P	P	23 08 37.9	-1.2
SNY				pmax	pmax		
	comp=N,23nm,1.0s						
SSLB	Suanglung	19.62	259	*e*P	Pn	23 08 43.3	+1.0
	comp=N,226nm,1.1s						
UGL	Uglegorsk	19.75	0	*e*P	Pn	23 08 43.3	-0.3
UGL				S	S	23 12 09.0	-14
UGL				pmax	pmax		
	comp=E,81nm,0.9s						
UGL				pmax	pmax		
	comp=Z,75nm,0.8s						
UGL				pmax	pmax		
	comp=Z,136nm,1.0s						
UGL				pmax	pmax		
	comp=E,186nm,0.7s						
UGL				MLR	MLR		
	comp=N,3μm,19.0s						
UGL				MLR	MLR		
	comp=Z,2μm,22.0s						
TWG	Pinlang	19.88	256	*e*P	Pn	23 08 46.1	+0.8
	comp=Z,277nm,0.9s						
TPUB	Ta-pu	20.08	258	*e*P	Pn	23 08 46.9	-0.7
	comp=Z,107nm,0.9s						
NJ2	Nanjing	20.11	284	*e*P	P	23 08 46.5	+0.5
NJ2				S	S	23 12 28.2	-2.3
NJ2				pmax	pmax		
	comp=Z,64nm,1.0s						
NJ2				LR	LR		
	comp=Z,1μm,15.2s						
NJ2				LR	LR		
	comp=Z,2μm,15.2s						
NJ2				LR	LR		
	comp=Z,3μm,17.4s						
QZH	Quanzhou	21.29	264	⇑*i*P	P	23 08 59.4	+0.6
QZH				*e*S	S	23 12 53.5	-0.4
QZH				pmax	pmax		
	comp=Z,43nm,1.0s						
QZH				LR	LR		
	comp=Z,680nm,16.1s						
QZH				LR	LR		
	comp=Z,2μm,17.5s						
QZH				LR	LR		
	comp=Z,2μm,18.0s						
KLR	Kul'dur	21.40	341	P	P	23 08 59.5	-0.3
	comp=Z,23nm,0.7s,baz=162,slow=8.1,SNR=18						
KLR				S	S	23 12 58.3	+2.6
	comp=Z,6.3nm,1.1s,baz=282,slow=15,SNR=6.4						
GRNR	Gornyy	21.86	350	*e*P	P	23 09 04.4	-0.3
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
BJT	Baijiatuau	23.73	304	*e*P	P	23 09 24.6	+0.5
	comp=Z,50nm,1.1s						
BJT	Baijiatuau	23.73	304	*e*P	P	23 09 24.6	+0.5
BJT				pmax	pmax		
	comp=Z,50nm,1.1s						
BJI	Beijing	23.73	304	⇑*e*P	P	23 09 25.1	+1.0
BJI				pmax	pmax		
	comp=Z,31nm,1.0s						
WHN	Wuhan	24.00	280	⇓P	P	23 09 26.5	-0.2
H11N2	WAKE ISLAND Hy	24.51	107	T	T	23 35 17.6	
	baz=297,slow=74,SNR=40						
H11N1	WAKE ISLAND Hy	24.51	107	T	T	23 34 55.5	
	baz=297,slow=74,SNR=25						
H11N3	WAKE ISLAND Hy	24.53	107	T	T	23 35 17.6	
	baz=297,slow=74,SNR=36						
TGY	Tagaytay City	24.68	237	P	P	23 09 33.7	+0.5
	comp=Z,247nm,0.3s,baz=141,slow=6.4,SNR=7.7						
H11S3	WAKE ISLAND Hy	24.93	110	T	T	23 35 38.8	
	baz=304						
H11S1	WAKE ISLAND Hy	24.93	110	T	T	23 35 38.2	
	baz=304						
H11S2	WAKE ISLAND Hy	24.95	110	T	T	23 35 27.8	
	baz=304						
HIA	Hailar	26.19	326	*e*P	P	23 09 47.1	+0.5
	comp=Z,131nm,0.9s						
HIA	Hailar	26.19	326	*c i*P	P	23 09 47.1	+0.5
HIA				pmax	pmax		
	comp=Z,107nm,0.9s						
ZEA	Zeya	26.70	340	*e*P	P	23 09 50.6	-0.4
ZEA				pmax	pmax		
	comp=N,62nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,130nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,2μm,14.0s						
ZEA				MLR	MLR		
	comp=N,900nm,12.0s						
DAV	Davao City (W)	27.00	218	LR	LR	23 19 43.7	
	comp=N,954nm,20.9s,baz=52,slow=34						
HHC	Hu-ho-hao-te	27.33	303	*e*P	P	23 09 55.8	-1.2
HHC				pmax	pmax		
	comp=N,24nm,1.1s						
HHC				pmax	pmax		
	comp=N,240nm,5.0s						
ENH	Enshi	28.21	280	*e*P	P	23 10 03.7	-1.1
	comp=N,34nm,0.9s						
XAN	Xi'an	28.49	288	P	P	23 10 05.7	-1.7
XAN				pP	pwP	23 10 18.0	-1.1
XAN				sP	sP	23 10 23.2	+5.0
XAN				pmax	pmax		
	comp=N,14nm,0.9s						
XAN				pmax	pmax		
	comp=N,220nm,6.5s						
XAN				LR	LR		
	comp=N,740nm,15.2s						
XAN				LR	LR		
	comp=N,2μm,16.8s						
XAN				LR	LR		
	comp=N,3μm,18.2s						
XAN	Xi'an	28.49	288	*e*P	P	23 10 06.1	-1.3
	comp=N,35nm,0.9s						
XAN	Xi'an	28.49	288	*e*P	P	23 10 06.1	-1.3
XAN				pmax	pmax		
	comp=Z,35nm,0.9s						
MA2	Magadan	30.86	9	*ce*P	P	23 10 28.9	+1.0
MA2				pmax	pmax		
	comp=Z,59nm,2.5s						
MA2	Magadan	30.86	9	P	P	23 10 25.5	-2.4
	comp=Z,4.9nm,0.3s,baz=180,slow=8.1,SNR=3.5						
QIZ	Qiongzhong	31.00	258	P	P	23 10 30.0	+0.4
QIZ				S	S	23 15 29.1	-3.7
QIZ				pmax	pmax		
	comp=Z,23nm,1.5s						
QIZ				LR	LR		
	comp=Z,360nm,17.2s						
QIZ				LR	LR		
	comp=Z,1μm,14.3s						
QIZ				LR	LR		
	comp=Z,1μm,17.7s						
QIZ	Qiongzhong	31.00	258	*e*P	P	23 10 31.7	+2.1
	comp=Z,16nm,1.0s						
GYA	Guiyang	31.31	273	⇑*i*P	P	23 10 31.6	-0.9
GYA				pP	pwP	23 10 46.8	+3.0
GYA				sP	sP	23 10 52.0	+8.7
GYA				PP	PnPn	23 11 37.2	+2.0
GYA				S	S	23 15 35.9	-1.9
GYA				sS	sS	23 15 56.6	+6.4
GYA				SS	SnSn	23 17 21.2	-0.9
GYA				pmax	pmax		
	comp=Z,20nm,1.2s						
GYA				pmax	pmax		
	comp=Z,210nm,9.1s						
GYA				LR	LR		
	comp=Z,2μm,17.6s						
GYA				LR	LR		
	comp=Z,1μm,17.6s						
GYA				LR	LR		
	comp=Z,2μm,16.7s						
ULN	Ulaanbaatar	32.66	314	*e*P	P	23 10 43.6	-0.5
	comp=Z,44nm,1.1s						
ULN	Ulaanbaatar	32.66	314	*ce*P	P	23 10 44.7	+0.6
ULN				pmax	pmax		
	comp=Z,51nm,1.3s						
ULN	Ulaanbaatar	32.66	314	P	P	23 10 44.4	+0.3
	SNR=12						
LZH	Lanzhou	32.68	292	*e*P	P	23 10 43.3	-1.2
LZH				pP	pwP	23 10 57.0	+0.8
LZH				sP	sP	23 11 02.1	+7.0
LZH				PP	PnPn	23 11 52.0	-0.8
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,6.3s						
LZH				LR	LR		
	comp=Z,2μm,14.1s						
LZH				LR	LR		
	comp=Z,4μm,15.2s						
LZH				LR	LR		
	comp=Z,5μm,17.4s						
CD2	Chengdu	33.04	282	*e*P	P	23 10 47.0	-0.5
SONA1	Songino Array	33.06	314	*e*P	P	23 10 47.5	-0.1
SONM	Songino Array	33.06	314	P	P	23 10 47.9	+0.3
	comp=Z,18nm,0.8s,baz=112,slow=6.9,SNR=31						
YAK	Yakutsk	33.73	350	*e*P	P	23 10 52.4	-0.7
YAK				*e**PP	pwP	23 11 07.1	+1.5
YAK				*e*S	S	23 16 12.5	-1.9
YAK				pmax	pmax		
	comp=Z,188nm,0.9s						
YAK				pmax	pmax		
	comp=N,134nm,1.1s						
YAK				pmax	pmax		
	comp=E,41nm,1.1s						
YAK				pmax	pmax		
	comp=Z,1μm,4.1s						
YAK				pmax	pmax		
	comp=N,3μm,4.5s						
YAK				pmax	pmax		
	comp=E,1μm,4.3s						
YAK				smax	smax		
	comp=E,1μm,3.8s						
YAK				smax	smax		
	comp=N,1μm,3.8s						
SEY	Seymchan	34.31	8	*ce*P	P	23 10 58.8	+0.7
SEY	Seymchan	34.31	8	P	P	23 10 57.4	-0.8
	comp=N,8.2nm,0.8s,baz=198,slow=6.7,SNR=9.6						
MRSI	Marisa	34.47	217	P	P	23 11 01.7	+1.7
BOD	Bodaibo	34.52	334	*e*P	P	23 11 00.0	0.0
BOD				pmax	pmax		
	comp=Z,53nm,1.2s						
SANI	Sanana	34.75	209	P	P	23 10 59.8	-2.5
KMI	Kunming	35.07	273	P	P	23 11 05.5	+0.1
KMI				pP	pwP	23 11 19.9	+3.1
KMI				PP	PP	23 12 26.3	+1.1
KMI				pmax	pmax		
	comp=Z,22nm,0.9s						
KMI				pmax	pmax		
	comp=Z,150nm,4.2s						
KMI				LR	LR		
	comp=Z,1μm,18.7s						
KMI				LR	LR		
	comp=Z,1μm,17.2s						
KMI				LR	LR		
	comp=Z,1μm,21.0s						
KMI	Kunming	35.07	273	*e*P	P	23 11 05.6	+0.2
	comp=Z,21nm,0.8s						
KMI	Kunming	35.07	273	*e*P	P	23 11 05.6	+0.2
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
ZAK	Zakamensk	35.89	317	*e*P	P	23 11 11.9	-0.1
ZAK				pmax	pmax		
	comp=Z,33nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA	Gaotai	35.99	298	*e*P	P	23 11 11.1	-2.0
GTA				pP	pwP	23 11 23.2	-1.7
GTA				sP	sP	23 11 28.2	+4.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,83nm,6.9s						
GTA				LR	LR		
	comp=Z,1μm,16.8s						
GTA				LR	LR		
	comp=Z,900nm,21.3s						
GTA				LR	LR		
	comp=Z,1μm,21.0s						
TLY	Talaya	36.17	319	*e*P	P	23 11 16.1	+1.8
	comp=Z,127nm,1.0s						
TLY	Talaya	36.17	319	*c i*P	P	23 11 15.2	+0.9
TLY	Talaya	36.17	319	P	P	23 11 14.1	-0.2
	SNR=15						
PCI	Palu	36.77	219	P	P	23 11 19.4	-0.3

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SKNT  Sakolnakorn        36.91 259   P       P       23 11 21.6 +0.7
      comp=Z,53nm,1.1s
NONG  Nongkai            37.16 261   P       P       23 11 23.9 +0.8
      comp=Z,4.8nm,1.0s
MOY   Mondy              37.70 318  eP       P       23 11 28.4 +1.0
MOY                                  pmax    pmax
      comp=Z,20nm,1.1s
KDI   Kendari            37.95 213   P       P       23 11 29.8 +0.1
CHAI  Chaiyaphum         39.10 259   P       P       23 11 39.5 +0.1
      comp=Z,126nm,0.9s,comp=Z,852nm
SPSI  Sidrap Palu        39.37 217   P       P       23 11 41.6  0.0
PAYA  Payao              39.48 265   P       P       23 11 43.3 +0.7
      comp=Z,14nm,1.0s,comp=Z,127nm
UTTA  Uttaradit          39.53 263   P       P       23 11 43.1 +0.1
      comp=Z,34nm,0.9s,comp=Z,249nm
PBKT  Sadao Pong         39.67 261  eP       P       23 11 44.8 +0.5
      comp=Z,61nm,1.0s
PBKT  Sadao Pong         39.67 261   P       P       23 11 44.7 +0.5
      comp=Z,74nm,1.4s,comp=Z,890nm
MTKI  Muara Teweh, K     39.70 226   P       P       23 11 46.9 +2.5
SRAK  Srakaew            39.93 256   P       P       23 11 43.0 -3.4
      comp=Z,500nm,0.9s,comp=Z,3µm
SUKH  Sukhothai          40.44 263   P       P       23 11 51.2 +0.6
      comp=Z,9.8nm,1.1s
CMMT  Chiang Mai         40.50 265   P       P       23 11 50.9 -0.2
      comp=Z,91nm,1.0s,comp=Z,842nm
CHTO  Chiang Mai         40.50 265  eP       P       23 11 51.1  0.0
      comp=Z,80nm,0.9s
CHTO  Chiang Mai         40.50 265  eP       P       23 11 51.1  0.0
CHTO                                 pmax    pmax
      comp=Z,80nm,0.9s
CHTO  Chiang Mai         40.50 265   P       P       23 11 51.2 +0.1
      SNR=26
CHTO  Chiang Mai         40.50 265   P       P       23 11 51.0  0.0
      comp=Z,412nm,1.0s,comp=Z,3µm
CM31  Chiang Mai Arr     40.64 264  eP       P       23 11 52.9 +0.6
CM31  Chiang Mai Arr     40.64 264   P       P       23 11 52.4 +0.1
      SNR=13
CMAR  Chiang Mai Arr     40.64 264   P       P       23 11 52.3  0.0
      comp=Z,15nm,0.8s,baz=46,slow=9.1,SNR=89
CMAR                                 PcP     PcP     23 13 55.4 +1.5
      comp=Z,6.6nm,1.0s,baz=46,slow=0.4,SNR=7.6
CM01  Chiang Mai Arr     40.64 264  eP       P       23 11 52.2  0.0
CM01                                ePcP     PcP     23 13 55.2 +1.4
BILL  Bilibino           41.35  14  eP       P       23 11 57.3 -0.2
      comp=Z,16nm,0.8s
BILL  Bilibino           41.35  14⇑iP       P       23 11 56.8 -0.7
BILL                                e                23 13 33.3
BILL                                eSS      SS      23 21 06.9 -7.1
BILL                                 pmax    pmax
      comp=Z,33nm,2.5s
BILL                                 MLR     MLR
      comp=Z,470nm,18.0s
UTHA  Uthaitani          41.44 260   P       P       23 11 59.5 +0.7
      comp=Z,26nm,0.9s,comp=Z,177nm
PATY  Pattaya            41.46 256   P       P       23 11 59.9 +0.9
      comp=Z,24nm,0.9s,comp=Z,1µm
UMPA  Umpang Tak         41.65 261   P       P       23 12 02.2 +1.6
      comp=Z,31nm,1.0s,comp=Z,2µm
MMRI  Maumere            42.26 210  eP       P       23 12 04.2 -1.2
      comp=Z,98nm,1.2s
SRDT  SRDT               42.27 259   P       P       23 12 06.2 +0.6
      comp=Z,38nm,1.3s,comp=Z,1µm
PHET  Kaeng Krachan      42.52 257   P       P       23 12 08.8 +1.2
      comp=Z,27nm,0.9s,comp=Z,225nm
COEN  Coen               43.01 178  eP       P       23 12 11.7 +0.2
      comp=Z,45nm,1.1s
TIXI  Tiksi              43.02 354  eP       P       23 12 08.8 -2.1
      comp=Z,12nm,1.1s
TIXI  Tiksi              43.02 354ceP       P       23 12 10.6 -0.3
TIXI                                 pmax    pmax
      comp=Z,8.0nm,0.8s
TIXI  Tiksi              43.02 354   P       P       23 12 10.1 -0.9
      comp=Z,6.6nm,0.7s,baz=146,slow=8.4,SNR=7.8
TRTT  Trang              45.11 250   P       P       23 12 29.9 +1.4
      comp=Z,21nm,1.1s
WMQ   Urumqi             45.20 304   P       P       23 12 29.2 +0.2
WMQ                                  pP      sP      23 12 38.1 -1.7
WMQ                                  PcP     PcP     23 14 10.0 +1.1
WMQ                                  pmax    pmax
      comp=Z,58nm,1.3s
WMQ                                  pmax    pmax
      comp=Z,250nm,4.9s
WMQ                                  LR      LR
      comp=Z,3µm,16.3s
WMQ                                  LR      LR
      comp=Z,3µm,18.1s
WMQ                                  LR      LR
      comp=Z,1µm,19.1s
WMQ   Urumqi             45.20 304  eP       P       23 12 29.4 +0.4
      comp=Z,33nm,1.1s
WMQ   Urumqi             45.20 304  eP       P       23 12 29.4 +0.4
WMQ                                  pmax    pmax
      comp=Z,33nm,1.1s
GAMB  Gambell            45.22  27  eP       P       23 12 31.0 +2.3
      comp=Z,8.7nm,1.1s
DGZ   Jazzator, Alta     45.66 312c iP       P       23 12 33.2 +0.5
DGZ                                  pmax    pmax
      comp=Z,25nm,0.9s
PKDT  Phuket             46.20 251   P       P       23 12 38.6 +1.5
      comp=Z,48nm,1.0s
ZSN   Zaisan             47.23 309d iP       P       23 12 44.6 -0.2
ZSN                                  pmax    pmax
      comp=Z,99nm,1.1s
ZSN                                  MLR     MLR
      comp=Z,241nm,15.0s
ZSN   Zaisan             47.23 309⇓iP       P       23 12 44.6 -0.2
      comp=Z,99nm,1.1s
ZSN                                 eLRM     MLR     23 33 34.4
      comp=Z,241nm,15.2s
ZAA0  Zalesovo Array     47.75 318  eP       P       23 12 48.8 +0.1
      comp=Z,106nm,1.1s
ZALV  Zalesovo Beam      47.75 318  eP       P       23 12 48.3 -0.5
ZALV                                 PcP     PcP     23 14 17.7 +0.2
ZALV  Zalesovo Beam      47.75 318  i P      P       23 12 48.7  0.0
ZALV                                 pmax    pmax
      comp=Z,64nm,0.9s
ZALV  Zalesovo Beam      47.75 318   P       P       23 12 48.8 +0.1
      comp=Z,64nm,0.9s,baz=102,slow=6.2,SNR=109
ZALV                                 PcP     PcP     23 14 17.7 +0.2
      comp=Z,8.0nm,0.8s,baz=102,slow=2.7,SNR=3.7
UGM   Wanagama           47.84 224  eP       P       23 12 48.3 -1.6
      comp=Z,68nm,1.0s
ANM   Nome               48.07  27  eP       P       23 12 52.2 +1.1
      comp=Z,14nm,1.0s
ANM   Nome               48.07  27  eP       P       23 12 52.2 +1.1
ANM                                  pmax    pmax
      comp=Z,14nm,1.0s
RAMN  Ramite             48.55 281  eP       P       23 12 54.8 -0.8
JIRN  Jiri               48.70 282  eP       P       23 12 56.6 -0.3
NVS   Novosibirsk        48.78 319⇓iP       P       23 12 57.7 +1.1
NVS                                  pmax    pmax
      comp=N,33nm,1.3s
NVS                                  pmax    pmax
      comp=E,92nm,1.3s
NVS                                  pmax    pmax
      comp=Z,126nm,1.3s
GUN   Gumba              48.90 283  eP       P       23 12 58.0 -0.4
      comp=Z,73nm,0.9s
MK01  Makanchi Array     48.98 308  eP       P       23 12 57.1 -1.2
MK31  Makanchi Array     48.99 308  eP       P       23 12 58.3 -0.1
MK31  Makanchi Array     48.99 308  eP       P       23 12 58.3 -0.1
MKAR  Makanchi Array     48.99 308  eP       P       23 12 58.3 -0.2
      comp=Z,184nm,0.8s
MKAR  Makanchi Array     48.99 308  i P      P       23 12 58.2 -0.2
MKAR                                 pmax    pmax
      comp=Z,35nm,0.9s
MKAR  Makanchi Array     48.99 308   P       P       23 12 58.2 -0.2
      comp=Z,34nm,0.9s,baz=93,slow=9.0,SNR=71
MAKZ  Makanchi           49.20 308  eP       P       23 13 00.1  0.0
      comp=Z,30nm,1.1s
MAKZ  Makanchi           49.20 308  eP       P       23 13 00.1  0.0
MAKZ                                 pmax    pmax
      comp=Z,30nm,1.1s
CISI  Cisompet, Garu     49.26 227  eP       P       23 12 58.6 -2.3
      comp=Z,39nm,1.0s
CTA   Charters Tower     49.27 175   P       P       23 13 00.9 +0.2
      comp=Z,6.8nm,1.0s,baz=356,slow=7.9,SNR=5.7
CTAO  Charters Tower     49.27 175  eP       P       23 13 00.9 +0.2
      comp=Z,32nm,1.4s
CTAO  Charters Tower     49.27 175  eP       P       23 13 00.9 +0.2
CTAO                                 pmax    pmax
      comp=Z,32nm,1.4s
PKI   Pulchoki           49.40 283  eP       P       23 13 01.2 -1.0
PKIN  Phulchoki          49.41 283  eP       P       23 13 01.1 -1.1
WRAB  Tennant Creek      49.50 190  eP       P       23 13 02.2 -0.3
      comp=Z,53nm,1.1s
WRAB  Tennant Creek      49.50 190ceP       P       23 12 59.8 -2.7
WRAB                                 pmax    pmax
      comp=Z,37nm,1.1s
WB2   Warramunga Arr     49.51 190  eP       P       23 13 02.1 -0.4
WRA   Warramunga Arr     49.51 190  i P      P       23 13 02.0 -0.6
WRA                                  pmax    pmax
      comp=Z,26nm,0.9s
WRA   Warramunga Arr     49.51 190   P       P       23 13 01.9 -0.6
      comp=Z,26nm,0.9s,baz=10,slow=8.1,SNR=25
WRA                                  S       S       23 20 05.3 -3.2
      comp=Z,2.5nm,1.1s,baz=8.0,slow=15,SNR=5.2
DMN   Daman              49.64 283  eP       P       23 13 03.2 -0.8
FITZ  Fitzroy Crossi     49.70 201  eP       P       23 13 03.9 -0.1
      comp=Z,23nm,1.3s
SEM   Semipalatinsk      50.32 313c iP       P       23 13 06.5 -2.2
SEM                                  pmax    pmax
      comp=Z,813nm,1.5s
SEM   Semipalatinsk      50.32 313⇑iP       P       23 13 06.6 -2.2
      comp=Z,813nm,1.5s
NRIK  Noril'sk           50.56 338   P       P       23 13 09.9 -0.1
      comp=Z,37nm,0.9s,baz=108,slow=9.5,SNR=37
DANN  Dangsing           50.58 284  eP       P       23 13 10.8 -0.4
      comp=Z,115nm,1.1s
KOLN  Koldanda           50.88 283  eP       P       23 13 12.7 -0.6
      comp=Z,93nm,1.2s
PYUN  Piuthan            51.31 284  eP       P       23 13 16.1 -0.4
      comp=Z,196nm,1.0s
KURK  Kurchatov          51.36 313  eP       P       23 13 16.3  0.0
      comp=Z,142nm,0.9s
KURK  Kurchatov          51.36 313ceP       P       23 13 16.7 +0.4
KURK                                 pmax    pmax
      comp=Z,219nm,1.3s
KURK  Kurchatov          51.36 313   P       P       23 13 16.3  0.0
      SNR=26
UZB   Uzynbulak          51.54 304c iP       P       23 13 15.8 -2.2
UZB                                  pmax    pmax
      comp=Z,146nm,1.4s
UZB                                  MLR     MLR
      comp=Z,453nm,16.0s
UZB   Uzynbulak          51.54 304⇑iP       P       23 13 15.8 -2.2
      comp=Z,146nm,1.4s
UZB                                 eLRM     MLR     23 37 06.0
      comp=Z,453nm,16.2s
KPKS  Kokpek             51.75 304c iP       P       23 13 17.4 -2.0
KPKS                                 pmax    pmax
      comp=Z,181nm,1.5s
KPKS                                 MLR     MLR
      comp=Z,833nm,18.0s
KPKS  Kokpek             51.75 304⇑iP       P       23 13 17.5 -2.0
      comp=Z,181nm,1.5s
KPKS                                eLRM     MLR     23 37 14.6
      comp=Z,833nm,17.9s
TDK   Taldyqorghan       51.80 306d iP       P       23 13 18.3 -1.4
TDK                                  pmax    pmax
      comp=Z,339nm,1.3s
TDK                                  MLR     MLR
      comp=Z,1µm,17.0s
TDK   Taldyqorghan       51.80 306⇓iP       P       23 13 18.3 -1.4
      comp=Z,339nm,1.2s
TDK                                 eLRM     MLR     23 37 01.1
      comp=Z,1µm,16.8s
ZHN   Zhinishke          51.97 304c iP       P       23 13 19.2 -1.9
ZHN                                  pmax    pmax
      comp=Z,86nm,1.5s
ZHN                                  MLR     MLR
      comp=Z,400nm,17.0s
ZHN   Zhinishke          51.97 304⇑iP       P       23 13 19.2 -1.9
      comp=Z,86nm,1.5s
ZHN                                 eLRM     MLR     23 37 22.3
      comp=Z,400nm,17.4s
SATY  Saty               52.00 304ceP       P       23 13 19.9 -1.5
SATY                                 pmax    pmax
      comp=Z,234nm,1.6s
SATY  Saty               52.00 304⇑eP       P       23 13 19.9 -1.5
      comp=Z,234nm,1.6s
PRZ   Przheval'sk        52.07 303  eP       P       23 13 22.7 +0.7
      comp=Z,53nm,1.0s
PRZ   Przheval'sk        52.07 303  eP       P       23 13 22.7 +0.7
PRZ                                  pmax    pmax
      comp=Z,53nm,1.0s
KDAK  Kodiak Island      52.70  38  i P      P       23 13 25.5 -0.7
KDAK  Kodiak Island      52.70  38   P       P       23 13 25.1 -1.0
      comp=Z,24nm,1.0s,baz=274,slow=5.0,SNR=10
CHKK  Chushkaly          52.93 305deP       P       23 13 26.3 -1.8
CHKK                                 pmax    pmax
      comp=Z,187nm,1.0s
CHKK  Chushkaly          52.93 305⇓eP       P       23 13 26.3 -1.8
      comp=Z,187nm,1.0s
MDOK  Medeo              52.97 304d iP       P       23 13 27.3 -1.3
MDOK                                 pmax    pmax
      comp=Z,366nm,1.2s
MDOK  Medeo              52.97 304⇓iP       P       23 13 27.3 -1.3
      comp=Z,366nm,1.2s
KDJ   Kajisay            53.02 303  eP       P       23 13 30.0 +1.0
      comp=Z,12nm,1.0s
AAA   Alma-Ata           53.06 304d iP       P       23 13 28.7 -0.4
AAA                                  pmax    pmax
      comp=Z,222nm,0.8s
AAA   Alma-Ata           53.06 304⇓iP       P       23 13 28.8 -0.4
      comp=Z,222nm,0.8s
IM3   Indian Mountai     53.16  27  eP       P       23 13 30.9 +1.5
AS01  Alice Springs      53.23 189  eP       P       23 13 29.3 -1.1
ASAR  Alice Springs      53.23 189   P       P       23 13 29.8 -0.7
      comp=Z,1.5nm,0.4s,baz=3.0,slow=5.7,SNR=15
ASAR                                 PcP     PcP     23 14 39.3 +1.2
      comp=Z,3.0nm,0.8s,baz=28,slow=3.6,SNR=3.6
KUU   Kurty              53.39 305c iP       P       23 13 29.6 -1.9
KUU                                  pmax    pmax
      comp=Z,227nm,1.5s
KUU                                  MLR     MLR
      comp=Z,328nm,17.0s
KUU   Kurty              53.39 305⇑iP       P       23 13 29.7 -1.9
      comp=Z,227nm,1.5s
KUU                                 eLRM     MLR     23 38 43.2
      comp=Z,328nm,16.9s
CAST  Castle Rocks       53.47  31  eP       P       23 13 33.6 +1.8
      comp=Z,15nm,1.1s
ULHL  Ulahol             53.69 303   P       P       23 13 34.1 +0.1
      SNR=5.4
SUA   Susitna One        53.89  33  eP       P       23 13 37.5 +2.5
      comp=Z,10.0nm,0.8s
NRN   Naryn              54.00 302  eP       P       23 13 36.4  0.0
      comp=Z,28nm,1.3s
NRN   Naryn              54.00 302  eP       P       23 13 36.4  0.0
NRN                                  pmax    pmax
      comp=Z,28nm,1.3s
TKM2  Tokmak 2           54.06 304   P       P       23 13 37.0 +0.4
      SNR=16
MLY   Manley             54.25  29  eP       P       23 13 39.6 +2.1
      comp=Z,13nm,1.3s
TRF   Thorofare Moun     54.27  31  eP       P       23 13 40.1 +2.3
      comp=Z,20nm,1.3s
KSH   Kashi              54.35 300   P       P       23 13 42.1 +3.4
KSH                                  pP      pwP     23 13 56.4 +5.5
KSH                                  PP      PP      23 15 43.6 +2.9
KSH                                  S       S       23 21 12.8 -2.4
KSH                                  pmax    pmax
      comp=Z,42nm,1.1s
KSH                                  pmax    pmax
      comp=Z,480nm,4.8s
KSH                                  LR      LR
      comp=Z,480nm,7.6s
KSH                                  LR      LR
      comp=Z,610nm,6.5s
KSH                                  LR      LR
      comp=Z,1µm,9.5s
KZA   Kyzart             54.45 303   P       P       23 13 40.6 +0.9
      SNR=19
MBWA  Marble Bar         54.57 206  eP       P       23 13 40.2 -0.1
      comp=Z,19nm,1.1s
KBK   Karagaybulak       54.57 304   P       P       23 13 40.6 +0.2
      SNR=29
CHMS  Chumysh            54.66 304   P       P       23 13 40.9 +0.1
      SNR=12
PMR   Palmer             54.67  33  eP       P       23 13 41.5 +1.0
      comp=Z,30nm,1.3s
PMR   Palmer             54.67  33  eP       P       23 13 41.5 +1.0
PMR                                  pmax    pmax
      comp=Z,30nm,1.3s
FRU1  Bishkek            54.78 304  eP       P       23 13 42.1 +0.4
      comp=Z,35nm,0.9s
FRU   Bishkek            54.78 304  i P      P       23 13 41.0 -0.7
FRU                                  pmax    pmax
      comp=Z,41nm,1.4s
USP   Ospenovka          54.80 304   P       P       23 13 41.8 -0.1
      SNR=18
BTLS  Baital             54.86 307ceP       P       23 13 40.2 -2.0
BTLS                                 pmax    pmax
      comp=Z,284nm,0.7s
BTLS                                 MLR     MLR
      comp=Z,442nm,16.0s
BTLS  Baital             54.86 307⇑eP       P       23 13 40.3 -2.0
      comp=Z,284nm,0.7s
BTLS                                eLRM     MLR     23 38 34.8
      comp=Z,442nm,15.7s
MCK   McKinley           54.90  31  eP       P       23 13 43.9 +1.7
      comp=Z,23nm,1.2s
AAK   Ala-Archa          54.91 304   P       P       23 13 41.6 -1.2
      SNR=13
AAK   Ala-Archa          54.91 304  eP       P       23 13 42.6 -0.1
      comp=Z,17nm,1.0s
AAK   Ala-Archa          54.91 304  i P      P       23 13 41.8 -1.0
      SNR=18
AAK   Ala-Archa          54.91 304ceP       P       23 13 42.7 -0.1
AAK                                  pmax    pmax
      comp=Z,15nm,0.8s
AAK   Ala-Archa          54.91 304   P       P       23 13 41.6 -1.2
      SNR=5.3
RND   Reindeer           54.91  31  eP       P       23 13 43.6 +1.2
      comp=Z,30nm,1.2s
RND   Reindeer           54.91  31  eP       P       23 13 43.6 +1.2
RND                                  pmax    pmax
      comp=Z,30nm,1.2s
UCH   Uchtor             54.96 303   P       P       23 13 44.1 +0.6
      SNR=24
KNK   Knik Glacier       54.98  33  eP       P       23 13 45.3 +2.5
      comp=Z,27nm,1.0s
EIDS  Eidsvold           55.04 170  eP       P       23 13 44.7 +1.1
      comp=Z,24nm,1.0s
SML   Sawmill            55.06  33  eP       P       23 13 44.9 +1.5
      comp=Z,24nm,0.9s
SML   Sawmill            55.06  33  eP       P       23 13 44.9 +1.5
SML                                  pmax    pmax
      comp=Z,24nm,0.9s
BRZS  Berezniki          55.20 313deP       P       23 13 42.4 -2.2
BRZS                                 pmax    pmax
      comp=Z,2µm,0.8s
BRZS                                 MLR     MLR
      comp=Z,68nm,7.0s
BRZS  Berezniki          55.20 313⇓eP       P       23 13 42.5 -2.2
      comp=Z,2µm,0.8s
BRZS                                eLRM     MLR     23 39 47.5
      comp=Z,68nm,6.8s
MDM   Murphy Dome        55.30  29  eP       P       23 13 45.8 +0.7
      comp=Z,28nm,1.5s
EKS2  Erkin-Say          55.42 304   P       P       23 13 46.4 -0.1
      SNR=15
AML   Almayashu          55.58 303   P       P       23 13 48.6 +0.7
      SNR=49
POKR  Poker Plat Res     55.65  29   P       P       23 13 48.8 +1.2
      baz=266
HDA   Harding Lake       55.82  30  eP       P       23 13 49.4 +0.6
      comp=Z,7.4nm,0.9s
HDA   Harding Lake       55.82  30   P       P       23 13 49.4 +0.6
      baz=267
ILAR  Eielson Array      55.86  29   P       P       23 13 48.5 -0.5
      comp=Z,4.2nm,0.8s,baz=258,slow=5.4,SNR=28
ILB   Eielson Array      55.86  29  eP       P       23 13 49.1  0.0
IL1   Eielson Array      55.86  29  eP       P       23 13 49.2 +0.1
DZM   Mont Dzumac        56.23 153  eP       P       23 13 53.8 +1.5
      comp=Z,17nm,1.1s
ARSB  Arslanbob          56.25 302  eP       P       23 13 52.8 +0.3
      comp=Z,52nm,1.1s
BRVK  Borovoye           56.40 317  eP       P       23 13 52.9 -0.2
      comp=Z,116nm,1.0s
BRVK  Borovoye           56.40 317ceP       P       23 13 53.6 +0.5
BRVK                                 pmax    pmax
      comp=Z,162nm,1.3s
BRVK  Borovoye           56.40 317   P       P       23 13 53.5 +0.3
      SNR=34
FYU   Fort Yukon         56.65  27  eP       P       23 13 57.9 +3.3
      comp=Z,22nm,1.1s
SCRK  Sand Creek         57.10  30  eP       P       23 13 56.8 -1.2
      comp=Z,33nm,1.4s
DZA   Taraz              57.15 304deP       P       23 13 57.9 -0.7
DZA                                  pmax    pmax
      comp=Z,220nm,1.4s
DZA   Taraz              57.15 304⇓eP       P       23 13 58.0 -0.7
      comp=Z,220nm,1.4s
KK31  Karatay Array      57.70 305  eP       P       23 14 02.8 +0.3
KK31  Karatay Array      57.70 305  eP       P       23 14 02.8 +0.3
KKAR  Karatay Array      57.70 305  eP       P       23 14 02.8 +0.3
KKAR  Karatay Array      57.70 305  eP       P       23 14 02.8 +0.3
NIL   Nilore             57.84 293  eP       P       23 14 03.7 +0.1
      comp=Z,28nm,0.9s
NIL   Nilore             57.84 293  eP       P       23 14 03.7 +0.1
NIL                                  pmax    pmax
      comp=Z,28nm,0.9s
BTK   Batken             58.12 301  eP       P       23 14 06.6 +1.0
      comp=Z,21nm,1.1s
BTK   Batken             58.12 301  eP       P       23 14 06.6 +1.0
BTK                                  pmax    pmax
      comp=Z,21nm,1.1s
IUG   Iuzhnay            58.24 304ceP       P       23 14 05.2 -1.2
IUG                                  pmax    pmax
      comp=Z,1µm,1.0s
IUG   Iuzhnay            58.24 304⇑eP       P       23 14 05.3 -1.2
      comp=Z,1µm,1.0s
GAR   Garm               58.75 300  eP       P       23 14 10.0 -0.1
GAR   Garm               58.75 300  eP       P       23 14 10.0 -0.1
HYB   Hyderabad          58.85 274  i P      P       23 14 10.5 -0.4
DAWY  Dawson             59.12  30  eP       P       23 14 13.0 +0.9
      comp=Z,25nm,1.3s
CHGR  Chuyangaron        59.71 300  eP       P       23 14 16.6  0.0
      comp=Z,112nm,0.8s
HYT   Haines Junctio     60.32  34  eP       P       23 14 24.0 +3.6
      comp=Z,28nm,1.1s
INK   Inuvik             61.10  25  eP       P       23 14 27.9 +2.4
      comp=Z,23nm,1.4s
INK   Inuvik             61.10  25  eP       P       23 14 27.9 +2.4
INK                                  pmax    pmax
      comp=Z,23nm,1.4s
INK   Inuvik             61.10  25   P       P       23 14 25.2 -0.3
      comp=Z,2.4nm,0.7s,baz=291,slow=4.3,SNR=12
FORT  Forrest            61.20 194  eP       P       23 14 28.6 +2.0
      comp=Z,37nm,0.8s
SVE   Sverdlovsk         61.41 322d iP       P       23 14 28.5 +0.7
SVE                                  pmax    pmax
      comp=Z,66nm,1.1s
WHY   Whitehorse         61.61  34  eP       P       23 14 31.5 +2.2
      comp=Z,17nm,1.1s
BBOO  Buckleboo          62.03 186  eP       P       23 14 29.6 -2.5
      comp=Z,27nm,1.1s
ARU   Arti               62.61 322  eP       P       23 14 36.2 +0.3
      comp=Z,73nm,0.9s
ARU   Arti               62.61 322c iP       P       23 14 36.0 +0.1
ARU                                                  23 15 13.0
ARU                                                  23 16 49.4
ARU                                  S       S       23 23 03.1 +1.2
ARU                                  SS      SS      23 27 06.9 +1.0
ARU                                  pmax    pmax
      comp=Z,93nm,1.0s
ABKAR Akbulak array      63.47 314  eP       P       23 14 42.2 +0.5
DLBC  Dease Lake         64.50  36   P       P       23 14 47.8 -0.7
      comp=Z,3.2nm,1.0s,baz=280,slow=6.1,SNR=2.9
CAN   Canberra           64.61 174  eP       P       23 14 53.6 +4.3
      comp=Z,25nm,1.0s
CAN   Canberra           64.61 174  eP       P       23 14 53.6 +4.4
CAN                                  pmax    pmax
      comp=Z,25nm,1.0s
PRGR  Permogore          67.59 329  eP       P       23 15 08.4 +0.3
PRGR                                e*SP     pwP     23 15 23.0 +2.8
PRGR                                 pmax    pmax
      comp=Z,53nm,0.9s
GEYT  Alibeck            68.20 302   P       P       23 15 12.7 +0.2
      comp=Z,27nm,0.9s,baz=45,slow=2.9,SNR=44
GYA0B ALIBECK ARRAY      68.20 302  eP       P       23 15 13.4 +0.9
      comp=Z,33nm,0.9s
LVZ   Lovozero           69.39 337  eP       P       23 15 19.2 -0.1
      comp=Z,22nm,1.2s
LVZ   Lovozero           69.39 337  i P      P       23 15 18.6 -0.7
LVZ                                  pmax    pmax
      comp=Z,16nm,1.1s
RES   Resolute Bay       69.96  14  eP       P       23 15 22.7 +0.1
      comp=Z,17nm,1.4s
RES   Resolute Bay       69.96  14  eP       P       23 15 22.7 +0.1
RES                                  pmax    pmax
      comp=Z,17nm,1.4s
YKW3  Yellowknife Ar     70.25  29  eP       P       23 15 27.1 +2.5
      comp=Z,24nm,1.4s
YKA   Yellowknife Ar     70.28  29   P       P       23 15 24.1 -0.7
      comp=Z,4.1nm,0.9s,baz=293,slow=6.1,SNR=14
YKB5  Yellowknife Ar     70.28  29  eP       P       23 15 23.7 -1.1
KLMR  Klimovskoe         70.61 330⇑iP       P       23 15 26.7 -0.2
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KLMR                                e            23 18 01.9
KLMR                                 pmax  pmax
      comp=Z,21nm,0.9s
KLMR  Klimovskoe        70.61 330⥣iP    P     23 15 26.7 -0.2
KLMR                             ⥣eP    P     23 15 26.7 -0.2
KLMR                             ⥣eP    P     23 15 26.7 -0.2
KLMR                                 AMP      23 15 27.9
      comp=Z,21nm,0.8s
KLMR                                ePP   PP    23 18 02.0 -1.0
KEV   Kevo              70.86 340  eP    P     23 15 29.1 +0.9
      comp=Z,53nm,1.2s
KEV   Kevo              70.86 340  eP    P     23 15 29.1 +0.9
KEV                                  pmax  pmax
      comp=Z,53nm,1.2s
ARCES ARCESS Array B    71.42 341  eP    P     23 15 32.1 +0.5
ARCES ARCESS Array B    71.42 341  eP    P     23 15 32.2 +0.5
ARCES ARCESS Array B    71.42 341   P    P     23 15 32.0 +0.4
      comp=Z,17nm,0.9s,baz=60,slow=7.2,SNR=21
ARE0  ARCESS Array S    71.42 341  eP    P     23 15 32.7 +1.0
      comp=Z,1.4nm,1.0s
LLLB  Lillooet          71.57  42  eP    P     23 15 35.6 +2.6
      comp=Z,16nm,1.2s
NLWA  Neilton Lookou    71.66  46  eP    P     23 15 36.4 +2.9
      comp=Z,21nm,0.9s
NLWA                               epP   pwP   23 15 47.8 +0.6
D03D  Eldon             72.09  45   P    P     23 15 37.3 +1.3
      baz=294
B05A  Bryant            72.40  44   P    P     23 15 38.1 +0.3
      baz=294
TULEG Thule             72.69   7  eP    P     23 15 38.6 -0.5
      comp=Z,17nm,1.0s
E04D  Cinebar           72.81  46   P    P     23 15 40.3 -0.1
      baz=295
LON   Longmire          73.20  46  eP    P     23 15 44.6 +1.8
      comp=Z,12nm,1.0s
LON   Longmire          73.20  46  eP    P     23 15 44.6 +1.8
LON                                  pmax  pmax
      comp=Z,12nm,1.0s
J01E  Myrtle Point      73.34  50   P    P     23 15 43.7 +0.2
      baz=295
I03D  Drain, OR         73.50  49   P    P     23 15 45.1 +0.7
      baz=295
H04D  Lebanon           73.55  48   P    P     23 15 45.5 +0.7
      baz=295
LTY   Liberty           73.69  45  eP    P     23 15 47.5 +1.8
      comp=Z,9.9nm,1.0s
K02D  Willamette Mer    73.71  50   P    P     23 15 46.5 +0.6
      baz=295,SNR=5.6
VRH   Novokhopyorsk     73.73 320  eP    P     23 15 44.5 -1.2
VRH                                  pmax  pmax
      comp=Z,30nm,0.9s
MOS   Moscow            73.82 325  eP    P     23 15 45.4 -0.7
MOS                                e           23 18 30.7
MOS                                eS    S     23 25 16.1 +0.6
MOS                                  pmax  pmax
      comp=Z,43nm,1.1s
MOS                                  MLR   MLR
      comp=Z,900nm,20.0s
H04A  Detroit Lake      73.84  48  eP    P     23 15 48.7 +2.1
      comp=Z,22nm,0.9s
L02E  Cave Junction     73.98  50   P    P     23 15 47.7 +0.4
      baz=295
B08A  Colville Reser    74.03  43  eP    P     23 15 49.5 +2.0
      comp=Z,9.1nm,0.9s
I04A  Tendick Farm,     74.08  49   P    P     23 15 48.7 +0.8
      baz=296,SNR=8.6
G05D  Wamic, OR         74.16  47   P    P     23 15 48.9 +0.5
      baz=296
KHMM  Horse Mountain    74.44  52  eP    P     23 15 48.1 -2.1
      comp=Z,23nm,1.1s
J04D  Umpqua Nationa    74.51  49   P    P     23 15 51.4 +0.7
      baz=296,SNR=5.4
I05D  Terrebonne, OR    74.54  48   P    P     23 15 51.0 +0.4
      baz=296
LPSR  Galich'ya Gora    74.63 322  eP    P     23 15 50.7 -0.2
LPSR                                 pmax  pmax
      comp=Z,40nm,1.0s
OBN   Obninsk           74.65 325  eP    P     23 15 50.9 -0.1
      comp=Z,44nm,1.2s
OBN   Obninsk           74.65 325⥥eP    P     23 15 51.4 +0.5
OBN                                e           23 16 04.6
OBN                                e           23 18 39.6
OBN                                eS    S     23 25 28.0 +3.2
OBN                                  pmax  pmax
      comp=Z,45nm,1.3s
OBN                                  MLR   MLR
      comp=Z,1µm,17.0s
OBN   Obninsk           74.65 325   P    P     23 15 51.1 +0.2
      comp=Z,4.5nm,0.8s,baz=51,slow=13,SNR=7.9
SEKA  Sheki             74.69 309   P    P     23 15 51.9 +0.3
YBH   Yreka Blue Hor    74.76  51  eP    P     23 15 52.8 +0.8
      comp=Z,15nm,1.1s
YBH   Yreka Blue Hor    74.76  51   P    P     23 15 52.1 +0.1
      comp=Z,9.1nm,0.9s,baz=281,slow=4.7,SNR=8.9
GROC  Groznyy           74.76 311  eP    P     23 15 50.7 -1.2
GROC                               e           23 16 04.3
GROC                               e           23 18 39.2
GROC                               eS    S     23 25 22.8 -3.7
GROC                                 pmax  pmax
      comp=Z,40nm,1.0s
HAWA  Hanford           74.78  45  eP    P     23 15 54.8 +2.9
      comp=Z,8.6nm,0.9s
M02C  Callahan          74.81  51   P    P     23 15 52.9 +0.6
      baz=296,SNR=5.5
L04D  Klamath Falls     74.82  50   P    P     23 15 53.1 +0.7
      baz=296,SNR=5.1
D08A  Wollman Farm,     74.86  44  eP    P     23 15 54.4 +2.0
      comp=Z,8.4nm,0.8s
ZKTA  Zakatala          74.89 309   P    P     23 15 53.6 +0.9
C09A  Chrisman Ranch    74.91  43  eP    P     23 15 55.9 +3.2
      comp=Z,11nm,0.9s
HATD  Hatta, Dubai      74.92 290   P    P     23 15 53.6 +0.4
PINE  Pine Mountain     75.03  48  eP    P     23 15 54.7 +1.0
      comp=Z,26nm,0.8s
J05D  Fort Rock, OR     75.07  49   P    P     23 15 54.6 +0.7
      baz=296,SNR=8.9
N02D  Trinity Center    75.09  51   P    P     23 15 54.6 +0.6
      baz=296,SNR=5.3
VSR   Storozhevoye      75.15 321  eP    P     23 15 52.5 -1.4
VSR                                  pmax  pmax
      comp=Z,58nm,1.0s
M04C  Macdoel           75.33  50   P    P     23 15 55.8 +0.4
      baz=296,SNR=7.2
WDC   Whiskeytown Da    75.38  52  eP    P     23 15 58.6 +3.1
      comp=Z,10nm,1.1s
O02D  Mt. Diablo Mer    75.39  52   P    P     23 15 55.9 +0.3
      baz=296
NEW   Newport           75.39  43  eP    P     23 15 56.1 +0.6
      comp=Z,11nm,1.0s
NEW   Newport           75.39  43   P    P     23 15 55.5 +0.1
      baz=298
NEW   Newport           75.39  43   P    P     23 15 55.1 -0.3
      comp=Z,9.5nm,1.0s,baz=315,slow=3.6,SNR=7.2
GANJ  Ganja             75.53 309   P    P     23 15 57.3 +0.9
E09A  Wood Farm, Sta    75.58  45  eP    P     23 15 59.2 +2.8
      comp=Z,9.8nm,0.9s
KULLO Kullorsuaq        75.61   5  i P   P     23 15 55.3 -0.9
G08A  Pilot Rock        75.63  46  eP    P     23 15 59.5 +2.5
GOF   Gofitskoye        75.71 314⥣iP    P     23 15 58.1 +0.8
GOF                                  pmax  pmax
      comp=Z,40nm,0.9s
I07A  Izee              75.83  47  eP    P     23 16 00.4 +2.2
      comp=Z,7.2nm,1.1s
FIA1  FINESS Array S    75.92 334  eP    P     23 15 58.2 +0.1
FINES FINESS Array B    75.92 334  i P   P     23 15 58.2 +0.1
FINES                                pmax  pmax
      comp=Z,13nm,0.8s
FINES FINESS Array B    75.92 334   P    P     23 15 58.0 -0.1
      comp=Z,13nm,0.8s,baz=74,slow=6.8,SNR=27
FINES                               PP    PP    23 18 43.6 -4.4
      comp=Z,2.7nm,0.9s,baz=45,slow=10.0,SNR=3.0
O03E  Paynes Creek      76.01  52   P    P     23 15 59.5 +0.3
      baz=297
TBLG  Delisi            76.12 310  eP    P     23 16 01.1 +1.4
      comp=Z,29nm,1.3s
TBLG  Delisi            76.12 310  eP    P     23 16 01.1 +1.4
TBLG                                 pmax  pmax
      comp=Z,29nm,1.3s
ZEI   Tsey              76.19 311  eP    P     23 15 57.7 -2.7
ZEI                                  pmax  pmax
      comp=Z,16nm,0.8s
MOD   Modoc Plateau     76.30  50  eP    P     23 16 01.7 +0.8
      comp=Z,12nm,1.0s
KBZ   Khabaz            76.41 313   P    P     23 16 02.3 +1.0
      comp=Z,53nm,0.8s,baz=86,slow=3.8,SNR=66
KVAR  Kislovodsk Arr    76.44 313   P    P     23 16 03.6 +2.0
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      comp=Z,15nm,0.8s,baz=107,slow=19,SNR=15
KIV   Kislovodsk        76.44 313  eP    P     23 16 02.6 +1.0
      comp=Z,50nm,0.9s
KIV   Kislovodsk        76.44 313⥥iP    P     23 16 01.9 +0.3
KIV   Kislovodsk        76.44 313  i P   P     23 16 01.6  0.0
      SNR=14
KIV   Kislovodsk        76.44 313  eP    P     23 16 02.2 +0.6
KIV                                  pmax  pmax
      comp=Z,39nm,1.0s
KIV   Kislovodsk        76.44 313   P    P     23 16 00.3 -1.3
      SNR=11
ORV   Oroville          76.55  52  eP    P     23 16 02.3 +0.1
      comp=Z,16nm,0.9s
ORV   Oroville          76.55  52  eP    P     23 16 02.3 +0.1
ORV                                  pmax  pmax
      comp=Z,16nm,0.9s
NEY   Neytrino          76.75 312  eP    P     23 16 05.2 +1.7
NEY                                  pmax  pmax
      comp=Z,4.0nm,0.9s
NAX   Nakhchivan        76.76 307   P    P     23 16 04.4 +0.9
J08A  Circle Bar Ran    76.83  48  eP    P     23 16 04.7 +0.8
      comp=Z,18nm,0.9s
GNI   Garni             76.83 309  eP    P     23 16 05.9 +2.0
      comp=Z,44nm,1.1s
GNI   Garni             76.83 309  i P   P     23 16 05.6 +1.6
      SNR=14
GNI   Garni             76.83 309ceP    P     23 16 05.2 +1.2
GNI                                  pmax  pmax
      comp=Z,430nm,1.7s
GNI   Garni             76.83 309   P    P     23 16 05.4 +1.5
      SNR=9.8
GNI   Garni             76.83 309   P    P     23 16 05.7 +1.8
      comp=Z,18nm,0.9s,baz=349,slow=7.1,SNR=5.6
BMO   Blue Mountains    76.87  46  eP    P     23 16 04.8 +0.8
      comp=Z,15nm,1.2s
BMO   Blue Mountains    76.87  46  eP    P     23 16 04.8 +0.8
BMO                                  pmax  pmax
      comp=Z,15nm,1.2s
WALA  Waterton Lakes    76.88  41  eP    P     23 16 05.1 +1.1
      comp=Z,24nm,0.8s
WVOR  Wild Horse Val    77.15  49  eP    P     23 16 09.0 +3.3
      comp=Z,12nm,1.0s
WVOR  Wild Horse Val    77.15  49  eP    P     23 16 09.0 +3.3
WVOR                                 pmax  pmax
      comp=Z,12nm,1.0s
AFDM  Forest Hills D    77.19  53  eP    P     23 16 08.5 +2.7
      comp=Z,10nm,1.1s
BEKR  Beckworth         77.19  51  eP    P     23 16 07.1 +1.0
      comp=Z,23nm,0.8s
VSU   Vasula            77.41 331d iP    P     23 16 07.2 +0.6
VSU                                  pmax  pmax
      comp=Z,72nm,1.0s
VSU   Vasula            77.41 331  eP    P     23 16 06.8 +0.2
VSU                                  IAmb  IAmb  23 16 07.5
      comp=Z,78nm,1.0s
RUBR  Rubicon Trail     77.71  52  eP    P     23 16 12.8 +3.8
      comp=Z,32nm,0.8s
PAHR  Pah Rah Range     77.93  51  eP    P     23 16 10.3 +0.2
      comp=Z,17nm,1.0s
VCNR  Virginia City     77.94  52  eP    P     23 16 11.5 +1.3
      comp=Z,11nm,0.8s
MSO   Missoula          77.97  43  eP    P     23 16 13.4 +3.3
MSO                                epP   pwP   23 16 23.2 -0.8
CMB   Columbia Colle    78.02  53  eP    P     23 16 10.7 +0.2
      comp=Z,15nm,0.9s
CMB   Columbia Colle    78.02  53  eP    P     23 16 10.7 +0.2
CMB                                  pmax  pmax
      comp=Z,15nm,0.9s
PNTR  Pine Nut          78.07  52  eP    P     23 16 11.9 +0.9
      comp=Z,22nm,0.8s
YERR  Yerington         78.37  52  eP    P     23 16 13.3 +0.7
      comp=Z,20nm,0.9s
SUMG  Summit            78.40   0  eP    P     23 16 13.3 +0.9
      comp=Z,25nm,0.9s
SUMG  Summit            78.40   0  i P   P     23 16 12.7 +0.3
      comp=Z,59nm,1.0s
SUMG  Summit            78.40   0  i P   P     23 16 12.7 +0.3
SUMG                                 pmax  pmax
      comp=Z,59nm,1.0s
WAKR  Walker            78.46  52  eP    P     23 16 14.0 +0.9
      comp=Z,11nm,1.0s
MFID  Camas Ranch       78.50  47  eP    P     23 16 14.1 +0.9
      comp=Z,15nm,0.8s
SOC   Sochi             78.51 314  eP    P     23 16 12.4 -0.6
SOC                                e*SP  pwP   23 16 24.4 -1.0
SOC                                ePPP  PPP   23 21 02.5
SOC                                eS    S     23 26 05.5 -2.0
SOC                                eSS   SS    23 31 13.3 +2.9
SOC                                  pmax  pmax
      comp=Z,42nm,0.7s
SOC                                  MLR   MLR
      comp=Z,659nm,20.0s
RYN   Ryan              79.03  52  eP    P     23 16 16.7 +0.5
      comp=Z,14nm,0.9s
KVN   Kaiserville       79.12  51  eP    P     23 16 17.0 +0.3
      comp=Z,22nm,0.9s
KVN   Kaiserville       79.12  51  eP    P     23 16 17.0 +0.3
KVN                                  pmax  pmax
      comp=Z,22nm,0.9s
MDPB  Devils Postpil    79.12  53  eP    P     23 16 19.1 +2.2
      comp=Z,9.1nm,0.9s
OMMB  Old Mammoth Mi    79.19  53  eP    P     23 16 19.1 +1.9
      comp=Z,14nm,1.2s
IZAR  Zarasai           79.24 329  eP    P     23 16 17.1 +0.3
IZAR                                 IAmb  IAmb  23 16 18.9
      comp=Z,24nm,1.0s
IDID  Didziasalis       79.27 328  eP    P     23 16 17.4 +0.5
IDID                                 IAmb  IAmb  23 16 19.0
      comp=Z,17nm,0.9s
HRY   Holter Researc    79.28  42  eP    P     23 16 19.2 +1.8
NV01  Mina Array Sit    79.28  52  eP    P     23 16 17.5 -0.1
NVAR  Mina Array Bea    79.28  52   P    P     23 16 18.0 +0.4
      comp=Z,12nm,0.9s,baz=289,slow=5.4,SNR=20
HLID  Hailey            79.32  46  eP    P     23 16 20.0 +2.3
      comp=Z,7.1nm,0.8s
HLID  Hailey            79.32  46   P    P     23 16 18.3 +0.6
      baz=300
LRM   Limekiln Ridge    79.37  43  eP    P     23 16 18.4 +0.4
NV11  Mina Array Sit    79.38  52  eP    P     23 16 20.2 +2.1
      comp=Z,0.7nm,0.8s
ISAL  Salakas           79.40 329  eP    P     23 16 18.2 +0.5
ISAL                                 IAmb  IAmb  23 16 19.8
      comp=Z,29nm,1.0s
IIGN  Ignalina          79.49 328  eP    P     23 16 18.7 +0.5
IIGN                                 IAmb  IAmb  23 16 20.3
      comp=Z,22nm,1.0s
NACGM Naroch            79.50 328  e     P     23 16 18.0 -0.2
NACGM                              eLR   LR    23 43 16.0
SIRT  Sirnak            79.66 307  eP    P     23 16 20.7 +1.1
      comp=Z,105nm,1.1s
EGMT  Eagleton          79.78  40  eP    P     23 16 21.1 +1.1
      comp=Z,18nm,0.9s
EGMT  Eagleton          79.78  40   P    P     23 16 19.8 -0.2
      baz=303
SLIT  Slitere, Latvi    79.79 332⥣eP    P     23 16 18.7 -1.0
SLIT                                 IAmb  IAmb  23 16 20.0
      comp=Z,212nm,1.3s
VES   Vestal, Richgr    79.97  55   P    P     23 16 21.1 -0.1
      baz=299
ELK   Elko              80.20  49  eP    P     23 16 24.0 +1.3
      comp=Z,9.9nm,1.0s
ELK   Elko              80.20  49   P    P     23 16 21.4 -1.2
      comp=Z,4.1nm,1.0s,baz=311,slow=6.5,SNR=4.1
CWC   Cottonwood Cre    80.40  54   P    P     23 16 23.8 +0.1
      baz=299
QLMT  Earthquake Lak    80.50  44  eP    P     23 16 26.9 +2.8
QLMT                               epP   pwP   23 16 38.1  0.0
GRAC  Grapevine Rang    80.62  53   P    P     23 16 25.2 +0.5
      baz=300
YHB   Horse Butte       80.68  44  eP    P     23 16 28.0 +2.9
      comp=Z,24nm,0.9s
FCC   Fort Churchill    80.70  26  eP    P     23 16 23.9 -0.7
      comp=Z,12nm,1.0s
FCC   Fort Churchill    80.70  26  eP    P     23 16 23.9 -0.7
FCC                                  pmax  pmax
      comp=Z,12nm,1.0s
AKASG Malin Array Be    80.77 324  i P   P     23 16 24.7 -0.4
AKASG                                pmax  pmax
      comp=Z,15nm,0.9s
AKASG Malin Array Be    80.77 324   P    P     23 16 24.7 -0.4
      comp=Z,13nm,0.9s,baz=48,slow=5.9,SNR=42
AKASG                               PP    PP    23 19 27.3 -1.5
      comp=Z,1.7nm,0.8s,baz=51,slow=9.1,SNR=4.1
AKBB  Malin Array Si    80.77 324  eP    P     23 16 24.8 -0.4
      comp=Z,20nm,0.9s
KIEV  Kiev              80.78 324  eP    P     23 16 24.1 -1.1
      comp=Z,18nm,0.9s
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KIEV  Kiev              80.78 324⥥iP    P     23 16 25.1 -0.1
KIEV  Kiev              80.78 324  i P   P     23 16 24.3 -0.9
      SNR=12
KIEV  Kiev              80.78 324  eP    P     23 16 23.4 -1.8
KIEV                                 pmax  pmax
      comp=Z,16nm,0.9s
AK11  Malin Array Si    80.81 324  eP    P     23 16 24.9 -0.5
DAC   Darwin (Calif)    80.82  54  eP    P     23 16 29.3 +3.3
      comp=Z,9.2nm,1.1s
PBUR  Paburg            80.97 331  eP    P     23 16 26.3 +0.2
PBUR                                 IAmb  IAmb  23 16 27.5
      comp=Z,53nm,0.9s
MPMC  Manual Prospec    81.00  54   P    P     23 16 27.5 +0.5
      baz=300,SNR=6.3
LRMC  Laurel Mtn Rad    81.15  54   P    P     23 16 28.0 +0.4
      baz=300
R11A  Troy Canyon, C    81.17  51  eP    P     23 16 28.5 +0.6
      comp=Z,13nm,0.9s
R11A  Troy Canyon, C    81.17  51   P    P     23 16 28.4 +0.6
      baz=300
EDW2  Edwards Air Fo    81.22  55   P    P     23 16 27.9 -0.1
      baz=300,SNR=5.7
FURC  Furnace Creek,    81.24  53   P    P     23 16 28.9 +1.0
      baz=300,SNR=6.3
H17A  Grant Village     81.25  44  eP    P     23 16 31.6 +3.3
      comp=Z,26nm,0.9s
H17A  Grant Village     81.25  44   P    P     23 16 28.3 +0.1
      baz=303
SIM   Simferopol'       81.25 317c iP    P     23 16 29.1 +1.2
SIM                                  pmax  pmax
      comp=Z,27nm,0.8s
SIM                                  MLR   MLR
      comp=Z,540nm,18.0s
LKWY  Lake              81.26  44  eP    P     23 16 30.4 +2.1
      comp=Z,21nm,0.9s
IMW   Indian Meadow     81.30  44  eP    P     23 16 32.0 +3.5
      comp=Z,19nm,0.8s
NC405 NORSAR Array S    81.30 338  eP    P     23 16 28.0 +0.2
TPNV  Topopah Spring    81.42  52  eP    P     23 16 29.6 +0.5
      comp=Z,21nm,0.9s
TPNV  Topopah Spring    81.42  52  eP    P     23 16 29.6 +0.5
TPNV                                 pmax  pmax
      comp=Z,21nm,0.9s
TPNV  Topopah Spring    81.42  52   P    P     23 16 29.3 +0.2
      baz=300,SNR=26
NC204 NORSAR Array S    81.49 338  eP    P     23 16 28.9  0.0
MOOW  Moose Ponds       81.49  44  eP    P     23 16 33.3 +3.9
      comp=Z,10nm,1.1s
TPAW  Teton Pass        81.50  45  eP    P     23 16 33.5 +3.9
TPAW                               epP   pwP   23 16 42.8 -0.7
NB2   NORSAR Subarra    81.52 338   P    P     23 16 28.2 -0.8
      comp=Z,2.3nm,0.7s,baz=40,slow=5.1
NOA   NORSAR Array B    81.52 338   P    P     23 16 28.6 -0.5
      comp=Z,6.5nm,0.9s,baz=40,slow=5.2,SNR=12
RLMT  Red Lodge         81.64  43  eP    P     23 16 33.4 +3.2
      comp=Z,18nm,0.9s
RLMT  Red Lodge         81.64  43   P    P     23 16 30.6 +0.4
      baz=303
SUW   Suwalki           81.70 329  eP    P     23 16 29.8 -0.3
SUW   Suwalki           81.70 329  eP    P     23 16 30.2 +0.2
      comp=Z,90nm,1.0s
SUW   Suwalki           81.70 329  eP    P     23 16 30.2 +0.2
SUW                                  pmax  pmax
      comp=Z,90nm,1.0s
GSC   Goldstone, Bar    81.86  54  eP    P     23 16 32.3 +0.9
      comp=Z,9.4nm,0.9s
GSC   Goldstone, Bar    81.86  54  eP    P     23 16 32.3 +0.9
GSC                                  pmax  pmax
      comp=Z,9.0nm,0.9s
GSC   Goldstone, Bar    81.86  54   P    P     23 16 31.4 +0.1
      baz=300
SHOC  Shoshone, Teco    81.93  53   P    P     23 16 32.1 +0.5
      baz=300
DUG   Dugway, Tooele    82.07  48  eP    P     23 16 36.0 +3.5
      comp=Z,16nm,1.0s
DUG   Dugway, Tooele    82.07  48  eP    P     23 16 36.0 +3.5
DUG                                  pmax  pmax
      comp=Z,16nm,1.0s
DUG   Dugway, Tooele    82.07  48   P    P     23 16 32.9 +0.4
      baz=302
HWUT  Hardware Ranch    82.13  47  eP    P     23 16 35.6 +2.8
      comp=Z,13nm,0.9s
PSUT  Pine Spring       82.25  50  eP    P     23 16 35.2 +1.6
      comp=Z,17nm,1.1s
SHPR  Sheep Range       82.40  52  eP    P     23 16 35.1 +0.8
      comp=Z,15nm,1.0s
TUQ   Turquoise Moun    82.41  54   P    P     23 16 34.5 +0.2
      baz=301,SNR=7.4
HEC   Hector,Ludlow     82.43  54   P    P     23 16 34.9 +0.5
      baz=300,SNR=6.2
MURC  Murrieta          82.43  56   P    P     23 16 35.6 +1.3
      baz=300
LAO   LASA Array        82.52  40   P    P     23 16 35.3 +0.8
      baz=305
DGMT  Dagmar            82.59  38   P    P     23 16 35.4 +0.5
      baz=306
BW06  Boulder Array     82.75  45   P    P     23 16 36.3 +0.1
      baz=304
PDAR  Pinedale Array    82.75  45  eP    P     23 16 37.4 +1.3
PDAR  Pinedale Array    82.75  45   P    P     23 16 36.1  0.0
      comp=Z,5.0nm,0.8s,baz=270,slow=3.0,SNR=9.4
GMRC  Granite Mounta    82.93  54   P    P     23 16 37.5 +0.4
      baz=301,SNR=8.9
PFO   Pinyon Flats O    82.95  55  eP    P     23 16 40.1 +2.9
      comp=Z,19nm,1.0s
PFO   Pinyon Flats O    82.95  55  eP    P     23 16 40.1 +2.9
PFO                                  pmax  pmax
      comp=Z,19nm,1.0s
PFO   Pinyon Flats O    82.95  55   P    P     23 16 37.7 +0.6
      baz=301,SNR=5.8
PFO   Pinyon Flats O    82.95  55   P    P     23 16 37.4 +0.2
      comp=Z,7.8nm,0.8s,baz=285,slow=6.7,SNR=11
XPFO  Pion Flat         82.96  55  eP    P     23 16 40.1 +2.9
      comp=Z,20nm,1.0s
BELC  Belle Mtn. Jos    83.09  55   P    P     23 16 38.2 +0.3
      baz=301,SNR=6.5
CCUT  Cedar City        83.09  51  eP    P     23 16 39.3 +1.3
      comp=Z,15nm,1.0s
SZCU  Shurtz Canyon     83.25  51  eP    P     23 16 42.5 +3.7
      comp=Z,8.1nm,0.9s
MONP2 Monument Peak     83.34  56   P    P     23 16 39.5 +0.2
      baz=301
MSU   Marysvale         83.38  49  eP    P     23 16 43.0 +3.6
LCMT  Little Creek M    83.45  51  eP    P     23 16 40.6 +0.9
      comp=Z,17nm,0.9s
IRM   Iron Mountain     83.61  54   P    P     23 16 40.5 +0.1
      baz=301,SNR=5.6
MTPU  Mount Pierson     83.62  50  eP    P     23 16 43.0 +2.2
      comp=Z,15nm,1.1s
ILGA  Ilgaz             83.63 314  eP    P     23 16 42.3 +1.6
      comp=Z,50nm,1.0s
BC3   Big Chuckawall    83.65  55   P    P     23 16 40.9 +0.1
      baz=301,SNR=7.9
IKP   In-Ko-Pah, Jac    83.69  56   P    P     23 16 41.0  0.0
      baz=301
IAS   Iasi              83.72 321⥣iP    P     23 16 41.0 +0.3
KNB   Kanab             83.74  51  eP    P     23 16 42.3 +1.1
      comp=Z,41nm,1.0s
LEOM  Leova             83.77 320⥣iP    P     23 16 41.5 +0.6
P17A  Butcher Ranch,    83.81  48  eP    P     23 16 45.5 +3.9
      comp=Z,17nm,1.0s
Q16A  Castle Valley     83.83  49  eP    P     23 16 45.2 +3.5
      comp=Z,28nm,1.1s
LVV   L'vov             83.95 325  eP    P     23 16 41.4 -0.4
SRU   San Rafael Swe    84.14  48  eP    P     23 16 46.4 +3.1
      comp=Z,15nm,1.0s
FRB   Frobisher Bay     84.17  13   P    P     23 16 42.1 -0.5
      comp=Z,5.9nm,0.9s,baz=340,slow=5.8,SNR=8.6
TLCR                    84.22 319⥣iP    P     23 16 43.9 +0.7
BEL   Belsk             84.22 328  eP    P     23 16 43.9 +0.8
BEL   Belsk             84.22 328  eP    P     23 16 43.9 +0.8
BIR   Birlad            84.24 321⥣iP    P     23 16 44.8 +1.4
PDMCI Parker Dam,Lak    84.25  54   P    P     23 16 44.1 +0.5
      baz=302
Y12C  Blythe            84.27  55  eP    P     23 16 47.3 +3.5
      comp=Z,13nm,1.1s
Y12C  Blythe            84.27  55   P    P     23 16 44.2 +0.5
      baz=302
PRAR  RASCA             84.34 322⥣iP    P     23 16 44.0 +0.1
GIUM  Giurgiulesti      84.38 320⥣iP    P     23 16 45.5 +1.4
BR131 Keskin Array S    84.41 313  eP    P     23 16 44.8 +0.3
BR131 Keskin Array S    84.41 313   P    P     23 16 44.8 +0.3
      SNR=17
BRTR  Keskin Array B    84.41 313  i P   P     23 16 45.2 +0.6
BRTR                                 pmax  pmax
      comp=Z,36nm,0.9s
BRTR  Keskin Array B    84.41 313   P    P     23 16 45.1 +0.6
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	comp=Z,35nm,0.9s,baz=98,slow=3.1,SNR=106						
BRTR				PP	PP	23 19 58.7	-0.6
	comp=Z,1.2nm,0.8s,baz=64,slow=6.6,SNR=3.5						
GLA	Glamis	84.41	55	P	P	23 16 45.6	+1.1
	baz=302						
U15A	North Rim	84.41	51	eP	P	23 16 46.0	+1.2
	comp=Z,14nm,1.0s						
CFR	Carcaliu	84.61	319	⇓iP	P	23 16 45.4	+0.2
BIZ	Bicaz	84.67	322	⇑iP	P	23 16 46.0	+0.5
K22A	Casper	84.67	44	P	P	23 16 46.7	+0.8
	baz=306						
BUR08	Bucovina Ar. S	84.71	323	eP	P	23 16 46.2	+0.3
BUR04	Bucovina Ar. S	84.72	323	eP	P	23 16 45.9	-0.1
BURAR	Bucovina Array	84.72	323	⇑iP	P	23 16 45.7	-0.2
KWP	Kalwaria Pacla	84.73	325	eP	P	23 16 46.3	+0.5
KWP	Kalwaria Pacla	84.73	325	eP	P	23 16 46.3	+0.5
PETR	Petresti	84.79	320	⇑iP	P	23 16 47.5	+1.4
RWWY	Rawlins	84.80	45	eP	P	23 16 49.4	+2.8
	comp=Z,52nm,1.3s						
GKP	Gorka Klasztor	84.84	330	eP	P	23 16 46.3	+0.1
GKP	Gorka Klasztor	84.84	330	eP	P	23 16 46.3	+0.1
ODBI	Odobesti	84.86	320	⇑iP	P	23 16 47.6	+1.1
ANTO	Ankara	84.87	313	eP	P	23 16 47.8	+1.0
	comp=Z,29nm,0.9s						
ANTO	Ankara	84.87	313	⇓iP	P	23 16 47.8	+1.0
ANTO	Ankara	84.87	313	eP	P	23 16 47.8	+1.0
ANTO				pmax	pmax		
	comp=Z,29nm,0.9s						
BR231	Keskin MP Arra	84.90	313	eP	P	23 16 48.5	+1.5
VRI	Vrincioaia	84.98	321	⇑iP	P	23 16 48.1	+1.0
TLB	Topalu	85.02	319	⇑iP	P	23 16 48.4	+1.1
HARR	Harsova	85.02	319	⇑iP	P	23 16 47.5	+0.2
PLOR	Plostina	85.03	321	⇑iP	P	23 16 48.4	+1.0
O20A	White River Ci	85.04	46	eP	P	23 16 51.5	+3.7
	comp=Z,30nm,1.0s						
O20A	White River Ci	85.04	46	P	P	23 16 48.3	+0.5
	baz=305						
Y14A	Wickenburg	85.24	54	eP	P	23 16 52.4	+3.7
	comp=Z,13nm,1.0s						
OZUR		85.36	321	⇑iP	P	23 16 49.9	+0.8
PV09	Paradox Valley	85.39	48	eP	P	23 16 53.5	+3.8
PGOR	Pogoanele	85.42	320	⇑iP	P	23 16 50.5	+1.2
PV21	Cone Mtn., Par	85.45	48	eP	P	23 16 52.5	+2.5
	comp=Z,35nm,0.9s						
PV23	Carpenter Ridg	85.49	48	eP	P	23 16 51.3	+1.1
	comp=Z,49nm,0.9s						
PV10	Paradox Valley	85.52	48	eP	P	23 16 53.7	+3.4
	comp=Z,50nm,0.9s						
PV14	Lion Creek, Pa	85.53	48	eP	P	23 16 51.1	+0.7
	comp=Z,48nm,1.0s						
WUAZ	Wupatki	85.53	52	eP	P	23 16 51.4	+1.1
	comp=Z,22nm,1.0s						
WUAZ	Wupatki	85.53	52	P	P	23 16 50.9	+0.6
	baz=303						
PV20	West Nyswonger	85.58	48	eP	P	23 16 51.5	+1.0
	comp=Z,42nm,1.0s						
PV19	Morning Glory	85.59	48	eP	P	23 16 51.5	+0.9
	comp=Z,38nm,0.9s						
PV04	Paradox Valley	85.59	48	eP	P	23 16 54.1	+3.5
	comp=Z,35nm,1.2s						
PV17	East Wray Mesa	85.62	48	eP	P	23 16 51.4	+0.6
	comp=Z,43nm,0.9s						
PV16	Nyswonger Mesa	85.63	48	eP	P	23 16 53.5	+2.7
	comp=Z,31nm,1.0s						
PV05	Paradox Valley	85.64	48	eP	P	23 16 54.7	+3.8
	comp=Z,32nm,1.0s						
DOPR	Dopca	85.66	321	⇓iP	P	23 16 51.2	+0.7
PV11	David Mesa, Pa	85.67	48	eP	P	23 16 52.0	+1.1
	comp=Z,40nm,1.0s						
ULM	Lac du Bonnet	85.68	33	eP	P	23 16 54.0	+3.4
	comp=Z,13nm,1.3s						
ULM	Lac du Bonnet	85.68	33	P	P	23 16 49.9	-0.6
	comp=Z,5.6nm,0.9s,baz=312,slow=6.6,SNR=7.0						
PV12	Saucer Basin,	85.70	48	eP	P	23 16 54.6	+3.4
	comp=Z,26nm,0.9s						
PV03	Paradox Valley	85.71	48	eP	P	23 16 54.3	+3.1
	comp=Z,32nm,1.1s						
OJC	Ojcow	85.76	327	eP	P	23 16 51.1	+0.2
OJC	Ojcow	85.76	327	eP	P	23 16 50.7	-0.2
	comp=Z,23nm,1.2s						
OJC	Ojcow	85.76	327	eP	P	23 16 51.1	+0.2
PV13	Radium Mtn., P	85.78	48	eP	P	23 16 53.1	+1.5
	comp=Z,24nm,1.1s						
TRPA	Tarpa	85.79	324	⇓iP	P	23 16 51.5	+0.4
PV02	Paradox Valley	85.81	48	eP	P	23 16 55.4	+3.6
	comp=Z,18nm,0.9s						
PV15	Paradox Valley	85.90	48	eP	P	23 16 56.2	+4.0
	comp=Z,14nm,0.8s						
PV01	Paradox Valley	85.96	48	eP	P	23 16 53.2	+0.7
	comp=Z,20nm,1.0s						
N23A	Red Feather La	86.04	45	P	P	23 16 53.3	+0.5
	baz=306						
NIE	Niedzica	86.06	326	eP	P	23 16 53.1	+0.6
NIE	Niedzica	86.06	326	eP	P	23 16 53.1	+0.6
PHWY	Pilot Hill	86.10	44	eP	P	23 16 56.9	+3.7
	comp=Z,15nm,1.0s						
SMCO	Snowmass	86.39	47	eP	P	23 16 58.7	+4.0
	comp=Z,20nm,1.1s						
214A	Organ Pipe Nat	86.44	55	P	P	23 16 55.3	+0.6
	baz=303						
MVCO	Mesa Verde	86.53	49	eP	P	23 16 58.8	+3.5
	comp=Z,9.7nm,1.1s						
MVCO	Mesa Verde	86.53	49	P	P	23 16 55.7	+0.4
	baz=305						
DRGR		86.57	323	⇑iP	P	23 16 54.5	-0.6
GOLR		86.59	321	⇑iP	P	23 16 52.7	-2.4
OKC	Ostrava-Krasne	86.80	327	eP	P	23 16 56.3	+0.2
OKC	Ostrava-Krasne	86.80	327	eP	P	23 16 56.3	+0.2
LOT	Lotru	86.86	322	⇑iP	P	23 16 56.7	+0.1
W18A	Petrified Fore	86.87	51	P	P	23 16 57.7	+0.8
	baz=304						
ISCO	Idaho Springs	86.89	46	eP	P	23 16 57.9	+0.8
	comp=Z,6.5nm,1.0s						
ISCO	Idaho Springs	86.89	46	eP	P	23 16 57.9	+0.8
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ISCO	Idaho Springs	86.89	46	P	P	23 16 57.5	+0.4
	baz=306						
MMAI	Mount Meron Ar	86.90	306	P	P	23 16 57.2	+0.3
	baz=46,slow=6.2						
KSP	Ksiaz	86.96	329	eP	P	23 16 57.0	+0.2
KSP	Ksiaz	86.96	329	eP	P	23 16 57.0	+0.2
MORC	Moravsky Berou	87.13	328	⇑iP	P	23 16 57.0	-0.7
MORC	Moravsky Berou	87.13	328	eP	P	23 16 57.0	-0.7
CSS	Mathiatis	87.26	309	eP	P	23 16 58.5	-0.1
	comp=Z,22nm,0.8s						
KRLC	Kraliky	87.28	328	eP	P	23 16 59.5	+1.1
KRLC	Kraliky	87.28	328	eP	P	23 16 59.5	+1.1
DPC	Dobruska-Polom	87.29	329	eP	P	23 16 58.3	-0.2
DPC				ex	x	23 17 15.2	
DPC	Dobruska-Polom	87.29	329	eP	P	23 16 58.3	-0.2
DPC				e		23 17 15.2	
S22A	4UR Ranch, Cre	87.31	48	P	P	23 16 59.4	+0.2
	baz=306						
UPC	Upice	87.32	329	eP	P	23 16 58.8	+0.2
UPC				epP	pwP	23 17 08.5	-2.5
UPC	Upice	87.32	329	eP	P	23 16 58.8	+0.2
UPC				e		23 17 08.5	
VYHS	Vyhne	87.39	326	eP	P	23 16 58.8	-0.2
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VYHS	Vyhne	87.39	326	eP	P	23 16 58.8	-0.2
GZR	Gura Zlata	87.44	322	⇓iP	P	23 16 59.2	-0.1
TUC	Tucson	87.69	54	eP	P	23 17 04.5	+3.7
	comp=Z,5.6nm,1.0s						
TUC	Tucson	87.69	54	P	P	23 17 01.5	+0.7
	baz=304						
VRAC	Vranov	87.90	328	⇑iP	P	23 17 01.0	-0.4
VRAC	Vranov	87.90	328	eP	P	23 17 00.9	-0.4
VRAC	Vranov	87.90	328	P	P	23 17 00.7	-0.7
	comp=Z,5.4nm,1.0s,baz=18,slow=4.4						
BZS	Buzias	87.91	323	⇓iP	P	23 17 00.7	-0.8
CLL	Collm	88.06	331	eP	P	23 17 04.3	+2.3
	comp=Z,10.0nm,1.1s						
CLL	Collm	88.06	331	i P	P	23 17 01.2	-0.9
	comp=Z,10.0nm,1.1s						
CLL				ePP	PP	23 20 29.0	+0.9
CLL	Collm	88.06	331	i P	P	23 17 01.2	-0.9
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SDCO	Great Sand Dun	88.16	47	eP	P	23 17 07.1	+3.9
	comp=Z,8.7nm,1.3s						
SDCO	Great Sand Dun	88.16	47	P	P	23 17 03.6	+0.4
	baz=306						
KRUC	Moravsky	88.17	328	eP	P	23 17 02.0	-0.6
MODS	Modra-Piesok	88.23	327	eP	P	23 17 02.7	-0.3
MODS				pmax	pmax		
	comp=Z,83nm,2.7s						
MODS	Modra-Piesok	88.23	327	eP	P	23 17 02.7	-0.3
BANR	Banloc	88.32	323	⇑iP	P	23 17 03.8	+0.4
MDVR	Moldovita	88.41	322	⇑iP	P	23 17 03.7	-0.2
TREC	Trest	88.42	328	eP	P	23 17 03.8	-0.1
TREC	Trest	88.42	328	eP	P	23 17 03.8	-0.1
VTS	Vitosha	88.97	320	⇑iP	P	23 17 06.1	-0.7
ANMO	Albuquerque	89.18	50	i P	P	23 17 07.2	-0.7
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ANMO	Albuquerque	89.18	50	P	P	23 17 08.3	+0.3
	baz=306						
ANMO	Albuquerque	89.18	50	P	P	23 17 08.3	+0.3
	comp=Z,2.1nm,0.9s,baz=274,slow=3.9,SNR=7.4						
CONA	Conrad Observa	89.22	327	eP	P	23 17 07.5	-0.2
	comp=Z,8.5nm,1.0s						
T25A	Trinidad	89.22	47	P	P	23 17 07.6	-0.6
	baz=307						
EYMN	Ely	89.36	33	P	P	23 17 08.1	-0.2
	baz=316						
KHC	Kasperske Hory	89.41	329	eP	P	23 17 06.5	-2.0
KHC				epP	pwP	23 17 19.1	-1.9
KHC	Kasperske Hory	89.41	329	eP	P	23 17 06.5	-2.0
KHC				e		23 17 19.1	
DAMY	Dhamar	89.46	286	eP	P	23 17 11.3	+1.6
	comp=Z,35nm,1.1s						
GEC2	GERESS Array S	89.56	329	eP	P	23 17 09.2	-0.1
	comp=Z,4.3nm,1.0s						
GEC2	GERESS Array S	89.56	329	eP	P	23 17 09.2	-0.1
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	89.56	329	P	P	23 17 08.8	-0.6
	comp=Z,0.8nm,0.4s,baz=57,slow=11,SNR=2.7						
ECSD	EROS Data Cent	89.67	38	eP	P	23 17 09.8	0.0
	comp=Z,11nm,1.2s						
ECSD	EROS Data Cent	89.67	38	P	P	23 17 09.5	-0.3
	baz=312						
ARSA	Arzberg	89.86	327	eP	P	23 17 10.3	-0.4
	comp=Z,5.3nm,1.0s						
E38A	The Farm, Brul	90.28	34	P	P	23 17 12.9	+0.3
	baz=316						
SOKA	Soboth	90.51	327	eP	P	23 17 12.9	-0.8
	comp=Z,17nm,1.6s						
F38A	Pierce - Schro	90.58	34	P	P	23 17 14.2	+0.2
	baz=315						
KBA	Koelnbreinsper	91.02	328	eP	P	23 17 15.4	-0.9
	comp=Z,3.4nm,0.9s						
F39A	Loretta	91.08	34	P	P	23 17 16.9	+0.5
	baz=316						
ABTA	Abfaltersbach	91.64	328	eP	P	23 17 17.4	-1.6
	comp=Z,7.5nm,1.0s						
MNTX	Cornudas Mount	91.81	52	eP	P	23 17 22.8	+2.8
	comp=Z,6.1nm,1.0s						
MNTX	Cornudas Mount	91.81	52	P	P	23 17 19.9	-0.1
	baz=306						
RETA	Reutte	91.89	329	ePcP	P	23 17 20.0	-0.2
	comp=Z,6.0nm,1.0s						
SQTA	Sankt Quirin	91.89	329	ePcP	P	23 17 20.1	-0.2
	comp=Z,2.9nm,0.7s						
FETA	Feichten	92.25	329	eP	P	23 17 21.2	-0.8
	comp=Z,7.0nm,1.0s						
BFO	Black Forest	92.30	331	eP	P	23 17 21.5	-0.5
	comp=Z,12nm,1.0s						
BFO	Black Forest	92.30	331	i P	P	23 17 21.9	-0.1
DAVA	Damuels	92.43	330	eP	P	23 17 21.9	-0.9
	comp=Z,10nm,0.9s						
SCHQ	Schefferville	92.61	16	P	P	23 17 21.4	-1.9
	comp=Z,3.8nm,0.9s,baz=271,slow=5.7,SNR=3.7						
FUORN	Ofenpass-Fuorn	92.77	329	eP	P	23 17 24.3	-0.2
	comp=Z,15nm,0.9s						
WMOK	Wichita Mounta	94.29	46	eP	P	23 17 34.2	+2.8
	comp=Z,7.5nm,0.9s						
WMOK	Wichita Mounta	94.29	46	P	P	23 17 32.0	+0.6
	baz=310						
TX31	Lajitas Ar. Si	94.40	53	eP	P	23 17 33.0	+0.9
TXAR	Lajitas Array	94.40	53	P	P	23 17 33.1	+1.0
	comp=Z,6.4nm,0.9s,baz=302,slow=2.5,SNR=30						
LSQQ	Lebel-sur-Quev	94.58	25	P	P	23 17 32.5	+0.1
	baz=327						
ESDC	Sonseca Array	104.43	334	PP	PKiKP	23 22 32.8	-0.2
	comp=Z,0.9nm,0.8s,baz=67,slow=8.5,SNR=2.7						
QSPA	South Pole Qui	119.06	180	ePKPdf	PKiKP	23 22 59.6	-0.2
SYO	Syowa Base	121.46	204	⇓ePKPdf	PKiKP	23 23 05.0	+0.7
TOA0	Torodi Ar. Sit	123.02	312	ePKPdf	PKiKP	23 23 08.4	-0.7
TORD	Torodi Ar. Bea	123.02	312	PKP	PKPdf	23 23 07.8	-1.0
	comp=Z,1.3nm,0.9s,baz=17,slow=1.5,SNR=6.3						
TORD				PP	PP	23 24 47.3	0.0
	comp=Z,3.5nm,1.0s,baz=74,slow=5.6,SNR=7.3						
SDV	Santo Domingo	130.69	45	ePKPdf	PKiKP	23 23 24.0	-0.7
SDV	Santo Domingo	130.69	45	PKP	PKPdf	23 23 22.6	-1.1
	comp=Z,2.8nm,0.4s,baz=30,slow=2.6,SNR=7.6						
PTGA	Pitinga	144.69	40	ePKPdf	PKPdf	23 23 47.9	-1.3
LPAZ	La Paz	149.44	72	ePKPdf	PKPdf	23 23 58.8	+1.0
LPAZ	La Paz	149.44	72	PKHKP	PKPpre	23 23 58.5	
LPAZ						23 24 02.8	
LPAZ				pmax	pmax		
	comp=Z,12nm,1.0s						
LPAZ				pmax	pmax		
	comp=Z,12nm,1.0s						
LPAZ	La Paz	149.44	72	PKP	PKPdf	23 23 58.5	+0.7
	comp=Z,7.1nm,0.9s,baz=318,slow=2.0,SNR=14						
LPAZ				PKPbc	PKiKP	23 24 02.8	-0.6
	comp=Z,12nm,1.0s,baz=331,slow=4.0,SNR=17						
MNMC	Minye Minye	149.53	78	ePKPbc	PKiKP	23 24 02.8	-0.2
PB11	IPOC Station P	149.74	79	ePKPbc	PKiKP	23 24 02.5	-0.8
PB04	IPOC Station P	150.28	84	ePKPbc	PKiKP	23 24 04.4	-0.1
PB01	IPOC Station P	150.39	81	ePKPbc	PKiKP	23 24 04.1	-0.5
GO06	Curarrehue	150.68	119	ePKPbc	PKiKP	23 24 05.3	+0.7
PLCA	Paso Flores	151.14	122	ePKPbc	PKiKP	23 24 05.9	+0.4
LVC	Limon Verde	151.46	84	PKPbc	PKPbc	23 24 04.3	-2.3
	comp=Z,2.2nm,0.6s,baz=287,slow=11,SNR=1.8						
GO04	Tololo Observa	151.54	100	ePKPbc	PKiKP	23 24 08.7	+1.8
ROC1	El Roble	151.55	106	ePKPbc	PKiKP	23 24 06.3	-0.5
PEL	Peldehue	151.83	106	ePKPbc	PKiKP	23 24 09.3	+2.1
PEL	Peldehue	151.83	106	ePKIKP	PKiKP	23 24 09.3	+2.1
CPUP	Villa Florida	162.63	85	PKPab	PKPab	23 25 02.6	+0.1
	comp=Z,1.3nm,0.6s,baz=275,slow=4.5,SNR=3.5						
BDFB	Brasilia	163.56	36	PKPab	PKPab	23 25 04.4	-2.4
	comp=Z,0.9nm,0.5s,baz=240,slow=8.1,SNR=2.3						

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*IDC **03** 23:08:21.9±0.5, 29°.32N×142°.17E, $h0^{km}$, mb4.3/32, mb1 4.4/34, mb1mx4.3/62, mbtmp4.3/34, ML3.1/3, Error ellipse: s-maj=16.6km s-min=13.2km az=85.0*

*ISCJB **03** 23:08:24.9±0.4, 29°.32N±0°.06×142°.13E±0°.10, $h30^{km}$, mb4.3/33, Error ellipse: s-maj=12.2km s-min=8.0km az=164.8*

ISC 03 23:08:26.4±0.5**, 29°.28N**±0°.06×**142°.2E**±0°.1**, $h30^{km}$, n43, $\sigma 1^{s}.07$**/45**, mb4.2**/33**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.18	179	Pn	Pn	23 09 00.6	-0.1
	7.5nm,0.3s,baz=270,slow=20,SNR=7.2						
JCJ				Sn	Sn	23 09 23.2	-3.4
	56nm,0.3s,baz=90,slow=20,SNR=6.8						
MJAR	Matsushiro Arr	7.96	336	Pn	Pn	23 10 20.4	+0.2
	0.8nm,0.3s,baz=165,slow=24,SNR=8.7						
MJAR				Sn	Sn	23 11 46.5	-2.7
	baz=158,slow=29,SNR=2.9						
MAT	Matsushiro	7.97	336	P	Pn	23 10 20.6	+0.4
MAT				S	Sn	23 11 46.3	-2.9
KSRS	Korea Array	14.41	308	Pn	Pn	23 11 50.4	+2.1
	0.2nm,0.3s,baz=117,slow=11,SNR=3.4						
USRK	Ussuriysk Ar.	16.95	334	Pn	Pn	23 12 19.7	-1.6
	0.1nm,0.3s,baz=148,slow=8.5,SNR=3.0						
KLR	Kul'dur	21.45	341	P	P	23 13 11.8	-0.4
	4.1nm,0.9s,baz=144,slow=11,SNR=3.8						
H11N2	WAKE ISLAND Hy	24.39	107	T	T	23 39 07.0	
	baz=296						
H11N1	WAKE ISLAND Hy	24.40	107	T	T	23 39 21.9	
	baz=296						
H11N3	WAKE ISLAND Hy	24.41	107	T	T	23 39 10.2	
	baz=296						
SONM	Songino Array	33.16	314	P	P	23 15 00.2	0.0
	2.5nm,0.7s,baz=128,slow=8.4,SNR=5.2						
SEY	Seymchan	34.31	8	P	P	23 15 10.1	+0.3
	2.4nm,0.9s,baz=107,slow=19,SNR=1.9						
CMAR	Chiang Mai Arr	40.76	265	P	P	23 16 05.1	+0.1
	2.3nm,0.8s,baz=86,slow=4.5,SNR=7.1						
ZALV	Zalesovo Beam	47.84	318	P	P	23 17 00.7	-0.5
	8.5nm,0.9s,baz=104,slow=6.3,SNR=8.1						
ZALV				PcP	PcP	23 18 29.4	-0.2
	1.3nm,0.7s,baz=100,slow=4.8,SNR=2.6						
ZALV	Zalesovo Beam	47.84	318	PcP	PcP	23 18 29.4	-0.2
MKAR	Makanchi Array	49.09	308	P	P	23 17 10.5	-0.5
	3.8nm,0.7s,baz=86,slow=11,SNR=12						
WRA	Warramunga Arr	49.52	190	P	P	23 17 14.5	+0.1
	7.2nm,0.8s,baz=19,slow=9.1,SNR=10						
WRA				PcP	PcP	23 18 37.1	+1.1
	2.6nm,0.8s,baz=0.7,slow=3.8,SNR=3.5						
NRIK	Noril'sk	50.62	338	P	P	23 17 22.0	-0.2
	5.5nm,0.8s,baz=140,slow=8.9,SNR=3.6						
KDAK	Kodiak Island	52.64	38	P	P	23 17 36.8	-0.7
	7.0nm,0.7s,baz=281,slow=5.2,SNR=4.2						
ASAR	Alice Springs	53.24	189	P	P	23 17 42.1	-0.2
	1.3nm,0.7s,baz=360,slow=5.9,SNR=5.9						
ILAR	Eielson Array	55.82	29	P	P	23 18 00.2	-0.3
	0.9nm,0.7s,baz=254,slow=6.0,SNR=5.8						
BVAR	Borovoye Array	56.44	316	P	P	23 18 05.7	+0.6
	5.1nm,0.6s,baz=91,slow=7.6,SNR=5.2						
STKA	Stephens Creek	60.82	181	P	P	23 18 36.1	+0.4
	2.6nm,0.9s,baz=349,slow=8.8,SNR=3.1						
INK	Inuvik	61.06	25	P	P	23 18 36.9	-0.1
	0.8nm,0.6s,baz=269,slow=3.3,SNR=4.5						
AKTO	Aktyubinsk	64.46	315	P	P	23 19 00.3	+0.3
	3.9nm,0.6s,baz=70,slow=13,SNR=4.4						
KIRV	Kirov	66.88	325	P	P	23 19 15.9	+0.5
	10nm,0.7s,baz=115,slow=1.4,SNR=6.7						
GEYT	Alibeck	68.31	302	P	P	23 19 25.7	+0.8
	5.0nm,0.8s,baz=71,slow=9.6,SNR=5.8						
YKA	Yellowknife Ar	70.24	29	P	P	23 19 36.3	0.0
	0.9nm,0.7s,baz=295,slow=6.2,SNR=6.6						
ARCES	ARCESS Array B	71.48	341	P	P	23 19 43.1	-0.7
	2.2nm,0.8s,baz=60,slow=5.3,SNR=4.4						
YBH	Yreka Blue Hor	74.68	51	P	P	23 20 05.8	+2.5
	1.7nm,1.0s,baz=342,slow=20,SNR=2.9						
NEW	Newport	75.32	43	P	P	23 20 07.2	+0.4
	1.9nm,0.7s,baz=346,slow=4.2,SNR=3.1						
FINES	FINESS Array B	75.98	334	P	P	23 20 10.3	0.0
	3.3nm,0.8s,baz=70,slow=5.4,SNR=6.4						
KBZ	Khabaz	76.51	313	P	P	23 20 13.7	+0.1
	9.0nm,0.8s,baz=80,slow=5.3,SNR=9.5						
NVAR	Mina Array Bea	79.19	52	P	P	23 20 30.1	+1.1
	1.8nm,0.7s,baz=291,slow=5.6,SNR=6.3						
AKASG	Malin Array Be	80.85	324	P	P	23 20 37.3	0.0
	1.3nm,0.6s,baz=49,slow=5.7,SNR=5.7						
HFS	Hagfors	81.41	337	P	P	23 20 39.7	-0.4
	1.3nm,0.6s,baz=79,slow=3.2,SNR=7.4						
NOA	NORSAR Array B	81.58	338	P	P	23 20 40.8	-0.3
	0.7nm,0.8s,baz=30,slow=0.9,SNR=2.6						
PDAR	Pinedale Array	82.68	45	P	P	23 20 47.2	-0.3
	1.1nm,0.9s,baz=278,slow=4.3,SNR=3.7						
FRB	Frobisher Bay	84.16	13	P	P	23 20 54.6	+0.3
	2.7nm,1.1s,baz=5.7,slow=10,SNR=2.2						
BRTR	Keskin Array B	84.51	313	P	P	23 20 57.4	+0.6
	7.8nm,1.0s,baz=104,slow=3.2,SNR=11						
MMAI	Mount Meron Ar	87.00	306	P	P	23 21 09.4	+0.2
	1.7nm,0.6s,baz=32,slow=6.4,SNR=4.2						
DAVOX	Davos/Dischmat	92.89	329	P	P	23 21 36.1	-0.6
	2.5nm,0.8s,baz=312,slow=7.2,SNR=2.6						
TXAR	Lajitas Array	94.31	53	P	P	23 21 43.0	-0.4
	1.0nm,0.9s,baz=283,slow=2.5,SNR=5.1						
LPAZ	La Paz	149.33	72	PKPbc	PKPbc	23 28 13.8	+0.1
	1.5nm,0.8s,baz=22,slow=11,SNR=3.3						

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*IDC **03** 23:16:52.5±0.6, 29°.29N×142°.16E, $h0^{km}$, mb4.0/27, mb1 4.1/30, mb1mx4.0/61, mbtmp4.0/30, ML2.9/4, MS4.2/1, Ms1 4.2/1, ms1mx3.1/51, Error ellipse: s-maj=17.9km s-min=14.8km az=70.0*

*ISCJB **03** 23:16:55.5±0.3, 29°.30N±0°.03×142°.04E±0°.08, $h30^{km}$, mb4.2/36, MS4.2/1, Error ellipse: s-maj=10.6km s-min=4.5km az=166.6*

*NEIC **03** 23:16:56.2±1.6, 29°.26N×142°.12E, $h24^{km}\pm 11^{km}$, mb4.7/10, Error ellipse: s-maj=7.5km s-min=4.9km az=75.0*

ISC 03 23:16:57.2±0.5**, 29°.31N**±0°.06×**142°.0E**±0°.1**, $h30^{km}$, n65, $\sigma 1^{s}.14$**/66**, mb4.3**/36**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.21	176	ePn	Pn	23 17 31.0	-0.8
CBIJ				eSn	Sn	23 17 57.4	-0.8
JCJ	Chichijima	2.21	176	Pn	Pn	23 17 31.0	-0.8
	4.3nm,0.3s,baz=324,slow=19,SNR=2.5						
JCJ				Sn	Sn	23 17 57.4	-0.8
	36nm,0.3s,baz=279,slow=20,SNR=8.0						
MJAR	Matsushiro Arr	7.89	337	Pn	Pn	23 18 51.1	+1.1
	0.6nm,0.3s,baz=140,slow=16,SNR=27						
MJAR				Sn	Sn	23 20 13.8	-4.4
	baz=189,slow=28,SNR=1.8						
MAJO	Matsushiro	7.90	337	ePn	Pn	23 18 51.6	+1.6
MAJO				eSn	Sn	23 20 13.8	-4.5
MAT	Matsushiro	7.90	337	P	Pn	23 18 51.4	+1.4
MAT				S	Sn	23 20 08.9	-9.4
MJB9	Matsu-Tunnel	7.90	337	ePn	Pn	23 18 51.6	+1.6
KSRS	Korea Array	14.30	308	Pn	Pn	23 20 17.7	+0.1
	0.1nm,0.3s,baz=111,slow=12,SNR=2.5						
KSAR	Wonju Array Be	14.32	308	Pn	Pn	23 20 17.7	-0.2
USRK	Ussuriysk Ar.	16.88	334	Pn	Pn	23 20 50.5	-0.7
	0.1nm,0.3s,baz=146,slow=10,SNR=2.8						
KLR	Kul'dur	21.39	341	P	P	23 21 42.4	+0.1
	1.9nm,0.6s,baz=164,slow=15,SNR=5.7						
H11N2	WAKE ISLAND Hy	24.51	107	T	T	23 47 46.6	
	baz=300,slow=74						
H11N1	WAKE ISLAND Hy	24.51	107	T	T	23 47 52.9	
	baz=300						
H11N3	WAKE ISLAND Hy	24.53	107	T	T	23 47 55.6	
	baz=300,slow=74						
SONA0	Songino Array	33.05	314	eP	P	23 23 29.0	-1.1
SONM	Songino Array	33.05	314	P	P	23 23 29.0	-1.1
	0.7nm,0.4s,baz=114,slow=11,SNR=5.5						
TLY	Talaya	36.16	319	P	P	23 23 57.2	+0.4
CMAR	Chiang Mai Arr	40.65	264	P	P	23 24 36.0	+1.2
	0.7nm,0.6s,baz=86,slow=5.4,SNR=4.9						
ZAA0	Zalesovo Array	47.75	318	eP	P	23 25 31.8	+0.5
	2.6nm,0.8s						
ZAA1	Zalesovo Array	47.75	318	eP	P	23 25 31.8	+0.5
ZALV	Zalesovo Beam	47.75	318	P	P	23 25 31.8	+0.5
	2.4nm,0.8s,baz=101,slow=6.2,SNR=9.8						
MK01	Makanchi Array	48.98	308	eP	P	23 25 41.2	+0.3
MK31	Makanchi Array	48.98	308	eP	P	23 25 41.6	+0.6
	1.6nm,0.9s						
MK32	Makanchi Array	48.98	308	eP	P	23 25 41.1	+0.2
MKAR	Makanchi Array	48.98	308	eP	P	23 25 41.6	+0.6
	11nm,0.8s						
MKAR	Makanchi Array	48.98	308	P	P	23 25 41.1	+0.2
	1.2nm,0.7s,baz=94,slow=9.2,SNR=15						
WB2	Warramunga Arr	49.52	190	eP	P	23 25 45.2	0.0
WR1	Warramunga Arr	49.52	190	eP	P	23 25 44.6	-0.6
	9.4nm,1.4s						
WRA	Warramunga Arr	49.52	190	P	P	23 25 44.6	-0.6
	1.3nm,0.5s,baz=11,slow=8.1,SNR=13						
NRIK	Noril'sk	50.55	338	P	P	23 25 53.5	+1.1
	1.4nm,0.6s,baz=116,slow=12,SNR=4.4						
KURK	Kurchatov	51.36	313	eP	P	23 26 00.3	+1.5
KURBB	Kurchatov Arra	51.41	313	P	P	23 26 00.3	+1.1
	3.2nm,0.5s,baz=88,slow=6.5,SNR=32						
ASAR	Alice Springs	53.24	189	P	P	23 26 12.8	-0.3
	0.5nm,0.4s,baz=1.6,slow=6.3,SNR=5.9						
AAK	Ala-Archa	54.90	304	P	P	23 26 25.5	+0.2
	0.7nm,0.6s,baz=34,slow=2.3,SNR=4.6						
ILAR	Eielson Array	55.85	29	P	P	23 26 30.7	-0.9
	0.6nm,0.8s,baz=269,slow=5.8,SNR=5.7						
BVAR	Borovoye Array	56.34	316	P	P	23 26 36.7	+1.4
	2.2nm,0.6s,baz=92,slow=6.6,SNR=28						
BVAR				LR	LR	23 50 28.2	
	comp=Z,193nm,20.3s,baz=93,slow=36						
BRVK	Borovoye	56.40	317	eP	P	23 26 37.1	+1.4
	4.1nm,0.8s						
CHGR	Chuyangaron	59.71	300	eP	P	23 26 60.0	+0.7
	9.2nm,0.6s						
INK	Inuvik	61.09	25	eP	P	23 27 07.9	-0.1
	16nm,1.8s						
INK	Inuvik	61.09	25	P	P	23 27 07.9	-0.1
	0.5nm,0.5s,baz=274,slow=3.9,SNR=4.5						
FORT	Forrest	61.22	194	eP	P	23 27 08.0	-1.2
	26nm,1.1s						
ARU	Arti	62.60	322	eP	P	23 27 18.7	+0.3
	18nm,1.5s						
ABKAR	Akbulak array	63.47	314	eP	P	23 27 25.4	+1.2
	10nm,1.5s						
AKTO	Aktyubinsk	64.36	315	P	P	23 27 29.9	-0.2
	2.4nm,0.6s,baz=80,slow=8.5,SNR=8.5						
KIRV	Kirov	66.80	325	P	P	23 27 46.1	+0.5
	3.9nm,0.6s,baz=81,slow=21,SNR=4.3						
GEYT	Alibeck	68.20	302	P	P	23 27 56.4	+1.4
	1.7nm,0.8s,baz=69,slow=7.9,SNR=3.4						
YKA	Yellowknife Ar	70.27	29	P	P	23 28 06.9	-0.4
	0.4nm,0.6s,baz=294,slow=6.3,SNR=6.5						

YKB5	**Yellowknife Ar**	**70.27**	**29**	*e*P	**P**	**23 28 06.9**	**-0.4**
FIA0	**FINESS Array S**	**75.91**	**334**	*e*P	**P**	**23 28 41.2**	**+0.6**
FINES	**FINESS Array B**	**75.91**	**334**	P	**P**	**23 28 41.2**	**+0.6**
	0.7nm,0.5s,baz=66,slow=6.5,SNR=8.5						
KBZ	**Khabaz**	**76.41**	**313**	P	**P**	**23 28 45.0**	**+1.2**
	3.9nm,0.8s,baz=78,slow=5.9,SNR=9.9						
NV01	**Mina Array Sit**	**79.27**	**52**	*e*P	**P**	**23 29 00.1**	**-0.1**
NVAR	**Mina Array Bea**	**79.27**	**52**	P	**P**	**23 29 00.1**	**-0.1**
	1.0nm,0.7s,baz=285,slow=5.6,SNR=6.7						
BOZ	**Bozeman (W)**	**79.97**	**43**	*e*P	**P**	**23 29 03.2**	**-0.5**
	4.4nm,0.8s						
AKASG	**Malin Array Be**	**80.76**	**324**	P	**P**	**23 29 07.6**	**0.0**
	0.7nm,0.6s,baz=48,slow=6.5,SNR=5.3						
HFS	**Hagfors**	**81.34**	**337**	P	**P**	**23 29 10.0**	**-0.6**
	0.5nm,0.4s,baz=64,slow=3.4,SNR=5.9						
NB200	**NORSAR Array S**	**81.51**	**338**	*e*P	**P**	**23 29 11.5**	**0.0**
NOA	**NORSAR Array B**	**81.51**	**338**	P	**P**	**23 29 11.5**	**0.0**
	1.0nm,1.0s,baz=22,slow=3.9,SNR=2.9						
PDAR	**Pinedale Array**	**82.74**	**45**	P	**P**	**23 29 18.9**	**+0.3**
	0.3nm,0.6s,baz=243,slow=4.0,SNR=4.3						
BR101	**Keskin Array S**	**84.40**	**313**	*e*P	**P**	**23 29 28.2**	**+1.1**
BR131	**Keskin Array S**	**84.40**	**313**	*e*P	**P**	**23 29 28.6**	**+1.5**
BRTR	**Keskin Array B**	**84.40**	**313**	P	**P**	**23 29 28.2**	**+1.1**
	1.5nm,0.7s,baz=98,slow=3.3,SNR=9.2						
MMAI	**Mount Meron Ar**	**86.89**	**306**	P	**P**	**23 29 39.6**	**+0.1**
	1.2nm,0.7s,baz=93,slow=10,SNR=3.1						
LTX	**Lajitas**	**94.39**	**53**	*e*P	**P**	**23 30 14.7**	**+0.1**
TXAR	**Lajitas Array**	**94.39**	**53**	P	**P**	**23 30 14.7**	**+0.1**
	0.6nm,0.9s,baz=264,slow=3.4,SNR=4.7						
LPAZ	**La Paz**	**149.43**	**72**	PKPbc	**PKPbc**	**23 36 44.1**	**-0.7**
	1.3nm,0.7s,baz=263,slow=8.1,SNR=3.5						

WEL 03 23:20:47.1, 40°S±1°×**175°.6E**±0°.9, **h52**^{km}±3^{km}, **ML3.7**/29,
North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POWZ	**Post Office Ro**	**0.47**	**163**	P	Pn	23 20 58.1	0.0
POWZ				S	Sn	23 21 07.0	+0.9
WAZ	**Wanganui**	**0.50**	**292**	P	Pn	23 20 58.8	+0.3
WAZ				S	Sn	23 21 07.7	+1.0
MOVZ	**Moawhango**	**0.55**	**13**	P	Pn	23 20 58.6	-0.4
MOVZ				S	Sn	23 21 07.5	-0.3
MTVZ	**Mangateitei**	**0.56**	**350**	P	Pn	23 20 59.3	+0.1
MTVZ				S	Sn	23 21 08.6	+0.5
DVHZ	**Dannevirke**	**0.57**	**129**	P	Pn	23 20 59.4	+0.1
DVHZ				S	Sn	23 21 09.3	+1.2
BHHZ	**Black Hill Sta**	**0.58**	**39**	P	Pn	23 20 59.4	0.0
BHHZ				S	Sn	23 21 08.6	+0.2
TRVZ	**Turoa**	**0.64**	**357**	P	Pn	23 21 00.4	0.0
TRVZ				S	Sn	23 21 10.1	+0.1
WHVZ	**Whangaehu Hut**	**0.66**	**360**	P	Pn	23 21 00.6	0.0
WPHZ	**Waipukurau**	**0.66**	**101**	P	Pn	23 21 00.9	+0.5
DRZ	**Dome Shelter**	**0.67**	**358**	P	Pn	23 21 00.8	+0.1
DRZ				P	Pn	23 21 00.9	+0.1
TUVZ	**Tukino**	**0.68**	**4**	P	Pn	23 21 00.8	+0.1
PRWZ	**Pori Road**	**0.68**	**155**	P	Pn	23 21 01.1	+0.4
PRWZ				S	Sn	23 21 11.7	+1.3
PKVZ	**Pokaka**	**0.68**	**344**	P	Pn	23 21 00.7	0.0
FWVZ	**Far West T-bar**	**0.69**	**358**	P	Pn	23 21 00.9	0.0
MRZ	**Mangatainoka R**	**0.72**	**181**	P	Pn	23 21 01.2	+0.1
COVZ	**Chateau Observ**	**0.74**	**357**	P	Pn	23 21 01.6	0.0
NGZ	**Ngauruhoe**	**0.77**	**1**	P	Pn	23 21 02.1	+0.3
KWHZ	**Kaweka Forest**	**0.82**	**51**	P	Pn	23 21 03.4	+0.8
WTVZ	**West Tongariro**	**0.83**	**360**	P	Pn	23 21 02.9	+0.3
KRVZ	**Karewarewa**	**0.85**	**3**	P	Pn	23 21 03.1	+0.2
KRVZ				P		23 21 03.2	
ANWZ	**Angora Road**	**0.85**	**128**	P	Pn	23 21 03.3	+0.4
TIWZ	**Tintock**	**0.86**	**165**	P	Pn	23 21 03.6	+0.6
TIWZ				P		23 21 03.7	
PRHZ	**Porangahau**	**0.86**	**112**	P	Pn	23 21 03.1	+0.1
TWVZ	**Taurewa**	**0.88**	**352**	P		23 21 03.2	
TWVZ				P	Pn	23 21 03.2	-0.1
BFZ	**Birch Farm**	**0.89**	**146**	P	Pn	23 21 03.3	-0.1
OGWZ	**Otaki Gorge**	**0.93**	**200**	P	Pn	23 21 04.3	+0.4
HOWZ	**Holdsworth Sta**	**0.96**	**183**	P	Pn	23 21 04.4	+0.1
KATZ	**Kakaramea**	**0.97**	**5**	P	Pn	23 21 05.2	+0.6
RITZ	**Rihia Road**	**0.99**	**12**	P	Pn	23 21 05.0	+0.4
MCHZ	**McNeill Hill**	**0.99**	**60**	P	Pn	23 21 05.6	+0.9
KAHZ	**Kahuranaki**	**1.00**	**82**	P	Pn	23 21 05.2	+0.4
LREZ	**Lake Rotokare**	**1.03**	**297**	P	Pn	23 21 06.2	+0.9
VRZ	**Vera Road**	**1.04**	**321**	P	Pn	23 21 05.5	+0.2
BKZ	**Black Stump Fm**	**1.04**	**42**	P	Pn	23 21 06.2	+0.7
KIW	**Kapiti Island**	**1.05**	**209**	P	Pn	23 21 05.9	+0.4
RATZ	**Rangitukua**	**1.08**	**8**	P	Pn	23 21 06.5	+0.5
HATZ	**Hinemaiaia**	**1.12**	**20**	P	Pn	23 21 06.3	-0.2
CKHZ	**Cape Kidnapper**	**1.18**	**77**	P	Pn	23 21 06.7	-0.6
TMWZ	**Te Maipa**	**1.19**	**169**	P	Pn	23 21 07.2	-0.2
MTW	**Mount Morrison**	**1.22**	**183**	P	Pn	23 21 07.4	-0.4
CAW	**Cannon Point**	**1.23**	**199**	P	Pn	23 21 07.8	-0.1
WATZ	**Wairara**	**1.24**	**5**	P	Pn	23 21 08.1	0.0
PREZ	**Palmer Road**	**1.26**	**298**	P	Pn	23 21 09.5	+1.2
PREZ				P	Pn	23 21 09.5	+1.2
NMHZ	**Naumai**	**1.26**	**48**	P	Pn	23 21 09.2	+0.8
MRHZ	**Matea Rd**	**1.28**	**30**	P	Pn	23 21 08.6	0.0
ARHZ	**Aropaoanui**	**1.28**	**58**	P	Pn	23 21 08.8	+0.3
MHEZ	**Mangahewa**	**1.31**	**311**	P	Pn	23 21 10.2	+1.2
KHEZ	**Kahui Hut**	**1.38**	**297**	P	Pn	23 21 11.4	+1.4
NMEZ	**Namu Road**	**1.42**	**291**	P	Pn	23 21 11.6	+1.1
PAWZ	**Paruwai Farm**	**1.44**	**185**	P	Pn	23 21 10.2	-0.6
PKE	**Pukeiti**	**1.45**	**301**	P	Pn	23 21 12.3	+1.4
TRWZ	**Traveller**	**1.46**	**177**	P	Pn	23 21 10.8	-0.2
TRWZ				P		23 21 12.0	
MTHZ	**Maungataniwha**	**1.46**	**42**	P	Pn	23 21 11.4	+0.3
KUTZ	**Kaahu Road**	**1.46**	**7**	P	Pn	23 21 10.7	-0.4
NBEZ	**Newall Road No**	**1.49**	**296**	P	Pn	23 21 12.9	+1.5
MSWZ	**Moikau Station**	**1.50**	**190**	P	Pn	23 21 10.7	-0.8
ALRZ	**Allen Road**	**1.50**	**23**	P	Pn	23 21 11.3	-0.2
DUWZ	**D'Urville Isla**	**1.54**	**236**	P	Pn	23 21 12.3	+0.2
HIZ	**Hauiti**	**1.54**	**338**	P	Pn	23 21 12.7	+0.6
RAHZ	**Arahi**	**1.55**	**49**	P	Pn	23 21 12.3	+0.1
BHW	**Baring Head**	**1.56**	**200**	P	Pn	23 21 11.7	-0.8
PRRZ	**Plateau Road**	**1.57**	**24**	P	Pn	23 21 12.4	-0.2
TLZ	**Tolley Road**	**1.61**	**359**	P	Pn	23 21 13.3	+0.1
TCW	**Tory Channel**	**1.61**	**218**	P	Pn	23 21 12.8	-0.3
PLWZ	**Palliser**	**1.65**	**189**	P	Pn	23 21 12.7	-0.9
KNZ	**Kokohu**	**1.86**	**61**	P	Pn	23 21 15.7	-0.7
TUWZ	**Tuamarina**	**1.94**	**220**	P	Pn	23 21 16.9	-0.7
MHGZ	**Mahia Peninsul**	**1.96**	**67**	P	Pn	23 21 17.5	-0.3
NNZ	**Nelson**	**2.11**	**232**	P	Pn	23 21 19.7	-0.2
BSWZ	**Blackbirch Sta**	**2.20**	**216**	P	Pn	23 21 20.3	-0.8
MWZ	**Matawai**	**2.20**	**44**	P	Pn	23 21 20.7	-0.5
TOZ	**Tahuroa Road**	**2.21**	**358**	P	Pn	23 21 19.4	-1.8
QRZ	**Quartz Range**	**2.50**	**248**	P	Pn	23 21 24.3	-0.9
RUGZ	**Raukumara Rang**	**2.56**	**40**	P	Pn	23 21 25.7	-0.5
TWGZ	**Tauwhareparae**	**2.56**	**47**	P	Pn	23 21 25.7	-0.4
THZ	**Tophouse**	**2.73**	**227**	P	Pn	23 21 27.7	-0.7
HAZ	**Te Kaha**	**2.77**	**39**	P	Pn	23 21 28.5	-0.5
PKGZ	**Pakihiroa**	**2.82**	**44**	P	Pn	23 21 28.7	-1.0
MKAZ	**Moumakai**	**2.85**	**353**	P	Pn	23 21 30.8	+0.7
KHZ	**Kahutara**	**2.92**	**211**	P	Pn	23 21 29.4	-1.5
AWAZ	**Awhitu Peninsu**	**2.97**	**345**	P	Pn	23 21 32.3	+0.7
WMGZ	**Waiomatatini S**	**3.06**	**47**	P	Pn	23 21 31.4	-1.4
WTAZ	**Waiatarua**	**3.11**	**345**	P	Pn	23 21 34.8	+1.2
WCZ	**Waipu Caves**	**4.12**	**346**	P	Pn	23 21 48.2	+0.8

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*SOME **03** 23:39:26.8, 42°.50N×79°.63E, h20^{km}*
*KRNET **03** 23:39:27.0±0.1, 42°.56N×79°.64E, h13^{km}, mb2.9*
*NNC **03** 23:39:27.5±1.2, 42°.59N×79°.65E, h0^{km}, mb3.5, mpv3.2,*
Error ellipse: s-maj=8.0km s-min=4.4km az=137.0
ISC 03 23:39:27.8±1.1, **42°.57N**±0°.04×**79°.64E**±0°.04, **h10**^{km}**, n55,**
σ1^s.32/94**, 16C-13D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**0.73**	**322**	P	**Pg**	**23 39 41.3**	**-0.7**
	5.9nm,0.1s						
UZB				S	**Sg**	**23 39 51.6**	**-0.1**
	76nm,0.2s						
UZB	**Uzynbulak**	**0.73**	**322**	*e*P	**Pg**	**23 39 41.3**	**-0.7**
	baz=22						
UZB				*e*S	**Sg**	**23 39 51.6**	**-0.1**
	baz=22						
UZB	**Uzynbulak**	**0.73**	**322**	*e*P	**Pg**	**23 39 41.3**	**-0.7**
	5.9nm,0.1s						
UZB				*e*S	**Sg**	**23 39 51.6**	**-0.1**
	76nm,0.2s						
PDGK	**Podgornoye**	**0.77**	**352**	P	**Pg**	**23 39 42.0**	**-0.7**
	8.9nm,0.2s						
PDGK				S	**Sb**	**23 39 52.7**	**-1.3**
	18nm,0.2s						
PDGK	**Podgornoye**	**0.77**	**352**	⇑P	**Pg**	**23 39 41.8**	**-0.9**
	3.8nm,0.3s						
PDGK				⇑S	**Sb**	**23 39 52.5**	**-1.5**
	24nm,0.5s						
PDGK	**Podgornoye**	**0.77**	**352**	⇓*i*P	**Pg**	**23 39 42.0**	**-0.7**
	baz=52						
PDGK				⇓*i*S	**Sb**	**23 39 52.6**	**-1.3**
	baz=52						
PRZ	**Przheval'sk**	**0.92**	**265**	⇑*i*P	**Pg**	**23 39 44.6**	**-0.9**
	baz=66						
PRZ				⇑*i*S	**Sg**	**23 39 56.3**	**-1.2**
	baz=66						
KTMS	**Ketmen**	**1.02**	**31**	P	**Pg**	**23 39 46.6**	**-0.9**
	20nm,0.1s						
KTMS				S	**Sb**	**23 40 00.1**	**-1.1**
	23nm,0.3s						
KTMS	**Ketmen**	**1.02**	**31**	*e*P	**Pg**	**23 39 46.6**	**-0.9**
	baz=29						
KTMS				*e*S	**Sb**	**23 40 00.7**	**-0.6**
	baz=29						
KTMS	**Ketmen**	**1.02**	**31**	*e*P	**Pg**	**23 39 46.6**	**-0.9**
	6.3nm,0.1s						
KTMS				*e*S	**Sb**	**23 40 00.7**	**-0.6**
	23nm,0.3s						
SATY	**Saty**	**1.03**	**299**	P	**Pg**	**23 39 46.1**	**-1.5**
	10nm,0.1s						
SATY				S	**Sg**	**23 40 00.1**	**-1.0**
	42nm,0.1s						
SATY	**Saty**	**1.03**	**299**	*e*P	**Pg**	**23 39 46.1**	**-1.5**
	10nm,0.1s						
SATY				*e*S	**Sg**	**23 40 00.1**	**-1.0**
	42nm,0.1s						
MNBS	**Baschi**	**1.76**	**330**	P	**Pb**	**23 39 59.6**	**-0.7**
	3.7nm,0.1s						
MNBS				S	**Sg**	**23 40 23.2**	**-1.2**
	46nm,0.4s						
DJR	**Jarkent**	**1.77**	**4**	P	**Pb**	**23 39 59.9**	**-0.5**
	2.0nm,0.1s						
DJR				S	**Sg**	**23 40 24.3**	**-0.4**
	6.6nm,0.3s						
DJR	**Jarkent**	**1.77**	**4**	*e*P	**Pb**	**23 39 59.9**	**-0.5**
	1.0nm,0.3s						
DJR				*e*S	**Sg**	**23 40 23.5**	**-1.1**
	6.6nm,0.3s						
KDJ	**Kajisay**	**1.87**	**257**	⇓*i*P	**Pb**	**23 40 01.7**	**-0.5**
	baz=57						
KDJ				⇓*i*S	**Sb**	**23 40 26.2**	**+0.4**
	baz=57						
KOTS	**Kotyrbulak**	**1.97**	**291**	Pg	**Pb**	**23 40 04.1**	**+0.2**
	14nm,0.2s						
KOTS				Lg	Lg	23 40 31.0	
	36nm,0.3s						
KOTS	**Kotyrbulak**	**1.97**	**291**	*e*P	**Pb**	**23 40 04.1**	**+0.2**
	baz=91						
KOTS				*e*S	**Sg**	**23 40 31.0**	**-0.2**
	baz=91						
KOTS	**Kotyrbulak**	**1.97**	**291**	*e*P	**Pb**	**23 40 04.1**	**+0.2**
	14nm,0.2s						
KOTS				*e*S	**Sg**	**23 40 31.0**	**-0.2**
	36nm,0.3s						
MDOK	**Medeo**	**2.00**	**288**	Pn	**Pb**	**23 40 02.9**	**-1.4**
	2.8nm,0.3s						
MDOK				Sn	**Sb**	**23 40 30.2**	**+0.9**
	15nm,0.6s						
MDOK	**Medeo**	**2.00**	**288**	Pg	**Pb**	**23 40 03.2**	**-1.1**
	11nm,0.2s						
MDOK				Lg	Lg	23 40 29.5	
	18nm,0.5s						
MDOK	**Medeo**	**2.00**	**288**	*e*P	**Pb**	**23 40 03.2**	**-1.1**
	11nm,0.2s						
MDOK				*e*S	**Sb**	**23 40 29.5**	**+0.2**
	18nm,0.5s						
TNSS	**Tian-Shan**	**2.04**	**284**	Pg	**Pb**	**23 40 03.7**	**-1.4**
	10nm,0.3s						
TNSS				Lg	Lg	23 40 30.4	
	12nm,0.2s						
TNSS	**Tian-Shan**	**2.04**	**284**	*e*P	**Pb**	**23 40 03.7**	**-1.4**
	10nm,0.3s						
TNSS				*e*S	**Sb**	**23 40 30.4**	**-0.3**
	12nm,0.2s						
KNDC	**Almaty**	**2.07**	**289**	⇑Pn	**Pb**	**23 40 05.5**	**+0.1**
	7.5nm,0.4s						
KNDC				⇑Sn	**Sg**	**23 40 33.7**	**-0.6**
	24nm,0.7s						
ARXS	**Arharly**	**2.11**	**322**	Pg	**Pb**	**23 40 05.2**	**-0.9**
	7.3nm,0.4s						
ARXS				Lg	Lg	23 40 33.1	
	35nm,0.3s						
ARXS	**Arharly**	**2.11**	**322**	*e*P	**Pb**	**23 40 05.2**	**-0.9**
	7.3nm,0.4s						
ARXS				*e*S	**Sb**	**23 40 33.1**	**+0.7**
	35nm,0.3s						
IZV	**Izvestkoviy**	**2.27**	**283**	Pg	**Pb**	**23 40 07.8**	**-1.3**
	16nm,0.2s						
IZV				Lg	Lg	23 40 37.4	
	20nm,0.3s						
IZV	**Izvestkoviy**	**2.27**	**283**	*e*P	**Pb**	**23 40 07.8**	**-1.3**
	baz=83						
IZV				*e*S	**Sb**	**23 40 37.4**	**+0.1**
	baz=83						
IZV	**Izvestkoviy**	**2.27**	**283**	*e*P	**Pb**	**23 40 07.8**	**-1.3**
	16nm,0.2s						
IZV				*e*S	**Sb**	**23 40 37.4**	**+0.1**
	20nm,0.3s						
CHKK	**Chushkaly**	**2.33**	**304**	Pg	**Pb**	**23 40 08.7**	**-1.1**
	2.8nm,0.1s						
CHKK				Lg	Lg	23 40 39.6	
	27nm,0.2s						
CHKK	**Chushkaly**	**2.33**	**304**	*e*P	**Pb**	**23 40 08.7**	**-1.1**
	baz=5.0						
CHKK				*e*S	**Sb**	**23 40 39.1**	**+0.5**
	baz=5.0						
CHKK	**Chushkaly**	**2.33**	**304**	*e*P	**Pb**	**23 40 08.7**	**-1.1**
	2.9nm,0.3s						
CHKK				*e*S	**Sb**	**23 40 39.1**	**+0.5**
	27nm,0.2s						
MTBS	**Maitube**	**2.43**	**284**	Pg	**Pb**	**23 40 10.3**	**-1.3**
	10nm,0.2s						
MTBS				Lg	Lg	23 40 41.9	
	14nm,0.2s						
MTBS	**Maitube**	**2.43**	**284**	*e*P	**Pb**	**23 40 10.3**	**-1.3**
	10nm,0.2s						
MTBS				*e*S	**Sb**	**23 40 41.9**	**+0.3**
	14nm,0.2s						
KTBS	**Karatobe**	**2.45**	**299**	Pg	**Pb**	**23 40 10.5**	**-1.4**
	3.5nm,0.1s						
KTBS				Lg	Lg	23 40 42.8	
	31nm,0.4s						
KTBS	**Karatobe**	**2.45**	**299**	*e*P	**Pb**	**23 40 09.7**	**-2.3**
	3.5nm,0.1s						
KTBS				*e*S	**Sb**	**23 40 40.9**	**-1.2**
	31nm,0.4s						
ULHL	**Ulahol**	**2.54**	**264**	⇓*i*P	**Pn**	**23 40 10.8**	**+1.6**
	baz=64						
ULHL				⇓*i*S	**Sb**	**23 40 43.6**	**-1.3**
	baz=64						
TDK	**Taldyqorghan**	**2.59**	**340**	Pg	**Pb**	**23 40 13.8**	**-0.6**
	13nm,0.3s						
TDK				Lg	Lg	23 40 48.0	
	26nm,0.6s						
TDK	**Taldyqorghan**	**2.59**	**340**	*e*P	**Pb**	**23 40 13.8**	**-0.6**
	13nm,0.3s						
TDK				*e*S	**Sg**	**23 40 48.0**	**-3.1**
	26nm,0.6s						
KAPS	**Kapalarasan**	**2.72**	**356**	Pg	**Pb**	**23 40 16.0**	**-0.6**
	0.8nm,0.2s						
KAPS				Lg	Lg	23 40 52.2	
	6.5nm,0.4s						
BOOM	**Boomskoye usch**	**2.73**	**270**	⇓*i*P	**Pb**	**23 40 14.4**	**-2.5**
	baz=70						
BOOM				⇓*i*S	**Sb**	**23 40 47.9**	**-2.7**
	baz=70						
KST	**Kastek**	**2.75**	**281**	Pg	**Pb**	**23 40 15.4**	**-1.7**
	5.7nm,0.2s						
KST				Lg	Lg	23 40 51.1	
	8.4nm,0.3s						
KST	**Kastek**	**2.75**	**281**	*e*P	**Pb**	**23 40 15.4**	**-1.7**
	6.2nm,0.4s						
KST				*e*S	**Sb**	**23 40 50.5**	**-0.4**
	6.2nm,0.4s						
KUU	**Kurty**	**2.75**	**300**	Pg	**Pb**	**23 40 16.9**	**-0.2**
	1.4nm,0.2s						
KUU				Lg	Lg	23 40 52.4	
	13nm,0.3s						
KUU	**Kurty**	**2.75**	**300**	*e*P	**Pb**	**23 40 16.5**	**-0.6**
	0.7nm,0.2s						
KUU				*e*S	**Sb**	**23 40 52.4**	**+1.5**
	10.0nm,0.3s						
DGS	**Degeres**	**2.92**	**285**	Pg	**Pb**	**23 40 18.6**	**-1.4**
	5.7nm,0.3s						
DGS				Lg	Lg	23 40 56.5	
	23nm,0.5s						
DGS	**Degeres**	**2.92**	**285**	*e*P	**Pb**	**23 40 18.5**	**-1.5**
	5.7nm,0.3s						
DGS				*e*S	**Sb**	**23 40 56.0**	**+0.2**
	23nm,0.5s						
NRN	**Naryn**	**2.94**	**249**	⇓*i*P	**Pn**	**23 40 17.1**	**+2.2**
	baz=49						
NRN				⇓*i*S	**Sb**	**23 40 53.7**	**-2.9**
	baz=49						
TKM2	**Tokmak 2**	**3.00**	**278**	⇑Pn	**Pn**	**23 40 18.0**	**+2.4**
	0.9nm,0.3s						
TKM2				⇑Lg	Lg	23 41 01.6	
	2.0nm,0.3s						
TKM2	**Tokmak 2**	**3.00**	**278**	⇑*i*P	**Pn**	**23 40 17.9**	**+2.3**
	baz=78						
TKM2				⇑*i*S	**Sb**	**23 40 54.9**	**-3.3**
	baz=78						
KZA	**Kyzart**	**3.29**	**263**	⇑*i*P	**Pn**	**23 40 22.4**	**+2.6**
	baz=63						
KZA				⇑*i*S	**Sn**	**23 41 02.0**	**+2.8**
	baz=63						
AAK	**Ala-Archa**	**3.80**	**273**	⇑Pg	**Pb**	**23 40 35.7**	**+0.7**
	3.1nm,1.1s						
AAK				⇓Lg	Lg	23 41 27.7	
	1.7nm,0.3s						
MAKZ	**Makanchi**	**4.56**	**21**	⇑Pn	**Pn**	**23 40 38.1**	**+1.3**
	0.2nm,0.3s						
MAKZ				⇑Lg	Lg	23 41 50.8	
	0.3nm,0.4s						
MK31	**Makanchi Array**	**4.63**	**23**	⇑Pn	**Pn**	**23 40 39.3**	**+1.5**
	0.2nm,0.3s,baz=210,slow=14,SNR=24						
MK31				⇓Sn	**Sn**	**23 41 33.8**	**+2.1**
	0.1nm,0.3s,baz=203,slow=25						
MK31				⇓Lg	Lg	23 41 53.9	
	0.2nm,0.3s,baz=194,slow=28						

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*IDC **03** 23:40:12.5±0.9, 13°.49N×119°.91E, h0^{km}, mb3.8/10,*
mb1 3.9/10, mb1mx3.6/66, mbtmp3.8/10, Error ellipse:
s-maj=19.6km s-min=12.7km az=160.0
*ISCJB **03** 23:40:18.3±0.6, 13°.59N±0°.03×120°.10E±0°.06, h56^{km}±8^{km},*
mb3.9/10, Error ellipse: s-maj=10.0km s-min=4.6km
az=9.6
*MAN **03** 23:40:18.2, 13°.60N×120°.12E, h43^{km}, MS3.3*
MAN INTENSITY III - LUBANG OCCIDENTAL MINDORO.
ISC 03 23:40:19.2±1.2, **13°.59N**±0°.03×**120°.11E**±0°.07, **h49**^{km}±14^{km},
n23, σ0^s.87/32, **mb3.9**/10, **1C-2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.95**	**57**	Pg	**Pn**	**23 40 35.9**	**-0.4**
	568nm,0.3s,baz=257,slow=2.6,SNR=22						
TGY				Lg	Lg	23 40 50.0	
	2µm,0.3s,baz=323,slow=20,SNR=37						
TGY	**Tagaytay City**	**0.95**	**57**	⇓*e*P	**Pn**	**23 40 35.9**	**-0.4**
TGY				*e*S	**Sn**	**23 40 48.6**	**-0.2**
SJMP	**San Jose**	**1.49**	**139**	*e*P	**Pn**	**23 40 43.7**	**+0.1**
SJMP				*e*S	**Sn**	**23 41 01.9**	**0.0**
BUSP	**Coron**	**1.58**	**177**	*e*P	**Pn**	**23 40 45.2**	**+0.3**
BUSP				*e*S	**Sn**	**23 41 04.0**	**-0.1**
BOAC	**Boac**	**1.69**	**94**	*e*P	**Pn**	**23 40 45.5**	**-0.7**
BOAC				*e*S	**Sn**	**23 41 06.8**	**0.0**
PCPH	**Palayan**	**2.18**	**26**	⇓*e*P	**Pn**	**23 40 52.0**	**-0.9**
PCPH				*e*S	**Sn**	**23 41 18.0**	**-0.8**
OTRP	**Odiongan**	**2.23**	**123**	*e*P	**Pn**	**23 40 53.5**	**-0.1**
GQP	**Guinayangan**	**2.29**	**82**	⇑*e*P	**Pn**	**23 40 55.0**	**+0.5**
GQP				*e*S	**Sn**	**23 41 24.2**	**+2.7**
ENPP	**El Nido**	**2.46**	**196**	*e*P	**Pn**	**23 40 57.5**	**+0.6**
ENPP				*e*S	**Sn**	**23 41 26.3**	**+0.5**
BALP	**Baler**	**2.56**	**33**	*e*P	**Pn**	**23 40 58.9**	**+0.6**
SMPP	**San Manuel, Pa**	**2.60**	**12**	*e*P	**Pn**	**23 40 58.6**	**-0.2**
SMPP				*e*S	**Sn**	**23 41 28.7**	**-0.5**
CUYO	**Cuyo Island**	**2.86**	**162**	*e*P	**Pn**	**23 41 02.5**	**+0.1**
CUYO				*e*S	**Sn**	**23 41 33.9**	**-1.8**
CAUP	**Cauayan**	**3.72**	**26**	*e*P	**Pn**	**23 41 15.7**	**+1.6**
SONM	**Songino Array**	**36.00**	**344**	P	**P**	**23 47 15.9**	**+0.3**
	1.4nm,0.7s,baz=160,slow=9.5,SNR=15						
WRA	**Warramunga Arr**	**36.14**	**157**	P	**P**	**23 47 16.5**	**-0.5**
	0.3nm,0.4s,baz=336,slow=9.6,SNR=3.6						
ASAR	**Alice Springs**	**39.41**	**160**	P	**P**	**23 47 44.7**	**+0.1**
	0.4nm,0.5s,baz=344,slow=6.2,SNR=3.7						
MKAR	**Makanchi Array**	**45.78**	**324**	P	**P**	**23 48 37.2**	**+1.2**
	0.5nm,0.7s,baz=123,slow=8.8,SNR=5.9						
KURBB	**Kurchatov Arra**	**49.96**	**326**	P	**P**	**23 49 08.8**	**+0.5**
	0.9nm,0.8s,baz=125,slow=8.0,SNR=4.9						
BVAR	**Borovoye Array**	**55.54**	**326**	P	**P**	**23 49 49.9**	**+0.4**
	0.7nm,0.6s,baz=124,slow=12,SNR=4.7						
ARCES	**ARCESS Array B**	**78.98**	**339**	P	**P**	**23 52 17.0**	**-0.5**
	1.8nm,0.8s,baz=70,slow=7.9,SNR=6.4						
FINES	**FINESS Array B**	**80.10**	**331**	P	**P**	**23 52 23.4**	**-0.4**
	1.0nm,0.6s,baz=44,slow=4.8,SNR=5.5						
HFS	**Hagfors**	**86.30**	**331**	P	**P**	**23 52 55.6**	**-0.1**
	1.4nm,0.8s,baz=90,slow=3.2,SNR=4.6						
NOA	**NORSAR Array B**	**87.09**	**333**	P	**P**	**23 52 58.5**	**-1.2**
	0.9nm,0.8s,baz=106,slow=2.5,SNR=3.7						

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*ISK **03** 23:45:32.7, 37°.31N×37°.09E, h8^{km}, ML1.9/9*
*ISCJB **03** 23:45:33.3±0.5, 37°.30N±0°.03×37°.09E±0°.03, h8^{km}±4^{km},*
Error ellipse: s-maj=6.0km s-min=3.9km az=18.4
*DDA **03** 23:45:33.7, 37°.31N×37°.17E, h7^{km}±2^{km}, ML2.6*
ISC 03 23:45:33.4±1.0, **37°.31N**±0°.04×**37°.11E**±0°.03, **h9**^{km}±8^{km},
n16, σ0^s.49/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	**Gaziantep**	**0.16**	**151**	PG	**Pg**	**23 45 36.6**	**-0.3**
GAZ				SG	**Sg**	**23 45 39.7**	**+0.5**
KMRS	**Kahramanmaras**	**0.26**	**319**	PG	**Pg**	**23 45 38.4**	**-0.2**
KMRS				SG	**Sg**	**23 45 42.0**	**-0.1**
GZT	**Gaziantep**	**0.36**	**83**	*i* P	**Pg**	**23 45 40.7**	**+0.1**
GZT				IAML_P			
	comp=Z,1µm,0.1s						
KUZU	**Kuzuini**	**0.54**	**183**	*i* P	**Pb**	**23 45 45.2**	**+0.1**
KUZU				IAML_P			
	comp=Z,3µm,0.1s						
ANDN	**Andirin**	**0.67**	**294**	*i* P	**Pg**	**23 45 46.4**	**+0.1**
ANDN				IAML_P			
	comp=Z,421nm,0.1s						
ATAB	**Bozova**	**0.95**	**80**	*i* P	**Pg**	**23 45 51.4**	**-0.4**
ATAB				*i* S	**Sb**	**23 46 04.4**	**-0.6**
KOZT	**Kozan**	**1.04**	**280**	PG	**Pg**	**23 45 52.5**	**-0.8**
KOZT				SG	**Sg**	**23 46 07.3**	**+0.5**
SAIM	**ADANA**	**1.05**	**309**	*i* P	**Pn**	**23 45 54.7**	**+0.2**
SAIM				*i* S	**Sn**	**23 46 10.1**	**+0.8**
SAIM				IAML_P			
	comp=Z,214nm,0.1s						
CEYT	**Ceyhan**	**1.13**	**255**	PN	**Pg**	**23 45 54.2**	**-0.9**
CEYT				SN	**Sb**	**23 46 10.2**	**+0.3**
AKCD	**Akcadag**	**1.17**	**33**	*i* P	**Pn**	**23 45 56.1**	**0.0**
AKCD				*i* S	**Sn**	**23 46 12.2**	**-0.2**
AKCD				IAML_P			
	comp=Z,670nm,0.2s						
TAHT	**Tahtakopru-Hat**	**1.20**	**219**	PN	**Pg**	**23 45 56.0**	**-0.3**
SURC	**SANLIURFA_SURC**	**1.27**	**109**	*i* P	**Pn**	**23 45 57.1**	**-0.4**
SURC				*i* S	**Sn**	**23 46 14.7**	**0.0**
SURC				IAML_P			
	comp=Z,285nm,0.1s						
DARE	**Darende-Malaty**	**1.29**	**13**	PN	**Pn**	**23 45 57.6**	**-0.1**
URFA	**Urfa**	**1.37**	**84**	PN	**Pb**	**23 45 58.9**	**-0.3**
PTK	**Pertek**	**2.39**	**48**	PN	**Pn**	**23 46 13.5**	**+0.5**
MAZI	**Mazidag**	**2.66**	**86**	PN	**Pn**	**23 46 17.5**	**+0.9**

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*IDC **03** 23:46:51.0±0.8, 4°.10S×102°.22E, h0^{km}, mb4.0/14,*
mb1 4.2/14, mb1mx3.8/67, mbtmp4.0/14, Error ellipse:
s-maj=41.2km s-min=14.6km az=53.0
*ISCJB **03** 23:47:01.4±0.4, 4°.05S±0°.06×102°.40E±0°.05, h100^{km}±3^{km},*
mb4.2/32, Error ellipse: s-maj=12.4km s-min=4.2km
az=39.8
*NEIC **03** 23:47:02.4±0.7, 3°.90S×102°.51E, h86^{km}±6^{km}, mb4.2/18,*
Error ellipse: s-maj=13.3km s-min=5.0km az=53.0
*DJA **03** 23:47:03.2±0.4, 4°S±3°×10°2E±°, h65^{km}±5^{km}, M4.2/12,*
MLv4.2/12
ISC 03 23:47:02.1±0.8, **4°.07S**±0°.07×**102°.41E**±0°.06, **h91**^{km}±6^{km},
n72, σ0^s.95/86, **mb4.2**/32, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

MNAI	Manna	0.61	118	*e*Pn	Pn	23 47 18.3	+0.4
MNAI				*e*Sn	Sn	23 47 28.3	-1.3
MNAI	Manna	0.61	118	P	Pn	23 47 18.2	+0.3
MNAI				S	Sn	23 47 29.6	-0.1
MASI	Maura Aman, Be	0.94	349	P	Pn	23 47 21.5	+0.2
MASI				S	Sn	23 47 36.2	+0.6
LHSI	Lahat	1.13	78	P	Pn	23 47 24.2	+0.8
LHSI				S	Sn	23 47 39.9	+0.5
MDSI	Maura Dua	1.81	103	P	Pn	23 47 32.9	+1.0
MDSI				S	Sn	23 47 56.0	+1.5
LWLI	Liwa	1.89	120	P	Pn	23 47 34.7	+1.6
KRJI	Kerinci	2.19	334	P	Pn	23 47 38.6	+1.7
KRJI				S	Sn	23 48 05.9	+2.4
KASI	Kota Agung	2.53	125	P	Pn	23 47 42.6	+1.2
KASI				S	Sn	23 48 11.9	+0.4
KLI	Kotabumi	2.56	108	P	Pn	23 47 42.6	+0.8
JMBI	JAMBI	2.71	27	P	Pn	23 47 44.5	+0.6
PPSI	Pulau Pagai	2.73	298	P	Pn	23 47 45.2	+1.1
PPSI				S	Sn	23 48 15.1	-1.2
PDSI	Padang	3.70	328	P	Pn	23 47 57.1	0.0
PPI	Padang Panjang	4.12	331	P	Pn	23 48 02.9	+0.1
SISI	Saibi	4.30	309	P	Pn	23 48 05.3	0.0
MNSI	Mandailing Nat	5.60	330	P	Pn	23 48 22.2	-0.8
CISI	Cisompet, Garu	6.39	123	*e*Pn	Pn	23 48 33.7	-0.2
CISI				*e*Sn	Sn	23 49 42.4	-3.1
CISI	Cisompet, Garu	6.39	123	P	Pn	23 48 33.1	-0.7
CMJI	Cimerak	7.04	122	P	Pn	23 48 41.8	-0.9
GSI	Gunungsitoli	7.20	318	P	Pn	23 48 44.2	-0.7
CM31	Chiang Mai Arr	22.65	351	*e*P	P	23 51 55.5	-0.5
	3.7nm,0.9s						
CMAR	Chiang Mai Arr	22.65	351	P	P	23 51 55.4	-0.5
	1.0nm,0.3s,baz=181,slow=9.3,SNR=7.5						
FITZ	Fitzroy Crossi	26.66	123	*e*P	P	23 52 33.5	+0.7
	5.5nm,1.3s						
FITZ				*e*PcP	PcP	23 55 55.6	+1.0
FITZ	Fitzroy Crossi	26.66	123	P	P	23 52 33.5	+0.7
	1.4nm,0.6s,baz=284,slow=6.3,SNR=5.6						
FITZ				PcP	PcP	23 55 55.6	+1.0
	1.3nm,1.0s,baz=297,slow=4.5,SNR=2.6						
H08S2	Diego Garcia H	29.97	262	T	T	00 22 38.3	
	baz=85						
H08S3	Diego Garcia H	29.98	262	T	T	00 22 31.7	
	baz=85						
H08S1	Diego Carcia H	29.99	262	T	T	00 22 59.8	
	baz=85						
SHL	Shillong	31.18	341	*e*P	P	23 53 11.2	-1.8
	5.1nm,0.3s						
YOJ	Yonaguni jima	34.73	34	*e*P	P	23 53 41.4	-2.3
	182nm,1.3s						
WR1	Warramunga Arr	34.88	120	*e*P	P	23 53 45.8	+0.7
	2.1nm,0.6s						
WR1				*e*PcP	PcP	23 56 17.4	+1.1
WRA	Warramunga Arr	34.88	120	P	P	23 53 45.8	+0.7
	0.9nm,0.5s,baz=302,slow=8.9,SNR=15						
WRA				PcP	PcP	23 56 17.4	+1.1
	0.4nm,0.7s,baz=309,slow=2.4,SNR=4.6						
WRAB	Tennant Creek	34.88	120	*e*P	P	23 53 45.9	+0.8
	4.4nm,1.9s						
WB2	Warramunga Arr	34.89	120	*e*P	P	23 53 45.8	+0.5
	6.8nm,1.4s						
AS31	Alice Springs	36.09	126	*e*P	P	23 53 56.4	+0.9
	0.9nm,0.4s						
AS31				*e*PcP	PcP	23 56 21.6	+1.6
ASAR	Alice Springs	36.09	126	P	P	23 53 56.4	+0.9
	0.7nm,0.4s,baz=301,slow=7.2,SNR=6.0						
ASAR				PcP	PcP	23 56 21.6	+1.6
	0.6nm,0.4s,baz=317,slow=2.7,SNR=4.0						
NIL	Nilore	46.55	326	*e*P	P	23 55 20.5	-0.5
	4.3nm,1.1s						
KDJ	Kajisay	51.39	336	*e*P	P	23 55 58.1	+0.2
	2.7nm,0.7s						
SONA0	Songino Array	51.81	3	*e*P	P	23 56 02.0	+1.1
SONA0				*e*PcP	PcP	23 57 13.1	+0.3
SONM	Songino Array	51.81	3	P	P	23 56 02.0	+1.1
	1.9nm,0.6s,baz=186,slow=9.1,SNR=21						
SONM				PcP	PcP	23 57 13.1	+0.3
	0.5nm,0.5s,baz=159,slow=4.1,SNR=6.4						
SONA1	Songino Array	51.82	3	*e*P	P	23 56 01.1	+0.1
GAR	Garm	52.10	328	*e*P	P	23 56 02.3	-1.0
	3.8nm,1.1s						
CHGR	Chuyangaron	52.47	327	*e*P	P	23 56 05.8	-0.1
	4.2nm,1.0s						
MK01	Makanchi Array	53.66	343	*e*P	P	23 56 14.3	-0.1
MK31	Makanchi Array	53.68	343	*e*P	P	23 56 14.6	0.0
	1.3nm,0.6s						
MK32	Makanchi Array	53.68	343	*e*P	P	23 56 14.8	+0.2
MKAR	Makanchi Array	53.68	343	*e*P	P	23 56 14.6	0.0
	14nm,0.5s						
MKAR	Makanchi Array	53.68	343	P	P	23 56 14.8	+0.2
	1.7nm,0.4s,baz=152,slow=9.2,SNR=29						
MAKZ	Makanchi	53.79	343	*e*P	P	23 56 14.5	-0.9
	2.6nm,1.5s						
TLY	Talaya	55.55	1	*e*P	P	23 56 26.4	-1.6
	3.4nm,0.8s						
KURBB	Kurchatov Arra	58.22	342	P	P	23 56 46.3	-0.6
	0.9nm,0.8s,baz=155,slow=6.7,SNR=8.1						
KURK	Kurchatov	58.28	342	*e*P	P	23 56 46.8	-0.4
KLR	Kul'dur	58.88	22	P	P	23 56 51.9	+0.4
	0.8nm,0.5s,baz=228,slow=3.4,SNR=5.0						
ZAA0	Zalesovo Array	59.66	348	*e*P	P	23 56 56.7	-0.1
	2.6nm,0.6s						
ZALV	Zalesovo Beam	59.66	348	P	P	23 56 56.2	-0.5
	2.7nm,0.3s,baz=162,slow=6.2,SNR=25						
ZAA1	Zalesovo Array	59.66	348	*e*P	P	23 56 56.2	-0.6
BVAR	Borovoye Array	62.96	339	P	P	23 57 18.7	-0.3
	1.5nm,0.5s,baz=150,slow=10.0,SNR=5.0						
ABKAR	Akbulak array	64.61	331	*e*P	P	23 57 30.1	+0.1
	1.5nm,0.9s						
KBZ	Khabaz	71.44	319	P	P	23 58 13.9	+1.0
	2.2nm,0.9s,baz=139,slow=7.1,SNR=3.8						
BR101	Keskin Array S	76.49	312	*e*P	P	23 58 42.9	+0.2
BRTR	Keskin Array B	76.49	312	P	P	23 58 42.9	+0.2
	0.8nm,0.8s,baz=126,slow=6.1,SNR=3.9						
AKASG	Malin Array Be	82.59	322	P	P	23 59 15.4	+0.2
	0.1nm,0.3s,baz=94,slow=5.1,SNR=3.3						
AKBB	Malin Array Si	82.59	322	*e*P	P	23 59 15.4	+0.2
	2.6nm,1.0s						
ARA0	ARCESS Array S	89.23	340	*e*P	P	23 59 48.3	+0.7
ARCES	ARCESS Array B	89.23	340	P	P	23 59 48.3	+0.7
	1.7nm,0.9s,baz=108,slow=5.8,SNR=3.5						
SPA0	Spitsbergen Ar	93.14	348	*e*P	P	00 00 04.9	-0.7
	47nm,1.4s						
SPITS	Spitsbergen Ar	93.14	348	P	P	00 00 04.9	-0.7
	9.4nm,1.1s,baz=107,slow=9.2,SNR=6.0						
PD31	Pinedale Array	132.13	32	*e*PKPdf	PKPdf	00 06 06.4	+0.3
PDAR	Pinedale Array	132.13	32	PKP	PKiKP	00 06 07.5	+0.3
	0.1nm,0.3s,baz=242,slow=1.9,SNR=2.5						
CPUP	Villa Florida	143.97	212	PKP	PKPdf	00 06 28.6	+0.7
	1.2nm,0.6s,baz=225,slow=2.9,SNR=2.9						
LTX	Lajitas	144.76	42	*e*PKPdf	PKPdf	00 06 29.6	+0.3
TXAR	Lajitas Array	144.76	42	PKP	PKPdf	00 06 29.6	+0.3
	1.7nm,0.5s,baz=284,slow=0.6,SNR=30						
BDFB	Brasilia	144.78	236	PKP	PKiKP	00 06 31.8	-1.7
	2.4nm,0.5s,baz=76,slow=5.4,SNR=5.3						
JCT	Junction City	146.39	36	*e*PKPdf	PKPbc	00 06 33.3	-0.1

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*IDC **03** 23:48:06.0±1.2, 40°.98N×47°.94E, h0^{km}, mb3.4/4, mb1 3.5/9, mb1mx3.3/63, mbtmp3.4/9, ML2.9/5, Error ellipse: s-maj=29.8km s-min=10.3km az=154.0*

*NSSP **03** 23:48:07.1, 40°.72N×47°.88E, h10^{km}, Ms3.5*

*MOS **03** 23:48:09.2±1.1, 40°.70N×48°.21E, h15^{km}, mb3.8/3, Error ellipse: s-maj=9.7km s-min=4.2km az=118.9*

*DRS **03** 23:48:09.5±0.0, 40°.46N×48°.55E, h26^{km}, ML3.6/3*

*AZER **03** 23:48:10.8±0.0, 40°.85N×47°.98E, h44^{km}, ml3.7/28, Error ellipse: s-maj=1.1km s-min=0.8km az=27.0*

*TEH **03** 23:48:11.8, 40°.92N×47°.97E, h28^{km}, ML3.7*

*NNC **03** 23:48:17.4±11.0, 41°.29N×49°.43E, h0^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=118.4km s-min=42.0km az=71.0*

ISC 03 23:48:12.2±0.8**, 40°.84N**±0°.02×**47°.94E**±0°.02**, h34**^{km}±2^{km}**, n142, σ2^{s}.22**/187**, 41C-34D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QBL	Gabala	0.13	323	*e*Pg	Pb	23 48 19.3	+1.0
QBL	Gabala	0.13	323	⇑P	Pb	23 48 19.4	+1.0
	SNR=473						
QBL				⇓S	Sb	23 48 25.6	+3.1
IML	Ismayilli	0.19	104	*e*Pg	Pn	23 48 19.1	+1.7
IML	Ismayilli	0.19	104	P	Pn	23 48 19.1	+1.7
	SNR=2340						
IML				⇓S	Sb	23 48 25.5	+2.2
XNQ	Khinaliq	0.36	24	*e*Pg	Pb	23 48 21.0	0.0
XNQ	Khinaliq	0.36	24	⇓P	Pb	23 48 21.0	0.0
	SNR=276						
XNQ				⇑S	Sn	23 48 28.5	+1.6
PQL	Pirkuli	0.49	96	*e*Pg	Pb	23 48 22.8	0.0
PQL	Pirkuli	0.49	96	P	Pb	23 48 22.9	0.0
	SNR=7528						
PQL				⇓S	Sb	23 48 31.7	+1.5
KDMR	Kurdemir	0.50	158	*e*Pg	Pb	23 48 23.2	+0.4
KDMR	Kurdemir	0.50	158	⇑P	Pb	23 48 23.1	+0.4
	SNR=110						
KDMR				⇑S	Sn	23 48 32.9	+2.6
ZRD	Zardab	0.59	200	*e*Pg	Pn	23 48 25.2	+1.1
ZRD	Zardab	0.59	200	⇓P	Pn	23 48 25.3	+1.1
	SNR=309						
ZRD				⇓S	Sn	23 48 36.9	+4.3
QUB	Quba	0.62	30	*e*Pg	Pn	23 48 25.8	+1.1
MNGR	Mingechevir, A	0.66	264	PG	Pn	23 48 26.1	+1.1
MNGR	Mingechevir, A	0.66	264	*e*Pg	Pn	23 48 26.1	+1.1
MNGR	Mingechevir, A	0.66	264	⇓P	Pn	23 48 26.1	+1.1
	SNR=87						
MNGR				⇓S	Sb	23 48 38.4	+4.2
QUBA	Quba, Azerbaij	0.66	39	P	Pn	23 48 25.9	+0.7
	SNR=509						
QUBA				⇑S	Sb	23 48 37.2	+2.7
SEKA	Sheki	0.67	303	PG	Pn	23 48 25.6	+0.2
SEKA	Sheki	0.67	303	*e*Pg	Pn	23 48 25.6	+0.2
SEKA	Sheki	0.67	303	⇓P	Pn	23 48 25.7	+0.3
	SNR=1891						
SEKA				⇓S	Sb	23 48 37.1	+2.2
QSAR	Qusar	0.72	20	⇓P	Pn	23 48 26.7	+0.7
QSAR				⇑S	Sb	23 48 38.5	+2.5
ATGJ	Altiaghaj	0.75	88	*e*Pg	Pn	23 48 26.6	+0.1
ATGJ	Altiaghaj	0.75	88	P	Pn	23 48 26.7	+0.1
	SNR=1316						
ATGJ				⇓S	Sb	23 48 39.0	+1.9
SIZA	Siyzn	0.76	72	*e*Pg	Pn	23 48 26.7	0.0
SIZA	Siyzn	0.76	72	⇑P	Pn	23 48 26.6	0.0
	SNR=442						
SIZA				⇓S	Sb	23 48 39.3	+2.0
KSMR	Kasumkent	0.78	10	*i* PG	Pn	23 48 27.2	+0.4
KSMR				*e*S	Sb	23 48 40.0	+2.3
KSMR				pmax	pmax		
	comp=Z,2µm,0.2s						
KSMR	Kasumkent	0.78	10	*i* Pg	Pn	23 48 27.2	+0.4
KSMR				*e*Sg	Sb	23 48 40.0	+2.3
GBS	Qobustan	0.82	112	*e*Pg	Pn	23 48 28.4	+1.1
GBS	Qobustan	0.82	112	P	Pn	23 48 28.5	+1.1
	SNR=158						
GBS				⇓S	Sb	23 48 41.0	+2.2
BRDA	Brd	0.82	226	*e*Pg	Pn	23 48 28.6	+1.3
BRDA	Brd	0.82	226	P	Pn	23 48 28.6	+1.3
	SNR=207						
BRDA				⇓S	Sb	23 48 42.1	+3.3
SAAT	Saatly	1.04	159	*e*Pg	Pn	23 48 29.8	-0.6
SAAT	Saatly	1.04	159	⇑P	Pn	23 48 29.9	-0.5
	SNR=6.6						
SAAT				⇑S	Sn	23 48 45.2	+1.4
ALIB	Äli-Bayra	1.20	137	*e*Pg	Pn	23 48 34.1	+1.6
ALIB	Äli-Bayra	1.20	137	⇑P	Pn	23 48 34.3	+1.8
	SNR=45						
ALIB				⇓S	Sb	23 48 52.0	+2.5
DRN	Derbent	1.22	14	⇑*e*PG	Pn	23 48 32.8	-0.1
DRN				*e*		23 48 49.6	
DRN				pmax	pmax		
	comp=Z,333nm,0.6s						
DRN				smax	smax		
	comp=N,839nm,0.6s						
DRN	Derbent	1.22	14	*e*Pg	Pn	23 48 32.0	-0.9
DRN	Derbent	1.22	14	⇑*e*Pg	Pn	23 48 33.0	+0.1
	comp=N,333nm,0.7s						
DRN				⇑*e*Sg	Sn	23 48 49.4	+1.1
	comp=N,839nm,0.6s						
GANJ	Ganja	1.25	262	PG	Pn	23 48 33.2	-0.1
GANJ	Ganja	1.25	262	*e*Pg	Pn	23 48 33.2	-0.1
GANJ	Ganja	1.25	262	⇑P	Pn	23 48 33.2	-0.1
	SNR=273						
GANJ				⇑S	Sn	23 48 50.0	+1.0
ZKTA	Zakatala	1.28	309	PG	Pn	23 48 34.4	+0.8
ZKTA	Zakatala	1.28	309	*e*Pg	Pn	23 48 34.4	+0.8
ZKTA	Zakatala	1.28	309	P	Pn	23 48 34.5	+0.8
	SNR=1145						
ZKTA				⇓S	Sb	23 48 53.0	+1.2
URKR	Urkarakh	1.34	350	⇑*e*PG	Pn	23 48 35.5	+0.8
URKR				*e*		23 48 58.1	
URKR	Urkarakh	1.34	350	*e*Pg	Pn	23 48 35.6	+0.9
URKR				*e*Sg	Sn	23 48 54.1	+2.6
GOBA	Gobu	1.43	107	*e*Pn	Pn	23 48 36.8	+1.0
GOBA	Gobu	1.43	107	⇑P	Pn	23 48 36.8	+1.0
GOBA				⇓S	Sn	23 48 55.1	+1.8
KMKR	Kumukh	1.44	334	*e*PN	Pn	23 48 38.0	+1.9
KMKR				pmax	pmax		
	comp=Z,191nm,0.4s						
KMKR	Kumukh	1.44	334	*e*Pg	Pn	23 48 38.0	+1.9
KMKR				*e*Sg	Sb	23 48 58.0	+1.4
DDFL	Dedoflistskaro	1.51	294	P	Pn	23 48 39.4	+2.5
GLBA	Clilabad	1.63	168	*e*Pn	Pn	23 48 38.5	0.0
GLBA	Clilabad	1.63	168	⇑Pn	Pn	23 48 38.5	0.0
	SNR=232						
GLBA				⇓Sn	Sn	23 48 59.6	+1.3
GDB	GEDABAY	1.67	267	*e*Pn	Pn	23 48 39.2	0.0
GDB	GEDABAY	1.67	267	Pn	Pn	23 48 39.2	0.0
	SNR=360						
GDB				⇓Sn	Sn	23 49 00.9	+1.4
GNBR	Gunib	1.71	335	⇓*e*PN	Pn	23 48 42.2	+2.5
GNBR				pmax	pmax		
	comp=Z,183nm,0.6s						
GNBR	Gunib	1.71	335	⇓*e*Pn	Pn	23 48 42.8	+3.1
	comp=Z,183nm,0.6s						
GNBR				⇑*e*Sn	Sb	23 49 06.2	+1.9
	comp=Z,556nm,0.7s						
VADZ	Vardenis	1.80	249	*i* P	Pn	23 48 42.0	+0.9
VADZ				*i* S	Sn	23 49 06.5	+3.5
ARKR	Arakani	1.90	338	*e*PN	Pn	23 48 46.0	+3.7
ARKR				*e*S	Sb	23 49 15.0	+5.4
ARKR				pmax	pmax		
	comp=Z,96nm,0.3s						
ARKR	Arakani	1.90	338	*e*Pn	Pn	23 48 46.0	+3.7
ARKR				*e*Sn	Sb	23 49 15.0	+5.4
XNZR	Khunzakh	1.94	332	⇑*e*PN	Pn	23 48 46.5	+3.6
XNZR				*e*		23 49 16.6	
XNZR	Khunzakh	1.94	332	*e*Pn	Pn	23 48 45.6	+2.7
XNZR				*e*Sn	Sb	23 49 10.9	+0.1
QZX	Qazax, Azerbai	1.96	277	*e*Pn	Pn	23 48 43.5	+0.4
QZX	Qazax, Azerbai	1.96	277	⇑Pn	Pn	23 48 43.4	+0.3
	SNR=120						
QZX				⇑Sn	Sn	23 49 07.6	+1.1
UNCR	Uncukul	2.06	336	*e*PN	Pn	23 48 46.0	+1.5
UNCR				*e*S	Sn	23 49 13.0	+4.0
UNCR				pmax	pmax		
	comp=Z,68nm,0.3s						
UNCR	Uncukul	2.06	336	*e*Pn	Pn	23 48 46.0	+1.5
UNCR				*e*Sn	Sn	23 49 13.0	+4.0
BUJR	Buynaksk	2.08	343	*e*PN	Pn	23 48 48.0	+3.3
BUJR				*e*S	Sb	23 49 15.5	+0.8
BUJR	Buynaksk	2.08	343	*e*Pn	Pn	23 48 48.0	+3.3
BUJR				*e*Sn	Sb	23 49 15.5	+0.8
KRNR	Karanay	2.13	339	PN	Pb	23 48 51.0	+0.8
KRNR				*e*S	Sb	23 49 23.5	+7.2
KRNR				pmax	pmax		
	comp=Z,49nm,0.3s						
KRNR	Karanay	2.13	339	*e*Pn	Pb	23 48 51.0	+0.8
KRNR				*e*Sn	Sb	23 49 23.5	+7.2
MAK	Makhachkala	2.15	351	*e*PN	Pn	23 48 47.5	+2.0
MAK				*e*		23 48 50.9	
MAK				*e*S	Sb	23 49 17.2	+0.7
MAK				*e*		23 49 22.0	
MAK				pmax	pmax		
	comp=Z,174nm,0.4s						
LRK	Lerik	2.21	172	*e*Pn	Pn	23 48 46.6	-0.1
LRK	Lerik	2.21	172	⇑Pn	Pn	23 48 46.4	-0.3
	SNR=127						
LRK				⇓Sn	Sn	23 49 14.5	+1.5
LKRN	Lenkeran, Azer	2.22	163	PN	Pn	23 48 45.8	-0.8
LKRN	Lenkeran, Azer	2.22	163	*e*Pn	Pn	23 48 45.8	-0.8
LKRN	Lenkeran, Azer	2.22	163	⇑Pn	Pn	23 48 45.8	-0.8
	SNR=7.7						
LKRN				⇓Sn	Sn	23 49 13.8	+1.0
BTLR	Botlikh	2.23	325	⇑*e*PN	Pb	23 48 52.4	+0.5
BTLR				*e*		23 49 24.6	
BTLR				pmax	pmax		
	comp=Z,97nm,0.6s						
BTLR				smax	smax		
	comp=N,137nm,0.9s						
BTLR	Botlikh	2.23	325	⇑*e*Pn	Pb	23 48 52.6	+0.7
	comp=N,97nm,0.6s						
BTLR				⇑*e*Sn	Sb	23 49 22.9	+3.8
	comp=N,137nm,0.9s						
DBC	Dubki	2.33	339	⇓*i*PN	Pn	23 48 49.8	+1.6
DBC				pmax	pmax		
	comp=Z,78nm,0.4s						
DBC	Dubki	2.33	339	*i* Pn	Pn	23 48 49.8	+1.6
DBC				*i* Sn	Sn	23 49 18.5	+2.8
ASTR	Astara	2.37	164	*e*Pn	Pn	23 48 47.9	-0.7
ASTR	Astara	2.37	164	⇑Pn	Pn	23 48 47.6	-1.0
	SNR=8.6						
ASTR				⇓Sn	Sn	23 49 18.7	+2.2
ORD	Ordubad	2.43	219	*e*Pn	Pn	23 48 50.7	+1.2
ORD	Ordubad	2.43	219	⇑Pn	Pn	23 48 50.8	+1.2
ORD				⇓Sn	Sn	23 49 19.3	+1.2
NAX	Nakhchivan	2.51	229	PN	Pn	23 48 52.4	+1.7
NAX	Nakhchivan	2.51	229	*e*Pn	Pn	23 48 52.4	+1.7
NAX	Nakhchivan	2.51	229	⇓Pn	Pn	23 48 52.4	+1.7
	SNR=9.4						
NAX				⇓Sn	Sn	23 49 22.8	+2.6
DVE	Vedeno	2.51	328	*e*PN	Pn	23 48 52.1	+1.4
DVE				pmax	pmax		
	comp=Z,83nm,0.6s						
GNI	Garni	2.54	255	⇓*i*P	Pn	23 48 52.5	+1.4
GNI				⇓*i*S	Sb	23 49 27.0	-1.0
GNI	Garni	2.54	255	*e*Pn	Pn	23 48 52.8	+1.7
GNI	Garni	2.54	255	Pn	Pn	23 48 52.9	+1.8
	comp=Z,12nm,0.3s,baz=291,slow=4.6,SNR=48						
GNI				Lg	Lg	23 49 28.7	
	comp=Z,12nm,0.3s,baz=329,slow=22,SNR=6.6						
TBLG	Delisi	2.58	291	P	Pn	23 48 51.9	+0.4
TBLG				S	Sn	23 49 22.6	+1.0
TBLG	Delisi	2.58	291	*e*PN	Pn	23 48 51.9	+0.4
HYR	Heyderabad	2.62	246	*e*Pn	Pn	23 48 53.9	+1.8
HYR	Heyderabad	2.62	246	⇓Pn	Pn	23 48 53.9	+1.8
HYR				⇑Sn	Sn	23 49 23.4	+0.7
IMRD	Marand	2.74	220	*e*Pn	Pn	23 48 54.8	+0.9
IMRD				IAMB	IAmb	23 49 40.6	
	comp=Z,3µm,0.6s						
GROC	Groznyy	2.85	327	*e*PN	Pb	23 49 01.2	-1.2
GROC				*e*S	Sb	23 49 40.0	+3.2
GROC				pmax	pmax		
	comp=Z,36nm,0.6s						
GROC				smax	smax		
	comp=N,275nm,1.0s						
GROC				smax	smax		
	comp=N,652nm,1.0s						
ITBZ	Tabriz	2.95	209	*e*Pn	Pn	23 48 58.2	+1.4
ITBZ				IAMB	IAmb	23 49 35.9	
	comp=Z,1µm,0.3s						
TRLG	Trialeti	2.98	285	P	Pn	23 48 57.8	+0.6
TRLG				S	Sn	23 49 32.3	+0.4
IBST	Bostanabad	3.24	195	*e*Pn	Pn	23 49 00.6	-0.2
IBST				IAMB	IAmb	23 49 15.2	
	comp=Z,781nm,0.3s						
LACR	Lac	3.37	307	*ce*PN	Pn	23 49 05.3	+2.8
IAZR	Azarshahr	3.51	206	*e*Pn	Pn	23 49 05.7	+1.2
IAZR				IAMB	IAmb	23 50 13.7	
	comp=Z,1µm,0.5s						
IAZR				IAMB	IAmb	23 50 16.1	
	comp=E,3µm,0.4s						
BTKR	Batakoyurt	3.58	316	⇑*e*PN	Pb	23 49 12.7	-2.1
ZEI	Tsey	3.59	304	*ce*PN	Pn	23 49 07.8	+2.1
KORR	Kora	3.66	309	*ce*PN	Pn	23 49 12.9	+6.5
DIGR	Digorskoe uzhe	3.85	304	*ce*PN	Pn	23 49 13.6	+4.4
LSNR	Lesken	3.92	310	*ce*PN	Pn	23 49 15.5	+5.5
NCK	Nalchik	4.18	311	*i* PN	Pn	23 49 18.6	+5.0
NEY	Neytrino	4.57	303	*i* PN	Pn	23 49 23.4	+4.3
KBZ	Khabaz	4.73	309	Pn	Pn	23 49 24.6	+3.6
	comp=E,0.1nm,0.3s,baz=160,slow=8.5,SNR=2.7						
KBZ				Lg	Lg	23 50 36.0	
	comp=E,0.9nm,0.3s,baz=115,slow=14,SNR=2.6						
SHA1	Shidzhatmaz	4.88	308	*i* PN	Pn	23 49 28.3	+5.0
KVAR	Kislovodsk Arr	4.98	310	Pn	Pn	23 49 28.1	+3.5
	baz=76,slow=19,SNR=1.6						
KVAR				Sn	Sn	23 50 18.6	-2.4
	baz=326,slow=18,SNR=2.5						
KIV	Kislovodsk	4.99	310	*e*PN	Pn	23 49 30.1	+5.4
KIV				*e*S	Sb	23 50 31.8	-6.4
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOF	Gofitskoye	5.54	321	*e*P	Pn	23 49 31.5	-0.7
GOF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
IPRN	Peran	5.74	142	*e*Pn	Pn	23 49 32.4	-2.7
IPRN				IAMB	IAmb	23 49 36.4	
	comp=Z,1µm,0.2s						
IDMV	Damavand	6.16	147	*e*Pn	Pn	23 49 41.2	+0.2
IDMV				IAMB	IAmb	23 49 43.9	
	comp=Z,768nm,0.2s						
IVIS	Veis	6.36	188	*e*Pn	Pn	23 49 45.8	+2.2
IVIS				IAMB	IAmb	23 49 46.6	
	comp=Z,110nm,0.5s						
IKIA	Kiasar	6.45	134	*e*Pn	Pn	23 49 43.4	-1.6
IKIA				IAMB	IAmb	23 49 44.2	
	comp=Z,514nm,0.2s						
ISHM	Shahmirzad	6.55	138	*e*Pn	Pn	23 49 45.1	-1.3
ISHM				IAMB	IAmb	23 51 02.6	
	comp=Z,669nm,0.2s						
IKOM	Komasi	6.66	183	*e*Pn	Pn	23 49 50.4	+2.6
ILAS	Lasjerd	6.73	142	*e*Pn	Pn	23 49 48.5	-0.3
ILAS				IAMB	IAmb	23 49 56.6	
	comp=Z,198nm,0.3s						
IANJ	Anjilo	7.13	137	*e*Pn	Pn	23 49 53.6	-0.7
IANJ				IAMB	IAmb	23 49 59.2	
	comp=Z,113nm,0.2s						
IKLH	Kolahrood	8.05	158	IAMB	IAmb	23 50 09.9	
	comp=Z,78nm,0.5s						
IKLH				*e*Pn	Pn	23 50 08.4	+1.5
GEYT	Alibeck	8.40	107	Pn	Pn	23 50 08.1	-3.4
	comp=Z,0.5nm,0.3s,baz=287,slow=16,SNR=14						
GEYT				Sn	Sn	23 51 35.2	-10
	comp=Z,0.6nm,0.3s,baz=293,slow=37,SNR=2.4						
GYA0B	ALIBECK ARRAY	8.40	107	⇓Pn	Pn	23 50 06.4	-5.1
	comp=Z,2.4nm,0.7s						
GYA0B				⇑Sn	Sn	23 51 36.4	-8.7
	comp=Z,8.8nm,0.8s						
BRTR	Keskin Array B	10.99	269	Pn	Pn	23 50 46.7	-0.3
	comp=Z,0.0nm,0.3s,baz=61,slow=18,SNR=3.1						
AKTO	Aktyubinsk	11.89	33	⇑P	Pn	23 50 54.4	-4.8
	comp=Z,1.9nm,0.8s						
AKTO				⇑S	Sn	23 52 56.6	-14
	comp=Z,2.5nm,0.7s						
AKTO	Aktyubinsk	11.89	33	Pn	Pn	23 50 54.4	-4.9
	comp=Z,0.3nm,0.3s,baz=211,slow=11,SNR=6.9						
AKTO				Sn	Sn	23 52 58.9	-12
	comp=Z,0.4nm,0.3s,baz=287,slow=20,SNR=5.1						
AB31	Akbulak array	11.94	41	⇓P	Pn	23 50 56.0	-3.8
	comp=Z,0.2nm,0.3s,baz=231,slow=14,SNR=5.2						
AB31				⇑S	Sn	23 52 58.9	-13
	comp=Z,0.5nm,0.5s,baz=220,slow=22,SNR=4.3						
OBN	Obninsk	16.15	336	⇑*e*P	Pn	23 51 57.9	+1.5
OBN				*e*S	Sn	23 54 59.9	+5.6
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,411nm,17.0s						
KIEV	Kiev	16.33	313	*i* P	P	23 52 05.3	+4.0
KIEV				pmax	pmax		
	comp=Z,59nm,6.9s						
ARU	Arti	17.07	20	P	Pn	23 52 04.3	-3.7
ARU				S	Sn	23 55 12.5	-4.1
BRVK	Borovoye	19.45	44	*i* P	P	23 52 32.0	-3.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	19.48	44	P	P	23 52 34.0	-2.1
BVAR	Borovoye Array	19.48	44	P	P	23 52 34.0	-2.1
	comp=Z,0.1nm,0.3s,baz=249,slow=9.5,SNR=3.3						
KLMR	Klimovskoe	20.70	348	*e*P	P	23 52 44.9	-4.3
KLMR				AMP		23 52 47.9	
	comp=Z,13nm,1.4s						
KURBB	Kurchatov Arra	23.33	55	P	P	23 53 15.8	-1.4
	comp=Z,0.1nm,0.3s,baz=258,slow=10,SNR=1.6						
KURK	Kurchatov	23.41	55	P	P	23 53 15.8	-2.1
FINES	FINESS Array B	24.55	334	P	P	23 53 25.5	-2.9
	comp=Z,1.0nm,0.3s,baz=137,slow=10.0,SNR=17						
MKAR	Makanchi Array	25.35	65	*i* P	P	23 53 33.7	-2.2
MKAR	Makanchi Array	25.35	65	P	P	23 53 33.5	-2.4
	comp=Z,0.5nm,0.9s,baz=260,slow=9.4,SNR=6.0						
ARCES	ARCESS Array B	31.08	345	P	P	23 54 23.6	-3.2
	comp=Z,1.7nm,0.8s,baz=134,slow=10,SNR=4.2						

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*IDC **03** 23:50:36.5±0.9, 41°.05N×29°.33W, h0^{km}, mb3.8/12,* *mb1 3.9/12, mb1mx3.6/65, mbtmp3.8/12, MS3.8/5, Ms1 3.8/5, ms1mx3.3/39, Error ellipse: s-maj=31.5km s-min=18.9km az=25.0*

*SVSA **03** 23:50:38.3±1.2, 41°.16N×29°.28W, h15^{km}, MD4.2, ML3.5, Error ellipse: s-maj=5.0km s-min=4.3km az=15.0*

ISC 03 23:50:37.2±3.4**, 40°.80N**±0°.05×**29°.28W**±0°.04**, h8**^{km}±21^{km}**, n37,** σ**1ˢ.26**/48**, mb3.8**/12**, MS3.8**/5**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	1.79	232	*e*S	Sn	23 51 29.8	-1.4
H07N1	FLORES T-PHASE	1.79	232	Pn	Pb	23 51 10.6	+0.4
H07N1				Sn	Sb	23 51 33.7	+1.0
SRBC	Serra Branca	2.00	151	*e*P	Pn	23 51 11.2	0.0
PGRA	Graciosa	2.03	150	*e*P	Pn	23 51 11.4	-0.2
PGRA				*e*S	Sb	23 51 38.4	-1.2
PGRA				A	A	23 51 42.8	
	48nm,0.5s						
H07S1	FLORES T-PHASE	2.05	227	*e*P	Pn	23 51 11.8	0.0
H07S1				*e*S	Sn	23 51 36.6	-1.0
H07S1	FLORES T-PHASE	2.05	227	Pn	Pb	23 51 13.6	-0.9
H07S1				Sn	Sn	23 51 36.9	-0.6
PCED	Cedros	2.21	168	*e*P	Pn	23 51 15.4	+1.3
PCED				*e*S	Sb	23 51 43.1	-1.8
PCED				A	A	23 51 48.4	
	110nm,0.4s						
ROSA	Rosais	2.23	159	*e*P	Pn	23 51 14.9	+0.6
ROSA				*e*S	Sb	23 51 42.8	-2.5
ROSA				A	A	23 51 46.8	
	47nm,0.4s						
CALA	Caldeira	2.26	168	*e*P	Pn	23 51 16.0	+1.2
CALA				*e*S	Sn	23 51 43.6	+0.7
HOR	Horta	2.32	167	*e*P	Pn	23 51 17.2	+1.6
HOR				*e*S	Sn	23 51 44.9	+0.6
HOR				A	A	23 51 47.8	
	113nm,0.1s						
PMAN	Manadas	2.35	157	*e*P	Pn	23 51 16.8	+0.8
PMAN				*e*S	Sn	23 51 45.6	+0.6
PMAN				A	A	23 51 53.0	
	54nm,0.4s						
PICO	Pico	2.39	164	*e*P	Pn	23 51 17.8	+1.2
PICO				*e*S	Sn	23 51 47.0	+1.0
PICO				A	A	23 51 56.4	
	70nm,0.6s						
PCAN	Candelaria	2.41	165	*e*P	Pn	23 51 18.2	+1.3
PCAN				*e*S	Sb	23 51 47.8	-2.8
PCAN				A	A	23 51 55.8	
	61nm,0.3s						
ADH	Angra Heroismo	2.66	143	*e*P	Pn	23 51 20.6	+0.4
ADH				*e*S	Sn	23 51 52.3	-0.3
ADH				A	A	23 51 56.3	
	34nm,0.4s						
PSCM	Serra do Cume	2.68	141	*e*P	Pn	23 51 20.4	-0.1
PSCM				*e*S	Sn	23 51 51.9	-1.2
PSCM				A	A	23 51 53.5	
	31nm,0.4s						
PSET	Sete Cidades	4.06	136	*e*P	Pn	23 51 39.7	+0.2
PSET				*e*S	Sn	23 52 25.4	-1.8
PSET				A	A	23 52 29.0	
	32nm,0.5s						
PDA	Ponta Delgada	4.14	136	*e*P	Pn	23 51 41.1	+0.5
CMLA	Cha da Macela	4.21	135	*e*P	Pn	23 51 41.7	+0.2
CMLA				*e*S	Sn	23 52 29.1	-1.7
CMLA				A	A	23 52 40.9	
	37nm,0.3s						
BART	Pico Bartolome	4.39	132	*e*P	Pn	23 51 44.0	-0.1
ESDC	Sonseca Array	19.35	85	P	Pn	23 55 06.6	+2.5
	0.1nm,0.3s,baz=303,slow=8.9,SNR=4.0						
NOA	NORSAR Array B	31.84	37	LR	LR	00 07 42.0	
	comp=Z,69nm,19.8s,baz=110,slow=32						
FRB	Frobisher Bay	32.40	328	P	P	23 57 05.6	-1.2
	2.6nm,1.0s,baz=122,slow=9.5,SNR=3.7						
TORD	Torodi Ar. Bea	38.63	127	P	P	23 58 02.0	+1.0
	0.9nm,0.8s,baz=317,slow=13,SNR=6.2						
ARCES	ARCESS Array B	40.25	26	LR	LR	00 12 48.0	
	comp=Z,163nm,19.8s,baz=206,slow=33						
AKASG	Malin Array Be	41.02	56	LR	LR	00 13 37.7	
	comp=Z,98nm,19.8s,baz=15,slow=34						
ULM	Lac du Bonnet	46.16	305	LR	LR	00 16 29.4	
	comp=Z,109nm,19.1s,baz=11,slow=34						
BRTR	Keskin Array B	47.09	70	P	P	23 59 10.3	+0.7
	0.4nm,0.8s,baz=264,slow=7.6,SNR=2.6						
YKA	Yellowknife Ar	52.76	324	P	P	23 59 50.8	-1.2
	0.3nm,0.6s,baz=70,slow=7.6,SNR=3.7						
PDAR	Pinedale Array	57.67	301	P	P	00 00 26.9	-1.3
	0.3nm,0.7s,baz=61,slow=7.3,SNR=3.7						
AKTO	Aktyubinsk	58.45	49	P	P	00 00 33.2	0.0
	1.3nm,0.7s,baz=288,slow=6.0,SNR=5.0						
TXAR	Lajitas Array	60.28	284	P	P	00 00 46.9	+0.6
	1.2nm,0.7s,baz=68,slow=7.5,SNR=9.1						
KURBB	Kurchatov Arra	69.28	40	P	P	00 01 44.0	-0.5
	0.3nm,0.3s,baz=310,slow=6.0,SNR=4.9						
MKAR	Makanchi Array	73.67	42	P	P	00 02 10.5	-0.7
	0.6nm,0.8s,baz=306,slow=5.2,SNR=5.6						
MKAR				LR	LR	00 34 17.8	
	comp=Z,73nm,18.6s,baz=316,slow=36						
LSZ	Lusaka	77.08	123	P	P	00 02 33.7	+2.6
	1.2nm,0.2s,baz=317,slow=11,SNR=3.0						
MATP	Matopo	81.15	127	P	P	00 02 55.4	+2.0
	1.3nm,0.9s,baz=342,slow=3.2,SNR=3.2						
SONM	Songino Array	83.39	28	P	P	00 03 04.2	-0.7
	0.3nm,0.7s,baz=323,slow=2.4,SNR=2.7						
ASAR	Alice Springs	157.84	45	PKPab	PKPab	00 11 07.5	+0.3
	0.7nm,0.8s,baz=339,slow=5.0,SNR=4.0						

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*ISCJB **03** 23:54:15.5±0.8, 73°.38N±0°.04×8°.4E±0°.3, h10^{km}, mb3.0/1, Error ellipse: s-maj=14.1km s-min=5.8km az=175.3*

*IDC **03** 23:54:15.3±2.5, 73°.28N×7°.19E, h0^{km}, mb3.2/1, mb1 3.3/6, mb1mx3.1/64, mbtmp3.3/6, ML2.7/5, Error ellipse: s-maj=42.4km s-min=18.4km az=87.0*

*NAO **03** 23:54:16.5±1.8, 73°.36N×7°.94E, ML2.6*

*BER **03** 23:54:18.2±3.0, 73°.36N×7°.66E, h9^{km}±74^{km}, ML2.0, Confirmed Earthquake*

ISC 03 23:54:17.7±1.3**, 73°.39N**±0°.07×**8°.5E**±0°.1**, h10**^{km}**, n26,** σ**1ˢ.29**/30**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	4.05	23	Pn	Pn	23 55 20.1	+0.6
HSP	Hornsund	4.06	23	Pn	Pn	23 55 20.1	+0.5
BRBA	Barentsburg A	4.90	14	Pn	Pn	23 55 31.0	-0.2
BRBA	Barentsburg A	4.90	14	Pn	Pn	23 55 31.0	-0.2
SPA0	Spitsbergen Ar	5.18	18	Pn	Pn	23 55 35.2	+0.1
	baz=188,slow=14						
SPA0	Spitsbergen Ar	5.18	18	Pn	Pn	23 55 35.2	+0.1
	baz=188,slow=14						
SPITS	Spitsbergen Ar	5.18	18	Pn	Pn	23 55 35.6	+0.5
	baz=213,slow=7.7,SNR=40						
SPITS				Sn	Sn	23 56 34.1	-0.7
	baz=198,slow=23,SNR=1.5						
HOPEN	Hopen	5.31	46	Pn	Pn	23 55 38.2	+1.4
HOPEN	Hopen	5.31	46	*e*P	Pn	23 55 38.2	+1.4
HOPEN				IAML		23 57 08.3	
	comp=Z,4.9nm,0.8s						
KBS	Kingsbay	5.62	7	Pn	Pn	23 55 41.0	-0.1
KBS	Kingsbay	5.62	7	*e*P	Pn	23 55 41.4	+0.2
KBS				IAML		23 57 04.5	
	comp=Z,3.0nm,0.8s						
ARA0	ARCESS Array S	6.65	117	Pn	Pn	23 55 57.7	+2.5
	baz=312,slow=12						
ARA0				Sn	Sn	23 57 10.5	-0.5
	baz=309,slow=22						
ARA0	ARCESS Array S	6.65	117	Pn	Pn	23 55 57.7	+2.5
	baz=312,slow=12						
ARA0				Sn	Sn	23 57 10.5	-0.5
	baz=309,slow=22						
ARCES	ARCESS Array B	6.65	117	Pn	Pn	23 55 57.5	+2.2
	comp=Z,0.2nm,0.3s,baz=315,slow=11,SNR=12						
ARCES				Sn	Sn	23 57 06.9	-4.1
	comp=Z,0.1nm,0.3s,baz=352,slow=24,SNR=0.8						
NB2	NORSAR Subarra	12.46	174	Pn	Pn	23 57 15.0	+0.3
NB2	NORSAR Subarra	12.46	174	Pn	Pn	23 57 15.0	+0.3
NOA	NORSAR Array B	12.46	174	Pn	Pn	23 57 13.3	-1.4
	comp=Z,0.0nm,0.3s,baz=354,slow=13,SNR=3.9						
NRA0	NORESS Array S	12.77	173	Pn	Pn	23 57 18.8	-0.2
	baz=357,slow=18						
NRA0	NORESS Array S	12.77	173	Pn	Pn	23 57 18.8	-0.2
	baz=357,slow=18						
HFS	Hagfors	13.47	169	Pn	Pn	23 57 27.6	-0.9
	baz=356,slow=11						
HFS	Hagfors	13.47	169	Pn	Pn	23 57 27.9	-0.6
	comp=Z,0.1nm,0.3s,baz=346,slow=17,SNR=1.9						
HFS	Hagfors	13.47	169	Pn	Pn	23 57 27.6	-0.9
	baz=356,slow=11						
FIA0	FINESS Array S	13.68	142	Pn	Pn	23 57 32.1	+0.8
	baz=332,slow=11						
FIA0	FINESS Array S	13.68	142	Pn	Pn	23 57 32.1	+0.8
	baz=332,slow=11						
FINES	FINESS Array B	13.68	142	Pn	Pn	23 57 31.4	+0.1
	comp=Z,0.2nm,0.3s,baz=341,slow=11,SNR=7.9						
AKASG	Malin Array Be	24.47	147	P	P	23 59 37.2	+0.8
	comp=Z,0.3nm,0.5s,baz=344,slow=9.4,SNR=4.3						

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*IDC **03** 23:57:30.6±1.1, 10°.76S×165°.15E, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.9/39, mbtmp4.0/9, ML4.3/2, Error ellipse: s-maj=33.2km s-min=20.6km az=144.0*

*ISCJB **03** 23:57:33.6±0.9, 10°.9S±0°.1×165°.12E±0°.09, h31^{km}, mb3.8/6, Error ellipse: s-maj=16.5km s-min=10.8km az=25.2*

ISC 03 23:57:35.2±1.0**, 10°.8S**±0°.1×**165°.2E**±0°.1**, h31**^{km}**, n15,** σ**1ˢ.04**/10**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.33	285	Pn	Pn	23 58 51.5	-1.2
	15nm,0.3s,baz=31,slow=3.7,SNR=4.0						
HNR				Sn	Sn	23 59 53.8	+0.7
	11nm,0.3s,baz=180,slow=20,SNR=2.8						
DZM	Mont Dzumac	11.25	174	Pn	Pn	00 00 13.5	-0.5
	1.1nm,0.3s,baz=326,slow=10.0,SNR=11						
CTA	Charters Tower	20.41	241	P	P	00 02 11.5	+1.6
	8.3nm,0.8s,baz=68,slow=12,SNR=12						
H11S2	WAKE ISLAND Hy	29.17	3	T	T	00 34 13.9	
	baz=184,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.18	3	T	T	00 34 17.2	
	baz=184,slow=76,SNR=7.9						
H11S1	WAKE ISLAND Hy	29.19	3	T	T	00 34 15.9	
	baz=184,slow=76,SNR=11						
STKA	Stephens Creek	30.22	223	P	P	00 03 44.0	+0.9
	1.4nm,0.7s,baz=25,slow=14,SNR=3.4						
H11N1	WAKE ISLAND Hy	30.40	3	T	T	00 35 42.3	
	baz=182,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	30.40	3	T	T	00 35 46.0	
	baz=182,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	30.41	3	T	T	00 35 43.7	
	baz=182,slow=76,SNR=16						
WRA	Warramunga Arr	31.03	249	P	P	00 03 50.1	-0.4
	1.1nm,0.5s,baz=81,slow=9.1,SNR=11						
ASAR	Alice Springs	32.39	243	P	P	00 04 01.2	-1.3
	1.1nm,0.6s,baz=63,slow=10,SNR=15						
ILAR	Eielson Array	83.49	19	P	P	00 09 59.5	-0.1
	0.5nm,1.0s,baz=224,slow=5.0,SNR=2.8						
NVAR	Mina Array Bea	86.31	50	P	P	00 10 15.2	+0.5
	0.2nm,0.3s,baz=253,slow=3.4,SNR=2.4						
MKAR	Makanchi Array	92.98	317	P	P	00 10 45.7	0.0
	0.4nm,0.8s,baz=112,slow=3.4,SNR=3.6						

SJA 03 23:58:05.4±0.8**, 32°.28S**×**67°.13W, h145**^{km}±6^{km}**, ML3.1, MW3.7, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRA	San Martin	1.20	97	*i* P	Pn	23 58 32.4	+0.7
MRA				*i* S	Sn	23 58 52.2	+0.5
RTCV	Cerro Valdivia	1.27	289	*i* P	Pn	23 58 33.2	+0.9
RTCV				*i* S	Sn	23 58 53.2	+0.4
ASAL	Salagasta	1.48	257	*i* P	Pn	23 58 35.5	+1.1
ASAL				*i* S	Sn	23 58 57.4	+0.7
RTLL	Cerro Villicun	1.49	309	*i* P	Pn	23 58 35.2	+0.7
RTLL				*i* S	Sn	23 58 57.9	+1.1
RTLL				IAML		23 58 58.4	
	comp=Z,138nm,0.3s						
ARCO	CERRO ARCO	1.63	249	*i* P	Pn	23 58 36.7	+0.6
ARCO				IAML		23 58 37.4	
	comp=Z,115nm,0.2s						
ARCO				*i* S	Sn	23 58 59.6	-0.1
AAGR	Agrelo	1.65	240	*i* P	Pn	23 58 37.4	+1.1
AAGR				*i* S	Sn	23 59 00.9	+0.9
AMOG	MOGNA	1.77	318	*i* P	Pn	23 58 38.6	+0.9
AMOG				*i* S	Sn	23 59 02.4	0.0
RTLS	Leoncito	1.91	284	*i* P	Pn	23 58 40.4	+0.9
RTLS				*i* S	Sn	23 59 06.8	+1.3
RTLS				IAML		23 59 07.2	
	comp=Z,63nm,0.3s						
APLL	PUNTA DE LOS L	1.94	15	*i* P	Pn	23 58 40.2	+0.6
APLL				*i* S	Sn	23 59 06.3	+0.4
APLL				IAML		23 59 06.8	
	comp=Z,149nm,0.3s						

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*IDC **04** 00:16:55.0±1.2, 41°.15N×29°.13W, h0^{km}, mb3.4/7, mb1 3.6/8, mb1mx3.4/41, mbtmp3.3/8, ML3.8/1, MS3.5/5, Ms1 3.6/5, ms1mx3.1/27, Error ellipse: s-maj=45.2km s-min=20.7km az=11.0*

*ISCJB **04** 00:16:56.3±2.2, 40°.97N±0°.04×29°.06W±0°.09, h25^{km}±17^{km}, mb3.4/7, MS3.5/4, Error ellipse: s-maj=12.1km s-min=6.4km az=159.7*

*SVSA **04** 00:16:56.1±1.1, 41°.20N×29°.25W, h5^{km}, MD4.2, ML3.5, Error ellipse: s-maj=8.0km s-min=5.7km az=79.0*

ISC 04 00:16:58.5±2.4**, 40°.95N**±0°.08×**29°.10W**±0°.08**, h27**^{km}±19^{km}**, n23,** σ**0ˢ.88**/27**, mb3.5**/7**, MS3.5**/4**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	1.99	232	*e*P	Pb	00 17 41.4	+7.4
PGRA	Graciosa	2.10	156	*e*P	Pn	00 17 30.5	-1.3
H07S1	FLORES T-PHASE	2.25	227	*e*P	Pb	00 17 38.9	+0.5
ROSA	Rosais	2.32	163	*e*P	Pn	00 17 33.6	-1.3
ROSA				*e*S	Sn	00 18 03.1	+0.6
ROSA				A	A	00 18 05.4	
	35nm,0.5s						
PCED	Cedros	2.34	172	*e*P	Pn	00 17 34.5	-0.6
CALA	Caldeira	2.38	172	*e*P	Pn	00 17 35.3	-0.5
CALA				*e*S	Sn	00 18 03.6	-0.5
PICO	Pico	2.50	168	*e*P	Pn	00 17 36.8	-0.6
PICO				*e*S	Sn	00 18 06.6	-0.4
PICO				A	A	00 18 09.6	
	27nm,0.3s						
PCAN	Candelaria	2.53	169	*e*P	Pn	00 17 36.9	-0.8
PCAN				*e*S	Sn	00 18 07.8	+0.2
PCAN				A	A	00 18 16.4	
	46nm,0.4s						
PSCM	Serra do Cume	2.71	145	*e*P	Pn	00 17 39.6	-0.7
PSCM				*e*S	Sn	00 18 12.1	-0.1
PSCM				A	A	00 18 13.9	
	26nm,0.3s						
PSET	Sete Cidades	4.07	139	*e*P	Pn	00 17 58.3	-0.7
PSET				*e*S	Sn	00 18 45.0	-0.7
PSET				A	A	00 18 45.6	
	19nm,0.6s						
GRON	Grota Negra	4.21	138	*e*P	Pn	00 18 01.4	+0.5
GRON				*e*S	Sn	00 18 50.1	+1.0
GRON				A	A	00 18 56.2	
	1.9nm,0.1s						
CMLA	Cha da Macela	4.22	138	*e*P	Pn	00 18 00.5	-0.4
CMLA				*e*S	Sn	00 18 48.6	-0.7
CMLA				A	A	00 18 52.5	
	17nm,0.3s						
ESDC	Sonseca Array	19.20	86	P	Pn	00 21 19.8	-1.3
	0.1nm,0.3s,baz=281,slow=9.6,SNR=1.9						
ESDC				LR	LR	00 27 34.8	
	comp=Z,146nm,19.1s,baz=80,slow=33						
GERES	GERESS Array B	30.99	61	LR	LR	00 34 04.5	
	comp=Z,117nm,18.3s,baz=284,slow=33						
NOA	NORSAR Array B	31.63	37	LR	LR	00 34 01.9	
	comp=Z,53nm,20.2s,baz=255,slow=33						
TORD	Torodi Ar. Bea	38.61	127	P	P	00 24 21.3	+2.0
	0.6nm,0.9s,baz=316,slow=8.3,SNR=3.6						
FINES	FINESS Array B	38.70	39	LR	LR	00 38 42.1	
	comp=Z,65nm,19.3s,baz=264,slow=34						
AKASG	Malin Array Be	40.82	56	P	P	00 24 38.5	+1.1
	0.1nm,0.3s,baz=300,slow=8.2,SNR=1.5						
AKASG				LR	LR	00 40 17.2	
	comp=Z,95nm,18.7s,baz=25,slow=34						
BRTR	Keskin Array B	46.91	70	P	P	00 25 25.9	-0.7
	0.5nm,0.9s,baz=322,slow=9.3,SNR=3.7						
YKA	Yellowknife Ar	52.72	324	P	P	00 26 09.1	-1.1
	0.2nm,0.6s,baz=64,slow=8.4,SNR=3.2						
PDAR	Pinedale Array	57.71	301	P	P	00 26 47.0	+0.1
	0.5nm,0.8s,baz=69,slow=8.4,SNR=5.0						
TXAR	Lajitas Array	60.38	284	P	P	00 27 05.6	+0.2
	0.4nm,0.7s,baz=77,slow=7.5,SNR=5.5						
MKAR	Makanchi Array	73.47	42	P	P	00 28 28.3	0.0
	0.4nm,0.8s,baz=335,slow=5.5,SNR=5.3						

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*IDC **04** 00:21:50.3±1.3, 29°.39N×142°.14E, h0^{km}, mb3.5/6, mb1 3.7/8, mb1mx3.5/41, mbtmp3.6/8, ML3.0/2, MS3.8/2, Ms1 3.8/2, ms1mx2.7/33, Error ellipse: s-maj=48.2km s-min=21.0km az=80.0*

*ISCJB **04** 00:21:52.7±0.9, 29°.41N±0°.07×142°.1E±0°.3, h30^{km}, mb3.6/6, MS3.8/2, Error ellipse: s-maj=35.7km s-min=8.4km az=171.4*

ISC 04 00:21:54.7±1.0**, 29°.37N**±0°.09×**142°.1E**±0°.3**, h30**^{km}**, n10,** σ**1ˢ.13**/9**, mb3.6**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.27	178	Pn	Pn	00 22 30.9	+0.8
	4.5nm,0.3s,baz=271,slow=23,SNR=6.9						
JCJ				Sn	Sn	00 22 56.5	-0.5
	14nm,0.3s,baz=299,slow=23,SNR=3.6						
MJAR	Matsushiro Arr	7.87	336	Pn	Pn	00 23 47.1	0.0
	0.2nm,0.3s,baz=154,slow=9.9,SNR=8.1						
SONM	Songino Array	33.07	314	P	P	00 28 26.6	-1.1
	0.2nm,0.6s,baz=117,slow=6.6,SNR=2.2						
ZALV	Zalesovo Beam	47.75	318	LR	LR	00 51 08.0	
	comp=Z,26nm,20.4s,baz=72,slow=37						
MKAR	Makanchi Array	49.01	308	P	P	00 30 38.0	-0.6
	0.4nm,0.7s,baz=105,slow=7.6,SNR=5.0						
WRA	Warramunga Arr	49.60	190	P	P	00 30 42.5	-0.8
	0.5nm,0.7s,baz=10.0,slow=8.2,SNR=6.3						
ILAR	Eielson Array	55.76	29	P	P	00 31 27.7	-0.7
	0.4nm,1.0s,baz=270,slow=7.2,SNR=2.1						
INK	Inuvik	61.00	25	LR	LR	00 57 24.7	
	comp=Z,325nm,20.9s,baz=74,slow=35						
FINES	FINESS Array B	75.89	334	P	P	00 33 39.1	+1.0
	1.6nm,0.9s,baz=61,slow=9.7,SNR=2.6						
BRTR	Keskin Array B	84.42	313	P	P	00 34 26.3	+1.7
	0.6nm,0.8s,baz=3.1,slow=4.6,SNR=2.9						

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*ISCJB **04** 00:33:48.9±0.6, 35°.59N±0°.07×140°.15E±0°.06, h75^{km}±5^{km}, mb3.4/6, Error ellipse: s-maj=11.1km s-min=8.3km az=17.6*

*JMA **04** 00:33:49.2±0.2, 35°.71N×140°.14E, h68^{km}±2^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s98.00000°, δ62.00000°, λ-37.00000°. NP2: ϕ_s208.00000°, δ58.00000°, λ-147.00000°. Principal axes: T Plg3.0000°, Azm154.0000°; N Plg45.0000°, Azm247.0000°; P Plg45.0000°, Azm61.0000°;*

*IDC **04** 00:33:51.1±3.6, 35°.74N×140°.22E, h76^{km}±29^{km}, mb3.1/6, mb1 3.4/6, mb1mx3.2/47, mbtmp3.5/6 Error ellipse: s-maj=33.5km s-min=28.4km az=51.0*

ISC 04 00:33:50.0±0.9**, 35°.63N**±0°.06×**140°.14E**±0°.06**, h69**^{km}±8^{km}**, n21,** σ**0ˢ.81**/23**, mb3.6**/6**, 1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.22	167	⇓P	Pn	00 34 00.7	+0.2
JSMT	Sammumatsuo	0.25	87	P	Pn	00 34 00.6	-0.1
TOK	Tokyo	0.32	281	P	Pn	00 34 01.3	+0.2
BSO3	Boso 3	0.88	160	P	Pn	00 34 06.2	-0.5
JOD2	Odawara 2	0.93	247	⇓P	Pn	00 34 06.8	-0.8
JOD2				S	Sn	00 34 19.5	-1.2
JAG	Ashikaga	0.97	325	⇑P	Pn	00 34 06.8	-1.3
JRY	Ryogami san	1.08	291	⇓P	Pn	00 34 09.2	-0.2
JFNN	Fujinakano	1.27	250	P	Pn	00 34 11.5	-0.3
JFNN				S	Sn	00 34 27.9	-0.3
JYN	Shimob	1.31	265	⇓P	Pn	00 34 11.8	-0.7
JYN				S	Sn	00 34 29.1	-0.2
JKT	Katashina	1.34	328	P	Pn	00 34 11.7	-1.3
MJAR	Matsushiro Arr	1.81	301	P	Pn	00 34 19.4	+0.3
	2.0nm,0.3s,baz=131,slow=15,SNR=34						
MJAR				S	Sn	00 34 42.4	+1.2
	3.3nm,0.3s,baz=140,slow=37,SNR=4.2						
MAT	Matsushiro	1.81	301	P	Pn	00 34 19.6	+0.5
MAT				S	Sn	00 34 42.3	+1.1
SONM	Songino Array	27.75	307	P	P	00 39 33.2	+1.0
	0.3nm,0.7s,baz=120,slow=8.5,SNR=2.0						
H11N2	WAKE ISLAND Hy	28.37	117	T	T	01 09 19.2	
	baz=308,slow=75,SNR=3.0						
H11N1	WAKE ISLAND Hy	28.38	117	T	T	01 09 18.5	
	baz=308,slow=75,SNR=6.4						
H11N3	WAKE ISLAND Hy	28.39	117	T	T	01 09 21.7	
	baz=308,slow=75,SNR=2.6						
ZALV	Zalesovo Beam	42.12	314	P	P	00 41 34.8	-0.4
	0.5nm,0.4s,baz=100,slow=8.0,SNR=4.1						
MKAR	Makanchi Array	44.01	303	P	P	00 41 50.3	-0.3
	0.3nm,0.7s,baz=88,slow=8.5,SNR=5.2						
ILAR	Eielson Array	51.23	32	P	P	00 42 45.5	-0.6
	0.3nm,0.7s,baz=276,slow=6.5,SNR=4.4						
WRA	Warramunga Arr	55.54	187	P	P	00 43 19.4	+1.2
	0.4nm,0.3s,baz=3.4,slow=7.7,SNR=3.4						
TXAR	Lajitas Array	91.79	52	P	P	00 46 50.3	-0.3
	0.2nm,0.6s,baz=306,slow=6.5,SNR=1.5						

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*ISCJB **04** 00:34:19.4±0.6, 24°.42S±0°.08×180°.0E±0°.1, h505^{km}, mb4.0/11, Error ellipse: s-maj=16.1km s-min=10.2km az=7.8*

*IDC **04** 00:34:19.8±1.7, 24°.35S×179°.96E, h501^{km}±17^{km}, mb3.6/12, mb1 3.8/13, mb1mx3.6/36, mbtmp4.5/13, Error ellipse: s-maj=20.4km s-min=15.9km az=141.0*

ISC 04 00:34:19.7±0.7**, 24°.5S**±0°.1×**179°.9W**±0°.1**, h505**^{km}**, n19,** σ**1ˢ.01**/24**, mb3.9**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.74	278	P	P	00 37 07.7	+1.5
	2.1nm,0.3s,baz=85,slow=17,SNR=38						
URZ	Urewera	13.96	190	P	P	00 37 19.8	+1.1
	6.1nm,0.3s,baz=31,slow=1.2,SNR=23						
URZ				S	S	00 39 44.6	-1.7
	2.9nm,0.3s,baz=100,slow=20,SNR=9.4						
RPZ	Rata Peaks	20.55	199	P	P	00 38 23.8	+0.9
	19nm,0.5s,baz=55,slow=2.5,SNR=14						
STKA	Stephens Creek	34.55	249	P	P	00 40 26.0	+0.4
	3.7nm,0.4s,baz=96,slow=11,SNR=26						
ASAR	Alice Springs	41.99	261	P	P	00 41 26.1	-0.3
	4.7nm,0.5s,baz=95,slow=7.3,SNR=55						
ASAR				ScP	ScP	00 46 12.9	+0.7
	0.6nm,0.5s,baz=100,slow=3.6,SNR=4.3						
WRA	Warramunga Arr	42.42	267	P	P	00 41 28.9	-0.9
	16nm,0.5s,baz=98,slow=8.3,SNR=125						
WRA				ScP	ScP	00 46 14.9	+1.0
	3.4nm,0.9s,baz=101,slow=4.0,SNR=14						
JAY	Jayapura	43.79	294	P	P	00 41 39.6	-1.0
	14nm,0.5s,baz=88,slow=3.6,SNR=5.3						
KSRS	Korea Array	78.73	320	P	P	00 45 29.5	+0.1
	1.4nm,0.6s,baz=135,slow=6.3,SNR=5.8						
PETK	Petropavlovsk-	79.68	347	P	P	00 45 34.0	-0.1
	3.1nm,0.8s,baz=157,slow=7.8,SNR=3.6						
USRK	Ussuriysk Ar.	81.28	327	P	P	00 45 41.5	-1.1
	1.0nm,0.4s,baz=163,slow=4.3,SNR=5.0						
NVAR	Mina Array Bea	85.14	44	P	P	00 46 02.7	+0.3
	0.6nm,0.5s,baz=229,slow=9.6,SNR=3.6						
CMAR	Chiang Mai Arr	89.78	290	P	P	00 46 25.6	+1.1
	0.8nm,0.3s,baz=138,slow=2.9,SNR=6.9						
TXAR	Lajitas Array	90.70	58	P	P	00 46 29.8	+1.2
	1.1nm,0.8s,baz=212,slow=6.4,SNR=13						
PDAR	Pinedale Array	93.08	44	P	P	00 46 39.8	+0.4
	0.2nm,0.6s,baz=222,slow=3.6,SNR=3.1						
MKAR	Makanchi Array	112.59	312	PKiKP	PKiKP	00 51 56.4	-1.8
	0.1nm,0.5s,baz=67,slow=1.9,SNR=5.6						
ARCES	ARCESS Array B	132.47	348	PKP	PKPdf	00 52 35.0	-0.6
	0.8nm,0.6s,baz=50,slow=1.9,SNR=5.5						
FINES	FINESS Array B	139.02	341	PKhKP	PKPpre	00 52 39.3	
	1.3nm,1.0s,baz=35,slow=4.7,SNR=6.7						
FINES				PKP	PKPdf	00 52 47.9	0.0
	0.5nm,0.4s,baz=100,slow=4.7,SNR=7.6						
FINES				SKPbc	SKPbc	00 55 33.9	-1.3
	1.8nm,0.5s,baz=31,slow=1.7,SNR=13						
AKASG	Malin Array Be	145.49	327	PKPbc	PKPdf	00 52 59.0	-0.7
	1.2nm,0.3s,baz=46,slow=4.4,SNR=9.4						
BRTR	Keskin Array B	147.97	306	PKPbc	PKPbc	00 53 07.5	-0.8
	1.2nm,0.6s,baz=145,slow=4.9,SNR=11						
BRTR				PKPab	PKPab	00 53 12.6	-0.2
	2.2nm,0.6s,baz=109,slow=2.7,SNR=14						

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*ISCJB **04** 00:37:40.8±0.8, 40°.90N±0°.05×29°.1W±0°.1, h10^{km}, mb3.4/7, MS3.7/17, Error ellipse: s-maj=13.0km s-min=6.3km az=171.8*

*IDC **04** 00:37:40.2±1.2, 40°.85N×29°.70W, h0^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.5/41, mbtmp3.5/8, ML3.7/1, MS3.8/18,*

Ms1 3.8/18, ms1mx3.6/30, Error ellipse: s-maj=39.1km s-min=19.8km az=11.0
*SVSA **04** 00:37:41.7±1.1, 41°.17N×29°.28W, h5^{km}, ML3.3, Error ellipse: s-maj=10.3km s-min=5.4km az=94.0*
ISC 04 00:37:41.5±0.8, **40°.96N**±0°.06×**29°.29W**±0°.06, **h10^{km}, n38,** σ**1^{s}.97**/32, **mb3.5**/7, **MS3.8**/17, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	1.89	229	*e*P	Sn	00 38 37.4	-0.2
SRBC	Serra Branca	2.14	153	*e*P	Pn	00 38 15.8	-1.5
H07S1	FLORES T-PHASE	2.15	224	*e*P	Sn	00 38 42.3	-2.0
PGRA	Graciosa	2.17	152	*e*P	Pn	00 38 16.0	-1.7
PCED	Cedros	2.37	169	*e*P	Pn	00 38 19.6	-0.8
PCED				A	A	00 38 48.2	
	63nm,0.6s						
PCED				*e*S	Sn	00 38 48.4	-1.1
ROSA	Rosais	2.38	160	*e*P	Pn	00 38 19.0	-1.5
ROSA				*e*S	Sn	00 38 47.3	-2.4
ROSA				A	A	00 38 51.4	
	27nm,0.4s						
CALA	Caldeira	2.41	169	*e*P	Pn	00 38 20.1	-1.0
CALA				*e*S	Sn	00 38 49.1	-1.7
HOR	Horta	2.48	168	*e*P	Pn	00 38 20.4	-1.5
HOR				*e*S	Sn	00 38 50.3	-1.9
HOR				A	A	00 38 54.0	
	64nm,0.1s						
PMAN	Manadas	2.50	158	*e*P	Pn	00 38 21.3	-0.9
PICO	Pico	2.54	165	*e*P	Pg	00 38 39.0	+8.8
PICO				*e*S	Sg	00 39 07.9	+4.8
PICO				A	A	00 39 10.3	
	28nm,0.2s						
PCAN	Candelaria	2.56	166	*e*P	Pn	00 38 21.9	-1.2
PCAN				*e*S	Sn	00 38 52.4	-2.0
PCAN				A	A	00 38 57.9	
	33nm,0.2s						
ADH	Angra Heroismo	2.79	145	*e*P	Pn	00 38 24.7	-1.5
PSCM	Serra do Cume	2.81	143	*e*P	Pn	00 38 25.0	-1.4
PSCM				*e*S	Sn	00 38 56.8	-3.5
PSCM				A	A	00 39 03.1	
	17nm,0.2s						
PSET	Sete Cidades	4.17	137	*e*P	Pn	00 38 44.2	-1.1
PDA	Ponta Delgada	4.26	138	*e*P	Pn	00 38 45.7	-0.7
GRON	Grota Negra	4.31	136	*e*P	Pn	00 38 46.8	-0.4
CMLA	Cha da Macela	4.32	136	*e*P	Pn	00 38 45.5	-1.8
CMLA				*e*S	Sn	00 39 34.1	-3.6
CMLA				A	A	00 39 39.7	
	24nm,0.4s						
BART	Pico Bartolome	4.50	134	*e*P	Pn	00 38 48.1	-1.7
ESDC	Sonseca Array	19.34	85	P	Pn	00 42 11.1	+3.0
	0.1nm,0.3s,baz=309,slow=8.9,SNR=3.7						
ESDC				LR	LR	00 48 09.5	
	comp=Z,226nm,20.3s,baz=275,slow=32						
MDT	Midelt	21.30	105	LR	LR	00 49 09.9	
	comp=Z,122nm,20.6s,baz=317,slow=32						
DAVOX	Davos/Dischmat	28.61	65	LR	LR	00 54 13.5	
	comp=Z,179nm,18.5s,baz=282,slow=34						
SFJD	Kangerlussuaq	28.63	343	LR	LR	00 51 47.8	
	comp=Z,32nm,21.1s,baz=158,slow=30						
KEST	Kesra	30.57	87	LR	LR	00 55 47.0	
	comp=Z,209nm,18.1s,baz=187,slow=35						
GERES	GERESS Array B	31.11	61	LR	LR	00 55 28.9	
	comp=Z,157nm,18.1s,baz=276,slow=34						
NOA	NORSAR Array B	31.71	37	LR	LR	00 54 46.2	
	comp=Z,117nm,19.0s,baz=245,slow=32						
TORD	Torodi Ar. Bea	38.73	127	P	P	00 45 07.6	+1.7
	1.0nm,0.9s,baz=329,slow=6.9,SNR=6.0						
FINES	FINESS Array B	38.79	39	LR	LR	00 59 17.6	
	comp=Z,181nm,19.1s,baz=256,slow=33						
AKASG	Malin Array Be	40.93	56	P	P	00 45 28.5	+4.7
	0.3nm,0.4s,baz=276,slow=9.2,SNR=2.7						
AKASG				LR	LR	01 01 33.5	
	comp=Z,180nm,18.4s,baz=270,slow=35						
ULM	Lac du Bonnet	46.06	305	LR	LR	01 03 51.4	
	comp=Z,111nm,19.5s,baz=70,slow=34						
KBZ	Khabaz	51.85	61	LR	LR	01 08 42.5	
	comp=Z,49nm,20.1s,baz=322,slow=36						
YKA	Yellowknife Ar	52.62	324	P	P	00 46 55.4	+0.2
	0.6nm,0.9s,baz=66,slow=7.4,SNR=5.8						
PDAR	Pinedale Array	57.59	301	P	P	00 47 30.1	-1.5
	0.4nm,1.0s,baz=61,slow=7.3,SNR=2.9						
PDAR				LR	LR	01 11 15.1	
	comp=Z,98nm,18.2s,baz=53,slow=35						
BDFB	Brasilia	58.93	201	LR	LR	01 08 11.2	
	comp=Z,73nm,19.1s,baz=248,slow=31						
TXAR	Lajitas Array	60.24	284	P	P	00 47 49.0	-1.2
	0.5nm,0.7s,baz=74,slow=6.7,SNR=5.9						
TXAR				LR	LR	01 13 08.7	
	comp=Z,76nm,18.6s,baz=0.0,slow=36						
NVAR	Mina Array Bea	65.52	300	LR	LR	01 18 13.0	
	comp=Z,42nm,18.2s,baz=132,slow=37						
LPAZ	La Paz	67.39	221	LR	LR	01 14 30.2	
	comp=Z,110nm,20.8s,baz=68,slow=33						
ZALV	Zalesovo Beam	69.89	35	P	P	00 48 53.6	+1.3
	0.1nm,0.3s,baz=292,slow=4.5,SNR=3.3						
ZALV				LR	LR	01 18 56.1	
	comp=Z,60nm,18.1s,baz=57,slow=35						
MKAR	Makanchi Array	73.56	42	P	P	00 49 15.3	+0.7
	0.7nm,1.0s,baz=339,slow=3.1,SNR=5.6						
MKAR				LR	LR	01 21 02.3	
	comp=Z,97nm,20.6s,baz=324,slow=35						

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*IDC **04** 00:51:54.7±0.6, 17°.30N×147°.21E, h0^{km}, mb4.1/20, mb1 4.3/20, mb1mx4.2/38, mbtmp4.1/20, Error ellipse: s-maj=19.8km s-min=13.2km az=90.0*
*ISCJB **04** 00:51:57.8±0.3, 17°.34N±0°.04×147°.26E±0°.06, h35^{km}, mb4.4/44, Error ellipse: s-maj=8.9km s-min=5.6km az=9.8*
*NEIC **04** 00:51:59.7±0.3, 17°.29N×147°.21E, h35^{km}, mb4.6/27, Error ellipse: s-maj=8.8km s-min=6.4km az=100.0*
ISC 04 00:51:59.5±0.5, **17°.33N**±0°.06×**147°.30E**±0°.08, **h35^{km}, n82,** σ**1^{s}.45**/76, **mb4.5**/43, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	1.58	247	*e*Pn	Pn	00 52 23.4	-1.7
SARN				*e*Sn	Sn	00 52 47.1	+2.6
GUMO	Guam	4.40	213	*e*Pn	Pn	00 53 00.9	-2.9
GUMO				*e*Sn	Sn	00 53 55.4	+1.5
GUMO	Guam	4.40	213	Pn	Pn	00 53 04.7	+0.8
	24nm,0.3s,baz=143,slow=6.5,SNR=5.0						
GUMO				Sn	Sn	00 53 57.6	+3.7
	11nm,0.3s,baz=162,slow=23,SNR=3.5						
PATS	Pohnpei	14.98	133	*e*Pn	Pn	00 55 21.6	-7.2
H11S3	WAKE ISLAND Hy	18.49	83	T	T	01 15 03.2	
	baz=275,slow=72,SNR=7.5						
H11S1	WAKE ISLAND Hy	18.50	83	T	T	01 15 15.5	
	baz=275,slow=72,SNR=5.4						
H11S2	WAKE ISLAND Hy	18.50	83	T	T	01 15 10.1	
	baz=275,slow=72,SNR=4.8						
H11N1	WAKE ISLAND Hy	18.73	80	T	T	01 15 11.9	
	baz=265,slow=75,SNR=8.9						
H11N2	WAKE ISLAND Hy	18.73	80	T	T	01 15 12.7	
	baz=265,slow=75,SNR=7.5						
H11N3	WAKE ISLAND Hy	18.75	80	T	T	01 15 13.4	
	baz=265,slow=75,SNR=8.5						
MJAR	Matsushiro Arr	20.76	339	P	P	00 56 37.9	+0.5
	2.2nm,0.4s,baz=171,slow=10,SNR=9.3						
MAJO	Matsushiro	20.76	339	*e*P	P	00 56 37.9	+0.5
SIJI	Sorong	24.02	223	P	P	00 57 09.7	-1.7
	18nm,0.8s,baz=177,slow=9.6,SNR=8.0						
YULB	Yu-li	25.09	288	*e*P	P	00 57 21.0	-0.1
	6.0nm,0.7s						
YHNB	Yeheng	25.25	291	*e*P	P	00 57 22.1	-0.5
	23nm,0.9s						
KSRS	Korea Array	26.32	323	P	P	00 57 30.1	-1.9
	0.9nm,0.5s,baz=146,slow=9.1,SNR=8.3						
KS15	Wonju Array Si	26.33	323	*e*P	P	00 57 30.1	-2.0
KSAR	Wonju Array Be	26.33	323	P	P	00 57 30.1	-2.0
USRK	Ussuriysk Ar.	29.73	337	P	P	00 58 03.8	+1.3
	0.6nm,0.3s,baz=161,slow=27,SNR=5.1						
YSS	Yuzh-Sakhalins	29.78	354	*e*P	P	00 58 00.4	-2.3
	28nm,1.1s						
COEN	Coen	31.36	188	*e*P	P	00 58 16.3	-0.8
	4.6nm,1.0s						
SBUM	Sibu	37.48	251	*e*P	P	00 59 09.7	-0.5
	6.6nm,0.7s						
WRAB	Tennant Creek	39.16	200	*e*P	P	00 59 23.1	-1.1
	15nm,0.6s						
WB2	Warramunga Arr	39.16	200	*e*P	P	00 59 23.9	-0.2
	16nm,0.8s						
WR1	Warramunga Arr	39.17	200	*e*P	P	00 59 23.6	-0.6
	18nm,0.8s						
WRA	Warramunga Arr	39.17	200	P	P	00 59 23.6	-0.6
	14nm,0.8s,baz=21,slow=9.0,SNR=67						
FITZ	Fitzroy Crossi	41.16	212	*e*P	P	00 59 40.1	-0.6
	7.7nm,1.4s						
AS01	Alice Springs	42.78	198	*e*P	P	00 59 54.4	+0.5
AS31	Alice Springs	42.80	198	*e*P	P	00 59 53.5	-0.6
	1.2nm,0.7s						
ASAR	Alice Springs	42.80	198	P	P	00 59 53.5	-0.6
	2.1nm,0.8s,baz=22,slow=9.2,SNR=15						
DZM	Mont Dzumac	43.42	154	*e*P	P	00 59 58.9	-0.3
	9.2nm,1.0s						
DZM	Mont Dzumac	43.42	154	P	P	00 59 58.9	-0.3
	6.1nm,0.9s,baz=357,slow=9.6,SNR=5.3						
UGM	Wanagama	44.16	238	*e*P	P	01 00 01.9	-3.4
	47nm,1.4s						
SONA0	Songino Array	45.16	322	*e*P	P	01 00 12.9	0.0
SONM	Songino Array	45.16	322	P	P	01 00 12.9	0.0
	1.9nm,0.9s,baz=120,slow=6.9,SNR=10						
SONA1	Songino Array	45.16	322	*e*P	P	01 00 12.6	-0.3
CM01	Chiang Mai Arr	45.91	279	*e*P	P	01 00 20.2	+1.0
CM31	Chiang Mai Arr	45.92	279	*e*P	P	01 00 20.2	+0.9
CMAR	Chiang Mai Arr	45.92	279	P	P	01 00 20.2	+0.9
	2.2nm,0.4s,baz=72,slow=6.6,SNR=18						
STKA	Stephens Creek	49.23	186	P	P	01 00 46.0	+1.4
	0.5nm,0.3s,baz=20,slow=7.4,SNR=3.7						
KEKH	Kekaha	49.92	76	*e*P	P	01 00 48.2	-1.9
FORT	Forrest	51.29	201	*e*P	P	01 01 01.2	+1.0
	33nm,0.7s						
ZAA0	Zalesovo Array	60.02	323	*e*P	P	01 02 02.3	-0.3
	3.0nm,0.8s						
ZALV	Zalesovo Beam	60.02	323	*e*P	P	01 02 01.8	-0.8
ZALV	Zalesovo Beam	60.02	323	P	P	01 02 02.2	-0.4
	2.4nm,0.7s,baz=98,slow=6.1,SNR=16						
ZAA1	Zalesovo Array	60.02	323	*e*P	P	01 02 02.2	-0.4
MK01	Makanchi Array	60.49	314	*e*P	P	01 02 06.5	+0.4
MK31	Makanchi Array	60.50	314	*e*P	P	01 02 06.5	+0.4
MK32	Makanchi Array	60.50	314	*e*P	P	01 02 06.6	+0.5
MKAR	Makanchi Array	60.50	314	P	P	01 02 06.6	+0.5
	1.5nm,0.6s,baz=90,slow=8.9,SNR=21						
MAKZ	Makanchi	60.72	314	*e*P	P	01 02 07.8	+0.2
	2.9nm,0.8s						
KURK	Kurchatov	63.30	318	*e*P	P	01 02 24.7	-0.1
	5.4nm,1.0s						
NRIK	Noril'sk	63.41	340	P	P	01 02 26.3	+1.1
	3.5nm,0.7s,baz=102,slow=5.9,SNR=5.8						
IL1	Eielson Array	64.20	26	*e*P	P	01 02 29.4	-1.1
ILAR	Eielson Array	64.20	26	P	P	01 02 31.1	+0.5
	1.6nm,0.8s,baz=256,slow=4.3,SNR=12						
ILB	Eielson Array	64.20	26	*e*P	P	01 02 31.1	+0.5
NIL	Nilore	67.53	300	*e*P	P	01 02 53.0	+0.5
	14nm,0.7s						
BRVK	Borovoye	68.56	321	*e*P	P	01 02 59.1	+0.5
	6.1nm,0.8s						
KK31	Karatay Array	68.81	310	*e*P	P	01 03 01.7	+1.3
KKAR	Karatay Array	68.81	310	*e*P	P	01 03 01.7	+1.3
INK	Inuvik	70.03	23	*e*P	P	01 03 08.7	+1.3
	4.6nm,1.3s						
INK	Inuvik	70.03	23	P	P	01 03 08.7	+1.3
	1.5nm,0.9s,baz=246,slow=5.0,SNR=4.3						
KBL	Kabul	70.88	301	*e*P	P	01 03 13.7	+0.2
	3.3nm,0.8s						
ARU	Arti	75.06	325	*e*P	P	01 03 37.6	0.0
	5.5nm,0.8s						
ABKAR	Akbulak array	75.37	317	*e*P	P	01 03 39.1	-0.4
YKA	Yellowknife Ar	78.47	28	P	P	01 03 57.1	+0.4
	0.7nm,0.6s,baz=285,slow=5.5,SNR=3.8						
YKB5	Yellowknife Ar	78.47	28	*e*P	P	01 03 57.1	+0.4
NV01	Mina Array Sit	82.77	52	*e*P	P	01 04 20.9	+0.4
NVAR	Mina Array Bea	82.77	52	P	P	01 04 20.9	+0.4
	1.0nm,0.6s,baz=274,slow=5.5,SNR=6.2						
ARA0	ARCESS Array S	84.25	343	*e*P	P	01 04 26.1	-1.2
ARCES	ARCESS Array B	84.25	343	P	P	01 04 26.1	-1.2
	3.4nm,0.9s,baz=30,slow=9.3,SNR=2.9						
ELK	Elko	84.36	49	*e*P	P	01 04 28.8	+0.1
	2.4nm,1.0s						
RLMT	Red Lodge	87.02	44	*e*P	P	01 04 40.5	-1.3
	4.1nm,1.2s						
PD31	Pinedale Array	87.68	46	*e*P	P	01 04 46.9	+1.8
PDAR	Pinedale Array	87.68	46	P	P	01 04 46.9	+1.8
	0.2nm,0.6s,baz=247,slow=3.6,SNR=2.8						
SRU	San Rafael Swe	88.32	50	*e*P	P	01 04 52.0	+3.9
	3.6nm,0.9s						
FIA0	FINESS Array S	88.75	336	*e*P	P	01 04 50.9	+1.5
FINES	FINESS Array B	88.75	336	P	P	01 04 50.9	+1.5
	0.6nm,0.5s,baz=44,slow=5.8,SNR=4.9						
PV14	Lion Creek, Pa	89.68	50	*e*P	P	01 04 58.1	+3.5
	5.5nm,0.9s						
PV12	Saucer Basin,	89.86	50	*e*P	P	01 04 59.3	+3.9
	4.6nm,0.9s						
LTX	Lajitas	97.33	56	*e*P	Pdif	01 05 32.6	+2.8
TXAR	Lajitas Array	97.33	56	P	Pdif	01 05 32.6	+2.8
	0.1nm,0.5s,baz=336,slow=2.0,SNR=2.5						

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*IDC **04** 01:10:09.3±1.3, 17°.24N×147°.11E, h0^{km}, mb3.9/10, mb1 4.1/10, mb1mx3.9/43, mbtmp3.9/10, Error ellipse: s-maj=42.4km s-min=19.2km az=88.0*
*ISCJB **04** 01:10:13.9±1.1, 17°.3N±0°.1×147°.1E±0°.3, h48^{km}, mb3.8/9, Error ellipse: s-maj=35.1km s-min=16.5km az=177.9*
ISC 04 01:10:16.0±1.3, **17°.3N**±0°.1×**147°.1E**±0°.3, **h48^{km}, n10,** σ**1^{s}.52**/10, **mb3.7**/9, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	20.73	339	P	P	01 14 50.3	-2.2
	1.0nm,0.4s,baz=168,slow=9.6,SNR=2.4						
KSRS	Korea Array	26.23	324	P	P	01 15 48.4	+2.0
	0.7nm,0.5s,baz=133,slow=7.3,SNR=3.6						
WRA	Warramunga Arr	39.04	199	P	P	01 17 37.5	-0.8
	3.9nm,0.8s,baz=22,slow=9.3,SNR=19						
ASAR	Alice Springs	42.68	198	P	P	01 18 07.7	-0.6
	0.6nm,0.8s,baz=17,slow=10.0,SNR=6.2						
SONM	Songino Array	45.06	322	P	P	01 18 26.0	-1.3
	0.5nm,0.6s,baz=124,slow=7.5,SNR=3.8						
CMAR	Chiang Mai Arr	45.71	279	P	P	01 18 33.5	+0.8
	0.8nm,0.3s,baz=68,slow=6.5,SNR=7.8						
ZALV	Zalesovo Beam	59.93	323	P	P	01 20 16.1	-0.9
	1.2nm,0.8s,baz=72,slow=4.8,SNR=5.7						
MKAR	Makanchi Array	60.38	314	P	P	01 20 20.4	+0.1
	0.4nm,0.6s,baz=88,slow=8.0,SNR=5.9						
ILAR	Eielson Array	64.35	26	P	P	01 20 47.0	+0.5
	0.4nm,0.9s,baz=258,slow=4.5,SNR=2.9						
FINES	FINESS Array B	88.71	336	P	P	01 23 05.8	+1.7
	1.1nm,0.9s,baz=58,slow=5.2,SNR=2.9						

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*ISCJB **04** 01:11:57.1±0.4, 41°.77N±0°.02×15°.89E±0°.03, h26^{km}±3^{km}, Error ellipse: s-maj=4.6km s-min=3.4km az=43.4*
*ROM **04** 01:11:57.3±0.1, 41°.726N±0°.004×15°.885E±0°.006, h24^{km}, ML2.7/12*
ISC 04 01:11:57.5±0.9, **41°.73N**±0°.03×**15°.87E**±0°.03, **h25^{km}**±5^{km}, **n29,** σ**0^{s}.63**/48, **Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAG	Monte S. Angel	0.03	116	P	Pb	01 12 02.0	+0.2
MSAG				S	Sb	01 12 04.8	0.0
SGRT	San Giovanni R	0.10	287	P	Pb	01 12 02.1	-0.1
SGRT				S	Sb	01 12 05.2	-0.2
SGRT				AML	AML		
	comp=E,5820µm,0.2s						
SGRT				AML	AML		
	comp=N,5445µm,0.2s						
SGRT				AML	AML		
	comp=E,5820µm,0.2s						
SGRT				AML	AML		
	comp=N,5445µm,0.2s						
SGRT				AML	AML		
	comp=E,5820µm,0.2s						
SGRT				AML	AML		
	comp=N,5445µm,0.2s						
MELA	Melanico ??? S	0.56	268	P	Pb	01 12 08.5	-0.1
MELA				S	Sb	01 12 16.7	+0.5
MELA				AML	AML		
	comp=E,3265µm,0.2s						
MELA				AML	AML		
	comp=N,1710µm,1.6s						
MELA				AML	AML		
	comp=E,3465µm,0.2s						
MELA				AML	AML		
	comp=N,1625µm,1.6s						
MELA				AML	AML		
	comp=E,3270µm,0.2s						
MELA				AML	AML		
	comp=N,1710µm,1.6s						
MELA				AML	AML		
	comp=E,3465µm,0.2s						
MELA				AML	AML		
	comp=N,1625µm,1.6s						
MELA				AML	AML		
	comp=E,3465µm,0.2s						
MELA				AML	AML		
	comp=E,3270µm,0.2s						
MELA				AML	AML		
	comp=N,1625µm,1.6s						
MELA				AML	AML		
	comp=N,1710µm,1.6s						
MOCO	Biccari - m.te	0.64	237	P	Pb	01 12 10.1	0.0
MOCO				S	Sb	01 12 19.0	+0.3
MOCO				AML	AML		
	comp=E,211µm,1.0s						
MOCO				AML	AML		
	comp=N,204µm,1.0s						
MOCO				AML	AML		
	comp=E,211µm,1.0s						
MOCO				AML	AML		
	comp=N,204µm,1.0s						
MOCO				AML	AML		
	comp=N,204µm,1.0s						
MOCO				AML	AML		
	comp=E,211µm,1.0s						
SGTA	Sant Agata di	0.70	213	P	Pb	01 12 10.8	-0.3
SGTA				S	Sb	01 12 21.0	+0.6
SGTA				AML	AML		
	comp=E,452µm,0.3s						
SGTA				AML	AML		
	comp=N,480µm,0.3s						
SGTA				AML	AML		
	comp=E,462µm,0.3s						
SGTA				AML	AML		
	comp=N,552µm,0.3s						
SGTA				AML	AML		
	comp=E,462µm,0.3s						
SGTA				AML	AML		
	comp=N,552µm,0.3s						
SGTA				AML	AML		
	comp=N,552µm,0.3s						
SGTA				AML	AML		
	comp=E,462µm,0.3s						
MRVN	Minervino Murg	0.71	160	P	Pb	01 12 10.7	-0.5
MRVN				S	Sn	01 12 21.3	-0.8
MRVN				AML	AML		
	comp=E,328µm,1.3s						
MRVN				AML	AML		
	comp=N,265µm,0.6s						
MRVN				AML	AML		
	comp=N,265µm,0.6s						
MRVN				AML	AML		
	comp=E,328µm,1.3s						
CIGN	Sant'Elia a Pi	0.73	265	P	Pb	01 12 11.8	+0.3
CIGN				S	Sb	01 12 21.8	+0.8
GATE	Gambatesa	0.75	254	P	Pb	01 12 12.1	+0.2
GATE				S	Sb	01 12 22.4	+0.7
PALZ	Palazzo San Ge	0.78	175	P	Pb	01 12 12.1	-0.4
PALZ				S	Sn	01 12 23.5	-0.4
VULT	Monte Vulture	0.79	194	P	Pb	01 12 12.4	-0.2
VULT				S	Sn	01 12 23.9	-0.4
VULT				AML	AML		
	comp=E,830µm,0.3s						
VULT				AML	AML		
	comp=N,986µm,0.4s						
VULT				AML	AML		
	comp=E,830µm,0.3s						
VULT				AML	AML		
	comp=N,986µm,0.4s						
CAFE	Carife	0.84	215	P	Pb	01 12 13.6	+0.1
CAFE				S	Sn	01 12 25.3	-0.2
CAFE				AML	AML		
	comp=E,315µm,1.2s						
CAFE				AML	AML		
	comp=N,248µm,1.1s						
CAFE				AML	AML		
	comp=E,315µm,1.2s						
CAFE				AML	AML		
	comp=N,248µm,1.1s						
ACER	Acerenza	0.94	177	P	Pn	01 12 15.2	0.0
ACER				S	Sn	01 12 28.1	+0.3
ACER				AML	AML		
	comp=E,559µm,0.9s						
ACER				AML	AML		
	comp=N,390µm,0.6s						
ACER				AML	AML		
	comp=E,570µm,0.9s						
ACER				AML	AML		
	comp=N,396µm,0.6s						
ACER				AML	AML		
	comp=E,559µm,0.9s						
ACER				AML	AML		
	comp=N,390µm,0.6s						
ACER				AML	AML		
	comp=E,570µm,0.9s						
ACER				AML	AML		
	comp=N,396µm,0.6s						
ACER				AML	AML		
	comp=E,559µm,0.9s						
ACER				AML	AML		
	comp=E,570µm,0.9s						
ACER				AML	AML		
	comp=N,396µm,0.6s						
ACER				AML	AML		
	comp=N,390µm,0.6s						
PSB1	Pescosannita	0.94	238	P	Pb	01 12 14.9	-0.2
PSB1				AML	AML		
	comp=E,168µm,1.6s						
PSB1				AML	AML		
	comp=N,138µm,1.6s						
PSB1				AML	AML		
	comp=N,138µm,1.6s						
PSB1				AML	AML		
	comp=E,168µm,1.6s						
BAI	Bari	0.98	129	*e*Pg	Pb	01 12 16.4	+0.7
BAI				Sg	Sn	01 12 29.1	+0.5
AMUR	Altamura	0.99	146	P	Pn	01 12 15.4	-0.4
AMUR				S	Sn	01 12 28.7	-0.2
AMUR				AML	AML		
	comp=E,288µm,0.3s						
AMUR				AML	AML		
	comp=N,259µm,0.9s						
AMUR				AML	AML		
	comp=E,288µm,0.3s						
AMUR				AML	AML		
	comp=N,259µm,0.9s						
MRLC	Muro Lucano	1.01	197	P	Pb	01 12 16.2	-0.1
MRLC				S	Sn	01 12 30.3	+0.8
MRLC				AML	AML		
	comp=E,330µm,0.4s						
MRLC				AML	AML		
	comp=N,258µm,1.5s						
MRLC				AML	AML		
	comp=N,258µm,1.5s						
MRLC				AML	AML		
	comp=E,330µm,0.4s						
SG1	Sgolgore (BA)	1.07	145	*e*Pg	Pn	01 12 16.7	-0.3
SG1				Sg	Sb	01 12 29.8	-1.2
MIDA	Miranda	1.21	267	P	Pb	01 12 19.6	-0.2
NOCI	Noci	1.30	136	P	Pn	01 12 20.1	0.0
NOCI				AML	AML		
	comp=E,360µm,1.4s						
NOCI				AML	AML		
	comp=N,610µm,1.1s						
NOCI				AML	AML		
	comp=N,610µm,1.1s						
NOCI				AML	AML		
	comp=E,360µm,1.4s						
LPEL	Lama dei Pelig	1.30	285	P	Pb	01 12 21.6	+0.3
FASA	Fasano	1.44	129	*e*Pg	Pb	01 12 22.6	-1.0
FASA				Sg	Sb	01 12 40.5	-1.0
MASS	Massafra	1.46	138	*e*Pg	Pn	01 12 22.4	+0.2
INTR	Introdacqua	1.50	282	P	Pb	01 12 24.1	-0.5
CGL1	Ceglie Messapi	1.62	131	*e*Pg	Pb	01 12 27.6	+1.0
CGL1				Sg	Sb	01 12 49.1	+2.5
STON	Ston	1.77	49	*i* Pn	Pn	01 12 26.7	+0.2
STON				Sn	Sn	01 12 48.2	-0.1
UDBI	Udbina	2.80	358	Sn	Sn	01 13 13.1	-0.7
NVLJ	Novalja	2.93	346	Sn	Sn	01 13 16.8	0.0
RETA	Reutte	6.81	329	*i* Pn	Pn	01 13 35.4	-0.5
	comp=E,0.1nm,0.1s						
DAVA	Damuels	7.01	324	*e*Pn	Pn	01 13 38.5	-0.2
	comp=E,0.5nm,0.2s						

IDC 04 01:12:31.3±63.0, **16°.81S**×**175°.09E, h0^{km}, mb4.2**/3, **mb1 4.4**/3, **mb1mx3.8**/28, **mbtmp4.2**/3, **MS4.5**/1, **Ms1 4.5**/1,

ms1mx2.9/38**, Error ellipse: s-maj=1100.0km s-min=140.8km az=74.0, Fiji Islands region**

```
Code  Station Name          Δ°  AZ°    Phase ID          Time     Res
                                       Op      ISC       h  m  s  ISC
RAO   Raoul Island       13.95 154    LR      LR        01 19 48.3
      comp=Z,2μm,18.2s,baz=11,slow=31
STKA  Stephens Creek     33.84 237    P       P         01 19 16.1 +0.5
      2.9nm,0.8s,baz=59,slow=5.9,SNR=6.0
WRA   Warramunga Arr     38.74 259    P       P         01 19 57.4 -0.3
      0.5nm,0.7s,baz=94,slow=8.9,SNR=5.1
ASAR  Alice Springs      39.14 253    P       P         01 20 00.7 -0.4
      2.7nm,0.8s,baz=83,slow=8.5,SNR=20
```

MAN 04 01:16:29.2, 9.°86N×125.°89E, h17^{km}, mb4.9, ML3.8, MS3.8, 2C-2D, Mindanao

```
Code  Station Name          Δ°  AZ°    Phase ID          Time     Res
                                       Op      ISC       h  m  s  ISC
SCPH  Surigao             0.40 260⇓  eP      Pb        01 16 39.1 +1.2
SCPH                                 eS      Sn        01 16 48.4 +0.9
BUTP  Butuan              0.92 197   eP      Pb        01 16 45.5 -1.3
BUTP                                 eS      Sb        01 16 58.0 -0.6
PLP   Palo                1.58 325⇑  eP      Pn        01 16 54.5 -2.0
PLP                                  i S     Sb        01 17 18.1 +0.3
BESP  Borongan            1.79 346   eP      Pn        01 16 59.8 +0.4
BESP                                 eS      Sb        01 17 22.8 -1.0
CGP   Cagayan de Oro      1.83 220   eP      Pn        01 16 57.2 -2.6
LLP   Lapu-Lapu           1.95 284   eP      Pn        01 17 02.0 +0.4
LLP                                  eS      Sb        01 17 28.3 -0.1
TBP   Tagbilaran          2.01 266   eP      Pn        01 17 01.6 -0.8
TBP                                  i S     Sb        01 17 31.8 +1.8
BUKP  Musuan              2.13 203   eP      Pn        01 17 04.0  0.0
BUKP                                 eS      Sn        01 17 31.8 +1.6
DCPH  Dipolog City        2.81 243⇑  eP      Pn        01 17 14.5 +1.1
CNP   Catarman            2.90 336   eP      Pn        01 17 12.8 -1.9
RCP   Roxas               3.53 299⇓  eP      Pn        01 17 24.1 +0.9
```

ISCJB ***04*** *01:19:27.6±0.4, 11.°66N±0.°03×92.°69E±0.°03, h51^{km}±3^{km}, mb4.6/80, MS3.8/13, Error ellipse: s-maj=5.3km s-min=4.5km az=30.7*

IDC ***04*** *01:19:28.1±0.6, 11.°80N×92.°72E, h36^{km}±3^{km}, mb4.3/22, mb1 4.4/24, mb1mx4.4/40, mbtmp4.5/24, ML4.4/2, MS3.7/17, Ms1 3.7/17, ms1mx3.5/54, Error ellipse: s-maj=14.9km s-min=13.1km az=9.0*

NEIC ***04*** *01:19:28.9±0.5, 11.°72N×92.°70E, h45^{km}±4^{km}, mb4.6/37, Error ellipse: s-maj=5.5km s-min=4.9km az=56.0*

NDI ***04*** *01:19:29.0±2.4, 11.°75N×92.°73E, h34^{km}±6^{km}, mb4.6, ML4.7, mb4.6(NEIC)*

DJA ***04*** *01:19:31.9±0.6, 12˚N±4˚×9˚3E±˚, h81^{km}±8^{km}, M4.3/11, mb4.4/11, mB4.9/4, MLv4.3/1, Mw(mB)4.2/4*

ISC 04 01:19:27.6±0.5**, 11.°70N**±0.°05×**92.°74E**±0.°05**, h33^{km}**±1^{km}**, h34^{km}:pP-P, n246, σ1.ˢ24**/249**, mb4.7**/89**, MS3.8**/13**, 17C-7D, Andaman Islands region**

```
Code  Station Name          Δ°  AZ°    Phase ID          Time     Res
                                       Op      ISC       h  m  s  ISC
PBA   Port Blair          0.04 181   ePn     Pb        01 19 34.1 +0.9
PBA                                  eSn     Sb        01 19 40.3 +3.4
PBA   Port Blair          0.04 181   eP      Pb        01 19 34.2 +1.0
PBA                                  eS      Sb        01 19 39.7 +2.7
PBA                                   IAML             01 19 41.1
      comp=N,386μm,0.4s
PBA                                   IAML             01 19 41.5
      comp=E,261μm,0.4s
CMBY  CAMPBELL BAY        4.80 166   eP      Pn        01 20 39.3 +1.7
CMBY                                 eS      Sn        01 21 31.7 -0.4
CMBY                                  IAML             01 21 40.2
      comp=N,442nm,0.6s
CMBY                                  IAML             01 21 40.4
      comp=E,488nm,0.3s
BSI   Banda Aceh          6.66 158   P       Pn        01 21 04.2 +1.0
PKDT  Phuket              6.68 124   P       Pn        01 21 08.5 +5.0
      comp=E,53nm,0.6s,comp=E,5μmcomp=E,0.3nm
SRDT  SRDT                6.75  66   P       Pn        01 21 08.3 +3.8
      comp=E,64nm,0.8s,comp=E,2μmcomp=E,0.3nm
PHET  Kaeng Krachan       6.84  79   P       Pn        01 21 09.6 +3.9
      comp=E,29nm,0.7s,comp=E,335nmcomp=E,0.1nm
UMPA  Umpang Tak          7.44  52   P       Pn        01 21 16.5 +2.5
      comp=E,20nm,0.9s,comp=E,1μmcomp=E,0.1nm
UTHA  Uthaitani           7.56  59   P       Pn        01 21 19.6 +4.0
      comp=E,12nm,0.7s,comp=E,111nmcomp=E,0.0nm
TRTT  Trang               7.85 119   P       Pn        01 21 24.0 +4.5
      comp=E,20nm,0.5s,comp=E,0.1nm
PATY  Pattaya             8.03  80   P       Pn        01 21 26.4 +4.4
      comp=E,24nm,0.5s,comp=E,4μmcomp=E,0.3nm
SUKH  Sukhothai           8.80  48   P       Pn        01 21 36.7 +4.0
      comp=E,10nm,0.7s
CM01  Chiang Mai Arr      8.98  41   ePn     Pn        01 21 36.3 +1.1
CM01                                 eSn     Sn        01 23 13.1 -2.2
CM31  Chiang Mai Arr      9.00  41   ePn     Pn        01 21 37.2 +1.8
CM31                                 eSn     Sn        01 23 14.0 -1.6
CMAR  Chiang Mai Arr      9.00  41   Pn      Pn        01 21 37.4 +2.0
      comp=E,1.0nm,0.3s,baz=234,slow=15,SNR=24
CMAR                                 Sn      Sn        01 23 14.3 -1.3
      comp=E,0.5nm,0.3s,baz=236,slow=28,SNR=3.0
CMAR                                 LR      LR        01 25 32.4
      comp=E,178nm,19.9s,baz=220,slow=41
CHTO  Chiang Mai          9.27  39   ePn     Pn        01 21 39.4 +0.4
CHTO  Chiang Mai          9.27  39   P       Pn        01 21 45.8 +6.8
      comp=E,40nm,0.6s
CMMT  Chiang Mai          9.27  39   P       Pn        01 21 45.7 +6.7
      comp=E,10.0nm,0.6s
PBKT  Sadao Pong          9.33  58   ePn     Pn        01 21 43.5 +3.5
PBKT  Sadao Pong          9.33  58   P       Pn        01 21 43.8 +3.9
      comp=E,24nm,0.8s,comp=E,1μm
SRAK  Srakaew             9.36  75   P       Pn        01 21 51.9  +12
KCSI  Kotacane, Aceh      9.53 148   P       Pn        01 21 41.0 -1.6
      comp=E,68nm,1.0s,comp=E,784nm
CHAI  Chaiyaphum          9.90  64   P       Pn        01 21 53.7 +6.0
      comp=E,6.8nm,1.0s,comp=E,76nm
KULM  Kulim              10.08 128   ePn     Pn        01 21 52.3 +2.1
PAYA  Payao              10.26  41   P       Pn        01 21 57.9 +5.3
      comp=E,9.8nm,0.7s,comp=E,122nm
PSI   Prapat             10.75 145   Pn      Pn        01 22 03.5 +4.0
      comp=E,3.4nm,0.3s,baz=359,slow=11,SNR=9.1
PSI                                  LR      LR        01 26 13.5
      comp=E,478nm,21.9s,baz=272,slow=37
BWNR  Bhubaneshwar       10.84 323   eP      Pn        01 21 45.8  -15
BWNR                                 eS      Sn        01 23 34.8  -26
IPM   Ipoh               10.89 131   ePn     Pn        01 22 03.8 +2.6
BRDH  Bariadhala         10.97 355   LR      LR        01 26 47.7
      comp=E,328nm,19.2s,baz=180,slow=40
NONG  Nongkai            11.88  57   P       Pn        01 22 20.7 +5.9
MDRS  Chennai            12.29 278   eP      Pn        01 22 20.8 +0.5
MDRS                                 eS      Sn        01 24 25.9  -10
PALK  Pallekele          12.66 251   Pn      Pn        01 22 25.3 -0.3
      comp=E,1.5nm,0.3s,baz=114,slow=9.5,SNR=8.5
PALK                                 Sn      Sn        01 24 34.8  -11
      comp=E,8.6nm,0.3s,baz=296,slow=21,SNR=11
PALK                                 LR      LR        01 27 00.5
      comp=E,324nm,19.3s,baz=116,slow=36
BOK   Bokaro             13.69 332   eP      Pn        01 22 39.3 -0.2
BOK                                   IAmb   IAmb      01 22 40.1
      comp=Z,16nm,0.3s
BOK                                  ex      x         01 24 59.3
SHL   Shillong           13.82 357   ePn     Pn        01 22 41.0 -0.5
SHL   Shillong           13.82 357   eP      Pn        01 22 43.0 +1.5
SHL                                   IAmb   IAmb      01 22 43.3
      comp=Z,7.4nm,0.3s
HYB   Hyderabad          14.86 294   i P     Pn        01 22 57.0 +1.4
HYB                                  eS      Sn        01 25 42.0 +2.8
HYB   Hyderabad          14.86 294   eP      Pn        01 22 56.8 +1.3
HYB                                   IAmb   IAmb      01 23 03.3
      comp=Z,20nm,1.2s
TRD   Trivandrum         15.86 260   eP      Pn        01 23 08.8 +0.2
NGP   Nagpur             16.14 307   eP      Pn        01 23 13.2 +1.0
NGP                                   IAmb   IAmb      01 23 17.1
      comp=Z,7.6nm,0.8s
NGP                                  ex      x         01 25 57.8
RAMN  Ramite             16.24 340   eP      Pn        01 23 13.9 +0.3
      comp=Z,161nm,0.7s
JIRN  Jiri               17.03 340   eP      Pn        01 23 24.2 +0.5
      comp=Z,98nm,0.5s
PKI   Pulchoki           17.23 338   eP      Pn        01 23 26.0 -0.1
      comp=Z,67nm,0.6s
PKIN  Phulchoki          17.24 337   eP      Pn        01 23 26.0 -0.2
      comp=Z,62nm,0.5s
GUN   Gumba              17.37 339   eP      Pn        01 23 28.5 +0.6
      comp=Z,66nm,0.7s
DMN   Daman              17.38 337   eP      Pn        01 23 28.1 +0.2
      comp=Z,130nm,0.7s
LSA   Lhasa              17.98 356   ePn     Pn        01 23 35.6 +0.1
      comp=Z,4.3nm,0.6s
KOLN  Koldanda           18.15 333   eP      Pn        01 23 37.7 +0.4
      comp=Z,80nm,0.6s
BHPL  Bhopal             18.56 310   eP      Pn        01 23 43.1 +0.8
BHPL                                  IAmb   IAmb      01 23 46.1
      comp=Z,9.7nm,0.6s
DANN  Dangsing           18.58 334   eP      Pn        01 23 43.6 +0.9
      comp=Z,75nm,0.5s
PYUN  Piuthan            18.70 332   eP      Pn        01 23 44.8 +0.7
      comp=Z,69nm,0.6s
GOA   Goa                18.77 284   eP      P         01 23 44.4 +0.2
GOA                                   IAmb   IAmb      01 23 45.9
      comp=Z,15nm,0.3s
MNAI  Manna              18.91 147   eP      P         01 23 42.3 -3.4
      comp=Z,64nm,1.1s
POO   Poona              19.46 293   eP      P         01 23 52.1 +0.3
DDI   Dehra Dun          23.01 326   eP      P         01 24 29.8 -0.1
DDI                                   IAmb   IAmb      01 24 31.5
      comp=Z,123nm,0.1s
KKM   Kota Kinabalu      23.85 102   eP      P         01 24 35.9 -2.4
      comp=Z,36nm,0.9s
SMLA  Simla              24.12 326   eP      P         01 24 41.2 +0.8
SMLA                                  IAmb   IAmb      01 24 43.0
      comp=Z,23nm,1.0s
ENH   Enshi              24.15  38   eP      P         01 24 39.2 -1.6
      comp=Z,19nm,0.8s
BHJ   Bhuj               24.80 301   eP      P         01 24 47.3 +0.5
DHRM  DHARAMSHALA        25.45 326   eP      P         01 24 53.2 +0.4
DHRM                                  IAmb   IAmb      01 24 53.8
      comp=Z,12nm,0.7s
XAN   Xi'an              26.70  31   P       P         01 25 04.2 +0.3
XAN                                   pmax   pmax
      comp=Z,6.0nm,0.7s
XAN                                   pmax   pmax
      comp=Z,130nm,4.6s
XAN   Xi'an              26.70  31   eP      P         01 25 04.2 +0.3
      comp=Z,4.7nm,0.6s
H08S3 Diego Garcia H     27.83 227   T       T         01 53 52.1
      baz=46,slow=76,SNR=422
H08S2 Diego Garcia H     27.84 227   T       T         01 53 44.4
      baz=46,slow=76,SNR=47
H08S1 Diego Carcia H     27.85 227   T       T         01 53 53.5
      baz=46,slow=76,SNR=8.9
NIL   Nilore             28.20 324   eP      P         01 25 17.1 -0.3
      comp=Z,12nm,0.8s
GTA   Gaotai             28.31  12   eP      P         01 25 18.7 +0.3
GTA                                   pP     pP        01 25 24.0 -4.0
GTA                                   sP     sP        01 25 27.3 -4.7
GTA                                   pmax   pmax
      comp=Z,5.0nm,1.0s
KBL   Kabul              31.34 320   eP      P         01 25 46.0 +0.5
      comp=Z,3.7nm,0.8s
NRN   Naryn              33.06 337   eP      P         01 26 01.0 +0.4
      comp=Z,6.9nm,1.0s
PRZ   Przheval'sk        33.12 340   eP      P         01 26 02.8 +1.8
      comp=Z,12nm,0.8s
KDJ   Kajisay            33.23 339   eP      P         01 26 03.2 +1.3
      comp=Z,7.8nm,0.7s
HHC   Hu-ho-hao-te       33.43  26   eP      P         01 26 06.3 +2.8
HHC                                   sP     pP        01 26 14.0 +0.8
HHC                                   pmax   pmax
      comp=Z,11nm,0.9s
HHC                                   pmax   pmax
      comp=Z,130nm,4.8s
UZB   Uzynbulak          33.52 342   eP      P         01 26 03.6 -0.8
      comp=Z,30nm,0.6s
SATY  Saty               33.64 341   eP      P         01 26 05.5 +0.2
      comp=Z,155nm,0.9s
KZA   Kyzart             33.91 336   P       P         01 26 09.1 +1.1
      SNR=7.2
KPKS  Kokpek             33.92 342   eP      P         01 26 07.9 +0.2
      comp=Z,100nm,0.9s
MDOK  Medeo              34.18 339⇓  eP      P         01 26 10.2 +0.2
      comp=Z,305nm,0.8s
UCH   Uchtor             34.33 336   P       P         01 26 12.5 +0.8
      SNR=6.2
TKM2  Tokmak 2           34.49 338   P       P         01 26 13.3 +0.5
      SNR=7.7
KBK   Karagaybulak       34.52 337   P       P         01 26 14.3 +1.3
      SNR=7.1
AML   Almayashu          34.58 335   P       P         01 26 14.8 +0.9
      SNR=8.6
AAK   Ala-Archa          34.68 336   P       P         01 26 15.9 +1.5
      SNR=6.8
AAK   Ala-Archa          34.68 336   eP      P         01 26 15.6 +1.2
      comp=Z,6.8nm,0.9s
CHMS  Chumysh            34.88 337   P       P         01 26 16.8 +0.7
      SNR=5.8
EKS2  Erkin-Say          34.99 335   P       P         01 26 18.3 +1.3
      SNR=11
KUU   Kurty              35.07 339⇓  eP      P         01 26 15.8 -1.8
      comp=Z,32nm,1.1s
USP   Ospenovka          35.21 337   P       P         01 26 19.5 +0.7
      SNR=13
MK01  Makanchi Array     36.06 348   eP      P         01 26 25.7 -0.4
MK31  Makanchi Array     36.08 348   eP      P         01 26 26.1 -0.1
      comp=Z,5.6nm,0.7s
MK32  Makanchi Array     36.08 348   eP      P         01 26 26.1 -0.2
MKAR  Makanchi Array     36.08 348   P       P         01 26 26.1 -0.2
      comp=Z,6.9nm,0.6s,baz=168,slow=8.1,SNR=95
MKAR                                 pP      pP        01 26 36.2 +0.2
      comp=Z,3.9nm,0.6s,baz=168,slow=7.8,SNR=11
MKAR                                 LR      LR        01 44 10.2
      comp=Z,82nm,19.9s,baz=164,slow=41
MAKZ  Makanchi           36.16 347   eP      P         01 26 26.7 -0.3
      comp=Z,8.1nm,0.6s
IUG   Iuzhnay            36.24 331⇑  eP      P         01 26 27.6 -0.2
      comp=Z,175nm,0.9s
ZSN   Zaisan             36.25 351   eP      P         01 26 26.1 -1.6
      comp=Z,29nm,1.1s
KK31  Karatay Array      36.76 332   eP      P         01 26 32.2 +0.2
      comp=Z,5.8nm,0.9s
KKAR  Karatay Array      36.76 332   eP      P         01 26 32.2 +0.2
      comp=Z,5.8nm,0.9s
BTLS  Baital             36.89 338⇑  eP      P         01 26 32.5 -0.6
      comp=Z,61nm,1.3s
SONA0 Songino Array      37.80  15   eP      P         01 26 40.7 -0.3
SONM  Songino Array      37.80  15   P       P         01 26 40.7 -0.3
      comp=Z,1.3nm,0.3s,baz=204,slow=8.2,SNR=19
SONM                                 pP      pP        01 26 50.9 +0.2
      comp=Z,0.7nm,0.4s,baz=202,slow=7.0,SNR=4.0
SONM                                 PcP     PcP       01 28 57.5 +0.2
      comp=Z,2.6nm,0.8s,baz=203,slow=3.6,SNR=7.0
SONM                                 LR      LR        01 43 36.5
      comp=Z,121nm,21.1s,baz=178,slow=38
SONA1 Songino Array      37.82  15   eP      P         01 26 40.8 -0.3
ULN   Ulaanbaatar        38.00  16   eP      P         01 26 42.9 +0.2
      comp=Z,3.0nm,1.1s
GEYT  Alibeck            40.48 316   P       P         01 27 04.5 +1.1
      comp=Z,16nm,0.7s,baz=134,slow=8.5,SNR=29
GEYT                                 pP      pP        01 27 14.6 +1.3
      comp=Z,15nm,0.6s,baz=134,slow=8.5,SNR=16
GEYT                                 LR      LR        01 44 19.4
      comp=Z,150nm,21.4s,baz=165,slow=37
KS15  Wonju Array Si     40.58  45   eP      P         01 27 03.5 -0.7
KSAR  Wonju Array Be     40.58  45   P       P         01 27 03.5 -0.7
KSAR                                 pP      pP        01 27 14.7 +0.7
KURK  Kurchatov          40.59 346   eP      P         01 27 03.8 -0.3
      comp=Z,8.2nm,1.0s
KSRS  Korea Array        40.62  45   P       P         01 27 03.5 -1.0
      comp=Z,1.9nm,0.6s,baz=240,slow=8.3,SNR=7.8
KSRS                                 pP      pP        01 27 14.7 +0.5
      comp=Z,1.5nm,0.5s,baz=240,slow=7.9,SNR=4.1
ZAA0  Zalesovo Array     42.62 353   eP      P         01 27 20.0 -0.6
      comp=Z,4.4nm,0.6s
ZALV  Zalesovo Beam      42.62 353   P       P         01 27 19.9 -0.6
      comp=Z,4.2nm,0.4s,baz=181,slow=9.0,SNR=27
ZALV                                 pP      pP        01 27 30.9 +0.5
      comp=Z,4.3nm,0.3s,baz=173,slow=8.1,SNR=15
ZALV                                 LR      LR        01 48 00.3
      comp=Z,53nm,18.3s,baz=244,slow=40
ZAA1  Zalesovo Array     42.62 353   eP      P         01 27 19.9 -0.7
BRVK  Borovoye           45.01 341   eP      P         01 27 39.7 -0.2
      comp=Z,6.6nm,1.0s
ABKAR Akbulak array      46.24 331   eP      P         01 27 49.9 +0.2
      comp=Z,7.4nm,0.9s
USRK  Ussuriysk Ar.      46.72  39   P       P         01 27 52.4 -1.2
      comp=Z,1.6nm,0.7s,baz=242,slow=8.0,SNR=4.7
MAJO  Matsushiro         47.73  51   eP      P         01 28 01.9 +0.3
MJAR  Matsushiro Arr     47.73  51   P       P         01 28 01.9 +0.3
      comp=Z,1.0nm,0.3s,baz=246,slow=7.6,SNR=4.1
MJAR                                 PcP     PcP       01 29 29.9 -0.6
      comp=Z,0.8nm,0.3s,baz=234,slow=1.7,SNR=4.3
MJAR                                 ScP     ScP       01 33 20.2 -2.3
      comp=Z,2.7nm,0.8s,baz=241,slow=3.6,SNR=6.6
MJAR                                 LR      LR        01 50 17.2
      comp=Z,50nm,18.1s,baz=150,slow=39
GNI   Garni              50.82 313   eP      P         01 28 26.6 +1.3
      comp=Z,14nm,0.9s
TBLG  Delisi             51.38 315   eP      P         01 28 30.7 +1.4
      comp=Z,12nm,0.9s
WRA   Warramunga Arr     51.62 127   P       P         01 28 33.1 +1.7
      comp=Z,7.5nm,0.6s,baz=301,slow=9.7,SNR=2.4
ARU   Arti               51.86 337   eP      P         01 28 31.9 -0.6
      comp=Z,7.1nm,1.1s
KBZ   Khabaz             53.37 316   P       P         01 28 44.4 +0.4
      comp=Z,3.6nm,0.8s,baz=140,slow=7.0,SNR=10.0
KIV   Kislovodsk         53.60 317   eP      P         01 28 46.8 +1.1
KMBO  Kilima Mbogo       56.57 261   P       P         01 29 09.6 +1.7
      comp=Z,1.4nm,0.7s,baz=41,slow=14,SNR=5.0
NRIK  Noril'sk           57.69 358   LR      LR        01 55 51.8
      comp=Z,74nm,20.5s,baz=195,slow=38
BR101 Keskin Array S     58.93 309   eP      P         01 29 22.9 -1.0
BR131 Keskin Array S     58.93 309   eP      P         01 29 23.3 -0.7
      comp=Z,4.4nm,0.9s
BRTR  Keskin Array B     58.93 309   P       P         01 29 22.9 -1.0
      comp=Z,5.0nm,1.0s,baz=129,slow=7.2,SNR=18
BRTR                                 pP      pP        01 29 33.4 -0.8
      comp=Z,1.9nm,0.7s,baz=118,slow=7.1,SNR=7.3
KLMR  Klimovskoe         62.44 334   eP      P         01 29 45.7 -1.6
KLMR                                 AMP               01 29 48.0
      comp=Z,14nm,1.2s
STKA  Stephens Creek     63.74 134   P       P         01 29 57.1 +0.8
      comp=Z,2.3nm,0.7s,baz=319,slow=8.4,SNR=3.0
CFR   Carcaliu           63.93 315⇑  iP      P         01 29 57.3 -0.2
LEOM  Leova              64.09 316⇓  iP      P         01 29 58.4 -0.1
AKASG Malin Array Be     64.33 321   P       P         01 29 58.7 -1.3
      comp=Z,3.2nm,0.5s,baz=87,slow=5.5,SNR=20
AKASG                                pP      pP        01 30 10.3  0.0
      comp=Z,1.5nm,0.6s,baz=88,slow=5.7,SNR=3.5
AKBB  Malin Array Si     64.33 321   eP      P         01 29 58.9 -1.1
      comp=Z,7.4nm,0.8s
KIEV  Kiev               64.34 321   eP      P         01 29 58.9 -1.2
      comp=Z,6.9nm,0.8s
KIEV  Kiev               64.34 321⇓  iP      P         01 29 59.1 -0.9
AK11  Malin Array Si     64.36 321   eP      P         01 29 59.0 -1.2
VRI   Vrincioaia         65.02 315⇑  iP      P         01 30 05.3 +0.7
PLOR  Plostina           65.07 315⇑  iP      P         01 30 05.8 +0.8
MLR   Muntele Rosu       65.51 315⇑  iP      P         01 30 08.5 +0.6
PRAR  RASCA              65.60 317⇑  iP      P         01 30 08.1 -0.3
BIZ   Bicaz              65.62 316⇑  iP      P         01 30 08.4 -0.1
PETK  Petropavlovsk-     65.75  37   LR      LR        02 03 24.5
      comp=Z,32nm,18.9s,baz=255,slow=40
DOPR  Dopca              65.96 315⇓  iP      P         01 30 10.6 -0.1
HUMR  Humele             66.05 314⇑  iP      P         01 30 11.1 -0.2
VOIR                     66.12 315⇑  iP      P         01 30 11.2 -0.7
BURAR Bucovina Array     66.32 317⇑  iP      P         01 30 13.5 +0.4
BUR08 Bucovina Ar. S     66.34 317   eP      P         01 30 13.2  0.0
      comp=Z,3.4nm,0.9s
NACGM Naroch             66.74 325   e       P         01 30 15.0 -0.5
ARCR  ARCALIA            66.82 316⇓  iP      P         01 30 15.9 -0.3
IDID  Didziasalis        66.86 325   eP      P         01 30 16.4 +0.2
IDID                                  IAmb   IAmb      01 30 17.1
      comp=Z,8.6nm,0.8s
LOT   Lotru              67.02 314⇑  iP      P         01 30 17.0 -0.6
VTS   Vitosha            67.11 311⇑  iP      P         01 30 17.7 -0.6
IIGN  Ignalina           67.16 325   eP      P         01 30 18.3 +0.2
IIGN                                  IAmb   IAmb      01 30 18.9
      comp=Z,9.9nm,0.5s
IZAR  Zarasai            67.23 326   eP      P         01 30 18.6  0.0
IZAR                                  IAmb   IAmb      01 30 19.3
      comp=Z,7.3nm,0.6s
ISAL  Salakas            67.26 326   eP      P         01 30 18.9 +0.1
ISAL                                  IAmb   IAmb      01 30 19.5
      comp=Z,5.8nm,0.7s
CJR   Cluj-Napoca        67.29 316⇑  iP      P         01 30 19.7 +0.5
VSU   Vasula             67.62 329   eP      P         01 30 20.3 -0.7
VSU                                   IAmb   IAmb      01 30 21.3
      comp=Z,50nm,0.8s
DRGR                     67.90 316⇓  iP      P         01 30 23.0 -0.1
TRPA  Tarpa              68.18 317⇑  iP      P         01 30 23.9 -0.8
KWP   Kalwaria Pacla     68.26 319   eP      P         01 30 25.3 +0.1
MDVR  Moldovita          68.40 314⇑  iP      P         01 30 26.0 -0.3
SUW   Suwalki            68.63 324   eP      P         01 30 26.8 -0.6
FIA1  FINESS Array S     68.71 332   eP      P         01 30 27.1 -0.7
FIA0  FINESS Array S     68.71 332   eP      P         01 30 27.2 -0.5
FINES FINESS Array B     68.71 332   P       P         01 30 27.2 -0.5
      comp=Z,11nm,0.7s,baz=106,slow=6.7,SNR=44
FINES                                pP      pP        01 30 38.0 -0.1
      comp=Z,2.5nm,0.5s,baz=96,slow=6.6,SNR=5.5
LSZ   Lusaka             69.30 249   eP      P         01 30 30.8 -1.7
      comp=Z,8.1nm,1.0s
PBUR  Paburg             69.67 326   eP      P         01 30 33.2 -0.7
PBUR                                  IAmb   IAmb      01 30 34.2
      comp=Z,45nm,0.7s
OJC   Ojcow              70.19 319   eP      P         01 30 36.8 -0.4
OJC   Ojcow              70.19 319   eP      P         01 30 35.4 -1.8
      comp=Z,7.8nm,0.6s
VYHS  Vyhne              70.67 317   eP      P         01 30 39.6 -0.6
ARA0  ARCESS Array S     71.23 340   eP      P         01 30 42.8 -0.3
ARCES ARCESS Array B     71.23 340   P       P         01 30 42.8 -0.3
      comp=Z,3.8nm,0.7s,baz=92,slow=6.7,SNR=23
ARCES                                pP      pP        01 30 53.4 -0.1
      comp=Z,2.0nm,0.6s,baz=107,slow=7.0,SNR=3.5
MORC  Moravsky Berou     71.61 319   eP      P         01 30 45.2 -0.7
      comp=Z,5.8nm,0.8s
MORC  Moravsky Berou     71.61 319⇑  iP      P         01 30 45.3 -0.5
VRAC  Vranov             72.20 318   LR      LR        02 06 17.9
      comp=Z,62nm,18.6s,baz=281,slow=39
DPC   Dobruska-Polom     72.42 319   eP      P         01 30 51.0 +0.3
DPC                                  epP     sP        01 31 04.7 -0.2
KSP   Ksiaz              72.47 320   eP      P         01 30 49.5 -1.4
CONA  Conrad Observa     72.63 317   eP      P         01 30 51.6 -0.5
      comp=Z,0.7nm,0.5s
UPC   Upice              72.63 319   eP      P         01 30 52.1 +0.2
ARSA  Arzberg            72.84 316   eP      P         01 30 53.3  0.0
      comp=Z,0.5nm,0.3s
SOKA  Soboth             73.17 315   eP      P         01 30 54.4 -0.9
      comp=Z,0.5nm,0.2s
OBKA  Obir               73.50 315   eP      P         01 30 57.0 -0.2
      comp=Z,3.0nm,0.6s
PVCC  Panska Ves         73.55 319   eP      P         01 30 57.8 +0.5
MOA   Molln              73.70 317   i P     P         01 30 57.6 -0.7
      comp=Z,1.9nm,0.6s
BRG   Berggiesshubel     73.96 320   eP      P         01 30 59.9 +0.1
      comp=Z,25nm,1.6s
GEC2  GERESS Array S     74.09 318   eP      P         01 31 00.6  0.0
      comp=Z,6.0nm,0.6s
GERES GERESS Array B     74.09 318   P       P         01 31 00.4 -0.2
      comp=Z,4.3nm,0.5s,baz=83,slow=5.6,SNR=16
GERES                                pP      pP        01 31 11.4 +0.3
      comp=Z,1.2nm,0.5s,baz=88,slow=6.9,SNR=3.1
MYKA  Terra Mystica      74.12 315   eP      P         01 30 59.6 -1.3
      comp=Z,1.0nm,0.3s
KHC   Kasperske Hory     74.17 318   eP      P         01 31 00.6 -0.4
      comp=Z,1.4nm,0.8s
KHC   Kasperske Hory     74.17 318   eP      P         01 31 00.8 -0.2
KHC                                  epP     pP        01 31 11.5  0.0
KBA   Koelnbreinsper     74.33 316   eP      P         01 31 00.5 -1.7
      comp=Z,1.4nm,0.4s
CLL   Collm              74.56 320   eP      P         01 31 03.0 -0.2
ABTA  Abfaltersbach      74.90 315   i P     P         01 31 04.4 -1.0
      comp=Z,1.3nm,0.5s
LBTB  Lobatse            74.90 240   LR      LR        01 59 09.3
      comp=Z,90nm,19.7s,baz=66,slow=32
WTTA  Wattenberg         75.49 316   i P     P         01 31 07.6 -1.3
      comp=Z,3.8nm,0.4s
WATA  Walderalm          75.53 316   eP      P         01 31 07.6 -1.5
      comp=Z,3.4nm,0.5s,SNR=5.5
NB2   NORSAR Subarra     75.75 330   P       P         01 31 08.4 -1.5
      comp=Z,1.9nm,0.6s,baz=91,slow=5.9
NB200 NORSAR Array S     75.75 330   eP      P         01 31 08.7 -1.2
NOA   NORSAR Array B     75.75 330   P       P         01 31 08.7 -1.2
      comp=Z,3.6nm,0.7s,baz=91,slow=5.7,SNR=13
NOA                                  pP      pP        01 31 19.5 -0.9
      comp=Z,1.1nm,0.5s,baz=92,slow=5.7,SNR=4.3
SQTA  Sankt Quirin       75.78 316   eP      P         01 31 09.3 -1.2
      comp=Z,6.6nm,0.5s,SNR=8.9
SPITS Spitsbergen Ar     75.84 348   LR      LR        02 10 51.4
      comp=Z,68nm,18.3s,baz=240,slow=41
MOTA  Moosalm            75.85 316   eP      P         01 31 09.4 -1.5
      comp=Z,3.9nm,0.6s,SNR=7.4
RETA  Reutte             76.07 316   i P     P         01 31 11.0 -1.1
      comp=Z,5.5nm,0.6s
FETA  Feichten           76.11 316   eP      P         01 31 11.4 -1.1
      comp=Z,2.0nm,0.4s,SNR=5.2
BOSA  Boshof             76.48 237   P       P         01 31 15.2 +0.4
      comp=Z,5.0nm,0.7s,baz=84,slow=4.3,SNR=11
BOSA                                 LR      LR        02 02 12.5
      comp=Z,79nm,19.9s,baz=80,slow=34
DAVA  Damuels            76.68 316   eP      P         01 31 14.9 -0.8
      comp=Z,6.0nm,0.6s
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KEST  Kesra             77.95 304  P        P        01 31 21.8 -1.1
      comp=Z,6.1nm,0.8s,baz=260,slow=4.5,SNR=5.5
BNI   Bardonecchia      79.06 314  eP       P        01 31 26.4 -2.5
      comp=Z,8.1nm,0.9s
SUR   Sutherland        81.39 234  LR       LR       02 01 27.1
      comp=Z,75nm,18.8s,baz=84,slow=31
TAM   Tamanrasset       83.03 292  eP       P        01 31 49.9 -0.6
      comp=Z,2.9nm,0.8s
ES19  SONSECA Array     87.67 310  eP       P        01 32 12.3 -0.9
ESDC  Sonseca Array     87.72 310  P        P        01 32 12.8 -0.7
      comp=Z,3.5nm,0.8s,baz=60,slow=4.3,SNR=14
ESDC                               pP       pP       01 32 24.6 +0.4
      comp=Z,0.5nm,0.6s,baz=67,slow=4.4,SNR=3.0
TOA0  Torodi Ar. Sit    88.39 283  eP       P        01 32 16.1 -0.9
TORD  Torodi Ar. Bea    88.39 283  P        P        01 32 16.1 -0.9
      comp=Z,2.3nm,0.9s,baz=64,slow=3.7,SNR=12
TOA1  Torodi Ar. Sit    88.39 283  eP       P        01 32 16.1 -0.9
IM3   Indian Mountai    88.63  22  eP       P        01 32 16.9 -0.3
MLY   Manley            90.19  22  eP       P        01 32 24.8 +0.2
      comp=Z,4.1nm,0.7s
MDM   Murphy Dome       91.15  22  eP       P        01 32 29.3 +0.3
      comp=Z,4.1nm,0.9s
IL1   Eielson Array     91.73  22  eP       P        01 32 29.7 -1.9
ILAR  Eielson Array     91.73  22  P        P        01 32 30.1 -1.6
      comp=Z,2.2nm,0.7s,baz=304,slow=4.2,SNR=33
ILAR                               pP       pP       01 32 41.3 -1.0
      comp=Z,0.8nm,0.7s,baz=306,slow=4.7,SNR=4.1
ILB   Eielson Array     91.73  22  eP       P        01 32 30.1 -1.6
      comp=Z,2.6nm,0.7s
SFJD  Kangerlussuaq     97.11 346  LR       LR       02 26 06.2
      comp=Z,72nm,18.3s,baz=103,slow=41
LAO   LASA Array       119.45  15  ePKPdf   PKPdf    01 38 14.4 +0.3
SNOW  Snow King Moun   121.06  20  ePKPdf   PKPdf    01 38 17.9 +0.3
REDW  Red Top Meadow   121.12  20  ePKPdf   PKPdf    01 38 17.7 +0.1
PD31  Pinedale Array   122.08  19  ePKPdf   PKPdf    01 38 18.3 -1.2
PDAR  Pinedale Array   122.08  19  PKP      PKPdf    01 38 18.7 -0.8
      comp=Z,1.1nm,0.7s,baz=79,slow=0.7,SNR=15
NV01  Mina Array Sit   122.31  29  ePKPdf   PKPdf    01 38 20.4 +0.3
NVAR  Mina Array Bea   122.31  29  PKP      PKPdf    01 38 20.2 +0.2
      comp=Z,2.4nm,0.6s,baz=306,slow=2.7,SNR=12
DUG   Dugway, Tooele   123.19  23  ePKPdf   PKPdf    01 38 21.6  0.0
R11A  Troy Canyon, C   123.61  27  ePKPdf   PKPdf    01 38 22.5  0.0
NLU   North Lily Min   123.68  23  ePKPdf   PKPdf    01 38 23.1 +0.4
ECSD  EROS Data Cent   124.18   8  ePKPdf   PKPdf    01 38 22.8 -0.5
PSUT  Pine Spring      124.19  25  ePKPdf   PKPdf    01 38 24.1 +0.4
MSU   Marysvale        124.89  24  ePKPdf   PKPdf    01 38 25.6 +0.6
Q16A  Castle Valley    124.93  23  ePKPdf   PKPdf    01 38 25.3 +0.3
MTPU  Mount Pierson    125.29  24  ePKPdf   PKPdf    01 38 26.5 +0.5
Q24A  Divide           126.91  17  ePKPdf   PKPdf    01 38 27.7 -1.3
CLNB  Carlsbad         133.49  20  ePKPpre  PKPpre   01 38 31.5
MNTX  Cornudas Mount   133.49  21  ePKPdf   PKPdf    01 38 42.7 +1.4
LTX   Lajitas          136.24  21  ePKPdf   PKPdf    01 38 46.4 -0.2
LTX                                eSKPbc   SKPbc    01 42 15.2 -1.2
TX31  Lajitas Ar. Si   136.24  21  ePKPdf   PKPdf    01 38 46.5  0.0
TXAR  Lajitas Array    136.24  21  PKP      PKPdf    01 38 46.4 -0.2
      comp=Z,0.8nm,0.4s,baz=259,slow=0.3,SNR=21
TXAR                               SKPbc    SKPbc    01 42 15.2 -1.2
      comp=Z,1.3nm,0.9s,baz=285,slow=2.4,SNR=8.0
JCT   Junction City    136.37  16  ePKPpre  PKPpre   01 38 31.6
JCT                                ePKPdf   PKPdf    01 38 46.1 -0.6
SPB   Sao Paulo        140.38 247  ePKPpre  PKPpre   01 38 49.9
PLCA  Paso Flores      147.55 204  ePKPbc   PKPbc    01 39 09.3 +0.4
CPUP  Villa Florida    148.29 238  PKPbc    PKPdf    01 39 10.1 +2.3
      comp=Z,4.9nm,0.7s,baz=98,slow=4.1,SNR=14
GO06  Curarrehue       148.90 204  ePKPbc   PKPbc    01 39 12.1 -0.5
APG   El Apazote       153.28   7  PKPab    PKPab    01 39 33.7 -1.6
      comp=Z,12nm,0.9s,baz=347,slow=10.0,SNR=8.2
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BJI ***04*** *01:20:16.7, 5°.86S×131°.13E, h61^{km}, mB5.1/27, mb4.9/42, Ms4.9/7, Ms7 4.6/7*

ISCJB ***04*** *01:20:21.9±0.5, 5°.56S±0°.03×131°.01E±0°.03, h86^{km}±4^{km}, mb4.9/68, Error ellipse: s-maj=4.9km s-min=4.3km az=12.5*

NEIC ***04*** *01:20:22.7±0.8, 5°.54S×130°.92E, h74^{km}±7^{km}, mb4.9/27, Error ellipse: s-maj=7.7km s-min=5.3km az=71.0*

DJA ***04*** *01:20:23.3±0.2, 6°S±2°×13°1E±°, h82^{km}±5^{km}, M5.0/23, mb4.8/23, mB5.3/9, MLv5.3/9, Mw(mB)4.8/9*

MOS ***04*** *01:20:24.8±1.1, 5°.59S×130°.77E, h109^{km}, mb4.9/23, Error ellipse: s-maj=16.1km s-min=6.2km az=114.4*

IDC ***04*** *01:20:26.8±0.5, 5°.55S×130°.79E, h106^{km}±4^{km}, mb4.4/18, mb1 4.5/19, mb1mx4.4/25, mbtmp4.7/19, MS3.1/7, Ms1 3.1/7, ms1mx2.9/39, Error ellipse: s-maj=15.3km s-min=9.2km az=78.0*

ISC 04 01:20:23.1±0.4, **5°.54S**±0°.03×**130°.97E**±0°.05, **h80**^{km}±3^{km}, **n208,** σ1^{s}.**55**/226, **mb5.0**/76, **13C-15D, Banda Sea**

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Code  Station Name       Δ°   AZ°     Phase ID           Time     Res
                                   Op       ISC        h  m  s    ISC
BNDI  Bandanaira         1.47 314  P        Pn       01 20 48.4 +0.3
BNDI                               S        Sn       01 21 07.7 +0.8
SAUI  Saumlaki           2.44 172  ePn      Pn       01 21 00.6 -0.4
SAUI                               eSn      Sn       01 21 26.4 -3.6
SAUI  Saumlaki           2.44 172  P        Pn       01 21 01.4 +0.4
SAUI                               S        Sn       01 21 31.0 +1.0
FAKI  Fak Fak            2.90  26  ePn      Pn       01 21 05.9 -1.3
FAKI                               eSn      Sn       01 21 36.8 -4.2
FAKI  Fak Fak            2.90  26  P        Pn       01 21 06.9 -0.3
FAKI                               S        Sn       01 21 39.0 -2.0
NLAI  Namlea             4.49 300  P        Pn       01 21 28.8  0.0
NLAI                               S        Sn       01 22 22.0 +2.2
SIJI  Sorong             4.65   4  P        Pn       01 21 30.0 -1.0
      baz=204,slow=11
SIJI                               S        Sn       01 22 18.1 -5.6
      89nm,0.3s,baz=272,slow=22,SNR=17
RKPI  Ransiki, Papua     5.12  39  P        Pn       01 21 37.8 +0.4
RKPI                               S        Sn       01 22 33.7 -1.6
SANI  Sanana             6.07 305  P        Pn       01 21 50.6 +0.3
      122nm,0.6s,2µm0.5nm
SANI                               S        Sn       01 22 54.0 -4.3
      122nm,0.6s,2µm0.5nm
BAKI  Biak               6.70  50  P        Pn       01 22 01.3 +2.3
SOEI  Soe                7.86 237  ePn      Pn       01 22 15.8 +0.9
SOEI                               eSn      Sn       01 23 42.6 +0.4
SOEI  Soe                7.86 237  P        Pn       01 22 15.6 +0.8
SOEI                               S        Sn       01 23 44.4 +2.1
BBSI  Bau Bau            8.37 270  P        Pn       01 22 25.7 +4.0
KDI   Kendari            8.47 280  P        Pn       01 22 25.5 +2.3
KDI                                S        Sn       01 23 59.2 +1.9
BATI  Baumata            8.60 237  P        Pn       01 22 25.3 +0.4
BATI                               S        Sn       01 23 58.9 -1.4
BATI  Baumata            8.60 237  P        Pn       01 22 25.6 +0.8
      17nm,0.3s,baz=122,slow=1.9,SNR=56
BATI                               S        Sn       01 24 00.5 +0.2
      23nm,0.3s,baz=252,slow=22,SNR=7.7
BATI                               LR       LR       01 26 14.3
      comp=Z,250nm,19.7s,baz=56,slow=41
MMRI  Maumere            9.20 250  ePn      Pn       01 22 36.5 +3.4
MMRI  Maumere            9.20 250  P        Pn       01 22 35.3 +2.2
EDFI  Ende, Flores       9.75 250  P        Pn       01 22 43.2 +2.6
      24nm,0.8s
JAY   Jayapura          10.16  73  LR       LR       01 28 19.7
      comp=Z,129nm,20.1s,baz=166,slow=46
BKSI  Bulukumba         10.81 271  P        Pn       01 22 58.5 +3.5
MRSI  Marisa            10.82 303  P        Pn       01 22 55.7 +0.5
      22nm,0.8s
BNSI  Bone              10.89 275  P        Pn       01 23 00.2 +4.1
SPSI  Sidrap Palu       11.28 278  P        Pn       01 23 03.1 +1.7
WSI   Waingapu          11.35 248  P        Pn       01 23 09.3 +6.9
TTSI  Tana Toraja       11.40 282  P        Pn       01 23 05.5 +2.5
PLAI  Plampang          13.49 255  P        Pn       01 23 29.8 -1.5
FITZ  Fitzroy Crossi    13.52 202  ePn      Pn       01 23 25.9 -5.8
FITZ                               S        Sn       01 25 46.1  -14
FITZ  Fitzroy Crossi    13.52 202  P        Pn       01 23 25.1 -6.5
      4.6nm,0.3s,baz=30,slow=9.6,SNR=83
FITZ                               S        Sn       01 25 46.1  -14
      7.0nm,0.3s,baz=228,slow=22,SNR=10
FITZ                               LR       LR       01 29 43.5
      comp=Z,12nm,21.9s,baz=32,slow=41
COEN  Coen              14.64 126  ePn      Pn       01 23 45.1 -1.1
WRAB  Tennant Creek     14.68 167  ePn      Pn       01 23 39.6 -7.0
      24nm,0.6s
WRAB                               eS       Sn       01 26 12.4  -16
WRAB  Tennant Creek     14.68 167ceP        Pn       01 23 40.3 -6.4
WRAB                               pmax     pmax
      comp=Z,11nm,2.5s
WRA   Warramunga Arr    14.68 167  P        Pn       01 23 39.9 -6.8
      comp=Z,3.3nm,0.3s,baz=344,slow=13,SNR=88
WRA                                S        Sn       01 26 13.7  -15
      comp=Z,7.9nm,0.3s,baz=348,slow=22,SNR=12
WRA                                LR       LR       01 30 03.9
      comp=Z,107nm,21.6s,baz=290,slow=39
WB2   Warramunga Arr    14.69 167  ePn      Pn       01 23 40.4 -6.4
KBKI  Kotabaru          14.93 278  P        Pn       01 23 50.8 +0.8
SRBI  Singaraja         15.85 260  P        Pn       01 23 56.4 -5.3
JAGI  Jajag, Banyuwa    16.95 259  ePn      P        01 24 16.4 +0.4
      comp=Z,41nm,1.1s
JAGI  Jajag, Banyuwa    16.95 259  P        P        01 24 17.0 +1.0
      comp=Z,21nm,0.4s
KMMI  Kalianget         16.97 264  P        P        01 24 17.8 +1.5
GMJI  Gumukmas          17.61 260  P        P        01 24 22.4 -0.9
AS31  Alice Springs     18.24 171  eP       P        01 24 27.7 -2.5
      comp=Z,12nm,0.5s
ASAR  Alice Springs     18.24 171  P        P        01 24 27.2 -3.0
      comp=Z,4.5nm,0.3s,baz=352,slow=14,SNR=91
ASAR                               S        S        01 27 39.1  -15
      comp=Z,2.9nm,0.3s,baz=344,slow=22,SNR=12
MBWA  Marble Bar        18.97 214  eP       P        01 24 37.1 -1.1
      comp=Z,10nm,0.5s
MBWA                               eS       S        01 27 53.1  -16
CTA   Charters Tower    20.73 136  P        P        01 24 58.4 +1.1
      comp=Z,10nm,0.6s,baz=316,slow=12,SNR=18
CTAO  Charters Tower    20.73 136  eP       P        01 24 58.4 +1.1
      comp=Z,12nm,0.8s
CTAO  Charters Tower    20.73 136  eP       P        01 24 58.4 +1.1
CTAO                               pmax     pmax
      comp=Z,12nm,0.8s
KPJI  Karang Pucung     21.98 264  P        P        01 25 08.0 -2.7
CISI  Cisompet, Garu    23.09 264  eP       P        01 25 19.6 -2.9
      comp=Z,37nm,0.7s
CISI  Cisompet, Garu    23.09 264  P        P        01 25 17.9 -4.6
GIRL  Giralia           23.46 222  eP       P        01 25 24.7 -1.0
      comp=Z,66nm,1.1s
FORT  Forrest           25.25 186  eP       P        01 25 39.7 -2.1
      comp=Z,21nm,0.7s
BBOO  Buckleboo         27.54 171  eP       P        01 26 01.6 -0.8
      comp=Z,7.8nm,0.8s
STKA  Stephens Creek    28.02 161  eP       P        01 26 07.0 +0.2
      comp=Z,4.6nm,1.4s
STKA  Stephens Creek    28.02 161  eP       P        01 26 07.0 +0.2
STKA                               pmax     pmax
      comp=Z,5.0nm,1.4s
STKA  Stephens Creek    28.02 161  P        P        01 26 06.8 +0.1
      comp=Z,4.0nm,0.4s,baz=338,slow=9.4,SNR=16
STKA                               LR       LR       01 38 10.8
      comp=Z,114nm,18.4s,baz=17,slow=38
HNR   Honiara           28.98  99  LR       LR       01 38 43.4
      comp=Z,31nm,19.8s,baz=24,slow=38
NWAO  Narrogin (SRO)    30.11 203  eP       P        01 26 23.9 -1.3
      comp=Z,52nm,1.4s
NWAO  Narrogin (SRO)    30.11 203  eP       P        01 26 23.9 -1.3
NWAO                               pmax     pmax
      comp=Z,52nm,1.4s
NWAO  Narrogin (SRO)    30.11 203  P        P        01 26 24.2 -1.0
      comp=Z,12nm,0.7s,baz=265,slow=7.9,SNR=10
ARMA  Armidale          31.47 144  eP       P        01 26 38.5 +1.0
      comp=Z,21nm,1.1s
PSI   Prapat            33.07 284  P        P        01 26 48.4 -3.2
      comp=Z,5.2nm,0.7s,baz=180,slow=20,SNR=3.9
CAN   Canberra          33.98 153  eP       P        01 27 01.0 +1.8
      comp=Z,16nm,0.8s
CAN   Canberra          33.98 153  eP       P        01 27 01.0 +1.8
CAN                                pmax     pmax
      comp=Z,16nm,0.8s
TOO   Toolangi          34.52 159  eP       P        01 27 04.7 +0.9
      comp=Z,22nm,1.4s
TOO   Toolangi          34.52 159  eP       P        01 27 04.7 +0.9
TOO                                pmax     pmax
      comp=Z,22nm,1.4s
NJ2   Nanjing           39.13 344  eP       P        01 27 42.9  0.0
NJ2                                pmax     pmax
      comp=Z,7.0nm,0.5s
CM01  Chiang Mai Arr    39.54 308  eP       P        01 27 46.3 -0.3
CMAR  Chiang Mai Arr    39.58 308  i P      P        01 27 46.7 -0.1
CMAR                               pmax     pmax
      comp=Z,5.0nm,0.5s
CMAR  Chiang Mai Arr    39.58 308  P        P        01 27 46.8 -0.1
      comp=Z,4.4nm,0.5s,baz=137,slow=7.7,SNR=18
CMAR                               PcP      PcP      01 29 53.0 +0.2
      comp=Z,0.9nm,0.5s,baz=144,slow=2.7,SNR=4.2
CHTO  Chiang Mai        39.77 308  eP       P        01 27 47.8 -0.7
      comp=Z,10nm,0.8s
CHTO  Chiang Mai        39.77 308  eP       P        01 27 47.8 -0.7
CHTO                               pmax     pmax
      comp=Z,10.0nm,0.8s
KMI   Kunming           41.02 319  P        P        01 28 00.3 +1.3
KMI                                pmax     pmax
      comp=Z,11nm,0.6s
KMI                                pmax     pmax
      comp=Z,79nm,4.0s
ENH   Enshi             41.14 331  eP       P        01 27 59.3 -0.3
      comp=Z,9.5nm,0.4s
MAJO  Matsushiro        42.41   9  eP       P        01 28 09.6 -0.3
      comp=Z,18nm,0.8s
MAJO  Matsushiro        42.41   9  i P      P        01 28 09.4 -0.5
MAJO                               pmax     pmax
      comp=Z,17nm,0.8s
MAT   Matsushiro        42.41   9  P        P        01 28 09.4 -0.5
MJAR  Matsushiro Arr    42.41   9  P        P        01 28 09.7 -0.1
      comp=Z,8.9nm,0.8s,baz=195,slow=11,SNR=18
MJAR                               pP       sP       01 28 34.8 -0.7
      comp=Z,2.8nm,0.7s,baz=198,slow=9.5,SNR=2.0
MJB9  Matsu-Tunnel      42.41   9  eP       P        01 28 10.0 +0.1
      comp=Z,18nm,0.8s
KSAR  Wonju Array Be    42.86 356  P        P        01 28 14.4 +1.0
KSAR                               PcP      PcP      01 30 03.9 +0.7
KSAR  Wonju Array Be    42.86 356  P        P        01 28 14.5 +1.0
KSAR                                                 01 30 03.9
KSRS  Korea Array       42.87 356  P        P        01 28 14.4 +0.9
      comp=Z,1.6nm,0.6s,baz=173,slow=8.9,SNR=6.9
KSRS                               PcP      PcP      01 30 03.9 +0.7
      comp=Z,2.2nm,0.8s,baz=168,slow=4.1,SNR=5.0
XAN   Xi'an             44.55 334  P        P        01 28 26.6 -0.6
XAN                                pP       pP       01 28 41.9 -2.6
XAN                                pmax     pmax
      comp=Z,16nm,0.7s
XAN                                pmax     pmax
      comp=Z,130nm,4.6s
XAN   Xi'an             44.55 334  eP       P        01 28 26.2 -1.0
      comp=Z,42nm,0.6s
XAN   Xi'an             44.55 334  eP       P        01 28 26.2 -1.0
XAN                                pmax     pmax
      comp=Z,42nm,0.6s
XAN   Xi'an             44.55 334  ePcP     P        01 28 26.6 -0.5
CD2   Chengdu           44.62 326  eP       P        01 28 28.5 +0.7
BJT   Baijiatuau        47.34 345  eP       P        01 28 48.8 -0.2
      comp=Z,37nm,1.1s
BJT   Baijiatuau        47.34 345  eP       P        01 28 48.8 -0.2
BJT                                pmax     pmax
      comp=Z,37nm,1.1s
BJI   Beijing           47.36 345⇑eP        P        01 28 49.3 +0.2
BJI                                pmax     pmax
      comp=Z,20nm,0.8s
LZH   Lanzhou           48.60 331  eP       P        01 28 58.1 -0.9
LZH                                pP       pP       01 29 13.5 -3.0
LZH                                sP       sP       01 29 20.3 -4.6
LZH                                ePP      PP       01 30 52.1 -0.6
LZH                                pmax     pmax
      comp=Z,20nm,1.3s
LZH                                pmax     pmax
      comp=Z,75nm,6.2s
LZH                                LR       LR
      comp=Z,320nm,14.3s
LZH                                LR       LR
      comp=Z,330nm,14.6s
LZH                                LR       LR
      comp=Z,430nm,17.2s
CN2   Changchun         49.37 355  eP       P        01 29 05.7 +1.2
CN2                                pmax     pmax
      comp=Z,10.0nm,0.6s
USRK  Ussuriysk Ar.     49.52   1  P        P        01 29 06.5 +0.9
      comp=Z,8.0nm,0.6s,baz=187,slow=7.1,SNR=25
RPZ   Rata Peaks        51.81 144  P        P        01 29 25.0 +2.1
      comp=Z,3.9nm,0.6s,baz=320,slow=7.9,SNR=2.0
LSA   Lhasa             51.84 315  eP       P        01 29 23.4 -0.6
      comp=Z,9.5nm,0.6s
LSA   Lhasa             51.84 315  eP       P        01 29 23.4 -0.6
LSA                                pmax     pmax
      comp=Z,10.0nm,0.6s
GTA   Gaotai            53.19 330  eP       P        01 29 33.6 +0.3
GTA                                pmax     pmax
      comp=Z,5.0nm,1.3s
RAMN  Ramite            53.71 309  eP       P        01 29 37.4 -0.1
      comp=Z,82nm,0.6s
JIRN  Jiri              54.38 310  eP       P        01 29 41.9 -0.7
      comp=Z,46nm,0.7s
KLR   Kul'dur           54.55   1  i P      P        01 29 42.0 -0.9
GUN   Gumba             54.75 310  eP       P        01 29 44.6 -0.6
      comp=Z,71nm,0.7s
PKI   Pulchoki          54.94 309  eP       P        01 29 45.5 -1.0
      comp=Z,25nm,0.7s
PKIN  Phulchoki         54.95 309  eP       P        01 29 45.6 -0.9
      comp=Z,20nm,0.7s
DMN   Daman             55.19 309  eP       P        01 29 47.7 -0.6
      comp=Z,35nm,0.6s
KOLN  Koldanda          56.44 309  eP       P        01 29 56.7 -0.4
      comp=Z,72nm,0.8s
DANN  Dangsing          56.59 309  eP       P        01 29 57.8 -0.5
      comp=Z,46nm,0.6s
PYUN  Piuthan           57.07 309  eP       P        01 30 01.2 -0.4
      comp=Z,129nm,1.0s
ULN   Ulaanbaatar       57.20 341  eP       P        01 30 03.0 +1.0
      comp=Z,9.1nm,0.6s
ULN   Ulaanbaatar       57.20 341ceP        P        01 30 03.3 +1.3
ULN                                pmax     pmax
      comp=Z,8.0nm,0.7s
SONM  Songino Array     57.39 341  P        P        01 30 04.3 +1.0
      comp=Z,4.4nm,0.6s,baz=160,slow=7.0,SNR=17
SONA1 Songino Array     57.39 341  eP       P        01 30 04.2 +0.8
ZAK   Zakamensk         60.62 340  eP       P        01 30 26.0 +0.4
ZAK                                pmax     pmax
      comp=Z,4.0nm,1.1s
TLY   Talaya            61.61 341  eP       P        01 30 33.1 +0.9
      comp=Z,6.1nm,0.6s
TLY   Talaya            61.61 341  i P      P        01 30 31.9 -0.3
MOY   Mondy             62.49 339  eP       P        01 30 39.4 +1.2
MOY                                pmax     pmax
      comp=Z,12nm,1.5s
PETK  Petropavlovsk-    62.65  18  P        P        01 30 40.7 +1.6
      comp=Z,14nm,0.8s,baz=173,slow=5.9,SNR=12
WMQ   Urumqi            62.72 326  eP       P        01 30 41.3 +1.5
WMQ   Urumqi            62.72 326  eP       P        01 30 40.7 +0.8
      comp=Z,21nm,0.9s
WMQ   Urumqi            62.72 326  eP       P        01 30 40.7 +0.8
WMQ                                pmax     pmax
      comp=Z,21nm,0.9s
BOD   Bodaibo           64.63 350  eP       P        01 30 51.4 -0.6
BOD                                pmax     pmax
      comp=Z,12nm,1.2s
ZSN   Zaisan            66.55 328deP        P        01 31 04.5 -0.1
ZSN                                pmax     pmax
      comp=Z,27nm,0.9s
ZSN   Zaisan            66.55 328⇓eP        P        01 31 04.6 -0.1
      comp=Z,27nm,0.9s
DGZ   Jazzator, Alta    66.70 331  i P      P        01 31 05.7  0.0
DGZ                                pmax     pmax
      comp=Z,5.0nm,0.9s
YAK   Yakutsk           67.39 359  eP       P        01 31 10.4 +0.8
YAK                                pmax     pmax
      comp=Z,37nm,0.6s
UZB   Uzynbulak         67.44 321deP        P        01 31 09.9 -0.6
UZB                                pmax     pmax
      comp=Z,140nm,0.9s
UZB   Uzynbulak         67.44 321⇓eP        P        01 31 09.9 -0.6
      comp=Z,140nm,0.9s
MKAR  Makanchi Array    67.56 326  i P      P        01 31 11.6 +0.6
MKAR                               pmax     pmax
      comp=Z,26nm,0.7s
MKAR  Makanchi Array    67.56 326  P        P        01 31 11.7 +0.7
      comp=Z,26nm,0.7s,baz=114,slow=8.5,SNR=234
MKAR                               pP       pwP      01 31 38.4 -0.2
      comp=Z,3.3nm,0.5s,baz=112,slow=6.9,SNR=2.4
KSH   Kashi             67.62 317  P        P        01 31 12.7 +1.0
KSH                                pP       pP       01 31 30.2 -0.3
KSH                                PP       PP       01 33 48.3 +6.5
KSH                                S        S        01 40 01.2 -1.6
KSH                                sS       sS       01 40 37.3 +1.2
KSH                                SS       SS       01 44 28.6 +3.4
KSH                                pmax     pmax
      comp=Z,22nm,0.7s
KSH                                pmax     pmax
      comp=Z,330nm,5.0s
KSH                                LR       LR
      comp=Z,170nm,5.4s
KSH                                LR       LR
      comp=Z,190nm,4.3s
KSH                                LR       LR
      comp=Z,630nm,6.6s
SATY  Saty              67.78 321deP        P        01 31 12.3 -0.3
SATY                               pmax     pmax
      comp=Z,465nm,0.9s
SATY  Saty              67.78 321⇓eP        P        01 31 12.4 -0.3
      comp=Z,465nm,0.9s
ZHN   Zhinishke         67.82 321deP        P        01 31 12.1 -0.8
ZHN                                pmax     pmax
      comp=Z,111nm,1.0s
ZHN   Zhinishke         67.82 321⇓eP        P        01 31 12.2 -0.8
      comp=Z,111nm,1.0s
KPKS  Kokpek            67.82 322ceP        P        01 31 11.6 -1.3
KPKS                               pmax     pmax
      comp=Z,361nm,0.9s
KPKS  Kokpek            67.82 322⇑eP        P        01 31 11.6 -1.3
      comp=Z,361nm,0.9s
MDOK  Medeo             68.69 321deP        P        01 31 17.2 -1.1
MDOK                               pmax     pmax
      comp=Z,113nm,0.9s
MDOK  Medeo             68.69 321⇓eP        P        01 31 17.3 -1.1
      comp=Z,113nm,0.9s
KZA   Kyzart            69.31 319  P        P        01 31 23.9 +1.3
      SNR=19
TKM2  Tokmak 2          69.49 320  P        P        01 31 24.2 +0.8
      SNR=23
KUU   Kurty             69.50 321ceP        P        01 31 21.7 -1.5
KUU                                pmax     pmax
      comp=Z,210nm,1.0s
KUU   Kurty             69.50 321⇑eP        P        01 31 21.8 -1.5
      comp=Z,210nm,1.0s
KBK   Karagaybulak      69.78 319  P        P        01 31 26.5 +1.3
      SNR=6.1
UCH   Uchtor            69.87 319  P        P        01 31 27.2 +1.2
      SNR=22
AAK   Ala-Archa         70.07 319  P        P        01 31 28.0 +1.0
      SNR=9.3
AAK   Ala-Archa         70.07 319  eP       P        01 31 27.6 +0.6
AAK   Ala-Archa         70.07 319ceP        P        01 31 28.1 +1.2
AAK                                pmax     pmax
      comp=Z,16nm,1.3s
CHMS  Chumysh           70.07 320  P        P        01 31 27.3 +0.5
      SNR=5.2
SEY   Seymchan          70.21  10ceP        P        01 31 29.0 +1.9
AML   Almayashu         70.36 318  P        P        01 31 30.2 +1.2
      SNR=27
USP   Ospenovka         70.36 320  P        P        01 31 29.2 +0.7
      SNR=26
EKS2  Erkin-Say         70.55 319  P        P        01 31 31.0 +1.1
      SNR=21
ZALV  Zalesovo Beam     70.72 333  P        P        01 31 30.1 -0.3
      comp=Z,9.2nm,0.6s,baz=133,slow=5.7,SNR=37
BTLS  Baital            71.49 321deP        P        01 31 34.2 -1.1
BTLS                               pmax     pmax
      comp=Z,87nm,1.2s
BTLS  Baital            71.49 321⇓eP        P        01 31 34.3 -1.1
      comp=Z,87nm,1.2s
KURK  Kurchatov         71.79 328  eP       P        01 31 37.0  0.0
      comp=Z,146nm,1.3s
KURK  Kurchatov         71.79 328ceP        P        01 31 37.5 +0.6
KURK                               pmax     pmax
      comp=Z,20nm,1.3s
NVS   Novosibirsk       72.00 333  i P      P        01 31 38.3 +0.2
NVS                                pmax     pmax
      comp=Z,14nm,1.4s
NVS                                pmax     pmax
      comp=N,8.0nm,1.3s
NVS                                pmax     pmax
      comp=E,10.0nm,1.3s
IUG   Iuzhnay           72.82 317d iP       P        01 31 42.9 -0.5
IUG                                pmax     pmax
      comp=Z,167nm,1.1s
IUG   Iuzhnay           72.82 317⇓iP        P        01 31 42.9 -0.5
      comp=Z,167nm,1.1s
VNDA  Vanda             73.77 173  P        P        01 31 48.8 +0.6
      comp=Z,4.5nm,0.5s,baz=316,slow=6.8,SNR=28
SBA   Scott Base        74.64 173  eP       P        01 31 54.9 +1.6
      comp=Z,482nm,2.1s
SBA   Scott Base        74.64 173  eP       P        01 31 54.9 +1.6
SBA                                pmax     pmax
      comp=Z,482nm,2.1s
BRZS  Berezniki         74.67 325  eP       P        01 31 53.2 -0.7
BRZS                               pmax     pmax
      comp=Z,126nm,1.0s
BRZS  Berezniki         74.67 325  eP       P        01 31 53.2 -0.7
      comp=Z,126nm,1.0s
MAW   Mawson            76.65 201  P        P        01 32 05.6 +0.7
      comp=Z,26nm,1.0s,baz=56,slow=7.3,SNR=2.7
TIXI  Tiksi             77.05 359  eP       P        01 32 07.0  0.0
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,7.4nm,0.6s						
TIXI	Tiksi	77.05	359	ceP	P	01 32 07.4	+0.4
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TIXI	Tiksi	77.05	359	LR	LR	02 08 44.6	
	comp=Z,18nm,19.2s,baz=342,slow=38						
BRVK	Borovoye	77.43	327	eP	P	01 32 09.2	-0.3
	comp=Z,27nm,1.0s						
BRVK	Borovoye	77.43	327	ceP	P	01 32 09.9	+0.4
BRVK				pmax	pmax		
	comp=Z,15nm,1.3s						
BILL	Bilibino	77.49	13	iP	P	01 32 08.8	-0.7
BILL				i		01 32 21.7	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GEYT	Alibeck	80.02	310	P	P	01 32 24.0	-0.1
	comp=Z,4.8nm,0.8s,baz=155,slow=4.9,SNR=11						
GEYT				pP	pwP	01 32 52.5	+0.1
	comp=Z,1.9nm,0.7s,baz=132,slow=6.2,SNR=2.7						
NRIK	Noril'sk	80.39	346	P	P	01 32 25.6	+0.2
	comp=Z,6.5nm,0.8s,baz=153,slow=4.3,SNR=8.6						
SVE	Sverdlovsk	84.03	329	eP	P	01 32 45.0	+0.3
SVE				pmax	pmax		
	comp=Z,28nm,1.1s						
QSPA	South Pole Qui	84.42	180	eP	P	01 32 46.3	-0.4
	comp=Z,17nm,0.6s						
ARU	Arti	84.99	328	eP	P	01 32 48.7	-0.8
	comp=Z,20nm,0.8s						
ARU	Arti	84.99	328	d iP	P	01 32 49.1	-0.4
ARU						01 36 04.5	
ARU				S	S	01 43 08.2	-3.8
ARU				SS	SS	01 48 50.9	+4.2
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SYO	Syowa Base	85.36	201	⇑iP	P	01 32 49.6	-1.6
KDAK	Kodiak Island	87.48	31	iP	P	01 33 03.4	+1.7
ILAR	Eielson Array	91.62	25	P	P	01 33 20.1	-0.9
	comp=Z,1.0nm,0.6s,baz=270,slow=4.1,SNR=8.4						
OBN	Obninsk	97.03	325	iP	P	01 33 43.9	-2.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	99.15	309	P	Pdif	01 33 56.3	+0.2
	comp=Z,0.4nm,0.7s,baz=53,slow=9.6,SNR=3.2						
ARCES	ARCESS Array B	100.56	340	P	Pdif	01 34 01.4	-0.1
	comp=Z,3.7nm,0.9s,baz=77,slow=5.5,SNR=5.0						
ARCES				PKiKP	PKiKP	01 38 27.2	-0.2
	comp=Z,4.3nm,1.1s,baz=100,slow=1.4,SNR=5.6						
FINES	FINESS Array B	101.95	332	P	Pdif	01 34 06.6	-1.2
	comp=Z,0.9nm,0.6s,baz=61,slow=13,SNR=4.2						
FINES				PKiKP	PKiKP	01 38 29.5	-0.6
	comp=Z,0.5nm,0.5s,baz=51,slow=4.4,SNR=3.9						
YKA	Yellowknife Ar	106.02	26	PKiKP	PKiKP	01 38 37.6	+0.1
	comp=Z,0.6nm,0.6s,baz=293,slow=1.9,SNR=9.9						
CLL	Collm	111.58	323	ePdif	Pdif	01 34 48.0	-2.8
CLL	Collm	111.58	323	eP	Pdif	01 34 48.0	-2.8
GERES	GERESS Array B	111.92	321	PKiKP	PKiKP	01 38 49.0	-0.2
	comp=Z,0.8nm,0.6s,baz=94,slow=2.9,SNR=2.1						
KBA	Koelnbreinsper	112.68	319	iPKiKP	PKiKP	01 38 53.1	+2.3
	comp=Z,1.1nm,0.5s						
ABTA	Abfaltersbach	113.32	319	iPKiKP	PKiKP	01 38 51.1	-0.9
	comp=Z,1.5nm,0.6s						
WTTA	Wattenberg	113.73	320	iPKiKP	PKiKP	01 38 52.7	-0.2
	comp=Z,2.4nm,0.3s						
WATA	Walderalm	113.75	320	iPKiKP	PKiKP	01 38 53.8	+1.0
	comp=Z,1.8nm,0.4s						
SQTA	Sankt Quirin	114.02	320	iPKPdf	PKPdf	01 38 51.3	-2.0
	comp=Z,0.5nm,0.3s						
MOTA	Moosalm	114.05	320	iPKPdf	PKPdf	01 38 52.3	-1.1
	comp=Z,1.0nm,0.4s						
FETA	Feichten	114.39	320	ePKPdf	PKPdf	01 38 52.2	-1.9
	comp=Z,0.8nm,0.4s						
DAVA	Damuels	114.85	320	iPKPdf	PKiKP	01 38 54.1	-0.8
	comp=Z,0.9nm,0.3s						
PDAR	Pinedale Array	115.18	45	PKP	PKPdf	01 38 56.5	+0.6
	comp=Z,0.4nm,0.6s,baz=122,slow=1.4,SNR=2.4						
BLCH	La Chartreuse	116.16	325	PP	PP	01 40 02.2	-0.8
DOU	Dourbes	116.98	324	PP	PP	01 40 01.4	-7.3
ULM	Lac du Bonnet	120.70	33	PKP	PKPdf	01 39 05.3	-0.6
	comp=Z,1.5nm,0.5s,baz=237,slow=3.0,SNR=6.2						
TXAR	Lajitas Array	123.35	58	PKP	PKiKP	01 39 12.7	+0.7
	comp=Z,0.4nm,0.5s,baz=169,slow=1.9,SNR=4.1						
ESDC	Sonseca Array	127.13	317	PKP	PKiKP	01 39 19.1	0.0
	comp=Z,0.2nm,0.4s,baz=29,slow=2.5,SNR=3.4						
TORD	Torodi Ar. Bea	129.46	282	PKP	PKPdf	01 39 23.4	-0.3
	comp=Z,1.5nm,0.6s,baz=83,slow=1.7,SNR=12						
TORD				pPKP	sPKPdf	01 39 51.3	-0.1
	comp=Z,0.8nm,0.6s,baz=64,slow=1.6,SNR=3.7						
JTS	JuntasAbangare	144.12	80	PKP	PKPdf	01 39 50.4	-0.3
	comp=Z,8.1nm,0.7s,baz=199,slow=16,SNR=5.5						
JTS				pPKP	sPKPdf	01 40 18.1	-0.3
	comp=Z,7.8nm,0.5s,baz=213,slow=2.9,SNR=3.8						
LVC	Limon Verde	145.92	146	PKPbc	PKiKP	01 39 56.9	-1.4
	comp=Z,6.6nm,0.5s,baz=273,slow=2.9,SNR=11						
LVC				pPKPbc	sPKPab	01 40 24.1	+1.4
	comp=Z,4.8nm,0.6s,baz=156,slow=3.6,SNR=3.7						
CPUP	Villa Florida	147.31	166	PKPbc	PKPbc	01 39 58.8	+0.5
	comp=Z,4.7nm,0.7s,baz=174,slow=3.1,SNR=8.8						
CPUP				pPKPbc	sPKPab	01 40 27.0	-0.5
	comp=Z,4.3nm,0.7s,baz=205,slow=4.5,SNR=3.5						
NNA	Nana	147.31	122	PKPbc	PKPab	01 40 00.3	-0.3
	comp=Z,11nm,0.6s,baz=261,slow=8.9,SNR=6.9						
ATAH	Atahualpa	148.10	113	PKPbc	PKiKP	01 40 03.4	+0.4
	comp=Z,5.1nm,0.6s,baz=92,slow=14,SNR=3.8						
ATAH				pPKPbc	sPKPab	01 40 31.7	+0.1
	comp=Z,9.7nm,0.7s,baz=211,slow=3.9,SNR=4.5						
LPAZ	La Paz	151.23	139	PKPbc	PKiKP	01 40 10.5	+0.9
	comp=Z,7.8nm,0.6s,baz=144,slow=1.7,SNR=15						
LPAZ				pPKPbc	sPKPbc	01 40 38.1	+1.3
	comp=Z,3.3nm,0.4s,baz=360,slow=2.7,SNR=3.7						

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*IDC **04** 01:31:45.6±1.3, 11°.42N×143°.20E, h0^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.6/42, mbtmp3.6/8, ML3.6/1, MS3.5/2, Ms1 3.4/2, ms1mx2.7/38, Error ellipse: s-maj=34.6km s-min=23.6km az=134.0*

*ISCJB **04** 01:31:48.5±1.0, 11°.4N±0°.1×143°.2E±0°.1, h32^{km}, mb3.6/7, MS3.5/2, Error ellipse: s-maj=25.7km s-min=10.4km az=44.4*

ISC 04 01:31:50.5±1.1**, 11°.4N**±0°.2×**143°.2E**±0°.2**, h32^{km}, n10, σ0^{s}.89**/9**, mb3.7**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	2.72	37	Pn	Pn	01 32 32.3	+0.4
	9.3nm,0.3s,baz=277,slow=20,SNR=1.5						
GUMO				Sn	Sn	01 33 03.0	-0.6
	8.0nm,0.3s,baz=200,slow=22,SNR=1.5						
WRA	Warramunga Arr	32.35	196	P	P	01 38 16.6	-0.5
	0.4nm,0.7s,baz=17,slow=9.5,SNR=1.9						
STKA	Stephens Creek	43.06	182	LR	LR	01 58 34.6	
	comp=Z,59nm,19.8s,baz=221,slow=37						
CMAR	Chiang Mai Arr	43.24	285	P	P	01 39 49.6	+0.4
	0.7nm,0.3s,baz=85,slow=6.7,SNR=5.9						
SONM	Songino Array	47.61	327	P	P	01 40 24.0	+0.5
	0.3nm,0.8s,baz=102,slow=28,SNR=1.5						
MKAR	Makanchi Array	61.94	317	P	P	01 42 06.9	-0.4
	0.5nm,0.7s,baz=90,slow=8.3,SNR=5.3						
ZALV	Zalesovo Beam	62.46	325	P	P	01 42 09.6	-0.9
	0.5nm,0.5s,baz=106,slow=5.2,SNR=2.3						
AAK	Ala-Archa	66.71	312	LR	LR	02 13 18.6	
	comp=Z,31nm,20.3s,baz=298,slow=37						
ILAR	Eielson Array	71.23	25	P	P	01 43 05.2	-0.9
	0.2nm,0.6s,baz=245,slow=6.2,SNR=5.7						
NVAR	Mina Array Bea	89.55	51	P	P	01 44 46.7	+1.3
	0.4nm,0.6s,baz=270,slow=3.6,SNR=1.6						

SJA 04 01:32:51.7±0.6**, 28°.13S×71°.12W, h52^{km}**±11^{km}**, ML2.8, MW3.5, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.96	157	iP	Pn	01 33 10.2	+1.0
LCO				iS	Sn	01 33 24.1	+2.1
AMOG	MOGNA	3.62	141	iP	Pn	01 33 47.9	+2.5
ACLC	CERRO LA CRUZ	3.88	110	iP	Pn	01 33 51.7	+2.7
RTLS	Leoncito	3.99	157	iP	Pn	01 33 54.2	+3.6
RTLS				IAML		01 34 00.2	
	comp=Z,8.6nm,0.3s						
RTCV	Cerro Valdivia	4.34	150	iP	Pn	01 33 57.7	+2.4
APLL	PUNTA DE LOS L	4.61	120	iP	Pn	01 34 01.8	+3.0
APLL				IAML		01 34 04.9	
	comp=Z,13nm,0.3s						

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*IDC **04** 01:33:15.2±1.8, 10°.66N×62°.72W, h94^{km}±14^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.5/36, mbtmp3.9/12, Error ellipse: s-maj=18.4km s-min=13.1km az=149.0*

*ISCJB **04** 01:33:19.2±0.5, 10°.85N±0°.03×62°.20W±0°.07, h119^{km}±4^{km}, mb3.8/10, Error ellipse: s-maj=10.6km s-min=4.2km az=176.6*

*TRN **04** 01:33:19.5, 10°.79N×62°.28W, h113^{km}, MD3.8*

TRN Felt MMI III North-west Trinidad.

ISC 04 01:33:17.0±0.8**, 10°.71N**±0°.04×**62°.26W**±0°.08**, h127^{km}**±7^{km}**, n68, σ1^{s}.87**/86**, mb3.8**/10**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALNG	Atlantic LNG	0.77	133	eP	Pn	01 33 40.0	+2.4
ALNG				eS	Sn	01 33 54.0	+0.8
BUAY	Buenos Aires	0.82	137	eP	Pn	01 33 39.1	+1.0
BUAY				eS	Sn	01 33 54.8	+0.9
TRN	Trinidad (W)	0.85	94	eP	Pn	01 33 39.5	+1.3
TRN				eS	Sn	01 33 54.3	0.0
TPP	Pointe-a-Pierr	0.89	116	⇑iP	Pn	01 33 40.4	+1.8
TPP				eS	Sn	01 33 55.7	+0.8
TBH	Brigand Hill	1.20	101	eP	Pn	01 33 44.0	+2.5
TBH				eS	Sn	01 34 00.8	+0.5
TPR	Prospect	1.53	72	eP	Pn	01 33 47.9	+2.6
GRGR	Grenville	1.54	23	eP	Pn	01 33 45.3	0.0
GRGR				eS	Sn	01 34 06.5	-0.4
BOT	Bacolet	1.58	73	eP	Pn	01 33 48.3	+2.4
GRHS	Sauteurs	1.62	22	eP	Pn	01 33 47.8	+1.5
GRHS				eS	Sn	01 34 08.4	-0.3
GRSS	Sisters	1.70	22	eP	Pn	01 33 49.4	+2.1
GRSS				eS	Sn	01 34 09.5	-0.8
TOSP	Speyside	1.79	71	eP	Pn	01 33 50.3	+2.0
TOSP				eS	Sn	01 34 12.1	-0.1
FCV	Fort Charlotte	2.63	22	eP	Pn	01 34 00.2	+1.5
FCV				eS	Sn	01 34 29.2	-1.7
SVB	Belmont	2.73	21	eP	Pn	01 34 01.3	+1.2
SVB				eS	Sn	01 34 31.8	-1.5
SVCV	St. Vincent, C	2.77	23	eP	Pn	01 34 01.4	+0.8
SVCV				eS	Sn	01 34 32.8	-1.4
SVV	Soufriere Volc	2.79	21	eP	Pn	01 34 03.0	+2.3
SVV				eS	Sn	01 34 33.0	-1.5
SSV	Crater Summit	2.80	22	eP	Pn	01 34 02.4	+1.3
SSV				eS	Sn	01 34 33.4	-1.6
SFAN	Fancy Village	2.86	22	eP	Pn	01 34 02.8	+1.1
SLDE	Delcer	3.29	21	eP	Pn	01 34 09.0	+1.6
SLDE				eS	Sn	01 34 44.2	-2.1
SLB	Belfond	3.32	21	eP	Pn	01 34 09.6	+1.8
SLB				eS	Sn	01 34 46.0	-1.0
SLPA	Patience	3.39	23	eP	Pn	01 34 11.1	+2.4
SLPA				eS	Sn	01 34 47.2	-1.3
SLW	Petit Monier	3.54	21	eP	Pn	01 34 11.9	+1.3
SLW				eS	Sn	01 34 49.8	-2.3
BBGH	Gun Hill	3.58	47	eP	Pn	01 34 12.1	+0.9
BBGH				eS	Sn	01 34 52.9	-0.3
BBSP	Saint Philip	3.63	49	eS	Sn	01 34 53.7	-0.5
H05S1	Guadeloupe/Mar	3.95	20	P	Pn	01 34 17.3	+1.3
H05S1				S	Sn	01 35 03.4	+1.7
BIM	Bigot	3.96	17	eP	Pn	01 34 17.2	+1.0
FDF	Fort de France	4.14	15	eP	Pn	01 34 19.4	+0.8
FDF	Fort de France	4.14	15	eS	Sn	01 35 05.4	-1.2
PML	Morne Lenard	4.18	14	eP	Pn	01 34 20.2	+1.1
GBMF	Grand Be	4.20	15	eP	Pn	01 34 20.4	+0.9
PCM	Pelee Case Pet	4.21	14	eP	Pn	01 34 20.3	+0.8
PCM	Pelee Case Pet	4.21	14	eP	Pn	01 34 20.3	+0.8
CXM	Morne La Croix	4.21	15	eP	Pn	01 34 20.7	+1.0
BAMF	Morne Balai	4.22	15	eP	Pn	01 34 20.7	+0.9
MDN	Morne-Daniel	4.66	10	eP	Pn	01 34 27.0	+1.5
MDN	Morne-Daniel	4.66	10	eS	Sn	01 35 15.9	-2.9
DLPL	La Plaine	4.70	12	eP	Pn	01 34 27.6	+1.6
DLPL	La Plaine	4.70	12	eS	Sn	01 35 16.4	-3.4
BBL	Barber's Block	4.85	9	eP	Pn	01 34 28.6	+0.5
BBL	Barber's Block	4.85	9	eS	Sn	01 35 20.5	-2.9
MDPO	Dominica; Chan	4.90	9	eP	Pn	01 34 29.9	+1.1
DWS	Wesley	4.92	11	eP	Pn	01 34 30.6	+1.6
TDBA	Terre de Bas,	5.14	7	eP	Pn	01 34 34.5	+2.5
TBG	Guadaloupe-3	5.15	7	eP	Pn	01 34 33.7	+1.6
MGG	Marie-Galante	5.26	10	eP	Pn	01 34 35.5	+1.9
MAGL	Barre de l'ile	5.29	10	eP	Pn	01 34 36.3	+2.2
CBE	Ff, Capester	5.37	7	eP	Pn	01 34 36.1	+1.0
DEG	La Desirade	5.69	12	eP	Pn	01 34 41.4	+2.0
H05N1	Guadeloupe/Mar	5.70	12	P	Pn	01 34 41.0	+1.6
	SNR=14						
H05N1				S	Sn	01 35 42.5	-1.2
ABD	La Joyeuse, An	5.78	7	eP	Pn	01 34 42.9	+2.4
MLYT	Lee's Yard	5.98	1	eP	Pn	01 34 44.6	+1.3
MLYT	Lee's Yard	5.98	1	eS	Sn	01 35 47.3	-3.2
BPA	Boggy Peak	6.31	4	eP	Pn	01 34 48.2	+0.5
NEV	Hard Times	6.40	357	eP	Pn	01 34 50.2	+1.4
ANWB	Willy Bob	6.93	4	eP	Pn	01 34 57.9	+1.8
SJG	San Juan	8.27	333	P	Pn	01 35 11.7	-2.4
	3.6nm,0.3s,baz=178,slow=19,SNR=9.0						
SDV	Santo Domingo	8.45	258	P	Pn	01 35 10.3	-6.5
	0.5nm,0.3s,baz=81,slow=12,SNR=2.7						
SDV				S	Sn	01 36 37.7	-13
	3.1nm,0.3s,baz=26,slow=8.7,SNR=6.5						
MDP	Montagnes des	11.04	120	P	Pn	01 35 50.1	-1.2
MDP				S	Sn	01 37 48.1	-5.0
PTGA	Pitinga	11.59	169	P	Pn	01 35 56.9	-1.9
	7.9nm,0.3s,baz=349,slow=17,SNR=55						
PTGA				S	Sn	01 38 01.0	-5.5
	3.6nm,0.3s,baz=270,slow=20,SNR=6.0						
TXAR	Lajitas Array	42.81	302	P	P	01 41 00.7	-1.9
	0.1nm,0.3s,baz=130,slow=8.6,SNR=4.4						
SCHQ	Schefferville	44.16	356	P	P	01 41 14.9	+2.0
	1.5nm,0.3s,baz=163,slow=3.0,SNR=6.0						
ULM	Lac du Bonnet	48.16	332	P	P	01 41 44.4	+0.1
	0.7nm,0.3s,baz=122,slow=7.6,SNR=6.1						
PDAR	Pinedale Array	51.99	317	P	P	01 42 13.5	-0.1
	0.7nm,0.5s,baz=115,slow=9.9,SNR=16						
TORD	Torodi Ar. Bea	62.48	81	P	P	01 43 32.2	+4.7
	0.7nm,0.4s,baz=287,slow=6.0,SNR=15						
YKA	Yellowknife Ar	63.75	336	P	P	01 43 34.9	-0.1
	0.5nm,0.4s,baz=110,slow=7.3,SNR=14						
ILAR	Eielson Array	78.10	334	P	P	01 45 02.2	+0.5
	0.7nm,0.6s,baz=89,slow=4.7,SNR=15						
ARCES	ARCESS Array B	79.26	21	P	P	01 45 11.7	+3.8
	0.9nm,0.7s,baz=280,slow=5.3,SNR=1.1						
FINES	FINESS Array B	79.89	29	P	P	01 45 14.9	+3.5
	0.7nm,0.3s,baz=273,slow=4.2,SNR=14						
BRTR	Keskin Array B	87.73	50	P	P	01 45 57.0	+4.9
	0.6nm,0.8s,baz=298,slow=3.1,SNR=2.9						

IDC 04 01:33:48.4±2.0**, 5°.86S×129°.63E, h368^{km}**±30^{km}**, mb2.7**/1**, mb1 3.0**/5**, mb1mx2.7**/38**, mbtmp3.7**/5**, Error ellipse: s-maj=56.0km s-min=13.5km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.22	18	P	Pn	01 35 12.4	+1.2
	1.1nm,0.3s,baz=173,slow=23,SNR=1.7						
SIJI				S	S	01 36 17.8	-0.7
	2.7nm,0.3s,baz=151,slow=23,SNR=5.6						
FITZ	Fitzroy Crossi	12.77	197	P	P	01 36 36.3	-1.5
	0.1nm,0.3s,baz=311,slow=18,SNR=1.6						
FITZ				S	S	01 38 49.1	-9.1
	0.0nm,0.3s,baz=178,slow=12,SNR=1.1						
WRA	Warramunga Arr	14.73	162	P	P	01 37 00.1	+0.8
	0.5nm,0.3s,baz=341,slow=12,SNR=27						
WRA				S	S	01 39 36.6	-0.8
	0.0nm,0.3s,baz=334,slow=20,SNR=3.8						
ASAR	Alice Springs	18.17	167	P	P	01 37 37.2	+0.9
	0.6nm,0.3s,baz=346,slow=11,SNR=16						
ASAR				S	S	01 40 45.6	+0.4
	0.1nm,0.3s,baz=345,slow=21,SNR=6.8						
MKAR	Makanchi Array	67.08	327	P	P	01 44 03.2	-0.1
	0.2nm,0.5s,baz=115,slow=7.7,SNR=5.8						

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*ISCJB **04** 01:39:50.0±0.4, 32°.69S±0°.04×70°.21W±0°.04, h111^{km}±3^{km}, mb3.5/6, Error ellipse: s-maj=6.7km s-min=5.5km az=43.5*

*SJA **04** 01:39:49.7±0.5, 32°.65S×70°.21W, h103^{km}±3^{km}, ML3.8, MW4.3*

*GUC **04** 01:39:50.5±0.6, 32°.66S×70°.23W, h95^{km}±6^{km}, ML4.0*

*IDC **04** 01:39:56.9±7.1, 32°.74S×69°.94W, h160^{km}±54^{km}, mb3.4/6, mb1 3.5/8, mb1mx3.4/29, mbtmp3.7/8, MS3.6/1, Ms1 3.6/1, ms1mx2.7/14, Error ellipse: s-maj=53.5km s-min=22.0km az=18.0*

ISC 04 01:39:50.7±0.6**, 32°.70S**±0°.04×**70°.23W**±0°.04**, h107^{km}**±5^{km}**, n28, σ0^{s}.89**/43**, mb3.5**/6**, 4C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PEL	Peldehue	0.59	220	iP	Pn	01 40 07.4	-0.5
PEL	Peldehue	0.59	220	⇑iP	Pn	01 40 07.2	-0.8
PEL				eS	Sn	01 40 20.4	-0.5
PEL				IAML		01 40 22.2	
	comp=E,6µm,0.3s						
FCH	Farellones	0.63	184	⇓iP	Pn	01 40 08.3	-0.3
FCH				iS	Sn	01 40 22.3	+0.2
FCH				IAML		01 40 23.1	
	comp=E,11µm,0.3s						
ROCH	El Roble	0.71	247	⇑iP	Pn	01 40 08.9	-0.2
ROCH				iS	Sn	01 40 23.2	+0.2
ROCH				IAML		01 40 24.5	
	comp=N,12µm,0.3s						
ROC1	El Roble	0.72	247	iP	Pn	01 40 08.9	-0.2
ROC1				iS	Sn	01 40 23.2	+0.1
CLCH	Cerro Calan	0.74	200	⇓iP	Pn	01 40 09.1	-0.1
CLCH				iS	Sn	01 40 23.3	+0.1
CLCH				IAML		01 40 25.4	
	comp=E,6µm,0.3s						
AUSP	Uspallata	0.85	57	iP	Pn	01 40 09.8	-0.8
AUSP				iS	Sn	01 40 24.9	-0.6
ARCO	CERRO ARCO	1.10	98	iP	Pn	01 40 12.5	-0.4
ARCO				iS	Sn	01 40 29.2	-0.6
ARCO				IAML		01 40 30.7	
	comp=Z,6µm,0.9s						
LMEL	Las Melosas	1.15	179	⇑iP	Pn	01 40 13.5	0.0
LMEL				iS	Sn	01 40 31.4	+0.8
LMEL				IAML		01 40 37.9	
	comp=N,2µm,0.2s						
ASAL	Salagasta	1.18	85	iP	Pn	01 40 13.2	-0.5
ASAL				iS	Sn	01 40 31.0	-0.1
RTLS	Leoncito	1.20	42	iP	Pn	01 40 13.9	-0.2
RTLS				iS	Sn	01 40 31.4	-0.3
RTLS				IAML		01 40 32.6	
	comp=Z,724nm,0.5s						
AAGR	Agrelo	1.24	109	iP	Pn	01 40 14.1	-0.3
CMCH	Combarbala	1.65	336	⇓iP	Pn	01 40 19.2	-0.1
CMCH				iS	Sn	01 40 41.0	0.0
RTCV	Cerro Valdivia	1.66	60	iP	Pn	01 40 18.7	-0.6
RTLL	Cerro Villicun	2.02	48	iP	Pn	01 40 23.4	-0.4
RTLL				IAML		01 40 49.9	
	comp=Z,317nm,0.5s						
GO04	Tololo Observa	2.56	349	⇑iP	Pn	01 40 30.7	-0.4
GO04				iS	Sn	01 41 02.1	+0.1
LVC	Limon Verde	10.12	7	P	Pn	01 42 18.6	+5.4
	comp=Z,0.2nm,0.3s,baz=169,slow=10.0,SNR=1.6						
LVC				S	Sn	01 44 14.2	+9.2
	comp=Z,0.4nm,0.3s,baz=305,slow=3.7,SNR=1.8						
CPUP	Villa Florida	12.90	64	P	Pn	01 42 51.9	+2.0
	comp=Z,0.1nm,0.3s,baz=16,slow=19,SNR=1.4						
CPUP				S	Sn	01 45 15.0	+3.1
	comp=Z,0.1nm,0.3s,baz=325,slow=20,SNR=1.6						
BDFB	Brasilia	26.35	55	P	P	01 45 15.4	-1.6
	comp=Z,0.8nm,0.4s,baz=194,slow=8.3,SNR=1.8						
PMSA	Palmer Station	32.33	175	LR	LR	01 59 03.4	
	comp=Z,98nm,18.4s,baz=174,slow=36						
TXAR	Lajitas Array	69.37	329	P	P	01 50 48.0	+1.1
	comp=Z,0.4nm,0.7s,baz=151,slow=8.6,SNR=5.3						
DBIC	Dimbokro	73.32	70	P	P	01 51 10.5	-0.5
	comp=Z,1.2nm,0.5s,baz=180,slow=6.5,SNR=4.4						
TORD	Torodi Ar. Bea	82.34	69	P	P	01 52 00.1	-0.8
	comp=Z,1.2nm,0.6s,baz=287,slow=5.3,SNR=14						
TORD				pP	pP	01 52 29.5	-0.5
	comp=Z,0.4nm,0.8s,baz=254,slow=5.2,SNR=1.9						
PDAR	Pinedale Array	83.31	332	P	P	01 52 05.7	+0.1
	comp=Z,0.2nm,0.6s,baz=153,slow=6.1,SNR=1.6						
NVAR	Mina Array Bea	83.70	324	P	P	01 52 09.1	+1.4
	comp=Z,0.3nm,0.6s,baz=169,slow=5.3,SNR=3.4						
WRA	Warramunga Arr	122.62	208	PKP	PKPdf	01 58 33.8	-0.5
	comp=Z,0.6nm,0.8s,baz=161,slow=1.7,SNR=12						
ZALV	Zalesovo Beam	152.32	32	PKPbc	PKiKP	01 59 33.9	+0.2
	comp=Z,6.0nm,0.5s,baz=295,slow=2.8,SNR=31						
ZALV				pPKPbc	pPKPbc	02 00 03.2	-0.8
	comp=Z,1.4nm,0.6s,baz=293,slow=2.6,SNR=3.2						
MKAR	Makanchi Array	154.77	48	PKP	PKPdf	01 59 30.4	+0.1
	comp=Z,0.3nm,0.9s,baz=48,slow=4.3,SNR=3.7						
MKAR				PKPbc	PKPbc	01 59 37.1	-1.8
	comp=Z,0.3nm,0.7s,baz=330,slow=1.7,SNR=3.1						
MKAR				PKPab	PKPab	01 59 53.1	-1.3
	comp=Z,0.5nm,0.7s,baz=317,slow=3.3,SNR=4.9						

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*ISCJB **04** 02:00:46.2±0.7, 40°.92N±0°.04×29°.3W±0°.1, h14^{km}, mb3.4/6, MS3.6/15, Error ellipse: s-maj=13.8km s-min=5.7km az=169.7*

*IDC **04** 02:00:46.1±1.2, 41°.12N×29°.37W, h0^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.3/63, mbtmp3.4/7, ML4.2/1, MS3.6/16, Ms1 3.6/16, ms1mx3.3/48, Error ellipse: s-maj=43.5km s-min=24.0km az=8.0*

*SVSA **04** 02:00:48.7±0.9, 41°.16N×29°.19W, h10^{km}, MD4.0, ML3.4, Error ellipse: s-maj=10.1km s-min=4.8km az=97.0*

ISC 04 02:00:47.3±0.9**, 40°.72N**±0°.07×**29°.4W**±0°.1**, h14^{km}, n32, σ1^{s}.11**/25**, mb3.5**/6**, MS3.6**/15**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROSA	Rosais	2.18	156	eS	Sb	02 01 53.4	-0.1
ROSA				A	A	02 01 59.0	
	47nm,0.5s						
CALA	Caldeira	2.20	166	eP	Pb	02 01 27.1	+0.1
CALA				eS	Sb	02 01 54.5	+0.4
HOR	Horta	2.27	165	eP	Pb	02 01 26.7	-1.3
HOR				eS	Sb	02 01 56.0	+0.1
HOR				A	A	02 01 57.9	
	46nm,0.2s						
PMAN	Manadas	2.31	154	eP	Pb	02 01 27.4	-1.4
PICO	Pico	2.34	161	eP	Pb	02 01 27.8	-1.5
PICO				eS	Sb	02 01 57.3	-0.7
PICO				A	A	02 02 02.2	
	28nm,0.4s						
PCAN	Candelaria	2.36	163	eP	Pb	02 01 28.5	-1.1
PCAN				eS	Sb	02 01 58.1	-0.5
PCAN				A	A	02 02 06.2	
	68nm,0.7s						
ADH	Angra Heroismo	2.64	141	eP	Pn	02 01 30.7	+1.2
PSCM	Serra do Cume	2.67	139	eP	Pn	02 01 30.6	+0.7
PSET	Sete Cidades	4.05	134	eP	Pn	02 01 49.1	+0.2
PDA	Ponta Delgada	4.14	135	eP	Pn	02 01 51.1	+1.0
GRON	Grota Negra	4.20	133	eP	Pn	02 01 52.6	+1.7
CMLA	Cha da Macela	4.20	133	eP	Pn	02 01 51.6	+0.6
CMLA				eS	Sn	02 02 39.0	-0.9
CMLA				A	A	02 02 46.7	
	28nm,0.3s						
ESDC	Sonseca Array	19.42	85	P	Pn	02 05 15.5	+1.1
	0.1nm,0.3s,baz=289,slow=7.9,SNR=5.2						
ESDC				LR	LR	02 11 53.1	
	comp=Z,143nm,18.4s,baz=305,slow=34						
MDT	Midelt	21.30	104	LR	LR	02 11 52.4	
	comp=Z,112nm,20.9s,baz=332,slow=31						
BORG	Borgarnes	24.51	8	LR	LR	02 12 39.0	
	comp=Z,144nm,19.7s,baz=147,slow=30						
DAVOX	Davos/Dischmat	28.77	65	LR	LR	02 16 43.4	
	comp=Z,41nm,19.0s,baz=277,slow=34						
GERES	GERESS Array B	31.28	60	LR	LR	02 18 12.1	
	comp=Z,108nm,18.9s,baz=298,slow=34						
NOA	NORSAR Array B	31.94	37	LR	LR	02 18 10.4	
	comp=Z,49nm,18.2s,baz=260,slow=33						
SADO	Sadowa	36.31	293	LR	LR	02 21 57.2	
	comp=Z,99nm,20.5s,baz=88,slow=35						
TORD	Torodi Ar. Bea	38.64	126	P	P	02 08 12.8	+2.4
	0.6nm,0.9s,baz=317,slow=6.1,SNR=4.1						
TORD				LR	LR	02 23 06.5	
	comp=Z,56nm,19.3s,baz=335,slow=34						
FINES	FINESS Array B	39.01	39	LR	LR	02 21 25.4	
	comp=Z,77nm,20.5s,baz=252,slow=32						
AKASG	Malin Array Be	41.11	56	LR	LR	02 24 59.3	
	comp=Z,97nm,19.1s,baz=310,slow=36						
PDAR	Pinedale Array	57.65	301	P	P	02 10 37.6	+0.3
	0.2nm,0.5s,baz=87,slow=5.5,SNR=2.8						
PDAR				LR	LR	02 33 21.0	
	comp=Z,54nm,18.1s,baz=37,slow=34						
NEW	Newport	59.77	309	LR	LR	02 35 07.6	
	comp=Z,68nm,18.3s,baz=22,slow=35						
TXAR	Lajitas Array	60.24	284	P	P	02 10 55.6	+0.3
	0.3nm,0.5s,baz=63,slow=6.8,SNR=5.5						
TXAR				LR	LR	02 37 54.0	
	comp=Z,47nm,18.4s,baz=0.0,slow=37						
BVAR	Borovoye Array	63.89	42	P	P	02 11 18.6	-0.8
	0.2nm,0.5s,baz=287,slow=5.9,SNR=2.8						
YBH	Yreka Blue Hor	66.56	305	LR	LR	02 38 01.9	
	comp=Z,51nm,19.5s,baz=27,slow=34						
PFO	Pinyon Flats O	67.03	295	LR	LR	02 40 38.2	

	comp=Z,154nm,18.1s,baz=35,slow=36						
LPAZ	La Paz	67.17	221	LR	LR	02 37 45.9	
	comp=Z,51nm,20.5s,baz=102,slow=33						
KURBB	Kurchatov Arra	69.38	40	P	P	02 11 54.1	-0.3
	0.2nm,0.5s,baz=308,slow=6.5,SNR=4.0						
MKAR	Makanchi Array	73.77	42	P	P	02 12 19.4	-1.6
	0.3nm,0.8s,baz=295,slow=4.4,SNR=4.7						
ASAR	Alice Springs	157.94	45	PKPab	PKPab	02 21 15.8	-1.1
	0.4nm,0.7s,baz=339,slow=4.0,SNR=3.5						

IDC 04 02:02:48.2±21.0**, 13.°09N**×**143.°33E, h0**km**, mb3.6**/5**, mb1 3.6**/5**, mb1mx3.4**/48**, mbtmp3.6**/5**, Error ellipse: s-maj=579.6km s-min=53.3km az=176.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	60.81	316	P	P	02 13 02.6	+0.3
	0.2nm,0.6s,baz=93,slow=8.8,SNR=3.2						
ZALV	Zalesovo Beam	61.16	325	P	P	02 13 04.5	0.0
	0.3nm,0.3s,baz=94,slow=4.3,SNR=2.4						
KURBB	Kurchatov Arra	64.04	320	P	P	02 13 23.5	-0.3
	0.5nm,0.5s,baz=106,slow=6.7,SNR=4.0						
BVAR	Borovoye Array	69.39	322	P	P	02 13 57.8	-0.1
	0.5nm,0.4s,baz=93,slow=7.7,SNR=5.3						
ILAR	Eielson Array	69.65	25	P	P	02 13 59.4	+0.1
	0.1nm,0.6s,baz=255,slow=5.6,SNR=4.6						

*ISCJB **04** 02:08:14.0±1.0, 41.°2N±0.°2×29.°2W±0.°1, h10km, mb3.6/10, Error ellipse: s-maj=31.1km s-min=15.3km az=10.8*
*IDC **04** 02:08:14.4±1.1, 41.°25N×29.°23W, h0km, mb3.6/10, mb1 3.7/11, mb1mx3.5/57, mbtmp3.5/11, ML3.4/1, Error ellipse: s-maj=35.8km s-min=19.3km az=9.0*
ISC 04 02:08:15.9±1.1**, 41.°2N**±0.°2×**29.°2W**±0.°1**, h10**km**, n12, σ0ˢ.43**/12**, mb3.7**/10**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	19.27	86	P	Pn	02 12 41.8	+0.1
	0.0nm,0.3s,baz=288,slow=13,SNR=3.1						
GERES	GERESS Array B	30.94	61	P	P	02 14 33.5	+0.5
	0.4nm,0.5s,baz=287,slow=6.7,SNR=2.8						
TORD	Torodi Ar. Bea	38.85	127	P	P	02 15 41.2	-0.1
	0.5nm,0.8s,baz=316,slow=6.0,SNR=2.9						
YKA	Yellowknife Ar	52.44	324	P	P	02 17 28.1	-0.1
	0.3nm,0.7s,baz=66,slow=7.6,SNR=2.5						
PDAR	Pinedale Array	57.50	301	P	P	02 18 06.0	+0.5
	0.4nm,0.7s,baz=64,slow=6.8,SNR=4.1						
AKTO	Aktyubinsk	58.14	49	P	P	02 18 09.4	-0.1
	1.1nm,0.8s,baz=295,slow=7.9,SNR=5.9						
TXAR	Lajitas Array	60.22	284	P	P	02 18 24.2	-0.2
	0.6nm,0.7s,baz=69,slow=7.0,SNR=7.1						
BVAR	Borovoye Array	63.45	42	P	P	02 18 45.0	-0.7
	0.7nm,0.9s,baz=318,slow=4.0,SNR=3.8						
KURBB	Kurchatov Arra	68.94	41	P	P	02 19 20.2	-0.6
	0.7nm,0.8s,baz=316,slow=5.6,SNR=5.9						
MKAR	Makanchi Array	73.34	42	P	P	02 19 47.4	-0.2
	0.6nm,0.8s,baz=327,slow=6.4,SNR=5.8						
SONM	Songino Array	83.01	28	P	P	02 20 41.6	+0.2
	0.4nm,0.7s,baz=320,slow=3.9,SNR=4.0						
ASAR	Alice Springs	157.51	44	PKPab	PKPab	02 28 44.1	-0.2
	0.2nm,0.5s,baz=322,slow=3.9,SNR=4.1						

*NIED **04** 02:40:00, 36.°10N×142.°10E, h11km, Mw4.3 Best double couple: M₀3.01000×10^15 NP1:φs224.00000°, δ32.00000°, λ116.00000°. NP2:φs14.00000°, δ61.00000°, λ75.00000°.*
*IDC **04** 02:40:28.8±0.6, 36.°08N×142.°02E, h0km, mb4.1/25, mb1 4.2/32, mb1mx4.1/62, mbtmp4.1/32, ML3.9/5, MS3.5/14, Ms1 3.6/14, ms1mx3.3/45, Error ellipse: s-maj=14.2km s-min=13.4km az=145.0*
*ISCJB **04** 02:40:30.3±0.3, 36.°14N±0.°03×142.°12E±0.°04, h23km, mb4.3/58, MS3.7/13, Error ellipse: s-maj=5.3km s-min=3.8km az=154.1*
*JMA **04** 02:40:30.8±0.3, 36.°10N×142.°15E, h66km, M4.4*
*NEIC **04** 02:40:31.5±2.3, 36.°06N×142.°09E, h18km±14km, mb4.5/16, Error ellipse: s-maj=6.2km s-min=5.6km az=83.0*
*MOS **04** 02:40:35.2±0.9, 36.°54N×141.°87E, h38km, mb4.6/33, Error ellipse: s-maj=9.4km s-min=5.8km az=117.6*
*BJI **04** 02:40:37.0, 36.°25N×141.°18E, h30km, mB4.9/16, mb4.6/28, Ms4.2/5, Ms7 4.1/5*
ISC 04 02:40:32.0±0.5**, 36.°13N**±0.°05×**142.°08E**±0.°05**, h23**km**, n163, σ1ˢ.52**/163**, mb4.5**/65**, MS3.6**/13**, 15C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.07	247	P	Pn	02 40 50.8	-0.9
CHOJ				S	Sn	02 41 06.3	+0.5
JHYU	Hitachinakayam	1.22	281	P	Pn	02 40 53.0	-0.7
JHYU				*e*S	Sn	02 41 09.3	-0.2
JIHU	Itakohorinouch	1.27	263	P	Pn	02 40 54.0	-0.3
JHO	Hitachi	1.31	292	P	Pn	02 40 53.9	-1.0
JSMT	Sammumatsuo	1.41	250	P	Pn	02 40 56.3	+0.1
JFK	Kawauchi	1.57	322	P	Pn	02 40 57.6	-0.9
JFK				*e*S	Sn	02 41 18.1	-0.1
BSO1	Boso 1	1.72	212	P	Pn	02 40 58.9	-1.2
BSO3	Boso 3	1.84	224	P	Pn	02 41 01.0	-0.9
JFT	Otama	1.97	315	P	Pn	02 41 04.4	+0.4
JMM	Marumori	2.02	330	P	Pn	02 41 03.8	-0.9
JAG	Ashikaga	2.14	279	P	Pn	02 41 05.6	-0.7
JRY	Ryogami san	2.57	269	P	Pn	02 41 11.8	-0.5
JOD2	Odawara 2	2.58	251	P	Pn	02 41 12.0	-0.4
MJAR	Matsushiro Arr	3.15	279	Pn	Pn	02 41 20.0	-0.2
	3.7nm,0.3s,baz=107,slow=7.2,SNR=87						
MJAR				Sn	Sn	02 41 56.5	-0.6
	2.1nm,0.3s,baz=27,slow=14,SNR=4.7						
MJAR				LR	LR	02 42 49.0	
	comp=Z,343nm,18.1s,baz=115,slow=46						
MAJO	Matsushiro	3.15	279	*e*Pn	Pn	02 41 21.1	+0.9
MAJO				*e*Sn	Sn	02 41 56.5	-0.7
MAJO	Matsushiro	3.15	279	*c i*P	Pn	02 41 20.2	-0.1
MAT	Matsushiro	3.15	279	P	Pn	02 41 20.8	+0.5
MAT				S	Sn	02 41 57.7	+0.5
MJB9	Matsu-Tunnel	3.15	279	*e*Pn	Pn	02 41 21.2	+0.9
JHJ	Hachijo jima 2	3.54	213	Pn	Pn	02 41 25.6	0.0
	97nm,0.3s,baz=54,slow=16,SNR=3.5						
JHJ				Sn	Sn	02 42 02.7	-4.2
	180nm,0.3s,baz=219,slow=24,SNR=7.3						
INU	Inuyama	4.19	261	*e*Pn	Pn	02 41 35.7	+1.2
ERM	Erimo	5.94	8	*e*Pn	Pn	02 41 56.2	-2.3
ERM				*e*Sn	Sn	02 42 56.1	-10
ERM	Erimo	5.94	8	*i* P	Pn	02 41 59.5	+0.9
ASAJ	Asahikawa	7.99	3	Pn	Pn	02 42 25.7	-1.0
	4.5nm,0.3s,baz=232,slow=11,SNR=10						
ASAJ				Sn	Sn	02 43 53.5	-2.9
	2.4nm,0.3s,baz=343,slow=19,SNR=3.0						
YUK	Yuzh-Kuril'sk	8.41	19	*e*P	Pn	02 42 31.3	-1.2
YUK				*e*S	Sn	02 43 59.7	-7.0
YUK				pmax	pmax		
	comp=Z,103nm,0.3s						
YUK				pmax	pmax		
	comp=N,18nm,0.2s						
YUK				pmax	pmax		
	comp=E,20nm,0.2s						
SHO	Shikotan	8.55	24	*e*P	Pn	02 42 30.9	-3.5
SHO				*e*S	Sn	02 44 00.7	-9.4
CBIJ	Chichi jima	9.00	179	Pn	Pn	02 42 38.0	-2.6
JCJ	Chichijima	9.00	179	Pn	Pn	02 42 38.0	-2.6
	comp=E,16nm,0.3s,baz=323,slow=16,SNR=9.3						
JCJ				Sn	Sn	02 44 08.9	-12
	comp=E,16nm,0.3s,baz=29,slow=23,SNR=6.8						
JNU	Nakatsue	9.70	255	Pn	Pn	02 42 50.0	-0.2
	comp=E,0.5nm,0.3s,baz=12,slow=5.3,SNR=4.0						
TEY	Ternei	9.82	337	⇓*e*P	Pn	02 43 01.1	+9.3
TEY				pmax	pmax		
	comp=Z,10.0nm,1.6s						
YSS	Yuzh-Sakhalins	10.83	2	*e*P	Pn	02 43 04.7	-0.9
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS				MLR	MLR		
	comp=N,300nm,17.0s						
YSS				MLR	MLR		
	comp=E,500nm,17.0s						
USRK	Ussuriysk Ar.	11.15	319	Pn	Pn	02 43 09.9	-0.1
	comp=E,0.2nm,0.3s,baz=132,slow=14,SNR=9.1						
USRK				LR	LR	02 47 28.1	
	comp=E,200nm,18.4s,baz=250,slow=38						
KSRS	Korea Array	11.43	281	Pn	Pn	02 43 16.4	+2.7
	comp=E,0.3nm,0.3s,baz=96,slow=13,SNR=15						
KSRS				LR	LR	02 47 34.2	
	comp=E,147nm,20.5s,baz=73,slow=37						
KS15	Wonju Array Si	11.46	281	*e*Pn	Pn	02 43 16.4	+2.2
KSAR	Wonju Array Be	11.46	281	Pn	Pn	02 43 16.4	+2.2
KSAR	Wonju Array Be	11.46	281	P	Pn	02 43 16.4	+2.2
KLR	Kul'dur	15.12	333	*i* P	Pn	02 44 02.0	-2.0
KLR	Kul'dur	15.12	333	Pn	Pn	02 44 01.9	-2.2
	comp=E,0.2nm,0.3s,baz=152,slow=13,SNR=5.2						
ZEA	Zeya	20.43	334	*e*P	P	02 45 07.8	+0.3
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						
ZEA				MLR	MLR		
	comp=N,400nm,13.0s						
ZEA				MLR	MLR		
	comp=E,500nm,13.0s						
MA2	Magadan	24.14	11	LR	LR	02 56 27.3	
	comp=E,84nm,19.1s,baz=104,slow=40						
HHC	Hu-ho-hao-te	24.28	290	*e*P	P	02 45 48.3	+0.7
HHC				S	S	02 49 57.7	-7.5
HHC				pmax	pmax		
	comp=E,13nm,0.9s						
HHC				pmax	pmax		
	comp=E,97nm,5.1s						
HHC				LR	LR		
	comp=E,280nm,12.1s						
HHC				LR	LR		
	comp=E,170nm,12.1s						
HHC				LR	LR		
	comp=E,200nm,10.4s						
XAN	Xi'an	27.14	275	P	P	02 46 13.1	-0.4
XAN				pP	pP	02 46 20.2	+0.6
XAN				pmax	pmax		
	comp=E,7.0nm,0.7s						
XAN				pmax	pmax		
	comp=E,110nm,4.9s						
XAN	Xi'an	27.14	275	*e*P	P	02 46 12.5	-1.0
	comp=E,7.2nm,0.6s						
XAN	Xi'an	27.14	275	*e*P	P	02 46 12.5	-1.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
H11N2	WAKE ISLAND Hy	27.23	120	T	T	03 14 50.5	
	baz=312,slow=74,SNR=14						
H11N1	WAKE ISLAND Hy	27.24	120	T	T	03 14 49.5	
	baz=312,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	27.25	120	T	T	03 14 45.6	
	baz=312,slow=74,SNR=14						
SEY	Seymchan	27.58	10	*ce*P	P	02 46 18.1	+1.0
SEY	Seymchan	27.58	10	P	P	02 46 18.4	+1.3
	comp=Z,2.8nm,0.8s,baz=95,slow=8.2,SNR=3.9						
ENH	Enshi	27.80	267	*e*P	P	02 46 18.1	-1.4
	comp=Z,20nm,0.8s						
H11S1	WAKE ISLAND Hy	27.92	122	T	T	03 15 33.3	
	baz=314,slow=75,SNR=30						
H11S3	WAKE ISLAND Hy	27.92	122	T	T	03 15 32.7	
	baz=314,slow=75,SNR=28						
H11S2	WAKE ISLAND Hy	27.94	122	T	T	03 15 34.1	
	baz=314,slow=75,SNR=27						
ULN	Ulaanbaatar	28.31	305	*e*P	P	02 46 24.7	+0.7
	comp=Z,8.4nm,0.7s						
ULN	Ulaanbaatar	28.31	305	*ce*P	P	02 46 25.4	+1.4
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
BOD	Bodaibo	28.58	328	*e*P	P	02 46 26.1	0.0
BOD				pmax	pmax		
	comp=Z,15nm,1.1s						
SONA1	Songino Array	28.73	305	*e*P	P	02 46 28.6	+0.9
SONA0	Songino Array	28.74	305	*e*P	P	02 46 28.2	+0.5
SONM	Songino Array	28.74	305	P	P	02 46 28.2	+0.5
	comp=Z,4.3nm,0.8s,baz=113,slow=9.3,SNR=31						
SONM				LR	LR	02 57 03.9	
	comp=Z,82nm,18.3s,baz=46,slow=35						
ZAK	Zakamensk	31.25	309	*e*P	P	02 46 49.7	-0.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TLY	Talaya	31.33	312	*c i*P	P	02 46 50.6	+0.1
TLY	Talaya	31.33	312	P	P	02 46 51.0	+0.5
	comp=Z,2.1nm,0.6s,baz=121,slow=5.9,SNR=9.0						
TLY				LR	LR	03 00 26.2	
	comp=Z,250nm,19.2s,baz=116,slow=38						
DAV	Davao City (W)	32.62	212	LR	LR	02 58 15.5	
	comp=Z,64nm,20.2s,baz=344,slow=33						
MOY	Mondy	32.93	311	*e*P	P	02 47 05.1	+0.4
GTA	Gaotai	33.35	289	*e*P	P	02 47 08.8	+0.3
GTA				pP	pP	02 47 15.9	+1.2
GTA				sP	pwP	02 47 20.0	+2.1
GTA				pmax	pmax		
	comp=Z,17nm,0.8s						
BILL	Bilibino	34.75	16	*i* P	P	02 47 24.6	+4.5
BILL				*i*		02 48 34.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TIXI	Tiksi	36.25	353	*ce*P	P	02 47 34.0	+1.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
UTTA	Uttaradit	40.93	255	P	P	02 48 13.7	+0.8
	comp=Z,2.4nm,0.8s						
DGZ	Jazzator, Alta	41.36	307	*c i*P	P	02 48 17.2	+0.9
DGZ				pmax	pmax		
	comp=Z,12nm,1.0s						
CMAR	Chiang Mai Arr	41.80	257	*ce*P	P	02 48 21.7	+1.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	41.80	257	P	P	02 48 20.1	+0.1
	comp=Z,1.3nm,0.4s,baz=48,slow=6.1,SNR=7.5						
ZAA0	Zalesovo Array	42.92	313	*e*P	P	02 48 29.3	+0.6
	comp=Z,8.0nm,1.0s						
ZAA1	Zalesovo Array	42.92	313	*e*P	P	02 48 28.9	+0.2
ZAA1				*e*PcP	PcP	02 50 18.5	-0.6
ZALV	Zalesovo Beam	42.92	313	P	P	02 48 28.9	+0.2
	comp=Z,2.4nm,0.5s,baz=90,slow=7.4,SNR=18						
ZALV				PcP	PcP	02 50 18.5	-0.6
	comp=Z,1.3nm,0.6s,baz=110,slow=3.6,SNR=2.8						
ZALV				LR	LR	03 07 26.0	
	comp=Z,47nm,21.6s,baz=70,slow=38						
MK01	Makanchi Array	45.05	303	*e*P	P	02 48 46.3	+0.3
MK32	Makanchi Array	45.05	303	*e*P	P	02 48 46.0	0.0
MKAR	Makanchi Array	45.05	303	*ce*P	P	02 48 46.5	+0.5
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	Makanchi Array	45.05	303	P	P	02 48 46.0	0.0
	comp=Z,6.8nm,0.8s,baz=92,slow=8.7,SNR=16						
MKAR				LR	LR	03 08 25.4	
	comp=Z,56nm,18.3s,baz=43,slow=37						
MAKZ	Makanchi	45.27	303	*e*P	P	02 48 48.1	+0.4
	comp=Z,9.4nm,0.9s						
MAKZ	Makanchi	45.27	303	*e*P	P	02 48 48.1	+0.4
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KURK	Kurchatov	46.91	309	P	P	02 49 01.0	+0.5
KURK	Kurchatov	46.91	309	*ce*P	P	02 49 00.8	+0.3
KURK				pmax	pmax		
	comp=Z,26nm,1.3s						
KURBB	Kurchatov Arra	46.98	309	P	P	02 49 01.0	-0.1
	comp=Z,8.7nm,0.8s,baz=82,slow=7.6,SNR=45						
RSO	Redoubt South	47.29	38	*e*P	P	02 48 59.8	-3.8
RAMN	Ramite	47.61	275	*e*P	P	02 49 06.7	+0.1
	comp=Z,31nm,0.8s						
JIRN	Jiri	47.64	276	*e*P	P	02 49 07.0	0.0
	comp=Z,16nm,0.5s						
PDGK	Podgornoye	47.67	299	P	P	02 49 07.0	+0.2
GUN	Gumba	47.78	277	*e*P	P	02 49 08.4	+0.3
	comp=Z,9.5nm,0.5s						
KKN	Kakani	48.31	277	*e*P	P	02 49 12.2	+0.2
	comp=Z,90nm,0.6s						
TARG	Taragay, Kyrgy	49.28	297	*e*P	P	02 49 21.1	+1.6
	comp=Z,5.7nm,0.8s						
DANN	Dangsing	49.30	278	*e*P	P	02 49 20.2	+0.5
	comp=Z,34nm,0.9s						
KOLN	Koldanda	49.67	278	*e*P	P	02 49 22.7	+0.3
	comp=Z,17nm,1.1s						
ILAR	Eielson Array	49.98	32	P	P	02 49 25.0	+1.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	49.98	32	P	P	02 49 25.0	+1.0
	comp=Z,0.6nm,0.8s,baz=256,slow=5.1,SNR=6.4						
ILB	Eielson Array	49.98	32	*e*P	P	02 49 25.0	+1.0
	comp=Z,0.1nm,0.4s						
PYUN	Piuthan	50.02	278	*e*P	P	02 49 25.3	+0.2
	comp=Z,47nm,1.2s						
AAK	Ala-Archa	51.39	299	*i* P	P	02 49 35.0	-0.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	Ala-Archa	51.39	299	P	P	02 49 35.6	+0.4
	comp=Z,1.3nm,0.4s,baz=58,slow=7.1,SNR=2.3						
OTUK	Ortayu	51.39	307	P	P	02 49 35.4	+0.5
BVAR	Borovoye Array	51.58	313	P	P	02 49 36.4	+0.2
	comp=Z,2.1nm,0.8s,baz=79,slow=7.7,SNR=11						
BVAR				PcP	PcP	02 50 50.1	+0.3
	comp=Z,1.9nm,0.8s,baz=73,slow=5.0,SNR=4.2						
BRVK	Borovoye	51.63	313	*e*P	P	02 49 37.3	+0.6
	comp=Z,3.4nm,0.8s						
BRVK	Borovoye	51.63	313	*ce*P	P	02 49 37.2	+0.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MNAS	Manas	52.84	300	P	P	02 49 47.0	+1.1
ARSB	Arslanbob	52.86	298	*e*P	P	02 49 48.2	+2.1
	comp=Z,5.4nm,0.7s						
SFK	Sufi-Kurgan	52.91	296	P	P	02 49 47.8	+1.2
INK	Inuvik	54.95	27	P	P	02 50 01.9	+1.2
	comp=Z,1.0nm,0.6s,baz=292,slow=4.2,SNR=8.6						
GAR	Garm	55.57	296	*e*P	P	02 50 06.6	+0.7
	comp=Z,7.6nm,1.1s						
GAR	Garm	55.57	296	*e*P	P	02 50 06.6	+0.7
GAR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WRAB	Tennant Creek	56.23	189	*ce*P	P	02 50 17.4	+7.0
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.7s						
WB2	Warramunga Arr	56.24	189	*e*P	P	02 50 10.4	-0.1
WR1	Warramunga Arr	56.24	189	*e*P	P	02 50 09.7	-0.8
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	56.24	189	*ce*P	P	02 50 18.1	+7.6
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRA	Warramunga Arr	56.24	189	P	P	02 50 09.7	-0.8
	comp=Z,1.5nm,0.8s,baz=11,slow=7.6,SNR=7.6						
ARU	Arti	57.39	319	*e*P	P	02 50 18.8	+0.4
	comp=Z,6.9nm,0.7s						
ARU	Arti	57.39	319	*c i*P	P	02 50 18.7	+0.4
ARU						02 52 23.6	
ARU				S	S	02 58 11.8	-1.8
ARU				SS	SS	03 01 55.0	-7.7
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ABKAR	Akbulak array	58.93	311	*e*P	P	02 50 29.4	+0.1
	comp=Z,4.1nm,0.8s						
AKTO	Aktyubinsk	59.68	313	P	P	02 50 34.1	-0.3
	comp=Z,3.3nm,0.8s,baz=77,slow=8.2,SNR=14						
AS31	Alice Springs	59.97	189	*e*P	P	02 50 36.6	0.0
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	59.97	189	P	P	02 50 36.6	0.0
	comp=Z,0.7nm,0.7s,baz=14,slow=7.8,SNR=4.6						
KIRV	Kirov	61.29	323	P	P	02 50 45.5	+0.3
	comp=Z,12nm,0.5s,baz=76,slow=4.6,SNR=6.1						
PRGR	Permogore	61.82	327	*e*P	P	02 50 48.3	-0.4
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
PALK	Pallekele	62.70	258	LR	LR	03 19 53.5	
	comp=Z,24nm,18.1s,baz=89,slow=38						
YKA	Yellowknife Ar	64.33	30	P	P	02 51 05.5	+0.1
	comp=Z,0.6nm,0.8s,baz=301,slow=6.5,SNR=9.9						
YKB5	Yellowknife Ar	64.33	30	*e*P	P	02 51 05.5	+0.1
GEYT	Alibeck	64.74	300	LR	LR	03 20 54.1	
	comp=Z,36nm,19.8s,baz=355,slow=38						
KLMR	Klimovskoe	64.81	328	*e*P	P	02 51 07.9	-0.6
KLMR				pmax	pmax		
	comp=Z,18nm,1.7s						
KLMR	Klimovskoe	64.81	328	*e*P	P	02 51 08.0	-0.6
KLMR				AMP		02 51 10.4	
	comp=Z,18nm,1.7s						
ARA0	ARCESS Array S	65.03	340	*e*P	P	02 51 10.2	+0.3
ARCES	ARCESS Array B	65.03	340	P	P	02 51 10.3	+0.3
	comp=Z,1.4nm,0.8s,baz=57,slow=6.6,SNR=3.4						
VRH	Novokhopyorsk	68.61	318	*e*P	P	02 51 32.8	-0.2
VRH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
OBN	Obninsk	69.14	324	*i* P	P	02 51 35.8	-0.4
OBN				*i*		02 51 44.1	
OBN				*i*		02 54 09.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LPSR	Galich'ya Gora	69.34	321	*e*P	P	02 51 37.3	-0.2
LPSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FIA0	FINESS Array S	69.86	333	*e*P	P	02 51 40.9	+0.3
FIA0	FINESS Array S	69.86	333	*e*P	P	02 51 40.9	+0.3
FINES	FINESS Array B	69.86	333	*ce*P	P	02 51 41.0	+0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	69.86	333	P	P	02 51 40.9	+0.3
	comp=Z,2.3nm,0.7s,baz=72,slow=6.2,SNR=7.9						
FINES				LR	LR	03 25 39.8	
	comp=Z,137nm,18.2s,baz=284,slow=39						
VSR	Storozhevoye	69.97	319	*i* P	P	02 51 40.0	-1.4
VSR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSU	Vasula	71.50	330	*i* P	P	02 51 51.2	+0.6
VSU				pmax	pmax		
	comp=Z,21nm,1.2s						
KIV	Kislovodsk	71.90	311	*e*P	P	02 51 54.4	+1.0
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
NV01	Mina Array Sit	75.11	53	*e*P	P	02 52 13.3	+0.8
NVAR	Mina Array Bea	75.11	53	P	P	02 52 13.3	+0.8
	comp=Z,0.3nm,0.5s,baz=289,slow=5.4,SNR=2.8						
HFS	Hagfors	75.13	336	P	P	02 52 12.9	+0.9
	comp=Z,2.4nm,1.0s,baz=49,slow=6.7,SNR=4.9						
NB2	NORSAR Subarra	75.23	338	P	P	02 52 13.0	+0.4
	comp=Z,0.7nm,0.6s,baz=39,slow=6.2						
NB200	NORSAR Array S	75.23	338	*e*P	P	02 52 13.0	+0.4
NOA	NORSAR Array B	75.23	338	P	P	02 52 13.0	+0.4
	comp=Z,1.9nm,0.8s,baz=39,slow=5.8,SNR=6.2						
NOA				LR	LR	03 29 06.7	
	comp=Z,68nm,18.9s,baz=280,slow=39						
AKASG	Malin Array Be	75.34	323	*ce*P	P	02 52 17.6	+4.3
AKASG	Malin Array Be	75.34	323	P	P	02 52 13.4	+0.1
	comp=Z,1.6nm,0.5s,baz=46,slow=5.9,SNR=11						
AKBB	Malin Array Si	75.34	323	*e*P	P	02 52 13.4	+0.1
	comp=Z,3.7nm,0.8s						
AKBB	Malin Array Si	75.34	323	*e*P	P	02 52 13.4	+0.1
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PD31	Pinedale Array	77.92	46	*e*P	P	02 52 30.6	+2.2
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	77.92	46	P	P	02 52 30.6	+2.2
	comp=Z,0.6nm,0.8s,baz=284,slow=1.2,SNR=6.5						
BR101	Keskin Array S	79.85	312	*e*P	P	02 52 39.5	+0.5
BRTR	Keskin Array B	79.85	312	P	P	02 52 39.5	+0.5
	comp=Z,1.5nm,0.8s,baz=121,slow=4.3,SNR=7.0						
CLL	Collm	82.15	331	*e*P	P	02 52 50.0	-0.8
CLL	Collm	82.15	331	*e*P	P	02 52 50.0	-0.8
PPT	Papeete	83.75	117	LR	LR	03 31 49.5	
	comp=Z,30nm,18.5s,baz=10,slow=37						
GEC2	GERESS Array S	83.76	329	*e*P	P	02 52 59.7	+0.4
	comp=Z,1.9nm,0.9s						
GEC2	GERESS Array S	83.76	329	*e*P	P	02 52 59.7	+0.4
GEC2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	GERESS Array B	83.76	329	P	P	02 52 59.7	+0.4
	comp=Z,0.8nm,0.8s,baz=12,slow=7.0,SNR=2.9						
LTX	Lajitas	90.25	53	*e*P	P	02 53 32.0	+0.8
LTX	Lajitas	90.25	53	*e*P	P	02 53 32.0	+0.8
TXAR	Lajitas Array	90.25	53	P	P	02 53 32.0	+0.8
	comp=Z,0.3nm,0.7s,baz=302,slow=2.0,SNR=4.0						
LPAZ	La Paz	146.68	62	PKP2	PKPbc	03 00 14.0	+0.8
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPAZ	La Paz	146.68	62	PKPbc	PKPbc	03 00 13.9	+0.8
	comp=Z,1.3nm,0.8s,baz=28,slow=3.6,SNR=4.1						

*KRNET **04** 02:45:21.7±0.1, 42.°56N×79.°67E, h8km, mb3.4*
*NNC **04** 02:45:21.6±1.8, 42.°57N×79.°66E, h0km, mb3.4, mpv3.4, Error ellipse: s-maj=11.8km s-min=7.1km az=138.0*
*SOME **04** 02:45:22.0, 42.°55N×79.°60E, h15km*
ISC 04 02:45:22.1±1.1**, 42.°54N**±0.°04×**79.°66E**±0.°04**, h10**km**, n49, σ1ˢ.75**/94**, 32C-23D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.77	323	P	Pg	02 45 36.2	-0.8
	22nm,0.2s						
UZB				S	Sg	02 45 46.3	-0.8
	230nm,0.1s						
UZB	Uzynbulak	0.77	323	⇓*e*P	Pg	02 45 36.2	-0.8
	baz=21						
UZB				⇓*e*S	Sg	02 45 46.3	-0.8
	baz=21						
UZB	Uzynbulak	0.77	323	⇓*e*P	Pg	02 45 36.2	-0.8

	22nm,0.2s						
UZB				*e*S	Sg	02 45 46.3	-0.8
	230nm,0.1s						
PDGK	Podgornoye	0.80	351	P	Pg	02 45 36.7	-0.9
	51nm,0.2s						
PDGK				S	Sb	02 45 47.1	-2.0
	35nm,0.2s						
PDGK	Podgornoye	0.80	351	⇓P	Pg	02 45 36.7	-0.9
	18nm,0.2s						
PDGK				⇓S	Sg	02 45 46.9	-1.1
	20nm,0.3s						
PDGK	Podgornoye	0.80	351	⇓*i*P	Pg	02 45 36.7	-0.9
	baz=50						
PDGK				⇓*i*S	Sg	02 45 47.0	-1.1
	baz=50						
PRZ	Przheval'sk	0.93	267	⇑*i*P	Pg	02 45 39.3	-0.8
	baz=66						
PRZ				⇑*i*S	Sg	02 45 52.3	+0.1
	baz=66						
KTMS	Ketmen	1.04	29	P	Pg	02 45 41.1	-1.0
	30nm,0.1s						
KTMS				S	Sb	02 45 54.8	-1.3
	59nm,0.1s						
KTMS	Ketmen	1.04	29	*e*P	Pg	02 45 41.1	-1.0
	baz=28						
KTMS				*e*S	Sb	02 45 54.8	-1.3
	baz=28						
KTMS	Ketmen	1.04	29	*e*P	Pg	02 45 41.1	-1.0
	30nm,0.1s						
KTMS				*e*S	Sb	02 45 54.8	-1.3
	59nm,0.1s						
SATY	Saty	1.06	300	P	Pg	02 45 41.5	-1.0
	14nm,0.1s						
SATY				S	Sg	02 45 55.3	-0.9
	222nm,0.1s						
SATY	Saty	1.06	300	⇓*e*P	Pg	02 45 41.2	-1.3
	14nm,0.1s						
SATY				*e*S	Sg	02 45 55.3	-0.9
	222nm,0.1s						
KURS	Kuram	1.45	312	⇑*e*P	Pg	02 45 48.8	-1.1
	baz=10.0						
KURS				⇓*i*S	Sg	02 46 07.2	-1.5
	baz=10.0						
KURS	Kuram	1.45	312	⇑*e*P	Pg	02 45 48.8	-1.1
	2.7nm,0.1s						
KURS				⇓*i*S	Sg	02 46 07.2	-1.5
	44nm,0.5s						
MNBS	Baschi	1.79	330	P	Pb	02 45 54.4	-0.7
	26nm,0.2s						
MNBS				S	Sg	02 46 17.8	-2.0
	75nm,0.2s						
MNBS	Baschi	1.79	330	⇓*e*P	Pb	02 45 54.5	-0.7
	baz=29						
MNBS				⇓*e*S	Sg	02 46 17.8	-2.0
	baz=29						
MNBS	Baschi	1.79	330	⇓*e*P	Pb	02 45 54.5	-0.7
	26nm,0.2s						
MNBS				*e*S	Sg	02 46 17.8	-2.0
	75nm,0.2s						
DJR	Jarkent	1.80	3	*e*P	Pb	02 45 54.3	-0.8
	14nm,0.2s						
DJR				*e*S	Sg	02 46 18.6	-1.3
	14nm,0.2s						
KDJ	Kajisay	1.88	258	⇑*i*P	Pb	02 45 56.8	+0.1
	baz=58						
KDJ				⇑*i*S	Sb	02 46 21.3	+1.0
	baz=58						
MDOK	Medeo	2.02	289	Pn	Pb	02 45 58.0	-1.0
	9.4nm,0.5s						
MDOK				Sn	Sb	02 46 24.1	-0.1
	30nm,0.8s						
MDOK	Medeo	2.02	289	⇓*e*P	Pb	02 45 58.3	-0.7
	baz=88						
MDOK				⇓*e*S	Sb	02 46 24.7	+0.5
	baz=88						
MDOK	Medeo	2.02	289	⇓*e*P	Pb	02 45 58.3	-0.7
	17nm,0.4s						
MDOK				*e*S	Sb	02 46 24.7	+0.5
	28nm,0.5s						
TNSS	Tian-Shan	2.06	285	*e*P	Pb	02 45 58.8	-1.0
	baz=84						
TNSS				*e*S	Sb	02 46 25.4	-0.2
	baz=84						
TNSS	Tian-Shan	2.06	285	*e*P	Pb	02 45 58.8	-1.0
	25nm,0.2s						
TNSS				*e*S	Sb	02 46 25.4	-0.2
	53nm,0.4s						
IZV	Izvestkoviy	2.30	284	Pg	Pb	02 46 02.8	-0.9
	27nm,0.2s						
IZV				Lg	Lg	02 46 32.0	
	61nm,0.3s						
IZV	Izvestkoviy	2.30	284	*e*P	Pb	02 46 02.9	-0.9
	baz=83						
IZV				*e*S	Sb	02 46 32.0	-0.2
	baz=83						
IZV	Izvestkoviy	2.30	284	*e*P	Pb	02 46 02.9	-0.9
	27nm,0.2s						
IZV				*e*S	Sb	02 46 32.0	-0.2
	61nm,0.3s						
CHKK	Chushkaly	2.36	305	⇑*i*P	Pb	02 46 03.7	-0.9
	baz=4.0						
CHKK				⇑*e*S	Sb	02 46 34.4	+0.6
	baz=4.0						
CHKK	Chushkaly	2.36	305	⇑*i*P	Pb	02 46 03.7	-0.9
	7.7nm,0.3s						
CHKK				*e*S	Sb	02 46 34.4	+0.6
	107nm,0.3s						
MTBS	Maitube	2.45	285	*e*P	Pb	02 46 05.0	-1.3
	baz=84						
MTBS				⇑*i*S	Sb	02 46 36.0	-0.5
	baz=84						
MTBS	Maitube	2.45	285	*e*P	Pb	02 46 05.0	-1.3
	21nm,0.2s						
MTBS				⇑*i*S	Sb	02 46 36.0	-0.5
	49nm,0.3s						
ULHL	Ulahol	2.55	265	⇑*i*P	Pb	02 46 06.3	-1.7
	baz=64						
ULHL				⇑*i*S	Sb	02 46 38.1	-1.4
	baz=64						
TDK	Taldyqorghan	2.63	340	*e*P	Pb	02 46 08.7	-0.5
	49nm,0.7s						
TDK				*e*S	Sg	02 46 42.7	-3.7
	131nm,0.7s						
BOOM	Boomskoye usch	2.75	270	⇑*e*P	Pb	02 46 09.0	-2.4
	baz=70						
BOOM				⇑*i*S	Sb	02 46 42.4	-2.9
	baz=70						
KST	Kastek	2.77	282	⇓*i*P	Pb	02 46 10.5	-1.2
	baz=81						
KST				⇓*e*S	Sb	02 46 45.1	-0.6
	baz=81						
KST	Kastek	2.77	282	⇓*i*P	Pb	02 46 10.5	-1.2
	18nm,0.2s						
KST				*e*S	Sb	02 46 45.1	-0.6
	31nm,0.7s						
KUU	Kurty	2.78	300	⇑*i*P	Pb	02 46 11.6	-0.3
	baz=0.0						
KUU				⇓*i*S	Sb	02 46 46.8	+0.8
	baz=0.0						
NRN	Naryn	2.94	249	⇑*i*P	Pb	02 46 12.0	-2.8
	baz=49						
NRN				⇑*i*S	Sb	02 46 48.2	-2.7
	baz=49						
TKM2	Tokmak 2	3.02	279	⇑Pg	Pb	02 46 14.1	-1.9
	4.5nm,0.6s						
TKM2				⇓Lg	Lg	02 46 54.5	
	10nm,0.3s						
TKM2	Tokmak 2	3.02	279	⇑*e*P	Pb	02 46 12.6	-3.4
	baz=78						
TKM2				⇑*i*S	Sb	02 46 49.7	-3.3
	baz=78						
KZA	Kyzart	3.30	264	⇑*i*P	Pn	02 46 17.2	+3.0
	baz=63						
KZA				⇑*i*S	Sn	02 46 56.9	+3.2
	baz=63						
KBK	Karagaybulak	3.48	274	⇑*e*P	Pn	02 46 19.0	+2.5
	baz=73						
KBK				⇑*i*S	Sn	02 46 59.9	+2.1
	baz=73						
AAK	Ala-Archa	3.81	273	⇑Pg	Pb	02 46 28.9	-0.7
	1.5nm,0.3s						
AAK				Lg	Lg	02 47 18.7	
	3.8nm,0.6s						
ARLS	Aral	4.02	262	⇑*i*P	Pn	02 46 26.6	+2.7
	baz=62						
ARLS				⇑*i*S	Sn	02 47 12.9	+1.8
	baz=62						
MAKZ	Makanchi	4.58	20	⇑Pn	Pn	02 46 33.7	+2.3
	1.0nm,0.3s						
MAKZ				⇓Sn	Sn	02 47 27.3	+2.7
	0.6nm,0.3s						
MAKZ				⇑Lg	Lg	02 47 44.8	
	0.7nm,0.3s						
MK31	Makanchi Array	4.65	23	Pn	Pn	02 46 34.2	+1.8
	0.2nm,0.2s,baz=188,slow=12,SNR=50						
MK31				Sn	Sn	02 47 27.8	+1.3
	0.7nm,0.3s,baz=190,slow=19,SNR=6.8						
MK31				⇑Lg	Lg	02 47 45.1	
	0.6nm,0.3s,baz=194,slow=27,SNR=4.3						
MRKS	Merke	4.75	275	*e*P	Pb	02 46 47.8	+2.3
	baz=74						
MRKS				*e*S	Sg	02 47 49.1	-5.5
	baz=74						
MRKS	Merke	4.75	275	*e*P	Pb	02 46 47.8	+2.3
	0.8nm,0.2s						
MRKS				*e*S	Sg	02 47 49.1	-5.5
	5.6nm,0.5s						
MNAS	Manas	5.29	272	⇑Pg	Pb	02 46 57.9	+3.2
	0.8nm,0.4s						
MNAS				⇓Lg	Lg	02 48 06.3	
	3.7nm,0.9s						

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*IDC **04** 02:47:39.9±0.7, 35.°48N×22.°76E, h0^{km}, mb3.7/14, mb1 3.8/22, mb1mx3.7/56, mbtmp3.7/22, ML3.8/6, MS3.3/2, Ms1 3.3/2, ms1mx2.6/48, Error ellipse: s-maj=15.9km s-min=14.7km az=30.0*

*ATH **04** 02:47:45.5, 35.°40N×22.°57E, h43^{km}±4^{km}, ML3.4/15, Error ellipse: s-maj=5.7km s-min=1.3km az=43.0*

*THE **04** 02:47:46.1, 35.°37N×22.°50E, h19^{km}±1^{km}, ML3.3/3, Error ellipse: s-maj=1.1km s-min=0.5km az=246.0*

ISC 04 02:47:43.8±3.2**, 35.°39N**±0.°05×**22.°54E**±0.°04**, h31**^{km}±24^{km}**, n165,** σ**2.^{s}79**/178**, mb3.8**/14**, 1C-1D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANKY	Antikythira Is	0.78	52	P	Pn	02 48 00.1	+1.5
ANKY				S	Sn	02 48 12.6	+3.3
ANKY				AML	AML	02 48 13.1	
	comp=N,14294µm,0.5s						
ANKY				AML	AML	02 48 18.5	
	comp=E,9288µm,0.5s						
ANKY	Antikythira Is	0.78	52	P	Pn	02 48 00.7	+2.1
ANKY				S	Sn	02 48 13.0	+3.7
KERA	Keramoti	0.83	91	P	Pn	02 48 01.5	+2.2
KERA				AML	AML	02 48 18.7	
	comp=E,3232µm,0.4s						
KERA				AML	AML	02 48 20.0	
	comp=N,4290µm,0.4s						
KTHR	Kythira	0.95	23	P	Pn	02 48 03.0	+2.1
KYTH	Kithira	0.97	25	P	Pn	02 48 03.7	+2.5
KYTH				AML	AML	02 48 21.7	
	comp=E,4439µm,0.4s						
KYTH				AML	AML	02 48 21.9	
	comp=N,4546µm,0.4s						
KYTH	Kithira	0.97	25	P	Pn	02 48 04.1	+2.9
KYTH				S	Sn	02 48 18.5	+4.6
IMMV	Iera Moni Meta	1.18	86	P	Pn	02 48 07.0	+2.9
IMMV				AML	AML	02 48 27.6	
	comp=N,3483µm,0.5s						
IMMV				AML	AML	02 48 35.0	
	comp=E,4046µm,0.5s						
IMMV	Iera Moni Meta	1.18	86	P	Pn	02 48 07.3	+3.2
IMMV				S	Sn	02 48 23.2	+4.1
CHAN	Chania	1.24	84	P	Pn	02 48 08.0	+3.2
CHAN				S	Sn	02 48 25.1	+4.7
VAM	Vamos	1.36	89	P	Pn	02 48 09.6	+3.0
VAM				AML	AML	02 48 39.0	
	comp=E,2543µm,0.7s						
VAM				AML	AML	02 48 53.7	
	comp=N,3693µm,0.8s						
VAM	Vamos	1.36	89	P	Pn	02 48 09.8	+3.2
VLI	Veliai	1.36	14	P	Pn	02 48 10.0	+3.3
VLI				AML	AML	02 48 38.6	
	comp=N,2003µm,0.6s						
VLI				AML	AML	02 48 41.2	
	comp=E,1353µm,0.5s						
VLI	Veliai	1.36	14	P	Pn	02 48 10.2	+3.5
VLI				S	Sn	02 48 27.2	+3.5
GVD	Gavdhos	1.39	113	P	Pn	02 48 09.3	+2.3
GVD	Gavdhos	1.39	113	P	Pn	02 48 09.4	+2.5
MES2	Methoni	1.58	335	P	Pn	02 48 13.3	+3.6
PYL	PYLOS	1.63	337	P	Pn	02 48 12.7	+2.4
PYL	PYLOS	1.63	337	P	Pn	02 48 12.7	+2.4
TMBK	Timbaki Herakl	1.85	99	P	Pn	02 48 16.7	+3.4
ITM	Ithomi	1.85	345	P	Pn	02 48 15.9	+2.5
ITM	Ithomi	1.85	345	P	Pn	02 48 16.2	+2.8
IDI	Anoyia	1.93	92	Pn	Pn	02 48 17.5	+3.0
	comp=E,27nm,0.3s,baz=250,slow=9.2,SNR=300						
IDI				Sn	Sn	02 48 36.4	-1.2
	comp=E,19nm,0.3s,baz=333,slow=20,SNR=5.5						
VLX	Vlachokerasia	1.98	356	P	Pn	02 48 18.8	+3.6
VLX				AML	AML	02 49 03.2	
	comp=E,837µm,1.1s						
VLX				AML	AML	02 49 06.8	
	comp=N,1224µm,0.9s						
VLX	Vlachokerasia	1.98	356	P	Pn	02 48 19.3	+4.1
MES3	Kyparissia	1.98	340	P	Pn	02 48 18.4	+3.2
MES3				AML	AML	02 49 03.2	
	comp=N,2058µm,0.8s						
MES3				AML	AML	02 49 06.1	
	comp=E,2371µm,0.6s						
MHLO	Agia Marina, M	1.99	49	P	Pn	02 48 17.5	+2.2
MHLO				AML	AML	02 48 51.2	
	comp=N,5309µm,0.6s						
MHLO				AML	AML	02 48 53.6	
	comp=E,5581µm,0.6s						
MHLO	Agia Marina, M	1.99	49	P	Pn	02 48 17.9	+2.6
MHLA	Plaka, Milos I	2.04	48	P	Pn	02 48 18.1	+2.2
KRND	KRANIDI	2.05	14	P	Pn	02 48 18.7	+2.7
KRND				AML	AML	02 49 00.7	
	comp=N,867µm,0.5s						
KRND				AML	AML	02 49 00.7	
	comp=E,879µm,0.6s						
KRND	KRANIDI	2.05	14	P	Pn	02 48 19.0	+2.9
DID	Didima	2.19	15	P	Pn	02 48 20.5	+2.5
DID				AML	AML	02 49 02.6	
	comp=E,677µm,0.4s						
DID				AML	AML	02 49 05.7	
	comp=N,501µm,0.6s						
DID	Didima	2.19	15	P	Pn	02 48 20.7	+2.7
AMT	Artemida-Makis	2.24	343	P	Pn	02 48 21.9	+3.1
AMT				AML	AML	02 49 11.0	
	comp=N,716µm,1.0s						
AMT				AML	AML	02 49 13.8	
	comp=E,895µm,0.6s						
AMT	Artemida-Makis	2.24	343	P	Pn	02 48 22.2	+3.5
SERI	Serifos	2.37	41	P	Pn	02 48 22.2	+1.8
SERI	Serifos	2.37	41	P	Pn	02 48 23.2	+2.7
LAST	Lasithi	2.42	95	P	Pn	02 48 24.5	+3.3
LAST	Lasithi	2.42	95	P	Pn	02 48 24.6	+3.4
THR6	Thira Island,	2.52	67	P	Pn	02 48 26.1	+3.6
NPS	Neapolis	2.52	92	P	Pn	02 48 25.4	+2.9
NPS	Neapolis	2.52	92	P	Pn	02 48 25.8	+3.3
THR3	Thira Island,	2.54	66	P	Pn	02 48 25.9	+3.1
GUR	Goura	2.55	357	P	Pn	02 48 26.6	+3.6
GUR	Goura	2.55	357	P	Pn	02 48 26.9	+3.9
LOUT	Loutraki	2.62	8	P	Pn	02 48 27.1	+3.3
LOUT	Loutraki	2.62	8	P	Pn	02 48 27.5	+3.6
DRO	Drossia	2.64	346	P	Pn	02 48 27.4	+3.1
DRO	Drossia	2.64	346	P	Pn	02 48 28.1	+3.9
LTK	Loutraki	2.65	7	P	Pn	02 48 27.0	+2.6
LTK				AML	AML	02 49 16.3	
	comp=N,391µm,0.5s						
LTK				AML	AML	02 49 21.3	
	comp=E,353µm,0.8s						
LTK	Loutraki	2.65	7	P	Pn	02 48 27.4	+3.0
VLY	Voula,Athens	2.66	22	P	Pn	02 48 26.2	+1.8
VLY	Voula,Athens	2.66	22	P	Pn	02 48 26.3	+1.9
KLV	Kalavryta, Ach	2.67	353	P	Pn	02 48 28.3	+3.7
KLV				AML	AML	02 49 23.6	
	comp=N,192µm,1.0s						
KLV				AML	AML	02 49 31.8	
	comp=E,286µm,1.0s						
KLV	Kalavryta, Ach	2.67	353	P	Pn	02 48 28.5	+3.9
ATH	Athens Observa	2.75	20	P	Pn	02 48 28.3	+2.7
ATHU	Athens Univers	2.76	21	P	Pn	02 48 28.4	+2.5
ATHU	Athens Univers	2.76	21	P	Pn	02 48 30.0	+4.2
RLS	Riolos of Patr	2.80	342	P	Pn	02 48 30.1	+3.8
RLS	Riolos of Patr	2.80	342	P	Pn	02 48 30.1	+3.8
VILL	Villia	2.84	12	P	Pn	02 48 29.5	+2.5
PTL	Penteli	2.86	22	P	Pn	02 48 29.3	+2.1
PTL	Penteli	2.86	22	P	Pn	02 48 29.6	+2.4
VIL2	Platees	2.88	12	P	Pn	02 48 29.0	+1.5
PROD	Prodromos	2.88	6	P	Pn	02 48 29.8	+2.4
PROD	Prodromos	2.88	6	P	Pn	02 48 30.1	+2.6
LAKA	Lakka	2.88	351	P	Pn	02 48 31.0	+3.5
LAKA				AML	AML	02 49 30.4	
	comp=N,283µm,0.8s						
LAKA				AML	AML	02 49 36.0	
	comp=E,252µm,1.0s						
LAKA	Lakka	2.88	351	P	Pn	02 48 31.0	+3.5
ALIK	Aliki, Aigiali	2.88	353	P	Pn	02 48 31.4	+3.9
DION	Dionisos Attik	2.91	22	P	Pn	02 48 29.9	+2.0
STIA	Sitia Lasithi	2.91	93	P	Pn	02 48 31.7	+3.8
APE	Apeiranthos	2.94	54	P	Pn	02 48 30.8	+2.4
APE	Apeiranthos	2.94	54	P	Pn	02 48 32.3	+3.9
AXS	Araxos	2.95	342	P	Pn	02 48 32.1	+3.6
AXS	Araxos	2.95	342	P	Pn	02 48 32.0	+3.6
TRIZ	Trizonia	2.99	353	P	Pn	02 48 31.9	+2.9
TRIZ	Trizonia	2.99	353	P	Pn	02 48 32.0	+3.0
KALE	Kalithea	3.01	354	P	Pn	02 48 32.2	+2.8
KALE	Kalithea	3.01	354	P	Pn	02 48 32.5	+3.1
DSF	Desfina	3.02	360	P	Pn	02 48 31.5	+2.1
DSF	Desfina	3.02	360	P	Pn	02 48 32.7	+3.3
ZKR	Zakros	3.02	94	P	Pn	02 48 32.6	+3.2
ZKR	Zakros	3.02	94	P	Pn	02 48 32.9	+3.4
SERG	Sergoula	3.04	353	P	Pn	02 48 32.5	+2.8
SERG	Sergoula	3.04	353	P	Pn	02 48 32.8	+3.1
EFP	Efpalio	3.07	351	P	Pn	02 48 33.7	+3.5
EFP	Efpalio	3.07	351	P	Pn	02 48 33.9	+3.8
VLS	Valsamata	3.19	331	P	Pn	02 48 33.7	+2.0
ANX	Ano Chora	3.23	351	P	Pn	02 48 35.6	+3.1
ANX	Ano Chora	3.23	351	P	Pn	02 48 35.8	+3.3
ATAL	Atalanti	3.32	7	P	Pn	02 48 36.7	+3.2
PVO	Paravola	3.32	346	P	Pn	02 48 37.6	+4.0
PVO	Paravola	3.32	346	P	Pn	02 48 37.9	+4.4
MRKA	Markates	3.41	14	P	Pn	02 48 37.9	+3.0
SMIA	Simia	3.52	9	P	Pn	02 48 39.6	+3.2
EVGI	Lefkada island	3.56	336	P	Pn	02 48 43.2	+6.4
EVR	Evrytania	3.57	351	P	Pn	02 48 40.9	+3.9
EVR	Evrytania	3.57	351	P	Pn	02 48 40.9	+3.9
AGG	Agios Georgios	3.63	357	P	Pn	02 48 40.9	+3.1
LKD2	Lefkada island	3.71	337	P	Pn	02 48 42.0	+3.1
KARP	Karpathos	3.78	86	P	Pn	02 48 41.6	+1.8
KARP	Karpathos	3.78	86	P	Pn	02 48 42.9	+3.0
NEO	Neokhori	3.95	8	P	Pn	02 48 44.7	+2.5
XOR	Xorichti	4.00	7	P	Pn	02 48 46.2	+3.3
FYTO	Fytoko, Volos	4.02	4	P	Pn	02 48 46.2	+3.0
CHOS	Chios island	4.11	42	P	Pn	02 48 46.6	+2.1
SMG	Samos	4.16	55	P	Pn	02 48 48.1	+3.0
THL	Klokotos Trika	4.19	354	P	Pn	02 48 48.2	+2.8
IGT	Igoumenitsa	4.49	338	P	Pn	02 48 50.5	+0.9
ARG	Arkhangelos	4.62	78	P	Pn	02 48 53.5	+2.1
KPRO	Kipourio	4.65	349	P	Pn	02 48 55.2	+3.3
LIT	Litokhoron	4.70	360	P	Pn	02 48 55.6	+3.0
KEK	Kerkira	4.83	334	P	Pn	02 48 55.1	+0.8
PENT	Pentalofos	4.92	347	P	Pn	02 48 59.2	+3.5
NEST	Nestorio	5.15	347	P	Pn	02 49 01.9	+3.1
BIA	Bitola	5.70	351	*i* Pn	Pn	02 49 08.9	+2.6
BIA				*e*Sg	Sn	02 50 11.4	+0.7
VAY	Valandovo	5.92	0	*i* Pn	Pn	02 49 10.8	+1.6
VAY				*e*Sg	Sn	02 50 15.9	-0.1
KRUS	Krusevo	6.05	351	*i* Pn	Pn	02 49 12.6	+1.4
KRUS				*e*Sg	Sn	02 50 18.5	-1.0
STIP	Stip	6.30	358	*i* Pn	Pn	02 49 16.4	+2.0
STIP				*e*Sg	Sn	02 50 26.9	+1.6
SKO	Skopje	6.63	353	*i* Pn	Pn	02 49 20.1	+1.1
VAE	Valguarnera	6.87	290	Pn	Pn	02 49 25.1	+2.7
	comp=E,0.3nm,0.3s,baz=166,slow=12,SNR=2.2						
VAE				Sn	Sn	02 50 40.6	+1.0
	comp=E,1.3nm,0.3s,baz=191,slow=10,SNR=3.4						
DRME	Dracevica, Mon	7.27	340	*e*Pn	Pn	02 49 27.6	-0.2
PDG	Podgorica	7.48	341	*e*Pn	Pn	02 49 30.1	-0.5
HCY	Herceg Novi	7.72	337	*e*Pn	Pn	02 49 32.9	-1.0
TREB	Trebinje	8.01	337	*e*Pn	Pn	02 49 37.3	-0.6
BBLS	Lazići	8.80	345	*e*Pn	Pn	02 49 47.9	-1.0
DIVS	Divibare	8.91	348	*e*Pn	Pn	02 49 49.3	-1.1
HAPS	Han Pijesak,BI	9.11	343	*e*Pn	Pn	02 49 50.9	-2.2
BRTR	Keskin Array B	9.82	61	Pn	Pn	02 49 60.0	-2.9
	comp=E,0.0nm,0.3s,baz=316,slow=10,SNR=3.7						
FRGS	Fruska Gora	9.97	349	*e*Pn	Pn	02 50 03.6	-1.3
BLY	Banja Luka	10.21	338	⇑*i*P	Pn	02 50 08.1	+0.1
BLY	Banja Luka	10.21	338	*e*Pn	Pn	02 50 06.3	-1.7
BZS	Buzias	10.24	356	⇓*i*P	Pn	02 50 08.4	-0.1
MLR	Muntele Rosu	10.42	13	LR	LR	02 54 38.1	
	comp=E,101nm,20.1s,baz=346,slow=41						
KEST	Kesra	10.75	276	Sn	Sn	02 52 13.3	-1.6
	comp=E,0.1nm,0.3s,baz=354,slow=18,SNR=2.7						
MMAI	Mount Meron Ar	10.91	99	Pn	Pn	02 50 15.2	-2.6
	comp=E,0.9nm,0.3s,baz=289,slow=11,SNR=7.3						
MMAI				Sn	Sn	02 52 11.7	-7.2
	comp=E,0.8nm,0.3s,baz=287,slow=34,SNR=4.2						
MORH	Mrgy, Hungar	11.21	346	*e*Pn	Pn	02 50 18.7	-3.0
CRES	Cresnjev	11.72	335	*e*Pn	Pn	02 50 27.4	-1.4
EIL	Elat	11.92	115	Pn	Pn	02 50 29.8	-1.8
	comp=E,0.7nm,0.3s,baz=291,slow=17,SNR=8.0						
EIL				Sn	Sn	02 52 33.7	-10
	comp=E,0.3nm,0.3s,baz=8.1,slow=14,SNR=3.3						
CEY	Cerknica	12.03	332	*e*Pn	Pn	02 50 32.1	-0.9
ASF	Jabal al Asfar	12.37	101	Pn	Pn	02 50 35.8	-2.0
	comp=E,0.3nm,0.3s,baz=254,slow=6.3,SNR=4.3						
SOKA	Soboth	12.61	336	*i* Pn	Pn	02 50 39.9	-1.1
	comp=E,1.0nm,0.2s						
OBKA	Obir	12.63	334	*i* Pn	Pn	02 50 41.7	+0.4
	comp=E,0.7nm,0.3s						
ARSA	Arzberg	12.96	338	*e*Pn	Pn	02 50 45.0	-0.7
	comp=E,2.0nm,0.6s						
MOA	Molln	13.89	336	*e*Pn	Pn	02 50 59.1	+0.7
	comp=E,0.9nm,0.4s						
DAVOX	Davos/Dischmat	14.83	324	Pn	Pn	02 51 13.4	+2.1
	comp=E,0.1nm,0.3s,baz=144,slow=19,SNR=2.9						
DAVOX				Sn	Sn	02 53 47.8	-6.8
	comp=E,0.1nm,0.3s,baz=279,slow=18,SNR=2.9						
GERES	GERESS Array B	14.94	337	Pn	Pn	02 51 12.1	-0.7
	comp=E,0.2nm,0.3s,baz=138,slow=12,SNR=2.1						
GERES				LR	LR	02 58 48.1	
	comp=E,166nm,19.6s,baz=295,slow=45						
AKASG	Malin Array Be	16.05	16	Pn	Pn	02 51 23.9	-3.2
	comp=E,0.5nm,0.3s,baz=206,slow=12,SNR=4.4						
KBZ	Khabaz	17.74	56	P	P	02 51 50.5	+1.7
	comp=E,0.1nm,0.3s,baz=259,slow=16,SNR=7.2						
ESDC	Sonseca Array	21.41	289	P	P	02 52 31.5	+2.4
	comp=E,0.7nm,0.7s,baz=81,slow=9.5,SNR=3.9						
HFS	Hagfors	25.41	350	P	P	02 53 08.1	-0.2
	comp=E,1.3nm,0.3s,baz=158,slow=10,SNR=14						
FINES	FINESS Array B	26.17	4	P	P	02 53 14.3	-0.7
	comp=E,0.5nm,0.3s,baz=165,slow=9.7,SNR=3.5						
NB2	NORSAR Subarra	26.67	348	P	P	02 53 19.5	-0.2
	comp=Z,0.2nm,0.4s,baz=160,slow=10						
NOA	NORSAR Array B	26.67	348	P	P	02 53 19.5	-0.2
	comp=Z,0.3nm,0.4s,baz=151,slow=9.1,SNR=5.7						
GEYT	Alibeck	28.55	74	P	P	02 53 36.6	-0.1
	comp=Z,1.7nm,0.4s,baz=265,slow=8.8,SNR=4.3						
TORD	Torodi Ar. Bea	29.06	226	P	P	02 53 43.8	+2.5
	comp=Z,0.2nm,0.6s,baz=26,slow=8.4,SNR=3.3						
AKTO	Aktyubinsk	29.69	49	P	P	02 53 45.1	-1.6
	comp=Z,0.8nm,0.5s,baz=278,slow=8.1,SNR=4.6						
ARCES	ARCESS Array B	34.24	2	P	P	02 54 26.1	-0.3
	comp=Z,0.8nm,0.6s,baz=194,slow=10,SNR=12						
MKAR	Makanchi Array	45.44	56	P	P	02 55 59.3	-0.4
	comp=Z,1.1nm,0.5s,baz=272,slow=8.0,SNR=17						
MKAR				PcP	PcP	02 57 39.3	+0.9
	comp=Z,0.3nm,0.5s,baz=280,slow=4.2,SNR=3.9						
ZALV	Zalesovo Beam	46.39	46	P	P	02 56 06.4	-0.6
	comp=Z,0.8nm,0.3s,baz=269,slow=7.9,SNR=6.4						
SONM	Songino Array	60.99	50	P	P	02 57 54.0	-0.1
	comp=Z,0.6nm,0.5s,baz=288,slow=7.6,SNR=7.0						
BOSA	Boshof	63.71	177	P	P	02 58 13.8	+1.5
	comp=Z,1.5nm,0.9s,baz=324,slow=8.7,SNR=3.0						
YKA	Yellowknife Ar	76.55	341	P	P	02 59 31.6	+1.1
	comp=Z,0.2nm,0.5s,baz=34,slow=5.2,SNR=8.0						
ILAR	Eielson Array	79.82	355	P	P	02 59 49.9	+1.2
	comp=Z,0.2nm,0.4s,baz=348,slow=2.6,SNR=5.6						
WRA	Warramunga Arr	118.75	95	PKP	PKiKP	03 06 29.4	+0.2
	comp=Z,0.1nm,0.6s,baz=324,slow=1.5,SNR=2.7						
ASAR	Alice Springs	120.20	99	PKP	PKPdf	03 06 30.9	-1.0
	comp=Z,0.4nm,0.8s,baz=324,slow=2.7,SNR=3.4						

MEX 04 02:50:01.1±0.5**, 14.°13N**×**92.°35W, h88**^{km}±21^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

THIG		**0.78**	**6**	*i* P	Pn	02 50 17.0	-1.2
THIG				*e*S	Sn	02 50 29.3	-1.7
PCIG		**1.77**	**332**	*e*P	Pn	02 50 29.0	-1.3
PCIG				*i* S	Sn	02 50 52.8	+0.3
CCIG	**Comitan**	**2.15**	**6**	*e*P	Pn	02 50 39.7	+4.3
CCIG				*e*S	Sn	02 51 07.8	+6.2

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*ISCJB **04** 02:57:06.9±0.6, 39°.76N±0°.03×141°.85E±0°.08, h65^{km}±3^{km}, mb3.4/8, Error ellipse: s-maj=9.8km s-min=5.4km az=8.5*

*JMA **04** 02:57:08.0, 39°.76N×141°.84E, h58^{km}±1^{km}, M3.4*

JMA Felt I J1.

*IDC **04** 02:57:15.1±3.7, 39°.61N×141°.44E, h121^{km}±37^{km}, mb3.2/8, mb1 3.3/9, mb1mx3.1/43, mbtmp3.5/9, Error ellipse: s-maj=27.5km s-min=23.8km az=9.0*

ISC 04 02:57:08.2±0.8**, 39°.77N**±0°.04×**141°.83E**±0°.06**, h56**^{km}±6^{km}**, n27,** σ1^s.**08**/33**, mb3.4**/8**, 3C-6D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.17**	**9**	⇑P	**Pn**	**02 57 17.3**	**+0.2**
JTH				S	**Sn**	**02 57 23.8**	**+0.3**
MIYJ	**Miyakonagasawa**	**0.19**	**182**	⇑P	**Pn**	**02 57 17.3**	**+0.1**
MIYJ				S	**Sn**	**02 57 23.7**	**+0.1**
JKZ	**Kuzumaki**	**0.44**	**300**	⇓P	**Pn**	**02 57 19.5**	**+0.2**
JKZ				S	**Sn**	**02 57 27.5**	**+0.2**
JKEN	**Kujiedanarisaw**	**0.45**	**348**	P	**Pn**	**02 57 19.4**	**+0.1**
JKEN				S	**Sn**	**02 57 27.7**	**+0.4**
JOM	**Ohasama**	**0.51**	**235**	⇓P	**Pn**	**02 57 19.9**	**-0.1**
JOM				S	**Sn**	**02 57 28.5**	**+0.1**
JANG	**Nango**	**0.65**	**339**	⇓P	**Pn**	**02 57 21.3**	**-0.4**
JANG				S	**Sn**	**02 57 31.3**	**-0.1**
JMK	**Ichinoseki**	**0.94**	**210**	P	**Pn**	**02 57 25.0**	**-0.3**
JMK				S	**Sn**	**02 57 37.5**	**-0.4**
JRG	**Rokugo**	**0.99**	**249**	P	**Pn**	**02 57 26.4**	**+0.4**
JRG				*e*S	**Sn**	**02 57 39.7**	**+0.5**
JAH	**Hinai**	**1.01**	**295**	⇓P	**Pn**	**02 57 26.4**	**+0.2**
JAH				*e*S	**Sn**	**02 57 40.1**	**+0.6**
JTM	**Tenmabayashi**	**1.17**	**331**	⇓P	**Pn**	**02 57 28.2**	**-0.2**
JTM				S	**Sn**	**02 57 43.6**	**+0.2**
JIO	**Ouri**	**1.36**	**196**	⇑P	**Pn**	**02 57 30.6**	**-0.4**
JIO				S	**Sn**	**02 57 47.3**	**-0.7**
JYK	**Kaneyama**	**1.42**	**234**	⇓P	**Pn**	**02 57 31.5**	**-0.2**
JYK				S	**Sn**	**02 57 49.5**	**+0.1**
MJAR	**Matsushiro Arr**	**4.30**	**223**	P	**Pn**	**02 58 14.7**	**+3.6**
	0.1nm,0.3s,baz=32,slow=12,SNR=6.8						
SONM	**Songino Array**	**26.63**	**299**	P	**P**	**03 02 40.3**	**-1.2**
	0.4nm,0.8s,baz=93,slow=7.2,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	**29.37**	**126**	T	T	03 33 40.2	
	baz=318,slow=75,SNR=43						
H11N1	**WAKE ISLAND Hy**	**29.38**	**126**	T	T	03 33 45.5	
	baz=318,slow=75,SNR=37						
H11N3	**WAKE ISLAND Hy**	**29.39**	**126**	T	T	03 33 45.3	
	baz=318,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hy**	**30.17**	**127**	T	T	03 34 46.9	
	baz=319,slow=76,SNR=7.5						
H11S3	**WAKE ISLAND Hy**	**30.17**	**127**	T	T	03 34 44.0	
	baz=319,slow=76,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**30.18**	**127**	T	T	03 34 46.4	
	baz=319,slow=76,SNR=6.9						
ZALV	**Zalesovo Beam**	**40.36**	**310**	P	**P**	**03 04 39.5**	**-0.8**
	1.4nm,0.6s,baz=94,slow=7.0,SNR=7.4						
MKAR	**Makanchi Array**	**42.99**	**300**	P	**P**	**03 05 01.1**	**-0.9**
	0.6nm,0.7s,baz=86,slow=9.8,SNR=10						
KURBB	**Kurchatov Arra**	**44.62**	**306**	P	**P**	**03 05 13.9**	**-0.9**
	1.7nm,0.7s,baz=82,slow=8.6,SNR=9.7						
ILAR	**Eielson Array**	**47.03**	**34**	P	**P**	**03 05 34.2**	**+0.5**
	0.2nm,0.6s,baz=256,slow=5.8,SNR=4.4						
WRA	**Warramunga Arr**	**59.81**	**188**	P	**P**	**03 07 06.0**	**-1.8**
	0.2nm,0.6s,baz=6.8,slow=6.9,SNR=3.1						
YKA	**Yellowknife Ar**	**61.29**	**31**	P	**P**	**03 07 20.6**	**+3.2**
	0.1nm,0.4s,baz=280,slow=7.5,SNR=3.1						
FINES	**FINESS Array B**	**66.56**	**332**	P	**P**	**03 07 51.1**	**-0.8**
	1.3nm,1.0s,baz=51,slow=11,SNR=2.7						

JMA 04 03:09:40.6±0.1**, 38°.09N**×**144°.48E, h9**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.38**	**276**	P	Pn	03 10 20.6	+0.8
JIKH				S	Sn	03 10 50.3	+1.1
OFUJ	**Ofunato**	**2.42**	**295**	P	Pn	03 10 21.4	+1.1
OFUJ				S	Sn	03 10 51.2	+1.3
JKMT	**Kesennumamotoy**	**2.47**	**288**	*e*S	Sn	03 10 52.5	+1.3
JIO	**Ouri**	**2.49**	**279**	S	Sn	03 10 53.2	+1.4
JMK	**Ichinoseki**	**2.70**	**290**	*e*S	Sn	03 10 58.5	+1.6
JOM	**Ohasama**	**2.85**	**300**	P	Pn	03 10 27.7	+1.5
JOM				S	Sn	03 11 02.3	+1.7
JFT	**Otama**	**3.33**	**261**	P	Pn	03 10 34.8	+1.9
JFT				S	Sn	03 11 14.2	+1.6
JYK	**Kaneyama**	**3.34**	**286**	P	Pn	03 10 34.9	+2.0
JYK				*e*S	Sn	03 11 14.7	+2.0
JOT	**Ohata**	**4.22**	**322**	P	Pn	03 10 46.8	+1.7
JRY	**Ryogami san**	**4.92**	**247**	P	Pn	03 10 55.2	+0.5
JRY				S	Sn	03 11 51.5	-0.3

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*IDC **04** 03:29:39.1±1.7, 34°.26S×73°.30W, h0^{km}, mb3.6/2, mb1 4.0/2, mb1mx3.6/24, mbtmp3.6/2, Error ellipse: s-maj=74.3km s-min=47.1km az=30.0*

*GUC **04** 03:29:44.2±0.5, 33°.76S×73°.11W, h20^{km}±4^{km}, ML3.7*

*SJA **04** 03:29:49.0±0.7, 33°.73S×72°.86W, h58^{km}±11^{km}, ML3.0, MW3.6*

ISC 04 03:29:39.1±3.4**, 34°.01S**±0°.06×**73°.33W**±0°.07**, h1**^{km}±21^{km}**, n19,** σ2^s.**21**/29**, 4C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHPI	**Pichilemu**	**1.16**	**109**	⇑*i*P	**Pn**	**03 30 04.0**	**+1.5**
CHPI				*i* S	**Sb**	**03 30 18.6**	**+1.1**
ROC1	**El Roble**	**2.19**	**63**	*i* P	**Pb**	**03 30 17.9**	**-1.8**
ROC1				*i* S	**Sn**	**03 30 40.3**	**-4.5**
ROCH	**El Roble**	**2.19**	**63**	*e*P	**Pn**	**03 30 17.6**	**+0.6**
ROCH				*i* S	**Sn**	**03 30 42.4**	**-2.5**
PEL	**Peldehue**	**2.37**	**69**	*i* P	**Pb**	**03 30 21.2**	**-1.5**
PEL	**Peldehue**	**2.37**	**69**	⇑*i*P	**Pb**	**03 30 21.1**	**-1.5**
PEL				*i* S	**Sn**	**03 30 47.6**	**-1.4**
PEL				IAML		03 30 52.7	
	comp=E,620nm,0.4s						
CLCH	**Cerro Calan**	**2.41**	**76**	⇑*i*P	**Pb**	**03 30 21.4**	**-1.9**
CLCH				*i* S	**Sn**	**03 30 49.4**	**-0.5**
CLCH				IAML		03 31 02.7	
	comp=N,473nm,0.5s						
LMEL	**Las Melosas**	**2.60**	**87**	⇑*i*P	**Pn**	**03 30 24.3**	**+1.8**
LMEL				*i* S	**Sn**	**03 30 55.2**	**+0.3**
LMEL				IAML		03 30 58.1	
	comp=N,428nm,0.2s						
FCH	**Farellones**	**2.62**	**76**	⇓*i*P	**Pn**	**03 30 24.6**	**+1.6**
FCH				*e*S	**Sn**	**03 30 56.2**	**+0.6**
FCH				IAML		03 30 57.6	
	comp=N,511nm,0.3s						
CCHI	**Chillan**	**2.78**	**159**	⇓*i*P	**Pn**	**03 30 25.3**	**+0.4**
CCHI				*i* S	**Sn**	**03 30 55.5**	**-3.6**
CCHI				IAML		03 30 59.1	
	comp=N,662nm,0.5s						
CMCH	**Combarbala**	**3.44**	**35**	⇓*i*P	**Pn**	**03 30 34.5**	**+0.5**
CMCH				*i* S	**Sn**	**03 31 12.8**	**-2.8**
AUSP	**Uspallata**	**3.75**	**63**	*i* P	**Pn**	**03 30 41.5**	**+3.0**
ARCO	**CERRO ARCO**	**3.85**	**74**	*i* P	**Pn**	**03 30 42.1**	**+2.4**
ARCO				IAML		03 31 12.3	
	comp=Z,25nm,0.4s						
ASAL	**Salagasta**	**4.02**	**71**	*i* P	**Pn**	**03 30 44.5**	**+2.5**
RTLS	**Leoncito**	**4.04**	**58**	*i* P	**Pn**	**03 30 45.2**	**+2.8**
RTLS				*i* S	**Sn**	**03 31 26.4**	**-4.3**
RTLS				IAML		03 31 37.2	
	comp=Z,34nm,0.4s						
TXAR	**Lajitas Array**	**69.23**	**332**	P	**P**	**03 40 49.4**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=155,slow=8.2,SNR=10						
TORD	**Torodi Ar. Bea**	**85.22**	**71**	P	**P**	**03 42 18.0**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=248,slow=5.2,SNR=7.8						
WRA	**Warramunga Arr**	**120.22**	**210**	PKP	**PKPdf**	**03 48 31.9**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=162,slow=2.0,SNR=5.1						
ZALV	**Zalesovo Beam**	**154.80**	**31**	PKPbc	**PKiKP**	**03 49 42.2**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=298,slow=3.2,SNR=3.7						
MKAR	**Makanchi Array**	**157.57**	**48**	PKPab	**PKPab**	**03 50 09.9**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=290,slow=3.1,SNR=4.2						

WEL 04 03:44:28.2±0.5**, 44°S**±2°×**17°3E**±°**, h5**^{km}±2^{km}**, ML4.1**/7**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLZ	**Canterbury Las**	**0.07**	**290**	P	Pg	03 44 30.4	+0.5
CRLZ				S	Sg	03 44 31.7	+0.6
MQZ	**McQueen's Vall**	**0.12**	**203**	P	Pg	03 44 31.2	+0.5
MQZ				S	Sg	03 44 33.3	+1.0
OKCZ	**Okains Bay**	**0.28**	**117**	P	Pg	03 44 34.2	+0.6
OKCZ				S	Sg	03 44 38.9	+1.5
AKCZ	**Akaroa Harbour**	**0.31**	**153**	P	Pg	03 44 34.8	+0.6
EYCZ	**Eyrewell**	**0.32**	**304**	P	Pg	03 44 35.0	+0.6
AMCZ	**Amberley**	**0.43**	**354**	P	Pg	03 44 37.1	+0.6
RACZ	**Rakaia**	**0.44**	**253**	P	Pg	03 44 37.5	+0.8
OXZ	**Oxford**	**0.56**	**299**	P	Pg	03 44 39.3	+0.2
OXZ				S	Sg	03 44 47.1	+0.7
LTZ	**Lake Taylor**	**0.88**	**338**	P	Pg	03 44 45.0	-0.1
RPZ	**Rata Peaks**	**1.21**	**264**	P	Pg	03 44 50.2	-1.3
INZ	**Inchbonnie**	**1.28**	**313**	P	Pn	03 44 51.7	-1.0
KHZ	**Kahutara**	**1.33**	**27**	P	Pn	03 44 50.7	-2.7
WVZ	**Waitaha Valley**	**1.54**	**289**	P	Pn	03 44 55.2	-1.0
THZ	**Tophouse**	**1.84**	**4**	P	Pn	03 44 58.4	-2.2
DSZ	**Denniston Nort**	**1.97**	**340**	P	Pn	03 45 02.7	+0.4
LBZ	**Lake Benmore**	**1.99**	**246**	P	Pn	03 45 01.7	-0.8
BSWZ	**Blackbirch Sta**	**2.07**	**25**	P	Pn	03 45 01.6	-2.0
ODZ	**Otahua Downs**	**2.07**	**225**	P	Pn	03 45 01.8	-1.8
FOZ	**Fox Glacier**	**2.11**	**271**	P	Pn	03 45 04.3	+0.1
TUWZ	**Tuamarina**	**2.35**	**23**	P	Pn	03 45 05.1	-2.3
NNZ	**Nelson**	**2.43**	**12**	P	Pn	03 45 07.1	-1.5
BHW	**Baring Head**	**2.71**	**37**	P	Pn	03 45 09.6	-2.8
HHSZ	**Highcliff Hill**	**2.74**	**213**	P	Pn	03 45 12.4	-0.4
HHSZ				P	Pn	03 45 12.4	-0.4
PLWZ	**Palliser**	**2.76**	**44**	P	Pn	03 45 09.9	-3.3
QRZ	**Quartz Range**	**2.78**	**357**	P	Pn	03 45 12.2	-1.1
MSWZ	**Moikau Station**	**2.88**	**41**	P	Pn	03 45 11.5	-3.2
JCZ	**Jackson Bay**	**2.88**	**259**	P	Pn	03 45 14.5	-0.4
WKZ	**Wanaka**	**2.93**	**244**	P	Pn	03 45 14.7	-0.7
DUWZ	**D'Urville Isla**	**2.94**	**18**	P	Pn	03 45 14.0	-1.6
EAZ	**Earnscleugh**	**2.94**	**235**	P	Pn	03 45 14.2	-1.4
TRWZ	**Traveller**	**3.11**	**46**	P	Pn	03 45 14.7	-3.3
MTW	**Mount Morrison**	**3.19**	**41**	P	Pn	03 45 15.8	-3.3
TUZ	**Tuapeka**	**3.22**	**222**	P	Pn	03 45 18.7	-0.7
TUZ				P	Pb	03 45 18.7	-7.1
OGWZ	**Otaki Gorge**	**3.33**	**34**	P	Pn	03 45 18.0	-2.9
HOWZ	**Holdsworth Sta**	**3.41**	**39**	P	Pn	03 45 19.6	-2.4
TMWZ	**Te Maipa**	**3.43**	**44**	P	Pn	03 45 19.2	-3.1
MRZ	**Mangatainoka R**	**3.63**	**37**	P	Pn	03 45 21.8	-3.2
SYZ	**Scrubby Hill**	**3.88**	**220**	P	Pn	03 45 28.4	0.0
BFZ	**Birch Farm**	**3.92**	**43**	P	Pn	03 45 25.2	-3.9

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*NEIC **04** 03:49:26.9±3.0, 5°.02S×133°.90E, h8^{km}±19^{km}, mb4.6/11, Error ellipse: s-maj=9.2km s-min=6.7km az=60.0*

*IDC **04** 03:49:26.4±0.6, 4°.90S×133°.79E, h0^{km}, mb4.3/10, mb1 4.4/14, mb1mx4.3/27, mbtmp4.4/14, ML4.3/5, MS3.4/4, Ms1 3.4/4, ms1mx2.9/35, Error ellipse: s-maj=25.4km s-min=11.1km az=60.0*

*ISCJB **04** 03:49:27.3±0.3, 5°.06S±0°.03×133°.89E±0°.03, h28^{km}, mb4.4/25, MS3.7/3, Error ellipse: s-maj=4.7km s-min=4.1km az=8.5*

*DJA **04** 03:49:29.6±1.4, 5°S±3°×13°4E±°, h23^{km}±14^{km}, M4.8/12, mB5.0/2, mb4.7/12, MLv4.8/6, Mw(mB)4.3/2*

ISC 04 03:49:29.6±0.4**, 5°.01S**±0°.04×**133°.88E**±0°.05**, h28**^{km}**, n77,** σ1^s.**93**/84**, mb4.7**/25**, MS3.4**/3**, 1C, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.64**	**322**	*e*Pn	**Pn**	**03 50 09.3**	**-1.0**
FAKI				*e*Sn	**Sn**	**03 50 39.4**	**-2.1**
FAKI	**Fak Fak**	**2.64**	**322**	P	**Pn**	**03 50 09.1**	**-1.3**
RKPI	**Ransiki, Papua**	**3.49**	**5**	P	**Pn**	**03 50 20.1**	**-1.9**
SAUI	**Saumlaki**	**3.91**	**221**	*e*Pn	**Pn**	**03 50 30.8**	**+2.9**
SAUI				*e*Sn	**Sn**	**03 51 12.0**	**-1.0**
SAUI	**Saumlaki**	**3.91**	**221**	P	**Pn**	**03 50 31.1**	**+3.2**
BNDI	**Bandanaira**	**3.99**	**277**	P	**Pn**	**03 50 30.8**	**+1.8**
SIJI	**Sorong**	**4.87**	**327**	Pn	**Pn**	**03 50 39.3**	**-1.8**
	3.6nm,0.3s,baz=297,slow=20,SNR=14						
SIJI				Sn	**Sn**	**03 51 30.8**	**-5.8**
	5.9nm,0.3s,baz=253,slow=19,SNR=4.6						
GENI	**Genyem**	**6.71**	**69**	P	**Pn**	**03 51 05.4**	**-1.0**
	79nm,0.6s						
JAY	**Jayapura**	**7.24**	**70**	Pn	**Pn**	**03 51 14.5**	**+0.7**
	2.1nm,0.3s,baz=214,slow=7.3,SNR=3.6						
JAY				Sn	**Sn**	**03 52 34.6**	**-0.6**
	1.2nm,0.3s,baz=171,slow=11,SNR=2.1						
SANI	**Sanana**	**8.41**	**290**	P	**Pn**	**03 51 27.1**	**-2.6**
	27nm,0.7s						
SOEI	**Soe**	**10.64**	**243**	*e*Pn	**Pn**	**03 52 01.3**	**+1.0**
SOEI				*e*Sn	**Sn**	**03 53 57.7**	**-1.0**
SOEI	**Soe**	**10.64**	**243**	P	**Pn**	**03 52 01.7**	**+1.3**
	76nm,0.7s						
BATI	**Baumata**	**11.37**	**242**	P	**Pn**	**03 52 13.1**	**+2.8**
BATI	**Baumata**	**11.37**	**242**	Pn	**Pn**	**03 52 10.0**	**-0.3**
	5.9nm,0.3s,baz=116,slow=7.4,SNR=4.6						
BATI				Sn	**Sn**	**03 54 14.4**	**-2.1**
	9.5nm,0.3s,baz=119,slow=24,SNR=6.0						
LUWI	**Luwuk**	**11.77**	**289**	*e*Pn	**Pn**	**03 52 16.9**	**+1.0**
LUWI				*e*Sn	**Sn**	**03 54 26.9**	**+0.6**
LUWI	**Luwuk**	**11.77**	**289**	P	**Pn**	**03 52 15.7**	**-0.1**
MMRI	**Maumere**	**12.11**	**252**	*e*Pn	**Pn**	**03 52 19.2**	**-1.3**
EDFI	**Ende, Flores**	**12.66**	**252**	P	**Pn**	**03 52 31.1**	**+3.0**
COEN	**Coen**	**12.77**	**135**	*e*Pn	**Pn**	**03 52 27.4**	**-2.1**
APSI	**Ampana**	**12.87**	**288**	P	**Pn**	**03 52 32.9**	**+2.0**
WSI	**Waingapu**	**14.24**	**250**	P	Pn	03 52 41.0	-8.6
WRAB	**Tennant Creek**	**14.84**	**178**	*e*Pn	**Pn**	**03 52 56.0**	**-1.7**
WRAB				*e*S	Sn	03 55 31.0	-10
WRA	**Warramunga Arr**	**14.85**	**178**	Pn	**Pn**	**03 52 54.9**	**-3.0**
	0.8nm,0.3s,baz=353,slow=14,SNR=29						
WRA				Sn	Sn	03 55 32.9	-8.7
	1.1nm,0.3s,baz=352,slow=24,SNR=4.8						
WB2	**Warramunga Arr**	**14.85**	**178**	*e*Pn	**Pn**	**03 52 55.2**	**-2.6**
FITZ	**Fitzroy Crossi**	**15.30**	**211**	*e*Pn	**Pn**	**03 53 01.2**	**-2.6**
	7.7nm,0.5s						
FITZ				Sn	Sn	03 55 43.1	-10
FITZ	**Fitzroy Crossi**	**15.30**	**211**	Pn	**Pn**	**03 53 00.8**	**-3.0**
	1.9nm,0.3s,baz=34,slow=12,SNR=70						
FITZ				Sn	Sn	03 55 43.1	-10
	2.2nm,0.3s,baz=199,slow=17,SNR=7.9						
FITZ				LR	LR	04 00 15.8	
	comp=Z,142nm,18.1s,baz=50,slow=42						
PLAI	**Plampang**	**16.43**	**256**	P	P	03 53 32.4	+11
AS01	**Alice Springs**	**18.55**	**180**	*e*P	**P**	**03 53 44.7**	**+0.4**
AS31	**Alice Springs**	**18.55**	**180**	*e*P	**P**	**03 53 43.6**	**-0.7**
	4.9nm,0.6s						
ASAR	**Alice Springs**	**18.55**	**180**	P	**Pn**	**03 53 46.2**	**+1.6**
	1.8nm,0.3s,baz=4.2,slow=9.3,SNR=73						
ASAR				S	**Sn**	**03 57 03.6**	**-7.8**
	0.4nm,0.3s,baz=358,slow=26,SNR=4.8						
ASAR				LR	LR	04 01 38.4	
	comp=Z,121nm,18.9s,baz=360,slow=39						
CTA	**Charters Tower**	**19.23**	**142**	P	**Pn**	**03 53 54.0**	**+1.2**
	1.0nm,0.3s,baz=317,slow=11,SNR=10						
CTA				S	**S**	**03 57 34.1**	**+6.0**
	0.2nm,0.3s,baz=41,slow=9.3,SNR=2.2						
CTAO	**Charters Tower**	**19.23**	**142**	*e*P	**P**	**03 53 51.5**	**-0.3**
	6.6nm,0.8s						
MBWA	**Marble Bar**	**21.13**	**219**	*e*P	**P**	**03 54 11.9**	**-0.6**
	7.8nm,0.8s						
MBWA				*e*S	**S**	**03 58 05.7**	**-0.6**
KPJI	**Karang Pucung**	**24.91**	**263**	P	**P**	**03 54 52.4**	**+1.8**
STKA	**Stephens Creek**	**27.69**	**166**	*e*P	**P**	**03 55 13.9**	**-1.6**
	0.8nm,0.9s						
STKA	**Stephens Creek**	**27.69**	**166**	P	**P**	**03 55 17.4**	**+1.9**
	2.1nm,0.7s,baz=354,slow=9.2,SNR=5.0						
BBOO	**Buckleboo**	**27.74**	**176**	*e*P	**P**	**03 55 17.1**	**+1.2**
	6.5nm,0.9s						
JCJ	**Chichijima**	**32.91**	**14**	LR	LR	04 07 37.6	
	comp=Z,39nm,19.1s,baz=87,slow=33						
PSI	**Prapat**	**35.77**	**282**	LR	LR	04 12 45.3	
	comp=Z,66nm,19.6s,baz=271,slow=39						
NJ2	**Nanjing**	**39.53**	**340**	*e*P	**P**	**03 56 56.8**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**41.59**	**305**	P	**P**	**03 57 15.6**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=134,slow=6.7,SNR=4.7						
KMI	**Kunming**	**42.58**	**316**	P	**P**	**03 57 24.8**	**+1.1**
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,4.7s						
KSAR	**Wonju Array Be**	**42.60**	**353**	P	**P**	**03 57 23.8**	**+0.4**
KSRS	**Korea Array**	**42.61**	**353**	P	**P**	**03 57 23.8**	**+0.4**
	comp=Z,3.7nm,0.8s,baz=171,slow=9.9,SNR=9.8						
XAN	**Xi'an**	**45.44**	**331**	P	**P**	**03 57 45.8**	**-0.5**
XAN				sP	pwP	03 57 56.0	-1.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,47nm,3.7s						
USRK	**Ussuriysk Ar.**	**49.01**	**358**	P	**P**	**03 58 14.3**	**+0.5**
	comp=Z,2.1nm,0.6s,baz=182,slow=6.6,SNR=6.3						
CN2	**Changchun**	**49.18**	**352**	*e*P	**P**	**03 58 15.6**	**+0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ	**Mudanjiang**	**49.55**	**356**	*e*P	**P**	**03 58 18.4**	**+0.4**
	comp=Z,9.3nm,0.8s						
LZH	**Lanzhou**	**49.63**	**328**	*e*P	**P**	**03 58 19.4**	**+0.4**
LZH				pP	pP	03 58 26.0	-0.8
LZH				sP	pwP	03 58 28.9	-0.9
LZH				*e*PP	**PP**	**04 00 14.5**	**+0.8**
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,64nm,6.5s						
LZH				LR	LR		
	comp=N,310nm,14.5s						
LZH				LR	LR		
	comp=E,310nm,14.7s						
LZH				LR	LR		
	comp=Z,380nm,17.6s						
HHC	**Hu-ho-hao-te**	**50.01**	**338**	*e*P	**P**	**03 58 22.5**	**+0.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GTA	**Gaotai**	**54.23**	**328**	*e*P	**P**	**03 58 53.9**	**+0.7**
GTA				pP	sP	03 59 01.1	-2.6
GTA				sP	pwP	03 59 04.4	+0.4
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SONM	**Songino Array**	**57.90**	**338**	P	**P**	**03 59 19.6**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=152,slow=7.3,SNR=5.2						
PETK	**Petropavlovsk-**	**61.30**	**16**	P	**P**	**03 59 43.1**	**+0.7**
	comp=Z,6.2nm,0.9s,baz=204,slow=8.7,SNR=3.5						
WMQ	**Urumqi**	**63.93**	**324**	*e*P	**P**	**04 00 01.5**	**+1.2**
MK01	**Makanchi Array**	**68.74**	**325**	*e*P	**P**	**04 00 31.6**	**+0.6**
MK31	**Makanchi Array**	**68.76**	**325**	*e*P	**P**	**04 00 31.7**	**+0.6**
MKAR	**Makanchi Array**	**68.76**	**325**	P	**P**	**04 00 31.7**	**+0.5**
	comp=Z,6.2nm,0.7s,baz=119,slow=7.9,SNR=87						
MAKZ	**Makanchi**	**68.95**	**325**	*e*P	**P**	**04 00 32.9**	**+0.6**
	comp=Z,7.4nm,0.8s						
KSH	**Kashi**	**69.24**	**316**	P	**P**	**04 00 37.5**	**+3.1**
KSH				pP	pwP	04 00 45.5	-0.7
KSH				PP	**PP**	**04 03 10.8**	**+3.1**
KSH				pmax	pmax		
	comp=Z,540nm,5.2s						
ZALV	**Zalesovo Beam**	**71.58**	**332**	P	**P**	**04 00 47.8**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=107,slow=4.6,SNR=11						
KURK	**Kurchatov**	**72.91**	**327**	*e*P	**P**	**04 00 56.2**	**+0.1**
TIXI	**Tiksi**	**76.58**	**358**	*e*P	**P**	**04 01 15.5**	**-1.5**
	comp=Z,5.7nm,0.8s						
BRVK	**Borovoye**	**78.57**	**327**	*e*P	**P**	**04 01 28.8**	**+0.3**
	comp=Z,5.5nm,0.8s						
NRIK	**Noril'sk**	**80.61**	**345**	P	**P**	**04 01 40.3**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=102,slow=4.5,SNR=3.7						
GEYT	**Alibeck**	**81.92**	**309**	P	**P**	**04 01 48.0**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=151,slow=3.4,SNR=4.0						
ABKAR	**Akbulak array**	**83.39**	**321**	*e*P	**P**	**04 01 54.3**	**-0.1**
QSPA	**South Pole Qui**	**84.95**	**180**	*e*P	**P**	**04 02 02.3**	**+0.1**
SYO	**Syowa Base**	**86.90**	**201**	⇑*e*X	P	04 02 25.0	+13
MLY	**Manley**	**88.38**	**24**	*e*P	**P**	**04 02 18.6**	**-0.2**
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	**89.92**	**25**	P	**P**	**04 02 24.4**	**-1.5**
	comp=Z,0.8nm,0.9s,baz=267,slow=4.5,SNR=6.3						
TXAR	**Lajitas Array**	**120.60**	**59**	PKP	**PKiKP**	**04 08 20.1**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=241,slow=3.7,SNR=3.2						
TORD	**Torodi Ar. Bea**	**132.17**	**283**	PKP	**PKiKP**	**04 08 42.8**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=118,slow=1.6,SNR=3.3						
DBIC	**Dimbokro**	**138.93**	**274**	PKP	**PKiKP**	**04 08 55.3**	**-1.5**
	comp=Z,1.9nm,0.6s,baz=265,slow=3.2,SNR=3.8						
NNA	**Nana**	**145.09**	**119**	*e*PKPbc	**PKPdf**	**04 09 06.3**	**+0.7**
CPUP	**Villa Florida**	**147.01**	**161**	PKPbc	**PKPab**	**04 09 11.4**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=165,slow=3.5,SNR=8.2						
LPAZ	**La Paz**	**149.64**	**135**	PKPbc	**PKiKP**	**04 09 19.9**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=326,slow=1.1,SNR=5.5						
ROSC	**El Rosal**	**151.90**	**89**	PKPbc	**PKiKP**	**04 09 24.6**	**+0.6**
	comp=Z,4.5nm,0.6s,baz=349,slow=10,SNR=4.8						

MEX 04 03:56:19.4±0.9**, 24°.85N**×**110°.39W, h16**^{km}±999^{km}**, MD3.8, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.74**	**175**	*e*P	Pb	03 56 30.9	-3.1
LPIG				*i* S	Sg	03 56 40.3	-3.5
SLBS	**Sierra La Lagu**	**1.22**	**161**	*e*P	Pn	03 56 39.1	-2.8
SLBS				*e*S	Sb	03 56 52.6	-5.1

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*ISCJB **04** 04:00:22.1±0.6, 6°.11N±0°.05×126°.61E±0°.06, h91^{km}±7^{km}, mb3.6/8, Error ellipse: s-maj=10.1km s-min=8.1km az=170.2*

*MAN **04** 04:00:22.4, 6°.09N×126°.61E, h57^{km}, mb4.9, ML3.8, MS3.8*

*IDC **04** 04:00:23.8±1.7, 6°.19N×126°.68E, h94^{km}±15^{km}, mb3.4/8, mb1 3.6/9, mb1mx3.3/39, mbtmp3.8/9, Error ellipse: s-maj=41.0km s-min=11.4km az=66.0*

ISC 04 04:00:23.2±0.9**, 6°.06N**±0°.06×**126°.59E**±0°.07**, h88**^{km}±8^{km}**, n24,** σ1^s.**87**/38**, mb3.7**/8**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.88**	**273**	*e*P	**Pn**	**04 00 40.8**	**-0.6**
DDMP				*e*S	**Sn**	**04 00 54.1**	**-0.8**
MATI	**Mati**	**0.94**	**339**	*e*P	**Pn**	**04 00 40.2**	**-1.9**
MATI				*e*S	**Sn**	**04 00 53.8**	**-2.5**
DAV	**Davao City (W)**	**1.42**	**315**	P	**Pn**	**04 00 48.2**	**+0.3**
	161nm,0.3s,baz=73,slow=20,SNR=5.4						
DAV				S	**Sn**	**04 01 07.3**	**+0.8**
	139nm,0.3s,baz=137,slow=22,SNR=7.7						
DMPH	**Davao City--Mi**	**1.48**	**314**	⇓*i*P	**Pn**	**04 00 52.5**	**+3.9**
DMPH				*i* S	**Sn**	**04 01 14.0**	**+6.1**
GSPH	**General Santos**	**1.63**	**271**	*e*P	**Pn**	**04 00 49.6**	**-1.0**
KCP	**Kidapawan**	**1.76**	**302**	⇓*i*P	**Pn**	**04 00 51.7**	**-0.7**
KCP				*i* S	**Sn**	**04 01 13.8**	**-0.6**
SKMP	**Bagumbayan, Su**	**2.09**	**283**	*e*P	**Pn**	**04 00 56.1**	**-0.4**
SKMP				*e*S	**Sn**	**04 01 21.6**	**-0.3**
BIPH	**Bislig**	**2.12**	**354**	⇑*i*P	**Pn**	**04 00 57.2**	**+0.2**
BIPH				*i* S	**Sn**	**04 01 20.4**	**-2.4**
BUKP	**Musuan**	**2.36**	**320**	*e*P	**Pn**	**04 00 59.4**	**-0.8**
BUKP				*e*S	**Sn**	**04 01 27.5**	**-1.0**
CTBH	**Cotabato--PC H**	**2.60**	**297**	⇑*i*P	**Pn**	**04 01 01.8**	**-1.5**
CTBH				*i* S	**Sn**	**04 01 34.4**	**+0.3**
CGP	**Cagayan de Oro**	**3.03**	**322**	⇓*e*	Pn	04 01 20.6	+11
BUTP	**Butuan**	**3.05**	**342**	*e*P	**Pn**	**04 01 09.9**	**+0.5**
BUTP				*e*S	**Sn**	**04 01 50.5**	**+5.5**
PAGZ	**Pagadian**	**3.65**	**299**	*e*P	**Pn**	**04 01 17.6**	**+0.1**
IPIL	**Ipil**	**4.34**	**294**	*e*P	**Pn**	**04 01 27.5**	**+0.6**
IPIL				*e*S	Sn	04 01 54.9	-22
SIJI	**Sorong**	**8.31**	**146**	P	**Pn**	**04 02 23.0**	**+1.9**
	2.1nm,0.3s,baz=82,slow=10,SNR=8.7						
FITZ	**Fitzroy Crossi**	**24.02**	**182**	P	**P**	**04 05 31.3**	**+1.2**
	1.5nm,0.6s,baz=27,slow=10,SNR=5.3						
WRA	**Warramunga Arr**	**26.94**	**164**	P	**P**	**04 05 57.3**	**+0.8**
	1.3nm,0.4s,baz=343,slow=11,SNR=16						
WRA				PcP	**PcP**	**04 09 16.6**	**0.0**
	0.4nm,0.7s,baz=324,slow=2.9,SNR=4.8						
ASAR	**Alice Springs**	**30.39**	**167**	P	**P**	**04 06 27.8**	**+0.6**
	0.2nm,0.3s,baz=347,slow=7.6,SNR=3.3						
ASAR				PcP	**PcP**	**04 09 25.0**	**-0.2**
	0.6nm,0.6s,baz=349,slow=3.1,SNR=6.1						
STKA	**Stephens Creek**	**40.35**	**160**	P	**P**	**04 07 53.4**	**+1.1**
	1.6nm,0.6s,baz=341,slow=7.9,SNR=4.0						
STKA				PcP	**PcP**	**04 09 54.5**	**+0.3**
	0.4nm,0.3s,baz=20,slow=7.3,SNR=3.6						
SONM	**Songino Array**	**45.06**	**341**	P	**P**	**04 08 30.3**	**-0.2**
	0.2nm,0.7s,baz=141,slow=7.1,SNR=2.3						
SONM				PcP	**PcP**	**04 10 09.6**	**-0.4**
	0.3nm,0.6s,baz=158,slow=2.9,SNR=3.2						
MKAR	**Makanchi Array**	**55.58**	**324**	P	**P**	**04 09 49.5**	**-0.3**
	0.3nm,0.4s,baz=110,slow=7.1,SNR=8.7						
MKAR				PcP	**PcP**	**04 10 47.9**	**-0.7**
	0.6nm,0.8s,baz=87,slow=4.3,SNR=4.4						
ILAR	**Eielson Array**	**83.08**	**26**	P	**P**	**04 12 37.5**	**-1.4**
	0.5nm,0.6s,baz=247,slow=5.2,SNR=12						
ARCES	**ARCESS Array B**	**88.23**	**340**	P	**P**	**04 13 03.2**	**-1.2**
	2.2nm,0.9s,baz=79,slow=5.3,SNR=5.3						
TORD	**Torodi Ar. Bea**	**122.04**	**290**	PKP	**PKPdf**	**04 19 07.8**	**-0.8**
	0.4nm,0.7s,baz=69,slow=2.1,SNR=5.5						

*NIED **04** 04:00:00, 30.°20N×131.°10E, h41km, Mw4.1 Best double couple: $M_0$1.43000×10^{15} NP1:ϕ_s329.00000°, δ51.00000°, λ153.00000°. NP2:ϕ_s77.00000°, δ70.00000°, λ42.00000°.*
*ISCJB **04** 04:00:51.3±0.5, 30.°19N±0.°03×131.°05E±0.°04, h50km±3km, mb4.1/21, MS3.5/3, Error ellipse: s-maj=7.0km s-min=4.5km az=43.6*
*IDC **04** 04:00:53.0±1.2, 30.°22N×130.°86E, h46km±11km, mb3.7/14, mb1 3.8/19, mb1mx3.7/44, mbtmp3.9/19, ML3.3/5, MS3.2/3, Ms1 3.2/3, ms1mx2.7/58, Error ellipse: s-maj=20.8km s-min=8.0km az=98.0*
*BJI **04** 04:00:52.6, 30.°28N×130.°99E, h55km, mB4.7/16, mb4.3/26, Ms4.7/4, Ms7 4.6/4*
*JMA **04** 04:00:52.0±0.1, 30.°20N×131.°09E, h40km±1km, M3.9*
JMA Felt I J1.
*NEIC **04** 04:00:54.4±0.9, 30.°30N×131.°02E, h60km±9km, mb4.3/3, Error ellipse: s-maj=12.2km s-min=7.4km az=177.0*
ISC 04 04:00:52.7±0.8, **30.°22N**±0.°05×**130.°98E**±0.°06, **h43**km±6km, **n68**, σ**1ˢ.07**/75, **mb4.2**/28, **MS3.4**/3, **3C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.19**	**340**	⇓P	**Pn**	**04 00 59.5**	**-0.8**
JMTN				*e*S	**Sn**	**04 01 05.1**	**-0.5**
JYAK	**Yakushimahirau**	**0.41**	**273**	⇑P	**Pn**	**04 01 02.6**	**+0.2**
JYAK				*e*S	**Sn**	**04 01 09.5**	**+0.3**
JTN	**Tanegashima 3**	**0.44**	**0**	⇓P	**Pn**	**04 01 02.0**	**-0.8**
JTN				*e*S	**Sn**	**04 01 09.4**	**-0.5**
JKC	**Kuchinoerabu**	**0.72**	**290**	⇑P	**Pn**	**04 01 07.1**	**+0.6**
JTSR	**Tashiro 2**	**0.95**	**357**	⇓P	**Pn**	**04 01 09.6**	**0.0**
JTSR				*e*S	**Sn**	**04 01 22.8**	**+0.8**
JNN	**Nakanoshima**	**1.03**	**249**	P	**Pn**	**04 01 11.8**	**+1.1**
JNN				*e*S	**Sn**	**04 01 26.0**	**+2.1**
JNAR	**Kushima--Naru**	**1.33**	**11**	⇓P	**Pn**	**04 01 14.8**	**0.0**
JNAR				S	**Sn**	**04 01 32.5**	**+1.2**
JSU	**Suzuyama**	**1.36**	**341**	⇑P	**Pn**	**04 01 15.3**	**0.0**
JSU				S	**Sn**	**04 01 32.8**	**+0.6**
JNU	**Nakatsue**	**2.90**	**358**	*e*Pn	**Pn**	**04 01 37.0**	**+0.6**
JNU	**Nakatsue**	**2.90**	**358**	P	**Pn**	**04 01 37.0**	**+0.6**
	23nm,0.3s,baz=255,slow=3.1,SNR=133						
JNU				S	**Sn**	**04 02 10.5**	**+0.5**
	21nm,0.3s,baz=173,slow=23,SNR=10						
JOW	**Kunigami**	**4.13**	**216**	P	**Pn**	**04 01 52.9**	**-0.4**
	1.3nm,0.3s,baz=99,slow=17,SNR=6.1						
JOW				S	**Sn**	**04 02 39.3**	**-0.9**
	4.2nm,0.3s,baz=64,slow=28,SNR=7.1						
INU	**Inuyama**	**7.21**	**43**	*e*Pn	**Pn**	**04 02 35.9**	**+0.3**
KSRS	**Korea Array**	**7.65**	**341**	P	**Pn**	**04 02 42.8**	**+1.2**
	0.2nm,0.3s,baz=157,slow=15,SNR=2.7						
KSRS				LR	LR	04 06 09.6	
	comp=Z,100nm,18.1s,baz=143,slow=42						
JHJ	**Hachijo jima 2**	**8.04**	**67**	S	**Sn**	**04 04 19.4**	**+2.8**
	45nm,0.3s,baz=77,slow=19,SNR=5.2						
JHJ2	**Mitsune**	**8.07**	**67**	*e*Pn	**Pn**	**04 02 49.0**	**+1.7**
SSE	**Sheshan**	**8.48**	**278**	*e*Pn	**Pn**	**04 02 54.9**	**+1.9**
MAJO	**Matsushiro**	**8.73**	**42**	*e*Pn	**Pn**	**04 02 56.4**	**-0.1**
MAT	**Matsushiro**	**8.73**	**42**	P	**Pn**	**04 02 56.4**	**0.0**
MJAR	**Matsushiro Arr**	**8.73**	**42**	P	**Pn**	**04 02 56.9**	**+0.5**
	0.9nm,0.3s,baz=247,slow=14,SNR=34						
MJB9	**Matsu-Tunnel**	**8.73**	**42**	*e*Pn	**Pn**	**04 02 56.5**	**+0.1**
NJ2	**Nanjing**	**10.55**	**283**	*e*P	**Pn**	**04 03 21.9**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**13.98**	**3**	P	**P**	**04 04 14.7**	**-0.4**
	0.3nm,0.3s,baz=172,slow=11,SNR=5.3						
HHC	**Hu-ho-hao-te**	**18.99**	**309**	*e*P	**Pn**	**04 05 13.1**	**+1.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.7s						
KLR	**Kul'dur**	**19.00**	**2**	P	**Pn**	**04 05 10.9**	**-0.7**
	0.1nm,0.3s,baz=205,slow=6.7,SNR=3.8						
XAN	**Xi'an**	**19.06**	**287**	P	**Pn**	**04 05 11.8**	**-0.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,84nm,4.6s						
XAN	**Xi'an**	**19.06**	**287**	P	**Pn**	**04 05 11.9**	**-0.6**
	9.6nm,0.5s						
GYA	**Guiyang**	**21.71**	**266**	P	**P**	**04 05 41.5**	**+1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	**Lanzhou**	**23.42**	**292**	*e*P	**P**	**04 05 56.2**	**-1.9**
LZH				pP	pP	04 06 09.5	+0.4
LZH				sP	sP	04 06 16.0	+1.6
LZH				*e*PP	**PnPn**	**04 06 30.3**	**+4.7**
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,72nm,5.2s						
LZH				LR	LR		
	comp=N,370nm,12.0s						
LZH				LR	LR		
	comp=E,370nm,12.5s						
LZH				LR	LR		
	comp=Z,450nm,15.3s						
CD2	**Chengdu**	**23.43**	**279**	*e*P	**P**	**04 05 58.0**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
KMI	**Kunming**	**25.48**	**265**	P	**P**	**04 06 18.7**	**+1.5**
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				pmax	pmax		
	comp=Z,110nm,5.7s						
SONM	**Songino Array**	**25.80**	**320**	P	**P**	**04 06 18.8**	**-0.9**
	1.4nm,0.5s,baz=141,slow=9.9,SNR=12						
SONM				LR	LR	04 17 15.4	
	comp=Z,60nm,20.2s,baz=18,slow=38						
SONA1	**Songino Array**	**25.80**	**320**	*e*P	**P**	**04 06 19.1**	**-0.6**
CHBT	**CHBT**	**31.68**	**243**	P	P	04 07 04.3	-8.0
	20nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**34.06**	**99**	T	T	04 43 32.2	
	baz=296,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**34.07**	**99**	T	T	04 43 31.0	
	baz=296,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	**34.08**	**99**	T	T	04 43 33.0	
	baz=296,slow=75,SNR=29						
WMQ	**Urumqi**	**36.72**	**304**	*e*P	**P**	**04 07 57.5**	**+1.8**
WMQ				pP	pP	04 08 11.5	+4.0
RAMN	**Ramite**	**38.92**	**276**	*e*P	**P**	**04 08 14.0**	**-0.8**
	3.8nm,0.4s						
JIRN	**Jiri**	**39.09**	**278**	*e*P	**P**	**04 08 16.8**	**+0.5**
	12nm,0.6s						
GUN	**Gumba**	**39.30**	**278**	*e*P	**P**	**04 08 18.1**	**+0.1**
	21nm,0.4s						
PKI	**Pulchoki**	**39.78**	**278**	*e*P	**P**	**04 08 22.0**	**0.0**
	8.7nm,0.5s						
ZALV	**Zalesovo Beam**	**40.69**	**319**	P	**P**	**04 08 27.9**	**-0.9**
	0.9nm,0.4s,baz=124,slow=7.9,SNR=4.7						
ZALV				LR	LR	04 26 05.8	
	comp=Z,47nm,19.7s,baz=248,slow=37						
MK01	**Makanchi Array**	**40.84**	**308**	*e*P	**P**	**04 08 30.1**	**0.0**
MK31	**Makanchi Array**	**40.85**	**308**	*e*P	**P**	**04 08 30.0**	**-0.3**
MKAR	**Makanchi Array**	**40.85**	**308**	P	**P**	**04 08 29.8**	**-0.5**
	1.8nm,0.8s,baz=95,slow=11,SNR=20						
DANN	**Dangsing**	**41.00**	**280**	*e*P	**P**	**04 08 32.0**	**0.0**
	13nm,0.5s						
KOLN	**Koldanda**	**41.28**	**279**	*e*P	**P**	**04 08 33.9**	**-0.4**
	3.0nm,0.3s						
PYUN	**Piuthan**	**41.72**	**279**	*e*P	**P**	**04 08 37.7**	**-0.1**
	13nm,0.8s						
KURK	**Kurchatov**	**43.73**	**313**	*e*P	**P**	**04 08 52.8**	**-0.8**
NRN	**Naryn**	**45.28**	**300**	*e*P	**P**	**04 09 07.2**	**+0.7**
	5.0nm,0.8s						
KSH	**Kashi**	**45.47**	**297**	P	**P**	**04 09 10.7**	**+2.9**
KSH				PP	**PP**	**04 10 54.8**	**+0.2**
AAK	**Ala-Archa**	**46.32**	**302**	*e*P	**P**	**04 09 14.2**	**-0.3**
	2.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**48.31**	**187**	P	**P**	**04 09 29.9**	**0.0**
	0.7nm,0.6s,baz=4.8,slow=12,SNR=3.7						
KK31	**Karatay Array**	**49.20**	**303**	*e*P	**P**	**04 09 36.8**	**+0.2**
KKAR	**Karatay Array**	**49.20**	**303**	*e*P	**P**	**04 09 36.7**	**+0.1**
WRAB	**Tennant Creek**	**49.96**	**176**	*e*P	**P**	**04 09 42.5**	**0.0**
WRA	**Warramunga Arr**	**49.97**	**176**	P	**P**	**04 09 42.4**	**-0.2**
	0.8nm,0.5s,baz=357,slow=8.5,SNR=7.9						
ASAR	**Alice Springs**	**53.65**	**177**	P	**P**	**04 10 09.9**	**-0.1**
	0.8nm,0.6s,baz=10,slow=13,SNR=11						
ABKAR	**Akbulak array**	**55.77**	**311**	*e*P	**P**	**04 10 24.7**	**-0.4**
STKA	**Stephens Creek**	**62.57**	**170**	P	**P**	**04 11 12.6**	**+0.4**
	1.3nm,0.6s,baz=341,slow=14,SNR=3.6						
INK	**Inuvik**	**64.28**	**24**	P	**P**	**04 11 23.3**	**+0.2**
	1.2nm,1.0s,baz=230,slow=8.1,SNR=3.1						
ARCES	**ARCESS Array B**	**67.20**	**338**	P	**P**	**04 11 41.5**	**-0.5**
	1.0nm,0.6s,baz=44,slow=7.2,SNR=5.9						
KBZ	**Khabaz**	**68.54**	**309**	P	**P**	**04 11 50.7**	**0.0**
	3.2nm,0.8s,baz=211,slow=5.5,SNR=6.1						
FINES	**FINESS Array B**	**70.60**	**331**	P	**P**	**04 12 02.6**	**-0.5**
	3.1nm,0.4s,baz=65,slow=6.0,SNR=52						
AKASG	**Malin Array Be**	**74.08**	**320**	P	**P**	**04 12 23.1**	**-1.1**
	0.6nm,0.4s,baz=57,slow=6.5,SNR=4.1						
BRTR	**Keskin Array B**	**76.50**	**308**	P	**P**	**04 12 37.8**	**-0.7**
	1.0nm,0.8s,baz=123,slow=5.0,SNR=5.8						
NOA	**NORSAR Array B**	**76.80**	**334**	P	**P**	**04 12 39.1**	**-0.5**
	0.4nm,0.5s,baz=49,slow=5.7,SNR=3.3						
CLL	**Collm**	**82.25**	**326**	*e*P	**P**	**04 13 09.0**	**-0.3**

MEX 04 04:01:25.3±17.0, **24.°85N**×**110.°40W**, **h10**km, **MD3.6, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.75**	**174**	*e*P	Pg	04 01 38.0	-1.8
	baz=266,slow=1.8						
LPIG				*e*S	Sg	04 01 47.0	-2.5
SLBS	**Sierra La Lagu**	**1.23**	**160**	*e*P	Pn	04 01 44.8	-3.8

IDC 04 04:12:35.9±14.0, **16.°62S**×**66.°29E**, **h0**km, **mb3.5**/4, **mb1 3.6**/4, **mb1mx3.4**/28, **mbtmp3.5**/4, **MS3.3**/4, **Ms1 3.3**/4, **ms1mx3.0**/30, **Error ellipse: s-maj=443.2km s-min=39.0km az=58.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**10.78**	**35**	T	T	04 25 58.3	
	baz=213,slow=75,SNR=3.6						
H08S2	**Diego Garcia H**	**10.79**	**35**	T	T	04 25 56.3	
	baz=213,slow=75,SNR=6.6						
H08S3	**Diego Garcia H**	**10.80**	**35**	T	T	04 25 60.0	
	baz=213,slow=75,SNR=24						
H08N3	**Diego Garcia H**	**11.20**	**25**	T	T	04 26 41.4	
	baz=203,slow=75,SNR=20						
H08N1	**Diego Carcia H**	**11.22**	**25**	T	T	04 26 42.1	
	baz=203,slow=75,SNR=10						
H08N2	**Diego Garcia H**	**11.23**	**25**	T	T	04 26 40.1	
	baz=203,slow=75,SNR=22						
PALK	**Pallekele**	**27.70**	**32**	LR	LR	04 26 22.2	
	comp=Z,71nm,21.4s,baz=295,slow=30						
KMBO	**Kilima Mbogo**	**32.48**	**295**	LR	LR	04 31 15.0	
	comp=Z,46nm,18.5s,baz=90,slow=34						
BOSA	**Boshof**	**39.53**	**245**	LR	LR	04 34 46.3	
	comp=Z,25nm,18.8s,baz=122,slow=34						
CMAR	**Chiang Mai Arr**	**47.41**	**44**	LR	LR	04 37 57.0	
	comp=Z,40nm,21.2s,baz=234,slow=32						
WRA	**Warramunga Arr**	**64.31**	**104**	P	P	04 23 13.8	0.0
	0.3nm,0.8s,baz=269,slow=5.7,SNR=3.6						
MKAR	**Makanchi Array**	**64.75**	**12**	P	P	04 23 16.1	+0.1
	0.4nm,0.8s,baz=190,slow=7.3,SNR=4.0						
ZALV	**Zalesovo Beam**	**72.06**	**11**	P	P	04 24 01.6	0.0
	0.2nm,0.3s,baz=187,slow=7.3,SNR=2.7						
SONM	**Songino Array**	**73.50**	**27**	P	P	04 24 10.6	+0.1
	0.3nm,0.6s,baz=221,slow=5.7,SNR=2.5						

*ISCJB **04** 04:25:40.0±0.8, 12.°0N±0.°2×87.°6W±0.°1, h48km, mb3.9/10, MS3.2/4, Error ellipse: s-maj=27.3km s-min=5.2km az=37.1*
*IDC **04** 04:25:41.7±1.4, 12.°16N×87.°45W, h41km±14km, mb3.7/10, mb1 3.9/13, mb1mx3.6/48, mbtmp3.8/13, ML3.0/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/38, Error ellipse: s-maj=36.0km s-min=7.8km az=41.0*
ISC 04 04:25:42.0±0.8, **12.°1N**±0.°2×**87.°5W**±0.°1, **h48**km, **n20**, σ**0ˢ.63**/24, **mb4.0**/10, **MS3.1**/4, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**3.08**	**126**	P	**Pn**	**04 26 28.7**	**+0.6**
	3.3nm,0.3s,baz=359,slow=23,SNR=16						
JTS				S	**Sn**	**04 27 03.5**	**-0.3**
	16nm,0.3s,baz=317,slow=16,SNR=7.9						
APG	**El Apazote**	**4.08**	**315**	P	**Pn**	**04 26 41.9**	**-0.2**
	0.3nm,0.3s,baz=101,slow=14,SNR=3.5						
APG				S	**Sn**	**04 27 28.7**	**+0.1**
	1.2nm,0.3s,baz=86,slow=13,SNR=5.3						
CMIG	**Matias Romero**	**8.70**	**306**	P	**Pn**	**04 27 45.0**	**-0.2**
	0.4nm,0.3s,baz=140,slow=12,SNR=7.9						
CMIG				S	**Sn**	**04 29 22.7**	**+0.7**
	0.2nm,0.3s,baz=72,slow=9.6,SNR=2.1						
ROSC	**El Rosal**	**14.89**	**118**	P	**P**	**04 29 13.5**	**-1.3**
	0.3nm,0.3s,baz=105,slow=20,SNR=3.1						
SDV	**Santo Domingo**	**16.89**	**99**	P	**P**	**04 29 37.4**	**+0.6**
	0.1nm,0.3s,baz=308,slow=13,SNR=2.4						
ATAH	**Atahualpa**	**21.15**	**154**	LR	LR	04 37 23.0	
	comp=Z,81nm,20.2s,baz=347,slow=33						
TXAR	**Lajitas Array**	**22.81**	**321**	P	**P**	**04 30 41.7**	**+0.7**
	3.0nm,0.5s,baz=137,slow=9.2,SNR=46						
TKL	**Tuckaleechee C**	**23.69**	**8**	P	**P**	**04 30 50.7**	**+1.3**
	4.5nm,0.6s,baz=180,slow=12,SNR=3.7						
TKL				LR	LR	04 39 53.8	
	comp=Z,71nm,18.9s,baz=347,slow=36						
NNA	**Nana**	**26.17**	**156**	LR	LR	04 39 55.6	
	comp=Z,36nm,18.5s,baz=354,slow=33						
PTGA	**Pitinga**	**30.17**	**113**	P	**P**	**04 31 48.0**	**+0.2**
	0.8nm,0.3s,baz=320,slow=19,SNR=3.4						
PTGA				LR	LR	04 45 26.4	
	comp=Z,84nm,18.2s,baz=288,slow=39						
PDAR	**Pinedale Array**	**36.05**	**332**	P	**P**	**04 32 39.3**	**+0.1**
	0.5nm,0.6s,baz=123,slow=11,SNR=6.2						
PDAR				PcP	**PcP**	**04 35 05.4**	**+0.8**
	0.3nm,0.6s,baz=157,slow=4.9,SNR=3.2						
NVAR	**Mina Array Bea**	**37.93**	**319**	P	**P**	**04 32 54.9**	**-0.3**
	0.2nm,0.8s,baz=104,slow=6.6,SNR=2.6						
NVAR				PcP	**PcP**	**04 35 10.9**	**+0.5**
	0.5nm,0.7s,baz=142,slow=4.3,SNR=4.3						
ULM	**Lac du Bonnet**	**38.65**	**351**	P	**P**	**04 32 59.8**	**-0.9**
	4.0nm,0.6s,baz=172,slow=11,SNR=8.0						
SCHQ	**Schefferville**	**45.62**	**17**	P	**P**	**04 33 57.0**	**-0.4**
	3.7nm,0.8s,baz=225,slow=13,SNR=3.5						
BDFB	**Brasilia**	**47.82**	**124**	P	**P**	**04 34 15.6**	**+0.3**
	2.5nm,0.7s,baz=284,slow=9.0,SNR=4.0						
YKA	**Yellowknife Ar**	**53.93**	**345**	P	**P**	**04 34 59.9**	**-0.6**
	0.6nm,0.8s,baz=138,slow=7.8,SNR=13						
YKA				PcP	**PcP**	**04 36 05.4**	**+0.1**
	0.2nm,0.6s,baz=148,slow=4.1,SNR=3.9						
ILAR	**Eielson Array**	**66.31**	**336**	P	**P**	**04 36 24.9**	**-0.4**
	0.4nm,0.8s,baz=118,slow=4.4,SNR=4.7						
ASAR	**Alice Springs**	**139.10**	**248**	PKP	**PKPdf**	**04 45 03.8**	**-0.5**
	0.3nm,0.8s,baz=186,slow=0.9,SNR=3.5						
WRA	**Warramunga Arr**	**139.13**	**254**	PKP	**PKPdf**	**04 45 04.6**	**+0.2**
	0.3nm,0.7s,baz=91,slow=2.5,SNR=5.7						
CMAR	**Chiang Mai Arr**	**148.97**	**348**	PKPbc	**PKPbc**	**04 45 26.0**	**+0.4**
	2.0nm,0.6s,baz=334,slow=3.4,SNR=6.6						

*ZAG **04** 04:29:44.8±0.0, 43.°65N×16.°41E, h1km*
*BEO **04** 04:29:45.7±0.6, 43.°69N×16.°16E, h16km±8km, ML4.2/17*
*MOS **04** 04:29:45.0±1.0, 43.°64N×16.°30E, h13km, mb4.2/5, Error ellipse: s-maj=5.9km s-min=3.7km az=86.8*
*PDG **04** 04:29:45.8±0.6, 43.°62N×16.°35E, h9km±2km, MD4.3/11, ML4.2/9, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
*ROM **04** 04:29:45.9±0.3, 43.°60N±0.°02×16.°53E±0.°07, h10km, ML3.9/64*
*PRU **04** 04:29:45.8±0.0, 43.°58N×16.°45E, h0km*
*SAR **04** 04:29:46.2±0.5, 43.°65N×16.°41E, h5km±2km, ML4.1/1*
*NEIC **04** 04:29:46.6±0.2, 43.°69N×16.°40E, h10km, MW4.0, ML4.0(ZAG), Error ellipse: s-maj=4.8km s-min=3.5km az=48.0, Moment Tensor Solution. s14 Moment tensor: Scale 10^{15}Nm; M_{rr}1.22; $M_{\theta\theta}$-1.16; $M_{\phi\phi}$-0.06; $M_{r\theta}$-0.16; $M_{\theta\phi}$0.41; $M_{\phi r}$-0.32; Best double couple: $M_0$1.30000×10^{15} NP1:ϕ_s273.00000°, δ48.00000°, λ68.00000°. NP2: ϕ_s124.00000°, δ46.00000°, λ113.00000°. Principal axes: T 1.3200, Plg74.0000°, Azm112.0000°; N -0.0200, Plg16.0000°, Azm288.0000°; P -1.3000, Plg1.0000°, Azm18.0000°;*
NEIC Felt [IV] at Split. Also felt at Marina.
*LDG **04** 04:29:47.3±0.1, 43.°71N×16.°46E, h10km, Ml3.9/19 Error ellipse: s-maj=4.6km s-min=2.9km az=21.0*
*THE **04** 04:29:48.3, 43.°48N×16.°35E, h7km±32km, ML4.1/1, Error ellipse: s-maj=43.3km s-min=3.1km az=298.0*
*IDC **04** 04:29:49.5±1.4, 43.°68N×16.°35E, h37km±12km, mb3.8/17, mb1 3.9/30, mb1mx3.7/63, mbtmp3.9/30, ML3.6/11, MS3.1/5, Ms1 3.1/5, ms1mx2.8/58, Error ellipse: s-maj=12.0km s-min=8.1km az=37.0*
*TIR **04** 04:29:53.0, 42.°26N×16.°89E, h7km, Md4.2/4*
ISC 04 04:29:45.1±1.0, **43.°61N**±0.°02×**16.°35E**±0.°02, **h8**km±6km, **n458**, σ**2ˢ.15**/626, **mb4.0**/24, **49C-32D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UDBI	**Udbina**	**1.01**	**336**	*i* Pg	**Pg**	**04 30 03.7**	**-0.8**
UDBI				Sg	**Sb**	**04 30 17.9**	**-0.4**
STON	**Ston**	**1.23**	**126**	*i* Pg	**Pn**	**04 30 07.9**	**-0.7**
STON				Sg	**Sn**	**04 30 25.6**	**+0.3**
STON	**Ston**	**1.23**	**126**	*e*Pg	**Pn**	**04 30 07.0**	**-1.5**
STON				Sg	**Sn**	**04 30 26.4**	**+1.1**
BLY	**Banja Luka**	**1.29**	**28**	*e*Pg	**Pn**	**04 30 08.9**	**-0.4**
BLY				*e*Sg	**Sn**	**04 30 27.8**	**+1.0**
BLY	**Banja Luka**	**1.29**	**28**	*e*Pn	**Pn**	**04 30 08.5**	**-0.9**
BLY				*e*Sn	**Sb**	**04 30 22.9**	**-3.3**
BLY	**Banja Luka**	**1.29**	**28**	⇑*i*P	**Pn**	**04 30 09.2**	**-0.1**
BLY				S	**Sn**	**04 30 27.5**	**+0.7**
BLY	**Banja Luka**	**1.29**	**28**	⇓*i*Pg	**Pn**	**04 30 08.2**	**-1.1**
BLY				*e*Sg	**Sb**	**04 30 25.8**	**-0.4**
BLY	**Banja Luka**	**1.29**	**28**	P	**Pn**	**04 30 08.4**	**-0.9**
BLY				S	**Sn**	**04 30 26.5**	**-0.3**
BLY				AML	AML		
	comp=E,9830µm,0.8s						
BLY				AML	AML		
	comp=N,8945µm,0.6s						
BLY				AML	AML		
	comp=E,9730µm,0.8s						
BLY				AML	AML		
	comp=N,8750µm,0.6s						
BLY				AML	AML		
	comp=E,9825µm,0.8s						
BLY				AML	AML		
	comp=N,8945µm,0.6s						
BLY				AML	AML		
	comp=E,9730µm,0.8s						
BLY				AML	AML		
	comp=N,8750µm,0.6s						
BLY				AML	AML		
	comp=N,8750µm,0.6s						
BLY				AML	AML		
	comp=N,8945µm,0.6s						
BLY				AML	AML		
	comp=E,9730µm,0.8s						
BLY				AML	AML		
	comp=E,9825µm,0.8s						
NVLJ	**Novalja**	**1.43**	**312**	*e*Pn	**Pn**	**04 30 11.3**	**0.0**
NVLJ				Sn	**Sg**	**04 30 32.2**	**+1.2**
DOB	**Doboj**	**1.69**	**48**	⇓*i*Pn	**Pn**	**04 30 14.6**	**-0.2**
DOB				*e*Sn	**Sn**	**04 30 36.8**	**+0.2**
TREB	**Trebinje**	**1.71**	**121**	*e*Pn	**Pb**	**04 30 16.5**	**-0.3**
TREB				*e*Sn	**Sg**	**04 30 39.8**	**-0.4**
TREB	**Trebinje**	**1.71**	**121**	⇑*i*Pn	**Pn**	**04 30 16.1**	**+0.9**
TREB				*e*Sn	**Sb**	**04 30 38.1**	**-0.4**
BRY	**Bratogost**	**1.75**	**113**	⇑*i*Pn	**Pb**	**04 30 17.0**	**-0.5**
BRY				*i* Sn	**Sg**	**04 30 41.5**	**+0.2**
SGRT	**San Giovanni R**	**1.91**	**194**	P	**Pn**	**04 30 18.6**	**+0.7**
SGRT				S	**Sb**	**04 30 43.7**	**-0.3**
SGRT				AML	AML		
	comp=E,2645µm,0.8s						
SGRT				AML	AML		
	comp=N,2030µm,0.7s						
SGRT				AML	AML		
	comp=E,2645µm,0.8s						
SGRT				AML	AML		
	comp=N,2030µm,0.7s						
UPM	**Unac-Piva**	**1.91**	**101**	⇓*i*Pn	**Pb**	**04 30 20.5**	**+0.3**
UPM				*i* Sn	**Sg**	**04 30 47.0**	**+0.6**
MSAG	**Monte S. Angel**	**1.92**	**190**	P	**Pb**	**04 30 20.2**	**-0.2**
MSAG				P	**Pg**	**04 30 20.9**	**-1.0**
MSAG				AML	AML		
	comp=E,2300µm,0.5s						
MSAG				AML	AML		
	comp=N,3545µm,0.5s						
MSAG				AML	AML		
	comp=E,2285µm,0.5s						
MSAG				AML	AML		
	comp=N,3595µm,0.5s						
MSAG				AML	AML		
	comp=E,2300µm,0.5s						
MSAG				AML	AML		
	comp=N,3595µm,0.5s						
MSAG				AML	AML		
	comp=N,3545µm,0.5s						
MSAG				AML	AML		
	comp=E,2285µm,0.5s						
HAPS	**Han Pijesak,Bl**	**1.94**	**75**	*e*Pn	**Pn**	**04 30 19.3**	**+0.9**
HAPS				*e*Sn	**Sb**	**04 30 44.3**	**-0.9**
HAPS	**Han Pijesak,Bl**	**1.94**	**75**	⇓*i*Pn	**Pn**	**04 30 18.9**	**+0.5**
HAPS				*e*Sn	**Sn**	**04 30 43.7**	**+0.6**
HCY	**Herceg Novi**	**1.96**	**126**	⇓*i*Pn	**Pb**	**04 30 20.2**	**-0.7**
HCY				*i* Sn	**Sg**	**04 30 47.6**	**-0.3**
HCY	**Herceg Novi**	**1.96**	**126**	*e*Pn	**Pb**	**04 30 20.0**	**-0.9**
HCY				*e*Sn	**Sb**	**04 30 44.9**	**-0.5**
BOJS	**Bojanci**	**2.05**	**338**	⇑*i*Pn	**Pb**	**04 30 21.9**	**-0.6**
BOJS				*e*Sn	**Sb**	**04 30 48.7**	**+0.5**
	comp=Z,388nm,0.4s						
BOJS	**Bojanci**	**2.05**	**338**	P	**Pb**	**04 30 21.8**	**-0.7**
BOJS				S	**Sb**	**04 30 48.6**	**+0.5**
BOJS				AML	AML		
	comp=E,2280µm,0.6s						
BOJS				AML	AML		
	comp=N,1590µm,1.2s						
BOJS				AML	AML		
	comp=E,2280µm,0.6s						
BOJS				AML	AML		
	comp=N,1590µm,1.2s						
NKME	**Niksic**	**2.08**	**113**	⇑*i*Pn	**Pb**	**04 30 22.5**	**-0.6**
NKY	**Niksic**	**2.09**	**111**	⇑*i*Pn	**Pb**	**04 30 22.8**	**-0.5**
NKY				*i* Sn	**Sb**	**04 30 50.0**	**+0.6**
OZLJ	**Ozalj**	**2.10**	**343**	*e*Pn	**Pb**	**04 30 23.1**	**-0.3**
OZLJ				Sn	**Sb**	**04 30 48.8**	**-0.8**
LPEL	**Lama dei Pelig**	**2.23**	**226**	P	**Pb**	**04 30 26.9**	**+1.3**
LPEL				AML	AML		
	comp=E,1270µm,0.7s						
LPEL				AML	AML		
	comp=N,801µm,0.8s						
LPEL				AML	AML		
	comp=E,1270µm,0.7s						
LPEL				AML	AML		
	comp=N,801µm,0.8s						
BBLS	**Lazići**	**2.23**	**82**	*e*Pn	**Pb**	**04 30 24.7**	**-0.9**
BBLS				*e*Sn	**Sb**	**04 30 52.5**	**-0.9**
BBLS	**Lazići**	**2.23**	**82**	⇓*i*Pn	**Pn**	**04 30 22.9**	**+0.5**
BBLS				*e*Sn	**Sn**	**04 30 50.6**	**+0.5**
PLE	**Pljevlja**	**2.23**	**96**	⇑*i*Pn	**Pb**	**04 30 24.5**	**-1.2**
PLE				*i* Sn	**Sb**	**04 30 54.2**	**+0.7**
SENI	**Senigallia**	**2.26**	**274**	P	**Pb**	**04 30 25.2**	**-0.9**
SENI				AML	AML		
	comp=E,3120µm,0.7s						
SENI				AML	AML		
	comp=N,3630µm,0.3s						
SENI				AML	AML		
	comp=N,3630µm,0.3s						
SENI				AML	AML		
	comp=E,3120µm,0.7s						
BUM	**Brajici-Budva**	**2.28**	**124**	⇓*i*Pn	**Pb**	**04 30 25.2**	**-1.3**
BUM				*i* Sn	**Sb**	**04 30 55.0**	**+0.2**
CING	**Cingoli**	**2.31**	**265**	P	**Pb**	**04 30 25.5**	**-1.4**
CING				AML	AML		
	comp=E,508µm,1.6s						
CING				AML	AML		
	comp=N,436µm,1.3s						
CING				AML	AML		
	comp=E,508µm,1.6s						
CING				AML	AML		
	comp=N,436µm,1.3s						
CRES	**Cresnjev**	**2.31**	**344**	⇓*i*Pn	**Pn**	**04 30 24.6**	**+1.3**
CRES				*e*Sn	**Sn**	**04 30 52.5**	**+0.6**
EL6	**Elcito**	**2.38**	**264**	P	**Pn**	**04 30 26.1**	**+1.7**
CAMP	**Campotosto**	**2.41**	**245**	P	**Pn**	**04 30 25.8**	**+0.9**
CAMP				AML	AML		
	comp=E,600µm,1.1s						
CAMP				AML	AML		
	comp=N,574µm,0.5s						
CAMP				AML	AML		
	comp=N,574µm,0.5s						
CAMP				AML	AML		
	comp=E,600µm,1.1s						
BLJ	**Bijeljina**	**2.41**	**60**	*e*Pn	**Pn**	**04 30 24.8**	**+0.1**
SMA1	**SAN MARTINO**	**2.41**	**247**	P	**Pn**	**04 30 26.5**	**+1.6**
SMA1				AML	AML		
	comp=E,1040µm,1.0s						

SMA1				AML	AML		
	comp=N,1154µm,1.0s						
SMA1				AML	AML		
	comp=E,1040µm,1.0s						
SMA1				AML	AML		
	comp=N,1154µm,1.0s						
FAGN	**Fagnano**	**2.43**	**237**	P	**Pn**	**04 30 26.9**	**+1.8**
FAGN				AML	AML		
	comp=E,2695µm,0.4s						
FAGN				AML	AML		
	comp=N,1665µm,0.6s						
FAGN				AML	AML		
	comp=E,2695µm,0.4s						
FAGN				AML	AML		
	comp=N,1665µm,0.6s						
KOME	**Kolasin**	**2.44**	**107**	⇑*i*Pn	**Pb**	**04 30 27.4**	**-1.7**
KOME				*i* Sn	**Sb**	**04 30 58.8**	**-0.5**
PDG	**Podgorica**	**2.44**	**118**	*e*Pn	**Pb**	**04 30 27.5**	**-1.6**
PDG				*e*Sn	**Sb**	**04 30 58.8**	**-0.4**
PDG	**Podgorica**	**2.44**	**118**	⇓*i*P	**Pb**	**04 30 28.1**	**-1.0**
PDG	**Podgorica**	**2.44**	**118**	S	**Sb**	**04 30 58.7**	**-0.4**
PDG	**Podgorica**	**2.44**	**118**	*e*Pn	**Pn**	**04 30 26.9**	**+1.8**
PDG				*e*Sn	**Sn**	**04 30 56.2**	**+1.2**
PDG	**Podgorica**	**2.44**	**118**	P	**Pb**	**04 30 28.3**	**-0.8**
PDG				AML	AML		
	comp=E,2600µm,0.4s						
PDG				AML	AML		
	comp=N,3240µm,1.0s						
PDG				AML	AML		
	comp=E,2025µm,0.4s						
PDG				AML	AML		
	comp=N,2535µm,1.0s						
PDG				AML	AML		
	comp=E,2025µm,0.4s						
PDG				AML	AML		
	comp=E,2600µm,0.4s						
PDG				AML	AML		
	comp=N,3240µm,1.0s						
PDG				AML	AML		
	comp=N,2535µm,1.0s						
TTG	**Podgorica**	**2.44**	**118**	⇓*i*Pn	**Pb**	**04 30 27.3**	**-1.8**
TTG				*i* Sn	**Sb**	**04 30 58.8**	**-0.4**
TTG	**Podgorica**	**2.44**	**118**	*e*Pn	**Pn**	**04 30 27.2**	**+2.1**
TTG				*e*Sn	**Sn**	**04 30 49.8**	**-5.2**
TTG	**Podgorica**	**2.44**	**118**	*e*P	**Pn**	**04 30 27.2**	**+2.1**
TTG				*e*		04 30 49.8	
FDMO	**Fiordimonte**	**2.45**	**258**	P	**Pn**	**04 30 27.3**	**+2.0**
FDMO				AML	AML		
	comp=E,502µm,0.9s						
FDMO				AML	AML		
	comp=N,466µm,0.9s						
FDMO				AML	AML		
	comp=E,502µm,0.9s						
FDMO				AML	AML		
	comp=N,466µm,0.9s						
TEKS	**Tekeris**	**2.48**	**67**	*e*Pn	**Pb**	**04 30 27.9**	**-1.9**
TEKS				*e*Sn	**Sn**	**04 30 56.8**	**+0.7**
TEKS	**Tekeris**	**2.48**	**67**	*e*Pn	**Pn**	**04 30 26.1**	**+0.4**
TEKS				*e*Sn	**Sn**	**04 30 57.0**	**+0.9**
ARVD	**Arcevia**	**2.48**	**269**	P	**Pn**	**04 30 27.4**	**+1.7**
ARVD				AML	AML		
	comp=E,302µm,1.0s						
ARVD				AML	AML		
	comp=N,352µm,1.1s						
ARVD				AML	AML		
	comp=N,352µm,1.1s						
ARVD				AML	AML		
	comp=E,302µm,1.0s						
AQU	**L'Aquila**	**2.50**	**241**	*e*Pn	**Pn**	**04 30 28.2**	**+2.2**
AQU				*e*Sn	**Sn**	**04 30 53.2**	**-3.4**
AQU	**L'Aquila**	**2.50**	**241**	*e*P	**Pn**	**04 30 28.2**	**+2.2**
AQU				*e*		04 30 53.3	
AQU	**L'Aquila**	**2.50**	**241**	⇓*i*Pn	**Pb**	**04 30 28.5**	**-1.7**
AQU				*e*Sn	**Sb**	**04 31 00.0**	**-1.1**
MIDA	**Miranda**	**2.50**	**219**	P	**Pn**	**04 30 27.5**	**+1.4**
MIDA				AML	AML		
	comp=E,896µm,0.9s						
MIDA				AML	AML		
	comp=N,954µm,0.8s						
MIDA				AML	AML		
	comp=E,898µm,0.9s						
MIDA				AML	AML		
	comp=N,865µm,0.8s						
MIDA				AML	AML		
	comp=N,954µm,0.8s						
MIDA				AML	AML		
	comp=N,865µm,0.8s						
MIDA				AML	AML		
	comp=E,898µm,0.9s						
MIDA				AML	AML		
	comp=E,896µm,0.9s						
SNTG	**Esanatoglia**	**2.51**	**263**	P	**Pb**	**04 30 29.9**	**-0.4**
SNTG				AML	AML		
	comp=E,404µm,0.8s						
SNTG				AML	AML		
	comp=N,443µm,1.0s						
SNTG				AML	AML		
	comp=E,404µm,0.8s						
SNTG				AML	AML		
	comp=N,443µm,1.0s						
DRME	**Dracevica, Mon**	**2.52**	**123**	⇓*i*Pn	**Pb**	**04 30 28.7**	**-1.9**
DRME				*i* Sn	**Sb**	**04 31 01.2**	**-0.5**
DRME	**Dracevica, Mon**	**2.52**	**123**	*e*Pn	**Pn**	**04 30 28.1**	**+1.8**
DRME				*e*Sn	**Sn**	**04 30 59.1**	**+1.9**
BAI	**Bari**	**2.53**	**171**	*e*Pn	**Pn**	**04 30 28.8**	**+2.4**
BAI				Sn	**Sn**	**04 30 57.7**	**+0.4**
CEY	**Cerknica**	**2.53**	**328**	⇑*i*Pn	**Pn**	**04 30 27.9**	**+1.4**
CEY				*e*Sn	**Sn**	**04 30 59.3**	**+1.8**
SKDS	**Skadanscina**	**2.56**	**320**	*i* Pn	**Pn**	**04 30 27.9**	**+1.1**
SKDS				*e*Sn	**Sb**	**04 31 00.9**	**-1.8**
	comp=Z,299nm,0.3s						
PESA	**Pesaro**	**2.56**	**279**	P	**Pb**	**04 30 29.5**	**-1.7**
PESA				AML	AML		
	comp=E,1106µm,1.2s						
PESA				AML	AML		
	comp=N,1110µm,0.9s						
PESA				AML	AML		
	comp=N,1110µm,0.9s						
PESA				AML	AML		
	comp=E,1106µm,1.2s						
CESI	**CESI - Serrava**	**2.58**	**258**	P	**Pb**	**04 30 30.0**	**-1.6**
CESI				AML	AML		
	comp=E,266µm,0.6s						
CESI				AML	AML		
	comp=N,315µm,1.2s						
CESI				AML	AML		
	comp=E,266µm,0.6s						
CESI				AML	AML		
	comp=N,315µm,1.2s						
MPAG	**Monte Paganucc**	**2.61**	**272**	P	**Pn**	**04 30 29.4**	**+1.9**
MPAG				AML	AML		
	comp=E,598µm,0.9s						
MPAG				AML	AML		
	comp=N,612µm,1.5s						
MPAG				AML	AML		
	comp=E,588µm,0.9s						
MPAG				AML	AML		
	comp=N,656µm,0.9s						
MPAG				AML	AML		
	comp=N,656µm,0.9s						
MPAG				AML	AML		
	comp=E,588µm,0.9s						
MPAG				AML	AML		
	comp=E,598µm,0.9s						
MPAG				AML	AML		
	comp=N,612µm,1.5s						
LNSS	**Leonessa**	**2.62**	**249**	P	**Pn**	**04 30 29.6**	**+1.8**
LNSS				AML	AML		
	comp=E,1074µm,0.6s						
LNSS				AML	AML		
	comp=N,760µm,1.2s						
LNSS				AML	AML		
	comp=N,760µm,1.2s						
LNSS				AML	AML		
	comp=E,1074µm,0.6s						
FRON	**Frontone**	**2.63**	**269**	P	**Pn**	**04 30 30.1**	**+2.2**
FRON				AML	AML		
	comp=E,560µm,0.7s						
FRON				AML	AML		
	comp=N,705µm,0.9s						
FRON				AML	AML		
	comp=E,560µm,0.7s						
FRON				AML	AML		
	comp=N,705µm,0.9s						
VVLD	**Villa Vallelon**	**2.65**	**230**	P	**Pn**	**04 30 30.2**	**+2.0**
VVLD				AML	AML		
	comp=E,778µm,0.7s						
VVLD				AML	AML		
	comp=N,646µm,1.0s						
VVLD				AML	AML		
	comp=N,646µm,1.0s						
VVLD				AML	AML		
	comp=E,778µm,0.7s						
DIVS	**Divibare**	**2.68**	**78**	*e*Pn	**Pn**	**04 30 29.8**	**+1.2**
DIVS				*e*Sn	**Sn**	**04 31 03.6**	**+2.4**
DIVS	**Divibare**	**2.68**	**78**	*e*Pn	**Pn**	**04 30 29.4**	**+0.9**
DIVS				*e*Sn	**Sn**	**04 31 00.6**	**-0.6**
DIVS	**Divibare**	**2.68**	**78**	*e*Pn	**Pn**	**04 30 29.4**	**+0.9**
DIVS				*e*Sn	**Sn**	**04 31 01.5**	**+0.3**
DIVS	**Divibare**	**2.68**	**78**	P	**Pn**	**04 30 27.4**	**-1.2**
DIVS				AML	AML		
	comp=E,866µm,0.7s						
DIVS				AML	AML		
	comp=N,1014µm,1.0s						
DIVS				AML	AML		
	comp=N,1014µm,1.0s						
DIVS				AML	AML		
	comp=E,866µm,0.7s						
MRB1	**Monte Rocchett**	**2.68**	**203**	P	**Pb**	**04 30 34.5**	**+1.2**
MRB1				AML	AML		
	comp=E,1008µm,0.7s						
MRB1				AML	AML		
	comp=N,1285µm,1.6s						
MRB1				AML	AML		
	comp=E,975µm,0.7s						
MRB1				AML	AML		
	comp=N,1296µm,0.7s						
MRB1				AML	AML		
	comp=E,975µm,0.7s						
MRB1				AML	AML		
	comp=N,1285µm,1.6s						
MRB1				AML	AML		
	comp=N,1296µm,0.7s						
MRB1				AML	AML		
	comp=E,1008µm,0.7s						
ULC	**Ulcinj**	**2.69**	**127**	⇓*i*Pn	**Pn**	**04 30 30.5**	**+1.8**
ULC				*i* Sn	**Sb**	**04 31 04.8**	**-1.8**
VAGA	**Valle Agricola**	**2.69**	**216**	P	**Pn**	**04 30 31.3**	**+2.6**
VAGA				AML	AML		
	comp=E,538µm,1.1s						
VAGA				AML	AML		
	comp=N,930µm,1.1s						
VAGA				AML	AML		
	comp=E,562µm,1.2s						
VAGA				AML	AML		
	comp=N,972µm,1.1s						
VAGA				AML	AML		
	comp=N,930µm,1.1s						
VAGA				AML	AML		
	comp=N,972µm,1.1s						
VAGA				AML	AML		
	comp=E,538µm,1.1s						
VAGA				AML	AML		
	comp=E,562µm,1.2s						
IVA	**Berane**	**2.69**	**105**	⇑*i*Pn	**Pb**	**04 30 31.7**	**-1.8**
IVA				*i* Sn	**Sb**	**04 31 05.1**	**-1.6**
FIAM	**Fiamignano**	**2.72**	**242**	P	**Pb**	**04 30 33.5**	**-0.5**
FIAM				AML	AML		
	comp=E,761µm,0.8s						
FIAM				AML	AML		
	comp=N,600µm,0.8s						
FIAM				AML	AML		
	comp=N,600µm,0.8s						
FIAM				AML	AML		
	comp=E,761µm,0.8s						
ATCC	**AVT- Casa Cast**	**2.73**	**262**	P	**Pb**	**04 30 33.5**	**-0.7**
ATCC				AML	AML		
	comp=E,946µm,0.6s						
ATCC				AML	AML		
	comp=N,805µm,1.1s						
ATCC				AML	AML		
	comp=N,805µm,1.1s						
ATCC				AML	AML		
	comp=E,946µm,0.6s						
ASSB	**Assisi San Ben**	**2.75**	**259**	P	**Pb**	**04 30 32.9**	**-1.6**
ASSB				AML	AML		
	comp=E,405µm,0.8s						
ASSB				AML	AML		
	comp=N,486µm,1.4s						
ASSB				AML	AML		
	comp=E,405µm,0.8s						
ASSB				AML	AML		
	comp=N,486µm,1.4s						
LJU	**Ljubljana**	**2.76**	**333**	*e*Pn	**Pn**	**04 30 30.8**	**+1.3**
LJU				*e*Sn	**Sn**	**04 31 04.5**	**+1.5**
LJU	**Ljubljana**	**2.76**	**333**	P	**Pn**	**04 30 30.6**	**+1.1**
LJU				S	**Sg**	**04 31 12.0**	**-1.6**
LJU				AML	AML		
	comp=E,2265µm,0.5s						
LJU				AML	AML		
	comp=N,2500µm,1.2s						
LJU				AML	AML		
	comp=E,2265µm,0.5s						
LJU				AML	AML		
	comp=N,2500µm,1.2s						
IVAS	**Ivanjica**	**2.76**	**89**	*e*Pn	**Pn**	**04 30 31.3**	**+1.6**
IVAS				*e*Sn	**Sb**	**04 31 06.4**	**-2.4**
PIEI	**Pieia**	**2.77**	**270**	P	**Pn**	**04 30 31.7**	**+2.0**
PIEI				AML	AML		
	comp=E,505µm,1.5s						
PIEI				AML	AML		
	comp=N,293µm,0.4s						
PIEI				AML	AML		
	comp=E,505µm,1.5s						
PIEI				AML	AML		
	comp=N,293µm,0.4s						
SG1	**Sgolgore (BA)**	**2.78**	**175**	*e*Pn	**Pn**	**04 30 30.4**	**+0.6**
SG1				Sn	**Sn**	**04 31 02.8**	**-0.7**
PE3	**Peglio**	**2.80**	**273**	P	**Pn**	**04 30 32.3**	**+2.2**
PE3				AML	AML		
	comp=E,1680µm,1.2s						
PE3				AML	AML		
	comp=N,1475µm,0.4s						
PE3				AML	AML		
	comp=E,1680µm,1.2s						
PE3				AML	AML		
	comp=N,1475µm,0.4s						
MURB	**Monte Urbino**	**2.81**	**264**	P	**Pb**	**04 30 34.3**	**-1.1**
MURB				AML	AML		
	comp=E,1605µm,1.0s						
MURB				AML	AML		
	comp=N,1165µm,1.0s						
MURB				AML	AML		
	comp=E,1685µm,0.3s						
MURB				AML	AML		
	comp=N,1102µm,0.3s						
MURB				AML	AML		
	comp=N,1102µm,0.3s						
MURB				AML	AML		
	comp=E,1685µm,0.3s						
MURB				AML	AML		
	comp=N,1165µm,1.0s						
MURB				AML	AML		
	comp=E,1605µm,1.0s						
SNAL	**S. Angelo Dei**	**2.81**	**198**	P	**Pn**	**04 30 33.2**	**+2.8**
SNAL				AML	AML		
	comp=E,1235µm,1.6s						
SNAL				AML	AML		
	comp=N,1495µm,0.8s						
SNAL				AML	AML		
	comp=E,1235µm,1.6s						
SNAL				AML	AML		
	comp=N,1495µm,0.8s						
ARRO	**Arrone**	**2.82**	**250**	P	**Pb**	**04 30 35.4**	**-0.2**
ARRO				AML	AML		
	comp=E,344µm,1.1s						
ARRO				AML	AML		
	comp=N,357µm,1.1s						
ARRO				AML	AML		
	comp=N,357µm,1.1s						
ARRO				AML	AML		
	comp=E,344µm,1.1s						
PVY	**Plav**	**2.83**	**110**	⇓*i*Pn	**Pb**	**04 30 34.1**	**-1.8**
PVY				*i* Sn	**Sb**	**04 31 12.1**	**+1.3**
ACER	**Acerenza**	**2.84**	**186**	P	**Pn**	**04 30 33.5**	**+2.8**
ACER				AML	AML		
	comp=E,2690µm,1.0s						
ACER				AML	AML		
	comp=N,1945µm,0.9s						
ACER				AML	AML		
	comp=E,2745µm,1.0s						
ACER				AML	AML		
	comp=N,1985µm,0.9s						
ACER				AML	AML		
	comp=N,1985µm,0.9s						
ACER				AML	AML		
	comp=N,1945µm,0.9s						
ACER				AML	AML		
	comp=E,2690µm,1.0s						
ACER				AML	AML		
	comp=E,2745µm,1.0s						
KOGS	**Kog**	**2.84**	**359**	P	**Pn**	**04 30 31.3**	**+0.7**
KOGS				AML	AML		
	comp=E,3145µm,1.0s						
KOGS				AML	AML		
	comp=N,2020µm,0.7s						
KOGS				AML	AML		
	comp=N,2020µm,0.7s						
KOGS				AML	AML		
	comp=E,3145µm,1.0s						
NOCI	**Noci**	**2.87**	**169**	P	**Pn**	**04 30 31.5**	**+0.5**
NOCI				AML	AML		
	comp=E,1054µm,1.0s						
NOCI				AML	AML		
	comp=N,1370µm,0.5s						
NOCI				AML	AML		
	comp=E,1054µm,1.0s						
NOCI				AML	AML		
	comp=N,1370µm,0.5s						
ATVO	**AVT- Monte Val**	**2.88**	**267**	P	**Pn**	**04 30 34.0**	**+2.8**
ATVO				AML	AML		
	comp=E,451µm,1.0s						
ATVO				AML	AML		
	comp=N,472µm,0.6s						
ATVO				AML	AML		
	comp=E,451µm,1.0s						
ATVO				AML	AML		
	comp=N,472µm,0.6s						
BEHE	**Becsehely**	**2.88**	**6**	*e*Pn	**Pb**	**04 30 35.1**	**-1.6**
BEHE				Sn	**Sn**	**04 31 07.1**	**+1.1**
BEHE				*e*Sg	**Sg**	**04 31 20.1**	**+2.6**
BEHE	**Becsehely**	**2.88**	**6**	*e*Pn	**Pn**	**04 30 32.0**	**+0.8**
BEHE				*e*Sn	**Sn**	**04 31 06.5**	**+0.5**
FASA	**Fasano**	**2.89**	**165**	*e*Pn	**Pn**	**04 30 31.7**	**+0.4**
FASA				Sn	**Sn**	**04 31 06.6**	**+0.4**
FRGS	**Fruska Gora**	**2.93**	**57**	*e*Pn	**Pn**	**04 30 31.4**	**-0.5**
FRGS				*e*Sn	**Sn**	**04 31 07.5**	**+0.3**
FRGS	**Fruska Gora**	**2.93**	**57**	*e*Pn	**Pn**	**04 30 32.7**	**+0.8**
FRGS				*e*Sn	**Sn**	**04 31 07.2**	**0.0**
ATTE	**AVT- Monte Tez**	**2.94**	**263**	P	**Pb**	**04 30 35.7**	**-2.0**
ATTE				AML	AML		
	comp=E,400µm,1.2s						
ATTE				AML	AML		
	comp=N,442µm,1.0s						
ATTE				AML	AML		
	comp=E,400µm,1.2s						
ATTE				AML	AML		
	comp=N,442µm,1.0s						
MATE	**Matera**	**2.97**	**175**	⇓*i*P	**Pn**	**04 30 32.7**	**+0.3**
CERT	**Cerreto**	**2.98**	**237**	P	**Pb**	**04 30 36.0**	**-2.4**
CERT				AML	AML		
	comp=E,575µm,1.1s						
CERT				AML	AML		
	comp=N,326µm,0.8s						
CERT				AML	AML		
	comp=N,326µm,0.8s						
CERT				AML	AML		
	comp=E,575µm,1.1s						
BADI	**Badiali**	**2.98**	**270**	P	**Pb**	**04 30 36.2**	**-2.3**
BADI				AML	AML		
	comp=E,525µm,1.1s						
BADI				AML	AML		
	comp=N,594µm,1.0s						
BADI				AML	AML		
	comp=N,594µm,1.0s						
BADI				AML	AML		
	comp=E,525µm,1.1s						
TRUS	**Trudelj**	**3.00**	**77**	*e*Pn	**Pn**	**04 30 33.9**	**+1.1**
TRUS				*e*Sn	**Sn**	**04 31 10.7**	**+1.8**
BCI	**Bajram Curri**	**3.00**	**113**	*i* PN	**Pg**	**04 30 42.1**	**-0.4**
BCI				*i* SN	**Sb**	**04 31 15.2**	**-0.2**
ATMC	**Monte Cedrone**	**3.03**	**268**	P	**Pb**	**04 30 37.1**	**-2.1**
ATMC				AML	AML		
	comp=E,724µm,0.9s						
ATMC				AML	AML		
	comp=N,580µm,0.4s						
ATMC				AML	AML		
	comp=E,724µm,0.9s						
ATMC				AML	AML		
	comp=N,580µm,0.4s						
MASS	**Massafra**	**3.03**	**168**	*e*Pn	**Pn**	**04 30 33.7**	**+0.4**
MASS				Sn	**Sn**	**04 31 11.2**	**+1.4**
PUK	**Puka**	**3.04**	**120**	P	**Pn**	**04 30 36.3**	**+2.8**
PUK				AML	AML		
	comp=E,1615µm,0.7s						
PUK				AML	AML		
	comp=N,1825µm,1.6s						
PUK				AML	AML		
	comp=E,1615µm,0.7s						
PUK				AML	AML		
	comp=N,1825µm,1.6s						
PUK	**Puka**	**3.04**	**120**	*i* PN	**Pb**	**04 30 40.1**	**+0.6**
PUK				*i* SN	**Sn**	**04 31 11.2**	**+1.1**
CGL1	**Ceglie Messapi**	**3.07**	**164**	*e*Pn	**Pn**	**04 30 34.3**	**+0.5**
MORH	**Mrgy, Hungar**	**3.07**	**31**	*e*Pn	**Pn**	**04 30 35.0**	**+1.2**
MORH				Sn	**Sn**	**04 31 10.1**	**-0.7**
MORH	**Mrgy, Hungar**	**3.07**	**31**	*e*Pn	**Pn**	**04 30 35.0**	**+1.2**
MORH				*e*Sn	**Sn**	**04 31 11.0**	**+0.2**
SABO	**M.te Sabotino**	**3.07**	**321**	P	**Pn**	**04 30 35.1**	**+1.2**
SABO				AML	AML		
	comp=E,2145µm,0.8s						
SABO				AML	AML		
	comp=N,2720µm,1.0s						
SABO				AML	AML		
	comp=N,2720µm,1.0s						
SABO				AML	AML		
	comp=E,2145µm,0.8s						
TAR1	**Taranto**	**3.16**	**167**	*e*Pn	**Pn**	**04 30 35.7**	**+0.7**
OBKA	**Obir**	**3.17**	**337**	*i* Pn	**Pn**	**04 30 37.2**	**+1.9**
	comp=E,17nm,0.2s,SNR=13						
OBKA				*e*Sn	**Sn**	**04 31 14.9**	**+1.6**
	comp=E,117nm,0.4s						
GRUS	**Gruza**	**3.18**	**83**	*e*Pn	**Pn**	**04 30 37.3**	**+2.0**
GRUS				*e*Sn	**Sn**	**04 31 14.7**	**+1.4**
CRE	**Caprese Michel**	**3.19**	**272**	P	**Pb**	**04 30 39.3**	**-2.8**
CRE				AML	AML		
	comp=E,348µm,1.1s						
CRE				AML	AML		
	comp=N,434µm,1.3s						
CRE				AML	AML		
	comp=E,348µm,1.1s						
CRE				AML	AML		
	comp=N,434µm,1.3s						
BEO	**Beograd**	**3.20**	**67**	*e*Pn	**Pn**	**04 30 37.6**	**+2.0**
BEO				*e*Sn	**Sn**	**04 31 15.4**	**+1.5**
CAFI	**Castiglion Fio**	**3.20**	**267**	P	**Pn**	**04 30 37.7**	**+2.0**
SOKA	**Soboth**	**3.21**	**344**	*i* Pn	**Pn**	**04 30 37.2**	**+1.4**
	comp=N,31nm,0.3s,SNR=37						
SOKA				*e*Sn	**Sn**	**04 31 15.5**	**+1.3**
	comp=N,53nm,0.7s						
CDRU	**Civita di Ruta**	**3.21**	**194**	P	**Pn**	**04 30 38.1**	**+2.3**
CDRU				AML	AML		
	comp=E,381µm,1.1s						
CDRU				AML	AML		
	comp=N,159µm,1.5s						
CDRU				AML	AML		
	comp=E,381µm,1.1s						
CDRU				AML	AML		
	comp=N,159µm,1.5s						
ASQU	**Asqua**	**3.31**	**275**	P	**Pn**	**04 30 40.6**	**+3.4**
ASQU				AML	AML		
	comp=E,381µm,0.9s						
ASQU				AML	AML		
	comp=N,486µm,1.0s						
ASQU				AML	AML		
	comp=N,486µm,1.0s						
ASQU				AML	AML		
	comp=E,381µm,0.9s						
TIR	**Tirane**	**3.45**	**130**	*e*Pn	**Pn**	**04 30 41.0**	**+2.0**
TIR	**Tirane**	**3.45**	**130**	*e*Pn	**Pn**	**04 30 41.4**	**+2.4**
TIR				*e*Sn	**Sn**	**04 31 20.5**	**+0.5**
TIR	**Tirane**	**3.45**	**130**	P	**Pn**	**04 30 41.7**	**+2.7**
TIR	**Tirane**	**3.45**	**130**	*e*P	**Pn**	**04 30 41.4**	**+2.4**
TIR				*e*		04 31 20.5	
TIR	**Tirane**	**3.45**	**130**	*i* PN	**Pb**	**04 30 47.2**	**+0.9**
TIR				*i* SN	**Sn**	**04 31 16.1**	**-3.9**
TIH	**Tihany**	**3.47**	**18**	*e*Pn	**Pn**	**04 30 39.1**	**-0.2**
TIH				Sn	**Sn**	**04 31 23.0**	**+2.5**

SELS	**Selova**	**3.50**	**95**	*e*Pn	**Pn**	**04 30 41.3**	**+1.6**
SELS				*e*Sn	**Sn**	**04 31 23.2**	**+1.9**
PTCC	**Patocco-Chiusa**	**3.51**	**324**	P	**Pn**	**04 30 41.6**	**+1.6**
PTCC				AML	AML		
	comp=E,584µm,1.5s						
PTCC				AML	AML		
	comp=N,553µm,1.6s						
PTCC				AML	AML		
	comp=N,553µm,1.6s						
PTCC				AML	AML		
	comp=E,584µm,1.5s						
ACOM	**Acomizza, Ital**	**3.56**	**327**	P	**Pn**	**04 30 43.3**	**+2.5**
ACOM				AML	AML		
	comp=E,2000µm,1.2s						
ACOM				AML	AML		
	comp=N,1304µm,1.1s						
ACOM				AML	AML		
	comp=N,1304µm,1.1s						
ACOM				AML	AML		
	comp=E,2000µm,1.2s						
MYKA	**Terra Mystica**	**3.58**	**329**	*e*Pn	**Pn**	**04 30 43.2**	**+2.3**
	comp=E,4.1nm,0.2s						
MYKA				*e*Sn	**Sn**	**04 31 25.8**	**+2.4**
	comp=E,43nm,0.5s						
SVIS	**Svilajnac**	**3.58**	**78**	*e*Pn	**Pn**	**04 30 42.0**	**+1.2**
SVIS				*e*Sn	**Sn**	**04 31 25.2**	**+2.0**
PHP	**Peshkopia**	**3.58**	**121**	P	**Pn**	**04 30 44.3**	**+3.4**
PHP	**Peshkopia**	**3.58**	**121**	P	**Pn**	**04 30 44.3**	**+3.4**
PHP	**Peshkopia**	**3.58**	**121**	P	**Pn**	**04 30 44.3**	**+3.4**
PHP	**Peshkopia**	**3.58**	**121**	*i* PN	**Pb**	**04 30 48.1**	**-0.5**
PHP				*i* SN	**Sn**	**04 31 23.4**	**0.0**
POLC	**Polcenigo**	**3.65**	**313**	P	**Pn**	**04 30 43.5**	**+1.8**
POLC				AML	AML		
	comp=E,2165µm,0.8s						
POLC				AML	AML		
	comp=N,2070µm,0.6s						
POLC				AML	AML		
	comp=E,2165µm,0.8s						
POLC				AML	AML		
	comp=N,2070µm,0.6s						
ARSA	**Arzberg**	**3.69**	**351**	*i* Pn	**Pn**	**04 30 43.0**	**+0.7**
	comp=N,22nm,0.5s,SNR=50						
ARSA				*e*Sn	**Sn**	**04 31 27.3**	**+1.3**
	comp=N,9.4nm,0.2s						
STAL	**STALIGIAL**	**3.70**	**317**	P	**Pn**	**04 30 44.1**	**+1.6**
STAL				AML	AML		
	comp=E,1590µm,1.5s						
STAL				AML	AML		
	comp=N,946µm,0.8s						
STAL				AML	AML		
	comp=E,1810µm,1.5s						
STAL				AML	AML		
	comp=N,1290µm,1.4s						
STAL				AML	AML		
	comp=N,1290µm,1.4s						
STAL				AML	AML		
	comp=N,946µm,0.8s						
STAL				AML	AML		
	comp=E,1590µm,1.5s						
STAL				AML	AML		
	comp=E,1810µm,1.5s						
PTF	**Prato**	**3.84**	**277**	P	**Pn**	**04 30 47.2**	**+2.8**
BANR	**Banloc**	**3.86**	**61**	S	**Sn**	**04 31 30.6**	**+0.5**
SCTE	**Santa Cesarea**	**3.87**	**155**	P	**Pn**	**04 30 45.8**	**+0.9**
SCTE				AML	AML		
	comp=E,226µm,1.4s						
SCTE				AML	AML		
	comp=N,249µm,1.0s						
SCTE				AML	AML		
	comp=E,226µm,1.4s						
SCTE				AML	AML		
	comp=N,249µm,1.0s						
BOVS	**Bovan**	**3.89**	**88**	*e*Pn	**Pn**	**04 30 46.6**	**+1.5**
BOVS				*e*Sn	**Sn**	**04 31 32.7**	**+1.8**
KUBS	**Kucevo**	**3.93**	**76**	*e*Pn	**Pn**	**04 30 46.1**	**+0.5**
CGRP	**Cima Grappa**	**3.96**	**307**	⇑*i*Pg	**Pn**	**04 30 48.1**	**+1.9**
MDVR	**Moldovita**	**4.03**	**71**	⇓*i*P	**Pn**	**04 30 49.2**	**+2.1**
MDVR	**Moldovita**	**4.03**	**71**	S	**Sn**	**04 31 34.8**	**+0.3**
AGOR	**Agordo**	**4.06**	**313**	⇓*i*Pn	**Pn**	**04 30 48.6**	**+1.2**
KBA	**Koelnbreinsper**	**4.07**	**330**	*i* Pn	**Pn**	**04 30 49.6**	**+1.9**
	comp=N,3.7nm,0.2s,SNR=9.5						
KBA				*e*Sn	**Sn**	**04 31 37.2**	**+1.7**
	comp=N,12nm,0.3s						
BARS	**Barje**	**4.07**	**99**	*e*Pn	**Pn**	**04 30 48.8**	**+1.2**
BARS	**Barje**	**4.07**	**99**	*e*Pn	**Pn**	**04 30 49.3**	**+1.7**
BARS				*e*Sn	**Sn**	**04 31 35.8**	**+0.3**
BARS				*e*Sn	**Sb**	**04 31 38.2**	**-8.2**
SOP	**Sopron**	**4.08**	**2**	*e*Pn	**Pn**	**04 30 47.1**	**-0.6**
SOP				Sn	**Sn**	**04 31 35.1**	**-0.5**
SOP				*e*Sg	**Sg**	**04 32 02.0**	**+6.1**
SKO	**Skopje**	**4.09**	**112**	P	**Pn**	**04 30 51.2**	**+3.4**
SKO				S	**Sn**	**04 31 39.7**	**+3.9**
SKO	**Skopje**	**4.09**	**112**	P	**Pn**	**04 30 51.2**	**+3.4**
SKO				S	**Sn**	**04 31 39.7**	**+3.9**
SKO	**Skopje**	**4.09**	**112**	*i* Pn	**Pn**	**04 30 50.2**	**+2.3**
SKO	**Skopje**	**4.09**	**112**	P	**Pn**	**04 30 51.2**	**+3.4**
SKO				S	**Sn**	**04 31 39.7**	**+3.9**
ABTA	**Abfaltersbach**	**4.15**	**321**	*i* Pn	**Pn**	**04 30 50.0**	**+1.3**
	comp=N,0.5nm,0.1s						
ABTA				*e*Sn	**Sb**	**04 31 53.3**	**+4.7**
	comp=N,145nm,0.8s						
KRUS	**Krusevo**	**4.26**	**120**	*i* Pn	**Pn**	**04 30 52.4**	**+2.1**
BZS	**Buzias**	**4.26**	**60**	⇑*i*P	**Pn**	**04 30 52.1**	**+1.9**
BZS	**Buzias**	**4.26**	**60**	P	**Pn**	**04 30 52.1**	**+1.9**
ZAGS	**Zajecar**	**4.27**	**85**	*e*Pn	**Pn**	**04 30 52.4**	**+2.1**
ZAGS				*e*Sn	**Sn**	**04 31 41.5**	**+1.2**
ROVR	**Rover Verones**	**4.28**	**300**	P	**Pn**	**04 30 52.2**	**+1.6**
BUD	**Budapest**	**4.31**	**25**	*e*Pn	**Pn**	**04 30 52.1**	**+1.3**
BUD				*e*Sg	Sn	04 31 23.1	-18
BUD				Sn	**Sn**	**04 31 42.0**	**+0.9**
CONA	**Conrad Observa**	**4.33**	**356**	*i* Pn	**Pn**	**04 30 52.5**	**+1.2**
	comp=N,9.1nm,0.3s,SNR=18						
CONA				Sn	**Sn**	**04 31 45.2**	**+3.2**
	comp=N,24nm,0.4s						
VLC	**Villacollemand**	**4.34**	**279**	*e*Pn	**Pn**	**04 30 54.1**	**+2.7**
TIP	**Timpagrande**	**4.44**	**176**	*e*Pn	**Pn**	**04 30 54.5**	**+1.8**
TIP	**Timpagrande**	**4.44**	**176**	⇑*i*P	**Pn**	**04 30 52.7**	**0.0**
MOA	**Molln**	**4.49**	**342**	*e*Pn	**Pn**	**04 30 55.6**	**+2.4**
	comp=N,61nm,0.6s,SNR=45						
MOA				*e*Sn	**Sn**	**04 31 46.9**	**+1.3**
	comp=N,21nm,0.4s						
RISI	**Rein**	**4.50**	**319**	⇑*i*P*	**Pn**	**04 30 55.6**	**+2.0**
RISI	**Rein**	**4.50**	**319**	P	**Pn**	**04 30 55.4**	**+1.8**
RISI				AML	AML		
	comp=E,1410µm,0.5s						
RISI				AML	AML		
	comp=N,917µm,0.9s						
RISI				AML	AML		
	comp=E,1410µm,0.5s						
RISI				AML	AML		
	comp=N,917µm,0.9s						
BIA	**Bitola**	**4.51**	**123**	P	**Pn**	**04 30 56.8**	**+3.2**
BIA				S	**Sn**	**04 31 49.9**	**+3.7**
BIA	**Bitola**	**4.51**	**123**	P	**Pn**	**04 30 56.8**	**+3.2**
BIA				S	**Sn**	**04 31 49.9**	**+3.7**
BIA	**Bitola**	**4.51**	**123**	*i* Pn	**Pn**	**04 30 56.4**	**+2.8**
KOSI	**Kohlern**	**4.53**	**311**	⇑*i*P*P	**Pn**	**04 30 55.6**	**+1.5**
KOSI	**Kohlern**	**4.53**	**311**	P	**Pn**	**04 30 55.6**	**+1.5**
KOSI				AML	AML		
	comp=E,853µm,1.3s						
KOSI				AML	AML		
	comp=N,694µm,1.0s						
KOSI				AML	AML		
	comp=E,853µm,1.3s						
KOSI				AML	AML		
	comp=N,694µm,1.0s						
HERR	**Herculane**	**4.54**	**72**	⇑*i*P	**Pn**	**04 30 56.3**	**+2.3**
HERR	**Herculane**	**4.54**	**72**	S	**Sn**	**04 31 46.2**	**-0.8**
ZAPS	**Zavoj**	**4.59**	**92**	*e*Pn	**Pn**	**04 30 57.0**	**+2.3**
ZAPS				*e*Sn	**Sn**	**04 31 48.5**	**+0.3**
SIRR	**Siria**	**4.61**	**53**	⇑*i*P	**Pn**	**04 30 57.3**	**+2.2**
MAGA	**Magasa**	**4.62**	**300**	P	**Pn**	**04 30 56.3**	**+1.1**
MAGA				AML	AML		
	comp=E,856µm,0.6s						
MAGA				AML	AML		
	comp=N,500µm,1.6s						
MAGA				AML	AML		
	comp=E,856µm,0.6s						
MAGA				AML	AML		
	comp=N,500µm,1.6s						
SRN	**Sarande**	**4.62**	**143**	P	**Pn**	**04 30 56.5**	**+1.4**
SRN	**Sarande**	**4.62**	**143**	P	**Pn**	**04 30 56.5**	**+1.4**
APPI	**Appiano**	**4.62**	**310**	P	**Pn**	**04 30 56.6**	**+1.4**
APPI				AML	AML		
	comp=E,465µm,0.7s						
APPI				AML	AML		
	comp=N,442µm,0.8s						
APPI				AML	AML		
	comp=N,442µm,0.8s						
APPI				AML	AML		
	comp=E,465µm,0.7s						
KEK	**Kerkira**	**4.67**	**145**	P	**Pn**	**04 30 57.1**	**+1.3**
KEK	**Kerkira**	**4.67**	**145**	P	**Pn**	**04 30 57.1**	**+1.3**
STIP	**Stip**	**4.71**	**112**	*i* Pn	**Pn**	**04 30 59.8**	**+3.4**
PLMA	**Palmaria, Port**	**4.72**	**278**	P	**Pn**	**04 30 59.2**	**+2.7**
PLMA				AML	AML		
	comp=E,96µm,1.1s						
PLMA				AML	AML		
	comp=N,166µm,1.4s						
PLMA				AML	AML		
	comp=N,166µm,1.4s						
PLMA				AML	AML		
	comp=E,96µm,1.1s						
ABSI	**Aberstueckl**	**4.73**	**313**	⇑*i*P*	**Pn**	**04 30 58.2**	**+1.4**
ABSI	**Aberstueckl**	**4.73**	**313**	P	**Pn**	**04 30 58.7**	**+1.9**
ABSI				AML	AML		
	comp=E,718µm,1.0s						
ABSI				AML	AML		
	comp=N,876µm,0.8s						
ABSI				AML	AML		
	comp=E,718µm,1.0s						
ABSI				AML	AML		
	comp=N,876µm,0.8s						
NEST	**Nestorio**	**4.74**	**131**	P	**Pn**	**04 30 59.8**	**+3.0**
NEST				S	**Sn**	**04 31 54.1**	**+2.1**
PUNG	**Punghina**	**4.80**	**80**	⇑*i*P	**Pn**	**04 30 59.7**	**+2.1**
PUNG	**Punghina**	**4.80**	**80**	S	**Sn**	**04 31 55.4**	**+2.0**
MODS	**Modra-Piesok**	**4.81**	**7**	*e*P	**Pn**	**04 30 58.3**	**+0.6**
MODS				*e*		04 31 52.9	
MODS				pmax	pmax		
	comp=N,58nm,0.6s						
MODS	**Modra-Piesok**	**4.81**	**7**	*e*PN	**Pn**	**04 30 58.3**	**+0.6**
MODS				*e*SN	**Sn**	**04 31 52.9**	**-0.7**
MODS				*e*LG	Lg	04 31 56.7	
ROSI	**Rosskopf**	**4.81**	**315**	⇑*i*Pn	**Pn**	**04 30 59.8**	**+1.8**
ROSI	**Rosskopf**	**4.81**	**315**	P	Pn	04 31 03.3	+5.4
ROSI				AML	AML		
	comp=E,803µm,1.1s						
ROSI				AML	AML		
	comp=N,701µm,1.1s						
ROSI				AML	AML		
	comp=N,701µm,1.1s						
ROSI				AML	AML		
	comp=E,803µm,1.1s						
MABI	**Malga Bissina**	**4.82**	**303**	⇓*i*Pn	**Pn**	**04 30 59.5**	**+1.5**
MABI	**Malga Bissina**	**4.82**	**303**	P	**Pn**	**04 30 59.5**	**+1.5**
MABI				AML	AML		
	comp=E,130µm,1.5s						
MABI				AML	AML		
	comp=N,164µm,0.9s						
MABI				AML	AML		
	comp=E,130µm,1.5s						
MABI				AML	AML		
	comp=N,164µm,0.9s						
GZR	**Gura Zlata**	**4.93**	**67**	⇑*i*P	**Pn**	**04 31 01.4**	**+1.9**
GZR	**Gura Zlata**	**4.93**	**67**	S	**Sn**	**04 31 57.9**	**+1.2**
WTTA	**Wattenberg**	**4.93**	**319**	*e*Pn	**Pn**	**04 31 02.8**	**+3.2**
	comp=N,1.3nm,0.1s						
WTTA				*e*Sn	**Sn**	**04 31 59.4**	**+2.4**
	comp=N,11nm,0.3s						
WTTA	**Wattenberg**	**4.93**	**319**	⇓*i*Pn	**Pn**	**04 31 03.2**	**+3.6**
SMOL	**Smolenice**	**4.96**	**8**	*e*P	**Pn**	**04 31 00.9**	**+1.1**
SMOL				*e*		04 31 57.0	
SMOL	**Smolenice**	**4.96**	**8**	*e*PN	**Pn**	**04 31 00.9**	**+1.1**
SMOL				*e*SN	**Sn**	**04 31 57.0**	**-0.4**
PSZ	**Piszkesteto**	**4.97**	**29**	*e*Pn	**Pn**	**04 31 00.1**	**+0.1**
PSZ				*e*Sn	**Sn**	**04 31 57.2**	**-0.5**
PSZ	**Piszkesteto**	**4.97**	**29**	⇑*i*P	**Pn**	**04 31 00.8**	**+0.8**
PSZ	**Piszkesteto**	**4.97**	**29**	*e*Pn	**Pb**	**04 31 08.0**	**-4.3**
PSZ				⇑Sn	**Sn**	**04 31 52.1**	**-5.7**
PSZ				*e*Pn	**Sn**	**04 31 52.1**	**-5.7**
PSZ				Sn	**Sn**	**04 31 53.1**	**-4.7**
PSZ				*e*Sg	**Sg**	**04 32 24.1**	**-0.6**
PSZ	**Piszkesteto**	**4.97**	**29**	*e*P	**Pn**	**04 31 00.1**	**+0.1**
PSZ				*e*		04 31 57.2	
WATA	**Walderalm**	**5.01**	**320**	*e*Pn	**Pn**	**04 31 03.4**	**+2.7**
	comp=N,4.8nm,0.2s,SNR=17						
WATA				*e*Sn	**Sn**	**04 32 01.3**	**+2.4**
	comp=N,22nm,0.4s						
SRE	**Strehaia**	**5.05**	**76**	⇓*i*P	**Pn**	**04 31 03.9**	**+2.9**
MOSI	**Grossmontoni**	**5.09**	**308**	⇑*i*Pn	**Pn**	**04 31 03.7**	**+2.0**
MOSI	**Grossmontoni**	**5.09**	**308**	P	**Pn**	**04 31 05.4**	**+3.6**
MOSI				AML	AML		
	comp=E,1210µm,0.9s						
MOSI				AML	AML		
	comp=N,1280µm,0.9s						
MOSI				AML	AML		
	comp=E,1210µm,0.9s						
MOSI				AML	AML		
	comp=N,1280µm,0.9s						
SQTA	**Sankt Quirin**	**5.11**	**317**	*e*Pn	**Pn**	**04 31 04.5**	**+2.5**
	comp=N,2.2nm,0.2s,SNR=8.2						
SQTA				*e*Sn	**Sn**	**04 32 05.1**	**+3.9**
	comp=N,32nm,0.5s						
VTS	**Vitosha**	**5.14**	**99**	*e*Pn	**Pn**	**04 31 04.7**	**+2.3**
VTS				*e*Sn	**Sn**	**04 32 03.9**	**+2.0**
VTS	**Vitosha**	**5.14**	**99**	⇓*i*P	**Pn**	**04 31 04.5**	**+2.1**
VTS	**Vitosha**	**5.14**	**99**	P	**Pn**	**04 31 05.2**	**+2.8**
VTS				S	**Sn**	**04 32 05.1**	**+3.2**
VTS	**Vitosha**	**5.14**	**99**	*e*P	**Pn**	**04 31 04.7**	**+2.3**
VTS				*e*		04 32 03.9	
VAY	**Valandovo**	**5.14**	**114**	*e*Pn	**Pn**	**04 31 03.7**	**+1.5**
VAY	**Valandovo**	**5.14**	**114**	*i* Pn	**Pn**	**04 31 04.0**	**+1.7**
KOLL	**Kolacno**	**5.17**	**15**	*e*P	**Pn**	**04 31 03.3**	**+0.6**
KOLL				*e*		04 32 01.0	
KOLL	**Kolacno**	**5.17**	**15**	*e*PN	**Pn**	**04 31 03.3**	**+0.6**
KOLL				*e*SN	**Sn**	**04 32 01.0**	**-1.5**
VYHS	**Vyhne**	**5.18**	**19**	*e*P	**Pn**	**04 31 03.8**	**+0.9**
VYHS				*e*		04 32 01.7	
VYHS				pmax	pmax		
	comp=N,41nm,0.5s						
VYHS	**Vyhne**	**5.18**	**19**	*e*PN	**Pn**	**04 31 03.8**	**+0.9**
VYHS				*e*SN	**Sn**	**04 32 01.7**	**-1.1**
VYHS				*e*LG	Lg	04 32 03.5	
KZN	**Kozani**	**5.22**	**127**	P	**Pn**	**04 31 05.8**	**+2.4**
KZN	**Kozani**	**5.22**	**127**	P	**Pn**	**04 31 05.8**	**+2.4**
KZN	**Kozani**	**5.22**	**127**	P	**Pn**	**04 31 05.8**	**+2.4**
FETA	**Feichten**	**5.23**	**313**	*e*Pn	**Pn**	**04 31 05.5**	**+1.8**
	comp=N,4.0nm,0.3s,SNR=7.8						
FETA				*e*Sn	**Sn**	**04 32 05.8**	**+1.6**
	comp=N,10nm,0.4s						
KPRO	**Kipourio**	**5.23**	**133**	P	**Pn**	**04 31 06.3**	**+2.7**
MOTA	**Moosalm**	**5.25**	**317**	*i* Pn	**Pn**	**04 31 06.1**	**+2.2**
	comp=N,27nm,0.6s,SNR=34						
MOTA				*i* Sn	**Sn**	**04 32 07.3**	**+2.7**
	comp=N,13nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**5.25**	**307**	*e*Pn	**Pn**	**04 31 06.3**	**+2.3**
FUORN	**Ofenpass-Fuorn**	**5.25**	**307**	⇑*i*Pn	**Pn**	**04 31 06.3**	**+2.3**
FUORN	**Ofenpass-Fuorn**	**5.25**	**307**	P	**Pn**	**04 31 06.4**	**+2.3**
FUORN				AML	AML		
	comp=E,173µm,0.7s						
FUORN				AML	AML		
	comp=N,181µm,1.5s						
FUORN				AML	AML		
	comp=E,173µm,0.7s						
FUORN				AML	AML		
	comp=N,181µm,1.5s						
LLI	**Lipari**	**5.27**	**192**	P	**Pn**	**04 31 06.5**	**+2.5**
KRUC	**Moravsky**	**5.46**	**0**	*e*PN	**Pn**	**04 31 07.3**	**+0.7**
KRUC				*e*SN	**Sn**	**04 32 08.0**	**-1.5**
PGF	**Pioggiola**	**5.49**	**261**	*e*Pn	**Pn**	**04 31 08.9**	**+1.8**
	SNR=1.0						
DRGR		**5.51**	**52**	⇑*i*P	**Pn**	**04 31 10.2**	**+2.8**
RETA	**Reutte**	**5.51**	**317**	*i* Pn	**Pn**	**04 31 10.9**	**+3.4**
	comp=N,1.5nm,0.2s						
RETA				*i* Sn	**Sn**	**04 32 13.1**	**+2.0**
	comp=N,17nm,0.4s						
GEA0	**GERESS Array S**	**5.54**	**342**	*e*Pn	**Pn**	**04 31 09.5**	**+1.7**
GEC2	**GERESS Array S**	**5.55**	**342**	*e*Pn	**Pn**	**04 31 09.3**	**+1.3**
GEC2				*e*Sn	**Sn**	**04 32 11.9**	**-0.1**
GEC2	**GERESS Array S**	**5.55**	**342**	*e*P	**Pn**	**04 31 09.3**	**+1.3**
GEC2				*e*		04 32 11.9	
GERES	**GERESS Array B**	**5.55**	**342**	Pn	**Pn**	**04 31 09.7**	**+1.7**
GERES				Sn	**Sn**	**04 32 10.9**	**-1.0**
GERES	**GERESS Array B**	**5.55**	**342**	P	**Pn**	**04 31 09.7**	**+1.7**
GERES						04 32 10.9	
GERES	**GERESS Array B**	**5.55**	**342**	Pn	**Pn**	**04 31 09.7**	**+1.7**
	comp=N,3.8nm,0.3s,baz=158,slow=12,SNR=42						
GERES				Sn	**Sn**	**04 32 10.9**	**-1.0**
	comp=N,4.8nm,0.3s,baz=158,slow=22,SNR=8.8						
DAVOX	**Davos/Dischmat**	**5.56**	**307**	Pn	**Pn**	**04 31 09.9**	**+1.7**
DAVOX				Sn	**Sn**	**04 32 09.9**	**-2.5**
DAVOX	**Davos/Dischmat**	**5.56**	**307**	P	**Pn**	**04 31 09.9**	**+1.7**
DAVOX						04 32 09.9	
DAVOX	**Davos/Dischmat**	**5.56**	**307**	⇓*i*Pn	**Pn**	**04 31 10.4**	**+2.1**
DAVOX	**Davos/Dischmat**	**5.56**	**307**	Pn	**Pn**	**04 31 09.9**	**+1.7**
	comp=N,3.5nm,0.3s,baz=114,slow=16,SNR=25						
DAVOX				Sn	**Sn**	**04 32 09.9**	**-2.5**
	comp=N,0.8nm,0.3s,baz=106,slow=9.9,SNR=4.2						
LOT	**Lotru**	**5.62**	**68**	⇑*i*P	**Pn**	**04 31 11.7**	**+2.8**
VDL	**Val di Lei**	**5.67**	**303**	⇓*i*Pn	**Pn**	**04 31 11.9**	**+2.2**
MUGIO	**Muggio**	**5.69**	**296**	⇑*e*Pn	**Pn**	**04 31 11.9**	**+2.0**
VRAC	**Vranov**	**5.70**	**2**	Pn	**Pn**	**04 31 10.4**	**+0.4**
VRAC				Sn	**Sn**	**04 32 13.1**	**-2.6**
VRAC	**Vranov**	**5.70**	**2**	⇑*i*P	**Pn**	**04 31 09.9**	**-0.1**
VRAC	**Vranov**	**5.70**	**2**	P	**Pn**	**04 31 10.4**	**+0.4**
VRAC						04 32 13.1	
VRAC	**Vranov**	**5.70**	**2**	*e*PN	**Pn**	**04 31 11.8**	**+1.8**
VRAC				*e*SN	**Sn**	**04 32 12.1**	**-3.5**
VRAC	**Vranov**	**5.70**	**2**	Pn	**Pn**	**04 31 10.4**	**+0.4**
	comp=N,0.9nm,0.3s,baz=179,slow=10,SNR=6.6						
VRAC				Sn	**Sn**	**04 32 13.1**	**-2.6**
	comp=N,4.0nm,0.3s,baz=268,slow=16,SNR=6.4						
VRAC				LR	LR	04 34 03.5	
	comp=N,188nm,19.2s,baz=210,slow=45						
LKD2	**Lefkada island**	**5.81**	**145**	P	**Pn**	**04 31 12.5**	**+1.0**
LKD2	**Lefkada island**	**5.81**	**145**	P	**Pn**	**04 31 12.5**	**+1.0**
VLAD	**Vladila**	**5.84**	**83**	⇓*i*P	**Pn**	**04 31 14.9**	**+3.0**
KHC	**Kasperske Hory**	**5.85**	**342**	*e*Pn	**Pn**	**04 31 13.6**	**+1.6**
KHC				*e*Sn	**Sn**	**04 32 19.7**	**+0.5**
KHC	**Kasperske Hory**	**5.85**	**342**	*e*PN	**Pn**	**04 31 13.8**	**+1.8**
KHC				*e*SN	**Sn**	**04 32 19.9**	**+0.7**
KHC	**Kasperske Hory**	**5.85**	**342**	*e*P	**Pn**	**04 31 13.8**	**+1.8**
KHC				*e*		04 32 19.9	
DAVA	**Damuels**	**5.85**	**311**	*e*Pn	**Pn**	**04 31 15.1**	**+2.9**
	comp=N,4.9nm,0.2s						
DAVA				*e*Sn	**Sn**	**04 32 22.8**	**+3.4**
	comp=N,20nm,0.4s						
DAVA	**Damuels**	**5.85**	**311**	⇓*i*Pn	**Pn**	**04 31 15.9**	**+3.7**
LANS	**Liptovska Anna**	**5.95**	**20**	*e*P	**Pn**	**04 31 15.2**	**+1.8**
LANS	**Liptovska Anna**	**5.95**	**20**	*e*PN	**Pn**	**04 31 15.2**	**+1.8**
CJR	**Cluj-Napoca**	**5.99**	**56**	⇑*i*P	**Pn**	**04 31 16.6**	**+2.6**
PANIX	**Pigniu (Panix)**	**6.04**	**305**	⇑*e*Pn	**Pn**	**04 31 18.1**	**+3.4**
LIENZ	**Kamor/St.Gall**	**6.07**	**310**	⇑*e*Pn	**Pn**	**04 31 18.4**	**+3.2**
MORC	**Moravsky Berou**	**6.22**	**7**	*e*Pn	**Pn**	**04 31 19.0**	**+1.8**
MORC				*e*Sn	**Sn**	**04 32 28.2**	**-0.3**
MORC	**Moravsky Berou**	**6.22**	**7**	⇑*i*P	**Pn**	**04 31 19.5**	**+2.3**
MORC	**Moravsky Berou**	**6.22**	**7**	*e*P	**Pn**	**04 31 19.0**	**+1.8**
MORC				*e*		04 32 28.2	
MORC	**Moravsky Berou**	**6.22**	**7**	*e*PN	**Pn**	**04 31 18.6**	**+1.4**
MORC				*e*SN	**Sn**	**04 32 27.6**	**-0.9**
EVR	**Evrytania**	**6.24**	**137**	P	**Pn**	**04 31 19.9**	**+2.5**
EVR				S	**Sn**	**04 32 31.6**	**+2.7**
EVR	**Evrytania**	**6.24**	**137**	P	**Pn**	**04 31 19.9**	**+2.5**
EVR				S	**Sn**	**04 32 31.6**	**+2.7**
TRPA	**Tarpa**	**6.25**	**42**	⇓*i*P	**Pn**	**04 31 20.3**	**+2.8**
TRPA	**Tarpa**	**6.25**	**42**	*e*Pn	**Pn**	**04 31 19.0**	**+1.5**
TRPA				Sn	**Sn**	**04 32 31.1**	**+1.9**
HUMR	**Humele**	**6.29**	**79**	⇓*i*P	**Pn**	**04 31 20.4**	**+2.4**
VAE	**Valguarnera**	**6.30**	**194**	Pn	**Pn**	**04 31 21.7**	**+3.5**
VAE	**Valguarnera**	**6.30**	**194**	Pn	**Pn**	**04 31 21.7**	**+3.5**
	comp=N,0.5nm,0.3s,baz=14,slow=12,SNR=2.0						
VLS	**Valsamata**	**6.30**	**148**	P	**Pn**	**04 31 19.0**	**+0.7**
OKC	**Ostrava-Krasne**	**6.35**	**11**	*e*PN	**Pn**	**04 31 20.9**	**+2.0**
OKC				*e*SN	**Sn**	**04 32 31.5**	**-0.1**
OKC	**Ostrava-Krasne**	**6.35**	**11**	*e*P	**Pn**	**04 31 20.9**	**+2.0**
OKC				*e*		04 32 31.5	
NIE	**Niedzica**	**6.42**	**24**	*e*Pn	**Pn**	**04 31 22.4**	**+2.6**
NIE				*e*Sn	**Sn**	**04 32 34.9**	**+1.6**
NIE	**Niedzica**	**6.42**	**24**	*e*P	**Pn**	**04 31 22.4**	**+2.6**
NIE				*e*		04 32 34.8	
AGG	**Agios Georgios**	**6.42**	**133**	*e*Pn	**Pn**	**04 31 22.5**	**+2.6**
AGG				*e*Sn	**Sn**	**04 32 35.1**	**+1.6**
AGG	**Agios Georgios**	**6.42**	**133**	*e*P	**Pn**	**04 31 22.5**	**+2.6**
AGG				*e*		04 32 35.1	
MMK	**Mattmark**	**6.44**	**295**	⇑Pn	**Pn**	**04 31 22.6**	**+2.2**
BNALP	**Bannalp**	**6.47**	**303**	⇑*e*Pn	**Pn**	**04 31 24.8**	**+4.0**
CLTB	**Caltabellotta**	**6.48**	**203**	*e*Pn	**Pn**	**04 31 24.7**	**+4.0**
VOIR		**6.48**	**71**	⇑*i*P	**Pn**	**04 31 24.1**	**+3.3**
PRU	**Pruhonice**	**6.50**	**350**	*e*PN	**Pn**	**04 31 22.1**	**+1.2**
PRU				*e*SN	**Sn**	**04 32 35.2**	**0.0**
PRU	**Pruhonice**	**6.50**	**350**	*e*P	**Pn**	**04 31 22.1**	**+1.2**
PRU				*e*		04 32 35.2	
UZH	**Uzhgorod**	**6.50**	**37**	*e*P	**Pn**	**04 31 25.4**	**+4.5**
UZH				*e*S	**Sn**	**04 32 41.4**	**+6.2**
ARCR	**ARCALIA**	**6.63**	**56**	⇑*i*P	**Pn**	**04 31 25.1**	**+2.4**
DPC	**Dobruska-Polom**	**6.75**	**360**	*e*PN	**Pn**	**04 31 25.8**	**+1.5**
DPC				*e*SN	**Sn**	**04 32 40.6**	**-0.7**
DPC	**Dobruska-Polom**	**6.75**	**360**	*e*P	**Pn**	**04 31 25.8**	**+1.5**
DPC				*e*		04 32 40.6	
DIX	**Grande Dixence**	**6.82**	**294**	⇓Pn	**Pn**	**04 31 28.1**	**+2.5**
DOPR	**Dopca**	**6.85**	**67**	⇓*i*P	**Pn**	**04 31 28.0**	**+2.2**
SLE	**Schleitheim**	**6.89**	**310**	⇑Pn	**Pn**	**04 31 27.5**	**+1.1**
UPC	**Upice**	**6.91**	**358**	*e*SN	**Sn**	**04 32 44.6**	**-0.6**
MBDF	**Montbardon**	**6.98**	**283**	*e*Pn	**Pn**	**04 31 28.7**	**+1.1**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**04 32 42.7**	**-4.5**
	comp=N,18nm,0.3s,SNR=1.0						
SENIN	**Lac Senin/Sane**	**6.98**	**296**	*e*Pn	**Pn**	**04 31 29.3**	**+1.5**
SENIN				*e*Sn	**Sn**	**04 32 47.0**	**-0.4**
SENIN	**Lac Senin/Sane**	**6.98**	**296**	⇑*e*Pg	**Pb**	**04 31 49.6**	**+2.9**
OJC	**Ojcow**	**7.02**	**18**	*e*Pn	**Pn**	**04 31 30.4**	**+2.3**
OJC				*e*Sn	**Sn**	**04 32 45.1**	**-3.0**
OJC	**Ojcow**	**7.02**	**18**	*e*Pn	**Pn**	**04 31 27.0**	**-1.1**
OJC				*e*Sn	**Sn**	**04 32 45.5**	**-2.6**
OJC	**Ojcow**	**7.02**	**18**	*e*P	**Pn**	**04 31 30.4**	**+2.3**
OJC				*e*		04 32 45.1	
GRFO	**Grafenberg**	**7.03**	**332**	*e*Pn	**Pn**	**04 31 30.7**	**+2.5**
	comp=N,14nm,0.8s						
GRFO				*e*S	**Sn**	**04 32 45.7**	**-2.6**
FRF	**La Foret Royal**	**7.04**	**273**	*e*Pn	**Pn**	**04 31 29.7**	**+1.3**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**04 32 44.7**	**-4.0**
	comp=N,6.1nm,0.3s						
GRYON	**Gryon**	**7.07**	**295**	⇓*e*Pn	**Pn**	**04 31 31.7**	**+2.9**
BNI	**Bardonecchia**	**7.08**	**285**	*e*Pn	**Pn**	**04 31 30.1**	**+1.0**
BNI				*e*Sn	**Sn**	**04 32 49.7**	**0.0**
BNI	**Bardonecchia**	**7.08**	**285**	*e*P	**Pn**	**04 31 30.1**	**+1.0**
BNI				*e*		04 32 49.7	
LPG	**La Plagne**	**7.11**	**289**	*e*Pn	**Pn**	**04 31 29.3**	**-0.3**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**04 32 46.2**	**-4.5**
	comp=N,81nm,0.8s						
MLR	**Muntele Rosu**	**7.11**	**71**	*e*Pn	**Pn**	**04 31 32.6**	**+3.2**
MLR				Sn	**Sn**	**04 32 50.0**	**-0.5**
MLR	**Muntele Rosu**	**7.11**	**71**	⇑*i*P	**Pn**	**04 31 32.8**	**+3.4**
MLR	**Muntele Rosu**	**7.11**	**71**	P	**Pn**	**04 31 32.4**	**+2.9**
MLR						04 32 50.0	
MLR	**Muntele Rosu**	**7.11**	**71**	Pn	**Pn**	**04 31 32.4**	**+2.9**
	comp=N,0.4nm,0.3s,baz=155,slow=10,SNR=10.0						
MLR				Sn	**Sn**	**04 32 50.0**	**-0.5**
	baz=45,slow=20,SNR=2.3						
LPL	**La Plagne**	**7.13**	**289**	*e*Pn	**Pn**	**04 31 30.3**	**+0.5**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**04 32 46.3**	**-4.7**
	comp=N,44nm,0.4s,SNR=1.0						
NKC	**Novy Kostel**	**7.14**	**339**	*e*SN	**Sn**	**04 32 51.3**	**+0.2**
OZUR		**7.15**	**66**	⇓*i*P	**Pn**	**04 31 32.6**	**+2.6**
LMR	**La Mourre**	**7.16**	**271**	*e*Pn	**Pn**	**04 31 31.2**	**+1.2**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**04 32 47.9**	**-3.7**
	comp=N,5.3nm,0.4s						
BFO	**Black Forest**	**7.31**	**313**	*e*Pn	**Pn**	**04 31 32.5**	**+0.4**
BFO				*e*S	**Sn**	**04 32 50.5**	**-4.8**
BFO	**Black Forest**	**7.31**	**313**	*e*P	**Pn**	**04 31 32.5**	**+0.4**
BFO				*e*S	**Sn**	**04 32 50.5**	**-4.8**
BFO	**Black Forest**	**7.31**	**313**	⇑Pn	**Pn**	**04 31 32.9**	**+0.8**
BUR04	**Bucovina Ar. S**	**7.39**	**54**	*e*Pn	**Pn**	**04 31 35.9**	**+2.6**
BURAR	**Bucovina Array**	**7.40**	**54**	⇑*i*P	**Pn**	**04 31 36.9**	**+3.6**
BUR08	**Bucovina Ar. S**	**7.40**	**54**	*e*Pn	**Pn**	**04 31 32.0**	**-1.4**
BRG	**Berggiesshubel**	**7.45**	**348**	PN	**Pn**	**04 31 32.5**	**-1.5**
BRG				PG	**Pg**	**04 32 05.4**	**-2.2**
BRG				SN	**Sn**	**04 32 59.1**	**+0.6**
	comp=N,26nm,1.2s						
BRG	**Berggiesshubel**	**7.45**	**348**	P	**Pn**	**04 31 32.5**	**-1.5**
BRG						04 32 59.1	
BRG				smax	smax		
	comp=N,26nm,1.2s						
ORIF	**Oris-en-Rattie**	**7.63**	**283**	*e*Pn	**Pn**	**04 31 37.6**	**+1.1**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**04 32 58.4**	**-4.7**

	comp=N,37nm,0.6s						
PLOR	**Plostina**	**7.67**	**69**	⇓iP	**Pn**	**04 31 39.7**	**+2.6**
ITM	**Ithomi**	**7.70**	**145**	ePn	**Pn**	**04 31 38.9**	**+1.4**
ITM				eSn	**Sn**	**04 33 04.6**	**-0.3**
BRANT	**Les Verrieres**	**7.72**	**299**	⇑P*	Pb	04 31 49.5	-10
VRI	**Vrincioaia**	**7.73**	**69**	⇑iP	**Pn**	**04 31 40.1**	**+2.3**
MOX	**Moxa**	**7.74**	**337**	P	**Pn**	**04 31 39.6**	**+1.6**
SMRF	**Simiane la Rot**	**7.80**	**276**	ePg	**Pn**	**04 31 40.0**	**+1.1**
SMRF				eSn	**Sn**	**04 33 02.5**	**-4.9**
	comp=N,2.0nm,0.3s						
CABF	**La Chapelle**	**7.85**	**296**	ePn	**Pn**	**04 31 40.0**	**+0.4**
	SNR=1.0						
CABF				eSn	**Sn**	**04 33 02.5**	**-6.2**
	comp=N,4.9nm,0.4s						
HINF	**Hinteralfeld**	**7.86**	**306**	ePn	**Pn**	**04 31 39.8**	**+0.1**
	SNR=1.0						
HINF				eSn	**Sn**	**04 33 02.6**	**-6.2**
	comp=N,16nm,0.5s						
ECH	**Echery**	**7.89**	**309**	ePn	**Pn**	**04 31 40.6**	**+0.6**
ECH				eSn	**Sn**	**04 33 07.1**	**-2.3**
ECH	**Echery**	**7.89**	**309**	eP	**Pn**	**04 31 40.6**	**+0.6**
ECH				e		04 33 07.1	
CDF	**Champ du Feu**	**7.93**	**310**	ePn	**Pn**	**04 31 40.8**	**+0.1**
	SNR=1.0						
CLL	**Collm**	**8.03**	**345**	ePn	**Pn**	**04 31 42.6**	**+0.7**
CLL	**Collm**	**8.03**	**345**	ePn	**Pn**	**04 31 46.0**	**+4.1**
CLL				ePg	Pg	04 32 14.0	-4.7
CLL				eSn	**Sn**	**04 33 07.0**	**-5.8**
CLL				e		04 33 35.0	
CLL				e		04 33 45.0	
CLL				eSg	**Sg**	**04 34 00.0**	**-2.6**
	comp=Z,56nm,1.1s						
CLL				eSglp		04 34 04.0	
	comp=N,200nm,22.8s						
CLL				eSglp		04 34 04.0	
	comp=E,700nm,14.2s						
CLL	**Collm**	**8.03**	**345**	eP	**Pn**	**04 31 46.0**	**+4.1**
CLL				e		04 33 07.0	
LVV	**L'vov**	**8.15**	**38**	eP	**Pn**	**04 31 43.0**	**-0.5**
LVV				eS	**Sn**	**04 33 13.1**	**-2.7**
LVV				eS	**Sn**	**04 33 20.1**	**+4.3**
LVV				pmax	pmax		
	comp=Z,40nm,1.4s						
HAU	**Haudompre**	**8.25**	**306**	ePn	**Pn**	**04 31 45.3**	**+0.3**
	SNR=1.0						
HAU				eSn	**Sn**	**04 33 12.5**	**-5.9**
	comp=Z,33nm,0.6s						
VIVF	**Saint-Julien-l**	**8.48**	**282**	ePn	**Pn**	**04 31 48.9**	**+0.8**
	SNR=1.0						
VIVF				eSn	**Sn**	**04 33 18.8**	**-5.1**
	comp=Z,3.5nm,0.4s						
TNS	**Taunus Mts**	**8.54**	**324**	P	**Pn**	**04 31 51.9**	**+2.9**
SSB	**Saint Sauveur**	**8.61**	**285**	ePn	**Pn**	**04 31 51.6**	**+1.7**
SSB	**Saint Sauveur**	**8.61**	**285**	eP	**Pn**	**04 31 51.6**	**+1.7**
LASF	**Ste Croix**	**9.04**	**277**	eSn	**Sn**	**04 33 32.5**	**-5.3**
	comp=Z,1.1nm,0.2s						
SMF	**Signal de Mont**	**9.35**	**293**	ePn	**Pn**	**04 32 00.4**	**+0.4**
	SNR=1.0						
SMF				eSn	**Sn**	**04 33 38.1**	**-7.2**
	comp=Z,11nm,0.4s						
LOR	**Lormes**	**9.51**	**297**	ePn	**Pn**	**04 32 02.4**	**+0.2**
	baz=117,SNR=1.0						
LOR				eSn	**Sn**	**04 33 42.4**	**-6.9**
	comp=Z,16nm,0.4s						
KEST	**Kesra**	**9.54**	**217**	Pn	Pn	04 32 08.2	+5.6
KEST	**Kesra**	**9.54**	**217**	Pn	Pn	04 32 08.2	+5.6
	comp=Z,0.2nm,0.3s,baz=276,slow=12,SNR=2.8						
KEST				LR	LR	04 35 41.3	
	comp=Z,130nm,20.0s,baz=340,slow=37						
APE	**Apeiranthos**	**9.58**	**130**	i P	**Pn**	**04 32 05.7**	**+2.5**
SSF	**Saint Saulge**	**9.68**	**295**	ePn	**Pn**	**04 32 05.0**	**+0.5**
	SNR=1.0						
SSF				eSn	**Sn**	**04 33 46.8**	**-6.6**
	comp=Z,8.6nm,0.4s						
AVF	**Avril sur Loir**	**9.71**	**294**	ePn	**Pn**	**04 32 05.4**	**+0.5**
	SNR=1.0						
AVF				eSn	**Sn**	**04 33 47.0**	**-7.1**
	comp=Z,3.1nm,0.4s						
BGF	**Bois d'Agland**	**9.99**	**292**	ePn	**Pn**	**04 32 09.4**	**+0.5**
BGF				eSn	**Sn**	**04 33 54.0**	**-7.1**
	comp=Z,10nm,0.4s						
HYF	**Humbligny**	**10.30**	**296**	ePn	**Pn**	**04 32 13.1**	**0.0**
CAF	**Calviac**	**10.33**	**282**	ePn	**Pn**	**04 32 15.2**	**+1.7**
TCF	**Toulx Ste Croi**	**10.38**	**290**	ePn	**Pn**	**04 32 14.7**	**+0.6**
IDI	**Anoyia**	**10.61**	**139**	Pn	**Pn**	**04 32 17.8**	**+0.4**
IDI				Sn	**Sn**	**04 34 08.1**	**-8.2**
IDI	**Anoyia**	**10.61**	**139**	Pn	**Pn**	**04 32 17.8**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=320,slow=16,SNR=3.5						
IDI				Sn	**Sn**	**04 34 08.1**	**-8.2**
	comp=Z,1.0nm,0.3s,baz=266,slow=19,SNR=4.7						
KIEV	**Kiev**	**11.26**	**46**	i P	**Pn**	**04 32 30.1**	**+4.0**
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKASG	**Malin Array Be**	**11.27**	**46**	Pn	**Pn**	**04 32 28.0**	**+1.8**
AKASG	**Malin Array Be**	**11.27**	**46**	P	**Pn**	**04 32 28.0**	**+1.8**
AKASG	**Malin Array Be**	**11.27**	**46**	Pn	**Pn**	**04 32 28.0**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=232,slow=13,SNR=5.0						
SIM	**Simferopol'**	**12.81**	**78**	P	**Pn**	**04 32 49.8**	**+2.5**
SIM				pmax	pmax		
	comp=Z,17nm,1.1s						
BRTR	**Keskin Array B**	**13.49**	**101**	Pn	**Pn**	**04 32 59.5**	**+2.6**
BRTR	**Keskin Array B**	**13.49**	**101**	P	**Pn**	**04 32 59.5**	**+2.6**
BRTR	**Keskin Array B**	**13.49**	**101**	Pn	**Pn**	**04 32 59.5**	**+2.6**
	comp=Z,0.0nm,0.3s,baz=290,slow=9.1,SNR=3.1						
ESDC	**Sonseca Array**	**15.68**	**262**	Pn	**Pn**	**04 33 28.0**	**+1.7**
ESDC	**Sonseca Array**	**15.68**	**262**	Pn	**Pn**	**04 33 28.0**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=72,slow=13,SNR=3.3						
VSU	**Vasula**	**16.21**	**20**	ceP	**P**	**04 33 36.1**	**0.0**
VSU				pmax	pmax		
	comp=Z,128nm,2.5s						
HFS	**Hagfors**	**16.63**	**355**	Pn	**Pn**	**04 33 39.0**	**+0.8**
HFS	**Hagfors**	**16.63**	**355**	P	**Pn**	**04 33 39.0**	**+0.8**
HFS	**Hagfors**	**16.63**	**355**	Pn	**Pn**	**04 33 39.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=163,slow=17,SNR=5.1						
VSR	**Storozhevoye**	**17.17**	**56**	i P	**P**	**04 33 47.9**	**+1.2**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN	**Obninsk**	**17.42**	**42**	i P	**P**	**04 33 50.6**	**+1.2**
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	**Obninsk**	**17.42**	**42**	LR	LR	04 41 03.4	
	comp=Z,31nm,18.6s,baz=208,slow=39						
LPSR	**Galich'ya Gora**	**17.50**	**51**	eP	**P**	**04 33 50.9**	**+0.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NB2	**NORSAR Subarra**	**17.73**	**352**	P	**P**	**04 33 52.6**	**-0.3**
	comp=Z,7.6nm,1.1s,baz=168,slow=11						
NOA	**NORSAR Array B**	**17.73**	**352**	P	**P**	**04 33 52.4**	**-0.5**
NOA	**NORSAR Array B**	**17.73**	**352**	P	**P**	**04 33 52.4**	**-0.5**
NOA	**NORSAR Array B**	**17.73**	**352**	P	**P**	**04 33 52.4**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=165,slow=11,SNR=7.5						
NOA				LR	LR	04 41 23.5	
	comp=Z,49nm,20.2s,baz=270,slow=39						
MOS	**Moscow**	**18.26**	**41**	eP	**P**	**04 33 58.7**	**-0.1**
MOS				eS	**S**	**04 37 26.2**	**-1.5**
MOS				pmax	pmax		
	comp=Z,31nm,0.8s						
MMAI	**Mount Meron Ar**	**18.27**	**119**	P	**P**	**04 34 00.2**	**+1.0**
MMAI	**Mount Meron Ar**	**18.27**	**119**	P	**P**	**04 34 00.2**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=323,slow=9.3,SNR=2.6						
FINES	**FINESS Array B**	**18.78**	**15**	P	**Pn**	**04 34 04.7**	**-0.2**
FINES	**FINESS Array B**	**18.78**	**15**	P	**Pn**	**04 34 04.7**	**-0.2**
FINES	**FINESS Array B**	**18.78**	**15**	P	**Pn**	**04 34 04.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=187,slow=9.6,SNR=16						
FIA1	**FINESS Array S**	**18.78**	**15**	eP	**Pn**	**04 34 04.8**	**0.0**
KIV	**Kislovodsk**	**19.00**	**80**	eP	**P**	**04 34 07.0**	**-0.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEY	**Neytrino**	**19.14**	**82**	i P	**Pn**	**04 34 11.3**	**+1.8**
NEY				pmax	pmax		
	comp=Z,7.0nm,2.3s						
EIL	**Elat**	**20.34**	**127**	P	Pn	04 34 23.4	-0.3
EIL	**Elat**	**20.34**	**127**	P	Pn	04 34 23.4	-0.3
	comp=Z,6.8nm,0.8s,baz=351,slow=12,SNR=4.5						
GNI	**Garni**	**21.38**	**90**	P	**P**	**04 34 34.0**	**+0.9**
GNI	**Garni**	**21.38**	**90**	ceP	**P**	**04 34 34.4**	**+1.4**
GNI				pmax	pmax		
	comp=Z,35nm,1.0s						
GNI	**Garni**	**21.38**	**90**	P	**P**	**04 34 33.9**	**+0.9**
	comp=Z,3.6nm,0.6s,baz=236,slow=15,SNR=2.9						
KLMR	**Klimovskoe**	**22.15**	**31**	eP	**P**	**04 34 41.6**	**+0.7**
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLMR	**Klimovskoe**	**22.15**	**31**	eP	**P**	**04 34 41.6**	**+0.7**
KLMR				AMP		04 34 48.8	
	comp=Z,7.0nm,0.8s						
PRGR	**Permogore**	**24.98**	**34**	eP	**P**	**04 35 07.9**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,16nm,0.6s						
KIRV	**Kirov**	**25.27**	**42**	P	**P**	**04 35 11.7**	**+0.3**
	comp=Z,7.6nm,0.5s,baz=244,slow=6.9,SNR=4.0						
ARU	**Arti**	**29.50**	**49**	P	**P**	**04 35 48.6**	**-0.8**
ARU				S	**S**	**04 40 44.6**	**+0.8**
ARU				SS	**SnSn**	**04 42 09.8**	**-1.0**
GEYT	**Alibeck**	**31.89**	**86**	P	**P**	**04 36 11.2**	**+0.5**
GEYT	**Alibeck**	**31.89**	**86**	P	**P**	**04 36 11.2**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=284,slow=14,SNR=4.1						
TOA0	**Torodi Ar. Sit**	**32.87**	**207**	eP	**P**	**04 36 20.3**	**+0.9**
TORD	**Torodi Ar. Bea**	**32.87**	**207**	P	**P**	**04 36 20.5**	**+1.1**
TORD	**Torodi Ar. Bea**	**32.87**	**207**	P	**P**	**04 36 20.5**	**+1.1**
	comp=Z,2.1nm,1.1s,baz=17,slow=10.0,SNR=7.3						
BRVK	**Borovoye**	**36.28**	**56**	ceP	**P**	**04 36 49.3**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**36.35**	**56**	P	**P**	**04 36 49.1**	**-0.1**
BVAR	**Borovoye Array**	**36.35**	**56**	P	**P**	**04 36 49.1**	**-0.1**
BVAR	**Borovoye Array**	**36.35**	**56**	P	**P**	**04 36 49.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=258,slow=7.4,SNR=6.1						
DBIC	**Dimbokro**	**41.24**	**213**	LR	LR	04 55 08.7	
	comp=Z,45nm,18.7s,baz=346,slow=37						
AAK	**Ala-Archa**	**41.69**	**70**	ceP	**P**	**04 37 34.8**	**+0.5**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURBB	**Kurchatov Arra**	**41.78**	**58**	P	**P**	**04 37 33.9**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=287,slow=9.5,SNR=5.9						
KURK	**Kurchatov**	**41.81**	**58**	P	**P**	**04 37 33.9**	**-1.0**
KURK	**Kurchatov**	**41.81**	**58**	P	**P**	**04 37 33.9**	**-1.0**
KSH	**Kashi**	**43.97**	**74**	P	**P**	**04 37 53.2**	**+0.5**
KSH				pP	pP	04 37 56.3	+0.9
KSH				pmax	pmax		
	comp=Z,330nm,5.4s						
ZAA0	**Zalesovo Array**	**44.61**	**52**	eP	**P**	**04 37 58.4**	**+0.9**
ZALV	**Zalesovo Beam**	**44.61**	**52**	eP	**P**	**04 37 57.1**	**-0.3**
ZALV	**Zalesovo Beam**	**44.61**	**52**	eP	**P**	**04 37 57.1**	**-0.3**
ZALV	**Zalesovo Beam**	**44.61**	**52**	P	**P**	**04 37 57.3**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=284,slow=9.7,SNR=9.3						
MK31	**Makanchi Array**	**45.35**	**62**	eP	**P**	**04 38 03.7**	**+0.2**
MK31	**Makanchi Array**	**45.35**	**62**	eP	**P**	**04 38 03.7**	**+0.2**
MKAR	**Makanchi Array**	**45.35**	**62**	P	**P**	**04 38 02.9**	**-0.6**
MKAR				PcP	**PcP**	**04 39 42.6**	**-0.3**
MKAR	**Makanchi Array**	**45.35**	**62**	P	**P**	**04 38 02.9**	**-0.6**
MKAR						04 39 42.6	
MKAR	**Makanchi Array**	**45.35**	**62**	P	**P**	**04 38 02.9**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=283,slow=7.4,SNR=10						
MKAR				PcP	**PcP**	**04 39 42.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=307,slow=3.1,SNR=3.0						
MK01	**Makanchi Array**	**45.36**	**62**	eP	**P**	**04 38 03.4**	**-0.2**
DGZ	**Jazzator, Alta**	**47.50**	**56**	i P	**P**	**04 38 20.0**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WMQ	**Urumqi**	**50.03**	**63**	eP	**P**	**04 38 43.5**	**+3.5**
SCHQ	**Schefferville**	**52.38**	**314**	P	**P**	**04 38 57.4**	**+0.1**
SCHQ	**Schefferville**	**52.38**	**314**	P	**P**	**04 38 57.4**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=86,slow=7.2,SNR=4.2						
SONM	**Songino Array**	**59.50**	**51**	P	**P**	**04 39 48.4**	**-0.2**
SONM	**Songino Array**	**59.50**	**51**	P	**P**	**04 39 48.4**	**-0.2**
SONM	**Songino Array**	**59.50**	**51**	P	**P**	**04 39 48.4**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=285,slow=7.3,SNR=8.7						
LZH	**Lanzhou**	**64.61**	**64**	eP	**P**	**04 40 23.7**	**+0.5**
LZH				pP	pP	04 40 27.0	+1.0
LZH				sP	sP	04 40 28.5	+1.5
LZH				ePP	**PP**	**04 42 47.2**	**+2.3**
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,56nm,7.2s						
LZH				LR	LR		
	comp=N,280nm,15.2s						
LZH				LR	LR		
	comp=E,290nm,15.3s						
LZH				LR	LR		
	comp=Z,370nm,18.2s						
BILL	**Bilibino**	**66.40**	**12**	i P	**P**	**04 40 35.0**	**+1.0**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YKA	**Yellowknife Ar**	**67.19**	**338**	P	**P**	**04 40 38.8**	**-0.3**
YKA	**Yellowknife Ar**	**67.19**	**338**	P	**P**	**04 40 38.8**	**-0.3**
YKA	**Yellowknife Ar**	**67.19**	**338**	P	**P**	**04 40 38.8**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=35,slow=5.9,SNR=12						
ULM	**Lac du Bonnet**	**69.48**	**321**	P	**P**	**04 40 53.3**	**-0.3**
ULM	**Lac du Bonnet**	**69.48**	**321**	P	**P**	**04 40 53.3**	**-0.3**
ULM	**Lac du Bonnet**	**69.48**	**321**	P	**P**	**04 40 53.3**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=56,slow=1.5,SNR=2.9						
ILAR	**Eielson Array**	**71.16**	**352**	P	**P**	**04 41 03.6**	**-0.1**
ILAR	**Eielson Array**	**71.16**	**352**	P	**P**	**04 41 03.6**	**-0.1**
ILAR	**Eielson Array**	**71.16**	**352**	P	**P**	**04 41 03.6**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=13,slow=6.6,SNR=7.1						
CMAR	**Chiang Mai Arr**	**72.23**	**81**	P	**P**	**04 41 10.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**72.23**	**81**	ceP	**P**	**04 41 09.3**	**-1.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**72.23**	**81**	P	**P**	**04 41 10.7**	**-0.2**
	comp=Z,2.7nm,0.3s,baz=305,slow=5.9,SNR=6.8						
NJ2	**Nanjing**	**76.74**	**58**	eP	**P**	**04 41 38.1**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PDAR	**Pinedale Array**	**81.30**	**323**	P	**P**	**04 42 01.5**	**-0.5**
PDAR	**Pinedale Array**	**81.30**	**323**	P	**P**	**04 42 01.5**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=81,slow=5.6,SNR=2.6						
TXAR	**Lajitas Array**	**88.98**	**311**	P	**P**	**04 42 41.2**	**+0.6**
TXAR	**Lajitas Array**	**88.98**	**311**	P	**P**	**04 42 41.2**	**+0.6**
TXAR	**Lajitas Array**	**88.98**	**311**	P	**P**	**04 42 41.2**	**+0.6**
	comp=Z,0.2nm,0.8s,baz=55,slow=6.7,SNR=2.4						
WRA	**Warramunga Arr**	**123.62**	**86**	PKP	**PKPdf**	**04 48 42.3**	**-1.0**
WRA	**Warramunga Arr**	**123.62**	**86**	PKIKP	**PKPdf**	**04 48 42.3**	**-1.0**
WRA	**Warramunga Arr**	**123.62**	**86**	PKP	**PKPdf**	**04 48 42.3**	**-1.0**
	comp=Z,0.6nm,1.0s,baz=339,slow=3.6,SNR=2.4						

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*ISK **04** 04:30:45.8, 40°.25N×23°.35E, h13^{km}, ML2.6/3*
*ISCJB **04** 04:30:46.6±0.4, 40°.26N±0°.02×23°.34E±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.5km az=176.9*
*ATH **04** 04:30:47.2, 40°.28N×23°.35E, h10^{km}±4^{km}, ML2.1/8, Error ellipse: s-maj=4.6km s-min=0.8km az=70.0*
ISC 04 04:30:46.5±0.9**, 40°.26N**±0°.03×**23°.34E**±0°.03**, h13**^{km}±7^{km}**, n21, σ0^{s}.45**/34**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLG	**Polygyros**	**0.14**	**34**	P	**Pg**	**04 30 50.3**	**+0.3**
PLG				S	**Sg**	**04 30 51.7**	**-0.8**
PLG				AML	AML	04 30 52.2	
	comp=N,4348µm,0.1s						
PLG				AML	AML	04 30 52.3	
	comp=E,4512µm,0.1s						
HORT	**Hortiatis**	**0.39**	**331**	PG	**Pg**	**04 30 54.4**	**+0.1**
HORT				SG	**Sg**	**04 31 00.2**	**+0.7**
HORT	**Hortiatis**	**0.39**	**331**	P	**Pb**	**04 30 54.9**	**-0.4**
HORT				S	**Sg**	**04 31 00.2**	**+0.7**
HORT				AML	AML	04 31 00.7	
	comp=E,1229µm,0.2s						
HORT				AML	AML	04 31 02.1	
	comp=N,618µm,0.2s						
PAIG	**Paliouri**	**0.42**	**142**	P	**Pb**	**04 30 55.4**	**-0.4**
PAIG				S	**Sg**	**04 31 00.7**	**+0.3**
PAIG				AML	AML	04 31 03.5	
	comp=E,283µm,0.2s						
PAIG				AML	AML	04 31 03.9	
	comp=N,222µm,0.2s						
THE	**Thessaloniki**	**0.47**	**323**	P	**Pb**	**04 30 56.4**	**-0.3**
THE				S	**Sg**	**04 31 01.9**	**-0.2**
OUR	**Ouranopolis**	**0.49**	**81**	PG	**Pg**	**04 30 55.8**	**-0.4**
OUR				SG	**Sg**	**04 31 03.1**	**+0.3**
SOH	**Sokhos**	**0.56**	**1**	P	**Pb**	**04 30 57.8**	**-0.4**
SOH				S	**Sb**	**04 31 06.2**	**-0.1**
SOH				AML	AML	04 31 07.2	
	comp=N,420µm,0.2s						
SOH				AML	AML	04 31 07.4	
	comp=E,443µm,0.2s						
LIT	**Litokhoron**	**0.67**	**257**	P	**Pb**	**04 31 00.4**	**+0.3**
LIT				S	**Sb**	**04 31 09.6**	**+0.3**
SRS	**Serrai**	**0.88**	**12**	P	**Pb**	**04 31 03.5**	**-0.1**
SRS				S	**Sb**	**04 31 15.4**	**0.0**
XOR	**Xorichti**	**0.90**	**187**	P	**Pn**	**04 31 04.9**	**+0.1**
NEO	**Neokhori**	**0.95**	**186**	P	**Pn**	**04 31 05.9**	**+0.2**
NEO				S	**Sn**	**04 31 18.8**	**-0.3**
NEO				AML	AML	04 31 20.3	
	comp=N,368µm,0.6s						
NEO				AML	AML	04 31 21.5	
	comp=E,327µm,0.3s						
KNT	**Kendrikon**	**0.96**	**340**	PG	**Pb**	**04 31 05.1**	**0.0**
KNT	**Kendrikon**	**0.96**	**340**	P	**Pg**	**04 31 04.9**	**-0.2**
KNT				S	**Sb**	**04 31 18.1**	**+0.3**
KNT				AML	AML	04 31 22.0	
	comp=E,183µm,0.1s						
KNT				AML	AML	04 31 22.6	
	comp=N,209µm,0.3s						
GRG	**Griva**	**1.00**	**315**	PG	**Pg**	**04 31 04.8**	**-1.0**
GRG	**Griva**	**1.00**	**315**	P	**Pg**	**04 31 05.0**	**-0.8**
KAVA	**Kavala**	**1.16**	**50**	P	**Pg**	**04 31 08.7**	**-0.1**
KAVA				S	**Sg**	**04 31 23.6**	**-0.3**
KAVA				AML	AML	04 31 25.0	
	comp=N,122µm,0.3s						
KAVA				AML	AML	04 31 27.6	
	comp=E,148µm,0.4s						
NVR	**Nevrokopi**	**1.16**	**20**	P	**Pb**	**04 31 08.4**	**0.0**
NVR				S	**Sn**	**04 31 24.2**	**-0.1**
NVR				AML	AML	04 31 25.9	
	comp=E,95µm,0.2s						
NVR				AML	AML	04 31 26.7	
	comp=N,76µm,0.4s						
AGG	**Agios Georgios**	**1.46**	**213**	PN	**Pn**	**04 31 12.5**	**-0.1**
RDO	**Rodhopi**	**1.89**	**61**	PN	**Pn**	**04 31 18.7**	**+0.2**
EDRB	**Edirne**	**3.02**	**57**	PN	**Pn**	**04 31 34.8**	**+0.7**
ITM	**Ithomi**	**3.27**	**200**	PN	**Pn**	**04 31 38.3**	**+0.9**

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*IDC **04** 04:33:54.2±1.2, 11°.23S×165°.49E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx3.9/36, mbtmp4.0/9, ML4.2/1, MS3.0/2, Ms1 3.0/2, ms1mx2.8/27, Error ellipse: s-maj=40.5km s-min=20.8km az=128.0*
*ISCJB **04** 04:33:57.0±0.8, 11°.43S±0°.07×165°.5E±0°.1, h30^{km}, mb3.9/7, MS3.1/1, Error ellipse: s-maj=20.1km s-min=10.3km az=174.9*
ISC 04 04:33:58.7±0.9**, 11°.32S**±0°.09×**165°.5E**±0°.2**, h30**^{km}**, n9, σ0^{s}.45**/10**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.73**	**175**	Pn	**Pn**	**04 36 30.8**	**+0.4**
	1.6nm,0.3s,baz=198,slow=20,SNR=14						
DZM				Sn	**Sn**	**04 38 29.1**	**-0.5**
	0.3nm,0.3s,baz=98,slow=18,SNR=4.4						
DZM				LR	LR	04 39 52.8	
	comp=Z,61nm,19.4s,baz=65,slow=33						
CTA	**Charters Tower**	**20.48**	**242**	P	**P**	**04 38 34.6**	**+0.4**
	2.9nm,0.5s,baz=82,slow=13,SNR=6.6						
STKA	**Stephens Creek**	**30.09**	**223**	P	**P**	**04 40 06.0**	**+0.3**
	2.6nm,0.7s,baz=48,slow=7.4,SNR=7.4						
STKA				LR	LR	04 51 49.9	
	comp=Z,37nm,18.3s,baz=22,slow=36						
WRA	**Warramunga Arr**	**31.18**	**250**	P	**P**	**04 40 15.3**	**-0.1**
	4.2nm,0.6s,baz=82,slow=9.0,SNR=56						
ASAR	**Alice Springs**	**32.47**	**244**	P	**P**	**04 40 25.9**	**-0.8**
	1.0nm,0.7s,baz=70,slow=9.5,SNR=12						
SONM	**Songino Array**	**78.76**	**324**	P	**P**	**04 45 58.7**	**+0.1**
	0.2nm,0.6s,baz=145,slow=5.3,SNR=2.8						
ILAR	**Eielson Array**	**83.84**	**19**	P	**P**	**04 46 24.7**	**-0.3**
	0.6nm,0.9s,baz=233,slow=5.2,SNR=8.0						
NVAR	**Mina Array Bea**	**86.37**	**50**	P	**P**	**04 46 38.7**	**+0.1**
	1.0nm,1.0s,baz=217,slow=7.2,SNR=3.6						
MKAR	**Makanchi Array**	**93.57**	**317**	P	**P**	**04 47 12.0**	**0.0**
	0.8nm,0.7s,baz=100,slow=6.3,SNR=11						

MEX 04 04:34:07.9±0.8**, 14°.39N**×**93°.25W, h14**^{km}±105^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.08**	**61**	i P	Pb	04 34 25.1	-3.4
THIG				i S	Sb	04 34 38.0	-4.6
PCIG		**1.31**	**1**	eP	Pn	04 34 28.9	-2.9
PCIG				eS	Sb	04 34 43.4	-5.6
CCIG	**Comitan**	**2.17**	**30**	eP	Pn	04 34 44.0	+0.2
CCIG				eS	Sb	04 35 13.1	-0.9

IGQ 04 04:35:09.0±0.7**, 3°S**±2°×**8°1W**±°**, h6**^{km}**, MLv3.7, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLA	**Playas - Guaya**	**0.70**	**18**	P	Pg	04 35 22.1	-0.3
APLA				S	Sb	04 35 32.4	-0.9
MORR	**Playas El Morr**	**0.71**	**22**	P	Pg	04 35 22.4	-0.2
MORR				S	Sb	04 35 33.3	-0.4
MCRA	**Macar, Loja**	**1.25**	**148**	P	Pg	04 35 31.3	-1.6
MCRA				S	Sg	04 35 48.3	-0.8
MILO	**Milagro-Astudi**	**1.46**	**46**	P	Pn	04 35 34.5	-1.3
MILO				S	Sg	04 35 56.0	0.0
GONZ	**Gonzanam**	**1.53**	**128**	P	Pb	04 35 37.6	-0.3
GONZ				S	Sg	04 35 57.9	-0.2
COHC	**Cochancay**	**1.59**	**58**	P	Pn	04 35 35.9	-1.7
BIL2	**Estacion Bilba**	**2.79**	**49**	P	Pn	04 35 55.5	+1.1
ARRY	**Arrayan**	**2.79**	**50**	P	Pn	04 35 53.0	-1.6
PAT1	**Patacocha**	**2.81**	**51**	P	Pn	04 35 54.6	-0.3
POND	**Pondoa**	**2.85**	**49**	P	Pn	04 35 54.2	-1.1
RUN5	**Runtun**	**2.88**	**49**	P	Pn	04 35 55.4	-0.2
PIS1	**Pisayambo**	**3.15**	**45**	P	Pn	04 35 59.8	+0.3
PISA	**Pisayambo**	**3.15**	**45**	P	Pn	04 36 00.0	+0.5
ILLI	**Illinizas Sur**	**3.18**	**36**	P	Pn	04 35 59.1	-0.9
VC1	**Cotopaxi 1**	**3.44**	**40**	P	Pn	04 36 03.9	+0.3
PITA	**Cotopaxi Volc**	**3.49**	**39**	P	Pn	04 36 05.0	+0.8
NINA	**Atacazo Ninahu**	**3.51**	**35**	P	Pn	04 36 04.6	+0.1
ARDO	**Archidona, Ten**	**3.62**	**51**	P	Pn	04 36 05.7	0.0
ANTM	**Antisana-La Mi**	**3.64**	**41**	P	Pn	04 36 06.1	-0.2
ANTG	**Antisana-Guama**	**3.64**	**40**	P	Pn	04 36 07.2	+0.8
GGPC	**Guagua Pichinc**	**3.70**	**33**	P	Pn	04 36 06.1	-1.1
ANTS	**Antisana-Sarah**	**3.70**	**41**	P	Pn	04 36 07.1	-0.1
YANA	**Yana**	**3.76**	**33**	P	Pn	04 36 07.1	-0.8
PULU	**Pululahua**	**3.92**	**33**	P	Pn	04 36 09.4	-0.6
PAC1	**Pacto, Paraso**	**3.98**	**27**	P	Pn	04 36 07.7	-3.0
OTAV	**Otavalo**	**4.12**	**32**	P	Pn	04 36 12.0	-1.0
CUSE	**Cuicocha Este**	**4.21**	**32**	P	Pn	04 36 12.8	-1.3
CUSW	**Cuicocha Oeste**	**4.22**	**32**	P	Pn	04 36 13.3	-0.9
CUIC	**Cuicocha-Domo**	**4.23**	**32**	P	Pn	04 36 13.9	-0.4
URCU	**Urcuqui**	**4.40**	**32**	P	Pn	04 36 17.8	+1.1
LITE1	**Lita**	**4.65**	**29**	P	Pn	04 36 17.7	-2.2
LITE1				S	Sn	04 37 00.7	-13

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*BEO **04** 04:56:32.8±0.9, 39°.43N×23°.70E, h0^{km}, ML3.3/2*
*ISK **04** 04:56:33.3, 39°.43N×23°.30E, h6^{km}, ML3.6/25*
*IDC **04** 04:56:33.5±1.0, 39°.35N×23°.61E, h0^{km}, mb3.4/7, mb1 3.5/10, mb1mx3.4/48, mbtmp3.3/10, ML3.3/3, Error ellipse: s-maj=24.5km s-min=13.9km az=124.0*
*ATH **04** 04:56:34.5, 39°.52N×23°.51E, h28^{km}, ML3.4/11, Error ellipse: s-maj=1.2km s-min=0.9km az=284.0*
*THE **04** 04:56:35.6, 39°.53N×23°.50E, h7^{km}, ML3.2/20, Error ellipse: s-maj=0.6km s-min=0.3km az=291.0*
*ISCJB **04** 04:56:36.1±0.3, 39°.53N±0°.01×23°.48E±0°.02, h18^{km}±3^{km}, mb3.3/7, Error ellipse: s-maj=2.8km s-min=1.7km az=14.5*
ISC 04 04:56:35.8±0.8**, 39°.48N**±0°.01×**23°.49E**±0°.02**, h15**^{km}±6^{km}**, n162, σ1^{s}.47**/206**, mb3.3**/7**, 15C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.26**	**244**	P	**Pg**	**04 56 41.3**	**-0.1**
XOR				S	**Sg**	**04 56 47.2**	**+2.0**
XOR				AML	AML	04 56 52.0	
	comp=E,16805µm,0.7s						
XOR				AML	AML	04 56 53.7	
	comp=N,23795µm,0.5s						
XOR	**Xorichti**	**0.26**	**244**	P	**Pg**	**04 56 41.4**	**0.0**
XOR				S	**Sg**	**04 56 45.9**	**+0.7**
NEO	**Neokhori**	**0.27**	**230**	P	**Pg**	**04 56 41.6**	**0.0**
NEO				S	**Sg**	**04 56 46.6**	**+1.1**
NEO				AML	AML	04 56 47.5	
	comp=E,30518µm,0.3s						
NEO				AML	AML	04 56 48.9	
	comp=N,18182µm,0.3s						
NEO	**Neokhori**	**0.27**	**230**	P	**Pg**	**04 56 41.6**	**0.0**
NEO				S	**Sg**	**04 56 46.6**	**+1.1**
SKIA	**Skiathos**	**0.31**	**183**	P	**Pb**	**04 56 42.5**	**-0.6**
SKIA				S	**Sb**	**04 56 48.4**	**+0.5**
SKIA				AML	AML	04 56 54.6	
	comp=N,10511µm,0.5s						
SKIA				AML	AML	04 56 57.6	
	comp=E,7791µm,0.5s						
SKIA	**Skiathos**	**0.31**	**183**	P	**Pb**	**04 56 42.6**	**-0.5**

SKIA				S	Sb	04 56 48.4	+0.5
AOS	Alonnisos	0.43	135	PG	Pb	04 56 43.7	-1.4
AOS				SG	Sb	04 56 51.1	-0.3
AOS	Alonnisos	0.43	135	P	Pb	04 56 44.0	-1.1
AOS				S	Sb	04 56 50.5	-0.9
AOS				AML	AML	04 56 57.3	
	comp=E,5035μm,0.6s						
AOS				AML	AML	04 56 57.3	
	comp=N,6670μm,0.9s						
AOS	Alonnisos	0.43	135	P	Pb	04 56 44.1	-1.0
AOS				S	Sb	04 56 50.6	-0.8
FYTO	Fytoko, Volos	0.43	261	P	Pb	04 56 44.2	-1.0
FYTO				S	Sb	04 56 51.0	-0.4
FYTO	Fytoko, Volos	0.43	261	P	Pb	04 56 44.5	-0.6
FYTO				S	Sb	04 56 51.1	-0.3
PAIG	Paliouri	0.47	18	P	Pg	04 56 43.9	-1.3
PAIG				S	Sg	04 56 50.3	-1.4
PAIG				AML	AML	04 56 51.4	
	comp=E,9060μm,0.4s						
PAIG				AML	AML	04 56 53.3	
	comp=N,9388μm,0.5s						
PAIG	Paliouri	0.47	18	P	Pg	04 56 44.1	-1.2
PAIG				S	Sg	04 56 50.1	-1.6
SMIA	Simia	0.64	200	P	Pn	04 56 48.9	-1.4
SMIA				S	Sb	04 56 57.7	+0.4
SMIA				AML	AML	04 56 59.0	
	comp=E,18341μm,0.5s						
SMIA				AML	AML	04 57 01.9	
	comp=N,44364μm,0.5s						
SMIA	Simia	0.64	200	P	Pn	04 56 49.2	-1.1
MRKA	Markates	0.77	174	P	Pn	04 56 51.2	-1.0
MRKA				S	Sn	04 57 02.6	-0.9
MRKA				AML	AML	04 57 10.7	
	comp=N,11416μm,0.6s						
MRKA				AML	AML	04 57 12.3	
	comp=E,6700μm,0.7s						
MRKA	Markates	0.77	174	P	Pn	04 56 51.5	-0.7
ATAL	Atalanti	0.86	205	P	Pn	04 56 52.9	-0.5
ATAL				S	Sn	04 57 05.4	-0.3
ATAL				AML	AML	04 57 08.5	
	comp=N,4444μm,0.6s						
ATAL				AML	AML	04 57 09.6	
	comp=E,4716μm,0.8s						
ATAL	Atalanti	0.86	205	P	Pn	04 56 52.9	-0.5
ATAL				S	Sn	04 57 05.6	-0.1
LRSO	Larissa Observ	0.87	283	P	Pg	04 56 51.7	-1.0
PLG	Polygyros	0.90	358	P	Pg	04 56 51.2	-2.0
PLG				S	Sg	04 57 03.2	-1.8
PLG				AML	AML	04 57 05.1	
	comp=N,6406μm,0.6s						
PLG				AML	AML	04 57 05.7	
	comp=E,8763μm,0.8s						
PLG	Polygyros	0.90	358	P	Pg	04 56 51.4	-1.8
PLG				S	Sg	04 57 03.8	-1.2
LKR	Lokris	0.91	205	P	Pb	04 56 52.1	-1.2
LKR				S	Sn	04 57 07.4	+0.6
OUR	Ouranopolis	0.94	24	P	Pg	04 56 52.6	-1.4
OUR				S	Sg	04 57 04.9	-1.4
LIT	Litokhoron	0.99	309	P	Pg	04 56 53.5	-1.5
LIT	Litokhoron	0.99	309	P	Pg	04 56 53.8	-1.2
LIT				S	Sg	04 57 07.5	-0.5
AGG	Agios Georgios	1.01	244	P	Pn	04 56 55.0	-0.5
AGG	Agios Georgios	1.01	244	P	Pn	04 56 55.1	-0.3
AGG				S	Sn	04 57 09.8	+0.5
SKY	Skiros Island	1.02	126	P	Pn	04 56 54.8	-0.7
SKY	Skiros Island	1.02	126	P	Pn	04 56 54.8	-0.7
THL	Klokotos Trika	1.14	275	P	Pg	04 56 56.6	-1.3
HORT	Hortiatis	1.16	345	PN	Pg	04 56 56.2	-2.0
HORT	Hortiatis	1.16	345	P	Pg	04 56 56.3	-2.0
HORT				S	Sg	04 57 12.1	-1.2
THE	Thessaloniki	1.22	341	P	Pg	04 56 57.6	-1.8
VIL2	Platees	1.27	188	P	Pn	04 56 59.4	+0.4
VIL2				S	Sn	04 57 17.5	+1.6
VIL2				AML	AML	04 57 25.0	
	comp=N,3283μm,0.6s						
VIL2				AML	AML	04 57 26.6	
	comp=E,4560μm,0.8s						
PROD	Prodromos	1.30	201	P	Pn	04 56 59.2	-0.2
PROD	Prodromos	1.30	201	P	Pn	04 57 00.3	+0.9
PROD				S	Sn	04 57 19.7	+3.2
DSF	Desfina	1.30	215	P	Pb	04 56 58.9	-1.1
DSF				S	Sn	04 57 17.3	+0.7
DSF				AML	AML	04 57 20.3	
	comp=E,1818μm,0.5s						
DSF				AML	AML	04 57 22.2	
	comp=N,1399μm,0.4s						
DSF	Desfina	1.30	215	P	Pn	04 56 59.6	+0.1
DSF				S	Sn	04 57 18.7	+2.1
VILL	Villia	1.32	186	P	Pn	04 57 00.2	+0.5
VILL				S	Sn	04 57 19.0	+2.0
SOH	Sokhos	1.35	356	P	Pn	04 56 59.1	-1.0
SOH				S	Sg	04 57 17.8	-1.5
LIA	Limnos Island	1.37	72	P	Pn	04 56 59.9	-0.5
LIA	Limnos Island	1.37	72	P	Pn	04 56 59.7	-0.7
EVR	Evrytania	1.42	247	P	Pb	04 57 01.3	-0.7
EVR	Evrytania	1.42	247	P	Pg	04 57 01.5	-1.7
EVR				S	Sn	04 57 21.3	+1.7
DION	Dionisos Attik	1.44	166	P	Pg	04 57 01.1	-2.5
PTL	Penteli	1.46	168	P	Pg	04 57 01.4	-2.5
PTL	Penteli	1.46	168	P	Pg	04 57 01.8	-2.0
PTL				S	Sn	04 57 24.1	+3.7
THAS	Thassos island	1.47	40	P	Pn	04 57 01.4	-0.3
ANX	Ano Chora	1.51	235	P	Pg	04 57 02.9	-1.9
LTK	Loutraki	1.51	196	P	Pg	04 57 02.8	-2.0
LTK				S	Sg	04 57 24.1	-0.3
KALE	Kalithea	1.51	225	P	Pn	04 57 02.3	-0.1
KALE	Kalithea	1.51	225	P	Pb	04 57 02.5	-1.1
KALE				S	Sg	04 57 22.9	-1.6
ATH	Athens Observa	1.51	173	P	Pg	04 57 02.7	-2.2
ATHU	Athens Univers	1.53	171	P	Pg	04 57 03.1	-2.1
LOUT	Loutraki	1.54	195	P	Pb	04 57 02.7	-1.3
LOUT	Loutraki	1.54	195	P	Pb	04 57 02.9	-1.1
LOUT				S	Sg	04 57 24.8	-0.7
SERG	Sergoula	1.54	227	P	Pb	04 57 03.1	-1.0
KZN	Kozani	1.56	303	P	Pn	04 57 02.5	-0.6
TRIZ	Trizonia	1.57	225	P	Pb	04 57 03.4	-1.1
EFP	Efpalio	1.62	230	P	Pg	04 57 04.8	-2.1
ALIK	Aliki, Aigiali	1.62	222	P	Pb	04 57 04.4	-1.0
SRS	Serrai	1.64	3	*e*Pn	Pn	04 57 03.0	-1.2
SRS				*e*Sn	Sn	04 57 26.0	+1.1
SRS	Serrai	1.64	3	P	Pn	04 57 02.9	-1.2
VLY	Voula,Athens	1.64	172	P	Pg	04 57 04.7	-2.6
GRG	Griva	1.70	331	P	Pn	04 57 04.1	-0.8
GRG				S	Sn	04 57 27.4	+1.0
KPRO	Kipourio	1.71	287	P	Pn	04 57 05.3	+0.2
LAKA	Lakka	1.71	224	P	Pb	04 57 05.3	-1.6
LAKA	Lakka	1.71	224	P	Pb	04 57 05.6	-1.3
LAKA				S	Sg	04 57 28.4	-2.4
KAVA	Kavala	1.71	27	P	Pn	04 57 03.8	-1.2
KAVA				S	Sn	04 57 26.8	+0.2
KNT	Kendrikon	1.74	345	PN	Pn	04 57 05.1	-0.4
KNT	Kendrikon	1.74	345	P	Pn	04 57 05.4	-0.1
KLV	Kalavryta, Ach	1.77	217	P	Pb	04 57 06.7	-1.3
KLV				S	Sg	04 57 31.4	-1.5
GUR	Goura	1.78	211	P	Pb	04 57 06.9	-1.3
GUR				S	Sg	04 57 31.6	-1.6
SIGR	SIGRI	1.85	97	PN	Pb	04 57 08.6	-0.8
NVR	Nevrokopi	1.89	9	P	Pn	04 57 06.5	-1.1
NVR				S	Sn	04 57 31.6	+0.4
VAY	Valandovo	1.97	339	*e*Pn	Pn	04 57 08.5	-0.1
VAY				*e*Sn	Sn	04 57 36.1	+3.0
VAY	Valandovo	1.97	339	P	Pn	04 57 08.8	+0.2
VAY	Valandovo	1.97	339	*i* Pn	Pn	04 57 08.5	-0.1
DID	Didima	1.98	186	P	Pn	04 57 08.7	-0.1
DID				S	Sb	04 57 34.7	-1.3
GADA	Gvkgeada	1.99	68	PN	Pb	04 57 10.6	-1.1
BOZC	Bozcaada	2.01	79	PN	Pb	04 57 10.9	-1.2
DRO	Drossia	2.06	223	P	Pb	04 57 11.2	-1.7
AXS	Araxos	2.09	233	P	Pb	04 57 11.4	-1.9
NEST	Nestorio	2.10	297	P	Pn	04 57 11.0	+0.5
KRND	KRANIDI	2.11	187	P	Pn	04 57 10.8	+0.3
TRIP	Tripoli	2.17	207	P	Pb	04 57 12.3	-2.5
EZN	Ezine	2.22	80	PN	Pb	04 57 13.9	-1.7
BIA	Bitola	2.26	314	*e*Pn	Pb	04 57 15.0	-1.4
VLX	Vlachokerasia	2.28	203	P	Pb	04 57 13.9	-2.8
CHOS	Chios island	2.28	118	PN	Pb	04 57 14.2	-2.5
RDO	Rodhopi	2.29	43	P	Pn	04 57 12.6	-0.4
ENEZ	Enez	2.40	58	PN	Pn	04 57 16.4	+1.9
ALN	Alexandroupoli	2.42	53	PN	Pn	04 57 16.6	+1.8
ALN	Alexandroupoli	2.42	53	P	Pn	04 57 13.6	-1.2
STIP	Stip	2.43	336	*i* Pn	Pn	04 57 14.3	-0.6
IGT	Igoumenitsa	2.44	272	*e*Pn	Pn	04 57 17.0	+1.9
GELI	Tayfur-Gelibol	2.47	67	PN	Pn	04 57 17.4	+1.9
KRUS	Krusevo	2.55	319	⇓*i*Pn	Pn	04 57 16.4	-0.3
ERIK	Erikli-Kesan	2.61	62	PN	Pn	04 57 19.3	+1.9
KDZ	Kurdzhali	2.62	33	PN	Pn	04 57 18.4	+0.8
URLA	Izmir	2.67	114	PN	Pn	04 57 19.7	+1.5
LPK	Lapseki	2.67	69	PN	Pn	04 57 20.3	+2.1
PLD	Plovdiv	2.78	19	PN	Pn	04 57 21.0	+1.2
PLD	Plovdiv	2.78	19	*e*Pn	Pn	04 57 19.3	-0.5
APE	Apeiranthos	2.89	146	PN	Pn	04 57 21.8	+0.5
SKO	Skopje	2.94	329	*e*Pn	Pn	04 57 22.0	+0.1
SKO	Skopje	2.94	329	*e*Pn	Pn	04 57 22.1	+0.1
KRBG	Karabiga-Canak	3.07	71	PN	Pn	04 57 25.9	+2.2
VTS	Vitosha	3.12	356	*e*Pn	Pn	04 57 24.7	+0.2
VTS				*e*Sn	Sn	04 58 02.2	+0.6
VTS	Vitosha	3.12	356	⇑*i*P	Pb	04 57 28.5	-2.5
VTS	Vitosha	3.12	356	S	Sb	04 58 12.2	+3.3
VTS	Vitosha	3.12	356	P	Pn	04 57 24.8	+0.2
BALB	Balikesir	3.40	86	PN	Pn	04 57 30.5	+2.3
EDRB	Edirne	3.42	45	PN	Pn	04 57 31.2	+2.6
BARS	Barje	3.57	340	*e*Pn	Pn	04 57 30.3	-0.3
BARS	Barje	3.57	340	*e*Pn	Pg	04 57 45.6	+1.4
CRLT	Corlu	3.64	62	PN	Pn	04 57 34.1	+2.5
AYDB	Zeytinkoy-Aydi	3.77	113	PN	Pn	04 57 35.6	+2.1
ZAPS	Zavoj	3.85	351	*e*Pn	Pn	04 57 35.0	+0.5
SELS	Selova	4.14	335	*e*Pn	Pn	04 57 37.8	-0.7
KULA	Kula-Manisa	4.14	102	PN	Pn	04 57 41.0	+2.4
CTYL	Yalikoy Yolu	4.17	60	PN	Pn	04 57 41.6	+2.8
CTKS	Kestanelik-??a	4.22	64	PN	Pn	04 57 42.4	+2.9
IDI	Anoyia	4.33	165	⇑*i*P	Pn	04 57 44.1	+3.0
PDG	Podgorica	4.36	314	⇓*i*P	Pb	04 57 49.0	-3.0
BOVS	Bovan	4.36	343	*e*Pn	Pn	04 57 41.0	-0.5
ZAGS	Zajecar	4.43	348	*e*Pn	Pn	04 57 41.9	-0.6
GEMT	Gemlik	4.48	76	PN	Pn	04 57 46.3	+3.1
VLAD	Vladila	4.57	8	⇓*i*P	Pg	04 58 04.1	+0.8
YLV	Yalova	4.65	75	PN	Pn	04 57 48.5	+3.0
IVAS	Ivanjica	4.80	330	*e*Pn	Pn	04 57 46.9	-0.7
GRUS	Gruza	4.87	336	*e*Pn	Pn	04 57 49.3	+0.8
KUBS	Kucevo	5.11	345	*e*Pn	Pn	04 57 50.4	-1.4
TRUS	Trudelj	5.27	335	*e*Pn	Pn	04 57 54.7	+0.7
DIVS	Divibare	5.30	332	*e*Pn	Pn	04 57 54.0	-0.5
MDVR	Moldovita	5.46	347	⇓*i*P	Pn	04 57 56.0	-0.7
MTUR	Matau	5.86	11	⇑*i*P	Pn	04 58 00.5	-1.7
GZR	Gura Zlata	5.94	355	⇑*i*P	Pn	04 58 05.3	+2.1
LOT	Lotru	5.97	2	⇓*i*P	Pn	04 58 05.3	+1.6
VOIR		6.07	10	⇑*i*P	Pn	04 58 04.8	-0.2
TLB	Topalu	6.13	32	⇓*i*P	Pn	04 58 03.5	-2.2
TIRR	Tirgusor	6.18	35	⇑*i*P	Pn	04 58 09.6	+3.1
MLR	Muntele Rosu	6.28	16	⇑*i*P	Pn	04 58 11.4	+3.5
MLR	Muntele Rosu	6.28	16	Pn	Pn	04 58 09.0	+1.1
	comp=N,0.7nm,0.3s,baz=231,slow=13,SNR=14						
MLR				Lg	Lg	04 59 58.6	
	comp=N,0.2nm,0.3s,baz=309,slow=22,SNR=3.3						
BZS	Buzias	6.29	348	⇑*i*P	Pn	04 58 10.4	+2.4
DOPR	Dopca	6.63	12	⇑*i*P	Pn	04 58 12.9	+0.2
CFR	Carcaliu	6.66	30	⇑*i*P	Pn	04 58 12.3	-0.7
PLOR	Plostina	6.78	19	⇑*i*P	Pn	04 58 14.1	-0.7
VRI	Vrincioaia	6.82	19	⇑*i*P	Pn	04 58 15.7	+0.5
OZUR		6.83	14	⇑*i*P	Pn	04 58 15.8	+0.4
ARCR	ARCALIA	7.63	4	⇑*i*P	Pn	04 58 21.5	-4.9
BIZ	Bicaz	7.70	13	⇑*i*P	Pn	04 58 27.9	+0.6
BRTR	Keskin Array B	7.84	85	Pn	Pn	04 58 29.7	+0.3
	comp=N,0.0nm,0.3s,baz=264,slow=11,SNR=2.7						
AKASG	Malin Array Be	11.93	18	Pn	Pn	04 59 24.8	-0.4
	comp=N,0.2nm,0.3s,baz=204,slow=11,SNR=4.1						
ESDC	Sonseca Array	21.14	279	P	P	05 01 22.2	+2.1
	comp=N,0.8nm,0.6s,baz=73,slow=10,SNR=6.7						
NOA	NORSAR Array B	22.89	345	P	P	05 01 40.2	+1.5
	comp=N,1.0nm,1.0s,baz=148,slow=8.9,SNR=2.6						
TORD	Torodi Ar. Bea	32.52	222	P	P	05 03 06.1	0.0
	comp=N,0.7nm,0.8s,baz=27,slow=9.0,SNR=6.3						
DBIC	Dimbokro	41.44	225	P	P	05 04 21.7	-0.2
	comp=N,2.4nm,0.7s,baz=53,slow=9.5,SNR=4.5						
MKAR	Makanchi Array	42.65	60	P	P	05 04 31.7	+0.1
	comp=N,0.1nm,0.6s,baz=277,slow=7.0,SNR=2.3						
ZALV	Zalesovo Beam	43.09	49	P	P	05 04 35.0	0.0
	comp=N,0.2nm,0.3s,baz=296,slow=7.9,SNR=2.1						
YKA	Yellowknife Ar	72.94	341	P	P	05 08 04.1	0.0
	comp=N,0.1nm,0.6s,baz=40,slow=5.9,SNR=3.0						

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*IDC **04** 05:03:18.1±1.4, 13°.32S×166°.55E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.7/41, mbtmp3.7/5, ML3.4/1, MS3.7/2, Ms1 3.7/2, ms1mx3.0/29, Error ellipse: s-maj=44.1km s-min=25.3km az=119.0*

*ISCJB **04** 05:03:21.8±1.5, 13°.37S±0°.09×166°.5E±0°.2, h39^{km}, mb3.6/4, MS3.7/2, Error ellipse: s-maj=30.9km s-min=12.8km az=172.3*

ISC 04 05:03:23.7±1.4**, 13°.3S**±0°.1×**166°.6E**±0°.2**, h39^{km}, n8, σ1^{s}58**/7**, mb3.6**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.56	300	LR	LR	05 08 05.8	
	comp=Z,60nm,20.3s,baz=98,slow=38						
DZM	Mont Dzumac	8.68	181	Pn	Pn	05 05 24.9	-2.0
	0.5nm,0.3s,baz=36,slow=19,SNR=5.2						
DZM				Sn	Sn	05 07 05.6	+2.0
	0.4nm,0.3s,baz=40,slow=7.9,SNR=2.8						
STKA	Stephens Creek	29.40	227	P	P	05 09 24.1	+0.7
	0.5nm,0.4s,baz=22,slow=11,SNR=3.1						
WRA	Warramunga Arr	31.52	254	P	P	05 09 42.0	-0.3
	0.4nm,0.5s,baz=85,slow=9.5,SNR=9.5						
WRA				LR	LR	05 22 09.8	
	comp=Z,67nm,18.8s,baz=85,slow=36						
ASAR	Alice Springs	32.55	247	P	P	05 09 50.9	-0.5
	0.6nm,0.6s,baz=76,slow=9.4,SNR=5.8						
ILAR	Eielson Array	85.43	18	P	P	05 15 56.9	+0.1
	0.5nm,0.6s,baz=237,slow=5.0,SNR=11						
TXAR	Lajitas Array	96.22	61	LR	LR	05 49 26.8	
	comp=Z,67nm,21.6s,baz=0.0,slow=29						
ARCES	ARCESS Array B	118.74	345	PKP	PKiKP	05 22 08.2	+1.0
	2.2nm,0.8s,baz=46,slow=1.9,SNR=6.0						

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*MEX **04** 05:10:22.5±1.4, 14°.73N×94°.55W, h16^{km}±29^{km}, MD4.5*

*IDC **04** 05:10:23.6±1.1, 15°.43N×93°.94W, h0^{km}, mb4.2/16, mb1 4.4/18, mb1mx4.3/39, mbtmp4.2/18, ML3.6/2, MS3.5/6, Ms1 3.5/6, ms1mx3.3/28, Error ellipse: s-maj=36.7km s-min=10.1km az=50.0*

*NEIC **04** 05:10:23.8±0.0, 14°.87N×94°.51W, h16^{km}, mb4.4/101, MD4.5(MEX), After MEX.*

ISC 04 05:10:24.2±2.2**, 14°.95N**±0°.06×**94°.47W**±0°.04**, h25^{km}**±16^{km}**, n367, σ1^{s}66**/372**, mb4.3**/97**, MS3.5**/6**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.42	58	*e*Pn	Pn	05 10 46.5	-2.1
PCIG				*e*Sn	Sn	05 11 03.3	-3.2
PCIG		1.42	58	*e*P	Pn	05 10 46.5	-2.1
PCIG				*i* S	Sn	05 11 05.7	-0.7
HUIG	Huatulco	1.78	297	*e*Pn	Pn	05 10 50.8	-2.7
HUIG				*e*Sn	Sn	05 11 10.0	-5.2
HUIG	Huatulco	1.78	297	*e*P	Pn	05 10 50.8	-2.7
HUIG				*e*S	Sn	05 11 10.3	-4.9
THIG		2.13	91	*e*Pn	Pn	05 10 56.4	-1.9
THIG		2.13	91	*e*P	Pn	05 10 55.5	-2.9
CMIG	Matias Romero	2.17	349	*e*Pn	Pn	05 10 58.2	-0.6
CMIG				*e*Sn	Sn	05 11 22.0	-2.9
CMIG	Matias Romero	2.17	349	*e*P	Pn	05 10 58.2	-0.6
CMIG				*e*S	Sn	05 11 24.6	-0.3
CMIG	Matias Romero	2.17	349	Pn	Pn	05 10 58.1	-0.7
	36nm,0.3s,baz=162,slow=11,SNR=661						
CMIG				Lg	Lg	05 11 24.8	
	114nm,0.3s,baz=59,slow=18,SNR=14						
TGBT	Tuxtla Gutierr	2.25	36	*i* P	Pn	05 11 01.3	+1.3
TGBT				*i* S	Sb	05 11 29.1	-2.6
CCIG	Comitan	2.61	59	*e*Pn	Pn	05 11 05.3	+0.3
CCIG	Comitan	2.61	59	*e*P	Pn	05 11 05.1	0.0
VHO	Vista Hermosa	3.03	314	*e*Pn	Pn	05 11 11.2	+0.3
VHO	Vista Hermosa	3.03	314	*i* P	Pn	05 11 10.0	-0.8
VHO				*i* S	Sn	05 11 45.5	-0.9
TUIG	Tuzandepetl	3.07	1	*e*Pn	Pn	05 11 11.8	+0.6
TUIG	Tuzandepetl	3.07	1	*i* P	Pn	05 11 11.8	+0.6
PNIG	Pinotepa	3.80	293	*e*Pn	Pn	05 11 19.9	-1.5
PNIG	Pinotepa	3.80	293	*e*P	Pn	05 11 19.9	-1.5
APG	El Apazote	3.87	89	Pn	Pn	05 11 19.4	-3.0
	3.5nm,0.3s,baz=259,slow=11,SNR=54						
APG				Sn	Sn	05 11 55.7	-12
	9.1nm,0.3s,baz=271,slow=23,SNR=3.9						
APG				Lg	Lg	05 12 20.5	
	16nm,0.3s,baz=96,slow=13,SNR=3.7						
TPIG	Tehuac#an	4.42	322	*e*Pn	Pn	05 11 33.2	+3.2
TPIG				*e*Sg	Sb	05 12 37.7	+3.3
TPIG	Tehuac#an	4.42	322	*e*P	Pn	05 11 33.2	+3.2
TPIG				*i* S	Sn	05 12 20.7	-0.2
LVIG	Laguna Verde	5.10	339	*e*Pn	Pn	05 11 41.1	+2.0
CAIG	El Cayaco	5.95	291	*e*Pn	Pn	05 11 50.0	-0.9
CAIG	El Cayaco	5.95	291	*e*P	Pn	05 11 50.0	-0.9
TGUH	Tegucigalpa,Un	7.03	96	*e*Pn	Pn	05 12 06.7	+1.1
MYIG	Mrida	7.48	36	*e*Pn	Pn	05 12 12.8	+0.9
TEIG	Tepich	7.90	47	*e*Pn	Pn	05 12 17.9	+0.3
ESTN	Estel	8.07	102	*e*Pn	Pn	05 12 20.7	+0.6
JTS	JuntasAbangare	10.38	115	Pn	Pn	05 12 53.7	+2.0
	0.2nm,0.3s,baz=164,slow=12,SNR=2.0						
JTS				Lg	Lg	05 15 30.0	
	0.2nm,0.3s,baz=11,slow=18,SNR=3.0						
833A	Chaparral WMA,	14.07	342	*e*Pn	Pn	05 13 42.9	+0.9
833A	Chaparral WMA,	14.07	342	P	Pn	05 13 44.1	+2.1
	baz=160						
435B	Jarrell	16.02	350	*e*Pn	P	05 14 10.1	-1.1
	18nm,0.6s						
435B	Jarrell	16.02	350	P	P	05 14 09.8	-1.4
	baz=169						
JCT	Junction City	16.21	343	*e*Pn	Pn	05 14 11.0	+0.4
	9.6nm,0.9s						
JCT	Junction City	16.21	343	P	P	05 14 12.1	-1.3
	baz=162						
LTX	Lajitas	16.64	331	*e*Pn	P	05 14 18.1	-0.2
TXAR	Lajitas Array	16.64	331	Pn	P	05 14 18.1	-0.2
	0.1nm,0.3s,baz=156,slow=14,SNR=35						
TX31	Lajitas Ar. Si	16.64	331	*e*Pn	P	05 14 17.8	-0.5
	4.9nm,0.9s						
WHTX	Lake Whitney,	17.18	351	*e*Pn	P	05 14 23.4	-0.7
	15nm,0.7s						
WHTX	Lake Whitney,	17.18	351	P	Pn	05 14 23.3	+0.6
	baz=170,SNR=5.2						
ABTX	Abilene, Hawle	18.21	346	*e*Pn	P	05 14 36.6	+1.1
	12nm,0.7s						
ABTX	Abilene, Hawle	18.21	346	P	P	05 14 36.6	+1.1
	baz=164,SNR=5.5						
249A	Camden	18.23	20	P	Pn	05 14 34.1	-1.5
	baz=203						
352A	Blakely	18.63	26	P	P	05 14 39.2	-0.9
	baz=210						
148A	Greensboro	18.70	18	P	Pn	05 14 41.1	-0.3
	baz=201						
149A	Jones	18.91	20	P	P	05 14 42.6	-0.5
	baz=203						
150A	Eclectic	19.19	22	P	P	05 14 45.8	-0.4
	baz=206						
TIGA	Tifton	19.20	29	P	P	05 14 44.7	-1.6
	baz=214						
LRAL	Lakeview Retre	19.24	19	P	P	05 14 46.5	-0.3
	baz=202						
Y45A	Yeager Farm, C	19.35	12	P	P	05 14 47.5	-0.5
	baz=194						
MNTX	Cornudas Mount	19.43	331	*e*P	Pn	05 14 50.1	0.0
	3.8nm,0.8s						
MNTX	Cornudas Mount	19.43	331	P	Pn	05 14 50.4	+0.2
	baz=147						
Y46A	Houston	19.52	14	P	P	05 14 49.6	-0.3
	baz=196						
MIAR	Mount Ida	19.53	2	*e*P	P	05 14 49.8	-0.2
	9.4nm,0.7s						
MIAR	Mount Ida	19.53	2	P	P	05 14 49.3	-0.7
	baz=183,SNR=8.9						
X41A	Kaden, Bauxite	19.54	5	P	P	05 14 49.4	-0.6
	baz=186,SNR=8.2						
Z50A	Ashland	19.81	22	*e*P	P	05 14 53.5	+0.5
	22nm,1.0s						
UALR	University of	19.83	5	*e*P	P	05 14 52.9	-0.4
	11nm,0.6s						
UREC	San Jos de Ur	19.89	109	*e*P	P	05 14 53.1	-1.0
UREC	San Jos de Ur	19.89	109	*e*P	P	05 14 53.1	-1.0
X45A	UM Field Stati	19.93	12	P	P	05 14 52.8	-1.4
	baz=194						
Y48A	Jasper	20.00	18	P	P	05 14 54.5	-0.6
	baz=201						
OXF	Oxford	20.01	12	*e*P	P	05 14 54.3	-0.8
	13nm,1.0s						
OXF	Oxford	20.01	12	P	P	05 14 53.2	-1.9
	baz=194						
WMOK	Wichita Mounta	20.08	350	*e*P	P	05 14 56.2	+0.2
	4.2nm,0.8s						
WMOK	Wichita Mounta	20.08	350	P	P	05 14 56.7	+0.7
	baz=168						
W39A	Magazine	20.17	2	*e*P	P	05 14 57.0	0.0
	7.8nm,0.8s						
W39A	Magazine	20.17	2	P	P	05 14 56.9	0.0
	baz=182						
Y49A	Blount Mountai	20.19	20	P	P	05 14 55.7	-1.4
	baz=203						
X46A	Booneville	20.23	14	P	P	05 14 56.1	-1.4
	baz=197						
W41B	Gary Mavity, V	20.24	5	*e*P	P	05 14 57.4	-0.2
	6.6nm,1.1s						
W41B	Gary Mavity, V	20.24	5	P	P	05 14 57.2	-0.4
	baz=186						
MSTX	Muleshoe	20.37	340	*e*P	P	05 14 59.6	+0.3
	14nm,0.8s						
MSTX	Muleshoe	20.37	340	P	P	05 15 00.2	+1.0
	baz=157,SNR=10						
X47A	Russelville	20.38	16	P	P	05 14 58.1	-1.1
	baz=199						
Y50A	Piedmont	20.45	21	P	P	05 14 57.8	-2.2
	baz=205						
HELC	Santa Helena	20.54	113	*e*P	P	05 15 01.7	+0.2
HELC	Santa Helena	20.54	113	*e*P	P	05 15 01.7	+0.2
X48A	Hartselle	20.54	18	P	P	05 14 59.4	-1.6
	baz=201						
V41A	Mountainview	20.85	5	P	P	05 15 03.4	-0.9
	baz=186,SNR=14						
SMLC	San Martn de	20.87	105	*e*P	P	05 15 03.0	-1.6
SMLC	San Martn de	20.87	105	*e*P	P	05 15 03.0	-1.6
AMTX	Amarillo	20.88	343	*e*P	P	05 15 05.2	+0.4
	27nm,0.8s						
AMTX	Amarillo	20.88	343	P	P	05 15 05.6	+0.8
	baz=160						
TUL1	Leonard	20.91	357	*e*P	P	05 15 05.1	+0.2
	13nm,0.8s						
TUL1	Leonard	20.91	357	P	P	05 15 04.1	-0.8
	baz=177						
GOGA	Godfrey	20.91	27	*e*P	P	05 15 05.0	0.0
	6.1nm,1.0s						
YOTC	Yotoco, Valle	20.91	120	*e*P	P	05 15 05.1	-0.2
YOTC	Yotoco, Valle	20.91	120	*e*P	P	05 15 05.1	-0.2
257A	Skidaway Islan	20.92	34	P	P	05 15 00.8	-4.3
	baz=219						
V42A	Cord	20.95	7	P	P	05 15 03.8	-1.6
	baz=188						
Z54A	Sparta	21.04	28	P	P	05 15 03.1	-3.3
	baz=213						
Y52A	Lilburn	21.05	25	P	P	05 15 03.6	-3.0
	baz=209						
W47A	Westpoint	21.14	16	P	P	05 15 05.6	-1.8
	baz=199						
V44A	Blytheville	21.19	10	P	P	05 15 07.3	-0.7
	baz=192						
319A	Douglas	21.24	323	*e*P	P	05 15 08.4	-0.2
	13nm,0.9s						
HHAR	Hobbs	21.25	1	*e*P	P	05 15 08.4	-0.2
	16nm,0.6s						
121A	Cookes Peak, D	21.29	328	P	P	05 15 11.3	+2.0
	baz=142,SNR=11						
PTBC	PUERTO BERRIO,	21.35	111	*e*P	P	05 15 07.7	-2.2
PTBC	PUERTO BERRIO,	21.35	111	*e*P	P	05 15 07.7	-2.2
U40A	Yellville	21.37	4	P	P	05 15 08.1	-1.8
	baz=184,SNR=5.4						
U41A	Viola	21.43	6	P	P	05 15 09.6	-0.9
	baz=187,SNR=6.1						
POPC	Popayan, Colom	21.45	123	*e*P	P	05 15 11.7	+0.5
POPC	Popayan, Colom	21.45	123	*e*P	P	05 15 11.7	+0.5
U42A	Revenden	21.51	7	P	P	05 15 10.3	-1.0
	baz=189						
V46A	Holladay	21.53	14	P	P	05 15 09.8	-1.8
	baz=197						
OTAV	Otavalo	21.55	131	*e*P	P	05 15 13.1	+0.6
	23nm,1.6s						
U43A	Rector	21.64	9	P	P	05 15 11.8	-0.9
	baz=191						
V47A	Nunnelly	21.70	15	P	P	05 15 12.4	-1.1
	baz=198						
GCUF	Volcan Galeras	21.73	127	*e*P	P	05 15 19.6	+5.2
GCUF	Volcan Galeras	21.73	127	*e*P	P	05 15 19.6	+5.2
W50A	Signal Mountai	21.78	21	*e*P	P	05 15 14.7	+0.3
	9.9nm,0.9s						
WVT	Waverly	21.91	15	*e*P	P	05 15 14.4	-1.3
	6.1nm,0.9s						

WVT	**Waverly**	**21.91**	**15**	P	**P**	**05 15 14.0**	**-1.7**
	baz=197						
BNM	**Barren Site**	**22.05**	**332**	*e*P	**P**	**05 15 18.8**	**+1.3**
V49A	**McMinnville**	**22.11**	**19**	P	**P**	**05 15 15.9**	**-1.9**
	baz=202						
Y22D	**IRIS PASSCAL I**	**22.12**	**332**	P	**P**	**05 15 19.4**	**+1.3**
	baz=147						
T41A	**Mountain View**	**22.14**	**6**	P	**P**	**05 15 16.8**	**-1.3**
	baz=187,SNR=5.4						
T42A	**Van Buren**	**22.20**	**7**	*e*P	**P**	**05 15 18.6**	**-0.1**
	5.0nm,0.8s						
T42A	**Van Buren**	**22.20**	**7**	P	**P**	**05 15 17.5**	**-1.3**
	baz=189						
LENM	**Lemitar**	**22.22**	**332**	*e*P	**P**	**05 15 20.1**	**+0.9**
ROSC	**El Rosal**	**22.23**	**115**	*e*P	**P**	**05 15 19.0**	**-0.7**
	4.8nm,1.0s						
ROSC	**El Rosal**	**22.23**	**115**	P	**P**	**05 15 21.6**	**+1.9**
	10nm,1.2s,baz=1.0,slow=9.0,SNR=8.2						
ROSC				LR	LR	05 25 00.2	
	comp=Z,82nm,19.4s,baz=318,slow=40						
V50A	**Pikevile**	**22.28**	**20**	P	**P**	**05 15 16.9**	**-2.8**
	baz=204						
BARC	**Barichara**	**22.48**	**109**	*e*P	**P**	**05 15 24.3**	**+2.0**
BARC	**Barichara**	**22.48**	**109**	*e*P	**P**	**05 15 24.3**	**+2.0**
LAZ	**Ladron**	**22.49**	**332**	*e*P	**P**	**05 15 24.8**	**+2.6**
ANMO	**Albuquerque**	**22.64**	**334**	*e*P	**P**	**05 15 25.4**	**+1.6**
	2.5nm,0.8s						
ANMO	**Albuquerque**	**22.64**	**334**	P	**P**	**05 15 25.2**	**+1.4**
	baz=149						
ANMO	**Albuquerque**	**22.64**	**334**	P	**P**	**05 15 24.9**	**+1.1**
	2.8nm,0.8s,baz=153,slow=12,SNR=16						
V51A	**Loudon**	**22.66**	**22**	P	**P**	**05 15 21.7**	**-2.0**
	baz=206						
S41A	**Jillco Farms,**	**22.68**	**6**	P	**P**	**05 15 23.1**	**-0.8**
	baz=187						
TKL	**Tuckaleechee C**	**22.74**	**23**	P	**P**	**05 15 21.4**	**-3.2**
	7.6nm,1.1s,baz=205,slow=14,SNR=2.8						
T46A	**Princeton**	**22.77**	**14**	P	**P**	**05 15 23.2**	**-1.7**
	baz=197						
TUC	**Tucson**	**22.79**	**322**	*e*P	**P**	**05 15 26.4**	**+1.1**
	12nm,1.2s						
TUC	**Tucson**	**22.79**	**322**	P	**P**	**05 15 28.1**	**+2.8**
	baz=136						
U49A	**Red Boiling Sp**	**22.83**	**18**	P	**P**	**05 15 23.4**	**-2.1**
	baz=202						
CHIC	**Chingaza**	**22.84**	**115**	*e*P	**P**	**05 15 28.3**	**+2.0**
CHIC	**Chingaza**	**22.84**	**115**	*e*P	**P**	**05 15 28.3**	**+2.0**
RUSC	**La Rusia**	**22.86**	**111**	*e*P	**P**	**05 15 26.3**	**-0.2**
RUSC	**La Rusia**	**22.86**	**111**	*e*P	**P**	**05 15 26.3**	**-0.2**
S42A	**Caledonia**	**22.96**	**7**	P	**P**	**05 15 25.4**	**-1.4**
	baz=189						
V52A	**Sevierville**	**22.97**	**23**	P	**P**	**05 15 23.0**	**-4.0**
	baz=208						
U50A	**Jamestown**	**23.04**	**20**	P	**P**	**05 15 25.5**	**-2.2**
	baz=204						
VILC	**Villavicencio,**	**23.12**	**116**	*e*P	**P**	**05 15 29.1**	**+0.2**
VILC	**Villavicencio,**	**23.12**	**116**	*e*P	**P**	**05 15 29.1**	**+0.2**
S44A	**Carbondale**	**23.12**	**11**	P	**P**	**05 15 27.1**	**-1.4**
	baz=193						
CCM	**Cathedral Cave**	**23.19**	**6**	*e*P	**P**	**05 15 28.6**	**-0.6**
	11nm,0.8s						
CCM	**Cathedral Cave**	**23.19**	**6**	P	**P**	**05 15 28.2**	**-1.0**
	baz=188						
R41A	**Rosebud**	**23.42**	**6**	P	**P**	**05 15 30.4**	**-1.1**
	baz=188						
T49A	**Edmonton**	**23.45**	**18**	P	**P**	**05 15 30.0**	**-1.9**
	baz=202						
R42A	**Luebbering**	**23.46**	**7**	P	**P**	**05 15 30.2**	**-1.7**
	baz=189,SNR=7.8						
U52A	**Thorn Hill**	**23.55**	**23**	P	**P**	**05 15 29.9**	**-2.8**
	baz=208						
R43A	**Red Bud**	**23.58**	**9**	P	**P**	**05 15 30.9**	**-2.1**
	baz=191,SNR=5.4						
T50A	**Nancy**	**23.59**	**20**	P	**P**	**05 15 30.8**	**-2.4**
	baz=204						
TZTN	**Tazewell**	**23.61**	**22**	P	**P**	**05 15 30.6**	**-2.8**
	baz=207						
R44A	**Waltonville**	**23.69**	**11**	P	**P**	**05 15 32.2**	**-1.8**
	baz=193						
T25A	**Trinidad**	**23.80**	**340**	*e*P	**P**	**05 15 36.6**	**+1.2**
	19nm,1.0s						
T25A	**Trinidad**	**23.80**	**340**	P	**P**	**05 15 36.9**	**+1.4**
	baz=156,SNR=16						
214A	**Organ Pipe Nat**	**23.80**	**318**	P	**P**	**05 15 37.1**	**+1.8**
	baz=131						
R45A	**Skylar, Fairfi**	**23.89**	**12**	P	**P**	**05 15 34.5**	**-1.4**
	baz=195,SNR=6.7						
X18A	**Snowflake**	**23.98**	**327**	*e*P	**P**	**05 15 40.4**	**+3.3**
	9.3nm,0.8s						
SDV	**Santo Domingo**	**24.08**	**102**	*e*P	**P**	**05 15 37.1**	**-1.1**
	4.3nm,0.7s						
SDV	**Santo Domingo**	**24.08**	**102**	P	**P**	**05 15 36.8**	**-1.4**
	4.2nm,0.6s,baz=303,slow=5.7,SNR=5.9						
Q41A	**Truxton**	**24.08**	**6**	P	**P**	**05 15 36.7**	**-1.1**
	baz=188,SNR=9.0						
Q42A	**Golden Eagle**	**24.12**	**8**	P	**P**	**05 15 36.5**	**-1.6**
	baz=189						
KSU1	**Kansas State U**	**24.13**	**356**	*e*P	**P**	**05 15 38.1**	**-0.2**
	10nm,0.8s						
KSU1	**Kansas State U**	**24.13**	**356**	P	**P**	**05 15 37.4**	**-0.9**
	baz=175						
S49A	**Springfield**	**24.16**	**18**	P	**P**	**05 15 36.2**	**-2.3**
	baz=202						
CBKS	**Cedar Bluff**	**24.22**	**350**	*e*P	**P**	**05 15 38.6**	**-0.5**
	69nm,1.5s						
CBKS	**Cedar Bluff**	**24.22**	**350**	P	**P**	**05 15 40.1**	**+1.0**
	baz=168,SNR=8.4						
Q43A	**New Douglas**	**24.27**	**9**	P	**P**	**05 15 38.2**	**-1.3**
	baz=191						
WCI	**Wyandotte Cave**	**24.29**	**16**	*e*P	**P**	**05 15 39.0**	**-0.7**
	14nm,0.9s						
WCI	**Wyandotte Cave**	**24.29**	**16**	P	**P**	**05 15 37.3**	**-2.4**
	baz=200						
R47A	**Wooly Knot Far**	**24.29**	**15**	P	**P**	**05 15 37.3**	**-2.4**
	baz=199						
OLIL	**Olney**	**24.35**	**12**	*e*P	**P**	**05 15 38.6**	**-1.6**
	15nm,0.8s						
Q45A	**Warren Harvey,**	**24.49**	**12**	P	**P**	**05 15 39.7**	**-1.8**
	baz=195						
SDCO	**Great Sand Dun**	**24.72**	**339**	*e*P	**P**	**05 15 44.0**	**+0.1**
	6.4nm,1.0s						
SDCO	**Great Sand Dun**	**24.72**	**339**	P	**P**	**05 15 45.1**	**+1.1**
	baz=154,SNR=8.7						
P42A	**Winchester**	**24.81**	**8**	*e*P	**P**	**05 15 43.1**	**-1.2**
	16nm,0.8s						
P42A	**Winchester**	**24.81**	**8**	P	**P**	**05 15 42.9**	**-1.5**
	baz=190,SNR=6.2						
P41A	**Barry, Barry**	**24.81**	**6**	P	**P**	**05 15 42.9**	**-1.5**
	baz=188,SNR=5.6						
R50A	**Paris**	**24.91**	**19**	P	**P**	**05 15 43.2**	**-2.1**
	baz=204						
Q47A	**Bedord North L**	**24.92**	**15**	P	**P**	**05 15 43.6**	**-1.9**
	baz=199						
P43A	**Skaggs, Pawnee**	**24.98**	**9**	P	**P**	**05 15 44.0**	**-1.9**
	baz=191						
KSCO	**Kaye Shedlock'**	**25.02**	**345**	P	**P**	**05 15 47.3**	**+0.8**
	baz=161						
BLO	**Bloomington**	**25.12**	**15**	*e*P	**P**	**05 15 46.2**	**-1.1**
	11nm,0.8s						
R51A	**Hillsboro**	**25.17**	**20**	P	**P**	**05 15 45.2**	**-2.5**
	baz=205						
P45A	**Graceland, Par**	**25.19**	**12**	P	**P**	**05 15 46.1**	**-1.7**
	baz=195						
S22A	**4UR Ranch, Cre**	**25.21**	**337**	*e*P	**P**	**05 15 48.5**	**+0.1**
	2.8nm,1.0s						
S22A	**4UR Ranch, Cre**	**25.21**	**337**	P	**P**	**05 15 50.0**	**+1.5**
	baz=151						
O41A	**Passleys Farm,**	**25.27**	**6**	P	**P**	**05 15 47.2**	**-1.3**
	baz=188						
P46A	**Rosedale**	**25.39**	**13**	P	**P**	**05 15 47.8**	**-1.8**
	baz=196						
MVCO	**Mesa Verde**	**25.44**	**333**	*e*P	**P**	**05 15 51.1**	**+0.7**
	8.8nm,1.0s						
MVCO	**Mesa Verde**	**25.44**	**333**	P	**P**	**05 15 51.9**	**+1.5**
	baz=147,SNR=5.6						
O42A	**Bath**	**25.44**	**8**	P	**P**	**05 15 48.6**	**-1.5**
	baz=190						
WUAZ	**Wupatki**	**25.48**	**327**	*e*P	**P**	**05 15 51.8**	**+1.1**
	23nm,1.1s						
WUAZ	**Wupatki**	**25.48**	**327**	P	**P**	**05 15 53.0**	**+2.2**
	baz=140,SNR=8.0						
O44A	**Mansfield**	**25.65**	**11**	P	**P**	**05 15 50.5**	**-1.6**
	baz=194						
P48A	**Milroy**	**25.68**	**16**	P	**P**	**05 15 50.3**	**-1.9**
	baz=200						
N41A	**Harden Midland**	**25.86**	**6**	P	**P**	**05 15 51.3**	**-2.6**
	baz=188						
O45A	**Potomac**	**25.89**	**12**	P	**P**	**05 15 52.4**	**-1.8**
	baz=195						
Q51A	**Peebles**	**25.91**	**20**	P	**P**	**05 15 52.3**	**-2.1**
	baz=205						
HDIL	**Hopedale**	**25.91**	**9**	P	**P**	**05 15 52.5**	**-1.8**
	baz=192						
N40A	**Mertquake, Sal**	**25.96**	**5**	P	**P**	**05 15 52.9**	**-1.9**
	baz=186						
SFIN	**Lafayette**	**26.14**	**13**	P	**P**	**05 15 54.4**	**-2.0**
	baz=196						
PDMCI	**Parker Dam,Lak**	**26.20**	**321**	P	**P**	**05 15 59.0**	**+1.9**
	baz=133						
Q52A	**Bidwell**	**26.22**	**22**	P	**P**	**05 15 54.7**	**-2.5**
	baz=208						
PV01	**Paradox Valley**	**26.25**	**334**	*e*P	**P**	**05 15 57.8**	**+0.1**
	11nm,1.0s						
P50A	**Jamestown**	**26.29**	**19**	P	**P**	**05 15 55.3**	**-2.5**
	baz=204						
N43A	**Stutzman Famil**	**26.30**	**9**	P	**P**	**05 15 56.5**	**-1.5**
	baz=192						
N44A	**Piper City**	**26.34**	**11**	P	**P**	**05 15 56.3**	**-1.9**
	baz=194						
PV13	**Radium Mtn., P**	**26.37**	**334**	*e*P	**P**	**05 15 59.2**	**+0.4**
	6.9nm,0.9s						
PV02	**Paradox Valley**	**26.38**	**334**	*e*P	**P**	**05 16 00.7**	**+1.8**
	8.0nm,1.1s						
PV15	**Paradox Valley**	**26.38**	**335**	*e*P	**P**	**05 16 00.2**	**+1.2**
	7.9nm,1.0s						
P51A	**Williamsport**	**26.41**	**20**	P	**P**	**05 15 56.7**	**-2.3**
	baz=205						
PV03	**Paradox Valley**	**26.46**	**334**	*e*P	**P**	**05 16 01.9**	**+2.3**
	6.8nm,0.9s						
M40A	**Post Highland**	**26.49**	**5**	P	**P**	**05 15 58.3**	**-1.3**
	baz=186,SNR=11						
O48A	**Farmland**	**26.50**	**16**	P	**P**	**05 15 57.4**	**-2.3**
	baz=200						
PV12	**Saucer Basin,**	**26.50**	**334**	*e*P	**P**	**05 16 02.2**	**+2.2**
	19nm,1.1s						
M39A	**Webster**	**26.51**	**4**	P	**P**	**05 15 58.2**	**-1.6**
	baz=185,SNR=6.6						
PV11	**David Mesa, Pa**	**26.51**	**334**	*e*P	**P**	**05 16 02.3**	**+2.2**
	7.4nm,1.0s						
PV17	**East Wray Mesa**	**26.53**	**334**	*e*P	**P**	**05 16 02.3**	**+2.0**
	8.6nm,1.0s						
PV07	**Paradox Valley**	**26.54**	**335**	*e*P	**P**	**05 16 01.2**	**+0.9**
	13nm,0.9s						
PV16	**Nyswonger Mesa**	**26.54**	**334**	*e*P	**P**	**05 16 02.5**	**+2.1**
	6.4nm,1.0s						
M41A	**Milan**	**26.55**	**7**	P	**P**	**05 15 58.8**	**-1.3**
	baz=189,SNR=5.5						
BC3	**Big Chuckawall**	**26.60**	**318**	P	**P**	**05 16 03.1**	**+2.3**
	baz=130,SNR=5.5						
PV04	**Paradox Valley**	**26.61**	**334**	*e*P	**P**	**05 16 03.3**	**+2.4**
	11nm,0.9s						
ISCO	**Idaho Springs**	**26.61**	**341**	*e*P	**P**	**05 16 02.4**	**+1.3**
	3.7nm,0.8s						
ISCO	**Idaho Springs**	**26.61**	**341**	P	**P**	**05 16 02.3**	**+1.3**
	baz=156,SNR=5.9						
PV14	**Lion Creek, Pa**	**26.64**	**334**	*e*P	**P**	**05 16 03.2**	**+2.0**
	6.0nm,1.0s						
O49A	**Covington**	**26.66**	**17**	*e*P	**P**	**05 15 57.1**	**-4.1**
	11nm,0.8s						
PV23	**Carpenter Ridg**	**26.70**	**334**	*e*P	**P**	**05 16 04.0**	**+2.2**
	11nm,0.9s						
IRM	**Iron Mountain**	**26.72**	**319**	P	**P**	**05 16 03.4**	**+1.6**
	baz=131						
PV21	**Cone Mtn., Par**	**26.78**	**334**	*e*P	**P**	**05 16 05.2**	**+2.7**
	6.3nm,0.9s						
PV09	**Paradox Valley**	**26.79**	**334**	*e*P	**P**	**05 16 04.7**	**+2.0**
M43A	**Waltham Townsh**	**26.82**	**9**	P	**P**	**05 16 01.2**	**-1.3**
	baz=192						
SCIA	**State Center**	**26.88**	**2**	*e*P	**P**	**05 16 02.4**	**-0.7**
	33nm,0.7s						
SCIA	**State Center**	**26.88**	**2**	P	**P**	**05 16 02.5**	**-0.7**
	baz=183						
N48A	**Decatur**	**27.09**	**16**	P	**P**	**05 16 02.6**	**-2.4**
	baz=200						
ACSO	**Alum Creek Sta**	**27.12**	**20**	P	**P**	**05 16 02.6**	**-2.7**
	baz=205						
L39A	**Vinton**	**27.16**	**4**	P	**P**	**05 16 03.5**	**-2.1**
	baz=185						
L40A	**Anamosa**	**27.16**	**5**	*e*P	**P**	**05 16 04.0**	**-1.6**
	23nm,0.8s						
L40A	**Anamosa**	**27.16**	**5**	P	**P**	**05 16 04.0**	**-1.6**
	baz=187,SNR=5.5						
L41A	**Preston**	**27.25**	**6**	P	**P**	**05 16 04.7**	**-1.7**
	baz=188						
L42A	**Oliver, Polo**	**27.28**	**8**	P	**P**	**05 16 05.1**	**-1.6**
	baz=190						
O52A	**Adamsville**	**27.40**	**21**	P	**P**	**05 16 05.4**	**-2.4**
	baz=207						
GMRC	**Granite Mounta**	**27.45**	**320**	P	**P**	**05 16 10.0**	**+1.4**
	baz=131						
K39A	**Oelwein**	**27.75**	**4**	P	**P**	**05 16 09.3**	**-1.6**
	baz=185,SNR=5.2						
K41A	**Shullsburg**	**27.79**	**7**	P	**P**	**05 16 09.2**	**-2.1**
	baz=189						
K40A	**Colesburg**	**27.80**	**5**	P	**P**	**05 16 10.2**	**-1.2**
	baz=187,SNR=12						
MTPU	**Mount Pierson**	**27.83**	**329**	*e*P	**P**	**05 16 13.2**	**+1.1**
	1.9nm,1.0s						
TUQ	**Turquoise Moun**	**28.04**	**321**	P	**P**	**05 16 15.3**	**+1.5**
	baz=132						
K42A	**Prairie Point,**	**28.08**	**8**	P	**P**	**05 16 12.3**	**-1.6**
	baz=191						
JFWS	**Jewell Farm**	**28.10**	**7**	*e*P	**P**	**05 16 12.8**	**-1.3**
	16nm,0.7s						
JFWS	**Jewell Farm**	**28.10**	**7**	P	**P**	**05 16 12.4**	**-1.6**
	baz=189						
P17A	**Butcher Ranch,**	**28.30**	**333**	*e*P	**P**	**05 16 16.9**	**+0.9**
	6.8nm,0.9s						
TMUT	**Trail Mountain**	**28.36**	**332**	*e*P	**P**	**05 16 19.5**	**+2.7**
	4.3nm,1.0s						
J39A	**Decorah**	**28.39**	**4**	P	**P**	**05 16 14.9**	**-1.7**
	baz=186						
J40A	**Soldiers Grove**	**28.53**	**6**	P	**P**	**05 16 16.1**	**-1.8**
	baz=188						
J41A	**Loganville**	**28.58**	**7**	P	**P**	**05 16 16.3**	**-2.0**
	baz=189						
ECSD	**EROS Data Cent**	**28.75**	**357**	*e*P	**P**	**05 16 19.5**	**-0.3**
	3.7nm,0.8s						
ECSD	**EROS Data Cent**	**28.75**	**357**	P	**P**	**05 16 19.3**	**-0.6**
	baz=176						
I39A	**Houston**	**28.92**	**4**	*e*P	**P**	**05 16 20.1**	**-1.2**
	21nm,0.8s						
I39A	**Houston**	**28.92**	**4**	P	**P**	**05 16 20.1**	**-1.2**
	baz=186,SNR=7.1						
MPU	**Maple Canyon**	**29.14**	**332**	*e*P	**P**	**05 16 24.3**	**+0.7**
	4.5nm,1.2s						
MPMC	**Manual Prospec**	**29.41**	**320**	P	**P**	**05 16 27.7**	**+1.6**
	baz=130						
K22A	**Casper**	**29.49**	**342**	*e*P	**P**	**05 16 28.7**	**+2.1**
	8.6nm,1.1s						
K22A	**Casper**	**29.49**	**342**	P	**P**	**05 16 27.2**	**+0.6**
	baz=156						
H38A	**Maiden Rock**	**29.69**	**3**	P	**P**	**05 16 27.3**	**-0.8**
	baz=184,SNR=5.2						
H39A	**Augusta**	**29.76**	**5**	P	**P**	**05 16 27.7**	**-1.0**
	baz=186,SNR=8.7						
R11A	**Troy Canyon, C**	**29.84**	**325**	P	**P**	**05 16 30.9**	**+1.1**
	baz=136						
H41A	**Junction City**	**29.85**	**7**	P	**P**	**05 16 27.0**	**-2.6**
	baz=189						
TCUT	**Toone Canyon**	**29.94**	**334**	*e*P	**P**	**05 16 31.6**	**+0.9**
	22nm,0.8s						
CWC	**Cottonwood Cre**	**30.02**	**320**	P	**P**	**05 16 32.8**	**+1.3**
	baz=130						
G38A	**Ridgeland**	**30.20**	**4**	P	**P**	**05 16 31.0**	**-1.7**
	baz=185						
SPMN	**Marine on St.**	**30.21**	**2**	*e*P	**P**	**05 16 31.8**	**-0.9**
	21nm,0.6s						
SPMN	**Marine on St.**	**30.21**	**2**	P	**P**	**05 16 31.5**	**-1.2**
	baz=183,SNR=10						
VES	**Vestal, Richgr**	**30.30**	**318**	P	**P**	**05 16 34.9**	**+1.3**
	baz=127						
G39A	**Holcombe**	**30.37**	**5**	P	**P**	**05 16 32.4**	**-1.7**
	baz=186,SNR=5.9						
G40A	**Rib Lake**	**30.44**	**6**	P	**P**	**05 16 32.5**	**-2.3**
	baz=188						
BGU	**Big Grassy Mou**	**30.50**	**332**	*e*P	**P**	**05 16 36.1**	**+0.5**
	2.0nm,1.1s						
PD31	**Pinedale Array**	**30.61**	**338**	*e*P	**P**	**05 16 36.9**	**+0.3**
	2.0nm,0.9s						
PDAR	**Pinedale Array**	**30.61**	**338**	*e*P	**P**	**05 16 36.7**	**+0.1**
PDAR	**Pinedale Array**	**30.61**	**338**	P	**P**	**05 16 37.3**	**+0.8**
	1.8nm,0.9s,baz=143,slow=9.5,SNR=11						
PDAR				LR	LR	05 28 59.2	
	comp=Z,82nm,18.2s,baz=156,slow=37						
F37A	**Hinrichs Farm,**	**30.72**	**3**	P	**P**	**05 16 35.6**	**-1.6**
	baz=184						
G43A	**Wallace**	**30.75**	**9**	P	**P**	**05 16 34.8**	**-2.7**
	baz=193						
F38A	**Pierce - Schro**	**30.99**	**4**	P	**P**	**05 16 38.2**	**-1.4**
	baz=185,SNR=5.4						
F39A	**Loretta**	**31.01**	**5**	P	**P**	**05 16 37.8**	**-2.1**
	baz=187						
HVU	**Hansel Valley**	**31.07**	**333**	*e*P	**P**	**05 16 41.9**	**+1.2**
	8.0nm,0.7s						
NV11	**Mina Array Sit**	**31.36**	**323**	*e*P	**P**	**05 16 44.6**	**+1.4**
	0.3nm,0.9s						
F43A	**Flat Rock, Esc**	**31.39**	**10**	P	**P**	**05 16 40.8**	**-2.4**
	baz=194						
ELK	**Elko**	**31.42**	**329**	*e*P	**P**	**05 16 45.2**	**+1.4**
	2.5nm,0.8s						
NV01	**Mina Array Sit**	**31.45**	**323**	*e*P	**P**	**05 16 45.3**	**+1.3**
NVAR	**Mina Array Bea**	**31.45**	**323**	P	**P**	**05 16 46.8**	**+2.7**
	2.3nm,0.7s,baz=138,slow=8.4,SNR=17						
REDW	**Red Top Meadow**	**31.60**	**337**	*e*P	**P**	**05 16 46.1**	**+0.8**
	7.1nm,0.7s						
E40A	**Wakefield**	**31.63**	**6**	P	**P**	**05 16 43.1**	**-2.2**
	baz=188						
SNOW	**Snow King Moun**	**31.65**	**337**	*e*P	**P**	**05 16 46.8**	**+1.0**
	17nm,0.7s						
E38A	**The Farm, Brul**	**31.65**	**4**	*e*P	**P**	**05 16 44.5**	**-1.0**
	9.8nm,0.8s						
E38A	**The Farm, Brul**	**31.65**	**4**	P	**P**	**05 16 44.0**	**-1.4**
	baz=185						
LOHW	**Long Hollow**	**31.72**	**337**	*e*P	**P**	**05 16 47.1**	**+0.7**
	6.1nm,0.8s						
TPAW	**Teton Pass**	**31.75**	**337**	*e*P	**P**	**05 16 47.3**	**+0.7**
	5.0nm,0.8s						
MOOW	**Moose Ponds**	**31.89**	**337**	*e*P	**P**	**05 16 49.5**	**+1.7**
	3.8nm,0.8s						
FXWY	**Fox Creek**	**31.90**	**337**	*e*P	**P**	**05 16 48.7**	**+0.7**
	2.5nm,1.0s						
IMW	**Indian Meadow**	**32.09**	**337**	*e*P	**P**	**05 16 51.6**	**+1.9**
	3.7nm,0.9s						
FLWY	**Flagg Ranch**	**32.16**	**338**	*e*P	**P**	**05 16 50.6**	**+0.3**
	3.8nm,0.8s						
RLMT	**Red Lodge**	**32.58**	**340**	*e*P	**P**	**05 16 54.5**	**+0.6**
	3.2nm,0.8s						
RLMT	**Red Lodge**	**32.58**	**340**	P	**P**	**05 16 53.9**	**0.0**
	baz=153						
YMR	**Madison River**	**32.76**	**338**	*e*P	**P**	**05 16 56.4**	**+0.9**
	4.7nm,0.7s						
MDND	**Maddock**	**33.08**	**354**	P	**P**	**05 16 57.4**	**-0.6**
	baz=171						
HLID	**Hailey**	**33.22**	**333**	*e*P	**P**	**05 16 59.9**	**+0.4**
	4.3nm,0.9s						
HLID	**Hailey**	**33.22**	**333**	P	**P**	**05 17 00.9**	**+1.4**
	baz=143,SNR=6.7						
MCMT	**McKenzie Canyo**	**33.61**	**336**	*e*P	**P**	**05 17 04.5**	**+1.6**
DLMT	**Dillon**	**33.96**	**337**	*e*P	**P**	**05 17 06.5**	**+0.7**
	6.9nm,0.9s						
ORV	**Oroville**	**34.08**	**321**	*e*P	**P**	**05 17 10.1**	**+3.3**
	1.0nm,0.9s						
WVOR	**Wild Horse Val**	**34.39**	**328**	*e*P	**P**	**05 17 10.4**	**+0.8**
	4.4nm,1.0s						
MOD	**Modoc Plateau**	**34.91**	**325**	*e*P	**P**	**05 17 15.3**	**+1.2**
	2.9nm,0.8s						
J08A	**Circle Bar Ran**	**34.97**	**329**	*e*P	**P**	**05 17 15.1**	**+0.5**
	7.6nm,0.8s						
ULM	**Lac du Bonnet**	**35.23**	**358**	*e*P	**P**	**05 17 14.9**	**-1.6**
	8.9nm,1.1s						
ULM	**Lac du Bonnet**	**35.23**	**358**	P	**P**	**05 17 14.7**	**-1.9**
	5.4nm,1.0s,baz=183,slow=9.2,SNR=7.2						
ULM				LR	LR	05 35 42.4	
	comp=Z,98nm,18.0s,baz=125,slow=44						
EGMT	**Eagleton**	**35.32**	**342**	*e*P	**P**	**05 17 19.0**	**+1.5**
	2.6nm,1.0s						
EGMT	**Eagleton**	**35.32**	**342**	P	**P**	**05 17 18.4**	**+0.9**
	baz=154						
MSO	**Missoula**	**35.70**	**337**	P	**P**	**05 17 21.4**	**+0.6**
	baz=147						
M02C	**Callahan**	**36.03**	**323**	P	**P**	**05 17 25.8**	**+2.1**
	baz=129						
J05D	**Fort Rock, OR**	**36.35**	**326**	P	**P**	**05 17 27.6**	**+1.0**
	baz=133						
F10A	**Beach Ranch, E**	**36.36**	**333**	*e*P	**P**	**05 17 27.4**	**+1.0**
	6.0nm,0.8s						
J04D	**Umpqua Nationa**	**36.80**	**326**	P	**P**	**05 17 31.7**	**+1.4**
	baz=132						
PTGA	**Pitinga**	**37.51**	**112**	P	**P**	**05 17 36.1**	**-0.5**
	0.9nm,0.3s,baz=301,slow=7.2,SNR=5.7						
I03D	**Drain, OR**	**37.78**	**325**	P	**P**	**05 17 39.3**	**+0.9**
	baz=131						
H04A	**Detroit Lake**	**37.81**	**327**	*e*P	**P**	**05 17 39.4**	**+0.7**
	8.1nm,0.9s						
NEW	**Newport**	**38.12**	**335**	P	**P**	**05 17 41.5**	**+0.2**
	baz=143						
LON	**Longmire**	**39.05**	**330**	*e*P	**P**	**05 17 50.0**	**+0.8**
	3.6nm,0.8s						
D03D	**Eldon**	**40.23**	**330**	P	**P**	**05 17 59.4**	**+0.6**
	baz=134						
LPAZ	**La Paz**	**40.50**	**139**	*e*P	**P**	**05 18 01.4**	**-0.7**
LPAZ	**La Paz**	**40.50**	**139**	P	**P**	**05 18 06.3**	**+4.1**
	1.5nm,0.3s,baz=289,slow=8.5,SNR=10						
LPAZ				LR	LR	05 33 13.4	
	comp=Z,79nm,20.5s,baz=309,slow=34						
FCC	**Fort Churchill**	**43.74**	**0**	*e*P	**P**	**05 18 26.7**	**-0.6**
	3.0nm,0.7s						
SCHQ	**Schefferville**	**45.21**	**22**	LR	LR	05 39 27.2	
	comp=Z,253nm,18.3s,baz=348,slow=39						
YKA	**Yellowknife Ar**	**49.58**	**348**	P	**P**	**05 19 13.0**	**0.0**
	2.5nm,0.6s,baz=153,slow=7.2,SNR=44						
YKA				LR	LR	05 41 35.3	
	comp=Z,10nm,21.0s,baz=88,slow=38						
YKB5	**Yellowknife Ar**	**49.58**	**348**	*e*P	**P**	**05 19 12.9**	**-0.1**
YKW3	**Yellowknife Ar**	**49.64**	**348**	*e*P	**P**	**05 19 13.5**	**0.0**
	5.8nm,1.1s						
BDFB	**Brasilia**	**55.05**	**122**	P	**P**	**05 19 56.7**	**+2.2**
	4.7nm,0.8s,baz=295,slow=6.3,SNR=6.3						
INK	**Inuvik**	**58.86**	**344**	*e*P	**P**	**05 20 20.5**	**0.0**
	3.9nm,0.8s						
HDA	**Harding Lake**	**60.88**	**337**	P	**P**	**05 20 34.2**	**-0.4**
	baz=119						
PRP	**Porcupine Dome**	**60.91**	**338**	*e*P	**P**	**05 20 35.8**	**+0.9**
	3.6nm,0.8s						
IL1	**Eielson Array**	**61.03**	**337**	*e*P	**P**	**05 20 35.9**	**+0.3**
ILAR	**Eielson Array**	**61.03**	**337**	P	**P**	**05 20 36.3**	**+0.7**
	2.4nm,0.9s,baz=148,slow=4.7,SNR=19						
ILB	**Eielson Array**	**61.03**	**337**	*e*P	**P**	**05 20 36.0**	**+0.4**
RND	**Reindeer**	**61.16**	**335**	*e*P	**P**	**05 20 38.0**	**+1.4**
	4.4nm,1.0s						
BWN	**Browne**	**61.75**	**336**	*e*P	**P**	**05 20 41.2**	**+0.8**
	21nm,0.9s						
MLY	**Manley**	**62.62**	**337**	*e*P	**P**	**05 20 47.0**	**+0.7**
	8.1nm,0.9s						
ESDC	**Sonseca Array**	**81.00**	**51**	P	**P**	**05 22 36.0**	**-1.3**
	1.9nm,0.8s,baz=282,slow=5.0,SNR=9.8						
ES19	**SONSECA Array**	**81.05**	**51**	*e*P	**P**	**05 22 36.4**	**-1.0**
NB2	**NORSAR Subarra**	**84.45**	**28**	P	**P**	**05 22 56.1**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=290,slow=5.3						
NB200	**NORSAR Array S**	**84.45**	**28**	*e*P	**P**	**05 22 55.1**	**+0.4**
NOA	**NORSAR Array B**	**84.45**	**28**	P	**P**	**05 22 55.1**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=291,slow=5.1,SNR=8.1						
ARA0	**ARCESS Array S**	**85.98**	**18**	*e*P	**P**	**05 23 02.6**	**+0.5**
ARCES	**ARCESS Array B**	**85.98**	**18**	P	**P**	**05 23 02.6**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=297,slow=5.3,SNR=4.7						
GERES	**GERESS Array B**	**90.38**	**39**	P	**P**	**05 23 24.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=240,slow=3.3,SNR=3.1						
TOA1	**Torodi Ar. Sit**	**92.47**	**76**	*e*P	**P**	**05 23 31.4**	**-2.5**
TORD	**Torodi Ar. Bea**	**92.48**	**76**	P	**P**	**05 23 31.4**	**-2.5**
	comp=Z,0.2nm,0.5s,baz=288,slow=5.4,SNR=4.0						
MKAR	**Makanchi Array**	**118.47**	**3**	PKP	**PKiKP**	**05 29 12.5**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=354,slow=2.9,SNR=4.6						
GEYT	**Alibeck**	**121.44**	**25**	PKP	**PKiKP**	**05 29 18.1**	**+1.9**
	comp=Z,1.0nm,0.4s,baz=243,slow=1.3,SNR=2.7						
WMQ	**Urumqi**	**121.48**	**358**	*e*P	**PKiKP**	**05 29 16.4**	**+0.3**
STKA	**Stephens Creek**	**126.43**	**241**	PKhKP	PKPpre	05 29 24.8	
	comp=Z,1.1nm,0.6s,baz=52,slow=3.4,SNR=3.1						
WRA	**Warramunga Arr**	**133.29**	**257**	PKhKP	PKPpre	05 29 38.2	
	comp=Z,0.4nm,0.6s,baz=87,slow=2.5,SNR=13						
ASAR	**Alice Springs**	**133.71**	**251**	PKhKP	PKPpre	05 29 39.1	
	comp=Z,0.2nm,0.2s,baz=294,slow=7.6,SNR=2.7						
CMAR	**Chiang Mai Arr**	**144.27**	**338**	PKhKP	PKPpre	05 29 57.3	
	comp=Z,0.5nm,0.4s,baz=340,slow=4.3,SNR=5.4						

ISCJB ***04*** *05:10:59.7±0.3, 46°.17N±0°.04×143°.07E±0°.09, h341^{km}, mb3.2/12, Error ellipse: s-maj=8.4km s-min=5.5km az=169.7*

SKHL ***04*** *05:11:00.6±0.4, 45°.84N×142°.75E, h341^{km}±42^{km}, mb4.5/5, msh4.8/1*

IDC ***04*** *05:11:00.5±0.6, 46°.18N×142°.93E, h343^{km}±8^{km}, mb3.0/12,*

mb1 3.2/18, mb1mx3.0/46, mbtmp3.7/18, Error ellipse: s-maj=15.8km s-min=11.6km az=165.0

*JMA **04** 05:11:01.2±0.3, 46°.02N×143°.13E, h345km, M3.6*

ISC 04 05:10:59.9±0.6**, 46°.03N**±0°.06×**143°.00E**±0°.08**, h341km, n34, σ1ˢ.55**/41**, mb3.2**/12**, 1C, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.94	350	eP	Pn	05 11 45.8	+1.5
YSS				AMB	AMB	05 11 46.9	
	190nm,0.3s						
YSS				eS	S	05 12 20.7	+0.8
YSS				A	A	05 12 21.3	
	80nm,0.6s						
YSS				A	A	05 12 21.3	
	90nm,0.6s						
JWK2	Keihoku	1.05	228	P	Pn	05 11 47.0	+2.1
JWK2				eS	S	05 12 22.9	+2.0
JSE	Soyaes	1.11	195	P	Pn	05 11 47.0	+1.8
KHLM	Kholmsk	1.21	328	⇑iP	Pn	05 11 46.8	+1.3
KHLM				AMB	AMB	05 11 46.9	
	170nm,0.3s						
JSS	Shosan	1.82	207	P	Pn	05 11 51.4	+2.2
ASAJ	Asahikawa	1.94	189	P	Pn	05 11 52.1	+2.1
ASAJ	Asahikawa	1.94	189	P	Pn	05 11 52.4	+2.4
	3.5nm,0.3s,baz=19,slow=6.8,SNR=25						
ASAJ				S	S	05 12 33.1	+3.0
	0.3nm,0.3s,baz=229,slow=19,SNR=3.5						
JMP	Maruseppu	2.04	173	P	Pn	05 11 52.7	+1.9
JKK2	Kamakawa 2	2.17	185	P	Pn	05 11 54.1	+2.4
JAR	Ashorobuto	2.79	168	P	Pn	05 11 59.0	+2.2
JAR				eS	S	05 12 43.9	+1.5
JAK	Akkeshi	3.27	158	P	Pn	05 12 02.4	+1.3
JAK				eS	S	05 12 49.1	-1.2
NEM2	Nemuro 2	3.31	143	eS	S	05 12 49.3	-1.7
JCH	Churui	3.43	176	P	Pn	05 12 03.3	+0.6
JCH				eS	S	05 12 50.3	-2.8
JKB	Kayabe	4.38	200	P	Pn	05 12 13.3	+0.9
JKB				eS	S	05 13 07.4	-3.4
JOT	Ohata	4.86	198	P	Pn	05 12 18.2	+0.6
GRNR	Gornyy	6.45	320	eP	Pn	05 12 35.3	-0.2
GRNR				AMB	AMB	05 12 36.0	
	10.0nm,0.5s						
USRK	Ussuriysk Ar.	8.00	261	P	Pn	05 12 54.4	+0.6
	0.6nm,0.3s,baz=67,slow=12,SNR=8.9						
KLR	Kul'dur	8.24	297	P	Pn	05 12 57.0	+0.3
	0.2nm,0.3s,baz=112,slow=12,SNR=5.0						
EKMR	Ekimchan	9.60	321	eP	Pn	05 13 13.0	+0.2
EKMR				AMB	AMB	05 13 14.0	
	7.0nm,0.5s						
MJAR	Matsushiro Arr	10.14	202	P	P	05 13 21.7	+0.3
	0.1nm,0.3s,baz=10.0,slow=11,SNR=6.1						
PETK	Petropavlovsk-	11.87	48	P	Pn	05 13 39.7	-0.3
	0.2nm,0.3s,baz=220,slow=8.9,SNR=4.0						
SEY	Seymchan	17.75	14	P	P	05 14 43.5	-0.8
	0.5nm,0.3s,baz=199,slow=7.9,SNR=5.4						
SONM	Songino Array	24.91	288	P	P	05 15 52.5	-0.5
	0.7nm,0.5s,baz=76,slow=9.3,SNR=6.2						
MKAR	Makanchi Array	40.94	294	P	P	05 18 09.3	-0.7
	0.4nm,0.5s,baz=76,slow=9.6,SNR=3.2						
ILAR	Eielson Array	41.43	38	P	P	05 18 13.1	-0.7
	0.6nm,0.9s,baz=276,slow=9.7,SNR=13						
KURBB	Kurchatov Arra	41.90	301	P	P	05 18 16.6	-1.1
	0.7nm,0.5s,baz=72,slow=8.7,SNR=4.6						
BVAR	Borovoye Array	45.77	306	P	P	05 18 47.7	-0.5
	0.3nm,0.3s,baz=91,slow=7.8,SNR=3.3						
YKA	Yellowknife Ar	55.53	33	P	P	05 19 59.4	-0.7
	0.9nm,0.5s,baz=307,slow=7.0,SNR=14						
WRA	Warramunga Arr	66.13	189	P	P	05 21 12.6	+1.2
	0.1nm,0.4s,baz=6.5,slow=6.6,SNR=4.6						
NVAR	Mina Array Bea	68.82	56	P	P	05 21 29.1	+0.8
	0.6nm,0.6s,baz=301,slow=5.5,SNR=6.4						
PDAR	Pinedale Array	70.64	48	P	P	05 21 39.3	+0.1
	0.6nm,0.7s,baz=306,slow=1.3,SNR=5.5						
ULM	Lac du Bonnet	71.41	35	P	P	05 21 42.8	-0.5
	1.2nm,0.5s,baz=327,slow=6.4,SNR=3.6						
BRTR	Keskin Array B	73.83	311	P	P	05 21 57.7	-0.2
	0.3nm,0.8s,baz=76,slow=7.9,SNR=2.9						
TXAR	Lajitas Array	83.76	54	P	P	05 22 52.0	+0.4
	0.3nm,0.6s,baz=302,slow=4.0,SNR=6.8						

NNC 04 05:13:15.6±2.3**, 54°.18N×86°.47E, h0km, mb3.8, mpv3.3, 5C-4D, Error ellipse: s-maj=27.4km s-min=11.5km az=0.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.00	257	⇓P	Pg	05 13 34.2	-0.4
	7.7nm,0.5s						
ZAA0				⇑S	Sb	05 13 48.7	-0.7
	14nm,1.0s						
KURK	Kurchatov	5.92	237	⇑Pn	Pn	05 14 46.7	+2.3
	2.0nm,0.8s						
KURK				⇓Lg	Lg	05 16 19.7	
	2.9nm,1.0s						
KURBB	Kurchatov Arra	6.02	237	⇓Pn	Pn	05 14 47.9	+2.1
	5.7nm,0.6s						
KURBB				⇑Lg	Lg	05 16 25.9	
	4.7nm,0.6s						
MK31	Makanchi Array	7.86	201	⇑Pn	Pn	05 15 12.2	+1.1
	1.3nm,0.7s						
MK31				⇑Sn	Sn	05 16 40.6	-0.1
	0.2nm,0.4s,baz=25,slow=26,SNR=5.0						
MK31				⇓Lg	Lg	05 17 22.7	
	1.2nm,0.7s,baz=28,slow=32,SNR=4.5						

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*ISCJB **04** 05:21:11.0±0.6, 35°.03N±0°.05×29°.64E±0°.08, h33km, Error ellipse: s-maj=9.6km s-min=6.8km az=177.8*

*ISK **04** 05:21:11.1, 35°.26N×29°.70E, h8km, ML2.8/12*

*HLW **04** 05:21:12.7, 35°.09N×29°.53E, h25km±25km, Md4.4*

ISC 04 05:21:11.4±1.1**, 35°.05N**±0°.06×**29°.65E**±0°.09**, h35km, n17, σ1ˢ.99**/20**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAS	Kas	1.18	358	PG	Pn	05 21 30.3	-1.3
AKAS				SG	Sn	05 21 44.2	-2.3
FETY	Fethiye	1.65	344	PN	Pn	05 21 38.4	+0.5
ELL	Elmali	1.71	7	PN	Pn	05 21 38.8	0.0
DALY	Dalyan (Mula)	1.94	336	PN	Pn	05 21 42.8	+0.9
TURN	Turunc	2.00	335	PN	Pn	05 21 44.9	+2.1
KORT	Korkueli	2.03	16	PN	Pn	05 21 43.4	+0.1
ALAN	Alanya-ANTALYA	2.45	52	PN	Pn	05 21 50.3	+1.3
BCK	Bucak	2.52	17	PN	Pn	05 21 50.7	+0.7
SUTC	Sutluce-Ispart	2.66	24	PN	Pn	05 21 52.5	+0.6
MLSB	Milas	2.70	326	PN	Pn	05 21 54.1	+1.7
BODT	Bodrum	2.76	317	PN	Pn	05 21 55.3	+2.1
HDMB	Hadim	2.99	50	PN	Pn	05 21 57.9	+1.3
BERE	Bereket-Mersin	3.19	65	PN	Pn	05 22 01.2	+2.0
AYDB	Zeytinkoy-Aydi	3.22	334	PN	Pn	05 22 01.1	+1.5
SWA2		6.79	213	P	Pn	05 22 49.8	+1.2
	baz=212						
HKAT	Jabal Katrina	7.49	149	P	Pn	05 23 00.9	+2.5
	baz=148						
HKAT				S	Sn	05 24 19.0	-3.1
	baz=148						
HFRF	Wahat Farafira	7.96	189	P	Pn	05 23 05.9	+1.2
	baz=188						
HFRF				S	Sn	05 24 29.2	-4.3
	baz=188						

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*IDC **04** 05:27:55.0±1.1, 2°.36N×90°.38E, h0km, mb4.0/10, mb1 4.1/13, mb1mx3.9/53, mbtmp4.0/13, ML3.9/3, Error ellipse: s-maj=34.0km s-min=17.1km az=41.0*

*NEIC **04** 05:27:56.6±0.4, 2°.34N×90°.40E, h10km, mb4.3/11, Error ellipse: s-maj=10.6km s-min=5.1km az=211.0*

*ISCJB **04** 05:27:58.0±0.6, 2°.31N±0°.09×90°.52E±0°.05, h33km, mb4.1/19, Error ellipse: s-maj=14.0km s-min=5.6km az=25.3*

ISC 04 05:28:00.2±0.9**, 2°.4N**±0°.1×**90°.47E**±0°.08**, h35km, n50, σ0ˢ.90**/46**, mb4.3**/27**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	7.18	98	ePn	Pn	05 29 44.0	+1.1
GSI				eSn	Sn	05 31 01.8	-1.6
PSI	Prapat	8.46	87	Pn	Pn	05 30 00.3	-0.2
	1.8nm,0.3s,baz=180,slow=9.7,SNR=2.7						
PSI				Sn	Sn	05 31 34.6	-0.3
	baz=359,slow=8.9,SNR=2.2						
KULM	Kulim	10.57	74	ePn	Pn	05 30 27.6	-1.6
PALK	Pallekele	10.88	297	ePn	Pn	05 30 32.1	-1.4
PALK				eSn	Sn	05 32 22.4	-12
PALK	Pallekele	10.88	297	Pn	Pn	05 30 32.7	-0.8
	1.0nm,0.3s,baz=116,slow=14,SNR=8.1						
PALK				Sn	Sn	05 32 22.8	-11
	4.2nm,0.3s,baz=295,slow=2.8,SNR=15						
CMAR	Chiang Mai Arr	18.02	27	P	Pn	05 32 08.3	+0.4
	0.1nm,0.3s,baz=216,slow=12,SNR=5.2						
H08S2	Diego Garcia H	20.51	241	T	T	05 53 41.2	
	baz=63,slow=74,SNR=39						
H08S3	Diego Garcia H	20.51	241	T	T	05 53 33.3	
	baz=63,slow=74,SNR=99						
H08S1	Diego Carcia H	20.52	241	T	T	05 53 49.0	
	baz=63,SNR=9.5						
JIRN	Jiri	25.47	351	eP	P	05 33 27.1	+1.5
	25nm,0.7s						
PKI	Pulchoki	25.52	350	eP	P	05 33 27.3	+1.3
	19nm,0.8s						
PKIN	Phulchoki	25.53	350	eP	P	05 33 27.2	+1.2
	12nm,0.7s						
DMN	Daman	25.61	349	eP	P	05 33 28.0	+1.3
	40nm,1.0s						
GUN	Gumba	25.77	351	eP	P	05 33 29.7	+1.4
	19nm,0.8s						
KOLN	Koldanda	26.09	346	eP	P	05 33 32.9	+1.9
	15nm,0.8s						
PYUN	Piuthan	26.56	345	eP	P	05 33 37.0	+1.7
	30nm,1.0s						
DANN	Dangsing	26.61	347	eP	P	05 33 36.8	+1.0
	11nm,0.7s						
LSA	Lhasa	27.18	1	eP	P	05 33 42.0	+0.8
	5.4nm,0.8s						
ARSB	Arslanbob	41.85	340	eP	P	05 35 47.6	+0.4
	5.5nm,0.9s						
AAK	Ala-Archa	42.56	343	eP	P	05 35 54.0	+1.2
	5.6nm,1.4s						
AAK	Ala-Archa	42.56	343	P	P	05 35 52.4	-0.4
	1.7nm,0.7s,baz=135,slow=7.4,SNR=5.7						
H01W3	Cape Leeuwin H	43.21	151	T	T	06 22 34.4	
	baz=326,slow=76,SNR=14						
H01W2	Cape Leeuwin H	43.22	151	T	T	06 22 35.9	
	baz=326,slow=76,SNR=7.7						
H01W1	Cape Leeuwin H	43.22	151	T	T	06 22 36.2	
	baz=326,slow=76,SNR=8.4						
KK31	Karatay Array	44.28	339	eP	P	05 36 07.0	+0.4
	3.4nm,0.8s						
KKAR	Karatay Array	44.28	339	eP	P	05 36 07.1	+0.5
	3.4nm,0.8s						
MK01	Makanchi Array	44.79	352	eP	P	05 36 10.3	-0.3
MK31	Makanchi Array	44.81	352	eP	P	05 36 10.9	+0.2
	2.6nm,0.8s						
MK32	Makanchi Array	44.81	352	eP	P	05 36 10.6	-0.2
MKAR	Makanchi Array	44.81	352	eP	P	05 36 10.8	+0.1
	17nm,0.8s						
MKAR	Makanchi Array	44.81	352	P	P	05 36 10.6	-0.2
	2.7nm,0.7s,baz=170,slow=8.9,SNR=39						
GEYT	Alibeck	46.16	324	P	P	05 36 21.2	-0.4
	2.7nm,0.6s,baz=119,slow=15,SNR=4.9						
SONA0	Songino Array	47.33	15	eP	P	05 36 31.5	+0.8
SONM	Songino Array	47.33	15	P	P	05 36 31.5	+0.8
	6.6nm,0.7s,baz=195,slow=9.1,SNR=50						
SONA1	Songino Array	47.35	15	eP	P	05 36 31.8	+0.9
WR1	Warramunga Arr	48.42	119	eP	P	05 36 40.5	+1.0
	3.2nm,1.0s						
WRA	Warramunga Arr	48.42	119	P	P	05 36 40.4	+1.0
	0.5nm,0.7s,baz=296,slow=8.7,SNR=10						
KURK	Kurchatov	49.20	350	eP	P	05 36 44.7	-0.2
	2.7nm,0.8s						
AS31	Alice Springs	49.55	124	eP	P	05 36 47.5	-0.6
	0.6nm,0.6s						
ASAR	Alice Springs	49.55	124	P	P	05 36 48.0	-0.1
	0.2nm,0.5s,baz=252,slow=4.8,SNR=4.3						
ZALV	Zalesovo Beam	51.62	356	eP	P	05 37 02.8	-0.3
ZALV	Zalesovo Beam	51.62	356	P	P	05 37 02.6	-0.4
	1.8nm,0.7s,baz=188,slow=9.0,SNR=7.7						
ZAA1	Zalesovo Array	51.62	356	eP	P	05 37 02.6	-0.5
ABKAR	Akbulak array	53.49	336	eP	P	05 37 17.1	+0.1
	4.8nm,1.0s						
AKTO	Aktyubinsk	55.19	335	P	P	05 37 29.1	-0.4
	baz=74,slow=7.4						
BR101	Keskin Array S	63.40	314	eP	P	05 38 26.2	-0.4
BRTR	Keskin Array B	63.40	314	P	P	05 38 26.2	-0.4
	0.4nm,0.7s,baz=128,slow=8.4,SNR=2.6						
TIXI	Tiksi	73.32	12	P	P	05 39 27.3	-0.6
	2.9nm,0.6s,baz=191,slow=2.6,SNR=8.0						
GERES	GERESS Array B	79.51	319	P	P	05 40 03.5	-0.1
	1.5nm,0.7s,baz=120,slow=7.9,SNR=4.0						
TXAR	Lajitas Array	145.69	22	PKPbc	PKPbc	05 47 36.4	+0.2
	0.6nm,0.8s,baz=300,slow=2.7,SNR=5.4						

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*IDC **04** 05:30:54.4±2.0, 37°.76N×56°.68E, h0km, mb3.2/1, mb1 3.4/2, mb1mx2.9/45, mbtmp3.4/2, ML2.5/1, Error ellipse: s-maj=156.3km s-min=19.3km az=174.0*

*ISN **04** 05:31:51.1±1.2, 33°.94N×48°.02E, h0km±12km, ML3.6*

*TEH **04** 05:31:55.7, 33°.95N×47°.95E, h10km, ML3.6*

*ISCJB **04** 05:31:56.6±0.3, 33°.88N±0°.02×47°.85E±0°.03, h18km, mb3.2/1, Error ellipse: s-maj=3.5km s-min=3.1km az=21.5*

*THR **04** 05:31:57.5, 34°.03N×48°.09E, h15km, ML3.6*

*AZER **04** 05:32:04.9±7.5, 34°.22N×48°.27E, h8km, ml3.4/4, Error ellipse: s-maj=90.4km s-min=65.9km az=92.0*

ISC 04 05:31:57.0±0.7**, 33°.90N**±0°.02×**47°.86E**±0°.03**, h18km, n56, σ1ˢ.80**/60**, 6C-3D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.38	182	eSg	Sb	05 32 11.8	+1.1
IKFM				ePg	Pg	05 32 04.7	-0.2
IKFM				IAMB	IAmb	05 32 12.3	
	comp=Z,0.0nm,0.2s						
IKOM	Komasi	0.40	313	IAMB	IAmb	05 32 15.3	
	comp=Z,0.0nm,0.2s						
IKOM				ePg	Pg	05 32 04.8	-0.5
IBZA	Bozab	0.56	360	IAMB	IAmb	05 32 15.3	
	comp=Z,0.0nm,0.2s						
IBZA				ePg	Pg	05 32 06.1	-2.3
IKMR	Kamar-syah	0.58	132	IAMB	IAmb	05 32 16.2	
	comp=Z,0.0nm,0.3s						
IKMR				ePg	Pg	05 32 06.2	-2.3
HSAM	Samen	0.69	63	IAMB	IAmb	05 32 16.5	
	comp=N,0.0nm,0.4s						
HSAM				ePg	Pb	05 32 07.2	-3.4
IVIS	Veis	1.04	307	ePg	Pb	05 32 15.7	-0.9
IVIS				IAMB	IAmb	05 32 33.6	
	comp=Z,17µm,0.3s						
IGHG	Ghaleghazi	1.16	292	ePg	Pn	05 32 18.5	0.0
IGHG				IAMB	IAmb	05 32 46.6	
	comp=Z,20µm,0.5s						
ILIN	Lien	1.26	324	ePg	Pn	05 32 20.1	+0.2
ILIN				IAMB	IAmb	05 32 41.2	
	comp=N,642nm,0.1s						
SNGE	Sanandaj	1.26	340	ePg	Pb	05 32 20.2	-0.2
SNGE	Sanandaj	1.26	340	ePg	Pb	05 32 20.2	-0.2
HSRG	Sareghieh	1.38	14	ePn	Pn	05 32 20.2	-1.4
HAGD	Aghdareh	1.40	49	ePg	Pn	05 32 19.8	-2.0
HAGD				IAMB	IAmb	05 32 39.6	
	comp=Z,0.0nm,0.3s						
KHMZ	Khomeyn	1.75	95	ePn	Pn	05 32 26.2	-0.5
KHMZ	Khomeyn	1.75	95	eAML	AML	05 32 56.6	
	comp=N,541nm,0.4s						
KHMZ	Khomeyn	1.75	95	ePg	Pn	05 32 26.2	-0.5
IBDR	Badra	1.80	244	ePn	Pn	05 32 27.0	-0.1
IBDR				eSn	Sg	05 32 53.5	-1.4
ASAO	Ashtian	1.90	70	ePn	Pn	05 32 29.1	+0.3
ASAO	Ashtian	1.90	70	eAML	AML	05 33 06.5	
	comp=E,466nm,0.6s						
ASAO	Ashtian	1.90	70	ePn	Pn	05 32 29.1	+0.3
SHGR	Shooshtar-Gavs	1.96	156	ePn	Pb	05 32 32.9	+0.8
SHGR	Shooshtar-Gavs	1.96	156	eAML	AML	05 33 06.0	
	comp=N,399nm,0.3s						
SHGR				eAML	AML	05 33 10.8	
	comp=E,578nm,0.6s						
SHGR	Shooshtar-Gavs	1.96	156	ePn	Pb	05 32 32.9	+0.8
IRAZ	Razeghan	2.27	48	ePn	Pb	05 32 35.8	-1.7
IRAZ				IAMB	IAmb	05 33 11.9	
	comp=Z,8µm,0.7s						
IPIR	Pirpir	2.81	115	ePn	Pn	05 32 42.6	+1.3
IPIR				IAMB	IAmb	05 32 50.0	
	comp=Z,2µm,0.4s						
ZNJK	Zanjan	2.84	13	ePn	Pn	05 32 42.7	+1.0
ZNJK	Zanjan	2.84	13	ePn	Pn	05 32 42.7	+1.0
GHVR	GHOM	2.90	78	ePn	Pn	05 32 41.7	-0.7
GHVR	GHOM	2.90	78	eAML	AML	05 33 30.9	
	comp=N,281nm,0.6s						
GHVR	GHOM	2.90	78	ePn	Pn	05 32 41.7	-0.7
IMHD	Mahdasht	2.91	52	ePn	Pn	05 32 45.2	+2.6
IMHD				IAMB	IAmb	05 33 26.4	
	comp=N,4µm,0.6s						
BHD	Baghdad	2.98	259	ePn	Pn	05 32 43.0	-0.3
BHD				eSn	Sn	05 33 21.0	+2.5
ZNGN	Zangian	3.08	124	ePn	Pn	05 32 46.4	+1.4
ROKH	ROKH	3.08	119	ePn	Pn	05 32 46.0	+1.0
ROKH				IAMB	IAmb	05 33 42.0	
	comp=Z,0.0nm,0.8s						
IKLH	Kolahrood	3.15	100	ePn	Pn	05 32 48.3	+2.3
IKLH				IAMB	IAmb	05 32 56.6	
	comp=Z,2µm,0.4s						
IHSB	Hasanabad	3.20	60	ePn	Pn	05 32 48.5	+2.0
IHSB				IAMB	IAmb	05 33 48.8	
	comp=Z,0.0nm,1.0s						
NSR	Nassriya	3.23	207	ePn	Pn	05 32 46.0	-0.8
NSR				eSn	Sn	05 33 26.0	+1.2
IKRK	Kirkuk	3.27	298	ePn	Pn	05 32 47.0	-0.3
IKRK				eSn	Sn	05 33 28.0	+2.3
KRSH	Karshahi	3.55	88	ePn	Pn	05 32 52.6	+1.2
KRSH				IAMB	IAmb	05 33 55.3	
	comp=E,0.0nm,0.5s						
IGAR	Gharneh	3.81	112	ePn	Pn	05 32 56.0	+1.0
IGAR				IAMB	IAmb	05 33 06.5	
	comp=Z,1µm,0.3s						
IDMV	Damavand	3.82	63	ePn	Pn	05 32 56.2	+1.0
IDMV				IAMB	IAmb	05 33 15.2	
	comp=Z,850nm,0.6s						
IZEF	Zefreh	3.87	104	ePn	Pn	05 32 56.9	+1.1
IRAM	Ramesheh	4.34	118	ePn	Pn	05 33 02.5	+0.2
IRAM				IAMB	IAmb	05 34 36.3	
	comp=Z,391nm,0.7s						
IFIR	Firoozkooh	4.38	65	IAMB	IAmb	05 33 17.7	
	comp=Z,594nm,0.3s						
IFIR				ePn	Pn	05 33 04.2	+1.3
ILAS	Lasjerd	4.45	69	ePn	Pn	05 33 04.8	+1.0
MSL	Mosul	4.62	304	ePn	Pn	05 33 05.0	-0.9
MSL				eSn	Sn	05 34 01.0	+1.8
ASTR	Astara	4.71	9	⇑P	Pn	05 33 09.8	+2.7
ASTR				⇓S	Sn	05 34 05.1	+3.9
LRK	Lerik	4.75	5	⇑P	Pn	05 33 12.2	+4.4
LRK				⇑S	Sn	05 34 06.2	+3.8
IANJ	Anjilo	5.22	71	ePn	Pn	05 33 14.8	+0.4
ORD	Ordubad	5.24	344	⇑P	Pb	05 33 21.4	-6.6
ORD				⇑S	Sn	05 34 20.0	+5.6
IKAZ	Kazeroun	5.32	139	ePn	Pn	05 33 16.7	+0.8
IKAZ				IAMB	IAmb	05 34 53.8	
	comp=Z,690nm,0.8s						
GLBA	Clilabad	5.35	4	⇓P	Pn	05 33 20.8	+4.9
GLBA				⇑S	Sn	05 34 18.7	+1.8
NAX	Nakhchivan	5.59	341	⇓P	Pn	05 33 26.7	+7.3
RTB	Rutbah	6.37	264	ePn	Pn	05 33 30.0	-0.1
RTB				eSn	Sn	05 34 43.0	+0.6
BRTR	Keskin Array B	12.79	301	P	P	05 35 06.8	-2.1
	comp=Z,0.0nm,0.3s,baz=98,slow=10,SNR=4.6						
AKTO	Aktyubinsk	18.12	21	Sn	Pn	05 36 09.1	+1.5
	comp=Z,0.2nm,0.3s,baz=202,slow=11,SNR=3.2						
TORD	Torodi Ar. Bea	46.64	255	P	P	05 40 24.1	-0.4
	comp=Z,0.2nm,0.6s,baz=46,slow=5.9,SNR=3.0						

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*JMA **04** 05:35:31.1±0.7, 34°.01N×141°.70E, h17km±3km, M3.4*

*IDC **04** 05:35:32.4±1.0, 34°.17N×141°.79E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/45, mbtmp3.5/7, ML2.6/1, MS2.6/2, Ms1 2.6/2, ms1mx2.3/41, Error ellipse: s-maj=25.1km s-min=19.1km az=112.0*

*ISCJB **04** 05:35:34.3±0.8, 34°.25N±0°.06×141°.75E±0°.08, h27km, mb3.5/6, Error ellipse: s-maj=9.8km s-min=7.5km az=144.7*

ISC 04 05:35:36.6±1.1**, 34°.25N**±0°.07×**141°.62E**±0°.10**, h27km, n15, σ1ˢ.11**/18**, mb3.5**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.67	307	P	Pb	05 35 47.6	-1.8
BSO3	Boso 3	1.07	301	P	Pn	05 35 54.2	-1.4
BSO4	Boso 4	1.29	305	P	Pn	05 35 58.3	-0.5
BSO4				S	Sb	05 36 16.8	+0.5
JKUC	kamogawauchiur	1.48	308	P	Pn	05 36 00.6	-0.9
JIM2	Oshima 3	1.87	285	P	Pn	05 36 05.1	-1.8
JHJ	Hachijo jima 2	1.91	234	Pn	Pn	05 36 07.4	+0.1
	58nm,0.3s,baz=68,slow=19,SNR=2.5						
JHJ				Sn	Sn	05 36 31.6	+1.2
	72nm,0.3s,baz=68,slow=19,SNR=3.3						
MJAR	Matsushiro Arr	3.61	310	Pn	Pn	05 36 31.6	+0.9
	0.4nm,0.3s,baz=133,slow=7.1,SNR=8.4						
MJAR				Sn	Sn	05 37 13.8	+1.3
	0.5nm,0.3s,baz=129,slow=29,SNR=7.7						
MJAR				LR	LR	05 38 10.8	
	comp=Z,54nm,20.0s,baz=160,slow=42						
MAT	Matsushiro	3.61	310	P	Pn	05 36 31.8	+1.0
MAT				S	Sn	05 37 13.2	+0.7
KSRS	Korea Array	11.57	290	LR	LR	05 43 05.8	
	comp=Z,44nm,18.5s,baz=5.0,slow=39						
SONM	Songino Array	29.56	308	P	P	05 41 39.7	+0.6
	0.3nm,0.6s,baz=91,slow=8.2,SNR=2.7						
MKAR	Makanchi Array	45.79	304	P	P	05 43 57.1	+1.3
	0.5nm,0.8s,baz=92,slow=9.5,SNR=3.4						
ILAR	Eielson Array	51.77	31	P	P	05 44 41.0	-0.5
	0.4nm,0.7s,baz=269,slow=5.8,SNR=5.7						
WRA	Warramunga Arr	54.34	188	P	P	05 44 59.8	-1.1
	0.3nm,0.5s,baz=3.8,slow=7.5,SNR=8.9						
INK	Inuvik	56.79	26	P	P	05 45 18.3	+0.3
	1.3nm,0.9s,baz=300,slow=5.2,SNR=4.3						
ASAR	Alice Springs	58.06	188	P	P	05 45 27.3	-0.2
	0.5nm,0.7s,baz=13,slow=8.9,SNR=5.4						

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*IDC **04** 05:38:51.2±1.6, 15°.86N×96°.89W, h0km, mb3.5/7, mb1 3.8/9, mb1mx3.6/40, mbtmp3.5/9, ML3.3/2, MS3.6/7, Ms1 3.6/7, ms1mx3.3/23, Error ellipse: s-maj=30.7km s-min=15.7km az=172.0*

*ISCJB **04** 05:38:52.3±0.4, 15°.93N±0°.04×97°.02W±0°.03, h13km, mb3.9/18, MS3.5/7, Error ellipse: s-maj=6.6km s-min=3.3km az=21.5*

*NEIC **04** 05:38:56.0±0.0, 15°.92N×97°.01W, h24km, mb4.2/17, MD4.5(MEX), After MEX.*

NEIC Felt [III] at Puerto Escondido. Also felt at Oaxaca, Santa Maria Colotepec, Santa Maria Huatulco and Tataltepec de Valdes.

*MEX **04** 05:38:56.0±0.7, 15°.92N×97°.01W, h24km±6km, MD4.4*

ISC 04 05:38:53.8±0.6**, 15°.94N**±0°.05×**96°.99W**±0°.03**, h13km, n95, σ2ˢ.07**/109**, mb4.1**/18**, MS3.6**/7**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.86	102	ePg	Pg	05 39 09.9	-0.5
HUIG				eSn	Sg	05 39 20.8	-1.0
HUIG	Huatulco	0.86	102	eP	Pg	05 39 09.9	-0.5
HUIG				eS	Sg	05 39 20.8	-1.0
VHO	Vista Hermosa	1.15	12	ePn	Pb	05 39 14.1	-1.5
VHO				eSn	Sb	05 39 28.4	-2.1
VHO	Vista Hermosa	1.15	12	eP	Pb	05 39 14.1	-1.5
VHO				eS	Sb	05 39 28.4	-2.1
PNIG	Pinotepa	1.18	292	ePn	Pn	05 39 13.9	-2.1
PNIG				eS	Sb	05 39 27.9	-3.5
PNIG	Pinotepa	1.18	292	eP	Pn	05 39 13.9	-2.1
PNIG				eS	Sb	05 39 27.9	-3.5
CMIG	Matias Romero	2.32	60	ePn	Pn	05 39 29.6	-2.1
CMIG	Matias Romero	2.32	60	eP	Pn	05 39 29.6	-2.1
CMIG	Matias Romero	2.32	60	Pn	Pn	05 39 29.8	-1.9
	12nm,0.3s,baz=239,slow=13,SNR=138						
CMIG				Pg	Pb	05 39 32.9	-2.5
	43nm,0.3s,baz=240,slow=14,SNR=105						
CMIG				Lg	Lg	05 40 03.8	
	112nm,0.3s,baz=358,slow=18,SNR=11						
TPIG	Tehuac#an	2.49	352	ePn	Pb	05 39 37.1	-1.4
TPIG				eSn	Sb	05 40 07.4	-1.7
TPIG	Tehuac#an	2.49	352	eP	Pb	05 39 37.1	-1.4
TPIG				i S	Sb	05 40 07.4	-1.7
CAIG	El Cayaco	3.33	290	ePn	Pn	05 39 44.6	-1.1
CAIG				eSn	Sn	05 40 23.4	-1.7
CAIG	El Cayaco	3.33	290	i P	Pn	05 39 44.6	-1.1
CAIG				eS	Sn	05 40 23.4	-1.7
PLIG	Platanillo	3.42	316	ePn	Pn	05 39 50.6	+3.7
PLIG				eSn	Sn	05 40 25.2	-2.3
PLIG	Platanillo	3.42	316	eP	Pn	05 39 50.6	+3.7
PLIG				eS	Sn	05 40 25.2	-2.3
PPM	Popocatepetl	3.48	333	ePn	Pn	05 39 50.2	+2.1

PPM				*e*Sn	Sn	05 40 29.2	-0.2
PPM	Popocatepetl	3.48	333	*e*P	Pn	05 39 50.2	+2.1
PPM				*e*S	Sn	05 40 29.2	-0.2
YAIG	Yautepec	3.52	326	*e*Pn	Pn	05 39 46.7	-1.6
YAIG				*e*Sg	Sb	05 40 36.4	-2.3
YAIG	Yautepec	3.52	326	*e*P	Pn	05 39 46.7	-1.6
YAIG				*e*S	Sb	05 40 36.4	-2.3
LVIG	Laguna Verde	3.80	8	*e*Pn	Pn	05 39 52.5	+0.5
UNM	Universidad Na	3.96	328	*e*Pn	Pn	05 39 54.7	+0.1
UNM				*e*S	Sb	05 40 51.9	+0.2
ARIG	Puente Sto Nin	3.97	306	*e*P	Pn	05 39 57.6	+3.3
ARIG				*e*S	Sn	05 40 39.6	-1.2
ARIG	Puente Sto Nin	3.97	306	*e*P	Pn	05 39 57.6	+3.3
ARIG				*e*S	Sn	05 40 39.6	-1.2
ZIIG	Zihuatanejo	4.60	292	*e*Pn	Pn	05 40 03.2	+0.2
ZIIG				*e*Sn	Sn	05 40 55.5	-0.9
ZIIG	Zihuatanejo	4.60	292	*e*P	Pn	05 40 03.2	+0.2
ZIIG				*e*S	Sn	05 40 55.5	-0.9
CCIG	Comitan	4.67	85	*e*Pn	Pn	05 40 06.8	+2.6
APG	El Apazote	6.36	98	Pn	Pn	05 40 29.6	+2.2
	0.6nm,0.3s,baz=302,slow=13,SNR=9.1						
APG				Sn	Sn	05 41 37.7	-2.3
	1.5nm,0.3s,baz=309,slow=14,SNR=3.7						
ZAIG	Zacatecas	8.59	323	*e*Pn	Pn	05 41 01.0	+2.8
TEIG	Tepich	9.31	61	*e*Pn	Pn	05 41 06.4	-1.3
TEIG				*e*Sn	Sn	05 42 50.3	-2.2
TGUH	Tegucigalpa,Un	9.57	100	*e*Pn	Pn	05 41 12.0	+0.7
JTS	JuntasAbangare	12.99	114	Pn	Pn	05 42 00.2	+2.0
	0.3nm,0.3s,baz=113,slow=5.1,SNR=2.2						
HDC	Heredia	13.86	114	*e*Pn	Pn	05 42 12.4	+2.2
TXAR	Lajitas Array	14.68	336	Pn	Pn	05 42 24.1	+2.8
	0.0nm,0.3s,baz=158,slow=12,SNR=2.8						
MNTX	Cornudas Mount	17.45	335	*e*Pn	P	05 42 58.1	-0.1
Z41A	Richland Creek	17.65	12	*e*Pn	P	05 43 00.0	-0.3
CCAR	Cane Creek	18.50	14	*e*P	Pn	05 43 10.8	+0.9
Z45A	Winona	18.56	19	*e*P	Pn	05 43 11.6	+1.0
MSTX	Muleshoe	18.69	345	*e*P	P	05 43 11.6	-0.4
MIAR	Mount Ida	18.77	9	*e*P	P	05 43 12.2	-0.5
LRAL	Lakeview Retre	19.27	26	*e*P	Pn	05 43 19.2	0.0
	18nm,1.3s						
X43A	Marvell	19.29	15	*e*P	P	05 43 18.2	-0.2
W41B	Gary Mavity, V	19.61	12	*e*P	Pn	05 43 24.3	+1.0
OXF	Oxford	19.70	19	*e*P	P	05 43 21.1	-1.8
	48nm,1.1s						
Z50A	Ashland	19.93	28	*e*P	Pn	05 43 31.6	+4.5
	18nm,1.1s						
BNM	Barren Site	20.10	336	*e*P	Pn	05 43 28.7	-0.7
LENM	Lemitar	20.25	335	*e*P	P	05 43 29.5	+0.4
HBAR	Harrisburg	20.33	15	*e*P	P	05 43 29.7	0.0
HHAR	Hobbs	20.44	7	*e*P	P	05 43 31.6	+0.7
X48A	Hartselle	20.48	24	*e*P	P	05 43 29.3	-2.1
	12nm,1.0s						
LAZ	Ladron	20.52	335	*e*P	P	05 43 31.9	-0.2
TUC	Tucson	20.56	325	*e*P	P	05 43 33.4	+1.1
ANMO	Albuquerque	20.74	338	P	Pn	05 43 36.0	-0.8
	0.8nm,0.8s,baz=145,slow=12,SNR=4.0						
PBMO	Poplar Bluff	21.55	14	*e*P	P	05 43 42.4	-0.5
SWET	Sewanee	21.60	25	*e*P	P	05 43 41.3	-2.1
T42A	Van Buren	21.64	13	*e*P	P	05 43 43.0	-0.9
WVT	Waverly	21.70	20	*e*P	P	05 43 41.2	-3.3
V48A	Smith Brothers	21.70	23	*e*P	P	05 43 41.9	-2.7
	20nm,1.1s						
X18A	Snowflake	21.87	330	*e*P	P	05 43 46.9	+0.3
T25A	Trinidad	22.11	344	*e*P	P	05 43 49.7	+0.5
CCM	Cathedral Cave	22.60	12	*e*P	P	05 43 54.2	+0.1
TKL	Tuckaleechee C	22.91	29	LR	LR	05 54 14.5	
	comp=Z,115nm,19.8s,baz=209,slow=40						
WUAZ	Wupatki	23.36	329	*e*P	P	05 44 05.3	+3.1
	2.8nm,1.0s						
T49A	Edmonton	23.40	24	*e*P	P	05 44 01.1	-1.3
	7.6nm,1.0s						
MVCO	Mesa Verde	23.51	336	*e*P	P	05 44 04.8	+1.0
WCI	Wyandotte Cave	24.12	21	*e*P	P	05 44 08.4	-0.9
P42A	Winchester	24.26	13	*e*P	P	05 44 09.9	-0.7
	7.4nm,0.9s						
PV01	Paradox Valley	24.35	337	*e*P	P	05 44 14.3	+2.5
	6.6nm,1.1s						
PV12	Saucer Basin,	24.60	337	*e*P	P	05 44 16.4	+2.4
	6.0nm,1.2s						
PV11	David Mesa, Pa	24.61	337	*e*P	P	05 44 16.7	+2.7
	8.4nm,1.0s						
PV04	Paradox Valley	24.70	337	*e*P	P	05 44 17.0	+2.1
	6.1nm,1.1s						
SMCO	Snowmass	24.75	341	*e*P	P	05 44 18.7	+3.1
PV23	Carpenter Ridg	24.79	337	*e*P	P	05 44 18.5	+2.7
	8.2nm,1.1s						
PFO	Pinyon Flats O	24.86	319	LR	LR	05 54 52.2	
	comp=Z,101nm,18.9s,baz=184,slow=38						
ISCO	Idaho Springs	24.93	344	*e*P	P	05 44 18.1	+1.1
	1.8nm,0.9s						
MTPU	Mount Pierson	25.77	332	*e*P	P	05 44 25.2	+0.4
Q51A	Peebles	25.92	25	*e*P	P	05 44 27.7	+2.0
P51A	Williamsport	26.43	25	*e*P	P	05 44 35.8	+5.6
	12nm,0.9s						
O49A	Covington	26.55	22	*e*P	P	05 44 37.4	+6.0
	24nm,0.8s						
SDV	Santo Domingo	26.66	102	*e*P	P	05 44 42.8	+10
	8.4nm,1.0s						
SDV	Santo Domingo	26.66	102	P	P	05 44 31.6	-1.2
	1.9nm,1.0s,baz=316,slow=7.2,SNR=3.4						
SDV				LR	LR	05 57 14.5	
	comp=Z,66nm,18.4s,baz=266,slow=42						
I41A	Arkdale	28.67	11	*e*P	P	05 44 54.5	+4.2
PDAR	Pinedale Array	28.82	341	P	P	05 44 53.5	+1.6
	0.2nm,0.6s,baz=137,slow=11,SNR=1.8						
PDAR				LR	LR	05 58 26.6	
	comp=Z,183nm,19.1s,baz=158,slow=41						
NVAR	Mina Array Bea	29.21	324	P	P	05 44 56.2	+0.7
	0.9nm,0.8s,baz=134,slow=8.9,SNR=5.7						
NVAR				LR	LR	05 57 53.9	
	comp=Z,150nm,18.5s,baz=101,slow=39						
ULM	Lac du Bonnet	34.23	1	LR	LR	05 59 21.5	
	comp=Z,128nm,18.8s,baz=17,slow=36						
PB11	IPOC Station P	44.51	142	*e*P	P	05 47 04.8	-0.7
YKA	Yellowknife Ar	48.13	349	P	P	05 47 32.2	-0.9
	0.1nm,0.6s,baz=155,slow=7.3,SNR=2.8						
TAOE	Nuku Hiva Isla	49.33	243	*e*LR	LR	06 01 36.6	
	comp=Z,176nm,24.3s						
RKT	Rikitea	53.74	225	*e*T	T	06 45 49.3	
	6.1nm,0.2s						
INK	Inuvik	57.26	345	P	P	05 48 40.4	-0.3
	1.3nm,1.0s,baz=138,slow=5.1,SNR=2.9						
IL1	Eielson Array	59.19	338	*e*P	P	05 48 53.9	-0.3
ILAR	Eielson Array	59.19	338	P	P	05 48 54.0	-0.3
	1.4nm,1.1s,baz=144,slow=5.5,SNR=7.3						
PPT2	Papeete2	61.61	239	*e*LR	LR	06 07 19.0	
	comp=Z,116nm,26.8s						
RAR	Rarotonga	71.80	241	LR	LR	06 16 34.1	
	comp=Z,68nm,18.3s,baz=176,slow=32						
LZH	Lanzhou	124.63	340	*e*PKP	PKiKP	05 57 59.1	+5.0
LZH				pPKP	sPKPdf	05 58 10.6	+11
LZH				sPKP		05 58 14.5	
WRA	Warramunga Arr	131.16	257	PKP	PKPdf	05 58 05.9	-0.5
	0.1nm,0.7s,baz=77,slow=2.5,SNR=3.0						

IDC 04 05:39:42.3±2.0**,10°.48S**×**166°.64E,h0km,mb3.7**/6,**mb1 4.0**/6**,mb1mx3.7**/43**,mbtmp3.7**/6**,MS3.3**/4**,Ms1 3.3**/4**,ms1mx3.0**/31**,Error ellipse: s-maj=87.1km s-min=27.4km az=143.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.67	278	LR	LR	05 44 00.6	
	comp=Z,156nm,19.7s,baz=23,slow=39						
DZM	Mont Dzumac	11.53	181	LR	LR	05 46 18.2	
	comp=Z,150nm,19.3s,baz=177,slow=34						
STKA	Stephens Creek	31.45	224	LR	LR	05 57 41.7	
	comp=Z,92nm,18.8s,baz=29,slow=34						
WRA	Warramunga Arr	32.50	249	P	P	05 46 14.5	-0.5
	0.5nm,0.7s,baz=82,slow=8.8,SNR=7.1						
ASAR	Alice Springs	33.83	243	P	P	05 46 27.1	+0.5
	0.1nm,0.3s,baz=66,slow=10,SNR=3.0						
ASAR				LR	LR	05 58 55.2	
	comp=Z,64nm,21.4s,baz=93,slow=34						
SONM	Songino Array	78.73	323	P	P	05 51 47.1	+0.2
	0.2nm,0.4s,baz=130,slow=4.5,SNR=2.5						
ILAR	Eielson Array	82.71	18	P	P	05 52 07.6	+0.1
	1.4nm,0.8s,baz=225,slow=6.5,SNR=14						
NVAR	Mina Array Bea	85.00	50	P	P	05 52 20.1	-0.1
	0.3nm,0.7s,baz=238,slow=8.4,SNR=3.6						
MKAR	Makanchi Array	93.71	317	P	P	05 53 00.8	-0.3
	0.6nm,0.7s,baz=92,slow=6.1,SNR=6.0						

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*NIED **04** 05:47:00,43°.90N×147°.90E,h35km,Mw3.5 Best double couple: M$_0$1.93000×10^{14} NP1:φ$_s$238.00000°,δ29.00000°,λ121.00000°. NP2:φ$_s$24.00000°,δ65.00000°,λ74.00000°.*
*SKHL **04** 05:47:52.4±0.4,44°.31N×148°.23E,h55km±5km,mb4.2/6*
*JMA **04** 05:47:52.6±0.4,43°.90N×147°.94E,h0km,M3.7*
ISC 04 05:47:50.9±2.5**,44°.29N**±0°.09×**148°.0E**±0°.1**,h2km**±14km**,n17,**σ1.^{s}33/27**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.91	243	*i* P	Pn	05 48 11.0	+0.2
SHO				AMB	AMB	05 48 11.1	
	30nm,0.2s						
SHO				AMB	AMB	05 48 11.1	
	40nm,0.2s						
SHO				AMB	AMB	05 48 11.1	
	50nm,0.2s						
SHO				*e*S	Sb	05 48 23.3	+1.3
SHO				A	A	05 48 24.1	
	140nm,0.2s						
SHO				A	A	05 48 24.1	
	760nm,0.2s						
KUR	Kuril'sk	0.94	356	*i* P	Pb	05 48 09.0	-1.0
KUR				AMB	AMB	05 48 10.2	
	180nm,0.3s						
KUR				*e*S	Sg	05 48 21.1	-0.1
KUR				A	A	05 48 24.0	
	560nm,0.3s						
KUR				A	A	05 48 24.0	
	1μm,0.3s						
YUK	Yuzh-Kuril'sk	1.53	261	*e*P	Pg	05 48 20.5	+0.3
YUK				AMB	AMB	05 48 21.9	
	30nm,0.2s						
YUK				AMB	AMB	05 48 21.9	
	40nm,0.2s						
YUK				*e*S	Sn	05 48 40.1	+0.5
YUK				A	A	05 48 44.0	
	290nm,0.4s						
YUK				A	A	05 48 44.0	
	450nm,0.4s						
LAGR	Lagunnoye	1.58	262	*e*P	Pn	05 48 19.0	-0.9
LAGR				AMB	AMB	05 48 22.0	
	10.0nm,0.2s						
LAGR				AMB	AMB	05 48 22.0	
	30nm,0.2s						
LAGR				*e*S	Sn	05 48 39.0	-1.8
LAGR				A	A	05 48 49.0	
	630nm,0.5s						
LAGR				A	A	05 48 49.0	
	420nm,0.5s						
GRPR	Tuman	1.60	260	*e*P	Pn	05 48 20.0	-0.2
GRPR				AMB	AMB	05 48 25.0	
	20nm,0.2s						
GRPR				AMB	AMB	05 48 25.0	
	30nm,0.2s						
GRPR				*e*S	Sn	05 48 41.0	-0.4
GRPR				A	A	05 48 45.0	
	260nm,0.2s						
GRPR				A	A	05 48 45.0	
	110nm,0.2s						
GLVR	Golovnino	1.84	253	*e*P	Pb	05 48 24.0	-1.3
GLVR				AMB	AMB	05 48 28.0	
	80nm,0.3s						
GLVR				*e*S	Sb	05 48 49.0	+0.3
GLVR				A	A	05 48 54.0	
	440nm,0.4s						
GLVR				A	A	05 48 54.0	
	200nm,0.4s						
NEM2	Nemuro 2	1.85	241	P	Pb	05 48 23.7	-1.7
NEM2				*e*S	Sn	05 48 46.3	-1.2
JRA	Rausu	2.07	261	P	Pb	05 48 28.9	-0.3
JKHN	Kushirohamanak	2.36	240	P	Pn	05 48 31.1	+0.5
JNK	Nakash	2.44	254	P	Pb	05 48 33.3	-2.2
JNK				*e*S	Sn	05 49 02.0	-0.2
JAK	Akkeshi	2.70	242	P	Pn	05 48 35.9	+0.6
JTKR	Abashiri--Toko	2.93	265	P	Pb	05 48 43.0	-0.8
JTKR				*e*S	Sb	05 49 21.3	+1.2
JAR	Ashorobuto	3.19	253	P	Pn	05 48 44.3	+2.2
JOB	Onbets	3.30	247	P	Pn	05 48 45.1	+1.6
JCH	Churui	3.74	245	P	Pn	05 48 51.5	+1.9
JNBK	Urakawa-nobuka	4.30	244	P	Pn	05 48 59.2	+1.9
JKB	Kayabe	5.61	247	P	Pn	05 49 17.1	+1.8
JKB				*e*S	Sn	05 50 19.2	-1.1

IDC 04 05:50:02.3±3.7**,4°.40S**×**151°.97E,h0km,mb3.0**/2**,mb1 3.4**/2**,mb1mx3.1**/33**,mbtmp3.1**/2**,Error ellipse: s-maj=158.1km s-min=49.1km az=121.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.11	227	P	P	05 55 10.4	+0.3
	0.2nm,0.4s,baz=54,slow=10,SNR=9.9						
ASAR	Alice Springs	25.90	221	P	P	05 55 36.5	+0.2
	0.3nm,0.5s,baz=50,slow=9.0,SNR=4.0						
TORD	Torodi Ar. Bea	149.40	288	PKPbc	PKPbc	06 09 53.5	-1.0
	0.3nm,0.7s,baz=94,slow=3.6,SNR=2.5						

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*SOME **04** 05:50:49.6,42°.18N×78°.45E,h15km*
*KRNET **04** 05:50:49.8±0.1,42°.20N×78°.40E,h15km,mb2.7*
*NNC **04** 05:50:50.3±1.5,42°.25N×78°.48E,h0km,mb2.9,mpv2.9, Error ellipse: s-maj=12.1km s-min=5.0km az=161.0*
ISC 04 05:50:49.4±1.3**,42°.21N**±0°.04×**78°.45E**±0°.03**,h8km**±9km**,n51,**σ0.^{s}81/97**,11C-19D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.28	353	⇑*i*P	Pg	05 50 55.4	+0.4
	baz=2.0						
PRZ				⇑*i*S	Sg	05 50 58.9	+0.2
	baz=2.0						
SATY	Saty	0.85	358	P	Pg	05 51 05.8	0.0
	2.7nm,0.1s						
SATY				S	Sg	05 51 17.5	+0.6
	11nm,0.2s						
SATY	Saty	0.85	358	*e*P	Pg	05 51 05.0	-0.8
	2.7nm,0.1s						
SATY				*e*S	Sg	05 51 15.9	-0.9
	11nm,0.2s						
KDJ	Kajisay	0.94	266	⇓*i*P	Pb	05 51 07.8	-0.4
	baz=66						
KDJ				⇓*i*S	Sb	05 51 19.9	-1.0
	baz=66						
UZB	Uzynbulak	1.03	24	*e*P	Pb	05 51 08.6	-1.0
	baz=26						
UZB				*e*S	Sb	05 51 22.2	-1.1
	baz=26						
UZB	Uzynbulak	1.03	24	*e*P	Pb	05 51 08.6	-1.0
	0.5nm,0.1s						
UZB				*e*S	Sb	05 51 22.2	-1.1
	4.0nm,0.2s						
PDGK	Podgornoye	1.36	34	P	Pn	05 51 14.4	-0.4
	0.5nm,0.3s						
PDGK				S	Sn	05 51 32.2	-0.8
	2.6nm,0.4s						
PDGK	Podgornoye	1.36	34	⇑P	Pn	05 51 14.1	-0.8
	0.7nm,0.5s						
PDGK				⇓S	Sn	05 51 32.0	-1.0
	2.5nm,0.4s						
PDGK	Podgornoye	1.36	34	⇓*i*P	Pb	05 51 15.5	+0.3
	baz=35						
PDGK				⇓*i*S	Sg	05 51 34.4	+1.3
	baz=35						
TNSS	Tian-Shan	1.38	307	P	Pn	05 51 15.1	-0.2
	3.4nm,0.2s						
TNSS				S	Sb	05 51 33.5	-0.2
	6.5nm,0.3s						
TNSS	Tian-Shan	1.38	307	⇓*e*P	Pn	05 51 15.2	-0.2
	baz=8.0						
TNSS				⇓*e*S	Sb	05 51 33.5	-0.2
	baz=8.0						
TNSS	Tian-Shan	1.38	307	⇓*e*P	Pn	05 51 15.2	-0.2
	3.4nm,0.2s						
TNSS				*e*S	Sb	05 51 33.5	-0.2
	6.5nm,0.3s						
MDOK	Medeo	1.40	313	Pg	Pn	05 51 15.0	-0.5
	4.2nm,0.1s						
MDOK				Lg	Lg	05 51 33.4	
	6.3nm,0.4s						
MDOK	Medeo	1.40	313	*e*P	Pn	05 51 15.0	-0.5
	baz=14						
MDOK				*e*S	Sn	05 51 33.4	-0.9
	baz=14						
MDOK	Medeo	1.40	313	*e*P	Pn	05 51 15.0	-0.5
	4.2nm,0.1s						
MDOK				*e*S	Sn	05 51 33.4	-0.9
	6.3nm,0.4s						
IZV	Izvestkoviy	1.58	302	P	Pb	05 51 18.8	-0.2
	6.4nm,0.2s						
IZV				S	Sb	05 51 39.9	+0.5
	26nm,0.2s						
IZV	Izvestkoviy	1.58	302	⇑*e*P	Pb	05 51 18.9	-0.2
	baz=3.0						
IZV				⇑*e*S	Sb	05 51 39.9	+0.5
	baz=3.0						
IZV	Izvestkoviy	1.58	302	⇑*e*P	Pb	05 51 18.9	-0.2
	6.4nm,0.2s						
IZV				*e*S	Sb	05 51 39.9	+0.5
	26nm,0.2s						
ULHL	Ulahol	1.64	272	⇓*i*P	Pb	05 51 19.4	-0.6
	baz=72						
ULHL				⇓*i*S	Sb	05 51 40.6	-0.3
	baz=72						
MTBS	Maitube	1.75	302	P	Pb	05 51 20.9	-0.9
	3.4nm,0.3s						
MTBS				S	Sb	05 51 43.5	-0.5
	19nm,0.2s						
MTBS	Maitube	1.75	302	*e*P	Pb	05 51 20.9	-0.9
	baz=3.0						
MTBS				*e*S	Sb	05 51 43.5	-0.5
	baz=3.0						
MTBS	Maitube	1.75	302	*e*P	Pb	05 51 20.9	-0.9
	3.4nm,0.3s						
MTBS				*e*S	Sb	05 51 43.5	-0.5
	19nm,0.2s						
KTMS	Ketmen	1.87	48	P	Pb	05 51 24.1	+0.2
	3.1nm,0.1s						
KTMS				S	Sg	05 51 49.3	-0.2
	8.1nm,0.4s						
KTMS	Ketmen	1.87	48	*e*P	Pb	05 51 24.1	+0.2
	baz=48						
KTMS				*e*S	Sg	05 51 49.3	-0.2
	baz=48						
KTMS	Ketmen	1.87	48	*e*P	Pb	05 51 24.1	+0.2
	3.1nm,0.1s						
KTMS				*e*S	Sg	05 51 49.3	-0.2
	8.1nm,0.4s						
MNBS	Baschi	1.87	359	P	Pb	05 51 23.8	-0.1
	7.2nm,0.2s						
MNBS				S	Sb	05 51 48.6	+1.1
	10nm,0.3s						
MNBS	Baschi	1.87	359	*e*P	Pb	05 51 23.8	-0.1
	baz=2.0						
MNBS				*e*S	Sb	05 51 48.5	+1.1
	baz=2.0						
MNBS	Baschi	1.87	359	*e*P	Pb	05 51 23.8	-0.1
	7.2nm,0.2s						
MNBS				*e*S	Sb	05 51 48.6	+1.1
	10nm,0.3s						
BOOM	Boomskoye usch	1.88	279	⇑*i*P	Pb	05 51 23.5	-0.6
	baz=80						
BOOM				⇑*i*S	Sb	05 51 48.1	+0.3
	baz=80						
CHKK	Chushkaly	1.96	327	Pg	Pb	05 51 25.4	0.0
	7.8nm,0.4s						
CHKK				Lg	Lg	05 51 51.1	
	14nm,0.3s						
CHKK	Chushkaly	1.96	327	*e*P	Pb	05 51 25.4	0.0
	baz=29						
CHKK				*e*S	Sb	05 51 51.2	+1.2
	baz=29						
CHKK	Chushkaly	1.96	327	*e*P	Pb	05 51 25.4	0.0
	7.8nm,0.4s						
CHKK				*e*S	Sb	05 51 51.1	+1.2
	14nm,0.3s						
NRN	Naryn	1.99	248	⇓*i*P	Pb	05 51 25.9	-0.1
	baz=48						
NRN				⇓*i*S	Sb	05 51 51.8	+0.8
	baz=48						
KST	Kastek	2.01	295	Pg	Pb	05 51 25.7	-0.7
	3.5nm,0.3s						
KST				Lg	Lg	05 51 51.6	
	13nm,0.6s						
KST	Kastek	2.01	295	*e*P	Pb	05 51 25.7	-0.7
	baz=96						
KST				*e*S	Sb	05 51 51.7	0.0
	baz=96						
KST	Kastek	2.01	295	*e*P	Pb	05 51 25.7	-0.7
	3.5nm,0.3s						
KST				*e*S	Sb	05 51 51.6	0.0
	13nm,0.6s						
ARXS	Arharly	2.05	347	Pg	Pb	05 51 26.7	-0.3
	5.1nm,0.4s						
ARXS				Lg	Lg	05 51 53.4	
	7.2nm,0.5s						
ARXS	Arharly	2.05	347	*e*P	Pb	05 51 26.7	-0.3
	5.1nm,0.4s						
ARXS				*e*S	Sb	05 51 53.4	+0.7
	7.2nm,0.5s						
TKM2	Tokmak 2	2.22	290	⇑Pn	Pb	05 51 29.5	-0.5
	0.8nm,0.5s						
TKM2				⇓Sn	Sb	05 51 58.4	+0.7
	3.4nm,0.3s						
TKM2	Tokmak 2	2.22	290	⇓*i*P	Pb	05 51 28.8	-1.2
	baz=90						
TKM2				⇓*i*S	Sb	05 51 56.3	-1.4
	baz=90						
DGS	Degeres	2.22	299	Pg	Pb	05 51 29.7	-0.3
	2.6nm,0.3s						
DGS				Lg	Lg	05 51 58.5	
	9.3nm,0.3s						
DGS	Degeres	2.22	299	*e*P	Pb	05 51 29.7	-0.3
	baz=99						
DGS				*e*S	Sb	05 51 58.5	+0.8
	baz=99						
DGS	Degeres	2.22	299	*e*P	Pb	05 51 29.7	-0.3
	2.6nm,0.3s						
DGS				*e*S	Sb	05 51 58.5	+0.8
	9.3nm,0.3s						
KUU	Kurty	2.28	318	*e*P	Pb	05 51 30.5	-0.4
	baz=19						
KUU				*e*S	Sb	05 52 00.4	+1.1
	baz=19						
KUU	Kurty	2.28	318	*e*P	Pb	05 51 30.5	-0.4
	3.0nm,0.4s						
KUU				*e*S	Sb	05 52 00.4	+1.1
	12nm,0.3s						
DJR	Jarkent	2.34	24	*e*P	Pb	05 51 32.4	+0.5
	0.2nm,0.1s						
DJR				*e*S	Sg	05 52 03.0	-1.5
	5.0nm,0.3s						
KZA	Kyzart	2.38	268	⇓*i*P	Pb	05 51 31.7	-1.1
	baz=68						
KZA				⇓*i*S	Sb	05 52 01.0	-1.5
	baz=68						
KBK	Karagaybulak	2.63	281	⇑*e*P	Pn	05 51 34.3	+2.0
	baz=81						
KBK				⇑*i*S	Sn	05 52 05.9	+1.4
	baz=81						
AAK	Ala-Archa	2.96	280	Pn	Pb	05 51 41.2	-1.2
	0.7nm,0.8s						
AAK				Sn	Sb	05 52 18.9	+0.1
	3.7nm,0.6s						
ARLS	Aral	3.09	265	⇓*i*P	Pn	05 51 40.7	+2.0
	baz=65						
ARLS				⇓*i*S	Sn	05 52 17.0	+1.1
	baz=65						
KAPS	Kapalarasan	3.14	12	*e*P	Pb	05 51 45.9	+0.3
	0.5nm,0.5s						
KAPS				*e*S	Sb	05 52 26.4	+2.3
	3.2nm,0.4s						

MEX 04 06:01:24.3±0.6**,15°.92N**×**97°.00W,h26km**±6km**,MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.87	100	*e*P	Pb	06 01 38.4	-2.5
HUIG				*e*S	Sb	06 01 49.1	-3.0
VHO	Vista Hermosa	1.18	13	*e*P	Pn	06 01 42.7	-2.6
VHO				*i* S	Sn	06 01 56.9	-3.7
PNIG	Pinotepa	1.18	294	*e*P	Pn	06 01 42.4	-2.8
PNIG				*e*S	Sn	06 01 57.5	-2.9
CMIG	Matias Romero	2.34	60	*e*P	Pn	06 01 58.1	-3.0

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*KRNET **04** 06:27:29.7±0.1,41°.22N×76°.47E,h14km,mb2.6*
*SOME **04** 06:27:30.5,41°.22N×76°.42E,h5km*
*KNET **04** 06:27:31.6±1.0,41°.30N×76°.35E,h2km±4km,ml1.8,Error ellipse: s-maj=8.0km s-min=2.5km az=120.0*

*NNC **04** 06:27:33.5±1.9, 41°.30N×76°.35E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=12.9km s-min=8.4km az=175.0*

ISC 04 06:27:29.8±1.6**, 41°.22N**±0°.06×**76°.45E**±0°.02**, h0**^{km}±12^{km}**, n51, σ0ˢ.68**/89**, 38C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	0.40	303	⇑*i*P	Pg	06 27 37.8	+0.4
	baz=99						
NRN				⇑*i*S	Sg	06 27 43.6	+1.0
	baz=99						
ULHL	Ulahol	1.04	352	⇑P	Pg	06 27 49.8	+0.1
	5.3nm,0.1s,SNR=42						
ULHL				⇓S	Sb	06 28 04.1	-0.9
	26nm,0.3s						
ULHL	Ulahol	1.04	352	⇑*i*P	Pg	06 27 49.8	+0.1
	baz=51						
ULHL				⇑*i*S	Sb	06 28 04.1	-0.9
	baz=51						
KDJ	Kajisay	1.06	31	⇑*i*P	Pg	06 27 50.0	-0.2
	baz=31						
KDJ				⇑*i*S	Sg	06 28 04.5	+0.5
	baz=31						
TARG	Taragay, Kyrgy	1.14	63	⇓*i*P	Pg	06 27 50.4	-1.3
	baz=63						
TARG				⇓*i*S	Sg	06 28 06.1	-0.4
	baz=63						
KZA	Kyzart	1.24	314	⇑P	Pg	06 27 53.6	0.0
	5.8nm,0.2s,SNR=22						
KZA	Kyzart	1.24	314	⇑*i*P	Pg	06 27 53.2	-0.4
	baz=14						
KZA				⇑*i*S	Sb	06 28 10.4	-0.6
	baz=14						
BOOM	Boomskoye usch	1.33	344	⇓*i*P	Pg	06 27 54.8	-0.4
	baz=43						
BOOM				⇓*i*S	Sn	06 28 12.7	-1.4
	baz=43						
ARLS	Aral	1.72	293	⇑*i*P	Pn	06 28 01.9	+0.8
	baz=93						
ARLS				⇑*i*S	Sb	06 28 24.7	+0.2
	baz=93						
UCH	Uchtor	1.76	306	⇑P	Pn	06 28 02.8	+0.8
	2.2nm,0.2s,SNR=8.6						
UCH	Uchtor	1.76	306	⇑*i*P	Pn	06 28 02.7	+0.8
	baz=5.0						
UCH				⇑*i*S	Sg	06 28 26.6	+0.2
	baz=5.0						
TKM2	Tokmak 2	1.81	340	⇓P	Pb	06 28 04.1	+0.1
	5.5nm,0.1s,SNR=9.4						
TKM2	Tokmak 2	1.81	340	⇑P	Pb	06 28 03.9	-0.1
	1.9nm,0.2s						
TKM2				⇑S	Sg	06 28 27.9	-0.2
	1.1nm,0.3s						
TKM2	Tokmak 2	1.81	340	⇑P	Pb	06 28 03.9	-0.1
	1.9nm,0.2s						
TKM2				⇑S	Sg	06 28 27.9	-0.2
	1.1nm,0.3s						
TKM2	Tokmak 2	1.81	340	⇓*i*P	Pb	06 28 03.6	-0.4
	baz=39						
TKM2				⇓*i*S	Sg	06 28 28.0	-0.1
	baz=39						
IZV	Izvestkoviy	1.82	4	P	Pb	06 28 04.3	+0.2
	4.2nm,0.3s						
IZV				S	Sg	06 28 28.9	+0.6
	8.2nm,0.4s						
IZV	Izvestkoviy	1.82	4	*e*P	Pb	06 28 04.3	+0.2
	4.2nm,0.3s						
IZV				*e*S	Sg	06 28 28.9	+0.6
	8.2nm,0.4s						
KBK	Karagaybulak	1.82	323	⇑P	Pb	06 28 04.2	+0.1
	7.2nm,0.1s,SNR=32						
KBK	Karagaybulak	1.82	323	⇓*i*P	Pb	06 28 03.9	-0.2
	baz=22						
KBK				⇓*i*S	Sg	06 28 28.4	+0.1
	baz=22						
TNSS	Tian-Shan	1.85	11	Pg	Pb	06 28 04.9	+0.1
	2.5nm,0.6s						
TNSS				Lg	Lg	06 28 30.1	
	6.0nm,0.3s						
TNSS	Tian-Shan	1.85	11	*e*P	Pb	06 28 05.0	+0.2
	2.5nm,0.6s						
TNSS				*e*S	Sg	06 28 30.1	+0.7
	6.0nm,0.3s						
KST	Kastek	1.86	349	P	Pb	06 28 05.0	+0.4
	4.1nm,0.2s						
KST				S	Sg	06 28 30.0	+0.6
	4.9nm,0.3s						
KST	Kastek	1.86	349	*e*P	Pb	06 28 05.0	+0.4
	4.1nm,0.2s						
KST				*e*S	Sg	06 28 30.0	+0.6
	4.9nm,0.3s						
MTBS	Maitube	1.91	360	Pg	Pb	06 28 05.8	+0.3
	3.9nm,0.2s						
MTBS				Lg	Lg	06 28 31.4	
	11nm,0.3s						
MTBS	Maitube	1.91	360	*e*P	Pb	06 28 05.8	+0.3
	3.9nm,0.2s						
MTBS				*e*S	Sg	06 28 31.4	+0.3
	11nm,0.3s						
MDOK	Medeo	1.99	13	Pn	Pb	06 28 07.0	0.0
	1.7nm,0.5s						
MDOK				Sn	Sg	06 28 33.7	-0.1
	17nm,0.6s						
MDOK	Medeo	1.99	13	Pn	Pb	06 28 07.0	0.0
	1.7nm,0.5s						
MDOK				Sn	Sg	06 28 33.7	-0.1
	17nm,0.6s						
MDOK	Medeo	1.99	13	*e*P	Pb	06 28 07.5	+0.5
	3.1nm,0.2s						
MDOK				*e*S	Sg	06 28 34.0	+0.2
	22nm,0.6s						
AAK	Ala-Archa	2.03	315	⇑P	Pb	06 28 07.8	+0.2
	6.9nm,0.2s,SNR=9.0						
AAK	Ala-Archa	2.03	315	⇑Pn	Pb	06 28 07.4	-0.3
	2.6nm,0.3s						
AAK				⇑Sn	Sg	06 28 35.5	+0.4
	4.0nm,0.5s						
AAK	Ala-Archa	2.03	315	⇑Pn	Pb	06 28 07.4	-0.3
	2.6nm,0.3s						
AAK				⇑Sn	Sg	06 28 35.5	+0.4
	4.0nm,0.5s						
AAK	Ala-Archa	2.03	315	⇑*i*P	Pb	06 28 07.3	-0.3
	baz=15						
AAK				⇑*i*S	Sg	06 28 33.9	-1.2
	baz=15						
DGS	Degeres	2.08	346	Pg	Pb	06 28 08.4	-0.1
	5.1nm,0.3s						
DGS				Lg	Lg	06 28 36.5	
	6.4nm,0.2s						
DGS	Degeres	2.08	346	*e*P	Pg	06 28 09.2	-0.5
	5.1nm,0.3s						
DGS				*e*S	Sg	06 28 37.0	+0.3
	6.4nm,0.2s						
CHMS	Chumysh	2.18	325	⇓P	Pb	06 28 10.7	+0.6
	6.6nm,0.2s,SNR=6.5						
CHMS	Chumysh	2.18	325	⇑*e*P	Pb	06 28 08.9	-1.2
	baz=25						
CHMS				⇑*i*S	Sb	06 28 37.2	-0.5
	baz=25						
AML	Almayashu	2.25	295	⇓P	Pb	06 28 11.7	+0.1
	4.8nm,0.3s,SNR=6.4						
AML	Almayashu	2.25	295	⇑*i*P	Pn	06 28 10.3	+1.7
	baz=95						
AML				⇑*i*S	Sb	06 28 39.5	-0.6
	baz=95						
SATY	Saty	2.35	38	*e*P	Pb	06 28 14.0	+1.1
	0.7nm,0.1s						
SATY				*e*S	Sg	06 28 45.2	+0.1
	12nm,0.1s						
EKS2	Erkin-Say	2.46	307	⇓*i*P	Pb	06 28 13.7	-1.2
	baz=7.0						
EKS2				⇓*i*S	Sb	06 28 44.4	-1.4
	baz=7.0						
KTBS	Karatobe	2.50	4	Pg	Pb	06 28 15.7	+0.1
	2.8nm,0.6s						
KTBS				Lg	Lg	06 28 48.2	
	18nm,0.5s						
KTBS	Karatobe	2.50	4	*e*P	Pb	06 28 15.7	+0.1
	2.8nm,0.6s						
KTBS				*e*S	Sg	06 28 48.2	-1.8
	18nm,0.5s						
USP	Ospenovka	2.51	325	⇑*i*P	Pb	06 28 15.0	-0.6
	baz=25						
USP				⇑*i*S	Sb	06 28 47.1	+0.1
	baz=25						
CHKK	Chushkaly	2.66	8	Pg	Pb	06 28 19.5	+1.1
	2.0nm,0.3s						
CHKK				Lg	Lg	06 28 54.7	
	8.6nm,0.3s						
CHKK	Chushkaly	2.66	8	*e*P	Pb	06 28 19.4	+1.1
	2.0nm,0.3s						
CHKK				*e*S	Sg	06 28 54.8	-0.6
	8.6nm,0.3s						
KUU	Kurty	2.67	358	⇑*i*P	Pb	06 28 19.2	+0.7
	2.8nm,0.3s						
KUU				*e*S	Sg	06 28 54.8	-0.9
	8.2nm,0.4s						
UZB	Uzynbulak	2.72	44	*e*P	Pb	06 28 20.0	+0.7
	1.7nm,0.4s						
UZB				*e*S	Sg	06 28 55.4	-1.7
	2.7nm,0.3s						
MRKS	Merke	2.84	303	Pg	Pb	06 28 21.0	-0.4
	2.8nm,0.3s						
MRKS				Lg	Lg	06 28 57.4	
	3.9nm,0.3s						
MRKS	Merke	2.84	303	*e*P	Pb	06 28 21.0	-0.4
	2.8nm,0.3s						
MRKS				*e*S	Sb	06 28 57.4	+0.6
	3.9nm,0.3s						
PDGK	Podgornoye	3.09	46	⇑Pn	Pb	06 28 25.1	-0.5
	1.6nm,0.7s						
PDGK				⇑Sn	Sb	06 29 05.1	+1.1
	6.9nm,0.9s						
PDGK	Podgornoye	3.09	46	⇑Pn	Pb	06 28 25.1	-0.5
	1.6nm,0.7s						
PDGK				⇑Sn	Sb	06 29 05.1	+1.1
	6.9nm,0.9s						

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*ISCJB **04** 06:55:35.4±0.4, 7°.00S±0°.04×129°.56E±0°.04, h150^{km}, mb4.0/6, Error ellipse: s-maj=5.6km s-min=4.9km az=156.2*

*DJA **04** 06:55:36.3±0.6, 7°S±6°×13°0E±°, h204^{km}±16^{km}, M4.4/5, mb4.1/4, mB4.7/4, MLv4.7/5, Mw(mB)3.9/4*

*NEIC **04** 06:55:37.4±0.6, 7°.04S×129°.50E, h156^{km}±8^{km}, mb4.2/8, Error ellipse: s-maj=8.7km s-min=7.3km az=56.0*

*IDC **04** 06:55:37.0±1.9, 7°.01S×129°.52E, h146^{km}±16^{km}, mb3.7/4, mb1 3.8/9, mb1mx3.5/34, mbtmp4.2/9, Error ellipse: s-maj=23.7km s-min=16.2km az=97.0*

ISC 04 06:55:36.2±0.6**, 7°.03S**±0°.05×**129°.56E**±0°.05**, h150**^{km}**, n35, σ2ˢ.27**/45**, mb4.0**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.97	119	*e*Pn	Pn	06 56 14.4	+3.3
SAUI				*e*Sn	Sn	06 56 38.8	+1.0
SAUI	Saumlaki	1.97	119	P	Pn	06 56 14.6	+3.6
FAKI	Fak Fak	4.88	33	*e*Pn	Pn	06 56 48.6	+0.5
FAKI				*e*Sn	Sn	06 57 40.9	-3.3
FAKI	Fak Fak	4.88	33	P	Pn	06 56 47.9	-0.2
SOEI	Soe	5.90	242	*e*Pn	Pn	06 57 03.9	+2.2
SOEI				*e*Sn	Sn	06 58 10.8	+2.3
SOEI	Soe	5.90	242	P	Pn	06 57 02.6	+0.9
	48nm,0.6s,1µm						
MTN	Manton Dam	5.99	165	*e*Pn	Pn	06 57 04.6	+1.8
MTN				*e*Sn	Sn	06 58 09.6	-1.0
SIJI	Sorong	6.35	16	P	Pn	06 57 07.9	+0.2
	2.1nm,0.3s,baz=299,slow=24,SNR=18						
SIJI				S	Sn	06 58 13.2	-6.1
	4.2nm,0.3s,baz=81,slow=24,SNR=7.5						
BATI	Baumata	6.63	241	P	Pn	06 57 13.0	+1.6
BATI				S	Sn	06 58 24.7	-1.3
BATI	Baumata	6.63	241	P	Pn	06 57 12.8	+1.3
	32nm,0.3s,baz=153,slow=2.4,SNR=15						
BATI				S	Sn	06 58 25.9	-0.1
	39nm,0.3s,baz=115,slow=23,SNR=14						
RKPI	Ransiki, Papua	7.16	40	P	Sn	06 58 38.2	-0.4
MMRI	Maumere	7.43	257	*e*Pn	Pn	06 57 21.3	-0.8
EDFI	Ende, Flores	7.98	257	P	Pn	06 57 30.0	+0.4
FITZ	Fitzroy Crossi	11.65	199	P	Pn	06 58 17.8	-0.3
	0.9nm,0.3s,baz=22,slow=9.8,SNR=37						
FITZ				S	Sn	07 00 18.4	-8.4
	2.8nm,0.3s,baz=94,slow=20,SNR=12						
WRAB	Tennant Creek	13.65	161	*e*Pn	Pn	06 58 44.2	+0.4
WRA	Warramunga Arr	13.65	161	P	Pn	06 58 43.3	-0.5
	0.6nm,0.3s,baz=334,slow=13,SNR=28						
WRA				S	Sn	07 01 07.1	-8.1
	1.2nm,0.3s,baz=335,slow=23,SNR=4.6						
WB2	Warramunga Arr	13.66	161	*e*Pn	Pn	06 58 43.5	-0.4
COEN	Coen	15.05	118	*e*Pn	Pn	06 59 03.1	+1.7
	10nm,0.9s						
JAGI	Jajag, Banyuwa	15.34	264	*e*Pn	Pn	06 59 03.9	-1.0
	11nm,0.6s						
MBWA	Marble Bar	16.97	213	*e*P	P	06 59 24.7	+0.5
	8.2nm,1.0s						
AS31	Alice Springs	17.06	166	*e*P	P	06 59 26.2	+0.8
	1.4nm,0.6s						
ASAR	Alice Springs	17.07	166	P	Pn	06 59 28.5	+2.5
	0.8nm,0.3s,baz=339,slow=9.2,SNR=69						
ASAR				S	S	07 02 30.3	-5.4
	0.6nm,0.3s,baz=321,slow=17,SNR=8.0						
ASAR				ScP	ScP	07 07 22.9	-0.4
	0.1nm,0.3s,baz=0.9,slow=1.6,SNR=7.6						
AS01	Alice Springs	17.07	166	*e*P	P	06 59 26.4	+0.9
SBUM	Sibu	19.70	298	*e*P	P	06 59 55.5	+1.4
	10nm,0.7s						
FORT	Forrest	23.67	183	*e*P	P	07 00 34.6	+0.5
	22nm,1.0s						
CM01	Chiang Mai Arr	39.38	310	*e*P	P	07 02 51.8	+0.3
CMAR	Chiang Mai Arr	39.41	310	P	P	07 02 52.6	+0.9
	1.5nm,0.5s,baz=136,slow=7.0,SNR=5.6						
MK01	Makanchi Array	67.99	327	*e*P	P	07 06 19.9	+0.7
MK31	Makanchi Array	68.01	327	*e*P	P	07 06 20.2	+0.9
	3.2nm,1.5s						
MKAR	Makanchi Array	68.01	327	*e*P	P	07 06 20.2	+0.9
	6.9nm,0.4s						
MKAR	Makanchi Array	68.01	327	P	P	07 06 20.3	+1.0
	0.8nm,0.4s,baz=118,slow=8.0,SNR=26						
ZALV	Zalesovo Beam	71.41	334	*e*P	P	07 06 40.1	+0.2
ZALV	Zalesovo Beam	71.41	334	P	P	07 06 41.0	+1.1
	0.3nm,0.3s,baz=193,slow=5.8,SNR=3.3						
KURBB	Kurchatov Arra	72.30	329	P	P	07 06 46.1	+0.8
	0.8nm,0.2s,baz=128,slow=5.0,SNR=5.3						
CPUP	Villa Florida	146.18	169	PKPbc	PKPab	07 15 01.2	+0.7
	2.9nm,1.0s,baz=194,slow=4.2,SNR=2.9						

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*ISCJB **04** 07:07:17.6±1.3, 28°.4N±0°.2×86°.5E±0°.2, h100^{km}, mb3.8/6, Error ellipse: s-maj=34.3km s-min=19.2km az=139.8*

*IDC **04** 07:07:20.6±11.0, 28°.54N×86°.54E, h108^{km}±107^{km}, mb3.5/6, mb1 3.5/8, mb1mx3.2/49, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=52.5km s-min=25.2km az=38.0*

ISC 04 07:07:19.8±1.5**, 28°.5N**±0°.2×**86°.5E**±0°.3**, h100**^{km}**, n9, σ0ˢ.53**/8**, mb3.7**/6**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	5.60	120	*e*P	Pn	07 08 35.0	-5.8
SHL				*i* S	Sn	07 10 02.0	+18
AAK	Ala-Archa	17.13	328	P	Pn	07 11 13.8	+0.7
	0.1nm,0.3s,baz=154,slow=10,SNR=4.6						
MKAR	Makanchi Array	18.55	351	P	P	07 11 27.8	-0.7
	0.3nm,0.3s,baz=174,slow=11,SNR=20						
KURBB	Kurchatov Arra	22.89	347	P	P	07 12 15.1	+0.3
	3.2nm,0.2s,baz=150,slow=10,SNR=4.5						
SONM	Songino Array	24.68	33	P	P	07 12 31.6	+0.2
	0.6nm,0.5s,baz=213,slow=10,SNR=4.7						
AKASG	Malin Array Be	48.03	314	P	P	07 15 48.6	0.0
	0.2nm,0.3s,baz=80,slow=7.2,SNR=5.4						
FINES	FINESS Array B	51.32	328	P	P	07 16 12.9	-0.5
	3.3nm,1.0s,baz=108,slow=9.1,SNR=4.3						
ARCES	ARCESS Array B	53.52	338	P	P	07 16 29.4	-0.2
	1.1nm,0.8s,baz=104,slow=7.5,SNR=4.3						
WRA	Warramunga Arr	66.73	131	P	P	07 18 00.5	+0.1
	0.3nm,0.5s,baz=326,slow=6.7,SNR=6.5						

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*MAN **04** 07:16:05.4, 16°.33N×120°.52E, h9^{km}, mb5.3, ML1.3, MS4.4*

MAN INTENSITY V - BAGUIO CITY; INTENSITY IV - LA TRINIDAD BENGUET; INTENSITY II - AGOO & SAN FERNANDO CITY LA UNION; DAGUPAN CITY.

*NEIC **04** 07:16:09.5±0.6, 16°.25N×120°.63E, h61^{km}±5^{km}, mb4.5/21, Error ellipse: s-maj=7.1km s-min=5.0km az=90.0*

NEIC Felt [V PIVS] at Baguio City, [IV PIVS] at La Trinidad and [II PIVS] at Agoo, Dagupan City and San Fernando. Also felt at Bacnotan.

*BJI **04** 07:16:09.5, 16°.23N×120°.54E, h62^{km}, mB4.6/22, mb4.3/35, Ms4.3/12, Ms7 4.0/10*

*IDC **04** 07:16:10.0±1.9, 16°.29N×120°.70E, h66^{km}±20^{km}, mb3.8/21, mb1 3.9/21, mb1mx3.8/45, mbtmp4.1/21, MS3.6/11, Ms1 3.6/11, ms1mx3.2/53, Error ellipse: s-maj=19.7km s-min=12.8km az=72.0*

ISC 04 07:16:06.5±0.8**, 16°.32N**±0°.03×**120°.63E**±0°.03**, h27**^{km}±6^{km}**, n117, σ1ˢ.68**/115**, mb4.5**/47**, 2C-3D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	San Manuel, Pa	0.17	164	*e*P	Pb	07 16 11.0	-1.1
SMPP				*e*S	Sb	07 16 14.8	-1.2
BOLP	Bolinao	0.69	275	*e*P	Pb	07 16 17.2	-2.8
BOLP				*e*S	Sb	07 16 29.5	+0.2
PCPH	Palayan	0.87	149	⇓*e*P	Pb	07 16 22.6	-0.4
PCPH				*e*S	Sn	07 16 36.0	+1.2
SCZP	Santa Cruz	0.88	232	*e*P	Pb	07 16 21.4	-1.8
BALP	Baler	1.07	122	*e*P	Pb	07 16 26.4	0.0
CAUP	Cauayan	1.30	61	*e*P	Pb	07 16 30.6	+0.3
ABRA	Dolores	1.33	3	*e*P	Pn	07 16 27.3	-2.0
ABRA				*e*S	Sn	07 16 43.9	-2.1
POLP	Polilio Island	2.02	141	*e*P	Pb	07 16 41.7	-0.9
POLP				*e*S	Sb	07 17 07.0	-0.3
TGY	Tagaytay City	2.22	172	P	Pn	07 16 43.5	+1.8
	317nm,0.3s,baz=15,slow=2.5,SNR=16						
TGY				S	Sb	07 17 11.6	-1.6
	405nm,0.3s,baz=240,slow=13,SNR=5.7						
TGY	Tagaytay City	2.22	172	⇑*e*P	Pn	07 16 42.7	+1.1
TGY				*e*S	Sb	07 17 13.9	+0.8
SGCP	Mt. Cagua	2.34	35	*e*P	Pb	07 16 46.4	-1.7
SGCP				*e*S	Sn	07 17 10.8	-0.4
GQP	Guinayangan	2.97	144	⇑*e*P	Pn	07 16 55.4	+3.6
GQP				*e*S	Sb	07 17 32.6	-2.0
TWG	Pinlang	6.49	4	*e*Pn	Pn	07 17 42.3	+2.1
YULB	Yu-li	7.07	5	*e*Pn	Pn	07 17 50.9	+2.7
SSLB	Suanglung	7.44	2	*e*Pn	Pn	07 17 56.5	+3.2
NACB	Ninganchiao	7.87	6	*e*Pn	Pn	07 18 02.0	+2.7
YHNB	Yeheng	8.34	5	*e*Pn	Pn	07 18 10.8	+5.1
YOJ	Yonaguni jima	8.41	15	*e*Pn	Pn	07 18 09.0	+2.4
QIZ	Qiongzhong	10.63	286	P	Pn	07 18 39.6	+2.5
QIZ				S	Sn	07 20 38.0	+2.7
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WHN	Wuhan	15.28	339	⇓P	Pn	07 19 37.1	-3.4
NJ2	Nanjing	15.75	354	*e*P	P	07 19 48.9	-1.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SKNT	Sakolnakorn	15.97	275	P	P	07 19 55.6	+2.8
GYA	Guiyang	16.45	310	P	P	07 19 57.0	-1.1
GYA				pP	sP	07 20 08.9	-0.4
GYA				PP	pP	07 20 13.0	+7.5
GYA				S	Sn	07 22 59.5	+2.0
GYA				sS	sS	07 23 16.2	-4.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
NONG	Nongkai	16.80	278	P	P	07 20 04.0	+2.1
KMI	Kunming	18.87	301	P	Pn	07 20 28.5	+2.8
KMI				pmax	pmax		
	comp=Z,19nm,0.5s						
KMI				pmax	pmax		
	comp=Z,140nm,4.0s						
JNU	Nakatsue	19.13	27	LR	LR	07 28 07.0	
	comp=Z,66nm,18.8s,baz=297,slow=38						
UTTA	Uttaradit	19.25	277	P	Pn	07 20 33.8	+3.7
	2.1nm,1.3s						
PAYA	Payao	19.99	282	P	Pn	07 20 43.1	+4.1
	5.2nm,1.0s,437nm						
SIJI	Sorong	20.05	147	LR	LR	07 29 28.8	
	comp=Z,60nm,19.6s,baz=73,slow=40						
UTHA	Uthaitani	20.39	271	P	Pn	07 20 47.2	+3.6
XAN	Xi'an	20.55	331	P	Pn	07 20 46.8	+1.3
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN				pmax	pmax		
	comp=Z,79nm,4.0s						
CM31	Chiang Mai Arr	20.81	279	*e*P	P	07 20 46.7	+0.8
	20nm,1.1s						
CMAR	Chiang Mai Arr	20.81	279	P	Pn	07 20 47.4	-1.1
	2.7nm,0.4s,baz=91,slow=8.1,SNR=22						
CMAR				LR	LR	07 29 12.2	
	comp=Z,117nm,18.1s,baz=96,slow=38						
CMMT	Chiang Mai	20.82	280	P	Pn	07 20 49.4	+0.7
	6.7nm,1.5s,360nm						
CHTO	Chiang Mai	20.82	280	*e*P	P	07 20 47.0	+0.8
	7.1nm,1.0s						
CHTO	Chiang Mai	20.82	280	P	Pn	07 20 49.4	+0.7
	29nm,0.4s						
UMPA	Umpang Tak	20.90	273	P	Pn	07 20 50.7	+1.1
CD2	Chengdu	21.17	316	*e*P	P	07 20 51.0	+1.1
KSRS	Korea Array	22.02	16	P	P	07 20 58.8	0.0
	1.4nm,0.7s,baz=198,slow=11,SNR=3.8						
KSRS				LR	LR	07 30 14.1	
	comp=Z,78nm,18.4s,baz=230,slow=38						
JCJ	Chichijima	22.68	58	LR	LR	07 28 54.7	
	comp=Z,62nm,21.5s,baz=221,slow=34						
GUMO	Guam	23.57	93	LR	LR	07 28 36.5	
	comp=Z,76nm,21.3s,baz=108,slow=32						
BJI	Beijing	23.95	352	⇓*e*P	P	07 21 19.5	+1.0
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LZH	Lanzhou	24.72	326	*e*P	P	07 21 27.2	+1.4
LZH				pP	sP	07 21 40.3	+2.7
LZH				sP	pP	07 21 47.1	+13
LZH				*e*PP	PnPn	07 22 05.9	+7.7
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,76nm,4.9s						
LZH				LR	LR		
	comp=N,500nm,14.1s						
LZH				LR	LR		
	comp=E,430nm,14.6s						
LZH				LR	LR		
	comp=Z,590nm,17.4s						
PSI	Prapat	25.23	240	P	P	07 21 30.8	+0.3
	10.0nm,0.8s,baz=0.4,slow=4.8,SNR=8.8						
HHC	Hu-ho-hao-te	25.68	344	*e*P	P	07 21 35.7	+1.4
HHC				pP	sP	07 21 52.5	+6.3
HHC				S	S	07 26 00.7	-0.6
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,67nm,4.3s						
HHC				LR	LR		
	comp=N,170nm,11.5s						
HHC				LR	LR		
	comp=E,310nm,5.6s						
HHC				LR	LR		
	comp=Z,280nm,11.5s						
BRDH	Bariadhala	28.02	288	LR	LR	07 33 45.0	
	comp=Z,167nm,18.2s,baz=322,slow=38						
ODAN	Odare	32.55	294	*e*P	P	07 22 36.0	+0.2
RAMN	Ramite	33.26	294	*e*P	P	07 22 42.4	+0.4
	16nm,0.7s						
SONA0	Songino Array	33.55	343	*e*P	P	07 22 43.7	-0.5
SONM	Songino Array	33.55	343	P	P	07 22 43.7	-0.5
	1.3nm,0.7s,baz=166,slow=10,SNR=9.9						
SONA1	Songino Array	33.56	343	*e*P	P	07 22 43.5	-0.8
JIRN	Jiri	33.76	295	*e*P	P	07 22 46.7	+0.1
	12nm,0.4s						
KLR	Kul'dur	34.06	13	P	P	07 22 48.0	-0.3
	0.9nm,0.5s,baz=198,slow=9.6,SNR=4.6						
GUN	Gumba	34.08	296	*e*P	P	07 22 49.3	0.0
	25nm,0.8s						
PKI	Pulchoki	34.42	295	*e*P	P	07 22 52.1	-0.1
DANN	Dangsing	36.01	296	*e*P	P	07 23 05.3	-0.5
	16nm,0.7s						
KOLN	Koldanda	36.03	295	*e*P	P	07 23 05.8	-0.2
PYUN	Piuthan	36.63	295	*e*P	P	07 23 10.8	-0.2
	32nm,1.1s						
WRA	Warramunga Arr	38.47	159	P	P	07 23 24.5	-1.9
	1.6nm,0.9s,baz=340,slow=9.0,SNR=12						
WR1	Warramunga Arr	38.47	159	*e*P	P	07 23 24.5	-1.9
	6.8nm,0.8s						
WMQ	Urumqi	39.11	321	*e*P	P	07 23 33.5	+1.9
WMQ				pP	sP	07 23 47.7	+4.1
PALK	Pallekele	40.04	262	LR	LR	07 40 07.7	
	comp=Z,80nm,18.6s,baz=288,slow=36						
AS31	Alice Springs	41.80	162	*e*P	P	07 23 52.4	-1.6
	1.0nm,0.6s						
ASAR	Alice Springs	41.80	162	P	P	07 23 52.5	-1.5
	0.8nm,0.8s,baz=334,slow=6.9,SNR=9.6						
AS01	Alice Springs	41.81	162	*e*P	P	07 23 52.3	-1.8
MKAR	Makanchi Array	43.92	322	P	P	07 24 10.8	-0.2
	3.0nm,0.9s,baz=113,slow=9.3,SNR=6.1						

KSH	Kashi	45.15	310	P	P	07 24 24.3	+3.3
KSH				pP	sP	07 24 41.0	+8.1
KSH				pmax	pmax		
	comp=Z,330nm,5.5s						
NIL	Nilore	45.86	301	eP	P	07 24 25.8	-0.9
	11nm,0.8s						
ZAA0	Zalesovo Array	46.73	332	eP	P	07 24 32.5	-0.6
	4.2nm,1.1s						
ZALV	Zalesovo Beam	46.73	332	P	P	07 24 31.3	-1.8
	0.7nm,0.3s,baz=130,slow=6.0,SNR=5.9						
ZAA1	Zalesovo Array	46.73	332	eP	P	07 24 31.3	-1.8
KURK	Kurchatov	48.00	325	eP	P	07 24 42.9	-0.1
	8.4nm,0.8s						
KURBB	Kurchatov Arra	48.01	325	P	P	07 24 42.5	-0.5
	5.7nm,0.9s,baz=121,slow=8.1,SNR=11						
GAR	Garm	49.25	308	eP	P	07 24 52.2	-0.8
	25nm,1.2s						
CHGR	Chuyangaron	50.06	307	eP	P	07 24 59.3	+0.1
	36nm,1.5s						
KKAR	Karatay Array	50.13	313	eP	P	07 24 58.6	-0.9
	3.6nm,0.8s						
BVAR	Borovoye Array	53.60	325	P	P	07 25 24.8	-0.4
	1.1nm,0.6s,baz=95,slow=9.1,SNR=5.0						
NRIK	Noril'sk	56.87	347	P	P	07 25 48.0	-0.5
	1.9nm,0.2s,baz=138,slow=6.7,SNR=10.0						
GEYT	Alibeck	58.58	305	P	P	07 26 01.2	+0.1
	1.5nm,0.3s,baz=128,slow=2.4,SNR=5.3						
GYA0B	ALIBECK ARRAY	58.58	305	eP	P	07 26 00.2	-0.9
	5.2nm,0.8s						
ABKAR	Akbulak array	58.74	318	eP	P	07 26 01.6	-0.4
	3.7nm,0.8s						
AKTO	Aktyubinsk	60.19	319	P	P	07 26 11.7	-0.3
	2.4nm,0.6s,baz=102,slow=8.2,SNR=11						
KIRV	Kirov	66.44	327	P	P	07 26 52.5	-0.6
	14nm,0.5s,baz=222,slow=5.0,SNR=4.9						
IM3	Indian Mountai	73.46	25	eP	P	07 27 36.4	+0.2
CAST	Castle Rocks	74.35	28	eP	P	07 27 41.2	-0.3
	5.3nm,0.8s						
MLY	Manley	74.78	26	eP	P	07 27 43.9	-0.2
	5.8nm,1.0s						
ILAR	Eielson Array	76.44	26	P	P	07 27 51.7	-1.8
	0.8nm,0.9s,baz=247,slow=5.4,SNR=11						
ILB	Eielson Array	76.44	26	eP	P	07 27 52.3	-1.2
	3.9nm,1.3s						
ARA0	ARCESS Array S	76.63	339	eP	P	07 27 54.2	-0.3
ARCES	ARCESS Array B	76.63	339	P	P	07 27 54.2	-0.3
	2.3nm,0.9s,baz=89,slow=7.4,SNR=3.5						
SCM	Sheep Creek Mo	76.73	29	eP	P	07 27 54.5	-0.8
	12nm,1.0s						
MMAI	Mount Meron Ar	77.38	301	LR	LR	08 06 07.0	
	comp=Z,123nm,18.3s,baz=315,slow=39						
BR101	Keskin Array S	77.49	308	eP	P	07 27 59.1	-1.0
BRTR	Keskin Array B	77.49	308	P	P	07 27 59.1	-1.0
	0.5nm,0.8s,baz=90,slow=8.6,SNR=2.4						
DOT	Dot Lake	77.86	27	eP	P	07 28 01.1	-0.4
	3.0nm,0.9s						
FIA1	FINESS Array S	77.98	331	eP	P	07 28 01.6	-0.6
	23nm,1.5s						
FIA0	FINESS Array S	77.98	331	eP	P	07 28 00.7	-1.5
FINES	FINESS Array B	77.98	331	P	P	07 28 00.7	-1.5
	1.8nm,0.7s,baz=73,slow=8.4,SNR=5.4						
AKASG	Malin Array Be	78.44	320	P	P	07 28 03.0	-1.9
	1.7nm,0.8s,baz=64,slow=5.8,SNR=6.3						
AKASG				LR	LR	08 07 11.9	
	comp=Z,106nm,18.2s,baz=300,slow=39						
EIL	Elat	78.44	298	LR	LR	08 05 47.4	
	comp=Z,88nm,19.5s,baz=291,slow=38						
AK11	Malin Array Si	78.47	320	eP	P	07 28 03.8	-1.3
EGAK	Eagle	78.84	26	eP	P	07 28 05.8	-1.1
	2.9nm,0.9s						
DAWY	Dawson	79.77	26	eP	P	07 28 11.5	-0.5
	9.9nm,1.6s						
INK	Inuvik	80.69	21	eP	P	07 28 16.5	-0.3
	2.3nm,0.9s						
BUR04	Bucovina Ar. S	81.71	317	eP	P	07 28 22.0	-0.8
NB2	NORSAR Subarra	84.92	333	P	P	07 28 40.0	+1.0
	comp=Z,2.8nm,0.8s,baz=69,slow=4.8						
NB200	NORSAR Array S	84.92	333	eP	P	07 28 38.6	-0.4
NOA	NORSAR Array B	84.92	333	P	P	07 28 38.6	-0.4
	comp=Z,1.4nm,0.9s,baz=73,slow=4.6,SNR=2.8						
MYKA	Terra Mystica	89.49	319	PcP	P	07 29 00.7	-0.7
	comp=Z,4.2nm,1.1s						
ABTA	Abfaltersbach	90.15	319	PcP	P	07 29 04.0	-0.5
	comp=Z,4.5nm,1.1s						
YKA	Yellowknife Ar	90.40	22	P	P	07 29 05.0	-0.2
	comp=Z,0.8nm,0.8s,baz=309,slow=4.6,SNR=12						
YKB5	Yellowknife Ar	90.40	22	eP	P	07 29 04.3	-0.9
MOTA	Moosalm	90.78	320	ePcP	P	07 29 06.7	-0.8
	comp=Z,4.3nm,0.8s						
FETA	Feichten	91.15	320	PcP	P	07 29 08.9	-0.3
	comp=Z,6.9nm,1.1s						
DAVA	Damuels	91.55	320	eP	P	07 29 07.8	-3.3
	comp=Z,2.2nm,0.3s						
LTX	Lajitas	117.65	44	ePKPdf	PKiKP	07 34 51.2	+0.3
TXAR	Lajitas Array	117.65	44	PKP	PKiKP	07 34 51.2	+0.3
	comp=Z,0.4nm,0.9s,baz=219,slow=0.8,SNR=3.7						

MAN 04 07:22:11.7, 16°.26N×120°.48E, h18^{km}, mb4.1, ML2.9, MS2.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	San Manuel, Pa	0.23	120	eP	Pb	07 22 17.3	+0.2
SMPP				eS	Sb	07 22 21.1	+0.4
BOLP	Bolinao	0.55	282	eP	Pn	07 22 24.4	-0.3
BOLP				eS	Sn	07 22 33.8	+0.3
PCPH	Palayan	0.92	139	⇑eP	Pb	07 22 29.0	-0.1
PCPH				eS	Sn	07 22 42.6	+0.2
BALP	Baler	1.18	116	eP	Pn	07 22 32.9	-0.4
BALP				eS	Sg	07 22 49.7	-0.3
ABRA	Dolores	1.40	9	eP	Pn	07 22 36.0	-0.3
ABRA				eS	Sb	07 22 55.9	+1.1
APYP	Conner	1.75	25	eP	Pn	07 22 41.1	-0.2
APYP				eS	Sn	07 23 03.3	+0.2

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*SOME **04** 07:24:42.9, 42°.53N×79°.60E, h10^{km}*
*NNC **04** 07:24:42.8±2.0, 42°.56N×79°.65E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=12.8km s-min=6.1km az=126.0*
*KRNET **04** 07:24:43.9±0.1, 42°.60N×79°.58E, h16^{km}, mb2.5*

ISC 04 07:24:43.4±1.9, 42°.58N±0°.06×79°.57E±0°.06, h10^{km}±13^{km}, n33, σ0^{s}.74/59, 12C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.70	325	P	Pb	07 24 57.3	-0.3
	3.7nm,0.1s						
UZB				S	Sb	07 25 07.6	+0.2
	9.9nm,0.2s						
UZB	Uzynbulak	0.70	325	⇓eP	Pb	07 24 57.4	-0.3
	baz=23						
UZB				⇓eS	Sb	07 25 07.6	+0.2
	baz=23						
UZB	Uzynbulak	0.70	325	⇓eP	Pb	07 24 57.4	-0.3
	3.7nm,0.1s						
UZB				eS	Sb	07 25 07.6	+0.2
	9.9nm,0.2s						
PDGK	Podgornoye	0.75	356	P	Pg	07 24 57.9	0.0
	5.4nm,0.1s						
PDGK				S	Sb	07 25 08.7	-0.3
	2.2nm,0.3s						
PDGK	Podgornoye	0.75	356	⇑P	Pg	07 24 57.7	-0.3
	2.6nm,0.6s						
PDGK				⇑S	Sb	07 25 08.7	-0.3
	1.1nm,0.3s						
PDGK	Podgornoye	0.75	356	⇑iP	Pg	07 24 57.8	-0.1
	baz=55						
PDGK				⇑iS	Sg	07 25 08.4	+0.6
	baz=55						
PRZ	Przheval'sk	0.87	264	⇑iP	Pb	07 25 00.6	-0.1
	baz=63						
PRZ				⇑iS	Sb	07 25 13.3	+0.9
	baz=63						
SATY	Saty	0.98	300	P	Pg	07 25 01.7	-0.6
	2.9nm,0.3s						
SATY				S	Sg	07 25 15.2	+0.2
	8.6nm,0.1s						
SATY	Saty	0.98	300	eP	Pg	07 25 01.7	-0.6
	2.9nm,0.3s						
SATY				eS	Sg	07 25 15.2	+0.2
	8.6nm,0.1s						
MNBS	Baschi	1.73	331	P	Pg	07 25 16.4	-0.1
	2.5nm,0.2s						
MNBS				S	Sg	07 25 40.7	+1.9
	8.0nm,0.1s						
MNBS	Baschi	1.73	331	eP	Pb	07 25 15.8	+0.5
	2.5nm,0.2s						
MNBS				eS	Sg	07 25 39.8	+1.0
	8.0nm,0.1s						
DJR	Jarkent	1.76	5	eP	Pb	07 25 15.9	0.0
	0.9nm,0.2s						
DJR				eS	Sg	07 25 39.6	-0.3
	1.2nm,0.3s						
KDJ	Kajisay	1.83	257	⇓iP	Pg	07 25 18.6	+0.2
	baz=56						
KDJ				⇓iS	Sg	07 25 43.0	+0.9
	baz=56						
KOTS	Kotyrbulak	1.92	291	Pg	Pg	07 25 19.9	-0.3
	1.2nm,0.1s						
KOTS				Lg	Lg	07 25 47.4	
	9.8nm,0.2s						
KOTS	Kotyrbulak	1.92	291	eP	Pb	07 25 19.2	+0.6
	baz=90						
KOTS				eS	Sg	07 25 45.1	0.0
	baz=90						
KOTS	Kotyrbulak	1.92	291	eP	Pb	07 25 19.1	+0.6
	1.2nm,0.3s						
KOTS				eS	Sg	07 25 45.0	0.0
	9.8nm,0.2s						
MDOK	Medeo	1.94	288	Pn	Pn	07 25 16.3	-0.2
	0.9nm,0.4s						
MDOK				Sn	Sg	07 25 46.0	+0.2
	2.7nm,0.8s						
TNSS	Tian-Shan	1.98	284	Pg	Pb	07 25 20.5	+0.7
	3.2nm,0.5s						
TNSS				Lg	Lg	07 25 47.5	
	3.9nm,0.5s						
TNSS	Tian-Shan	1.98	284	eP	Pb	07 25 20.5	+0.7
	baz=84						
TNSS				eS	Sg	07 25 47.5	+0.4
	baz=84						
TNSS	Tian-Shan	1.98	284	eP	Pb	07 25 20.5	+0.7
	3.2nm,0.5s						
TNSS				eS	Sg	07 25 47.5	+0.4
	3.9nm,0.5s						
ARXS	Arharly	2.07	323	Pg	Pb	07 25 21.7	+0.6
	1.2nm,0.2s						
ARXS				Lg	Lg	07 25 49.5	
	10.0nm,0.5s						
ARXS	Arharly	2.07	323	eP	Pb	07 25 21.7	+0.6
	1.2nm,0.2s						
ARXS				eS	Sg	07 25 49.5	-0.4
	10.0nm,0.5s						
IZV	Izvestkoviy	2.22	283	Pg	Pb	07 25 24.6	+0.9
	2.5nm,0.2s						
IZV				Lg	Lg	07 25 55.0	
	7.3nm,0.2s						
IZV	Izvestkoviy	2.22	283	eP	Pb	07 25 24.6	+0.9
	2.5nm,0.2s						
IZV				eS	Sg	07 25 55.0	+0.2
	7.3nm,0.3s						
CHKK	Chushkaly	2.28	305	Pg	Pb	07 25 25.2	+0.6
	0.8nm,0.2s						
CHKK				Lg	Lg	07 25 55.5	
	7.6nm,0.3s						
CHKK	Chushkaly	2.28	305	eP	Pb	07 25 25.2	+0.6
	0.8nm,0.2s						
CHKK				eS	Sg	07 25 55.5	-1.0
	7.6nm,0.3s						
KTBS	Karatobe	2.40	299	Pg	Pb	07 25 27.3	+0.7
	0.6nm,0.2s						
KTBS				Lg	Lg	07 25 59.1	
	7.1nm,0.5s						
KTBS	Karatobe	2.40	299	eP	Pb	07 25 27.3	+0.7
	0.6nm,0.2s						
KTBS				eS	Sg	07 25 59.1	-1.3
	7.1nm,0.5s						
ULHL	Ulahol	2.49	263	⇑iP	Pb	07 25 28.0	-0.3
	baz=63						
ULHL				⇑iS	Sb	07 26 00.5	+1.5
	baz=63						
BOOM	Boomskoye usch	2.68	269	⇑eP	Pb	07 25 30.5	-1.1
	baz=69						
BOOM				⇑iS	Sb	07 26 04.5	-0.1
	baz=69						
DGS	Degeres	2.87	285	Pg	Pb	07 25 35.8	+1.1
	1.5nm,0.4s						
DGS				Lg	Lg	07 26 13.7	
	6.3nm,0.5s						
DGS	Degeres	2.87	285	eP	Pb	07 25 35.8	+1.1
	1.5nm,0.4s						
DGS				eS	Sg	07 26 13.7	-1.7
	6.3nm,0.5s						
TKM2	Tokmak 2	2.94	278	⇑iP	Pb	07 25 34.6	-1.5
	baz=78						
TKM2				⇑iS	Sb	07 26 11.2	-1.0
	baz=78						

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*IDC **04** 07:31:58.9±0.9, 10°.52N×141°.70E, h0^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.7/41, mbtmp3.7/8, MS3.5/2, Ms1 3.5/2, ms1mx2.7/36, Error ellipse: s-maj=36.3km s-min=21.4km az=95.0*

ISC 04 07:32:04.3±0.9, 10°.5N±0°.2×141°.6E±0°.3, h35^{km}, n9, σ1^{s}.31/8, mb3.8/8, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	29.56	338	LR	LR	07 49 30.4	
	comp=Z,19nm,19.0s,baz=140,slow=36						
WRA	Warramunga Arr	31.08	193	P	P	07 38 18.7	-0.8
	0.3nm,0.5s,baz=15,slow=9.7,SNR=9.8						
ASAR	Alice Springs	34.78	192	P	P	07 38 52.0	+0.3
	0.2nm,0.4s,baz=20,slow=12,SNR=6.1						
MKAR	Makanchi Array	61.58	318	P	P	07 42 18.9	+0.6
	0.4nm,0.6s,baz=99,slow=9.5,SNR=8.5						
ZALV	Zalesovo Beam	62.35	326	P	P	07 42 23.1	-0.2
	0.5nm,0.4s,baz=123,slow=6.0,SNR=2.8						
ILAR	Eielson Array	72.70	25	P	P	07 43 26.2	-2.2
	0.3nm,0.8s,baz=245,slow=6.4,SNR=3.4						
GEYT	Alibeck	78.56	307	P	P	07 44 02.7	+0.1
	1.5nm,0.3s,baz=101,slow=4.6,SNR=5.8						
GEYT				LR	LR	08 22 46.9	
	comp=Z,147nm,19.6s,baz=325,slow=39						
YKA	Yellowknife Ar	87.04	27	P	P	07 44 46.9	+0.9
	0.3nm,0.5s,baz=291,slow=5.0,SNR=5.6						
NVAR	Mina Array Bea	91.31	51	P	P	07 45 08.4	+1.4
	0.4nm,0.6s,baz=288,slow=3.7,SNR=3.6						

KRSC 04 07:37:24.8±1.6, 55°.99N×163°.50E, h18^{km}±9^{km}, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.44	301	i P	Pg	07 37 33.6	-0.1
KBTR				eS	Sg	07 37 38.4	-1.4
KBG	Krutoberegovo	0.52	302	eP	Pg	07 37 34.7	-0.5
KBG				eS	Sg	07 37 41.0	-1.1
SMKR	Semkarok	1.28	299	eP	Pn	07 37 47.8	0.0
SMKR				eS	Sb	07 38 04.0	-0.5
BDR	Baidarnaya	1.40	295	eP	Pn	07 37 50.0	+0.5
BDR				eS	Sn	07 38 07.6	0.0
SRKR	Sorokina	1.46	298	eP	Pb	07 37 51.7	+0.3
SRKR				eS	Sb	07 38 10.3	+0.6
ZLN	Zelenaya	1.51	272	eP	Pb	07 37 52.8	+0.4
ZLN				eS	Sb	07 38 12.3	+1.1
CIRR	Tsirk	1.55	276	eP	Pb	07 37 52.8	-0.2
BZGR	Bezymyannyi-Gr	1.57	269	eP	Pb	07 37 54.1	+0.7
KLY	Klyuchi	1.62	283	eP	Pn	07 37 52.1	-0.4
KLY				eS	Sn	07 38 10.9	-2.0
KRSR	Krestovskiy	1.66	279	eP	Pb	07 37 54.1	-0.7
BZWR	Bezymyannyi-We	1.69	270	eP	Pb	07 37 55.4	0.0
BZMR	Bezymyannaya	1.69	269	eP	Pn	07 37 54.2	+0.7
KPT	Kopyto	1.84	271	eP	Pn	07 37 56.4	+0.9
TUMD	Tumrok D	1.93	247	eP	Pb	07 37 58.4	-0.9
KZV	Kizimen	2.02	246	i P	Pb	07 38 00.2	-0.8
TUMR	Tumrok	2.03	251	eP	Pb	07 38 00.9	-0.2
KOZ	Kozyrevsk	2.04	274	eP	Pb	07 38 00.7	-0.5
SRDR	Sredinnyy	2.14	280	eP	Pb	07 38 01.9	-1.1
SRDR				eS	Sb	07 38 28.3	-0.9
ESO	Esso	2.70	271	eP	Pb	07 38 10.6	-1.9
ESO				eS	Sb	07 38 43.0	-2.2
SDLR	Sedlovina	3.81	227	eP	Pn	07 38 25.8	+3.1
SMAR	Somma	3.86	227	eP	Pn	07 38 26.7	+3.3
AVH	Avacha	3.88	227	eP	Pn	07 38 27.1	+3.5
UGLR	Uglovaya	3.89	226	eP	Pn	07 38 26.9	+3.2
GNL	Ganaly	3.95	237	eP	Pn	07 38 27.9	+3.4
DALK	Dalny	4.05	225	eP	Pn	07 38 29.3	+3.5
KRMR	Karymshinskiy	4.45	227	eP	Pn	07 38 35.7	+4.4

DJA 04 07:40:40.3±1.2, 5°N±7°×9°6E±°, h14^{km}±16^{km}, M4.0/6, MLv4.0/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	Banda Aceh	0.76	317	P	Pg	07 40 54.4	-0.7
BSI				S	Sb	07 41 05.4	-0.2
LHMI	Lhok Sumawe	1.16	76	P	Pn	07 40 59.8	-2.3
LHMI				S	Sb	07 41 16.1	-0.9
TPTI		2.15	141	P	Pn	07 41 15.1	-0.7
TPTI				S	Sn	07 41 42.6	+0.3
KCSI	Kotacane, Aceh	2.40	126	P	Pn	07 41 20.4	+1.1
SNSI	Sinabang, Aceh	2.56	169	P	Pn	07 41 20.7	-0.8

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*KRNET **04** 07:42:55.7±0.1, 41°.54N×78°.16E, h16^{km}, mb2.2*
*NNC **04** 07:42:57.4±1.4, 41°.83N×78°.13E, h0^{km}, mb3.3, mpv3.1, Error ellipse: s-maj=10.8km s-min=4.8km az=177.0, Suspected Mining explosion.*

ISC 04 07:42:57.4±1.6, 41°.73N±0°.09×78°.14E±0°.04, h0^{km}, n24, σ1^{s}.19/38, 16C-6D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.25	269	⇑iP	Pg	07 43 02.0	-0.2
	baz=5.0						
TARG				⇑iS	Sg	07 43 07.1	+1.7
	baz=5.0						
PRZ	Przheval'sk	0.77	15	⇑iP	Pb	07 43 13.7	-0.2
	baz=12						
PRZ				⇑iS	Sb	07 43 27.0	+2.0
	baz=12						
KDJ	Kajisay	0.82	299	⇓iP	Pg	07 43 13.3	+0.2
	baz=9.0						
KDJ				⇓iS	Sb	07 43 26.6	+0.4
	baz=9.0						
ULHL	Ulahol	1.50	291	⇑iP	Pn	07 43 25.0	-0.8
	baz=97						
ULHL				⇑iS	Sn	07 43 46.4	+0.2
	baz=97						
TNSS	Tian-Shan	1.57	326	P	Pn	07 43 24.9	-2.0
	5.4nm,0.1s						
TNSS				S	Sn	07 43 45.6	-2.6
	5.4nm,0.3s						
IZV	Izvestkoviy	1.72	320	P	Pn	07 43 27.6	-1.2
	4.7nm,0.1s						
IZV				S	Sn	07 43 50.5	-1.1
	6.9nm,0.3s						
BOOM	Boomskoye usch	1.80	296	⇑iP	Pb	07 43 30.7	-0.7
	baz=1.0						
BOOM				⇑iS	Sg	07 43 56.2	+0.9
	baz=1.0						
PDGK	Podgornoye	1.88	32	P	Pn	07 43 29.8	-1.1
	1.1nm,0.2s						
PDGK				S	Sn	07 43 54.0	-1.5
	1.1nm,0.3s						
PDGK	Podgornoye	1.88	32	⇑Pn	Pn	07 43 29.5	-1.5
	1.5nm,0.6s						
PDGK				⇓Sn	Sn	07 43 55.7	+0.3
	2.1nm,0.6s						
PDGK	Podgornoye	1.88	32	⇓iP	Pb	07 43 31.8	-0.9
	baz=28						
PDGK				⇓iS	Sg	07 44 00.3	+2.5
	baz=28						
MTBS	Maitube	1.88	318	P	Pn	07 43 30.7	-0.2
	6.0nm,0.1s						
MTBS				S	Sn	07 43 55.4	0.0
	5.9nm,0.2s						
KST	Kastek	2.08	310	Pg	Pb	07 43 35.3	-0.7
	4.3nm,0.5s						
KST				Lg	Lg	07 44 03.3	
	12nm,0.5s						
KZA	Kyzart	2.18	280	⇑iP	Pn	07 43 36.0	+0.7
	baz=85						
KZA				⇑iS	Sb	07 44 05.1	-0.7
	baz=85						
TKM2	Tokmak 2	2.23	303	⇑Pg	Pn	07 43 36.7	+0.9
	2.4nm,0.5s						
TKM2				⇓Lg	Lg	07 44 07.1	
	4.2nm,0.3s						
TKM2	Tokmak 2	2.23	303	⇑iP	Pn	07 43 36.2	+0.4
	baz=7.0						
TKM2				⇑iS	Sb	07 44 05.8	-1.0
	baz=7.0						
KTBS	Karatobe	2.25	332	Pg	Pn	07 43 36.4	+0.4
	5.3nm,0.3s						
KTBS				Lg	Lg	07 44 05.1	
	16nm,0.5s						
CHKK	Chushkaly	2.28	339	Pg	Pn	07 43 36.9	+0.6
	12nm,0.3s						
CHKK				Lg	Lg	07 44 06.1	
	12nm,0.2s						
DGS	Degeres	2.31	312	Pg	Pb	07 43 38.5	-1.4
	8.1nm,0.6s						
DGS				Lg	Lg	07 44 08.9	
	9.6nm,0.6s						
MNBS	Baschi	2.35	5	Pg	Pn	07 43 38.2	+0.8
	1.5nm,0.1s						
MNBS				Lg	Lg	07 44 08.8	
	14nm,0.3s						
KTMS	Ketmen	2.37	43	Pg	Pn	07 43 37.7	+0.1
	3.3nm,0.1s						
KTMS				Lg	Lg	07 44 07.8	
	4.0nm,0.3s						
ARXS	Arharly	2.49	355	Pg	Pn	07 43 38.0	-1.2
	6.3nm,0.3s						
ARXS				Lg	Lg	07 44 07.9	
	7.5nm,0.7s						
KUU	Kurty	2.53	329	Pg	Pn	07 43 41.4	+1.6
	3.1nm,0.5s						
KUU				Lg	Lg	07 44 14.3	
	11nm,0.8s						
KBK	Karagaybulak	2.54	292	⇑iP	Pn	07 43 40.8	+0.7
	baz=96						
KBK				⇑iS	Sn	07 44 13.3	+1.5
	baz=96						
SGDS	Sogindy	3.11	305	Pg	Pb	07 43 52.9	-0.7
	2.7nm,0.3s						
SGDS				Lg	Lg	07 44 33.5	
	1.5nm,0.3s						

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*ISK **04** 07:56:50.9, 34°.91N×24°.05E, h6^{km}, ML4.4/26*
*MOS **04** 07:56:51.3±1.2, 34°.73N×24°.05E, h20^{km}, mb4.9/46, Error ellipse: s-maj=5.4km s-min=3.1km az=76.6*
*ATH **04** 07:56:54.5, 34°.80N×24°.15E, h27^{km}, ML4.4/13, Error ellipse: s-maj=1.7km s-min=0.8km az=188.0*
*BEO **04** 07:56:54.2±0.9, 34°.81N×23°.47E, h0^{km}, ML4.5/3*
*NEIC **04** 07:56:54.5±0.0, 34°.80N×24°.15E, h27^{km}, mb4.7/49, ML4.2(THE), ML4.4(ATH), After ATH.*
*ISCJB **04** 07:56:54.3±0.3, 34°.73N±0°.02×24°.14E±0°.02, h42^{km}±2^{km}, mb4.6/101, MS3.9/6, Error ellipse: s-maj=3.6km s-min=2.3km az=23.9*
*IDC **04** 07:56:54.4±1.6, 34°.84N×24°.13E, h27^{km}±9^{km}, mb4.4/32, mb1 4.4/44, mb1mx4.4/65, mbtmp4.5/44, ML4.3/11, MS3.8/7, Ms1 3.8/7, ms1mx3.3/50, Error ellipse: s-maj=12.5km s-min=9.6km az=175.0*
*GII **04** 07:56:56.0±0.0, 34°.55N×24°.79E, h1^{km}, mb4.4/1, MD4.2/1*
*THE **04** 07:56:57.0, 34°.84N×24°.18E, h7^{km}, ML4.2/7, Error ellipse: s-maj=0.9km s-min=0.6km az=239.0*
*NIC **04** 07:56:58.5±0.2, 34°.27N×24°.66E, h25^{km}, mb4.8, ML4.3*
*HLW **04** 07:56:58.0, 34°.66N×24°.56E, h11^{km}±27^{km}, Md4.7, Ml4.6*
*DDA **04** 07:57:20.1, 35°.88N×26°.08E, h26^{km}±1^{km}, ML4.3*

ISC 04 07:56:54.1±0.6, 34°.75N±0°.03×24°.13E±0°.02, h28^{km}±3^{km}, n649, σ2^{s}.05/707, mb4.7/114, MS3.9/6, 44C-13D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.09	338	ePg	Pb	07 56 59.3	+0.1
GVD	Gavdhos	0.09	338	P	Pb	07 56 59.3	+0.1
GVD				S	Sb	07 57 02.9	+0.3
GVD				AML	AML	07 57 03.5	
GVD				AML	AML	07 57 03.8	
GVD	Gavdhos	0.09	338	P	Pb	07 56 59.3	+0.1
GVD				S	Sb	07 57 01.4	-1.2
TMBK	Timbaki Herakl	0.61	58	P	Pn	07 57 07.0	0.0
TMBK				S	Sn	07 57 15.5	-0.4
VAM	Vamos	0.66	5	ePn	Pn	07 57 07.7	+0.1
VAM	Vamos	0.66	5	P	Pb	07 57 06.4	-0.7
VAM				S	Sb	07 57 16.1	+0.2
VAM				AML	AML	07 57 19.6	
VAM				AML	AML	07 57 22.3	
VAM	Vamos	0.66	5	P	Pn	07 57 07.7	+0.1
VAM				S	Sn	07 57 17.8	+0.8

VAM	**Vamos**	**0.66**	**5**	*e*P	**Pn**	**07 57 07.7**	**+0.1**
PRNS	**Prines Rethymn**	**0.68**	**26**	P	**Pb**	**07 57 07.1**	**-0.4**
PRNS				S	**Sb**	**07 57 16.4**	**-0.3**
IMMV	**Iera Moni Meta**	**0.72**	**350**	P	**Pb**	**07 57 07.8**	**-0.3**
IMMV				S	**Sn**	**07 57 18.4**	**-0.1**
IMMV				AML	AML	07 57 22.0	
IMMV				AML	AML	07 57 23.4	
IMMV	**Iera Moni Meta**	**0.72**	**350**	P	**Pn**	**07 57 08.6**	**+0.2**
IMMV				S	**Sn**	**07 57 18.9**	**+0.4**
CHAN	**Chania**	**0.77**	**355**	P	**Pn**	**07 57 10.1**	**+1.0**
CHAN				S	**Sn**	**07 57 20.4**	**+0.6**
IDI	**Anoyia**	**0.82**	**49**	*e*Pg	**Pb**	**07 57 09.0**	**-1.0**
IDI				*e*Sg	**Sn**	**07 57 21.2**	**+0.1**
IDI	**Anoyia**	**0.82**	**49**	P	**Pb**	**07 57 08.9**	**-1.0**
IDI				S	**Sn**	**07 57 21.3**	**+0.1**
IDI				AML	AML	07 57 23.4	
	comp=N,43075µm,0.3s						
IDI				AML	AML	07 57 28.9	
	comp=E,40579µm,0.4s						
IDI	**Anoyia**	**0.82**	**49**	⇓*i*P	**Pb**	**07 57 09.3**	**-0.6**
IDI				S	**Sb**	**07 57 20.9**	**+0.2**
IDI	**Anoyia**	**0.82**	**49**	P	**Pn**	**07 57 11.2**	**+1.3**
IDI				S	**Sn**	**07 57 21.4**	**+0.2**
IDI	**Anoyia**	**0.82**	**49**	Pg	**Pb**	**07 57 09.0**	**-1.0**
	comp=E,587nm,0.3s,baz=242,slow=12,SNR=676						
IDI				Lg	Lg	07 57 20.4	
	comp=E,2µm,0.3s,baz=312,slow=20,SNR=37						
IDI				LR	LR	07 57 48.8	
	comp=E,3µm,21.5s,baz=263,slow=71						
KSTL	**Kastelli Herak**	**0.95**	**54**	P	**Pb**	**07 57 15.3**	**+3.3**
IACM	**Heraklion**	**0.95**	**54**	P	**Pn**	**07 57 11.4**	**-0.2**
IACM				S	**Sn**	**07 57 24.8**	**+0.6**
IACM	**Heraklion**	**0.95**	**54**	P	**Pb**	**07 57 14.2**	**+2.2**
LAST	**Lasithi**	**1.18**	**69**	*e*Pn	**Pb**	**07 57 16.8**	**+0.8**
LAST				*e*Sn	**Sb**	**07 57 34.8**	**+3.9**
LAST	**Lasithi**	**1.18**	**69**	P	**Pb**	**07 57 16.5**	**+0.5**
LAST				S	**Sb**	**07 57 33.1**	**+2.2**
LAST				AML	AML	07 57 39.0	
	comp=N,16201µm,0.9s						
LAST				AML	AML	07 57 45.2	
	comp=E,21205µm,0.8s						
LAST	**Lasithi**	**1.18**	**69**	P	**Pb**	**07 57 16.8**	**+0.8**
LAST				S	**Sb**	**07 57 34.8**	**+3.9**
ANKY	**Antikythira Is**	**1.30**	**329**	*e*Pn	**Pb**	**07 57 19.5**	**+1.5**
ANKY				*e*Sn	**Sb**	**07 57 37.6**	**+3.3**
ANKY	**Antikythira Is**	**1.30**	**329**	P	**Pb**	**07 57 19.3**	**+1.3**
ANKY				AML	AML	07 57 49.4	
	comp=N,13386µm,0.7s						
ANKY				AML	AML	07 57 50.5	
	comp=E,15355µm,0.8s						
ANKY	**Antikythira Is**	**1.30**	**329**	P	**Pb**	**07 57 19.5**	**+1.5**
ANKY				S	**Sb**	**07 57 37.6**	**+3.3**
NPS	**Neapolis**	**1.32**	**67**	*e*Pn	**Pb**	**07 57 19.5**	**+1.2**
NPS				*e*Sn	**Sb**	**07 57 38.1**	**+3.3**
NPS	**Neapolis**	**1.32**	**67**	P	**Pb**	**07 57 18.9**	**+0.6**
NPS				AML	AML	07 57 46.0	
	comp=N,18828µm,0.6s						
NPS				AML	AML	07 57 46.6	
	comp=E,16718µm,0.4s						
NPS	**Neapolis**	**1.32**	**67**	P	**Pb**	**07 57 19.5**	**+1.2**
NPS				S	**Sb**	**07 57 38.1**	**+3.3**
NPS	**Neapolis**	**1.32**	**67**	*e*P	**Pb**	**07 57 19.5**	**+1.2**
NPS				*e*		07 57 38.1	
STIA	**Sitia Lasithi**	**1.67**	**74**	P	**Pb**	**07 57 25.6**	**+1.3**
STIA				S	**Sb**	**07 57 46.8**	**+1.9**
KYTH	**Kithira**	**1.75**	**330**	*e*Pn	**Pb**	**07 57 26.4**	**+0.8**
KYTH				*e*Sn	**Sb**	**07 57 49.4**	**+2.2**
KYTH	**Kithira**	**1.75**	**330**	P	**Pb**	**07 57 25.6**	**0.0**
KYTH				AML	AML	07 57 56.9	
	comp=N,10304µm,0.8s						
KYTH				AML	AML	07 58 02.1	
	comp=E,15157µm,1.5s						
KYTH	**Kithira**	**1.75**	**330**	P	**Pb**	**07 57 26.4**	**+0.8**
KYTH				S	**Sb**	**07 57 49.4**	**+2.2**
ZKR	**Zakros**	**1.75**	**77**	PN	**Pb**	**07 57 24.6**	**-1.0**
ZKR	**Zakros**	**1.75**	**77**	*e*Pn	**Pb**	**07 57 26.4**	**+0.8**
ZKR				*e*Sn	**Sb**	**07 57 48.7**	**+1.5**
ZKR	**Zakros**	**1.75**	**77**	P	**Pb**	**07 57 25.8**	**+0.1**
ZKR				AML	AML	07 58 03.0	
	comp=N,4806µm,0.7s						
ZKR				AML	AML	07 58 11.4	
	comp=E,15856µm,0.8s						
ZKR	**Zakros**	**1.75**	**77**	P	**Pb**	**07 57 26.4**	**+0.8**
ZKR				S	**Sb**	**07 57 48.7**	**+1.5**
KTHR	**Kythira**	**1.76**	**329**	P	**Pb**	**07 57 26.4**	**+0.6**
THR6	**Thira Island,**	**1.91**	**33**	*e*Pn	**Pb**	**07 57 27.0**	**-1.2**
THR6	**Thira Island,**	**1.91**	**33**	P	**Pb**	**07 57 27.0**	**-1.2**
THR6	**Thira Island,**	**1.91**	**33**	P	**Pb**	**07 57 27.0**	**-1.2**
THR5	**Thira Island,**	**1.94**	**31**	P	**Pb**	**07 57 27.1**	**-1.6**
THR5	**Thira Island,**	**1.94**	**31**	P	**Pb**	**07 57 27.3**	**-1.5**
THT1	**Athinios (Pele**	**1.94**	**33**	P	**Pn**	**07 57 27.1**	**+1.8**
MHLO	**Agia Marina, M**	**1.95**	**6**	P	**Pb**	**07 57 27.2**	**-1.7**
MHLO				AML	AML	07 58 05.7	
	comp=N,41210µm,0.6s						
MHLO				AML	AML	07 58 07.7	
	comp=E,49977µm,0.7s						
MHLO	**Agia Marina, M**	**1.95**	**6**	P	**Pb**	**07 57 27.4**	**-1.5**
THR3	**Thira Island,**	**1.95**	**32**	*e*Pn	**Pb**	**07 57 27.8**	**-1.2**
THR3	**Thira Island,**	**1.95**	**32**	P	**Pb**	**07 57 27.8**	**-1.2**
THR3	**Thira Island,**	**1.95**	**32**	P	**Pb**	**07 57 27.8**	**-1.2**
THR7	**Fira-Santorini**	**1.98**	**32**	P	**Pb**	**07 57 28.2**	**-1.3**
THR7	**Fira-Santorini**	**1.98**	**32**	P	**Pb**	**07 57 28.3**	**-1.1**
THT2	**Imerovigli**	**1.98**	**32**	P	**Pb**	**07 57 28.2**	**-1.4**
THT2	**Imerovigli**	**1.98**	**32**	P	**Pb**	**07 57 28.2**	**-1.4**
THR8	**Santorini-Mono**	**1.98**	**33**	P	**Pn**	**07 57 27.2**	**+1.4**
THR8	**Santorini-Mono**	**1.98**	**33**	P	**Pb**	**07 57 28.4**	**-1.2**
THR2	**Thira island,**	**2.00**	**32**	*e*Pn	**Pb**	**07 57 28.3**	**-1.5**
THR2	**Thira island,**	**2.00**	**32**	P	**Pb**	**07 57 28.2**	**-1.5**
THR2	**Thira island,**	**2.00**	**32**	P	**Pb**	**07 57 28.3**	**-1.5**
MHLA	**Plaka, Milos I**	**2.00**	**7**	P	**Pb**	**07 57 28.1**	**-1.8**
MHLA				AML	AML	07 58 08.4	
	comp=E,17260µm,1.2s						
MHLA				AML	AML	07 58 10.8	
	comp=N,20931µm,0.9s						
ANAF	**Anafi Island**	**2.09**	**39**	P	**Pn**	**07 57 29.0**	**+1.7**
IOSP	**Ios island**	**2.18**	**25**	P	**Pn**	**07 57 28.4**	**-0.2**
VLI	**Veliai**	**2.19**	**334**	*e*Pn	**Pb**	**07 57 31.7**	**-1.4**
VLI	**Veliai**	**2.19**	**334**	P	**Pb**	**07 57 31.0**	**-2.1**
VLI				AML	AML	07 58 12.0	
	comp=N,3995µm,0.9s						
VLI				AML	AML	07 58 28.1	
	comp=E,4776µm,1.1s						
VLI	**Veliai**	**2.19**	**334**	P	**Pb**	**07 57 31.7**	**-1.4**
SERI	**Serifos**	**2.42**	**7**	P	**Pn**	**07 57 33.2**	**+1.4**
SERI				AML	AML	07 58 16.9	
	comp=N,1580µm,1.1s						
SERI				AML	AML	07 58 20.0	
	comp=E,3113µm,0.8s						
SERI	**Serifos**	**2.42**	**7**	P	**Pn**	**07 57 33.8**	**+1.9**
AMGA	**Amorgos Island**	**2.52**	**34**	P	**Pn**	**07 57 34.6**	**+1.3**
AMGA	**Amorgos Island**	**2.52**	**34**	P	**Pn**	**07 57 35.5**	**+2.2**
APE	**Apeiranthos**	**2.58**	**26**	PN	**Pn**	**07 57 33.9**	**-0.1**
APE				SN	**Sn**	**07 58 05.2**	**+0.7**
APE	**Apeiranthos**	**2.58**	**26**	*e*Pn	**Pn**	**07 57 35.8**	**+1.8**
APE	**Apeiranthos**	**2.58**	**26**	P	**Pn**	**07 57 35.2**	**+1.2**
APE	**Apeiranthos**	**2.58**	**26**	⇑*i*P	**Pn**	**07 57 35.1**	**+1.1**
APE				S	**Sn**	**07 58 06.1**	**+1.6**
APE	**Apeiranthos**	**2.58**	**26**	P	**Pn**	**07 57 35.8**	**+1.8**
APE	**Apeiranthos**	**2.58**	**26**	*c i*P	**Pn**	**07 57 34.8**	**+0.8**
KARP	**Karpathos**	**2.61**	**71**	PN	**Pn**	**07 57 36.2**	**+1.7**
KARP	**Karpathos**	**2.61**	**71**	*e*Pn	**Pn**	**07 57 35.5**	**+1.1**
KARP	**Karpathos**	**2.61**	**71**	P	**Pb**	**07 57 37.4**	**-2.8**
KARP	**Karpathos**	**2.61**	**71**	P	**Pb**	**07 57 37.5**	**-2.8**
KRND	**KRANIDI**	**2.74**	**343**	P	**Pn**	**07 57 38.6**	**+2.3**
DID	**Didima**	**2.84**	**346**	*e*Pn	**Pn**	**07 57 39.7**	**+2.0**
DID	**Didima**	**2.84**	**346**	P	**Pn**	**07 57 39.0**	**+1.4**
DID	**Didima**	**2.84**	**346**	P	**Pn**	**07 57 39.7**	**+2.0**
PYL	**PYLOS**	**2.89**	**318**	*e*Pn	**Pn**	**07 57 41.3**	**+3.0**
PYL	**PYLOS**	**2.89**	**318**	P	**Pn**	**07 57 39.2**	**+0.9**
PYL	**PYLOS**	**2.89**	**318**	P	**Pn**	**07 57 41.3**	**+3.0**
VLX	**Vlachokerasia**	**2.97**	**332**	*e*Pn	**Pb**	**07 57 43.5**	**-3.0**
VLX	**Vlachokerasia**	**2.97**	**332**	P	**Pn**	**07 57 43.0**	**+3.4**
VLX	**Vlachokerasia**	**2.97**	**332**	P	**Pb**	**07 57 43.5**	**-3.0**
ITM	**Ithomi**	**3.01**	**324**	*e*Pn	**Pn**	**07 57 40.8**	**+0.8**
ITM	**Ithomi**	**3.01**	**324**	P	**Pn**	**07 57 41.8**	**+1.9**
ITM	**Ithomi**	**3.01**	**324**	P	**Pb**	**07 57 44.3**	**-2.8**
VLY	**Voula,Athens**	**3.11**	**355**	*e*Pn	**Pn**	**07 57 43.6**	**+2.3**
VLY	**Voula,Athens**	**3.11**	**355**	P	**Pn**	**07 57 42.9**	**+1.6**
VLY	**Voula,Athens**	**3.11**	**355**	P	**Pn**	**07 57 43.6**	**+2.3**
TRIP	**Tripoli**	**3.15**	**332**	P	**Pn**	**07 57 45.6**	**+3.6**
ATHU	**Athens Univers**	**3.22**	**355**	*e*Pn	**Pn**	**07 57 44.6**	**+1.8**
ATHU	**Athens Univers**	**3.22**	**355**	P	**Pn**	**07 57 44.6**	**+1.8**
PTL	**Penteli**	**3.30**	**356**	*e*Pn	**Pn**	**07 57 45.9**	**+2.0**
PTL	**Penteli**	**3.30**	**356**	P	**Pn**	**07 57 45.5**	**+1.6**
PTL	**Penteli**	**3.30**	**356**	P	**Pn**	**07 57 45.9**	**+2.0**
DION	**Dionisos Attik**	**3.32**	**357**	P	**Pn**	**07 57 46.0**	**+1.7**
LOUT	**Loutraki**	**3.36**	**344**	P	**Pn**	**07 57 46.5**	**+1.7**
LOUT	**Loutraki**	**3.36**	**344**	P	**Pn**	**07 57 46.8**	**+2.0**
SLUM	**Salum**	**3.38**	**164**	P	**Pn**	**07 57 46.3**	**+1.4**
	baz=170						
SLUM				AMP		07 58 00.0	
	baz=170						
SLUM				S	**Sn**	**07 58 20.8**	**-3.3**
	baz=170						
AMT	**Artemida-Makis**	**3.40**	**325**	P	**Pn**	**07 57 49.1**	**+3.8**
DAT	**Datca**	**3.43**	**54**	PN	**Pn**	**07 57 47.1**	**+1.3**
DAT	**Datca**	**3.43**	**54**	*i* P	**Pn**	**07 57 47.2**	**+1.4**
BODT	**Bodrum**	**3.46**	**47**	PN	**Pn**	**07 57 47.3**	**+1.1**
VILL	**Villia**	**3.47**	**349**	P	**Pn**	**07 57 48.1**	**+1.8**
GUR	**Goura**	**3.49**	**336**	*e*Pn	**Pn**	**07 57 49.3**	**+2.7**
GUR	**Goura**	**3.49**	**336**	P	**Pn**	**07 57 49.3**	**+2.7**
DATC	**Datca-Mugla**	**3.50**	**54**	PN	**Pn**	**07 57 48.2**	**+1.5**
VIL2	**Platees**	**3.52**	**349**	P	**Pn**	**07 57 47.5**	**+0.5**
BDRM	**Kayabasi**	**3.54**	**48**	*i* P	**Pn**	**07 57 50.1**	**+2.8**
BDRM				IAML_P			
	comp=Z,3µm,0.3s						
ARG	**Arkhangelos**	**3.57**	**65**	PN	**Pn**	**07 57 49.7**	**+2.0**
ARG	**Arkhangelos**	**3.57**	**65**	*e*Pn	**Pn**	**07 57 50.4**	**+2.7**
ARG	**Arkhangelos**	**3.57**	**65**	P	**Pn**	**07 57 50.3**	**+2.7**
ARG	**Arkhangelos**	**3.57**	**65**	P	**Pn**	**07 57 50.4**	**+2.7**
ARG	**Arkhangelos**	**3.57**	**65**	*e*P	**Pn**	**07 57 50.4**	**+2.7**
PROD	**Prodromos**	**3.64**	**345**	P	**Pn**	**07 57 50.8**	**+2.2**
KLV	**Kalavryta, Ach**	**3.65**	**335**	*e*Pn	**Pn**	**07 57 51.7**	**+2.9**
KLV	**Kalavryta, Ach**	**3.65**	**335**	P	**Pn**	**07 57 51.0**	**+2.2**
KLV	**Kalavryta, Ach**	**3.65**	**335**	P	**Pn**	**07 57 51.7**	**+2.9**
BBRN	**Bozburun-Marma**	**3.73**	**58**	PN	**Pn**	**07 57 51.7**	**+1.8**
DRO	**Drossia**	**3.74**	**329**	P	**Pn**	**07 57 53.3**	**+3.3**
MRSB	**Marmaris-Mugla**	**3.85**	**58**	PN	**Pn**	**07 57 53.2**	**+1.7**
ALIK	**Aliki, Aigiali**	**3.86**	**336**	P	**Pn**	**07 57 55.1**	**+3.5**
GCAM	**G?zelcaml?**	**3.87**	**40**	PN	**Pn**	**07 57 53.4**	**+1.7**
DSF	**Desfina**	**3.87**	**341**	*e*Pn	**Pn**	**07 57 53.8**	**+1.9**
DSF	**Desfina**	**3.87**	**341**	P	**Pn**	**07 57 52.7**	**+0.8**
DSF	**Desfina**	**3.87**	**341**	P	**Pn**	**07 57 53.8**	**+1.9**
LAKA	**Lakka**	**3.89**	**334**	*e*Pn	**Pn**	**07 57 54.9**	**+2.8**
LAKA	**Lakka**	**3.89**	**334**	P	**Pn**	**07 57 54.0**	**+1.9**
LAKA	**Lakka**	**3.89**	**334**	P	**Pn**	**07 57 54.9**	**+2.8**
MLSB	**Milas**	**3.90**	**48**	PN	**Pn**	**07 57 53.5**	**+1.3**
CHOS	**Chios island**	**3.94**	**23**	PN	**Pn**	**07 57 53.2**	**+0.3**
TRIZ	**Trizonia**	**3.97**	**336**	P	**Pn**	**07 57 55.0**	**+1.9**
TRIZ	**Trizonia**	**3.97**	**336**	P	**Pn**	**07 57 55.6**	**+2.5**
KALE	**Kalithea**	**3.97**	**337**	*e*Pn	**Pn**	**07 57 55.4**	**+2.2**
KALE	**Kalithea**	**3.97**	**337**	P	**Pn**	**07 57 55.1**	**+1.9**
KALE	**Kalithea**	**3.97**	**337**	P	**Pn**	**07 57 55.4**	**+2.2**
MRKA	**Markates**	**3.97**	**354**	P	**Pn**	**07 57 54.6**	**+1.4**
MRKA	**Markates**	**3.97**	**354**	P	**Pn**	**07 57 54.7**	**+1.5**
LKR	**Lokris**	**4.00**	**347**	*e*Pn	**Pn**	**07 57 53.7**	**+0.2**
LKR	**Lokris**	**4.00**	**347**	P	**Pn**	**07 57 53.7**	**+0.2**
SERG	**Sergoula**	**4.02**	**336**	P	**Pn**	**07 57 56.3**	**+2.5**
ATAL	**Atalanti**	**4.03**	**348**	*e*Pn	**Pn**	**07 57 55.5**	**+1.5**
ATAL	**Atalanti**	**4.03**	**348**	P	**Pn**	**07 57 55.5**	**+1.5**
EFP	**Efpalio**	**4.08**	**335**	P	**Pn**	**07 57 57.3**	**+2.7**
AXS	**Araxos**	**4.09**	**328**	P	**Pn**	**07 57 57.2**	**+2.4**
AXS	**Araxos**	**4.09**	**328**	P	**Pn**	**07 57 57.6**	**+2.8**
URLA	**Izmir**	**4.11**	**28**	PN	**Pn**	**07 57 55.8**	**+0.7**
SMIA	**Simia**	**4.18**	**350**	P	**Pn**	**07 57 58.0**	**+1.9**
AYDN	**Tasoluk**	**4.20**	**45**	*i* P	**Pn**	**07 57 59.7**	**+3.4**
AYDN				IAML_P			
	comp=Z,5µm,0.3s						
TURN	**Turunc**	**4.21**	**59**	PN	**Pn**	**07 57 54.2**	**-2.2**
TURN	**Turunc**	**4.21**	**59**	*i* P	**Pn**	**07 57 55.5**	**-0.8**
TURN				IAML_P			
	comp=Z,19µm,0.2s						
DALY	**Dalyan (Mula)**	**4.22**	**59**	PN	**Pn**	**07 57 58.4**	**+1.9**
ANX	**Ano Chora**	**4.22**	**336**	P	**Pn**	**07 57 58.8**	**+2.1**
ANX	**Ano Chora**	**4.22**	**336**	P	**Pn**	**07 57 59.2**	**+2.5**
BLCB	**Balcova**	**4.32**	**32**	PN	**Pn**	**07 57 58.9**	**+1.0**
PVO	**Paravola**	**4.39**	**332**	P	**Pn**	**07 58 02.4**	**+3.5**
AYDB	**Zeytinkoy-Aydi**	**4.40**	**43**	PN	**Pn**	**07 58 00.5**	**+1.3**
AOS	**Alonnisos**	**4.41**	**357**	PN	**Pn**	**07 57 59.3**	**+0.1**
SKIA	**Skiathos**	**4.44**	**353**	P	**Pn**	**07 58 01.4**	**+1.8**
FETY	**Fethiye**	**4.45**	**64**	PN	**Pn**	**07 58 01.6**	**+1.9**
FETY	**Fethiye**	**4.45**	**64**	*i* P	**Pn**	**07 58 02.6**	**+2.8**
FETY				IAML_P			
	comp=Z,10µm,0.3s						
AGG	**Agios Georgios**	**4.50**	**342**	*e*Pn	**Pn**	**07 58 01.4**	**+0.9**
AGG	**Agios Georgios**	**4.50**	**342**	P	**Pn**	**07 58 02.7**	**+2.3**
AGG	**Agios Georgios**	**4.50**	**342**	*e*P	**Pn**	**07 58 01.4**	**+0.9**
EVR	**Evrytania**	**4.55**	**337**	*e*Pn	**Pn**	**07 58 04.0**	**+2.7**
EVR	**Evrytania**	**4.55**	**337**	P	**Pn**	**07 58 04.0**	**+2.7**
NEO	**Neokhori**	**4.60**	**351**	*e*Pn	**Pn**	**07 58 03.4**	**+1.5**
NEO	**Neokhori**	**4.60**	**351**	P	**Pn**	**07 58 03.4**	**+1.5**
SIGR	**SIGRI**	**4.66**	**17**	PN	**Pn**	**07 58 03.2**	**+0.6**
XOR	**Xorichti**	**4.67**	**351**	*e*Pn	**Pn**	**07 58 04.3**	**+1.6**
XOR	**Xorichti**	**4.67**	**351**	P	**Pn**	**07 58 04.3**	**+1.6**
AKAS	**Kas**	**4.71**	**70**	PN	**Pn**	**07 58 04.6**	**+1.2**
AKAS	**Kas**	**4.71**	**70**	*i* P	**Pn**	**07 58 05.1**	**+1.7**
AKAS				*i* S	**Sn**	**07 58 56.8**	**-0.3**
AKAS				IAML_P			
	comp=Z,7µm,0.1s						
TAVA	**DENIZLI_Tavas**	**4.73**	**54**	*i* P	**Pn**	**07 58 07.4**	**+3.7**
TAVA				*i* S	**Sn**	**07 58 58.1**	**+0.5**
TAVA				IAML_P			
	comp=Z,4µm,0.3s						
FYTO	**Fytoko, Volos**	**4.74**	**349**	*e*Pn	**Pn**	**07 58 05.5**	**+1.7**
FYTO	**Fytoko, Volos**	**4.74**	**349**	P	**Pn**	**07 58 05.5**	**+1.7**
DENT	**Denizli**	**4.97**	**51**	PN	**Pn**	**07 58 08.9**	**+2.0**
AKHS	**Akhisar**	**5.07**	**35**	*i* P	**Pn**	**07 58 11.5**	**+3.3**
THL	**Klokotos Trika**	**5.09**	**341**	P	**Pn**	**07 58 10.6**	**+2.1**
ELL	**Elmali**	**5.11**	**65**	PN	**Pn**	**07 58 11.1**	**+2.2**
MANT	**Manisa**	**5.16**	**42**	*e*Pn	**Pn**	**07 58 11.2**	**+1.6**
MANT	**Manisa**	**5.16**	**42**	*i* P	**Pn**	**07 58 11.5**	**+1.8**
KULA	**Kula-Manisa**	**5.23**	**43**	PN	**Pn**	**07 58 12.3**	**+1.7**
LIT	**Litokhoron**	**5.50**	**347**	*e*Pn	**Pn**	**07 58 14.6**	**+0.5**
LIT	**Litokhoron**	**5.50**	**347**	*e*P	**Pn**	**07 58 14.6**	**+0.5**
KORT	**Korkueli**	**5.53**	**64**	PN	**Pn**	**07 58 16.9**	**+2.2**
KORT	**Korkueli**	**5.53**	**64**	*i* P	**Pn**	**07 58 18.2**	**+3.5**
KORT				IAML_P			
	comp=Z,5µm,0.3s						
SWA2		**5.61**	**168**	P	**Pn**	**07 58 17.2**	**+1.5**
	baz=171						
SWA2				AMP		07 59 00.0	
	baz=171						
BRDR	**BURDUR-Merkez**	**5.62**	**57**	*i* P	**Pn**	**07 58 18.2**	**+2.2**
BRDR				IAML_P			
	comp=Z,5µm,0.3s						
KHAL	**Karahalli**	**5.63**	**49**	*i* P	**Pn**	**07 58 18.2**	**+2.2**
KHAL				IAML_P			
	comp=Z,2µm,0.2s						
KPRO	**Kipourio**	**5.64**	**338**	P	**Pn**	**07 58 18.2**	**+2.0**
DEMI	**Demirci**	**5.64**	**39**	*i* P	**Pn**	**07 58 17.6**	**+1.4**
DEMI				IAML_P			
	comp=Z,1µm,0.3s						
IGT	**Igoumenitsa**	**5.65**	**329**	*e*Pn	**Pn**	**07 58 15.1**	**-1.2**
IGT				*e*Sn	**Sn**	**07 59 14.8**	**-5.4**
ANTB	**Antalya**	**5.72**	**66**	PN	**Pn**	**07 58 20.2**	**+3.1**
BCK	**Bucak**	**5.89**	**61**	PN	**Pn**	**07 58 21.8**	**+2.2**
PENT	**Pentalofos**	**5.93**	**337**	P	**Pn**	**07 58 22.8**	**+2.6**
GELI	**Tayfur-Gelibol**	**5.94**	**18**	PN	**Pn**	**07 58 21.5**	**+1.4**
KZIL	**AFYON_Kizioren**	**5.97**	**52**	*i* P	**Pn**	**07 58 24.0**	**+3.2**
KZIL				IAML_P			
	comp=Z,1µm,0.1s						
SOH	**Sokhos**	**6.09**	**354**	P	**Pn**	**07 58 26.2**	**+3.9**
GDZ	**Gediz**	**6.09**	**43**	*i* P	**Pn**	**07 58 25.9**	**+3.4**
GDZ				IAML_P			
	comp=Z,2µm,0.6s						
NEST	**Nestorio**	**6.16**	**338**	P	**Pn**	**07 58 25.4**	**+2.1**
KRBG	**Karabiga-Canak**	**6.17**	**23**	PN	**Pn**	**07 58 24.6**	**+1.3**
SUTC	**Sutluce-Ispart**	**6.19**	**62**	PN	**Pn**	**07 58 25.8**	**+2.0**
ERIK	**Erikli-Kesan**	**6.20**	**17**	PN	**Pn**	**07 58 25.2**	**+1.4**
BAGO	**Egridir - ISPA**	**6.27**	**57**	*i* P	**Pn**	**07 58 26.5**	**+1.7**
BAGO				IAML_P			
	comp=Z,724nm,0.2s						
ALN	**Alexandroupoli**	**6.32**	**13**	*e*Pn	**Pn**	**07 58 26.7**	**+1.3**
ALN	**Alexandroupoli**	**6.32**	**13**	*e*P	**Pn**	**07 58 26.7**	**+1.3**
GRG	**Griva**	**6.34**	**348**	P	**Pn**	**07 58 28.5**	**+2.7**
HBRG	**Burj al `Arab**	**6.37**	**129**	AMP		07 59 00.0	
	baz=131						
SRS	**Serrai**	**6.37**	**356**	*e*Pn	**Pn**	**07 58 26.6**	**+0.5**
SHUT	**Suhut-Afyon**	**6.41**	**52**	PN	**Pn**	**07 58 28.8**	**+2.1**
KEPZ	**Antalya-Kepez**	**6.44**	**68**	*i* P	**Pn**	**07 58 30.0**	**+2.9**
KEPZ				*i* S	**Sn**	**07 59 35.5**	**-4.3**
KEPZ				IAML_P			
	comp=Z,3µm,0.2s						
MRMT	**Marmara Adasi**	**6.46**	**24**	PN	**Pn**	**07 58 29.1**	**+1.8**
KNT	**Kendrikon**	**6.47**	**352**	*e*Pn	**Pn**	**07 58 30.3**	**+2.8**
KNT	**Kendrikon**	**6.47**	**352**	P	**Pn**	**07 58 30.3**	**+2.8**
KNT	**Kendrikon**	**6.47**	**352**	*e*P	**Pn**	**07 58 30.3**	**+2.8**
BIA	**Bitola**	**6.64**	**341**	*i* Pn	**Pn**	**07 58 31.7**	**+1.8**
BIA				*e*Sg	**Sn**	**07 59 44.0**	**-0.6**
VAY	**Valandovo**	**6.67**	**350**	*i* Pn	**Pn**	**07 58 29.4**	**-0.8**
AKMC	**Akamas**	**6.75**	**85**	P	**Pn**	**07 58 29.9**	**-1.4**
	baz=265						
PPCY	**Paphos**	**6.76**	**87**	P	**Pn**	**07 58 30.6**	**-0.9**
	baz=266						
MMB	**Musomiste**	**6.83**	**357**	P	**Pn**	**07 58 33.6**	**+1.1**
DOGA	**KONYA_Doganhis**	**6.94**	**59**	*i* P	**Pn**	**07 58 36.1**	**+2.0**
DOGA				IAML_P			
	comp=Z,3µm,0.3s						
RZN	**Rozhen**	**6.94**	**4**	P	**Pn**	**07 58 35.5**	**+1.4**
ALFC	**Alefka**	**6.97**	**84**	P	**Pn**	**07 58 33.6**	**-0.8**
	baz=264						
ALFC				S	**Sn**	**07 59 48.2**	**-4.5**
KRUS	**Krusevo**	**6.99**	**342**	*i* Pn	**Pn**	**07 58 35.5**	**+0.8**
STIP	**Stip**	**7.10**	**348**	*i* Pn	**Pn**	**07 58 36.8**	**+0.7**
HDMB	**Hadim**	**7.14**	**70**	PN	**Pn**	**07 58 39.6**	**+2.8**
KKB	**Krupnik**	**7.15**	**354**	P	**Pn**	**07 58 38.6**	**+1.8**
BORA	**Eskisehir**	**7.18**	**43**	PN	**Pn**	**07 58 39.5**	**+2.2**
BORA	**Eskisehir**	**7.18**	**43**	*i* P	**Pn**	**07 58 41.8**	**+4.5**
SZAC	**Souni**	**7.21**	**87**	P	**Pn**	**07 58 36.4**	**-1.2**
	baz=268						
SZAC				S	**Sn**	**07 59 53.2**	**-5.3**
PLD	**Plovdiv**	**7.36**	**3**	*e*Pn	**Pn**	**07 58 42.0**	**+2.4**
KONT	**Konya--Tatoy**	**7.37**	**62**	*i* P	**Pn**	**07 58 43.1**	**+3.3**
KONT				IAML_P			
	comp=Z,934nm,0.2s						
TIP	**Timpagrande**	**7.37**	**309**	*e*Pn	**Pn**	**07 58 39.8**	**-0.1**
TIP	**Timpagrande**	**7.37**	**309**	⇑*i*P	**Pn**	**07 58 39.9**	**0.0**
TIR	**Tirane**	**7.39**	**334**	*e*Pn	**Pn**	**07 58 39.0**	**-1.1**
TIR				*e*Sn	**Sn**	**07 59 56.5**	**-6.6**
TIR	**Tirane**	**7.39**	**334**	*e*Pn	**Pn**	**07 58 40.8**	**+0.7**
TIR	**Tirane**	**7.39**	**334**	⇑*i*P	**Pn**	**07 58 39.4**	**-0.7**
TIR	**Tirane**	**7.39**	**334**	*e*P	**Pn**	**07 58 40.8**	**+0.7**
KDHN	**Kadinhani**	**7.44**	**57**	*i* P	**Pn**	**07 58 42.5**	**+1.6**
KDHN				IAML_P			
	comp=Z,864nm,0.4s						
CEL	**Celeste**	**7.50**	**300**	*e*Pn	**Pn**	**07 58 41.8**	**+0.1**
CEL				*e*Sn	**Sn**	**08 00 01.3**	**-4.4**
HNAT	**Natroun**	**7.50**	**131**	P	**Pn**	**07 58 42.3**	**+0.6**
	baz=132						
SKO	**Skopje**	**7.51**	**344**	*e*Pn	**Pn**	**07 58 41.9**	**+0.1**
SKO	**Skopje**	**7.51**	**344**	*i* Pn	**Pn**	**07 58 40.2**	**-1.5**
SKO	**Skopje**	**7.51**	**344**	P	**Pn**	**07 58 42.9**	**+1.1**
CSS	**Mathiatis**	**7.57**	**86**	*e*Pn	**Pn**	**07 58 41.6**	**-1.0**
CSS	**Mathiatis**	**7.57**	**86**	P	**Pn**	**07 58 38.7**	**-3.9**
CSS	**Mathiatis**	**7.57**	**86**	Pn	**Pn**	**07 58 41.4**	**-1.2**
CSS				Sn	**Sn**	**08 00 02.1**	**-5.3**
VTS	**Vitosha**	**7.86**	**355**	*e*Pn	**Pn**	**07 58 47.6**	**+0.9**
VTS	**Vitosha**	**7.86**	**355**	*e*Pn	**Pn**	**07 58 47.3**	**+0.6**
VTS	**Vitosha**	**7.86**	**355**	⇑*i*P	**Pn**	**07 58 46.4**	**-0.3**
VTS	**Vitosha**	**7.86**	**355**	*e*P	**Pn**	**07 58 47.3**	**+0.6**
VTS	**Vitosha**	**7.86**	**355**	P	**Pn**	**07 58 49.5**	**+2.8**
BARS	**Barje**	**8.25**	**348**	*e*Pn	**Pn**	**07 58 51.9**	**0.0**
VAE	**Valguarnera**	**8.32**	**292**	Pn	**Pn**	**07 58 54.0**	**+1.1**
	comp=Z,2.9nm,0.3s,baz=139,slow=15,SNR=1.6						
VAE				Sn	**Sn**	**08 00 21.8**	**-4.2**
	comp=Z,3.9nm,0.3s,baz=134,slow=4.2,SNR=6.0						
MATE	**Matera**	**8.32**	**317**	⇑*i*P	**Pn**	**07 58 49.2**	**-3.6**
DRME	**Dracevica, Mon**	**8.37**	**334**	*e*Pn	**Pn**	**07 58 52.2**	**-1.4**
HFRF	**Wahat Farafira**	**8.38**	**154**	P	**Pn**	**07 58 54.2**	**+0.4**
	baz=155						
HFRF				S	**Sn**	**08 00 20.2**	**-7.4**
	baz=155						
HFRF				AMP		08 01 00.0	
	baz=155						
SG1	**Sgolgore (BA)**	**8.46**	**318**	*e*Pn	**Pn**	**07 58 56.6**	**+1.7**
SG1				Sn	**Sn**	**08 00 24.3**	**-5.2**
BR231	**Keskin MP Arra**	**8.56**	**51**	*e*Pn	**Pn**	**07 58 56.0**	**-0.3**
PDG	**Podgorica**	**8.56**	**335**	*e*Pn	**Pn**	**07 58 54.6**	**-1.5**
PDG				*e*Sn	**Sn**	**08 00 25.5**	**-6.2**
PDG	**Podgorica**	**8.56**	**335**	⇑*i*P	**Pn**	**07 58 55.2**	**-0.9**
PDG	**Podgorica**	**8.56**	**335**	*e*Pn	**Pn**	**07 58 54.3**	**-1.8**
TTG	**Podgorica**	**8.56**	**335**	*e*Pn	**Pn**	**07 58 54.1**	**-2.0**
TTG	**Podgorica**	**8.56**	**335**	*e*P	**Pn**	**07 58 54.2**	**-2.0**
ANTO	**Ankara**	**8.59**	**51**	*e*Pn	**Pn**	**07 58 57.3**	**+0.7**
ANTO	**Ankara**	**8.59**	**51**	⇑*i*P	**Pn**	**07 58 59.5**	**+2.9**
ANTO	**Ankara**	**8.59**	**51**	*e*P	**Pn**	**07 58 57.3**	**+0.7**
ZAPS	**Zavoj**	**8.59**	**353**	*e*Pn	**Pn**	**07 58 57.4**	**+0.8**
NBNS	**Bani Suef**	**8.63**	**133**	P	**Pn**	**07 58 57.8**	**+0.5**
	baz=134						
SELS	**Selova**	**8.77**	**345**	*e*Pn	**Pn**	**07 58 58.1**	**-1.0**
HCY	**Herceg Novi**	**8.86**	**332**	*e*Pn	**Pn**	**07 58 58.2**	**-2.0**
BR101	**Keskin Array S**	**9.06**	**54**	*e*Pn	**Pn**	**07 59 04.4**	**+1.2**
BR131	**Keskin Array S**	**9.06**	**54**	*e*Pn	**Pn**	**07 59 04.2**	**+1.0**
BRTR	**Keskin Array B**	**9.06**	**54**	*i* P	**Pn**	**07 59 05.3**	**+2.1**
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRTR	**Keskin Array B**	**9.06**	**54**	Pn	**Pn**	**07 59 04.4**	**+1.2**
	comp=Z,1.3nm,0.3s,baz=225,slow=13,SNR=55						
BOVS	**Bovan**	**9.07**	**349**	*e*Pn	**Pn**	**07 59 03.2**	**+0.1**
TAMRE	**El Minia**	**9.13**	**139**	P	**Pn**	**07 59 04.6**	**+0.6**
	baz=140						
TREB	**Trebinje**	**9.14**	**332**	*e*Pn	**Pn**	**07 59 01.7**	**-2.4**
ZAGS	**Zajecar**	**9.17**	**351**	*e*Pn	**Pn**	**07 59 05.3**	**+0.9**
HNTI	**Hanita**	**9.33**	**97**	Pn	**Pn**	**07 59 03.8**	**-2.9**
HNTI				Sn	**Sn**	**08 00 44.6**	**-6.1**
IVAS	**Ivanjica**	**9.34**	**342**	*e*Pn	**Pn**	**07 59 04.7**	**-2.1**
IVAS				*e*Sn	**Sn**	**08 00 44.9**	**-6.0**
SLTI	**Sal'it**	**9.45**	**102**	Sn	**Sn**	**08 00 46.8**	**-6.9**
KZIT	**Kziot**	**9.45**	**111**	P	**Pn**	**07 59 08.8**	**+0.4**
	comp=Z,57nm,0.7s						
KZIT	**Kziot**	**9.45**	**111**	Pn	**Pn**	**07 59 05.3**	**-3.1**
KZIT				Sn	**Sn**	**08 00 46.8**	**-6.9**
GRUS	**Gruza**	**9.50**	**345**	*e*Pn	**Pn**	**07 59 07.7**	**-1.3**
STON	**Ston**	**9.53**	**330**	*e*Pn	**Pn**	**07 59 07.0**	**-2.4**
MMA0B	**Mount Meron ar**	**9.53**	**97**	Sn	**Sn**	**08 00 49.3**	**-6.5**
MMAI	**Mount Meron Ar**	**9.53**	**97**	Pn	**Pn**	**07 59 08.9**	**-0.7**
	comp=Z,6.1nm,0.3s,baz=292,slow=12,SNR=13						
MMAI				Sn	**Sn**	**08 00 51.1**	**-4.7**
	comp=Z,12nm,0.3s,baz=280,slow=24,SNR=8.6						
AMAZ	**Amatzia**	**9.60**	**107**	P	**Pn**	**07 59 10.5**	**+0.1**
	comp=Z,100nm,0.8s						
AMAZ	**Amatzia**	**9.60**	**107**	Pn	**Pn**	**07 59 07.1**	**-3.3**
AMAZ				Sn	**Sn**	**08 00 50.2**	**-7.1**
HNKL	**Nakhl**	**9.62**	**117**	P	**Pn**	**07 59 10.1**	**-0.7**
	baz=118						
HNKL				AMP		08 01 00.0	
	baz=118						
MMLI	**Mount Malkishu**	**9.70**	**101**	Pn	**Pn**	**07 59 09.6**	**-2.2**
MMLI				Sn	**Sn**	**08 00 53.0**	**-6.8**
KSDI	**Kefar Szold**	**9.70**	**96**	Pn	**Pn**	**07 59 09.7**	**-2.1**
KSDI				Sn	**Sn**	**08 00 53.4**	**-6.5**
NATI	**Neve Ativ**	**9.75**	**95**	Pn	**Pn**	**07 59 10.0**	**-2.5**
NATI				Sn	**Sn**	**08 00 55.5**	**-5.5**
RCY	**Rachaya**	**9.79**	**94**	*e*P	**Pn**	**07 59 11.4**	**-1.7**
BBLS	**Lazići**	**9.81**	**340**	*e*Pn	**Pn**	**07 59 11.1**	**-2.2**
BBLS				*e*Sn	**Sn**	**08 00 56.4**	**-6.1**
BBLS	**Lazići**	**9.81**	**340**	*e*Pn	**Pn**	**07 59 11.1**	**-2.2**
YTIR	**Yattir**	**9.82**	**107**	Pn	**Pn**	**07 59 11.3**	**-2.2**
KUBS	**Kucevo**	**9.83**	**350**	*e*Pn	**Pn**	**07 59 13.3**	**-0.3**
HMDT	**Nahal Hemdat**	**9.84**	**101**	Pn	**Pn**	**07 59 11.2**	**-2.5**
HMDT				Sn	**Sn**	**08 00 56.1**	**-7.1**
ILGA	**Ilgaz**	**9.84**	**47**	*e*Pn	**Pn**	**07 59 14.9**	**+0.9**
DIVS	**Divibare**	**9.87**	**342**	*e*Pn	**Pn**	**07 59 12.8**	**-1.3**
DIVS				*e*Sn	**Sn**	**08 00 56.9**	**-7.0**
DIVS	**Divibare**	**9.87**	**342**	*e*Pn	**Pn**	**07 59 12.7**	**-1.5**
DIVS	**Divibare**	**9.87**	**342**	*e*Pn	**Pn**	**07 59 12.6**	**-1.5**
TRUS	**Trudelj**	**9.88**	**344**	*e*Pn	**Pn**	**07 59 12.7**	**-1.6**
DSI	**Dead Sea**	**9.95**	**105**	Sn	**Sn**	**08 00 59.7**	**-6.3**
MZDA	**Masada**	**10.04**	**107**	Pn	**Pn**	**07 59 14.4**	**-2.0**
HAPS	**Han Pijesak,Bl**	**10.14**	**338**	*e*Pn	**Pn**	**07 59 14.4**	**-3.5**
PRNI	**Paran**	**10.17**	**113**	Pn	**Pn**	**07 59 15.4**	**-2.9**
PRNI				Sn	**Sn**	**08 01 04.7**	**-6.7**
MDVR	**Moldovita**	**10.19**	**350**	⇑*i*P	**Pn**	**07 59 18.8**	**+0.3**
GHAJ	**Ghor Haditha**	**10.20**	**107**	P	**Pn**	**07 59 20.1**	**+1.5**
	comp=Z,65nm,0.7s						
GHAJ	**Ghor Haditha**	**10.20**	**107**	Sn	**Sn**	**08 01 05.4**	**-6.6**
HERR	**Herculane**	**10.20**	**353**	⇑*i*P	**Pn**	**07 59 18.3**	**-0.3**
WALJ	**Wala**	**10.29**	**105**	P	**Pn**	**07 59 20.2**	**+0.2**
	comp=Z,76nm,0.6s						
HRFI	**Mount Harif**	**10.35**	**114**	P	**Pn**	**07 59 21.5**	**+0.8**
	comp=Z,56nm,0.7s						
HRFI	**Mount Harif**	**10.35**	**114**	Pn	**Pn**	**07 59 17.9**	**-2.8**
HRFI				Sn	**Sn**	**08 01 09.3**	**-6.5**
MBRI	**Mt Berech**	**10.38**	**115**	Pn	**Pn**	**07 59 19.5**	**-1.7**
EIL	**Elat**	**10.47**	**116**	Sn	**Sn**	**08 01 12.3**	**-6.5**

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EIL   Elat              10.47 116   Pn     Pn     07 59 21.8 -0.6
      comp=Z,1.4nm,0.3s,baz=252,slow=1.7,SNR=18
EIL                                 Sn     Sn     08 01 14.3 -4.4
      comp=Z,6.0nm,0.3s,baz=40,slow=4.1,SNR=7.0
AQBJ  Aqaba             10.51 115   P      Pn     07 59 26.6 +3.6
      comp=Z,70nm,0.6s
ISR   Istrita           10.52   9⇑iP     Pn     07 59 24.0 +1.0
ARR   Arges             10.61   2⇑iP     Pn     07 59 25.5 +1.2
GZR   Gura Zlata        10.68 355⇑iP     Pn     07 59 25.2  0.0
LOT   Lotru             10.69 359⇑iP     Pn     07 59 23.7 -1.7
VOIR                    10.70   3⇑iP     Pn     07 59 26.9 +1.4
MLR   Muntele Rosu      10.82   7 ePn    Pn     07 59 27.7 +0.5
MLR   Muntele Rosu      10.82   7⇑iP     Pn     07 59 27.8 +0.6
MLR   Muntele Rosu      10.82   7  Pn    Pn     07 59 28.3 +1.2
      comp=Z,0.2nm,0.3s,baz=172,slow=8.5,SNR=11
MLR                                 LR     LR     08 04 18.6
      comp=Z,658nm,18.0s,baz=274,slow=41
ASF   Jabal al Asfar    10.97 100 eP     Pn     07 59 29.0 -0.3
ASF   Jabal al Asfar    10.97 100  P     Pn     07 59 29.7 +0.4
ASF   Jabal al Asfar    10.97 100  Pn    Pn     07 59 29.0 -0.3
      comp=Z,0.9nm,0.3s,baz=233,slow=12,SNR=5.0
ASF                                 Sn     Sn     08 01 25.0 -6.2
      comp=Z,0.7nm,0.3s,baz=286,slow=20,SNR=2.7
BZS   Buzias            11.02 351⇑iP     Pn     07 59 29.4 -0.4
HHRG  Al Ghardaqah      11.04 130  P     Pn     07 59 32.0 +1.8
      baz=132
DOPR  Dopca             11.24   5⇑iP     Pn     07 59 34.3 +1.4
VRI   Vrincioaia        11.28   9⇑iP     Pn     07 59 33.6 +0.2
BLY   Banja Luka        11.32 334 ePn    Pn     07 59 31.4 -2.6
BLY   Banja Luka        11.32 334⇑iP     Pn     07 59 32.5 -1.4
BLY   Banja Luka        11.32 334 ePn    Pn     07 59 31.2 -2.7
UDBI  Udbina            11.69 329 ePn    Pn     07 59 38.3 -0.8
MORH  Mrgy, Hungar      12.18 342 ePn    Pn     07 59 42.6 -3.1
MORH  Mrgy, Hungar      12.18 342⇑ePn    Pn     07 59 42.1 -3.6
MORH                                Sn     Sn     08 01 51.1 -9.4
BURAR Bucovina Array    12.88   3⇑iP     Pn     07 59 56.7 +1.4
BUR04 Bucovina Ar. S    12.88   3 ePn    Pn     07 59 56.5 +1.1
CRES  Cresnjev          12.88 332 ePn    Pn     07 59 51.8 -3.5
BUR08 Bucovina Ar. S    12.90   3 ePn    Pn     07 59 57.0 +1.3
CEY   Cerknica          13.23 329 ePn    Pn     07 59 57.3 -2.7
SOKA  Soboth            13.75 333 i Pn   Pn     08 00 04.1 -3.2
      comp=Z,1.3nm,0.2s
OBKA  Obir              13.80 331 ePn    Pn     08 00 03.8 -4.1
      comp=Z,1.1nm,0.2s
ARSA  Arzberg           14.06 335 ePn    Pn     08 00 07.9 -3.5
      comp=Z,4.0nm,0.7s
MYKA  Terra Mystica     14.27 329 ePn    Pn     08 00 13.2 -1.1
      comp=Z,1.2nm,0.3s
VYHS  Vyhne             14.28 346 eP     P      08 00 22.0 +0.7
VYHS  Vyhne             14.28 346 ePN    P      08 00 22.0 +0.7
VYHS                              ePG    Pn     08 01 02.5 +48
VYHS                              eSG           08 01 18.2
VYHS                              eLG    Lg     08 01 21.2
KOLL  Kolacno           14.46 345 ePG    P      08 00 57.7 +34
MODS  Modra-Piesok      14.53 342 eP     P      08 00 24.2 +0.1
MODS  Modra-Piesok      14.53 342 ePN    P      08 00 24.2 +0.1
MODS                              ePG    Pn     08 00 44.1 +26
MODS                              eSG           08 00 45.9
MODS                              eLG    Lg     08 00 46.9
CONA  Conrad Observa    14.54 337 ePn    Pn     08 00 17.6 -0.4
      comp=Z,1.4nm,0.4s
VOZR  Vozrozhdenie      14.60  44⇑eP     Pn     08 00 19.5 +0.8
SMOL  Smolenice         14.62 342 ePG    P      08 00 45.6 +21
SMOL                              eSG           08 00 49.4
KBA   Koelnbreinsper    14.75 330 ePn    Pn     08 00 19.7 -1.2
      comp=Z,0.5nm,0.1s
KBA   Koelnbreinsper    14.75 330  P     P      08 00 30.7 +4.0
ABTA  Abfaltersbach     14.85 327 ePn    Pn     08 00 20.8 -1.3
      comp=Z,2.2nm,0.2s
MOA   Molln             15.02 334 i Pn   Pn     08 00 22.3 -2.1
      comp=Z,0.8nm,0.2s
SIRT  Sirnak            15.05  74 ePn    Pn     08 00 26.2 +1.3
      comp=Z,112nm,1.1s
KRUC  Moravsky          15.40 341 ePG    P      08 00 58.9 +25
KRUC                              eSG           08 01 11.9
VRAC  Vranov            15.57 341⇑iP     Pn     08 00 32.0 +0.4
VRAC  Vranov            15.57 341 ePN    Pn     08 00 32.6 +1.0
VRAC  Vranov            15.57 341 eSN    Sn     08 03 26.1 +2.9
VRAC  Vranov            15.57 341 ePG    P      08 01 02.1 +26
VRAC                              eSG           08 01 16.5
VRAC  Vranov            15.57 341  Pn    Pn     08 00 32.6 +1.0
      comp=Z,0.9nm,0.3s,baz=156,slow=8.3,SNR=14
WTTA  Wattenberg        15.63 327 ePn    Pn     08 00 29.9 -2.6
      comp=Z,3.9nm,0.4s
WATA  Walderalm         15.71 327 ePn    Pn     08 00 32.5 -1.1
      comp=Z,8.2nm,0.5s,SNR=7.9
MORC  Moravsky Berou    15.78 344 ePn    Pn     08 00 35.9 +1.6
      comp=Z,13nm,0.8s
MORC  Moravsky Berou    15.78 344⇓iP     Pn     08 00 35.5 +1.2
MORC  Moravsky Berou    15.78 344  P     P      08 00 38.6 +0.7
MORC  Moravsky Berou    15.78 344 ePN    P      08 00 38.2 +0.3
OJC   Ojcow             15.78 350 ePn    Pn     08 00 35.5 +1.2
      comp=Z,5.7nm,0.8s
OJC   Ojcow             15.78 350 eP     Pn     08 00 35.5 +1.2
OJC                                pmax  pmax
      comp=Z,6.0nm,0.8s
SQTA  Sankt Quirin      15.79 326 ePn    Pn     08 00 32.0 -2.6
      comp=Z,1.3nm,0.4s
FUORN Ofenpass-Fuorn    15.82 323 ePn    Pn     08 00 36.0 +0.9
      comp=Z,50nm,0.8s
FETA  Feichten          15.87 325 ePn    Pn     08 00 37.0 +1.4
      comp=Z,0.9nm,0.6s
MOTA  Moosalm           15.93 326 ePn    Pn     08 00 36.3 -0.1
      comp=Z,1.3nm,0.3s
DOMR  Dombai            16.03  53⇓iP     Pn     08 00 38.4 +0.8
GEC2  GERESS Array S    16.06 334 ePn    Pn     08 00 37.6 -0.4
      comp=Z,17nm,0.8s
GEC2  GERESS Array S    16.06 334 eP     Pn     08 00 37.6 -0.4
GEC2                               pmax  pmax
      comp=Z,17nm,0.8s
GERES GERESS Array B    16.06 334  Pn    Pn     08 00 36.6 -1.4
      comp=Z,0.7nm,0.3s,baz=156,slow=15,SNR=4.1
DAVOX Davos/Dischmat    16.12 322  Pn    Pn     08 00 40.3 +1.4
      comp=Z,0.5nm,0.3s,baz=146,slow=12,SNR=12
RETA  Reutte            16.20 326 ePn    Pn     08 00 37.7 -2.0
      comp=Z,1.2nm,0.2s
KHC   Kasperske Hory    16.35 335 ePn    Pn     08 00 41.2 -0.4
      comp=Z,8.3nm,0.7s
KHC   Kasperske Hory    16.35 335 eP     Pn     08 00 40.1 -1.5
KHC                               ex     x      08 00 45.9
KHC   Kasperske Hory    16.35 335 eP     Pn     08 00 40.1 -1.5
KIEV  Kiev              16.36  12 ePn    Pn     08 00 39.2 -2.4
      comp=Z,18nm,0.6s
KIEV  Kiev              16.36  12⇑iP     Pn     08 00 40.2 -1.4
KIEV  Kiev              16.36  12⇑eP     Pn     08 00 39.2 -2.4
AKASG Malin Array Be    16.37  12ceP     Pn     08 00 39.4 -2.3
AKASG                              pmax  pmax
      comp=Z,20nm,0.5s
AKASG Malin Array Be    16.37  12  Pn    Pn     08 00 39.4 -2.3
      comp=Z,7.5nm,0.3s,baz=203,slow=10,SNR=44
DAVA  Damuels           16.47 324 eP     P      08 00 47.2 +1.4
      comp=Z,16nm,0.6s,SNR=7.4
DPC   Dobruska-Polom    16.60 342 eP     P      08 00 48.4 +1.4
DPC   Dobruska-Polom    16.60 342 eP     P      08 00 48.4 +1.4
NEY   Neytrino          16.73  54⇓eP     P      08 00 48.2 -0.5
SHA1  Shidzhatmaz       16.90  52 eP     P      08 00 51.3 +0.7
KIV   Kislovodsk        17.01  52 ePn    P      08 00 51.2 -0.5
      comp=Z,47nm,0.8s
KIV   Kislovodsk        17.01  52⇑iP     P      08 00 51.9 +0.2
KIV   Kislovodsk        17.01  52 eP     P      08 00 52.6 +0.9
KIV                                pmax  pmax
      comp=Z,66nm,1.1s
LPG   La Plagne         17.05 314  P     P      08 00 56.7 +4.4
KBZ   Khabaz            17.05  53  Pn    P      08 00 52.1 +0.1
      comp=Z,0.9nm,0.3s,baz=256,slow=10,SNR=34
KSP   Ksiaz             17.06 343 ePn    P      08 00 52.5 +0.4
KSP   Ksiaz             17.06 343 eP     P      08 00 52.5 +0.4
LPL   La Plagne         17.07 314  P     P      08 00 54.7 +2.3
GNI   Garni             17.22  66 ePn    Pn     08 00 53.1 +0.4
GNI   Garni             17.22  66d iP    P      08 00 54.1  0.0
GNI                                pmax  pmax
      comp=Z,142nm,1.7s
GNI   Garni             17.22  66  P     Pn     08 00 52.0 -0.7
      comp=Z,0.8nm,0.3s,baz=213,slow=3.9,SNR=5.7
GNI                                LR    LR     08 08 39.5
      comp=Z,212nm,19.6s,baz=290,slow=41
SENIN Lac Senin/Sane    17.22 317 ePn    P      08 00 53.8 -0.3
      comp=Z,5.5nm,1.1s
PYA1  Pyatigorsk        17.32  52 i P    P      08 00 55.7 +0.6
ZEI   Tsey              17.36  57 eP     Pn     08 00 55.1 +0.6
ZEI                                pmax  pmax
      comp=Z,9.0nm,0.6s
NCK   Nalchik           17.42  54⇑eP     P      08 00 56.0 -0.1
GRFO  Grafenberg        17.69 331 ePn    P      08 00 59.3 +0.3
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      comp=Z,30nm,1.0s
GRFO  Grafenberg        17.69 331 eP     P      08 00 59.3 +0.3
GRFO                               pmax  pmax
      comp=Z,30nm,1.0s
BRG   Berggiesshubel    17.73 338 eP     Pn     08 00 57.7 -1.1
      comp=Z,9.1nm,1.0s
BRG   Berggiesshubel    17.73 338 eP     Pn     08 00 57.7 -1.1
BRG                                pmax  pmax
      comp=Z,9.0nm,1.0s
GOF   Gofitskoye        17.75  49⇓iP     P      08 01 00.3 +0.6
GOF                                pmax  pmax
      comp=Z,60nm,0.6s
BFO   Black Forest      17.95 324 ePn    P      08 01 02.5 +0.5
      comp=Z,13nm,0.7s
BFO   Black Forest      17.95 324 eP     P      08 01 02.5 +0.5
BFO                                pmax  pmax
      comp=Z,13nm,0.7s
MOX   Moxa              18.31 334  P     Pn     08 01 08.2 +2.2
CLL   Collm             18.40 337 eP     P      08 01 07.0 +0.1
      comp=Z,14nm,1.0s
CLL   Collm             18.40 337 i P    Pn     08 01 07.5 +0.5
      comp=Z,29nm,1.4s
CLL                               esP    sP     08 01 18.0  0.0
CLL   Collm             18.40 337 i P    Pn     08 01 07.5 +0.5
GROC  Groznyy           18.80  57⇓eP     Pn     08 01 14.2 +2.2
GROC                               pmax  pmax
      comp=Z,18nm,0.9s
BTLR  Botlikh           18.93  59⇓iP     Pn     08 01 14.9 +1.3
BTLR                               pmax  pmax
      comp=Z,19nm,0.8s
SEKA  Sheki             19.27  64  P     Pn     08 01 17.4 -0.2
SUW   Suwalki           19.27 358 eP     P      08 01 15.4 -0.9
SUW   Suwalki           19.27 358 eP     P      08 01 14.8 -1.6
      comp=Z,186nm,0.7s
SUW   Suwalki           19.27 358 eP     P      08 01 15.4 -0.9
VSR   Storozhevoye      19.73  29⇑eP     P      08 01 20.2 -1.2
VSR                                pmax  pmax
      comp=Z,27nm,1.1s
SSF   Saint Saulge      19.78 315  P     P      08 01 22.7 +0.7
WLF   Walferdange       19.91 324 ⇑P     Pn     08 01 26.4 +1.3
KLNR  Kaliningrad       20.04 353⇑eP     P      08 01 23.8 -0.9
KLNR                               pmax  pmax
      comp=Z,44nm,0.8s
NACGM Naroch            20.23   4 e      P      08 01 24.0 -2.9
MEM   Membach           20.62 326 ⇑P     Pn     08 01 32.7 -0.8
      comp=Z,32nm,0.9s
IDID  Didziasalis       20.64   4 eP     P      08 01 29.6 -1.7
IDID                               IAmb  IAmb   08 01 31.6
      comp=Z,30nm,0.3s
IIGN  Ignalina          20.65   3 eP     P      08 01 29.5 -1.8
IIGN                               IAmb  IAmb   08 01 31.8
      comp=Z,17nm,0.5s
LPSR  Galich'ya Gora    20.73  26 eP     P      08 01 32.4 +0.1
LPSR                               pmax  pmax
      comp=Z,30nm,0.7s
BLCH  La Chartreuse     20.83 325  P     Pn     08 01 35.6 -0.2
BLCH                               pP    pP     08 01 38.9 -2.1
ISAL  Salakas           20.86   3 eP     P      08 01 32.8 -0.9
ISAL                               IAmb  IAmb   08 01 35.0
      comp=Z,10nm,0.4s
DOU   Dourbes           20.95 323 ⇓P     P      08 01 35.7 +1.0
BMRD  Maredsous         21.00 324  pP    pP     08 01 40.5 -2.1
IZAR  Zarasai           21.05   3 eP     P      08 01 35.0 -0.7
IZAR                               IAmb  IAmb   08 01 36.1
      comp=Z,8.5nm,0.7s
PBUR  Paburg            21.33 357 eP     P      08 01 36.0 -2.7
PBUR                               IAmb  IAmb   08 01 38.2
      comp=Z,58nm,0.7s
BSD   Bornholm Skovb    21.34 345 i P    P      08 01 36.6 -2.2
BSD   Bornholm Skovb    21.34 345 i P    P      08 01 36.6 -2.2
OBN   Obninsk           22.12  19 i P    P      08 01 47.7 +0.6
OBN                               i             08 01 58.0
OBN                               i             08 02 09.2
OBN                               i             08 05 42.8
OBN                                pmax  pmax
      comp=Z,15nm,0.9s
OBN   Obninsk           22.12  19  P     P      08 01 45.0 -2.1
      comp=Z,3.8nm,0.3s,baz=210,slow=16,SNR=4.6
ES19  SONSECA Array     22.81 291 eP     P      08 01 55.9 +1.1
ESDC  Sonseca Array     22.86 291  P     P      08 01 56.3 +1.0
      comp=Z,2.4nm,0.6s,baz=81,slow=9.4,SNR=18
VSU   Vasula            23.78   3deP     P      08 02 05.0 +0.9
VSU   Vasula            23.78   3 eP     P      08 02 01.8 -2.3
VSU                                IAmb  IAmb   08 02 04.3
      comp=Z,61nm,0.7s
MDT   Midelt            23.93 274  P     P      08 02 05.2 -0.7
      comp=Z,0.8nm,0.6s,baz=101,slow=5.2,SNR=2.6
MDT                                LR    LR     08 14 39.3
      comp=Z,172nm,18.3s,baz=340,slow=44
MUD   Monsted U'grnd    23.99 339 i P    P      08 02 08.7 +2.6
MUD   Monsted U'grnd    23.99 339 i P    P      08 02 08.7 +2.6
PBRG  Braganca          25.14 295 eP     P      08 02 18.1 +1.2
      comp=Z,23nm,1.6s
MVO   Moncorvo          25.30 294 eP     P      08 02 20.2 +1.9
      comp=Z,17nm,1.2s
PMRV  Marv??o           25.50 290 eP     P      08 02 19.7 -0.4
      comp=Z,28nm,1.0s
PESTR Estremoz          25.66 289 eP     P      08 02 23.8 +2.3
PBDV  Barranco-do-Ve    25.99 285 eP     P      08 02 30.9 +6.3
      comp=Z,26nm,1.3s
PMTG  Montargil         26.15 289 eP     P      08 02 28.4 +2.5
      comp=Z,25nm,1.7s
HFS   Hagfors           26.29 348  P     P      08 02 25.7 -1.3
      comp=Z,14nm,0.5s,baz=156,slow=11,SNR=63
PGAV  Gavieira, Arco    26.30 296 eP     P      08 02 29.2 +1.8
FIA0  FINESS Array S    26.74   2 eP     P      08 02 29.3 -1.7
FIA0                              ePcP   PcP    08 05 53.0 -0.5
FIA0  FINESS Array S    26.74   2 eP     P      08 02 29.3 -1.7
FIA0                              e             08 05 53.0
FINES FINESS Array B    26.74   2 i P    P      08 02 29.2 -1.8
FINES                              pmax  pmax
      comp=Z,8.0nm,0.7s
FINES FINESS Array B    26.74   2  P     P      08 02 29.3 -1.7
      comp=Z,7.2nm,0.7s,baz=160,slow=12,SNR=26
FINES                              PcP   PcP    08 05 53.0 -0.5
      comp=Z,1.0nm,0.4s,baz=145,slow=4.7,SNR=5.7
FINES                              LR    LR     08 14 58.3
      comp=Z,138nm,21.3s,baz=270,slow=41
FIA1  FINESS Array S    26.74   2 eP     P      08 02 29.4 -1.6
NC602 NORSAR Array S    27.24 346 eP     P      08 02 34.5 -1.1
      comp=Z,23nm,0.8s
GEYT  Alibeck           27.47  73  P     P      08 02 36.9 -1.0
      comp=Z,1.2nm,0.4s,baz=258,slow=12,SNR=2.5
NC405 NORSAR Array S    27.56 347 eP     P      08 02 37.4 -1.0
      comp=Z,18nm,0.6s
NB2   NORSAR Subarra    27.59 346  P     P      08 02 37.5 -1.1
      comp=Z,13nm,1.0s,baz=156,slow=9.3
NB2   NORSAR Subarra    27.59 346  P     P      08 02 38.4 -0.3
NB200 NORSAR Array S    27.59 346 eP     P      08 02 37.6 -1.1
NOA   NORSAR Array B    27.59 346  P     P      08 02 37.6 -1.1
      comp=Z,7.5nm,0.7s,baz=160,slow=9.4,SNR=30
NC204 NORSAR Array S    27.89 346 eP     P      08 02 41.1 -0.3
EKA   Eskdalemuir Ar    27.89 326  P     P      08 02 41.4  0.0
      comp=Z,1.7nm,0.5s,baz=123,slow=9.1,SNR=6.2
KLMR  Klimovskoe        27.94  16 eP     P      08 02 38.9 -2.8
KLMR                               pmax  pmax
      comp=Z,17nm,0.9s
KLMR  Klimovskoe        27.94  16 eP     P      08 02 39.0 -2.8
KLMR                               AMP          08 02 40.8
      comp=Z,17nm,0.8s
AKTO  Aktyubinsk        29.15  47  P     P      08 02 51.4 -1.3
      comp=Z,7.1nm,0.6s,baz=251,slow=9.5,SNR=34
TOA1  Torodi Ar. Sit    29.58 229 eP     P      08 02 56.9 +0.1
TOA0  Torodi Ar. Sit    29.58 229 eP     P      08 02 58.9 +2.1
TORD  Torodi Ar. Bea    29.58 229  P     P      08 02 56.9 +0.1
      comp=Z,7.3nm,0.5s,baz=71,slow=9.6,SNR=55
AB31  Akbulak array     29.98  50 eP     P      08 02 59.6 -0.5
AB31                               pmax  pmax
      comp=Z,3.0nm,0.7s
ABKAR Akbulak array     29.98  50 eP     P      08 02 59.6 -0.5
      comp=Z,3.3nm,0.8s
PRGR  Permogore         30.18  20 eP     P      08 02 57.4 -4.2
PRGR                               pmax  pmax
      comp=Z,50nm,0.8s
ARU   Arti              31.88  36 eP     P      08 03 16.0 -0.7
      comp=Z,12nm,0.5s
ARU   Arti              31.88  36c iP    P      08 03 16.9 +0.2
ARU                                             08 04 19.6
ARU                                S     S      08 08 28.8 +3.2
ARU                                pmax  pmax
      comp=Z,9.0nm,0.6s
SVE   Sverdlovsk        33.09  37 eP     P      08 03 28.0 +0.7
SVE                                pmax  pmax
      comp=Z,30nm,0.7s
ARA0  ARCESS Array S    34.84   1 eP     P      08 03 40.5 -1.9
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ARA0                              ePcP   PcP    08 06 14.9  0.0
ARCES ARCESS Array B    34.84   1  P     P      08 03 40.5 -1.9
      comp=Z,5.8nm,0.6s,baz=178,slow=9.0,SNR=37
ARCES                              PcP   PcP    08 06 14.9  0.0
      comp=Z,2.2nm,0.8s,baz=168,slow=2.2,SNR=3.6
ARE0  ARCESS Array S    34.84   1 eP     P      08 03 40.5 -1.9
      comp=Z,0.2nm,0.8s
CHGR  Chuyangaron       36.04  70 eP     P      08 03 53.4 +0.3
      comp=Z,24nm,0.9s
KK31  Karatay Array     36.64  63  P     P      08 03 59.1 +0.9
KK31                               pmax  pmax
      comp=Z,13nm,0.6s
KKAR  Karatay Array     36.64  63 eP     P      08 03 58.7 +0.5
      comp=Z,22nm,0.7s
KKAR  Karatay Array     36.64  63 eP     P      08 03 58.7 +0.5
KKAR                               pmax  pmax
      comp=Z,22nm,0.7s
GAR   Garm              36.88  70 eP     P      08 04 00.7 +0.3
      comp=Z,12nm,0.8s
GAR   Garm              36.88  70 eP     P      08 04 00.7 +0.3
GAR                                pmax  pmax
      comp=Z,12nm,0.8s
BTK   Batken            37.13  68 eP     P      08 04 03.4 +1.0
      comp=Z,6.3nm,1.0s
BRVK  Borovoye          37.18  46 eP     P      08 04 02.8 +0.2
      comp=Z,13nm,1.1s
BRVK  Borovoye          37.18  46d iP    P      08 04 02.9 +0.3
BRVK                               pmax  pmax
      comp=Z,8.0nm,1.0s
BVA0  Borovoye Array    37.24  46 i P    P      08 04 03.0 -0.1
BVA0                               pmax  pmax
      comp=Z,11nm,1.1s
BVAR  Borovoye Array    37.24  46  P     P      08 04 03.3 +0.2
      comp=Z,4.9nm,0.9s,baz=258,slow=5.9,SNR=22
OTUK  Ortayu            37.92  54  P     P      08 04 09.0  0.0
OTUK                               pmax  pmax
      comp=Z,20nm,1.1s
MNAS  Manas             38.15  64  P     P      08 04 11.6 +0.5
MNAS                               pmax  pmax
      comp=Z,6.0nm,0.8s
DBIC  Dimbokro          38.65 230 eP     P      08 04 16.0 +0.6
      comp=Z,4.4nm,0.8s
DBIC  Dimbokro          38.65 230 eP     P      08 04 16.0 +0.6
DBIC                               pmax  pmax
      comp=Z,4.0nm,0.8s
DBIC  Dimbokro          38.65 230  P     P      08 04 15.8 +0.5
      comp=Z,2.6nm,0.5s,baz=18,slow=7.4,SNR=6.8
TIC   Toumodi           38.78 231 eP     P      08 04 17.5 +1.1
KIC   Kosan Boka        38.82 230 eP     P      08 04 17.9 +1.1
      comp=Z,39nm,1.3s
AML   Almayashu         39.06  64  P     P      08 04 20.1 +1.1
      SNR=8.4
EKS2  Erkin-Say         39.07  63  P     P      08 04 20.1 +1.3
      SNR=21
LIC   Lamto             39.10 230 eP     P      08 04 20.4 +1.3
      comp=Z,32nm,1.2s
SFK   Sufi-Kurgan       39.18  67  P     P      08 04 19.9  0.0
SFK                                pmax  pmax
      comp=Z,20nm,0.5s
USP   Ospenovka         39.54  62  P     P      08 04 23.4 +0.8
      SNR=9.7
AAK   Ala-Archa         39.60  63  P     P      08 04 24.6 +1.4
      SNR=13
AAK   Ala-Archa         39.60  63 eP     P      08 04 23.3 +0.1
      comp=Z,2.6nm,0.7s
AAK   Ala-Archa         39.60  63c iP    P      08 04 24.4 +1.2
AAK                                pmax  pmax
      comp=Z,15nm,0.7s
AAK   Ala-Archa         39.60  63  P     P      08 04 23.3 +0.1
      comp=Z,14nm,0.6s,baz=230,slow=3.8,SNR=40
UCH   Uchtor            39.65  64  P     P      08 04 25.2 +1.1
      SNR=9.7
FRU   Bishkek           39.67  63 eP     P      08 04 24.0 +0.3
FRU                               e             08 04 29.0
CHMS  Chumysh           39.75  62  P     P      08 04 25.1 +0.8
      SNR=11
KBK   Karagaybulak      39.93  63  P     P      08 04 27.5 +1.5
      SNR=10
KZA   Kyzart            40.22  64  P     P      08 04 30.4 +1.8
      SNR=12
NIL   Nilore            40.32  77 eP     P      08 04 29.6 +0.5
      comp=Z,13nm,0.8s
NIL   Nilore            40.32  77 eP     P      08 04 29.6 +0.5
NIL                                pmax  pmax
      comp=Z,13nm,0.8s
TKM2  Tokmak 2          40.38  63  P     P      08 04 30.7 +1.0
      SNR=22
TKM2  Tokmak 2          40.38  63  P     P      08 04 29.3 -0.4
TKM2                               pmax  pmax
      comp=Z,13nm,0.7s
NRN   Naryn             40.85  65 eP     P      08 04 34.6 +0.8
      comp=Z,27nm,1.0s
NRN   Naryn             40.85  65 eP     P      08 04 34.6 +0.8
NRN                                pmax  pmax
      comp=Z,27nm,1.0s
ULHL  Ulahol            40.93  63  P     P      08 04 36.0 +1.7
      SNR=18
KSH   Kashi             41.14  68  P     P      08 04 35.5 -0.5
KSH                                pP    pP     08 04 39.4 -4.7
KSH                                PP    PP     08 06 11.8 +0.8
KSH                                S     S      08 10 43.8 -3.7
KSH                                sS    pS     08 10 48.8 -7.4
KSH                                SS    SS     08 13 37.6  -13
KSH                                pmax  pmax
      comp=Z,23nm,0.5s
KSH                                pmax  pmax
      comp=Z,510nm,8.5s
KSH                                LR    LR
      comp=N,190nm,5.8s
KSH                                LR    LR
      comp=E,210nm,5.0s
KSH                                LR    LR
      comp=Z,280nm,6.8s
KURBB Kurchatov Arra    42.03  51  P     P      08 04 43.0 +0.1
      comp=Z,16nm,0.6s,baz=278,slow=8.6,SNR=130
KURK  Kurchatov         42.09  51 eP     P      08 04 43.3 -0.2
KURK  Kurchatov         42.09  51c iP    P      08 04 43.2 -0.2
KURK                               pmax  pmax
      comp=Z,16nm,0.7s
TARG  Taragay, Kyrgy    42.15  64 eP     P      08 04 45.2 +0.6
      comp=Z,6.3nm,0.6s
PDGK  Podgornoye        43.15  61  P     P      08 04 52.0 -0.4
PDGK                               pmax  pmax
      comp=Z,14nm,0.6s
SPA0  Spitsbergen Ar    43.66 358 eP     P      08 04 55.4 -0.5
      comp=Z,26nm,1.1s
SPITS Spitsbergen Ar    43.66 358  P     P      08 04 55.4 -0.5
      comp=Z,2.9nm,0.5s,baz=150,slow=11,SNR=12
MAKZ  Makanchi          44.49  56 eP     P      08 05 03.3 +0.4
      comp=Z,8.7nm,0.6s
MAKZ  Makanchi          44.49  56  P     P      08 05 02.9  0.0
MAKZ                               pmax  pmax
      comp=Z,8.0nm,0.6s
KBS   Kingsbay          44.58 357⇑eP     P      08 05 03.1  0.0
KBS                                pmax  pmax
      comp=Z,28nm,0.6s
MK31  Makanchi Array    44.70  56 eP     P      08 05 04.9 +0.2
MK31  Makanchi Array    44.70  56 eP     P      08 05 04.9 +0.2
MK32  Makanchi Array    44.70  56 eP     P      08 05 05.0 +0.4
MKAR  Makanchi Array    44.70  56 i P    P      08 05 05.0 +0.4
MKAR                               pmax  pmax
      comp=Z,19nm,0.6s
MKAR  Makanchi Array    44.70  56  P     P      08 05 05.0 +0.4
      comp=Z,18nm,0.6s,baz=279,slow=6.9,SNR=261
MKAR                               ScP   ScP    08 10 37.3 +0.3
      comp=Z,0.4nm,0.8s,baz=11,slow=1.2,SNR=3.7
MK01  Makanchi Array    44.71  56 eP     P      08 05 05.0 +0.2
NVS   Novosibirsk       44.97  45⇓iP     P      08 05 07.6 +1.0
NVS                                pmax  pmax
      comp=Z,43nm,0.5s
NVS                                pmax  pmax
      comp=N,9.0nm,0.6s
NVS                                pmax  pmax
      comp=E,16nm,0.6s
ZAA1  Zalesovo Array    45.90  46 eP     P      08 05 13.4 -0.5
ZALV  Zalesovo Beam     45.90  46 eP     P      08 05 13.2 -0.7
ZALV  Zalesovo Beam     45.90  46 i P    P      08 05 13.3 -0.7
ZALV                               pmax  pmax
      comp=Z,39nm,0.4s
ZALV  Zalesovo Beam     45.90  46  P     P      08 05 13.4 -0.5
      comp=Z,39nm,0.4s,baz=268,slow=9.1,SNR=242
ZALV                               ScP   ScP    08 10 41.4 -0.4
      comp=Z,0.6nm,0.5s,baz=262,slow=2.9,SNR=3.4
DGZ   Jazzator, Alta    47.80  52c iP    P      08 05 29.3 +0.2
DGZ                                pmax  pmax
      comp=Z,5.0nm,0.8s
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NRIK	Noril'sk	48.61	25	P	P	08 05 34.6	-0.2
	comp=Z,3.9nm,0.7s,baz=235,slow=6.0,SNR=7.8						
NRIK				LR	LR	08 27 33.3	
	comp=Z,186nm,19.4s,baz=260,slow=38						
WMQ	Urumqi	48.94	59	eP	P	08 05 40.3	+2.4
WMQ				pP	pP	08 05 44.8	-1.2
SUMG	Summit	49.06	339	i P	P	08 05 39.4	+0.7
SUMG	Summit	49.06	339	eP	P	08 05 39.4	+0.7
LSZ	Lusaka	49.90	175	P	P	08 05 47.3	+1.9
LSZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LSZ	Lusaka	49.90	175	P	P	08 05 47.3	+1.9
	comp=Z,1.8nm,0.6s,baz=23,slow=5.7,SNR=4.4						
PYUN	Piuthan	50.06	80	eP	P	08 05 47.5	+0.7
	comp=Z,23nm,0.6s						
DANN	Dangsing	50.58	80	eP	P	08 05 51.7	+0.9
	comp=Z,54nm,0.7s						
KOLN	Koldanda	50.68	81	eP	P	08 05 51.9	+0.4
	comp=Z,11nm,0.7s						
HVS	Khovu-Aksy	51.56	49⇓	eP	P	08 05 58.2	+0.6
HVS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DMN	Daman	51.97	80	eP	P	08 06 01.8	+0.6
	comp=Z,24nm,0.8s						
PKIN	Phulchoki	52.22	80	eP	P	08 06 03.2	+0.1
	comp=Z,12nm,0.8s						
PKI	Pulchoki	52.23	80	eP	P	08 06 03.3	+0.1
	comp=Z,14nm,0.6s						
GUN	Gumba	52.47	79	eP	P	08 06 05.5	+0.4
	comp=Z,18nm,0.5s						
JIRN	Jiri	52.83	80	eP	P	08 06 08.3	+0.6
	comp=Z,16nm,0.4s						
RAMN	Ramite	53.45	80	eP	P	08 06 12.0	-0.2
	comp=Z,12nm,0.6s						
KNGR	Kungurtug, Tuv	54.03	49⇑	iP	P	08 06 16.0	+0.1
TAPN	Taplejung	54.18	79	eP	P	08 06 18.0	+0.4
	comp=Z,8.1nm,0.5s						
MOY	Mondy	55.91	47	eP	P	08 06 30.5	+1.0
MOY				pmax	pmax		
	comp=Z,15nm,1.6s						
LSA	Lhasa	55.98	75	eP	P	08 06 31.3	+0.5
	comp=Z,6.4nm,0.9s						
LSA	Lhasa	55.98	75	eP	P	08 06 31.3	+0.5
LSA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TLY	Talaya	57.50	47c	iP	P	08 06 41.6	+1.0
TLY	Talaya	57.50	47	P	P	08 06 41.9	+1.3
	comp=Z,2.4nm,0.6s,baz=270,slow=5.6,SNR=6.8						
ZAK	Zakamensk	57.65	48	eP	P	08 06 41.9	+0.1
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	Gaotai	58.90	61	eP	P	08 06 41.5	-9.3
GTA				pP	pP	08 06 46.4	-13
GTA				sP	sP	08 06 48.8	-14
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONA0	Songino Array	60.40	50	eP	P	08 07 01.4	+0.5
SONM	Songino Array	60.40	50	P	P	08 07 01.4	+0.5
	comp=Z,9.1nm,0.6s,baz=290,slow=7.0,SNR=66						
SONA1	Songino Array	60.40	50	eP	P	08 07 01.3	+0.3
ULN	Ulaanbaatar	60.80	50	eP	P	08 07 03.6	-0.2
	comp=Z,14nm,0.7s						
ULN	Ulaanbaatar	60.80	50c	iP	P	08 07 04.1	+0.4
ULN				pmax	pmax		
	comp=Z,16nm,0.8s						
BOD	Bodaibo	61.29	38	eP	P	08 07 05.6	-1.1
BOD				pmax	pmax		
	comp=Z,15nm,0.9s						
TIXI	Tiksi	61.84	20	P	P	08 07 09.8	-0.4
	comp=Z,4.5nm,0.7s,baz=306,slow=5.5,SNR=7.6						
SCHQ	Schefferville	62.95	319	P	P	08 07 18.4	+0.5
	comp=Z,3.7nm,0.5s,baz=50,slow=5.2,SNR=20						
LZH	Lanzhou	63.14	63	eP	P	08 07 19.9	+0.3
LZH				pP	pP	08 07 23.1	-5.2
LZH				sP	sP	08 07 24.7	-6.8
LZH				ePP	PP	08 09 40.0	+1.6
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,76nm,7.8s						
LZH				LR	LR		
	comp=N,310nm,16.0s						
LZH				LR	LR		
	comp=E,320nm,15.5s						
LZH				LR	LR		
	comp=Z,400nm,18.3s						
HHC	Hu-ho-hao-te	66.57	56	eP	P	08 07 42.4	+0.6
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,4.0s						
KMI	Kunming	67.23	75	P	P	08 07 48.1	+1.7
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,88nm,4.1s						
CMAR	Chiang Mai Arr	67.46	83	P	P	08 07 48.1	+0.4
	comp=Z,0.9nm,0.3s,baz=301,slow=8.7,SNR=10						
CM01	Chiang Mai Arr	67.49	83	eP	P	08 07 48.0	+0.1
XAN	Xi'an	67.78	63	P	P	08 07 49.5	0.0
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,64nm,4.2s						
HIA	Hailar	67.91	45	eP	P	08 07 50.9	+0.7
	comp=Z,20nm,1.1s						
HIA	Hailar	67.91	45c	iP	P	08 07 50.8	+0.7
HIA				pmax	pmax		
	comp=Z,13nm,1.0s						
BILL	Bilibino	73.67	14⇑	eP	P	08 08 25.6	+0.9
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CN2	Changchun	74.08	48	eP	P	08 08 27.3	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SEY	Seymchan	74.25	22⇑	eP	P	08 08 27.5	-0.7
KLR	Kul'dur	74.63	40	P	P	08 08 30.6	-0.1
	comp=Z,3.4nm,0.6s,baz=302,slow=7.2,SNR=23						
INK	Inuvik	75.90	352	eP	P	08 08 37.8	+0.2
	comp=Z,5.8nm,1.1s						
INK	Inuvik	75.90	352	eP	P	08 08 37.8	+0.2
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
INK	Inuvik	75.90	352	P	P	08 08 37.6	+0.1
	comp=Z,2.9nm,0.5s,baz=8.4,slow=7.3,SNR=40						
NJ2	Nanjing	75.99	61	eP	P	08 08 39.9	+1.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
YKW3	Yellowknife Ar	77.52	342	eP	P	08 08 47.4	+0.5
	comp=Z,4.7nm,0.5s						
YKA	Yellowknife Ar	77.57	342	P	P	08 08 47.7	+0.6
	comp=Z,2.9nm,0.5s,baz=32,slow=5.2,SNR=101						
YKB5	Yellowknife Ar	77.57	342	eP	P	08 08 47.2	0.0
USRK	Ussuriysk Ar.	77.72	44	P	P	08 08 48.5	+0.1
	comp=Z,5.7nm,0.5s,baz=297,slow=3.9,SNR=16						
FYU	Fort Yukon	78.67	356	eP	P	08 08 54.4	+1.3
	comp=Z,5.5nm,0.7s						
KS01	Wonju Array Si	79.17	52	eP	P	08 08 56.6	+0.2
KSRS	Korea Array	79.20	52	P	P	08 08 56.8	+0.2
	comp=Z,4.8nm,0.6s,baz=311,slow=4.6,SNR=18						
IM3	Indian Mountai	79.57	359	eP	P	08 08 58.8	+0.7
FFC	Flin Flon	79.59	332	eP	P	08 08 59.1	+0.7
	comp=Z,4.7nm,0.8s						
FFC	Flin Flon	79.59	332	eP	P	08 08 59.1	+0.7
FFC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
EGAK	Eagle	80.13	354	eP	P	08 09 01.8	+0.6
	comp=Z,3.7nm,1.1s						
ULM	Lac du Bonnet	80.17	326	P	P	08 09 01.9	+0.2
	comp=Z,1.3nm,0.5s,baz=31,slow=3.9,SNR=4.4						
MDM	Murphy Dome	80.44	357	eP	P	08 09 03.7	+0.9
	comp=Z,6.0nm,0.8s						
MLY	Manley	80.46	358	eP	P	08 09 04.2	+1.2
	comp=Z,4.9nm,0.8s						
IL1	Eielson Array	80.55	356	eP	P	08 09 04.1	+0.6
ILAR	Eielson Array	80.55	356	P	P	08 09 04.1	+0.7
	comp=Z,1.0nm,0.6s,baz=344,slow=3.9,SNR=21						
ILB	Eielson Array	80.55	356	eP	P	08 09 04.1	+0.7
	comp=Z,1.9nm,0.9s						
DAWY	Dawson	80.65	353	eP	P	08 09 04.8	+0.8
	comp=Z,5.6nm,0.6s						
ANM	Nome	80.73	4	eP	P	08 09 04.9	+0.5
	comp=Z,1.4nm,0.7s						
ANM	Nome	80.73	4	eP	P	08 09 04.9	+0.5
ANM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRH	Wood River Hil	80.92	357	eP	P	08 09 06.1	+0.8
	comp=Z,10nm,0.7s						
BPAW	Bear Paw Mtn.	81.40	358	eP	P	08 09 08.4	+0.4
	comp=Z,8.2nm,0.9s						
YSS	Yuzh-Sakhalins	81.77	37	P	P	08 09 11.1	+0.9
CAST	Castle Rocks	82.12	358	eP	P	08 09 12.4	+0.6
	comp=Z,5.0nm,0.8s						
DHY	Denali Highway	82.27	356	eP	P	08 09 13.6	+0.8
	comp=Z,8.0nm,0.6s						
PETK	Petropavlovsk-	83.65	26	LR	LR	08 49 38.7	
	comp=Z,63nm,18.9s,baz=352,slow=38						
SUA	Susitna One	84.03	358	eP	P	08 09 22.7	+0.8
	comp=Z,6.9nm,0.6s						
ECSD	EROS Data Cent	85.08	321	eP	P	08 09 28.1	+0.8
	comp=Z,4.3nm,0.7s						
MAJO	Matsushiro	86.22	47	eP	P	08 09 33.2	0.0
MAJO	Matsushiro	86.22	47	eP	P	08 09 33.2	0.0
MJAR	Matsushiro Arr	86.22	47	P	P	08 09 33.2	0.0
	comp=Z,1.6nm,0.3s,baz=326,slow=4.7,SNR=5.4						
LAO	LASA Array	87.45	328	eP	P	08 09 38.8	-0.3
	comp=Z,7.4nm,0.6s						
PDAR	Pinedale Array	92.00	328	P	P	08 10 00.0	-0.6
	comp=Z,0.5nm,0.8s,baz=50,slow=4.6,SNR=4.4						
DAV	Davao City (W)	95.33	78	LR	LR	08 57 50.5	
	comp=Z,33nm,19.7s,baz=45,slow=38						
WRA	Warramunga Arr	117.39	96	PKP	PKPdf	08 15 37.4	-0.1
	comp=Z,0.3nm,0.6s,baz=319,slow=1.8,SNR=7.3						
ASAR	Alice Springs	118.81	100	PKP	PKPdf	08 15 39.9	-0.2
	comp=Z,0.5nm,0.8s,baz=287,slow=1.1,SNR=6.8						

MAN ***04*** *08:08:28.0, 19°.05N×121°.07E, h12^{km}, mb5.1, ML4.1, MS4.2*

NEIC ***04*** *08:08:28.8±0.7, 18°.99N×121°.11E, h41^{km}±5^{km}, mb4.5/21, Error ellipse: s-maj=7.5km s-min=5.3km az=134.0*

ISCJB ***04*** *08:08:29.2±0.4, 19°.09N±0°.02×121°.19E±0°.04, h58^{km}±4^{km}, mb4.3/49, MS3.9/6, Error ellipse: s-maj=5.7km s-min=3.7km az=2.4*

IDC ***04*** *08:08:31.4±2.0, 18°.98N×121°.21E, h70^{km}±18^{km}, mb3.7/24, mb1 3.9/27, mb1mx3.9/43, mbtmp4.1/27, MS3.7/7, Ms1 3.7/7, ms1mx3.3/37, Error ellipse: s-maj=15.2km s-min=9.8km az=80.0*

BJI ***04*** *08:08:33.8, 19°.33N×120°.72E, h49^{km}, mB4.6/17, mb4.4/37, ML4.0/3, Ms4.1/12, Ms7 3.9/12*

ISC 04 08:08:29.9±0.8**, 19°.06N**±0°.04×**121°.07E**±0°.04**, h48**^{km}±7^{km}**, n131, σ1^{s}.82**/132**, mb4.4**/55**, MS4.0**/6**, 1C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.23	131	eP	Pn	08 08 50.0	-0.7
SGCP				eS	Sn	08 09 05.8	-0.5
ABRA	Dolores	1.45	194	eP	Pn	08 08 52.5	-1.1
ABRA				eS	Sn	08 09 12.0	+0.6
CVP	Callao Caves	1.53	152⇑	iP	Pn	08 08 54.7	-0.1
CVP				i S	Sn	08 09 12.4	-1.1
CAUP	Cauayan	2.23	161	eP	Pn	08 09 06.8	+2.5
CAUP				eS	Sn	08 09 34.0	+3.4
PALP	Palanan	2.37	147	eP	Pn	08 09 07.7	+1.4
PALP				eS	Sn	08 09 35.8	+1.6
BOLP	Bolinao	2.89	203	eP	Pn	08 09 12.5	-0.9
BOLP				eS	Sn	08 09 50.4	+3.5
SMPP	San Manuel, Pa	2.92	187	eP	Pn	08 09 14.0	+0.2
SMPP				eS	Sn	08 09 47.9	+0.1
BALP	Baler	3.34	172	eP	Pn	08 09 20.2	+0.6
BALP				eS	Sn	08 10 01.9	+3.9
SCZP	Santa Cruz	3.45	199	eP	Pn	08 09 23.8	+2.6
PCPH	Palayan	3.48	180⇓	eP	Pn	08 09 23.0	+1.5
TWG	Pinlang	3.74	0	ePn	Pn	08 09 24.0	-1.0
TPUB	Ta-pu	4.24	355	ePn	Pn	08 09 31.3	-0.7
YULB	Yu-li	4.31	3	ePn	Pn	08 09 32.7	-0.2
SSLB	Suanglung	4.70	359	ePn	Pn	08 09 38.2	-0.2
TGY	Tagaytay City	4.94	181	P	Pn	08 09 43.6	+2.0
	50nm,0.3s,baz=225,slow=13,SNR=2.0						
TGY				LR	LR	08 11 50.4	
	comp=Z,362nm,19.5s,baz=214,slow=41						
TGY	Tagaytay City	4.94	181⇓	eP	Pn	08 09 56.4	+15
NACB	Ninganchiao	5.11	5	ePn	Pn	08 09 43.7	-0.1
YHNB	Yeheng	5.59	3	ePn	Pn	08 09 51.4	+0.8
YOJ	Yonaguni jima	5.67	18	ePn	Pn	08 09 52.1	+0.6
TATO	Taipei	5.90	4	ePn	Pn	08 09 55.8	+1.1
QZH	Quanzhou	6.29	339⇓	iP	Pn	08 09 58.4	-1.6
QZH				S	Sn	08 11 05.7	-4.8
QZH				smax	smax		
	comp=N,52nm,0.5s						
QZH				smax	smax		
	comp=E,70nm,0.5s						
JOW	Kunigami	10.19	39	ePn	Pn	08 10 53.0	-0.5
JOW	Kunigami	10.19	39	P	Pn	08 10 53.6	+0.1
	1.0nm,0.3s,baz=191,slow=16,SNR=9.8						
QIZ	Qiongzhong	10.62	272	P	Pn	08 10 57.6	-1.8
QIZ				S	Sn	08 12 54.6	-2.4
QIZ				pmax	pmax		
	comp=Z,32nm,0.6s						
QIZ	Qiongzhong	10.62	272	ePn	Pn	08 10 57.4	-2.0
QIZ				eSn	Sn	08 12 53.8	-3.2
DAV	Davao City (W)	12.70	159	LR	LR	08 16 10.9	
	comp=Z,218nm,21.0s,baz=8.0,slow=36						
NJ2	Nanjing	13.09	352	eP	Pn	08 11 34.1	+1.0
NJ2				pmax	pmax		
	comp=Z,29nm,0.6s						
GYA	Guiyang	15.18	302	P	P	08 12 04.0	-1.6
GYA				pP	pP	08 12 12.8	-3.0
GYA				PP	pwP	08 12 18.0	-1.3
GYA				S	Sn	08 14 51.2	+2.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
SKNT	Sakolnakorn	16.39	265	P	P	08 12 21.6	+2.7
	9.1nm,1.1s,785nm						
JNU	Nakatsue	16.53	30	ePn	Pn	08 12 18.6	+0.3
	35nm,1.1s						
JNU	Nakatsue	16.53	30	P	Pn	08 12 18.7	+0.3
	0.5nm,0.3s,baz=80,slow=1.1,SNR=4.9						
NONG	Nongkai	17.02	270	P	P	08 12 29.6	+3.7
	0.2nm,0.6s,243nm						
KMI	Kunming	18.02	293	P	P	08 12 39.5	+2.4
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI				pmax	pmax		
	comp=Z,150nm,5.1s						
XAN	Xi'an	18.43	326	P	Pn	08 12 48.6	+6.7
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,92nm,4.6s						
SBUM	Sibu	18.64	209	eP	Pn	08 12 43.6	-0.9
	comp=Z,10nm,1.0s						
KS15	Wonju Array Si	19.26	17	eP	P	08 12 50.0	-0.3
KSRS	Korea Array	19.28	17	P	P	08 12 50.2	-0.3
	comp=Z,2.2nm,0.3s,baz=198,slow=11,SNR=36						
KSRS				LR	LR	08 20 15.4	
	comp=Z,109nm,20.4s,baz=228,slow=36						
KS01	Wonju Array Si	19.29	17	eP	P	08 12 50.4	-0.4
PBKT	Sadao Pong	19.30	266	P	Pn	08 12 52.8	+0.5
	comp=Z,9.2nm,0.9s,comp=Z,830nm						
UTTA	Uttaradit	19.51	269	P	Pn	08 12 55.1	+0.2
	comp=Z,2.7nm,0.8s						
PAYA	Payao	20.02	274	P	Pn	08 13 03.9	+2.9
PAYA	Payao	20.02	274	P	Pn	08 13 03.9	+2.9
	comp=Z,7.5nm,0.9s,comp=Z,158nm						
CMMT	Chiang Mai	20.93	273	P	Pn	08 13 10.4	-1.3
CMMT	Chiang Mai	20.93	273	P	Pn	08 13 10.4	-1.3
	comp=Z,18nm,0.9s						
CHTO	Chiang Mai	20.93	273	eP	P	08 13 08.4	-0.3
	comp=Z,14nm,0.8s						
CHTO	Chiang Mai	20.93	273	P	Pn	08 13 10.5	-1.3
	comp=Z,79nm,0.9s						
CHTO	Chiang Mai	20.93	273	P	Pn	08 13 10.5	-1.3
	comp=Z,79nm,0.9s						
UTHA	Uthaitani	20.93	264	P	Pn	08 13 10.9	-0.9
UTHA	Uthaitani	20.93	264	P	Pn	08 13 10.9	-0.9
	comp=Z,10nm,0.9s,comp=Z,86nm						
CM01	Chiang Mai Arr	20.95	272	eP	P	08 13 09.1	+0.2
CMAR	Chiang Mai Arr	20.96	272	P	Pn	08 13 10.5	-1.6
	comp=Z,7.0nm,0.7s,baz=82,slow=8.9,SNR=28						
CMAR				LR	LR	08 20 37.8	
	comp=Z,57nm,21.8s,baz=85,slow=34						
BJT	Baijiatuau	21.31	350	eP	P	08 13 14.1	+1.5
	comp=Z,27nm,0.8s						
BJI	Beijing	21.33	350⇓	eP	P	08 13 16.4	+3.7
BJI				pmax	pmax		
	comp=Z,25nm,0.9s						
UMPA	Umpang Tak	21.35	266	P	P	08 13 06.9	-6.4
PHET	Kaeng Krachan	21.49	257	P	P	08 13 17.0	+2.3
SRDT	SRDT	21.53	261	P	P	08 13 19.3	+4.1
SRDT	SRDT	21.53	261	P	P	08 13 19.3	+4.1
LZH	Lanzhou	22.76	322	eP	P	08 13 29.6	+1.3
LZH				pP	pwP	08 13 41.8	-0.2
LZH				sP	sP	08 13 47.9	+3.2
LZH				ePP	PnPn	08 13 59.7	+5.9
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,72nm,4.6s						
LZH				LR	LR		
	comp=Z,260nm,11.5s						
LZH				LR	LR		
	comp=Z,270nm,12.0s						
LZH				LR	LR		
	comp=Z,350nm,14.3s						
MJAR	Matsushiro Arr	23.02	37	P	P	08 13 31.4	+0.6
	comp=Z,1.1nm,0.3s,baz=221,slow=13,SNR=5.0						
HHC	Hu-ho-hao-te	23.19	341	eP	P	08 13 35.3	+2.7
HHC				pP	sP	08 13 48.5	-0.4
HHC				sP	pwP	08 13 53.6	+6.4
HHC				S	S	08 17 39.5	-1.4
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				LR	LR		
	comp=Z,200nm,4.8s						
HHC				LR	LR		
	comp=Z,200nm,6.1s						
HHC				LR	LR		
	comp=Z,200nm,10.8s						
TRTT	Trang	23.56	245	P	P	08 13 37.2	+0.9
	comp=Z,18nm,1.2s						
KULM	Kulim	24.16	238	eP	P	08 13 41.1	-0.7
	comp=Z,13nm,0.9s						
USRK	Ussuriysk Ar.	26.68	18	P	P	08 14 04.5	+0.2
	comp=Z,1.5nm,0.6s,baz=208,slow=8.3,SNR=5.4						
PSI	Prapat	27.03	236	P	P	08 14 08.7	+0.8
	comp=Z,3.9nm,0.6s,baz=0.2,slow=4.6,SNR=5.5						
SONM	Songino Array	31.09	341	P	P	08 14 44.7	+1.0
	comp=Z,1.1nm,0.7s,baz=156,slow=9.1,SNR=6.0						
SONA1	Songino Array	31.10	341	eP	P	08 14 44.2	+0.4
KLR	Kul'dur	31.30	14	P	P	08 14 45.6	+0.3
	comp=Z,0.7nm,0.5s,baz=205,slow=12,SNR=4.6						
TAPN	Taplejung	31.68	291	eP	P	08 14 50.7	+1.4
	comp=Z,22nm,1.1s						
ODAN	Odare	31.89	290	eP	P	08 14 52.3	+1.1
	comp=Z,41nm,0.9s						
RAMN	Ramite	32.60	290	eP	P	08 14 58.9	+1.5
	comp=Z,41nm,0.6s						
JIRN	Jiri	33.05	292	eP	P	08 15 02.7	+1.2
	comp=Z,30nm,0.7s						
GUN	Gumba	33.36	292	eP	P	08 15 05.4	+1.3
	comp=Z,54nm,0.7s						
PKI	Pulchoki	33.73	291	eP	P	08 15 07.9	+0.6
	comp=Z,20nm,0.8s						
DMN	Daman	34.00	291	eP	P	08 15 10.3	+0.7
	comp=Z,31nm,0.8s						
DANN	Dangsing	35.27	292	eP	P	08 15 21.4	+0.8
	comp=Z,17nm,0.6s						
KOLN	Koldanda	35.35	291	eP	P	08 15 21.9	+0.7
	comp=Z,35nm,0.9s						
PYUN	Piuthan	35.92	292	eP	P	08 15 26.8	+0.7
	comp=Z,28nm,0.8s						
WMQ	Urumqi	37.28	319	eP	P	08 15 40.1	+2.9
WMQ				sP	sP	08 15 58.9	+4.6
WRA	Warramunga Arr	40.89	161	P	P	08 16 04.0	-3.6
	comp=Z,0.5nm,0.3s,baz=341,slow=9.2,SNR=16						
WRA				PcP	PcP	08 18 06.5	-1.0
	comp=Z,0.7nm,0.5s,baz=345,slow=3.3,SNR=7.1						
WRA				S	S	08 22 05.6	-10
	comp=Z,0.3nm,0.8s,baz=344,slow=15,SNR=3.4						
MK01	Makanchi Array	42.04	320	eP	P	08 16 17.9	+1.1
MK01				ePcP	PcP	08 18 11.2	+0.1
MK31	Makanchi Array	42.06	320	eP	P	08 16 18.2	+1.3
	comp=Z,2.9nm,1.1s						
MKAR	Makanchi Array	42.06	320	eP	P	08 16 18.2	+1.3
	comp=Z,14nm,0.5s						
MKAR	Makanchi Array	42.06	320	P	P	08 16 17.1	+0.2
	comp=Z,1.9nm,0.6s,baz=115,slow=8.7,SNR=17						
MKAR				PcP	PcP	08 18 11.0	-0.1
	comp=Z,2.5nm,0.7s,baz=89,slow=5.2,SNR=7.8						
H11S3	WAKE ISLAND Hy	43.10	83	T	T	09 02 09.4	
	baz=276,slow=74,SNR=73						
H11S1	WAKE ISLAND Hy	43.11	83	T	T	09 02 08.2	
	baz=276,slow=74,SNR=32						
H11S2	WAKE ISLAND Hy	43.12	83	T	T	09 02 11.9	
	baz=276,slow=74,SNR=31						
H11N1	WAKE ISLAND Hy	43.13	81	T	T	09 02 11.7	
	baz=278,slow=75,SNR=82						
H11N2	WAKE ISLAND Hy	43.13	81	T	T	09 02 12.7	
	baz=278,slow=75,SNR=74						
H11N3	WAKE ISLAND Hy	43.14	81	T	T	09 02 05.9	
	baz=278,slow=75,SNR=54						
KSH	Kashi	43.76	308	P	P	08 16 35.3	+4.3
KSH				sP	pwP	08 16 55.2	+8.0
KSH				PP	PcP	08 18 22.1	+5.0
KSH				S	S	08 23 02.1	+3.9
KSH				sS	sS	08 23 24.3	+5.7
KSH				pmax	pmax		
	comp=Z,36nm,0.7s						
KSH				pmax	pmax		
	comp=Z,640nm,8.1s						
KSH				LR	LR		
	comp=Z,180nm,5.4s						
KSH				LR	LR		
	comp=Z,270nm,5.2s						
KSH				LR	LR		
	comp=Z,410nm,8.1s						
PETK	Petropavlovsk-	44.22	31	eP	P	08 16 34.2	0.0
PETK	Petropavlovsk-	44.22	31	P	P	08 16 33.8	-0.5
	comp=Z,2.2nm,0.8s,baz=252,slow=3.0,SNR=4.3						
NRN	Naryn	44.25	310	eP	P	08 16 35.0	-0.1
	comp=Z,13nm,0.8s						
AS31	Alice Springs	44.28	163	eP	P	08 16 34.9	-0.1
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	44.28	163	P	P	08 16 33.0	-2.0
	comp=Z,0.9nm,0.4s,baz=339,slow=6.7,SNR=12						
ASAR				S	S	08 23 02.5	-3.2
	comp=Z,0.2nm,0.7s,baz=345,slow=16,SNR=3.2						
ZALV	Zalesovo Beam	44.54	330	eP	P	08 16 37.4	+0.7
ZALV	Zalesovo Beam	44.54	330	P	P	08 16 36.9	+0.1
	comp=Z,1.1nm,0.6s,baz=127,slow=8.1,SNR=6.1						
NIL	Nilore	44.86	299	eP	P	08 16 39.9	+0.2
	comp=Z,29nm,0.8s						
KURK	Kurchatov	46.03	323	eP	P	08 16 49.1	+0.4
	comp=Z,4.8nm,0.9s						
BTK	Batken	47.76	307	eP	P	08 17 03.5	+1.1
	comp=Z,3.1nm,0.7s						
GAR	Garm	47.95	306	eP	P	08 17 03.5	-0.5
	comp=Z,16nm,0.7s						
KK31	Karatay Array	48.61	311	eP	P	08 17 09.6	+0.6
	comp=Z,8.1nm,1.0s						
KK31				ePcP	PcP	08 18 34.0	+0.1
KKAR	Karatay Array	48.61	311	eP	P	08 17 09.7	+0.8
	comp=Z,8.1nm,1.0s						
KKAR				ePcP	PcP	08 18 33.9	0.0
CHGR	Chuyangaron	48.79	305	eP	P	08 17 10.4	-0.1
	comp=Z,11nm,0.6s						
BRVK	Borovoye	51.70	323	eP	P	08 17 32.2	+0.2
	comp=Z,4.3nm,0.6s						
BRVK				ePcP	PcP	08 18 44.7	-0.3
BBOO	Buckleboo	53.54	164	eP	P	08 17 44.4	-1.5
	comp=Z,7.7nm,0.9s						
NRIK	Noril'sk	54.31	346	P	P	08 17 51.7	+0.7
	comp=Z,6.6nm,0.6s,baz=130,slow=7.4,SNR=16						
STKA	Stephens Creek	54.34	158	P	P	08 17 51.0	-0.7
	comp=Z,0.4nm,0.4s,baz=333,slow=14,SNR=3.3						
ABKAR	Akbulak array	57.01	317	eP	P	08 18 11.1	+0.4
	comp=Z,3.1nm,0.6s						
GEYT	Alibeck	57.40	303	P	P	08 18 15.0	+1.3
	comp=Z,1.0nm,0.4s,baz=130,slow=2.3,SNR=5.1						
AKTO	Aktyubinsk	58.42	318	LR	LR	08 45 01.3	
	comp=Z,190nm,19.8s,baz=307,slow=37						
KIRV	Kirov	64.37	327	LR	LR	08 49 58.5	
	comp=Z,217nm,18.5s,baz=23,slow=38						
KBZ	Khabaz	68.64	310	P	P	08 19 28.2	0.0
	comp=Z,4.0nm,0.9s,baz=134,slow=4.2,SNR=8.4						
BPAW	Bear Paw Mtn.	72.15	27	eP	P	08 19 48.9	-0.4
SUA	Susitna One	72.59	30	eP	P	08 19 51.2	-0.9
	comp=Z,5.7nm,1.2s						
MDM	Murphy Dome	73.21	26	eP	P	08 19 55.3	-0.3
	comp=Z,1.6nm,0.9s						
ILAR	Eielson Array	73.81	26	P	P	08 19 57.6	-1.5
	comp=Z,0.2nm,0.6s,baz=268,slow=4.9,SNR=7.4						

ARCES	ARCESS Array B	74.24	339	P	P	08 20 01.4	-0.1
	comp=Z,2.1nm,0.7s,baz=71,slow=9.1,SNR=10						
FIA1	FINESS Array S	75.81	330	*e*P	P	08 20 10.4	-0.2
FINES	FINESS Array B	75.81	330	P	P	08 20 09.8	-0.8
	comp=Z,0.9nm,0.6s,baz=288,slow=1.8,SNR=3.4						
BRTR	Keskin Array B	76.15	307	P	P	08 20 12.6	-0.7
	comp=Z,0.9nm,0.5s,baz=113,slow=3.0,SNR=6.2						
AKASG	Malin Array Be	76.63	319	P	P	08 20 14.3	-1.2
	comp=Z,2.2nm,0.7s,baz=63,slow=5.6,SNR=5.9						
AK11	Malin Array Si	76.67	319	*e*P	P	08 20 14.8	-1.0
BUR04	Bucovina Ar. S	79.99	317	*e*P	P	08 20 33.8	-0.6
NOA	NORSAR Array B	82.69	333	P	P	08 20 47.1	-1.1
	comp=Z,0.6nm,0.7s,baz=65,slow=5.2,SNR=2.3						
VYHS	Vyhne	83.74	319	*e*P	P	08 20 55.2	+1.3
KMBO	Kilima Mbogo	84.52	267	P	P	08 20 58.6	-0.2
	comp=Z,0.9nm,0.3s,baz=90,slow=9.1,SNR=3.7						
KMBO				LR	LR	08 56 21.1	
	comp=Z,58nm,20.7s,baz=88,slow=34						
GERES	GERESS Array B	86.72	321	P	P	08 21 09.4	+0.5
	comp=Z,0.7nm,0.6s,baz=338,slow=5.7,SNR=3.7						
YKA	Yellowknife Ar	87.71	23	P	P	08 21 13.0	-0.2
	comp=Z,0.5nm,0.5s,baz=311,slow=4.5,SNR=11						
YKB5	Yellowknife Ar	87.71	23	*e*P	P	08 21 12.6	-0.7
TXAR	Lajitas Array	115.37	43	PKP	PKiKP	08 27 05.5	-1.6
	comp=Z,0.2nm,0.5s,baz=318,slow=1.2,SNR=3.0						

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*SOME **04** 08:09:09.7, 42°.57N×79°.65E, h20^{km}*
*KRNET **04** 08:09:09.3±0.1, 42°.57N×79°.67E, h7^{km}, mb2.9*
*NNC **04** 08:09:09.4±1.1, 42°.59N×79°.65E, h0^{km}, mb2.8, mpv3.0, Error ellipse: s-maj=7.1km s-min=4.5km az=134.0*
ISC 04 08:09:09.8±1.4**, 42°.61N**±0°.04×**79°.62E**±0°.04**, h0**^{km}±11^{km}**, n35,** σ1^s.**20**/68**, 14C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.70	321	P	Pg	08 09 23.5	+0.3
	22nm,0.1s						
UZB				S	Sg	08 09 33.5	+1.3
	44nm,0.1s						
UZB	Uzynbulak	0.70	321	⇓*e*P	Pg	08 09 23.6	+0.3
	baz=21						
UZB				⇓*e*S	Sg	08 09 33.6	+1.3
	baz=21						
UZB	Uzynbulak	0.70	321	⇓*e*P	Pg	08 09 23.6	+0.3
	22nm,0.1s						
UZB				*e*S	Sg	08 09 33.5	+1.3
	44nm,0.1s						
PDGK	Podgornoye	0.73	352	P	Pg	08 09 24.0	+0.1
	5.0nm,0.2s						
PDGK				S	Sg	08 09 33.9	+0.6
	10nm,0.1s						
PDGK	Podgornoye	0.73	352	⇓P	Pg	08 09 23.9	+0.1
	0.9nm,0.3s						
PDGK				⇓S	Sg	08 09 34.5	+1.3
	4.0nm,0.4s						
PDGK	Podgornoye	0.73	352	⇑*i*P	Pg	08 09 24.0	+0.1
	baz=50						
PDGK				⇑*i*S	Sg	08 09 34.6	+1.3
	baz=50						
PRZ	Przheval'sk	0.91	263	⇑*i*P	Pg	08 09 27.1	-0.2
	baz=65						
PRZ				⇑*i*S	Sg	08 09 39.8	+0.7
	baz=65						
KTMS	Ketmen	1.00	32	P	Pg	08 09 28.6	-0.3
	13nm,0.1s						
KTMS				S	Sg	08 09 42.2	+0.4
	18nm,0.1s						
KTMS	Ketmen	1.00	32	*e*P	Pg	08 09 28.6	-0.3
	baz=29						
KTMS				*e*S	Sg	08 09 42.2	+0.4
	baz=29						
KTMS	Ketmen	1.00	32	*e*P	Pg	08 09 28.6	-0.3
	13nm,0.1s						
KTMS				*e*S	Sg	08 09 42.2	+0.4
	18nm,0.1s						
SATY	Saty	1.00	297	P	Pg	08 09 29.3	+0.2
	2.0nm,0.1s						
SATY				S	Sg	08 09 42.9	+0.8
	28nm,0.1s						
SATY	Saty	1.00	297	*e*P	Pg	08 09 29.3	+0.2
	2.0nm,0.1s						
SATY				*e*S	Sg	08 09 42.9	+0.8
	28nm,0.1s						
KURS	Kuram	1.38	310	*e*P	Pn	08 09 35.9	-0.5
	baz=10.0						
KURS				*e*S	Sn	08 09 54.9	-0.6
	baz=10.0						
KURS	Kuram	1.38	310	*e*P	Pn	08 09 35.9	-0.5
	2.8nm,0.1s						
KURS				*e*S	Sn	08 09 54.9	-0.6
	4.8nm,0.4s						
MNBS	Baschi	1.72	329	P	Pb	08 09 41.8	-0.6
	10nm,0.2s						
MNBS				S	Sb	08 10 04.7	+0.1
	9.7nm,0.2s						
MNBS	Baschi	1.72	329	*e*P	Pb	08 09 41.8	-0.6
	baz=29						
MNBS				*e*S	Sb	08 10 04.7	+0.1
	baz=29						
MNBS	Baschi	1.72	329	*e*P	Pb	08 09 41.8	-0.6
	10nm,0.2s						
MNBS				*e*S	Sb	08 10 04.8	+0.1
	9.7nm,0.2s						
DJR	Jarkent	1.73	4	*e*P	Pb	08 09 42.0	-0.5
	1.8nm,0.2s						
DJR				*e*S	Sg	08 10 05.5	0.0
	11nm,0.2s						
KDJ	Kajisay	1.87	256	⇑*i*P	Pb	08 09 44.8	-0.2
	baz=57						
KDJ				⇑*i*S	Sg	08 10 09.3	-0.6
	baz=57						
MDOK	Medeo	1.97	287	Pn	Pb	08 09 45.2	-1.5
	2.8nm,0.4s						
MDOK				Sn	Sb	08 10 10.8	-1.1
	8.8nm,0.6s						
TNSS	Tian-Shan	2.02	283	*e*P	Pb	08 09 46.3	-1.3
	baz=84						
TNSS				*e*S	Sb	08 10 12.5	-0.9
	baz=84						
TNSS	Tian-Shan	2.02	283	*e*P	Pb	08 09 46.3	-1.3
	4.3nm,0.4s						
TNSS				*e*S	Sb	08 10 12.4	-0.9
	10nm,0.2s						
IZV	Izvestkoviy	2.26	282	Pg	Pb	08 09 50.8	-0.7
	5.7nm,0.1s						
IZV				Lg	Lg	08 10 20.8	
	21nm,0.4s						
IZV	Izvestkoviy	2.26	282	*e*P	Pb	08 09 50.8	-0.7
	baz=83						
IZV				*e*S	Sb	08 10 20.8	+0.8
	baz=83						
IZV	Izvestkoviy	2.26	282	*e*P	Pb	08 09 50.8	-0.7
	5.7nm,0.1s						
IZV				*e*S	Sb	08 10 20.8	+0.8
	21nm,0.4s						
CHKK	Chushkaly	2.29	304	*e*P	Pb	08 09 50.1	-2.0
	baz=4.0						
CHKK				*e*S	Sb	08 10 19.0	-2.0
	baz=4.0						
CHKK	Chushkaly	2.29	304	*e*P	Pb	08 09 50.1	-2.0
	1.4nm,0.2s						
CHKK				*e*S	Sb	08 10 19.0	-2.0
	23nm,0.3s						
ULHL	Ulahol	2.53	263	⇑*i*P	Pb	08 09 54.2	-2.0
	baz=64						
ULHL				⇑*i*S	Sb	08 10 26.8	-1.1
	baz=64						
KAPS	Kapalarasan	2.69	356	*e*P	Pb	08 09 57.3	-1.5
	1.2nm,0.2s						
KAPS				*e*S	Sb	08 10 31.3	-1.0
	6.3nm,0.4s						
BOOM	Boomskoye usch	2.72	269	⇓*i*P	Pn	08 09 56.3	+1.4
	baz=70						
BOOM				⇓*i*S	Sb	08 10 31.2	-2.3
	baz=70						
TKM2	Tokmak 2	2.98	277	⇓Pg	Pb	08 10 02.7	-1.2
	1.3nm,0.5s						
TKM2				⇑Lg	Lg	08 10 42.2	
	3.0nm,0.3s						
TKM2	Tokmak 2	2.98	277	⇑*i*P	Pb	08 10 01.0	-2.9
	baz=78						
TKM2				⇑*i*S	Sb	08 10 38.1	-2.8
	baz=78						
KZA	Kyzart	3.28	262	⇑*i*P	Pn	08 10 05.0	+2.1
	baz=63						
KZA				⇑*i*S	Sn	08 10 45.3	+2.5
	baz=63						
ARLS	Aral	4.00	261	⇓*i*P	Pn	08 10 14.6	+2.1
	baz=62						
ARLS				⇓*i*S	Sn	08 11 01.4	+1.2
	baz=62						
MK31	Makanchi Array	4.60	24	⇓Pn	Pn	08 10 21.8	+1.2
	0.1nm,0.3s,baz=206,slow=13,SNR=13						
MK31				⇑Sn	Sn	08 11 15.2	+0.5
	0.2nm,0.3s,baz=206,slow=25,SNR=7.5						
MK31				⇓Lg	Lg	08 11 31.8	
	0.3nm,0.4s,baz=203,slow=29						

IDC 04 08:20:03.7±9.0**, 19°.70S×177°.91W, h452**^{km}±95^{km}**, mb2.8**/5**, mb1 3.2**/5**, mb1mx3.1**/20**, mbtmp3.6**/5**, Error ellipse: s-maj=103.1km s-min=26.9km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.79	256	P	P	08 27 36.1	0.0
	0.2nm,0.6s,baz=84,slow=8.0,SNR=4.7						
ASAR				PcP	PcP	08 29 08.0	-0.9
	0.7nm,0.7s,baz=90,slow=3.7,SNR=3.2						
WRA	Warramunga Arr	44.80	261	PcP	PcP	08 29 07.8	-1.2
	0.2nm,0.5s,baz=93,slow=3.4,SNR=2.7						
NVAR	Mina Array Bea	80.38	43	P	P	08 31 26.8	-0.6
	0.2nm,0.4s,baz=229,slow=7.5,SNR=4.0						
TXAR	Lajitas Array	86.55	57	P	P	08 31 58.7	+0.4
	0.4nm,0.7s,baz=225,slow=5.1,SNR=5.3						
ILAR	Eielson Array	87.52	13	P	P	08 32 01.5	-0.4
	0.4nm,0.8s,baz=224,slow=6.1,SNR=8.9						
PDAR	Pinedale Array	88.32	43	P	P	08 32 06.8	+0.3
	0.3nm,0.6s,baz=219,slow=2.3,SNR=3.7						
BRTR	Keskin Array B	146.36	313	PKPbc	PKPbc	08 38 53.3	-0.2
	0.7nm,0.6s,baz=118,slow=4.3,SNR=3.7						
GERES	GERESS Array B	149.46	345	PKPbc	PKPbc	08 39 00.7	-0.3
	0.4nm,0.3s,baz=112,slow=1.1,SNR=3.1						

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*IDC **04** 08:23:02.1±3.0, 1°.71S×133°.20E, h0^{km}, mb3.6/2, mb1 4.0/3, mb1mx3.5/32, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=142.2km s-min=29.4km az=75.0*
*ISCJB **04** 08:23:05.8±0.8, 1°.78S±0°.10×132°.99E±0°.07, h33^{km}, mb3.7/2, Error ellipse: s-maj=14.4km s-min=9.3km az=161.7*
*DJA **04** 08:23:05.6±1.6, 2°S±7°×13°3E±°, h72^{km}±33^{km}, M3.8/6, mb3.9/1, MLv3.7/6*
ISC 04 08:23:07.1±1.1**, 1°.76S**±0°.09×**133°.02E**±0°.07**, h35**^{km}**, n6,** σ**0**^{s}.**82**/7**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	1.18	78	P	Pn	08 23 26.4	-0.8
RKPI				S	Sn	08 23 42.5	+0.4
FAKI	Fak Fak	1.38	214	P	Pn	08 23 29.5	-0.4
SWI	Sorong	1.97	297	P	Pn	08 23 37.3	-0.7
WRA	Warramunga Arr	18.12	176	P	Pn	08 27 15.5	-0.6
	0.3nm,0.3s,baz=356,slow=12,SNR=12						
WRA				S	Sn	08 30 26.2	-11
	0.1nm,0.3s,baz=358,slow=23,SNR=4.2						
ASAR	Alice Springs	21.79	178	P	P	08 27 56.8	+0.6
	3.4nm,0.7s,baz=360,slow=11,SNR=46						
MKAR	Makanchi Array	65.64	324	P	P	08 33 48.5	+0.7
	0.2nm,0.5s,baz=112,slow=7.9,SNR=3.0						

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*DJA **04** 08:29:15.1±2.5, 1°N±10°×12°8E±2°5, h129^{km}±11^{km}, M4.7/4, mb4.8/3, mB6.4/1, MLv4.7/4, Mw(mB)6.2/1*
*IDC **04** 08:29:29.0±1.8, 2°.51N×125°.96E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.5/38, mbtmp3.7/4, Error ellipse: s-maj=160.4km s-min=24.3km az=65.0*
ISC 04 08:29:31.5±1.0**, 2°.16N**±0°.08×**125°.5E**±0°.1**, h10**^{km}**, n8,** σ**2**^{s}.**63**/7**, mb3.7**/4**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.52	1	P	Pg	08 30 03.0	+2.3
MRSI	Marisa	3.92	245	P	Pg	08 30 49.2	+2.4
KDI	Kendari	6.72	205	P	Pn	08 31 03.0	-7.3
WRA	Warramunga Arr	23.62	159	P	P	08 34 43.1	+0.2
	0.7nm,0.3s,baz=338,slow=10,SNR=16						
MNSI	Mandailing Nat	25.94	267	P	P	08 35 00.7	-3.7
ASAR	Alice Springs	26.94	163	P	P	08 35 14.6	+1.2
	0.6nm,0.4s,baz=344,slow=7.9,SNR=22						
STKA	Stephens Creek	37.14	157	P	P	08 36 42.6	0.0
	1.4nm,0.6s,baz=324,slow=7.7,SNR=4.9						
MKAR	Makanchi Array	58.15	326	P	P	08 39 24.3	-1.3
	0.2nm,0.4s,baz=118,slow=7.7,SNR=5.2						

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*ISCJB **04** 08:38:02.8±0.3, 36°.41N±0°.02×70°.66E±0°.04, h188^{km}, mb4.0/27, Error ellipse: s-maj=5.3km s-min=2.9km az=157.6*
*IDC **04** 08:38:02.6±2.8, 36°.24N×70°.78E, h187^{km}±24^{km}, mb3.5/13, mb1 3.6/19, mb1mx3.4/50, mbtmp4.1/19, Error ellipse: s-maj=19.3km s-min=13.5km az=177.0*
*BJI **04** 08:38:05.4, 36°.53N×70°.79E, h213^{km}, mB4.5/3, mb4.0/9*
*NEIC **04** 08:38:06.0±0.4, 36°.52N×70°.87E, h208^{km}±3^{km}, mb4.3/15, Error ellipse: s-maj=6.2km s-min=5.3km az=89.0*
*NNC **04** 08:38:11.4±1.3, 37°.00N×70°.88E, h226^{km}±15^{km}, mb3.3, mpv4.5, Error ellipse: s-maj=14.3km s-min=11.3km az=62.0*
ISC 04 08:38:04.0±0.4**, 36°.46N**±0°.04×**70°.86E**±0°.05**, h188**^{km}**, n108,** σ**1**^{s}.**85**/123**, mb4.1**/26**, 6C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.42	218	*e*Pn	Pn	08 38 50.6	+4.1
KBL				*e*Sn	Sn	08 39 23.7	+4.3
GAR	Garm	2.57	351	*e*Pn	Pn	08 38 50.9	+2.8
GAR				*e*Sn	Sn	08 39 23.1	+0.5
CHGR	Chuyangaron	2.58	329	*e*Pn	Pn	08 38 50.7	+2.6
CHGR				*e*Sn	Sn	08 39 22.9	+0.3
CEP	Cherat	2.77	162	P	Pn	08 38 55.1	+4.7
CEP				S	Sn	08 39 31.0	+4.4
CHCP	Chirah Chowk	3.42	144	P	Pn	08 39 02.9	+4.7
NIL	Nilore	3.42	144	*e*Pn	Pn	08 39 02.7	+4.5
BTK	Batken	3.59	360	*e*Pn	Pn	08 39 02.8	+2.5
BTK				*e*Sn	Sn	08 39 47.3	+2.8
SFK	Sufi-Kurgan	4.12	30	⇑P	Pn	08 39 09.6	+2.6
	65nm,0.6s						
SFK				⇑S	Sn	08 39 57.2	+0.7
	52nm,0.6s						
KSH	Kashi	5.07	51	P	Pn	08 39 16.7	-2.3
KSH				S	Sn	08 40 08.3	-10
KSH				smax	smax		
	comp=N,80nm,0.5s						
KSH				smax	smax		
	comp=E,96nm,0.8s						
AML	Almayashu	6.08	20	P	Pn	08 39 34.1	+1.7
	SNR=75						
DHRM	DHARAMSHALA	6.15	131	*e*P	Pn	08 39 36.3	+2.9
DHRM				*e*S	Sn	08 40 44.5	+0.7
DHRM				IAML		08 40 46.0	
	comp=E,786nm,0.5s						
DHRM				IAML		08 40 47.5	
	comp=N,658nm,0.4s						
MNAS	Manas	6.16	11	⇓P	Pn	08 39 34.8	+1.7
	comp=N,26nm,0.7s						
MNAS				⇓S	Sn	08 40 41.4	-2.3
	comp=N,124nm,0.7s						
NRN	Naryn	6.38	37	*e*Pn	Pn	08 39 36.8	+0.5
UCH	Uchtor	6.42	25	P	Pn	08 39 38.8	+1.8
	SNR=113						
KZA	Kyzart	6.57	30	P	Pn	08 39 40.1	+1.3
	SNR=18						
EKS2	Erkin-Say	6.59	19	P	Pn	08 39 40.7	+1.8
	SNR=27						
KK31	Karatay Array	6.64	358	*e*Pn	Pn	08 39 40.8	+1.3
KK31	Karatay Array	6.64	358	P	Pn	08 39 40.5	+1.1
	comp=N,19nm,0.5s,baz=188,slow=13,SNR=271						
KK31				⇓S	Sn	08 40 51.2	-3.7
	comp=N,36nm,0.5s,baz=186,slow=21,SNR=16						
KKAR	Karatay Array	6.64	358	*e*Pn	Pn	08 39 40.8	+1.4
AAK	Ala-Archa	6.78	23	P	Pn	08 39 43.3	+1.9
	SNR=35						
AAK	Ala-Archa	6.78	23	*e*Pn	Pn	08 39 43.1	+1.8
AAK	Ala-Archa	6.78	23	⇓P	Pn	08 39 43.3	+1.9
	comp=N,27nm,0.7s						
AAK				⇓S	Sn	08 40 56.0	-2.4
	comp=N,27nm,0.6s						
AAK	Ala-Archa	6.78	23	P	Pn	08 39 42.5	+1.1
	comp=N,6.3nm,0.3s,baz=186,slow=7.0,SNR=109						
AAK				S	Sn	08 40 57.8	-0.6
	comp=N,2.9nm,0.3s,baz=318,slow=21,SNR=9.0						
KBK	Karagaybulak	6.95	26	P	Pn	08 39 45.6	+2.0
	SNR=21						
FRU1	Bishkek	6.98	23	*e*Pn	Pn	08 39 43.8	-0.1
CHMS	Chumysh	7.19	23	P	Pn	08 39 48.8	+2.2
	SNR=10						
USP	Ospenovka	7.36	21	P	Pn	08 39 49.6	+0.9
	SNR=12						
TKM2	Tokmak 2	7.42	28	P	Pn	08 39 51.5	+1.7
	SNR=74						
TKM2	Tokmak 2	7.42	28	⇑P	Pn	08 39 51.2	+1.5
	comp=N,56nm,0.8s						
TKM2				⇓S	Sn	08 41 10.3	-3.2
	comp=N,29nm,0.9s						
SMLA	Simla	7.47	134	*e*P	Pn	08 39 52.7	+2.3
SMLA				*e*S	Sn	08 41 13.1	-1.5
TARG	Taragay, Kyrgy	7.54	44	*e*Pn	Pn	08 39 52.7	+1.1
DDI	Dehra Dun	8.58	133	*e*P	Pn	08 40 07.5	+2.5
DDI				*e*S	Sn	08 41 37.5	-3.6
DDI				IAML		08 41 45.5	
	comp=E,140nm,0.2s						
NDI	New Delhi	9.43	144	*e*P	Pn	08 40 17.5	+1.5
NDI				*e*S	Sn	08 41 56.0	-5.2
GEYT	Alibeck	10.27	282	P	Pn	08 40 24.3	-2.6
	comp=E,0.9nm,0.3s,baz=94,slow=16,SNR=3.1						
BHJ	Bhuj	13.20	185	*e*x	Pn	08 41 01.3	-3.1
BHJ				*e*S	Sn	08 43 21.6	-10
BHJ				IAML		08 43 32.5	
	comp=E,22nm,0.3s						
BHJ				IAML		08 43 33.6	
	comp=N,28nm,0.5s						
PYUN	Piuthan	13.21	126	*e*P	Pn	08 41 05.0	+0.2
	comp=N,31nm,0.5s						
MAKZ	Makanchi	13.26	35	*e*Pn	Pn	08 41 05.6	+0.7
MK01	Makanchi Array	13.38	36	*e*Pn	Pn	08 41 06.7	+0.1
MK31	Makanchi Array	13.39	36	*e*Pn	Pn	08 41 07.7	+1.0
MK31	Makanchi Array	13.39	36	⇑P	Pn	08 41 07.1	+0.4
	comp=N,1.9nm,0.5s,baz=216,slow=8.8,SNR=28						
MKAR	Makanchi Array	13.39	36	*e*Pn	Pn	08 41 07.7	+1.0
MKAR	Makanchi Array	13.39	36	P	Pn	08 41 07.6	+0.9
	comp=N,0.6nm,0.3s,baz=213,slow=8.9,SNR=20						
DANN	Dangsing	13.56	123	*e*P	Pn	08 41 09.7	+0.5
	comp=N,57nm,0.7s						
KOLN	Koldanda	13.83	125	*e*P	Pn	08 41 13.4	+0.8
	comp=N,8.2nm,0.3s						
BHPL	Bhopal	14.35	155	*e*P	P	08 41 20.6	+0.1
BHPL				IAmb	IAmb	08 41 24.2	
	comp=Z,42nm,0.9s						
WMQ	Urumqi	14.82	55	*e*P	P	08 41 26.6	+1.0
WMQ				sP	Pn	08 42 19.0	+55
DMN	Daman	14.95	122	*e*P	P	08 41 27.8	+0.4
	comp=Z,36nm,0.9s						
KKN	Kakani	14.95	121	*e*P	P	08 41 27.7	+0.3
	comp=Z,42nm,0.5s						
AB31	Akbulak array	15.06	331	P	Pn	08 41 26.9	-0.4
	comp=Z,5.9nm,0.7s,baz=143,slow=12,SNR=92						
ABKAR	Akbulak array	15.06	331	*e*Pn	Pn	08 41 27.1	-0.2
PKIN	Phulchoki	15.17	122	*e*P	P	08 41 30.1	+0.3
	comp=Z,24nm,0.4s						
PKI	Pulchoki	15.18	122	*e*P	P	08 41 30.3	+0.3
	comp=Z,23nm,0.4s						
KURBB	Kurchatov Arra	15.20	19	P	P	08 41 30.8	+1.1
	comp=Z,0.2nm,0.3s,baz=210,slow=11,SNR=12						
GUN	Gumba	15.30	120	*e*P	P	08 41 32.2	+0.9
	comp=Z,36nm,0.7s						
JIRN	Jiri	15.67	120	*e*P	P	08 41 36.9	+1.5
	comp=Z,31nm,0.4s						
RAMN	Ramite	16.39	121	*e*P	Pn	08 41 45.1	+1.2
	comp=Z,40nm,0.7s						
BVAR	Borovoye Array	16.57	359	P	Pn	08 41 46.2	+0.7
	comp=Z,1.2nm,0.3s,baz=150,slow=10,SNR=17						
BRVK	Borovoye	16.60	359	*e*P	P	08 41 44.9	-0.2
	comp=Z,4.5nm,0.7s						
AKTO	Aktyubinsk	16.76	330	⇑P	Pn	08 41 47.6	-0.2
	comp=Z,14nm,0.8s						
AKTO	Aktyubinsk	16.76	330	P	Pn	08 41 48.0	+0.2
	comp=Z,1.4nm,0.3s,baz=138,slow=10,SNR=44						
NGP	Nagpur	16.84	153	*e*P	Pn	08 41 50.7	+1.6
TAPN	Taplejung	16.93	118	*e*P	Pn	08 41 52.6	+2.2
	comp=Z,22nm,0.7s						
ODAN	Odare	17.00	120	*e*P	Pn	08 41 53.2	+2.1
	comp=Z,27nm,0.6s						
POO	Poona	18.05	171	*e*P	P	08 42 00.6	-0.7
BOK	Bokaro	18.09	130	*e*P	Pn	08 42 02.8	-0.9
ZAA0	Zalesovo Array	20.00	25	*e*P	P	08 42 22.2	+0.2
	comp=Z,8.3nm,0.6s						
ZALV	Zalesovo Beam	20.00	25	*e*P	P	08 42 22.4	+0.5
ZALV	Zalesovo Beam	20.00	25	P	P	08 42 22.6	+0.7
	comp=Z,7.8nm,0.5s,baz=218,slow=12,SNR=31						
HYB	Hyderabad	20.15	158	*i* P	Pn	08 42 29.0	+0.6
HYB	Hyderabad	20.15	158	*e*P	P	08 42 26.2	+2.2
HYB				IAmb	IAmb	08 42 28.5	
	comp=Z,11nm,1.0s						
SHL	Shillong	21.00	115	*e*P	P	08 42 33.9	+0.9
	comp=Z,8.0nm,0.4s						
SHL	Shillong	21.00	115	*e*P	P	08 42 32.2	-0.8
SHL				IAmb	IAmb	08 42 36.2	
	comp=Z,6.5nm,1.1s						
GOA	Goa	21.05	172	*e*P	P	08 42 34.9	+1.5
MDRS	Chennai	24.77	158	*e*P	P	08 43 08.9	+0.4
LZH	Lanzhou	26.53	81	⇑P	P	08 43 26.9	+2.5
LZH				pP	pP	08 44 07.5	+3.7
LZH				PP	PnPn	08 44 21.2	+4.5
LZH				sP	PP	08 44 32.0	+3.9
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,52nm,4.8s						
TRD	Trivandrum	28.37	167	*e*P	P	08 43 39.9	-0.8
SONM	Songino Array	28.45	55	P	P	08 43 42.5	+1.2
	comp=Z,0.3nm,0.3s,baz=253,slow=10,SNR=3.4						
BRTR	Keskin Array B	29.34	288	P	P	08 43 49.3	0.0
	comp=Z,0.3nm,0.5s,baz=93,slow=8.7,SNR=2.5						
HHC	Hu-ho-hao-te	31.89	69	*e*P	P	08 44 13.3	+1.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,7.2s						
AKASG	Malin Array Be	32.88	309	P	P	08 44 20.7	+0.7
	comp=Z,0.5nm,0.4s,baz=83,slow=7.0,SNR=3.2						
KIEV	Kiev	32.89	309	*e*P	P	08 44 19.4	-0.7
	comp=Z,5.1nm,1.1s						
CMBY	CAMPBELL BAY	36.10	139	*e*P	P	08 44 47.0	-1.0
FIA1	FINESS Array S	37.45	326	*e*P	P	08 44 58.5	-0.4
FINES	FINESS Array B	37.45	326	P	P	08 44 59.2	+0.3
	comp=Z,2.5nm,0.6s,baz=99,slow=12,SNR=9.8						
LVZ	Lovozero	37.46	338	*e*P	P	08 44 59.0	+0.2
	comp=Z,34nm,1.6s						
KEV	Kevo	40.80	338	*e*P	P	08 45 26.8	+0.4
	comp=Z,25nm,1.4s						
ARCES	ARCESS Array B	41.14	338	P	P	08 45 29.9	+0.7
	comp=Z,5.5nm,0.6s,baz=111,slow=7.9,SNR=37						
ARE0	ARCESS Array S	41.14	338	*e*P	P	08 45 29.1	-0.1
	comp=Z,1.3nm,1.4s						
NB2	NORSAR Subarra	44.34	323	P	P	08 45 54.9	-0.3
	comp=Z,1.4nm,0.6s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.34	323	P	P	08 45 54.8	-0.4
	comp=Z,2.0nm,0.7s,baz=97,slow=7.7,SNR=8.5						
TIXI	Tiksi	45.86	22	*e*P	P	08 46 06.7	-0.2
	comp=Z,4.3nm,0.8s						
TIXI	Tiksi	45.86	22	P	P	08 46 07.0	+0.2
	comp=Z,4.0nm,0.3s,baz=272,slow=5.4,SNR=12						
SPA0	Spitsbergen Ar	47.51	347	*e*P	P	08 46 20.2	+0.6
	comp=Z,29nm,1.3s						
TOA0	Torodi Ar. Sit	65.60	269	*e*P	P	08 48 26.6	-1.5
TORD	Torodi Ar. Bea	65.60	269	P	P	08 48 25.4	-2.6
	comp=Z,2.0nm,0.5s,baz=48,slow=6.4,SNR=28						
IM3	Indian Mountai	72.25	18	*e*P	P	08 49 07.8	-0.4
INK	Inuvik	73.97	9	*e*P	P	08 49 18.5	+0.4
	comp=Z,2.4nm,0.8s						
CAST	Castle Rocks	74.76	19	*e*P	P	08 49 23.0	+0.1
	comp=Z,4.1nm,1.0s						
ILAR	Eielson Array	74.85	16	P	P	08 49 22.3	-1.0
	comp=Z,0.5nm,0.8s,baz=296,slow=5.0,SNR=8.2						
PPLA	Purkeypile	75.16	19	*e*P	P	08 49 25.2	-0.1
	comp=Z,29nm,1.6s						
DHY	Denali Highway	76.20	17	*e*P	P	08 49 30.7	-0.6
	comp=Z,13nm,1.6s						
SML	Sawmill	77.06	18	*e*P	P	08 49 35.5	-0.5
	comp=Z,15nm,1.3s						
YKA	Yellowknife Ar	81.29	3	P	P	08 49 58.4	-0.4
	comp=Z,0.6nm,0.4s,baz=351,slow=5.4,SNR=21						
YKB5	Yellowknife Ar	81.29	3	*e*P	P	08 49 58.6	-0.2
WRA	Warramunga Arr	82.07	122	P	P	08 50 02.1	-1.3
	comp=Z,0.3nm,0.4s,baz=324,slow=4.9,SNR=13						

WB2	Warramunga Arr	82.08	122	*e*P	P	08 50 02.3	-1.3
	comp=Z,6.6nm,1.5s						
WC3	Warramunga Arr	82.10	122	*e*P	P	08 50 02.8	-0.9
	comp=Z,3.5nm,1.3s						
ASAR	Alice Springs	84.33	125	P	P	08 50 14.4	-0.6
	comp=Z,0.3nm,0.5s,baz=326,slow=5.1,SNR=4.6						

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*KRSC **04** 08:48:25.1±2.0, 55°.47N×153°.30E, h41^{km}±83^{km}, ML4.3*
*MOS **04** 08:48:27.5±1.1, 55°.44N×153°.31E, h31^{km}, mb4.4/1, Error ellipse: s-maj=13.8km s-min=8.3km az=130.8*
ISC 04 08:48:31.0±2.8**, 55°.43N**±0°.06×**153°.4E**±0°.2**, h35^{km}, n40, σ1^{s}42**/50**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESO	Esso	3.03	78	*e*P	Pn	08 49 15.3	-1.1
ESO	Esso	3.03	78	PN	Pn	08 49 15.3	-1.1
GNL	Ganaly	3.16	122	*e*P	Pn	08 49 16.6	-1.6
GNL				*e*S	Sn	08 49 53.4	-1.3
GNL	Ganaly	3.16	122	PN	Pn	08 49 16.6	-1.6
GNL				S	Sn	08 49 53.4	-1.3
APC	Apacha	3.33	137	*e*P	Pn	08 49 20.3	-0.3
APC				*e*S	Sn	08 50 00.8	+1.9
APC	Apacha	3.33	137	PN	Pn	08 49 20.3	-0.3
APC				S	Sn	08 50 00.8	+1.9
SRDR	Sredinnyy	3.66	73	*e*P	Pn	08 49 24.8	-0.3
SRDR	Sredinnyy	3.66	73	PN	Pn	08 49 24.8	-0.3
KRX	Arik	3.69	122	*e*P	Pn	08 49 24.1	-1.6
KRX	Arik	3.69	122	PN	Pn	08 49 24.1	-1.6
KOK	Koryaka	3.73	123	*e*P	Pn	08 49 25.5	-0.6
KOK	Koryaka	3.73	123	PN	Pn	08 49 25.5	-0.6
KII	Karymskiy	3.77	109	*e*P	Pn	08 49 26.5	-0.1
KII	Karymskiy	3.77	109	PN	Pn	08 49 26.5	-0.1
AVH	Avacha	3.79	123	*e*P	Pn	08 49 27.3	+0.3
AVH	Avacha	3.79	123	PN	Pn	08 49 27.3	+0.3
KRMR	Karymshinskiy	3.80	131	*e*P	Pn	08 49 27.0	0.0
KRMR				*e*S	Sn	08 50 12.5	+2.1
KRMR	Karymshinskiy	3.80	131	PN	Pn	08 49 27.0	0.0
KRMR				S	Sn	08 50 12.5	+2.1
SMAR	Somma	3.83	122	*e*P	Pn	08 49 26.1	-1.4
SMAR	Somma	3.83	122	PN	Pn	08 49 26.1	-1.4
TUMR	Tumrok	3.84	89	*e*P	Pn	08 49 26.1	-1.6
TUMR	Tumrok	3.84	89	PN	Pn	08 49 28.5	+0.8
TUMR				S	Sn	08 50 15.1	+3.5
UGLR	Uglovaya	3.87	123	*e*P	Pn	08 49 27.6	-0.4
UGLR	Uglovaya	3.87	123	PN	Pn	08 49 27.6	-0.4
PET	Petropavlovsk	3.91	126	*e*PN	Pn	08 49 25.3	-3.1
PET				pmax	pmax		
	comp=Z,40nm,0.6s						
DALK	Dalny	3.95	125	*e*P	Pn	08 49 28.5	-0.5
DALK				*e*S	Sn	08 50 15.0	+1.0
DALK	Dalny	3.95	125	PN	Pn	08 49 28.5	-0.5
DALK				S	Sn	08 50 15.0	+1.0
TUMD	Tumrok D	4.00	90	*e*P	Pn	08 49 28.5	-1.2
TUMD				*e*S	Sn	08 50 15.1	-0.1
MTVR	Mutnovka	4.08	134	*e*P	Pn	08 49 29.4	-1.5
MTVR	Mutnovka	4.08	134	PN	Pn	08 49 29.4	-1.5
SRKR	Sorokina	4.52	71	*e*P	Pn	08 49 35.2	-1.7
SRKR	Sorokina	4.52	71	PN	Pn	08 49 35.2	-1.7
BDR	Baidarnaya	4.52	72	*e*P	Pn	08 49 35.8	-1.1
BDR	Baidarnaya	4.52	72	PN	Pn	08 49 35.8	-1.1
KDTR	Khodutka, Kamc	4.56	141	P	Pn	08 49 36.2	-1.3
KDTR	Khodutka, Kamc	4.56	141	PN	Pn	08 49 36.2	-1.3
SMKR	Semkarok	4.67	72	*e*P	Pn	08 49 36.4	-2.5
SMKR	Semkarok	4.67	72	PN	Pn	08 49 36.4	-2.5
PALN	Palana	5.11	41	P	Pn	08 49 45.0	+0.1
PALN	Palana	5.11	41	PN	Pn	08 49 45.0	+0.1

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*IDC **04** 08:48:30.8±3.2, 12°.91N×91°.00W, h0^{km}, mb3.3/4, mb1 3.7/6, mb1mx3.5/44, mbtmp3.3/6, ML3.2/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/24, Error ellipse: s-maj=49.7km s-min=29.7km az=135.0*
ISC 04 08:48:36.1±2.0**, 13°.1N**±0°.1×**91°.0W**±0°.1**, h33^{km}, n8, σ1^{s}59**/9**, mb3.4**/3**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	El Apazote	2.00	14	Pn	Pn	08 49 07.2	-0.6
	13nm,0.3s,baz=191,slow=12,SNR=48						
APG				Pg	Pb	08 49 11.2	-0.7
	15nm,0.3s,baz=212,slow=19,SNR=66						
APG				LR	LR	08 49 21.5	
	comp=Z,22nm,19.3s,baz=187,slow=24						
APG				Sn	Sb	08 49 36.7	+0.1
	13nm,0.3s,baz=269,slow=23,SNR=5.3						
CMIG	Matias Romero	5.52	317	Pn	Pn	08 49 53.6	-2.4
	0.4nm,0.3s,baz=142,slow=9.5,SNR=7.6						
CMIG				Sn	Sn	08 51 00.3	+1.9
	0.6nm,0.3s,baz=162,slow=20,SNR=2.6						
TXAR	Lajitas Array	20.04	326	P	P	08 53 06.0	-0.6
	0.5nm,0.8s,baz=155,slow=13,SNR=6.0						
ANMO	Albuquerque	25.92	330	LR	LR	09 05 23.5	
	comp=Z,154nm,18.2s,baz=32,slow=39						
NVAR	Mina Array Bea	35.04	321	P	P	08 55 28.2	+2.1
	0.3nm,0.6s,baz=126,slow=9.0,SNR=3.4						
RPN	Rapa Nui	43.74	204	LR	LR	09 08 32.2	
	comp=Z,32nm,20.8s,baz=18,slow=28						
YKA	Yellowknife Ar	52.17	346	P	P	08 57 43.0	-0.3
	0.3nm,0.7s,baz=143,slow=7.2,SNR=6.2						
ILAR	Eielson Array	64.10	337	P	P	08 59 07.0	+0.3
	0.4nm,0.9s,baz=178,slow=4.9,SNR=4.9						

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*ISCJB **04** 08:50:49.5±0.9, 7°.54S±0°.07×129°.19E±0°.08, h131^{km}, mb3.1/1, Error ellipse: s-maj=10.8km s-min=9.5km az=166.1*
*IDC **04** 08:50:51.3±2.1, 7°.53S×129°.13E, h144^{km}±25^{km}, mb2.9/1, mb1 3.5/5, mb1mx3.2/35, mbtmp3.8/5, Error ellipse: s-maj=25.1km s-min=20.0km az=114.0*
ISC 04 08:50:49.8±0.9**, 7°.58S**±0°.06×**129°.28E**±0°.10**, h131^{km}, n6, σ2^{s}59**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.14	244	P	Pn	08 52 19.6	+1.3
	5.9nm,0.3s,baz=68,slow=11,SNR=4.7						
BATI				S	Sn	08 53 26.1	-1.1
	6.2nm,0.3s,baz=79,slow=17,SNR=6.9						
SIJI	Sorong	6.95	17	P	Pn	08 52 30.5	+1.4
	baz=204,slow=20,SNR=6.4						
SIJI				S	Sn	08 53 43.2	-3.7
	1.3nm,0.3s,baz=143,slow=17,SNR=3.0						
FITZ	Fitzroy Crossi	11.04	198	P	Pn	08 53 24.7	+0.6
	0.8nm,0.3s,baz=24,slow=13,SNR=31						
FITZ				S	Sn	08 55 21.7	-4.2
	0.4nm,0.3s,baz=52,slow=20,SNR=4.1						
WRA	Warramunga Arr	13.23	159	P	Pn	08 53 54.0	+1.2
	0.6nm,0.3s,baz=332,slow=14,SNR=29						
WRA				S	Sn	08 56 16.5	-2.4
	0.8nm,0.3s,baz=339,slow=22,SNR=12						
ASAR	Alice Springs	16.60	165	P	P	08 54 38.0	+2.9
	0.3nm,0.3s,baz=338,slow=10,SNR=22						
ASAR				S	Sn	08 57 38.8	-1.2
	0.2nm,0.3s,baz=315,slow=16,SNR=6.0						
MKAR	Makanchi Array	68.32	327	P	P	09 01 36.1	-0.7
	0.2nm,0.5s,baz=125,slow=8.2,SNR=2.7						

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*GUC **04** 09:03:16.4±0.7, 36°.17S×72°.69W, h16^{km}±4^{km}, ML4.1*
ISC 04 09:03:11.0±3.1**, 36°.24S**±0°.09×**73°.1W**±0°.2**, h10^{km}, n16, σ2^{s}03**/24**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	0.88	114	*e*P	Pg	09 03 28.4	+0.4
CCHI				*i* S	Sg	09 03 36.5	-3.0
CCHI				IAML		09 03 48.2	
	comp=N,7μm,0.6s						
CHPI	Pichilemu	2.04	26	*e*P	Pn	09 03 47.1	+1.7
CHPI				*i* S	Sn	09 04 10.1	-0.9
LMEL	Las Melosas	3.35	45	*e*P	Pn	09 04 05.5	+1.8
LMEL				*i* S	Sn	09 04 43.7	+0.1
LMEL				IAML		09 04 57.3	
	comp=E,406nm,0.8s						
CLCH	Cerro Calan	3.52	37	*e*P	Pn	09 04 07.6	+1.7
CLCH				*i* S	Sn	09 04 46.8	-0.8
CLCH				IAML		09 05 04.3	
	comp=N,869nm,0.5s						
PEL	Peldehue	3.66	33	*e*P	Pn	09 04 09.4	+1.6
PEL				*e*S	Sn	09 04 50.8	-0.3
PEL				IAML		09 05 14.3	
	comp=E,303nm,0.3s						
ROC1	El Roble	3.67	28	*i* P	Pn	09 04 08.7	+0.6
ROC1				*i* S	Sb	09 05 02.9	+2.0
ROCH	El Roble	3.68	28	⇑*i*P	Pn	09 04 08.8	+0.6
ROCH				*i* S	Sn	09 04 51.6	-0.1
ROCH				IAML		09 05 11.3	
	comp=N,321nm,0.6s						
FCH	Farellones	3.70	39	*e*P	Pn	09 04 09.3	+0.7
FCH				*i* S	Sn	09 04 51.7	-0.7
FCH				IAML		09 05 09.8	
	comp=N,216nm,0.7s						
RFA	San Rafael	4.03	70	*e*P	Pn	09 04 16.7	+3.8
AAGR	Agrelo	4.71	49	*i* P	Pn	09 04 25.5	+3.3
ARCO	CERRO ARCO	4.81	46	*i* P	Pb	09 04 32.5	-3.1
ARCO				IAML		09 04 49.0	
	comp=Z,48nm,0.5s						
AUSP	Uspallata	5.04	38	*i* P	Pn	09 04 29.2	+2.3
ASAL	Salagasta	5.05	45	*i* P	Pn	09 04 30.0	+3.0
RTLS	Leoncito	5.43	36	*i* P	Pn	09 04 33.7	+1.4
RTLS				*e*S	Sb	09 05 52.4	+1.0
RTLS				IAML		09 06 04.1	
	comp=Z,44nm,0.6s						
AMOG	MOGNA	6.52	37	*i* P	Pn	09 04 40.6	-6.5
MRA	San Martin	7.18	60	*e*P	Pn	09 04 58.7	+2.5

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*ISCJB **04** 09:03:33.8±0.6, 22°.55S±0°.04×68°.1W±0°.1, h168^{km}±9^{km}, mb3.8/3, Error ellipse: s-maj=16.7km s-min=6.3km az=9.8*
*IDC **04** 09:03:33.6±0.9, 22°.50S×67°.79W, h137^{km}±20^{km}, mb3.7/3, mb1 3.6/6, mb1mx3.4/27, mbtmp4.1/6, Error ellipse: s-maj=38.0km s-min=17.8km az=103.0*
*GUC **04** 09:03:35.4±0.6, 22°.52S×68°.26W, h164^{km}±5^{km}, ML3.6*
ISC 04 09:03:33.8±1.0**, 22°.56S**±0°.05×**68°.0W**±0°.1**, h155^{km}**±12^{km}**, n20, σ1^{s}07**/35**, mb3.9**/3**, 9C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.87	267	P	Pn	09 03 58.7	+0.3
	91nm,0.3s,baz=83,slow=5.5,SNR=844						
LVC				S	Sn	09 04 16.4	-0.7
	60nm,0.3s,baz=114,slow=20,SNR=91						
LVC				LR	LR	09 04 34.6	
	comp=Z,91nm,21.4s,baz=26,slow=58						
PB09	IPOC Station P	1.40	303	⇑*i*P	Pn	09 04 04.1	+1.1
PB09				*i* S	Sn	09 04 25.3	0.0
PB09				IAML		09 04 27.7	
	comp=E,660nm,0.6s						
PB06	IPOC Station P	1.49	264	⇑*i*P	Pn	09 04 04.3	+0.5
PB06				*i* S	Sn	09 04 26.5	-0.2
PB06				IAML		09 04 29.5	
	comp=N,472nm,0.4s						
PB15	IPOC Station P	1.53	245	⇑*i*P	Pn	09 04 05.0	+0.8
PB15				*i* S	Sn	09 04 28.2	+0.7
PB03	IPOC Station P	1.73	287	⇑*i*P	Pn	09 04 06.9	+0.6
PB03				*i* S	Sn	09 04 30.5	-0.8
PB03				IAML		09 04 31.6	
	comp=N,700nm,0.4s						
PB07	IPOC Station P	1.96	295	⇑*i*P	Pn	09 04 09.8	+0.9
PB07				*i* S	Sn	09 04 35.2	-0.8
PB04	IPOC Station P	2.03	276	⇑*i*P	Pn	09 04 10.2	+0.5
PB04				*i* S	Sn	09 04 36.2	-1.1
PB04				IAML		09 04 40.1	
	comp=E,667nm,0.8s						
PB01	IPOC Station P	2.07	317	⇑*i*P	Pn	09 04 10.8	+0.7
PB01				*i* S	Sn	09 04 37.8	-0.2
PB01				IAML		09 04 39.5	
	comp=E,506nm,0.4s						
PB05	IPOC Station P	2.08	262	*e*P	Pn	09 04 10.5	+0.2
PB05				*i* S	Sn	09 04 37.2	-1.1
PB02	IPOC Station P	2.17	304	⇑*i*P	Pn	09 04 12.0	+0.6
PB02				*i* S	Sn	09 04 39.1	-1.2
PB02				IAML		09 04 43.9	
	comp=E,650nm,0.3s						
PB10	IPOC Station P	2.56	248	⇑*i*P	Pn	09 04 16.0	+0.1
PB10				*i* S	Sn	09 04 47.3	-1.1
PB08	IPOC Station P	2.65	335	⇓*i*P	Pn	09 04 19.1	+1.6
PB08				*i* S	Sn	09 04 52.5	+1.5
PB08				IAML		09 04 56.4	
	comp=E,190nm,0.5s						
PB14	IPOC Station P	3.03	227	*e*P	Pn	09 04 22.5	+0.5
PB14				*i* S	Sn	09 04 58.5	-0.9
PB11	IPOC Station P	3.20	330	*e*P	Pn	09 04 24.1	0.0
PB11				*i* S	Sn	09 05 02.4	-0.6
LPAZ	La Paz	6.24	359	P	Pn	09 05 05.2	+0.7
	comp=E,1.1nm,0.3s,baz=165,slow=6.8,SNR=25						
LPAZ				S	Sn	09 06 13.8	-1.4
	comp=E,0.1nm,0.3s,baz=297,slow=2.2,SNR=2.5						
SIV	San Ignacio	9.23	46	P	Pn	09 05 40.2	-3.4
	comp=E,5.9nm,0.3s,baz=244,slow=12,SNR=117						
SIV				S	Sn	09 07 17.7	-8.4
	comp=E,1.8nm,0.3s,baz=125,slow=20,SNR=9.2						
BDFB	Brasilia	20.06	73	P	P	09 07 54.6	-0.7
	comp=E,0.5nm,0.3s,baz=251,slow=14,SNR=4.2						
PTGA	Pitinga	23.06	21	P	P	09 08 25.2	-0.6
	comp=E,1.1nm,0.3s,baz=195,slow=9.0,SNR=3.9						
DBIC	Dimbokro	68.21	73	P	P	09 14 19.5	+1.4
	comp=E,1.3nm,0.5s,baz=224,slow=9.7,SNR=3.9						
TORD	Torodi Ar. Bea	76.90	70	P	P	09 15 10.0	+0.6
	comp=E,0.9nm,0.4s,baz=235,slow=5.7,SNR=22						

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*IDC **04** 09:12:44.8±1.5, 37°.49N×134°.92E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.4/46, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=36.5km s-min=23.7km az=115.0*
*JMA **04** 09:12:59.2±0.1, 35°.98N×140°.99E, h42^{km}±1^{km}, M3.3*
JMA Felt I J1.
ISC 04 09:12:55.8±1.6**, 36°.02N**±0°.04×**141°.16E**±0°.06**, h15^{km}**±10^{km}**, n16, σ0^{s}98**/24**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.40	218	P	Pn	09 13 07.4	+0.4
CHOJ				S	Sn	09 13 13.3	-0.9
JIHU	Itakohorinouch	0.52	264	P	Pn	09 13 08.9	+0.3
JIHU				S	Sn	09 13 16.3	-0.8
JHYU	Hitachinakayam	0.56	305	P	Pn	09 13 10.0	+0.8
JHYU				S	Sn	09 13 17.7	-0.6
JSMT	Sammumatsuo	0.69	237	P	Pn	09 13 11.4	+0.4
JHO	Hitachi	0.76	321	P	Pn	09 13 12.8	+0.9
JHO				S	Sn	09 13 22.8	-0.3
JYT	Yasato	0.81	285	P	Pn	09 13 12.4	-0.2
JYT				*e*S	Sg	09 13 22.0	-0.1
BSO3	Boso 3	1.33	204	P	Pb	09 13 20.5	+0.3
JFK	Kawauchi	1.36	350	P	Pg	09 13 21.8	-0.2
BSO1	Boso 1	1.37	186	P	Pb	09 13 21.2	+0.4
JAG	Ashikaga	1.44	287	P	Pn	09 13 21.4	+0.1
MJAR	Matsushiro Arr	2.44	283	Pn	Pn	09 13 32.8	-2.3
	0.5nm,0.3s,baz=286,slow=17,SNR=23						
MJAR				Sn	Sn	09 14 05.7	+1.0
	0.6nm,0.3s,baz=244,slow=36,SNR=6.2						
MAT	Matsushiro	2.44	283	P	Pn	09 13 36.6	+1.5
MAT				S	Sb	09 14 09.2	-0.1
ASAJ	Asahikawa	8.16	7	Pn	Pn	09 14 53.0	-0.6
	0.6nm,0.3s,baz=296,slow=7.3,SNR=4.1						
ASAJ				Sn	Sn	09 16 24.6	-0.9
	0.3nm,0.3s,baz=343,slow=20,SNR=3.1						
ILAR	Eielson Array	50.46	32	P	P	09 21 54.3	+1.7
	0.3nm,0.8s,baz=279,slow=5.3,SNR=4.2						
WRA	Warramunga Arr	56.03	188	P	P	09 22 32.6	-1.3
	0.3nm,0.3s,baz=3.1,slow=7.8,SNR=18						
ASAR	Alice Springs	59.76	188	P	P	09 22 59.5	-0.6
	0.3nm,0.8s,baz=344,slow=6.2,SNR=3.6						

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*NNC **04** 09:16:48.0±1.6, 50°.71N×73°.59E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=18.2km s-min=15.0km az=31.0, Suspected Mining explosion.*
*ISCJB **04** 09:16:49.6±1.0, 51°.1N±0°.1×74°.04E±0°.10, h0^{km}, Error ellipse: s-maj=17.7km s-min=7.6km az=15.4*
*IDC **04** 09:16:49.8±1.4, 50°.95N×73°.79E, h0^{km}, mb1 2.7/4, mb1mx2.6/44, mbtmp2.7/4, ML2.4/3, Error ellipse: s-maj=32.7km s-min=9.4km az=32.0*
ISC 04 09:16:51.5±1.7**, 51°.1N**±0°.1×**74°.0E**±0°.1**, h0^{km}, n14, σ1^{s}35**/10**, 6C-6D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR05	Kurchatov Arra	2.91	97	⇓Lg	Lg	09 18 24.7	
	37nm,1.1s						
KUR06	Kurchatov Arra	2.91	98	⇓Pn	Pn	09 17 38.8	-0.2
	2.9nm,0.9s						
KURBB	Kurchatov Arra	2.91	98	Pn	Pn	09 17 38.8	-0.2
	0.4nm,0.3s,baz=281,slow=14,SNR=21						
KURBB				Lg	Lg	09 18 24.5	
	0.3nm,0.3s,baz=278,slow=32,SNR=12						
BVA0	Borovoye Array	2.94	312	⇑Pn	Pn	09 17 38.9	-0.6
	baz=75,slow=56,SNR=16						
BVA0				⇑Lg	Lg	09 18 19.7	
	29nm,0.8s,baz=115,slow=32,SNR=18						
BVAR	Borovoye Array	2.94	312	Pn	Pn	09 17 37.9	-1.6
	0.6nm,0.3s,baz=129,slow=14,SNR=12						
BVAR				Lg	Lg	09 18 22.3	
	1.6nm,0.3s,baz=118,slow=20,SNR=11						
KURK	Kurchatov	2.95	96	⇑Pn	Pn	09 17 41.5	+2.0
	5.3nm,1.1s						
KURK				⇑Lg	Lg	09 18 25.6	
	52nm,0.8s						
BRVK	Borovoye	3.02	312	⇓Pn	Pn	09 17 40.1	-0.3
	3.7nm,0.7s						
BRVK				⇑Lg	Lg	09 18 21.4	
	77nm,0.9s						
OTUK	Ortayu	3.06	201	⇓Pg	Pn	09 17 34.0	-7.1
	4.5nm,0.6s						
OTUK				⇑Lg	Lg	09 18 12.0	
	31nm,0.8s						
MK31	Makanchi Array	6.96	125	⇓Pg	Pb	09 18 53.4	+0.2
	0.6nm,0.6s,baz=297,slow=13,SNR=4.5						
MK31				⇓Lg	Lg	09 20 26.9	
	26nm,1.1s,baz=311,slow=25,SNR=6.9						
MKAR	Makanchi Array	6.96	125	Pn	Pn	09 18 32.3	-2.3
	0.1nm,0.3s,baz=304,slow=12,SNR=3.1						
MKAR				Lg	Lg	09 20 29.7	
	0.4nm,0.3s,baz=311,slow=26,SNR=11						
I46RU	ZALESOVO INFRA	7.19	62	*i*		10 03 40.0	
	baz=245,slow=330,SNR=1.2						
ZALV	Zalesovo Beam	7.19	62	Pn	Pn	09 18 38.5	+0.8
	baz=225,slow=11,SNR=2.6						
ZALV				Sn	Sn	09 20 00.3	+0.2
	0.2nm,0.3s,baz=241,slow=15,SNR=2.5						
AAK	Ala-Archa	8.47	178	Lg	Lg	09 21 14.1	
	0.3nm,0.3s,baz=68,slow=19,SNR=7.2						
AKTO	Aktyubinsk	10.15	272	Lg	Lg	09 22 04.2	
	0.1nm,0.3s,baz=240,slow=14,SNR=2.7						

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*NIED **04** 09:18:00, 40°.40N×142°.30E, h44^{km}, Mw4.1 Best double couple: $M_0$1.41000×10^{15} NP1:ϕ_s180.00000°, δ17.00000°, λ65.00000°. NP2:ϕ_s26.00000°, δ75.00000°, λ97.00000°.*
*ISCJB **04** 09:18:42.7±0.7, 40°.38N±0°.03×142°.26E±0°.08, h57^{km}±4^{km}, mb4.0/19, MS4.2/1, Error ellipse: s-maj=9.6km s-min=5.7km az=7.7*
*JMA **04** 09:18:43.4±0.1, 40°.38N×142°.29E, h40^{km}±1^{km}, M4.1*
JMA Felt II J1.
*IDC **04** 09:18:45.8±1.8, 40°.31N×142°.17E, h74^{km}±15^{km}, mb3.7/20, mb1 3.8/25, mb1mx3.7/45, mbtmp4.0/25, MS3.1/7, Ms1 3.1/7, ms1mx3.0/54, Error ellipse: s-maj=17.0km s-min=10.9km az=116.0*
ISC 04 09:18:44.1±1.0**, 40°.36N**±0°.04×**142°.19E**±0°.07**, h53^{km}**±8^{km}**, n51, σ1^{s}31**/54**, mb4.2**/25**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.39	248	P	Pn	09 18 53.7	-0.6
JKEN				*e*S	Sn	09 19 01.0	-0.7
JTH	Tanohata	0.48	211	P	Pn	09 18 54.7	-0.6
JTH				S	Sn	09 19 02.8	-0.6
JANG	Nango	0.51	272	P	Pn	09 18 55.4	-0.3
JANG				S	Sn	09 19 03.8	-0.2
JKZ	Kuzumaki	0.75	241	P	Pn	09 18 59.0	+0.3
JKZ				S	Sn	09 19 10.0	+0.7
JARK	Aomorirokkasho	0.90	317	P	Pn	09 19 00.0	-0.5
JARK				S	Sn	09 19 11.8	-0.8
JTM	Tenmabayashi	0.95	297	P	Pn	09 19 01.0	-0.2
JTM				S	Sn	09 19 14.0	+0.1
JOM	Ohasama	1.12	218	P	Pn	09 19 04.0	+0.6
JOM				*e*S	Sn	09 19 18.7	+0.9
JAH	Hinai	1.20	263	P	Pn	09 19 05.2	+0.7
JAH				S	Sn	09 19 20.4	+0.7
JOT	Ohata	1.34	320	P	Pn	09 19 05.8	-0.6
JOT				S	Sn	09 19 23.2	0.0
ASAJ	Asahikawa	3.77	4	P	Pn	09 19 40.6	+0.9
	5.9nm,0.3s,baz=201,slow=8.6,SNR=14						
ASAJ				S	Sn	09 20 27.2	+4.5
	7.0nm,0.3s,baz=300,slow=8.7,SNR=4.4						
ASAJ				LR	LR	09 21 43.7	
	comp=Z,158nm,19.9s,baz=178,slow=46						
MAT	Matsushiro	4.92	221	P	Pn	09 19 59.0	+3.5
MAT				S	Sn	09 20 53.1	+1.9
MJAR	Matsushiro Arr	4.92	221	P	Pn	09 19 56.8	+1.3
	0.3nm,0.3s,baz=30,slow=13,SNR=24						
MJAR				LR	LR	09 21 57.4	
	comp=Z,110nm,19.7s,baz=35,slow=39						
USRK	Ussuriysk Ar.	8.48	300	P	Pn	09 20 45.2	+1.1
	1.6nm,0.3s,baz=102,slow=15,SNR=27						
KSRS	Korea Array	11.49	260	P	Pn	09 21 28.4	+3.1
	0.1nm,0.3s,baz=69,slow=13,SNR=3.4						
KSRS				LR	LR	09 25 29.0	
	comp=Z,85nm,19.4s,baz=70,slow=35						
KLR	Kul'dur	11.55	324	P	Pn	09 21 27.8	+1.7
	0.1nm,0.3s,baz=128,slow=13,SNR=3.8						
KLR				LR	LR	09 26 31.4	
	comp=Z,66nm,18.3s,baz=61,slow=40						
JNU	Nakatsue	11.59	235	LR	LR	09 26 20.4	
	comp=Z,57nm,21.9s,baz=299,slow=39						
PETK	Petropavlovsk-	16.56	34	LR	LR	09 28 12.7	
	comp=Z,71nm,21.9s,baz=13,slow=34						
MA2	Magadan	19.98	13	P	P	09 23 11.8	0.0
	3.2nm,0.5s,baz=169,slow=16,SNR=2.4						
SEY	Seymchan	23.42	12	P	P	09 23 48.2	0.0
	1.7nm,0.6s,baz=195,slow=10,SNR=5.8						
SONM	Songino Array	26.59	298	P	P	09 24 16.3	-1.0
	0.8nm,0.4s,baz=94,slow=8.0,SNR=8.9						
H11N2	WAKE ISLAND Hy	29.49	127	T	T	09 56 06.3	
	baz=320,slow=75						
H11N1	WAKE ISLAND Hy	29.50	127	T	T	09 56 08.0	
	baz=320,slow=75						
H11N3	WAKE ISLAND Hy	29.51	127	T	T	09 56 10.3	
	baz=320,slow=75						
H11S1	WAKE ISLAND Hy	30.31	129	T	T	09 57 12.5	
	baz=319						
H11S3	WAKE ISLAND Hy	30.31	129	T	T	09 57 19.7	
	baz=319,slow=74						
H11S2	WAKE ISLAND Hy	30.33	129	T	T	09 57 14.0	
	baz=319,slow=74						
ZALV	Zalesovo Beam	40.20	310	P	P	09 26 14.7	-0.3
	3.3nm,0.4s,baz=92,slow=8.1,SNR=15						
MKAR	Makanchi Array	42.95	299	P	P	09 26 37.7	0.0
	3.2nm,0.7s,baz=85,slow=9.8,SNR=26						
MKAR				PcP	PcP	09 28 24.9	-2.5
	0.5nm,0.7s,baz=98,slow=4.4,SNR=2.7						
CMAR	Chiang Mai Arr	43.00	252	P	P	09 26 37.5	-0.9
	0.9nm,0.3s,baz=52,slow=5.8,SNR=3.2						
ILAR	Eielson Array	46.39	34	P	P	09 27 04.8	+0.1
	0.3nm,0.6s,baz=274,slow=5.8,SNR=5.8						
JIRN	Jiri	47.40	273	*e*P	P	09 27 13.9	+0.3
	8.5nm,0.5s						
RAMN	Ramite	47.45	271	*e*P	P	09 27 15.7	+1.8
	12nm,0.7s						
GUN	Gumba	47.51	273	*e*P	P	09 27 14.9	+0.5
	28nm,0.7s						
KKN	Kakani	48.02	273	*e*P	P	09 27 19.6	+1.3
	19nm,0.7s						
DANN	Dangsing	48.90	275	*e*P	P	09 27 26.0	+0.9
	21nm,0.5s						
PYUN	Piuthan	49.61	275	*e*P	P	09 27 33.2	+2.7
	12nm,0.7s						
INK	Inuvik	51.17	28	P	P	09 27 41.3	0.0
	0.4nm,0.4s,baz=281,slow=12,SNR=5.2						
AKTO	Aktyubinsk	56.94	311	P	P	09 28 22.8	-0.9
	2.5nm,0.7s,baz=59,slow=12,SNR=10						
WRA	Warramunga Arr	60.43	188	P	P	09 28 47.0	-1.2
	0.5nm,0.6s,baz=7.6,slow=6.9,SNR=16						
YKA	Yellowknife Ar	60.65	31	P	P	09 28 48.0	-1.1
	0.3nm,0.9s,baz=299,slow=6.3,SNR=3.4						
ARCES	ARCESS Array B	61.11	339	P	P	09 28 51.6	-0.7
	1.4nm,0.6s,baz=71,slow=8.7,SNR=6.8						
GEYT	Alibeck	62.79	298	P	P	09 29 03.8	-0.2
	1.1nm,0.4s,baz=29,slow=3.3,SNR=3.2						
ASAR	Alice Springs	64.16	188	P	P	09 29 12.2	-0.9
	0.6nm,0.7s,baz=10,slow=5.8,SNR=7.6						
FINES	FINESS Array B	66.17	332	P	P	09 29 24.9	-0.7
	3.4nm,0.7s,baz=54,slow=9.7,SNR=9.2						
KBZ	Khabaz	69.22	310	P	P	09 29 45.0	-0.1
	3.2nm,0.8s,baz=231,slow=22,SNR=5.7						

NB2	NORSAR Subarra	71.36	337	P	P	09 29 58.0	0.0
	comp=Z,1.3nm,0.6s,baz=38,slow=6.2						
NOA	NORSAR Array B	71.36	337	P	P	09 29 58.0	0.0
	comp=Z,1.6nm,0.6s,baz=38,slow=6.0,SNR=7.7						
AKASG	Malin Array Be	72.05	322	P	P	09 30 02.1	-0.1
	comp=Z,2.3nm,0.5s,baz=43,slow=5.9,SNR=14						
PDAR	Pinedale Array	74.92	46	P	P	09 30 20.2	+0.5
	comp=Z,0.2nm,0.4s,baz=150,slow=1.2,SNR=3.7						
BRTR	Keskin Array B	77.11	311	P	P	09 30 31.6	-0.4
	comp=Z,0.6nm,0.5s,baz=67,slow=3.2,SNR=4.2						
EIL	Elat	83.07	303	LR	LR	10 12 17.5	
	comp=Z,100nm,18.8s,baz=316,slow=39						

IDC ***04*** *09:33:14.6±0.5, 0°.59N×126°.21E, h0^{km}, mb4.4/18, mb1 4.4/20, mb1mx4.3/33, mbtmp4.3/20, ML3.6/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/47, Error ellipse: s-maj=27.0km s-min=10.3km az=75.0*

NEIC ***04*** *09:33:16.4±0.2, 0°.63N×126°.21E, h10^{km}, mb4.7/27, Error ellipse: s-maj=7.5km s-min=4.4km az=65.0*

DJA ***04*** *09:33:18.8±0.8, 1°N±4°×12°6E±°, h16^{km}±10^{km}, M4.5/15, mb4.6/8, mB5.6/1, MLv4.5/15, Mw(mB)5.1/1*

ISCJB ***04*** *09:33:19.6±0.2, 0°.60N±0°.03×126°.31E±0°.03, h47^{km}, mb4.5/50, MS3.6/2, Error ellipse: s-maj=5.1km s-min=4.1km az=148.4*

ISC 04 09:33:21.6±0.4**, 0°.66N**±0°.05×**126°.39E**±0°.05**, h47**^{km}**, n121, σ1^{s}.53**/119**, mb4.5**/50**, 2C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.98	84	*e*Pg	Pn	09 33 39.0	0.0
TNTI				*e*Sg	Sn	09 33 53.5	+1.6
TNTI	Ternate	0.98	84	P	Pn	09 33 39.0	0.0
KMSI	Cibinong	2.41	268	P	Pn	09 33 54.9	-3.8
SANI	Sanana	2.72	189	P	Pn	09 34 01.1	-1.8
NLAI	Namlea	3.94	170	P	Pn	09 34 18.0	-1.6
LUWI	Luwuk	4.00	245	*e*Pn	Pn	09 34 15.4	-5.0
LUWI	Luwuk	4.00	245	P	Pn	09 34 12.2	-8.2
MRSI	Marisa	4.46	268	P	Pn	09 34 26.5	-0.2
APSI	Ampana	5.00	252	P	Pn	09 34 34.3	+0.2
SIJI	Sorong	5.11	107	Pn	Pn	09 34 36.1	+0.5
	1.5nm,0.3s,baz=292,slow=11,SNR=2.7						
SIJI				LR	LR	09 37 07.1	
	comp=Z,439nm,19.9s,baz=330,slow=44						
KDI	Kendari	5.94	219	P	Pn	09 34 45.4	-1.7
	32nm,0.6s,0.2nm						
BNDI	Bandanaira	6.23	146	P	Pn	09 34 49.8	-1.3
	76nm,0.6s,0.3nm						
KCP	Kidapawan	6.44	348	⇑*i*P	Pn	09 34 59.9	+5.9
MPSI	Mapaga	6.50	267	P	Pn	09 34 54.9	+0.1
	28nm,0.9s,0.1nm						
FAKI	Fak Fak	6.85	121	*e*Pn	Pn	09 35 00.0	+0.4
FAKI	Fak Fak	6.85	121	P	Pn	09 35 01.2	+1.6
	21nm,0.8s,0.1nm						
CTBH	Cotabato--PC H	6.86	342	⇑*i*P	Pn	09 35 00.2	+0.5
TTSI	Tana Toraja	7.53	241	P	Pn	09 35 06.0	-3.0
	60nm,0.6s,4µm0.2nm						
BNSI	Bone	8.05	231	P	Pn	09 35 10.5	-5.5
SPSI	Sidrap Palu	8.06	235	P	Pn	09 35 14.7	-1.5
	33nm,0.7s						
BKSI	Bulukumba	8.63	226	P	Pn	09 35 26.3	+2.2
EDFI	Ende, Flores	10.46	207	P	Pn	09 35 59.2	+10
WSI	Waingapu	11.92	210	P	Pn	09 36 18.4	+9.3
MTN	Manton Dam	14.22	161	*e*Pn	Pn	09 36 37.5	-2.9
KMMI	Kalianget	14.57	238	P	P	09 36 58.6	+8.0
PWJI	Pagerwojo	16.91	239	P	P	09 37 20.5	+3.9
FITZ	Fitzroy Crossi	18.66	182	*e*P	P	09 37 32.4	-3.4
	2.8nm,0.8s						
FITZ	Fitzroy Crossi	18.66	182	P	P	09 37 32.4	-3.4
	0.2nm,0.3s,baz=23,slow=10.0,SNR=4.4						
KPJI	Karang Pucung	19.14	245	P	Pn	09 37 46.5	+4.1
WRAB	Tennant Creek	21.90	160	*e*P	P	09 38 10.5	-0.5
	24nm,0.9s						
WR1	Warramunga Arr	21.91	160	*e*P	P	09 38 09.3	-1.7
	29nm,0.9s						
WRA	Warramunga Arr	21.91	160	P	P	09 38 09.3	-1.7
	7.3nm,0.5s,baz=338,slow=11,SNR=76						
WRA				PcP	PcP	09 42 09.7	+0.6
	0.4nm,0.6s,baz=316,slow=2.3,SNR=3.2						
WB2	Warramunga Arr	21.91	160	*e*P	P	09 38 10.0	-1.1
WB2				*e*P	P	09 38 10.7	-0.5
WC3	Warramunga Arr	21.93	160	*e*P	P	09 38 10.5	-0.9
	29nm,0.8s						
COEN	Coen	22.07	132	*e*P	P	09 38 13.3	+0.4
	9.5nm,1.0s						
GUMO	Guam	22.35	54	LR	LR	09 47 22.7	
	comp=Z,30nm,18.2s,baz=230,slow=38						
MDSI	Maura Dua	22.78	257	P	P	09 38 25.1	+4.7
AS31	Alice Springs	25.26	164	*e*P	P	09 38 44.5	+0.9
	3.7nm,0.4s						
ASAR	Alice Springs	25.26	164	P	P	09 38 43.2	-0.4
	3.4nm,0.3s,baz=344,slow=13,SNR=51						
ASAR				PcP	PcP	09 42 16.6	+0.4
	0.4nm,0.5s,baz=336,slow=2.5,SNR=3.2						
ASAR				S	S	09 43 09.2	+2.8
	0.5nm,0.8s,baz=349,slow=17,SNR=2.7						
AS01	Alice Springs	25.27	164	*e*P	P	09 38 43.6	-0.2
JOW	Kunigami	26.08	4	P	P	09 38 50.8	-0.2
	1.6nm,0.6s,baz=178,slow=12,SNR=2.8						
SKNT	Sakolnakorn	27.38	308	P	P	09 39 05.3	+2.5
	2.8nm,1.1s						
NJ2	Nanjing	32.02	348	*e*P	P	09 39 44.1	+0.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI	Kunming	33.37	319	P	P	09 39 57.2	+1.2
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
KMI				pmax	pmax		
	comp=Z,100nm,4.0s						
ENH	Enshi	33.55	333	*e*P	P	09 39 56.8	-0.4
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	35.42	157	*e*P	P	09 40 14.1	+0.8
	comp=Z,1.0nm,0.6s						
STKA	Stephens Creek	35.42	157	P	P	09 40 13.3	0.0
	comp=Z,2.8nm,0.5s,baz=331,slow=12,SNR=15						
KSAR	Wonju Array Be	36.62	2	P	P	09 40 24.3	+0.8
KSAR				PcP	PcP	09 42 45.0	-1.0
KSRS	Korea Array	36.64	2	P	P	09 40 24.3	+0.7
	comp=Z,2.8nm,0.7s,baz=188,slow=10,SNR=8.0						
KSRS				PcP	PcP	09 42 45.0	-1.0
	comp=Z,1.9nm,0.8s,baz=199,slow=2.6,SNR=4.2						
CD2	Chengdu	36.96	327	*e*P	P	09 40 26.6	+0.1
XAN	Xi'an	37.02	336	P	P	09 40 26.6	-0.4
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,300nm,6.5s						
XAN	Xi'an	37.02	336	*e*P	P	09 40 23.9	-3.2
	comp=Z,9.5nm,1.1s						
MAJO	Matsushiro	37.34	16	*e*P	P	09 40 29.0	-0.7
MAT	Matsushiro	37.34	16	P	P	09 40 29.8	+0.1
MJAR	Matsushiro Arr	37.34	16	P	P	09 40 29.0	-0.7
	comp=Z,6.4nm,0.9s,baz=196,slow=9.4,SNR=10.0						
LZH	Lanzhou	41.00	332	*e*P	P	09 41 01.7	+1.3
LZH				pP	pP	09 41 06.3	-6.1
LZH				sP	pwP	09 41 08.8	-6.5
LZH				*e*PP	PnPn	09 42 40.1	-0.2
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,76nm,5.4s						
LZH				LR	LR		
	comp=N,350nm,13.2s						
LZH				LR	LR		
	comp=E,370nm,13.5s						
LZH				LR	LR		
	comp=Z,450nm,16.7s						
HHC	Hu-ho-hao-te	42.20	343	*e*P	P	09 41 11.8	+1.7
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,4.0s						
CN2	Changchun	42.96	359	*e*P	P	09 41 18.4	+2.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
USRK	Ussuriysk Ar.	43.63	6	P	P	09 41 22.2	+0.7
	comp=Z,10nm,0.9s,baz=181,slow=5.8,SNR=12						
GTA	Gaotai	45.57	331	*e*P	P	09 41 31.2	-6.0
GTA				pP	pP	09 41 35.6	-14
GTA				sP	pwP	09 41 38.6	-14
GTA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ODAN	Odare	45.63	308	*e*P	P	09 41 37.7	-0.3
	comp=Z,7.0nm,0.5s						
RAMN	Ramite	46.29	308	*e*P	P	09 41 43.3	0.0
	comp=Z,9.2nm,0.5s						
JIRN	Jiri	46.94	308	*e*P	P	09 41 47.9	-0.6
GUN	Gumba	47.30	309	*e*P	P	09 41 50.4	-0.9
PKI	Pulchoki	47.52	308	*e*P	P	09 41 52.6	-0.3
KOLN	Koldanda	49.04	307	*e*P	P	09 42 04.2	-0.3
	comp=Z,41nm,1.1s						
DANN	Dangsing	49.17	308	*e*P	P	09 42 04.5	-1.1
	comp=Z,18nm,0.7s						
HYB	Hyderabad	49.90	292	*i* P	P	09 42 11.0	0.0
SONA0	Songino Array	50.09	343	*e*P	P	09 42 11.5	-0.6
SONM	Songino Array	50.09	343	P	P	09 42 11.5	-0.6
	comp=Z,2.5nm,0.8s,baz=158,slow=8.6,SNR=9.9						
SONA1	Songino Array	50.10	343	*e*P	P	09 42 12.2	+0.1
WMQ	Urumqi	55.05	326	*e*P	P	09 42 51.1	+2.3
WMQ				sP	pP	09 42 58.1	-3.2
WMQ	Urumqi	55.05	326	*e*P	P	09 42 45.5	-3.3
	comp=Z,16nm,1.0s						
PETK	Petropavlovsk-	58.38	22	P	P	09 43 12.3	+0.2
	comp=Z,14nm,1.0s,baz=188,slow=8.0,SNR=4.9						
PEA1	Petropavlovsk-	58.39	22	*e*P	P	09 43 12.3	+0.1
TARG	Taragay, Kyrgy	59.82	320	*e*P	P	09 43 22.5	-0.4
	comp=Z,5.2nm,1.0s						
MK01	Makanchi Array	59.87	326	*e*P	P	09 43 21.8	-0.9
MK31	Makanchi Array	59.89	326	*e*P	P	09 43 21.9	-0.9
MK32	Makanchi Array	59.89	326	*e*P	P	09 43 21.7	-1.1
MKAR	Makanchi Array	59.89	326	*e*P	P	09 43 21.9	-0.9
	comp=Z,38nm,0.9s						
MKAR	Makanchi Array	59.89	326	P	P	09 43 21.7	-1.1
	comp=Z,4.7nm,0.7s,baz=121,slow=8.1,SNR=52						
KSH	Kashi	59.99	316	P	P	09 43 24.5	+0.7
KSH				sP	pP	09 43 34.7	-1.5
KSH				pmax	pmax		
	comp=Z,500nm,6.3s						
MAKZ	Makanchi	60.07	326	*e*P	P	09 43 23.3	-0.7
	comp=Z,11nm,1.1s						
NRN	Naryn	60.86	318	*e*P	P	09 43 29.5	-0.4
	comp=Z,3.9nm,0.8s						
AAK	Ala-Archa	62.42	319	*e*P	P	09 43 38.1	-2.1
	comp=Z,3.6nm,0.9s						
KBL	Kabul	63.14	309	*e*P	P	09 43 41.1	-4.1
	comp=Z,7.6nm,0.9s						
ZAA0	Zalesovo Array	63.16	334	*e*P	P	09 43 43.8	-0.9
	comp=Z,3.4nm,1.0s						
ZALV	Zalesovo Beam	63.16	334	P	P	09 43 42.8	-1.8
	comp=Z,1.3nm,0.4s,baz=116,slow=6.8,SNR=9.7						
ZAA1	Zalesovo Array	63.17	334	*e*P	P	09 43 42.8	-1.9
GAR	Garm	63.77	314	*e*P	P	09 43 49.0	-0.1
	comp=Z,37nm,1.2s						
BTK	Batken	63.82	315	*e*P	P	09 43 49.2	-0.2
KURK	Kurchatov	64.15	328	*e*P	P	09 43 50.6	-0.6
	comp=Z,20nm,0.9s						
CHGR	Chuyangaron	64.48	313	*e*P	P	09 43 54.2	+0.4
	comp=Z,18nm,1.0s						
KK31	Karatay Array	65.25	318	*e*P	P	09 43 59.1	+0.5
	comp=Z,2.3nm,0.9s						
KKAR	Karatay Array	65.25	318	*e*P	P	09 43 59.1	+0.5
	comp=Z,2.3nm,0.9s						
CASY	Casey	67.75	187	*e*P	P	09 44 14.3	+0.2
	comp=Z,14nm,0.8s						
TIXI	Tiksi	70.89	1	*e*P	P	09 44 33.6	+0.2
	comp=Z,5.2nm,1.1s						
GEYT	Alibeck	72.56	310	P	P	09 44 44.4	+0.2
	comp=Z,3.0nm,0.8s,baz=153,slow=4.8,SNR=4.5						
NRIK	Noril'sk	73.31	347	P	P	09 44 47.8	-0.1
	comp=Z,8.0nm,0.8s,baz=88,slow=4.3,SNR=5.6						
ABKAR	Akbulak array	74.31	321	*e*P	P	09 44 53.9	-0.3
	comp=Z,2.7nm,0.8s						
GAMB	Gambell	77.32	24	*e*P	P	09 45 13.5	+2.5
	comp=Z,5.5nm,0.9s						
ARU	Arti	77.34	328	*e*P	P	09 45 11.2	-0.1
	comp=Z,10nm,0.8s						
KBZ	Khabaz	84.83	314	P	P	09 45 51.0	-0.4
	comp=Z,2.3nm,0.9s,baz=135,slow=2.9,SNR=3.4						
RSO	Redoubt South	84.91	29	*e*P	P	09 45 53.3	+1.6
SPU	Mount Spurr	85.34	29	*e*P	P	09 45 51.8	-1.9
COLD	Coldfoot	86.83	23	*e*P	P	09 46 02.8	+1.9
	comp=Z,2.9nm,1.2s						
KLMR	Klimovskoe	87.90	331	*e*P	P	09 46 03.3	-2.8
KLMR				AMP		09 46 12.9	
	comp=Z,17nm,1.4s						
ILAR	Eielson Array	88.00	25	P	P	09 46 05.5	-1.1
	comp=Z,0.6nm,0.5s,baz=241,slow=5.1,SNR=18						
ILB	Eielson Array	88.00	25	*e*P	P	09 46 05.5	-1.1
BR101	Keskin Array S	91.70	310	*e*P	P	09 46 23.9	-0.8
BRTR	Keskin Array B	91.70	310	P	P	09 46 23.9	-0.8
	comp=Z,0.6nm,0.7s,baz=119,slow=5.4,SNR=4.2						
ARA0	ARCESS Array S	93.19	340	*e*P	P	09 46 30.8	+0.1
ARCES	ARCESS Array B	93.19	340	P	P	09 46 30.8	+0.2
	comp=Z,2.7nm,0.9s,baz=69,slow=4.9,SNR=3.5						
AKASG	Malin Array Be	94.04	321	P	P	09 46 35.4	+0.5
	comp=Z,0.1nm,0.3s,baz=67,slow=2.6,SNR=2.8						
BUR04	Bucovina Ar. S	97.05	318	*e*P	Pdif	09 46 49.0	+0.1
YKA	Yellowknife Ar	102.41	25	Pdiff	Pdif	09 47 13.2	+0.9
	comp=Z,0.3nm,0.8s,baz=296,slow=4.2,SNR=5.1						
TOA0	Torodi Ar. Sit	123.50	286	*e*PKPdf	PKiKP	09 52 15.2	0.0
TORD	Torodi Ar. Bea	123.50	286	PKP	PKPdf	09 52 14.1	-0.9
	comp=Z,1.1nm,0.8s,baz=342,slow=4.8,SNR=6.2						
TOA1	Torodi Ar. Sit	123.50	286	*e*PKPdf	PKPdf	09 52 14.1	-0.9
LTX	Lajitas	123.71	54	*e*PKPdf	PKiKP	09 52 16.1	+0.7
TXAR	Lajitas Array	123.71	54	PKP	PKiKP	09 52 16.1	+0.7
	comp=Z,0.4nm,0.7s,baz=205,slow=0.4,SNR=5.0						

ISCJB ***04*** *09:35:34.4±0.3, 24°.44N±0°.01×122°.02E±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=2.2km s-min=2.0km az=146.5*

JMA ***04*** *09:35:34.0±0.1, 24°.41N×121°.99E, h0^{km}, M3.7*

TAP ***04*** *09:35:35.1, 24°.45N×121°.97E, h13^{km}, ML3.8, B*

ISC 04 09:35:34.9±0.8**, 24°.44N**±0°.02×**122°.01E**±0°.02**, h13**^{km}±5^{km}**, n109, σ0^{s}.65**/163**, 16C-21D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.16	44	⇓P	Pb	09 35 39.5	-0.2
	baz=49						
EOS1				S	Sb	09 35 43.1	+0.2
	baz=49						
TWC	Suao	0.22	320	⇑*i*P	Pg	09 35 39.6	-0.3
	baz=335						
TWC				*i* S	Sg	09 35 42.1	-1.0
	baz=335						
ENA	Nanau	0.24	268	⇓*i*P	Pg	09 35 39.8	-0.3
	baz=270						
ENA				S	Sg	09 35 42.7	-1.0
	baz=270						
ILA	Ilan	0.40	324	P	Pg	09 35 43.2	+0.2
	baz=327						
ILA				S	Sg	09 35 48.4	0.0
	baz=327						
TWE	Neicheng	0.42	312	⇑*i*P	Pg	09 35 43.2	-0.1
	baz=319						
TWE				*e*S	Sg	09 35 47.7	-1.2
	baz=319						
NTC	Toucheng	0.45	339	*e*P	Pg	09 35 43.7	-0.1
	baz=351						
ENTT	Nioudou	0.45	297	⇑*i*P	Pg	09 35 43.8	-0.1
	baz=297						
ENTT				S	Sg	09 35 49.4	-0.5
	baz=297						
NACB	Ninganchiao	0.46	235	⇓P	Pg	09 35 43.6	-0.4
	baz=231						
NACB				S	Sg	09 35 49.7	-0.5
	baz=231						
NDT	Datong Townshi	0.48	290	⇓*i*P	Pg	09 35 44.4	0.0
	baz=290						
NDT				S	Sg	09 35 50.0	-0.9
	baz=290						
TWD	Chiawan	0.52	227	⇓*i*P	Pg	09 35 44.8	-0.4
	baz=228						
TWD				S	Sg	09 35 51.5	-0.5
	baz=228						
ETLH	Xiulin Townshi	0.53	245	⇓P	Pg	09 35 45.0	-0.5
	baz=242						
ETLH				*e*S	Sg	09 35 52.3	-0.2
	baz=242						
TIPB	Shuangxi	0.56	343	⇑*i*P	Pg	09 35 45.9	0.0
	baz=352						
TIPB				*e*S	Sg	09 35 53.7	+0.3
	baz=352						
NNSB	Datong	0.57	269	⇓P	Pg	09 35 45.8	-0.4
	baz=268						
NNSB				S	Sg	09 35 52.7	-1.0
	baz=268						
TWB1	Santiao Chiao	0.57	358	⇑*e*P	Pg	09 35 46.1	-0.1
	baz=352						
NWLT	Wulai	0.57	307	*e*P	Pg	09 35 46.1	-0.1
	baz=307						
NNS	Nan Shan	0.58	270	⇓*i*P	Pg	09 35 45.9	-0.4
	baz=269						
NNS				S	Sg	09 35 53.0	-1.0
	baz=269						
HWA	Hwalien	0.59	219	*e*P	Pb	09 35 47.3	+0.2
	baz=223						
YHNB	Yeheng	0.62	292	⇓P	Pg	09 35 47.1	0.0
	baz=297						
YHNB				S	Sg	09 35 54.1	-1.3
	baz=297						
NSK	Sanguang	0.64	292	⇓*i*P	Pg	09 35 47.3	-0.1
	baz=297						
NSK				S	Sg	09 35 54.6	-1.3
	baz=297						
ENLB	Shoufeng	0.65	215	*e*P	Pb	09 35 48.7	+0.6
	baz=219						
ENLB				*e*S	Sn	09 36 00.3	+0.4
	baz=219						
NWF	Wu-fen Shan	0.66	342	⇑*i*P	Pg	09 35 48.1	+0.2
	baz=332						
NWF				S	Sg	09 35 56.9	+0.2
	baz=332						
TWA	Mucha	0.66	325	⇑P	Pb	09 35 48.1	-0.3
	baz=326						
TWA				S	Sg	09 35 56.5	-0.2
	baz=326						
WFSB	Wu-fen Shan	0.66	342	P	Pb	09 35 48.2	-0.2
	baz=332						
WFSB				S	Sg	09 35 57.0	+0.3
	baz=332						
NHDH	Xindian Distri	0.68	320	*e*P	Pb	09 35 48.7	0.0
	baz=310						
NHDH				*e*S	Sg	09 35 56.9	-0.4
	baz=310						
TATO	Taipei	0.71	319	⇑P	Pb	09 35 49.3	0.0
	baz=309						
TATO				S	Sg	09 35 57.8	-0.5
	baz=309						
WHF	Hehuan Shan	0.74	247	⇓*i*P	Pg	09 35 48.9	-0.5
	baz=255						
WHF				S	Sg	09 35 59.0	-0.1
	baz=255						
TWT	Tachien	0.78	257	⇓P	Pg	09 35 50.0	-0.2
	baz=255						
TWT				S	Sg	09 35 59.9	-0.5
	baz=255						
TDCB	Techi	0.80	257	⇓P	Pg	09 35 50.3	-0.1
	baz=255						
TDCB				S	Sg	09 35 59.8	-1.1
	baz=255						
WLTB	Daxi	0.80	301	P	Pn	09 35 51.4	-0.5
	baz=301						
WLTB				S	Sb	09 36 01.3	-0.2
	baz=301						
YM01	YM01	0.81	331	⇑P	Pb	09 35 51.2	+0.3
	baz=331						
YM01				S	Sg	09 36 01.1	-0.2
	baz=331						
ESL	Shilin	0.81	220	⇓P	Pg	09 35 50.0	-0.7
	baz=225						
YM11	YM11	0.83	332	⇑P	Pb	09 35 51.5	+0.3
	baz=332						
YM11				*e*S	Sb	09 36 03.2	+0.9
	baz=332						
YM05	YM05	0.83	331	⇑P	Pb	09 35 51.4	+0.2
	baz=332						
YM05				*e*S	Sg	09 36 01.6	-0.3
	baz=332						
YM04	YM04	0.83	329	P	Pb	09 35 51.4	+0.1
	baz=330						
YM08	YM08	0.84	333	⇑P	Pg	09 35 51.2	0.0
	baz=334						
CHGB	Renai	0.85	244	⇓P	Pg	09 35 51.1	-0.4
	baz=251						
CHGB				S	Sg	09 36 02.3	-0.3
	baz=251						
TWS1	Kuangyinshan	0.85	321	⇑*i*P	Pn	09 35 52.5	-0.2
	baz=314						
TWS1				*e*S	Sb	09 36 03.3	+0.4
	baz=314						
JYNG	Yonagunijimaku	0.85	89	P	Pg	09 35 51.6	+0.1
JYNG				S	Sb	09 36 03.8	+0.8
NTST	Danshui	0.88	325	*e*P	Pn	09 35 53.0	0.0
	baz=326						
OWD	Renai	0.90	238	*e*P	Pg	09 35 51.5	-0.9
	baz=231						
TWY	Chenhua	0.91	336	⇑*e*P	Pg	09 35 53.0	+0.4
	baz=336						
TWY				*e*S	Sn	09 36 06.9	+0.4
	baz=336						
YOJ	Yonaguni jima	0.92	88	P	Pb	09 35 52.5	-0.1
	baz=89						
YOJ				S	Sn	09 36 06.2	-0.3
	baz=89						
YOJ	Yonaguni jima	0.92	88	P	Pb	09 35 52.4	-0.3
YOJ				*e*S	Sg	09 36 05.2	+0.6
NCU	National Centr	0.92	306	*e*P	Pn	09 35 53.5	0.0
	baz=305						
NCU				*e*S	Sn	09 36 05.5	-1.1
	baz=305						
NCUH	Zhongli	0.92	305	*e*P	Pn	09 35 53.5	0.0
	baz=295						
LIOB	Emei	0.93	283	⇓*i*P	Pg	09 35 52.9	0.0
	baz=283						
LIOB				S	Sb	09 36 04.3	-0.8
	baz=283						
EGFH	Guangfu	0.93	215	*e*P	Pb	09 35 52.6	-0.3
	baz=226						
NSTT	Nanjuang	0.94	282	⇓*i*P	Pg	09 35 53.2	+0.2
	baz=281						
NSTT				*i* S	Sb	09 36 04.7	-0.7
	baz=281						
WHP	Taichung City	0.98	261	⇓*i*P	Pg	09 35 54.0	+0.1
	baz=260						
WHP				S	Sb	09 36 06.5	-0.3
	baz=260						
SBCB	Hsinchu	0.99	291	P	Pn	09 35 55.6	+1.0
	baz=284						
SBCB				*e*S	Sn	09 36 09.3	+0.8
	baz=284						
HSN	Hsinchu	1.01	291	*e*P	Pg	09 35 54.5	0.0
	baz=287						
HSN				S	Sn	09 36 08.4	-0.5
	baz=287						
VWDT	VWDT	1.04	230	⇑P	Pb	09 35 54.7	-0.2
	baz=232						
VWDT				*e*S	Sg	09 36 08.8	0.0
	baz=232						
HGSD	Ruisui	1.08	210	*e*P	Pg	09 35 56.8	+1.0
	baz=209						
HGSD				*e*S	Sn	09 36 13.7	+3.0
	baz=209						
NMLH	Miaoli	1.11	275	*e*P	Pg	09 35 57.3	+0.9
	baz=275						
TWQ1	Liyutan	1.13	266	P	Pg	09 35 57.4	+0.7
	baz=265						
NSY	Sanyi	1.14	269	*e*P	Pg	09 35 57.8	+1.0
	baz=268						
SMLT	Sun Moon Lake	1.15	242	⇓P	Pn	09 35 56.9	0.0
	baz=247						
SMLT				S	Sb	09 36 11.3	-0.3
	baz=247						
SSLB	Suanglung	1.16	236	⇓P	Pb	09 35 56.5	-0.3
	baz=243						
SSLB				S	Sb	09 36 10.9	-0.9
	baz=243						
TYC	Yuchr	1.18	243	⇓P	Pn	09 35 56.9	-0.2
	baz=242						
PTSB	Yuanli	1.19	271	*e*P	Pg	09 35 58.5	+0.7
	baz=270						
PTSB				*e*S	Sg	09 36 14.4	+1.1
	baz=270						
PCYT	Pengchaiyu	1.19	3	*e*P	Pn	09 35 56.6	-0.7
	baz=1.0						
YULB	Yu-li	1.23	212	*e*P	Pn	09 35 57.2	-0.6
	baz=212						
TCU	Taichung	1.25	257	*e*P	Pg	09 35 59.3	+0.4
	baz=256						
TWF1	Yuli	1.26	211	*e*P	Pn	09 35 57.9	-0.4
	baz=226						
WHYT	Xinyi Township	1.29	235	*e*P	Pg	09 36 00.3	+0.6
	baz=235						
WJS	Zhushan	1.32	243	*e*P	Pg	09 36 01.4	+1.0
	baz=235						
WNT	Mingjian	1.33	246	*e*P	Pg	09 36 00.8	+0.2
	baz=239						
ALS	Alishan	1.44	230	*e*P	Pb	09 36 01.6	-0.1

	baz=230						
CHN5	Tsauling	1.48	236	⇑P	Pg	09 36 03.2	-0.1
	baz=236						
CHN5				eS	Sg	09 36 24.4	+1.9
	baz=236						
WDLH	Douliu	1.54	241	eP	Pg	09 36 04.6	+0.1
	baz=242						
ELDTW	Lidau	1.54	216	eP	Pb	09 36 02.9	-0.5
	baz=202						
IRIF	Iriomote-Funau	1.57	93	P	Pn	09 36 02.0	-0.5
IRIF				S	Sn	09 36 22.0	-0.8
RLNB	Erlin	1.60	250	eP	Pg	09 36 04.9	-0.8
	baz=262						
CHN2	Minshiung	1.67	238	eP	Pg	09 36 06.4	-0.6
	baz=238						
HATJ	Hateruma jima	1.68	103	P	Pn	09 36 04.3	+0.2
HATJ				S	Sb	09 36 26.6	-0.3
CHN4	Tsaushan	1.69	230	eP	Pg	09 36 06.8	-0.6
	baz=233						
CHN4				eS	Sg	09 36 30.2	+1.0
	baz=233						
TPUB	Ta-pu	1.69	228	eP	Pb	09 36 06.4	+0.4
	baz=230						
STYT	Tauyuan	1.71	222	eP	Pb	09 36 06.5	+0.2
	baz=223						
CHY	Chiayi	1.72	237	eP	Pb	09 36 06.2	-0.3
	baz=224						
WTP	Ta-pu	1.74	227	eP	Pb	09 36 07.5	+0.6
	baz=229						
WTP				eS	Sg	09 36 30.9	-0.1
	baz=229						
TWG	Pinlang	1.82	208	eP	Pn	09 36 06.1	+0.1
	baz=191						
TWGBT	Beinan	1.82	208	eP	Pn	09 36 05.9	-0.1
	baz=191						
JKRS	Kuro-shima	1.84	96	P	Pn	09 36 06.1	-0.1
JKRS				S	Sn	09 36 29.2	-0.1
SNST	Tainan City	1.84	229	eP	Pg	09 36 09.8	-0.4
	baz=231						
CHN1	Nanshi	1.84	228	eP	Pb	09 36 09.2	+0.7
	baz=230						
SLGT	Liugui	1.90	221	eP	Pb	09 36 09.5	0.0
	baz=223						
JIJ	Ishigaki jima	1.95	92	P	Pn	09 36 07.0	-0.7
JIJ				S	Sn	09 36 30.3	-1.7
ECL	Taimali	2.07	208	eP	Pn	09 36 08.9	-0.5
	baz=193						
JISG	Ishigakijimahi	2.10	85	P	Pn	09 36 09.2	-0.6
JISG				eS	Sn	09 36 35.7	-0.2
SSD	Sandimen	2.10	217	eP	Pb	09 36 12.6	-0.3
	baz=230						
MASBT	Mashibuluo	2.21	215	eP	Pn	09 36 12.7	+1.4
	baz=218						
PTTC	Pingtan	2.29	298	eP	Pn	09 36 13.6	+1.2
	baz=297						
EAST	Anshuo	2.31	208	eP	Pn	09 36 13.4	+0.7
	baz=193						
VWUC	VWUC	2.39	284	eP	Pn	09 36 13.9	+0.1
	baz=283						
PHUB	P'eng-hu	2.41	248	eP	Pn	09 36 13.8	-0.2
	baz=250						
SCZT	Fangliau	2.42	212	eP	Pb	09 36 17.1	-1.2
	baz=195						
LAY	Lan-yu	2.42	190	eP	Pn	09 36 13.5	-0.8
	baz=187						
WDGT	Dungji	2.45	242	eP	Pn	09 36 15.6	+1.0
	baz=244						
JTJ	Tarama	2.46	85	P	Pn	09 36 15.1	+0.3
JTJ				eS	Sn	09 36 44.8	+0.1
MATB	Ma-tsu	2.53	313	eP	Pn	09 36 15.6	-0.1
	baz=311						
VCHM	Qimei	2.66	243	eP	Pn	09 36 18.4	+0.9
	baz=246						
PTMZ	Houxiangcun	2.69	283	eP	Pn	09 36 19.0	+1.1
	baz=282						
JIRB	Irabujima	2.91	82	P	Pn	09 36 21.4	+0.5
LYJJ	Jianjiangzhen	2.92	316	eP	Pn	09 36 20.7	-0.4
	baz=315						
XPSS	Dashiqiu	2.98	327	eP	Pn	09 36 21.4	-0.4
	baz=325						
MHZQ	Yeshan	3.16	302	eP	Pn	09 36 25.2	+0.8
	baz=301						
KNMB	Chin-men Tao	3.30	271	eP	Pn	09 36 26.6	+0.4
	baz=270						
AXDP	Jialang	3.70	278	eP	Pn	09 36 32.4	+0.6
	baz=277						
ZPLA	Ao Xicun	3.92	263	eP	Pn	09 36 36.0	+1.2
	baz=263						

GUC 04 09:40:04.7±0.7, 21°.43S×67°.33W, h250km±9km, ML3.5, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.82	258	eP	Pn	09 40 46.7	+0.9
PB09				i S	S	09 41 18.5	+0.4
PB01	IPOC Station P	2.05	280	eP	Pn	09 40 48.5	+0.8
PB01				i S	S	09 41 22.3	+0.6
PB01				IAML		09 41 24.2	
	comp=N,81nm,0.2s						
PB08	IPOC Station P	2.13	306	eP	Pn	09 40 50.0	+1.1
PB08				i S	S	09 41 24.8	+1.2
PB03	IPOC Station P	2.34	254	eP	Pn	09 40 51.9	+1.4
PB03				i S	S	09 41 27.4	+0.7
PB03				IAML		09 41 28.4	
	comp=E,114nm,0.2s						
PB02	IPOC Station P	2.40	272	eP	Pn	09 40 52.4	+1.4
PB02				i S	S	09 41 28.3	+0.7
PB02				IAML		09 41 29.9	
	comp=N,245nm,0.4s						
PB07	IPOC Station P	2.40	262	eP	Pn	09 40 52.7	+1.5
PB07				i S	S	09 41 28.8	+0.9
PB07				IAML		09 41 30.2	
	comp=N,107nm,0.5s						
PB06	IPOC Station P	2.44	238	eP	Pn	09 40 53.2	+1.6
PB06				i S	S	09 41 29.3	+0.8
PB06				IAML		09 41 34.3	
	comp=N,43nm,0.7s						
PB15	IPOC Station P	2.66	228	eP	Pn	09 40 55.1	+1.2
PB15				i S	S	09 41 33.3	+0.6
PB11	IPOC Station P	2.74	307	eP	Pn	09 40 55.5	+0.9
PB11				i S	S	09 41 34.8	+0.8
PB04	IPOC Station P	2.77	250	eP	Pn	09 40 56.2	+1.2
PB04				i S	S	09 41 35.0	+0.4
PB04				IAML		09 41 38.1	
	comp=N,68nm,0.2s						
MNMC	Minye Minye	3.12	317	eP	Pn	09 41 00.2	+1.3
MNMC				i S	S	09 41 42.4	+0.7

IDC 04 09:48:00.5±1.9, 0°.67N×126°.27E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/46, mbtmp3.3/3, Error ellipse: s-maj=169.3km s-min=24.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.96	159	P	P	09 52 54.9	-1.2
	0.4nm,0.5s,baz=338,slow=11,SNR=12						
ASAR	Alice Springs	25.31	163	P	P	09 53 29.9	+0.9
	0.4nm,0.5s,baz=346,slow=12,SNR=6.3						
MKAR	Makanchi Array	59.81	326	P	P	09 58 07.6	-0.1
	0.2nm,0.4s,baz=118,slow=8.4,SNR=4.0						

TAP 04 10:02:25.5, 23°.47N×120°.91E, h5km, ML2.3, 10C-5D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALS	Alishan	0.11	295	⇓iP	Pg	10 02 28.4	+0.5
	baz=297						
ALS				i S	Sg	10 02 30.5	+0.9
	baz=297						
WHYT	Xinyi Township	0.24	347	⇑P	Pg	10 02 30.8	+0.7
	baz=358						
WHYT				S	Sg	10 02 34.4	+1.1
	baz=358						
CHN5	Tsauling	0.25	302	⇓iP	Pg	10 02 31.4	+1.0
	baz=304						
CHN5				S	Sg	10 02 35.3	+1.5
	baz=304						
ELDTW	Lidau	0.29	160	⇓iP	Pg	10 02 31.9	+0.8
	baz=158						
ELDTW				i S	Sg	10 02 35.8	+0.8
	baz=158						
TPUB	Ta-pu	0.31	238	⇑P	Pb	10 02 32.5	-1.0
	baz=237						
CHN4	Tsaushan	0.31	249	⇑iP	Pb	10 02 32.9	-0.7
	baz=239						
SSLB	Suanglung	0.32	7	⇑P	Pg	10 02 32.0	+0.2
	baz=8.0						
SSLB				eS	Sg	10 02 36.4	+0.3
	baz=8.0						
STYT	Tauyuan	0.33	205	⇑iP	Pg	10 02 32.7	+0.7
	baz=203						
WTP	Ta-pu	0.35	231	⇑iP	Pb	10 02 33.4	-0.8
	baz=238						
VWDT	VWDT	0.36	36	⇑P	Pg	10 02 33.1	+0.7
	baz=41						
YULB	Yu-li	0.36	101	⇓P	Pg	10 02 33.4	+0.9
	baz=109						
YULB				S	Sg	10 02 37.9	+0.6
	baz=109						
TWF1	Yuli	0.37	107	⇓iP	Pb	10 02 33.7	-0.8
	baz=115						
EHY	Hungye	0.38	84	P	Pb	10 02 33.8	-0.9
	baz=92						
EHY				S	Sg	10 02 38.9	+1.0
	baz=92						
WGK	Gukeng	0.39	305	eP	Pb	10 02 34.4	-0.4
	baz=307						
WJS	Zhushan	0.39	335	eP	Pb	10 02 35.0	+0.1
	baz=336						
WJS				eS	Sb	10 02 41.3	0.0
	baz=336						
CHN2	Minshiung	0.41	280	eP	Pb	10 02 34.9	-0.2
	baz=280						
WDLH	Douliu	0.41	303	eP	Pb	10 02 34.6	-0.5
	baz=305						
SMLT	Sun Moon Lake	0.42	359	⇑P	Pg	10 02 34.3	+0.7
	baz=7.0						
SMLT				S	Sg	10 02 40.0	+0.9
	baz=7.0						
TYC	Yuchr	0.44	354	⇑iP	Pg	10 02 34.8	+0.8
	baz=2.0						
TYC				eS	Sb	10 02 42.1	-0.5
	baz=2.0						
CHY	Chiayi	0.45	274	eP	Pb	10 02 35.6	-0.3
	baz=275						
CHY				eS	Sb	10 02 43.1	+0.3
	baz=275						
CHN1	Nanshi	0.45	232	⇑iP	Pb	10 02 35.7	-0.2
	baz=231						
CHN1				eS	Sb	10 02 42.5	-0.4
	baz=231						
SNST	Tainan City	0.45	237	P	Pb	10 02 35.6	-0.3
	baz=236						
SNST				S	Sb	10 02 42.6	-0.3
	baz=236						
WNT	Mingjian	0.46	333	eP	Pb	10 02 36.6	+0.5
	baz=336						
WNT				eS	Sb	10 02 43.7	+0.5
	baz=336						
HGSD	Ruisui	0.47	87	eP	Pb	10 02 35.7	-0.6
	baz=87						
EGFH	Guangfu	0.52	67	eP	Pg	10 02 36.0	+0.5
	baz=56						
EGFH				eS	Sg	10 02 43.0	+0.9
	baz=56						
SLGT	Liugui	0.53	207	eP	Pb	10 02 36.7	-0.5
	baz=204						
OWD	Renai	0.54	26	eP	Pg	10 02 35.9	-0.1
	baz=40						
WLGB	Puzi	0.56	271	eP	Pb	10 02 37.8	+0.1
	baz=273						
WLGB				eS	Sb	10 02 47.1	+1.0
	baz=273						
ESL	Shilin	0.59	54	eP	Pb	10 02 37.6	-0.7
	baz=55						
ESL				eS	Sg	10 02 44.9	+0.4
	baz=55						
CHGB	Renai	0.64	22	eP	Pg	10 02 37.6	-0.2
	baz=35						
CHN8	Yiju	0.65	260	eP	Pb	10 02 39.0	-0.4
	baz=260						
CHN8				eS	Sb	10 02 50.3	+1.5
	baz=260						
TWG	Pinlang	0.66	167	eP	Pg	10 02 38.7	+0.6
	baz=161						
TWG				eS	Sg	10 02 47.7	+1.0
	baz=161						
TWGBT	Beinan	0.66	166	eP	Pg	10 02 38.8	+0.6
	baz=161						
TWGBT				eS	Sg	10 02 47.4	+0.6
	baz=161						
WHF	Hehuan Shan	0.75	26	eP	Pg	10 02 39.8	-0.2
	baz=37						
SSD	Sandimen	0.76	200	eP	Pg	10 02 39.9	-0.1
	baz=191						
WHP	Taichung City	0.81	2	eP	Pb	10 02 42.6	+0.5
	baz=11						
TDCB	Techi	0.82	16	eP	Pg	10 02 40.8	-0.4
	baz=17						
TWT	Tachien	0.82	17	eP	Pg	10 02 41.0	-0.3
	baz=18						
TWD	Chiawan	0.88	46	eP	Pg	10 02 42.6	+0.3
	baz=56						
MASBT	Mashibuluo	0.89	197	eP	Pg	10 02 42.5	0.0
	baz=195						
TWQ1	Liyutan	0.89	352	eP	Pn	10 02 44.3	-0.4
	baz=338						
TWQ1				eS	Sn	10 02 57.2	-0.7
	baz=338						
ETLH	Xiulin Townshi	0.91	35	eP	Pg	10 02 42.5	-0.3
	baz=36						
NACB	Ninganchiao	0.94	41	eP	Pg	10 02 42.8	-0.8
	baz=55						
NACB				eS	Sg	10 02 56.3	+0.4
	baz=55						
NSY	Sanyi	0.96	352	eP	Pn	10 02 45.6	0.0
	baz=353						
NNSB	Datong	1.05	24	eP	Pg	10 02 44.6	-1.0
	baz=20						
EAST	Anshuo	1.08	183	P	Pb	10 02 46.8	+0.1
	baz=170						
EAST				eS	Sn	10 03 01.9	-0.7
	baz=170						
NSTT	Nanjuang	1.16	4	eP	Pn	10 02 48.8	+0.4
	baz=5.0						
NSTT				eS	Sn	10 03 04.6	-0.1
	baz=5.0						
WDGT	Dungji	1.17	260	P	Pg	10 02 47.6	-0.2
	baz=260						
LIOB	Emei	1.18	5	eP	Pn	10 02 48.9	+0.3
	baz=353						
LIOB				eS	Sn	10 03 05.9	+0.8
	baz=353						
PHUB	P'eng-hu	1.23	273	eP	Pg	10 02 48.7	-0.4
	baz=274						
PHUB				eS	Sg	10 03 04.5	-0.5
	baz=274						
NDT	Datong Townshi	1.26	26	eP	Pg	10 02 49.5	-0.1
	baz=37						
YHNB	Yeheng	1.27	19	eP	Pn	10 02 50.2	+0.3
	baz=21						
TIPB	Shuangxi	1.72	29	eP	Pb	10 02 57.9	+0.4
	baz=46						

TAP 04 10:02:30.1, 23°.47N×120°.92E, h5km, ML2.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALS	Alishan	0.11	292	i P	Pg	10 02 33.1	+0.5
	baz=293						
ALS				S	Sg	10 02 35.2	+1.0
	baz=293						
WHYT	Xinyi Township	0.23	346	eP	Pg	10 02 35.6	+0.9
	baz=357						
WHYT				S	Sg	10 02 39.0	+1.1
	baz=357						
CHN5	Tsauling	0.25	300	eP	Pb	10 02 36.2	-1.0
	baz=302						
ELDTW	Lidau	0.29	161	S	Sg	10 02 40.5	+0.7
	baz=159						
TPUB	Ta-pu	0.31	237	eP	Pb	10 02 37.3	-0.9
	baz=237						
TPUB				S	Sg	10 02 41.7	+1.3
	baz=237						
TPUB	Ta-pu	0.31	237	S	Pb	10 02 37.0	-1.2
	baz=237						
SSLB	Suanglung	0.32	6	eP	Pg	10 02 37.0	+0.6
	baz=8.0						
CHN4	Tsaushan	0.32	248	eP	Pb	10 02 37.9	-0.5
	baz=248						
CHN4	Tsaushan	0.32	248	S	Pb	10 02 37.5	-0.9
	baz=239						
STYT	Tauyuan	0.34	205	eP	Pg	10 02 37.5	+0.7
	baz=203						
STYT	Tauyuan	0.34	205	S	Pg	10 02 37.3	+0.5
	baz=203						
VWDT	VWDT	0.35	36	eP	Pg	10 02 37.5	+0.6
	baz=41						
VWDT	VWDT	0.35	36	S	Pg	10 02 37.8	+0.8
	baz=41						
WTP	Ta-pu	0.35	231	P	Pb	10 02 38.1	-0.9
	baz=238						
WTP				eS	Sb	10 02 43.4	-1.5
	baz=238						
WTP	Ta-pu	0.35	231	S	Pb	10 02 38.3	-0.7
	baz=238						
YULB	Yu-li	0.36	102	eP	Pb	10 02 38.5	-0.5
	baz=110						
YULB				S	Sg	10 02 42.9	+1.0
	baz=110						
TWF1	Yuli	0.37	108	eP	Pb	10 02 38.5	-0.7
	baz=116						
TWF1				eS	Sg	10 02 43.5	+1.3
	baz=116						
TWF1	Yuli	0.37	108	eS	Pb	10 02 38.5	-0.7
	baz=115						
TWG	Pinlang	0.66	167	eP	Pb	10 02 43.9	-0.3
	baz=165						

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*KRNET **04** 10:05:28.6±0.1, 42°.55N×79°.65E, h10km, mb3.5*
*SOME **04** 10:05:29.2, 42°.57N×79°.57E, h20km*
*NNC **04** 10:05:29.1±1.0, 42°.58N×79°.58E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=6.4km s-min=3.5km az=137.0*
*ISCJB **04** 10:05:30.2±0.6, 42°.56N±0°.03×79°.66E±0°.04, h10km, Error ellipse: s-maj=5.6km s-min=2.9km az=141.5*

ISC 04 10:05:29.1±1.0, 42°.52N±0°.04×79°.61E±0°.03, h10km, n77, σ1s.66/140, 34C-25D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.76	325	P	Pg	10 05 42.9	-0.9
	50nm,0.1s						
UZB				S	Sg	10 05 53.0	-0.8
	147nm,0.2s						
UZB	Uzynbulak	0.76	325	⇓eP	Pg	10 05 42.9	-0.9
	baz=23						
UZB				⇓eS	Sg	10 05 52.9	-0.8
	baz=23						
UZB	Uzynbulak	0.76	325	⇓eP	Pg	10 05 42.9	-0.9
	50nm,0.1s						
UZB				eS	Sg	10 05 53.0	-0.8
	147nm,0.2s						
PDGK	Podgornoye	0.81	354	P	Pg	10 05 43.7	-1.1
	34nm,0.3s						
PDGK				S	Sg	10 05 54.3	-1.0
	22nm,0.3s						
PDGK	Podgornoye	0.81	354	⇑P	Pg	10 05 43.6	-1.1
	22nm,0.3s						
PDGK				⇑S	Sg	10 05 54.1	-1.3
	15nm,0.3s						
PDGK	Podgornoye	0.81	354	⇓iP	Pg	10 05 43.7	-1.1
	baz=51						
PDGK				⇓iS	Sg	10 05 54.6	-0.8
	baz=51						
PRZ	Przheval'sk	0.90	268	⇑iP	Pb	10 05 46.2	-0.7
	baz=66						
PRZ				⇑iS	Sb	10 05 58.5	-0.5
	baz=66						
SATY	Saty	1.04	302	P	Pg	10 05 47.7	-1.3
	11nm,0.2s						
SATY				S	Sg	10 06 01.2	-1.4
	191nm,0.2s						
SATY	Saty	1.04	302	⇓eP	Pg	10 05 47.8	-1.3
	11nm,0.2s						
SATY				eS	Sg	10 06 01.2	-1.4
	191nm,0.2s						
KTMS	Ketmen	1.07	30	P	Pg	10 05 48.4	-1.3
	24nm,0.2s						
KTMS				S	Sg	10 06 02.3	-1.4
	133nm,0.3s						
KTMS	Ketmen	1.07	30	⇑eP	Pg	10 05 48.4	-1.3
	baz=29						
KTMS				⇑eS	Sg	10 06 02.3	-1.4
	baz=29						
KTMS	Ketmen	1.07	30	⇑eP	Pg	10 05 48.4	-1.3
	24nm,0.2s						
KTMS				eS	Sg	10 06 02.3	-1.4
	133nm,0.3s						
KURS	Kuram	1.43	313	P	Pg	10 05 55.5	-1.1
	3.7nm,0.1s						
KURS				S	Sg	10 06 14.1	-1.1
	79nm,0.4s						
KURS	Kuram	1.43	313	⇑eP	Pg	10 05 55.5	-1.1
	baz=11						
KURS				⇑eS	Sg	10 06 14.1	-1.1
	baz=11						
KURS	Kuram	1.43	313	⇑eP	Pg	10 05 55.5	-1.1
	3.7nm,0.1s						
KURS				eS	Sg	10 06 14.1	-1.1
	79nm,0.4s						
MNBS	Baschi	1.79	331	P	Pb	10 06 01.2	-0.8
	25nm,0.3s						
MNBS				S	Sg	10 06 24.8	-1.8
	140nm,0.4s						
MNBS	Baschi	1.79	331	⇓eP	Pb	10 06 01.2	-0.8
	baz=30						
MNBS				⇓eS	Sg	10 06 24.8	-1.8
	baz=30						
MNBS	Baschi	1.79	331	⇓eP	Pb	10 06 01.2	-0.8
	25nm,0.3s						
MNBS				eS	Sg	10 06 24.9	-1.8
	140nm,0.4s						
DJR	Jarkent	1.81	4	P	Pb	10 06 01.4	-1.0
	8.4nm,0.2s						
DJR				S	Sb	10 06 24.6	-0.6
	19nm,0.3s						
DJR	Jarkent	1.81	4	eP	Pb	10 06 01.4	-1.0
	8.4nm,0.2s						
DJR				eS	Sb	10 06 24.6	-0.6
	19nm,0.3s						
KDJ	Kajisay	1.84	259	⇑iP	Pb	10 06 02.8	-0.2
	baz=58						
KDJ				⇑iS	Sg	10 06 27.4	-1.0
	baz=58						
KOTS	Kotyrbulak	1.97	292	P	Pb	10 06 05.1	-0.1
	22nm,0.2s						
KOTS				S	Sg	10 06 30.9	-1.6
	142nm,0.3s						
KOTS	Kotyrbulak	1.97	292	eP	Pb	10 06 04.6	-0.6
	baz=91						
KOTS				eS	Sg	10 06 30.3	-2.1
	baz=91						
KOTS	Kotyrbulak	1.97	292	eP	Pb	10 06 04.6	-0.6
	22nm,0.2s						
KOTS				eS	Sg	10 06 30.3	-2.1
	142nm,0.3s						
MDOK	Medeo	1.99	290	Pn	Pb	10 06 04.0	-1.5
	7.2nm,0.5s						
MDOK				Sn	Sb	10 06 30.2	-0.2
	53nm,0.7s						
MDOK	Medeo	1.99	290	Pg	Pb	10 06 04.6	-0.9
	19nm,0.3s						
MDOK				Lg	Lg	10 06 30.2	
	46nm,0.4s						
MDOK	Medeo	1.99	290	eP	Pb	10 06 04.6	-0.9
	baz=89						
MDOK				eS	Sb	10 06 30.2	-0.2
	baz=89						
MDOK	Medeo	1.99	290	eP	Pb	10 06 04.6	-0.9
	19nm,0.3s						
MDOK				eS	Sb	10 06 30.2	-0.2
	46nm,0.4s						
TNSS	Tian-Shan	2.03	286	P	Pb	10 06 05.1	-1.2
	31nm,0.3s						
TNSS				S	Sb	10 06 31.0	-0.7
	58nm,0.4s						
TNSS	Tian-Shan	2.03	286	eP	Pb	10 06 05.1	-1.2
	baz=85						
TNSS				eS	Sb	10 06 31.0	-0.7
	baz=85						
TNSS	Tian-Shan	2.03	286	eP	Pb	10 06 05.1	-1.2
	31nm,0.3s						
TNSS				eS	Sb	10 06 31.0	-0.7
	58nm,0.4s						
ARXS	Arharly	2.13	323	Pg	Pb	10 06 06.7	-1.2
	10.0nm,0.3s						

ARXS	89nm,0.4s			Lg	Lg	10 06 33.6	
ARXS	**Arharly** 10.0nm,0.3s	2.13	323	eP	Pb	10 06 06.7	-1.2
ARXS	89nm,0.4s			eS	Sb	10 06 33.6	-0.9
IZV	**Izvestkoviy** 40nm,0.2s	2.27	284	Pg	Pb	10 06 09.1	-1.1
IZV	76nm,0.4s			Lg	Lg	10 06 38.1	
IZV	**Izvestkoviy** baz=83	2.27	284	eP	Pb	10 06 09.1	-1.1
IZV	baz=83			eS	Sb	10 06 38.1	-0.3
IZV	**Izvestkoviy** 40nm,0.2s	2.27	284	eP	Pb	10 06 09.1	-1.1
IZV	76nm,0.4s			eS	Sb	10 06 38.1	-0.3
CHKK	**Chushkaly** 4.8nm,0.2s	2.33	306	Pg	Pb	10 06 10.8	-0.5
CHKK	94nm,0.3s			Lg	Lg	10 06 40.8	
CHKK	**Chushkaly** baz=5.0	2.33	306	eP	Pb	10 06 10.8	-0.5
CHKK	baz=5.0			eS	Sb	10 06 40.7	+0.5
CHKK	**Chushkaly** 4.8nm,0.2s	2.33	306	eP	Pb	10 06 10.8	-0.5
CHKK	94nm,0.3s			eS	Sb	10 06 40.8	+0.5
MTBS	**Maitube** baz=85	2.42	286	⇓iP	Pb	10 06 11.8	-1.0
MTBS	baz=85			⇓eS	Sb	10 06 43.0	+0.4
MTBS	**Maitube** 27nm,0.2s	2.42	286	⇓iP	Pb	10 06 11.8	-1.0
MTBS	50nm,0.3s			eS	Sb	10 06 43.0	+0.4
KTBS	**Karatobe** 7.6nm,0.2s	2.45	300	Pg	Pb	10 06 11.9	-1.4
KTBS	106nm,0.5s			Lg	Lg	10 06 42.5	
KTBS	**Karatobe** baz=98	2.45	300	eP	Pb	10 06 11.9	-1.4
KTBS	baz=98			eS	Sb	10 06 42.6	-1.0
KTBS	**Karatobe** 7.6nm,0.2s	2.45	300	eP	Pb	10 06 11.9	-1.4
KTBS	106nm,0.5s			eS	Sb	10 06 42.5	-1.0
ULHL	**Ulahol** baz=64	2.51	265	⇑iP	Pb	10 06 13.0	-1.4
ULHL	baz=64			⇑iS	Sb	10 06 44.4	-1.1
TDK	**Taldyqorghan** 34nm,0.2s	2.63	341	Pg	Pb	10 06 15.4	-0.9
TDK	66nm,0.4s			Lg	Lg	10 06 48.7	
TDK	**Taldyqorghan** 34nm,0.2s	2.63	341	eP	Pb	10 06 15.4	-0.9
TDK	66nm,0.4s			eS	Sb	10 06 48.7	+0.1
BOOM	**Boomskoye usch** baz=70	2.71	271	⇑eP	Pb	10 06 15.8	-2.1
BOOM	baz=70			⇑iS	Sb	10 06 48.1	-3.2
KST	**Kastek** 18nm,0.2s	2.74	282	Pg	Pb	10 06 16.7	-1.5
KST	16nm,0.5s			Lg	Lg	10 06 50.7	
KST	**Kastek** baz=82	2.74	282	eP	Pb	10 06 16.7	-1.5
KST	baz=82			eS	Sb	10 06 50.8	-1.1
KST	**Kastek** 18nm,0.2s	2.74	282	eP	Pb	10 06 16.7	-1.5
KST	16nm,0.5s			eS	Sb	10 06 50.7	-1.1
KUU	**Kurty** 2.0nm,0.2s	2.76	301	Pg	Pb	10 06 17.4	-1.1
KUU	53nm,0.3s			Lg	Lg	10 06 52.1	
KUU	**Kurty** baz=0.0	2.76	301	eP	Pb	10 06 18.0	-0.5
KUU	baz=0.0			eS	Sb	10 06 52.9	+0.6
KUU	**Kurty** 2.0nm,0.2s	2.76	301	eP	Pb	10 06 18.0	-0.5
KUU	53nm,0.3s			eS	Sb	10 06 52.9	+0.6
KAPS	**Kapalarasan** 4.3nm,0.3s	2.77	356	Pg	Pb	10 06 17.6	-1.1
KAPS	5.3nm,0.2s			Lg	Lg	10 06 52.3	
KAPS	**Kapalarasan** 4.3nm,0.3s	2.77	356	eP	Pb	10 06 17.6	-1.1
KAPS	5.3nm,0.2s			eS	Sb	10 06 52.3	-0.4
NRN	**Naryn** baz=49	2.90	249	⇑eP	Pb	10 06 18.6	-2.6
NRN	baz=49			⇑iS	Sn	10 06 53.1	+2.3
DGS	**Degeres** 15nm,0.4s	2.91	286	Pg	Pb	10 06 19.6	-1.6
DGS	63nm,0.6s			Lg	Lg	10 06 55.8	
DGS	**Degeres** baz=85	2.91	286	eP	Pb	10 06 21.0	-0.2
DGS	baz=85			eS	Sb	10 06 58.0	+1.1
DGS	**Degeres** 16nm,0.5s	2.91	286	eP	Pb	10 06 21.0	-0.2
DGS	63nm,0.6s			eS	Sb	10 06 58.0	+1.1
TKM2	**Tokmak 2** 3.2nm,0.3s	2.98	279	⇑Pn	Pb	10 06 20.1	-2.4
TKM2	23nm,0.6s			⇓Lg	Lg	10 07 00.6	
TKM2	**Tokmak 2** baz=79	2.98	279	⇑eP	Pb	10 06 19.3	-3.2
TKM2	baz=79			⇑eS	Sb	10 06 55.5	-3.6
KZA	**Kyzart** baz=63	3.27	264	⇓eP	Pn	10 06 23.4	+2.7
KZA	baz=63			⇓eS	Sb	10 07 03.0	-4.4
CHMS	**Chumysh** baz=79	3.61	279	⇑iP	Pn	10 06 28.0	+2.9
CHMS	baz=79			⇑iS	Sn	10 07 10.2	+2.4
AAK	**Ala-Archa** 2.6nm,0.5s	3.78	273	Pg	Pb	10 06 33.8	-2.2
AAK	6.9nm,0.7s			⇓Lg	Lg	10 07 24.6	
AAK	**Ala-Archa** baz=73	3.78	273	⇑iP	Pn	10 06 30.2	+2.6
AAK	baz=73			⇑iS	Sn	10 07 14.8	+2.6
UCH	**Uchtor** baz=67	3.79	267	⇑eP	Pn	10 06 31.0	+3.0
UCH	baz=67			⇑iS	Sn	10 07 15.7	+2.9
USP	**Ospenovka** baz=83	3.83	283	⇓eP	Pn	10 06 30.8	+2.7
USP	baz=83			⇓iS	Sn	10 07 15.9	+2.7
ARLS	**Aral** baz=62	3.98	262	⇑iP	Pn	10 06 32.8	+2.4
ARLS	baz=62			⇑iS	Sn	10 07 18.8	+1.6
EKS2	**Erkin-Say** baz=73	4.31	274	⇓iP	Pn	10 06 37.4	+2.6
EKS2	baz=73			⇓iS	Sn	10 07 27.5	+2.3
AML	**Almayashu** baz=67	4.41	267	⇑iP	Pn	10 06 39.0	+2.6
AML	baz=67			⇑iS	Sn	10 07 30.4	+2.5
MAKZ	**Makanchi** 0.6nm,0.3s	4.61	21	⇓Pn	Pn	10 06 40.5	+1.8
MAKZ	0.8nm,0.5s			⇓Lg	Lg	10 07 52.1	
MK31	**Makanchi Array** 0.5nm,0.3s,baz=205,slow=13,SNR=40	4.68	23	Pn	Pn	10 06 41.1	+1.4
MK31	0.5nm,0.3s,baz=203,slow=25,SNR=3.9			⇑Sn	Sn	10 07 35.1	+1.0
MK31	1.2nm,0.4s,baz=203,slow=25,SNR=3.9			⇑Lg	Lg	10 07 53.8	
MRKS	**Merke** baz=75	4.72	275	eP	Pb	10 06 54.4	+2.5
MRKS	baz=75			eS	Sg	10 07 55.4	-5.1
MRKS	**Merke** 2.7nm,0.2s	4.72	275	eP	Pb	10 06 54.4	+2.5
MRKS	8.9nm,0.3s			eS	Sg	10 07 55.4	-5.1
SFK	**Sufi-Kurgan** 1.7nm,0.9s	5.24	243	⇑Pg	Pb	10 07 02.5	+1.6
SFK	2.4nm,0.7s			⇓Lg	Lg	10 08 15.3	
MNAS	**Manas** baz=72	5.25	272	⇓iP	Pn	10 06 50.6	+2.8
MNAS	baz=72			⇓iS	Sn	10 07 49.1	+0.6

*IDC **04** 10:07:23.4±3.1, 36°.15N×141°.99E, h0^{km}, mb3.5/2, mb1 3.6/3, mb1mx3.2/45, mbtmp3.4/3, ML2.5/1, Error ellipse: s-maj=74.8km s-min=29.9km az=43.0*
*JMA **04** 10:07:26.8±0.2, 36°.36N×141°.83E, h64^{km}±4^{km}, M2.8*
ISC 04 10:07:25.9±1.4**, 36°.40N**±0°.06×**141°.78E**±0°.09**, h19^{km}, n14,** σ**1^{s}.49**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	0.97	267	P	Pg	10 07 45.2	+0.5
JHO	**Hitachi**	1.00	283	P	Pg	10 07 45.6	+0.2
CHOJ	**Chosi**	1.02	228	P	Pn	10 07 45.6	+0.4
CHOJ				eS	Sn	10 07 59.5	+0.6
ONAJ	**Iwakimizuishiy**	1.06	312	P	Pg	10 07 46.6	+0.1
JFK	**Kawauchi**	1.21	323	P	Pg	10 07 48.8	-0.6
JFT	**Otama**	1.61	314	P	Pg	10 07 55.4	-1.5
JMM	**Marumori**	1.67	332	P	Pb	10 07 54.8	-1.2
JAG	**Ashikaga**	1.88	272	P	Pb	10 07 58.2	-1.4
BSO3	**Boso 3**	1.90	213	P	Pn	10 07 57.3	+0.3
JRY	**Ryogami san**	2.36	262	P	Pn	10 08 04.9	+1.2
MJAR	**Matsushiro Arr** 0.6nm,0.3s,baz=117,slow=8.3,SNR=19	2.88	274	Pn	Pn	10 08 12.8	+2.0
MJAR	0.2nm,0.3s,baz=29,slow=31,SNR=3.0			Sn	Sb	10 08 51.4	-0.2
MAT	**Matsushiro**	2.89	274	P	Pb	10 08 13.7	-3.1
MAT				S	Sn	10 08 44.6	-0.5
SONM	**Songino Array** 0.4nm,0.5s,baz=104,slow=10,SNR=2.6	28.39	305	P	P	10 13 21.9	+2.8
WRA	**Warramunga Arr** 0.5nm,1.0s,baz=6.1,slow=7.5,SNR=3.2	56.47	188	P	P	10 17 05.5	-1.1

*SOME **04** 10:20:15.5, 42°.55N×79°.70E, h15^{km}*
*KRNET **04** 10:20:15.3±0.1, 42°.56N×79°.67E, h5^{km}, mb2.7*
*NNC **04** 10:20:16.5±1.5, 42°.62N×79°.70E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=9.3km s-min=6.1km az=130.0*
ISC 04 10:20:14.2±1.6**, 42°.50N**±0°.05×**79°.69E**±0°.04**, h0**^{km}±12^{km}**, n49,** σ**1^{s}.06**/90**, 22C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak** 6.3nm,0.2s	0.81	323	P	Pg	10 20 29.9	+0.1
UZB	18nm,0.2s			S	Sg	10 20 40.3	0.0
UZB	**Uzynbulak** baz=21	0.81	323	⇑eP	Pg	10 20 29.9	+0.1
UZB	baz=21			⇑eS	Sg	10 20 40.3	0.0
UZB	**Uzynbulak** 6.3nm,0.2s	0.81	323	⇑eP	Pg	10 20 29.9	+0.1
UZB	18nm,0.2s			eS	Sg	10 20 40.3	0.0
PDGK	**Podgornoye** 3.7nm,0.2s	0.84	350	P	Pg	10 20 30.5	0.0
PDGK	11nm,0.3s			S	Sg	10 20 41.3	-0.1
PDGK	**Podgornoye** 1.0nm,0.2s	0.84	350	⇓P	Pg	10 20 30.3	-0.1
PDGK	8.0nm,0.3s			⇑S	Sg	10 20 41.0	-0.3
PDGK	**Podgornoye** baz=50	0.84	350	⇑iP	Pg	10 20 30.3	-0.1
PDGK	baz=50			⇑iS	Sg	10 20 41.1	-0.3
PRZ	**Przheval'sk** baz=66	0.95	270	⇓iP	Pb	10 20 33.3	-0.4
PRZ	baz=66			⇓eS	Sb	10 20 46.2	-0.7
KTMS	**Ketmen**	1.07	27	P	Pg	10 20 35.0	+0.3
KTMS				S	Sn	10 20 49.1	-3.0
KTMS	**Ketmen** baz=28	1.07	27	eP	Pg	10 20 35.0	+0.3
KTMS	baz=28			eS	Sg	10 20 48.9	+0.4
KTMS	**Ketmen** 4.1nm,0.1s	1.07	27	eP	Pg	10 20 35.0	+0.3
KTMS	12nm,0.3s			eS	Sg	10 20 48.9	+0.4
SATY	**Saty** 1.0nm,0.1s	1.10	301	eP	Pb	10 20 35.2	-0.9
SATY	17nm,0.2s			eS	Sb	10 20 49.4	-1.6
KURS	**Kuram** baz=10.0	1.49	312	eP	Pb	10 20 42.5	-0.3
KURS	baz=10.0			eS	Sg	10 21 01.9	-0.2
KURS	**Kuram** 0.5nm,0.1s	1.49	312	eP	Pb	10 20 42.5	-0.3
KURS	2.7nm,0.3s			eS	Sg	10 21 01.8	-0.2
DJR	**Jarkent** 0.9nm,0.3s	1.83	2	P	Pb	10 20 48.2	-0.5
DJR	5.0nm,0.3s			S	Sg	10 21 12.2	-1.1
DJR	**Jarkent** 0.9nm,0.3s	1.83	2	eP	Pb	10 20 48.2	-0.5
DJR	5.0nm,0.3s			eS	Sg	10 21 12.2	-1.1
MNBS	**Baschi**	1.84	330	P	Pb	10 20 48.3	-0.5
MNBS				S	Sb	10 21 11.7	-0.6
MNBS	**Baschi** baz=29	1.84	330	⇑eP	Pb	10 20 48.3	-0.5
MNBS	baz=29			⇑eS	Sb	10 21 11.7	-0.6
MNBS	**Baschi** 6.2nm,0.4s	1.84	330	⇑eP	Pb	10 20 48.3	-0.5
MNBS	11nm,0.2s			eS	Sb	10 21 11.7	-0.6
KDJ	**Kajisay** baz=58	1.89	260	⇑iP	Pb	10 20 51.1	+1.3
KDJ	baz=58			⇑iS	Sg	10 21 15.7	+0.6
KOTS	**Kotyrbulak** 4.0nm,0.3s	2.03	292	Pg	Pb	10 20 52.7	+0.6
KOTS	15nm,0.4s			Lg	Lg	10 21 19.4	
KOTS	**Kotyrbulak** baz=90	2.03	292	eP	Pb	10 20 52.7	+0.6
KOTS	baz=90			eS	Sg	10 21 19.4	0.0
KOTS	**Kotyrbulak** 4.0nm,0.3s	2.03	292	eP	Pb	10 20 52.7	+0.6
KOTS	15nm,0.4s			eS	Sg	10 21 19.4	0.0
MDOK	**Medeo** baz=88	2.05	290	eP	Pb	10 20 52.9	+0.5
MDOK	baz=88			eS	Sg	10 21 19.7	-0.5
MDOK	**Medeo** 2.3nm,0.2s	2.05	290	eP	Pb	10 20 52.9	+0.5
MDOK	4.5nm,0.4s			eS	Sg	10 21 19.6	-0.5
ARXS	**Arharly**	2.19	322	Pg	Pb	10 20 54.1	-0.6
ARXS				Lg	Lg	10 21 21.6	
ARXS	**Arharly** 2.8nm,0.4s	2.19	322	eP	Pb	10 20 54.1	-0.6
ARXS	8.0nm,0.6s			eS	Sb	10 21 21.6	-0.7
IZV	**Izvestkoviy** 3.0nm,0.2s	2.33	284	Pg	Pb	10 20 56.9	-0.1
IZV	14nm,0.3s			Lg	Lg	10 21 27.3	
IZV	**Izvestkoviy** baz=83	2.33	284	eP	Pb	10 20 57.0	-0.1
IZV	baz=83			eS	Sb	10 21 27.3	+0.9
IZV	**Izvestkoviy** 3.0nm,0.2s	2.33	284	eP	Pb	10 20 57.0	-0.1
IZV	14nm,0.3s			eS	Sb	10 21 27.3	+0.9
CHKK	**Chushkaly**	2.39	305	Pg	Pb	10 20 58.2	0.0
CHKK				Lg	Lg	10 21 28.7	
CHKK	**Chushkaly** baz=4.0	2.39	305	eP	Pb	10 20 58.2	0.0
CHKK	baz=4.0			eS	Sb	10 21 28.7	+0.5
CHKK	**Chushkaly** 1.3nm,0.2s	2.39	305	eP	Pb	10 20 58.2	0.0
CHKK	16nm,0.3s			eS	Sb	10 21 28.8	+0.5
ULHL	**Ulahol** baz=64	2.56	266	⇑iP	Pb	10 21 00.7	-0.5
ULHL	baz=64			⇑iS	Sb	10 21 32.9	-0.4
BOOM	**Boomskoye usch** baz=70	2.77	271	⇑iP	Pb	10 21 03.1	-1.6
BOOM	baz=70			⇑iS	Sb	10 21 37.4	-1.8
KST	**Kastek**	2.79	283	Pg	Pb	10 21 05.9	+0.8
KST				Lg	Lg	10 21 42.0	
KST	**Kastek** baz=81	2.79	283	eP	Pb	10 21 05.9	+0.8
KST	baz=81			eS	Sb	10 21 42.0	+2.1
KST	**Kastek** 2.3nm,0.2s	2.79	283	eP	Pb	10 21 05.9	+0.8
KST	7.5nm,0.5s			eS	Sb	10 21 42.0	+2.1
KAPS	**Kapalarasan** 0.6nm,0.2s	2.80	355	Pg	Pb	10 21 04.2	-0.8
KAPS	3.5nm,0.5s			Lg	Lg	10 21 39.1	
KAPS	**Kapalarasan** 0.6nm,0.2s	2.80	355	eP	Pb	10 21 04.2	-0.8
KAPS	5.4nm,0.6s			eS	Sb	10 21 39.1	-0.8
KUU	**Kurty**	2.82	301	Pg	Pb	10 21 04.8	-0.5
KUU				Lg	Lg	10 21 40.1	
KUU	**Kurty** baz=0.0	2.82	301	eP	Pb	10 21 05.4	0.0
KUU	baz=0.0			eS	Sb	10 21 41.0	+0.6
KUU	**Kurty** 0.5nm,0.2s	2.82	301	eP	Pb	10 21 05.4	0.0
KUU	7.7nm,0.5s			eS	Sb	10 21 41.0	+0.6
DGS	**Degeres**	2.97	286	Pg	Pb	10 21 07.8	-0.3
DGS				Lg	Lg	10 21 45.7	
DGS	**Degeres** baz=85	2.97	286	eP	Pb	10 21 07.8	-0.3
DGS	baz=85			eS	Sb	10 21 45.7	+0.8
DGS	**Degeres** 1.9nm,0.3s	2.97	286	eP	Pb	10 21 07.8	-0.3
DGS	9.6nm,0.6s			eS	Sb	10 21 45.7	+0.8
TKM2	**Tokmak 2** 0.3nm,0.6s	3.04	279	⇓Pn	Pb	10 21 08.3	-1.0
TKM2	0.8nm,0.3s			⇑Sn	Sb	10 21 47.8	+0.7
TKM2	**Tokmak 2** baz=78	3.04	279	⇑iP	Pb	10 21 06.7	-2.7
TKM2	baz=78			⇑iS	Sb	10 21 44.2	-2.9
KZA	**Kyzart** baz=63	3.32	264	⇑eP	Pb	10 21 11.1	-3.1
KZA	baz=63			⇑iS	Sb	10 21 51.4	-3.8
MK31	**Makanchi Array** 0.3nm,0.5s,baz=208,slow=13,SNR=9.1	4.68	23	Pn	Pn	10 21 28.2	+2.1
MK31	0.3nm,0.5s,baz=201,slow=25,SNR=4.9			⇑Sn	Sn	10 22 22.8	+1.7
MK31	0.5nm,0.6s,baz=198,slow=28			⇑Lg	Lg	10 22 37.6	

*NORS **04** 10:33:49.1±0.0, 42°.54N×41°.13E, h4^{km}, MPVA3.0*
*DDA **04** 10:33:49.9, 42°.23N×41°.29E, h7^{km}±3^{km}, ML2.7*
ISC 04 10:33:46.5±3.5**, 42°.38N**±0°.05×**41°.0E**±0°.1**, h8**^{km}±26^{km}**, n9,** σ**0^{s}.41**/17**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBOC	**Borcka**	1.14	155	i P	Pb	10 34 08.4	0.0
DBOC	comp=Z,762nm,0.1s			IAML_P			
ARTV	**Artvin**	1.37	150	i P	Pn	10 34 12.1	0.0
ARTV				i S	Sn	10 34 30.8	+0.3
ARTV	comp=Z,622nm,0.1s			IAML_P			
DBAD	**Bademkaya**	1.45	159	i P	Pn	10 34 13.3	+0.3
DBAD				i S	Sb	10 34 31.8	-0.6
DBAD	comp=Z,544nm,0.1s			IAML_P			
DAGI	**Agillar**	1.46	152	i P	Pb	10 34 14.1	+0.1
DAGI				i S	Sn	10 34 32.8	+0.2
DAGI	comp=Z,135nm,0.1s			IAML_P			
NEY	**Neytrino**	1.53	55	ePg	Pn	10 34 14.8	+0.6
NEY				eSg	Sn	10 34 33.8	-0.6
DDEM	**Demirkent**	1.58	159	i P	Pn	10 34 14.7	-0.2
DDEM				i S	Sn	10 34 35.6	+0.1
DDEM	comp=Z,403nm,0.1s			IAML_P			
SHA1	**Shidzhatmaz**	1.82	41	ePg	Pb	10 34 20.1	0.0
SHA1				eSg	Sb	10 34 42.7	-0.4
DIGR	**Digorskoe uzhe**	1.96	74	ePg	Pb	10 34 22.9	+0.3
DIGR				eSg	Sb	10 34 47.5	+0.2
ZEI	**Tsey**	2.17	78	ePg	Pb	10 34 25.4	-0.7
ZEI				eSg	Sb	10 34 53.5	+0.3

*SOME **04** 10:39:13.1, 42°.55N×79°.63E, h5^{km}*
*NNC **04** 10:39:13.1±1.0, 42°.59N×79°.64E, h0^{km}, mpv2.0, Error ellipse: s-maj=6.0km s-min=4.0km az=150.0*
*KRNET **04** 10:39:14.3±0.1, 42°.62N×79°.64E, h19^{km}, mb2.2*
ISC 04 10:39:13.7±1.7**, 42°.61N**±0°.06×**79°.61E**±0°.05**, h4**^{km}±12^{km}**, n17,** σ**0^{s}.89**/34**, 7C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak** 0.6nm,0.1s	0.69	322	P	Pg	10 39 27.0	0.0
UZB	8.2nm,0.1s			S	Sb	10 39 37.2	-1.1
UZB	**Uzynbulak** baz=20	0.69	322	eP	Pg	10 39 27.0	0.0
UZB	baz=20			eS	Sb	10 39 37.3	-1.1
UZB	**Uzynbulak** 0.6nm,0.1s	0.69	322	eP	Pg	10 39 27.0	0.0
UZB	8.2nm,0.1s			eS	Sb	10 39 37.2	-1.1
PDGK	**Podgornoye** 0.8nm,0.2s	0.73	353	P	Pg	10 39 28.0	+0.3
PDGK	1.5nm,0.1s			S	Sb	10 39 38.9	-0.6
PDGK	**Podgornoye** 0.6nm,0.4s	0.73	353	⇑P	Pg	10 39 27.4	-0.3
PDGK	1.2nm,0.3s			⇓S	Sg	10 39 38.0	+0.8
PDGK	**Podgornoye** baz=51	0.73	353	⇓iP	Pb	10 39 28.1	-1.0
PDGK	baz=51			⇓iS	Sb	10 39 38.5	-0.9
PRZ	**Przheval'sk** baz=62	0.90	262	⇑iP	Pb	10 39 32.2	+0.2
PRZ	baz=62			⇑iS	Sb	10 39 44.3	-0.2
SATY	**Saty**	0.99	297	P	Pg	10 39 32.4	-0.4
SATY				S	Sg	10 39 46.2	+0.5
SATY	**Saty** 0.7nm,0.1s	0.99	297	eP	Pg	10 39 32.4	-0.4
SATY	11nm,0.1s			eS	Sg	10 39 46.2	+0.5
KTMS	**Ketmen**	1.00	33	P	Pb	10 39 32.7	-1.0
KTMS				S	Sb	10 39 46.9	-0.4
KTMS	**Ketmen**	1.00	33	eP	Pb	10 39 32.7	-1.0
KTMS				eS	Sb	10 39 46.9	-0.4
KURS	**Kuram** baz=9.0	1.37	310	eP	Pb	10 39 39.7	-0.3
KURS	baz=9.0			⇓iS	Sn	10 39 58.8	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	Kuram	1.37	310	*e*P	Pb	10 39 39.7	-0.3
	0.9nm,0.5s						
KURS				⇓*i*S	Sn	10 39 58.7	+0.4
	2.5nm,0.5s						
DJR	Jarkent	1.73	4	*e*P	Pg	10 39 46.5	-0.4
	0.4nm,0.1s						
DJR				*e*S	Sg	10 40 10.3	+1.0
	1.1nm,0.2s						
KDJ	Kajisay	1.86	256	⇑*i*P	Pb	10 39 48.0	-0.4
	baz=56						
KDJ				⇑*i*S	Sg	10 40 13.4	-0.1
	baz=56						
ULHL	Ulahol	2.52	263	⇑*i*P	Pb	10 39 58.3	-1.3
	baz=63						
ULHL				⇑*i*S	Sb	10 40 30.2	-0.8
	baz=63						
BOOM	Boomskoye usch	2.71	269	⇓*i*P	Pn	10 40 00.1	+1.8
	baz=69						
BOOM				⇓*i*S	Sb	10 40 34.2	-2.4
	baz=69						

IDC 04 10:54:18.3±2.2,3°.51N×129°.18E,h0^{km},mb3.5/3, mb1 3.6/3,mb1mx3.3/32,mbtmp3.5/3,Error ellipse: s-maj=138.3km s-min=24.6km az=69.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.86	168	P	P	10 59 32.5	-1.0
	1.2nm,0.6s,baz=348,slow=10,SNR=20						
ASAR	Alice Springs	27.41	171	P	P	11 00 06.6	+0.8
	0.2nm,0.7s,baz=355,slow=8.8,SNR=2.9						
MKAR	Makanchi Array	59.14	324	P	P	11 04 20.9	0.0
	0.3nm,0.4s,baz=115,slow=7.4,SNR=8.1						

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*ISCJB **04** 10:58:57.8±0.8,34°.12N±0°.04×140°.86E±0°.08,h40^{km}, mb3.4/3,Error ellipse: s-maj=9.4km s-min=6.2km az=168.3*

*JMA **04** 10:58:58.2±0.3,34°.16N×140°.86E,h42^{km},M2.9*

*IDC **04** 10:59:01.1±4.1,34°.07N×140°.68E,h52^{km}±32^{km},mb3.1/3, mb1 3.4/4,mb1mx3.1/45,mbtmp3.3/4,ML2.4/1,MS2.6/2, Ms1 2.6/2,ms1mx2.4/17,Error ellipse: s-maj=47.8km s-min=8.5km az=85.0*

ISC 04 10:58:58.9±1.3,34°.14N±0°.05×140°.87E±0°.09,h40^{km},n18, σ0^{s}.93/20,mb3.5/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.53	10	P	Pn	10 59 08.8	-0.7
BSO3	Boso 3	0.73	336	P	Pn	10 59 12.1	-0.4
BSO4	Boso 4	0.96	333	P	Pn	10 59 15.6	-0.2
JMKN	Mikurajimanish	1.09	257	P	Pn	10 59 17.9	+0.3
JKUC	kamogawauchiur	1.16	332	P	Pn	10 59 18.0	-0.6
JHJ	Hachijo jima 2	1.36	222	P	Pn	10 59 21.3	0.0
	33nm,0.3s,baz=163,slow=22,SNR=12						
JHJ				S	Sn	10 59 36.9	-1.3
	62nm,0.3s,baz=326,slow=23,SNR=13						
KTJ3	Kamata3	1.68	299	P	Pn	10 59 25.0	-0.8
KTJ3				*e*S	Sn	10 59 44.4	-1.8
JIZS	Izushimoda	1.74	290	P	Pn	10 59 26.7	+0.1
JIZS				*e*S	Sn	10 59 47.7	+0.1
JOD2	Odawara 2	1.85	308	P	Pn	10 59 27.5	-0.6
JOD2				*e*S	Sn	10 59 48.5	-1.8
MJAR	Matsushiro Arr	3.24	319	P	Pn	10 59 47.7	+0.5
	0.5nm,0.3s,baz=153,slow=11,SNR=22						
MJAR				S	Sn	11 00 25.2	+0.7
	0.3nm,0.3s,baz=112,slow=21,SNR=4.6						
MJAR				LR	LR	11 00 49.4	
	comp=Z,53nm,18.9s,baz=70,slow=34						
MAT	Matsushiro	3.24	319	P	Pn	10 59 47.7	+0.5
MAT				S	Sn	11 00 25.8	+1.2
KSRS	Korea Array	11.02	291	LR	LR	11 05 46.6	
	comp=Z,48nm,20.9s,baz=320,slow=37						
H11N2	WAKE ISLAND Hy	27.18	115	T	T	11 33 47.7	
	baz=306,slow=75						
H11N1	WAKE ISLAND Hy	27.19	115	T	T	11 33 47.4	
	baz=306,slow=75						
H11N3	WAKE ISLAND Hy	27.20	115	T	T	11 33 50.3	
	baz=306,slow=75						
MKAR	Makanchi Array	45.34	304	P	P	11 07 13.6	+0.6
	0.2nm,0.5s,baz=82,slow=9.7,SNR=4.0						
WRA	Warramunga Arr	54.13	188	P	P	11 08 19.2	-0.8
	0.2nm,0.4s,baz=4.5,slow=7.6,SNR=10						
ASAR	Alice Springs	57.86	188	P	P	11 08 47.8	+1.1
	0.3nm,0.6s,baz=2.9,slow=7.1,SNR=9.3						

IDC 04 11:05:31.0±3.6,10°.83S×165°.07E,h0^{km},mb3.8/3, mb1 4.1/3,mb1mx3.6/34,mbtmp3.8/3,MS3.1/2,Ms1 3.1/2, ms1mx2.8/32,Error ellipse: s-maj=185.3km s-min=31.1km az=138.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.23	285	LR	LR	11 09 04.6	
	comp=Z,243nm,20.8s,baz=92,slow=41						
DZM	Mont Dzumac	11.26	173	LR	LR	11 11 10.7	
	comp=Z,80nm,18.9s,baz=26,slow=30						
H11S2	WAKE ISLAND Hy	29.18	3	T	T	11 42 05.8	
	baz=184,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	29.18	3	T	T	11 42 10.0	
	baz=184,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	29.19	3	T	T	11 42 06.7	
	baz=184,slow=76,SNR=28						
H11N1	WAKE ISLAND Hy	30.40	3	T	T	11 43 37.3	
	baz=182,slow=76,SNR=37						
H11N3	WAKE ISLAND Hy	30.41	3	T	T	11 43 39.0	
	baz=182,slow=76,SNR=21						
H11N2	WAKE ISLAND Hy	30.42	3	T	T	11 43 37.1	
	baz=182,slow=76,SNR=35						
WRA	Warramunga Arr	30.94	249	P	P	11 11 50.4	+0.4
	0.7nm,0.7s,baz=80,slow=9.0,SNR=4.6						
ASAR	Alice Springs	32.30	243	P	P	11 12 01.6	-0.3
	1.2nm,0.5s,baz=64,slow=10,SNR=42						
ILAR	Eielson Array	83.52	19	P	P	11 18 00.5	0.0
	0.4nm,0.6s,baz=243,slow=5.1,SNR=9.1						

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*DRS **04** 11:05:37.4±0.0,42°.82N×47°.77E,h2^{km}*

*ISCJB **04** 11:05:41.8±0.7,42°.98N±0°.04×47°.84E±0°.04,h7^{km}±4^{km}, Error ellipse: s-maj=6.4km s-min=4.0km az=23.7*

*MOS **04** 11:05:41.9±1.3,42°.95N×47°.84E,h11^{km},mb3.7/1,Error ellipse: s-maj=10.5km s-min=7.2km az=176.0*

*MOS **04** 11:05:42.8±0.0,42°.84N×47°.71E,h12^{km},MPVA3.5*

*NORS **04** 11:05:43.1±0.0,42°.84N×47°.71E,h10^{km},MPVA3.7*

ISC 04 11:05:43.6±1.1,42°.86N±0°.04×47°.76E±0°.04,h13^{km}±7^{km}, n39,σ0^{s}.86/62,10C-2D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAK	Makhachkala	0.21	299	*e*PG	Pg	11 05 48.0	-0.2
MAK				*e*		11 05 51.5	
MAK				pmax	pmax		
	comp=Z,166nm,0.4s						
MAK				smax	smax		
	comp=E,3µm,0.4s						
MAK				smax	smax		
	comp=E,3µm,0.3s						
MAK	Makhachkala	0.21	299	*e*Pg	Pg	11 05 48.0	-0.2
MAK				*e*Sg	Sg	11 05 51.6	+0.2
BUJR	Buynaksk	0.48	266	PG	Pg	11 05 52.5	-0.5
BUJR				*e*S	Sb	11 06 00.5	-0.4
BUJR				pmax	pmax		
	comp=Z,95nm,0.2s						
BUJR	Buynaksk	0.48	266	*e*Pg	Pg	11 05 52.5	-0.5
BUJR				*e*Sg	Sb	11 06 00.5	-0.4
KRNR	Karanay	0.63	267	*e*PG	Pg	11 05 55.0	-0.8
KRNR				S	Sg	11 06 04.5	+0.4
KRNR				pmax	pmax		
	comp=Z,29nm,0.3s						
KRNR	Karanay	0.63	267	*e*Pg	Pg	11 05 55.0	-0.8
KRNR				*e*Sg	Sg	11 06 04.5	+0.4
DBC	Dubki	0.70	284	*e*PG	Pg	11 05 57.1	-0.1
DBC				*e*S	Sb	11 06 07.5	+0.2
DBC	Dubki	0.70	284	*e*Pg	Pg	11 05 57.1	-0.1
DBC				*e*Sg	Sb	11 06 07.5	+0.2
UNCR	Uncukul	0.72	259	*e*PG	Pg	11 05 57.0	-0.6
UNCR				*e*S	Sn	11 06 11.0	+0.4
UNCR				pmax	pmax		
	comp=Z,40nm,0.4s						
UNCR	Uncukul	0.72	259	*e*Pg	Pg	11 05 57.0	-0.6
UNCR				*e*Sg	Sn	11 06 11.0	+0.4
GNBR	Gunib	0.75	231	⇑*i*PG	Pg	11 05 57.7	-0.5
GNBR				*e*		11 06 12.2	
GNBR				pmax	pmax		
	comp=Z,91nm,0.6s						
GNBR				smax	smax		
	comp=N,91nm,1.2s						
GNBR	Gunib	0.75	231	*e*Pg	Pg	11 05 57.7	-0.5
GNBR				*e*Sg	Sb	11 06 09.3	+0.5
XNZR	Khunzakh	0.84	248	*e*Pg	Pg	11 05 59.5	-0.4
XNZR				*e*Sg	Sn	11 06 13.7	+0.1
KMKR	Kumukh	0.88	214	*e*PG	Pb	11 06 01.0	+0.2
KMKR				S	Sn	11 06 14.0	-0.5
KMKR				pmax	pmax		
	comp=Z,41nm,0.2s						
KMKR	Kumukh	0.88	214	*e*Pg	Pb	11 06 01.0	+0.2
KMKR				*e*Sg	Sn	11 06 14.0	-0.5
DRN	Derbent	0.93	153	*e*PG	Pn	11 06 03.1	+0.8
DRN				*e*S	Sn	11 06 16.3	+0.8
DRN	Derbent	0.93	153	*e*Pg	Pn	11 06 03.1	+0.8
DRN				*e*Sg	Sn	11 06 16.3	+0.8
BTLR	Botlikh	1.15	261	⇓*e*PG	Pn	11 06 05.5	+0.1
BTLR				*e*		11 06 23.5	
BTLR				pmax	pmax		
	comp=Z,31nm,0.4s						
BTLR				smax	smax		
	comp=N,46nm,13.2s						
BTLR	Botlikh	1.15	261	*e*Pg	Pg	11 06 05.9	+0.2
BTLR				*e*Sg	Sn	11 06 22.2	+1.2
DVE	Vedeno	1.20	275	⇑*e*PG	Pg	11 06 06.8	+0.1
DVE	Vedeno	1.20	275	*e*Pg	Pg	11 06 07.1	+0.3
DVE				*e*Sg	Sn	11 06 23.7	+1.3
LACR	Lac	2.55	270	*e*PN	Pb	11 06 27.6	-1.6
LACR				*e*S	Sb	11 06 59.8	-0.7
LACR	Lac	2.55	270	*e*Pn	Pb	11 06 27.6	-1.6
LACR				*e*Sn	Sb	11 06 59.8	-0.7
ZEI	Tsey	2.84	270	*e*Pn	Pb	11 06 34.5	+0.3
ZEI				*e*Sn	Sb	11 07 07.5	-1.5
NCK	Nalchik	3.11	283	⇑*e*PN	Pn	11 06 31.4	-1.0
NCK	Nalchik	3.11	283	*e*Pn	Pn	11 06 35.0	+2.6
PYA1	Pyatigorsk	3.60	291	⇓*e*PN	Pn	11 06 39.3	+0.1
PYA1	Pyatigorsk	3.60	291	*e*Pn	Pn	11 06 39.2	+0.1
PYA1				*e*Sn	Sn	11 07 21.5	0.0
SHA1	Shidzhatmaz	3.83	285	⇑*e*PN	Pn	11 06 42.7	+0.3
SHA1	Shidzhatmaz	3.83	285	*e*Pn	Pn	11 06 43.1	+0.7
SHA1				*e*Sn	Sn	11 07 27.0	-0.3
KIV	Kislovodsk	3.85	288	⇑*e*PN	Pn	11 06 43.5	+0.9
KIV	Kislovodsk	3.85	288	*e*Pn	Pn	11 06 43.9	+1.2
KIV				*e*Sn	Sn	11 07 28.1	+0.2
GOF	Gofitskoye	4.05	304	*e*PN	Pn	11 06 46.2	+0.9
GOF				pmax	pmax		
	comp=Z,10.0nm,0.4s						
DOMR	Dombai	4.51	278	⇑*e*PN	Pn	11 06 51.9	+0.1
DOMR	Dombai	4.51	278	*e*Pn	Pn	11 06 51.9	+0.1
KIEV	Kiev	14.90	308	⇑*e*P	Pn	11 09 16.4	+2.6
ARU	Arti	15.25	23	⇑*e*P	Pn	11 09 17.9	-0.5
ARU				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	19.61	82	⇑*e*P	P	11 10 11.3	-0.5
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
DGZ	Jazzator, Alta	28.00	62	⇑*e*P	P	11 11 32.1	-2.1

MEX 04 11:09:53.3±0.3,16°.25N×95°.93W,h19^{km}±103^{km},MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.51	199	*e*P	Pg	11 10 01.8	-1.8
HUIG				*i* S	Sg	11 10 08.6	-2.0
VHO	Vista Hermosa	1.12	317	*e*P	Pn	11 10 10.6	-3.6
VHO				*e*S	Sb	11 10 24.5	-4.0
CMIG	Matias Romero	1.31	50	*e*P	Pn	11 10 13.2	-3.4
CMIG				*e*S	Sn	11 10 28.8	-4.7
PCIG		2.67	101	*e*P	Pn	11 10 31.8	-3.6
PCIG				*i* S	Sn	11 11 03.8	-3.4
CCIG	Comitan	3.65	89	*e*P	Pn	11 10 49.9	+1.0

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*DDA **04** 11:12:53.8,38°.62N×43°.13E,h7^{km}±3^{km},ML2.9*

*ISK **04** 11:12:53.3,38°.63N×43°.14E,h5^{km},ML2.1/6*

*ISCJB **04** 11:12:54.5±0.5,38°.60N±0°.03×43°.14E±0°.04,h10^{km}±6^{km}, Error ellipse: s-maj=5.6km s-min=5.2km az=34.8*

ISC 04 11:12:54.2±1.0,38°.62N±0°.03×43°.13E±0°.04,h10^{km}±10^{km}, n12,σ0^{s}.73/18,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.20	97	PG	Pg	11 12 58.4	-0.1
VANB				SG	Sg	11 13 02.5	+1.0
TVAN	Van	0.23	112	*i* P	Pg	11 12 58.7	-0.4
TVAN				*i* S	Sg	11 13 03.2	+0.7
TVAN				IAML_P			
	comp=Z,11µm,0.1s						
GEVA	Gevas	0.31	190	*i* P	Pb	11 13 01.3	-0.6
GEVA				IAML_P			
	comp=Z,13µm,0.2s						
AKDM	Akdamar-Van	0.31	202	PG	Pg	11 13 00.2	-0.3
AKDM				SG	Sg	11 13 05.1	+0.3
ADCV	BITLIS_Adilcev	0.37	301	*i* P	Pb	11 13 02.0	-0.9
ADCV				*i* S	Sb	11 13 09.3	+0.4
VMUR	Van-Muradiye	0.51	43	*i* P	Pb	11 13 04.5	-0.8
VMUR				*i* S	Sb	11 13 12.1	-0.6
TUTA	Tutak	0.82	343	*i* P	Pg	11 13 09.7	-0.3
GURO	Guroymak-BITLI	0.86	266	PG	Pg	11 13 10.5	-0.3
AGRB	Hanur-Agry	0.96	354	PG	Pg	11 13 12.1	-0.6
SIRT	Sirnak	1.24	206	PN	Pn	11 13 17.7	+0.1
EATA	Eleskirt	1.34	338	*i* P	Pb	11 13 19.5	0.0
EATA				*i* S	Sn	11 13 38.7	+1.5
EATA				IAML_P			
	comp=Z,295nm,0.2s						
CUKT	Cukurca	1.42	164	PN	Pb	11 13 20.4	-0.4

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*ISK **04** 11:14:59.2,38°.65N×43°.17E,h18^{km},ML2.2/4*

*DDA **04** 11:15:00.8,38°.66N×43°.20E,h7^{km}±3^{km},ML2.9*

*ISCJB **04** 11:15:01.2±0.5,38°.60N±0°.04×43°.16E±0°.04,h13^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=5.2km az=170.1*

ISC 04 11:15:00.7±1.0,38°.64N±0°.03×43°.18E±0°.04,h14^{km}±10^{km}, n11,σ0^{s}.98/17,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.17	104	PG	Pb	11 15 04.9	-0.8
VANB				SG	Sg	11 15 09.1	+1.4
TVAN	Van	0.21	121	*i* P	Pb	11 15 05.9	-0.5
TVAN				*i* S	Sg	11 15 09.5	+0.7
TVAN				IAML_P			
	comp=Z,13µm,0.1s						
AKDM	Akdamar-Van	0.35	207	PG	Pg	11 15 06.9	-0.9
AKDM				SG	Sg	11 15 12.5	-0.2
ADCV	BITLIS_Adilcev	0.39	296	*i* P	Pb	11 15 09.4	-0.1
ADCV				*i* S	Sb	11 15 15.9	+0.4
ADCV				IAML_P			
	comp=Z,2µm,0.1s						
VMUR	Van-Muradiye	0.47	41	*i* P	Pb	11 15 10.3	-0.4
VMUR				*i* S	Sb	11 15 19.1	+1.5
VMUR				IAML_P			
	comp=Z,3µm,0.1s						
TUTA	Tutak	0.81	340	*i* P	Pb	11 15 16.6	-0.2
TUTA				IAML_P			
	comp=Z,5µm,0.2s						
BASK	Baskale_VAN	0.87	132	*e*P	Pb	11 15 17.3	-0.4
BASK				IAML_P			
	comp=Z,500nm,0.1s						
GURO	Guroymak-BITLI	0.90	265	PG	Pg	11 15 16.9	-1.3
AGRB	Hanur-Agry	0.95	351	PG	Pg	11 15 17.7	-1.4
SRTM	Siirt_Merkez	1.18	237	*i* P	Pg	11 15 24.4	+1.0
SRTM				IAML_P			
	comp=Z,234nm,0.1s						
EATA	Eleskirt	1.33	337	*i* P	Pg	11 15 25.8	-0.6
EATA				*i* S	Sg	11 15 44.8	+1.0
EATA				IAML_P			
	comp=Z,305nm,0.2s						

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*KRNET **04** 11:29:58.8±0.1,40°.52N×77°.18E,h20^{km},mb2.1*

*SOME **04** 11:30:01.4,40°.48N×77°.10E,h10^{km}*

*NNC **04** 11:30:01.5±1.6,40°.56N×77°.05E,h0^{km},mb3.0,mpv2.6, Error ellipse: s-maj=16.2km s-min=7.1km az=131.0*

ISC 04 11:29:59.9±1.9,40°.33N±0°.07×77°.06E±0°.05,h27^{km}±17^{km}, n23,σ1^{s}.47/39,19C-2D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.36	324	⇑*i*P	Pn	11 30 23.8	+0.4
	baz=15						
NRN				⇑*i*S	Sb	11 30 41.1	-0.9
	baz=15						
TARG	Taragay, Kyrgy	1.50	22	⇑*i*P	Pn	11 30 23.4	-2.1
	baz=21						
TARG				⇑*i*S	Sn	11 30 41.9	-2.5
	baz=21						
KDJ	Kajisay	1.80	3	⇑*i*P	Pn	11 30 29.3	0.0
	baz=0.0						
KDJ				⇑*i*S	Sn	11 30 51.4	+0.1
	baz=0.0						
ULHL	Ulahol	2.01	342	⇑*i*P	Pb	11 30 33.7	-2.1
	baz=38						
ULHL				⇑*i*S	Sb	11 30 58.8	-1.7
	baz=38						
KZA	Kyzart	2.21	323	⇑*i*P	Pb	11 30 38.0	-1.4
	baz=18						
KZA				⇑*i*S	Sb	11 31 07.1	+0.5
	baz=18						
BOOM	Boomskoye usch	2.31	339	⇑*i*P	Pn	11 30 38.3	+1.9
	baz=35						
BOOM				⇑*i*S	Sb	11 31 07.3	-1.9
	baz=35						
UCH	Uchtor	2.69	315	⇑*e*P	Pb	11 30 44.9	-2.7
	baz=11						
UCH				⇑*i*S	Sb	11 31 18.9	-1.5
	baz=11						
TNSS	Tian-Shan	2.70	358	Pg	Pb	11 30 48.2	+0.4
	3.8nm,0.5s						
TNSS				Lg	Lg	11 31 22.0	
	9.1nm,0.7s						
TNSS	Tian-Shan	2.70	358	*e*P	Pb	11 30 48.1	+0.4
	3.8nm,0.5s						
TNSS				*e*S	Sb	11 31 21.8	+1.1
	9.1nm,0.7s						
SFK	Sufi-Kurgan	2.74	264	⇑Pn	Pb	11 30 47.7	-0.6
	0.7nm,0.4s						
SFK				⇑Lg	Lg	11 31 25.7	
	1.3nm,0.4s						
SFK	Sufi-Kurgan	2.74	264	⇑*i*P	Pb	11 30 48.1	-0.2
	baz=61						
SFK				⇑*i*S	Sb	11 31 23.8	+2.2
	baz=61						
TKM2	Tokmak 2	2.81	338	⇓Pn	Pn	11 30 45.5	+2.3
	1.7nm,0.8s						
TKM2				⇓Lg	Lg	11 31 23.4	
	0.6nm,0.3s						
MDOK	Medeo	2.83	360	*e*P	Pb	11 30 50.3	+0.5
	4.8nm,0.2s						
MDOK				*e*S	Sb	11 31 25.4	+1.4
	15nm,0.8s						
KST	Kastek	2.83	344	*e*P	Pb	11 30 50.7	+0.9
	1.4nm,0.3s						
KST				*e*S	Sb	11 31 26.1	+2.1
	4.8nm,0.5s						
SATY	Saty	2.91	20	Pg	Pb	11 30 50.0	-1.0
	4.3nm,0.8s						
SATY				Lg	Lg	11 31 25.3	
	8.2nm,0.3s						
SATY	Saty	2.91	20	*e*P	Pb	11 30 50.0	-1.0
	4.3nm,0.8s						
SATY				*e*S	Sb	11 31 25.2	-0.9
	8.2nm,0.3s						
UZB	Uzynbulak	3.17	27	*e*P	Pb	11 30 55.8	+0.2
	1.1nm,0.3s						
UZB				*e*S	Sb	11 31 34.9	+1.0
	2.7nm,0.5s						
PDGK	Podgornoye	3.50	30	Pg	Pb	11 31 00.9	-0.3
PDGK				Lg	Lg	11 31 43.9	
CHKK	Chushkaly	3.52	359	*e*P	Pb	11 31 02.1	+0.7
	0.7nm,0.2s						
CHKK				⇑*i*S	Sb	11 31 45.9	+2.2
	6.3nm,0.4s						
KUU	Kurty	3.60	352	Pg	Pb	11 31 03.4	+0.7
KUU				Lg	Lg	11 31 48.2	
KUU	Kurty	3.60	352	*e*P	Pb	11 31 03.4	+0.7
	0.8nm,0.6s						
KUU				*e*S	Sb	11 31 48.2	+2.2
	3.9nm,0.4s						
MNBS	Baschi	3.87	15	Pg	Pb	11 31 07.5	0.0
MNBS				Lg	Lg	11 31 56.0	
MNBS	Baschi	3.87	15	*e*P	Pb	11 31 07.9	+0.3
	0.4nm,0.1s						
MNBS				*e*S	Sb	11 31 55.7	+1.7
	2.7nm,0.2s						

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*ISCJB **04** 11:41:49.4±0.5,33°.98S±0°.07×14°.58W±0°.09,h10^{km}, mb4.6/17,MS4.3/4,Error ellipse: s-maj=10.5km s-min=10.3km az=1.9*

*IDC **04** 11:41:50.2±1.4,33°.93S×14°.61W,h0^{km},mb4.2/7, mb1 4.2/7,mb1mx4.0/28,mbtmp4.2/7,MS4.2/4,Ms1 4.3/4, ms1mx3.9/20,Error ellipse: s-maj=47.9km s-min=19.8km az=174.0*

*NEIC **04** 11:41:51.2±0.3,33°.93S×14°.58W,h10^{km},mb4.8/10,Error ellipse: s-maj=8.4km s-min=7.8km az=220.0*

*GCMT **04** 11:41:55.2±0.3,34°.14S±0°.02×14°.36W±0°.02,h18^{km}±1^{km}, MW5.0/79,Moment Tensor Solution. s20,c21; s79,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.07±.18; $M_{\theta\theta}$-1.84±.19; $M_{\phi\phi}$1.77±.16; $M_{r\theta}$0.65±.45; $M_{\theta\phi}$3.30±.17; $M_{\phi r}$0.43±.35; Best double couple: $M_0$3.84300×10^{16} NP1:ϕ_s76.00000°,δ86.00000°,λ11.00000°. NP2: ϕ_s345.00000°,δ79.00000°,λ176.00000°. Principal axes: T 3.8590, Plg11.0000°, Azm301.0000°; N -0.0370, Plg78.0000°, Azm95.0000°; P -3.8270, Plg5.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 11:41:51.2±0.6,33°.95S±0°.09×14°.6W±0°.1,h10^{km},n41, σ0^{s}.89/29,mb4.7/17,MS4.2/4,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09N1	TRISTAN DA CUN	3.62	150	T	T	11 46 05.7	
TRIS	Tristan da Cun	3.62	150	*e*Pg	Pg	11 43 01.4	+0.8
H09W1	TRISTAN DA CUN	3.64	150	T	T	11 46 08.3	
H10S2	ASCENSION HYDR	24.87	360	T	T	12 13 23.4	
	baz=180,slow=75,SNR=132						
H10S3	ASCENSION HYDR	24.88	360	T	T	12 13 24.3	
	baz=180,slow=75,SNR=144						
H10S1	ASCENSION HYDR	24.89	360	T	T	12 13 25.0	
	baz=180,slow=75,SNR=104						
ASCN	Ascension	25.89	1	*e*P	P	11 47 24.7	+1.4
	79nm,0.9s						
H10N1	ASCENSION HYDR	25.98	0	T	T	12 14 48.5	
	baz=189,slow=78,SNR=7.0						
H10N3	ASCENSION HYDR	25.98	0	T	T	12 14 44.8	
	baz=189,slow=78,SNR=44						
H10N2	ASCENSION HYDR	26.00	0	T	T	12 14 46.6	
	baz=189,slow=78,SNR=14						
BDFB	Brasilia	35.18	293	P	P	11 48 45.6	0.0
	3.8nm,0.8s,baz=143,slow=5.1,SNR=3.3						
CPUP	Villa Florida	37.52	270	LR	LR	12 02 40.7	
	comp=Z,364nm,18.2s,baz=120,slow=33						
SNAA	Sanae	38.30	174	LR	LR	12 01 02.3	
	comp=Z,160nm,19.7s,baz=334,slow=30						
MATP	Matopo	40.34	82	P	P	11 49 29.6	+0.3
	4.9nm,0.8s,baz=246,slow=9.6,SNR=11						
LIC	Lamto	40.97	15	*e*PKIKP	P	11 49 36.3	+2.1
	49nm,1.5s						
KIC	Kosan Boka	41.16	15	*e*PKIKP	P	11 49 36.8	+1.0
	40nm,1.1s						
TIC	Toumodi	41.38	14	*e*PKIKP	P	11 49 36.6	-1.0
DBIC	Dimbokro	41.44	15	*e*P	P	11 49 37.8	-0.3
	21nm,1.4s						
DBIC	Dimbokro	41.44	15	P	P	11 49 38.9	+0.8
	2.5nm,0.7s,baz=174,slow=9.9,SNR=5.4						
LSZ	Lusaka	42.75	75	*e*P	P	11 49 49.4	+0.4
	14nm,1.5s						
LSZ	Lusaka	42.75	75	P	P	11 49 50.0	+0.9
	1.3nm,0.3s,baz=243,slow=3.0,SNR=3.7						
PLCA	Paso Flores	44.36	244	*e*P	P	11 50 01.8	0.0
	20nm,1.6s						
SIV	San Ignacio	45.35	281	P	P	11 50 11.4	+1.6
	3.2nm,0.8s,baz=130,slow=8.1,SNR=17						
TOA0	Torodi Ar. Sit	49.34	21	*e*P	P	11 50 40.1	-0.6
TORD	Torodi Ar. Bea	49.34	21	P	P	11 50 40.7	0.0
	2.9nm,0.9s,baz=207,slow=6.4,SNR=11						

TOA1	**Torodi Ar. Sit**	**49.34**	**21**	*e*P	**P**	**11 50 40.7**	**-0.1**
PB11	**IPOC Station P**	**50.57**	**272**	*e*P	**P**	**11 50 50.0**	**-0.3**
	15nm,1.0s						
MNMC	**Minye Minye**	**50.81**	**272**	*e*P	**P**	**11 50 52.4**	**+0.1**
	14nm,1.1s						
LPAZ	**La Paz**	**51.00**	**276**	*e*P	**P**	**11 50 53.7**	**-0.5**
LPAZ	**La Paz**	**51.00**	**276**	P	**P**	**11 50 52.9**	**-1.2**
	0.7nm,0.6s,baz=135,slow=4.3,SNR=2.4						
PTGA	**Pitinga**	**53.78**	**298**	*e*P	**P**	**11 51 14.7**	**+0.6**
	6.5nm,0.9s						
MBAR	**Mbarara**	**53.83**	**62**	*e*P	**P**	**11 51 13.3**	**-1.4**
	10nm,1.3s						
QSPA	**South Pole Qui**	**56.29**	**180**	*e*P	**P**	**11 51 31.2**	**-0.6**
	16nm,0.9s						
VNDA	**Vanda**	**68.77**	**179**	LR	LR	12 20 03.1	
	comp=Z,139nm,18.4s,baz=167,slow=33						
KEST	**Kesra**	**72.85**	**20**	LR	LR	12 23 15.0	
	comp=Z,445nm,18.7s,baz=236,slow=34						
ES19	**SONSECA Array**	**73.95**	**9**	*e*P	**P**	**11 53 26.4**	**-0.1**
PSZ	**Piszkesteto**	**87.16**	**22**	*e*P	**P**	**11 54 36.6**	**-0.6**
	12nm,1.0s						
YKA	**Yellowknife Ar**	**124.02**	**327**	PKP	**PKiKP**	**12 00 49.4**	**+0.3**
	0.8nm,0.6s,baz=91,slow=2.1,SNR=4.5						
YKB5	**Yellowknife Ar**	**124.02**	**327**	*e*PKPdf	**PKPdf**	**12 00 47.8**	**-1.0**
ILAR	**Eielson Array**	**137.90**	**332**	PKhKP	PKPpre	12 01 10.0	
	0.4nm,0.8s,baz=42,slow=2.0,SNR=5.1						
ILAR				PKP	**PKiKP**	**12 01 16.1**	**-1.0**
	0.7nm,0.9s,baz=53,slow=1.2,SNR=5.9						
ANM	**Nome**	**144.56**	**339**	*e*PKPdf	**PKPdf**	**12 01 26.8**	**-0.2**

ISCJB ***04*** *11:42:46.4±1.3, 35°.38N±0°.04×141°.49E±0°.09, h18^{km}±9^{km}, mb3.4/4, Error ellipse: s-maj=12.0km s-min=6.6km az=170.5*

IDC ***04*** *11:42:46.4±1.2, 35°.25N×141°.40E, h0^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.4/40, mbtmp3.3/6, ML2.7/2, Error ellipse: s-maj=28.0km s-min=20.3km az=86.0*

JMA ***04*** *11:42:48.3±0.2, 35°.39N×141°.33E, h32^{km}±2^{km}, M3.1*

ISC 04 11:42:48.1±1.6**, 35°.37N**±0°.05×**141°.35E**±0°.07**, h15**^{km}±10^{km}**, n21,** σ**1^{s}.46**/22**, mb3.4**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.52**	**310**	P	**Pg**	**11 42 58.5**	**+0.1**
CHOJ				S	**Sg**	**11 43 06.1**	**+0.7**
BSO1	**Boso 1**	**0.78**	**203**	P	**Pb**	**11 43 03.4**	**+0.5**
BSO1				X		11 43 14.0	
JSMT	**Sammumatsuo**	**0.79**	**291**	P	**Pb**	**11 43 02.9**	**-0.5**
JSMT				*e*S	**Sg**	**11 43 13.2**	**-0.5**
KTR	**Katsuura**	**0.88**	**256**	P	**Pb**	**11 43 04.1**	**-0.9**
BSO3	**Boso 3**	**0.89**	**231**	P	**Pb**	**11 43 04.8**	**-0.3**
BSO3				*e*X		11 43 17.4	
BSO4	**Boso 4**	**0.91**	**246**	P	**Pb**	**11 43 05.0**	**-0.5**
JYT	**Yasato**	**1.27**	**313**	P	**Pn**	**11 43 11.4**	**+0.1**
JYT				*e*S	**Sb**	**11 43 27.4**	**-0.5**
JHJ	**Hachijo jima 2**	**2.59**	**211**	Pn	**Pn**	**11 43 30.1**	**+0.6**
	11nm,0.3s,baz=141,slow=22,SNR=9.9						
JHJ				Sn	**Sn**	**11 43 58.9**	**-1.8**
	53nm,0.3s,baz=59,slow=23,SNR=10						
MJAR	**Matsushiro Arr**	**2.81**	**296**	Pn	**Pn**	**11 43 32.8**	**+0.4**
	0.4nm,0.3s,baz=102,slow=6.9,SNR=26						
MJAR				Sn	**Sn**	**11 44 08.6**	**+2.6**
	0.4nm,0.3s,baz=25,slow=33,SNR=4.6						
MAT	**Matsushiro**	**2.81**	**296**	P	**Pn**	**11 43 33.1**	**+0.7**
MAT				S	**Sn**	**11 44 02.0**	**-4.0**
ASAJ	**Asahikawa**	**8.79**	**6**	Pn	**Pn**	**11 44 53.0**	**-1.5**
	0.6nm,0.3s,baz=207,slow=10,SNR=3.4						
ASAJ				Sn	**Sn**	**11 46 32.5**	**-0.7**
	0.3nm,0.3s,baz=106,slow=16,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**27.38**	**118**	T	T	12 17 37.7	
	baz=310,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**27.38**	**118**	T	T	12 17 35.9	
	baz=310,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**27.39**	**118**	T	T	12 17 41.6	
	baz=310,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**28.03**	**120**	T	T	12 18 21.9	
	baz=312,slow=75,SNR=103						
H11S3	**WAKE ISLAND Hy**	**28.03**	**120**	T	T	12 18 19.5	
	baz=312,slow=75,SNR=75						
H11S2	**WAKE ISLAND Hy**	**28.05**	**120**	T	T	12 18 13.4	
	baz=312,slow=75,SNR=54						
MKAR	**Makanchi Array**	**44.98**	**304**	P	**P**	**11 51 04.5**	**+1.9**
	0.2nm,0.6s,baz=106,slow=3.9,SNR=2.9						
ILAR	**Eielson Array**	**50.93**	**32**	P	**P**	**11 51 49.5**	**+1.2**
	0.5nm,0.8s,baz=276,slow=6.8,SNR=5.1						
WRA	**Warramunga Arr**	**55.41**	**188**	P	**P**	**11 52 21.2**	**-0.5**
	0.5nm,0.4s,baz=5.4,slow=7.8,SNR=29						
ASAR	**Alice Springs**	**59.14**	**188**	P	**P**	**11 52 48.0**	**0.0**
	0.2nm,0.8s,baz=0.5,slow=6.2,SNR=5.7						

ISCJB ***04*** *11:48:40.5±0.4, 34°.1S±0°.1×14°.67W±0°.07, h10^{km}, mb4.7/30, MS4.3/9, Error ellipse: s-maj=14.8km s-min=7.8km az=164.3*

IDC ***04*** *11:48:41.2±1.1, 34°.08S×14°.58W, h0^{km}, mb4.4/9, mb1 4.4/9, mb1mx4.1/28, mbtmp4.4/9, MS4.3/8, Ms1 4.2/8, ms1mx4.1/18, Error ellipse: s-maj=43.6km s-min=16.1km az=179.0*

NEIC ***04*** *11:48:42.1±0.3, 34°.02S×14°.68W, h10^{km}, mb4.8/21, Error ellipse: s-maj=12.1km s-min=5.7km az=170.0*

GCMT ***04*** *11:48:47.1±0.2, 34°.10S±0°.02×14°.28W±0°.01, h19^{km}±1^{km}, MW5.1/104, Moment Tensor Solution. s29,c33; s104,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.81±.19; M$_{\theta\theta}$-1.61±.17; M$_{\phi\phi}$2.43±.17; M$_{r\theta}$-1.38±.35; M$_{\theta\phi}$4.28±.13; M$_{\phi r}$0.62±.31; Best double couple: M$_0$5.01400×10^{16} NP1:φ$_s$76.00000°, δ77.00000°, λ-16.00000°. NP2:φ$_s$169.00000°, δ74.00000°, λ-167.00000°. Principal axes: T 5.1510, Plg2.0000°, Azm123.0000°; N -0.2690, Plg70.0000°, Azm218.0000°; P -4.8770, Plg20.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 11:48:41.8±0.5**, 34°.2S**±0°.1×**14°.64W**±0°.09**, h10**^{km}**, n69,** σ**1^{s}.46**/50**, mb4.8**/34**, MS4.4**/9**, 1C-1D, Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09N1	**TRISTAN DA CUN**	**3.44**	**147**	T	T	11 52 58.2	
	SNR=64						
TRIS	**Tristan da Cun**	**3.44**	**147**	*e*P	Pg	11 49 54.4	+6.7
H09W1	**TRISTAN DA CUN**	**3.46**	**148**	T	T	11 53 03.9	
	SNR=89						
H10S2	**ASCENSION HYDR**	**25.11**	**360**	T	T	12 20 19.5	
	baz=180,slow=75,SNR=305						
H10S3	**ASCENSION HYDR**	**25.12**	**360**	T	T	12 20 20.1	
	baz=180,slow=75,SNR=355						
H10S1	**ASCENSION HYDR**	**25.13**	**360**	T	T	12 20 20.9	
	baz=180,slow=75,SNR=380						
H10N1	**ASCENSION HYDR**	**26.22**	**0**	T	T	12 21 28.0	
	baz=190,slow=78,SNR=38						
H10N3	**ASCENSION HYDR**	**26.22**	**0**	T	T	12 21 40.2	
	baz=190,slow=78,SNR=132						
H10N2	**ASCENSION HYDR**	**26.24**	**0**	T	T	12 21 41.4	
	baz=190,slow=78,SNR=53						
SUR	**Sutherland**	**29.61**	**97**	LR	LR	12 03 36.1	
	comp=Z,653nm,21.3s,baz=249,slow=30						
TSUM	**Tsumeb**	**32.27**	**71**	P	**P**	**11 55 10.9**	**0.0**
	2.4nm,0.8s,baz=255,slow=17,SNR=2.5						
BOSA	**Boshof**	**34.35**	**92**	*e*P	**P**	**11 55 29.5**	**+0.5**
	8.9nm,0.9s						
BOSA	**Boshof**	**34.35**	**92**	P	**P**	**11 55 29.5**	**+0.5**
	6.9nm,0.9s,baz=248,slow=8.3,SNR=6.5						
BDFB	**Brasilia**	**35.23**	**293**	*e*P	**P**	**11 55 35.6**	**-1.1**
	47nm,1.4s						
BDFB	**Brasilia**	**35.23**	**293**	P	**P**	**11 55 37.3**	**+0.7**
	7.4nm,0.8s,baz=116,slow=6.6,SNR=9.1						
BDFB				LR	LR	12 07 54.2	
	comp=Z,652nm,18.3s,baz=107,slow=33						
LBTB	**Lobatse**	**35.97**	**86**	*e*P	**P**	**11 55 43.7**	**+0.7**
	9.3nm,1.0s						
MATP	**Matopo**	**40.42**	**82**	P	**P**	**11 56 21.0**	**+0.5**
	3.9nm,0.5s,baz=234,slow=8.8,SNR=13						
LIC	**Lamto**	**41.21**	**15**	*e*P	**P**	**11 56 29.3**	**+2.4**
	56nm,1.3s						
KIC	**Kosan Boka**	**41.41**	**15**	*e*P	**P**	**11 56 25.9**	**-2.6**
	40nm,1.2s						
TIC	**Toumodi**	**41.62**	**14**	*e*P	**P**	**11 56 29.5**	**-0.7**
DBIC	**Dimbokro**	**41.68**	**15**	*e*P	**P**	**11 56 29.9**	**-0.8**
	14nm,1.4s						
DBIC	**Dimbokro**	**41.68**	**15**	P	**P**	**11 56 31.1**	**+0.4**
	4.1nm,0.9s,baz=191,slow=5.2,SNR=3.1						
DBIC				LR	LR	12 09 43.2	
	comp=Z,134nm,21.9s,baz=190,slow=30						
LSZ	**Lusaka**	**42.85**	**75**	*e*P	**P**	**11 56 40.4**	**0.0**
	17nm,1.5s						
LSZ	**Lusaka**	**42.85**	**75**	P	**P**	**11 56 40.9**	**+0.4**
	1.1nm,0.3s,baz=239,slow=5.9,SNR=3.5						
PLCA	**Paso Flores**	**44.22**	**244**	*e*P	**P**	**11 56 52.6**	**+1.4**
	13nm,1.3s						
SIV	**San Ignacio**	**45.36**	**282**	P	**P**	**11 57 02.7**	**+2.1**
	15nm,0.8s,baz=132,slow=8.4,SNR=71						
SYO	**Syowa Base**	**45.87**	**156**	⇑*e*P	**P**	**11 57 01.8**	**-2.0**
SYO	**Syowa Base**	**45.87**	**156**	⇓*i*sP	sP	11 57 07.0	+0.1
GO02	**Mina Guanaco**	**48.09**	**265**	*e*P	**P**	**11 57 22.7**	**+0.5**
	26nm,1.4s						
LVC	**Limon Verde**	**48.61**	**269**	*e*P	**P**	**11 57 25.8**	**-0.5**
	11nm,1.3s						
TOA0	**Torodi Ar. Sit**	**49.58**	**21**	*e*P	**P**	**11 57 32.4**	**-0.8**
	20nm,1.1s						
TORD	**Torodi Ar. Bea**	**49.58**	**21**	P	**P**	**11 57 32.7**	**-0.4**
	5.0nm,1.1s,baz=188,slow=5.2,SNR=16						
TORD				LR	LR	12 14 00.9	
	comp=Z,371nm,21.6s,baz=310,slow=31						
TOA1	**Torodi Ar. Sit**	**49.58**	**21**	*e*P	**P**	**11 57 32.7**	**-0.5**
PB04	**IPOC Station P**	**49.76**	**269**	*e*P	**P**	**11 57 34.9**	**0.0**
	46nm,1.2s						
PB01	**IPOC Station P**	**49.79**	**270**	*e*P	**P**	**11 57 35.7**	**+0.6**
	18nm,1.0s						
PB11	**IPOC Station P**	**50.53**	**272**	*e*P	**P**	**11 57 40.4**	**-0.4**
	36nm,1.1s						
MNMC	**Minye Minye**	**50.78**	**272**	*e*P	**P**	**11 57 42.6**	**-0.1**
	29nm,1.1s						
LPAZ	**La Paz**	**50.98**	**277**	*e*P	**P**	**11 57 44.0**	**-0.6**
	7.1nm,1.2s						
LPAZ	**La Paz**	**50.98**	**277**	P	**P**	**11 57 45.1**	**+0.4**
	2.9nm,0.9s,baz=126,slow=6.6,SNR=7.2						
PTGA	**Pitinga**	**53.85**	**298**	*e*P	**P**	**11 58 05.5**	**+0.3**
	12nm,1.2s						
MBAR	**Mbarara**	**53.98**	**62**	*e*P	**P**	**11 58 06.0**	**-0.5**
	9.5nm,1.0s						
MAW	**Mawson**	**54.17**	**153**	LR	LR	12 16 10.7	
	comp=Z,263nm,21.4s,baz=264,slow=30						
QSPA	**South Pole Qui**	**56.06**	**180**	*e*P	**P**	**11 58 22.5**	**+1.8**
	13nm,1.3s						
KMBO	**Kilima Mbogo**	**58.51**	**67**	LR	LR	12 22 58.3	
	comp=Z,257nm,18.5s,baz=93,slow=35						
NNA	**Nana**	**60.41**	**276**	*e*P	**P**	**11 58 51.3**	**-0.5**
	14nm,0.8s						
SDV	**Santo Domingo**	**68.14**	**298**	*e*P	**P**	**11 59 41.6**	**-1.0**
	8.6nm,1.1s						
ROSC	**El Rosal**	**68.28**	**292**	LR	LR	12 27 54.1	
	comp=Z,331nm,20.8s,baz=116,slow=34						
OTAV	**Otavalo**	**68.68**	**286**	*e*P	**P**	**11 59 45.5**	**-0.9**
	3.7nm,0.9s						
ES19	**SONSECA Array**	**74.19**	**9**	*e*P	**P**	**12 00 18.2**	**-0.3**
H07N1	**FLORES T-PHASE**	**75.08**	**347**	T	T	13 20 48.5	
	SNR=17						
FETA	**Feichten**	**84.00**	**17**	*i* pP	**P**	**12 01 15.7**	**+3.6**
	6.6nm,1.2s						
ABTA	**Abfaltersbach**	**84.20**	**18**	*i* P	**P**	**12 01 15.3**	**+2.2**
	9.4nm,1.3s						
RETA	**Reutte**	**84.45**	**17**	*i* PcP	**P**	**12 01 17.6**	**+3.3**
	5.4nm,1.0s						
WTTA	**Wattenberg**	**84.45**	**18**	*i* PcP	**P**	**12 01 17.8**	**+3.3**
	3.2nm,0.5s						
OBKA	**Obir**	**84.53**	**20**	*e*P	**P**	**12 01 17.0**	**+2.2**
	3.2nm,0.8s						
SOKA	**Soboth**	**84.82**	**20**	*e*P	**P**	**12 01 17.4**	**+1.1**
	5.5nm,1.2s						
CONA	**Conrad Observa**	**86.20**	**20**	PcP	**P**	**12 01 26.0**	**+3.0**
	9.1nm,1.8s						
PSZ	**Piszkesteto**	**87.40**	**22**	*e*P	**P**	**12 01 29.0**	**+0.1**
	8.3nm,1.1s						
H01W2	**Cape Leeuwin H**	**96.21**	**140**	T	T	13 50 14.3	
	baz=220,slow=75,SNR=12						
H01W3	**Cape Leeuwin H**	**96.22**	**140**	T	T	13 50 10.5	
	baz=220,slow=75,SNR=12						
H01W1	**Cape Leeuwin H**	**96.22**	**140**	T	T	13 50 06.0	
	baz=220,slow=75,SNR=11						
SCHQ	**Schefferville**	**99.34**	**332**	LR	LR	12 43 59.9	
	comp=Z,100nm,18.0s,baz=34,slow=33						
YKA	**Yellowknife Ar**	**124.19**	**326**	PKP	**PKPdf**	**12 07 39.8**	**0.0**
	0.6nm,0.8s,baz=98,slow=2.1,SNR=9.2						
YKB5	**Yellowknife Ar**	**124.19**	**326**	*e*PKPdf	**PKPdf**	**12 07 38.5**	**-1.2**
LZH	**Lanzhou**	**130.41**	**69**	*e*PKP	**PKPdf**	**12 07 53.0**	**+0.2**
LZH				pPKP	PKiKP	12 07 53.2	-0.4
LZH				sPKP		12 07 57.6	
LZH				LR	LR		
	comp=N,65nm,18.0s						
LZH				LR	LR		
	comp=E,71nm,18.2s						
LZH				LR	LR		
	comp=Z,96nm,20.0s						
HHC	**Hu-ho-hao-te**	**137.38**	**65**	*e*P	**PKPdf**	**12 08 02.7**	**-2.9**
ILAR	**Eielson Array**	**138.09**	**332**	PKP	**PKiKP**	**12 08 07.5**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=13,slow=0.7,SNR=6.8						
SVW2	**Sparrevohn**	**143.28**	**329**	*e*PKPdf	**PKPdf**	**12 08 15.5**	**0.0**
ANM	**Nome**	**144.76**	**339**	*e*PKPdf	**PKPdf**	**12 08 17.7**	**-0.3**

NDI ***04*** *12:04:52.5±2.9, 33°.09N×94°.85E, h10^{km}, mb4.8, mb4.8(NEIC)*

ISCJB ***04*** *12:04:53.1±0.1, 32°.84N±0°.02×94°.66E±0°.02, h10^{km}, mb4.6/121, MS4.3/18, Error ellipse: s-maj=2.4km s-min=2.1km az=161.5*

IDC ***04*** *12:04:53.4±0.5, 32°.86N×94°.72E, h0^{km}, mb4.4/28, mb1 4.5/32, mb1mx4.4/45, mbtmp4.4/32, ML4.1/4, MS4.2/17, Ms1 4.2/17, ms1mx4.0/33, Error ellipse: s-maj=13.2km s-min=10.4km az=44.0*

BJI ***04*** *12:04:54.2, 32°.87N×94°.76E, h7^{km}, mB5.0/32, mb4.7/45, ML4.4/5, Ms4.7/62, Ms7 4.6/57*

NEIC ***04*** *12:04:55.0±0.1, 32°.90N×94°.70E, h10^{km}, mb4.8/72, Error ellipse: s-maj=2.7km s-min=1.9km az=220.0*

GCMT ***04*** *12:04:55.0±0.3, 32°.86N±0°.02×94°.84E±0°.02, h25^{km}±1^{km}, MW4.9/84, Moment Tensor Solution. s21,c21; s84,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.74±.18; M$_{\theta\theta}$-1.32±.11; M$_{\phi\phi}$2.06±.12; M$_{r\theta}$0.13±.24; M$_{\theta\phi}$2.26±.10; M$_{\phi r}$0.00±.21; Best double couple: M$_0$2.82600×10^{16} NP1:φ$_s$252.00000°, δ88.00000°, λ-3.00000°. NP2: φ$_s$342.00000°, δ87.00000°, λ-178.00000°. Principal axes: T 3.1930, Plg1.0000°, Azm297.0000°; N -0.7350, Plg86.0000°, Azm39.0000°; P -2.4600, Plg4.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***04*** *12:04:56.6±1.0, 32°.90N×94°.72E, h36^{km}, mb4.9/60, MS4.1/9 Error ellipse: s-maj=6.5km s-min=3.4km az=120.7*

ISC 04 12:04:54.8±0.3**, 32°.85N**±0°.03×**94°.65E**±0°.03**, h10**^{km}**, n400,** σ**1^{s}.57**/415**, mb4.8**/130**, MS4.3**/18**, 42C-22D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.34**	**225**	Pn	**Pb**	**12 06 06.9**	**-4.6**
LSA				Sn	**Sb**	**12 07 02.1**	**-2.0**
LSA				LR	LR		
	comp=Z,12µm,8.3s						
LSA	**Lhasa**	**4.34**	**225**	*e*Pn	Pb	12 06 06.0	-5.5
LSA	**Lhasa**	**4.34**	**225**	*e*P	Pb	12 06 06.0	-5.5
SHL	**Shillong**	**7.65**	**199**	*e*Pn	**Pn**	**12 06 47.4**	**+0.9**
SHL				*e*Sn	**Sn**	**12 08 13.6**	**+0.2**
SHL	**Shillong**	**7.65**	**199**	*e*P	**Pn**	**12 06 47.4**	**+0.9**
SHL				*e*		12 08 13.6	
SHL	**Shillong**	**7.65**	**199**	*e*P	**Pn**	**12 06 46.9**	**+0.3**
SHL				*e*S	**Sn**	**12 08 10.4**	**-3.0**
CD2	**Chengdu**	**7.99**	**102**	P	Pn	12 06 54.3	+3.3
CD2				S	**Sn**	**12 08 24.9**	**+3.5**
CD2				pmax	pmax		
	comp=Z,80nm,0.5s						
CD2				pmax	pmax		
	comp=Z,510nm,3.8s						
CD2				LR	LR		
	comp=N,12µm,8.0s						
CD2				LR	LR		
	comp=E,8µm,7.9s						
CD2				LR	LR		
	comp=Z,7µm,8.2s						
TAPN	**Taplejung**	**8.13**	**229**	*e*Pn	**Pn**	**12 06 55.3**	**+2.1**
TAPN				*e*Sn	**Sn**	**12 08 28.2**	**+2.8**
	41nm,0.6s						
LZH	**Lanzhou**	**8.25**	**64**	*e*P	Pn	12 06 58.7	+4.0
LZH				S	**Sn**	**12 08 32.0**	**+4.0**
LZH				smax	smax		
	comp=N,250nm,1.2s						
LZH				smax	smax		
	comp=E,200nm,1.2s						
LZH				LR	LR		
	comp=N,10µm,7.8s						
LZH				LR	LR		
	comp=E,7µm,7.6s						
LZH				LR	LR		
	comp=Z,8µm,8.1s						
ODAN	**Odare**	**8.68**	**228**	*e*Pn	**Pn**	**12 07 02.4**	**+1.7**
ODAN				*e*Sn	**Sn**	**12 08 40.3**	**+1.5**
	73nm,0.8s						
JIRN	**Jiri**	**8.96**	**237**	*e*Pn	**Pn**	**12 07 06.4**	**+1.8**
JIRN				*e*Sn	**Sn**	**12 08 47.3**	**+1.5**
	56nm,0.4s						
GUN	**Gumba**	**9.03**	**239**	*e*Pn	**Pn**	**12 07 07.1**	**+1.5**
GUN				*e*Sn	**Sn**	**12 08 48.8**	**+1.2**
	211nm,0.7s						
RAMN	**Ramite**	**9.13**	**232**	*e*Pn	**Pn**	**12 07 07.7**	**+0.9**
RAMN				*e*Sn	**Sn**	**12 08 50.8**	**+1.0**
	58nm,0.5s						
KKN	**Kakani**	**9.54**	**240**	*e*Pn	**Pn**	**12 07 13.5**	**+1.1**
KKN				*e*Sn	**Sn**	**12 09 00.1**	**+0.3**
	77nm,0.7s						
PKI	**Pulchoki**	**9.57**	**239**	*e*Pn	**Pn**	**12 07 14.3**	**+1.4**
PKI				*e*Sn	**Sn**	**12 09 00.8**	**+0.1**
	236nm,0.7s						
PKIN	**Phulchoki**	**9.57**	**239**	*e*Pn	**Pn**	**12 07 14.3**	**+1.3**
PKIN				*e*Sn	**Sn**	**12 09 00.7**	**-0.1**
	130nm,0.6s						
DMN	**Daman**	**9.77**	**240**	*e*Pn	**Pn**	**12 07 17.6**	**+2.0**
DMN				*e*Sn	**Sn**	**12 09 05.6**	**+0.1**
	94nm,0.7s						
KMI	**Kunming**	**10.46**	**135**	P	**Pn**	**12 07 26.6**	**+1.5**
KMI				PP	**PnPn**	**12 07 36.3**	**+3.5**
KMI				sP		12 07 37.8	
KMI				S	**Sn**	**12 09 23.9**	**+1.4**
KMI				SS	**SnSn**	**12 09 37.7**	**+3.4**
KMI				pmax	pmax		
	comp=Z,19nm,0.7s						
KMI				pmax	pmax		
	comp=Z,140nm,4.3s						
KMI				LR	LR		
	comp=N,2µm,7.8s						
KMI				LR	LR		
	comp=Z,2µm,8.5s						
KMI	**Kunming**	**10.46**	**135**	*e*Pn	**Pn**	**12 07 25.7**	**+0.6**
KMI	**Kunming**	**10.46**	**135**	*e*P	**Pn**	**12 07 25.7**	**+0.6**
BRDH	**Bariadhala**	**10.48**	**195**	Pn	**Pn**	**12 07 25.9**	**+0.7**
	51nm,0.3s,baz=54,slow=3.2,SNR=9.4						
BRDH				Sn	**Sn**	**12 09 23.6**	**+1.0**
	42nm,0.3s,baz=182,slow=21,SNR=7.2						
BRDH				Lg	Lg	12 10 25.5	
	38nm,0.3s,baz=97,slow=14,SNR=1.5						
BRDH				LR	LR	12 12 37.2	
	comp=Z,1µm,20.9s,baz=22,slow=44						
BOK	**Bokaro**	**11.87**	**223**	*e*P	**Pn**	**12 07 45.0**	**+0.8**
BOK				*e*S	**Sn**	**12 09 51.9**	**-4.8**
XAN	**Xi'an**	**11.98**	**80**	P	**Pn**	**12 07 45.2**	**-0.5**
XAN				pP		12 07 48.7	
XAN				S	**Sn**	**12 09 52.7**	**-6.8**
XAN				pmax	pmax		
	comp=Z,21nm,1.3s						
XAN				LR	LR		
	comp=E,2µm,8.9s						
XAN				LR	LR		
	comp=Z,2µm,12.7s						
XAN	**Xi'an**	**11.98**	**80**	*e*Pn	**Pn**	**12 07 45.1**	**-0.6**
XAN				*e*Sn	**Sn**	**12 09 57.9**	**-1.6**
XAN	**Xi'an**	**11.98**	**80**	*e*P	**Pn**	**12 07 45.1**	**-0.6**
XAN				*e*		12 09 57.9	
WMQ	**Urumqi**	**12.23**	**336**	P	**Pn**	**12 07 49.4**	**+0.4**
WMQ				pP		12 07 57.8	
WMQ				pmax	pmax		
	comp=Z,30nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,1µm,7.3s						
WMQ				LR	LR		
	comp=N,5µm,9.9s						
WMQ				LR	LR		
	comp=E,8µm,10.7s						
WMQ				LR	LR		
	comp=Z,1µm,15.1s						
WMQ	**Urumqi**	**12.23**	**336**	*e*Pn	**Pn**	**12 07 49.0**	**0.0**
WMQ	**Urumqi**	**12.23**	**336**	*e*P	**Pn**	**12 07 49.0**	**0.0**
GYA	**Guiyang**	**12.23**	**118**	⇑*i*P	**Pn**	**12 07 48.5**	**-0.8**
GYA				pP		12 07 58.6	
GYA				S	**Sn**	**12 10 06.5**	**+0.7**
GYA				sS		12 10 18.2	
GYA				SS	**SnSn**	**12 10 22.8**	**+5.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,100nm,4.3s						
GYA				LR	LR		
	comp=E,2µm,8.2s						
GYA				LR	LR		
	comp=Z,620nm,11.0s						
ENH	**Enshi**	**12.91**	**98**	*e*Pn	**Pn**	**12 07 58.1**	**-0.3**
DDI	**Dehra Dun**	**14.37**	**264**	*e*P	**Pn**	**12 08 18.9**	**+0.5**
DDI				IAmb	IAmb	12 08 24.4	
	comp=Z,42nm,1.0s						
CHTO	**Chiang Mai**	**14.50**	**164**	*e*Pn	**Pn**	**12 08 21.1**	**+0.9**
CHTO	**Chiang Mai**	**14.50**	**164**	*e*P	**Pn**	**12 08 21.1**	**+0.9**
CHTO	**Chiang Mai**	**14.50**	**164**	P	**P**	**12 08 25.6**	**-1.3**
	comp=Z,25nm,1.6s						
BTO	**Baotou**	**14.54**	**54**	*e*P	Pn	12 08 15.8	-4.9
CM31	**Chiang Mai Arr**	**14.85**	**164**	*e*Pn	**Pn**	**12 08 25.6**	**+0.7**
CMAR	**Chiang Mai Arr**	**14.85**	**164**	Pn	**Pn**	**12 08 25.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=334,slow=13,SNR=22						
CMAR				PcP	**PcP**	**12 13 36.5**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=299,slow=1.6,SNR=5.7						
CMAR				ScP	**ScP**	**12 17 11.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=324,slow=2.5,SNR=7.4						
CM01	**Chiang Mai Arr**	**14.89**	**164**	*e*Pn	**Pn**	**12 08 26.6**	**+1.2**
SMLA	**Simla**	**14.94**	**268**	*e*P	**Pn**	**12 08 24.1**	**-1.9**
SMLA				IAmb	IAmb	12 08 29.8	
	comp=Z,36nm,1.0s						
TIY	**Taiyuan**	**15.31**	**67**	*e*P	**P**	**12 08 36.1**	**+0.3**
TIY				pmax	pmax		
	comp=Z,32nm,0.8s						
TIY				LR	LR		
	comp=Z,1µm,7.8s						
TIY				LR	LR		
	comp=Z,1µm,8.8s						
TIY				LR	LR		
	comp=Z,2µm,13.2s						
DHRM	**DHARAMSHALA**	**15.49**	**273**	*e*P	**Pn**	**12 08 35.1**	**+1.6**
DHRM				IAmb	IAmb	12 08 39.0	
	comp=Z,93nm,1.1s						
HHC	**Hu-ho-hao-te**	**15.70**	**55**	*e*P	**Pn**	**12 08 35.5**	**-0.6**
HHC				pP	pP	12 08 42.6	-1.8
HHC				S	**Sn**	**12 11 26.7**	**-3.5**
HHC				SS	**S**	**12 11 45.7**	**+0.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,3.9s						
HHC				LR	LR		
	comp=Z,2µm,10.1s						
HHC				LR	LR		
	comp=Z,4µm,11.0s						
HHC				LR	LR		
	comp=Z,4µm,10.8s						
PDGK	**Podgornoye**	**15.84**	**316**	P	**Pn**	**12 08 37.8**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,33nm,1.1s						
UTTA	**Uttaradit**	**15.96**	**159**	P	**P**	**12 08 40.8**	**-2.2**
	comp=Z,6.1nm,1.1s,comp=Z,66nm						
UZB	**Uzynbulak**	**16.02**	**314**	*de*P	**Pn**	**12 08 38.9**	**-1.3**
UZB				pmax	pmax		
	comp=Z,83nm,0.7s						
UZB	**Uzynbulak**	**16.02**	**314**	⇓*e*P	**Pn**	**12 08 39.0**	**-1.3**
	comp=Z,83nm,0.7s						
PRZ	**Przheval'sk**	**16.04**	**311**	*e*Pn	**Pn**	**12 08 40.5**	**-0.1**
	comp=Z,75nm,0.8s						
PRZ	**Przheval'sk**	**16.04**	**311**	*e*P	**Pn**	**12 08 40.5**	**-0.1**
PRZ				pmax	pmax		
	comp=Z,75nm,0.8s						
ZSN	**Zaisan**	**16.36**	**336**	*e*P	**P**	**12 08 45.3**	**-2.1**
ZSN				pmax	pmax		
	comp=Z,39nm,1.0s						
ZSN	**Zaisan**	**16.36**	**336**	*e*P	**P**	**12 08 45.3**	**-2.1**
	comp=Z,39nm,1.0s						

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KPKS  Kokpek            16.40 315deP    Pn      12 08 43.9 -1.2
KPKS                              pmax  pmax
      comp=Z,125nm,0.9s
KPKS  Kokpek            16.40 315⇓eP    Pn      12 08 43.9 -1.2
      comp=Z,125nm,0.9s
KSH   Kashi             16.46 299  P    P       12 08 48.9 +0.2
KSH                                pP   sP      12 08 56.7 +1.9
KSH                                PP   pP      12 09 03.3  +10
KSH                                S    Sn      12 11 49.1 +0.3
KSH                                sS   sS      12 12 05.1 -2.5
KSH                                SS   SnSn    12 12 14.0  +12
KSH                                pmax pmax
      comp=Z,37nm,1.1s
KSH                                pmax pmax
      comp=Z,800nm,4.7s
KSH                                LR   LR
      comp=Z,480nm,5.3s
KSH                                LR   LR
      comp=Z,1µm,9.5s
NONG  Nongkai           16.59 151  P    P       12 08 50.0 -0.1
      comp=Z,0.3nm,0.8s
KDJ   Kajisay           16.65 309 ePn   Pn      12 08 48.1 -0.2
      comp=Z,66nm,0.9s
KDJ   Kajisay           16.65 309 eP    Pn      12 08 48.1 -0.2
KDJ                                pmax pmax
      comp=Z,66nm,0.9s
MK01  Makanchi Array    16.80 329 ePn   Pn      12 08 49.2 -0.9
MK31  Makanchi Array    16.82 329 ePn   Pn      12 08 49.8 -0.6
MK31  Makanchi Array    16.82 329 eP    Pn      12 08 48.7 -1.6
MK31                               pmax pmax
      comp=Z,23nm,1.0s
MK32  Makanchi Array    16.82 329 ePn   Pn      12 08 49.8 -0.6
MKAR  Makanchi Array    16.82 329 ePn   Pn      12 08 49.8 -0.6
      comp=Z,84nm,0.8s
MKAR  Makanchi Array    16.82 329  Pn   Pn      12 08 49.8 -0.6
      comp=Z,0.8nm,0.3s,baz=135,slow=12,SNR=42
MKAR                               LR   LR      12 14 53.0
      comp=Z,355nm,18.4s,baz=136,slow=36
WHN   Wuhan             16.93  93 ⇑P    Pn      12 08 48.7 -3.0
WHN                                S    Sn      12 11 53.5 -6.4
WHN                                LR   LR
      comp=Z,6µm,13.0s
WHN                                LR   LR
      comp=Z,4µm,11.1s
WHN                                LR   LR
      comp=Z,2µm,20.8s
MAKZ  Makanchi          16.97 329 ePn   P       12 08 52.1 -2.0
      comp=Z,29nm,1.1s
MAKZ  Makanchi          16.97 329 eP    P       12 08 52.1 -2.0
MAKZ                               pmax pmax
      comp=Z,29nm,1.1s
UMPA  Umpang Tak        17.01 166  P    P       12 08 57.3 +2.6
      comp=Z,8.6nm,1.1s,comp=Z,1µm
NRN   Naryn             17.13 305 ePn   P       12 08 55.6 -0.7
      comp=Z,47nm,1.0s
NRN   Naryn             17.13 305 eP    P       12 08 55.6 -0.7
NRN                                pmax pmax
      comp=Z,47nm,1.0s
MDOK  Medeo             17.24 312deP    P       12 08 58.7 +1.4
MDOK                               pmax pmax
      comp=Z,632nm,1.3s
MDOK  Medeo             17.24 312⇓eP    P       12 08 58.8 +1.4
      comp=Z,632nm,1.3s
ULHL  Ulahol            17.32 308  P    P       12 09 02.5 +4.3
      SNR=7.0
AAA   Alma-Ata          17.35 312deP    P       12 09 01.0 +2.7
AAA                                pmax pmax
      comp=Z,893nm,1.1s
AAA                                MLR  MLR
      comp=Z,135nm,12.0s
AAA   Alma-Ata          17.35 312⇓eP    P       12 09 01.1 +2.7
      comp=Z,893nm,1.1s
AAA                               eLRM  MLR     12 16 43.6
      comp=Z,135nm,11.6s
SONA0 Songino Array     17.41  27 ePn   Pn      12 08 56.4 -1.3
SONM  Songino Array     17.41  27  P    Pn      12 08 56.4 -1.3
      comp=Z,0.5nm,0.3s,baz=211,slow=14,SNR=18
SONM                               LR   LR      12 16 12.8
      comp=Z,881nm,18.6s,baz=204,slow=39
SONA1 Songino Array     17.42  27 ePn   Pn      12 08 56.7 -1.3
TDK   Taldyqorghan      17.48 319c iP   Pn      12 08 57.6 -1.0
TDK                                pmax pmax
      comp=Z,536nm,1.2s
TDK   Taldyqorghan      17.48 319⇑iP    Pn      12 08 57.7 -1.0
      comp=Z,536nm,1.2s
CHKK  Chushkaly         17.64 314⇓eP    P       12 09 00.7 -0.9
CHKK                               pmax pmax
      comp=Z,36nm,0.9s
CHKK  Chushkaly         17.64 314⇓eP    P       12 09 00.7 -0.9
      comp=Z,36nm,0.9s
DGZ   Jazzator, Alta    17.67 344⇑iP    P       12 09 01.8 -0.2
DGZ                                pmax pmax
      comp=Z,4.0nm,0.8s
ULN   Ulaanbaatar       17.69  28 ePn   Pn      12 08 59.9 -1.5
      comp=Z,22nm,1.3s
ULN   Ulaanbaatar       17.69  28⇑iP    P       12 09 00.1 -2.1
ULN                                pmax pmax
      comp=Z,6.0nm,1.1s
KNGR  Kungurtug, Tuv    17.86   6⇑eP    P       12 09 02.5 -1.6
CHCP  Chirah Chowk      17.91 278  P    Pn      12 09 03.5 -0.5
KZA   Kyzart            17.91 306  P    P       12 09 08.2 +3.2
      SNR=28
NIL   Nilore            17.91 278 ePn   P       12 09 03.8 -0.9
      comp=Z,40nm,0.8s
NIL   Nilore            17.91 278 eP    P       12 09 03.8 -0.9
NIL                                pmax pmax
      comp=Z,40nm,0.8s
SKNT  Sakolnakorn       17.92 150  P    P       12 09 06.9 +2.1
      comp=Z,11nm,0.8s
BHPL  Bhopal            17.95 242  IAmb IAmb    12 09 02.8
      comp=Z,21nm,0.8s
BHPL                              eP    Pn      12 09 04.0 -0.5
TKM2  Tokmak 2          18.05 309  P    P       12 09 10.0 +3.7
      SNR=22
TKM2  Tokmak 2          18.05 309  P    P       12 09 07.1 +0.8
TKM2                               pmax pmax
      comp=Z,32nm,1.1s
KUU   Kurty             18.06 313 eP    P       12 09 05.5 -0.7
KUU                                pmax pmax
      comp=Z,85nm,0.8s
KUU   Kurty             18.06 313 eP    P       12 09 05.5 -0.7
      comp=Z,85nm,0.8s
NGP   Nagpur            18.11 234 ex    Pn      12 09 03.1 -3.5
NGP                                IAmb IAmb    12 09 08.2
      comp=Z,28nm,1.1s
HVS   Khovu-Aksy        18.28 358⇓eP    Pn      12 09 06.3 -2.2
KBK   Karagaybulak      18.36 308  P    P       12 09 13.7 +4.0
      SNR=27
SFK   Sufi-Kurgan       18.43 299  P    Pn      12 09 12.8 +2.2
SFK                                pmax pmax
      comp=Z,54nm,0.9s
UCH   Uchtor            18.47 306  P    Pn      12 09 14.3 +3.1
      SNR=43
SARP  Sargodha          18.58 273  P    Pn      12 09 13.0 +0.7
FRU1  Bishkek           18.64 308 eP    Pn      12 09 13.2 +0.3
      comp=Z,44nm,0.9s
FRU1  Bishkek           18.64 308  P    Pn      12 09 13.0 +0.1
CHMS  Chumysh           18.64 309  P    Pn      12 09 15.2 +2.3
      SNR=21
ZAK   Zakamensk         18.64  17 eP    Pn      12 09 12.3 -0.6
ZAK                                pmax pmax
      comp=Z,9.0nm,1.3s
AAK   Ala-Archa         18.65 307  P    Pn      12 09 16.3 +3.1
      SNR=14
AAK   Ala-Archa         18.65 307 eP    Pn      12 09 13.1 -0.1
      comp=Z,27nm,0.9s
AAK   Ala-Archa         18.65 307ceP    Pn      12 09 15.6 +2.4
AAK                                pmax pmax
      comp=Z,26nm,0.9s
AAK   Ala-Archa         18.65 307  P    Pn      12 09 14.8 +1.6
      comp=Z,0.7nm,0.3s,baz=139,slow=10,SNR=29
AAK                                LR   LR      12 17 22.3
      comp=Z,972nm,21.6s,baz=106,slow=40
FRU   Bishkek           18.66 308 eP    Pn      12 09 15.0 +1.9
FRU                                pmax pmax
      comp=Z,80nm,2.0s
BJT   Baijiatuau        18.71  61 eP    Pn      12 09 12.6 -1.1
      comp=Z,16nm,1.0s
BJT   Baijiatuau        18.71  61 eP    Pn      12 09 12.6 -1.1
BJT                                pmax pmax
      comp=Z,16nm,1.0s
USP   Ospenovka         18.92 309  P    Pn      12 09 17.9 +1.5
      SNR=17
AML   Almayashu         18.99 305  P    Pn      12 09 21.9 +4.4
      SNR=17
CEP   Cherat            19.02 279  P    P       12 09 14.5 -2.5
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CEP                                S    Sn      12 12 48.0 -2.8
EKS2  Erkin-Say         19.14 307  P    Pn      12 09 23.8 +4.7
      SNR=67
THW   Thamme Wali       19.25 276  P    P       12 09 18.2 -1.2
MOY   Mondy             19.36  12 eP    Pn      12 09 23.2 +1.5
MOY                                pmax pmax
      comp=Z,40nm,2.9s
QIZ   Qiongzhong        19.36 132  P    Pn      12 09 21.3 -0.5
QIZ                                S    S       12 12 59.4 -0.4
QIZ                                pmax pmax
      comp=Z,10.0nm,1.6s
QIZ                                pmax pmax
      comp=Z,300nm,3.3s
QIZ                                LR   LR
      comp=Z,2µm,15.7s
QIZ                                LR   LR
      comp=Z,3µm,16.7s
QIZ                                LR   LR
      comp=Z,1µm,8.8s
QIZ   Qiongzhong        19.36 132 eP    Pn      12 09 20.6 -1.2
      comp=Z,34nm,1.4s
TLY   Talaya            19.93  17 eP    Pn      12 09 26.7 -1.6
      comp=Z,3.7nm,0.9s
TLY   Talaya            19.93  17⇓eP    Pn      12 09 26.4 -1.9
TLY   Talaya            19.93  17  LR   LR      12 17 28.2
      comp=Z,2µm,18.2s,baz=229,slow=38
SRAK  Srakaew           19.93 159  P    Pn      12 09 32.6 +4.1
      comp=Z,55nm,0.7s,comp=Z,535nm
MNAS  Manas             19.94 305  P    Pn      12 09 29.3 +0.6
MNAS                               pmax pmax
      comp=Z,79nm,1.3s
BTLS  Baital            20.05 313deP    Pn      12 09 28.7 -1.1
BTLS                               pmax pmax
      comp=Z,239nm,0.9s
BTLS  Baital            20.05 313⇓eP    Pn      12 09 28.7 -1.1
      comp=Z,239nm,0.9s
BTK   Batken            20.44 297 eP    Pn      12 09 34.3 -0.1
      comp=Z,66nm,0.8s
BTK   Batken            20.44 297 eP    Pn      12 09 34.3 -0.2
BTK                                pmax pmax
      comp=Z,66nm,0.8s
NJ2   Nanjing           20.44  86 eP    Pn      12 09 31.8 -2.6
NJ2                                pmax pmax
      comp=Z,14nm,0.7s
NJ2                                LR   LR
      comp=Z,1µm,10.8s
NJ2                                LR   LR
      comp=Z,2µm,13.8s
SEM   Semipalatinsk     20.51 333deP    P       12 09 32.5 -0.7
SEM                                pmax pmax
      comp=Z,267nm,0.7s
SEM   Semipalatinsk     20.51 333⇓eP    P       12 09 32.6 -0.7
      comp=Z,267nm,0.7s
IRK   Irkutsk           20.60  17 eP    Pn      12 09 34.9 -1.2
IRK                                pmax pmax
      comp=Z,45nm,2.9s
GAR   Garm              20.61 294 eP    Pn      12 09 34.8 -1.7
      comp=Z,84nm,1.0s
GAR   Garm              20.61 294 eP    Pn      12 09 34.8 -1.7
GAR                                pmax pmax
      comp=Z,84nm,1.0s
HYB   Hyderabad         21.14 227 i P   P       12 09 40.0  0.0
HYB                               eS    S       12 13 30.0 -5.2
HYB   Hyderabad         21.14 227 eP    P       12 09 40.8 +0.8
HYB                                IAmb IAmb    12 09 44.4
      comp=Z,194nm,1.7s
PBA   Port Blair        21.17 185 eP    P       12 09 41.6 +1.3
PBA                                IAmb IAmb    12 09 43.9
      comp=Z,199nm,1.4s
KBL   Kabul             21.36 282 eP    P       12 09 43.4 +0.9
      comp=Z,90nm,0.9s
KBL   Kabul             21.36 282 eP    P       12 09 43.4 +0.9
KBL                                pmax pmax
      comp=Z,90nm,0.9s
KURBB Kurchatov Arra    21.36 331  P    P       12 09 42.3 +0.2
      comp=Z,41nm,0.7s,baz=138,slow=11,SNR=256
KURBB                              ScP  ScP     12 17 22.4 -0.4
      comp=Z,0.9nm,0.8s,baz=153,slow=2.2,SNR=5.7
KURK  Kurchatov         21.40 331 eP    P       12 09 42.4 -0.2
KURK  Kurchatov         21.40 331c iP   P       12 09 42.3 -0.2
KURK                               pmax pmax
      comp=Z,42nm,0.8s
CHGR  Chuyangaron       21.45 293 eP    P       12 09 43.4 +0.1
      comp=Z,71nm,0.7s
KK31  Karatay Array     21.53 305 eP    P       12 09 45.2 +1.2
KK31  Karatay Array     21.53 305 i P   P       12 09 45.8 +1.7
KK31                               pmax pmax
      comp=Z,31nm,0.9s
KKAR  Karatay Array     21.53 305 eP    P       12 09 45.2 +1.2
KKAR  Karatay Array     21.53 305 eP    P       12 09 45.3 +1.2
IUG   Iuzhnay           21.56 303 eP    P       12 09 45.5 +1.0
IUG                                pmax pmax
      comp=Z,303nm,0.9s
IUG   Iuzhnay           21.56 303 eP    P       12 09 45.5 +1.0
      comp=Z,303nm,0.9s
TAS   Tashkent          21.87 300  P    P       12 09 49.7 +2.0
ZAA0  Zalesovo Array    22.22 345 eP    P       12 09 50.6 -0.7
      comp=Z,11nm,0.9s
ZALV  Zalesovo Beam     22.22 345 eP    P       12 09 50.3 -1.0
ZALV  Zalesovo Beam     22.22 345  P    P       12 09 50.8 -0.5
      comp=Z,8.0nm,0.8s,baz=164,slow=12,SNR=22
ZAA1  Zalesovo Array    22.22 345 eP    P       12 09 50.8 -0.5
SSE   Sheshan           22.56  87 eP    P       12 09 55.3 +0.1
      comp=Z,40nm,0.9s
DL2   Dalian            22.64  67  P    P       12 09 58.9 +3.0
DL2                               eS    S       12 14 07.6 +3.9
DL2                                pmax pmax
      comp=Z,52nm,0.8s
DL2                                LR   LR
      comp=Z,2µm,15.1s
DL2                                LR   LR
      comp=Z,670nm,16.1s
DL2                                LR   LR
      comp=Z,1µm,15.5s
NVS   Novosibirsk       23.41 343⇑iP    P       12 10 03.4 -0.3
NVS                               eS    S       12 14 12.0 -4.7
NVS                                pmax pmax
      comp=N,8.0nm,1.1s
NVS                                pmax pmax
      comp=Z,21nm,1.1s
NVS                                pmax pmax
      comp=E,11nm,1.3s
NVS                                smax smax
      comp=N,32nm,2.5s
NVS                                smax smax
      comp=E,9.0nm,1.8s
POO   Poona             23.49 238 eP    P       12 10 04.3 -0.6
POO                                IAmb IAmb    12 10 06.2
      comp=Z,13nm,0.8s
BRZS  Berezniki         23.61 323 eP    P       12 10 05.6 -0.2
BRZS                               pmax pmax
      comp=Z,72nm,0.9s
BRZS  Berezniki         23.61 323 eP    P       12 10 05.7 -0.2
      comp=Z,72nm,0.8s
MDRS  Chennai           23.69 217 eP    P       12 10 07.5 +0.7
MDRS                               IAmb IAmb    12 10 11.3
      comp=Z,13nm,0.9s
YHNB  Yeheng            24.76 102 eP    P       12 10 16.7 -0.1
      comp=Z,19nm,1.0s
HIA   Hailar            24.87  41 eP    P       12 10 18.2 +0.7
      comp=Z,21nm,1.1s
HIA   Hailar            24.87  41⇓eP    P       12 10 20.4 +2.9
HIA                                pmax pmax
      comp=Z,17nm,0.9s
NACB  Ninganchiao       25.15 103 eP    P       12 10 20.6 +0.4
      comp=Z,21nm,1.0s
GOA   Goa               25.60 232 eP    P       12 10 24.9 +0.6
GOA                                IAmb IAmb    12 10 25.4
      comp=Z,32nm,0.6s
CMBY  CAMPBELL BAY      25.72 182 eP    P       12 10 25.5 +0.1
CN2   Changchun         26.38  57 eP    P       12 10 33.4 +2.2
CN2                               eS    S       12 15 02.7 -1.6
CN2                                pmax pmax
      comp=Z,10.0nm,0.6s
CN2                                pmax pmax
      comp=Z,200nm,3.0s
CN2                                LR   LR
      comp=Z,900nm,17.0s
CN2                                LR   LR
      comp=Z,1µm,15.0s
BVAR  Borovoye Array    26.64 326  P    P       12 10 34.1 +0.6
      comp=Z,2.7nm,0.8s,baz=123,slow=11,SNR=12
BVAR                               LR   LR      12 20 57.3
      comp=Z,506nm,19.8s,baz=102,slow=36
BRVK  Borovoye          26.71 326 eP    P       12 10 34.2 +0.2
      comp=Z,12nm,0.9s
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BRVK  Borovoye          26.71 326deP    P       12 10 34.7 +0.6
BRVK                               pmax pmax
      comp=Z,5.0nm,0.8s
KS15  Wonju Array Si    27.47  71 eP    P       12 10 39.9 -1.2
KSRS  Korea Array       27.50  71  P    P       12 10 41.1 -0.3
      comp=Z,3.5nm,0.7s,baz=273,slow=9.3,SNR=14
KSRS                               LR   LR      12 22 12.0
      comp=Z,303nm,18.1s,baz=266,slow=38
PALK  Pallekele         28.56 210  LR   LR      12 25 17.0
      comp=Z,190nm,19.2s,baz=143,slow=43
TRD   Trivandrum        29.24 218 eP    P       12 10 58.3 +1.3
GEYT  Alibeck           30.08 290  P    P       12 11 06.4 +2.1
      comp=Z,3.5nm,0.7s,baz=86,slow=4.6,SNR=7.8
GEYT                               LR   LR      12 25 21.6
      comp=Z,811nm,18.6s,baz=55,slow=41
GYA0B ALIBECK ARRAY     30.08 290 eP    P       12 11 05.2 +0.8
      comp=Z,8.8nm,0.8s
ABKAR Akbulak array     30.54 313 eP    P       12 11 08.6 +0.3
VLA   Vladivostok       30.86  60⇑eP    P       12 11 15.1 +4.0
VLA                                pmax pmax
      comp=Z,63nm,1.5s
USRK  Ussuriysk Ar.     31.08  58  P    P       12 11 14.4 +1.3
      comp=Z,1.4nm,0.5s,baz=258,slow=6.5,SNR=3.5
USRK                               LR   LR      12 24 50.8
      comp=Z,471nm,19.6s,baz=255,slow=39
ZEA   Zeya              31.18  38 eP    P       12 11 20.4 +6.6
ZEA                                pmax pmax
      comp=Z,10.0nm,0.8s
ZEA                                MLR  MLR
      comp=Z,1µm,11.0s
ZEA                                MLR  MLR
      comp=E,800nm,12.0s
GSI   Gunungsitoli      31.50 174 eP    P       12 11 17.3 +0.3
      comp=E,70nm,1.4s
MNCY  Minicoy           31.61 224 eP    P       12 11 18.1 +0.2
KLR   Kul'dur           32.03  48⇑iP    P       12 11 24.5 +3.2
SVE   Sverdlovsk        33.43 326 eP    P       12 11 34.5 +1.0
SVE                                pmax pmax
      comp=Z,23nm,1.1s
ARU   Arti              34.23 324 eP    P       12 11 40.5  0.0
      comp=Z,9.2nm,0.8s
ARU   Arti              34.23 324d iP   P       12 11 41.1 +0.7
ARU                                             12 12 50.9
ARU                                S    S       12 17 06.6 -0.4
ARU                                SS   SnSn    12 19 16.7 +1.4
ARU                                pmax pmax
      comp=Z,10.0nm,0.8s
MAJO  Matsushiro        35.78  72 eP    P       12 11 55.2 +1.1
MAJO  Matsushiro        35.78  72 eP    P       12 11 55.2 +1.1
MJAR  Matsushiro Arr    35.78  72  P    P       12 11 55.2 +1.1
      comp=Z,3.9nm,0.9s,baz=274,slow=6.4,SNR=4.9
MJAR                               LR   LR      12 26 14.2
      comp=Z,354nm,18.4s,baz=280,slow=36
NRIK  Noril'sk          36.75 356  P    P       12 12 02.0  0.0
      comp=Z,8.0nm,0.7s,baz=162,slow=6.5,SNR=9.9
NRIK                               LR   LR      12 27 40.5
      comp=Z,358nm,18.1s,baz=295,slow=37
NKL   Nikolayevsk       38.47  44 eP    P       12 12 15.0 -1.7
NKL                                pmax pmax
      comp=Z,23nm,0.9s
NKL                                MLR  MLR
      comp=Z,1µm,10.0s
ASAJ  Asahikawa         38.68  59  P    P       12 12 18.4 -0.2
      comp=Z,14nm,0.8s,baz=285,slow=4.6,SNR=7.2
YSS   Yuzh-Sakhalins    38.89  54 eP    P       12 12 24.1 +3.8
YSS                                MLR  MLR
      comp=Z,400nm,16.0s
YSS                                MLR  MLR
      comp=E,500nm,15.0s
ERM   Erimo             39.14  62 eP    P       12 12 22.0 -0.5
      comp=E,22nm,0.8s
ERM   Erimo             39.14  62 eP    P       12 12 22.0 -0.5
ERM                                pmax pmax
      comp=Z,22nm,0.8s
GNI   Garni             40.34 295 eP    P       12 12 33.1 +0.4
      comp=Z,10nm,0.8s
GNI   Garni             40.34 295⇑iP    P       12 12 35.5 +2.8
GNI                                pmax pmax
      comp=Z,57nm,1.7s
GNI   Garni             40.34 295  P    P       12 12 34.1 +1.4
      comp=Z,2.6nm,0.3s,baz=98,slow=2.3,SNR=3.2
GOF   Gofitskoye        41.29 303 eP    P       12 12 44.9 +4.6
GOF                                pmax pmax
      comp=Z,30nm,1.1s
KBZ   Khabaz            41.44 301  P    P       12 12 43.9 +2.4
      comp=Z,1.6nm,0.8s,baz=296,slow=1.0,SNR=2.9
KBZ                                LR   LR      12 33 37.7
      comp=Z,264nm,19.3s,baz=326,slow=42
KIV   Kislovodsk        41.58 301 eP    P       12 12 43.6 +0.8
      comp=Z,18nm,1.4s
KIV   Kislovodsk        41.58 301 eP    P       12 12 43.6 +0.8
KIV                                pmax pmax
      comp=Z,18nm,1.4s
NEY   Neytrino          41.59 300⇑eP    P       12 12 47.3 +4.3
NEY                                pmax pmax
      comp=Z,1.0nm,0.9s
VRH   Novokhopyorsk     42.36 312 eP    P       12 12 47.9 -1.0
VRH                                pmax pmax
      comp=Z,10.0nm,0.8s
DOMR  Dombai            42.39 300⇑iP    P       12 12 52.0 +2.5
DOMR                               pmax pmax
      comp=Z,13nm,1.3s
SIRT  Sirnak            42.48 291 eP    P       12 12 51.3 +1.0
      comp=Z,53nm,1.2s
TIXI  Tiksi             42.90  15 eP    P       12 12 52.4 -0.6
TIXI  Tiksi             42.90  15⇑eP    P       12 12 53.0  0.0
TIXI                               pmax pmax
      comp=Z,4.0nm,0.6s
TIXI  Tiksi             42.90  15  P    P       12 12 52.1 -0.9
      comp=Z,3.9nm,0.5s,baz=198,slow=3.3,SNR=12
VSR   Storozhevoye      43.97 312 eP    P       12 13 00.1 -1.8
VSR                                pmax pmax
      comp=Z,40nm,1.4s
LPSR  Galich'ya Gora    44.19 314 eP    P       12 13 03.8 +0.1
LPSR                               pmax pmax
      comp=Z,10.0nm,0.7s
KLMR  Klimovskoe        45.06 325 eP    P       12 13 09.9 -0.6
KLMR                               pmax pmax
      comp=Z,21nm,0.9s
KLMR  Klimovskoe        45.06 325 eP    P       12 13 09.9 -0.6
KLMR                               AMP          12 13 14.8
      comp=Z,21nm,0.9s
OBN   Obninsk           45.76 317 eP    P       12 13 17.3 +1.1
      comp=Z,53nm,1.4s
OBN   Obninsk           45.76 317 i P   P       12 13 17.0 +0.8
OBN                               i             12 13 29.3
OBN                               i             12 15 00.8
OBN                                pmax pmax
      comp=Z,13nm,1.0s
SEY   Seymchan          46.71  32⇑eP    P       12 13 27.1 +3.6
ILGA  Ilgaz             48.51 298 eP    P       12 13 38.8 +0.7
      comp=Z,12nm,0.9s
PETK  Petropavlovsk-    48.64  46  LR   LR      12 36 22.4
      comp=Z,325nm,18.8s,baz=249,slow=39
BR101 Keskin Array S    48.83 296 eP    P       12 13 40.9 +0.4
BR131 Keskin Array S    48.83 296 eP    P       12 13 40.9 +0.4
BRTR  Keskin Array B    48.83 296  P    P       12 13 40.9 +0.4
      comp=Z,3.1nm,0.8s,baz=94,slow=7.4,SNR=13
ANTO  Ankara            49.43 297 eP    P       12 13 45.4 +0.4
      comp=Z,13nm,0.8s
ANTO  Ankara            49.43 297 eP    P       12 13 45.4 +0.4
ANTO                               pmax pmax
      comp=Z,13nm,0.8s
AKASG Malin Array Be    50.26 311  P    P       12 13 50.9 -0.1
      comp=Z,7.0nm,0.8s,baz=76,slow=6.7,SNR=26
AKASG                              LR   LR      12 37 50.2
      comp=Z,201nm,18.8s,baz=190,slow=39
AKBB  Malin Array Si    50.26 311 eP    P       12 13 50.8 -0.3
      comp=Z,20nm,1.1s
AKBB  Malin Array Si    50.26 311 eP    P       12 13 50.8 -0.3
AKBB                               pmax pmax
      comp=Z,20nm,1.1s
KIEV  Kiev              50.27 311 eP    P       12 13 50.8 -0.3
      comp=Z,21nm,1.2s
KIEV  Kiev              50.27 311⇑iP    P       12 13 50.9 -0.2
KIEV  Kiev              50.27 311⇓eP    P       12 13 51.0 -0.2
KIEV                               pmax pmax
      comp=Z,22nm,1.3s
AK11  Malin Array Si    50.30 311 eP    P       12 13 51.0 -0.4
SOEI  Soe               50.92 141 eP    P       12 13 56.7 +0.2
      comp=Z,12nm,0.7s
VSU   Vasula            51.27 321⇑eP    P       12 13 59.5 +1.0
VSU                                pmax pmax
      comp=Z,43nm,1.1s
VSU   Vasula            51.27 321 eP    P       12 13 59.4 +0.9
IDID  Didziasalis       51.39 317 eP    P       12 14 02.2 +2.7
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FIA1  FINESS Array S    51.59 325  eP      P       12 14 01.0 +0.1
FIA0  FINESS Array S    51.59 325  eP      P       12 14 00.6 -0.3
FIA0  FINESS Array S    51.59 325  eP      P       12 14 00.6 -0.3
FINES FINESS Array B    51.59 325   P      P       12 14 00.6 -0.3
      comp=Z,5.5nm,0.9s,baz=87,slow=9.7,SNR=6.1
IZAR  Zarasai           51.65 318  eP      P       12 14 02.2 +0.8
IZAR                                IAmb   IAmb    12 14 03.3
      comp=Z,6.9nm,0.7s
IIGN  Ignalina          51.69 317  eP      P       12 14 02.8 +1.1
IIGN                                IAmb   IAmb    12 14 09.6
      comp=Z,9.5nm,0.9s
TIRR  Tirgusor          51.70 303⇑iP      P       12 14 00.7 -1.3
ISAL  Salakas           51.73 318  eP      P       12 14 03.2 +1.2
ISAL                                IAmb   IAmb    12 14 08.7
      comp=Z,22nm,0.4s
CFR   Carcaliu          51.76 304⇑iP      P       12 14 02.4  0.0
ICOR  Ion Corvin        52.20 303⇑iP      P       12 14 06.7 +1.0
ARA0  ARCESS Array S    52.35 335  eP      P       12 14 07.1 +0.6
ARCES ARCESS Array B    52.35 335  eP      P       12 14 06.5  0.0
ARCES ARCESS Array B    52.35 335  eP      P       12 14 06.5  0.0
ARCES ARCESS Array B    52.35 335   P      P       12 14 07.1 +0.6
      comp=Z,3.8nm,0.9s,baz=94,slow=7.3,SNR=12
VRI   Vrincioaia        52.60 305⇑iP      P       12 14 09.9 +1.2
PLOR  Plostina          52.66 305⇑iP      P       12 14 10.6 +1.4
BIZ   Bicaz             52.83 307⇑iP      P       12 14 11.4 +1.0
ISR   Istrita           52.88 305⇑iP      P       12 14 12.6 +1.8
BILL  Bilibino          53.12  27⇑eP      P       12 14 14.5 +2.3
BILL                                pmax   pmax
      comp=Z,5.0nm,0.8s
MLR   Muntele Rosu      53.22 305  eP      P       12 14 14.2 +0.8
      comp=Z,18nm,0.9s
MLR   Muntele Rosu      53.22 305⇑iP      P       12 14 13.6 +0.2
MLR   Muntele Rosu      53.22 305  eP      P       12 14 14.2 +0.8
MLR                                 pmax   pmax
      comp=Z,18nm,0.9s
BURAR Bucovina Array    53.30 308⇑iP      P       12 14 14.4 +0.5
BUR04 Bucovina Ar. S    53.30 308  eP      P       12 14 14.4 +0.5
BUR08 Bucovina Ar. S    53.30 308  eP      P       12 14 14.4 +0.4
DOPR  Dopca             53.50 306⇓iP      P       12 14 16.6 +1.2
SUW   Suwalki           53.58 316  eP      P       12 14 15.9 +0.2
SUW   Suwalki           53.58 316  eP      P       12 14 15.9 +0.2
      comp=Z,68nm,1.0s
SUW   Suwalki           53.58 316  eP      P       12 14 15.9 +0.2
LVV   L'vov             53.68 311  eP      P       12 14 14.2 -2.4
LVV                                e               12 16 16.8
LVV                                eS      S       12 21 37.0  -13
LVV                                 smax   smax
      comp=Z,500nm,19.0s
VOIR                    53.84 305⇑iP      P       12 14 18.1 +0.1
MTUR  Matau             53.88 305⇑iP      P       12 14 19.4 +1.2
ARCR  ARCALIA           53.98 307⇑iP      P       12 14 19.6 +0.8
ARR   Arges             54.14 305⇑iP      P       12 14 20.5 +0.4
KWP   Kalwaria Pacla    54.56 311  eP      P       12 14 24.2 +1.2
KWP   Kalwaria Pacla    54.56 311  eP      P       12 14 24.2 +1.2
TRPA  Tarpa             54.96 309⇑iP      P       12 14 26.6 +0.7
GZR   Gura Zlata        55.41 306⇑iP      P       12 14 30.4 +1.1
SPA0  Spitsbergen Ar    55.70 346  eP      P       12 14 31.2 +0.4
SIRR  Siria             55.96 307⇑iP      P       12 14 34.4 +1.2
NIE   Niedzica          56.14 311  eP      P       12 14 35.1 +0.7
NIE   Niedzica          56.14 311  eP      P       12 14 35.1 +0.7
BZS   Buzias            56.15 306⇑iP      P       12 14 35.0 +0.5
OJC   Ojcow             56.28 312  eP      P       12 14 36.7 +1.3
OJC   Ojcow             56.28 312  eP      P       12 14 35.9 +0.5
      comp=Z,13nm,0.7s
OJC   Ojcow             56.28 312  eP      P       12 14 35.9 +0.5
OJC                                 pmax   pmax
      comp=Z,13nm,0.7s
MDVR  Moldovita         56.29 305⇑iP      P       12 14 36.4 +0.8
IDI   Anoyia            56.72 293  eP      P       12 14 39.3 +0.5
      comp=Z,11nm,0.8s
VYHS  Vyhne             57.29 310  eP      P       12 14 43.6 +1.0
VYHS                                pmax   pmax
      comp=Z,6.0nm,1.4s
VYHS  Vyhne             57.29 310  eP      P       12 14 43.6 +1.0
DIVS  Divibare          57.66 305  eP      P       12 14 45.4  0.0
      comp=Z,6.7nm,0.9s
MORC  Moravsky Berou    57.80 312  eP      P       12 14 46.8 +0.6
      comp=Z,7.7nm,0.9s
MORC  Moravsky Berou    57.80 312⇑iP      P       12 14 46.6 +0.4
MORC  Moravsky Berou    57.80 312  eP      P       12 14 46.8 +0.6
MORC                                pmax   pmax
      comp=Z,8.0nm,0.9s
MORC  Moravsky Berou    57.80 312  eP      P       12 14 47.2 +1.0
MORH  Mrgy, Hungar      58.00 307  eP      P       12 14 47.1 -0.5
KRLC  Kraliky           58.20 312  eP      P       12 14 49.8 +0.8
KRLC  Kraliky           58.20 312  eP      P       12 14 49.8 +0.8
DPC   Dobruska-Polom    58.42 313  eP      P       12 14 51.7 +1.1
DPC                                epP     sP      12 14 55.9 -1.2
DPC   Dobruska-Polom    58.42 313  eP      P       12 14 51.7 +1.1
NC405 NORSAR Array S    58.51 326  eP      P       12 14 51.0 +0.1
VRAC  Vranov            58.52 311  eP      P       12 14 52.4 +1.2
UPC   Upice             58.57 313  eP      P       12 14 52.8 +1.2
UPC   Upice             58.57 313  eP      P       12 14 52.8 +1.2
PDG   Podgorica         58.66 303⇑iP      P       12 14 52.6 +0.3
KRUC  Moravsky          58.71 311  eP      P       12 14 52.6 +0.1
NB201 NORSAR Array S    58.73 326  eP      P       12 14 52.6 +0.1
NB2   NORSAR Subarra    58.77 326   P      P       12 14 52.0 -0.8
      comp=Z,3.7nm,0.7s,baz=76,slow=6.9
NB200 NORSAR Array S    58.77 326  eP      P       12 14 52.2 -0.6
NOA   NORSAR Array B    58.77 326   P      P       12 14 52.2 -0.6
      comp=Z,4.6nm,0.6s,baz=78,slow=7.0,SNR=16
NC204 NORSAR Array S    58.93 326  eP      P       12 14 54.1 +0.1
CONA  Conrad Observa    59.36 310  i pP    P       12 14 58.0 +0.8
      comp=Z,7.7nm,0.7s
PRU   Pruhonice         59.62 313  eP      P       12 15 00.0 +1.2
PRU   Pruhonice         59.62 313  eP      P       12 15 00.0 +1.2
BRG   Berggiesshubel    59.74 314  eP      P       12 15 00.1 +0.4
      comp=Z,8.1nm,0.8s
BRG   Berggiesshubel    59.74 314  eP      P       12 15 00.1 +0.4
BRG                                 pmax   pmax
      comp=Z,8.0nm,0.8s
ARSA  Arzberg           59.77 309  i P     P       12 14 59.9 -0.1
      comp=Z,1.6nm,0.6s
CLL   Collm             60.19 314  eP      P       12 15 03.0 +0.3
      comp=Z,6.0nm,0.6s
CLL                                esP     pP      12 15 07.0 -0.5
CLL   Collm             60.19 314  eP      P       12 15 03.0 +0.3
CLL                                 pmax   pmax
      comp=Z,6.0nm,0.6s
SOKA  Soboth            60.26 309  i P     P       12 15 03.6 +0.2
      comp=Z,6.8nm,1.0s
MOA   Molln             60.41 310  i P     P       12 15 04.8 +0.5
      comp=Z,3.9nm,0.9s
KHC   Kasperske Hory    60.47 312  eP      P       12 15 05.3 +0.6
KHC   Kasperske Hory    60.47 312  eP      P       12 15 05.3 +0.6
GEC2  GERESS Array S    60.47 311  eP      P       12 15 05.2 +0.4
      comp=Z,7.5nm,1.1s
GEC2  GERESS Array S    60.47 311  eP      P       12 15 05.2 +0.4
GEC2                                pmax   pmax
      comp=Z,8.0nm,1.1s
GERES GERESS Array B    60.47 311   P      P       12 15 05.4 +0.6
      comp=Z,2.9nm,0.6s,baz=64,slow=6.1,SNR=12
GEA0  GERESS Array S    60.48 311  eP      P       12 15 05.3 +0.5
KBA   Koelnbreinsper    61.24 310  i P     P       12 15 10.1 -0.1
      comp=Z,4.5nm,1.1s
ABTA  Abfaltersbach     61.89 309  eP      P       12 15 13.7 -0.8
      comp=Z,2.5nm,0.6s
WTTA  Wattenberg        62.28 310  i P     P       12 15 15.5 -1.7
      comp=Z,4.4nm,0.7s
WATA  Walderalm         62.30 310  i P     P       12 15 15.9 -1.3
      comp=Z,4.3nm,0.7s
SQTA  Sankt Quirin      62.57 310  i P     P       12 15 18.9 -0.2
      comp=Z,4.5nm,0.6s
RETA  Reutte            62.77 311  i P     P       12 15 19.7 -0.6
      comp=Z,5.7nm,0.9s
FETA  Feichten          62.95 310  i P     P       12 15 21.5 -0.1
      comp=Z,7.0nm,0.9s
FUORN Ofenpass-Fuorn    63.39 310  eP      P       12 15 24.7  0.0
      comp=Z,13nm,1.4s
KMBO  Kilima Mbogo      63.71 250   P      P       12 15 27.3 +0.1
      comp=Z,1.3nm,0.5s,baz=44,slow=13,SNR=5.5
BFO   Black Forest      64.01 312ceP      P       12 15 29.0 +0.5
BFO                                 pmax   pmax
      comp=Z,4.0nm,2.5s
TUE   Stuetta           64.03 310  eP      P       12 15 28.7 -0.1
      comp=Z,9.2nm,0.8s
WRAB  Tennant Creek     64.77 138  eP      P       12 15 33.9 +0.2
      comp=Z,5.8nm,0.9s
WRAB  Tennant Creek     64.77 138  eP      P       12 15 33.9 +0.2
WRAB                                pmax   pmax
      comp=Z,6.0nm,0.9s
WRA   Warramunga Arr    64.77 138   P      P       12 15 33.3 -0.4
WRA                                 pmax   pmax
      comp=Z,2.0nm,0.8s
WRA   Warramunga Arr    64.77 138   P      P       12 15 33.3 -0.4
      comp=Z,2.5nm,0.9s,baz=322,slow=8.6,SNR=16
WR1   Warramunga Arr    64.77 138  eP      P       12 15 33.3 -0.4
      comp=Z,4.8nm,0.8s
WB2   Warramunga Arr    64.78 138  eP      P       12 15 33.8 +0.1
      comp=Z,6.0nm,0.9s
WC3   Warramunga Arr    64.80 138  eP      P       12 15 34.2 +0.3
      comp=Z,6.1nm,0.9s
WLF   Walferdange       64.86 314 ⇑P      P       12 15 38.0 +4.0
      comp=Z,19nm,0.9s
ANM   Nome              64.91  28  eP      P       12 15 34.4 +0.4
      comp=Z,4.7nm,1.0s
ANM   Nome              64.91  28  eP      P       12 15 34.4 +0.4
ANM                                 pmax   pmax
      comp=Z,5.0nm,1.0s
SENIN Lac Senin/Sane    65.39 310  eP      P       12 15 37.7  0.0
      comp=Z,6.0nm,0.7s
AS31  Alice Springs     67.54 141  eP      P       12 15 51.1 -0.3
      comp=Z,1.2nm,0.6s
ASAR  Alice Springs     67.54 141   P      P       12 15 51.5  0.0
      comp=Z,2.2nm,0.6s,baz=324,slow=5.9,SNR=25
ASAR                                LR     LR      12 48 19.8
      comp=Z,167nm,18.1s,baz=221,slow=39
AS01  Alice Springs     67.56 141  eP      P       12 15 51.0 -0.5
IM3   Indian Mountai    68.54  24  eP      P       12 15 57.1 -0.1
NWAO  Narrogin (SRO)    68.81 160  eP      P       12 15 59.0 -0.1
      comp=Z,22nm,1.2s
NWAO  Narrogin (SRO)    68.81 160  eP      P       12 15 59.0 -0.1
NWAO                                pmax   pmax
      comp=Z,22nm,1.2s
COLD  Coldfoot          69.02  22  eP      P       12 16 00.8 +0.7
      comp=Z,3.6nm,0.9s
MLY   Manley            70.12  24  eP      P       12 16 07.0  0.0
      comp=Z,7.1nm,0.9s
CAST  Castle Rocks      70.57  26  eP      P       12 16 10.4 +0.6
      comp=Z,3.8nm,0.8s
BPAW  Bear Paw Mtn.     70.58  25  eP      P       12 16 09.5 -0.3
      comp=Z,15nm,1.3s
PPLA  Purkeypile        70.83  26  eP      P       12 16 11.8 +0.3
      comp=Z,10.0nm,0.8s
MDM   Murphy Dome       71.02  24  eP      P       12 16 12.7 +0.2
      comp=Z,7.7nm,1.4s
COLA  College           71.20  24  eP      P       12 16 13.4 -0.1
      comp=Z,9.9nm,0.9s
COLA  College           71.20  24⇓eP      P       12 16 16.0 +2.5
COLA                                pmax   pmax
      comp=Z,7.0nm,0.9s
TRF   Thorofare Moun    71.21  25  eP      P       12 16 14.0 +0.2
      comp=Z,4.1nm,0.9s
MCK   McKinley          71.52  25  eP      P       12 16 16.3 +0.8
      comp=Z,3.5nm,0.8s
MCK   McKinley          71.52  25  eP      P       12 16 16.3 +0.8
MCK                                 pmax   pmax
      comp=Z,4.0nm,0.8s
PRP   Porcupine Dome    71.56  22  eP      P       12 16 16.0 +0.1
      comp=Z,4.4nm,0.8s
ILAR  Eielson Array     71.58  23   P      P       12 16 15.0 -0.9
ILAR                                pmax   pmax
      comp=Z,3.0nm,0.9s
ILAR  Eielson Array     71.58  23   P      P       12 16 15.0 -0.9
      comp=Z,2.3nm,0.8s,baz=284,slow=5.4,SNR=16
ILB   Eielson Array     71.58  23  eP      P       12 16 15.7 -0.2
IL1   Eielson Array     71.59  23  eP      P       12 16 15.6 -0.3
CTA   Charters Tower    72.12 129   P      P       12 16 19.4 -0.3
      comp=Z,3.2nm,0.7s,baz=329,slow=10,SNR=4.7
SUA   Susitna One       72.22  27  eP      P       12 16 19.9  0.0
      comp=Z,11nm,0.7s
DHY   Denali Highway    72.48  25  eP      P       12 16 21.6 +0.2
      comp=Z,6.8nm,0.8s
PMR   Palmer            72.76  27  eP      P       12 16 22.8 -0.1
      comp=Z,16nm,1.1s
PMR   Palmer            72.76  27  eP      P       12 16 22.8 -0.1
PMR                                 pmax   pmax
      comp=Z,16nm,1.1s
SML   Sawmill           72.93  26  eP      P       12 16 23.5 -0.5
      comp=Z,29nm,0.8s
SML   Sawmill           72.93  26  eP      P       12 16 23.5 -0.5
SML                                 pmax   pmax
      comp=Z,29nm,0.8s
RIDG  Independ'e Rid    72.93  24  eP      P       12 16 23.4 -0.6
      comp=Z,12nm,1.0s
INK   Inuvik            72.99  17  eP      P       12 16 24.5 +0.4
      comp=Z,4.3nm,0.8s
INK   Inuvik            72.99  17   P      P       12 16 24.2  0.0
      comp=Z,3.6nm,0.8s,baz=342,slow=10,SNR=9.6
SCRK  Sand Creek        73.06  23  eP      P       12 16 24.6 -0.3
      comp=Z,8.8nm,0.9s
KNK   Knik Glacier      73.13  27  eP      P       12 16 25.3 +0.1
      comp=Z,15nm,1.0s
SCM   Sheep Creek Mo    73.28  26  eP      P       12 16 26.4 +0.2
      comp=Z,20nm,1.2s
SCM   Sheep Creek Mo    73.28  26  eP      P       12 16 26.4 +0.2
SCM                                 pmax   pmax
      comp=Z,20nm,1.2s
KDAK  Kodiak Island     73.66  31  i P     P       12 16 28.0 -0.3
OHAK  Old Harbor        73.68  32  eP      P       12 16 28.6 +0.2
      comp=Z,64nm,1.4s
KLU   Klutina           74.02  26  eP      P       12 16 30.9 +0.4
      comp=Z,13nm,1.0s
ES19  SONSECA Array     75.70 308  eP      P       12 16 40.7 +0.1
ESDC  Sonseca Array     75.75 308   P      P       12 16 41.2 +0.3
      comp=Z,3.7nm,0.8s,baz=52,slow=6.6,SNR=9.2
STKA  Stephens Creek    78.16 141  eP      P       12 16 53.9 -0.4
      comp=Z,0.6nm,0.8s
STKA  Stephens Creek    78.16 141  eP      P       12 16 53.9 -0.4
STKA                                pmax   pmax
      comp=Z,1.0nm,0.8s
STKA  Stephens Creek    78.16 141   P      P       12 16 54.1 -0.2
      comp=Z,2.2nm,0.7s,baz=315,slow=4.3,SNR=6.0
LSZ   Lusaka            79.45 244  eP      P       12 17 02.0 +0.2
      comp=Z,5.6nm,0.9s
LSZ   Lusaka            79.45 244  eP      P       12 17 02.0 +0.2
LSZ                                 pmax   pmax
      comp=Z,6.0nm,0.9s
YKW3  Yellowknife Ar    82.05  13  eP      P       12 17 14.9  0.0
      comp=Z,5.4nm,1.2s
YKA   Yellowknife Ar    82.11  13   P      P       12 17 14.4 -0.8
      comp=Z,2.2nm,0.9s,baz=332,slow=4.7,SNR=18
YKB5  Yellowknife Ar    82.11  13  eP      P       12 17 14.6 -0.7
TOA1  Torodi Ar. Sit    85.42 283  eP      P       12 17 32.8 -0.2
TOA0  Torodi Ar. Sit    85.42 283  eP      P       12 17 32.4 -0.7
TORD  Torodi Ar. Bea    85.42 283   P      P       12 17 32.8 -0.2
      comp=Z,1.7nm,0.6s,baz=86,slow=4.3,SNR=10
DBIC  Dimbokro          94.34 281   LR     LR      13 05 01.6
      comp=Z,154nm,18.8s,baz=353,slow=38
LTX   Lajitas          115.76  18  ePKPdf  PKPdf   12 23 39.4 +1.4
LTX   Lajitas          115.76  18  ePKIKP  PKPdf   12 23 39.4 +1.4
TXAR  Lajitas Array    115.76  18   PKP    PKPdf   12 23 39.4 +1.4
      comp=Z,0.2nm,0.5s,baz=320,slow=1.1,SNR=3.7
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WEL 04 12:09:19.6±1.0**, 38°S**±5°×**17°9E**±°**, h12^{km}, ML3.9**/13**, Off east coast of North Island**

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Code  Station Name       Δ°   AZ°   Phase ID       Time        Res
                                    Op     ISC     h  m  s     ISC
WMGZ  Waiomatatini S    0.58 287    P      Pb      12 09 31.9 +0.2
WMGZ                                S      Sb      12 09 40.4 +0.4
PUZ   Puketiti          0.68 263    P      Pb      12 09 33.7 +0.1
PUZ                                 S      Sb      12 09 43.3 +0.3
MXZ   Matakaoa Point    0.77 304    P      Pb      12 09 35.0 -0.1
MXZ                                 S      Sb      12 09 46.3 +0.8
PKGZ  Pakihiroa         0.83 277    P      Pg      12 09 35.6 -0.1
PKGZ                                S      Sb      12 09 48.0 +0.8
CNGZ  Carnagh Statio    0.87 235    P      Pn      12 09 37.5 -0.1
CNGZ                                S      Sb      12 09 48.6 +0.4
TWGZ  Tauwhareparae     0.92 258    P      Pb      12 09 37.6 +0.1
TWGZ                                P      Pb      12 09 37.6 +0.1
TWGZ                                S      Sn      12 09 51.2 -0.3
HAZ   Te Kaha           1.08 282    P      Pb      12 09 39.5 -0.8
HAZ                                 S      Sb      12 09 53.9 -0.5
TKGZ  Te Karaka         1.09 246    P      Pb      12 09 40.4 -0.1
TKGZ                                S      Sg      12 09 55.1 +0.2
RUGZ  Raukumara Rang    1.14 271    P      Pb      12 09 40.4 -0.9
RIGZ  Rimuhau           1.28 236    P      Pn      12 09 43.0 -0.4
MWZ   Matawai           1.30 254    P      Pn      12 09 42.6 -1.0
MWZ                                 S      Sb      12 09 59.5 -1.2
PRGZ  Paritu Road       1.34 226    P      Pn      12 09 43.8 -0.4
RAGZ  Rawiri            1.43 249    P      Pb      12 09 46.0 -0.4
MHGZ  Mahia Peninsul    1.50 219    P      Pn      12 09 45.6 -0.7
KNZ   Kokohu            1.53 227    P      Pn      12 09 45.8 -1.0
SNGZ  Shannon Statio    1.60 240    P      Pn      12 09 47.4 -0.4
URZ   Urewera           1.60 260    P      Pn      12 09 47.4 -0.4
RTZ   Ruatahuna         1.79 249    P      Pn      12 09 50.8 +0.3
WHHZ  Waihua            1.83 233    P      Pn      12 09 51.0 +0.1
RAHZ  Arahi             1.84 239    P      Pn      12 09 51.2 +0.1
RAHZ                                P      Pn      12 09 51.2 +0.1
EDRZ  Edgecumbe         1.88 266    P      Pn      12 09 51.9 +0.2
MUGZ  Murupara          1.91 255    P      Pn      12 09 51.9 -0.1
MTHZ  Maungataniwha     1.98 244    P      Pn      12 09 53.5 +0.4
OPRZ  Ohinepanea        2.03 273    P      Pn      12 09 52.9 -0.8
TARZ  Mount Tarawera    2.08 263    P      Pn      12 09 54.6 +0.2
ARHZ  Aropaoanui        2.09 232    P      Pn      12 09 54.4 -0.1
NMHZ  Naumai            2.12 238    P      Pn      12 09 55.2 +0.2
PRRZ  Plateau Road      2.20 256    P      Pn      12 09 56.7 +0.6
ALRZ  Allen Road        2.26 255    P      Pn      12 09 57.0 +0.2
MRHZ  Matea Rd          2.28 248    P      Pn      12 09 57.2  0.0
HSRZ  Hossack Road      2.29 261    P      Pn      12 09 57.3 +0.1
CKHZ  Cape Kidnapper    2.30 223    P      Pn      12 09 56.6 -0.8
BKZ   Black Stump Fm    2.37 240    P      Pn      12 09 58.2 -0.1
MCHZ  McNeill Hill      2.38 232    P      Pn      12 09 58.3 -0.2
KAHZ  Kahuranaki        2.51 224    P      Pn      12 09 59.2 -1.1
KWHZ  Kaweka Forest     2.55 235    P      Pn      12 10 00.2 -0.6
PXZ   Pawanui           2.69 220    P      Pn      12 10 01.0 -1.7
RITZ  Rihia Road        2.74 248    P      Pn      12 10 03.4 -0.1
WATZ  Wairara           2.75 254    P      Pn      12 10 03.3 -0.4
RATZ  Rangitukua        2.77 251    P      Pn      12 10 03.8  0.0
BHHZ  Black Hill Sta    2.82 237    P      Pn      12 10 03.9 -0.7
TOZ   Tahuroa Road      2.87 274    P      Pn      12 10 05.3  0.0
WPHZ  Waipukurau        2.94 224    P      Pn      12 10 04.9 -1.2
KRVZ  Karewarewa        2.94 247    P      Pn      12 10 05.9 -0.4
KUZ   Kuaotunu          2.98 294    P      Pn      12 10 05.5 -1.2
MOVZ  Moawhango         2.99 241    P      Pn      12 10 06.6 -0.3
ANWZ  Angora Road       3.21 219    P      Pn      12 10 07.9 -1.9
DVHZ  Dannevirke        3.25 224    P      Pn      12 10 08.4 -2.1
MKAZ  Moumakai          3.27 285    P      Pn      12 10 09.8 -0.9
HIZ   Hauiti            3.40 260    P      Pn      12 10 12.7 +0.3
GRZ   Great Barrier     3.40 300    P      Pn      12 10 12.1 -0.4
ETAZ  East Tamaki Re    3.49 286    P      Pn      12 10 13.5 -0.3
PRWZ  Pori Road         3.54 223    P      Pn      12 10 12.3 -2.1
POWZ  Post Office Ro    3.54 226    P      Pn      12 10 13.4 -1.0
MBAZ  Motutapu North    3.58 289    P      Pn      12 10 14.4 -0.5
VRZ   Vera Road         3.60 250    P      Pn      12 10 15.2  0.0
AWAZ  Awhitu Peninsu    3.68 283    P      Pn      12 10 16.5 +0.2
RVAZ  Riverhead Bore    3.82 287    P      Pn      12 10 18.7 +0.5
MRZ   Mangatainoka R    3.82 225    P      Pn      12 10 15.6 -2.7
LREZ  Lake Rotokare     3.97 247    P      Pn      12 10 21.0 +0.7
WCZ   Waipu Caves       4.34 297    P      Pn      12 10 25.5 +0.1
CAW   Cannon Point      4.41 224    P      Pn      12 10 23.8 -2.6
OUZ   Omahuta           5.23 300    P      Pn      12 10 38.1 +0.4
NNZ   Nelson            5.48 232    P      Pn      12 10 38.8 -2.3
CTZ   Chatham Island    6.58 152    P      Pn      12 10 57.7 +1.5
```

WEL 04 12:11:00.4±1.2**, 38°S**±6°×**17°9E**±°**, h12^{km}, ML3.6**/11**, Off east coast of North Island**

```
Code  Station Name       Δ°   AZ°   Phase ID       Time        Res
                                    Op     ISC     h  m  s     ISC
WMGZ  Waiomatatini S    0.61 285    P      Pb      12 11 13.1 +0.1
WMGZ                                S      Sb      12 11 22.2 +0.6
PUZ   Puketiti          0.72 262    P      Pb      12 11 14.9  0.0
PUZ                                 S      Sb      12 11 25.2 +0.4
MXZ   Matakaoa Point    0.80 301    P      Pb      12 11 16.1  0.0
MXZ                                 S      Sb      12 11 27.7 +0.9
PKGZ  Pakihiroa         0.86 276    P      Pg      12 11 16.8 -0.3
PKGZ                                S      Sb      12 11 29.0 +0.1
CNGZ  Carnagh Statio    0.91 236    P      Pn      12 11 18.7 -0.2
TWGZ  Tauwhareparae     0.95 258    P      Pg      12 11 18.8  0.0
TWGZ                                S      Sn      12 11 32.3 -0.9
HAZ   Te Kaha           1.11 281    P      Pb      12 11 20.7 -0.8
TKGZ  Te Karaka         1.13 246    P      Pb      12 11 21.8 -0.1
TKGZ                                S      Sb      12 11 36.3 -0.2
RUGZ  Raukumara Rang    1.17 270    P      Pb      12 11 21.5 -1.2
MWZ   Matawai           1.34 254    P      Pn      12 11 23.9 -1.0
URZ   Urewera           1.64 260    P      Pn      12 11 28.8 -0.2
MTHZ  Maungataniwha     2.02 244    P      Pn      12 11 34.4 +0.1
ARHZ  Aropaoanui        2.13 232    P      Pn      12 11 35.7  0.0
BKZ   Black Stump Fm    2.40 240    P      Pn      12 11 39.4 -0.3
MCHZ  McNeill Hill      2.42 232    P      Pn      12 11 39.6 -0.2
KWHZ  Kaweka Forest     2.58 235    P      Pn      12 11 41.6 -0.5
BHHZ  Black Hill Sta    2.85 237    P      Pn      12 11 45.3 -0.5
MKAZ  Moumakai          3.30 284    P      Pn      12 11 51.1 -0.7
HIZ   Hauiti            3.43 260    P      Pn      12 11 54.0 +0.4
OUZ   Omahuta           5.26 300    P      Pn      12 12 19.3 +0.6
```

WEL 04 12:11:33.9±1.6**, 38°S**±8°×**17°9E**±°**, h19^{km}**±10^{km}**, ML3.6**/7**, Off east coast of North Island**

```
Code  Station Name       Δ°   AZ°   Phase ID       Time        Res
                                    Op     ISC     h  m  s     ISC
WMGZ  Waiomatatini S    0.58 283    P      Pg      12 11 45.9 +0.4
WMGZ                                S      Sn      12 11 55.3 -0.8
PUZ   Puketiti          0.70 260    P      Pb      12 11 47.5  0.0
PUZ                                 S      Sg      12 11 57.9 +0.8
MXZ   Matakaoa Point    0.76 301    P      Pg      12 11 49.1 +0.2
MXZ                                 S      Sn      12 12 00.5  0.0
PKGZ  Pakihiroa         0.83 274    P      Pb      12 11 49.8  0.0
PKGZ                                S      Sn      12 12 02.0 -0.5
CNGZ  Carnagh Statio    0.90 234    P      Pn      12 11 51.9 +0.3
TWGZ  Tauwhareparae     0.93 256    P      Pb      12 11 51.7 +0.1
TWGZ                                S      Sn      12 12 05.3 +0.3
HAZ   Te Kaha           1.08 280    P      Pb      12 11 53.6 -0.4
HAZ                                 S      Sn      12 12 08.2 -0.3
TKGZ  Te Karaka         1.12 244    P      Pn      12 11 54.6  0.0
TKGZ                                S      Sn      12 12 09.3 -0.1
RUGZ  Raukumara Rang    1.15 269    P      Pn      12 11 54.5 -0.6
MWZ   Matawai           1.32 253    P      Pn      12 11 56.6 -0.7
MWZ                                 S      Sn      12 12 13.4 -1.0
URZ   Urewera           1.62 259    P      Pb      12 12 02.8 -0.4
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*SOME **04** 12:16:57.8, 41.°60N×77.°90E, h5^{km}*

*KRNET **04** 12:16:57.5±0.1, 41.°51N×77.°84E, h18^{km}, mb2.4*

*NNC **04** 12:16:59.1±1.1, 41.°62N×77.°84E, h0^{km}, mb3.0, mpv2.7,*
Error ellipse: s-maj=7.6km s-min=4.1km az=12.0

ISC 04 12:16:55.5±2.2**, 41.°47N**±0.°06×**77.°86E**±0.°03**, h2^{km}**±20^{km}**,**
n34, σ0.s90/61**, 15C-5D, Kyrgyzstan-Xinjiang border region**

```
Code  Station Name       Δ°   AZ°   Phase ID       Time        Res
                                    Op     ISC     h  m  s     ISC
KDJ   Kajisay           0.83 322⇑iP       Pb      12 17 12.8  0.0
      baz=22
KDJ                             ⇑iS       Sb      12 17 23.2 -1.3
      baz=22
NRN   Naryn             1.40 269⇑iP       Pb      12 17 23.3 +0.7
      baz=67
NRN                             ⇑iS       Sg      12 17 42.5 +2.0
      baz=67
ULHL  Ulahol            1.44 303⇑iP       Pb      12 17 23.2 +0.1
      baz=2.0
ULHL                            ⇑iS       Sg      12 17 42.2 +0.6
      baz=2.0
SATY  Saty              1.63  14  eP      Pb      12 17 26.1 -0.4
      3.0nm,0.2s
SATY                              eS      Sb      12 17 46.5 -1.0
      15nm,0.3s
TNSS  Tian-Shan         1.70 337   P      Pb      12 17 27.9 +0.1
      2.5nm,0.2s
TNSS                               S      Sb      12 17 49.8 -0.1
      5.6nm,0.2s
TNSS  Tian-Shan         1.70 337⇓eP       Pb      12 17 27.9 +0.1
      2.5nm,0.2s
TNSS                              eS      Sb      12 17 49.8 -0.1
      6.5nm,0.3s
MDOK  Medeo             1.79 341   P      Pb      12 17 29.0 -0.2
      2.7nm,0.4s
MDOK                               S      Sb      12 17 51.2 -0.9
      4.3nm,0.6s
MDOK  Medeo             1.79 341⇑eP       Pb      12 17 29.4 +0.2
      4.8nm,0.4s
MDOK                              eS      Sb      12 17 51.9 -0.3
      3.2nm,0.4s
IZV   Izvestkoviy       1.82 330   P      Pb      12 17 29.7 +0.1
      2.1nm,0.3s
IZV                                S      Sg      12 17 53.2 -0.6
      14nm,0.2s
IZV   Izvestkoviy       1.82 330  eP      Pb      12 17 29.7 +0.1
      2.1nm,0.3s
IZV                               eS      Sb      12 17 52.7 -0.1
      14nm,0.2s
KOTS  Kotyrbulak        1.84 343   P      Pb      12 17 30.3 +0.3
      3.2nm,0.2s
KOTS                               S      Sb      12 17 53.9 +0.2
      6.9nm,0.4s
KOTS  Kotyrbulak        1.84 343⇓eP       Pb      12 17 30.4 +0.3
      3.2nm,0.2s
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KOTS				eS	Sb	12 17 53.9	+0.2
	6.9nm,0.4s						
UZB	**Uzynbulak**	1.88	27	P	Pb	12 17 29.9	-0.7
UZB				S	Sb	12 17 53.2	-1.5
UZB	**Uzynbulak**	1.88	27	eP	Pb	12 17 29.9	-0.7
	0.4nm,0.2s						
UZB				eS	Sb	12 17 53.2	-1.5
	2.7nm,0.1s						
KZA	**Kyzart**	2.05	288	⇑iP	Pb	12 17 34.2	+0.6
	baz=87						
KZA				⇑iS	Sg	12 18 00.7	-0.5
	baz=87						
KST	**Kastek**	2.11	319	eP	Pb	12 17 35.5	+1.0
	3.2nm,0.6s						
KST				⇑iS	Sg	12 18 02.8	-0.5
	6.8nm,0.4s						
PDGK	**Podgornoye**	2.21	32	Pg	Pb	12 17 36.5	+0.2
	0.6nm,0.2s						
PDGK				Lg	Lg	12 18 04.1	
	2.6nm,0.3s						
PDGK	**Podgornoye**	2.21	32	⇓Pn	Pb	12 17 35.7	-0.6
	1.6nm,0.6s						
PDGK				⇑Sn	Sb	12 18 04.7	+0.5
	2.8nm,0.4s						
PDGK	**Podgornoye**	2.21	32	⇑iP	Pb	12 17 36.5	+0.2
	baz=33						
PDGK				⇑iS	Sb	12 18 03.9	-0.3
	baz=33						
TKM2	**Tokmak 2**	2.22	311	⇓iP	Pb	12 17 36.4	-0.1
	baz=11						
TKM2				⇓iS	Sb	12 18 04.6	+0.1
	baz=11						
DGS	**Degeres**	2.35	319	Pg	Pb	12 17 39.9	+1.3
	1.9nm,0.5s						
DGS				Lg	Lg	12 18 10.0	
	5.5nm,0.3s						
DGS	**Degeres**	2.35	319	eP	Pb	12 17 39.9	+1.3
	1.9nm,0.5s						
DGS				eS	Sg	12 18 10.0	-1.0
	5.5nm,0.3s						
KTBS	**Karatobe**	2.40	339	Pg	Pb	12 17 39.7	+0.2
	3.8nm,0.3s						
KTBS				Lg	Lg	12 18 09.4	
	9.4nm,0.4s						
KTBS	**Karatobe**	2.40	339	eP	Pb	12 17 39.7	+0.2
	3.8nm,0.3s						
KTBS				eS	Sb	12 18 09.4	-0.1
	9.4nm,0.4s						
CHKK	**Chushkaly**	2.46	345	Pg	Pb	12 17 40.9	+0.4
	3.0nm,0.2s						
CHKK				Lg	Lg	12 18 12.5	
	15nm,0.2s						
CHKK	**Chushkaly**	2.46	345	eP	Pb	12 17 40.9	+0.4
	3.0nm,0.2s						
CHKK				eS	Sb	12 18 12.2	+0.9
	15nm,0.2s						
KUU	**Kurty**	2.67	336	Pg	Pb	12 17 44.8	+0.8
KUU				Lg	Lg	12 18 18.5	
KUU	**Kurty**	2.67	336	eP	Pb	12 17 44.8	+0.8
	1.2nm,0.3s						
KUU				eS	Sb	12 18 18.5	+1.4
	7.3nm,0.4s						
ARLS	**Aral**	2.68	279	⇑iP	Pb	12 17 42.6	-1.7
	baz=79						
ARLS				⇑iS	Sb	12 18 15.6	-2.1
	baz=79						
KTMS	**Ketmen**	2.70	42	Pg	Pb	12 17 46.0	+1.5
KTMS				Lg	Lg	12 18 20.8	
KTMS	**Ketmen**	2.70	42	eP	Pb	12 17 46.0	+1.5
	0.8nm,0.2s						
KTMS				eS	Sg	12 18 20.8	-1.3
	5.4nm,0.5s						
ARXS	**Arharly**	2.74	359	Pg	Pb	12 17 45.6	+0.3
	1.5nm,0.4s						
ARXS				Lg	Lg	12 18 20.5	
	10.0nm,0.2s						
ARXS	**Arharly**	2.74	359	eP	Pb	12 17 45.8	+0.6
	1.5nm,0.4s						
ARXS				eS	Sb	12 18 20.5	+1.2
	17nm,0.4s						
DJR	**Jarkent**	3.19	26	eP	Pb	12 17 53.9	+1.0
	0.6nm,0.1s						
DJR				eS	Sb	12 18 34.0	+1.8
	2.6nm,0.4s						

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*IDC **04** 12:54:33.5±0.9, 17°.61N×120°.82E, h0^{km}, mb3.6/8, mb1 3.9/8, mb1mx3.7/36, mbtmp3.6/8, Error ellipse: s-maj=32.8km s-min=18.3km az=73.0*

*NEIC **04** 12:54:39.4±0.7, 17°.57N×120°.48E, h50^{km}±7^{km}, mb4.5/8, Error ellipse: s-maj=9.3km s-min=6.4km az=87.0*

NEIC Felt [II PIVS] at Sinait.

*ISCJB **04** 12:54:41.1±0.4, 17°.86N±0°.03×120°.36E±0°.04, h61^{km}±5^{km}, mb4.1/13, Error ellipse: s-maj=6.8km s-min=5.6km az=13.5*

*MAN **04** 12:54:41.1, 17°.83N×120°.33E, h39^{km}, MS4.7*

MAN INTENSITY II - SINAIT ILOCOS SUR.

ISC 04 12:54:41.4±0.8**, 17°.81N**±0°.04×**120°.35E**±0°.05**, h60**^{km}±8^{km}**, n43, σ1^{s}.77**/54**, mb4.4**/17**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	0.38	115	eP	Pn	12 54 52.3	+0.1
ABRA				eS	Sn	12 55 00.9	+0.9
APYP	**Conner**	0.85	86	eP	Pn	12 54 57.1	-0.5
APYP				eS	Sn	12 55 08.9	-0.6
CVP	**Callao Caves**	1.41	94	⇓iP	Pn	12 55 05.0	+0.1
CVP				i S	Sn	12 55 22.4	-0.1
BOLP	**Bolinao**	1.48	196	eP	Pn	12 55 06.6	+0.7
BOLP				eS	Sn	12 55 24.7	+0.4
CAUP	**Cauayan**	1.65	121	eP	Pn	12 55 09.4	+1.3
CAUP				eS	Sn	12 55 29.8	+1.4
SGCP	**Mt. Cagua**	1.67	75	eP	Pn	12 55 08.4	-0.1
SGCP				eS	Sn	12 55 29.4	+0.6
SMPP	**San Manuel, Pa**	1.68	169	eP	Pn	12 55 08.5	-0.2
SMPP				eS	Sn	12 55 29.3	+0.1
PALP	**Palanan**	2.12	110	eP	Pn	12 55 15.3	+0.8
PALP				eS	Sn	12 55 40.6	+0.9
PCPH	**Palayan**	2.35	162	⇑eP	Pn	12 55 18.9	+1.2
TWG	**Pinlang**	5.03	8	ePn	Pn	12 55 55.3	+0.9
TWG				eSn	Sn	12 56 49.8	-1.4
TPUB	**Ta-pu**	5.47	3	ePn	Pn	12 56 01.3	+0.9
TPUB				eSn	Sn	12 56 59.8	-2.2
YULB	**Yu-li**	5.62	9	ePn	Pn	12 56 03.5	+1.0
YULB				eSn	Sn	12 57 02.8	-3.0
SSLB	**Suanglung**	5.97	5	ePn	Pn	12 56 08.7	+1.3
NACB	**Ninganchiao**	6.44	10	ePn	Pn	12 56 14.7	+1.0
YHNB	**Yeheng**	6.89	8	ePn	Pn	12 56 20.8	+0.9
QIZ	**Qiongzhong**	10.05	279	ePn	Pn	12 57 03.2	+0.1
QIZ				eSn	Sn	12 58 51.2	-3.1
CMAR	**Chiang Mai Arr**	20.35	275	P	Pn	12 59 17.2	+1.5
	1.0nm,0.9s,baz=83,slow=8.6,SNR=7.8						
KSRS	**Korea Array**	20.67	17	P	P	12 59 16.5	+0.1
	0.7nm,0.4s,baz=201,slow=11,SNR=4.4						
SONM	**Songino Array**	32.05	342	P	P	13 01 04.6	+2.0
	0.4nm,0.5s,baz=152,slow=9.5,SNR=2.6						
JIRN	**Jiri**	32.90	294	eP	P	13 01 13.1	+2.6
	7.1nm,0.4s						
GUN	**Gumba**	33.21	294	eP	P	13 01 15.7	+2.4
	6.9nm,0.5s						
DANN	**Dangsing**	35.13	294	eP	P	13 01 31.6	+1.8
KOLN	**Koldanda**	35.18	293	eP	P	13 01 31.8	+1.6
	3.6nm,0.5s						
PYUN	**Piuthan**	35.77	293	eP	P	13 01 36.8	+1.6
	6.8nm,0.6s						
WRAB	**Tennant Creek**	39.95	159	eP	P	13 02 06.2	-3.9
	12nm,1.5s						
WRA	**Warramunga Arr**	39.95	159	P	P	13 02 06.5	-3.7
	0.4nm,0.4s,baz=346,slow=8.9,SNR=28						
WB2	**Warramunga Arr**	39.96	159	eP	P	13 02 06.5	-3.8
MK01	**Makanchi Array**	42.57	321	eP	P	13 02 33.3	+1.8
MK31	**Makanchi Array**	42.59	321	eP	P	13 02 33.1	+1.6
MKAR	**Makanchi Array**	42.59	321	eP	P	13 02 32.8	+1.2
	7.1nm,0.7s						
MKAR	**Makanchi Array**	42.59	321	P	P	13 02 34.5	+2.9
	1.0nm,0.8s,baz=115,slow=8.7,SNR=13						
AS31	**Alice Springs**	43.30	162	eP	P	13 02 34.9	-2.6
	2.4nm,0.3s						
ASAR	**Alice Springs**	43.30	162	P	P	13 02 34.9	-2.7
	2.5nm,0.3s,baz=338,slow=7.2,SNR=144						
AS01	**Alice Springs**	43.31	162	eP	P	13 02 34.9	-2.7
KURK	**Kurchatov**	46.63	324	eP	P	13 03 03.7	0.0
	3.4nm,0.8s						
BBOO	**Buckleboo**	52.53	163	eP	P	13 03 46.1	-2.6
	7.7nm,1.1s						
IM3	**Indian Mountai**	72.23	25	eP	P	13 05 59.4	-0.6
CAST	**Castle Rocks**	73.16	28	eP	P	13 06 05.1	-0.4
MLY	**Manley**	73.56	26	eP	P	13 06 08.0	+0.1
	10nm,1.6s						
RND	**Reindeer**	74.60	28	eP	P	13 06 14.4	+0.3
	15nm,1.6s						
WRH	**Wood River Hil**	74.77	27	eP	P	13 06 15.1	+0.2
	3.9nm,1.3s						
ILAR	**Eielson Array**	75.23	26	P	P	13 06 16.9	-0.6
	0.2nm,0.8s,baz=280,slow=4.1,SNR=4.0						
YKA	**Yellowknife Ar**	89.12	22	P	P	13 07 31.8	+1.7
	0.2nm,0.7s,baz=305,slow=5.1,SNR=4.1						

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*CNRM **04** 13:05:07.3, 36°.09N×8°.45W, h46^{km}, ml2.6*

*MDD **04** 13:05:10.3±1.2, 36°.19N×8°.17W, h38^{km}±20^{km}, mbLg2.3/9, Error ellipse: s-maj=13.4km s-min=5.5km az=32.0, PRXIMO*

*INMG **04** 13:05:10.3±1.9, 36°.33N×8°.12W, h6^{km}±7^{km}, ML2.2, Error ellipse: s-maj=8.2km s-min=4.8km az=39.0*

*IGIL **04** 13:05:10.4, 36°.28N×8°.20W, h9^{km}, ML2.3*

ISC 04 13:05:07.6±1.4**, 36°.21N**±0°.06×**8°.11W**±0°.04**, h20**^{km}±6^{km}**, n64, σ1^{s}.41**/118**, 6D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	1.04	8	eP	Pn	13 05 28.3	+1.3
PBDV				eS	Sn	13 05 41.3	+0.4
PBDV				A	A	13 05 45.4	
	14nm,0.1s						
PBDV	**Barranco-do-Ve**	1.04	8	P	Pn	13 05 28.3	+1.3
PBDV				S	Sn	13 05 41.3	+0.4
	14nm,0.1s						
PFVI	**Vila Bisbo**	1.09	328	⇓iP	Pb	13 05 27.8	+0.1
PFVI				eS	Sb	13 05 41.0	-0.4
PFVI				A	A	13 05 45.5	
	29nm,0.3s						
PFVI	**Vila Bisbo**	1.09	328	⇓P	Pb	13 05 27.8	+0.1
	15nm,0.1s,SNR=18						
PFVI				S	Sb	13 05 40.9	-0.5
	36nm,0.1s,SNR=8.0						
MORF	**Marmelete**	1.18	338	eP	Pb	13 05 29.4	+0.2
MORF				eS	Sb	13 05 44.0	-0.1
MORF				AML	AML	13 05 47.5	
	comp=E,57nm,0.2s						
MORF	**Marmelete**	1.18	338	eP	Pb	13 05 29.4	+0.2
MORF				eS	Sb	13 05 44.2	+0.2
MORF				A	A	13 05 47.8	
	comp=E,34nm,0.1s						
MORF	**Marmelete**	1.18	338	P	Pb	13 05 29.4	+0.2
MORF				S	Sb	13 05 44.2	+0.2
	comp=E,34nm,0.1s						
PVAQ	**Vaqueiros**	1.23	15	eP	Pb	13 05 30.9	+0.8
PVAQ				eS	Sb	13 05 45.8	+0.3
PVAQ				A	A	13 05 46.7	
	comp=E,33nm,0.1s						
PVAQ	**Vaqueiros**	1.23	15	P	Pb	13 05 30.9	+0.8
PVAQ				S	Sb	13 05 45.8	+0.3
	comp=E,33nm,0.1s						
PVAQ	**Vaqueiros**	1.23	15	P	Pb	13 05 31.0	+0.8
EGRO	**El Granado**	1.41	21	⇓P	Pb	13 05 33.6	+0.4
	comp=E,2.8nm,0.1s,SNR=18						
EGRO				S	Sn	13 05 50.2	+0.1
	comp=E,33nm,0.1s,SNR=24						
PTEO	**Sao Teotonio**	1.42	340	⇓eP	Pb	13 05 33.0	-0.3
PTEO				eS	Sn	13 05 50.2	-0.1
PTEO				A	A	13 05 53.6	
	comp=E,15nm,0.4s						
PTEO	**Sao Teotonio**	1.42	340	P	Pb	13 05 33.0	-0.3
PTEO				S	Sn	13 05 50.2	-0.1
	comp=E,7.6nm,0.4s						
MESJ	**Messejana**	1.63	357	eP	Pb	13 05 36.2	-0.6
MESJ				eS	Sn	13 05 55.5	+0.1
MESJ				AML	AML	13 05 56.5	
	comp=N,23nm,0.1s						
MESJ	**Messejana**	1.63	357	⇓eP	Pb	13 05 36.3	-0.6
MESJ				eS	Sn	13 05 55.5	+0.1
MESJ				A	A	13 05 56.4	
	comp=N,21nm,0.3s						
MESJ	**Messejana**	1.63	357	P	Pb	13 05 36.3	-0.6
MESJ				S	Sn	13 05 55.5	+0.1
	comp=N,21nm,0.3s						
PBEJ	**Beja**	1.82	6	ePn	Pb	13 05 39.9	-0.3
PBEJ				eSn	Sn	13 06 00.7	+0.5
PBEJ				A	A	13 06 03.8	
	comp=N,11nm,0.4s						
PBEJ	**Beja**	1.82	6	P	Pb	13 05 39.9	-0.3
PBEJ				S	Sn	13 06 00.7	+0.5
	comp=N,5.3nm,0.4s						
PNCL	**Nicolau / Gran**	1.93	350	ePn	Pn	13 05 39.9	+0.8
PNCL				eSn	Sn	13 06 01.9	-0.9
PNCL				A	A	13 06 06.1	
	comp=N,6.6nm,0.2s						
PNCL	**Nicolau / Gran**	1.93	350	P	Pn	13 05 39.9	+0.8
PNCL				S	Sn	13 06 01.9	-0.9
	comp=N,6.6nm,0.2s						
ESPR	**Espera**	1.93	69	P	Pb	13 05 41.1	-0.9
	comp=N,1.0nm,0.1s,SNR=7.9						
ESPR				S	Sn	13 06 02.6	-0.2
	comp=N,5.8nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	1.93	36	⇓P	Pn	13 05 40.5	+1.3
	comp=N,1.0nm,0.1s,SNR=18						
EMIN				S	Sn	13 06 02.1	-0.8
	comp=N,2.2nm,0.2s,SNR=14						
PBAR	**Barrancos**	2.14	23	ePn	Pn	13 05 43.5	+1.4
PBAR				eSn	Sn	13 06 07.4	-0.6
PBAR				A	A	13 06 09.6	
	comp=N,28nm,0.5s						
PBAR	**Barrancos**	2.14	23	P	Pn	13 05 43.5	+1.4
PBAR				S	Sn	13 06 07.4	-0.6
	comp=N,28nm,0.5s						
PESTR	**Estremoz**	2.68	9	ePn	Pn	13 05 50.7	+1.1
PESTR				eSn	Sn	13 06 21.1	-0.4
PESTR				A	A	13 06 24.3	
	comp=N,3.0nm,0.2s						
EBAD	**Badajoz**	2.68	19	P	Pn	13 05 50.9	+1.3
	comp=N,2.9nm,0.1s,SNR=6.7						
EBAD				S	Sn	13 06 19.7	-1.8
	comp=N,0.5nm,0.1s,SNR=5.6						
EMIJ	**Mijas**	2.71	82	P	Pn	13 05 50.6	+0.6
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIJ				S	Sn	13 06 20.8	-1.4
	comp=N,1.2nm,0.2s,SNR=7.9						
HORN	**Hornachuelos**	2.80	54	P	Pn	13 05 53.4	+2.2
ECAB	**El Cabril**	2.84	48	P	Pn	13 05 53.3	+1.6
	comp=N,0.4nm,0.2s,SNR=14						
ECAB				S	Sn	13 06 24.1	-1.3
	comp=N,1.2nm,0.1s,SNR=6.9						
PMTG	**Montargil**	2.85	358	ePn	Pn	13 05 52.8	+0.9
PMTG				eSn	Sn	13 06 25.0	-0.7
PMTG				A	A	13 06 25.8	
	comp=N,5.4nm,0.1s						
PMTG	**Montargil**	2.85	358	P	Pn	13 05 52.8	+0.9
PMTG				S	Sn	13 06 25.0	-0.7
	comp=N,5.4nm,0.1s						
PMAFR	**Mafra**	2.89	342	ePn	Pn	13 05 53.9	+1.4
PMAFR				eSn	Sn	13 06 26.2	-0.5
PMAFR				A	A	13 06 27.7	
	comp=N,12nm,0.3s						
PMAFR	**Mafra**	2.89	342	P	Pn	13 05 53.9	+1.4
	comp=N,10nm,0.1s,SNR=25						
PMAFR				S	Sn	13 06 25.6	-1.1
	comp=N,6.4nm,0.1s,SNR=5.7						
ZHG	**ZHG**	3.01	156	P	Pn	13 05 54.0	-0.2
PMRV	**Marv??o**	3.26	10	ePn	Pn	13 05 58.6	+1.1
PMRV				eSn	Sn	13 06 34.6	-1.1
PMRV				A	A	13 06 38.1	
	comp=N,3.5nm,0.1s						
PMRV	**Marv??o**	3.26	10	P	Pn	13 05 58.6	+1.1
PMRV				S	Sn	13 06 34.6	-1.1
	comp=N,3.5nm,0.1s						
EGOR	**Sierra Gorda,**	3.34	73	S	Sn	13 06 36.8	-0.9
	comp=N,0.1nm,0.2s,SNR=7.9						
PTOM	**Tomar**	3.41	356	ePn	Pn	13 06 00.6	+1.1
PTOM				eSn	Sn	13 06 37.0	-2.3
PTOM				A	A	13 06 40.1	
	comp=N,7.8nm,0.4s						
PTOM	**Tomar**	3.41	356	P	Pn	13 06 00.6	+1.1
PTOM				S	Sn	13 06 37.0	-2.3
	comp=N,3.9nm,0.4s						
EADA	**Adamuz**	3.43	54	P	Pn	13 06 01.5	+1.6
	comp=N,0.6nm,0.2s,SNR=7.9						
EADA				S	Sn	13 06 38.9	-0.9
	comp=N,3.2nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	3.66	8	ePn	Pn	13 06 04.3	+1.4
PCBR				eSn	Sn	13 06 45.0	-0.4
PCBR				A	A	13 06 45.8	
	comp=N,5.3nm,0.5s						
PCBR	**Castelo Branco**	3.66	8	P	Pn	13 06 04.3	+1.4
PCBR				S	Sn	13 06 45.0	-0.4
	comp=N,2.7nm,0.5s						
ELGU	**Los Guajares,**	3.67	78	P	Pn	13 06 06.6	+3.5
	comp=N,0.0nm,0.2s,SNR=7.9						
ELGU				S	Sn	13 06 45.2	-0.6
	comp=N,1.0nm,0.1s,SNR=7.9						
SRHM	**Skhour des Reh**	3.73	177	P	Pn	13 06 04.0	-0.1
PCAS	**Casmilo, Conde**	3.85	356	ePn	Pn	13 06 06.6	+1.0
PCAS				eSn	Sn	13 06 49.2	-1.0
PCAS				A	A	13 06 50.4	
	comp=N,3.1nm,0.4s						
PCAS	**Casmilo, Conde**	3.85	356	P	Pn	13 06 06.6	+1.0
PCAS				S	Sn	13 06 49.2	-1.0
	comp=N,3.1nm,0.4s						
EPLA	**Plasencia**	4.17	22	P	Pn	13 06 11.2	+1.3
	comp=N,0.6nm,0.1s,SNR=5.9						
EPLA				S	Sn	13 06 54.8	-3.3
	comp=N,1.7nm,0.1s,SNR=6.8						
MTE	**Manteigas**	4.21	6	eSn	Sn	13 06 57.5	-1.6
MTE				A	A	13 06 59.4	
	comp=N,4.1nm,0.3s						
MTE	**Manteigas**	4.21	6	S	Sn	13 06 57.5	-1.6
	comp=N,2.0nm,0.3s						
EQES	**Quesada**	4.33	67	P	Pn	13 06 13.9	+1.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	13 07 00.1	-2.1
	comp=N,0.8nm,0.2s,SNR=7.9						
MDT	**Midelt**	4.45	139	P	Pn	13 06 13.9	-0.1
PAB	**San Pablo**	4.46	41	P	Pn	13 06 15.9	+1.8
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S	Sn	13 07 01.5	-3.9
	SNR=7.9						
SESP	**Santiago Espad**	4.83	65	S	Sn	13 07 13.6	-1.1
	comp=N,3.8nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	5.02	9	ePn	Pn	13 06 22.6	+0.9
MVO				eSn	Sn	13 07 16.8	-2.3
MVO				A	A	13 07 18.5	
	comp=N,2.8nm,0.3s						
MVO	**Moncorvo**	5.02	9	P	Pn	13 06 22.9	+1.2
	comp=N,1.3nm,0.1s,SNR=6.7						
MVO				S	Sn	13 07 16.6	-2.5
	comp=N,1.1nm,0.1s,SNR=7.9						
POLO	**Lamas de Olo**	5.16	3	ePn	Pn	13 06 24.6	+0.9
POLO				eSn	Sn	13 07 20.5	-2.2
POLO				A	A	13 07 22.3	
	comp=N,1.3nm,0.5s						
POLO	**Lamas de Olo**	5.16	3	P	Pn	13 06 24.6	+0.9
POLO				S	Sn	13 07 20.5	-2.2
	comp=N,1.3nm,0.5s						
GUD	**Guadarrama**	5.40	34	P	Pn	13 06 28.4	+1.3
	comp=N,0.0nm,0.1s,SNR=7.9						
GUD				S	Sn	13 07 26.0	-2.7
	comp=N,0.0nm,0.2s,SNR=7.9						
ELOB	**Lobios**	5.65	0	P	Pn	13 06 31.4	+1.0
	comp=N,0.6nm,0.2s,SNR=6.7						
ELOB				S	Sn	13 07 31.3	-3.4
	comp=N,0.3nm,0.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	5.75	359	ePn	Pn	13 06 32.7	+0.9
PGAV				eSn	Sn	13 07 33.5	-3.6
PGAV				A	A	13 07 37.7	
	comp=N,2.3nm,0.5s						
PGAV	**Gavieira, Arco**	5.75	359	P	Pn	13 06 32.7	+0.9
PGAV				S	Sn	13 07 33.5	-3.6
	comp=N,2.3nm,0.5s						
ETOB	**Tobarra**	5.76	63	P	Pn	13 06 33.4	+1.6
	comp=N,0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	13 07 34.5	-2.9
	comp=N,0.5nm,0.2s,SNR=7.9						
ECAL	**Calabor**	5.82	10	P	Pn	13 06 33.9	+1.2
	comp=N,0.9nm,0.1s,SNR=7.1						
ECAL				S	Sn	13 07 36.2	-2.6
	comp=N,1.2nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	6.76	355	P	Pn	13 06 46.7	+1.1
	comp=N,0.6nm,0.1s,SNR=7.9						

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*ISCJB **04** 13:07:24.8±0.5, 2°.20S±0°.06×68°.23E±0°.09, h15^{km}, mb4.0/16, MS4.4/2, Error ellipse: s-maj=14.1km s-min=7.8km az=157.5*

*IDC **04** 13:07:24.5±0.7, 2°.21S×68°.17E, h0^{km}, mb3.9/11, mb1 4.1/11, mb1mx3.8/42, mbtmp3.9/11, MS4.4/2, Ms1 4.4/2, ms1mx3.3/50, Error ellipse: s-maj=21.2km s-min=19.3km az=158.0*

*NEIC **04** 13:07:25.8±0.3, 2°.21S×68°.17E, h10^{km}, mb4.3/5, Error ellipse: s-maj=10.5km s-min=9.7km az=72.0*

ISC 04 13:07:26.6±0.6**, 2°.2S**±0°.1×**68°.2E**±0°.1**, h15**^{km}**, n49, σ0^{s}.71**/43**, mb4.1**/16**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N2	**Diego Garcia H**	4.95	146	Pn	Pn	13 08 40.1	0.0
H08N2				T	T	13 13 44.8	
	baz=324,slow=75,SNR=1520						
H08N3	**Diego Garcia H**	4.96	146	Pn	Pn	13 08 40.3	0.0
H08N3				T	T	13 13 45.7	
	baz=324,slow=75,SNR=1464						
H08N1	**Diego Carcia H**	4.97	146	Pn	Pn	13 08 40.4	0.0
H08N1				T	T	13 13 40.7	
	baz=324,slow=75,SNR=1341						
H08S3	**Diego Garcia H**	6.87	142	T	T	13 16 20.7	
	baz=3.0,slow=79,SNR=5.0						
H08S1	**Diego Carcia H**	6.87	142	T	T	13 16 21.2	
	baz=3.0,slow=79,SNR=3.6						
H08S2	**Diego Garcia H**	6.88	142	T	T	13 16 24.5	
	baz=3.0,slow=79,SNR=3.8						
OPO	**Ambohidratompo**	26.23	230	LR	LR	13 21 01.0	
	comp=Z,244nm,18.9s,baz=89,slow=31						
CM31	**Chiang Mai Arr**	36.58	55	eP	P	13 14 31.4	-0.9
CMAR	**Chiang Mai Arr**	36.58	55	P	P	13 14 31.6	-0.7
	0.7nm,0.6s,baz=52,slow=28,SNR=4.4						
GAR	**Garm**	41.06	3	eP	P	13 15 09.9	+0.1
	11nm,0.9s						
LSZ	**Lusaka**	41.51	249	eP	P	13 15 13.7	-0.1
	6.3nm,1.1s						
LSZ	**Lusaka**	41.51	249	P	P	13 15 14.4	+0.6
	3.6nm,0.7s,baz=73,slow=8.3,SNR=6.3						
BTK	**Batken**	42.14	3	eP	P	13 15 17.9	-0.6
	3.7nm,0.8s						
MATP	**Matopo**	42.73	242	P	P	13 15 23.7	-0.1
	2.1nm,0.9s,baz=72,slow=6.4,SNR=2.8						
AAK	**Ala-Archa**	45.01	7	P	P	13 15 43.2	+1.5
	0.8nm,0.6s,baz=171,slow=16,SNR=3.3						
MKAR	**Makanchi Array**	50.36	13	P	P	13 16 22.9	-0.2
	0.6nm,0.8s,baz=196,slow=8.4,SNR=6.1						
MK32	**Makanchi Array**	50.36	13	eP	P	13 16 22.9	-0.2
KBZ	**Khabaz**	51.06	337	P	P	13 16 29.0	+0.7
	2.7nm,0.9s,baz=148,slow=5.6,SNR=2.9						
ABKAR	**Akbulak array**	51.77	353	eP	P	13 16 33.3	-0.2
KURK	**Kurchatov**	53.48	8	eP	P	13 16 45.9	-0.3
	2.2nm,0.8s						
ZALV	**Zalesovo Beam**	57.66	12	P	P	13 17 15.2	-0.9
	0.6nm,0.6s,baz=202,slow=11,SNR=5.0						
ZAA1	**Zalesovo Array**	57.66	12	eP	P	13 17 15.2	-1.0
SONA0	**Songino Array**	59.96	29	eP	P	13 17 33.8	+1.4
SONM	**Songino Array**	59.96	29	P	P	13 17 33.8	+1.4
	1.2nm,0.8s,baz=219,slow=6.6,SNR=7.4						
WRA	**Warramunga Arr**	66.85	111	P	P	13 18 19.4	+0.9
	2.5nm,0.8s,baz=285,slow=5.9,SNR=22						
WR1	**Warramunga Arr**	66.85	111	eP	P	13 18 19.4	+0.9
	14nm,1.6s						
WB2	**Warramunga Arr**	66.86	111	eP	P	13 18 19.1	+0.5
ASAR	**Alice Springs**	66.91	115	P	P	13 18 19.6	+0.7
	2.1nm,0.8s,baz=282,slow=6.0,SNR=24						
AS31	**Alice Springs**	66.91	115	eP	P	13 18 18.6	-0.2
	0.7nm,0.8s						
AS01	**Alice Springs**	66.95	115	eP	P	13 18 19.3	+0.1
ESDC	**Sonseca Array**	77.77	311	P	P	13 19 23.2	-0.2
	0.6nm,0.7s,baz=56,slow=3.9,SNR=4.1						
SEY	**Seymchan**	89.31	27	LR	LR	14 01 12.6	
	comp=Z,530nm,19.3s,baz=149,slow=36						
YKA	**Yellowknife Ar**	119.83	1	PKP	PKPdf	13 26 14.8	-1.3
	0.1nm,0.6s,baz=347,slow=2.5,SNR=3.1						
PDAR	**Pinedale Array**	139.58	357	PKP	PKPdf	13 26 53.4	-1.0
	0.4nm,0.7s,baz=29,slow=3.4,SNR=4.7						
NV01	**Mina Array Sit**	143.47	9	ePKPdf	PKPdf	13 27 00.3	-1.1
NVAR	**Mina Array Bea**	143.47	9	PKP	PKPdf	13 27 00.8	-0.7
	0.4nm,0.7s,baz=291,slow=2.8,SNR=2.7						
PV13	**Radium Mtn., P**	144.13	356	ePKPdf	PKPbc	13 27 00.5	-0.1
MTPU	**Mount Pierson**	144.35	1	ePKPdf	PKPdf	13 27 03.0	-0.2
S22A	**4UR Ranch, Cre**	144.35	353	ePKPdf	PKPdf	13 27 02.6	-0.5

SZCU	Shurtz Canyon	144.78	2	*e*PKPdf	PKPdf	13 27 03.5	-0.2
PKCU	Pink Cliffs	144.94	1	*e*PKPdf	PKPdf	13 27 04.2	0.0
LCMT	Little Creek M	145.35	2	*e*PKPbc	PKPdf	13 27 05.7	+1.0
WMOK	Wichita Mounta	145.44	341	*e*PKPbc	PKPab	13 27 04.9	+0.1
DAC	Darwin (Calif)	145.69	8	*e*PKPdf	PKPab	13 27 06.6	+0.8
U15A	North Rim	145.96	1	*e*PKPdf	PKPab	13 27 07.3	+0.3
MNTX	Cornudas Mount	150.06	349	*e*PKPbc	PKiKP	13 27 17.8	-0.4
LTX	Lajitas	151.94	345	*e*PKPbc	PKiKP	13 27 22.6	+0.3
TX31	Lajitas Ar. Si	151.94	345	*e*PKPbc	PKPbc	13 27 22.0	0.0
TXAR	Lajitas Array	151.94	345	PKPbc	PKiKP	13 27 22.6	+0.3
	1.7nm,1.0s,baz=354,slow=1.3,SNR=10						

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*ISCJB **04** 13:15:26.6±0.6, 2°.20S±0°.07×68°.3E±0°.1, h10^{km}, mb4.2/14, MS3.8/8, Error ellipse: s-maj=18.6km s-min=7.9km az=157.1*

*IDC **04** 13:15:27.7±0.9, 2°.21S×68°.28E, h0^{km}, mb3.9/8, mb1 4.1/8, mb1mx3.7/46, mbtmp3.9/8, MS3.8/9, Ms1 3.8/9, ms1mx3.5/46, Error ellipse: s-maj=27.1km s-min=23.1km az=20.0*

*NEIC **04** 13:15:28.4±0.8, 2°.21S×68°.22E, h10^{km}±5^{km}, mb4.5/6, Error ellipse: s-maj=14.5km s-min=9.0km az=56.0*

ISC 04 13:15:28.7±0.6, **2°.2S**±0°.1×**68°.3E**±0°.1, **h10**^{km}, **n44**, σ**0^{s}.91**/33, **mb4.2**/14, **MS3.8**/8, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	4.90	146	Pn	Pn	13 16 42.2	0.0
H08N2				T	T	13 21 44.0	
	baz=324,slow=75,SNR=766						
H08N3	Diego Garcia H	4.91	146	Pn	Pn	13 16 41.7	-0.7
H08N3				T	T	13 21 43.9	
	baz=324,slow=75,SNR=660						
H08N1	Diego Carcia H	4.92	146	Pn	Pn	13 16 42.2	-0.3
H08N1				T	T	13 21 45.9	
	baz=324,slow=75,SNR=712						
DGAR	Diego Garcia	6.63	141	*e*Pn	Pn	13 17 07.5	+1.3
H08S3	Diego Garcia H	6.82	142	T	T	13 24 16.6	
	baz=287,slow=80,SNR=14						
H08S1	Diego Carcia H	6.83	142	T	T	13 24 16.3	
	baz=287,slow=80,SNR=8.2						
H08S2	Diego Garcia H	6.84	142	T	T	13 24 17.9	
	baz=287,slow=80,SNR=11						
PALK	Pallekele	15.60	53	LR	LR	13 23 52.2	
	comp=Z,227nm,20.3s,baz=296,slow=32						
OPO	Ambohidratompo	26.27	230	LR	LR	13 29 43.1	
	comp=Z,164nm,18.6s,baz=67,slow=32						
WSAR	Wadi Sarin	27.00	340	LR	LR	13 30 21.0	
	comp=Z,89nm,18.2s,baz=6.0,slow=33						
CMAR	Chiang Mai Arr	36.53	54	P	P	13 22 36.5	+1.6
	1.4nm,1.0s,baz=243,slow=10,SNR=8.0						
CMAR				LR	LR	13 35 44.7	
	comp=Z,74nm,19.8s,baz=322,slow=33						
GAR	Garm	41.07	2	*e*P	P	13 23 12.2	-0.5
LSZ	Lusaka	41.57	249	*e*P	P	13 23 16.3	-0.9
	4.0nm,0.8s						
LSZ	Lusaka	41.57	249	P	P	13 23 17.6	+0.4
	2.6nm,0.6s,baz=68,slow=9.8,SNR=3.5						
BOSA	Boshof	48.63	233	LR	LR	13 44 01.0	
	comp=Z,168nm,18.5s,baz=10,slow=35						
GIRL	Giralia	48.98	118	*e*P	P	13 24 14.9	-0.9
	258nm,1.4s						
MK32	Makanchi Array	50.36	12	*e*P	P	13 24 25.1	-0.8
MKAR	Makanchi Array	50.36	12	P	P	13 24 25.1	-0.8
	0.3nm,0.7s,baz=195,slow=8.8,SNR=4.3						
MKAR				LR	LR	13 44 58.2	
	comp=Z,210nm,18.7s,baz=334,slow=35						
KVAR	Kislovodsk Arr	51.37	336	LR	LR	13 46 34.6	
	comp=Z,216nm,20.7s,baz=218,slow=36						
KIV	Kislovodsk	51.37	336	*e*P	P	13 24 33.4	-0.3
	12nm,1.2s						
XAN	Xi'an	52.56	43	*e*P	P	13 24 41.7	-1.1
	5.2nm,0.8s						
ZALV	Zalesovo Beam	57.66	12	P	P	13 25 17.7	-1.4
	0.4nm,0.5s,baz=200,slow=7.7,SNR=4.3						
ZAA1	Zalesovo Array	57.66	12	*e*P	P	13 25 17.7	-1.4
FITZ	Fitzroy Crossi	58.38	110	*e*P	P	13 25 24.7	-0.2
	19nm,2.0s						
FITZ	Fitzroy Crossi	58.38	110	LR	LR	13 48 19.9	
	comp=Z,36nm,19.1s,baz=301,slow=34						
SONA0	Songino Array	59.94	29	*e*P	P	13 25 36.2	+0.9
SONM	Songino Array	59.94	29	P	P	13 25 36.2	+0.9
	1.1nm,0.8s,baz=223,slow=6.8,SNR=9.2						
MAW	Mawson	65.36	182	LR	LR	13 47 52.6	
	comp=Z,128nm,18.7s,baz=2.5,slow=30						
WR1	Warramunga Arr	66.78	111	*e*P	P	13 26 21.6	+0.5
	5.5nm,1.0s						
WRA	Warramunga Arr	66.78	111	P	P	13 26 21.6	+0.5
	3.8nm,1.1s,baz=284,slow=6.2,SNR=21						
WB2	Warramunga Arr	66.79	111	*e*P	P	13 26 20.4	-0.7
ASAR	Alice Springs	66.84	115	P	P	13 26 21.7	+0.3
	1.9nm,0.8s,baz=287,slow=5.9,SNR=20						
AS31	Alice Springs	66.84	115	*e*P	P	13 26 21.1	-0.3
	0.9nm,1.0s						
AS01	Alice Springs	66.89	115	*e*P	P	13 26 21.3	-0.4
ESDC	Sonseca Array	77.82	311	P	P	13 27 29.1	+2.4
	0.5nm,0.6s,baz=100,slow=2.5,SNR=3.7						
PDAR	Pinedale Array	139.59	358	PKP	PKPdf	13 34 57.9	+0.5
	0.2nm,0.5s,baz=64,slow=4.1,SNR=2.7						
MTPU	Mount Pierson	144.36	1	*e*PKPdf	PKPab	13 35 04.8	+0.6
PKCU	Pink Cliffs	144.95	1	*e*PKPdf	PKPab	13 35 06.3	0.0
LCMT	Little Creek M	145.36	2	*e*PKPbc	PKPbc	13 35 07.4	-0.1
WMOK	Wichita Mounta	145.48	341	*e*PKPdf	PKPbc	13 35 06.6	-1.2
SHPR	Sheep Range	145.75	5	*e*PKPdf	PKPdf	13 35 08.1	-0.3
MNTX	Cornudas Mount	150.08	349	*e*pPKPdf	pPKPdf	13 35 18.4	+0.7
LTX	Lajitas	151.97	345	*e*PKPbc	PKPbc	13 35 24.6	-0.5
TXAR	Lajitas Array	151.97	345	PKPbc	PKPbc	13 35 24.6	-0.5
	1.2nm,1.0s,baz=56,slow=3.2,SNR=7.7						

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*SOME **04** 13:28:22.1, 40°.38N×77°.28E, h10^{km}*

*KRNET **04** 13:28:23.6±0.1, 40°.50N×77°.28E, h8^{km}, mb2.2*

*NNC **04** 13:28:23.9±1.1, 40°.46N×77°.27E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=11.1km s-min=7.5km az=90.0*

ISC 04 13:28:22.7±3.0, **40°.5N**±0°.1×**77°.27E**±0°.05, **h2**^{km}±13^{km}, **n23**, σ**1^{s}.19**/37, **12C-2D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.33	18	⇑*i*P	Pn	13 28 48.2	-0.5
	baz=17						
TARG				⇑*i*S	Sn	13 29 06.2	-1.0
	baz=17						
NRN	Naryn	1.36	316	⇑*i*P	Pg	13 28 49.6	+0.8
	baz=13						
NRN				⇑*i*S	Sn	13 29 08.1	+0.2
	baz=13						
ULHL	Ulahol	1.94	337	⇑*i*P	Pb	13 28 59.3	+0.4
	baz=36						
ULHL				⇑*i*S	Sg	13 29 26.3	+1.3
	baz=36						
KZA	Kyzart	2.22	317	⇑*i*P	Pb	13 29 04.5	+0.8
	baz=16						
KZA				⇑*i*S	Sg	13 29 34.6	+0.7
	baz=16						
BOOM	Boomskoye usch	2.26	334	⇓*i*P	Pb	13 29 03.7	-0.6
	baz=34						
BOOM				⇓*i*S	Sg	13 29 33.7	-1.4
	baz=34						
TNSS	Tian-Shan	2.58	355	Pg	Pg	13 29 11.4	-0.7
	3.5nm,0.4s						
TNSS				Lg	Lg	13 29 47.2	
	3.2nm,0.3s						
TNSS	Tian-Shan	2.58	355	*e*P	Pg	13 29 11.4	-0.7
	3.5nm,0.5s						
TNSS				*e*S	Sg	13 29 47.2	+1.6
	3.2nm,0.3s						
IZV	Izvestkoviy	2.62	349	Pg	Pg	13 29 12.0	-0.8
IZV				Lg	Lg	13 29 48.3	
IZV	Izvestkoviy	2.62	349	*e*P	Pg	13 29 12.0	-0.8
	0.6nm,0.1s						
IZV				*e*S	Sg	13 29 48.0	+1.3
	8.7nm,0.6s						
ARLS	Aral	2.62	303	⇑*i*P	Pb	13 29 09.6	-1.0
	baz=3.0						
ARLS				⇑*i*S	Sb	13 29 42.8	-0.5
	baz=3.0						
MDOK	Medeo	2.70	357	Pn	Pb	13 29 10.2	-1.7
	1.5nm,0.6s						
MDOK				Lg	Lg	13 29 50.3	
	5.3nm,1.1s						
MDOK	Medeo	2.70	357	Pg	Pg	13 29 13.5	-0.9
MDOK				Lg	Lg	13 29 51.1	
MDOK	Medeo	2.70	357	*e*P	Pg	13 29 13.6	-0.9
	2.2nm,0.5s						
MDOK				*e*S	Sg	13 29 50.8	+1.4
	5.7nm,0.5s						
SATY	Saty	2.73	18	*e*P	Pb	13 29 13.6	+1.3
	2.7nm,0.6s						
SATY				*e*S	Sg	13 29 50.7	+0.4
	3.1nm,0.4s						
TKM2	Tokmak 2	2.75	334	⇑Pn	Pn	13 29 09.0	+0.9
	2.1nm,1.1s						
TKM2				⇑Lg	Lg	13 29 50.7	
	1.1nm,0.5s						
KOTS	Kotyrbulak	2.77	358	Pg	Pb	13 29 14.3	+1.3
	2.1nm,0.5s						
KOTS				Lg	Lg	13 29 52.6	
	5.5nm,0.6s						
KOTS	Kotyrbulak	2.77	358	*e*P	Pb	13 29 14.3	+1.3
	2.1nm,0.5s						
KOTS				*e*S	Sg	13 29 52.0	+0.4
	5.5nm,0.6s						
KURS	Kuram	3.09	12	*e*P	Pb	13 29 19.4	+0.9
	1.7nm,0.8s						
KURS				*e*S	Sg	13 30 00.6	-1.4
	2.4nm,0.8s						
KTBS	Karatobe	3.27	353	Pg	Pb	13 29 23.5	+1.9
KTBS				Lg	Lg	13 30 07.4	
KTBS	Karatobe	3.27	353	*e*P	Pb	13 29 23.5	+1.9
	0.6nm,0.4s						
KTBS				*e*S	Sg	13 30 07.4	-0.4
	0.9nm,0.5s						
PDGK	Podgornoye	3.31	29	Pg	Pb	13 29 23.7	+1.5
PDGK				Lg	Lg	13 30 07.9	
CHKK	Chushkaly	3.39	357	Pg	Pg	13 29 25.8	-1.8
CHKK				Lg	Lg	13 30 11.7	
CHKK	Chushkaly	3.39	357	*e*P	Pg	13 29 25.9	-1.8
	0.5nm,0.1s						
CHKK				*e*S	Sg	13 30 11.6	-0.1
	5.5nm,0.3s						

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*IDC **04** 13:35:26.2±0.4, 37°.57N×82°.40E, h0^{km}, mb4.5/34, mb1 4.6/39, mb1mx4.5/56, mbtmp4.5/39, ML4.3/5, MS3.7/4, Ms1 3.8/4, ms1mx3.3/39, Error ellipse: s-maj=12.2km s-min=9.1km az=34.0*

*ISCJB **04** 13:35:26.2±0.1, 37°.58N±0°.02×82°.44E±0°.02, h10^{km}, mb4.6/89, MS4.0/5, Error ellipse: s-maj=3.1km s-min=2.6km az=42.3*

*BJI **04** 13:35:27.5, 37°.72N×82°.36E, h11^{km}, mB4.8/20, mb4.5/37, ML4.9/7, Ms4.3/22, Ms7 4.0/18*

*MOS **04** 13:35:28.8±1.0, 37°.63N×82°.45E, h27^{km}, mb4.8/49, Error ellipse: s-maj=6.7km s-min=3.9km az=118.1*

*NEIC **04** 13:35:29.6±1.0, 37°.55N×82°.42E, h24^{km}±7^{km}, mb4.7/32, Error ellipse: s-maj=4.1km s-min=3.1km az=204.0*

*NNC **04** 13:35:35.5±2.9, 38°.06N×82°.39E, h14^{km}±15^{km}, mb4.9, mpv4.8, Error ellipse: s-maj=18.8km s-min=13.2km az=102.0*

ISC 04 13:35:27.8±0.3, **37°.60N**±0°.04×**82°.41E**±0°.04, **h10**^{km}, **n327**, σ**1^{s}.54**/345, **mb4.7**/88, **MS4.0**/6, **46C-21D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	5.39	293	Pn	Pn	13 36 55.0	+6.6
KSH				Sn	Sn	13 38 00.4	+10
PRZ	Przheval'sk	5.76	329	*e*Pn	Pn	13 36 56.4	+2.8
PRZ	Przheval'sk	5.76	329	*e*P	Pn	13 36 56.4	+2.8
KDJ	Kajisay	6.05	320	*e*Pn	Pn	13 37 00.7	+3.2
KDJ	Kajisay	6.05	320	*e*P	Pn	13 37 00.7	+3.2
PDGK	Podgornoye	6.14	340	⇓Pn	Pn	13 37 00.3	+1.6
	56nm,0.4s						
PDGK				⇓Sn	Sn	13 38 06.4	-2.6
	363nm,0.5s						
PDGK				⇑Lg	Lg	13 38 37.4	
	639nm,0.6s						
PDGK	Podgornoye	6.14	340	P	Pn	13 37 00.2	+1.6
PDGK				*e*S	Sn	13 38 06.4	-2.6
NRN	Naryn	6.26	310	*e*Pn	Pn	13 37 02.7	+2.2
NRN	Naryn	6.26	310	*e*P	Pn	13 37 02.7	+2.2
ULHL	Ulahol	6.63	316	P	Pn	13 37 08.1	+2.6
	SNR=146						
MDOK	Medeo	6.90	325	⇑Pn	Pn	13 37 11.0	+1.9
	82nm,0.8s						
MDOK				⇓Lg	Lg	13 39 02.8	
	321nm,0.6s						
MDOK	Medeo	6.90	325	P	Pn	13 37 11.3	+2.2
KNDC	Almaty	6.98	325	⇑Pn	Pn	13 37 12.9	+2.8
	73nm,0.6s						
KNDC				⇑Lg	Lg	13 39 08.3	
	389nm,0.8s						
KZA	Kyzart	7.09	311	P	Pn	13 37 14.9	+2.9
	SNR=24						
DHRM	DHARAMSHALA	7.32	225	*e*P	Pn	13 37 15.2	+0.2
DHRM				*e*S	Sn	13 38 37.1	-1.2
SFK	Sufi-Kurgan	7.36	292	⇑Pn	Pn	13 37 18.8	+3.2
	19nm,0.4s						
SFK				⇑Lg	Lg	13 39 20.5	
	172nm,0.6s						
SFK	Sufi-Kurgan	7.36	292	P	Pn	13 37 18.7	+3.2
WMQ	Urumqi	7.40	31	*e*Pn	Pn	13 37 17.9	+2.0
WMQ				Sn	Sn	13 38 38.5	-1.4
WMQ				smax	smax		
	comp=N,1μm,0.9s						
WMQ				smax	smax		
	comp=E,1μm,0.9s						
WMQ				LR	LR		
	comp=N,470nm,10.1s						
WMQ				LR	LR		
	comp=E,830nm,14.5s						
WMQ				LR	LR		
	comp=Z,1μm,13.9s						
WMQ	Urumqi	7.40	31	*e*Pn	Pn	13 37 17.5	+1.6
WMQ	Urumqi	7.40	31	*e*P	Pn	13 37 17.5	+1.6
TKM2	Tokmak 2	7.44	318	P	Pn	13 37 19.2	+2.6
	SNR=44						
TKM2	Tokmak 2	7.44	318	⇑Pn	Pn	13 37 18.6	+2.0
	42nm,0.5s						
TKM2				⇑Lg	Lg	13 39 23.2	
	95nm,0.7s						
TKM2	Tokmak 2	7.44	318	P	Pn	13 37 18.5	+2.0
KBK	Karagaybulak	7.62	314	P	Pn	13 37 22.1	+3.0
	SNR=36						
UCH	Uchtor	7.62	310	P	Pn	13 37 22.1	+2.7
	SNR=21						
SMLA	Simla	7.77	215	*e*P	Pn	13 37 23.4	+2.5
SMLA				*e*S	Sn	13 38 49.0	0.0
AAK	Ala-Archa	7.88	312	P	Pn	13 37 25.6	+3.1
	SNR=16						
AAK	Ala-Archa	7.88	312	*e*Pn	Pn	13 37 24.7	+2.2
AAK				Pg	Pb	13 37 46.2	+1.7
AAK				Lg	Lg	13 39 38.7	
AAK	Ala-Archa	7.88	312	⇑Pn	Pn	13 37 25.5	+3.0
	12nm,0.7s						
AAK				⇑Lg	Lg	13 39 33.8	
	119nm,0.8s						
AAK	Ala-Archa	7.88	312	P	Pn	13 37 24.1	+1.6
	SNR=25						
AAK	Ala-Archa	7.88	312	Pn	Pn	13 37 25.0	+2.5
	2.3nm,0.3s,baz=157,slow=13,SNR=36						
AAK				Pg	Pb	13 37 46.2	+1.7
	4.5nm,0.3s,baz=126,slow=7.7,SNR=7.3						
AAK				Lg	Lg	13 39 38.7	
	3.8nm,0.3s,baz=300,slow=16,SNR=5.6						
FRU1	Bishkek	7.90	314	*e*Pn	Pn	13 37 23.6	+0.8
FRU1	Bishkek	7.90	314	*e*P	Pn	13 37 23.6	+0.8
FRU	Bishkek	7.93	314	*e*P	Pn	13 37 24.0	+0.9
CHMS	Chumysh	7.95	315	P	Pn	13 37 25.7	+2.3
	SNR=6.2						
AML	Almayashu	8.08	307	P	Pn	13 37 28.2	+2.6
	SNR=13						
DDI	Dehra Dun	8.11	208	*e*P	Pn	13 37 25.5	-0.1
DDI				*e*S	Sn	13 38 54.9	-2.5
USP	Ospenovka	8.27	316	P	Pn	13 37 30.2	+2.4
	SNR=9.1						
EKS2	Erkin-Say	8.32	310	P	Pn	13 37 31.2	+2.6
	SNR=14						
CHCP	Chirah Chowk	8.42	245	P	Pn	13 37 31.6	+1.8
NIL	Nilore	8.43	245	*e*Pn	Pn	13 37 30.8	+0.8
NIL	Nilore	8.43	245	*e*P	Pn	13 37 30.8	+0.8
MNAS	Manas	9.03	306	⇓Pn	Pn	13 37 41.9	+3.6
	6.1nm,1.1s						
MNAS				⇑Pg		13 38 14.8	
	22nm,1.1s						
MNAS				⇓Lg	Lg	13 40 14.9	
	53nm,1.2s						
MNAS	Manas	9.03	306	P	Pn	13 37 41.9	+3.6
MK01	Makanchi Array	9.16	360	*e*Pn	Pn	13 37 39.8	-0.3
MK31	Makanchi Array	9.19	359	*e*Pn	Pn	13 37 40.6	+0.2
MK31	Makanchi Array	9.19	359	Pn	Pn	13 37 40.8	+0.5
	33nm,0.5s,baz=185,slow=13,SNR=2792						
MK31				Sn	Sn	13 39 22.1	-1.8
	36nm,0.6s,baz=184,slow=23,SNR=3.3						
MK31				⇓Lg	Lg	13 40 12.4	
	43nm,0.5s						
MK31	Makanchi Array	9.19	359	*e*P	Pn	13 37 40.6	+0.2
MKAR	Makanchi Array	9.19	359	*e*Pn	Pn	13 37 40.6	+0.2
MKAR				Sn	Sn	13 39 16.2	-7.6
MKAR				Lg	Lg	13 40 19.2	
MKAR	Makanchi Array	9.19	359	*i* P	Pn	13 37 40.7	+0.3
MKAR				pmax	pmax		
	comp=Z,61nm,0.4s						
MKAR	Makanchi Array	9.19	359	Pn	Pn	13 37 41.7	+1.3
	comp=Z,33nm,0.3s,baz=186,slow=12,SNR=1474						
MKAR				Sn	Sn	13 39 16.2	-7.6
	comp=Z,4.2nm,0.3s,baz=180,slow=18,SNR=3.7						
MKAR				Lg	Lg	13 40 19.2	
	comp=Z,11nm,0.3s,baz=173,slow=27,SNR=4.5						
MAKZ	Makanchi	9.21	358	*e*Pn	Pn	13 37 40.8	+0.2
MAKZ	Makanchi	9.21	358	⇑Pn	Pn	13 37 41.2	+0.5
	comp=Z,48nm,0.3s						
MAKZ				⇑Sn	Sn	13 39 18.8	-5.5
	comp=Z,79nm,0.7s						
MAKZ	Makanchi	9.21	358	*e*P	Pn	13 37 40.8	+0.2
DANN	Dangsing	9.29	173	*e*P	Pn	13 37 44.0	+1.9
	comp=Z,17nm,0.4s						
CEP	Cherat	9.33	249	P	Pn	13 37 42.6	+0.1
CEP				S	Sn	13 39 23.0	-4.5
BTK	Batken	9.37	289	*e*Pn	Pn	13 37 43.8	+0.8
BTK	Batken	9.37	289	*e*P	Pn	13 37 43.8	+0.8
PYUN	Piuthan	9.49	177	*e*P	Pn	13 37 46.3	+1.6
	comp=Z,26nm,0.6s						
KOLN	Koldanda	9.85	174	*e*P	Pn	13 37 52.0	+2.3
	comp=Z,141nm,1.1s						
NDI	New Delhi	9.90	208	*e*P	Pn	13 37 49.0	-1.1
THW	Thamme Wali	9.95	244	P	Pn	13 37 51.5	+0.6
GUN	Gumba	10.09	162	*e*P	Pn	13 37 57.6	+4.5
	comp=Z,50nm,0.8s						
DMN	Daman	10.22	166	*e*P	Pn	13 37 58.8	+4.0
	comp=Z,82nm,1.2s						
PKIN	Phulchoki	10.31	165	*e*P	Pn	13 37 59.8	+3.8
	comp=Z,26nm,0.5s						
PKI	Pulchoki	10.31	165	*e*P	Pn	13 38 00.0	+3.9
	comp=Z,44nm,0.8s						
KK31	Karatay Array	10.61	305	*e*Pn	Pn	13 38 00.3	+0.5
KK31	Karatay Array	10.61	305	Pn	Pn	13 38 07.2	+7.4
	comp=Z,0.8nm,0.3s,baz=128,slow=13,SNR=3.9						
KK31				⇑Lg	Lg	13 40 59.2	
	comp=Z,7.5nm,0.6s						
KK31	Karatay Array	10.61	305	*e*P	Pn	13 38 00.4	+0.5
KKAR	Karatay Array	10.61	305	*e*Pn	Pn	13 38 00.2	+0.4
KKAR	Karatay Array	10.61	305	*e*P	Pn	13 38 00.2	+0.4
LSA	Lhasa	10.73	135	*e*Pn	Pn	13 38 00.4	-1.5
LSA	Lhasa	10.73	135	*e*P	Pn	13 38 00.4	-1.5
KBL	Kabul	11.24	258	*e*Pn	Pn	13 38 07.2	-1.4
KBL	Kabul	11.24	258	*e*P	Pn	13 38 07.2	-1.4
DGZ	Jazzator, Alta	12.63	15	⇑*e*P	Pn	13 38 26.5	-1.0
OTUK	Ortayu	12.93	329	P	Pn	13 38 31.2	-0.4
KURBB	Kurchatov Arra	13.31	349	Pn	Pn	13 38 34.2	-2.5
	comp=Z,0.2nm,0.3s,baz=175,slow=12,SNR=15						
KURBB				Lg	Lg	13 42 31.8	
	comp=Z,0.2nm,0.3s,baz=167,slow=28,SNR=2.9						
KURK	Kurchatov	13.39	350	*e*Pn	Pn	13 38 35.2	-2.5
KURK				Lg	Lg	13 42 31.8	
KURK	Kurchatov	13.39	350	⇑*e*P	Pn	13 38 35.8	-1.9
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURK	Kurchatov	13.39	350	P	Pn	13 38 38.3	+0.6
	SNR=5.9						
GTA	Gaotai	13.76	77	*e*P	Pn	13 38 41.1	-1.8
GTA				pP	P	13 38 46.5	-5.1
GTA				sP		13 38 50.8	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,190nm,7.9s						
GTA				LR	LR		
	comp=Z,290nm,13.1s						
GTA				LR	LR		
	comp=Z,340nm,11.0s						
BOK	Bokaro	14.08	167	*e*P	Pn	13 38 46.4	-0.9
SHL	Shillong	14.45	143	*e*Pn	Pn	13 38 51.7	-0.8
SHL	Shillong	14.45	143	*e*P	Pn	13 38 51.7	-0.8
SHL	Shillong	14.45	143	*e*P	Pn	13 38 50.4	-2.1
JBP	Jabalpur	14.54	189	*e*P	Pn	13 38 54.3	+0.7
JBP				*e*x	x	13 44 35.2	
BHPL	Bhopal	14.94	198	*e*P	Pn	13 38 58.0	-1.1
BHPL				IAmb	IAmb	13 38 58.8	
ZAA0	Zalesovo Array	16.44	5	*e*Pn	Pn	13 39 14.8	-3.6
	comp=Z,11nm,0.5s						
ZALV	Zalesovo Beam	16.44	5	*e*Pn	Pn	13 39 14.6	-3.7
ZALV				Sn	Sn	13 42 11.7	-9.0
ZALV	Zalesovo Beam	16.44	5	*i* P	Pn	13 39 15.1	-3.2
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ZALV	Zalesovo Beam	16.44	5	Pn	Pn	13 39 15.3	-3.1
	comp=Z,0.8nm,0.3s,baz=190,slow=13,SNR=14						
ZALV				Sn	Sn	13 42 11.7	-9.0
	comp=Z,0.7nm,0.3s,baz=188,slow=27,SNR=4.0						
ZALV				LR	LR	13 46 47.2	
	comp=Z,225nm,21.5s,baz=252,slow=41						
NGP	Nagpur	16.65	191	*e*P	Pn	13 39 21.0	-0.3
BRDH	Bariadhala	16.87	149	LR	LR	13 45 49.2	
	comp=Z,196nm,18.7s,baz=334,slow=37						
LZH	Lanzhou	17.23	89	*e*P	P	13 39 31.7	+1.5
LZH				pP	sP	13 39 36.3	+1.4
LZH				sP	pP	13 39 38.9	+5.5
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,86nm,4.6s						
LZH				LR	LR		
	comp=Z,370nm,10.2s						
LZH				LR	LR		
	comp=Z,400nm,11.0s						
LZH				LR	LR		
	comp=Z,570nm,13.5s						
NVS	Novosibirsk	17.25	2	⇓*i*P	Pn	13 39 26.8	-1.9
NVS				*e*		13 42 32.8	
BWNR	Bhubaneshwar	17.49	169	*e*x	P	13 39 26.6	-6.4
BWNR				IAmb	IAmb	13 39 30.5	
	comp=Z,29nm,0.7s						
BVAR	Borovoye Array	17.55	335	P	Pn	13 39 32.6	+0.2
	comp=Z,1.6nm,0.3s,baz=145,slow=13,SNR=41						
BVAR				Lg	Lg	13 44 52.9	
	comp=Z,0.2nm,0.3s,baz=147,slow=31,SNR=3.0						
BRVK	Borovoye	17.61	335	*e*Pn	Pn	13 39 32.1	-1.1
	comp=Z,11nm,0.6s						
BRVK	Borovoye	17.61	335	⇓*e*P	Pn	13 39 33.2	+0.1
CD2	Chengdu	18.85	104	*e*P	P	13 39 48.0	0.0
GEYT	Alibeck	19.20	278	P	P	13 39 52.1	+0.4
	comp=Z,1.4nm,0.3s,baz=91,slow=12,SNR=12						
GYA0B	ALIBECK ARRAY	19.20	278	*e*P	P	13 39 51.3	-0.4
	comp=Z,11nm,0.7s						
MOY	Mondy	19.23	37	*e*P	P	13 39 53.8	+1.7
MOY				pmax	pmax		
	comp=Z,23nm,3.4s						
ZAK	Zakamensk	19.64	43	*e*P	P	13 39 56.5	0.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ABKAR	Akbulak array	19.96	313	*e*P	P	13 39 59.8	-0.2
SONM	Songino Array	20.30	52	P	P	13 40 05.0	+1.1
SONM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SONM	Songino Array	20.30	52	P	P	13 40 05.0	+1.1
	comp=Z,4.7nm,0.6s,baz=244,slow=12,SNR=27						
SONM				Lg	Lg	13 46 24.1	
	comp=Z,2.8nm,0.9s,baz=250,slow=29,SNR=3.3						
SONA1	Songino Array	20.31	52	*e*P	P	13 40 04.4	+0.4
HYB	Hyderabad	20.39	191	*i* P	P	13 40 05.0	+0.2
HYB	Hyderabad	20.39	191	*e*P	P	13 40 05.0	+0.2
HYB				IAmb	IAmb	13 40 16.4	
	comp=Z,25nm,1.2s						
POO	Poona	20.43	204	*e*P	P	13 40 04.2	-1.1
POO				IAmb	IAmb	13 40 06.8	
	comp=Z,5.2nm,0.3s						
TLY	Talaya	20.55	40	*e*P	P	13 40 07.1	+0.7
	comp=Z,23nm,0.5s						
TLY	Talaya	20.55	40	*i* P	P	13 40 07.0	+0.7
TLY	Talaya	20.55	40	P	P	13 40 06.4	+0.1
	SNR=7.0						
TLY	Talaya	20.55	40	P	P	13 40 07.8	+1.4

	comp=Z,3.6nm,0.4s,baz=219,slow=8.6,SNR=8.5						
ULN	**Ulaanbaatar**	**20.73**	**53**	eP	**P**	**13 40 08.4**	**0.0**
	comp=Z,28nm,1.1s						
ULN	**Ulaanbaatar**	**20.73**	**53**	ceP	**P**	**13 40 09.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,20nm,1.4s						
ULN	**Ulaanbaatar**	**20.73**	**53**	P	**P**	**13 40 07.1**	**-1.4**
	SNR=11						
KMI	**Kunming**	**21.30**	**120**	P	**P**	**13 40 16.2**	**+1.3**
KMI				pmax	pmax		
	comp=Z,14nm,0.7s						
KMI				pmax	pmax		
	comp=Z,170nm,4.9s						
KMI				LR	LR		
	comp=Z,220nm,9.4s						
KMI				LR	LR		
	comp=Z,190nm,10.3s						
AKTO	**Aktyubinsk**	**21.61**	**314**	P	**P**	**13 40 17.6**	**-0.2**
	comp=Z,19nm,0.7s,baz=106,slow=11,SNR=67						
AKTO				LR	LR	13 50 19.5	
	comp=Z,262nm,18.5s,baz=324,slow=41						
XAN	**Xi'an**	**21.77**	**91**	P	**P**	**13 40 19.9**	**+0.3**
XAN				pP	pP	13 40 23.7	+0.8
XAN				sP	sP	13 40 25.5	+1.1
XAN				S	S	13 44 10.4	-10
XAN				pmax	pmax		
	comp=Z,23nm,0.7s						
XAN				LR	LR		
	comp=Z,370nm,9.2s						
XAN				LR	LR		
	comp=Z,260nm,9.2s						
XAN				LR	LR		
	comp=Z,440nm,10.3s						
XAN	**Xi'an**	**21.77**	**91**	eP	**P**	**13 40 19.5**	**-0.1**
	comp=Z,16nm,0.7s						
XAN	**Xi'an**	**21.77**	**91**	eP	**P**	**13 40 19.5**	**-0.1**
XAN				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC	**Hu-ho-hao-te**	**22.77**	**73**	eP	**P**	**13 40 30.7**	**+0.3**
HHC				pP	pP	13 40 36.3	+2.6
HHC				sP	sP	13 40 39.8	+4.6
HHC				PP	**PnPn**	**13 40 57.8**	**+3.4**
HHC				eS	**S**	**13 44 34.8**	**-4.6**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				LR	LR		
	comp=Z,370nm,10.1s						
HHC				LR	LR		
	comp=Z,350nm,8.6s						
HHC				LR	LR		
	comp=Z,240nm,10.1s						
GYA	**Guiyang**	**23.31**	**111**	⇑iP	**P**	**13 40 33.8**	**-2.3**
GYA				pP	pP	13 40 41.2	+1.8
GYA				PP	**PnPn**	**13 41 06.2**	**+4.4**
GYA				S	**S**	**13 44 44.4**	**-4.3**
GYA				sS	pS	13 44 53.0	+0.3
GYA				SS	**SnSn**	**13 45 28.9**	**+6.0**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.3s						
GYA				LR	LR		
	comp=Z,110nm,8.7s						
GYA				LR	LR		
	comp=Z,440nm,11.0s						
GYA				LR	LR		
	comp=Z,420nm,12.1s						
ENH	**Enshi**	**23.57**	**100**	eP	**P**	**13 40 39.3**	**+0.7**
	comp=Z,12nm,0.9s						
CHTO	**Chiang Mai**	**23.65**	**138**	eP	**P**	**13 40 38.1**	**-1.3**
	comp=Z,17nm,1.0s						
CHTO	**Chiang Mai**	**23.65**	**138**	eP	**P**	**13 40 38.1**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,17nm,1.0s						
CHTO	**Chiang Mai**	**23.65**	**138**	P	**P**	**13 40 39.3**	**-0.1**
CHTO	**Chiang Mai**	**23.65**	**138**	P	**P**	**13 40 38.8**	**-0.6**
	comp=Z,84nm,0.9s						
CMAR	**Chiang Mai Arr**	**23.95**	**138**	P	**P**	**13 40 41.9**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=320,slow=9.6,SNR=25						
CMAR				PcP	**PcP**	**13 44 25.8**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=305,slow=3.7,SNR=5.5						
CM01	**Chiang Mai Arr**	**23.98**	**138**	eP	**P**	**13 40 41.3**	**-1.3**
SVE	**Sverdlovsk**	**24.07**	**330**	⇓eP	**P**	**13 40 43.4**	**+0.3**
SVE				pmax	pmax		
	comp=Z,20nm,0.6s						
ARU	**Arti**	**24.66**	**327**	eP	**P**	**13 40 48.4**	**-0.1**
	comp=Z,22nm,0.8s						
ARU	**Arti**	**24.66**	**327**	c iP	**P**	**13 40 48.7**	**+0.2**
ARU						13 41 21.3	
ARU				S	**S**	**13 45 09.9**	**+0.1**
ARU				pmax	pmax		
	comp=Z,20nm,0.7s						
UTTA	**Uttaradit**	**25.40**	**136**	P	**P**	**13 41 01.8**	**+6.4**
NONG	**Nongkai**	**26.63**	**131**	P	P	13 41 15.5	+8.9
WHN	**Wuhan**	**27.29**	**95**	⇓P	**P**	**13 41 13.9**	**+1.4**
BTLR	**Botlikh**	**27.98**	**292**	⇑eP	**P**	**13 41 18.6**	**-0.1**
BTLR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DVE	**Vedeno**	**28.04**	**292**	⇓eP	**P**	**13 41 20.2**	**+1.0**
DVE				pmax	pmax		
	comp=Z,13nm,0.8s						
HIA	**Hailar**	**29.22**	**54**	⇑eP	**P**	**13 41 32.0**	**+2.4**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GNI	**Garni**	**29.29**	**287**	⇓eP	**P**	**13 41 32.4**	**+1.9**
GNI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GNI	**Garni**	**29.29**	**287**	P	**P**	**13 41 31.3**	**+0.9**
	comp=Z,1.9nm,0.3s,baz=129,slow=16,SNR=2.1						
KIRV	**Kirov**	**29.95**	**325**	P	**P**	**13 41 36.3**	**+0.5**
	comp=Z,22nm,0.7s,baz=192,slow=22,SNR=5.4						
PYA1	**Pyatigorsk**	**30.22**	**295**	⇑eP	**P**	**13 41 38.6**	**+0.1**
QIZ	**Qiongzhong**	**30.25**	**120**	P	**P**	**13 41 40.3**	**+1.4**
QIZ				S	**S**	**13 46 38.7**	**0.0**
NJ2	**Nanjing**	**30.30**	**89**	eP	**P**	**13 41 39.2**	**0.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CHBT	**CHBT**	**30.48**	**139**	P	**P**	**13 41 37.7**	**-3.2**
	comp=Z,78nm,2.1s						
KIV	**Kislovodsk**	**30.52**	**295**	eP	**P**	**13 41 42.4**	**+1.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NRIK	**Noril'sk**	**31.92**	**3**	P	**P**	**13 41 54.0**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
NRIK	**Noril'sk**	**31.92**	**3**	P	**P**	**13 41 54.0**	**+0.8**
	comp=Z,7.2nm,0.4s,baz=168,slow=6.0,SNR=8.2						
MOS	**Moscow**	**34.92**	**316**	eP	**P**	**13 42 18.8**	**-0.6**
OBN	**Obninsk**	**35.39**	**315**	i P	**P**	**13 42 23.2**	**-0.3**
OBN				i		13 43 42.2	
OBN				pmax	pmax		
	comp=Z,11nm,1.1s						
KLMR	**Klimovskoe**	**35.45**	**325**	eP	**P**	**13 42 22.2**	**-1.6**
KLMR				pmax	pmax		
	comp=Z,12nm,0.8s						
KLMR	**Klimovskoe**	**35.45**	**325**	eP	**P**	**13 42 22.3**	**-1.6**
KLMR				AMP		13 42 24.9	
	comp=Z,12nm,0.8s						
KSAR	**Wonju Array Be**	**35.80**	**76**	P	**P**	**13 42 28.0**	**+0.8**
KSAR	**Wonju Array Be**	**35.80**	**76**	P	**P**	**13 42 28.0**	**+0.8**
KSRS	**Korea Array**	**35.82**	**76**	P	**P**	**13 42 28.0**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=285,slow=8.2,SNR=11						
KLR	**Kul'dur**	**37.06**	**56**	⇑eP	**P**	**13 42 38.3**	**+0.5**
BR131	**Keskin Array S**	**37.77**	**289**	eP	**P**	**13 42 44.5**	**+0.4**
BRTR	**Keskin Array B**	**37.77**	**289**	P	**P**	**13 42 45.1**	**+1.0**
	comp=Z,9.1nm,0.8s,baz=93,slow=8.2,SNR=48						
JNU	**Nakatsue**	**39.44**	**81**	P	**P**	**13 42 58.9**	**+0.8**
	comp=Z,6.1nm,0.8s,baz=240,slow=4.0,SNR=6.9						
AKASG	**Malin Array Be**	**39.50**	**307**	P	**P**	**13 42 58.3**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**39.50**	**307**	P	**P**	**13 42 58.3**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=79,slow=7.3,SNR=12						
AKBB	**Malin Array Si**	**39.51**	**307**	eP	**P**	**13 42 58.3**	**-0.1**
	comp=Z,14nm,1.2s						
AKBB	**Malin Array Si**	**39.51**	**307**	eP	**P**	**13 42 58.3**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,14nm,1.2s						
KIEV	**Kiev**	**39.52**	**307**	eP	**P**	**13 42 58.3**	**-0.2**
	comp=Z,14nm,1.2s						
KIEV	**Kiev**	**39.52**	**307**	⇑iP	**P**	**13 42 58.9**	**+0.4**
KIEV	**Kiev**	**39.52**	**307**	⇓eP	**P**	**13 42 58.4**	**-0.1**
KIEV				pmax	pmax		
	comp=Z,13nm,1.2s						
AK11	**Malin Array Si**	**39.54**	**307**	eP	**P**	**13 42 58.2**	**-0.5**
LVZ	**Lovozero**	**40.14**	**334**	⇓eP	**P**	**13 43 03.6**	**+0.1**
LVZ				pmax	pmax		
	comp=Z,15nm,1.3s						
CFR	**Carcaliu**	**40.75**	**298**	⇑iP	**P**	**13 43 09.6**	**+0.8**
TLB	**Topalu**	**40.91**	**298**	⇑iP	**P**	**13 43 10.1**	**0.0**
HARR	**Harsova**	**40.97**	**298**	⇑iP	**P**	**13 43 09.2**	**-1.4**
ICOR	**Ion Corvin**	**41.16**	**297**	⇑iP	**P**	**13 43 12.7**	**+0.5**
VSU	**Vasula**	**41.21**	**319**	⇓eP	**P**	**13 43 13.2**	**+0.8**
VSU				pmax	pmax		
	comp=Z,33nm,1.0s						
TIXI	**Tiksi**	**41.45**	**20**	eP	**P**	**13 43 13.9**	**-0.2**
	comp=Z,4.7nm,1.2s						
TIXI	**Tiksi**	**41.45**	**20**	⇓eP	**P**	**13 43 14.3**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,2.5s						
TIXI	**Tiksi**	**41.45**	**20**	P	**P**	**13 43 14.1**	**0.0**
	comp=Z,2.1nm,0.4s,baz=249,slow=5.4,SNR=5.8						
VRI	**Vrincioaia**	**41.62**	**300**	⇑iP	**P**	**13 43 16.9**	**+0.9**
PLOR	**Plostina**	**41.68**	**300**	⇑iP	**P**	**13 43 17.8**	**+1.3**
BIZ	**Bicaz**	**41.89**	**301**	⇓iP	**P**	**13 43 19.1**	**+1.0**
FIA1	**FINESS Array S**	**41.89**	**323**	eP	**P**	**13 43 18.0**	**+0.1**
FINES	**FINESS Array B**	**41.89**	**323**	P	**P**	**13 43 18.2**	**+0.3**
	comp=Z,6.1nm,0.6s,baz=95,slow=8.8,SNR=26						
SECR		**42.22**	**299**	⇑iP	**P**	**13 43 22.3**	**+1.4**
MLR	**Muntele Rosu**	**42.22**	**299**	⇑iP	**P**	**13 43 22.7**	**+1.6**
BURAR	**Bucovina Array**	**42.39**	**302**	⇑iP	**P**	**13 43 23.2**	**+0.9**
BUR04	**Bucovina Ar. S**	**42.39**	**302**	eP	**P**	**13 43 21.6**	**-0.8**
BUR08	**Bucovina Ar. S**	**42.40**	**303**	eP	**P**	**13 43 22.3**	**-0.1**
DOPR	**Dopca**	**42.53**	**300**	⇓iP	**P**	**13 43 24.5**	**+1.1**
NKL	**Nikolayevsk**	**42.56**	**49**	eP	**P**	**13 43 22.7**	**-0.8**
NKL				pmax	pmax		
	comp=Z,13nm,0.8s						
VOIR		**42.85**	**299**	⇑iP	**P**	**13 43 26.9**	**+0.8**
LVV	**L'vov**	**42.89**	**306**	eP	**P**	**13 43 26.5**	**+0.2**
ARCR	**ARCALIA**	**43.05**	**302**	⇓iP	**P**	**13 43 29.5**	**+1.9**
SUW	**Suwalki**	**43.09**	**312**	eP	**P**	**13 43 28.2**	**+0.4**
SUW	**Suwalki**	**43.09**	**312**	eP	**P**	**13 43 28.2**	**+0.4**
ARR	**Arges**	**43.16**	**299**	⇑iP	**P**	**13 43 29.6**	**+1.1**
ARCES	**ARCESS Array B**	**43.84**	**335**	P	**P**	**13 43 34.2**	**+0.6**
	comp=Z,15nm,0.6s,baz=97,slow=7.7,SNR=84						
ARCES				PcP	**PcP**	**13 45 20.1**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=107,slow=3.7,SNR=5.2						
ARE0	**ARCESS Array S**	**43.84**	**335**	eP	**P**	**13 43 34.2**	**+0.6**
MAJO	**Matsushiro**	**43.97**	**74**	⇑eP	**P**	**13 43 34.5**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MAT	**Matsushiro**	**43.97**	**74**	P	**P**	**13 43 34.8**	**-0.4**
MJAR	**Matsushiro Arr**	**43.97**	**74**	P	**P**	**13 43 35.4**	**+0.2**
	comp=Z,5.2nm,0.7s,baz=290,slow=10,SNR=11						
GZR	**Gura Zlata**	**44.43**	**300**	⇑iP	**P**	**13 43 39.7**	**+0.9**
KTK1	**Kautokeino**	**44.49**	**334**	eP	**P**	**13 43 39.4**	**+0.6**
KTK1				ePP	**PcP**	**13 45 22.0**	**0.0**
HAMF	**Hammerfest**	**44.74**	**336**	eP	**P**	**13 43 41.6**	**+0.8**
MDVR	**Moldovita**	**45.30**	**299**	⇑iP	**P**	**13 43 46.9**	**+1.2**
NIE	**Niedzica**	**45.35**	**306**	eP	**P**	**13 43 47.4**	**+1.4**
NIE	**Niedzica**	**45.35**	**306**	eP	**P**	**13 43 47.4**	**+1.4**
OJC	**Ojcow**	**45.54**	**307**	eP	**P**	**13 43 48.1**	**+0.6**
OJC	**Ojcow**	**45.54**	**307**	eP	**P**	**13 43 48.1**	**+0.6**
LANS	**Liptovska Anna**	**45.93**	**306**	eP	**P**	**13 43 53.1**	**+2.5**
LANS	**Liptovska Anna**	**45.93**	**306**	eP	**P**	**13 43 53.1**	**+2.5**
TRO	**Tromso**	**46.11**	**334**	eP	**P**	**13 43 52.4**	**+0.7**
TRO				ePP	**PP**	**13 45 41.2**	**+1.7**
VYHS	**Vyhne**	**46.46**	**305**	eP	**P**	**13 43 55.7**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,17nm,2.2s						
VYHS	**Vyhne**	**46.46**	**305**	eP	**P**	**13 43 55.7**	**+0.9**
DIVS	**Divibare**	**46.66**	**299**	eP	**P**	**13 43 57.2**	**+0.7**
	comp=Z,12nm,0.9s						
MORC	**Moravsky Berou**	**47.05**	**307**	eP	**P**	**13 44 00.5**	**+1.1**
STEI	**Steigen**	**47.23**	**332**	eP	**P**	**13 44 00.8**	**+0.4**
STEI				ePP	**PP**	**13 45 52.0**	**+0.8**
MOR8	**Moi Rana**	**47.45**	**329**	eP	**P**	**13 44 01.5**	**-0.8**
DPC	**Dobruska-Polom**	**47.72**	**308**	eP	**P**	**13 44 06.0**	**+1.4**
DPC				epP	**sP**	**13 44 11.2**	**+1.6**
DPC	**Dobruska-Polom**	**47.72**	**308**	eP	**P**	**13 44 06.0**	**+1.4**
DPC				e		13 44 11.2	
VRAC	**Vranov**	**47.75**	**306**	⇑iP	**P**	**13 44 06.1**	**+1.3**
VRAC	**Vranov**	**47.75**	**306**	eP	**P**	**13 44 06.2**	**+1.4**
UPC	**Upice**	**47.88**	**308**	eP	**P**	**13 44 07.1**	**+1.3**
UPC				epP	**sP**	**13 44 12.4**	**+1.6**
UPC	**Upice**	**47.88**	**308**	eP	**P**	**13 44 07.1**	**+1.3**
UPC				e		13 44 12.4	
LOF	**Lofoten**	**47.89**	**332**	eP	**P**	**13 44 05.9**	**+0.3**
KRUC	**Moravsky**	**47.93**	**306**	eP	**P**	**13 44 07.5**	**+1.3**
KONS	**Konsvik**	**47.99**	**330**	eP	**P**	**13 44 07.0**	**+0.6**
NSS	**Namsos**	**48.48**	**327**	eP	**P**	**13 44 10.3**	**+0.1**
CONA	**Conrad Observa**	**48.53**	**305**	i P	**P**	**13 44 11.7**	**+0.8**
	comp=Z,5.0nm,0.7s,SNR=4.2						
SPA0	**Spitsbergen Ar**	**48.62**	**345**	eP	**P**	**13 44 11.6**	**+0.4**
PVCC	**Panska Ves**	**48.78**	**308**	eP	**P**	**13 44 14.0**	**+1.3**
PVCC	**Panska Ves**	**48.78**	**308**	eP	**P**	**13 44 14.0**	**+1.3**
NC405	**NORSAR Array S**	**48.80**	**322**	eP	**P**	**13 44 12.9**	**+0.1**
PRU	**Pruhonice**	**48.91**	**308**	eP	**P**	**13 44 15.3**	**+1.5**
PRU	**Pruhonice**	**48.91**	**308**	eP	**P**	**13 44 15.3**	**+1.5**
ARSA	**Arzberg**	**48.91**	**304**	i P	**P**	**13 44 14.6**	**+0.7**
	comp=Z,5.9nm,1.0s						
NC602	**NORSAR Array S**	**48.92**	**322**	eP	**P**	**13 44 13.5**	**-0.1**
NB2	**NORSAR Subarra**	**49.05**	**322**	P	**P**	**13 44 14.7**	**-0.1**
	comp=Z,14nm,0.7s,baz=84,slow=7.9						
NB2	**NORSAR Subarra**	**49.05**	**322**	P	**P**	**13 44 14.7**	**-0.1**
	baz=84,slow=7.9						
NOA	**NORSAR Array B**	**49.05**	**322**	P	**P**	**13 44 14.6**	**-0.1**
	comp=Z,9.0nm,0.6s,baz=84,slow=7.5,SNR=27						
BRG	**Berggiesshubel**	**49.10**	**309**	eP	P	13 44 12.2	-2.9
	comp=Z,5.6nm,1.0s						
BRG				i		13 44 15.9	
	comp=Z,14nm,1.0s						
BRG	**Berggiesshubel**	**49.10**	**309**	eP	P	13 44 12.2	-3.0
BRG				i		13 44 15.9	
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,14nm,1.0s						
NC204	**NORSAR Array S**	**49.25**	**323**	eP	**P**	**13 44 16.1**	**-0.1**
SOKA	**Soboth**	**49.38**	**303**	i P	**P**	**13 44 18.1**	**+0.6**
	comp=Z,7.6nm,0.7s						
CLL	**Collm**	**49.58**	**309**	eP	**P**	**13 44 18.4**	**-0.5**
	comp=Z,9.4nm,0.7s						
CLL	**Collm**	**49.58**	**309**	⇑iP	**P**	**13 44 19.2**	**+0.3**
	comp=Z,10.0nm,0.6s						
CLL	**Collm**	**49.58**	**309**	⇑iP	**P**	**13 44 19.2**	**+0.3**
CLL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MOA	**Molln**	**49.59**	**305**	i P	**P**	**13 44 19.4**	**+0.4**
	comp=Z,8.1nm,1.0s						
GEC2	**GERESS Array S**	**49.71**	**306**	eP	**P**	**13 44 20.8**	**+0.8**
	comp=Z,10.0nm,0.7s						
GEC2	**GERESS Array S**	**49.71**	**306**	eP	**P**	**13 44 20.8**	**+0.8**
GEC2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GERES	**GERESS Array B**	**49.71**	**306**	P	**P**	**13 44 21.2**	**+1.2**
	comp=Z,7.6nm,0.6s,baz=78,slow=6.9,SNR=48						
GEA0	**GERESS Array S**	**49.71**	**306**	eP	**P**	**13 44 20.5**	**+0.5**
KHC	**Kasperske Hory**	**49.72**	**307**	eP	**P**	**13 44 20.8**	**+0.8**
KHC	**Kasperske Hory**	**49.72**	**307**	eP	**P**	**13 44 20.8**	**+0.8**
OBKA	**Obir**	**49.75**	**303**	i P	**P**	**13 44 20.8**	**+0.4**
	comp=Z,6.3nm,0.9s						
DOMB	**Dombas**	**49.97**	**324**	eP	**P**	**13 44 21.8**	**+0.1**
DOMB				ePP	**PP**	**13 46 17.0**	**+0.7**
KONO	**Kongsberg**	**50.01**	**321**	eP	**P**	**13 44 22.2**	**+0.2**
MYKA	**Terra Mystica**	**50.32**	**303**	P	**P**	**13 44 23.7**	**-0.9**
	comp=Z,5.4nm,0.9s						
KBA	**Koelnbreinsper**	**50.39**	**304**	i P	**P**	**13 44 25.8**	**+0.5**
	comp=Z,2.5nm,0.5s						
AKN	**Aaknes**	**50.92**	**324**	eP	**P**	**13 44 29.6**	**+0.8**
SNART	**Snartemo**	**51.45**	**319**	eP	**P**	**13 44 33.7**	**+0.8**
WTTA	**Wattenberg**	**51.46**	**305**	i P	**P**	**13 44 33.9**	**+0.5**
	comp=Z,4.3nm,0.5s						
WATA	**Walderalm**	**51.48**	**305**	i P	**P**	**13 44 33.9**	**+0.5**
	comp=Z,3.9nm,0.5s						
SQTA	**Sankt Quirin**	**51.75**	**305**	i P	**P**	**13 44 35.6**	**+0.1**
	comp=Z,6.9nm,0.6s						
MOTA	**Moosalm**	**51.79**	**305**	i P	**P**	**13 44 36.0**	**+0.2**
	comp=Z,4.8nm,0.6s						
RETA	**Reutte**	**51.97**	**305**	i P	**P**	**13 44 37.4**	**+0.4**
	comp=Z,8.7nm,0.8s						
FETA	**Feichten**	**52.12**	**305**	i P	**P**	**13 44 38.4**	**+0.1**
	comp=Z,6.0nm,0.7s						
DAVA	**Damuels**	**52.60**	**305**	i P	**P**	**13 44 42.2**	**+0.4**
	comp=Z,5.4nm,0.5s						
PETK	**Petropavlovsk-**	**52.68**	**47**	P	**P**	**13 44 42.6**	**+0.5**
	comp=Z,4.9nm,0.9s,baz=290,slow=2.9,SNR=8.6						
BILL	**Bilibino**	**53.50**	**28**	⇓eP	**P**	**13 44 48.8**	**+0.9**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.7s						
MEM	**Membach**	**54.04**	**310**	⇑P	**P**	**13 44 51.7**	**-0.4**
MEM				⇑pP	**pP**	**13 44 58.2**	**+2.5**
WLF	**Walferdange**	**54.24**	**309**	⇑P	**P**	**13 44 54.9**	**+1.3**
DOU	**Dourbes**	**55.06**	**310**	⇓P	**P**	**13 45 00.3**	**+0.8**
KMBO	**Kilima Mbogo**	**56.76**	**238**	P	**P**	**13 45 12.3**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=30,slow=20,SNR=2.7						
ES19	**SONSECA Array**	**64.78**	**302**	eP	**P**	**13 46 06.4**	**-0.3**
ESDC	**Sonseca Array**	**64.84**	**302**	P	**P**	**13 46 07.3**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=53,slow=6.5,SNR=22						
ANM	**Nome**	**65.27**	**26**	eP	**P**	**13 46 10.5**	**+1.2**
	comp=Z,6.3nm,1.0s						
ANM	**Nome**	**65.27**	**26**	eP	**P**	**13 46 10.5**	**+1.2**
ANM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
IM3	**Indian Mountai**	**68.08**	**21**	eP	**P**	**13 46 27.4**	**+0.1**
COLD	**Coldfoot**	**68.17**	**19**	eP	**P**	**13 46 28.0**	**+0.2**
	comp=Z,4.9nm,1.0s						
FITZ	**Fitzroy Crossi**	**68.73**	**136**	P	**P**	**13 46 31.6**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=8.5,slow=3.9,SNR=5.6						
MLY	**Manley**	**69.64**	**21**	eP	**P**	**13 46 37.4**	**+0.4**
	comp=Z,5.6nm,0.8s						
BPAW	**Bear Paw Mtn.**	**70.26**	**22**	eP	**P**	**13 46 40.8**	**0.0**
	comp=Z,9.2nm,1.0s						
MDM	**Murphy Dome**	**70.40**	**20**	eP	**P**	**13 46 42.0**	**+0.4**
	comp=Z,30nm,2.0s						
CAST	**Castle Rocks**	**70.42**	**23**	eP	**P**	**13 46 42.0**	**+0.2**
	comp=Z,8.8nm,0.9s						
COLA	**College**	**70.57**	**20**	⇑eP	**P**	**13 46 42.9**	**+0.3**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
IL1	**Eielson Array**	**70.92**	**20**	eP	**P**	**13 46 44.2**	**-0.6**
ILAR	**Eielson Array**	**70.92**	**20**	P	**P**	**13 46 44.4**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=312,slow=5.4,SNR=33						
ILAR				LR	LR	14 22 11.7	
	comp=Z,75nm,22.0s,baz=21,slow=40						
ILB	**Eielson Array**	**70.92**	**20**	eP	**P**	**13 46 44.2**	**-0.5**
INK	**Inuvik**	**71.04**	**13**	eP	**P**	**13 46 45.4**	**0.0**
	comp=Z,10nm,1.2s						
INK	**Inuvik**	**71.04**	**13**	P	**P**	**13 46 45.7**	**+0.3**
	comp=Z,2.4nm,0.4s,baz=338,slow=3.4,SNR=21						
DHY	**Denali Highway**	**72.09**	**21**	eP	**P**	**13 46 51.7**	**-0.3**
	comp=Z,5.7nm,0.7s						
RIDG	**Independ'e Rid**	**72.28**	**20**	eP	**P**	**13 46 52.6**	**-0.5**
	comp=Z,16nm,1.0s						
SCRK	**Sand Creek**	**72.33**	**20**	eP	**P**	**13 46 53.2**	**-0.2**
	comp=Z,6.6nm,0.9s						
RSO	**Redoubt South**	**72.37**	**25**	eP	**P**	**13 46 54.2**	**+0.4**
DAWY	**Dawson**	**73.42**	**18**	eP	**P**	**13 46 59.7**	**-0.1**
	comp=Z,17nm,1.3s						
KDAK	**Kodiak Island**	**74.40**	**27**	P	**P**	**13 47 04.4**	**-1.1**
	comp=Z,10nm,0.6s,baz=328,slow=3.9,SNR=6.5						
TOA0	**Torodi Ar. Sit**	**74.80**	**275**	eP	**P**	**13 47 07.7**	**-0.9**
TORD	**Torodi Ar. Bea**	**74.80**	**275**	P	**P**	**13 47 07.8**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=40,slow=5.6,SNR=22						
WRA	**Warramunga Arr**	**75.24**	**130**	P	**P**	**13 47 11.1**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=329,slow=5.6,SNR=61						
WRAB	**Tennant Creek**	**75.24**	**130**	eP	**P**	**13 47 10.7**	**-0.3**
	comp=Z,8.0nm,0.9s						
WRAB	**Tennant Creek**	**75.24**	**130**	ceP	**P**	**13 47 11.0**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,20nm,2.5s						
WB2	**Warramunga Arr**	**75.25**	**130**	eP	**P**	**13 47 10.5**	**-0.5**
AS31	**Alice Springs**	**77.83**	**133**	eP	**P**	**13 47 25.1**	**-0.4**
	comp=Z,2.2nm,1.1s						
ASAR	**Alice Springs**	**77.83**	**133**	P	**P**	**13 47 25.7**	**+0.2**
	comp=Z,5.2nm,0.9s,baz=326,slow=5.5,SNR=38						
AS01	**Alice Springs**	**77.85**	**133**	eP	**P**	**13 47 25.3**	**-0.4**
YKW3	**Yellowknife Ar**	**79.25**	**8**	eP	**P**	**13 47 32.2**	**-0.6**
	comp=Z,4.9nm,0.7s						
YKA	**Yellowknife Ar**	**79.31**	**8**	P	**P**	**13 47 32.7**	**-0.5**
	comp=Z,4.9nm,0.6s,baz=340,slow=5.5,SNR=117						
YKB5	**Yellowknife Ar**	**79.31**	**8**	eP	**P**	**13 47 32.6**	**-0.5**
CTA	**Charters Tower**	**83.02**	**122**	P	**P**	**13 47 54.7**	**+1.2**
	comp=Z,3.1nm,0.8s,baz=324,slow=8.2,SNR=5.9						
DBIC	**Dimbokro**	**83.81**	**274**	P	**P**	**13 47 57.5**	**-0.3**
	comp=Z,3.8nm,0.9s,baz=80,slow=8.1,SNR=4.3						
BOSA	**Boshof**	**84.87**	**228**	P	**P**	**13 48 02.8**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=31,slow=3.3,SNR=4.9						
FFC	**Flin Flon**	**87.97**	**3**	eP	**P**	**13 48 16.7**	**-1.0**
	comp=Z,4.6nm,0.9s						
FFC	**Flin Flon**	**87.97**	**3**	eP	**P**	**13 48 16.7**	**-1.0**
FFC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	**Stephens Creek**	**88.46**	**133**	P	**P**	**13 48 18.6**	**-1.7**
	comp=Z,1.0nm,0.5s,baz=332,slow=9.5,SNR=3.9						
ULM	**Lac du Bonnet**	**92.51**	**359**	P	**P**	**13 48 37.9**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=303,slow=2.5,SNR=4.6						
F10A	**Beach Ranch, E**	**94.95**	**14**	eP	**P**	**13 48 49.8**	**-0.7**
	comp=Z,4.4nm,1.0s						
BOZ	**Bozeman (W)**	**96.22**	**10**	eP	**P**	**13 48 55.7**	**-0.6**
	comp=Z,7.6nm,0.7s						
BOZ	**Bozeman (W)**	**96.22**	**10**	eP	**P**	**13 48 55.7**	**-0.6**
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PDAR	**Pinedale Array**	**99.27**	**9**	P	**Pdif**	**13 49 09.3**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=306,slow=3.0,SNR=3.1						
SDV	**Santo Domingo**	**127.33**	**326**	ePKPdf	**PKPdf**	**13 54 33.2**	**-0.3**
QSPA	**South Pole Qui**	**127.38**	**180**	ePKPdf	**PKPdf**	**13 54 31.5**	**-0.3**
CPUP	**Villa Florida**	**144.29**	**276**	PKP	**PKPab**	**13 55 01.8**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=95,slow=2.8,SNR=7.3						
LPAZ	**La Paz**	**146.46**	**301**	ePKPdf	**PKPdf**	**13 55 09.6**	**+0.6**
LPAZ	**La Paz**	**146.46**	**301**	PKPbc	**PKPdf**	**13 55 09.8**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=46,slow=4.3,SNR=7.7						

ISCJB ***04*** *13:40:03.8±0.4, 40°.38N±0°.02×25°.86E±0°.03, h8^{km}±4^{km},*
Error ellipse: s-maj=4.4km s-min=3.7km az=5.6
ATH ***04*** *13:40:03.8, 40°.38N×25°.83E, h18^{km}±4^{km}, ML2.0/1, Error*
ellipse: s-maj=4.4km s-min=1.1km az=295.0
ISK ***04*** *13:40:03.7, 40°.37N×25°.87E, h9^{km}, ML2.1/13*
DDA ***04*** *13:40:04.6, 40°.28N×26°.00E, h7^{km}±5^{km}, ML2.6*
ISC 04 13:40:04.0±0.9**, 40°.37N**±0°.02×**25°.85E**±0°.03**, h13**^{km}±8^{km}**,**
n24, σ**0^{s}.44**/32**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.18**	**169**	PG	**Pg**	**13 40 08.1**	**+0.1**
GADA				SG	**Sg**	**13 40 10.8**	**0.0**
SMTH	**Samothraki Isl**	**0.27**	**293**	P	**Pg**	**13 40 09.5**	**0.0**
SMTH				S	**Sg**	**13 40 13.6**	**+0.2**
SMTH				AML	AML	13 40 13.8	
	comp=E,870µm,0.2s						
SMTH				AML	AML	13 40 14.1	
	comp=N,1143µm,0.2s						
ENEZ	**Enez**	**0.43**	**32**	PG	**Pg**	**13 40 12.2**	**-0.4**
ENEZ				SG	**Sg**	**13 40 18.7**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.47**	**86**	PG	**Pg**	**13 40 13.3**	**0.0**
BOZC	**Bozcaada**	**0.55**	**164**	PG	**Pb**	**13 40 15.2**	**-0.2**
BOZC	**Bozcaada**	**0.55**	**164**	i P	**Pg**	**13 40 13.4**	**-1.3**
ALN	**Alexandroupoli**	**0.55**	**15**	PG	**Pg**	**13 40 14.4**	**-0.4**
ALN	**Alexandroupoli**	**0.55**	**15**	P	**Pg**	**13 40 14.6**	**-0.2**
ALN				S	**Sg**	**13 40 22.0**	**0.0**
ERIK	**Erikli-Kesan**	**0.59**	**59**	PG	**Pg**	**13 40 15.4**	**-0.1**
EZN	**Ezine**	**0.65**	**146**	PG	**Pg**	**13 40 15.8**	**-0.8**
LPK	**Lapseki**	**0.69**	**89**	PG	**Pb**	**13 40 17.7**	**-0.2**
LIA	**Limnos Island**	**0.69**	**228**	P	**Pg**	**13 40 17.4**	**-0.1**
LIA				S	**Sg**	**13 40 27.0**	**+0.5**
KESN	**Edirne-Kesan**	**0.78**	**54**	i P	**Pb**	**13 40 20.0**	**+0.3**
RDO	**Rodhopi**	**0.82**	**343**	PG	**Pg**	**13 40 19.8**	**0.0**
RDO	**Rodhopi**	**0.82**	**343**	P	**Pg**	**13 40 19.4**	**-0.3**
RDO				S	**Sg**	**13 40 30.2**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.82**	**139**	i P	**Pg**	**13 40 19.9**	**+0.1**
BAYC				IAML_P			
	comp=Z,737nm,0.1s						
THAS	**Thassos island**	**0.90**	**286**	P	**Pg**	**13 40 21.0**	**-0.3**
THAS				S	**Sg**	**13 40 32.9**	**-0.1**
KRBG	**Karabiga-Canak**	**1.10**	**88**	PN	**Pn**	**13 40 25.3**	**+0.2**
SIGR	**SIGRI**	**1.15**	**180**	PN	**Pg**	**13 40 26.9**	**+0.7**
SIGR	**SIGRI**	**1.15**	**180**	P	**Pb**	**13 40 25.8**	**0.0**
SIGR				S	**Sn**	**13 40 41.9**	**+0.5**
KAVA	**Kavala**	**1.20**	**302**	P	**Pn**	**13 40 25.7**	**-0.8**
MRMT	**Marmara Adasi**	**1.35**	**79**	PN	**Pn**	**13 40 28.3**	**-0.3**
OUR	**Ouranopolis**	**1.43**	**269**	PN	**Pb**	**13 40 30.7**	**+0.2**
EDRB	**Edirne**	**1.62**	**24**	PN	**Pn**	**13 40 32.9**	**+0.6**

IDC ***04*** *13:48:38.5±1.1, 11°.24S×117°.54E, h0^{km}, mb3.7/5,*
mb1 3.7/9, mb1mx3.6/30, mbtmp3.6/9, ML3.4/4, MS2.8/1,
Ms1 2.8/1, ms1mx2.5/29, Error ellipse: s-maj=38.9km
s-min=18.1km az=55.0
ISCJB ***04*** *13:48:39.7±0.5, 11°.58S±0°.06×117°.48E±0°.04, h34^{km},*
mb3.7/5, Error ellipse: s-maj=8.5km s-min=4.9km az=19.1

DJA **04** *13:48:44.6±0.6, 11°S±5°×11°8E±°, h46^{km}±53^{km}, M4.4/14, mB5.1/3, mb4.4/6, MLv4.4/14, Mw(mB)4.5/3*

ISC 04 13:48:42.6±0.8**, 11.°47S**±0.°09×**117.°53E**±0.°07**, h34^{km}, n22, σ2.^{s}09**/25**, mb3.7**/5**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	2.64	5	P	Pn	13 49 21.7	-1.1
BASI	**Baing, Sumba**	3.25	68	P	Pn	13 49 32.4	+1.3
BASI				S	Sn	13 50 09.1	+0.5
WSI	**Waingapu**	3.26	57	P	Pn	13 49 31.9	+0.6
DNP	**Denpasar**	3.59	320	P	Pn	13 49 35.7	-0.2
SRBI	**Singaraja**	4.06	326	P	Pn	13 49 42.0	-0.4
JAGI	**Jajag, Banyuwa**	4.46	312	P	Pn	13 49 47.5	-0.4
EDFI	**Ende, Flores**	4.91	57	P	Pn	13 49 53.7	-0.5
GMJI	**Gumukmas**	5.12	308	P	Pn	13 49 55.9	-1.1
MMRI	**Maumere**	5.43	59	P	Pn	13 50 01.6	+0.4
BATI	**Baumata** 8.5nm,0.5s,0.1nm	6.16	79	P	Pn	13 50 11.9	+0.7
BATI	**Baumata** 3.0nm,0.3s,baz=282,slow=16,SNR=4.4	6.16	79	Pn	Pn	13 50 12.1	+0.8
BATI	5.8nm,0.3s,baz=356,slow=20,SNR=10.0			Sn	Sn	13 51 21.9	+1.3
BATI	comp=Z,86nm,19.5s,baz=296,slow=44			LR	LR	13 53 04.8	
PWJI	**Pagerwojo** 16nm,0.4s,0.2nm	6.60	301	P	Pn	13 50 17.1	-0.1
SOEI	**Soe** 18nm,0.8s,0.2nm	6.84	76	P	Pn	13 50 21.4	+0.7
PCJI	**Pacitan**	7.05	297	P	Pn	13 50 23.7	+0.2
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=318,slow=12,SNR=14	10.24	131	Pn	Pn	13 51 07.4	+0.1
FITZ	1.2nm,0.3s,baz=172,slow=23,SNR=14			Sn	Sn	13 52 54.4	-6.7
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=290,slow=14,SNR=5.0	18.23	120	P	P	13 52 53.7	+0.6
WRA	0.2nm,0.3s,baz=287,slow=24,SNR=6.6			S	Sn	13 56 03.2	-13
ASAR	**Alice Springs** 0.0nm,0.3s,baz=301,slow=9.5,SNR=6.9	19.75	130	P	P	13 53 10.9	+1.1
ASAR	0.1nm,0.3s,baz=300,slow=23,SNR=10			S	S	13 56 42.4	-8.2
NWAO	**Narrogin (SRO)** 8.4nm,0.6s,baz=241,slow=11,SNR=17	21.36	181	P	P	13 53 31.0	+3.9
NWAO	6.5nm,0.5s,baz=137,slow=8.8,SNR=8.5			S	S	13 57 12.3	-10
CMAR	**Chiang Mai Arr** 0.5nm,0.9s,baz=146,slow=6.6,SNR=4.1	34.93	328	P	P	13 55 30.9	-0.6
SONM	**Songino Array** 0.3nm,0.5s,baz=164,slow=10.0,SNR=2.6	59.86	351	P	P	13 58 45.7	+0.7
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=146,slow=5.7,SNR=6.7	66.01	334	P	P	13 59 25.3	-0.5
ZALV	**Zalesovo Beam** 0.6nm,0.5s,baz=160,slow=4.7,SNR=3.7	70.84	340	P	P	13 59 54.5	-1.2

NEIC **04** *13:51:13.0±0.0, 49.°93N×179.°28E, h8^{km}, ML3.1(AEIC), After AEIC.*

IDC **04** *13:51:28.6±16.0, 50.°63N×177.°25W, h0^{km}, mb3.3/4, mb1 3.8/4, mb1mx3.3/42, mbtmp3.4/4, Error ellipse: s-maj=319.0km s-min=64.6km az=80.0*

ISC 04 13:51:11.0±1.9**, 50.°0N**±0.°2×**178.°8E**±0.°2**, h10^{km}, n12, σ0.^{s}89**/19**, mb3.6**/4**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	2.68	46	P	Pn	13 51 55.0	+0.8
TASE				S	Sn	13 52 27.0	+0.2
TAPA	**Tanaga Point A**	2.78	48	P	Pn	13 51 56.2	+0.7
TAPA				S	Sn	13 52 29.5	+0.4
KIMD	**Kanaga Island**	3.04	53	P	Pn	13 51 59.4	+0.4
KIMD				S	Sn	13 52 35.8	+0.4
KIKV	**Kanaga Island**	3.13	52	P	Pn	13 52 01.1	+0.8
KIKV				S	Sn	13 52 38.6	+0.8
ADK	**Adak**	3.39	55	P	Pn	13 52 04.0	+0.2
ADK				S	Sn	13 52 43.1	-1.0
ETKA	**Kagalaska Isla**	3.53	57	P	Pn	13 52 05.9	+0.1
GSMY	**Great Sitkin M**	3.80	56	P	Pn	13 52 10.3	+0.8
GSMY				S	Sn	13 52 54.6	+0.3
ATKA	**Atka Island**	4.90	61	P	Pn	13 52 24.7	+0.1
ATKA				S	Sn	13 53 20.4	-0.9
ILAR	**Eielson Array** 0.4nm,1.0s,baz=246,slow=11,SNR=3.8	23.24	38	P	P	13 56 15.4	-2.6
YKA	**Yellowknife Ar** 0.7nm,0.7s,baz=281,slow=8.2,SNR=8.5	37.26	45	P	P	13 58 22.6	+0.3
PDAR	**Pinedale Array** 0.5nm,0.7s,baz=300,slow=3.6,SNR=3.7	48.17	70	P	P	13 59 51.6	+0.2
TXAR	**Lajitas Array** 0.2nm,0.4s,baz=319,slow=4.0,SNR=4.3	60.37	79	P	P	14 01 20.9	+0.6

DDA **04** *14:09:02.7, 39.°74N×25.°65E, h7^{km}±2^{km}, ML2.7*

ATH **04** *14:09:02.9, 39.°73N×25.°67E, h27^{km}±3^{km}, ML2.0/2, Error ellipse: s-maj=3.7km s-min=1.3km az=252.0*

ISCJB **04** *14:09:04.1±0.5, 39.°71N±0.°03×25.°65E±0.°04, h19^{km}±12^{km}, Error ellipse: s-maj=5.8km s-min=4.6km az=18.3*

ISC 04 14:09:03.1±1.2**, 39.°72N**±0.°04×**25.°66E**±0.°03**, h16^{km}**±11^{km}**, n11, σ0.^{s}70**/19**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	0.33	68	*i* P	Pb	14 09 10.3	-0.2
BOZC				*i* S	Sb	14 09 15.8	+0.2
BOZC	comp=Z,3µm,0.1s			IAML_P			
LIA	**Limnos Island**	0.41	296	P	Pb	14 09 12.0	+0.1
LIA				S	Sb	14 09 18.2	+0.3
LIA	comp=E,465µm,0.2s			AML	AML	14 09 18.4	
LIA	comp=N,286µm,0.1s			AML	AML	14 09 18.5	
SIGR	**SIGRI**	0.53	163	P	Pg	14 09 13.3	-0.3
EFSA	**Agios Efstrati**	0.55	251	P	Pn	14 09 15.1	-1.1
EFSA				S	Sb	14 09 23.1	+1.2
PRK	**Paraskevi**	0.67	135	P	Pb	14 09 16.4	+0.1
PRK				S	Sn	14 09 26.8	-1.2
PRK	comp=N,337µm,0.3s			AML	AML	14 09 27.4	
PRK	comp=E,538µm,0.7s			AML	AML	14 09 29.9	
BAYC	**CANAKKALE_Bayr**	0.68	88	*i* P	Pb	14 09 16.4	-0.2
BAYC				*i* S	Sb	14 09 26.5	+0.7
BAYC	comp=Z,1µm,0.2s			IAML_P			
SMTH	**Samothraki Isl**	0.76	352	P	Pg	14 09 17.9	0.0
SMTH				S	Sg	14 09 28.3	+0.4
AYVA	**Ayvalik**	0.90	117	*i* P	Pb	14 09 20.1	-0.1
AYVA				*i* S	Sn	14 09 34.9	+1.3
ALN	**Alexandroupoli**	1.21	14	P	Pg	14 09 26.2	-0.3
KESN	**Edirne-Kesan**	1.35	35	*i* P	Pg	14 09 28.8	-0.4
KESN				*i* S	Sg	14 09 47.5	+0.6
KESN	comp=Z,141nm,0.2s			IAML_P			
CHOS	**Chios island**	1.36	167	P	Pn	14 09 27.7	+0.1

SOME **04** *14:20:10.9, 42.°55N×79.°67E, h10^{km}*

KRNET **04** *14:20:11.1±0.1, 42.°58N×79.°66E, h12^{km}, mb2.8*

NNC **04** *14:20:11.4±0.9, 42.°60N×79.°65E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=6.0km s-min=3.3km az=135.0*

ISC 04 14:20:11.2±1.2**, 42.°56N**±0.°04×**79.°68E**±0.°04**, h10^{km}, n51, σ1.^{s}17**/91**, 22C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak** 11nm,0.2s	0.76	321	P	Pg	14 20 25.3	-0.6
UZB	29nm,0.1s			S	Sg	14 20 35.5	-0.4
UZB	**Uzynbulak** baz=21	0.76	321	⇑*e*P	Pg	14 20 25.3	-0.6
UZB	baz=21			⇑*e*S	Sg	14 20 35.5	-0.4
UZB	**Uzynbulak** 11nm,0.2s	0.76	321	⇑*e*P	Pg	14 20 25.3	-0.6
UZB	29nm,0.1s			*e*S	Sg	14 20 35.5	-0.4
PDGK	**Podgornoye** 3.5nm,0.2s	0.78	350	P	Pg	14 20 25.9	-0.5
PDGK	8.6nm,0.2s			S	Sb	14 20 36.5	-1.3
PDGK	**Podgornoye** 0.7nm,0.3s	0.78	350	⇑P	Pg	14 20 25.7	-0.6
PDGK	5.3nm,0.3s			⇑S	Sg	14 20 36.1	-0.5
PDGK	**Podgornoye** baz=50	0.78	350	⇑*i*P	Pg	14 20 25.8	-0.6
PDGK	baz=50			⇑*i*S	Sb	14 20 36.6	-1.2
PRZ	**Przheval'sk** baz=65	0.95	266	⇑*i*P	Pg	14 20 28.6	-0.9
PRZ	baz=65			⇑*i*S	Sg	14 20 41.4	-0.5
KTMS	**Ketmen**	1.01	29	P	Pg	14 20 30.2	-0.6
KTMS				S	Sb	14 20 44.0	-0.5
KTMS	**Ketmen** baz=29	1.01	29	*e*P	Pg	14 20 30.2	-0.6
KTMS	baz=29			*e*S	Sb	14 20 44.0	-0.5
KTMS	**Ketmen** 4.2nm,0.1s	1.01	29	*e*P	Pg	14 20 30.2	-0.6
KTMS	6.3nm,0.2s			*e*S	Sb	14 20 44.0	-0.5
SATY	**Saty**	1.06	299	P	Pg	14 20 30.8	-0.9
SATY				S	Sb	14 20 44.9	-0.9
SATY	**Saty** 2.5nm,0.1s	1.06	299	*e*P	Pg	14 20 30.6	-1.0
SATY	25nm,0.1s			*e*S	Sb	14 20 44.9	-0.9
KURS	**Kuram** 2.5nm,0.3s	1.44	311	P	Pg	14 20 38.1	-0.9
KURS	7.7nm,0.4s			S	Sg	14 20 57.4	-0.3
KURS	**Kuram** baz=10.0	1.44	311	*e*P	Pg	14 20 38.1	-0.9
KURS	baz=10.0			*e*S	Sg	14 20 57.5	-0.3
KURS	**Kuram** 2.5nm,0.3s	1.44	311	*e*P	Pg	14 20 38.1	-0.9
KURS	7.7nm,0.4s			*e*S	Sg	14 20 57.4	-0.3
DJR	**Jarkent** 1.9nm,0.2s	1.77	3	P	Pb	14 20 43.7	-0.2
DJR	6.0nm,0.4s			S	Sg	14 21 07.5	-0.8
DJR	**Jarkent** 1.9nm,0.2s	1.77	3	*e*P	Pb	14 20 43.7	-0.2
DJR	6.0nm,0.4s			*e*S	Sg	14 21 07.5	-0.8
MNBS	**Baschi** 2.2nm,0.1s	1.78	329	P	Pb	14 20 43.6	-0.5
MNBS	26nm,0.3s			S	Sg	14 21 06.9	-1.7
MNBS	**Baschi** 2.2nm,0.1s	1.78	329	⇑*e*P	Pb	14 20 43.6	-0.5
MNBS	26nm,0.3s			*e*S	Sg	14 21 06.9	-1.7
KDJ	**Kajisay** baz=57	1.90	258	⇑*i*P	Pb	14 20 46.5	+0.4
KDJ	baz=57			⇑*i*S	Sg	14 21 11.1	-1.3
KOTS	**Kotyrbulak** 4.0nm,0.3s	2.00	291	Pg	Pb	14 20 47.6	-0.3
KOTS	20nm,0.5s			Lg	Lg	14 21 13.5	
KOTS	**Kotyrbulak** 4.0nm,0.3s	2.00	291	*e*P	Pb	14 20 47.6	-0.3
KOTS	20nm,0.5s			*e*S	Sb	14 21 13.5	+0.6
MDOK	**Medeo** 2.3nm,0.5s	2.03	288	Pn	Pb	14 20 47.3	-1.0
MDOK	4.3nm,0.8s			Sn	Sb	14 21 13.9	+0.3
MDOK	**Medeo** 3.6nm,0.2s	2.03	288	Pg	Pb	14 20 48.3	0.0
MDOK	4.5nm,0.3s			Lg	Lg	14 21 15.5	
MDOK	**Medeo** baz=88	2.03	288	*e*P	Pb	14 20 48.3	0.0
MDOK	baz=88			*e*S	Sg	14 21 15.6	-0.8
MDOK	**Medeo** 3.6nm,0.2s	2.03	288	*e*P	Pb	14 20 48.3	0.0
MDOK	4.5nm,0.3s			*e*S	Sg	14 21 15.6	-0.8
TNSS	**Tian-Shan** 3.7nm,0.2s	2.07	284	Pg	Pb	14 20 48.4	-0.7
TNSS	6.2nm,0.3s			Lg	Lg	14 21 15.5	
TNSS	**Tian-Shan** 3.7nm,0.2s	2.07	284	*e*P	Pb	14 20 48.4	-0.7
TNSS	6.2nm,0.3s			*e*S	Sb	14 21 15.5	+0.6
ARXS	**Arharly** 1.8nm,0.5s	2.13	321	Pg	Pb	14 20 49.4	-0.7
ARXS	21nm,0.5s			Lg	Lg	14 21 17.5	
ARXS	**Arharly** 1.8nm,0.5s	2.13	321	*e*P	Pb	14 20 49.4	-0.7
ARXS	21nm,0.5s			*e*S	Sg	14 21 17.5	-2.3
IZV	**Izvestkoviy** 6.9nm,0.1s	2.31	283	Pg	Pb	14 20 52.5	-0.5
IZV	6.2nm,0.2s			Lg	Lg	14 21 22.7	
IZV	**Izvestkoviy** baz=83	2.31	283	*e*P	Pb	14 20 52.5	-0.5
IZV	baz=83			*e*S	Sb	14 21 22.8	+1.1
IZV	**Izvestkoviy** 6.9nm,0.1s	2.31	283	*e*P	Pb	14 20 52.5	-0.5
IZV	6.2nm,0.3s			*e*S	Sb	14 21 22.8	+1.1
CHKK	**Chushkaly**	2.35	304	Pg	Pb	14 20 53.2	-0.6
CHKK				Lg	Lg	14 21 23.4	
CHKK	**Chushkaly** baz=4.0	2.35	304	*e*P	Pb	14 20 53.2	-0.6
CHKK	baz=4.0			*e*S	Sb	14 21 23.4	+0.5
CHKK	**Chushkaly** 1.2nm,0.1s	2.35	304	*e*P	Pb	14 20 53.2	-0.6
CHKK	12nm,0.2s			*e*S	Sb	14 21 23.4	+0.5
KTBS	**Karatobe** 1.3nm,0.2s	2.48	299	Pg	Pb	14 20 55.0	-0.8
KTBS	11nm,0.3s			Lg	Lg	14 21 27.1	
KTBS	**Karatobe** 1.3nm,0.2s	2.48	299	*e*P	Pb	14 20 55.0	-0.8
KTBS	11nm,0.3s			*e*S	Sb	14 21 27.1	+0.7
ULHL	**Ulahol** baz=64	2.56	264	⇑*i*P	Pb	14 20 55.5	-1.9
ULHL	baz=64			⇑*i*S	Sb	14 21 28.5	-0.6
KAPS	**Kapalarasan** 0.4nm,0.2s	2.73	355	Pg	Pb	14 21 00.4	+0.2
KAPS	2.8nm,0.3s			Lg	Lg	14 21 36.1	
KAPS	**Kapalarasan** 0.4nm,0.2s	2.73	355	*e*P	Pb	14 21 00.5	+0.2
KAPS	2.8nm,0.3s			*e*S	Sg	14 21 36.1	-3.0
BOOM	**Boomskoye usch** baz=69	2.76	270	⇑*i*P	Pb	14 20 58.6	-2.2
BOOM	baz=69			⇑*i*S	Sb	14 21 32.6	-2.2
KST	**Kastek** 3.7nm,0.2s	2.78	281	Pg	Pb	14 21 00.0	-1.0
KST	4.3nm,0.4s			Lg	Lg	14 21 35.5	
KST	**Kastek** 3.7nm,0.2s	2.78	281	*e*P	Pb	14 21 00.0	-1.0
KST	4.3nm,0.4s			*e*S	Sb	14 21 35.5	+0.3
KUU	**Kurty**	2.78	300	Pg	Pb	14 21 00.6	-0.5
KUU				Lg	Lg	14 21 35.9	
KUU	**Kurty** 1.3nm,0.5s	2.78	300	*e*P	Pb	14 21 00.6	-0.5
KUU	4.9nm,0.5s			*e*S	Sb	14 21 35.9	+0.7
DGS	**Degeres** 3.2nm,0.4s	2.95	285	Pg	Pb	14 21 03.2	-0.8
DGS				Lg	Lg	14 21 41.4	
DGS	**Degeres** 3.2nm,0.4s	2.95	285	*e*P	Pb	14 21 03.2	-0.8
DGS	5.8nm,0.4s			*e*S	Sb	14 21 41.4	+1.3
TKM2	**Tokmak 2** baz=78	3.03	278	⇑*i*P	Pb	14 21 02.6	-2.8
TKM2	baz=78			⇑*i*S	Sb	14 21 38.9	-3.6
KZA	**Kyzart** baz=63	3.32	263	⇑*i*P	Pb	14 21 07.3	-3.1
KZA	baz=63			⇑*i*S	Sn	14 21 46.6	+3.3
ARLS	**Aral** baz=62	4.04	262	⇑*i*P	Pn	14 21 15.6	+2.3
ARLS	baz=62			⇑*i*S	Sn	14 22 03.1	+2.4

IDC 04 14:24:32.7±7.1**, 5.°57N**×**95.°54E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.1**/43**, mbtmp3.2**/3**, Error ellipse: s-maj=374.2km s-min=30.0km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=169,slow=8.3,SNR=4.0	42.63	347	P	P	14 32 30.7	-0.2
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=302,slow=9.1,SNR=6.2	45.81	125	P	P	14 32 56.4	-0.3
ASAR	**Alice Springs** 0.1nm,0.6s,baz=304,slow=7.9,SNR=4.1	47.38	129	P	P	14 33 09.1	+0.1

ISK **04** *14:29:08.7, 38.°54N×44.°09E, h23^{km}, ML2.6/5*

DDA **04** *14:29:13.6, 38.°78N×43.°68E, h7^{km}±4^{km}, ML2.8*

ISC 04 14:29:12.3±2.0**, 38.°74N**±0.°03×**43.°73E**±0.°08**, h6^{km}**±17^{km}**, n14, σ0.^{s}87**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	0.28	333	*i* P	Pb	14 29 20.1	+0.2
VMUR				*i* S	Sb	14 29 25.3	+0.4
VANB	**Van**	0.31	242	PG	Pb	14 29 20.2	-0.1
VANB				SG	Sb	14 29 28.4	+2.7
TVAN	**Van**	0.33	230	*i* P	Pb	14 29 20.9	0.0
TVAN				*i* S	Sb	14 29 26.6	+0.1
GEVA	**Gevas**	0.68	231	*i* P	Pb	14 29 26.3	-0.5
GEVA				*i* S	Sb	14 29 37.2	+0.7
GEVA	comp=Z,2µm,0.1s			IAML_P			
AKDM	**Akdamar-Van**	0.72	235	PG	Pg	14 29 26.2	0.0
BASK	**Baskale_VAN**	0.72	163	*i* P	Pn	14 29 29.0	-0.3
BASK	comp=Z,2µm,0.1s			IAML_P			
ADCV	**BITLIS_Adilcev**	0.79	275	*i* P	Pb	14 29 28.5	-0.1
ADCV				*i* S	Sb	14 29 40.5	+0.8
DYDN	**Diyadin**	0.80	358	*i* P	Pn	14 29 30.0	-0.5
DYDN	comp=Z,1µm,0.1s			IAML_P			
TUTA	**Tutak**	0.97	313	*i* P	Pg	14 29 31.2	+0.2
TUTA				*i* S	Sb	14 29 45.4	+0.3
AGRB	**Hanur-Agry**	1.01	326	PN	Pb	14 29 32.4	-0.1
GURO	**Guroymak-BITLI**	1.34	262	PN	Pn	14 29 36.5	-1.3
EATA	**Eleskirt**	1.48	320	*i* P	Pg	14 29 40.9	+0.2
EATA	comp=Z,554nm,0.3s			IAML_P			
CUKT	**Cukurca**	1.49	184	PN	Pn	14 29 32.6	-7.3
SRTM	**Siirt_Merkez**	1.61	243	*i* P	Pg	14 29 43.1	-0.1
SRTM	comp=Z,398nm,0.3s			IAML_P			

IDC **04** *14:33:01.1±0.7, 11.°15S×165.°56E, h0^{km}, mb4.1/15, mb1 4.3/17, mb1mx4.2/37, mbtmp4.2/17, ML4.6/2, MS4.0/15, Ms1 4.0/15, ms1mx3.8/34, Error ellipse: s-maj=25.6km s-min=16.5km az=143.0*

NEIC **04** *14:33:02.8±0.2, 11.°03S×165.°45E, h10^{km}, mb4.7/12, Error ellipse: s-maj=6.6km s-min=5.5km az=124.0*

ISCJB **04** *14:33:04.1±0.3, 11.°16S±0.°05×165.°39E±0.°05, h30^{km}, mb4.4/34, MS4.1/16, Error ellipse: s-maj=7.1km s-min=6.4km az=16.8*

GCMT **04** *14:33:05.8±0.4, 11.°09S±0.°04×165.°15E±0.°03, h19^{km}±2^{km}, MW5.0/55, Moment Tensor Solution. s18,c25; s55,c75; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.03±.24; M$_{\theta\theta}$-0.02±.14; M$_{\phi\phi}$-2.01±.16; M$_{r\theta}$0.73±.34; M$_{\theta\phi}$0.36±.10; M$_{\phi r}$-2.94±.42; Best double couple: M$_0$3.65800×10^{16} NP1:φ$_s$167.00000°,δ73.00000°,λ88.00000°. NP2: φ$_s$354.00000°,δ17.00000°,λ97.00000°. Principal axes: T 3.6410, Plg62.0000°, Azm74.0000°; N 0.0370, Plg2.0000°, Azm167.0000°; P -3.6760, Plg28.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 14:33:06.1±0.5**, 11.°15S**±0.°07×**165.°44E**±0.°07**, h30^{km}, n71, σ1.^{s}41**/67**, mb4.6**/34**, MS4.0**/16**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.67	287	*e*P	Pn	14 34 27.0	-1.3
HNR				*e*S	Sn	14 35 33.0	+0.6
HNR	**Honiara**	5.67	287	*e*Pn	Pn	14 34 27.6	-0.7
HNR				Sn	Sn	14 35 31.8	-0.6
HNR	**Honiara** 33nm,0.3s,baz=118,slow=9.6,SNR=13	5.67	287	Pn	Pn	14 34 28.4	+0.1
HNR	29nm,0.3s,baz=179,slow=16,SNR=4.1			Sn	Sn	14 35 31.8	-0.6
HNR	comp=Z,2µm,21.3s,baz=118,slow=36			LR	LR	14 36 31.3	
MARNC	**Mare, Loyalty**	10.57	167	*e*Pn	Pn	14 35 37.4	+1.8
DZM	**Mont Dzumac** 25nm,0.7s	10.90	175	*e*Pn	Pn	14 35 40.3	0.0
DZM	853nm,22.2s			*e*LQ	LQ	14 37 41.9	
DZM	comp=Z,376nm,20.8s			*e*LR	LR	14 38 13.0	
DZM	**Mont Dzumac** 2.2nm,0.3s,baz=294,slow=8.6,SNR=26	10.90	175	Pn	Pn	14 35 40.2	0.0
DZM	baz=72,slow=20,SNR=1.4			Sn	Sn	14 37 39.0	-2.3
OUENC	**Ouen Island, N**	11.29	173	*e*Pn	Pn	14 35 46.7	+1.3
PINNC	**Pines Island,**	11.56	171	*e*Pn	Pn	14 35 51.2	+2.1
MANU	**Manus Island** 271nm,1.3s	20.09	295	*e*P	Pn	14 37 37.6	-1.8
CTA	**Charters Tower** 12nm,0.9s,baz=68,slow=17,SNR=6.0	20.48	242	P	P	14 37 40.9	-0.8
CTA	comp=Z,672nm,21.2s,baz=66,slow=34			LR	LR	14 44 38.3	
CTAO	**Charters Tower** 58nm,1.5s	20.48	242	*e*P	P	14 37 41.9	+0.2
COEN	**Coen** 61nm,1.5s	21.91	260	*e*P	P	14 37 56.7	-0.4
JAY	**Jayapura** 18nm,0.7s,baz=142,slow=12,SNR=3.4	25.99	287	P	P	14 38 37.3	+0.7
JAY	comp=Z,307nm,18.7s,baz=54,slow=38			LR	LR	14 49 40.7	
H11S2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=29	29.48	2	T	T	15 09 49.2	
H11S3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=19	29.48	2	T	T	15 09 44.6	
H11S1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=6.3	29.50	2	T	T	15 09 50.5	
STKA	**Stephens Creek** 2.0nm,0.7s,baz=55,slow=9.8,SNR=8.4	30.16	223	P	P	14 39 13.4	-0.2
STKA	comp=Z,484nm,19.1s,baz=35,slow=36			LR	LR	14 50 55.9	
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=25	30.70	3	T	T	15 11 20.7	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=8.4	30.71	3	T	T	15 11 21.6	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=6.3	30.72	3	T	T	15 11 21.6	
WRAB	**Tennant Creek** 19nm,1.3s	31.15	250	*e*P	P	14 39 21.5	-1.1
WB2	**Warramunga Arr**	31.15	250	*e*P	P	14 39 21.6	-1.0
WRA	**Warramunga Arr** 6.7nm,1.0s,baz=80,slow=9.2,SNR=20	31.16	250	P	P	14 39 22.0	-0.7
WRA	0.9nm,0.9s,baz=79,slow=3.5,SNR=4.1			PcP	PcP	14 42 17.9	+0.5
WRA	comp=Z,404nm,18.4s,baz=55,slow=37			LR	LR	14 52 27.8	
GUMO	**Guam** comp=Z,198nm,19.5s,baz=156,slow=36	31.95	320	LR	LR	14 51 58.1	
AS01	**Alice Springs**	32.43	243	*e*P	P	14 39 33.7	-0.1
AS31	**Alice Springs** 1.1nm,0.8s	32.47	243	*e*P	P	14 39 33.4	-0.8
ASAR	**Alice Springs** 2.0nm,0.4s,baz=63,slow=10.0,SNR=95	32.48	243	P	P	14 39 33.8	-0.4
ASAR	0.6nm,0.8s,baz=65,slow=3.1,SNR=4.4			PcP	PcP	14 42 21.4	+0.4
ASAR	comp=Z,321nm,19.7s,baz=73,slow=34			LR	LR	14 51 45.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	39.06	255	eP	P	14 40 30.6	-0.1
	20nm,1.7s						
PPT	Papeete	43.97	104	LR	LR	14 55 39.7	
	comp=Z,125nm,21.7s,baz=299,slow=31						
PPT2	Papeete2	43.97	104	eS	S	14 47 42.9	+1.6
	154nm,24.2s						
PPT2				eLR	LR	14 53 20.7	
	comp=Z,315nm,29.2s						
TBI	Tubuai	44.57	112	eLR	LR	14 53 47.8	
	comp=Z,226nm,31.2s						
KSRS	Korea Array	59.79	326	LR	LR	15 07 53.9	
	comp=Z,76nm,19.2s,baz=145,slow=35						
NJ2	Nanjing	61.88	316	eP	P	14 43 22.1	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PETK	Petropavlovsk-	64.34	355	LR	LR	15 09 05.9	
	comp=Z,78nm,18.1s,baz=52,slow=34						
VNDA	Vanda	66.39	181	LR	LR	15 08 28.1	
	comp=Z,141nm,19.7s,baz=224,slow=32						
KLR	Kul'dur	67.03	337	P	P	14 43 56.9	+0.6
	comp=Z,1.0nm,0.8s,baz=144,slow=6.9,SNR=4.0						
KMI	Kunming	70.92	302	P	P	14 44 22.6	+1.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,220nm,5.0s						
HHC	Hu-ho-hao-te	71.72	320	eP	P	14 44 25.6	+0.1
HHC				S	S	14 53 46.2	+2.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.0s						
HHC				LR	LR		
	comp=N,290nm,12.1s						
HHC				LR	LR		
	comp=E,270nm,12.1s						
HHC				LR	LR		
	comp=Z,330nm,13.8s						
CMAR	Chiang Mai Arr	71.88	294	P	P	14 44 28.5	+1.7
	comp=Z,0.6nm,0.7s,baz=108,slow=5.1,SNR=5.4						
CMAR				LR	LR	15 13 29.8	
	comp=Z,44nm,21.9s,baz=315,slow=34						
LZH	Lanzhou	74.60	312	eP	P	14 44 41.2	-1.6
LZH				pP	pP	14 44 44.5	-6.3
LZH				sP	sP	14 44 46.1	-7.7
LZH				ePP	PP	14 47 30.3	+0.3
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,7.9s						
LZH				LR	LR		
	comp=N,330nm,15.8s						
LZH				LR	LR		
	comp=E,330nm,15.5s						
LZH				LR	LR		
	comp=Z,420nm,18.4s						
SONM	Songino Array	78.57	324	P	P	14 45 05.3	+0.3
	comp=Z,0.5nm,0.8s,baz=120,slow=7.2,SNR=3.1						
QSPA	South Pole Qui	78.86	180	eP	P	14 45 06.5	+0.3
	comp=Z,13nm,1.3s						
GTA	Gaotai	78.91	314	eP	P	14 45 06.4	-0.6
GTA				pP	pP	14 45 10.6	-4.5
GTA				sP	PcP	14 45 13.9	-1.7
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL	Bilibino	78.98	0	eP	P	14 45 05.9	-0.7
	comp=Z,6.6nm,1.1s						
HDA	Harding Lake	83.44	19	eP	P	14 45 29.1	-1.2
	comp=Z,7.7nm,1.1s						
ILAR	Eielson Array	83.71	19	P	P	14 45 30.4	-1.3
	comp=Z,1.3nm,0.6s,baz=235,slow=5.7,SNR=18						
ILB	Eielson Array	83.71	19	eP	P	14 45 31.4	-0.3
IL1	Eielson Array	83.71	19	eP	P	14 45 31.5	-0.2
SCRK	Sand Creek	84.12	20	eP	P	14 45 33.5	-0.5
	comp=Z,21nm,1.5s						
HUMO	Hull Mountain	84.32	45	eP	P	14 45 34.9	-0.5
	comp=Z,28nm,2.0s						
AFDM	Forest Hills D	84.50	49	eP	P	14 45 35.2	-1.2
	comp=Z,4.9nm,1.0s						
BEKR	Beckworth	85.24	48	eP	P	14 45 38.6	-1.7
	comp=Z,2.3nm,0.5s						
MDPB	Devils Postpil	85.50	50	eP	P	14 45 41.2	-0.6
	comp=Z,4.9nm,1.1s						
TIXI	Tiksi	86.14	349	eP	P	14 45 44.3	+0.6
	comp=Z,13nm,1.8s						
NV01	Mina Array Sit	86.32	50	eP	P	14 45 44.7	-1.0
NVAR	Mina Array Bea	86.32	50	P	P	14 45 45.2	-0.5
	comp=Z,2.4nm,1.0s,baz=240,slow=8.4,SNR=8.3						
NVAR				LR	LR	15 17 04.9	
	comp=Z,176nm,20.1s,baz=2.5,slow=31						
NV11	Mina Array Sit	86.43	50	eP	P	14 45 45.8	-0.4
	comp=Z,0.7nm,1.6s						
G08A	Pilot Rock	87.93	43	eP	P	14 45 51.5	-1.7
	comp=Z,18nm,2.0s						
WMQ	Urumqi	88.95	315	eP	P	14 45 58.9	+0.9
SYO	Syowa Base	91.60	197⇑	ePcP	PcP	14 46 11.8	+1.1
MK01	Makanchi Array	93.38	317	eP	P	14 46 18.1	-0.4
MKAR	Makanchi Array	93.39	317	P	P	14 46 18.1	-0.4
	comp=Z,0.4nm,0.6s,baz=90,slow=7.6,SNR=4.8						
ZALV	Zalesovo Beam	93.46	324	P	P	14 46 17.0	-1.6
	comp=Z,0.3nm,0.3s,baz=341,slow=3.1,SNR=2.5						
PDAR	Pinedale Array	93.84	47	P	P	14 46 20.4	-0.6
	comp=Z,0.3nm,0.6s,baz=246,slow=1.5,SNR=4.4						
YKA	Yellowknife Ar	95.20	27	P	P	14 46 24.9	-1.5
	comp=Z,0.5nm,0.9s,baz=254,slow=4.7,SNR=6.7						
YKA				LR	LR	15 26 22.6	
	comp=Z,16nm,18.4s,baz=44,slow=34						
TXAR	Lajitas Array	96.14	61	P	P	14 46 30.6	-1.1
	comp=Z,0.4nm,1.0s,baz=281,slow=5.4,SNR=2.4						
TXAR				LR	LR	15 26 18.8	
	comp=Z,101nm,18.0s,baz=0.0,slow=33						
KSH	Kashi	96.58	309	P	P	14 46 33.9	+0.4
KSH				pP	pP	14 46 38.7	-3.0
KSH				pmax	pmax		
	comp=Z,640nm,7.7s						
VYHS	Vyhne	133.51	330	ePDIFF	Pdif	14 49 25.1	+7.6
ESDC	Sonseca Array	150.07	343	PKPbc	PKiKP	14 52 54.5	-0.7
	comp=Z,0.1nm,0.3s,baz=347,slow=4.5,SNR=3.1						
TOA0	Torodi Ar. Sit	163.98	279	ePKPdf	PKPdf	14 53 07.7	+0.2
TORD	Torodi Ar. Bea	163.98	279	PKP	PKPdf	14 53 08.2	+0.7
	comp=Z,1.1nm,0.9s,baz=50,slow=0.8,SNR=5.1						
TORD				PKPab	PKPab	14 54 02.7	+2.1
	comp=Z,1.0nm,1.1s,baz=73,slow=5.0,SNR=3.6						

IDC 04 14:44:52.4±2.2, 18°.97N×143°.91E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.2/32, mbtmp3.3/3, Error ellipse: s-maj=288.3km s-min=28.1km az=109.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	39.80	194	P	P	14 52 28.2	+0.8
	0.1nm,0.4s,baz=16,slow=8.7,SNR=7.3						
ASAR	Alice Springs	43.49	193	P	P	14 52 56.6	-1.1
	0.4nm,1.0s,baz=20,slow=9.4,SNR=3.5						
ILAR	Eielson Array	64.15	26	P	P	14 55 28.4	0.0
	0.4nm,0.9s,baz=256,slow=6.4,SNR=4.4						

MAN 04 14:49:55.9, 10°.10N×123°.45E, h1^{km}, mb4.3, ML3.1, MS2.8, 1C, Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.55	66	eP	Pg	14 50 06.2	-0.2
LLP				eS	Sb	14 50 15.9	-0.9
TBP	Tagbilaran	0.57	135	eP	Pb	14 50 08.1	-0.6
SNPH	Sibulan	0.78	196⇑	iP	Pg	14 50 10.3	-0.5
GUIM	Jordan	1.00	302	eP	Pn	14 50 16.6	-0.5
GUIM				eS	Sn	14 50 31.9	0.0
MSLP	Maasin	1.38	88	eP	Pn	14 50 21.1	-1.3
MSLP				eS	Sn	14 50 42.0	+0.7
OCLP	Ormoc	1.48	50	eP	Pg	14 50 27.5	+3.2
OCLP				eS	Sn	14 50 46.1	+2.3

KRSC 04 14:50:07.3±1.1, 56°.21N×161°.09E, h172^{km}±9^{km}, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CIRR	Tsirk	0.21	243	eP	Pn	14 50 31.3	+0.9
ZLN	Zelenaya	0.25	219	eP	Pn	14 50 32.4	+1.9
ZLN				eS	Sn	14 50 50.6	+2.4
KLY	Klyuchi	0.26	293	iP	Pn	14 50 31.2	+0.9
KLY				eS	Sn	14 50 48.5	+0.5
BZGR	Bezymyannyi-Gr	0.35	219	eP	Pn	14 50 32.1	+1.4
BDR	Baidarnaya	0.36	11	eP	Pn	14 50 31.9	+1.2
BDR				eS	Sn	14 50 50.2	+1.4
SMKR	Semkarok	0.43	30	eP	Pn	14 50 32.3	+1.4
SMKR				eS	Sn	14 50 50.9	+1.7
SRKR	Sorokina	0.45	6	eP	Pn	14 50 31.8	+0.8
SRDR	Sredinnyy	0.77	278	eP	Pn	14 50 32.3	-0.3
KBTR	Krutoberegovo	0.97	89	eP	Pn	14 50 35.3	+1.4
KBTR				eS	Sn	14 50 55.6	+1.2
TUMR	Tumrok	1.07	210	eP	Pn	14 50 36.1	+1.2
TUMD	Tumrok D	1.08	201	eP	Pn	14 50 35.7	+0.8
KZV	Kizimen	1.19	203	eP	Pn	14 50 37.2	+1.3
ESO	Esso	1.37	259	eP	Pn	14 50 36.9	-0.4
MKZ	Mys Kozlova	1.70	167	eP	Pn	14 50 41.2	+0.7
MKZ				eS	Sn	14 51 06.2	0.0
KII	Karymskiy	2.38	204	eP	Pn	14 50 49.9	+1.8
GNL	Ganaly	3.11	217	eP	Pn	14 50 58.0	+1.0
SPN	Mys Shipunski	3.18	192	eP	Pn	14 50 57.3	-0.5
SPN				eS	Sn	14 51 35.5	-1.5
KRX	Arik	3.19	207	eP	Pn	14 51 00.1	+2.1
SDLR	Sedlovina	3.21	204	eP	Pn	14 50 59.8	+1.6
SMAR	Somma	3.24	205	eP	Pn	14 51 00.8	+2.1
AVH	Avacha	3.25	206	eP	Pn	14 51 00.5	+1.8
KOK	Koryaka	3.25	207	eP	Pn	14 51 00.6	+1.8
UGLR	Uglovaya	3.28	205	eP	Pn	14 51 00.8	+1.7
DALK	Dalny	3.46	204	eP	Pn	14 51 02.4	+1.1

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*IDC **04** 15:05:18.4±1.1, 46°.64N×155°.72E, h0^{km}, mb3.3/6, mb1 3.6/7, mb1mx3.4/34, mbtmp3.4/7, ML2.7/1, Error ellipse: s-maj=37.9km s-min=21.3km az=120.0*

*ISCJB **04** 15:05:19.5±0.9, 46°.60N±0°.10×155°.7E±0°.3, h18^{km}, mb3.2/6, Error ellipse: s-maj=28.7km s-min=11.2km az=18.7*

ISC 04 15:05:21.2±1.0, 46°.6N±0°.1×155°.7E±0°.2, h18^{km}, n7, σ1^{s}.78/8, mb3.4/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	6.61	10	Pn	Pn	15 06 54.7	-2.7
	0.8nm,0.3s,baz=184,slow=14,SNR=20						
PETK				Sn	Sn	15 08 14.8	+2.6
	0.1nm,0.3s,baz=58,slow=44,SNR=3.1						
INK	Inuvik	40.79	33	P	P	15 13 01.6	+0.7
	0.4nm,0.6s,baz=269,slow=6.7,SNR=4.1						
MKAR	Makanchi Array	48.57	299	P	P	15 14 02.8	-0.5
	0.1nm,0.6s,baz=70,slow=9.3,SNR=2.6						
CMAR	Chiang Mai Arr	54.09	259	P	P	15 14 45.8	+0.9
	0.4nm,0.8s,baz=40,slow=6.2,SNR=4.7						
WRA	Warramunga Arr	69.02	202	P	P	15 16 25.5	0.0
	0.2nm,0.7s,baz=22,slow=6.8,SNR=3.7						
ASAR	Alice Springs	72.70	201	P	P	15 16 47.9	0.0
	0.2nm,0.6s,baz=20,slow=5.9,SNR=4.4						
TXAR	Lajitas Array	75.98	62	P	P	15 17 07.4	+0.1
	0.3nm,0.7s,baz=308,slow=4.4,SNR=3.1						

IDC 04 15:05:59.6±3.9, 5°.12S×153°.22E, h0^{km}, mb3.3/4, mb1 3.4/4, mb1mx3.3/29, mbtmp3.3/4, Error ellipse: s-maj=133.6km s-min=30.2km az=110.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.55	230	P	P	15 11 13.5	+1.5
	0.1nm,0.5s,baz=54,slow=9.9,SNR=5.5						
ASAR	Alice Springs	26.20	223	P	P	15 11 34.7	-1.6
	0.2nm,0.7s,baz=58,slow=8.5,SNR=2.9						
MKAR	Makanchi Array	80.84	319	P	P	15 18 14.9	-0.7
	0.3nm,0.8s,baz=91,slow=5.8,SNR=4.2						
ZALV	Zalesovo Beam	81.65	326	P	P	15 18 19.9	+0.3
	0.5nm,0.5s,baz=119,slow=5.1,SNR=3.2						
TORD	Torodi Ar. Bea	150.80	288	PKPbc	PKiKP	15 25 55.5	-0.3
	0.3nm,0.6s,baz=73,slow=4.2,SNR=3.7						

IDC 04 15:26:05.5±3.5, 4°.60S×152°.30E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.3/45, mbtmp3.3/4, Error ellipse: s-maj=114.5km s-min=32.0km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.21	227	P	P	15 31 15.4	+1.1
	0.1nm,0.5s,baz=52,slow=9.9,SNR=5.2						
ASAR	Alice Springs	25.96	221	P	P	15 31 40.0	0.0
	0.2nm,0.7s,baz=57,slow=9.4,SNR=5.0						
FITZ	Fitzroy Crossi	29.32	241	P	P	15 32 09.4	-0.7
	0.8nm,0.6s,baz=90,slow=9.9,SNR=4.7						
MKAR	Makanchi Array	79.85	319	P	P	15 38 16.3	+0.2
	0.6nm,0.9s,baz=103,slow=6.5,SNR=3.9						
TORD	Torodi Ar. Bea	149.77	288	PKPbc	PKPbc	15 45 57.8	-0.8
	0.5nm,0.6s,baz=82,slow=2.0,SNR=3.5						

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*IDC **04** 15:27:10.0±0.6, 32°.87N×94°.82E, h0^{km}, mb3.9/17, mb1 4.0/21, mb1mx3.8/54, mbtmp3.8/21, ML3.5/4, MS3.7/6, Ms1 3.7/6, ms1mx3.3/43, Error ellipse: s-maj=24.3km s-min=13.5km az=55.0*

*ISCJB **04** 15:27:12.5±0.3, 32°.77N±0°.03×94°.75E±0°.05, h33^{km}, mb3.9/21, MS3.7/5, Error ellipse: s-maj=6.1km s-min=4.6km az=17.3*

*NEIC **04** 15:27:13.9±1.6, 32°.90N×94°.87E, h27^{km}±13^{km}, mb4.1/10, Error ellipse: s-maj=6.4km s-min=4.9km az=66.0*

*BJI **04** 15:27:13.0, 32°.85N×94°.78E, h5^{km}, mB4.3/2, mb4.2/10, ML3.9/3, Ms3.9/13, Ms7 3.9/12*

ISC 04 15:27:15.1±0.5, 32°.84N±0°.06×94°.79E±0°.07, h35^{km}, n61, σ1^{s}.22/58, mb4.0/21, MS3.7/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	4.42	226	ePn	Pn	15 28 23.1	+2.9
SHL	Shillong	7.68	200	ePn	Pn	15 29 03.7	-1.0
GTA	Gaotai	7.71	30	ePn	Pn	15 29 06.7	+1.7
JIRN	Jiri	9.05	237	eP	Pn	15 29 22.7	-1.0
	31nm,0.7s						
GUN	Gumba	9.13	240	eP	Pn	15 29 23.8	-0.9
	20nm,0.4s						
RAMN	Ramite	9.22	233	eP	Pn	15 29 24.9	-0.9
	13nm,0.4s						
PKI	Pulchoki	9.67	240	eP	Pn	15 29 30.8	-1.2
	20nm,0.3s						
PKIN	Phulchoki	9.67	240	eP	Pn	15 29 31.5	-0.6
	22nm,0.4s						
DMN	Daman	9.87	241	eP	Pn	15 29 33.8	-0.9
	23nm,0.5s						
BRDH	Bariadhala	10.50	196	Pn	Pn	15 29 43.4	+0.2
	42nm,0.3s,baz=252,slow=20,SNR=3.3						
BRDH				Sn	Sn	15 31 37.8	-1.9
	46nm,0.3s,baz=304,slow=23,SNR=2.4						
BRDH				LR	LR	15 33 40.9	
	comp=Z,148nm,20.0s,baz=354,slow=37						
DANN	Dangsing	10.51	248	eP	Pn	15 29 42.5	-1.0
	41nm,0.5s						
KOLN	Koldanda	10.91	245	eP	Pn	15 29 47.1	-1.9
	14nm,0.6s						
PYUN	Piuthan	11.22	248	eP	Pn	15 29 51.9	-1.3
	24nm,0.6s						
XAN	Xi'an	11.87	80	P	Pn	15 30 02.4	+0.6
XAN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
XAN	Xi'an	11.87	80	ePn	Pn	15 30 00.1	-1.7
WMQ	Urumqi	12.29	335	eP	Pn	15 30 10.6	+3.0
WMQ				sP	P	15 30 17.9	-1.5
WMQ				LR	LR		
	comp=N,600nm,23.9s						
WMQ				LR	LR		
	comp=E,680nm,19.9s						
WMQ				LR	LR		
	comp=Z,340nm,11.9s						
WMQ	Urumqi	12.29	335	ePn	Pn	15 30 05.6	-2.0
ENH	Enshi	12.79	98	eP	Pn	15 30 15.3	+0.7
	8.1nm,0.8s						
CMAR	Chiang Mai Arr	14.80	164	Pn	Pn	15 30 42.4	+0.4
	0.2nm,0.3s,baz=334,slow=14,SNR=6.7						
KDJ	Kajisay	16.75	309	ePn	Pn	15 31 06.9	-0.2
	11nm,1.0s						
MK01	Makanchi Array	16.87	329	ePn	Pn	15 31 08.7	+0.3
MK31	Makanchi Array	16.89	329	ePn	Pn	15 31 09.2	+0.5
MKAR	Makanchi Array	16.89	329	ePn	Pn	15 31 09.1	+0.4
	9.7nm,0.7s						
MKAR	Makanchi Array	16.89	329	Pn	Pn	15 31 07.1	-1.6
	0.1nm,0.3s,baz=136,slow=14,SNR=5.5						
MAKZ	Makanchi	17.04	329	ePn	Pn	15 31 10.1	-0.4
	4.2nm,1.3s						
PBKT	Sadao Pong	17.14	159	ePn	Pn	15 31 10.7	-1.2
SONM	Songino Array	17.36	27	P	Pn	15 31 13.0	-1.7
	0.1nm,0.3s,baz=217,slow=12,SNR=4.6						
SONA1	Songino Array	17.37	27	ePn	Pn	15 31 12.4	-2.5
ULN	Ulaanbaatar	17.64	28	ePn	Pn	15 31 15.6	-2.6
	2.7nm,0.8s						
AAK	Ala-Archa	18.75	307	eP	Pn	15 31 31.9	+0.1
	4.9nm,1.0s						
AAK	Ala-Archa	18.75	307	P	Pn	15 31 32.5	+0.7
	0.1nm,0.3s,baz=155,slow=10,SNR=9.0						
BTK	Batken	20.55	297	eP	P	15 31 51.8	+1.1
	39nm,1.8s						
HYB	Hyderabad	21.22	228	iP	P	15 32 01.0	+3.0
KURBB	Kurchatov Arra	21.43	331	P	P	15 31 59.6	-0.4
	7.3nm,0.9s,baz=139,slow=11,SNR=20						
KURK	Kurchatov	21.46	331	eP	P	15 31 59.5	-0.8
	6.6nm,0.6s						
KBL	Kabul	21.48	282	eP	P	15 32 00.2	-0.6
	44nm,1.4s						
ZALV	Zalesovo Beam	22.26	344	eP	P	15 32 09.1	+0.2
ZALV	Zalesovo Beam	22.26	344	P	P	15 32 09.7	+0.8
	1.4nm,0.8s,baz=165,slow=12,SNR=5.6						
BVAR	Borovoye Array	26.72	326	P	P	15 32 51.2	+0.2
	0.9nm,0.9s,baz=124,slow=8.9,SNR=5.6						
BRVK	Borovoye	26.79	326	eP	P	15 32 51.4	-0.2
	8.2nm,1.6s						
KSRS	Korea Array	27.39	71	LR	LR	15 43 35.3	
	comp=Z,34nm,20.4s,baz=350,slow=36						
GEYT	Alibeck	30.20	290	P	P	15 33 21.9	-0.3
	1.9nm,0.7s,baz=126,slow=7.3,SNR=3.8						
GEYT				LR	LR	15 47 31.2	
	comp=Z,191nm,20.2s,baz=330,slow=40						
MJAR	Matsushiro Arr	35.67	72	LR	LR	15 48 38.2	
	comp=Z,79nm,19.8s,baz=100,slow=36						
MA2	Magadan	45.22	36	LR	LR	15 56 20.7	
	comp=Z,121nm,18.3s,baz=302,slow=39						
SEY	Seymchan	46.66	32	LR	LR	15 58 21.1	
	comp=Z,833nm,21.0s,baz=330,slow=40						
BRTR	Keskin Array B	48.94	296	P	P	15 35 57.4	-0.7
	0.7nm,0.8s,baz=123,slow=6.1,SNR=4.4						
AKASG	Malin Array Be	50.36	311	P	P	15 36 08.0	-0.5
	0.9nm,0.5s,baz=76,slow=6.8,SNR=5.9						
FINES	FINESS Array B	51.67	325	P	P	15 36 18.0	-0.1
	0.5nm,0.5s,baz=95,slow=7.9,SNR=3.6						
ARCES	ARCESS Array B	52.41	335	P	P	15 36 24.5	+0.9
	3.7nm,1.0s,baz=90,slow=9.0,SNR=4.0						
MLR	Muntele Rosu	53.32	305	eP	P	15 36 31.6	+0.8
	7.7nm,0.9s						
VYHS	Vyhne	57.39	310	eP	P	15 37 00.5	+0.6
NB2	NORSAR Subarra	58.84	326	P	P	15 37 09.3	-0.6
	comp=Z,0.7nm,0.6s,baz=79,slow=6.9						
NOA	NORSAR Array B	58.84	326	P	P	15 37 09.1	-0.8
	comp=Z,1.5nm,0.8s,baz=79,slow=7.1,SNR=5.2						
GERES	GERESS Array B	60.57	311	P	P	15 37 22.1	0.0
	comp=Z,0.6nm,0.4s,baz=106,slow=7.2,SNR=3.0						
WRA	Warramunga Arr	64.68	138	P	P	15 37 50.0	+0.4
	comp=Z,0.3nm,0.8s,baz=311,slow=11,SNR=7.5						
ASAR	Alice Springs	67.45	141	P	P	15 38 08.1	+0.6
	comp=Z,0.5nm,0.5s,baz=324,slow=6.3,SNR=18						
ILAR	Eielson Array	71.55	23	P	P	15 38 31.8	-0.4
	comp=Z,0.6nm,0.8s,baz=280,slow=5.3,SNR=6.1						
CTA	Charters Tower	72.02	129	P	P	15 38 35.9	+0.3
	comp=Z,5.4nm,1.1s,baz=9.8,slow=13,SNR=2.8						
INK	Inuvik	72.97	17	P	P	15 38 40.7	+0.2
	comp=Z,0.5nm,0.5s,baz=312,slow=12						
YKA	Yellowknife Ar	82.09	13	P	P	15 39 31.3	-0.3
	comp=Z,0.7nm,0.8s,baz=331,slow=4.9,SNR=9.1						
TORD	Torodi Ar. Bea	85.54	283	P	P	15 39 49.5	-0.6
	comp=Z,0.9nm,0.7s,baz=75,slow=4.1,SNR=5.0						

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*IDC **04** 15:31:35.5±0.9, 32°.81N×94°.69E, h0^{km}, mb3.4/7, mb1 3.5/10, mb1mx3.4/50, mbtmp3.4/10, ML3.1/3, Error ellipse: s-maj=41.1km s-min=17.9km az=57.0*

*ISCJB **04** 15:31:38.4±0.7, 32°.78N±0°.07×94°.5E±0°.1, h33^{km}, mb3.4/7, Error ellipse: s-maj=14.2km s-min=8.1km az=35.3*

ISC 04 15:31:40.6±1.0, 32°.9N±0°.1×94°.5E±0°.1, h35^{km}, n19, σ1^{s}.74/19, mb3.4/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIRN	Jiri	8.89	236	eP	Pn	15 33 48.1	+1.2
	6.6nm,0.5s						
GUN	Gumba	8.96	239	eP	Pn	15 33 48.6	+0.7
	9.0nm,0.4s						
RAMN	Ramite	9.07	231	eP	Pn	15 33 49.8	+0.5
	4.9nm,0.4s						
PKI	Pulchoki	9.50	238	eP	Pn	15 33 55.8	+0.6
	8.3nm,0.4s						
PKIN	Phulchoki	9.50	238	eP	Pn	15 33 55.3	+0.1
	8.7nm,0.4s						
DMN	Daman	9.69	240	eP	Pn	15 33 57.6	-0.2
	6.7nm,0.5s						
DANN	Dangsing	10.31	247	eP	Pn	15 34 04.7	-1.6
	15nm,0.4s						
KOLN	Koldanda	10.72	244	eP	Pn	15 34 09.4	-2.5
	5.4nm,0.7s						
PYUN	Piuthan	11.03	247	eP	Pn	15 34 11.9	-4.2
	5.6nm,0.6s						
MKAR	Makanchi Array	16.73	330	Pn	Pn	15 35 31.6	-0.6
	0.0nm,0.3s,baz=134,slow=12,SNR=2.4						
SONM	Songino Array	17.42	28	P	P	15 35 41.5	-0.4
	0.1nm,0.3s,baz=220,slow=13,SNR=2.9						
AAK	Ala-Archa	18.54	307	P	Pn	15 35 57.4	+2.8
	0.1nm,0.3s,baz=116,slow=11,SNR=6.5						
KURBB	Kurchatov Arra	21.27	331	P	P	15 36 24.2	+0.5
	3.4nm,0.8s,baz=138,slow=11,SNR=17						
ZALV	Zalesovo Beam	22.15	345	P	P	15 36 33.8	+0.7
	0.9nm,0.7s,baz=163,slow=10,SNR=4.6						
BVAR	Borovoye Array	26.54	326	P	P	15 37 17.7	+2.8
	0.7nm,0.8s,baz=119,slow=7.2,SNR=4.2						
WRA	Warramunga Arr	64.88	138	P	P	15 42 17.0	+0.6
	0.3nm,0.9s,baz=318,slow=9.0,SNR=4.5						
ASAR	Alice Springs	67.64	141	P	P	15 42 32.8	-1.4
	0.3nm,0.6s,baz=325,slow=5.9,SNR=5.5						
YKA	Yellowknife Ar	82.09	13	P	P	15 43 56.3	-0.8
	0.1nm,0.5s,baz=321,slow=4.5,SNR=3.5						
TORD	Torodi Ar. Bea	85.30	283	P	P	15 44 14.4	0.0
	0.4nm,0.6s,baz=78,slow=4.8,SNR=2.8						

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*ISCJB **04** 15:33:45.1±0.9, 33°.81N±0°.04×35°.75E±0°.07, h11^{km}±9^{km}, Error ellipse: s-maj=9.7km s-min=6.9km az=152.7*

*GRAL **04** 15:33:45.2±0.3, 33°.80N×35°.78E, h13^{km}±5^{km}, MD2.6*

*NSSC **04** 15:33:45.2±0.9, 33°.78N×35°.71E, h17^{km}±19^{km}, ML1.6*

ISC 04 15:33:45.1±1.2, 33°.80N±0°.04×35°.78E±0°.09, h11^{km}±17^{km}, n8, σ0^{s}.37/13, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	Bhannes	0.15	314	eP	Pg	15 33 48.7	0.0
DQRL	Deir Qamar	0.20	242	eP	Pg	15 33 49.4	-0.1
DQRL				eS	Sg	15 33 52.4	0.0
QRWL	Qaraoun	0.26	199	eP	Pg	15 33 50.3	-0.3
RCY	Rachaya	0.30	172	eP	Pg	15 33 51.1	-0.2
RCY				eS	Sg	15 33 55.5	0.0
BRBR	Barbar	0.41	160	eP	Pg	15 33 53.2	-0.1
BRBR				eS	Sb	15 34 00.3	-0.6
BRBR				AML	AML	15 34 04.6	
	comp=E,73nm,0.3s						
BRBR				AML	AML	15 34 04.8	
	comp=N,33nm,0.4s						
QASN	Qassioun	0.49	123	eP	Pb	15 33 56.5	+0.7
QASN				eS	Sb	15 34 02.9	-0.2
QASN				AML	AML	15 34 07.1	
	comp=E,48nm,0.3s						
QASN				AML	AML	15 34 13.9	
	comp=N,109nm,0.5s						
HWQ	Hawqa	0.50	16	eP	Pg	15 33 54.5	-0.4
TOTH	TOTAH	0.69	129	eP	Pb	15 33 59.4	+0.1
TOTH				AML	AML	15 33 59.8	
	comp=N,17nm,0.3s						
TOTH				eS	Sb	15 34 09.1	+0.2
TOTH				AML	AML	15 34 14.8	
	comp=E,19nm,0.4s						

MEX 04 15:43:43.4±0.5, 16°.63N×92°.29W, h5^{km}, MD3.6, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	0.38	157	iP	Pg	15 43 49.7	-1.1
CCIG				eS	Sg	15 43 55.8	0.0
PCIG		1.28	224	eP	Pn	15 44 03.7	-4.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG				i S	Sg	15 44 21.1	-3.5
CMIG	Matias Romero	2.52	281	eP	Pn	15 44 22.0	-3.1
CMIG				i S	Sn	15 44 54.8	-1.4

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*IDC **04** 15:47:27.4±1.2, 10°.22N×62°.74W, h0^{km}, mb3.5/7, mb1 3.9/10, mb1mx3.7/38, mbtmp3.7/10, ML3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/29, Error ellipse: s-maj=38.4km s-min=22.5km az=32.0*

*TRN **04** 15:47:35.8, 10°.22N×62°.97W, h21^{km}, MD3.9*

ISC 04 15:47:34.3±0.9, **10°.07N**±0°.05×**63°.06W**±0°.06, **h51**^{km}±12^{km}, **n31**, σ1^{s}.**45**/47, **mb3.6**/7, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	1.60	81	eP	Pn	15 48 02.1	+1.9
TPP				eS	Sn	15 48 21.1	+1.4
TRN	Trinidad (W)	1.73	70	eP	Pn	15 48 02.5	+0.6
TRN				eS	Sn	15 48 23.3	+0.5
TBH	Brigand Hill	2.00	78	eP	Pn	15 48 06.6	+0.9
TBH				eS	Sn	15 48 30.9	+1.3
GRGR	Grenville	2.47	34	eP	Pn	15 48 13.7	+1.6
GRGR				eS	Sn	15 48 40.8	-0.2
TPR	Prospect	2.50	64	eP	Pn	15 48 13.0	+0.5
TPR				eS	Sn	15 48 42.1	+0.3
BOT	Bacolet	2.55	64	eP	Pn	15 48 14.0	+0.9
BOT				eS	Sn	15 48 42.9	0.0
GRHS	Sauteurs	2.55	33	eP	Pn	15 48 14.0	+0.8
GRHS				eS	Sn	15 48 42.0	-1.1
GRSS	Sisters	2.63	33	eP	Pn	15 48 15.0	+0.7
GRSS				eS	Sn	15 48 43.3	-1.6
TOSP	Speyside	2.76	64	eP	Pn	15 48 18.4	+2.3
TOSP				eS	Sn	15 48 48.1	-0.1
FCV	Fort Charlotte	3.54	30	eP	Pn	15 48 28.2	+1.3
FCV				eS	Sn	15 49 07.2	-0.4
SVB	Belmont	3.64	29	eP	Pn	15 48 29.2	+1.1
SVB				eS	Sn	15 49 08.5	-1.4
SVCV	St. Vincent, C	3.69	30	eP	Pn	15 48 30.7	+1.8
SVCV				eS	Sn	15 49 09.5	-1.7
SVV	Soufriere Volc	3.70	29	eP	Pn	15 48 30.0	+1.1
SVV				eS	Sn	15 49 09.8	-1.5
SSV	Crater Summit	3.72	29	eP	Pn	15 48 30.7	+1.4
SSV				eS	Sn	15 49 10.3	-1.6
SLDE	Delcer	4.20	28	eP	Pn	15 48 37.0	+1.3
SLB	Belfond	4.22	28	eP	Pn	15 48 38.3	+2.1
SLB				eS	Sn	15 49 22.1	-2.2
SLPA	Patience	4.30	29	eP	Pn	15 48 38.6	+1.3
SLW	Petit Monier	4.44	28	eP	Pn	15 48 40.3	+1.2
FDF	Fort de France	5.00	22	eP	Pn	15 48 49.1	+2.3
FDF	Fort de France	5.00	22	eS	Sn	15 49 40.9	-2.4
BBL	Barber's Block	5.64	16	eP	Pn	15 48 57.1	+1.5
SDV	Santo Domingo	7.56	262	Pn	Pn	15 49 22.4	+0.3
	3.3nm,0.3s,baz=42,slow=8.5,SNR=11						
SDV				Sn	Sn	15 50 46.1	-0.6
	2.4nm,0.3s,baz=294,slow=19,SNR=10						
PTGA	Pitinga	11.16	164	Pn	Pn	15 50 09.6	-1.7
	0.4nm,0.3s,baz=311,slow=19,SNR=4.0						
PTGA				Sn	Sn	15 52 13.3	-1.4
	0.6nm,0.3s,baz=71,slow=23,SNR=4.2						
PTGA				Lg	Lg	15 53 18.4	
	1.6nm,0.3s,baz=250,slow=19,SNR=6.9						
PTGA				LR	LR	15 54 35.1	
	comp=Z,94nm,18.9s,baz=38,slow=38						
MDP	Montagnes des	11.44	115	Pn	Pn	15 50 10.2	-5.0
	0.7nm,0.3s,baz=34,slow=15,SNR=3.1						
MDP				Sn	Sn	15 52 11.7	-10
	1.9nm,0.3s,baz=51,slow=17,SNR=6.4						
TXAR	Lajitas Array	42.48	303	P	P	15 55 26.6	+1.7
	0.3nm,0.6s,baz=116,slow=5.8,SNR=3.4						
ULM	Lac du Bonnet	48.35	332	P	P	15 56 10.6	-0.2
	0.8nm,0.3s,baz=146,slow=10.0,SNR=2.6						
PDAR	Pinedale Array	51.92	317	P	P	15 56 38.4	0.0
	0.4nm,0.7s,baz=119,slow=12,SNR=4.3						
NVAR	Mina Array Bea	56.74	309	P	P	15 57 15.4	+2.0
	0.6nm,0.7s,baz=123,slow=5.7,SNR=4.2						
TORD	Torodi Ar. Bea	63.36	80	P	P	15 57 56.0	-2.9
	0.6nm,1.0s,baz=286,slow=5.8,SNR=2.8						
YKA	Yellowknife Ar	64.01	336	P	P	15 58 02.7	+0.4
	0.3nm,0.4s,baz=108,slow=7.4,SNR=6.1						
ILAR	Eielson Array	78.33	334	P	P	15 59 29.5	+0.7
	0.1nm,0.5s,baz=100,slow=5.0,SNR=3.0						

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*IDC **04** 15:50:26.4±2.0, 44°.81N×150°.67E, h0^{km}, mb3.6/6, mb1 3.9/8, mb1mx3.6/45, mbtmp3.6/8, ML3.2/2, MS4.0/1, Ms1 4.0/1, ms1mx2.7/39, Error ellipse: s-maj=64.3km s-min=32.6km az=157.0*

*ISCJB **04** 15:50:29.6±0.6, 44°.93N±0°.09×150°.31E±0°.07, h39^{km}, mb3.6/9, MS4.0/1, Error ellipse: s-maj=14.1km s-min=4.0km az=153.8*

*SKHL **04** 15:50:30.5±0.8, 44°.87N×150°.40E, h65^{km}±4^{km}, mb4.3/6*

*JMA **04** 15:50:32.3±0.6, 45°.13N×150°.07E, h30^{km}, M4.3*

*MOS **04** 15:50:32.3±1.1, 45°.24N×149°.98E, h66^{km}, mb3.9/4, Error ellipse: s-maj=16.9km s-min=9.3km az=139.0*

ISC 04 15:50:30.5±0.8, **44°.92N**±0°.09×**150°.29E**±0°.07, **h39**^{km}, **n52**, σ1^{s}.**71**/62, **mb3.6**/9, **6C-2D**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.75	281	i P	Pn	15 50 59.1	+0.9
KUR				AMB	AMB	15 51 00.0	
	40nm,0.3s						
KUR				AMB	AMB	15 51 00.0	
	30nm,0.3s						
KUR				AMB	AMB	15 51 00.0	
	80nm,0.3s						
KUR				i S	Sn	15 51 19.7	+0.5
KUR				A	A	15 51 23.5	
	150nm,0.2s						
KUR				A	A	15 51 23.5	
	360nm,0.2s						
KUR	Kuril'sk	1.75	281	d iPN	Pn	15 50 59.1	+0.9
KUR				i S	Sn	15 51 20.9	+1.7
KUR				pmax	pmax		
	comp=Z,325nm,0.5s						
KUR				pmax	pmax		
	comp=N,135nm,0.4s						
KUR				pmax	pmax		
	comp=E,79nm,0.6s						
KUR				smax	smax		
	comp=E,262nm,0.3s						
KUR				smax	smax		
	comp=N,146nm,0.2s						
SHO	Shikotan	2.69	248	i P	Pn	15 51 11.9	+0.7
SHO				AMB	AMB	15 51 13.0	
	comp=N,8.0nm,0.3s						
SHO				AMB	AMB	15 51 13.0	
	comp=N,20nm,0.3s						
SHO				AMB	AMB	15 51 13.0	
	comp=N,30nm,0.3s						
SHO				i S	Sn	15 51 43.5	+0.9
SHO				A	A	15 51 44.0	
	comp=N,110nm,0.2s						
SHO	Shikotan	2.69	248	c iPN	Pn	15 51 12.0	+0.7
SHO				i S	Sn	15 51 42.1	-0.5
SHO				pmax	pmax		
	comp=N,8.0nm,0.3s						
SHO				pmax	pmax		
	comp=E,16nm,0.3s						
SHO				pmax	pmax		
	comp=Z,29nm,0.3s						
SHO				smax	smax		
	comp=N,28nm,0.2s						
SHO				smax	smax		
	comp=E,67nm,0.3s						
YUK	Yuzh-Kuril'sk	3.29	256	i P	Pn	15 51 21.2	+1.8
YUK				AMB	AMB	15 51 22.1	
	comp=E,10.0nm,0.2s						
YUK				AMB	AMB	15 51 22.1	
	comp=E,40nm,0.2s						
YUK				i S	Sn	15 51 58.4	+1.1
YUK				A	A	15 52 01.0	
	comp=E,60nm,0.2s						
YUK				A	A	15 52 01.0	
	comp=E,70nm,0.2s						
YUK	Yuzh-Kuril'sk	3.29	256	c iPN	Pn	15 51 21.4	+2.0
YUK				i S	Sn	15 51 58.3	+1.0
YUK				pmax	pmax		
	comp=N,12nm,0.2s						
YUK				pmax	pmax		
	comp=E,9.0nm,0.2s						
YUK				pmax	pmax		
	comp=Z,37nm,0.2s						
YUK				smax	smax		
	comp=N,60nm,0.2s						
YUK				smax	smax		
	comp=E,69nm,0.2s						
LAGR	Lagunnoye	3.34	257	eP	Pn	15 51 21.0	+0.9
LAGR				AMB	AMB	15 51 22.0	
	comp=E,40nm,0.3s						
LAGR				eS	Sn	15 51 59.0	+0.6
LAGR				A	A	15 52 00.0	
	comp=E,110nm,0.3s						
LAGR				A	A	15 52 00.0	
	comp=E,120nm,0.3s						
LAGR	Lagunnoye	3.34	257	ePN	Pn	15 51 21.8	+1.7
LAGR				eS	Sn	15 51 59.9	+1.5
LAGR				pmax	pmax		
	comp=Z,69nm,0.1s						
LAGR				smax	smax		
	comp=E,122nm,0.1s						
LAGR				smax	smax		
	comp=N,114nm,0.2s						
GRPR	Tuman	3.37	256	eP	Pn	15 51 22.0	+1.5
GRPR				AMB	AMB	15 51 22.0	
	comp=N,10.0nm,0.1s						
GRPR				eS	Sn	15 52 00.0	+0.9
GRPR				A	A	15 52 00.0	
	comp=N,80nm,0.2s						
GRPR				A	A	15 52 00.0	
	comp=N,30nm,0.2s						
GRPR	Tuman	3.37	256	ePN	Pn	15 51 22.4	+1.9
GRPR				eS	Sn	15 52 00.2	+1.1
GRPR				pmax	pmax		
	comp=Z,124nm,0.1s						
GRPR				smax	smax		
	comp=N,75nm,0.1s						
GRPR				smax	smax		
	comp=E,30nm,0.1s						
GLVR	Golovnino	3.62	253	eP	Pn	15 51 25.0	+1.0
GLVR				AMB	AMB	15 51 26.0	
	comp=E,30nm,0.3s						
GLVR				AMB	AMB	15 51 26.0	
	comp=E,20nm,0.3s						
GLVR				eS	Sn	15 52 07.0	+1.6
GLVR				A	A	15 52 07.0	
	comp=E,180nm,0.4s						
GLVR				A	A	15 52 07.0	
	comp=E,100nm,0.4s						
GLVR	Golovnino	3.62	253	ePN	Pn	15 51 25.7	+1.7
GLVR				eS	Sn	15 52 07.0	+1.6
GLVR				pmax	pmax		
	comp=Z,159nm,0.2s						
GLVR				pmax	pmax		
	comp=E,28nm,0.3s						
GLVR				smax	smax		
	comp=N,177nm,0.3s						
GLVR				smax	smax		
	comp=E,103nm,0.3s						
NEM2	Nemuro 2	3.62	246	P	Pn	15 51 24.6	+0.6
NEM2				eS	Sn	15 52 03.7	-1.8
JRA	Rausu	3.83	257	P	Pn	15 51 29.6	+2.8
JNK	Nakash	4.22	254	P	Pn	15 51 34.3	+2.1
JNK				eS	Sn	15 52 21.0	+0.8
JAK	Akkeshi	4.47	246	P	Pn	15 51 36.3	+0.6
JAK				eS	Sn	15 52 25.1	-1.3
JTKR	Abashiri--Toko	4.67	261	P	Pn	15 51 41.2	+2.8
JAR	Ashorobuto	4.97	253	P	Pn	15 51 44.8	+2.3
JAR				eS	Sn	15 52 39.9	+1.2
JMP	Maruseppu	5.04	262	P	Pn	15 51 46.6	+3.0
JOB	Onbets	5.08	249	P	Pn	15 51 45.6	+1.6
JKK2	Kamakawa 2	5.50	262	P	Pn	15 51 53.3	+3.4
JCH	Churui	5.52	248	P	Pn	15 51 50.9	+0.8
ASAJ	Asahikawa	5.56	264	Pn	Pn	15 51 54.1	+3.5
	comp=E,1.5nm,0.3s,baz=311,slow=32,SNR=10						
YSS	Yuzh-Sakhalins	5.63	294	eP	Pn	15 51 53.4	+1.8
YSS	Yuzh-Sakhalins	5.63	294	ePN	Pn	15 51 51.3	-0.3
MYR	Moyori	5.72	245	eP	Pn	15 51 54.5	+1.6
MYR				eS	Sn	15 52 54.7	-2.6
ERM	Erimo	5.95	243	eP	Pn	15 51 58.3	+2.4
ERM	Erimo	5.95	243	⇓iPN	Pn	15 51 58.3	+2.4
JBT2	Biratori 2	6.12	252	P	Pn	15 51 59.9	+1.6
SKR	Severo-Kuril's	6.97	32	eP	Pn	15 52 10.7	+0.7
SKR	Severo-Kuril's	6.97	32	⇑ePN	Pn	15 52 10.7	+0.7
JKB	Kayabe	7.39	249	P	Pn	15 52 16.8	+1.1
JYM2	Yakumo 2	7.74	252	P	Pn	15 52 22.0	+1.5
PETK	Petropavlovsk-	9.53	28	Pn	Pn	15 52 46.0	+1.1
	comp=E,0.2nm,0.3s,baz=178,slow=10,SNR=5.7						
H11N2	WAKE ISLAND Hy	28.66	146	T	T	16 27 16.0	
	baz=336,slow=76,SNR=55						
H11N1	WAKE ISLAND Hy	28.67	146	T	T	16 27 16.7	
	baz=336,slow=76,SNR=46						
H11N3	WAKE ISLAND Hy	28.67	146	T	T	16 27 12.1	
	baz=336,slow=76,SNR=46						
TIXI	Tiksi	28.72	346	⇑eP	P	15 56 20.8	-2.8
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.4s						
H11S1	WAKE ISLAND Hy	29.69	147	T	T	16 28 31.9	
	baz=336,slow=76,SNR=89						
H11S3	WAKE ISLAND Hy	29.69	147	T	T	16 28 32.6	
	baz=336,slow=76,SNR=56						
H11S2	WAKE ISLAND Hy	29.70	147	T	T	16 28 29.5	
	baz=336,slow=76,SNR=51						
ILAR	Eielson Array	39.20	37	P	P	15 57 54.4	+0.1
	comp=Z,0.6nm,1.0s,baz=261,slow=8.8,SNR=3.8						
INK	Inuvik	44.25	31	P	P	15 58 36.4	+0.9
	comp=Z,0.4nm,0.3s,baz=274,slow=6.2,SNR=5.4						
AAK	Ala-Archa	52.87	296	eP	P	15 59 40.5	-1.9
AAK	Ala-Archa	52.87	296	⇑eP	P	15 59 40.5	-1.9
AAK				pmax	pmax		
	comp=Z,2.0nm,1.5s						
YKA	Yellowknife Ar	53.56	35	eP	P	15 59 47.6	+0.6
YKA	Yellowknife Ar	53.56	35	P	P	15 59 47.7	+0.8
	comp=Z,0.4nm,0.5s,baz=295,slow=6.9,SNR=6.6						
HNR	Honiara	54.80	168	LR	LR	16 20 04.0	
	comp=Z,127nm,19.4s,baz=318,slow=32						
ARU	Arti	55.02	317	⇑eP	P	15 59 54.0	-3.7
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NVAR	Mina Array Bea	65.05	60	P	P	16 01 08.0	+1.0
	comp=Z,0.3nm,0.5s,baz=294,slow=8.8,SNR=3.0						
PDAR	Pinedale Array	67.42	52	P	P	16 01 23.1	+0.9
	comp=Z,0.4nm,0.7s,baz=274,slow=1.4,SNR=4.4						
TXAR	Lajitas Array	80.12	58	P	P	16 02 37.5	+1.0
	comp=Z,0.4nm,0.5s,baz=290,slow=4.0,SNR=6.1						

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*ATH **04** 15:51:04.6, 36°.26N×21°.47E, h32^{km}±1^{km}, ML3.3/13, Error ellipse: s-maj=2.9km s-min=1.1km az=258.0*

*THE **04** 15:51:05.7, 36°.26N×21°.53E, h10^{km}±1^{km}, ML3.3/4, Error ellipse: s-maj=2.2km s-min=1.0km az=273.0*

*IDC **04** 15:51:07.4±61.0, 36°.98N×22°.45E, h0^{km}, mb3.6/3, mb1 3.7/3, mb1mx3.2/39, mbtmp3.6/3, Error ellipse: s-maj=1172.0km s-min=60.9km az=37.0*

ISC 04 15:51:02.4±2.1, **36°.19N**±0°.07×**21°.36E**±0°.07, **h11**^{km}±10^{km}, **n50**, σ1^{s}.**08**/55, **mb3.6**/3, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MES2	Methoni	0.69	24	P	Pg	15 51 17.2	+1.4
MES2				S	Sb	15 51 26.4	+0.3
MES2				AML	AML	15 51 27.4	
	comp=N,9842µm,0.3s						
MES2				AML	AML	15 51 28.3	
	comp=E,16170µm,0.6s						
PYL	PYLOS	0.77	23	P	Pg	15 51 18.1	+0.8
PYL				S	Sb	15 51 28.2	-0.1
PYL				AML	AML	15 51 29.8	
	comp=E,8779µm,0.5s						
PYL				AML	AML	15 51 31.1	
	comp=N,4952µm,0.3s						
PYL	PYLOS	0.77	23	P	Pg	15 51 18.4	+1.1
PYL				S	Sb	15 51 28.9	+0.6
MES3	Kyparissia	1.09	13	P	Pg	15 51 23.5	+0.2
ITM	Ithomi	1.09	25	P	Pg	15 51 23.3	-0.1
ITM				S	Sg	15 51 36.8	-0.7
ITM				AML	AML	15 51 42.2	
	comp=E,4173µm,0.5s						
ITM				AML	AML	15 51 46.5	
	comp=N,2674µm,0.6s						
ITM	Ithomi	1.09	25	P	Pg	15 51 23.4	0.0
ITM				S	Sb	15 51 37.4	-0.1
KTHR	Kythira	1.33	86	P	Pb	15 51 27.7	+0.3
KYTH	Kithira	1.37	86	P	Pn	15 51 28.2	+0.8
KYTH				AML	AML	15 51 58.1	
	comp=N,2738µm,0.8s						
KYTH				AML	AML	15 51 58.9	
	comp=E,1521µm,0.4s						
KYTH	Kithira	1.37	86	P	Pn	15 51 28.2	+0.8
AMT	Artemida-Makis	1.37	12	P	Pn	15 51 27.8	+0.3
AMT				AML	AML	15 51 55.1	
	comp=N,3356µm,0.6s						
AMT				AML	AML	15 52 05.4	
	comp=E,1880µm,0.7s						
AMT	Artemida-Makis	1.37	12	P	Pn	15 51 28.2	+0.7
VLI	Veliai	1.38	67	P	Pn	15 51 28.1	+0.6
VLI				S	Sg	15 51 45.0	-1.8
VLI				AML	AML	15 51 54.1	
	comp=E,2164µm,1.1s						
VLI				AML	AML	15 52 00.4	
	comp=N,2122µm,0.9s						
VLI	Veliai	1.38	67	P	Pn	15 51 28.2	+0.7
VLI				S	Sg	15 51 45.3	-1.4
VLX	Vlachokerasia	1.44	34	P	Pn	15 51 28.8	+0.3
VLX				S	Sb	15 51 46.5	-1.1
VLX				AML	AML	15 51 53.4	
	comp=N,2821µm,0.8s						
VLX				AML	AML	15 51 57.5	
	comp=E,2796µm,0.5s						
VLX	Vlachokerasia	1.44	34	P	Pn	15 51 29.1	+0.7
VLX				S	Sn	15 51 47.4	0.0
TRIP	Tripoli	1.52	28	P	Pn	15 51 30.6	+1.0
TRIP				S	Sn	15 51 49.3	-0.2
TRIP				AML	AML	15 51 59.0	
	comp=E,2167µm,0.7s						
TRIP				AML	AML	15 52 04.2	
	comp=N,1906µm,1.4s						
TRIP	Tripoli	1.52	28	P	Pn	15 51 31.1	+1.5
ANKY	Antikythira Is	1.61	101	P	Pn	15 51 31.7	+1.0
ANKY	Antikythira Is	1.61	101	P	Pn	15 51 31.6	+1.0
DRO	Drossia	1.78	9	P	Pn	15 51 34.0	+0.9
DRO				AML	AML	15 52 12.0	
	comp=E,1740µm,0.6s						
DRO				AML	AML	15 52 17.4	
	comp=N,1525µm,0.9s						
DRO	Drossia	1.78	9	P	Pn	15 51 34.5	+1.4
KRND	KRANIDI	1.87	50	P	Pn	15 51 34.0	-0.2
KRND				AML	AML	15 52 07.4	
	comp=N,968µm,0.9s						
KRND				AML	AML	15 52 14.6	
	comp=E,1014µm,1.0s						
RLS	Riolos of Patr	1.87	3	P	Pn	15 51 35.6	+1.3
GUR	Goura	1.92	24	P	Pn	15 51 35.7	+0.7
GUR				S	Sn	15 51 59.4	+0.3
GUR				AML	AML	15 52 19.5	
	comp=N,1358µm,0.8s						
GUR				AML	AML	15 52 21.5	
	comp=E,1444µm,0.7s						
GUR	Goura	1.92	24	P	Pn	15 51 36.0	+1.0
KLV	Kalavryta, Ach	1.96	19	P	Pn	15 51 36.4	+0.9
KLV				S	Sn	15 52 00.2	0.0
KLV				AML	AML	15 52 19.4	
	comp=E,672µm,1.1s						
KLV				AML	AML	15 52 22.2	
	comp=N,675µm,1.3s						
KLV	Kalavryta, Ach	1.96	19	P	Pn	15 51 36.5	+0.9
LAKA	Lakka	2.11	13	P	Pn	15 51 39.0	+1.5
LAKA				AML	AML	15 52 25.3	
	comp=E,811µm,1.1s						
LAKA				AML	AML	15 52 34.3	
	comp=N,634µm,0.9s						
LAKA	Lakka	2.11	13	P	Pn	15 51 39.1	+1.5
LOUT	Loutraki	2.21	35	P	Pn	15 51 40.5	+1.5
LTK	Loutraki	2.24	35	P	Pn	15 51 39.7	+0.3
IMMV	Iera Moni Meta	2.25	108	P	Pn	15 51 40.2	+0.7
IMMV	Iera Moni Meta	2.25	108	P	Pn	15 51 40.4	+0.9
KALE	Kalithea	2.29	16	P	Pn	15 51 41.8	+1.7
ANX	Ano Chora	2.44	10	P	Pn	15 51 44.5	+2.2
KPRO	Kipourio	3.76	0	P	Pn	15 52 02.4	+2.0
BIA	Bitola	4.83	360	i Pn	Pn	15 52 09.6	-5.4
KRUS	Krusevo	5.17	359	i Pn	Pn	15 52 20.2	+0.4
STIP	Stip	5.54	6	i Pn	Pn	15 52 27.1	+2.4
DRME	Dracevica, Mon	6.22	345	ePn	Pn	15 52 33.5	-0.6
HCY	Herceg Novi	6.63	341	ePn	Pn	15 52 38.0	-1.8
TREB	Trebinje	6.92	341	ePn	Pn	15 52 42.0	-1.7
BRY	Bratogost	7.05	343	ePn	Pn	15 52 44.2	-1.4
BBLS	Lazići	7.81	350	ePn	Pn	15 52 54.8	-1.2
DIVS	Divibare	7.97	353	ePn	Pn	15 52 56.8	-1.4
HAPS	Han Pijesak,BI	8.10	348	ePn	Pn	15 52 57.8	-2.2
CRES	Cresnjev	10.61	337	ePn	Pn	15 53 31.8	-2.4
FINES	FINESS Array B	25.45	5	P	P	15 56 28.9	-1.1
	comp=N,0.9nm,0.7s,baz=169,slow=7.9,SNR=3.3						
MKAR	Makanchi Array	45.80	57	P	P	15 59 21.4	-2.6
	comp=N,0.2nm,0.3s,baz=269,slow=8.0,SNR=11						
ZALV	Zalesovo Beam	46.54	47	P	P	15 59 27.1	-2.7
	comp=N,0.4nm,0.3s,baz=271,slow=8.4,SNR=3.1						

IDC 04 16:14:55.5±1.5, **6°.21S**×**153°.69E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.6**/30, **mbtmp3.6**/4, **Error ellipse: s-maj=73.7km s-min=26.3km az=124.0**, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.23	232	P	P	16 20 05.3	+0.8
	0.7nm,0.8s,baz=58,slow=9.3,SNR=8.1						
WRA				PcP	PcP	16 23 52.5	-0.5
	0.4nm,1.1s,baz=56,slow=2.8,SNR=3.6						
ASAR	Alice Springs	25.75	226	P	P	16 20 28.2	+0.1
	1.2nm,0.7s,baz=66,slow=8.5,SNR=16						
ASAR				PcP	PcP	16 23 57.7	-0.7
	0.2nm,0.8s,baz=66,slow=2.6,SNR=3.9						
MKAR	Makanchi Array	81.96	319	P	P	16 27 16.4	-1.0
	0.8nm,0.8s,baz=107,slow=5.2,SNR=8.7						
ILAR	Eielson Array	83.13	22	P	P	16 27 24.9	+1.9
	0.4nm,0.8s,baz=252,slow=5.7,SNR=3.8						
TORD	Torodi Ar. Bea	151.56	286	PKPbc	PKPbc	16 34 51.3	-1.5
	0.5nm,0.7s,baz=78,slow=2.1,SNR=4.3						

IDC 04 16:23:15.2±1.7, **7°.01S**×**129°.11E**, **h0**^{km}, **mb3.7**/1, **mb1 3.7**/3, **mb1mx3.3**/30, **mbtmp3.5**/3, **ML3.6**/3, **Error ellipse: s-maj=63.6km s-min=28.4km az=78.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.47	20	Pn	Pn	16 24 52.3	+0.4
	1.3nm,0.3s,baz=41,slow=20,SNR=10.0						
SIJI				Sn	Sn	16 25 54.7	-12
	2.3nm,0.3s,baz=236,slow=22,SNR=8.7						
WRA	Warramunga Arr	13.82	159	Pn	Pn	16 26 31.1	-1.5
	0.4nm,0.3s,baz=341,slow=14,SNR=34						
WRA				Sn	Sn	16 28 53.8	-13
	0.8nm,0.3s,baz=343,slow=22,SNR=9.9						
ASAR	Alice Springs	17.19	165	P	P	16 27 18.4	-0.3
	0.2nm,0.3s,baz=356,slow=12,SNR=25						
ASAR				S	Sn	16 30 17.3	-12
	0.1nm,0.3s,baz=355,slow=26,SNR=6.3						
MKAR	Makanchi Array	67.75	327	P	P	16 34 14.7	-0.1
	0.3nm,0.4s,baz=121,slow=7.8,SNR=14						

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*JMA **04** 16:26:29.4±0.4, 46°.02N×140°.68E, h4^{km}±4^{km}, M2.8*

*SKHL **04** 16:26:29.8±0.9, 46°.00N×140°.94E, h10^{km}, mb3.0/1*

ISC 04 16:26:31.5±3.9, **45°.90N**±0°.08×**140°.5E**±0°.3, **h35**^{km}, **n4**, σ0^{s}.**28**/6, **Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRR	Rishiri	0.94	144	P	Pn	16 26 48.2	0.0
JWK2	Keihoku	1.12	121	P	Pn	16 26 50.4	-0.3
JWK2				eS	Sn	16 27 05.2	+0.3
KHLM	Kholmsk	1.56	42	eSg	Sn	16 27 16.0	+0.2
KHLM				A	A	16 27 16.4	
	370nm,0.5s						
KHLM				A	A	16 27 16.4	
	200nm,0.5s						
YSS	Yuzh-Sakhalins	1.87	55	ePg	Pn	16 27 00.9	0.0
YSS				AMB	AMB	16 27 02.1	
	10.0nm,0.6s						
YSS				eSg	Sn	16 27 23.2	-0.1
YSS				A	A	16 27 25.5	
	20nm,0.5s						
YSS				A	A	16 27 25.5	
	40nm,0.5s						

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*ISCJB **04** 16:31:59.6±0.6, 32°.82N±0°.07×94°.39E±0°.09, h33^{km}, mb3.5/10, Error ellipse: s-maj=12.4km s-min=7.7km*

az=36.9

*IDC **04** 16:32:02.9±4.3, 32°.92N×94°.58E, h43^{km}±42^{km}, mb3.3/10, mb1 3.5/13, mb1mx3.3/38, mbtmp3.5/13, ML3.4/3, Error ellipse: s-maj=36.1km s-min=17.1km az=56.0*

ISC 04 16:32:01.9±0.7**, 32°.92N**±0°.09×**94°.4E**±0°.1**, h35**^{km}**, n21, σ1^{s}12**/21**, mb3.6**/10**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIRN	Jiri	8.85	236	eP	Pn	16 34 06.7	-0.9
	16nm,0.6s						
GUN	Gumba	8.91	238	eP	Pn	16 34 08.4	-0.1
	9.4nm,0.5s						
PKI	Pulchoki	9.45	238	eP	Pn	16 34 15.0	-0.9
	8.0nm,0.4s						
PKIN	Phulchoki	9.46	238	eP	Pn	16 34 15.1	-0.8
	8.9nm,0.4s						
DMN	Daman	9.64	239	eP	Pn	16 34 17.6	-0.9
	10.0nm,0.5s						
DANN	Dangsing	10.26	246	eP	Pn	16 34 27.3	+0.4
	15nm,0.5s						
KOLN	Koldanda	10.67	244	eP	Pn	16 34 31.2	-1.3
	7.9nm,0.8s						
PYUN	Piuthan	10.97	247	eP	Pn	16 34 35.6	-1.0
	9.0nm,0.6s						
CMAR	Chiang Mai Arr	14.96	163	P	Pn	16 35 32.0	+1.2
	0.1nm,0.3s,baz=345,slow=17,SNR=4.1						
MKAR	Makanchi Array	16.67	330	P	P	16 35 54.6	-0.3
	0.1nm,0.3s,baz=136,slow=13,SNR=12						
SONM	Songino Array	17.43	28	P	Pn	16 36 00.8	-1.5
	0.1nm,0.3s,baz=213,slow=12,SNR=5.3						
KURBB	Kurchatov Arra	21.22	331	P	P	16 36 44.0	-0.5
	4.4nm,0.8s,baz=137,slow=11,SNR=25						
ZALV	Zalesovo Beam	22.11	345	P	P	16 36 55.0	+1.0
	0.6nm,0.5s,baz=161,slow=9.4,SNR=4.1						
BVAR	Borovoye Array	26.49	327	P	P	16 37 37.9	+2.2
	0.5nm,0.7s,baz=118,slow=5.5,SNR=3.4						
AKASG	Malin Array Be	50.08	311	P	P	16 40 52.9	-0.3
	0.3nm,0.5s,baz=69,slow=7.0,SNR=4.2						
GERES	GERESS Array B	60.30	311	P	P	16 42 09.1	+2.1
	0.6nm,0.6s,baz=50,slow=4.2,SNR=3.6						
WRA	Warramunga Arr	64.94	138	P	P	16 42 37.4	-0.7
	0.4nm,0.7s,baz=323,slow=7.7,SNR=5.3						
ASAR	Alice Springs	67.70	141	P	P	16 42 55.5	-0.3
	0.5nm,0.8s,baz=323,slow=6.4,SNR=9.5						
ILAR	Eielson Array	71.60	23	P	P	16 43 18.9	-0.3
	0.4nm,0.9s,baz=292,slow=4.8,SNR=3.9						
YKA	Yellowknife Ar	82.09	13	P	P	16 44 18.6	+0.2
	0.1nm,0.5s,baz=327,slow=3.3,SNR=3.0						
TORD	Torodi Ar. Bea	85.23	282	P	P	16 44 34.3	-1.1
	0.3nm,0.6s,baz=73,slow=5.9,SNR=3.1						

PGC 04 16:32:51.1±19.0**, 48°.90N**×**129°.67W, h10**^{km}**, MLSn2.8**/7**, Mw3.5**/7**, 258km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	1.02	158	P	Pb	16 33 08.3	-2.4
KEMF				S	Sg	16 33 21.6	-2.4
PACB	Port Alice, BC	2.09	42	Pn	Pn	16 33 23.7	-2.5
PACB				Sn	Sn	16 33 47.5	-4.8
PHC	Port Hardy	2.32	38	Pn	Pn	16 33 28.7	-0.7
WOSB	Woss	2.39	57	Pn	Pn	16 33 28.9	-1.4
TLCB	Telegraph Cove	2.48	47	Pn	Pn	16 33 29.9	-1.6
TLCB				Sn	Sn	16 33 58.3	-3.4
BTB	Buttle Lake	2.78	77	Pn	Pn	16 33 34.0	-1.9
BTB				Sn	Sn	16 34 07.2	-2.4
NCRB	Newcastle Ridg	2.79	56	Pn	Pn	16 33 34.8	-1.2
MGB	Mount Grey	3.29	86	Pn	Pn	16 33 42.3	-0.5
MGB				Sn	Sn	16 34 19.5	-2.4
BBB	Bella Bella	3.44	16	Pn	Pn	16 33 42.6	-2.2

KRSC 04 16:36:36.0±0.9**, 51°.72N**×**158°.84E, h73**^{km}±11^{km}**, ML3.6, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.48	281	eP	Pn	16 36 49.9	+1.0
KDTR				eS	Sn	16 36 59.5	+1.1
RUS	Russkaya	0.74	344	eP	Pn	16 36 53.0	+1.5
RUS				eS	Sn	16 37 04.8	+1.8
MTVR	Mutnovka	0.86	332	eP	Pn	16 36 54.6	+1.5
MTVR				eS	Sn	16 37 07.8	+2.0
KRMR	Karymshinskiy	1.19	339	eP	Pn	16 36 58.7	+1.7
KRMR				eS	Sn	16 37 15.2	+2.4
PAU	Pauzhetka	1.29	259	eP	Pn	16 36 59.4	+1.1
PAU				eS	Sn	16 37 16.4	+1.3
PET	Petropavlovsk	1.31	355	eP	Pn	16 37 00.1	+1.6
PET				eS	Sn	16 37 17.3	+1.9
DALK	Dalny	1.31	358	eP	Pn	16 37 00.0	+1.4
DALK				eS	Sn	16 37 16.9	+1.4
NLC	Nalytchevo	1.48	12	eP	Pn	16 37 01.3	+0.5
NLC				eS	Sn	16 37 19.7	+0.2
UGLR	Uglovaya	1.49	360	eP	Pn	16 37 02.7	+1.7
SMAR	Somma	1.54	359	eP	Pn	16 37 03.1	+1.3
AVH	Avacha	1.55	358	eP	Pn	16 37 03.8	+2.1
AVH				eS	Sn	16 37 23.6	+2.5
SPN	Mys Shipunski	1.56	27	eP	Pn	16 37 03.5	+1.7
SPN				eS	Sn	16 37 22.9	+1.7
SDLR	Sedlovina	1.56	1	eP	Pn	16 37 03.2	+1.3
KOK	Koryaka	1.58	355	eP	Pn	16 37 04.4	+2.3
KOK				eS	Sn	16 37 24.5	+2.6
APC	Apacha	1.59	320	eP	Pn	16 37 02.8	+0.6
KRX	Arik	1.64	356	eP	Pn	16 37 04.8	+1.7
KRX				eS	Sn	16 37 24.8	+1.3
GNL	Ganaly	2.05	345	eP	Pn	16 37 10.6	+2.1
KII	Karymskiy	2.35	9	eP	Pn	16 37 15.0	+2.6
KII				eS	Sn	16 37 42.8	+2.5

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*IDC **04** 16:48:47.3±1.0, 11°.14S×165°.32E, h0^{km}, mb3.9/8, mb1 4.2/10, mb1mx3.9/31, mbtmp4.0/10, ML4.6/2, MS3.5/2, Ms1 3.5/2, ms1mx2.9/31, Error ellipse: s-maj=30.6km s-min=20.7km az=144.0*

*NEIC **04** 16:48:48.9±0.4, 11°.17S×165°.29E, h10^{km}, mb4.5/6, Error ellipse: s-maj=8.6km s-min=7.6km az=95.0*

*ISCJB **04** 16:48:49.9±0.5, 11°.27S±0°.06×165°.27E±0°.06, h30^{km}, mb4.2/12, MS3.6/1, Error ellipse: s-maj=9.5km s-min=7.8km az=42.9*

ISC 04 16:48:51.7±0.6**, 11°.23S**±0°.07×**165°.32E**±0°.07**, h30**^{km}**, n28, σ0^{s}81**/31**, mb4.0**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.58	288	P	Pn	16 50 12.0	-0.7
HNR				S	Sn	16 51 15.0	-0.9
HNR	Honiara	5.58	288	ePn	Pn	16 50 12.7	-0.1
HNR				eSn	Sn	16 51 15.9	0.0
HNR	Honiara	5.58	288	Pn	Pn	16 50 13.1	+0.4
	19nm,0.3s,baz=165,slow=3.2,SNR=7.7						
HNR				Sn	Sn	16 51 15.9	0.0
	8.8nm,0.3s,baz=90,slow=20,SNR=2.5						
HNR				LR	LR	16 52 21.9	
	comp=Z,387nm,20.6s,baz=109,slow=39						
MARNC	Mare, Loyalty	10.52	166	ePn	Pn	16 51 21.5	+1.0
DZM	Mont Dzumac	10.84	174	Pn	Pn	16 51 25.9	+1.0
	3.3nm,0.3s,baz=294,slow=18,SNR=47						
DZM				Sn	Sn	16 53 23.0	-2.2
	0.2nm,0.3s,baz=158,slow=19,SNR=1.7						
PINNC	Pines Island,	11.50	170	ePn	Pn	16 51 35.0	+1.1
TARA	Tarawa	14.61	32	ePn	Pn	16 52 16.4	0.0
MANU	Manus Island	20.02	296	eP	P	16 53 22.3	0.0
	70nm,0.9s						
CTA	Charters Tower	20.35	242	P	P	16 53 26.6	+0.8
	8.5nm,1.0s,baz=74,slow=13,SNR=4.9						
COEN	Coen	21.78	261	eP	P	16 53 41.7	+0.4
	20nm,1.0s						
STKA	Stephens Creek	30.02	223	eP	P	16 54 58.6	+0.6
	2.8nm,1.4s						
STKA	Stephens Creek	30.02	223	P	P	16 54 59.1	+1.1
	1.7nm,0.8s,baz=60,slow=13,SNR=3.2						
WB2	Warramunga Arr	31.02	250	eP	P	16 55 06.0	-1.0
WRAB	Tennant Creek	31.02	250	eP	P	16 55 06.7	-0.3
	14nm,1.4s						
WR1	Warramunga Arr	31.03	250	eP	P	16 55 06.8	-0.3
	17nm,1.3s						
WRA	Warramunga Arr	31.03	250	P	P	16 55 06.8	-0.3
	4.8nm,1.0s,baz=78,slow=9.2,SNR=24						
AS01	Alice Springs	32.30	243	eP	P	16 55 17.5	-0.7
AS31	Alice Springs	32.34	243	eP	P	16 55 17.8	-0.8
	0.8nm,0.8s						
ASAR	Alice Springs	32.34	243	P	P	16 55 18.2	-0.3
	2.1nm,0.8s,baz=65,slow=10,SNR=24						
PPT	Papeete	44.06	104	LR	LR	17 12 51.2	
	comp=Z,78nm,20.4s,baz=67,slow=33						
CMAR	Chiang Mai Arr	71.81	294	P	P	17 00 12.4	+0.4
	0.4nm,0.7s,baz=117,slow=4.0,SNR=4.5						
ILAR	Eielson Array	83.82	19	P	P	17 01 17.3	-0.5
	0.6nm,1.0s,baz=245,slow=4.8,SNR=4.1						
NVAR	Mina Array Bea	86.46	50	P	P	17 01 32.6	+0.6
	0.1nm,0.4s,baz=235,slow=3.2,SNR=2.3						
MK32	Makanchi Array	93.37	317	eP	P	17 02 04.5	+0.5
MKAR	Makanchi Array	93.37	317	P	P	17 02 04.5	+0.5
	0.3nm,0.7s,baz=93,slow=5.2,SNR=3.8						
DGMT	Dagmar	98.62	42	eP	P	17 02 27.1	-0.8
	79nm,0.3s						
TORD	Torodi Ar. Bea	163.88	278	PKP	PKPdf	17 08 51.9	-1.0
	0.8nm,1.2s,baz=48,slow=2.1,SNR=4.1						
TOA1	Torodi Ar. Sit	163.88	278	ePKPdf	PKPdf	17 08 51.9	-1.0

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*IDC **04** 16:51:30.4±1.3, 11°.12S×165°.28E, h0^{km}, mb3.9/5, mb1 4.2/7, mb1mx3.8/32, mbtmp4.1/7, ML4.5/2, Error ellipse: s-maj=37.8km s-min=24.9km az=129.0*

*NEIC **04** 16:51:31.7±0.6, 11°.15S×165°.27E, h10^{km}, mb4.2/4, Error ellipse: s-maj=12.6km s-min=8.0km az=65.0*

*ISCJB **04** 16:51:33.2±0.9, 11°.31S±0°.10×165°.17E±0°.10, h30^{km}, mb3.9/8, Error ellipse: s-maj=17.7km s-min=8.6km az=135.9*

ISC 04 16:51:34.9±1.1**, 11°.2S**±0°.1×**165°.3E**±0°.1**, h30**^{km}**, n18, σ0^{s}58**/19**, mb3.9**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.50	288	Pn	Pn	16 52 55.6	+0.8
	9.9nm,0.3s,baz=337,slow=7.7,SNR=4.7						
HNR				Sn	Sn	16 53 56.4	-0.7
	1.9nm,0.3s,baz=0.0,slow=20,SNR=1.9						
DZM	Mont Dzumac	10.88	174	ePn	Pn	16 54 08.9	+0.2
DZM	Mont Dzumac	10.88	174	Pn	Pn	16 54 09.1	+0.4
	4.8nm,0.3s,baz=58,slow=19,SNR=27						
OUENC	Ouen Island, N	11.27	172	ePn	Pn	16 54 12.9	-1.0
PINNC	Pines Island,	11.55	170	ePn	Pn	16 54 17.7	-0.1
STKA	Stephens Creek	30.00	223	eP	P	16 57 41.2	+0.1
	5.1nm,1.9s						
STKA	Stephens Creek	30.00	223	P	P	16 57 42.2	+1.1
	1.4nm,0.5s,baz=41,slow=9.3,SNR=5.9						
WR1	Warramunga Arr	30.98	250	eP	P	16 57 49.5	-0.2
	6.1nm,1.1s						
WRA	Warramunga Arr	30.98	250	P	P	16 57 49.5	-0.3
	0.9nm,0.9s,baz=81,slow=9.2,SNR=5.3						
AS31	Alice Springs	32.29	243	eP	P	16 58 00.8	-0.6
	1.2nm,1.2s						
ASAR	Alice Springs	32.29	243	P	P	16 58 01.1	-0.3
	0.9nm,0.5s,baz=66,slow=10,SNR=23						
FITZ	Fitzroy Crossi	38.87	255	eP	P	16 58 57.1	-0.8
	14nm,1.8s						
FITZ	Fitzroy Crossi	38.87	255	P	P	16 58 58.1	+0.2
	baz=96,slow=9.2						
ILAR	Eielson Array	83.80	19	P	P	17 04 01.3	+0.3
	0.5nm,0.7s,baz=231,slow=5.3,SNR=3.8						
MK32	Makanchi Array	93.30	317	eP	P	17 04 46.5	-0.4
MKAR	Makanchi Array	93.30	317	P	P	17 04 46.5	-0.4
	0.3nm,0.6s,baz=84,slow=5.2,SNR=4.0						
ARA0	ARCESS Array S	116.35	345	ePKPdf	PKPdf	17 10 14.8	-0.2
ARCES	ARCESS Array B	116.35	345	PKP	PKPdf	17 10 14.8	-0.2
	1.6nm,0.9s,baz=15,slow=3.7,SNR=5.1						

MEX 04 17:02:23.2±0.4**, 15°.98N**×**98°.29W, h2**^{km}±4^{km}**, MD3.8, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.44	21	eP	Pg	17 02 31.2	-0.4
PNIG				i S	Sg	17 02 37.9	+0.6
VHO	Vista Hermosa	1.84	54	eP	Pn	17 02 52.9	-3.2
VHO				eS	Sn	17 03 15.6	-4.6
HUIG	Huatulco	2.11	95	eP	Pn	17 02 56.7	-2.9
HUIG				eS	Sn	17 03 22.0	-4.5
CMIG	Matias Romero	3.45	71	eP	Pn	17 03 15.3	-2.7

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*SOME **04** 17:05:19.8, 42°.50N×79°.65E, h15^{km}*

*NNC **04** 17:05:19.9±1.2, 42°.58N×79°.64E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=7.8km s-min=4.2km az=134.0*

*KRNET **04** 17:05:20.2±0.1, 42°.57N×79°.64E, h16^{km}, mb2.6*

ISC 04 17:05:19.7±1.6**, 42°.57N**±0°.05×**79°.65E**±0°.04**, h7**^{km}±10^{km}**, n46, σ1^{s}08**/83**, 15C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.74	321	P	Pg	17 05 34.2	+0.2
	5.3nm,0.1s						
UZB				S	Sb	17 05 44.5	-1.0
	12nm,0.1s						
UZB	Uzynbulak	0.74	321	⇑eP	Pg	17 05 34.2	+0.2
	baz=22						
UZB				⇑eS	Sb	17 05 44.4	-1.0
	baz=22						
UZB	Uzynbulak	0.74	321	⇑eP	Pg	17 05 34.2	+0.2
	5.3nm,0.1s						
UZB				eS	Sb	17 05 44.5	-1.0
	12nm,0.1s						
PDGK	Podgornoye	0.77	351	P	Pg	17 05 35.0	+0.4
	2.4nm,0.1s						
PDGK				S	Sb	17 05 45.8	-0.5
	5.6nm,0.2s						
PDGK	Podgornoye	0.77	351	⇓P	Pg	17 05 34.8	+0.3
	0.8nm,0.2s						
PDGK				⇑S	Sg	17 05 45.2	+0.7
	4.1nm,0.3s						
PDGK	Podgornoye	0.77	351	⇑iP	Pg	17 05 34.9	+0.4
	baz=52						
PDGK				⇑iS	Sb	17 05 45.9	-0.4
	baz=52						
PRZ	Przheval'sk	0.93	265	⇑iP	Pb	17 05 37.5	-0.8
	baz=65						
PRZ				⇑iS	Sg	17 05 50.3	+0.7
	baz=65						
KTMS	Ketmen	1.02	30	P	Pg	17 05 39.8	+0.5
KTMS				S	Sn	17 05 53.9	-1.4
KTMS	Ketmen	1.02	30	eP	Pg	17 05 39.8	+0.5
	baz=30						
KTMS				eS	Sn	17 05 53.9	-1.4
	baz=30						
KTMS	Ketmen	1.02	30	eP	Pg	17 05 39.8	+0.5
	0.6nm,0.1s						
KTMS				eS	Sn	17 05 53.9	-1.4
	4.2nm,0.1s						
SATY	Saty	1.04	299	P	Pb	17 05 39.4	-0.8
SATY				S	Sg	17 05 53.6	+0.5
SATY	Saty	1.04	299	eP	Pb	17 05 39.4	-0.8
	1.7nm,0.1s						
SATY				eS	Sg	17 05 53.6	+0.5
	18nm,0.1s						
KURS	Kuram	1.42	311	eP	Pb	17 05 46.5	-0.1
	baz=11						
KURS				eS	Sg	17 06 05.7	+0.2
	baz=11						
KURS	Kuram	1.42	311	eP	Pb	17 05 46.5	-0.1
	0.5nm,0.1s						
KURS				eS	Sg	17 06 05.7	+0.2
	1.8nm,0.3s						
MNBS	Baschi	1.76	329	P	Pb	17 05 52.8	+0.2
MNBS				S	Sg	17 06 16.8	+0.4
MNBS	Baschi	1.76	329	eP	Pb	17 05 52.8	+0.2
	5.4nm,0.4s						
MNBS				eS	Sg	17 06 16.8	+0.4
	7.5nm,0.3s						
DJR	Jarkent	1.77	3	⇑iP	Pg	17 05 53.0	-0.6
	0.9nm,0.4s						
DJR				eS	Sg	17 06 16.7	+0.3
	2.6nm,0.3s						
KDJ	Kajisay	1.88	257	⇓iP	Pb	17 05 54.6	0.0
	baz=57						
KDJ				⇓iS	Sg	17 06 19.7	-0.6
	baz=57						
KOTS	Kotyrbulak	1.98	290	Pg	Pb	17 05 56.4	+0.2
	3.2nm,0.1s						
KOTS				Lg	Lg	17 06 23.0	
	6.2nm,0.3s						
KOTS	Kotyrbulak	1.98	290	eP	Pb	17 05 56.4	+0.2
	baz=90						
KOTS				eS	Sg	17 06 23.1	-0.3
	baz=90						
KOTS	Kotyrbulak	1.98	290	eP	Pb	17 05 56.4	+0.2
	3.2nm,0.1s						
KOTS				eS	Sg	17 06 23.0	-0.3
	6.2nm,0.3s						
MDOK	Medeo	2.00	288	Pn	Pn	17 05 54.2	0.0
	1.3nm,0.6s						
MDOK				Sn	Sg	17 06 22.5	-1.7
	2.6nm,0.6s						
MDOK	Medeo	2.00	288	Pg	Pb	17 05 56.0	-0.6
	1.7nm,0.2s						
MDOK				Lg	Lg	17 06 22.6	
	2.6nm,0.2s						
MDOK	Medeo	2.00	288	eP	Pb	17 05 56.0	-0.6
	1.7nm,0.2s						
MDOK				eS	Sg	17 06 22.6	-1.5
	2.6nm,0.2s						
TNSS	Tian-Shan	2.04	284	Pg	Pb	17 05 57.0	-0.4
	2.6nm,0.2s						
TNSS				Lg	Lg	17 06 23.9	
	4.1nm,0.3s						
TNSS	Tian-Shan	2.04	284	eP	Pb	17 05 57.0	-0.4
	baz=84						
TNSS				eS	Sg	17 06 23.8	-1.6
	baz=84						
TNSS	Tian-Shan	2.04	284	eP	Pb	17 05 57.0	-0.4
	2.6nm,0.2s						
TNSS				eS	Sg	17 06 23.9	-1.6
	4.1nm,0.3s						
ARXS	Arharly	2.11	322	Pg	Pb	17 05 58.4	-0.1
	2.9nm,0.3s						
ARXS				Lg	Lg	17 06 26.2	
	6.8nm,0.2s						
ARXS	Arharly	2.11	322	eP	Pb	17 05 58.4	-0.1
	2.9nm,0.3s						
ARXS				eS	Sg	17 06 26.2	-1.4
	6.8nm,0.2s						
IZV	Izvestkoviy	2.28	283	Pg	Pb	17 06 00.9	-0.5
	2.8nm,0.2s						
IZV				Lg	Lg	17 06 31.3	
	7.7nm,0.2s						
IZV	Izvestkoviy	2.28	283	eP	Pb	17 06 01.1	-0.3
	baz=83						
IZV				eS	Sb	17 06 30.8	+0.9
	baz=83						
IZV	Izvestkoviy	2.28	283	eP	Pb	17 06 01.1	-0.3
	4.6nm,0.2s						
IZV				eS	Sb	17 06 30.8	+0.9
	12nm,0.4s						
CHKK	Chushkaly	2.33	304	eP	Pb	17 06 01.5	-0.6
	baz=5.0						
CHKK				eS	Sb	17 06 31.7	+0.5
	baz=5.0						
CHKK	Chushkaly	2.33	304	eP	Pb	17 06 01.5	-0.6
	1.1nm,0.3s						
CHKK				eS	Sb	17 06 31.7	+0.5
	7.5nm,0.3s						
KTBS	Karatobe	2.46	299	Pg	Pb	17 06 03.0	-1.3
	1.1nm,0.3s						
KTBS				Lg	Lg	17 06 34.6	
	7.3nm,0.3s						
KTBS	Karatobe	2.46	299	eP	Pb	17 06 03.6	-0.7
	1.1nm,0.3s						
KTBS				eS	Sb	17 06 34.9	+0.1
	7.3nm,0.3s						
ULHL	Ulahol	2.55	264	⇑iP	Pb	17 06 04.4	-1.5
	baz=64						
ULHL				⇑iS	Sb	17 06 37.0	-0.5
	baz=64						
KAPS	Kapalarasan	2.72	356	Pg	Pb	17 06 08.7	-0.2
	0.6nm,0.3s						
KAPS				Lg	Lg	17 06 43.4	
	1.6nm,0.5s						
KAPS	Kapalarasan	2.72	356	eP	Pb	17 06 09.7	+0.9
	0.6nm,0.3s						
KAPS				eS	Sg	17 06 45.2	-2.0
	3.2nm,0.3s						
BOOM	Boomskoye usch	2.74	270	⇓iP	Pb	17 06 07.1	-2.2
	baz=70						
BOOM				⇓iS	Sb	17 06 41.2	-2.0
	baz=70						
KST	Kastek	2.75	281	Pg	Pb	17 06 09.4	0.0
	4.2nm,0.5s						
KST				Lg	Lg	17 06 45.2	
	6.4nm,0.4s						
KST	Kastek	2.75	281	eP	Pb	17 06 09.4	0.0
	4.2nm,0.5s						
KST				eS	Sb	17 06 45.2	+1.7
	6.4nm,0.4s						
DGS	Degeres	2.93	285	Pg	Pb	17 06 12.0	-0.3
	2.1nm,0.3s						
DGS				Lg	Lg	17 06 50.0	
	10nm,0.4s						
DGS	Degeres	2.93	285	eP	Pb	17 06 12.0	-0.3
	2.1nm,0.4s						
DGS				eS	Sb	17 06 50.0	+1.6
	10nm,0.4s						
TKM2	Tokmak 2	3.01	278	⇑iP	Pb	17 06 10.6	-3.2
	baz=78						
TKM2				⇑iS	Sb	17 06 47.3	-3.5
	baz=78						
ARLS	Aral	4.02	262	⇑iP	Pn	17 06 24.6	+2.7
	baz=62						
ARLS				⇑iS	Sn	17 07 12.1	+2.7
	baz=62						

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*ISCJB **04** 17:07:55.0±0.8, 24°.89N±0°.04×122°.44E±0°.03, h13^{km}±4^{km}, Error ellipse: s-maj=6.6km s-min=4.3km az=26.0*

*TAP **04** 17:07:55.7, 24°.90N×122°.42E, h12^{km}, ML2.6, D*

*JMA **04** 17:07:55.6±0.2, 24°.77N×122°.41E, h11^{km}*

ISC 04 17:07:55.0±1.1**, 24°.86N**±0°.04×**122°.42E**±0°.03**, h13**^{km}±11^{km}**, n21, σ0^{s}37**/36**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.41	221	P	Pb	17 08 04.2	+0.1
	baz=216						
EOS1				eS	Sb	17 08 11.1	+0.9
	baz=216						
TWB1	Santiao Chiao	0.42	291	P	Pg	17 08 03.3	-0.1
	baz=285						
TWB1				S	Sg	17 08 09.0	-0.1
	baz=285						
EGS		0.45	269	eP	Pb	17 08 04.8	0.0
	baz=262						
EGS				eS	Sb	17 08 11.1	-0.3
	baz=262						
TIPB	Shuangxi	0.55	282	eP	Pg	17 08 06.2	+0.3
	baz=277						
TIPB				eS	Sg	17 08 13.7	+0.4
	baz=277						
TWC	Suao	0.58	245	eP	Pg	17 08 06.2	-0.1
	baz=240						
TWC				eS	Sg	17 08 14.3	+0.3
	baz=240						
NWF	Wu-fen Shan	0.62	290	eP	Pg	17 08 07.4	+0.2
	baz=286						
NWF				eS	Sg	17 08 15.9	+0.5
	baz=286						
WFSB	Wu-fen Shan	0.62	290	P	Pg	17 08 07.6	+0.4
	baz=286						
WFSB				eS	Sb	17 08 16.2	-0.2
	baz=286						
JYNG	Yonagunijimaku	0.62	130	P	Pg	17 08 07.0	-0.2
JYNG				eS	Sg	17 08 15.2	-0.2
TWE	Neicheng	0.70	259	eP	Pg	17 08 08.5	-0.2
	baz=254						
TWE				eS	Sg	17 08 17.9	0.0
	baz=254						
YM07	YM07	0.79	294	eP	Pg	17 08 10.0	-0.4
	baz=290						
YM07				eS	Sg	17 08 20.7	-0.2
	baz=290						
ENTT	Nioudou	0.81	255	eP	Pg	17 08 10.8	+0.1
	baz=251						
ENTT				eS	Sb	17 08 22.1	+0.3
	baz=251						
NHDH	Xindian Distri	0.82	278	eP	Pb	17 08 11.3	+0.1
	baz=274						
NHDH				eS	Sg	17 08 21.6	-0.1
	baz=274						
YM08	YM08	0.82	294	eP	Pg	17 08 10.7	-0.3
	baz=290						
YM01	YM01	0.83	291	eP	Pg	17 08 10.5	-0.5
	baz=287						
YM01				eS	Sg	17 08 22.0	+0.1
	baz=287						
YM11	YM11	0.83	292	eP	Pg	17 08 11.4	+0.3
	baz=289						

PCYT	Pengchaiyu	0.83	338	*e*P	Pg	17 08 11.2	+0.1
	baz=337						
YM05	YM05	0.84	292	*e*P	Pg	17 08 11.0	-0.3
	baz=288						
YM10	YM10	0.84	291	*e*P	Pg	17 08 10.6	-0.7
	baz=288						
YHNB	Yeheng	0.97	259	*e*P	Pg	17 08 13.2	-0.5
	baz=256						
YHNB				*e*S	Sg	17 08 25.7	-0.8
	baz=256						
ETLH	Xiulin Townshi	1.07	233	*e*P	Pb	17 08 15.6	+0.1
	baz=230						
ETLH				*e*S	Sn	17 08 30.5	-0.3
	baz=230						
IRIF	Iriomote-Funau	1.30	113	P	Pb	17 08 19.5	+0.2

IDC 04 17:09:00.1±6.9**, 18°.73S×173°.21W, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/32**, mbtmp3.7**/4**, Error ellipse: s-maj=291.2km s-min=34.9km az=144.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	38.19	261	P	P	17 16 22.4	+0.6
	6.0nm,1.1s,baz=127,slow=5.1,SNR=3.1						
ASAR	Alice Springs	49.33	255	P	P	17 17 50.6	-0.9
	0.2nm,0.7s,baz=87,slow=9.7,SNR=4.1						
WRA	Warramunga Arr	49.34	259	P	P	17 17 51.5	-0.2
	0.2nm,0.4s,baz=96,slow=8.2,SNR=11						
ILAR	Eielson Array	85.66	11	P	P	17 21 40.3	0.0
	0.5nm,1.0s,baz=201,slow=4.8,SNR=3.2						

MEX 04 17:23:18.8±0.3**, 15°.99N×98°.31W, h2^{km}, MD3.8, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.44	23	*e*P	Pg	17 23 26.8	-0.5
PNIG				*i* S	Sg	17 23 33.4	+0.3
VHO	Vista Hermosa	1.86	54	*e*P	Pn	17 23 48.2	-3.7
VHO				*i* S	Sn	17 24 11.7	-4.4

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*KRNET **04** 17:33:36.6±0.1, 42°.20N×78°.45E, h15^{km}, mb3.0*

*SOME **04** 17:33:37.2, 42°.23N×78°.42E, h10^{km}*

*NNC **04** 17:33:38.8±1.0, 42°.34N×78°.44E, h0^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=8.0km s-min=3.0km az=168.0*

ISC 04 17:33:36.9±1.2**, 42°.23N**±0°.03×**78°.43E**±0°.02**, h2^{km}**±10^{km}**, n64, σ0^{s}.97**/121**, 29C-20D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.26	354	⇑*i*P	Pg	17 33 42.3	+0.4
	baz=54						
PRZ				⇑*i*S	Sg	17 33 46.5	+1.3
	baz=54						
TARG	Taragay, Kyrgy	0.68	224	⇑*i*P	Pg	17 33 49.4	-0.6
	baz=26						
TARG				⇑*i*S	Sg	17 33 58.4	-0.4
	baz=26						
SATY	Saty	0.83	359	*e*P	Pg	17 33 53.0	+0.1
	9.0nm,0.1s						
SATY				*e*S	Sg	17 34 04.3	+0.6
	60nm,0.1s						
KDJ	Kajisay	0.94	264	⇑*i*P	Pg	17 33 55.3	+0.5
	baz=66						
KDJ				⇑*i*S	Sg	17 34 08.0	+1.0
	baz=66						
UZB	Uzynbulak	1.02	25	P	Pg	17 33 56.0	-0.4
UZB				S	Sg	17 34 09.7	+0.1
UZB	Uzynbulak	1.02	25	*e*P	Pg	17 33 56.0	-0.4
	baz=24						
UZB				*e*S	Sg	17 34 09.7	+0.1
	baz=24						
UZB	Uzynbulak	1.02	25	*e*P	Pg	17 33 56.0	-0.4
	1.1nm,0.1s						
UZB				*e*S	Sg	17 34 09.7	+0.1
	15nm,0.1s						
KURS	Kuram	1.27	351	*e*P	Pn	17 34 01.1	-0.7
	baz=51						
KURS				*e*S	Sn	17 34 18.6	-0.9
	baz=51						
KURS	Kuram	1.27	351	*e*P	Pn	17 34 01.1	-0.7
	1.8nm,0.1s						
KURS				*e*S	Sn	17 34 18.6	-0.9
	3.3nm,0.4s						
PDGK	Podgornoye	1.35	35	P	Pn	17 34 02.1	-0.8
	1.5nm,0.2s						
PDGK				S	Sn	17 34 20.0	-1.5
	4.6nm,0.3s						
PDGK	Podgornoye	1.35	35	⇓P	Pn	17 34 01.7	-1.1
	0.9nm,0.4s						
PDGK				⇑S	Sb	17 34 19.5	-1.2
	6.1nm,0.7s						
PDGK	Podgornoye	1.35	35	⇑*i*P	Pn	17 34 01.9	-1.0
	baz=34						
PDGK				⇑*i*S	Sn	17 34 20.1	-1.3
	baz=34						
TNSS	Tian-Shan	1.36	307	P	Pn	17 34 02.7	-0.5
	4.3nm,0.2s						
TNSS				S	Sb	17 34 20.6	-0.8
	13nm,0.3s						
TNSS	Tian-Shan	1.36	307	*e*P	Pn	17 34 02.8	-0.5
	baz=7.0						
TNSS				*e*S	Sb	17 34 20.6	-0.8
	baz=7.0						
TNSS	Tian-Shan	1.36	307	*e*P	Pn	17 34 02.8	-0.5
	4.3nm,0.1s						
TNSS				*e*S	Sb	17 34 20.6	-0.8
	13nm,0.3s						
MDOK	Medeo	1.39	313	⇑P	Pn	17 34 02.8	-0.6
	2.1nm,0.6s						
MDOK				S	Sn	17 34 21.2	-1.2
	16nm,0.9s						
MDOK	Medeo	1.39	313	Pg	Pb	17 34 03.1	-0.5
	8.2nm,0.2s						
MDOK				Lg	Lg	17 34 21.5	
	19nm,0.4s						
MDOK	Medeo	1.39	313	⇓*e*P	Pb	17 34 03.1	-0.5
	baz=13						
MDOK				⇓*e*S	Sn	17 34 21.4	-0.9
	baz=13						
MDOK	Medeo	1.39	313	⇓*e*P	Pb	17 34 03.1	-0.5
	8.2nm,0.2s						
MDOK				*e*S	Sn	17 34 21.4	-0.9
	19nm,0.4s						
KOTS	Kotyrbulak	1.40	316	P	Pb	17 34 03.5	-0.3
	7.4nm,0.2s						
KOTS				S	Sg	17 34 22.2	+0.3
	14nm,0.3s						
KOTS	Kotyrbulak	1.40	316	⇓*e*P	Pb	17 34 03.5	-0.3
	baz=17						
KOTS				⇓*e*S	Sg	17 34 22.1	+0.3
	baz=17						
KOTS	Kotyrbulak	1.40	316	⇓*e*P	Pb	17 34 03.5	-0.3
	7.4nm,0.2s						
KOTS				*e*S	Sg	17 34 22.2	+0.3
	14nm,0.3s						
IZV	Izvestkoviy	1.57	302	P	Pb	17 34 06.6	-0.1
	11nm,0.2s						
IZV				S	Sg	17 34 27.4	+0.1
	60nm,0.2s						
IZV	Izvestkoviy	1.57	302	⇑*e*P	Pb	17 34 06.6	-0.1
	baz=2.0						
IZV				⇑*e*S	Sg	17 34 27.4	+0.1
	baz=2.0						
IZV	Izvestkoviy	1.57	302	⇑*e*P	Pb	17 34 06.6	-0.1
	11nm,0.2s						
IZV				*e*S	Sg	17 34 27.4	+0.1
	60nm,0.2s						
ULHL	Ulahol	1.63	271	⇓*i*P	Pb	17 34 07.0	-0.8
	baz=72						
ULHL				⇓*i*S	Sg	17 34 29.1	-0.1
	baz=72						
MTBS	Maitube	1.73	302	*e*P	Pb	17 34 08.7	-0.7
	baz=3.0						
MTBS				*e*S	Sb	17 34 31.6	-0.1
	baz=3.0						
MTBS	Maitube	1.73	302	*e*P	Pb	17 34 08.7	-0.7
	5.0nm,0.2s						
MTBS				*e*S	Sb	17 34 31.6	-0.1
	40nm,0.3s						
MNBS	Baschi	1.85	359	P	Pb	17 34 11.3	-0.2
MNBS				S	Sb	17 34 35.2	0.0
MNBS	Baschi	1.85	359	⇓*e*P	Pb	17 34 11.5	0.0
	baz=1.0						
MNBS				⇓*e*S	Sg	17 34 35.9	-0.5
	baz=1.0						
MNBS	Baschi	1.85	359	⇓*e*P	Pb	17 34 11.5	0.0
	13nm,0.2s						
MNBS				*e*S	Sg	17 34 35.9	-0.5
	32nm,0.3s						
KTMS	Ketmen	1.86	49	P	Pb	17 34 11.3	-0.4
KTMS				S	Sb	17 34 35.6	0.0
KTMS	Ketmen	1.86	49	*e*P	Pb	17 34 11.3	-0.4
	baz=47						
KTMS				*e*S	Sb	17 34 35.6	0.0
	baz=47						
KTMS	Ketmen	1.86	49	*e*P	Pb	17 34 11.3	-0.4
	12nm,0.1s						
KTMS				*e*S	Sb	17 34 35.6	0.0
	25nm,0.4s						
BOOM	Boomskoye usch	1.87	279	⇑*i*P	Pb	17 34 11.1	-0.7
	baz=80						
BOOM				⇑*i*S	Sg	17 34 36.3	-0.5
	baz=80						
CHKK	Chushkaly	1.94	327	Pg	Pb	17 34 12.9	-0.1
	20nm,0.2s						
CHKK				Lg	Lg	17 34 38.5	
	45nm,0.4s						
CHKK	Chushkaly	1.94	327	*e*P	Pb	17 34 12.9	-0.1
	baz=28						
CHKK				*e*S	Sg	17 34 38.5	-0.7
	baz=28						
CHKK	Chushkaly	1.94	327	*e*P	Pb	17 34 12.9	-0.1
	20nm,0.2s						
CHKK				*e*S	Sg	17 34 38.5	-0.7
	45nm,0.4s						
KTBS	Karatobe	1.96	320	Pg	Pb	17 34 13.3	0.0
KTBS				Lg	Lg	17 34 39.1	
KTBS	Karatobe	1.96	320	*e*P	Pb	17 34 13.4	0.0
	baz=17						
KTBS				*e*S	Sg	17 34 39.1	-0.8
	baz=17						
KTBS	Karatobe	1.96	320	*e*P	Pb	17 34 13.4	0.0
	16nm,0.3s						
KTBS				*e*S	Sg	17 34 39.1	-0.8
	27nm,0.5s						
NRN	Naryn	1.98	247	⇑*i*P	Pb	17 34 13.1	-0.8
	baz=48						
NRN				⇑*i*S	Sb	17 34 39.7	+0.5
	baz=48						
KST	Kastek	2.00	295	⇑*i*P	Pb	17 34 14.3	+0.3
	baz=95						
KST				⇓*i*S	Sg	17 34 40.5	-0.5
	baz=95						
KST	Kastek	2.00	295	⇑*i*P	Pb	17 34 14.3	+0.3
	6.8nm,0.4s						
KST				⇓*i*S	Sg	17 34 40.5	-0.5
	42nm,0.9s						
ARXS	Arharly	2.03	348	Pg	Pb	17 34 14.7	+0.1
	8.7nm,0.2s						
ARXS				Lg	Lg	17 34 41.8	
	22nm,0.3s						
ARXS	Arharly	2.03	348	*e*P	Pb	17 34 14.7	+0.1
	8.7nm,0.2s						
ARXS				*e*S	Sg	17 34 41.8	-0.4
	22nm,0.3s						
TKM2	Tokmak 2	2.21	289	⇓Pn	Pb	17 34 17.8	+0.1
	0.7nm,0.3s						
TKM2				⇑Sn	Sg	17 34 47.0	-0.8
	12nm,0.5s						
TKM2	Tokmak 2	2.21	289	⇑*i*P	Pb	17 34 16.7	-0.9
	baz=90						
TKM2				⇑*i*S	Sb	17 34 44.9	-0.6
	baz=90						
DGS	Degeres	2.21	298	Pg	Pb	17 34 17.6	0.0
	3.5nm,0.2s						
DGS				Lg	Lg	17 34 46.7	
	26nm,0.4s						
DGS	Degeres	2.21	298	*e*P	Pb	17 34 17.6	0.0
	baz=99						
DGS				*e*S	Sg	17 34 46.8	-1.0
	baz=99						
DGS	Degeres	2.21	298	*e*P	Pb	17 34 17.6	0.0
	3.5nm,0.2s						
DGS				*e*S	Sg	17 34 46.7	-1.0
	26nm,0.4s						
KUU	Kurty	2.27	318	Pg	Pb	17 34 18.5	0.0
	4.7nm,0.3s						
KUU				Lg	Lg	17 34 48.3	
	11nm,0.3s						
KUU	Kurty	2.27	318	*e*P	Pb	17 34 18.5	0.0
	baz=18						
KUU				*e*S	Sg	17 34 48.3	-1.3
	baz=18						
KUU	Kurty	2.27	318	*e*P	Pb	17 34 18.5	0.0
	4.7nm,0.3s						
KUU				*e*S	Sg	17 34 48.3	-1.3
	11nm,0.3s						
DJR	Jarkent	2.33	25	⇑*i*P	Pb	17 34 19.8	+0.2
	1.1nm,0.2s						
DJR				*e*S	Sg	17 34 50.5	-1.1
	17nm,0.2s						
KZA	Kyzart	2.37	267	⇓*i*P	Pn	17 34 18.4	+1.2
	baz=68						
KZA				⇓*i*S	Sb	17 34 49.1	-1.3
	baz=68						
KBK	Karagaybulak	2.62	281	⇑*e*P	Pb	17 34 22.2	-2.4
	baz=81						
KBK				⇑*i*S	Sb	17 34 55.3	-1.9
	baz=81						
TDK	Taldyqorghan	2.77	360	*e*P	Pb	17 34 27.5	+0.3
	6.1nm,0.1s						
TDK				*e*S	Sb	17 35 03.4	+1.8
	22nm,0.3s						
AAK	Ala-Archa	2.94	279	⇑Pn	Pb	17 34 29.3	-0.8
	1.5nm,0.6s						
AAK				⇑Lg	Lg	17 35 07.5	
	7.9nm,0.6s						
ARLS	Aral	3.08	265	⇓*i*P	Pn	17 34 27.7	+1.0
	baz=65						
ARLS				⇓*i*S	Sn	17 35 05.8	+1.5
	baz=65						
KAPS	Kapalarasan	3.13	12	*e*P	Pb	17 34 33.6	+0.4
	0.9nm,0.3s						
KAPS				*e*S	Sb	17 35 14.2	+2.3
	13nm,0.3s						
MRKS	Merke	3.89	279	*e*P	Pb	17 34 47.2	+1.0
	baz=80						
MRKS				*e*S	Sb	17 35 37.6	+3.9
	baz=80						
MRKS	Merke	3.89	279	*e*P	Pb	17 34 47.2	+1.0
	1.3nm,0.4s						
MRKS				*e*S	Sb	17 35 37.7	+3.9
	3.8nm,0.4s						
MK31	Makanchi Array	5.33	30	⇑Pn	Pn	17 35 00.6	+3.1
	0.1nm,0.4s,baz=211,slow=14,SNR=9.8						
MK31				⇑Sn	Sn	17 36 01.4	+1.9
	0.3nm,0.5s,baz=212,slow=25,SNR=3.7						
MK31				⇓Lg	Lg	17 36 18.9	
	0.3nm,0.3s,baz=212,slow=27,SNR=4.6						

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*IDC **04** 17:47:47.0±0.5, 37°.39N×70°.30E, h0^{km}, mb4.1/27, mb1 4.3/34, mb1mx4.2/58, mbtmp4.2/34, ML4.2/7, MS3.9/18, Ms1 3.9/18, ms1mx3.7/45, Error ellipse: s-maj=11.4km s-min=10.0km az=179.0*

*MOS **04** 17:47:49.5±1.5, 37°.59N×70°.31E, h21^{km}, mb4.6/41, Error ellipse: s-maj=5.9km s-min=4.1km az=86.8*

*BJI **04** 17:47:49.2, 37°.49N×70°.49E, h5^{km}, mB4.9/23, mb4.5/36, ML5.1/2, Ms4.5/21, Ms7 4.2/19*

*ISCJB **04** 17:47:50.1±0.2, 37°.49N±0°.02×70°.24E±0°.03, h30^{km}, mb4.3/85, MS3.9/18, Error ellipse: s-maj=3.4km s-min=2.9km az=22.9*

*NNC **04** 17:47:51.1±2.7, 37°.73N×70°.04E, h0^{km}, mb5.2, mpv4.8, Error ellipse: s-maj=22.5km s-min=17.9km az=159.0*

*NEIC **04** 17:47:52.1±0.3, 37°.48N×70°.26E, h35^{km}, mb4.6/25, Error ellipse: s-maj=6.7km s-min=4.9km az=181.0*

ISC 04 17:47:51.7±0.3**, 37°.47N**±0°.03×**70°.11E**±0°.03**, h30^{km}, n269, σ2^{s}.05**/269**, mb4.4**/85**, MS3.9**/17**, 22C-19D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHGR	Chuyangaron	1.40	328	*e*Pn	Pn	17 48 14.6	-0.7
GAR	Garm	1.54	6	*e*Pn	Pn	17 48 15.9	-1.2
GAR	Garm	1.54	6	*e*PG	Pn	17 48 15.9	-1.2
BTK	Batken	2.64	12	*e*Pn	Pb	17 48 35.4	-2.9
BTK	Batken	2.64	12	*e*PN	Pb	17 48 35.4	-2.9
KBL	Kabul	3.05	197	*e*Pn	Pb	17 48 43.5	-1.9
KBL	Kabul	3.05	197	*e*PN	Pb	17 48 43.5	-1.9
SFK	Sufi-Kurgan	3.67	45	⇑Pg	Pb	17 48 54.3	-1.6
	889nm,0.7s						
SFK				⇓Lg	Lg	17 49 41.9	
	782nm,0.6s						
SFK	Sufi-Kurgan	3.67	45	Pg	Pb	17 48 54.8	-1.2
SFK				Lg	Lg	17 49 42.6	
TAS	Tashkent	3.91	351	PN	Pn	17 48 46.7	-2.9
CEP	Cherat	3.92	158	P	Pn	17 48 54.9	+4.9
ARSB	Arslanbob	4.45	29	*e*Pn	Pn	17 48 56.3	-0.8
CHCP	Chirah Chowk	4.59	145	P	Pn	17 49 03.9	+4.8
NIL	Nilore	4.59	145	*e*Pn	Pn	17 49 03.5	+4.4
NIL	Nilore	4.59	145	*e*PN	Pn	17 49 03.5	+4.4
THW	Thamme Wali	4.85	164	P	Pn	17 49 06.7	+4.0
KSH	Kashi	5.03	64	P	Pn	17 49 02.1	-3.1
KSH				sP	Pb	17 49 07.0	-12
KSH				S	Sn	17 49 55.6	-6.8
KSH				LR	LR		
	comp=N,3µm,1.0s						
KSH				LR	LR		
	comp=E,2µm,0.8s						
KSH				LR	LR		
	comp=Z,9µm,5.4s						
MNAS	Manas	5.34	19	⇑Pn	Pn	17 49 09.7	+0.3
	comp=Z,31nm,0.5s						
MNAS				⇑Pg	Pb	17 49 25.1	+0.8
	comp=Z,132nm,0.6s						
MNAS				⇑Sn	Sn	17 50 10.6	+0.7
	comp=Z,137nm,0.5s						
MNAS				⇑Lg	Lg	17 50 34.4	
	comp=Z,424nm,0.9s						
MNAS	Manas	5.34	19	Pg	Pb	17 49 25.5	+1.2
	comp=Z,77nm,0.5s						
MNAS				Lg	Lg	17 50 36.1	
	comp=Z,109nm,0.7s						
MNAS	Manas	5.34	19	PN	Pn	17 49 09.0	-0.4
AML	Almayashu	5.41	30	P	Pn	17 49 10.6	-0.1
	SNR=65						
DZA	Taraz	5.50	9	Pg	Pb	17 49 28.1	+1.3
DZA				Lg	Lg	17 50 40.3	
KK31	Karatay Array	5.63	3	*e*Pn	Pn	17 49 11.4	-2.0
KK31	Karatay Array	5.63	3	Pn	Pn	17 49 13.2	-0.2
	comp=Z,14nm,0.5s,baz=186,slow=14,SNR=189						
KK31				Pg	Pb	17 49 30.6	+1.3
	comp=Z,52nm,0.4s,baz=181,slow=16,SNR=16						
KK31				⇓Lg	Lg	17 50 43.5	
	comp=Z,572nm,0.8s,baz=191,slow=29						
KK31	Karatay Array	5.63	3	*e*PN	Pn	17 49 11.4	-2.0
KKAR	Karatay Array	5.63	3	*e*Pn	Pn	17 49 11.8	-1.6
KKAR	Karatay Array	5.63	3	*e*PN	Pn	17 49 11.8	-1.6
MRKS	Merke	5.78	23	Pg	Pb	17 49 33.9	+2.1
	comp=Z,180nm,0.6s						
UCH	Uchtor	5.83	34	P	Pn	17 49 16.7	+0.2
	SNR=58						
EKS2	Erkin-Say	5.90	27	P	Pn	17 49 17.6	+0.5
	SNR=50						
SARP	Sargodha	5.92	158	P	Pn	17 49 20.2	+2.9
NRN	Naryn	6.04	47	*e*Pn	Pn	17 49 18.3	-0.9
NRN	Naryn	6.04	47	*e*PN	Pn	17 49 18.3	-0.9
KZA	Kyzart	6.07	39	P	Pn	17 49 21.2	+1.5
	SNR=30						
AAK	Ala-Archa	6.16	32	P	Pn	17 49 21.6	+0.8
	SNR=58						
AAK	Ala-Archa	6.16	32	*e*Pn	Pn	17 49 20.4	-0.3
AAK				*e*Pg	Pb	17 49 39.1	+0.9
AAK				*e*Sn	Sn	17 50 34.7	+4.5
AAK				Lg	Lg	17 51 02.9	
AAK	Ala-Archa	6.16	32	⇓Pn	Pn	17 49 22.3	+1.6
	comp=Z,26nm,0.3s						
AAK				⇓Pg	Pb	17 49 40.7	+2.4
	comp=Z,125nm,0.9s						
AAK				⇑Sn	Sn	17 50 30.0	-0.2
	comp=Z,210nm,0.9s						
AAK				⇓Lg	Lg	17 50 59.0	
	comp=Z,615nm,1.2s						
AAK	Ala-Archa	6.16	32	*c i*PN	Pn	17 49 21.5	+0.8
AAK				pmax	pmax		
	comp=Z,24nm,0.4s						
AAK	Ala-Archa	6.16	32	Pn	Pn	17 49 21.5	+0.8
	comp=Z,14nm,0.3s,baz=183,slow=5.9,SNR=155						
AAK				Pg	Pb	17 49 39.1	+0.9
	comp=Z,18nm,0.3s,baz=196,slow=15,SNR=11						
AAK				Sn	Sn	17 50 34.7	+4.5
	comp=Z,9.9nm,0.3s,baz=133,slow=19,SNR=4.4						
AAK				Lg	Lg	17 51 02.8	
	comp=Z,16nm,0.3s,baz=348,slow=18,SNR=4.6						
FRU1	Bishkek	6.36	32	*e*Pn	Pn	17 49 24.6	+1.2
FRU1	Bishkek	6.36	32	*e*PN	Pn	17 49 24.6	+1.2
KBK	Karagaybulak	6.37	34	P	Pn	17 49 24.7	+1.1
	SNR=43						
FRU	Bishkek	6.37	31	*e*PN	Pn	17 49 24.0	+0.5
FRU				*e*		17 49 40.0	
FRU				pmax	pmax		
	comp=Z,660nm,1.6s						
CHMS	Chumysh	6.56	31	P	Pn	17 49 26.5	+0.4
	SNR=46						
USP	Ospenovka	6.69	29	P	Pn	17 49 28.8	+0.9
	SNR=29						
ULHL	Ulahol	6.71	43	P	Pn	17 49 28.6	+0.4
	SNR=17						
TKM2	Tokmak 2	6.87	36	P	Pn	17 49 31.8	+1.2
	SNR=25						
TKM2	Tokmak 2	6.87	36	⇓Pn	Pn	17 49 30.7	+0.2
	comp=Z,29nm,0.6s						
KDJ	Kajisay	7.16	47	*e*Pn	Pn	17 49 33.1	-1.3
KDJ	Kajisay	7.16	47	*e*PN	Pn	17 49 33.1	-1.3
DHRM	DHARAMSHALA	7.28	134	*e*P	Pn	17 49 37.9	+1.7
DHRM				*e*S	Sn	17 50 48.9	-9.0
DHRM				IAML		17 51 07.6	
	comp=N,415nm,0.6s						
DHRM				IAML		17 51 08.2	
	comp=E,652nm,1.6s						
KNDC	Almaty	7.77	40	⇓Pn	Pn	17 49 44.2	+1.5
	comp=E,112nm,1.3s						
KNDC				⇑Lg	Lg	17 51 53.3	
	comp=E,550nm,1.3s						
MDOK	Medeo	7.77	41	⇓Pn	Pn	17 49 43.1	+0.3
	comp=E,33nm,0.6s						
MDOK	Medeo	7.77	41	P	Pn	17 49 43.1	+0.3
SMLA	Simla	8.61	135	*e*P	Pn	17 49 55.7	+1.6
SMLA				*e*S	Sn	17 51 21.7	-8.5
SMLA				IAML		17 51 44.2	
	comp=E,197nm,0.3s						
SMLA				IAML		17 51 45.3	
	comp=N,195nm,0.2s						
PDGK	Podgornoye	9.24	48	⇓Lg	Lg	17 52 38.9	
	comp=N,137nm,1.2s						
PDGK	Podgornoye	9.24	48	P	Pn	17 49 59.0	-3.9
GEYT	Alibeck	9.52	276	Pn	Pn	17 50 06.0	-0.7
	comp=N,6.9nm,0.3s,baz=95,slow=8.7,SNR=48						
GEYT				Sn	Sn	17 51 47.0	-5.6
	comp=N,0.7nm,0.3s,baz=100,slow=16,SNR=2.3						
GEYT				LR	LR	17 55 00.1	
	comp=N,777nm,19.3s,baz=90,slow=45						
GYA0B	ALIBECK ARRAY	9.52	276	*e*Pn	Pn	17 50 04.5	-2.2
DDI	Dehra Dun	9.71	135	*e*P	Pn	17 50 11.1	+1.7
DDI				*e*S	Sn	17 51 46.4	-11
DDI				IAML		17 52 13.7	
	comp=E,273nm,0.0s						
NDI	New Delhi	10.59	144	*e*P	Pn	17 50 20.0	-1.4
NDI				*e*x	x	17 52 22.5	
OTUK	Ortayu	10.89	8	⇑Pn	Pn	17 50 24.1	-1.3
	comp=E,7.1nm,0.5s						
OTUK				⇑Lg	Lg	17 53 30.8	
	comp=E,285nm,1.4s						
OTUK	Ortayu	10.89	8	P	Pn	17 50 23.9	-1.5
MAKZ	Makanchi	12.82	40	*e*Pn	Pn	17 50 49.7	-2.1
MAKZ	Makanchi	12.82	40	*e*P	Pn	17 50 49.7	-2.1
MK01	Makanchi Array	12.96	40	*e*Pn	Pn	17 50 51.4	-2.2
MK31	Makanchi Array	12.97	40	*e*Pn	Pn	17 50 52.4	-1.4
MK31	Makanchi Array	12.97	40	*e*P	Pn	17 50 52.4	-1.4
MK32	Makanchi Array	12.97	40	*e*Pn	Pn	17 50 52.0	-1.8
MKAR	Makanchi Array	12.97	40	*i* P	Pn	17 50 52.5	-1.3
MKAR				pmax	pmax		
	comp=Z,16nm,0.8s						
MKAR	Makanchi Array	12.97	40	Pn	Pn	17 50 52.0	-1.8
	comp=Z,0.7nm,0.3s,baz=227,slow=12,SNR=91						
MKAR				Lg	Lg	17 54 35.5	
	comp=Z,0.2nm,0.3s,baz=232,slow=31,SNR=3.0						
MKAR				LR	LR	17 55 49.5	
	comp=Z,580nm,21.3s,baz=238,slow=37						
ABKAR	Akbulak array	13.89	331	*e*Pn	Pn	17 51 02.9	-3.5
PYUN	Piuthan	14.29	127	*e*P	Pn	17 51 08.8	-3.4
	comp=Z,59nm,0.4s						
KURBB	Kurchatov Arra	14.46	22	Pn	Pn	17 51 09.3	-4.8
	comp=Z,0.2nm,0.3s,baz=210,slow=12,SNR=26						

Code	Station	Dist	Az	Phase	ISC phase	Time	Res
KURBB				Sn	Sn	17 53 58.5	+5.2
	comp=Z,0.1nm,0.3s,baz=206,slow=29,SNR=3.4						
KURBB				Lg	Lg	17 55 26.0	
	comp=Z,0.1nm,0.3s,baz=211,slow=32,SNR=5.3						
KURK	**Kurchatov**	14.57	22	*e*Pn	Pn	17 51 09.3	-6.2
KURK				Sn	Sn	17 53 58.5	+2.6
KURK	**Kurchatov**	14.57	22	⇑*i*P	Pn	17 51 10.4	-5.2
DANN	**Dangsing**	14.62	125	*e*P	Pn	17 51 13.5	-3.2
	comp=Z,55nm,0.4s						
WMQ	**Urumqi**	14.77	59	*e*P	Pn	17 51 18.9	+0.5
WMQ				sP	P	17 51 28.3	+4.2
WMQ				S	Sn	17 54 03.9	+2.9
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,59nm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,9.1s						
WMQ				LR	LR		
	comp=Z,2µm,9.1s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
WMQ	**Urumqi**	14.77	59	*e*Pn	Pn	17 51 15.0	-3.4
WMQ	**Urumqi**	14.77	59	*e*P	Pn	17 51 15.0	-3.4
KOLN	**Koldanda**	14.91	127	*e*P	Pn	17 51 17.0	-3.5
	comp=Z,49nm,0.4s						
BHPL	**Bhopal**	15.51	154	*e*P	Pn	17 51 27.8	-0.5
BHPL				IAmb	IAmb	17 51 35.6	
	comp=Z,20nm,0.9s						
BVAR	**Borovoye Array**	15.56	1	Pn	Pn	17 51 25.5	-3.2
	comp=Z,1.7nm,0.3s,baz=163,slow=13,SNR=47						
BVAR				Lg	Lg	17 56 02.5	
	comp=Z,0.4nm,0.3s,baz=158,slow=23,SNR=3.3						
BVAR				LR	LR	17 57 57.5	
	comp=Z,426nm,19.2s,baz=202,slow=39						
AKTO	**Aktyubinsk**	15.59	330	Pn	Pn	17 51 28.1	-0.9
	comp=Z,1.0nm,0.3s,baz=143,slow=18,SNR=13						
AKTO				Sn	Sn	17 54 19.9	-0.8
	comp=Z,0.7nm,0.3s,baz=342,slow=20,SNR=4.0						
AKTO				Lg	Lg	17 56 05.1	
	baz=95,slow=22,SNR=4.1						
AKTO				LR	LR	17 57 15.6	
	comp=Z,377nm,19.7s,baz=322,slow=36						
BRVK	**Borovoye**	15.59	0	*e*Pn	Pn	17 51 26.1	-3.0
	comp=Z,21nm,0.7s						
BRVK	**Borovoye**	15.59	0	*c i*P	Pn	17 51 25.9	-3.2
KKN	**Kakani**	16.00	123	*e*P	Pn	17 51 30.9	-3.8
	comp=Z,60nm,0.6s						
DMN	**Daman**	16.00	124	*e*P	Pn	17 51 30.6	-4.2
	comp=Z,34nm,0.4s						
PKIN	**Phulchoki**	16.21	123	*e*P	Pn	17 51 33.3	-4.2
	comp=Z,37nm,0.4s						
PKI	**Pulchoki**	16.23	123	*e*P	Pn	17 51 33.2	-4.6
	comp=Z,60nm,0.6s						
JIRN	**Jiri**	16.69	121	*e*P	Pn	17 51 39.3	-4.4
	comp=Z,107nm,0.4s						
RAMN	**Ramite**	17.43	122	*e*P	Pn	17 51 48.8	-4.0
	comp=Z,122nm,0.6s						
DGZ	**Jazzator, Alta**	17.47	40	⇓*e*P	Pn	17 51 49.3	-3.7
MAK	**Makhachkala**	18.09	295	*e*P	Pn	17 51 58.6	-2.0
MAK				*e*S	Sn	17 55 22.7	+1.2
MAK				pmax	pmax		
	comp=Z,157nm,1.0s						
MAK				MLR	MLR		
	comp=Z,539nm,12.0s						
GNBR	**Gunib**	18.40	293	⇓*i*P	Pn	17 52 05.3	+0.8
GNBR				pmax	pmax		
	comp=Z,36nm,0.8s						
DVE	**Vedeno**	19.09	294	⇑*e*P	Pn	17 52 15.2	+2.4
DVE				pmax	pmax		
	comp=Z,16nm,0.6s						
LSA	**Lhasa**	19.14	108	*e*P	P	17 52 09.4	-3.5
	comp=Z,13nm,0.7s						
LSA	**Lhasa**	19.14	108	*e*P	P	17 52 09.4	-3.5
LSA				pmax	pmax		
	comp=Z,13nm,0.7s						
POO	**Poona**	19.15	169	*e*P	P	17 52 13.4	+0.8
POO				*e*P	Pn	17 52 14.0	+0.3
BOK	**Bokaro**	19.20	131	*e*P	Pn	17 52 14.4	+0.2
BOK				IAmb	IAmb	17 52 16.1	
	comp=Z,14nm,0.7s						
ZAA0	**Zalesovo Array**	19.35	27	*e*P	P	17 52 12.2	-2.3
	comp=Z,33nm,0.8s						
ZALV	**Zalesovo Beam**	19.35	27	*e*P	P	17 52 12.1	-2.4
ZALV	**Zalesovo Beam**	19.35	27	*i* P	P	17 52 12.6	-1.9
ZALV				pmax	pmax		
	comp=Z,33nm,0.7s						
ZALV	**Zalesovo Beam**	19.35	27	P	P	17 52 12.3	-2.2
	comp=Z,2.8nm,0.3s,baz=220,slow=10,SNR=63						
ZALV				LR	LR	18 00 11.7	
	comp=Z,451nm,20.7s,baz=250,slow=38						
ZAA1	**Zalesovo Array**	19.35	27	*e*P	P	17 52 12.3	-2.2
GROC	**Groznyy**	19.37	295	⇑*e*P	Pn	17 52 17.8	+1.7
GROC				pmax	pmax		
	comp=Z,25nm,0.7s						
NAX	**Nakhchivan**	19.38	283	P	Pn	17 52 20.3	+4.0
NVS	**Novosibirsk**	19.55	23	⇑*i*P	P	17 52 15.4	-1.3
NVS				*i*		17 55 49.0	
GNI	**Garni**	19.93	286	*e*P	P	17 52 20.0	-1.1
	comp=Z,26nm,0.9s						
GNI	**Garni**	19.93	286	⇑*e*P	Pn	17 52 25.1	+2.1
GNI				pmax	pmax		
	comp=Z,142nm,2.0s						
GNI	**Garni**	19.93	286	P	Pn	17 52 23.9	+1.0
	comp=Z,5.0nm,0.6s,baz=169,slow=1.4,SNR=9.0						
GNI				LR	LR	18 01 50.0	
	comp=Z,216nm,20.1s,baz=18,slow=42						
TBLG	**Delisi**	19.98	290	*e*P	Pn	17 52 23.4	0.0
	comp=Z,27nm,1.1s						
TBLG	**Delisi**	19.98	290	*e*P	Pn	17 52 23.4	0.0
TBLG				pmax	pmax		
	comp=Z,27nm,1.1s						
SVE	**Sverdlovsk**	20.37	345	⇑*e*P	P	17 52 26.6	+1.0
SVE				pmax	pmax		
	comp=Z,21nm,1.1s						
ARU	**Arti**	20.49	341	*e*P	P	17 52 26.8	-0.1
	comp=Z,53nm,1.1s						
ARU	**Arti**	20.49	341	*d i*P	Pn	17 52 28.4	-0.7
ARU						17 52 44.7	
ARU				S	Sn	17 56 19.1	+0.1
ARU				SS	SnSn	17 56 38.7	+4.9
ARU				pmax	pmax		
	comp=Z,44nm,1.0s						
ZEI	**Tsey**	20.69	293	*e*P	P	17 52 29.6	+0.1
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NCK	**Nalchik**	21.00	295	⇓*e*P	P	17 52 34.4	+1.8
NCK				pmax	pmax		
	comp=Z,69nm,1.1s						
HYB	**Hyderabad**	21.32	157	*i* P	P	17 52 38.0	+1.9
HYB	**Hyderabad**	21.32	157	*e*P	P	17 52 38.0	+1.9
HYB				IAmb	IAmb	17 52 40.1	
	comp=Z,108nm,2.2s						
PYA1	**Pyatigorsk**	21.44	296	⇓*e*P	P	17 52 38.1	+0.8
KBZ	**Khabaz**	21.53	295	P	P	17 52 37.8	-0.4
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	**Khabaz**	21.53	295	P	P	17 52 37.8	-0.4
	comp=Z,7.2nm,0.9s,baz=141,slow=4.5,SNR=10.0						
NEY	**Neytrino**	21.60	294	⇓*i*P	P	17 52 41.3	+2.1
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GOF	**Gofitskoye**	21.64	299	⇓*i*P	P	17 52 41.0	+1.6
GOF				*e*S	Sn	17 56 45.0	-2.1
GOF				pmax	pmax		
	comp=Z,60nm,1.1s						
GOF				smax	smax		
	comp=E,120nm,2.7s						
SHA1	**Shidzhatmaz**	21.71	295	*i* P	P	17 52 41.0	+0.6
KVAR	**Kislovodsk Arr**	21.71	296	P	P	17 52 39.7	-0.6
	comp=E,3.4nm,0.9s,baz=37,slow=23,SNR=3.8						
KIV	**Kislovodsk**	21.71	296	*e*P	P	17 52 39.2	-1.1
	comp=E,25nm,0.7s						
KIV	**Kislovodsk**	21.71	296	*e*P	P	17 52 40.6	+0.3
KIV				pmax	pmax		
	comp=Z,32nm,1.0s						
KIV				MLR	MLR		
	comp=Z,239nm,14.0s						
SIRT	**Sirnak**	21.93	279	*e*P	P	17 52 44.7	+2.0
	comp=Z,62nm,0.8s						
SHL	**Shillong**	21.97	116	*e*P	P	17 52 41.3	-2.0
	comp=Z,29nm,0.8s						
SHL	**Shillong**	21.97	116	*e*P	P	17 52 41.3	-2.0
SHL				pmax	pmax		
	comp=Z,29nm,0.8s						
SHL	**Shillong**	21.97	116	*e*P	P	17 52 42.9	-0.4
SHL				IAmb	IAmb	17 52 45.0	
	comp=Z,23nm,1.0s						
SHL				*e*S	S	17 56 43.2	-1.3
GTA	**Gaotai**	23.30	76	*e*P	P	17 52 57.6	+0.5
GTA				pP	pP	17 53 02.1	-3.7
GTA				sP	sP	17 53 05.0	-4.8
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,220nm,5.2s						
GTA				LR	LR		
	comp=Z,410nm,16.5s						
GTA				LR	LR		
	comp=Z,430nm,11.3s						
GTA				LR	LR		
	comp=Z,550nm,14.4s						
BRDH	**Bariadhala**	23.68	122	LR	LR	18 04 46.5	
	comp=Z,226nm,19.9s,baz=324,slow=43						
VRH	**Novokhopyorsk**	24.32	313	*e*P	P	17 53 09.8	+3.3
VRH				pmax	pmax		
	comp=Z,20nm,1.3s						
VSR	**Storozhevoye**	25.82	312	*e*P	P	17 53 17.9	-2.2
VSR				pmax	pmax		
	comp=Z,40nm,1.1s						
MOY	**Mondy**	25.95	47	*e*P	P	17 53 23.2	+1.8
MOY				pmax	pmax		
	comp=Z,15nm,1.5s						
LPSR	**Galich'ya Gora**	26.46	315	*e*P	P	17 53 28.4	+2.5
LPSR				pmax	pmax		
	comp=Z,40nm,1.8s						
ZAK	**Zakamensk**	26.91	51	*e*P	P	17 53 28.8	-1.3
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LZH	**Lanzhou**	26.98	83	*e*P	P	17 53 29.8	-1.1
LZH				pP	pP	17 53 34.2	-6.1
LZH				sP	sP	17 53 37.6	-6.7
LZH				*e*PP	PnPn	17 54 15.0	+1.3
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,78nm,4.8s						
LZH				LR	LR		
	comp=Z,370nm,12.0s						
LZH				LR	LR		
	comp=Z,370nm,12.3s						
LZH				LR	LR		
	comp=Z,460nm,15.2s						
TLY	**Talaya**	27.51	48	⇓*e*P	P	17 53 35.9	+0.6
TLY	**Talaya**	27.51	48	LR	LR	18 06 12.8	
	comp=Z,358nm,21.8s,baz=260,slow=40						
SIM	**Simferopol'**	27.92	297	P	P	17 53 38.5	-0.5
SIM				pmax	pmax		
	comp=Z,12nm,2.0s						
SONA0	**Songino Array**	28.39	57	*e*P	P	17 53 43.3	0.0
SONM	**Songino Array**	28.39	57	P	P	17 53 43.3	0.0
	comp=Z,0.8nm,0.5s,baz=267,slow=7.5,SNR=8.0						
SONM				LR	LR	18 06 16.6	
	comp=Z,416nm,19.3s,baz=232,slow=39						
SONA1	**Songino Array**	28.39	57	*e*P	P	17 53 43.5	+0.1
BR101	**Keskin Array S**	28.47	286	*e*P	P	17 53 46.5	+2.3
BR131	**Keskin Array S**	28.47	286	*e*P	P	17 53 46.8	+2.6
BRTR	**Keskin Array B**	28.47	286	*ce*P	P	17 53 47.2	+3.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	28.47	286	P	P	17 53 46.5	+2.3
	comp=Z,1.6nm,0.8s,baz=94,slow=7.1,SNR=7.4						
CD2	**Chengdu**	28.49	93	P	P	17 53 43.5	-0.8
CD2				S	S	17 58 30.9	+0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.2s						
CD2				LR	LR		
	comp=Z,730nm,11.4s						
CD2				LR	LR		
	comp=Z,670nm,10.9s						
CD2				LR	LR		
	comp=Z,420nm,12.4s						
MMAI	**Mount Meron Ar**	28.59	272	LR	LR	18 08 10.2	
	comp=Z,128nm,18.6s,baz=350,slow=43						
PRGR	**Permogore**	28.59	336	*e*P	P	17 53 42.1	-2.7
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN	**Obninsk**	28.74	319	*i* P	P	17 53 50.0	+3.8
OBN				*i*		17 54 35.5	
OBN				*i*		17 55 00.6	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
OBN	**Obninsk**	28.74	319	LR	LR	18 06 57.4	
	comp=Z,110nm,18.6s,baz=302,slow=40						
KLMR	**Klimovskoe**	30.29	330	*e*P	P	17 53 59.5	-0.3
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KLMR	**Klimovskoe**	30.29	330	*e*P	P	17 53 59.6	-0.3
KLMR				AMP		17 54 08.9	
	comp=Z,10.0nm,0.9s						
KMI	**Kunming**	30.32	105	P	P	17 54 02.8	+2.0
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,100nm,5.0s						
CHTO	**Chiang Mai**	31.31	118	P	P	17 54 17.0	+7.7
	comp=Z,19nm,1.4s						
XAN	**Xi'an**	31.53	84	P	P	17 54 05.4	-5.8
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,150nm,7.3s						
CMAR	**Chiang Mai Arr**	31.55	119	P	P	17 54 09.9	-1.5
	comp=Z,2.4nm,0.3s,baz=312,slow=8.3,SNR=5.7						
CMAR				LR	LR	18 08 50.8	
	comp=Z,120nm,19.2s,baz=285,slow=40						
PALK	**Pallekele**	31.56	160	*i* P	P	17 54 18.0	+6.4
AKASG	**Malin Array Be**	31.79	308	*ce*P	P	17 54 15.0	+1.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	31.79	308	P	P	17 54 14.1	+1.0
	comp=Z,1.1nm,0.4s,baz=80,slow=7.3,SNR=15						
AKBB	**Malin Array Si**	31.79	308	*e*P	P	17 54 13.1	-0.1
	comp=Z,23nm,1.6s						
KIEV	**Kiev**	31.80	308	*e*P	P	17 54 12.9	-0.3
	comp=Z,24nm,1.7s						
KIEV	**Kiev**	31.80	308	⇑*e*P	P	17 54 14.6	+1.4
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AK11	**Malin Array Si**	31.82	308	*e*P	P	17 54 13.6	+0.2
HHC	**Hu-ho-hao-te**	32.11	71	*e*P	P	17 54 18.0	+1.7
HHC				S	S	17 59 25.3	-1.4
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				LR	LR		
	comp=Z,470nm,11.2s						
HHC				LR	LR		
	comp=Z,530nm,10.4s						
GYA	**Guiyang**	32.71	99	*e*P	P	17 54 22.9	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
UTTA	**Uttaradit**	33.15	118	P	P	17 54 26.5	+1.1
	comp=Z,2.5nm,0.6s						
NRIK	**Noril'sk**	33.31	11	P	P	17 54 26.2	0.0
	comp=Z,4.7nm,0.5s,baz=187,slow=8.3,SNR=4.5						
NRIK				LR	LR	18 08 37.9	
	comp=Z,237nm,18.5s,baz=246,slow=38						
BUR04	**Bucovina Ar. S**	34.17	302	*e*P	P	17 54 35.8	+1.7
BUR08	**Bucovina Ar. S**	34.18	302	*e*P	P	17 54 35.9	+1.6
PBKT	**Sadao Pong**	34.24	119	*e*P	P	17 54 35.4	+0.5
PBKT	**Sadao Pong**	34.24	119	P	P	17 54 36.6	+1.7
	comp=Z,7.3nm,0.9s,comp=Z,1µm						
SRDT	**SRDT**	34.56	124	P	P	17 54 40.0	+2.3
	comp=Z,15nm,1.3s,comp=Z,991nm						
NONG	**Nongkai**	34.79	115	P	P	17 54 44.3	+4.6
	comp=Z,0.2nm,1.0s,comp=Z,123nm						
LVV	**L'vov**	35.02	306	*e*P	P	17 54 43.7	+2.4
BOD	**Bodaibo**	35.06	40	*e*P	P	17 54 40.1	-1.5
BOD				pmax	pmax		
	comp=Z,9.0nm,1.9s						
CHAI	**Chaiyaphum**	35.41	119	P	P	17 54 54.4	+9.4
PHET	**Kaeng Krachan**	35.95	125	P	P	17 54 55.5	+5.9
	comp=Z,4.0nm,1.0s						
SKNT	**Sakolnakorn**	36.10	115	P	P	17 54 51.9	+0.9
	comp=Z,7.9nm,1.1s						
UZH	**Uzhgorod**	36.13	304	*e*P	P	17 54 54.8	+3.9
FIA0	**FINESS Array S**	36.28	326	*e*P	P	17 54 53.0	+1.0
FIA0	**FINESS Array S**	36.28	326	*e*P	P	17 54 53.0	+1.0
FINES	**FINESS Array B**	36.28	326	*i* P	P	17 54 53.9	+1.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	36.28	326	P	P	17 54 53.0	+1.0
	comp=Z,1.7nm,0.5s,baz=118,slow=8.9,SNR=14						
ARA0	**ARCESS Array S**	39.98	337	*e*P	P	17 55 23.9	+0.9
ARCES	**ARCESS Array B**	39.98	337	P	P	17 55 24.0	+0.9
ARCES				pmax	pmax		
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	39.98	337	P	P	17 55 23.9	+0.9
	comp=Z,12nm,1.1s,baz=109,slow=7.6,SNR=20						
NJ2	**Nanjing**	40.05	83	*e*P	P	17 55 25.3	+1.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CONA	**Conrad Observa**	40.45	303	*e*P	P	17 55 29.7	+2.3
	comp=Z,6.6nm,1.2s						
ARSA	**Arzberg**	40.75	302	P	P	17 55 28.3	-1.5
	comp=Z,1.5nm,0.6s						
SOKA	**Soboth**	41.16	301	P	P	17 55 34.9	+1.7
	comp=Z,6.2nm,1.3s						
BRG	**Berggiesshubel**	41.47	307	*e*P	P	17 55 38.6	+3.1
	comp=Z,5.3nm,1.1s						
BRG	**Berggiesshubel**	41.47	307	*e*P	P	17 55 38.7	+3.1
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MOA	**Molln**	41.53	303	P	P	17 55 37.0	+0.8
	comp=Z,4.9nm,1.2s						
GERES	**GERESS Array B**	41.79	304	P	P	17 55 39.2	+0.8
	comp=Z,0.8nm,0.8s,baz=82,slow=7.0,SNR=3.6						
CN2	**Changchun**	41.80	63	*e*P	P	17 55 45.0	+6.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KHC	**Kasperske Hory**	41.84	305	*e*P	P	17 55 36.0	-2.8
KHC	**Kasperske Hory**	41.84	305	*e*P	P	17 55 36.0	-2.8
CLL	**Collm**	42.03	308	*e*(P)	P	17 55 44.0	+3.8
CLL				*e*pP	sP	17 55 52.0	-1.3
CLL	**Collm**	42.03	308	*e*P	P	17 55 44.0	+3.8
CLL				*e*		17 55 52.0	
MYKA	**Terra Mystica**	42.11	301	*e*P	P	17 55 41.6	+0.6
	comp=Z,4.1nm,0.9s						
KBA	**Koelnbreinsper**	42.25	302	P	P	17 55 41.5	-0.7
	comp=Z,7.5nm,1.4s						
NC303	**NORSAR Array S**	43.12	323	*e*P	P	17 55 46.7	-2.2
NB2	**NORSAR Subarra**	43.18	322	P	P	17 55 49.6	+0.1
	comp=Z,1.4nm,0.4s,baz=95,slow=7.9						
NB200	**NORSAR Array S**	43.18	322	*e*P	P	17 55 49.5	+0.1
NOA	**NORSAR Array B**	43.18	322	P	P	17 55 49.5	+0.1
	comp=Z,1.5nm,0.4s,baz=97,slow=8.1,SNR=12						
NOA				LR	LR	18 16 53.8	
	comp=Z,94nm,21.9s,baz=275,slow=40						
PSI	**Prapat**	43.47	136	P	P	17 55 51.4	-1.0
	comp=Z,2.7nm,0.4s,baz=188,slow=0.9,SNR=4.2						
YAK	**Yakutsk**	43.60	36	*e*P	P	17 55 51.9	-0.8
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MOTA	**Moosalm**	43.72	302	P	P	17 55 50.4	-3.7
	comp=Z,2.1nm,0.6s						
FETA	**Feichten**	44.02	302	P	P	17 55 53.5	-3.1
	comp=Z,6.5nm,1.1s						
DAVA	**Damuels**	44.55	303	*e*P	P	17 56 02.1	+1.4
	comp=Z,4.5nm,0.6s						
TIXI	**Tiksi**	45.15	22	*e*P	P	17 56 03.3	-1.7
	comp=Z,6.6nm,0.8s						
TIXI	**Tiksi**	45.15	22	*ce*P	P	17 56 05.8	+0.8
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KLR	**Kul'dur**	45.15	54	⇓*e*P	P	17 56 06.7	+1.3
KSAR	**Wonju Array Be**	45.22	72	P	P	17 56 05.2	-0.7
KSAR	**Wonju Array Be**	45.22	72	P	P	17 56 05.3	-0.7
KSRS	**Korea Array**	45.24	72	P	P	17 56 05.2	-0.9
	comp=Z,1.5nm,0.7s,baz=273,slow=8.4,SNR=4.6						
KSRS				LR	LR	18 15 35.7	
	comp=Z,105nm,20.7s,baz=324,slow=37						
USRK	**Ussuriysk Ar.**	46.32	61	P	P	17 56 15.1	+0.5
	comp=Z,0.7nm,0.5s,baz=273,slow=5.2,SNR=2.8						
SPITS	**Spitsbergen Ar**	46.39	347	P	P	17 56 16.0	+1.3
SPITS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SPITS	**Spitsbergen Ar**	46.39	347	P	P	17 56 16.0	+1.3
	comp=Z,3.7nm,0.6s,baz=142,slow=5.4,SNR=13						
KMBO	**Kilima Mbogo**	48.98	226	*i* P	P	17 56 44.2	+8.4
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMBO	**Kilima Mbogo**	48.98	226	P	P	17 56 37.4	+1.6
	comp=Z,0.8nm,0.5s,baz=327,slow=12,SNR=3.2						
KMBO				LR	LR	18 20 05.9	
	comp=Z,74nm,19.7s,baz=91,slow=40						
MAJO	**Matsushiro**	53.26	69	*e*P	P	17 57 07.0	-0.6
MAJO	**Matsushiro**	53.26	69	*e*P	P	17 57 07.0	-0.6
MJAR	**Matsushiro Arr**	53.26	69	P	P	17 57 07.0	-0.6
	comp=Z,2.2nm,0.9s,baz=288,slow=8.8,SNR=3.5						
ES19	**SONSECA Array**	56.32	297	*e*P	P	17 57 31.1	+1.4
ESDC	**Sonseca Array**	56.38	297	P	P	17 57 31.7	+1.5
	comp=Z,0.7nm,0.6s,baz=48,slow=6.8,SNR=5.9						
BILL	**Bilibino**	58.05	26	*e*P	P	17 57 43.1	+1.7
	comp=Z,5.5nm,1.1s						
BILL	**Bilibino**	58.05	26	⇑*e*P	P	17 57 43.2	+1.7
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PETK	**Petropavlovsk-**	59.77	44	LR	LR	18 23 26.8	
	comp=Z,162nm,18.4s,baz=326,slow=36						
SUMG	**Summit**	59.91	341	*i* P	P	17 57 55.9	+1.1
SUMG	**Summit**	59.91	341	*i* P	P	17 57 55.9	+1.1
TOA1	**Torodi Ar. Sit**	65.04	268	*e*P	P	17 58 29.9	+0.6
TOA0	**Torodi Ar. Sit**	65.04	268	*e*P	P	17 58 28.4	-1.0
	comp=Z,8.9nm,1.4s						
TORD	**Torodi Ar. Bea**	65.04	268	P	P	17 58 29.9	+0.6
	comp=Z,1.3nm,0.6s,baz=42,slow=7.4,SNR=11						
ANM	**Nome**	69.41	22	*e*P	P	17 58 57.2	+0.9
	comp=Z,4.9nm,1.0s						
ANM	**Nome**	69.41	22	*e*P	P	17 58 57.2	+0.9
ANM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
COLD	**Coldfoot**	71.23	15	*e*P	P	17 59 08.5	+1.1
	comp=Z,4.7nm,0.9s						
IM3	**Indian Mountai**	71.46	17	*e*P	P	17 59 09.0	+0.2
MLY	**Manley**	72.96	17	*e*P	P	17 59 19.0	+1.1
	comp=Z,26nm,2.0s						
INK	**Inuvik**	73.06	9	*e*P	P	17 59 18.5	+0.2
	comp=Z,28nm,1.9s						
INK	**Inuvik**	73.06	9	P	P	17 59 18.8	+0.5
	comp=Z,3.6nm,0.9s,baz=357,slow=6.4,SNR=10						
MDM	**Murphy Dome**	73.59	16	*e*P	P	17 59 22.9	+1.3
	comp=Z,10.0nm,1.2s						
COLA	**College**	73.74	16	⇓*i*P	P	17 59 23.7	+1.3
COLA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CAST	**Castle Rocks**	73.99	18	*e*P	P	17 59 24.3	+0.3
	comp=Z,12nm,1.0s						
IL1	**Eielson Array**	74.04	16	*e*P	P	17 59 24.1	-0.1
ILAR	**Eielson Array**	74.04	16	P	P	17 59 24.2	0.0
	comp=Z,1.6nm,0.9s,baz=315,slow=4.0,SNR=12						
ILAR				LR	LR	18 34 45.5	
	comp=Z,75nm,21.2s,baz=14,slow=38						
ILB	**Eielson Array**	74.04	16	*e*P	P	17 59 24.7	+0.6
SCRK	**Sand Creek**	75.34	15	*e*P	P	17 59 33.3	+1.4
	comp=Z,7.8nm,1.1s						
FITZ	**Fitzroy Crossi**	76.04	126	P	P	17 59 35.4	-0.9
	comp=Z,1.1nm,0.8s,baz=293,slow=7.7,SNR=4.7						
DAWY	**Dawson**	76.14	13	*e*P	P	17 59 37.8	+1.5
	comp=Z,10nm,1.3s						
YKA	**Yellowknife Ar**	80.31	2	P	P	18 00 00.0	+0.7
YKA	**Yellowknife Ar**	80.31	2	P	P	18 00 00.0	+0.7
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	**Yellowknife Ar**	80.31	2	P	P	17 59 60.0	+0.7
	comp=Z,1.6nm,0.5s,baz=351,slow=5.4,SNR=24						
YKB5	**Yellowknife Ar**	80.31	2	*e*P	P	17 59 59.7	+0.4
SCHQ	**Schefferville**	80.92	336	P	P	18 00 04.8	+1.9
	comp=Z,3.4nm,0.8s,baz=39,slow=1.0,SNR=3.6						
WRA	**Warramunga Arr**	83.11	121	P	P	18 00 13.2	-1.5
	comp=Z,1.1nm,0.5s,baz=324,slow=4.9,SNR=34						
WR1	**Warramunga Arr**	83.11	121	*e*P	P	18 00 13.2	-1.5
	comp=Z,5.0nm,1.0s						
WRAB	**Tennant Creek**	83.11	121	*e*P	P	18 00 13.2	-1.5
	comp=Z,5.0nm,1.0s						
WRAB	**Tennant Creek**	83.11	121	*e*P	P	18 00 13.2	-1.5
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WB2	**Warramunga Arr**	83.11	121	*e*P	P	18 00 13.2	-1.6
AS31	**Alice Springs**	85.39	124	*e*P	P	18 00 24.2	-2.0
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	85.39	124	P	P	18 00 24.7	-1.6
	comp=Z,1.5nm,0.5s,baz=310,slow=4.9,SNR=57						
AS01	**Alice Springs**	85.42	124	*e*P	P	18 00 24.1	-2.3

KRNET 04 17:49:09.6±0.1, 42°.19N×78°.47E, h16^{km}, mb2.8, 14C-2D,

Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.30**	**350**	⇑*i*P	Pg	17 49 15.6	-0.5
	baz=53						
PRZ				⇑*i*S	Sg	17 49 19.6	-0.9
	baz=53						
TARG	**Taragay, Kyrgy**	**0.68**	**227**	⇑*i*P	Pg	17 49 22.5	-0.5
	baz=27						
TARG				⇑*i*S	Sg	17 49 31.7	-0.3
	baz=27						
KDJ	**Kajisay**	**0.96**	**267**	⇑*i*P	Pn	17 49 28.7	+0.1
	baz=67						
KDJ				⇑*i*S	Sg	17 49 41.0	+0.2
	baz=67						
PDGK	**Podgornoye**	**1.36**	**33**	⇑*i*P	Pb	17 49 35.1	+0.2
	baz=33						
PDGK				⇑*i*S	Sg	17 49 53.1	-0.6
	baz=33						
ULHL	**Ulahol**	**1.65**	**273**	⇑*i*P	Pb	17 49 39.8	0.0
	baz=73						
ULHL				⇑*i*S	Sg	17 50 02.0	-0.9
	baz=73						
BOOM	**Boomskoye usch**	**1.90**	**280**	⇑*i*P	Pb	17 49 44.4	+0.5
	baz=80						
BOOM				⇑*i*S	Sg	17 50 09.4	-1.3
	baz=80						
TKM2	**Tokmak 2**	**2.24**	**290**	⇑*i*P	Pb	17 49 49.4	-0.5
	baz=90						
TKM2				⇑*i*S	Sb	17 50 18.2	+0.8
	baz=90						
ARLS	**Aral**	**3.10**	**265**	⇓*i*P	Pn	17 50 01.0	+2.9
	baz=65						
ARLS				⇓*i*S	Sn	17 50 38.2	+3.3
	baz=65						

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*GUC **04** 18:07:02.3±0.6, 28°.17S×70°.34W, h41^{km}±8^{km}, ML4.0*
*ISCJB **04** 18:07:04.6±0.7, 28°.17S±0°.05×70°.3W±0°.2, h58^{km}, mb3.8/1, Error ellipse: s-maj=21.7km s-min=5.0km az=16.6*
*IDC **04** 18:07:04.7±1.0, 28°.17S×70°.63W, h48^{km}±6^{km}, mb3.7/1, mb1 3.7/3, mb1mx3.4/38, mbtmp3.7/3, Error ellipse: s-maj=49.9km s-min=34.9km az=141.0*
ISC 04 18:07:05.1±1.0, **28°.15S**±0°.06×**70°.5W**±0°.2, **h58**^{km}**, n16,** σ**1^{s}.29**/20, **Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.87**	**190**	*e*P	**Pn**	**18 07 20.6**	**-1.0**
LCO				*i* S	**Sn**	**18 07 33.6**	**-0.2**
LCO					IAML	18 07 34.9	
	comp=E,4μm,0.4s						
GO04	**Tololo Observa**	**2.03**	**187**	*e*P	**Pn**	**18 07 37.0**	**-0.2**
GO04				*i* S	**Sn**	**18 08 03.7**	**+2.1**
GO04					IAML	18 08 19.3	
	comp=N,4μm,0.7s						
CMCH	**Combarbala**	**3.04**	**188**	*e*P	**Pn**	**18 07 50.8**	**-0.1**
CMCH				*i* S	**Sn**	**18 08 27.8**	**+1.7**
GO02	**Mina Guanaco**	**3.09**	**16**	*e*P	**Pn**	**18 07 51.8**	**0.0**
GO02				*i* S	**Sn**	**18 08 29.4**	**+1.7**
ROCH	**El Roble**	**4.82**	**185**	*e*P	**Pn**	**18 08 15.5**	**+0.1**
LVC	**Limon Verde**	**5.71**	**15**	P	**Pn**	**18 08 26.6**	**-1.1**
	comp=N,1.0nm,0.3s,baz=158,slow=8.1,SNR=26						
LVC				Lg	Lg	18 09 48.2	
	comp=N,7.3nm,0.3s,baz=99,slow=18,SNR=5.3						
CPUP	**Villa Florida**	**11.88**	**84**	P	**Pn**	**18 09 50.9**	**-0.9**
	comp=N,0.1nm,0.3s,baz=150,slow=20,SNR=2.2						
SIV	**San Ignacio**	**14.93**	**38**	P	**P**	**18 10 37.7**	**+0.5**
	comp=N,0.3nm,0.3s,baz=226,slow=16,SNR=6.0						
TORD	**Torodi Ar. Bea**	**80.99**	**70**	P	**P**	**18 19 15.3**	**+1.3**
	comp=N,0.6nm,0.5s,baz=242,slow=5.4,SNR=7.2						
TORD				pP	**pP**	**18 19 30.9**	**0.0**
	comp=N,0.8nm,0.6s,baz=254,slow=5.1,SNR=3.2						
ASAR	**Alice Springs**	**123.35**	**207**	PKP	**PKiKP**	**18 25 56.3**	**-0.2**
	comp=N,0.5nm,1.0s,baz=137,slow=1.5,SNR=6.9						
WRA	**Warramunga Arr**	**126.48**	**209**	PKP	**PKiKP**	**18 26 02.3**	**-0.4**
	comp=N,0.3nm,0.5s,baz=151,slow=1.7,SNR=12						
H11S2	**WAKE ISLAND Hy**	**126.98**	**273**	T	T	20 45 19.5	
	baz=112,slow=75,SNR=7.3						
H11S1	**WAKE ISLAND Hy**	**126.99**	**273**	T	T	20 45 17.3	
	baz=112,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy**	**126.99**	**273**	T	T	20 45 15.5	
	baz=112,slow=75,SNR=8.9						
ZALV	**Zalesovo Beam**	**148.53**	**28**	PKPbc	**PKiKP**	**18 26 46.4**	**-0.1**
	comp=N,1.2nm,0.4s,baz=298,slow=3.0,SNR=6.5						
ZALV				pPKPbc	**pPKPbc**	**18 27 00.2**	**-2.1**
	comp=N,1.4nm,0.4s,baz=309,slow=2.6,SNR=6.5						
MKAR	**Makanchi Array**	**151.73**	**42**	PKPbc	**PKiKP**	**18 26 54.0**	**+0.7**
	comp=N,0.6nm,0.6s,baz=308,slow=1.6,SNR=8.3						
MKAR				pPKPbc	**pPKPbc**	**18 27 07.7**	**-2.8**
	comp=N,1.2nm,0.7s,baz=307,slow=1.5,SNR=11						

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*IDC **04** 18:09:09.6±3.7, 13°.90N×92°.55W, h0^{km}, mb3.6/2, mb1 3.8/5, mb1mx3.5/39, mbtmp3.4/5, ML3.2/3, Error ellipse: s-maj=78.2km s-min=31.9km az=10.0*
ISC 04 18:09:15.2±2.1, **13°.8N**±0°.2×**92°.67W**±0°.09, **h46**^{km}**, n6,** σ**2^{s}.43**/8, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APG	**El Apazote**	**2.44**	**61**	Pn	**Pn**	**18 09 49.6**	**-3.1**
	2.5nm,0.3s,baz=255,slow=12,SNR=21						
APG				Sn	**Sn**	**18 10 24.0**	**+2.6**
	8.4nm,0.3s,baz=355,slow=10,SNR=7.6						
CMIG	**Matias Romero**	**3.88**	**327**	Pn	**Pn**	**18 10 09.5**	**-2.8**
	1.2nm,0.3s,baz=151,slow=9.9,SNR=10.0						
CMIG				Sn	**Sn**	**18 10 57.6**	**+0.9**
	2.5nm,0.3s,baz=225,slow=16,SNR=5.6						
TXAR	**Lajitas Array**	**18.48**	**328**	P	**Pn**	**18 13 28.8**	**+0.8**
	0.1nm,0.3s,baz=154,slow=11,SNR=4.2						
NVAR	**Mina Array Bea**	**33.40**	**322**	P	**P**	**18 15 51.3**	**+1.7**
	0.5nm,0.8s,baz=118,slow=7.3,SNR=2.9						
YKA	**Yellowknife Ar**	**51.04**	**347**	P	**P**	**18 18 12.1**	**-0.3**
	1.1nm,0.7s,baz=152,slow=7.4,SNR=21						
CMAR	**Chiang Mai Arr**	**145.93**	**340**	PKPbc	**PKPdf**	**18 28 50.9**	**+0.9**
	0.5nm,0.9s,baz=346,slow=3.3,SNR=5.1						

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*NIED **04** 19:01:00, 43°.40N×147°.30E, h56^{km}, Mw3.9 Best double couple: $M_0$6.91000×10^{14} NP1:ϕ_s326.00000°, δ15.00000°, λ-144.00000°. NP2:ϕ_s201.00000°, δ81.00000°, λ-78.00000°.*
*ISCJB **04** 19:01:08.6±0.8, 43°.42N±0°.05×147°.35E±0°.06, h60^{km}±5^{km}, mb3.9/22, Error ellipse: s-maj=10.2km s-min=5.0km az=143.1*
*SKHL **04** 19:01:09.0±0.6, 43°.43N×147°.43E, h61^{km}±2^{km}, mb4.4/6*
*JMA **04** 19:01:09.1±0.2, 43°.35N×147°.31E, h39^{km}±5^{km}, M4.2*
*MOS **04** 19:01:09.9±1.0, 43°.59N×147°.27E, h63^{km}, mb4.3/14, Error ellipse: s-maj=12.7km s-min=9.2km az=127.9*
*IDC **04** 19:01:16.9±7.5, 45°.05N×146°.87E, h33^{km}±57^{km}, mb3.7/16, mb1 3.9/17, mb1mx3.7/54, mbtmp3.9/17, ML3.3/1, Error ellipse: s-maj=23.2km s-min=17.8km az=128.0*
ISC 04 19:01:08.8±1.4, **43°.40N**±0°.06×**147°.42E**±0°.06, **h48**^{km}±10^{km}**, n65,** σ**1^{s}.18**/86, **mb3.9**/22, **5C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.64**	**318**	*i* P	**Pn**	**19 01 21.0**	**-0.6**
SHO				AMB	AMB	19 01 22.5	
	100nm,0.2s						
SHO				AMB	AMB	19 01 22.5	
	120nm,0.2s						
SHO				AMB	AMB	19 01 22.5	
	130nm,0.2s						
SHO				*i* S	**Sn**	**19 01 30.9**	**0.0**
SHO				A	A	19 01 31.7	
	1μm,0.2s						
SHO				A	A	19 01 31.7	
	940nm,0.2s						
SHO	**Shikotan**	**0.64**	**318**	*d* *i*PN	**Pn**	**19 01 21.8**	**+0.2**
SHO				*i* S	**Sn**	**19 01 31.2**	**+0.3**
SHO				pmax	pmax		
	comp=Z,2μm,0.5s						
SHO				pmax	pmax		
	comp=N,1μm,0.2s						
SHO				pmax	pmax		
	comp=E,1μm,0.2s						
SHO				smax	smax		
	comp=E,9μm,0.2s						
SHO				smax	smax		
	comp=N,12μm,0.6s						
NEM2	**Nemuro 2**	**1.23**	**269**	P	**Pn**	**19 01 29.1**	**-0.3**
NEM2				*e*S	**Sn**	**19 01 43.6**	**-1.3**
YUK	**Yuzh-Kuril'sk**	**1.30**	**300**	*i* P	**Pn**	**19 01 30.4**	**-0.1**
YUK				AMB	AMB	19 01 31.0	
	comp=N,230nm,0.2s						
YUK				AMB	AMB	19 01 31.0	
	comp=N,290nm,0.2s						
YUK				AMB	AMB	19 01 31.0	
	comp=N,110nm,0.2s						
YUK				*i* S	**Sn**	**19 01 46.2**	**-0.5**
YUK				A	A	19 01 47.0	
	comp=N,2μm,0.6s						
YUK				A	A	19 01 47.0	
	comp=N,530nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.30**	**300**	*d* *i*PN	**Pn**	**19 01 30.3**	**-0.2**
YUK				*i* S	**Sn**	**19 01 46.2**	**-0.5**
YUK				pmax	pmax		
	comp=Z,811nm,0.3s						
YUK				pmax	pmax		
	comp=N,117nm,0.1s						
YUK				pmax	pmax		
	comp=E,255nm,0.2s						
YUK				smax	smax		
	comp=E,5μm,0.6s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
GRPR	**Tuman**	**1.34**	**297**	*i* P	**Pn**	**19 01 30.0**	**-1.0**
GRPR				AMB	AMB	19 01 31.7	
	comp=N,190nm,0.2s						
GRPR				AMB	AMB	19 01 31.7	
	comp=N,150nm,0.2s						
GRPR				AMB	AMB	19 01 31.7	
	comp=N,160nm,0.2s						
GRPR				*i* S	**Sn**	**19 01 47.0**	**-0.6**
GRPR				A	A	19 01 47.0	
	comp=N,430nm,0.3s						
GRPR				A	A	19 01 47.0	
	comp=N,1μm,0.3s						
GRPR	**Tuman**	**1.34**	**297**	⇓*i*PN	**Pn**	**19 01 30.8**	**-0.2**
GRPR				*i* S	**Sn**	**19 01 47.0**	**-0.6**
GRPR				pmax	pmax		
	comp=E,153nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,631nm,0.2s						
GRPR				pmax	pmax		
	comp=N,186nm,0.1s						
GRPR				smax	smax		
	comp=N,4μm,0.3s						
GRPR				smax	smax		
	comp=E,11μm,0.3s						
LAGR	**Lagunnoye**	**1.36**	**300**	*i* P	**Pn**	**19 01 31.0**	**-0.2**
LAGR				AMB	AMB	19 01 32.0	
	comp=E,80nm,0.2s						
LAGR				AMB	AMB	19 01 32.0	
	comp=E,120nm,0.2s						
LAGR				AMB	AMB	19 01 32.0	
	comp=E,50nm,0.2s						
LAGR				*i* S	**Sn**	**19 01 47.0**	**-1.1**
LAGR				A	A	19 01 52.0	
	comp=E,320nm,0.3s						
LAGR				A	A	19 01 52.0	
	comp=E,940nm,0.3s						
LAGR	**Lagunnoye**	**1.36**	**300**	⇓*i*PN	**Pn**	**19 01 31.1**	**-0.2**
LAGR				*i* S	**Sn**	**19 01 47.6**	**-0.5**
LAGR				pmax	pmax		
	comp=Z,483nm,0.3s						
LAGR				pmax	pmax		
	comp=N,75nm,0.2s						
LAGR				pmax	pmax		
	comp=E,124nm,0.1s						
LAGR				smax	smax		
	comp=N,3μm,0.3s						
LAGR				smax	smax		
	comp=E,9μm,0.4s						
GLVR	**Golovnino**	**1.43**	**285**	*i* P	**Pn**	**19 01 32.0**	**-0.2**
GLVR				AMB	AMB	19 01 33.0	
	comp=E,190nm,0.2s						
GLVR				AMB	AMB	19 01 33.0	
	comp=E,170nm,0.2s						
GLVR				AMB	AMB	19 01 33.0	
	comp=E,90nm,0.2s						
GLVR				*i* S	**Sn**	**19 01 49.0**	**-0.7**
GLVR				A	A	19 01 55.0	
	comp=E,530nm,0.2s						
GLVR				A	A	19 01 55.0	
	comp=E,260nm,0.2s						
GLVR	**Golovnino**	**1.43**	**285**	⇓*i*PN	**Pn**	**19 01 32.2**	**0.0**
GLVR				*i* S	**Sn**	**19 01 49.7**	**0.0**
GLVR				pmax	pmax		
	comp=N,194nm,0.1s						
GLVR				pmax	pmax		
	comp=E,172nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,757nm,0.1s						
GLVR				smax	smax		
	comp=N,5μm,0.4s						
GLVR				smax	smax		
	comp=E,3μm,0.3s						
JKHN	**Kushirohamanak**	**1.68**	**260**	P	**Pn**	**19 01 35.9**	**+0.2**
JKHN				*e*S	**Sn**	**19 01 55.7**	**-0.4**
JRA	**Rausu**	**1.75**	**289**	P	**Pn**	**19 01 37.0**	**+0.3**
JRA				*e*S	**Sn**	**19 01 57.7**	**-0.1**
KUR	**Kuril'sk**	**1.86**	**10**	*i* P	**Pn**	**19 01 38.2**	**0.0**
KUR				AMB	AMB	19 01 41.7	
	comp=E,120nm,0.5s						
KUR				AMB	AMB	19 01 41.7	
	comp=E,50nm,0.5s						
KUR				AMB	AMB	19 01 41.7	
	comp=E,130nm,0.5s						
KUR				*i* S	**Sn**	**19 02 00.0**	**-0.5**
KUR				A	A	19 02 01.5	
	comp=E,430nm,0.4s						
KUR				A	A	19 02 01.5	
	comp=E,190nm,0.4s						
KUR	**Kuril'sk**	**1.86**	**10**	*c* *i*PN	**Pn**	**19 01 39.5**	**+1.3**
KUR				*i* S	**Sn**	**19 02 00.0**	**-0.5**
KUR				pmax	pmax		
	comp=N,14nm,0.2s						
KUR				pmax	pmax		
	comp=E,10.0nm,0.2s						
KUR				pmax	pmax		
	comp=Z,42nm,0.2s						
KUR				smax	smax		
	comp=N,499nm,0.2s						
KUR				smax	smax		
	comp=E,83nm,0.1s						
JNK	**Nakash**	**1.98**	**276**	P	**Pn**	**19 01 39.8**	**+0.1**
JNK				*e*S	**Sn**	**19 02 02.2**	**-1.1**
JAK	**Akkeshi**	**2.03**	**260**	P	**Pn**	**19 01 40.4**	**-0.1**
JAK				*e*S	**Sn**	**19 02 03.4**	**-1.3**
JTKR	**Abashiri--Toko**	**2.61**	**284**	P	**Pn**	**19 01 49.7**	**+1.3**
JTKR				*e*S	**Sn**	**19 02 19.8**	**+0.9**
JAR	**Ashorobuto**	**2.67**	**269**	P	**Pn**	**19 01 49.7**	**+0.5**
JAR				*e*S	**Sn**	**19 02 20.3**	**0.0**
JOB	**Onbets**	**2.67**	**261**	P	**Pn**	**19 01 49.6**	**+0.3**
JOB				*e*S	**Sn**	**19 02 19.5**	**-0.9**
JMP	**Maruseppu**	**3.01**	**283**	P	**Pn**	**19 01 55.5**	**+1.6**
JCH	**Churui**	**3.08**	**257**	P	**Pn**	**19 01 55.6**	**+0.7**
JCH				*e*S	**Sn**	**19 02 29.5**	**-0.9**
HRK	**Horoka**	**3.13**	**273**	*e*S	**Sn**	**19 02 32.5**	**+0.8**
ERM	**Erimo**	**3.43**	**248**	*e*P	**Pn**	**19 02 01.5**	**+1.8**
ERM	**Erimo**	**3.43**	**248**	*d* *i*PN	**Pn**	**19 02 01.5**	**+1.8**
JEM	**Erimo**	**3.43**	**248**	*e*S	**Sn**	**19 02 39.1**	**0.0**
JFR	**Furan**	**3.54**	**268**	*e*S	**Sn**	**19 02 41.2**	**-0.5**
ASAJ	**Asahikawa**	**3.57**	**283**	Pn	**Pn**	**19 02 04.5**	**+3.0**
	comp=E,2.8nm,0.3s,baz=92,slow=14,SNR=7.9						
ASAJ				Sn	**Sn**	**19 02 48.9**	**+6.4**
	comp=E,3.1nm,0.3s,baz=13,slow=32,SNR=3.9						
JNBK	**Urakawa-nobuka**	**3.61**	**254**	P	**Pn**	**19 02 02.8**	**+0.6**
JNBK				*e*S	**Sn**	**19 02 41.3**	**-2.2**
YSS	**Yuzh-Sakhalins**	**4.85**	**319**	*e*P	**Pn**	**19 02 20.2**	**+1.1**
YSS	**Yuzh-Sakhalins**	**4.85**	**319**	*e*PN	Pn	19 02 25.0	+5.9
SONM	**Songino Array**	**28.79**	**293**	P	**P**	**19 07 02.8**	**+0.7**
	comp=E,3.0nm,0.5s,baz=87,slow=8.5,SNR=31						
TIXI	**Tiksi**	**29.75**	**348**	⇑*e*P	**P**	**19 07 08.9**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GTA	**Gaotai**	**35.55**	**280**	*e*P	**P**	**19 08 02.6**	**+1.2**
GTA				pP	pP	19 08 07.1	-6.6
GTA				sP	sP	19 08 10.6	-8.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DGZ	**Jazzator, Alta**	**40.77**	**301**	⇑*e*P	**P**	**19 08 46.2**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
COLA	**College**	**41.24**	**36**	*e*P	**P**	**19 08 50.8**	**+2.2**
COLA	**College**	**41.24**	**36**	⇑*e*P	**P**	**19 08 50.8**	**+2.2**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**41.37**	**307**	P	**P**	**19 08 48.9**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=72,slow=7.8,SNR=6.7						
ILAR	**Eielson Array**	**41.66**	**36**	P	**P**	**19 08 52.2**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=270,slow=8.2,SNR=4.5						
MKAR	**Makanchi Array**	**44.92**	**298**	*e*P	**P**	**19 09 18.8**	**+0.1**
MKAR	**Makanchi Array**	**44.92**	**298**	*i* P	**P**	**19 09 18.8**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**44.92**	**298**	P	**P**	**19 09 18.9**	**+0.2**
	comp=Z,3.2nm,0.8s,baz=79,slow=8.6,SNR=31						
KURK	**Kurchatov**	**45.89**	**304**	*e*P	**P**	**19 09 26.1**	**-0.1**
KURK	**Kurchatov**	**45.89**	**304**	⇓*e*P	**P**	**19 09 26.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**46.61**	**30**	P	**P**	**19 09 32.0**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=295,slow=8.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**47.62**	**254**	P	P	19 09 52.2	+12
	comp=Z,0.4nm,0.8s,baz=42,slow=7.4,SNR=3.6						
BRVK	**Borovoye**	**49.93**	**310**	*e*P	**P**	**19 09 57.3**	**-0.1**
BRVK	**Borovoye**	**49.93**	**310**	⇑*e*P	**P**	**19 09 57.3**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARU	**Arti**	**54.74**	**317**	*e*P	**P**	**19 10 31.6**	**-1.4**
ARU	**Arti**	**54.74**	**317**	P	**P**	**19 10 31.4**	**-1.6**
ARU						19 12 30.5	
ARU				S	**S**	**19 18 08.7**	**-1.1**
ARU				SS	**SS**	**19 21 52.6**	**0.0**
RES	**Resolute Bay**	**55.25**	**17**	P	**P**	**19 10 36.0**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=330,slow=7.5,SNR=4.0						
YKA	**Yellowknife Ar**	**55.98**	**34**	P	**P**	**19 10 42.7**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=298,slow=6.8,SNR=4.3						
ARCES	**ARCESS Array B**	**59.65**	**340**	*e*P	**P**	**19 11 06.2**	**-1.3**
ARCES	**ARCESS Array B**	**59.65**	**340**	*e*P	**P**	**19 11 06.2**	**-1.3**
ARCES	**ARCESS Array B**	**59.65**	**340**	P	**P**	**19 11 05.6**	**-1.9**
	comp=Z,3.4nm,0.8s,baz=48,slow=6.8,SNR=12						
WRA	**Warramunga Arr**	**64.16**	**194**	P	P	19 11 56.4	+18
	comp=Z,0.8nm,1.0s,baz=10,slow=6.7,SNR=4.7						
FINES	**FINESS Array B**	**65.28**	**333**	P	**P**	**19 11 44.5**	**-0.6**
	comp=Z,3.5nm,0.6s,baz=40,slow=8.6,SNR=17						
ASAR	**Alice Springs**	**67.88**	**193**	P	P	19 12 22.7	+21
	comp=Z,0.2nm,0.8s,baz=14,slow=7.9,SNR=3.0						
NB2	**NORSAR Subarra**	**70.00**	**339**	P	**P**	**19 12 14.4**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=30,slow=6.5						
NB2	**NORSAR Subarra**	**70.00**	**339**	P	**P**	**19 12 14.2**	**-0.8**
NOA	**NORSAR Array B**	**70.00**	**339**	P	**P**	**19 12 14.9**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=31,slow=6.3,SNR=7.9						
KBZ	**Khabaz**	**70.18**	**312**	P	**P**	**19 12 17.0**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**70.18**	**312**	P	**P**	**19 12 16.9**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=98,slow=4.2,SNR=7.6						
AKASG	**Malin Array Be**	**71.98**	**324**	P	**P**	**19 12 26.8**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=40,slow=6.3,SNR=14						
BRTR	**Keskin Array B**	**77.93**	**314**	P	**P**	**19 13 02.2**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=81,slow=3.9,SNR=3.6						

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*NIED **04** 19:08:00, 29°.30N×142°.00E, h5^{km}, Mw4.0 Best double couple: $M_0$1.32000×10^{15} NP1:ϕ_s165.00000°, δ31.00000°, λ-178.00000°. NP2:ϕ_s74.00000°, δ89.00000°, λ-59.00000°.*
*IDC **04** 19:08:46.0±0.6, 29°.31N×142°.14E, h0^{km}, mb3.9/18, mb1 4.1/21, mb1mx4.0/55, mbtmp3.9/21, ML3.1/4, MS3.3/4, Ms1 3.3/4, ms1mx3.0/49, Error ellipse: s-maj=18.1km s-min=14.7km az=93.0*
*ISCJB **04** 19:08:49.0±0.3, 29°.34N±0°.03×141°.98E±0°.06, h30^{km}, mb4.2/32, MS3.5/1, Error ellipse: s-maj=8.1km s-min=3.3km az=164.4*
*JMA **04** 19:08:49.7±0.1, 29°.31N×141°.99E, h65^{km}, M4.1*
*NEIC **04** 19:08:50.6±1.7, 29°.27N×142°.08E, h31^{km}±12^{km}, mb4.7/15, Error ellipse: s-maj=5.8km s-min=5.2km az=63.0*
ISC 04 19:08:50.8±0.5, **29°.32N**±0°.05×**142°.1E**±0°.1, **h30**^{km}**, n70,** σ**1^{s}.17**/83, **mb4.3**/32, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.22**	**177**	*e*Pn	**Pn**	**19 09 25.2**	**-0.4**
CBIJ				*e*Sn	**Sn**	**19 09 50.5**	**-1.5**
CBIJ	**Chichi jima**	**2.22**	**177**	S	**Sn**	**19 09 51.0**	**-0.9**
JCJ	**Chichijima**	**2.22**	**177**	Pn	**Pn**	**19 09 25.2**	**-0.4**
	10nm,0.3s,baz=306,slow=19,SNR=5.7						
JCJ				Sn	**Sn**	**19 09 50.5**	**-1.5**
	26nm,0.3s,baz=319,slow=22,SNR=5.8						
JHJ2	**Mitsune**	**4.24**	**334**	*e*S	**Sn**	**19 10 41.2**	**-0.6**
JHJ	**Hachijo jima 2**	**4.26**	**333**	Sn	**Sn**	**19 10 38.3**	**-4.0**
	10nm,0.3s,baz=66,slow=20,SNR=3.1						
BSO3	**Boso 3**	**5.62**	**347**	P	**Pn**	**19 10 13.0**	**+1.0**
BSO3				S	**Sn**	**19 11 16.7**	**+1.2**
BSO4	**Boso 4**	**5.84**	**346**	P	**Pn**	**19 10 16.0**	**+0.8**
BSO4				S	**Sn**	**19 11 21.9**	**+0.9**
JOD2	**Odawara 2**	**6.44**	**338**	P	**Pn**	**19 10 24.5**	**+1.0**
JOD2				S	**Sn**	**19 11 37.4**	**+1.4**
JHU	**Hanno**	**6.92**	**341**	P	**Pn**	**19 10 30.4**	**+0.3**
JHU				S	**Sn**	**19 11 47.8**	**-0.1**
JYT	**Yasato**	**7.07**	**348**	P	**Pn**	**19 10 32.6**	**+0.5**
JRY	**Ryogami san**	**7.19**	**339**	P	**Pn**	**19 10 34.3**	**+0.5**
JRY				*e*S	**Sn**	**19 11 52.6**	**-1.9**
JAG	**Ashikaga**	**7.42**	**344**	P	**Pn**	**19 10 36.1**	**-0.8**
MJAR	**Matsushiro Arr**	**7.89**	**337**	Pn	**Pn**	**19 10 43.8**	**+0.3**
	0.4nm,0.3s,baz=158,slow=9.1,SNR=21						
MJAR				Sn	**Sn**	**19 12 09.7**	**-2.1**
	0.1nm,0.3s,baz=200,slow=20,SNR=3.5						
MJAR				LR	LR	19 14 02.2	
	comp=Z,106nm,18.8s,baz=325,slow=40						
MAJO	**Matsushiro**	**7.89**	**337**	*e*Pn	**Pn**	**19 10 44.2**	**+0.7**
MAJO				*e*Sn	**Sn**	**19 12 09.7**	**-2.1**
MAT	**Matsushiro**	**7.89**	**337**	P	**Pn**	**19 10 44.3**	**+0.8**
MAT				S	**Sn**	**19 12 10.3**	**-1.6**
KSRS	**Korea Array**	**14.31**	**308**	Pn	**Pn**	**19 12 12.3**	**+0.9**
	0.1nm,0.3s,baz=117,slow=12,SNR=3.0						
KSRS				LR	LR	19 17 56.5	
	comp=Z,137nm,18.2s,baz=320,slow=38						
KSAR	**Wonju Array Be**	**14.34**	**308**	Pn	**Pn**	**19 12 12.3**	**+0.7**
GUMO	**Guam**	**15.87**	**170**	LR	LR	19 17 03.3	
	comp=Z,81nm,20.8s,baz=86,slow=31						
USRK	**Ussuriysk Ar.**	**16.88**	**334**	Pn	**Pn**	**19 12 45.3**	**+0.6**
	0.1nm,0.3s,baz=141,slow=9.3,SNR=3.0						
SONA0	**Songino Array**	**33.06**	**314**	*e*P	**P**	**19 15 23.6**	**-0.2**
SONM	**Songino Array**	**33.06**	**314**	P	**P**	**19 15 23.6**	**-0.2**
	1.0nm,0.7s,baz=117,slow=7.8,SNR=4.2						
CHTO	**Chiang Mai**	**40.53**	**265**	*e*P	**P**	**19 16 26.6**	**-0.9**
	10.0nm,1.8s						
CM31	**Chiang Mai Arr**	**40.67**	**264**	*e*P	**P**	**19 16 26.8**	**-1.9**
CMAR	**Chiang Mai Arr**	**40.67**	**264**	P	**P**	**19 16 28.9**	**+0.3**
	0.5nm,0.7s,baz=91,slow=3.9,SNR=5.5						
CMAR				LR	LR	19 34 07.3	
	comp=Z,62nm,19.2s,baz=315,slow=37						
ZAA1	**Zalesovo Array**	**47.76**	**318**	*e*P	**P**	**19 17 24.7**	**-0.2**
ZALV	**Zalesovo Beam**	**47.76**	**318**	P	**P**	**19 17 24.7**	**-0.2**
	0.5nm,0.4s,baz=106,slow=5.4,SNR=5.0						
MK01	**Makanchi Array**	**48.99**	**308**	*e*P	**P**	**19 17 34.6**	**0.0**
MK31	**Makanchi Array**	**49.00**	**308**	*e*P	**P**	**19 17 34.6**	**0.0**
MK32	**Makanchi Array**	**49.00**	**308**	*e*P	**P**	**19 17 34.5**	**-0.1**
MK32				*e*ScP	**ScP**	**19 22 54.9**	**+3.6**
MKAR	**Makanchi Array**	**49.00**	**308**	*e*P	**P**	**19 17 34.6**	**0.0**
	7.1nm,0.7s						
MKAR				ScP	**ScP**	**19 22 54.9**	**+3.6**
MKAR	**Makanchi Array**	**49.00**	**308**	P	**P**	**19 17 34.5**	**0.0**
	0.9nm,0.8s,baz=92,slow=8.7,SNR=11						
MKAR				ScP	**ScP**	**19 22 54.9**	**+3.6**
	0.2nm,0.6s,baz=72,slow=4.7,SNR=3.6						
WR1	**Warramunga Arr**	**49.54**	**190**	*e*P	**P**	**19 17 37.9**	**-1.0**
	6.7nm,1.1s						
WR1				*e*PcP	**PcP**	**19 19 00.8**	**+0.4**
WRA	**Warramunga Arr**	**49.54**	**190**	P	**P**	**19 17 37.9**	**-1.0**
	1.4nm,0.4s,baz=11,slow=8.3,SNR=31						
WRA				PcP	**PcP**	**19 19 00.8**	**+0.4**
	0.4nm,0.6s,baz=2.2,slow=4.1,SNR=5.6						
KURK	**Kurchatov**	**51.37**	**313**	*e*P	**P**	**19 17 52.6**	**+0.1**
	4.2nm,0.9s						
KDAK	**Kodiak Island**	**52.67**	**38**	P	**P**	**19 18 01.1**	**-0.9**
	2.9nm,0.6s,baz=270,slow=8.1,SNR=4.8						
ASAR	**Alice Springs**	**53.26**	**189**	P	**P**	**19 18 06.1**	**-0.7**
	0.4nm,0.4s,baz=4.7,slow=5.5,SNR=15						
ILAR	**Eielson Array**	**55.83**	**29**	P	**P**	**19 18 23.9**	**-1.0**
	0.6nm,0.7s,baz=262,slow=6.2,SNR=9.5						
BRVK	**Borovoye**	**56.41**	**317**	*e*P	**P**	**19 18 30.5**	**+1.3**
	4.4nm,0.8s						
KK31	**Karatay Array**	**57.71**	**305**	*e*P	**P**	**19 18 39.3**	**+0.6**
KKAR	**Karatay Array**	**57.71**	**305**	*e*P	**P**	**19 18 39.3**	**+0.6**
CHGR	**Chuyangaron**	**59.73**	**300**	*e*P	**P**	**19 18 52.8**	**-0.1**

	6.7nm,0.7s						
INK	Inuvik	61.06	25	P	P	19 18 60.0	-1.4
	0.7nm,0.5s,baz=344,slow=2.7,SNR=4.6						
ABKAR	Akbulak array	63.48	314	eP	P	19 19 18.8	+0.9
YKA	Yellowknife Ar	70.25	29	P	P	19 20 00.4	-0.3
	0.7nm,0.6s,baz=293,slow=6.4,SNR=11						
YKB5	Yellowknife Ar	70.25	29	eP	P	19 20 00.4	-0.3
FIA0	FINESS Array S	75.91	334	eP	P	19 20 34.1	-0.1
FINES	FINESS Array B	75.91	334	P	P	19 20 34.1	-0.1
	4.0nm,1.0s,baz=57,slow=5.1,SNR=3.8						
KBZ	Khabaz	76.42	313	P	P	19 20 37.9	+0.5
	1.6nm,0.7s,baz=58,slow=10,SNR=4.8						
BEKR	Beckworth	77.15	51	eP	P	19 20 41.6	-0.3
	4.5nm,0.8s						
CMB	Columbia Colle	77.98	53	eP	P	19 20 46.3	-0.1
	14nm,1.7s						
NV01	Mina Array Sit	79.24	52	eP	P	19 20 53.5	-0.1
NVAR	Mina Array Bea	79.24	52	P	P	19 20 54.0	+0.5
	2.0nm,0.6s,baz=292,slow=5.7,SNR=17						
AKASG	Malin Array Be	80.77	324	P	P	19 21 01.0	-0.2
	0.1nm,0.3s,baz=52,slow=5.3,SNR=3.2						
R11A	Troy Canyon, C	81.14	51	eP	P	19 21 02.9	-0.9
	13nm,1.9s						
HVU	Hansel Valley	81.23	47	eP	P	19 21 04.9	+0.7
	12nm,1.8s						
IMW	Indian Meadow	81.26	44	eP	P	19 21 04.5	+0.1
	2.8nm,0.8s						
HFS	Hagfors	81.34	337	P	P	19 21 04.3	+0.1
	2.2nm,0.8s,baz=3.8,slow=4.3,SNR=3.3						
PD31	Pinedale Array	82.72	45	eP	P	19 21 10.2	-1.9
PDAR	Pinedale Array	82.72	45	P	P	19 21 12.0	0.0
	0.6nm,0.6s,baz=298,slow=3.2,SNR=6.0						
KNB	Kanab	83.70	51	eP	P	19 21 17.8	+0.6
	26nm,2.0s						
BR101	Keskin Array S	84.42	313	eP	P	19 21 21.1	+0.5
BRTR	Keskin Array B	84.42	313	P	P	19 21 21.1	+0.5
	1.2nm,0.7s,baz=109,slow=3.5,SNR=8.7						
PV23	Carpenter Ridg	85.45	48	eP	P	19 21 25.9	-0.2
	7.4nm,0.9s						
PV14	Lion Creek, Pa	85.49	48	eP	P	19 21 26.4	+0.2
	6.7nm,0.8s						
PV12	Saucer Basin,	85.67	48	eP	P	19 21 27.4	+0.3
	4.5nm,0.9s						
CLL	Collm	88.06	331	epP	pP	19 21 49.0	+2.3
LTX	Lajitas	94.36	53	eP	P	19 22 08.6	+0.5
TXAR	Lajitas Array	94.36	53	P	P	19 22 08.6	+0.5
	0.3nm,0.7s,baz=303,slow=5.0,SNR=5.4						
LPAZ	La Paz	149.40	72	ePKPbc	PKPbc	19 28 37.4	-0.9
LPAZ	La Paz	149.40	72	PKPbc	PKPbc	19 28 37.8	-0.5
	1.3nm,0.8s,baz=349,slow=5.2,SNR=3.8						

MEX 04 19:34:46.8±0.6, 14°.77N×93°.22W, h66km±36km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.93	0	eP	Pn	19 35 02.8	-1.5
PCIG				i S	Sn	19 35 15.0	-2.1
THIG		0.94	81	eP	Pn	19 35 02.8	-1.5
THIG				i S	Sn	19 35 15.5	-1.8
CCIG	Comitan	1.83	35	i P	Pn	19 35 17.7	+1.4
CCIG				i S	Sn	19 35 40.3	+1.6

*IDC **04** 19:36:47.8±2.1, 43°.63N×105°.25W, h0km, mb1 3.5/2, mb1mx3.2/31, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=51.6km s-min=9.6km az=151.0*

*NEIC **04** 19:36:52.5±0.9, 44°.08N×105°.40W, h0km, ML3.2, Error ellipse: s-maj=12.6km s-min=11.0km az=160.0, Suspected Mining explosion.*

NEIC 26 km [16 miles] SSE of Gillette.

ISC 04 19:36:48.0±0.9, 44°.26N±0°.05×105°.61W±0°.04, h0km, n35, σ1s.88/29, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.14	96	ePg	Pg	19 37 08.5	-1.4
K22A	Casper	1.74	203	ePn	Pn	19 37 19.4	-0.2
LAO	LASA Array	2.47	350	ePn	Pg	19 37 36.2	+0.8
RLMT	Red Lodge	2.75	290	ePn	Pg	19 37 39.0	-1.7
BW06	Boulder Array	3.23	244	ePn	Pb	19 37 45.9	-0.5
PD31	Pinedale Array	3.23	244	ePn	Pb	19 37 44.2	-2.2
PDAR	Pinedale Array	3.23	244	ePn	Pb	19 37 44.8	-1.6
PDAR				Lg	Lg	19 38 30.9	
PDAR	Pinedale Array	3.23	244	Pn	Pb	19 37 44.0	-2.4
	1.9nm,0.3s,baz=76,slow=12,SNR=30						
PDAR				Pg	Pg	19 37 48.7	-1.3
	2.7nm,0.3s,baz=67,slow=18,SNR=31						
PDAR				Lg	Lg	19 38 30.9	
	5.4nm,0.3s,baz=74,slow=34,SNR=11						
N23A	Red Feather La	3.37	184	ePn	Pn	19 37 42.3	+0.2
H17A	Grant Village	3.56	274	ePn	Pb	19 37 48.5	-3.6
LOHW	Long Hollow	3.66	262	ePn	Pb	19 37 54.3	+0.6
FLWY	Flagg Ranch	3.66	269	ePn	Pb	19 37 53.5	-0.3
YPP	Pitchstone Pla	3.73	272	ePn	Pb	19 37 53.4	-1.6
MOOW	Moose Ponds	3.74	264	ePn	Pb	19 37 53.3	-1.8
SNOW	Snow King Moun	3.80	260	ePn	Pb	19 37 55.7	-0.5
IMW	Indian Meadow	3.85	267	ePn	Pb	19 37 55.9	-1.2
REDW	Red Top Meadow	3.90	259	ePn	Pb	19 37 57.7	-0.1
FXWY	Fox Creek	3.96	263	ePn	Pb	19 37 57.6	-1.2
OGNE	Ogallala	4.23	140	ePn	Pn	19 37 54.2	+0.4
DGMT	Dagmar	4.33	13	ePn	Pb	19 38 02.3	-2.7
ISCO	Idaho Springs	4.45	180	ePn	Pn	19 37 58.0	+0.9
EGMT	Eagleton	4.74	324	ePn	Pb	19 38 10.5	-1.6
SMCO	Snowmass	5.17	192	ePn	Pn	19 38 11.9	+4.8
JLU	Jordanelle	5.66	232	ePn	Pn	19 38 12.6	-0.9
HVU	Hansel Valley	5.80	247	ePn	Pn	19 38 19.6	+4.1
SPUT	South Promonto	5.83	242	ePn	Pn	19 38 20.1	+4.3
SRU	San Rafael Swe	6.32	217	ePn	Pb	19 38 32.5	-6.5
PV14	Lion Creek, Pa	6.41	205	ePn	Pn	19 38 30.8	+6.8
PV11	David Mesa, Pa	6.44	204	ePn	Pn	19 38 27.7	+3.5
PV16	Nyswonger Mesa	6.44	204	ePn	Pn	19 38 27.3	+3.1
PV03	Paradox Valley	6.47	203	ePn	Pn	19 38 26.3	+1.6
ECSD	EROS Data Cent	6.51	91	ePn	Pn	19 38 32.3	+7.2
DUG	Dugway, Tooele	6.71	235	ePn	Pn	19 38 30.7	+2.8
I10CA	LAC DU BONNET	8.82	44	i		20 31 00.0	
	baz=222,slow=330,SNR=2.9						
ULM	Lac du Bonnet	8.93	44	Pn	Pn	19 39 00.5	+2.3
	0.4nm,0.3s,baz=224,slow=22,SNR=4.2						
ULM				Lg	Lg	19 41 29.0	
	baz=308,slow=9.0,SNR=4.0						

*IDC **04** 19:39:43.8±1.9, 33°.44S×179°.44W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.9/28, mbtmp4.0/3, ML4.2/1, MS3.5/2, Ms1 3.4/2, ms1mx2.9/29, Error ellipse: s-maj=56.7km s-min=38.5km az=136.0*

*ISCJB **04** 19:39:46.1±0.8, 33°.78S±0°.04×179°.0W±0°.1, h48km, mb3.9/5, MS3.4/2, Error ellipse: s-maj=17.2km s-min=4.2km az=15.5*

*WEL **04** 19:39:48.1±0.7, 34°S±7°×17°9W±1°6, h33km, ML4.9/15*

*NEIC **04** 19:39:54.4±3.5, 34°.14S×179°.47W, h92km±30km, mb4.2/3, Error ellipse: s-maj=46.7km s-min=22.0km az=196.0*

ISC 04 19:39:48.4±1.0, 33°.80S±0°.07×179°.1W±0°.1, h48km, n38, σ1s.44/52, mb3.9/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.33	209	P	Pn	19 40 52.5	+0.8
MXZ				S	Sn	19 41 41.3	+0.5
WMGZ	Waiomatatini S	4.51	206	P	Pn	19 40 54.5	+0.4
WMGZ				S	Sn	19 41 46.1	+0.8
GLKZ	Green Lake	4.63	12	P	Pn	19 40 55.6	-0.2
GLKZ				S	Sn	19 41 45.8	-2.4
PKGZ	Pakihiroa	4.70	209	P	Pn	19 40 57.0	+0.2
PKGZ				S	Sn	19 41 50.6	+0.6
HAZ	Te Kaha	4.71	212	P	Pn	19 40 57.5	+0.6
HAZ				S	Sn	19 41 51.2	+0.9
PUZ	Puketiti	4.79	206	P	Pn	19 40 57.7	-0.3
PUZ				S	Sn	19 41 53.0	+0.8
RUGZ	Raukumara Rang	4.93	212	P	Pn	19 41 01.2	+1.1
RUGZ				S	Sn	19 41 56.8	+0.9
TWGZ	Tauwhareparae	4.99	208	P	Pn	19 41 00.8	+0.1
TWGZ				S	Sn	19 41 57.4	+0.3
CNGZ	Carnagh Statio	5.17	205	P	Pn	19 41 03.5	+0.2
TKGZ	Te Karaka	5.26	208	P	Pn	19 41 07.0	+2.5
TKGZ				S	Sn	19 42 03.3	-0.5
MWZ	Matawai	5.30	211	P	Pn	19 41 06.1	+1.0
MWZ				S	Sn	19 42 03.7	-1.2
URZ	Urewera	5.43	214	ePn	Pn	19 41 06.2	-0.5
URZ				eSn	Sn	19 42 05.2	-2.7
URZ	Urewera	5.43	214	Pn	Pn	19 41 07.3	+0.5
	7.4nm,0.3s,baz=267,slow=4.6,SNR=16						
URZ				Sn	Sn	19 42 05.2	-2.7
	7.9nm,0.3s,baz=86,slow=20,SNR=8.5						
URZ	Urewera	5.43	214	P	Pn	19 41 07.2	+0.5
URZ				S	Sn	19 42 02.5	-5.4
RAGZ	Rawiri	5.49	210	P	Pn	19 41 08.8	+1.2
MKAZ	Moumakai	5.76	233	P	Pn	19 41 12.0	+0.7
SNGZ	Shannon Statio	5.76	209	P	Pn	19 41 11.5	+0.2
SNGZ				S	Sn	19 42 16.5	+0.4
RTZ	Ruatahuna	5.78	213	P	Pn	19 41 11.9	+0.3
WCZ	Waipu Caves	5.83	247	P	Pn	19 41 13.6	+1.3
KNZ	Kokohu	5.84	206	P	Pn	19 41 10.7	-1.6
KNZ				S	Sn	19 42 16.1	-2.0
TOZ	Tahuroa Road	5.92	227	P	Pn	19 41 15.9	+2.5
OUZ	Omahuta	6.24	255	ePn	Pn	19 41 18.1	+0.3
OUZ	Omahuta	6.24	255	P	Pn	19 41 18.4	+0.6
BKZ	Black Stump Fm	6.45	213	P	Pn	19 41 20.1	-0.7
NGZ	Ngauruhoe	6.88	217	P	Pn	19 41 27.0	+0.2
PPT	Papeete	30.95	66	LR	LR	19 56 00.8	
	comp=Z,69nm,21.3s,baz=11,slow=31						
STKA	Stephens Creek	32.99	262	LR	LR	19 59 31.3	
	comp=Z,87nm,18.7s,baz=11,slow=36						
AS01	Alice Springs	42.12	271	eP	P	19 47 34.8	-1.3
AS31	Alice Springs	42.16	271	eP	P	19 47 35.8	-0.7
	0.6nm,0.6s						
ASAR	Alice Springs	42.16	271	P	P	19 47 35.8	-0.7
	1.3nm,0.8s,baz=113,slow=7.7,SNR=13						
ASAR				PcP	PcP	19 49 31.3	+1.1
	0.2nm,0.5s,baz=110,slow=3.8,SNR=3.0						
WB2	Warramunga Arr	43.45	276	eP	P	19 47 47.7	+0.8
WRAB	Tennant Creek	43.45	276	eP	P	19 47 44.7	-2.2
	8.6nm,1.3s						
WR1	Warramunga Arr	43.46	276	eP	P	19 47 45.5	-1.5
	5.9nm,1.1s						
WRA	Warramunga Arr	43.46	276	P	P	19 47 45.5	-1.5
	1.0nm,0.4s,baz=116,slow=7.6,SNR=17						
FIA0	FINESS Array S	147.98	337	ePKPbc	PKPbc	19 59 28.1	+0.5
FINES	FINESS Array B	147.98	337	PKPbc	PKPbc	19 59 28.1	+0.5
	1.4nm,0.6s,baz=29,slow=3.2,SNR=7.9						
NB200	NORSAR Array S	151.95	349	ePKPbc	PKiKP	19 59 39.3	+1.5
NOA	NORSAR Array B	151.95	349	PKPbc	PKiKP	19 59 39.3	+1.5
	0.7nm,0.7s,baz=18,slow=4.7,SNR=3.4						

MDD 04 19:46:13.9±0.2, 38°.05N×3°.28W, h10km, mbLg1.2/16, Error ellipse: s-maj=2.0km s-min=1.7km az=30.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	Quesada	0.30	146	Pg	Pg	19 46 19.7	-0.2
	1.5nm,0.4s,SNR=12						
EQES				Lg	Lg	19 46 24.1	
	5.1nm,0.2s,SNR=7.9						
SESP	Santiago Espad	0.58	83	Pg	Pg	19 46 25.2	0.0
	3.9nm,0.2s,SNR=7.9						
SESP				Lg	Lg	19 46 32.9	
	20nm,0.2s,SNR=7.9						
EQUE	Quentar	0.85	189	Pg	Pb	19 46 30.8	-0.1
	4.2nm,0.3s,SNR=8.4						
EQUE				Lg	Lg	19 46 41.5	
	3.8nm,0.3s,SNR=14						
EADA	Adamuz	1.03	277	Pg	Pg	19 46 32.9	-0.8
	1.1nm,0.3s,SNR=28						
EADA				Lg	Lg	19 46 46.7	
	4.1nm,0.3s,SNR=14						
EGOR	Sierra Gorda,	1.15	215	Pg	Pb	19 46 34.6	-1.3
	0.0nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	19 46 51.1	
	1.6nm,1.2s,SNR=7.9						
EBER	Berja	1.19	165	Pg	Pb	19 46 36.3	-0.4
	2.5nm,0.8s,SNR=13						
EBER				Lg	Lg	19 46 53.0	
	5.5nm,0.3s,SNR=11						
ELGU	Los Guajares,	1.21	193	Pg	Pb	19 46 37.0	0.0
	1.4nm,0.5s,SNR=7.9						
ELGU				Lg	Lg	19 46 53.3	
	12nm,0.8s,SNR=7.9						
ETOB	Tobarra	1.48	66	Pg	Pb	19 46 41.8	+0.3
	2.8nm,0.7s,SNR=15						
ETOB				Lg	Lg	19 47 01.6	
	3.7nm,0.3s,SNR=10						
EMUR	La Murta	1.62	97	Lg	Lg	19 47 05.7	
	4.6nm,0.4s,SNR=15						
ECAB	El Cabril	1.69	272	Pn	Pn	19 46 42.6	-0.9
	2.4nm,1.2s,SNR=7.9						
ECAB				Pg	Pb	19 46 45.0	-0.1
	2.6nm,0.8s,SNR=12						
ECAB				Sn	Sn	19 47 04.3	-0.9
	3.9nm,0.3s,SNR=16						
ESDC	Sonseca Array	1.71	342	Pg	Pb	19 46 45.0	-0.3
	0.3nm,0.4s,baz=162,slow=17,SNR=6.0						
ESDC				Sn	Sn	19 47 04.1	-1.6
	0.8nm,0.5s,SNR=7.9						
ESDC				Lg	Lg	19 47 07.6	
	0.9nm,0.3s,baz=161,slow=30,SNR=14						
PAB	San Pablo	1.71	331	Pg	Pb	19 46 45.6	+0.1
	4.5nm,2.4s,SNR=7.9						
PAB				Lg	Lg	19 47 08.3	
	4.5nm,0.9s,SNR=7.9						
EMIJ	Mijas	1.90	219	Pg	Pb	19 46 49.2	+0.6
	2.9nm,2.4s,SNR=7.9						
EMIJ				Lg	Lg	19 47 15.8	
	3.5nm,8.8s,SNR=7.9						
ECHE	Chera	2.37	49	Lg	Lg	19 47 29.4	
	5.3nm,5.9s,SNR=7.9						
GUD	Guadarrama	2.68	346	Lg	Lg	19 47 38.4	
	3.2nm,3.6s,SNR=7.9						
EMIN	Mina Concepcio	2.70	265	Sn	Sn	19 47 28.2	-1.8
	1.3nm,1.1s,SNR=7.9						
EMIN				Lg	Lg	19 47 39.4	
	1.3nm,0.3s,SNR=6.0						
EPLA	Plasencia	2.97	314	Sn	Sn	19 47 34.1	-2.5
	1.8nm,2.3s,SNR=7.9						
EPLA				Lg	Lg	19 47 48.9	
	5.6nm,3.6s,SNR=7.9						
EBAD	Badajoz	3.02	285	Sn	Sn	19 47 35.9	-2.0
	2.9nm,2.3s,SNR=7.9						
EBAD				Lg	Lg	19 47 49.5	
	2.7nm,2.4s,SNR=7.9						
PESTR	Estremoz	3.48	285	eSn	Sn	19 47 47.2	-2.2
PESTR				eSg	Sg	19 48 04.1	-1.6
PMRV	Marv??o	3.50	294	eSg	Sg	19 48 03.4	-2.8
PMRV				A	A	19 48 08.1	
	1.8nm,0.4s						
PMRV	Marv??o	3.50	294	Lg	Lg	19 48 03.4	
	1.8nm,0.4s						
PVAQ	Vaqueiros	3.58	261	eSg	Sb	19 48 03.6	+2.9
PVAQ	Vaqueiros	3.58	261	Lg	Lg	19 48 03.6	
PMTG	Montargil	4.01	286	eSn	Sn	19 47 59.8	-2.5
PMTG				eSg	Sg	19 48 20.3	-2.3
PMTG	Montargil	4.01	286	Sn	Sn	19 47 59.8	-2.5
PMTG				Lg	Lg	19 48 20.3	

*IDC **04** 19:54:23.9±4.8, 6°.55S×104°.68E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/38, mbtmp3.3/3, Error ellipse: s-maj=236.3km s-min=29.9km az=49.0*

*ISCJB **04** 19:54:30.7±1.3, 6°.8S±0°.1×104°.8E±0°.1, h49km, mb3.3/3, Error ellipse: s-maj=24.0km s-min=6.6km az=137.5*

*DJA **04** 19:54:32.9±1.3, 7°S±10°×10°5E±°, h27km±12km, M3.5/8, MLv3.5/8*

ISC 04 19:54:32.3±1.3, 6°.6S±0°.1×104°.9E±0°.1, h49km, n13, σ1s.53/14, mb3.2/3, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.13	341	P	Pn	19 54 51.8	0.0
BLSI	Bandar Lampung	1.28	17	P	Pn	19 54 53.6	-0.2
KLI	Kotabumi	1.72	360	P	Pn	19 55 00.7	+0.8
SKJI	Sukabumi	1.73	104	P	Pn	19 55 01.8	+1.8
LWLI	Liwa	1.76	333	P	Pn	19 55 01.8	+1.3
LWLI				S	Sn	19 55 24.3	+2.5
CBJI	Citeko	1.98	85	P	Pn	19 55 05.4	+2.0
MDSI	Maura Dua	2.21	342	P	Pn	19 55 07.2	+0.7
MNAI	Manna	2.92	319	P	Pn	19 55 18.0	+1.7
CISI	Cisompet, Garu	3.08	108	P	Pn	19 55 19.0	+0.5
CMJI	Cimerak	3.75	109	P	Pn	19 55 28.0	+0.4
WRA	Warramunga Arr	31.53	118	P	P	20 00 49.4	-0.8
	0.4nm,0.7s,baz=289,slow=10,SNR=5.4						
ASAR	Alice Springs	32.66	124	P	P	20 00 59.9	-0.1
	0.3nm,0.9s,baz=302,slow=8.1,SNR=4.5						
MKAR	Makanchi Array	56.81	342	P	P	20 04 09.3	-2.4
	0.1nm,0.4s,baz=168,slow=9.5,SNR=4.5						

MDD 04 19:58:39.6±0.4, 36°.99N×5°.43W, h0km, mbLg0.8/10, 2D, Error ellipse: s-maj=3.9km s-min=3.2km az=62.0, PRXIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIJA	Lijar	0.09	164	⇓Pg	Pg	19 58 40.7	-0.6
LIJA				Lg	Lg	19 58 42.2	
LIJA	Lijar	0.09	164	⇓iP	Pg	19 58 40.7	-0.6
LIJA				i S	Sg	19 58 42.2	-0.2
ESPR	Espera	0.36	251	Pg	Pg	19 58 47.3	+0.8
	5.4nm,0.3s,SNR=8.3						
ESPR				Lg	Lg	19 58 51.9	
	5.4nm,0.4s,SNR=7.3						
EJIF	Jimena Fronter	0.54	183	Pg	Pb	19 58 52.1	+0.2
	0.7nm,0.4s,SNR=7.9						
EJIF				Lg	Lg	19 59 00.3	
	2.3nm,0.6s,SNR=7.9						
EMIJ	Mijas	0.68	128	Pg	Pg	19 58 51.5	-1.1
	1.1nm,0.6s,SNR=7.9						
EMIJ				Lg	Lg	19 59 04.6	
	14nm,2.9s,SNR=7.9						
EGOR	Sierra Gorda,	1.07	83	Pg	Pb	19 59 01.2	+0.1
	1.3nm,0.8s,SNR=7.9						
EGOR				Lg	Lg	19 59 17.1	
	3.0nm,0.7s,SNR=7.9						
ECAB	El Cabril	1.08	1	Pg	Pg	19 58 59.6	-0.8
	2.6nm,0.5s,SNR=28						
ECAB				Lg	Lg	19 59 13.3	
	4.2nm,0.6s,SNR=9.2						
EMIN	Mina Concepcio	1.26	309	Pg	Pg	19 59 01.5	-2.2
	0.6nm,0.6s,SNR=7.9						
EMIN				Lg	Lg	19 59 17.8	
	2.5nm,0.5s,SNR=7.9						
EADA	Adamuz	1.36	30	Pg	Pg	19 59 04.7	-1.0
	0.3nm,1.1s,SNR=7.9						
EADA				Lg	Lg	19 59 22.7	
	2.3nm,0.6s,SNR=7.9						
EGRO	El Granado	1.72	289	Pg	Pn	19 59 10.7	-0.1
	0.8nm,0.5s,SNR=7.9						
EGRO				Lg	Lg	19 59 33.3	
	1.9nm,0.7s,SNR=7.9						
PVAQ	Vaqueiros	1.87	283	Sn	Sn	19 59 31.5	-5.7
PVAQ				Lg	Lg	19 59 37.4	
PVAQ	Vaqueiros	1.87	283	eSn	Sn	19 59 31.5	-5.7
PVAQ				eSg	Sb	19 59 37.4	-1.2
EQES	Quesada	2.05	66	Lg	Lg	19 59 46.5	
	2.4nm,5.3s,SNR=7.9						
PAB	San Pablo	2.69	18	Lg	Lg	20 00 05.0	
	2.1nm,4.2s,SNR=7.9						

*IDC **04** 20:00:03.1±0.8, 10°.91S×165°.54E, h0km, mb3.9/10, mb1 4.2/12, mb1mx4.1/31, mbtmp4.0/12, ML4.6/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/36, Error ellipse: s-maj=29.5km s-min=18.1km az=143.0*

*NEIC **04** 20:00:04.2±0.4, 10°.95S×165°.60E, h10km, mb4.5/4, Error ellipse: s-maj=13.1km s-min=8.4km az=141.0*

*ISCJB **04** 20:00:05.6±0.5, 11°.05S±0°.09×165°.49E±0°.06, h30km, mb4.0/12, MS3.4/2, Error ellipse: s-maj=12.3km s-min=9.0km az=179.3*

ISC 04 20:00:07.2±0.6, 10°.9S±0°.1×165°.58E±0°.08, h30km, n33, σ1s.12/32, mb3.9/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.75	285	eP	Pn	20 01 31.0	+0.5
HNR				eS	Sn	20 02 35.0	-0.5
HNR	Honiara	5.75	285	ePn	Pn	20 01 30.2	-0.4
HNR	Honiara	5.75	285	Pn	Pn	20 01 30.7	+0.2
	32nm,0.3s,baz=128,slow=8.6,SNR=9.2						
HNR				Sn	Sn	20 02 34.6	-0.9
	11nm,0.3s,baz=143,slow=20,SNR=4.2						
HNR				LR	LR	20 03 32.6	
	comp=Z,185nm,20.3s,baz=169,slow=37						
DZM	Mont Dzumac	11.10	176	ePn	Pn	20 02 43.3	-0.7
DZM	Mont Dzumac	11.10	176	Pn	Pn	20 02 43.7	-0.3
	2.7nm,0.3s,baz=342,slow=22,SNR=26						
CTA	Charters Tower	20.71	242	P	P	20 04 46.2	+0.9
	5.1nm,0.9s,baz=52,slow=9.9,SNR=4.1						
CTAO	Charters Tower	20.71	242	eP	P	20 04 46.0	+0.8
	21nm,1.4s						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	20 36 36.6	
	baz=181,slow=75,SNR=4.0						
H11S3	WAKE ISLAND Hy	29.27	2	T	T	20 36 42.7	
	baz=181,slow=75,SNR=4.1						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	20 36 39.5	
	baz=181,slow=75,SNR=3.2						
STKA	Stephens Creek	30.41	223	P	P	20 06 17.4	+0.4
	1.5nm,0.7s,baz=60,slow=12,SNR=3.2						
STKA				LR	LR	20 17 48.3	
	comp=Z,83nm,18.8s,baz=266,slow=35						
H11N1	WAKE ISLAND Hy	30.49	2	T	T	20 38 08.8	
	baz=182,slow=76,SNR=4.0						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	20 38 11.6	
	baz=182,slow=76,SNR=4.0						
H11N2	WAKE ISLAND Hy	30.51	2	T	T	20 38 09.3	
	baz=182,slow=76,SNR=3.3						
WB2	Warramunga Arr	31.36	250	eP	P	20 06 24.5	-1.0
	14nm,1.3s						
WR1	Warramunga Arr	31.37	250	eP	P	20 06 24.9	-0.7
	13nm,1.3s						
WR1				ePcP	PcP	20 09 20.6	+1.5
WRA	Warramunga Arr	31.37	250	P	P	20 06 24.9	-0.7
	3.6nm,0.9s,baz=80,slow=9.0,SNR=12						
WRA				PcP	PcP	20 09 20.6	+1.5
	0.4nm,1.0s,baz=89,slow=4.6,SNR=4.9						
WRA				LR	LR	20 19 39.0	
	comp=Z,66nm,18.1s,baz=105,slow=38						
AS31	Alice Springs	32.69	243	eP	P	20 06 36.2	-1.0
	1.2nm,1.1s						
ASAR	Alice Springs	32.70	243	P	P	20 06 36.4	-0.9
	0.5nm,0.3s,baz=63,slow=10,SNR=22						
ASAR				PcP	PcP	20 09 24.0	+1.3
	0.3nm,0.6s,baz=71,slow=2.4,SNR=4.4						
SONA0	Songino Array	78.49	324	eP	P	20 12 06.1	+0.5
SONM	Songino Array	78.49	324	P	P	20 12 06.1	+0.5
	0.4nm,0.8s,baz=134,slow=8.3,SNR=3.5						
ILAR	Eielson Array	83.47	19	P	P	20 12 32.7	+1.1
	1.0nm,0.8s,baz=242,slow=4.6,SNR=12						
ILB	Eielson Array	83.47	19	eP	P	20 12 32.5	+0.9
NV01	Mina Array Sit	86.08	50	eP	P	20 12 43.3	-2.4
NVAR	Mina Array Bea	86.08	50	P	P	20 12 47.1	+1.4
	0.6nm,0.7s,baz=237,slow=4.8,SNR=4.5						
MK32	Makanchi Array	93.34	317	eP	P	20 13 19.7	+0.3
MKAR	Makanchi Array	93.34	317	P	P	20 13 19.7	+0.3
	0.3nm,0.7s,baz=91,slow=7.2,SNR=3.0						
YKA	Yellowknife Ar	94.96	27	P	P	20 13 25.3	-1.1
	0.3nm,0.8s,baz=258,slow=4.6,SNR=5.6						
YKB5	Yellowknife Ar	94.96	27	eP	P	20 13 23.1	-3.3
LTX	Lajitas	95.92	61	eP	P	20 13 32.1	+0.3
TXAR	Lajitas Array	95.92	61	P	P	20 13 32.1	+0.3
	0.3nm,0.7s,baz=218,slow=5.7,SNR=5.6						
ARA0	ARCESS Array S	116.19	345	ePKPdf	PKiKP	20 18 47.4	+0.3
ARCES	ARCESS Array B	116.19	345	PKP	PKiKP	20 18 47.4	+0.3
	3.1nm,0.9s,baz=8.9,slow=3.9,SNR=5.4						

*ISCJB **04** 20:13:10.5±0.4, 7°.91S±0°.05×123°.09E±0°.07, h221km, mb3.4/5, Error ellipse: s-maj=10.9km s-min=4.8km az=151.5*

*IDC **04** 20:13:12.2±1.3, 7°.94S×122°.96E, h234km±13km, mb3.2/5, mb1 3.5/9, mb1mx3.3/31, mbtmp4.0/9, Error ellipse: s-maj=46.5km s-min=10.5km az=61.0*

*DJA **04** 20:13:13.0±0.8, 8°S±4°×12°3E±°, h215km±10km, M3.8/14, mB4.4/1, mb3.8/3, MLv3.8/14, Mw(mB)3.6/1*

ISC 04 20:13:11.1±0.7, 7°.96S±0°.05×123°.04E±0°.09, h221km, n27, σ1s.85/35, mb3.9/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.04	230	P	Pn	20 13 44.4	+1.1
EDFI	Ende, Flores	1.55	239	P	Pn	20 13 48.2	+1.0
SOEI	Soe	2.16	146	P	Pn	20 13 54.5	+1.6
SOEI				S	S	20 14 27.9	+2.4
BATI	Baumata	2.32	165	P	Pn	20 13 56.3	+1.9
BATI				S	S	20 14 30.6	+2.3
BATI	Baumata	2.32	165	P	Pn	20 13 56.7	+2.3
	24nm,0.3s,baz=343,slow=1.1,SNR=60						
BATI				S	S	20 14 27.2	-1.1
	32nm,0.3s,baz=302,slow=22,SNR=11						
BBSI	Bau Bau	2.50	349	P	Pn	20 13 57.7	+1.4
WSI	Waingapu	3.20	238	P	Pn	20 14 04.1	-0.1

BASI	Baing, Sumba	3.31	227	P	Pn	20 14 06.5	+1.0
BKSI	Bulukumba	3.91	312	P	Pn	20 14 13.0	+0.4
KDI	Kendari	4.00	354	P	Pn	20 14 13.9	+0.2
BNSI	Bone	4.58	320	P	Pn	20 14 21.7	+0.8
SPSI	Sidrap Palu	5.13	320	P	Pn	20 14 28.5	+0.8
PLAI	Plampang	5.28	260	P	Pn	20 14 30.3	+0.7
FITZ	Fitzroy Crossi	10.39	166	P	Pn	20 15 34.9	-0.2
	0.6nm,0.3s,baz=359,slow=7.8,SNR=22						
FITZ				S	S	20 17 27.2	-4.4
	0.8nm,0.3s,baz=345,slow=20,SNR=7.0						
WRA	Warramunga Arr	16.18	139	P	P	20 16 46.4	+0.7
	1.6nm,0.3s,baz=316,slow=12,SNR=78						
WRA				S	S	20 19 39.6	-4.7
	0.1nm,0.3s,baz=307,slow=21,SNR=3.5						
WRA				ScP	ScP	20 24 37.5	-3.3
	0.0nm,0.3s,baz=323,slow=2.1,SNR=4.7						
ASAR	Alice Springs	18.77	148	P	P	20 17 15.8	+1.8
	1.4nm,0.3s,baz=330,slow=13,SNR=50						
ASAR				S	S	20 20 38.0	+2.1
	0.0nm,0.3s,baz=331,slow=20,SNR=4.7						
ASAR				ScP	ScP	20 24 43.3	-2.8
	0.1nm,0.3s,baz=331,slow=1.8,SNR=10						
CMAR	Chiang Mai Arr	35.42	318	P	P	20 19 45.8	-0.6
	0.1nm,0.3s,baz=133,slow=9.2,SNR=2.3						
RAMN	Ramite	49.52	316	*e*P	P	20 21 41.8	+1.9
	4.9nm,0.5s						
GUN	Gumba	50.62	316	*e*P	P	20 21 49.4	+1.1
	2.9nm,0.4s						
PKI	Pulchoki	50.73	316	*e*P	P	20 21 49.6	+0.5
	2.7nm,0.3s						
PKIN	Phulchoki	50.74	316	*e*P	P	20 21 49.9	+0.8
	4.0nm,0.5s						
DANN	Dangsing	52.35	315	*e*P	P	20 22 01.2	+0.1
	9.4nm,0.6s						
USRK	Ussuriysk Ar.	52.54	8	P	P	20 22 01.1	-0.7
	1.6nm,0.5s,baz=189,slow=6.1,SNR=6.0						
PYUN	Piuthan	52.74	314	*e*P	P	20 22 04.9	+1.0
	2.6nm,0.4s						
SONM	Songino Array	57.47	347	P	P	20 22 37.2	+0.1
	0.2nm,0.4s,baz=152,slow=9.8,SNR=3.8						
MKAR	Makanchi Array	65.44	330	P	P	20 23 30.4	+0.1
	0.5nm,0.5s,baz=131,slow=6.7,SNR=12						
ZALV	Zalesovo Beam	69.57	337	P	P	20 23 54.6	-1.3
	1.0nm,0.5s,baz=142,slow=5.1,SNR=5.9						

IDC 04 20:29:51.3±3.4, 3°.77N×95°.06E, h0km, mb3.2/2, mb1 3.4/4, mb1mx3.1/56, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=66.0km s-min=47.0km az=57.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.98	104	Pn	Pn	20 30 55.3	+1.6
	0.9nm,0.3s,baz=360,slow=15,SNR=3.7						
PSI				Sn	Sn	20 31 41.7	+0.4
	1.0nm,0.3s,baz=360,slow=19,SNR=3.6						
CMAR	Chiang Mai Arr	15.08	14	Pn	Pn	20 33 25.6	-0.2
	0.1nm,0.3s,baz=201,slow=9.9,SNR=4.5						
WRA	Warramunga Arr	45.21	123	P	P	20 38 11.1	+0.5
	0.2nm,0.7s,baz=303,slow=9.1,SNR=2.7						
ASAR	Alice Springs	46.65	128	P	P	20 38 21.0	-0.9
	0.2nm,0.4s,baz=299,slow=7.5,SNR=4.0						

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*ISCJB **04** 20:31:31.9±0.6, 4°.40S±0°.05×127°.62E±0°.06, h250km, mb3.4/4, Error ellipse: s-maj=8.3km s-min=6.5km az=32.9*

*IDC **04** 20:31:32.1±1.4, 4°.24S×127°.61E, h277km±16km, mb3.2/5, mb1 3.2/9, mb1mx3.0/52, mbtmp3.8/9, Error ellipse: s-maj=20.5km s-min=10.0km az=75.0*

*DJA **04** 20:31:34.4±1.0, 4°S±6°×12°8E±°, h255km±9km, M3.6/7, MLv3.6/7*

ISC 04 20:31:31.5±0.8, 4°.30S±0°.07×127°.57E±0°.06, h250km, n14, σ2s.20/19, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	1.15	336	P	Pn	20 32 11.0	+3.5
NLAI				S	S	20 32 39.5	+3.7
BNDI	Bandanaira	2.34	96	P	Pn	20 32 19.5	+2.4
SANI	Sanana	2.74	325	P	Pn	20 32 22.4	+1.2
SANI				S	S	20 33 01.8	+1.2
FAKI	Fak Fak	4.86	74	P	Pn	20 32 47.6	+1.9
FAKI				S	S	20 33 44.4	-0.4
SIJI	Sorong	5.02	47	P	Pn	20 32 49.8	+2.2
	2.5nm,0.3s,baz=180,slow=23,SNR=20						
SIJI				S	S	20 33 48.4	+0.2
	3.0nm,0.3s,baz=216,slow=22,SNR=7.0						
SWI	Sorong	5.02	47	P	Pn	20 32 48.6	+1.0
SWI				S	S	20 33 48.0	-0.2
BATI	Baumata	7.04	213	P	Pn	20 33 13.8	+1.0
	1.8nm,0.3s,baz=48,slow=6.6,SNR=8.3						
FITZ	Fitzroy Crossi	13.85	188	P	Pn	20 34 37.3	-0.5
	0.2nm,0.3s,baz=34,slow=11,SNR=9.2						
WRA	Warramunga Arr	16.89	158	P	P	20 35 11.9	-0.3
	0.3nm,0.3s,baz=339,slow=12,SNR=25						
WRA				S	S	20 38 19.4	+3.8
	0.1nm,0.3s,baz=343,slow=16,SNR=5.5						
ASAR	Alice Springs	20.20	163	P	P	20 35 47.2	-0.6
	2.2nm,0.3s,baz=345,slow=11,SNR=89						
ASAR				S	S	20 39 17.4	-3.0
	0.5nm,0.6s,baz=349,slow=22,SNR=6.5						
STKA	Stephens Creek	30.43	156	P	P	20 37 20.3	-0.7
	0.8nm,0.3s,baz=303,slow=7.4,SNR=4.1						
CMAR	Chiang Mai Arr	36.16	310	P	P	20 38 08.5	-2.0
	0.3nm,0.5s,baz=138,slow=7.1,SNR=3.3						
MKAR	Makanchi Array	64.66	327	P	P	20 41 40.8	-2.0
	0.5nm,0.6s,baz=119,slow=7.0,SNR=3.4						
ZALV	Zalesovo Beam	68.11	334	P	P	20 42 01.6	-2.8
	0.4nm,0.5s,baz=127,slow=9.2,SNR=2.3						

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*NIED **04** 20:32:00, 36°.40N×143°.00E, h5km, Mw4.0 Best double couple: M₀1.26000×10¹⁵ NP1:φs54.00000°, δ33.00000°, λ-63.00000°. NP2:φs203.00000°, δ61.00000°, λ-106.00000°.*

*IDC **04** 20:32:25.5±0.6, 36°.29N×143°.27E, h0km, mb3.9/17, mb1 4.1/24, mb1mx4.0/54, mbtmp4.0/24, ML3.5/6, MS3.0/3, Ms1 3.0/3, ms1mx2.7/50, Error ellipse: s-maj=15.2km s-min=13.3km az=110.0*

*ISCJB **04** 20:32:28.6±0.3, 36°.36N±0°.04×143°.04E±0°.04, h29km, mb4.1/26, Error ellipse: s-maj=5.2km s-min=4.1km az=7.2*

*NEIC **04** 20:32:30.7±0.3, 36°.24N×143°.20E, h35km, mb4.4/10, Error ellipse: s-maj=7.6km s-min=7.0km az=181.0*

*JMA **04** 20:32:30.2±0.2, 36°.42N×142°.97E, h75km, M4.1*

ISC 04 20:32:29.7±0.6, 36°.33N±0°.05×143°.13E±0°.06, h29km, n80, σ1s.66/91, mb4.1/26, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.94	252	P	Pn	20 33 00.7	0.0
ONAJ	Iwakimizuishiy	2.02	293	P	Pn	20 33 00.6	-1.3
JHYU	Hitachinakayam	2.05	271	P	Pn	20 33 01.6	-0.6
JHYU				S	Sn	20 33 24.4	-2.4
JHO	Hitachi	2.08	279	P	Pn	20 33 01.6	-1.0
JHO				S	Sn	20 33 24.9	-2.7
JFK	Kawauchi	2.08	301	P	Pn	20 33 01.1	-1.6
JFK				S	Sn	20 33 24.4	-3.3
BSO1	Boso 1	2.42	227	P	Pn	20 33 07.1	+0.3
JFT	Otama	2.53	299	P	Pn	20 33 08.5	-0.4
JFT				S	Sn	20 33 36.5	-2.2
JAG	Ashikaga	2.96	273	P	Pn	20 33 14.2	-0.6
JMK	Ichinoseki	3.02	331	P	Pn	20 33 14.1	-1.5
JMK				S	Sn	20 33 47.9	-3.0
JYK	Kaneyama	3.39	320	P	Pn	20 33 19.7	-1.0
JYK				*e*S	Sn	20 33 57.9	-2.1
JRY	Ryogami san	3.43	266	P	Pn	20 33 20.8	-0.5
JRY				*e*S	Sn	20 33 58.4	-2.6
JOD2	Odawara 2	3.45	253	P	Pn	20 33 21.8	+0.3
JOM	Ohasama	3.46	336	P	Pn	20 33 19.8	-1.8
JOM				*e*S	Sn	20 33 58.6	-3.0
JYN	Shimob	3.81	259	P	Pn	20 33 26.8	+0.3
MJAR	Matsushiro Arr	3.97	275	Pn	Pn	20 33 28.6	-0.1
	1.2nm,0.3s,baz=87,slow=13,SNR=49						
MJAR				Sn	Sn	20 34 11.7	-2.5
	1.6nm,0.3s,baz=151,slow=12,SNR=6.1						
MJAR				LR	LR	20 35 16.5	
	comp=Z,128nm,21.6s,baz=95,slow=42						
MAJO	Matsushiro	3.97	275	*e*Pn	Pn	20 33 29.2	+0.6
MAJO				*e*Sn	Sn	20 34 11.7	-2.6
MAT	Matsushiro	3.97	275	P	Pn	20 33 29.3	+0.6
MAT				S	Sn	20 34 14.1	-0.2
MAT	Matsushiro	3.97	275	P	Pn	20 33 29.3	+0.6
MJB9	Matsu-Tunnel	3.97	275	*e*Pn	Pn	20 33 29.0	+0.3
JHJ	Hachijo jima 2	4.22	222	Pn	Pn	20 33 29.8	-2.3
	18nm,0.3s,baz=352,slow=20,SNR=13						
JHJ				Sn	Sn	20 34 15.7	-4.7
	110nm,0.3s,baz=44,slow=23,SNR=8.1						
INU	Inuyama	5.06	261	*e*Pn	Pn	20 33 44.3	+0.8
ASAJ	Asahikawa	7.79	357	Pn	Pn	20 34 18.6	-2.5
	2.9nm,0.3s,baz=108,slow=13,SNR=9.4						
ASAJ				Sn	Sn	20 35 37.5	-11
	0.5nm,0.3s,baz=233,slow=20,SNR=2.4						
CBIJ	Chichi jima	9.24	185	*e*Pn	Pn	20 34 38.7	-2.3
CBIJ				*e*Sn	Sn	20 36 12.2	-12
JCJ	Chichijima	9.24	185	Pn	Pn	20 34 38.7	-2.3
	10nm,0.3s,baz=12,slow=20,SNR=4.9						
JCJ				Sn	Sn	20 36 12.2	-12
	19nm,0.3s,baz=331,slow=22,SNR=6.0						
JNU	Nakatsue	10.57	256	Pn	Pn	20 34 59.7	+0.4
	0.3nm,0.3s,baz=24,slow=20,SNR=2.9						
USRK	Ussuriysk Ar.	11.58	316	Pn	Pn	20 35 12.2	-0.7
	0.4nm,0.3s,baz=123,slow=14,SNR=7.4						
KSRS	Korea Array	12.23	280	Pn	Pn	20 35 23.8	+2.0
	0.1nm,0.3s,baz=90,slow=14,SNR=3.6						
KSRS				LR	LR	20 39 39.5	
	comp=Z,75nm,21.3s,baz=35,slow=35						
KSAR	Wonju Array Be	12.26	280	Pn	Pn	20 35 23.8	+1.5
KLR	Kul'dur	15.34	331	Pn	Pn	20 35 59.8	-4.2
	0.3nm,0.3s,baz=161,slow=9.3,SNR=9.5						
KLR				LR	LR	20 42 48.1	
	comp=Z,111nm,18.8s,baz=344,slow=40						
H11N2	WAKE ISLAND Hy	26.61	122	T	T	21 05 52.2	
	baz=314,slow=75,SNR=7.2						
H11N1	WAKE ISLAND Hy	26.61	122	T	T	21 05 54.5	
	baz=314,slow=75,SNR=4.6						
H11N3	WAKE ISLAND Hy	26.62	122	T	T	21 05 54.5	
	baz=314,slow=75,SNR=5.5						
H11S1	WAKE ISLAND Hy	27.32	124	T	T	21 06 53.3	
	baz=304						
H11S3	WAKE ISLAND Hy	27.32	124	T	T	21 06 50.5	
	baz=304						
H11S2	WAKE ISLAND Hy	27.34	124	T	T	21 06 50.9	
	baz=304						
XAN	Xi'an	27.97	275	*e*P	P	20 38 21.0	+3.2
	5.0nm,0.7s						
ENH	Enshi	28.66	268	*e*P	P	20 38 27.0	+3.0
	6.6nm,0.6s						
ULN	Ulaanbaatar	28.89	305	*e*P	P	20 38 27.9	+1.8
ULN				*e*pP	pwP	20 38 41.4	-0.9
SONA1	Songino Array	29.32	305	*e*P	P	20 38 31.8	+2.0
SONA1				*e*pP	pwP	20 38 43.8	-2.3
SONA0	Songino Array	29.32	305	*e*P	P	20 38 31.9	+2.1
SONM	Songino Array	29.32	305	P	P	20 38 31.9	+2.1
	2.3nm,0.7s,baz=100,slow=8.2,SNR=14						
TLY	Talaya	31.83	311	*e*P	P	20 38 53.7	+1.9
	2.9nm,0.9s						
TLY	Talaya	31.83	311	P	P	20 38 54.2	+2.4
	0.7nm,0.7s,baz=147,slow=4.2,SNR=5.5						
CMAR	Chiang Mai Arr	42.67	257	P	P	20 40 25.5	+1.5
	0.4nm,1.0s,baz=46,slow=7.7,SNR=3.2						
ZAA0	Zalesovo Array	43.40	313	*e*P	P	20 40 30.6	+1.1
	5.7nm,1.3s						
ZAA1	Zalesovo Array	43.40	313	*e*P	P	20 40 30.6	+1.1
ZAA1				*e*PP	PcP	20 42 17.3	-0.2
ZALV	Zalesovo Beam	43.40	313	P	P	20 40 30.6	+1.1
	0.9nm,0.5s,baz=90,slow=7.4,SNR=7.4						
ZALV				PcP	PcP	20 42 17.3	-0.2
	1.0nm,0.5s,baz=104,slow=2.6,SNR=4.0						
MK01	Makanchi Array	45.66	303	*e*P	P	20 40 48.8	+1.1
MK31	Makanchi Array	45.66	303	*e*P	P	20 40 48.5	+0.9
MK32	Makanchi Array	45.66	303	*e*P	P	20 40 48.9	+1.2
MKAR	Makanchi Array	45.66	303	*e*P	P	20 40 48.4	+0.7
	13nm,0.8s						
MKAR	Makanchi Array	45.66	303	P	P	20 40 48.9	+1.2
	1.5nm,0.9s,baz=87,slow=9.5,SNR=11						
MAKZ	Makanchi	45.87	303	*e*P	P	20 40 51.4	+2.1
	3.1nm,0.9s						
KURK	Kurchatov	47.45	309	*e*P	P	20 41 02.4	+0.8
	5.0nm,0.8s						
KURBB	Kurchatov Arra	47.52	309	P	P	20 41 03.1	+1.0
	1.0nm,0.4s,baz=82,slow=8.0,SNR=13						
IL1	Eielson Array	49.36	32	*e*P	P	20 41 16.3	+0.2
ILAR	Eielson Array	49.36	32	P	P	20 41 15.7	-0.4
	0.9nm,0.8s,baz=265,slow=6.4,SNR=9.5						
ILAR				PcP	PcP	20 42 36.9	-1.3
	0.3nm,0.6s,baz=282,slow=4.2,SNR=2.6						
BVAR	Borovoye Array	52.06	313	P	P	20 41 37.5	+0.8
	0.2nm,0.4s,baz=77,slow=10,SNR=3.0						
INK	Inuvik	54.39	27	P	P	20 41 54.2	+0.7
	1.3nm,0.8s,baz=292,slow=6.0,SNR=4.5						
WB2	Warramunga Arr	56.58	190	*e*P	P	20 42 08.8	-1.0
WR1	Warramunga Arr	56.58	190	*e*P	P	20 42 09.5	-0.2
	5.8nm,0.9s						
WRA	Warramunga Arr	56.58	190	P	P	20 42 09.5	-0.2
	4.5nm,0.7s,baz=11,slow=7.4,SNR=36						
FITZ	Fitzroy Crossi	56.60	200	P	P	20 42 10.6	+0.7
	1.1nm,0.7s,baz=351,slow=13,SNR=2.9						
CHGR	Chuyangaron	57.21	296	*e*P	P	20 42 15.2	+0.9
	26nm,1.5s						
AS01	Alice Springs	60.29	190	*e*P	P	20 42 35.5	-0.2
AS31	Alice Springs	60.30	190	*e*P	P	20 42 35.4	-0.3
	1.2nm,0.8s						
ASAR	Alice Springs	60.30	190	P	P	20 42 35.7	0.0
	2.9nm,0.7s,baz=2.5,slow=6.2,SNR=39						
YKA	Yellowknife Ar	63.72	30	P	P	20 42 58.2	0.0
	0.4nm,0.7s,baz=300,slow=6.6,SNR=7.1						
FIA0	FINESS Array S	70.07	333	*e*P	P	20 43 36.6	-2.1
FINES	FINESS Array B	70.07	333	P	P	20 43 36.6	-2.1
	2.2nm,0.9s,baz=39,slow=9.0,SNR=2.2						
NV01	Mina Array Sit	74.30	54	*e*P	P	20 44 05.9	+1.2
NVAR	Mina Array Bea	74.30	54	P	P	20 44 05.0	+0.3
NVAR	Mina Array Bea	74.30	54	P	P	20 44 05.0	+0.3
	1.5nm,0.8s,baz=282,slow=6.4,SNR=8.8						
NB2	NORSAR Subarra	75.36	338	P	P	20 44 10.7	+0.5
	comp=Z,13nm,1.4s,baz=40,slow=5.9						
NB200	NORSAR Array S	75.36	338	*e*P	P	20 44 10.7	+0.5
NOA	NORSAR Array B	75.36	338	P	P	20 44 10.7	+0.5
	comp=Z,1.6nm,0.8s,baz=39,slow=5.7,SNR=3.7						
AKASG	Malin Array Be	75.69	323	P	P	20 44 11.2	-0.9
	comp=Z,0.2nm,0.3s,baz=46,slow=6.1,SNR=4.1						
LTX	Lajitas	89.45	53	*e*P	P	20 45 25.1	+0.8
TXAR	Lajitas Array	89.45	53	P	P	20 45 25.1	+0.8
	comp=Z,0.6nm,0.6s,baz=299,slow=3.8,SNR=7.9						
LPAZ	La Paz	145.83	63	PKPbc	PKPab	20 52 07.6	-0.2
	comp=Z,2.2nm,0.6s,baz=7.0,slow=7.1,SNR=8.9						

JMA 04 20:34:57.7±0.1, 37°.92N×143°.76E, h19km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.85	283	*e*S	Sb	20 35 52.6	-1.1
JIO	Ouri	1.97	286	P	Pn	20 35 30.7	+0.6
JIO				S	Sn	20 35 55.1	+0.8
JKMT	Kesennumamotoy	2.00	297	P	Pn	20 35 31.3	+0.8
JKMT				S	Sn	20 35 56.2	+1.1
OFUJ	Ofunato	2.01	306	P	Pn	20 35 31.6	+1.0
OFUJ				*e*S	Sn	20 35 56.0	+0.8
JMK	Ichinoseki	2.25	298	P	Pn	20 35 35.1	+1.3
JMK				S	Sn	20 36 02.9	+1.9
JOM	Ohasama	2.48	310	P	Pn	20 35 38.4	+1.4
JOM				S	Sn	20 36 08.6	+1.9
JOU	Okura	2.48	281	S	Sn	20 36 08.7	+1.8
JFT	Otama	2.74	263	*e*S	Sn	20 36 14.7	+1.3
JYK	Kaneyama	2.85	291	P	Pn	20 35 43.7	+1.5
JYK				S	Sn	20 36 18.6	+2.6
JRG	Rokugo	2.86	302	P	Pn	20 35 44.1	+1.9
JRG				*e*S	Sn	20 36 18.4	+2.3

MEX 04 20:38:33.7±0.8, 15°.79N×92°.89W, h182km±9km, MD3.8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.33	255	*e*P	Pn	20 38 56.7	-1.4
PCIG				*i* S	Sn	20 39 14.4	-2.5
CCIG	Comitan	0.87	56	*i* P	Pn	20 38 59.6	-1.3
CCIG				*i* S	Sn	20 39 19.4	-2.6
THIG		1.06	146	*i* S	Sn	20 39 23.4	-0.8

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*ISCJB **04** 20:44:31.2±0.8, 40°.39N±0°.04×142°.28E±0°.10, h56km±6km, mb3.8/5, Error ellipse: s-maj=12.2km s-min=6.2km az=3.7*

*JMA **04** 20:44:32.6±0.1, 40°.37N×142°.27E, h40km±1km, M3.8*

JMA Felt I J1.

*IDC **04** 20:44:33.2±2.5, 40°.44N×142°.36E, h65km±20km, mb3.5/5, mb1 3.5/8, mb1mx3.2/55, mbtmp3.6/8, Error ellipse: s-maj=38.4km s-min=15.2km az=100.0*

ISC 04 20:44:32.2±1.3, 40°.38N±0°.04×142°.25E±0°.09, h48km±11km, n23, σ0s.90/27, mb3.8/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.45	248	P	Pn	20 44 42.7	0.0
JKEN				S	Sn	20 44 49.8	-0.4
JTH	Tanohata	0.53	214	P	Pn	20 44 43.7	0.0
JTH				S	Sn	20 44 51.7	-0.2
JANG	Nango	0.56	270	P	Pn	20 44 44.4	+0.3
JANG				S	Sn	20 44 52.6	0.0
JKZ	Kuzumaki	0.81	241	P	Pn	20 44 48.0	+0.7
JKZ				S	Sn	20 44 58.7	+0.4
JARK	Aomorirokkasho	0.92	313	P	Pn	20 44 49.0	+0.2
JARK				S	Sn	20 45 00.6	-0.3
JTM	Tenmabayashi	0.99	295	P	Pn	20 44 50.0	+0.3
JTM				*e*S	Sn	20 45 02.7	+0.1
JOM	Ohasama	1.17	220	P	Pn	20 44 52.9	+0.8
JOM				*e*S	Sn	20 45 07.5	+0.6
JAH	Hinai	1.25	262	P	Pn	20 44 54.2	+1.0
JAH				*e*S	Sn	20 45 09.9	+1.0
JOT	Ohata	1.36	318	P	Pn	20 44 55.1	+0.4
JOT				*e*S	Sn	20 45 11.8	+0.3
ASAJ	Asahikawa	3.75	4	P	Pn	20 45 29.2	+1.8
	1.9nm,0.3s,baz=211,slow=20,SNR=8.0						
ASAJ				S	Sn	20 46 10.0	-0.2
	1.4nm,0.3s,baz=233,slow=20,SNR=3.0						
MJAR	Matsushiro Arr	4.97	221	P	Pn	20 45 45.7	+1.4
	0.1nm,0.3s,baz=29,slow=14,SNR=6.6						
USRK	Ussuriysk Ar.	8.51	300	P	Pn	20 46 33.7	+1.0
	0.2nm,0.3s,baz=267,slow=30,SNR=4.1						
H11N2	WAKE ISLAND Hy	29.47	127	T	T	21 21 25.4	
	baz=319,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	29.48	127	T	T	21 21 24.9	
	baz=319,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	29.49	127	T	T	21 21 28.3	
	baz=319,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	30.29	129	T	T	21 22 49.6	
	baz=322,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	30.29	129	T	T	21 22 52.5	
	baz=322,slow=76,SNR=7.5						
H11S2	WAKE ISLAND Hy	30.30	129	T	T	21 22 53.0	
	baz=322,slow=76,SNR=6.1						
ZALV	Zalesovo Beam	40.22	310	P	P	20 52 03.9	+0.1
	0.6nm,0.4s,baz=96,slow=9.4,SNR=4.4						
MKAR	Makanchi Array	42.98	299	P	P	20 52 26.9	+0.5
	0.6nm,0.7s,baz=84,slow=9.8,SNR=6.3						
WRA	Warramunga Arr	60.46	189	P	P	20 54 36.9	0.0
	0.1nm,0.4s,baz=6.0,slow=6.9,SNR=3.7						
ARCES	ARCESS Array B	61.11	339	P	P	20 54 40.6	-0.2
	3.0nm,0.9s,baz=61,slow=7.3,SNR=2.4						
FINES	FINESS Array B	66.17	332	P	P	20 55 11.5	-2.8
	1.2nm,0.8s,baz=67,slow=11,SNR=2.7						

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*IDC **04** 20:48:36.9±9.6, 18°.43S×175°.23W, h153km±89km, mb3.7/8, mb1 4.0/8, mb1mx3.7/28, mbtmp4.1/8, Error ellipse: s-maj=52.7km s-min=22.3km az=156.0*

*ISCJB **04** 20:48:40.9±0.9, 18°.6S±0°.2×175°.3W±0°.2, h205km, mb3.7/7, Error ellipse: s-maj=35.6km s-min=17.6km az=41.9*

ISC 04 20:48:42.1±1.0, 18°.6S±0°.2×175°.2W±0°.3, h205km, n11, σ0s.55/13, mb3.8/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	20.72	197	P	P	20 53 06.4	-0.4
	16nm,1.0s,baz=320,slow=7.9,SNR=2.6						
STKA	Stephens Creek	41.01	243	P	P	20 56 05.7	+0.3
	1.1nm,0.4s,baz=114,slow=8.5,SNR=7.0						
WRA	Warramunga Arr	47.52	260	P	P	20 56 56.5	-0.6
	2.5nm,0.7s,baz=98,slow=5.9,SNR=44						
WRA				PcP	PcP	20 58 24.4	+0.4
	0.7nm,0.8s,baz=86,slow=3.7,SNR=5.6						
ASAR	Alice Springs	47.56	255	P	P	20 56 57.5	0.0
	18nm,0.7s,baz=89,slow=8.6,SNR=233						
ASAR				PcP	PcP	20 58 24.7	+0.6
	1.0nm,0.8s,baz=96,slow=3.8,SNR=4.4						
NVAR	Mina Array Bea	77.83	42	P	P	21 00 17.9	+0.7
	0.4nm,0.6s,baz=226,slow=8.7,SNR=3.2						
ILAR	Eielson Array	85.89	12	P	P	21 00 58.2	-0.1
	0.4nm,0.6s,baz=222,slow=5.8,SNR=7.3						
CMAR	Chiang Mai Arr	92.00	289	P	P	21 01 28.2	0.0
	1.3nm,0.9s,baz=112,slow=2.9,SNR=8.9						
YKA	Yellowknife Ar	93.69	24	P	P	21 01 33.9	-0.9
	0.3nm,0.8s,baz=237,slow=4.7,SNR=4.3						
BRTR	Keskin Array B	147.41	316	PKPbc	PKPbc	21 08 02.5	+0.4
	1.5nm,0.8s,baz=133,slow=3.4,SNR=8.1						
GERES	GERESS Array B	148.97	349	PKPbc	PKPbc	21 08 06.1	+0.3
	0.7nm,0.7s,baz=332,slow=2.0,SNR=4.1						
DAVOX	Davos/Dischmat	151.57	353	PKPbc	PKPbc	21 08 11.7	-0.5
	2.3nm,0.7s,baz=354,slow=6.4,SNR=4.2						

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*ISCJB **04** 20:56:34.7±0.7, 27°.75N±0°.04×58°.17E±0°.08, h10km, Error ellipse: s-maj=11.0km s-min=4.7km az=15.4*

*TEH **04** 20:56:34.8, 27°.75N×58°.35E, h28km, ML3.3*

*DSN **04** 20:56:40.9±0.2, 27°.64N×57°.81E, h10km, ML2.8/6, Error ellipse: s-maj=8.7km s-min=4.5km az=331.0*

*OMAN **04** 20:56:41.5±0.2, 27°.45N×58°.14E, h18km, ml3.0/10, Error ellipse: s-maj=6.6km s-min=3.5km az=339.0*

ISC 04 20:56:33.8±1.6, 27°.77N±0°.05×58°.3E±0°.1, h10km, n25, σ2s.17/32, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	Nian	1.34	261	*e*Pg	Pb	20 56 59.8	+0.8
NIAN				IAMB	IAmb	20 57 00.7	
	comp=Z,0.0nm,0.2s						
GENO	Geno	1.94	259	IAMB	IAmb	20 57 38.5	
	comp=E,0.0nm,0.2s						
GENO				*e*Pn	Pn	20 57 07.6	+0.5
CHMN	Cheshme madani	2.19	342	*e*Pn	Pn	20 57 11.7	+1.1
CHMN				IAMB	IAmb	20 57 14.4	
	comp=Z,0.0nm,0.2s						
NGRK	Negar Kerman	2.33	323	*e*Pn	Pn	20 57 13.3	+0.7
NGRK				IAMB	IAmb	20 57 41.7	
	comp=Z,0.0nm,0.1s						
BANOM	Banah	2.58	225	*e*P	Pn	20 57 17.7	+2.0
	SNR=6.2						
BANOM	Banah	2.58	225	P	Pn	20 57 16.0	+0.3
	SNR=54						
BANOM				S	Sn	20 57 46.0	-1.2
TVBK	TV Kerman	2.59	329	*e*Pn	Pn	20 57 17.3	+1.1
TVBK				IAMB	IAmb	20 57 19.0	
	comp=Z,0.0nm,0.2s						
SHME	Shamm	2.60	229	*e*P	Pn	20 57 16.5	+0.6
	SNR=18						
SHME				S	Sn	20 57 44.9	-2.7
KHGB	Koh Gabri	3.05	329	*e*Pn	Pn	20 57 22.9	+0.5
KHGB				IAMB	IAmb	20 58 09.4	
	comp=E,0.0nm,0.2s						
MDH	Madha	3.06	217	P	Pn	20 57 21.4	-0.9
MSFE	Esma-Masafi	3.09	219	P	Pn	20 57 24.2	+1.5
UOSS	Minazif	3.40	214	P	Pn	20 57 28.7	+1.7
UOSS	Minazif	3.40	214	P	Pn	20 57 29.9	+2.9
HATD	Hatta, Dubai	3.53	214	P	Pn	20 57 32.5	+3.7
ASHO	Ashiyiah	3.69	214	*i* P	Pn	20 57 33.8	+2.8
	SNR=16						
ASHO	Ashiyiah	3.69	214	P	Pn	20 57 34.2	+3.2
	SNR=16						
ASHO				S	Sn	20 58 13.0	-1.6
FAQ	Al Faqa, Dubai	3.89	220	*i* P	Pn	20 57 35.4	+1.8
	SNR=7.0						
FAQ	Al Faqa, Dubai	3.89	220	P	Pn	20 57 35.3	+1.7
	SNR=7.3						
FAQ				S	Sn	20 58 17.5	-1.9
SOHO	SOHO	3.97	204	P	Pn	20 57 34.1	-0.6
SOHO				S	Sn	20 58 15.9	-5.4
ASUD	Al Ashush, Dub	4.13	221	*i* P	Pn	20 57 39.0	+2.0
	SNR=16						
ASUD	Al Ashush, Dub	4.13	221	P	Pn	20 57 39.3	+2.3
	SNR=16						
ASUD				S	Sn	20 58 24.0	-1.4
WSAR	Wadi Sarin	4.52	176	P	Pn	20 57 45.0	+2.6
IKOO	Kooshah	4.67	7	*e*Pn	Pn	20 57 45.3	+0.6
IKOO				IAMB	IAmb	20 58 40.3	
	comp=E,234nm,0.3s						
ITEG	Tejag	5.12	4	*e*Pn	Pn	20 57 51.7	+0.9
ITEG				IAMB	IAmb	20 58 02.6	
	comp=Z,61nm,0.3s						

WBK	**Wadi Bani Khal**	**5.17**	**173**	P	**Pn**	**20 57 54.4**	**+3.0**
WBK				S	**Sn**	**20 58 49.4**	**-1.8**

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*NNC **04** 21:01:39.4±1.2, 42.°68N×78.°37E, h0^{km}, mb2.0, mpv2.5, Error ellipse: s-maj=9.3km s-min=3.2km az=174.0*
*SOME **04** 21:01:41.5, 42.°70N×78.°37E, h15^{km}*
*KRNET **04** 21:01:41.5±0.1, 42.°74N×78.°38E, h26^{km}, mb2.3*
ISC 04 21:01:41.3±1.0, **42.°73N**±0.°03×**78.°39E**±0.°02, **h24**^{km}±8^{km}, **n30**, σ**0.^{s}65**/60, **12C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.24**	**178**	⇑*i*P	**Pb**	**21 01 47.9**	**+0.3**
	baz=74						
PRZ				⇑*i*S	**Sb**	**21 01 52.4**	**+0.6**
	baz=74						
SATY	**Saty**	**0.33**	**2**	P	**Pb**	**21 01 48.6**	**-0.2**
	11nm,0.1s						
SATY				S	**Sb**	**21 01 53.6**	**-0.4**
	137nm,0.1s						
SATY	**Saty**	**0.33**	**2**	*e*P	**Pb**	**21 01 48.6**	**-0.2**
	11nm,0.1s						
SATY				*e*S	**Sb**	**21 01 53.7**	**-0.2**
	137nm,0.1s						
UZB	**Uzynbulak**	**0.62**	**48**	P	**Pb**	**21 01 53.6**	**-0.1**
	1.2nm,0.1s						
UZB				S	**Sb**	**21 02 02.4**	**+0.3**
	6.7nm,0.1s						
UZB	**Uzynbulak**	**0.62**	**48**	*e*P	**Pb**	**21 01 53.6**	**-0.1**
	baz=49						
UZB				*e*S	**Sb**	**21 02 02.4**	**+0.3**
	baz=49						
UZB	**Uzynbulak**	**0.62**	**48**	*e*P	**Pb**	**21 01 53.6**	**-0.1**
	1.2nm,0.1s						
UZB				*e*S	**Sb**	**21 02 02.4**	**+0.3**
	6.7nm,0.1s						
KURS	**Kuram**	**0.78**	**348**	P	**Pb**	**21 01 56.1**	**-0.1**
	2.6nm,0.1s						
KURS				S	**Sb**	**21 02 06.8**	**+0.5**
	5.6nm,0.2s						
KURS	**Kuram**	**0.78**	**348**	*e*P	**Pb**	**21 01 56.1**	**-0.1**
	baz=48						
KURS				*e*S	**Sb**	**21 02 06.8**	**+0.5**
	baz=48						
KURS	**Kuram**	**0.78**	**348**	*e*P	**Pb**	**21 01 56.1**	**-0.1**
	2.6nm,0.1s						
KURS				*e*S	**Sb**	**21 02 06.8**	**+0.5**
	5.6nm,0.2s						
PDGK	**Podgornoye**	**1.00**	**53**	P	**Pb**	**21 02 00.2**	**+0.1**
	0.6nm,0.2s						
PDGK				S	**Sn**	**21 02 13.8**	**+0.3**
	1.7nm,0.4s						
PDGK	**Podgornoye**	**1.00**	**53**	⇑P	**Pn**	**21 01 59.3**	**-0.7**
	0.3nm,0.4s						
PDGK				⇑S	**Sb**	**21 02 13.0**	**+0.1**
	2.0nm,0.6s						
PDGK	**Podgornoye**	**1.00**	**53**	⇑*i*P	**Pn**	**21 02 00.0**	**0.0**
	baz=54						
PDGK				⇑*i*S	**Sn**	**21 02 13.4**	**-0.1**
	baz=54						
KDJ	**Kajisay**	**1.08**	**237**	⇓*i*P	**Pb**	**21 02 01.4**	**+0.1**
	baz=36						
KDJ				⇓*i*S	**Sb**	**21 02 15.6**	**+0.5**
	baz=36						
MDOK	**Medeo**	**1.08**	**294**	P	**Pn**	**21 01 59.7**	**-1.4**
	1.0nm,0.9s						
MDOK				S	**Sn**	**21 02 14.0**	**-1.3**
	1.8nm,0.6s						
TARG	**Taragay, Kyrgy**	**1.09**	**204**	⇓*i*P	**Pn**	**21 02 01.3**	**-0.1**
	baz=3.0						
TARG				⇓*i*S	**Sb**	**21 02 16.4**	**+0.8**
	baz=3.0						
TNSS	**Tian-Shan**	**1.11**	**287**	P	**Pn**	**21 02 01.5**	**-0.2**
	0.5nm,0.1s						
TNSS				S	**Sb**	**21 02 16.1**	**0.0**
	1.5nm,0.1s						
TNSS	**Tian-Shan**	**1.11**	**287**	*e*P	**Pn**	**21 02 01.5**	**-0.2**
	baz=86						
TNSS				*e*S	**Sb**	**21 02 16.1**	**0.0**
	baz=86						
TNSS	**Tian-Shan**	**1.11**	**287**	*e*P	**Pn**	**21 02 01.5**	**-0.2**
	0.5nm,0.1s						
TNSS				*e*S	**Sb**	**21 02 16.1**	**0.0**
	1.5nm,0.1s						
CHKK	**Chushkaly**	**1.52**	**318**	P	**Pb**	**21 02 08.9**	**+0.1**
	2.4nm,0.2s						
CHKK				S	**Sb**	**21 02 28.5**	**+0.8**
	3.6nm,0.2s						
CHKK	**Chushkaly**	**1.52**	**318**	*e*P	**Pb**	**21 02 08.9**	**+0.1**
	baz=18						
CHKK				*e*S	**Sb**	**21 02 28.5**	**+0.8**
	baz=18						
CHKK	**Chushkaly**	**1.52**	**318**	*e*P	**Pb**	**21 02 08.9**	**+0.1**
	2.4nm,0.2s						
CHKK				*e*S	**Sb**	**21 02 28.5**	**+0.8**
	3.6nm,0.2s						
ARXS	**Arharly**	**1.54**	**345**	P	**Pb**	**21 02 09.7**	**+0.5**
	0.8nm,0.1s						
ARXS				S	**Sb**	**21 02 29.8**	**+1.5**
	4.6nm,0.2s						
ARXS	**Arharly**	**1.54**	**345**	*e*P	**Pb**	**21 02 09.7**	**+0.5**
	0.8nm,0.1s						
ARXS				*e*S	**Sb**	**21 02 29.8**	**+1.5**
	4.6nm,0.2s						
KTBS	**Karatobe**	**1.59**	**309**	P	**Pb**	**21 02 10.1**	**+0.1**
	0.7nm,0.1s						
KTBS				S	**Sb**	**21 02 30.8**	**+1.1**
	4.4nm,0.2s						
KTBS	**Karatobe**	**1.59**	**309**	*e*P	**Pb**	**21 02 10.1**	**+0.1**
	0.7nm,0.1s						
KTBS				*e*S	**Sb**	**21 02 30.8**	**+1.1**
	4.4nm,0.2s						
ULHL	**Ulahol**	**1.66**	**254**	⇑*i*P	**Pb**	**21 02 11.5**	**+0.2**
	baz=53						
ULHL				⇑*i*S	**Sb**	**21 02 33.1**	**+1.2**
	baz=53						
BOOM	**Boomskoye usch**	**1.82**	**263**	⇑*i*P	**Pb**	**21 02 13.7**	**-0.4**
	baz=63						
BOOM				⇑*i*S	**Sb**	**21 02 36.6**	**0.0**
	baz=63						
KUU	**Kurty**	**1.90**	**309**	P	**Pb**	**21 02 15.6**	**+0.4**
	0.9nm,0.4s						
KUU				S	**Sb**	**21 02 40.0**	**+1.5**
	2.5nm,0.2s						
KUU	**Kurty**	**1.90**	**309**	*e*P	**Pb**	**21 02 15.6**	**+0.4**
	0.9nm,0.4s						
KUU				*e*S	**Sb**	**21 02 40.0**	**+1.5**
	2.5nm,0.2s						
TKM2	**Tokmak 2**	**2.06**	**276**	⇑*i*P	**Pb**	**21 02 17.7**	**-0.5**
	baz=76						
TKM2				⇑*i*S	**Sb**	**21 02 42.8**	**-0.7**
	baz=76						

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*IDC **04** 21:07:05.3±3.0, 13.°11N×91.°29W, h0^{km}, mb3.4/3, mb1 3.8/6, mb1mx3.6/31, mbtmp3.4/6, ML3.4/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/27, Error ellipse: s-maj=55.8km s-min=41.9km az=174.0*
*ISCJB **04** 21:07:11.2±1.1, 13.°39N±0.°07×91.°50W±0.°05, h42^{km}±12^{km}, mb3.4/3, MS3.3/2, Error ellipse: s-maj=12.0km s-min=6.3km az=25.0*
*UCR **04** 21:07:12.8±1.9, 13.°48N×91.°43W, h42^{km}±383^{km}, MD3.5, ML3.1*
ISC 04 21:07:11.8±2.1, **13.°45N**±0.°08×**91.°41W**±0.°06, **h26**^{km}±14^{km}, **n24**, σ**1.^{s}33**/31, **mb3.5**/3, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.13**	**29**	*e*P	**Pn**	**21 07 32.1**	**0.0**
FUG				*e*S	**Sb**	**21 07 47.4**	**+0.2**
IXG	**Ixpaco**	**1.17**	**52**	*e*P	**Pb**	**21 07 34.5**	**+1.0**
PCG	**Pacaya**	**1.22**	**40**	*e*P	**Pn**	**21 07 33.9**	**+0.5**
PCG				*e*S	**Sn**	**21 07 49.7**	**+0.5**
NBG	**Las Nubes**	**1.53**	**42**	*e*P	**Pn**	**21 07 34.5**	**-3.2**
RTR	**El Retiro**	**1.77**	**75**	*e*P	**Pn**	**21 07 41.9**	**+1.0**
CEVE	**Cerro Verde**	**1.77**	**78**	*e*P	**Pn**	**21 07 40.8**	**-0.2**
CEVE				*e*S	**Sn**	**21 08 03.4**	**+0.5**
SBLS	**San Blas**	**1.78**	**77**	*e*P	**Pn**	**21 07 40.8**	**-0.2**
APG	**El Apazote**	**1.79**	**31**	Pn	**Pn**	**21 07 42.1**	**+0.8**
	20nm,0.3s,baz=200,slow=13,SNR=236						
APG				Sn	**Sn**	**21 08 05.1**	**+1.7**
	25nm,0.3s,baz=170,slow=11,SNR=12						
SNJE	**San Jose**	**1.80**	**76**	*e*P	**Pn**	**21 07 41.0**	**-0.3**
BOQS	**Boqueron**	**2.09**	**82**	*e*P	**Pn**	**21 07 46.1**	**+0.8**
BOQS				*e*S	**Sb**	**21 08 12.4**	**-2.3**
MTO3	**Montecristo**	**2.20**	**64**	*e*P	**Pn**	**21 07 47.2**	**+0.4**
MTO3				*e*S	**Sn**	**21 08 15.5**	**+2.1**
LFU	**La Fuente**	**2.25**	**82**	*e*P	**Pn**	**21 07 47.8**	**+0.4**
LFU				*e*S	**Sn**	**21 08 16.4**	**+2.0**
LFRS	**El Faro**	**2.29**	**85**	*e*P	**Pn**	**21 07 49.1**	**+1.1**
LFRS				*e*S	**Sb**	**21 08 17.6**	**-2.8**
PACA	**Pacayal**	**3.00**	**89**	*e*P	**Pn**	**21 07 59.2**	**+1.4**
LCND	**La Caada**	**3.42**	**92**	*e*P	**Pn**	**21 08 04.3**	**+0.7**
LCND				*e*S	**Sn**	**21 08 43.6**	**+0.3**
LCND				IAML		21 08 54.8	
	comp=Z,80nm,0.4s						
CMIG	**Matias Romero**	**4.93**	**318**	Pn	**Pn**	**21 08 25.5**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=140,slow=9.3,SNR=7.0						
CMIG				Sn	**Sn**	**21 09 19.8**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=88,slow=11,SNR=4.2						
TXAR	**Lajitas Array**	**19.47**	**326**	P	**Pn**	**21 11 39.1**	**+1.0**
	baz=148,slow=10,SNR=2.2						
H06E1	**SOCORRO T-PHAS**	**19.48**	**288**	T	T	21 31 36.9	
	SNR=3.8						
ATAH	**Atahualpa**	**24.19**	**147**	LR	LR	21 20 43.5	
	comp=Z,69nm,20.1s,baz=359,slow=34						
ANMO	**Albuquerque**	**25.36**	**330**	LR	LR	21 23 59.4	
	comp=Z,110nm,18.7s,baz=39,slow=39						
NVAR	**Mina Array Bea**	**34.46**	**321**	P	**P**	**21 13 58.0**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=142,slow=9.0,SNR=2.7						
YKA	**Yellowknife Ar**	**51.69**	**347**	P	**P**	**21 16 15.2**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=144,slow=7.5,SNR=5.4						
ILAR	**Eielson Array**	**63.57**	**337**	P	**P**	**21 17 39.0**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=133,slow=6.3,SNR=3.4						
CMAR	**Chiang Mai Arr**	**146.69**	**342**	PKPbc	**PKPbc**	**21 26 51.8**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=352,slow=4.2,SNR=4.6						

UCR 04 21:12:04.0±1.6, **13.°73N×90.°96W, h25**^{km}±22^{km}, **MD3.6, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.67**	**49**	*e*P	Pb	21 12 17.5	+0.4
FUG	**Fuego 3**	**0.72**	**9**	*e*P	Pb	21 12 17.3	-0.8
PCG	**Pacaya**	**0.74**	**27**	*e*P	Pb	21 12 18.2	-0.2
NBG	**Las Nubes**	**1.04**	**35**	*e*P	Pb	21 12 23.8	+0.3
CEVE	**Cerro Verde**	**1.30**	**86**	*e*P	Pn	21 12 26.3	-0.5
SNJE	**San Jose**	**1.32**	**84**	*e*P	Pn	21 12 26.3	-0.7
BOQS	**Boqueron**	**1.63**	**90**	*e*P	Pn	21 12 31.0	-0.3
MTO3	**Montecristo**	**1.68**	**67**	*e*P	Pn	21 12 32.5	+0.4
MTO3				*e*S	Sb	21 13 00.8	+5.4
LFU	**La Fuente**	**1.79**	**89**	*e*P	Pn	21 12 33.9	+0.5
LFRS	**El Faro**	**1.84**	**93**	*e*P	Pn	21 12 34.0	-0.2
LFRS				*e*S	Sb	21 13 02.1	+2.3
TECA	**Tecapa**	**2.40**	**95**	*e*P	Pn	21 12 42.8	+0.9
PACA	**Pacayal**	**2.57**	**95**	*e*P	Pn	21 12 45.1	+0.9
CNCH	**Conchagua**	**3.07**	**98**	*e*P	Pn	21 12 51.3	+0.3

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*IDC **04** 21:13:18.5±1.1, 3.°09S×136.°31E, h0^{km}, mb3.7/4, mb1 4.0/8, mb1mx3.8/25, mbtmp3.8/8, ML3.6/4, Error ellipse: s-maj=23.9km s-min=23.1km az=36.0*
*ISCJB **04** 21:13:21.2±0.7, 3.°15S±0.°09×136.°26E±0.°06, h34^{km}, mb3.6/3, Error ellipse: s-maj=12.6km s-min=8.8km az=165.3*
ISC 04 21:13:22.4±0.8, **3.°23S**±0.°08×**136.°22E**±0.°07, **h34**^{km}, **n8**, σ**2.^{s}49**/12, **mb3.9**/3, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.54**	**81**	Pn	**Pn**	**21 14 26.4**	**-2.3**
	0.8nm,0.3s,baz=307,slow=10,SNR=1.9						
JAY				Sn	**Sn**	**21 15 20.6**	**+0.2**
	0.6nm,0.3s,baz=329,slow=3.8,SNR=1.8						
SIJI	**Sorong**	**5.47**	**295**	Pn	**Pn**	**21 14 40.6**	**-1.0**
	6.9nm,0.3s,baz=249,slow=2.5,SNR=18						
SIJI				Sn	**Sn**	**21 15 40.4**	**-3.1**
	15nm,0.3s,baz=290,slow=23,SNR=22						
WRA	**Warramunga Arr**	**16.71**	**186**	Pn	**Pn**	**21 17 14.0**	**0.0**
	0.2nm,0.3s,baz=3.9,slow=13,SNR=15						
WRA				Sn	**Sn**	**21 20 14.2**	**-4.6**
	0.4nm,0.3s,baz=5.8,slow=23,SNR=7.8						
FITZ	**Fitzroy Crossi**	**18.05**	**214**	P	**P**	**21 17 33.0**	**+2.2**
	0.2nm,0.3s,baz=34,slow=10.0,SNR=7.7						
FITZ				S	Sn	21 20 43.8	-7.3
	0.3nm,0.3s,baz=118,slow=18,SNR=7.7						
ASAR	**Alice Springs**	**20.44**	**186**	P	**P**	**21 18 00.1**	**+3.1**
	3.0nm,0.6s,baz=13,slow=11,SNR=29						
ASAR				S	**S**	**21 21 43.6**	**-0.5**
	0.9nm,0.8s,baz=5.7,slow=29,SNR=3.4						
CMAR	**Chiang Mai Arr**	**42.56**	**302**	P	**P**	**21 21 16.8**	**+1.4**
	0.5nm,0.7s,baz=117,slow=6.0,SNR=5.1						
MKAR	**Makanchi Array**	**68.70**	**323**	P	**P**	**21 24 24.0**	**+1.3**
	0.5nm,0.4s,baz=104,slow=8.2,SNR=10						
ILAR	**Eielson Array**	**87.34**	**25**	P	**P**	**21 26 06.2**	**+0.5**
	0.4nm,0.6s,baz=268,slow=4.1,SNR=9.0						

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*IDC **04** 21:25:15.9±2.1, 36.°63N×143.°16E, h0^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.4/44, mbtmp3.8/6, ML3.3/3, MS3.4/2, Ms1 3.4/2, ms1mx2.6/41, Error ellipse: s-maj=43.1km s-min=23.3km az=87.0*
*JMA **04** 21:25:21.5±0.1, 36.°97N×142.°74E, h46^{km}, M3.4*
ISC 04 21:25:17.5±3.6, **36.°88N**±0.°04×**142.°88E**±0.°09, **h8**^{km}±25^{km}, **n31**, σ**1.^{s}96**/38, **mb3.5**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.67**	**287**	P	**Pn**	**21 25 47.2**	**+0.1**
JFK				*e*S	**Sn**	**21 26 05.9**	**-2.8**
ONAJ	**Iwakimizuishiy**	**1.68**	**278**	P	**Pn**	**21 25 47.3**	**+0.1**
JIKH	**Ishinomakikobu**	**1.81**	**322**	P	**Pn**	**21 25 48.9**	**-0.1**
JIKH				*e*S	**Sn**	**21 26 09.6**	**-2.5**
JFFD	**Fukushimafurud**	**1.86**	**277**	P	**Pn**	**21 25 50.1**	**+0.4**
JMM	**Marumori**	**1.93**	**301**	P	**Pn**	**21 25 50.7**	**+0.1**
JMM				*e*S	**Sn**	**21 26 12.3**	**-2.7**
JIO	**Ouri**	**1.98**	**323**	P	**Pn**	**21 25 51.5**	**+0.2**
JIO				*e*S	**Sn**	**21 26 13.8**	**-2.5**
JFT	**Otama**	**2.12**	**288**	P	**Pn**	**21 25 54.3**	**+1.0**
JFT				*e*S	**Sn**	**21 26 18.2**	**-1.7**
JMK	**Ichinoseki**	**2.44**	**328**	P	**Pn**	**21 25 58.3**	**+0.6**
JMK				*e*S	**Sn**	**21 26 25.7**	**-2.0**
BSO1	**Boso 1**	**2.71**	**215**	P	**Pb**	**21 26 03.8**	**-2.1**
BSO1				*e*S	**Sn**	**21 26 35.4**	**+1.9**
JAG	**Ashikaga**	**2.79**	**262**	P	**Pn**	**21 26 03.8**	**+1.4**
JAG				*e*S	**Sn**	**21 26 34.6**	**-1.7**
JYK	**Kaneyama**	**2.84**	**316**	P	**Pn**	**21 26 04.3**	**+1.1**
JOM	**Ohasama**	**2.87**	**335**	P	**Pn**	**21 26 04.6**	**+1.0**
JOM				*e*S	**Sn**	**21 26 36.8**	**-1.5**
JRY	**Ryogami san**	**3.32**	**256**	P	**Pn**	**21 26 11.2**	**+1.5**
JRY				*e*S	**Sn**	**21 26 47.1**	**-2.3**
JOD2	**Odawara 2**	**3.47**	**243**	P	**Pn**	**21 26 13.8**	**+2.0**
JOD2				*e*S	**Sn**	**21 26 51.4**	**-1.6**
MJAR	**Matsushiro Arr**	**3.76**	**266**	Pn	**Pn**	**21 26 18.4**	**+2.6**
	0.4nm,0.3s,baz=90,slow=16,SNR=14						
MJAR				Sn	**Sn**	**21 26 58.9**	**-1.5**
	baz=91,slow=16,SNR=2.8						
JYN	**Shimob**	**3.77**	**250**	P	**Pn**	**21 26 18.7**	**+2.8**
JYN				*e*S	**Sn**	**21 27 00.2**	**-0.3**
MAT	**Matsushiro**	**3.77**	**266**	P	**Pn**	**21 26 18.4**	**+2.5**
MAT				S	**Sn**	**21 26 59.0**	**-1.4**
MAT	**Matsushiro**	**3.77**	**266**	P	**Pn**	**21 26 18.3**	**+2.4**
JHJ	**Hachijo jima 2**	**4.53**	**215**	Pn	**Pn**	**21 26 25.0**	**-1.4**
	7.5nm,0.3s,baz=66,slow=20,SNR=2.3						
JHJ				Sn	**Sn**	**21 27 16.1**	**-3.2**
	29nm,0.3s,baz=64,slow=23,SNR=6.4						
ASAJ	**Asahikawa**	**7.23**	**358**	Pn	**Pn**	**21 27 05.9**	**+2.5**
	0.6nm,0.3s,baz=217,slow=20,SNR=2.6						
KLR	**Kul'dur**	**14.76**	**330**	LR	LR	21 35 18.4	
	comp=Z,159nm,18.5s,baz=339,slow=40						
H11N2	**WAKE ISLAND Hy**	**27.07**	**123**	T	T	21 59 39.2	
	baz=324,slow=75,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**27.08**	**123**	T	T	21 59 39.1	
	baz=324						
H11N3	**WAKE ISLAND Hy**	**27.09**	**123**	T	T	21 59 42.0	
	baz=324,slow=75,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**27.80**	**125**	T	T	22 00 29.8	
	baz=323						
H11S3	**WAKE ISLAND Hy**	**27.80**	**125**	T	T	22 00 29.2	
	baz=323						
H11S2	**WAKE ISLAND Hy**	**27.82**	**125**	T	T	22 00 29.8	
	baz=323						
SONM	**Songino Array**	**28.84**	**304**	P	**P**	**21 31 18.8**	**+2.5**
	1.6nm,0.9s,baz=97,slow=8.8,SNR=9.0						
JAY	**Jayapura**	**39.25**	**183**	LR	LR	21 51 27.2	
	comp=Z,46nm,18.1s,baz=214,slow=40						
MKAR	**Makanchi Array**	**45.19**	**302**	P	**P**	**21 33 37.1**	**+2.3**
	0.5nm,0.7s,baz=89,slow=9.3,SNR=7.1						
WRA	**Warramunga Arr**	**57.09**	**190**	P	**P**	**21 35 02.6**	**-1.8**
	0.3nm,0.9s,baz=8.9,slow=5.9,SNR=2.7						

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*IDC **04** 21:46:36.1±0.9, 11.°42N×143.°25E, h0^{km}, mb3.9/10, mb1 4.1/10, mb1mx3.8/35, mbtmp3.9/10, Error ellipse: s-maj=31.0km s-min=20.8km az=100.0*
*ISCJB **04** 21:46:39.3±0.7, 11.°4N±0.°1×143.°1E±0.°1, h32^{km}, mb3.9/10, Error ellipse: s-maj=23.9km s-min=10.3km az=36.2*
ISC 04 21:46:41.1±0.9, **11.°4N**±0.°1×**143.°2E**±0.°2, **h32**^{km}, **n11**, σ**0.^{s}73**/11, **mb3.9**/10, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.74**	**37**	Sn	**Sn**	**21 47 55.1**	**+0.2**
	10nm,0.3s,baz=321,slow=22,SNR=3.6						
WRA	**Warramunga Arr**	**32.33**	**196**	P	**P**	**21 53 07.3**	**-0.2**
	0.8nm,0.6s,baz=19,slow=9.7,SNR=16						
ASAR	**Alice Springs**	**36.00**	**195**	P	**P**	**21 53 39.4**	**0.0**
	0.3nm,0.5s,baz=20,slow=11,SNR=6.1						
CMAR	**Chiang Mai Arr**	**43.23**	**285**	P	**P**	**21 54 40.5**	**+0.7**
	1.5nm,0.7s,baz=86,slow=6.4,SNR=16						
MKAR	**Makanchi Array**	**61.94**	**317**	P	**P**	**21 56 58.4**	**+0.5**
	0.7nm,0.6s,baz=91,slow=8.7,SNR=9.8						
ZALV	**Zalesovo Beam**	**62.46**	**325**	P	**P**	**21 57 00.8**	**-0.4**
	0.6nm,0.4s,baz=119,slow=6.8,SNR=4.7						
ILAR	**Eielson Array**	**71.25**	**25**	P	**P**	**21 57 56.4**	**-0.6**
	0.2nm,0.4s,baz=243,slow=5.8,SNR=8.9						
YKA	**Yellowknife Ar**	**85.56**	**27**	P	**P**	**21 59 16.3**	**+0.3**
	0.2nm,0.6s,baz=284,slow=5.2,SNR=3.7						
ARCES	**ARCESS Array B**	**88.65**	**342**	P	**P**	**21 59 30.3**	**-0.5**
	3.4nm,0.9s,baz=68,slow=11,SNR=4.3						
NVAR	**Mina Array Bea**	**89.58**	**51**	P	**P**	**21 59 37.0**	**+0.8**
	0.4nm,0.5s,baz=260,slow=5.2,SNR=4.9						
FINES	**FINESS Array B**	**92.44**	**335**	P	**P**	**21 59 47.3**	**-1.3**
	1.7nm,0.9s,baz=32,slow=5.6,SNR=3.0						

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*ISCJB **04** 22:21:58.8±1.3, 36.°88N±0.°05×141.°51E±0.°08, h17^{km}±7^{km}, mb3.0/2, Error ellipse: s-maj=11.7km s-min=6.3km az=27.1*
*JMA **04** 22:22:00.3±0.1, 36.°88N×141.°39E, h42^{km}±2^{km}, M3.0*
*IDC **04** 22:22:01.0±3.4, 36.°50N×141.°40E, h0^{km}, mb3.1/2, mb1 3.2/3, mb1mx3.1/41, mbtmp2.9/3, ML1.8/1, Error ellipse: s-maj=81.4km s-min=26.6km az=163.0*
ISC 04 22:21:57.1±2.0, **36.°94N**±0.°05×**141.°54E**±0.°09, **h4**^{km}±12^{km}, **n14**, σ**0.^{s}69**/22, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.62**	**286**	P	**Pb**	**22 22 11.4**	**+0.9**
ONAJ				S	**Sb**	**22 22 18.9**	**-0.6**
JFK	**Kawauchi**	**0.68**	**309**	P	**Pn**	**22 22 12.7**	**-0.9**
JFK				S	**Sb**	**22 22 21.9**	**+0.5**
JFFD	**Fukushimafurud**	**0.80**	**281**	P	**Pb**	**22 22 13.6**	**+0.1**
JFFD				S	**Sg**	**22 22 22.9**	**+0.1**
JHO	**Hitachi**	**0.84**	**248**	P	**Pg**	**22 22 13.8**	**+0.5**
JHO				S	**Sg**	**22 22 23.5**	**-0.8**
JHYU	**Hitachinakayam**	**0.97**	**232**	P	**Pg**	**22 22 15.7**	**0.0**
JHYU				S	**Sg**	**22 22 27.1**	**-1.2**
JMM	**Marumori**	**1.10**	**328**	P	**Pn**	**22 22 19.5**	**+0.2**
JFT	**Otama**	**1.12**	**301**	P	**Pn**	**22 22 20.1**	**+0.5**
JIO	**Ouri**	**1.52**	**354**	P	**Pb**	**22 22 26.1**	**+0.2**
JIO				S	**Sn**	**22 22 44.5**	**-0.8**
JFY	**Yanaizu**	**1.54**	**288**	P	**Pb**	**22 22 26.0**	**-0.2**
JFY				S	**Sb**	**22 22 44.9**	**-1.1**
JOU	**Okura**	**1.59**	**334**	P	**Pg**	**22 22 27.9**	**+0.4**
JOU				S	**Sg**	**22 22 47.8**	**-0.3**
MJAR	**Matsushiro Arr**	**2.71**	**263**	Pn	**Pn**	**22 22 42.1**	**+0.7**
	0.2nm,0.3s,baz=89,slow=14,SNR=8.2						
MJAR				Sn	**Sn**	**22 23 14.3**	**-0.2**
	0.3nm,0.3s,baz=87,slow=16,SNR=5.9						
MAT	**Matsushiro**	**2.71**	**263**	P	**Pn**	**22 22 42.1**	**+0.7**
MAT				S	**Sn**	**22 23 15.3**	**+0.7**
MKAR	**Makanchi Array**	**44.26**	**302**	P	P	22 30 14.6	+7.0
	0.1nm,0.7s,baz=87,slow=7.4,SNR=2.4						
ILAR	**Eielson Array**	**49.52**	**32**	P	P	22 30 55.6	+7.1
	0.2nm,0.7s,baz=267,slow=8.1,SNR=3.0						

MEX 04 22:22:59.4±0.7, **18.°16N×100.°54W, h52**^{km}±8^{km}, **MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.21**	**57**	*e*P	Pn	22 23 06.3	-1.8
ARIG				*e*S	Sn	22 23 12.6	-1.7
MEIG	**Mezcala**	**0.90**	**105**	*i* P	Pn	22 23 14.5	-1.5
MEIG				*i* S	Sn	22 23 26.1	-2.1
PLIG	**Platanillo**	**1.01**	**77**	*e*P	Pn	22 23 16.2	-1.1
PLIG				*i* S	Sn	22 23 28.0	-2.6
ZIIG	**Zihuatanejo**	**1.04**	**238**	*e*P	Pn	22 23 19.4	+1.6

IDC 04 22:28:05.4±1.0, **11.°27N×143.°29E, h0**^{km}, **mb3.5**/6, **mb1 3.8**/6, **mb1mx3.5**/38, **mbtmp3.5**/6, **Error ellipse: s-maj=37.3km s-min=23.7km az=105.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.24**	**196**	P	P	22 34 37.2	+1.5
	0.5nm,0.8s,baz=17,slow=9.7,SNR=4.5						
ASAR	**Alice Springs**	**35.91**	**195**	P	P	22 35 06.0	-1.7
	0.2nm,0.4s,baz=18,slow=9.2,SNR=3.3						
CMAR	**Chiang Mai Arr**	**43.36**	**285**	P	P	22 36 10.7	+0.8
	0.9nm,0.3s,baz=87,slow=5.6,SNR=4.0						
MKAR	**Makanchi Array**	**62.10**	**317**	P	P	22 38 27.6	-0.7
	0.3nm,0.7s,baz=86,slow=5.2,SNR=4.0						
ILAR	**Eielson Array**	**71.32**	**25**	P	P	22 39 26.1	-0.6
	0.1nm,0.4s,baz=252,slow=5.6,SNR=3.3						
NVAR	**Mina Array Bea**	**89.57**	**51**	P	P	22 41 06.6	+1.0
	0.3nm,0.6s,baz=270,slow=5.4,SNR=2.5						

IDC 04 22:28:44.0±1.2, **11.°42N×143.°25E, h0**^{km}, **mb3.7**/7, **mb1 4.0**/7, **mb1mx3.6**/39, **mbtmp3.7**/7, **MS2.6**/1, **Ms1 2.6**/1, **ms1mx2.5**/34, **Error ellipse: s-maj=32.7km s-min=27.8km az=98.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.68**	**36**	LR	LR	22 30 48.8	
	comp=Z,104nm,18.6s,baz=190,slow=47						
WRA	**Warramunga Arr**	**32.37**	**196**	P	P	22 35 15.0	-0.5
	0.5nm,0.7s,baz=18,slow=9.6,SNR=7.9						
CMAR	**Chiang Mai Arr**	**43.29**	**285**	P	P	22 36 48.5	+0.6
	0.8nm,0.3s,baz=86,slow=6.3,SNR=6.4						
SONM	**Songino Array**	**47.63**	**327**	P	P	22 37 21.5	-0.5
	0.1nm,0.3s,baz=141,slow=5.2,SNR=2.3						
MKAR	**Makanchi Array**	**61.97**	**317**	P	P	22 39 07.0	+1.0
	0.5nm,0.7s,baz=96,slow=7.5,SNR=5.7						
ZALV	**Zalesovo Beam**	**62.48**	**325**	P	P	22 39 07.4	-1.7
	0.3nm,0.3s,baz=114,slow=5.7,SNR=4.0						
ILAR	**Eielson Array**	**71.20**	**25**	P	P	22 40 04.3	-0.2
	0.1nm,0.4s,baz=251,slow=5.5,SNR=3.7						
NVAR	**Mina Array Bea**	**89.51**	**51**	P	P	22 41 44.6	+0.8
	0.5nm,0.6s,baz=256,slow=6.4,SNR=3.5						

IDC 04 22:39:08.7±3.7, **7.°42S×126.°53E, h418**^{km}±51^{km}, **mb3.0**/3, **mb1 3.1**/7, **mb1mx3.0**/37, **mbtmp3.9**/7, **Error ellipse: s-maj=80.2km s-min=18.5km az=52.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.96**	**225**	P	P	22 40 21.8	+0.4
	37nm,0.3s,baz=97,slow=1.6,SNR=26						
BATI				S	S	22 41 20.7	+0.1
	23nm,0.3s,baz=108,slow=20,SNR=14						
FITZ	**Fitzroy Crossi**	**10.65**	**185**	P	P	22 41 34.2	+1.1
	0.6nm,0.3s,baz=7.5,slow=7.2,SNR=20						
WRA	**Warramunga Arr**	**14.57**	**149**	P	P	22 42 14.9	-1.2
	1.3nm,0.3s,baz=328,slow=13,SNR=54						
WRA				S	S	22 44 49.5	-1.5
	0.0nm,0.3s,baz=323,slow=23,SNR=3.4						
ASAR	**Alice Springs**	**17.64**	**157**	P	P	22 42 49.1	+0.3
	0.6nm,0.3s,baz=338,slow=11,SNR=15						
SONM	**Songino Array**	**57.82**	**344**	P	P	22 48 18.4	-0.1
	0.3nm,0.5s,baz=164,slow=7.4,SNR=4.3						
MKAR	**Makanchi Array**	**66.73**	**329**	P	P	22 49 17.6	+0.8
	0.3nm,0.4s,baz=119,slow=7.9,SNR=12						
ZALV	**Zalesovo Beam**	**70.48**	**335**	P	P	22 49 38.0	-1.4
	0.9nm,0.5s,baz=153,slow=4.8,SNR=5.3						

TAP 04 22:47:12.9,24°.42N×122°.42E,h71^{km},ML2.5,C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=296	0.30	296	*e*P	Pn	22 47 24.3	+0.1
YOJ	**Yonaguni jima** baz=84	0.54	85	*i* P	Pn	22 47 26.3	+0.2
YOJ	baz=84			S	Sn	22 47 35.8	-0.1
TWC	**Suao** baz=295	0.56	290	*e*P	Pn	22 47 26.7	+0.3
TWC	baz=295			*e*S	Sn	22 47 35.8	-0.5
TWC	**Suao** baz=9.0	0.56	290	*i* S	Pn	22 47 26.3	-0.1
EGS	baz=304	0.62	314	*e*P	Pn	22 47 27.2	+0.2
TWB1	**Santiao Chiao** baz=326	0.71	326	*e*P	Pn	22 47 28.4	+0.3
TWE	**Neicheng** baz=298	0.75	294	*e*P	Pn	22 47 28.6	+0.1
TIPB	**Shuangxi** baz=315	0.78	316	*e*P	Pn	22 47 28.3	-0.5
NACB	**Ninganchiao** baz=245	0.79	252	*e*P	Pn	22 47 28.1	-0.9
NACB	**Ninganchiao** baz=205	0.79	252	*e*P	Pn	22 47 28.0	-1.0
ENTT	**Nioudou** baz=289	0.81	286	P	Pn	22 47 29.5	+0.3
TWD	**Chiawan** baz=246	0.83	246	*i* P	Pn	22 47 29.2	-0.2
TWD	**Chiawan** baz=207	0.83	246	*e*P	Pn	22 47 29.3	-0.1
NDT	**Datong Townshi** baz=275	0.85	283	*e*P	Pn	22 47 30.2	+0.6
ETLH	**Xiulin Townshi** baz=250	0.88	257	P	Pn	22 47 30.2	+0.1
ENLB	**Shoufeng** baz=231	0.91	236	*e*P	Pn	22 47 30.3	0.0
NWLT	**Wulai** baz=296	0.91	293	*e*S	Sn	22 47 43.0	-0.4
NNSB	**Datong** baz=271	0.95	271	*e*P	Pn	22 47 30.9	0.0
YHNB	**Yeheng** baz=276	0.99	285	*e*P	Pn	22 47 30.7	-0.7
YHNB	baz=276			*e*S	Sn	22 47 45.5	+0.4
YHNB	**Yeheng** baz=300	0.99	285	*e*P	Pn	22 47 30.7	-0.7
YM07	**YM07** baz=307	1.05	316	*e*P	Pn	22 47 32.5	+0.4
YM10	**YM10** baz=312	1.08	313	*e*P	Pn	22 47 33.1	+0.6
YM10	baz=312			*e*S	Sn	22 47 46.1	-1.0
YM10	**YM10** baz=340	1.08	313	*e*S	Sn	22 47 45.7	-1.3
YM05	**YM05** baz=304	1.08	314	*e*P	Pn	22 47 32.5	0.0
YM05	baz=304			*e*S	Sn	22 47 45.6	-1.5
YM05	**YM05** baz=341	1.08	314	*e*S	Sn	22 47 45.8	-1.3
ESL	**Shilin** baz=236	1.09	237	*e*P	Pn	22 47 32.4	-0.2
YM04	**YM04** baz=312	1.09	312	*e*P	Pn	22 47 31.9	-0.8
YM04	baz=312			*e*S	Sn	22 47 46.0	-1.3
WHF	**Hehuan Shan** baz=248	1.09	256	P	Pn	22 47 32.9	-0.1
WHF	**Hehuan Shan** baz=237	1.09	256	*e*P	Pn	22 47 32.9	-0.1
TDCB	**Techi** baz=262	1.17	262	*e*P	Pn	22 47 33.9	+0.2
TDCB	baz=262			*e*S	Sn	22 47 49.2	0.0
CHGB	**Renai** baz=245	1.20	253	P	Pn	22 47 34.4	+0.2
CHGB	baz=245			*e*S	Sn	22 47 50.0	0.0
OWD	**Renai** baz=243	1.23	248	P	Pn	22 47 34.6	0.0
HGSD	**Ruisui** baz=221	1.30	225	P	Pn	22 47 35.2	0.0
HGSD	baz=221			S	Sn	22 47 51.6	-0.4
LIOB	**Emei** baz=280	1.30	280	*e*P	Pn	22 47 35.4	+0.1
LIOB	baz=280			S	Sn	22 47 53.0	+0.8
LIOB	**Emei** baz=283	1.30	280	*e*P	Pn	22 47 35.8	+0.4
NSTT	**Nanjuang** baz=279	1.31	280	*e*P	Pn	22 47 36.0	+0.6
NSTT	baz=279			*e*S	Sn	22 47 52.6	+0.2
NSTT	**Nanjuang** baz=289	1.31	280	*e*P	Pn	22 47 35.9	+0.5
VWDT	**VWDT** baz=233	1.34	241	*e*P	Pn	22 47 36.3	+0.4
VWDT	baz=233			*e*S	Sn	22 47 53.2	+0.1
WHP	**Taichung City** baz=259	1.35	264	*e*P	Pn	22 47 37.3	+1.2
WHP	**Taichung City** baz=256	1.35	264	*e*P	Pn	22 47 37.4	+1.3
YULB	**Yu-li** baz=235	1.45	226	*e*P	Pn	22 47 36.8	-0.5
YULB	baz=235			*e*S	Sn	22 47 54.6	-1.0
TWF1	**Yuli** baz=233	1.48	224	*e*P	Pn	22 47 37.3	-0.4
TWF1	baz=233			*e*S	Sn	22 47 56.0	-0.3
SMLT	**Sun Moon Lake** baz=242	1.49	249	*e*P	Pn	22 47 38.5	+0.6
TYC	**Yuchr** baz=243	1.52	251	*e*P	Pn	22 47 39.5	+1.3
TYC	**Yuchr** baz=236	1.52	251	*e*P	Pn	22 47 39.4	+1.3
CHN5	**Tsauling** baz=243	1.79	243	*e*P	Pn	22 47 42.8	+0.9
CHN4	**Tsaushan** baz=238	1.98	238	*e*P	Pn	22 47 45.4	+1.1

TAP 04 22:47:20.8,24°.47N×121°.84E,h8^{km},ML1.7,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau** baz=239	0.10	243	*i* P	Pg	22 47 23.4	+0.2
ENA	baz=239			*i* S	Sg	22 47 25.0	+0.2
TWC	**Suao** baz=9.0	0.14	5	⇓*i*P	Pg	22 47 24.2	+0.5
EOS1	**EOS1** baz=65	0.28	74	*e*P	Pg	22 47 26.9	+0.6
EOS1	baz=65			*e*S	Sb	22 47 31.7	-1.1
TWE	**Neicheng** baz=330	0.29	328	*e*P	Pg	22 47 27.3	+0.7
ENTT	**Nioudou** baz=304	0.30	304	*e*P	Pg	22 47 27.2	+0.5
NDT	**Datong Townshi** baz=293	0.32	294	*e*P	Pg	22 47 27.9	+0.7
NDT	baz=293			*e*S	Sg	22 47 32.1	+0.7
NACB	**Ninganchiao** baz=205	0.37	217	*e*S	Sg	22 47 32.8	-0.1
NNSB	**Datong** baz=263	0.41	264	*e*P	Pg	22 47 29.2	+0.3
NNSB	baz=263			*e*S	Sg	22 47 35.0	+0.5
ETLH	**Xiulin Townshi** baz=237	0.42	231	*e*P	Pg	22 47 29.1	+0.1
NWLT	**Wulai** baz=311	0.43	315	*e*P	Pb	22 47 30.2	-0.5
YHNB	**Yeheng** baz=300	0.46	295	*e*S	Sb	22 47 37.3	-1.0
NSK	**Sanguang** baz=295	0.48	295	*e*P	Pb	22 47 31.1	-0.5
YM01	**YM01** baz=341	0.71	340	*e*P	Pb	22 47 35.1	-0.4
YM10	**YM10** baz=340	0.72	340	*e*P	Pb	22 47 35.5	-0.2
YM05	**YM05** baz=341	0.73	340	*e*P	Pb	22 47 36.4	+0.5

MEX 04 22:56:57.9±0.6,17°.46N×96°.75W,h76^{km}±7^{km},MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	0.38	178	*e*P	Pn	22 57 09.3	-1.3
VHO				*i* S	Sn	22 57 18.1	-1.7
PNIG	**Pinotepa**	1.69	231	*e*P	Pn	22 57 22.7	-2.9
PNIG				*e*S	Sn	22 57 41.3	-5.4
HUIG	**Huatulco**	1.79	160	*e*P	Pn	22 57 24.3	-2.6
HUIG				*e*S	Sn	22 57 47.2	-1.6

KRSC 04 23:08:42.7±0.9,53°.87N×160°.60E,h104^{km}±11^{km},ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KII	**Karymskiy**	0.70	284	*e*P	Pn	23 09 01.9	+1.4
KII				*e*S	Sn	23 09 14.7	+0.8
SPN	**Mys Shipunski**	0.85	204	*e*P	Pn	23 09 03.1	+1.3
SPN				*e*S	Sn	23 09 16.8	+0.7
MKZ	**Mys Kozlova**	0.96	44	*i* P	Pn	23 09 04.6	+1.7
MKZ				*e*S	Sn	23 09 19.4	+1.3
NLC	**Nalytchevo**	1.02	227	*e*P	Pn	23 09 05.0	+1.4
NLC				*e*S	Sn	23 09 20.6	+1.2
SDLR	**Sedlovina**	1.18	241	*e*P	Pn	23 09 07.2	+1.7
SMAR	**Somma**	1.23	241	*e*P	Pn	23 09 08.0	+1.8
SMAR				*e*S	Sn	23 09 25.4	+1.5
UGLR	**Uglovaya**	1.25	239	*e*P	Pn	23 09 08.3	+2.0
UGLR				*e*S	Sn	23 09 25.8	+1.7
KZV	**Kizimen**	1.26	352	*i* P	Pn	23 09 08.2	+1.8
KZV				*e*S	Sn	23 09 25.6	+1.2
AVH	**Avacha**	1.27	242	*e*P	Pn	23 09 08.7	+2.3
AVH				*e*S	Sn	23 09 26.4	+2.1
KRX	**Arik**	1.27	247	*e*P	Pn	23 09 08.3	+1.8
KRX				*e*S	Sn	23 09 25.5	+1.0
KOK	**Koryaka**	1.31	245	*e*P	Pn	23 09 08.9	+2.0
TUMD	**Tumrok D**	1.34	355	*e*P	Pn	23 09 08.7	+1.4
TUMD				*e*S	Sn	23 09 26.6	+0.8
DALK	**Dalny**	1.39	233	*e*P	Pn	23 09 09.3	+1.6
DALK				*e*S	Sn	23 09 28.2	+1.5
PET	**Petropavlovsk**	1.44	235	*e*P	Pn	23 09 10.1	+1.7
PET				*e*S	Sn	23 09 29.0	+1.2
TUMR	**Tumrok**	1.44	350	*e*P	Pn	23 09 10.7	+2.2
GNL	**Ganaly**	1.59	265	*e*P	Pn	23 09 12.0	+1.7
KRMR	**Karymshinskiy**	1.81	236	*e*P	Pn	23 09 14.9	+1.9
KRMR				*e*S	Sn	23 09 37.3	+1.3
RUS	**Russkaya**	1.91	222	*e*P	Pn	23 09 15.4	+1.2
RUS				*e*S	Sn	23 09 38.6	+0.3
MTVR	**Mutnovka**	2.01	227	*e*P	Pn	23 09 17.8	+2.1
MTVR				*e*S	Sn	23 09 42.3	+1.5
ZLN	**Zelenaya**	2.16	3	*e*P	Pn	23 09 19.8	+2.3
ESO	**Esso**	2.33	333	*e*P	Pn	23 09 21.3	+1.6
SRDR	**Sredinnyy**	2.50	349	*e*P	Pn	23 09 22.9	+0.9
KDTR	**Khodutka, Kamc**	2.57	218	*e*P	Pn	23 09 23.8	+1.0
KDTR				*e*S	Sn	23 09 52.6	-0.9
KBTR	**Krutoberegovo**	2.67	28	*e*P	Pn	23 09 26.3	+2.2
KBTR				*e*S	Sn	23 09 57.4	+1.5
SMKR	**Semkarok**	2.76	10	*e*P	Pn	23 09 27.5	+2.1
SRKR	**Sorokina**	2.81	6	*e*P	Pn	23 09 27.0	+1.0

SOME ***04*** *23:13:23.9,42°.53N×79°.60E,h5^{km}*
KRNET ***04*** *23:13:24.3±0.1,42°.58N×79°.69E,h24^{km},mb2.0*
NNC ***04*** *23:13:24.1±1.6,42°.60N×79°.63E,h0^{km},mpv1.8,Error ellipse: s-maj=9.9km s-min=6.0km az=125.0*
ISC 04 23:13:24.0±2.4,42°.57N±0°.08×79°.59E±0°.09,h14^{km}±14^{km}, n11,σ0^{s}74/22,8C-4D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak** 1.0nm,0.2s	0.71	324	P	**Pg**	**23 13 38.0**	**+0.2**
UZB	2.9nm,0.1s			S	**Sb**	**23 13 48.1**	**+0.2**
UZB	**Uzynbulak** 1.0nm,0.2s	0.71	324	*e*P	**Pg**	**23 13 38.0**	**+0.2**
UZB	2.9nm,0.1s			*e*S	**Sb**	**23 13 48.1**	**+0.2**
PDGK	**Podgornoye** 0.7nm,0.2s	0.76	355	P	**Pg**	**23 13 38.7**	**-0.1**
PDGK	1.0nm,0.3s			S	**Sb**	**23 13 49.5**	**+0.1**
PDGK	**Podgornoye** 0.4nm,0.4s	0.76	355	⇑P	**Pg**	**23 13 38.5**	**-0.3**
PDGK	0.7nm,0.3s			⇑S	**Sg**	**23 13 48.9**	**+0.1**
PDGK	**Podgornoye** baz=49	0.76	355	⇑*e*P	**Pg**	**23 13 38.6**	**-0.2**
PDGK	baz=49			⇑*i*S	**Sg**	**23 13 49.3**	**+0.5**
PRZ	**Przheval'sk** baz=65	0.88	265	⇑*i*P	**Pb**	**23 13 42.2**	**+0.9**
PRZ	baz=65			⇑*i*S	**Sb**	**23 13 54.9**	**+1.9**
SATY	**Saty**	0.99	300	P	**Pg**	**23 13 42.9**	**-0.4**
SATY				S	**Sg**	**23 13 56.5**	**+0.2**
SATY	**Saty** 0.8nm,0.1s	0.99	300	*e*P	**Pg**	**23 13 42.9**	**-0.4**
SATY	5.2nm,0.2s			*e*S	**Sg**	**23 13 56.5**	**+0.2**
KDJ	**Kajisay** baz=57	1.84	257	⇑*i*P	**Pb**	**23 13 58.2**	**+0.6**
KDJ	baz=57			⇑*i*S	**Sg**	**23 14 23.1**	**-0.1**
ULHL	**Ulahol** baz=64	2.50	264	⇓*i*P	**Pb**	**23 14 07.8**	**-1.0**
ULHL	baz=64			⇓*e*S	**Sb**	**23 14 39.5**	**-0.1**
BOOM	**Boomskoye usch** baz=69	2.70	269	⇓*i*P	**Pb**	**23 14 10.8**	**-1.4**
BOOM	baz=69			⇓*i*S	**Sb**	**23 14 44.3**	**-0.9**

IDC 04 23:31:22.5±15.0,23°.11S×175°.50W,h0^{km},mb4.0/3, mb1 4.3/4,mb1mx3.8/22,mbtmp4.2/4,ML4.2/1,Error ellipse: s-maj=285.4km s-min=51.3km az=83.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera** 0.9nm,0.3s,baz=329,slow=19,SNR=4.4	16.37	201	Pn	Pn	23 35 12.4	-1.3
URZ	0.3nm,0.3s,baz=330,slow=20,SNR=3.6			Sn	Sn	23 38 17.5	+1.6
STKA	**Stephens Creek** 0.3nm,0.3s,baz=56,slow=6.8,SNR=3.3	38.84	247	P	P	23 38 48.8	-0.7
ASAR	**Alice Springs** 0.6nm,0.3s,baz=93,slow=7.7,SNR=11	46.24	259	P	P	23 39 49.9	+0.1
WRA	**Warramunga Arr** 1.9nm,0.5s,baz=97,slow=8.4,SNR=39	46.59	264	P	P	23 39 52.8	+0.2

SOME ***04*** *23:39:27.1,42°.55N×79°.63E,h10^{km}*
KRNET ***04*** *23:39:27.9±0.1,42°.61N×79°.63E,h16^{km},mb2.5*
NNC ***04*** *23:39:27.2±0.8,42°.60N×79°.65E,h0^{km},mb2.9,mpv2.5, Error ellipse: s-maj=4.9km s-min=2.4km az=127.0*
ISC 04 23:39:26.0±1.8,42°.52N±0°.05×79°.67E±0°.06,h1^{km}±11^{km}, n42,σ1^{s}00/76,15C-6D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak** 5.4nm,0.1s	0.78	323	P	**Pg**	**23 39 41.3**	**+0.3**
UZB	20nm,0.2s			S	**Sg**	**23 39 51.6**	**+0.4**
UZB	**Uzynbulak** baz=21	0.78	323	⇓*e*P	**Pg**	**23 39 41.3**	**+0.3**
UZB	baz=21			⇓*e*S	**Sg**	**23 39 51.6**	**+0.4**
UZB	**Uzynbulak** 5.4nm,0.1s	0.78	323	⇓*e*P	**Pg**	**23 39 41.3**	**+0.3**
UZB	24nm,0.3s			*e*S	**Sg**	**23 39 51.6**	**+0.4**
PDGK	**Podgornoye** 3.0nm,0.2s	0.82	351	P	**Pg**	**23 39 41.8**	**+0.1**
PDGK	2.6nm,0.2s			S	**Sg**	**23 39 52.5**	**+0.2**
PDGK	**Podgornoye** 1.0nm,0.2s	0.82	351	⇑P	**Pg**	**23 39 41.2**	**-0.5**
PDGK	3.8nm,0.5s			⇓S	**Sg**	**23 39 51.9**	**-0.3**
PDGK	**Podgornoye** baz=52	0.82	351	⇑*i*P	**Pg**	**23 39 41.7**	**+0.1**
PDGK	baz=52			⇑*i*S	**Sg**	**23 39 52.2**	**0.0**
PRZ	**Przheval'sk** baz=63	0.94	268	⇓*i*P	**Pb**	**23 39 45.2**	**0.0**
PRZ	baz=63			⇓*i*S	**Sb**	**23 39 57.3**	**-0.9**
SATY	**Saty**	1.07	300	P	**Pg**	**23 39 46.3**	**-0.2**
SATY				S	**Sg**	**23 40 00.2**	**-0.2**
SATY	**Saty** 0.9nm,0.1s	1.07	300	*e*P	**Pg**	**23 39 46.3**	**-0.2**
SATY	29nm,0.1s			*e*S	**Sg**	**23 40 00.2**	**-0.2**
KURS	**Kuram** baz=10.0	1.46	312	*e*P	**Pn**	**23 39 53.0**	**-0.6**
KURS	baz=10.0			*e*S	**Sn**	**23 40 11.6**	**-1.8**
KURS	**Kuram** 0.3nm,0.1s	1.46	312	*e*P	**Pn**	**23 39 53.0**	**-0.6**
KURS	2.7nm,0.6s			*e*S	**Sn**	**23 40 11.6**	**-1.8**
DJR	**Jarkent** 0.9nm,0.2s	1.81	3	*e*P	**Pb**	**23 40 00.1**	**+0.1**
DJR	3.5nm,0.2s			*e*S	**Sg**	**23 40 23.7**	**-0.4**
KDJ	**Kajisay** baz=56	1.89	259	⇑*i*P	**Pg**	**23 40 02.5**	**+0.4**
KDJ	baz=56			⇑*i*S	**Sg**	**23 40 27.1**	**+0.6**
KOTS	**Kotyrbulak** 1.6nm,0.3s	2.01	292	Pg	**Pb**	**23 40 04.1**	**+0.7**
KOTS	17nm,0.6s			Lg	Lg	23 40 31.1	
KOTS	**Kotyrbulak** baz=89	2.01	292	*e*P	**Pb**	**23 40 04.1**	**+0.7**
KOTS	baz=89			*e*S	**Sg**	**23 40 31.1**	**+0.6**
KOTS	**Kotyrbulak** 1.6nm,0.3s	2.01	292	*e*P	**Pb**	**23 40 04.1**	**+0.7**
KOTS	17nm,0.6s			*e*S	**Sg**	**23 40 31.1**	**+0.6**
MDOK	**Medeo** 1.5nm,0.4s	2.03	289	Pn	**Pb**	**23 40 03.3**	**-0.5**
MDOK	1.8nm,0.8s			Sn	**Sb**	**23 40 29.3**	**-0.2**
MDOK	**Medeo** 1.6nm,0.4s	2.03	289	Pg	**Pb**	**23 40 03.9**	**+0.1**
MDOK	4.5nm,0.3s			Lg	Lg	23 40 30.6	
MDOK	**Medeo** baz=87	2.03	289	*e*P	**Pb**	**23 40 03.9**	**+0.1**
MDOK	baz=87			*e*S	**Sg**	**23 40 30.4**	**-0.8**
MDOK	**Medeo** 1.6nm,0.4s	2.03	289	*e*P	**Pb**	**23 40 03.9**	**+0.1**
MDOK	4.5nm,0.3s			*e*S	**Sg**	**23 40 30.4**	**-0.8**
TNSS	**Tian-Shan** 1.2nm,0.2s	2.07	285	Pg	**Pb**	**23 40 04.5**	**-0.1**
TNSS	5.3nm,0.5s			Lg	Lg	23 40 31.5	
TNSS	**Tian-Shan** baz=83	2.07	285	*e*P	**Pb**	**23 40 04.5**	**-0.1**
TNSS	baz=83			*e*S	**Sg**	**23 40 31.5**	**-0.9**
TNSS	**Tian-Shan** 1.2nm,0.2s	2.07	285	*e*P	**Pb**	**23 40 04.5**	**-0.1**
TNSS	5.3nm,0.5s			*e*S	**Sg**	**23 40 31.4**	**-0.9**
ARXS	**Arharly** 1.5nm,0.3s	2.16	322	Pg	**Pb**	**23 40 05.3**	**-0.6**
ARXS	6.3nm,0.2s			Lg	Lg	23 40 33.5	
ARXS	**Arharly** 1.5nm,0.3s	2.16	322	*e*P	**Pb**	**23 40 05.3**	**-0.6**
ARXS	7.1nm,0.3s			*e*S	**Sb**	**23 40 33.0**	**-0.1**
CHKK	**Chushkaly**	2.37	305	Pg	**Pb**	**23 40 09.3**	**-0.2**
CHKK				Lg	Lg	23 40 40.0	
CHKK	**Chushkaly** baz=4.0	2.37	305	*e*P	**Pb**	**23 40 08.9**	**-0.6**
CHKK	baz=4.0			*e*S	**Sb**	**23 40 38.8**	**-0.4**
CHKK	**Chushkaly** 0.5nm,0.1s	2.37	305	*e*P	**Pb**	**23 40 08.9**	**-0.6**
CHKK	8.9nm,0.3s			*e*S	**Sb**	**23 40 38.8**	**-0.4**
KTBS	**Karatobe** 0.8nm,0.2s	2.49	300	Pg	**Pb**	**23 40 11.5**	**0.0**
KTBS	7.5nm,0.2s			Lg	Lg	23 40 43.7	
KTBS	**Karatobe** baz=97	2.49	300	*e*P	**Pb**	**23 40 11.5**	**0.0**
KTBS	baz=97			*e*S	**Sb**	**23 40 43.7**	**+1.1**
KTBS	**Karatobe** 0.8nm,0.2s	2.49	300	*e*P	**Pb**	**23 40 11.5**	**0.0**
KTBS	7.5nm,0.2s			*e*S	**Sb**	**23 40 43.7**	**+1.1**
ULHL	**Ulahol** baz=63	2.55	265	⇑*i*P	**Pb**	**23 40 12.0**	**-0.7**
ULHL	baz=63			⇑*i*S	**Sb**	**23 40 44.1**	**-0.6**
BOOM	**Boomskoye usch** baz=69	2.75	271	⇑*i*P	**Pb**	**23 40 14.7**	**-1.4**
BOOM	baz=69			⇑*i*S	**Sb**	**23 40 48.5**	**-2.0**
KUU	**Kurty**	2.79	301	Pg	**Pb**	**23 40 16.7**	**0.0**
KUU				Lg	Lg	23 40 52.4	
KUU	**Kurty** baz=99	2.79	301	*e*P	**Pb**	**23 40 16.7**	**0.0**
KUU	baz=99			*e*S	**Sb**	**23 40 52.4**	**+1.0**
KUU	**Kurty** 0.4nm,0.1s	2.79	301	*e*P	**Pb**	**23 40 16.6**	**0.0**
KUU	5.0nm,0.3s			*e*S	**Sb**	**23 40 52.4**	**+1.0**
NRN	**Naryn** baz=48	2.94	250	⇑*i*P	**Pb**	**23 40 18.0**	**-1.4**
NRN	baz=48			⇑*i*S	**Sb**	**23 40 54.6**	**-1.4**
DGS	**Degeres**	2.95	285	Pg	**Pb**	**23 40 19.8**	**+0.3**
DGS				Lg	Lg	23 40 57.8	
DGS	**Degeres** baz=84	2.95	285	*e*P	**Pb**	**23 40 19.8**	**+0.3**
DGS	baz=84			*e*S	**Sb**	**23 40 57.9**	**+1.8**
DGS	**Degeres** 1.8nm,0.5s	2.95	285	*e*P	**Pb**	**23 40 19.8**	**+0.3**
DGS	8.6nm,0.5s			*e*S	**Sb**	**23 40 57.8**	**+1.8**
TKM2	**Tokmak 2** baz=77	3.02	279	⇑*e*P	**Pb**	**23 40 18.2**	**-2.6**
TKM2	baz=77			⇑*i*S	**Sb**	**23 40 54.9**	**-3.4**
ARLS	**Aral** baz=61	4.03	262	⇑*i*P	**Pn**	**23 40 32.4**	**+3.5**
ARLS	baz=61			⇑*i*S	**Sn**	**23 41 18.6**	**+1.8**

ISCJB ***05*** *00:11:13.3±0.6,31°.26N±0°.05×115°.63W±0°.04,h7^{km}±9^{km}, Error ellipse: s-maj=8.4km s-min=5.9km az=20.3*
ECX ***05*** *00:11:14.2±0.7,31°.22N×115°.62W,h5^{km},MD2.4,ML2.6*
MEX ***05*** *00:11:14.5±0.3,31°.23N×115°.31W,h10^{km}±24^{km},MD3.4*
ISC 05 00:11:12.2±1.8,31°.19N±0°.08×115°.67W±0°.06, h14^{km}±15^{km},n14,σ0^{s}45/22,3C,Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	0.23	130	*e*P	**Pb**	**00 11 18.9**	**+0.6**
SPIG				*e*S	**Sb**	**00 11 22.4**	**0.0**
SPIG	**San Pedro Mart**	0.23	130	*e*P	**Pb**	**00 11 18.7**	**+0.3**
SPIG				*e*S	**Sb**	**00 11 22.1**	**-0.4**
SPX	**San Pedro Mart**	0.23	130	*e*P	**Pb**	**00 11 18.9**	**+0.5**
SPX				*i* S	**Sb**	**00 11 22.1**	**-0.4**
ECBX	**El Chinero**	0.60	62	⇑*e*P	**Pg**	**00 11 24.0**	**+0.1**
ECBX				*e*S	**Sg**	**00 11 31.2**	**-0.6**
ZAX	**El Zacaton**	0.61	302	*e*P	**Pb**	**00 11 24.9**	**+0.1**
ZAX				*e*S	**Sb**	**00 11 34.1**	**+0.9**
ZAX				*e*		00 11 35.6	

ZAX				IAML		00 11 35.6	
	comp=E,309nm,0.6s						
ECNX	Esteban Cantu	0.92	300	*e*P	Pn	00 11 30.6	-0.2
ECNX				*e*S	Sn	00 11 43.4	-0.6
PBX	Punta Banda	1.06	301	*e*P	Pn	00 11 32.6	-0.1
PBX				*e*S	Sn	00 11 47.0	-0.2
CBX	Cerro Bola	1.40	323	*e*P	Pb	00 11 38.4	+0.2
CBX				*e*S	Sg	00 11 57.3	-0.2
CBX				IAML		00 12 01.9	
	comp=E,88nm,0.5s						
CBX				⇑*e*		00 12 01.9	
RMX	La Rumorosa	1.45	346	*e*P	Pn	00 11 38.5	+0.3
RMX				⇑*e*		00 11 57.5	
RMX				IAML		00 11 57.5	
	comp=N,62nm,0.1s						
IKP	In-Ko-Pah, Jac	1.50	346	*e*P	Pb	00 11 40.5	+0.5
TJIG	Tijuana	1.50	326	*i* P	Pb	00 11 40.4	+0.4
BAR	Barrett	1.71	330	*e*P	Pb	00 11 43.8	+0.3
SDRC	San Diego Road	1.88	325	*e*P	Pb	00 11 45.9	-0.4
EML	El Monte Cty P	1.97	330	*e*P	Pb	00 11 47.5	-0.3

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*IDC **05** 00:17:41.1±0.9, 0°.99N×120°.48E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.7/36, mbtmp3.9/9, ML3.8/2, MS3.4/4, Ms1 3.5/4, ms1mx3.1/36, Error ellipse: s-maj=59.6km s-min=16.1km az=64.0*
*ISCJB **05** 00:17:43.9±0.4, 1°.16N±0°.05×120°.57E±0°.04, h32^{km}, mb3.9/8, MS3.5/2, Error ellipse: s-maj=8.1km s-min=4.9km az=39.4*
*DJA **05** 00:17:45.8±0.6, 1°N±5°×12°1E±°, h10^{km}, M4.5/12, mB4.8/3, mb4.5/7, MLv4.6/12, Mw(mB)4.0/3*
*NEIC **05** 00:17:45.5±2.9, 1°.03N×120°.52E, h31^{km}±23^{km}, mb4.0/2, Error ellipse: s-maj=17.5km s-min=6.9km az=51.0*
NEIC Felt [III] at Tolitoli.
ISC 05 00:17:45.2±0.6, **1°.04N**±0°.07×**120°.60E**±0°.05, **h32**^{km}, **n38, σ1^{s}48**/32, **mb3.9**/8, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	0.98	225	P	Pb	00 18 03.9	+0.1
MRSI	Marisa	1.46	112	P	Pn	00 18 09.6	+0.3
MRSI				S	Sb	00 18 30.6	+0.7
PCI	Palu	2.07	201	P	Pb	00 18 21.7	-0.5
APSI	Ampana	2.20	151	P	Pb	00 18 23.1	-1.3
LUWI	Luwuk	3.00	133	*e*Pn	Pb	00 18 34.9	-3.1
LUWI	Luwuk	3.00	133	P	Pn	00 18 34.0	+3.4
KMSI	Cibinong	3.42	98	P	Pn	00 18 37.1	+0.8
TTSI	Tana Toraja	4.13	191	P	Pb	00 18 51.8	-5.4
SPSI	Sidrap Palu	5.04	189	P	Pn	00 19 04.8	+6.2
	72nm,0.8s,757nm0.2nm						
KDI	Kendari	5.36	158	P	Pn	00 19 02.9	-0.1
BNSI	Bone	5.42	185	P	Pn	00 19 09.3	+5.4
SANI	Sanana	6.20	120	P	Pn	00 19 15.7	+1.1
	36nm,0.8s,0.2nm						
BKSI	Bulukumba	6.33	184	P	Pn	00 19 22.2	+5.8
	28nm,0.8s,321nm0.1nm						
KKM	Kota Kinabalu	6.62	319	*e*Pn	Pn	00 19 19.5	-1.0
SBUM	Sibu	8.49	280	*e*Pn	Pn	00 19 45.2	-0.9
SBUM				*e*Sn	Sn	00 21 20.6	-0.2
EDFI	Ende, Flores	9.78	174	P	Pn	00 20 08.7	+4.8
SIJI	Sorong	10.84	100	Pn	Pn	00 20 20.1	+1.8
	0.9nm,0.3s,baz=274,slow=16,SNR=5.7						
BATI	Baumata	11.58	165	LR	LR	00 25 23.4	
	comp=Z,166nm,21.6s,baz=8.5,slow=40						
FAKI	Fak Fak	12.29	109	*e*Pn	Pn	00 20 38.1	-0.1
MTN	Manton Dam	17.31	143	*e*Pn	Pn	00 21 44.9	+0.3
	7.7nm,0.8s						
FITZ	Fitzroy Crossi	19.65	166	P	Pn	00 22 12.5	-0.6
	0.1nm,0.3s,baz=13,slow=7.1,SNR=4.9						
FITZ				LR	LR	00 30 16.9	
	comp=Z,65nm,19.8s,baz=350,slow=38						
KRAB	Krabi	22.48	289	P	P	00 22 37.1	-5.0
WR1	Warramunga Arr	24.83	148	*e*P	P	00 23 04.7	-0.1
WRA	Warramunga Arr	24.83	148	P	P	00 23 04.7	-0.1
	3.9nm,1.1s,baz=334,slow=8.6,SNR=15						
WB2	Warramunga Arr	24.83	148	*e*P	P	00 23 04.7	-0.2
CMAR	Chiang Mai Arr	27.41	310	LR	LR	00 37 19.1	
	comp=Z,68nm,18.0s,baz=130,slow=43						
ASAR	Alice Springs	27.76	153	P	P	00 23 31.7	+0.4
	1.4nm,0.8s,baz=327,slow=7.2,SNR=11						
JNU	Nakatsue	33.35	16	LR	LR	00 37 52.8	
	comp=Z,147nm,18.6s,baz=309,slow=36						
STKA	Stephens Creek	38.31	151	P	P	00 25 04.1	+1.1
	2.8nm,0.7s,baz=316,slow=9.9,SNR=3.2						
USA0B	Ussuriysk Arra	44.16	12	*e*P	P	00 25 51.4	+0.5
	3.7nm,1.0s						
SONA0	Songino Array	48.22	347	*e*P	P	00 26 23.2	+0.3
SONM	Songino Array	48.22	347	P	P	00 26 23.2	+0.3
	0.7nm,0.8s,baz=168,slow=6.3,SNR=4.2						
SONA1	Songino Array	48.23	347	*e*P	P	00 26 23.3	+0.2
MK32	Makanchi Array	56.49	329	*e*P	P	00 27 25.4	+1.2
MKAR	Makanchi Array	56.49	329	P	P	00 27 25.4	+1.2
	0.5nm,0.7s,baz=127,slow=8.4,SNR=5.2						
ZALV	Zalesovo Beam	60.40	337	P	P	00 27 51.9	+0.5
	0.7nm,0.8s,baz=120,slow=8.7,SNR=4.7						
ZAA1	Zalesovo Array	60.40	337	*e*P	P	00 27 51.9	+0.5
NRIK	Noril'sk	71.68	348	P	P	00 29 04.7	+1.2
	1.1nm,0.5s,baz=100,slow=2.7,SNR=4.4						

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*SOME **05** 00:45:20.7, 42°.55N×79°.72E, h15^{km}*
*KRNET **05** 00:45:21.0±0.1, 42°.55N×79°.61E, h14^{km}, mb2.6*
*NNC **05** 00:45:21.7±0.8, 42°.60N×79°.62E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=5.4km s-min=2.8km az=133.0*
ISC 05 00:45:21.8±1.6, **42°.59N**±0°.04×**79°.52E**±0°.04, **h1**^{km}±10^{km}, **n55, σ1^{s}22**/99, **33C-15D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.67	327	*e*P	Pg	00 45 35.0	+0.4
	baz=24						
UZB				*e*S	Sb	00 45 45.4	-0.8
	baz=24						
UZB	Uzynbulak	0.67	327	*e*P	Pg	00 45 35.0	+0.4
	3.6nm,0.1s						
UZB				*e*S	Sb	00 45 45.4	-0.8
	16nm,0.3s						
PDGK	Podgornoye	0.74	358	⇑P	Pg	00 45 35.8	-0.2
	0.3nm,0.2s						
PDGK				⇑S	Sg	00 45 46.3	+0.8
	3.0nm,0.2s						
PDGK	Podgornoye	0.74	358	⇓*i*P	Pg	00 45 35.8	-0.2
	baz=53						
PDGK				⇓*i*S	Sg	00 45 46.5	+0.9
	baz=53						
PDGK	Podgornoye	0.74	358	⇑*i*P	Pn	00 45 39.8	+0.2
	baz=2.0						
PDGK				⇑*i*S	Sb	00 45 49.3	+1.0
	baz=2.0						
PRZ	Przheval'sk	0.83	263	⇑*i*P	Pb	00 45 38.1	-1.2
	baz=66						
PRZ				⇑*i*S	Sb	00 45 49.8	-1.3
	baz=66						
PRZ	Przheval'sk	0.83	263	⇑*i*P	Pn	00 45 42.1	+1.1
	baz=57						
PRZ				⇑*i*S	Sn	00 45 53.1	-0.9
	baz=57						
SATY	Saty	0.94	300	P	Pg	00 45 39.7	-0.3
	3.2nm,0.1s						
SATY				S	Sb	00 45 54.7	+0.6
	17nm,0.1s						
SATY	Saty	0.94	300	*e*P	Pb	00 45 40.4	-0.7
	2.2nm,0.1s						
SATY				*e*S	Sb	00 45 54.6	+0.4
	13nm,0.1s						
KURS	Kuram	1.33	313	P	Pn	00 45 46.6	-1.1
	1.1nm,0.2s						
KURS				S	Sn	00 46 06.7	+0.5
	3.2nm,0.5s						
KURS	Kuram	1.33	313	*e*P	Pb	00 45 47.6	-0.2
	baz=12						
KURS				*e*S	Sn	00 46 06.7	+0.5
	baz=12						
KURS	Kuram	1.33	313	*e*P	Pb	00 45 47.5	-0.2
	1.1nm,0.2s						
KURS				*e*S	Sn	00 46 06.7	+0.5
	3.2nm,0.5s						
DJR	Jarkent	1.75	6	P	Pn	00 45 53.0	-0.5
	0.5nm,0.2s						
DJR				S	Sb	00 46 17.6	+0.2
	3.4nm,0.2s						
DJR	Jarkent	1.75	6	*e*P	Pb	00 45 53.8	-1.0
	0.8nm,0.2s						
DJR				⇓*i*S	Sb	00 46 17.6	+0.2
	3.4nm,0.2s						
KDJ	Kajisay	1.79	256	⇑*i*P	Pb	00 45 54.2	-1.4
	baz=57						
KDJ				⇑*i*S	Sg	00 46 19.1	-0.3
	baz=57						
KDJ	Kajisay	1.79	256	⇑*i*P	Pg	00 45 59.8	+3.6
	baz=53						
KDJ				⇑*i*S	Sg	00 46 23.6	+4.2
	baz=53						
KOTS	Kotyrbulak	1.88	291	Pg	Pb	00 45 57.2	+0.1
	2.8nm,0.3s						
KOTS				Lg	Lg	00 46 24.4	
	16nm,0.4s						
KOTS	Kotyrbulak	1.88	291	*e*P	Pg	00 45 57.8	-0.1
	baz=91						
KOTS				*e*S	Sg	00 46 24.4	+2.1
	baz=91						
KOTS	Kotyrbulak	1.88	291	*e*P	Pg	00 45 57.8	-0.1
	2.8nm,0.3s						
KOTS				*e*S	Sg	00 46 24.4	+2.1
	16nm,0.4s						
MDOK	Medeo	1.90	288	⇑P	Pg	00 45 57.7	-0.7
	1.3nm,0.3s						
MDOK				⇑S	Sg	00 46 23.9	+1.0
	4.8nm,0.6s						
MDOK	Medeo	1.90	288	Pg	Pb	00 45 57.5	0.0
	3.8nm,0.2s						
MDOK				Lg	Lg	00 46 25.2	
	5.0nm,0.4s						
MDOK	Medeo	1.90	288	⇓*i*P	Pb	00 45 57.5	0.0
	baz=89						
MDOK				⇓*e*S	Sg	00 46 24.0	+1.0
	baz=89						
MDOK	Medeo	1.90	288	⇓*i*P	Pb	00 45 57.5	0.0
	4.6nm,0.2s						
MDOK				*e*S	Sg	00 46 24.0	+1.0
	6.8nm,0.9s						
TNSS	Tian-Shan	1.94	284	Pg	Pb	00 45 57.4	-0.9
	2.5nm,0.3s						
TNSS				Lg	Lg	00 46 24.9	
	6.2nm,0.3s						
TNSS	Tian-Shan	1.94	284	*e*P	Pb	00 45 57.9	-0.4
	baz=85						
TNSS				*e*S	Sg	00 46 24.9	+0.6
	baz=85						
TNSS	Tian-Shan	1.94	284	*e*P	Pb	00 45 57.9	-0.4
	2.5nm,0.3s						
TNSS				*e*S	Sg	00 46 24.9	+0.6
	6.2nm,0.3s						
ARXS	Arharly	2.04	323	Pg	Pb	00 45 58.6	-1.2
	1.7nm,0.3s						
ARXS				Lg	Lg	00 46 27.2	
	9.9nm,0.5s						
ARXS	Arharly	2.04	323	*e*P	Pb	00 45 59.2	-0.5
	1.7nm,0.3s						
ARXS				*e*S	Sg	00 46 27.2	-0.1
	9.9nm,0.5s						
CHKK	Chushkaly	2.24	305	Pg	Pb	00 46 03.1	0.0
	1.0nm,0.1s						
CHKK				Lg	Lg	00 46 34.7	
	11nm,0.2s						
CHKK	Chushkaly	2.24	305	*e*P	Pb	00 46 03.1	0.0
	baz=5.0						
CHKK				*e*S	Sg	00 46 33.6	-0.2
	baz=5.0						
CHKK	Chushkaly	2.24	305	*e*P	Pb	00 46 03.1	0.0
	0.8nm,0.1s						
CHKK				*e*S	Sg	00 46 33.6	-0.2
	11nm,0.2s						
MTBS	Maitube	2.33	284	Pg	Pb	00 46 04.4	-0.4
	4.3nm,0.2s						
MTBS				Lg	Lg	00 46 36.6	
	8.8nm,0.5s						
MTBS	Maitube	2.33	284	*e*P	Pb	00 46 04.7	-0.1
	baz=85						
MTBS				⇓*i*S	Sg	00 46 36.7	-0.2
	baz=85						
MTBS	Maitube	2.33	284	*e*P	Pb	00 46 04.7	-0.1
	2.3nm,0.1s						
MTBS				⇓*i*S	Sg	00 46 36.6	-0.2
	5.9nm,0.3s						
KTBS	Karatobe	2.36	299	Pg	Pb	00 46 04.8	-0.4
	1.4nm,0.2s						
KTBS				Lg	Lg	00 46 37.6	
	16nm,0.2s						
KTBS	Karatobe	2.36	299	*e*P	Pb	00 46 04.8	-0.4
	baz=98						
KTBS				*e*S	Sg	00 46 37.0	-0.6
	baz=98						
KTBS	Karatobe	2.36	299	*e*P	Pb	00 46 04.8	-0.4
	1.4nm,0.2s						
KTBS				*e*S	Sg	00 46 37.0	-0.6
	16nm,0.2s						
ULHL	Ulahol	2.45	263	⇑*i*P	Pn	00 46 04.0	+0.8
	baz=64						
ULHL				⇑*i*S	Sb	00 46 36.1	-1.5
	baz=64						
ULHL	Ulahol	2.45	263	⇓*i*P	Pg	00 46 09.6	+0.8
	baz=61						
ULHL				⇓*i*S	Sg	00 46 40.8	+0.2
	baz=61						
BOOM	Boomskoye usch	2.65	269	⇑*i*P	Pn	00 46 06.6	+0.7
	baz=70						
BOOM				⇑*i*S	Sb	00 46 41.0	-2.2
	baz=70						
BOOM	Boomskoye usch	2.65	269	⇓*i*P	Pg	00 46 12.0	-0.6
	baz=67						
BOOM				⇓*i*S	Sg	00 46 45.4	-1.5
	baz=67						
KUU	Kurty	2.66	300	Pg	Pb	00 46 10.3	-0.1
	0.5nm,0.2s						
KUU				Lg	Lg	00 46 46.6	
	8.0nm,0.2s						
KUU	Kurty	2.66	300	*e*P	Pb	00 46 10.7	+0.3
	baz=0.0						
KUU				*e*S	Sg	00 46 46.7	-0.7
	baz=0.0						
KUU	Kurty	2.66	300	*e*P	Pb	00 46 10.7	+0.3
	0.5nm,0.2s						
KUU				*e*S	Sg	00 46 46.6	-0.7
	8.0nm,0.2s						
KAPS	Kapalarasan	2.70	358	Pg	Pb	00 46 10.0	-0.9
	0.6nm,0.5s						
KAPS				Lg	Lg	00 46 46.4	
	2.1nm,0.2s						
KAPS	Kapalarasan	2.70	358	*e*P	Pb	00 46 09.8	-1.1
	0.6nm,0.5s						
KAPS				*e*S	Sb	00 46 45.1	+0.5
	2.1nm,0.2s						
NRN	Naryn	2.87	247	⇑*i*P	Pn	00 46 10.1	+1.1
	baz=49						
NRN				⇑*i*S	Sb	00 46 46.3	-3.4
	baz=49						
TKM2	Tokmak 2	2.91	278	⇑Pn	Pb	00 46 11.6	-3.0
	1.6nm,0.8s						
TKM2				⇓Lg	Lg	00 46 57.0	
	2.6nm,0.6s						
TKM2	Tokmak 2	2.91	278	⇑*i*P	Pn	00 46 10.8	+1.3
	baz=78						
TKM2				⇑*i*S	Sn	00 46 47.3	+2.1
	baz=78						
TKM2	Tokmak 2	2.91	278	⇑*i*P	Pg	00 46 15.9	-1.6
	baz=77						
TKM2				⇑*i*S	Sb	00 46 51.3	+0.5
	baz=77						
KZA	Kyzart	3.21	262	⇑*i*P	Pn	00 46 14.9	+1.1
	baz=63						
KZA				⇑*i*S	Sn	00 46 54.8	+1.9
	baz=63						
ARLS	Aral	3.93	261	⇓*i*P	Pn	00 46 24.9	+1.4
	baz=62						
ARLS				⇓*i*S	Sn	00 47 11.6	+1.3
	baz=62						
ARLS	Aral	3.93	261	⇑*i*P	Pb	00 46 30.2	-1.8
	baz=60						
ARLS				⇑*i*S	Sb	00 47 15.6	-4.5
	baz=60						
MAKZ	Makanchi	4.57	22	⇑Pn	Pn	00 46 32.7	+0.6
	0.2nm,0.3s						
MK31	Makanchi Array	4.64	24	⇑Pn	Pn	00 46 33.4	+0.2
	0.1nm,0.3s,baz=206,slow=14,SNR=6.9						
MK31				⇑Sn	Sn	00 47 27.5	-0.2
	1.0nm,0.9s,baz=209,slow=25,SNR=3.7						
MK31				⇑Lg	Lg	00 47 46.7	
	0.3nm,0.5s						

IDC 05 00:47:00.4±3.2, **32°.74S**×**178°.08W**, **h0**^{km}, **mb3.6**/2, **mb1 3.9**/3, **mb1mx3.7**/18, **mbtmp3.7**/3, **ML3.3**/1, **Error ellipse: s-maj=76.0km s-min=46.8km az=122.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.76	214	Pn	Pn	00 48 39.4	-1.4
	0.6nm,0.3s,baz=335,slow=17,SNR=2.9						
URZ				Sn	Sn	00 49 50.7	-7.7
	4.3nm,0.3s,baz=153,slow=21,SNR=13						
ASAR	Alice Springs	42.97	269	P	P	00 55 01.9	+0.5
	0.2nm,0.4s,baz=114,slow=6.7,SNR=5.0						
WRA	Warramunga Arr	44.17	275	P	P	00 55 10.8	-0.3
	0.4nm,0.3s,baz=112,slow=7.9,SNR=16						
FINES	FINESS Array B	147.30	339	PKPbc	PKPbc	01 06 44.3	-0.7
	3.1nm,1.0s,baz=20,slow=4.4,SNR=4.5						

DJA 05 01:05:11.7±1.2, **7°S**±14°×**10°8E**±°, **h238**^{km}±7^{km}, **M3.1**/8, **MLv3.1**/8, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.38	149	P	Pn	01 05 42.8	-0.1
CMJI				S	S	01 06 08.4	+1.0
CISI	Cisompet, Garu	0.44	258	P	Pn	01 05 43.4	+0.3
CISI				S	S	01 06 09.3	+1.6
KPJI	Karang Pucung	0.69	79	P	Pn	01 05 44.1	+0.2
KPJI				S	S	01 06 10.4	+1.4
SMRI	Semarang	2.21	80	P	Pn	01 05 55.2	0.0
UGM	Wanagama	2.30	101	P	Pn	01 05 56.6	+0.5
PCJI	Pacitan	2.99	104	P	Pn	01 06 03.3	0.0
NGJI	Ngawi	3.19	89	P	Pn	01 06 18.8	+13
PWJI	Pagerwojo	3.57	99	P	Pn	01 06 10.1	+0.2

WEL 05 01:06:28.9, 38°S±9°×**17°9E**±°, **h33**^{km}, **ML4.0**/10, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	0.45	257	P	Pb	01 06 38.8	+0.1
WMGZ				S	Sn	01 06 46.5	+0.6
MXZ	Matakaoa Point	0.54	286	P	Pb	01 06 40.1	-0.1
MXZ				S	Sn	01 06 48.4	+0.1
PUZ	Puketiti	0.66	237	P	Pb	01 06 42.3	+0.2
PUZ				S	Sn	01 06 52.4	+1.2
PKGZ	Pakihiroa	0.72	256	P	Pn	01 06 42.8	-0.1
PKGZ				S	Sb	01 06 53.2	+0.3
TWGZ	Tauwhareparae	0.90	239	P	Pb	01 06 46.0	-0.2
TWGZ				S	Sb	01 06 59.5	+1.6
HAZ	Te Kaha	0.94	267	P	Pb	01 06 46.2	-0.5
HAZ				S	Sb	01 06 59.0	+0.2
CNGZ	Carnagh Statio	0.97	218	P	Pb	01 06 47.3	0.0
RUGZ	Raukumara Rang	1.05	256	P	Pn	01 06 47.8	+0.4
RUGZ				P	Pn	01 06 47.8	+0.3
RUGZ				S	Sb	01 07 01.8	-0.3
TKGZ	Te Karaka	1.14	230	P	Pn	01 06 49.0	+0.5
TKGZ				P	Pn	01 06 49.0	+0.5
TKGZ				S	Sb	01 07 04.1	-0.5
MWZ	Matawai	1.29	241	P	Pn	01 06 50.8	+0.1
RIGZ	Rimuhau	1.37	223	P	Pn	01 06 52.0	+0.3
PRGZ	Paritu Road	1.47	215	P	Pn	01 06 53.5	+0.3
URZ	Urewera	1.56	249	P	Pn	01 06 55.3	+1.0
KNZ	Kokohu	1.65	217	P	Pn	01 06 55.4	-0.2
MHGZ	Mahia Peninsul	1.66	210	P	Pn	01 06 55.8	+0.1
SNGZ	Shannon Statio	1.66	230	P	Pn	01 06 55.9	+0.1
RTZ	Ruatahuna	1.80	240	P	Pn	01 06 58.9	+1.2
RTZ				S	Sn	01 07 21.1	+1.6
MUGZ	Murupara	1.89	246	P	Pn	01 06 60.0	+1.1
RAHZ	Arahi	1.90	230	P	Pn	01 06 59.6	+0.6
RAHZ				P	Pn	01 06 59.6	+0.6
OPRZ	Ohinepanea	1.91	265	P	Pn	01 06 59.5	+0.4
WHHZ	Waihua	1.92	224	P	Pn	01 06 59.9	+0.6
TARZ	Mount Tarawera	2.01	254	P	Pn	01 07 01.8	+1.2
MTHZ	Maungataniwha	2.02	235	P	Pn	01 07 01.2	+0.5
ARHZ	Aropaoanui	2.18	224	P	Pn	01 07 03.6	+0.7
BKZ	Black Stump Fm	2.42	233	P	Pn	01 07 06.5	+0.3
CKHZ	Cape Kidnapper	2.43	217	P	Pn	01 07 06.1	-0.3
MCHZ	McNeill Hill	2.47	225	P	Pn	01 07 07.1	+0.1
KWHZ	Kaweka Forest	2.62	229	P	Pn	01 07 08.8	-0.2
KAHZ	Kahuranaki	2.64	218	P	Pn	01 07 08.7	-0.5
TOZ	Tahuroa Road	2.74	269	P	Pn	01 07 12.1	+1.5
KUZ	Kuaotunu	2.76	290	P	Pn	01 07 11.4	+0.6
PXZ	Pawanui	2.83	215	P	Pn	01 07 10.6	-1.2
BHHZ	Black Hill Sta	2.88	231	P	Pn	01 07 12.3	-0.3
MOVZ	Moawhango	3.03	235	P	Pn	01 07 14.9	+0.3
WPHZ	Waipukurau	3.06	219	P	Pn	01 07 13.9	-1.0
MKAZ	Moumakai	3.09	280	P	Pn	01 07 16.2	+0.8
TRVZ	Turoa	3.11	238	P	Pn	01 07 15.8	0.0
WIAZ	Waiheke Island	3.19	286	P	Pn	01 07 16.3	-0.5
MTVZ	Mangateitei	3.20	238	P	Pn	01 07 16.4	-0.6
VRZ	Vera Road	3.59	246	P	Pn	01 07 23.7	+1.4
BFZ	Birch Farm	3.63	215	P	Pn	01 07 20.9	-2.0
POWZ	Post Office Ro	3.65	222	P	Pn	01 07 21.4	-1.6
PRWZ	Pori Road	3.67	218	P	Pn	01 07 22.0	-1.3
MRZ	Mangatainoka R	3.94	221	P	Pn	01 07 24.7	-2.4
TMWZ	Te Maipa	4.14	214	P	Pn	01 07 27.4	-2.4

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*GUC **05** 01:09:24.7±0.5, 28°.23S×70°.91W, h86^{km}±5^{km}, ML3.9*
*ISCJB **05** 01:09:25.0±1.0, 28°.22S±0°.03×70°.8W±0°.1, h83^{km}±15^{km}, Error ellipse: s-maj=18.0km s-min=5.4km az=1.4*
*SJA **05** 01:09:26.7±0.5, 28°.32S×70°.71W, h73^{km}±4^{km}, ML3.2, MW3.5*
ISC 05 01:09:25.5±1.6, **28°.22S**±0°.04×**70°.9W**±0°.1, **h79**^{km}±17^{km}, **n14, σ0^{s}84**/21, **3D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.81	167	*i* P	Pn	01 09 43.0	+0.4
LCO				*i* S	Sn	01 09 55.1	-0.2
LCO	Las Campanas	0.81	167	⇓*i*P	Pn	01 09 42.9	+0.4
LCO				*i* S	Sn	01 09 54.9	-0.3
LCO				IAML		01 09 57.2	
	comp=E,2µm,0.2s						
CRCH	Chaqaral	1.88	8	*e*P	Pn	01 09 56.4	+0.7
CRCH				*i* S	Sn	01 10 17.6	-1.1
GO04	Tololo Observa	1.95	177	*e*P	Pn	01 09 57.1	+0.2
GO04				*i* S	Sn	01 10 20.9	0.0
GO04				IAML		01 10 24.8	
	comp=N,2µm,0.3s						
CMCH	Combarbala	2.95	182	⇓*i*P	Pn	01 10 10.0	-0.1
CMCH				*i* S	Sn	01 10 43.5	-1.1
CMCH				IAML		01 11 00.3	
	comp=E,556nm,0.4s						
GO02	Mina Guanaco	3.26	21	*e*P	Pn	01 10 15.3	+0.6
GO02				*i* S	Sn	01 10 51.8	-0.6
GO02				IAML		01 11 20.0	
	comp=N,222nm,0.6s						
AMOG	MOGNA	3.43	143	*i* P	Pn	01 10 17.4	+0.7
ACLC	CERRO LA CRUZ	3.67	110	*i* P	Pn	01 10 20.9	+0.8
RTLL	Cerro Villicun	3.75	146	*e*P	Pn	01 10 22.1	+1.1
RTLL				*i* S	Sn	01 11 02.7	-1.4
RTLS	Leoncito	3.83	159	*i* P	Pn	01 10 23.9	+1.5
RTLS				IAML		01 11 09.5	
	comp=Z,43nm,0.6s						
CFA	Coronel Fontan	4.10	146	*i* P	Pn	01 10 26.5	+0.7
RTCV	Cerro Valdivia	4.17	151	*i* P	Pn	01 10 27.6	+0.8
APLL	PUNTA DE LOS L	4.40	121	*i* P	Pn	01 10 29.8	0.0
APLL				IAML		01 10 30.7	
	comp=Z,22nm,0.3s						
CYA	Choya	4.50	94	⇓*i*P	Pn	01 10 31.5	+0.2

MEX 05 01:35:15.8±0.5, **16°.65N**×**91°.08W**, **h117**^{km}±103^{km}, **MD3.9, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	1.07	250	*e*P	Pn	01 35 37.0	-1.6
CCIG				*i* S	Sn	01 35 54.2	-1.5

MAN 05 01:52:53.4, 10°.14N×**123°.11E, h28**^{km}**, mb3.7, ML2.4, MS1.9, 1D, Cebu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.71	313	*e*P	Pb	01 53 07.3	+0.1
GUIM				*e*S	Sn	01 53 18.5	+1.0
SNPH	Sibulan	0.80	171	*i* P	Pn	01 53 08.9	0.0
SNPH				*i* S	Sn	01 53 20.4	+0.5

RCP	**Roxas**	**1.46**	**346**	⇓*e*P	Pb	01 53 20.1	+0.2
MSLP	**Maasin**	**1.72**	**90**	*e*P	Pn	01 53 21.2	-0.3
MSLP				*e*S	Sn	01 53 43.5	+1.0

MAN 05 01:57:21.6, 17°.73N×121°.37E, h1^{km}, mb3.5, ML2.2, MS1.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**0.43**	**94**	⇓*i*P	Pg	01 57 28.3	-1.6
CVP				*i* S	Sg	01 57 35.4	-0.1

MEX 05 01:58:45.6±0.8**, 20°.99N×106°.18W, h5^{km}, MD3.9, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANIG	**Ahuacatlan**	**1.55**	**87**	*e*P	Pn	01 59 10.4	-3.7
ANIG				*e*S	Sn	01 59 31.0	-3.6
CJM	**Chamela**	**1.83**	**144**	*e*P	Pn	01 59 14.1	-3.6
CJM				*e*S	Sn	01 59 36.7	-4.6
MAIG	**Mazatlaan**	**2.20**	**354**	*i* P	Pn	01 59 19.7	-3.1
MAIG				*i* S	Sn	01 59 46.0	-4.5
R15V		**2.75**	**131**	*e*P	Pn	01 59 26.2	-4.2
R15V				*e*S	Sn	01 59 56.2	-7.9
EZ5V		**2.85**	**121**	*e*P	Pn	01 59 32.8	+0.7
EZ5V				*i* S	Sn	02 00 09.2	+2.4

IDC 05 02:05:31.2±3.4**, 5°.53S×149°.48E, h0^{km}, mb4.4**/3**, mb1 4.8**/3**, mb1mx3.7**/38**, mbtmp4.5**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/28**, Error ellipse: s-maj=101.2km s-min=45.9km az=116.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**18.76**	**284**	LR	LR	02 18 54.5	
	comp=Z,59nm,18.1s,slow=43						
WRA	**Warramunga Arr**	**20.55**	**224**	P	P	02 10 11.4	-0.1
	11nm,0.5s,baz=50,slow=11,SNR=95						
ASAR	**Alice Springs**	**23.46**	**218**	P	P	02 10 43.1	+0.5
	5.8nm,0.5s,baz=54,slow=9.0,SNR=84						
FITZ	**Fitzroy Crossi**	**26.42**	**240**	P	P	02 11 08.9	-1.0
	4.3nm,0.5s,baz=55,slow=9.0,SNR=26						
TORD	**Torodi Ar. Bea**	**147.35**	**286**	PKPbc	PKPbc	02 25 18.0	0.0
	0.4nm,0.7s,baz=62,slow=4.5,SNR=5.6						

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*IDC **05** 02:07:57.2±1.5, 51°.63N×177°.73W, h0^{km}, mb3.3/6, mb1 3.8/7, mb1mx3.5/46, mbtmp3.4/7, ML4.1/1, Error ellipse: s-maj=64.1km s-min=25.0km az=142.0*

*NEIC **05** 02:08:09.2±0.0, 51°.88N×177°.43W, h79^{km}, ML3.4(AEIC), After AEIC.*

ISC 05 02:08:08.3±1.0**, 51°.7N**±0°.2×**177°.42W**±0°.05**, h79^{km}, n28, σ1^{s}.26**/26**, mb3.3**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**0.12**	**69**	P	**Pn**	**02 08 21.1**	**+1.3**
KIKV	**Kanaga Island**	**0.22**	**44**	P	**Pn**	**02 08 21.5**	**+1.3**
TAPA	**Tanaga Point A**	**0.26**	**292**	P	**Pn**	**02 08 21.7**	**+1.3**
KIRH	**Kanaga Island**	**0.27**	**48**	P	**Pn**	**02 08 21.8**	**+1.4**
TAFP	**Tanaga Falls P**	**0.40**	**298**	P	**Pn**	**02 08 22.1**	**+0.9**
TAFP				S	**Sn**	**02 08 32.2**	**+1.5**
TASE	**Tanaga Southea**	**0.40**	**287**	P	**Pn**	**02 08 22.6**	**+1.3**
ADK	**Adak**	**0.49**	**70**	P	**Pn**	**02 08 22.9**	**+1.0**
ADK				S	**Sn**	**02 08 33.5**	**+1.6**
ADAG	**Mount Adagdak**	**0.57**	**62**	P	**Pn**	**02 08 23.8**	**+1.2**
ETKA	**Kagalaska Isla**	**0.65**	**77**	P	**Pn**	**02 08 24.4**	**+1.1**
GAEA	**Gareloi East**	**0.83**	**275**	P	**Pn**	**02 08 26.5**	**+1.2**
GALAA	**Gareloi Lava P**	**0.84**	**274**	P	**Pn**	**02 08 26.6**	**+1.2**
GSSP	**Great Sitkin S**	**0.86**	**64**	P	**Pn**	**02 08 26.6**	**+1.0**
GSTD	**Great Sitkin T**	**0.86**	**66**	P	**Pn**	**02 08 26.6**	**+0.9**
GSTD				S	**Sn**	**02 08 40.1**	**+1.3**
GSMY	**Great Sitkin M**	**0.91**	**68**	P	**Pn**	**02 08 27.2**	**+1.0**
ATKA	**Atka Island**	**2.05**	**75**	P	**Pn**	**02 08 42.1**	**+1.3**
ATKA				S	**Sn**	**02 09 07.0**	**+1.3**
KDAK	**Kodiak Island**	**15.52**	**57**	Pn	**Pn**	**02 11 40.1**	**-2.1**
	0.7nm,0.3s,baz=277,slow=8.1,SNR=15						
ILAR	**Eielson Array**	**20.44**	**39**	P	**P**	**02 12 38.5**	**-0.4**
	0.6nm,0.8s,baz=262,slow=12,SNR=8.6						
H11N2	**WAKE ISLAND Hy**	**34.21**	**207**	T	T	02 51 19.7	
	baz=18,slow=76,SNR=78						
H11N3	**WAKE ISLAND Hy**	**34.22**	**207**	T	T	02 51 24.7	
	baz=18,slow=76,SNR=87						
H11N1	**WAKE ISLAND Hy**	**34.23**	**207**	T	T	02 51 25.4	
	baz=18,slow=76,SNR=72						
YKA	**Yellowknife Ar**	**34.37**	**47**	P	**P**	**02 14 46.4**	**-0.8**
	0.2nm,0.6s,baz=286,slow=7.9,SNR=6.9						
H11S1	**WAKE ISLAND Hy**	**35.43**	**207**	T	T	02 52 54.7	
	baz=17,slow=76,SNR=41						
H11S2	**WAKE ISLAND Hy**	**35.45**	**207**	T	T	02 52 56.6	
	baz=17,slow=76,SNR=54						
H11S3	**WAKE ISLAND Hy**	**35.45**	**207**	T	T	02 52 57.7	
	baz=17,slow=76,SNR=37						
NVAR	**Mina Array Bea**	**42.66**	**84**	P	**P**	**02 15 57.6**	**+0.5**
	0.2nm,0.5s,baz=292,slow=9.5,SNR=2.1						
PDAR	**Pinedale Array**	**45.38**	**73**	P	**P**	**02 16 18.4**	**-0.4**
	1.5nm,0.8s,baz=311,slow=3.3,SNR=14						
TXAR	**Lajitas Array**	**57.75**	**82**	P	**P**	**02 17 51.2**	**+0.2**
	0.1nm,0.4s,baz=294,slow=4.5,SNR=6.5						
WRA	**Warramunga Arr**	**82.86**	**225**	P	**P**	**02 20 22.6**	**-1.3**
	0.2nm,0.5s,baz=35,slow=6.2,SNR=3.6						

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*KRNET **05** 02:43:34.0±0.1, 41°.83N×80°.50E, mb3.1*

*SOME **05** 02:43:35.7, 41°.82N×80°.00E, h10^{km}*

*NNC **05** 02:43:38.2±1.3, 41°.94N×80°.12E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=9.1km s-min=7.1km az=114.0*

ISC 05 02:43:36.1±2.0**, 41°.81N**±0°.08×**80°.00E**±0°.06**, h10^{km}, n19, σ1^{s}.28**/36**, 9C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**1.52**	**332**	*e*P	**Pb**	**02 44 03.8**	**-0.7**
	3.3nm,0.2s						
UZB				*e*S	**Sg**	**02 44 24.0**	**-1.2**
	8.5nm,0.3s						
PDGK	**Podgornoye**	**1.57**	**346**	⇑P	**Pg**	**02 44 05.2**	**-1.1**
	4.3nm,0.6s						
PDGK				⇑S	**Sg**	**02 44 25.3**	**-1.3**
	8.8nm,0.4s						
PDGK	**Podgornoye**	**1.57**	**346**	⇓*e*P	**Pn**	**02 44 03.7**	**-0.5**
	baz=34						
PDGK				⇓*i*S	**Sg**	**02 44 25.3**	**-1.3**
	baz=34						
KTMS	**Ketmen**	**1.66**	**9**	*e*P	**Pb**	**02 44 05.8**	**-1.0**
	5.2nm,0.1s						
KTMS				*e*S	**Sg**	**02 44 27.6**	**-2.0**
	20nm,0.3s						
SATY	**Saty**	**1.72**	**317**	⇑*i*P	**Pb**	**02 44 07.2**	**-0.7**
	4.5nm,0.1s						
SATY				⇑*i*S	**Sb**	**02 44 30.2**	**+0.4**
	21nm,0.3s						
KDJ	**Kajisay**	**2.13**	**280**	⇑*e*P	**Pb**	**02 44 14.9**	**0.0**
	baz=78						
KDJ				⇑*i*S	**Sg**	**02 44 44.8**	**+0.2**
	baz=78						
KURS	**Kuram**	**2.16**	**322**	*e*P	**Pb**	**02 44 15.2**	**-0.1**
	3.2nm,0.5s						
KURS				*e*S	**Sg**	**02 44 43.8**	**-1.7**
	15nm,0.5s						
MNBS	**Baschi**	**2.56**	**333**	*e*P	**Pb**	**02 44 21.8**	**-0.4**
	1.1nm,0.1s						
MNBS				*e*S	**Sb**	**02 44 55.2**	**+1.4**
	17nm,0.3s						
KOTS	**Kotyrbulak**	**2.57**	**305**	*e*P	**Pb**	**02 44 23.2**	**+0.8**
	1.7nm,0.4s						
KOTS				*e*S	**Sg**	**02 44 57.3**	**-1.4**
	8.1nm,0.3s						
MDOK	**Medeo**	**2.57**	**303**	⇑S	**Sb**	**02 44 55.1**	**+0.9**
	9.7nm,0.8s						
MDOK	**Medeo**	**2.57**	**303**	*e*P	**Pb**	**02 44 22.1**	**-0.3**
	1.8nm,0.4s						
MDOK				*e*S	**Sb**	**02 44 55.7**	**+1.5**
	8.5nm,0.4s						
TNSS	**Tian-Shan**	**2.58**	**300**	*e*P	**Pb**	**02 44 22.8**	**+0.1**
	1.7nm,0.4s						
TNSS				*e*S	**Sg**	**02 44 56.9**	**-2.0**
	4.5nm,0.6s						
IZV	**Izvestkoviy**	**2.80**	**297**	*e*P	**Pb**	**02 44 26.4**	**+0.2**
	2.0nm,0.3s						
IZV				*e*S	**Sb**	**02 45 02.8**	**+2.2**
	15nm,0.5s						
ULHL	**Ulahol**	**2.84**	**280**	⇓*i*P	**Pb**	**02 44 24.9**	**-2.1**
	baz=79						
ULHL				⇓*i*S	**Sb**	**02 45 01.5**	**-0.3**
	baz=79						
ARXS	**Arharly**	**2.89**	**327**	*e*P	**Pb**	**02 44 27.4**	**-0.3**
	1.8nm,0.5s						
ARXS				*e*S	**Sb**	**02 45 04.9**	**+1.7**
	7.8nm,0.5s						
CHKK	**Chushkaly**	**3.02**	**314**	*e*P	**Pb**	**02 44 29.9**	**-0.1**
	1.0nm,0.2s						
CHKK				*e*S	**Sb**	**02 45 08.9**	**+2.0**
	11nm,0.3s						
TKM2	**Tokmak 2**	**3.45**	**290**	⇑Pg	**Pg**	**02 44 42.1**	**-0.1**
	1.3nm,0.8s						
TKM2				⇓Lg	Lg	02 45 27.0	
	2.3nm,0.6s						
KAPS	**Kapalarasan**	**3.51**	**353**	*e*P	**Pb**	**02 44 38.1**	**-0.2**
	0.6nm,0.3s						
KAPS				*e*S	**Sb**	**02 45 22.9**	**+1.8**
	3.1nm,0.5s						
MK31	**Makanchi Array**	**5.25**	**17**	⇓Pn	**Pn**	**02 44 55.6**	**+0.9**
	0.1nm,0.3s,baz=202,slow=13,SNR=7.0						
MK31				⇑Sn	**Sn**	**02 45 57.6**	**+2.4**
	0.3nm,0.5s,baz=186,slow=12,SNR=4.5						

JMA 05 03:08:15.6, 38°.24N×141°.77E, h56^{km}±1^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.25**	**287**	P	Pn	03 08 25.0	+0.1
JIKH				S	Sn	03 08 31.6	0.0
JIO	**Ouri**	**0.39**	**303**	P	Pn	03 08 26.3	+0.2
JIO				S	Sn	03 08 33.8	+0.1
JKMT	**Kesennumamotoy**	**0.61**	**338**	P	Pn	03 08 28.7	+0.1
JKMT				S	Sn	03 08 38.0	0.0
JOFO	**Osakifurukawao**	**0.77**	**298**	P	Pn	03 08 30.8	+0.4
JOFO				S	Sn	03 08 42.3	+1.0
JMK	**Ichinoseki**	**0.83**	**329**	P	Pn	03 08 31.6	+0.3
JMK				S	Sn	03 08 43.0	+0.2
JMM	**Marumori**	**0.86**	**244**	P	Pn	03 08 31.4	-0.2
JMM				S	Sn	03 08 43.0	-0.4
JOU	**Okura**	**0.88**	**279**	P	Pn	03 08 32.1	+0.2
JOU				S	Sn	03 08 44.4	+0.5
JFK	**Kawauchi**	**1.12**	**219**	P	Pn	03 08 35.0	-0.2
JFK				S	Sn	03 08 49.4	-0.3
JOM	**Ohasama**	**1.29**	**343**	P	Pn	03 08 37.9	+0.6
JOM				S	Sn	03 08 54.1	+0.6
JYK	**Kaneyama**	**1.30**	**302**	P	Pn	03 08 37.8	+0.4
JYK				*e*S	Sn	03 08 54.6	+0.8
JYS	**Shirataka**	**1.34**	**270**	P	Pn	03 08 38.5	+0.4
JYS				S	Sn	03 08 55.7	+0.8
JFT	**Otama**	**1.34**	**238**	P	Pn	03 08 38.7	+0.6
JFT				S	Sn	03 08 55.3	+0.4
JRG	**Rokugo**	**1.46**	**323**	P	Pn	03 08 40.4	+0.8
JRG				*e*S	Sn	03 08 59.1	+1.5
JYA	**Atsumi**	**1.65**	**283**	P	Pn	03 08 42.8	+0.5

GUC 05 03:08:39.0±0.5**, 28°.21S×70°.04W, h38^{km}**±5^{km}**, ML4.1, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.99**	**216**	*e*P	Pn	03 08 57.2	+0.6
LCO				*i* S	Sn	03 09 10.3	+0.8
CRCH	**Chaqaral**	**1.93**	**344**	*e*P	Pn	03 09 12.4	+3.2
CRCH				*i* S	Sn	03 09 30.6	-1.5
GO04	**Tololo Observa**	**2.07**	**199**	*e*P	Pn	03 09 15.0	+3.6
GO04				*i* S	Sn	03 09 40.3	+4.3
GO04				IAML		03 09 52.5	
	comp=E,1μm,0.4s						
GO02	**Mina Guanaco**	**3.06**	**8**	*e*P	Pn	03 09 28.6	+3.5
GO02				*i* S	Sn	03 10 05.5	+4.9
GO02				IAML		03 10 21.8	
	comp=N,325nm,0.6s						
ROCH	**El Roble**	**4.82**	**190**	*e*P	Pn	03 09 55.2	+6.0
ROCH				*e*S	Sn	03 10 48.7	+4.7
ROCH				IAML		03 11 16.0	
	comp=E,95nm,0.5s						

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*IDC **05** 03:15:53.9±1.2, 10°.41N×62°.40W, h0^{km}, mb3.6/6, mb1 4.0/9, mb1mx3.7/40, mbtmp3.8/9, ML3.5/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/39, Error ellipse: s-maj=34.9km s-min=25.7km az=37.0*

*TRN **05** 03:15:56.1, 10°.43N×62°.27W, h5^{km}, MD3.7*

ISC 05 03:15:55.6±1.5**, 10°.39N**±0°.05×**62°.33W**±0°.05**, h13^{km}**±10^{km}**, n76, σ1^{s}.33**/91**, mb3.6**/6**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALNG	**Atlantic LNG**	**0.67**	**108**	*e*P	**Pg**	**03 16 09.1**	**+0.5**
BUAY	**Buenos Aires**	**0.69**	**113**	*e*P	**Pg**	**03 16 09.1**	**0.0**
TPP	**Pointe-a-Pierr**	**0.87**	**94**	*e*P	**Pg**	**03 16 11.9**	**-0.5**
TPP				*e*S	**Sg**	**03 16 23.5**	**-0.4**
TRN	**Trinidad (W)**	**0.95**	**74**	*e*P	**Pg**	**03 16 12.4**	**-1.6**
TRN				*e*S	**Sb**	**03 16 26.4**	**-0.1**
TBH	**Brigand Hill**	**1.25**	**85**	*e*P	**Pb**	**03 16 18.7**	**-0.4**
TPR	**Prospect**	**1.72**	**62**	*e*P	**Pn**	**03 16 25.9**	**+0.6**
TPR				*e*S	**Sn**	**03 16 47.9**	**+0.7**
BOT	**Bacolet**	**1.77**	**64**	*e*P	**Pn**	**03 16 26.9**	**+1.1**
BOT				*e*S	**Sn**	**03 16 49.0**	**+0.7**
GRGR	**Grenville**	**1.86**	**21**	*e*P	**Pn**	**03 16 27.7**	**+0.5**
GRGR				*e*S	**Sn**	**03 16 51.8**	**+1.2**
GRHS	**Sauteurs**	**1.95**	**20**	*e*S	**Sn**	**03 16 53.7**	**+0.9**
TOSP	**Speyside**	**1.98**	**63**	*e*P	**Pn**	**03 16 29.9**	**+1.0**
TOSP				*e*S	**Sn**	**03 16 54.0**	**+0.4**
GRSS	**Sisters**	**2.03**	**20**	*e*P	**Pn**	**03 16 31.1**	**+1.6**
GRSS				*e*S	**Sn**	**03 16 55.3**	**+0.6**
FCV	**Fort Charlotte**	**2.95**	**21**	*e*P	**Pn**	**03 16 44.1**	**+1.9**
SVB	**Belmont**	**3.06**	**20**	*e*P	**Pn**	**03 16 44.8**	**+1.1**
SVB				*e*S	**Sn**	**03 17 20.3**	**+0.1**
SVCV	**St. Vincent, C**	**3.10**	**22**	*e*P	**Pn**	**03 16 44.8**	**+0.6**
SVCV				*e*S	**Sn**	**03 17 21.8**	**+0.7**
SVV	**Soufriere Volc**	**3.11**	**20**	*e*P	**Pn**	**03 16 46.1**	**+1.7**
SSV	**Crater Summit**	**3.13**	**21**	*e*P	**Pn**	**03 16 45.3**	**+0.5**
SFAN	**Fancy Village**	**3.19**	**21**	*e*P	**Pn**	**03 16 47.2**	**+1.7**
SLDE	**Delcer**	**3.62**	**20**	*e*P	**Pn**	**03 16 53.4**	**+2.0**
SLDE				*e*S	**Sn**	**03 17 34.3**	**+0.3**
SLB	**Belfond**	**3.65**	**20**	*e*P	**Pn**	**03 16 53.0**	**+1.2**
SLB				*e*S	**Sn**	**03 17 34.8**	**0.0**
SLPA	**Patience**	**3.71**	**22**	*e*P	**Pn**	**03 16 53.8**	**+1.1**
SLPA				*e*S	**Sn**	**03 17 36.6**	**+0.2**
BBGH	**Gun Hill**	**3.86**	**44**	*e*S	**Sn**	**03 17 39.2**	**-0.7**
SLW	**Petit Monier**	**3.86**	**21**	*e*P	**Pn**	**03 16 56.0**	**+1.2**
SLW				*e*S	**Sn**	**03 17 40.4**	**+0.4**
BBSP	**Saint Philip**	**3.90**	**46**	*e*S	**Sn**	**03 17 41.0**	**0.0**
H05S1	**Guadeloupe/Mar**	**4.27**	**20**	Pn	**Pn**	**03 16 59.3**	**-1.0**
	SNR=6.4						
H05S1				Sn	**Sn**	**03 17 47.9**	**-2.2**
BIM	**Bigot**	**4.29**	**17**	*e*P	**Pn**	**03 17 02.6**	**+1.9**
TRMF	**Trois Ilets**	**4.31**	**17**	*e*P	**Pn**	**03 17 02.9**	**+2.0**
ZAM	**Aeronautique**	**4.35**	**17**	*e*P	**Pn**	**03 17 03.4**	**+2.0**
LPMF	**Morne Lapointe**	**4.37**	**18**	*e*P	**Pn**	**03 17 03.4**	**+1.7**
FDF	**Fort de France**	**4.47**	**15**	*e*P	**Pn**	**03 17 03.8**	**+0.6**
FDF	**Fort de France**	**4.47**	**15**	*e*S	**Sn**	**03 17 54.9**	**-0.3**
PML	**Morne Lenard**	**4.51**	**14**	*e*P	**Pn**	**03 17 05.4**	**+1.7**
GBMF	**Grand Be**	**4.53**	**14**	*e*P	**Pn**	**03 17 06.0**	**+1.9**
PCM	**Pelee Case Pet**	**4.54**	**14**	*e*P	**Pn**	**03 17 05.7**	**+1.6**
CXM	**Morne La Croix**	**4.54**	**14**	*e*P	**Pn**	**03 17 06.1**	**+1.9**
BAMF	**Morne Balai**	**4.55**	**15**	*e*P	**Pn**	**03 17 06.1**	**+1.8**
DSHT	**Scott's Head**	**4.89**	**11**	*e*P	**Pn**	**03 17 09.8**	**+1.0**
DBCT	**Belle View Cho**	**4.95**	**11**	*e*P	**Pn**	**03 17 11.2**	**+1.4**
MDN	**Morne-Daniel**	**4.99**	**10**	*e*P	**Pn**	**03 17 11.3**	**+1.1**
MDN	**Morne-Daniel**	**4.99**	**10**	*e*S	**Sn**	**03 18 07.8**	**0.0**
DLPL	**La Plaine**	**5.03**	**12**	*e*P	**Pn**	**03 17 12.7**	**+1.9**
DLPL	**La Plaine**	**5.03**	**12**	*e*S	**Sn**	**03 18 07.8**	**-1.1**
BBL	**Barber's Block**	**5.18**	**9**	*e*P	**Pn**	**03 17 13.7**	**+0.8**
BBL	**Barber's Block**	**5.18**	**9**	*e*S	**Sn**	**03 18 12.4**	**-0.1**
MDPO	**Dominica; Chan**	**5.23**	**9**	*e*P	**Pn**	**03 17 14.4**	**+0.9**
MDPO	**Dominica; Chan**	**5.23**	**9**	*e*S	**Sn**	**03 18 13.4**	**-0.3**
MDPV	**Dominica, Penn**	**5.29**	**10**	*e*P	**Pn**	**03 17 15.6**	**+1.3**
MDPV	**Dominica, Penn**	**5.29**	**10**	*e*S	**Sn**	**03 18 13.8**	**-1.4**
TBG	**Guadaloupe-3**	**5.47**	**7**	*e*P	**Pn**	**03 17 18.8**	**+1.9**
TBG	**Guadaloupe-3**	**5.47**	**7**	*e*S	**Sn**	**03 18 20.1**	**+0.3**
MGG	**Marie-Galante**	**5.59**	**10**	*e*P	**Pn**	**03 17 20.0**	**+1.5**
MGG	**Marie-Galante**	**5.59**	**10**	*e*S	**Sn**	**03 18 21.1**	**-1.5**
CBE	**Ff, Capester**	**5.69**	**7**	*e*P	**Pn**	**03 17 22.5**	**+2.5**
H05N1	**Guadeloupe/Mar**	**6.02**	**12**	Pn	**Pn**	**03 17 23.3**	**-1.2**
MLYT	**Lee's Yard**	**6.30**	**1**	*e*P	**Pn**	**03 17 30.5**	**+2.2**
MLYT	**Lee's Yard**	**6.30**	**1**	*e*S	**Sn**	**03 18 38.9**	**-1.3**
ANWB	**Willy Bob**	**7.26**	**4**	*e*P	**Pn**	**03 17 42.7**	**+1.3**
SDV	**Santo Domingo**	**8.32**	**260**	*e*P	**Pn**	**03 17 57.8**	**+1.6**
SDV	**Santo Domingo**	**8.32**	**260**	*e*P	**Pn**	**03 17 57.8**	**+1.6**
SDV	**Santo Domingo**	**8.32**	**260**	Pn	**Pn**	**03 17 57.4**	**+1.2**
	3.0nm,0.3s,baz=64,slow=8.4,SNR=15						
SDV				Sn	**Sn**	**03 19 27.2**	**-3.0**
	0.5nm,0.3s,baz=3.3,slow=19,SNR=1.9						
TAMC	**Tame, Arauca**	**10.15**	**248**	*e*P	**Pn**	**03 18 21.3**	**+0.2**
TAMC	**Tame, Arauca**	**10.15**	**248**	*e*P	**Pn**	**03 18 21.3**	**+0.2**
MDP	**Montagnes des**	**10.94**	**118**	Pn	**Pn**	**03 18 32.2**	**+0.2**
	0.4nm,0.3s,baz=294,slow=10.0,SNR=5.1						
MDP				Sn	Sn	03 20 22.4	-12
	0.3nm,0.3s,baz=22,slow=19,SNR=4.2						
PTGA	**Pitinga**	**11.29**	**168**	Pn	**Pn**	**03 18 35.5**	**-1.3**
	0.5nm,0.3s,baz=328,slow=22,SNR=5.6						
BARC	**Barichara**	**11.37**	**252**	*e*P	**Pn**	**03 18 40.0**	**+1.9**
BARC	**Barichara**	**11.37**	**252**	*e*P	**Pn**	**03 18 40.0**	**+1.9**
RUSC	**La Rusia**	**11.54**	**248**	*e*P	**Pn**	**03 18 42.1**	**+1.5**
RUSC	**La Rusia**	**11.54**	**248**	*e*P	**Pn**	**03 18 42.1**	**+1.5**
BRRC	**Barranca, Sant**	**11.71**	**255**	*e*P	**Pn**	**03 18 44.8**	**+2.3**
BRRC	**Barranca, Sant**	**11.71**	**255**	*e*P	**Pn**	**03 18 44.8**	**+2.3**
ATAH	**Atahualpa**	**23.64**	**223**	LR	LR	03 30 53.8	
	comp=Z,106nm,18.9s,baz=7.6,slow=38						
TXAR	**Lajitas Array**	**42.92**	**302**	P	**P**	**03 23 53.5**	**-0.9**
	0.3nm,1.0s,baz=120,slow=8.9,SNR=2.7						
TXAR				PcP	**PcP**	**03 25 45.7**	**+0.5**
	0.2nm,0.5s,baz=134,slow=5.2,SNR=3.6						
ULM	**Lac du Bonnet**	**48.41**	**332**	P	**P**	**03 24 36.5**	**-1.0**
	0.9nm,0.4s,baz=116,slow=4.0,SNR=4.3						
PDAR	**Pinedale Array**	**52.18**	**317**	P	**P**	**03 25 06.3**	**-0.1**
	0.6nm,0.9s,baz=105,slow=10,SNR=3.4						
YKA	**Yellowknife Ar**	**64.01**	**336**	P	**P**	**03 26 27.4**	**-1.3**
	0.3nm,0.5s,baz=113,slow=7.5,SNR=5.2						
ILAR	**Eielson Array**	**78.36**	**334**	P	**P**	**03 27 56.3**	**+0.7**
	0.2nm,0.5s,baz=86,slow=4.7,SNR=6.0						
FINES	**FINESS Array B**	**80.20**	**29**	P	**P**	**03 28 07.2**	**+1.6**
	1.2nm,0.5s,baz=266,slow=4.2,SNR=11						

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*NIED **05** 03:24:00, 45°.50N×151°.80E, h23^{km}, Mw5.2 Best double couple: M$_0$7.27000×10^{16} NP1:φ$_s$245.00000°, δ39.00000°, λ121.00000°. NP2:φ$_s$28.00000°, δ57.00000°, λ67.00000°.*

*IDC **05** 03:24:44.5±0.4, 45°.54N×151°.41E, h0^{km}, mb4.8/30, mb1 4.9/36, mb1mx4.9/38, mbtmp4.8/36, ML3.5/5, MS4.7/14, Ms1 4.7/14, ms1mx4.3/31, Error ellipse: s-maj=13.4km s-min=10.2km az=147.0*

*JMA **05** 03:24:46.4±0.7, 45°.46N×151°.76E, h30^{km}, M5.6*

*ISCJB **05** 03:24:47.1±0.7, 45°.38N±0°.02×151°.48E±0°.02, h28^{km}±4^{km}, mb5.0/355, MS4.9/30, Error ellipse: s-maj=4.2km s-min=1.9km az=161.7*

*SKHL **05** 03:24:47.4±0.7, 45°.24N×151°.73E, h38^{km}±7^{km}, mb5.8/4, mbh4.7/1, Ms5.1/8, msh5.6/4*

*MOS **05** 03:24:48.8±1.0, 45°.46N×151°.40E, h38^{km}, mb5.3/89, MS4.5/13, Error ellipse: s-maj=5.1km s-min=4.1km az=100.0*

*BJI **05** 03:24:49.9, 45°.49N×151°.29E, h46^{km}, mB5.2/55, mb5.2/76, Ms5.1/75, Ms7 5.0/71*

*NEIC **05** 03:24:50.4±1.1, 45°.49N×151°.32E, h34^{km}±8^{km}, mb5.1/249, Error ellipse: s-maj=4.7km s-min=2.4km az=160.0*

*GCMT **05** 03:24:51.3±0.2, 45°.43N±0°.01×151°.62E±0°.02, h27^{km}, MW5.2/110, Moment Tensor Solution. s80,c124; s110,c173; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.69±.02; M$_{\theta\theta}$-0.26±.01; M$_{\phi\phi}$-0.42±.01; M$_{r\theta}$0.14±.03; M$_{\theta\phi}$-0.40±.01; M$_{\phi r}$0.36±.02; Best double couple: M$_0$0.81700×10^{17} NP1:φ$_s$30.00000°, δ59.00000°, λ80.00000°. NP2:φ$_s$229.00000°, δ32.00000°, λ106.00000°. Principal axes: T 0.7950, Plg74.0000°, Azm275.0000°; N 0.0460, Plg8.0000°, Azm35.0000°; P -0.8400, Plg14.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 03:24:50.7±0.4**, 45°.41N**±0°.04×**151°.43E**±0°.03**, h44^{km}**±2^{km}**, h43^{km}:pP-P, n1129, σ1^{s}.31**/1220**, mb5.1**/369**, MS4.9**/30**, 101C-35D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.52**	**267**	*i* P	**Pn**	**03 25 29.0**	**-0.1**
KUR				AMB	AMB	03 25 31.0	
	450nm,0.4s						
KUR				AMB	AMB	03 25 31.0	
	280nm,0.4s						
KUR				AMB	AMB	03 25 31.0	
	1μm,0.4s						
KUR				AMB	AMB	03 25 32.3	
	4μm,3.0s						
KUR				*i* S	**Sn**	**03 25 59.8**	**+1.2**
KUR				A	A	03 26 08.1	
	9μm,0.5s						
KUR				A	A	03 26 08.1	
	3μm,0.5s						
KUR				AMS	AMS	03 26 46.0	
	25μm,13.0s						
KUR				AMS	AMS	03 26 46.0	
	36μm,13.0s						
KUR				AMS	AMS	03 26 46.0	
	30μm,13.0s						
KUR	**Kuril'sk**	**2.52**	**267**	*d i*PN	**Pn**	**03 25 29.6**	**+0.5**
KUR				*i* S	**Sn**	**03 26 00.4**	**+1.8**
KUR				pmax	pmax		
	comp=N,454nm,0.4s						
KUR				pmax	pmax		
	comp=Z,1μm,0.4s						
KUR				pmax	pmax		
	comp=E,284nm,0.2s						
KUR				smax	smax		
	comp=N,4μm,0.4s						
KUR				smax	smax		
	comp=E,1μm,0.2s						
KUR				MLR	MLR		
	comp=Z,4μm,12.0s						
SHO	**Shikotan**	**3.63**	**246**	*i* P	**Pn**	**03 25 43.4**	**-0.9**
SHO				AMB	AMB	03 25 45.0	
	comp=Z,70nm,0.4s						
SHO				AMB	AMB	03 25 45.0	
	comp=Z,180nm,0.4s						
SHO				AMB	AMB	03 25 45.0	
	comp=Z,230nm,0.4s						
SHO				*i* S	**Sn**	**03 26 25.8**	**0.0**
SHO				A	A	03 26 36.7	
	comp=Z,2μm,0.5s						
SHO				A	A	03 26 36.7	
	comp=Z,2μm,0.5s						
SHO				A	A	03 26 43.0	
	comp=Z,4μm,2.4s						
SHO				A	A	03 26 43.0	
	comp=Z,4μm,2.4s						
SHO				AMS	AMS	03 27 52.2	
	comp=Z,12μm,17.0s						
SHO				AMS	AMS	03 27 52.2	
	comp=Z,10μm,17.0s						
SHO				AMS	AMS	03 27 52.2	
	comp=Z,9μm,17.0s						
SHO	**Shikotan**	**3.63**	**246**	*c i*PN	**Pn**	**03 25 43.2**	**-1.1**
SHO				*i* S	**Sn**	**03 26 26.3**	**+0.5**
SHO				pmax	pmax		
	comp=N,71nm,0.4s						
SHO				pmax	pmax		
	comp=E,183nm,0.4s						
SHO				pmax	pmax		
	comp=Z,229nm,0.4s						
SHO				smax	smax		
	comp=E,2.0nm,0.5s						
SHO				pmax	pmax		
	comp=E,4μm,2.4s						
SHO				pmax	pmax		
	comp=N,4μm,2.1s						
YUK	**Yuzh-Kuril'sk**	**4.20**	**253**	*i* P	**Pn**	**03 25 52.5**	**+0.3**
YUK				AMB	AMB	03 25 58.0	
	comp=N,410nm,0.2s						
YUK				AMB	AMB	03 25 58.0	
	comp=N,1μm,0.2s						
YUK				*i* S	**Sn**	**03 26 40.9**	**+1.0**
YUK				A	A	03 26 50.0	
	comp=N,2μm,0.5s						
YUK				A	A	03 26 50.0	
	comp=N,4μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.20**	**253**	*d i*PN	**Pn**	**03 25 53.0**	**+0.8**
YUK				*i* S	**Sn**	**03 26 41.0**	**+1.0**

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YUK                                pmax   pmax
      comp=N,409nm,0.2s
YUK                                pmax   pmax
      comp=Z,1µm,0.2s
YUK                                smax   smax
      comp=N,2µm,0.5s
YUK                                smax   smax
      comp=E,4µm,0.5s
LAGR  Lagunnoye           4.24 253 eP     Pn     03 25 53.0 +0.2
LAGR                               AMB    AMB    03 25 56.0
      comp=E,640nm,0.2s
LAGR                               eS     Sn     03 26 42.0 +1.0
LAGR                               A      A      03 26 52.0
      comp=E,3µm,0.4s
LAGR                               A      A      03 26 52.0
      comp=E,5µm,0.4s
LAGR  Lagunnoye           4.24 253 ePN    Pn     03 25 53.3 +0.5
LAGR                               eS     Sn     03 26 42.4 +1.4
LAGR                               pmax   pmax
      comp=Z,639nm,0.2s
LAGR                               smax   smax
      comp=E,5µm,0.5s
LAGR                               smax   smax
      comp=N,3µm,0.3s
GRPR  Tuman               4.28 253 eP     Pn     03 25 53.0 -0.2
GRPR                               AMB    AMB    03 25 57.0
      comp=N,270nm,0.3s
GRPR                               AMB    AMB    03 25 57.0
      comp=N,570nm,0.3s
GRPR                               eS     Sn     03 26 43.0 +1.2
GRPR                               A      A      03 26 53.0
      comp=N,2µm,0.4s
GRPR                               A      A      03 26 53.0
      comp=N,370nm,0.4s
GRPR  Tuman               4.28 253 ePN    Pn     03 25 53.4 +0.2
GRPR                               eS     Sn     03 26 43.3 +1.5
GRPR                               pmax   pmax
      comp=Z,574nm,0.3s
GRPR                               pmax   pmax
      comp=N,271nm,0.2s
GRPR                               smax   smax
      comp=N,2µm,0.3s
GRPR                               smax   smax
      comp=E,374nm,0.4s
GLVR  Golovnino           4.54 250 eP     Pn     03 25 57.0 +0.1
GLVR                               i S    Sn     03 26 48.0 -0.4
GLVR                               A      A      03 27 00.0
      comp=E,4µm,0.5s
GLVR                               A      A      03 27 00.0
      comp=E,130nm,0.5s
GLVR  Golovnino           4.54 250 ePN    Pn     03 25 56.8 -0.1
GLVR                               i S    Sn     03 26 48.7 +0.3
GLVR                               smax   smax
      comp=E,129nm,0.6s
GLVR                               smax   smax
      comp=N,4µm,0.5s
NEM2  Nemuro 2            4.56 245 ⇑P     Pn     03 25 55.9 -1.2
NEM2                               eS     Sn     03 26 46.7 -2.1
JRA   Rausu               4.73 254 P      Pn     03 26 01.1 +1.6
JNK   Nakash              5.14 252 P      Pn     03 26 05.3 +0.2
JNK                                eS     Sn     03 27 02.3 -0.7
JAK   Akkeshi             5.41 246 P      Pn     03 26 07.5 -1.3
JAK                                eS     Sn     03 27 07.9 -1.8
JTKR  Abashiri--Toko      5.55 258 ⇑P     Pn     03 26 12.1 +1.4
JAR   Ashorobuto          5.88 252 P      Pn     03 26 16.0 +0.7
JMP   Maruseppu           5.92 259 P      Pn     03 26 17.8 +2.0
SKR   Severo-Kuril's      6.14  29 eP     Pn     03 26 18.5 -0.3
SKR                                AMB    AMB    03 26 22.7
      comp=N,610nm,0.6s
SKR                                eS     Sn     03 27 24.1 -3.5
SKR                                A      A      03 27 31.7
      comp=N,4µm,4.0s
SKR                                A      A      03 27 31.7
      comp=N,4µm,4.0s
SKR                                A      A      03 27 40.7
      comp=N,1µm,0.7s
SKR                                A      A      03 27 40.7
      comp=N,1µm,0.7s
SKR                                AMS    AMS    03 28 53.0
      comp=N,7µm,18.0s
SKR                                AMS    AMS    03 28 53.0
      comp=N,12µm,18.0s
SKR                                AMS    AMS    03 28 53.0
      comp=N,6µm,18.0s
SKR   Severo-Kuril's      6.14  29 ePN    Pn     03 26 18.5 -0.3
SKR                                pmax   pmax
      comp=Z,608nm,0.6s
SKR                                MLR    MLR
      comp=Z,6µm,17.0s
YSS   Yuzh-Sakhalins      6.22 287 ePn    Pn     03 26 22.0 +2.2
YSS                                eSn    Sn     03 27 27.4 -2.2
YSS   Yuzh-Sakhalins      6.22 287 eP     Pn     03 26 22.7 +2.8
YSS                                AMB    AMB    03 26 23.1
      comp=Z,120nm,1.0s
YSS                                eS     Sn     03 27 32.1 +2.5
YSS                                AMS    AMS    03 28 47.0
      comp=Z,4µm,17.0s
YSS                                AMS    AMS    03 28 47.0
      comp=Z,8µm,17.0s
YSS                                AMS    AMS    03 28 47.0
      comp=Z,11µm,17.0s
YSS   Yuzh-Sakhalins      6.22 287⇑ePN    Pn     03 26 22.1 +2.2
YSS                                pmax   pmax
      comp=Z,90nm,0.8s
YSS                                MLR    MLR
      comp=E,8µm,14.0s
HRK   Horoka              6.25 255 eP     Pn     03 26 21.6 +1.2
JSE   Soyaes              6.27 269 P      Pn     03 26 23.2 +2.6
JKK2  Kamakawa 2          6.38 259 P      Pn     03 26 24.0 +1.8
JKA   Kamikawa-asahi      6.42 261 eP     Pn     03 26 24.8 +2.1
ASAJ  Asahikawa           6.42 262 P      Pn     03 26 24.8 +2.1
ASAJ  Asahikawa           6.42 262 Pn     Pn     03 26 24.8 +2.1
      comp=E,16nm,0.3s,baz=79,slow=19,SNR=52
ASAJ                               LR     LR     03 29 07.3
      comp=E,9µm,18.4s,baz=121,slow=41
JCH   Churui              6.45 247 P      Pn     03 26 22.3 -0.8
JCH                                eS     Sn     03 27 33.2 -2.2
MYR   Moyori              6.66 245 eP     Pn     03 26 25.3 -0.7
MYR                                eS     Sn     03 27 38.7 -1.9
JWK2  Keihoku             6.72 273 P      Pn     03 26 30.9 +4.2
JFR   Furan               6.73 254 P      Pn     03 26 27.8 +0.9
JAB   Ashibetsu           6.86 257 P      Pn     03 26 30.8 +2.1
ERM   Erimo               6.89 243 ePn    Pn     03 26 30.1 +1.1
ERM                                eSn    Sn     03 27 45.9 -0.2
ERM   Erimo               6.89 243cePN    Pn     03 26 31.4 +2.3
ERM                                pmax   pmax
      comp=Z,485nm,1.0s
JNBK  Urakawa-nobuka      7.01 247 P      Pn     03 26 29.3 -1.5
JNBK                               eS     Sn     03 27 46.4 -2.7
PAU   Pauzhetka           7.04  29 eP     Pn     03 26 31.4 +0.3
PAU                                AMB    AMB    03 26 31.7
      comp=Z,170nm,1.0s
PAU                                AMB    AMB    03 26 33.7
      comp=Z,3µm,9.0s
PAU                                eS     Sn     03 27 47.6 -2.1
PAU                                A      A      03 27 49.2
      comp=Z,6µm,5.0s
PAU                                A      A      03 27 50.2
      comp=Z,500nm,0.8s
PAU                                A      A      03 27 50.2
      comp=Z,400nm,0.8s
JBT2  Biratori 2          7.04 251 ⇑P     Pn     03 26 30.5 -0.6
JHR   Hokuryu             7.13 260 P      Pn     03 26 34.6 +2.2
UGL   Uglegorsk           7.35 303 eP     Pn     03 26 38.7 +3.3
UGL                                AMB    AMB    03 26 40.4
      comp=Z,80nm,0.9s
UGL                                AMB    AMB    03 26 40.4
      comp=Z,40nm,0.9s
UGL                                AMB    AMB    03 26 40.4
      comp=Z,300nm,0.9s
UGL                                eS     Sn     03 28 00.4 +3.0
UGL                                A      A      03 28 07.0
      comp=Z,290nm,0.8s
UGL                                A      A      03 28 07.0
      comp=Z,280nm,0.8s
UGL                                AMS    AMS    03 29 40.0
      comp=Z,11µm,16.0s
UGL                                AMS    AMS    03 29 40.0
      comp=Z,9µm,16.0s
UGL                                AMS    AMS    03 29 40.0
      comp=Z,13µm,16.0s
UGL   Uglegorsk           7.35 303 ePN    Pn     03 26 39.7 +4.3
UGL                                pmax   pmax
      comp=Z,303nm,1.0s
UGL                                MLR    MLR
      comp=Z,13µm,16.0s
UGL                                MLR    MLR
      comp=E,9µm,16.0s
JEW   Eniwo               7.63 254 P      Pn     03 26 40.6 +1.4
TYV   Tymovskoe           8.01 316 eP     Pn     03 26 47.0 +2.6
TYV                                AMB    AMB    03 26 48.1
      comp=E,300nm,2.0s
TYV                                AMB    AMB    03 26 48.3
      comp=E,100nm,0.7s
TYV                                eS     Sn     03 28 16.3 +2.7
TYV                                A      A      03 28 19.5
      comp=E,40nm,1.0s
TYV                                A      A      03 28 21.0
      comp=E,1µm,5.0s
TYV                                AMS    AMS    03 30 07.0
      comp=E,8µm,16.0s
TYV                                AMS    AMS    03 30 07.0
      comp=E,7µm,16.0s
TYV   Tymovskoe           8.01 316 ePN    Pn     03 26 46.2 +1.8
TYV                                eS     Sn     03 28 17.6 +4.0
TYV                                pmax   pmax
      comp=Z,300nm,1.5s
TYV                                pmax   pmax
      comp=Z,101nm,0.7s
TYV                                smax   smax
      comp=E,37nm,1.0s
TYV                                smax   smax
      comp=E,1µm,5.2s
TYV                                MLR    MLR
      comp=E,8µm,16.0s
TYV                                MLR    MLR
      comp=Z,7µm,16.0s
JNB   Noboribetsu         8.05 252 P      Pn     03 26 44.9 -0.2
JNB                                eS     Sn     03 28 12.1 -2.7
JKB   Kayabe              8.32 249 P      Pn     03 26 47.8 -0.9
JKB                                eS     Sn     03 28 15.8 -5.5
JYM2  Yakumo 2            8.65 252 P      Pn     03 26 52.4 -0.9
PEA0B Petropavlovsk-      8.72  26 ePn    Pn     03 26 54.2  0.0
PETK  Petropavlovsk-      8.72  26 ePn    Pn     03 26 54.4 +0.2
PETK                               eSn    Sn     03 28 30.0 -1.2
PETK  Petropavlovsk-      8.72  26 ePN    Pn     03 26 54.4 +0.2
PETK  Petropavlovsk-      8.72  26 Pn     Pn     03 26 53.2 -1.0
      comp=Z,2.6nm,0.3s,baz=183,slow=12,SNR=19
JANG  Nango               8.85 239 P      Pn     03 26 52.7 -3.2
JANG                               eS     Sn     03 28 25.8 -8.4
JTM   Tenmabayashi        8.88 242 P      Pn     03 26 54.0 -2.3
JTM                                eS     Sn     03 28 26.9 -8.0
JSR   Shiriuchi           8.90 248 P      Pn     03 26 54.4 -2.2
JSR                                eS     Sn     03 28 28.6 -6.8
JTH   Tanohata            8.92 236 eS     Sn     03 28 24.4  -12
PET   Petropavlovsk       8.96  29 ePn    Pn     03 26 56.0 -1.5
PET                                eSn    Sn     03 28 39.2 +2.3
PET   Petropavlovsk       8.96  29 eP     Pn     03 26 57.6 +0.2
PET                                eS     Sn     03 28 34.2 -2.7
PET                                AMS    AMS    03 30 32.5
      comp=Z,5µm,15.0s
PET   Petropavlovsk       8.96  29 ePN    Pn     03 26 57.6 +0.2
PET                                MLR    MLR
      comp=Z,5µm,15.0s
PET                                MLR    MLR
      comp=Z,4µm,15.0s
JOSM  Okushiri--Mats      9.27 253 P      Pn     03 27 00.9 -0.8
OFUJ  Ofunato             9.61 232 P      Pn     03 27 02.0 -4.4
OKH   Okha                9.84 329 eP     Pn     03 27 13.6 +4.2
OKH                                AMS    AMS    03 32 44.0
      comp=Z,4µm,14.0s
OKH   Okha                9.84 329⇓ePN    Pn     03 27 05.6 -3.8
JRG   Rokugo              9.99 237 P      Pn     03 27 08.9 -2.7
NKL   Nikolayevsk        10.45 322 eP     Pn     03 27 19.7 +2.0
NKL                                AMB    AMB    03 27 22.0
      comp=Z,70nm,1.0s
NKL                                AMB    AMB    03 27 22.0
      comp=Z,120nm,1.0s
NKL                                AMB    AMB    03 27 22.0
      comp=Z,230nm,1.0s
NKL                                AMS    AMS    03 32 05.0
      comp=Z,4µm,15.0s
NKL                                AMS    AMS    03 32 05.0
      comp=Z,6µm,15.0s
NKL   Nikolayevsk        10.45 322 ePN    Pn     03 27 19.7 +2.0
NKL                                pmax   pmax
      comp=N,70nm,1.2s
NKL                                pmax   pmax
      comp=E,120nm,1.2s
NKL                                pmax   pmax
      comp=Z,310nm,1.2s
NKL                                MLR    MLR
      comp=E,3µm,15.0s
NKL                                MLR    MLR
      comp=Z,5µm,15.0s
TEY   Ternei             10.47 273 eP     Pn     03 27 19.2 +1.1
TEY                                AMB    AMB    03 27 27.0
      comp=Z,130nm,1.0s
TEY   Ternei             10.47 273⇓ePN    Pn     03 27 16.4 -1.7
TEY                                pmax   pmax
      comp=Z,20nm,1.3s
GRNR  Gornyy             11.37 303 eP     Pn     03 27 33.4 +2.9
GRNR                               AMB    AMB    03 27 38.0
      comp=Z,60nm,1.0s
GRNR  Gornyy             11.37 303 ePN    Pn     03 27 34.0 +3.5
GRNR                               pmax   pmax
      comp=Z,11nm,1.0s
JFY   Yanaizu            11.88 232 P      Pn     03 27 35.8 -1.7
MAJO  Matsushiro         13.34 233 ePn    Pn     03 27 55.2 -2.1
MAJO  Matsushiro         13.34 233⇑ePN    Pn     03 27 56.0 -1.4
MAT   Matsushiro         13.34 233 P      Pn     03 27 54.7 -2.7
MAT                                S      Sn     03 30 28.0 +3.8
MJAR  Matsushiro Arr     13.34 233 Pn     Pn     03 27 55.0 -2.4
      comp=Z,0.1nm,0.3s,baz=23,slow=14,SNR=18
MJAR                               LR     LR     03 33 33.3
      comp=Z,2µm,21.4s,baz=45,slow=40
MJB9  Matsu-Tunnel       13.34 233 ePn    Pn     03 27 55.4 -2.0
USA0B Ussuriysk Arra     13.86 272 ePn    Pn     03 28 04.5 +0.1
USRK  Ussuriysk Ar.      13.86 272 Pn     Pn     03 28 03.4 -0.9
      comp=Z,1.9nm,0.3s,baz=86,slow=12,SNR=28
USRK                               LR     LR     03 33 27.3
      comp=Z,3µm,18.9s,baz=71,slow=38
KLR   Kul'dur            13.88 293 eP     Pn     03 28 06.5 +1.9
KLR   Kul'dur            13.88 293ceP     Pn     03 28 06.5 +1.9
KLR   Kul'dur            13.88 293 Pn     Pn     03 28 03.0 -1.6
      comp=Z,0.1nm,0.3s,baz=93,slow=18,SNR=5.2
KLR                                LR     LR     03 33 43.6
      comp=Z,4µm,19.0s,baz=102,slow=39
VLA   Vladivostok        14.19 268 eP     Pn     03 28 07.3 -1.6
VLA   Vladivostok        14.19 268d iP    Pn     03 28 07.3 -1.6
MA2   Magadan            14.19 359 ePn    Pn     03 28 08.8  0.0
MA2   Magadan            14.19 359 eP     Pn     03 28 08.9 +0.1
MA2   Magadan            14.19 359⇓iP     Pn     03 28 08.9 +0.1
MA2                                pmax   pmax
      comp=Z,64nm,1.3s
MA2   Magadan            14.19 359 Pn     Pn     03 28 07.9 -1.0
      comp=Z,6.1nm,0.3s,baz=181,slow=8.9,SNR=22
MA2                                LR     LR     03 34 04.2
      comp=Z,3µm,18.1s,baz=176,slow=40
EKMR  Ekimchan           14.27 309 eP     Pn     03 28 10.2 +0.3
EKMR                               AMB    AMB    03 28 26.2
      comp=Z,50nm,1.0s
MSHR  Mys Shultsa        14.86 266d iP    Pn     03 28 16.6 -1.2
INU   Inuyama            14.87 232 ePn    Pn     03 28 15.9 -2.0
JHJ   Hachijo jima 2     15.21 220 LR     LR     03 37 41.0
      comp=Z,819nm,18.2s,baz=68,slow=51
MDJ   Mudanjiang         15.46 275 P      Pn     03 28 25.9 +0.2
MDJ                                pP     P      03 28 34.6 +5.1
MDJ                                sP     pP     03 28 41.7 +2.2
MDJ                                S      Sn     03 31 16.8 +1.1
MDJ                                sS     S      03 31 29.0 -1.0
MDJ                                SS     SnSn   03 31 31.0 +2.5
MDJ                                pmax   pmax
      comp=Z,48nm,1.0s
MDJ                                pmax   pmax
      comp=Z,630nm,5.3s
MDJ                                LR     LR
      comp=Z,3µm,17.1s
MDJ                                LR     LR
      comp=Z,4µm,17.7s
MDJ                                LR     LR
      comp=Z,6µm,17.9s
MDJ   Mudanjiang         15.46 275 ePn    Pn     03 28 25.5 -0.2
      comp=Z,127nm,0.9s
SEY   Seymchan           17.57   1 eP     Pn     03 28 50.6 -1.4
SEY   Seymchan           17.57   1⇑eP     Pn     03 28 50.6 -1.4
SEY   Seymchan           17.57   1 P      Pn     03 28 49.9 -2.1
      comp=Z,0.4nm,0.3s,baz=175,slow=8.9,SNR=13
ZEA   Zeya               17.69 307 eP     Pn     03 28 52.0 -1.6
ZEA                                AMB    AMB    03 28 57.0
      comp=Z,90nm,6.0s
ZEA                                AMB    AMB    03 28 57.0
      comp=Z,800nm,6.0s
ZEA                                AMB    AMB    03 28 58.4
      comp=Z,90nm,1.0s
ZEA                                AMB    AMB    03 28 58.4
      comp=Z,160nm,1.0s
ZEA                                AMS    AMS    03 36 22.0
      comp=Z,1µm,15.0s
ZEA                                AMS    AMS    03 36 22.0
      comp=Z,4µm,15.0s
ZEA                                AMS    AMS    03 36 22.0
      comp=Z,6µm,15.0s
ZEA   Zeya               17.69 307 eP     Pn     03 28 52.0 -1.6
ZEA                                pmax   pmax
      comp=Z,800nm,6.0s
ZEA                                pmax   pmax
      comp=E,71nm,1.0s
ZEA                                pmax   pmax
      comp=N,86nm,1.2s
ZEA                                pmax   pmax
      comp=Z,160nm,1.2s
ZEA                                MLR    MLR
      comp=E,4µm,15.0s
ZEA                                MLR    MLR
      comp=Z,6µm,15.0s
ZEA                                MLR    MLR
      comp=N,1µm,11.0s
KROS  Kirovskiy          18.07 309 eP     P      03 28 56.0 -2.3
KROS                               AMB    AMB    03 28 59.3
      comp=N,110nm,1.0s
CN2   Changchun          18.55 274 eP     P      03 29 02.1 -1.5
CN2                                esP    sP     03 29 17.8 -1.1
CN2                                eS     Sn     03 32 27.5 -2.9
CN2                                pmax   pmax
      comp=N,60nm,1.1s
CN2                                pmax   pmax
      comp=N,200nm,3.0s
CN2                                LR     LR
      comp=N,1µm,15.0s
CN2                                LR     LR
      comp=N,4µm,15.0s
CN2                                LR     LR
      comp=N,5µm,15.0s
KSRS  Korea Array        19.29 254 P      P      03 29 11.3 -0.4
      comp=N,0.8nm,0.3s,baz=66,slow=11,SNR=34
KSRS                               PcP    PcP    03 33 34.6 +1.8
      baz=135,slow=0.4,SNR=4.4
KSRS                               LR     LR     03 36 50.5
      comp=N,2µm,18.3s,baz=59,slow=38
KS01  Wonju Array Si     19.30 254 eP     P      03 29 11.1 -0.8
KS15  Wonju Array Si     19.32 254 eP     P      03 29 12.2 +0.1
      comp=N,29nm,1.0s
KS15                               ePcP   PcP    03 33 34.6 +1.7
KSAR  Wonju Array Be     19.32 254 P      P      03 29 11.3 -0.8
KSAR  Wonju Array Be     19.32 254 P      P      03 29 11.3 -0.8
JNU   Nakatsue           20.03 239 eP     P      03 29 19.7 -0.2
      comp=N,111nm,1.1s
JNU   Nakatsue           20.03 239 P      P      03 29 20.8 +0.8
      comp=N,36nm,0.8s,baz=36,slow=9.6,SNR=18
JNU                                LR     LR     03 38 38.7
      comp=N,2µm,18.6s,baz=28,slow=42
SNY   Shenyang           20.44 270 ⇑P     P      03 29 24.2  0.0
SNY                                S      S      03 33 07.6 -2.9
SNY                                pmax   pmax
      comp=N,83nm,1.1s
SNY                                LR     LR
      comp=N,2µm,16.1s
SNY                                LR     LR
      comp=N,4µm,15.5s
SNY                                LR     LR
      comp=N,6µm,16.3s
YAK   Yakutsk            20.87 331 eP     P      03 29 28.2 -0.5
YAK                                e             03 29 41.7
YAK                                ePPP   PPP    03 29 48.8
YAK                                eS     S      03 33 17.8 -0.9
YAK                                e             03 33 38.8
YAK                                eSSS   SSS    03 33 50.3
YAK                                pmax   pmax
      comp=Z,86nm,0.9s
YAK                                pmax   pmax
      comp=E,12nm,1.1s
YAK                                pmax   pmax
      comp=N,16nm,0.9s
YAK                                smax   smax
      comp=N,118nm,1.3s
YAK                                smax   smax
      comp=E,120nm,1.8s
YAK                                MLR    MLR
      comp=Z,1µm,19.0s
YAK                                MLR    MLR
      comp=N,2µm,15.0s
YAK                                MLR    MLR
      comp=E,1µm,15.0s
HIA   Hailar             21.73 292 eP     P      03 29 36.3 -1.8
      comp=E,21nm,0.9s
HIA   Hailar             21.73 292⇑eP     P      03 29 36.1 -2.0
HIA                                pmax   pmax
      comp=Z,18nm,1.1s
ADK   Adak               21.92  61 eP     P      03 29 39.5 -0.5
      comp=Z,67nm,1.0s
ADK   Adak               21.92  61 eP     P      03 29 39.5 -0.5
ADK                                pmax   pmax
      comp=Z,67nm,1.0s
DL2   Dalian             22.94 264 ⇑P     P      03 29 50.1 -0.9
DL2                                sP     sP     03 30 07.4 +1.2
DL2                                S      S      03 33 56.6 -1.3
DL2                                sS     sS     03 34 11.9 -2.9
DL2                                pmax   pmax
      comp=Z,80nm,0.9s
DL2                                pmax   pmax
      comp=Z,690nm,4.5s
DL2                                LR     LR
      comp=Z,560nm,18.7s
DL2                                LR     LR
      comp=Z,810nm,17.8s
DL2                                LR     LR
      comp=Z,1µm,16.1s
ATKA  Atka Island        23.47  61 eP     P      03 29 56.0 -0.1
      comp=Z,201nm,1.4s
BILL  Bilibino           23.97  14 eP     P      03 29 59.1 -1.6
      comp=Z,10nm,0.7s
BILL  Bilibino           23.97  14 eP     P      03 29 59.0 -1.6
BILL  Bilibino           23.97  14d iP    P      03 29 59.0 -1.6
BILL                               i             03 30 04.9
BILL                               e             03 30 30.1
BILL                               e             03 33 42.8
BILL                               eS     S      03 34 17.3 +3.3
BILL                               pmax   pmax
      comp=Z,9.0nm,0.7s
BILL                               MLR    MLR
      comp=Z,3µm,17.0s
BOD   Bodaibo            25.98 312 eP     P      03 30 15.5 -3.5
BOD                                pmax   pmax
      comp=Z,9.0nm,1.4s
BJT   Baijiatuau         26.32 271 eP     P      03 30 22.5 +0.2
      comp=Z,96nm,0.9s
BJT   Baijiatuau         26.32 271 eP     P      03 30 22.5 +0.2
BJT                                pmax   pmax
      comp=Z,96nm,0.9s
TIA   Tai'an             27.37 263 P      P      03 30 32.0 +0.3
TIA                                pmax   pmax
      comp=Z,9.0nm,1.5s
TIA                                LR     LR
      comp=Z,410nm,14.8s
TIA                                LR     LR
      comp=Z,420nm,13.4s
TIA                                LR     LR
      comp=Z,260nm,9.8s
TIXI  Tiksi              28.44 345 P      P      03 30 38.3 -2.6
      comp=Z,7.2nm,0.5s,baz=144,slow=7.2,SNR=13
NJ2   Nanjing            28.49 253 eP     P      03 30 42.3 +0.6
NJ2                                S      S      03 35 28.1 +1.8
NJ2                                pmax   pmax
      comp=Z,20nm,0.6s
NJ2                                LR     LR
      comp=Z,2µm,22.8s
NJ2                                LR     LR
      comp=Z,1µm,23.0s
NJ2                                LR     LR
      comp=Z,2µm,16.3s
HHC   Hu-ho-hao-te       29.23 275 eP     P      03 30 49.5 +1.1
HHC                                pP     pwP    03 31 01.3 -1.0
HHC                                S      S      03 35 43.0 +4.8
HHC                                sS     sS     03 36 00.2 +4.8
HHC                                pmax   pmax
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	comp=Z,71nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.3s						
HHC				LR	LR		
	comp=Z,2µm,16.9s						
HHC				LR	LR		
	comp=Z,4µm,14.9s						
HHC				LR	LR		
	comp=Z,5µm,15.3s						
H11S1	WAKE ISLAND Hy	29.68	150	T	T	04 02 46.9	
	baz=338						
H11S3	WAKE ISLAND Hy	29.69	150	T	T	04 02 48.7	
	baz=338,slow=74						
H11S2	WAKE ISLAND Hy	29.70	150	T	T	04 02 48.6	
	baz=338,slow=74						
TIY	Taiyuan	29.94	269	eP	P	03 30 56.3	+1.6
TIY				pmax	pmax		
	comp=Z,37nm,0.6s						
TIY				LR	LR		
	comp=Z,680nm,17.2s						
TIY				LR	LR		
	comp=Z,1µm,14.6s						
TIY				LR	LR		
	comp=Z,1µm,16.4s						
ULN	Ulaanbaatar	30.26	291	eP	P	03 30 57.2	-0.2
	comp=Z,11nm,0.9s						
ULN	Ulaanbaatar	30.26	291	⇓eP	P	03 30 57.0	-0.5
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
ULN	Ulaanbaatar	30.26	291	P	P	03 30 58.9	+1.4
	SNR=6.9						
BTO	Baotou	30.41	276	eP	P	03 30 59.1	+0.3
ANM	Nome	30.46	36	eP	P	03 30 59.8	+0.9
	comp=Z,9.5nm,1.2s						
ANM	Nome	30.46	36	eP	P	03 30 59.8	+0.9
ANM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SONA1	Songino Array	30.69	291	eP	P	03 31 00.9	-0.3
SONA0	Songino Array	30.70	291	eP	P	03 31 00.5	-0.9
SONA0				ePcP	PcP	03 33 59.1	+0.9
SONM	Songino Array	30.70	291	P	P	03 31 00.5	-0.9
	comp=Z,7.4nm,0.8s,baz=73,slow=7.2,SNR=41						
SONM				PcP	PcP	03 33 59.1	+0.9
	comp=Z,1.6nm,0.7s,baz=110,slow=1.8,SNR=3.9						
SONM				LR	LR	03 44 27.6	
	comp=Z,3µm,18.5s,baz=66,slow=39						
TLY	Talaya	31.78	299	⇑eP	P	03 31 09.8	-0.9
TLY	Talaya	31.78	299	P	P	03 31 10.1	-0.6
	comp=Z,2.3nm,0.7s,baz=85,slow=8.7,SNR=5.6						
TLY				PcP	PcP	03 34 02.1	+1.2
	comp=Z,1.3nm,0.4s,baz=207,slow=5.4,SNR=3.6						
TLY				LR	LR	03 45 03.8	
	comp=Z,7µm,18.6s,baz=84,slow=38						
ZAK	Zakamensk	32.20	297	eP	P	03 31 11.0	-3.5
ZAK				e		03 34 01.6	
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WHN	Wuhan	32.46	256	⇓P	P	03 31 17.4	+0.6
WHN				S	S	03 36 24.1	-4.4
WHN				LR	LR		
	comp=Z,8µm,17.0s						
WHN				LR	LR		
	comp=Z,10µm,20.3s						
WHN				LR	LR		
	comp=Z,8µm,18.0s						
MOY	Mondy	33.41	299	eP	P	03 31 25.9	+0.8
TWG	Pinlang	33.43	238	eP	P	03 31 28.4	+3.0
	comp=Z,196nm,0.9s						
XAN	Xi'an	34.24	266	P	P	03 31 32.7	+0.3
XAN				pmax	pmax		
	comp=Z,35nm,1.1s						
XAN				pmax	pmax		
	comp=Z,260nm,3.9s						
XAN				LR	LR		
	comp=Z,1µm,13.7s						
XAN				LR	LR		
	comp=Z,910nm,13.1s						
XAN				LR	LR		
	comp=Z,1µm,12.7s						
XAN	Xi'an	34.24	266	eP	P	03 31 32.7	+0.3
	comp=Z,31nm,0.8s						
XAN	Xi'an	34.24	266	eP	P	03 31 32.7	+0.3
XAN				pmax	pmax		
	comp=Z,31nm,0.8s						
IM3	Indian Mountai	35.54	35	eP	P	03 31 43.0	-0.1
IM3				ePcP	PcP	03 34 12.0	+0.8
KNGR	Kungurtug, Tuv	35.77	298	⇓eP	P	03 31 44.3	-1.1
KDAK	Kodiak Island	35.86	49	eP	P	03 31 45.8	-0.1
	comp=Z,52nm,0.9s						
KDAK	Kodiak Island	35.86	49	P	P	03 31 45.6	-0.4
	comp=Z,28nm,0.9s,baz=342,slow=13,SNR=7.6						
PPLA	Purkeypile	35.94	41	eP	P	03 31 48.6	+1.8
	comp=Z,43nm,1.4s						
ENH	Enshi	35.97	260	eP	P	03 31 47.2	-0.1
	comp=Z,37nm,0.9s						
CAST	Castle Rocks	36.01	40	eP	P	03 31 48.6	+1.4
	comp=Z,14nm,1.0s						
BPAW	Bear Paw Mtn.	36.53	39	eP	P	03 31 52.7	+1.0
	comp=Z,11nm,1.0s						
MLY	Manley	36.69	37	eP	P	03 31 54.1	+1.1
	comp=Z,8.9nm,1.0s						
MLY				ePcP	PcP	03 34 15.9	+1.1
LZH	Lanzhou	36.77	272	⇑P	P	03 31 55.7	+1.5
LZH				pP	pwP	03 32 08.5	+0.6
LZH				sP	sP	03 32 13.6	+3.3
LZH				PP	PP	03 33 18.1	-0.2
LZH				S	S	03 37 33.5	-1.6
LZH				sS	sS	03 37 54.1	+1.5
LZH				SS	SnSn	03 40 03.1	-5.7
LZH				pmax	pmax		
	comp=Z,150nm,1.2s						
LZH				pmax	pmax		
	comp=Z,450nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,14.0s						
LZH				LR	LR		
	comp=Z,2µm,17.0s						
TRF	Thorofare Moun	36.82	40	eP	P	03 31 55.0	+0.7
	comp=Z,15nm,0.9s						
COLD	Coldfoot	37.10	33	eP	P	03 31 58.1	+1.7
	comp=Z,9.2nm,1.2s						
RC01	Rabbit Creek A	37.11	44	eP	P	03 31 54.8	-1.8
	comp=Z,28nm,1.0s						
BWN	Browne	37.20	38	eP	P	03 31 59.2	+1.9
	comp=Z,93nm,1.1s						
PMR	Palmer	37.38	43	eP	P	03 31 57.5	-1.3
	comp=Z,12nm,0.7s						
PMR	Palmer	37.38	43	eP	P	03 31 57.5	-1.3
PMR				pmax	pmax		
	comp=Z,12nm,0.7s						
MCK	McKinley	37.43	39	eP	P	03 31 59.8	+0.5
	comp=Z,21nm,1.0s						
MCK	McKinley	37.43	39	eP	P	03 31 59.8	+0.5
MCK	McKinley	37.43	39	eP	P	03 31 59.8	+0.5
MCK				pmax	pmax		
	comp=Z,21nm,1.0s						
RND	Reindeer	37.47	40	eP	P	03 31 59.8	+0.1
	comp=Z,25nm,1.0s						
RND	Reindeer	37.47	40	eP	P	03 31 59.8	+0.1
RND				pmax	pmax		
	comp=Z,25nm,1.0s						
KNK	Knik Glacier	37.71	43	eP	P	03 32 02.3	+0.6
	comp=Z,34nm,1.0s						
SML	Sawmill	37.75	42	eP	P	03 32 02.7	+0.7
	comp=Z,55nm,0.8s						
SML	Sawmill	37.75	42	eP	P	03 32 02.7	+0.7
SML	Sawmill	37.75	42	eP	P	03 32 02.7	+0.7
SML				pmax	pmax		
	comp=Z,55nm,0.8s						
MDM	Murphy Dome	37.75	37	eP	P	03 32 02.6	+0.6
	comp=Z,14nm,0.9s						
WRH	Wood River Hil	37.81	38	eP	P	03 32 03.0	+0.6
	comp=Z,9.7nm,1.0s						
TCOL	CIGO, UAF Yank	37.91	37	P	P	03 32 03.5	+0.2
	baz=269,SNR=6.0						
COLA	College	37.91	37	eP	P	03 32 04.0	+0.7
	comp=Z,26nm,1.0s						
COLA	College	37.91	37	eP	P	03 32 03.7	+0.4
COLA	College	37.91	37	⇑iP	P	03 32 03.7	+0.4
COLA				pmax	pmax		
	comp=Z,29nm,1.1s						
GTA	Gaotai	38.03	280	⇑P	P	03 32 05.8	+1.0
GTA				pP	pwP	03 32 18.6	-0.3
GTA				sP	sP	03 32 22.7	+1.8
GTA				PcP	PcP	03 34 20.8	+1.3
GTA				PcS	PcS	03 38 10.3	+1.8
GTA				ScS	ScS	03 42 10.4	-2.5
GTA				pmax	pmax		
	comp=Z,38nm,1.0s						
GTA				pmax	pmax		
	comp=Z,420nm,6.7s						
GTA				LR	LR		
	comp=Z,870nm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,15.9s						
GTA				LR	LR		
	comp=Z,2µm,15.2s						
POKR	Poker Plat Res	38.09	37	P	P	03 32 05.1	+0.3
	baz=269,SNR=14						
DHY	Denali Highway	38.14	40	eP	P	03 32 05.8	+0.3
	comp=Z,15nm,1.0s						
HDA	Harding Lake	38.30	38	eP	P	03 32 07.3	+0.7
	comp=Z,18nm,1.1s						
HDA	Harding Lake	38.30	38	P	P	03 32 06.8	+0.2
	baz=271,SNR=8.1						
IL1	Eielson Array	38.33	37	eP	P	03 32 05.3	-1.5
ILAR	Eielson Array	38.33	37	P	P	03 32 05.7	-1.1
	comp=Z,9.1nm,1.1s,baz=260,slow=7.3,SNR=35						
ILAR				PcP	PcP	03 34 19.1	-0.7
	comp=Z,0.7nm,0.9s,baz=288,slow=3.7,SNR=2.5						
ILB	Eielson Array	38.33	37	eP	P	03 32 06.8	0.0
	comp=Z,19nm,1.4s						
ILB				ePcP	PcP	03 34 19.1	-0.7
PRP	Porcupine Dome	38.90	36	eP	P	03 32 12.8	+1.0
	comp=Z,9.3nm,0.8s						
KLU	Klutina	38.92	43	eP	P	03 32 12.9	+1.0
	comp=Z,35nm,1.1s						
FYU	Fort Yukon	39.02	35	eP	P	03 32 14.1	+1.6
	comp=Z,33nm,1.2s						
DIV	Divide	39.02	43	eP	P	03 32 13.8	+1.0
	comp=Z,17nm,0.7s						
HARP	HAARP	39.20	41	eP	P	03 32 10.4	-3.8
	comp=Z,39nm,1.1s						
RIDG	Independ'e Rid	39.25	39	eP	P	03 32 15.2	+0.5
	comp=Z,24nm,1.1s						
NRIK	Noril'sk	39.31	330	P	P	03 32 12.1	-2.9
	comp=Z,3.0nm,0.5s,baz=104,slow=5.5,SNR=6.3						
NRIK				LR	LR	03 50 01.7	
	comp=Z,828nm,18.2s,baz=282,slow=39						
CD2	Chengdu	39.60	265	⇑P	P	03 32 18.6	+0.7
CD2				sP	sP	03 32 37.1	+3.5
CD2				S	S	03 38 17.7	-0.1
CD2				pmax	pmax		
	comp=Z,580nm,7.4s						
CD2				LR	LR		
	comp=Z,2µm,13.9s						
CD2				LR	LR		
	comp=Z,1µm,12.9s						
CD2				LR	LR		
	comp=Z,1µm,14.1s						
SCRK	Sand Creek	39.61	39	eP	P	03 32 17.7	0.0
	comp=Z,23nm,1.4s						
GYA	Guiyang	40.28	258	⇑iP	P	03 32 23.8	+0.1
GYA				pP	pwP	03 32 37.4	-1.2
GYA				sP	sP	03 32 43.0	+3.5
GYA				PP	PnPn	03 34 01.8	+1.0
GYA				S	S	03 38 27.8	-0.4
GYA				sS	sS	03 38 50.0	+4.2
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,6.4s						
GYA				LR	LR		
	comp=Z,760nm,16.2s						
GYA				LR	LR		
	comp=Z,850nm,16.9s						
GYA				LR	LR		
	comp=Z,1µm,17.6s						
DAWY	Dawson	41.62	38	eP	P	03 32 35.0	+0.8
	comp=Z,6.8nm,1.0s						
DGZ	Jazzator, Alta	42.24	300	c iP	P	03 32 38.7	-0.9
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZAA1	Zalesovo Array	42.45	307	eP	P	03 32 38.8	-2.3
ZAA1				ePcP	PcP	03 34 33.5	+0.2
ZAA0	Zalesovo Array	42.45	307	eP	P	03 32 40.0	-1.0
	comp=Z,2.7nm,0.8s						
ZAA0				ePcP	PcP	03 34 33.5	+0.2
ZALV	Zalesovo Beam	42.45	307	eP	P	03 32 38.7	-2.3
ZALV				ePcP	PcP	03 34 33.8	+0.5
ZALV	Zalesovo Beam	42.45	307	eP	P	03 32 38.7	-2.3
ZALV				e		03 34 33.8	
ZALV	Zalesovo Beam	42.45	307	P	P	03 32 38.8	-2.3
	comp=Z,2.5nm,0.6s,baz=72,slow=6.6,SNR=9.7						
ZALV				PcP	PcP	03 34 33.5	+0.2
	comp=Z,15nm,0.9s,baz=67,slow=2.4,SNR=22						
ZALV				LR	LR	03 51 22.7	
	comp=Z,2µm,19.7s,baz=72,slow=38						
HYT	Haines Junctio	43.05	43	eP	P	03 32 48.3	+2.3
	comp=Z,53nm,1.2s						
NVS	Novosibirsk	43.09	308	eP	P	03 32 42.2	-3.9
NVS				e		03 34 33.7	
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
QIZ	Qiongzhong	43.24	246	P	P	03 32 48.8	+1.0
QIZ				S	S	03 39 17.0	+5.2
QIZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,200nm,6.3s						
QIZ				LR	LR		
	comp=Z,860nm,19.8s						
QIZ				LR	LR		
	comp=Z,870nm,19.4s						
QIZ				LR	LR		
	comp=Z,980nm,16.5s						
INK	Inuvik	43.41	32	eP	P	03 32 49.2	+0.7
	comp=Z,23nm,0.9s						
INK	Inuvik	43.41	32	P	P	03 32 48.3	-0.2
	comp=Z,20nm,0.9s,baz=276,slow=7.5,SNR=59						
KMI	Kunming	43.84	259	P	P	03 32 53.6	+0.7
KMI				pP	pP	03 33 05.3	+1.3
KMI				sP	sP	03 33 11.7	+3.0
KMI				PP	PP	03 34 34.9	-0.5
KMI				S	S	03 39 19.7	-1.3
KMI				sS	sS	03 39 35.7	-3.1
KMI				pmax	pmax		
	comp=Z,24nm,1.2s						
KMI				pmax	pmax		
	comp=Z,230nm,3.9s						
KMI				LR	LR		
	comp=Z,990nm,18.2s						
KMI				LR	LR		
	comp=Z,540nm,17.8s						
KMI				LR	LR		
	comp=Z,850nm,18.9s						
WMQ	Urumqi	44.33	292	P	P	03 32 56.7	+0.3
WMQ				sP	sP	03 33 15.6	+3.1
WMQ				pmax	pmax		
	comp=Z,77nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,1µm,8.7s						
WMQ				LR	LR		
	comp=Z,4µm,17.9s						
WMQ				LR	LR		
	comp=Z,3µm,14.7s						
WMQ				LR	LR		
	comp=Z,2µm,19.5s						
WMQ	Urumqi	44.33	292	eP	P	03 32 57.7	+1.3
	comp=Z,28nm,0.8s						
WMQ	Urumqi	44.33	292	eP	P	03 32 57.7	+1.3
WMQ				pmax	pmax		
	comp=Z,28nm,0.8s						
WHY	Whitehorse	44.34	43	eP	P	03 32 58.3	+2.0
	comp=Z,26nm,1.0s						
SKAG	Skagway	44.44	44	eP	P	03 32 59.0	+2.1
	comp=Z,11nm,0.8s						
JIS	Juneau Island	45.25	46	eP	P	03 33 06.2	+2.8
	comp=Z,25nm,1.0s						
MK31	Makanchi Array	46.52	298	eP	P	03 33 12.7	-1.0
MK31	Makanchi Array	46.52	298	i P	P	03 33 12.5	-1.2
MK31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MK32	Makanchi Array	46.52	298	eP	P	03 33 12.5	-1.1
MK32				ePcP	PcP	03 34 48.1	+0.8
MK32				eScP	ScP	03 38 40.3	+3.2
MKAR	Makanchi Array	46.52	298	eP	P	03 33 12.7	-1.0
	comp=Z,88nm,1.0s						
MKAR	Makanchi Array	46.52	298	P	P	03 33 12.5	-1.1
	comp=Z,7.6nm,0.7s,baz=76,slow=6.8,SNR=75						
MKAR				PcP	PcP	03 34 48.1	+0.8
	comp=Z,7.0nm,0.8s,baz=47,slow=5.3,SNR=5.6						
MKAR				ScP	ScP	03 38 40.3	+3.2
	comp=Z,1.2nm,0.9s,baz=82,slow=5.4,SNR=4.2						
MK01	Makanchi Array	46.53	298	eP	P	03 33 12.2	-1.5
MAKZ	Makanchi	46.71	298	eP	P	03 33 14.2	-0.9
	comp=Z,7.4nm,0.8s						
MAKZ	Makanchi	46.71	298	P	P	03 33 13.5	-1.6
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KURK	Kurchatov	47.14	304	eP	P	03 33 16.7	-1.6
	comp=Z,12nm,0.8s						
KURK	Kurchatov	47.14	304	⇓eP	P	03 33 15.8	-2.5
KURK				pmax	pmax		
	comp=Z,15nm,0.9s						
KURK	Kurchatov	47.14	304	P	P	03 33 17.5	-0.8
	SNR=5.7						
DLBC	Dease Lake	47.37	44	eP	P	03 33 22.8	+2.6
	comp=Z,19nm,1.0s						
DLBC	Dease Lake	47.37	44	P	P	03 33 19.7	-0.5
	comp=Z,14nm,0.9s,baz=287,slow=9.1,SNR=22						
NONG	Nongkai	48.34	252	P	P	03 33 29.6	+1.6
	comp=Z,0.6nm,0.8s,comp=Z,107nm						
SKNT	Sakolnakorn	48.56	250	P	P	03 33 31.1	+1.3
	comp=Z,9.8nm,1.0s						
KDM	Kudat	48.66	229	P	P	03 33 37.0	+6.6
LSA	Lhasa	49.18	273	P	P	03 33 36.8	+1.9
LSA				pmax	pmax		
	comp=Z,47nm,0.8s						
LSA	Lhasa	49.18	273	eP	P	03 33 36.9	+2.0
	comp=Z,32nm,0.8s						
LSA	Lhasa	49.18	273	i P	P	03 33 37.1	+2.2
	SNR=6.8						
LSA	Lhasa	49.18	273	eP	P	03 33 36.9	+2.0
LSA				pmax	pmax		
	comp=Z,32nm,0.8s						
SDKM	Sandakan	49.54	227	P	P	03 33 43.9	+6.6
PDGK	Podgornoye	49.86	295	P	P	03 33 39.5	-0.1
PDGK				pmax	pmax		
	comp=Z,23nm,1.0s						
UTTA	Uttaradit	50.31	254	P	P	03 33 44.4	+1.3
	comp=Z,5.3nm,0.9s,comp=Z,51nm						
CHAI	Chaiyaphum	50.66	251	P	P	03 33 46.7	+1.0
	comp=Z,9.2nm,0.8s,comp=Z,91nm						
CMMT	Chiang Mai	50.66	256	P	P	03 33 47.1	+1.3
	comp=Z,28nm,0.9s						
CHTO	Chiang Mai	50.67	256	eP	P	03 33 46.9	+1.1
	comp=Z,22nm,0.8s						
CHTO	Chiang Mai	50.67	256	P	P	03 33 46.8	+1.1
	SNR=10.0						
CHTO				P	P	03 33 46.8	+1.1
	SNR=10.0						
CHTO	Chiang Mai	50.67	256	P	P	03 33 47.2	+1.4
	comp=Z,122nm,0.8s,comp=Z,2µm						
BRVK	Borovoye	50.85	310	eP	P	03 33 45.8	-1.0
	comp=Z,11nm,0.8s						
BRVK	Borovoye	50.85	310	⇓iP	P	03 33 45.1	-1.6
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s						
PBKT	Sadao Pong	50.86	252	P	P	03 33 48.7	+1.5
	comp=Z,8.2nm,1.2s,comp=Z,868nm						
CM31	Chiang Mai Arr	50.91	256	eP	P	03 33 48.6	+1.0
CM31				ePcP	PcP	03 35 03.2	-0.5
CMAR	Chiang Mai Arr	50.91	256	P	P	03 33 48.6	+1.0
	comp=Z,6.7nm,0.9s,baz=37,slow=7.3,SNR=24						
CMAR				PcP	PcP	03 35 03.2	-0.5
	comp=Z,4.8nm,0.8s,baz=19,slow=3.8,SNR=5.1						
CM01	Chiang Mai Arr	50.93	256	eP	P	03 33 48.8	+1.0
CM01				ePcP	PcP	03 35 04.0	+0.3
SHL	Shillong	51.16	268	eP	P	03 33 50.2	+0.5
	comp=Z,144nm,0.9s						
SHL	Shillong	51.16	268	eP	P	03 33 50.2	+0.5
SHL				pmax	pmax		
	comp=Z,144nm,0.9s						
TARG	Taragay, Kyrgy	51.73	294	eP	P	03 33 54.8	+0.8
	comp=Z,20nm,0.8s						
OTUK	Ortayu	51.90	303	P	P	03 33 53.3	-1.4
OTUK				pmax	pmax		
	comp=Z,11nm,1.0s						
KDJ	Kajisay	51.93	295	eP	P	03 33 57.6	+2.4
	comp=Z,39nm,0.9s						
KDJ	Kajisay	51.93	295	eP	P	03 33 57.6	+2.4
KDJ				pmax	pmax		
	comp=Z,39nm,0.9s						
SRAK	Srakaew	51.99	249	P	P	03 33 54.4	-1.3
	comp=Z,85nm,0.9s,comp=Z,678nm						
ULHL	Ulahol	52.47	295	P	P	03 34 00.4	+1.1
	SNR=9.7						
RES	Resolute Bay	52.47	18	eP	P	03 33 58.3	-0.2
	comp=Z,22nm,1.1s						
RES	Resolute Bay	52.47	18	eP	P	03 33 58.3	-0.2
RES				pmax	pmax		
	comp=Z,22nm,1.1s						
TKM2	Tokmak 2	52.54	296	P	P	03 34 00.1	+0.4
	SNR=10						
TKM2	Tokmak 2	52.54	296	P	P	03 33 59.9	+0.2
TKM2				pmax	pmax		
	comp=Z,18nm,1.1s						
UMPA	Umpang Tak	52.54	254	P	P	03 34 06.5	+6.7
UTHA	Uthaitani	52.60	253	P	P	03 34 02.4	+2.2
	comp=Z,6.1nm,0.8s						
YKW3	Yellowknife Ar	52.66	36	eP	P	03 34 00.9	+0.9
	comp=Z,15nm,1.0s						
YKA	Yellowknife Ar	52.70	36	P	P	03 34 00.4	+0.1
	comp=Z,12nm,0.9s,baz=299,slow=7.1,SNR=99						
YKA				PcP	PcP	03 35 10.0	+0.4
	comp=Z,1.1nm,0.8s,baz=296,slow=3.6,SNR=4.0						
YKB5	Yellowknife Ar	52.70	36	eP	P	03 33 59.6	-0.7
YKB5				ePcP	PcP	03 35 10.0	+0.4
CHMS	Chumysh	53.03	297	P	P	03 34 04.0	+0.8
	SNR=8.3						
NRN	Naryn	53.05	294	eP	P	03 34 04.8	+1.1
	comp=Z,9.1nm,0.9s						
NRN	Naryn	53.05	294	eP	P	03 34 04.8	+1.1
NRN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
USP	Ospenovka	53.05	297	P	P	03 34 03.8	+0.4
	SNR=38						
KBK	Karagaybulak	53.08	296	P	P	03 34 04.3	+0.5
	SNR=19						
KZA	Kyzart	53.19	295	P	P	03 34 06.0	+1.2
	SNR=32						
FRU	Bishkek	53.20	297	⇓eP	P	03 34 06.0	+1.6
FRU				e		03 35 06.0	
FRU				pmax	pmax		
	comp=Z,70nm,2.0s						
AAK	Ala-Archa	53.38	296	P	P	03 34 06.2	+0.3
	SNR=25						
AAK	Ala-Archa	53.38	296	eP	P	03 34 06.0	+0.1
	comp=Z,26nm,0.9s						
AAK	Ala-Archa	53.38	296	i P	P	03 34 05.8	-0.1
	SNR=39						
AAK	Ala-Archa	53.38	296	i P	P	03 34 05.4	-0.5
AAK				pmax	pmax		
	comp=Z,27nm,0.9s						
AAK	Ala-Archa	53.38	296	P	P	03 34 06.4	+0.5
	SNR=7.9						
KBS	Kingsbay	53.64	351	ceP	P	03 34 06.9	-0.2
KBS				pmax	pmax		
	comp=Z,123nm,0.7s						
SRDT	SRDT	53.69	252	P	P	03 34 22.6	+14
SPA0	Spitsbergen Ar	53.72	350	eP	P	03 34 08.8	+1.1
	comp=Z,26nm,0.9s						
EKS2	Erkin-Say	53.82	297	P	P	03 34 09.5	+0.4
	SNR=27						
JIRN	Jiri	53.88	274	eP	P	03 34 11.2	+1.2
	comp=Z,231nm,0.8s						
GUN	Gumba	53.95	275	eP	P	03 34 11.4	+0.9
	comp=Z,173nm,1.0s						
SVE	Sverdlovsk	54.02	317	eP	P	03 34 09.6	-0.5
SVE				pmax	pmax		
	comp=Z,29nm,0.9s						
RAMN	Ramite	54.03	273	eP	P	03 34 11.9	+1.0
	comp=Z,207nm,0.8s						
KSH	Kashi	54.08	292	⇑iP	P	03 34 15.8	+4.8
KSH				pP	sP	03 34 28.2	+1.1
KSH				PP	PP	03 36 18.1	+5.5
KSH				S	S	03 41 48.5	+4.2
KSH				sS	sS	03 42 09.0	+4.7
KSH				SS	SS	03 45 27.9	+2.1
KSH				pmax	pmax		
	comp=Z,120nm,1.2s						
KSH				pmax	pmax		
	comp=Z,440nm,4.7s						

KSH				LR	LR		
	comp=Z,570nm,7.5s						
KSH				LR	LR		
	comp=Z,490nm,6.5s						
KSH				LR	LR		
	comp=Z,3µm,10.1s						
AML	Almayashu	54.15	296	P	P	03 34 12.9	+1.1
	SNR=18						
PHET	Kaeng Krachan	54.39	250	P	P	03 34 15.7	+2.4
	comp=Z,14nm,0.9s						
KKN	Kakani	54.44	275	*e*P	P	03 34 16.0	+2.1
	comp=Z,117nm,0.8s						
PKI	Pulchoki	54.48	275	*e*P	P	03 34 15.1	+0.7
	comp=Z,62nm,0.8s						
PKIN	Phulchoki	54.49	275	*e*P	P	03 34 15.1	+0.8
	comp=Z,73nm,0.8s						
DMN	Daman	54.67	275	*e*P	P	03 34 16.8	+1.2
	comp=Z,97nm,0.8s						
MNAS	Manas	54.71	297	P	P	03 34 15.7	+0.1
MNAS				pmax	pmax		
	comp=Z,33nm,1.0s						
ARSB	Arslanbob	55.03	296	*e*P	P	03 34 19.2	+1.3
	comp=Z,56nm,0.9s						
LLLB	Lillooet	55.04	51	*e*P	P	03 34 18.8	+1.1
	comp=Z,12nm,1.0s						
LLLB				*e*pP	pP	03 34 31.3	+2.2
DANN	Dangsing	55.17	277	*e*P	P	03 34 20.6	+1.4
	comp=Z,245nm,0.7s						
ARU	Arti	55.21	317	*e*P	P	03 34 17.1	-1.7
	comp=Z,28nm,1.0s						
ARU	Arti	55.21	317	*c* *i*P	P	03 34 16.6	-2.2
ARU						03 36 17.8	
ARU				S	S	03 42 00.9	+2.2
ARU				SS	SS	03 45 36.6	-5.9
ARU				pmax	pmax		
	comp=Z,27nm,1.0s						
SFK	Sufi-Kurgan	55.41	294	P	P	03 34 21.0	+0.2
SFK				pmax	pmax		
	comp=Z,49nm,1.0s						
A04D	Lummi Island	55.56	53	P	P	03 34 21.8	+0.4
	baz=302						
KK31	Karatay Array	55.62	299	*e*P	P	03 34 21.7	-0.2
	comp=Z,28nm,0.8s						
KK31	Karatay Array	55.62	299	*i* P	P	03 34 21.6	-0.4
KK31				pmax	pmax		
	comp=Z,28nm,0.9s						
KKAR	Karatay Array	55.62	299	*e*P	P	03 34 21.7	-0.3
	comp=Z,28nm,0.8s						
KKAR	Karatay Array	55.62	299	*e*P	P	03 34 21.7	-0.3
KKAR				pmax	pmax		
	comp=Z,28nm,0.8s						
KOLN	Koldanda	55.63	276	*e*P	P	03 34 23.6	+1.1
	comp=Z,139nm,0.8s						
TULEG	Thule	55.66	11	*e*P	P	03 34 21.0	-0.7
	comp=Z,19nm,0.7s						
PYUN	Piuthan	55.86	277	*e*P	P	03 34 25.1	+1.0
	comp=Z,281nm,1.0s						
D03D	Eldon	55.97	55	P	P	03 34 25.0	+0.6
	baz=302						
B05A	Bryant	56.15	53	P	P	03 34 25.6	0.0
	baz=302						
KSM	Kuching	56.73	232	*e*P	P	03 34 31.2	+1.1
	comp=Z,28nm,0.8s						
E04D	Cinebar	56.80	55	P	P	03 34 30.1	-0.2
	baz=303						
C06D	Leavenworth	57.01	53	P	P	03 34 32.2	+0.4
	baz=303						
BTK	Batken	57.10	296	*e*P	P	03 34 33.6	+1.0
	comp=Z,50nm,0.9s						
BTK	Batken	57.10	296	*e*P	P	03 34 33.6	+1.0
BTK				pmax	pmax		
	comp=Z,50nm,0.9s						
LTY	Liberty	57.50	54	*e*P	P	03 34 38.9	+3.5
	comp=Z,9.4nm,0.9s						
B08A	Colville Reser	57.65	52	*e*P	P	03 34 37.1	+0.8
	comp=Z,17nm,1.1s						
H04D	Lebanon	57.82	57	P	P	03 34 36.8	-0.7
	baz=304						
PRGR	Permogore	57.86	327	*e*P	P	03 34 35.3	-2.2
PRGR				pmax	pmax		
	comp=Z,33nm,0.9s						
I03D	Drain, OR	57.91	59	P	P	03 34 38.6	+0.5
	baz=304						
GAR	Garm	58.02	295	*e*P	P	03 34 39.9	+0.7
	comp=Z,145nm,0.9s						
GAR	Garm	58.02	295	*e*P	P	03 34 39.9	+0.7
GAR				pmax	pmax		
	comp=Z,145nm,0.9s						
H04A	Detroit Lake	58.05	57	*e*P	P	03 34 40.7	+1.5
	comp=Z,35nm,0.9s						
G05D	Wamic, OR	58.25	56	P	P	03 34 40.8	+0.2
	baz=304						
K02D	Willamette Mer	58.29	60	P	P	03 34 40.7	-0.2
	baz=305						
AB31	Akbulak array	58.38	310	*i* P	P	03 34 40.4	-1.0
AB31				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ABKAR	Akbulak array	58.38	310	*e*P	P	03 34 40.4	-1.0
	comp=Z,22nm,1.0s						
I04A	Tendick Farm,	58.42	58	P	P	03 34 41.8	0.0
	baz=305						
C09A	Chrisman Ranch	58.55	52	*e*P	P	03 34 43.4	+0.8
	comp=Z,10nm,0.8s						
D08A	Wollman Farm,	58.61	53	*e*P	P	03 34 41.8	-1.2
	comp=Z,15nm,1.1s						
D08A				*e*pP	pP	03 34 56.4	+1.9
F07A	Phinny Hill Vi	58.69	55	*e*P	P	03 34 45.2	+1.6
	comp=Z,43nm,1.1s						
ARA0	ARCESS Array S	58.73	341	*e*P	P	03 34 43.1	-0.4
ARA0				*e*PcP	PcP	03 35 33.7	+0.9
ARCES	ARCESS Array B	58.73	341	*e*P	P	03 34 42.9	-0.6
ARCES	ARCESS Array B	58.73	341	*e*P	P	03 34 42.9	-0.6
ARCES	ARCESS Array B	58.73	341	P	P	03 34 43.1	-0.4
	comp=Z,15nm,0.9s,baz=30,slow=5.8,SNR=22						
ARCES				PcP	PcP	03 35 33.7	+0.9
	comp=Z,9.6nm,0.8s,baz=72,slow=4.0,SNR=7.1						
ARE0	ARCESS Array S	58.73	341	*e*P	P	03 34 43.2	-0.3
	comp=Z,1.4nm,1.0s						
I05D	Terrebonne, OR	58.75	57	P	P	03 34 43.9	-0.1
	baz=305						
KULLO	Kullorsuaq	58.77	9	*i* P	P	03 34 42.3	-1.3
	comp=Z,18nm,0.8s						
KULLO	Kullorsuaq	58.77	9	*i* P	P	03 34 42.3	-1.3
KULLO				pmax	pmax		
	comp=Z,18nm,0.8s						
NEW	Newport	58.92	51	*e*P	P	03 34 46.0	+0.9
	comp=Z,17nm,1.1s						
NEW	Newport	58.92	51	*e*P	P	03 34 46.1	+0.9
NEW				pmax	pmax		
	comp=Z,17nm,1.1s						
NEW	Newport	58.92	51	P	P	03 34 44.9	-0.3
	baz=305,SNR=5.2						
CHGR	Chuyangaron	58.95	295	*e*P	P	03 34 46.3	+0.7
	comp=Z,243nm,1.0s						
NIL	Nilore	59.21	288	*e*P	P	03 34 48.7	+1.3
	comp=Z,170nm,0.8s						
NIL	Nilore	59.21	288	*e*P	P	03 34 48.7	+1.3
NIL				pmax	pmax		
	comp=Z,170nm,0.8s						
PINE	Pine Mountain	59.30	57	*e*P	P	03 34 49.9	+1.8
	comp=Z,16nm,0.9s						
E09A	Wood Farm, Sta	59.35	53	*e*P	P	03 34 49.2	+1.1
	comp=Z,26nm,1.2s						
L04D	Klamath Falls	59.38	59	P	P	03 34 48.4	-0.2
	baz=306						
J05D	Fort Rock, OR	59.41	58	P	P	03 34 49.3	+0.4
	baz=305,SNR=6.1						
YBH	Yreka Blue Hor	59.42	60	*e*P	P	03 34 50.7	+1.9
	comp=Z,17nm,1.3s						
YBH				*e*pP	pP	03 35 00.5	+0.6
YBH	Yreka Blue Hor	59.42	60	*e*P	P	03 34 50.7	+1.9
YBH				*e**PP	pP	03 35 00.5	+0.6
YBH				pmax	pmax		
	comp=Z,17nm,1.3s						
KULM	Kulim	59.43	244	*e*P	P	03 34 50.9	+1.8
	comp=Z,25nm,0.9s						
NDI	New Delhi	59.52	281	*e*P	P	03 34 51.0	+1.5
M02C	Callahan	59.53	61	P	P	03 34 49.4	-0.2
	baz=306						
G08A	Pilot Rock	59.59	55	*e*P	P	03 34 51.2	+1.2
	comp=Z,13nm,1.1s						
N02D	Trinity Center	59.86	61	P	P	03 34 51.4	-0.4
	baz=306						
M04C	Macdoel	59.92	60	P	P	03 34 52.0	-0.3
	baz=306						
I07A	Izee	59.98	56	*e*P	P	03 34 54.0	+1.3
	comp=Z,12nm,1.4s						
SOEI	Soe	60.11	211	P	P	03 34 53.0	-0.8
F10A	Beach Ranch, E	60.19	53	*e*P	P	03 34 57.2	+3.2
	comp=Z,9.0nm,0.8s						
WDC	Whiskeytown Da	60.19	61	*e*P	P	03 34 55.8	+1.8
	comp=Z,12nm,1.1s						
WDC	Whiskeytown Da	60.19	61	*e*P	P	03 34 55.8	+1.8
WDC				pmax	pmax		
	comp=Z,12nm,1.1s						
WALA	Waterton Lakes	60.20	49	*e*P	P	03 34 55.0	+0.9
	comp=Z,27nm,1.3s						
O02D	Mt. Diablo Mer	60.28	62	P	P	03 34 54.7	0.0
	baz=306						
KLMR	Klimovskoe	60.64	329	*e*P	P	03 34 52.9	-3.8
KLMR				pmax	pmax		
	comp=Z,11nm,0.9s						
KLMR	Klimovskoe	60.64	329	*e*P	P	03 34 52.9	-3.8
KLMR				AMP		03 34 57.9	
	comp=Z,11nm,0.9s						
MOD	Modoc Plateau	60.78	59	*e*P	P	03 34 59.5	+1.3
	comp=Z,23nm,1.1s						
BMO	Blue Mountains	60.80	55	*e*P	P	03 34 59.4	+1.2
	comp=Z,10.0nm,1.1s						
BMO	Blue Mountains	60.80	55	*e*P	P	03 34 59.4	+1.2
BMO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
O03E	Paynes Creek	60.82	61	P	P	03 34 58.9	+0.5
	baz=307,SNR=7.6						
J08A	Circle Bar Ran	61.01	56	*e*P	P	03 35 01.1	+1.5
	comp=Z,22nm,1.0s						
ORV	Oroville	61.44	62	*e*P	P	03 35 02.8	+0.3
	comp=Z,7.2nm,1.1s						
ORV	Oroville	61.44	62	*e*P	P	03 35 02.8	+0.3
ORV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WVOR	Wild Horse Val	61.46	57	*e*P	P	03 35 04.0	+1.2
	comp=Z,17nm,1.0s						
WVOR	Wild Horse Val	61.46	57	*e*P	P	03 35 04.0	+1.2
WVOR				pmax	pmax		
	comp=Z,17nm,1.0s						
KBL	Kabul	61.47	291	*e*P	P	03 35 02.7	-0.3
	comp=Z,78nm,0.8s						
KBL	Kabul	61.47	291	*e*P	P	03 35 02.7	-0.3
KBL				pmax	pmax		
	comp=Z,78nm,0.8s						
MSO	Missoula	61.51	51	*e*P	P	03 35 04.0	+1.0
	comp=Z,25nm,1.0s						
MSO	Missoula	61.51	51	P	P	03 35 03.1	+0.1
	baz=307,SNR=6.3						
SUMG	Summit	62.11	3	*e*P	P	03 35 07.0	0.0
	comp=Z,52nm,0.9s						
SUMG	Summit	62.11	3	*i* P	P	03 35 06.9	0.0
	comp=Z,118nm,0.8s						
SUMG	Summit	62.11	3	*e*P	P	03 35 07.0	0.0
SUMG				pmax	pmax		
	comp=Z,52nm,0.9s						
AFDM	Forest Hills D	62.13	62	*e*P	P	03 35 08.6	+1.4
	comp=Z,10nm,1.2s						
AFDM				*e*pP	pP	03 35 18.1	-0.4
MFID	Camas Ranch	62.51	55	*e*P	P	03 35 11.0	+1.1
	comp=Z,9.6nm,1.1s						
FFC	Flin Flon	62.52	39	*e*P	P	03 35 10.3	+0.8
	comp=Z,20nm,1.1s						
FFC	Flin Flon	62.52	39	*e*P	P	03 35 10.3	+0.8
FFC	Flin Flon	62.52	39	*e*P	P	03 35 10.3	+0.8
FFC				pmax	pmax		
	comp=Z,20nm,1.1s						
PAHR	Pah Rah Range	62.65	60	*e*P	P	03 35 11.9	+1.1
	comp=Z,13nm,1.2s						
VCNR	Virginia City	62.74	61	*e*P	P	03 35 12.8	+1.3
	comp=Z,5.2nm,1.0s						
PNTR	Pine Nut	62.90	61	*e*P	P	03 35 14.3	+1.8
	comp=Z,8.1nm,0.8s						
LRM	Limekiln Ridge	62.94	51	*e*P	P	03 35 14.0	+1.2
FCC	Fort Churchill	63.02	32	*e*P	P	03 35 12.8	0.0
	comp=Z,19nm,1.0s						
FCC	Fort Churchill	63.02	32	*e*P	P	03 35 12.7	0.0
FCC	Fort Churchill	63.02	32	*e*P	P	03 35 12.8	0.0
FCC				pmax	pmax		
	comp=Z,19nm,1.0s						
EGMT	Eagleton	63.02	48	*e*P	P	03 35 14.1	+1.0
	comp=Z,25nm,1.0s						
EGMT	Eagleton	63.02	48	P	P	03 35 12.8	-0.3
	baz=309						
CMB	Columbia Colle	63.05	62	*e*P	P	03 35 14.5	+1.1
	comp=Z,12nm,1.3s						
CMB	Columbia Colle	63.05	62	*e*P	P	03 35 14.5	+1.1
CMB				pmax	pmax		
	comp=Z,12nm,1.3s						
YERR	Yerington	63.18	61	*e*P	P	03 35 15.7	+1.2
	comp=Z,27nm,1.4s						
HLID	Hailey	63.24	54	*e*P	P	03 35 15.8	+1.1
	comp=Z,6.8nm,0.9s						
HLID	Hailey	63.24	54	P	P	03 35 15.0	+0.3
	baz=308						
WAKR	Walker	63.36	61	*e*P	P	03 35 17.4	+1.9
	comp=Z,13nm,1.3s						
KVN	Kaiserville	63.84	60	*e*P	P	03 35 19.9	+1.1
	comp=Z,15nm,1.2s						
KVN	Kaiserville	63.84	60	*e*P	P	03 35 19.9	+1.1
KVN				pmax	pmax		
	comp=Z,15nm,1.2s						
RYN	Ryan	63.84	61	*e*P	P	03 35 19.9	+1.2
	comp=Z,12nm,1.2s						
NV01	Mina Array Sit	64.10	61	*e*P	P	03 35 21.3	+0.8
NVAR	Mina Array Bea	64.10	61	P	P	03 35 21.1	+0.6
	comp=Z,3.7nm,0.9s,baz=289,slow=7.3,SNR=17						
MDPB	Devils Postpil	64.12	62	*e*P	P	03 35 22.2	+1.5
	comp=Z,5.8nm,1.0s						
NV11	Mina Array Sit	64.19	61	*e*P	P	03 35 22.2	+1.2
	comp=Z,0.5nm,1.1s						
YHB	Horse Butte	64.30	52	*e*P	P	03 35 25.1	+3.4
	comp=Z,16nm,1.0s						
SCO	Scoresbysund	64.32	358	*e*P	P	03 35 21.8	+0.7
	comp=Z,38nm,1.0s						
SCO	Scoresbysund	64.32	358	*i* P	P	03 35 21.5	+0.4
	comp=Z,30nm,0.9s						
SCO	Scoresbysund	64.32	358	*e*P	P	03 35 21.8	+0.7
SCO				pmax	pmax		
	comp=Z,38nm,1.0s						
ELK	Elko	64.51	57	*e*P	P	03 35 24.4	+1.2
	comp=Z,5.5nm,1.2s						
ELK				*e*pP	pP	03 35 35.2	+0.9
FIA1	FINESS Array S	64.74	334	*e*P	P	03 35 23.9	-0.2
FIA0	FINESS Array S	64.75	334	*e*P	P	03 35 23.4	-0.6
FIA0	FINESS Array S	64.75	334	*e*P	P	03 35 23.4	-0.6
FINES	FINESS Array B	64.75	334	P	P	03 35 23.4	-0.6
	comp=Z,34nm,0.8s,baz=46,slow=8.2,SNR=55						
H17A	Grant Village	64.87	52	*e*P	P	03 35 28.8	+3.2
	comp=Z,20nm,1.1s						
H17A				*e*pP	pP	03 35 37.6	+0.5
H17A	Grant Village	64.87	52	P	P	03 35 27.8	+2.3
	baz=310						
IMW	Indian Meadow	64.99	52	*e*P	P	03 35 28.0	+1.7
	comp=Z,15nm,1.1s						
FXWY	Fox Creek	65.10	53	*e*P	P	03 35 28.5	+1.4
	comp=Z,8.4nm,1.1s						
RLMT	Red Lodge	65.12	50	*e*P	P	03 35 29.0	+1.9
	comp=Z,15nm,1.1s						
RLMT	Red Lodge	65.12	50	P	P	03 35 27.0	-0.1
	baz=310						
MOOW	Moose Ponds	65.19	52	*e*P	P	03 35 29.1	+1.5
	comp=Z,12nm,1.1s						
TPAW	Teton Pass	65.24	53	*e*P	P	03 35 28.8	+0.8
	comp=Z,22nm,1.0s						
HVU	Hansel Valley	65.30	55	*e*P	P	03 35 29.3	+1.1
	comp=Z,9.7nm,1.0s						
HVU	Hansel Valley	65.30	55	*e*P	P	03 35 29.3	+1.1
HVU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LOHW	Long Hollow	65.36	52	*e*P	P	03 35 30.7	+2.1
	comp=Z,18nm,1.4s						
PKM	Mcpherson Peak	65.37	65	P	P	03 35 29.2	+0.4
	baz=310						
REDW	Red Top Meadow	65.38	53	*e*P	P	03 35 30.9	+2.1
	comp=Z,25nm,1.1s						
GRAC	Grapevine Rang	65.58	62	P	P	03 35 30.4	+0.4
	baz=310						
DGMT	Dagmar	65.58	45	P	P	03 35 29.8	0.0
	baz=312						
OBN	Obninsk	65.75	325	*e*P	P	03 35 30.2	-0.4
OBN	Obninsk	65.75	325	*de*P	P	03 35 29.5	-1.1
OBN				*i*		03 36 00.2	
OBN				*e*		03 37 54.7	
OBN				pmax	pmax		
	comp=Z,23nm,1.0s						
OBN				MLR	MLR		
	comp=Z,478nm,10.0s						
SPUT	South Promonto	65.78	55	*e*P	P	03 35 33.1	+1.7
	comp=Z,8.2nm,0.9s						
R11A	Troy Canyon, C	65.81	59	*e*P	P	03 35 32.1	+0.5
	comp=Z,5.7nm,1.1s						
R11A	Troy Canyon, C	65.81	59	P	P	03 35 32.1	+0.5
	baz=310,SNR=6.5						
HYB	Hyderabad	65.85	271	*i* P	P	03 35 32.0	+0.1
MPMC	Manual Prospec	66.10	62	P	P	03 35 33.2	-0.3
	baz=310						
FURC	Furnace Creek,	66.23	62	P	P	03 35 34.7	+0.7
	baz=310,SNR=5.5						
GEYT	Alibeck	66.28	300	P	P	03 35 35.0	+0.6
	comp=Z,44nm,0.8s,baz=2.9,slow=2.9,SNR=55						
VRH	Novokhopyorsk	66.28	320	*e*P	P	03 35 33.5	-0.6
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
DUG	Dugway, Tooele	66.29	56	*e*P	P	03 35 35.8	+1.2
	comp=Z,14nm,1.1s						
DUG	Dugway, Tooele	66.29	56	*e*P	P	03 35 35.7	+1.2
DUG	Dugway, Tooele	66.29	56	P	P	03 35 34.9	+0.3
	baz=310,SNR=5.9						
TPNV	Topopah Spring	66.30	61	*e*P	P	03 35 35.5	+0.8
TPNV	Topopah Spring	66.30	61	*e*P	P	03 35 35.5	+0.8
TPNV	Topopah Spring	66.30	61	P	P	03 35 34.9	+0.2
	baz=310						
BW06	Boulder Array	66.49	52	*e*P	P	03 35 36.6	+0.7
	comp=Z,10nm,1.0s						
BW06	Boulder Array	66.49	52	P	P	03 35 35.6	-0.4
	baz=311						
PD31	Pinedale Array	66.49	52	*e*P	P	03 35 36.5	+0.6
PDAR	Pinedale Array	66.49	52	P	P	03 35 36.0	+0.1
	comp=Z,2.1nm,0.8s,baz=288,slow=0.9,SNR=13						
PDAR				LR	LR	04 05 41.7	
	comp=Z,174nm,18.9s,baz=7.0,slow=37						
EDW2	Edwards Air Fo	66.53	64	P	P	03 35 36.7	+0.6
	baz=310						
LPSR	Galich'ya Gora	66.54	322	*e*P	P	03 35 35.2	-0.6
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
SFJD	Kangerlussuaq	66.67	9	*i* P	P	03 35 36.1	-0.2
SFJD	Kangerlussuaq	66.67	9	*i* P	P	03 35 36.1	-0.2
PSUT	Pine Spring	66.74	58	*e*P	P	03 35 38.5	+0.9
	comp=Z,3.0nm,0.9s						
VSU	Vasula	66.85	332	*ce*P	P	03 35 38.0	+0.4
VSU				pmax	pmax		
	comp=Z,135nm,1.7s						
VSU	Vasula	66.85	332	*e*P	P	03 35 37.4	-0.3
VSU				IAmb	IAmb	03 35 38.7	
	comp=Z,84nm,0.9s						
WRAB	Tennant Creek	66.86	197	*e*P	P	03 35 38.4	+0.3
	comp=Z,30nm,0.8s						
WRAB	Tennant Creek	66.86	197	*ce*P	P	03 35 37.9	-0.2
WRAB				pmax	pmax		
	comp=Z,11nm,1.0s						
WB2	Warramunga Arr	66.87	197	*e*P	P	03 35 38.5	+0.3
NLU	North Lily Min	66.87	56	*e*P	P	03 35 39.9	+1.4
	comp=Z,9.7nm,1.1s						
WR1	Warramunga Arr	66.87	197	*e*P	P	03 35 37.9	-0.3
	comp=Z,35nm,0.8s						
WRA	Warramunga Arr	66.87	197	P	P	03 35 37.9	-0.3
	comp=Z,6.6nm,0.9s,baz=17,slow=6.8,SNR=44						
MPU	Maple Canyon	67.09	56	*e*P	P	03 35 41.3	+1.6
	comp=Z,6.2nm,0.9s						
SHPR	Sheep Range	67.25	61	*e*P	P	03 35 41.9	+1.1
	comp=Z,8.2nm,1.3s						
VSR	Storozhevoye	67.42	321	⇓*e*P	P	03 35 39.8	-1.6
VSR				pmax	pmax		
	comp=Z,38nm,0.7s						
TUQ	Turquoise Moun	67.47	62	P	P	03 35 41.5	-0.7
	baz=311						
HEC	Hector,Ludlow	67.61	63	P	P	03 35 42.4	-0.6
	baz=311						
CCUT	Cedar City	67.67	59	*e*P	P	03 35 44.7	+1.2
	comp=Z,8.2nm,1.2s						
MTPU	Mount Pierson	68.06	58	*e*P	P	03 35 47.5	+1.4
	comp=Z,4.7nm,1.2s						
GMRC	Granite Mounta	68.06	62	P	P	03 35 45.9	+0.1
	baz=311						
LCMT	Little Creek M	68.09	59	*e*P	P	03 35 47.4	+1.3
	comp=Z,5.4nm,0.9s						
K22A	Casper	68.24	51	P	P	03 35 47.1	+0.1
	baz=312						
ULM	Lac du Bonnet	68.30	40	P	P	03 35 46.5	-0.5
	comp=Z,2.5nm,0.8s,baz=291,slow=9.0,SNR=5.0						
SRU	San Rafael Swe	68.33	56	*e*P	P	03 35 48.5	+0.9
	comp=Z,12nm,1.1s						
SRU	San Rafael Swe	68.33	56	*e*P	P	03 35 48.5	+0.9
SRU				pmax	pmax		
	comp=Z,12nm,1.1s						
KNB	Kanab	68.34	59	*e*P	P	03 35 49.2	+1.5
	comp=Z,17nm,1.4s						
KNB	Kanab	68.34	59	*e*P	P	03 35 49.2	+1.5
KNB				pmax	pmax		
	comp=Z,17nm,1.4s						
DZM	Mont Dzumac	68.53	165	*e*LR	LR	03 56 42.9	
	comp=Z,752nm,24.9s						
RSSD	Black Hills	68.58	48	*e*P	P	03 35 49.4	+0.2
	comp=Z,15nm,1.2s						
RSSD	Black Hills	68.58	48	*e*P	P	03 35 49.4	+0.2
RSSD				pmax	pmax		
	comp=Z,15nm,1.2s						
RSSD	Black Hills	68.58	48	P	P	03 35 48.0	-1.1
	baz=313						
IRM	Iron Mountain	68.79	63	P	P	03 35 50.3	0.0
	baz=311						
NC303	NORSAR Array S	68.91	341	*e*P	P	03 35 50.5	-0.1
NC405	NORSAR Array S	68.93	340	*e*P	P	03 35 50.7	0.0
NC204	NORSAR Array S	69.01	341	*e*P	P	03 35 51.1	-0.1
	comp=Z,88nm,1.1s						
MAK	Makhachkala	69.05	310	*e*P	P	03 35 51.1	-0.6
MAK				*e**PP	pwP	03 36 05.6	-0.4
MAK				*e**SP	sP	03 36 11.4	+2.7
MAK				*e*		03 38 27.6	
MAK				*e*S	S	03 44 52.5	-0.9
MAK				*e**SS	sS	03 45 17.5	+3.3
MAK				*e*SS	SS	03 49 19.3	+0.3
MAK				MLR	MLR		
	comp=Z,1µm,14.0s						
U15A	North Rim	69.05	59	*e*P	P	03 35 53.4	+1.1
	comp=Z,10nm,1.3s						
NB201	NORSAR Array S	69.08	340	*e*P	P	03 35 51.7	+0.1
	comp=Z,66nm,1.0s						
NB2	NORSAR Subarra	69.11	341	P	P	03 35 51.4	-0.5
	comp=Z,69nm,1.0s,baz=29,slow=6.5						
NB2	NORSAR Subarra	69.11	341	P	P	03 35 51.4	-0.5
	baz=29,slow=6.5						
NB200	NORSAR Array S	69.11	341	*e*P	P	03 35 51.0	-0.9
NOA	NORSAR Array B	69.11	341	P	P	03 35 51.0	-0.9
NOA	NORSAR Array B	69.11	341	P	P	03 35 51.0	-0.9
	comp=Z,40nm,0.8s,baz=29,slow=6.3,SNR=65						
NOA				LR	LR	04 11 18.2	
	comp=Z,427nm,18.2s,baz=20,slow=40						
IZAR	Zarasai	69.15	330	*e*P	P	03 35 51.7	-0.4
IZAR				IAmb	IAmb	03 35 54.2	
	comp=Z,18nm,1.0s						
NBO00	NORSAR Array S	69.22	341	*e*P	P	03 35 52.6	+0.1
	comp=Z,74nm,1.2s						
NC602	NORSAR Array S	69.30	340	*e*P	P	03 35 52.5	-0.4
IDID	Didziasalis	69.32	330	*e*P	P	03 35 52.9	-0.3
IDID				IAmb	IAmb	03 35 54.5	
	comp=Z,25nm,0.9s						
PDMCI	Parker Dam,Lak	69.32	62	P	P	03 35 53.7	+0.1
	baz=312						
ISAL	Salakas	69.33	330	*e*P	P	03 35 53.0	-0.3
ISAL				IAmb	IAmb	03 35 54.6	
	comp=Z,21nm,1.0s						
NAO01	NORSAR Array S	69.36	341	*e*P	P	03 35 53.4	0.0
	comp=Z,44nm,0.9s						
DBC	Dubki	69.37	311	*i* P	P	03 35 54.0	+0.2
DBC				pmax	pmax		
	comp=Z,21nm,0.8s						
IIGN	Ignalina	69.47	330	*e*P	P	03 35 53.9	-0.3
IIGN				IAmb	IAmb	03 35 55.5	
	comp=Z,30nm,1.0s						
NACGM	Naroch	69.62	330	*e*P	P	03 35 53.0	-2.1
NACGM				PM		03 35 55.0	
	comp=Z,0.2nm,0.8s						
GNBR	Gunib	69.73	310	*e*P	P	03 35 56.9	+0.8
DVE	Vedeno	69.79	311	*d* *i*P	P	03 35 56.7	+0.3
GROC	Groznyy	69.80	311	*e*P	P	03 35 56.4	+0.1
GROC				*e*		03 36 18.9	
GROC				*e*		03 38 29.4	
GROC				*e*S	S	03 45 07.2	+5.0
GROC				pmax	pmax		
	comp=Z,53nm,0.9s						
PV17	East Wray Mesa	69.80	56	*e*P	P	03 35 57.9	+1.1

	comp=Z,13nm,0.9s						
PV03	Paradox Valley	69.88	56	eP	P	03 35 58.5	+1.3
	comp=Z,13nm,1.3s						
GOF	Gofitskoye	69.93	314	eP	P	03 35 58.1	+1.0
AKT	Akhty	69.94	309	i P	P	03 35 58.2	+0.8
BTLR	Botlikh	69.94	311	i P	P	03 35 57.4	+0.1
WUAZ	Wupatki	70.21	59	P	P	03 35 59.5	+0.2
	baz=312						
Y14A	Wickenburg	70.27	62	eP	P	03 36 00.3	+0.9
	comp=Z,5.9nm,1.2s						
AS01	Alice Springs	70.56	197	eP	P	03 36 02.1	+1.0
AS31	Alice Springs	70.57	197	eP	P	03 36 02.6	+1.5
	comp=Z,5.7nm,0.8s						
ASAR	Alice Springs	70.58	197	P	P	03 36 01.9	+0.7
	comp=Z,5.8nm,0.9s,baz=13,slow=5.9,SNR=38						
PYA1	Pyatigorsk	70.60	313	⇓iP	P	03 36 01.9	+0.6
PYA1				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KONO	Kongsberg	70.72	341	⇓eP	P	03 36 01.2	-0.5
KONO				pmax	pmax		
	comp=Z,42nm,2.5s						
NCK	Nalchik	70.74	313	⇑iP	P	03 36 02.9	+0.7
KIV	Kislovodsk	70.88	314	eP	P	03 36 04.0	+0.9
	comp=Z,127nm,0.9s						
KIV	Kislovodsk	70.88	314	⇑iP	P	03 36 03.7	+0.6
KIV	Kislovodsk	70.88	314	eP	P	03 36 04.0	+0.9
KIV	Kislovodsk	70.88	314	i P	P	03 36 03.4	+0.3
	SNR=28						
KIV	Kislovodsk	70.88	314	eP	P	03 36 04.1	+0.9
KIV				pmax	pmax		
	comp=Z,165nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,18.0s						
KIV	Kislovodsk	70.88	314	P	P	03 36 03.5	+0.4
	SNR=25						
X16A	Lo Mia Camp, P	70.91	60	eP	P	03 36 04.8	+1.3
	comp=Z,4.7nm,1.0s						
KBZ	Khabaz	70.94	313	P	P	03 36 04.2	+1.0
	comp=Z,134nm,0.8s,baz=52,slow=3.6,SNR=167						
SHA1	Shidzhatmaz	71.05	313	i P	P	03 36 05.1	+0.8
ZEI	Tsey	71.08	312	eP	P	03 36 03.9	-0.6
ZEI				pmax	pmax		
	comp=Z,60nm,0.9s						
PALK	Pallekele	71.34	261	eP	P	03 36 07.1	+0.9
	comp=Z,30nm,1.0s						
PALK	Pallekele	71.34	261	i P	P	03 36 07.7	+1.5
NEY	Neytrino	71.37	313	d iP	P	03 36 07.4	+1.2
NEY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TBLG	Delisi	71.38	311	eP	P	03 36 07.7	+1.6
	comp=Z,171nm,0.9s						
TBLG	Delisi	71.38	311	eP	P	03 36 07.7	+1.6
TBLG				pmax	pmax		
	comp=Z,171nm,0.9s						
S22A	4UR Ranch, Cre	71.39	55	eP	P	03 36 07.8	+1.2
	comp=Z,11nm,1.3s						
S22A	4UR Ranch, Cre	71.39	55	P	P	03 36 06.2	-0.4
	baz=314						
SUW	Suwalki	71.60	331	eP	P	03 36 06.9	-0.2
SUW	Suwalki	71.60	331	eP	P	03 36 10.0	+2.9
	comp=Z,50nm,1.1s						
SUW	Suwalki	71.60	331	eP	P	03 36 06.9	-0.2
OGNE	Ogallala	71.85	50	eP	P	03 36 10.1	+1.1
	comp=Z,30nm,1.0s						
OGNE	Ogallala	71.85	50	P	P	03 36 09.1	+0.1
	baz=315						
DOMR	Dombai	71.90	314	d iP	P	03 36 10.5	+1.2
DOMR				pmax	pmax		
	comp=Z,38nm,1.0s						
EYMN	Ely	71.95	39	P	P	03 36 07.3	-2.1
	baz=319						
AKASG	Malin Array Be	72.00	326	P	P	03 36 08.7	-0.9
	comp=Z,13nm,0.5s,baz=35,slow=6.3,SNR=108						
AKBB	Malin Array Si	72.00	326	eP	P	03 36 08.7	-0.9
	comp=Z,49nm,0.9s						
AKBB	Malin Array Si	72.00	326	eP	P	03 36 08.7	-0.9
AKBB				pmax	pmax		
	comp=Z,49nm,0.9s						
KIEV	Kiev	72.01	326	eP	P	03 36 08.7	-0.8
	comp=Z,52nm,1.0s						
KIEV	Kiev	72.01	326	⇑iP	P	03 36 09.0	-0.6
KIEV	Kiev	72.01	326	eP	P	03 36 08.8	-0.8
KIEV	Kiev	72.01	326	i P	P	03 36 09.2	-0.4
	SNR=29						
KIEV	Kiev	72.01	326	c iP	P	03 36 08.8	-0.8
KIEV				pmax	pmax		
	comp=Z,45nm,0.9s						
GNI	Garni	72.49	310	eP	P	03 36 15.1	+2.2
	comp=Z,81nm,0.8s						
GNI	Garni	72.49	310	i P	P	03 36 14.9	+2.0
	SNR=28						
GNI	Garni	72.49	310	c iP	P	03 36 14.8	+1.9
GNI				pmax	pmax		
	comp=Z,368nm,0.8s						
GNI	Garni	72.49	310	P	P	03 36 11.7	-1.2
	SNR=14						
SOC	Sochi	72.65	315	eP	P	03 36 12.8	-0.8
SOC				eS	S	03 45 34.3	-0.9
SOC				pmax	pmax		
	comp=Z,68nm,0.8s						
SOC				MLR	MLR		
	comp=Z,664nm,11.0s						
ECSD	EROS Data Cent	72.66	45	eP	P	03 36 13.7	0.0
	comp=Z,14nm,1.1s						
ECSD	EROS Data Cent	72.66	45	P	P	03 36 12.8	-0.8
	baz=317,SNR=7.8						
TUC	Tucson	72.74	61	eP	P	03 36 15.2	+0.8
	comp=Z,3.2nm,1.1s						
TUC	Tucson	72.74	61	eP	P	03 36 15.2	+0.8
TUC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TUC	Tucson	72.74	61	P	P	03 36 14.8	+0.4
	baz=313						
ANN	Anapa	72.87	317	eP	P	03 36 14.7	-0.1
ANN				e*PP	pP	03 36 24.9	-2.2
ANN				pmax	pmax		
	comp=Z,70nm,0.9s						
E38A	The Farm, Brul	72.93	40	eP	P	03 36 14.9	-0.3
	comp=Z,11nm,0.6s						
E38A	The Farm, Brul	72.93	40	P	P	03 36 14.6	-0.6
	baz=319,SNR=5.6						
T25A	Trinidad	73.20	54	P	P	03 36 16.6	-0.6
	baz=315						
F38A	Pierce - Schro	73.27	41	P	P	03 36 17.0	-0.2
	baz=319,SNR=6.5						
SPMN	Marine on St.	73.39	42	eP	P	03 36 18.1	+0.1
	comp=Z,7.8nm,0.9s						
SPMN	Marine on St.	73.39	42	P	P	03 36 17.5	-0.4
	baz=319						
ANMO	Albuquerque	73.54	57	⇓eP	P	03 36 20.0	+0.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	73.54	57	P	P	03 36 18.5	-0.7
	baz=314						
E39A	Mellen	73.55	40	P	P	03 36 18.2	-0.7
	baz=320,SNR=6.3						
F39A	Loretta	73.74	40	P	P	03 36 19.1	-0.9
	baz=320						
E40A	Wakefield	73.80	39	P	P	03 36 20.3	0.0
	baz=320,SNR=7.6						
G38A	Ridgeland	73.88	41	P	P	03 36 19.8	-1.0
	baz=319						
F40A	Park Falls	74.10	40	P	P	03 36 20.1	-2.0
	baz=320						
G39A	Holcombe	74.11	41	P	P	03 36 20.7	-1.5
	baz=320						
GKP	Gorka Klasztor	74.18	333	eP	P	03 36 22.5	+0.1
GKP	Gorka Klasztor	74.18	333	eP	P	03 36 22.5	+0.1
E41A	Kenton	74.19	39	P	P	03 36 21.7	-0.9
	baz=321						
BEL	Belsk	74.22	331	eP	P	03 36 23.5	+0.8
BEL	Belsk	74.22	331	eP	P	03 36 23.5	+0.8
319A	Douglas	74.31	61	eP	P	03 36 24.7	+1.0
	comp=Z,7.0nm,0.8s						
SIM	Simferopol'	74.32	319	c eP	P	03 36 23.6	+0.2
SIM				pmax	pmax		
	comp=Z,69nm,0.7s						
SIM				MLR	MLR		
	comp=Z,1µm,14.0s						
H39A	Augusta	74.51	41	P	P	03 36 23.5	-1.0
	baz=320						
G40A	Rib Lake	74.56	40	P	P	03 36 23.8	-1.1
	baz=320						
E42A	Champion	74.68	38	P	P	03 36 24.3	-1.2
	baz=321						
F41A	Three Lakes	74.69	39	eP	P	03 36 25.5	-0.1
	comp=Z,15nm,1.0s						
F41A	Three Lakes	74.69	39	P	P	03 36 25.5	-0.1
	baz=321						
LVV	L'vov	74.71	328	eP	P	03 36 25.6	0.0
H40A	Chili	74.97	41	P	P	03 36 26.0	-1.1
	baz=320						
SCHQ	Schefferville	74.99	22	eP	P	03 36 25.1	-2.0
	comp=Z,17nm,0.9s						
SCHQ	Schefferville	74.99	22	P	P	03 36 25.1	-2.0
	comp=Z,16nm,0.9s,baz=336,slow=4.4,SNR=6.6						
I39A	Houston	75.03	42	eP	P	03 36 27.1	-0.4
	comp=Z,23nm,1.2s						
I39A	Houston	75.03	42	P	P	03 36 26.2	-1.3
	baz=320						
KIS	Kishinev	75.07	323	⇑iP	P	03 36 26.0	-1.7
	comp=Z,190nm,1.0s						
KIS	Kishinev	75.07	323	⇑iP	P	03 36 26.0	-1.7
KIS				i		03 36 45.0	
KIS				pmax	pmax		
	comp=Z,190nm,1.0s						
F42A	Maple Grove Fa	75.11	39	P	P	03 36 26.9	-1.1
	baz=321						
H41A	Junction City	75.31	40	eP	P	03 36 28.8	-0.3
	comp=Z,6.9nm,0.8s						
H41A	Junction City	75.31	40	P	P	03 36 28.1	-1.0
	baz=321						
J39A	Decorah	75.34	42	P	P	03 36 28.0	-1.3
	baz=320,SNR=6.6						
KWP	Kalwaria Pacla	75.36	328	eP	P	03 36 30.2	+0.9
KWP	Kalwaria Pacla	75.36	328	eP	P	03 36 30.3	+0.9
	comp=Z,2µm,1.0s						
KWP	Kalwaria Pacla	75.36	328	eP	P	03 36 30.2	+0.9
BANOM	Banah	75.41	292	i P	P	03 36 31.7	+1.6
	SNR=9.5						
I40A	Norwalk	75.42	41	P	P	03 36 28.0	-1.8
	baz=320						
SHME	Shamm	75.43	292	i P	P	03 36 30.4	+0.3
	SNR=7.8						
IAS	Iasi	75.44	324	⇑iP	P	03 36 30.2	+0.4
F43A	Flat Rock, Esc	75.47	38	P	P	03 36 27.5	-2.5
	baz=322						
I41A	Arkdale	75.64	41	P	P	03 36 29.8	-1.2
	baz=321						
SIRT	Sirnak	75.64	309	eP	P	03 36 32.5	+1.2
	comp=Z,128nm,1.0s						
F44A	Big Bay de Noc	75.68	38	P	P	03 36 29.9	-1.3
	baz=322						
G43A	Wallace	75.69	39	eP	P	03 36 31.2	0.0
	comp=Z,15nm,0.8s						
G43A	Wallace	75.69	39	P	P	03 36 30.4	-0.9
	baz=322						
LEOM	Leova	75.73	323	⇑iP	P	03 36 31.9	+0.5
K39A	Oelwein	75.73	43	P	P	03 36 29.8	-1.8
	baz=320						
PRAR	RASCA	75.85	325	⇑iP	P	03 36 31.1	-1.1
OJC	Ojcow	75.92	330	eP	P	03 36 33.0	+0.5
OJC	Ojcow	75.92	330	eP	P	03 36 32.4	-0.1
	comp=Z,102nm,1.0s						
OJC	Ojcow	75.92	330	eP	P	03 36 33.0	+0.5
RUE	Ruedersdorf	75.93	335	eP	P	03 36 32.3	-0.1
MNCI	Minicoy	75.99	268	eP	P	03 36 34.8	+1.4
	comp=Z,45nm,1.1s						
BUR08	Bucovina Ar. S	76.03	326	eP	P	03 36 33.9	+0.5
BUR04	Bucovina Ar. S	76.05	326	eP	P	03 36 33.5	+0.1
BURAR	Bucovina Array	76.05	326	⇑iP	P	03 36 33.8	+0.4
MATQ	Matagami	76.06	30	P	P	03 36 32.4	-0.9
	baz=327						
KSU1	Kansas State U	76.06	48	eP	P	03 36 33.2	-0.3
	comp=Z,18nm,1.4s						
KSU1	Kansas State U	76.06	48	P	P	03 36 32.0	-1.5
	baz=318						
K40A	Colesburg	76.09	42	P	P	03 36 32.2	-1.4
	baz=320						
J41A	Loganville	76.11	41	P	P	03 36 31.7	-2.0
	baz=321						
L39A	Vinton	76.12	43	P	P	03 36 32.8	-0.9
	baz=320						
UOSS	Minazif	76.14	291	eP	P	03 36 34.5	+0.3
	comp=Z,33nm,1.0s						
UOSS	Minazif	76.14	291	i P	P	03 36 34.0	-0.2
	SNR=9.3						
UOSS	Minazif	76.14	291	P	P	03 36 34.2	0.0
UOSS				P	P	03 36 34.2	0.0
BIR	Birlad	76.15	324	⇑iP	P	03 36 35.3	+1.4
I42A	Draeger Farm,	76.21	40	P	P	03 36 32.9	-1.3
	baz=321						
BIZ	Bicaz	76.24	325	⇓iP	P	03 36 35.1	+0.7
HATD	Hatta, Dubai	76.28	291	i P	P	03 36 35.8	+0.8
	SNR=11						
HATD	Hatta, Dubai	76.28	291	P	P	03 36 35.5	+0.6
HATD				P	P	03 36 35.5	+0.6
UZH	Uzhgorod	76.34	328	eP	P	03 36 34.6	-0.3
UZH				e		03 36 49.0	
MSTX	Muleshoe	76.39	55	P	P	03 36 35.8	+0.2
	baz=316						
NIE	Niedzica	76.41	330	eP	P	03 36 36.4	+1.1
NIE	Niedzica	76.41	330	eP	P	03 36 36.4	+1.1
ASHO	Ashiyiah	76.42	291	P	P	03 36 36.7	+0.9
ASHO	Ashiyiah	76.42	291	P	P	03 36 37.0	+1.2
MNTX	Cornudas Mount	76.46	59	eP	P	03 36 36.5	+0.6
MNTX				ePcP	PcP	03 36 40.8	-6.7
MNTX	Cornudas Mount	76.46	59	P	P	03 36 35.3	-0.6
	baz=315						
NAZ	Nazwa, Dubai	76.47	292	P	P	03 36 36.6	+0.6
NAZ				P	P	03 36 36.6	+0.6
SOHO	SOHO	76.49	291	P	P	03 36 36.7	+0.6
SOHO				P	P	03 36 36.7	+0.6
TLCR		76.51	322	⇓iP	P	03 36 36.3	+0.4
M39A	Webster	76.53	44	P	P	03 36 35.4	-0.7
	baz=320,SNR=6.5						
GIUM	Giurgiulesti	76.53	323	⇑iP	P	03 36 36.7	+0.7
L40A	Anamosa	76.54	43	eP	P	03 36 35.7	-0.4
	comp=Z,12nm,0.9s						
L40A	Anamosa	76.54	43	P	P	03 36 35.1	-1.1
	baz=320						
F46A	Macinaw City C	76.55	37	P	P	03 36 35.4	-0.7
	baz=323						
J42A	Columbus	76.56	41	P	P	03 36 35.8	-0.4
	baz=321						
KSP	Ksiaz	76.56	333	eP	P	03 36 36.7	+0.6
KSP	Ksiaz	76.56	333	eP	P	03 36 36.7	+0.6
TRPA	Tarpa	76.66	328	⇑iP	P	03 36 37.7	+1.0
TRPA	Tarpa	76.66	328	⇑eP	P	03 36 37.1	+0.3
BMR	Baia Mare	76.67	327	⇑iP	P	03 36 37.7	+0.9
FAQ	Al Faqa, Dubai	76.68	292	i P	P	03 36 37.3	+0.1
	SNR=6.7						
FAQ	Al Faqa, Dubai	76.68	292	P	P	03 36 37.7	+0.5
FAQ				P	P	03 36 37.7	+0.5
PETR	Petresti	76.75	323	⇑iP	P	03 36 38.9	+1.6
ODBI	Odobesti	76.79	324	⇑iP	P	03 36 39.2	+1.7
CFR	Carcaliu	76.80	323	⇓iP	P	03 36 37.8	+0.2
OKC	Ostrava-Krasne	76.81	331	eP	P	03 36 38.2	+0.7
OKC	Ostrava-Krasne	76.81	331	eP	P	03 36 38.2	+0.7
ARCR	ARCALIA	76.82	326	⇓iP	P	03 36 39.0	+1.3
VRI	Vrincioaia	76.85	324	⇓iP	P	03 36 39.0	+1.1
K42A	Prairie Point,	76.87	41	P	P	03 36 36.4	-1.7
	baz=321						
L41A	Preston	76.88	42	P	P	03 36 35.9	-2.2
	baz=321						
LSQQ	Lebel-sur-Quev	76.88	30	P	P	03 36 36.7	-1.2
	baz=327						
PLOR	Plostina	76.89	324	⇑iP	P	03 36 38.5	+0.4
LANS	Liptovska Anna	76.93	330	eP	P	03 36 39.7	+1.4
LANS	Liptovska Anna	76.93	330	eP	P	03 36 39.7	+1.4
ASUD	Al Ashush, Dub	76.94	292	i P	P	03 36 39.5	+0.8
	SNR=6.6						
ASUD	Al Ashush, Dub	76.94	292	P	P	03 36 39.8	+1.1
UPC	Upice	76.94	333	eP	P	03 36 38.9	+0.6
UPC				ex	x	03 36 44.5	
UPC	Upice	76.94	333	eP	P	03 36 38.9	+0.6
UPC				e		03 36 44.5	
DPC	Dobruska-Polom	76.98	332	eP	P	03 36 39.4	+0.8
DPC	Dobruska-Polom	76.98	332	eP	P	03 36 39.4	+0.8
OZUR		77.05	325	⇑iP	P	03 36 40.4	+1.4
CHGQ	Chibougamau	77.05	28	P	P	03 36 38.2	-0.7
	baz=329,SNR=7.3						
KRLC	Kraliky	77.06	332	eP	P	03 36 39.7	+0.7
KRLC	Kraliky	77.06	332	eP	P	03 36 39.7	+0.7
MORC	Moravsky Berou	77.06	331	eP	P	03 36 39.6	+0.5
	comp=Z,73nm,0.9s						
MORC	Moravsky Berou	77.06	331	⇑iP	P	03 36 39.9	+0.8
MORC	Moravsky Berou	77.06	331	⇑iP	P	03 36 39.8	+0.7
GRER		77.14	323	⇑iP	P	03 36 40.8	+1.3
CLL	Collm	77.19	335	eP	P	03 36 38.2	-1.4
	comp=Z,83nm,1.0s						
CLL	Collm	77.19	335	⇑iP	P	03 36 39.7	+0.1
	comp=Z,88nm,1.0s						
CLL				e		03 36 45.0	
CLL				esP	pwP	03 36 56.0	+1.4
CLL	Collm	77.19	335	eP	P	03 36 38.3	-1.4
CLL				pmax	pmax		
	comp=Z,83nm,1.0s						
TIRR	Tirgusor	77.26	322	eP	P	03 36 40.4	+0.3
	comp=Z,35nm,0.9s						
TIRR	Tirgusor	77.26	322	⇑iP	P	03 36 40.5	+0.4
TIRR	Tirgusor	77.26	322	eP	P	03 36 40.4	+0.3
TIRR				pmax	pmax		
	comp=Z,35nm,0.9s						
N40A	Mertquake, Sal	77.27	44	P	P	03 36 39.3	-0.9
	baz=320						
BRG	Berggiesshubel	77.28	334	i P	P	03 36 40.4	+0.2
	comp=Z,32nm,1.0s						
BRG	Berggiesshubel	77.28	334	i P	P	03 36 40.4	+0.2
BRG				pmax	pmax		
	comp=Z,32nm,1.0s						
HARR	Harsova	77.28	322	⇓iP	P	03 36 40.8	+0.5
DOPR	Dopca	77.32	325	⇑iP	P	03 36 41.4	+0.9
TLB	Topalu	77.32	322	⇑iP	P	03 36 41.1	+0.6
H46A	Fife Lake	77.34	38	P	P	03 36 40.2	-0.5
	baz=323,SNR=6.8						
PVCC	Panska Ves	77.39	333	eP	P	03 36 41.6	+0.8
PVCC	Panska Ves	77.39	333	eP	P	03 36 41.6	+0.8
M41A	Milan	77.39	43	P	P	03 36 40.0	-0.9
	baz=321						
CJR	Cluj-Napoca	77.42	326	⇓iP	P	03 36 42.3	+1.2
STKA	Stephens Creek	77.44	189	eP	P	03 36 42.0	+0.9
	comp=Z,2.1nm,0.9s						
STKA				epP	sP	03 36 56.4	-0.5
STKA	Stephens Creek	77.44	189	eP	P	03 36 42.0	+0.9
STKA				e*PP	sP	03 36 56.4	-0.5
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	Stephens Creek	77.44	189	P	P	03 36 42.0	+0.9
	comp=Z,2.6nm,0.8s,baz=316,slow=8.3,SNR=6.3						
MLR	Muntele Rosu	77.47	324	eP	P	03 36 42.4	+0.9
	comp=Z,51nm,0.9s						
MLR	Muntele Rosu	77.47	324	⇑iP	P	03 36 42.5	+0.9
MFTR	Murfatlar	77.48	322	⇑iP	P	03 36 41.5	+0.1
ILGA	Ilgaz	77.49	317	eP	P	03 36 44.2	+2.4
	comp=Z,98nm,1.1s						
PGOR	Pogoanele	77.51	323	⇑iP	P	03 36 43.0	+1.5
LTVH	Ltavrtes, Hu	77.52	328	⇑eP	P	03 36 42.0	+0.5
ISR	Istrita	77.53	324	⇑iP	P	03 36 42.6	+0.9
AMRR	Amara	77.60	323	⇑iP	P	03 36 42.5	+0.5
DRGR		77.70	327	⇑iP	P	03 36 43.2	+0.5
MHTO	MHTO	77.70	287	P	P	03 36 44.2	+1.2
MHTO				P	P	03 36 44.2	+1.2
VYHS	Vyhne	77.71	330	eP	P	03 36 43.5	+0.9
VYHS				pmax	pmax		
	comp=Z,26nm,1.0s						
VYHS	Vyhne	77.71	330	eP	P	03 36 43.5	+0.9
N41A	Harden Midland	77.75	44	eP	P	03 36 42.7	-0.3
	comp=Z,15nm,0.8s						
N41A	Harden Midland	77.75	44	P	P	03 36 41.1	-1.9
	baz=321						
VRAC	Vranov	77.78	332	⇓iP	P	03 36 44.1	+1.0
VRAC	Vranov	77.78	332	⇑iP	P	03 36 44.0	+1.0
KOLL	Kolacno	77.79	330	eP	P	03 36 44.0	+0.9
KOLL	Kolacno	77.79	330	eP	P	03 36 44.0	+0.9
SECR		77.79	324	⇑iP	P	03 36 43.8	+0.6
ICOR	Ion Corvin	77.80	322	⇑iP	P	03 36 44.5	+1.4
PSZ	Piszkesteto	77.82	329	eP	P	03 36 44.1	+0.8
	comp=Z,52nm,1.0s						
PSZ	Piszkesteto	77.82	329	⇑iP	P	03 36 44.3	+1.0
PSZ	Piszkesteto	77.82	329	⇑eP	P	03 36 44.0	+0.7
PSZ	Piszkesteto	77.82	329	eP	P	03 36 44.1	+0.8
PSZ				pmax	pmax		
	comp=Z,52nm,1.0s						
PRA	Prague	77.83	333	eP	P	03 36 44.6	+1.4
PRA	Prague	77.83	333	eP	P	03 36 44.6	+1.4
PRU	Pruhonice	77.87	333	eP	P	03 36 44.1	+0.6
PRU				ex	x	03 36 49.7	
PRU	Pruhonice	77.87	333	eP	P	03 36 44.1	+0.6
PRU				e		03 36 49.7	
VOIR		77.89	325	⇑iP	P	03 36 44.8	+1.0
PSN	Preselentsi	77.98	322	eP	P	03 36 45.8	+1.6
RASA	Rasa	78.00	323	⇑iP	P	03 36 44.5	+0.2
SULR		78.00	323	⇑iP	P	03 36 44.8	+0.5
MTUR	Matau	78.05	324	⇑iP	P	03 36 45.3	+0.6
N42A	Yates City	78.06	43	P	P	03 36 44.0	-0.7
	baz=321,SNR=5.0						
KRUC	Moravsky	78.06	332	⇑iP	P	03 36 45.3	+0.7
WMOK	Wichita Mounta	78.10	52	eP	P	03 36 45.8	+0.7
	comp=Z,5.2nm,1.0s						
WMOK				epP	pP	03 36 57.9	+1.4
WMOK	Wichita Mounta	78.10	52	eP	P	03 36 45.8	+0.7
WMOK				e*PP	pP	03 36 57.9	+1.4
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WMOK	Wichita Mounta	78.10	52	P	P	03 36 44.1	-1.0
	baz=318						
ARR	Arges	78.11	325	⇓iP	P	03 36 46.4	+1.4
TREC	Trest	78.16	332	eP	P	03 36 45.8	+0.6
TREC	Trest	78.16	332	eP	P	03 36 45.8	+0.6
SMOL	Smolenice	78.18	331	eP	P	03 36 46.5	+1.2
SMOL	Smolenice	78.18	331	eP	P	03 36 46.5	+1.2
O41A	Passleys Farm,	78.20	44	P	P	03 36 44.9	-0.6
	baz=321,SNR=7.1						
I48A	Sherman Twp	78.27	37	P	P	03 36 44.7	-1.1
	baz=324						
NKC	Novy Kostel	78.30	335	eP	P	03 36 46.6	+0.7
NKC	Novy Kostel	78.30	335	eP	P	03 36 46.6	+0.7
MODS	Modra-Piesok	78.36	331	eP	P	03 36 47.5	+1.2
MODS				pmax	pmax		
	comp=Z,64nm,1.0s						
MODS	Modra-Piesok	78.36	331	eP	P	03 36 47.4	+1.2
DEV	Deva	78.38	326	⇑iP	P	03 36 46.5	+0.1
SGRR	Singureni	78.49	323	⇑iP	P	03 36 46.9	-0.1
SIRR	Siria	78.54	327	⇑iP	P	03 36 48.0	+0.7
BR101	Keskin Array S	78.55	316	eP	P	03 36 47.9	+0.2
BR131	Keskin Array S	78.55	316	eP	P	03 36 48.5	+0.8
	comp=Z,32nm,1.0s						
BR131	Keskin Array S	78.55	316	P	P	03 36 48.2	+0.6
	SNR=9.8						
BRTR	Keskin Array B	78.55	316	P	P	03 36 47.9	+0.2
	comp=Z,18nm,0.9s,baz=67,slow=4.2,SNR=75						
J47A	Sunmer	78.55	38	P	P	03 36 46.3	-1.0
	baz=324						
ZST	Bratislava	78.57	331	eP	P	03 36 47.2	-0.2
ZST				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZST	Bratislava	78.57	331	eP	P	03 36 47.1	-0.3
HDIL	Hopedale	78.62	43	eP	P	03 36 47.8	0.0
	comp=Z,36nm,1.1s						
HDIL	Hopedale	78.62	43	P	P	03 36 47.3	-0.5
	baz=321,SNR=5.3						
HUMR	Humele	78.66	324	⇓iP	P	03 36 47.6	-0.3
GZR	Gura Zlata	78.83	326	⇑iP	P	03 36 49.4	+0.4
ANTO	Ankara	78.85	316	eP	P	03 36 50.6	+1.4
	comp=Z,57nm,0.9s						
ANTO	Ankara	78.85	316	⇑iP	P	03 36 50.6	+1.4
ANTO	Ankara	78.85	316	P	P	03 36 50.0	+0.8
	SNR=7.7						
TUL1	Leonard	78.87	50	P	P	03 36 49.2	-0.1
	baz=319						
P42A	Winchester	78.87	44	eP	P	03 36 49.2	0.0
	comp=Z,14nm,1.0s						
P42A	Winchester	78.87	44	P	P	03 36 47.9	-1.2
	baz=321						
BR231	Keskin MP Arra	78.88	316	eP	P	03 36 51.0	+1.6
	comp=Z,50nm,0.9s						
Q41A	Truxton	78.92	45	P	P	03 36 49.3	-0.2
	baz=321,SNR=8.0						
KHC	Kasperske Hory	78.92	333	eP	P	03 36 50.0	+0.6
	comp=Z,28nm,1.0s						
KHC	Kasperske Hory	78.92	333	eP	P	03 36 50.2	+0.8
KHC	Kasperske Hory	78.92	333	eP	P	03 36 49.9	+0.6
KHC	Kasperske Hory	78.92	333	eP	P	03 36 50.0	+0.6
KHC				pmax	pmax		
	comp=Z,28nm,1.0s						
N44A	Piper City	78.99	42	P	P	03 36 48.8	-1.0
	baz=322						
BZS	Buzias	79.10	327	⇑iP	P	03 36 50.6	+0.3
GEC2	GERESS Array S	79.13	333	eP	P	03 36 50.9	+0.3
	comp=Z,21nm,0.9s						
GERES	GERESS Array B	79.13	333	P	P	03 36 50.6	0.0
	comp=Z,13nm,0.8s,baz=35,slow=4.9,SNR=63						
GEA0	GERESS Array S	79.14	333	eP	P	03 36 50.7	+0.1
GRA1	Grafenberg Arr	79.15	335	eP	P	03 36 51.6	+1.0
	comp=Z,76nm,1.0s						

GRFO	Grafenberg	79.15	335	*e*P	P	03 36 51.6	+1.0
	comp=Z,68nm,1.0s						
TX31	Lajitas Ar. Si	79.18	59	*e*P	P	03 36 51.5	+0.3
LTX	Lajitas	79.18	59	*e*P	P	03 36 50.1	-1.1
LTX	Lajitas	79.18	59	*e*P	P	03 36 50.1	-1.1
TXAR	Lajitas Array	79.18	59	P	P	03 36 50.1	-1.1
	comp=Z,4.2nm,1.0s,baz=297,slow=4.1,SNR=22						
SOP	Sopron	79.20	331	*e*P	P	03 36 52.0	+1.2
ZIMR		79.20	323	⇑*i*P	P	03 36 51.3	+0.4
K48A	Perry	79.21	38	P	P	03 36 49.6	-1.4
	baz=324						
CONA	Conrad Observa	79.22	331	*i* P	P	03 36 52.2	+1.1
	comp=Z,42nm,1.2s,SNR=11						
N45A	Kentland	79.24	41	P	P	03 36 49.9	-1.3
	baz=322						
SZH	Strazhica	79.28	323	*e*P	P	03 36 51.9	+0.5
Q42A	Golden Eagle	79.30	44	P	P	03 36 50.8	-0.8
	baz=321						
CRAR	CRAIOVA	79.31	325	⇑*i*P	P	03 36 52.8	+1.3
VLAD	Vladila	79.33	324	⇑*i*P	P	03 36 52.0	+0.4
O44A	Mansfield	79.33	42	P	P	03 36 50.8	-1.0
	baz=322						
R41A	Rosebud	79.35	45	P	P	03 36 51.1	-0.8
	baz=321						
L47A	Sherwood	79.39	39	P	P	03 36 50.8	-1.2
	baz=323						
HERR	Herculane	79.40	326	⇑*i*P	P	03 36 52.1	+0.1
BANR	Banloc	79.48	327	⇑*i*P	P	03 36 53.3	+0.9
G53A	Haliburton	79.57	33	P	P	03 36 52.1	-0.8
	baz=327						
HHAR	Hobbs	79.57	48	*e*P	P	03 36 53.7	+0.6
	comp=Z,4.9nm,0.9s						
CCM	Cathedral Cave	79.60	45	*e*P	P	03 36 53.0	-0.2
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	79.60	45	*e*P	P	03 36 53.0	-0.2
CCM				pmax	pmax		
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	79.60	45	P	P	03 36 52.1	-1.1
	baz=321						
O45A	Potomac	79.61	42	P	P	03 36 52.2	-1.0
	baz=322						
R42A	Luebbering	79.66	45	P	P	03 36 52.6	-0.9
	baz=321						
BEBN	Eben Emael	79.69	339	⇓P	P	03 36 54.2	+0.8
	comp=Z,6.8nm,1.1s						
PUNG	Punghina	79.70	325	⇑*i*P	P	03 36 53.7	+0.1
M47A	Cromwell	79.70	40	P	P	03 36 53.1	-0.6
	baz=323						
S41A	Jillco Farms,	79.71	46	P	P	03 36 52.9	-0.9
	baz=320						
MORH	Mrgy, Hungar	79.72	329	*e*P	P	03 36 53.0	-0.7
L48A	N Adams	79.76	39	P	P	03 36 54.0	0.0
	baz=324						
MDVR	Moldovita	79.76	326	⇑*i*P	P	03 36 53.6	-0.4
MEM	Membach	79.77	338	⇑P	P	03 36 54.1	+0.2
	comp=Z,41nm,1.0s						
P44A	Sand Creek, Wi	79.80	43	P	P	03 36 54.3	+0.1
	baz=322						
SFIN	Lafayette	79.80	41	P	P	03 36 53.3	-1.0
	baz=323						
MOA	Molln	79.82	332	*i* P	P	03 36 55.1	+0.9
	comp=Z,19nm,0.9s,SNR=6.2						
L49A	Milan	79.92	38	P	P	03 36 54.3	-0.6
	baz=324						
ARSA	Arzberg	79.92	331	*i* P	P	03 36 55.9	+1.1
	comp=Z,23nm,1.2s,SNR=6.4						
M48A	Edgerton	80.00	39	*e*P	P	03 36 55.8	+0.5
	comp=Z,12nm,0.9s						
M48A	Edgerton	80.00	39	P	P	03 36 54.2	-1.1
	baz=324						
UCC	Uccle	80.02	339	⇑P	P	03 36 55.3	+0.1
Q44A	Meyer Farm, Va	80.05	44	*e*P	P	03 36 55.6	+0.1
	comp=Z,26nm,1.3s						
Q44A	Meyer Farm, Va	80.05	44	P	P	03 36 54.1	-1.5
	baz=322						
N47A	Urbana	80.05	40	P	P	03 36 54.6	-1.0
	baz=323						
S42A	Caledonia	80.05	45	P	P	03 36 55.1	-0.5
	baz=321,SNR=12						
U40A	Yellville	80.08	48	P	P	03 36 55.1	-0.7
	baz=320,SNR=12						
T41A	Mountain View	80.12	46	P	P	03 36 55.2	-0.9
	baz=321						
P45A	Graceland, Par	80.17	42	*e*P	P	03 36 56.3	+0.1
	comp=Z,14nm,0.8s						
P45A	Graceland, Par	80.17	42	P	P	03 36 55.3	-0.9
	baz=322						
FRGS	Fruska Gora	80.18	328	⇑*i*P	P	03 36 56.3	+0.1
SNF	Seneffe	80.30	339	⇓P	P	03 36 57.4	+0.7
O47A	Sheridan	80.34	41	P	P	03 36 56.0	-1.2
	baz=323						
N48A	Decatur	80.37	40	P	P	03 36 56.7	-0.6
	baz=324,SNR=7.5						
DIM	Dimitrovgrad	80.44	322	*e*P	P	03 36 58.7	+1.0
Q45A	Warren Harvey,	80.47	43	P	P	03 36 57.5	-0.4
	baz=322,SNR=5.3						
T42A	Van Buren	80.47	46	*e*P	P	03 36 57.1	-0.8
	comp=Z,6.2nm,0.8s						
T42A	Van Buren	80.47	46	P	P	03 36 56.6	-1.3
	baz=321						
S43A	Fulton Ridge,	80.56	45	P	P	03 36 56.5	-1.9
	baz=321						
STU	Stuttgart	80.57	336	*e*P	P	03 36 59.0	+0.8
	comp=Z,45nm,1.1s						
STU	Stuttgart	80.57	336	*e*P	P	03 36 59.0	+0.8
STU				pmax	pmax		
	comp=Z,45nm,1.1s						
SOKA	Soboth	80.59	331	*i* P	P	03 36 59.0	+0.5
	comp=Z,40nm,1.1s,SNR=15						
PERS	Pernice	80.60	331	*i* P	P	03 36 58.9	+0.4
WLF	Walferdange	80.60	338	⇑P	P	03 37 00.1	+1.7
	comp=Z,25nm,1.2s						
DOU	Dourbes	80.61	339	⇑P	P	03 36 58.7	+0.3
O48A	Farmland	80.79	40	P	P	03 36 59.0	-0.5
	baz=324,SNR=5.7						
KBA	Koelnbreinsper	80.80	332	*i* P	P	03 37 01.0	+1.2
	comp=Z,34nm,0.9s,SNR=15						
M50A	Fremont	80.81	38	P	P	03 36 58.8	-0.8
	baz=325						
S44A	Carbondale	80.88	44	P	P	03 36 59.6	-0.4
	baz=322						
SIUC	Southern Illin	80.88	44	*e*P	P	03 37 00.7	+0.6
	comp=Z,17nm,0.8s						
V41A	Mountainview	80.89	48	P	P	03 36 59.1	-1.1
	baz=320						
P47A	Martinsville	80.89	41	P	P	03 36 59.8	-0.3
	baz=323						
OBKA	Obir	80.90	331	*i* P	P	03 36 59.3	-0.8
	comp=Z,9.6nm,0.7s						
VTS	Vitosha	80.95	324	*e*P	P	03 37 01.2	+0.7
	comp=Z,95nm,1.1s						
VTS	Vitosha	80.95	324	⇑*i*P	P	03 37 01.2	+0.7
VTS	Vitosha	80.95	324	P	P	03 37 01.1	+0.5
VTS	Vitosha	80.95	324	*e*P	P	03 37 01.4	+0.8
GOLS	Golise	80.97	331	*i* P	P	03 37 00.7	+0.2
PBMO	Poplar Bluff	81.00	46	*e*P	P	03 37 01.0	+0.2
	comp=Z,9.0nm,0.6s						
DIVS	Divibare	81.00	327	*e*P	P	03 37 00.1	-0.7
	comp=Z,22nm,1.1s						
DIVS	Divibare	81.00	327	⇑*i*P	P	03 37 00.6	-0.2
MIAR	Mount Ida	81.08	49	*e*P	P	03 37 00.8	-0.5
	comp=Z,5.7nm,0.8s						
MIAR	Mount Ida	81.08	49	*e*P	P	03 37 00.8	-0.5
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MIAR	Mount Ida	81.08	49	P	P	03 36 59.6	-1.7
	baz=320						
MYKA	Terra Mystica	81.10	332	*i* P	P	03 37 01.5	+0.3
	comp=Z,19nm,1.4s						
WATA	Walderalm	81.14	334	*i* P	P	03 37 02.5	+1.0
	comp=Z,14nm,0.5s,SNR=11						
ALN	Alexandroupoli	81.16	321	*e*P	P	03 37 02.5	+1.0
	comp=Z,26nm,1.0s						
ALN	Alexandroupoli	81.16	321	P	P	03 37 01.6	+0.1
RDO	Rodhopi	81.18	322	P	P	03 37 01.6	0.0
RDO	Rodhopi	81.18	322	P	P	03 37 01.6	0.0
CRES	Cresnjev	81.18	331	*i* P	P	03 37 01.6	0.0
CRES	Cresnjev	81.18	331	⇑*i*P	P	03 37 00.6	-1.0
WHAR	Wooly Hollow	81.19	48	*e*P	P	03 37 01.8	0.0
	comp=Z,11nm,1.1s						
BFO	Black Forest	81.22	336	*e*P	P	03 37 02.0	+0.3
	comp=Z,25nm,0.8s						
BFO	Black Forest	81.22	336	*e*P	P	03 37 02.1	+0.3
BFO				pmax	pmax		
	comp=Z,25nm,0.8s						
RETA	Reutte	81.25	334	*i* P	P	03 37 03.0	+1.0
	comp=Z,33nm,1.2s,SNR=6.5						
Q47A	Bedord North L	81.26	42	P	P	03 37 01.7	-0.4
	baz=323,SNR=6.1						
V42A	Cord	81.26	47	P	P	03 37 01.2	-0.9
	baz=321						
MOTA	Moosalm	81.28	334	*i* P	P	03 37 03.1	+0.9
	comp=Z,61nm,1.2s,SNR=19						
N50A	Nevada	81.28	39	P	P	03 37 01.1	-1.0
	baz=325						
W41B	Gary Mavity, V	81.31	48	*e*P	P	03 37 02.7	+0.3
	comp=Z,17nm,1.3s						
W41B	Gary Mavity, V	81.31	48	P	P	03 37 01.9	-0.4
	baz=320						
P48A	Milroy	81.31	41	P	P	03 37 02.3	0.0
	baz=324						
PMOR	Pomariorio Ree	81.33	122	*e*T	T	05 06 52.5	
	comp=Z,12nm,0.2s						
SQTA	Sankt Quirin	81.35	334	*i* P	P	03 37 03.4	+0.8
	comp=Z,46nm,1.2s,SNR=11						
ABTA	Abfaltersbach	81.36	333	*i* P	P	03 37 02.5	-0.2
	comp=Z,12nm,1.0s,SNR=5.5						
HAPS	Han Pijesak,Bl	81.41	327	*e*P	P	03 37 02.6	-0.4
BBLS	Lazići	81.43	327	⇑*i*P	P	03 37 03.0	0.0
PARMO	Parma	81.43	45	*e*P	P	03 37 04.0	+1.0
	comp=Z,41nm,0.8s						
BLY	Banja Luka	81.50	329	*e*P	P	03 37 02.5	-0.7
	comp=Z,6.9nm,0.8s						
BLY	Banja Luka	81.50	329	⇓*i*P	P	03 37 03.3	0.0
BLY	Banja Luka	81.50	329	*e*P	P	03 37 02.9	-0.4
TAOE	Nuku Hiva Isla	81.52	112	*e*LR	LR	04 02 46.6	
	comp=Z,658nm,23.9s,baz=326						
L53A	Girard	81.55	36	P	P	03 37 03.1	-0.4
	baz=326						
P49A	Miami Univ. Ec	81.57	40	P	P	03 37 02.7	-1.0
	baz=324						
O50A	Cable	81.57	39	P	P	03 37 03.2	-0.6
	baz=324,SNR=6.6						
Q48A	North Vernon	81.59	41	P	P	03 37 03.4	-0.4
	baz=324						
MMB	Musomiste	81.59	323	*e*P	P	03 37 04.6	+0.7
CEY	Cerknica	81.61	331	⇑*i*P	P	03 37 02.6	-1.3
S46A	Don Dixon Farm	81.64	44	P	P	03 37 03.2	-0.9
	baz=323						
ECH	Echery	81.65	337	*e*P	P	03 37 04.2	+0.2
	comp=Z,19nm,0.8s						
ECH	Echery	81.65	337	*e*P	P	03 37 04.2	+0.2
ECH				pmax	pmax		
	comp=Z,19nm,0.8s						
FETA	Feichten	81.68	334	*i* P	P	03 37 05.1	+0.7
	comp=Z,27nm,1.1s,SNR=9.6						
DAVA	Damuels	81.70	335	*i* P	P	03 37 05.0	+0.5
	comp=Z,35nm,0.9s						
R47A	Wooly Knot Far	81.72	42	P	P	03 37 04.2	-0.4
	baz=323						
NVR	Nevrokopi	81.73	323	P	P	03 37 02.6	-2.0
NVR	Nevrokopi	81.73	323	P	P	03 37 02.6	-2.0
ACSO	Alum Creek Sta	81.79	39	*e*P	P	03 37 05.1	+0.2
	comp=Z,25nm,1.4s						
ACSO	Alum Creek Sta	81.79	39	P	P	03 37 04.5	-0.3
	baz=325						
M53A	WI Miller and	81.80	37	P	P	03 37 04.8	-0.1
	baz=326						
WCI	Wyandotte Cave	81.89	42	*e*P	P	03 37 05.7	+0.3
	comp=Z,13nm,0.9s						
WCI	Wyandotte Cave	81.89	42	*e*P	P	03 37 05.7	+0.3
WCI				pmax	pmax		
	comp=Z,13nm,0.9s						
WCI	Wyandotte Cave	81.89	42	P	P	03 37 05.5	+0.1
	baz=323						
P50A	Jamestown	81.93	40	P	P	03 37 05.5	-0.1
	baz=324						
R48A	Northridge Ran	81.95	42	P	P	03 37 05.8	0.0
	baz=323						
MANT	Manisa	81.96	318	*e*P	P	03 37 06.9	+0.8
	comp=Z,87nm,1.1s						
O51A	Pataskala	82.03	39	P	P	03 37 06.1	-0.1
	baz=325						
T46A	Princeton	82.06	44	P	P	03 37 06.4	+0.1
	baz=322,SNR=9.2						
STIP	Stip	82.15	324	*i* P	P	03 37 06.3	-0.5
FUORN	Ofenpass-Fuorn	82.18	334	*e*P	P	03 37 08.3	+1.2
	comp=Z,40nm,1.2s						
UDBI	Udbina	82.20	330	*i* P	P	03 37 06.2	-0.9
SKO	Skopje	82.22	325	*i* P	P	03 37 08.2	+1.0
VAY	Valandovo	82.30	324	*i* P	P	03 37 08.1	+0.5
PPT2	Papeete2	82.36	124	*e*LR	LR	04 02 45.4	
	comp=Z,944nm,23.0s,baz=324						
PPT2	Papeete2	82.36	124	*e*T	T	05 08 10.9	
	comp=Z,4.0nm,0.2s						
P51A	Williamsport	82.36	39	*e*P	P	03 37 07.4	-0.5
	comp=Z,9.3nm,0.8s						
P51A	Williamsport	82.36	39	P	P	03 37 06.9	-1.0
	baz=325						
O52A	Adamsville	82.39	38	*e*P	P	03 37 08.9	+0.9
	comp=Z,33nm,1.4s						
O52A	Adamsville	82.39	38	P	P	03 37 07.5	-0.5
	baz=326						
CSS	Mathiatis	82.39	313	*e*P	P	03 37 07.5	-0.7
	comp=Z,22nm,0.9s						
S48A	Wiedeman Farm,	82.45	42	P	P	03 37 08.2	-0.1
	baz=323,SNR=5.1						
Q50A	Georgetown	82.47	40	P	P	03 37 07.7	-0.8
	baz=324						
N54A	Moraine State	82.48	37	P	P	03 37 07.4	-1.1
	baz=326						
NVLJ	Novalja	82.49	330	*i* P	P	03 37 07.4	-1.0
M55A	Ridgway	82.57	36	P	P	03 37 07.8	-1.2
	baz=327						
BRY	Bratogost	82.58	327	⇑*i*P	P	03 37 08.2	-0.9
TUE	Stuetta	82.59	335	*e*P	P	03 37 09.8	+0.5
	comp=Z,48nm,1.4s						
Q51A	Peebles	82.61	40	*e*P	P	03 37 09.5	+0.3
	comp=Z,11nm,0.8s						
Q51A	Peebles	82.61	40	P	P	03 37 08.4	-0.8
	baz=325						
PDG	Podgorica	82.70	326	⇑*i*P	P	03 37 09.6	0.0
PDG	Podgorica	82.70	326	⇑*i*P	P	03 37 09.2	-0.4
TTG	Podgorica	82.70	326	*e*P	P	03 37 08.8	-0.8
	comp=Z,42nm,1.1s						
TTG	Podgorica	82.70	326	*e*P	P	03 37 08.8	-0.8
TTG				pmax	pmax		
	comp=Z,42nm,1.1s						
S49A	Springfield	82.72	42	P	P	03 37 09.6	-0.2
	baz=324,SNR=5.8						
T48A	Bowling Green	82.73	43	P	P	03 37 08.9	-0.9
	baz=323						
R50A	Paris	82.76	41	P	P	03 37 09.0	-1.0
	baz=324						
KRUS	Krusevo	82.81	325	*i* P	P	03 37 10.6	+0.3
TREB	Trebinje	82.81	327	*e*P	P	03 37 07.8	-2.4
WVT	Waverly	82.81	45	*e*P	P	03 37 10.5	+0.2
	comp=Z,8.6nm,0.9s						
WVT	Waverly	82.81	45	*e*P	P	03 37 10.5	+0.2
WVT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WVT	Waverly	82.81	45	P	P	03 37 09.5	-0.8
	baz=323						
U47A	Clarksville	82.83	44	P	P	03 37 09.4	-0.9
	baz=323						
V46A	Holladay	82.93	45	P	P	03 37 10.0	-0.9
	baz=322						
DRME	Dracevica, Mon	82.94	326	⇑*i*P	P	03 37 10.7	-0.1
HCY	Herceg Novi	82.98	327	*e*P	P	03 37 09.8	-1.3
BIA	Bitola	83.07	324	*i* P	P	03 37 11.9	+0.3
R51A	Hillsboro	83.09	40	P	P	03 37 10.7	-1.0
	baz=325						
U48A	Cassie Pea, Po	83.14	43	P	P	03 37 11.2	-0.8
	baz=323						
T49A	Edmonton	83.14	42	*e*P	P	03 37 11.9	-0.1
	comp=Z,5.7nm,0.9s						
T49A	Edmonton	83.14	42	P	P	03 37 11.3	-0.7
	baz=324						
V47A	Nunnelly	83.20	45	P	P	03 37 10.7	-1.6
	baz=323						
S50A	Richmond	83.22	41	P	P	03 37 11.5	-0.9
	baz=324						
OXF	Oxford	83.29	47	*e*P	P	03 37 13.3	+0.6
	comp=Z,23nm,1.0s						
OXF	Oxford	83.29	47	*e*P	P	03 37 13.3	+0.6
OXF				pmax	pmax		
	comp=Z,23nm,1.0s						
SENIN	Lac Senin/Sane	83.30	336	*e*P	P	03 37 13.7	+0.8
	comp=Z,25nm,0.8s						
TIR	Tirane	83.38	325	*e*P	P	03 37 13.0	-0.1
	comp=Z,25nm,0.6s						
TIR	Tirane	83.38	325	*e*P	P	03 37 13.0	-0.1
TIR				pmax	pmax		
	comp=Z,25nm,0.6s						
U49A	Red Boiling Sp	83.50	43	P	P	03 37 13.5	-0.4
	baz=324,SNR=6.5						
AOS	Alonnisos	83.52	322	P	P	03 37 06.9	-7.0
AOS	Alonnisos	83.52	322	P	P	03 37 06.9	-7.0
T50A	Nancy	83.54	42	P	P	03 37 13.8	-0.3
	baz=324,SNR=7.8						
V48A	Smith Brothers	83.61	44	*e*P	P	03 37 14.5	0.0
	comp=Z,6.6nm,0.7s						
V48A	Smith Brothers	83.61	44	P	P	03 37 13.9	-0.6
	baz=323						
S51A	Beattyville	83.62	41	P	P	03 37 13.9	-0.5
	baz=325						
Y45A	Yeager Farm, C	83.72	47	P	P	03 37 14.2	-0.8
	baz=322						
Q54A	Coxs Mills	83.76	38	P	P	03 37 14.2	-0.9
	baz=326						
P55A	Reedsville	83.76	37	P	P	03 37 14.6	-0.5
	baz=327						
U50A	Jamestown	84.03	42	P	P	03 37 15.8	-0.8
	baz=324,SNR=7.6						
W48A	Pulaski	84.04	45	P	P	03 37 16.3	-0.3
	baz=323,SNR=7.3						
V49A	McMinnville	84.04	43	P	P	03 37 15.7	-0.9
	baz=324						
SMIA	Simia	84.06	322	P	P	03 37 16.0	-0.7
Y46A	Houston	84.06	47	P	P	03 37 16.5	-0.3
	baz=322,SNR=5.7						
X47A	Russelville	84.07	46	P	P	03 37 15.9	-0.9
	baz=323						
Q55A	Buckhannon	84.08	38	P	P	03 37 14.7	-2.1
	baz=327						
AGG	Agios Georgios	84.32	323	*e*P	P	03 37 17.5	-0.5
	comp=Z,12nm,0.8s						
AGG	Agios Georgios	84.32	323	*e*P	P	03 37 17.5	-0.5
AGG				pmax	pmax		
	comp=Z,12nm,0.8s						
LKR	Lokris	84.34	322	P	P	03 37 12.5	-5.6
LKR	Lokris	84.34	322	P	P	03 37 12.5	-5.6
W49A	Belvidere	84.38	44	P	P	03 37 17.2	-1.1
	baz=324						
JAN	Janina	84.41	324	P	P	03 37 17.8	-0.7
JAN	Janina	84.41	324	P	P	03 37 17.8	-0.7
JAN	Janina	84.41	324	P	P	03 37 17.8	-0.7
U51A	La Follette	84.45	42	P	P	03 37 17.7	-1.0
	baz=325						
SWET	Sewanee	84.47	44	*e*P	P	03 37 18.6	-0.2
	comp=Z,16nm,0.9s						
V50A	Pikevile	84.50	43	P	P	03 37 17.9	-1.1
	baz=324						
X48A	Hartselle	84.53	45	P	P	03 37 17.4	-1.7
	baz=323						
TZTN	Tazewell	84.53	41	P	P	03 37 18.5	-0.7
	baz=325						
SRN	Sarande	84.57	325	P	P	03 37 15.2	-4.0
SRN	Sarande	84.57	325	P	P	03 37 15.2	-4.0
R55A	Marlinton	84.65	38	P	P	03 37 19.6	-0.1
	baz=327						
BNI	Bardonecchia	84.67	336	*e*P	P	03 37 20.6	+0.9
	comp=Z,18nm,1.0s						
BNI	Bardonecchia	84.67	336	*e*P	P	03 37 20.7	+0.9
BNI				pmax	pmax		
	comp=Z,18nm,1.0s						
U52A	Thorn Hill	84.74	41	P	P	03 37 19.5	-0.7
	baz=325,SNR=6.1						
V51A	Loudon	84.76	42	*e*P	P	03 37 20.9	+0.6
	comp=Z,14nm,1.0s						
V51A	Loudon	84.76	42	P	P	03 37 19.3	-1.0
	baz=324						
W50A	Signal Mountai	84.78	43	*e*P	P	03 37 21.3	+0.9
	comp=Z,9.3nm,0.9s						
W50A	Signal Mountai	84.78	43	P	P	03 37 19.4	-1.0
	baz=324						
X49A	Woodville	84.84	45	P	P	03 37 19.8	-0.9
	baz=324						
Y48A	Jasper	84.89	45	P	P	03 37 20.4	-0.5
	baz=323						
AQU	L'Aquila	84.94	330	*e*P	P	03 37 22.2	+1.1
	comp=Z,35nm,0.9s						
AQU	L'Aquila	84.94	330	*e*P	P	03 37 22.2	+1.1
AQU				pmax	pmax		
	comp=Z,35nm,0.9s						
AQU	L'Aquila	84.94	330	*e*P	P	03 37 21.6	+0.5
CPCT	Cooper Cave	84.96	43	*e*P	P	03 37 21.4	+0.1
	comp=Z,15nm,1.0s						
T54A	Tazewell	85.02	40	P	P	03 37 19.9	-1.7
	baz=326						
SSB	Saint Sauveur	85.06	337	*e*P	P	03 37 22.6	+0.9
	comp=Z,26nm,0.9s						
W51A	Cleveland	85.08	43	P	P	03 37 20.7	-1.2
	baz=324						
V52A	Sevierville	85.08	42	*e*P	P	03 37 22.2	+0.3
	comp=Z,12nm,1.0s						
V52A	Sevierville	85.08	42	P	P	03 37 20.5	-1.4
	baz=325						
U53A	Fall Branch	85.13	41	P	P	03 37 21.7	-0.5
	baz=325,SNR=5.7						
TKL	Tuckaleechee C	85.15	42	*e*P	P	03 37 22.4	+0.3
	comp=Z,13nm,1.0s						
TKL	Tuckaleechee C	85.15	42	*e*P	P	03 37 22.5	+0.3
TKL				pmax	pmax		
	comp=Z,13nm,1.0s						
MATE	Matera	85.21	327	⇑*i*P	P	03 37 22.5	+0.1
GUR	Goura	85.22	322	P	P	03 37 20.7	-1.9
GUR	Goura	85.22	322	P	P	03 37 20.7	-1.9
147A	Livingston	85.32	47	P	P	03 37 22.3	-0.8
	baz=323						
Y49A	Blount Mountai	85.32	45	*e*P	P	03 37 22.9	-0.2
	comp=Z,14nm,1.3s						
Y49A	Blount Mountai	85.32	45	P	P	03 37 22.0	-1.1
	baz=324						
BLA	Blacksburg	85.41	39	*e*P	P	03 37 24.3	+0.8
	comp=Z,15nm,1.0s						
BLA	Blacksburg	85.41	39	*e*P	P	03 37 24.3	+0.8
BLA				pmax	pmax		
	comp=Z,15nm,1.0s						
BLA	Blacksburg	85.41	39	P	P	03 37 22.4	-1.1
	baz=326						
V53A	Saluda	85.59	42	P	P	03 37 23.4	-1.1
	baz=325						
Y50A	Piedmont	85.63	45	P	P	03 37 23.2	-1.5
	baz=324						
148A	Greensboro	85.70	46	P	P	03 37 23.1	-1.8
	baz=323						
W53A	Cullowhee	85.83	42	P	P	03 37 24.7	-1.1
	baz=325						
Y51A	Rockmart	85.95	44	P	P	03 37 25.9	-0.4
	baz=324,SNR=6.8						
ITM	Ithomi	86.03	322	*e*P	P	03 37 26.2	-0.4
	comp=Z,53nm,0.8s						
Z50A	Ashland	86.05	45	*e*P	P	03 37 26.3	-0.4
	comp=Z,12nm,0.8s						
Z50A	Ashland	86.05	45	P	P	03 37 26.3	-0.4
	baz=324,SNR=8.6						
BG3	Lake Jocassee	86.09	42	*e*P	P	03 37 27.5	+0.6
	comp=Z,13nm,1.0s						
149A	Jones	86.13	46	P	P	03 37 26.2	-1.0
	baz=323						
IDI	Anoyia	86.27	319	⇑*i*P	P	03 37 27.5	-0.3
X53A	Estanollee	86.31	43	P	P	03 37 28.3	+0.3
	baz=325,SNR=5.8						
Z51A	Franklin	86.37	44	P	P	03 37 27.4	-0.9
	baz=324						
249A	Camden	86.46	47	P	P	03 37 28.4	-0.4
	baz=323						
TIP	Timpagrande	86.46	326	*e*P	P	03 37 29.2	+0.4
	comp=Z,20nm,0.9s						
TIP	Timpagrande	86.46	326	⇑*i*P	P	03 37 28.5	-0.3
Y52A	Lilburn	86.47	43	P	P	03 37 27.7	-1.0
	baz=325						
VAM	Vamos	86.49	319	P	P	03 37 16.6	-12
150A	Eclectic	86.51	45	P	P	03 37 28.1	-0.9
	baz=324						
Y53A	Monroe	86.70	43	P	P	03 37 29.0	-0.9
	baz=325						
KMSC	Kings Mountain	86.71	41	*e*P	P	03 37 30.1	+0.1
	comp=Z,9.1nm,0.9s						
KMSC	Kings Mountain	86.71	41	P	P	03 37 29.1	-0.9
	baz=326						
PAULI	Pauline	86.75	41	*e*P	P	03 37 30.9	+0.7
	comp=Z,8.3nm,1.0s						
Z52A	Williamson	86.84	44	P	P	03 37 29.9	-0.7
	baz=324						
250A	Grady	86.89	46	*e*P	P	03 37 31.5	+0.6
	comp=Z,24nm,1.1s						
250A	Grady	86.89	46	P	P	03 37 29.9	-1.0
	baz=324						
151A	Opelika	86.93	45	P	P	03 37 29.9	-1.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=324						
TBI	**Tubuai**	**86.98**	**128**	*e*LR	LR	04 04 32.9	
	comp=Z,518nm,29.2s,baz=324						
TBI	**Tubuai**	**86.98**	**128**	*e*T	T	05 13 55.8	
	comp=Z,8.5nm,0.3s						
HODGE	**Hodges**	**87.03**	**42**	*e*P	**P**	**03 37 32.5**	**+1.0**
152A	**Waverly Hall**	**87.11**	**45**	*e*P	**P**	**03 37 31.9**	**0.0**
	comp=Z,6.3nm,0.8s						
152A	**Waverly Hall**	**87.11**	**45**	P	**P**	**03 37 31.0**	**-0.9**
	baz=324						
Y54A	**Tignall**	**87.13**	**42**	P	**P**	**03 37 32.0**	**0.0**
	baz=325,SNR=15						
Z53A	**Monticello**	**87.18**	**43**	P	**P**	**03 37 31.1**	**-1.1**
	baz=325						
251A	**Midway**	**87.23**	**45**	P	**P**	**03 37 32.7**	**+0.1**
	baz=324						
JSC	**Jenkinsville**	**87.45**	**41**	*e*P	**P**	**03 37 33.8**	**+0.3**
	comp=Z,7.5nm,1.0s						
JSC	**Jenkinsville**	**87.45**	**41**	*e*P	**P**	**03 37 33.8**	**+0.3**
JSC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
154A	**Montrose**	**87.95**	**43**	*e*P	**P**	**03 37 36.8**	**+0.9**
	comp=Z,36nm,1.0s						
155A	**Kite**	**88.25**	**43**	P	**P**	**03 37 37.0**	**-0.3**
	baz=326						
254A	**Abbeville**	**88.40**	**44**	P	**P**	**03 37 38.0**	**-0.1**
	baz=325						
353A	**Camilla**	**88.43**	**45**	P	**P**	**03 37 37.4**	**-0.9**
	baz=325						
PBRG	**Braganca**	**91.00**	**344**	*e*P	**P**	**03 37 49.7**	**-0.5**
	comp=Z,26nm,1.6s						
PGAV	**Gavieira, Arco**	**91.14**	**345**	*e*P	**P**	**03 37 50.3**	**-0.5**
POLO	**Lamas de Olo**	**91.62**	**345**	*e*P	**P**	**03 37 52.8**	**-0.3**
	comp=Z,12nm,1.1s						
MVO	**Moncorvo**	**91.68**	**344**	*e*P	**P**	**03 37 52.6**	**-0.7**
	comp=Z,17nm,1.6s						
PVRL	**Vila Real**	**91.70**	**344**	*e*P	**P**	**03 37 53.0**	**-0.4**
	comp=Z,18nm,1.2s						
KEST	**Kesra**	**92.26**	**330**	*e*P	**P**	**03 37 56.6**	**+0.5**
	comp=Z,24nm,0.9s						
KEST	**Kesra**	**92.26**	**330**	P	**P**	**03 37 54.8**	**-1.4**
	comp=Z,20nm,0.9s,baz=309,slow=4.2,SNR=13						
PVIS	**Viseu**	**92.28**	**344**	*e*P	**P**	**03 37 55.5**	**-0.6**
ES19	**SONSECA Array**	**92.42**	**341**	*e*P	**P**	**03 37 56.0**	**-0.8**
ESDC	**Sonseca Array**	**92.46**	**341**	P	**P**	**03 37 55.6**	**-1.4**
	comp=Z,3.4nm,0.9s,baz=11,slow=4.3,SNR=12						
MTE	**Manteigas**	**92.52**	**344**	*e*P	**P**	**03 37 56.8**	**-0.4**
	comp=Z,23nm,1.6s						
PCAS	**Casmilo, Conde**	**93.03**	**345**	*e*P	**P**	**03 37 58.7**	**-0.8**
PCBR	**Castelo Branco**	**93.04**	**344**	*e*P	P	03 37 50.1	-9.4
060A	**Indiantown**	**93.88**	**45**	*e*P	**P**	**03 38 05.0**	**+1.4**
	comp=Z,113nm,1.1s						
PMTG	**Montargil**	**93.93**	**344**	*e*P	**P**	**03 38 02.8**	**-0.9**
	comp=Z,30nm,1.3s						
PMAFR	**Mafra**	**94.24**	**345**	*e*P	**P**	**03 38 03.3**	**-1.8**
PNCL	**Nicolau / Gran**	**94.92**	**344**	*e*P	**P**	**03 38 07.7**	**-0.5**
MESJ	**Messejana**	**95.12**	**344**	*e*P	**P**	**03 38 08.8**	**-0.3**
	comp=Z,32nm,2.1s						
RKT	**Rikitea**	**95.39**	**117**	*e*LR	LR	04 08 43.8	
	comp=Z,370nm,31.2s						
TOA1	**Torodi Ar. Sit**	**115.61**	**327**	*e*PKPdf	**PKiKP**	**03 43 27.6**	**-0.7**
TOA0	**Torodi Ar. Sit**	**115.61**	**327**	*e*PKPdf	**PKiKP**	**03 43 27.6**	**-0.7**
TORD	**Torodi Ar. Bea**	**115.61**	**327**	PKP	**PKiKP**	**03 43 27.6**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=346,slow=2.0,SNR=7.3						
DBIC	**Dimbokro**	**123.97**	**331**	*e*PKPdf	**PKPdf**	**03 43 44.5**	**+0.1**
DBIC				*e*PP	**PP**	**03 45 24.9**	**-2.5**
DBIC	**Dimbokro**	**123.97**	**331**	*e*PKIKP	**PKPdf**	**03 43 44.6**	**+0.1**
DBIC				*e*		03 45 25.0	
DBIC	**Dimbokro**	**123.97**	**331**	PKP	**PKPdf**	**03 43 42.9**	**-1.6**
	comp=Z,4.9nm,0.9s,baz=343,slow=1.5,SNR=7.8						
DBIC				PP	**PP**	**03 45 24.9**	**-2.5**
	comp=Z,5.0nm,1.1s,baz=6.4,slow=6.1,SNR=3.5						
LPAZ	**La Paz**	**136.00**	**62**	*e*PKPdf	**PKiKP**	**03 44 09.1**	**-0.4**
LPAZ	**La Paz**	**136.00**	**62**	PKP	**PKPdf**	**03 44 07.8**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=23,slow=3.9,SNR=7.3						
MNMC	**Minye Minye**	**137.19**	**66**	*e*PKPdf	**PKiKP**	**03 44 11.7**	**+0.2**
PB11	**IPOC Station P**	**137.61**	**67**	*e*PKPdf	**PKiKP**	**03 44 12.1**	**0.0**
SYO	**Syowa Base**	**139.16**	**211**	⇑*e*PKPdf	**PKPdf**	**03 44 12.0**	**+0.7**
SYO	**Syowa Base**	**139.16**	**211**	⇑*e*pPKPdf	pPKPdf	03 44 29.4	+5.9
BDFB	**Brasilia**	**146.11**	**35**	*e*PKPdf	**PKPbc**	**03 44 26.2**	**-0.2**
BDFB				*e*PKPdf	**PKPab**	**03 44 27.2**	**+0.2**
BDFB	**Brasilia**	**146.11**	**35**	PKPbc	**PKPbc**	**03 44 26.2**	**-0.2**
	comp=Z,6.2nm,0.8s,baz=270,slow=2.2,SNR=8.1						
NVL	**N'lazarevskaya**	**147.94**	**204**	*e*PKP2	PKPab	03 44 43.8	+11
NVL				pmax	pmax		
	comp=Z,27nm,0.9s						
PLCA	**Paso Flores**	**149.24**	**96**	*e*PKPbc	**PKPbc**	**03 44 34.7**	**+0.5**
PLCA	**Paso Flores**	**149.24**	**96**	*e*PKP2	**PKPbc**	**03 44 34.7**	**+0.5**
CPUP	**Villa Florida**	**150.15**	**60**	PKPbc	**PKPbc**	**03 44 36.9**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=318,slow=3.1,SNR=7.3						
SNAA	**Sanae**	**150.94**	**196**	PKP	**PKPbc**	**03 44 37.2**	**-0.1**
SNAA	**Sanae**	**150.94**	**196**	*e*PKPbc	**PKPbc**	**03 44 37.5**	**+0.2**
SNAA				*e*PKPab	**pPKPdf**	**03 44 44.4**	**+0.6**
SNAA	**Sanae**	**150.94**	**196**	*e*PKIKP	**PKPbc**	**03 44 37.5**	**+0.2**
SNAA				*e*		03 44 44.4	
VNA2	**Neumayer--Watz**	**152.41**	**195**	PKP	**PKPbc**	**03 44 40.7**	**+0.1**
VNA3	**Neumayer Olymp**	**152.53**	**193**	PKP	**PKPbc**	**03 44 40.6**	**-0.3**
VNA1	**Neumayer--Stat**	**152.80**	**195**	PKP	**PKiKP**	**03 44 42.4**	**+0.8**

*IDC **05** 03:26:19.5±1.4,45°.42N×151°.98E,h0^{km},mb4.3/11,mb1 4.5/12,mb1mx4.1/33,mbtmp4.3/12,ML2.6/1,MS4.4/1,Ms1 4.4/1,ms1mx3.3/27,Error ellipse: s-maj=48.5km s-min=25.4km az=86.0*

*ISCJB **05** 03:26:23.8±0.8,45°.3N±0°.1×151°.55E±0°.09,h36^{km},mb4.3/11,MS4.4/1,Error ellipse: s-maj=17.2km s-min=6.1km az=155.0*

*SKHL **05** 03:26:24.9±0.4,45°.07N×151°.71E,h59^{km}±3^{km},mb4.3/1*

*MOS **05** 03:26:24.7±1.1,45°.34N×151°.55E,h45^{km},mb4.6/9,Error ellipse: s-maj=19.4km s-min=16.5km az=176.8*

ISC 05 03:26:25.2±1.1,45°.2N±0°.1×151°.63E±0°.10,h36^{km},n24,σ0^{s}.89/29,mb4.4/11,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.66**	**271**	*i* P	**Pn**	**03 27 06.0**	**+0.5**
KUR				AMB	AMB	03 27 06.8	
	20nm,0.3s						
KUR				AMB	AMB	03 27 06.8	
	40nm,0.3s						
KUR				*i* S	**Sn**	**03 27 36.8**	**+0.4**
KUR				A	A	03 27 39.9	
	120nm,0.3s						
KUR				A	A	03 27 39.9	
	100nm,0.3s						
KUR	**Kuril'sk**	**2.66**	**271**	*c* *i*PN	**Pn**	**03 27 06.4**	**+0.9**
KUR				*i* S	**Sn**	**03 27 37.1**	**+0.7**
KUR				pmax	pmax		
	comp=Z,565nm,0.2s						
KUR				pmax	pmax		
	comp=E,220nm,0.3s						
KUR				smax	smax		
	comp=N,668nm,0.3s						
KUR				smax	smax		
	comp=E,38nm,0.2s						
SHO	**Shikotan**	**3.69**	**250**	*e*P	**Pn**	**03 27 19.8**	**+0.1**
SHO				*e*S	**Sn**	**03 28 00.7**	**-1.3**
SHO				A	A	03 28 06.2	
	comp=E,320nm,0.8s						
SHO				A	A	03 28 06.2	
	comp=E,50nm,0.8s						
SHO	**Shikotan**	**3.69**	**250**	*e*PN	**Pn**	**03 27 19.4**	**-0.3**
SHO				*e*S	**Sn**	**03 28 00.5**	**-1.5**
SHO				smax	smax		
	comp=N,261nm,0.3s						
SHO				smax	smax		
	comp=E,201nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**256**	*e*P	**Pn**	**03 27 28.4**	**+0.5**
YUK				*e*S	**Sn**	**03 28 16.4**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**4.29**	**256**	*e*PN	**Pn**	**03 27 28.4**	**+0.5**
YUK				*e*S	**Sn**	**03 28 16.4**	**-0.2**
LAGR	**Lagunnoye**	**4.34**	**256**	*e*S	**Sn**	**03 28 17.6**	**-0.2**
GRPR	**Tuman**	**4.37**	**256**	*e*S	**Sn**	**03 28 18.1**	**-0.4**
GLVR	**Golovnino**	**4.62**	**253**	*e*S	**Sn**	**03 28 24.0**	**-0.8**
USA0B	**Ussuriysk Arra**	**14.01**	**273**	P	**Pn**	**03 29 40.5**	**-0.5**
USRK	**Ussuriysk Ar.**	**14.01**	**273**	Pn	**Pn**	**03 29 40.5**	**-0.4**
	comp=E,0.3nm,0.3s,baz=75,slow=13,SNR=2.4						
SONM	**Songino Array**	**30.89**	**291**	P	**P**	**03 32 39.3**	**+1.1**
	comp=E,1.5nm,0.7s,baz=77,slow=9.3,SNR=2.5						
INK	**Inuvik**	**43.48**	**31**	LR	LR	03 54 11.9	
	comp=E,451nm,18.2s,baz=75,slow=39						
MKAR	**Makanchi Array**	**46.73**	**298**	PcP	**PcP**	**03 36 21.8**	**-1.7**
	comp=E,1.5nm,0.7s,baz=79,slow=3.8,SNR=2.7						
ARCES	**ARCESS Array B**	**58.94**	**341**	P	**P**	**03 36 19.5**	**-0.8**
	comp=E,6.1nm,1.0s,baz=41,slow=6.2,SNR=3.3						
FINES	**FINESS Array B**	**64.96**	**334**	P	**P**	**03 36 59.7**	**-1.1**
	comp=E,6.8nm,0.9s,baz=44,slow=8.3,SNR=4.7						
GEYT	**Alibeck**	**66.49**	**301**	P	**P**	**03 37 11.8**	**+0.7**
	comp=E,2.7nm,0.4s,baz=69,slow=7.9,SNR=2.9						
WRA	**Warramunga Arr**	**66.75**	**198**	P	**P**	**03 37 14.2**	**+1.5**
	comp=E,0.9nm,0.6s,baz=16,slow=6.7,SNR=2.2						
NOA	**NORSAR Array B**	**69.32**	**341**	P	**P**	**03 37 27.9**	**-0.6**
	comp=E,3.3nm,0.7s,baz=27,slow=6.3,SNR=5.6						
ASAR	**Alice Springs**	**70.45**	**197**	P	**P**	**03 37 36.9**	**+1.1**
	comp=E,0.8nm,0.8s,baz=23,slow=8.1,SNR=2.1						
KBZ	**Khabaz**	**71.16**	**313**	P	**P**	**03 37 40.8**	**+0.9**
	comp=E,8.5nm,0.8s,baz=94,slow=4.7,SNR=2.7						
AKASG	**Malin Array Be**	**72.22**	**326**	P	**P**	**03 37 45.3**	**-0.9**
	comp=E,1.7nm,0.4s,baz=38,slow=6.3,SNR=4.4						
BRTR	**Keskin Array B**	**78.77**	**316**	P	**P**	**03 38 25.0**	**+0.9**
	comp=E,2.1nm,1.0s,baz=32,slow=5.6,SNR=3.5						
GERES	**GERESS Array B**	**79.35**	**333**	P	**P**	**03 38 26.3**	**-0.8**
	comp=E,1.2nm,0.6s,baz=47,slow=5.6,SNR=4.7						

BUC 05 03:35:11.1±0.3,45°.36N×21°.57E,h5^{km},MD2.2/2,8C-4D, Error ellipse: s-maj=3.6km s-min=2.4km az=50.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZS	**Buzias**	**0.26**	**8**	⇑*i*P	Pg	03 35 16.8	+0.6
BZS	**Buzias**	**0.26**	**8**	⇑*i*P	Pg	03 35 16.8	+0.6
BZS				*i* S	Sg	03 35 20.7	+1.0
BANR	**Banloc**	**0.30**	**275**	⇓*i*P	Pg	03 35 17.3	+0.3
BANR	**Banloc**	**0.30**	**275**	⇓*i*P	Pg	03 35 17.3	+0.3
BANR				*i* S	Sg	03 35 22.0	+1.0
MDVR	**Moldovita**	**0.59**	**170**	⇓*i*P	Pb	03 35 23.2	-0.7
MDVR	**Moldovita**	**0.59**	**170**	⇓*i*P	Pb	03 35 23.2	-0.7
MDVR				*i* S	Sb	03 35 31.3	-1.2
HERR	**Herculane**	**0.77**	**128**	⇑*i*P	Pg	03 35 26.1	+0.3
HERR	**Herculane**	**0.77**	**128**	⇑*i*P	Pg	03 35 26.1	+0.3
HERR				*i* S	Sb	03 35 38.0	+0.4
GZR	**Gura Zlata**	**0.85**	**87**	⇑*i*P	Pg	03 35 27.9	+0.4
GZR	**Gura Zlata**	**0.85**	**87**	⇑*i*P	Pg	03 35 27.9	+0.4
GZR				*i* S	Sb	03 35 40.5	+0.3
SIRR	**Siria**	**0.91**	**4**	⇑*i*P	Pb	03 35 30.0	+0.6
SIRR	**Siria**	**0.91**	**4**	⇑*i*P	Pb	03 35 30.0	+0.6
SIRR				*i* S	Sb	03 35 41.7	-0.2

JMA 05 03:46:59.3±0.4,38°.37N×144°.50E,h28^{km},M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.33**	**289**	P	Pn	03 47 37.1	+1.4
JIKH	**Ishinomakikobu**	**2.39**	**270**	P	Pn	03 47 37.7	+1.2
JIKH				S	Sn	03 48 06.4	+1.6
JKMT	**Kesennumamotoy**	**2.41**	**281**	P	Pn	03 47 38.2	+1.3
MIYJ	**Miyakonagasawa**	**2.41**	**301**	P	Pn	03 47 38.0	+1.1
JMK	**Ichinoseki**	**2.63**	**284**	P	Pn	03 47 41.7	+1.8
JOM	**Ohasama**	**2.73**	**295**	P	Pn	03 47 43.0	+1.7
JYK	**Kaneyama**	**3.29**	**281**	P	Pn	03 47 51.4	+2.5
JFT	**Otama**	**3.40**	**257**	P	Pn	03 47 52.7	+2.2
JFT				S	Sn	03 48 32.0	+2.1
JCH	**Churui**	**4.33**	**349**	P	Pn	03 48 03.0	-0.2
JRY	**Ryogami san**	**5.05**	**244**	P	Pn	03 48 14.4	+1.2
JRY				S	Sn	03 49 09.6	-1.0

*IDC **05** 03:48:13.8±0.8,45°.49N×151°.44E,h0^{km},mb3.9/22,mb1 4.1/22,mb1mx4.0/48,mbtmp3.9/22,MS4.0/3,Ms1 4.0/3,ms1mx3.3/55,Error ellipse: s-maj=21.5km s-min=16.8km az=162.0*

*JMA **05** 03:48:15.9±0.8,45°.59N×151°.62E,h30^{km},M4.5*

*ISCJB **05** 03:48:16.8±0.4,45°.43N±0°.07×151°.46E±0°.07,h32^{km},mb4.2/37,MS4.4/2,Error ellipse: s-maj=11.8km s-min=4.9km az=149.6*

*NEIC **05** 03:48:21.6±1.1,45°.53N×151°.45E,h56^{km}±10^{km},mb4.6/18,Error ellipse: s-maj=7.7km s-min=4.9km az=161.0*

ISC 05 03:48:17.9±0.7,45°.3N±0°.1×151°.57E±0°.08,h32^{km},n79,σ1^{s}.23/75,mb4.3/37,4C-1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.62**	**247**	P	**Pn**	**03 49 24.8**	**-0.6**
NEM2				*e*S	**Sn**	**03 50 15.8**	**-2.1**
JNK	**Nakash**	**5.21**	**253**	P	**Pn**	**03 49 34.4**	**+0.9**
JAK	**Akkeshi**	**5.47**	**247**	P	**Pn**	**03 49 36.3**	**-0.8**
JTKR	**Abashiri--Toko**	**5.63**	**259**	P	**Pn**	**03 49 40.6**	**+1.2**
JAR	**Ashorobuto**	**5.95**	**253**	P	**Pn**	**03 49 44.9**	**+1.1**
JMP	**Maruseppu**	**6.00**	**260**	P	**Pn**	**03 49 46.9**	**+2.4**
JKK2	**Kamakawa 2**	**6.46**	**260**	P	**Pn**	**03 49 53.3**	**+2.5**
ASAJ	**Asahikawa**	**6.51**	**262**	Pn	**Pn**	**03 49 54.0**	**+2.7**
	1.7nm,0.3s,baz=68,slow=18,SNR=6.9						
ASAJ				LR	LR	03 52 26.1	
	comp=Z,221nm,19.9s,baz=338,slow=39						
JCH	**Churui**	**6.51**	**248**	P	**Pn**	**03 49 51.0**	**-0.5**
JCH				*e*S	**Sn**	**03 51 02.7**	**-1.9**
JFR	**Furan**	**6.80**	**255**	P	**Pn**	**03 49 58.1**	**+2.7**
JNBK	**Urakawa-nobuka**	**7.07**	**248**	P	**Pn**	**03 49 59.2**	**+0.1**
SMY	**Shemya**	**16.48**	**55**	*e*Pn	**Pn**	**03 52 02.6**	**-3.9**
H11N2	**WAKE ISLAND Hy**	**28.51**	**149**	T	T	04 25 54.6	
	baz=337,slow=76,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	**28.52**	**149**	T	T	04 25 59.0	
	baz=337,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**28.52**	**149**	T	T	04 25 58.8	
	baz=337,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.56**	**150**	T	T	04 27 20.4	
	baz=338,slow=76,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**29.57**	**150**	T	T	04 27 14.9	
	baz=338,slow=76,SNR=3.1						
H11S2	**WAKE ISLAND Hy**	**29.58**	**150**	T	T	04 27 15.9	
	baz=338,slow=76,SNR=3.1						
SONA0	**Songino Array**	**30.82**	**291**	*e*P	**P**	**03 54 31.1**	**+0.3**
SONM	**Songino Array**	**30.82**	**291**	P	**P**	**03 54 31.1**	**+0.3**
	0.3nm,0.5s,baz=98,slow=8.3,SNR=2.4						
TLY	**Talaya**	**31.90**	**299**	LR	LR	04 08 42.7	
	comp=Z,501nm,19.0s,baz=337,slow=39						
IM3	**Indian Mountai**	**35.55**	**35**	*e*P	**P**	**03 55 11.2**	**-0.5**
KDAK	**Kodiak Island**	**35.84**	**49**	*e*P	**P**	**03 55 14.0**	**-0.2**
	43nm,1.3s						
KDAK	**Kodiak Island**	**35.84**	**49**	P	**P**	**03 55 14.0**	**-0.2**
	5.4nm,0.7s,baz=285,slow=11,SNR=4.4						
PPLA	**Purkeypile**	**35.94**	**40**	*e*P	**P**	**03 55 14.8**	**-0.5**
	16nm,1.5s						
TRF	**Thorofare Moun**	**36.82**	**40**	*e*P	**P**	**03 55 23.5**	**+0.7**
	11nm,1.4s						
MCK	**McKinley**	**37.43**	**39**	*e*P	**P**	**03 55 28.6**	**+0.8**
	7.3nm,1.4s						
SML	**Sawmill**	**37.74**	**42**	*e*P	**P**	**03 55 27.0**	**-3.4**
	8.3nm,0.8s						
ILAR	**Eielson Array**	**38.33**	**37**	P	**P**	**03 55 34.8**	**-0.5**
	1.3nm,1.1s,baz=251,slow=8.6,SNR=5.0						
ILB	**Eielson Array**	**38.33**	**37**	*e*P	**P**	**03 55 34.8**	**-0.5**
	4.3nm,1.4s						
INK	**Inuvik**	**43.43**	**31**	*e*P	**P**	**03 56 18.1**	**+1.0**
	4.6nm,1.2s						
INK	**Inuvik**	**43.43**	**31**	P	**P**	**03 56 18.1**	**+1.0**
	1.5nm,0.8s,baz=262,slow=3.1,SNR=5.8						
MK32	**Makanchi Array**	**46.65**	**298**	*e*P	**P**	**03 56 42.7**	**-0.4**
MK32				*e*PcP	**PcP**	**03 58 16.9**	**+0.4**
MKAR	**Makanchi Array**	**46.65**	**298**	P	**P**	**03 56 42.7**	**-0.4**
	0.6nm,0.7s,baz=73,slow=8.3,SNR=7.2						
MKAR				PcP	**PcP**	**03 58 16.9**	**+0.4**
	0.5nm,0.7s,baz=338,slow=1.3,SNR=4.6						
BVAR	**Borovoye Array**	**50.94**	**310**	P	**P**	**03 57 16.0**	**+0.1**
	0.1nm,0.3s,baz=74,slow=7.7,SNR=2.3						
YKA	**Yellowknife Ar**	**52.71**	**36**	P	**P**	**03 57 29.0**	**0.0**
	0.6nm,0.8s,baz=299,slow=7.0,SNR=9.2						
YKB5	**Yellowknife Ar**	**52.71**	**36**	*e*P	**P**	**03 57 28.9**	**0.0**
GAR	**Garm**	**58.14**	**295**	*e*P	**P**	**03 58 09.2**	**+0.7**
	7.1nm,0.9s						
ABKAR	**Akbulak array**	**58.51**	**310**	*e*P	**P**	**03 58 09.9**	**-0.9**
	1.5nm,0.4s						
ARA0	**ARCESS Array S**	**58.84**	**341**	*e*P	**P**	**03 58 12.2**	**-0.6**
ARCES	**ARCESS Array B**	**58.84**	**341**	P	**P**	**03 58 12.2**	**-0.6**
	1.4nm,0.8s,baz=33,slow=6.8,SNR=4.3						
CHGR	**Chuyangaron**	**59.08**	**295**	*e*P	**P**	**03 58 15.4**	**+0.3**
	12nm,0.8s						
NIL	**Nilore**	**59.33**	**288**	*e*P	**P**	**03 58 15.8**	**-1.0**
	21nm,0.9s						
NV01	**Mina Array Sit**	**64.06**	**61**	*e*P	**P**	**03 58 50.2**	**+1.5**
NVAR	**Mina Array Bea**	**64.06**	**61**	P	**P**	**03 58 50.2**	**+1.5**
	0.6nm,0.7s,baz=283,slow=4.8,SNR=4.7						
FIA0	**FINESS Array S**	**64.86**	**334**	*e*P	**P**	**03 58 52.4**	**-0.9**
FINES	**FINESS Array B**	**64.86**	**334**	P	**P**	**03 58 52.4**	**-0.9**
	2.5nm,0.8s,baz=45,slow=3.0,SNR=6.0						
GEYT	**Alibeck**	**66.41**	**301**	P	**P**	**03 59 03.5**	**-0.2**
	2.3nm,0.5s,baz=49,slow=4.5,SNR=4.0						
WR1	**Warramunga Arr**	**66.83**	**198**	*e*P	**P**	**03 59 07.3**	**+0.9**
	5.6nm,1.4s						
WRA	**Warramunga Arr**	**66.83**	**198**	P	**P**	**03 59 07.3**	**+0.9**
	0.6nm,0.7s,baz=13,slow=6.8,SNR=5.8						
NB2	**NORSAR Subarra**	**69.22**	**341**	P	**P**	**03 59 20.2**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=30,slow=6.5						
NB200	**NORSAR Array S**	**69.22**	**341**	*e*P	**P**	**03 59 20.6**	**-0.5**
NOA	**NORSAR Array B**	**69.22**	**341**	P	**P**	**03 59 20.6**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=29,slow=6.1,SNR=3.8						
HFS	**Hagfors**	**69.41**	**339**	P	**P**	**03 59 21.7**	**-0.5**
	comp=Z,3.8nm,0.7s,baz=48,slow=4.8,SNR=9.7						
AS31	**Alice Springs**	**70.52**	**197**	*e*P	**P**	**03 59 31.7**	**+2.2**
	comp=Z,1.2nm,1.4s						
ASAR	**Alice Springs**	**70.53**	**197**	P	**P**	**03 59 31.7**	**+2.2**
	comp=Z,0.4nm,0.7s,baz=10,slow=5.1,SNR=4.0						
KVAR	**Kislovodsk Arr**	**71.01**	**314**	P	**P**	**03 59 32.3**	**-0.2**
	comp=Z,4.6nm,0.7s,baz=60,slow=20,SNR=3.4						
KIV	**Kislovodsk**	**71.01**	**314**	*e*P	**P**	**03 59 32.3**	**-0.2**
	comp=Z,12nm,1.0s						
KBZ	**Khabaz**	**71.06**	**313**	P	**P**	**03 59 33.0**	**+0.4**
	comp=Z,7.1nm,0.8s,baz=34,slow=2.4,SNR=13						
W18A	**Petrified Fore**	**71.43**	**59**	*e*P	**P**	**03 59 37.5**	**+2.2**
	comp=Z,23nm,0.6s						
AKASG	**Malin Array Be**	**72.12**	**326**	P	**P**	**03 59 38.3**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=34,slow=6.5,SNR=7.4						
AKBB	**Malin Array Si**	**72.12**	**326**	*e*P	**P**	**03 59 38.3**	**-0.5**
	comp=Z,3.1nm,1.3s						
GNI	**Garni**	**72.62**	**310**	LR	LR	04 33 36.4	
	comp=Z,304nm,20.6s,baz=344,slow=38						
BUR08	**Bucovina Ar. S**	**76.16**	**326**	*e*P	**P**	**04 00 03.0**	**+0.4**
	comp=Z,4.1nm,0.8s						
BUR04	**Bucovina Ar. S**	**76.17**	**326**	*e*P	**P**	**04 00 02.4**	**-0.3**
BURAR	**Bucovina Array**	**76.17**	**326**	⇓*i*P	**P**	**04 00 02.8**	**+0.1**
BIZ	**Bicaz**	**76.36**	**325**	⇑*i*P	**P**	**04 00 04.3**	**+0.6**
TRPA	**Tarpa**	**76.78**	**328**	⇑*i*P	**P**	**04 00 06.7**	**+0.7**
CLL	**Collm**	**77.30**	**335**	*i* P	**P**	**04 00 08.6**	**-0.3**
	comp=Z,10.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**77.46**	**346**	P	**P**	**04 00 09.0**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=19,slow=4.1,SNR=3.7						
VOIR		**78.01**	**325**	⇑*i*P	**P**	**04 00 14.0**	**+1.0**
ARR	**Arges**	**78.24**	**325**	⇑*i*P	**P**	**04 00 15.1**	**+0.8**
BR101	**Keskin Array S**	**78.68**	**316**	*e*P	**P**	**04 00 16.2**	**-0.7**
BRTR	**Keskin Array B**	**78.68**	**316**	P	**P**	**04 00 16.2**	**-0.7**
	comp=Z,1.1nm,1.0s,baz=39,slow=4.7,SNR=4.5						
KHC	**Kasperske Hory**	**79.04**	**333**	*e*P	**P**	**04 00 19.2**	**+0.6**
KHC				*e*x	x	04 00 22.9	
LTX	**Lajitas**	**79.14**	**59**	*e*P	**P**	**04 00 20.7**	**+1.2**
TXAR	**Lajitas Array**	**79.14**	**59**	P	**P**	**04 00 20.7**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=276,slow=3.6,SNR=4.4						
GEC2	**GERESS Array S**	**79.25**	**333**	*e*P	**P**	**04 00 18.8**	**-1.0**
	comp=Z,1.1nm,1.0s						
GERES	**GERESS Array B**	**79.25**	**333**	P	**P**	**04 00 18.8**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=49,slow=4.1,SNR=4.8						

*ISCJB **05** 03:57:25.5±1.0,13°.86N±0°.02×92°.84E±0°.02,h17^{km}±7^{km},mb4.7/127,MS4.2/8,Error ellipse: s-maj=4.4km s-min=3.5km az=33.6*

*BJI **05** 03:57:27.4,13°.91N×92°.82E,h26^{km},mB4.9/24,mb4.5/40,Ms4.4/20,Ms7 4.2/19*

*DJA **05** 03:57:27.5±0.4,14°N±3°×9°3E±°,h21^{km},M5.0/17,mb4.6/17,mB5.8/6,MLv5.0/4,Mw(mB)5.3/6*

*NDI **05** 03:57:27.9±2.5,13°.91N×92°.81E,h16^{km},mb4.9,mb4.8(NEIC)*

*NEIC **05** 03:57:27.2±2.2,13°.86N×92°.93E,h16^{km}±13^{km},mb4.8/59,Error ellipse: s-maj=5.4km s-min=4.4km az=46.0*

*IDC **05** 03:57:28.7±0.5,13°.82N×92°.88E,h27^{km}±2^{km},mb4.4/30,mb1 4.5/32,mb1mx4.5/38,mbtmp4.6/32,ML4.4/2,MS4.0/5,Ms1 4.0/5,ms1mx3.6/51,Error ellipse: s-maj=13.0km s-min=9.7km az=42.0*

*MOS **05** 03:57:28.0±0.9,13°.88N×92°.89E,h35^{km},mb5.0/45,Error ellipse: s-maj=8.1km s-min=4.7km az=117.5*

ISC 05 03:57:29.0±0.3,13°.90N±0°.04×92°.91E±0°.04,h29^{km}±2^{km},h29^{km}:pP-P,n356,σ1^{s}.64/425,mb4.8/129,MS4.2/8,42C-22D,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.24**	**184**	*e*Pn	Pn	03 58 04.9	+0.9
PBA				*e*Sn	Sn	03 58 31.4	+0.6
PBA	**Port Blair**	**2.24**	**184**	*e*P	Pn	03 58 04.7	+0.6
PBA				*e*S	Sn	03 58 31.1	+0.4
SRDT	**SRDT**	**6.04**	**85**	P	**Pn**	**03 58 58.2**	**+1.8**
	170nm,0.5s,4µm0.7nm						
UMPA	**Umpang Tak**	**6.19**	**68**	P	**Pn**	**03 58 59.1**	**+0.6**
	37nm,0.8s,1µm0.4nm						
UTHA	**Uthaitani**	**6.54**	**75**	P	**Pn**	**03 59 05.2**	**+2.0**
	34nm,0.8s,359nm0.1nm						
PHET	**Kaeng Krachan**	**6.62**	**98**	P	**Pn**	**03 59 07.0**	**+2.7**
	34nm,0.5s,466nm0.1nm						
CMBY	**CAMPBELL BAY**	**6.92**	**172**	*e*S	**Sn**	**04 00 23.4**	**-2.9**
CM01	**Chiang Mai Arr**	**7.35**	**52**	*e*Pn	**Pn**	**03 59 13.7**	**-0.7**
CM01				*e*Sn	**Sn**	**04 00 34.6**	**-2.2**
CM31	**Chiang Mai Arr**	**7.36**	**51**	*e*Pn	**Pn**	**03 59 15.4**	**+1.0**
CM31				*e*Sn	**Sn**	**04 00 36.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**7.36**	**51**	*i* P	**Pn**	**03 59 15.8**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**7.36**	**51**	Pn	**Pn**	**03 59 11.6**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=240,slow=15,SNR=5.2						
CMAR				Sn	**Sn**	**04 00 34.6**	**-2.4**
	comp=Z,5.2nm,0.3s,baz=240,slow=28,SNR=13						
SUKH	**Sukhothai**	**7.39**	**60**	P	**Pn**	**03 59 16.1**	**+1.2**
	comp=Z,20nm,0.6s,comp=Z,0.1nm						
CHTO	**Chiang Mai**	**7.58**	**49**	*e*Pn	**Pn**	**03 59 18.4**	**+0.9**
CHTO				*e*Sn	**Sn**	**04 00 37.4**	**-5.1**
CHTO	**Chiang Mai**	**7.58**	**49**	*e*P	**Pn**	**03 59 18.4**	**+0.9**
CHTO				*e*		04 00 37.4	
CHTO	**Chiang Mai**	**7.58**	**49**	P	Pn	03 59 22.7	+5.2
	comp=Z,111nm,0.7s,comp=Z,1.7nm						
CMMT	**Chiang Mai**	**7.58**	**49**	P	Pn	03 59 22.6	+5.0
	comp=Z,26nm,0.7s,comp=Z,0.4nm						
PATY	**Pattaya**	**7.80**	**96**	P	**Pn**	**03 59 23.0**	**+2.4**
	comp=Z,40nm,0.5s,comp=Z,3µmcomp=Z,0.3nm						
PKDT	**Phuket**	**8.01**	**138**	P	Pn	03 59 28.5	+5.1
	comp=Z,12nm,0.6s,comp=Z,6µmcomp=Z,0.4nm						
UTTA	**Uttaradit**	**8.29**	**62**	P	Pn	03 59 32.6	+5.3
	comp=Z,5.0nm,0.6s,comp=Z,71nmcomp=Z,0.0nm						
BRDH	**Bariadhala**	**8.81**	**352**	Pn	**Pn**	**03 59 33.2**	**-1.1**
	comp=Z,4.8nm,0.3s,baz=96,slow=19,SNR=2.7						
BRDH				Sn	**Sn**	**04 01 08.9**	**-3.8**
	comp=Z,53nm,0.3s,baz=227,slow=21,SNR=15						
BRDH				LR	LR	04 03 13.4	
	comp=Z,664nm,20.3s,baz=160,slow=39						
SRAK	**Srakaew**	**8.87**	**88**	P	Pn	03 59 46.0	+11
	comp=Z,342nm,0.7s,comp=Z,2µm						
CHAI	**Chaiyaphum**	**9.00**	**76**	P	**Pn**	**03 59 40.5**	**+3.5**
	comp=Z,14nm,0.8s						
VIS	**Vishakhapatnam**	**9.97**	**294**	*i* P	**Pn**	**03 59 49.6**	**-0.7**
VIS				*i* S	Sn	04 01 32.1	-9.2
NONG	**Nongkai**	**10.68**	**66**	P	Pn	04 00 06.4	+6.4
	comp=Z,0.4nm,1.1s						
SKNT	**Sakolnakorn**	**11.11**	**73**	P	Pn	04 00 11.7	+5.8
	comp=Z,5.8nm,1.0s,comp=Z,2µm						
KCSI	**Kotacane, Aceh**	**11.38**	**155**	P	**Pn**	**04 00 11.5**	**+1.9**
KULM	**Kulim**	**11.46**	**138**	*e*Pn	**Pn**	**04 00 08.6**	**-2.3**
SHL	**Shillong**	**11.64**	**355**	*e*Pn	**Pn**	**04 00 10.2**	**-3.2**
SHL				*e*Sn	**Sn**	**04 02 14.5**	**-8.1**
SHL	**Shillong**	**11.64**	**355**	*e*P	**Pn**	**04 00 10.2**	**-3.2**
SHL	**Shillong**	**11.64**	**355**	*e*P	**Pn**	**04 00 10.6**	**-2.8**
SHL				IAmb	IAmb	04 00 17.3	
	comp=Z,37nm,0.2s						
SHL				*i* S	Sn	04 02 13.0	-10
BOK	**Bokaro**	**11.87**	**327**	*e*P	**Pn**	**04 00 14.7**	**-1.6**
BOK				IAmb	IAmb	04 00 15.2	
	comp=Z,17nm,0.5s						
MDRS	**Chennai**	**12.34**	**268**	*e*P	**Pn**	**04 00 20.2**	**-2.6**
MDRS				IAmb	IAmb	04 00 26.7	
	comp=Z,19nm,0.9s						
PALK	**Pallekele**	**13.68**	**242**	*e*Pn	**Pn**	**04 00 39.2**	**-1.9**
PALK				*e*Sn	Sn	04 03 00.5	-12
PALK	**Pallekele**	**13.68**	**242**	*i* P	**Pn**	**04 00 41.1**	**-0.1**
PALK	**Pallekele**	**13.68**	**242**	Pn	**Pn**	**04 00 39.9**	**-1.3**
	comp=Z,1.6nm,0.3s,baz=116,slow=8.7,SNR=4.5						
PALK				Sn	Sn	04 02 59.1	-13
	comp=Z,2.8nm,0.3s,baz=296,slow=21,SNR=6.6						
HYB	**Hyderabad**	**14.26**	**286**	*i* P	**Pn**	**04 00 48.0**	**-1.0**
	comp=Z,35nm,0.8s						
HYB				*e*S	**Sn**	**04 03 28.0**	**+1.7**
HYB	**Hyderabad**	**14.26**	**286**	*e*P	**Pn**	**04 00 46.0**	**-3.0**

HYB				IAmb	IAmb	04 00 58.2	
	comp=Z,386nm,0.1s						
RAMN	**Ramite**	**14.26**	**337**	*e*P	**Pn**	**04 00 44.7**	**-4.5**
	comp=Z,67nm,0.5s						
KMI	**Kunming**	**14.50**	**38**	P	**Pn**	**04 00 54.0**	**+1.5**
KMI				sP	P	04 01 02.2	+3.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,420nm,13.5s						
KMI				LR	LR		
	comp=Z,480nm,14.3s						
KMI				LR	LR		
	comp=Z,430nm,13.5s						
NGP	**Nagpur**	**15.05**	**301**	*e*P	**Pn**	**04 00 58.1**	**-1.5**
NGP				IAmb	IAmb	04 01 00.3	
	comp=Z,25nm,1.2s						
NGP				*e*x	x	04 03 30.9	
PKI	**Pulchoki**	**15.29**	**334**	*e*P	**Pn**	**04 00 57.6**	**-5.6**
	comp=Z,55nm,0.6s						
PKIN	**Phulchoki**	**15.30**	**334**	*e*P	**Pn**	**04 00 57.7**	**-5.6**
	comp=Z,40nm,0.4s						
DMN	**Daman**	**15.46**	**333**	*e*P	**Pn**	**04 01 00.6**	**-4.7**
	comp=Z,21nm,0.4s						
BKNI	**Bangkinang**	**15.71**	**148**	P	**Pn**	**04 01 08.6**	**+0.3**
LSA	**Lhasa**	**15.81**	**354**	*e*Pn	**Pn**	**04 01 05.5**	**-4.5**
	comp=Z,15nm,0.5s						
LSA	**Lhasa**	**15.81**	**354**	*i* P	**P**	**04 01 13.6**	**0.0**
	SNR=7.3						
LSA	**Lhasa**	**15.81**	**354**	*e*P	**Pn**	**04 01 05.5**	**-4.5**
LSA				pmax	pmax		
	comp=Z,15nm,0.5s						
PPI	**Padang Panjang**	**16.08**	**152**	P	**Pn**	**04 01 11.8**	**-1.3**
	comp=Z,18nm,1.3s,comp=Z,8μm						
MYKOM	**Kota Tinggi**	**16.18**	**137**	*e*Pn	**P**	**04 01 16.8**	**-0.5**
	comp=Z,39nm,0.9s						
MYKOM				*e*Sn	**Sn**	**04 04 06.3**	**-6.9**
KOLN	**Koldanda**	**16.30**	**329**	*e*P	**Pn**	**04 01 14.1**	**-1.9**
PDSI	**Padang**	**16.51**	**152**	P	**Pn**	**04 01 16.9**	**-1.7**
	comp=Z,15nm,0.9s						
TRD	**Trivandrum**	**16.53**	**253**	*e*P	**Pn**	**04 01 16.4**	**-2.5**
DANN	**Dangsing**	**16.70**	**331**	*e*P	**Pn**	**04 01 18.4**	**-2.9**
	comp=Z,25nm,0.5s						
PYUN	**Piuthan**	**16.88**	**328**	*e*P	**Pn**	**04 01 20.8**	**-2.5**
	comp=Z,64nm,0.7s						
RGRI	**Rengat**	**16.96**	**146**	P	**P**	**04 01 25.6**	**-0.4**
	comp=Z,112nm,0.5s,comp=Z,56μm						
SDSI	**Sungai Dareh**	**16.99**	**150**	P	**Pn**	**04 01 22.7**	**-1.9**
	comp=Z,49nm,0.6s						
QIZ	**Qiongzhong**	**17.02**	**70**	P	**P**	**04 01 26.0**	**-0.6**
QIZ				LR	LR		
	comp=Z,220nm,10.0s						
QIZ				LR	LR		
	comp=Z,470nm,14.3s						
QIZ				LR	LR		
	comp=Z,490nm,15.9s						
QIZ	**Qiongzhong**	**17.02**	**70**	*e*Pn	**P**	**04 01 27.7**	**+1.1**
	comp=Z,14nm,1.0s						
BHPL	**Bhopal**	**17.36**	**305**	*e*P	**Pn**	**04 01 28.9**	**-0.2**
BHPL				IAmb	IAmb	04 01 32.5	
	comp=Z,46nm,1.0s						
GYA	**Guiyang**	**17.95**	**44**	*e*P	**P**	**04 01 38.8**	**+1.9**
GYA				pP	sP	04 01 48.1	-0.3
GYA				PP	**PnPn**	**04 01 53.0**	**+5.2**
GYA				S	**Sn**	**04 04 53.2**	**-2.8**
GYA				sS	S	04 05 03.9	+2.2
GYA				SS	**SnSn**	**04 05 16.6**	**+6.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.9s						
GYA				LR	LR		
	comp=Z,460nm,12.3s						
GYA				LR	LR		
	comp=Z,480nm,12.3s						
GYA				LR	LR		
	comp=Z,450nm,14.8s						
DSRI	**Dabo**	**18.38**	**140**	P	**P**	**04 01 38.9**	**-2.7**
GOA	**Goa**	**18.53**	**277**	*e*P	**P**	**04 01 43.3**	**+0.1**
JMBI	**JAMBI**	**18.75**	**145**	P	**Pn**	**04 01 46.8**	**+0.5**
POO	**Poona**	**18.87**	**287**	*e*P	**P**	**04 01 46.6**	**-0.4**
MASI	**Maura Aman, Be**	**19.30**	**151**	P	**P**	**04 01 51.9**	**+0.1**
CD2	**Chengdu**	**19.65**	**29**	P	**Pn**	**04 01 57.0**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PMBI	**Palembang**	**20.45**	**144**	P	**P**	**04 02 03.6**	**-0.6**
PPBI	**Pangkal Pinang**	**20.66**	**140**	P	**P**	**04 02 07.3**	**+0.7**
	comp=Z,28nm,0.7s,comp=Z,17μm						
NDI	**New Delhi**	**20.70**	**318**	*e*P	**P**	**04 02 06.5**	**-0.4**
KSM	**Kuching**	**21.18**	**124**	*e*P	**P**	**04 02 13.7**	**+1.5**
	comp=Z,17nm,0.9s						
DDI	**Dehra Dun**	**21.32**	**322**	*e*P	**P**	**04 02 14.8**	**+1.1**
DDI				IAmb	IAmb	04 02 15.9	
	comp=Z,82nm,0.7s						
MDSI	**Maura Dua**	**21.42**	**148**	P	**P**	**04 02 15.5**	**+0.8**
ENH	**Enshi**	**22.34**	**40**	*e*P	**P**	**04 02 24.8**	**+0.1**
	comp=Z,18nm,0.8s						
SMLA	**Simla**	**22.43**	**322**	*e*P	**P**	**04 02 25.7**	**+0.2**
SMLA				IAmb	IAmb	04 02 27.9	
	comp=Z,262nm,2.3s						
DHRM	**DHARAMSHALA**	**23.75**	**323**	*e*P	**P**	**04 02 40.0**	**+0.9**
LZH	**Lanzhou**	**24.18**	**22**	*e*P	**P**	**04 02 43.7**	**+0.7**
LZH				pP	pP	04 02 52.0	+0.7
LZH				sP	sP	04 02 55.7	+0.9
LZH				PP	**PnPn**	**04 03 18.9**	**+5.8**
LZH				pmax	pmax		
	comp=Z,55nm,1.1s						
LZH				pmax	pmax		
	comp=Z,520nm,5.2s						
LZH				LR	LR		
	comp=Z,870nm,12.4s						
LZH				LR	LR		
	comp=Z,950nm,12.5s						
LZH				LR	LR		
	comp=Z,990nm,13.6s						
KKM	**Kota Kinabalu**	**24.23**	**106**	*e*P	**P**	**04 02 41.8**	**-1.8**
	comp=Z,17nm,1.1s						
XAN	**Xi'an**	**24.75**	**33**	P	**P**	**04 02 48.0**	**-0.2**
XAN	**Xi'an**	**24.75**	**33**	*e*P	**P**	**04 02 48.6**	**+0.4**
	comp=Z,17nm,0.9s						
XAN	**Xi'an**	**24.75**	**33**	*e*P	**P**	**04 02 48.6**	**+0.4**
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
GTA	**Gaotai**	**26.13**	**12**⇓	P	**P**	**04 03 02.1**	**+1.4**
GTA				pP	pP	04 03 10.1	+1.1
GTA				sP	sP	04 03 13.8	+1.3
GTA				PcP	**PcP**	**04 06 28.8**	**+1.2**
GTA				PcS	**PcS**	**04 10 10.4**	**+1.8**
GTA				ScS	ScS	04 13 54.9	-0.4
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,6.5s						
GTA				LR	LR		
	comp=Z,510nm,18.7s						
GTA				LR	LR		
	comp=Z,370nm,19.4s						
GTA				LR	LR		
	comp=Z,680nm,19.0s						
NIL	**Nilore**	**26.55**	**321**	*e*P	**P**	**04 03 05.0**	**+0.5**
	comp=Z,32nm,1.0s						
NIL	**Nilore**	**26.55**	**321**	*e*P	**P**	**04 03 05.0**	**+0.5**
NIL				pmax	pmax		
	comp=Z,32nm,1.0s						
SMRI	**Semarang**	**27.13**	**139**	*e*P	**P**	**04 03 09.0**	**-0.8**
	comp=Z,53nm,1.0s						
SSLB	**Suanglung**	**28.26**	**65**	*e*P	**P**	**04 03 22.2**	**+2.3**
	comp=Z,35nm,1.1s						
YULB	**Yu-li**	**28.46**	**66**	*e*P	**P**	**04 03 18.3**	**-3.3**
	comp=Z,26nm,1.0s						
YHNB	**Yeheng**	**28.87**	**64**	*e*P	**P**	**04 03 22.2**	**-3.1**
	comp=Z,28nm,1.0s						
KSH	**Kashi**	**29.55**	**333**	P	**P**	**04 03 30.7**	**-0.6**
KSH				pP	pP	04 03 41.1	+1.5
KSH				PP	**PnPn**	**04 04 30.3**	**+3.9**
KSH				S	**S**	**04 08 17.9**	**-6.6**
KSH				sS	sS	04 08 37.0	-1.0
KSH				SS	**SnSn**	**04 09 57.0**	**+3.2**
KSH				pmax	pmax		
	comp=Z,27nm,0.9s						
KSH				LR	LR		
	comp=Z,990nm,7.7s						
KSH				LR	LR		
	comp=Z,510nm,5.3s						
KSH				LR	LR		
	comp=Z,2μm,9.1s						
KBL	**Kabul**	**29.79**	**318**	*e*P	**P**	**04 03 34.4**	**+0.9**
	comp=Z,8.1nm,0.8s						
KBL	**Kabul**	**29.79**	**318**	*e*P	**P**	**04 03 34.4**	**+0.9**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NJ2	**Nanjing**	**29.82**	**48**	*e*P	**P**	**04 03 34.4**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WMQ	**Urumqi**	**30.15**	**352**	*e*P	**P**	**04 03 37.4**	**+1.0**
WMQ				pP	sP	04 03 48.1	-0.1
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				LR	LR		
	comp=Z,550nm,17.5s						
WMQ				LR	LR		
	comp=Z,590nm,19.3s						
WMQ				LR	LR		
	comp=Z,470nm,16.5s						
SFK	**Sufi-Kurgan**	**31.09**	**330**	P	**P**	**04 03 45.9**	**+0.9**
SFK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NRN	**Naryn**	**31.13**	**335**	*e*P	**P**	**04 03 46.7**	**+1.3**
	comp=Z,7.4nm,1.0s						
NRN	**Naryn**	**31.13**	**335**	*e*P	**P**	**04 03 46.7**	**+1.3**
NRN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**31.41**	**28**	*e*P	P	04 03 57.1	+9.5
HHC				sP	sP	04 04 09.4	+10
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,450nm,5.2s						
GAR	**Garm**	**31.98**	**326**	*e*P	**P**	**04 03 53.0**	**+0.4**
	comp=Z,39nm,1.0s						
GAR	**Garm**	**31.98**	**326**	*e*P	**P**	**04 03 53.1**	**+0.4**
GAR				pmax	pmax		
	comp=Z,39nm,1.0s						
ARSB	**Arslanbob**	**32.36**	**331**	*e*P	**P**	**04 03 57.3**	**+1.2**
	comp=Z,17nm,0.7s						
CHGR	**Chuyangaron**	**32.39**	**324**	*e*P	**P**	**04 03 56.5**	**+0.2**
	comp=Z,72nm,0.8s						
BTK	**Batken**	**32.47**	**327**	*e*P	**P**	**04 04 00.4**	**+3.4**
	comp=Z,14nm,0.8s						
BTK	**Batken**	**32.47**	**327**	*e*P	**P**	**04 04 00.4**	**+3.4**
BTK				pmax	pmax		
	comp=Z,14nm,0.8s						
AAK	**Ala-Archa**	**32.75**	**334**	*e*P	**P**	**04 04 01.1**	**+1.6**
	comp=Z,6.3nm,0.9s						
AAK	**Ala-Archa**	**32.75**	**334**	*i* P	**P**	**04 04 00.2**	**+0.8**
	SNR=6.2						
AAK	**Ala-Archa**	**32.75**	**334**⇓	*e*P	**P**	**04 03 59.9**	**+0.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DAV	**Davao City (W)**	**32.81**	**99**	LR	LR	04 20 15.3	
	comp=Z,179nm,18.1s,baz=336,slow=42						
BJI	**Beijing**	**33.09**	**34**⇑	*e*P	**P**	**04 04 04.0**	**+1.8**
BJI				S	**S**	**04 09 21.5**	**+2.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MNAS	**Manas**	**33.50**	**332**	P	**P**	**04 04 07.2**	**+1.2**
MNAS				pmax	pmax		
	comp=Z,12nm,0.7s						
MK01	**Makanchi Array**	**33.95**	**347**	*e*P	**P**	**04 04 10.2**	**+0.5**
MK31	**Makanchi Array**	**33.98**	**347**	*e*P	**P**	**04 04 10.8**	**+0.8**
	comp=Z,14nm,0.8s						
MK31	**Makanchi Array**	**33.98**	**347**	*i* P	**P**	**04 04 10.5**	**+0.5**
MK31				pmax	pmax		
	comp=Z,13nm,0.7s						
MK32	**Makanchi Array**	**33.98**	**347**	*e*P	**P**	**04 04 10.7**	**+0.7**
MK32				*e*pP	**pP**	**04 04 19.6**	**+1.3**
MK32				*e*PcP	**PcP**	**04 06 47.9**	**+0.2**
MKAR	**Makanchi Array**	**33.98**	**347**	*e*P	**P**	**04 04 10.8**	**+0.8**
	comp=Z,99nm,0.8s						
MKAR				pP	**pP**	**04 04 19.6**	**+1.3**
MKAR	**Makanchi Array**	**33.98**	**347***c*	*e*P	**P**	**04 04 10.6**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,19nm,0.8s						
MKAR	**Makanchi Array**	**33.98**	**347**	P	**P**	**04 04 10.7**	**+0.8**
	comp=Z,18nm,0.8s,baz=163,slow=8.8,SNR=169						
MKAR				pP	**pP**	**04 04 19.6**	**+1.3**
	comp=Z,6.0nm,0.8s,baz=148,slow=9.6,SNR=8.2						
MKAR				PcP	**PcP**	**04 06 47.9**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=151,slow=3.3,SNR=3.8						
MAKZ	**Makanchi**	**34.06**	**347**	*e*P	**P**	**04 04 11.2**	**+0.5**
	comp=Z,15nm,0.8s						
MAKZ	**Makanchi**	**34.06**	**347**	*e*P	**P**	**04 04 11.2**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,15nm,0.8s						
KK31	**Karatay Array**	**34.90**	**331**	*e*P	**P**	**04 04 19.1**	**+1.1**
	comp=Z,5.9nm,0.8s						
KK31	**Karatay Array**	**34.90**	**331**	*e*P	**P**	**04 04 19.1**	**+1.1**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKAR	**Karatay Array**	**34.90**	**331**	*e*P	**P**	**04 04 19.1**	**+1.1**
	comp=Z,5.9nm,0.8s						
KKAR	**Karatay Array**	**34.90**	**331**	*e*P	**P**	**04 04 19.1**	**+1.1**
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONA0	**Songino Array**	**35.65**	**16**	*e*P	**P**	**04 04 25.8**	**+1.3**
SONA0				*e*pP	**pP**	**04 04 34.4**	**+1.4**
SONA0				*e*PcP	**PcP**	**04 06 53.6**	**+1.0**
SONA0				*e*ScP	**ScP**	**04 10 38.5**	**+1.8**
SONM	**Songino Array**	**35.65**	**16**	P	**P**	**04 04 25.8**	**+1.3**
	comp=Z,3.1nm,0.7s,baz=201,slow=8.4,SNR=20						
SONM				pP	**pP**	**04 04 34.4**	**+1.4**
	comp=Z,7.2nm,1.0s,baz=202,slow=8.1,SNR=15						
SONM				PcP	**PcP**	**04 06 53.6**	**+1.0**
	comp=Z,2.2nm,1.0s,baz=202,slow=3.4,SNR=4.6						
SONM				ScP	**ScP**	**04 10 38.5**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=218,slow=5.3,SNR=3.6						
SONA1	**Songino Array**	**35.66**	**16**	*e*P	**P**	**04 04 25.5**	**+0.9**
ULN	**Ulaanbaatar**	**35.85**	**16**	*e*P	**P**	**04 04 27.4**	**+1.2**
	comp=Z,6.0nm,1.0s						
ULN	**Ulaanbaatar**	**35.85**	**16**⇑	*e*P	**P**	**04 04 27.3**	**+1.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
DGZ	**Jazzator, Alta**	**35.98**	**354**⇓	*e*P	**P**	**04 04 27.9**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HATD	**Hatta, Dubai**	**36.25**	**293**	P	**P**	**04 04 32.4**	**+2.6**
ASHO	**Ashiyiah**	**36.29**	**293**	*i* P	**P**	**04 04 32.1**	**+1.9**
	SNR=8.7						
KNGR	**Kungurtug, Tuv**	**36.80**	**5**⇑	*i*P	**P**	**04 04 34.8**	**+0.6**
ASUD	**Al Ashush, Dub**	**36.93**	**293**	P	**P**	**04 04 38.8**	**+3.2**
OTUK	**Ortayu**	**38.25**	**338**	P	**P**	**04 04 47.2**	**+0.7**
OTUK				pmax	pmax		
	comp=Z,25nm,1.1s						
KURK	**Kurchatov**	**38.51**	**345**	*e*P	**P**	**04 04 49.3**	**+0.8**
	comp=Z,22nm,0.9s						
KURK	**Kurchatov**	**38.51**	**345***d*	*i*P	**P**	**04 04 48.9**	**+0.4**
KURK				pmax	pmax		
	comp=Z,33nm,1.3s						
TLY	**Talaya**	**38.66**	**11**⇑	*e*P	**P**	**04 04 51.5**	**+1.6**
TLY	**Talaya**	**38.66**	**11**	P	**P**	**04 04 51.4**	**+1.5**
	comp=Z,0.4nm,0.2s,baz=186,slow=8.7,SNR=3.7						
BATI	**Baumata**	**38.79**	**127**	P	**P**	**04 04 49.5**	**-1.9**
	comp=Z,13nm,0.3s,baz=315,slow=8.1,SNR=4.0						
KS15	**Wonju Array Si**	**38.94**	**47**	*e*P	**P**	**04 04 51.9**	**-0.5**
KSAR	**Wonju Array Be**	**38.94**	**47**	P	**P**	**04 04 51.9**	**-0.5**
KSAR				pP	**pP**	**04 05 00.1**	**-0.9**
KSAR	**Wonju Array Be**	**38.94**	**47**	P	**P**	**04 04 51.9**	**-0.5**
KSAR				*PP	**pP**	**04 05 00.1**	**-0.9**
KSRS	**Korea Array**	**38.97**	**47**	P	**P**	**04 04 51.9**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=242,slow=8.7,SNR=5.0						
KSRS				pP	**pP**	**04 05 00.1**	**-1.2**
	comp=Z,1.6nm,0.9s,baz=239,slow=9.9,SNR=3.1						
KSRS				LR	LR	04 23 52.7	
	comp=Z,292nm,19.0s,baz=354,slow=41						
GEYT	**Alibeck**	**39.03**	**314**	P	**P**	**04 04 54.8**	**+1.5**
	comp=Z,17nm,0.7s,baz=134,slow=8.3,SNR=25						
GEYT				pP	**pP**	**04 05 02.5**	**+0.8**
	comp=Z,7.5nm,0.8s,baz=125,slow=7.4,SNR=4.1						
GEYT				PcP	**PcP**	**04 07 04.2**	**+1.2**
	comp=Z,2.7nm,0.6s,baz=151,slow=3.3,SNR=2.1						
GEYT				PKKP	**PKKPdf**	**04 28 58.5**	**-3.4**
	comp=Z,2.6nm,0.3s,baz=270,slow=7.4,SNR=5.2						
GYA0B	**ALIBECK ARRAY**	**39.03**	**314**	*e*P	**P**	**04 04 54.3**	**+1.1**
	comp=Z,20nm,0.8s						
ZAA0	**Zalesovo Array**	**40.46**	**353**	*e*P	**P**	**04 05 05.1**	**+0.3**
	comp=Z,17nm,0.8s						
ZALV	**Zalesovo Beam**	**40.46**	**353**	P	**P**	**04 05 05.1**	**+0.3**
	comp=Z,17nm,0.7s,baz=178,slow=8.8,SNR=74						
ZALV				pP	**pP**	**04 05 14.0**	**+0.7**
	comp=Z,7.8nm,0.8s,baz=181,slow=8.7,SNR=7.8						
ZAA1	**Zalesovo Array**	**40.46**	**353**	*e*P	**P**	**04 05 05.1**	**+0.3**
ZAA1				*e*pP	**pP**	**04 05 14.0**	**+0.7**
SIJI	**Sorong**	**40.73**	**108**	P	**P**	**04 05 07.2**	**-0.5**
	comp=Z,3.9nm,0.5s,baz=324,slow=18,SNR=2.6						
CN2	**Changchun**	**40.76**	**37**	*e*P	P	04 05 15.4	+7.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NVS	**Novosibirsk**	**41.54**	**352**	*e*P	**P**	**04 05 13.3**	**-0.3**
NVS				pmax	pmax		
	comp=N,6.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BVAR	**Borovoye Array**	**42.94**	**340**	P	**P**	**04 05 25.1**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=138,slow=7.6,SNR=22						
BVAR				pP	**pP**	**04 05 33.3**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=142,slow=12,SNR=5.2						
BVAR				PcP	**PcP**	**04 07 16.2**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=174,slow=2.9,SNR=3.7						
BRVK	**Borovoye**	**43.00**	**340**	*e*P	**P**	**04 05 26.0**	**+0.4**
	comp=Z,6.6nm,0.8s						
BRVK	**Borovoye**	**43.00**	**340**⇓	*i*P	**P**	**04 05 25.3**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AB31	**Akbulak array**	**44.42**	**329**	*i* P	**P**	**04 05 37.9**	**+0.8**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ABKAR	**Akbulak array**	**44.42**	**329**	*e*P	**P**	**04 05 38.0**	**+0.9**
USRK	**Ussuriysk Ar.**	**44.92**	**40**	P	**P**	**04 05 42.1**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=248,slow=15,SNR=3.3						
FITZ	**Fitzroy Crossi**	**45.31**	**134**	*e*P	**P**	**04 05 44.0**	**-0.6**
	comp=Z,13nm,0.8s						
FITZ				*e*PcP	**PcP**	**04 07 24.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**45.31**	**134**	PcP	**PcP**	**04 07 24.8**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=321,slow=6.2,SNR=3.4						
AKTO	**Aktyubinsk**	**46.14**	**330**	P	**P**	**04 05 51.1**	**+0.4**
	comp=Z,4.1nm,0.5s,baz=108,slow=8.7,SNR=16						
MAJO	**Matsushiro**	**46.24**	**52**	*e*P	**P**	**04 05 52.9**	**+1.1**
MAJO				*e*pP	**pP**	**04 06 01.3**	**+0.7**
MAJO				*e*PcP	**PcP**	**04 07 29.4**	**+2.3**
MAJO	**Matsushiro**	**46.24**	**52**	*e*P	**P**	**04 05 52.9**	**+1.1**
MAJO				*e**PP	**pP**	**04 06 01.3**	**+0.7**
MAJO				*e*		04 07 29.4	
MJAR	**Matsushiro Arr**	**46.24**	**52**	P	**P**	**04 05 52.9**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=263,slow=12,SNR=5.3						
MJAR				pP	**pP**	**04 06 01.3**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=263,slow=11,SNR=4.4						
MJAR				PcP	**PcP**	**04 07 29.4**	**+2.3**
	comp=Z,1.0nm,0.3s,baz=233,slow=1.8,SNR=3.5						
BOD	**Bodaibo**	**46.64**	**15**	*e*P	P	04 06 02.6	+8.1
BOD				pmax	pmax		
	comp=Z,11nm,1.4s						
DAMY	**Dhamar**	**46.96**	**277**	*e*P	**P**	**04 06 00.9**	**+2.9**
	comp=Z,31nm,1.0s						
GNBR	**Gunib**	**48.65**	**315**⇑	*e*P	**P**	**04 06 10.8**	**+0.3**
GNBR				pmax	pmax		
	comp=Z,29nm,0.8s						
DBC	**Dubki**	**48.98**	**316**	*i* P	**P**	**04 06 14.0**	**+1.0**
DBC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BTLR	**Botlikh**	**49.26**	**315**⇑	*i*P	**P**	**04 06 15.3**	**+0.1**
BTLR				pmax	pmax		
	comp=Z,17nm,0.9s						
SVE	**Sverdlovsk**	**49.40**	**337**	*e*P	**P**	**04 06 16.7**	**+0.9**
SVE				pmax	pmax		
	comp=Z,38nm,1.1s						
GNI	**Garni**	**49.47**	**311**	*e*P	**P**	**04 06 19.3**	**+2.4**
	comp=Z,32nm,1.1s						
GNI	**Garni**	**49.47**	**311**	*i* P	**P**	**04 06 19.4**	**+2.4**
	SNR=10						
GNI	**Garni**	**49.47**	**311***d*	*i*P	**P**	**04 06 18.8**	**+1.9**
GNI				pmax	pmax		
	comp=Z,77nm,1.1s						
ARU	**Arti**	**49.91**	**336**	*e*P	**P**	**04 06 19.9**	**+0.1**
	comp=Z,12nm,1.0s						
ARU	**Arti**	**49.91**	**336***c*	*i*P	**P**	**04 06 19.7**	**-0.1**
ARU						04 08 10.6	
ARU				S	**S**	**04 13 27.5**	**-0.5**
ARU				SS	**SS**	**04 16 56.0**	**-5.0**
ARU				pmax	pmax		
	comp=Z,18nm,1.4s						
SIRT	**Sirnak**	**50.48**	**307**	*e*P	**P**	**04 06 25.2**	**+0.6**
	comp=Z,40nm,1.0s						
ZEI	**Tsey**	**50.91**	**314**	*e*P	**P**	**04 06 27.4**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NEY	**Neytrino**	**51.88**	**314**⇓	*e*P	**P**	**04 06 35.3**	**+0.3**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KBZ	**Khabaz**	**51.91**	**315**	P	**P**	**04 06 36.3**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=110,slow=9.2,SNR=6.8						
KIV	**Kislovodsk**	**52.13**	**315**	*e*P	**P**	**04 06 38.4**	**+1.6**
	comp=Z,21nm,0.8s						
KIV	**Kislovodsk**	**52.13**	**315**	*e*P	**P**	**04 06 37.6**	**+0.8**
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
WR1	**Warramunga Arr**	**52.84**	**129**	*e*P	**P**	**04 06 41.8**	**-0.5**
	comp=Z,18nm,0.7s						
WR1				*e*PcP	**PcP**	**04 07 51.5**	**+0.2**
WR1				*e*		04 08 00.4	
WR1				*e*ScP	**ScP**	**04 11 45.8**	**-1.2**
WRA	**Warramunga Arr**	**52.84**	**129**	*i* P	**P**	**04 06 41.7**	**-0.6**
WRA				pmax	pmax		
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**	**52.84**	**129**	P	**P**	**04 06 41.8**	**-0.6**
	comp=Z,14nm,0.7s,baz=307,slow=8.2,SNR=163						
WRA				PcP	**PcP**	**04 07 51.5**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=323,slow=3.2,SNR=7.3						
WRA				pPcP		04 08 00.4	
	comp=Z,3.6nm,0.8s,baz=320,slow=3.5,SNR=6.1						
WRA				ScP	**ScP**	**04 11 45.8**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=316,slow=4.0,SNR=3.2						
WRAB	**Tennant Creek**	**52.85**	**129**	*e*P	**P**	**04 06 42.0**	**-0.3**
	comp=Z,20nm,0.7s						
WRAB	**Tennant Creek**	**52.85**	**129***c*	*i*P	**P**	**04 06 41.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,35nm,1.3s						
WB2	**Warramunga Arr**	**52.85**	**129**	*e*P	**P**	**04 06 42.0**	**-0.4**
WB2				*e*PcP	**PcP**	**04 07 51.6**	**+0.2**
AS31	**Alice Springs**	**54.78**	**133**	*e*P	**P**	**04 06 56.2**	**-0.2**
	comp=Z,3.3nm,0.6s						
AS31				*e*pP	**pP**	**04 07 05.0**	**-0.4**
AS31				*e*ScP	**ScP**	**04 11 54.0**	**-1.3**
ASAR	**Alice Springs**	**54.78**	**133**	P	**P**	**04 06 56.1**	**-0.3**
	comp=Z,11nm,0.6s,baz=311,slow=6.7,SNR=106						
ASAR				pP	**pP**	**04 07 05.0**	**-0.4**
	comp=Z,7.0nm,0.6s,baz=312,slow=6.7,SNR=13						
ASAR				PcP	**PcP**	**04 07 59.5**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=310,slow=4.5,SNR=3.4						
ASAR				pPcP		04 08 08.0	
	comp=Z,2.1nm,0.8s,baz=306,slow=3.3,SNR=4.6						
ASAR				ScP	**ScP**	**04 11 54.0**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=307,slow=3.4,SNR=5.2						
AS01	**Alice Springs**	**54.81**	**133**	*e*P	**P**	**04 06 55.6**	**-1.0**
AS01				*e*PcP	**PcP**	**04 07 59.4**	**+0.6**
VRH	**Novokhopyorsk**	**55.35**	**323**	*e*P	**P**	**04 06 59.5**	**-0.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MMAI	**Mount Meron Ar**	**55.40**	**301**	LR	LR	04 35 54.8	
	comp=Z,185nm,18.1s,baz=355,slow=42						
NRIK	**Noril'sk**	**55.50**	**358**	P	**P**	**04 07 00.7**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=164,slow=7.8,SNR=2.7						
VSR	**Storozhevoye**	**56.85**	**323**⇑	*i*P	**P**	**04 07 09.6**	**-1.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KMBO	**Kilima Mbogo**	**57.10**	**259**	*e*P	**P**	**04 07 13.8**	**+0.2**
	comp=Z,0.9nm,0.9s						
KMBO	**Kilima Mbogo**	**57.10**	**259**	*e*P	**P**	**04 07 13.8**	**+0.2**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KMBO	**Kilima Mbogo**	**57.10**	**259**	P	**P**	**04 07 13.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=49,slow=20,SNR=3.8						
LPSR	**Galich'ya Gora**	**57.48**	**324**	*e*P	**P**	**04 07 14.5**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BR101	**Keskin Array S**	**57.68**	**308**	*e*P	**P**	**04 07 16.6**	**-0.4**
BR101				*e*pP	**pP**	**04 07 25.4**	**-0.5**
BR101				*e*PcP	**PcP**	**04 08 10.3**	**+0.4**
BR131	**Keskin Array S**	**57.68**	**308**	*e*P	**P**	**04 07 16.8**	**-0.3**
	comp=Z,13nm,0.8s						
BRTR	**Keskin Array B**	**57.68**	**308**	P	**P**	**04 07 16.6**	**-0.4**
	comp=Z,10nm,0.7s,baz=119,slow=7.8,SNR=78						
BRTR				pP	**pP**	**04 07 25.4**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=112,slow=8.4,SNR=6.4						
BRTR				PcP	**PcP**	**04 08 10.3**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=140,slow=4.7,SNR=2.1						
PRGR	**Permogore**	**58.37**	**336**	*e*P	**P**	**04 07 18.6**	**-2.7**

PRGR				e*PP	pP	04 07 27.9	-2.2
PRGR				pmax	pmax		
	comp=Z,16nm,0.9s						
OBN	Obninsk	59.69	326	⇑*e*P	P	04 07 29.8	-0.8
OBN				*e*		04 07 40.8	
OBN				*e*S	S	04 15 34.2	-5.1
OBN				*e*SS	SS	04 19 32.9	-2.2
OBN				pmax	pmax		
	comp=Z,32nm,2.5s						
OBN				MLR	MLR		
	comp=Z,457nm,13.0s						
KLMR	Klimovskoe	60.55	333	*e*P	P	04 07 34.6	-1.8
KLMR				pmax	pmax		
	comp=Z,23nm,1.8s						
KLMR	Klimovskoe	60.55	333	*e*P	P	04 07 34.6	-1.8
KLMR				AMP		04 07 39.8	
	comp=Z,23nm,1.8s						
TIXI	Tiksi	61.61	12	*e*P	P	04 07 43.0	-0.4
	comp=Z,5.8nm,1.0s						
TIXI	Tiksi	61.61	12	⇑*e*P	P	04 07 43.3	-0.1
TIXI				pmax	pmax		
	comp=Z,11nm,2.5s						
TLCR		62.04	314	⇑*i*P	P	04 07 47.3	+0.5
TLCR		62.04	314	⇑P	P	04 07 47.3	+0.5
TIRR	Tirgusor	62.22	313	⇑*i*P	P	04 07 47.1	-0.9
TIRR	Tirgusor	62.22	313	⇑P	P	04 07 47.1	-0.9
TLB	Topalu	62.50	313	⇓*i*P	P	04 07 48.8	-1.1
TLB	Topalu	62.50	313	⇓P	P	04 07 48.8	-1.1
CFR	Carcaliu	62.51	314	⇓*i*P	P	04 07 50.0	+0.1
CFR	Carcaliu	62.51	314	⇓P	P	04 07 50.0	+0.1
HARR	Harsova	62.59	313	⇑*i*P	P	04 07 49.0	-1.5
HARR	Harsova	62.59	313	⇑P	P	04 07 49.0	-1.5
AKASG	Malin Array Be	62.74	320	*ce*P	P	04 07 50.5	-0.8
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKASG	Malin Array Be	62.74	320	P	P	04 07 50.3	-1.0
	comp=Z,4.5nm,0.7s,baz=83,slow=6.3,SNR=22						
AKBB	Malin Array Si	62.74	320	*e*P	P	04 07 50.3	-1.0
	comp=Z,6.1nm,0.8s						
AKBB	Malin Array Si	62.74	320	*e*P	P	04 07 50.3	-1.0
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIEV	Kiev	62.75	320	*e*P	P	04 07 50.9	-0.5
	comp=Z,5.8nm,0.7s						
KIEV	Kiev	62.75	320	⇑*i*P	P	04 07 50.9	-0.5
KIEV	Kiev	62.75	320	⇑*i*P	P	04 07 50.8	-0.5
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AK11	Malin Array Si	62.77	320	*e*P	P	04 07 50.8	-0.8
MBAR	Mbarara	63.20	262	*e*P	P	04 07 57.4	+2.2
	comp=Z,11nm,1.1s						
VRI	Vrincioaia	63.59	314	⇑*i*P	P	04 07 58.4	+1.3
VRI	Vrincioaia	63.59	314	⇑P	P	04 07 58.4	+1.3
ISR	Istrita	63.62	314	⇑*i*P	P	04 07 58.3	+0.9
ISR	Istrita	63.62	314	⇑P	P	04 07 58.3	+0.9
PLOR	Plostina	63.64	314	⇑*i*P	P	04 07 58.5	+1.0
PLOR	Plostina	63.64	314	⇑P	P	04 07 58.5	+1.0
PETK	Petropavlovsk-	63.91	37	P	P	04 07 56.9	-2.2
	comp=Z,1.7nm,0.7s,baz=294,slow=11,SNR=2.3						
PEA1	Petropavlovsk-	63.91	37	*e*P	P	04 07 56.9	-2.2
MLR	Muntele Rosu	64.09	314	*e*P	P	04 08 01.6	+1.0
	comp=Z,24nm,1.0s						
MLR	Muntele Rosu	64.09	314	⇑*i*P	P	04 08 01.8	+1.2
MLR	Muntele Rosu	64.09	314	⇑P	P	04 08 01.8	+1.2
BIZ	Bicaz	64.15	316	⇑*i*P	P	04 08 01.5	+0.7
PET	Petropavlovsk	64.45	38	⇑*e*P	P	04 08 03.3	+0.7
PET				pmax	pmax		
	comp=Z,90nm,1.3s						
DOPR	Dopca	64.53	314	⇑*i*P	P	04 08 03.7	+0.4
HUMR	Humele	64.67	313	⇑*i*P	P	04 08 04.3	+0.1
VOIR		64.71	314	⇑*i*P	P	04 08 04.4	-0.2
VOIR		64.71	314	⇑P	P	04 08 04.4	-0.2
BURAR	Bucovina Array	64.83	316	⇑*i*P	P	04 08 05.6	+0.2
BUR04	Bucovina Ar. S	64.84	316	*e*P	P	04 08 05.8	+0.4
BUR08	Bucovina Ar. S	64.85	316	*e*P	P	04 08 06.3	+0.8
ARR	Arges	64.99	314	⇓*i*P	P	04 08 06.5	+0.1
NACGM	Naroch	65.04	324	*e*	P	04 08 05.0	-1.4
STKA	Stephens Creek	65.17	135	*e*P	P	04 08 08.1	+0.5
	comp=Z,1.6nm,0.9s						
STKA	Stephens Creek	65.17	135	*e*P	P	04 08 08.1	+0.5
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	Stephens Creek	65.17	135	P	P	04 08 07.4	-0.2
	comp=Z,5.6nm,0.8s,baz=313,slow=7.2,SNR=14						
STKA				LR	LR	04 40 55.9	
	comp=Z,67nm,18.3s,baz=351,slow=40						
VTS	Vitosha	65.79	311	⇓*i*P	P	04 08 11.3	-0.4
VTS	Vitosha	65.79	311	⇓P	P	04 08 11.3	-0.4
PUNG	Punghina	66.11	312	⇑*i*P	P	04 08 13.5	0.0
GZR	Gura Zlata	66.30	314	⇑*i*P	P	04 08 14.7	-0.1
GZR	Gura Zlata	66.30	314	⇑P	P	04 08 14.7	-0.1
DRGR		66.45	315	⇑*i*P	P	04 08 16.5	+0.7
DRGR		66.45	315	⇑P	P	04 08 16.5	+0.7
HERR	Herculane	66.52	313	⇓*i*P	P	04 08 16.0	-0.1
TRPA	Tarpa	66.68	317	⇑*i*P	P	04 08 17.4	+0.3
FIA0	FINESS Array S	66.86	331	*e*P	P	04 08 17.6	-0.3
FIA0				*e*pP	pP	04 08 27.5	+0.5
FIA0	FINESS Array S	66.86	331	*e*P	P	04 08 17.7	-0.3
FIA0				e*PP	pP	04 08 27.5	+0.5
FINES	FINESS Array B	66.86	331	*i* P	P	04 08 17.8	-0.2
FINES				pmax	pmax		
	comp=Z,9.0nm,0.7s						
FINES	FINESS Array B	66.86	331	P	P	04 08 17.6	-0.3
	comp=Z,8.7nm,0.7s,baz=94,slow=6.1,SNR=24						
FINES				pP	pP	04 08 27.5	+0.5
	comp=Z,2.1nm,0.6s,baz=90,slow=7.6,SNR=2.4						
SUW	Suwalki	66.96	323	*e*P	P	04 08 18.7	-0.1
SUW	Suwalki	66.96	323	*e*P	P	04 08 18.7	-0.1
MDVR	Moldovita	67.01	313	⇓*i*P	P	04 08 18.7	-0.7
NIE	Niedzica	68.26	318	*e*P	P	04 08 28.2	+1.0
NIE	Niedzica	68.26	318	*e*P	P	04 08 28.2	+1.0
PSZ	Piszkesteto	68.44	316	⇓*i*P	P	04 08 28.3	0.0
PSZ	Piszkesteto	68.44	316	⇓P	P	04 08 28.3	0.0
OJC	Ojcow	68.64	319	*e*P	P	04 08 29.8	+0.3
OJC	Ojcow	68.64	319	*e*P	P	04 08 29.8	+0.3
PDG	Podgorica	68.72	310	⇓*i*P	P	04 08 29.0	-1.1
VYHS	Vyhne	69.17	317	*e*P	P	04 08 32.7	-0.1
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.8s						
VYHS	Vyhne	69.17	317	*e*P	P	04 08 32.7	-0.1
ARA0	ARCESS Array S	69.22	340	*e*P	P	04 08 32.7	0.0
ARCES	ARCESS Array B	69.22	340	P	P	04 08 32.7	0.0
	comp=Z,4.4nm,0.6s,baz=88,slow=6.3,SNR=28						
MORC	Moravsky Berou	70.07	318	*e*P	P	04 08 38.6	+0.2
	comp=Z,16nm,1.1s						
MORC	Moravsky Berou	70.07	318	⇓*i*P	P	04 08 39.0	+0.6
MORC	Moravsky Berou	70.07	318	⇓P	P	04 08 39.0	+0.6
MORC	Moravsky Berou	70.07	318	*e*P	P	04 08 39.2	+0.8
MODS	Modra-Piesok	70.21	317	*e*P	P	04 08 39.5	+0.3
MODS				pmax	pmax		
	comp=Z,195nm,3.2s						
MODS	Modra-Piesok	70.21	317	*e*P	P	04 08 39.5	+0.3
LSZ	Lusaka	70.26	248	*e*P	P	04 08 41.9	+1.7
	comp=Z,6.6nm,0.9s						
LSZ	Lusaka	70.26	248	*e*P	P	04 08 41.9	+1.7
LSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DPC	Dobruska-Polom	70.87	319	*e*P	P	04 08 43.5	+0.2
DPC	Dobruska-Polom	70.87	319	*e*P	P	04 08 43.5	+0.2
BILL	Bilibino	70.99	22	*e*P	P	04 08 44.3	+0.7
	comp=Z,4.7nm,0.9s						
BILL	Bilibino	70.99	22	⇓*i*P	P	04 08 50.0	+6.4
BILL				pmax	pmax		
	comp=Z,14nm,1.8s						
CONA	Conrad Observa	71.15	316	*i* P	P	04 08 44.7	-0.4
	comp=Z,6.8nm,1.8s						
ARSA	Arzberg	71.38	315	*i* P	P	04 08 46.9	+0.5
	comp=Z,8.7nm,1.3s						
SOKA	Soboth	71.72	315	*i* P	P	04 08 49.0	+0.4
	comp=Z,10nm,1.1s						
PRU	Pruhonice	72.02	318	*e*P	P	04 08 51.1	+1.0
PRU	Pruhonice	72.02	318	*e*P	P	04 08 51.1	+1.0
OBKA	Obir	72.06	315	*i* P	P	04 08 50.8	+0.2
	comp=Z,14nm,0.9s						
MOA	Molln	72.22	316	*i* P	P	04 08 51.8	+0.3
	comp=Z,14nm,1.8s						
BRG	Berggiesshubel	72.39	319	*i* P	P	04 08 53.0	+0.7
	comp=Z,16nm,1.1s						
BRG				*e*		04 09 01.0	
	comp=Z,3.9nm,0.9s						
BRG	Berggiesshubel	72.39	319	*i* P	P	04 08 53.0	+0.7
BRG				*e*		04 09 01.0	
BRG				pmax	pmax		
	comp=Z,16nm,1.1s						
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GEA0	GERESS Array S	72.58	317	*e*P	P	04 08 53.8	+0.2
GEC2	GERESS Array S	72.58	317	*e*P	P	04 08 54.4	+0.7
	comp=Z,10nm,0.8s						
GERES	GERESS Array B	72.58	317	P	P	04 08 53.7	+0.1
	comp=Z,7.7nm,0.8s,baz=77,slow=5.9,SNR=48						
GERES				pP	pP	04 09 02.8	+0.1
	comp=Z,2.6nm,0.9s,baz=87,slow=7.1,SNR=4.9						
KHC	Kasperske Hory	72.65	317	*e*P	P	04 08 54.2	+0.2
	comp=Z,2.3nm,0.9s						
KHC	Kasperske Hory	72.65	317	*e*P	P	04 08 54.2	+0.2
KHC	Kasperske Hory	72.65	317	*e*P	P	04 08 54.2	+0.2
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MYKA	Terra Mystica	72.68	315	P	P	04 08 54.8	+0.6
	comp=Z,2.2nm,0.5s						
KBA	Koelnbreinsper	72.87	315	*i* P	P	04 08 55.0	-0.5
	comp=Z,4.6nm,0.8s						
CLL	Collm	72.98	320	*e*P	P	04 08 56.0	+0.2
CLL				*e*(sP)	pP	04 09 04.0	-0.9
CLL	Collm	72.98	320	*e*P	P	04 08 52.0	-3.8
CLL				e*PP	pP	04 09 04.0	-0.9
ABTA	Abfaltersbach	73.45	315	*i* P	P	04 08 58.8	0.0
	comp=Z,5.6nm,1.1s						
NB2	NORSAR Subarra	73.93	330	P	P	04 09 00.7	-0.6
	comp=Z,1.9nm,0.6s,baz=89,slow=5.9						
NB200	NORSAR Array S	73.93	330	*e*P	P	04 09 00.7	-0.6
NOA	NORSAR Array B	73.93	330	P	P	04 09 00.7	-0.6
	comp=Z,2.8nm,0.6s,baz=90,slow=5.7,SNR=7.7						
WATA	Walderalm	74.06	316	*i* P	P	04 09 01.6	-0.8
	comp=Z,3.2nm,0.6s						
SQTA	Sankt Quirin	74.32	316	*i* P	P	04 09 03.3	-0.6
	comp=Z,8.8nm,0.7s,SNR=5.2						
MOTA	Moosalm	74.38	316	*i* P	P	04 09 04.0	-0.4
	comp=Z,7.5nm,0.8s,SNR=5.1						
RETA	Reutte	74.61	316	*i* P	P	04 09 05.0	-0.5
	comp=Z,14nm,1.1s						
FETA	Feichten	74.66	315	*i* P	P	04 09 05.4	-0.6
	comp=Z,11nm,1.3s						
DAVA	Damuels	75.22	316	*i* P	P	04 09 09.0	-0.2
	comp=Z,17nm,1.1s,SNR=6.7						
KEST	Kesra	76.86	304	*e*P	P	04 09 18.3	-0.4
	comp=Z,16nm,1.1s						
KEST	Kesra	76.86	304	P	P	04 09 18.3	-0.4
	comp=Z,10nm,0.9s,baz=302,slow=2.8,SNR=6.8						
BOSA	Boshof	77.82	236	*e*P	P	04 09 25.3	+1.1
BOSA	Boshof	77.82	236	*e*P	P	04 09 25.3	+1.1
BOSA	Boshof	77.82	236	P	P	04 09 24.8	+0.6
	comp=Z,6.0nm,0.6s,baz=74,slow=4.0,SNR=16						
EKA	Eskdalemuir Ar	82.11	325	P	P	04 09 46.5	-0.2
	comp=Z,1.6nm,0.7s,baz=88,slow=5.9,SNR=7.3						
TAM	Tamanrasset	82.36	292	*e*P	P	04 09 50.0	+1.1
	comp=Z,4.4nm,1.1s						
TAM	Tamanrasset	82.36	292	*e*P	P	04 09 50.0	+1.1
TAM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANM	Nome	82.52	25	*e*P	P	04 09 50.4	+1.7
	comp=Z,7.2nm,1.2s						
ANM	Nome	82.52	25	*e*P	P	04 09 50.4	+1.7
ANM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ES19	SONSECA Array	86.38	310	*e*P	P	04 10 09.0	+0.1
ESDC	Sonseca Array	86.44	310	P	P	04 10 09.0	-0.1
	comp=Z,3.1nm,0.7s,baz=56,slow=4.9,SNR=17						
ESDC				pP	pP	04 10 17.0	-1.3
	comp=Z,0.2nm,0.5s,baz=62,slow=3.7,SNR=3.4						
IM3	Indian Mountai	86.54	22	*e*P	P	04 10 10.0	+1.0
SVW2	Sparrevohn	87.95	27	*e*P	P	04 10 14.7	-1.3
	comp=Z,58nm,0.6s						
TOA0	Torodi Ar. Sit	88.05	283	*e*P	P	04 10 17.9	+0.6
TORD	Torodi Ar. Bea	88.05	283	P	P	04 10 16.3	-1.0
	comp=Z,5.9nm,0.9s,baz=77,slow=4.6,SNR=36						
TORD				pP	pP	04 10 26.1	-0.5
	comp=Z,3.4nm,1.0s,baz=78,slow=2.9,SNR=8.6						
TORD				PP	PP	04 13 42.3	-1.9
	comp=Z,1.0nm,0.9s,baz=94,slow=9.1,SNR=5.1						
TOA1	Torodi Ar. Sit	88.06	283	*e*P	P	04 10 16.3	-1.0
TOA1				*e*pP	pP	04 10 26.1	-0.5
TOA1				*e*PP	PP	04 13 42.3	-1.9
MLY	Manley	88.10	22	*e*P	P	04 10 18.1	+1.5
	comp=Z,4.6nm,1.0s						
CAST	Castle Rocks	88.36	24	*e*P	P	04 10 19.6	+1.7
	comp=Z,12nm,1.0s						
BPAW	Bear Paw Mtn.	88.46	23	*e*P	P	04 10 20.4	+2.0
	comp=Z,14nm,1.2s						
BPAW				*e*pP	pP	04 10 27.6	-0.1
MDM	Murphy Dome	89.05	22	*e*P	P	04 10 22.3	+1.2
	comp=Z,6.8nm,1.0s						
IL1	Eielson Array	89.64	22	*e*P	P	04 10 23.5	-0.3
ILAR	Eielson Array	89.64	22	P	P	04 10 23.4	-0.4
	comp=Z,0.8nm,0.7s,baz=298,slow=4.8,SNR=13						
ILAR				pP	pP	04 10 32.5	-0.6
	comp=Z,1.5nm,0.8s,baz=299,slow=4.4,SNR=9.6						
ILB	Eielson Array	89.64	22	*e*P	P	04 10 23.4	-0.4
PRP	Porcupine Dome	89.70	21	*e*P	P	04 10 26.1	+1.8
	comp=Z,4.9nm,0.8s						
SCRK	Sand Creek	91.13	22	*e*P	P	04 10 32.1	+1.2
	comp=Z,6.0nm,1.2s						
INK	Inuvik	91.56	16	*e*P	P	04 10 31.9	-0.7
INK				*e*pP	pP	04 10 42.7	+0.7
INK	Inuvik	91.56	16	*e*P	P	04 10 31.9	-0.7
INK				e*PP	pP	04 10 42.7	+0.7
PD31	Pinedale Array	119.95	19	*e*PKPdf	PKPdf	04 16 17.2	-0.1
PDAR	Pinedale Array	119.95	19	PKP	PKPdf	04 16 17.2	-0.1
	comp=Z,0.3nm,0.5s,baz=90,slow=2.4,SNR=5.9						
PDAR				pPKP	pPKPdf	04 16 24.8	-1.9
	comp=Z,0.6nm,0.7s,baz=60,slow=3.6,SNR=4.2						
NV01	Mina Array Sit	120.30	28	*e*PKPdf	PKiKP	04 16 19.7	+1.6
NVAR	Mina Array Bea	120.30	28	PKP	PKiKP	04 16 19.8	+1.6
	comp=Z,0.6nm,0.6s,baz=321,slow=2.2,SNR=7.1						
NVAR				pPKP	pPKPdf	04 16 25.9	-1.8
	comp=Z,1.3nm,0.9s,baz=265,slow=3.1,SNR=5.7						
LTX	Lajitas	134.13	20	*e*PKPdf	PKiKP	04 16 45.4	-0.5
LTX				*e*pPKPdf	pPKPdf	04 16 53.4	-0.6
LTX	Lajitas	134.13	20	*e*PKIKP	PKiKP	04 16 45.4	-0.5
LTX				*e*		04 16 53.4	
TXAR	Lajitas Array	134.13	20	PKP	PKiKP	04 16 45.4	-0.5
	comp=Z,0.4nm,0.6s,baz=312,slow=0.3,SNR=7.6						
TXAR				pPKP	pPKPdf	04 16 53.4	-0.6
	comp=Z,0.3nm,0.5s,baz=184,slow=0.4,SNR=4.3						
TEIG	Tepich	146.06	2	*e*PKPdf	PKPab	04 17 08.0	+0.5
CPUP	Villa Florida	149.52	241	PKPbc	PKPbc	04 17 15.7	-0.5
	comp=Z,2.4nm,1.0s,baz=132,slow=5.5,SNR=4.8						
SDV	Santo Domingo	152.08	323	*e*PKPbc	PKPbc	04 17 22.5	-0.3
ROSC	El Rosal	157.47	325	PKPab	PKPab	04 17 56.8	+1.4
	comp=Z,3.9nm,0.8s,baz=108,slow=20,SNR=4.0						
LPAZ	La Paz	161.54	260	PKPab	PKPab	04 18 13.3	-0.2
	comp=Z,2.3nm,0.9s,baz=117,slow=8.0,SNR=7.1						

MEX 05 04:01:05.7±0.3, 15°.42N×93°.42W, h91^{km}±4^{km}, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.34	35	*e*P	Pn	04 01 18.1	-1.3
PCIG				*e*S	Sn	04 01 27.9	-1.8
THIG		1.23	114	*i* P	Pn	04 01 27.0	-1.1
THIG				*i* S	Sn	04 01 43.4	-1.6
CCIG	Comitan	1.50	55	*e*P	Pn	04 01 30.5	-1.2
CCIG				*i* S	Sn	04 01 49.9	-1.5

IDC 05 04:06:20.6±4.4, 13°.18N×91°.92E, h24^{km}±6^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.2/42, mbtmp3.7/4, Error ellipse: s-maj=241.4km s-min=20.7km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	34.48	348	P	P	04 13 05.4	-1.3
	0.3nm,0.5s,baz=160,slow=8.9,SNR=4.7						
MKAR				pP	sP	04 13 14.4	-1.1
	0.3nm,0.5s,baz=167,slow=8.8,SNR=4.0						
FITZ	Fitzroy Crossi	45.53	132	P	P	04 14 38.1	-0.5
	1.0nm,0.8s,baz=307,slow=5.1,SNR=3.8						
WRA	Warramunga Arr	53.16	128	P	P	04 15 36.5	-0.5
	0.5nm,0.7s,baz=306,slow=8.6,SNR=6.6						
WRA				pP	pP	04 15 43.9	+0.2
	0.4nm,0.6s,baz=304,slow=9.9,SNR=3.4						
WRA				PcP	PcP	04 16 46.8	+1.8
	0.1nm,0.6s,baz=335,slow=3.7,SNR=3.6						
WRA				pPcP		04 16 54.8	
	0.3nm,0.6s,baz=323,slow=3.1,SNR=5.0						
ASAR	Alice Springs	55.01	132	P	P	04 15 50.6	+0.1
	0.5nm,0.3s,baz=312,slow=6.4,SNR=5.7						
ASAR				pP	pP	04 15 58.2	+0.9
	0.4nm,0.4s,baz=307,slow=7.3,SNR=3.6						

IDC 05 04:10:22.6±3.3, 11°.16S×120°.90E, h0^{km}, mb3.6/1, mb1 3.7/3, mb1mx3.4/29, mbtmp3.5/3, ML2.5/2, Error ellipse: s-maj=257.0km s-min=33.1km az=49.0, South of Sumba

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.61	126	Pn	Pn	04 14 03.6	-0.4
	0.0nm,0.3s,baz=303,slow=14,SNR=3.5						
ASAR	Alice Springs	17.55	137	P	Pn	04 14 29.2	+0.3
	0.1nm,0.3s,baz=306,slow=12,SNR=10						
MKAR	Makanchi Array	67.23	332	P	P	04 21 18.8	0.0
	0.7nm,1.1s,baz=120,slow=5.7,SNR=3.9						

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*ISCJB **05** 04:30:29.8±0.4, 51°.47N±0°.02×16°.09E±0°.03, h0^{km}, mb3.4/1, Error ellipse: s-maj=2.8km s-min=2.2km az=24.1*

*IDC **05** 04:30:31.9±0.8, 51°.47N×16°.12E, h0^{km}, mb3.2/1, mb1 3.4/8, mb1mx3.2/55, mbtmp3.3/8, ML2.9/7, Error ellipse: s-maj=13.4km s-min=7.4km az=107.0*

*UPP **05** 04:30:33.8±2.9, 51°.59N×15°.47E, h0^{km}, ML1.9, Suspected explosion*

*BGR **05** 04:30:33.4±0.4, 51°.39N×16°.07E, h1^{km}, ML3.0/14, Error ellipse: s-maj=5.6km s-min=3.3km az=19.0*

ISC 05 04:30:30.2±0.7, 51°.52N±0°.03×16°.12E±0°.02, h0^{km}, n62, σ1^{s}.51/126, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.69	171	*i* Pg	Pb	04 30 44.7	-0.3
KSP				*e*Sg	Sg	04 30 53.2	+0.9
KSP	Ksiaz	0.69	171	*e*Pg	Pb	04 30 44.8	-0.3
KSP				*e*Sg	Sg	04 30 53.2	+0.9
UPC	Upice	1.02	184	*e*PG	Pb	04 30 50.8	+0.1
UPC				*e*SG	Sg	04 31 03.8	+0.9
	comp=Z,115nm,0.4s						
DPC	Dobruska-Polom	1.18	174	*e*PG	Pg	04 30 53.5	+0.7
DPC				*e*SG	Sg	04 31 08.1	0.0
	comp=Z,40nm,0.5s						
DPC	Dobruska-Polom	1.18	174	*e*Pg	Pb	04 30 53.7	+0.2
DPC				*e*Sg	Sg	04 31 08.4	+0.3
PVCC	Panska Ves	1.40	225	*e*PG	Pb	04 30 57.9	+0.8
PVCC				*e*SG	Sn	04 31 16.8	+0.7
	comp=Z,151nm,0.4s						
KRLC	Kraliky	1.51	164	*e*PG	Pg	04 30 59.7	+0.6
KRLC				*e*SG	Sg	04 31 18.8	+0.2
	comp=Z,17nm,0.5s						
BRG	Berggiesshubel	1.52	245	PN	Pn	04 30 59.0	+0.5
BRG				PG	Pg	04 31 00.7	+1.4
BRG				SG	Sn	04 31 20.5	+1.5
	188nm,0.5s						
BRG	Berggiesshubel	1.52	245	*e*Pn	Pn	04 30 59.1	+0.5
BRG				*e*Sg	Sn	04 31 19.5	+0.5
PRA	Prague	1.81	217	*e*SG	Sg	04 31 29.2	+1.0
	comp=Z,36nm,0.5s						
PRU	Pruhonice	1.84	214	*e*PN	Pn	04 31 03.5	+0.6
PRU				*e*PG	Pg	04 31 05.3	0.0
PRU				*e*SG	Sb	04 31 28.8	+0.7
	comp=Z,44nm,0.6s						
FBE	Freiberg	1.84	252	*e*Pg	Pg	04 31 06.3	+0.9
FBE				*e*Sg	Sg	04 31 29.6	+0.3
CLL	Collm	1.97	265	*e*Pn	Pn	04 31 05.0	+0.3
CLL				*i* Pg	Pg	04 31 08.5	+0.7
CLL				*i*		04 31 11.3	
CLL				*i* Sg	Sg	04 31 33.9	+0.6
	comp=Z,34nm,0.6s						
CLL	Collm	1.97	265	*e*Pn	Pn	04 31 05.4	+0.7
CLL				*e*Pg	Pg	04 31 09.0	+1.2
CLL				*e*Sg	Sg	04 31 34.8	+1.5
MORC	Moravsky Berou	1.97	152	*e*PN	Pn	04 31 05.6	+0.8
MORC				*e*SG	Sb	04 31 33.0	+1.0
MORC	Moravsky Berou	1.97	152	*e*Pn	Pn	04 31 05.5	+0.8
MORC				*e*Sg	Sb	04 31 32.4	+0.5
OKC	Ostrava-Krasne	2.12	142	*e*PG	Pg	04 31 11.0	+0.2
OKC				*e*SG	Sb	04 31 37.3	+0.9
	comp=Z,63nm,0.7s						
VRAC	Vranov	2.24	172	*e*PN	Pn	04 31 09.9	+1.4
VRAC				*e*SG	Sb	04 31 41.4	+1.7
VRAC	Vranov	2.24	172	Pn	Pn	04 31 10.0	+1.5
	comp=Z,3.3nm,0.3s,baz=348,slow=19,SNR=11						
VRAC				Pg	Pg	04 31 13.0	0.0
	comp=Z,3.3nm,0.3s,baz=347,slow=16,SNR=13						
VRAC				Sn	Sn	04 31 33.6	-3.2
	comp=Z,2.8nm,0.3s,baz=332,slow=11,SNR=4.0						
VRAC				Lg	Lg	04 31 42.4	
	comp=Z,2.1nm,0.3s,baz=283,slow=18,SNR=3.9						
TREC	Trest	2.27	191	*e*PN	Pn	04 31 10.3	+1.4
TREC				*e*PG	Pg	04 31 13.4	-0.2
TREC				*e*SG	Sg	04 31 43.0	0.0
	comp=Z,38nm,0.5s						
KRUC	Moravsky	2.47	176	*e*PN	Pb	04 31 16.3	+0.9
KRUC				*e*SG	Sg	04 31 50.3	+0.8
TANN	Tannenbergstha	2.57	246	*e*Pn	Pn	04 31 14.4	+1.4
TANN				*e*Pg	Pg	04 31 20.3	+1.0
TANN				*e*Sg	Sg	04 31 52.1	-0.4
NKC	Novy Kostel	2.66	242	*e*PN	Pn	04 31 15.6	+1.3
NKC				*e*PG	Pg	04 31 22.1	+0.9
NKC				*e*SG	Sg	04 31 57.2	+1.6
	comp=Z,57nm,0.4s						
OJC	Ojcow	2.67	118	*e*Pg	Pg	04 31 22.6	+1.3
OJC				*e*Sg	Sg	04 31 58.4	+2.5
OJC	Ojcow	2.67	118	*e*Pn	Pn	04 31 15.5	+1.1
OJC				*e*Pg	Pg	04 31 22.7	+1.4
KHC	Kasperske Hory	2.90	215	*e*PN	Pn	04 31 18.5	+0.9
KHC				*e*PG	Pg	04 31 24.5	-1.2
KHC				*e*SN	Sn	04 31 53.0	-0.1
KHC				*e*SG	Sg	04 32 03.0	-0.2
	comp=Z,26nm,0.7s						
MOX	Moxa	2.98	255	*e*Pn	Pn	04 31 20.8	+2.2
MOX				*e*Pg	Pg	04 31 28.3	+1.2
MOX				*e*Sg	Sg	04 32 05.0	-0.7
ROTZ	Rotzenmuhle	3.05	236	*e*Pn	Pn	04 31 20.7	+1.1
ROTZ				*e*Pg	Pg	04 31 29.5	+0.9
ROTZ				*e*Sg	Sg	04 32 07.4	-0.7
GEC2	GERESS Array S	3.10	211	*e*Pn	Pn	04 31 22.0	+1.6
GEC2				*e*Pg	Pg	04 31 28.2	-1.4
GEC2				*e*Sg	Sg	04 32 08.7	-1.0
GERES	GERESS Array B	3.10	211	Pn	Pn	04 31 21.4	+1.0
	comp=Z,1.3nm,0.3s,baz=29,slow=12,SNR=32						
GERES				Pg	Pb	04 31 27.9	+1.7
	comp=Z,3.2nm,0.3s,baz=29,slow=19,SNR=31						
GERES				Sn	Sn	04 31 56.7	-1.5
	comp=Z,2.4nm,0.3s,baz=35,slow=23,SNR=5.9						
GERES				Lg	Lg	04 32 06.5	
	comp=Z,2.5nm,0.3s,baz=33,slow=27,SNR=5.8						
SMOL	Smolenice	3.13	164	*e*PG	Pg	04 31 31.9	+1.8
SMOL				*e*SG	Sg	04 32 08.9	-1.7
WET	Wettzell	3.16	222	*e*Sg	Sg	04 32 11.7	0.0
LANS	Liptovska Anna	3.20	137	*e*PG	Pg	04 31 34.3	+2.9
LANS				*e*SG	Sg	04 32 13.3	+0.4
MODS	Modra-Piesok	3.24	166	*e*PG	Pg	04 31 32.8	+0.6
MODS				*e*SG	Sg	04 32 13.1	-1.1
MODS				*e*LG	Lg	04 32 19.6	
NIE	Niedzica	3.40	127	*e*P	Pg	04 31 35.6	+0.3
NIE				*e*S	Sg	04 32 20.9	+1.6
VYHS	Vyhne	3.50	149	*e*PG	Pg	04 31 37.1	-0.1
VYHS				*e*SG	Sg	04 32 22.1	-0.5
VYHS				*e*LG	Lg	04 32 26.6	
CONA	Conrad Observa	3.60	183	*i* Pn	Pn	04 31 28.3	+1.0
	comp=Z,0.3nm,0.1s						
CONA				Sg	Sb	04 32 19.8	+0.8
	comp=Z,11nm,0.3s						
GRF	Grafenberg Arr	3.62	241	*e*Sg	Sg	04 32 27.2	+0.8
BSD	Bornholm Skovb	3.67	349	*i* P	Pn	04 31 28.8	+0.7
BSD				*i* S	Sn	04 32 09.0	-3.0
MOA	Molln	3.87	199	*i* Pn	Pn	04 31 32.4	+1.5
	comp=Z,0.4nm,0.2s						
MOA				*e*Sg	Sb	04 32 23.9	-2.8
	comp=Z,6.3nm,0.4s						
ARSA	Arzberg	4.29	185	*i* Pn	Pn	04 31 39.7	+2.9
	comp=Z,0.7nm,0.3s						
ARSA				Sg	Sb	04 32 36.6	-2.3
	comp=Z,2.7nm,0.4s						
LUNU	Lund	4.41	340	P	Pn	04 31 38.6	+0.3
LUNU				S	Sn	04 32 28.8	-1.6
KBA	Koelnbreinsper	4.81	203	*i* Pn	Pn	04 31 45.6	+1.6
	comp=Z,1.1nm,0.3s						
KBA				Sn	Sn	04 32 37.2	-3.1

	comp=Z,3.5nm,0.5s						
SOKA	Soboth	4.90	189	*e*Pn	Pn	04 31 45.7	+0.6
	comp=Z,1.0nm,0.2s						
SOKA				*i* Sn	Sn	04 32 43.7	+1.1
	comp=Z,0.4nm,0.1s						
BJUU	Bjuv	4.92	339	P	Pn	04 31 45.2	0.0
BJUU				S	Sn	04 32 40.5	-2.2
OBKA	Obir	5.12	192	Pn	Pn	04 31 49.2	+1.0
	comp=Z,0.6nm,0.3s						
OBKA				Sg	Sb	04 33 01.0	-1.8
	comp=Z,2.7nm,0.5s						
DEL	Delary	5.13	346	P	Pn	04 31 48.5	+0.3
DEL				S	Sn	04 32 44.9	-3.2
WATA	Walderalm	5.13	217	*e*Sn	Sn	04 32 46.2	-2.2
	comp=Z,3.4nm,0.3s						
MYKA	Terra Mystica	5.16	199	Sg	Sg	04 33 16.3	+0.4
	comp=Z,3.0nm,0.4s						
MOTA	Moosalm	5.31	220	*e*Pn	Pn	04 31 53.6	+2.8
	comp=Z,0.5nm,0.2s						
MOTA				Sn	Sn	04 32 47.8	-5.0
	comp=Z,2.3nm,0.6s						
ABTA	Abfaltersbach	5.33	208	*e*Pn	Pn	04 31 53.1	+2.0
	comp=Z,0.7nm,0.4s						
ABTA				Sg	Sg	04 33 19.9	-1.6
	comp=Z,1.7nm,0.3s						
RETA	Reutte	5.34	223	*i* Pn	Pn	04 31 51.8	+0.7
	comp=Z,0.6nm,0.2s						
RETA				*e*Sn	Sn	04 32 49.6	-3.8
	comp=Z,0.8nm,0.3s						
SQTA	Sankt Quirin	5.37	219	*e*Pn	Pn	04 31 54.0	+2.3
	comp=Z,1.2nm,0.3s						
SQTA				Sg	Sg	04 33 22.1	-0.5
	comp=Z,3.4nm,0.5s						
FETA	Feichten	5.72	220	*e*Pn	Pn	04 31 58.0	+1.5
	comp=Z,0.6nm,0.4s						
FETA				*e*Sn	Sn	04 33 05.5	+2.5
	comp=Z,0.9nm,0.5s						
DAVA	Damuels	5.88	226	*e*Sn	Sn	04 33 04.5	-2.3
	comp=Z,6.3nm,0.8s						
DAVOX	Davos/Dischmat	6.27	223	Pn	Pn	04 32 04.3	+0.3
	comp=Z,0.3nm,0.3s,baz=48,slow=16,SNR=3.9						
DAVOX				Sn	Sn	04 33 15.3	-1.1
	comp=Z,0.2nm,0.3s,baz=300,slow=20,SNR=2.5						
DAVOX				Lg	Lg	04 33 48.7	
	comp=Z,0.4nm,0.3s,baz=0.0,slow=20,SNR=2.9						
BORU	Boraas	6.43	344	P	Pn	04 32 06.9	+1.0
AKASG	Malin Array Be	8.29	91	Pn	Pn	04 32 27.5	-4.0
	comp=Z,0.4nm,0.3s,baz=286,slow=13,SNR=2.4						
HFS	Hagfors	8.74	352	Pn	Pn	04 32 37.0	-0.6
	comp=Z,0.1nm,0.3s,baz=176,slow=21,SNR=3.0						
FINES	FINESS Array B	11.35	25	Pn	Pn	04 33 12.2	-1.1
	comp=Z,0.1nm,0.3s,baz=212,slow=7.7,SNR=3.3						
FINES				Sn	Sn	04 35 09.8	-11
	comp=Z,0.1nm,0.3s,baz=228,slow=20,SNR=2.4						
ARCES	ARCESS Array B	18.61	10	Pn	P	04 34 46.6	-2.1
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=6.5						
YKA	Yellowknife Ar	59.85	336	P	P	04 40 39.1	+2.2
	comp=Z,0.2nm,0.5s,baz=25,slow=7.5,SNR=3.8						

IDC 05 04:33:19.6±1.6**, 0°.43S×137°.50E, h0^{km}, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.4**/48**, mbtmp3.4**/4**, ML3.4**/2**, MS3.6**/1**, Ms1 3.8**/1**, ms1mx2.7**/25**, Error ellipse: s-maj=38.1km s-min=24.5km az=65.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.82	123	Pn	Pn	04 34 21.5	+1.8
	0.9nm,0.3s,baz=18,slow=19,SNR=2.4						
JAY				Sn	Sn	04 35 05.5	+0.1
	2.1nm,0.3s,baz=333,slow=2.3,SNR=3.2						
WRA	Warramunga Arr	19.64	189	P	P	04 37 48.4	-1.5
	0.2nm,0.3s,baz=12,slow=12,SNR=13						
FITZ	Fitzroy Crossi	21.07	213	P	P	04 38 06.2	+0.6
	1.0nm,0.9s,baz=61,slow=11,SNR=2.4						
ASAR	Alice Springs	23.36	188	P	P	04 38 30.5	+0.6
	2.1nm,0.8s,baz=25,slow=9.3,SNR=15						
CMAR	Chiang Mai Arr	42.27	298	LR	LR	05 01 32.8	
	comp=Z,68nm,18.2s,baz=328,slow=40						
MKAR	Makanchi Array	67.25	322	P	P	04 44 15.7	-0.3
	0.3nm,0.4s,baz=100,slow=4.4,SNR=6.2						

IDC 05 04:38:28.8±4.3**, 20°.46S×178°.93W, h0^{km}, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.7**/28**, mbtmp3.8**/4**, Error ellipse: s-maj=294.8km s-min=28.6km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.68	257	P	P	04 46 36.6	+0.8
	1.6nm,0.6s,baz=98,slow=7.8,SNR=16						
WRA	Warramunga Arr	43.75	262	P	P	04 46 36.7	+0.3
	0.4nm,0.3s,baz=97,slow=8.0,SNR=31						
FITZ	Fitzroy Crossi	52.17	263	P	P	04 47 39.9	-1.8
	1.2nm,0.8s,baz=60,slow=8.1,SNR=7.3						
NVAR	Mina Array Bea	81.59	44	P	P	04 50 49.1	+0.1
	0.2nm,0.6s,baz=217,slow=7.4,SNR=2.0						

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*ISCJB **05** 04:41:45.4±0.6, 43°.12N±0°.05×145°.87E±0°.05, h62^{km}±3^{km}, mb3.8/19, Error ellipse: s-maj=8.6km s-min=4.5km az=147.3*

*JMA **05** 04:41:45.9±0.1, 43°.08N×145°.84E, h56^{km}±1^{km}, M3.6*

JMA Felt II J1.

*SKHL **05** 04:41:46.3±0.4, 43°.10N×145°.82E, h55^{km}±5^{km}, mb4.9/6*

SKHL Felt (II) at Yushno-Kuril'sk.

*MOS **05** 04:41:46.0±1.0, 43°.21N×145°.83E, h64^{km}, mb4.1/11, Error ellipse: s-maj=14.8km s-min=9.0km az=82.9*

MOS Felt (II) at Yuzhno-Kuril'sk.

*IDC **05** 04:41:51.4±2.5, 43°.52N×145°.75E, h86^{km}±23^{km}, mb3.6/15, mb1 3.8/17, mb1mx3.6/38, mbtmp3.9/17, Error ellipse: s-maj=34.3km s-min=15.6km az=174.0*

ISC 05 04:41:46.1±0.9**, 43°.09N**±0°.05×**145°.92E**±0°.04**, h51**^{km}±7^{km}**, n64, σ1^{s}21**/78**, mb3.7**/19**, 5C-8D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.30	335	P	Pn	04 41 55.5	+0.2
NEM2				S	Sn	04 42 02.3	+0.4
JKHN	Kushirohamanak	0.56	269	P	Pn	04 41 57.9	-0.1
JKHN				*e*S	Sn	04 42 06.1	-0.6
GLVR	Golovnino	0.71	336	*i* P	Pn	04 42 00.0	+0.1
GLVR				AMB	AMB	04 42 00.0	
	500nm,0.2s						
GLVR				AMB	AMB	04 42 00.0	
	700nm,0.2s						
GLVR				AMB	AMB	04 42 00.0	
	520nm,0.2s						
GLVR				*i* S	Sn	04 42 10.0	-0.1
GLVR				A	A	04 42 11.0	
	6µm,0.4s						
GLVR				A	A	04 42 11.0	
	10µm,0.4s						
GLVR	Golovnino	0.71	336	*d i*PN	Pn	04 42 00.1	+0.1
GLVR				*i* S	Sn	04 42 10.5	+0.4
GLVR				pmax	pmax		
	comp=N,499nm,0.1s						
GLVR				pmax	pmax		
	comp=E,699nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,5µm,0.1s						
GLVR				smax	smax		
	comp=E,10µm,0.3s						
GLVR				smax	smax		
	comp=N,6µm,0.1s						
JAK	Akkeshi	0.90	264	P	Pn	04 42 01.7	-0.8
JAK				*e*S	Sn	04 42 13.4	-1.1
GRPR	Tuman	0.91	353	*i* P	Pn	04 42 02.0	-0.6
GRPR				AMB	AMB	04 42 04.0	
	comp=N,670nm,0.4s						
GRPR				AMB	AMB	04 42 04.0	
	comp=N,230nm,0.4s						
GRPR				AMB	AMB	04 42 04.0	
	comp=N,1µm,0.4s						
GRPR				*i* S	Sn	04 42 14.0	-0.7
GRPR				A	A	04 42 14.9	
	comp=N,7µm,0.4s						
GRPR				A	A	04 42 14.9	
	comp=N,8µm,0.4s						
GRPR	Tuman	0.91	353	*c i*PN	Pn	04 42 02.5	-0.1
GRPR				*i* S	Sn	04 42 14.2	-0.5
GRPR				pmax	pmax		
	comp=Z,1µm,0.2s						
GRPR				pmax	pmax		
	comp=N,666nm,0.1s						
GRPR				pmax	pmax		
	comp=E,234nm,0.1s						
GRPR				smax	smax		
	comp=N,17µm,0.4s						
GRPR				smax	smax		
	comp=E,8µm,0.2s						
YUK	Yuzh-Kuril'sk	0.94	358	*i* P	Pn	04 42 03.1	+0.1
YUK				AMB	AMB	04 42 03.9	
	comp=E,980nm,0.3s						
YUK				*i* S	Sn	04 42 14.9	-0.6
YUK				A	A	04 42 17.3	
	comp=E,8µm,0.4s						
YUK				A	A	04 42 17.3	
	comp=E,6µm,0.4s						
YUK	Yuzh-Kuril'sk	0.94	358	*d i*PN	Pn	04 42 03.1	+0.1
YUK				*i* S	Sn	04 42 15.3	-0.2
YUK				pmax	pmax		
	comp=Z,755nm,0.2s						
YUK				pmax	pmax		
	comp=N,207nm,0.1s						
YUK				pmax	pmax		
	comp=E,158nm,0.1s						
YUK				smax	smax		
	comp=N,11nm,0.3s						
YUK				smax	smax		
	comp=E,5.0nm,0.2s						
LAGR	Lagunnoye	0.97	354	*i* P	Pn	04 42 03.0	-0.4
LAGR				AMB	AMB	04 42 05.0	
	comp=E,160nm,0.4s						
LAGR				AMB	AMB	04 42 05.0	
	comp=E,820nm,0.4s						
LAGR				*i* S	Sn	04 42 16.0	-0.1
LAGR				A	A	04 42 17.0	
	comp=E,6µm,0.5s						
LAGR				A	A	04 42 17.0	
	comp=E,11µm,0.5s						
LAGR	Lagunnoye	0.97	354	*c i*PN	Pn	04 42 03.5	+0.1
LAGR				*i* S	Sn	04 42 16.1	-0.1
LAGR				pmax	pmax		
	comp=N,161nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,818nm,0.1s						
LAGR				smax	smax		
	comp=N,19µm,0.2s						
LAGR				smax	smax		
	comp=E,11µm,0.2s						
JNK	Nakash	1.00	300	P	Pn	04 42 03.1	-0.8
JNK				*e*S	Sn	04 42 15.5	-1.5
SHO	Shikotan	1.02	40	*i* P	Pn	04 42 04.0	-0.1
SHO				AMB	AMB	04 42 04.0	
	comp=E,80nm,0.2s						
SHO				AMB	AMB	04 42 04.0	
	comp=E,120nm,0.2s						
SHO				AMB	AMB	04 42 04.0	
	comp=E,180nm,0.2s						
SHO				*i* S	Sn	04 42 17.0	-0.5
SHO				A	A	04 42 17.6	
	comp=E,2µm,0.2s						
SHO				A	A	04 42 17.6	
	comp=E,2µm,0.2s						
SHO	Shikotan	1.02	40	*c i*PN	Pn	04 42 04.0	-0.1
SHO				*i* S	Sn	04 42 16.9	-0.5
SHO				pmax	pmax		
	comp=N,54nm,0.2s						
SHO				pmax	pmax		
	comp=E,79nm,0.2s						
SHO				pmax	pmax		
	comp=Z,182nm,0.2s						
SHO				smax	smax		
	comp=E,2µm,0.1s						
SHO				smax	smax		
	comp=N,2µm,0.3s						
JRA	Rausu	1.02	326	P	Pn	04 42 04.1	0.0
JRA				*e*S	Sn	04 42 17.5	0.0
JOB	Onbets	1.54	264	P	Pn	04 42 10.5	-0.6
JOB				*e*S	Sn	04 42 28.4	-1.6
JAR	Ashorobuto	1.58	278	P	Pn	04 42 11.4	-0.3
JAR				*e*S	Sn	04 42 30.4	-0.7
JTKR	Abashiri--Toko	1.71	302	P	Pn	04 42 13.7	+0.4
JTKR				*e*S	Sn	04 42 34.8	+0.8
ERM	Erimo	2.31	243	*e*P	Pn	04 42 23.2	+1.6
ERM	Erimo	2.31	243	*de*PN	Pn	04 42 23.2	+1.6
KUR	Kuril'sk	2.56	33	*i* P	Pn	04 42 25.7	+0.7
KUR				AMB	AMB	04 42 28.0	
	comp=N,60nm,0.4s						
KUR				AMB	AMB	04 42 28.0	
	comp=N,40nm,0.4s						
KUR				AMB	AMB	04 42 28.0	
	comp=N,150nm,0.4s						
KUR				*i* S	Sn	04 42 55.1	+0.2
KUR				A	A	04 42 58.0	
	comp=N,270nm,0.2s						
KUR				A	A	04 42 58.0	
	comp=N,320nm,0.2s						
KUR	Kuril'sk	2.56	33	*c i*PN	Pn	04 42 26.3	+1.3
KUR				*e*S	Sn	04 42 56.1	+1.2
KUR				pmax	pmax		
	comp=Z,146nm,0.4s						
KUR				smax	smax		
	comp=E,324nm,0.4s						
KUR				smax	smax		
	comp=N,217nm,0.2s						
JKA	Kamikawa-asahi	2.62	294	*e*P	Pn	04 42 27.2	+1.3
ASAJ	Asahikawa	2.62	294	P	Pn	04 42 27.1	+1.3
	comp=N,21nm,0.3s,baz=110,slow=11,SNR=68						
ASAJ				S	Sn	04 43 00.6	+4.2
	comp=N,8.8nm,0.3s,baz=242,slow=20,SNR=4.5						
YSS	Yuzh-Sakhalins	4.47	331	*e*P	Pn	04 42 52.4	+1.3
YSS				*e*S	Sn	04 43 40.1	-1.7
YSS				A	A	04 43 42.5	
	comp=N,20nm,0.6s						
YSS	Yuzh-Sakhalins	4.47	331	*e*PN	Pn	04 42 52.4	+1.3
YSS				*e*S	Sn	04 43 42.5	+0.7
YSS				smax	smax		
	comp=E,30nm,1.4s						
UGL	Uglegorsk	6.56	337	*e*P	Pn	04 43 19.6	-0.2
MJAR	Matsushiro Arr	8.83	225	P	Pn	04 44 01.0	+10
	comp=E,0.1nm,0.3s,baz=30,slow=13,SNR=3.3						
SKR	Severo-Kuril's	10.31	39	*e*P	Pn	04 44 12.2	+1.1
SKR	Severo-Kuril's	10.31	39	⇑*e*PN	Pn	04 44 12.2	+1.1
ULN	Ulaanbaatar	27.46	294	*e*P	P	04 47 31.7	+4.5
ULN	Ulaanbaatar	27.46	294	⇓*e*P	P	04 47 31.7	+4.5
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	27.90	294	P	P	04 47 31.0	-0.2
	comp=Z,0.9nm,0.7s,baz=102,slow=7.3,SNR=4.7						
H11N2	WAKE ISLAND Hy	29.22	136	T	T	05 18 40.9	
	baz=328,slow=76,SNR=435						
H11N1	WAKE ISLAND Hy	29.23	136	T	T	05 18 41.7	
	baz=328,slow=76,SNR=344						
H11N3	WAKE ISLAND Hy	29.23	136	T	T	05 18 42.1	
	baz=328,slow=76,SNR=266						
TIXI	Tiksi	29.83	349	*e*P	P	04 47 52.7	+4.9
TIXI	Tiksi	29.83	349	⇓*e*P	P	04 47 52.7	+4.9
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
H11S1	WAKE ISLAND Hy	30.15	138	T	T	05 19 51.4	
	baz=329,slow=76,SNR=673						
H11S3	WAKE ISLAND Hy	30.16	138	T	T	05 19 51.9	
	baz=329,slow=76,SNR=602						
H11S2	WAKE ISLAND Hy	30.17	138	T	T	05 19 52.8	
	baz=329,slow=76,SNR=436						
KNGR	Kungurtug, Tuv	33.43	300	⇓*e*P	P	04 48 23.6	+3.7
KDAK	Kodiak Island	40.35	47	*e*P	P	04 49 18.3	0.0
KDAK	Kodiak Island	40.35	47	*i* P	P	04 49 18.3	0.0
KDAK	Kodiak Island	40.35	47	P	P	04 49 18.1	-0.2
	comp=Z,7.7nm,1.0s,baz=281,slow=10,SNR=5.7						
ZALV	Zalesovo Beam	40.68	307	P	P	04 49 20.3	-0.8
	comp=Z,0.3nm,0.3s,baz=132,slow=4.3,SNR=2.4						
ZALV				PcP	PcP	04 51 21.2	-0.6
	comp=Z,0.3nm,0.4s,baz=94,slow=2.9,SNR=3.5						
COLA	College	42.13	36	*e*P	P	04 49 34.7	+1.9
COLA	College	42.13	36	⇓*e*P	P	04 49 34.7	+1.9
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR	Eielson Array	42.55	36	P	P	04 49 36.1	-0.1
	comp=Z,1.0nm,0.6s,baz=270,slow=7.7,SNR=11						
MKAR	Makanchi Array	44.10	298	P	P	04 49 48.3	-0.7
	comp=Z,0.6nm,0.5s,baz=78,slow=8.7,SNR=9.3						
MKAR				PcP	PcP	04 51 32.5	-0.9
	comp=Z,0.2nm,0.7s,baz=51,slow=2.8,SNR=2.3						
KURK	Kurchatov	45.16	304	⇓*e*P	P	04 50 02.8	+5.5
KURK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
INK	Inuvik	47.42	30	P	P	04 50 14.9	+0.1
	comp=Z,1.1nm,0.3s,baz=286,slow=5.1,SNR=21						
YKA	Yellowknife Ar	56.84	33	P	P	04 51 24.4	-0.5
	comp=Z,0.3nm,0.5s,baz=302,slow=6.8,SNR=6.2						
ARCES	ARCESS Array B	59.55	339	*e*P	P	04 51 42.9	-0.8
ARCES	ARCESS Array B	59.55	339	P	P	04 51 42.8	-0.9
	comp=Z,4.2nm,0.9s,baz=27,slow=8.3,SNR=4.4						
FINES	FINESS Array B	65.05	333	P	P	04 52 19.3	-1.2
	comp=Z,2.9nm,0.5s,baz=42,slow=7.5,SNR=23						
NVAR	Mina Array Bea	68.69	57	P	P	04 52 44.9	+0.6
	comp=Z,1.0nm,0.6s,baz=290,slow=6.9,SNR=9.5						
NB2	NORSAR Subarra	69.89	338	P	P	04 52 50.0	-1.1
	comp=Z,0.7nm,0.4s,baz=32,slow=6.5						
NOA	NORSAR Array B	69.89	338	P	P	04 52 50.2	-1.0
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	69.89	338	P	P	04 52 50.2	-1.0
	comp=Z,1.4nm,0.6s,baz=36,slow=5.8,SNR=5.8						
PDAR	Pinedale Array	71.02	49	P	P	04 52 58.6	0.0
	comp=Z,0.4nm,0.5s,baz=266,slow=1.0,SNR=5.4						
AKASG	Malin Array Be	71.57	323	P	P	04 53 00.2	-1.3
	comp=Z,0.8nm,0.5s,baz=42,slow=5.5,SNR=6.6						
GERES	GERESS Array B	79.29	330	P	P	04 53 44.9	-1.0
	comp=Z,0.4nm,0.6s,baz=28,slow=5.7,SNR=2.3						
TXAR	Lajitas Array	83.76	55	P	P	04 54 10.4	+0.5
	comp=Z,0.5nm,0.7s,baz=302,slow=4.2,SNR=6.5						

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*ATH **05** 04:42:07.1, 34°.48N×24°.49E, h10^{km}±31^{km}, ML2.6/2, Error ellipse: s-maj=31.6km s-min=3.7km az=0.0*

*THE **05** 04:42:08.8, 34°.53N×24°.38E, h1^{km}±5^{km}, ML2.5/3, Error ellipse: s-maj=8.0km s-min=0.9km az=167.0*

ISC 05 04:42:07.5±3.2**, 34°.6N**±0°.3×**24°.6E**±0°.1**, h8**^{km}±18^{km}**, n8, σ0^{s}31**/13**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.48	302	P	Pg	04 42 17.1	+0.3
GVD				S	Sg	04 42 22.7	-0.4
GVD				AML	AML	04 42 23.2	
	comp=N,3056µm,0.4s						
GVD				AML	AML	04 42 24.8	
	comp=E,2266µm,0.2s						
GVD	Gavdhos	0.48	302	P	Pg	04 42 17.1	+0.3
GVD				S	Sg	04 42 22.9	-0.2
VAM	Vamos	0.88	339	P	Pn	04 42 26.1	-0.1
VAM				S	Sn	04 42 39.3	+0.1
VAM	Vamos	0.88	339	P	Pn	04 42 25.9	-0.3
VAM				S	Sn	04 42 39.5	+0.3
LAST	Lasithi	0.94	52	P	Pb	04 42 26.1	0.0
IMMV	Iera Moni Meta	1.00	331	P	Pb	04 42 26.8	-0.4
IMMV				AML	AML	04 42 44.3	
	comp=E,443µm,0.4s						
IMMV				AML	AML	04 42 46.5	
	comp=N,464µm,0.5s						
IMMV	Iera Moni Meta	1.00	331	P	Pb	04 42 27.5	+0.3
IMMV				S	Sn	04 42 42.4	+0.1
ANKY	Antikythira Is	1.65	321	P	Pg	04 42 39.5	+0.2

NNC 05 04:43:18.5±1.7**, 36°.96N×70°.26E, h0^{km}, mb3.5, mpv3.3, 5C-3D, Error ellipse: s-maj=14.3km s-min=11.9km az=148.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.97	39	⇑P	Pn	04 44 21.2	+0.3
	2.4nm,0.3s						
SFK				⇑S	Sn	04 45 09.7	+1.5
	6.7nm,0.4s						
MNAS	Manas	5.79	17	⇓P	Pn	04 44 46.2	+0.5
	1.4nm,0.6s						
MNAS				⇓S	Sn	04 45 53.7	+0.9
	4.3nm,0.6s						
KK31	Karatay Array	6.14	2	⇑P	Pn	04 44 51.1	+0.7
	0.4nm,0.3s,baz=169,slow=12,SNR=24						
KK31				S	Sn	04 46 02.5	+1.1
	1.1nm,0.5s,baz=183,slow=20,SNR=4.9						
AAK	Ala-Archa	6.54	29	⇑P	Pn	04 44 54.4	-1.7
	1.1nm,0.4s						
AAK				⇓S	Sn	04 46 12.7	+1.3
	5.4nm,0.6s						
TKM2	Tokmak 2	7.23	33	⇑P	Pn	04 45 05.1	-0.5
	3.1nm,0.8s						
AB31	Akbulak array	14.40	332	P	Pn	04 46 43.8	+0.3
	0.1nm,0.3s,baz=163,slow=81,SNR=6.3						

IDC 05 05:00:20.3±1.9**, 5°.26S×151°.96E, h0^{km}, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.7**/38**, mbtmp3.9**/4**, Error ellipse: s-maj=104.2km s-min=27.0km az=128.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.52	228	P	P	05 05 21.6	-0.2
	1.5nm,0.6s,baz=53,slow=10,SNR=28						
ASAR	Alice Springs	25.25	222	P	P	05 05 47.9	-0.5
	2.6nm,0.6s,baz=58,slow=9.0,SNR=42						
FITZ	Fitzroy Crossi	28.71	241	P	P	05 06 19.9	+0.4
	1.2nm,0.6s,baz=51,slow=6.3,SNR=9.9						
ILAR	Eielson Array	82.89	22	P	P	05 12 46.4	-0.2
	0.3nm,0.7s,baz=233,slow=5.1,SNR=4.1						
TORD	Torodi Ar. Bea	149.65	287	PKPbc	PKPbc	05 20 13.1	0.0
	1.4nm,1.1s,baz=79,slow=2.4,SNR=9.6						

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*IDC **05** 05:01:34.8±1.0, 7°.39N×124°.56E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.5/43, mbtmp3.6/5, MS3.7/4, Ms1 3.6/4, ms1mx3.2/48, Error ellipse: s-maj=29.2km s-min=11.2km az=29.0*

*ISCJB **05** 05:01:35.9±0.9, 7°.72N±0°.03×124°.84E±0°.04, h11^{km}±7^{km}, mb3.6/5, MS3.7/3, Error ellipse: s-maj=7.2km s-min=5.4km az=177.2*

*MAN **05** 05:01:36.0, 7°.76N×124°.78E, h1^{km}, mb4.6, ML3.4, MS3.3*

MAN INTENSITY II - MARAMAG BUKIDNON; INTENSITY I - DON CARLOS BUKIDNON.

ISC 05 05:01:35.5±1.2**, 7°.71N**±0°.03×**124°.79E**±0°.03**, h6**^{km}±9^{km}**, n22, σ1^{s}32**/24**, mb3.7**/5**, MS3.6**/3**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.31	58	*e*P	Pg	05 01 41.7	0.0
BUKP				*e*S	Sg	05 01 46.9	+1.1
CTBH	Cotabato--PC H	0.73	228	⇑*i*P	Pg	05 01 50.3	+0.7
CTBH				*i* S	Sb	05 02 01.6	+0.8
CGP	Cagayan de Oro	0.74	352	⇑*i*P	Pb	05 01 50.1	-0.8
CGP				*i* S	Sb	05 01 59.9	-1.4
KCP	Kidapawan	0.76	157	⇑*i*P	Pg	05 01 48.9	-1.3
DAV	Davao City (W)	1.01	129	Pg	Pg	05 01 54.4	-0.5
	333nm,0.3s,baz=286,slow=8.4,SNR=7.9						
DAV				Lg	Lg	05 02 10.0	
	526nm,0.3s,baz=164,slow=22,SNR=54						
SKMP	Bagumbayan, Su	1.21	192	*e*P	Pn	05 01 56.7	-2.3
SKMP				*e*S	Sn	05 02 17.4	+1.7
PAGZ	Pagadian	1.41	276	*e*P	Pb	05 02 01.7	-0.4
PAGZ				*e*S	Sg	05 02 22.5	+1.8
BUTP	Butuan	1.49	33	*e*P	Pb	05 02 03.4	-0.2
MATI	Mati	1.64	118	*e*P	Pb	05 02 07.0	+0.8
DDMP	Don Marcelino,	1.84	150	*e*P	Pn	05 02 07.5	-0.1
DDMP				*e*S	Sn	05 02 32.8	+1.6
IPIL	Ipil	2.20	272	*e*P	Pb	05 02 14.6	-1.2
MSLP	Maasin	2.41	2	*e*P	Pn	05 02 15.8	+0.4
OCLP	Ormoc	3.32	357	*e*P	Pb	05 02 33.6	-1.2
BATI	Baumata	17.84	184	LR	LR	05 13 12.7	
	comp=Z,123nm,20.8s,baz=295,slow=40						
JNU	Nakatsue	25.91	12	LR	LR	05 18 38.8	
	comp=Z,190nm,18.6s,baz=316,slow=39						
WRA	Warramunga Arr	29.04	161	P	P	05 07 34.7	-2.0
	0.2nm,0.6s,baz=332,slow=11,SNR=2.5						
ASAR	Alice Springs	32.43	164	P	P	05 08 05.5	-1.1
	0.5nm,0.6s,baz=342,slow=7.1,SNR=4.8						
STKA	Stephens Creek	42.51	159	LR	LR	05 28 34.9	
	comp=Z,51nm,19.2s,baz=3.7,slow=38						
MKAR	Makanchi Array	53.21	325	P	P	05 10 55.9	+1.2
	0.9nm,0.9s,baz=128,slow=9.3,SNR=5.7						
ZALV	Zalesovo Beam	56.19	333	P	P	05 11 18.0	+1.9
	0.5nm,0.6s,baz=144,slow=8.2,SNR=2.8						
KURBB	Kurchatov Arra	57.37	327	P	P	05 11 25.3	+0.7
	0.3nm,0.3s,baz=120,slow=6.6,SNR=5.5						
TIXI	Tiksi	63.92	1	LR	LR	05 39 44.7	
	comp=Z,130nm,21.8s,baz=334,slow=36						

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*IDC **05** 05:02:59.9±1.2, 10°.46N×126°.92E, h0^{km}, mb3.9/8,*

mb1 4.1/8,mb1mx3.8/38,mbtmp3.9/8,MS4.2/1,Ms1 4.2/1, ms1mx3.0/56,Error ellipse: s-maj=118.3km s-min=15.7km az=72.0
*MAN **05** 05:03:02.0,10°.27N×125°.36E,h251km,mb4.7,ML3.6, MS3.6*
ISC 05 05:03:01.8±0.9,**10°.53N**±0°.05×**126°.97E**±0°.07,**h10km,n18, σ2s.24**/20,**mb3.9**/8,**1C-2D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.64	243	⇓eP	Pn	05 03 30.8	+0.1
SCPH				eS	Sg	05 03 53.4	-1.2
BESP	Borongan	1.84	305	eP	Pg	05 03 39.9	+2.7
BUTP	Butuan	2.05	221	eP	Pb	05 03 39.1	+0.1
BUTP				eS	Sg	05 04 09.5	+1.9
PLP	Palo	2.06	288	⇓eP	Pn	05 03 29.5	-7.0
PLP				eS	Sn	05 03 49.4	-13
MSLP	Maasin	2.12	259	eP	Pn	05 03 36.5	-0.8
MSLP				eS	Sn	05 04 02.1	-1.6
MSLP	Maasin	2.12	259	eS	Sn	05 04 01.6	-2.0
OCLP	Ormoc	2.38	283	eS	Sn	05 03 58.5	-12
BIPH	Bislig	2.41	195	⇑eP	Sn	05 04 09.1	-1.8
BIPH				i S	Sg	05 04 17.5	-1.8
DDMP	Don Marcelino,	4.57	196	eP	Pg	05 04 30.2	+0.8
DDMP				eS	Sn	05 05 11.7	+7.3
FITZ	Fitzroy Crossi	28.48	183	P	P	05 08 56.5	-0.8
	1.1nm,0.5s,baz=344,slow=7.4,SNR=6.2						
WRA	Warramunga Arr	31.14	167	P	P	05 09 19.4	-1.5
	0.9nm,0.5s,baz=347,slow=9.2,SNR=10						
ASAR	Alice Springs	34.66	169	P	P	05 09 50.8	-0.9
	0.8nm,0.3s,baz=350,slow=7.7,SNR=16						
SONM	Songino Array	41.02	339	P	P	05 10 44.8	-0.6
	0.4nm,0.5s,baz=160,slow=4.7,SNR=5.0						
STKA	Stephens Creek	44.43	162	P	P	05 11 12.6	-0.4
	1.1nm,0.6s,baz=333,slow=9.0,SNR=2.7						
TLY	Talaya	45.23	340	LR	LR	05 28 49.1	
	comp=Z,290nm,20.1s,baz=326,slow=34						
MKAR	Makanchi Array	52.24	322	P	P	05 12 13.3	+0.1
	0.9nm,0.7s,baz=111,slow=7.9,SNR=4.9						
ZALV	Zalesovo Beam	54.73	331	P	P	05 12 30.8	-0.5
	0.6nm,0.7s,baz=111,slow=3.2,SNR=2.6						
ARCES	ARCESS Array B	84.19	340	P	P	05 15 33.9	+0.8
	1.5nm,0.8s,baz=83,slow=7.5,SNR=3.7						

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*DDA **05** 05:08:30.9,37°.08N×37°.10E,h7km±1km,ML2.6*
*ISK **05** 05:08:30.5,37°.05N×37°.08E,h5km,ML1.8/5*
*ISCJB **05** 05:08:31.3±0.6,37°.07N±0°.03×37°.09E±0°.04,h1km±6km, Error ellipse: s-maj=4.9km s-min=4.3km az=31.9*
ISC 05 05:08:31.0±1.1,**37°.05N**±0°.03×**37°.09E**±0°.03,**h8**km±8km, **n12,σ0s.59**/23,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.15	38	PG	Pg	05 08 34.2	-0.1
GAZ				SG	Sg	05 08 36.7	+0.2
KUZU	Kuzuini	0.28	183	i P	Pb	05 08 37.5	-0.7
KUZU				i S	Sb	05 08 42.8	-0.3
KUZU				IAML_P			
	comp=Z,4μm,0.1s						
KMRS	Kahramanmaras	0.48	341	PG	Pg	05 08 40.2	-0.1
KMRS				SG	Sb	05 08 47.2	-1.7
GZT	Gaziantep	0.48	51	i P	Pg	05 08 40.6	+0.2
GZT				i S	Sg	05 08 47.0	+0.3
GZT				IAML_P			
	comp=Z,1μm,0.1s						
ANDN	Andirin	0.80	312	i P	Pg	05 08 46.2	-0.1
ANDN				IAML_P			
	comp=Z,358nm,0.2s						
TAHT	Tahtakopru-Hat	0.99	227	PG	Pg	05 08 49.9	-0.2
TAHT				SG	Sb	05 09 03.8	+0.1
ATAB	Bozova	1.04	66	i P	Pn	05 08 51.9	0.0
ATAB				i S	Sn	05 09 06.6	-0.2
ATAB				IAML_P			
	comp=Z,3μm,0.1s						
SAIM	ADANA	1.22	319	i P	Pn	05 08 55.7	+1.2
SAIM				i S	Sn	05 09 11.9	+0.7
SAIM				IAML_P			
	comp=Z,205nm,0.2s						
SURC	SANLIURFA_SURC	1.23	98	i P	Pn	05 08 54.8	+0.3
SURC				i S	Sn	05 09 11.4	+0.1
SURC				IAML_P			
	comp=Z,185nm,0.1s						
AKCD	Akcadag	1.41	28	i P	Pb	05 08 57.2	-0.3
AKCD				i S	Sn	05 09 15.9	+0.1
AKCD				IAML_P			
	comp=Z,394nm,0.1s						
URFA	Urfa	1.43	74	PN	Pb	05 08 57.9	-0.1
URFA				SN	Sg	05 09 17.8	+0.8
DARE	Darende-Malaty	1.55	11	PN	Pb	05 08 59.5	-0.4
DARE				SN	Sg	05 09 20.5	-0.2

NNC 05 05:34:51.7±2.6,**36°.99N**×**70°.02E,h0km,mb3.6,mpv3.3, 5C-2D,Error ellipse: s-maj=22.3km s-min=18.4km az=153.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.07	41	⇑P	Pn	05 35 55.6	+0.2
	1.4nm,0.5s						
SFK				⇑S	Sn	05 36 45.7	+1.8
	6.5nm,0.4s						
MNAS	Manas	5.81	18	⇑P	Pn	05 36 20.0	+0.7
	1.4nm,0.4s						
MNAS				⇓S	Sn	05 37 27.5	+0.8
	12nm,0.7s						
KK31	Karatay Array	6.12	3	P	Pn	05 36 23.2	-0.1
	0.5nm,0.2s,baz=182,slow=12,SNR=14						
KK31				S	Sn	05 37 35.9	+1.9
	0.7nm,0.3s,baz=190,slow=26,SNR=4.5						
AAK	Ala-Archa	6.61	30	⇑P	Pn	05 36 31.3	+1.1
	2.9nm,0.9s						
AAK				⇓S	Sn	05 37 45.5	-0.7
	3.6nm,0.6s						
TKM2	Tokmak 2	7.31	34	⇑P	Pn	05 36 37.6	-2.3
	3.4nm,0.6s						
AB31	Akbulak array	14.28	332	P	Pn	05 38 14.8	-0.2
	0.2nm,0.3s,baz=159,slow=12,SNR=16						

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*NNC **05** 05:35:50.1±1.4,53°.76N×90°.48E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=10.8km s-min=7.1km az=59.0, Suspected Mining explosion.*
ASRS 05 05:35:43.6,53°.79N×90°.91E,M2.7,4C-6D,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.61	275	⇓Pg	Pg	05 36 50.9	-1.9
	6.9nm,0.8s						
ZAA0				⇓Lg	Lg	05 37 37.3	
	31nm,0.8s						
KURK	Kurchatov	8.15	253	⇑Pn	Pn	05 37 46.3	+3.3
	1.7nm,1.0s						
KURK				⇑Sn	Sn	05 39 17.8	+2.1
	6.0nm,0.8s						
KURK				⇑Lg	Lg	05 40 02.2	
	13nm,0.8s						
MK31	Makanchi Array	8.91	222	Pn	Pn	05 37 58.5	+4.9
	0.2nm,0.3s,baz=34,slow=12,SNR=27						
MK31				⇓Sn	Sn	05 39 37.1	+2.5
	0.6nm,0.6s,baz=37,slow=23,SNR=3.7						
MK31				⇓Lg	Lg	05 40 27.4	
	4.6nm,0.8s,baz=45,slow=31,SNR=3.5						
MAKZ	Makanchi	9.03	223	⇑Pn	Pn	05 37 58.8	+3.6
	1.9nm,1.1s						
MAKZ				⇓Sn	Sn	05 39 40.1	+2.7
	3.5nm,1.1s						
MAKZ				⇓Lg	Lg	05 40 30.0	
	4.7nm,0.9s						

IDC 05 05:36:19.6±1.5,**15°.25S**×**177°.66W,h0km,mb4.1**/7, **mb1 4.4**/7,**mb1mx4.1**/35,**mbtmp4.1**/7,**MS3.9**/3,**Ms1 3.9**/3, **ms1mx3.3**/29,**Error ellipse: s-maj=96.6km s-min=19.7km az=149.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	23.38	190	LR	LR	05 49 59.4	
	comp=Z,69nm,18.1s,baz=158,slow=35						
STKA	Stephens Creek	40.58	239	P	P	05 44 00.8	-0.4
	2.4nm,0.5s,baz=87,slow=12,SNR=6.5						
WRA	Warramunga Arr	45.87	257	P	P	05 44 44.2	0.0
	1.9nm,0.7s,baz=92,slow=6.7,SNR=54						
ASAR	Alice Springs	46.25	252	P	P	05 44 47.1	0.0
	8.7nm,0.6s,baz=86,slow=8.2,SNR=92						
FITZ	Fitzroy Crossi	54.21	259	P	P	05 45 47.4	-0.1
	1.0nm,0.3s,baz=119,slow=8.1,SNR=12						
MJAR	Matsushiro Arr	66.24	322	LR	LR	06 12 02.3	
	comp=Z,94nm,20.9s,baz=30,slow=32						
NVAR	Mina Array Bea	77.02	44	P	P	05 48 15.9	+1.0
	0.5nm,0.6s,baz=222,slow=11,SNR=4.2						
ILAR	Eielson Array	83.15	13	P	P	05 48 46.8	-0.4
	0.3nm,0.4s,baz=222,slow=5.2,SNR=10.0						
TXAR	Lajitas Array	83.97	58	P	P	05 48 51.9	-0.4
	0.7nm,0.7s,baz=221,slow=8.0,SNR=9.0						
TXAR				LR	LR	06 18 52.3	
	comp=Z,176nm,20.8s,baz=0.0,slow=30						

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*ISCJB **05** 05:44:52.3±7.8,2°.6S±0°.7×6°7E±°,h10km,mb3.5/5,Error ellipse: s-maj=245.3km s-min=12.7km az=155.3*
*IDC **05** 05:44:52.3±9.3,2°.59S×67°.25E,h0km,mb3.5/5,mb1 3.6/5, mb1mx3.4/60,mbtmp3.5/5,Error ellipse: s-maj=295.2km s-min=25.6km az=66.0*
ISC 05 05:44:54.5±8.8,**2°.6S**±0°.8×**6°7E**±°,**h10km,n8,σ0s.30**/8, **mb3.6**/5,**Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	5.20	136	Pn	Pn	05 46 12.1	-0.1
H08N2				T	T	05 51 12.8	
	baz=324,slow=75,SNR=412						
H08N3	Diego Garcia H	5.21	137	Pn	Pn	05 46 12.2	-0.1
H08N3				T	T	05 51 13.5	
	baz=324,slow=75,SNR=361						
H08N1	Diego Carcia H	5.22	136	Pn	Pn	05 46 12.4	-0.1
H08N1				T	T	05 51 14.2	
	baz=324,slow=75,SNR=386						
MKAR	Makanchi Array	50.86	13	P	P	05 53 55.1	-0.5
	0.3nm,0.6s,baz=186,slow=4.3,SNR=3.3						
KURBB	Kurchatov Arra	53.82	9	P	P	05 54 17.6	+0.1
	0.2nm,0.4s,baz=206,slow=8.3,SNR=4.6						
SONM	Songino Array	60.63	29	P	P	05 55 06.1	+0.2
	0.5nm,0.7s,baz=225,slow=7.3,SNR=4.0						
WRA	Warramunga Arr	67.48	110	P	P	05 55 51.7	+0.3
	0.8nm,1.1s,baz=281,slow=5.6,SNR=4.6						
ASAR	Alice Springs	67.50	114	P	P	05 55 51.3	-0.1
	0.3nm,0.7s,baz=281,slow=6.3,SNR=4.5						

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*NAO **05** 05:54:04.9±0.7,61°.78N×17°.02E,ML2.1*
*ISCJB **05** 05:54:05.8±0.5,61°.79N±0°.02×17°.10E±0°.05,h12km±3km, Error ellipse: s-maj=3.9km s-min=3.1km az=27.1*
*IDC **05** 05:54:05.5±0.8,61°.66N×17°.12E,h0km,mb1 3.0/4, mb1mx2.8/43,mbtmp2.9/4,ML2.1/4,Error ellipse: s-maj=14.2km s-min=6.0km az=155.0*
*HEL **05** 05:54:06.8±0.0,61°.78N×17°.10E,h10km,ML2.4, ML2.2(UPP),Confirmed Earthquake*
*UPP **05** 05:54:06.6±0.1,61°.77N×17°.06E,h11km,ML2.2, Confirmed Earthquake*
*BER **05** 05:54:09.4±3.8,61°.86N×17°.00E,h15km±16km, ML2.1(NAO)*
ISC 05 05:54:05.6±0.8,**61°.80N**±0°.02×**17°.22E**±0°.02,**h14**km±5km, **n41,σ1s.79**/82,**3C-8D,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUDU	Hudiksvall	0.08	217	⇓P	Pg	05 54 08.6	+0.1
HUDU				S	Sg	05 54 10.0	-0.5
HUDU	Hudiksvall	0.08	217	⇓iP	Pg	05 54 08.6	+0.1
HUDU				i S	Sg	05 54 10.0	-0.5
ARNU	Arnoeviken	0.13	146	⇓P	Pb	05 54 10.0	+0.2
ARNU				S	Sb	05 54 12.3	-0.3
ARNU	Arnoeviken	0.13	146	⇓iP	Pb	05 54 10.0	+0.2
ARNU				i S	Sb	05 54 12.3	-0.3
HASU	Hassela	0.46	321	⇓P	Pg	05 54 14.8	+0.2
HASU				S	Sg	05 54 20.8	0.0
HASU	Hassela	0.46	321	⇓iP	Pg	05 54 14.8	+0.2
HASU				i S	Sg	05 54 20.8	0.0
ROTU	Roteberg	0.78	241	P	Pg	05 54 19.5	-1.1
ROTU				S	Sg	05 54 28.6	-2.2
ROTU	Roteberg	0.78	241	i P	Pg	05 54 19.5	-1.1
ROTU				i S	Sg	05 54 28.6	-2.2
IGGU	Iggoen	0.93	177	P	Pg	05 54 23.3	-0.3
IGGU				S	Sg	05 54 34.8	-1.0
IGGU	Iggoen	0.93	177	eP	Pg	05 54 23.3	-0.3
IGGU				eS	Sg	05 54 34.8	-1.0
HEMU	Hemsoen	0.96	23	⇑P	Pn	05 54 24.9	+0.4
HEMU				S	Sb	05 54 37.6	+1.3
HEMU	Hemsoen	0.96	23	eP	Pg	05 54 24.7	+0.7
HEMU				eS	Sb	05 54 37.6	+1.3
SOLU	Sollefteaa	1.45	1	⇓P	Pb	05 54 32.7	+0.4
SOLU				S	Sb	05 54 51.5	+1.0
SOLU	Sollefteaa	1.45	1	⇓eP	Pb	05 54 32.7	+0.4
SOLU				eS	Sb	05 54 51.5	+1.0
FALU	Falun	1.48	208	⇑P	Pn	05 54 31.9	+0.3
FALU				S	Sn	05 54 49.9	-0.7
FALU	Falun	1.48	208	⇑eP	Pn	05 54 31.9	+0.3
FALU				eS	Sn	05 54 49.9	-0.7
OSTU	Oestervaala	1.58	182	P	Pb	05 54 34.2	-0.2
OSTU				S	Sn	05 54 53.5	+0.4
OSTU	Oestervaala	1.58	182	eP	Pb	05 54 34.2	-0.2
OSTU				eS	Sn	05 54 53.5	+0.4
AAL	Aland	2.12	139	eP	Pn	05 54 41.9	+1.5
AAL				eS	Sb	05 55 08.9	-0.8
RAF	Rauma	2.32	108	eP	Pb	05 54 46.6	-0.4
RAF				eSB	Sb	05 55 16.8	+1.3
RAF				MSG		05 55 19.6	
	comp=Z,14nm,0.1s						
HFS	Hagfors	2.40	227	Pn	Pn	05 54 46.0	+1.6
	baz=40,slow=14						
HFS				Lg	Lg	05 55 16.2	
	baz=49,slow=28						
HFS	Hagfors	2.40	227	Pn	Pn	05 54 46.0	+1.6
	comp=Z,2.8nm,0.3s,baz=49,slow=16,SNR=116						
HFS				Lg	Lg	05 55 15.9	
	comp=Z,5.8nm,0.3s,baz=48,slow=29,SNR=19						
HFS	Hagfors	2.40	227	Pn	Pn	05 54 46.0	+1.6
	baz=40,slow=14						
HFS				Sg	Sn	05 55 16.2	+2.7
	baz=49,slow=28						
UMAU	Umeaa	2.62	36	ePB	Pb	05 54 52.2	0.0
UMAU				eS	Sb	05 55 23.1	-1.1
UMAU				eSB	Sg	05 55 25.9	-3.8
VAF	Ylistaro	2.82	61	ePB	Pb	05 54 55.0	-0.6
VAF				eSB	Sb	05 55 31.2	+1.2
VAF				MSG		05 55 35.7	
	comp=Z,20nm,0.2s						
NRA0	NORESS Array S	2.94	251	Pn	Pn	05 54 52.3	+0.5
	baz=62,slow=14						
NRA0				Pg	Pb	05 54 57.2	-0.5
	baz=61,slow=18						
NRA0				Sn	Sn	05 55 27.5	+0.6
	baz=72,slow=28						
NRA0				Lg	Lg	05 55 34.3	
	baz=69,slow=37						
NRA0	NORESS Array S	2.94	251	Pn	Pn	05 54 52.3	+0.5
	baz=62,slow=14						
NRA0				Pg	Pb	05 54 57.2	-0.5
	baz=61,slow=18						
NRA0				Sn	Sn	05 55 27.5	+0.6
	baz=72,slow=28						
NRA0				Sg	Sb	05 55 34.3	+0.8
	baz=69,slow=37						
NB2	NORSAR Subarra	2.99	258	Pn	Pn	05 54 53.4	+1.0
	baz=75,slow=14						
NB2				Sn	Sn	05 55 29.2	+1.2
	baz=76,slow=22						
NB2				Lg	Lg	05 55 36.1	
	baz=68,slow=37						
NB2	NORSAR Subarra	2.99	258	Pn	Pn	05 54 53.4	+1.0
	baz=75,slow=14						
NB2				Sn	Sn	05 55 29.2	+1.2
	baz=76,slow=22						
NB2				Sg	Sb	05 55 36.1	+1.3
	baz=68,slow=37						
NOA	NORSAR Array B	2.99	258	Pn	Pn	05 54 53.6	+1.2
	comp=Z,0.1nm,0.3s,baz=64,slow=18,SNR=8.3						
NOA				Sn	Sn	05 55 27.2	-0.8
	comp=Z,0.3nm,0.3s,baz=60,slow=4.4,SNR=7.8						
BURU	Burvik	3.37	32	ePB	Pb	05 55 03.8	-1.1
BURU				eSG	Sg	05 55 50.7	-2.8
KEF	Keuruu	3.63	81	eSG	Sg	05 55 59.7	-2.2
KEF				MSG		05 56 04.1	
	comp=Z,6.1nm,0.2s						
MEF	Metsahovi	3.84	111	MSG		05 56 09.0	
	comp=Z,8.9nm,0.2s						
FIA0	FINESS Array S	4.24	91	Pn	Pn	05 55 13.4	+3.9
	baz=285,slow=14						
FIA0				Sn	Sn	05 56 03.2	+4.3
	baz=285,slow=28						
FIA0				Lg	Lg	05 56 18.2	
	baz=276,slow=22						
FIA0	FINESS Array S	4.24	91	Pn	Pn	05 55 13.4	+3.9
	baz=285,slow=14						
FIA0				Sn	Sn	05 56 03.2	+4.3
	baz=285,slow=28						
FIA0				Sg	Sg	05 56 18.2	-3.4
	baz=276,slow=22						
FINES	FINESS Array B	4.24	91	Pn	Pn	05 55 13.6	+3.9
	comp=Z,0.1nm,0.3s,baz=275,slow=22,SNR=6.3						
FINES				Sn	Sn	05 56 02.7	+3.9
	comp=Z,1.3nm,0.3s,baz=279,slow=22,SNR=14						
FINES				Lg	Lg	05 56 18.8	
	comp=Z,3.5nm,0.3s,baz=274,slow=22,SNR=12						
KON	Kongsberg	4.32	243	Pn	Pn	05 55 10.8	+0.1
KON				Sn	Sn	05 55 58.2	-2.6
KONO	Kongsberg	4.32	243	Pn	Pn	05 55 10.8	+0.1
KONO				Sn	Sn	05 55 58.2	-2.6
ARA0	ARCESS Array S	8.47	20	Pn	Pn	05 56 08.0	+0.3
	baz=203,slow=14						
ARA0				Sn	Sn	05 57 38.4	-4.6
	baz=208,slow=28						
ARA0	ARCESS Array S	8.47	20	Pn	Pn	05 56 08.0	+0.3
	baz=203,slow=14						
ARA0				Sn	Sn	05 57 38.4	-4.6
	baz=208,slow=28						
ARCES	ARCESS Array B	8.47	20	Pn	Pn	05 56 07.9	+0.3
	comp=Z,0.1nm,0.3s,baz=204,slow=14,SNR=8.9						

MDD 05 06:00:00.8±0.2,**38°.05N**×**3°.28W,h1**km±3km,**mbLg1.2**/2, **1D,Error ellipse: s-maj=2.6km s-min=1.1km az=44.0, PRXIMO,Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQES	Quesada	0.29	145	⇓Pg	Pg	06 00 06.4	-0.1
	1.0nm,0.1s,SNR=18						
EQES				Lg	Lg	06 00 10.8	
	2.0nm,0.1s,SNR=12						
SESP	Santiago Espad	0.59	83	Pg	Pg	06 00 12.0	0.0
	2.1nm,0.2s,SNR=7.9						
SESP				Lg	Lg	06 00 20.2	
	7.0nm,0.1s,SNR=7.9						
EADA	Adamuz	1.03	277	Pg	Pg	06 00 19.5	-1.0
	1.1nm,0.2s,SNR=7.9						
EBER	Berja	1.19	165	Pg	Pg	06 00 23.8	+0.2
	1.5nm,0.2s,SNR=7.9						

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*SFS **05** 06:00:10.0,38°.05N×3°.27W,ML2.0,TORREPEROGIL (JAEN)*
MDD 05 06:00:10.5±0.2,**38°.05N**×**3°.28W,h1**km±3km,**mbLg2.1**/20, **Error ellipse: s-maj=1.6km s-min=1.1km az=47.0, PRXIMO,Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQES	Quesada	0.30	146	Pg	Pg	06 00 15.8	-0.4
	4.5nm,0.1s,SNR=22						
EQES				Lg	Lg	06 00 20.2	
	12nm,0.1s,SNR=7.5						
SESP	Santiago Espad	0.58	83	Pg	Pg	06 00 21.4	-0.2
	8.4nm,0.1s,SNR=4.0						
SESP				Lg	Lg	06 00 29.5	
	104nm,0.3s,SNR=7.9						
GORA	Gorafe	0.60	162	Pg	Pg	06 00 21.9	0.0
	12nm,0.4s,SNR=4.0						
GORA				Lg	Lg	06 00 30.5	
	12nm,0.3s,SNR=7.9						
EQUE	Quentar	0.85	189	Pg	Pg	06 00 27.3	+0.5
	3.3nm,0.3s,SNR=9.5						
EQUE				Lg	Lg	06 00 37.1	
	16nm,0.3s,SNR=12						
EADA	Adamuz	1.03	277	Pg	Pg	06 00 29.0	-1.2
	3.8nm,0.1s,SNR=21						
EADA				Lg	Lg	06 00 42.7	
	45nm,0.2s,SNR=5.0						
EGOR	Sierra Gorda,	1.15	215	Pg	Pg	06 00 31.4	-1.0
	4.0nm,0.4s,SNR=7.9						
EGOR				Lg	Lg	06 00 49.0	
	18nm,0.3s,SNR=7.9						
EBER	Berja	1.19	165	Pg	Pg	06 00 33.6	+0.3
	18nm,0.8s,SNR=16						
EBER				Lg	Lg	06 00 52.1	
	24nm,0.4s,SNR=6.9						
ELGU	Los Guajares,	1.21	193	Pg	Pg	06 00 33.5	-0.2
	5.3nm,0.4s,SNR=7.9						
ELGU				Lg	Lg	06 00 50.6	
	24nm,0.3s,SNR=7.9						
ETOB	Tobarra	1.48	66	Pg	Pn	06 00 38.0	-0.5
	5.6nm,0.6s,SNR=15						
ETOB				Lg	Lg	06 00 57.6	
	16nm,0.2s,SNR=5.0						
EMAL	Malaga-Limoner	1.58	216	eP	Pn	06 00 39.7	0.0
EMAL				eS	Sn	06 01 00.5	-0.2
EMUR	La Murta	1.62	97	Pg	Pn	06 00 39.2	-1.2
	4.0nm,0.4s,SNR=7.9						
EMUR				Lg	Lg	06 01 02.5	
	31nm,0.5s,SNR=7.9						
ECAB	El Cabril	1.69	271	Pn	Pn	06 00 38.7	-2.5
	11nm,0.6s,SNR=14						
ECAB				Lg	Lg	06 01 02.7	
	8.2nm,0.3s,SNR=16						
ESDC	Sonseca Array	1.71	342	Pg	Pb	06 00 42.3	-0.4
	1.1nm,0.2s,baz=163,slow=17,SNR=16						
ESDC				Lg	Lg	06 01 04.3	
	4.4nm,0.3s,baz=162,slow=29,SNR=7.9						
PAB	San Pablo	1.71	331	Pg	Pn	06 00 42.0	+0.4
	0.1nm,0.3s,SNR=7.9						
PAB				Lg	Lg	06 01 04.1	
	10nm,0.6s,SNR=7.9						
EMIJ	Mijas	1.90	219	Pg	Pb	06 00 46.5	+0.4
	3.8nm,0.5s,SNR=7.9						
EMIJ				Lg	Lg	06 01 13.2	
	9.4nm,0.5s,SNR=7.9						
UCM	Universidad Co	2.25	1	eP	Pb	06 00 51.0	-1.0
UCM				eS	Sb	06 01 19.4	-1.1
ECHE	Chera	2.37	49	Pg	Pg	06 00 55.8	-0.2
	0.1nm,0.1s,SNR=7.9						
ECHE				Lg	Lg	06 01 25.8	
	1.3nm,0.1s,SNR=7.9						
EBEN2	Beniarda presa	2.51	75	Lg	Lg	06 01 30.8	
	6.2nm,0.2s,SNR=7.9						
GUD	Guadarrama	2.68	346	Lg	Lg	06 01 34.6	
	1.2nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	2.70	265	Pn	Pn	06 00 54.0	-1.0
	0.5nm,0.1s,SNR=7.9						
EMIN				Pg	Pb	06 00 59.3	-0.3
	0.8nm,0.4s,SNR=7.9						
EMIN				Lg	Lg	06 01 33.8	
	1.4nm,0.3s,SNR=7.9						
EBAD	Badajoz	3.02	285	Pg	Pb	06 01 05.1	+0.1
	0.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	06 01 32.8	-3.5
	0.5nm,0.1s,SNR=7.9						
EBAD				Lg	Lg	06 01 43.9	
	1.7nm,0.4s,SNR=7.9						
PESTR	Estremoz	3.48	285	ePg	Pb	06 01 13.8	+0.8
PESTR				eSn	Sn	06 01 44.5	-3.2
PESTR				eSg	Sb	06 01 58.5	+2.7
PESTR				A	A	06 02 06.6	
	3.7nm,0.5s						
PMRV	Marv??o	3.50	294	eSn	Sn	06 01 44.0	-4.2
PMRV				eSg	Sb	06 01 59.3	+3.0
PMRV				A	A	06 02 06.0	
	4.1nm,0.4s						
PMRV	Marv??o	3.50	294	Sn	Sn	06 01 44.0	-4.2
PMRV				Lg	Lg	06 01 59.3	
	4.1nm,0.4s						
PVAQ	Vaqueiros	3.58	261	eSg	Sb	06 02 00.3	+1.8
PMTG	Montargil	4.01	286	eSn	Sn	06 01 55.8	-4.9
PMTG				eSg	Sg	06 02 16.4	-2.9
PMTG				A	A	06 02 19.2	
	3.6nm,0.5s						
PMTG	Montargil	4.01	286	Sn	Sn	06 01 55.8	-4.9
PMTG				Lg	Lg	06 02 16.4	
	3.6nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNCL	**Nicolau / Gran**	**4.14**	**272**	*e*Sg	Sg	06 02 19.6	-4.0
PNCL	**Nicolau / Gran**	**4.14**	**272**	Lg	Lg	06 02 19.6	

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*ISCJB **05** 06:01:26.0±0.4, 24°.72N±0°.02×122°.43E±0°.01, h11^{km}±3^{km}, Error ellipse: s-maj=3.6km s-min=2.2km az=15.2*

*TAP **05** 06:01:26.8, 24°.72N×122°.31E, h8^{km}±1^{km}, ML2.9, C*

*JMA **05** 06:01:27.0, 24°.66N×122°.41E, h34^{km}±2^{km}, M2.3*

ISC 05 06:01:26.2±1.1**, 24°.70N**±0°.03×**122°.39E**±0°.02**, h19**^{km}±3^{km}**, n51, σ0ˢ.50**/98**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=225	**0.28**	**239**	*e*P	**Pg**	**06 01 33.1**	**+0.7**
EOS1	baz=225			*e*S	**Sg**	**06 01 37.8**	**+1.1**
EGS	baz=290	**0.44**	**290**	*e*P	**Pg**	**06 01 34.4**	**-0.8**
EGS	baz=290			*e*S	**Sg**	**06 01 40.8**	**-0.5**
TWB1	**Santiao Chiao** baz=314	**0.48**	**311**	P	**Pg**	**06 01 35.7**	**-0.3**
TWB1	baz=314			S	**Sg**	**06 01 41.5**	**-1.0**
TWC	**Suao** baz=255	**0.50**	**260**	P	**Pg**	**06 01 35.7**	**-0.6**
TWC	baz=255			*e*S	**Sb**	**06 01 44.2**	**+1.0**
NTC	**Toucheng** baz=287	**0.53**	**287**	P	**Pb**	**06 01 36.7**	**-0.1**
NTC	baz=287			S	**Sb**	**06 01 44.3**	**+0.2**
JYNG	**Yonagunijimaku**	**0.56**	**116**	P	**Pb**	**06 01 37.7**	**+0.4**
JYNG				*e*S	**Sb**	**06 01 45.4**	**+0.5**
TIPB	**Shuangxi** baz=299	**0.58**	**298**	P	**Pb**	**06 01 37.8**	**+0.2**
TIPB	baz=299			S	**Sb**	**06 01 45.2**	**-0.3**
YOJ	**Yonaguni jima** baz=111	**0.61**	**112**	*e*P	**Pb**	**06 01 38.5**	**+0.3**
YOJ	**Yonaguni jima**	**0.61**	**112**	P	**Pb**	**06 01 38.5**	**+0.3**
YOJ				*e*S	**Sb**	**06 01 46.6**	**+0.2**
NANB	**Nanao** baz=240	**0.64**	**246**	*e*P	**Pb**	**06 01 38.5**	**-0.2**
NANB	baz=240			*e*S	**Sg**	**06 01 48.1**	**+0.7**
ENA	**Nanau** baz=240	**0.65**	**246**	P	**Pb**	**06 01 38.6**	**-0.2**
ENA	baz=240			S	**Sg**	**06 01 48.1**	**+0.4**
TWE	**Neicheng** baz=269	**0.66**	**272**	P	**Pb**	**06 01 38.7**	**-0.3**
TWE	baz=269			S	**Sg**	**06 01 48.7**	**+0.7**
NWF	**Wu-fen Shan** baz=305	**0.67**	**304**	P	**Pg**	**06 01 40.1**	**+0.7**
NWF	baz=305			*e*S	**Sg**	**06 01 48.7**	**+0.3**
WFSB	**Wu-fen Shan** baz=305	**0.67**	**304**	*e*P	**Pg**	**06 01 40.0**	**+0.6**
WFSB	baz=305			*e*S	**Sg**	**06 01 49.4**	**+1.0**
ENTT	**Nioudou** baz=263	**0.75**	**266**	P	**Pg**	**06 01 41.1**	**+0.1**
ENTT	baz=263			*e*S	**Sg**	**06 01 50.9**	**0.0**
NDT	**Datong Townshi** baz=260	**0.80**	**264**	P	**Pg**	**06 01 42.2**	**+0.3**
NDT	baz=260			S	**Sg**	**06 01 52.8**	**+0.2**
NWLT	**Wulai** baz=274	**0.81**	**276**	P	**Pb**	**06 01 41.8**	**+0.2**
NWLT	baz=274			S	**Sg**	**06 01 52.5**	**-0.3**
NHDH	**Xindian Distri** baz=288	**0.83**	**289**	*e*P	**Pn**	**06 01 43.1**	**+0.3**
NHDH	baz=288			*e*S	**Sn**	**06 01 54.0**	**-0.5**
TATO	**Taipei** baz=288	**0.86**	**289**	*e*P	**Pn**	**06 01 43.5**	**+0.2**
TATO	baz=288			*e*S	**Sg**	**06 01 54.4**	**-0.2**
YM01	**YM01** baz=302	**0.87**	**301**	*e*P	**Pn**	**06 01 44.0**	**+0.5**
YM01	baz=302			*e*S	**Sg**	**06 01 54.3**	**-0.4**
YM08	**YM08** baz=305	**0.88**	**304**	*e*P	**Pg**	**06 01 43.4**	**+0.1**
YM08	baz=305			*e*S	**Sg**	**06 01 54.5**	**-0.4**
YM11	**YM11** baz=303	**0.88**	**302**	*e*P	**Pn**	**06 01 43.9**	**+0.3**
YM11	baz=303			*e*S	**Sg**	**06 01 55.1**	**+0.2**
NACB	**Ninganchiao** baz=230	**0.89**	**235**	*e*P	**Pb**	**06 01 43.0**	**-0.1**
NACB	baz=230			*e*S	**Sb**	**06 01 54.6**	**+0.1**
YM04	**YM04** baz=301	**0.90**	**301**	*e*P	**Pb**	**06 01 43.3**	**+0.1**
YM04	baz=301			*e*S	**Sg**	**06 01 55.5**	**-0.2**
TWY	**Chenhua** baz=310	**0.92**	**309**	P	**Pb**	**06 01 43.4**	**-0.1**
TWY	baz=310			S	**Sg**	**06 01 56.4**	**+0.1**
YHNB	**Yeheng** baz=266	**0.92**	**269**	*e*P	**Pb**	**06 01 43.8**	**+0.2**
YHNB	baz=266			*e*S	**Sg**	**06 01 56.1**	**-0.3**
NSK	**Sanguang** baz=267	**0.94**	**269**	P	**Pb**	**06 01 44.1**	**+0.2**
NSK	baz=267			S	**Sn**	**06 01 57.0**	**-0.4**
TWD	**Chiawan** baz=225	**0.95**	**230**	P	**Pg**	**06 01 44.9**	**+0.3**
TWD	baz=225			*e*S	**Sg**	**06 01 56.9**	**-0.2**
NNSB	**Datong** baz=251	**0.95**	**254**	*e*P	**Pb**	**06 01 44.1**	**-0.1**
NNSB	baz=251			*e*S	**Sn**	**06 01 57.5**	**-0.3**
ETLH	**Xiulin Townshi** baz=236	**0.96**	**240**	*e*P	**Pb**	**06 01 44.2**	**0.0**
ETLH	baz=236			*e*S	**Sn**	**06 01 57.8**	**-0.1**
NNS	**Nan Shan** baz=251	**0.96**	**255**	P	**Pg**	**06 01 45.0**	**+0.1**
NNS	baz=251			S	**Sn**	**06 01 58.3**	**+0.3**
WLTB	**Daxi** baz=277	**1.04**	**279**	*e*P	**Pg**	**06 01 47.8**	**+1.3**
WLTB	baz=277			*e*S	**Sn**	**06 01 59.3**	**-0.6**
WHF	**Hehuan Shan** baz=238	**1.16**	**242**	P	**Pb**	**06 01 48.4**	**+0.4**
WHF	baz=238			S	**Sn**	**06 02 03.3**	**-0.1**
TWT	**Tachien** baz=246	**1.19**	**249**	*e*P	**Pg**	**06 01 49.4**	**+0.2**
TWT	baz=246			*e*S	**Sg**	**06 02 04.9**	**0.0**
TDCB	**Techi** baz=246	**1.21**	**249**	*e*P	**Pg**	**06 01 49.3**	**-0.2**
TDCB	baz=246			*e*S	**Sg**	**06 02 04.6**	**-0.8**
LIOB	**Emei** baz=266	**1.25**	**268**	*e*P	**Pg**	**06 01 50.4**	**0.0**
LIOB	baz=266			*e*S	**Sg**	**06 02 06.6**	**-0.2**
NSTT	**Nanjuang** baz=265	**1.27**	**267**	*e*P	**Pg**	**06 01 50.3**	**-0.3**
NSTT	baz=265			*e*S	**Sg**	**06 02 07.8**	**+0.6**
IRIF	**Iriomote-Funau**	**1.27**	**106**	P	**Pn**	**06 01 48.2**	**-0.7**
IRIF				*e*S	**Sn**	**06 02 04.6**	**-0.9**
CHGB	**Renai** baz=237	**1.28**	**241**	*e*P	**Pg**	**06 01 50.7**	**-0.2**
CHGB	baz=237			*e*S	**Sg**	**06 02 07.3**	**-0.3**
OWD	**Renai** baz=233	**1.33**	**237**	P	**Pg**	**06 01 51.4**	**-0.5**
OWD	baz=233			*e*S	**Sg**	**06 02 09.0**	**-0.3**
WHP	**Taichung City** baz=250	**1.38**	**253**	*e*P	**Pg**	**06 01 52.9**	**0.0**
WHP	baz=250			*e*S	**Sg**	**06 02 10.5**	**-0.4**
HATJ	**Hateruma jima**	**1.44**	**116**	*e*S	**Sn**	**06 02 09.3**	**-0.3**
VWDT	**VWDT** baz=228	**1.48**	**231**	*e*P	**Pg**	**06 01 55.1**	**+0.5**
VWDT	baz=228			*e*S	**Sg**	**06 02 13.5**	**-0.4**
HGSD	**Ruisui** baz=213	**1.49**	**217**	*e*P	**Pb**	**06 01 53.7**	**+0.5**
HGSD	baz=213			*e*S	**Sb**	**06 02 12.9**	**+1.2**
JKRS	**Kuro-shima**	**1.54**	**107**	P	**Pn**	**06 01 52.7**	**0.0**
JKRS				S	**Sn**	**06 02 11.9**	**-0.3**
SMLT	**Sun Moon Lake** baz=236	**1.58**	**240**	*e*P	**Pg**	**06 01 56.4**	**-0.3**
SMLT	baz=236			*e*S	**Sb**	**06 02 15.4**	**+0.8**
TYC	**Yuchr** baz=238	**1.60**	**241**	*e*P	**Pb**	**06 01 55.7**	**+0.5**
JIJ	**Ishigaki jima**	**1.63**	**101**	P	**Pn**	**06 01 53.9**	**0.0**
JIJ				*e*S	**Sn**	**06 02 13.9**	**-0.5**
YULB	**Yu-li** baz=215	**1.64**	**218**	*e*P	**Pb**	**06 01 55.2**	**-0.6**
YULB	baz=215			*e*S	**Sb**	**06 02 16.2**	**+0.2**
JISG	**Ishigakijimahi**	**1.75**	**93**	P	**Pn**	**06 01 55.7**	**+0.2**
CHN4	**Tsaushan** baz=229	**2.12**	**231**	*e*P	**Pb**	**06 02 02.5**	**-1.5**
CHN4	baz=229			*e*S	**Sb**	**06 02 29.3**	**-0.6**

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*IDC **05** 06:03:55.9±1.5, 6°.48S×147°.36E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/28, mbtmp3.8/6, ML3.8/1, MS4.0/1, Ms1 4.0/1, ms1mx2.9/31, Error ellipse: s-maj=56.4km s-min=23.2km az=114.0*

*ISCJB **05** 06:04:02.7±1.3, 6°.6S±0°.2×147°.3E±0°.3, h63^{km}, mb3.6/5, Error ellipse: s-maj=45.1km s-min=19.1km az=24.4*

ISC 05 06:04:04.2±1.5**, 6°.6S**±0°.2×**147°.3E**±0°.4**, h63**^{km}**, n8, σ0ˢ.91**/7**, mb3.7**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=50,slow=10,SNR=16	**18.30**	**222**	P	**P**	**06 08 12.0**	**-1.2**
ASAR	**Alice Springs** 1.4nm,0.4s,baz=54,slow=8.9,SNR=32	**21.31**	**216**	P	**P**	**06 08 45.2**	**-0.8**
FITZ	**Fitzroy Crossi** 3.4nm,0.4s,baz=50,slow=7.3,SNR=40	**24.02**	**240**	P	**P**	**06 09 14.0**	**+0.6**
STKA	**Stephens Creek** 0.9nm,0.5s,baz=5.6,slow=13,SNR=3.1	**25.72**	**191**	P	**P**	**06 09 29.5**	**+0.8**
JNU	**Nakatsue** comp=Z,179nm,19.6s,baz=303,slow=32	**42.46**	**339**	LR	LR	06 26 52.7	
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=102,slow=5.3,SNR=2.6	**78.14**	**320**	P	**P**	**06 15 56.7**	**+0.1**
ILAR	**Eielson Array** 0.5nm,0.8s,baz=229,slow=6.6,SNR=3.9	**85.90**	**23**	P	**P**	**06 16 36.5**	**-0.4**
TORD	**Torodi Ar. Bea** 0.5nm,0.7s,baz=66,slow=3.7,SNR=7.2	**145.52**	**284**	PKPbc	**PKPab**	**06 23 37.1**	**+0.3**

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*SOF **05** 06:06:12.8, 41°.79N×23°.82E, h5^{km}*

*ISCJB **05** 06:06:12.2±0.4, 41°.80N±0°.01×23°.78E±0°.03, h4^{km}±3^{km}, Error ellipse: s-maj=3.6km s-min=2.3km az=169.3*

*THE **05** 06:06:13.2, 41°.75N×23°.78E, h2^{km}±1^{km}, ML2.6/10, Error ellipse: s-maj=1.1km s-min=0.5km az=258.0*

*BEO **05** 06:06:13.1±0.6, 41°.75N×23°.86E, h12^{km}±3^{km}, ML2.7/8*

*ATH **05** 06:06:13.2, 41°.72N×23°.80E, h20^{km}±8^{km}, ML2.5/5, Error ellipse: s-maj=9.6km s-min=1.8km az=183.0*

*SKO **05** 06:06:14.0, 41°.78N×23°.76E, h5^{km}*

ISC 05 06:06:13.4±0.9**, 41°.75N**±0°.02×**23°.79E**±0°.02**, h15**^{km}±6^{km}**, n66, σ1ˢ.28**/92**, 6C-3D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	**Musomiste**	**0.17**	**197**	*i* Pg	**Pg**	**06 06 17.8**	**+0.2**
MMB				*i* Sg	**Sg**	**06 06 21.8**	**+1.4**
MMB	**Musomiste**	**0.17**	**197**	*i* Pg	**Pg**	**06 06 17.8**	**+0.2**
NVR	**Nevrokopi**	**0.41**	**173**	P	**Pb**	**06 06 21.0**	**-1.3**
NVR				S	**Sg**	**06 06 26.5**	**-0.6**
NVR	comp=N,958μm,0.3s			AML	AML	06 06 28.1	
NVR	comp=E,889μm,0.3s			AML	AML	06 06 31.4	
NVR	**Nevrokopi**	**0.41**	**173**	P	**Pb**	**06 06 20.9**	**-1.3**
NVR				S	**Sb**	**06 06 26.7**	**-1.5**
KKB	**Krupnik**	**0.54**	**282**	*i* Pg	**Pg**	**06 06 23.2**	**-0.9**
KKB				*i* Sg	**Sg**	**06 06 30.4**	**-0.9**
KKB	**Krupnik**	**0.54**	**282**	*i* Pg	**Pg**	**06 06 23.2**	**-0.9**
SRS	**Serrai**	**0.65**	**193**	*e*Pg	**Pb**	**06 06 25.8**	**-0.7**
SRS				*e*Sg	**Sb**	**06 06 35.0**	**-0.4**
SRS	**Serrai**	**0.65**	**193**	P	**Pb**	**06 06 25.9**	**-0.7**
SRS				S	**Sb**	**06 06 35.0**	**-0.4**
SRS	comp=E,622μm,0.3s			AML	AML	06 06 39.4	
SRS	comp=N,689μm,0.3s			AML	AML	06 06 41.2	
SRS	**Serrai**	**0.65**	**193**	P	**Pb**	**06 06 25.7**	**-0.7**
SRS				S	**Sb**	**06 06 34.9**	**-0.4**
SRS	**Serrai**	**0.65**	**193**	*i* Pg	**Pb**	**06 06 25.9**	**-0.5**
RZN	**Rozhen**	**0.69**	**95**	*i* P	**Pb**	**06 06 26.6**	**-0.7**
PLD	**Plovdiv**	**0.77**	**62**	*i* P	**Pb**	**06 06 28.2**	**-0.2**
PGB	**Panagyurishte**	**0.84**	**19**	*i* P	**Pg**	**06 06 28.5**	**-1.3**
KNT	**Kendrikon**	**0.89**	**229**	P	**Pb**	**06 06 29.9**	**-0.6**
KNT				S	**Sb**	**06 06 42.0**	**-0.3**
KNT	comp=N,798μm,0.2s			AML	AML	06 06 42.4	
KNT	comp=E,806μm,0.4s			AML	AML	06 06 45.5	
KNT	**Kendrikon**	**0.89**	**229**	P	**Pb**	**06 06 29.9**	**-0.6**
KNT				S	**Sg**	**06 06 41.7**	**-0.7**
KNT	**Kendrikon**	**0.89**	**229**	*i* Pg	**Pb**	**06 06 30.0**	**-0.6**
KNT				*i* Sg	**Sb**	**06 06 41.9**	**-0.4**
KAVA	**Kavala**	**0.93**	**144**	P	**Pb**	**06 06 30.5**	**-0.6**
KAVA	comp=E,946μm,0.2s			AML	AML	06 06 47.1	
KAVA	comp=N,1549μm,0.4s			AML	AML	06 06 47.3	
KAVA	**Kavala**	**0.93**	**144**	P	**Pb**	**06 06 30.6**	**-0.6**
KAVA				S	**Sb**	**06 06 43.9**	**+0.6**
VTS	**Vitosha**	**0.94**	**333**	*e*Pg	**Pb**	**06 06 31.0**	**-0.6**
VTS				*e*Sg	**Sg**	**06 06 43.6**	**-0.5**
VTS	**Vitosha**	**0.94**	**333**	⇑*i*P	**Pg**	**06 06 30.8**	**-0.9**
VTS				S	**Sg**	**06 06 42.8**	**-1.3**
VTS	**Vitosha**	**0.94**	**333**	P	**Pg**	**06 06 30.7**	**-0.9**
VTS				S	**Sb**	**06 06 44.5**	**+0.6**
VTS	**Vitosha**	**0.94**	**333**	*i* Pg	**Pg**	**06 06 30.8**	**-0.9**
SOH	**Sokhos**	**0.99**	**200**	P	**Pb**	**06 06 31.4**	**-0.8**
SOH	comp=E,824μm,0.3s			AML	AML	06 06 48.2	
SOH	comp=N,1072μm,0.3s			AML	AML	06 06 48.6	
SOH	**Sokhos**	**0.99**	**200**	P	**Pb**	**06 06 31.6**	**-0.5**
SOH				S	**Sb**	**06 06 45.6**	**+0.6**
SOH	**Sokhos**	**0.99**	**200**	*i* Pg	**Pb**	**06 06 31.7**	**-0.5**
VAY	**Valandovo**	**1.01**	**245**	*e*Pg	**Pb**	**06 06 32.8**	**+0.2**
VAY				*e*Sg	**Sb**	**06 06 46.7**	**+1.0**
VAY	**Valandovo**	**1.01**	**245**	P	**Pb**	**06 06 32.1**	**-0.5**
VAY				S	**Sb**	**06 06 46.3**	**+0.6**
VAY	**Valandovo**	**1.01**	**245**	*i* Pg	**Pb**	**06 06 32.6**	**+0.1**
VAY				*i* Sg	**Sb**	**06 06 46.8**	**+1.0**
STIP	**Stip**	**1.20**	**268**	*i* Pg	**Pg**	**06 06 32.1**	**-4.5**
HORT	**Hortiatis**	**1.27**	**205**	P	**Pn**	**06 06 36.9**	**+0.4**
HORT	**Hortiatis**	**1.27**	**205**	P	**Pn**	**06 06 37.0**	**+0.4**
HORT				S	**Sn**	**06 06 55.6**	**+2.2**
THE	**Thessaloniki**	**1.28**	**209**	*i* Pg	**Pn**	**06 06 37.1**	**+0.5**
GRG	**Griva**	**1.31**	**233**	P	**Pn**	**06 06 37.5**	**+0.3**
GRG	**Griva**	**1.31**	**233**	P	**Pb**	**06 06 37.8**	**0.0**
GRG				S	**Sn**	**06 06 56.2**	**+1.7**
GRG	**Griva**	**1.31**	**233**	*i* Pg	**Pb**	**06 06 37.7**	**0.0**
THAS	**Thassos island**	**1.34**	**148**	P	**Pb**	**06 06 37.7**	**-0.5**
THAS				S	**Sn**	**06 06 56.7**	**+1.6**
PLG	**Polygyros**	**1.40**	**191**	P	**Pb**	**06 06 39.1**	**-0.2**
PLG	**Polygyros**	**1.40**	**191**	P	**Pg**	**06 06 38.7**	**-1.6**
OUR	**Ouranopolis**	**1.42**	**174**	P	**Pn**	**06 06 38.8**	**+0.2**
OUR	**Ouranopolis**	**1.42**	**174**	P	**Pn**	**06 06 38.9**	**+0.2**
OUR				S	**Sn**	**06 06 59.7**	**+2.6**
RDO	**Rodhopi**	**1.44**	**114**	P	**Pg**	**06 06 39.6**	**-1.5**
RDO				S	**Sn**	**06 07 00.3**	**+2.7**
ZAPS	**Zavoj**	**1.75**	**331**	*e*Pg	**Pb**	**06 06 45.3**	**+0.2**
ZAPS				*e*Sg	**Sg**	**06 07 08.8**	**-0.8**
BARS	**Barje**	**1.81**	**307**	*e*Pn	**Pn**	**06 06 44.9**	**+0.9**
BARS	**Barje**	**1.81**	**307**	*e*Pn	Pg	06 06 57.2	+9.0
BARS				*e*Sn	**Sn**	**06 07 08.4**	**+1.6**
BARS	**Barje**	**1.81**	**307**	*i* Pg	**Pn**	**06 06 44.9**	**+0.9**
VLAD	**Vladila**	**2.29**	**11**	⇓*i*P	**Pb**	**06 06 53.6**	**-0.8**
VLAD	**Vladila**	**2.29**	**11**	S	**Sg**	**06 07 24.5**	**-2.5**
ZAGS	**Zajecar**	**2.36**	**331**	*e*Pg	**Pb**	**06 06 56.2**	**+0.7**
ZAGS				*e*Sg	**Sg**	**06 07 29.8**	**+0.6**
BOVS	**Bovan**	**2.43**	**321**	*e*Pn	**Pn**	**06 06 53.3**	**+0.8**
SELS	**Selova**	**2.46**	**307**	*e*Pn	**Pn**	**06 06 53.2**	**+0.2**
PUNG	**Punghina**	**2.60**	**346**	S	**Sn**	**06 07 29.4**	**+3.2**
SRE	**Strehaia**	**2.94**	**352**	⇑*i*P	**Pn**	**06 07 00.2**	**+0.7**
GRUS	**Gruza**	**3.11**	**314**	*e*Pn	**Pn**	**06 07 02.2**	**+0.3**
GRUS				*e*Sn	**Sn**	**06 07 40.4**	**+1.6**
IVAS	**Ivanjica**	**3.25**	**305**	*e*Pn	**Pn**	**06 07 03.7**	**-0.1**
HERR	**Herculane**	**3.29**	**343**	⇓*i*P	**Pn**	**06 07 04.1**	**-0.2**
MDVR	**Moldovita**	**3.39**	**334**	⇑*i*P	**Pn**	**06 07 04.7**	**-1.0**
MDVR	**Moldovita**	**3.39**	**334**	S	**Sn**	**06 07 45.1**	**-0.6**
DIVS	**Divibare**	**3.65**	**311**	*e*Pn	**Pn**	**06 07 09.2**	**-0.1**
ARR	**Arges**	**3.67**	**9**	⇓*i*P	**Pn**	**06 07 10.1**	**+0.5**
GZR	**Gura Zlata**	**3.71**	**349**	⇑*i*P	**Pn**	**06 07 10.8**	**+0.6**
GZR	**Gura Zlata**	**3.71**	**349**	S	**Sn**	**06 07 53.1**	**-0.6**
VOIR		**3.80**	**13**	⇑*i*P	**Pn**	**06 07 13.1**	**+1.7**
BANR	**Banloc**	**4.11**	**333**	S	**Sn**	**06 08 09.3**	**+5.9**
BZS	**Buzias**	**4.17**	**339**	*e*Pn	**Pn**	**06 07 16.7**	**+0.2**
BZS	**Buzias**	**4.17**	**339**	⇑*i*P	**Pn**	**06 07 16.4**	**-0.1**
BZS	**Buzias**	**4.17**	**339**	S	**Sn**	**06 08 05.0**	**+0.1**

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*ISCJB **05** 06:07:49.5±0.4, 32°.19N±0°.02×115°.19W±0°.02, h23^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.3km az=16.1*

*ANF **05** 06:07:49.4±0.5, 32°.25N×115°.18W, h23^{km}±3^{km}, ML3.0/9, Error ellipse: s-maj=4.7km s-min=2.5km az=12.0*

*ECX **05** 06:07:50.9±0.5, 32°.17N×115°.24W, h8^{km}, MD2.9, ML3.2, Fault plane solution: NP1:φ$_s$48.33000°, δ60.00000°, λ0.00000°.*

*PAS **05** 06:07:50.0, 32°.16N×115°.21W, h19^{km}, ML3.1, ML2.9(ECX)*

*NEIC **05** 06:07:50.0±0.0, 32°.16N×115°.21W, h19^{km}, ML2.9(ECX), ML3.1(PAS), After PAS.*

*MEX **05** 06:07:51.3±0.4, 32°.25N×115°.08W, h16^{km}±999^{km}, MD3.8*

ISC 05 06:07:49.4±1.0**, 32°.18N**±0°.03×**115°.23W**±0°.02**, h23**^{km}±8^{km}**, n46, σ1ˢ.09**/70**, 9C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.25**	**345**	*e*P	**Pb**	**06 07 55.9**	**+0.2**
CPBX				*e*S	**Sb**	**06 07 59.2**	**-0.6**
CPBX	**Cerro Prieto**	**0.25**	**345**	*e*P	**Pb**	**06 07 55.9**	**+0.2**
CPBX				*e*S	**Sb**	**06 07 59.2**	**-0.6**
CPBX	comp=N,21μm,0.1s			IAML		06 08 01.5	
CPBX				⇓*e*		06 08 01.5	
UABX	**UABC, Campus M**	**0.49**	**338**	*e*P	**Pn**	**06 07 59.7**	**-1.3**
YMD	**Yuma Desert**	**0.69**	**57**	⇑*i*P	**Pn**	**06 08 02.8**	**-1.0**
YMD				⇑*e*P	**Pn**	**06 08 02.8**	**-1.0**
ECBX	**El Chinero**	**0.72**	**168**	⇓*e*P	**Pn**	**06 08 03.6**	**-0.5**
ECBX				*e*S	**Sn**	**06 08 13.3**	**-1.1**
YUH	**Yuha Desert**	**0.75**	**309**	⇑*i*P	**Pn**	**06 08 03.9**	**-0.7**
COK	**Cook Ranch**	**0.79**	**328**	⇑*i*P	**Pn**	**06 08 05.4**	**+0.3**
RMX	**La Rumorosa**	**0.84**	**301**	*e*P	**Pb**	**06 08 04.8**	**-0.5**
RMX				*e*S	**Sb**	**06 08 15.2**	**-1.0**
RMX				⇑*e*		06 08 15.8	
RMX	comp=N,958nm,0.2s			IAML		06 08 15.8	
IKP	**In-Ko-Pah, Jac** baz=122,SNR=71	**0.88**	**303**	P	**Pn**	**06 08 06.1**	**-0.3**
IKP	baz=122			S	**Sb**	**06 08 17.9**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**0.88**	**303**	⇑*e*P	**Pn**	**06 08 06.2**	**-0.3**
IKP				*e*S	**Sn**	**06 08 18.1**	**-0.5**
SWSC	**Sam W. Stewart** baz=148	**0.91**	**328**	P	**Pb**	**06 08 05.8**	**-0.7**
SWSC	baz=148			S	**Sb**	**06 08 17.5**	**-0.6**
GLA	**Glamis**	**0.94**	**21**	*e*Pg	**Pn**	**06 08 06.3**	**-0.9**
GLA				*e*Sn	**Sn**	**06 08 19.6**	**-0.3**
GLA	**Glamis** baz=200,SNR=34	**0.94**	**21**	P	**Pb**	**06 08 06.2**	**-0.8**
GLA	baz=200			S	**Sb**	**06 08 18.0**	**-1.1**
SPIG	**San Pedro Mart**	**1.14**	**190**	*e*Pn	**Pb**	**06 08 10.7**	**0.0**
SPIG				*e*Sn	**Sn**	**06 08 25.6**	**+0.2**
SPIG	**San Pedro Mart**	**1.14**	**190**	*i* P	**Pb**	**06 08 10.7**	**0.0**
SPIG				*e*S	**Sn**	**06 08 25.6**	**+0.2**
SPIG	**San Pedro Mart**	**1.14**	**190**	*e*P	**Pb**	**06 08 10.6**	**-0.1**
CBX	**Cerro Bola**	**1.22**	**277**	*e*Pn	**Pb**	**06 08 11.9**	**-0.1**
CBX				*e*Sn	**Sb**	**06 08 28.1**	**+0.7**
CBX	**Cerro Bola**	**1.22**	**277**	*e*P	**Pb**	**06 08 11.9**	**-0.1**
CBX				*e*S	**Sb**	**06 08 28.1**	**+0.7**
CBX	**Cerro Bola**	**1.22**	**277**	⇑*e*P	**Pb**	**06 08 11.9**	**-0.1**
CBX				*e*S	**Sb**	**06 08 28.2**	**+0.8**
CBX	comp=N,442nm,0.2s			IAML		06 08 30.0	
MONP2	**Monument Peak** baz=125,SNR=30	**1.24**	**306**	P	**Pn**	**06 08 11.4**	**0.0**
MONP2	baz=125			S	**Sb**	**06 08 28.2**	**+0.4**
TJIG	**Tijuana**	**1.25**	**282**	*e*P	**Pb**	**06 08 12.0**	**-0.3**
TJIG				*i* S	**Sb**	**06 08 28.2**	**+0.2**
TJIG	**Tijuana**	**1.25**	**282**	⇑*e*P	**Pb**	**06 08 12.1**	**-0.3**
BAR	**Barrett**	**1.32**	**293**	*e*Pn	**Pb**	**06 08 13.1**	**-0.5**
BAR				*e*Sn	**Sb**	**06 08 31.2**	**+1.1**
BAR	**Barrett**	**1.32**	**293**	⇑*e*P	**Pb**	**06 08 13.1**	**-0.5**
113A	**Mohawk Valley,**	**1.37**	**64**	*e*Pn	**Pb**	**06 08 13.1**	**-1.3**
113A				*e*Sn	**Sb**	**06 08 29.9**	**-1.6**
BC3	**Big Chuckawall** baz=172	**1.49**	**353**	S	**Sn**	**06 08 32.3**	**-1.3**
Y12C	**Blythe**	**1.68**	**20**	*e*Pn	**Pb**	**06 08 21.0**	**+1.4**
Y12C				*e*Sn	**Sb**	**06 08 40.9**	**+0.5**
109C	**Camp Elliot, M** baz=114	**1.74**	**295**	P	**Pn**	**06 08 18.8**	**+0.7**
109C	baz=114			Sb	**Sb**	**06 08 43.5**	**+1.4**
CPE	**Camp Elliot**	**1.74**	**295**	*e*Pn	**Pb**	**06 08 19.2**	**-1.4**
CPE				*e*Sn	**Sb**	**06 08 41.1**	**-0.9**
XPFO	**Pion Flat**	**1.77**	**325**	*e*Pn	**Pn**	**06 08 18.5**	**-0.2**
PFO	**Pinyon Flats O**	**1.77**	**324**	*e*Pn	**Pn**	**06 08 18.3**	**-0.3**
PFO	**Pinyon Flats O** baz=144	**1.77**	**324**	P	**Pn**	**06 08 18.4**	**-0.3**
214A	**Organ Pipe Nat** baz=276,SNR=16	**2.06**	**95**	P	**Pn**	**06 08 22.2**	**-0.5**
214A	baz=276			S	**Sn**	**06 08 46.7**	**-1.0**
Y14A	**Wickenburg**	**2.56**	**46**	*e*Pn	**Pn**	**06 08 31.0**	**+1.4**
CIS	**Catalina Islan** baz=114	**2.95**	**295**	Sb	**Sb**	**06 09 19.6**	**+2.7**
W13A	**Hualapai Mount**	**3.12**	**21**	*e*Pn	**Pb**	**06 08 47.1**	**+2.7**
MWC	**Mount Wilson**	**3.13**	**311**	*e*Pn	**Pb**	**06 08 43.2**	**-1.3**
MWC				*e*Sn	**Sb**	**06 09 20.0**	**-2.3**
GSC	**Goldstone, Bar**	**3.38**	**338**	*e*Pn	**Pn**	**06 08 43.1**	**+2.2**
TUC	**Tucson**	**3.77**	**87**	*e*Pn	**Pn**	**06 08 48.0**	**+1.8**
X16A	**Lo Mia Camp, P**	**3.88**	**54**	*e*Pn	**Pn**	**06 08 49.3**	**+1.5**
WUAZ	**Wupatki**	**4.62**	**43**	*e*Pn	**Pn**	**06 09 00.4**	**+2.4**
U15A	**North Rim**	**4.89**	**29**	*e*Pn	**Pn**	**06 09 03.1**	**+1.3**
U15A				*e*Lg	Lg	06 10 33.4	
X18A	**Snowflake**	**5.00**	**61**	*e*Pn	**Pn**	**06 09 04.5**	**+1.3**
319A	**Douglas**	**5.13**	**97**	*e*Pn	**Pn**	**06 09 04.5**	**-0.4**
KNB	**Kanab**	**5.22**	**22**	*e*Pn	**Pn**	**06 09 05.6**	**-0.6**
W18A	**Petrified Fore**	**5.44**	**56**	*e*Pn	**Pn**	**06 09 11.5**	**+2.3**

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*SOME **05** 06:24:29.2, 41°.58N×76°.32E, h5^{km}*

*NNC **05** 06:24:30.8±0.5, 41°.63N×76°.33E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=3.7km s-min=2.4km az=5.0*

*KRNET **05** 06:24:31.8±0.1, 41°.74N×76°.25E, h18^{km}, mb2.2*

ISC 05 06:24:30.4±1.5**, 41°.66N**±0°.04×**76°.31E**±0°.03**, h2**^{km}±11^{km}**, n22, σ0ˢ.81**/39**, 24C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn** baz=14	**0.33**	**225**	⇑*i*P	**Pb**	**06 24 39.3**	**+0.2**
NRN	baz=14			⇑*i*S	**Sb**	**06 24 44.8**	**-0.1**
ULHL	**Ulahol** baz=59	**0.58**	**355**	⇑*i*P	**Pg**	**06 24 41.4**	**-0.2**
ULHL	baz=59			⇑*i*S	**Sg**	**06 24 48.8**	**-0.4**
KDJ	**Kajisay**	**0.80**	**54**	⇑*i*P	**Pb**	**06 24 47.1**	**0.0**

	baz=61						
KDJ				⇑*i*S	**Sb**	**06 24 58.3**	**-0.2**
	baz=61						
KZA	**Kyzart**	**0.89**	**298**	⇓*i*P	**Pg**	**06 24 47.3**	**-0.2**
	baz=95						
KZA				⇓*i*S	**Sg**	**06 24 58.8**	**-0.3**
	baz=95						
TARG	**Taragay, Kyrgy**	**1.12**	**86**	⇑*i*P	**Pn**	**06 24 53.3**	**-0.2**
	baz=90						
TARG				⇑*i*S	**Sn**	**06 25 09.1**	**-0.6**
	baz=90						
TKM2	**Tokmak 2**	**1.36**	**337**	⇑*i*P	**Pn**	**06 24 55.5**	**-1.1**
	baz=38						
TKM2				⇑*i*S	**Sg**	**06 25 12.7**	**-1.5**
	baz=38						
KBK	**Karagaybulak**	**1.42**	**315**	⇑*i*P	**Pn**	**06 24 56.7**	**-0.6**
	baz=14						
KBK				⇑*i*S	**Sb**	**06 25 14.4**	**-1.8**
	baz=14						
UCH	**Uchtor**	**1.45**	**293**	⇑*i*P	**Pn**	**06 24 57.5**	**-0.6**
	baz=91						
UCH				⇑*i*S	**Sb**	**06 25 16.1**	**-1.4**
	baz=91						
ARLS	**Aral**	**1.50**	**278**	⇑*i*P	**Pn**	**06 24 58.2**	**-0.2**
	baz=76						
ARLS				⇑*i*S	**Sn**	**06 25 17.7**	**-0.9**
	baz=76						
CHMS	**Chumysh**	**1.76**	**320**	⇑*i*P	**Pn**	**06 25 02.5**	**+0.5**
	baz=19						
CHMS				⇑*i*S	**Sn**	**06 25 24.9**	**-0.1**
	baz=19						
AML	**Almayashu**	**2.01**	**284**	⇑*i*P	**Pn**	**06 25 06.9**	**+1.3**
	baz=82						
AML				⇑*i*S	**Sn**	**06 25 32.8**	**+1.3**
	baz=82						
KTBS	**Karatobe**	**2.07**	**8**	Pg	**Pb**	**06 25 09.1**	**+0.5**
	3.8nm,0.2s						
KTBS				Lg	Lg	06 25 37.9	
	5.0nm,0.3s						
KTBS	**Karatobe**	**2.07**	**8**	*e*P	**Pb**	**06 25 09.1**	**+0.5**
	3.8nm,0.2s						
KTBS				*e*S	**Sg**	**06 25 37.9**	**+1.1**
	5.0nm,0.3s						
USP	**Ospenovka**	**2.09**	**321**	⇓*i*P	**Pn**	**06 25 07.7**	**+1.3**
	baz=20						
USP				⇓*i*S	**Sn**	**06 25 33.3**	**+0.3**
	baz=20						
SATY	**Saty**	**2.09**	**47**	Pg	**Pb**	**06 25 09.3**	**+0.2**
	3.1nm,0.2s						
SATY				Lg	Lg	06 25 38.0	
	6.5nm,0.3s						
SATY	**Saty**	**2.09**	**47**	*e*P	**Pb**	**06 25 09.3**	**+0.2**
	3.1nm,0.2s						
SATY				*e*S	**Sg**	**06 25 38.0**	**+0.6**
	6.5nm,0.3s						
EKS2	**Erkin-Say**	**2.13**	**299**	⇑*i*P	**Pn**	**06 25 08.3**	**+1.2**
	baz=97						
EKS2				⇑*i*S	**Sn**	**06 25 35.0**	**+0.8**
	baz=97						
SGDS	**Sogindy**	**2.17**	**326**	Pg	**Pb**	**06 25 11.2**	**+0.7**
	2.3nm,0.5s						
SGDS				Lg	Lg	06 25 41.5	
	1.9nm,0.2s						
KUU	**Kurty**	**2.23**	**1**	Pg	**Pb**	**06 25 11.9**	**+0.5**
	1.5nm,0.2s						
KUU				Lg	Lg	06 25 42.6	
	4.9nm,0.5s						
KUU	**Kurty**	**2.23**	**1**	*e*P	**Pb**	**06 25 11.9**	**+0.5**
	0.6nm,0.1s						
KUU				*e*S	**Sg**	**06 25 42.6**	**+0.7**
	5.0nm,0.4s						
CHKK	**Chushkaly**	**2.25**	**13**	Pg	**Pb**	**06 25 12.2**	**+0.6**
	2.3nm,0.2s						
CHKK				Lg	Lg	06 25 43.1	
	5.0nm,0.4s						
CHKK	**Chushkaly**	**2.25**	**13**	⇑*i*P	**Pb**	**06 25 12.2**	**+0.6**
	2.3nm,0.2s						
CHKK				⇑*i*S	**Sg**	**06 25 43.1**	**+0.6**
	5.0nm,0.4s						

MEX 05 06:31:33.8±0.2, 15°.96N×98°.29W, h1^{km}, MD3.6, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.46**	**19**	*e*P	Pg	06 31 42.4	-0.3
PNIG				*i* S	Sg	06 31 49.0	+0.4

MEX 05 06:47:32.2±0.4, 18°.90N×95°.92W, h16^{km}±10^{km}, MD3.9, Veracruz

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVIG	**Laguna Verde**	**0.94**	**330**	*i* P	Pb	06 47 47.3	-2.9
LVIG				*i* S	Sb	06 47 58.0	-4.5
TPIG	**Tehuac#an**	**1.45**	**251**	*e*P	Pn	06 47 54.2	-3.7
TPIG				*i* S	Sn	06 48 11.9	-4.8
VHO	**Vista Hermosa**	**1.98**	**203**	*e*P	Pn	06 48 01.5	-3.7
VHO				*i* S	Sn	06 48 24.7	-5.1

IDC 05 06:52:38.8±12.0, 15°.20S×177°.94W, h455^{km}±139^{km}, mb3.0/7, mb1 3.4/7, mb1mx3.1/31, mbtmp3.7/7, Error ellipse: s-maj=103.0km s-min=32.7km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.63**	**257**	P	P	07 00 17.1	-0.3
	0.2nm,0.3s,baz=98,slow=6.1,SNR=14						
ASAR	**Alice Springs**	**46.01**	**252**	P	P	07 00 20.4	0.0
	3.0nm,0.4s,baz=86,slow=7.9,SNR=41						
NVAR	**Mina Array Bea**	**77.17**	**44**	P	P	07 03 44.9	-0.2
	0.7nm,0.6s,baz=219,slow=7.9,SNR=6.9						
ILAR	**Eielson Array**	**83.16**	**13**	P	P	07 04 15.6	0.0
	0.7nm,0.7s,baz=219,slow=5.5,SNR=8.4						
TXAR	**Lajitas Array**	**84.17**	**58**	P	P	07 04 21.8	+0.3
	0.1nm,0.5s,baz=221,slow=7.0,SNR=5.9						
PDAR	**Pinedale Array**	**85.08**	**43**	P	P	07 04 25.7	-0.2
	0.2nm,0.5s,baz=213,slow=6.5,SNR=2.6						
YKA	**Yellowknife Ar**	**91.70**	**25**	P	P	07 04 56.4	+0.3
	0.1nm,0.5s,baz=236,slow=4.7,SNR=3.9						
BRTR	**Keskin Array B**	**143.15**	**318**	PKP	PKPdf	07 11 19.9	-0.8
	1.6nm,0.8s,baz=67,slow=4.2,SNR=7.2						

NNC 05 07:01:26.3±1.4, 41°.82N×78°.43E, h0^{km}, mb3.2, mpv2.9, 1C-1D, Error ellipse: s-maj=10.3km s-min=8.3km az=91.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**1.64**	**319**	P	Pn	07 01 55.8	-1.0
	5.5nm,0.2s						
TNSS				S	Sg	07 02 18.9	0.0
	5.7nm,0.3s						
MDOK	**Medeo**	**1.69**	**323**	Pg	Pn	07 01 56.6	-0.6
	3.5nm,0.3s						
MDOK				Lg	Lg	07 02 20.2	
	4.8nm,0.4s						
CHKK	**Chushkaly**	**2.29**	**333**	Pg	Pb	07 02 07.8	-0.8
	9.3nm,0.3s						
CHKK				Lg	Lg	07 02 39.3	
	20nm,0.5s						
TKM2	**Tokmak 2**	**2.37**	**299**	⇓Pn	Pn	07 02 07.7	+1.1
	2.4nm,0.6s						
TKM2				⇑Sn	Sn	07 02 36.9	+0.5
	3.2nm,0.4s						
ARXS	**Arharly**	**2.44**	**350**	Pg	Pb	07 02 10.7	-0.2
ARXS				Lg	Lg	07 02 44.2	

MAN 05 07:07:50.4, 9°.38N×125°.48E, h1^{km}, mb4.5, ML3.3, MS3.1, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.40**	**1**	⇑*e*P	Pg	07 07 58.0	0.0
SCPH				*e*S	Sg	07 08 04.6	+1.4
BUTP	**Butuan**	**0.43**	**161**	*e*P	Pg	07 07 58.6	-0.1
BUTP				*e*S	Sb	07 08 06.6	-1.3
CGP	**Cagayan de Oro**	**1.21**	**220**	⇓*e*P	Pg	07 08 12.6	-0.9
CGP				*e*S	Sn	07 08 31.9	+0.6
BIPH	**Bislig**	**1.48**	**144**	⇓*e*P	Pn	07 08 16.9	-1.2
BIPH				*e*S	Sg	07 08 35.6	-2.2
BUKP	**Musuan**	**1.55**	**196**	*e*P	Pn	07 08 18.7	-0.5
BUKP				*e*S	Sg	07 08 42.4	+2.2
TBP	**Tagbilaran**	**1.62**	**281**	*e*P	Pn	07 08 20.5	+0.3
LLP	**Lapu-Lapu**	**1.76**	**302**	*e*P	Pn	07 08 19.7	-2.3
LLP				*e*S	Sg	07 08 47.6	+0.7
PLP	**Palo**	**1.84**	**344**	⇓*e*P	Pn	07 08 22.2	-0.9
PLP				*e*S	Sb	07 08 47.9	-0.5
OCLP	**Ormoc**	**1.87**	**333**	*e*P	Pn	07 08 23.2	-0.3
OCLP				*e*S	Sg	07 08 53.5	+3.0
BESP	**Borongan**	**2.21**	**359**	*e*P	Pn	07 08 29.6	+1.4
BESP				*e*S	Sg	07 09 02.0	+0.7
KCP	**Kidapawan**	**2.39**	**189**	⇓*i*P	Pn	07 08 31.1	+0.3
KCP				*i* S	Sg	07 09 06.2	-1.1
MATI	**Mati**	**2.54**	**162**	*e*P	Pb	07 08 35.4	-1.4
MATI				*e*S	Sg	07 09 13.8	+1.8
PAGZ	**Pagadian**	**2.57**	**234**	*e*P	Pn	07 08 33.3	0.0
PAGZ				*e*S	Sn	07 09 06.3	+1.1

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*NEIC **05** 07:50:56.5±0.0, 35°.36S×179°.38W, h5^{km}, ML4.2(WEL), After WEL.*

WEL 05 07:50:53.4±1.3, 35°S±8°×17°9W±1°3, h33^{km}, ML4.5/17, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.17**	**213**	*e*Pn	Pn	07 51 41.0	0.0
MXZ	**Matakaoa Point**	**3.17**	**213**	P	Pn	07 51 41.2	+0.2
MXZ				S	Sn	07 52 16.8	-0.9
WMGZ	**Waiomatatini S**	**3.34**	**210**	P	Pn	07 51 44.6	+1.3
WMGZ				S	Sn	07 52 23.6	+1.7
HAZ	**Te Kaha**	**3.58**	**217**	P	Pn	07 51 47.3	+0.8
HAZ				S	Sn	07 52 29.2	+1.6
PUZ	**Puketiti**	**3.62**	**209**	P	Pn	07 51 47.4	+0.2
RUGZ	**Raukumara Rang**	**3.79**	**216**	P	Pn	07 51 50.2	+0.6
TWGZ	**Tauwhareparae**	**3.83**	**211**	P	Pn	07 51 50.2	+0.2
TWGZ				S	Sn	07 52 34.6	+0.7
CNGZ	**Carnagh Statio**	**4.00**	**207**	P	Pn	07 51 53.1	+0.7
TKGZ	**Te Karaka**	**4.11**	**211**	P	Pn	07 51 53.8	0.0
MWZ	**Matawai**	**4.16**	**214**	P	Pn	07 51 54.0	-0.6
KUZ	**Kuaotunu**	**4.29**	**244**	P	Pn	07 51 54.7	-1.6
URZ	**Urewera**	**4.30**	**218**	*e*Pn	Pn	07 51 56.0	-0.5
URZ				*e*Sn	Sn	07 52 46.5	+1.0
URZ	**Urewera**	**4.30**	**218**	P	Pn	07 51 56.0	-0.5
GRZ	**Great Barrier**	**4.32**	**251**	P	Pn	07 51 56.7	0.0
RIGZ	**Rimuhau**	**4.37**	**209**	P	Pn	07 51 57.1	-0.3
PRGZ	**Paritu Road**	**4.51**	**207**	P	Pn	07 51 58.9	-0.5
SNGZ	**Shannon Statio**	**4.61**	**212**	P	Pn	07 52 00.9	+0.2
MUGZ	**Murupara**	**4.64**	**219**	P	Pn	07 52 01.1	0.0
MHGZ	**Mahia Peninsul**	**4.70**	**205**	P	Pn	07 52 00.7	-1.3
RAHZ	**Arahi**	**4.83**	**213**	P	Pn	07 52 04.0	+0.2
MTHZ	**Maungataniwha**	**4.90**	**216**	P	Pn	07 52 04.6	-0.1
TOZ	**Tahuroa Road**	**4.91**	**234**	P	Pn	07 52 05.0	+0.1
WCZ	**Waipu Caves**	**5.13**	**257**	P	Pn	07 52 09.0	+1.2
BKZ	**Black Stump Fm**	**5.31**	**216**	*e*Pn	Pn	07 52 09.4	-1.0
BKZ				*e*Sn	Sn	07 53 08.2	-2.3
OUZ	**Omahuta**	**5.67**	**265**	*e*Pn	Pn	07 52 14.5	-0.8
OUZ	**Omahuta**	**5.67**	**265**	P	Pn	07 52 14.1	-1.2
HIZ	**Hauiti**	**5.78**	**230**	*e*Pn	Pn	07 52 17.7	+0.9
HIZ	**Hauiti**	**5.78**	**230**	P	Pn	07 52 17.1	+0.4
BFZ	**Birch Farm**	**6.66**	**209**	*e*Pn	Pn	07 52 26.1	-2.7
THZ	**Tophouse**	**9.06**	**219**	*e*Pn	Pn	07 53 00.7	-1.2
KHZ	**Kahutara**	**9.25**	**214**	*e*Pn	Pn	07 53 03.0	-1.3
WB2	**Warramunga Arr**	**43.22**	**278**	*e*P	P	07 58 49.6	-1.9
QSPA	**South Pole Qui**	**55.20**	**180**	*e*P	P	08 00 13.2	-9.5

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*ISCJB **05** 07:53:23.8±0.7, 0°.14S±0°.06×98°.43E±0°.06, h48^{km}, mb3.8/3, Error ellipse: s-maj=9.6km s-min=7.1km az=41.8*

*DJA **05** 07:53:23.9±0.4, 0°S±3°×9°8E±°, h37^{km}±7^{km}, M3.2/6, MLv3.2/6*

ISC 05 07:53:25.8±1.1, 0°.15S±0°.06×98°.43E±0°.06, h48^{km}, n9, σ2.^{s}32/13, mb3.8/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.18**	**303**	P	**Pn**	**07 53 31.7**	**-2.1**
PBSI				S	**Sn**	**07 53 37.8**	**-1.7**
SISI	**Saibi**	**1.34**	**151**	P	**Pn**	**07 53 46.7**	**-1.4**
SISI				S	**Sn**	**07 54 04.2**	**-0.5**
MNSI	**Mandailing Nat**	**1.48**	**51**	P	**Pn**	**07 53 48.8**	**-1.3**
MNSI				S	**Sn**	**07 54 06.9**	**-1.4**
GSI	**Gunungsitoli**	**1.68**	**329**	P	**Pn**	**07 53 50.4**	**-2.4**
GSI				S	Sn	07 54 00.0	-13
PPI	**Padang Panjang**	**1.99**	**99**	P	**Pn**	**07 53 54.9**	**-2.1**
PPI				S	**Sn**	**07 54 19.6**	**-1.1**
PDSI	**Padang**	**2.16**	**110**	P	**Pn**	**07 53 57.4**	**-2.0**
SONM	**Songino Array**	**48.30**	**7**	P	**P**	**08 02 04.7**	**+2.3**
	0.8nm,0.4s,baz=192,slow=9.6,SNR=6.6						
MKAR	**Makanchi Array**	**48.85**	**345**	P	**P**	**08 02 05.4**	**-1.1**
	0.3nm,0.6s,baz=170,slow=8.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**55.09**	**350**	P	**P**	**08 02 57.1**	**+4.3**
	0.5nm,0.5s,baz=181,slow=5.8,SNR=2.9						

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*CNRM **05** 08:06:15.0, 38°.26N×3°.09W, h60^{km}, ml3.7*

*SFS **05** 08:06:15.0, 38°.04N×3°.29W, h4^{km}, ML2.7, TORREPEROGIL (JAEN)*

*MDD **05** 08:06:16.0±0.2, 38°.05N×3°.29W, h3^{km}±1^{km}, mbLg2.6/21, Error ellipse: s-maj=1.6km s-min=1.2km az=55.0, PRXIMO*

MDD EMS: III-IV INTENSIDAD MAXIMA.

ISC 05 08:06:14.6±1.1, 38°.10N±0°.02×3°.34W±0°.02, h8^{km}±9^{km}, n43, σ0.^{s}94/65, 3C-2D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	**Quesada**	**0.36**	**144**	⇓Pg	**Pg**	**08 06 21.5**	**-0.2**
	26nm,0.2s,SNR=18						
EQES				Lg	Lg	08 06 25.9	
	37nm,0.1s,SNR=5.0						
SESP	**Santiago Espad**	**0.62**	**87**	⇑Pg	**Pg**	**08 06 27.1**	**+0.5**
	9.4nm,0.1s,SNR=18						
SESP				Lg	Lg	08 06 35.2	
	578nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**0.62**	**87**	P	**Pg**	**08 06 26.9**	**+0.2**
SESP				S	**Sg**	**08 06 35.6**	**+0.7**
GORA	**Gorafe**	**0.66**	**159**	Pg	**Pg**	**08 06 27.4**	**+0.1**
	3.4nm,0.1s,SNR=7.9						
GORA				Lg	Lg	08 06 36.3	
	66nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**0.89**	**185**	Pg	**Pg**	**08 06 31.5**	**-0.3**
	0.0nm,0.1s,SNR=34						
EQUE				Lg	Lg	08 06 43.2	
	12nm,0.1s						
EADA	**Adamuz**	**0.98**	**275**	⇑Pg	**Pn**	**08 06 34.6**	**-0.1**
	3.5nm,0.1s,SNR=18						
EADA				Lg	Lg	08 06 48.5	
	25nm,0.1s						
EGOR	**Sierra Gorda,**	**1.16**	**212**	Pg	**Pg**	**08 06 36.9**	**+0.1**
	3.3nm,0.3s,SNR=7.9						
EGOR				Lg	Lg	08 06 53.3	
	5.0nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.25**	**163**	Pg	**Pb**	**08 06 37.9**	**-0.5**
	0.4nm,0.2s,SNR=51						
EBER				Lg	Lg	08 06 54.8	
	126nm,0.3s						
ELGU	**Los Guajares,**	**1.25**	**191**	Pg	**Pn**	**08 06 38.1**	**-0.3**
	0.4nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	08 06 55.2	
	60nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**1.51**	**68**	Pn	**Pn**	**08 06 42.1**	**+0.1**
	0.0nm,0.0s,SNR=7.9						
ETOB				Pg	**Pg**	**08 06 43.5**	**0.0**
	1.5nm,0.1s,SNR=46						
ETOB				Lg	Lg	08 07 03.1	
	62nm,0.3s						
HORN	**Hornachuelos**	**1.54**	**261**	P	**Pb**	**08 06 43.0**	**-0.3**
HORN				S	**Sg**	**08 07 05.1**	**+1.1**
EMAL	**Malaga-Limoner**	**1.59**	**214**	⇓*i*P	**Pg**	**08 06 45.7**	**+0.7**
EMAL				*e*S	**Sg**	**08 07 06.0**	**+0.3**
ECAB	**El Cabril**	**1.64**	**270**	Pn	**Pn**	**08 06 44.3**	**+0.5**
	5.4nm,0.2s,SNR=32						
ECAB				Lg	Lg	08 07 08.7	
	126nm,0.7s,SNR=22						
ESDC	**Sonseca Array**	**1.65**	**343**	Pg	**Pg**	**08 06 46.3**	**0.0**
	1.0nm,0.2s,baz=163,slow=17,SNR=53						
ESDC				Sn	**Sb**	**08 07 06.3**	**0.0**
	2.0nm,0.6s,baz=163,slow=30,SNR=5.4						
ESDC				Lg	Lg	08 07 09.6	
	54nm,0.3s,baz=161,slow=29,SNR=18						
PAB	**San Pablo**	**1.65**	**332**	Pg	**Pg**	**08 06 46.8**	**+0.6**
	0.2nm,0.1s,SNR=7.9						
PAB				Sn	**Sg**	**08 07 07.6**	**-0.1**
	2.9nm,0.3s,SNR=7.9						
PAB				Lg	Lg	08 07 10.0	
	18nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**1.68**	**98**	Pn	**Pn**	**08 06 44.3**	**0.0**
	8.0nm,0.3s,SNR=7.9						
EMUR				Pg	**Pb**	**08 06 45.8**	**+0.1**
	12nm,0.3s,SNR=16						
EMUR				Lg	Lg	08 07 08.1	
	144nm,0.6s,SNR=43						
EMIJ	**Mijas**	**1.91**	**217**	Pg	**Pb**	**08 06 49.5**	**-0.2**
	0.0nm,0.1s,SNR=7.9						
EMIJ				Lg	Lg	08 07 17.7	
	36nm,0.5s,SNR=7.4						
CART	**Cartagena**	**1.92**	**105**	Pn	**Pg**	**08 06 50.8**	**-0.5**
CART				Sn	**Sn**	**08 07 11.6**	**-0.2**
CART	**Cartagena**	**1.92**	**105**	*e*P	**Pg**	**08 06 50.8**	**-0.5**
CART				*e*S	**Sn**	**08 07 11.6**	**-0.2**
UCM	**Universidad Co**	**2.21**	**2**	⇑*i*P	**Pg**	**08 06 57.9**	**+1.0**
UCM				*e*S	**Sg**	**08 07 24.6**	**-1.1**
ECHE	**Chera**	**2.38**	**50**	Pn	**Pn**	**08 06 54.3**	**+0.4**
	0.0nm,0.0s,SNR=7.9						
ECHE				Pg	**Pg**	**08 07 00.6**	**+0.4**
	0.9nm,0.2s,SNR=7.9						
ECHE				Lg	Lg	08 07 31.8	
	21nm,0.3s,SNR=7.9						
EBEN2	**Beniarda presa**	**2.54**	**76**	Pn	**Pn**	**08 06 58.1**	**+2.0**
	2.2nm,0.3s,SNR=7.9						
EBEN2				Sn	**Sn**	**08 07 26.0**	**-1.2**
	SNR=7.9						
EBEN2				Lg	Lg	08 07 36.3	
	27nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**2.62**	**346**	Pn	**Pb**	**08 07 00.7**	**-1.2**
	0.0nm,0.1s,SNR=7.9						
GUD				Pg	**Pg**	**08 07 05.8**	**+1.0**
	0.6nm,0.2s,SNR=13						
GUD				Lg	Lg	08 07 39.5	
	10nm,0.3s,SNR=13						
EMIN	**Mina Concepcio**	**2.66**	**264**	Pn	**Pn**	**08 06 58.0**	**+0.2**
	0.0nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	08 07 38.9	
	26nm,0.4s,SNR=13						
EPLA	**Plasencia**	**2.90**	**313**	Pn	**Pn**	**08 07 02.6**	**+1.5**
	5.1nm,0.3s,SNR=7.9						
EPLA				Pg	**Pg**	**08 07 09.4**	**-0.8**
	0.1nm,0.1s,SNR=8.0						
EPLA				Lg	Lg	08 07 47.5	
	6.2nm,0.2s,SNR=6.0						
EBAD	**Badajoz**	**2.96**	**284**	Pn	**Pn**	**08 07 02.5**	**+0.6**
	0.1nm,0.1s,SNR=7.9						
EBAD				Pg	**Pg**	**08 07 10.4**	**-1.0**
	0.1nm,0.0s,SNR=9.3						
EBAD				Sn	**Sn**	**08 07 37.5**	**-0.1**
	2.8nm,0.2s,SNR=5.9						
EBAD				Lg	Lg	08 07 50.9	
	28nm,0.2s,SNR=10						
EMOS	**Mosqueruela**	**3.17**	**44**	Pn	**Pn**	**08 07 05.9**	**+0.9**
	0.0nm,0.1s,SNR=5.5						
EMOS				Pg	**Pg**	**08 07 13.8**	**-1.6**
	0.1nm,0.1s,SNR=13						
EMOS				Sn	**Sn**	**08 07 42.8**	**-0.4**
	1.7nm,0.5s,SNR=7.9						
EMOS				Lg	Lg	08 07 55.4	
	18nm,0.5s,SNR=7.9						
EGRO	**El Granado**	**3.33**	**262**	Pn	**Pn**	**08 07 08.2**	**+1.2**
	0.2nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**08 07 46.1**	**-0.6**
	1.0nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	08 08 01.9	
	21nm,0.4s,SNR=7.8						
PESTR	**Estremoz**	**3.43**	**284**	*e*Pg	**Pg**	**08 07 19.4**	**-0.8**
PESTR				*e*Sg	**Sg**	**08 08 04.9**	**+0.3**
PESTR				A	A	08 08 12.2	
	19nm,0.4s						
PMRV	**Marv??o**	**3.44**	**294**	*e*Pg	**Pg**	**08 07 20.8**	**+0.3**
PMRV				*e*Sg	**Sg**	**08 08 05.5**	**+0.5**
PMRV				A	A	08 08 16.4	
	25nm,0.5s						
PMRV	**Marv??o**	**3.44**	**294**	Pg	**Pg**	**08 07 20.8**	**+0.3**
PMRV				Lg	Lg	08 08 05.5	
	25nm,0.5s						
PVAQ	**Vaqueiros**	**3.54**	**260**	*e*Pn	**Pn**	**08 07 12.6**	**+2.8**
PVAQ				*e*Sn	**Sn**	**08 07 51.3**	**-0.6**
PVAQ				*e*Sg	**Sg**	**08 08 05.7**	**-2.6**
PVAQ				A	A	08 08 18.3	
	5.7nm,0.8s						
PVAQ	**Vaqueiros**	**3.54**	**260**	Pn	**Pn**	**08 07 12.6**	**+2.8**
PVAQ				Sn	**Sn**	**08 07 51.3**	**-0.6**
PVAQ				Lg	Lg	08 08 05.7	
	5.7nm,0.8s						
JBK	**JBK**	**3.80**	**170**	P	**Pn**	**08 07 13.9**	**+0.2**
JBK				S	**Sn**	**08 08 00.1**	**+1.5**
MESJ	**Messejana**	**3.87**	**268**	*e*Sg	**Sg**	**08 08 17.7**	**-1.1**
MESJ				A	A	08 08 21.5	
	12nm,0.5s						
MESJ	**Messejana**	**3.87**	**268**	Lg	Lg	08 08 17.7	
	12nm,0.5s						
PMTG	**Montargil**	**3.95**	**286**	*e*Sn	**Sn**	**08 08 01.9**	**-0.1**
PMTG				*e*Sg	**Sg**	**08 08 22.0**	**+0.5**
PMTG				A	A	08 08 25.2	
	20nm,0.5s						
PMTG	**Montargil**	**3.95**	**286**	Sn	**Sn**	**08 08 01.9**	**-0.1**
PMTG				Lg	Lg	08 08 22.0	
	20nm,0.5s						
PNCL	**Nicolau / Gran**	**4.10**	**272**	*e*Sg	**Sg**	**08 08 24.9**	**-1.2**
PNCL				A	A	08 08 33.6	
	12nm,0.5s						
PNCL	**Nicolau / Gran**	**4.10**	**272**	Lg	Lg	08 08 24.9	
	12nm,0.5s						
PCAS	**Casmilo, Conde**	**4.47**	**298**	*e*Sg	**Sg**	**08 08 38.6**	**+0.6**
PCAS				A	A	08 08 47.5	
	18nm,0.5s						
PCAS	**Casmilo, Conde**	**4.47**	**298**	Lg	Lg	08 08 38.6	
	18nm,0.5s						
ECAL	**Calabor**	**4.64**	**327**	Lg	Lg	08 08 43.8	
	SNR=7.9						

MDD 05 08:07:01.9±0.3, 38°.04N×3°.29W, h2^{km}±1^{km}, mbLg1.9/9, Error ellipse: s-maj=2.5km s-min=1.4km az=38.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	**Quesada**	**0.29**	**144**	Pg	Pg	08 07 07.2	-0.3
	7.6nm,0.2s,SNR=7.9						
EQES				Lg	Lg	08 07 11.4	
	15nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**0.59**	**82**	Pg	Pg	08 07 13.0	-0.3
	3.4nm,0.1s,SNR=7.9						
SESP				Lg	Lg	08 07 21.1	
	31nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**0.84**	**188**	Pg	Pg	08 07 17.1	-0.9
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.03**	**278**	Pg	Pg	08 07 20.2	-1.3
	3.2nm,0.1s,SNR=7.9						
EADA				Lg	Lg	08 07 33.8	
	6.9nm,0.1s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.13**	**215**	Lg	Lg	08 07 40.3	
	16nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.18**	**164**	Lg	Lg	08 07 43.3	
	19nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**1.20**	**193**	Lg	Lg	08 07 41.7	
	23nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**1.50**	**66**	Sn	Sb	08 07 48.8	-1.1
	0.9nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**1.63**	**96**	Lg	Lg	08 07 54.2	
	1.1nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**1.68**	**272**	Lg	Lg	08 07 54.6	
	2.4nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**1.72**	**331**	Lg	Lg	08 07 55.8	
	1.4nm,0.1s,SNR=7.9						

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*KRNET **05** 08:08:01.4±0.1, 41°.54N×76°.84E, h16^{km}, mb2.8*

*SOME **05** 08:08:01.8, 41°.52N×76°.97E, h20^{km}*

*NNC **05** 08:08:02.9±0.7, 41°.59N×76°.89E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=4.4km s-min=3.0km az=150.0*

*KNET **05** 08:08:05.0±0.8, 41°.68N×76°.61E, h0^{km}, ml2.1, Error ellipse: s-maj=7.2km s-min=4.6km az=156.0*

ISC 05 08:07:59.8±1.3, 41°.46N±0°.04×76°.79E±0°.02, h6^{km}±10^{km}, n63, σ0.^{s}62/107, 47C-16D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.60**	**268**	⇑*i*P	**Pn**	**08 08 14.1**	**-1.0**

	baz=60						
NRN				⇑iS	Sb	08 08 23.1	+1.4
	baz=60						
KDJ	Kajisay	0.73	23	⇑iP	Pg	08 08 14.0	0.0
	baz=24						
KDJ				⇑iS	Sg	08 08 22.8	-0.7
	baz=24						
TARG	Taragay, Kyrgy	0.81	70	⇓iP	Pg	08 08 15.4	0.0
	baz=75						
TARG				⇓iS	Sg	08 08 25.9	0.0
	baz=75						
ULHL	Ulahol	0.89	333	⇓P	Pb	08 08 17.4	-0.4
	20nm,0.1s,SNR=183						
ULHL	Ulahol	0.89	333	⇑iP	Pb	08 08 17.4	-0.4
	baz=28						
ULHL				⇑iS	Sg	08 08 28.9	+0.4
	baz=28						
BOOM	Boomskoye usch	1.21	329	⇓iP	Pb	08 08 23.3	0.0
	baz=25						
BOOM				⇓iS	Sg	08 08 38.8	-0.1
	baz=25						
KZA	Kyzart	1.31	299	⇓P	Pb	08 08 25.9	+0.9
	13nm,0.2s,SNR=25						
KZA				⇑S	Sn	08 08 43.2	+0.1
	51nm,0.5s						
KZA	Kyzart	1.31	299	⇑iP	Pb	08 08 26.0	+0.9
	baz=95						
KZA				⇑iS	Sn	08 08 43.6	+0.5
	baz=95						
IZV	Izvestkoviy	1.58	355	P	Pb	08 08 29.8	+0.1
	18nm,0.1s						
IZV				S	Sb	08 08 50.1	+0.1
	104nm,0.3s						
IZV	Izvestkoviy	1.58	355	eP	Pb	08 08 29.8	+0.1
	18nm,0.1s						
IZV				eS	Sb	08 08 50.1	+0.1
	104nm,0.3s						
TNSS	Tian-Shan	1.58	4	P	Pb	08 08 29.6	-0.2
	36nm,0.6s						
TNSS				S	Sn	08 08 49.3	-0.5
	49nm,0.5s						
TNSS	Tian-Shan	1.58	4	⇑iP	Pb	08 08 29.6	-0.2
	21nm,0.2s						
TNSS				eS	Sn	08 08 49.3	-0.5
	51nm,0.2s						
MTBS	Maitube	1.69	351	P	Pb	08 08 31.6	+0.2
	34nm,0.2s						
MTBS				S	Sb	08 08 53.4	+0.3
	56nm,0.2s						
MTBS	Maitube	1.69	351	⇓iP	Pb	08 08 31.6	+0.2
	34nm,0.2s						
MTBS				⇓iS	Sb	08 08 53.4	+0.3
	56nm,0.2s						
KST	Kastek	1.70	339	P	Pb	08 08 31.6	0.0
	15nm,0.5s						
KST				S	Sb	08 08 53.2	-0.1
	18nm,0.3s						
KST	Kastek	1.70	339	⇓iP	Pb	08 08 31.6	0.0
	7.7nm,0.2s						
KST				eS	Sb	08 08 53.2	-0.1
	19nm,0.3s						
TKM2	Tokmak 2	1.71	329	⇓P	Pg	08 08 32.4	-0.3
	8.6nm,0.2s,SNR=6.9						
TKM2	Tokmak 2	1.71	329	⇑P	Pg	08 08 32.3	-0.3
	2.1nm,0.3s						
TKM2				⇑S	Sg	08 08 54.7	-0.2
	10nm,0.5s						
TKM2	Tokmak 2	1.71	329	⇑iP	Pg	08 08 32.4	-0.3
	baz=27						
TKM2				⇑iS	Sg	08 08 54.6	-0.2
	baz=27						
MDOK	Medeo	1.72	6	⇑P	Pb	08 08 31.7	-0.1
	4.4nm,0.3s						
MDOK				S	Sn	08 08 53.2	+0.5
	20nm,0.4s						
MDOK	Medeo	1.72	6	Pg	Pb	08 08 31.8	-0.1
	13nm,0.2s						
MDOK				Lg	Lg	08 08 53.3	
	43nm,0.3s						
MDOK	Medeo	1.72	6	eP	Pb	08 08 31.8	-0.1
	12nm,0.3s						
MDOK				⇑iS	Sn	08 08 53.3	+0.5
	29nm,0.4s						
KNDC	Almaty	1.77	4	⇑P	Pb	08 08 32.3	-0.3
	30nm,0.4s						
KNDC				⇓S	Sb	08 08 55.5	+0.4
	127nm,0.6s						
KOTS	Kotyrbulak	1.79	8	P	Pb	08 08 33.3	+0.1
	29nm,0.1s						
KOTS				S	Sb	08 08 55.8	-0.2
	68nm,0.3s						
KOTS	Kotyrbulak	1.79	8	eP	Pb	08 08 33.3	+0.1
	29nm,0.1s						
KOTS				eS	Sb	08 08 55.8	-0.2
	68nm,0.3s						
KBK	Karagaybulak	1.82	312	⇑P	Pg	08 08 35.4	+0.6
	8.8nm,0.1s,SNR=23						
KBK	Karagaybulak	1.82	312	⇑iP	Pg	08 08 34.7	-0.1
	baz=9.0						
KBK				⇑iS	Sg	08 08 58.8	+0.4
	baz=9.0						
UCH	Uchtor	1.87	295	⇑P	Pg	08 08 36.3	+0.6
	4.7nm,0.2s,SNR=8.9						
UCH	Uchtor	1.87	295	⇑iP	Pg	08 08 35.9	+0.2
	baz=92						
UCH				⇑iS	Sg	08 09 00.8	+0.9
	baz=92						
ARLS	Aral	1.89	283	⇑iP	Pg	08 08 36.4	+0.3
	baz=81						
ARLS				⇑iS	Sg	08 09 01.8	+1.1
	baz=81						
DGS	Degeres	1.94	337	P	Pg	08 08 36.4	-0.6
	7.4nm,0.2s						
DGS				S	Sb	08 09 01.1	+0.9
	26nm,0.2s						
DGS	Degeres	1.94	337	eP	Pg	08 08 36.4	-0.6
	7.4nm,0.2s						
DGS				eS	Sb	08 09 01.1	+0.9
	26nm,0.2s						
SATY	Saty	2.00	36	Pg	Pb	08 08 36.7	0.0
	16nm,0.2s						
SATY				Lg	Lg	08 09 02.0	
	76nm,0.3s						
SATY	Saty	2.00	36	⇑iP	Pb	08 08 36.7	0.0
	16nm,0.2s						
SATY				eS	Sb	08 09 02.0	+0.1
	76nm,0.3s						
AAK	Ala-Archa	2.08	305	⇑P	Pg	08 08 40.0	+0.3
	5.2nm,0.2s,SNR=8.3						
AAK	Ala-Archa	2.08	305	⇑Pn	Pg	08 08 39.7	+0.1
	1.7nm,0.2s						
AAK				Sn	Sg	08 09 07.2	+0.6
	19nm,0.8s						
AAK	Ala-Archa	2.08	305	⇑iP	Pb	08 08 38.5	+0.4
	baz=3.0						
AAK				⇑iS	Sg	08 09 05.6	-1.0
	baz=3.0						
CHMS	Chumysh	2.16	316	⇑P	Pg	08 08 41.0	-0.3
	5.2nm,0.2s,SNR=7.5						
CHMS	Chumysh	2.16	316	⇑iP	Pb	08 08 39.2	-0.2
	baz=14						
CHMS				⇑iS	Sb	08 09 07.0	+0.5
	baz=14						
KTBS	Karatobe	2.26	358	Pg	Pb	08 08 41.4	+0.4
	7.3nm,0.2s						
KTBS				Lg	Lg	08 09 10.0	
	57nm,0.4s						
KTBS	Karatobe	2.26	358	eP	Pb	08 08 41.4	+0.4
	7.3nm,0.2s						
KTBS				eS	Sb	08 09 10.0	+0.8
	57nm,0.4s						
KURS	Kuram	2.27	26	Pg	Pb	08 08 41.7	+0.4
	5.0nm,0.7s						
KURS				Lg	Lg	08 09 10.3	
	19nm,0.5s						
KURS	Kuram	2.27	26	⇓iP	Pb	08 08 41.7	+0.4
	5.0nm,0.7s						
KURS				⇓iS	Sb	08 09 10.3	+0.6
	19nm,0.5s						
UZB	Uzynbulak	2.37	44	eP	Pb	08 08 42.6	-0.3
	7.0nm,0.3s						
UZB				eS	Sb	08 09 12.2	-0.3
	36nm,0.6s						
CHKK	Chushkaly	2.40	3	Pg	Pb	08 08 43.8	+0.4
	14nm,0.3s						
CHKK				Lg	Lg	08 09 14.2	
	100nm,0.2s						
CHKK	Chushkaly	2.40	3	⇑iP	Pb	08 08 43.8	+0.4
	14nm,0.3s						
CHKK				⇑iS	Sb	08 09 14.2	+0.9
	100nm,0.2s						
AML	Almayashu	2.41	287	⇑P	Pg	08 08 46.9	+0.9
	5.9nm,0.2s,SNR=17						
AML	Almayashu	2.41	287	⇑iP	Pb	08 08 43.7	-0.2
	baz=85						
AML				⇑iS	Sb	08 09 14.8	+0.8
	baz=85						
KUU	Kurty	2.46	352	Pg	Pb	08 08 45.2	+0.7
	6.9nm,0.3s						
KUU				Lg	Lg	08 09 16.5	
	43nm,0.2s						
KUU	Kurty	2.46	352	eP	Pb	08 08 45.2	+0.7
	6.9nm,0.3s						
KUU				⇓iS	Sb	08 09 16.5	+1.5
	43nm,0.2s						
USP	Ospenovka	2.48	318	⇑P	Pg	08 08 46.4	-1.0
	7.9nm,0.3s,SNR=14						
USP	Ospenovka	2.48	318	⇑iP	Pb	08 08 43.9	-1.0
	baz=16						
USP				⇑iS	Sb	08 09 15.1	-0.6
	baz=16						
EKS2	Erkin-Say	2.55	299	⇑iP	Pb	08 08 45.0	-1.0
	baz=97						
EKS2				⇑iS	Sb	08 09 17.0	-0.7
	baz=97						
ARXS	Arharly	2.86	15	Pg	Pb	08 08 51.5	+0.1
	6.0nm,0.4s						
ARXS				Lg	Lg	08 09 27.0	
	72nm,0.4s						
ARXS	Arharly	2.86	15	eP	Pb	08 08 51.5	+0.1
	6.0nm,0.4s						
ARXS				eS	Sb	08 09 27.0	+0.5
	72nm,0.4s						
ARSB	Arslanbob	2.87	269	⇑iP	Pb	08 08 50.6	-0.9
	baz=67						
ARSB				⇑iS	Sb	08 09 26.0	-0.9
	baz=67						
MRKS	Merke	2.95	297	Pg	Pg	08 08 55.9	-0.5
	8.6nm,0.4s						
MRKS				Lg	Lg	08 09 35.4	
	7.2nm,0.5s						
MRKS	Merke	2.95	297	⇓iP	Pg	08 08 55.9	-0.5
	7.9nm,0.4s						
MRKS				eS	Sg	08 09 35.1	+0.6
	7.2nm,0.5s						
DJR	Jarkent	3.62	36	Pg	Pb	08 09 04.3	0.0
	1.7nm,0.7s						
DJR				Lg	Lg	08 09 49.1	
	3.9nm,0.4s						
DJR	Jarkent	3.62	36	eP	Pb	08 09 04.3	0.0
	1.7nm,0.7s						
DJR				⇓iS	Sb	08 09 49.1	+0.6
	3.9nm,0.4s						
KAPS	Kapalarasan	4.26	25	Pg	Pb	08 09 16.0	+0.9
	1.8nm,0.2s						
KAPS	Kapalarasan	4.26	25	eP	Pb	08 09 16.0	+0.9
	1.8nm,0.2s						
KAPS				⇑eS	Sb	08 10 09.5	+2.7
	11nm,0.4s						
KK31	Karatay Array	4.94	292	⇑Pg	Pg	08 09 34.8	+0.3
	0.3nm,0.3s,baz=105,slow=14,SNR=4.3						
KK31				Lg	Lg	08 10 41.6	
	1.3nm,0.7s,baz=111,slow=23,SNR=5.0						

UCR 05 08:33:25.2±1.4, 13.°57N×90.°64W, h19^{km}±5^{km}, MD3.7, ML3.5, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.63	18	eP	Pg	08 33 37.9	+0.1
PCG	Pacaya	0.82	2	eP	Pb	08 33 40.2	-0.8
FUG	Fuego 3	0.89	347	eP	Pb	08 33 40.3	-1.9
RTR	El Retiro	1.02	71	eP	Pb	08 33 44.4	+0.1
CEVE	Cerro Verde	1.02	75	⇓eP	Pb	08 33 44.4	0.0
CEVE				eS	Sg	08 33 59.3	+0.8
CEVE				IAML		08 34 04.0	
	comp=Z,3μm,0.2s						
SBLS	San Blas	1.02	75	eP	Pb	08 33 44.3	-0.1
SBLS				eS	Sg	08 33 58.8	+0.1
SNJE	San Jose	1.05	73	eP	Pb	08 33 44.6	-0.2
NBG	Las Nubes	1.05	16	eP	Pb	08 33 44.6	-0.3
BOQS	Boqueron	1.33	83	eP	Pn	08 33 49.0	0.0
BOQS				eS	Sb	08 34 07.2	+0.8
UEES	San Salvador	1.36	83	eP	Pn	08 33 48.7	-0.6
UEES				eS	Sb	08 34 07.3	0.0
UEES				IAML		08 34 12.4	
	comp=Z,2μm,0.2s						
SNET	Serv Nac Est T	1.37	85	eP	Pn	08 33 49.1	-0.3
SNET				IAML		08 34 10.4	
	comp=Z,1μm,0.2s						
OPAM	San Salvador	1.40	84	eP	Pn	08 33 49.9	+0.1
OPAM				eS	Sb	08 34 09.4	+1.0
OPAM				IAML		08 34 14.8	
	comp=Z,873nm,0.2s						
LFU	La Fuente	1.49	83	eP	Pn	08 33 51.2	+0.2
LFRS	El Faro	1.53	88	eP	Pn	08 33 52.0	+0.4
LBRS	Las Brisas	1.56	84	eP	Pn	08 33 52.1	+0.1
PAVA	Las Pavas	1.66	85	eP	Pn	08 33 53.6	+0.2
PAVA				IAML		08 34 28.9	
	comp=Z,287nm,0.3s						
VICT	Victoria	1.98	79	eP	Pn	08 33 57.7	-0.1
TECA	Tecapa	2.08	92	eP	Pn	08 33 58.8	-0.4
PACA	Pacayal	2.25	92	eP	Pn	08 34 02.0	+0.4

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*ISCJB **05** 08:35:25.7±8.3, 2.°4S±0.°7×6°7E±°, h10^{km}, mb3.7/5, MS3.9/2, Error ellipse: s-maj=256.2km s-min=14.0km az=155.6*

*IDC **05** 08:35:27.9±8.4, 2.°24S×67.°49E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.5/38, mbtmp3.6/5, MS3.7/3, Ms1 3.7/3, ms1mx3.4/32, Error ellipse: s-maj=266.5km s-min=24.3km az=68.0*

ISC 05 08:35:28.9±9.9, 2.°3S±0.°8×6°7E±°, h10^{km}, n11, σ0.^{s}31/7, mb3.8/5, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N2	Diego Garcia H	5.43	138	Pn	Pn	08 36 49.9	+0.2
H08N2				T	T	08 42 01.7	
	baz=323,slow=75,SNR=1728						
H08N3	Diego Garcia H	5.44	138	T	T	08 42 03.1	
	baz=323,slow=75,SNR=1752						
H08N1	Diego Carcia H	5.46	138	Pn	Pn	08 36 50.2	+0.2
H08N1				T	T	08 41 56.7	
	baz=323,slow=75,SNR=1987						
PALK	Pallekele	16.36	54	LR	LR	08 43 54.5	
	comp=Z,109nm,18.3s,baz=294,slow=31						
CMAR	Chiang Mai Arr	37.31	55	LR	LR	08 55 41.8	
	comp=Z,35nm,21.2s,baz=265,slow=33						
MKAR	Makanchi Array	50.61	13	P	P	08 44 27.8	-0.2
	0.5nm,0.7s,baz=205,slow=6.4,SNR=3.3						
ZALV	Zalesovo Beam	57.89	12	P	P	08 45 21.1	+0.3
	0.6nm,0.4s,baz=208,slow=8.5,SNR=2.8						
SONM	Songino Array	60.42	29	P	P	08 45 38.9	+0.2
	0.4nm,0.5s,baz=222,slow=7.8,SNR=2.7						
WRA	Warramunga Arr	67.63	111	P	P	08 46 26.3	-0.3
	0.6nm,0.7s,baz=286,slow=6.0,SNR=7.3						
ASAR	Alice Springs	67.66	115	P	P	08 46 26.5	-0.3
	0.4nm,0.7s,baz=286,slow=6.6,SNR=5.3						
GERES	GERESS Array B	68.79	325	LR	LR	09 18 47.7	
	comp=Z,360nm,18.2s,baz=346,slow=38						

SJA 05 08:43:01.8±0.8, 32.°13S×68.°28W, h28^{km}±3^{km}, ML3.0, MW3.7, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTCV	Cerro Valdivia	0.35	319	i P	Pn	08 43 10.9	-0.1
CFA	Coronel Fontan	0.52	4	i P	Pb	08 43 12.8	+0.2
CFA				i S	Sn	08 43 21.5	+0.1
SJA	San Juan	0.64	338	IAML		08 43 26.8	
	comp=Z,287nm,0.2s						
ASAL	Salagasta	0.66	225	i P	Pn	08 43 15.7	+0.2
ZON	Zonda	0.67	329	IAML		08 43 27.6	
	comp=Z,262nm,0.1s						
RTLL	Cerro Villicun	0.81	348	i P	Pn	08 43 17.7	+0.2
RTLL				IAML		08 43 33.5	
	comp=Z,305nm,0.5s						
ARCO	CERRO ARCO	0.90	218	IAML		08 43 38.4	
	comp=Z,609nm,0.3s						
RTLS	Leoncito	0.93	290	i P	Pb	08 43 20.4	+0.9
RTLS				i S	Sn	08 43 34.3	+2.5
RTLS				IAML		08 43 34.6	
	comp=Z,886nm,0.4s						
ACAN	Cantantal	0.93	99	i P	Pb	08 43 19.8	+0.4
AUSP	Uspallata	0.95	264	i P	Pb	08 43 20.6	+0.8
AAGR	Agrelo	1.06	206	i P	Pb	08 43 22.8	+1.2
AMOG	MOGNA	1.20	351	i P	Pb	08 43 24.6	+0.7
ACCO	Cerro Coronel	1.68	336	i P	Pb	08 43 32.4	+0.2
ACDV	Cuesta del Vie	2.08	339	i P	Pb	08 43 37.6	-1.3
ACDV				IAML		08 44 06.9	
	comp=Z,121nm,0.4s						
MRA	San Martin	2.19	98	IAML		08 44 18.1	
	comp=Z,118nm,0.4s						
APLL	PUNTA DE LOS L	2.28	41	IAML		08 44 20.4	
	comp=Z,93nm,0.4s						
RFA	San Rafael	2.64	183	IAML		08 44 28.3	
	comp=Z,204nm,0.2s						
CYA	Choya	4.25	31	IAML		08 45 21.6	
	comp=Z,13nm,0.4s						

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*SOME **05** 08:48:24.6, 42.°58N×79.°78E, h20^{km}*

*KRNET **05** 08:48:25.6±0.1, 42.°65N×79.°69E, h20^{km}, mb2.7*

*NNC **05** 08:48:25.0±0.7, 42.°62N×79.°65E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=4.1km s-min=2.3km az=130.0*

ISC 05 08:48:25.1±1.9, 42.°61N±0.°05×79.°65E±0.°05, h1^{km}±12^{km}, n45, σ1.^{s}02/79, 12C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.70	320	P	Pg	08 48 38.6	0.0
	2.7nm,0.1s						
UZB				S	Sg	08 48 48.8	+1.0
	37nm,0.3s						
UZB	Uzynbulak	0.70	320	eP	Pg	08 48 38.6	0.0
	baz=16						
UZB				eS	Sg	08 48 48.7	+1.0
	baz=16						
UZB	Uzynbulak	0.70	320	eP	Pg	08 48 38.6	0.0
	2.7nm,0.1s						
UZB				eS	Sg	08 48 48.8	+1.0
	37nm,0.3s						
PDGK	Podgornoye	0.72	351	P	Pg	08 48 38.8	-0.3
	4.5nm,0.1s						
PDGK				S	Sg	08 48 49.3	+0.8
	3.8nm,0.3s						
PDGK	Podgornoye	0.72	351	⇑P	Pg	08 48 38.7	-0.3
	3.6nm,0.4s						
PDGK				⇓S	Sg	08 48 49.2	+0.8
	2.9nm,0.2s						
PDGK	Podgornoye	0.72	351	⇓iP	Pg	08 48 38.8	-0.3
	baz=48						
PDGK				⇓iS	Sg	08 48 49.2	+0.8
	baz=48						
PRZ	Przheval'sk	0.93	262	⇓iP	Pb	08 48 44.0	-0.1
	baz=61						
PRZ				⇓iS	Sg	08 48 57.1	+2.1
	baz=61						
SATY	Saty	1.01	297	P	Pb	08 48 44.2	-1.4
	4.0nm,0.1s						
SATY				S	Sb	08 48 58.5	-1.0
	27nm,0.1s						
SATY	Saty	1.01	297	eP	Pb	08 48 44.2	-1.4
	4.0nm,0.1s						
SATY				eS	Sb	08 48 58.5	-1.0
	27nm,0.1s						
KURS	Kuram	1.39	309	P	Pn	08 48 51.0	-0.7
	2.6nm,0.4s						
KURS				S	Sb	08 49 10.1	-0.1
	5.7nm,0.5s						
KURS	Kuram	1.39	309	eP	Pn	08 48 51.0	-0.7
	baz=8.0						
KURS				eS	Sb	08 49 10.1	-0.1
	baz=8.0						
KURS	Kuram	1.39	309	eP	Pn	08 48 51.0	-0.7
	2.6nm,0.4s						
KURS				eS	Sb	08 49 10.1	-0.1
	5.7nm,0.5s						
DJR	Jarkent	1.72	3	P	Pb	08 48 56.9	-0.7
	1.4nm,0.2s						
DJR				S	Sb	08 49 20.3	+0.5
	4.7nm,0.2s						
DJR	Jarkent	1.72	3	eP	Pb	08 48 56.9	-0.7
	1.4nm,0.2s						
DJR				eS	Sb	08 49 20.3	+0.5
	4.7nm,0.2s						
KDJ	Kajisay	1.89	256	⇑iP	Pb	08 49 00.4	-0.1
	baz=55						
KDJ				⇑iS	Sg	08 49 25.9	+0.1
	baz=55						
KOTS	Kotyrbulak	1.96	289	Pg	Pb	08 49 01.8	0.0
	3.3nm,0.1s						
KOTS				Lg	Lg	08 49 28.7	
	23nm,0.4s						
KOTS	Kotyrbulak	1.96	289	eP	Pb	08 49 01.8	0.0
	baz=88						
KOTS				eS	Sg	08 49 28.8	+0.6
	baz=88						
KOTS	Kotyrbulak	1.96	289	eP	Pb	08 49 01.8	0.0
	3.3nm,0.1s						
KOTS				eS	Sg	08 49 28.7	+0.6
	23nm,0.4s						
MDOK	Medeo	1.99	287	Pg	Pb	08 49 02.1	0.0
	3.1nm,0.4s						
MDOK				Lg	Lg	08 49 29.1	
	6.0nm,0.4s						
MDOK	Medeo	1.99	287	eP	Pb	08 49 02.1	0.0
	baz=86						
MDOK				eS	Sg	08 49 29.1	+0.2
	baz=86						
MDOK	Medeo	1.99	287	eP	Pb	08 49 02.1	0.0
	3.1nm,0.4s						
MDOK				eS	Sg	08 49 29.1	+0.2
	6.0nm,0.4s						
TNSS	Tian-Shan	2.03	283	Pg	Pb	08 49 02.2	-0.8
	4.3nm,0.3s						
TNSS				Lg	Lg	08 49 29.5	
	7.4nm,0.5s						
TNSS	Tian-Shan	2.03	283	eP	Pn	08 49 01.5	+0.7
	baz=82						
TNSS				eS	Sb	08 49 28.0	-1.0
	baz=82						
TNSS	Tian-Shan	2.03	283	eP	Pn	08 49 01.5	+0.7
	4.2nm,0.5s						
TNSS				eS	Sb	08 49 28.0	-1.0
	8.6nm,0.3s						
ARXS	Arharly	2.08	321	Pg	Pb	08 49 02.9	-0.8
	2.8nm,0.2s						
ARXS				Lg	Lg	08 49 30.5	
	18nm,0.3s						
ARXS	Arharly	2.08	321	eP	Pb	08 49 02.9	-0.8
	2.8nm,0.2s						
ARXS				eS	Sb	08 49 30.4	+0.5
	18nm,0.3s						
CHKK	Chushkaly	2.31	303	Pg	Pb	08 49 07.0	-0.5
	1.5nm,0.5s						
CHKK				Lg	Lg	08 49 37.3	
	17nm,0.3s						
CHKK	Chushkaly	2.31	303	eP	Pb	08 49 07.0	-0.5
	baz=3.0						
CHKK				eS	Sb	08 49 37.2	+0.8
	baz=3.0						
CHKK	Chushkaly	2.31	303	eP	Pb	08 49 07.0	-0.5
	1.5nm,0.5s						
CHKK				eS	Sb	08 49 37.3	+0.8
	17nm,0.3s						
KTBS	Karatobe	2.43	298	Pg	Pb	08 49 08.9	-0.8
	1.7nm,0.2s						
KTBS				Lg	Lg	08 49 40.9	
	10nm,0.4s						
KTBS	Karatobe	2.43	298	eP	Pb	08 49 08.9	-0.8
	baz=96						
KTBS				eS	Sb	08 49 40.9	+0.8
	baz=96						
KTBS	Karatobe	2.43	298	eP	Pb	08 49 08.9	-0.8
	1.7nm,0.2s						
KTBS				eS	Sb	08 49 40.9	+0.8
	10nm,0.4s						
ULHL	Ulahol	2.55	263	⇑eP	Pb	08 49 09.8	-1.9
	baz=62						
ULHL				⇑iS	Sb	08 49 42.4	-1.2
	baz=62						
KAPS	Kapalarasan	2.68	356	Pg	Pb	08 49 12.0	-1.9
	1.2nm,0.2s						
KAPS				Lg	Lg	08 49 46.1	
	2.9nm,0.2s						
KAPS	Kapalarasan	2.68	356	eP	Pb	08 49 12.0	-1.9
	1.2nm,0.2s						
KAPS				⇓eS	Sb	08 49 46.1	-1.2
	2.9nm,0.2s						

KUU	**Kurty**	**2.73**	**299**	Lg	Lg	08 49 49.4	
	6.4nm,0.2s						
KUU	**Kurty**	**2.73**	**299**	*e*P	**Pb**	**08 49 14.1**	**-0.7**
	baz=98						
KUU				⇓*i*S	**Sb**	**08 49 49.5**	**+0.7**
	baz=98						
KUU	**Kurty**	**2.73**	**299**	*e*P	**Pb**	**08 49 14.1**	**-0.7**
	1.5nm,0.1s						
KUU				⇓*i*S	**Sb**	**08 49 49.4**	**+0.7**
	7.0nm,0.2s						
BOOM	**Boomskoye usch**	**2.74**	**269**	⇑*i*P	**Pn**	**08 49 12.3**	**+1.9**
	baz=68						
BOOM				⇑*i*S	**Sb**	**08 49 46.5**	**-2.7**
	baz=68						
DGS	**Degeres**	**2.91**	**284**	Pg	**Pb**	**08 49 18.4**	**+0.5**
	2.6nm,0.4s						
DGS				Lg	Lg	08 49 57.3	
	7.3nm,0.6s						
DGS	**Degeres**	**2.91**	**284**	*e*P	**Pb**	**08 49 18.4**	**+0.5**
	baz=83						
DGS				*e*S	**Sg**	**08 49 57.3**	**-1.4**
	baz=83						
DGS	**Degeres**	**2.91**	**284**	*e*P	**Pb**	**08 49 18.4**	**+0.5**
	2.6nm,0.4s						
DGS				*e*S	**Sg**	**08 49 57.3**	**-1.4**
	7.3nm,0.6s						
TKM2	**Tokmak 2**	**3.00**	**277**	⇑Pg	**Pb**	**08 49 19.8**	**+0.4**
	1.4nm,0.6s						
TKM2				⇑Lg	Lg	08 49 59.8	
	2.4nm,0.5s						
TKM2	**Tokmak 2**	**3.00**	**277**	⇑*i*P	**Pn**	**08 49 15.8**	**+1.9**
	baz=77						
TKM2				⇑*i*S	**Sb**	**08 49 52.9**	**-3.7**
	baz=77						
MK31	**Makanchi Array**	**4.59**	**23**	Pn	**Pn**	**08 49 36.1**	**+0.5**
	0.1nm,0.4s,baz=200,slow=15,SNR=3.6						
MK31				⇑Sn	**Sn**	**08 50 30.5**	**+1.0**
	1.1nm,0.8s						
MK31				⇓Lg	Lg	08 50 49.9	
	0.5nm,0.5s						

MDD 05 08:52:15.6±0.2**, 38°.05N**×**3°.28W, h1**^{km}±3^{km}**, mbLg2.5**/22**, 1C-2D, Error ellipse: s-maj=1.7km s-min=1.1km az=47.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	**Quesada**	**0.30**	**147**	⇓Pg	Pg	08 52 20.9	-0.4
	27nm,0.2s,SNR=18						
EQES				Lg	Lg	08 52 25.3	
	66nm,0.2s,SNR=10						
SESP	**Santiago Espad**	**0.58**	**83**	⇑Pg	Pg	08 52 26.5	-0.2
	39nm,0.3s,SNR=18						
SESP				Lg	Lg	08 52 34.6	
	256nm,0.2s,SNR=7.9						
GORA	**Gorafe**	**0.60**	**162**	Pg	Pb	08 52 29.3	+0.4
	30nm,0.2s,SNR=4.0						
GORA				Lg	Lg	08 52 35.5	
	160nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**0.86**	**189**	Pg	Pg	08 52 32.3	+0.3
	3.9nm,0.2s,SNR=5.7						
EQUE				Lg	Lg	08 52 42.5	
	41nm,0.2s,SNR=11						
EADA	**Adamuz**	**1.03**	**277**	Pg	Pg	08 52 34.1	-1.3
	2.9nm,0.1s,SNR=7.9						
EADA				Lg	Lg	08 52 48.0	
	70nm,0.2s,SNR=11						
EGOR	**Sierra Gorda,**	**1.15**	**215**	Pg	Pg	08 52 36.6	-1.0
	2.1nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	08 52 54.1	
	50nm,0.3s,SNR=7.9						
EBER	**Berja**	**1.19**	**165**	Pg	Pg	08 52 38.7	+0.3
	24nm,0.4s,SNR=6.1						
EBER				Lg	Lg	08 52 56.1	
	121nm,0.5s,SNR=9.4						
ELGU	**Los Guajares,**	**1.22**	**193**	Pg	Pg	08 52 38.3	-0.6
	4.1nm,0.2s,SNR=7.9						
ELGU				Lg	Lg	08 52 55.4	
	70nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**1.48**	**66**	Pg	Pn	08 52 42.9	-0.6
	6.3nm,0.4s,SNR=7.9						
ETOB				Lg	Lg	08 53 02.6	
	62nm,0.5s,SNR=6.3						
EMAL	**Malaga-Limoner**	**1.58**	**216**	⇓*i*P	Pn	08 52 44.3	-0.4
EMAL				*e*S	Sn	08 53 05.3	-0.5
EMUR	**La Murta**	**1.62**	**97**	Pg	Pn	08 52 44.3	-1.1
	8.0nm,0.3s,SNR=8.3						
EMUR				Lg	Lg	08 53 07.7	
	96nm,0.4s,SNR=5.5						
ECAB	**El Cabril**	**1.69**	**271**	Pn	Pn	08 52 43.8	-2.5
	5.3nm,0.3s,SNR=7.9						
ECAB				Lg	Lg	08 53 07.8	
	14nm,0.3s,SNR=5.8						
ESDC	**Sonseca Array**	**1.71**	**342**	Pg	Pn	08 52 46.9	+0.4
	5.0nm,0.5s,baz=164,slow=18,SNR=6.2						
ESDC				Lg	Lg	08 53 08.7	
	6.3nm,0.2s,baz=160,slow=29,SNR=10						
PAB	**San Pablo**	**1.71**	**331**	Pg	Pb	08 52 47.5	-0.4
	0.8nm,0.1s,SNR=7.9						
PAB				Lg	Lg	08 53 08.9	
	5.4nm,0.2s,SNR=7.9						
CART	**Cartagena**	**1.86**	**104**	Pn	Pb	08 52 50.3	-0.1
CART				Sn	Sn	08 53 11.9	-0.9
CART	**Cartagena**	**1.86**	**104**	*e*P	Pb	08 52 50.3	-0.1
CART				*e*S	Sn	08 53 11.9	-0.9
EMIJ	**Mijas**	**1.90**	**219**	Pg	Pb	08 52 51.4	+0.2
	1.6nm,0.6s,SNR=7.9						
EMIJ				Lg	Lg	08 53 16.0	
	23nm,0.4s,SNR=5.4						
UCM	**Universidad Co**	**2.25**	**1**	*e*S	Sb	08 53 26.2	+0.7
ESPR	**Espera**	**2.37**	**241**	Lg	Lg	08 53 33.6	
	8.9nm,0.2s,SNR=7.9						
ECHE	**Chera**	**2.37**	**49**	Pg	Pg	08 53 01.1	+0.1
	1.3nm,0.2s,SNR=7.9						
ECHE				Sn	Sn	08 53 22.5	-2.9
	0.2nm,0.1s,SNR=7.9						
ECHE				Lg	Lg	08 53 31.6	
	1.5nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**2.67**	**346**	Lg	Lg	08 53 38.6	
	8.2nm,0.4s,SNR=6.1						
EMIN	**Mina Concepcio**	**2.70**	**265**	Lg	Lg	08 53 38.1	
	10nm,0.3s,SNR=7.6						
EPLA	**Plasencia**	**2.96**	**314**	Lg	Lg	08 53 46.7	
	2.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.02**	**285**	Lg	Lg	08 53 50.4	
	15nm,0.2s,SNR=5.4						
EMOS	**Mosqueruela**	**3.17**	**42**	Lg	Lg	08 53 56.0	
	12nm,0.6s,SNR=7.9						
EGRO	**El Granado**	**3.37**	**262**	Lg	Lg	08 54 00.9	
	11nm,0.4s,SNR=7.9						
PMRV	**Marv??o**	**3.50**	**294**	*e*Sg	Sg	08 54 06.0	-1.9
PMRV				A	A	08 54 08.8	
	11nm,0.5s						
PMRV	**Marv??o**	**3.50**	**294**	Lg	Lg	08 54 06.0	
	11nm,0.5s						
PVAQ	**Vaqueiros**	**3.58**	**261**	*e*Sg	Sb	08 54 06.2	+2.6
PVAQ				A	A	08 54 11.1	
	3.6nm,0.6s						
PVAQ	**Vaqueiros**	**3.58**	**261**	Lg	Lg	08 54 06.2	
	3.6nm,0.6s						
ERTA	**Horta de San J**	**4.03**	**43**	Lg	Lg	08 54 23.4	
	3.9nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**4.25**	**318**	Lg	Lg	08 54 30.9	
	0.2nm,0.1s,SNR=7.9						

ISCJB ***05*** *08:55:28.1±0.7, 12°.22N±0°.08×88°.58W±0°.04, h33*^{km}*, mb4.1/18, MS3.5/3, Error ellipse: s-maj=11.7km s-min=3.5km az=22.4*

NEIC ***05*** *08:55:29.4±0.7, 12°.18N×88°.53W, h35*^{km}*, mb4.3/21, Error ellipse: s-maj=13.4km s-min=4.4km az=214.0*

UCR ***05*** *08:55:30.5±0.5, 12°.20N×88°.31W, h7*^{km}*±67*^{km}*, mb4.3(NEIC)*

IDC ***05*** *08:55:33.6±2.6, 12°.67N×88°.20W, h40*^{km}*±26*^{km}*, mb3.6/7, mb1 3.9/11, mb1mx3.6/40, mbtmp3.8/11, ML3.2/4, MS3.6/3, Ms1 3.6/3, ms1mx3.2/34, Error ellipse: s-maj=46.2km s-min=20.2km az=33.0*

ISC 05 08:55:29.6±0.9**, 12°.18N**±0°.10×**88°.52W**±0°.06**, h33**^{km}**, n52,** σ1^{s}.**26**/55**, mb4.2**/18**, MS3.5**/3**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**1.81**	**80**	*e*P	**Pn**	**08 55 59.1**	**+0.6**
COPN	**Copaltepe**	**1.89**	**90**	*e*P	**Pn**	**08 55 59.8**	**+0.2**
MOMN	**Momotombo**	**1.95**	**83**	*e*P	**Pn**	**08 56 00.7**	**+0.3**
MGAN	**Managua**	**2.22**	**91**	*e*P	**Pn**	**08 56 04.8**	**+0.7**
ESTN	**Estel**	**2.29**	**66**	*e*Pn	**Pn**	**08 56 04.8**	**-0.3**
ESTN				*e*Sn	**Sn**	**08 56 34.4**	**+2.1**
ESTN	**Estel**	**2.29**	**66**	*e*P	**Pn**	**08 56 06.0**	**+0.9**
MATN	**Matagalpa**	**2.64**	**73**	*e*P	**Pn**	**08 56 10.3**	**+0.4**
MATN				*e*S	**Sn**	**08 56 41.7**	**+0.8**
BOAB	**BOACO BROADBAN**	**2.80**	**84**	*e*Pn	**Pn**	**08 56 12.3**	**+0.2**
BOAB				*e*Sn	**Sn**	**08 56 45.7**	**+0.9**
CONN	**Concepcion**	**2.90**	**102**	*e*P	**Pn**	**08 56 13.9**	**+0.4**
CONN				*e*S	**Sn**	**08 56 48.2**	**+0.9**
ACON	**Acoyapa**	**3.28**	**93**	*e*P	**Pn**	**08 56 19.1**	**+0.4**
APG	**El Apazote**	**3.38**	**326**	Pn	**Pn**	**08 56 22.8**	**+2.5**
	0.9nm,0.3s,baz=95,slow=9.2,SNR=7.6						
JTS	**JuntasAbangare**	**3.97**	**118**	*e*Pn	**Pn**	**08 56 28.0**	**-0.3**
JTS	**JuntasAbangare**	**3.97**	**118**	Pn	**Pn**	**08 56 31.0**	**+2.7**
	3.0nm,0.3s,baz=14,slow=19,SNR=13						
ESPN	**Las Esperanzas**	**4.13**	**89**	*e*Pn	**Pn**	**08 56 30.8**	**+0.4**
HDC	**Heredia**	**4.84**	**116**	*e*Pn	**Pn**	**08 56 40.4**	**+0.1**
CCIG	**Comitan**	**5.38**	**320**	*e*Pn	**Pn**	**08 56 48.2**	**+0.5**
CMIG	**Matias Romero**	**7.86**	**309**	Pn	**Pn**	**08 57 23.4**	**+1.7**
	0.4nm,0.3s,baz=139,slow=9.4,SNR=12						
CMIG				Sn	**Sn**	**08 58 49.4**	**-0.1**
	0.1nm,0.3s,baz=250,slow=18,SNR=2.1						
TEIG	**Tepich**	**8.00**	**2**	*e*Pn	**Pn**	**08 57 23.9**	**+0.3**
LNIG	**Linares**	**16.34**	**322**	*e*Pn	**Pn**	**08 59 17.5**	**+0.8**
	12nm,1.0s						
KVTX	**Kingsville**	**17.63**	**331**	*e*Pn	**P**	**08 59 33.2**	**-0.2**
	112nm,1.6s						
SDV	**Santo Domingo**	**17.89**	**99**	*e*Pn	**Pn**	**08 59 35.5**	**-0.7**
	7.2nm,0.6s						
SDV	**Santo Domingo**	**17.89**	**99**	P	**P**	**08 59 38.2**	**+1.5**
	1.7nm,0.3s,baz=30,slow=13,SNR=12						
833A	**Chaparral WMA,**	**19.00**	**329**	*e*P	**P**	**08 59 48.3**	**-0.3**
	18nm,0.8s						
352A	**Blakely**	**19.49**	**9**	*e*P	**P**	**08 59 53.6**	**-0.3**
	14nm,0.8s						
VBMS	**Vicksburg**	**20.02**	**355**	*e*P	**P**	**08 59 59.4**	**-0.3**
	17nm,0.7s						
435B	**Jarrell**	**20.32**	**337**	*e*P	**P**	**09 00 03.2**	**+0.3**
	12nm,0.8s						
152A	**Waverly Hall**	**20.69**	**9**	*e*P	**P**	**09 00 07.0**	**+0.1**
	20nm,1.5s						
JCT	**Junction City**	**20.99**	**332**	*e*P	**P**	**09 00 10.0**	**-0.3**
	11nm,0.8s						
GOGA	**Godfrey**	**21.63**	**12**	*e*P	**P**	**09 00 17.1**	**+0.1**
	13nm,1.4s						
ATAH	**Atahualpa**	**21.67**	**152**	LR	LR	09 07 27.6	
	comp=Z,101nm,18.7s,baz=352,slow=32						
TXAR	**Lajitas Array**	**22.13**	**323**	P	**P**	**09 00 24.0**	**+1.4**
	2.0nm,0.7s,baz=146,slow=12,SNR=30						
TX31	**Lajitas Ar. Si**	**22.13**	**323**	*e*P	**P**	**09 00 22.4**	**-0.2**
HODGE	**Hodges**	**22.68**	**14**	*e*P	**P**	**09 00 27.9**	**-0.4**
	11nm,1.1s						
MIAR	**Mount Ida**	**22.73**	**349**	*e*P	**P**	**09 00 27.5**	**-1.3**
	30nm,1.5s						
ABTX	**Abilene, Hawle**	**22.76**	**335**	*e*P	**P**	**09 00 27.5**	**-1.7**
	18nm,1.4s						
WHAR	**Wooly Hollow**	**23.26**	**352**	*e*P	**P**	**09 00 33.1**	**-1.1**
	8.5nm,1.0s						
W39A	**Magazine**	**23.40**	**349**	*e*P	**P**	**09 00 35.8**	**+0.2**
	33nm,1.6s						
TKL	**Tuckaleechee C**	**23.76**	**10**	P	**P**	**09 00 37.3**	**-1.8**
	4.6nm,0.8s,baz=174,slow=10,SNR=3.9						
TKL				LR	LR	09 09 07.2	
	comp=Z,247nm,19.2s,baz=60,slow=35						
LPIG	**La Paz**	**23.82**	**303**	LR	LR	09 09 28.3	
	comp=Z,185nm,21.9s,baz=48,slow=35						
WMOK	**Wichita Mounta**	**24.31**	**339**	*e*P	**P**	**09 00 42.9**	**-1.4**
	8.2nm,1.4s						
HHAR	**Hobbs**	**24.49**	**349**	*e*P	**P**	**09 00 45.6**	**-0.2**
	20nm,1.6s						
MSTX	**Muleshoe**	**25.28**	**331**	*e*P	**P**	**09 00 52.3**	**-0.9**
	16nm,1.3s						
CCM	**Cathedral Cave**	**25.88**	**355**	*e*P	**P**	**09 00 57.4**	**-1.0**
	8.3nm,1.0s						
SPMN	**Marine on St.**	**33.13**	**354**	*e*P	**P**	**09 02 01.5**	**-1.2**
	11nm,0.8s						
SADO	**Sadowa**	**33.45**	**12**	P	**P**	**09 02 05.0**	**-0.5**
	1.8nm,0.5s,baz=211,slow=11,SNR=3.9						
PDAR	**Pinedale Array**	**35.52**	**333**	P	**P**	**09 02 24.7**	**+1.0**
	0.8nm,1.1s,baz=126,slow=4.6,SNR=2.5						
NVAR	**Mina Array Bea**	**37.22**	**320**	P	**P**	**09 02 40.9**	**+2.6**
	0.3nm,0.7s,baz=149,slow=7.3,SNR=3.5						
ULM	**Lac du Bonnet**	**38.44**	**352**	*e*P	**P**	**09 02 46.5**	**-1.5**
	6.6nm,0.9s						
ULM	**Lac du Bonnet**	**38.44**	**352**	P	**P**	**09 02 46.9**	**-1.2**
	4.2nm,0.8s,baz=170,slow=7.5,SNR=8.5						
YKA	**Yellowknife Ar**	**53.60**	**345**	P	**P**	**09 04 46.6**	**-0.7**
	1.7nm,1.0s,baz=142,slow=7.4,SNR=12						
LZH	**Lanzhou**	**130.59**	**347**	*e*PKP	**PKPdf**	**09 14 33.0**	**-4.9**
LZH				pPKP	pPKPdf	09 14 44.2	-3.8
LZH				sPKP		09 14 48.1	
CMAR	**Chiang Mai Arr**	**148.68**	**346**	PKPbc	**PKiKP**	**09 15 16.0**	**+0.1**
	1.2nm,0.3s,baz=54,slow=0.7,SNR=7.2						

ISCJB ***05*** *09:02:48.9±1.4, 12°.3N±0°.2×88°.5W±0°.2, h35*^{km}*, mb3.9/4, Error ellipse: s-maj=44.7km s-min=8.1km az=37.8*

IDC ***05*** *09:02:51.6±2.1, 12°.43N×88°.32W, h42*^{km}*±24*^{km}*, mb3.7/4, mb1 3.9/7, mb1mx3.5/38, mbtmp3.7/7, ML2.7/3, Error ellipse: s-maj=63.6km s-min=14.0km az=39.0*

ISC 05 09:02:51.0±1.3**, 12°.4N**±0°.2×**88°.4W**±0°.2**, h35**^{km}**, n8,** σ1^{s}.**16**/9**, mb3.9**/4**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	**El Apazote**	**3.28**	**322**	P	**Pn**	**09 03 41.3**	**+1.1**
	0.1nm,0.3s,baz=98,slow=14,SNR=3.8						
JTS	**JuntasAbangare**	**3.96**	**122**	P	**Pn**	**09 03 50.2**	**+0.9**
	1.9nm,0.3s,baz=18,slow=18,SNR=10						
JTS				S	**Sn**	**09 04 34.3**	**-0.2**
	1.8nm,0.3s,baz=8.8,slow=19,SNR=3.8						
CMIG	**Matias Romero**	**7.83**	**307**	P	**Pn**	**09 04 42.7**	**+0.2**
	0.2nm,0.3s,baz=126,slow=9.5,SNR=5.1						
TXAR	**Lajitas Array**	**22.04**	**322**	P	**P**	**09 07 43.6**	**+0.7**
	1.8nm,0.7s,baz=145,slow=12,SNR=26						
TKL	**Tuckaleechee C**	**23.51**	**9**	P	**P**	**09 07 59.2**	**+1.4**
	5.1nm,0.9s,baz=201,slow=14,SNR=4.0						
ULM	**Lac du Bonnet**	**38.23**	**352**	P	**P**	**09 10 06.2**	**-1.3**
	2.8nm,0.6s,baz=176,slow=9.9,SNR=6.1						
YKA	**Yellowknife Ar**	**53.41**	**345**	P	**P**	**09 12 05.7**	**-1.3**
	1.2nm,1.0s,baz=142,slow=7.1,SNR=9.3						
CMAR	**Chiang Mai Arr**	**148.49**	**347**	PKPbc	**PKPbc**	**09 22 35.0**	**+0.1**
	0.9nm,0.3s,baz=313,slow=2.4,SNR=4.6						

ATH ***05*** *09:05:22.3, 40°.90N×19°.71E, h6*^{km}*±3*^{km}*, ML3.0/4, Error ellipse: s-maj=5.9km s-min=1.9km az=139.0*

SKO ***05*** *09:05:25.7, 40°.53N×20°.11E, h0*^{km}

TIR ***05*** *09:05:26.6, 40°.70N×19°.86E, h3*^{km}*, Md3.4/6*

THE ***05*** *09:05:27.1, 40°.70N×19°.97E, h1*^{km}*, ML2.9/9, Error ellipse: s-maj=0.9km s-min=0.3km az=293.0*

PDG ***05*** *09:05:27.9±0.6, 40°.77N×19°.89E, h0*^{km}*±11*^{km}*, ML3.2/11, Error ellipse: s-maj=0.7km s-min=1.4km az=0.0*

BEO ***05*** *09:05:28.5±0.6, 40°.80N×19°.86E, h0*^{km}*, ML2.8/7*

ISC 05 09:05:25.8±1.1**, 40°.64N**±0°.02×**19°.84E**±0°.02**, h5**^{km}±10^{km}**, n97,** σ1^{s}.**22**/137**, 15C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.31**	**237**	P	**Pn**	**09 05 35.2**	**-1.9**
VLO				S	**Sb**	**09 05 42.0**	**+2.7**
VLO	**Vlora**	**0.31**	**237**	*i* PG	**Pn**	**09 05 35.0**	**-2.0**
VLO				*i* SG	**Sb**	**09 05 42.0**	**+2.7**
TPE	**Tepelena**	**0.37**	**159**	*i* PG	**Pb**	**09 05 34.7**	**-0.2**
TPE				*i* SG	**Sb**	**09 05 41.3**	**+0.4**
TIR	**Tirane**	**0.71**	**2**	*e*Pg	**Pg**	**09 05 39.2**	**-0.2**
TIR				*e*Sg	**Sg**	**09 05 45.3**	**-3.3**
TIR	**Tirane**	**0.71**	**2**	⇑*i*P	**Pg**	**09 05 40.0**	**+0.6**
TIR				S	**Sg**	**09 05 49.9**	**+1.3**
TIR	**Tirane**	**0.71**	**2**	P	**Pg**	**09 05 39.5**	**+0.1**
TIR				S	**Sg**	**09 05 48.9**	**+0.3**
TIR	**Tirane**	**0.71**	**2**	⇑*i*Pg	**Pg**	**09 05 39.7**	**+0.3**
TIR	**Tirane**	**0.71**	**2**	*i* PG	**Pg**	**09 05 39.7**	**+0.3**
TIR				*i* SG	**Sg**	**09 05 49.0**	**+0.4**
SRN	**Sarande**	**0.77**	**171**	P	**Pn**	**09 05 42.4**	**-0.9**
SRN				S	**Sn**	**09 05 54.2**	**-1.1**
SRN	**Sarande**	**0.77**	**171**	*i* PG	**Pn**	**09 05 42.2**	**-1.1**
SRN				*i* SG	**Sn**	**09 05 55.2**	**0.0**
KEK	**Kerkira**	**0.93**	**182**	P	**Pn**	**09 05 45.1**	**-0.4**
KEK				S	**Sn**	**09 06 01.0**	**+1.8**
KEK				AML	AML	09 06 05.5	
	comp=E,1278µm,0.2s						
KEK				AML	AML	09 06 06.4	
	comp=N,1099µm,0.3s						
KEK	**Kerkira**	**0.93**	**182**	P	**Pn**	**09 05 45.6**	**+0.1**
KEK				S	**Sn**	**09 06 00.3**	**+1.1**
NEST	**Nestorio**	**0.95**	**103**	P	**Pg**	**09 05 43.5**	**-0.5**
NEST				S	**Sn**	**09 05 59.3**	**-0.7**
NEST				AML	AML	09 06 06.7	
	comp=N,667µm,0.4s						
NEST				AML	AML	09 06 09.8	
	comp=E,681µm,0.3s						
NEST	**Nestorio**	**0.95**	**103**	P	**Pg**	**09 05 43.5**	**-0.5**
NEST				S	**Sg**	**09 05 56.2**	**-0.1**
PENT	**Pentalofos**	**1.09**	**114**	P	**Pg**	**09 05 46.2**	**-0.4**
PENT				S	**Sb**	**09 06 00.8**	**-0.9**
PHP	**Peshkopia**	**1.14**	**23**	P	**Pb**	**09 05 46.4**	**-1.7**
PHP	**Peshkopia**	**1.14**	**23**	*i* PG	**Pb**	**09 05 46.1**	**-2.0**
PHP				*i* SG	**Sb**	**09 06 02.7**	**-0.5**
IGT	**Igoumenitsa**	**1.17**	**161**	P	**Pn**	**09 05 49.2**	**+0.3**
IGT				AML	AML	09 06 11.2	
	comp=E,1527µm,0.6s						
IGT				AML	AML	09 06 12.2	
	comp=N,1652µm,0.5s						
IGT	**Igoumenitsa**	**1.17**	**161**	P	**Pn**	**09 05 49.1**	**+0.3**
IGT				S	**Sn**	**09 06 06.8**	**+1.6**
BIA	**Bitola**	**1.19**	**71**	P	**Pb**	**09 05 47.4**	**-1.5**
BIA				S	**Sb**	**09 06 02.8**	**-1.8**
BIA	**Bitola**	**1.19**	**71**	*i* Pg	**Pb**	**09 05 48.3**	**-0.6**
JAN	**Janina**	**1.25**	**141**	P	**Pg**	**09 05 50.5**	**+0.7**
JAN	**Janina**	**1.25**	**141**	P	**Pg**	**09 05 50.3**	**+0.5**
JAN				S	**Sn**	**09 06 08.4**	**+1.1**
KRUS	**Krusevo**	**1.29**	**55**	*i* Pn	**Pn**	**09 05 48.4**	**-2.2**
KRUS				*i* Sn	**Sg**	**09 06 10.3**	**+3.0**
KPRO	**Kipourio**	**1.35**	**120**	P	**Pb**	**09 05 51.0**	**-0.7**
KPRO				AML	AML	09 06 18.2	
	comp=N,837µm,0.5s						
KPRO				AML	AML	09 06 19.2	
	comp=E,975µm,0.4s						
KPRO	**Kipourio**	**1.35**	**120**	P	**Pg**	**09 05 51.5**	**-0.2**
KPRO				S	**Sg**	**09 06 10.6**	**+1.4**
ULC	**Ulcinj**	**1.40**	**341**	⇑*i*Pg	**Pb**	**09 05 52.0**	**-0.4**
ULC				*i* Sg	**Sg**	**09 06 11.8**	**+1.1**
KZN	**Kozani**	**1.51**	**102**	P	**Pb**	**09 05 54.1**	**-0.3**
KZN	**Kozani**	**1.51**	**102**	P	**Pb**	**09 05 53.4**	**-1.0**
KZN				S	**Sg**	**09 06 13.8**	**-0.5**
DRME	**Dracevica, Mon**	**1.62**	**343**	⇓*i*Pg	**Pb**	**09 05 55.5**	**-0.8**
DRME				*i* Sg	**Sg**	**09 06 19.6**	**+1.7**
DRME	**Dracevica, Mon**	**1.62**	**343**	*e*Pn	**Pb**	**09 05 55.7**	**-0.6**
SKO	**Skopje**	**1.80**	**42**	*e*Pg	**Pb**	**09 05 59.1**	**-0.1**
SKO				*e*Sg	**Sb**	**09 06 21.9**	**-0.2**
SKO	**Skopje**	**1.80**	**42**	P	**Pn**	**09 05 57.9**	**+0.4**
SKO				S	**Sb**	**09 06 21.5**	**-0.6**
SKO	**Skopje**	**1.80**	**42**	*i* Pn	**Pb**	**09 05 59.2**	**0.0**
SKO				*i* Sn	**Sg**	**09 06 23.2**	**-0.3**
BUM	**Brajici-Budva**	**1.81**	**337**	⇑*i*Pn	**Pn**	**09 05 57.7**	**0.0**
BUM				*i* Sn	**Sg**	**09 06 25.3**	**+1.5**
PDG	**Podgorica**	**1.84**	**346**	*e*Pn	**Pb**	**09 05 59.3**	**-0.7**
PDG				*e*Sg	**Sb**	**09 06 22.4**	**-1.0**
PDG	**Podgorica**	**1.84**	**346**	⇑*i*P	**Pb**	**09 05 59.6**	**-0.4**
PDG	**Podgorica**	**1.84**	**346**	S	**Sb**	**09 06 24.3**	**+0.9**
PDG	**Podgorica**	**1.84**	**346**	*e*Pn	**Pb**	**09 05 59.5**	**-0.5**
TTG	**Podgorica**	**1.84**	**346**	⇑*i*Pn	**Pb**	**09 05 59.4**	**-0.5**
TTG				*i* Sn	**Sg**	**09 06 25.6**	**+0.6**
FASA	**Fasano**	**1.90**	**276**	*e*Pn	**Pb**	**09 06 00.9**	**0.0**
FASA				Sn	**Sg**	**09 06 31.1**	**+4.4**
TSLK	**Tsoukalades, L**	**1.92**	**161**	P	**Pb**	**09 06 01.2**	**-0.1**
LKD2	**Lefkada island**	**1.95**	**161**	P	**Pb**	**09 06 01.5**	**-0.3**
LKD2	**Lefkada island**	**1.95**	**161**	P	**Pb**	**09 06 01.6**	**-0.3**
LKD2				S	**Sg**	**09 06 27.4**	**-1.1**
PVY	**Plav**	**1.96**	**3**	⇓*i*Pn	**Pb**	**09 06 01.8**	**-0.2**
PVY				*i* Sn	**Sb**	**09 06 27.6**	**+0.8**
GRG	**Griva**	**1.97**	**80**	P	**Pn**	**09 05 58.6**	**-1.4**
GRG	**Griva**	**1.97**	**80**	P	**Pn**	**09 05 59.0**	**-0.9**
THL	**Klokotos Trika**	**1.98**	**122**	P	**Pb**	**09 06 01.3**	**-1.1**
STIP	**Stip**	**2.06**	**58**	*i* Pn	**Pb**	**09 06 04.0**	**+0.2**
HCY	**Herceg Novi**	**2.07**	**331**	⇑*i*Pn	**Pb**	**09 06 03.2**	**-0.7**
HCY				*i* Sn	**Sg**	**09 06 32.0**	**-0.3**
HCY	**Herceg Novi**	**2.07**	**331**	*e*Pn	**Pn**	**09 05 59.0**	**-2.3**
LIT	**Litokhoron**	**2.10**	**104**	P	**Pb**	**09 06 03.2**	**-1.1**
EVGI	**Lefkada island**	**2.11**	**162**	P	**Pb**	**09 06 03.0**	**-1.6**
VAY	**Valandovo**	**2.18**	**71**	*e*Pg	**Pb**	**09 06 06.1**	**+0.4**
VAY				*e*Sg	**Sg**	**09 06 35.4**	**-0.3**
VAY	**Valandovo**	**2.18**	**71**	*i* Pn	**Pn**	**09 06 03.2**	**+0.5**
VAY				*i* Sn	**Sb**	**09 06 33.6**	**+0.7**
KOME	**Kolasin**	**2.22**	**354**	⇑*i*Pn	**Pb**	**09 06 05.1**	**-1.4**
KOME				*i* Sn	**Sb**	**09 06 34.8**	**+0.4**
NKME	**Niksic**	**2.23**	**343**	⇓*i*Pn	**Pb**	**09 06 05.2**	**-1.4**
NKME				*i* Sn	**Sb**	**09 06 35.0**	**+0.5**
IVA	**Berane**	**2.23**	**1**	⇑*i*Pn	**Pb**	**09 06 05.2**	**-1.5**
IVA				*i* Sn	**Sb**	**09 06 34.3**	**-0.4**
NKY	**Niksic**	**2.26**	**344**	⇓*i*Pn	**Pb**	**09 06 05.6**	**-1.6**
NKY				*i* Sn	**Sb**	**09 06 35.7**	**+0.1**
EVR	**Evrytania**	**2.29**	**138**	P	**Pb**	**09 06 07.5**	**-0.2**
TREB	**Trebinje**	**2.36**	**332**	*e*Pn	**Pn**	**09 06 06.4**	**+1.2**
TREB	**Trebinje**	**2.36**	**332**	*e*Pn	**Pn**	**09 06 03.8**	**-1.4**
MATE	**Matera**	**2.38**	**271**	⇑*i*P	**Pb**	**09 06 07.3**	**-1.9**
PVO	**Paravola**	**2.40**	**147**	P	**Pb**	**09 06 08.0**	**-1.6**
BRY	**Bratogost**	**2.46**	**337**	⇑*i*Pn	**Pb**	**09 06 08.6**	**-2.0**
BRY				*i* Sn	**Sb**	**09 06 40.5**	**-0.8**
BRY	**Bratogost**	**2.46**	**337**	*e*Pn	**Pn**	**09 06 06.5**	**-0.3**
AGG	**Agios Georgios**	**2.51**	**129**	P	**Pb**	**09 06 09.3**	**-2.1**
SJES	**Sjenica**	**2.62**	**2**	*e*Pn	**Pn**	**09 06 10.5**	**+1.5**
BARS	**Barje**	**2.63**	**34**	*e*Pn	**Pn**	**09 06 10.1**	**+1.1**
BARS	**Barje**	**2.63**	**34**	*e*Pn	Pg	09 06 25.1	+8.9
FYTO	**Fytoko, Volos**	**2.68**	**116**	P	**Pn**	**09 06 11.2**	**+1.5**
FYTO	**Fytoko, Volos**	**2.68**	**116**	P	**Pn**	**09 06 10.0**	**+0.4**
STON	**Ston**	**2.75**	**325**	*e*Pn	**Pn**	**09 06 09.6**	**-0.9**
STON				Sn	**Sn**	**09 06 43.1**	**-1.0**
SELS	**Selova**	**2.75**	**20**	*e*Pn	**Pn**	**09 06 11.5**	**+0.9**
TIP	**Timpagrande**	**2.78**	**239**	⇑*i*P	**Pb**	**09 06 13.0**	**-3.1**
TIP	**Timpagrande**	**2.78**	**239**	S	**Sb**	**09 06 49.5**	**-1.0**
IVAS	**Ivanjica**	**2.94**	**4**	*e*Pn	**Pn**	**09 06 13.9**	**+0.6**
VTS	**Vitosha**	**3.19**	**51**	*e*Pn	**Pn**	**09 06 18.4**	**+1.6**
VTS	**Vitosha**	**3.19**	**51**	⇓*i*P	**Pn**	**09 06 18.2**	**+1.4**
VTS	**Vitosha**	**3.19**	**51**	S	**Sn**	**09 06 56.0**	**+0.7**
BBLS	**Lazići**	**3.24**	**354**	*e*Pn	**Pn**	**09 06 18.3**	**+0.8**
BBLS	**Lazići**	**3.24**	**354**	*e*Pn	**Pn**	**09 06 18.2**	**+0.8**
BOVS	**Bovan**	**3.30**	**24**	*e*Pn	**Pn**	**09 06 19.3**	**+1.1**
GRUS	**Gruza**	**3.31**	**11**	*e*Pn	**Pn**	**09 06 19.6**	**+1.3**
ZAPS	**Zavoj**	**3.36**	**37**	*e*Pn	**Pn**	**09 06 20.9**	**+1.9**
DIVS	**Divibare**	**3.46**	**2**	*e*Pn	**Pn**	**09 06 21.8**	**+1.4**
DIVS	**Divibare**	**3.46**	**2**	*e*Pn	**Pn**	**09 06 19.7**	**-0.7**
HAPS	**Han Pijesak,BI**	**3.51**	**349**	*e*Pn	**Pn**	**09 06 21.1**	**0.0**
HAPS	**Han Pijesak,BI**	**3.51**	**349**	*e*Pn	**Pn**	**09 06 20.6**	**-0.5**
ZAGS	**Zajecar**	**3.63**	**28**	*e*Pn	**Pn**	**09 06 23.8**	**+1.0**
KUBS	**Kucevo**	**4.01**	**19**	*e*Pn	**Pn**	**09 06 28.4**	**+0.5**
MDVR	**Moldovita**	**4.36**	**18**	⇑*i*P	**Pn**	**09 06 33.4**	**+0.6**
BZS	**Buzias**	**5.14**	**14**	*e*Pn	**Pn**	**09 06 44.7**	**+1.2**
BZS	**Buzias**	**5.14**	**14**	⇑*i*P	**Pn**	**09 06 44.1**	**+0.6**
GZR	**Gura Zlata**	**5.22**	**23**	⇑*i*P	**Pn**	**09 06 46.0**	**+1.4**
CRES	**Cresnjev**	**6.09**	**330**	*e*Pn	**Pn**	**09 06 56.2**	**-0.3**
CEY	**Cerknica**	**6.45**	**324**	*e*Pn	**Pn**	**09 07 00.8**	**-0.7**

MEX ***05*** *09:11:04.6±0.8, 14°.30N×92°.35W, h84*^{km}*±20*^{km}*, MD3.9*

UCR ***05*** *09:11:04.4±1.3, 13°.88N×92°.09W, h14*^{km}*±17*^{km}*, MD3.8, ML3.5*

IDC ***05*** *09:11:08.3±2.6, 14°.52N×92°.22W, h47*^{km}*±24*^{km}*, mb3.5/5, mb1 3.7/7, mb1mx3.5/35, mbtmp3.6/7, ML3.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/31, Error ellipse: s-maj=41.8km s-min=17.8km az=46.0*

ISC 05 09:11:02.1±2.3**, 14°.23N**±0°.10×**92°.22W**±0°.08**, h13**^{km}±12^{km}**, n34,** σ1^{s}.**40**/43**, mb3.6**/5**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.67**	**356**	*e*P	**Pn**	**09 11 18.1**	**+0.7**
THIG				*i* S	**Sn**	**09 11 29.6**	**+1.9**
FUG	**Fuego 3**	**1.35**	**81**	*e*P	**Pg**	**09 11 28.2**	**0.0**
PCG	**Pacaya**	**1.57**	**84**	*e*P	**Pg**	**09 11 31.5**	**-0.9**
PCG				*e*S	**Sg**	**09 11 53.5**	**+0.6**
IXG	**Ixpaco**	**1.71**	**92**	*e*P	**Pb**	**09 11 32.6**	**-1.1**
IXG				*e*S	**Sn**	**09 11 53.2**	**-0.6**
PCIG		**1.75**	**327**	*e*P	**Pn**	**09 11 30.9**	**-1.3**
PCIG				*i* S	**Sn**	**09 11 50.2**	**-4.2**
NBG	**Las Nubes**	**1.85**	**79**	*e*P	**Pg**	**09 11 36.2**	**-1.6**
APG	**El Apazote**	**1.87**	**66**	P	**Pg**	**09 11 36.8**	**-1.2**
	38nm,0.3s,baz=187,slow=13,SNR=622						
APG				LR	LR	09 12 11.1	
	comp=Z,95nm,19.4s,baz=265,slow=36						
CCIG	**Comitan**	**2.04**	**2**	*e*P	**Pg**	**09 11 40.3**	**-1.0**

CCIG				eS	**Sg**	**09 12 10.5**	**+2.7**
RTR	**El Retiro**	**2.52**	**97**	eP	**Pn**	**09 11 43.5**	**+0.5**
RTR				eS	**Sn**	**09 12 12.4**	**-1.3**
SBLS	**San Blas**	**2.55**	**99**	eP	**Pn**	**09 11 43.1**	**-0.4**
SBLS				eS	**Sn**	**09 12 15.1**	**+0.5**
CEVE	**Cerro Verde**	**2.55**	**99**	eP	**Pn**	**09 11 43.0**	**-0.6**
CEVE				eS	**Sn**	**09 12 14.0**	**-0.6**
CEVE				IAML		09 12 24.2	
	comp=Z,1µm,0.4s						
SNJE	**San Jose**	**2.56**	**98**	eP	**Pn**	**09 11 43.3**	**-0.4**
CEDA	**San Andres**	**2.78**	**99**	eP	**Pn**	**09 11 45.6**	**-0.8**
CEDA				IAML		09 12 39.1	
	comp=Z,400nm,0.5s						
BOQS	**Boqueron**	**2.90**	**99**	eP	**Pn**	**09 11 48.8**	**+0.5**
BOQS				eS	**Sn**	**09 12 22.2**	**-0.9**
UEES	**San Salvador**	**2.94**	**100**	eP	**Pn**	**09 11 48.5**	**-0.1**
UEES				eS	**Sn**	**09 12 23.1**	**-0.7**
UEES				IAML		09 12 30.2	
	comp=Z,424nm,0.4s						
SNET	**Serv Nac Est T**	**2.95**	**100**	eP	**Pn**	**09 11 48.7**	**-0.2**
SNET				IAML		09 12 36.5	
	comp=Z,307nm,0.2s						
OPAM	**San Salvador**	**2.98**	**100**	IAML		09 12 31.1	
	comp=Z,329nm,0.3s						
LBRS	**Las Brisas**	**3.12**	**99**	eP	**Pn**	**09 11 50.1**	**-1.1**
LFRS	**El Faro**	**3.13**	**101**	eP	**Pn**	**09 11 51.0**	**-0.3**
PAVA	**Las Pavas**	**3.23**	**99**	eP	**Pn**	**09 11 53.0**	**+0.3**
PAVA				IAML		09 12 52.1	
	comp=Z,167nm,0.4s						
VICT	**Victoria**	**3.49**	**94**	eP	**Pn**	**09 11 55.9**	**-0.4**
TECA	**Tecapa**	**3.69**	**101**	eP	**Pn**	**09 11 59.0**	**-0.1**
CMIG	**Matias Romero**	**3.83**	**318**	P	**Pn**	**09 11 59.8**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=159,slow=12,SNR=37						
PACA	**Pacayal**	**3.86**	**101**	eP	**Pn**	**09 12 01.4**	**0.0**
LCND	**La Caada**	**4.31**	**102**	eP	**Pn**	**09 12 07.1**	**-0.3**
JTS	**JuntasAbangare**	**8.11**	**118**	P	**Pn**	**09 13 01.1**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=15,slow=19,SNR=5.2						
JTS				LR	LR	09 16 27.4	
	comp=Z,120nm,18.4s,baz=30,slow=39						
TXAR	**Lajitas Array**	**18.38**	**327**	P	**P**	**09 15 18.2**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=151,slow=13,SNR=5.4						
H06E1	**SOCORRO T-PHAS**	**18.49**	**287**	T	T	09 34 12.5	
	SNR=8.0						
ATAH	**Atahualpa**	**25.28**	**146**	P	**P**	**09 16 33.3**	**+4.4**
	comp=Z,4.8nm,0.4s,baz=2.3,slow=4.6,SNR=13						
PDAR	**Pinedale Array**	**32.12**	**336**	P	**P**	**09 17 30.2**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=143,slow=9.1,SNR=2.3						
NVAR	**Mina Array Bea**	**33.35**	**321**	P	**P**	**09 17 41.7**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=127,slow=8.0,SNR=4.2						
YKA	**Yellowknife Ar**	**50.75**	**347**	P	**P**	**09 20 00.1**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=152,slow=7.2,SNR=24						
YKA				PcP	**PcP**	**09 21 16.8**	**-1.7**
	comp=Z,0.2nm,0.8s,baz=153,slow=3.9,SNR=4.0						
ILAR	**Eielson Array**	**62.54**	**337**	P	**P**	**09 21 25.6**	**+0.2**
	comp=Z,0.4nm,1.0s,baz=118,slow=5.1,SNR=5.7						
CMAR	**Chiang Mai Arr**	**145.70**	**341**	PKPbc	**PKPdf**	**09 30 40.9**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=334,slow=3.0,SNR=6.6						

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*RSNC **05** 09:21:35.8±1.4, 0°.88N×78°.03W, h0^{km}±6^{km}, ML3.0*
*IGQ **05** 09:21:35.3±0.8, 1°N±6°×7°8W±°, h8^{km}, MLv3.7*
ISC 05 09:21:34.9±1.2, 0°.78N±0°.03×77°.98W±0°.03, h3^{km}±12^{km}, n52, σ1^{s}53/63, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TULM	**Tulcn-Chalpat**	**0.20**	**108**	P	**Pg**	**09 21 39.3**	**+0.4**
TULM				S	**Sg**	**09 21 41.7**	**+0.1**
CMBC	**Cumbal**	**0.22**	**43**	ePg	**Pg**	**09 21 40.1**	**+0.8**
ATUL	**Tulcn**	**0.26**	**91**	P	**Pg**	**09 21 40.5**	**+0.6**
ATUL				S	**Sg**	**09 21 42.0**	**-1.2**
LITE1	**Lita**	**0.38**	**272**	P	**Pb**	**09 21 43.7**	**-0.8**
YAHU	**Yahuarcocha**	**0.42**	**193**	P	**Pb**	**09 21 44.7**	**-0.5**
YAHU				S	**Sg**	**09 21 47.4**	**-1.1**
URCU	**Urcuqui**	**0.44**	**219**	P	**Pb**	**09 21 45.0**	**-0.5**
URCU				S	**Sg**	**09 21 47.7**	**-1.4**
IMBA	**Imbabura, San**	**0.55**	**204**	P	**Pb**	**09 21 47.7**	**+0.3**
IMBA				S	**Sg**	**09 21 50.0**	**-2.5**
ACOT	**Cotacachi (Cas**	**0.56**	**212**	P	**Pb**	**09 21 47.9**	**+0.2**
ACOT				S	**Sg**	**09 21 50.4**	**-2.8**
COTA	**Cotacachi**	**0.57**	**219**	P	**Pb**	**09 21 47.9**	**0.0**
CUIC	**Cuicocha-Domo**	**0.61**	**219**	P	**Pb**	**09 21 48.0**	**-0.4**
CUIC				S	**Sg**	**09 21 50.7**	**-3.8**
CAYA	**Cayambe**	**0.70**	**181**	P	**Pb**	**09 21 49.7**	**-0.4**
OTAV	**Otavalo**	**0.71**	**221**	eP	**Pb**	**09 21 49.7**	**-0.6**
OTAV				eS	**Sn**	**09 22 02.1**	**-1.9**
OTAV				i		09 22 06.3	
	comp=Z,436nm,0.6s						
OTAV	**Otavalo**	**0.71**	**221**	P	**Pb**	**09 21 49.9**	**-0.4**
GCUF	**Volcan Galeras**	**0.77**	**55**	eP	**Pb**	**09 21 50.5**	**-0.8**
GCUF				eS	**Sb**	**09 22 02.5**	**+0.1**
GCUF				i		09 22 08.1	
	comp=Z,263nm,0.6s						
CPAS2	**Pasto**	**0.85**	**59**	eP	**Pn**	**09 21 54.4**	**+0.3**
CPAS2				IAML		09 22 13.3	
	comp=Z,2µm,0.4s						
PAC1	**Pacto, Paraso**	**0.96**	**238**	P	**Pb**	**09 21 54.2**	**-0.1**
YANA	**Yana**	**1.07**	**214**	P	**Pb**	**09 21 56.2**	**-0.1**
GGPC	**Guagua Pichinc**	**1.13**	**213**	P	**Pn**	**09 21 58.0**	**-0.2**
ANTI	**Antisana**	**1.23**	**189**	P	**Pn**	**09 21 59.8**	**+0.2**
ANTS	**Antisana-Sarah**	**1.28**	**189**	P	**Pn**	**09 22 00.2**	**0.0**
ANTS				S	**Pn**	**09 22 03.6**	**+3.4**
CRUC	**La Cruz**	**1.29**	**53**	eP	**Pn**	**09 22 00.5**	**+0.3**
ANTG	**Antisana-Guama**	**1.30**	**192**	P	**Pn**	**09 22 00.8**	**+0.3**
ANTG				S	**Pn**	**09 22 03.6**	**+3.1**
NINA	**Atacazo Ninahu**	**1.32**	**209**	P	**Pn**	**09 22 00.6**	**-0.2**
ANTM	**Antisana-La Mi**	**1.33**	**191**	P	**Pn**	**09 22 01.0**	**+0.1**
ANTM				S	**Pn**	**09 22 03.6**	**+2.7**
PITA	**Cotopaxi Volc**	**1.40**	**199**	P	**Pb**	**09 22 03.1**	**+1.1**
VC1	**Cotopaxi 1**	**1.47**	**197**	P	**Pg**	**09 22 04.3**	**+1.1**
BVC2	**Cotopaxi Volca**	**1.49**	**197**	P	**Pg**	**09 22 04.5**	**+1.0**
NAS2	**Nasa**	**1.50**	**199**	P	**Pg**	**09 22 05.1**	**+1.5**
BTAM	**Cotopaxi Volca**	**1.50**	**196**	P	**Pg**	**09 22 04.9**	**+1.2**
BNAS	**Cotopaxi Volca**	**1.52**	**199**	P	**Pg**	**09 22 05.3**	**+1.1**
BMOR	**Cotopaxi Volca**	**1.57**	**198**	P	**Pg**	**09 22 05.5**	**+0.4**
PAST	**Pastocalle**	**1.61**	**204**	P	**Pg**	**09 22 06.6**	**+0.9**
ILLI	**Illinizas Sur**	**1.66**	**207**	P	**Pg**	**09 22 07.9**	**+1.1**
ARDO	**Archidona, Ten**	**1.77**	**174**	P	**Pg**	**09 22 09.0**	**+0.1**
PIS1	**Pisayambo**	**1.87**	**193**	P	**Pg**	**09 22 12.6**	**+1.8**
PISA	**Pisayambo**	**1.87**	**193**	P	**Pg**	**09 22 11.4**	**+0.6**
SOTA	**Rioblanco**	**1.92**	**45**	i	Pg	09 22 17.9	+6.1
	comp=Z,113nm,0.4s						
MAG1	**Magdalena**	**1.98**	**245**	P	**Pg**	**09 22 15.7**	**+2.7**
SAGO	**Sagoatoa**	**2.04**	**200**	P	**Pg**	**09 22 16.2**	**+2.2**
BRUN	**Tungurahua Vol**	**2.23**	**191**	P	**Pg**	**09 22 19.5**	**+1.9**
POND	**Pondoa**	**2.23**	**192**	P	**Pg**	**09 22 20.2**	**+2.4**
BULB	**Ulba Tungurahu**	**2.24**	**191**	P	**Pg**	**09 22 19.0**	**+1.0**
PUYO	**Puyo, Santa Ro**	**2.26**	**181**	P	**Pg**	**09 22 21.0**	**+2.8**
RETU	**Refugio**	**2.26**	**192**	P	**Pg**	**09 22 20.5**	**+2.1**
BBIL	**Ulba Tungurahu**	**2.27**	**193**	P	**Pg**	**09 22 20.6**	**+2.1**
BIL2	**Estacion Bilba**	**2.28**	**193**	P	**Pg**	**09 22 19.7**	**+1.1**
BPAT	**Tungurahua Vol**	**2.31**	**191**	P	**Pg**	**09 22 21.2**	**+1.9**
PAT1	**Patacocha**	**2.31**	**191**	P	**Pg**	**09 22 20.8**	**+1.4**
ARRY	**Arrayan**	**2.32**	**192**	P	**Pg**	**09 22 20.7**	**+1.3**
BMAS	**Trigal station**	**2.32**	**192**	P	**Pg**	**09 22 20.9**	**+1.4**
PTLC	**Puerto Leguiza**	**3.24**	**101**	eP	**Pb**	**09 22 32.5**	**-0.6**
PTLC				i		09 23 30.4	
	comp=Z,52nm,0.5s						
YOTC	**Yotoco, Valle**	**3.58**	**27**	i	**Pg**	**09 22 45.7**	**+2.2**
	comp=Z,15nm,0.7s						

IDC 05 09:30:56.5±5.5, 7°.52S×116°.86E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.2/60, mbtmp3.4/3, 1C, Error ellipse: s-maj=263.1km s-min=28.1km az=58.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**16.88**	**31**	⇑eP	P	09 35 00.2	+3.7
WRA	**Warramunga Arr**	**20.96**	**128**	P	P	09 35 41.2	-0.2
	0.3nm,0.3s,baz=302,slow=12,SNR=20						
ASAR	**Alice Springs**	**22.92**	**136**	P	P	09 36 02.4	+0.1
	0.3nm,0.4s,baz=313,slow=9.1,SNR=8.3						
SONM	**Songino Array**	**55.89**	**352**	P	P	09 40 36.2	0.0
	0.7nm,0.7s,baz=182,slow=8.5,SNR=3.9						

MDD 05 09:40:31.5±0.2, 38°.05N×3°.28W, h2^{km}±1^{km}, mbLg2.0/12, 1D, Error ellipse: s-maj=1.7km s-min=1.1km az=55.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	**Quesada**	**0.29**	**145**	⇓Pg	Pg	09 40 36.9	-0.3
	7.0nm,0.2s,SNR=18						
EQES				Lg	Lg	09 40 41.2	
	15nm,0.1s						
SESP	**Santiago Espad**	**0.59**	**82**	Pg	Pg	09 40 42.5	-0.2
	8.2nm,0.1s,SNR=7.9						
SESP				Lg	Lg	09 40 50.5	
	63nm,0.1s,SNR=7.9						
GORA	**Gorafe**	**0.60**	**161**	Pg	Pg	09 40 42.9	0.0
	4.9nm,0.1s,SNR=7.9						
GORA				Lg	Lg	09 40 51.6	
	18nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**0.85**	**188**	Pg	Pg	09 40 47.3	-0.5
	0.5nm,0.1s,SNR=14						
EQUE				Lg	Lg	09 40 58.7	
	2.5nm,0.1s						
EADA	**Adamuz**	**1.03**	**277**	Pg	Pg	09 40 50.1	-1.1
	4.0nm,0.1s,SNR=51						
EADA				Lg	Lg	09 41 03.9	
	23nm,0.1s,SNR=18						
EGOR	**Sierra Gorda,**	**1.14**	**215**	Pg	Pg	09 40 52.6	-0.7
	0.1nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	09 41 09.1	
	4.1nm,0.1s,SNR=7.9						
EBER	**Berja**	**1.19**	**165**	Pg	Pg	09 40 53.7	-0.5
	SNR=17						
EBER				Lg	Lg	09 41 11.0	
	3.9nm,0.2s,SNR=5.7						
ELGU	**Los Guajares,**	**1.21**	**193**	Pg	Pg	09 40 54.0	-0.5
	0.0nm,0.0s,SNR=7.9						
ELGU				Lg	Lg	09 41 11.2	
	7.2nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**1.49**	**66**	Pn	Pn	09 40 57.5	-1.8
	0.0nm,0.1s,SNR=7.9						
ETOB				Pg	Pb	09 40 58.5	-1.4
	0.2nm,0.1s,SNR=9.3						
ETOB				Sn	Sb	09 41 16.5	-2.7
	1.2nm,0.1s,SNR=7.9						
ETOB				Lg	Lg	09 41 18.6	
	5.6nm,0.1s,SNR=11						
EMUR	**La Murta**	**1.63**	**97**	Pn	Pn	09 41 00.1	-1.1
	0.0nm,0.0s,SNR=7.9						
EMUR				Lg	Lg	09 41 23.7	
	3.2nm,0.2s,SNR=6.8						
ECAB	**El Cabril**	**1.69**	**272**	Pn	Pn	09 40 59.8	-2.1
	1.9nm,0.2s,SNR=16						
ECAB				Pg	Pb	09 41 02.1	-1.1
	0.6nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	09 41 20.7	-3.4
	0.3nm,0.0s,SNR=7.9						
ECAB				Lg	Lg	09 41 24.6	
	3.2nm,0.1s						
ESDC	**Sonseca Array**	**1.71**	**342**	Pg	Pn	09 41 02.2	-0.1
	0.1nm,0.1s,baz=163,slow=17,SNR=6.1						
ESDC				Sn	Sn	09 41 21.4	-3.4
	1.1nm,0.1s,baz=354,slow=3.6,SNR=7.9						
ESDC				Lg	Lg	09 41 25.1	
	8.0nm,0.3s,baz=154,slow=30,SNR=19						
PAB	**San Pablo**	**1.71**	**331**	Pg	Pn	09 41 02.4	+0.1
	0.0nm,0.0s,SNR=7.9						
PAB				Sn	Sn	09 41 21.9	-3.0
	0.4nm,0.1s,SNR=7.9						
PAB				Lg	Lg	09 41 25.8	
	3.3nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**1.90**	**219**	Pg	Pb	09 41 06.0	-0.8
	0.1nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	09 41 27.1	-2.2
	0.1nm,0.1s,SNR=7.9						
ECHE	**Chera**	**2.38**	**49**	Lg	Lg	09 41 47.1	
	0.2nm,0.0s,SNR=7.9						
EBEN2	**Beniarda presa**	**2.51**	**75**	Sn	Sn	09 41 41.1	-3.4
	0.6nm,0.1s,SNR=7.9						
EBEN2				Lg	Lg	09 41 51.7	
	0.3nm,0.0s,SNR=7.9						
EGRO	**El Granado**	**3.37**	**263**	Pn	Pn	09 41 22.4	-2.6
	0.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	09 42 01.9	-3.6
	0.4nm,0.1s,SNR=7.9						

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*ISCJB **05** 09:41:11.0±0.4, 38°.09N±0°.03×3°.33W±0°.03, h11^{km}, Error ellipse: s-maj=4.7km s-min=3.7km az=5.9*
*MDD **05** 09:41:12.6±0.2, 38°.04N×3°.29W, h2^{km}±1^{km}, mbLg2.5/18, Error ellipse: s-maj=1.7km s-min=1.2km az=53.0, PRXIMO*
MDD EMS: II INTENSIDAD MAXIMA.
*SFS **05** 09:41:12.0, 38°.04N×3°.29W, h3^{km}, ML2.6, TORREPEROGIL (JAEN)*
ISC 05 09:41:11.7±0.8, 38°.05N±0°.03×3°.30W±0°.03, h11^{km}, n28, σ1^{s}08/30, 1C-1D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	**Quesada**	**0.31**	**143**	⇓Pg	**Pg**	**09 41 18.0**	**+0.1**
	30nm,0.2s,SNR=18						
EQES				Lg	Lg	09 41 22.2	
	42nm,0.1s,SNR=16						
SESP	**Santiago Espad**	**0.60**	**83**	⇑Pg	**Pg**	**09 41 23.7**	**+0.2**
	24nm,0.1s,SNR=18						
SESP				Lg	Lg	09 41 31.7	
	144nm,0.1s,SNR=7.9						
GORA	**Gorafe**	**0.61**	**160**	Pg	**Pg**	**09 41 23.8**	**+0.3**
	20nm,0.1s,SNR=7.9						
GORA				Lg	Lg	09 41 32.2	
	84nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**0.85**	**187**	Pg	**Pg**	**09 41 28.4**	**+0.3**
	1.4nm,0.2s,SNR=10						
EQUE				Lg	Lg	09 41 40.1	
	38nm,0.2s						
EADA	**Adamuz**	**1.01**	**277**	Pg	**Pg**	**09 41 31.2**	**0.0**
	8.3nm,0.1s,SNR=5.1						
EADA				Lg	Lg	09 41 45.1	
	60nm,0.2s,SNR=12						
EGOR	**Sierra Gorda,**	**1.14**	**215**	Pg	**Pb**	**09 41 33.6**	**+0.2**
	8.8nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	09 41 50.1	
	28nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.20**	**164**	Pg	**Pb**	**09 41 34.3**	**-0.1**
	7.6nm,0.2s,SNR=7.5						
EBER				Lg	Lg	09 41 53.0	
	43nm,0.2s,SNR=163						
ELGU	**Los Guajares,**	**1.21**	**192**	Pg	**Pb**	**09 41 34.9**	**+0.3**
	5.2nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	09 41 51.9	
	13nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**1.50**	**66**	Pn	**Pn**	**09 41 39.0**	**+0.3**
	3.1nm,0.2s,SNR=7.9						
ETOB				Lg	Lg	09 42 00.2	
	30nm,0.2s,SNR=8.4						
EMAL	**Malaga-Limoner**	**1.57**	**215**	eP	**Pg**	**09 41 42.0**	**+0.2**
EMAL				eS	**Sb**	**09 42 01.0**	**+0.5**
EMUR	**La Murta**	**1.65**	**97**	Pn	**Pn**	**09 41 40.9**	**+0.3**
	2.5nm,0.2s,SNR=7.9						
EMUR				Sn	**Sn**	**09 42 01.5**	**-0.2**
	7.1nm,0.3s,SNR=7.9						
EMUR				Lg	Lg	09 42 04.6	
	54nm,0.3s,SNR=10.0						
ECAB	**El Cabril**	**1.67**	**272**	Pn	**Pn**	**09 41 40.8**	**-0.1**
	5.4nm,0.2s,SNR=7.9						
ECAB				Pg	**Pb**	**09 41 43.1**	**+0.7**
	3.2nm,0.1s,SNR=7.9						
ECAB				Sn	**Sn**	**09 42 02.4**	**+0.1**
	3.5nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	09 42 04.9	
	17nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**1.70**	**343**	Pg	**Pg**	**09 41 44.2**	**-0.2**
	4.6nm,0.1s,baz=163,slow=17,SNR=82						
ESDC				Lg	Lg	09 42 06.0	
	22nm,0.3s,baz=162,slow=29,SNR=17						
PAB	**San Pablo**	**1.70**	**332**	Lg	Lg	09 42 06.4	
	11nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.89**	**219**	Pn	**Pg**	**09 41 49.0**	**+1.1**
	3.1nm,0.3s,SNR=7.9						
EMIJ				Sn	**Sb**	**09 42 11.1**	**+1.3**
	5.6nm,0.2s,SNR=7.9						
EMIJ				Lg	Lg	09 42 15.4	
	16nm,0.3s,SNR=5.1						
UCM	**Universidad Co**	**2.26**	**1**	eS	**Sb**	**09 42 21.1**	**+0.7**
ECHE	**Chera**	**2.39**	**49**	Lg	Lg	09 42 28.4	
	2.4nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**2.67**	**346**	Pn	**Pn**	**09 41 55.3**	**+0.5**
	0.0nm,0.1s,SNR=6.2						
GUD				Lg	Lg	09 42 36.4	
	2.7nm,0.2s,SNR=5.0						
EMIN	**Mina Concepcio**	**2.68**	**265**	Pn	**Pn**	**09 41 54.6**	**-0.2**
	2.6nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	09 42 34.2	
	5.6nm,0.2s,SNR=7.8						
EPLA	**Plasencia**	**2.95**	**314**	Pn	**Pn**	**09 41 59.7**	**+1.1**
	0.2nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	09 42 43.2	
	3.8nm,0.2s,SNR=5.7						
EBAD	**Badajoz**	**3.00**	**285**	Pg	**Pb**	**09 42 07.2**	**+2.1**
	1.6nm,0.1s,SNR=7.6						
EBAD				Sn	**Sn**	**09 42 34.3**	**-0.8**
	3.4nm,1.7s,SNR=7.9						
EBAD				Lg	Lg	09 42 45.9	
	23nm,0.2s,SNR=5.0						
EMOS	**Mosqueruela**	**3.19**	**43**	Sn	**Sn**	**09 42 39.0**	**-1.1**
	1.7nm,0.3s,SNR=7.9						
EMOS				Lg	Lg	09 42 51.4	
	2.2nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**3.35**	**262**	Lg	Lg	09 42 56.8	
	4.5nm,0.3s,SNR=4.6						
PESTR	**Estremoz**	**3.46**	**285**	eSn	**Sn**	**09 42 46.1**	**-0.5**
PESTR				eSg	**Sg**	**09 43 02.1**	**-0.8**
PESTR				A	A	09 43 09.2	
	11nm,0.5s						
PMRV	**Marv??o**	**3.48**	**295**	eSg	**Sg**	**09 43 00.5**	**-3.0**
PMRV				A	A	09 43 04.0	
	14nm,0.4s						
PMRV	**Marv??o**	**3.48**	**295**	Lg	Lg	09 43 00.5	
	14nm,0.4s						
PVAQ	**Vaqueiros**	**3.56**	**261**	eSg	**Sg**	**09 43 02.9**	**-3.1**
PVAQ				A	A	10 15 51.0	
	5.2nm,0.7s						
PVAQ	**Vaqueiros**	**3.56**	**261**	Lg	Lg	09 43 02.9	

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*NNC **05** 09:44:25.5±2.6, 53°.50N×87°.81E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=22.6km s-min=11.1km az=61.0, Suspected Mining explosion.*
ASRS 05 09:44:21.8, 53°.63N×87°.92E, M3.0, 6C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.86**	**281**	⇑Pn	Pg	09 44 57.2	-0.3
	31nm,0.6s						
ZAA0				⇑Sn	Sg	09 45 23.6	+2.0
	83nm,0.5s						
KURBB	**Kurchatov Arra**	**6.52**	**246**	⇑Pn	Pn	09 46 01.7	+2.8
	12nm,0.6s						
KURBB				⇑Sn	Sn	09 47 13.7	-0.2
	26nm,0.7s						
KURBB				⇓Lg	Lg	09 47 48.8	
	43nm,0.8s						
MK31	**Makanchi Array**	**7.74**	**210**	⇓Pn	Pn	09 46 19.2	+3.5
	2.8nm,0.7s,baz=28,slow=12,SNR=17						
MK31				⇓Sn	Sn	09 47 44.1	+0.2
	0.4nm,0.4s,baz=36,slow=20,SNR=4.7						
MK31				⇓Lg	Lg	09 48 26.1	
	8.3nm,0.7s,baz=34,slow=31,SNR=5.8						
MAKZ	**Makanchi**	**7.82**	**211**	⇓Pn	Pn	09 46 20.1	+3.3
	2.7nm,0.7s						
MAKZ				⇑Sn	Sn	09 47 47.3	+1.3
	3.5nm,0.7s						
MAKZ				⇑Lg	Lg	09 48 27.4	
	14nm,0.9s						

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*KRAR **05** 10:00:26.6±0.3, 53°.57N×87°.72E, M2.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **05** 10:00:27.6±2.3, 53°.48N×87°.74E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=19.6km s-min=9.3km az=64.0, Suspected Mining explosion.*
IDC 05 10:00:28.5±3.3, 53°.56N×87°.67E, h0^{km}, mb1 3.5/2, mb1mx3.1/45, mbtmp3.5/2, ML3.2/2, 8C-3D, Error ellipse: s-maj=32.3km s-min=15.7km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.74**	**284**	⇑Pn	Pn	10 00 58.9	-1.0
	6.7nm,0.3s						
ZAA0				⇑Sn	Sg	10 01 24.9	+0.6
	56nm,0.8s						
ZALV	**Zalesovo Beam**	**1.74**	**284**	Pg	Pn	10 00 59.0	-0.9
	10nm,0.3s,baz=101,slow=14,SNR=111						
ZALV				Lg	Lg	10 01 23.4	
	6.0nm,0.3s,baz=103,slow=25,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.35**	**246**	⇑Pn	Pn	10 02 03.9	+0.7
	2.6nm,0.3s						
KURBB				⇑Sn	Sn	10 03 15.3	-1.1
	4.0nm,0.7s						
KURBB				⇑Lg	Lg	10 03 48.5	
	9.3nm,0.7s						
KURBB	**Kurchatov Arra**	**6.35**	**246**	Pn	Pn	10 02 04.0	+0.8
	0.4nm,0.3s,baz=62,slow=14,SNR=19						
KURBB				Lg	Lg	10 03 50.4	
	0.1nm,0.3s,baz=65,slow=31,SNR=9.5						
MK31	**Makanchi Array**	**7.60**	**209**	⇑Pn	Pn	10 02 20.6	+0.2
	0.7nm,0.5s,baz=30,slow=14,SNR=23						
MK31				⇑Sn	Sn	10 03 45.6	-1.5
	2.1nm,0.9s,baz=28,slow=23,SNR=5.5						
MK31				⇓Lg	Lg	10 04 26.6	
	3.8nm,0.8s,baz=31,slow=28,SNR=5.6						
MKAR	**Makanchi Array**	**7.60**	**209**	Pn	Pn	10 02 21.6	+1.2
	0.6nm,0.3s,baz=32,slow=14,SNR=22						
MKAR				Lg	Lg	10 04 29.0	
	0.1nm,0.3s,baz=29,slow=30,SNR=6.4						
MAKZ	**Makanchi**	**7.68**	**211**	⇓Pn	Pn	10 02 21.5	0.0
	1.6nm,0.8s						
MAKZ				⇑Sn	Sn	10 03 48.8	-0.3
	3.8nm,0.9s						
MAKZ				⇓Lg	Lg	10 04 29.5	
	4.7nm,1.1s						
BVAR	**Borovoye Array**	**10.36**	**274**	Pn	Pn	10 02 59.7	+1.5
	0.2nm,0.3s,baz=76,slow=15,SNR=4.6						
I34MN	**SONGINO INFRAS**	**13.19**	**108**	i		11 19 40.0	
	baz=303,slow=320,SNR=1.3						

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*KRNET **05** 10:04:15.9±0.1, 43°.59N×76°.57E, h21^{km}, mb2.4*
*NNC **05** 10:04:15.8±0.3, 43°.58N×76°.56E, h2^{km}±3^{km}, mb2.7, mpv2.7, Error ellipse: s-maj=2.7km s-min=1.4km az=144.0*
*SOME **05** 10:04:16.4, 43°.60N×76°.57E, h10^{km}*
ISC 05 10:04:16.1±0.8, 43°.59N±0°.02×76°.57E±0°.02, h12^{km}±7^{km}, n27, σ0^{s}35/53, 11C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTBS	**Karatobe**	**0.15**	**33**	P	**Pg**	**10 04 19.7**	**0.0**
	40nm,0.1s						
KTBS				S	**Sg**	**10 04 22.0**	**-0.2**
	60nm,0.2s						
KTBS	**Karatobe**	**0.15**	**33**	eP	**Pg**	**10 04 19.7**	**0.0**
	baz=37						
KTBS				eS	**Sg**	**10 04 22.0**	**-0.2**
	baz=37						
KTBS	**Karatobe**	**0.15**	**33**	eP	**Pg**	**10 04 19.7**	**0.0**
	40nm,0.1s						
KTBS				eS	**Sg**	**10 04 22.0**	**-0.2**
	60nm,0.2s						
KUU	**Kurty**	**0.35**	**331**	P	**Pg**	**10 04 23.1**	**0.0**
	3.3nm,0.1s						
KUU				S	**Sg**	**10 04 28.0**	**+0.3**
	20nm,0.2s						
KUU	**Kurty**	**0.35**	**331**	⇓iP	**Pg**	**10 04 23.1**	**0.0**
	baz=31						
KUU				⇓iS	**Sg**	**10 04 28.1**	**+0.3**
	baz=31						
KUU	**Kurty**	**0.35**	**331**	⇓iP	**Pg**	**10 04 23.1**	**0.0**
	3.3nm,0.1s						
KUU				⇓iS	**Sg**	**10 04 28.0**	**+0.3**
	20nm,0.2s						
CHKK	**Chushkaly**	**0.40**	**49**	P	**Pg**	**10 04 24.1**	**0.0**
	5.4nm,0.2s						
CHKK				S	**Sg**	**10 04 29.6**	**+0.1**
	20nm,0.3s						
CHKK	**Chushkaly**	**0.40**	**49**	⇓iP	**Pg**	**10 04 24.1**	**0.0**
	baz=49						
CHKK				⇑iS	**Sg**	**10 04 29.6**	**+0.1**
	baz=49						
CHKK	**Chushkaly**	**0.40**	**49**	⇓iP	**Pg**	**10 04 24.1**	**0.0**
	5.4nm,0.2s						
CHKK				⇑iS	**Sg**	**10 04 29.6**	**+0.1**
	20nm,0.3s						
IZV	**Izvestkoviy**	**0.55**	**177**	P	**Pg**	**10 04 27.1**	**+0.2**
	1.8nm,0.1s						
IZV				S	**Sg**	**10 04 34.8**	**+0.4**

	16nm,0.2s						
IZV	Izvestkoviy	0.55	177	*e*P	Pg	10 04 27.1	+0.2
	baz=77						
IZV				*e*S	Sg	10 04 34.7	+0.4
	baz=77						
IZV	Izvestkoviy	0.55	177	*e*P	Pg	10 04 27.1	+0.2
	1.8nm,0.1s						
IZV				*e*S	Sg	10 04 34.8	+0.4
	16nm,0.2s						
TNSS	Tian-Shan	0.62	153	*e*P	Pg	10 04 28.2	0.0
	baz=54						
TNSS				*e*S	Sg	10 04 36.6	+0.2
	baz=54						
TNSS	Tian-Shan	0.62	153	*e*P	Pg	10 04 28.2	0.0
	0.8nm,0.1s						
TNSS				*e*S	Sg	10 04 36.6	+0.2
	3.2nm,0.2s						
KST	Kastek	0.70	219	*e*P	Pg	10 04 29.8	0.0
	baz=19						
KST				*e*S	Sg	10 04 39.3	+0.2
	baz=19						
KST	Kastek	0.70	219	*e*P	Pg	10 04 29.8	0.0
	2.6nm,0.2s						
KST				*e*S	Sg	10 04 39.2	+0.2
	3.5nm,0.2s						
TKM2	Tokmak 2	0.98	227	⇓P	Pg	10 04 34.5	-0.4
	0.8nm,0.5s						
TKM2				⇑S	Sb	10 04 47.8	-0.2
	0.4nm,0.1s						
TKM2	Tokmak 2	0.98	227	⇑*i*P	Pg	10 04 34.8	-0.1
	baz=27						
TKM2				⇑*i*S	Sb	10 04 47.7	-0.2
	baz=27						
ARXS	Arharly	1.10	55	P	Pg	10 04 36.7	-0.6
	1.6nm,0.1s						
ARXS				S	Sg	10 04 51.3	-0.3
	3.5nm,0.1s						
ARXS	Arharly	1.10	55	*e*P	Pg	10 04 36.7	-0.6
	1.6nm,0.1s						
ARXS				*e*S	Sg	10 04 51.3	-0.3
	3.5nm,0.1s						
BOOM	Boomskoye usch	1.19	203	⇑*i*P	Pb	10 04 37.9	-0.8
	baz=3.0						
BOOM				⇑*i*S	Sb	10 04 53.6	-0.5
	baz=3.0						
ULHL	Ulahol	1.36	190	⇑*i*P	Pn	10 04 40.8	-0.3
	baz=90						
ULHL				⇑*i*S	Sb	10 04 58.1	-1.0
	baz=90						
SATY	Saty	1.44	111	P	Pb	10 04 42.9	0.0
	2.4nm,0.1s						
SATY				S	Sb	10 05 01.7	+0.5
	11nm,0.2s						
SATY	Saty	1.44	111	*e*P	Pb	10 04 42.9	0.0
	2.4nm,0.1s						
SATY				*e*S	Sb	10 05 01.7	+0.5
	11nm,0.2s						
KBK	Karagaybulak	1.51	232	⇓*i*P	Pn	10 04 43.6	+0.5
	baz=32						
KBK				⇓*i*S	Sb	10 05 03.4	+0.1
	baz=32						
USP	Ospenovka	1.54	259	⇑*i*P	Pb	10 04 44.4	-0.2
	baz=59						
USP				⇑*i*S	Sb	10 05 04.6	+0.5
	baz=59						
KAPS	Kapalarasan	2.62	49	Pg	Pb	10 05 03.6	+0.7
	0.7nm,0.4s						
KAPS				Lg	Lg	10 05 37.3	
	1.4nm,0.1s						

*IDC **05** 10:08:03.3±1.2, 8°.89S×110°.64E, h0^{km}, mb4.1/8, mb1 4.2/9, mb1mx3.9/34, mbtmp4.1/9, ML3.7/1, MS3.2/3, Ms1 3.3/3, ms1mx3.1/26, Error ellipse: s-maj=53.1km s-min=16.8km az=53.0*

*ISCJB **05** 10:08:09.3±0.6, 9°.10S±0°.06×110°.59E±0°.03, h69^{km}±6^{km}, mb4.1/15, Error ellipse: s-maj=9.5km s-min=4.1km az=14.2*

*NEIC **05** 10:08:09.2±0.9, 9°.26S×110°.53E, h52^{km}±9^{km}, mb4.3/8, Error ellipse: s-maj=13.1km s-min=7.9km az=224.0*

*DJA **05** 10:08:10.8±0.7, 9°S±3°×11°1E±°, h30^{km}±8^{km}, M4.6/22, mb4.8/6, mB4.8/3, MLv4.5/22, Mw(mB)4.1/3*

ISC 05 10:08:08.8±0.6, **9°.30S**±0°.05×**110°.53E**±0°.03, **h48**^{km}±6^{km}, **n58**, σ**1^{s}.91**/72, **mb4.3**/15, **MS3.2**/3, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	Pacitan	1.27	30	P	Pn	10 08 27.9	-2.3
PCJI				S	Sn	10 08 41.5	-4.6
UGM	Wanagama	1.38	360	*e*Pn	Pn	10 08 31.0	-0.8
UGM				*e*Sn	Sn	10 08 49.0	+0.2
UGM	Wanagama	1.38	360	P	Pn	10 08 30.9	-0.8
UGM				S	Sn	10 08 46.2	-2.6
WOJI	Wonogiri, Jawa	1.50	15	P	Pn	10 08 32.7	-0.7
WOJI				S	Sn	10 08 49.2	-2.6
PWJI	Pagerwojo	1.79	45	P	Pn	10 08 36.4	-0.8
PWJI				S	Sn	10 08 55.7	-3.1
NGJI	Ngawi	2.13	26	P	Pn	10 08 44.9	+3.0
NGJI				S	Sn	10 09 11.9	+4.7
SMRI	Semarang	2.24	358	*e*Pn	Pn	10 08 45.4	+1.9
SMRI				*e*Sn	Sn	10 09 11.5	+1.6
SMRI	Semarang	2.24	358	P	Pn	10 08 45.3	+1.9
KPJI	Karang Pucung	2.52	321	P	Pn	10 08 49.3	+2.0
CMJI	Cimerak	2.55	306	P	Pn	10 08 48.4	+0.6
CMJI				S	Sn	10 09 17.7	+0.1
GMJI	Gumukmas	3.05	71	P	Pn	10 08 54.8	+0.2
GMJI				S	Sn	10 09 29.8	-0.1
GRJI	Gresik	3.06	39	P	Pn	10 08 55.6	+1.0
CISI	Cisompet, Garu	3.20	303	*e*Pn	Pn	10 08 58.0	+1.3
CISI				*e*Sn	Sn	10 09 33.2	-0.4
CISI	Cisompet, Garu	3.20	303	P	Pn	10 08 58.0	+1.3
CISI				S	Sn	10 09 33.8	+0.2
JCJI	Jatiwangi	3.58	321	P	Pn	10 08 57.7	-4.2
JCJI				S	Sn	10 09 40.0	-2.9
JAGI	Jajag, Banyuwa	3.67	77	*e*Pn	Pn	10 09 03.6	+0.5
JAGI				*e*Sn	Sn	10 09 44.3	-0.8
JAGI	Jajag, Banyuwa	3.67	77	P	Pn	10 09 04.2	+1.1
ABJI	Asem Bagus	3.95	68	P	Pn	10 09 08.6	+1.6
ABJI				S	Sn	10 09 51.3	-0.8
KMMI	Kalianget	4.07	57	P	Pn	10 09 09.3	+0.7
SKJI	Sukabumi	4.55	300	P	Pn	10 09 16.7	+1.5
DBJI	Dramaga	4.64	306	P	Pn	10 09 17.7	+1.3
SRBI	Singaraja	4.78	76	P	Pn	10 09 19.6	+1.3
XMIS	Christmas Isla	4.95	256	*e*Pn	Pn	10 09 20.9	+0.2
XMIS				*e*Sn	Sn	10 10 11.5	-5.2
PLAI	Plampang	7.17	87	P	Pn	10 09 52.4	+1.3
EDFI	Ende, Flores	11.03	88	P	Pn	10 10 43.5	-0.7
SOEI	Soe	13.55	93	*e*Pn	Pn	10 11 19.4	+0.7
GIRL	Giralia	13.73	165	*e*Pn	Pn	10 11 18.8	-2.1
SANI	Sanana	16.97	66	P	P	10 12 07.9	+3.5
FITZ	Fitzroy Crossi	17.07	122	*e*Pn	Pn	10 12 02.6	-1.6
	1.0nm,0.6s						
FITZ	Fitzroy Crossi	17.07	122	P	P	10 12 05.8	+0.4
	0.2nm,0.3s,baz=297,slow=11,SNR=5.4						
FAKI	Fak Fak	22.49	75	*e*P	P	10 13 01.6	-2.9
	9.9nm,1.0s						
WRA	Warramunga Arr	25.31	117	P	P	10 13 32.5	+1.2
	6.2nm,0.8s,baz=290,slow=11,SNR=42						
WRA				pPcP		10 17 21.7	
	0.2nm,0.6s,baz=300,slow=1.4,SNR=4.6						
WRA				LR	LR	10 23 59.4	
	comp=Z,32nm,19.4s,baz=315,slow=38						
WR1	Warramunga Arr	25.31	117	*e*P	P	10 13 32.5	+1.2
	5.2nm,0.8s						
WRAB	Tennant Creek	25.32	117	*e*P	P	10 13 32.2	+0.9
	8.1nm,0.9s						
WB2	Warramunga Arr	25.32	117	*e*P	P	10 13 32.6	+1.2
ASAR	Alice Springs	26.51	125	P	P	10 13 43.8	+1.7
	2.7nm,0.8s,baz=302,slow=9.2,SNR=22						
ASAR				pP	sP	10 13 60.0	+0.8
	3.8nm,0.8s,baz=301,slow=8.9,SNR=11						
ASAR				PcP	PcP	10 17 08.5	+2.3
	0.7nm,0.8s,baz=303,slow=1.9,SNR=6.0						
ASAR				pPcP		10 17 24.8	
	0.6nm,0.5s,baz=308,slow=1.8,SNR=7.4						
AS31	Alice Springs	26.51	125	*e*P	P	10 13 45.4	+3.2
	0.9nm,0.7s						
AS01	Alice Springs	26.55	125	*e*P	P	10 13 42.4	-0.1
FORT	Forrest	26.90	145	*e*P	P	10 13 44.8	-0.7
	18nm,1.1s						
CMAR	Chiang Mai Arr	29.86	337	LR	LR	10 25 56.9	
	comp=Z,54nm,18.6s,baz=355,slow=36						
STKA	Stephens Creek	36.52	132	P	P	10 15 12.5	+2.7
	2.3nm,0.8s,baz=316,slow=5.6,SNR=6.9						
STKA				pP	sP	10 15 28.6	+1.2
	4.4nm,0.7s,baz=325,slow=7.8,SNR=7.7						
STKA				LR	LR	10 32 22.5	
	comp=Z,60nm,18.9s,baz=213,slow=40						
H08S2	Diego Garcia H	37.65	270	T	T	10 55 27.1	
	baz=95,slow=76,SNR=3.7						
H08S3	Diego Garcia H	37.66	270	T	T	10 55 24.7	
	baz=95,slow=76,SNR=4.1						
H08S1	Diego Carcia H	37.67	270	T	T	10 55 23.2	
	baz=95,slow=76,SNR=4.6						
USRK	Ussuriysk Ar.	56.69	18	P	P	10 17 46.0	-1.4
	2.7nm,0.8s,baz=171,slow=2.1,SNR=5.4						
KLR	Kul'dur	61.19	16	P	P	10 18 16.7	-1.9
	1.4nm,0.5s,baz=186,slow=6.0,SNR=9.3						
MK01	Makanchi Array	61.24	338	*e*P	P	10 18 18.0	-1.0
MK31	Makanchi Array	61.27	338	*e*P	P	10 18 18.4	-0.8
MK32	Makanchi Array	61.27	338	*e*P	P	10 18 17.9	-1.3
MKAR	Makanchi Array	61.27	338	*e*P	P	10 18 18.3	-0.9
	4.9nm,0.5s						
MKAR	Makanchi Array	61.27	338	P	P	10 18 17.9	-1.3
	0.5nm,0.3s,baz=155,slow=7.5,SNR=8.4						
ZALV	Zalesovo Beam	66.66	344	*e*P	P	10 18 53.3	-1.1
ZALV	Zalesovo Beam	66.66	344	P	P	10 18 53.2	-1.2
	1.1nm,0.3s,baz=144,slow=6.0,SNR=5.3						
ZAA1	Zalesovo Array	66.67	344	*e*P	P	10 18 53.2	-1.3
ABKAR	Akbulak array	73.19	328	*e*P	P	10 19 34.4	-0.2
	4.7nm,1.0s						
QSPA	South Pole Qui	80.70	180	*e*P	P	10 20 17.1	+0.3
	5.8nm,1.1s						
BR101	Keskin Array S	85.96	311	*e*P	P	10 20 44.8	+0.4
BRTR	Keskin Array B	85.96	311	P	P	10 20 44.8	+0.5
	0.8nm,0.7s,baz=109,slow=6.7,SNR=5.2						

*ISCJB **05** 10:13:52.3±0.4, 38°.12N±0°.03×3°.32W±0°.03, h11^{km}, Error ellipse: s-maj=4.3km s-min=3.6km az=164.5*

*MDD **05** 10:13:54.6±0.1, 38°.05N×3°.28W, h1^{km}±2^{km}, mbLg2.2/20, Error ellipse: s-maj=1.5km s-min=1.1km az=50.0, PRXIMO MDD EMS: II INTENSIDAD MAXIMA.*

*SFS **05** 10:13:54.0, 38°.05N×3°.28W, h1^{km}, ML2.3, TORREPEROGIL (JAEN)*

ISC 05 10:13:54.8±0.8, **38°.06N**±0°.03×**3°.28W**±0°.03, **h11**^{km}, **n30**, σ**1^{s}.76**/34, **1C-1D**, **Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQES	Quesada	0.30	146	⇓Pg	Pg	10 13 59.9	-1.1
	14nm,0.2s,SNR=18						
EQES				Lg	Lg	10 14 04.3	
	20nm,0.1s,SNR=5.0						
SESP	Santiago Espad	0.59	83	⇑Pg	Pg	10 14 05.5	-0.7
	14nm,0.2s,SNR=18						
SESP				Lg	Lg	10 14 13.6	
	197nm,0.4s,SNR=7.9						
GORA	Gorafe	0.60	162	Pg	Pg	10 14 05.4	-1.1
	6.9nm,0.1s,SNR=4.0						
GORA				Lg	Lg	10 14 14.7	
	43nm,0.2s,SNR=7.9						
EQUE	Quentar	0.86	188	Pg	Pg	10 14 11.5	+0.1
	5.6nm,0.4s,SNR=14						
EQUE				Lg	Lg	10 14 21.3	
	25nm,0.2s,SNR=15						
EADA	Adamuz	1.03	277	Pg	Pg	10 14 13.0	-1.5
	5.4nm,0.2s,SNR=36						
EADA				Lg	Lg	10 14 26.6	
	32nm,0.2s,SNR=17						
EGOR	Sierra Gorda,	1.15	215	Pg	Pb	10 14 15.8	-0.9
	2.7nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	10 14 32.7	
	42nm,0.3s,SNR=7.9						
EBER	Berja	1.20	165	Pg	Pb	10 14 17.7	+0.2
	13nm,0.3s,SNR=26						
EBER				Lg	Lg	10 14 35.9	
	59nm,0.3s,SNR=18						
ELGU	Los Guajares,	1.22	193	Pg	Pn	10 14 17.0	-0.8
	2.4nm,0.2s,SNR=7.9						
ELGU				Lg	Lg	10 14 34.7	
	22nm,0.4s,SNR=7.9						
ETOB	Tobarra	1.49	66	Pg	Pn	10 14 22.1	+0.6
	12nm,0.2s,SNR=21						
ETOB				Lg	Lg	10 14 41.4	
	44nm,0.4s,SNR=5.0						
EMAL	Malaga-Limoner	1.58	216	*e*P	Pn	10 14 23.6	+1.0
EMAL				*e*S	Sg	10 14 46.1	+0.5
EMUR	La Murta	1.63	97	Pg	Pn	10 14 23.2	-0.2
	38nm,0.9s,SNR=7.1						
EMUR				Lg	Lg	10 14 46.5	
	56nm,0.5s,SNR=5.0						
ECAB	El Cabril	1.69	271	Pn	Pn	10 14 22.6	-1.6
	4.8nm,0.3s,SNR=14						
ECAB				Lg	Lg	10 14 46.5	
	10nm,0.2s,SNR=17						
ESDC	Sonseca Array	1.70	342	Pg	Pb	10 14 26.4	+0.3
	2.1nm,0.3s,baz=163,slow=17,SNR=16						
ESDC				Lg	Lg	10 14 47.8	
	19nm,0.5s,baz=160,slow=29,SNR=18						
PAB	San Pablo	1.71	331	Pg	Pb	10 14 26.3	+0.1
	3.4nm,0.2s,SNR=7.9						
PAB				Lg	Lg	10 14 48.0	
	13nm,0.4s,SNR=7.9						
EMIJ	Mijas	1.90	219	Pg	Pb	10 14 30.1	+0.6
	2.1nm,0.3s,SNR=4.0						
EMIJ				Sn	Sn	10 14 52.0	+0.8
	7.8nm,0.3s,SNR=7.9						
EMIJ				Lg	Lg	10 14 56.7	
	18nm,0.4s,SNR=5.9						
ECHE	Chera	2.37	49	Pg	Pg	10 14 39.7	-0.5
	0.1nm,0.3s,SNR=7.9						
ECHE				Lg	Lg	10 15 10.5	
	9.3nm,0.4s,SNR=7.9						
EBEN2	Beniarda presa	2.51	75	Lg	Lg	10 15 15.0	
	3.6nm,0.4s,SNR=7.9						
GUD	Guadarrama	2.67	346	Pg	Pb	10 14 44.9	+2.2
	1.3nm,0.2s,SNR=7.9						
GUD				Lg	Lg	10 15 18.0	
	4.5nm,0.3s,SNR=12						
EMIN	Mina Concepcio	2.70	265	Pn	Pn	10 14 37.3	-0.7
	0.3nm,0.1s,SNR=7.9						
EMIN				Pg	Pb	10 14 43.4	+0.4
	3.6nm,0.3s,SNR=7.9						
EMIN				Sn	Sn	10 15 10.3	-0.4
	1.1nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	10 15 18.0	
	2.0nm,0.2s,SNR=8.4						
EPLA	Plasencia	2.96	314	Pg	Pb	10 14 49.6	+2.0
	1.4nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	10 15 26.0	
	0.7nm,0.4s,SNR=7.9						
EBAD	Badajoz	3.01	285	Pg	Pb	10 14 49.5	+1.1
	0.2nm,0.2s,SNR=4.7						
EBAD				Sn	Sn	10 15 16.5	-2.0
	3.0nm,0.4s,SNR=4.7						
EBAD				Lg	Lg	10 15 29.3	
	9.0nm,0.2s,SNR=9.3						
EMOS	Mosqueruela	3.18	43	Pg	Pg	10 14 54.7	-0.9
	0.1nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	10 15 20.3	-2.5
	0.1nm,0.1s,SNR=7.9						
EMOS				Lg	Lg	10 15 35.3	
	3.9nm,0.4s,SNR=7.9						
EGRO	El Granado	3.37	262	Sn	Sn	10 15 24.7	-2.5
	1.2nm,0.3s,SNR=7.9						
EGRO				Lg	Lg	10 15 39.5	
	3.1nm,0.5s,SNR=5.3						
PESTR	Estremoz	3.48	285	*e*Sg	Sg	10 15 43.5	-2.9
PESTR				A	A	10 15 51.0	
	5.1nm,0.5s						
PVAQ	Vaqueiros	3.58	261	Sn	Sn	10 15 30.6	-1.8
PVAQ				Lg	Lg	10 15 44.1	
	5.2nm,0.7s						
PVAQ	Vaqueiros	3.58	261	*e*Sg	Sb	10 15 44.1	+2.7
PVAQ				*e*Sn	Sn	10 15 30.6	-1.8
PBEJ	Beja	3.62	271	*e*Sg	Sb	10 15 46.5	+3.9
PBEJ				A	A	10 15 55.7	
	4.7nm,0.2s						
PBEJ	Beja	3.62	271	Lg	Lg	10 15 46.5	
	2.3nm,0.2s						
MESJ	Messejana	3.91	268	*e*Sg	Sb	10 15 55.3	+4.3
MESJ				A	A	10 16 03.5	
	4.7nm,0.6s						
MESJ	Messejana	3.91	268	Lg	Lg	10 15 55.3	
	4.7nm,0.6s						

*ISCJB **05** 10:22:07.4±0.3, 24°.05N±0°.02×122°.45E±0°.01, h15^{km}±3^{km}, Error ellipse: s-maj=2.8km s-min=1.9km az=158.0*

*TAP **05** 10:22:07.1, 24°.07N×122°.41E, h16^{km}±1^{km}, ML3.0, D*

*JMA **05** 10:22:07.4±0.1, 24°.03N×122°.42E, h22^{km}±3^{km}, M2.4*

ISC 05 10:22:07.1±1.1, **24°.04N**±0°.02×**122°.42E**±0°.02, **h19**^{km}±2^{km}, **n77**, σ**0^{s}.54**/148, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.57	332	*e*P	Pg	10 22 18.8	+0.2
	baz=331						
EOS1				*e*S	Sg	10 22 26.7	+0.4
	baz=331						
JYNG	Yonagunijimaku	0.63	50	P	Pg	10 22 19.7	+0.1
JYNG				*e*S	Sb	10 22 27.9	+0.1
YOJ	Yonaguni jima	0.68	52	*e*P	Pg	10 22 20.7	+0.1
	baz=53						
YOJ				*e*S	Sb	10 22 29.3	-0.1
	baz=53						
YOJ	Yonaguni jima	0.68	52	P	Pb	10 22 20.5	+0.1
YOJ				*e*S	Sb	10 22 29.3	-0.1
NANB	Nanao	0.72	302	*e*P	Pg	10 22 21.4	+0.1
	baz=300						
NANB				*e*S	Sg	10 22 31.2	+0.2
	baz=300						
ENA	Nanau	0.73	302	P	Pg	10 22 21.7	+0.3
	baz=300						
ENA				*e*S	Sg	10 22 31.0	-0.2
	baz=300						
TWD	Chiawan	0.75	273	*e*P	Pb	10 22 21.2	-0.4
	baz=271						
TWD				*e*S	Sg	10 22 32.7	+0.8
	baz=271						
ENLB	Shoufeng	0.76	260	*e*S	Sn	10 22 33.9	+0.1
	baz=257						
NACB	Ninganchiao	0.77	280	*e*P	Pb	10 22 21.9	+0.1
	baz=278						
NACB				*e*S	Sg	10 22 33.0	+0.6
	baz=278						
TWC	Suao	0.77	317	*e*P	Pb	10 22 21.6	-0.3
	baz=316						
TWC				S	Sb	10 22 31.0	-0.9
	baz=316						
ETLH	Xiulin Townshi	0.87	281	*e*P	Pb	10 22 23.8	+0.1
	baz=279						
ETLH				*e*S	Sg	10 22 36.0	+0.2
	baz=279						
EGS		0.92	331	P	Pb	10 22 24.6	+0.2
	baz=331						
EGS				S	Sg	10 22 37.0	-0.1
	baz=331						
ESL	Shilin	0.93	256	P	Pn	10 22 25.2	0.0
	baz=254						
ESL				*e*S	Sg	10 22 37.7	+0.1
	baz=254						
ILA	Ilan	0.95	320	*e*S	Sb	10 22 37.4	+0.4
	baz=319						
TWE	Neicheng	0.96	315	P	Pb	10 22 25.4	+0.2
	baz=314						
TWE				S	Sb	10 22 37.4	-0.2
	baz=314						
NTC	Toucheng	0.97	326	*e*P	Pb	10 22 25.6	+0.2
	baz=325						
NTC				*e*S	Sn	10 22 39.4	+0.4
	baz=325						
ENTT	Nioudou	0.98	308	P	Pb	10 22 25.7	+0.2
	baz=306						
ENTT				*e*S	Sb	10 22 38.4	+0.3
	baz=306						
EGFH	Guangfu	0.98	248	*e*P	Pg	10 22 27.1	+0.9
	baz=246						
EGFH				*e*S	Sn	10 22 39.4	+0.1
	baz=246						
NDT	Datong Townshi	1.00	304	*e*P	Pn	10 22 26.1	0.0
	baz=303						
NDT				*e*S	Sg	10 22 39.7	0.0
	baz=303						
NNSB	Datong	1.02	292	*e*P	Pb	10 22 26.3	0.0
	baz=290						
NNSB				*e*S	Sn	10 22 40.0	-0.4
	baz=290						
NNS	Nan Shan	1.03	293	P	Pb	10 22 26.6	+0.1
	baz=291						
NNS				*i* S	Sg	10 22 41.0	+0.1
	baz=291						
TWB1	Santiao Chiao	1.04	338	P	Pb	10 22 25.9	-0.6
	baz=338						
TWB1				*e*S	Sb	10 22 40.0	+0.2
	baz=338						
WHF	Hehuan Shan	1.06	276	P	Pb	10 22 26.8	-0.3
	baz=274						
WHF				S	Sg	10 22 41.6	-0.2
	baz=274						
HGSD	Ruisui	1.06	239	*e*P	Pn	10 22 27.3	+0.3
	baz=237						
HGSD				*e*S	Sb	10 22 40.6	+0.1
	baz=237						
TIPB	Shuangxi	1.07	330	P	Pb	10 22 26.7	-0.4
	baz=329						
TIPB				S	Sb	10 22 40.3	-0.5
	baz=329						
NWLT	Wulai	1.11	311	*e*P	Pn	10 22 27.6	-0.1
	baz=310						
NWLT				*e*S	Sb	10 22 42.1	+0.2
	baz=310						
CHGB	Renai	1.14	271	*e*P	Pn	10 22 28.1	-0.1
	baz=269						
CHGB				*e*S	Sb	10 22 43.1	+0.2
	baz=269						
EHY	Hungye	1.14	242	*e*P	Pn	10 22 27.5	-0.6
	baz=240						
EHY				S	Sn	10 22 43.5	+0.3
	baz=240						
YHNB	Yeheng	1.14	303	*e*P	Pn	10 22 28.1	0.0
	baz=302						
YHNB				*e*S	Sn	10 22 43.1	-0.2
	baz=302						
OWD	Renai	1.14	266	*e*P	Pn	10 22 28.0	-0.2
	baz=264						
OWD				*e*S	Sg	10 22 44.3	0.0
	baz=264						
NSK	Sanguang	1.16	303	P	Pn	10 22 28.4	0.0
	baz=302						
NSK				S	Sg	10 22 44.2	-0.5
	baz=302						
TWT	Tachien	1.16	281	*e*P	Pg	10 22 29.4	-0.1
	baz=279						
TWT				S	Sn	10 22 44.0	+0.1
	baz=279						
TDCB	Techi	1.17	281	*e*P	Pn	10 22 28.7	+0.1
	baz=279						
TDCB				*e*S	Sb	10 22 43.4	-0.3
	baz=279						
NWF	Wu-fen Shan	1.18	331	*e*P	Pn	10 22 28.5	-0.2
	baz=330						
NWF				*e*S	Sn	10 22 44.1	-0.1
	baz=330						
WFSB	Wu-fen Shan	1.18	331	*e*P	Pn	10 22 28.2	-0.4
	baz=330						
WFSB				*e*S	Sn	10 22 44.5	+0.3
	baz=330						
VWDT	VWDT	1.21	256	*e*P	Pb	10 22 29.4	+0.1
	baz=254						
VWDT				*e*S	Sg	10 22 45.7	-0.6
	baz=254						
TWA	Mucha	1.21	321	*e*P	Pb	10 22 29.2	-0.1
	baz=320						
TWA				S	Sg	10 22 45.9	-0.4
	baz=320						
YULB	Yu-li	1.22	238	*e*P	Pn	10 22 28.9	-0.2
	baz=236						
YULB				*e*S	Sb	10 22 43.7	-1.1
	baz=236						
NHDH	Xindian Distri	1.23	319	*e*P	Pb	10 22 30.0	+0.3
	baz=317						
NHDH				*e*S	Sg	10 22 46.5	-0.5
	baz=317						
IRIF	Iriomote-Funau	1.23	76	P	Pb	10 22 29.9	+0.1
IRIF				S	Sn	10 22 46.0	+0.6
TWF1	Yuli	1.24	237	*e*P	Pn	10 22 29.4	0.0
	baz=234						
TWF1				*e*S	Sb	10 22 45.3	-0.2
	baz=234						
TATO	Taipei	1.26	318	*e*P	Pb	10 22 30.6	+0.4
	baz=317						
TATO				*e*S	Sg	10 22 47.0	-0.9
	baz=317						
HATJ	Hateruma jima	1.27	89	P	Pb	10 22 30.4	0.0
HATJ				*e*S	Sn	10 22 46.5	+0.2
YM01	YM01	1.34	325	*e*P	Pn	10 22 31.1	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=324						
YM01				*e*S	Sn	10 22 47.6	-0.8
	baz=324						
YM11	**YM11**	1.36	326	*e*P	Pb	10 22 31.9	-0.1
	baz=325						
YM11				*e*S	Sb	10 22 50.0	+1.0
	baz=325						
YM05	**YM05**	1.36	325	*e*P	Pn	10 22 31.3	+0.2
	baz=324						
SSLB	**Suanglung**	1.36	260	*e*P	Pn	10 22 31.7	+0.5
	baz=258						
SSLB				*e*S	Sn	10 22 48.2	-0.6
	baz=258						
WHP	**Taichung City**	1.37	280	*e*P	Pb	10 22 32.4	+0.2
	baz=278						
WHP				*e*S	Sb	10 22 49.8	+0.5
	baz=278						
YM04	**YM04**	1.37	324	*e*P	Pn	10 22 31.1	-0.2
	baz=323						
YM04				*e*S	Sb	10 22 50.2	+0.9
	baz=323						
YM08	**YM08**	1.37	327	*e*P	Pn	10 22 31.7	+0.5
	baz=326						
YM08				*e*S	Sg	10 22 50.4	-1.1
	baz=326						
SMLT	**Sun Moon Lake**	1.40	264	*e*P	Pb	10 22 32.7	0.0
	baz=262						
SMLT				*e*S	Sb	10 22 50.2	0.0
	baz=262						
LIOB	**Emei**	1.42	295	P	Pb	10 22 32.7	-0.2
	baz=294						
LIOB				S	Sb	10 22 50.9	+0.3
	baz=294						
NSTT	**Nanjuang**	1.42	295	P	Pb	10 22 32.9	-0.1
	baz=293						
NSTT				*e*S	Sb	10 22 51.0	+0.2
	baz=293						
TYC	**Yuchr**	1.44	265	*e*P	Pb	10 22 33.4	+0.1
	baz=263						
TYC				*e*S	Sb	10 22 51.7	+0.5
	baz=263						
TWY	**Chenhua**	1.44	329	*e*P	Pb	10 22 33.0	-0.3
	baz=328						
TWY				*e*S	Sb	10 22 52.0	+0.8
	baz=328						
JKRS	**Kuro-shima**	1.47	82	P	Pb	10 22 33.5	-0.2
JKRS				*e*S	Sb	10 22 52.1	+0.1
WHYT	**Xinyi Township**	1.48	257	*e*P	Pb	10 22 34.3	+0.3
	baz=255						
TWQ1	**Liyutan**	1.54	282	*e*P	Pn	10 22 34.3	+0.8
	baz=280						
TWQ1				*e*S	Sg	10 22 55.5	-1.3
	baz=280						
ELDTW	**Lidau**	1.54	237	*e*P	Pn	10 22 33.3	-0.4
	baz=235						
ELDTW				*e*S	Sn	10 22 51.4	-1.9
	baz=235						
JIJ	**Ishigaki jima**	1.60	78	P	Pn	10 22 34.3	-0.2
JIJ				S	Sn	10 22 54.2	-0.5
PCYT	**Pengchaiyu**	1.61	349	*e*P	Pn	10 22 34.3	-0.3
	baz=349						
PCYT				*e*S	Sn	10 22 54.6	-0.2
	baz=349						
CHN5	**Tsauling**	1.66	255	*e*P	Pb	10 22 37.4	+0.3
	baz=253						
CHN5				*e*S	Sb	10 22 58.7	+1.1
	baz=253						
TWGBT	**Beinan**	1.73	226	*e*P	Pn	10 22 37.0	+0.7
	baz=224						
TWGBT				*e*S	Sn	10 22 56.0	-1.8
	baz=224						
TWG	**Pinlang**	1.73	226	*e*P	Pn	10 22 37.0	+0.7
	baz=224						
TWG				*e*S	Sn	10 22 58.1	+0.2
	baz=224						
WDLH	**Douliu**	1.76	259	*e*P	Pb	10 22 39.2	+0.4
	baz=257						
WDLH				*e*S	Sg	10 23 02.6	-1.3
	baz=257						
TPUB	**Ta-pu**	1.80	246	*e*P	Pb	10 22 39.0	-0.5
	baz=244						
TPUB				*e*S	Sb	10 23 02.4	+0.7
	baz=244						
JISG	**Ishigakijimahi**	1.81	72	P	Pn	10 22 37.2	0.0
JISG				*e*S	Sn	10 22 58.7	-1.0
CHN4	**Tsaushan**	1.81	248	*e*P	Pb	10 22 40.0	+0.3
	baz=246						
CHN4				*e*S	Sb	10 23 03.6	+1.6
	baz=246						
WTP	**Ta-pu**	1.84	245	*e*P	Pb	10 22 40.2	+0.1
	baz=243						
WTP				*e*S	Sb	10 23 02.4	-0.4
	baz=243						
RLNB	**Erlin**	1.89	266	*e*S	Sb	10 23 04.4	+0.1
	baz=264						
TWK	**Hsinying**	1.93	247	*e*P	Pb	10 22 42.2	+0.5
	baz=245						
TWK				*e*S	Sb	10 23 04.4	-1.1
	baz=245						
CHN1	**Nanshi**	1.93	244	*e*P	Pb	10 22 41.2	-0.6
	baz=243						
CHN1				S	Sb	10 23 05.6	+0.1
	baz=243						
SLGT	**Liugui**	1.93	238	*e*P	Pb	10 22 42.6	+0.9
	baz=236						
SLGT				*e*S	Sn	10 23 04.0	+1.2
	baz=236						
SGST	**Jiashian**	1.94	241	*e*P	Pb	10 22 41.6	-0.2
	baz=239						
SGST				*e*S	Sb	10 23 06.4	+0.8
	baz=239						
SSD	**Sandimen**	2.09	232	*e*P	Pb	10 22 43.2	-1.1
	baz=230						
JTJ	**Tarama**	2.17	74	P	Pn	10 22 43.1	+1.0
JTJ				*e*S	Sn	10 23 08.8	+0.3
MASBT	**Mashibuluo**	2.17	229	*e*P	Pb	10 22 44.9	-1.0
	baz=228						
MASBT				*e*S	Sb	10 23 12.7	+0.3
	baz=228						

IDC 05 11:13:12.1±2.4, **5°.09N×125°.39E, h0^{km}, mb3.4**/3, **mb1 3.5**/3, **mb1mx3.3**/38, **mbtmp3.4**/3, **Error ellipse: s-maj=211.7km s-min=27.6km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	26.39	161	P	P	11 18 50.2	-0.2
	0.5nm,0.8s,baz=340,slow=10.0,SNR=10.0						
ASAR	**Alice Springs**	29.76	164	P	P	11 19 20.8	+0.2
	0.2nm,0.6s,baz=348,slow=8.3,SNR=7.6						
MKAR	**Makanchi Array**	55.68	325	P	P	11 22 50.2	-0.1
	0.2nm,0.5s,baz=139,slow=9.0,SNR=4.1						

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*ISK **05** 11:24:26.8, 37°.12N×40°.21E, h5^{km}±1^{km}, ML2.2/3*
*DDA **05** 11:24:27.6, 37°.16N×40°.22E, h7^{km}±1^{km}, ML2.5*
ISC 05 11:24:28.9±1.5, **37°.20N**±0°.06×**40°.18E**±0°.03, **h7^{km}**±12^{km}, **n9, σ0^s.81**/17, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAZI	**Mazidag**	0.34	40	PG	Pg	11 24 35.7	+0.2
MAZI				SG	Sb	11 24 42.1	-0.8
MARD	**Mardin**	0.49	77	*i* P	Pg	11 24 37.3	-1.2
MARD				*i* S	Sb	11 24 48.5	+1.0
DIYA	**Diyarbakir**	0.72	356	*i* P	Pb	11 24 43.4	-0.5
DIYA				*i* S	Sb	11 24 54.6	+0.5
DIYA				IAML_P			
	comp=Z,919nm,0.1s						
URFA	**Urfa**	1.11	283	PN	Pg	11 24 49.9	-0.3
URFA				SN	Sn	11 25 06.9	+0.4
HANI	**Diyarbakir_Han**	1.23	8	*i* P	Pg	11 24 51.8	-0.6
HANI				*i* S	Sn	11 25 09.2	-0.2
HANI				IAML_P			
	comp=Z,487nm,0.2s						
SURC	**SANLIURFA_SURC**	1.29	256	*i* P	Pn	11 24 53.2	-0.2
SURC				*i* S	Sn	11 25 11.5	+0.6
SRTM	**Siirt_Merkez**	1.59	60	*i* P	Pb	11 24 58.6	-0.2
SRTM				*i* S	Sg	11 25 22.0	+1.8
SRTM				IAML_P			
	comp=Z,138nm,0.1s						
ELZG	**Elazig**	1.60	324	*i* P	Pb	11 24 58.7	-0.2
ELZG				*i* S	Sg	11 25 20.9	+0.5
ELZG				IAML_P			
	comp=Z,207nm,0.2s						
PTK	**Pertek**	1.80	340	PN	Pb	11 25 01.8	-0.5

IDC 05 11:26:26.3±1.4, **3°.40N×123°.70E, h0^{km}, mb3.6**/5, **mb1 3.7**/5, **mb1mx3.5**/38, **mbtmp3.6**/5, **Error ellipse: s-maj=245.6km s-min=20.5km az=64.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	25.45	156	P	P	11 31 56.6	+0.6
	0.6nm,0.3s,baz=336,slow=9.6,SNR=7.8						
ASAR	**Alice Springs**	28.68	160	P	P	11 32 25.4	+0.1
	0.1nm,0.4s,baz=338,slow=7.0,SNR=3.5						
STKA	**Stephens Creek**	38.99	155	P	P	11 33 53.5	-1.0
	0.4nm,0.3s,baz=0.0,slow=13,SNR=1.7						
MKAR	**Makanchi Array**	56.13	327	P	P	11 36 06.7	-1.0
	0.4nm,0.4s,baz=120,slow=7.9,SNR=8.1						
ZALV	**Zalesovo Beam**	59.54	335	P	P	11 36 32.8	+1.3
	0.4nm,0.4s,baz=122,slow=6.7,SNR=2.3						

IDC 05 11:27:48.7±2.5, **6°.06S×129°.14E, h269^{km}**±26^{km}, **mb3.2**/1, **mb1 3.1**/5, **mb1mx2.8**/35, **mbtmp3.6**/5, **Error ellipse: s-maj=73.9km s-min=17.7km az=99.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	5.58	22	P	Pn	11 29 13.2	+1.1
	3.2nm,0.3s,baz=202,slow=19,SNR=25						
SIJI				S	S	11 30 18.7	-0.4
	1.8nm,0.3s,baz=274,slow=23,SNR=6.4						
FITZ	**Fitzroy Crossi**	12.44	196	P	Pn	11 30 36.7	-0.6
	0.2nm,0.3s,baz=8.3,slow=8.1,SNR=11						
FITZ				S	S	11 32 58.9	+3.1
	0.1nm,0.3s,baz=147,slow=22,SNR=1.2						
WRA	**Warramunga Arr**	14.69	160	P	Pn	11 31 04.4	-0.2
	0.1nm,0.3s,baz=340,slow=12,SNR=10						
WRA				S	S	11 33 40.8	-5.5
	0.1nm,0.3s,baz=345,slow=22,SNR=2.9						
ASAR	**Alice Springs**	18.09	166	P	P	11 31 41.1	-0.1
	0.2nm,0.3s,baz=345,slow=11,SNR=11						
ASAR				S	S	11 34 50.0	-4.4
	0.1nm,0.3s,baz=344,slow=17,SNR=8.3						
ILAR	**Eielson Array**	92.87	25	P	P	11 40 30.6	-0.1
	0.4nm,0.9s,baz=243,slow=5.8,SNR=4.2						

DJA 05 11:32:09.6±0.4, **1°S**±2°×**12°0E**±°, **h11^{km}**±3^{km}, **M3.4**/10, **MLv3.4**/10, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCI	**Palu**	0.37	263	P	Pb	11 32 17.8	-0.3
PCI				S	Sb	11 32 24.3	+0.4
MPSI	**Mapaga**	1.23	346	P	Pn	11 32 31.5	-1.2
MPSI				S	Sg	11 32 49.0	-0.2
APSI	**Ampana**	1.45	92	P	Pn	11 32 34.9	-0.9
APSI				S	Sb	11 32 55.3	+0.2
MRSI	**Marisa**	2.19	53	P	Pn	11 32 46.4	+0.4
TTSI	**Tana Toraja**	2.20	190	P	Pn	11 32 46.4	+0.2
TTSI				S	Sn	11 33 13.9	+0.5
SPSI	**Sidrap Palu**	3.11	188	P	Pn	11 32 59.0	+0.3
SPSI				S	Sn	11 33 35.7	-0.2
BNSI	**Bone**	3.52	182	P	Pn	11 33 04.5	+0.2
BNSI				S	Sn	11 33 47.7	+1.8
KDI	**Kendari**	3.91	142	P	Pn	11 33 07.2	-2.5
BKSI	**Bulukumba**	4.43	181	P	Pn	11 33 16.7	-0.1

IDC 05 11:32:55.2±8.7, **2°.01N×126°.25E, h0^{km}, mb3.6**/3, **mb1 3.8**/3, **mb1mx3.4**/30, **mbtmp3.6**/3, **Error ellipse: s-maj=170.3km s-min=134.8km az=74.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.21	160	P	P	11 38 03.4	-0.7
	0.7nm,0.4s,baz=339,slow=11,SNR=23						
ASAR	**Alice Springs**	26.59	164	P	P	11 38 35.6	+0.3
	0.2nm,0.3s,baz=330,slow=9.1,SNR=9.3						
STKA	**Stephens Creek**	36.71	158	P	P	11 40 04.3	+0.2
	1.1nm,0.9s,baz=339,slow=8.6,SNR=2.4						

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*MOS **05** 11:46:55.7±0.0, 42°.51N×41°.07E, h10^{km}, MPVA3.4*
*DDA **05** 11:46:56.1, 42°.19N×40°.93E, h7^{km}±2^{km}, ML2.8*
ISC 05 11:46:53.3±1.3, **42°.39N**±0°.03×**41°.00E**±0°.06, **h1^{km}**±12^{km}, **n11, σ0^s.20**/22, **Black Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DOMR	**Dombai**	1.01	27	*i* Pg	Pb	11 47 13.6	-0.2
DOMR				*i* Sg	Sg	11 47 26.1	+0.2
DBOC	**Borcka**	1.16	154	*i* P	Pn	11 47 16.6	-0.1
DBOC				*i* S	Sn	11 47 33.0	-0.2
ARXR	**Arkhyz**	1.19	10	*e*Pg	Pg	11 47 16.3	+0.2
ARXR				*e*Sg	Sg	11 47 31.1	-0.4
ARTV	**Artvin**	1.39	150	*i* P	Pb	11 47 20.4	+0.2
ARTV				*i* S	Sb	11 47 38.5	-0.1
ARTV				IAML_P			
	comp=Z,1µm,0.1s						
RPOR	**Krasnaya Polya**	1.41	338	*e*Pg	Pg	11 47 20.4	0.0
RPOR				*i* Sg	Sn	11 47 39.9	+0.4
DBAD	**Bademkaya**	1.47	159	*i* P	Pn	11 47 21.1	+0.1
DBAD				*i* S	Sg	11 47 40.2	-0.2
DBAD				IAML_P			
	comp=Z,523nm,0.1s						
DAGI	**Agillar**	1.48	152	*i* P	Pn	11 47 21.4	+0.2
DAGI				*i* S	Sg	11 47 41.0	+0.1
DAGI				IAML_P			
	comp=Z,221nm,0.1s						
NEY	**Neytrino**	1.53	55	*i* Pg	Pb	11 47 22.5	-0.1
NEY				*e*Sg	Sn	11 47 42.7	+0.1
DDEM	**Demirkent**	1.60	159	*i* P	Pb	11 47 23.6	-0.1
DDEM				*i* S	Sn	11 47 44.1	-0.1
DDEM				IAML_P			
	comp=Z,583nm,0.1s						
SHA1	**Shidzhatmaz**	1.81	42	*e*Pg	Pb	11 47 27.3	-0.1
SHA1				*i* Sg	Sn	11 47 49.6	0.0
LZRR	**Lazarevskoye**	1.94	323	*i* Pg	Pb	11 47 29.4	-0.2
LZRR				*e*Sg	Sb	11 47 54.3	0.0

DJA 05 12:01:50.7±0.6, **9°S**±6°×**11°1E**±°, **h10^{km}, M3.7**/5, **MLv3.7**/5, **South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	1.12	33	P	Pb	12 02 10.4	-1.8
PCJI				S	Sb	12 02 25.3	-1.5
UGM	**Wanagama**	1.22	358	P	Pn	12 02 12.9	-1.0
WOJI	**Wonogiri, Jawa**	1.34	16	P	Pn	12 02 14.8	-0.7
WOJI				S	Sb	12 02 31.2	-2.1
PWJI	**Pagerwojo**	1.66	48	P	Pn	12 02 18.8	-1.1
PWJI				S	Sn	12 02 38.3	-2.9
NGJI	**Ngawi**	1.97	27	P	Pb	12 02 27.1	+0.3
SMRI	**Semarang**	2.08	357	P	Pb	12 02 27.4	-1.2
KPJI	**Karang Pucung**	2.41	318	P	Pn	12 02 30.9	+0.6
CMJI	**Cimerak**	2.49	303	P	Pn	12 02 30.5	-0.8
GRJI	**Gresik**	2.92	41	P	Pn	12 02 36.7	-0.5
GMJI	**Gumukmas**	2.98	73	P	Pn	12 02 37.3	-0.7
CISI	**Cisompet, Garu**	3.14	300	P	Pn	12 02 39.8	-0.5
JAGI	**Jajag, Banyuwa**	3.61	80	P	Pn	12 02 45.7	-1.1
ABJI	**Asem Bagus**	3.87	70	P	Pn	12 02 50.2	-0.1
SRBI	**Singaraja**	4.72	78	P	Pn	12 03 01.1	-0.9

MAN 05 12:04:21.4, 17°.44N×122°.57E, h27^{km}, mb4.2, ML3.0, MS2.7, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CVP	**Callao Caves**	0.76	290	⇓*i*P	Pb	12 04 35.9	-0.2
CVP				*i* S	Sn	12 04 46.6	-0.4
CAUP	**Cauayan**	0.87	235	*e*P	Pb	12 04 38.2	+0.2
CAUP				*e*S	Sb	12 04 45.8	-3.5
SGCP	**Mt. Cagua**	0.94	328	*e*P	Pn	12 04 38.5	-0.3
SGCP				*e*S	Sn	12 04 51.7	+0.2
APYP	**Conner**	1.33	288	*e*P	Pn	12 04 44.4	0.0
ABRA	**Dolores**	1.79	277	*e*P	Pn	12 04 50.8	+0.2
ABRA				*e*S	Sn	12 05 12.5	+0.1
BALP	**Baler**	1.94	210	*e*P	Pn	12 04 52.7	0.0
BALP				*e*S	Sn	12 05 14.5	-1.7
SMPP	**San Manuel, Pa**	2.22	235	*e*P	Pn	12 04 56.5	-0.1
SMPP				*e*S	Sn	12 05 22.0	-1.1
BOLP	**Bolinao**	2.75	248	*e*P	Pn	12 05 05.2	+1.4
BOLP				*e*S	Sn	12 05 38.4	+2.1
GQP	**Guinayangan**	3.52	182	⇑*e*P	Pn	12 05 14.7	+0.3
GQP				*e*S	Sn	12 05 52.8	-2.3

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*KRNET **05** 12:06:41.3±0.1, 42°.58N×79°.66E, h14^{km}, mb3.3*
*SOME **05** 12:06:41.2, 42°.57N×79°.65E, h15^{km}*
*NNC **05** 12:06:41.7±0.8, 42°.59N×79°.63E, h0^{km}, mb3.8, mpv3.7, Error ellipse: s-maj=5.3km s-min=3.0km az=135.0*
*ISCJB **05** 12:06:42.6±0.7, 42°.57N±0°.04×79°.76E±0°.04, h10^{km}, Error ellipse: s-maj=6.2km s-min=3.1km az=140.7*
ISC 05 12:06:43.3±1.1, **42°.64N**±0°.04×**79°.64E**±0°.03, **h10^{km}, n62, σ1^s.20**/105, **31C-13D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	0.68	318	P	Pg	12 06 55.5	-0.9
	26nm,0.1s						
UZB				S	Sg	12 07 05.6	+0.3
	356nm,0.2s						
UZB	**Uzynbulak**	0.68	318	*e*P	Pg	12 06 55.5	-0.9
	baz=21						
UZB				*e*S	Sg	12 07 05.6	+0.3
	baz=21						
UZB	**Uzynbulak**	0.68	318	*e*P	Pg	12 06 55.5	-0.9
	26nm,0.1s						
UZB				*e*S	Sg	12 07 05.6	+0.3
	356nm,0.2s						
PDGK	**Podgornoye**	0.69	351	P	Pg	12 06 56.1	-0.7
	54nm,0.1s						
PDGK				S	Sb	12 07 06.8	-0.5
	62nm,0.2s						
PDGK	**Podgornoye**	0.69	351	⇓P	Pg	12 06 56.1	-0.7
	14nm,0.2s						
PDGK				⇑S	Sb	12 07 06.8	-0.5
	55nm,0.3s						
PDGK	**Podgornoye**	0.69	351	⇑*i*P	Pg	12 06 56.0	-0.7
	baz=50						
PDGK				⇑*i*S	Sb	12 07 06.7	-0.5
	baz=50						
PRZ	**Przheval'sk**	0.93	260	⇑*i*P	Pg	12 06 58.9	-2.3
	baz=65						
PRZ				⇑*i*S	Sg	12 07 11.6	-1.7
	baz=65						
KTMS	**Ketmen**	0.96	33	P	Pg	12 07 00.6	-1.2
	47nm,0.1s						
KTMS				S	Sb	12 07 14.3	-0.5
	60nm,0.2s						
KTMS	**Ketmen**	0.96	33	*e*P	Pg	12 07 00.6	-1.2
	baz=29						
KTMS				*e*S	Sb	12 07 14.4	-0.5
	baz=29						
KTMS	**Ketmen**	0.96	33	*e*P	Pg	12 07 00.6	-1.2
	47nm,0.1s						
KTMS				*e*S	Sb	12 07 14.3	-0.5
	60nm,0.2s						
SATY	**Saty**	1.00	295	P	Pg	12 07 00.5	-1.9
	20nm,0.2s						
SATY				S	Sg	12 07 14.3	-1.1
	223nm,0.1s						
SATY	**Saty**	1.00	295	*e*P	Pg	12 07 00.5	-1.9
	20nm,0.2s						
SATY				*e*S	Sg	12 07 14.3	-1.1
	223nm,0.1s						
KURS	**Kuram**	1.37	309	P	Pn	12 07 08.2	-0.3
	9.9nm,0.2s						
KURS				S	Sg	12 07 27.5	+0.3
	48nm,0.4s						
KURS	**Kuram**	1.37	309	*e*P	Pn	12 07 08.2	-0.3
	baz=10.0						
KURS				*e*S	Sg	12 07 27.6	+0.3
	baz=10.0						
KURS	**Kuram**	1.37	309	*e*P	Pn	12 07 08.2	-0.3
	9.9nm,0.2s						
KURS				*e*S	Sg	12 07 27.5	+0.3
	48nm,0.4s						
DJR	**Jarkent**	1.69	4	P	Pb	12 07 14.3	-0.3
	18nm,0.2s						
DJR				S	Sg	12 07 38.1	+0.4
	26nm,0.2s						
DJR	**Jarkent**	1.69	4	*e*P	Pb	12 07 14.3	-0.3
	18nm,0.2s						
DJR				*e*S	Sg	12 07 38.1	+0.4
	26nm,0.2s						
MNBS	**Baschi**	1.69	328	P	Pb	12 07 14.0	-0.7
	14nm,0.1s						
MNBS				S	Sg	12 07 37.4	-0.4
	138nm,0.4s						
MNBS	**Baschi**	1.69	328	*e*P	Pb	12 07 14.0	-0.7
	14nm,0.1s						
MNBS				*e*S	Sg	12 07 37.4	-0.4
	138nm,0.4s						
KDJ	**Kajisay**	1.89	255	⇑*i*P	Pn	12 07 16.2	+0.4
	baz=57						
KDJ				⇑*i*S	Sb	12 07 41.7	0.0
	baz=57						
MDOK	**Medeo**	1.97	286	⇓Pn	Pn	12 07 17.4	+0.6
	7.0nm,0.2s						
MDOK				Sn	Sb	12 07 43.8	-0.2
	46nm,0.7s						
MDOK	**Medeo**	1.97	286	Pg	Pn	12 07 17.5	+0.6
	29nm,0.2s						
MDOK				Lg	Lg	12 07 44.1	
	44nm,0.4s						
MDOK	**Medeo**	1.97	286	*e*P	Pn	12 07 17.5	+0.6
	29nm,0.2s						
MDOK				*e*S	Sb	12 07 43.7	-0.4
	44nm,0.4s						
TNSS	**Tian-Shan**	2.02	282	Pg	Pn	12 07 18.3	+0.5
	29nm,0.2s						
TNSS				Lg	Lg	12 07 45.3	
	35nm,0.2s						
TNSS	**Tian-Shan**	2.02	282	⇓*i*P	Pn	12 07 18.3	+0.5
	baz=84						
TNSS				⇓*e*S	Sb	12 07 46.3	+0.7
	baz=84						
TNSS	**Tian-Shan**	2.02	282	⇓*i*P	Pn	12 07 18.3	+0.5
	29nm,0.2s						
TNSS				*e*S	Sb	12 07 45.3	-0.3
	35nm,0.2s						
KNDC	**Almaty**	2.04	287	⇑Pg	Pb	12 07 19.9	-0.6
	13nm,0.2s						
KNDC				⇑Lg	Lg	12 07 49.1	
	109nm,0.5s						
ARXS	**Arharly**	2.05	321	Pg	Pb	12 07 19.6	-1.1
	8.4nm,0.2s						
ARXS				Lg	Lg	12 07 47.5	
	144nm,0.4s						
ARXS	**Arharly**	2.05	321	*e*P	Pb	12 07 19.6	-1.1
	8.4nm,0.2s						
ARXS				*e*S	Sg	12 07 47.5	-1.6
	144nm,0.4s						
IZV	**Izvestkoviy**	2.26	281	Pg	Pb	12 07 23.0	-1.2
	42nm,0.2s						
IZV				Lg	Lg	12 07 53.1	
	70nm,0.2s						
IZV	**Izvestkoviy**	2.26	281	*e*P	Pb	12 07 23.1	-1.2
	42nm,0.2s						
IZV				*e*S	Sb	12 07 53.1	+0.8
	70nm,0.2s						
CHKK	**Chushkaly**	2.28	303	Pg	Pb	12 07 23.6	-0.9
	8.2nm,0.2s						
CHKK				Lg	Lg	12 07 54.2	
	97nm,0.2s						
CHKK	**Chushkaly**	2.28	303	*e*P	Pb	12 07 23.6	-0.9
	8.2nm,0.2s						
CHKK				*e*S	Sb	12 07 54.2	+1.3
	97nm,0.2s						
MTBS	**Maitube**	2.41	283	Pg	Pb	12 07 25.0	-1.8
	30nm,0.3s						
MTBS				Lg	Lg	12 07 56.8	
	34nm,0.2s						
MTBS	**Maitube**	2.41	283	*e*P	Pb	12 07 25.0	-1.8
	30nm,0.3s						
MTBS				*e*S	Sb	12 07 56.8	+0.3
	34nm,0.2s						
KTBS	**Karatobe**	2.41	297	Pg	Pb	12 07 25.7	-1.1
	17nm,0.2s						
KTBS				Lg	Lg	12 07 57.8	
	124nm,0.5s						
KTBS	**Karatobe**	2.41	297	*e*P	Pb	12 07 25.7	-1.1
	17nm,0.2s						
KTBS				*e*S	Sb	12 07 57.8	+1.2
	124nm,0.5s						
TDK	**Taldyqorghan**	2.52	340	Pg	Pb	12 07 28.2	-0.5
	27nm,0.2s						
TDK				Lg	Lg	12 08 02.1	
	155nm,0.3s						

TDK	Taldyqorghan	2.52	340	eP	Pb	12 07 28.2	-0.5
	27nm,0.2s						
TDK				eS	Sg	12 08 02.1	-2.1
	155nm,0.3s						
ULHL	Ulahol	2.54	262	⇑iP	Pn	12 07 25.9	+1.1
	baz=64						
ULHL				⇑iS	Sb	12 07 58.6	-2.0
	baz=64						
KAPS	Kapalarasan	2.65	356	Pg	Pb	12 07 30.7	-0.2
	4.2nm,0.2s						
KAPS				Lg	Lg	12 08 06.5	
	23nm,0.5s						
KAPS	Kapalarasan	2.65	356	eP	Pb	12 07 30.7	-0.2
	4.2nm,0.2s						
KAPS				eS	Sg	12 08 06.5	-1.8
	23nm,0.5s						
KUU	Kurty	2.71	299	Pg	Pb	12 07 30.7	-1.3
	3.4nm,0.2s						
KUU				Lg	Lg	12 08 06.2	
	28nm,0.4s						
KUU	Kurty	2.71	299	eP	Pb	12 07 30.7	-1.3
	3.4nm,0.2s						
KUU				eS	Sb	12 08 06.2	+0.9
	28nm,0.4s						
KST	Kastek	2.73	280	Pg	Pb	12 07 31.1	-1.2
	30nm,0.3s						
KST				Lg	Lg	12 08 07.0	
	39nm,0.5s						
KST	Kastek	2.73	280	eP	Pb	12 07 31.1	-1.2
	30nm,0.3s						
KST				eS	Sb	12 08 07.0	+1.1
	39nm,0.5s						
BOOM	Boomskoye usch	2.73	268	⇑iP	Pn	12 07 28.9	+1.5
	baz=69						
BOOM				⇑iS	Sb	12 08 03.2	-2.8
	baz=69						
DGS	Degeres	2.90	283	Pg	Pb	12 07 33.1	-2.0
	28nm,0.3s						
DGS				Lg	Lg	12 08 10.4	
	49nm,0.4s						
DGS	Degeres	2.90	283	eP	Pb	12 07 33.1	-2.0
	28nm,0.3s						
DGS				eS	Sb	12 08 10.4	-0.3
	49nm,0.4s						
NRN	Naryn	2.97	247	⇑iP	Pn	12 07 31.7	+1.0
	baz=48						
NRN				⇑iS	Sn	12 08 08.4	+1.9
	baz=48						
TKM2	Tokmak 2	2.99	277	⇑Pn	Pn	12 07 32.5	+1.6
	1.5nm,0.2s						
TKM2				⇓Lg	Lg	12 08 15.9	
	24nm,0.7s						
TKM2	Tokmak 2	2.99	277	⇓iP	Pn	12 07 32.2	+1.3
	baz=78						
TKM2				⇓iS	Sn	12 08 09.6	+2.7
	baz=78						
KZA	Kyzart	3.30	262	⇑iP	Pn	12 07 36.6	+1.2
	baz=63						
KZA				⇑iS	Sn	12 08 17.1	+2.2
	baz=63						
KBK	Karagaybulak	3.46	272	⇑iP	Pn	12 07 39.0	+1.6
	baz=73						
KBK				⇑iS	Sn	12 08 20.6	+2.1
	baz=73						
CHMS	Chumysh	3.61	277	⇑iP	Pn	12 07 40.7	+1.4
	baz=78						
CHMS				⇑iS	Sn	12 08 24.2	+2.2
	baz=78						
AAK	Ala-Archa	3.79	272	⇑Pg	Pb	12 07 51.7	+1.3
	1.4nm,0.2s						
AAK				⇓Lg	Lg	12 08 42.2	
	11nm,0.8s						
AAK	Ala-Archa	3.79	272	⇑iP	Pn	12 07 43.5	+1.6
	baz=73						
AAK				⇑iS	Sn	12 08 28.6	+1.9
	baz=73						
ARLS	Aral	4.02	261	⇓iP	Pn	12 07 46.0	+0.9
	baz=62						
ARLS				⇓iS	Sn	12 08 33.1	+0.8
	baz=62						
MAKZ	Makanchi	4.49	21	⇓Pn	Pn	12 07 51.4	+0.1
	2.0nm,0.2s						
MAKZ				⇑Lg	Lg	12 09 05.2	
	2.1nm,0.6s						
MK31	Makanchi Array	4.56	24	⇑Pn	Pn	12 07 53.7	+1.3
	0.5nm,0.2s,baz=206,slow=10,SNR=66						
MK31				⇑Sn	Sn	12 08 46.1	+0.8
	0.3nm,0.2s,baz=2.1,slow=74,SNR=5.3						
MK31				⇑Lg	Lg	12 09 06.1	
	0.6nm,0.3s,baz=195,slow=27,SNR=4.1						
MNAS	Manas	5.27	271	⇓Pg	Pb	12 08 17.6	+2.0
	2.2nm,1.0s						
MNAS				⇑Lg	Lg	12 09 28.3	
	4.9nm,0.9s						
KK31	Karatay Array	6.72	277	⇑Pg	Pb	12 08 44.9	+4.7
	0.8nm,0.6s						

IDC ***05*** *12:18:42.1±1.1, 51°.49N×16°.03E, h0^{km}, mb1 3.5/5, mb1mx3.2/50, mbtmp3.3/5, ML2.8/5, Error ellipse: s-maj=16.4km s-min=9.9km az=105.0*

ISC 05 12:18:41.2±1.2**, 51°.57N**±0°.03×**16°.24E**±0°.03**, h16**^{km}±10^{km}**, n38,** σ**1**^{s}**59**/68**, 1C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.73	177	i Pg	Pg	12 18 54.9	-0.6
KSP				i Sg	Sg	12 19 04.3	-0.8
UPC	Upice	1.08	188	ePG	Pb	12 19 00.9	-0.6
UPC				eSG	Sb	12 19 14.3	-1.0
	comp=Z,131nm,0.3s						
DPC	Dobruska-Polom	1.23	177	ePG	Pn	12 19 03.7	-0.1
DPC				eSG	Sb	12 19 19.2	-0.4
	comp=Z,56nm,0.5s						
PVCC	Panska Ves	1.48	226	ePG	Pn	12 19 07.8	+0.5
PVCC				eSG	Sn	12 19 26.6	+0.3
	comp=Z,138nm,0.2s						
KRLC	Kraliky	1.54	167	ePG	Pb	12 19 09.7	+0.3
KRLC				eSG	Sb	12 19 29.0	+0.4
	comp=Z,13nm,0.3s						
BRG	Berggiesshubel	1.60	245	PN	Pn	12 19 08.1	-0.8
BRG				PG	Pb	12 19 09.8	-0.6
BRG				SG	Sn	12 19 29.4	+0.1
	61nm,0.5s						
PRU	Pruhonice	1.92	215	ePG	Pb	12 19 15.6	-0.2
PRU				eSG	Sb	12 19 39.0	-0.5
	comp=Z,41nm,0.4s						
MORC	Moravsky Berou	1.98	155	⇑iP	Pg	12 19 18.3	-0.9
MORC	Moravsky Berou	1.98	155	S	Sn	12 19 35.1	-3.5
MORC	Moravsky Berou	1.98	155	ePN	Pn	12 19 15.7	+1.6
MORC				eSG	Sg	12 19 43.6	-1.3
CLL	Collm	2.04	264	ePn	Pn	12 19 14.0	-0.9
CLL				ePg	Pb	12 19 17.0	-0.9
CLL				e		12 19 21.0	
CLL				e		12 19 40.0	
CLL				eSg	Sb	12 19 43.0	-0.1
	comp=Z,25nm,0.5s						
OKC	Ostrava-Krasne	2.12	144	ePG	Pg	12 19 21.3	-0.5
OKC				eSG	Sg	12 19 48.5	-0.8
	comp=Z,36nm,0.7s						
VRAC	Vranov	2.28	174	⇓iP	Pn	12 19 20.2	+2.0
VRAC	Vranov	2.28	174	S	Sn	12 19 38.7	-7.2
VRAC	Vranov	2.28	174	ePN	Pn	12 19 20.1	+1.9
VRAC				eSG	Sb	12 19 51.5	+1.6
VRAC	Vranov	2.28	174	Pn	Pn	12 19 19.6	+1.4
	comp=Z,0.9nm,0.3s,baz=345,slow=13,SNR=6.5						
VRAC				Pg	Pg	12 19 23.5	-1.4
	comp=Z,2.1nm,0.3s,baz=352,slow=16,SNR=4.4						
VRAC				Lg	Lg	12 19 51.7	
	comp=Z,6.1nm,0.3s,baz=270,slow=22,SNR=12						
TREC	Trest	2.33	192	eSG	Sb	12 19 53.4	+2.0
	comp=Z,22nm,0.3s						
KRUC	Moravsky	2.52	178	ePN	Pn	12 19 23.8	+2.4
KRUC				eSG	Sg	12 19 59.9	-2.1
OJC	Ojcow	2.63	120	ePg	Pg	12 19 32.7	+1.1
OJC				eSg	Sg	12 20 08.4	+2.7
NKC	Novy Kostel	2.75	242	ePN	Pn	12 19 25.3	+0.6
NKC				ePG	Pb	12 19 31.2	+1.2
NKC				eSG	Sg	12 20 08.0	-1.5
	comp=Z,34nm,0.3s						
KHC	Kasperske Hory	2.98	216	ePN	Pn	12 19 28.6	+0.7
KHC				ePG	Pb	12 19 34.1	+0.2
KHC				eSN	Sn	12 20 03.3	0.0
KHC				eSG	Sb	12 20 12.9	+2.8
	comp=Z,11nm,0.3s						
GERES	GERESS Array B	3.18	212	Pn	Pn	12 19 31.9	+1.2
	comp=Z,0.7nm,0.3s,baz=28,slow=13,SNR=12						
GERES				Pg	Pb	12 19 38.3	+0.9
	comp=Z,1.7nm,0.3s,baz=29,slow=16,SNR=18						
GERES				Sn	Sn	12 20 07.1	-1.2
	comp=Z,1.6nm,0.3s,baz=25,slow=28,SNR=5.8						
GERES				Lg	Lg	12 20 17.3	
	comp=Z,3.5nm,0.3s,baz=27,slow=26,SNR=8.7						
MODS	Modra-Piesok	3.27	168	ePG	Pg	12 19 44.4	+0.5
MODS				eSG	Sg	12 20 25.6	-0.6
MODS				eLG	Lg	12 20 30.5	
NIE	Niedzica	3.37	128	eP	Pg	12 19 44.2	-1.6
NIE				eS	Sg	12 20 29.2	-0.2
VYHS	Vyhne	3.51	150	eSG	Sg	12 20 33.8	0.0
VYHS				eLG	Lg	12 20 35.5	
BSD	Bornholm Skovb	3.64	348	i P	Pn	12 19 37.0	+0.2
BSD				i S	Sn	12 20 18.4	-0.9
CONA	Conrad Observa	3.66	184	ePn	Pn	12 19 39.3	+2.1
	comp=Z,0.3nm,0.1s						
CONA				Sg	Sg	12 20 37.6	-1.0
MOA	Molln	3.94	200	ePn	Pn	12 19 42.2	+1.1
	comp=Z,1.8nm,0.2s						
MOA				Sg	Sg	12 20 48.0	+0.4
	comp=Z,1.5nm,0.3s						
ARSA	Arzberg	4.35	186	ePn	Pn	12 19 47.7	+1.0
	comp=Z,0.2nm,0.1s						
ARSA				Sg	Sg	12 21 01.0	+0.2
	comp=Z,8.3nm,0.6s						
KBA	Koelnbreinsper	4.88	204	ePn	Pn	12 19 55.3	+1.2
	comp=Z,0.9nm,0.2s						
KBA				Sg	Sg	12 21 18.3	+0.5
	comp=Z,3.4nm,0.6s						
OBKA	Obir	5.19	193	ePn	Pn	12 19 59.8	+1.6
	comp=Z,0.8nm,0.1s						
OBKA				Sg	Sg	12 21 29.8	+2.2
	comp=Z,9.1nm,0.8s						
WTTA	Wattenberg	5.25	217	Sg	Sg	12 21 30.1	+0.3
ABTA	Abfaltersbach	5.41	208	Sg	Sg	12 21 35.4	+0.5
	comp=Z,1.2nm,0.2s						
FETA	Feichten	5.81	220	Sg	Sg	12 21 48.1	+0.6
	comp=Z,0.9nm,0.5s						
DAVOX	Davos/Dischmat	6.35	223	Lg	Lg	12 22 00.7	
	comp=Z,0.2nm,0.3s,baz=165,slow=23,SNR=2.2						
FINES	FINESS Array B	11.27	25	Pn	Pn	12 21 21.6	+0.2
	comp=Z,0.1nm,0.3s,baz=221,slow=15,SNR=1.3						
EKA	Eskdalemuir Ar	12.15	296	Pn	Pn	12 21 35.5	+2.1
	baz=107,slow=14,SNR=1.3						
ARCES	ARCESS Array B	18.55	10	Pn	P	12 22 54.7	-2.2
	comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=1.6						

JMA ***05*** *12:25:28.5±0.4, 36°.15N×127°.68E, h0^{km}, M4.8*

ISCJB ***05*** *12:25:34.8±0.8, 35°.88N±0°.05×127°.95E±0°.09, h10^{km}, mb3.4/4, Error ellipse: s-maj=10.7km s-min=7.1km az=163.0*

IDC ***05*** *12:25:36.2±1.1, 35°.81N×128°.24E, h0^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.3/38, mbtmp3.4/6, ML2.8/2, Error ellipse: s-maj=35.6km s-min=10.6km az=72.0*

ISC 05 12:25:37.4±1.0**, 35°.72N**±0°.06×**128°.04E**±0°.08**, h10**^{km}**, n15,** σ**1**^{s}**49**/19**, mb3.4**/4**, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTU	Tsushima	1.63	136	P	Pn	12 26 06.1	-0.1
JTU				eS	Sg	12 26 29.9	-0.1
KSRS	Korea Array	1.73	357	Pg	Pn	12 26 06.2	-1.4
	129nm,0.3s,baz=177,slow=18,SNR=637						
KSRS				Lg	Lg	12 26 28.9	
	420nm,0.3s,baz=177,slow=30,SNR=10						
JII	Iki	2.37	143	P	Pn	12 26 16.6	+0.2
JII				eS	Sb	12 26 51.5	+1.9
JFU	Fukue jima 2	3.11	169	P	Pn	12 26 26.9	+0.3
JNU	Nakatsue	3.50	137	P	Pn	12 26 32.7	+0.8
JNU	Nakatsue	3.50	137	Pn	Pn	12 26 32.2	+0.3
	3.1nm,0.3s,baz=323,slow=6.5,SNR=28						
JNU				Pg	Pb	12 26 39.5	0.0
	3.9nm,0.3s,baz=325,slow=16,SNR=5.5						
JNU				Sn	Sn	12 27 09.6	-3.8
	7.5nm,0.3s,baz=263,slow=2.9,SNR=4.9						
JNU				Lg	Lg	12 27 26.8	
	13nm,0.3s,baz=177,slow=20,SNR=3.1						
JGT2	ShimaneMisato	3.71	99	P	Pn	12 26 34.1	-0.7
JHT	Toyohira	3.74	105	P	Pn	12 26 34.9	-0.4
JOI	OKI	4.26	81	eS	Sn	12 27 32.4	+0.2
MJAR	Matsushiro Arr	8.27	81	Pn	Pn	12 27 40.2	+2.8
	0.1nm,0.3s,baz=268,slow=15,SNR=2.8						
USRK	Ussuriysk Ar.	9.00	18	Pn	Pn	12 27 46.0	-1.3
	0.1nm,0.3s,baz=201,slow=11,SNR=2.3						
WRA	Warramunga Arr	55.68	173	P	P	12 35 14.9	+1.0
	0.3nm,0.9s,baz=353,slow=7.6,SNR=5.7						
ASAR	Alice Springs	59.32	174	P	P	12 35 39.6	+0.1
	0.2nm,0.8s,baz=358,slow=6.4,SNR=2.1						
YKA	Yellowknife Ar	70.05	26	P	P	12 36 47.9	-1.2
	0.3nm,0.8s,baz=303,slow=6.5,SNR=7.2						
BRTR	Keskin Array B	71.22	306	P	P	12 36 58.5	+1.6
	0.4nm,0.5s,baz=73,slow=4.8,SNR=1.9						

MEX 05 12:35:40.3±0.5**, 14°.09N**×**92°.65W, h20**^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.90	25	i P	Pb	12 35 54.9	-2.3
THIG				i S	Sb	12 36 06.0	-2.8
PCIG		1.70	341	i P	Pn	12 36 06.1	-2.7
PCIG				i S	Sn	12 36 25.6	-4.4
CCIG	Comitan	2.24	13	eP	Pn	12 36 16.8	+0.3
CCIG				i S	Sn	12 36 32.1	-11

NIED ***05*** *12:43:00, 33°.20N×140°.60E, h59^{km}, Mw3.9 Best double couple: $M_0$8.04000×10^{14} NP1:ϕ_s214.00000°, δ7.00000°, λ-60.00000°. NP2:ϕ_s3.00000°, δ84.00000°, λ-94.00000°.*

ISCJB ***05*** *12:43:19.8±0.4, 33°.11N±0°.02×140°.60E±0°.05, h80^{km}±3^{km}, mb4.2/49, Error ellipse: s-maj=6.4km s-min=3.9km az=0.7*

NEIC ***05*** *12:43:20.8±0.6, 33°.15N×140°.63E, h74^{km}±5^{km}, mb4.4/29, Error ellipse: s-maj=7.8km s-min=5.4km az=96.0*

NEIC Recorded [1 JMA] on Hachijo-jima.

IDC ***05*** *12:43:21.4±0.8, 33°.14N×140°.43E, h73^{km}±6^{km}, mb3.8/21, mb1 3.9/25, mb1mx3.8/42, mbtmp4.0/25, MS3.0/2, Ms1 3.0/2, ms1mx2.6/37, Error ellipse: s-maj=15.7km s-min=11.6km az=82.0*

JMA ***05*** *12:43:21.6±0.1, 33°.21N×140°.57E, h70^{km}±2^{km}, M4.1*

JMA Felt I J1.

ISC 05 12:43:20.5±0.7**, 33°.12N**±0°.04×**140°.61E**±0°.05**, h71**^{km}±6^{km}**, n114,** σ**1**^{s}**64**/142**, mb4.4**/49**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.67	270	ePn	Pn	12 43 35.8	+0.8
JHJ2				eSn	Sn	12 43 46.3	+0.4
JHJ2	Mitsune	0.67	270	P	Pn	12 43 36.1	+1.0
JHJ2				S	Sn	12 43 46.2	+0.4
JHCJ	Hachijojimakas	0.68	267	P	Pn	12 43 36.2	+0.9
JHCJ				S	Sn	12 43 46.3	+0.1
JHJ	Hachijo jima 2	0.69	271	P	Pn	12 43 36.1	+0.7
	3µm,0.3s,baz=107,slow=23,SNR=3697						
JHJ				S	Sn	12 43 46.5	0.0
	5µm,0.3s,baz=89,slow=24,SNR=35						
JAOM	Aogashimamukai	0.96	228	P	Pn	12 43 40.2	+1.6
JAOM				eS	Sn	12 43 52.9	+0.8
JMKN	Mikurajimanish	1.15	313	P	Pn	12 43 41.0	0.0
JMKN				S	Sn	12 43 54.8	-1.5
BSO1	Boso 1	1.56	11	P	Pn	12 43 46.2	+0.4
BSO1				S	Sn	12 44 05.3	+0.3
JKO	Kozu shima	1.63	311	P	Pn	12 43 47.9	+0.7
JKO				eS	Sn	12 44 07.1	-0.3
BSO3	Boso 3	1.68	357	P	Pn	12 43 48.2	+0.5
BSO3				S	Sn	12 44 08.8	+0.5
JTHY	Toshimahigashi	1.79	322	P	Pn	12 43 49.8	+0.5
JTHY				eS	Sn	12 44 10.8	-0.3
JIM2	Oshima 3	1.88	329	P	Pn	12 43 50.5	0.0
JIM2				eS	Sn	12 44 11.9	-1.4
BSO4	Boso 4	1.88	353	P	Pn	12 43 51.2	+0.7
BSO4				eS	Sn	12 44 13.0	-0.3
JIZS	Izushimoda	2.15	318	P	Pn	12 43 55.1	+0.9
JIZS				eS	Sn	12 44 19.6	-0.3
JOD2	Odawara 2	2.49	330	P	Pn	12 43 59.1	+0.3
JOD2				eS	Sn	12 44 26.4	-1.7
TK02	Tokai 2	2.52	290	P	Pn	12 44 00.5	+1.5
TK04	Tokai 4	2.61	300	P	Pn	12 44 02.0	+1.7
TK04				eS	Sn	12 44 32.5	+1.7
JFNN	Fujinakano	2.62	323	P	Pn	12 44 02.1	+1.6
JFNN				eS	Sn	12 44 32.4	+1.2
SHZ3	Shizuoka 3	2.79	315	P	Pn	12 44 04.6	+1.8
INU	Inuyama	3.72	308	ePn	Pn	12 44 17.2	+1.7
INU				eSn	Sn	12 44 50.1	-7.9
MJAR	Matsushiro Arr	3.95	331	P	Pn	12 44 18.6	-0.1
	0.8nm,0.3s,baz=356,slow=11,SNR=43						
MJAR				S	Sn	12 45 07.9	+4.2
	0.9nm,0.3s,baz=161,slow=13,SNR=4.1						
MAJO	Matsushiro	3.95	331	ePn	Pn	12 44 19.9	+1.3
MAJO				eSn	Sn	12 45 07.9	+4.2
MAT	Matsushiro	3.95	331	P	Pn	12 44 19.7	+1.0
MAT				S	Sn	12 45 04.3	+0.5
MJB9	Matsu-Tunnel	3.95	331	ePn	Pn	12 44 20.0	+1.3
CBIJ	Chichi jima	6.15	167	ePn	Pn	12 44 49.2	+0.4
CBIJ				eSn	Sn	12 45 52.0	-5.8
JCJ	Chichijima	6.15	167	P	Pn	12 44 49.2	+0.4
	14nm,0.3s,baz=278,slow=22,SNR=11						
JCJ				S	Sn	12 45 52.0	-5.8
	8.0nm,0.3s,baz=296,slow=21,SNR=2.0						
JNU	Nakatsue	8.16	273	ePn	Pn	12 45 19.3	+3.0
JNU	Nakatsue	8.16	273	P	Pn	12 45 18.9	+2.5
	1.9nm,0.3s,baz=156,slow=9.3,SNR=28						
ERM	Erimo	9.11	12	ePn	Pn	12 45 27.4	-1.7
ASAJ	Asahikawa	11.09	7	P	Pn	12 45 53.1	-3.1
	1.5nm,0.3s,baz=226,slow=10.0,SNR=16						
ASAJ				S	Sn	12 47 57.0	-1.4
	0.3nm,0.3s,baz=48,slow=26,SNR=2.2						
KSRS	Korea Array	11.23	296	P	Pn	12 45 58.4	+0.2
	0.1nm,0.3s,baz=111,slow=15,SNR=3.3						
KSRS				LR	LR	12 49 59.7	
	comp=Z,57nm,19.8s,baz=350,slow=36						
KLR	Kul'dur	17.41	340	P	Pn	12 47 17.1	-1.4
	0.1nm,0.3s,baz=159,slow=13,SNR=4.3						
YULB	Yu-li	19.55	245	eP	P	12 47 40.5	-2.1
	8.7nm,1.1s						
TPUB	Ta-pu	20.11	246	eP	P	12 47 48.7	+0.1
	12nm,1.0s						
HHC	Hu-ho-hao-te	24.38	297	eP	P	12 48 31.4	-0.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,94nm,5.2s						
H11N2	WAKE ISLAND Hy	26.96	113	T	T	13 17 55.9	
	baz=306,slow=75,SNR=122						
H11N1	WAKE ISLAND Hy	26.97	113	T	T	13 17 44.4	
	baz=306,slow=75,SNR=107						
H11N3	WAKE ISLAND Hy	26.98	113	T	T	13 17 45.3	
	baz=306,slow=75,SNR=113						
MA2	Magadan	27.32	11	LR	LR	13 00 22.4	
	comp=Z,38nm,20.2s,baz=204,slow=37						
H11S3	WAKE ISLAND Hy	27.52	115	T	T	13 18 28.8	
	baz=307,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	27.53	115	T	T	13 18 40.1	
	baz=307,slow=75,SNR=24						
H11S2	WAKE ISLAND Hy	27.54	115	T	T	13 18 37.8	
	baz=307,slow=75,SNR=16						
SONA0	Songino Array	29.61	310	eP	P	12 49 19.6	+0.6
SONM	Songino Array	29.61	310	P	P	12 49 19.6	+0.6
	comp=Z,1.0nm,0.4s,baz=98,slow=11,SNR=3.2						
LZH	Lanzhou	30.30	286	eP	P	12 49 23.7	-1.5
LZH				pP	pP	12 49 42.3	+0.3
LZH				sP	sP	12 49 52.1	+1.9
LZH				PP	PnPn	12 50 25.0	-0.9
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,52nm,5.2s						
TIXI	Tiksi	39.10	354	P	P	12 50 40.6	+0.2
	comp=Z,1.1nm,0.3s,baz=98,slow=4.6,SNR=2.6						
PBKT	Sadao Pong	39.30	255	eP	P	12 50 41.5	-1.1
	comp=Z,4.6nm,1.1s						
CM31	Chiang Mai Arr	39.99	259	eP	P	12 50 47.4	-1.0
CMAR	Chiang Mai Arr	39.99	259	P	P	12 50 47.4	-1.0
	comp=Z,0.5nm,0.3s,baz=51,slow=7.5,SNR=5.3						
WMQ	Urumqi	42.14	301	eP	P	12 51 07.2	+1.3
WMQ				sP	sP	12 51 32.8	+1.4
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1µm,10.5s						
ZAA1	Zalesovo Array	44.15	315	eP	P	12 51 21.1	-0.8
ZAA1				ePcP	PP	12 53 05.6	-0.2
ZALV	Zalesovo Beam	44.15	315	P	P	12 51 21.1	-0.8
	comp=Z,0.4nm,0.3s,baz=91,slow=5.7,SNR=2.6						
ZALV				PcP	PP	12 53 05.6	-0.2
	comp=Z,4.2nm,0.4s,baz=103,slow=3.2,SNR=18						
MK01	Makanchi Array	45.74	305	eP	P	12 51 34.5	-0.1
MK31	Makanchi Array	45.74	305	eP	P	12 51 34.5	-0.2
MK32	Makanchi Array	45.74	305	eP	P	12 51 34.4	-0.2
MK32				ePcP	PcP	12 53 11.8	+0.4
MK32				eScP	ScP	12 56 52.5	-5.5
MKAR	Makanchi Array	45.74	305	eP	P	12 51 34.5	-0.2
	comp=Z,14nm,0.7s						
MKAR	Makanchi Array	45.74	305	P	P	12 51 34.4	-0.2
	comp=Z,1.3nm,0.5s,baz=83,slow=9.6,SNR=30						
MKAR				PcP	PcP	12 53 11.8	+0.4
	comp=Z,0.2nm,0.3s,baz=68,slow=3.6,SNR=4.7						
MKAR				ScP	ScP	12 56 52.5	-5.5
	comp=Z,0.2nm,0.6s,baz=83,slow=5.5,SNR=2.7						
MAKZ	Makanchi	45.95	305	eP	P	12 51 36.2	-0.1
	comp=Z,2.2nm,0.9s						
MTN	Manton Dam	46.59	193	eP	P	12 51 41.2	-0.3
	comp=Z,3.6nm,0.6s						
KURK	Kurchatov	47.91	311	eP	P	12 51 50.9	-0.6
	comp=Z,4.6nm,0.9s						
KDJ	Kajisay	50.01	300	eP	P	12 52 08.9	+0.9
	comp=Z,4.1nm,0.9s						
KDAK	Kodiak Island	50.49	40	P	P	12 52 12.3	+1.3
	comp=Z,12nm,1.1s,baz=108,slow=20,SNR=1.8						
GSI	Gunungsitoli	51.28	241	eP	P	12 52 16.6	-0.9
	comp=Z,21nm,0.7s						
KSH	Kashi	51.49	297	P	P	12 52 22.2	+3.2
KSH				pP	sP	12 52 42.5	-2.3
KSH				pmax	pmax		
	comp=Z,630nm,7.0s						
TRF	Thorofare Moun	51.66	32	eP	P	12 52 18.9	-1.1
AAK	Ala-Archa	51.85	301	eP	P	12 52 21.2	-0.5
	comp=Z,1.7nm,0.6s						
GHO	Glory Hole Cre	52.28	35	eP	P	12 52 25.3	+0.8
	comp=Z,6.1nm,1.0s						
KNK	Knik Glacier	52.51	35	eP	P	12 52 25.2	-0.9
	comp=Z,4.6nm,1.0s						
MDM	Murphy Dome	52.60	30	eP	P	12 52 25.9	-0.8
	comp=Z,1.4nm,0.9s						
FITZ	Fitzroy Crossi	52.90	198	eP	P	12 52 29.6	+0.3
	comp=Z,2.7nm,1.1s						
SCM	Sheep Creek Mo	53.04	34	eP	P	12 52 29.7	-0.4
	comp=Z,3.7nm,1.2s						
WRAB	Tennant Creek	53.09	187	eP	P	12 52 30.7	0.0
	comp=Z,4.9nm,0.6s						
WB2	Warramunga Arr	53.10	187	eP	P	12 52 30.4	-0.4
WR1	Warramunga Arr	53.10	187	eP	P	12 52 31.1	+0.2
	comp=Z,6.0nm,0.6s						
WR1				ePcP	PcP	12 53 40.3	+1.9
WRA	Warramunga Arr	53.10	187	P	P	12 52 31.1	+0.2
	comp=Z,4.7nm,0.4s,baz=5.3,slow=7.6,SNR=214						
WRA				PcP	PcP	12 53 40.3	+1.9
	comp=Z,1.2nm,0.8s,baz=358,slow=3.8,SNR=3.1						
WC3	Warramunga Arr	53.11	187	eP	P	12 52 30.9	-0.1
	comp=Z,4.6nm,0.6s						
ILAR	Eielson Array	53.17	31	P	P	12 52 32.4	+1.5
	comp=Z,0.4nm,0.9s,baz=261,slow=7.1,SNR=4.5						
ILAR				PcP	PcP	12 53 38.1	0.0
	comp=Z,0.2nm,0.8s,baz=270,slow=2.7,SNR=3.0						
SCRK	Sand Creek	54.46	32	eP	P	12 52 41.4	+0.9
	comp=Z,1.9nm,1.2s						
KK31	Karatay Array	54.59	302	eP	P	12 52 41.4	-0.2
	comp=Z,6.4nm,1.0s						
KKAR	Karatay Array	54.59	302	eP	P	12 52 41.3	-0.3
	comp=Z,6.4nm,1.0s						
AS01	Alice Springs	56.82	187	eP	P	12 52 58.1	+0.4
AS31	Alice Springs	56.82	187	eP	P	12 52 58.1	+0.4
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	56.83	187	P	P	12 52 58.0	+0.3
	comp=Z,2.6nm,0.5s,baz=2.5,slow=6.5,SNR=149						
ASAR				PcP	PcP	12 53 54.5	+1.8
	comp=Z,1.0nm,0.8s,baz=9.9,slow=2.2,SNR=4.9						
INK	Inuvik	58.18	26	eP	P	12 53 08.3	+1.6
	comp=Z,0.7nm,0.8s						
INK	Inuvik	58.18	26	P	P	12 53 07.6	+0.9
	comp=Z,0.6nm,0.6s,baz=294,slow=5.5,SNR=7.0						
ABKAR	Akbulak array	60.00	312	eP	P	12 53 19.9	+0.3
	comp=Z,3.8nm,1.1s						
FORT	Forrest	64.65	192	eP	P	12 53 52.1	+1.4
	comp=Z,25nm,0.6s						

STKA	**Stephens Creek**	**64.65**	**179**	P	**P**	**12 53 51.8**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=326,slow=7.5,SNR=3.7						
BBOO	**Buckleboo**	**65.72**	**184**	*e*P	**P**	**12 53 58.9**	**+1.4**
	comp=Z,3.0nm,1.1s						
ARA0	**ARCESS Array S**	**67.43**	**340**	*e*P	**P**	**12 54 08.3**	**+0.1**
ARCES	**ARCESS Array B**	**67.43**	**340**	P	**P**	**12 54 08.3**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=58,slow=6.8,SNR=9.2						
YKA	**Yellowknife Ar**	**67.53**	**29**	P	**P**	**12 54 09.4**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=294,slow=6.2,SNR=6.8						
NWAO	**Narrogin (SRO)**	**69.28**	**201**	*e*P	**P**	**12 54 20.7**	**+0.6**
	comp=Z,12nm,0.8s						
FIA0	**FINESS Array S**	**71.98**	**333**	*e*P	**P**	**12 54 36.2**	**0.0**
FINES	**FINESS Array B**	**71.98**	**333**	P	**P**	**12 54 36.2**	**0.0**
	comp=Z,3.8nm,0.7s,baz=84,slow=5.5,SNR=13						
AKASG	**Malin Array Be**	**77.00**	**323**	P	**P**	**12 55 05.2**	**-0.3**
	comp=Z,2.3nm,0.4s,baz=48,slow=5.9,SNR=13						
AKBB	**Malin Array Si**	**77.00**	**323**	*e*P	**P**	**12 55 05.4**	**0.0**
	comp=Z,5.2nm,0.9s						
NB2	**NORSAR Subarra**	**77.54**	**337**	P	**P**	**12 55 08.0**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=42,slow=5.9						
NB200	**NORSAR Array S**	**77.54**	**337**	*e*P	**P**	**12 55 08.1**	**-0.3**
NOA	**NORSAR Array B**	**77.54**	**337**	P	**P**	**12 55 08.1**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=42,slow=5.5,SNR=4.6						
NVAR	**Mina Array Bea**	**77.89**	**52**	P	**P**	**12 55 12.0**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=297,slow=6.0,SNR=2.7						
PDAR	**Pinedale Array**	**80.90**	**45**	P	**P**	**12 55 28.9**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=318,slow=1.2,SNR=2.9						
BR101	**Keskin Array S**	**80.96**	**312**	*e*P	**P**	**12 55 27.6**	**0.0**
BR131	**Keskin Array S**	**80.96**	**312**	*e*P	**P**	**12 55 27.7**	**+0.1**
	comp=Z,4.4nm,1.0s						
BRTR	**Keskin Array B**	**80.96**	**312**	P	**P**	**12 55 27.6**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=137,slow=4.0,SNR=9.6						
BUR04	**Bucovina Ar. S**	**80.97**	**322**	*e*P	**P**	**12 55 27.0**	**-0.5**
VYHS	**Vyhne**	**83.57**	**325**	*e*P	**P**	**12 55 41.2**	**+0.4**
CLL	**Collm**	**84.16**	**330**	*i* P	**P**	**12 55 43.9**	**+0.2**
	comp=Z,9.0nm,0.8s						
CLL				*e*pP	**pP**	**12 56 01.0**	**-1.8**
GERES	**GERESS Array B**	**85.68**	**328**	P	**P**	**12 55 51.4**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=49,slow=3.1,SNR=4.4						
LTX	**Lajitas**	**93.04**	**52**	*e*P	**P**	**12 56 28.3**	**+1.6**
TXAR	**Lajitas Array**	**93.04**	**52**	P	**P**	**12 56 28.3**	**+1.6**
	comp=Z,0.9nm,0.6s,baz=301,slow=3.1,SNR=15						
TOA1	**Torodi Ar. Sit**	**119.56**	**313**	*e*PKPdf	**PKPdf**	**13 02 02.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**119.56**	**313**	PKP	**PKPdf**	**13 02 02.1**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=40,slow=2.5,SNR=5.4						
LPAZ	**La Paz**	**149.12**	**64**	*e*PKPbc	**PKPbc**	**13 03 02.6**	**+0.5**
LPAZ	**La Paz**	**149.12**	**64**	PKPbc	**PKPbc**	**13 03 02.3**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=301,slow=5.9,SNR=2.6						

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*DDA **05** 12:49:13.7, 38°.30N×42°.86E, h6^{km}±2^{km}, ML2.6*

*ISK **05** 12:49:13.3, 38°.41N×42°.84E, h8^{km}, ML2.2/5*

*ISCJB **05** 12:49:14.1±0.6, 38°.32N±0°.04×42°.84E±0°.04, h11^{km}±5^{km}, Error ellipse: s-maj=7.0km s-min=5.4km az=157.7*

ISC 05 12:49:13.9±0.9**, 38°.36N**±0°.04×**42°.85E**±0°.03**, h12**^{km}±8^{km}**, n10, σ0^s.75**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKDM	**Akdamar-Van**	**0.11**	**105**	PG	**Pg**	**12 49 16.6**	**-0.3**
AKDM				SG	**Sg**	**12 49 19.3**	**+0.1**
GEVA	**Gevas**	**0.17**	**105**	*i* P	**Pg**	**12 49 17.8**	**-0.1**
GEVA				*i* S	**Sg**	**12 49 20.9**	**+0.3**
GEVA				IAML_P			
	comp=Z,13µm,0.1s						
ADCV	**BITLIS_Adilcev**	**0.46**	**348**	*i* P	**Pb**	**12 49 24.5**	**+0.3**
ADCV				*i* S	**Sb**	**12 49 33.0**	**+1.9**
TVAN	**Van**	**0.47**	**68**	*i* P	**Pb**	**12 49 24.0**	**-0.3**
TVAN				*i* S	**Sb**	**12 49 31.1**	**-0.2**
TVAN				IAML_P			
	comp=Z,2µm,0.2s						
GURO	**Guroymak-BITLI**	**0.67**	**287**	PG	**Pg**	**12 49 26.5**	**-0.5**
GURO				SG	**Sg**	**12 49 35.7**	**-0.1**
SRTM	**Siirt_Merkez**	**0.82**	**244**	*i* P	**Pb**	**12 49 29.9**	**-0.2**
SRTM				*i* S	**Sb**	**12 49 41.3**	**+0.1**
SRTM				IAML_P			
	comp=Z,564nm,0.1s						
SIRT	**Sirnak**	**0.91**	**201**	PG	**Pb**	**12 49 32.0**	**+0.2**
TUTA	**Tutak**	**1.04**	**358**	*i* P	**Pn**	**12 49 34.5**	**-0.1**
TUTA				*i* S	**Sb**	**12 49 48.9**	**+1.0**
TUTA				IAML_P			
	comp=Z,467nm,0.2s						
AGRB	**Hanur-Agry**	**1.22**	**5**	PN	**Pg**	**12 49 36.1**	**-1.4**
TASB	**TASBURUN-IGDIR**	**1.95**	**33**	PN	**Pn**	**12 49 47.1**	**+0.1**

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*ISCJB **05** 12:50:09.8±0.7, 13°.1N±0°.1×143°.1E±0°.1, h200^{km}, mb3.3/8, Error ellipse: s-maj=20.8km s-min=12.9km az=155.1*

*IDC **05** 12:50:10.2±1.3, 13°.16N×143°.08E, h189^{km}±12^{km}, mb3.2/8, mb1 3.5/8, mb1mx3.2/34, mbtmp3.6/8, Error ellipse: s-maj=25.9km s-min=14.8km az=118.0*

ISC 05 12:50:11.2±0.8**, 13°.1N**±0°.2×**143°.2E**±0°.1**, h200**^{km}**, n9, σ0^s.93**/11**, mb3.4**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.72**	**74**	P	**Pn**	**12 50 47.0**	**+0.1**
	20nm,0.3s,baz=70,slow=2.0,SNR=11						
GUMO				S	**Sn**	**12 51 13.3**	**-1.4**
	53nm,0.3s,baz=139,slow=20,SNR=14						
WRA	**Warramunga Arr**	**33.99**	**195**	P	**P**	**12 56 35.2**	**-0.9**
	0.3nm,0.6s,baz=13,slow=9.4,SNR=5.7						
WRA				PcP	**PcP**	**12 59 10.3**	**+0.8**
	0.3nm,1.0s,baz=360,slow=3.2,SNR=3.2						
ASAR	**Alice Springs**	**37.67**	**194**	P	**P**	**12 57 07.8**	**+0.4**
	0.1nm,0.2s,baz=19,slow=12,SNR=3.0						
CMAR	**Chiang Mai Arr**	**42.80**	**283**	P	**P**	**12 57 48.8**	**-0.8**
	0.6nm,0.6s,baz=69,slow=5.9,SNR=4.5						
MKAR	**Makanchi Array**	**60.68**	**316**	P	**P**	**13 00 01.3**	**-0.1**
	0.2nm,0.6s,baz=88,slow=6.9,SNR=3.8						
ILAR	**Eielson Array**	**69.70**	**25**	P	**P**	**13 00 58.6**	**-0.3**
	1.1nm,0.6s,baz=251,slow=6.0,SNR=28						
YKA	**Yellowknife Ar**	**84.03**	**27**	P	**P**	**13 02 19.7**	**+0.7**
	0.5nm,0.6s,baz=286,slow=5.1,SNR=7.7						
NVAR	**Mina Array Bea**	**88.50**	**51**	P	**P**	**13 02 43.0**	**+1.4**
	1.0nm,0.7s,baz=255,slow=6.5,SNR=7.2						
PDAR	**Pinedale Array**	**93.47**	**45**	P	**P**	**13 03 04.7**	**+0.1**
	0.3nm,0.8s,baz=286,slow=6.5,SNR=2.6						

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*ISCJB **05** 13:13:47.0±0.3, 38°.91N±0°.03×99°.94E±0°.05, h8^{km}, mb3.9/16, Error ellipse: s-maj=6.0km s-min=3.6km az=139.3*

*IDC **05** 13:13:47.1±0.7, 38°.86N×99°.92E, h0^{km}, mb3.8/12, mb1 3.9/16, mb1mx3.8/41, mbtmp3.8/16, ML3.4/4, MS3.3/1, Ms1 3.3/1, ms1mx2.8/45, Error ellipse: s-maj=26.5km s-min=14.9km az=47.0*

*BJI **05** 13:13:50.3, 38°.95N×100°.05E, h15^{km}, mb4.3/13, ML4.1/16, Ms4.0/8, Ms7 3.8/8*

*NEIC **05** 13:13:51.5±1.5, 38°.91N×99°.93E, h28^{km}±12^{km}, mb4.1/12, Error ellipse: s-maj=5.8km s-min=4.2km az=58.0*

ISC 05 13:13:50.0±0.4**, 38°.98N**±0°.04×**99°.76E**±0°.05**, h8**^{km}**, n54, σ2^s.20**/63**, mb4.0**/16**, 1D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**0.43**	**6**	⇓Pg	**Pg**	**13 13 59.7**	**+1.2**
GTA				Sg	**Sg**	**13 14 06.8**	**+2.6**
GTA				smax	smax		
	comp=N,4µm,0.8s						
GTA				smax	smax		
	comp=E,6µm,0.9s						
LZH	**Lanzhou**	**4.34**	**130**	Pn	**Pn**	**13 14 56.2**	**-0.2**
LZH				Pg	**Pb**	**13 15 08.7**	**+2.1**
LZH				Sn	**Sn**	**13 15 42.9**	**-4.4**
LZH				Sg	**Sb**	**13 16 02.5**	**+3.2**
LZH				smax	smax		
	comp=N,880nm,1.2s						
LZH				smax	smax		
	comp=E,600nm,1.2s						
LZH				LR	LR		
	comp=N,2µm,4.9s						
LZH				LR	LR		
	comp=E,2µm,6.5s						
LZH				LR	LR		
	comp=Z,2µm,7.0s						
BTO	**Baotou**	**8.07**	**75**	*e*P	Pn	13 15 42.8	-4.7
BTO				S	**Sn**	**13 17 22.8**	**+3.9**
XAN	**Xi'an**	**8.87**	**121**	P	Pn	13 15 54.5	-4.0
XAN				S	**Sn**	**13 17 42.9**	**+4.3**
XAN				smax	smax		
	comp=N,29nm,1.2s						
XAN				smax	smax		
	comp=E,21nm,1.3s						
XAN	**Xi'an**	**8.87**	**121**	*e*Pn	Pn	13 15 54.7	-3.7
HHC	**Hu-ho-hao-te**	**9.26**	**75**	*e*P	**Pn**	**13 16 03.8**	**-0.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SONM	**Songino Array**	**10.08**	**26**	Pn	**Pn**	**13 16 15.3**	**+0.2**
	2.0nm,0.3s,baz=209,slow=14,SNR=19						
SONM				Sn	**Sn**	**13 18 03.9**	**-4.5**
	1.0nm,0.3s,baz=206,slow=20,SNR=3.8						
SONM				Lg	Lg	13 19 04.3	
	1.4nm,0.3s,baz=192,slow=27,SNR=3.8						
SONA1	**Songino Array**	**10.09**	**26**	*e*Pn	**Pn**	**13 16 15.6**	**+0.3**
WMQ	**Urumqi**	**10.27**	**302**	*e*P	**Pn**	**13 16 20.2**	**+2.5**
WMQ				sP		13 16 27.5	
WMQ				S	**Sn**	**13 18 19.3**	**+6.3**
WMQ				LR	LR		
	comp=N,2µm,10.3s						
WMQ				LR	LR		
	comp=E,2µm,11.1s						
WMQ				LR	LR		
	comp=Z,280nm,11.9s						
ULN	**Ulaanbaatar**	**10.34**	**28**	*e*Pn	**Pn**	**13 16 17.3**	**-1.4**
BJI	**Beijing**	**12.72**	**80**	*e*P	**Pn**	**13 16 50.8**	**-0.4**
TLY	**Talaya**	**12.99**	**11**	Lg	Lg	13 20 39.3	
	0.0nm,0.3s,baz=264,slow=19,SNR=1.4						
GYA	**Guiyang**	**13.76**	**153**	*e*P	Pn	13 17 01.2	-4.3
GYA				PP	**P**	**13 17 16.0**	**+1.8**
GYA				S	**Sn**	**13 19 38.5**	**-0.2**
GYA				SS	**SnSn**	**13 19 55.8**	**+4.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				LR	LR		
	comp=N,260nm,12.6s						
GYA				LR	LR		
	comp=E,180nm,12.3s						
GYA				LR	LR		
	comp=Z,250nm,14.8s						
KMI	**Kunming**	**14.04**	**169**	P	**Pn**	**13 17 09.8**	**+0.4**
KMI				PP	P	13 17 23.4	+6.0
KMI				S	**Sn**	**13 19 47.1**	**+1.5**
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				LR	LR		
	comp=N,190nm,8.5s						
KMI				LR	LR		
	comp=E,150nm,8.5s						
KMI				LR	LR		
	comp=Z,230nm,11.1s						
KMI	**Kunming**	**14.04**	**169**	*e*Pn	**Pn**	**13 17 08.6**	**-0.8**
SHL	**Shillong**	**14.93**	**209**	*e*Pn	**Pn**	**13 17 20.3**	**-1.3**
MK01	**Makanchi Array**	**14.96**	**307**	*e*Pn	**Pn**	**13 17 21.9**	**+0.2**
MK31	**Makanchi Array**	**14.98**	**307**	*e*Pn	**Pn**	**13 17 22.4**	**+0.4**
MKAR	**Makanchi Array**	**14.98**	**307**	*e*Pn	**Pn**	**13 17 22.3**	**+0.3**
	16nm,0.6s						
MKAR				Lg	Lg	13 21 47.0	
MKAR	**Makanchi Array**	**14.98**	**307**	Pn	**Pn**	**13 17 21.4**	**-0.5**
	0.1nm,0.3s,baz=111,slow=14,SNR=7.3						
MKAR				Lg	Lg	13 21 47.0	
	0.1nm,0.3s,baz=118,slow=30,SNR=3.1						
MKAR				LR	LR	13 22 59.0	
	comp=Z,124nm,19.8s,baz=312,slow=36						
MAKZ	**Makanchi**	**15.18**	**307**	*e*Pn	**Pn**	**13 17 25.4**	**+0.8**
	3.5nm,0.7s						
KDJ	**Kajisay**	**17.44**	**288**	*e*Pn	**Pn**	**13 17 54.8**	**+1.1**
	8.0nm,1.0s						
ZAA0	**Zalesovo Array**	**18.11**	**331**	*e*Pn	**Pn**	**13 18 03.2**	**+1.5**
	6.1nm,1.4s						
ZALV	**Zalesovo Beam**	**18.11**	**331**	*e*P	**Pn**	**13 18 02.6**	**+0.9**
ZALV				Lg	Lg	13 23 16.2	
ZALV	**Zalesovo Beam**	**18.11**	**331**	P	**Pn**	**13 18 02.1**	**+0.4**
	0.2nm,0.3s,baz=133,slow=11,SNR=6.4						
ZALV				Lg	Lg	13 23 16.2	
	0.1nm,0.3s,baz=132,slow=21,SNR=1.9						
KURK	**Kurchatov**	**18.96**	**315**	*e*P	**P**	**13 18 11.8**	**+0.4**
	6.0nm,0.8s						
KURK				PcP	**PcP**	**13 22 35.1**	**-1.7**
KURK				Lg	Lg	13 23 51.0	
KURBB	**Kurchatov Arra**	**18.96**	**315**	P	**P**	**13 18 12.1**	**+0.6**
	0.1nm,0.3s,baz=124,slow=11,SNR=12						
KURBB				PcP	**PcP**	**13 22 35.1**	**-1.7**
	0.0nm,0.3s,baz=113,slow=1.5,SNR=4.6						
KURBB				Lg	Lg	13 23 51.0	
	0.0nm,0.3s,baz=133,slow=32,SNR=4.5						
FRU1	**Bishkek**	**19.36**	**289**	*e*P	**P**	**13 18 16.0**	**+0.1**
	15nm,0.4s						
AAK	**Ala-Archa**	**19.45**	**289**	*e*P	**P**	**13 18 19.4**	**+2.3**
	4.1nm,1.1s						
AAK	**Ala-Archa**	**19.45**	**289**	P	**P**	**13 18 17.6**	**+0.5**
	0.1nm,0.3s,baz=87,slow=12,SNR=2.5						
CHTO	**Chiang Mai**	**20.11**	**182**	*e*P	**P**	**13 18 23.0**	**-1.2**
	12nm,1.3s						
CHTO	**Chiang Mai**	**20.11**	**182**	P	**P**	**13 18 23.9**	**-0.3**
	42nm,1.8s						
CMMT	**Chiang Mai**	**20.11**	**182**	P	**P**	**13 18 23.8**	**-0.4**
	7.6nm,1.4s						
CMAR	**Chiang Mai Arr**	**20.46**	**182**	P	**P**	**13 18 26.8**	**-1.3**
	3.2nm,0.7s,baz=354,slow=10,SNR=28						
CM01	**Chiang Mai Arr**	**20.50**	**182**	*e*P	**P**	**13 18 26.8**	**-1.7**
ARSB	**Arslanbob**	**20.58**	**285**	*e*P	**P**	**13 18 30.4**	**+1.1**
	34nm,1.4s						
UTTA	**Uttaradit**	**21.17**	**178**	P	**P**	**13 18 42.8**	**+7.1**
	1.6nm,0.8s						
KSAR	**Wonju Array Be**	**22.12**	**85**	P	**P**	**13 18 43.1**	**-2.7**
KSRS	**Korea Array**	**22.15**	**85**	P	**P**	**13 18 43.1**	**-3.0**
	1.5nm,0.7s,baz=284,slow=10,SNR=4.4						
PBKT	**Sadao Pong**	**22.35**	**177**	P	**P**	**13 18 49.0**	**+0.6**
	6.6nm,1.3s						
CHGR	**Chuyangaron**	**23.80**	**279**	*e*P	**P**	**13 19 03.5**	**+0.3**
	8.7nm,0.9s						
BVAR	**Borovoye Array**	**24.55**	**315**	P	**P**	**13 19 10.5**	**+0.4**
	1.9nm,0.4s,baz=107,slow=8.7,SNR=13						
BRVK	**Borovoye**	**24.63**	**315**	*e*P	**P**	**13 19 10.9**	**+0.2**
	4.4nm,0.7s						
ABKAR	**Akbulak array**	**30.06**	**303**	*e*P	**P**	**13 19 59.6**	**+0.2**
ARU	**Arti**	**32.14**	**317**	*e*P	**P**	**13 20 17.3**	**-0.4**
	8.6nm,1.1s						
FINES	**FINESS Array B**	**49.11**	**322**	P	**P**	**13 22 37.0**	**-0.6**
	1.8nm,0.7s,baz=97,slow=9.8,SNR=4.3						
AKASG	**Malin Array Be**	**49.56**	**308**	P	**P**	**13 22 39.9**	**-1.2**
	1.9nm,0.6s,baz=65,slow=7.5,SNR=7.3						
BRTR	**Keskin Array B**	**50.05**	**293**	P	**P**	**13 22 44.3**	**-1.0**
	1.1nm,0.6s,baz=84,slow=8.0,SNR=5.4						
NOA	**NORSAR Array B**	**56.16**	**324**	P	**P**	**13 23 29.0**	**-0.8**
	0.4nm,0.5s,baz=71,slow=7.2,SNR=2.8						
GERES	**GERESS Array B**	**59.62**	**310**	P	**P**	**13 23 54.3**	**-0.1**
	0.4nm,0.6s,baz=69,slow=8.7,SNR=3.0						
WRA	**Warramunga Arr**	**66.96**	**145**	P	**P**	**13 24 40.0**	**-3.1**
	1.0nm,0.6s,baz=342,slow=6.8,SNR=7.8						
ASAR	**Alice Springs**	**70.04**	**147**	P	**P**	**13 24 59.4**	**-2.9**
	0.4nm,0.6s,baz=337,slow=5.7,SNR=4.9						
YKA	**Yellowknife Ar**	**75.16**	**16**	P	**P**	**13 25 31.5**	**-0.9**
	0.4nm,0.9s,baz=333,slow=5.6,SNR=3.6						
ESDC	**Sonseca Array**	**75.19**	**309**	P	**P**	**13 25 32.6**	**-0.4**
	0.3nm,0.4s,baz=46,slow=4.8,SNR=3.4						

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*IDC **05** 13:25:06.6±0.9, 38°.86N×143°.74E, h0^{km}, mb3.6/9, mb1 3.8/12, mb1mx3.6/52, mbtmp3.7/12, ML2.8/3, Error ellipse: s-maj=23.9km s-min=17.0km az=104.0*

*JMA **05** 13:25:09.5±0.1, 39°.09N×143°.31E, h21^{km}±3^{km}, M3.9*

ISC 05 13:25:07.3±2.2**, 39°.01N**±0°.04×**143°.33E**±0°.06**, h3**^{km}±13^{km}**, n33, σ1^s.71**/38**, mb3.8**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**1.29**	**274**	P	**Pg**	**13 25 32.2**	**+0.1**
OFUJ				*e*S	**Sn**	**13 25 48.7**	**-1.4**
MIYJ	**Miyakonagasawa**	**1.30**	**296**	P	**Pb**	**13 25 32.0**	**-0.4**
MIYJ				*e*S	**Sb**	**13 25 48.1**	**-1.4**
JTH	**Tanohata**	**1.47**	**310**	P	**Pn**	**13 25 34.1**	**-0.5**
JTH				*e*S	**Sn**	**13 25 52.2**	**-2.1**
JIO	**Ouri**	**1.65**	**251**	P	**Pb**	**13 25 37.7**	**-0.5**
JIO				*e*S	**Sb**	**13 25 58.1**	**-1.3**
JMK	**Ichinoseki**	**1.65**	**269**	P	**Pb**	**13 25 37.9**	**-0.3**
JMK				*e*S	**Sb**	**13 25 58.2**	**-1.2**
JOM	**Ohasama**	**1.65**	**287**	P	**Pb**	**13 25 37.5**	**-0.8**
JOM				*e*S	**Sn**	**13 25 57.4**	**-1.4**
JANG	**Nango**	**1.95**	**315**	P	**Pn**	**13 25 40.5**	**-0.8**
JRG	**Rokugo**	**2.13**	**281**	P	**Pb**	**13 25 45.0**	**-1.5**
JRG				*e*S	**Sn**	**13 26 10.5**	**-0.2**
JOU	**Okura**	**2.18**	**254**	P	**Pb**	**13 25 46.4**	**-1.0**
JMM	**Marumori**	**2.30**	**241**	P	**Pb**	**13 25 47.2**	**-2.1**
JMM				*e*S	**Sn**	**13 26 14.5**	**-0.3**
JYK	**Kaneyama**	**2.32**	**269**	P	**Pb**	**13 25 48.2**	**-1.5**
JAH	**Hinai**	**2.39**	**300**	P	**Pn**	**13 25 47.9**	**+0.6**
JAH				*e*S	**Sn**	**13 26 16.9**	**-0.2**
JTM	**Tenmabayashi**	**2.48**	**316**	P	**Pn**	**13 25 49.4**	**+0.8**
JFT	**Otama**	**2.79**	**239**	P	**Pn**	**13 25 54.6**	**+1.8**
MJAR	**Matsushiro Arr**	**4.75**	**240**	Pn	**Pn**	**13 26 22.9**	**+3.2**
	0.3nm,0.3s,baz=44,slow=11,SNR=18						
MJAR				Sn	**Sb**	**13 27 27.6**	**-1.0**
	baz=188,slow=28,SNR=1.2						
ASAJ	**Asahikawa**	**5.13**	**354**	Pn	**Pn**	**13 26 24.9**	**-0.1**
	1.9nm,0.3s,baz=191,slow=10,SNR=23						
ASAJ				Sn	**Sn**	**13 27 21.8**	**-3.0**
	0.6nm,0.3s,baz=24,slow=23,SNR=1.3						
JHJ	**Hachijo jima 2**	**6.54**	**207**	Pn	**Pn**	**13 26 43.7**	**-0.7**
	6.2nm,0.3s,baz=62,slow=23,SNR=1.8						
JHJ				Sn	**Sn**	**13 27 55.0**	**-4.5**
	8.5nm,0.3s,baz=54,slow=22,SNR=1.2						
USRK	**Ussuriysk Ar.**	**9.95**	**305**	Pn	Pn	13 27 35.6	+4.6
	0.1nm,0.3s,baz=115,slow=16,SNR=2.6						
SEY	**Seymchan**	**24.57**	**10**	P	**P**	**13 30 29.4**	**+1.2**
	0.7nm,0.3s,baz=189,slow=12,SNR=6.1						
H11N2	**WAKE ISLAND Hy**	**27.98**	**127**	T	T	14 00 16.2	
	baz=319,slow=74,SNR=23						
H11N1	**WAKE ISLAND Hy**	**27.99**	**127**	T	T	14 00 14.7	
	baz=319,slow=74,SNR=19						
H11N3	**WAKE ISLAND Hy**	**28.00**	**127**	T	T	14 00 15.8	
	baz=319,slow=74,SNR=21						
SONM	**Songino Array**	**28.01**	**300**	P	**P**	**13 31 01.7**	**+2.1**
	0.7nm,0.4s,baz=76,slow=7.6,SNR=2.4						
H11S1	**WAKE ISLAND Hy**	**28.78**	**129**	T	T	14 01 21.3	
	baz=321						
H11S3	**WAKE ISLAND Hy**	**28.79**	**129**	T	T	14 01 14.8	
	baz=321						
H11S2	**WAKE ISLAND Hy**	**28.80**	**129**	T	T	14 01 20.9	
	baz=321						
ZALV	**Zalesovo Beam**	**41.74**	**311**	P	**P**	**13 33 01.0**	**+3.7**
	0.7nm,0.4s,baz=92,slow=6.3,SNR=3.2						
MKAR	**Makanchi Array**	**44.38**	**301**	P	**P**	**13 33 20.3**	**+1.4**
	1.2nm,0.8s,baz=88,slow=9.0,SNR=3.8						
ILAR	**Eielson Array**	**47.02**	**33**	P	**P**	**13 33 38.9**	**-0.6**
	0.4nm,0.7s,baz=261,slow=6.5,SNR=8.2						
WRA	**Warramunga Arr**	**59.24**	**190**	P	**P**	**13 35 09.9**	**-0.1**
	1.0nm,0.5s,baz=8.2,slow=7.0,SNR=17						
YKA	**Yellowknife Ar**	**61.34**	**31**	P	**P**	**13 35 22.9**	**-0.9**
	0.1nm,0.6s,baz=301,slow=6.1,SNR=2.9						
ASAR	**Alice Springs**	**62.97**	**190**	P	**P**	**13 35 33.5**	**-1.7**
	0.5nm,0.7s,baz=25,slow=7.3,SNR=5.8						
FINES	**FINESS Array B**	**67.77**	**333**	P	**P**	**13 36 07.5**	**+1.6**
	2.0nm,0.9s,baz=76,slow=5.9,SNR=2.6						

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*IDC **05** 13:26:29.2±1.6, 10°.92S×165°.24E, h0^{km}, mb3.9/4, mb1 4.1/6, mb1mx3.8/47, mbtmp4.0/6, ML4.2/2, MS3.6/6, Ms1 3.6/6, ms1mx3.3/29, Error ellipse: s-maj=39.2km s-min=28.1km az=124.0*

*ISCJB **05** 13:26:32.0±1.2, 11°.16S±0°.09×165°.3E±0°.1, h31^{km}, mb4.0/7, MS3.6/4, Error ellipse: s-maj=19.6km s-min=8.6km az=144.9*

*NEIC **05** 13:26:32.8±3.3, 10°.99S×165°.25E, h23^{km}±23^{km}, mb4.2/4, Error ellipse: s-maj=17.0km s-min=10.3km az=225.0*

ISC 05 13:26:34.5±1.4**, 11°.1S**±0°.1×**165°.1E**±0°.1**, h31**^{km}**, n24, σ2^s.31**/19**, mb3.8**/7**, MS3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.33**	**288**	*e*P	Pn	13 27 58.0	+6.0
HNR				*e*S	**Sb**	**13 29 04.0**	**-6.6**
HNR	**Honiara**	**5.33**	**288**	Pn	**Pn**	**13 27 52.5**	**+0.5**
	15nm,0.3s,baz=141,slow=16,SNR=5.3						
HNR				Sn	**Sn**	**13 28 57.8**	**+5.3**
	12nm,0.3s,baz=250,slow=16,SNR=1.7						
HNR				LR	LR	13 30 15.8	
	comp=Z,1µm,18.3s,baz=170,slow=42						
DZM	**Mont Dzumac**	**11.00**	**173**	*e*Pn	**Pn**	**13 29 10.4**	**+0.5**
	5.4nm,0.2s						
DZM				*e*LR	LR	13 31 42.4	
	comp=Z,332nm,22.9s						
DZM	**Mont Dzumac**	**11.00**	**173**	*e*Pn	**Pn**	**13 29 09.7**	**-0.3**
DZM				Sn	**Sn**	**13 31 10.5**	**-1.4**
DZM	**Mont Dzumac**	**11.00**	**173**	Pn	**Pn**	**13 29 10.0**	**+0.1**
	0.7nm,0.3s,baz=13,slow=18,SNR=29						
DZM				Sn	**Sn**	**13 31 10.5**	**-1.4**
	0.1nm,0.3s,baz=14,slow=7.5,SNR=1.4						
DZM				LR	LR	13 32 40.4	
	comp=Z,192nm,21.0s,baz=24,slow=33						
PINNC	**Pines Island,**	**11.68**	**169**	*e*Pn	**Pn**	**13 29 19.2**	**+0.1**
H11S2	**WAKE ISLAND Hy**	**29.43**	**3**	T	T	14 03 05.8	
	baz=184,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**29.44**	**3**	T	T	14 03 13.8	
	baz=184,slow=76,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**29.45**	**3**	T	T	14 03 06.1	
	baz=184,slow=76,SNR=9.1						
STKA	**Stephens Creek**	**29.98**	**223**	*e*P	**P**	**13 32 41.7**	**+1.3**
	2.1nm,1.5s						
STKA	**Stephens Creek**	**29.98**	**223**	P	**P**	**13 32 41.5**	**+1.2**
	0.6nm,0.6s,baz=50,slow=7.9,SNR=2.4						
STKA				LR	LR	13 43 41.3	
	comp=Z,116nm,18.8s,baz=25,slow=34						
H11N1	**WAKE ISLAND Hy**	**30.66**	**3**	T	T	14 04 38.2	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**30.66**	**3**	T	T	14 04 43.0	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.68**	**3**	T	T	14 04 39.3	
	baz=182						
WRAB	**Tennant Creek**	**30.86**	**250**	*e*P	**P**	**13 32 49.1**	**+0.7**
	19nm,1.8s						
WB2	**Warramunga Arr**	**30.86**	**250**	*e*P	**P**	**13 32 49.5**	**+1.2**
WR1	**Warramunga Arr**	**30.87**	**250**	*e*P	**P**	**13 32 49.3**	**+0.9**
	16nm,1.6s						
WRA	**Warramunga Arr**	**30.87**	**250**	P	**P**	**13 32 49.3**	**+0.9**
	1.4nm,0.9s,baz=78,slow=9.0,SNR=6.5						
WRA				LR	LR	13 45 53.5	
	comp=Z,122nm,18.2s,baz=80,slow=38						
AS01	**Alice Springs**	**32.17**	**243**	*e*P	**P**	**13 33 00.5**	**+0.7**
AS31	**Alice Springs**	**32.21**	**243**	*e*P	**P**	**13 33 00.2**	**+0.1**
	1.4nm,1.0s						
ASAR	**Alice Springs**	**32.21**	**243**	P	**P**	**13 33 00.4**	**+0.2**
	3.7nm,1.0s,baz=69,slow=9.6,SNR=24						
ASAR				LR	LR	13 44 24.4	
	comp=Z,93nm,21.1s,baz=72,slow=33						
PPT2	**Papeete2**	**44.30**	**104**	*e*LR	LR	13 47 07.8	
	comp=Z,79nm,21.8s						
PETK	**Petropavlovsk-**	**64.25**	**355**	LR	LR	14 00 55.0	
	comp=Z,60nm,18.6s,baz=331,slow=32						
ILAR	**Eielson Array**	**83.75**	**19**	P	**P**	**13 38 58.9**	**-1.3**
	0.3nm,0.5s,baz=241,slow=5.3,SNR=7.7						

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*ISCJB **05** 13:29:08.0±1.1, 36°.31N±0°.06×26°.54E±0°.05, h120^{km}±11^{km}, Error ellipse: s-maj=10.9km s-min=5.4km az=155.5*

*ATH **05** 13:29:07.6, 36°.31N×26°.49E, h128^{km}±5^{km}, ML3.1/1, Error ellipse: s-maj=6.5km s-min=2.6km az=36.0*

*THE **05** 13:29:09.8, 36°.35N×26°.49E, h127^{km}±8^{km}, ML2.7/5, Error ellipse: s-maj=8.1km s-min=1.3km az=151.0*

ISC 05 13:29:07.0±2.0**, 36°.36N**±0°.06×**26°.53E**±0°.05**, h130**^{km}±15^{km}**, n18, σ1^s.69**/29**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANAF	**Anafi Island**	**0.61**	**270**	P	**Pn**	**13 29 27.8**	**+1.1**
AMGA	**Amorgos Island**	**0.70**	**313**	P	**Pn**	**13 29 28.1**	**+0.8**
AMGA				S	**Sn**	**13 29 42.9**	**+0.2**
AMGA	**Amorgos Island**	**0.70**	**313**	P	**Pn**	**13 29 27.5**	**+0.2**
KARP	**Karpathos**	**0.96**	**147**	P	**Pn**	**13 29 30.4**	**+0.9**
KARP				S	**Sn**	**13 29 46.5**	**0.0**
KARP	**Karpathos**	**0.96**	**147**	P	**Pn**	**13 29 30.4**	**+0.9**
KARP				S	**Sn**	**13 29 46.1**	**-0.5**
ARG	**Arkhangelos**	**1.30**	**96**	P	**Pn**	**13 29 33.9**	**+1.1**
ARG	**Arkhangelos**	**1.30**	**96**	P	**Pn**	**13 29 33.6**	**+0.8**
ARG				S	**Sn**	**13 29 52.2**	**-0.2**
NPS	**Neapolis**	**1.32**	**215**	P	**Pn**	**13 29 33.7**	**+0.6**
NPS				S	**Sn**	**13 29 52.1**	**-0.9**
NPS				AML	AML	13 29 53.4	
	comp=N,576µm,0.2s						
NPS				AML	AML	13 29 53.8	
	comp=E,999µm,0.3s						
NPS	**Neapolis**	**1.32**	**215**	P	**Pn**	**13 29 33.7**	**+0.6**
NPS				S	**Sn**	**13 29 51.6**	**-1.4**
LAST	**Lasithi**	**1.47**	**216**	P	**Pn**	**13 29 35.2**	**+0.4**
LAST	**Lasithi**	**1.47**	**216**	P	**Pn**	**13 29 35.4**	**+0.6**
LAST				S	**Sn**	**13 29 55.2**	**-0.7**
IDI	**Anoyia**	**1.71**	**232**	P	**Pn**	**13 29 37.5**	**0.0**
TURN	**Turunc**	**1.75**	**72**	*i* P	**Pn**	**13 29 35.4**	**-2.4**
TURN				*i* S	**Sn**	**13 29 55.0**	**-6.4**
TURN				IAML_P			

	comp=Z,257nm,0.1s						
DALY	Dalyan (Mula)	1.77	74	iP	Pn	13 29 40.5	+2.4
DALY				iS	Sn	13 30 03.6	+1.7
DALY				IAML_P			
	comp=Z,647nm,0.2s						
FETY	Fethiye	2.08	82	iP	Pn	13 29 43.1	+1.2
FETY				iS	Sn	13 30 07.9	-0.7
FETY				IAML_P			
	comp=Z,157nm,0.1s						
VAM	Vamos	2.12	244	P	Pn	13 29 43.2	+0.8
TAVA	DENIZLI_Tavas	2.21	59	iP	Pn	13 29 45.3	+1.7
TAVA				iS	Sn	13 30 11.3	-0.3
TAVA				IAML_P			
	comp=Z,157nm,0.1s						
IMMV	Iera Moni Meta	2.25	247	P	Pn	13 29 44.6	+0.5

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*NIED **05** 13:31:00, 38°.70N×142°.20E, h44^{km}, Mw4.5 Best double couple: $M_0$7.21000×10^{15} NP1:ϕ_s198.00000°, δ26.00000°, λ79.00000°. NP2:ϕ_s31.00000°, δ64.00000°, λ96.00000°.*
*BJI **05** 13:31:01.2, 38°.59N×142°.03E, h50^{km}, mB5.1/34, mb4.8/56, Ms4.5/23, Ms7 4.2/20*
*JMA **05** 13:31:02.2±0.1, 38°.66N×142°.16E, h42^{km}±1^{km}, M4.6*
JMA Felt III J1.
*ISCJB **05** 13:31:02.1±0.4, 38°.65N±0°.02×142°.09E±0°.04, h52^{km}±2^{km}, mb4.6/94, MS4.1/12, Error ellipse: s-maj=5.5km s-min=3.6km az=25.4*
*NEIC **05** 13:31:03.8±0.4, 38°.68N×142°.03E, h53^{km}±3^{km}, mb4.7/44, Error ellipse: s-maj=4.8km s-min=3.7km az=127.0*
NEIC Recorded [3 JMA] in Miyagi.
*IDC **05** 13:31:03.7±1.6, 38°.65N×142°.10E, h51^{km}±14^{km}, mb4.2/30, mb1 4.3/39, mb1mx4.3/52, mbtmp4.5/39, ML4.0/8, MS3.6/13, Ms1 3.6/13, ms1mx3.4/38, Error ellipse: s-maj=12.8km s-min=9.2km az=111.0*
ISC 05 13:31:03.2±0.7, **38°.66N**±0°.04×**142°.11E**±0°.05, **h47**^{km}±5^{km}, **n235**, σ1^{s}**32**/253, **mb4.7**/109, **MS4.2**/12, **11C-24D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKMT	Kesennumamotoy	0.52	287	P	Pn	13 31 13.8	-0.7
JKMT				S	Sn	13 31 21.7	-0.9
OFUJ	Ofunato	0.54	320	⇓P	Pn	13 31 14.0	-0.8
OFUJ				eS	Sn	13 31 22.1	-1.0
JIKH	Ishinomakikobu	0.62	236	P	Pn	13 31 14.9	-0.8
JIKH				S	Sn	13 31 23.6	-1.2
JIO	Ouri	0.64	251	⇓P	Pn	13 31 15.1	-0.9
JIO				S	Sn	13 31 23.9	-1.2
JMK	Ichinoseki	0.76	293	⇓P	Pn	13 31 17.1	-0.4
JMK				S	Sn	13 31 27.6	-0.4
JOM	Ohasama	1.03	322	⇓P	Pn	13 31 21.0	-0.3
JOU	Okura	1.18	256	⇓P	Pn	13 31 23.0	-0.2
JOU				S	Sn	13 31 38.4	+0.3
JTH	Tanohata	1.29	351	⇓P	Pn	13 31 23.9	-0.9
JTH				eS	Sn	13 31 40.2	-0.7
JMM	Marumori	1.31	233	⇓P	Pn	13 31 24.3	-0.7
JMM				S	Sn	13 31 40.4	-0.9
JRG	Rokugo	1.37	303	⇓P	Pn	13 31 25.8	0.0
JRG				S	Sn	13 31 43.1	+0.3
JYK	Kaneyama	1.40	281	⇓P	Pn	13 31 26.3	+0.1
ERM	Erimo	3.44	13	ePn	Pn	13 31 54.6	+0.3
MJAR	Matsushiro Arr	3.75	237	P	Pn	13 32 00.2	+1.6
	9.7nm,0.3s,baz=37,slow=13,SNR=173						
MJAR				S	Sn	13 32 54.4	+13
	6.0nm,0.3s,baz=49,slow=22,SNR=5.1						
MJAR				LR	LR	13 33 37.8	
	comp=Z,931nm,18.4s,baz=40,slow=41						
MAJO	Matsushiro	3.75	237	ePn	Pn	13 32 00.1	+1.4
MAT	Matsushiro	3.75	237	P	Pn	13 32 00.2	+1.6
MAT				eS	Sn	13 32 50.1	+8.5
MJB9	Matsu-Tunnel	3.75	237	ePn	Pn	13 32 00.2	+1.6
INU	Inuyama	5.25	233	ePn	Pn	13 32 21.0	+1.9
ASAJ	Asahikawa	5.46	4	P	Pn	13 32 21.9	-0.1
	4.3nm,0.3s,baz=204,slow=14,SNR=25						
ASAJ				S	Sn	13 33 25.1	+1.6
	7.1nm,0.3s,baz=25,slow=24,SNR=4.1						
ASAJ				Lg	Lg	13 33 46.8	
	4.4nm,0.3s,baz=126,slow=31,SNR=6.4						
JHJ2	Mitsune	5.84	199	ePn	Pn	13 32 26.9	-0.3
JHJ	Hachijo jima 2	5.85	200	P	Pn	13 32 26.3	-1.0
	74nm,0.3s,baz=287,slow=17,SNR=14						
JHJ				S	Sn	13 33 28.0	-5.0
	64nm,0.3s,baz=210,slow=23,SNR=6.5						
JHJ				LR	LR	13 34 33.8	
	comp=Z,234nm,19.6s,baz=37,slow=36						
YSS	Yuzh-Sakhalins	8.30	3	ePn	Pn	13 32 59.5	-1.3
USA0B	Ussuriysk Arra	9.40	309	ePn	Pn	13 33 17.1	+1.2
USRK	Ussuriysk Ar.	9.40	309	P	Pn	13 33 17.5	+1.5
	1.9nm,0.3s,baz=100,slow=17,SNR=84						
USRK				LR	LR	13 36 44.5	
	comp=Z,496nm,19.0s,baz=151,slow=36						
JNU	Nakatsue	10.66	242	ePn	Pn	13 33 34.4	+1.2
JNU	Nakatsue	10.66	242	P	Pn	13 33 34.8	+1.6
	1.0nm,0.3s,baz=70,slow=7.8,SNR=12						
JNU				LR	LR	13 37 57.9	
	comp=Z,488nm,20.4s,baz=4.0,slow=39						
MDJ	Mudanjiang	11.09	306	P	Pn	13 33 42.0	+2.9
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,500nm,4.4s						
MDJ	Mudanjiang	11.09	306	ePn	Pn	13 33 38.0	-1.0
KSRS	Korea Array	11.26	268	P	Pn	13 33 42.4	+1.1
	1.1nm,0.3s,baz=81,slow=14,SNR=30						
KSRS				LR	LR	13 37 40.6	
	comp=Z,384nm,20.8s,baz=48,slow=35						
KS01	Wonju Array Si	11.27	268	ePn	Pn	13 33 39.1	-2.5
KSAR	Wonju Array Be	11.29	268	P	Pn	13 33 42.4	+0.7
CBIJ	Chichi jima	11.54	180	P	Pn	13 33 45.6	+0.4
JCJ	Chichijima	11.54	180	P	Pn	13 33 45.6	+0.4
	3.2nm,0.3s,baz=266,slow=20,SNR=2.5						
JCJ				LR	LR	13 40 14.6	
	comp=Z,45nm,19.8s,baz=316,slow=48						
KLR	Kul'dur	12.92	328	P	Pn	13 34 04.0	0.0
	0.2nm,0.3s,baz=138,slow=13,SNR=11						
KLR				LR	LR	13 38 59.1	
	comp=Z,456nm,19.7s,baz=146,slow=37						
CN2	Changchun	13.55	298	eP	Pn	13 34 13.7	+1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DL2	Dalian	15.98	277	P	P	13 34 46.6	-0.9
DL2				pP	pP	13 34 57.7	-0.7
DL2				eS	Sn	13 37 42.1	+1.4
DL2				pmax	pmax		
	comp=Z,40nm,1.1s						
DL2				LR	LR		
	comp=N,400nm,13.2s						
DL2				LR	LR		
	comp=E,330nm,11.8s						
DL2				LR	LR		
	comp=Z,400nm,16.7s						
PETK	Petropavlovsk-	18.01	32	P	P	13 35 10.4	+0.6
	0.1nm,0.3s,baz=238,slow=8.3,SNR=3.4						
PETK				LR	LR	13 41 45.5	
	comp=Z,120nm,21.6s,baz=252,slow=36						
SSE	Sheshan	18.73	253	eP	P	13 35 18.0	+0.1
	40nm,1.0s						
HIA	Hailar	19.21	311	eP	P	13 35 22.9	-0.1
	12nm,0.6s						
TIA	Tai'an	19.98	271	P	P	13 35 30.5	-1.0
TIA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NJ2	Nanjing	20.06	258	eP	P	13 35 32.3	-0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
BJI	Beijing	20.09	282	P	P	13 35 31.7	-1.0
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJT	Baijiatuau	20.09	282	eP	P	13 35 31.4	-1.4
	19nm,1.1s						
MA2	Magadan	21.65	12	P	P	13 35 49.1	-0.2
	13nm,0.8s,baz=195,slow=10,SNR=7.1						
MA2				LR	LR	13 44 45.8	
	comp=Z,112nm,18.1s,baz=342,slow=38						
HHC	Hu-ho-hao-te	23.53	285	eP	P	13 36 08.2	-1.0
HHC				S	S	13 40 14.4	-5.3
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,400nm,5.2s						
HHC				LR	LR		
	comp=N,330nm,10.4s						
HHC				LR	LR		
	comp=E,550nm,12.1s						
HHC				LR	LR		
	comp=Z,590nm,16.9s						
TWG	Pinlang	23.92	235	eP	P	13 36 11.1	-1.7
	155nm,1.1s						
SEY	Seymchan	25.09	11	P	P	13 36 24.1	+1.1
	16nm,0.9s,baz=200,slow=6.7,SNR=36						
ULN	Ulaanbaatar	26.94	301	eP	P	13 36 39.0	-1.1
	4.6nm,0.6s						
XAN	Xi'an	27.04	270	P	P	13 36 39.4	-1.6
XAN				pP	pP	13 36 50.7	-2.6
XAN				sP	sP	13 36 56.6	-2.3
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,290nm,6.9s						
XAN	Xi'an	27.04	270	eP	P	13 36 38.0	-3.1
	8.4nm,0.6s						
SONA1	Songino Array	27.37	301	eP	P	13 36 42.7	-1.3
SONM	Songino Array	27.38	301	P	P	13 36 44.1	+0.1
	2.0nm,0.5s,baz=106,slow=10,SNR=6.9						
SONM				LR	LR	13 47 19.8	
	comp=Z,161nm,20.6s,baz=186,slow=36						
ENH	Enshi	28.06	263	eP	P	13 36 47.5	-2.7
	32nm,0.7s						
H11N2	WAKE ISLAND Hy	28.55	124	T	T	14 07 16.0	
	baz=317,slow=75,SNR=505						
H11N1	WAKE ISLAND Hy	28.56	124	T	T	14 07 16.6	
	baz=317,slow=75,SNR=543						
H11N3	WAKE ISLAND Hy	28.57	124	T	T	14 07 17.1	
	baz=317,slow=75,SNR=595						
H11S1	WAKE ISLAND Hy	29.33	126	T	T	14 08 21.0	
	baz=318,slow=76,SNR=54						
H11S3	WAKE ISLAND Hy	29.33	126	T	T	14 08 19.1	
	baz=318,slow=76,SNR=90						
H11S2	WAKE ISLAND Hy	29.34	126	T	T	14 08 22.2	
	baz=318,slow=76,SNR=41						
TLY	Talaya	29.72	309	LR	LR	13 49 38.5	
	comp=Z,542nm,18.1s,baz=79,slow=38						
LZH	Lanzhou	30.38	277	eP	P	13 37 10.8	0.0
LZH				pP	pP	13 37 24.1	+0.9
LZH				sP	sP	13 37 30.3	+1.5
LZH				ePP	PnPn	13 38 11.0	+0.6
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,86nm,4.9s						
LZH				LR	LR		
	comp=N,400nm,13.0s						
LZH				LR	LR		
	comp=E,400nm,13.4s						
LZH				LR	LR		
	comp=Z,650nm,16.5s						
GYA	Guiyang	32.07	258	⇓iP	P	13 37 25.1	-0.6
GYA				pP	pP	13 37 40.4	+2.3
GYA				sP	sP	13 37 46.2	+2.5
GYA				PP	PnPn	13 38 34.0	+1.6
GYA				S	S	13 42 32.6	-2.1
GYA				sS	sS	13 42 53.0	-2.3
GYA				SS	SnSn	13 44 27.4	-0.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,560nm,16.9s						
GYA				LR	LR		
	comp=E,500nm,17.3s						
GYA				LR	LR		
	comp=Z,520nm,17.0s						
CD2	Chengdu	32.26	268	eP	P	13 37 26.0	-1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
BILL	Bilibino	32.31	17	eP	P	13 37 27.4	+0.1
	5.9nm,1.0s						
GTA	Gaotai	32.65	285	eP	P	13 37 30.8	+0.1
GTA				PcP	PcP	13 40 16.8	+1.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,160nm,4.9s						
GTA				LR	LR		
	comp=N,350nm,17.5s						
GTA				LR	LR		
	comp=E,300nm,18.4s						
GTA				LR	LR		
	comp=Z,330nm,17.5s						
TIXI	Tiksi	33.75	352	eP	P	13 37 36.6	-3.1
	3.2nm,0.6s						
TIXI	Tiksi	33.75	352	P	P	13 37 38.8	-1.0
	3.7nm,0.6s,baz=138,slow=5.3,SNR=11						
QIZ	Qiongzhong	34.12	244	P	P	13 37 43.5	-0.1
QIZ				LR	LR		
	comp=N,130nm,15.3s						
QIZ				LR	LR		
	comp=E,190nm,15.5s						
KMI	Kunming	35.78	260	P	P	13 37 57.8	-0.3
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,94nm,5.4s						
NONG	Nongkai	39.57	250	P	P	13 38 31.3	+1.4
	0.2nm,0.9s						
WMQ	Urumqi	40.62	295	P	P	13 38 39.4	+0.9
WMQ				sP	sP	13 38 58.3	+1.6
WMQ				pmax	pmax		
	comp=Z,63nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,1µm,7.7s						
WMQ				LR	LR		
	comp=N,470nm,12.9s						
WMQ				LR	LR		
	comp=E,400nm,17.1s						
WMQ				LR	LR		
	comp=Z,410nm,18.3s						
WMQ	Urumqi	40.62	295	eP	P	13 38 37.0	-1.5
	24nm,0.8s						
JAY	Jayapura	40.99	182	LR	LR	13 55 32.4	
	comp=Z,63nm,18.9s,baz=358,slow=36						
ZAA0	Zalesovo Array	41.25	311	eP	P	13 38 42.5	-0.8
	9.1nm,0.6s						
ZALV	Zalesovo Beam	41.25	311	eP	P	13 38 42.1	-1.2
ZALV				PcP	PcP	13 40 41.2	-0.1
ZALV	Zalesovo Beam	41.25	311	P	P	13 38 43.6	+0.2
	7.9nm,0.5s,baz=89,slow=7.9,SNR=36						
ZALV				PcP	PcP	13 40 41.2	-0.1
	3.7nm,0.6s,baz=84,slow=2.9,SNR=4.7						
UTTA	Uttaradit	41.69	252	P	P	13 38 51.6	+4.2
	2.0nm,0.8s						
CHAI	Chaiyaphum	41.81	248	P	P	13 38 48.7	+0.3
	4.2nm,0.7s						
NRIK	Noril'sk	42.03	334	P	P	13 38 49.5	-0.1
	2.7nm,0.3s,baz=120,slow=6.3,SNR=5.1						
PBKT	Sadao Pong	42.12	250	eP	P	13 38 50.5	-0.4
PBKT	Sadao Pong	42.12	250	P	P	13 38 51.9	+1.0
	7.4nm,1.1s						
CMMT	Chiang Mai	42.24	255	P	P	13 38 54.6	+2.7
	7.4nm,0.6s						
CHTO	Chiang Mai	42.24	255	eP	P	13 38 50.2	-1.7
	5.7nm,0.6s						
CHTO	Chiang Mai	42.24	255	P	P	13 38 54.7	+2.8
	32nm,0.7s						
CMAR	Chiang Mai Arr	42.46	254	P	P	13 38 53.5	-0.1
	1.4nm,0.6s,baz=46,slow=8.0,SNR=9.3						
CMAR				PcP	PcP	13 40 46.7	+0.7
	0.5nm,0.5s,baz=36,slow=2.9,SNR=3.3						
CM01	Chiang Mai Arr	42.47	254	eP	P	13 38 52.3	-1.4
LSA	Lhasa	42.63	274	eP	P	13 38 53.4	-2.2
	9.4nm,0.9s						
SRAK	Srakaew	43.01	246	P	P	13 39 04.0	+5.8
	26nm,0.9s						
SANI	Sanana	43.16	204	P	P	13 39 00.1	+0.9
MK01	Makanchi Array	43.74	301	eP	P	13 39 03.5	-0.3
MK31	Makanchi Array	43.74	301	eP	P	13 39 03.4	-0.3
MKAR	Makanchi Array	43.74	301	eP	P	13 39 03.6	-0.2
	74nm,0.7s						
MKAR				PcP	PcP	13 40 49.8	-0.1
MKAR	Makanchi Array	43.74	301	P	P	13 39 03.9	+0.1
	9.9nm,0.7s,baz=84,slow=8.7,SNR=68						
MKAR				PcP	PcP	13 40 49.8	-0.1
	1.4nm,0.7s,baz=96,slow=1.4,SNR=2.3						
UTHA	Uthaitani	43.89	250	P	P	13 39 08.4	+3.2
	3.0nm,0.9s,76nm						
MAKZ	Makanchi	43.95	301	eP	P	13 39 05.4	0.0
	11nm,0.8s						
KURK	Kurchatov	45.38	307	eP	P	13 39 16.4	-0.3
	34nm,0.6s						
KURK				PcP	PcP	13 40 55.6	+0.2
KURBB	Kurchatov Arra	45.45	307	P	P	13 39 17.2	-0.1
	32nm,0.6s,baz=82,slow=8.2,SNR=215						
KURBB				PcP	PcP	13 40 55.6	0.0
	2.3nm,0.6s,baz=82,slow=3.6,SNR=4.4						
PHET	Kaeng Krachan	45.49	247	P	P	13 39 20.2	+2.2
	6.9nm,0.6s,168nm						
KDAK	Kodiak Island	45.52	43	P	P	13 39 17.7	0.0
	3.0nm,0.7s,baz=270,slow=10,SNR=2.9						
MLY	Manley	46.18	33	eP	P	13 39 24.1	+1.2
	7.2nm,1.2s						
TAPN	Taplejung	46.40	273	eP	P	13 39 25.9	+0.5
	13nm,0.4s						
ODAN	Odare	46.88	272	eP	P	13 39 29.6	+0.5
	30nm,0.6s						
KSM	Kuching	47.08	226	eP	P	13 39 31.6	+1.1
	16nm,1.2s						
JIRN	Jiri	47.44	274	eP	P	13 39 34.1	+0.5
	24nm,0.4s						
RAMN	Ramite	47.46	273	eP	P	13 39 33.9	+0.3
	56nm,0.8s						
GUN	Gumba	47.56	275	eP	P	13 39 34.8	+0.2
	25nm,0.4s						
ILAR	Eielson Array	47.83	33	P	P	13 39 35.5	-0.1
	2.1nm,0.7s,baz=263,slow=6.1,SNR=24						
PKI	Pulchoki	48.09	274	eP	P	13 39 38.7	+0.1
	11nm,0.5s						
PKIN	Phulchoki	48.10	274	eP	P	13 39 38.7	+0.1
	10nm,0.4s						
DMN	Daman	48.31	275	eP	P	13 39 40.5	+0.3
	12nm,0.4s						
DANN	Dangsing	49.01	276	eP	P	13 39 46.2	+0.6
	94nm,0.5s						
PYUN	Piuthan	49.73	276	eP	P	13 39 51.2	+0.2
	57nm,0.8s						
BRVK	Borovoye	49.95	311	eP	P	13 39 52.0	-0.1
	12nm,1.1s						
AAK	Ala-Archa	50.22	297	eP	P	13 39 52.7	-1.8
	4.0nm,0.7s						
KSH	Kashi	50.26	293	P	P	13 39 59.1	+4.2
KSH				sP	sP	13 40 15.5	+2.3
KSH				PP	PP	13 41 55.7	+5.4
KSH				S	S	13 47 08.1	+4.1
KSH				sS	sS	13 47 31.4	+5.9
KSH				SS	SS	13 50 38.1	+0.5
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
KSH				LR	LR		
	comp=N,280nm,5.1s						
KSH				LR	LR		
	comp=E,260nm,4.9s						
KSH				LR	LR		
	comp=Z,1µm,9.6s						
IPM	Ipoh	50.47	238	eP	P	13 39 56.4	-0.1
	14nm,0.6s						
HNR	Honiara	50.65	157	LR	LR	14 00 25.8	
	comp=Z,84nm,18.8s,baz=280,slow=35						
ARSB	Arslanbob	51.73	296	eP	P	13 40 05.8	0.0
	15nm,0.8s						
INK	Inuvik	52.69	28	P	P	13 40 13.2	+0.9
	1.7nm,0.5s,baz=290,slow=6.6,SNR=27						
KK31	Karatay Array	52.80	299	eP	P	13 40 12.9	-0.7
KKAR	Karatay Array	52.80	299	eP	P	13 40 12.9	-0.7
GAR	Garm	54.51	295	eP	P	13 40 26.0	-0.4
	9.2nm,0.5s						
NIL	Nilore	54.65	287	eP	P	13 40 26.7	-0.6
	28nm,0.6s						
CHGR	Chuyangaron	55.48	295	eP	P	13 40 32.9	-0.3
	58nm,1.5s						
ARU	Arti	55.52	318	eP	P	13 40 33.0	-0.2
	23nm,1.1s						
ABKAR	Akbulak array	57.32	310	eP	P	13 40 45.5	-0.6
KBL	Kabul	57.36	290	eP	P	13 40 46.0	-0.9
	9.2nm,1.1s						
WRAB	Tennant Creek	58.74	189	eP	P	13 40 55.4	-0.8
	10nm,0.9s						
WB2	Warramunga Arr	58.75	189	eP	P	13 40 55.5	-0.8
WRA	Warramunga Arr	58.75	189	P	P	13 40 55.6	-0.7
	4.1nm,0.5s,baz=6.7,slow=7.1,SNR=160						
SPITS	Spitsbergen Ar	59.04	349	P	P	13 40 57.3	-0.4
	14nm,1.1s,baz=75,slow=7.6,SNR=6.0						
RES	Resolute Bay	60.89	15	P	P	13 41 10.4	+0.1
	2.3nm,0.8s,baz=328,slow=8.5,SNR=4.5						
YKA	Yellowknife Ar	62.12	31	P	P	13 41 18.9	0.0
	0.6nm,0.6s,baz=301,slow=6.3,SNR=13						
AS01	Alice Springs	62.47	188	eP	P	13 41 20.6	-1.0
AS31	Alice Springs	62.48	188	eP	P	13 41 21.0	-0.6
	1.2nm,0.7s						
ASAR	Alice Springs	62.48	188	P	P	13 41 21.4	-0.2
	0.9nm,0.6s,baz=16,slow=9.5,SNR=44						
ARCES	ARCESS Array B	62.67	339	P	P	13 41 22.4	0.0
	2.2nm,0.6s,baz=40,slow=9.6,SNR=15						
KLMR	Klimovskoe	62.68	327	eP	P	13 41 15.4	-7.2
KLMR				AMP		13 41 26.5	
	comp=Z,16nm,1.6s						
GEYT	Alibeck	63.54	299	P	P	13 41 28.8	0.0
	comp=Z,5.8nm,0.8s,baz=5.6,slow=6.1,SNR=8.1						
FIA1	FINESS Array S	67.63	332	eP	P	13 41 54.3	-0.4
FINES	FINESS Array B	67.63	332	P	P	13 41 54.8	+0.1
	comp=Z,10nm,0.7s,baz=48,slow=8.8,SNR=27						
FINES				LR	LR	14 16 51.9	
	comp=Z,529nm,18.2s,baz=292,slow=41						
STKA	Stephens Creek	70.18	180	P	P	13 42 10.8	0.0
	comp=Z,1.2nm,0.7s,baz=22,slow=11,SNR=4.1						
KIV	Kislovodsk	70.26	311	eP	P	13 42 11.4	-0.1
	comp=Z,26nm,0.9s						
KIV	Kislovodsk	70.26	311	⇓iP	P	13 42 11.7	+0.2
KBZ	Khabaz	70.27	311	P	P	13 42 11.9	+0.6
	comp=Z,10.0nm,0.9s,baz=52,slow=4.0,SNR=12						
BEKR	Beckworth	71.44	54	eP	P	13 42 19.3	+0.5
	comp=Z,19nm,1.7s						
PAHR	Pah Rah Range	72.14	53	eP	P	13 42 23.3	+0.3
	comp=Z,6.2nm,1.2s						
NB2	NORSAR Subarra	72.90	337	P	P	13 42 26.7	-0.3
	comp=Z,2.9nm,0.6s,baz=39,slow=6.2						
NOA	NORSAR Array B	72.90	337	P	P	13 42 26.9	0.0
	comp=Z,4.4nm,0.7s,baz=39,slow=5.9,SNR=12						
BOZ	Bozeman (W)	73.19	45	eP	P	13 42 29.5	+0.3
	comp=Z,8.7nm,0.7s						
AKASG	Malin Array Be	73.35	322	P	P	13 42 29.8	0.0
	comp=Z,4.8nm,0.5s,baz=45,slow=6.1,SNR=20						
AKBB	Malin Array Si	73.35	322	eP	P	13 42 29.0	-0.7
	comp=Z,15nm,1.0s						
KIEV	Kiev	73.36	322	eP	P	13 42 29.2	-0.6
	comp=Z,15nm,1.0s						
KIEV	Kiev	73.36	322	⇑iP	P	13 42 29.1	-0.7
AK11	Malin Array Si	73.39	322	eP	P	13 42 29.4	-0.6
NVAR	Mina Array Bea	73.58	54	P	P	13 42 32.5	+0.9
	comp=Z,1.0nm,0.8s,baz=295,slow=6.6,SNR=5.7						
HVU	Hansel Valley	74.91	48	eP	P	13 42 40.5	+1.3
	comp=Z,5.3nm,1.2s						
R11A	Troy Canyon, C	75.33	53	eP	P	13 42 42.7	+1.0
	comp=Z,2.3nm,1.0s						
DUG	Dugway, Tooele	75.88	50	eP	P	13 42 45.2	+0.4
	comp=Z,2.8nm,0.8s						
PD31	Pinedale Array	76.14	46	eP	P	13 42 46.5	+0.1
PDAR	Pinedale Array	76.14	46	eP	P	13 42 46.5	+0.1
PDAR	Pinedale Array	76.14	46	P	P	13 42 47.0	+0.7
	comp=Z,1.8nm,0.6s,baz=260,slow=1.4,SNR=28						
BUR08	Bucovina Ar. S	77.36	322	eP	P	13 42 52.7	-0.3
BUR04	Bucovina Ar. S	77.38	322	eP	P	13 42 52.4	-0.7
BURAR	Bucovina Array	77.38	322	⇑iP	P	13 42 53.4	+0.3
BIZ	Bicaz	77.41	321	⇓iP	P	13 42 53.8	+0.6
CFR	Carcaliu	77.60	319	⇑iP	P	13 42 53.7	-0.5
ULM	Lac du Bonnet	77.84	34	P	P	13 42 55.4	-0.1
	comp=Z,2.3nm,0.7s,baz=334,slow=6.6,SNR=4.3						
VRI	Vrincioaia	77.84	320	⇓iP	P	13 42 56.3	+0.7
PLOR	Plostina	77.89	320	⇓iP	P	13 42 56.7	+0.8
SRU	San Rafael Swe	77.93	49	eP	P	13 42 57.6	+1.2
	comp=Z,7.0nm,1.0s						
TIRR	Tirgusor	77.94	318	⇓iP	P	13 42 55.9	-0.2
OJC	Ojcow	78.00	326	eP	P	13 42 56.6	+0.3
	comp=Z,18nm,1.2s						
TLB	Topalu	78.05	318	⇓iP	P	13 42 55.8	-0.9
BR131	Keskin Array S	78.19	312	eP	P	13 42 57.8	+0.1
BRTR	Keskin Array B	78.19	312	P	P	13 42 58.1	+0.4
	comp=Z,2.9nm,0.4s,baz=114,slow=3.2,SNR=30						
TRPA	Tarpa	78.28	323	⇓iP	P	13 42 58.7	+0.8
DOPR	Dopca	78.45	321	⇓iP	P	13 42 58.6	-0.3
ISR	Istrita	78.45	319	⇑iP	P	13 42 58.5	-0.5
ICOR	Ion Corvin	78.50	318	⇓iP	P	13 43 00.0	+0.8
MLR	Muntele Rosu	78.50	320	⇓iP	P	13 42 58.5	-0.9
VOIR		78.99	320	⇓iP	P	13 43 02.5	+0.5

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DRGR                        79.17 322⇑iP    P       13 43 03.5 +0.6
ARR   Arges                 79.24 320⇓iP    P       13 43 04.3 +0.9
MORC  Moravsky Berou        79.30 327 eP    P       13 43 03.9 +0.3
      comp=Z,9.6nm,1.0s
MORC  Moravsky Berou        79.30 327⇓iP    P       13 43 04.0 +0.4
MORC  Moravsky Berou        79.30 327 eP    P       13 43 04.3 +0.7
DPC   Dobruska-Polom        79.37 328 eP    P       13 43 05.1 +1.1
UPC   Upice                 79.38 328 eP    P       13 43 05.1 +1.1
KRLC  Kraliky               79.39 328 eP    P       13 43 04.9 +0.8
PV17  East Wray Mesa        79.40  49 epP   pP      13 43 17.8 -0.3
PV13  Radium Mtn., P        79.56  49 eP    P       13 43 06.6 +1.1
      comp=Z,18nm,1.6s
PSZ   Piszkesteto           79.65 325⇑iP    P       13 43 06.3 +0.7
VYHS  Vyhne                 79.70 326 eP    P       13 43 06.4 +0.7
BRG   Berggiesshubel        79.93 330 i P   P       13 43 07.2 +0.2
      comp=Z,8.3nm,0.8s
PVCC  Panska Ves            79.95 329 eP    P       13 43 08.0 +1.0
CLL   Collm                 79.96 330 eP    P       13 43 07.0 -0.1
      comp=Z,11nm,0.8s
CLL   Collm                 79.96 330 eP    P       13 43 05.0 -2.0
      comp=Z,13nm,0.8s
CLL                                   epP   pP      13 43 23.0 +2.3
VRAC  Vranov                80.06 327⇑iP    P       13 43 07.6  0.0
VRAC  Vranov                80.06 327 eP    P       13 43 08.5 +0.9
GZR   Gura Zlata            80.14 321⇑iP    P       13 43 08.2 -0.1
KRUC  Moravsky              80.33 327 eP    P       13 43 09.8 +0.7
BZS   Buzias                80.54 322⇑iP    P       13 43 10.0 -0.3
MDVR  Moldovita             81.10 322⇓iP    P       13 43 13.0 -0.4
CONA  Conrad Observa        81.42 327 eP    P       13 43 15.5 +0.4
      comp=Z,5.5nm,0.9s
KHC   Kasperske Hory        81.44 329 eP    P       13 43 15.2 +0.1
      comp=Z,3.1nm,0.8s
KHC   Kasperske Hory        81.44 329 eP    P       13 43 15.9 +0.8
GERES GERESS Array B        81.62 328  P    P       13 43 16.4 +0.2
      comp=Z,2.4nm,0.6s,baz=36,slow=5.6,SNR=14
GEA0  GERESS Array S        81.62 328 eP    P       13 43 15.6 -0.5
VTS   Vitosha               81.92 319 eP    P       13 43 17.3 -0.5
      comp=Z,8.9nm,0.8s
VTS   Vitosha               81.92 319⇑iP    P       13 43 18.5 +0.7
SOKA  Soboth                82.75 326 eP    P       13 43 22.4 +0.4
      comp=Z,13nm,1.0s
OBKA  Obir                  83.09 327 eP    P       13 43 23.9  0.0
      comp=Z,4.6nm,0.9s
KBA   Koelnbreinsper        83.16 328 ePcP  P       13 43 25.0 +0.7
      comp=Z,9.2nm,0.9s
MYKA  Terra Mystica         83.39 327 eP    P       13 43 25.3  0.0
      comp=Z,7.0nm,0.7s
ABTA  Abfaltersbach         83.77 328 eP    P       13 43 27.1 -0.2
      comp=Z,2.8nm,0.6s
MOTA  Moosalm               83.87 329 ePcP  P       13 43 27.9  0.0
      comp=Z,5.5nm,0.9s
RETA  Reutte                83.89 329 ePcP  P       13 43 28.6 +0.7
      comp=Z,10nm,0.8s
PDG   Podgorica             84.04 321⇑iP    P       13 43 28.3 -0.3
TTG   Podgorica             84.04 321 eP    P       13 43 28.2 -0.5
      comp=Z,15nm,0.9s
LIT   Litokhoron            84.12 318 eP    P       13 43 28.9 -0.3
      comp=Z,13nm,0.9s
FETA  Feichten              84.28 329 ePcP  P       13 43 30.1 +0.1
      comp=Z,4.8nm,0.7s
DAVA  Damuels               84.41 330 ePcP  P       13 43 31.0 +0.4
      comp=Z,15nm,1.1s
FUORN Ofenpass-Fuorn        84.79 329 eP    P       13 43 32.9 +0.2
      comp=Z,17nm,0.7s
TX31  Lajitas Ar. Si        88.69  53 eP    P       13 43 52.2 +0.4
TXAR  Lajitas Array         88.69  53  P    P       13 43 52.4 +0.6
      comp=Z,1.1nm,0.7s,baz=307,slow=3.5,SNR=20
QSPA  South Pole Qui       128.40 180 ePKPdf PKPdf  13 50 03.0 -0.6
SNAA  Sanae                142.47 197  PKP   PKPdf  13 50 26.5 -3.1
VNA2  Neumayer--Watz       144.03 197  PKP   PKPbc  13 50 30.2 -0.2
VNA3  Neumayer Olymp       144.28 195  PKP   PKPab  13 50 30.5 -0.3
VNA1  Neumayer--Stat       144.43 196  PKP   PKPab  13 50 29.2 -2.1
LPAZ  La Paz               145.38  58 ePKPdf PKPdf  13 50 37.0  0.0
LPAZ  La Paz               145.38  58  PKPbc PKPbc  13 50 36.6 -0.3
      comp=Z,2.2nm,0.6s,baz=297,slow=4.1,SNR=8.0
MNMC  Minye Minye          146.34  64 ePKPdf PKPab  13 50 40.3  0.0
PB11  IPOC Station P       146.72  65 ePKPdf PKPbc  13 50 39.8 -0.6
LCO   Las Campanas         151.22  80 ePKPbc PKPbc  13 50 51.3 -0.5
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NIED ***05*** *13:34:00, 38°.70N×142°.10E, h44km, Mw4.0 Best double couple: M₀1.10000×10¹⁵ NP1:φₛ219.00000°, δ21.00000°, λ109.00000°. NP2:φₛ19.00000°, δ70.00000°, λ83.00000°.*
ISCJB ***05*** *13:34:24.0±0.8, 38°.67N±0°.04×142°.13E±0°.09, h51km±6km, mb3.8/16, Error ellipse: s-maj=12.6km s-min=5.2km az=19.1*
JMA ***05*** *13:34:24.4±0.1, 38°.66N×142°.15E, h41km±1km, M3.9*
JMA Felt II J1.
IDC ***05*** *13:34:27.3±2.1, 38°.63N×142°.06E, h66km±19km, mb3.5/16, mb1 3.7/21, mb1mx3.6/46, mbtmp3.9/21, Error ellipse: s-maj=18.2km s-min=13.3km az=110.0*
ISC 05 13:34:24.8±1.4, **38°.65N**±0°.05×**142°.14E**±0°.09, **h42**km±13km, **n39**, σ**0ˢ.94**/44, **mb3.9**/16, **Near east coast of eastern Honshu**

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Code  Station Name          Δ°   AZ°    Phase ID       Time      Res
                                      Op     ISC     h  m  s    ISC
JKMT  Kesennumamotoy        0.54 288  P      Pn     13 34 35.9 -0.2
JKMT                                  S      Sn     13 34 43.7 -0.5
OFUJ  Ofunato               0.56 320  P      Pn     13 34 36.0 -0.4
OFUJ                                  S      Sn     13 34 44.0 -0.7
JIKH  Ishinomakikobu        0.62 237  P      Pn     13 34 36.9 -0.3
JIKH                                  S      Sn     13 34 45.6 -0.5
JIO   Ouri                  0.65 253  P      Pn     13 34 37.2 -0.3
JIO                                   S      Sn     13 34 45.9 -0.7
JMK   Ichinoseki            0.78 293  P      Pn     13 34 39.2 -0.1
JMK                                   S      Sn     13 34 49.4 -0.4
JOM   Ohasama               1.05 322  P      Pn     13 34 43.0 -0.1
JOU   Okura                 1.19 257  P      Pn     13 34 45.1 +0.2
JOU                                   S      Sn     13 35 00.3 +0.4
JTH   Tanohata              1.30 351  P      Pn     13 34 46.0 -0.5
JTH                                   S      Sn     13 35 02.7  0.0
JMM   Marumori              1.31 234  P      Pn     13 34 46.3 -0.3
JMM                                  eS      Sn     13 35 02.6 -0.3
JRG   Rokugo                1.39 303  P      Pn     13 34 47.9 +0.3
JYK   Kaneyama              1.41 281  P      Pn     13 34 48.3 +0.3
MJAR  Matsushiro Arr        3.76 237  P      Pn     13 35 22.6 +2.3
      1.2nm,0.3s,baz=38,slow=13,SNR=4.6
MJAR                                  S      Sn     13 36 14.1  +11
      0.5nm,0.3s,baz=207,slow=36,SNR=1.5
MAT   Matsushiro            3.76 237  P      Pn     13 35 22.4 +2.1
MAT                                  eS      Sn     13 36 11.8 +8.5
ASAJ  Asahikawa             5.47   3  P      Pn     13 35 44.5 +0.8
      1.9nm,0.3s,baz=211,slow=16,SNR=7.2
ASAJ                                  S      Sn     13 36 45.4  0.0
      1.5nm,0.3s,baz=50,slow=31,SNR=2.1
JHJ   Hachijo jima 2        5.84 200  P      Pn     13 35 50.9 +2.1
      10nm,0.3s,baz=15,slow=12,SNR=5.7
JHJ                                   S      Sn     13 36 53.4 -1.0
      21nm,0.3s,baz=81,slow=22,SNR=2.0
USRK  Ussuriysk Ar.         9.42 309  P      Pn     13 36 39.6 +1.8
      0.4nm,0.3s,baz=128,slow=14,SNR=6.9
KSRS  Korea Array          11.27 268  P      Pn     13 37 05.9 +2.7
      0.1nm,0.3s,baz=81,slow=13,SNR=4.2
SEY   Seymchan             25.10  11  P      P      13 39 46.5 +1.3
      4.1nm,0.9s,baz=188,slow=7.1,SNR=4.0
H11N2 WAKE ISLAND Hy       28.53 124  T      T      14 10 34.6
      baz=317,slow=75,SNR=21
H11N1 WAKE ISLAND Hy       28.54 124  T      T      14 10 39.2
      baz=317,slow=75,SNR=28
H11N3 WAKE ISLAND Hy       28.55 124  T      T      14 10 39.4
      baz=317,slow=75,SNR=22
H11S1 WAKE ISLAND Hy       29.30 126  T      T      14 11 37.2
      baz=318,slow=76,SNR=22
H11S3 WAKE ISLAND Hy       29.31 126  T      T      14 11 37.3
      baz=318,slow=76,SNR=29
H11S2 WAKE ISLAND Hy       29.32 126  T      T      14 11 50.7
      baz=318,slow=76,SNR=26
ZALV  Zalesovo Beam        41.27 311  P      P      13 42 05.6 -0.1
      1.2nm,0.4s,baz=81,slow=6.9,SNR=3.8
CMAR  Chiang Mai Arr       42.47 254  P      P      13 42 15.4 -0.5
      0.3nm,0.4s,baz=56,slow=6.9,SNR=2.7
MKAR  Makanchi Array       43.76 301  P      P      13 42 25.9 -0.2
      1.3nm,0.7s,baz=86,slow=9.0,SNR=4.4
KURBB Kurchatov Arra       45.48 307  P      P      13 42 39.3 -0.3
      5.6nm,0.6s,baz=81,slow=8.3,SNR=11
KURBB                                 PcP    PcP    13 44 16.8 -1.1
      0.5nm,0.6s,baz=64,slow=3.6,SNR=4.2
ILAR  Eielson Array        47.83  33  P      P      13 42 58.2 +0.4
      0.5nm,0.7s,baz=268,slow=6.3,SNR=5.8
INK   Inuvik               52.69  28  P      P      13 43 35.1 +0.6
      1.7nm,1.1s,baz=276,slow=5.7,SNR=4.2
WRA   Warramunga Arr       58.74 189  P      P      13 44 17.7 -0.7
      0.5nm,0.4s,baz=7.3,slow=7.4,SNR=11
YKA   Yellowknife Ar       62.13  31  P      P      13 44 41.0 -0.1
      0.1nm,0.3s,baz=301,slow=5.9,SNR=2.7
ASAR  Alice Springs        62.47 189  P      P      13 44 43.4 -0.4
      0.3nm,0.7s,baz=12,slow=5.7,SNR=4.6
ARCES ARCESS Array B       62.69 339  P      P      13 44 44.4 -0.3
      1.7nm,0.9s,baz=17,slow=6.6,SNR=3.2
FINES FINESS Array B       67.65 332  P      P      13 45 16.5 -0.5
      1.2nm,0.6s,baz=51,slow=9.8,SNR=3.9
NOA   NORSAR Array B       72.92 337  P      P      13 45 48.9 -0.4
      0.9nm,0.7s,baz=308,slow=8.4,SNR=3.1
AKASG Malin Array Be       73.37 322  P      P      13 45 51.5 -0.5
      0.6nm,0.4s,baz=44,slow=5.6,SNR=2.8
PDAR  Pinedale Array       76.13  46  P      P      13 46 08.8 +0.3
      0.3nm,0.5s,baz=346,slow=2.3,SNR=4.4
TXAR  Lajitas Array        88.69  53  P      P      13 47 14.3 +0.3
      0.3nm,0.7s,baz=298,slow=3.9,SNR=3.4
```

ISCJB ***05*** *13:51:54.9±1.3, 11°.13S±0°.09×165°.2E±0°.1, h31km, mb3.7/3, MS3.3/1, Error ellipse: s-maj=19.1km s-min=8.4km az=141.8*
IDC ***05*** *13:51:58.4±3.4, 11°.09S×165°.22E, h46km±28km, mb3.5/4, mb1 3.9/6, mb1mx3.5/32, mbtmp4.0/6, ML4.3/2, MS3.4/1, Ms1 3.3/1, ms1mx2.9/19, Error ellipse: s-maj=31.6km s-min=20.2km az=51.0*
ISC 05 13:51:56.7±1.4, **11°.0S**±0°.1×**165°.3E**±0°.1, **h31**km, **n13**, σ**0ˢ.74**/9, **mb3.6**/3, **Santa Cruz Islands**

```
Code  Station Name          Δ°   AZ°    Phase ID       Time      Res
                                      Op     ISC     h  m  s    ISC
HNR   Honiara               5.49 286  P      Pn     13 53 16.6 +0.2
      20nm,0.3s,baz=117,slow=18,SNR=9.2
HNR                                   S      Sn     13 54 19.4 +0.8
      4.7nm,0.3s,baz=192,slow=17,SNR=1.3
DZM   Mont Dzumac          11.03 174  P      Pn     13 54 33.5 +1.0
      1.2nm,0.3s,baz=59,slow=16,SNR=14
DZM                                   S      Sn     13 56 34.8 -0.2
      0.1nm,0.3s,baz=109,slow=19,SNR=2.2
CTA   Charters Tower       20.41 242  P      P      13 56 31.0 -0.4
      3.2nm,0.9s,baz=72,slow=9.6,SNR=3.0
H11S2 WAKE ISLAND Hy       29.37   3  T      T      14 28 35.5
      baz=184,slow=76,SNR=5.6
H11S3 WAKE ISLAND Hy       29.37   3  T      T      14 28 33.0
      baz=184,slow=76,SNR=4.1
H11S1 WAKE ISLAND Hy       29.39   3  T      T      14 28 33.3
      baz=184,slow=76,SNR=5.3
STKA  Stephens Creek       30.14 223  LR     LR     14 09 50.6
      comp=Z,60nm,18.1s,baz=25,slow=36
H11N1 WAKE ISLAND Hy       30.59   3  T      T      14 30 06.7
      baz=182
H11N3 WAKE ISLAND Hy       30.60   3  T      T      14 30 05.2
      baz=182
H11N2 WAKE ISLAND Hy       30.61   3  T      T      14 30 09.4
      baz=182
WRA   Warramunga Arr       31.07 250  P      P      13 58 11.6 -0.7
      1.0nm,0.9s,baz=81,slow=9.1,SNR=11
ASAR  Alice Springs        32.40 243  P      P      13 58 23.2 -0.8
      2.1nm,0.9s,baz=70,slow=9.6,SNR=24
ASAR                                  PcP    PcP    14 01 10.7 -0.6
      0.3nm,0.8s,baz=66,slow=3.2,SNR=2.8
ILAR  Eielson Array        83.64  19  P      P      14 04 22.0 +0.2
      0.2nm,0.5s,baz=234,slow=4.9,SNR=5.1
```

ISCJB ***05*** *14:18:32.9±0.5, 33°.60N±0°.04×131°.87E±0°.05, h82km±4km, mb3.5/3, Error ellipse: s-maj=7.6km s-min=6.3km az=19.9*
JMA ***05*** *14:18:34.5, 33°.64N×131°.89E, h72km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φₛ275.00000°, δ76.00000°, λ129.00000°. NP2: φₛ22.00000°, δ41.00000°, λ22.00000°. Principal axes: T Plg45.0000°, Azm224.0000°; N Plg38.0000°, Azm83.0000°; P Plg21.0000°, Azm336.0000°;*
JMA Felt II J1.
IDC ***05*** *14:18:34.8±1.3, 33°.61N×131°.70E, h87km±10km, mb3.1/3, mb1 3.5/6, mb1mx3.2/38, mbtmp3.7/6 Error ellipse: s-maj=22.8km s-min=12.5km az=78.0*
ISC 05 14:18:33.6±0.9, **33°.61N**±0°.05×**131°.89E**±0°.04, **h76**km±7km, **n19**, σ**0ˢ.85**/27, **mb3.8**/3, **6C-4D, Kyushu**

```
Code  Station Name          Δ°   AZ°    Phase ID       Time      Res
                                      Op     ISC     h  m  s    ISC
JKI   Kunimi                0.27 275 ⇑P      Pn     14 18 45.8 +0.5
JKI                                   S      Sn     14 18 53.9 +0.1
JKD   Kudamatsu             0.44 359 ⇑P      Pn     14 18 46.7 +0.2
JKD                                   S      Sn     14 18 55.5 -0.5
JBEP  Beppuamama            0.49 236 ⇓P      Pn     14 18 47.6 +0.7
JBEP                                  S      Sn     14 18 57.3 +0.6
JNA   Nagahama              0.50  96 ⇑P      Pn     14 18 47.5 +0.5
JNA                                   S      Sn     14 18 56.9 +0.1
UWA2  Uwa jima 2            0.73 123 ⇓P      Pn     14 18 49.8 +0.4
UWA2                                  S      Sn     14 19 00.9 -0.1
JHM   Kurahashi             0.75  45 ⇑P      Pn     14 18 49.8 +0.3
JNU   Nakatsue              0.97 240  P      Pn     14 18 53.1 +0.9
      80nm,0.3s,baz=43,slow=4.9,SNR=1263
JNU                                   S      Sn     14 19 06.7 +0.7
      64nm,0.3s,baz=30,slow=20,SNR=64
JET   Tanbara               0.98  80 ⇑P      Pn     14 18 52.6 +0.3
JKU   Kubokawa              1.03 107 ⇓P      Pn     14 18 53.0 +0.2
JTO   Tosashimizu           1.07 134 ⇓P      Pn     14 18 53.7 +0.4
JTO                                   S      Sn     14 19 07.5 -0.6
JHT   Toyohira              1.14  23 ⇑P      Pn     14 18 54.8 +0.6
JGT2  ShimaneMisato         1.54  19  P      Pn     14 18 59.8 +0.5
KSRS  Korea Array           5.01 321  P      Pn     14 19 47.1 +0.8
      2.6nm,0.3s,baz=140,slow=14,SNR=34
KSRS                                  S      Sn     14 20 42.7 -0.2
      1.5nm,0.3s,baz=139,slow=24,SNR=5.6
MAT   Matsushiro            5.95  59  P      Pn     14 20 01.1 +2.0
MJAR  Matsushiro Arr        5.95  59  P      Pn     14 20 01.5 +2.4
      0.9nm,0.3s,baz=244,slow=14,SNR=69
KLR   Kul'dur              15.61 360  P      P      14 22 11.3 -0.4
      0.2nm,0.3s,baz=189,slow=8.0,SNR=7.5
MKAR  Makanchi Array       39.47 305  P      P      14 25 55.2 -1.3
      0.2nm,0.6s,baz=103,slow=5.0,SNR=3.0
WRA   Warramunga Arr       53.30 177  P      P      14 27 44.9 -0.1
      0.8nm,0.8s,baz=355,slow=8.1,SNR=12
ASAR  Alice Springs        56.99 178  P      P      14 28 11.4  0.0
      0.6nm,0.7s,baz=0.7,slow=6.3,SNR=21
```

MDD 05 14:25:00.3±0.5, **38°.04N**×**3°.30W**, **h3**km±4km, **mbLg1.3**/6, **Error ellipse: s-maj=4.5km s-min=3.1km az=71.0, PRXIMO, Spain**

```
Code  Station Name          Δ°   AZ°    Phase ID       Time      Res
                                      Op     ISC     h  m  s    ISC
EQES  Quesada               0.29 142  Pg     Pg     14 25 05.8 -0.2
      3.3nm,0.3s,SNR=7.9
EQES                                  Lg     Lg     14 25 10.1
      5.2nm,0.5s,SNR=7.9
SESP  Santiago Espad        0.60  82  Pg     Pg     14 25 11.2 -0.7
      2.4nm,0.6s,SNR=7.9
EGOR  Sierra Gorda,         1.12 215  Pg     Pg     14 25 21.0 -0.9
      1.7nm,0.3s,SNR=7.9
EBER  Berja                 1.18 164  Pg     Pg     14 25 22.2 -0.8
      8.1nm,0.4s,SNR=7.9
ETOB  Tobarra               1.51  66  Lg     Lg     14 25 48.8
      17nm,3.2s,SNR=7.9
EMUR  La Murta              1.64  96  Lg     Lg     14 25 52.9
      25nm,1.8s,SNR=7.9
ECAB  El Cabril             1.67 272  Lg     Lg     14 25 54.6
      62nm,7.3s,SNR=7.9
ESDC  Sonseca Array         1.72 343  Lg     Lg     14 25 54.8
      SNR=7.9
PAB   San Pablo             1.72 332  Lg     Lg     14 25 54.3
      9.9nm,3.2s,SNR=7.9
ECHE  Chera                 2.39  49  Lg     Lg     14 26 17.6
      50nm,2.8s,SNR=7.9
```

MDD ***05*** *14:25:09.5±0.2, 38°.05N×3°.28W, h1km±3km, mbLg2.6/20, Error ellipse: s-maj=1.8km s-min=1.2km az=40.0, PRXIMO*
MDD EMS: II-III INTENSIDAD MAXIMA.
SFS ***05*** *14:25:09.0, 38°.00N×3°.20W, ML2.6, SABIOTE (JAEN)*
LDG ***05*** *14:25:09.0±0.1, 38°.07N×3°.28W, h2km, Ml2.7/5, Error ellipse: s-maj=1.8km s-min=1.5km az=108.0*
CNRM ***05*** *14:25:15.5, 37°.96N×3°.31W, h39km, ml3.3*
ISC 05 14:25:07.9±1.2, **38°.12N**±0°.02×**3°.26W**±0°.02, **h4**km±10km, **n44**, σ**1ˢ.80**/62, **1D, Spain**

```
Code  Station Name          Δ°   AZ°    Phase ID       Time      Res
                                      Op     ISC     h  m  s    ISC
EQES  Quesada               0.35 155  Pg     Pg     14 25 15.2 +0.4
      SNR=7.9
EQES                                  Lg     Lg     14 25 19.0
      47nm,0.1s,SNR=4.2
SESP  Santiago Espad        0.56  90  Pg     Pg     14 25 19.8 +1.0
      44nm,0.4s,SNR=7.9
SESP                                  Lg     Lg     14 25 28.5
      294nm,0.2s,SNR=7.9
GORA  Gorafe                0.67 165  Pg     Pg     14 25 20.6 -0.1
      16nm,0.2s,SNR=7.9
GORA                                  Lg     Lg     14 25 29.3
      185nm,0.3s,SNR=7.9
EQUE  Quentar               0.93 189  Pg     Pg     14 25 25.8 +0.1
      7.1nm,0.4s,SNR=4.9
EQUE                                  Lg     Lg     14 25 36.3
      71nm,0.3s,SNR=5.5
EADA  Adamuz                1.04 273  Pg     Pg     14 25 28.0 +0.1
      8.6nm,0.3s,SNR=4.7
EADA                                  Lg     Lg     14 25 41.7
      51nm,0.1s,SNR=6.6
EGOR  Sierra Gorda,         1.22 214  Pg     Pb     14 25 30.6 -0.9
      3.0nm,0.4s,SNR=7.9
EGOR                                  Lg     Lg     14 25 46.4
      78nm,0.3s,SNR=7.9
EBER  Berja                 1.26 166  Pg     Pn     14 25 32.4  0.0
      32nm,0.4s,SNR=7.9
EBER                                  Lg     Lg     14 25 47.8
      61nm,0.3s,SNR=6.3
ELGU  Los Guajares,         1.29 193  Pg     Pb     14 25 32.0 -0.7
      17nm,0.6s,SNR=7.9
ELGU                                  Lg     Lg     14 25 48.2
      108nm,0.3s,SNR=7.9
ETOB  Tobarra               1.44  68  Pg     Pn     14 25 36.8 +1.9
      36nm,0.3s,SNR=6.1
ETOB                                  Lg     Lg     14 25 56.6
      46nm,0.2s,SNR=5.5
HORN  Hornachuelos          1.60 261  S      Sg     14 25 59.5 +0.1
EMUR  La Murta              1.62  99  Pg     Pb     14 25 39.4 +0.9
      26nm,0.3s,SNR=5.0
EMUR                                  Lg     Lg     14 26 01.5
      163nm,0.5s,SNR=6.6
ESDC  Sonseca Array         1.64 341  Pg     Pb     14 25 40.3 +1.5
      1.6nm,0.3s,baz=164,slow=17,SNR=4.5
ESDC                                  Sn     Sn     14 25 59.1 -0.1
      baz=212,slow=38,SNR=7.9
ESDC                                  Lg     Lg     14 26 02.8
      10nm,0.3s,baz=161,slow=29,SNR=6.8
EMAL  Malaga-Limoner        1.65 215⇓iP      Pb     14 25 38.2 -0.6
EMAL                                 eS      Sb     14 25 59.2 -0.7
PAB   San Pablo             1.66 329  Pg     Pn     14 25 40.2 +2.4
      4.8nm,0.4s,SNR=7.9
PAB                                   Sn     Sn     14 25 58.7 -0.9
      2.6nm,0.2s,SNR=7.9
PAB                                   Lg     Lg     14 26 03.1
      14nm,0.3s,SNR=7.9
ECAB  El Cabril             1.70 269  Pg     Pb     14 25 40.0 +0.2
      36nm,0.3s,SNR=8.7
ECAB                                  Lg     Lg     14 26 01.0
      35nm,0.3s,SNR=8.9
CART  Cartagena             1.87 106  Pn     Pg     14 25 44.9 +1.2
CART                                  Sn     Sb     14 26 06.9 +0.6
CART  Cartagena             1.87 106 eP      Pg     14 25 44.9 +1.2
CART                                 eS      Sb     14 26 06.9 +0.6
EMIJ  Mijas                 1.97 218  Pg     Pb     14 25 44.6 +0.3
      31nm,0.3s,SNR=4.9
EMIJ                                  Lg     Lg     14 26 10.7
      24nm,0.3s,SNR=7.9
LIJA  Lijar                 2.09 235  Pn     Pb     14 25 47.0 +0.5
LIJA                                  Sn     Sn     14 26 07.5 -2.8
LIJA  Lijar                 2.09 235 i P     Pb     14 25 47.0 +0.5
LIJA                                 eS      Sn     14 26 07.5 -2.8
UCM   Universidad Co        2.18   0 eS      Sb     14 26 18.9 +3.5
ECHE  Chera                 2.31  50  Lg     Lg     14 26 25.5
      15nm,0.3s,SNR=7.9
EBEN2 Beniarda presa        2.48  76  Lg     Lg     14 26 29.4
      28nm,0.4s,SNR=7.9
GUD   Guadarrama            2.61 345  Lg     Lg     14 26 32.8
      9.8nm,0.3s,SNR=7.9
EMIN  Mina Concepcio        2.72 264  Lg     Lg     14 26 31.8
      16nm,0.4s,SNR=7.9
GOG   Mont Gurugu           2.90 176  P      Pn     14 25 56.0 +1.0
GOG                                   S      Sn     14 26 31.4 +1.0
EBAD  Badajoz               3.01 283  Lg     Lg     14 26 44.6
      33nm,0.3s,SNR=7.9
EMOS  Mosqueruela           3.11  43  Pg     Pb     14 26 08.0 +4.1
      0.6nm,0.4s,SNR=7.9
EMOS                                  Sn     Sn     14 26 37.2 +1.5
      0.5nm,0.5s,SNR=7.9
EMOS                                  Lg     Lg     14 26 50.0
      3.3nm,0.3s,SNR=7.9
EGRO  El Granado            3.39 261  Lg     Lg     14 26 54.2
      13nm,0.3s,SNR=7.9
PESTR Estremoz              3.48 284  P      Pb     14 26 09.5 -0.5
PESTR                                 S      Sn     14 26 46.1 +1.7
PVAQ  Vaqueiros             3.60 260  P      Pn     14 26 08.4 +3.9
PVAQ                                  S      Sn     14 26 49.0 +1.6
JBK   JBK                   3.82 171  P      Pn     14 26 09.0 +1.3
JBK                                   S      Sn     14 26 53.8 +0.6
ETSF  Etsaut                5.20  22 ePn     Pn     14 26 26.6 +0.1
ETSF  Etsaut                5.20  22 ePg     Pg     14 26 47.1 -0.4
ETSF                                 eSn     Sn     14 27 23.7 -3.2
ETSF                                 eSg     Sg     14 27 53.3 -1.5
      1.0nm,0.3s
ETSF  Etsaut                5.20  22  Pn     Pn     14 26 26.6 +0.1
ETSF                                  Pg     Pg     14 26 47.1 -0.4
ETSF                                  Sn     Sn     14 27 23.7 -3.2
ETSF                                  Lg     Lg     14 27 53.3
      0.5nm,0.3s
SJPF  Ste Jean              5.22  17 ePn     Pn     14 26 27.3 +0.6
SJPF  Ste Jean              5.22  17 ePg     Pg     14 26 47.1 -0.8
SJPF                                 eSn     Sn     14 27 23.9 -3.5
SJPF                                 eSg     Sg     14 27 53.5 -2.0
      0.7nm,0.2s
SJPF  Ste Jean              5.22  17  Pn     Pn     14 26 27.3 +0.6
SJPF                                  Pg     Pg     14 26 47.1 -0.8
SJPF                                  Sn     Sn     14 27 23.9 -3.5
SJPF                                  Lg     Lg     14 27 53.5
      0.3nm,0.2s
EPF   Esparros              5.62  28 ePn     Pn     14 26 32.0 -0.2
EPF   Esparros              5.62  28 ePg     Pg     14 26 54.5 -1.0
EPF                                  eSn     Sn     14 27 33.8 -3.4
EPF                                  eSg     Sg     14 28 06.5 -1.8
      1.7nm,0.4s
EPF   Esparros              5.62  28  Pn     Pn     14 26 32.0 -0.2
EPF                                   Pg     Pg     14 26 54.5 -1.0
EPF                                   Sn     Sn     14 27 33.8 -3.4
EPF                                   Lg     Lg     14 28 06.5
      0.9nm,0.4s
MTLF  Montolieu             6.67  37 ePn     Pn     14 26 46.2 -0.4
MTLF  Montolieu             6.67  37 ePg     Pg     14 27 13.1 -2.5
MTLF                                 eSg     Sg     14 28 38.3 -3.7
      0.8nm,0.2s
MTLF  Montolieu             6.67  37  Pn     Pn     14 26 46.2 -0.4
MTLF                                  Pg     Pg     14 27 13.1 -2.5
MTLF                                  Lg     Lg     14 28 38.3
      0.4nm,0.2s
```

SJA 05 14:46:43.6±0.7, **31°.32S**×**68°.97W**, **h26**km±2km, **ML2.5**, **MW4.1**, **San Juan Province**

```
Code  Station Name          Δ°   AZ°    Phase ID       Time      Res
                                      Op     ISC     h  m  s    ISC
RTLL  Cerro Villicun        0.42  91 i P     Pb     14 46 53.1 +0.4
RTLL                                 i S     Sb     14 46 59.9 +1.1
RTLL                                  IAML          14 47 00.1
      comp=Z,488nm,0.2s
RTLS  Leoncito              0.55 210 i P     Pn     14 46 56.4 +0.3
RTLS                                 i S     Sn     14 47 05.0 +0.4
RTLS                                  IAML          14 47 07.0
      comp=Z,259nm,0.2s
AMOG  MOGNA                 0.56  47 i P     Pn     14 46 55.6 -0.3
AMOG                                 i S     Sn     14 47 04.3 -0.2
RTCV  Cerro Valdivia        0.65 146 i P     Pn     14 46 56.9 -0.3
RTCV                                 i S     Sn     14 47 06.6 -0.2
ACCO  Cerro Coronel         0.74 354 i P     Pn     14 46 58.9 +0.3
AUSP  Uspallata             0.97 201 i P     Pb     14 47 03.0 +1.1
AUSP                                 i S     Sn     14 47 17.1 +2.2
ACDV  Cuesta del Vie        1.15 354 i P     Pb     14 47 05.6 +0.6
ACDV                                 i S     Sb     14 47 22.7 +3.1
ASAL  Salagasta             1.27 175 i P     Pb     14 47 07.8 +0.8
ASAL                                 i S     Sb     14 47 25.7 +2.8
```

IDC 05 15:14:12.3±1.4, **10°.09N**×**122°.84E**, **h0**km, **mb3.6**/3, **mb1 3.7**/4, **mb1mx3.4**/52, **mbtmp3.8**/4, **ML4.0**/1, **Error**

ellipse: s-maj=162.4km s-min=21.6km az=61.0, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**13.74**	**142**	Pn	Pn	15 17 29.9	+1.3
	0.7nm,0.3s,baz=323,slow=13,SNR=2.8						
SIJI				Sn	Sn	15 20 01.4	-0.8
	0.6nm,0.3s,baz=345,slow=20,SNR=2.4						
ASAR	**Alice Springs**	**35.25**	**162**	P	P	15 21 08.7	-0.2
	0.1nm,0.8s,baz=341,slow=7.1,SNR=3.0						
MKAR	**Makanchi Array**	**50.17**	**324**	P	P	15 23 09.9	+0.1
	1.1nm,0.3s,baz=122,slow=7.5,SNR=51						
ZALV	**Zalesovo Beam**	**53.21**	**333**	P	P	15 23 31.9	-0.4
	0.4nm,0.4s,baz=128,slow=9.3,SNR=3.4						

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*ISCJB **05** 15:19:05.4±1.1, 42°.92N±0°.06×145°.65E±0°.07, h49^{km}±9^{km}, Error ellipse: s-maj=12.4km s-min=5.8km az=146.2*

*SKHL **05** 15:19:06.4±0.3, 42°.94N×145°.68E, h58^{km}±2^{km}, mb4.1/5*

*JMA **05** 15:19:06.1±0.1, 42°.93N×145°.61E, h46^{km}±1^{km}, M3.2*

JMA Felt I J1.

*MOS **05** 15:19:06.0±1.6, 43°.00N×145°.60E, h82^{km}, mb4.3/1, Error ellipse: s-maj=99.9km s-min=22.4km az=79.8*

ISC 05 15:19:05.1±2.0**, 42°.87N**±0°.09×**145°.69E**±0°.06**, h46**^{km}±16^{km}**, n18, σ0^{s}.54**/34**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.44**	**299**	P	**Pn**	**15 19 15.5**	**+0.2**
JKHN				*e*S	**Sn**	**15 19 22.4**	**-0.2**
NEM2	**Nemuro 2**	**0.49**	**5**	P	**Pn**	**15 19 16.3**	**+0.3**
NEM2				*e*S	**Sn**	**15 19 23.6**	**-0.1**
JAK	**Akkeshi**	**0.74**	**280**	P	**Pn**	**15 19 19.3**	**+0.2**
JAK				*e*S	**Sn**	**15 19 29.1**	**-0.2**
GLVR	**Golovnino**	**0.87**	**352**	*e*P	**Pn**	**15 19 21.4**	**+0.4**
GLVR				AMB	AMB	15 19 21.6	
	140nm,0.2s						
GLVR				AMB	AMB	15 19 21.6	
	70nm,0.2s						
GLVR				*e*S	**Sn**	**15 19 32.8**	**+0.2**
GLVR				A	A	15 19 33.5	
	720nm,0.3s						
GLVR				A	A	15 19 33.5	
	860nm,0.3s						
GLVR	**Golovnino**	**0.87**	**352**	*e*PN	**Pn**	**15 19 21.4**	**+0.4**
GLVR				*e*S	**Sn**	**15 19 32.8**	**+0.2**
GLVR				pmax	pmax		
	comp=Z,696nm,0.2s						
GLVR				pmax	pmax		
	comp=N,141nm,0.1s						
GLVR				smax	smax		
	comp=N,3µm,0.4s						
GLVR				smax	smax		
	comp=E,3µm,0.3s						
JNK	**Nakash**	**1.00**	**316**	P	**Pn**	**15 19 22.5**	**-0.2**
JNK				*e*S	**Sn**	**15 19 34.4**	**-1.3**
GRPR	**Tuman**	**1.12**	**3**	*e*P	**Pn**	**15 19 24.0**	**-0.4**
GRPR				AMB	AMB	15 19 25.0	
	comp=E,120nm,0.2s						
GRPR				AMB	AMB	15 19 25.0	
	comp=E,50nm,0.2s						
GRPR				*e*S	**Sn**	**15 19 37.0**	**-1.6**
GRPR				A	A	15 19 38.0	
	comp=E,530nm,0.2s						
GRPR				A	A	15 19 38.0	
	comp=E,320nm,0.2s						
GRPR	**Tuman**	**1.12**	**3**	*e*PN	**Pn**	**15 19 24.5**	**+0.1**
GRPR				*e*S	**Sn**	**15 19 37.8**	**-0.8**
GRPR				pmax	pmax		
	comp=E,119nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,513nm,0.2s						
GRPR				smax	smax		
	comp=N,1µm,0.2s						
GRPR				smax	smax		
	comp=E,1µm,0.2s						
JRA	**Rausu**	**1.14**	**339**	P	**Pn**	**15 19 25.1**	**+0.5**
JRA				*e*S	**Sn**	**15 19 39.0**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**1.17**	**6**	*i* P	**Pn**	**15 19 25.2**	**+0.2**
YUK				AMB	AMB	15 19 25.9	
	comp=E,20nm,0.2s						
YUK				AMB	AMB	15 19 25.9	
	comp=E,40nm,0.2s						
YUK				*i* S	**Sn**	**15 19 39.6**	**-0.1**
YUK				A	A	15 19 40.9	
	comp=E,680nm,0.4s						
YUK				A	A	15 19 40.9	
	comp=E,740nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.17**	**6**	*i* PN	**Pn**	**15 19 25.5**	**+0.5**
YUK				*i* S	**Sn**	**15 19 40.0**	**+0.3**
YUK				pmax	pmax		
	comp=Z,474nm,0.2s						
YUK				pmax	pmax		
	comp=N,56nm,0.1s						
YUK				pmax	pmax		
	comp=E,79nm,0.2s						
YUK				smax	smax		
	comp=E,319nm,0.1s						
YUK				smax	smax		
	comp=N,971nm,0.2s						
LAGR	**Lagunnoye**	**1.18**	**4**	*i* P	**Pn**	**15 19 25.0**	**-0.2**
LAGR				AMB	AMB	15 19 25.0	
	comp=N,30nm,0.2s						
LAGR				AMB	AMB	15 19 25.0	
	comp=N,70nm,0.2s						
LAGR				AMB	AMB	15 19 25.0	
	comp=N,50nm,0.2s						
LAGR				*i* S	**Sn**	**15 19 40.0**	**-0.1**
LAGR				A	A	15 19 40.1	
	comp=N,420nm,0.3s						
LAGR				A	A	15 19 40.1	
	comp=N,620nm,0.3s						
LAGR	**Lagunnoye**	**1.18**	**4**	*i* PN	**Pn**	**15 19 25.7**	**+0.5**
LAGR				*i* S	**Sn**	**15 19 40.5**	**+0.4**
LAGR				pmax	pmax		
	comp=N,33nm,0.1s						
LAGR				pmax	pmax		
	comp=E,65nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,451nm,0.1s						
LAGR				smax	smax		
	comp=N,1µm,0.2s						
LAGR				smax	smax		
	comp=E,2µm,0.4s						
SHO	**Shikotan**	**1.30**	**40**	*i* P	**Pn**	**15 19 27.0**	**+0.3**
SHO				AMB	AMB	15 19 27.7	
	comp=E,30nm,0.2s						
SHO				*i* S	**Sn**	**15 19 42.3**	**-0.7**
SHO				A	A	15 19 44.2	
	comp=E,260nm,0.2s						
SHO				A	A	15 19 44.2	
	comp=E,300nm,0.2s						
SHO	**Shikotan**	**1.30**	**40**	*i* PN	**Pn**	**15 19 27.1**	**+0.3**
SHO				*i* S	**Sn**	**15 19 42.6**	**-0.4**
SHO				pmax	pmax		
	comp=N,10.0nm,0.1s						
SHO				pmax	pmax		
	comp=Z,35nm,0.1s						
SHO				smax	smax		
	comp=N,268nm,0.3s						
SHO				smax	smax		
	comp=E,238nm,0.3s						
JOB	**Onbets**	**1.36**	**272**	P	**Pn**	**15 19 27.8**	**+0.2**
JAR	**Ashorobuto**	**1.47**	**287**	P	**Pn**	**15 19 29.4**	**+0.3**
JAR				*e*S	**Sn**	**15 19 46.8**	**-0.3**
JTKR	**Abashiri--Toko**	**1.70**	**311**	P	**Pn**	**15 19 33.1**	**+0.9**

IDC 05 15:23:33.2±2.7**, 50°.35N×96°.58E, h0**^{km}**, Error ellipse: s-maj=47.8km s-min=19.3km az=178.0, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLY	**Talaya**	**4.65**	**71**	Pg	Pb	15 24 55.1	-0.6
	0.0nm,0.3s,baz=252,slow=14,SNR=11						
TLY				Lg	Lg	15 25 56.2	
	0.0nm,0.3s,baz=44,slow=19,SNR=5.7						
SONM	**Songino Array**	**6.92**	**108**	Pg	Pb	15 25 38.4	+4.2
	0.6nm,0.3s,baz=298,slow=18,SNR=6.0						
SONM				Lg	Lg	15 27 13.0	
	1.5nm,0.3s,baz=307,slow=39,SNR=5.1						
ZALV	**Zalesovo Beam**	**8.08**	**301**	Pg	Pb	15 25 59.0	+5.1
	0.2nm,0.3s,baz=113,slow=12,SNR=2.4						
ZALV				Lg	Lg	15 27 40.1	
	0.8nm,0.3s,baz=114,slow=28,SNR=5.2						
MKAR	**Makanchi Array**	**10.12**	**255**	Pn	Pn	15 26 05.6	+6.0
	0.0nm,0.3s,baz=83,slow=12,SNR=1.5						
MKAR				Pg		15 26 39.5	
	0.1nm,0.3s,baz=68,slow=18,SNR=3.9						
MKAR				Sn	Sn	15 27 46.7	-7.1
	0.1nm,0.3s,baz=66,slow=18,SNR=2.9						
MKAR				Lg	Lg	15 28 55.6	
	0.3nm,0.3s,baz=76,slow=31,SNR=4.3						

IDC 05 15:32:47.3±10.0**, 49°.21S×107°.15E, h0**^{km}**, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.5**/26**, mbtmp3.4**/2**, MS3.8**/5**, Ms1 3.7**/5**, ms1mx3.5**/18**, Error ellipse: s-maj=530.2km s-min=47.3km az=120.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.20**	**22**	T	T	15 52 20.3	
	baz=199,slow=74						
H01W1	**Cape Leeuwin H**	**15.21**	**22**	T	T	15 52 18.1	
	baz=199,slow=74						
H01W3	**Cape Leeuwin H**	**15.21**	**22**	T	T	15 52 18.4	
	baz=199,slow=74						
STKA	**Stephens Creek**	**31.03**	**69**	LR	LR	15 49 30.0	
	comp=Z,80nm,20.6s,baz=206,slow=32						
ASAR	**Alice Springs**	**33.04**	**49**	P	P	15 39 24.4	+0.1
	0.7nm,0.9s,baz=208,slow=8.3,SNR=7.3						
ASAR				LR	LR	15 51 38.6	
	comp=Z,83nm,19.4s,baz=228,slow=34						
WRA	**Warramunga Arr**	**36.41**	**46**	P	P	15 39 53.5	0.0
	0.7nm,0.7s,baz=211,slow=8.3,SNR=8.4						
BATI	**Baumata**	**41.25**	**25**	LR	LR	15 56 34.2	
	comp=Z,98nm,18.4s,baz=247,slow=35						
RPZ	**Rata Peaks**	**43.19**	**108**	LR	LR	15 55 40.7	
	comp=Z,94nm,18.3s,baz=168,slow=32						
MJAR	**Matsushiro Arr**	**89.72**	**25**	LR	LR	16 23 39.8	
	comp=Z,159nm,22.0s,baz=350,slow=34						
NVAR	**Mina Array Bea**	**145.95**	**91**	PKPbc	PKPdf	15 52 26.4	-1.5
	1.0nm,0.8s,baz=220,slow=5.5,SNR=5.2						
TXAR	**Lajitas Array**	**149.28**	**119**	PKPbc	PKPbc	15 52 38.4	+0.5
	0.5nm,0.8s,baz=201,slow=3.9,SNR=5.4						

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*IDC **05** 15:40:02.0±0.6, 56°.18S×25°.09W, h0^{km}, mb4.6/11, mb1 4.6/12, mb1mx4.4/28, mbtmp4.6/12, ML4.1/1, MS3.9/10, Ms1 3.9/10, ms1mx3.7/25, Error ellipse: s-maj=19.2km s-min=17.9km az=163.0*

*ISCJB **05** 15:40:04.7±0.3, 56°.16S±0°.06×25°.2W±0°.1, h30^{km}, mb4.8/20, MS4.0/10, Error ellipse: s-maj=9.7km s-min=7.0km az=136.9*

*NEIC **05** 15:40:07.9±1.5, 56°.16S×25°.23W, h41^{km}±13^{km}, mb5.0/14, Error ellipse: s-maj=10.3km s-min=7.3km az=216.0*

*BJI **05** 15:40:08.5, 56°.20S×25°.30W, h36^{km}, mB5.6/3, Ms5.1/3, Ms7 4.8/3*

ISC 05 15:40:06.8±0.4**, 56°.17S**±0°.09×**25°.24W**±0°.08**, h30**^{km}**, n70, σ0^{s}.96**/59**, mb5.0**/20**, MS3.9**/11**, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.71**	**282**	*e*Pn	**Pn**	**15 41 44.5**	**+1.4**
VNA1	**Neumayer--Stat**	**16.29**	**160**	P	**Pn**	**15 43 53.0**	**-0.1**
VNA3	**Neumayer Olymp**	**16.53**	**162**	P	**Pn**	**15 43 54.8**	**-1.3**
VNA3				S	Sn	15 46 41.3	-17
VNA2	**Neumayer--Watz**	**16.69**	**159**	P	**Pn**	**15 43 57.1**	**-1.0**
	baz=327,slow=16						
VNA2				S	Sn	15 46 46.8	-15
	baz=316,slow=22						
SNAA	**Sanae**	**18.20**	**157**	P	**P**	**15 44 17.2**	**+0.3**
SNAA	**Sanae**	**18.20**	**157**	*e*P	**P**	**15 44 17.2**	**+0.3**
	28nm,1.2s						
SNAA				S	Sn	15 47 27.0	-12
SNAA	**Sanae**	**18.20**	**157**	P	**Pn**	**15 44 15.9**	**-1.0**
	0.7nm,0.3s,baz=322,slow=13,SNR=26						
SNAA				S	Sn	15 47 27.0	-12
	0.1nm,0.3s,baz=354,slow=18,SNR=2.1						
SNAA				LR	LR	15 50 44.5	
	comp=Z,276nm,19.8s,baz=324,slow=35						
EFI	**East Falkland**	**19.73**	**269**	*e*P	**P**	**15 44 33.2**	**-0.4**
	173nm,1.5s						
PMSA	**Palmer Station**	**20.65**	**230**	P	**P**	**15 44 43.4**	**-0.2**
	16nm,0.6s,baz=72,slow=13,SNR=3.6						
H09W1	**TRISTAN DA CUN**	**20.97**	**30**	T	T	16 04 57.6	
	SNR=33						
USHA	**Ushuaia**	**24.21**	**255**	P	**P**	**15 45 19.6**	**-0.9**
	4.5nm,0.7s,baz=100,slow=17,SNR=2.1						
USHA				LR	LR	15 53 41.3	
	comp=Z,141nm,18.9s,baz=95,slow=34						
SYO	**Syowa Base**	**30.80**	**140**⇑	*e*X	**P**	**15 46 21.0**	**+1.7**
QSPA	**South Pole Qui**	**34.08**	**180**	*e*P	**P**	**15 46 47.6**	**-0.7**
	42nm,1.3s						
QSPA	**South Pole Qui**	**34.08**	**180**	P	**P**	**15 46 47.9**	**-0.4**
	14nm,0.5s,baz=38,slow=1.2,SNR=177						
CPUP	**Villa Florida**	**37.72**	**309**	*e*P	**P**	**15 47 19.4**	**-0.2**
	7.9nm,0.8s						
CPUP	**Villa Florida**	**37.72**	**309**	P	**P**	**15 47 19.7**	**+0.1**
	5.9nm,0.5s,baz=150,slow=7.3,SNR=21						
CPUP				LR	LR	16 02 50.7	
	comp=Z,198nm,20.7s,baz=186,slow=36						
PEL	**Peldehue**	**38.71**	**287**	*e*P	**P**	**15 47 26.8**	**-1.1**
	25nm,0.5s						
ROC1	**El Roble**	**39.02**	**287**	*e*P	**P**	**15 47 29.3**	**-1.4**
	24nm,0.5s						
MAW	**Mawson**	**39.40**	**143**	LR	LR	16 01 38.8	
	comp=Z,179nm,19.0s,baz=237,slow=33						
GO04	**Tololo Observa**	**41.09**	**290**	*e*P	**P**	**15 47 47.3**	**-0.6**
	35nm,1.6s						
BDFB	**Brasilia**	**44.03**	**328**	LR	LR	16 06 20.6	
	comp=Z,214nm,18.7s,baz=150,slow=36						
GO02	**Mina Guanaco**	**44.52**	**295**	*e*P	**P**	**15 48 15.9**	**0.0**
	18nm,0.7s						
BOSA	**Boshof**	**44.95**	**74**	P	**P**	**15 48 18.1**	**-1.0**
	2.0nm,0.6s,baz=233,slow=4.6,SNR=4.0						
BOSA				LR	LR	16 04 14.0	
	comp=Z,274nm,18.2s,baz=213,slow=32						
LVC	**Limon Verde**	**46.31**	**298**	*e*P	**P**	**15 48 31.0**	**+0.9**
	32nm,1.4s						
VNDA	**Vanda**	**46.50**	**182**	LR	LR	16 09 35.2	
	comp=Z,88nm,18.1s,baz=174,slow=38						
H10S2	**ASCENSION HYDR**	**47.82**	**14**	T	T	16 40 28.0	
	baz=187,slow=75,SNR=8.6						
H10S3	**ASCENSION HYDR**	**47.82**	**14**	T	T	16 40 30.5	
	baz=187,slow=75,SNR=7.4						
H10S1	**ASCENSION HYDR**	**47.84**	**14**	T	T	16 40 33.1	
	baz=187,slow=75,SNR=8.1						
LBTB	**Lobatse**	**48.00**	**71**	P	**P**	**15 48 43.4**	**+0.4**
	4.5nm,0.8s,baz=183,slow=7.7,SNR=4.8						
H10N3	**ASCENSION HYDR**	**48.94**	**14**	T	T	16 41 42.3	
	baz=266,slow=74,SNR=6.6						
H10N2	**ASCENSION HYDR**	**48.95**	**14**	T	T	16 41 44.8	
	baz=188,slow=74,SNR=3.4						
MNMC	**Minye Minye**	**49.59**	**300**	*e*P	**P**	**15 48 56.0**	**+0.5**
	15nm,0.8s						
LPAZ	**La Paz**	**51.34**	**303**	*e*P	**P**	**15 49 09.6**	**+0.5**
	14nm,0.7s						
LPAZ	**La Paz**	**51.34**	**303**	P	**P**	**15 49 10.3**	**+1.2**
	11nm,0.5s,baz=120,slow=4.8,SNR=38						
LPAZ				LR	LR	16 12 27.3	
	comp=Z,48nm,20.1s,baz=134,slow=38						
CASY	**Casey**	**53.42**	**159**	*e*P	**P**	**15 49 24.2**	**+1.0**
	30nm,1.8s						
LIC	**Lamto**	**64.37**	**22**	*e*P	**P**	**15 50 39.0**	**-0.7**
	18nm,0.7s						
KIC	**Kosan Boka**	**64.56**	**23**	*e*P	**P**	**15 50 40.8**	**-0.2**
	30nm,1.2s						
TIC	**Toumodi**	**64.78**	**22**	*e*P	**P**	**15 50 42.3**	**-0.1**
DBIC	**Dimbokro**	**64.84**	**22**	*e*P	**P**	**15 50 42.2**	**-0.6**
	26nm,1.4s						
DBIC	**Dimbokro**	**64.84**	**22**	P	**P**	**15 50 42.8**	**0.0**
	3.5nm,0.5s,baz=173,slow=7.2,SNR=6.2						
DBIC				LR	LR	16 12 58.5	
	comp=Z,126nm,18.1s,baz=345,slow=30						
OTAV	**Otavalo**	**70.64**	**302**	*e*P	**P**	**15 51 20.3**	**+0.4**
	16nm,1.4s						
TOA0	**Torodi Ar. Sit**	**72.64**	**28**	*e*P	**P**	**15 51 31.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**72.64**	**28**	P	**P**	**15 51 29.7**	**-1.6**
	3.8nm,0.5s,baz=196,slow=6.7,SNR=46						
ROSC	**El Rosal**	**72.80**	**308**	LR	LR	16 24 35.1	
	comp=Z,55nm,20.8s,baz=136,slow=37						
SDV	**Santo Domingo**	**74.87**	**313**	*e*P	**P**	**15 51 42.5**	**-2.2**
SDV	**Santo Domingo**	**74.87**	**313**	P	**P**	**15 51 45.7**	**+1.0**
	2.4nm,0.5s,baz=148,slow=12,SNR=5.2						
H07N1	**FLORES T-PHASE**	**95.62**	**355**	T	T	17 38 33.8	
	SNR=6.3						
ASAR	**Alice Springs**	**98.53**	**161**	P	**P**	**15 53 41.5**	**-1.0**
	0.4nm,0.9s,baz=185,slow=4.0,SNR=4.4						
AS01	**Alice Springs**	**98.55**	**161**	*e*P	**P**	**15 53 42.2**	**-0.3**
CLL	**Collm**	**111.69**	**25**	*e*pPKiKP	pPKiKP	15 58 50.0	+5.3
CM01	**Chiang Mai Arr**	**123.98**	**109**	*e*PKPdf	**PKPdf**	**15 59 01.4**	**-0.5**
FINES	**FINESS Array B**	**123.98**	**27**	PKP	**PKPdf**	**15 58 59.4**	**-1.1**
	1.6nm,0.9s,baz=198,slow=4.0,SNR=2.6						
CMAR	**Chiang Mai Arr**	**124.00**	**109**	PKP	**PKPdf**	**15 59 01.6**	**-0.3**
	0.7nm,0.8s,baz=236,slow=3.7,SNR=6.5						
KSH	**Kashi**	**127.55**	**73**	PKP	**PKiKP**	**15 59 12.4**	**+3.6**
KSH				sPKP		15 59 22.5	
KSH				PP	**PP**	**16 01 11.1**	**+1.1**
ARCES	**ARCESS Array B**	**130.65**	**21**	PKP	**PKPdf**	**15 59 12.4**	**-0.6**
	2.6nm,0.8s,baz=204,slow=2.0,SNR=4.9						
KMI	**Kunming**	**131.46**	**108**	PKP	**PKiKP**	**15 59 16.9**	**-0.3**
CD2	**Chengdu**	**136.57**	**104**	PKP	**PKPdf**	**15 59 25.0**	**-0.4**
WMQ	**Urumqi**	**136.86**	**77**	*e*PKP	**PKPdf**	**15 59 26.5**	**+0.9**
WMQ				LR	LR		
	comp=N,190nm,13.1s						
WMQ				LR	LR		
	comp=Z,150nm,20.3s						
YKA	**Yellowknife Ar**	**136.99**	**317**	PKP	**PKPdf**	**15 59 24.7**	**-0.3**
	0.2nm,0.4s,baz=131,slow=2.0,SNR=4.5						
LZH	**Lanzhou**	**140.51**	**99**	*e*PKP	**PKPdf**	**15 59 32.6**	**0.0**
LZH				sPKP		15 59 53.1	
LZH				LR	LR		
	comp=N,120nm,18.1s						
LZH				LR	LR		
	comp=E,130nm,18.2s						
LZH				LR	LR		
	comp=Z,180nm,20.3s						
GTA	**Gaotai**	**140.63**	**91**	*e*PKP	**PKiKP**	**15 59 35.6**	**+0.3**
GTA				sPKP		15 59 50.3	
NJ2	**Nanjing**	**145.34**	**119**	*e*PKPbc	**PKPab**	**15 59 42.1**	**+1.0**
DAWY	**Dawson**	**147.68**	**311**	*e*PKPbc	**PKPbc**	**15 59 47.1**	**+0.2**
HHC	**Hu-ho-hao-te**	**148.15**	**100**	*e*PKPbc	**PKPdf**	**15 59 44.1**	**-1.6**
SONM	**Songino Array**	**149.65**	**85**	PKPbc	**PKPbc**	**15 59 51.7**	**-0.9**
	1.1nm,0.5s,baz=204,slow=3.3,SNR=5.4						
RIDG	**Independ'e Rid**	**149.92**	**310**	*e*PKPbc	**PKiKP**	**15 59 53.6**	**+0.1**
IL1	**Eielson Array**	**151.01**	**311**	*e*PKPbc	**PKPbc**	**15 59 55.1**	**0.0**
ILAR	**Eielson Array**	**151.01**	**311**	PKPbc	**PKPbc**	**15 59 55.2**	**+0.1**
	3.7nm,1.1s,baz=134,slow=2.1,SNR=17						
ILB	**Eielson Array**	**151.01**	**311**	*e*PKPbc	**PKPbc**	**15 59 55.2**	**+0.1**
RND	**Reindeer**	**151.59**	**308**	*e*PKPbc	**PKiKP**	**15 59 57.3**	**+0.3**

IDC 05 15:41:09.8±8.1**, 31°.36S×179°.31E, h462**^{km}±103^{km}**, mb2.3**/2**, mb1 2.6**/3**, mb1mx2.6**/30**, mbtmp3.4**/3**, Error ellipse: s-maj=106.8km s-min=46.4km az=8.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.12**	**194**	P	P	15 42 56.4	+0.5
	0.9nm,0.3s,baz=7.6,slow=15,SNR=13						
URZ				S	S	15 44 22.8	-0.2
	0.2nm,0.3s,baz=344,slow=7.4,SNR=2.6						
ASAR	**Alice Springs**	**40.76**	**269**	P	P	15 48 09.7	0.0
	0.1nm,0.5s,baz=108,slow=7.4,SNR=5.6						
WRA	**Warramunga Arr**	**41.84**	**275**	P	P	15 48 18.0	-0.2
	0.2nm,0.3s,baz=112,slow=8.0,SNR=7.6						
FINES	**FINESS Array B**	**145.20**	**338**	PKPbc	PKPdf	15 59 53.0	-0.2
	3.3nm,1.1s,baz=49,slow=6.4,SNR=3.3						

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*CRAAG **05** 15:50:33.7, 36°.24N×1°.74E, Ml2.6*

*ISCJB **05** 15:50:34.5±0.8, 36°.44N±0°.08×1°.57E±0°.08, h25^{km}±13^{km}, Error ellipse: s-maj=13.1km s-min=10.7km az=159.0*

*MDD **05** 15:50:36.8±2.5, 36°.50N×1°.34E, h0^{km}, mb3.6/5, Error ellipse: s-maj=28.4km s-min=13.3km az=132.0, PRXIMO*

ISC 05 15:50:34.0±1.3**, 36°.29N**±0°.07×**1°.59E**±0°.06**, h27**^{km}±10^{km}**, n11, σ1^{s}.81**/15**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.05**	**271**	P	**Pb**	**15 50 38.3**	**-0.4**
ECHA	**Ech Chlef**	**0.23**	**233**	P	**Pn**	**15 50 42.7**	**+1.0**
EMHD	**Djebel Mahouad**	**1.10**	**94**	P	**Pn**	**15 50 54.4**	**+0.6**
EIBI	**Ibiza**	**2.74**	**356**	P	**Pn**	**15 51 17.7**	**+1.5**
	2.2nm,0.3s,SNR=7.9						
EIBI				S	**Sn**	**15 51 46.7**	**-1.8**
	7.6nm,0.2s,SNR=7.9						
EBEN2	**Beniarda presa**	**2.77**	**330**	P	**Pn**	**15 51 17.0**	**+0.3**
	2.2nm,0.2s,SNR=7.9						
EBEN2				S	**Sn**	**15 51 47.3**	**-2.0**
	1.2nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.60**	**15**	P	**Pn**	**15 51 30.9**	**+2.8**
	0.4nm,0.1s,SNR=7.9						
ETOS				S	**Sn**	**15 52 07.7**	**-2.1**
	2.4nm,0.4s,SNR=7.9						
EBER	**Berja**	**3.66**	**281**	P	**Pn**	**15 51 29.8**	**+0.7**
	2.0nm,0.2s,SNR=10						
EQES	**Quesada**	**4.03**	**293**	P	**Pn**	**15 51 35.4**	**+1.4**
	0.7nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**4.14**	**284**	P	**Pn**	**15 51 37.4**	**+1.8**
	1.7nm,0.3s,SNR=4.0						
ELGU	**Los Guajares,**	**4.24**	**279**	P	**Pn**	**15 51 38.1**	**+1.2**
	1.5nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.38**	**339**	P	**Pn**	**15 51 40.9**	**+2.0**
	0.5nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**15 52 27.9**	**-1.3**
	7.1nm,0.8s,SNR=7.9						

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*IDC **05** 15:53:16.3±1.4, 1°.04N×125°.71E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/35, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=106.9km s-min=21.6km az=67.0*

*DJA **05** 15:53:19.6±0.5, 1°N±8°×12°6E±°, h10^{km}, M3.9/5, MLv3.9/5*

*ISCJB **05** 15:53:20.2±1.2, 1°.2N±0°.2×126°.26E±0°.07, h44^{km}, mb3.7/4, Error ellipse: s-maj=21.7km s-min=10.1km az=6.2*

ISC 05 15:53:22.2±1.2**, 1°.2N**±0°.2×**126°.21E**±0°.07**, h44**^{km}**, n9, σ0^{s}.79**/9**, mb3.7**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**110**	P	**Pn**	**15 53 43.9**	**+0.8**
KMSI	**Cibinong**	**2.31**	**254**	P	**Pn**	**15 53 58.1**	**+0.3**
KMSI				S	**Sn**	**15 54 26.2**	**+1.1**
LUWI	**Luwuk**	**4.10**	**237**	P	Pn	15 54 37.5	+15
APSI	**Ampana**	**5.02**	**245**	P	Pn	15 54 40.7	+5.7
FITZ	**Fitzroy Crossi**	**19.19**	**182**	P	**P**	**15 57 41.5**	**-0.9**
	0.2nm,0.3s,baz=20,slow=8.4,SNR=6.9						
WRA	**Warramunga Arr**	**22.48**	**160**	P	**P**	**15 58 17.2**	**-0.8**
	1.3nm,0.3s,baz=334,slow=11,SNR=19						
ASAR	**Alice Springs**	**25.83**	**164**	P	**P**	**15 58 49.6**	**-0.1**
	0.8nm,0.4s,baz=344,slow=10,SNR=25						
ASAR				PcP	**PcP**	**16 02 18.4**	**0.0**
	0.2nm,0.5s,baz=346,slow=2.3,SNR=5.8						
STKA	**Stephens Creek**	**35.99**	**157**	P	**P**	**16 00 18.9**	**-0.1**
	0.8nm,0.6s,baz=330,slow=14,SNR=2.9						
MKAR	**Makanchi Array**	**59.34**	**326**	P	**P**	**16 03 19.4**	**-0.4**
	0.3nm,0.5s,baz=125,slow=8.6,SNR=11						

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*IDC **05** 15:54:02.9±1.0, 17°.62S×174°.37W, h0^{km}, mb4.0/8, mb1 4.2/8, mb1mx3.9/33, mbtmp4.0/8, Error ellipse: s-maj=33.4km s-min=23.0km az=134.0*

*ISCJB **05** 15:54:14.1±0.7, 17°.7S±0°.2×174°.55W±0°.08, h100^{km}, mb4.0/10, Error ellipse: s-maj=21.8km s-min=10.9km az=179.8*

*NEIC **05** 15:54:14.9±2.0, 17°.66S×174°.54W, h93^{km}±21^{km}, mb4.2/3, Error ellipse: s-maj=21.5km s-min=11.3km az=153.0*

ISC 05 15:54:15.6±0.8**, 17°.8S**±0°.2×**174°.39W**±0°.08**, h100**^{km}**, n14, σ1^{s}.77**/15**, mb4.0**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.43**	**108**	Pn	**Pn**	**15 55 21.7**	**+1.1**
NIUE				Sn	**Sn**	**15 56 06.3**	**-4.7**
RAR	**Rarotonga**	**14.20**	**106**	*e*P	**Pn**	**15 57 34.9**	**+2.8**
URZ	**Urewera**	**21.72**	**198**	P	**P**	**15 58 58.8**	**+0.1**
	2.7nm,0.3s,baz=281,slow=2.7,SNR=7.8						
STKA	**Stephens Creek**	**42.06**	**242**	*e*P	**P**	**16 01 58.0**	**+0.3**
	3.0nm,1.7s						
STKA	**Stephens Creek**	**42.06**	**242**	P	**P**	**16 01 57.7**	**+0.1**
	0.5nm,0.5s,baz=74,slow=18,SNR=2.9						
WR1	**Warramunga Arr**	**48.42**	**259**	*e*P	**P**	**16 02 46.9**	**-1.2**
	17nm,1.8s						
WRA	**Warramunga Arr**	**48.42**	**259**	P	**P**	**16 02 46.9**	**-1.2**
	1.2nm,0.6s,baz=98,slow=7.1,SNR=32						
AS01	**Alice Springs**	**48.47**	**254**	*e*P	**P**	**16 02 47.2**	**-1.2**
AS31	**Alice Springs**	**48.51**	**254**	*e*P	**P**	**16 02 47.9**	**-0.9**
	2.2nm,0.6s						
ASAR	**Alice Springs**	**48.51**	**254**	P	**P**	**16 02 48.1**	**-0.7**
	8.1nm,0.6s,baz=90,slow=8.4,SNR=196						
FITZ	**Fitzroy Crossi**	**56.83**	**260**	P	**P**	**16 03 50.2**	**+0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	1.6nm,0.9s,baz=83,slow=8.1,SNR=2.7						
QSPA	**South Pole Qui**	72.28	180	P	P	16 05 30.5	+0.4
	1.6nm,0.7s,baz=343,slow=1.0,SNR=15						
NVAR	**Mina Array Bea**	76.72	42	P	P	16 05 56.2	-0.1
	0.5nm,0.7s,baz=228,slow=10,SNR=3.6						
ILAR	**Eielson Array**	84.95	11	P	P	16 06 38.7	-0.5
	0.2nm,0.5s,baz=226,slow=5.8,SNR=8.6						

IDC 05 16:02:01.1±1.7,**11°.18S**×**167°.02E**,**h0**^{km},**mb3.7**/4,**mb1 4.1**/5,**mb1mx3.6**/36,**mbtmp3.9**/5,**ML4.4**/1,**Error ellipse: s-maj=72.5km s-min=25.8km az=151.0**,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	7.17	283	Pn	Pn	16 03 49.5	+2.2
	5.9nm,0.3s,baz=17,slow=5.1,SNR=5.9						
H11S2	**WAKE ISLAND Hy**	29.48	359	T	T	16 38 27.6	
	baz=181,slow=76,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	29.48	359	T	T	16 38 27.1	
	baz=181,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	29.50	359	T	T	16 38 27.4	
	baz=181,slow=76,SNR=12						
WRA	**Warramunga Arr**	32.61	250	P	P	16 08 34.3	-0.5
	0.8nm,0.8s,baz=82,slow=9.2,SNR=7.7						
ASAR	**Alice Springs**	33.85	244	P	P	16 08 45.5	-0.1
	0.8nm,1.0s,baz=64,slow=10,SNR=5.1						
ILAR	**Eielson Array**	83.24	18	P	P	16 14 27.7	-1.5
	0.9nm,0.9s,baz=235,slow=5.7,SNR=7.3						
NVAR	**Mina Array Bea**	85.16	49	P	P	16 14 41.5	+1.7
	0.6nm,0.8s,baz=228,slow=7.6,SNR=4.6						

*NIED **05** 16:15:00,28°.80N×128°.60E,h5^{km},Mw4.8 Best double couple: M$_0$1.59000×10^{16} NP1:φ$_s$220.00000°,δ37.00000°,λ-116.00000°. NP2:φ$_s$72.00000°,δ58.00000°,λ-72.00000°.*

*IDC **05** 16:15:23.9±0.5,28°.81N×128°.71E,h0^{km},mb4.3/20,mb1 4.4/21,mb1mx4.3/36,mbtmp4.3/21,ML3.3/2,MS4.1/26,Ms1 4.1/26,ms1mx3.9/46,Error ellipse: s-maj=18.6km s-min=12.2km az=84.0*

*JMA **05** 16:15:25.6±0.2,28°.79N×128°.60E,h12^{km}±2^{km},M4.6*

JMA Felt I J1.

*ISCJB **05** 16:15:26.8±0.5,28°.79N±0°.02×128°.64E±0°.02,h26^{km}±3^{km},mb4.8/133,MS4.2/29,Error ellipse: s-maj=3.3km s-min=2.8km az=31.2*

*GCMT **05** 16:15:26.0±0.3,28°.69N±0°.02×128°.55E±0°.04,h13^{km}±1^{km},MW4.8/61,Moment Tensor Solution. s19,c24; s61,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.88±.16; M$_{\theta\theta}$1.74±.11; M$_{\phi\phi}$0.13±.10; M$_{r\theta}$0.25±.24; M$_{\theta\phi}$1.00±.07; M$_{\phi r}$0.79±.29; Best double couple: M$_0$2.22800×10^{16} NP1:φ$_s$227.00000°,δ55.00000°,λ-112.00000°. NP2: φ$_s$82.00000°,δ40.00000°,λ-62.00000°. Principal axes: T 2.2990, Plg8.0000°, Azm332.0000°; N -0.1440, Plg18.0000°, Azm240.0000°; P -2.1560, Plg70.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **05** 16:15:29.0±1.0,28°.78N×128°.62E,h49^{km},mb5.1/39,MS4.3/4 Error ellipse: s-maj=7.1km s-min=4.7km az=97.9*

*BJI **05** 16:15:30.8,28°.68N×128°.56E,h60^{km},mB4.9/48,mb4.6/64,Ms4.7/67,Ms7 4.4/63*

*NEIC **05** 16:15:31.0±0.4,28°.78N×128°.61E,h50^{km}±3^{km},mb5.0/92,Error ellipse: s-maj=4.5km s-min=3.4km az=139.0*

NEIC Recorded [1 JMA] on Amami-oshima.

ISC 05 16:15:28.9±1.0,**28°.76N**±0°.03×**128°.70E**±0°.04,**h31**^{km}±7^{km},**n319**,σ**1^s.69**/339,**mb4.9**/141,**MS4.2**/29,**8C-3D**,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTAJ	**Takarajima**	0.59	48	P	Pb	16 15 37.9	-2.9
JTAJ				*e*S	Sb	16 15 46.1	-2.9
JAMN	**Amaminishikomi**	0.66	141	P	Pb	16 15 39.8	-2.2
JAMN				*e*S	Sb	16 15 49.9	-1.0
JAM	**Amami Oshima**	0.86	113	P	Pn	16 15 43.5	-1.5
JAM				*e*S	Sb	16 15 55.8	-0.9
JTK	**Tokunoshima**	0.99	167	P	Pn	16 15 44.9	-1.9
JTK				*e*S	Sn	16 15 59.3	-0.4
JZK	**Kikaishima**	1.20	111	P	Pn	16 15 50.0	+0.4
JOKE	**Okinoerabujima**	1.40	185	P	Pn	16 15 51.1	-1.2
JOKE				*e*S	Sn	16 16 09.5	-0.2
JNN	**Nakanoshima**	1.49	43	P	Pn	16 15 52.9	-0.7
JYRO	**Yoronjima**	1.74	187	P	Pn	16 15 56.0	-1.0
JYRO				*e*S	Sn	16 16 17.9	-0.3
JIH	**Iheya**	1.84	201	P	Pn	16 15 57.4	-1.0
JIH				*e*S	Sn	16 16 20.3	-0.2
JOW	**Kunigami**	1.96	191	*e*Pn	Pn	16 15 59.4	-0.6
JOW				Sn	Sn	16 16 24.9	+1.4
JOW	**Kunigami**	1.96	191	P	Pn	16 15 58.9	-1.1
JOW	**Kunigami**	1.96	191	Pn	Pn	16 15 59.1	-0.9
	13nm,0.3s,baz=88,slow=20,SNR=64						
JOW				Sn	Sn	16 16 24.9	+1.4
	14nm,0.3s,baz=194,slow=14,SNR=11						
JKC	**Kuchinoerabu**	2.14	37	P	Pn	16 16 02.1	-0.4
JYAK	**Yakushimahirau**	2.16	46	P	Pn	16 16 01.9	-0.9
JNTH	**Nagotoyohara**	2.31	195	P	Pn	16 16 04.0	-0.9
JMTN	**Minamitane**	2.52	49	P	Pn	16 16 07.7	0.0
JAGN	**Aguni-jima**	2.52	211	P	Pn	16 16 07.7	-0.1
JTN	**Tanegashima 3**	2.74	46	P	Pn	16 16 11.1	+0.3
JKE	**Kume jima 2**	2.96	216	P	Pn	16 16 14.8	+1.0
JMZ	**Minamidaito 2**	3.69	142	P	Pn	16 16 23.9	+0.1
JMZ				*e*S	Sn	16 17 07.2	+1.0
JNU	**Nakatsue**	4.73	23	Pn	Pn	16 16 42.7	+4.4
	2.4nm,0.3s,baz=193,slow=7.6,SNR=27						
JNU				LR	LR	16 18 40.5	
	comp=Z,2μm,18.9s,baz=256,slow=42						
YOJ	**Yonaguni jima**	6.65	231	*e*Pn	Pn	16 17 06.7	+2.1
YOJ	**Yonaguni jima**	6.65	231	*e*P	Pn	16 17 06.7	+2.1
SSE	**Sheshan**	6.93	291	P	Pn	16 17 07.2	-1.1
SSE				S	Sn	16 18 27.9	+1.8
SSE				pmax	pmax		
	comp=Z,11nm,0.7s						
SSE				LR	LR		
	comp=N,3μm,11.9s						
SSE				LR	LR		
	comp=E,1μm,11.9s						
SSE				LR	LR		
	comp=Z,1μm,8.7s						
SSE	**Sheshan**	6.93	291	*e*Pn	Pn	16 17 07.2	-1.1
YHNB	**Yeheng**	7.71	240	*e*Pn	Pn	16 17 23.2	+4.0
NACB	**Ninganchiao**	7.84	236	*e*Pn	Pn	16 17 22.1	+1.2
SSLB	**Suanglung**	8.54	236	*e*Pn	Pn	16 17 31.3	+0.8
YULB	**Yu-li**	8.54	233	*e*Pn	Pn	16 17 29.3	-1.2
KSAR	**Wonju Array Be**	8.69	356	Pn	Pn	16 17 35.4	+2.9
KSAR				Lg	Lg	16 20 08.1	
KSAR	**Wonju Array Be**	8.69	356	P	Pn	16 17 35.4	+2.9
KSRS	**Korea Array**	8.70	356	Pn	Pn	16 17 35.4	+2.8
	0.2nm,0.3s,baz=178,slow=14,SNR=3.0						
KSRS				Lg	Lg	16 20 08.1	
	0.4nm,0.3s,baz=180,slow=31,SNR=4.8						
KSRS				LR	LR	16 20 59.9	
	comp=Z,1μm,19.8s,baz=170,slow=39						
KS01	**Wonju Array Si**	8.72	356	*e*Pn	Pn	16 17 33.0	+0.1
TWG	**Pinlang**	9.07	231	*e*Pn	Pn	16 17 34.2	-3.6
TPUB	**Ta-pu**	9.07	235	*e*Pn	Pn	16 17 39.0	+1.3
NJ2	**Nanjing**	9.12	294	*e*P	Pn	16 17 38.4	0.0
NJ2				S	Sn	16 19 16.2	-3.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2				LR	LR		
	comp=N,5μm,12.5s						
NJ2				LR	LR		
	comp=E,2μm,11.4s						
NJ2				LR	LR		
	comp=Z,3μm,19.2s						
INU	**Inuyama**	9.64	45	*e*Pn	Pn	16 17 47.5	+2.0
QZH	**Quanzhou**	9.80	250	P	Pn	16 17 53.1	+5.4
QZH				S	Sn	16 19 38.8	+2.1
QZH				pmax	pmax		
	comp=Z,38nm,1.7s						
QZH				LR	LR		
	comp=N,2μm,9.5s						
QZH				LR	LR		
	comp=E,700nm,6.9s						
QZH				LR	LR		
	comp=Z,1μm,9.0s						
MAJO	**Matsushiro**	11.15	43	*e*Pn	Pn	16 18 09.7	+3.5
MAJO	**Matsushiro**	11.15	43	*e*P	Pn	16 18 09.7	+3.5
MJB9	**Matsu-Tunnel**	11.15	43	*e*Pn	Pn	16 18 09.5	+3.3
MJAR	**Matsushiro Arr**	11.15	43	Pn	Pn	16 18 07.7	+1.5
	0.0nm,0.3s,baz=54,slow=44,SNR=3.7						
DL2	**Dalian**	11.70	332	⇓P	Pn	16 18 21.0	+7.3
DL2				pmax	pmax		
	comp=Z,21nm,0.8s						
DL2				pmax	pmax		
	comp=Z,310nm,7.1s						
DL2				LR	LR		
	comp=N,1μm,10.1s						
DL2				LR	LR		
	comp=E,1μm,10.2s						
DL2				LR	LR		
	comp=Z,2μm,11.6s						
CBIJ	**Chichi jima**	12.04	95	Pn	Pn	16 18 20.4	+2.0
JCJ	**Chichijima**	12.04	95	Pn	Pn	16 18 20.4	+2.0
	2.1nm,0.3s,baz=307,slow=20,SNR=2.0						
JCJ				LR	LR	16 23 06.6	
	comp=Z,291nm,18.4s,baz=340,slow=38						
WHN	**Wuhan**	12.61	282	⇓P	P	16 18 42.2	+4.9
WHN				S	Sn	16 21 00.2	+15
WHN				LR	LR		
	comp=N,6μm,12.4s						
WHN				LR	LR		
	comp=E,2μm,13.7s						
WHN				LR	LR		
	comp=Z,2μm,16.3s						
SNY	**Shenyang**	13.69	344	⇑P	P	16 18 50.0	+0.8
SNY				S	Sn	16 21 19.4	+7.5
SNY				pmax	pmax		
	comp=Z,29nm,1.8s						
SNY				LR	LR		
	comp=N,3μm,11.0s						
SNY				LR	LR		
	comp=E,2μm,6.9s						
SNY				LR	LR		
	comp=Z,4μm,12.2s						
VLA	**Vladivostok**	14.56	9	*i* P	Pn	16 18 54.3	+1.6
CN2	**Changchun**	15.24	351	*e*P	P	16 19 07.6	+1.2
CN2				*e*sP	sP	16 19 26.6	+8.5
CN2				*e*S	Sn	16 21 54.6	+5.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,3μm,10.0s						
CN2				LR	LR		
	comp=Z,3μm,10.0s						
CN2				LR	LR		
	comp=Z,3μm,10.0s						
BJT	**Baijiatuau**	15.26	321	*e*Pn	Pn	16 19 03.0	+1.0
	comp=Z,59nm,0.9s						
BJT	**Baijiatuau**	15.26	321	*e*P	Pn	16 19 03.0	+1.0
BJT				pmax	pmax		
	comp=Z,59nm,0.9s						
USA0B	**Ussuriysk Arra**	15.63	9	*e*Pn	Pn	16 19 07.7	+0.7
	comp=Z,72nm,1.7s						
USRK	**Ussuriysk Ar.**	15.63	9	Pn	Pn	16 19 07.7	+0.7
	comp=Z,0.1nm,0.3s,baz=188,slow=9.6,SNR=2.7						
USRK				LR	LR	16 24 36.3	
	comp=Z,464nm,19.1s,baz=177,slow=36						
MDJ	**Mudanjiang**	15.84	2	P	P	16 19 14.7	+1.5
MDJ				pP	sP	16 19 23.9	-0.9
MDJ				sP	pP	16 19 32.8	+12
MDJ				S	Sn	16 22 06.1	+1.8
MDJ				sS	S	16 22 21.1	+3.1
MDJ				pmax	pmax		
	comp=Z,18nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,680nm,5.2s						
MDJ				LR	LR		
	comp=Z,770nm,15.3s						
MDJ				LR	LR		
	comp=Z,760nm,11.2s						
MDJ				LR	LR		
	comp=Z,650nm,15.9s						
MDJ	**Mudanjiang**	15.84	2	*e*Pn	Pn	16 19 10.5	+0.8
	comp=Z,91nm,1.2s						
TIY	**Taiyuan**	16.26	307	*e*P	P	16 19 21.2	+3.3
TIY				LR	LR		
	comp=Z,1μm,9.9s						
TIY				LR	LR		
	comp=Z,380nm,6.5s						
TIY				LR	LR		
	comp=Z,750nm,9.0s						
TGY	**Tagaytay City**	16.27	208	LR	LR	16 25 40.3	
	comp=Z,419nm,19.7s,baz=221,slow=38						
ENH	**Enshi**	16.80	280	*e*Pn	Pn	16 19 22.0	+0.1
	comp=Z,66nm,1.6s						
ERM	**Erimo**	17.68	38	*i* P	P	16 19 33.6	+0.1
XAN	**Xi'an**	17.68	292	P	Pn	16 19 32.6	-0.4
XAN				pP	sP	16 19 43.5	-1.8
XAN				sP	pP	16 19 51.9	+10
XAN				S	Sn	16 22 42.7	-6.4
XAN				sS	S	16 22 59.2	+3.4
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN				LR	LR		
	comp=Z,1μm,10.3s						
XAN				LR	LR		
	comp=Z,930nm,8.9s						
XAN				LR	LR		
	comp=Z,1μm,9.6s						
XAN	**Xi'an**	17.68	292	*e*Pn	Pn	16 19 32.8	-0.2
	comp=Z,112nm,1.6s						
XAN	**Xi'an**	17.68	292	*e*P	Pn	16 19 32.8	-0.2
XAN				pmax	pmax		
	comp=Z,112nm,1.6s						
HHC	**Hu-ho-hao-te**	18.50	315	*e*P	Pn	16 19 44.9	+1.9
HHC				S	Sn	16 23 05.4	-3.4
HHC				SS	SnSn	16 23 29.8	+7.0
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,5.2s						
HHC				LR	LR		
	comp=Z,1μm,12.7s						
HHC				LR	LR		
	comp=Z,1μm,11.5s						
HHC				LR	LR		
	comp=Z,1μm,12.4s						
ASAJ	**Asahikawa**	18.93	32	P	P	16 19 46.2	-1.0
	comp=Z,0.3nm,0.3s,baz=220,slow=20,SNR=5.3						
BTO	**Baotou**	19.34	313	*e*P	Pn	16 19 54.3	+1.2
GYA	**Guiyang**	19.66	269	⇑*i*P	P	16 19 55.9	+0.3
GYA				pP	sP	16 20 09.3	+2.1
GYA				PP	PnPn	16 20 18.0	+7.0
GYA				S	S	16 23 28.9	-7.0
GYA				sS	sS	16 23 48.6	+0.1
GYA				SS	SnSn	16 23 58.0	+6.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,4.9s						
GYA				LR	LR		
	comp=Z,560nm,14.9s						
GYA				LR	LR		
	comp=Z,500nm,15.0s						
GYA				LR	LR		
	comp=Z,520nm,14.6s						
KLR	**Kul'dur**	20.58	6	*i* P	P	16 20 04.4	-0.7
KLR	**Kul'dur**	20.58	6	P	P	16 20 04.2	-0.9
	comp=Z,20nm,1.1s,baz=190,slow=8.7,SNR=25						
KLR				LR	LR	16 27 21.7	
	comp=Z,402nm,20.1s,baz=183,slow=35						
YSS	**Yuzh-Sakhalins**	21.23	27	*e*P	P	16 20 14.8	+2.7
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS				MLR	MLR		
	comp=E,700nm,16.0s						
GUMO	**Guam**	21.29	132	LR	LR	16 26 47.0	
	comp=E,678nm,21.6s,baz=332,slow=32						
HIA	**Hailar**	21.60	344	*e*P	P	16 20 15.4	-0.8
	comp=E,19nm,1.2s						
HIA	**Hailar**	21.60	344	*e*P	P	16 20 15.4	-0.8
HIA				pmax	pmax		
	comp=Z,19nm,1.2s						
CD2	**Chengdu**	21.74	282	P	P	16 20 18.3	+0.4
CD2				pP	sP	16 20 29.9	+0.3
CD2				sP	pP	16 20 36.5	+11
CD2				S	S	16 24 15.5	-1.4
CD2				sS	Sn	16 24 35.1	+8.2
CD2				pmax	pmax		
	comp=Z,80nm,0.7s						
CD2				pmax	pmax		
	comp=Z,140nm,4.6s						
CD2				LR	LR		
	comp=Z,7μm,12.9s						
CD2				LR	LR		
	comp=Z,3μm,12.7s						
CD2				LR	LR		
	comp=Z,2μm,9.5s						
DAV	**Davao City (W)**	21.77	188	LR	LR	16 30 56.6	
	comp=Z,337nm,18.3s,baz=8.5,slow=43						
LZH	**Lanzhou**	22.18	296	*e*P	P	16 20 22.8	0.0
LZH				pP	sP	16 20 36.5	+2.0
LZH				sP	pP	16 20 43.8	+13
LZH				PP		16 20 51.4	
LZH				S	S	16 24 17.2	-8.3
LZH				sS	Sn	16 24 39.4	+1.7
LZH				SS	SnSn	16 24 58.9	+5.6
LZH				pmax	pmax		
	comp=Z,43nm,1.3s						
LZH				pmax	pmax		
	comp=Z,330nm,4.9s						
LZH				LR	LR		
	comp=Z,3μm,13.0s						
LZH				LR	LR		
	comp=Z,1μm,12.5s						
LZH				LR	LR		
	comp=Z,1μm,14.6s						
KMI	**Kunming**	23.41	267	P	P	16 20 34.7	-1.0
KMI				pP	sP	16 20 49.2	+1.6
KMI				sP	pP	16 20 52.1	+8.2
KMI				S	S	16 24 36.5	-11
KMI				sS	sS	16 24 58.7	-2.5
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,110nm,4.0s						
KMI				LR	LR		
	comp=Z,950nm,11.7s						
KMI				LR	LR		
	comp=Z,610nm,10.8s						
KMI				LR	LR		
	comp=Z,550nm,12.0s						
ZEA	**Zeya**	24.98	358	*e*P	P	16 20 49.0	-0.7
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,55nm,1.4s						
ZEA				MLR	MLR		
	comp=N,1μm,10.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,10.0s						
ULN	**Ulaanbaatar**	25.40	325	*e*P	P	16 20 52.4	-1.4
	comp=Z,26nm,1.0s						
ULN	**Ulaanbaatar**	25.40	325	*ce*P	P	16 20 53.9	+0.2
ULN				pmax	pmax		
	comp=Z,37nm,1.3s						
SONM	**Songino Array**	25.71	324	P	P	16 20 57.2	+0.6
	comp=Z,16nm,1.0s,baz=142,slow=8.9,SNR=23						
SONM				LR	LR	16 32 19.7	
	comp=Z,388nm,18.3s,baz=123,slow=40						
SONA1	**Songino Array**	25.72	324	*e*P	P	16 20 55.3	-1.3
GTA	**Gaotai**	26.08	302	⇓P	P	16 20 59.8	-0.2
GTA				PcP	PcP	16 24 27.8	+0.6
GTA				PcS	PcS	16 28 07.6	-0.5
GTA				ScS	ScS	16 31 52.9	-1.6
GTA				pmax	pmax		
	comp=Z,41nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,4.9s						
GTA				LR	LR		
	comp=Z,2μm,14.6s						
GTA				LR	LR		
	comp=Z,900nm,15.9s						
GTA				LR	LR		
	comp=Z,1μm,15.9s						
CMMT	**Chiang Mai**	28.90	257	P	P	16 21 26.8	+1.5
	comp=Z,4.7nm,1.5s						
CHTO	**Chiang Mai**	28.91	257	*e*P	P	16 21 24.6	-0.7
	comp=Z,3.8nm,0.9s						
CHTO	**Chiang Mai**	28.91	257	*e*P	P	16 21 24.6	-0.7
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHTO	**Chiang Mai**	28.91	257	P	P	16 21 26.9	+1.6
	comp=Z,21nm,1.6s						
ZAK	**Zakamensk**	28.91	325	*e*P	P	16 21 24.8	-0.4
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CMAR	**Chiang Mai Arr**	29.06	256	P	P	16 21 27.1	+0.4
	comp=Z,0.7nm,0.6s,baz=60,slow=7.9,SNR=7.9						
CMAR				LR	LR	16 33 57.4	
	comp=Z,208nm,19.3s,baz=62,slow=38						
CM01	**Chiang Mai Arr**	29.06	256	*e*P	P	16 21 26.3	-0.4
SIJI	**Sorong**	29.56	175	LR	LR	16 32 57.0	
	comp=Z,201nm,19.5s,baz=341,slow=36						
TLY	**Talaya**	29.57	328	*e*P	P	16 21 30.6	-0.3
	comp=Z,89nm,1.4s						
TLY	**Talaya**	29.57	328	*i* P	P	16 21 31.3	+0.4
TLY	**Talaya**	29.57	328	P	P	16 21 30.8	-0.2
	comp=Z,1.6nm,0.6s,baz=160,slow=11,SNR=13						
TLY				LR	LR	16 34 43.4	
	comp=Z,1μm,19.1s,baz=122,slow=39						
IRK	**Irkutsk**	29.66	329	*e*P	P	16 21 30.9	-0.8
IRK				pmax	pmax		
	comp=Z,51nm,2.3s						
SKR	**Severo-Kuril's**	30.10	36	*i* P	P	16 21 36.4	+0.8
SANI	**Sanana**	30.74	185	P	P	16 21 44.5	+3.0
BOD	**Bodaibo**	30.82	345	*e*P	P	16 21 42.2	+0.4
BOD				pmax	pmax		
	comp=Z,8.0nm,1.9s						
MOY	**Mondy**	30.84	326	*e*P	P	16 21 41.9	-0.4
MOY				pmax	pmax		
	comp=Z,31nm,2.5s						
SHL	**Shillong**	32.83	273	*e*P	P	16 21 58.9	-1.2
	comp=Z,21nm,1.1s						
SHL	**Shillong**	32.83	273	*e*P	P	16 21 58.9	-1.2
SHL				pmax	pmax		
	comp=Z,21nm,1.1s						
JAY	**Jayapura**	33.16	158	LR	LR	16 32 47.1	
	comp=Z,219nm,20.8s,baz=320,slow=31						
YAK	**Yakutsk**	33.28	1	*e*P	P	16 22 01.4	-2.0
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				MLR	MLR		
	comp=Z,393nm,16.0s						
YAK				MLR	MLR		
	comp=N,320nm,15.0s						
YAK				MLR	MLR		
	comp=E,140nm,14.0s						
MA2	**Magadan**	34.30	20	*i* P	P	16 22 12.7	+0.5
MA2				pmax	pmax		
	comp=Z,12nm,1.2s						
MA2	**Magadan**	34.30	20	LR	LR	16 35 07.1	
	comp=Z,146nm,20.3s,baz=233,slow=35						
WMQ	**Urumqi**	35.92	306	P	P	16 22 27.2	+0.6
WMQ				sP	sP	16 22 45.5	+6.6
WMQ				pmax	pmax		
	comp=Z,43nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,1μm,10.9s						
WMQ				LR	LR		
	comp=Z,1μm,17.3s						
WMQ				LR	LR		
	comp=Z,960nm,19.7s						
WMQ				LR	LR		
	comp=Z,870nm,22.1s						
WMQ	**Urumqi**	35.92	306	*e*P	P	16 22 26.6	0.0
	comp=Z,76nm,1.8s						
WMQ	**Urumqi**	35.92	306	*e*P	P	16 22 26.6	0.0
WMQ				pmax	pmax		
	comp=Z,75nm,1.8s						
ODAN	**Odare**	36.46	277	*e*P	P	16 22 31.6	0.0
	comp=Z,53nm,0.8s						
RAMN	**Ramite**	37.13	278	*e*P	P	16 22 37.1	-0.2
	comp=Z,11nm,0.7s						
SEY	**Seymchan**	37.49	18	*ce*P	P	16 22 39.6	+0.1
GUN	**Gumba**	37.55	279	*e*P	P	16 22 41.1	+0.1
	comp=Z,44nm,1.1s						
DGZ	**Jazzator, Alta**	37.58	315	*i* P	P	16 22 40.8	+0.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
EDFI	**Ende, Flores**	37.90	191	P	P	16 22 47.6	+4.0
PKI	**Pulchoki**	38.03	279	*e*P	P	16 22 44.4	-0.6
	comp=Z,51nm,1.0s						
PKIN	**Phulchoki**	38.04	279	*e*P	P	16 22 44.4	-0.6
	comp=Z,43nm,1.1s						

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DMN   Daman            38.29 279  eP     P      16 22 46.8 -0.3
      comp=Z,54nm,1.2s
KOLN  Koldanda         39.56 280  eP     P      16 22 57.4 -0.2
      comp=Z,42nm,1.3s
PYUN  Piuthan          40.02 280  eP     P      16 23 01.4 -0.1
      comp=Z,77nm,1.3s
MK01  Makanchi Array   40.20 310  eP     P      16 23 01.8 -0.7
MK31  Makanchi Array   40.21 310  eP     P      16 23 02.1 -0.5
MK31  Makanchi Array   40.21 310  eP     P      16 23 02.1 -0.5
MKAR  Makanchi Array   40.21 310  eP     P      16 23 02.0 -0.6
      comp=Z,34nm,0.9s
MKAR                              PcP    PcP    16 25 05.3 -1.0
MKAR  Makanchi Array   40.21 310  eP     P      16 23 02.0 -0.6
MKAR                                            16 25 05.3
MKAR                              pmax   pmax
      comp=Z,34nm,0.9s
MKAR  Makanchi Array   40.21 310  P      P      16 23 01.8 -0.8
      comp=Z,2.9nm,0.8s,baz=95,slow=10,SNR=32
MKAR                              PcP    PcP    16 25 05.3 -1.0
      comp=Z,3.6nm,1.0s,baz=91,slow=3.4,SNR=6.2
MKAR                              LR     LR     16 41 20.4
      comp=Z,282nm,20.2s,baz=358,slow=39
MAKZ  Makanchi         40.42 310  eP     P      16 23 04.0 -0.4
      comp=Z,18nm,1.3s
MAKZ  Makanchi         40.42 310  eP     P      16 23 04.0 -0.4
MAKZ                              pmax   pmax
      comp=Z,18nm,1.3s
ZAA0  Zalesovo Array   40.53 321  eP     P      16 23 04.2 -0.9
      comp=Z,21nm,1.2s
ZALV  Zalesovo Beam    40.53 321  eP     P      16 23 04.0 -1.0
ZALV                              ePcP   PcP    16 25 05.7 -1.4
ZALV  Zalesovo Beam    40.53 321  eP     P      16 23 04.0 -1.0
ZALV                              e             16 25 05.7
ZALV  Zalesovo Beam    40.53 321  P      P      16 23 04.5 -0.5
      comp=Z,8.9nm,0.8s,baz=109,slow=8.0,SNR=30
ZALV                              PcP    PcP    16 25 05.7 -1.4
      comp=Z,2.7nm,0.9s,baz=104,slow=4.6,SNR=4.9
ZALV                              LR     LR     16 40 50.2
      comp=Z,231nm,21.0s,baz=245,slow=38
NVS   Novosibirsk      41.70 322  eP     P      16 23 13.9 -0.8
NVS                               e             16 24 58.8
NVS                               pmax   pmax
      comp=N,8.0nm,1.5s
NVS                               pmax   pmax
      comp=E,13nm,1.5s
NVS                               pmax   pmax
      comp=Z,18nm,1.5s
PDGK  Podgornoye       41.77 304  P      P      16 23 14.9 -0.8
PDGK                              pmax   pmax
      comp=Z,23nm,1.3s
TIXI  Tiksi            42.94   0  eP     P      16 23 23.7 -0.8
      comp=Z,4.7nm,0.5s
TIXI  Tiksi            42.94   0  i P    P      16 23 22.5 -2.0
TIXI                              pmax   pmax
      comp=Z,2.0nm,1.1s
KURK  Kurchatov        43.31 315  eP     P      16 23 26.9 -1.0
      comp=Z,37nm,1.4s
KURK  Kurchatov        43.31 315  eP     P      16 23 26.9 -1.0
KURK                              pmax   pmax
      comp=Z,37nm,1.4s
KSH   Kashi            44.39 298  P      P      16 23 40.4 +3.5
KSH                               sP     sP     16 23 58.9  +10
KSH                               PP     PcP    16 25 26.4 +6.0
KSH                               S      S      16 30 11.5 +1.9
KSH                               sS     sS     16 30 42.5  +18
KSH                               SS     SS     16 33 24.2 -4.7
KSH                               pmax   pmax
      comp=Z,490nm,6.6s
KSH                               LR     LR
      comp=Z,360nm,6.4s
KSH                               LR     LR
      comp=Z,280nm,4.8s
KSH                               LR     LR
      comp=Z,1μm,8.8s
TKM2  Tokmak 2         44.61 303  P      P      16 23 37.4 -1.3
TKM2                              pmax   pmax
      comp=Z,15nm,1.1s
BILL  Bilibino         45.15  19  eP     P      16 23 41.6 -0.7
      comp=Z,22nm,1.3s
BILL  Bilibino         45.15  19ceP      P      16 23 41.5 -0.8
BILL                              pmax   pmax
      comp=Z,22nm,1.7s
FRU   Bishkek          45.33 303  eP     P      16 23 45.0 +0.8
FRU                               e             16 25 16.0
AAK   Ala-Archa        45.42 303  i P    P      16 23 43.2 -1.9
AAK                               pmax   pmax
      comp=Z,4.0nm,1.5s
SFK   Sufi-Kurgan      46.26 299  P      P      16 23 49.9 -1.9
SFK                               pmax   pmax
      comp=Z,7.0nm,1.3s
ARSB  Arslanbob        46.58 301  eP     P      16 23 53.0 -1.2
      comp=Z,37nm,1.6s
NRIK  Noril'sk         46.99 341  P      P      16 23 57.0 +0.2
      comp=Z,1.1nm,0.3s,baz=129,slow=8.6,SNR=3.3
NRIK                              LR     LR     16 45 24.7
      comp=Z,565nm,18.1s,baz=350,slow=38
NIL   Nilore           47.21 291  eP     P      16 23 58.2 -0.9
      comp=Z,14nm,0.8s
NIL   Nilore           47.21 291  eP     P      16 23 58.2 -0.9
NIL                               pmax   pmax
      comp=Z,14nm,0.8s
KK31  Karatay Array    48.33 304  eP     P      16 24 07.4 -0.3
KK31  Karatay Array    48.33 304  eP     P      16 24 07.4 -0.3
KKAR  Karatay Array    48.33 304  eP     P      16 24 07.4 -0.3
KKAR  Karatay Array    48.33 304  eP     P      16 24 07.4 -0.3
BVA0  Borovoye Array   48.70 317  i P    P      16 24 10.0 -0.3
BVA0                              pmax   pmax
      comp=Z,26nm,1.0s
WRAB  Tennant Creek    48.71 173  eP     P      16 24 10.8 +0.2
      comp=Z,15nm,1.1s
WRAB  Tennant Creek    48.71 173ceP      P      16 24 10.9 +0.2
WRAB                              pmax   pmax
      comp=Z,19nm,1.3s
WRA   Warramunga Arr   48.72 173  P      P      16 24 10.8 +0.1
      comp=Z,3.3nm,0.8s,baz=354,slow=8.0,SNR=40
WRA                               LR     LR     16 44 00.9
      comp=Z,83nm,21.9s,baz=210,slow=35
WB2   Warramunga Arr   48.72 173  eP     P      16 24 11.0 +0.3
      comp=Z,15nm,1.1s
BRVK  Borovoye         48.77 317  eP     P      16 24 10.3 -0.5
      comp=Z,35nm,0.9s
BRVK  Borovoye         48.77 317  P      P      16 24 10.5 -0.3
BRVK                              pmax   pmax
      comp=Z,35nm,0.9s
GAR   Garm             48.81 298  eP     P      16 24 11.5  0.0
      comp=Z,128nm,0.5s
CHGR  Chuyangaron      49.75 298  eP     P      16 24 18.3 -0.3
      comp=Z,29nm,1.5s
MBWA  Marble Bar       50.38 191  eP     P      16 24 23.4 +0.1
      comp=Z,19nm,1.3s
KBL   Kabul            50.49 293  eP     P      16 24 24.5  0.0
      comp=Z,22nm,0.3s
KBL   Kabul            50.49 293  eP     P      16 24 24.5  0.0
KBL                               pmax   pmax
      comp=Z,22nm,0.3s
AS31  Alice Springs    52.36 174  eP     P      16 24 38.9 +0.7
      comp=Z,4.1nm,1.6s
ASAR  Alice Springs    52.36 174  P      P      16 24 38.7 +0.5
      comp=Z,0.8nm,0.6s,baz=4.0,slow=14,SNR=28
ASAR                              PcP    PcP    16 25 49.6 +0.6
      comp=Z,0.7nm,0.8s,baz=343,slow=2.7,SNR=2.6
ASAR                              LR     LR     16 45 13.6
      comp=Z,63nm,21.7s,baz=349,slow=34
AS01  Alice Springs    52.36 174  eP     P      16 24 39.0 +0.8
ANM   Nome             54.10  29  eP     P      16 24 50.8 +0.3
      comp=Z,10nm,0.9s
ANM   Nome             54.10  29  eP     P      16 24 50.8 +0.3
ANM                               pmax   pmax
      comp=Z,10.0nm,0.9s
SVE   Sverdlovsk       54.54 321⇑eP      P      16 24 54.1 +0.2
SVE                               pmax   pmax
      comp=Z,19nm,1.3s
ABKAR Akbulak array    55.25 312  eP     P      16 24 58.0 -1.1
ARU   Arti             55.69 321  eP     P      16 25 01.2 -0.9
      comp=Z,12nm,1.0s
ARU   Arti             55.69 321ceP      P      16 25 01.1 -1.1
ARU                               pmax   pmax
      comp=Z,16nm,1.3s
GEYT  Alibeck          58.42 299  P      P      16 25 21.8  0.0
      comp=Z,2.2nm,0.7s,baz=5.7,slow=3.0,SNR=4.5
GEYT                              LR     LR     16 54 10.5
      comp=Z,364nm,18.0s,baz=20,slow=40
IM3   Indian Mountai   59.06  28  eP     P      16 25 25.4 -0.4
RSO   Redoubt South    59.86  34  eP     P      16 25 31.5 -0.1
PPLA  Purkeypile       59.90  31  eP     P      16 25 32.4 +0.6
      comp=Z,56nm,1.6s
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CAST  Castle Rocks     59.91  31  eP     P      16 25 32.0 +0.3
      comp=Z,25nm,1.4s
KDAK  Kodiak Island    60.25  37  i P    P      16 25 34.3 +0.2
MLY   Manley           60.36  29  eP     P      16 25 34.9 +0.1
      comp=Z,9.3nm,1.0s
SUA   Susitna One      60.72  33  eP     P      16 25 37.1 -0.3
      comp=Z,22nm,0.8s
RC01  Rabbit Creek A   61.25  33  eP     P      16 25 41.0 +0.1
      comp=Z,32nm,1.4s
MCK   McKinley         61.28  30  eP     P      16 25 40.6 -0.5
      comp=Z,16nm,1.0s
MCK   McKinley         61.28  30  eP     P      16 25 40.6 -0.5
MCK                               pmax   pmax
      comp=Z,16nm,1.0s
RND   Reindeer         61.35  31  eP     P      16 25 41.2 -0.4
      comp=Z,25nm,0.8s
RND   Reindeer         61.35  31  eP     P      16 25 41.2 -0.4
RND                               pmax   pmax
      comp=Z,25nm,0.8s
MDM   Murphy Dome      61.43  29  eP     P      16 25 42.0  0.0
      comp=Z,34nm,1.0s
PMR   Palmer           61.47  33  eP     P      16 25 42.0 -0.3
      comp=Z,17nm,1.0s
PMR   Palmer           61.47  33  eP     P      16 25 42.0 -0.3
PMR                               pmax   pmax
      comp=Z,17nm,1.0s
STKA  Stephens Creek   61.53 168  P      P      16 25 42.1 -0.9
      comp=Z,2.1nm,1.0s,baz=357,slow=16,SNR=3.1
STKA                              LR     LR     16 52 52.9
      comp=Z,40nm,21.6s,baz=19,slow=36
COLA  College          61.60  29  i P    P      16 25 43.9 +0.8
COLA                              pmax   pmax
      comp=Z,3.0nm,0.8s
POKR  Poker Flat Res   61.74  29  P      P      16 25 45.0 +0.9
      baz=278
KNK   Knik Glacier     61.82  33  eP     P      16 25 44.7  0.0
      comp=Z,22nm,1.0s
PRGR  Permogore        61.90 327  eP     P      16 25 43.3 -1.9
PRGR                              pmax   pmax
      comp=Z,10.0nm,1.1s
ILAR  Eielson Array    62.02  29  P      P      16 25 44.8 -1.3
      comp=Z,2.7nm,0.8s,baz=273,slow=5.6,SNR=27
ILB   Eielson Array    62.02  29  eP     P      16 25 45.1 -1.0
IL1   Eielson Array    62.02  29  eP     P      16 25 45.0 -1.1
HDA   Harding Lake     62.05  29  eP     P      16 25 45.4 -0.8
      comp=Z,18nm,0.9s
HDA   Harding Lake     62.05  29  P      P      16 25 45.6 -0.6
      baz=279
DZM   Mont Dzumac      62.27 140  eLR    LR     16 44 32.6
      comp=Z,364nm,26.2s
FYU   Fort Yukon       62.43  27  eP     P      16 25 49.6 +0.9
      comp=Z,60nm,1.6s
PRP   Porcupine Dome   62.48  28  eP     P      16 25 47.8 -1.5
      comp=Z,7.5nm,0.9s
RIDG  Independ'e Rid   63.08  30  eP     P      16 25 51.6 -1.5
      comp=Z,23nm,1.2s
DIV   Divide           63.15  33  eP     P      16 25 51.6 -2.1
      comp=Z,16nm,0.9s
HARP  HAARP            63.19  31  eP     P      16 25 53.3 -0.5
      comp=Z,26nm,1.0s
SCRK  Sand Creek       63.40  30  eP     P      16 25 54.8 -0.5
      comp=Z,20nm,1.2s
TMCR  Tamitsa          64.80 331  eP     P      16 26 03.5 -0.8
TMCR                              pmax   pmax
      comp=Z,9.0nm,0.8s
KLMR  Klimovskoe       64.95 327  eP     P      16 26 04.6 -0.8
KLMR                              pmax   pmax
      comp=Z,13nm,1.5s
KLMR  Klimovskoe       64.95 327  eP     P      16 26 04.7 -0.7
KLMR                              AMP           16 26 15.4
      comp=Z,13nm,1.5s
DAWY  Dawson           65.35  29  eP     P      16 26 07.0 -1.1
      comp=Z,30nm,1.8s
INK   Inuvik           66.41  24  eP     P      16 26 14.4 -0.3
      comp=Z,18nm,1.3s
INK   Inuvik           66.41  24  eP     P      16 26 14.4 -0.3
INK                               pmax   pmax
      comp=Z,19nm,1.3s
HYT   Haines Junctio   67.12  32  eP     P      16 26 20.0 +0.5
      comp=Z,12nm,1.1s
GNI   Garni            67.78 305  eP     P      16 26 24.5 +0.4
GNI                               pmax   pmax
      comp=Z,14nm,1.1s
VSR   Storozhevoye     67.88 317  i P    P      16 26 23.2 -1.1
VSR                               pmax   pmax
      comp=Z,6.0nm,1.0s
KBZ   Khabaz           67.90 309  P      P      16 26 25.1 +0.6
      comp=Z,4.3nm,0.9s,baz=251,slow=14,SNR=5.7
KBZ                               LR     LR     16 58 32.0
      comp=Z,321nm,18.3s,baz=20,slow=38
KIV   Kislovodsk       67.97 309  eP     P      16 26 24.5 -0.7
KIV                               pmax   pmax
      comp=Z,11nm,1.1s
FINES FINESS Array B   70.88 330  P      P      16 26 40.5 -2.1
      comp=Z,1.5nm,0.7s,baz=64,slow=4.4,SNR=7.1
FINES                             LR     LR     16 59 34.7
      comp=Z,621nm,18.8s,baz=350,slow=37
RES   Resolute Bay     73.00  11  eP     P      16 26 53.5 -1.6
      comp=Z,8.2nm,0.8s
RES   Resolute Bay     73.00  11  eP     P      16 26 53.5 -1.6
RES                               pmax   pmax
      comp=Z,8.0nm,0.8s
KIEV  Kiev             73.91 319  i P    P      16 26 58.2 -2.7
KIEV                              pmax   pmax
      comp=Z,2.0nm,1.1s
BRTR  Keskin Array B   75.83 308  i P    P      16 27 11.3 -1.1
BRTR                              pmax   pmax
      comp=Z,2.0nm,1.0s
BRTR  Keskin Array B   75.83 308  P      P      16 27 10.2 -2.2
      comp=Z,1.6nm,1.0s,baz=116,slow=5.3,SNR=5.5
YKW3  Yellowknife Ar   76.02  25  eP     P      16 27 11.5 -1.4
      comp=Z,16nm,1.1s
YKA   Yellowknife Ar   76.07  25  P      P      16 27 13.1  0.0
      comp=Z,6.1nm,0.9s,baz=297,slow=5.6,SNR=51
YKB5  Yellowknife Ar   76.07  25  eP     P      16 27 11.7 -1.4
NB2   NORSAR Subarra   77.24 334  P      P      16 27 17.6 -2.3
      comp=Z,1.4nm,0.8s,baz=49,slow=5.6
NOA   NORSAR Array B   77.24 334  P      P      16 27 17.5 -2.3
      comp=Z,2.9nm,0.8s,baz=50,slow=5.4,SNR=8.1
NOA                               LR     LR     17 07 14.4
      comp=Z,192nm,20.9s,baz=270,slow=40
URZ   Urewera          80.58 143  LR     LR     16 58 55.7
      comp=Z,108nm,20.2s,baz=176,slow=32
RPZ   Rata Peaks       81.90 150  LR     LR     17 02 01.8
      comp=Z,54nm,20.5s,baz=324,slow=34
B08A  Colville Reser   82.09  39  eP     P      16 27 46.4 -0.1
      comp=Z,15nm,1.2s
NEW   Newport          83.35  38  eP     P      16 27 52.5 -0.5
      comp=Z,8.1nm,1.1s
NEW   Newport          83.35  38  eP     P      16 27 52.5 -0.5
NEW                               pmax   pmax
      comp=Z,8.0nm,1.1s
NEW   Newport          83.35  38  P      P      16 27 53.4 +0.3
      baz=306
L04D  Klamath Falls    83.79  45  P      P      16 27 57.0 +1.5
      baz=304
E09A  Wood Farm, Sta   83.81  40  eP     P      16 27 54.8 -0.6
      comp=Z,10nm,1.1s
N02D  Trinity Center   84.22  46  P      P      16 27 59.7 +2.0
      baz=303
M04C  Macdoel          84.32  45  P      P      16 27 59.6 +1.4
      baz=304
O03E  Paynes Creek     85.17  46  P      P      16 28 04.0 +1.5
      baz=304
MOD   Modoc Plateau    85.20  44  eP     P      16 28 01.9 -0.8
      comp=Z,11nm,1.3s
BMO   Blue Mountains   85.27  41  eP     P      16 28 02.6 -0.3
      comp=Z,10.0nm,1.3s
BMO   Blue Mountains   85.27  41  eP     P      16 28 02.6 -0.3
BMO                               pmax   pmax
      comp=Z,10.0nm,1.3s
J08A  Circle Bar Ran   85.47  42  eP     P      16 28 04.4 +0.4
      comp=Z,9.6nm,1.1s
ORV   Oroville         85.77  47  eP     P      16 28 05.3 -0.1
      comp=Z,14nm,1.4s
FCC   Fort Churchill   85.83  21  eP     P      16 28 04.2 -1.0
      comp=Z,13nm,0.8s
FCC   Fort Churchill   85.83  21  eP     P      16 28 04.2 -1.0
FCC                               pmax   pmax
      comp=Z,13nm,0.8s
MSO   Missoula         85.93  38  P      P      16 28 07.0 +0.8
      baz=309
FFC   Flin Flon        86.15  27  eP     P      16 28 06.1 -0.8
      comp=Z,22nm,0.9s
FFC   Flin Flon        86.15  27  eP     P      16 28 06.1 -0.8
FFC                               pmax   pmax
      comp=Z,22nm,0.9s
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BEKR  Beckworth        86.32  46  eP     P      16 28 07.8 -0.5
      comp=Z,24nm,1.6s
MFID  Camas Ranch      86.98  41  eP     P      16 28 11.4  0.0
      comp=Z,18nm,1.4s
PAHR  Pah Rah Range    87.03  46  eP     P      16 28 11.4 -0.3
      comp=Z,14nm,1.5s
EGMT  Eagleton         87.34  35  P      P      16 28 13.8 +0.8
      baz=312
CMB   Columbia Colle   87.35  48  eP     P      16 28 13.0 -0.2
      comp=Z,16nm,1.5s
CMB   Columbia Colle   87.35  48  eP     P      16 28 13.0 -0.2
CMB                               pmax   pmax
      comp=Z,16nm,1.5s
DLMT  Dillon           87.58  38  eP     P      16 28 13.5 -0.9
      comp=Z,21nm,1.4s
HLID  Hailey           87.70  40  eP     P      16 28 14.1 -0.9
      comp=Z,13nm,1.3s
HLID  Hailey           87.70  40  P      P      16 28 16.4 +1.4
      baz=309
BOZ   Bozeman (W)      87.95  38  P      P      16 28 15.1 -1.0
      baz=310
NV01  Mina Array Sit   88.46  46  eP     P      16 28 18.4 -0.3
NVAR  Mina Array Bea   88.46  46  P      P      16 28 19.4 +0.6
      comp=Z,1.1nm,0.9s,baz=293,slow=4.8,SNR=8.2
YHB   Horse Butte      88.74  38  eP     P      16 28 20.6 +0.6
      comp=Z,11nm,0.4s
ELK   Elko             88.96  43  eP     P      16 28 21.7 +0.6
      comp=Z,11nm,1.8s
ELK   Elko             88.96  43  eP     P      16 28 21.7 +0.6
ELK                               pmax   pmax
      comp=Z,11nm,1.8s
YNR   Norris Junctio   89.04  38  eP     P      16 28 20.8 -0.6
      comp=Z,10nm,1.2s
H17A  Grant Village    89.30  38  eP     P      16 28 21.5 -1.2
      comp=Z,18nm,1.3s
H17A  Grant Village    89.30  38  P      P      16 28 25.9 +3.2
      baz=311
IMW   Indian Meadow    89.43  39  eP     P      16 28 23.4 +0.1
      comp=Z,17nm,1.5s
RLMT  Red Lodge        89.52  37  eP     P      16 28 22.7 -0.9
      comp=Z,13nm,1.2s
RLMT  Red Lodge        89.52  37  P      P      16 28 24.6 +1.0
      baz=312
FXWY  Fox Creek        89.55  39  eP     P      16 28 23.8  0.0
      comp=Z,6.2nm,1.3s
MOOW  Moose Ponds      89.64  39  eP     P      16 28 26.4 +2.2
      comp=Z,10nm,1.5s
DGMT  Dagmar           89.73  32  eP     P      16 28 23.3 -0.9
      comp=Z,22nm,1.0s
DGMT  Dagmar           89.73  32  P      P      16 28 25.3 +1.0
      baz=316
HVU   Hansel Valley    89.76  41  eP     P      16 28 24.4 -0.3
      comp=Z,8.5nm,1.3s
HVU   Hansel Valley    89.76  41  eP     P      16 28 24.4 -0.3
HVU                               pmax   pmax
      comp=Z,9.0nm,1.3s
REDW  Red Top Meadow   89.83  39  eP     P      16 28 24.1 -1.0
      comp=Z,6.2nm,1.0s
GRAC  Grapevine Rang   89.91  47  P      P      16 28 26.6 +1.2
      baz=307
LAO   LASA Array       90.01  34  P      P      16 28 27.0 +1.4
      baz=314
SPUT  South Promonto   90.25  41  eP     P      16 28 26.1 -0.9
      comp=Z,16nm,1.6s
TPNV  Topopah Spring   90.65  47  eP     P      16 28 30.9 +1.9
      comp=Z,16nm,1.6s
TPNV  Topopah Spring   90.65  47  P      P      16 28 29.9 +1.0
      baz=308
DUG   Dugway, Tooele   90.75  42  eP     P      16 28 28.6 -0.6
      comp=Z,20nm,1.7s
DUG   Dugway, Tooele   90.75  42  eP     P      16 28 28.7 -0.6
DUG                               pmax   pmax
      comp=Z,20nm,1.7s
DUG   Dugway, Tooele   90.75  42  P      P      16 28 30.9 +1.6
      baz=310
BW06  Boulder Array    90.93  39  eP     P      16 28 30.2 -0.1
      comp=Z,14nm,1.5s
BW06  Boulder Array    90.93  39  P      P      16 28 29.6 -0.6
      baz=312
PD31  Pinedale Array   90.93  39  eP     P      16 28 30.2  0.0
PDAR  Pinedale Array   90.93  39  eP     P      16 28 29.6 -0.6
PDAR  Pinedale Array   90.93  39  P      P      16 28 30.1  0.0
      comp=Z,0.8nm,0.7s,baz=354,slow=1.5,SNR=11
TCUT  Toone Canyon     90.97  41  eP     P      16 28 30.9 +0.4
      comp=Z,40nm,1.7s
PSUT  Pine Spring      91.17  44  eP     P      16 28 31.4  0.0
      comp=Z,3.9nm,1.1s
GSC   Goldstone, Bar   91.28  48  eP     P      16 28 33.3 +1.5
      comp=Z,7.5nm,1.3s
GSC   Goldstone, Bar   91.28  48  eP     P      16 28 33.3 +1.5
GSC                               pmax   pmax
      comp=Z,8.0nm,1.3s
PPT2  Papeete2         91.33 109  eLR    LR     16 57 59.1
      comp=Z,88nm,22.0s
ULM   Lac du Bonnet    91.98  27  P      P      16 28 34.1 -0.5
      comp=Z,7.4nm,0.9s,baz=312,slow=5.2,SNR=11
MSU   Marysvale        92.20  43  eP     P      16 28 36.3 +0.1
MSU   Marysvale        92.20  43  eP     P      16 28 36.3 +0.1
P17A  Butcher Ranch,   92.43  42  eP     P      16 28 37.8 +0.6
      comp=Z,20nm,1.5s
MTPU  Mount Pierson    92.50  44  eP     P      16 28 39.9 +2.2
      comp=Z,15nm,1.7s
LDFC  Landfair         92.52  47  eP     P      16 28 37.2 -0.4
      comp=Z,25nm,1.5s
PFO   Pinyon Flats O   92.53  49  eP     P      16 28 37.4 -0.2
      comp=Z,17nm,1.4s
PFO   Pinyon Flats O   92.53  49  eP     P      16 28 37.4 -0.2
PFO                               pmax   pmax
      comp=Z,17nm,1.4s
PFO   Pinyon Flats O   92.53  49  P      P      16 28 37.8 +0.2
      baz=307
XPFO  Pion Flat        92.53  49  eP     P      16 28 37.4 -0.2
      comp=Z,17nm,1.4s
KNB   Kanab            92.76  45  eP     P      16 28 39.8 +1.1
      comp=Z,27nm,1.8s
RSSD  Black Hills      92.91  35  eP     P      16 28 39.6 +0.3
      comp=Z,18nm,1.5s
RSSD  Black Hills      92.91  35  eP     P      16 28 39.7 +0.3
RSSD                              pmax   pmax
      comp=Z,18nm,1.5s
RSSD  Black Hills      92.91  35  P      P      16 28 39.7 +0.3
      baz=316
IRM   Iron Mountain    93.06  48  P      P      16 28 41.0 +1.0
      baz=308
W13A  Hualapai Mount   93.30  47  eP     P      16 28 43.2 +1.9
      comp=Z,9.9nm,1.5s
O20A  White River Ci   93.43  40  P      P      16 28 42.8 +1.0
      baz=313
U15A  North Rim        93.46  45  eP     P      16 28 43.1 +1.0
      comp=Z,21nm,1.8s
PV14  Lion Creek, Pa   94.16  42  eP     P      16 28 46.2 +1.0
      comp=Z,16nm,1.6s
N23A  Red Feather La   94.19  38  P      P      16 28 46.0 +0.6
      baz=314
NNA   Nana            150.91  60  ePKPbc PKPbc  16 35 19.2 -0.2
NNA   Nana            150.91  60  ePKIKP PKPbc  16 35 19.2 -0.2
PTGA  Pitinga         150.93  18  ePKPbc PKPbc  16 35 19.3 -0.1
LPAZ  La Paz          160.13  55  ePKPdf PKPdf  16 35 29.0 +2.3
LPAZ  La Paz          160.13  55  ePKIKP PKPdf  16 35 29.0 +2.3
```

MAN 05 16:20:53.5, 8.46N×123.22E, h27km, mb3.5, ML2.2, MS1.6, 2C, Mindanao

```
Code  Station Name          Δ°  AZ°   Phase ID        Time     Res
                                      Op     ISC     h  m  s   ISC
PAGZ  Pagadian            0.62 165   eP     Pb      16 21 05.5 -0.4
PAGZ                                 eS     Sb      16 21 14.5 +0.3
SNPH  Sibulan             0.88   1⇑i P     Pn      16 21 09.9 -0.3
SNPH                                 i S    Sn      16 21 22.3 +0.2
IPIL  Ipil                0.93 224   eP     Pb      16 21 11.1 +0.2
IPIL                                 eS     Sn      16 21 23.7 +0.6
TBP   Tagbilaran          1.38  27   eP     Pb      16 21 18.9 +0.3
CTBH  Cotabato--PC H      1.59 140⇑i P     Pn      16 21 20.2 +0.3
CTBH                                 i S    Sn      16 21 40.4 +0.8
```

IDC 05 16:25:33.6±1.9, 20.08N×146.46E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/51, mbtmp3.7/5, Error ellipse: s-maj=63.9km s-min=28.2km az=88.0, Mariana Islands region

```
Code  Station Name          Δ°  AZ°   Phase ID        Time     Res
                                      Op     ISC     h  m  s   ISC
WRA   Warramunga Arr     41.50 197   P      P       16 33 22.9 +0.1
      0.2nm,0.6s,baz=22,slow=9.2,SNR=5.3
CMAR  Chiang Mai Arr     44.77 276   P      P       16 33 49.1 -0.3
```

	0.2nm,0.3s,baz=67,slow=5.0,SNR=3.4						
ASAR	Alice Springs	45.17	196	P	P	16 33 52.0	-0.3
	0.2nm,0.8s,baz=12,slow=5.8,SNR=4.3						
ARCES	ARCESS Array B	81.41	342	P	P	16 37 52.2	0.0
	2.0nm,0.8s,baz=58,slow=7.5,SNR=5.6						
FINES	FINESS Array B	85.94	335	P	P	16 38 15.6	+0.1
	3.5nm,1.0s,baz=58,slow=5.2,SNR=3.6						

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*JMA **05** 16:26:17.6±0.2, 28.°79N×128.°60E, h10km±3km, M3.2*
*ISCJB **05** 16:26:18.3±0.9, 28.°79N±0.°04×128.°61E±0.°07, h20km±8km, mb3.4/7, Error ellipse: s-maj=10.1km s-min=5.8km az=9.4*
*IDC **05** 16:26:22.3±2.0, 28.°71N×128.°78E, h44km±20km, mb3.2/8, mb1 3.4/10, mb1mx3.3/54, mbtmp3.5/10, ML2.9/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/26, Error ellipse: s-maj=29.9km s-min=14.6km az=89.0*
ISC 05 16:26:20.3±1.4, **28.°76N**±0.°04×**128.°73E**±0.°06, **h25**km±11km, **n21**, σ**1ˢ36**/28, **mb3.4**/7, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTAJ	Takarajima	0.57	47	P	Pb	16 26 30.0	-1.7
JTAJ				S	Sb	16 26 38.3	-1.1
JAMN	Amaminishikomi	0.65	143	P	Pb	16 26 32.0	-1.1
JAMN				S	Sb	16 26 42.0	+0.3
JAM	Amami Oshima	0.85	114	P	Pn	16 26 35.6	-1.0
JAM				*e*S	Sn	16 26 48.2	0.0
JTK	Tokunoshima	0.99	169	P	Pn	16 26 37.1	-1.6
JTK				S	Sn	16 26 51.2	-0.7
JZK	Kikaishima	1.18	112	P	Pb	16 26 42.5	+0.4
JZK				*e*S	Sb	16 27 00.0	+3.1
JOKE	Okinoerabujima	1.40	186	P	Pn	16 26 43.2	-1.1
JYRO	Yoronjima	1.75	188	P	Pn	16 26 48.4	-0.7
JIH	Iheya	1.85	202	P	Pn	16 26 49.6	-0.8
JOW	Kunigami	1.96	192	P	Pn	16 26 51.2	-0.9
JOW	Kunigami	1.96	192	P	Pn	16 26 51.1	-1.0
	2.2nm,0.3s,baz=95,slow=18,SNR=25						
JOW				S	Sb	16 27 21.2	+1.7
	4.3nm,0.3s,baz=84,slow=21,SNR=8.6						
JNTH	Nagotoyohara	2.32	196	P	Pn	16 26 56.3	-0.6
JNU	Nakatsue	4.72	22	P	Pn	16 27 32.2	+2.2
	0.6nm,0.3s,baz=186,slow=8.3,SNR=6.7						
KSRS	Korea Array	8.69	356	P	Pn	16 28 26.8	+2.4
	0.1nm,0.3s,baz=177,slow=14,SNR=3.0						
KSRS				LR	LR	16 32 28.8	
	comp=Z,149nm,18.2s,baz=334,slow=42						
KLR	Kul'dur	20.57	6	P	P	16 30 57.7	+0.6
	1.1nm,0.6s,baz=214,slow=11,SNR=3.6						
SONM	Songino Array	25.72	324	P	P	16 31 50.3	+1.6
	1.5nm,0.8s,baz=120,slow=8.5,SNR=4.7						
MKAR	Makanchi Array	40.22	310	P	P	16 33 55.6	+0.8
	0.3nm,0.7s,baz=99,slow=9.1,SNR=3.3						
MKAR				PcP	PcP	16 35 56.8	-1.7
	0.2nm,0.7s,baz=79,slow=7.5,SNR=3.4						
ZALV	Zalesovo Beam	40.53	321	P	P	16 33 56.6	-0.6
	0.8nm,0.6s,baz=118,slow=8.6,SNR=4.0						
WRA	Warramunga Arr	48.72	173	P	P	16 35 03.1	+0.2
	0.3nm,0.7s,baz=353,slow=8.1,SNR=5.6						
ASAR	Alice Springs	52.36	174	P	P	16 35 30.0	-0.4
	0.2nm,0.9s,baz=2.7,slow=13,SNR=7.3						
ILAR	Eielson Array	62.01	29	P	P	16 36 37.5	-0.6
	0.3nm,0.8s,baz=286,slow=6.5,SNR=5.3						
YKA	Yellowknife Ar	76.05	25	P	P	16 38 04.5	-0.8
	0.1nm,0.4s,baz=299,slow=5.7,SNR=5.5						

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*ISCJB **05** 16:27:27.1±0.6, 29.°96N±0.°05×138.°5E±0.°1, h443km, mb2.9/4, Error ellipse: s-maj=13.8km s-min=6.3km az=178.4*
*IDC **05** 16:27:28.4±0.8, 29.°93N×138.°70E, h449km±12km, mb2.7/5, mb1 3.0/10, mb1mx2.7/57, mbtmp3.8/10, Error ellipse: s-maj=26.2km s-min=11.4km az=79.0*
*JMA **05** 16:27:28.7±0.4, 30.°26N×137.°75E, h445km, M3.4*
ISC 05 16:27:28.0±0.9, **29.°99N**±0.°07×**138.°6E**±0.°1, **h443**km, **n21**, σ**1ˢ65**/25, **mb3.0**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	3.25	19	P	P	16 28 38.8	+2.5
JHJ	Hachijo jima 2	3.29	18	P	P	16 28 37.9	+1.3
	31nm,0.3s,baz=116,slow=22,SNR=11						
JHJ				S	S	16 29 35.0	+2.6
	12nm,0.3s,baz=246,slow=20,SNR=2.7						
JHJ2	Mitsune	3.29	19	P	P	16 28 38.1	+1.5
CBIJ	Chichi jima	4.30	131	S	S	16 30 00.2	+12
JCJ	Chichijima	4.30	131	P	P	16 28 45.1	-0.3
	3.0nm,0.3s,baz=299,slow=19,SNR=2.6						
JCJ				S	S	16 29 47.0	-1.4
	15nm,0.3s,baz=289,slow=22,SNR=7.0						
BSO3	Boso 3	5.08	18	S	S	16 30 02.0	+0.8
BSO4	Boso 4	5.21	16	S	S	16 30 03.5	-0.4
JOD2	Odawara 2	5.28	5	P	P	16 28 55.1	+0.5
JOD2				S	S	16 30 02.6	-2.8
JNY	Yasuok	5.39	354	P	P	16 28 53.7	-2.0
JHU	Hanno	5.88	6	*e*S	S	16 30 13.4	-3.0
JRY	Ryogami san	6.02	3	P	P	16 29 02.7	+0.6
JAG	Ashikaga	6.46	6	P	P	16 29 07.0	+0.3
JAG				S	S	16 30 24.2	-3.3
MJAR	Matsushiro Arr	6.54	358	P	P	16 29 08.4	+0.8
	0.0nm,0.3s,baz=177,slow=11,SNR=2.8						
JHO	Hitachi	6.82	14	P	P	16 29 11.4	+0.9
JHO				S	S	16 30 33.3	-1.0
ASAJ	Asahikawa	14.46	12	P	P	16 30 34.3	+1.0
	0.3nm,0.3s,baz=217,slow=14,SNR=5.1						
USRK	Ussuriysk Ar.	15.11	342	P	P	16 30 41.7	+1.5
	0.6nm,0.3s,baz=140,slow=9.6,SNR=11						
KLR	Kul'dur	19.90	347	P	P	16 31 29.5	+0.9
	1.4nm,0.5s,baz=175,slow=8.0,SNR=4.9						
CMAR	Chiang Mai Arr	37.73	261	P	P	16 34 04.8	+0.3
	0.4nm,0.5s,baz=80,slow=5.0,SNR=5.4						
WRA	Warramunga Arr	49.81	185	P	P	16 35 38.6	-0.2
	0.7nm,0.5s,baz=1.8,slow=7.8,SNR=17						
ASAR	Alice Springs	53.53	185	P	P	16 36 05.5	-0.4
	0.3nm,0.4s,baz=355,slow=5.2,SNR=4.9						
ILAR	Eielson Array	56.75	30	P	P	16 36 27.4	-0.5
	0.2nm,0.7s,baz=261,slow=5.5,SNR=4.4						

IDC 05 16:29:30.4±8.8, **10.°75S**×**166.°34E**, **h106**km±69km, **mb3.3**/4, **mb1 3.6**/5, **mb1mx3.3**/42, **mbtmp3.7**/5, **ML3.7**/1, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.7**/19, **Error ellipse: s-maj=109.3km s-min=27.1km az=138.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.43	281	P	Pn	16 31 02.5	-0.1
	1.8nm,0.3s,baz=72,slow=3.2,SNR=3.3						
HNR				LR	LR	16 33 40.5	
	comp=Z,174nm,19.1s,baz=72,slow=39						
H11S2	WAKE ISLAND Hy	29.05	1	T	T	17 05 37.5	
	baz=181,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.06	1	T	T	17 05 37.8	
	baz=181,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.07	1	T	T	17 05 38.9	
	baz=181,slow=76,SNR=14						
WRA	Warramunga Arr	32.14	250	P	P	16 35 48.5	+0.4
	0.5nm,0.7s,baz=81,slow=9.1,SNR=5.3						
ASAR	Alice Springs	33.45	243	P	P	16 35 59.2	-0.3
	0.5nm,0.8s,baz=68,slow=10,SNR=5.0						
ILAR	Eielson Array	83.05	18	P	P	16 41 43.5	-0.1
	0.8nm,0.9s,baz=227,slow=6.4,SNR=5.9						
NVAR	Mina Array Bea	85.38	50	P	P	16 41 56.6	+0.3
	0.4nm,0.6s,baz=234,slow=7.7,SNR=3.4						
BRTR	Keskin Array B	129.19	313	PKP	PKPdf	16 48 26.1	-0.6
	0.8nm,1.0s,baz=90,slow=1.4,SNR=2.7						

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*SNET **05** 16:32:03.0±0.0, 12.°76N×88.°46W, h14km*
*UCR **05** 16:32:04.2±0.9, 12.°81N×88.°39W, h53km±89km, ML4.1, mb4.3(NEIC)*
*NEIC **05** 16:32:06.4±1.5, 12.°96N×88.°13W, h45km±16km, mb4.3/6, MD4.0(SNET), Error ellipse: s-maj=18.5km s-min=8.7km az=64.0*
NEIC Felt [I] at Usulutan.
ISC 05 16:32:03.9±1.8, **12.°78N**±0.°08×**88.°31W**±0.°08, **h30**km±14km, **n18**, σ**1ˢ18**/23, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCY	Lacayo	0.64	1	*e*P	Pn	16 32 17.1	0.0
LCY				*e*S	Sn	16 32 27.1	+0.8
VSM	San Miguel	0.65	3	*e*P	Pn	16 32 17.6	+0.3
VSM				*e*S	Sn	16 32 28.8	+2.1
CNCH	Conchagua	0.68	43	*e*P	Pn	16 32 18.2	+0.7
PACA	Pacayal	0.69	359	*e*P	Pb	16 32 17.5	+0.1
PACA				*e*S	Sn	16 32 28.1	+0.6
PACA				IAML		16 32 28.8	
	comp=Z,7µm,0.2s						
TECA	Tecapa	0.73	345	*e*P	Pb	16 32 18.1	-0.2
TECA				*e*S	Sn	16 32 29.2	+0.4
LFRS	El Faro	1.11	319	*e*P	Pn	16 32 23.0	-0.6
LFRS				*e*S	Sn	16 32 36.9	-1.1
LBRS	Las Brisas	1.19	323	*e*P	Pn	16 32 24.4	-0.2
TGUH	Tegucigalpa,Un	1.62	38	*e*Pn	Pn	16 32 29.8	-0.6
ESTN	Estel	1.92	80	*e*Pn	Pn	16 32 34.2	-0.4
BOAB	BOACO BROADBAN	2.60	97	*e*Pn	Pn	16 32 43.4	-0.5
WBCY	West Bay, Gran	9.33	44	*e*Pn	Pn	16 34 14.2	-2.3
OTAV	Otavalo	15.84	141	*e*Pn	Pn	16 35 46.8	+1.5
	comp=Z,7.8nm,1.5s						
957A	Wimauma	15.87	20	*e*Pn	Pn	16 35 43.9	-1.3
	comp=Z,223nm,0.4s						
ROSC	El Rosal	15.91	118	*e*Pn	Pn	16 35 47.8	+1.7
	comp=Z,4.9nm,0.9s						
LNIG	Linares	16.01	320	*e*Pn	Pn	16 35 48.3	+1.2
	comp=Z,8.3nm,1.6s						
TZTN	Tazewell	24.05	9	*e*P	P	16 37 15.3	-1.1
	comp=Z,38nm,0.6s						
P53A	Whipple	27.30	12	*e*P	P	16 37 44.3	-1.6
	comp=Z,18nm,0.6s						
O52A	Adamsville	27.82	11	*e*P	P	16 37 49.9	-0.7
	comp=Z,17nm,0.6s						

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*BJI **05** 16:37:59.3, 55.°44N×35.°14W, h6km, mB5.3/14, mb4.8/20, Ms5.1/9, Ms7 4.8/8*
*IDC **05** 16:38:00.6±0.4, 55.°49N×35.°03W, h0km, mb4.3/30, mb1 4.5/35, mb1mx4.4/46, mbtmp4.3/35, ML3.8/5, MS4.1/29, Ms1 4.1/29, ms1mx4.0/50, Error ellipse: s-maj=13.4km s-min=9.4km az=179.0*
*ISCJB **05** 16:38:01.3±0.1, 55.°46N±0.°03×35.°10W±0.°03, h14km, mb4.7/172, MS4.2/29, Error ellipse: s-maj=4.7km s-min=2.2km az=170.0*
*NEIC **05** 16:38:01.1±1.9, 55.°46N×35.°02W, h2km±11km, mb4.9/143, Error ellipse: s-maj=4.3km s-min=2.2km az=177.0*
ISC 05 16:38:02.8±0.3, **55.°44N**±0.°06×**35.°11W**±0.°05, **h14**km, **n492**, σ**0ˢ91**/486, **mb4.8**/172, **MS4.2**/29, **14C-1D**, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	7.89	321	*e*Pn	Pn	16 39 55.7	-1.3
IVI	Ivigtut	8.97	315	*e*Pn	Pn	16 40 11.1	-0.7
ANGG	Ammassalik, Gr	10.29	354	*e*Pn	Pn	16 40 25.3	-4.5
BORG	Borgarnes	11.56	31	*e*Pn	Pn	16 40 47.8	+0.5
BORG	Borgarnes	11.56	31	Pn	Pn	16 40 46.4	-0.8
	0.1nm,0.3s,baz=209,slow=5.9,SNR=2.3						
SFJD	Kangerlussuaq	13.73	334	*e*Pn	Pn	16 41 16.0	-0.8
SFJD	Kangerlussuaq	13.73	334	*i* P	Pn	16 41 16.4	-0.4
SFJD	Kangerlussuaq	13.73	334	Pn	Pn	16 41 15.7	-1.1
	0.5nm,0.3s,baz=146,slow=14,SNR=3.5						
SFJD				LR	LR	16 45 37.4	
	comp=Z,604nm,20.8s,baz=128,slow=33						
DRLN	Deer Lake	14.98	255	*e*Pn	Pn	16 41 33.6	-0.4
	388nm,1.9s						
SCO	Scoresbysund	16.17	16	*e*Pn	P	16 41 51.5	-1.0
	19nm,1.2s						
SCO	Scoresbysund	16.17	16	*i* P	P	16 41 54.6	+2.1
SUMG	Summit	17.27	357	*e*Pn	Pn	16 42 02.2	-1.3
	22nm,1.1s						
SUMG	Summit	17.27	357	*i* P	Pn	16 42 01.9	-1.6
ESK	Eskdalemuir	18.05	77	*e*Pn	P	16 42 14.0	+0.7
	96nm,1.5s						
SCHQ	Schefferville	18.07	281	*e*Pn	P	16 42 13.0	-0.6
	26nm,0.8s						
SCHQ	Schefferville	18.07	281	P	P	16 42 13.0	-0.6
	2.4nm,0.3s,baz=72,slow=7.4,SNR=18						
SCHQ				LR	LR	16 48 00.1	
	comp=Z,690nm,21.2s,baz=92,slow=33						
EKA	Eskdalemuir Ar	18.07	77	P	P	16 42 13.1	-0.5
	baz=256,slow=6.8,SNR=6.1						
FRB	Frobisher Bay	18.65	310	P	P	16 42 18.6	-1.3
	0.3nm,0.3s,baz=121,slow=6.7,SNR=4.6						
FRB				LR	LR	16 48 19.9	
	comp=Z,476nm,18.7s,baz=82,slow=33						
JMIC	Jan Mayen	19.38	26	LR	LR	16 48 19.7	
	comp=Z,344nm,21.9s,baz=8.0,slow=32						
GBN	Guysborough	19.47	250	*e*P	Pn	16 42 29.4	-0.8
	130nm,1.5s						
KULLO	Kullorsuaq	21.09	344	*i* P	P	16 42 46.3	0.0
DAG	Danmarks Havn	22.26	10	*i* P	P	16 42 59.4	+0.6
	22nm,1.2s						
MVO	Moncorvo	23.30	116	*e*P	P	16 43 22.8	+13
PKME	Peaks-Kenny Pk	23.84	259	P	P	16 43 15.7	+0.5
	baz=52						
PCBR	Castelo Branco	24.06	119	*e*P	P	16 43 19.4	+2.0
CHGQ	Chibougamau	24.20	273	P	P	16 43 18.3	-0.4
	baz=62						
PMTG	Montargil	24.29	121	*e*P	P	16 43 19.9	+0.4
	39nm,1.5s						
TULEG	Thule	24.51	342	*e*P	P	16 43 22.4	+1.2
	39nm,1.3s						
NB2	NORSAR Subarra	24.58	58	P	P	16 43 21.7	-0.4
	comp=Z,4.7nm,1.1s,baz=293,slow=10						
NOA	NORSAR Array B	24.58	58	P	P	16 43 21.3	-0.7
	comp=Z,3.6nm,0.9s,baz=280,slow=9.8,SNR=3.5						
NOA				LR	LR	16 50 30.4	
	comp=Z,453nm,20.4s,baz=275,slow=31						
LATQ	La Tuque	24.58	267	P	P	16 43 22.5	+0.4
	baz=57						
PNCL	Nicolau / Gran	24.89	123	*e*P	P	16 43 21.9	-3.1
MESJ	Messejana	25.26	123	*e*P	P	16 43 30.2	+1.9
	comp=Z,42nm,1.7s						
HFS	Hagfors	25.94	59	P	P	16 43 33.2	-1.2
	comp=Z,11nm,1.0s,baz=280,slow=8.6,SNR=3.3						
HFS				LR	LR	16 51 23.4	
	comp=Z,635nm,19.0s,baz=351,slow=31						
ESDC	Sonseca Array	25.98	114	P	P	16 43 34.8	-0.2
	comp=Z,1.7nm,0.7s,baz=313,slow=8.4,SNR=11						
ESDC				LR	LR	16 52 03.2	
	comp=Z,432nm,18.1s,baz=340,slow=32						
ES19	SONSECA Array	25.99	114	*e*P	P	16 43 35.2	+0.2
LSQQ	Lebel-sur-Quev	26.09	273	P	P	16 43 36.3	+0.4
	baz=60						
MATQ	Matagami	26.12	275	P	P	16 43 36.0	0.0
	baz=61						
TRQ	Mont Tremblant	26.24	266	*e*P	P	16 43 39.7	+2.4
ALFO	Alfred	26.77	265	P	P	16 43 41.2	-0.7
	baz=54						
D54A	Lac Fusel, La	26.92	270	P	P	16 43 43.0	-0.2
	baz=56						
LONY	Lake Ozonia	27.21	263	P	P	16 43 45.8	-0.1
	baz=52						
D53A	Lac Vacive, Po	27.55	270	P	P	16 43 49.5	+0.5
	baz=56						
E54A	Lac Daplat, Po	27.62	269	P	P	16 43 49.7	+0.1
	baz=55						
E53A	Dumoine, Ponti	27.92	269	P	P	16 43 52.9	+0.6
	baz=55						
PEMO	Pembroke	28.09	267	P	P	16 43 54.3	+0.5
	baz=54						
H56A	Elgin	28.17	265	P	P	16 43 55.2	+0.7
	baz=52						
PLVO	Plevna	28.37	266	P	P	16 43 57.1	+0.8
	baz=53						
D51A	Lot 18 Range I	28.50	272	P	P	16 43 57.2	-0.2
	baz=56						
CLL	Collm	28.54	78	*i* P	P	16 43 58.2	+0.5
D50A	G1974 Best Tow	28.72	272	P	P	16 43 59.7	+0.3
	baz=56						
E51A	G1948 Merrick	28.88	271	P	P	16 44 01.1	+0.3
	baz=56						
DELO	Deloro Mine	28.99	266	P	P	16 44 02.1	+0.3
	baz=52						
DAVOX	Davos/Dischmat	29.08	88	LR	LR	16 54 21.9	
	comp=Z,851nm,20.1s,baz=310,slow=34						
G53A	Haliburton	29.20	268	P	P	16 44 04.2	+0.6
	baz=53						
I55A	Frankford	29.21	265	P	P	16 44 04.4	+0.7
	baz=52						
E50A	Wahnapitae	29.65	272	P	P	16 44 08.4	+0.8
	baz=55						
SADO	Sadowa	29.71	268	P	P	16 44 08.9	+0.7
	comp=Z,6.1nm,0.7s,baz=47,slow=12,SNR=3.9						
SADO				LR	LR	16 54 32.8	
	comp=Z,211nm,19.8s,baz=95,slow=33						
RES	Resolute Bay	29.73	332	*e*P	P	16 44 08.8	+0.8
	comp=Z,15nm,0.3s						
RES	Resolute Bay	29.73	332	LR	LR	16 55 50.7	
	comp=Z,343nm,18.4s,baz=6.0,slow=36						
WLVO	Wesleyville	29.80	266	P	P	16 44 09.6	+0.6
	baz=52						
ARCES	ARCESS Array B	29.82	38	P	P	16 44 07.7	-1.2
	comp=Z,2.7nm,0.8s,baz=260,slow=9.9,SNR=12						
KLBO	Killbear Provi	29.97	269	P	P	16 44 11.1	+0.7
	baz=54						
GERES	GERESS Array B	30.14	82	P	P	16 44 11.5	-0.6
	comp=Z,1.0nm,0.7s,baz=302,slow=9.2,SNR=7.7						
GERES				LR	LR	16 54 48.3	
	comp=Z,465nm,19.3s,baz=342,slow=34						
GEA0	GERESS Array S	30.14	82	*e*P	P	16 44 12.6	+0.5
K55A	Perry	30.36	263	P	P	16 44 14.3	+0.3
	baz=50						
F49A	Sandfield	30.77	272	P	P	16 44 17.9	+0.4
	baz=54						
E47A	Iron Bridge	31.08	274	P	P	16 44 21.1	+0.9
	baz=55						
FCC	Fort Churchill	31.31	301	*e*P	P	16 44 22.6	+0.5
	comp=Z,19nm,1.0s						
FINES	FINESS Array B	31.50	54	P	P	16 44 21.5	-2.3
	comp=Z,3.9nm,0.9s,baz=228,slow=4.9,SNR=5.2						
M54A	Oil Creek Stat	32.06	263	P	P	16 44 29.4	+0.4
	baz=49						
L53A	Girard	32.10	264	P	P	16 44 29.3	-0.1
	baz=49						
G47A	Hillman	32.15	272	P	P	16 44 30.0	+0.3
	baz=54						
N54A	Moraine State	32.60	263	P	P	16 44 33.8	+0.1
	baz=48						
O55A	Ligonier	32.72	261	P	P	16 44 35.1	+0.3
	baz=47						
M52A	Chesterland	32.99	265	P	P	16 44 36.9	-0.3
	baz=49						
N53A	Lisbon	33.19	263	P	P	16 44 39.2	+0.4
	baz=48						
VYHS	Vyhne	33.21	79	*e*P	P	16 44 38.8	-0.1
O53A	New Philadelph	33.77	263	P	P	16 44 44.3	+0.4
	baz=48						
P54A	Burton	33.80	261	P	P	16 44 44.3	+0.1
	baz=47						
PSZ	Piszkesteto	34.12	79⇑	*i*P	P	16 44 48.6	+1.7
O52A	Adamsville	34.21	263	P	P	16 44 47.3	-0.4
	baz=47						
P53A	Whipple	34.39	262	P	P	16 44 49.2	-0.1
	baz=47						
R55A	Marlinton	34.51	259	P	P	16 44 50.6	+0.2
	baz=45						
M49A	Liberty Center	34.53	267	P	P	16 44 51.3	+0.9
	baz=49						
O51A	Pataskala	34.63	264	P	P	16 44 51.4	+0.1
	baz=48						
P52A	Corning	34.71	263	P	P	16 44 51.3	-0.7
	baz=47						
ACSO	Alum Creek Sta	34.78	264	P	P	16 44 53.1	+0.4
	baz=48						
H43A	Windswept, Lux	34.80	274	P	P	16 44 52.3	-0.5
	baz=52						
E40A	Wakefield	34.83	278	P	P	16 44 53.5	+0.5
	baz=54						
EYMN	Ely	34.88	282	P	P	16 44 54.8	+1.4
	baz=56						
N49A	Columbus Grove	35.01	266	*e*P	P	16 44 55.7	+1.1
	comp=Z,73nm,1.6s						
N49A	Columbus Grove	35.01	266	P	P	16 44 55.7	+1.1
	baz=48						
TRPA	Tarpa	35.48	77⇑	*i*P	P	16 44 59.2	+0.7
N48A	Decatur	35.53	267	P	P	16 44 59.8	+0.7
	baz=48						
M47A	Cromwell	35.54	268	P	P	16 45 00.7	+1.5
	baz=49						
O49A	Covington	35.58	266	P	P	16 45 00.6	+1.1
	baz=48						
E38A	The Farm, Brul	35.67	280	P	P	16 45 00.8	+0.6
	baz=54						
G40A	Rib Lake	35.70	277	P	P	16 45 01.2	+0.7
	baz=53						
F39A	Loretta	35.72	278	P	P	16 45 00.9	+0.2
	baz=54						
H41A	Junction City	35.78	276	P	P	16 45 01.8	+0.6
	baz=52						
N47A	Urbana	35.90	268	P	P	16 45 02.0	-0.2
	baz=48						
O48A	Farmland	36.00	266	P	P	16 45 03.3	+0.2
	baz=48						
KEST	Kesra	36.03	104	P	P	16 45 02.8	-0.7
	comp=Z,5.2nm,0.8s,baz=334,slow=7.2,SNR=3.0						
KEST				LR	LR	16 58 28.0	
	comp=Z,296nm,21.5s,baz=310,slow=34						
ULM	Lac du Bonnet	36.03	288	*e*P	P	16 45 03.8	+0.5
	comp=Z,64nm,1.6s						
ULM	Lac du Bonnet	36.03	288	P	P	16 45 03.4	+0.1
	comp=Z,11nm,0.7s,baz=65,slow=10,SNR=11						
ULM				LR	LR	16 58 39.2	
	comp=Z,477nm,18.6s,baz=62,slow=34						
F38A	Pierce - Schro	36.23	279	P	P	16 45 05.4	+0.3
	baz=54						
P49A	Miami Univ. Ec	36.24	265	P	P	16 45 06.2	+1.0
	baz=47						
DRGR		36.33	79⇑	*i*P	P	16 45 06.9	+0.9
BZS	Buzias	36.41	81⇑	*i*P	P	16 45 07.1	+0.5
N46A	Monticello	36.48	269	P	P	16 45 07.6	+0.4
	baz=49						
P48A	Milroy	36.69	266	P	P	16 45 09.6	+0.6
	baz=47						
K42A	Prairie Point,	36.75	273	P	P	16 45 09.6	+0.2
	baz=50						
J41A	Loganville	36.76	274	P	P	16 45 09.7	+0.2
	baz=51						
L43A	Garden Prairie	36.78	272	P	P	16 45 09.6	-0.2
	baz=50						
R50A	Paris	36.88	263	P	P	16 45 11.5	+0.9
	baz=46						
S51A	Beattyville	36.91	262	P	P	16 45 11.6	+0.6
	baz=45						
FFC	Flin Flon	36.95	297	*e*P	P	16 45 11.3	+0.3
	comp=Z,21nm,1.4s						
N45A	Kentland	36.95	269	P	P	16 45 12.0	+0.8
	baz=48						
MDVR	Moldovita	36.97	82⇑	*i*P	P	16 45 11.9	+0.5
SFIN	Lafayette	37.03	268	P	P	16 45 12.5	+0.6
	baz=48						
GZR	Gura Zlata	37.20	81⇑	*i*P	P	16 45 13.7	+0.3
BUR08	Bucovina Ar. S	37.23	76	*e*P	P	16 45 13.0	-0.6
Q48A	North Vernon	37.23	265	P	P	16 45 14.3	+0.7
	baz=47						
U53A	Fall Branch	37.25	259	P	P	16 45 14.0	+0.2
	baz=44						
BUR04	Bucovina Ar. S	37.25	76	*e*P	P	16 45 14.2	+0.4
BURAR	Bucovina Array	37.25	76⇑	*i*P	P	16 45 14.0	+0.1
I39A	Houston	37.31	276	P	P	16 45 15.4	+1.2
	baz=51						
N44A	Piper City	37.34	270	P	P	16 45 14.4	-0.1
	baz=48						
M43A	Waltham Townsh	37.39	271	P	P	16 45 15.3	+0.3
	baz=49						
K41A	Shullsburg	37.40	274	P	P	16 45 15.8	+0.7
	baz=50						
L42A	Oliver, Polo	37.43	272	P	P	16 45 16.0	+0.8
	baz=50						
KMSC	Kings Mountain	37.44	257	P	P	16 45 16.3	+0.8
	baz=42						
P46A	Rosedale	37.60	267	P	P	16 45 17.9	+1.2
	baz=47						
TZTN	Tazewell	37.66	260	*e*P	P	16 45 19.4	+2.1
	comp=Z,25nm,1.4s						
TZTN	Tazewell	37.66	260	P	P	16 45 18.4	+1.0
	baz=44						
AK11	Malin Array Si	37.69	70	*e*P	P	16 45 16.1	-1.3
KIEV	Kiev	37.70	70	*e*P	P	16 45 16.8	-0.7
	comp=Z,10nm,0.9s						
KIEV	Kiev	37.70	70⇑	*i*P	P	16 45 17.4	-0.1
KIEV	Kiev	37.70	70	*i* P	P	16 45 16.9	-0.6
	SNR=7.0						
AKASG	Malin Array Be	37.71	70	P	P	16 45 16.8	-0.7
	comp=Z,6.6nm,0.8s,baz=305,slow=8.3,SNR=25						
AKBB	Malin Array Si	37.71	70	*e*P	P	16 45 17.1	-0.5
	comp=Z,9.5nm,0.8s						
S49A	Springfield	37.77	264	P	P	16 45 19.1	+0.9
	baz=46						
KLMR	Klimovskoe	37.77	50	*e*P	P	16 45 14.9	-3.0
KLMR				AMP		16 45 20.3	
	comp=Z,55nm,1.4s						
V53A	Saluda	37.88	259	P	P	16 45 19.9	+0.7
	baz=43						
P45A	Graceland, Par	37.97	268	P	P	16 45 20.2	+0.4
	baz=47						
WCI	Wyandotte Cave	38.03	265	P	P	16 45 19.5	-0.8

	baz=46						
U51A	La Follette	38.04	261	P	P	16 45 19.8	-0.8
	baz=44						
T50A	Nancy	38.05	262	P	P	16 45 19.0	-1.6
	baz=45						
R47A	Wooly Knot Far	38.12	265	P	P	16 45 21.4	+0.3
	baz=46						
BIZ	Bicaz	38.14	77	⇑iP	P	16 45 21.8	+0.6
S48A	Wiedeman Farm,	38.29	264	P	P	16 45 23.0	+0.4
	baz=45						
DOPR	Dopca	38.32	78	⇑iP	P	16 45 23.3	+0.5
NHSC	New Hope	38.32	253	P	P	16 45 23.3	+0.4
	baz=40						
W53A	Cullowhee	38.44	259	P	P	16 45 24.4	+0.4
	baz=43						
VOIR		38.45	79	⇓iP	P	16 45 24.1	+0.2
L39A	Vinton	38.68	274	P	P	16 45 26.7	+0.9
	baz=50						
MLR	Muntele Rosu	38.91	78	⇑iP	P	16 45 28.5	+0.6
U49A	Red Boiling Sp	38.94	263	P	P	16 45 28.6	+0.6
	baz=44						
N41A	Harden Midland	38.95	272	P	P	16 45 28.9	+0.8
	baz=48						
X53A	Estanollee	39.01	258	P	P	16 45 28.9	+0.2
	baz=42						
YKW3	Yellowknife Ar	39.08	314	eP	P	16 45 29.2	+0.4
	comp=Z,9.9nm,1.1s						
PLOR	Plostina	39.09	78	⇑iP	P	16 45 29.6	+0.3
YKA	Yellowknife Ar	39.10	314	P	P	16 45 28.9	-0.2
	comp=Z,2.9nm,0.7s,baz=62,slow=9.0,SNR=35						
YKA				PcP	PcP	16 47 38.0	-0.4
	comp=Z,0.7nm,0.7s,baz=55,slow=3.4,SNR=5.6						
YKB5	Yellowknife Ar	39.10	314	eP	P	16 45 28.7	-0.4
Q44A	Meyer Farm, Va	39.11	268	P	P	16 45 29.8	+0.3
	baz=47						
R45A	Skylar, Fairfi	39.11	267	P	P	16 45 30.1	+0.6
	baz=46						
Y54A	Tignall	39.14	257	P	P	16 45 29.7	0.0
	baz=42						
V50A	Pikevile	39.16	261	P	P	16 45 29.1	-0.9
	baz=44						
VTS	Vitosha	39.18	84	⇑iP	P	16 45 30.6	+0.4
M39A	Webster	39.19	274	P	P	16 45 30.0	-0.2
	baz=49						
S46A	Don Dixon Farm	39.21	266	P	P	16 45 30.5	+0.2
	baz=46						
X52A	Dahlonega	39.26	259	P	P	16 45 30.5	-0.3
	baz=42						
W51A	Cleveland	39.34	260	P	P	16 45 31.4	0.0
	baz=43						
O41A	Passleys Farm,	39.36	271	P	P	16 45 32.1	+0.6
	baz=48						
U48A	Cassie Pea, Po	39.37	263	P	P	16 45 32.4	+0.8
	baz=44						
P42A	Winchester	39.41	270	eP	P	16 45 33.4	+1.4
	comp=Z,17nm,0.9s						
P42A	Winchester	39.41	270	P	P	16 45 32.7	+0.8
	baz=47						
V49A	McMinnville	39.55	262	P	P	16 45 33.0	-0.1
	baz=44						
R44A	Waltonville	39.60	267	P	P	16 45 33.9	+0.4
	baz=46						
Y53A	Monroe	39.64	258	P	P	16 45 34.3	+0.3
	baz=42						
Z54A	Sparta	39.69	256	P	P	16 45 34.2	-0.1
	baz=41						
T46A	Princeton	39.77	265	P	P	16 45 34.0	-0.9
	baz=45						
U47A	Clarksville	39.85	264	P	P	16 45 35.9	+0.3
	baz=44						
GOGA	Godfrey	39.91	257	P	P	16 45 35.7	-0.5
	baz=41						
155A	Kite	39.95	255	P	P	16 45 36.4	0.0
	baz=41						
Q42A	Golden Eagle	39.97	269	P	P	16 45 36.7	+0.1
	baz=47						
SIUC	Southern Illin	40.05	267	eP	P	16 45 38.8	+1.6
	comp=Z,69nm,1.5s						
R43A	Red Bud	40.06	268	P	P	16 45 37.8	+0.4
	baz=46						
S44A	Carbondale	40.08	267	P	P	16 45 38.2	+0.6
	baz=46						
V48A	Smith Brothers	40.08	263	P	P	16 45 37.6	0.0
	baz=44						
W49A	Belvidere	40.22	261	P	P	16 45 37.7	-1.0
	baz=43						
ECSD	EROS Data Cent	40.26	280	eP	P	16 45 40.5	+1.5
	comp=Z,42nm,1.7s						
ECSD	EROS Data Cent	40.26	280	P	P	16 45 39.7	+0.7
	baz=51,SNR=5.3						
154A	Montrose	40.30	256	P	P	16 45 39.5	+0.1
	baz=41						
CFR	Carcaliu	40.33	77	⇑iP	P	16 45 38.8	-0.7
Q41A	Truxton	40.34	270	P	P	16 45 39.9	+0.2
	baz=47						
X50B	Fort Payne	40.35	260	P	P	16 45 38.8	-1.0
	baz=43						
WVT	Waverly	40.38	264	P	P	16 45 39.8	-0.1
	baz=44						
V47A	Nunnelly	40.41	263	P	P	16 45 40.7	+0.4
	baz=44						
W48A	Pulaski	40.58	262	P	P	16 45 42.1	+0.3
	baz=43						
Z52A	Williamson	40.60	258	P	P	16 45 42.3	+0.4
	baz=42						
S43A	Fulton Ridge,	40.63	267	P	P	16 45 42.2	0.0
	baz=46						
X49A	Woodville	40.69	261	P	P	16 45 43.2	+0.6
	baz=43						
V46A	Holladay	40.77	264	P	P	16 45 43.9	+0.6
	baz=44						
Y50A	Piedmont	40.82	260	P	P	16 45 43.7	0.0
	baz=42						
W47A	Westpoint	40.87	263	P	P	16 45 44.1	0.0
	baz=44						
R41A	Rosebud	40.88	269	P	P	16 45 44.5	+0.3
	baz=46						
S42A	Caledonia	40.91	268	P	P	16 45 44.4	0.0
	baz=46						
254A	Abbeville	40.91	255	P	P	16 45 44.5	0.0
	baz=40						
CCM	Cathedral Cave	40.97	269	eP	P	16 45 45.7	+0.9
	comp=Z,32nm,1.6s						
CCM	Cathedral Cave	40.97	269	P	P	16 45 45.2	+0.3
	baz=46						
T43A	Greenville	41.10	267	P	P	16 45 46.4	+0.4
	baz=45						
X48A	Hartselle	41.14	261	P	P	16 45 46.3	0.0
	baz=43						
152A	Waverly Hall	41.16	257	P	P	16 45 46.2	-0.3
	baz=41						
Y49A	Blount Mountai	41.22	260	P	P	16 45 46.3	-0.7
	baz=42						
Z50A	Ashland	41.39	259	P	P	16 45 48.6	+0.2
	baz=42						
X47A	Russelville	41.55	262	P	P	16 45 50.3	+0.6
	baz=43						
S41A	Jillco Farms,	41.58	269	P	P	16 45 50.2	+0.3
	baz=46						
T42A	Van Buren	41.59	268	eP	P	16 45 50.9	+0.9
	comp=Z,18nm,1.3s						
T42A	Van Buren	41.59	268	P	P	16 45 50.6	+0.6
	baz=45						
Z49A	Columbiana	41.78	260	P	P	16 45 52.5	+1.0
	baz=42						
150A	Eclectic	41.93	259	P	P	16 45 53.8	+1.0
	baz=41						
X46A	Booneville	41.93	263	P	P	16 45 53.1	+0.2
	baz=43						
T41A	Mountain View	41.97	268	P	P	16 45 53.7	+0.6
	baz=45						
U42A	Revenden	42.15	267	P	P	16 45 55.4	+0.7
	baz=45,SNR=5.8						
149A	Jones	42.37	259	P	P	16 45 56.1	-0.3
	baz=41						
OXF	Oxford	42.43	264	P	P	16 45 56.2	-0.7
	baz=43						
V42A	Cord	42.63	267	P	P	16 45 58.7	+0.3
	baz=44						
INK	Inuvik	42.96	327	eP	P	16 46 00.3	-0.5
	comp=Z,12nm,1.1s						
INK	Inuvik	42.96	327	P	P	16 46 00.6	-0.2
	comp=Z,11nm,1.2s,baz=48,slow=9.4,SNR=10						
Y45A	Yeager Farm, C	42.98	263	P	P	16 46 01.2	-0.1
	baz=43						
U40A	Yellville	43.07	269	P	P	16 46 02.6	+0.5
	baz=45						
V41A	Mountainview	43.08	267	P	P	16 46 02.5	+0.3
	baz=44						
KSU1	Kansas State U	43.30	274	P	P	16 46 04.7	+0.8
	baz=47						
W41B	Gary Mavity, V	43.57	267	eP	P	16 46 06.0	-0.1
	comp=Z,11nm,0.8s						
W41B	Gary Mavity, V	43.57	267	P	P	16 46 06.6	+0.5
	baz=44						
BRAL	Brewton	43.59	258	P	P	16 46 06.4	+0.1
	baz=40						
LAO	LASA Array	43.70	289	eP	P	16 46 08.5	+1.4
	comp=Z,44nm,0.8s						
LAO	LASA Array	43.70	289	P	P	16 46 09.2	+2.1
	baz=51,SNR=18						
HHAR	Hobbs	43.74	269	eP	P	16 46 08.0	+0.5
	comp=Z,8.1nm,0.8s						
RSSD	Black Hills	44.14	285	P	P	16 46 11.7	+0.8
	baz=50						
TAM	Tamanrasset	44.30	121	eP	P	16 46 11.0	-1.3
	comp=Z,24nm,1.5s						
X40A	Basin Creek Fa	44.40	267	eP	P	16 46 13.0	+0.2
	comp=Z,15nm,0.9s						
X40A	Basin Creek Fa	44.40	267	P	P	16 46 12.8	+0.1
	baz=43						
W39A	Magazine	44.43	268	eP	P	16 46 13.9	+0.9
	comp=Z,9.7nm,0.8s						
W39A	Magazine	44.43	268	P	P	16 46 13.8	+0.8
	baz=44						
EGMT	Eagleton	44.74	293	eP	P	16 46 16.8	+1.4
	comp=Z,37nm,1.0s						
EGMT	Eagleton	44.74	293	P	P	16 46 16.9	+1.5
	baz=51,SNR=8.0						
MIAR	Mount Ida	44.78	267	eP	P	16 46 16.5	+0.8
	comp=Z,36nm,1.4s						
MIAR	Mount Ida	44.78	267	P	P	16 46 17.0	+1.2
	baz=43,SNR=6.2						
RLMT	Red Lodge	46.33	290	eP	P	16 46 29.9	+1.6
	comp=Z,29nm,1.3s						
RLMT	Red Lodge	46.33	290	P	P	16 46 29.5	+1.2
	baz=49,SNR=6.8						
K22A	Casper	46.47	285	eP	P	16 46 29.8	+0.5
	comp=Z,16nm,1.2s						
K22A	Casper	46.47	285	P	P	16 46 30.1	+0.8
	baz=48						
HRY	Holter Researc	46.66	293	eP	P	16 46 30.7	0.0
BR131	Keskin Array S	46.97	80	eP	P	16 46 34.0	+0.8
BRTR	Keskin Array B	46.97	80	P	P	16 46 34.5	+1.3
	comp=Z,8.0nm,0.7s,baz=311,slow=5.7,SNR=48						
BRTR				PcP	PcP	16 48 03.6	-1.8
	comp=Z,0.9nm,0.9s,baz=329,slow=5.4,SNR=2.2						
BRTR				LR	LR	17 05 58.8	
	comp=Z,205nm,19.1s,baz=337,slow=36						
BOZ	Bozeman (W)	47.28	292	eP	P	16 46 36.8	+1.2
	comp=Z,32nm,1.2s						
BOZ	Bozeman (W)	47.28	292	P	P	16 46 36.2	+0.6
	baz=49,SNR=7.3						
N23A	Red Feather La	47.34	283	eP	P	16 46 37.9	+1.7
	comp=Z,18nm,1.1s						
N23A	Red Feather La	47.34	283	P	P	16 46 35.7	-0.5
	baz=47						
DAWY	Dawson	47.45	325	eP	P	16 46 37.4	+0.9
	comp=Z,12nm,1.1s						
H17A	Grant Village	47.51	290	P	P	16 46 38.2	+0.7
	baz=48						
FYU	Fort Yukon	47.57	329	eP	P	16 46 38.5	+1.2
	comp=Z,36nm,1.2s						
WMOK	Wichita Mounta	47.60	272	eP	P	16 46 38.6	+0.5
	comp=Z,9.2nm,1.0s						
WMOK	Wichita Mounta	47.60	272	P	P	16 46 39.0	+0.9
	baz=44						
YFT	Old Faithful	47.62	290	eP	P	16 46 39.1	+0.8
	comp=Z,9.2nm,0.8s						
MSO	Missoula	47.69	294	P	P	16 46 39.0	+0.3
	baz=49						
DLBC	Dease Lake	47.69	315	eP	P	16 46 39.9	+1.4
	comp=Z,19nm,1.3s						
ISCO	Idaho Springs	47.90	282	eP	P	16 46 41.9	+1.2
	comp=Z,28nm,1.7s						
ISCO	Idaho Springs	47.90	282	P	P	16 46 40.0	-0.7
	baz=46						
MOOW	Moose Ponds	48.03	289	eP	P	16 46 42.4	+0.9
	comp=Z,10nm,1.4s						
LOHW	Long Hollow	48.05	289	eP	P	16 46 42.7	+1.1
	comp=Z,6.6nm,1.1s						
BW06	Boulder Array	48.05	287	eP	P	16 46 41.8	+0.1
	comp=Z,22nm,1.6s						
BW06	Boulder Array	48.05	287	P	P	16 46 41.6	-0.2
	baz=47,SNR=5.8						
PD31	Pinedale Array	48.05	287	eP	P	16 46 41.9	+0.2
PDAR	Pinedale Array	48.05	287	eP	P	16 46 41.5	-0.3
PDAR	Pinedale Array	48.05	287	P	P	16 46 42.1	+0.4
	comp=Z,1.7nm,0.6s,baz=64,slow=7.5,SNR=14						
FXWY	Fox Creek	48.26	289	eP	P	16 46 43.8	+0.5
	comp=Z,5.8nm,0.9s						
REDW	Red Top Meadow	48.35	289	eP	P	16 46 43.8	-0.2
	comp=Z,51nm,2.0s						
NEW	Newport	48.38	298	P	P	16 46 43.5	-0.4
	baz=49						
PRP	Porcupine Dome	48.38	329	eP	P	16 46 43.9	+0.1
	comp=Z,5.5nm,0.9s						
MCMT	McKenzie Canyo	48.44	292	eP	P	16 46 45.2	+0.6
ARU	Arti	48.47	48	eP	P	16 46 44.5	0.0
	comp=Z,24nm,1.0s						
COLD	Coldfoot	48.49	332	eP	P	16 46 44.9	+0.5
	comp=Z,5.5nm,1.1s						
HYT	Haines Junctio	48.98	321	eP	P	16 46 49.1	+0.6
	comp=Z,8.0nm,0.9s						
SCRK	Sand Creek	49.00	326	eP	P	16 46 49.6	+1.1
	comp=Z,33nm,1.5s						
T25A	Trinidad	49.08	278	eP	P	16 46 50.7	+1.0
	comp=Z,11nm,1.1s						
T25A	Trinidad	49.08	278	P	P	16 46 50.4	+0.7
	baz=45						
O20A	White River Ci	49.13	284	P	P	16 46 50.1	+0.1
	baz=46						
AMTX	Amarillo	49.15	274	eP	P	16 46 51.6	+1.6
	comp=Z,19nm,0.8s						
AMTX	Amarillo	49.15	274	P	P	16 46 51.5	+1.4
	baz=44						
POKR	Poker Plat Res	49.24	329	P	P	16 46 51.2	+1.0
	baz=44						
C09A	Chrisman Ranch	49.26	298	eP	P	16 46 51.3	+0.6
	comp=Z,33nm,1.5s						
SDCO	Great Sand Dun	49.27	280	P	P	16 46 50.0	-1.2
	baz=45						
KBZ	Khabaz	49.32	69	P	P	16 46 51.9	+0.8
	comp=Z,3.6nm,0.9s,baz=325,slow=8.2,SNR=5.1						
IL1	Eielson Array	49.32	328	eP	P	16 46 50.9	+0.1
ILAR	Eielson Array	49.32	328	P	P	16 46 51.3	+0.4
	comp=Z,5.6nm,1.0s,baz=40,slow=6.0,SNR=32						
ILAR				PcP	PcP	16 48 11.9	-1.4
	comp=Z,0.9nm,0.8s,baz=7.4,slow=3.0,SNR=3.5						
ILAR				LR	LR	17 07 29.7	
	comp=Z,238nm,19.6s,baz=69,slow=36						
ILB	Eielson Array	49.32	328	eP	P	16 46 50.9	0.0
B08A	Colville Reser	49.42	299	eP	P	16 46 51.8	-0.2
	comp=Z,29nm,1.4s						
COLA	College	49.53	329	eP	P	16 46 53.1	+0.6
	comp=Z,14nm,1.3s						
MDM	Murphy Dome	49.58	329	eP	P	16 46 53.2	+0.3
	comp=Z,21nm,1.2s						
HDA	Harding Lake	49.60	328	eP	P	16 46 53.7	+0.7
	comp=Z,5.4nm,0.8s						
HDA	Harding Lake	49.60	328	P	P	16 46 54.0	+0.9
	baz=44						
WRH	Wood River Hil	49.90	329	eP	P	16 46 55.7	+0.5
	comp=Z,11nm,1.0s						
F10A	Beach Ranch, E	49.95	296	eP	P	16 46 57.3	+1.2
	comp=Z,27nm,1.9s						
S22A	4UR Ranch, Cre	50.01	281	P	P	16 46 56.6	-0.2
	baz=45						
HLID	Hailey	50.12	291	eP	P	16 46 58.2	+0.7
	comp=Z,8.9nm,0.9s						
HLID	Hailey	50.12	291	P	P	16 46 59.0	+1.5
	baz=47,SNR=15						
TCUT	Toone Canyon	50.19	287	eP	P	16 46 58.0	-0.1
	comp=Z,18nm,0.8s						
MLY	Manley	50.26	330	eP	P	16 46 58.4	+0.3
	comp=Z,13nm,1.4s						
IM3	Indian Mountai	50.36	332	eP	P	16 46 59.1	+0.3
MSTX	Muleshoe	50.43	274	eP	P	16 47 00.7	+0.8
	comp=Z,24nm,1.4s						
MSTX	Muleshoe	50.43	274	P	P	16 47 00.1	+0.3
	baz=43						
HVU	Hansel Valley	50.47	289	eP	P	16 46 59.9	-0.2
	comp=Z,8.3nm,1.3s						
SPUT	South Promonto	50.62	288	eP	P	16 47 00.8	-0.4
	comp=Z,22nm,1.3s						
MCK	McKinley	50.70	328	eP	P	16 47 01.5	+0.1
	comp=Z,26nm,1.1s						
DHY	Denali Highway	50.70	327	eP	P	16 47 02.3	+0.7
	comp=Z,13nm,1.1s						
PV12	Saucer Basin,	50.71	283	eP	P	16 47 02.5	+0.4
	comp=Z,14nm,0.9s						
PV04	Paradox Valley	50.71	283	eP	P	16 47 03.3	+1.3
	comp=Z,24nm,1.4s						
PV02	Paradox Valley	50.75	283	eP	P	16 47 03.5	+1.1
	comp=Z,11nm,0.9s						
BMO	Blue Mountains	50.76	295	eP	P	16 47 02.7	+0.6
	comp=Z,7.7nm,1.0s						
PV11	David Mesa, Pa	50.76	283	eP	P	16 47 03.9	+1.4
	comp=Z,15nm,0.7s						
PV16	Nyswonger Mesa	50.78	283	eP	P	16 47 03.6	+1.1
	comp=Z,11nm,0.9s						
PV03	Paradox Valley	50.78	283	eP	P	16 47 03.3	+0.8
	comp=Z,12nm,0.8s						
PV14	Lion Creek, Pa	50.79	283	eP	P	16 47 03.6	+0.9
	comp=Z,6.0nm,0.8s						
PV10	Paradox Valley	50.80	283	eP	P	16 47 05.0	+2.2
	comp=Z,18nm,0.9s						
PV19	Morning Glory	50.82	283	eP	P	16 47 03.4	+0.6
	comp=Z,9.6nm,1.0s						
PV17	East Wray Mesa	50.83	283	eP	P	16 47 04.0	+1.1
	comp=Z,18nm,0.9s						
PV13	Radium Mtn., P	50.83	283	eP	P	16 47 03.9	+0.9
	comp=Z,20nm,1.1s						
RND	Reindeer	50.91	328	eP	P	16 47 03.4	+0.4
	comp=Z,8.3nm,0.9s						
TOA0	Torodi Ar. Sit	50.93	131	eP	P	16 47 03.2	-0.5
TORD	Torodi Ar. Bea	50.93	131	P	P	16 47 03.2	-0.4
	comp=Z,5.7nm,1.0s,baz=340,slow=8.5,SNR=24						
TORD				LR	LR	17 06 21.9	
	comp=Z,158nm,20.8s,baz=335,slow=33						
MFID	Camas Ranch	50.97	292	eP	P	16 47 04.5	+0.6
	comp=Z,4.9nm,0.8s						
BPAW	Bear Paw Mtn.	51.02	329	eP	P	16 47 04.5	+0.7
	comp=Z,8.7nm,0.9s						
PV05	Paradox Valley	51.05	283	eP	P	16 47 04.9	+0.4
	comp=Z,18nm,0.8s						
SRU	San Rafael Swe	51.10	285	eP	P	16 47 06.4	+1.5
	comp=Z,4.1nm,0.8s						
BGU	Big Grassy Mou	51.20	288	eP	P	16 47 06.3	+0.7
	comp=Z,4.4nm,1.1s						
TRF	Thorofare Moun	51.31	329	eP	P	16 47 06.3	+0.1
	comp=Z,15nm,1.2s						
MVCO	Mesa Verde	51.33	282	eP	P	16 47 06.5	-0.3
	comp=Z,6.3nm,0.9s						
MVCO	Mesa Verde	51.33	282	P	P	16 47 07.0	+0.2
	baz=44						
NLU	North Lily Min	51.36	287	eP	P	16 47 05.4	-1.5
	comp=Z,11nm,1.0s						
DUG	Dugway, Tooele	51.60	287	eP	P	16 47 09.2	+0.6
	comp=Z,16nm,1.6s						
DUG	Dugway, Tooele	51.60	287	P	P	16 47 07.9	-0.6
	baz=45						
Q16A	Castle Valley	51.60	285	eP	P	16 47 08.8	+0.1
	comp=Z,37nm,1.9s						
ANMO	Albuquerque	51.81	278	P	P	16 47 10.3	0.0
	baz=43						
CAST	Castle Rocks	51.86	329	eP	P	16 47 10.2	+0.1
	comp=Z,16nm,1.2s						
SML	Sawmill	51.95	326	eP	P	16 47 11.4	+0.6
	comp=Z,18nm,1.0s						
F05D	White Salmon	52.17	298	P	P	16 47 11.4	-1.2
	baz=46						
KNK	Knik Glacier	52.28	326	eP	P	16 47 14.2	+1.0
	comp=Z,19nm,1.0s						
PMR	Palmer	52.36	327	eP	P	16 47 14.5	+0.7
	comp=Z,23nm,1.3s						
J08A	Circle Bar Ran	52.40	294	eP	P	16 47 14.5	0.0
MSU	Marysvale	52.44	285	eP	P	16 47 14.8	-0.2
ELK	Elko	52.52	289	eP	P	16 47 16.0	+0.4
	comp=Z,14nm,1.4s						
TIXI	Tiksi	52.71	6	eP	P	16 47 16.4	+0.2
	comp=Z,16nm,1.0s						
MTPU	Mount Pierson	52.78	285	eP	P	16 47 18.9	+1.2
	comp=Z,15nm,1.4s						
GNI	Garni	52.79	71	eP	P	16 47 17.6	+0.2
	comp=Z,109nm,1.7s						
GNI	Garni	52.79	71	i P	P	16 47 19.1	+1.6
	SNR=7.3						
RC01	Rabbit Creek A	52.93	326	eP	P	16 47 19.1	+1.1
	comp=Z,18nm,1.0s						
SUA	Susitna One	52.96	327	eP	P	16 47 19.2	+0.8
	comp=Z,14nm,0.9s						
WVOR	Wild Horse Val	53.13	293	eP	P	16 47 20.5	+0.6
	comp=Z,13nm,1.1s						
PSUT	Pine Spring	53.34	286	eP	P	16 47 22.6	+0.9
	comp=Z,3.9nm,0.9s						
SIRT	Sirnak	53.43	75	eP	P	16 47 21.0	-1.1
	comp=Z,46nm,1.2s						
MNTX	Cornudas Mount	53.58	274	eP	P	16 47 23.4	+0.2
	comp=Z,19nm,1.6s						
MNTX	Cornudas Mount	53.58	274	P	P	16 47 23.2	0.0
	baz=42						
SZCU	Shurtz Canyon	53.60	285	eP	P	16 47 24.2	+0.7
	comp=Z,5.2nm,1.0s						
CCUT	Cedar City	53.78	285	eP	P	16 47 25.7	+0.8
	comp=Z,16nm,1.7s						
KNB	Kanab	53.87	284	eP	P	16 47 26.0	+0.5
	comp=Z,11nm,1.2s						
J05D	Fort Rock, OR	53.88	296	P	P	16 47 26.2	+0.8
	baz=45						
ABKAR	Akbulak array	53.99	54	eP	P	16 47 26.4	+0.4
U15A	North Rim	54.00	284	eP	P	16 47 26.9	+0.3
	comp=Z,3.4nm,0.9s						
X18A	Snowflake	54.08	280	eP	P	16 47 28.7	+1.7
	comp=Z,13nm,1.5s						
WUAZ	Wupatki	54.15	282	eP	P	16 47 28.3	+0.7
	comp=Z,8.5nm,1.1s						
WUAZ	Wupatki	54.15	282	P	P	16 47 27.8	+0.3
	baz=43						
DBIC	Dimbokro	54.28	142	eP	P	16 47 28.4	0.0
	comp=Z,16nm,1.2s						
DBIC	Dimbokro	54.28	142	P	P	16 47 28.2	-0.2
	comp=Z,9.4nm,1.0s,baz=348,slow=10,SNR=7.0						
DBIC				LR	LR	17 08 28.9	
	comp=Z,206nm,18.2s,baz=351,slow=34						
121A	Cookes Peak, D	54.33	277	P	P	16 47 27.3	-1.6
	baz=42						
TX31	Lajitas Ar. Si	54.38	271	eP	P	16 47 29.0	-0.1
TXAR	Lajitas Array	54.38	271	P	P	16 47 29.7	+0.5
	comp=Z,0.3nm,0.4s,baz=29,slow=16,SNR=4.8						
TXAR				LR	LR	17 10 18.6	
	comp=Z,387nm,18.2s,baz=0.0,slow=36						
MOD	Modoc Plateau	54.38	294	eP	P	16 47 29.9	+0.8
	comp=Z,14nm,1.1s						
R11A	Troy Canyon, C	54.42	288	eP	P	16 47 29.4	0.0
	comp=Z,10nm,1.5s						
R11A	Troy Canyon, C	54.42	288	P	P	16 47 29.7	+0.2
	baz=44						
M04C	Macdoel	55.27	295	P	P	16 47 36.3	+0.8
	baz=44						
KVN	Kaiserville	55.27	290	eP	P	16 47 36.6	+1.0
	comp=Z,38nm,1.6s						
PAHR	Pah Rah Range	55.48	291	eP	P	16 47 37.4	+0.3
	comp=Z,21nm,1.2s						
SHPR	Sheep Range	55.52	286	eP	P	16 47 36.9	-0.6
	comp=Z,8.3nm,1.4s						
BRVK	Borovoye	55.68	45	eP	P	16 47 37.9	-0.2
	comp=Z,11nm,1.2s						
NV11	Mina Array Sit	55.75	289	eP	P	16 47 39.2	+0.2
	comp=Z,0.4nm,1.0s						
YBH	Yreka Blue Hor	55.75	295	LR	LR	17 10 33.3	
	comp=Z,246nm,18.4s,baz=34,slow=35						
TPNV	Topopah Spring	55.80	287	eP	P	16 47 39.6	+0.2
	comp=Z,18nm,1.7s						
TPNV	Topopah Spring	55.80	287	P	P	16 47 40.1	+0.7
	baz=43						
RYN	Ryan	55.80	290	eP	P	16 47 39.4	0.0
	comp=Z,8.5nm,1.1s						
NV01	Mina Array Sit	55.83	290	eP	P	16 47 39.0	-0.7
NVAR	Mina Array Bea	55.83	290	P	P	16 47 39.7	0.0
	comp=Z,1.5nm,0.7s,baz=59,slow=6.1,SNR=11						
NVAR				LR	LR	17 10 05.9	
	comp=Z,430nm,21.2s,baz=28,slow=34						
W13A	Hualapai Mount	55.85	284	eP	P	16 47 39.2	-0.7
	comp=Z,3.8nm,1.3s						
BEKR	Beckworth	55.88	292	eP	P	16 47 38.6	-1.4
	comp=Z,18nm,1.4s						
VCNR	Virginia City	55.92	291	eP	P	16 47 41.0	+0.7
VCNR				ePcP	PcP	16 48 38.7	-0.1
PNTR	Pine Nut	56.04	291	eP	P	16 47 41.6	+0.4
	comp=Z,19nm,1.0s						
TUC	Tucson	56.19	279	P	P	16 47 41.3	-0.8
	baz=42						
N02D	Trinity Center	56.30	295	P	P	16 47 41.9	-0.9

	baz=43						
O03E	Paynes Creek	56.33	293	P	P	16 47 43.2	+0.1
	baz=43						
GRAC	Grapevine Rang	56.37	288	P	P	16 47 44.5	+1.1
	baz=42						
KDAK	Kodiak Island	56.43	325	LR	LR	17 10 16.3	
	comp=Z,200nm,18.2s,baz=58,slow=34						
SHOC	Shoshone, Teco	56.58	286	P	P	16 47 44.5	-0.3
	baz=42						
PDMCI	Parker Dam,Lak	56.58	283	P	P	16 47 45.1	+0.3
	baz=42						
TUQ	Turquoise Moun	56.73	285	P	P	16 47 45.7	-0.3
	baz=42						
AFDM	Forest Hills D	56.87	292	eP	P	16 47 46.6	-0.3
	comp=Z,4.2nm,0.9s						
O02D	Mt. Diablo Mer	56.93	294	P	P	16 47 47.5	+0.2
	baz=43						
GMRC	Granite Mounta	57.07	285	P	P	16 47 48.6	+0.2
	baz=42						
MPMC	Manual Prospec	57.13	287	P	P	16 47 49.5	+0.6
	baz=42,SNR=5.8						
CWC	Cottonwood Cre	57.17	288	P	P	16 47 49.0	-0.2
	baz=42						
Y12C	Blythe	57.21	283	eP	P	16 47 50.3	+1.0
	comp=Z,12nm,1.1s						
Y12C	Blythe	57.21	283	P	P	16 47 48.8	-0.5
	baz=42						
113A	Mohawk Valley,	57.52	282	eP	P	16 47 52.7	+1.2
	comp=Z,14nm,1.3s						
214A	Organ Pipe Nat	57.59	280	P	P	16 47 51.0	-1.0
	baz=41						
LRMC	Laurel Mtn Rad	57.66	287	P	P	16 47 51.5	-1.2
	baz=42						
BC3	Big Chuckawall	57.79	284	P	P	16 47 53.0	-0.5
	baz=41						
BELC	Belle Mtn. Jos	57.84	284	P	P	16 47 52.5	-1.4
	baz=42						
GLA	Glamis	57.90	283	P	P	16 47 53.9	-0.3
	baz=41						
ISA	Isabella, Lake	57.96	287	eP	P	16 47 55.4	+0.7
	comp=Z,24nm,1.8s						
ISA	Isabella, Lake	57.96	287	P	P	16 47 55.8	+1.2
	baz=42						
EDW2	Edwards Air Fo	58.28	286	P	P	16 47 57.4	+0.6
	baz=42						
XPFO	Pion Flat	58.38	284	eP	P	16 47 57.9	+0.2
	comp=Z,11nm,0.8s						
PFO	Pinyon Flats O	58.38	284	eP	P	16 47 57.9	+0.2
	comp=Z,10.0nm,0.8s						
PFO	Pinyon Flats O	58.38	284	P	P	16 47 58.4	+0.7
	baz=41						
PFO	Pinyon Flats O	58.38	284	LR	LR	17 12 01.8	
	comp=Z,168nm,20.7s,baz=16,slow=35						
SWSC	Sam W. Stewart	58.52	283	P	P	16 47 57.6	-0.9
	baz=41						
BFSC	Mount Baldy Ra	58.57	286	P	P	16 47 57.7	-1.3
	baz=41						
MONP2	Monument Peak	58.90	284	P	P	16 48 02.5	+1.1
	baz=41						
IKP	In-Ko-Pah, Jac	58.91	283	P	P	16 48 01.8	+0.5
	baz=41						
ROSC	El Rosal	59.41	227	P	P	16 48 06.6	+1.3
	comp=Z,9.0nm,0.5s,baz=62,slow=7.9,SNR=5.8						
SNCC	San Nicolas Is	60.34	286	P	P	16 48 10.8	-0.3
	baz=41						
ZAA0	Zalesovo Array	60.35	36	eP	P	16 48 10.3	-0.5
	comp=Z,2.2nm,0.8s						
ZALV	Zalesovo Beam	60.35	36	eP	P	16 48 09.1	-1.7
ZALV	Zalesovo Beam	60.35	36	P	P	16 48 09.5	-1.3
	comp=Z,1.1nm,0.6s,baz=327,slow=8.0,SNR=7.2						
KURK	Kurchatov	60.76	42	eP	P	16 48 13.6	-0.1
	comp=Z,9.3nm,0.9s						
GEYT	Alibeck	61.47	64	P	P	16 48 19.4	+0.6
	comp=Z,5.4nm,0.8s,baz=316,slow=6.2,SNR=8.3						
LPIG	La Paz	62.18	273	LR	LR	17 15 07.9	
	comp=Z,184nm,19.7s,baz=26,slow=36						
KK31	Karatay Array	63.44	52	eP	P	16 48 32.0	+0.2
KKAR	Karatay Array	63.44	52	eP	P	16 48 31.9	+0.1
MAKZ	Makanchi	65.23	42	eP	P	16 48 42.8	-0.7
	comp=Z,10nm,1.1s						
EKS2	Erkin-Say	65.24	50	P	P	16 48 45.8	+2.0
	SNR=13						
MK31	Makanchi Array	65.36	42	eP	P	16 48 43.8	-0.6
MKAR	Makanchi Array	65.36	42	eP	P	16 48 44.0	-0.4
	comp=Z,20nm,0.8s						
MKAR	Makanchi Array	65.36	42	P	P	16 48 44.2	-0.2
	comp=Z,5.2nm,0.9s,baz=330,slow=5.9,SNR=39						
MK01	Makanchi Array	65.39	42	eP	P	16 48 43.8	-0.7
AAK	Ala-Archa	65.58	50	P	P	16 48 47.9	+1.9
	SNR=5.9						
AAK	Ala-Archa	65.58	50	eP	P	16 48 47.1	+1.1
	comp=Z,11nm,1.2s						
AAK	Ala-Archa	65.58	50	i P	P	16 48 46.8	+0.8
	SNR=8.5						
AAK	Ala-Archa	65.58	50	LR	LR	17 18 19.4	
	comp=Z,165nm,18.3s,baz=316,slow=37						
AML	Almayashu	65.64	51	P	P	16 48 48.7	+2.1
	SNR=7.7						
TKM2	Tokmak 2	65.82	49	P	P	16 48 49.0	+1.4
	SNR=7.7						
UCH	Uchtor	65.92	50	P	P	16 48 50.4	+1.9
	SNR=12						
ARSB	Arslanbob	65.97	52	eP	P	16 48 49.4	+0.9
	comp=Z,15nm,1.0s						
BTK	Batken	66.00	54	eP	P	16 48 50.9	+2.2
	comp=Z,18nm,0.9s						
CHGR	Chuyangaron	66.34	56	eP	P	16 48 51.3	+0.4
	comp=Z,17nm,1.1s						
GAR	Garm	66.61	55	eP	P	16 48 53.5	+0.9
	comp=Z,73nm,1.0s						
KSH	Kashi	68.77	51	P	P	16 49 09.1	+2.9
KSH				PP	PP	16 51 41.5	+4.0
KSH				S	S	16 58 11.4	+2.3
KSH				SS	SS	17 02 37.3	+4.3
KSH				LR	LR		
	comp=Z,250nm,6.9s						
KSH				LR	LR		
	comp=Z,280nm,5.1s						
KSH				LR	LR		
	comp=Z,910nm,11.3s						
WMQ	Urumqi	69.91	40	eP	P	16 49 15.9	+2.7
WMQ				sP	pwP	16 49 22.5	+2.7
WMQ				LR	LR		
	comp=Z,220nm,15.7s						
WMQ				LR	LR		
	comp=Z,190nm,17.9s						
WMQ				LR	LR		
	comp=Z,260nm,11.3s						
WMQ	Urumqi	69.91	40	eP	P	16 49 07.8	-5.3
	comp=Z,137nm,1.3s						
UOSS	Minazif	70.56	74	eP	P	16 49 16.6	-0.8
	comp=Z,18nm,1.0s						
UOSS	Minazif	70.56	74	P	P	16 49 16.3	-1.0
HATD	Hatta, Dubai	70.62	74	i P	P	16 49 17.4	-0.3
	SNR=5.5						
PETK	Petropavlovsk-	71.30	352	LR	LR	17 21 57.5	
	comp=Z,87nm,18.1s,baz=351,slow=37						
BDFB	Brasilia	71.64	193	P	P	16 49 24.5	+0.7
	comp=Z,3.2nm,0.6s,baz=301,slow=0.9,SNR=4.0						
BDFB				LR	LR	17 16 05.2	
	comp=Z,75nm,21.7s,baz=80,slow=32						
SONA1	Songino Array	72.13	26	eP	P	16 49 25.9	-0.7
SONM	Songino Array	72.14	26	P	P	16 49 25.8	-0.9
	comp=Z,0.9nm,0.8s,baz=329,slow=7.3,SNR=4.7						
ULN	Ulaanbaatar	72.28	26	eP	P	16 49 25.2	-2.3
	comp=Z,19nm,1.7s						
NIL	Nilore	72.33	56	eP	P	16 49 28.2	+0.2
	comp=Z,22nm,1.3s						
KLR	Kul'dur	75.12	9	LR	LR	17 19 30.2	
	comp=Z,52nm,19.9s,baz=326,slow=33						
LPAZ	La Paz	76.71	213	eP	P	16 49 53.6	-0.5
	comp=Z,17nm,1.9s						
LPAZ	La Paz	76.71	213	P	P	16 49 53.8	-0.3
	comp=Z,2.4nm,0.8s,baz=19,slow=15,SNR=6.5						
GTA	Gaotai	78.00	34	eP	P	16 50 00.7	0.0
GTA				pP	sP	16 50 05.1	-0.8
GTA				sP	PcP	16 50 08.0	-2.4
GTA				pmax	pmax		
	comp=Z,130nm,6.7s						
GTA				LR	LR		
	comp=Z,230nm,16.5s						
GTA				LR	LR		
	comp=Z,260nm,16.5s						
GTA				LR	LR		
	comp=Z,220nm,17.1s						
MNMC	Minye Minye	79.84	213	eP	P	16 50 11.1	+0.2
	comp=Z,36nm,1.9s						
HHC	Hu-ho-hao-te	79.97	25	eP	P	16 50 11.5	+0.1
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.2s						
USRK	Ussuriysk Ar.	80.14	9	P	P	16 50 11.0	-1.0
	comp=Z,1.6nm,0.8s,baz=351,slow=4.2,SNR=4.2						
PB11	IPOC Station P	80.45	213	eP	P	16 50 13.9	-0.2
	comp=Z,8.2nm,0.5s						
KMBO	Kilima Mbogo	80.99	105	LR	LR	17 28 04.4	
	comp=Z,93nm,18.1s,baz=90,slow=37						
LZH	Lanzhou	82.31	32	eP	P	16 50 23.1	-0.9
LZH				pP	pP	16 50 26.3	-1.7
LZH				sP	PcP	16 50 27.8	-1.5
LZH				ePP	PP	16 53 33.2	+1.3
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,85nm,8.7s						
LZH				LR	LR		
	comp=Z,230nm,16.5s						
LZH				LR	LR		
	comp=Z,240nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
CPUP	Villa Florida	83.63	200	P	P	16 50 29.9	-0.5
	comp=Z,1.2nm,0.7s,baz=53,slow=5.1,SNR=2.3						
NJ2	Nanjing	90.05	22	eP	P	16 51 03.2	+1.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KMI	Kunming	92.07	37	P	P	16 51 11.4	-0.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,130nm,4.5s						
GYA	Guiyang	92.13	34	eP	P	16 51 12.0	+0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	Chiang Mai Arr	96.75	43	P	P	16 51 32.1	-0.9
	comp=Z,0.3nm,0.7s,baz=316,slow=5.0,SNR=3.9						
CMAR				PP	PP	16 55 27.5	+0.4
	comp=Z,0.8nm,1.0s,baz=331,slow=8.6,SNR=6.7						
BOSA	Boshof	98.26	129	LR	LR	17 37 46.7	
	comp=Z,78nm,18.0s,baz=324,slow=36						
WRA	Warramunga Arr	143.68	17	PKP	PKPbc	16 57 34.5	-0.1
	comp=Z,0.5nm,0.6s,baz=347,slow=3.0,SNR=15						
QSPA	South Pole Qui	145.33	180	ePKPbc	PKPab	16 57 38.5	-0.2
QSPA	South Pole Qui	145.33	180	PKPbc	PKPab	16 57 38.1	-0.6
	comp=Z,12nm,1.1s,baz=174,slow=1.9,SNR=13						
AS31	Alice Springs	147.24	19	ePKPbc	PKPbc	16 57 44.9	-0.6
ASAR	Alice Springs	147.24	19	PKPbc	PKPbc	16 57 45.1	-0.3
	comp=Z,7.1nm,0.8s,baz=350,slow=2.4,SNR=68						
AS01	Alice Springs	147.25	19	ePKPdf	PKPbc	16 57 44.6	-0.9

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*IDC **05** 16:44:09.1±0.6, 0°.65N×125°.58E, h0^{km}, mb4.0/11, mb1 4.2/12, mb1mx4.0/34, mbtmp4.0/12, ML3.2/2, Error ellipse: s-maj=31.7km s-min=12.8km az=76.0*

*NEIC **05** 16:44:13.9±2.1, 0°.69N×125°.79E, h33^{km}±16^{km}, mb4.5/7, Error ellipse: s-maj=8.0km s-min=5.7km az=61.0*

*DJA **05** 16:44:15.6±0.5, 1°N±5°×12°6E±°, h30^{km}, M4.5/13, mb4.6/7, mB4.8/4, MLv4.5/13, Mw(mB)4.0/4*

ISC 05 16:44:15.2±0.5**, 0°.67N**±0°.07×**125°.79E**±0°.08**, h44**^{km}**, n54, σ1**^{s}**12**/48**, mb4.3**/17**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.58	86	ePn	Pn	16 44 37.0	-3.7
TNTI	Ternate	1.58	86	P	Pn	16 44 37.7	-3.0
KMSI	Cibinong	1.81	267	P	Pn	16 44 48.2	+4.3
KMSI				S	Sn	16 45 16.1	+10
SANI	Sanana	2.71	176	P	Pn	16 44 57.0	+0.8
LUWI	Luwuk	3.46	241	ePn	Pn	16 45 06.8	+0.2
LUWI	Luwuk	3.46	241	P	Pn	16 45 14.0	+7.4
MRSI	Marisa	3.85	267	P	Pn	16 45 20.4	+8.5
APSI	Ampana	4.43	249	P	Pn	16 45 25.8	+6.0
SIJI	Sorong	5.69	106	Pn	Pn	16 45 38.5	+1.4
	0.5nm,0.3s,baz=310,slow=14,SNR=2.4						
MPSI	Mapaga	5.90	267	P	Pn	16 45 50.5	+10
CTBH	Cotabato--PC H	6.69	347⇑	iP	Pn	16 45 51.6	+0.7
TTSI	Tana Toraja	7.01	238	P	Pn	16 46 04.6	+9.2
	52nm,0.5s,646nm0.2nm						
FAKI	Fak Fak	7.38	119	ePn	Pn	16 46 00.9	+0.5
SPSI	Sidrap Palu	7.57	233	P	Pn	16 46 10.8	+7.7
	22nm,0.5s,376nm0.1nm						
BNSI	Bone	7.59	228	P	Pn	16 46 10.3	+7.0
	23nm,0.6s,0.1nm						
BKSI	Bulukumba	8.21	223	P	Pn	16 46 19.9	+8.1
	14nm,0.5s,223nm0.1nm						
SOEI	Soe	10.47	188	ePn	Pn	16 46 41.5	-1.3
KKM	Kota Kinabalu	10.95	299	ePn	Pn	16 46 49.4	0.0
MTN	Manton Dam	14.43	159	ePn	Pn	16 47 38.0	+1.2
FITZ	Fitzroy Crossi	18.65	180	P	Pn	16 48 29.1	-1.0
	0.1nm,0.3s,baz=17,slow=14,SNR=2.7						
CISI	Cisompet, Garu	19.70	245	eP	Pn	16 48 41.0	-1.8
	48nm,1.3s						
WRAB	Tennant Creek	22.13	158	eP	P	16 49 06.7	-0.5
	22nm,1.4s						
WR1	Warramunga Arr	22.13	158	eP	P	16 49 06.6	-0.6
	21nm,1.3s						
WR1				ePcP	PcP	16 53 04.3	+0.8
WRA	Warramunga Arr	22.13	158	P	P	16 49 06.6	-0.6
	3.7nm,0.5s,baz=338,slow=11,SNR=83						
WRA				PcP	PcP	16 53 04.3	+0.8
	0.4nm,0.9s,baz=316,slow=2.3,SNR=2.4						
WB2	Warramunga Arr	22.14	158	eP	P	16 49 06.7	-0.5
TPUB	Ta-pu	23.05	348	eP	P	16 49 15.6	-1.2
AS31	Alice Springs	25.44	162	eP	P	16 49 39.9	+0.8
	2.6nm,0.3s						
ASAR	Alice Springs	25.44	162	P	P	16 49 39.6	+0.5
	2.3nm,0.4s,baz=348,slow=13,SNR=75						
ASAR				PcP	PcP	16 53 11.8	+1.3
	0.4nm,0.5s,baz=349,slow=2.3,SNR=5.8						
AS01	Alice Springs	25.46	162	eP	P	16 49 39.5	+0.3
STKA	Stephens Creek	35.66	157	eP	P	16 51 08.8	-0.5
	4.5nm,1.9s						
STKA	Stephens Creek	35.66	157	P	P	16 51 08.5	-0.7
	2.4nm,0.4s,baz=334,slow=8.7,SNR=11						
KSAR	Wonju Array Be	36.64	3	P	P	16 51 17.6	+0.1
KSRS	Korea Array	36.66	3	P	P	16 51 17.6	0.0
	0.9nm,0.6s,baz=182,slow=9.9,SNR=5.6						
MJAR	Matsushiro Arr	37.50	17	P	P	16 51 26.6	+1.7
	0.8nm,0.5s,baz=120,slow=36,SNR=3.7						
MAJO	Matsushiro	37.51	17	eP	P	16 51 26.6	+1.7
USRK	Ussuriysk Ar.	43.69	6	P	P	16 52 15.3	-0.4
	2.8nm,0.6s,baz=177,slow=8.4,SNR=6.8						
SONA0	Songino Array	49.91	343	eP	P	16 53 05.3	+0.8
SONM	Songino Array	49.91	343	P	P	16 53 05.3	+0.8
	0.8nm,0.7s,baz=158,slow=4.7,SNR=3.6						
PETK	Petropavlovsk-	58.60	22	P	P	16 54 07.3	-0.3
	2µm,0.7s,baz=192,slow=5.1,SNR=7.7						
PEA1	Petropavlovsk-	58.60	22	eP	P	16 54 07.3	-0.3
MK01	Makanchi Array	59.53	327	eP	P	16 54 13.4	-0.7
MK32	Makanchi Array	59.55	327	eP	P	16 54 12.8	-1.5
MKAR	Makanchi Array	59.55	327	P	P	16 54 12.8	-1.5
	2.5nm,0.5s,baz=115,slow=8.5,SNR=16						
MAKZ	Makanchi	59.73	327	eP	P	16 54 14.8	-0.8
	2.7nm,0.5s						
ZALV	Zalesovo Beam	62.89	334	P	P	16 54 36.9	+0.2
	0.7nm,0.5s,baz=128,slow=9.3,SNR=3.4						
ZAA1	Zalesovo Array	62.90	334	eP	P	16 54 36.9	+0.1
KURK	Kurchatov	63.83	329	eP	P	16 54 42.0	-0.9
	5.8nm,0.6s						
ABKAR	Akbulak array	73.93	322	eP	P	16 55 45.2	-0.6
VNDA	Vanda	80.53	173	eP	P	16 56 23.0	+0.7
VNDA	Vanda	80.53	173	P	P	16 56 22.7	+0.5
	2.9nm,0.8s,baz=301,slow=5.9,SNR=7.5						
BR101	Keskin Array S	91.23	310	eP	P	16 57 16.2	0.0
BRTR	Keskin Array B	91.23	310	P	P	16 57 16.2	0.0
	0.3nm,0.8s,baz=154,slow=1.9,SNR=3.2						
TORD	Torodi Ar. Bea	122.91	286	PKP	PKiKP	17 03 08.4	+0.5
	0.4nm,0.7s,baz=62,slow=1.9,SNR=2.8						
TOA1	Torodi Ar. Sit	122.92	286	ePKPdf	PKiKP	17 03 08.4	+0.5

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*ISCJB **05** 17:05:35.4±2.2, 29°.7N±0°.2×144°.2E±0°.5, h10^{km}, mb3.6/8, Error ellipse: s-maj=68.5km s-min=16.0km az=162.8*

*IDC **05** 17:05:35.8±2.7, 29°.72N×144°.18E, h0^{km}, mb3.6/8, mb1 3.7/9, mb1mx3.5/45, mbtmp3.6/9, ML3.0/1, Error ellipse: s-maj=91.1km s-min=21.3km az=73.0*

ISC 05 17:05:37.7±2.5**, 29°.7N**±0°.2×**144°.1E**±0°.5**, h10**^{km}**, n9, σ0**^{s}**76**/9**, mb3.7**/8**, North Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	8.43	326	Pn	Pn	17 07 39.7	-0.2
	0.2nm,0.3s,baz=161,slow=12,SNR=11						
SONM	Songino Array	34.11	313	P	P	17 12 22.7	+0.1
	0.4nm,0.5s,baz=111,slow=7.9,SNR=3.6						
CMAR	Chiang Mai Arr	42.49	265	P	P	17 13 33.9	+0.5
	0.2nm,0.7s,baz=75,slow=10,SNR=2.9						
ZALV	Zalesovo Beam	48.69	317	P	P	17 14 21.9	0.0
	0.4nm,0.4s,baz=102,slow=8.5,SNR=3.3						
MKAR	Makanchi Array	50.18	308	P	P	17 14 32.1	-1.4
	0.4nm,0.6s,baz=93,slow=7.5,SNR=6.0						
WRA	Warramunga Arr	50.24	192	P	P	17 14 34.3	+0.2
	0.7nm,0.7s,baz=9.1,slow=7.9,SNR=12						
KURBB	Kurchatov Arra	52.48	313	P	P	17 14 50.5	-0.2
	1.7nm,0.7s,baz=90,slow=6.4,SNR=16						
ASAR	Alice Springs	53.96	192	P	P	17 15 01.0	-0.7
	0.2nm,0.9s,baz=10,slow=5.7,SNR=2.9						
BRTR	Keskin Array B	85.47	314	P	P	17 18 16.8	+0.8
	0.8nm,0.9s,baz=45,slow=6.8,SNR=3.0						

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*ISCJB **05** 17:10:48.7±0.5, 23°.53S±0°.04×179°.92W±0°.09, h550^{km}, mb3.8/11, Error ellipse: s-maj=11.0km s-min=5.4km az=179.8*

*WEL **05** 17:10:49.3±1.2, 24°S±9°×17°9W±3°7, h594^{km}±14^{km}*

*IDC **05** 17:10:49.1±1.4, 23°.58S×180°.00E, h534^{km}±16^{km}, mb3.3/11, mb1 3.5/11, mb1mx3.4/24, mbtmp4.1/11, Error ellipse: s-maj=24.2km s-min=11.2km az=159.0*

ISC 05 17:10:49.7±0.6**, 23°.65S**±0°.07×**179°.86W**±0°.10**, h550**^{km}**, n67, σ1**^{s}**61**/87**, mb3.7**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.84	163	P	P	17 12 25.6	-1.1
RIZ				S	S	17 13 49.5	+3.3
RAO	Raoul Island	5.85	163	P	P	17 12 25.1	-1.7
	59nm,0.3s,baz=95,slow=23,SNR=9.1						
GLKZ	Green Lake	5.86	163	P	P	17 12 26.9	0.0
GLKZ				S	S	17 13 46.1	-0.4
OUZ	Omahuta	12.86	205	P	P	17 13 38.9	+2.0
KUZ	Kuaotunu	13.60	195	P	P	17 13 44.1	-0.4
WIAZ	Waiheke Island	13.79	197	P	P	17 13 50.4	+3.8
MXZ	Matakaoa Point	13.96	186	P	P	17 13 46.4	-1.9
WMGZ	Waiomatatini S	14.20	186	P	P	17 13 50.7	-0.1
WMGZ				S	S	17 16 21.2	+1.3
HAZ	Te Kaha	14.21	188	P	P	17 13 51.0	+0.2
HAZ				S	S	17 16 20.0	0.0
PUZ	Puketiti	14.47	186	P	P	17 13 55.6	+2.0
TOZ	Tahuroa Road	14.59	195	P	P	17 13 59.0	+4.2
URZ	Urewera	14.79	189	P	P	17 13 54.1	-2.7
	4.8nm,0.3s,baz=289,slow=2.2,SNR=20						
URZ				S	S	17 16 30.9	-0.1
	1.1nm,0.3s,baz=178,slow=22,SNR=6.3						
URZ	Urewera	14.79	189	P	P	17 13 54.3	-2.6
MWZ	Matawai	14.81	188	P	P	17 13 56.1	-1.0
RIGZ	Rimuhau	15.15	187	P	P	17 14 01.8	+1.3
TLZ	Tolley Road	15.15	194	P	P	17 14 00.9	+0.2
MTHZ	Maungataniwha	15.41	190	P	P	17 14 02.6	-0.7
MTHZ				S	S	17 16 40.3	-1.9
RAHZ	Arahi	15.44	189	P	P	17 14 03.8	+0.3
HIZ	Hauiti	15.49	196	P	P	17 14 06.3	+2.3
NMHZ	Naumai	15.66	190	P	P	17 14 05.5	-0.3
NMHZ				S	S	17 16 45.5	-0.9
BKZ	Black Stump Fm	15.78	190	P	P	17 14 03.9	-3.1
BKZ				S	S	17 16 47.3	-1.0
TWVZ	Taurewa	15.89	193	P	P	17 14 08.5	+0.4
COVZ	Chateau Observ	15.99	193	P	P	17 14 08.8	-0.3
FWVZ	Far West T-bar	16.04	193	P	P	17 14 09.5	-0.2
KWHZ	Kaweka Forest	16.04	190	P	P	17 14 07.2	-2.3
KWHZ				S	S	17 16 51.6	-1.1
VRZ	Vera Road	16.09	195	P	P	17 14 10.9	+1.0
MOVZ	Moawhango	16.14	192	P	P	17 14 10.5	-0.1
BHHZ	Black Hill Sta	16.17	191	P	P	17 14 07.5	-3.2
BHHZ				S	S	17 16 53.7	-1.1
PKE	Pukeiti	16.36	197	P	P	17 14 15.0	+2.5
PXZ	Pawanui	16.57	189	P	P	17 14 13.8	-0.5
PXZ				S	S	17 17 00.0	-1.2
DVHZ	Dannevirke	16.94	190	P	P	17 14 16.7	-1.0
DVHZ				S	S	17 17 06.1	-1.2
PRWZ	Pori Road	17.22	191	P	P	17 14 19.3	-1.0
BFZ	Birch Farm	17.30	190	P	P	17 14 19.5	-1.5
BFZ				S	S	17 17 13.4	+0.2
MRZ	Mangatainoka R	17.39	192	P	P	17 14 19.6	-2.3
MRZ				S	S	17 17 13.4	-1.3
OGWZ	Otaki Gorge	17.62	193	P	P	17 14 22.6	-1.3
OGWZ				S	S	17 17 18.6	+0.2
HOWZ	Holdsworth Sta	17.63	192	P	P	17 14 23.4	-0.7
HOWZ				S	S	17 17 16.6	-2.1
KIW	Kapiti Island	17.72	193	P	P	17 14 23.9	-0.9
TMWZ	Te Maipa	17.77	191	P	P	17 14 25.1	-0.3
DUWZ	D'Urville Isla	17.89	196	P	P	17 14 26.4	+0.1
MTW	Mount Morrison	17.89	191	P	P	17 14 26.0	-0.3
CAW	Cannon Point	17.92	193	P	P	17 14 26.3	-0.4
TRWZ	Traveller	18.09	191	P	P	17 14 27.2	-1.0
PAWZ	Paruwai Farm	18.12	191	P	P	17 14 28.2	-0.3
TCW	Tory Channel	18.19	194	P	P	17 14 29.1	0.0
RPZ	Rata Peaks	21.37	198	P	P	17 14 58.0	0.0
	10nm,0.5s,baz=25,slow=1.6,SNR=8.9						
CTA	Charters Tower	31.60	270	P	P	17 16 28.5	+0.4
	3.2nm,0.4s,baz=97,slow=10,SNR=12						
STKA	Stephens Creek	34.93	248	P	P	17 16 57.1	+1.1
	0.9nm,0.4s,baz=148,slow=23,SNR=3.3						
ASAR	Alice Springs	42.20	260	P	P	17 17 54.9	-0.1
	0.9nm,0.6s,baz=97,slow=7.2,SNR=21						
ASAR				pP	pP	17 19 30.5	-1.0
	2.4nm,1.2s,baz=84,slow=7.8,SNR=3.3						
ASAR				ScP	ScP	17 22 38.7	+3.9
	1.7nm,0.9s,baz=114,slow=4.4,SNR=14						
ASAR				S	S	17 23 33.9	-2.0
	0.3nm,0.8s,baz=98,slow=14,SNR=3.7						
WRA	Warramunga Arr	42.55	266	P	P	17 17 57.1	-0.6
	1.3nm,0.5s,baz=93,slow=8.5,SNR=56						
WRA				ScP	ScP	17 22 40.0	+3.8
	1.3nm,1.0s,baz=95,slow=4.4,SNR=7.0						
WRA				S	S	17 23 39.0	-1.9
	0.3nm,1.0s,baz=102,slow=16,SNR=2.7						
PETK	Petropavlovsk-	78.89	346	P	P	17 21 55.8	-0.1
	2.0nm,0.6s,baz=114,slow=7.6,SNR=5.6						
NVAR	Mina Array Bea	84.48	44	P	P	17 22 26.3	+1.1
	0.7nm,0.5s,baz=226,slow=7.1,SNR=6.3						
CMAR	Chiang Mai Arr	89.56	290	P	P	17 22 50.9	+1.6
	0.3nm,0.8s,baz=140,slow=4.3,SNR=4.4						
TXAR	Lajitas Array	90.19	58	P	P	17 22 53.9	+1.8
	1.8nm,0.7s,baz=214,slow=6.2,SNR=23						
ILAR	Eielson Array	91.76	13	P	P	17 22 57.8	-0.6
	0.4nm,0.8s,baz=212,slow=6.0,SNR=5.0						
PDAR	Pinedale Array	92.42	44	P	P	17 23 02.8	+0.5
	0.8nm,0.6s,baz=206,slow=4.1,SNR=9.4						
MKAR	Makanchi Array	112.08	313	PKiKP	PKiKP	17 28 22.1	-0.6
	0.4nm,0.6s,baz=228,slow=1.2,SNR=7.1						
KURBB	Kurchatov Arra	115.15	316	PKP	PKPdf	17 28 27.6	-0.8
	1.0nm,0.4s,baz=109,slow=1.7,SNR=5.4						
BVAR	Borovoye Array	120.33	319	PKP	PKPdf	17 28 37.9	-0.5
	0.9nm,0.5s,baz=27,slow=1.7,SNR=6.6						
ARCES	ARCESS Array B	131.67	348	PKP	PKPdf	17 28 58.8	-0.8
	0.9nm,0.5s,baz=57,slow=1.5,SNR=7.3						
FINES	FINESS Array B	138.25	342	PKhKP	PKPpre	17 29 04.8	
	1.4nm,0.9s,baz=72,slow=4.5,SNR=3.3						
FINES				PKP	PKPdf	17 29 12.7	+0.7
	1.0nm,0.7s,baz=17,slow=1.5,SNR=3.1						
NB2	NORSAR Subarra	141.85	351	PKP	PKPdf	17 29 14.1	-4.5
	comp=Z,0.5nm,0.5s,baz=12,slow=3.1						
NOA	NORSAR Array B	141.85	351	PKhKP	PKPpre	17 29 08.9	
	comp=Z,0.8nm,0.6s,baz=16,slow=4.6,SNR=3.7						
AKASG	Malin Array Be	144.83	328	PKP	PKPdf	17 29 23.8	-0.3
	comp=Z,2.1nm,0.5s,baz=45,slow=4.0,SNR=11						
BRTR	Keskin Array B	147.53	308	PKPbc	PKPbc	17 29 32.8	+0.1
	comp=Z,0.3nm,0.7s,baz=132,slow=4.6,SNR=6.2						
MMAI	Mount Meron Ar	147.71	295	PKPbc	PKiKP	17 29 34.6	-0.1
	comp=Z,3.4nm,0.4s,baz=75,slow=7.2,SNR=12						
MLR	Muntele Rosu	149.79	323	PKPbc	PKiKP	17 29 38.2	-0.5
GERES	GERESS Array B	152.66	340	PKPbc	PKiKP	17 29 44.5	0.0
	comp=Z,0.7nm,0.7s,baz=35,slow=3.6,SNR=3.7						

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*ISCJB **05** 17:11:53.2±0.6, 23°.32N±0°.04×93°.04E±0°.06, h10^{km}, mb3.6/2, MS3.7/1, Error ellipse: s-maj=7.8km s-min=5.2km az=6.2*

*NDI **05** 17:11:54.8±2.1, 23°.26N×93°.08E, h33^{km}±26^{km}, ML3.2*

*IDC **05** 17:12:13.4±2.0, 22°.10N×93°.92E, h0^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.1/48, mbtmp3.2/4, ML2.9/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/30, Error ellipse: s-maj=97.2km s-min=28.0km az=58.0*

ISC 05 17:11:53.4±1.0,23.°34N±0.°05×92.°98E±0.°07,h10km,n12, σ1.s72/13,mb3.5/3,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	SAIHA	0.84	179	eP	Pb	17 12 10.1	-0.1
SAIH				eS	Sg	17 12 20.0	-0.7
SAIH				IAML		17 12 23.4	
	comp=E,1µm,0.4s						
SAIH				IAML		17 12 23.6	
	comp=N,676nm,0.3s						
BELO	BELONIA	1.41	267	eP	Pn	17 12 19.8	+0.6
BELO				eS	Sn	17 12 38.7	+0.9
BELO				IAML		17 12 43.8	
	comp=N,550nm,0.2s						
BELO				IAML		17 12 44.1	
	comp=E,581nm,0.4s						
SHL	Shillong	2.44	336	eP	Pn	17 12 35.0	+1.6
SHL				eS	Sn	17 13 03.8	+0.4
KOHI	KOHIMA	2.59	23	eP	Pn	17 12 37.4	+1.9
KOHI				eS	Sn	17 13 08.2	+1.1
KOHI				IAML		17 13 11.5	
	comp=E,44nm,0.4s						
KOHI				IAML		17 13 12.0	
	comp=N,32nm,0.5s						
GUWA	GUWAHATI	3.08	338	eS	Sn	17 13 15.7	-3.3
TEZP	TEZPUR	3.27	357	eP	Pn	17 12 45.0	+0.3
ZIRO	ZIRO	4.25	11	eP	Pn	17 12 59.1	+0.7
ZIRO				eS	Sn	17 13 45.2	-2.9
ZIRO				IAML		17 13 49.2	
	comp=E,114nm,0.3s						
ZIRO				IAML		17 13 50.7	
	comp=N,100nm,0.2s						
CMAR	Chiang Mai Arr	7.39	130	Pn	Pn	17 13 41.1	-0.4
	comp=N,0.1nm,0.3s,baz=301,slow=14,SNR=7.0						
MKAR	Makanchi Array	24.94	342	P	P	17 17 51.1	+34
	comp=N,0.2nm,0.5s,baz=159,slow=10,SNR=2.2						
MA2	Magadan	53.96	32	LR	LR	17 45 27.0	
	comp=N,66nm,19.3s,baz=122,slow=36						
WRA	Warramunga Arr	58.97	133	P	P	17 22 05.3	+12
	comp=N,0.2nm,0.5s,baz=322,slow=7.4,SNR=5.9						
ASAR	Alice Springs	61.34	137	P	P	17 22 21.1	+11
	comp=N,0.3nm,0.5s,baz=321,slow=6.7,SNR=9.2						

MAN 05 17:22:29.4,9.°58N×122.°41E,h28km,mb3.7,ML2.4,MS1.9, 1C,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	Sibulan	0.85	106	⇑iP	Pn	17 22 44.6	-1.1
SNPH				i S	Sb	17 22 54.4	-2.4
GUIM	Jordan	1.05	10	eP	Pn	17 22 48.6	+0.2
GUIM				eS	Sn	17 23 01.7	-0.5
TBP	Tagbilaran	1.44	86	eP	Pb	17 22 56.4	+0.8
IPIL	Ipil	1.79	175	eP	Pn	17 22 58.6	+0.1
IPIL				eS	Sn	17 23 20.5	+0.2
PAGZ	Pagadian	1.98	151	eP	Pn	17 23 02.2	+1.2
PAGZ				eS	Sb	17 23 30.5	+1.6
MSLP	Maasin	2.48	77	eP	Pn	17 23 09.1	+1.1
MSLP				eS	Sn	17 23 38.3	+0.9

*VAO **05** 17:30:46.4±1.8,22.°92S×68.°85W,h10km,mb4.6*
*ISCJB **05** 17:30:49.0±0.3,22.°73S±0.°03×69.°02W±0.°04,h104km±3km, mb4.4/10,Error ellipse: s-maj=6.4km s-min=4.3km az=5.6*
*IDC **05** 17:30:50.6±0.5,22.°59S×68.°90W,h95km±3km,mb4.1/6, mb1 4.0/8,mb1mx3.7/36,mbtmp4.3/8,MS2.6/1,Ms1 2.7/1, ms1mx2.5/25,Error ellipse: s-maj=19.3km s-min=11.3km az=125.0*
*GUC **05** 17:30:50.9±0.7,22.°68S×69.°17W,h97km±4km,ML4.5*
*NEIC **05** 17:30:50.0±0.0,22.°68S×69.°17W,h97km,mb4.7/9, ML4.5(GUC),After GUC.*
NEIC Felt at Calama.
ISC 05 17:30:49.9±0.4,22.°75S±0.°03×68.°96W±0.°05,h94km±3km, h94km:pP-P,n82,σ1.s56/115,mb4.4/12,6C-6D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.15	19	ePn	Pn	17 31 04.5	+0.8
LVC				eSn	Sn	17 31 14.8	+0.9
LVC				eSn	Sn	17 31 14.9	+1.1
LVC	Limon Verde	0.15	19	P	Pn	17 31 04.5	+0.8
	1µm,0.3s,baz=103,slow=3.1						
LVC				S	Sn	17 31 14.8	+0.9
	8µm,0.3s,baz=149,slow=23,SNR=272						
PB06	IPOC Station P	0.56	275	⇓eP	Pn	17 31 06.0	+0.3
PB06				i S	Sn	17 31 17.6	+0.1
PB06				IAML		17 31 18.9	
	comp=E,19µm,0.1s						
PB09	IPOC Station P	0.99	345	⇓eP	Pn	17 31 10.8	+0.9
PB09				eS	Sn	17 31 25.1	+0.2
PB09				IAML		17 31 26.7	
	comp=E,25µm,0.5s						
PB03	IPOC Station P	1.01	314	⇑iP	Pn	17 31 10.2	0.0
PB03				⇓iP	Pn	17 31 10.2	0.0
PB03				eS	Sn	17 31 24.5	-0.9
PB05	IPOC Station P	1.15	265	⇑eP	Pn	17 31 11.7	0.0
PB05				eS	Sn	17 31 27.0	-1.1
PB05				IAML		17 31 30.5	
	comp=E,7µm,0.6s						
PB04	IPOC Station P	1.17	291	ePn	Pn	17 31 11.8	-0.2
PB04				eSn	Sn	17 31 28.4	-0.3
PB04	IPOC Station P	1.17	291	⇑eP	Pn	17 31 11.6	-0.5
PB04				eS	Sn	17 31 27.3	-1.4
PB04				IAML		17 31 29.4	
	comp=N,11µm,0.1s						
PB07	IPOC Station P	1.33	320	⇑eP	Pn	17 31 13.9	0.0
PB07				eS	Sn	17 31 31.1	-0.9
PB07				IAML		17 31 33.0	
	comp=E,27µm,0.4s						
PB10	IPOC Station P	1.65	242	ePn	Pn	17 31 17.5	-0.2
PB10				eSn	Sn	17 31 37.7	-1.0
PB10	IPOC Station P	1.65	242	eP	Pn	17 31 17.5	-0.2
PB10				eS	Sn	17 31 37.8	-1.0
PB10				IAML		17 31 45.5	
	comp=N,2µm,0.3s						
PB02	IPOC Station P	1.67	329	⇑eP	Pn	17 31 18.0	-0.1
PB02				eS	Sn	17 31 38.3	-1.1
PB02				IAML		17 31 41.8	
	comp=E,27µm,0.3s						
PB01	IPOC Station P	1.77	344	ePn	Pn	17 31 19.4	0.0
PB01				eSn	Sn	17 31 41.1	-0.6
PB01	IPOC Station P	1.77	344	⇓eP	Pn	17 31 19.6	+0.2
PB01				eS	Sn	17 31 41.4	-0.4
PB01				IAML		17 31 42.9	
	comp=N,9µm,0.4s						
PB14	IPOC Station P	2.28	215	eP	Pn	17 31 27.0	+0.8
PB14				eS	Sn	17 31 54.4	+0.4
GO02	Mina Guanaco	2.46	193	ePn	Pn	17 31 30.0	+1.4
GO02				eSn	Sn	17 31 56.9	-1.5
PB11	IPOC Station P	3.05	348	ePn	Pn	17 31 34.9	-1.4
PB11	IPOC Station P	3.05	348	⇓eP	Pn	17 31 35.0	-1.4
PB11				eS	Sn	17 32 10.0	-2.1
MNMC	Minye Minye	3.65	351	ePn	Pn	17 31 43.0	-1.6
LCO	Las Campanas	6.42	194	ePn	Pn	17 32 19.6	-2.6
LCO				eSn	Sn	17 33 29.9	-4.2
LCO	Las Campanas	6.42	194	eP	Pn	17 32 19.7	-2.5
LPAZ	La Paz	6.48	7	ePn	Pn	17 32 23.7	+0.4
LPAZ	La Paz	6.48	7	P	Pn	17 32 24.5	+1.2
	comp=N,5.9nm,0.3s,baz=133,slow=2.5,SNR=72						
LPAZ				LR	LR	17 34 46.1	
	comp=N,49nm,20.4s,baz=157,slow=37						
GO04	Tololo Observa	7.57	192	ePn	Pn	17 32 35.0	-2.8
GO04				eSn	Sn	17 33 57.0	-5.1
SIV	San Ignacio	10.03	49	P	Pn	17 33 09.6	-1.6
	comp=N,1.4nm,0.3s,baz=246,slow=9.8,SNR=21						
SIV				S	Sn	17 34 53.6	-8.3
	comp=N,0.8nm,0.3s,baz=206,slow=16,SNR=2.0						
ROC1	El Roble	10.34	190	ePn	Pn	17 33 11.3	-4.2
ROC1				eSn	Sn	17 35 02.0	-7.6
PEL	Peldehue	10.46	188	ePn	Pn	17 33 14.7	-2.2
CPUP	Villa Florida	11.17	111	ePn	Pn	17 33 27.3	+0.7
CPUP	Villa Florida	11.17	111	P	Pn	17 33 26.9	+0.3
	comp=N,0.3nm,0.3s,baz=282,slow=11,SNR=10						
CPUP	Villa Florida	11.17	111	eP	Pn	17 33 24.6	-2.0
NNA	Nana	13.08	324	ePn	Pn	17 33 50.4	-1.8
TRCB	Terra Rica	15.06	93	eP	Pn	17 34 18.7	+0.9
PTGB	Pitanga	15.60	101	eP	P	17 34 26.1	-0.7
CPSB	Cacapava Do Su	15.83	122	eP	Pn	17 34 27.4	0.0
ITAB	Concordia	15.90	110	eP	Pn	17 34 28.4	+0.2
GO06	Curarrehue	16.91	187	ePn	Pn	17 34 40.3	-0.5
	comp=N,50nm,1.4s						
CNLB	Canela	17.53	116	eP	P	17 34 47.8	-0.3
ITRB	Iturama	17.61	84	eP	Pn	17 34 50.6	+1.2
FRTB	Fartura	17.87	96	eP	Pn	17 34 54.0	+1.5
PLCA	Paso Flores	17.98	184	eP	P	17 34 53.9	+0.9
	comp=N,20nm,1.3s						
PLCA	Paso Flores	17.98	184	eP	P	17 34 54.4	+1.4
TIJ01	Guaruva-PR	18.41	102	eP	Pn	17 34 59.5	+0.4
TER01	Tubaro-SC	18.78	112	eP	Pn	17 35 03.3	0.0
SPB	Sao Paulo	19.81	97	eP	P	17 35 12.8	-0.3
	comp=N,23nm,0.8s						
BDFB	Brasilia	21.00	74	P	P	17 35 25.6	-0.5
	comp=N,7.1nm,0.5s,baz=260,slow=12,SNR=11						
PTGA	Pitinga	23.57	23	eP	P	17 35 51.1	-1.2
	comp=N,14nm,1.3s						
PTGA	Pitinga	23.57	23	P	P	17 35 51.3	-1.0
	comp=N,3.8nm,0.4s,baz=185,slow=19,SNR=12						
EFI	East Falkland	30.08	166	eP	P	17 36 51.3	+1.1
	comp=N,103nm,1.4s						
GO10	Punta Arenas	30.39	182	eP	P	17 36 52.7	-0.4
	comp=N,117nm,1.3s						
LGNH	Logne	41.17	355	ePcP	PcP	17 40 23.3	+0.5
VNA3	Neumayer Olymp	58.91	161	P	P	17 40 40.4	+1.6
VNA2	Neumayer--Watz	59.49	160	P	P	17 40 44.3	+1.5
	baz=291,slow=9.1						
SNAA	Sanae	61.12	161	P	P	17 40 55.2	+1.3
SNAA	Sanae	61.12	161	eP	P	17 40 55.2	+1.3
	comp=N,23nm,1.7s						
SNAA	Sanae	61.12	161	P	P	17 40 55.2	+1.3
	comp=N,4.0nm,0.6s,baz=276,slow=8.1,SNR=19						
LTX	Lajitas	61.63	326	eP	P	17 40 58.2	+0.3
LTX				epP	pP	17 41 22.2	+0.2
TXAR	Lajitas Array	61.63	326	P	P	17 40 58.3	+0.3
	comp=N,0.1nm,0.3s,baz=146,slow=12,SNR=4.0						
TXAR				pP	pP	17 41 22.2	+0.2
	comp=N,0.5nm,0.7s,baz=130,slow=5.1,SNR=4.5						
QSPA	South Pole Qui	67.44	180	eP	P	17 41 37.4	+2.0
	comp=N,6.8nm,0.6s						
DBIC	Dimbokro	69.14	73	eP	P	17 41 46.0	-0.6
	comp=N,13nm,1.4s						
DBIC				sP	sP	17 42 22.2	+0.1
DBIC	Dimbokro	69.14	73	P	P	17 41 46.0	-0.6
	comp=N,0.9nm,0.4s,baz=203,slow=1.8,SNR=2.4						
DBIC				sP	sP	17 42 22.2	+0.1
	comp=N,3.2nm,0.8s,baz=227,slow=6.2,SNR=2.4						
PDAR	Pinedale Array	75.17	330	pP	pP	17 42 47.5	+0.4
	comp=N,0.3nm,0.6s,baz=154,slow=4.8,SNR=3.0						
SYO	Syowa Base	75.35	159	⇓iP	P	17 42 23.0	+0.3
SYO	Syowa Base	75.35	159	⇑eP	P	17 42 26.4	+3.7
ULM	Lac du Bonnet	76.49	343	pP	pP	17 42 54.6	+0.4
	comp=N,0.8nm,0.3s,baz=135,slow=4.0,SNR=2.5						
TOA1	Torodi Ar. Sit	77.83	70	eP	P	17 42 36.1	-1.5
TOA1				epP	pP	17 43 02.7	-0.1
TOA1				esP	sP	17 43 13.5	+0.3
TORD	Torodi Ar. Bea	77.83	70	P	P	17 42 36.1	-1.5
	comp=N,2.7nm,0.5s,baz=259,slow=5.0,SNR=25						
TORD				pP	pP	17 43 02.7	-0.1
	comp=N,1.9nm,0.7s,baz=253,slow=5.2,SNR=4.4						
TORD				sP	sP	17 43 13.5	+0.3
	comp=N,1.4nm,0.5s,baz=250,slow=5.1,SNR=3.5						
BOSA	Boshof	82.91	118	P	P	17 43 04.7	-0.1
	comp=N,2.6nm,0.8s,baz=236,slow=5.2,SNR=4.1						
BOSA				pP	pP	17 43 31.9	+1.5
	comp=N,2.6nm,0.9s,baz=281,slow=6.6,SNR=2.8						
YKA	Yellowknife Ar	92.35	341	pP	pP	17 44 15.7	+0.7
	comp=N,2.0nm,0.7s,baz=134,slow=4.4,SNR=6.0						
ASAR	Alice Springs	128.78	207	PKP	PKPdf	17 49 47.6	+0.5
	comp=N,0.6nm,0.7s,baz=134,slow=1.9,SNR=10						
ASAR				pPKP	pPKPdf	17 50 14.7	+0.8
	comp=N,0.6nm,0.9s,baz=138,slow=1.5,SNR=3.6						
AS31	Alice Springs	128.78	207	ePKPdf	PKPdf	17 49 47.3	+0.1
TIXI	Tiksi	130.03	353	PKP	PKPdf	17 49 47.3	-0.6
	comp=N,0.8nm,0.4s,baz=5.7,slow=3.0,SNR=3.0						
WR1	Warramunga Arr	131.85	210	ePKPdf	PKPdf	17 49 54.0	+0.9
WR1				epPKPdf	pPKPdf	17 50 20.8	+1.0
WRA	Warramunga Arr	131.85	210	PKP	PKPdf	17 49 54.0	+0.9
	comp=N,0.5nm,0.6s,baz=151,slow=1.6,SNR=15						
WRA				pPKP	pPKPdf	17 50 20.8	+1.0
	comp=N,0.2nm,0.6s,baz=150,slow=1.6,SNR=3.2						
ZAA1	Zalesovo Array	143.10	26	ePKPdf	PKPdf	17 50 11.6	-1.0
ZAA1				epPKPdf	pPKPdf	17 50 40.1	+0.7
ZALV	Zalesovo Beam	143.10	26	PKP	PKPdf	17 50 11.6	-1.0
	comp=N,0.5nm,0.4s,baz=298,slow=3.2,SNR=3.7						
ZALV				pPKP	pPKPdf	17 50 40.1	+0.7
	comp=N,1.0nm,0.6s,baz=278,slow=3.7,SNR=3.4						
KSH	Kashi	145.91	52	PKPbc	PKPab	17 50 20.4	+0.8
KSH				PP	PP	17 53 45.9	+4.8
KSH				AMB	AMB		
	comp=Z,880nm,6.7s						
MAKZ	Makanchi	146.49	37	ePKPdf	PKPbc	17 50 19.9	-0.4
MK31	Makanchi Array	146.67	37	ePKPdf	PKPbc	17 50 20.0	-0.8
MK32	Makanchi Array	146.67	37	ePKPdf	PKPdf	17 50 19.9	+0.9
MK32				epPKPdf	pPKPbc	17 50 47.8	+0.4
MKAR	Makanchi Array	146.67	37	PKPbc	PKPdf	17 50 19.9	+0.9
	comp=Z,1.3nm,0.7s,baz=327,slow=1.9,SNR=15						
MKAR				pPKPbc	pPKPbc	17 50 47.8	+0.4
	comp=Z,2.3nm,0.9s,baz=302,slow=2.3,SNR=6.7						
MK01	Makanchi Array	146.69	37	ePKPdf	PKPdf	17 50 19.8	+0.7
LZH	Lanzhou	165.32	24	ePKP	PKPdf	17 50 44.2	+0.4
LZH				pPKP	pPKPdf	17 51 08.5	-2.4
LZH				sPKP		17 51 17.6	
LZH				PKP	PKPab	17 51 44.3	+2.5

PGC 05 17:37:56.4±3.4,71.°97N×131.°08W,h35km,ML3.6/1, 201km west of Sachs Harbour, Nt Beaufort Sea, Beaufort Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	Inuvik	3.77	194	Pn	Pn	17 38 50.9	-1.0
INK				Sn	Sn	17 39 30.6	-4.3
KUKN	Kugluktuk,NWT	6.89	119	Pn	Pn	17 39 33.3	-1.4
KUKN				Sn	Sn	17 40 47.4	-4.3
COLD	Coldfoot	8.17	244	Pn	Pn	17 39 51.7	-0.6
COLD				Sn	Sn	17 41 16.5	-6.6
DAWY	Dawson	8.51	205	Pn	Pn	17 39 54.9	-2.2
DAWY				Sn	Sn	17 41 22.2	-10
DOT	Dot Lake	9.66	217	Pn	Pn	17 40 11.4	-1.3
DOT				Sn	Sn	17 41 50.4	-9.4
BVCY	Beaver Creek	10.29	206	Pn	Pn	17 40 18.8	-2.7
BVCY				Sn	Sn	17 42 07.2	-8.2
RES	Resolute Bay	10.61	58	Pn	Pn	17 40 22.8	-2.9
RES				Sn	Sn	17 42 11.7	-11
YUK3	Moose Creek	10.86	204	Pn	Pn	17 40 27.1	-2.1
YUK3				Sn	Sn	17 42 20.6	-8.8
YUK2	White River	10.90	205	Pn	Pn	17 40 27.0	-2.7
YUK2				Sn	Sn	17 42 22.1	-8.1
YUK4	Talbot Arm	11.07	199	Pn	Pn	17 40 29.2	-3.0
YUK5	Granite Creek	11.20	197	Pn	Pn	17 40 32.6	-1.3
YUK5				Sn	Sn	17 42 26.6	-11
YKW3	Yellowknife Ar	11.33	138	Pn	Pn	17 40 32.7	-2.8
YKW3				Sn	Sn	17 42 27.8	-13
YKW1	Yellowknife Ar	11.41	138	Sn	Sn	17 42 32.2	-10
YUK6	Outpost Mounta	11.43	198	Pn	Pn	17 40 36.4	-0.7
WHY	Whitehorse	11.46	189	Pn	Pn	17 40 35.8	-1.6
HYT	Haines Junctio	11.47	196	Pn	Pn	17 40 36.4	-1.2

*IDC **05** 17:41:30.3±2.0,0.°79N×126.°71E,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.4/32,mbtmp3.8/3,Error ellipse: s-maj=168.9km s-min=24.5km az=66.0*
*DJA **05** 17:41:33.6±2.4,1°N±7°×12°6E±°,h19km±24km,M3.6/5, MLv3.6/5*
*ISCJB **05** 17:41:34.6±1.0,0.°6N±0.°2×126.°32E±0.°07,h47km,mb3.7/3, Error ellipse: s-maj=22.0km s-min=10.1km az=174.3*
ISC 05 17:41:36.1±1.2,0.°6N±0.°2×126.°37E±0.°07,h47km,n5, σ1.s78/6,mb3.8/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.01	81	P	Pn	17 41 52.3	-1.6
TNTI				S	Sn	17 42 07.5	+0.5
KMSI	Cibinong	2.39	269	P	Pn	17 42 11.3	-1.4
WRA	Warramunga Arr	21.86	159	P	P	17 46 24.4	-0.5
	1.5nm,0.6s,baz=339,slow=11,SNR=25						
ASAR	Alice Springs	25.21	164	P	P	17 46 59.5	+1.8
	2.7nm,0.9s,baz=343,slow=11,SNR=26						
MKAR	Makanchi Array	59.92	326	P	P	17 51 38.5	+1.1
	0.3nm,0.4s,baz=122,slow=6.1,SNR=3.2						

MDD 05 17:43:21.6±0.2,38.°04N×3.°29W,h2km±1km,mbLg2.1/18, 1D,Error ellipse: s-maj=1.7km s-min=1.2km az=51.0, PRXIMO,Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQES	Quesada	0.29	144	⇓Pg	Pg	17 43 27.0	-0.2
	7.3nm,0.3s,SNR=18						
EQES				Lg	Lg	17 43 31.3	
	25nm,0.1s,SNR=5.0						
SESP	Santiago Espad	0.59	82	Pg	Pg	17 43 32.6	-0.3
	10nm,0.1s,SNR=7.9						
SESP				Lg	Lg	17 43 40.8	
	34nm,0.1s,SNR=7.9						
EQUE	Quentar	0.84	188	Pg	Pg	17 43 38.1	+0.4
	1.9nm,0.2s,SNR=6.4						
EQUE				Lg	Lg	17 43 49.0	
	7.6nm,0.1s,SNR=5.0						
EADA	Adamuz	1.02	278	Pg	Pg	17 43 40.1	-1.1
	3.0nm,0.3s,SNR=64						
EADA				Lg	Lg	17 43 53.9	
	26nm,0.1s,SNR=16						
EGOR	Sierra Gorda,	1.13	215	Pg	Pg	17 43 43.0	-0.3
	5.4nm,0.3s,SNR=7.9						
EGOR				Lg	Lg	17 43 57.3	
	19nm,0.2s,SNR=7.9						
EBER	Berja	1.18	164	Pg	Pg	17 43 43.5	-0.8
	7.2nm,0.3s,SNR=18						
EBER				Lg	Lg	17 44 00.7	
	24nm,0.4s,SNR=5.0						
ELGU	Los Guajares,	1.20	193	Pg	Pg	17 43 44.7	+0.2
	3.1nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	17 43 59.9	
	30nm,0.3s,SNR=7.9						
ETOB	Tobarra	1.50	66	Pg	Pn	17 43 49.2	-0.2
	3.2nm,0.3s,SNR=9.8						
ETOB				Lg	Lg	17 44 08.9	
	9.8nm,0.2s,SNR=67						
EMUR	La Murta	1.63	96	Pg	Pn	17 43 51.2	0.0
	1.0nm,0.3s,SNR=7.9						
EMUR				Lg	Lg	17 44 13.6	
	30nm,0.4s,SNR=7.6						
ECAB	El Cabril	1.68	272	Pn	Pn	17 43 49.9	-2.1
	2.2nm,0.3s,SNR=24						
ECAB				Pg	Pb	17 43 52.5	-0.7
	1.8nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	17 44 11.4	-2.7
	1.7nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	17 44 13.3	
	10nm,0.3s,SNR=5.0						
ESDC	Sonseca Array	1.71	342	Pg	Pb	17 43 53.2	-0.6
	0.5nm,0.3s,baz=164,slow=18,SNR=8.1						
ESDC				Sn	Sn	17 44 11.8	-3.2
	baz=163,slow=29,SNR=7.9						
ESDC				Lg	Lg	17 44 15.4	
	0.3nm,0.3s,baz=163,slow=29,SNR=3.8						
PAB	San Pablo	1.72	332	Pg	Pb	17 43 53.8	-0.1
	6.3nm,0.6s,SNR=7.9						
PAB				Sn	Sn	17 44 11.8	-3.2
	SNR=7.9						
PAB				Lg	Lg	17 44 15.6	
	6.2nm,0.2s,SNR=7.9						
EMIJ	Mijas	1.89	219	Pg	Pb	17 43 56.3	-0.5
	3.4nm,0.4s,SNR=7.9						
EMIJ				Sn	Sn	17 44 18.1	-1.1
	3.9nm,0.4s,SNR=7.9						
EMIJ				Lg	Lg	17 44 22.6	
	4.9nm,0.2s,SNR=4.7						
ECHE	Chera	2.38	49	Pg	Pg	17 44 06.9	-0.3
	2.3nm,0.7s,SNR=7.9						
ECHE				Lg	Lg	17 44 37.7	
	3.5nm,0.3s,SNR=7.9						
GUD	Guadarrama	2.69	346	Lg	Lg	17 44 44.6	
	4.4nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	2.69	265	Pg	Pb	17 44 10.3	-0.1
	2.0nm,0.3s,SNR=7.9						
EMIN				Lg	Lg	17 44 43.7	
	2.9nm,0.4s,SNR=8.0						
EBAD	Badajoz	3.01	285	Pn	Pn	17 44 09.3	-1.0
	0.3nm,0.1s,SNR=7.9						
EBAD				Pg	Pb	17 44 15.6	-0.3
	3.8nm,0.7s,SNR=7.9						
EBAD				Sn	Sn	17 44 43.9	-3.0
	1.5nm,0.6s,SNR=5.0						
EBAD				Lg	Lg	17 44 54.8	
	10nm,0.2s,SNR=5.8						
EMOS	Mosqueruela	3.19	42	Pg	Pg	17 44 21.2	-1.5
	0.3nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	17 45 00.7	
	1.2nm,0.4s,SNR=7.9						
EGRO	El Granado	3.36	263	Pn	Pn	17 44 13.0	-2.1
	0.8nm,0.3s,SNR=4.0						
EGRO				Sn	Sn	17 44 51.0	-4.4
	0.2nm,0.4s,SNR=4.0						
EGRO				Lg	Lg	17 45 07.8	
	1.4nm,0.3s,SNR=4.0						
PESTR	Estremoz	3.48	285	eSn	Sn	17 44 55.6	-2.8
PMRV	Marv??o	3.50	295	eSg	Sg	17 45 10.8	-3.0
PMRV				A	A	18 10 11.9	
	5.4nm,0.3s						
PMRV	Marv??o	3.50	295	Lg	Lg	17 45 10.8	
PVAQ	Vaqueiros	3.57	261	ePn	Pn	17 44 16.5	-1.4
PVAQ				eSg	Sb	17 45 11.9	+2.8
PVAQ	Vaqueiros	3.57	261	Pn	Pn	17 44 16.5	-1.4
PVAQ				Lg	Lg	17 45 11.9	

IDC 05 17:45:56.9±3.6,19.°84S×70.°29W,h0km,mb3.9/1, mb1 4.5/2,mb1mx3.7/25,mbtmp4.3/2,ML4.9/1,Error ellipse: s-maj=134.4km s-min=65.2km az=110.0,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	4.09	31	Pn	Pn	17 47 01.2	0.0
	52nm,0.3s,baz=283,slow=7.9,SNR=769						
TORD	Torodi Ar. Bea	78.03	71	P	P	17 57 57.9	0.0
	0.7nm,0.6s,baz=247,slow=5.4,SNR=5.1						
MKAR	Makanchi Array	145.01	33	PKPbc	PKPbc	18 05 34.6	-0.9
	0.2nm,0.7s,baz=311,slow=3.3,SNR=2.3						

*UPP **05** 18:01:40.5±0.1,67.°08N×20.°92E,h0km,ML1.9,Explosion*
*ISCJB **05** 18:01:40.2±0.3,67.°06N±0.°02×20.°99E±0.°06,h0km,Error ellipse: s-maj=3.6km s-min=2.8km az=10.5*
*HEL **05** 18:01:41.2±0.1,67.°08N×20.°91E,h0km,ML2.3, ML1.9(UPP),Explosion*
*NAO **05** 18:01:41.8±0.8,67.°08N×21.°13E,ML2.6*
*IDC **05** 18:01:41.5±0.8,67.°07N×21.°11E,h0km,mb1 3.3/5, mb1mx3.1/45,mbtmp3.3/5,ML2.1/4,Error ellipse: s-maj=16.6km s-min=7.0km az=106.0*
*BER **05** 18:01:43.8±3.2,67.°03N×20.°96E,h0km,ML1.6, ML2.6(NAO),Suspected explosion*
ISC 05 18:01:40.6±0.7,67.°08N±0.°02×20.°93E±0.°03,h0km,n69, σ1.s15/91,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	Masugnsbyn	0.56	47	P	Pg	18 01 51.3	-0.1
MASU				S	Sg	18 01 59.9	+1.2
MASU	Masugnsbyn	0.56	47	i P	Pg	18 01 51.3	-0.1
MASU				i S	Sg	18 01 59.9	+1.2
ERTU	Ertsjaerv	0.72	136	P	Pg	18 01 54.2	-0.2
ERTU	Ertsjaerv	0.72	136	eP	Pg	18 01 54.0	-0.5
PAJU	Pajala	0.86	93	P	Pg	18 01 56.4	-0.6
PAJU	Pajala	0.86	93	i P	Pg	18 01 56.4	-0.6
RATU	Laukkuluspa	0.91	326	P	Pg	18 01 57.2	-0.8
RATU	Laukkuluspa	0.91	326	eP	Pg	18 01 57.2	-0.8
KUA	Kurravaara	0.91	346	P	Pg	18 01 57.5	-0.5
KUA	Kurravaara	0.91	346	eP	Pg	18 01 57.5	-0.5
HARU	Harads	0.92	179	P	Pg	18 01 57.6	-0.5
HARU	Harads	0.92	179	eP	Pg	18 01 57.6	-0.5
SALU	Saltoluokta	0.99	289	P	Pg	18 01 58.9	-0.6
SALU	Saltoluokta	0.99	289	eP	Pg	18 01 58.9	-0.6
LANU	Lannavaara	1.06	22	P	Pg	18 01 59.8	-1.1
LANU	Lannavaara	1.06	22	eP	Pg	18 02 00.1	-0.8
	baz=205						
LANU				eS	Sg	18 02 10.8	-3.7
KALU	Kalix	1.56	140	P	Pn	18 02 09.3	-0.3
KALU	Kalix	1.56	140	e	Pn	18 02 04.6	-4.9
SJUU	Sjulsmark	1.60	170	P	Pn	18 02 09.8	-0.2
SJUU	Sjulsmark	1.60	170	eP	Pn	18 02 09.8	-0.2
TOF	Tornio	1.69	125	eP	Pn	18 02 11.2	0.0
TOF				MSG		18 02 31.7	
	comp=Z,27nm,0.2s						
TOF				eSN	Sb	18 02 34.9	+0.8

HEF	Hetta	1.69	37	eP	Pn	18 02 11.0	-0.4
HEF	Hetta	1.69	37	eP	Pn	18 02 11.0	-0.4
	baz=215						
HEF				MSG		18 02 31.7	
	comp=Z,20nm,0.2s						
HEF				eSN	Sg	18 02 35.1	+0.2
LILU	Lilltraesk	1.85	194	P	Pn	18 02 14.0	+0.4
LILU	Lilltraesk	1.85	194	eP	Pn	18 02 14.0	+0.4
KIF	Kilpisjarvi	1.94	359	Pn	Pb	18 02 15.9	-0.8
KIF				Sn	Sg	18 02 42.9	+0.2
KIF	Kilpisjarvi	1.94	359	eP	Pb	18 02 15.9	-0.8
KIF				eS	Sb	18 02 40.5	-0.8
KIF	Kilpisjarvi	1.94	359	eP	Pb	18 02 15.7	-1.0
KIF				MSG		18 02 39.4	
	comp=Z,19nm,0.2s						
KIF				eSG	Sg	18 02 43.0	+0.2
RNF	Rovaniemi	2.06	101	eP	Pn	18 02 17.2	+0.8
RNF				eSG	Sb	18 02 46.2	+1.2
KTK1	Kautokeino	2.13	23	eP	Pb	18 02 19.4	-0.6
KTK1				eS	Sg	18 02 48.0	-0.9
KTK1				IAML		18 02 54.5	
	comp=Z,8.8nm,0.2s						
SGF	Sodankyl	2.21	78	eP	Pn	18 02 19.3	+0.9
SGF				eSG	Sb	18 02 49.7	+0.6
STEI	Steigen	2.35	294	eP	Pn	18 02 21.6	+1.3
BURU	Burvik	2.51	176	P	Pn	18 02 23.5	+0.9
BURU	Burvik	2.51	176	eP	Pn	18 02 23.5	+0.9
	baz=360						
SVAU	Svanoeiden	2.65	193	P	Pn	18 02 25.2	+0.7
SVAU	Svanoeiden	2.65	193	eP	Pn	18 02 25.2	+0.7
ODEU	Stanfors	2.68	182	P	Pn	18 02 25.7	+0.8
ODEU	Stanfors	2.68	182	eP	Pn	18 02 25.7	+0.8
MOR8	Moi Rana	2.74	254	eP	Pn	18 02 27.1	+1.4
OUL	Oulu	2.84	132	ePB	Pb	18 02 30.4	-1.7
ARA0	ARCESS Array S	3.00	32	Pn	Pn	18 02 29.5	+0.2
	baz=209,slow=14						
ARA0				Sn	Sn	18 03 06.1	+0.2
	baz=221,slow=22						
ARA0	ARCESS Array S	3.00	32	Pn	Pn	18 02 29.5	+0.2
	baz=209,slow=14						
ARA0				Sn	Sn	18 03 06.1	+0.2
	baz=221,slow=22						
ARCES	ARCESS Array B	3.00	32	Pn	Pn	18 02 29.5	+0.2
	comp=Z,0.5nm,0.3s,baz=217,slow=33,SNR=37						
ARCES				Pg	Pb	18 02 33.3	-1.5
	comp=Z,0.5nm,0.3s,baz=212,slow=13,SNR=45						
ARCES				Sn	Sn	18 03 07.3	+1.4
	comp=Z,0.8nm,0.3s,baz=221,slow=21,SNR=10						
ARE0	ARCESS Array S	3.00	32	eP	Pn	18 02 30.1	+0.8
LOF	Lofoten	3.02	294	eP	Pn	18 02 32.2	+2.6
KONS	Konsvik	3.15	263	eP	Pn	18 02 33.5	+2.2
UMAU	Umeaa	3.21	182	P	Pn	18 02 32.8	+0.7
UMAU	Umeaa	3.21	182	eP	Pn	18 02 32.9	+0.8
VRF	Varrio	3.42	75	eP	Pn	18 02 37.3	+2.3
	baz=265						
MSF	Maaselka	3.46	106	ePG	Pb	18 02 43.2	+0.6
	baz=289						
MSF				eSG	Sb	18 03 28.2	+3.2
KEV	Kevo	3.50	37	eP	Pn	18 02 37.4	+1.2
KU6	Riekki	3.73	102	eP	Pn	18 02 41.2	+1.8
	baz=290						
KU6				eS	Sn	18 03 20.8	-3.3
VAF	Ylistaro	4.12	169	eP	Pn	18 02 46.4	+1.7
	baz=347						
APA0	Apatity Array	4.70	78	Pn	Pn	18 02 53.3	+0.7
	baz=270,slow=14						
APA0				Sn	Sn	18 03 48.0	+0.3
APA0	Apatity Array	4.70	78	Pn	Pn	18 02 53.3	+0.7
	baz=270,slow=14						
APA0				Sn	Sn	18 03 48.0	+0.3
FIA0	FINESS Array S	6.08	156	Pn	Pn	18 03 12.7	+1.1
	baz=343,slow=14						
FIA0				Sn	Sn	18 04 22.8	+1.0
	baz=338,slow=28						
FIA0	FINESS Array S	6.08	156	Pn	Pn	18 03 12.7	+1.1
	baz=343,slow=14						
FIA0				Sn	Sn	18 04 22.8	+1.0
	baz=338,slow=28						
FINES	FINESS Array B	6.08	156	Pn	Pn	18 03 12.4	+0.8
	comp=Z,0.1nm,0.3s,baz=339,slow=12,SNR=11						
FINES				Pg	Pb	18 03 24.4	-2.9
	comp=Z,0.1nm,0.3s,baz=340,slow=13,SNR=4.9						
FINES				Sn	Sn	18 04 22.6	+0.8
	comp=Z,0.2nm,0.3s,baz=340,slow=23,SNR=6.2						
NB2	NORSAR Subarra	7.40	220	Pn	Pn	18 03 30.6	+0.9
	baz=28,slow=16						
NB2	NORSAR Subarra	7.40	220	Pn	Pn	18 03 30.6	+0.9
	baz=28,slow=16						
NOA	NORSAR Array B	7.40	220	Pn	Pn	18 03 31.3	+1.6
	comp=Z,0.0nm,0.3s,baz=76,slow=13,SNR=4.3						
NRA0	NORESS Array S	7.58	217	Pn	Pn	18 03 31.8	-0.4
NRA0	NORESS Array S	7.58	217	Pn	Pn	18 03 31.8	-0.4
HFS	Hagfors	7.67	208	Pn	Pn	18 03 33.4	0.0
	baz=27,slow=14						
HFS	Hagfors	7.67	208	Pn	Pn	18 03 31.6	-1.8
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=7.8						
HFS	Hagfors	7.67	208	Pn	Pn	18 03 33.4	0.0
	baz=27,slow=14						
SPA0	Spitsbergen Ar	11.24	355	Pn	Pn	18 04 22.9	+0.7
	baz=152,slow=16						
SPA0	Spitsbergen Ar	11.24	355	Pn	Pn	18 04 22.9	+0.7
	baz=152,slow=16						
SPITS	Spitsbergen Ar	11.24	355	Pn	Pn	18 04 21.3	-0.9
	baz=168,slow=15,SNR=2.6						

MDD 05 18:08:20.8±0.2**, 38°.05N×3°.28W, h1**^{km}±2^{km}**, mbLg2.1**/17**, 1D, Error ellipse: s-maj=1.6km s-min=1.1km az=45.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	Quesada	0.29	146	⇓Pg	Pg	18 08 26.0	-0.4
	10nm,0.2s,SNR=18						
EQES				Lg	Lg	18 08 30.3	
	29nm,0.5s,SNR=4.5						
SESP	Santiago Espad	0.58	83	Pg	Pg	18 08 31.7	-0.2
	2.3nm,0.3s,SNR=7.9						
SESP				Lg	Lg	18 08 39.4	
	134nm,0.3s,SNR=7.9						
EQUE	Quentar	0.85	189	Pg	Pg	18 08 37.5	+0.4
	1.4nm,0.1s,SNR=8.1						
EQUE				Lg	Lg	18 08 47.8	
	22nm,0.3s,SNR=9.2						
EADA	Adamuz	1.03	277	Pg	Pg	18 08 39.2	-1.3
	3.5nm,0.1s,SNR=19						
EADA				Lg	Lg	18 08 52.9	
	28nm,0.1s,SNR=5.1						
EGOR	Sierra Gorda,	1.14	216	Pg	Pg	18 08 42.2	-0.5
	2.7nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	18 08 59.1	
	16nm,0.3s,SNR=7.9						
EBER	Berja	1.19	165	Pg	Pg	18 08 43.7	+0.1
	11nm,0.4s,SNR=11						
EBER				Lg	Lg	18 09 01.3	
	28nm,0.4s,SNR=12						
ELGU	Los Guajares,	1.21	193	Pg	Pg	18 08 44.1	+0.1
	2.0nm,0.2s,SNR=4.0						
ELGU				Lg	Lg	18 09 00.2	
	20nm,0.2s,SNR=7.9						
ETOB	Tobarra	1.49	66	Pg	Pn	18 08 48.2	-0.5
	0.2nm,0.3s,SNR=5.9						
ETOB				Sn	Sg	18 09 05.8	-2.7
	1.1nm,0.2s,SNR=14						
ETOB				Lg	Lg	18 09 07.9	
	8.6nm,0.1s,SNR=6.2						
EMUR	La Murta	1.62	97	Pg	Pn	18 08 50.1	-0.4
	3.9nm,0.3s,SNR=7.9						
EMUR				Lg	Lg	18 09 12.8	
	29nm,0.4s,SNR=7.9						
ECAB	El Cabril	1.69	272	Pn	Pn	18 08 48.9	-2.6
	4.2nm,0.3s,SNR=7.9						
ECAB				Pg	Pb	18 08 51.7	-0.9
	SNR=7.9						
ECAB				Sn	Sn	18 09 10.5	-3.2
	1.2nm,0.1s,SNR=7.9						
ECAB				Lg	Lg	18 09 12.9	
	13nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	1.71	342	Pg	Pn	18 08 52.3	+0.5
	0.7nm,0.1s,baz=163,slow=17,SNR=10						
ESDC				Sn	Sn	18 09 10.2	-4.1
	0.5nm,0.1s,baz=77,slow=45,SNR=7.9						
ESDC				Lg	Lg	18 09 14.7	
	4.2nm,0.1s,baz=161,slow=29,SNR=7.9						
PAB	San Pablo	1.71	331	Pg	Pb	18 08 52.5	-0.6
	0.1nm,0.3s,SNR=7.9						
PAB				Lg	Lg	18 09 14.4	
	6.7nm,0.2s,SNR=7.9						
EMIJ	Mijas	1.90	219	Pg	Pg	18 08 57.0	-0.1
	0.0nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	18 09 18.7	-0.1
	3.4nm,0.3s,SNR=7.9						
EMIJ				Lg	Lg	18 09 23.2	
	11nm,0.6s,SNR=7.9						
ECHE	Chera	2.37	49	Pg	Pb	18 09 05.2	+0.9
	0.0nm,0.3s,SNR=7.9						
ECHE				Lg	Lg	18 09 36.3	
	1.8nm,0.2s,SNR=7.9						
GUD	Guadarrama	2.68	346	Sn	Sn	18 09 37.3	-1.0
	0.4nm,0.2s,SNR=7.9						
GUD				Lg	Lg	18 09 44.7	
	2.7nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	2.70	265	Pn	Pn	18 09 02.8	-2.4
	0.2nm,0.1s,SNR=7.9						
EMIN				Pg	Pb	18 09 09.7	-0.1
	0.7nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	18 09 45.1	
	3.3nm,0.3s,SNR=7.9						
EPLA	Plasencia	2.97	314	Sn	Sn	18 09 42.3	-3.0
	1.4nm,0.3s,SNR=7.9						
EPLA				Lg	Lg	18 09 52.7	
	2.7nm,0.2s,SNR=7.9						
EBAD	Badajoz	3.02	285	Pn	Pn	18 09 08.6	-1.1
	SNR=7.9						
EBAD				Pg	Pb	18 09 15.4	+0.1
	SNR=7.9						
EBAD				Sn	Sn	18 09 45.0	-1.5
	0.7nm,0.1s,SNR=7.9						
EBAD				Lg	Lg	18 09 56.3	
	6.1nm,0.2s,SNR=7.9						
PESTR	Estremoz	3.48	285	eSn	Sn	18 09 54.1	-3.8
PESTR				eSg	Sb	18 10 09.3	+3.3
PESTR				A	A	18 10 16.4	
	3.7nm,0.7s						
PMRV	Marv??o	3.50	294	Sn	Sn	18 09 53.7	-4.7
PMRV				Lg	Lg	18 10 09.4	
	5.4nm,0.3s						
PMRV	Marv??o	3.50	294	eSn	Sn	18 09 53.7	-4.7
PMRV				eSg	Sb	18 10 09.4	+2.9
PVAQ	Vaqueiros	3.58	261	eSg	Sb	18 10 10.7	+2.0
PVAQ				A	A	18 10 15.4	
	2.6nm,0.4s						
PVAQ	Vaqueiros	3.58	261	Lg	Lg	18 10 10.7	
	2.6nm,0.4s						
PMTG	Montargil	4.01	286	eSg	Sg	18 10 26.5	-3.1
PMTG				A	A	18 10 29.9	
	3.1nm,0.3s						
PMTG	Montargil	4.01	286	Lg	Lg	18 10 26.5	
	3.1nm,0.3s						

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*MOS **05** 18:18:29.5±0.9, 36°.47N×70°.70E, h212^{km}, mb4.7/54, Error ellipse: s-maj=5.8km s-min=3.6km az=83.6*

*IDC **05** 18:18:29.6±1.2, 36°.32N×70°.67E, h203^{km}±11^{km}, mb4.0/43, mb1 4.1/50, mb1mx4.0/64, mbtmp4.6/50, MS3.7/1, Ms1 3.7/1, ms1mx2.8/50, Error ellipse: s-maj=8.1km s-min=5.7km az=0.0*

*ISCJB **05** 18:18:29.1±0.2, 36°.47N±0°.02×70°.65E±0°.02, h206^{km}±2^{km}, mb4.5/179, Error ellipse: s-maj=2.9km s-min=2.5km az=152.3*

*BJI **05** 18:18:30.2, 36°.53N×70°.59E, h217^{km}, mB4.9/27, mb4.5/32*

*NEIC **05** 18:18:30.2±0.3, 36°.47N×70°.65E, h204^{km}±3^{km}, mb4.7/115, Error ellipse: s-maj=3.6km s-min=2.8km az=185.0*

*NNC **05** 18:18:33.2±1.8, 36°.86N×70°.47E, h198^{km}±17^{km}, mb4.0, mpv5.1, Error ellipse: s-maj=17.9km s-min=14.8km az=167.0*

ISC 05 18:18:29.9±0.4**, 36°.45N**±0°.03×**70°.64E**±0°.03**, h203**^{km}±3^{km}**, h203**^{km}**:pP-P, n459,** σ1^{s}**54**/536**, mb4.6**/180**, 31C-22D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.30	215	ePn	Pn	18 19 13.6	+1.6
KBL				eS	S	18 19 44.9	+0.6
KBL	Kabul	2.30	215	ePN	Pn	18 19 13.6	+1.6
KBL				eS	S	18 19 44.9	+0.6
CHGR	Chuyangaron	2.50	332	ePn	Pn	18 19 13.8	-0.2
CHGR				eS	S	18 19 45.8	-2.1
GAR	Garm	2.56	354	ePn	Pn	18 19 14.7	0.0
GAR				eS	S	18 19 47.0	-2.3
GAR	Garm	2.56	354	ePN	Pn	18 19 14.7	0.0
CEP	Cherat	2.82	158	P	Pn	18 19 19.6	+1.9
CEP				S	S	18 19 56.0	+1.6
CHCP	Chirah Chowk	3.52	141	⇓P	Pn	18 19 27.8	+1.9
NIL	Nilore	3.52	142	ePn	Pn	18 19 27.8	+1.9
NIL	Nilore	3.52	142	ePN	Pn	18 19 27.8	+1.9
BTK	Batken	3.61	2	ePn	Pn	18 19 29.6	+2.6
BTK				eS	S	18 20 13.0	+1.7
BTK	Batken	3.61	2	ePN	Pn	18 19 29.6	+2.6
BTK				eS	S	18 20 13.0	+1.7
SFK	Sufi-Kurgan	4.22	31	⇑P	Pn	18 19 34.7	+0.1
	128nm,0.4s						
SFK				⇑S	S	18 20 22.9	-2.2
	621nm,0.7s						
SFK	Sufi-Kurgan	4.22	31	PN	Pn	18 19 34.7	+0.1
SFK				S	S	18 20 22.9	-2.2
SFK				pmax	pmax		
	comp=Z,129nm,0.4s						
SFK				smax	smax		
	comp=N,621nm,0.7s						
SARP	Sargodha	4.82	159	P	Pn	18 19 43.4	+1.3
TAS	Tashkent	4.99	348	PN	Pn	18 19 44.4	+0.3
ARSB	Arslanbob	5.20	20	ePn	Pn	18 19 46.5	-0.5
ARSB				eS	S	18 20 41.4	-6.2
KSH	Kashi	5.21	52	⇓iP	Pn	18 19 42.3	-4.8
KSH				S	S	18 20 34.3	-13
KSH				LR	LR		
	comp=N,6µm,4.0s						
AML	Almayashu	6.15	22	P	Pn	18 19 59.0	-0.5
	SNR=320						
MNAS	Manas	6.20	13	⇑P	Pn	18 19 59.5	-0.3
	comp=N,49nm,0.5s						
MNAS				⇓S	S	18 21 07.1	-3.8
	comp=N,384nm,0.5s						
MNAS	Manas	6.20	13	PN	Pn	18 19 59.5	-0.3
MNAS				pmax	pmax		
	comp=Z,49nm,0.5s						
DHRM	DHARAMSHALA	6.28	130	eP	Pn	18 20 01.5	+0.4
DHRM				eS	S	18 21 11.1	-1.8
DHRM				IAML		18 21 14.2	
	comp=N,1µm,0.6s						
DHRM				IAML		18 21 16.1	
	comp=E,2µm,0.4s						
NRN	Naryn	6.50	38	ePn	Pn	18 20 02.1	-1.8
NRN	Naryn	6.50	38	ePN	Pn	18 20 02.1	-1.8
UCH	Uchtor	6.51	26	P	Pn	18 20 03.7	-0.4
	SNR=474						
KK31	Karatay Array	6.65	359	ePn	Pn	18 20 05.1	-0.4
KK31				eS	S	18 21 14.4	-6.8
KK31	Karatay Array	6.65	359	P	Pn	18 20 04.9	-0.6
	comp=E,64nm,0.6s,baz=196,slow=21,SNR=463						
KK31				⇓S	S	18 21 14.3	-7.0
	comp=E,48nm,0.5s						
KK31	Karatay Array	6.65	359	ePN	Pn	18 20 05.1	-0.4
KKAR	Karatay Array	6.65	359	ePn	Pn	18 20 05.2	-0.3
KKAR				eS	S	18 21 14.6	-6.7
KKAR	Karatay Array	6.65	359	ePN	Pn	18 20 05.2	-0.3
EKS2	Erkin-Say	6.67	20	P	Pn	18 20 05.8	0.0
	SNR=58						
KZA	Kyzart	6.67	31	P	Pn	18 20 05.6	-0.4
	SNR=46						
AAK	Ala-Archa	6.86	25	P	Pn	18 20 08.6	+0.1
	SNR=140						
AAK	Ala-Archa	6.86	25	ePn	Pn	18 20 08.4	0.0
AAK				eS	S	18 21 22.7	-3.8
AAK				eS	S	18 21 24.4	-2.0
AAK	Ala-Archa	6.86	25	⇓P	Pn	18 20 08.4	0.0
	comp=E,84nm,0.5s						
AAK				⇑S	S	18 21 21.5	-5.0
	comp=E,207nm,0.7s						
AAK	Ala-Archa	6.86	25	i P	Pn	18 20 08.2	-0.3
	SNR=167						
AAK	Ala-Archa	6.86	25	P	Pn	18 20 08.5	0.0
	comp=E,49nm,0.3s,baz=176,slow=5.7,SNR=597						
AAK				S	S	18 21 24.4	-2.0
	comp=E,24nm,0.3s,baz=20,slow=22,SNR=16						
KBK	Karagaybulak	7.04	27	P	Pn	18 20 11.1	+0.4
	SNR=111						
FRU1	Bishkek	7.06	25	ePn	Pn	18 20 10.2	-0.7
FRU1				eS	S	18 21 25.4	-5.6
FRU1	Bishkek	7.06	25	ePN	Pn	18 20 10.2	-0.7
FRU	Bishkek	7.08	24	⇑ePN	Pn	18 20 11.0	-0.1
FRU				i S	S	18 21 29.0	-2.4
FRU				pmax	pmax		
	comp=Z,140nm,1.0s						
FRU				smax	smax		
	comp=E,720nm,1.9s						
ULHL	Ulahol	7.24	35	P	Pn	18 20 13.6	+0.3
	SNR=53						
CHMS	Chumysh	7.27	25	P	Pn	18 20 13.0	-0.6
	SNR=142						
USP	Ospenovka	7.43	22	P	Pn	18 20 14.9	-0.8
	SNR=52						
TKM2	Tokmak 2	7.51	29	P	Pn	18 20 16.7	-0.2
	SNR=63						
TKM2	Tokmak 2	7.51	29	⇓P	Pn	18 20 16.6	-0.2
	comp=E,104nm,0.6s						
TKM2	Tokmak 2	7.51	29	PN	Pn	18 20 16.6	-0.3
TKM2				pmax	pmax		
	comp=Z,104nm,0.6s						
SMLA	Simla	7.59	132	eP	Pn	18 20 17.7	-0.1
SMLA				eS	S	18 21 39.1	-4.5
SMLA				IAML		18 21 45.0	
	comp=N,676nm,0.8s						
SMLA				IAML		18 21 46.2	
	comp=E,657nm,1.0s						
TARG	Taragay, Kyrgy	7.67	44	ePn	Pn	18 20 18.1	-1.1
AAA	Alma-Ata	8.30	34	ePN	Pn	18 20 27.7	+0.7
AAA				pmax	pmax		
	comp=Z,107nm,0.7s						
MDOK	Medeo	8.32	34	⇑P	Pn	18 20 26.9	-0.5
	comp=Z,68nm,0.5s						
MDOK	Medeo	8.32	34	PN	Pn	18 20 26.9	-0.5
KNDC	Almaty	8.33	34	⇓P	Pn	18 20 28.0	+0.6
	comp=Z,165nm,0.5s						
PRZ	Przheval'sk	8.51	42	ePn	Pn	18 20 29.9	+0.1
PRZ	Przheval'sk	8.51	42	ePN	Pn	18 20 29.9	+0.1
DDI	Dehra Dun	8.70	132	eP	Pn	18 20 31.9	-0.4
DDI				eS	S	18 22 04.2	-6.0
DDI				IAML		18 22 08.1	
	comp=N,305nm,1.2s						
DDI				IAML		18 22 09.2	
	comp=E,284nm,0.5s						
NDI	New Delhi	9.52	143	eP	Pn	18 20 43.0	+0.1
NDI				eS	S	18 22 23.0	-6.7
PDGK	Podgornoye	9.67	42	⇓P	Pn	18 20 44.0	-0.8
	comp=E,14nm,0.9s						
PDGK	Podgornoye	9.67	42	P	Pn	18 20 44.0	-0.8
PDGK				pmax	pmax		
	comp=Z,14nm,0.9s						
ASHT	Ashkhabad	9.89	282	P	Pn	18 20 47.8	+0.2
GEYT	Alibeck	10.10	282	P	Pn	18 20 48.8	-1.5
	comp=Z,7.4nm,0.3s,baz=98,slow=11,SNR=86						
GEYT				S	S	18 22 38.5	-5.2
	comp=Z,3.7nm,0.3s,baz=98,slow=11,SNR=3.6						
GYA0B	ALIBECK ARRAY	10.10	282	ePn	Pn	18 20 48.6	-1.7
GYA0B				eS	S	18 22 37.2	-6.5
GYA0B	ALIBECK ARRAY	10.10	282	⇓P	Pn	18 20 48.7	-1.7
	comp=Z,115nm,1.1s						
OTUK	Ortayu	11.86	6	⇓P	Pn	18 21 11.9	-0.9
	comp=Z,27nm,0.8s						
OTUK	Ortayu	11.86	6	P	Pn	18 21 11.8	-0.9
OTUK				pmax	pmax		
	comp=Z,27nm,0.8s						
BHJ	Bhuj	13.18	184	eP	Pn	18 21 29.4	0.0
PYUN	Piuthan	13.35	125	eP	Pn	18 21 30.2	-1.7
	comp=Z,100nm,0.4s						
MAKZ	Makanchi	13.37	36	ePn	Pn	18 21 30.6	-1.1
MAKZ	Makanchi	13.37	36	eP	Pn	18 21 30.6	-1.1
MK01	Makanchi Array	13.49	37	ePn	Pn	18 21 31.9	-1.4
MK31	Makanchi Array	13.51	36	ePn	Pn	18 21 32.3	-1.1
MK31	Makanchi Array	13.51	36	⇑P	Pn	18 21 32.6	-0.9
	comp=Z,27nm,0.8s						
MK31	Makanchi Array	13.51	36	P	Pn	18 21 32.5	-0.9
MK31				pmax	pmax		
	comp=Z,28nm,0.8s						
MK32	Makanchi Array	13.51	36	ePn	Pn	18 21 32.7	-0.7
MK32				eS	S	18 24 06.9	+3.3
MKAR	Makanchi Array	13.51	36	ePn	Pn	18 21 32.4	-1.1
MKAR				S	S	18 24 06.9	+3.3
MKAR	Makanchi Array	13.51	36	P	Pn	18 21 32.7	-0.7
	comp=Z,0.8nm,0.3s,baz=224,slow=8.5,SNR=51						
MKAR				S	S	18 24 06.9	+3.3
	baz=221,slow=21,SNR=3.3						
DANN	Dangsing	13.71	122	eP	Pn	18 21 35.0	-1.4
	comp=Z,179nm,0.5s						
KOLN	Koldanda	13.97	125	eP	Pn	18 21 38.5	-1.1
	comp=Z,96nm,0.5s						
BHPL	Bhopal	14.41	154	eP	Pn	18 21 45.2	+0.3
WMQ	Urumqi	14.97	55	P	Pn	18 21 51.3	-0.2
WMQ				sP	sP	18 22 50.8	
WMQ				S	S	18 24 34.1	-3.4
WMQ				pmax	pmax		
	comp=Z,39nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,200nm,3.6s						
WMQ				LR	LR		
	comp=Z,180nm,14.9s						
WMQ				LR	LR		
	comp=Z,250nm,13.9s						
WMQ				LR	LR		
	comp=Z,250nm,14.9s						
WMQ	Urumqi	14.97	55	ePn	Pn	18 21 51.0	-0.5
WMQ				eS	S	18 24 37.2	-0.3
WMQ	Urumqi	14.97	55	eP	Pn	18 21 51.0	-0.5
WMQ				eS	S	18 24 37.3	-0.3
AB31	Akbulak array	14.99	332	⇑P	Pn	18 21 50.5	-1.2
	comp=Z,12nm,0.6s						
AB31	Akbulak array	14.99	332	P	Pn	18 21 50.4	-1.2
AB31				pmax	pmax		
	comp=Z,12nm,0.6s						
ABKAR	Akbulak array	14.99	332	ePn	Pn	18 21 50.5	-1.2
DMN	Daman	15.09	122	eP	Pn	18 21 53.1	-0.3
	comp=Z,102nm,0.4s						
KURBB	Kurchatov Arra	15.27	19	⇑P	Pn	18 21 53.5	-1.5
	comp=Z,24nm,0.7s						
KURBB	Kurchatov Arra	15.27	19	P	Pn	18 21 54.0	-1.0
	comp=Z,0.8nm,0.3s,baz=210,slow=9.9,SNR=49						
PKIN	Phulchoki	15.31	121	eP	Pn	18 21 55.6	-0.5
	comp=Z,170nm,0.5s						
PKI	Pulchoki	15.33	121	eP	Pn	18 21 55.8	-0.5
	comp=Z,143nm,0.5s						
KURK	Kurchatov	15.38	19	eP	Pn	18 21 54.0	-2.3
KURK	Kurchatov	15.38	19	ceP	Pn	18 21 54.5	-1.8
KURK				pmax	pmax		
	comp=Z,50nm,1.7s						
GUN	Gumba	15.45	119	eP	Pn	18 21 57.2	-0.5
	comp=Z,159nm,0.6s						
JBP	Jabalpur	15.51	146	⇑eP	P	18 21 58.9	+0.7
JBP				ex	x	18 24 40.5	
JIRN	Jiri	15.81	119	eP	Pn	18 22 02.2	0.0
	comp=Z,496nm,0.5s						
SHME	Shamm	16.14	234	i P	Pn	18 22 06.7	+0.9
	SNR=6.3						
RAMN	Ramite	16.54	120	eP	Pn	18 22 10.5	-0.3
	comp=Z,194nm,0.6s						
BVA0	Borovoye Array	16.58	359	P	Pn	18 22 10.7	-0.1
	comp=Z,1.2nm,0.6s,baz=165,slow=11,SNR=102						
BVAR	Borovoye Array	16.58	359	P	Pn	18 22 10.6	-0.1
	comp=Z,3.3nm,0.3s,baz=161,slow=12,SNR=65						
BVAR				S	S	18 25 09.7	-2.9
	comp=Z,0.3nm,0.3s,baz=170,slow=19,SNR=3.3						
MSFE	Esma-Masafi	16.61	232	i P	Pn	18 22 12.4	+1.1
	SNR=12						
BRVK	Borovoye	16.61	359	eP	Pn	18 22 10.8	-0.3
	comp=Z,27nm,0.8s						
BRVK	Borovoye	16.61	359	eP	Pn	18 22 10.8	-0.3
BRVK				pmax	pmax		
	comp=Z,27nm,0.8s						
AKTO	Aktyubinsk	16.68	331	⇑P	Pn	18 22 11.5	-0.5
	comp=Z,52nm,1.1s						
AKTO	Aktyubinsk	16.68	331	P	Pn	18 22 12.1	0.0
	comp=Z,2.7nm,0.3s,baz=141,slow=9.7,SNR=58						
AKTO				S	S	18 25 10.4	-4.3
	comp=Z,0.2nm,0.3s,baz=232,slow=17,SNR=5.5						
AKTO				LR	LR	18 29 31.5	
	comp=Z,223nm,18.5s,baz=336,slow=39						
WSAR	Wadi Sarin	16.76	222	P	P	18 22 09.3	-2.8
	comp=Z,0.1nm,0.3s,baz=24,slow=12,SNR=1.6						
UOSS	Minazif	16.87	231	eP	Pn	18 22 15.0	+0.5
	comp=Z,31nm,0.8s						
UOSS	Minazif	16.87	231	i P	Pn	18 22 14.7	+0.2
	SNR=16						
NGP	Nagpur	16.92	152	⇑eP	Pn	18 22 14.8	-0.3
NGP				ex	x	18 25 13.3	

HATD	Hatta, Dubai	17.00	231	i P	Pn	18 22 16.1	0.0
	SNR=11						
NAZ	Nazwa, Dubai	17.19	233	i P	Pn	18 22 18.6	+0.4
	SNR=6.5						
FAQ	Al Faqa, Dubai	17.40	232	P	Pn	18 22 20.9	+0.2
ALNE	Al Ain	17.80	230	i P	Pn	18 22 25.2	-0.2
	SNR=15						
DGZ	Jazzator, Alta	18.00	37	c iP	P	18 22 24.9	-0.6
POO	Poona	18.07	170	eP	P	18 22 25.2	-1.2
POO					IAmb	IAmb	18 22 32.6	
	comp=Z,21nm,0.6s						
BOK	Bokaro	18.22	130	eP	P	18 22 28.3	+0.4
BOK					IAmb	IAmb	18 22 31.0	
	comp=Z,117nm,0.2s						
LSA	Lhasa	18.45	105	eP	Pn	18 22 33.7	+0.3
	comp=Z,25nm,0.6s						
LSA	Lhasa	18.45	105	P	P	18 22 32.0	+1.2
LSA	Lhasa	18.45	105	eP	Pn	18 22 33.7	+0.3
LSA					pmax	pmax		
	comp=Z,25nm,0.6s						
ZAA0	Zalesovo Array	20.09	25	eP	P	18 22 47.1	-0.6
	comp=Z,45nm,0.8s						
ZAA0	Zalesovo Array	20.09	25	⇑P	P	18 22 47.5	-0.1
	comp=Z,53nm,0.8s						
ZALV	Zalesovo Beam	20.09	25	eP	P	18 22 46.9	-0.7
ZALV					S	S	18 26 18.4	-3.5
ZALV	Zalesovo Beam	20.09	25	P	P	18 22 47.6	-0.1
	comp=Z,31nm,0.5s,baz=219,slow=12,SNR=177						
ZALV					S	S	18 26 18.4	-3.5
	comp=Z,1.6nm,0.6s,baz=213,slow=21,SNR=4.0						
ZAA1	Zalesovo Array	20.09	25	eP	P	18 22 47.6	-0.1
ZAA1					eS	S	18 26 18.4	-3.5
GROC	Groznyy	20.20	297	i P	Pn	18 22 51.6	-2.2
GROC					pmax	pmax		
	comp=Z,39nm,1.1s						
HYB	Hyderabad	20.21	158	i P	Pn	18 22 53.0	-1.2
	comp=Z,45nm,1.0s						
HYB					eS	S	18 26 20.0	-5.0
HYB	Hyderabad	20.21	158	eP	P	18 22 49.1	-0.3
NVS	Novosibirsk	20.34	21	⇑iP	P	18 22 50.6	+0.3
NVS					eS	S	18 26 25.1	-1.6
NVS					pmax	pmax		
	comp=N,43nm,0.8s						
NVS					pmax	pmax		
	comp=E,15nm,0.8s						
NVS					pmax	pmax		
	comp=Z,53nm,0.8s						
NVS					smax	smax		
	comp=N,10.0nm,0.9s						
NVS					smax	smax		
	comp=E,34nm,1.3s						
GNI	Garni	20.63	288	ceP	Pn	18 22 57.3	-2.1
GNI					pmax	pmax		
	comp=Z,77nm,1.3s						
GNI	Garni	20.63	288	P	P	18 22 54.6	+0.7
	comp=Z,10.0nm,0.6s,baz=94,slow=5.7,SNR=6.9						
TBLG	Delisi	20.75	293	eP	P	18 22 57.4	+2.5
	comp=Z,47nm,0.8s						
TBLG	Delisi	20.75	293	eP	P	18 22 57.4	+2.5
TBLG					pmax	pmax		
	comp=Z,47nm,0.8s						
GOA	Goa	21.06	171	eP	P	18 22 56.8	-1.6
GOA					IAmb	IAmb	18 23 01.9	
	comp=Z,53nm,1.5s						
SHL	Shillong	21.15	115	eP	P	18 23 01.3	+1.8
	comp=Z,25nm,0.6s						
SHL	Shillong	21.15	115	eP	P	18 23 01.3	+1.8
SHL					pmax	pmax		
	comp=Z,25nm,0.6s						
SHL	Shillong	21.15	115	eP	P	18 23 00.0	+0.5
SHL					IAmb	IAmb	18 23 02.2	
	comp=Z,13nm,1.0s						
SHL					i x	x	18 26 43.0	
SVE	Sverdlovsk	21.47	345	⇑eP	P	18 23 03.0	+0.8
SVE					eS	S	18 26 49.9	+3.1
SVE					pmax	pmax		
	comp=Z,19nm,0.9s						
ZEI	Tsey	21.50	295	eP	P	18 23 05.2	+2.3
ZEI					pmax	pmax		
	comp=Z,11nm,0.6s						
ARU	Arti	21.59	342	eP	P	18 23 03.5	+0.1
	comp=Z,15nm,0.9s						
ARU	Arti	21.59	342	d iP	P	18 23 04.3	+0.8
ARU					*PP	pP	18 23 38.3	-0.1
ARU							18 23 45.5	
ARU					S	S	18 26 52.0	+3.3
ARU					pmax	pmax		
	comp=Z,40nm,1.5s						
NCK	Nalchik	21.83	297	i P	P	18 23 09.2	+3.2
NCK					pmax	pmax		
	comp=Z,17nm,0.9s						
PYA1	Pyatigorsk	22.28	298	P	P	18 23 12.7	+2.3
KBZ	Khabaz	22.36	298	P	P	18 23 11.0	0.0
	comp=Z,2.9nm,0.8s,baz=137,slow=9.3,SNR=11						
NEY	Neytrino	22.42	296	i P	P	18 23 15.0	+3.2
NEY					pmax	pmax		
	comp=Z,2.0nm,0.9s						
GOF	Gofitskoye	22.52	301	eP	P	18 23 14.1	+1.6
GOF					pmax	pmax		
	comp=Z,30nm,0.8s						
KVAR	Kislovodsk Arr	22.55	298	P	P	18 23 13.3	+0.4
	comp=Z,2.3nm,0.4s,baz=166,slow=17,SNR=3.3						
KIV	Kislovodsk	22.55	298	eP	P	18 23 13.7	+0.7
	comp=Z,34nm,1.0s						
KIV	Kislovodsk	22.55	298	eP	P	18 23 15.2	+2.3
KIV					e*SP	sP	18 24 16.2	+1.8
KIV					eS	S	18 27 09.1	+4.4
KIV					pmax	pmax		
	comp=Z,20nm,0.9s						
GTA	Gaotai	23.16	74	P	P	18 23 19.4	+0.9
GTA					pP	pP	18 24 02.0	+5.5
GTA					sP	sP	18 24 30.0	+7.4
GTA					PcP	PcP	18 27 01.0	+0.6
GTA					PcS	PcS	18 30 38.2	-1.7
GTA					pmax	pmax		
	comp=Z,15nm,1.3s						
GTA					pmax	pmax		
	comp=Z,200nm,4.9s						
VRH	Novokhopyorsk	25.34	315	eP	P	18 23 41.7	+3.8
VRH					pmax	pmax		
	comp=Z,10.0nm,0.7s						
KIRV	Kirov	26.16	335	P	P	18 23 46.7	+1.5
	comp=Z,18nm,0.6s,baz=111,slow=1.9,SNR=7.8						
MOY	Mondy	26.35	45	eP	P	18 23 48.9	+1.8
MOY					pmax	pmax		
	comp=Z,10.0nm,1.6s						
LZH	Lanzhou	26.71	81	⇓P	P	18 23 49.2	-1.4
LZH					PP	PnPn	18 24 44.2	-0.4
LZH					sP	sP	18 24 57.1	+0.5
LZH					pmax	pmax		
	comp=Z,25nm,1.1s						
LZH					pmax	pmax		
	comp=Z,89nm,5.0s						
VSR	Storozhevoye	26.83	313	eP	P	18 23 54.5	+3.3
VSR					pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZAK	Zakamensk	27.25	49	eP	P	18 23 55.3	+0.2
ZAK					pmax	pmax		
	comp=Z,5.0nm,1.1s						
LPSR	Galich'ya Gora	27.49	316	eP	P	18 23 59.5	+2.4
LPSR					pmax	pmax		
	comp=Z,10.0nm,1.1s						
TLY	Talaya	27.89	46	P	P	18 24 01.6	+0.9
	comp=Z,1.5nm,0.4s,baz=221,slow=8.5,SNR=8.5						
CD2	Chengdu	28.02	92	eP	P	18 24 03.0	+0.8
ASF	Jabal al Asfar	28.11	271	P	P	18 24 02.6	-0.4
	comp=Z,0.8nm,0.4s,baz=78,slow=20,SNR=2.3						
SONA0	Songino Array	28.61	55	eP	P	18 24 07.9	+0.7
SONA0					ePcP	PcP	18 27 13.1	+0.2
SONM	Songino Array	28.61	55	P	P	18 24 07.9	+0.7
	comp=Z,5.3nm,1.0s,baz=257,slow=9.8,SNR=22						
SONM					PcP	PcP	18 27 13.1	+0.2
	comp=Z,0.7nm,0.6s,baz=244,slow=5.0,SNR=3.8						
SONA1	Songino Array	28.61	55	eP	P	18 24 08.0	+0.7
ILGA	Ilgaz	29.01	291	eP	P	18 24 10.0	-1.1
	comp=Z,16nm,1.2s						
ULN	Ulaanbaatar	29.05	55	eP	P	18 24 11.6	+0.4
	comp=Z,4.6nm,1.0s						
ULN	Ulaanbaatar	29.05	55	ceP	P	18 24 10.7	-0.5
ULN					pmax	pmax		
	comp=Z,4.0nm,0.9s						
MMAI	Mount Meron Ar	29.06	274	P	P	18 24 12.6	+1.2
	comp=Z,1.2nm,0.7s,baz=76,slow=7.6,SNR=2.6						
MMAI					PcP	PcP	18 27 15.2	+1.0
	comp=Z,1.3nm,0.5s,baz=76,slow=7.0,SNR=6.9						
MMAI					ScP	ScP	18 30 36.9	+0.6
	comp=Z,2.3nm,0.7s,baz=316,slow=7.0,SNR=3.5						
BR101	Keskin Array S	29.17	288	eP	P	18 24 13.4	+1.1
BR101					ePP	sP	18 25 18.1	+1.0
BR101					ePcP	PcP	18 27 14.0	-0.4
BR101					eScP	ScP	18 30 35.7	-1.0
BR131	Keskin Array S	29.17	288	eP	P	18 24 12.8	+0.4
	comp=Z,13nm,1.7s						
BRTR	Keskin Array B	29.17	288	i P	P	18 24 13.8	+1.4
BRTR					pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	29.17	288	P	P	18 24 13.4	+1.1
	comp=Z,1.2nm,0.7s,baz=107,slow=9.4,SNR=9.0						
BRTR					PP	sP	18 25 18.1	+1.0
	comp=Z,1.9nm,0.9s,baz=90,slow=8.6,SNR=2.8						
BRTR					PcP	PcP	18 27 14.0	-0.4
	comp=Z,0.7nm,0.9s,baz=113,slow=3.3,SNR=3.5						
BRTR					ScP	ScP	18 30 35.7	-1.0
	comp=Z,0.8nm,0.8s,baz=69,slow=4.1,SNR=4.0						
KMI	Kunming	29.67	103	P	P	18 24 18.9	+1.9
KMI					pmax	pmax		
	comp=Z,6.0nm,0.5s						
KMI					pmax	pmax		
	comp=Z,99nm,4.8s						
PRGR	Permogore	29.70	336	eP	P	18 24 16.1	-0.4
PRGR					pmax	pmax		
	comp=Z,19nm,0.7s						
OBN	Obninsk	29.79	320	ceP	P	18 24 17.4	0.0
OBN					e*PP	pP	18 25 02.3	+3.5
OBN					e		18 25 23.6	
OBN					pmax	pmax		
	comp=Z,7.0nm,0.7s						
ANTO	Ankara	29.81	288	eP	P	18 24 19.8	+2.0
	comp=Z,25nm,1.5s						
ANTO	Ankara	29.81	288	eP	P	18 24 19.8	+2.0
ANTO					pmax	pmax		
	comp=Z,25nm,1.5s						
CHTO	Chiang Mai	30.45	118	eP	P	18 24 25.2	+1.5
	comp=Z,3.2nm,0.8s						
CM31	Chiang Mai Arr	30.69	118	eP	P	18 24 27.1	+1.4
CMAR	Chiang Mai Arr	30.69	118	P	P	18 24 25.1	-0.6
	comp=Z,2.5nm,0.9s,baz=298,slow=8.2,SNR=21						
CMAR					PcP	PcP	18 27 17.9	-0.7
	comp=Z,1.9nm,0.8s,baz=294,slow=4.3,SNR=7.5						
CMAR					ScP	ScP	18 30 40.7	-1.0
	comp=Z,0.2nm,0.5s,baz=296,slow=4.4,SNR=4.0						
CM01	Chiang Mai Arr	30.72	118	eP	P	18 24 27.4	+1.4
XAN	Xi'an	31.23	83	P	P	18 24 31.0	+0.6
XAN					pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN					pmax	pmax		
	comp=Z,130nm,5.0s						
XAN	Xi'an	31.23	83	eP	P	18 24 30.9	+0.5
	comp=Z,6.9nm,0.9s						
XAN	Xi'an	31.23	83	eP	P	18 24 30.9	+0.5
XAN					pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLMR	Klimovskoe	31.39	331	eP	P	18 24 30.0	-1.3
KLMR					pmax	pmax		
	comp=Z,22nm,1.5s						
KLMR	Klimovskoe	31.39	331	eP	P	18 24 30.0	-1.3
KLMR					AMP		18 24 32.9	
	comp=Z,22nm,1.4s						
DAMY	Dhamar	31.99	234	eP	P	18 24 36.6	-0.9
	comp=Z,115nm,1.9s						
HHC	Hu-ho-hao-te	32.06	69	eP	P	18 24 38.3	+0.7
HHC					pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC					pmax	pmax		
	comp=Z,160nm,4.3s						
GYA	Guiyang	32.15	98	⇓iP	P	18 24 39.7	+1.1
GYA					pP	pP	18 25 24.2	+2.8
GYA					PP	PP	18 25 56.0	+0.5
GYA					PcP	PcP	18 27 22.1	-0.4
GYA					S	S	18 29 36.5	+0.3
GYA					sS	sS	18 30 54.6	+2.6
GYA					pmax	pmax		
	comp=Z,20nm,0.8s						
UTTA	Uttaradit	32.31	117	P	P	18 24 41.6	+1.7
	comp=Z,3.0nm,0.6s						
AKASG	Malin Array Be	32.75	309	P	P	18 24 44.2	+0.9
	comp=Z,2.3nm,0.5s,baz=78,slow=7.4,SNR=17						
AKASG					PP	PP	18 26 01.8	+0.2
	comp=Z,5.8nm,0.8s,baz=87,slow=11,SNR=9.7						
AKASG					PcP	PcP	18 27 22.8	-0.8
	comp=Z,0.6nm,0.5s,baz=76,slow=3.4,SNR=2.7						
AKASG					ScP	ScP	18 30 46.1	-2.0
	comp=Z,0.5nm,0.4s,baz=75,slow=4.1,SNR=4.8						
AKBB	Malin Array Si	32.75	309	eP	P	18 24 43.4	0.0
AKBB					ePP	PP	18 26 01.8	+0.2
AKBB	Malin Array Si	32.75	309	eP	P	18 24 43.4	0.0
AKBB					e		18 26 01.8	
KIEV	Kiev	32.76	309	eP	P	18 24 44.0	+0.5
	comp=Z,49nm,2.0s						
KIEV	Kiev	32.76	309	⇓iP	P	18 24 44.3	+0.9
KIEV	Kiev	32.76	309	⇓P	P	18 24 44.4	+1.0
AK11	Malin Array Si	32.78	309	eP	P	18 24 43.3	-0.3
ENH	Enshi	32.87	89	eP	P	18 24 46.0	+1.3
	comp=Z,10nm,1.0s						
PBKT	Sadao Pong	33.38	118	eP	P	18 24 50.6	+1.4
PBKT	Sadao Pong	33.38	118	P	P	18 24 52.0	+2.8
	comp=Z,10nm,0.9s						
SRDT	SRDT	33.64	123	P	P	18 24 55.6	+4.2
	comp=Z,15nm,0.9s						
TMCR	Tamitsa	33.97	335	eP	P	18 24 54.3	+0.6
TMCR					pmax	pmax		
	comp=Z,17nm,0.6s						
NONG	Nongkai	33.99	114	P	P	18 24 55.7	+1.3
	comp=Z,0.1nm,0.6s						
VRI	Vrincioaia	34.00	300	⇑iP	P	18 24 50.4	-3.9
VRI	Vrincioaia	34.00	300	⇑P	P	18 24 50.4	-3.9
PLOR	Plostina	34.05	300	⇓iP	P	18 24 50.6	-4.2
PLOR	Plostina	34.05	300	⇓P	P	18 24 50.6	-4.2
NRIK	Noril'sk	34.23	11	P	P	18 24 57.3	+1.3
	comp=Z,23nm,0.6s,baz=199,slow=5.7,SNR=45						
MLR	Muntele Rosu	34.55	299	⇓iP	P	18 24 59.1	-0.1
MLR	Muntele Rosu	34.55	299	⇓P	P	18 24 59.1	-0.1
MLR	Muntele Rosu	34.55	299	P	P	18 24 59.9	+0.8
	comp=Z,6.6nm,0.8s,baz=186,slow=3.3,SNR=15						
ALN	Alexandroupoli	34.81	291	eP	P	18 25 01.1	-0.1
	comp=Z,13nm,1.6s						
ALN	Alexandroupoli	34.81	291	eP	P	18 25 01.1	-0.1
ALN					pmax	pmax		
	comp=Z,13nm,1.6s						
DOPR	Dopca	34.94	300	⇑iP	P	18 25 02.2	-0.1
KARP	Karpathos	34.97	282	eP	P	18 25 03.8	+1.1
	comp=Z,188nm,1.3s						
BURAR	Bucovina Array	35.07	303	⇑iP	P	18 25 02.3	-1.2
BURAR	Bucovina Array	35.07	303	⇑P	P	18 25 02.3	-1.2
BUR04	Bucovina Ar. S	35.07	303	eP	P	18 25 04.7	+1.2
BUR04					ePP	PP	18 26 26.8	-0.6
BUR08	Bucovina Ar. S	35.08	303	eP	P	18 25 04.2	+0.6
BUR08					ePP	PP	18 26 27.2	-0.3
VOIR		35.18	299	⇓iP	P	18 25 06.2	+1.7
VOIR		35.18	299	⇓P	P	18 25 06.2	+1.7
ATD	Arta Tunnel	35.26	232	P	P	18 25 04.8	-0.6
	comp=Z,13nm,0.8s,baz=250,slow=21,SNR=2.8						
SKNT	Sakolnakorn	35.29	114	P	P	18 25 06.6	+1.0
	comp=Z,6.7nm,1.2s						
ARR	Arges	35.48	299	⇓iP	P	18 25 08.9	+1.9
BOD	Bodaibo	35.58	39	eP	P	18 25 07.5	-0.1
BOD					pmax	pmax		
	comp=Z,15nm,1.3s						
BJI	Beijing	35.65	70	P	P	18 25 10.1	+1.7
VSU	Vasula	36.05	322	i P	P	18 25 10.6	-0.9
VSU					pmax	pmax		
	comp=Z,38nm,0.9s						
IDI	Anoyia	36.82	282	eP	P	18 25 20.2	+1.6
	comp=Z,91nm,1.6s						
IDI	Anoyia	36.82	282	P	P	18 25 19.1	+0.5
	comp=Z,5.9nm,0.7s,baz=18,slow=18,SNR=4.1						
SUW	Suwalki	36.94	314	eP	P	18 25 20.1	+0.9
	comp=Z,18nm,0.8s						
SUW	Suwalki	36.94	314	eP	P	18 25 20.1	+0.9
SUW					pmax	pmax		
	comp=Z,18nm,0.8s						
FIA0	FINESS Array S	37.37	326	eP	P	18 25 23.4	+0.8
FIA1	FINESS Array S	37.37	326	eP	P	18 25 22.8	+0.2
FINES	FINESS Array B	37.37	326	P	P	18 25 23.4	+0.8
	comp=Z,8.4nm,0.4s,baz=118,slow=9.2,SNR=79						
LVZ	Lovozero	37.40	339	eP	P	18 25 23.1	+0.2
	comp=Z,12nm,0.7s						
LVZ	Lovozero	37.40	339	ceP	P	18 25 22.9	0.0
LVZ					pmax	pmax		
	comp=Z,10.0nm,0.8s						
AGG	Agios Georgios	37.94	289	eP	P	18 25 28.1	+0.4
	comp=Z,58nm,2.0s						
AGG	Agios Georgios	37.94	289	eP	P	18 25 28.2	+0.4
AGG					pmax	pmax		
	comp=Z,58nm,2.0s						
NJ2	Nanjing	39.77	82	eP	P	18 25 43.4	+0.4
NJ2					pmax	pmax		
	comp=Z,15nm,0.5s						
KEV	Kevo	40.74	338	eP	P	18 25 50.9	+0.4
	comp=Z,20nm,0.9s						
KEV	Kevo	40.74	338	eP	P	18 25 50.9	+0.4
KEV					pmax	pmax		
	comp=Z,19nm,0.9s						
ARA0	ARCESS Array S	41.08	338	eP	P	18 25 54.2	+0.9
ARCES	ARCESS Array B	41.08	338	P	P	18 25 54.2	+0.9
	comp=Z,18nm,0.6s,baz=112,slow=7.7,SNR=139						
ARE0	ARCESS Array S	41.08	338	eP	P	18 25 54.3	+1.1
	comp=Z,7.6nm,1.9s						
ARE0	ARCESS Array S	41.08	338	eP	P	18 25 54.4	+1.1
KTK1	Kautokeino	41.55	336	eP	P	18 25 57.7	+0.7
TIP	Timpagrande	42.13	291	eP	P	18 26 04.1	+1.8
	comp=Z,51nm,1.9s						
HAMF	Hammerfest	42.17	339	eP	P	18 26 03.1	+1.1
ZEA	Zeya	42.32	47	eP	P	18 26 04.8	+1.3
ZEA					pmax	pmax		
	comp=Z,29nm,1.0s						
IPM	Ipoh	42.33	131	eP	P	18 26 04.6	+0.6
	comp=Z,20nm,0.8s						
CUC	Castrocucco	42.65	292	eP	P	18 26 07.6	+1.2
	comp=Z,12nm,1.1s						
GERES	GERESS Array B	42.72	305	PP	PP	18 27 53.7	+3.5
	comp=Z,0.8nm,0.8s,baz=79,slow=8.7,SNR=4.2						
HFS	Hagfors	42.93	322	P	P	18 26 08.8	+0.5
	comp=Z,14nm,0.7s,baz=96,slow=11,SNR=36						
GSI	Gunungsitoli	42.95	138	eP	P	18 26 11.2	+2.2
	comp=Z,141nm,1.7s						
CLL	Collm	43.00	309	eP	P	18 26 09.0	0.0
CLL					esP	sP	18 27 16.0	+0.5
CLL	Collm	43.00	309	eP	P	18 26 09.0	0.0
TRO	Tromso	43.20	336	eP	P	18 26 10.6	+0.3
MOR8	Moi Rana	43.72	331	eP	P	18 26 14.6	0.0
STEI	Steigen	43.89	333	eP	P	18 26 16.5	+0.7
NC405	NORSAR Array S	44.01	323	eP	P	18 26 17.6	+0.6
NC602	NORSAR Array S	44.06	323	eP	P	18 26 17.4	+0.2
NC602					ePcP	PcP	18 27 59.9	+1.1
YAK	Yakutsk	44.18	35	c iP	P	18 26 18.2	0.0
YAK					e		18 27 58.0	
YAK					e		18 28 02.4	
YAK					eS	S	18 32 33.3	-2.2
YAK					pmax	pmax		
	comp=Z,45nm,0.9s						
YAK					pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK					pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK					pmax	pmax		
	comp=Z,41nm,1.8s						
YAK					smax	smax		
	comp=N,23nm,1.9s						
NC303	NORSAR Array S	44.19	323	eP	P	18 26 19.2	+0.8
	comp=N,18nm,0.8s						
NC303					ePcP	PcP	18 27 59.6	+0.4
NB201	NORSAR Array S	44.21	323	eP	P	18 26 18.7	+0.2
NB201					ePcP	PcP	18 27 59.1	-0.3
NB2	NORSAR Subarra	44.25	323	P	P	18 26 18.7	-0.1
	comp=Z,4.8nm,0.7s,baz=98,slow=7.9						
NB2	NORSAR Subarra	44.25	323	P	P	18 26 19.0	+0.2
NB2	NORSAR Subarra	44.25	323	P	P	18 26 18.7	-0.1
	baz=98,slow=7.9						
NB200	NORSAR Array S	44.25	323	eP	P	18 26 19.0	+0.2
NOA	NORSAR Array B	44.25	323	P	P	18 26 19.0	+0.2
	comp=Z,7.5nm,0.7s,baz=97,slow=7.7,SNR=31						
KONS	Konsvik	44.32	331	eP	P	18 26 19.7	+0.5
NAO01	NORSAR Array S	44.39	323	eP	P	18 26 19.9	0.0
NBO00	NORSAR Array S	44.46	323	eP	P	18 26 20.6	+0.1
MNSI	Mandailing Nat	44.46	136	P	P	18 26 22.6	+1.6
NC204	NORSAR Array S	44.49	323	eP	P	18 26 21.2	+0.4
SSLB	Suanglung	44.86	92	eP	P	18 26 25.5	+1.4
	comp=Z,10nm,1.1s						
KONO	Kongsberg	44.94	321	eP	P	18 26 24.6	+0.3
	comp=Z,56nm,1.4s						
KONO	Kongsberg	44.94	321	eP	P	18 26 24.6	+0.3
KONO					pmax	pmax		
	comp=Z,56nm,1.4s						
KS01	Wonju Array Si	45.15	71	eP	P	18 26 27.5	+1.3
KS15	Wonju Array Si	45.15	71	eP	P	18 26 26.3	+0.1
KSAR	Wonju Array Be	45.15	71	P	P	18 26 25.5	-0.7
KSAR					PcP	PcP	18 28 01.4	-1.6
KSAR	Wonju Array Be	45.15	71	P	P	18 26 25.5	-0.7
KSAR							18 28 01.4	
KSRS	Korea Array	45.17	71	P	P	18 26 25.5	-1.0
	comp=Z,1.3nm,0.4s,baz=276,slow=7.3,SNR=10						
KSRS					PcP	PcP	18 28 01.4	-1.7
	comp=Z,1.6nm,0.8s,baz=280,slow=3.7,SNR=4.0						
KLR	Kul'dur	45.41	54	P	P	18 26 28.4	+0.2
	comp=Z,4.4nm,0.7s,baz=281,slow=7.9,SNR=18						
DAVOX	Davos/Dischmat	45.54	303	P	P	18 26 29.6	+0.2
	comp=Z,1.2nm,0.4s,baz=353,slow=7.5,SNR=3.0						
DAVOX					PcP	PcP	18 28 03.6	-0.9
	comp=Z,1.4nm,0.4s,baz=108,slow=6.4,SNR=3.5						
BKNI	Bangkinang	45.67	135	eP	P	18 26 30.7	+0.1
	comp=Z,50nm,1.0s						
TIXI	Tiksi	45.93	22	ePcP	PcP	18 28 03.8	-1.3
TIXI	Tiksi	45.93	22	c iP	P	18 26 32.0	+0.1
TIXI					pmax	pmax		
	comp=Z,26nm,0.9s						
TIXI	Tiksi	45.93	22	P	P	18 26 32.3	+0.4
	comp=Z,23nm,0.3s,baz=264,slow=3.8,SNR=104						
TIXI					PcP	PcP	18 28 04.6	-0.5
	comp=Z,7.7nm,0.7s,baz=45,slow=0.5,SNR=6.0						
USA0B	Ussuriysk Arra	46.45	61	eP	P	18 26 37.8	+1.5
	comp=Z,21nm,1.6s						
USRK	Ussuriysk Ar.	46.45	61	P	P	18 26 37.0	+0.6
	comp=Z,0.8nm,0.5s,baz=280,slow=8.9,SNR=5.6						
USRK					PcP	PcP	18 28 06.6	-0.8
	comp=Z,1.5nm,0.6s,baz=256,slow=3.0,SNR=3.7						
SENIN	Lac Senin/Sane	47.37	303	eP	P	18 26 43.5	-0.2
	comp=Z,91nm,2.0s						
SPA0	Spitsbergen Ar	47.48	347	eP	P	18 26 45.3	+1.5
SPA0	Spitsbergen Ar	47.48	347	eP	P	18 26 45.3	+1.5
SPITS	Spitsbergen Ar	47.48	347	P	P	18 26 44.9	+1.0
	comp=Z,5.5nm,0.4s,baz=119,slow=12,SNR=60						
BNI	Bardonecchia	48.08	301	eP	P	18 26 49.1	+0.1
	comp=Z,66nm,2.0s						
BNI	Bardonecchia	48.08	301	eP	P	18 26 49.1	+0.1
BNI					pmax	pmax		
	comp=Z,66nm,2.0s						
KMBO	Kilima Mbogo	48.58	227	i P	P	18 26 55.4	+2.1
KMBO					pmax	pmax		
	comp=Z,2.0nm,0.5s						
KMBO	Kilima Mbogo	48.58	227	P	P	18 26 53.3	0.0
	comp=Z,1.6nm,0.5s,baz=36,slow=12,SNR=6.8						
KBS	Kingsbay	48.60	347	eP	P	18 26 53.5	+1.2
	comp=Z,17nm,0.8s						
KBS	Kingsbay	48.60	347	eP	P	18 26 53.6	+1.2
KEST	Kesra	48.77	288	eP	P	18 26 55.2	+0.8
	comp=Z,35nm,1.4s						
KEST	Kesra	48.77	288	P	P	18 26 55.5	+1.1
	comp=Z,8.1nm,1.1s,baz=63,slow=4.5,SNR=3.3						
JNU	Nakatsue	48.89	75	eP	P	18 26 56.2	+0.9
	comp=Z,108nm,1.9s						
JNU	Nakatsue	48.89	75	P	P	18 26 56.1	+0.9
	comp=Z,6.6nm,0.8s,baz=6.6,slow=6.3,SNR=3.4						
SSB	Saint Sauveur	49.49	302	eP	P	18 26 60.0	+0.3
	comp=Z,93nm,2.0s						
SSB	Saint Sauveur	49.49	302	eP	P	18 27 00.0	+0.3
SSB					pmax	pmax		
	comp=Z,93nm,2.0s						
TGY	Tagaytay City	49.99	103	P	P	18 27 04.4	+0.6
	comp=Z,94nm,0.4s,baz=306,slow=19,SNR=3.3						
NKL	Nikolayevsk	50.36	47	i P	P	18 27 06.0	0.0
NKL					pmax	pmax		
	comp=Z,45nm,0.6s						
SBUM	Sibu	51.12	122	eP	P	18 27 13.4	+1.3
	comp=Z,7.6nm,1.3s						
EKA	Eskdalemuir Ar	52.12	316	P	P	18 27 20.1	+1.1
	comp=Z,2.4nm,0.9s,baz=98,slow=7.4,SNR=3.2						
MBAR	Mbarara	52.24	234	eP	P	18 27 21.3	+0.7
	comp=Z,4.1nm,0.6s						
MBAR	Mbarara	52.24	234	eP	P	18 27 21.3	+0.7
MBAR					pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAJO	Matsushiro	53.24	68	eP	P	18 27 27.7	+0.1
MAJO	Matsushiro	53.24	68	eP	P	18 27 27.7	+0.1
MJAR	Matsushiro Arr	53.25	68	P	P	18 27 27.7	+0.1
	comp=Z,6.4nm,1.1s,baz=283,slow=12,SNR=7.0						

MA2	Magadan	54.59	38	*e*P	P	18 27 37.2	+0.3
	comp=Z,63nm,1.9s						
MA2	Magadan	54.59	38	*e*P	P	18 27 37.2	+0.3
MA2				pmax	pmax		
	comp=Z,63nm,1.9s						
SEY	Seymchan	54.63	34	*i* P	P	18 27 37.3	+0.2
DAG	Danmarks Havn	54.70	344	⇑*i*P	P	18 27 38.1	+0.7
	comp=Z,13nm,0.7s						
DAG	Danmarks Havn	54.70	344	⇑*i*P	P	18 27 38.1	+0.7
DAG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ERM	Erimo	54.91	60	*e*P	P	18 27 40.9	+1.4
	comp=Z,108nm,1.1s						
ERM	Erimo	54.91	60	*e*P	P	18 27 40.9	+1.4
ERM				pmax	pmax		
	comp=Z,108nm,1.1s						
SCO	Scoresbysund	56.99	336	*e*P	P	18 27 55.0	+1.3
	comp=Z,8.5nm,0.6s						
SCO	Scoresbysund	56.99	336	*e*P	P	18 27 55.0	+1.3
SCO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ES19	SONSECA Array	57.17	298	*e*P	P	18 27 56.4	+0.8
ESDC	Sonseca Array	57.22	298	P	P	18 27 56.1	+0.1
	comp=Z,1.1nm,0.6s,baz=54,slow=7.7,SNR=7.1						
ESDC				PcP	PcP	18 28 46.2	-1.8
	comp=Z,0.5nm,0.6s,baz=64,slow=6.3,SNR=3.2						
MPSI	Mapaga	58.02	117	P	P	18 28 04.4	+2.7
BILL	Bilibino	58.78	26	*e*P	P	18 28 07.3	+1.0
	comp=Z,19nm,0.9s						
BILL	Bilibino	58.78	26*c*	*i*P	P	18 28 06.9	+0.6
BILL				*e**PP	PcP	18 28 54.4	+0.8
BILL				*e*		18 30 18.5	
BILL				pmax	pmax		
	comp=Z,17nm,1.0s						
MRSI	Marisa	59.40	115	P	P	18 28 12.2	+0.9
PEA1	Petropavlovsk-	60.21	44	*e*P	P	18 28 15.8	-0.4
PEA0B	Petropavlovsk-	60.21	44	*e*P	P	18 28 15.9	-0.3
	comp=Z,322nm,2.0s						
PEA0B	Petropavlovsk-	60.21	44	P	P	18 28 15.9	-0.3
PETK	Petropavlovsk-	60.21	44	*e*P	P	18 28 15.7	-0.6
PETK	Petropavlovsk-	60.21	44	*e*P	P	18 28 15.7	-0.6
PETK	Petropavlovsk-	60.21	44	P	P	18 28 15.8	-0.4
	comp=Z,2.7nm,0.8s,baz=284,slow=6.0,SNR=5.1						
SUMG	Summit	61.02	341	*e*P	P	18 28 22.6	+0.8
	comp=Z,6.0nm,1.1s						
SUMG	Summit	61.02	341	*i* P	P	18 28 22.7	+0.8
	comp=Z,4.9nm,0.6s						
SUMG	Summit	61.02	341	*e*P	P	18 28 22.6	+0.8
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LUWI	Luwuk	61.04	116	*e*P	P	18 28 22.2	-0.2
	comp=Z,23nm,1.0s						
TNTI	Ternate	63.24	111	*e*P	P	18 28 37.4	+0.4
	comp=Z,47nm,1.2s						
TNTI	Ternate	63.24	111	P	P	18 28 38.4	+1.4
SANI	Sanana	64.08	114	P	P	18 28 42.2	-0.3
LSZ	Lusaka	65.21	226	*e*P	P	18 28 50.5	+0.7
	comp=Z,4.9nm,1.1s						
LSZ	Lusaka	65.21	226	*e*P	P	18 28 50.5	+0.7
LSZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TOA1	Torodi Ar. Sit	65.42	268	*e*P	P	18 28 49.4	-1.7
TOA0	Torodi Ar. Sit	65.42	268	*e*P	P	18 28 48.7	-2.5
TORD	Torodi Ar. Bea	65.42	268	P	P	18 28 49.4	-1.8
	comp=Z,4.3nm,0.4s,baz=49,slow=6.0,SNR=74						
BATI	Baumata	68.08	122	P	P	18 29 06.8	-1.1
	comp=Z,40nm,0.7s,baz=335,slow=0.6,SNR=16						
SOEI	Soe	68.18	121	*e*P	P	18 29 07.5	-1.2
	comp=Z,30nm,0.8s						
SOEI	Soe	68.18	121	P	P	18 29 13.8	+5.2
FAKI	Fak Fak	69.33	110	*e*P	P	18 29 15.7	0.0
	comp=Z,23nm,1.0s						
FAKI	Fak Fak	69.33	110	P	P	18 29 16.8	+1.1
ANM	Nome	70.20	22	*e*P	P	18 29 21.2	+1.0
	comp=Z,49nm,1.8s						
ANM				*e*PcP	PcP	18 29 40.7	0.0
ANM	Nome	70.20	22	*e*P	P	18 29 21.2	+1.0
ANM				*e*		18 29 40.7	
ANM				pmax	pmax		
	comp=Z,49nm,1.8s						
SAUI	Saumlaki	71.96	115	*e*P	P	18 29 32.6	+1.1
	comp=Z,126nm,0.8s						
SAUI	Saumlaki	71.96	115	P	P	18 29 33.0	+1.5
COLD	Coldfoot	72.10	16	*e*P	P	18 29 32.1	+0.6
	comp=Z,13nm,1.3s						
IM3	Indian Mountai	72.31	17	*e*P	P	18 29 32.8	0.0
FYU	Fort Yukon	73.69	14	*e*P	P	18 29 42.3	+1.4
	comp=Z,82nm,1.6s						
MLY	Manley	73.82	17	*e*P	P	18 29 42.2	+0.5
	comp=Z,7.2nm,0.8s						
INK	Inuvik	74.00	9	*e*P	P	18 29 43.3	+0.7
	comp=Z,16nm,0.6s						
INK	Inuvik	74.00	9	*e*P	P	18 29 43.3	+0.7
INK				pmax	pmax		
	comp=Z,16nm,0.6s						
INK	Inuvik	74.00	9	P	P	18 29 42.9	+0.2
	comp=Z,12nm,0.5s,baz=350,slow=6.4,SNR=185						
DBIC	Dimbokro	74.40	267	*e*P	P	18 29 44.4	-1.5
	comp=Z,15nm,1.4s						
DBIC	Dimbokro	74.40	267	*e*P	P	18 29 44.4	-1.5
DBIC				pmax	pmax		
	comp=Z,15nm,1.4s						
DBIC	Dimbokro	74.40	267	P	P	18 29 45.4	-0.5
	comp=Z,2.5nm,0.6s,baz=18,slow=5.3,SNR=5.9						
LBTB	Lobatse	74.44	222	*e*P	P	18 29 46.7	+0.8
	comp=Z,10nm,0.9s						
LBTB	Lobatse	74.44	222	*e*P	P	18 29 46.7	+0.8
LBTB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDM	Murphy Dome	74.45	16	*e*P	P	18 29 45.9	+0.5
	comp=Z,35nm,1.3s						
KIC	Kosan Boka	74.49	266	*e*PKP1	P	18 29 45.7	-0.7
	comp=Z,6.6nm,0.5s						
BPAW	Bear Paw Mtn.	74.53	18	*e*P	P	18 29 45.9	+0.1
	comp=Z,16nm,1.2s						
TIC	Toumodi	74.55	267	*e*PKP1	P	18 29 45.4	-1.3
PRP	Porcupine Dome	74.55	15	*e*P	P	18 29 47.0	+0.9
	comp=Z,22nm,1.6s						
COLA	College	74.61	16	*e*P	P	18 29 46.7	+0.6
	comp=Z,20nm,0.8s						
COLA	College	74.61	16	*i* P	P	18 29 46.6	+0.4
COLA				pmax	pmax		
	comp=Z,24nm,1.1s						
TSUM	Tsumeb	74.65	232	*e*P	P	18 29 47.4	+0.1
	comp=Z,20nm,1.8s						
LIC	Lamto	74.80	267	*e*PKP1	P	18 29 44.6	-3.6
	comp=Z,11nm,0.5s						
CAST	Castle Rocks	74.83	18	*e*P	P	18 29 48.0	+0.5
	comp=Z,42nm,1.2s						
BWN	Browne	74.84	17	*e*P	P	18 29 48.7	+1.1
	comp=Z,32nm,1.2s						
WRH	Wood River Hil	74.90	16	*e*P	P	18 29 46.9	-1.0
	comp=Z,5.5nm,0.8s						
IL1	Eielson Array	74.91	16	*e*P	P	18 29 47.2	-0.7
ILAR	Eielson Array	74.91	16	P	P	18 29 47.6	-0.3
	comp=Z,3.7nm,0.4s,baz=298,slow=4.6,SNR=89						
ILAR				PP	PP	18 32 40.7	+3.0
	comp=Z,1.0nm,1.0s,baz=327,slow=7.6,SNR=4.1						
ILB	Eielson Array	74.91	16	*e*P	P	18 29 47.2	-0.7
	comp=Z,18nm,1.3s						
FITZ	Fitzroy Crossi	75.09	126	*e*P	P	18 29 49.2	-0.4
	comp=Z,6.0nm,0.8s						
FITZ	Fitzroy Crossi	75.09	126	P	P	18 29 48.3	-1.4
	comp=Z,7.0nm,0.9s,baz=334,slow=5.0,SNR=12						
HDA	Harding Lake	75.21	16	*e*P	P	18 29 48.7	-1.0
	comp=Z,19nm,1.5s						
PPLA	Purkeypile	75.23	19	*e*P	P	18 29 49.8	-0.2
	comp=Z,56nm,1.8s						
TRF	Thorofare Moun	75.25	18	*e*P	P	18 29 49.9	-0.3
	comp=Z,44nm,2.0s						
MCK	McKinley	75.34	17	*e*P	P	18 29 50.2	-0.2
	comp=Z,7.7nm,0.7s						
MCK	McKinley	75.34	17	*e*P	P	18 29 50.2	-0.2
MCK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RND	Reindeer	75.63	17	*e*P	P	18 29 51.4	-0.8
	comp=Z,11nm,0.8s						
RND	Reindeer	75.63	17	*e*P	P	18 29 51.4	-0.8
RND				pmax	pmax		
	comp=Z,11nm,0.8s						
SVW2	Sparrevohn	75.76	21	*e*P	P	18 29 53.4	+0.5
	comp=Z,18nm,1.4s						
SCRK	Sand Creek	76.22	15	*e*P	P	18 29 55.5	-0.1
	comp=Z,26nm,1.3s						
RIDG	Independ'e Rid	76.25	15	*e*P	P	18 29 55.3	-0.4
	comp=Z,61nm,1.8s						
DHY	Denali Highway	76.27	17	*e*P	P	18 29 55.3	-0.5
	comp=Z,8.8nm,0.6s						
DOT	Dot Lake	76.50	15	*e*P	P	18 29 56.5	-0.5
	comp=Z,8.9nm,1.0s						
PAX	Paxson	76.79	16	*e*P	P	18 29 58.7	-0.1
	comp=Z,8.8nm,0.8s						
PAX	Paxson	76.79	16	*e*P	P	18 29 58.7	-0.1
PAX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SUA	Susitna One	76.80	19	*e*P	P	18 29 58.4	-0.5
	comp=Z,17nm,1.1s						
GHO	Glory Hole Cre	77.01	18	*e*P	P	18 29 59.9	-0.1
	comp=Z,40nm,1.4s						
DAWY	Dawson	77.04	13	*e*P	P	18 29 59.9	-0.1
	comp=Z,14nm,1.0s						
RSO	Redoubt South	77.09	20	*e*P	P	18 30 01.1	+0.5
PMR	Palmer	77.11	18	*e*P	P	18 29 59.5	-0.9
	comp=Z,14nm,1.1s						
SML	Sawmill	77.13	18	*e*P	P	18 29 59.5	-1.1
	comp=Z,65nm,1.3s						
SML	Sawmill	77.13	18	*e*P	P	18 29 59.5	-1.1
SML				pmax	pmax		
	comp=Z,65nm,1.3s						
SCM	Sheep Creek Mo	77.35	17	*e*P	P	18 30 01.4	-0.5
	comp=Z,31nm,1.1s						
SCM	Sheep Creek Mo	77.35	17	*e*P	P	18 30 01.4	-0.5
SCM				pmax	pmax		
	comp=Z,31nm,1.1s						
HARP	HAARP	77.36	16	*e*P	P	18 30 02.5	+0.7
	comp=Z,62nm,0.9s						
RC01	Rabbit Creek A	77.38	19	*e*P	P	18 30 02.0	+0.1
	comp=Z,16nm,1.1s						
KNK	Knik Glacier	77.43	18	*e*P	P	18 30 02.1	-0.1
	comp=Z,23nm,1.1s						
BOSA	Boshof	77.52	220	P	P	18 30 02.8	-0.5
	comp=Z,11nm,0.8s,baz=29,slow=4.1,SNR=16						
KLU	Klutina	77.98	17	*e*P	P	18 30 06.0	+0.6
	comp=Z,20nm,1.0s						
BRLK	Bradley Lake	78.19	20	*e*P	P	18 30 06.0	-0.5
	comp=Z,108nm,2.0s						
GLI	Glacier Island	78.23	18	*e*P	P	18 30 06.7	0.0
	comp=Z,29nm,1.2s						
SEW	Seward	78.30	19	*e*P	P	18 30 07.0	+0.1
	comp=Z,74nm,1.6s						
DIV	Divide	78.33	17	*e*P	P	18 30 08.2	+0.9
	comp=Z,12nm,0.8s						
CHGN	Chignik	78.67	25	*e*P	P	18 30 08.6	-0.4
	comp=Z,89nm,1.4s						
BMRM	Bremner River	78.75	17	*e*P	P	18 30 09.5	0.0
	comp=Z,3.6nm,0.9s						
KDAK	Kodiak Island	79.36	22	*e*P	P	18 30 12.5	-0.2
	comp=Z,33nm,0.9s						
KDAK	Kodiak Island	79.36	22	*i* P	P	18 30 13.0	+0.2
HMT	Hamilton	79.39	17	*e*P	P	18 30 12.4	-0.6
	comp=Z,140nm,1.7s						
OHAK	Old Harbor	79.61	23	*e*P	P	18 30 14.3	+0.2
	comp=Z,34nm,1.0s						
MID	Middleton Isla	79.68	18	*e*P	P	18 30 12.7	-1.8
	comp=Z,500nm,1.3s						
MID	Middleton Isla	79.68	18	*e*P	P	18 30 12.7	-1.8
MID				pmax	pmax		
	comp=Z,500nm,1.3s						
HYT	Haines Junctio	80.37	14	*e*P	P	18 30 19.2	+0.8
	comp=Z,14nm,0.9s						
WHY	Whitehorse	81.00	12	*e*P	P	18 30 21.5	-0.2
	comp=Z,10.0nm,1.0s						
YKU2	Yakutat	81.15	15	*e*P	P	18 30 21.9	-0.4
	comp=Z,1μm,1.3s						
YKW3	Yellowknife Ar	81.24	2	*e*P	P	18 30 23.2	+0.4
	comp=Z,13nm,1.1s						
YKA	Yellowknife Ar	81.31	2	P	P	18 30 23.4	+0.3
	comp=Z,3.7nm,0.5s,baz=348,slow=5.2,SNR=98						
YKA				PP	PP	18 33 30.5	-0.3
	comp=Z,0.7nm,0.8s,baz=356,slow=7.7,SNR=5.3						
YKB5	Yellowknife Ar	81.31	2	*e*P	P	18 30 23.3	+0.1
SCHQ	Schefferville	82.03	337	*e*P	P	18 30 27.0	0.0
	comp=Z,106nm,2.0s						
SCHQ	Schefferville	82.03	337	P	P	18 30 27.1	0.0
	comp=Z,5.0nm,0.9s,baz=230,slow=16,SNR=2.7						
WRA	Warramunga Arr	82.21	122	P	P	18 30 27.4	-1.1
	comp=Z,14nm,0.8s,baz=324,slow=4.9,SNR=119						
WR1	Warramunga Arr	82.21	122	*e*P	P	18 30 27.4	-1.1
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	82.21	122	*e*P	P	18 30 27.4	-1.0
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	82.21	122	*e*P	P	18 30 27.4	-1.0
WRAB				pmax	pmax		
	comp=Z,17nm,0.8s						
WB2	Warramunga Arr	82.22	122	*e*P	P	18 30 26.6	-1.9
WC3	Warramunga Arr	82.25	122	*e*P	P	18 30 27.7	-0.9
	comp=Z,17nm,0.8s						
SUR	Sutherland	82.83	221	*e*P	P	18 30 31.5	0.0
	comp=Z,161nm,2.0s						
DLBC	Dease Lake	83.90	11	*e*P	P	18 30 37.5	+0.8
	comp=Z,7.6nm,0.8s						
FCC	Fort Churchill	84.29	352	*e*P	P	18 30 38.2	-0.2
	comp=Z,6.6nm,0.8s						
FCC	Fort Churchill	84.29	352	*e*P	P	18 30 38.3	-0.2
FCC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SIT	Sitka	84.30	14	*e*P	P	18 30 38.7	+0.1
	comp=Z,140nm,1.7s						
SIT	Sitka	84.30	14	*e*P	P	18 30 38.7	+0.1
SIT				pmax	pmax		
	comp=Z,140nm,1.7s						
AS31	Alice Springs	84.46	125	*e*P	P	18 30 39.0	-0.9
	comp=Z,3.6nm,0.6s						
ASAR	Alice Springs	84.46	125	P	P	18 30 39.0	-0.9
	comp=Z,11nm,0.8s,baz=310,slow=4.8,SNR=205						
AS01	Alice Springs	84.49	125	*e*P	P	18 30 39.1	-0.9
FFC	Flin Flon	88.97	356	*e*P	P	18 31 00.2	-1.0
	comp=Z,8.7nm,1.1s						
FFC	Flin Flon	88.97	356	*i* P	P	18 31 01.5	+0.3
STKA	Stephens Creek	94.99	126	*e*P	P	18 31 28.0	-1.3
	comp=Z,5.7nm,1.9s						
STKA	Stephens Creek	94.99	126	*e*P	P	18 31 28.0	-1.3
STKA				pmax	pmax		
	comp=Z,6.0nm,1.9s						
STKA	Stephens Creek	94.99	126	P	P	18 31 27.8	-1.5
	comp=Z,0.9nm,0.6s,baz=331,slow=16,SNR=3.5						
TXAR	Lajitas Array	114.35	355	PP	PP	18 37 44.2	+1.0
	comp=Z,0.1nm,0.5s,baz=352,slow=5.6,SNR=3.8						
SNAA	Sanae	119.24	200	PKP	PKPdf	18 36 53.3	-0.3
VNA2	Neumayer--Watz	120.24	202	PKP	PKPdf	18 36 55.0	-0.5
VNA1	Neumayer--Stat	120.39	202	PKP	PKPdf	18 36 54.7	-1.0
VNA3	Neumayer Olymp	121.05	202	PKP	PKPdf	18 36 56.4	-0.7
QSPA	South Pole Qui	126.24	180	*e*PKPdf	PKPdf	18 37 06.2	-1.0
CPUP	Villa Florida	134.92	268	*e*PKPdf	PKPdf	18 37 23.8	-1.0
CPUP	Villa Florida	134.92	268	PKP	PKPdf	18 37 24.1	-0.7
	comp=Z,2.0nm,0.7s,baz=116,slow=1.3,SNR=7.3						
GO06	Curarrehue	150.13	252	*e*PKPbc	PKPbc	18 37 55.8	-0.8

MAN 05 18:23:46.0, 6°.55N×123°.82E, h27km, mb4.6, ML3.5, MS3.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	0.72	93	*e*P	Pn	18 24 00.5	0.0
SKMP				*e*S	Sn	18 24 11.5	+0.9
CTBH	Cotabato--PC H	0.79	33	⇓*e*P	Pb	18 24 00.8	-0.4
CTBH				*i* S	Sn	18 24 12.6	+0.3
KCP	Kidapawan	1.34	70	⇑*i*P	Pb	18 24 14.6	+4.0
KCP				*i* S	Sb	18 24 41.5	+14
PAGZ	Pagadian	1.36	341	*e*P	Pn	18 24 09.3	+0.1
PAGZ				*e*S	Sb	18 24 27.9	+0.1
IPIL	Ipil	1.74	315	*e*P	Pn	18 24 15.0	+0.5
IPIL				*e*S	Sn	18 24 36.3	+0.4

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*NEIC **05** 18:40:34.4±0.0, 19°.72N×68°.54W, h42km, MD3.6(RSPR), After RSPR.*

RSPR 05 18:40:34.4, 19°.72N×68°.54W, h42km±30km, MD3.6/9, 6C-3D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	1.22	221	⇑*i*P	Pn	18 40 53.9	-1.2
DR12				*e*S	Sn	18 41 08.9	-1.5
IDE	Isla Desecheo	1.67	143	⇑*e*P	Pn	18 40 59.9	-1.3
IDE	Isla Desecheo	1.67	143	*e*S	Sn	18 41 19.6	-1.7
SDD	Santo Domingo	1.81	226	*e*Pn	Pn	18 41 03.6	+0.5
SDD				*e*Sn	Sn	18 41 21.5	-3.2
AGPR	Aguadilla, PR	1.84	132	⇑*e*P	Pn	18 41 03.3	-0.2
AGPR	Aguadilla, PR	1.84	132	⇑*e*P	Pn	18 41 03.3	-0.2
AGPR				*e*S	Sn	18 41 25.1	-0.5
AGP	Aguadilla	1.86	134	*e*Pn	Pn	18 41 02.6	-1.3
AGP				*e*Sn	Sn	18 41 25.1	-1.1
MPR	Mayaguez	2.00	138	*e*Pn	Pn	18 41 05.2	-0.5
BANI	BANI	2.17	233	*e*Pn	Pn	18 41 09.7	+1.5
BANI				*e*Sn	Sn	18 41 37.9	+4.1
CELP	Cerrillos	2.48	131	⇑*e*P	Pn	18 41 12.3	0.0
CELP	Cerrillos	2.48	131	*e*Pn	Pn	18 41 12.3	0.0
OBIP	Obispado Ponce	2.48	132	⇓*e*P	Pn	18 41 12.7	+0.4
OBIP	Obispado Ponce	2.48	132	*e*S	Sn	18 41 41.0	-0.4
OBIP	Obispado Ponce	2.48	132	*e*Pn	Pn	18 41 11.6	-0.7
ICMP	Isla Caja de M	2.64	133	*e*Pn	Pn	18 41 15.5	+1.0
SDDR	Presa de Saban	2.69	255	*e*Pn	Pn	18 41 18.1	+2.8
SJG	San Juan	2.77	125	*e*S	Sn	18 41 47.1	-1.5
SJG	San Juan	2.77	125	*e*Pn	Pn	18 41 14.7	-1.6
CBYP	Canovanas	2.92	119	⇑*e*P	Pn	18 41 17.7	-0.8
CBYP	Canovanas	2.92	119	*e*Pn	Pn	18 41 17.1	-1.3
HUMP	Col San Antoni	2.99	121	*e*Pn	Pn	18 41 19.1	-0.2
MTP	Monte Pirata	3.26	119	⇑*e*P	Pn	18 41 22.2	-0.8
MTP	Monte Pirata	3.26	119	*e*S	Sn	18 42 00.3	-0.3
MTP	Monte Pirata	3.26	119	*e*Pn	Pn	18 41 21.9	-1.1
MTP				*e*Sn	Sn	18 42 00.3	-0.3
CUPR	Culebra, Puert	3.39	114	⇓*e*P	Pn	18 41 23.9	-0.9
CUPR	Culebra, Puert	3.39	114	*e*Pn	Pn	18 41 23.9	-0.9
STVI	Saint Thomas	3.66	111	*e*Pn	Pn	18 41 27.6	-0.8
LGNH	Logne	4.03	253	*e*Pn	Pn	18 41 32.2	-1.3
ABVI	Anegada Island	4.10	103	*e*Pn	Pn	18 41 31.4	-3.1
ABV	Anegada	4.10	103	⇓*e*P	Pn	18 41 34.5	0.0
ABV	Anegada	4.10	103	*e*S	Sn	18 42 20.2	-1.1
SMRT	St. Maarten	5.44	107	*e*Pn	Pn	18 41 52.4	-0.6
BBGH	Gun Hill	10.82	126	*e*Pn	Pn	18 43 05.0	-1.7
SDV	Santo Domingo	10.96	191	*e*Pn	Pn	18 43 07.8	-1.1

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*IDC **05** 18:41:58.4±10.0, 23°.42S×179°.95E, h475km±128km, mb3.4/7, mb1 3.6/8, mb1mx3.2/33, mbtmp4.3/8, Error ellipse: s-maj=68.6km s-min=24.7km az=7.0*

*ISCJB **05** 18:42:02.3±0.9, 23°.5S±0°.1×179°.8E±0°.2, h535km, mb3.8/7, Error ellipse: s-maj=20.0km s-min=13.8km az=3.7*

ISC 05 18:42:02.9±1.0, 23°.7S±0°.1×179°.9E±0°.2, h535km, n8, σ0.s73/9, mb3.9/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.70	189	P	P	18 45 08.8	-0.4
	1.4nm,0.3s,baz=78,slow=3.1,SNR=7.1						
URZ				S	S	18 47 42.8	-0.1
	0.3nm,0.3s,baz=47,slow=22,SNR=3.1						
STKA	Stephens Creek	34.72	248	P	P	18 48 09.5	+1.2
	1.1nm,0.5s,baz=93,slow=9.2,SNR=5.1						
ASAR	Alice Springs	41.99	260	P	P	18 49 08.0	+0.5
	2.5nm,0.7s,baz=96,slow=7.8,SNR=36						
WRA	Warramunga Arr	42.34	266	P	P	18 49 09.9	-0.4
	3.5nm,0.5s,baz=102,slow=8.4,SNR=89						
SIJI	Sorong	52.30	288	P	P	18 50 24.1	-1.0
	10nm,0.9s,baz=122,slow=19,SNR=4.1						
BATI	Baumata	55.14	274	P	P	18 50 45.2	-0.1
	5.4nm,0.5s,baz=106,slow=4.0,SNR=4.7						
NVAR	Mina Array Bea	84.67	44	P	P	18 53 40.9	+0.3
	0.2nm,0.3s,baz=213,slow=8.1,SNR=2.6						
TXAR	Lajitas Array	90.40	58	P	P	18 54 07.6	0.0
	0.5nm,0.8s,baz=205,slow=5.5,SNR=6.3						

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*IDC **05** 18:47:43.5±1.5, 15°.42N×122°.18E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/35, mbtmp3.4/4, Error ellipse: s-maj=30.8km s-min=22.2km az=61.0*

*ISCJB **05** 18:47:46.4±0.9, 15°.51N±0°.03×121°.85E±0°.06, h0km±6km, mb3.3/4, Error ellipse: s-maj=9.4km s-min=4.1km az=166.0*

*MAN **05** 18:47:46.3, 15°.47N×121°.80E, h1km, mb4.9, ML3.8, MS3.8*
MAN INTENSITY II - SIPALAY NEGROS OCCIDENTAL.

ISC 05 18:47:46.2±1.2, 15°.53N±0°.03×121°.92E±0°.06, h12km±9km, n19, σ1.s54/24, mb3.4/4, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.40	303	*e*P	Pg	18 47 53.5	-0.6
BALP				*e*S	Sb	18 47 59.7	-1.6
POLP	Polilio Island	0.79	179	*e*P	Pg	18 48 00.8	-0.8
POLP				*e*S	Sg	18 48 12.6	+0.7
CAUP	Cauayan	1.41	356	*e*P	Pg	18 48 13.5	+0.1
CAUP				*e*S	Sg	18 48 32.5	+0.7
PALP	Palanan	1.60	17	*e*P	Pg	18 48 16.5	-0.5
PALP				*e*S	Sg	18 48 49.8	+12
GQP	Guinayangan	1.69	162	⇑*e*P	Pn	18 48 16.8	+1.2
GQP				*e*S	Sg	18 48 41.1	+0.5
TGY	Tagaytay City	1.71	214	Pn	Pn	18 48 15.7	-0.2
	244nm,0.3s,baz=94,slow=2.3,SNR=19						
TGY				Sn	Sn	18 48 38.5	+0.8
	94nm,0.3s,baz=352,slow=9.7,SNR=4.7						
TGY	Tagaytay City	1.71	214	⇓*e*P	Pn	18 48 15.5	-0.4
BOAC	Boac	2.06	182	*e*P	Pn	18 48 21.4	+0.8
BOAC				*e*S	Sb	18 48 49.4	+0.3
BOLP	Bolinao	2.11	294	*e*P	Pn	18 48 21.3	-0.1
BOLP				*e*S	Sn	18 48 48.7	+1.1
CVP	Callao Caves	2.17	357	*e*P	Pb	18 48 25.3	-0.1
SJMP	San Jose	3.14	194	*e*P	Pn	18 48 37.0	+1.3
SJMP				*e*S	Sb	18 49 18.4	-2.1
BUSP	Coron	3.88	206	*e*P	Pn	18 48 49.3	+3.5
CMAR	Chiang Mai Arr	22.16	281	P	P	18 52 45.0	+2.7
	0.3nm,0.5s,baz=89,slow=9.4,SNR=5.3						
WRA	Warramunga Arr	37.30	160	P	P	18 54 55.5	-3.0
	0.5nm,0.6s,baz=340,slow=9.2,SNR=6.2						
ASAR	Alice Springs	40.67	163	P	P	18 55 24.8	-2.0
	0.5nm,0.4s,baz=342,slow=7.6,SNR=25						
H11S3	WAKE ISLAND Hy	42.83	79	T	T	19 41 45.4	
	baz=274,slow=74,SNR=71						
H11S1	WAKE ISLAND Hy	42.84	79	T	T	19 41 49.1	
	baz=274,slow=74,SNR=45						
H11S2	WAKE ISLAND Hy	42.85	79	T	T	19 41 47.5	
	baz=274,slow=74,SNR=45						
MKAR	Makanchi Array	45.30	322	P	P	18 56 04.4	+0.4
	0.3nm,0.7s,baz=118,slow=8.3,SNR=3.4						

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*IDC **05** 19:09:12.6±5.2, 38°.40N×88°.95E, h0km, mb3.5/1, mb1 3.5/6, mb1mx3.3/47, mbtmp3.4/6, ML3.0/4, Error ellipse: s-maj=99.9km s-min=43.0km az=26.0*

*NNC **05** 19:09:18.2±1.5, 38°.77N×88°.57E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=14.9km s-min=11.1km az=61.0*

ISC 05 19:09:18.1±2.0, 38°.6N±0°.2×88°.8E±0°.1, h35km, n11, σ0.s94/15, 3C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	8.53	307	⇓Pn	Pn	19 11 18.9	-0.3
	6.7nm,1.1s						
PDGK				⇓Sn	Sn	19 12 54.0	-0.1
	10.0nm,0.7s						
PDGK				⇓Lg	Lg	19 13 39.3	
	21nm,1.1s						
MK31	Makanchi Array	9.53	332	Pn	Pn	19 11 32.8	-0.1
	0.6nm,0.3s,baz=148,slow=13,SNR=13						
MK31				Sn	Sn	19 13 19.7	+1.0
	1.8nm,0.7s,baz=147,slow=24,SNR=5.3						
MK31				⇑Lg	Lg	19 14 10.4	
	1.7nm,0.6s,baz=146,slow=14,SNR=4.0						
MKAR	Makanchi Array	9.53	332	Pn	Pn	19 11 32.9	+0.1
	0.6nm,0.3s,baz=143,slow=14,SNR=24						
MKAR				Sn	Sn	19 13 19.2	+0.5
	0.4nm,0.3s,baz=144,slow=24,SNR=5.8						
MKAR				Lg	Lg	19 14 23.3	
	0.1nm,0.3s,baz=140,slow=25,SNR=4.2						
MAKZ	Makanchi	9.66	331	⇓Pn	Pn	19 11 35.3	+0.7
	3.9nm,1.1s						
MAKZ				⇓Sn	Sn	19 13 21.9	0.0
	2.3nm,0.8s						
MAKZ				⇑Lg	Lg	19 14 15.5	
	3.9nm,0.9s						
KURBB	Kurchatov Arra	14.10	332	⇑Pn	Pn	19 12 33.7	-1.6
	1.8nm,0.8s						
KURBB	Kurchatov Arra	14.10	332	Pn	Pn	19 12 33.4	-1.9
	0.0nm,0.3s,baz=143,slow=13,SNR=5.8						
KURBB				Lg	Lg	19 16 53.6	
	0.0nm,0.3s,baz=135,slow=28,SNR=1.6						
KK31	Karatay Array	14.59	294	⇓Pn	Pn	19 12 42.6	+0.7
	0.8nm,0.8s						
ZALV	Zalesovo Beam	15.64	351	Pn	Pn	19 12 54.4	-1.3
	0.1nm,0.3s,baz=155,slow=18,SNR=2.0						
SONM	Songino Array	15.78	48	Pn	Pn	19 12 57.5	-0.2
	0.1nm,0.3s,baz=252,slow=11,SNR=2.5						
BVAR	Borovoye Array	19.27	325	P	P	19 13 39.7	+0.1
	baz=125,slow=18,SNR=3.2						

YKA	Yellowknife Ar	77.54	11	P	P	19 21 10.6	+0.8
	0.3nm,0.7s,baz=338,slow=5.7,SNR=4.9						

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*ISCJB **05** 19:09:32.5±0.3, 62°.31S±0°.04×155°.1E±0°.1, h10^{km}, mb5.0/43, MS5.0/106, Error ellipse: s-maj=7.9km s-min=5.4km az=13.2*

*IDC **05** 19:09:32.8±0.6, 62°.26S×155°.63E, h0^{km}, mb4.5/8, mb1 4.6/8, mb1mx4.4/29, mbtmp4.5/8, MS4.7/18, Ms1 4.7/18, ms1mx4.7/25, Error ellipse: s-maj=34.2km s-min=17.6km az=73.0*

*NEIC **05** 19:09:34.2±0.2, 62°.31S×155°.05E, h10^{km}, mb5.0/44, MS5.0/84, Error ellipse: s-maj=6.6km s-min=4.7km az=102.0*

*GCMT **05** 19:09:39.2±0.1, 62°.32S±0°.01×155°.02E±0°.02, h13^{km}, MW5.5/113, Moment Tensor Solution. s104,c172; s113,c210; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.24±.03; $M_{\theta\theta}$1.87±.03; $M_{\phi\phi}$-1.63±.03; $M_{r\theta}$-0.48±.07; $M_{\theta\phi}$-1.30±.03; $M_{\phi r}$-0.05±.06; Best double couple: $M_0$2.22800×10^{17} NP1:ϕ_s243.00000°, δ88.00000°, λ169.00000°. NP2:ϕ_s334.00000°, δ79.00000°, λ2.00000°. Principal axes: T 2.3730, Plg10.0000°, Azm198.0000°; N -0.2930, Plg79.0000°, Azm52.0000°; P -2.0820, Plg6.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 19:09:34.1±0.3, **62°.38S**±0°.05×**155°.14E**±0°.07, **h10^{km}**, **n201**, σ**1^{s}38**/109, **mb5.1**/43, **MS5.0**/106, **1C-1D**, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	Macquarie Isla	8.15	16	ePn	Pn	19 11 28.9	-3.4
VNDA	Vanda	15.37	174	Pn	Pn	19 13 04.9	-5.7
	3.9nm,0.3s,baz=342,slow=13,SNR=56						
VNDA				Sn	Sn	19 15 48.3	-12
	0.1nm,0.3s,baz=44,slow=13,SNR=2.9						
VNDA				LR	LR	19 18 29.5	
	comp=Z,6μm,20.1s,baz=358,slow=35						
SBA	Scott Base	15.98	171	ePn	Pn	19 13 14.8	-3.7
	409nm,1.8s						
PYZ	Puysegur Point	17.54	27	ePn	Pn	19 13 38.6	+0.2
	86nm,1.1s						
WHZ	Wether Hill Ro	18.08	30	ePn	Pn	19 13 45.0	-0.1
	206nm,1.9s						
DCZ	Deep Cove	18.31	28	ePn	Pn	19 13 47.1	-0.7
	293nm,1.8s						
MLZ	Mavora Lakes	18.62	30	eP	P	19 13 50.7	-0.7
	405nm,1.8s						
WKZ	Wanaka	19.34	31	eP	P	19 13 59.6	+0.2
	239nm,1.7s						
CASY	Casey	19.38	239	eP	Pn	19 14 03.5	+2.8
	22nm,1.0s						
ODZ	Otahua Downs	19.54	35	eP	P	19 14 00.8	-0.8
	71nm,1.4s						
LBZ	Lake Benmore	20.04	33	eP	P	19 14 07.8	+0.8
	75nm,1.4s						
TAU	Tasmania Unive	20.04	343	eP	P	19 14 07.0	0.0
	120nm,1.6s						
FOZ	Fox Glacier	20.75	31	eP	P	19 14 14.7	0.0
	270nm,1.8s						
RPZ	Rata Peaks	20.89	34	eP	P	19 14 16.9	+0.7
	38nm,1.1s						
RPZ	Rata Peaks	20.89	34	LR	LR	19 20 52.6	
	comp=Z,6μm,20.0s,baz=186,slow=33						
CRLZ	Canterbury Las	21.44	37	eP	P	19 14 22.3	+0.2
	148nm,1.5s						
OXZ	Oxford	21.51	35	eP	P	19 14 22.5	-0.4
	68nm,1.4s						
LTZ	Lake Taylor	22.08	35	eP	P	19 14 29.4	+0.3
	39nm,1.2s						
KHZ	Kahutara	22.77	37	eP	P	19 14 35.2	-1.1
	200nm,1.8s						
SNZO	South Karori	24.12	38	PFAKE		19 15 00.0	+10
SNZO				LR	LR		
	comp=Z,4μm,20.0s						
URZ	Urewera	27.64	39	eP	P	19 15 21.8	+0.2
	comp=Z,55nm,1.5s						
URZ	Urewera	27.64	39	LR	LR	19 25 18.3	
	comp=Z,2μm,18.9s,baz=213,slow=34						
QSPA	South Pole Qui	27.71	180	eP	P	19 15 21.5	-0.8
	comp=Z,19nm,0.8s						
QSPA	South Pole Qui	27.71	180	P	P	19 15 21.6	-0.6
	comp=Z,14nm,1.0s,baz=355,slow=2.5,SNR=22						
QSPA				LR	LR	19 26 31.7	
	comp=Z,1μm,20.5s,baz=16,slow=37						
STKA	Stephens Creek	31.74	338	eP	P	19 15 57.7	-0.3
	comp=Z,4.9nm,1.8s						
STKA	Stephens Creek	31.74	338	P	P	19 15 58.9	+0.9
	comp=Z,4.1nm,0.9s,baz=169,slow=8.8,SNR=7.4						
STKA				LR	LR	19 25 41.0	
	comp=Z,2μm,21.2s,baz=156,slow=30						
MAW	Mawson	35.89	221	LR	LR	19 31 28.3	
	comp=Z,4μm,18.9s,baz=119,slow=36						
RAO	Raoul Island	37.51	41	PFAKE		19 17 00.0	+12
RAO				LR	LR		
	comp=Z,3μm,19.0s						
H01W1	Cape Leeuwin H	37.53	298	T	T	19 57 09.8	
	baz=148,slow=76,SNR=92						
H01W2	Cape Leeuwin H	37.53	298	T	T	19 57 05.1	
	baz=148,slow=76,SNR=87						
H01W3	Cape Leeuwin H	37.54	298	T	T	19 57 14.5	
	baz=148,slow=76,SNR=83						
NWAO	Narrogin (SRO)	38.01	303	eP	P	19 16 51.9	-0.2
	comp=Z,25nm,1.2s						
NWAO				LR	LR		
	comp=Z,2μm,21.0s						
NWAO	Narrogin (SRO)	38.01	303	LR	LR	19 28 34.7	
	comp=Z,2μm,20.1s,baz=12,slow=30						
PINNC	Pines Island,	40.62	18	eP	P	19 17 14.1	+0.2
	comp=Z,47nm,1.2s						
DZM	Mont Dzumac	41.02	16	eP	P	19 17 16.8	-0.5
	comp=Z,48nm,1.3s						
DZM				eS	S	19 23 30.8	+1.3
	comp=Z,1μm,26.9s						
DZM				eLQ	LQ	19 26 45.2	
	comp=Z,946nm,30.3s						
DZM				eLR	LR	19 28 28.0	
	comp=Z,4μm,25.6s,baz=210						
DZM	Mont Dzumac	41.02	16	eP	P	19 17 16.4	-0.9
	comp=Z,58nm,1.7s						
DZM	Mont Dzumac	41.02	16	P	P	19 17 15.9	-1.4
	comp=Z,12nm,1.0s,baz=190,slow=11,SNR=3.7						
DZM				LR	LR	19 30 45.4	
	comp=Z,2μm,20.4s,baz=196,slow=31						
SYO	Syowa Base	41.16	210⇓	eP	P	19 17 16.6	-1.3
SYO	Syowa Base	41.16	210⇑	ipP	pP	19 17 24.0	+4.0
AS01	Alice Springs	41.27	330	eP	P	19 17 18.3	-1.0
ASAR	Alice Springs	41.28	330	P	P	19 17 18.9	-0.5
	comp=Z,4.6nm,0.9s,baz=165,slow=8.5,SNR=20						
ASAR				PcP	PcP	19 19 17.1	-0.8
	comp=Z,0.9nm,0.9s,baz=143,slow=3.4,SNR=3.5						
ASAR				LR	LR	19 31 59.0	
	comp=Z,1μm,19.4s,baz=162,slow=33						
AS31	Alice Springs	41.28	330	eP	P	19 17 19.2	-0.2
	comp=Z,1.4nm,0.8s						
CTA	Charters Tower	42.70	348	LR	LR	19 32 12.3	
	comp=Z,1μm,21.9s,baz=170,slow=32						
CTAO	Charters Tower	42.70	348	eP	P	19 17 31.2	+0.2
	comp=Z,18nm,1.1s						
CTAO				LR	LR		
	comp=Z,2μm,22.0s						
WB2	Warramunga Arr	44.77	332	eP	P	19 17 46.7	-1.0
WR1	Warramunga Arr	44.77	332	eP	P	19 17 46.6	-1.1
	comp=Z,12nm,1.0s						
WR1				ePcP	PcP	19 19 28.1	-1.6
WRA	Warramunga Arr	44.77	332	P	P	19 17 46.6	-1.1
	comp=Z,4.4nm,0.8s,baz=163,slow=6.9,SNR=24						
WRA				PcP	PcP	19 19 28.1	-1.6
	comp=Z,1.4nm,0.8s,baz=168,slow=2.9,SNR=3.3						
WRA				LR	LR	19 34 02.8	
	comp=Z,957nm,20.3s,baz=155,slow=33						
WRAB	Tennant Creek	44.78	332	eP	P	19 17 46.6	-1.2
	comp=Z,7.1nm,0.8s						
WRAB				LR	LR		
	comp=Z,1μm,20.0s						
SNAA	Sanae	45.37	190	P	P	19 17 53.1	+1.2
SNAA	Sanae	45.37	190	eP	P	19 17 52.1	+0.2
	comp=Z,11nm,1.0s						
VNA3	Neumayer Olymp	46.24	187	P	P	19 17 59.3	+0.5
VNA2	Neumayer--Watz	46.42	188	P	P	19 18 01.0	+0.8
VNA1	Neumayer--Stat	46.74	188	P	P	19 18 02.7	+0.1
MSVF	Nonsavu	47.39	30	eP	P	19 18 08.2	-0.1
	comp=Z,55nm,1.8s						
MSVF				LR	LR		
	comp=Z,985nm,22.0s						
MBWA	Marble Bar	47.77	313	eP	P	19 18 11.5	+0.3
	comp=Z,33nm,1.6s						
MBWA				LR	LR		
	comp=Z,1μm,22.0s						
FITZ	Fitzroy Crossi	48.77	321	eP	P	19 18 19.7	+0.7
	comp=Z,12nm,1.0s						
FITZ	Fitzroy Crossi	48.77	321	P	P	19 18 19.6	+0.7
	comp=Z,14nm,1.2s,baz=170,slow=8.7,SNR=6.4						
PMSA	Palmer Station	49.87	159	eP	P	19 18 28.8	+2.0
	comp=Z,178nm,1.4s						
HNR	Honiara	52.97	6	PFAKE		19 19 00.0	+9.5
HNR				LR	LR		
	comp=Z,8μm,20.0s						
TBI	Tubuai	53.71	70	eS	S	19 26 32.0	+2.2
	comp=Z,599nm,29.2s						
TBI				eLQ	LQ	19 31 30.2	
	comp=Z,2μm,28.0s						
TBI				eLR	LR	19 33 54.8	
	comp=Z,642nm,27.2s,baz=196						
TBI	Tubuai	53.71	70	eT	T	20 16 09.4	
	comp=Z,34nm,0.3s						
FUNA	Funafuti	56.55	29	PFAKE		19 19 30.0	+14
FUNA				LR	LR		
	comp=Z,4μm,19.0s						
SAUI	Saumlaki	57.02	331	eP	P	19 19 20.1	+0.2
	comp=Z,72nm,1.6s						
SOEI	Soe	57.09	323	eP	P	19 19 18.7	-1.9
	comp=Z,32nm,1.2s						
PAE	Paea	58.67	67	eT	T	20 22 19.0	
	comp=Z,2.6nm,0.3s						
TVO	Taravao	58.71	67	eT	T	20 22 21.7	
	comp=Z,3.3nm,0.3s						
MMRI	Maumere	58.74	321	eP	P	19 19 30.6	-1.3
	comp=Z,41nm,1.1s						
PPT2	Papeete2	58.74	67	eS	S	19 27 39.1	+2.2
	comp=Z,478nm,27.0s						
PPT2				eLQ	LQ	19 34 19.4	
	comp=Z,1μm,27.2s						
PPT2				eLR	LR	19 36 28.1	
	comp=Z,1μm,28.2s,baz=215						
PPT	Papeete	58.76	67	LR	LR	19 39 33.9	
	comp=Z,276nm,20.6s,baz=211,slow=31						
GO10	Punta Arenas	59.20	150	eP	P	19 19 36.3	+1.5
	comp=Z,210nm,1.6s						
RKT	Rikitea	60.46	84	eS	S	19 28 01.7	+2.8
	comp=Z,862nm,31.2s						
RKT				eLQ	LQ	19 34 49.9	
	comp=Z,630nm,37.2s						
RKT				eLR	LR	19 37 30.4	
	comp=Z,554nm,28.8s						
RKT	Rikitea	60.46	84	eT	T	20 24 43.2	
	comp=Z,12nm,0.3s						
GO09	Cerro Castillo	60.63	148	eP	P	19 19 45.8	+1.2
	comp=Z,64nm,1.0s						
JAY	Jayapura	60.69	343	LR	LR	19 44 35.7	
	comp=Z,725nm,18.2s,baz=168,slow=35						
VAH	Vaihoa	61.67	67	eT	T	20 26 03.4	
	comp=Z,219nm,0.3s						
FAKI	Fak Fak	61.73	334	eP	P	19 19 53.4	+1.0
	comp=Z,16nm,1.0s						
KAPI	Kappang	62.91	320	PFAKE		19 20 10.0	+10
KAPI				LR	LR		
	comp=Z,602nm,20.0s						
EFI	East Falkland	63.29	158	eP	P	19 20 02.3	-0.1
	comp=Z,94nm,1.3s						
EFI				LR	LR		
	comp=Z,801nm,19.0s						
HOPE	Hope Point	63.32	172	eP	P	19 20 02.6	0.0
	comp=Z,240nm,1.4s						
COCO	West Island	64.84	293	eP	P	19 20 12.1	-0.9
	comp=Z,510nm,1.9s						
TAOE	Nuku Hiva Isla	70.61	71	eP	P	19 20 48.8	-0.8
	comp=Z,225nm,1.4s						
PLCA	Paso Flores	70.87	145	eP	P	19 20 51.4	+0.5
	comp=Z,7.6nm,1.3s						
GO06	Curarrehue	71.70	144	eP	P	19 20 56.6	+0.7
	comp=Z,22nm,1.6s						
KSM	Kuching	72.07	312	eP	P	19 20 57.4	-0.9
	comp=Z,17nm,1.4s						
SBUM	Sibu	72.33	314	eP	P	19 20 59.5	-0.3
	comp=Z,14nm,1.7s						
DAV	Davao City (W)	72.89	329	PFAKE		19 21 10.0	+6.9
DAV				LR	LR		
	comp=Z,314nm,19.0s						
TRQA	Tornquist	75.54	151	PFAKE		19 21 30.0	+12
TRQA				LR	LR		
	comp=Z,375nm,19.0s						
SUR	Sutherland	78.70	218	PFAKE		19 21 50.0	+14
SUR				LR	LR		
	comp=Z,2μm,21.0s						
KULM	Kulim	79.13	304	eP	P	19 21 37.8	-0.8
	comp=Z,52nm,1.7s						
H08S2	Diego Garcia H	79.86	273	T	T	20 50 11.4	
	baz=152,slow=76,SNR=63						
H08S1	Diego Carcia H	79.87	273	T	T	20 50 08.0	
	baz=152,slow=76,SNR=38						
H08S3	Diego Garcia H	79.88	273	T	T	20 50 12.1	
	baz=152,slow=76,SNR=62						
DGAR	Diego Garcia	80.08	273	PFAKE		19 22 00.0	+16
DGAR				LR	LR		
	comp=Z,227nm,19.0s						
TRIS	Tristan da Cun	80.38	190	PFAKE		19 22 00.0	+15
TRIS				LR	LR		
	comp=Z,1μm,21.0s						
BOSA	Boshof	80.87	223	eP	P	19 21 49.4	+1.2
	comp=Z,40nm,1.9s						
BOSA	Boshof	80.87	223	P	P	19 21 50.6	+2.4
	comp=Z,3.3nm,1.0s,baz=160,slow=6.2,SNR=2.6						
BOSA				LR	LR	19 54 05.0	
	comp=Z,530nm,20.3s,baz=156,slow=33						
ABPO	Ambohimpanom	81.32	246	PFAKE		19 22 00.0	+9.2
ABPO				LR	LR		
	comp=Z,164nm,19.0s						
LCO	Las Campanas	81.81	141	PFAKE		19 22 10.0	+17
LCO				LR	LR		
	comp=Z,211nm,21.0s						
WAKE	Wake Island	81.89	11	PFAKE		19 22 00.0	+6.7
WAKE				LR	LR		
	comp=Z,2μm,21.0s						
LBTB	Lobatse	84.10	225	eP	P	19 22 04.8	-0.2
	comp=Z,25nm,1.6s						
CPUP	Villa Florida	87.86	151	LR	LR	20 00 09.2	
	comp=Z,134nm,18.4s,baz=200,slow=35						
LVC	Limon Verde	88.36	140	PFAKE		19 22 40.0	+14
LVC				LR	LR		
	comp=Z,296nm,22.0s						
QIZ	Qiongzhong	88.66	318	P	P	19 22 27.9	+0.8
QIZ				SKS	SKSac	19 32 52.0	-4.1
QIZ				S	S	19 33 14.3	+0.8
QIZ				SS	SS	19 39 06.1	+0.8
QIZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
QIZ				LR	LR		
	comp=Z,270nm,20.1s						
QIZ				LR	LR		
	comp=Z,430nm,22.6s						
QIZ	Qiongzhong	88.66	318	PFAKE		19 22 40.0	+13
QIZ				LR	LR		
	comp=Z,46nm,22.0s						
TATO	Taipei	91.11	330	PFAKE		19 22 50.0	+12
TATO				LR	LR		
	comp=Z,10099μm,21.0s						
CMAR	Chiang Mai Arr	91.85	308	LR	LR	20 03 36.2	
	comp=Z,228nm,18.0s,baz=154,slow=35						
TSUM	Tsumeb	92.05	220	PFAKE		19 22 50.0	+6.6
TSUM				LR	LR		
	comp=Z,858nm,21.0s						
CHTO	Chiang Mai	92.18	308	PFAKE		19 22 50.0	+6.4
CHTO				LR	LR		
	comp=Z,250nm,19.0s						
LSZ	Lusaka	92.22	231	PFAKE		19 23 00.0	+16
LSZ				LR	LR		
	comp=Z,624nm,21.0s						
LPAZ	La Paz	94.55	139	eP	P	19 22 54.7	-0.8
LPAZ	La Paz	94.55	139	P	P	19 22 54.9	-0.7
	comp=Z,0.8nm,0.5s,baz=160,slow=6.6,SNR=2.8						
LPAZ				LR	LR	19 57 49.4	
	comp=Z,112nm,20.2s,baz=130,slow=31						
NNA	Nana	95.64	129	PFAKE		19 23 10.0	+10
NNA				LR	LR		
	comp=Z,112nm,22.0s						
GYA	Guiyang	96.61	317	eP	P	19 23 06.4	+2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	96.65	314	P	P	19 23 06.1	+1.9
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,5.9s						
SSE	Sheshan	97.07	331	PFAKE		19 23 20.0	+14
SSE				LR	LR		
	comp=Z,345nm,19.0s						
NJ2	Nanjing	98.52	329	eP	Pdif	19 23 13.0	+0.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ENH	Enshi	99.32	321	PFAKE		19 23 30.0	+14
ENH				LR	LR		
	comp=Z,321nm,19.0s						
MJAR	Matsushiro Arr	99.52	346	LR	LR	20 05 48.4	
	comp=Z,174nm,19.1s,baz=170,slow=34						
SHEL	Horse Pasture	100.48	199	PFAKE		19 23 30.0	+8.5
SHEL				LR	LR		
	comp=Z,337nm,19.0s						
PAYG	Puerto Ayora	100.57	112	PFAKE		19 23 30.0	+8.1
PAYG				LR	LR		
	comp=Z,314nm,20.0s						
KMBO	Kilima Mbogo	101.58	244	PFAKE		19 23 40.0	+13
KMBO				LR	LR		
	comp=Z,223nm,19.0s						
CD2	Chengdu	101.67	317	eP	Pdif	19 23 27.5	+1.2
ERM	Erimo	104.49	351	PFAKE		19 23 50.0	+12
ERM				LR	LR		
	comp=Z,262nm,22.0s						
MBAR	Mbarara	104.72	239	PFAKE		19 23 50.0	+9.4
MBAR				LR	LR		
	comp=Z,745nm,21.0s						
LSA	Lhasa	104.97	306	PFAKE		19 23 50.0	+8.5
LSA				LR	LR		
	comp=Z,226nm,19.0s						
OTAV	Otavalo	106.28	123	PFAKE		19 28 10.0	+11
OTAV				LR	LR		
	comp=Z,132nm,22.0s						
LZH	Lanzhou	106.42	319	ePdif	Pdif	19 23 49.6	+2.1
LZH				PKP	PKiKP	19 27 59.3	+0.9
LZH				PP	PP	19 28 15.2	+2.5
LZH				SS	SS	19 43 16.4	+0.6
LZH				AMB	AMB		
	comp=Z,200nm,9.6s						
LZH				LR	LR		
	comp=Z,460nm,17.5s						
LZH				LR	LR		
	comp=Z,510nm,17.8s						
LZH				LR	LR		
	comp=Z,560nm,20.1s						
BJT	Baijiatuau	106.76	330	PFAKE		19 28 10.0	+11
BJT				LR	LR		
	comp=Z,569nm,20.0s						
MDJ	Mudanjiang	108.60	341	PFAKE		19 28 10.0	+8.1
MDJ				LR	LR		
	comp=Z,261nm,19.0s						
ASCN	Ascension	109.43	191	PFAKE		19 28 20.0	+15
ASCN				LR	LR		
	comp=Z,14μm,19.0s						
RCBR	Riachuelo	111.46	168	PFAKE		19 28 20.0	+12
RCBR				LR	LR		
	comp=Z,44μm,21.0s						
PTGA	Pitinga	111.72	142	PFAKE		19 28 20.0	+11
PTGA				LR	LR		
	comp=Z,13μm,21.0s						
JTS	JuntasAbangare	112.69	112	PFAKE		19 28 20.0	+9.3
JTS				LR	LR		
	comp=Z,269nm,19.0s						
BCIP	Isla Barro Col	113.84	118	PFAKE		19 28 20.0	+7.2
BCIP				LR	LR		
	comp=Z,121nm,20.0s						
HIA	Hailar	114.81	335	PFAKE		19 28 30.0	+16
HIA				LR	LR		
	comp=Z,406nm,20.0s						
NIL	Nilore	115.66	294	PFAKE		19 28 30.0	+14
NIL				LR	LR		
	comp=Z,232nm,22.0s						
ADK	Adak	116.08	19	PFAKE		19 28 30.0	+14
ADK				LR	LR		
	comp=Z,1μm,22.0s						
ULN	Ulaanbaatar	116.39	326	PFAKE		19 28 30.0	+13
ULN				LR	LR		
	comp=Z,339nm,19.0s						
SDV	Santo Domingo	117.20	127	PFAKE		19 28 30.0	+10
SDV				LR	LR		
	comp=Z,227nm,21.0s						
PFO	Pinyon Flats O	118.47	72	PFAKE		19 28 30.0	+8.7
PFO				LR	LR		
	comp=Z,647nm,19.0s						
WMQ	Urumqi	118.75	310	ePKP	PKiKP	19 28 22.1	+0.6
WMQ				LR	LR		
	comp=Z,290nm,29.1s						
WMQ				LR	LR		
	comp=Z,410nm,23.9s						
WMQ				LR	LR		
	comp=Z,550nm,29.1s						
TUC	Tucson	119.91	77	PFAKE		19 28 40.0	+16
TUC				LR	LR		
	comp=Z,414nm,19.0s						
TLY	Talaya	120.77	325	PFAKE		19 28 40.0	+15
TLY				LR	LR		
	comp=Z,164nm,21.0s						
NVAR	Mina Array Bea	121.71	67	PKP	PKPdf	19 28 27.2	-0.3
	comp=Z,0.4nm,0.7s,baz=206,slow=6.0,SNR=2.7						
KVTX	Kingsville	121.86	91	PFAKE		19 28 40.0	+12
KVTX				LR	LR		
	comp=Z,375nm,19.0s						
MNTX	Cornudas Mount	121.87	82	PFAKE		19 28 40.0	+12
MNTX				LR	LR		
	comp=Z,452nm,19.0s						
WUAZ	Wupatki	122.33	75	PFAKE		19 28 40.0	+11
WUAZ				LR	LR		
	comp=Z,228nm,20.0s						
AAK	Ala-Archa	122.76	300	PFAKE		19 28 40.0	+10
AAK				LR	LR		
	comp=Z,177nm,19.0s						
MTDJ	Mount Denham	122.93	116	PFAKE		19 28 40.0	+9.5
MTDJ				LR	LR		
	comp=Z,225nm,19.0s						
JCT	Junction City	123.44	87	PFAKE		19 28 40.0	+8.9
JCT				LR	LR		
	comp=Z,298nm,19.0s						
ANMO	Albuquerque	124.09	79	PFAKE		19 28 40.0	+7.6
ANMO				LR	LR		
	comp=Z,407nm,20.0s						
WVOR	Wild Horse Val	124.89	64	PFAKE		19 28 50.0	+16
WVOR				LR	LR		
	comp=Z,238nm,20.0s						
DUG	Dugway, Tooele	125.56	70	PFAKE		19 28 50.0	+15
DUG				LR	LR		
	comp=Z,364nm,20.0s						
SDDR	Presa de Saban	126.16	122	PFAKE		19 28 50.0	+13
SDDR				LR	LR		
	comp=Z,196nm,19.0s						
SDCO	Great Sand Dun	126.83	78	PFAKE		19 28 50.0	+12
SDCO				LR	LR		
	comp=Z,259nm,19.0s						
TORD	Torodi Ar. Bea	127.31	213	PKP	PKiKP	19 28 39.0	-0.2
TORD	Torodi Ar. Bea	127.31	213	PKP	PKiKP	19 28 39.0	-0.2
	comp=Z,0.9nm,1.1s,baz=117,slow=0.3,SNR=4.3						
TOA1	Torodi Ar. Sit	127.31	213	ePKPdf	PKiKP	19 28 39.0	-0.2
SJG	San Juan	127.33	128	PFAKE		19 28 50.0	+11
SJG				LR	LR		
	comp=Z,146nm,21.0s						
HLID	Hailey	127.60	67	PFAKE		19 28 50.0	+11
HLID				LR	LR		
	comp=Z,327nm,19.0s						
KURBB	Kurchatov Arra	127.83	308	PKP	PKiKP	19 28 39.3	+0.3
	comp=Z,0.3nm,0.3s,baz=128,slow=2.7,SNR=3.7						
KURK	Kurchatov	127.87	308	ePKPdf	PKiKP	19 28 39.3	+0.2
KURK				LR	LR		
	comp=Z,623nm,19.0s						
ISCO	Idaho Springs	128.45	76	PFAKE		19 28 50.0	+8.9
ISCO				LR	LR		
	comp=Z,430nm,20.0s						
PDAR	Pinedale Array	129.07	71	PKP	PKiKP	19 28 43.1	+1.0
	comp=Z,0.1nm,0.3s,baz=268,slow=6.3,SNR=2.5						
LKWY	Lake	130.14	69	PFAKE		19 29 00.0	+16
LKWY				LR	LR		
	comp=Z,622nm,20.0s						
CBKS	Cedar Bluff	130.34	82	PFAKE		19 29 00.0	+15
CBKS				LR	LR		
	comp=Z,654nm,19.0s						
BILL	Bilibino	130.37	5	PFAKE		19 28 50.0	+6.3
BILL				LR	LR		
	comp=Z,449nm,19.0s						

BOZ	Bozeman (W)	130.43	67	PFAKE		19 29 00.0	+15
BOZ				LR	LR		
	comp=Z,577nm,19.0s						
OGNE	Ogallala	130.99	78	PFAKE		19 29 00.0	+14
OGNE				LR	LR		
	comp=Z,538nm,19.0s						
RLMT	Red Lodge	131.07	69	PFAKE		19 29 00.0	+14
RLMT				LR	LR		
	comp=Z,525nm,19.0s						
SACV	Santiago Islan	132.65	182	PFAKE		19 29 00.0	+10
SACV				LR	LR		
	comp=Z,306nm,19.0s						
BVAR	Borovoye Array	132.79	305	PKP	PKiKP	19 28 51.8	+2.8
	comp=Z,0.6nm,0.7s,baz=72,slow=4.7,SNR=3.3						
BRVK	Borovoye	132.86	305	PFAKE		19 29 00.0	+11
BRVK				LR	LR		
	comp=Z,242nm,21.0s						
EGMT	Eagleton	133.13	66	PFAKE		19 29 00.0	+10
EGMT				LR	LR		
	comp=Z,332nm,19.0s						
COLA	College	133.76	30	PFAKE		19 29 00.0	+9.4
COLA				LR	LR		
	comp=Z,358nm,21.0s						
GNI	Garni	133.85	275	PFAKE		19 29 00.0	+8.2
GNI				LR	LR		
	comp=Z,529nm,19.0s						
ILAR	Eielson Array	133.90	30	PKP	PKPdf	19 28 48.3	-1.3
	comp=Z,0.9nm,1.0s,baz=247,slow=4.7,SNR=4.6						
NHSC	New Hope	134.72	104	PFAKE		19 29 00.0	+6.5
NHSC				LR	LR		
	comp=Z,399nm,19.0s						
TIXI	Tiksi	134.97	349	PFAKE		19 29 00.0	+7.2
TIXI				LR	LR		
	comp=Z,328nm,20.0s						
DGMT	Dagmar	135.87	70	PFAKE		19 29 10.0	+15
DGMT				LR	LR		
	comp=Z,383nm,21.0s						
HDIL	Hopedale	136.57	89	PFAKE		19 29 10.0	+13
HDIL				LR	LR		
	comp=Z,592nm,20.0s						
CNNC	Cliffs of the	137.53	104	PFAKE		19 29 10.0	+11
CNNC				LR	LR		
	comp=Z,1µm,19.0s						
KIV	Kislovodsk	137.78	277	PFAKE		19 29 10.0	+10
KIV				LR	LR		
	comp=Z,497nm,22.0s						
BLA	Blacksburg	138.01	100	PFAKE		19 29 10.0	+10
BLA				LR	LR		
	comp=Z,370nm,19.0s						
P51A	Williamsport	138.62	96	*e*PKPpre	PKPpre	19 28 51.8	
ANTO	Ankara	139.18	264	PFAKE		19 29 10.0	+7.4
ANTO				LR	LR		
	comp=Z,408nm,22.0s						
CBN	Corbin Frederi	140.21	102	PFAKE		19 29 10.0	+5.4
CBN				LR	LR		
	comp=Z,499nm,19.0s						
AAM	Ann Arbor	140.57	92	PFAKE		19 29 10.0	+4.8
AAM				LR	LR		
	comp=Z,393nm,21.0s						
YKA	Yellowknife Ar	141.68	48	PKhKP	PKPpre	19 28 57.0	
	comp=Z,0.6nm,0.8s,baz=238,slow=2.6,SNR=7.1						
YKA				PKP	PKPdf	19 29 03.3	-0.6
	comp=Z,0.5nm,0.7s,baz=229,slow=2.6,SNR=7.7						
YKB5	Yellowknife Ar	141.68	48	*e*PKPpre	PKPpre	19 28 57.3	
YKB5				*e*PKPdf	PKPdf	19 29 03.5	-0.5
TIRR	Tirgusor	144.80	265	*e*PKPdf	PKPdf	19 29 09.8	-0.2
FCC	Fort Churchill	147.27	64	*e*PKPdf	PKPdf	19 29 14.9	+1.2
BUR04	Bucovina Ar. S	148.64	265	*e*PKPdf	PKPdf	19 29 15.6	-1.0
BUR04				*e*PKPbc	pPKPbc	19 29 22.5	-0.1
AKASG	Malin Array Be	148.94	273	PKP	PKPdf	19 29 18.1	+1.3
	comp=Z,0.2nm,0.3s,baz=92,slow=1.7,SNR=2.5						
AKASG				PKPbc	sPKPbc	19 29 23.6	-0.2
	comp=Z,1.3nm,0.7s,baz=101,slow=2.3,SNR=7.4						
AKBB	Malin Array Si	148.94	273	*e*PKPdf	PKPdf	19 29 17.8	+1.0
AKBB				*e*PKPbc	pPKPbc	19 29 23.4	+0.2
KIEV	Kiev	148.95	273	PFAKE		19 29 30.0	+5.0
KIEV				LR	LR		
	comp=Z,699nm,19.0s						
AK11	Malin Array Si	148.95	273	*e*PKPdf	PKPdf	19 29 18.2	+1.4
AK11				*e*PKPbc	pPKPbc	19 29 22.6	-0.5
PAB	San Pablo	153.97	218	PFAKE		19 29 40.0	-6.4
PAB				LR	LR		
	comp=Z,438nm,21.0s						
LVZ	Lovozero	155.29	309	PFAKE		19 29 40.0	-11
LVZ				LR	LR		
	comp=Z,1µm,22.0s						
SCHQ	Schefferville	157.24	90	*e*PKPdf	PKPdf	19 29 28.8	+0.1
SCHQ				*e*PKPab	PKPab	19 29 58.9	-1.1
SCHQ	Schefferville	157.24	90	PKPab	PKPab	19 29 58.8	-1.1
	comp=Z,4.5nm,0.8s,baz=240,slow=18,SNR=3.0						

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*NEIC **05** 19:11:12.2±0.0, 19°.25N×66°.25W, h67^{km}, MD3.3(RSPR), After RSPR.*

RSPR 05 19:11:12.2, 19°.25N×66°.25W, h67^{km}±3^{km}, MD3.3/8, 15C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.81	199⇑	*e*P	Pn	19 11 27.4	-0.8
EMPR	Esperanza - Ma	0.81	199	*e*S	Sn	19 11 39.6	-0.5
EMPR	Esperanza - Ma	0.81	199	*e*Pn	Pn	19 11 27.6	-0.6
CBYP	Canovanas	1.04	159⇑	*e*P	Pn	19 11 30.3	-0.9
CBYP	Canovanas	1.04	159	*e*S	Sn	19 11 44.5	-0.7
CBYP	Canovanas	1.04	159	*e*Pn	Pn	19 11 29.6	-1.5
AGPR	Aguadilla, PR	1.13	227⇑	*e*P	Pn	19 11 31.4	-0.8
AGPR	Aguadilla, PR	1.13	227⇑	*e*P	Pn	19 11 31.4	-0.8
SJG	San Juan	1.13	175⇑	*e*P	Pn	19 11 31.3	-1.0
SJG	San Juan	1.13	175	*e*S	Sn	19 11 46.6	-0.7
SJG	San Juan	1.13	175	*e*Pn	Pn	19 11 31.3	-1.0
SJG				*e*Sn	Sn	19 11 46.6	-0.7
HUMP	Col San Antoni	1.16	161⇑	*e*P	Pn	19 11 31.9	-0.8
HUMP	Col San Antoni	1.16	161	*e*S	Sn	19 11 47.3	-0.6
HUMP	Col San Antoni	1.16	161	*e*Pn	Pn	19 11 32.1	-0.6
HUMP				*e*Sn	Sn	19 11 47.3	-0.6
AGP	Aguadilla	1.19	225	*e*Pn	Pn	19 11 32.0	-1.0
CELP	Cerrillos	1.21	195⇑	*e*P	Pn	19 11 33.3	0.0
CELP				*e*S	Sn	19 11 48.6	-0.4
CELP	Cerrillos	1.21	195	*e*Pn	Pn	19 11 33.3	0.0
CELP				*e*Sn	Sn	19 11 48.6	-0.4
OBIP	Obispado Ponce	1.25	196⇑	*e*P	Pn	19 11 33.0	-0.7
OBIP	Obispado Ponce	1.25	196	*e*S	Sn	19 11 49.4	-0.5
OBIP	Obispado Ponce	1.25	196	*e*Pn	Pn	19 11 34.3	+0.5
OBIP				*e*Sn	Sn	19 11 51.7	+1.8
CUPR	Culebra, Puert	1.31	136⇑	*e*P	Pn	19 11 33.7	-0.9
CUPR	Culebra, Puert	1.31	136	*e*S	Sn	19 11 50.7	-0.6
CUPR	Culebra, Puert	1.31	136	*e*Pn	Pn	19 11 33.7	-0.9
CUPR				*e*Sn	Sn	19 11 49.8	-1.5
MTP	Monte Pirata	1.32	150⇑	*e*P	Pn	19 11 34.0	-0.8
MTP	Monte Pirata	1.32	150	*e*S	Sn	19 11 51.1	-0.6
MTP	Monte Pirata	1.32	150⇑	*e*P	Pn	19 11 34.0	-0.8
MTP				*e*S	Sn	19 11 51.1	-0.6
MPR	Mayaguez	1.33	219	*e*Pn	Pn	19 11 35.3	+0.4
MPR				*e*Sn	Sn	19 11 53.9	+2.0
ICMP	Isla Caja de M	1.38	191	*e*Pn	Pn	19 11 36.9	+1.3
IDE	Isla Desecheo	1.44	234⇑	*e*P	Pn	19 11 36.1	-0.3
STVI	Saint Thomas	1.52	126⇑	*e*P	Pn	19 11 36.7	-0.6
STVI	Saint Thomas	1.52	126	*e*S	Sn	19 11 55.6	-0.6
STVI	Saint Thomas	1.52	126⇑	*e*P	Pn	19 11 36.7	-0.6
STVI				*e*S	Sn	19 11 55.6	-0.6
ABVI	Anegada Island	1.88	106	*e*Pn	Pn	19 11 41.8	-0.5
ABV	Anegada	1.89	106⇑	*e*P	Pn	19 11 41.9	-0.4
CDVI	St. Croix	2.05	136	*e*Pn	Pn	19 11 45.7	+1.2
CDVI				*e*Sn	Sn	19 12 01.6	-7.5
SMRT	St. Maarten	3.24	111	*e*Pn	Pn	19 11 59.0	-1.7
BANI	BANI	3.98	258	*e*Pn	Pn	19 12 14.5	+3.5
ANWB	Willy Bob	4.52	110	*e*Pn	Pn	19 12 17.0	-1.2
SDDR	Presa de Saban	4.77	268	*e*Pn	Pn	19 12 23.9	+2.2
SDDR				*e*Sn	Sn	19 13 12.2	-3.5
GRTK	Grand Turk	5.11	297	*e*Pn	Pn	19 12 26.6	+0.4
BBSR	BB Station	13.14	6	*e*Pn	Pn	19 14 15.0	-1.0

IDC 05 19:17:22.3±19.0, 5°.20N×97°.09E, h312^{km}±174^{km}, mb2.7/4, mb1 2.9/5, mb1mx2.7/47, mbtmp3.4/5, Error ellipse: s-maj=220.5km s-min=18.5km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.30	8	P	P	19 20 20.2	+0.1
	0.1nm,0.3s,baz=201,slow=11,SNR=11						
MKAR	Makanchi Array	43.37	345	P	P	19 24 54.9	+0.3
	0.2nm,0.4s,baz=158,slow=8.5,SNR=7.3						
WRA	Warramunga Arr	44.33	125	P	P	19 25 02.4	-0.2
	0.3nm,0.9s,baz=304,slow=9.8,SNR=4.8						
ASAR	Alice Springs	45.96	130	P	P	19 25 15.3	0.0
	0.1nm,0.3s,baz=307,slow=7.5,SNR=4.9						
ZALV	Zalesovo Beam	49.62	351	P	P	19 25 41.6	-0.9
	0.4nm,0.3s,baz=167,slow=8.0,SNR=2.6						

MAN 05 19:18:22.2, 6°.43N×123°.98E, h47^{km}, mb3.9, ML2.7, MS2.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	0.57	81	*e*P	Pn	19 18 35.4	+1.3
SKMP				*e*S	Sn	19 18 49.8	+7.1
CTBH	Cotabato--PC H	0.83	19⇑	*i*P	Pn	19 18 39.0	+1.4
CTBH				*i* S	Sn	19 18 50.9	+2.1
PAGZ	Pagadian	1.53	337	*e*P	Pn	19 18 48.2	+1.0
PAGZ				*e*S	Sn	19 19 06.7	+0.9

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*ISCJB **05** 19:26:50.1±0.6, 27°.97N±0°.06×87°.21E±0°.05, h10^{km}, mb3.6/4, Error ellipse: s-maj=8.8km s-min=6.3km az=27.4*

*IDC **05** 19:26:50.2±1.9, 27°.98N×87°.36E, h0^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.3/41, mbtmp3.5/6, ML3.4/2, Error ellipse: s-maj=74.6km s-min=22.6km az=65.0*

*NDI **05** 19:26:56.5±2.2, 28°.09N×87°.29E, h30^{km}, ML3.3*

ISC 05 19:26:51.6±0.7, 28°.13N±0°.07×87°.26E±0°.04, h10^{km}, n16, σ3^{s}.15/25, mb3.7/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTK	Tadong	1.44	124	*e*P	Pg	19 27 21.7	+2.5
GTK				*e*S	Sg	19 27 38.9	+0.9
GTK				IAML		19 27 41.9	
	comp=E,238nm,0.1s						
GTK				IAML		19 27 49.0	
	comp=N,253nm,0.2s						
TAWA	Tawang	4.11	96	*e*P	Pn	19 27 55.5	+0.6
TAWA				*e*S	Sn	19 28 41.2	-2.1
TAWA				IAML		19 28 47.4	
	comp=N,142nm,0.2s						
TAWA				IAML		19 28 47.7	
	comp=E,160nm,0.2s						
BOK	Bokaro	4.49	196	*e*P	Pn	19 28 02.2	+2.4
BOK				*e*S	Sn	19 28 48.6	-3.6
BOK				IAML		19 28 51.3	
	comp=N,95nm,0.1s						
BOK				IAML		19 28 52.3	
	comp=E,105nm,0.1s						
SHL	Shillong	4.86	121	*e*P	Pn	19 28 07.0	+2.1
SHL				*e*S	Sn	19 28 59.6	-1.7
SHL				IAML		19 29 02.7	
	comp=E,28nm,0.3s						
SHL				IAML		19 29 03.5	
	comp=N,28nm,0.2s						
TEZP	TEZPUR	5.15	106	*e*P	Pn	19 28 10.8	+2.0
TEZP				*e*S	Sn	19 29 04.0	-4.3
TEZP				IAML		19 29 07.8	
	comp=E,74nm,0.1s						
TEZP				IAML		19 29 08.1	
	comp=N,52nm,0.2s						
ZIRO	ZIRO	5.87	94	*e*P	Pn	19 28 21.3	+2.5
ZIRO				*e*S	Sn	19 29 21.9	-4.3
KOHI	KOHIMA	6.57	110	*e*x	Pn	19 28 30.4	+2.0
KOHI				*e*x	Sn	19 29 35.2	-8.3
SAIH	SAIHA	7.64	136	*e*P	Pn	19 28 45.1	+2.0
DDI	Dehra Dun	8.33	287	*e*P	Pn	19 28 54.2	+1.7
DDI				*e*S	Sn	19 30 22.8	-4.0
SMLA	Simla	9.28	291	*e*P	Pn	19 29 06.8	+1.3
SMLA				*e*S	Sn	19 30 45.0	-4.9
SMLA				IAML		19 30 51.5	
	comp=N,13nm,0.5s						
SMLA				IAML		19 30 51.7	
	comp=E,26nm,0.3s						
CMAR	Chiang Mai Arr	14.41	129	Pn	Pn	19 30 14.2	-1.5
	comp=E,0.0nm,0.3s,baz=310,slow=7.0,SNR=1.7						
MKAR	Makanchi Array	19.03	349	P	Pn	19 31 17.4	+3.0
	comp=E,0.2nm,0.3s,baz=174,slow=9.4,SNR=11						
SONM	Songino Array	24.66	32	P	P	19 32 12.8	+0.2
	comp=E,0.3nm,0.5s,baz=224,slow=10,SNR=1.9						
ARCES	ARCESS Array B	54.12	338	P	P	19 36 16.9	+0.5
	comp=E,3.0nm,1.0s,baz=105,slow=10,SNR=1.8						
WRA	Warramunga Arr	66.00	131	P	P	19 37 37.7	-0.8
	comp=E,0.3nm,0.4s,baz=326,slow=6.6,SNR=15						
ASAR	Alice Springs	68.36	134	P	P	19 37 52.8	-0.8
	comp=E,0.3nm,0.6s,baz=317,slow=6.3,SNR=7.2						

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*IDC **05** 19:39:32.6±0.6, 10°.79S×165°.02E, h0^{km}, mb4.6/19, mb1 4.8/21, mb1mx4.7/29, mbtmp4.6/21, ML4.8/2, MS4.4/17, Ms1 4.4/17, ms1mx4.1/40, Error ellipse: s-maj=20.1km s-min=15.2km az=141.0*

*ISCJB **05** 19:39:35.7±0.1, 10°.82S±0°.03×164°.91E±0°.03, h31^{km}, mb5.0/153, MS4.5/21, Error ellipse: s-maj=3.7km s-min=3.6km az=37.5*

*NEIC **05** 19:39:36.4±1.3, 10°.75S×164°.95E, h24^{km}±9^{km}, mb5.1/124, Error ellipse: s-maj=3.5km s-min=3.3km az=69.0*

*GCMT **05** 19:39:37.4±0.3, 10°.76S±0°.03×164°.87E±0°.02, h15^{km}, MW5.1/85, Moment Tensor Solution. s18,c21; s85,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.64±.12; $M_{\theta\theta}$-1.24±.11; $M_{\phi\phi}$-2.40±.10; $M_{r\theta}$1.08±.48; $M_{\theta\phi}$1.40±.08; $M_{\phi r}$-4.68±.45; Best double couple: $M_0$5.92200×10^{16} NP1:ϕ_s162.00000°,δ72.00000°,λ99.00000°. NP2: ϕ_s316.00000°,δ20.00000°,λ65.00000°. Principal axes: T 6.2010, Plg62.0000°, Azm85.0000°; N -0.5570, Plg8.0000°, Azm340.0000°; P -5.6430, Plg27.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **05** 19:39:39.5, 10°.68S×164°.76E, h45^{km}, mB5.2/32, mb4.8/51, Ms5.1/23, Ms7 4.7/22*

ISC 05 19:39:37.4±0.3, 10°.81S±0°.04×165°.01E±0°.04, h31^{km}, n284, σ1^{s}.12/292, mb5.1/160, MS4.4/22, 3C-2D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.17	285	*e*P	Pn	19 40 52.0	-0.6
HNR				*e*S	Sn	19 41 52.0	+0.8
HNR	Honiara	5.17	285	*e*Pn	Pn	19 40 52.0	-0.6
HNR				*e*Sn	Sn	19 41 52.4	+1.2
HNR	Honiara	5.17	285	Pn	Pn	19 40 53.0	+0.4
	39nm,0.3s,baz=166,slow=2.3,SNR=68						
HNR				Sn	Sn	19 41 52.4	+1.2
	18nm,0.3s,baz=17,slow=19,SNR=3.3						
HNR				LR	LR	19 43 12.0	
	comp=Z,8µm,18.3s,baz=111,slow=42						
MARNC	Mare, Loyalty	11.00	165	*e*Pn	Pn	19 42 12.8	+0.1
DZM	Mont Dzumac	11.29	173	*e*Pn	Pn	19 42 16.5	-0.2
	297nm,1.4s						
DZM				*e*LR	LR	19 44 52.9	
	comp=Z,2µm,24.5s						
DZM	Mont Dzumac	11.29	173	*e*Pn	Pn	19 42 16.8	+0.1
DZM				*e*Sn	Sn	19 44 18.9	-3.0
DZM	Mont Dzumac	11.29	173	Pn	Pn	19 42 16.8	+0.1
	6.5nm,0.3s,baz=303,slow=20,SNR=26						
DZM				Sn	Sn	19 44 19.5	-2.3
	baz=316,slow=18,SNR=3.2						
DZM				LR	LR	19 45 53.3	
	comp=Z,2µm,18.6s,baz=18,slow=34						
OUENC	Ouen Island, N	11.68	172	*e*Pn	Pn	19 42 22.7	+0.7
PINNC	Pines Island,	11.97	169	*e*Pn	Pn	19 42 27.5	+1.5
RABL	Rabaul	14.32	296	*e*Pn	Pn	19 42 57.5	-0.6
MSVF	Nonsavu	14.39	120	*e*Pn	Pn	19 43 00.9	+1.8
TARA	Tarawa	14.42	34	*e*Pn	Pn	19 42 59.1	-0.4
PATS	Pohnpei	18.75	339	*e*P	P	19 43 52.1	-1.8
	431nm,1.5s						
EIDS	Eidsvold	19.59	220	*e*P	P	19 44 02.8	-0.4
	74nm,1.0s						
KWAJ	Kwajalein Atol	19.65	8	*e*P	P	19 44 01.3	-2.4
	183nm,0.6s						
CTA	Charters Tower	20.28	241	P	P	19 44 11.4	+0.8
	62nm,0.9s,baz=68,slow=13,SNR=15						
CTA				LR	LR	19 51 31.7	
	comp=Z,1µm,20.8s,baz=46,slow=35						
CTAO	Charters Tower	20.28	241	*e*P	P	19 44 11.0	+0.4
	134nm,1.1s						
LHI	Lord Howe Isla	21.34	194	*e*P	P	19 44 23.1	+1.1
	314nm,1.4s						
COEN	Coen	21.55	259	*e*P	P	19 44 23.4	-1.0
	45nm,1.2s						
ARMA	Armidale	23.14	211	*e*P	P	19 44 41.4	+0.2
	112nm,1.0s						
RAO	Raoul Island	24.32	141	*e*P	P	19 44 51.4	-0.9
	303nm,0.6s						
KNTN	Kanton	24.43	73	*e*P	P	19 44 53.2	-0.3
	278nm,1.4s						
JAY	Jayapura	25.48	287	P	P	19 45 01.7	-1.4
JAY	Jayapura	25.48	287	P	P	19 45 02.6	-0.5
	baz=294,slow=4.4,SNR=4.9						
OUZ	Omahuta	25.53	164	*e*P	P	19 45 05.2	+1.9
	186nm,1.6s						
GENI	Genyem	25.96	287	P	P	19 45 07.0	-0.4
CAN	Canberra	28.42	208	*e*P	P	19 45 28.9	-0.4
	27nm,1.2s						
HIZ	Hauiti	28.96	164	*e*P	P	19 45 34.5	+0.4
	286nm,1.7s						
H11S2	WAKE ISLAND Hy	29.16	3	T	T	20 16 08.6	
	baz=184,slow=76,SNR=114						
H11S3	WAKE ISLAND Hy	29.16	3	T	T	20 16 08.6	
	baz=184,slow=76,SNR=80						
H11S1	WAKE ISLAND Hy	29.18	3	T	T	20 16 09.7	
	baz=184,slow=76,SNR=88						
URZ	Urewera	29.41	160	*e*P	P	19 45 39.4	+1.4
	56nm,1.4s						
BKZ	Black Stump Fm	30.04	162	*e*P	P	19 45 44.1	+0.4
	79nm,1.5s						
STKA	Stephens Creek	30.12	222	*e*P	P	19 45 45.1	+0.6
	12nm,0.9s						
STKA	Stephens Creek	30.12	222	P	P	19 45 44.9	+0.4
	41nm,0.9s,baz=28,slow=9.3,SNR=75						
STKA				LR	LR	19 57 23.4	
	comp=Z,2µm,18.1s,baz=34,slow=36						
H11N1	WAKE ISLAND Hy	30.38	4	T	T	20 17 36.8	
	baz=184,slow=76,SNR=61						
H11N3	WAKE ISLAND Hy	30.39	4	T	T	20 17 49.9	
	baz=184,slow=76,SNR=43						
H11N2	WAKE ISLAND Hy	30.40	4	T	T	20 17 42.6	
	baz=184,slow=76,SNR=44						
WRAB	Tennant Creek	30.87	249	*e*P	P	19 45 48.9	-2.3
	49nm,1.3s						
WB2	Warramunga Arr	30.88	249	*e*P	P	19 45 49.0	-2.3
WR1	Warramunga Arr	30.89	249	*e*P	P	19 45 49.5	-1.9
	51nm,1.2s						
WR1				*e*PcP	PcP	19 48 48.5	+0.7
WRA	Warramunga Arr	30.89	249	P	P	19 45 49.5	-1.9
	9.6nm,1.1s,baz=78,slow=9.2,SNR=29						
WRA				PcP	PcP	19 48 48.5	+0.7
	1.5nm,0.8s,baz=81,slow=2.5,SNR=5.6						
WRA				LR	LR	19 58 33.7	
	comp=Z,1µm,18.3s,baz=70,slow=37						
BFZ	Birch Farm	31.37	163	*e*P	P	19 45 57.4	+2.0
	93nm,1.1s						
GUMO	Guam	31.41	320	LR	LR	19 57 55.2	
	comp=Z,424nm,19.7s,baz=168,slow=35						
SNZO	South Karori	31.56	166	*e*P	P	19 45 59.1	+2.1
	149nm,1.2s						
THZ	Tophouse	31.61	169	*e*P	P	19 45 57.7	+0.2
	75nm,1.4s						
TOO	Toolangi	31.91	210	*e*P	P	19 46 00.5	+0.3
	16nm,0.7s						
AS01	Alice Springs	32.21	243	*e*P	P	19 46 00.3	-2.7
AS31	Alice Springs	32.25	243	*e*P	P	19 46 01.4	-2.1
	3.3nm,0.8s						
ASAR	Alice Springs	32.25	243	P	P	19 46 01.4	-2.0
	12nm,0.9s,baz=73,slow=9.3,SNR=49						
ASAR				PcP	PcP	19 48 51.5	-0.1
	1.8nm,0.8s,baz=84,slow=2.5,SNR=5.0						
ASAR				LR	LR	19 58 19.0	
	comp=Z,738nm,18.8s,baz=73,slow=35						
KHZ	Kahutara	32.36	168	*e*P	P	19 46 03.9	-0.1
	101nm,1.5s						
LTZ	Lake Taylor	32.48	170	*e*P	P	19 46 05.7	+0.6
	123nm,1.7s						
FOZ	Fox Glacier	32.87	174	*e*P	P	19 46 10.3	+1.9
	133nm,1.5s						
OXZ	Oxford	32.97	171	*e*P	P	19 46 10.1	+0.7
	65nm,1.4s						
MTN	Manton Dam	33.20	263	*e*P	P	19 46 10.3	-1.5
	37nm,1.7s						
RPZ	Rata Peaks	33.20	172	*e*P	P	19 46 13.9	+2.5
	51nm,1.3s						
FAKI	Fak Fak	33.42	281	*e*P	P	19 46 13.1	-0.6
	13nm,1.0s						
MQZ	McQueen’s Vall	33.44	170	*e*P	P	19 46 13.5	+0.1
	184nm,1.6s						
LBZ	Lake Benmore	33.76	173	*e*P	P	19 46 17.2	+1.0
	88nm,1.8s						
WKZ	Wanaka	34.08	175	*e*P	P	19 46 18.3	-0.7
	95nm,1.5s						
ODZ	Otahua Downs	34.46	173	*e*P	P	19 46 21.4	-0.9
	36nm,1.3s						
BBOO	Buckleboo	34.47	226	*e*P	P	19 46 22.5	0.0
	112nm,0.9s						
SIJI	Sorong	34.94	284	LR	LR	20 03 14.5	
	comp=Z,621nm,18.1s,baz=128,slow=41						
BNDI	Bandanaira	35.32	277	P	P	19 46 27.4	-2.7
TAU	Tasmania Unive	35.50	203	*e*P	P	19 46 29.1	-2.1
	165nm,2.0s						
JOHN	Johnston Islan	37.19	43	*e*P	P	19 46 45.3	-0.7
	481nm,1.4s						
FITZ	Fitzroy Crossi	38.74	255	*e*P	P	19 46 57.4	-1.8
	18nm,1.0s						
FITZ	Fitzroy Crossi	38.74	255	LR	LR	20 02 53.0	
	comp=Z,728nm,18.0s,baz=90,slow=36						
FORT	Forrest	39.59	234	*e*P	P	19 47 05.8	-0.3
	39nm,0.9s						
SANI	Sanana	39.69	280	P	P	19 47 04.1	-3.1
BATI	Baumata	40.63	267	P	P	19 47 13.1	-1.9
BATI	Baumata	40.63	267	LR	LR	20 05 17.4	
	comp=Z,521nm,18.5s,baz=122,slow=38						
BBSI	Bau Bau	42.31	274	P	P	19 47 33.5	+4.8
PPT	Papeete	44.46	104	LR	LR	20 04 04.6	
	comp=Z,376nm,18.4s,baz=247,slow=33						
PPT2	Papeete2	44.46	104	*e*S	S	19 54 19.2	-0.4
	268nm,25.0s						
PPT2				*e*LR	LR	20 00 08.4	
	comp=Z,615nm,30.0s						
MBWA	Marble Bar	44.59	251	*e*P	P	19 47 45.8	-1.3
	19nm,1.1s						
TBI	Tubuai	45.09	112	*e*S	S	19 54 28.5	0.0
	208nm,26.5s						
TBI				*e*LQ	LQ	19 58 38.5	
	1µm,29.0s						
TBI				*e*LR	LR	20 00 27.0	
	comp=Z,480nm,28.2s						
HON	Honolulu	48.37	49	*e*P	P	19 48 15.2	-1.5
	320nm,1.2s						
KHLU	Kahalu`u	48.95	52	*e*P	P	19 48 21.9	+0.7
	372nm,1.5s						
KHU	Kahuku	48.97	53	*e*P	P	19 48 22.6	+1.1
	374nm,1.5s						
MORW	Morawa	49.10	241	*e*P	P	19 48 21.6	-0.6
	19nm,0.9s						
JAGI	Jajag, Banyuwa	50.15	268	*e*P	P	19 48 31.2	+0.8
	59nm,0.7s						
KKM	Kota Kinabalu	51.37	287	*e*P	P	19 48 39.3	-0.4
	30nm,1.0s						
JOW	Kunigami	51.69	317	*e*P	P	19 48 41.1	-0.6
	50nm,1.2s						
MJAR	Matsushiro Arr	53.43	333	P	P	19 48 54.0	-0.5
	2.6nm,0.9s,baz=163,slow=11,SNR=4.6						
MAJO	Matsushiro	53.43	333	*e*P	P	19 48 54.1	-0.4
	44nm,1.7s						
MJB9	Matsu-Tunnel	53.43	333	*e*P	P	19 48 54.7	+0.1
	44nm,1.7s						
SMRI	Semarang	53.98	269	*e*P	P	19 48 57.8	-1.2
	57nm,1.2s						
TAOE	Nuku Hiva Isla	54.02	93	*e*LR	LR	20 04 24.5	
	comp=Z,315nm,27.2s						
SBUM	Sibu	54.14	281	*e*P	P	19 48 59.8	-0.4
	7.7nm,1.3s						
JNU	Nakatsue	54.46	325	*e*P	P	19 49 01.9	-0.2
	83nm,1.6s						
YULB	Yu-li	54.62	309	*e*P	P	19 49 04.2	+0.7
	29nm,1.3s						
NACB	Ninganchiao	54.83	310	*e*P	P	19 49 04.8	-0.1
	36nm,1.3s						
TPUB	Ta-pu	55.08	308	*e*P	P	19 49 06.8	0.0
	40nm,1.2s						
SSLB	Suanglung	55.10	309	*e*P	P	19 49 06.9	0.0
	54nm,1.7s						
YHNB	Yeheng	55.27	310	*e*P	P	19 49 07.6	-0.6
	49nm,1.4s						
KSM	Kuching	55.75	279	*e*P	P	19 49 10.4	-1.4
	18nm,1.1s						
ERM	Erimo	56.27	341	*e*P	P	19 49 15.0	+0.2
	76nm,1.1s						

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CISI   Cisompet, Garu   56.49 268 eP      P       19 49 17.2 +0.1
       84nm,1.1s
RKT    Rikitea          58.35 110 eS      S       19 57 30.3 -0.7
       273nm,27.0s
RKT                               eLR     LR      20 06 34.0
       comp=Z,480nm,29.5s
SSE    Sheshan          59.18 316 eP      P       19 49 34.6 -1.0
       81nm,1.3s
KSRS   Korea Array      59.27 326  P      P       19 49 36.8 +0.7
       3.7nm,1.0s,baz=210,slow=26,SNR=5.4
KS15   Wonju Array Si   59.28 326 eP      P       19 49 36.3 +0.1
KSAR   Wonju Array Be   59.28 326  P      P       19 49 36.8 +0.6
KS01   Wonju Array Si   59.30 326 eP      P       19 49 35.2 -1.1
YSS    Yuzh-Sakhalins   60.84 343 eP      P       19 49 46.5 -0.1
       137nm,1.8s
NJ2    Nanjing          61.34 316 eP      P       19 49 50.5 +0.1
NJ2                                pmax   pmax
       comp=Z,8.0nm,0.6s
MNAI   Manna            61.76 271 eP      P       19 49 54.0 +0.5
       361nm,1.2s
QIZ    Qiongzhong       61.93 298  P      P       19 49 55.1 +0.5
QIZ                                S      S       19 58 18.3 +1.3
QIZ                                SS     SS      20 02 20.7 +0.8
QIZ                                pmax   pmax
       comp=Z,10.0nm,1.4s
QIZ                                LR     LR
       comp=N,160nm,18.1s
QIZ                                LR     LR
       comp=E,230nm,23.0s
QIZ                                LR     LR
       comp=Z,310nm,24.0s
QIZ    Qiongzhong       61.93 298 eP      P       19 49 54.7 +0.1
       22nm,1.4s
USA0B  Ussuriysk Arra   62.41 334 eP      P       19 49 57.0 -0.3
       49nm,1.8s
USRK   Ussuriysk Ar.    62.41 334  P      P       19 49 56.4 -0.9
       1.9nm,0.8s,baz=242,slow=4.1,SNR=4.1
SMY    Shemya           63.76   6 eP      P       19 50 06.4 +0.3
       889nm,2.0s
MDJ    Mudanjiang       63.80 333 eP      P       19 50 06.5 -0.1
       18nm,1.3s
PETK   Petropavlovsk-   63.97 355 eP      P       19 50 07.4  0.0
PETK   Petropavlovsk-   63.97 355  P      P       19 50 08.1 +0.6
       4.6nm,0.8s,baz=140,slow=12,SNR=4.5
PEA1   Petropavlovsk-   63.97 355 eP      P       19 50 08.1 +0.6
KIWB   Kanaga Island    64.28  12 eP      P       19 50 09.6 +0.1
ADK    Adak             64.41  12 eP      P       19 50 10.2 -0.1
       197nm,1.8s
CN2    Changchun        65.17 329 eP      P       19 50 15.8 +0.3
CN2                               esP     pwP     19 50 33.0 +3.3
CN2                               eS      S       19 58 55.2 -1.3
CN2                                pmax   pmax
       comp=Z,10.0nm,0.6s
CN2                                pmax   pmax
       comp=Z,200nm,3.0s
CN2                                LR     LR
       comp=N,270nm,11.0s
CN2                                LR     LR
       comp=E,240nm,11.0s
CN2                                LR     LR
       comp=Z,270nm,11.0s
IPM    Ipoh             65.47 280 eP      P       19 50 17.4 -0.7
       34nm,1.2s
CASY   Casey            66.34 201 eP      P       19 50 24.9 +2.2
       33nm,1.6s
VNDA   Vanda            66.72 181 eP      P       19 50 27.2 +2.1
VNDA   Vanda            66.72 181  P      P       19 50 27.9 +2.8
       9.2nm,0.9s,baz=338,slow=6.8,SNR=5.6
VNDA                               LR     LR      20 16 33.1
       comp=Z,128nm,18.3s,baz=28,slow=33
ENH    Enshi            67.18 309 eP      P       19 50 28.1 -0.7
       28nm,1.0s
NONG   Nongkai          67.45 295  P      P       19 50 31.2 +0.5
       0.4nm,1.1s,150nm
BJT    Baijiatuau       67.83 321 eP      P       19 50 33.0 +0.4
       16nm,1.4s
BJI    Beijing          67.84 321⇑eP      P       19 50 34.4 +1.7
BJI                                S      S       19 59 30.9 +1.9
BJI                                pmax   pmax
       comp=Z,6.0nm,1.6s
XAN    Xi'an            69.42 313  P      P       19 50 43.3 +0.5
XAN                                pP     pwP     19 50 56.4 -0.5
XAN                                sP     PcP     19 51 01.7 -4.3
XAN                                pmax   pmax
       comp=Z,7.0nm,0.9s
XAN                                pmax   pmax
       comp=Z,220nm,5.8s
XAN    Xi'an            69.42 313 eP      P       19 50 42.8  0.0
       11nm,1.0s
UTTA   Uttaradit        69.67 294  P      P       19 50 46.3 +1.8
       2.8nm,1.0s
KMI    Kunming          70.38 302  P      P       19 50 50.3 +1.2
KMI                                pmax   pmax
       comp=Z,19nm,0.8s
KMI                                pmax   pmax
       comp=Z,140nm,4.4s
KMI    Kunming          70.38 302 eP      P       19 50 48.5 -0.5
       29nm,1.2s
FALS   False Pass       70.61  19 eP      P       19 50 51.0 +1.5
       174nm,1.4s
SPIA   Saint Paul Isl   70.75  14 eP      P       19 50 51.1 +0.8
       369nm,1.6s
MA2    Magadan          71.08 352 eP      P       19 50 53.8 +1.5
       58nm,1.6s
HHC    Hu-ho-hao-te     71.18 320 eP      P       19 50 55.6 +2.1
HHC                                pP     pwP     19 51 06.4 -1.3
HHC                                PcP    PcP     19 51 18.4 +5.0
HHC                                S      S       20 00 09.1 +0.5
HHC                                pmax   pmax
       comp=Z,16nm,0.8s
HHC                                pmax   pmax
       comp=Z,160nm,5.2s
HHC                                LR     LR
       comp=N,220nm,10.4s
HHC                                LR     LR
       comp=E,350nm,9.5s
HHC                                LR     LR
       comp=Z,180nm,17.8s
CM01   Chiang Mai Arr   71.33 294 eP      P       19 50 54.6 -0.1
CM31   Chiang Mai Arr   71.35 294 eP      P       19 50 55.4 +0.6
       18nm,1.1s
CMAR   Chiang Mai Arr   71.35 294  P      P       19 50 55.6 +0.8
       7.3nm,1.0s,baz=116,slow=4.4,SNR=32
CMAR                               LR     LR      20 22 52.4
       comp=Z,60nm,18.6s,baz=285,slow=36
CMMT   Chiang Mai       71.46 294  P      P       19 50 55.7 +0.2
       12nm,1.3s
CHTO   Chiang Mai       71.46 294 eP      P       19 50 54.6 -0.9
       22nm,1.4s
CHTO   Chiang Mai       71.46 294  P      P       19 50 55.8 +0.3
       56nm,1.3s
HIA    Hailar           71.81 331 eP      P       19 50 56.3 -0.7
       20nm,1.1s
CD2    Chengdu          71.88 308 eP      P       19 50 57.6 -0.2
CD2                                S      S       20 00 15.9 -1.1
CD2                                pmax   pmax
       comp=Z,10.0nm,0.5s
CD2                                pmax   pmax
       comp=Z,120nm,5.0s
CD2                                LR     LR
       comp=E,710nm,17.4s
CD2                                LR     LR
       comp=Z,430nm,17.9s
LZH    Lanzhou          74.06 312 ⇑P      P       19 51 12.7 +1.9
LZH                                pP     PcP     19 51 26.4 +0.5
LZH                                sP     pwP     19 51 31.6 +6.6
LZH                                PP     PP      19 54 00.6 +4.1
LZH                               eS      S       20 00 40.2 -1.6
LZH                                sS     sS      20 01 03.5 +8.1
LZH                                pmax   pmax
       comp=Z,34nm,1.4s
LZH                                pmax   pmax
       comp=Z,190nm,6.0s
LZH                                LR     LR
       comp=N,570nm,16.3s
LZH                                LR     LR
       comp=E,520nm,16.4s
LZH                                LR     LR
       comp=Z,580nm,17.5s
GAMB   Gambell          76.47  10 eP      P       19 51 24.0 +0.3
       33nm,1.2s
ULN    Ulaanbaatar      77.68 324 eP      P       19 51 31.8 +0.6
       17nm,0.9s
SONA0  Songino Array    78.05 324 eP      P       19 51 33.8 +0.7
SONM   Songino Array    78.05 324  P      P       19 51 33.8 +0.6
       6.2nm,1.0s,baz=134,slow=5.0,SNR=16
SONA1  Songino Array    78.05 324 eP      P       19 51 33.5 +0.2
GTA    Gaotai           78.37 314 ⇓P      P       19 51 36.6 +1.4
GTA                                pP     PcP     19 51 43.8 -0.6
GTA                                pmax   pmax
       comp=Z,7.0nm,1.2s
GTA                                pmax   pmax
       comp=Z,220nm,5.2s
GTA                                LR     LR
       comp=N,180nm,17.5s
GTA                                LR     LR
       comp=E,270nm,18.4s
GTA                                LR     LR
       comp=Z,320nm,17.5s
ANM    Nome             78.42  13 eP      P       19 51 35.8 +1.1
       12nm,1.3s
BILL   Bilibino         78.64   0 eP      P       19 51 36.0 +0.1
       20nm,1.2s
QSPA   South Pole Qui   79.20 180 eP      P       19 51 40.5 +1.2
       27nm,1.0s
SPU    Mount Spurr      79.31  20 eP      P       19 51 39.0 -0.7
SHL    Shillong         79.77 299 eP      P       19 51 43.0 -0.2
       64nm,1.8s
CAST   Castle Rocks     80.95  18 eP      P       19 51 48.6 +0.1
       20nm,1.7s
RPN    Rapa Nui         81.33 116  LR     LR      20 24 20.3
       comp=Z,84nm,18.3s,baz=4.5,slow=33
SCM    Sheep Creek Mo   81.37  21 eP      P       19 51 49.5 -1.4
       18nm,1.0s
DIV    Divide           81.46  22 eP      P       19 51 49.9 -1.4
       9.3nm,0.9s
TLY    Talaya           81.52 326 eP      P       19 51 51.3 -0.5
       18nm,0.9s
LSA    Lhasa            81.61 302 eP      P       19 51 53.5 +0.2
       5.8nm,1.1s
IM3    Indian Mountai   82.39  16 eP      P       19 51 55.6 -0.4
MDM    Murphy Dome      83.23  18 eP      P       19 51 59.5 -1.0
       7.6nm,1.2s
HDA    Harding Lake     83.25  19 eP      P       19 52 00.1 -0.4
       9.7nm,1.0s
HDA    Harding Lake     83.25  19  P      P       19 52 00.7 +0.1
       baz=227
RIDG   Independ'e Rid   83.50  20 eP      P       19 52 02.4 +0.5
       16nm,1.2s
IL1    Eielson Array    83.52  19 eP      P       19 52 00.4 -1.5
ILAR   Eielson Array    83.52  19  P      P       19 52 01.9  0.0
       1.7nm,0.7s,baz=246,slow=5.2,SNR=17
ILB    Eielson Array    83.52  19 eP      P       19 52 01.5 -0.4
       12nm,1.5s
O02D   Mt. Diablo Mer   83.66  47  P      P       19 52 04.2 +0.9
       baz=250
K02D   Willamette Mer   83.91  45  P      P       19 52 04.9 +0.4
       baz=249
SCRK   Sand Creek       83.94  20 eP      P       19 52 04.5 +0.3
       8.5nm,1.1s
O03E   Paynes Creek     84.42  47  P      P       19 52 07.8 +0.7
       baz=251
AFDM   Forest Hills D   84.59  49 eP      P       19 52 07.8 -0.2
       12nm,1.3s
MAW    Mawson           84.67 202  LR     LR      20 24 03.9
       comp=Z,154nm,20.2s,baz=142,slow=32
CMB    Columbia Colle   84.74  50 eP      P       19 52 07.9 -0.9
       3.7nm,0.9s
JIRN   Jiri             85.24 299 eP      P       19 52 12.5 +0.6
       45nm,1.1s
ISA    Isabella, Lake   85.50  53 eP      P       19 52 11.9 -0.8
       3.3nm,0.8s
ISA    Isabella, Lake   85.50  53  P      P       19 52 13.0 +0.2
       baz=253
WAKR   Walker           85.60  50 eP      P       19 52 13.2 -0.1
       20nm,1.8s
DAWY   Dawson           85.60  21 eP      P       19 52 13.3 +0.8
       7.7nm,1.1s
EDW2   Edwards Air Fo   85.66  53  P      P       19 52 13.6 +0.1
       baz=254
TIXI   Tiksi            85.72 349 eP      P       19 52 12.4 -0.4
       24nm,1.8s
BFSC   Mount Baldy Ra   85.75  54  P      P       19 52 13.5 -0.5
       baz=254
J05D   Fort Rock, OR    85.79  45  P      P       19 52 14.4 +0.3
       baz=251
PKI    Pulchoki         85.89 299 eP      P       19 52 15.3 +0.2
       37nm,1.2s
PKIN   Phulchoki        85.90 299 eP      P       19 52 15.3 +0.2
       28nm,1.3s
E04D   Cinebar          85.99  41  P      P       19 52 15.6 +0.8
       baz=250
PAHR   Pah Rah Range    86.00  49 eP      P       19 52 14.6 -0.6
       6.9nm,1.1s
CWC    Cottonwood Cre   86.03  52  P      P       19 52 15.1 -0.3
       baz=254
LRMC   Laurel Mtn Rad   86.07  53  P      P       19 52 15.9 +0.3
       baz=254
DMN    Daman            86.16 299 eP      P       19 52 17.0 +0.6
       59nm,1.2s
RYN    Ryan             86.32  50 eP      P       19 52 16.6 -0.2
       6.6nm,1.2s
DAC    Darwin (Calif)   86.36  52 eP      P       19 52 16.8 -0.3
       5.7nm,1.2s
MONP2  Monument Peak    86.38  56  P      P       19 52 17.3  0.0
       baz=255
NV01   Mina Array Sit   86.42  50 eP      P       19 52 17.0 -0.4
NVAR   Mina Array Bea   86.42  50  P      P       19 52 17.2 -0.1
       4.7nm,1.0s,baz=234,slow=7.7,SNR=16
NVAR                               LR     LR      20 25 27.8
       comp=Z,325nm,18.4s,baz=266,slow=32
NV11   Mina Array Sit   86.54  50 eP      P       19 52 17.5 -0.3
       0.8nm,1.1s
PFO    Pinyon Flats O   86.54  55  P      P       19 52 18.1 +0.2
       baz=255
TPFO   Pinon Flats      86.54  55  P      P       19 52 18.2 +0.2
       baz=255
KVN    Kaiserville      86.75  49 eP      P       19 52 18.4 -0.5
       5.6nm,1.1s
HEC    Hector,Ludlow    86.96  54  P      P       19 52 20.1 +0.2
       baz=255
FURC   Furnace Creek,   86.98  52  P      P       19 52 20.1 +0.3
       baz=254
BELC   Belle Mtn. Jos   87.01  55  P      P       19 52 20.3  0.0
       baz=255
WVOR   Wild Horse Val   87.34  46 eP      P       19 52 21.6 -0.1
       9.5nm,1.2s
GMRC   Granite Mounta   87.48  54  P      P       19 52 22.8 +0.2
       baz=255
DANN   Dangsing         87.49 299 eP      P       19 52 23.4 +0.5
       10nm,0.7s
KOLN   Koldanda         87.49 299 eP      P       19 52 22.5 -0.3
       23nm,1.4s
J08A   Circle Bar Ran   87.73  45 eP      P       19 52 23.6 +0.1
       14nm,1.4s
IRM    Iron Mountain    87.74  55  P      P       19 52 24.1 +0.4
       baz=255
G08A   Pilot Rock       87.97  43 eP      P       19 52 24.4 -0.2
       7.5nm,1.1s
PYUN   Piuthan          88.09 299 eP      P       19 52 25.0 -0.7
       15nm,1.0s
WMQ    Urumqi           88.41 315 eP      P       19 52 25.9 -0.8
WMQ                                sP     pwP     19 52 45.9 +4.6
WMQ                                pmax   pmax
       comp=Z,15nm,1.5s
WMQ                                LR     LR
       comp=N,290nm,15.9s
WMQ                                LR     LR
       comp=E,290nm,17.9s
WMQ                                LR     LR
       comp=Z,280nm,18.9s
R11A   Troy Canyon, C   88.46  51 eP      P       19 52 26.9 -0.2
       3.3nm,1.2s
R11A   Troy Canyon, C   88.46  51  P      P       19 52 27.4 +0.2
       baz=255
PDMCI  Parker Dam,Lak   88.58  55  P      P       19 52 28.2 +0.7
       baz=256
W13A   Hualapai Mount   88.97  54 eP      P       19 52 29.6 -0.1
       8.1nm,1.3s
214A   Organ Pipe Nat   89.11  57  P      P       19 52 31.2 +1.1
       baz=257
ELK    Elko             89.33  48 eP      P       19 52 31.1 -0.1
       2.9nm,0.3s
LCMT   Little Creek M   89.93  52 eP      P       19 52 34.2 +0.2
       8.6nm,1.2s
CCUT   Cedar City       89.97  52 eP      P       19 52 34.9 +0.6
       5.7nm,1.0s
SZCU   Shurtz Canyon    90.19  52 eP      P       19 52 35.3  0.0
       27nm,1.9s
KNB    Kanab            90.26  52 eP      P       19 52 36.3 +0.7
       15nm,1.4s
U15A   North Rim        90.54  53 eP      P       19 52 37.1  0.0
       5.7nm,0.9s
HLID   Hailey           90.63  46 eP      P       19 52 37.6 +0.4
       5.8nm,1.2s
HLID   Hailey           90.63  46  P      P       19 52 37.8 +0.6
       baz=256
PKCU   Pink Cliffs      90.75  52 eP      P       19 52 37.9 -0.2
       21nm,1.5s
X16A   Lo Mia Camp, P   90.78  55 eP      P       19 52 38.1  0.0
       5.4nm,1.3s
MTPU   Mount Pierson    90.99  52 eP      P       19 52 39.8 +0.6
       8.5nm,1.3s
DUG    Dugway, Tooele   90.99  49  P      P       19 52 39.4 +0.5
       baz=257
WUAZ   Wupatki          91.07  54 eP      P       19 52 39.4  0.0
       6.6nm,1.1s
WUAZ   Wupatki          91.07  54  P      P       19 52 40.0 +0.6
       baz=258
MSU    Marysvale        91.10  51 eP      P       19 52 40.2 +0.7
HVU    Hansel Valley    91.38  48 eP      P       19 52 40.6 -0.2
       7.9nm,1.0s
NLU    North Lily Min   91.49  50 eP      P       19 52 41.3  0.0
       5.8nm,1.1s
SYO    Syowa Base       91.80 197⇑eP      P       19 52 40.6 -1.3
SYO    Syowa Base       91.80 197⇓ePcP    P       19 52 42.0 +0.1
DLMT   Dillon           92.32  44 eP      P       19 52 44.9 -0.1
       11nm,1.1s
LRM    Limekiln Ridge   92.52  44 eP      P       19 52 45.5 -0.4
MK01   Makanchi Array   92.84 317 eP      P       19 52 46.2 -1.0
MK31   Makanchi Array   92.85 317 eP      P       19 52 46.2 -1.0
MK32   Makanchi Array   92.85 317 eP      P       19 52 47.2  0.0
MK32                              ePKKPdf PKKPdf  20 09 58.0 -0.1
MKAR   Makanchi Array   92.85 317 eP      P       19 52 46.1 -1.1
       34nm,0.9s
MKAR                               PKKPbc PKKPdf  20 09 58.0 -0.1
MKAR   Makanchi Array   92.85 317  P      P       19 52 47.2  0.0
       6.2nm,0.9s,baz=90,slow=4.9,SNR=30
MKAR                               PKKPbc PKKPdf  20 09 58.0 -0.1
       0.8nm,1.0s,baz=254,slow=3.7,SNR=4.5
ZAA0   Zalesovo Array   92.94 324 eP      P       19 52 46.4 -1.0
       5.7nm,1.0s
ZALV   Zalesovo Beam    92.94 324 eP      P       19 52 46.4 -1.0
ZALV   Zalesovo Beam    92.94 324  P      P       19 52 46.6 -0.7
       3.6nm,0.9s,baz=133,slow=8.3,SNR=9.8
ZAA1   Zalesovo Array   92.94 324 eP      P       19 52 46.6 -0.7
BOZ    Bozeman (W)      93.03  44 eP      P       19 52 48.4 +0.1
       6.1nm,0.8s
BOZ    Bozeman (W)      93.03  44  P      P       19 52 48.9 +0.7
       baz=258
FXWY   Fox Creek        93.05  46 eP      P       19 52 48.4 -0.1
       3.0nm,1.0s
MAKZ   Makanchi         93.06 317 eP      P       19 52 48.0 -0.2
       11nm,1.0s
BW06   Boulder Array    93.92  47  P      P       19 52 52.5  0.0
       baz=259
PD31   Pinedale Array   93.92  47 eP      P       19 52 51.9 -0.7
       5.2nm,1.4s
PDAR   Pinedale Array   93.92  47 eP      P       19 52 51.2 -1.3
PDAR   Pinedale Array   93.92  47  P      P       19 52 52.1 -0.4
       1.6nm,0.9s,baz=222,slow=2.0,SNR=10
YKA    Yellowknife Ar   95.09  27  P      P       19 52 55.2 -1.8
       0.8nm,0.9s,baz=256,slow=4.5,SNR=8.3
YKB5   Yellowknife Ar   95.09  27 eP      P       19 52 55.2 -1.9
NRIK   Noril'sk         95.65 340  P      P       19 52 58.3 -1.2
       1.1nm,0.5s,baz=146,slow=15,SNR=2.4
KURK   Kurchatov        95.99 320 eP      P       19 53 02.3 +0.9
KURBB  Kurchatov Arra   96.03 320  P      P       19 53 02.3 +0.7
       0.3nm,0.2s,baz=95,slow=5.8,SNR=3.7
KSH    Kashi            96.04 309  P      P       19 53 04.6 +2.5
KSH                                pP     pwP     19 53 18.7 +1.9
KSH                                PP     PP      19 57 01.2 +6.1
LTX    Lajitas          96.35  61 eP      P       19 53 03.2 -0.6
TXAR   Lajitas Array    96.35  61  P      P       19 53 03.2 -0.6
       0.2nm,0.6s,baz=208,slow=1.7,SNR=2.4
TXAR                               LR     LR      20 28 26.6
       comp=Z,220nm,20.2s,baz=0.0,slow=30
SSPA   Standing Stone  117.48  50 ePKPdf  PKPdf   19 58 17.2 -3.2
LPAZ   La Paz          120.94 116  PKP    PKiKP   19 58 29.6 +0.9
LPAZ                              epPKPdf pPKPdf  19 58 36.0 -1.2
LPAZ   La Paz          120.94 116  PKP    PKiKP   19 58 29.6 +0.9
       1.0nm,0.7s,baz=233,slow=5.1,SNR=2.8
FIA0   FINESS Array S  121.28 338 ePKPdf  PKiKP   19 58 27.7 +0.5
FINES  FINESS Array B  121.28 338  PKP    PKiKP   19 58 27.7 +0.5
       3.0nm,1.0s,baz=316,slow=3.8,SNR=3.4
CPUP   Villa Florida   124.72 133 ePKPdf  PKPdf   19 58 34.7  0.0
CPUP   Villa Florida   124.72 133  PKP    PKPdf   19 58 35.0 +0.3
       0.9nm,0.6s,baz=200,slow=2.9,SNR=2.4
AKASG  Malin Array Be  126.27 327  PKP    PKiKP   19 58 38.1 +0.7
       0.4nm,0.6s,baz=73,slow=1.3,SNR=3.8
AK11   Malin Array Si  126.31 327 ePKPdf  PKPdf   19 58 36.8 -0.2
BR101  Keskin Array S  128.27 313 ePKPdf  PKiKP   19 58 41.9 -0.1
BRTR   Keskin Array B  128.27 313  PKP    PKiKP   19 58 41.9 -0.1
       1.4nm,1.0s,baz=76,slow=5.2,SNR=4.2
GEC2   GERESS Array S  135.17 333 ePKPdf  PKiKP   19 58 54.8 -0.7
GERES  GERESS Array B  135.17 333  PKP    PKiKP   19 58 54.8 -0.7
       1.1nm,0.9s,baz=26,slow=3.4,SNR=5.2
ES19   SONSECA Array   149.58 343 ePKPdf  PKPdf   19 59 18.2 -1.5
ES19                              ePKPbc  PKPbc   19 59 23.2 -1.0
ESDC   Sonseca Array   149.62 343  PKPbc  PKPbc   19 59 23.5 -0.9
       0.7nm,0.6s,baz=17,slow=3.8,SNR=3.4
TOA0   Torodi Ar. Sit  163.51 280 ePKPdf  PKPdf   19 59 38.6 +0.4
TORD   Torodi Ar. Bea  163.51 280  PKP    PKPdf   19 59 39.2 +1.1
       0.9nm,0.9s,baz=45,slow=1.2,SNR=4.9
TOA1   Torodi Ar. Sit  163.51 280 ePKPdf  PKPdf   19 59 39.2 +1.1
```

IDC ***05*** *19:55:28.3±1.9, 1°.33N×127°.12E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/46, mbtmp3.4/4, Error ellipse: s-maj=179.2km s-min=21.2km az=67.0*

ISCJB ***05*** *19:55:33.3±1.3, 0°.8N±0°.1×126°.2E±0°.1, h39^{km}, mb3.3/4, Error ellipse: s-maj=20.8km s-min=13.2km az=32.2*

DJA ***05*** *19:55:36.6±0.4, 1°N±4°×12°6E±°, h40^{km}, M3.7/9, MLv3.7/9*

ISC 05 19:55:34.7±1.4, **1°.0N**±0°.2×**126°.3E**±0°.2, **h39^{km}, n10, σ1^{s}.65**/7, **mb3.4**/4, **Northern Molucca Sea**

```
Code   Station Name      Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
TNTI   Ternate           1.09 100  P       Pn       19 55 59.6 +6.2
KMSI   Cibinong          2.34 261  P       Pn       19 56 07.6 -3.1
SANI   Sanana            3.00 186  P       Pn       19 56 16.8 -3.0
LUWI   Luwuk             4.04 241  P       Pn       19 56 35.0 +0.9
MRSI   Marisa            4.38 264  P       Pn       19 56 38.2 -0.5
APSI   Ampana            5.00 248  P       Pn       19 56 46.7 -0.6
WRA    Warramunga Arr   22.22 160  P       P        20 00 26.4 -1.6
       1.0nm,0.7s,baz=341,slow=11,SNR=21
ASAR   Alice Springs    25.57 164  P       P        20 01 01.2 +1.0
       0.3nm,0.3s,baz=344,slow=12,SNR=18
MKAR   Makanchi Array   59.59 326  P       P        20 05 33.1 -1.5
       0.2nm,0.5s,baz=125,slow=7.6,SNR=4.9
BVAR   Borovoye Array   69.40 328  P       P        20 06 40.5 +1.9
       0.3nm,0.8s,baz=132,slow=6.2,SNR=2.6
```

IDC ***05*** *20:00:47.5±11.0, 10°.25S×165°.36E, h0^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.6/46, mbtmp4.0/5, ML4.1/2, Error ellipse: s-maj=202.3km s-min=35.9km az=42.0*

NEIC ***05*** *20:00:53.4±3.4, 10°.91S×164°.97E, h10^{km}, mb4.4/8, Error ellipse: s-maj=66.8km s-min=13.2km az=222.0*

ISC 05 20:00:55.6±2.4, **10°.6S**±0°.2×**165°.2E**±0°.2, **h46^{km}, n19, σ1^{s}.88**/21, **mb4.4**/11, **Santa Cruz Islands**

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Code   Station Name      Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
HNR    Honiara           5.27 283 ePn      Pn       20 02 11.1 -0.8
HNR                               eSn      Sn       20 03 11.5 +0.1
HNR                               eSn      Sn       20 03 11.7 +0.3
HNR    Honiara           5.27 283  Pn      Pn       20 02 11.0 -0.8
       8.7nm,0.3s,baz=186,slow=0.7,SNR=8.5
HNR                                Sn      Sn       20 03 11.7 +0.3
       baz=36,slow=19,SNR=2.1
DZM    Mont Dzumac      11.43 174 ePn      Pn       20 03 35.3 -1.0
DZM                               eSn      Sn       20 05 46.0 +3.2
DZM    Mont Dzumac      11.43 174  Pn      Pn       20 03 36.7 +0.3
       0.9nm,0.3s,baz=6.7,slow=17,SNR=9.9
OUENC  Ouen Island, N   11.82 172 ePn      Pn       20 03 36.5 -5.1
OUENC                             eSn      Sn       20 05 52.6 +0.5
PINNC  Pines Island,    12.10 170 ePn      Pn       20 03 36.6 -8.8
PINNC                             eSn      Sn       20 05 53.7 -5.4
CTAO   Charters Tower   20.49 240 eP       Pn       20 05 35.1 +2.8
       14nm,1.1s
STKA   Stephens Creek   30.34 222 eP       P        20 07 05.1 +2.1
       3.3nm,1.9s
STKA   Stephens Creek   30.34 222  P       P        20 07 05.8 +2.7
       1.8nm,0.8s,baz=63,slow=13,SNR=5.1
WRAB   Tennant Creek    31.07 249 eP       P        20 07 07.8 -1.9
       6.8nm,1.4s
WB2    Warramunga Arr   31.07 249 eP       P        20 07 09.9 +0.2
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	11nm,1.5s						
WR1	Warramunga Arr	31.08	249	*e*P	P	20 07 09.2	-0.6
	14nm,1.8s						
WRA	Warramunga Arr	31.08	249	P	P	20 07 09.2	-0.6
	0.3nm,0.6s,baz=70,slow=10,SNR=4.8						
SNZO	South Karori	31.68	166	*e*P	P	20 07 16.0	+1.3
	334nm,1.4s						
THZ	Tophouse	31.74	169	*e*P	P	20 07 16.4	+1.1
	262nm,2.0s						
ASAR	Alice Springs	32.46	242	P	P	20 07 22.9	+1.1
	0.5nm,0.8s,baz=66,slow=10.0,SNR=8.2						
BBOO	Buckleboo	34.69	226	*e*P	P	20 07 40.3	-0.8
	45nm,1.8s						
MLZ	Mavora Lakes	34.70	176	*e*P	P	20 07 40.1	-0.8
	46nm,1.5s						
FITZ	Fitzroy Crossi	38.93	254	*e*P	P	20 08 17.7	+0.4
	3.5nm,1.0s						

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*ISCJB **05** 20:15:09.7±0.2, 23°.68S±0°.03×66°.90W±0°.03, h212^{km}±3^{km}, mb4.1/13, Error ellipse: s-maj=5.0km s-min=3.5km az=34.5*
*SJA **05** 20:15:09.5±0.6, 23°.67S×66°.82W, h218^{km}±5^{km}, ML4.2, MW3.8*
*NEIC **05** 20:15:09.3±0.8, 23°.75S×66°.75W, h195^{km}±12^{km}, mb4.7/6, Error ellipse: s-maj=16.2km s-min=9.3km az=90.0*
*IDC **05** 20:15:10.2±0.9, 23°.60S×66°.70W, h194^{km}±8^{km}, mb3.5/9, mb1 3.8/15, mb1mx3.7/27, mbtmp4.2/15, Error ellipse: s-maj=14.7km s-min=12.0km az=29.0*
*VAO **05** 20:15:10.4±0.3, 23°.74S×66°.99W, h219^{km}±5^{km}, mb4.4*
*GUC **05** 20:15:12.4±0.5, 23°.51S×67°.43W, h244^{km}±8^{km}, ML4.9*
ISC 05 20:15:10.5±0.6, **23°.67S**±0°.04×**66°.88W**±0°.04, **h207**^{km}±6^{km}, **n96**, σ**1^{s}34**/122, **mb4.2**/13, **11C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	1.43	71	*e*P	Pn	20 15 45.4	+0.6
HJA				IAML		20 15 46.3	
	comp=Z,1μm,0.5s						
HJA				*e*S	S	20 16 11.3	+0.4
SLA	San Lorenzo	1.64	130	*e*P	Pn	20 15 47.5	+1.3
SLA				IAML		20 15 47.7	
	comp=Z,842nm,0.3s						
SLA				*e*S	S	20 16 13.6	-0.1
YJA	Yavi	1.95	41	*e*P	Pn	20 15 50.5	+0.9
YJA				*e*S	S	20 16 20.1	+0.6
LVC	Limon Verde	2.15	299	*e*Pn	Pn	20 15 52.4	+0.9
LVC				*e*Sn	S	20 16 23.5	+0.6
LVC	Limon Verde	2.15	299	*e*P	Pn	20 15 52.5	+1.0
LVC				*e*S	S	20 16 23.8	+0.9
LVC	Limon Verde	2.15	299	P	Pn	20 15 52.4	+0.9
	comp=Z,218nm,0.3s,baz=125,slow=6.7,SNR=922						
LVC				S	S	20 16 23.1	+0.2
	comp=Z,143nm,0.3s,baz=20,slow=23,SNR=33						
LVC	Limon Verde	2.15	299	*e*P	Pn	20 15 52.6	+1.1
LVC				*e*S	S	20 16 23.0	+0.2
PB15	IPOC Station P	2.42	280	⇑*e*P	Pn	20 15 55.1	+0.8
PB15				*e*S	S	20 16 27.8	0.0
PB06	IPOC Station P	2.66	291	⇑*e*P	Pn	20 15 57.5	+0.7
PB06				*e*S	S	20 16 31.7	-0.7
PB06				IAML		20 16 32.5	
	comp=N,3μm,0.4s						
PB06				IAML		20 16 34.0	
	comp=N,3μm,0.2s						
PB09	IPOC Station P	2.87	310	⇑*e*P	Pn	20 16 00.4	+1.1
PB09				*e*S	S	20 16 37.0	+0.2
PB09				IAML		20 16 39.1	
	comp=N,770nm,0.4s						
GO02	Mina Guanaco	2.88	238	*e*Pn	Pn	20 15 59.9	+0.5
GO02				*e*Sn	S	20 16 37.1	-0.1
GO02	Mina Guanaco	2.88	238	*e*P	Pn	20 16 00.0	+0.5
GO02				*e*S	S	20 16 36.8	-0.4
PB03	IPOC Station P	3.10	301	⇑*e*P	Pn	20 16 02.4	+0.4
PB03				*e*S	S	20 16 40.2	-1.4
PB03				IAML		20 16 43.2	
	comp=N,2μm,0.4s						
PB05	IPOC Station P	3.16	284	⇑*e*P	Pn	20 16 02.8	+0.2
PB05				*e*S	S	20 16 41.1	-1.7
PB05				IAML		20 16 45.1	
	comp=E,2μm,0.4s						
PB04	IPOC Station P	3.29	293	*e*Pn	Pn	20 16 04.4	+0.2
PB04				*e*Sn	S	20 16 43.9	-1.8
PB04	IPOC Station P	3.29	293	⇑*e*P	Pn	20 16 04.4	+0.2
PB04				*e*S	S	20 16 44.2	-1.5
PB04				IAML		20 16 47.9	
	comp=N,3μm,0.3s						
PB10	IPOC Station P	3.37	272	*e*Pn	Pn	20 16 05.5	+0.5
PB10				*e*Sn	S	20 16 45.9	-1.2
PB10	IPOC Station P	3.37	272	⇑*e*P	Pn	20 16 05.5	+0.5
PB10				*e*S	S	20 16 45.0	-2.0
PB07	IPOC Station P	3.38	304	⇑*i*P	Pn	20 16 05.6	+0.3
PB07				*i* S	S	20 16 45.9	-1.7
PB07				IAML		20 16 47.7	
	comp=E,2μm,0.4s						
AHML	Horco Molle	3.40	156	*e*P	Pn	20 16 04.9	-0.5
AHML				*e*S	S	20 16 46.4	-1.6
PB01	IPOC Station P	3.56	317	*e*Pn	Pn	20 16 07.6	+0.3
PB01				*e*Sn	S	20 16 50.1	-1.2
PB01	IPOC Station P	3.56	317	*e*P	Pn	20 16 07.8	+0.4
PB01				*e*S	S	20 16 50.2	-1.1
PB01				IAML		20 16 54.7	
	comp=E,836nm,0.4s						
PB02	IPOC Station P	3.64	309	*e*P	Pn	20 16 08.5	+0.2
PB02				*e*S	S	20 16 50.9	-2.2
PB02				IAML		20 16 56.6	
	comp=E,2μm,0.5s						
PB08	IPOC Station P	4.10	329	*e*P	Pn	20 16 15.3	+1.0
PB08				*e*S	S	20 17 03.6	-0.2
PB08				IAML		20 17 05.7	
	comp=E,551nm,0.3s						
PB11	IPOC Station P	4.67	326	*e*Pn	Pn	20 16 20.5	-0.6
PB11				*e*Sn	S	20 17 13.2	-3.1
MNMC	Minye Minye	5.18	330	*e*Pn	Pn	20 16 27.7	0.0
MNMC				*e*Sn	S	20 17 26.3	-1.9
MNMCX	Minye Minye	5.18	330	*e*P	Pn	20 16 27.7	0.0
MNMCX				*e*S	S	20 17 25.7	-2.5
LCO	Las Campanas	6.33	212	*e*Pn	Pn	20 16 40.1	-2.2
LCO				*e*Sn	S	20 17 41.6	-13
LCO	Las Campanas	6.33	212	*e*P	Pn	20 16 40.4	-2.0
GO04	Tololo Observa	7.36	208	*e*Pn	Pn	20 16 53.6	-2.1
GO04				*e*Sn	S	20 18 06.7	-13
LPAZ	La Paz	7.44	351	*e*Pn	Pn	20 16 56.8	-0.3
LPAZ				*e*Sn	S	20 18 19.5	-2.3
LPAZ	La Paz	7.44	351	P	Pn	20 16 57.6	+0.5
	comp=E,1.8nm,0.3s,baz=137,slow=5.4,SNR=24						
LPAZ				S	S	20 18 20.4	-1.4
	comp=E,0.5nm,0.3s,baz=200,slow=4.3,SNR=5.5						
LPAZ	La Paz	7.44	351	*e*P	Pn	20 16 57.4	+0.3
CPUP	Villa Florida	9.06	109	*e*Pn	Pn	20 17 15.6	-1.9
CPUP	Villa Florida	9.06	109	P	Pn	20 17 16.2	-1.3
	comp=E,0.2nm,0.3s,baz=291,slow=12,SNR=19						
CPUP	Villa Florida	9.06	109	*e*P	Pn	20 17 16.3	-1.3
SIV	San Ignacio	9.39	37	P	Pn	20 17 20.4	-1.5
	comp=E,1.4nm,0.3s,baz=226,slow=13,SNR=28						
ROC1	El Roble	9.96	201	*e*Pn	Pn	20 17 24.9	-4.5
PEL	Peldehue	10.01	199	*e*Pn	Pn	20 17 25.2	-4.6
AQDB	Aquidauana	10.84	75	*e*P	Pn	20 17 40.3	-0.3
TRCB	Terra Rica	13.13	89	*e*P	Pn	20 18 10.8	+1.3
PTGB	Pitanga	13.56	97	*e*P	P	20 18 17.3	+0.2
CPSB	Cacapava Do Su	13.72	122	*e*P	Pn	20 18 15.9	-0.8
C2SB	Chapadao do Su	13.97	72	*e*P	Pn	20 18 20.0	+0.1
PLTB	Pedras Altas	14.25	127	*e*P	Pn	20 18 23.9	+0.7
NNA	Nana	14.99	319	*e*Pn	P	20 18 34.1	+1.1
	comp=E,78nm,1.9s						
NNA	Nana	14.99	319	P	P	20 18 34.3	+1.3
	comp=E,1.6nm,0.3s,baz=160,slow=11,SNR=4.1						
ITRB	Iturama	15.85	79	*e*P	Pn	20 18 43.1	+0.2
FRTB	Fartura	15.89	92	*e*P	Pn	20 18 45.0	+1.7
GO06	Curarrehue	16.34	193	*e*P	Pn	20 18 48.5	-0.1
	comp=E,7.4nm,1.0s						
BB19B	Bebedouro	17.17	85	*e*P	Pn	20 18 58.4	-0.2
RCLB	Rio Claro- Sao	17.85	90	*e*P	P	20 19 04.1	-0.3
BDFB	Brasilia	19.47	69	*e*P	P	20 19 22.1	+0.1
	comp=E,65nm,0.8s						
BDFB	Brasilia	19.47	69	P	P	20 19 21.8	-0.1
	comp=E,6.8nm,0.3s,baz=248,slow=9.7,SNR=71						
JANB	Januaria	22.93	72	*e*P	P	20 19 55.7	-1.1
CAM01	Campos-RJ	23.33	90	*e*P	P	20 19 59.6	-0.7
PTGA	Pitinga	23.77	17	*e*P	P	20 20 01.4	-3.0
	comp=E,30nm,1.8s						
PTGA	Pitinga	23.77	17	P	P	20 20 03.9	-0.5
	comp=E,1.3nm,0.3s,baz=168,slow=19,SNR=3.3						
PTGA	Pitinga	23.77	17	*e*P	P	20 20 04.1	-0.3
ALF01	Guarapari-ES	24.41	88	*e*P	P	20 20 09.5	-0.6
SJMB	Sao Joao De Ma	24.45	83	*e*P	P	20 20 09.9	-0.6
BSFB	Barra de Sao F	24.72	84	*e*P	P	20 20 12.4	-0.6
RIB01	Linhares ES	25.01	85	*e*P	P	20 20 14.7	-0.9
GO09	Cerro Castillo	27.88	187	*e*P	P	20 20 41.7	+0.8
	comp=E,59nm,0.8s						
EFI	East Falkland	28.77	169	*e*P	P	20 20 48.3	-0.5
	comp=E,124nm,1.4s						
PMSA	Palmer Station	41.14	178	*e*P	P	20 22 35.3	+1.3
	comp=E,263nm,1.6s						
BANI	BANI	41.94	355	*e*P	P	20 22 40.7	-0.6
VNA3	Neumayer Olymp	57.43	161	P	P	20 24 38.5	+1.3
VNA1	Neumayer--Stat	57.62	160	P	P	20 24 40.6	+2.1
VNA2	Neumayer--Watz	57.99	160	P	P	20 24 42.4	+1.4
	baz=278,slow=8.0						
SNAA	Sanae	59.62	161	P	P	20 24 53.7	+1.3
SNAA	Sanae	59.62	161	P	P	20 24 53.7	+1.3
	comp=E,2.8nm,0.6s,baz=259,slow=8.7,SNR=13						
TXAR	Lajitas Array	63.48	324	P	P	20 25 20.2	+1.5
	comp=E,0.3nm,0.4s,baz=146,slow=7.6,SNR=6.4						
DBIC	Dimbokro	67.59	72	P	P	20 25 44.6	-0.6
	comp=E,3.9nm,0.9s,baz=209,slow=8.8,SNR=5.9						
DBIC	Dimbokro	67.59	72	*e*P	P	20 25 44.7	-0.6
SYO	Syowa Base	73.82	159	⇑*i*P	P	20 26 19.0	-2.9
SYO	Syowa Base	73.82	159	⇓*e*X	P	20 26 31.0	+9.1
SYO	Syowa Base	73.82	159	⇑*e*pP	pP	20 27 10.0	-2.4
TOA0	Torodi Ar. Sit	76.35	69	*e*P	P	20 26 35.0	-2.2
TORD	Torodi Ar. Bea	76.35	69	P	P	20 26 35.8	-1.4
	comp=E,3.2nm,0.5s,baz=280,slow=6.4,SNR=46						
PPT2	Papeete2	76.64	257	*e*LR	LR	20 26 24.6	
	comp=E,255nm,26.8s						
PDAR	Pinedale Array	76.92	329	P	P	20 26 41.6	+1.4
	comp=E,0.3nm,0.5s,baz=128,slow=7.6,SNR=3.7						
NVAR	Mina Array Bea	78.35	321	P	P	20 26 50.0	+1.9
	comp=E,0.2nm,0.4s,baz=168,slow=4.6,SNR=3.1						
BOSA	Boshof	80.78	117	P	P	20 27 01.9	+0.4
	comp=E,1.7nm,0.4s,baz=253,slow=3.5,SNR=8.6						
TAM	Tamanrasset	84.14	62	*e*P	P	20 27 19.1	+0.2
	comp=E,4.3nm,1.0s						
YKA	Yellowknife Ar	93.85	340	P	P	20 28 05.0	+1.3
	comp=E,0.2nm,0.5s,baz=135,slow=4.5,SNR=6.8						
LPH	Laupahoehoe	96.52	289	*e*P	P	20 28 19.3	+2.4
ASAR	Alice Springs	128.80	205	PKP	PKiKP	20 33 55.5	+0.8
	comp=E,0.3nm,0.8s,baz=132,slow=1.4,SNR=3.7						
WRA	Warramunga Arr	131.97	207	PKP	PKiKP	20 34 01.1	0.0
	comp=E,0.2nm,0.5s,baz=151,slow=1.7,SNR=3.7						
KURBB	Kurchatov Arra	142.05	36	PKP	PKPdf	20 34 16.2	-1.4
	comp=E,0.4nm,0.7s,baz=303,slow=2.9,SNR=4.0						
AAK	Ala-Archa	142.94	50	PKP	PKPdf	20 34 17.7	-2.0
	comp=E,1.0nm,0.7s,baz=216,slow=8.7,SNR=3.1						
ZALV	Zalesovo Beam	143.05	28	PKP	PKPbc	20 34 17.4	+0.6
	comp=E,0.7nm,0.5s,baz=308,slow=7.1,SNR=3.9						
KSH	Kashi	144.92	54	PKP	PKPdf	20 34 23.7	+0.5
KSH				pPKP	pPKPdf	20 35 16.5	-1.7
KSH				PP	PP	20 37 44.6	+1.2
KSH				AMB	AMB		
	comp=Z,450nm,8.6s						
MKAR	Makanchi Array	146.20	39	PKPbc	PKPbc	20 34 26.8	+0.3
	comp=Z,2.7nm,0.7s,baz=310,slow=3.0,SNR=39						
LZH	Lanzhou	165.25	31	⇑PKP	PKPdf	20 34 49.6	-0.8
LZH				pPKP	pPKPdf	20 35 43.5	-2.3
CMAR	Chiang Mai Arr	165.79	109	PKPab	PKPab	20 35 52.4	+0.6
	comp=Z,0.7nm,0.6s,baz=256,slow=5.4,SNR=7.8						

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*ISCJB **05** 20:41:26.1±0.5, 0°.97N±0°.05×100°.31E±0°.07, h200^{km}, mb3.8/17, Error ellipse: s-maj=9.7km s-min=7.6km az=9.6*
*IDC **05** 20:41:29.7±0.9, 1°.02N×100°.31E, h221^{km}±8^{km}, mb3.6/17, mb1 3.7/18, mb1mx3.4/59, mbtmp4.1/18, Error ellipse: s-maj=20.1km s-min=10.3km az=54.0*
*DJA **05** 20:41:29.2±0.7, 1°N±6°×10°0E±°, h194^{km}±7^{km}, M3.7/6, MLv3.7/6*
ISC 05 20:41:27.8±0.6, **0°.88N**±0°.07×**100°.19E**±0°.08, **h200**^{km}, **n26**, σ**1^{s}52**/34, **mb3.6**/17, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	Mandailing Nat	0.61	262	P	Pn	20 41 56.9	+1.5
MNSI				S	Sn	20 42 17.9	+1.3
BKNI	Bangkinang	1.02	123	P	Pn	20 42 00.2	+2.5
PDSI	Padang	1.80	171	P	Pn	20 42 05.2	+0.8
PBSI	Pulau Batu	2.12	244	P	Pn	20 42 08.7	+1.1
PBSI				S	Sn	20 42 38.7	+0.2
SISI	Saibi	2.45	207	P	Pn	20 42 11.6	+0.4
SISI				S	Sn	20 42 45.0	-0.1
GSI	Gunungsitoli	2.64	279	P	Pn	20 42 14.1	+0.7
KCSI	Kotacane, Aceh	3.56	317	P	Pn	20 42 24.0	-0.3
SNSI	Sinabang, Aceh	4.14	292	P	Pn	20 42 33.6	+2.2
CMAR	Chiang Mai Arr	17.51	356	P	P	20 45 19.0	+0.5
	0.1nm,0.3s,baz=190,slow=10,SNR=3.1						
WRA	Warramunga Arr	39.35	124	P	P	20 48 37.7	-0.5
	3.8nm,0.4s,baz=303,slow=9.0,SNR=60						
WRA				PcP	PcP	20 50 42.0	-0.5
	0.1nm,0.4s,baz=320,slow=2.7,SNR=4.5						
ASAR	Alice Springs	40.85	129	P	P	20 48 49.6	-0.8
	0.6nm,0.3s,baz=298,slow=7.8,SNR=17						
ASAR				ScP	ScP	20 54 14.8	-3.2
	0.5nm,0.8s,baz=303,slow=4.2,SNR=6.3						
MKAR	Makanchi Array	48.33	344	P	P	20 49 48.7	-0.5
	0.6nm,0.4s,baz=158,slow=8.5,SNR=26						
MKAR				pP	pP	20 50 36.8	+3.8
	0.6nm,0.7s,baz=147,slow=7.2,SNR=3.4						
STKA	Stephens Creek	50.95	134	P	P	20 50 08.8	-0.3
	1.1nm,0.6s,baz=306,slow=10,SNR=4.3						
KURBB	Kurchatov Arra	52.86	343	P	P	20 50 22.3	-0.6
	0.3nm,0.4s,baz=155,slow=6.9,SNR=4.2						
KURBB				pP	pP	20 51 10.2	+2.6
	0.3nm,0.7s,baz=168,slow=7.4,SNR=2.8						
ZALV	Zalesovo Beam	54.39	349	P	P	20 50 33.1	-0.9
	0.4nm,0.3s,baz=167,slow=6.8,SNR=4.0						
ZALV				pP	pP	20 51 21.7	+2.8
	0.8nm,0.5s,baz=187,slow=7.2,SNR=2.8						
BVAR	Borovoye Array	57.57	339	P	P	20 50 55.2	-1.3
	0.6nm,0.5s,baz=133,slow=10,SNR=4.1						
KBZ	Khabaz	66.28	318	P	P	20 51 54.0	-0.6
	0.9nm,0.7s,baz=129,slow=6.5,SNR=2.8						
BRTR	Keskin Array B	71.54	312	P	P	20 52 26.1	-1.3
	1.8nm,0.6s,baz=131,slow=7.1,SNR=15						
MAW	Mawson	73.11	194	P	P	20 52 36.8	+0.9
	10nm,0.6s,baz=34,slow=7.3,SNR=6.3						
MATP	Matopo	73.18	248	P	P	20 52 38.6	+1.2
	2.6nm,0.4s,baz=69,slow=6.0,SNR=14						
BOSA	Boshof	77.21	241	P	P	20 53 01.2	+0.8
	1.9nm,0.6s,baz=28,slow=4.7,SNR=3.8						
AKASG	Malin Array Be	77.34	322	P	P	20 52 58.2	-2.2
	0.4nm,0.4s,baz=92,slow=4.6,SNR=4.1						
IDI	Anoyia	77.50	306	P	P	20 53 01.3	-0.5
	11nm,0.9s,baz=351,slow=13,SNR=3.3						
FINES	FINESS Array B	81.67	332	P	P	20 53 23.5	0.0
	2.2nm,1.1s,baz=88,slow=3.5,SNR=2.8						
ARCES	ARCESS Array B	83.85	340	P	P	20 53 33.8	-0.8
	4.1nm,1.0s,baz=140,slow=3.2,SNR=4.4						
GERES	GERESS Array B	87.02	319	P	P	20 53 50.6	-0.2
	0.5nm,0.7s,baz=103,slow=4.2,SNR=3.5						

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*WEL **05** 20:55:16.5±1.0, 37°S±11°×18°0E±1°1, h46^{km}±49^{km}, ML3.9/16*
*IDC **05** 20:55:17.6±2.0, 36°.65S×178°.69E, h0^{km}, mb3.8/2, mb1 4.0/3, mb1mx3.8/22, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=45.6km s-min=30.6km az=111.0*
ISC 05 20:55:15.0±2.0, **37°.1S**±0°.2×**179°.9E**±0°.3, **h37**^{km}±7^{km}, **n40**, σ**0^{s}64**/52, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.32	248	P	Pn	20 55 36.1	-0.8
MXZ				S	Sn	20 55 51.9	-1.3
WMGZ	Waiomatatini S	1.36	237	P	Pn	20 55 37.5	+0.1
WMGZ				S	Sn	20 55 54.5	+0.4
PUZ	Puketiti	1.61	232	P	Pn	20 55 41.2	+0.4
PUZ				S	Sn	20 56 00.8	+0.5
PKGZ	Pakihiroa	1.63	240	P	Pn	20 55 40.9	-0.1
PKGZ				S	Sn	20 56 00.9	+0.1
HAZ	Te Kaha	1.78	247	P	Pn	20 55 43.4	+0.3
TWGZ	Tauwhareparae	1.84	233	P	Pn	20 55 45.0	+1.0
TWGZ				S	Sn	20 56 06.3	+0.1
CNGZ	Carnagh Statio	1.91	223	P	Pn	20 55 45.6	+0.7
RUGZ	Raukumara Rang	1.94	242	P	Pn	20 55 45.5	+0.1
TKGZ	Te Karaka	2.09	229	P	Pn	20 55 48.1	+0.7
TKGZ				S	Sn	20 56 12.0	0.0
MWZ	Matawai	2.23	235	P	Pn	20 55 49.0	-0.3
MWZ				S	Sn	20 56 14.4	-1.2
RIGZ	Rimuhau	2.31	225	P	Pn	20 55 50.3	-0.2
RIGZ				S	Sn	20 56 17.6	-0.1
PRGZ	Paritu Road	2.41	220	P	Pn	20 55 51.7	-0.1
URZ	Urewera	2.47	241	Pn	Pn	20 55 52.9	+0.3
	9.5nm,0.3s,baz=261,slow=4.6,SNR=36						
URZ				Sn	Sn	20 56 21.3	-0.2
	27nm,0.3s,baz=257,slow=18,SNR=17						
URZ	Urewera	2.47	241	P	Pn	20 55 53.0	+0.3
URZ				S	Sn	20 56 21.0	-0.6
MHGZ	Mahia Peninsul	2.57	216	P	Pn	20 55 54.3	+0.3
SNGZ	Shannon Statio	2.61	229	P	Pn	20 55 54.7	+0.1
SNGZ				S	Sn	20 56 24.4	-0.7
RTZ	Ruatahuna	2.74	235	P	Pn	20 55 57.0	+0.6
RTZ				S	Sn	20 56 28.6	+0.2
MUGZ	Murupara	2.81	239	P	Pn	20 55 57.4	0.0
RAHZ	Arahi	2.85	229	P	Pn	20 55 59.0	+1.1
RAHZ				S	Sn	20 56 30.4	-0.6
TGRZ	Tauranga	2.93	256	P	Pn	20 55 59.9	+0.9
MTHZ	Maungataniwha	2.96	233	P	Pn	20 55 59.8	+0.3
MTHZ				S	Sn	20 56 33.5	-0.3
ARHZ	Aropaoanui	3.13	225	P	Pn	20 56 01.9	+0.2
NMHZ	Naumai	3.13	229	P	Pn	20 56 02.8	+0.9
KUZ	Kuaotunu	3.33	275	P	Pn	20 56 04.0	-0.4
BKZ	Black Stump Fm	3.37	231	P	Pn	20 56 04.9	-0.1
TOZ	Tahuroa Road	3.52	258	P	Pn	20 56 06.6	-0.5
KWHZ	Kaweka Forest	3.57	228	P	Pn	20 56 07.4	-0.4
KAHZ	Kahuranaki	3.58	220	P	Pn	20 56 07.7	-0.1
MKAZ	Moumakai	3.75	268	P	Pn	20 56 10.6	+0.4
WIAZ	Waiheke Island	3.79	273	P	Pn	20 56 11.8	+1.0
BHHZ	Black Hill Sta	3.83	230	P	Pn	20 56 10.9	-0.5
KRVZ	Karewarewa	3.88	238	P	Pn	20 56 13.5	+1.3
WTVZ	West Tongariro	3.93	238	P	Pn	20 56 13.8	+1.0
HIZ	Hauiti	4.21	249	P	Pn	20 56 18.0	+1.5
DVHZ	Dannevirke	4.32	221	P	Pn	20 56 17.5	-0.5
ASAR	Alice Springs	41.46	276	P	P	21 02 57.9	-0.4
	0.9nm,0.6s,baz=120,slow=7.9,SNR=13						
WRA	Warramunga Arr	43.05	281	P	P	21 03 11.0	-0.3
	0.5nm,0.4s,baz=120,slow=7.7,SNR=17						
ARCES	ARCESS Array B	144.65	345	PKhKP	PKPpre	21 14 46.6	
	2.1nm,0.9s,baz=0.0,slow=4.5,SNR=3.7						
FINES	FINESS Array B	150.61	334	PKPbc	PKPab	21 15 09.2	+0.3
	0.9nm,0.7s,baz=117,slow=1.6,SNR=5.2						
TORD	Torodi Ar. Bea	156.11	184	PKPab	PKPab	21 15 41.7	+8.5
	0.5nm,1.0s,baz=195,slow=2.8,SNR=2.1						

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*IDC **05** 21:08:49.2±3.0, 36°.32N×70°.85E, h184^{km}±27^{km}, mb3.2/8, mb1 3.3/14, mb1mx3.0/43, mbtmp3.8/14, Error ellipse: s-maj=23.0km s-min=15.8km az=0.0*
*ISCJB **05** 21:08:50.3±0.5, 36°.51N±0°.04×70°.77E±0°.06, h200^{km}, mb3.3/7, Error ellipse: s-maj=7.5km s-min=4.8km az=158.1*
*NNC **05** 21:08:55.6±1.6, 36°.91N×70°.69E, h198^{km}±19^{km}, mb2.9, mpv3.9, Error ellipse: s-maj=17.6km s-min=11.1km az=49.0*
ISC 05 21:08:51.2±0.7, **36°.58N**±0°.07×**70°.77E**±0°.07, **h200**^{km}, **n36**, σ**1^{s}44**/42, **mb3.2**/7, **4C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	4.04	31	⇑P	Pn	21 09 55.0	+1.3
	16nm,0.3s						
SFK				⇓S	Sn	21 10 42.1	-0.8
	78nm,0.4s						
AML	Almayashu	5.99	21	P	Pn	21 10 19.6	+1.0
	SNR=51						
MNAS	Manas	6.05	12	⇓P	Pn	21 10 20.4	+1.3
	3.9nm,0.3s						
MNAS				⇓S	Sn	21 11 27.5	-1.2
	136nm,0.6s						
UCH	Uchtor	6.34	26	P	Pn	21 10 24.1	+0.9
	SNR=14						
EKS2	Erkin-Say	6.50	20	P	Pn	21 10 26.0	+1.1
	SNR=18						
KK31	Karatay Array	6.52	358	P	Pn	21 10 25.8	+0.7
	2.0nm,0.3s,baz=185,slow=14,SNR=59						
KK31				⇓S	Sn	21 11 36.1	-3.4
	21nm,0.4s,baz=173,slow=13,SNR=17						
AAK	Ala-Archa	6.70	24	⇑P	Pn	21 10 28.2	+0.7
	2.7nm,0.4s						
AAK				⇑S	Sn	21 11 42.8	-1.2
	36nm,0.6s						
AAK	Ala-Archa	6.70	24	P	Pn	21 10 28.9	+1.4
	1.9nm,0.3s,baz=169,slow=4.5,SNR=36						
AAK				S	Sn	21 11 43.9	0.0
	4.9nm,0.3s,baz=3.7,slow=19,SNR=34						
USP	Ospenovka	7.26	22	P	Pn	21 10 35.3	+0.5
	SNR=12						
TKM2	Tokmak 2	7.34	29	P	Pn	21 10 36.9	+1.0
	SNR=5.6						
TKM2	Tokmak 2	7.34	29	⇓P	Pn	21 10 36.8	+0.9
	6.0nm,0.5s						
GEYT	Alibeck	10.18	281	P	Pn	21 11 13.7	+1.0
	0.3nm,0.3s,baz=91,slow=10,SNR=2.9						
MAKZ	Makanchi	13.20	36	⇓P	Pn	21 11 51.4	+0.4
	1.9nm,0.6s						
MK31	Makanchi Array	13.33	37	⇓P	P	21 11 55.1	-0.4
	1.5nm,0.8s,baz=215,slow=10,SNR=9.9						
MKAR	Makanchi Array	13.33	37	P	Pn	21 11 53.9	+1.2
	0.1nm,0.3s,baz=223,slow=12,SNR=5.2						
PYUN	Piuthan	13.34	126	*e*P	Pn	21 11 50.7	-2.5
	4.1nm,0.3s						
DANN	Dangsing	13.69	123	*e*P	Pn	21 11 57.3	-0.3
	5.0nm,0.2s						
KOLN	Koldanda	13.96	125	*e*P	Pn	21 11 58.9	-2.0
	2.2nm,0.2s						
AB31	Akbulak array	14.92	331	P	Pn	21 12 12.2	0.0
	1.2nm,0.5s,baz=144,slow=11,SNR=38						
AB31				S	S	21 14 53.4	-4.5
	0.8nm,0.5s,baz=163,slow=21,SNR=5.5						
DMN	Daman	15.08	122	*e*P	Pn	21 12 14.0	-0.6
	3.0nm,0.2s						
KURBB	Kurchatov Arra	15.11	19	P	P	21 12 15.8	+0.8
	0.1nm,0.3s,baz=209,slow=12,SNR=7.9						
PKIN	Phulchoki	15.29	122	*e*P	Pn	21 12 17.0	-0.3
	7.3nm,0.4s						
PKI	Pulchoki	15.31	122	*e*P	Pn	21 12 17.2	-0.3
	7.4nm,0.4s						
GUN	Gumba	15.42	120	*e*P	Pn	21 12 19.0	+0.1
	5.8nm,0.4s						
JIRN	Jiri	15.79	120	*e*P	P	21 12 23.2	0.0
	32nm,0.4s						
BVAR	Borovoye Array	16.44	359	P	Pn	21 12 32.1	+1.5
	0.9nm,0.3s,baz=158,slow=9.3,SNR=17						
AKTO	Aktyubinsk	16.62	330	⇑P	Pn	21 12 33.7	+1.0
	11nm,1.0s						
AKTO	Aktyubinsk	16.62	330	P	Pn	21 12 34.2	+1.5
	1.3nm,0.3s,baz=140,slow=9.0,SNR=25						
ZALV	Zalesovo Beam	19.92	25	P	P	21 13 09.1	+1.7
	2.4nm,0.5s,baz=220,slow=12,SNR=17						
TLY	Talaya	27.72	47	P	P	21 14 21.9	+1.1
	0.6nm,0.5s,baz=268,slow=14,SNR=2.9						
FINES	FINESS Array B	37.31	326	P	P	21 15 45.1	+1.4
	1.1nm,0.7s,baz=128,slow=11,SNR=3.3						
ARCES	ARCESS Array B	41.00	338	P	P	21 16 16.3	+2.2
	3.8nm,1.1s,baz=117,slow=9.2,SNR=3.5						
NOA	NORSAR Array B	44.20	323	P	P	21 16 41.2	+1.1
	0.5nm,0.8s,baz=102,slow=7.7,SNR=3.2						
TORD	Torodi Ar. Bea	65.53	268	P	P	21 19 12.9	-0.6
	0.2nm,0.5s,baz=44,slow=8.2,SNR=3.4						
WRA	Warramunga Arr	82.19	122	P	P	21 20 48.6	-1.4
	0.2nm,0.4s,baz=324,slow=5.0,SNR=7.9						
ASAR	Alice Springs	84.45	125	P	P	21 21 00.4	-1.1
	0.2nm,0.5s,baz=310,slow=4.8,SNR=4.5						

MDD 05 21:23:20.0±0.3, **38°.05N**×**3°.27W**, **h3**^{km}±3^{km}, **mbLg2.5**/14, **Error ellipse: s-maj=2.2km s-min=2.0km az=57.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQES	Quesada	0.29	147	Pg	Pg	21 23 25.1	-0.4
	18nm,0.3s,SNR=35						
EQES				Lg	Lg	21 23 29.2	
	24nm,0.1s,SNR=11						
SESP	Santiago Espad	0.58	82	Pg	Pg	21 23 30.6	-0.5
	14nm,0.2s,SNR=7.9						
SESP				Lg	Lg	21 23 38.3	
	146nm,0.2s,SNR=7.9						
GORA	Gorafe	0.59	162	Pg	Pg	21 23 30.9	-0.5
	12nm,0.3s,SNR=7.9						
GORA				Lg	Lg	21 23 39.3	
	71nm,0.3s,SNR=7.9						
EQUE	Quentar	0.85	189	Pg	Pg	21 23 36.1	-0.2

	0.7nm,0.2s,SNR=16						
EQUE				Lg	Lg	21 23 46.6	
	26nm,0.2s,SNR=9.1						
EADA	Adamuz	1.04	277	Pg	Pg	21 23 38.8	-1.1
	16nm,0.5s,SNR=9.6						
EADA				Lg	Lg	21 23 52.4	
	44nm,0.1s,SNR=32						
EGOR	Sierra Gorda,	1.15	216	Pg	Pg	21 23 41.4	-0.6
	0.3nm,0.6s,SNR=7.9						
EGOR				Lg	Lg	21 23 59.2	
	22nm,0.3s,SNR=7.9						
EBER	Berja	1.19	165	Pg	Pg	21 23 42.1	-0.6
	5.3nm,0.5s,SNR=7.3						
EBER				Lg	Lg	21 23 59.2	
	29nm,0.2s,SNR=11						
ELGU	Los Guajares,	1.21	194	Pg	Pg	21 23 42.4	-0.8
	2.7nm,0.4s,SNR=7.9						
ELGU				Lg	Lg	21 23 59.0	
	27nm,0.3s,SNR=7.9						
ETOB	Tobarra	1.48	66	Pg	Pn	21 23 47.3	-0.3
	3.9nm,0.3s,SNR=14						
ETOB				Lg	Lg	21 24 06.6	
	9.2nm,0.1s,SNR=8.4						
EMUR	La Murta	1.62	97	Pg	Pn	21 23 49.5	0.0
	0.6nm,0.5s,SNR=7.7						
EMUR				Lg	Lg	21 24 11.1	
	23nm,0.3s,SNR=4.7						
ECAB	El Cabril	1.70	272	Pn	Pn	21 23 48.6	-1.9
	0.6nm,0.1s,SNR=7.9						
ECAB				Pg	Pb	21 23 51.3	-0.5
	1.6nm,0.3s,SNR=6.3						
ECAB				Lg	Lg	21 24 11.6	
	11nm,0.1s,SNR=5.0						
ESDC	Sonseca Array	1.71	342	Pg	Pn	21 23 51.2	+0.4
	1.4nm,0.2s,baz=162,slow=18,SNR=20						
ESDC				Lg	Lg	21 24 13.6	
	7.3nm,0.3s,baz=162,slow=30,SNR=36						
PAB	San Pablo	1.72	331	Pg	Pn	21 23 51.3	+0.4
	0.2nm,0.2s,SNR=7.9						
PAB				Lg	Lg	21 24 14.0	
	12nm,0.2s,SNR=7.9						
EMIJ	Mijas	1.90	219	Pg	Pb	21 23 55.4	+0.1
	0.5nm,0.5s,SNR=8.1						
EMIJ				Lg	Lg	21 24 21.6	
	94nm,0.5s,SNR=18						

IGIL ***05*** *21:23:47.8, 38.°06N×3.°29W, h0^{km}, ML3.5*
SFS ***05*** *21:23:48.0, 38.°00N×3.°20W, ML3.4, SABIOTE (JAEN)*
MDD ***05*** *21:23:48.9±0.1, 38.°04N×3.°28W, h3^{km}±1^{km}, mbLg3.7/25, Error ellipse: s-maj=1.4km s-min=1.2km az=46.0, PRXIMO*
MDD EMS: IV-V INTENSIDAD MAXIMA.
LDG ***05*** *21:23:49.2±0.1, 38.°04N×3.°26W, h2^{km}, Ml3.5/10, Error ellipse: s-maj=2.4km s-min=1.8km az=154.0*
INMG ***05*** *21:23:49.0±1.5, 38.°05N×3.°28W, h4^{km}±2^{km}, ML3.6, Error ellipse: s-maj=1.6km s-min=1.4km az=72.0*
CNRM ***05*** *21:23:52.2, 37.°79N×3.°12W, h9^{km}, ml3.8*
ISC 05 21:23:47.7±1.1**, 38.°12N**±0.°02×**3.°28W**±0.°01**, h7**^{km}±9^{km}**, n139,** σ1^{s}**78**/240**, 2C-3D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	Quesada	0.36	153	⇓Pg	Pg	21 23 54.1	-0.6
	475nm,0.3s,SNR=18						
EQES				Lg	Lg	21 23 58.3	
	2µm,0.5s,SNR=7.9						
SESP	Santiago Espad	0.58	90	⇑Pg	Pb	21 23 59.8	-0.5
	216nm,0.2s,SNR=18						
SESP				Lg	Lg	21 24 07.8	
	4µm,0.3s,SNR=7.9						
SESP	Santiago Espad	0.58	90	P	Pn	21 24 01.3	-1.2
SESP				S	Sb	21 24 10.2	+1.5
GORA	Gorafe	0.67	164	⇓Pg	Pg	21 23 59.8	-0.7
	78nm,0.2s,SNR=18						
GORA				Lg	Lg	21 24 08.3	
	2µm,0.4s,SNR=7.9						
EQUE	Quentar	0.92	188	Pg	Pg	21 24 04.2	-1.3
	50nm,0.5s,SNR=7.9						
EQUE				Lg	Lg	21 24 15.6	
	498nm,0.4s,SNR=7.9						
EADA	Adamuz	1.03	273	⇓Pg	Pg	21 24 07.8	+0.4
	18nm,0.2s,SNR=18						
EADA				Lg	Lg	21 24 21.3	
	2µm,0.4s,SNR=7.9						
EGOR	Sierra Gorda,	1.21	213	Pg	Pb	21 24 10.2	-0.8
	91nm,0.4s,SNR=7.9						
EGOR				Lg	Lg	21 24 26.8	
	937nm,0.5s,SNR=7.9						
EBER	Berja	1.26	166	Pg	Pn	21 24 11.2	-0.7
	133nm,0.5s,SNR=7.9						
EBER				Lg	Lg	21 24 27.4	
	659nm,0.3s,SNR=7.9						
ELGU	Los Guajares,	1.28	193	Pg	Pn	21 24 11.0	-1.1
	67nm,0.3s,SNR=7.9						
ELGU				Lg	Lg	21 24 26.2	
	334nm,0.5s,SNR=7.9						
ETOB	Tobarra	1.46	68	⇑Pg	Pg	21 24 16.4	+0.8
	38nm,0.5s,SNR=18						
ETOB				Lg	Lg	21 24 35.6	
	302nm,0.2s,SNR=7.9						
HORN	Hornachuelos	1.59	261	P	Pg	21 24 18.4	+0.3
HORN				S	Sg	21 24 43.2	+4.4
EMUR	La Murta	1.63	99	Pg	Pb	21 24 18.6	+0.4
	66nm,0.4s,SNR=7.9						
EMUR				Lg	Lg	21 24 40.1	
	1µm,0.4s,SNR=7.9						
EMAL	Malaga-Limoner	1.64	214	eP	Pn	21 24 17.4	+0.5
EMAL				i S	Sb	21 24 39.9	+0.9
ESDC	Sonseca Array	1.64	341	Pg	Pg	21 24 20.3	+1.2
	72nm,0.3s,SNR=7.9						
ESDC				Sn	Sb	21 24 38.7	-0.5
	SNR=7.9						
ESDC				Lg	Lg	21 24 42.5	
	SNR=7.9						
PAB	San Pablo	1.65	330	Pg	Pg	21 24 20.5	+1.1
	81nm,0.5s,SNR=7.9						
PAB				Sn	Sb	21 24 38.8	-0.8
	21nm,0.1s,SNR=7.9						
PAB				Lg	Lg	21 24 42.2	
	258nm,0.3s,SNR=7.9						
ECAB	El Cabril	1.69	269	Pg	Pb	21 24 19.6	+0.5
	12nm,0.4s,SNR=7.9						
ECAB				Lg	Lg	21 24 40.4	
	1µm,0.8s,SNR=7.9						
CART	Cartagena	1.88	106	Pn	Pn	21 24 21.1	+0.8
CART	Cartagena	1.88	106	eP	Pn	21 24 21.1	+0.8
CART				eS	Sb	21 24 45.3	-0.7
EMIJ	Mijas	1.96	218	Pn	Pn	21 24 19.0	-2.4
	12nm,0.3s,SNR=4.0						
EMIJ				Pg	Pb	21 24 24.3	+0.6
	62nm,0.3s,SNR=7.9						
EMIJ				Lg	Lg	21 24 47.4	
	231nm,0.4s,SNR=7.9						
ETRV	Los Montesinos	1.99	92	Pg	Pb	21 24 24.3	+0.2
	37nm,0.2s,SNR=7.9						
ETRV				Sn	Sn	21 24 45.9	-1.0
	131nm,0.2s,SNR=7.9						
ETRV				Lg	Lg	21 24 52.8	
	4µm,0.9s,SNR=7.9						
LIJA	Lijar	2.08	235	Pn	Pn	21 24 23.2	+0.1
LIJA	Lijar	2.08	235	i P	Pn	21 24 23.2	+0.1
LIJA				i S	Sn	21 24 51.0	+1.7
LIJA	Lijar	2.08	235	eS	Sn	21 24 48.0	-1.3
UCM	Universidad Co	2.18	1	eP	Pg	21 24 30.7	+1.2
UCM				eS	Sg	21 24 58.1	+0.2
REAL	Reales	2.25	224	Pn	Pb	21 24 28.8	+0.1
REAL	Reales	2.25	224	eP	Pb	21 24 28.8	+0.1
REAL	Reales	2.25	224	eP	Pb	21 24 28.8	+0.1
REAL				eS	Sn	21 24 49.5	-4.0
ECHE	Chera	2.32	50	Pn	Pn	21 24 27.0	+0.6
	6.5nm,0.4s,SNR=7.9						
ECHE				Pg	Pg	21 24 32.8	+0.6
	6.1nm,0.3s,SNR=7.9						
ECHE				Sn	Sb	21 24 57.4	-1.5
	0.7nm,0.2s,SNR=7.9						
ESPR	Espera	2.40	239	Pn	Pn	21 24 27.4	0.0
	7.2nm,0.3s,SNR=7.9						
ESPR				Pg	Pg	21 24 34.0	+0.3
	85nm,0.7s,SNR=7.9						
ESPR				Sn	Sn	21 24 54.7	-2.4
	5.3nm,0.4s,SNR=7.9						
EJIF	Jimena Fronter	2.42	227	Pg	Pb	21 24 31.9	+0.4
	3.2nm,0.5s,SNR=7.9						
EJIF				Lg	Lg	21 24 57.5	
	102nm,0.4s,SNR=7.9						
ALJ	Aljibe	2.47	231	eP	Pg	21 24 37.0	+2.0
ALJ				eS	Sb	21 25 02.0	-1.1
EBEN2	Beniarda presa	2.49	76	Pn	Pn	21 24 29.2	+0.5
	7.4nm,0.3s,SNR=7.9						
EBEN2				Pg	Pg	21 24 35.7	+0.4
	72nm,0.2s,SNR=7.9						
EBEN2				Sn	Sn	21 24 59.9	+0.6
	95nm,0.3s,SNR=7.9						
GIBL	Gibalbin	2.50	240	eS	Sg	21 25 10.4	+2.5
GUD	Guadarrama	2.61	345	Pg	Pg	21 24 38.1	+0.4
	13nm,0.2s,SNR=7.9						
GUD				Sn	Sn	21 25 03.1	+0.7
	8.4nm,0.4s,SNR=7.9						
GUD				Lg	Lg	21 25 12.9	
	197nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	2.71	264	Pn	Pn	21 24 31.4	-0.2
	0.8nm,0.3s,SNR=7.9						
EMIN				Pg	Pg	21 24 39.1	-0.5
	18nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	21 25 02.5	-2.1
	2.7nm,0.3s,SNR=7.9						
EMIN				Lg	Lg	21 25 11.3	
	270nm,0.5s,SNR=7.9						
CEUT	Ceuta	2.77	217	P	Pn	21 24 34.9	+2.4
CEUT				S	Sn	21 25 07.4	+1.1
CEU	Ceuta	2.78	218	eP	Pb	21 24 36.9	-0.9
CEU				eS	Sn	21 25 04.8	-1.7
CNIL	Conil	2.82	233	eP	Pg	21 24 45.0	+3.2
CNIL				eS	Sn	21 25 10.2	+2.8
GOG	Mont Gurugu	2.90	175	P	Pn	21 24 35.5	+1.1
GOG				S	Sn	21 25 08.0	-1.6
EPLA	Plasencia	2.92	313	Pn	Pn	21 24 35.0	+0.4
	0.0nm,0.3s,SNR=7.9						
EPLA				Pg	Pg	21 24 43.2	-0.5
	19nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	21 25 07.7	-2.3
	14nm,0.4s,SNR=7.9						
EPLA				Lg	Lg	21 25 20.4	
	61nm,0.2s,SNR=7.9						
PALE	Palemas	2.95	191	P	Pn	21 24 37.3	+2.3
PALE				S	Sn	21 25 08.5	-2.1
SMIR	Smir Dam	2.96	215	P	Pb	21 24 38.5	-2.3
PBAR	Barrancos	2.97	272	ePn	Pn	21 24 35.9	+0.7
PBAR				eSg	Sg	21 25 23.1	+0.1
PBAR				A	A	21 25 27.8	
	129nm,0.4s						
PBAR	Barrancos	2.97	272	Pn	Pn	21 24 35.9	+0.7
EBAD	Badajoz	3.00	283	Pn	Pn	21 24 35.3	-0.4
	3.6nm,0.2s,SNR=7.9						
EBAD				Pg	Pg	21 24 44.3	-0.9
	3.8nm,0.4s,SNR=7.9						
EBAD				Sn	Sn	21 25 08.7	-3.2
	48nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	21 25 24.6	
	225nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	3.12	43	Pn	Pn	21 24 38.9	+1.4
	0.7nm,0.3s,SNR=7.9						
EMOS				Pg	Pg	21 24 48.1	+0.6
	10.0nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	21 25 12.9	-2.3
	9.0nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	21 25 30.0	
	73nm,0.3s,SNR=7.9						
TAF	Taforalt	3.37	168	P	Pn	21 24 42.6	+1.7
TAF				S	Sn	21 25 18.0	-3.2
EGRO	El Granado	3.38	261	Pn	Pn	21 24 40.2	-0.7
	0.0nm,0.3s,SNR=7.9						
EGRO				Pg	Pg	21 24 51.1	-1.4
	5.7nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	21 25 19.5	-1.8
	7.5nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	21 25 34.3	
	297nm,0.7s,SNR=7.9						
PESTR	Estremoz	3.46	284	ePn	Pn	21 24 43.3	+1.2
PESTR	Estremoz	3.46	284	ePg	Pg	21 24 52.6	-1.5
PESTR				eSg	Sg	21 25 36.9	-2.1
PESTR				A	A	21 25 45.6	
	143nm,0.6s						
PESTR	Estremoz	3.46	284	P	Pb	21 24 49.7	+0.3
PESTR				S	Sb	21 25 34.5	+2.8
PMRV	Marv??o	3.47	293	ePn	Pn	21 24 43.9	+1.7
PMRV	Marv??o	3.47	293	ePg	Pg	21 24 53.5	-0.7
PMRV				eSg	Sg	21 25 37.9	-1.3
PMRV				A	A	21 25 42.4	
	189nm,0.6s						
PMRV	Marv??o	3.47	293	Pn	Pn	21 24 43.9	+1.7
PMRV				Pg	Pg	21 24 53.5	-0.7
PVAQ	Vaqueiros	3.59	260	ePn	Pn	21 24 43.5	-0.3
PVAQ	Vaqueiros	3.59	260	ePg	Pb	21 24 52.5	+1.0
PVAQ				eSn	Sn	21 25 24.6	-1.9
PVAQ				eSg	Sg	21 25 40.3	-2.7
PVAQ	Vaqueiros	3.59	260	Pn	Pn	21 24 43.5	-0.3
PVAQ				Pg	Pb	21 24 52.5	+1.0
PVAQ	Vaqueiros	3.59	260	P	Pb	21 24 52.0	+0.5
PVAQ				S	Sb	21 25 34.5	-0.8
PBEJ	Beja	3.62	270	eSg	Sg	21 25 40.8	-3.2
PBEJ				A	A	21 25 50.3	
	94nm,0.8s						
PCBR	Castelo Branco	3.70	299	ePn	Pn	21 24 45.5	+0.3
PCBR	Castelo Branco	3.70	299	ePg	Pg	21 24 57.1	-1.4
PCBR				eSg	Sg	21 25 46.3	-0.1
PCBR	Castelo Branco	3.70	299	Pn	Pn	21 24 45.5	+0.3
PCBR				Pg	Pg	21 24 57.1	-1.4
EIBI	Ibiza	3.73	75	Pn	Pn	21 24 45.7	-0.1
	0.6nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	21 25 27.9	-2.1
	5.4nm,0.5s,SNR=7.9						
EIBI				Lg	Lg	21 25 44.7	
	30nm,0.3s,SNR=7.9						
PBDV	Barranco-do-Ve	3.79	258	ePn	Pn	21 24 48.0	+1.4
PBDV				eSg	Sg	21 25 46.4	-3.2
PBDV	Barranco-do-Ve	3.79	258	Pn	Pn	21 24 48.0	+1.4
JBK	JBK	3.82	171	P	Pn	21 24 49.1	+1.9
JBK				S	Sn	21 25 30.9	-1.5
RSA	Sarsar	3.83	213	P	Pn	21 24 50.3	+3.2
RSA				S	Sn	21 25 31.5	-0.8
MESJ	Messejana	3.92	267	eP	Pn	21 24 48.1	-0.2
MESJ				eS	Sn	21 25 30.3	-4.1
MESJ				eSg	Sb	21 25 48.3	+3.7
MESJ				AML	AML	21 26 00.1	
	comp=N,103nm,0.4s						
MESJ	Messejana	3.92	267	ePn	Pn	21 24 48.7	+0.5
MESJ	Messejana	3.92	267	ePg	Pb	21 24 59.5	+2.4
MESJ				eSg	Sg	21 25 50.1	-3.3
MESJ	Messejana	3.92	267	Pn	Pn	21 24 48.7	+0.5
MESJ				Pg	Pb	21 24 59.5	+2.4
ERTA	Horta de San J	3.98	43	Pn	Pn	21 24 50.5	+1.4
	comp=N,0.3nm,0.2s,SNR=7.9						
ERTA				Pg	Pg	21 25 03.2	-0.6
	comp=N,0.0nm,0.4s,SNR=7.9						
PMTG	Montargil	3.99	285	ePn	Pn	21 24 49.0	-0.3
PMTG	Montargil	3.99	285	ePg	Pg	21 25 02.2	-1.9
PMTG				eSg	Sg	21 25 55.4	-0.4
PMTG	Montargil	3.99	285	Pn	Pn	21 24 49.0	-0.3
PMTG				Pg	Pg	21 25 02.2	-1.9
MTE	Manteigas	4.02	306	ePn	Pn	21 24 50.9	+1.2
MTE	Manteigas	4.02	306	ePg	Pg	21 25 03.1	-1.6
MTE				eSg	Sg	21 25 56.4	-0.3
MTE	Manteigas	4.02	306	Pn	Pn	21 24 50.9	+1.2
MTE				Pg	Pg	21 25 03.1	-1.6
PNCL	Nicolau / Gran	4.14	271	ePn	Pn	21 24 52.9	+1.5
PNCL	Nicolau / Gran	4.14	271	ePg	Pg	21 25 05.2	-1.8
PNCL				eSg	Sg	21 25 57.8	-2.9
PNCL	Nicolau / Gran	4.14	271	Pn	Pn	21 24 52.9	+1.5
PNCL				Pg	Pg	21 25 05.2	-1.8
ESAC	San Caprasio	4.19	30	Lg	Lg	21 26 05.4	
	comp=N,283nm,0.4s,SNR=7.9						
MVO	Moncorvo	4.20	318	ePn	Pn	21 24 54.1	+1.9
MVO	Moncorvo	4.20	318	ePg	Pg	21 25 07.8	-0.3
MVO				eSg	Sg	21 26 03.4	+0.9
MVO	Moncorvo	4.20	318	Pn	Pn	21 24 53.0	+0.8
	comp=N,0.9nm,0.3s,SNR=7.9						
MVO				Pg	Pg	21 25 06.7	-1.4
	comp=N,4.9nm,0.4s,SNR=7.9						
MVO				Lg	Lg	21 26 04.9	
	comp=N,82nm,0.3s,SNR=7.9						
PTOM	Tomar	4.28	292	ePn	Pn	21 24 55.0	+1.8
PTOM	Tomar	4.28	292	ePg	Pg	21 25 07.4	-2.2
PTOM				eSg	Sg	21 26 02.4	-2.6
PTOM	Tomar	4.28	292	Pn	Pn	21 24 55.0	+1.8
PTOM				Pg	Pg	21 25 07.4	-2.2
SICH	Sidi Chahed	4.34	203	P	Pn	21 24 55.6	+1.5
SICH				S	Sn	21 25 44.5	-0.4
MORF	Marmelete	4.34	261	ePn	Pn	21 24 55.8	+1.7
MORF				eSg	Sg	21 26 04.5	-2.5
MORF	Marmelete	4.34	261	Pn	Pn	21 24 55.8	+1.7
PTEO	Sao Teotonio	4.35	264	eSg	Sg	21 26 05.3	-2.1
PVIS	Viseu	4.42	307	ePn	Pn	21 24 56.0	+0.8
PVIS	Viseu	4.42	307	ePg	Pg	21 25 11.3	-1.0
PVIS				eSg	Sg	21 26 09.0	-0.5
PVIS	Viseu	4.42	307	Pn	Pn	21 24 56.0	+0.8
PVIS				Pg	Pg	21 25 11.3	-1.0
PCAS	Casmilo, Conde	4.50	297	ePn	Pn	21 24 57.2	+0.9
PCAS				eSg	Sg	21 26 11.9	-0.2
PCAS	Casmilo, Conde	4.50	297	Pn	Pn	21 24 57.2	+0.9
PFVI	Vila Bisbo	4.51	259	eSg	Sg	21 26 11.6	-1.1
PFVI	Vila Bisbo	4.51	259	Lg	Lg	21 26 11.6	
	comp=N,97nm,0.5s,SNR=7.9						
PBRG	Braganca	4.54	325	ePn	Pn	21 24 58.8	+1.9
PBRG				eSg	Sg	21 26 13.8	+0.3
PBRG	Braganca	4.54	325	Pn	Pn	21 24 58.8	+1.9
LCRM	LCR	4.61	197	P	Pn	21 24 59.7	+1.8
LCRM				S	Sn	21 25 49.2	-2.6
ECAL	Calabor	4.65	326	Pn	Pn	21 25 00.4	+2.0
	comp=N,2.5nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	21 26 18.0	
	comp=N,98nm,0.4s,SNR=7.9						
PVRL	Vila Real	4.65	314	ePn	Pn	21 25 02.3	+3.9
PVRL				eSg	Sg	21 26 17.0	-0.1
PVRL	Vila Real	4.65	314	Pn	Pn	21 25 02.3	+3.9
EPOB	Poblet	4.66	45	Pn	Pn	21 24 59.9	+1.4
	comp=N,0.2nm,0.3s,SNR=7.9						
EPOB				Pg	Pg	21 25 14.6	-2.3
	comp=N,0.5nm,0.5s,SNR=7.9						
PMST	Lisbon--Monsan	4.68	279	eSg	Sg	21 26 17.8	-0.1
POLO	Lamas de Olo	4.76	314	ePn	Pn	21 25 00.5	+0.5
POLO				eSg	Sg	21 26 19.5	-1.1
POLO	Lamas de Olo	4.76	314	Pn	Pn	21 25 00.5	+0.5
PMAFR	Mafra	4.78	282	eSg	Sg	21 26 19.5	-1.7
PMAFR	Mafra	4.78	282	Pn	Pn	21 24 58.5	-1.7
	comp=N,5.3nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	21 25 54.1	-1.8
	comp=N,6.7nm,0.4s,SNR=7.9						
PMAFR				Lg	Lg	21 26 21.5	
	comp=N,219nm,0.4s,SNR=7.9						
EARA	Aranguren	4.82	15	Lg	Lg	21 26 23.5	
	comp=N,58nm,0.4s,SNR=7.9						
IELO	Elcoad	4.97	18	Pn	Pn	21 25 04.8	+2.0
	comp=N,0.5nm,0.4s,SNR=7.9						
IELO				Pg	Pg	21 25 23.3	+0.5
	comp=N,2.7nm,0.2s,SNR=7.9						
IELO				Lg	Lg	21 26 27.2	
	comp=N,34nm,0.3s,SNR=7.9						
ETOS	Mallorca	5.03	69	Pn	Pn	21 25 04.7	+1.2
	comp=N,1.3nm,0.2s,SNR=7.9						
ETOS				Pg	Pb	21 25 18.9	+2.9
	comp=N,0.0nm,0.4s,SNR=7.9						
PCAB	Cabril	5.12	316	ePn	Pn	21 25 08.4	+3.6
PCAB				eSg	Sg	21 26 31.5	-0.5
PCAB	Cabril	5.12	316	Pn	Pn	21 25 08.4	+3.6
ETSF	Etsaut	5.20	23	ePn	Pn	21 25 07.5	+1.5
ETSF	Etsaut	5.20	23	ePg	Pg	21 25 27.1	-0.2
ETSF				eSn	Sn	21 26 05.2	-1.1
	comp=N,28nm,0.6s						
ETSF				eSg	Sg	21 26 35.6	+0.9
	comp=N,10nm,0.3s						
ETSF	Etsaut	5.20	23	Pn	Pn	21 25 07.5	+1.5
ETSF				Pg	Pg	21 25 27.1	-0.2
ETSF				Sn	Sn	21 26 05.2	-1.1
	comp=N,14nm,0.6s						
ETSF				Lg	Lg	21 26 35.6	
	comp=N,5.2nm,0.3s						
SJPF	Ste Jean	5.22	17	ePn	Pn	21 25 08.0	+1.7
SJPF	Ste Jean	5.22	17	ePg	Pg	21 25 27.3	-0.5
SJPF				eSn	Sn	21 26 05.6	-1.2
	comp=N,15nm,0.4s						
SJPF				eSg	Sg	21 26 36.5	+1.1
	comp=N,14nm,0.2s						
SJPF	Ste Jean	5.22	17	Pn	Pn	21 25 08.0	+1.7
SJPF				Pg	Pg	21 25 27.3	-0.5
SJPF				Sn	Sn	21 26 05.6	-1.2
	comp=N,7.6nm,0.4s						
SJPF				Lg	Lg	21 26 36.5	
	comp=N,6.8nm,0.2s						
MD31	MD31	5.38	193	S	Sn	21 26 07.5	-3.2
MDT	Midelt	5.41	192	S	Sn	21 26 06.9	-4.5
ZHG	ZHG	5.41	211	P	Pn	21 25 10.9	+2.1
ZHG				S	Sn	21 26 13.4	+2.0
PGAV	Gavieira, Arco	5.42	317	ePn	Pn	21 25 10.0	+0.9
PGAV				eSg	Sg	21 26 41.3	-0.5
PGAV	Gavieira, Arco	5.42	317	Pn	Pn	21 25 10.0	+0.9
EPF	Esparros	5.62	28	ePn	Pn	21 25 13.5	+1.7
EPF	Esparros	5.62	28	ePg	Pg	21 25 35.2	-0.2
EPF				eSn	Sn	21 26 15.2	-1.4
	comp=N,7.2nm,0.3s						
EPF				eSg	Sg	21 26 47.9	-0.3
	comp=N,22nm,0.4s						
EPF	Esparros	5.62	28	Pn	Pn	21 25 13.5	+1.7
EPF				Pg	Pg	21 25 35.2	-0.2
EPF				Sn	Sn	21 26 15.2	-1.4
	comp=N,3.6nm,0.3s						
EPF				Lg	Lg	21 26 47.9	
	comp=N,11nm,0.4s						
MTLF	Montolieu	6.68	37	ePg	Pg	21 25 52.9	-2.6
MTLF				eSn	Sn	21 26 40.1	-2.4
	comp=N,3.6nm,0.4s						
MTLF				eSg	Sg	21 27 21.0	-1.0
	comp=N,6.7nm,0.4s						
MTLF	Montolieu	6.68	37	Pg	Pg	21 25 52.9	-2.6
MTLF				Sn	Sn	21 26 40.1	-2.4
	comp=N,1.8nm,0.4s						
MTLF				Lg	Lg	21 27 21.0	
	comp=N,3.3nm,0.4s						
SRHM	Skhour des Reh	6.79	215	P	Pn	21 25 32.1	+4.4
SRHM				S	Sn	21 26 49.9	+4.6
LFF	La Frestale	7.45	23	ePn	Pn	21 25 37.9	+1.2
LFF	La Frestale	7.45	23	ePg	Pg	21 26 07.7	-2.6
LFF				eSn	Sn	21 26 58.3	-3.1
	comp=N,9.2nm,0.4s						
LFF				eSg	Sg	21 27 45.2	-1.5
	comp=N,9.0nm,0.4s						
LFF	La Frestale	7.45	23	Pn	Pn	21 25 37.9	+1.2
LFF				Pg	Pg	21 26 07.7	-2.6
LFF				Sn	Sn	21 26 58.3	-3.1
	comp=N,4.6nm,0.4s						
LFF				Lg	Lg	21 27 45.2	
	comp=N,4.5nm,0.4s						
OUZM	OUZ	7.75	203	P	Pn	21 25 45.7	+4.7
OUZM				S	Sn	21 27 12.9	+3.8
OUK	Oukaimeden	7.86	210	P	Pn	21 25 43.3	+0.5
OUK				S	Sn	21 27 12.3	0.0
TTIG	Tnine Tigouga,	8.68	211	P	Pn	21 25 53.3	-0.4
TTIG				S	Sn	21 27 35.3	+3.3

ISCJB ***05*** *21:24:09.7±0.3, 38.°24N±0.°02×3.°38W±0.°02, h13^{km}, Error ellipse: s-maj=2.7km s-min=2.3km az=1.2*
MDD ***05*** *21:24:12.9±0.1, 38.°05N×3.°27W, h0^{km}, mbLg3.9/31, Error ellipse: s-maj=1.2km s-min=1.1km az=156.0, PRXIMO*
MDD EMS: V INTENSIDAD MAXIMA.
SFS ***05*** *21:24:13.0, 38.°00N×3.°20W, ML3.7, TORREPEROGIL (JAEN)*
INMG ***05*** *21:24:13.8±2.3, 38.°07N×3.°25W, h11^{km}±11^{km}, ML3.8, Error ellipse: s-maj=4.0km s-min=3.3km az=23.0*
LDG ***05*** *21:24:13.0±0.1, 38.°06N×3.°28W, h2^{km}, Ml3.6/8, Error ellipse: s-maj=1.4km s-min=1.1km az=102.0*
IGIL ***05*** *21:24:13.3, 38.°06N×3.°27W, h0^{km}, ML3.8*
ISC 05 21:24:11.6±0.7**, 38.°09N**±0.°02×**3.°20W**±0.°02**, h13**^{km}**, n105,** σ2^{s}**35**/107**, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	Quesada	0.30	160	Pg	Pg	21 24 18.0	+0.2
	411nm,0.2s,SNR=18						
EQES				Lg	Lg	21 24 22.4	
	5µm,0.5s,SNR=6.6						
SESP	Santiago Espad	0.52	86	Pg	Pb	21 24 23.7	+1.0
	441nm,0.2s,SNR=7.9						
SESP				Lg	Lg	21 24 31.7	
	9µm,0.4s,SNR=7.9						
GORA	Gorafe	0.62	168	Pg	Pg	21 24 24.4	+0.7
	143nm,0.1s,SNR=7.9						
GORA				Lg	Lg	21 24 32.1	
	3µm,0.5s,SNR=7.9						
EQUE	Quentar	0.90	192	Pg	Pg	21 24 29.3	+0.3
	66nm,0.1s,SNR=7.9						
EQUE				Lg	Lg	21 24 39.7	
	987nm,0.4s,SNR=7.9						

EADA	Adamuz	1.09	275	Pg	Pb	21 24 31.8	-0.5
	23nm,0.1s,SNR=7.9						
EADA				Lg	Lg	21 24 45.5	
	1µm,0.2s,SNR=7.9						
EBER	Berja	1.21	168	Pg	Pg	21 24 36.5	+1.5
	SNR=7.9						
EBER				Lg	Lg	21 24 51.1	
	1µm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	1.21	217	Lg	Lg	21 24 49.9	
	2µm,0.4s,SNR=7.9						
ELGU	Los Guajares,	1.26	196	Pg	Pg	21 24 36.1	+0.2
	SNR=7.9						
ELGU				Lg	Lg	21 24 51.9	
	911nm,0.5s,SNR=7.9						
ETOB	Tobarra	1.41	66	Lg	Lg	21 24 59.2	
	790nm,0.4s,SNR=7.0						
EMUR	La Murta	1.57	98	Lg	Lg	21 25 04.3	
	3µm,0.5s,SNR=14						
EMAL	Malaga-Limoner	1.64	217	eS	Sb	21 25 03.0	+0.7
ESDC	Sonseca Array	1.69	340	Lg	Lg	21 25 06.2	
	764nm,0.8s,baz=161,slow=29,SNR=15						
PAB	San Pablo	1.71	329	Sn	Sn	21 25 02.8	-0.2
	35nm,0.1s,SNR=7.9						
PAB				Lg	Lg	21 25 06.1	
	232nm,0.2s,SNR=7.9						
ECAB	El Cabril	1.75	270	Lg	Lg	21 25 05.1	
	2µm,0.6s,SNR=12						
CART	Cartagena	1.81	105	Pn	Pn	21 24 41.8	-0.7
CART	Cartagena	1.81	105	i P	Pn	21 24 41.8	-0.7
CART				eS	Sb	21 25 08.8	+1.6
ETRV	Los Montesinos	1.93	91	Lg	Lg	21 25 16.3	
	8µm,0.9s,SNR=7.9						
EMIJ	Mijas	1.97	220	Lg	Lg	21 25 13.6	
	555nm,0.6s,SNR=13						
LIJA	Lijar	2.11	237	eP	Sg	21 25 18.0	-1.5
UCM	Universidad Co	2.22	359	eS	Sg	21 25 22.9	-0.1
ECHE	Chera	2.30	49	Lg	Lg	21 25 28.3	
	380nm,0.5s,SNR=7.9						
ESPR	Espera	2.44	241	Lg	Lg	21 25 28.5	
	459nm,0.5s,SNR=7.9						
EBEN2	Beniarda presa	2.44	75	Lg	Lg	21 25 31.7	
	1µm,0.8s,SNR=7.9						
ALJ	Aljibe	2.50	232	Pn	Pn	21 24 52.5	+0.6
ALJ	Aljibe	2.50	232	eP	Pn	21 24 52.5	+0.6
ALJ				eS	Sn	21 25 23.0	+0.8
GUD	Guadarrama	2.66	344	Lg	Lg	21 25 36.4	
	430nm,0.7s,SNR=7.9						
EMIN	Mina Concepcio	2.76	264	Lg	Lg	21 25 37.0	
	523nm,0.5s,SNR=10						
CEU	Ceuta	2.79	219	i P	Pb	21 24 60.0	-1.3
CEU				eS	Sn	21 25 27.1	-2.4
EPLA	Plasencia	2.99	312	Lg	Lg	21 25 44.9	
	145nm,0.3s,SNR=7.9						
EBAD	Badajoz	3.07	284	Lg	Lg	21 25 47.5	
	344nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	3.11	42	Lg	Lg	21 25 52.5	
	334nm,0.7s,SNR=7.9						
EGRO	El Granado	3.44	262	Pn	Pn	21 25 04.2	-0.6
	2.3nm,0.1s,SNR=7.9						
EGRO				Pg	Pb	21 25 14.5	+2.2
	9.6nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	21 25 56.8	
	548nm,0.8s,SNR=7.9						
PESTR	Estremoz	3.53	284	ePg	Pg	21 25 18.0	-1.3
PESTR				eSg	Sg	21 26 01.6	-3.4
PESTR				A	A	21 26 11.3	
	236nm,0.5s						
PMRV	Marv??o	3.54	294	ePg	Pg	21 25 18.0	-1.4
PMRV				eSg	Sg	21 26 02.6	-2.7
PMRV				A	A	21 26 06.0	
	273nm,0.6s						
PMRV	Marv??o	3.54	294	Pg	Pg	21 25 18.0	-1.4
PVAQ	Vaqueiros	3.65	261	ePn	Pn	21 25 09.0	+1.3
PVAQ				eSg	Sb	21 26 03.3	+3.3
PVAQ				A	A	21 26 13.8	
	263nm,0.6s						
PVAQ	Vaqueiros	3.65	261	Pn	Pn	21 25 09.0	+1.3
PBEJ	Beja	3.68	271	eSg	Sb	21 26 05.2	+4.1
PBEJ				A	A	21 26 14.2	
	198nm,0.7s						
PCBR	Castelo Branco	3.77	299	ePn	Pn	21 25 10.7	+1.3
PCBR				eSg	Sg	21 26 09.2	-3.3
PCBR				A	A	21 26 15.3	
	133nm,0.4s						
PCBR	Castelo Branco	3.77	299	Pn	Pn	21 25 10.7	+1.3
PBDV	Barranco-do-Ve	3.85	259	ePn	Pn	21 25 11.4	+0.9
PBDV				eSg	Sg	21 26 13.1	-2.0
PBDV				A	A	21 26 24.3	
	193nm,0.6s						
PBDV	Barranco-do-Ve	3.85	259	Pn	Pn	21 25 11.4	+0.9
ERTA	Horta de San J	3.96	43	Lg	Lg	21 26 20.8	
	SNR=7.9						
MESJ	Messejana	3.98	268	eSg	Sg	21 26 14.8	-4.4
MESJ				AML	AML	21 26 28.8	
	comp=N,233nm,0.6s						
MESJ	Messejana	3.98	268	ePg	Pg	21 25 25.0	-2.7
MESJ				eSg	Sb	21 26 13.8	+4.3
MESJ				A	A	21 26 21.7	
	comp=N,217nm,0.7s						
MESJ	Messejana	3.98	268	Pg	Pg	21 25 25.0	-2.7
PMTG	Montargil	4.06	286	ePg	Pg	21 25 28.0	-1.3
PMTG				eSg	Sb	21 26 17.0	+5.1
PMTG				A	A	21 26 28.0	
	comp=N,359nm,0.7s						
PMTG	Montargil	4.06	286	Pg	Pg	21 25 28.0	-1.3
MTE	Manteigas	4.09	306	ePn	Pn	21 25 16.9	+3.0
MTE				eSg	Sb	21 26 18.0	+5.2
MTE				A	A	21 26 29.4	
	comp=N,207nm,0.5s						
MTE	Manteigas	4.09	306	Pn	Pn	21 25 16.9	+3.0
PNCL	Nicolau / Gran	4.20	272	eSg	Sg	21 26 22.1	-4.5
PNCL				A	A	21 26 29.3	
	comp=N,138nm,0.5s						
MVO	Moncorvo	4.26	317	ePn	Pn	21 25 19.2	+2.9
MVO				eSg	Sg	21 26 25.7	-2.8
MVO				A	A	21 26 39.7	
	comp=N,121nm,0.6s						
MVO	Moncorvo	4.26	317	Lg	Lg	21 26 28.5	
	SNR=7.9						
PTOM	Tomar	4.35	292	ePn	Pn	21 25 18.9	+1.6
PTOM				eSg	Sg	21 26 27.3	-3.8
PTOM				A	A	21 26 41.6	
	comp=N,237nm,0.6s						
PTOM	Tomar	4.35	292	Pn	Pn	21 25 18.9	+1.6
MORF	Marmelete	4.39	261	eSg	Sg	21 26 27.9	-4.8
MORF				AML	AML	21 26 33.8	
	comp=N,209nm,0.5s						
MORF	Marmelete	4.39	261	eSg	Sg	21 26 28.0	-4.6
MORF				A	A	21 26 36.7	
	comp=N,60nm,0.7s						
PTEO	Sao Teotonio	4.41	265	eSg	Sg	21 26 31.0	-2.1
PTEO				A	A	21 26 35.1	
	comp=N,370nm,0.7s						
PVIS	Viseu	4.49	307	ePn	Pn	21 25 21.9	+2.6
PVIS				eSg	Sg	21 26 33.0	-2.6
PVIS				A	A	21 26 48.7	
	comp=N,83nm,0.5s						
PVIS	Viseu	4.49	307	Pn	Pn	21 25 21.9	+2.6
PCAS	Casmilo, Conde	4.57	297	ePn	Pn	21 25 22.2	+1.8
PCAS				eSg	Sg	21 26 35.6	-2.6
PCAS				A	A	21 26 42.7	
	comp=N,215nm,0.7s						
PCAS	Casmilo, Conde	4.57	297	Pn	Pn	21 25 22.2	+1.8
PFVI	Vila Bisbo	4.57	260	ePn	Pn	21 25 22.8	+2.4
PFVI				eSg	Sg	21 26 33.4	-4.8
PFVI				A	A	21 26 38.9	
	comp=N,112nm,0.6s						
PFVI	Vila Bisbo	4.57	260	Lg	Lg	21 26 35.3	
	comp=N,514nm,1.1s,SNR=7.9						
PBRG	Braganca	4.61	325	ePn	Pn	21 25 23.8	+2.9
PBRG				eSg	Sg	21 26 35.8	-3.6
PBRG				A	A	21 26 40.6	
	comp=N,75nm,0.6s						
PBRG	Braganca	4.61	325	Pn	Pn	21 25 23.8	+2.9
EPOB	Poblet	4.64	44	Lg	Lg	21 26 43.1	
	SNR=7.9						
ECAL	Calabor	4.71	326	Pn	Pn	21 25 24.8	+2.3
	comp=N,28nm,0.4s,SNR=7.9						
ECAL				Lg	Lg	21 26 39.7	
	comp=N,380nm,0.9s,SNR=7.9						
PVRL	Vila Real	4.72	314	eSg	Sg	21 26 39.4	-3.7
PVRL				A	A	21 26 57.4	
	comp=N,70nm,0.6s						
POLO	Lamas de Olo	4.83	314	ePn	Pn	21 25 26.8	+2.7
POLO	Lamas de Olo	4.83	314	Pn	Pn	21 25 26.8	+2.7
EARA	Aranguren	4.84	14	Lg	Lg	21 26 47.6	
	comp=N,523nm,1.3s,SNR=7.9						
PMAFR	Mafra	4.85	282	ePn	Pn	21 25 27.0	+2.7
PMAFR	Mafra	4.85	282	Lg	Lg	21 26 45.4	
	comp=N,861nm,0.8s,SNR=7.9						
ETOS	Mallorca	4.98	68	Pn	Pn	21 25 29.5	+3.4
	comp=N,14nm,0.4s,SNR=7.9						
IELO	Elcoad	4.98	17	Lg	Lg	21 26 52.2	
	comp=N,156nm,0.9s,SNR=7.9						
EORO	Oroz-Betelu	5.01	16	Pg	Pg	21 25 48.3	+0.7
	comp=N,83nm,0.5s,SNR=7.9						
EORO				Lg	Lg	21 26 54.6	
	SNR=7.9						
ELAN	Lanestosa	5.14	358	Lg	Lg	21 26 56.0	
	comp=N,198nm,0.8s,SNR=7.9						
PCAB	Cabril	5.18	316	ePn	Pn	21 25 32.2	+3.3
PCAB	Cabril	5.18	316	Pn	Pn	21 25 32.2	+3.3
ETSF	Etsaut	5.21	22	ePn	Pn	21 25 30.4	+1.1
ETSF	Etsaut	5.21	22	ePg	Pg	21 25 50.2	-1.2
ETSF				eSn	Sn	21 26 28.1	-1.2
	comp=N,11nm,0.2s						
ETSF				eSg	Sg	21 26 57.8	-1.1
	comp=N,11nm,0.3s						
ETSF	Etsaut	5.21	22	Pn	Pn	21 25 30.4	+1.1
ETSF				Pg	Pg	21 25 50.2	-1.2
ETSF				Sn	Sn	21 26 28.1	-1.2
	comp=N,5.3nm,0.2s						
ETSF				Lg	Lg	21 26 57.8	
	comp=N,5.6nm,0.3s						
SJPF	Ste Jean	5.24	16	ePn	Pn	21 25 30.5	+0.8
SJPF	Ste Jean	5.24	16	ePg	Pg	21 25 51.9	-0.1
SJPF				eSn	Sn	21 26 28.7	-1.3
	comp=N,13nm,0.3s						
SJPF				eSg	Sg	21 26 58.5	-1.3
	comp=N,16nm,0.2s						
SJPF	Ste Jean	5.24	16	Pn	Pn	21 25 30.5	+0.8
SJPF				Pg	Pg	21 25 51.9	-0.1
SJPF				Sn	Sn	21 26 28.7	-1.3
	comp=N,6.6nm,0.3s						
SJPF				Lg	Lg	21 26 58.5	
	comp=N,7.8nm,0.2s						
ELOB	Lobios	5.31	317	Lg	Lg	21 27 02.8	
	SNR=7.9						
ATE	Arette	5.34	20	Lg	Lg	21 27 03.4	
	SNR=7.9						
CSOR	Sort	5.42	36	Lg	Lg	21 27 06.0	
	comp=N,124nm,0.8s,SNR=7.9						
EARI	Arriondas	5.43	344	Lg	Lg	21 27 05.3	
	comp=N,228nm,0.9s,SNR=7.9						
PGAV	Gavieira, Arco	5.49	316	ePn	Pn	21 25 36.2	+3.0
PGAV				eSg	Sg	21 27 05.3	-2.5
PGAV				A	A	21 27 23.7	
	comp=N,74nm,0.6s						
PGAV	Gavieira, Arco	5.49	316	Pn	Pn	21 25 36.2	+3.0
EPF	Esparros	5.63	28	ePn	Pn	21 25 36.0	+1.0
EPF	Esparros	5.63	28	ePg	Pg	21 25 58.1	-1.2
EPF				eSn	Sn	21 26 38.3	-1.2
	comp=N,4.6nm,0.2s						
EPF				eSg	Sg	21 27 11.0	-1.2
	comp=N,15nm,0.3s						
EPF	Esparros	5.63	28	Pg	Pg	21 25 58.1	-1.2
EPF				Sn	Sn	21 26 38.3	-1.2
	comp=N,2.3nm,0.2s						
EPF				Lg	Lg	21 27 11.0	
	comp=N,7.4nm,0.3s						
CFON	Fontmartina	5.68	48	Lg	Lg	21 27 19.0	
	SNR=7.9						
EZAM	Zamans	5.85	316	Lg	Lg	21 27 18.2	
	comp=N,157nm,1.2s,SNR=7.9						
CLLI	Llivia	5.91	40	Lg	Lg	21 27 24.1	
	SNR=7.9						
EAGO	Agolada(Pontev	6.01	323	Lg	Lg	21 27 24.1	
	comp=N,195nm,1.7s,SNR=7.9						
EPON	Pontenova	6.03	331	Lg	Lg	21 27 25.5	
	comp=N,136nm,0.9s,SNR=7.9						
MTLF	Montolieu	6.67	36	ePn	Pn	21 25 50.3	+1.0
MTLF	Montolieu	6.67	36	ePg	Pg	21 26 17.4	-1.8
MTLF				eSn	Sn	21 27 03.2	-1.9
	comp=N,5.0nm,0.4s						
MTLF				eSg	Sg	21 27 43.2	-2.4
	comp=N,8.7nm,0.4s						
MTLF	Montolieu	6.67	36	Pn	Pn	21 25 50.3	+1.0
MTLF				Pg	Pg	21 26 17.4	-1.8
MTLF				Sn	Sn	21 27 03.2	-1.9
	comp=N,2.5nm,0.4s						
MTLF				Lg	Lg	21 27 43.2	
	comp=N,4.3nm,0.4s						
LFF	La Frestale	7.46	22	ePn	Pn	21 26 01.3	+1.3
LFF	La Frestale	7.46	22	Pn	Pn	21 26 01.3	+1.3

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*ISCJB **05** 21:43:31.5±0.4, 41.°96N±0.°01×23.°20E±0.°03, h2^{km}±3^{km}, Error ellipse: s-maj=3.2km s-min=2.1km az=4.6*

*ISK **05** 21:43:32.9, 41.°88N×23.°26E, h5^{km}, ML2.9/9*

*SOF **05** 21:43:32.3, 41.°97N×23.°34E, h2^{km}, MD2.8*

*THE **05** 21:43:32.5, 41.°92N×23.°29E, h4^{km}±1^{km}, ML2.4/12, Error ellipse: s-maj=1.3km s-min=0.7km az=281.0*

*SKO **05** 21:43:33.4, 41.°94N×23.°26E, h4^{km}, M2.3, ML2.7*

*ATH **05** 21:43:33.2, 41.°87N×23.°29E, h26^{km}±1^{km}, ML2.4/4, Error ellipse: s-maj=3.7km s-min=1.5km az=160.0*

ISC 05 21:43:32.8±0.8**, 41.°95N**±0.°01×**23.°19E**±0.°02**, h14**^{km}±6^{km}**, n101, σ1.ˢ62**/137**, 15C-9D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KKB	Krupnik	0.11	225	⇑iPg	Pg	21 43 36.4	+0.4
KKB				i Sg	Sg	21 43 39.2	+0.8
KKB	Krupnik	0.11	225	i P	Pg	21 43 36.5	+0.4
MMB	Musomiste	0.54	131	⇑iPg	Pg	21 43 42.6	-0.7
MMB				i Sg	Sg	21 43 49.8	-0.8
MMB	Musomiste	0.54	131	i P	Pg	21 43 42.7	-0.7
VTS	Vitosha	0.67	3	⇓iP	Pg	21 43 45.2	-0.7
VTS				S	Sg	21 43 54.0	-0.8
VTS	Vitosha	0.67	3	P	Pg	21 43 45.0	-1.0
VTS				S	Sg	21 43 54.1	-0.8
VTS	Vitosha	0.67	3	⇑iPg	Pg	21 43 45.3	-0.7
VTS				i Sg	Sg	21 43 54.1	-0.7
VTS	Vitosha	0.67	3	i P	Pg	21 43 45.2	-0.7
VAY	Valandovo	0.78	217	P	Pb	21 43 48.5	+0.4
VAY				S	Sb	21 43 59.5	+1.0
VAY	Valandovo	0.78	217	⇓iPg	Pb	21 43 48.6	+0.5
VAY				i Sg	Sb	21 43 59.6	+1.0
VAY				eLg	Lg	21 43 59.7	
	comp=N,176nm,0.6s						
VAY				eLg	Lg	21 43 60.0	
	comp=E,172nm,0.5s						
NVR	Nevrokopi	0.78	140	P	Pg	21 43 46.5	-1.4
NVR				S	Sg	21 43 55.9	-2.3
NVR				AML	AML	21 44 00.2	
	comp=N,581µm,0.1s						
NVR				AML	AML	21 44 00.8	
	comp=E,734µm,0.1s						
NVR	Nevrokopi	0.78	140	P	Pg	21 43 46.5	-1.4
NVR				S	Sg	21 43 56.0	-2.3
STIP	Stip	0.79	252	⇓iPg	Pg	21 43 44.8	-3.4
STIP				i Sg	Sg	21 43 53.8	-4.8
STIP				eLg	Lg	21 43 54.1	
	comp=N,191nm,0.2s						
STIP				eLg	Lg	21 43 54.3	
	comp=E,100nm,0.2s						
KNT	Kendrikon	0.81	196	PG	Pg	21 43 48.1	-0.5
KNT				SG	Sg	21 43 59.1	-0.2
KNT	Kendrikon	0.81	196	P	Pg	21 43 48.3	-0.3
KNT				S	Sg	21 43 59.0	-0.2
KNT				AML	AML	21 44 02.3	
	comp=N,587µm,0.2s						
KNT				AML	AML	21 44 02.7	
	comp=E,594µm,0.2s						
KNT	Kendrikon	0.81	196	P	Pg	21 43 48.3	-0.3
KNT				S	Sg	21 43 59.2	-0.1
KNT	Kendrikon	0.81	196	⇑iPg	Pg	21 43 48.3	-0.3
KNT				i Sg	Sg	21 43 59.4	+0.2
SRS	Serrai	0.88	160	P	Pg	21 43 48.8	-1.1
SRS				S	Sg	21 44 00.6	-0.8
SRS				AML	AML	21 44 02.4	
	comp=N,484µm,0.2s						
SRS				AML	AML	21 44 03.2	
	comp=E,335µm,0.1s						
SRS	Serrai	0.88	160	P	Pg	21 43 48.8	-1.1
SRS				S	Sg	21 44 00.6	-0.8
SRS	Serrai	0.88	160	⇑iPg	Pg	21 43 48.8	-1.1
SRS				i Sg	Sg	21 44 00.7	-0.8
PGB	Panagyurishte	0.94	50	i P	Pg	21 43 48.9	-2.2
SOH	Sokhos	1.13	174	P	Pb	21 43 53.7	-0.5
SOH				S	Sb	21 44 08.2	-0.5
SOH				AML	AML	21 44 10.6	
	comp=N,768µm,0.3s						
SOH				AML	AML	21 44 12.0	
	comp=E,338µm,0.2s						
SOH	Sokhos	1.13	174	P	Pb	21 43 53.6	-0.5
SOH				S	Sb	21 44 08.7	0.0
SOH	Sokhos	1.13	174	⇑iPg	Pb	21 43 53.6	-0.5
SOH				i Sg	Sg	21 44 09.2	-0.2
PLD	Plovdiv	1.14	82	PN	Pb	21 43 52.3	-1.9
PLD	Plovdiv	1.14	82	⇑iPg	Pb	21 43 52.5	-1.8
PLD				i Sg	Sb	21 44 08.1	-0.8
PLD	Plovdiv	1.14	82	i P	Pb	21 43 52.5	-1.8
GRG	Griva	1.15	211	PN	Pb	21 43 54.9	+0.4
GRG				SN	Sn	21 44 10.9	+0.8
GRG	Griva	1.15	211	P	Pb	21 43 54.9	+0.4
GRG				S	Sn	21 44 10.9	+0.8
GRG	Griva	1.15	211	P	Pb	21 43 54.8	+0.3
GRG				S	Sn	21 44 11.0	+0.8
GRG	Griva	1.15	211	i Pg	Pb	21 43 54.8	+0.3
GRG				i Sg	Sn	21 44 11.0	+0.8
THE	Thessaloniki	1.32	187	P	Pn	21 43 57.1	+0.3
THE				S	Sn	21 44 15.0	+0.7
THE	Thessaloniki	1.32	187	P	Pn	21 43 57.2	+0.3
THE				S	Sg	21 44 15.4	-0.1
THE	Thessaloniki	1.32	187	i Pg	Pn	21 43 57.2	+0.3
THE				i Sg	Sg	21 44 15.4	-0.1
BARS	Barje	1.34	311	⇓iPg	Pg	21 43 58.8	+0.2
BARS				i Sg	Sg	21 44 16.6	+0.7
HORT	Hortiatis	1.35	183	PN	Pb	21 43 57.9	+0.1
HORT	Hortiatis	1.35	183	P	Pb	21 43 58.0	+0.1
HORT				S	Sn	21 44 15.7	+0.6
HORT	Hortiatis	1.35	183	P	Pn	21 43 57.4	+0.1
HORT				S	Sg	21 44 15.9	-0.4
KVLA	Kavala	1.35	138	P	Pn	21 43 56.6	-0.6
KAVA	Kavala	1.38	133	P	Pn	21 43 56.9	-0.6
KAVA	Kavala	1.38	133	P	Pn	21 43 56.5	-1.0
KAVA				S	Sn	21 44 14.7	-0.8
KRUS	Krusevo	1.56	249	i Pn	Pb	21 44 01.7	+0.1
PLG	Polygyros	1.58	173	P	Pn	21 44 00.5	+0.1
PLG	Polygyros	1.58	173	P	Pn	21 44 00.6	+0.1
PLG				S	Sb	21 44 21.9	+0.2
OUR	Ouranopolis	1.72	159	PN	Pn	21 44 01.8	-0.4
OUR	Ouranopolis	1.72	159	P	Pn	21 44 01.8	-0.4
OUR	Ouranopolis	1.72	159	P	Pn	21 44 01.8	-0.4
OUR				S	Sn	21 44 24.4	+0.4
DIM	Dimitrovgrad	1.75	86	i P	Pb	21 44 03.8	-0.9
THAS	Thassos island	1.77	139	P	Pn	21 44 02.2	-0.7
THAS	Thassos island	1.77	139	P	Pn	21 44 02.2	-0.7
THAS				S	Sn	21 44 25.5	+0.3
RDO	Rodhopi	1.94	114	PN	Pn	21 44 06.4	+1.2
RDO	Rodhopi	1.94	114	P	Pn	21 44 05.6	+0.3
RDO	Rodhopi	1.94	114	P	Pn	21 44 04.7	-0.5
RDO				S	Sn	21 44 30.0	+0.7
PAIG	Paliouri	2.05	169	P	Pn	21 44 06.5	-0.4
VLAD	Vladila	2.24	23	⇓iP	Pn	21 44 10.4	+1.0
VLAD	Vladila	2.24	23	S	Sb	21 44 39.9	-0.6
SMTH	Samothraki Isl	2.30	129	P	Pn	21 44 11.6	+1.3
PUNG	Punghina	2.34	355	⇑iP	Pn	21 44 11.3	+0.5
PUNG	Punghina	2.34	355	S	Sn	21 44 39.6	+0.3
ZIMR		2.34	42	S	Sb	21 44 43.6	+0.1
ALN	Alexandroupoli	2.39	115	PN	Pn	21 44 12.9	+1.4
ALN	Alexandroupoli	2.39	115	P	Pn	21 44 12.3	+0.9
SZH	Strazhica	2.42	56	i P	Pn	21 44 12.0	+0.1
ENEZ	Enez	2.54	117	PN	Pn	21 44 14.9	+1.4
NEO	Neokhori	2.64	179	P	Pn	21 44 14.3	-0.6
EDRB	Edirne	2.66	91	PN	Pn	21 44 16.7	+1.5
GADA	Gvkgeada	2.70	130	PN	Pn	21 44 17.3	+1.6
ERIK	Erikli-Kesan	2.81	116	PN	Pn	21 44 18.8	+1.5
HUMR	Humele	2.89	26	S	Sn	21 44 56.0	+3.0
GELI	Tayfur-Gelibol	2.92	121	PN	Pn	21 44 20.6	+1.8
HERR	Herculane	2.99	349	⇑iP	Pn	21 44 19.3	-0.4
HERR	Herculane	2.99	349	S	Sn	21 44 55.2	-0.1
AGG	Agios Georgios	2.99	193	PN	Pn	21 44 21.9	+2.0
MDVR	Moldovita	3.03	340	⇑iP	Pn	21 44 19.5	-0.9
MDVR	Moldovita	3.03	340	S	Sn	21 44 55.2	-1.3
SGRR	Singureni	3.06	41	⇑iP	Pn	21 44 23.1	+2.5
SGRR	Singureni	3.06	41	S	Sb	21 45 01.4	-2.6
RKY	Sarkoy-Tekirda	3.26	111	PN	Pn	21 44 25.3	+1.8
GZR	Gura Zlata	3.46	355	⇓iP	Pn	21 44 26.2	-0.1
GZR	Gura Zlata	3.46	355	S	Sn	21 45 07.8	+0.7
KRBG	Karabiga-Canak	3.47	115	PN	Pn	21 44 28.0	+1.7
SULR		3.53	38	S	Sn	21 45 11.9	+3.2
ARR	Arges	3.58	17	⇑iP	Pn	21 44 28.1	+0.2
LEHL	Lehliu	3.66	45	S	Sn	21 45 16.3	+4.3
RASA	Rasa	3.68	51	S	Sb	21 45 17.9	-4.1
VOIR		3.74	21	⇑iP	Pn	21 44 30.5	+0.3
VOIR		3.74	21	S	Sn	21 45 15.6	+1.6
BZS	Buzias	3.84	343	⇓iP	Pn	21 44 31.5	0.0
BZS	Buzias	3.84	343	S	Sn	21 45 15.3	-1.1
ICOR	Ion Corvin	4.02	56	⇑iP	Pn	21 44 36.9	+3.1
ICOR	Ion Corvin	4.02	56	S	Sn	21 45 25.4	+4.7
MLR	Muntele Rosu	4.07	28	⇑iP	Pn	21 44 36.4	+1.7
MLR	Muntele Rosu	4.07	28	S	Sn	21 45 24.9	+2.8
DOPR	Dopca	4.32	21	S	Sn	21 45 30.7	+2.4
TLB	Topalu	4.42	52	S	Sn	21 45 35.5	+5.0
TIRR	Tirgusor	4.57	55	S	Sn	21 45 40.3	+6.0
PLOR	Plostina	4.63	31	⇓iP	Pn	21 44 44.5	+2.1
PLOR	Plostina	4.63	31	S	Sn	21 45 37.8	+1.8
CFR	Carcaliu	4.83	46	⇓iP	Pn	21 44 47.7	+2.7
CFR	Carcaliu	4.83	46	S	Sn	21 45 45.9	+5.1
DRGR		4.86	356	S	Sn	21 45 42.4	+0.9

IDC 05 21:53:17.1±3.1**, 22.°69N**×**144.°54E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/58**, mbtmp3.4**/3**, Error ellipse: s-maj=139.8km s-min=32.7km az=82.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.53	194	P	P	22 01 22.6	-0.1
	0.1nm,0.3s,baz=18,slow=8.9,SNR=7.3						
MKAR	Makanchi Array	54.96	312	P	P	22 02 49.4	-0.6
	0.1nm,0.5s,baz=89,slow=8.9,SNR=4.0						
FINES	FINESS Array B	82.82	335	P	P	22 05 43.5	+0.4
	0.4nm,0.3s,baz=69,slow=4.6,SNR=7.5						

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*IDC **05** 22:03:43.9±1.8, 40.°61N×125.°90W, h0^{km}, mb3.1/4, mb1 3.7/7, mb1mx3.5/64, mbtmp3.4/7, ML3.7/3, MS2.1/1, Ms1 2.1/1, ms1mx2.0/18, Error ellipse: s-maj=22.1km s-min=12.6km az=42.0*

*ISCJB **05** 22:03:44.4±0.6, 40.°47N±0.°03×125.°79W±0.°06, h13^{km}, mb3.0/4, Error ellipse: s-maj=6.5km s-min=3.4km az=162.9*

*NEIC **05** 22:03:44.8±0.0, 40.°45N×126.°01W, h15^{km}, MW3.8(BRK), After NCEDC.*

*NCEDC **05** 22:03:44.8, 40.°45N×126.°01W, h15^{km}, MW3.8(BRK)*

*ANF **05** 22:03:45.0±1.5, 40.°49N×125.°74W, ML3.6/13, Error ellipse: s-maj=17.6km s-min=7.9km az=66.0*

ISC 05 22:03:44.2±1.3**, 40.°45N**±0.°04×**125.°95W**±0.°09**, h13**^{km}**, n81, σ2.ˢ45**/106**, mb2.9**/4**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JCC	Jacoby Creek,	1.51	75	ePg	Pn	22 04 09.2	-1.7
KMRM	Mail Ridge	1.73	97	ePg	Pn	22 04 14.1	+0.1
KHMM	Horse Mountain	1.74	75	ePg	Pn	22 04 13.1	-1.2
KHMM				eSg	Sn	22 04 32.9	-3.6
KCPM	Cahto Peak	1.97	112	ePn	Pn	22 04 16.4	-0.9
KCPM				eSn	Sn	22 04 36.5	-5.4
O02D	Mt. Diablo Mer	2.43	95	P	Pn	22 04 23.4	-0.3
	baz=277,SNR=94						
O02D				S	Sn	22 04 52.4	-0.9
	baz=277						
L02E	Cave Junction	2.46	45	P	Pn	22 04 23.5	-0.6
	baz=227,SNR=262						
L02E				S	Sn	22 04 52.0	-2.0
	baz=227						
N02D	Trinity Center	2.52	77	P	Pn	22 04 23.9	-1.1
	baz=259,SNR=142						
N02D				S	Sn	22 04 54.0	-1.6
	baz=259						
M02C	Callahan	2.53	67	P	Pn	22 04 23.9	-1.2
	baz=250,SNR=225						
M02C				S	Sn	22 04 54.3	-1.5
	baz=250						
WDC	Whiskeytown Da	2.60	86	ePn	Pn	22 04 25.3	-0.6

HOPS	**Hopland Field**	**2.65**	**122**	*e*Pn	**Pn**	**22 04 24.8**	**-1.9**
HOPS				*e*S	Sn	22 04 46.2	-12
KEBM	**Edson Butte**	**2.71**	**26**	*e*Pn	**Pn**	**22 04 26.8**	**-0.7**
KEBM				*e*Sn	**Sn**	**22 04 57.1**	**-3.1**
YBH	**Yreka Blue Hor**	**2.77**	**61**	*e*Pn	**Pn**	**22 04 28.7**	**+0.4**
YBH				*e*Sn	**Sn**	**22 04 56.7**	**-4.9**
YBH	**Yreka Blue Hor**	**2.77**	**61**	Pn	**Pn**	**22 04 28.6**	**+0.3**
	11nm,0.3s,baz=251,slow=14,SNR=137						
YBH				LR	LR	22 04 47.0	
	comp=Z,40nm,21.4s,baz=338,slow=24						
YBH				Sn	**Sn**	**22 05 00.2**	**-1.4**
	7.3nm,0.3s,baz=74,slow=20,SNR=8.7						
K02D	**Willamette Mer**	**2.83**	**37**	P	**Pn**	**22 04 28.8**	**-0.4**
	baz=219,SNR=1000						
K02D				S	**Sn**	**22 05 00.3**	**-2.8**
	baz=219						
GDXM	**Geysers**	**2.93**	**123**	*e*Pn	**Pn**	**22 04 31.8**	**+1.2**
J01E	**Myrtle Point**	**3.11**	**28**	P	**Pn**	**22 04 32.2**	**-0.6**
	baz=210,SNR=67						
J01E				S	**Sn**	**22 05 06.3**	**-3.5**
	baz=210						
HUMO	**Hull Mountain**	**3.12**	**45**	*e*Pn	**Pn**	**22 04 32.9**	**-0.1**
HUMO				*e*S	**Sn**	**22 05 09.8**	**-0.3**
O03E	**Paynes Creek**	**3.17**	**91**	P	**Pn**	**22 04 33.2**	**-0.7**
	baz=274,SNR=64						
O03E				S	**Sn**	**22 05 09.7**	**-1.9**
	baz=274						
L04D	**Klamath Falls**	**3.27**	**56**	P	**Pn**	**22 04 36.0**	**+0.8**
	baz=239,SNR=43						
MCCM	**Marconi Confer**	**3.31**	**133**	*e*Pn	**Pn**	**22 04 33.7**	**-1.9**
MCCM				*e*S	**Sn**	**22 05 11.5**	**-3.3**
M04C	**Macdoel**	**3.38**	**65**	P	**Pn**	**22 04 37.8**	**+1.0**
	baz=248,SNR=19						
ORV	**Oroville**	**3.53**	**103**	*e*Pn	**Pn**	**22 04 38.4**	**-0.4**
I03D	**Drain, OR**	**3.78**	**30**	P	**Pn**	**22 04 42.0**	**-0.2**
	baz=212,SNR=92						
I03D				S	**Sn**	**22 05 24.7**	**-1.9**
	baz=212						
K04D	**Chiloquin, OR**	**3.83**	**54**	P	**Pn**	**22 04 44.1**	**+1.1**
	baz=237,SNR=16						
I02D	**Swisshome**	**3.98**	**22**	P	**Pn**	**22 04 45.3**	**+0.5**
	baz=204						
J04D	**Umpqua Nationa**	**4.00**	**45**	P	**Pn**	**22 04 46.6**	**+1.2**
	baz=228,SNR=47						
AFDM	**Forest Hills D**	**4.12**	**110**	*e*Pn	**Pn**	**22 04 47.7**	**+0.8**
AFDM				*e*Sn	**Sn**	**22 05 31.6**	**-3.3**
I04A	**Tendick Farm,**	**4.26**	**37**	P	**Pn**	**22 04 49.8**	**+1.1**
	baz=220,SNR=57						
BEKR	**Beckworth**	**4.32**	**96**	*e*Pn	**Pn**	**22 04 47.1**	**-2.7**
BEKR				*e*Sg	**Sn**	**22 05 43.4**	**+3.3**
MOD	**Modoc Plateau**	**4.50**	**69**	*e*Pn	**Pn**	**22 04 52.4**	**+0.1**
MOD				*e*S	**Sn**	**22 05 36.4**	**-8.2**
J05D	**Fort Rock, OR**	**4.52**	**50**	P	**Pn**	**22 04 53.8**	**+1.4**
	baz=233,SNR=34						
H04D	**Lebanon**	**4.72**	**29**	P	**Pn**	**22 04 55.7**	**+0.7**
	baz=212						
H04D				S	**Sn**	**22 05 48.4**	**-1.1**
	baz=212						
CMB	**Columbia Colle**	**4.94**	**117**	*e*Pn	**Pn**	**22 04 60.0**	**+1.7**
CMB				*e*S	**Sn**	**22 05 49.1**	**-6.2**
PINE	**Pine Mountain**	**5.01**	**46**	*e*Pn	**Pn**	**22 05 00.9**	**+1.7**
H04A	**Detroit Lake**	**5.07**	**32**	*e*Pn	**Pn**	**22 05 00.7**	**+0.9**
PNTR	**Pine Nut**	**5.08**	**103**	*e*Pn	**Pn**	**22 05 01.9**	**+1.7**
PAHR	**Pah Rah Range**	**5.09**	**96**	*e*Pn	**Pn**	**22 05 00.3**	**0.0**
SAO	**San Andreas Ge**	**5.09**	**135**	*e*Pn	**Pn**	**22 04 58.9**	**-1.3**
SAO				*e*S	**Sn**	**22 05 54.2**	**-4.7**
G03D	**McMinnville, O**	**5.16**	**22**	P	**Pn**	**22 05 02.3**	**+1.3**
	baz=204						
I05D	**Terrebonne, OR**	**5.18**	**40**	P	**Pn**	**22 05 02.0**	**+0.7**
	baz=223						
WAKR	**Walker**	**5.40**	**109**	*e*Pn	**Pn**	**22 05 07.4**	**+2.8**
WVOR	**Wild Horse Val**	**5.84**	**68**	*e*Pn	**Pn**	**22 05 10.1**	**-0.5**
G05D	**Wamic, OR**	**5.88**	**34**	P	**Pn**	**22 05 12.0**	**+1.0**
	baz=217						
I07A	**Izee**	**6.00**	**51**	*e*Pn	**Pn**	**22 05 14.5**	**+1.7**
MDPB	**Devils Postpil**	**6.04**	**116**	*e*Pn	**Pn**	**22 05 16.5**	**+3.1**
KVN	**Kaiserville**	**6.21**	**100**	*e*Pn	**Pn**	**22 05 17.0**	**+1.3**
KVN				*e*Sn	**Sn**	**22 06 24.6**	**-2.0**
NV01	**Mina Array Sit**	**6.25**	**106**	*e*Pn	**Pn**	**22 05 17.7**	**+1.3**
NV01				*e*Sg	**Sn**	**22 06 35.4**	**+7.7**
NVAR	**Mina Array Bea**	**6.25**	**106**	Pn	**Pn**	**22 05 17.7**	**+1.4**
	2.5nm,0.3s,baz=284,slow=15,SNR=28						
NVAR				Sn	**Sn**	**22 06 30.7**	**+3.0**
	1.2nm,0.3s,baz=300,slow=24,SNR=17						
NVAR				Lg	Lg	22 07 03.4	
	baz=276,slow=34,SNR=1.8						
J08A	**Circle Bar Ran**	**6.29**	**60**	*e*Pn	**Pn**	**22 05 17.6**	**+0.8**
PAGB	**Antelope Grade**	**6.51**	**135**	*e*Pn	**Pn**	**22 05 18.2**	**-1.5**
LON	**Longmire**	**6.98**	**24**	*e*Pn	**Pn**	**22 05 28.0**	**+1.8**
F07A	**Phinny Hill Vi**	**7.00**	**37**	*e*Pn	**Pn**	**22 05 28.2**	**+1.8**
G08A	**Pilot Rock**	**7.06**	**44**	*e*Pn	**Pn**	**22 05 29.9**	**+2.6**
PKM	**Mcpherson Peak**	**7.38**	**137**	P	**Pn**	**22 05 30.6**	**-1.1**
	baz=320						
D03D	**Eldon**	**7.38**	**15**	P	**Pn**	**22 05 32.9**	**+1.3**
	baz=198						
HAWA	**Hanford**	**7.56**	**36**	*e*Pn	**Pn**	**22 05 35.4**	**+1.3**
ISA	**Isabella, Lake**	**7.59**	**127**	*e*Pn	**Pn**	**22 05 36.5**	**+2.0**
ISA				*e*Sn	**Sn**	**22 07 06.6**	**+6.2**
ISA	**Isabella, Lake**	**7.59**	**127**	P	**Pn**	**22 05 35.5**	**+1.0**
	baz=311						
BMO	**Blue Mountains**	**7.74**	**52**	*e*Pn	**Pn**	**22 05 38.0**	**+1.3**
E08A	**Dider Farm, El**	**7.85**	**37**	*e*Pn	**Pn**	**22 05 39.7**	**+1.7**
MFID	**Camas Ranch**	**8.11**	**65**	*e*Pn	**Pn**	**22 05 44.6**	**+2.9**
D08A	**Wollman Farm,**	**8.34**	**35**	*e*Pn	**Pn**	**22 05 45.9**	**+1.2**
F10A	**Beach Ranch, E**	**8.43**	**46**	*e*Pn	**Pn**	**22 05 49.3**	**+3.2**
HLID	**Hailey**	**9.14**	**66**	*e*Pn	**Pn**	**22 05 57.9**	**+2.1**
HLID	**Hailey**	**9.14**	**66**	P	**Pn**	**22 05 58.1**	**+2.3**
	baz=254,SNR=12						
PSUT	**Pine Spring**	**9.54**	**98**	*e*Pn	**Pn**	**22 06 02.4**	**+0.9**
BGU	**Big Grassy Mou**	**9.83**	**83**	*e*Pn	**Pn**	**22 06 08.5**	**+3.2**
NEW	**Newport**	**10.05**	**36**	Pn	**Pn**	**22 06 10.5**	**+2.4**
	0.2nm,0.3s,baz=256,slow=12,SNR=2.6						
MCMT	**McKenzie Canyo**	**10.60**	**61**	*e*Pn	**Pn**	**22 06 19.5**	**+3.6**
NLU	**North Lily Min**	**10.63**	**88**	*e*Pn	**Pn**	**22 06 20.9**	**+4.5**
MSO	**Missoula**	**10.79**	**50**	*e*Pn	**Pn**	**22 06 21.5**	**+3.2**
MSO	**Missoula**	**10.79**	**50**	P	**Pn**	**22 06 19.2**	**+0.9**
	baz=238,SNR=5.9						
MSU	**Marysvale**	**10.82**	**96**	*e*Pn	**Pn**	**22 06 22.9**	**+4.0**
TMUT	**Trail Mountain**	**11.39**	**91**	*e*Pn	**Pn**	**22 06 24.6**	**-2.3**
BOZ	**Bozeman (W)**	**11.67**	**59**	*e*Pn	**Pn**	**22 06 33.1**	**+2.5**
BOZ	**Bozeman (W)**	**11.67**	**59**	P	**Pn**	**22 06 29.4**	**-1.1**
	baz=249,SNR=5.1						
SDCO	**Great Sand Dun**	**16.10**	**93**	*e*Pn	**P**	**22 07 34.4**	**+0.6**
	3.3nm,1.0s						
TXAR	**Lajitas Array**	**21.32**	**114**	P	**P**	**22 08 33.0**	**+2.1**
	0.5nm,0.9s,baz=294,slow=9.3,SNR=4.6						
YKA	**Yellowknife Ar**	**23.11**	**13**	P	**P**	**22 08 49.4**	**-0.2**
	0.1nm,0.3s,baz=195,slow=10,SNR=2.6						
ULM	**Lac du Bonnet**	**23.16**	**55**	P	**P**	**22 08 49.5**	**-0.7**
	4.1nm,0.8s,baz=270,slow=9.4,SNR=7.8						
ILAR	**Eielson Array**	**27.21**	**340**	P	**P**	**22 09 28.2**	**+0.8**
	0.2nm,0.8s,baz=153,slow=10,SNR=4.1						

IDC 05 22:04:22.7±2.0, 3°.90S×125°.30E, h0^{km}, mb3.1/2, mb1 3.4/3, mb1mx3.2/47, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=356.3km s-min=26.7km az=63.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.22**	**152**	P	P	22 08 38.7	+1.1
	0.1nm,0.3s,baz=329,slow=12,SNR=7.2						
ASAR	**Alice Springs**	**21.34**	**158**	P	P	22 09 10.8	-0.9
	0.3nm,0.3s,baz=347,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**63.11**	**328**	P	P	22 14 52.2	0.0
	0.1nm,0.5s,baz=133,slow=7.7,SNR=3.7						

ROM 05 22:08:03.6±0.1, 40°.072N±0°.004×15°.862E±0°.006, h12^{km}±1^{km}, ML3.0/27, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUC	**Castrocucco**	**0.09**	**204**	P	Pg	22 08 06.5	+0.1
CUC				S	Sg	22 08 08.5	+0.1
CUC				AML	AML		
	comp=E,27700µm,0.4s						
CUC				AML	AML		
	comp=N,29700µm,0.4s						
CUC				AML	AML		
	comp=E,35300µm,0.4s						
CUC				AML	AML		
	comp=N,35300µm,0.4s						
CUC				AML	AML		
	comp=E,27700µm,0.4s						
CUC				AML	AML		
	comp=N,29700µm,0.4s						
CUC				AML	AML		
	comp=E,35300µm,0.4s						
CUC				AML	AML		
	comp=N,35300µm,0.4s						
CUC				AML	AML		
	comp=E,27700µm,0.4s						
CUC				AML	AML		
	comp=N,29700µm,0.4s						
CUC				AML	AML		
	comp=E,35300µm,0.4s						
CUC				AML	AML		
	comp=N,35300µm,0.4s						
CUC				AML	AML		
	comp=N,35300µm,0.4s						
CUC				AML	AML		
	comp=N,29700µm,0.4s						
CUC				AML	AML		
	comp=E,27700µm,0.4s						
CUC				AML	AML		
	comp=E,35300µm,0.4s						
SIRI	**Monte Sirino -**	**0.11**	**2**	P	Pg	22 08 07.1	+0.4
SIRI				S	Sg	22 08 09.8	+0.8
SIRI				AML	AML		
	comp=E,67050µm,0.3s						
SIRI				AML	AML		
	comp=N,36550µm,0.4s						
SIRI				AML	AML		
	comp=E,68550µm,0.3s						
SIRI				AML	AML		
	comp=N,37650µm,0.4s						
SIRI				AML	AML		
	comp=E,67050µm,0.3s						
SIRI				AML	AML		
	comp=N,36550µm,0.4s						
SIRI				AML	AML		
	comp=E,68550µm,0.3s						
SIRI				AML	AML		
	comp=N,37650µm,0.4s						
SIRI				AML	AML		
	comp=E,67050µm,0.3s						
SIRI				AML	AML		
	comp=N,36550µm,0.4s						
SIRI				AML	AML		
	comp=E,68550µm,0.3s						
SIRI				AML	AML		
	comp=N,37650µm,0.4s						
SIRI				AML	AML		
	comp=N,37650µm,0.4s						
SIRI				AML	AML		
	comp=E,68550µm,0.3s						
SIRI				AML	AML		
	comp=E,67050µm,0.3s						
SIRI				AML	AML		
	comp=N,36550µm,0.4s						
MMN	**Mormanno**	**0.21**	**151**	P	Pg	22 08 08.3	+0.2
MMN				S	Sg	22 08 12.8	+1.7
MMN				AML	AML		
	comp=E,3995µm,0.2s						
MMN				AML	AML		
	comp=N,5325µm,0.2s						
MMN				AML	AML		
	comp=E,3995µm,0.2s						
MMN				AML	AML		
	comp=N,5325µm,0.2s						
MMN				AML	AML		
	comp=N,5325µm,0.2s						
MMN				AML	AML		
	comp=E,3995µm,0.2s						
SCHR	**S. Chirico Rap**	**0.21**	**52**	P	Pg	22 08 08.3	+0.1
SCHR				S	Sg	22 08 11.9	+0.6
SCHR				AML	AML		
	comp=E,7990µm,0.5s						
SCHR				AML	AML		
	comp=N,8005µm,1.3s						
SCHR				AML	AML		
	comp=E,7990µm,0.5s						
SCHR				AML	AML		
	comp=N,8005µm,1.3s						
SCHR				AML	AML		
	comp=E,7990µm,0.5s						
SCHR				AML	AML		
	comp=N,8005µm,1.3s						
SCHR				AML	AML		
	comp=E,7990µm,0.5s						
SCHR				AML	AML		
	comp=N,8005µm,1.3s						
T0701	**Viggianello (P**	**0.21**	**114**	P	Pg	22 08 08.3	0.0
T0701				S	Sg	22 08 12.2	+0.8
T0701				AML	AML		
	comp=E,5280µm,1.2s						
T0701				AML	AML		
	comp=N,5000µm,0.2s						
T0701				AML	AML		
	comp=E,5285µm,1.2s						
T0701				AML	AML		
	comp=N,4995µm,0.3s						
T0701				AML	AML		
	comp=E,5285µm,1.2s						
T0701				AML	AML		
	comp=N,4995µm,0.3s						
T0701				AML	AML		
	comp=N,4995µm,0.3s						
T0701				AML	AML		
	comp=E,5285µm,1.2s						
MGR	**Morigerati**	**0.24**	**286**	P	Pg	22 08 09.0	+0.3
MGR				S	Sg	22 08 13.4	+1.2
MGR				AML	AML		
	comp=E,12350µm,0.3s						
MGR				AML	AML		
	comp=N,13500µm,0.4s						
MGR				AML	AML		
	comp=E,14450µm,0.3s						
MGR				AML	AML		
	comp=N,11750µm,0.3s						
MGR				AML	AML		
	comp=E,12400µm,0.3s						
MGR				AML	AML		
	comp=N,13550µm,0.3s						
MGR				AML	AML		
	comp=E,14450µm,0.3s						
MGR				AML	AML		
	comp=N,11750µm,0.3s						
MGR				AML	AML		
	comp=E,12400µm,0.3s						
MGR				AML	AML		
	comp=N,13500µm,0.4s						
MGR				AML	AML		
	comp=E,14450µm,0.3s						
MGR				AML	AML		
	comp=N,11750µm,0.3s						
MGR				AML	AML		
	comp=E,12400µm,0.3s						
MGR				AML	AML		
	comp=E,14450µm,0.3s						
MGR				AML	AML		
	comp=N,13500µm,0.4s						
MGR				AML	AML		
	comp=N,11750µm,0.3s						
MCEL	**Monticello**	**0.26**	**350**	P	Pg	22 08 09.3	+0.2
MCEL				S	Sb	22 08 13.8	-0.8
MCEL				AML	AML		
	comp=E,6800µm,0.3s						
MCEL				AML	AML		
	comp=N,5865µm,0.4s						
MCEL				AML	AML		
	comp=E,6915µm,0.3s						
MCEL				AML	AML		
	comp=N,6040µm,0.4s						
MCEL				AML	AML		
	comp=E,6800µm,0.3s						
MCEL				AML	AML		
	comp=N,5865µm,0.4s						
MCEL				AML	AML		
	comp=E,6915µm,0.3s						
MCEL				AML	AML		
	comp=N,6040µm,0.4s						
MCEL				AML	AML		
	comp=E,6800µm,0.3s						
MCEL				AML	AML		
	comp=N,5860µm,0.4s						
MCEL				AML	AML		
	comp=E,6915µm,0.3s						
MCEL				AML	AML		
	comp=N,6040µm,0.4s						
MCEL				AML	AML		
	comp=E,6915µm,0.3s						
MCEL				AML	AML		
	comp=E,6800µm,0.3s						
MCEL				AML	AML		
	comp=N,6040µm,0.4s						
MCEL				AML	AML		
	comp=N,5860µm,0.4s						
SLCN	**Sala Consilina**	**0.36**	**331**	P	Pg	22 08 11.1	+0.2
SLCN				AML	AML		
	comp=E,7995µm,0.3s						
SLCN				AML	AML		
	comp=N,6155µm,0.4s						
SLCN				AML	AML		
	comp=E,8450µm,0.3s						
SLCN				AML	AML		
	comp=N,6385µm,0.4s						
SLCN				AML	AML		
	comp=E,7995µm,0.3s						
SLCN				AML	AML		
	comp=N,6160µm,0.4s						
SLCN				AML	AML		
	comp=E,8450µm,0.3s						
SLCN				AML	AML		
	comp=N,6385µm,0.4s						
SLCN				AML	AML		
	comp=E,8450µm,0.3s						
SLCN				AML	AML		
	comp=N,6160µm,0.4s						
SLCN				AML	AML		
	comp=N,6385µm,0.4s						
SLCN				AML	AML		
	comp=E,7995µm,0.3s						
BULG	**Bulgheria - Ca**	**0.37**	**271**	P	Pg	22 08 11.3	+0.2
BULG				AML	AML		
	comp=E,3095µm,0.3s						
BULG				AML	AML		
	comp=N,4085µm,0.2s						
BULG				AML	AML		
	comp=E,3175µm,0.3s						
BULG				AML	AML		
	comp=N,4175µm,0.2s						
BULG				AML	AML		
	comp=E,3100µm,0.3s						
BULG				AML	AML		
	comp=N,4090µm,0.2s						
BULG				AML	AML		
	comp=E,3175µm,0.3s						
BULG				AML	AML		
	comp=N,4175µm,0.2s						
BULG				AML	AML		
	comp=E,3175µm,0.3s						
BULG				AML	AML		
	comp=E,3100µm,0.3s						
BULG				AML	AML		
	comp=N,4175µm,0.2s						
BULG				AML	AML		
	comp=N,4090µm,0.2s						
T0702	**Acquaformosa (**	**0.39**	**154**	P	Pg	22 08 11.6	+0.2
T0702				S	Sb	22 08 17.9	-0.5
T0702				AML	AML		
	comp=E,2620µm,0.4s						
T0702				AML	AML		
	comp=N,2065µm,0.9s						
T0702				AML	AML		
	comp=E,2625µm,0.4s						
T0702				AML	AML		
	comp=N,2065µm,0.9s						
T0702				AML	AML		
	comp=E,2625µm,0.4s						
T0702				AML	AML		
	comp=N,2064µm,0.9s						
T0702				AML	AML		
	comp=N,2064µm,0.9s						
T0702				AML	AML		
	comp=E,2625µm,0.4s						
SALB	**San Lorenzo Be**	**0.42**	**117**	P	Pg	22 08 11.4	-0.5
SALB				S	Sb	22 08 18.6	-0.7
SALB				AML	AML		
	comp=E,1950µm,0.9s						
SALB				AML	AML		
	comp=N,1595µm,0.3s						
SALB				AML	AML		
	comp=E,2035µm,0.3s						
SALB				AML	AML		
	comp=N,1565µm,0.2s						
SALB				AML	AML		
	comp=E,1950µm,0.9s						
SALB				AML	AML		
	comp=N,1595µm,0.3s						
SALB				AML	AML		
	comp=E,2035µm,0.3s						
SALB				AML	AML		
	comp=N,1565µm,0.2s						
SALB				AML	AML		
	comp=N,1595µm,0.3s						
SALB				AML	AML		
	comp=E,1950µm,0.9s						
SALB				AML	AML		
	comp=N,1565µm,0.2s						
SALB				AML	AML		
	comp=E,2035µm,0.3s						
ORI	**Oriolo Calabro**	**0.45**	**91**	P	Pg	22 08 12.6	+0.1
ORI				AML	AML		
	comp=E,3440µm,0.5s						
ORI				AML	AML		
	comp=N,3460µm,0.3s						
ORI				AML	AML		
	comp=E,3440µm,0.5s						
ORI				AML	AML		
	comp=N,3460µm,0.3s						
ORI				AML	AML		
	comp=E,3440µm,0.5s						
ORI				AML	AML		
	comp=N,3460µm,0.3s						
CMPR	**Campora**	**0.49**	**300**	P	Pg	22 08 13.2	-0.1
CMPR				S	Sb	22 08 20.9	-0.5
CMPR				AML	AML		
	comp=E,1715µm,0.3s						
CMPR				AML	AML		
	comp=N,1570µm,0.4s						
CMPR				AML	AML		
	comp=E,1715µm,0.3s						
CMPR				AML	AML		
	comp=N,1570µm,0.4s						
CMPR				AML	AML		
	comp=E,1715µm,0.3s						
CMPR				AML	AML		
	comp=N,1570µm,0.4s						
CMPR				AML	AML		
	comp=N,1570µm,0.4s						
CMPR				AML	AML		
	comp=E,1715µm,0.3s						
CRAC	**Craco**	**0.53**	**56**	P	Pb	22 08 14.5	-0.3
CRAC				S	Sb	22 08 22.1	-0.2
CRAC				AML	AML		
	comp=E,2130µm,0.3s						
CRAC				AML	AML		
	comp=N,948µm,0.5s						
CRAC				AML	AML		
	comp=E,2130µm,0.3s						
CRAC				AML	AML		
	comp=N,947µm,0.5s						
CRAC				AML	AML		
	comp=N,947µm,0.5s						
CRAC				AML	AML		
	comp=E,2130µm,0.3s						
CET2	**Cetraro**	**0.55**	**172**	P	Pg	22 08 14.3	0.0
CET2				S	Sg	22 08 21.9	+0.4
CET2				AML	AML		
	comp=E,2055µm,0.9s						
CET2				AML	AML		
	comp=N,3520µm,1.3s						
CET2				AML	AML		
	comp=E,2055µm,0.9s						
CET2				AML	AML		
	comp=N,3520µm,1.3s						
CET2				AML	AML		
	comp=E,2055µm,0.9s						
CET2				AML	AML		
	comp=N,3520µm,1.3s						
ACER	**Acerenza**	**0.72**	**5**	P	Pg	22 08 17.4	-0.1
ACER				AML	AML		
	comp=E,1740µm,0.5s						
ACER				AML	AML		
	comp=N,1265µm,0.8s						
ACER				AML	AML		
	comp=E,1795µm,0.5s						
ACER				AML	AML		

	comp=N,1315µm,0.8s						
ACER				AML	AML		
	comp=E,1740µm,0.5s						
ACER				AML	AML		
	comp=N,1265µm,0.8s						
ACER				AML	AML		
	comp=E,1800µm,0.5s						
ACER				AML	AML		
	comp=N,1315µm,0.8s						
ACER				AML	AML		
	comp=E,1800µm,0.5s						
ACER				AML	AML		
	comp=E,1740µm,0.5s						
ACER				AML	AML		
	comp=N,1265µm,0.8s						
ACER				AML	AML		
	comp=N,1315µm,0.8s						
MRLC	**Muro Lucano**	**0.74**	**337**	P	Pb	22 08 18.4	0.0
MRLC				AML	AML		
	comp=E,488µm,0.5s						
MRLC				AML	AML		
	comp=N,490µm,0.3s						
MRLC				AML	AML		
	comp=E,503µm,0.5s						
MRLC				AML	AML		
	comp=N,490µm,0.3s						
MRLC				AML	AML		
	comp=E,488µm,0.5s						
MRLC				AML	AML		
	comp=N,490µm,0.3s						
MRLC				AML	AML		
	comp=E,503µm,0.5s						
MRLC				AML	AML		
	comp=N,490µm,0.3s						
MRLC				AML	AML		
	comp=E,503µm,0.5s						
MRLC				AML	AML		
	comp=E,488µm,0.5s						
MRLC				AML	AML		
	comp=N,490µm,0.3s						
MRLC				AML	AML		
	comp=N,490µm,0.3s						
CELI	**Celico**	**0.83**	**143**	P	Pb	22 08 19.9	-0.2
CELI				AML	AML		
	comp=E,990µm,0.6s						
CELI				AML	AML		
	comp=N,1220µm,0.5s						
CELI				AML	AML		
	comp=E,990µm,0.6s						
CELI				AML	AML		
	comp=N,1220µm,0.5s						
CELI				AML	AML		
	comp=E,990µm,0.6s						
CELI				AML	AML		
	comp=N,1220µm,0.5s						
MATE	**Matera**	**0.86**	**48**	P	Pg	22 08 19.8	-0.5
MATE				AML	AML		
	comp=E,576µm,1.0s						
MATE				AML	AML		
	comp=N,724µm,0.3s						
MATE				AML	AML		
	comp=E,576µm,1.0s						
MATE				AML	AML		
	comp=N,724µm,0.3s						
SG1	**Sgolgore (BA)**	**0.99**	**39**	*e*Pg	Pb	22 08 21.9	-0.7
SG1				Sg	Sn	22 08 39.1	+1.9
AMUR	**Altamura**	**1.01**	**34**	P	Pb	22 08 21.7	-1.2
AMUR				AML	AML		
	comp=E,494µm,0.4s						
AMUR				AML	AML		
	comp=N,465µm,0.4s						
AMUR				AML	AML		
	comp=E,494µm,0.4s						
AMUR				AML	AML		
	comp=N,465µm,0.4s						
AMUR				AML	AML		
	comp=N,465µm,0.4s						
AMUR				AML	AML		
	comp=E,494µm,0.4s						
MRVN	**Minervino Murg**	**1.02**	**14**	P	Pb	22 08 22.4	-0.8
MRVN				AML	AML		
	comp=E,367µm,0.9s						
MRVN				AML	AML		
	comp=N,210µm,0.7s						
MRVN				AML	AML		
	comp=E,367µm,0.9s						
MRVN				AML	AML		
	comp=N,210µm,0.7s						
MRVN				AML	AML		
	comp=N,210µm,0.7s						
MRVN				AML	AML		
	comp=E,367µm,0.9s						
MASS	**Massafra**	**1.13**	**60**	*e*Pg	Pb	22 08 23.9	-1.1
TIP	**Timpagrande**	**1.13**	**142**	P	Pn	22 08 25.2	0.0
TIP				AML	AML		
	comp=E,150µm,1.4s						
TIP				AML	AML		
	comp=N,150µm,0.6s						
TIP				AML	AML		
	comp=E,150µm,1.4s						
TIP				AML	AML		
	comp=N,150µm,0.6s						
TIP				AML	AML		
	comp=E,150µm,1.4s						
TIP				AML	AML		
	comp=N,150µm,0.6s						
TAR1	**Taranto**	**1.18**	**67**	*e*Pg	Pn	22 08 24.9	-0.9
SERS	**Sersale**	**1.22**	**148**	P	Pn	22 08 26.3	-0.2
SERS				AML	AML		
	comp=E,172µm,0.4s						
SERS				AML	AML		
	comp=N,206µm,1.1s						
SERS				AML	AML		
	comp=E,172µm,0.4s						
SERS				AML	AML		
	comp=N,206µm,1.1s						
SERS				AML	AML		
	comp=E,172µm,0.4s						
SERS				AML	AML		
	comp=N,206µm,1.1s						
BAI	**Bari**	**1.29**	**37**	*e*Pg	Pb	22 08 27.7	-0.1
BAI				Sg	Sg	22 08 47.9	+2.7
FASA	**Fasano**	**1.36**	**56**	*e*Pg	Pn	22 08 28.5	+0.2
FASA				Sg	Sg	22 08 50.4	+3.0
CGL1	**Ceglie Messapi**	**1.36**	**64**	*e*Pg	Pb	22 08 28.7	-0.3
SGRT	**San Giovanni R**	**1.68**	**357**	P	Pn	22 08 33.1	+0.2
SGRT				AML	AML		
	comp=E,138µm,0.4s						
SGRT				AML	AML		
	comp=N,124µm,1.3s						
SGRT				AML	AML		
	comp=E,138µm,0.4s						
SGRT				AML	AML		
	comp=N,124µm,1.3s						
SGRT				AML	AML		
	comp=E,138µm,0.4s						
SGRT				AML	AML		
	comp=N,124µm,1.3s						
MPAZ	**Palizzi**	**2.12**	**177**	AML	AML		
	comp=E,91µm,1.2s						
MPAZ				AML	AML		
	comp=N,99µm,0.7s						
MPAZ				AML	AML		
	comp=E,91µm,1.2s						
MPAZ				AML	AML		
	comp=N,99µm,0.7s						
STON	**Ston**	**3.12**	**26**	*e*Pn	Pn	22 08 52.5	0.0
STON				Sn	Sn	22 09 30.1	+0.4
CRM1	**Catelraimondo**	**3.77**	**327**	AML	AML		
	comp=N,8537µm,1.6s						
CRM1				AML	AML		
	comp=E,3385µm,1.6s						
CRM1				AML	AML		
	comp=N,8537µm,1.6s						
CRM1				AML	AML		
	comp=E,3385µm,1.6s						
BIA	**Bitola**	**4.27**	**75**	*i* Pn	Pn	22 09 11.4	+3.0
KRUS	**Krusevo**	**4.29**	**71**	*i* Pn	Pn	22 09 10.6	+1.8
NVLJ	**Novalja**	**4.55**	**351**	*e*Pn	Pn	22 09 12.5	+0.4
NVLJ				Sn	Sn	22 10 04.5	-0.4

*BUC **05** 22:10:27.4±0.7, 44°.62N×22°.30E, h14^{km}±6^{km}, MD2.4/2, Error ellipse: s-maj=6.7km s-min=5.4km az=345.0*

BEO 05 22:10:28.3±0.5**, 44°.55N×22°.38E, h1**^{km}±5^{km}**, ML1.7**/10**, 6C-4D, Mining explosion., Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HERR	**Herculane**	**0.34**	**5**	⇑*i*P	Pg	22 10 33.8	-0.9
HERR				S	Sg	22 10 37.9	-1.2
HERR	**Herculane**	**0.34**	**5**	⇑*i*P	Pg	22 10 33.8	-0.9
HERR				*i* S	Sg	22 10 37.9	-1.2
KUBS	**Kucevo**	**0.52**	**255**	*e*Pg	Pg	22 10 37.9	-0.4
KUBS				*e*Sg	Sg	22 10 45.4	+0.4
MDVR	**Moldovita**	**0.53**	**296**	S	Sg	22 10 44.0	-1.3
MDVR	**Moldovita**	**0.53**	**296**	*i* S	Sg	22 10 44.0	-1.3
ZAGS	**Zajecar**	**0.74**	**188**	*e*Pg	Pg	22 10 42.7	+0.2
ZAGS				*e*Sg	Sg	22 10 52.1	0.0
SVIS	**Svilajnac**	**0.88**	**252**	*e*Sg	Sg	22 10 56.1	-0.5
GZR	**Gura Zlata**	**0.89**	**18**	⇓*i*P	Pg	22 10 43.6	-1.8
GZR	**Gura Zlata**	**0.89**	**18**	⇓*i*P	Pg	22 10 43.6	-1.8
GZR				*i* S	Sg	22 10 55.1	-1.9
BOVS	**Bovan**	**1.03**	**208**	*e*Pg	Pg	22 10 47.6	-0.5
BOVS				*e*Sg	Sg	22 11 00.4	-1.0
BZS	**Buzias**	**1.20**	**333**	*e*Pg	Pg	22 10 49.0	-2.3
BZS				*e*Sg	Sg	22 11 05.7	-1.1
BZS	**Buzias**	**1.20**	**333**	⇑*i*P	Pg	22 10 48.8	-2.5
BZS	**Buzias**	**1.20**	**333**	S	Sg	22 11 04.0	-2.8
BZS	**Buzias**	**1.20**	**333**	⇑*i*P	Pg	22 10 48.8	-2.5
BZS				*i* S	Sg	22 11 04.0	-2.8
ZAPS	**Zavoj**	**1.29**	**172**	*e*Pg	Pg	22 10 52.3	-0.6
ZAPS				*e*Sg	Sg	22 11 08.9	-0.7
LOT	**Lotru**	**1.34**	**47**	⇓*i*P	Pg	22 10 51.7	-2.2
LOT	**Lotru**	**1.34**	**47**	⇓*i*P	Pg	22 10 51.7	-2.2
LOT				*i* S	Sg	22 11 10.6	-0.6
GRUS	**Gruza**	**1.36**	**242**	*e*Pg	Pg	22 10 53.5	-1.0
GRUS				*e*Sg	Sg	22 11 11.7	-0.4
DEV	**Deva**	**1.39**	**15**	⇑*i*P	Pn	22 10 53.7	-1.1
DEV	**Deva**	**1.39**	**15**	⇑*i*P	Pn	22 10 53.7	-1.1
DEV				*i* S	Sg	22 11 10.7	-2.2
TRUS	**Trudelj**	**1.45**	**258**	*e*Pg	Pn	22 10 55.0	-0.7
TRUS				*e*Sg	Sg	22 11 14.9	0.0
VLAD	**Vladila**	**1.55**	**110**	S	Sb	22 11 18.1	+0.1
VLAD	**Vladila**	**1.55**	**110**	*i* S	Sb	22 11 18.1	+0.1
DIVS	**Divibare**	**1.77**	**256**	*e*Sg	Sg	22 11 24.9	-0.3
BARS	**Barje**	**1.78**	**193**	*e*Pg	Pn	22 10 59.7	-0.5
BARS				*e*Sg	Sn	22 11 23.5	+0.1
IVAS	**Ivanjica**	**1.88**	**240**	*e*Sg	Sb	22 11 27.2	-0.1
VOIR		**2.09**	**64**	S	Sn	22 11 30.9	-0.4
VOIR		**2.09**	**64**	*i* S	Sn	22 11 30.9	-0.4
DRGR		**2.26**	**6**	S	Sn	22 11 33.1	-2.2
DRGR		**2.26**	**6**	*i* S	Sn	22 11 33.1	-2.2

*IDC **05** 22:11:27.9±1.0, 10°.95S×165°.18E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.9/55, mbtmp4.0/10, ML4.1/2, MS3.4/1, Ms1 3.3/1, ms1mx2.9/23, Error ellipse: s-maj=32.5km s-min=19.2km az=143.0*

*ISCJB **05** 22:11:31.0±0.8, 11°.1S±0°.1×165°.12E±0°.08, h31^{km}, mb3.8/7, MS3.3/1, Error ellipse: s-maj=15.3km s-min=10.7km az=21.7*

ISC 05 22:11:32.7±0.9**, 11°.0S**±0°.1×**165°.2E**±0°.1**, h31**^{km}**, n10, σ1^{s}.01**/11**, mb3.8**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.38**	**286**	Pn	**Pn**	**22 12 50.1**	**-0.7**
	13nm,0.3s,baz=277,slow=8.1,SNR=3.4						
HNR				Sn	**Sn**	**22 13 52.0**	**+0.3**
	9.4nm,0.3s,baz=111,slow=8.6,SNR=2.8						
DZM	**Mont Dzumac**	**11.10**	**174**	Pn	**Pn**	**22 14 09.3**	**-0.1**
	0.7nm,0.3s,baz=307,slow=17,SNR=6.4						
CTA	**Charters Tower**	**20.34**	**241**	P	**P**	**22 16 08.2**	**+1.5**
	6.1nm,0.8s,baz=61,slow=10,SNR=3.3						
STKA	**Stephens Creek**	**30.11**	**223**	P	**P**	**22 17 39.9**	**+0.2**
	1.7nm,0.7s,baz=92,slow=15,SNR=3.8						
STKA				LR	LR	22 29 09.9	
	comp=Z,67nm,18.2s,baz=19,slow=35						
WRA	**Warramunga Arr**	**30.99**	**250**	P	**P**	**22 17 46.8**	**-0.7**
	1.7nm,0.7s,baz=80,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**32.33**	**243**	P	**P**	**22 17 58.0**	**-1.3**
	2.8nm,0.9s,baz=72,slow=9.8,SNR=22						
ILAR	**Eielson Array**	**83.63**	**19**	P	**P**	**22 23 58.1**	**+0.4**
	0.5nm,0.7s,baz=234,slow=5.1,SNR=7.0						
NVAR	**Mina Array Bea**	**86.40**	**50**	P	**P**	**22 24 12.9**	**+0.3**
	0.4nm,0.7s,baz=260,slow=5.4,SNR=2.8						
MKAR	**Makanchi Array**	**93.09**	**317**	P	**P**	**22 24 44.8**	**+1.2**
	0.2nm,0.7s,baz=89,slow=2.3,SNR=1.8						
YKA	**Yellowknife Ar**	**95.17**	**27**	P	**P**	**22 24 51.5**	**-1.2**
	0.1nm,0.5s,baz=251,slow=5.2,SNR=3.0						

*IDC **05** 22:14:32.5±1.5, 1°.79S×100°.18E, h0^{km}, mb3.7/8, mb1 3.8/8, mb1mx3.6/58, mbtmp3.7/8, Error ellipse: s-maj=71.6km s-min=18.6km az=56.0*

*DJA **05** 22:14:36.7±0.3, 1°S±2°×10°0E±°, h10^{km}, M4.1/10, mb4.0/1, MLv4.1/10*

*ISCJB **05** 22:14:37.1±1.2, 1°.45S±0°.04×100°.16E±0°.06, h26^{km}±9^{km}, mb3.8/7, Error ellipse: s-maj=10.3km s-min=6.8km az=160.1*

ISC 05 22:14:36.3±3.3**, 1°.48S**±0°.04×**100°.17E**±0°.05**, h12**^{km}±22^{km}**, n23, σ1^{s}.46**/24**, mb3.9**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.64**	**28**	P	**Pb**	**22 14 47.9**	**-1.5**
PDSI				S	**Sb**	**22 14 57.2**	**-1.1**
PPI	**Padang Panjang**	**1.04**	**13**	P	**Pb**	**22 14 55.5**	**-0.8**
PPI				S	**Sb**	**22 15 10.2**	**+0.3**
SISI	**Saibi**	**1.09**	**278**	P	**Pn**	**22 14 56.1**	**-1.2**
PPSI	**Pulau Pagai**	**1.28**	**187**	P	**Pn**	**22 14 59.5**	**-0.6**
PPSI				S	**Sb**	**22 15 18.2**	**+1.3**
SDSI	**Sungai Dareh**	**1.37**	**67**	P	**Pn**	**22 15 00.3**	**-1.0**
KRJI	**Kerinci**	**1.43**	**115**	P	**Pn**	**22 15 01.0**	**-1.2**
KRJI				S	**Sn**	**22 15 20.8**	**-0.2**
BKNI	**Bangkinang**	**2.00**	**26**	P	**Pb**	**22 15 13.4**	**+0.8**
MNSI	**Mandailing Nat**	**2.33**	**345**	P	**Pn**	**22 15 16.7**	**+2.2**
MASI	**Maura Aman, Be**	**2.65**	**129**	P	**Pn**	**22 15 20.4**	**+1.5**
MASI				S	**Sb**	**22 15 57.7**	**+1.4**
MDSI	**Maura Dua**	**5.00**	**127**	P	**Pn**	**22 15 52.9**	**+1.7**
CMAR	**Chiang Mai Arr**	**19.85**	**357**	P	**P**	**22 19 09.2**	**+1.9**
	0.3nm,0.3s,baz=184,slow=8.9,SNR=5.4						
H08S2	**Diego Garcia H**	**28.24**	**257**	T	T	22 49 19.5	
	baz=79,slow=74						
H08S3	**Diego Garcia H**	**28.25**	**257**	T	T	22 49 17.8	
	baz=79,slow=74						
H08S1	**Diego Carcia H**	**28.26**	**257**	T	T	22 49 16.3	
	baz=79						
WRA	**Warramunga Arr**	**38.12**	**121**	P	P	22 21 51.4	-4.2
	0.3nm,0.7s,baz=307,slow=8.7,SNR=10						
ASAR	**Alice Springs**	**39.43**	**127**	P	**P**	**22 22 03.3**	**-3.2**
	0.4nm,0.5s,baz=296,slow=8.2,SNR=4.4						
SONM	**Songino Array**	**49.41**	**6**	P	**P**	**22 23 28.0**	**+1.8**
	0.7nm,0.7s,baz=193,slow=10,SNR=5.0						
MKAR	**Makanchi Array**	**50.58**	**344**	P	**P**	**22 23 34.0**	**-0.9**
	1.5nm,0.4s,baz=157,slow=8.6,SNR=25						
KURBB	**Kurchatov Arra**	**55.10**	**343**	P	**P**	**22 24 07.5**	**-0.7**
	0.9nm,0.5s,baz=164,slow=7.0						
ZALV	**Zalesovo Beam**	**56.69**	**349**	P	**P**	**22 24 19.6**	**+0.1**
	0.7nm,0.5s,baz=181,slow=7.4,SNR=5.9						
FINES	**FINESS Array B**	**83.73**	**332**	P	**P**	**22 27 05.7**	**+0.7**
	1.5nm,0.9s,baz=109,slow=12,SNR=3.1						
TXAR	**Lajitas Array**	**144.19**	**37**	PKP	**PKPab**	**22 34 11.2**	**+0.4**
	0.2nm,0.4s,baz=8.1,slow=1.5,SNR=7.3						
CPUP	**Villa Florida**	**144.84**	**217**	PKP	**PKPab**	**22 34 12.2**	**-0.9**
	1.6nm,0.6s,baz=134,slow=2.7,SNR=4.6						

IDC 05 22:21:59.5±1.8**, 5°.86S**×**130°.40E, h0**^{km}**, mb3.7**/1**, mb1 3.6**/3**, mb1mx3.2**/40**, mbtmp3.4**/3**, ML3.3**/3**, Error ellipse: s-maj=79.9km s-min=27.8km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.04**	**10**	Pn	Pn	22 23 15.8	-0.5
	2.4nm,0.3s,baz=306,slow=23,SNR=27						
SIJI				Sn	Sn	22 24 03.7	-12
	2.5nm,0.3s,baz=345,slow=22,SNR=8.5						
WRA	**Warramunga Arr**	**14.51**	**165**	Pn	Pn	22 25 25.3	-1.0
	0.1nm,0.3s,baz=347,slow=13,SNR=3.6						
WRA				Sn	Sn	22 27 59.8	-8.3
	0.3nm,0.3s,baz=351,slow=23,SNR=6.6						
ASAR	**Alice Springs**	**18.02**	**170**	P	P	22 26 12.0	-0.1
	0.2nm,0.3s,baz=346,slow=12,SNR=7.4						
ASAR				S	Sn	22 29 22.7	-11
	0.0nm,0.3s,baz=340,slow=22,SNR=3.8						
MKAR	**Makanchi Array**	**67.50**	**326**	P	P	22 32 57.6	+0.2
	0.4nm,0.4s,baz=118,slow=8.1,SNR=4.4						

*DRS **05** 22:33:23.6±0.0, 41°.03N×46°.05E, h15^{km}*

*TIF **05** 22:33:24.7, 41°.07N×46°.19E, h11^{km}±4^{km}*

*MOS **05** 22:33:25.4±1.7, 41°.05N×46°.40E, h10^{km}, mb3.8/1, Error ellipse: s-maj=11.3km s-min=6.0km az=98.5*

*NORS **05** 22:33:26.6±0.0, 41°.21N×46°.47E, h15^{km}, MPVA3.7*

ISC 05 22:33:25.3±1.2**, 41°.11N**±0°.03×**46°.27E**±0°.02**, h10**^{km}±10^{km}**, n40, σ0^{s}.90**/68**, 1C-3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.73**	**358**	P	**Pb**	**22 33 40.0**	**-0.1**
LGD				S	**Sn**	**22 33 51.6**	**-1.3**
LGD	**Lagodekhi**	**0.73**	**358**	⇓*i*PG	**Pb**	**22 33 40.0**	**-0.1**
LGD				*e*S	**Sn**	**22 33 51.6**	**-1.3**
AKT	**Akhty**	**1.16**	**71**	*e*PG	**Pb**	**22 33 47.0**	**-0.5**
AKT				*e*S	**Sb**	**22 34 01.6**	**-1.1**
AKT	**Akhty**	**1.16**	**71**	*e*Pg	**Pb**	**22 33 47.0**	**-0.5**
AKT				*e*Sg	**Sb**	**22 34 01.6**	**-1.1**
KMKR	**Kumukh**	**1.20**	**31**	⇓*i*PG	**Pb**	**22 33 48.0**	**-0.2**
KMKR				*e*S	**Sb**	**22 34 03.5**	**-0.4**
KMKR				pmax	pmax		
	comp=Z,29nm,0.2s						
SEAG	**Tbilisi Sea**	**1.28**	**301**	P	**Sg**	**22 34 07.2**	**+0.5**
TBLG	**Delisi**	**1.31**	**299**	P	**Pb**	**22 33 49.6**	**-0.5**
TBLG				S	**Sg**	**22 34 07.2**	**-0.3**
TBLG	**Delisi**	**1.31**	**299**	*e*PG	**Pb**	**22 33 49.5**	**-0.5**
TBLG	**Delisi**	**1.31**	**299**	*i* P	**Pg**	**22 33 50.3**	**-0.2**
TBLG				*i* S	**Sg**	**22 34 07.7**	**+0.1**
TBLG				IAML_P			
	comp=Z,5µm,0.2s						
KZRT	**Kazreti**	**1.44**	**282**	P	**Pb**	**22 33 52.0**	**-0.2**
KZRT				S	**Sb**	**22 34 10.2**	**-0.4**
URKR	**Urkarakh**	**1.47**	**44**	*e*PG	**Pg**	**22 33 53.8**	**+0.2**
URKR				*e*S	**Sg**	**22 34 14.1**	**+1.4**
GNI	**Garni**	**1.51**	**231**	*d* *i*PG	**Pg**	**22 33 55.2**	**+1.0**
BTLR	**Botlikh**	**1.56**	**359**	⇑*i*PN	**Pb**	**22 33 54.0**	**-0.3**
BTLR	**Botlikh**	**1.56**	**359**	*i* Pg	**Pb**	**22 33 54.0**	**-0.3**
BTLR				*e*Sg	**Sb**	**22 34 13.9**	**-0.2**
TRLG	**Trialeti**	**1.69**	**286**	P	**Pn**	**22 33 55.2**	**+0.1**
TRLG				S	**Sb**	**22 34 17.2**	**-0.8**
DVE	**Vedeno**	**1.85**	**357**	*e*PN	**Pb**	**22 33 59.2**	**-0.1**
DVE	**Vedeno**	**1.85**	**357**	*e*Pg	**Pb**	**22 33 59.1**	**-0.1**
DVE				*e*Sg	**Sb**	**22 34 23.2**	**+0.6**
DBC	**Dubki**	**1.96**	**12**	*e*PN	**Pb**	**22 34 01.2**	**+0.1**
DBC	**Dubki**	**1.96**	**12**	*e*Pg	**Pb**	**22 34 01.2**	**+0.1**
DBC				*e*Sg	**Sb**	**22 34 25.5**	**-0.1**
BGD	**Bogdanovka**	**2.02**	**275**	P	**Pn**	**22 33 59.8**	**+0.2**
BGD				S	**Sb**	**22 34 26.0**	**-1.6**
EAK	**Akyaka**	**2.06**	**259**	*i* P	**Pg**	**22 34 04.7**	**-0.2**
EAK				*i* S	**Sb**	**22 34 28.5**	**-0.2**
EAK				IAML_P			
	comp=Z,231nm,0.2s						
GROC	**Groznyy**	**2.12**	**351**	*e*PN	**Pb**	**22 34 03.4**	**-0.5**
GROC				*e*		22 34 10.2	
GROC				*e*S	**Sb**	**22 34 30.2**	**-0.1**
GROC				pmax	pmax		
	comp=Z,30nm,1.3s						
GROC				smax	smax		
	comp=E,41nm,0.5s						
GROC				smax	smax		
	comp=E,84nm,1.4s						
GROC	**Groznyy**	**2.12**	**351**	*e*Pg	**Pg**	**22 34 05.4**	**-0.6**
GROC				*e*Sg	**Sg**	**22 34 34.6**	**+0.9**
KMGR	**Komgaron**	**2.21**	**332**	*e*PN	**Pg**	**22 34 06.3**	**-1.5**
KMGR				*e*S	**Sg**	**22 34 35.4**	**-1.0**
KMGR	**Komgaron**	**2.21**	**332**	*e*Pg	**Pg**	**22 34 06.3**	**-1.5**
KMGR				*e*Sg	**Sg**	**22 34 35.4**	**-1.0**
LACR	**Lac**	**2.26**	**320**	*e*PN	**Pb**	**22 34 05.6**	**-0.8**
LACR				*e*S	**Sb**	**22 34 35.3**	**+0.8**
LACR				pmax	pmax		
	comp=Z,16nm,0.3s						
LACR				smax	smax		
	comp=N,47nm,0.5s						
LACR	**Lac**	**2.26**	**320**	*e*Pn	**Pb**	**22 34 06.1**	**-0.3**
LACR				*e*Sn	**Sg**	**22 34 36.5**	**-1.6**
DIGO	**Kars**	**2.31**	**254**	*i* P	**Pg**	**22 34 09.1**	**-0.5**
DIGO				*i* S	**Sg**	**22 34 38.7**	**-0.8**
DIGO				IAML_P			
	comp=Z,272nm,0.2s						
ZEI	**Tsey**	**2.44**	**314**	*e*PN	**Pb**	**22 34 08.8**	**-0.6**
ZEI				*e*S	**Sb**	**22 34 41.1**	**+1.5**
ZEI	**Tsey**	**2.44**	**314**	*e*Pn	**Pb**	**22 34 08.8**	**-0.6**
ZEI				*e*Sn	**Sb**	**22 34 41.1**	**+1.5**
ARNR	**Ardon**	**2.55**	**325**	*e*PN	**Pg**	**22 34 14.1**	**0.0**
ARNR				*e*S	**Sg**	**22 34 46.6**	**-0.5**
ARNR	**Ardon**	**2.55**	**325**	*e*Pn	**Pg**	**22 34 14.1**	**0.0**
ARNR				*e*Sn	**Sg**	**22 34 46.6**	**-0.5**
DIGR	**Digorskoe uzhe**	**2.69**	**313**	*e*PN	**Pb**	**22 34 13.1**	**-0.6**
DIGR				*e*S	**Sb**	**22 34 47.9**	**+1.1**
DIGR	**Digorskoe uzhe**	**2.69**	**313**	*e*Pn	**Pb**	**22 34 13.1**	**-0.6**
DIGR				*e*Sn	**Sb**	**22 34 47.9**	**+1.1**
DAGI	**Agillar**	**3.29**	**271**	*i* P	**Pg**	**22 34 29.0**	**+0.6**
DAGI				IAML_P			
	comp=Z,40nm,0.4s						
NEY	**Neytrino**	**3.40**	**310**	*e*PN	**Pn**	**22 34 20.2**	**+1.7**
KIV	**Kislovodsk**	**3.89**	**318**	*e*PN	**Pn**	**22 34 28.0**	**+2.8**
KIEV	**Kiev**	**15.23**	**315**	*e*P	**Pn**	**22 37 01.9**	**+1.6**
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**17.30**	**23**	*e*P	**P**	**22 37 26.9**	**-1.2**
BRVK	**Borovoye**	**20.14**	**45**	*e*P	**P**	**22 37 59.4**	**0.0**

*ISCJB **05** 22:59:59.3±0.8, 20°.8S±0°.2×177°.9W±0°.1, h495^{km}, mb3.8/7, Error ellipse: s-maj=21.7km s-min=17.8km az=174.8*

*IDC **05** 23:00:01.2±2.9, 20°.93S×177°.85W, h513^{km}±29^{km}, mb3.4/7, mb1 3.6/8, mb1mx3.3/31, mbtmp4.2/8, Error ellipse: s-maj=34.1km s-min=17.3km az=154.0*

ISC 05 22:59:59.5±0.8**, 20°.9S**±0°.2×**177°.8W**±0°.1**, h495**^{km}**, n34, σ0^{s}.60**/34**, mb3.8**/7**, 4C-8D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.68**	**262**	P	**P**	**23 03 06.6**	**0.0**
	0.5nm,0.3s,baz=79,slow=17,SNR=5.8						
STKA	**Stephens Creek**	**37.77**	**245**	P	**P**	**23 06 32.7**	**0.0**
	2.7nm,0.8s,baz=89,slow=8.7,SNR=4.4						
ASAR	**Alice Springs**	**44.58**	**257**	P	**P**	**23 07 27.5**	**+0.3**
	3.6nm,0.6s,baz=95,slow=8.0,SNR=47						
ASAR				PcP	**PcP**	**23 09 00.5**	**+0.7**
	0.6nm,0.5s,baz=101,slow=4.3,SNR=6.2						
WRA	**Warramunga Arr**	**44.70**	**262**	P	**P**	**23 07 27.9**	**-0.2**
	2.9nm,0.3s,baz=96,slow=7.5,SNR=178						
WRA				PcP	**PcP**	**23 09 00.2**	**0.0**
	0.5nm,0.7s,baz=101,slow=3.4,SNR=3.9						
WRA				S	**S**	**23 13 27.2**	**-1.0**
	0.6nm,1.0s,baz=95,slow=13,SNR=3.7						
MJAR	**Matsushiro Arr**	**70.59**	**324**	P	**P**	**23 10 24.7**	**+0.3**
	1.3nm,0.6s,baz=162,slow=5.9,SNR=5.7						
SNAA	**Sanae**	**87.64**	**178**	P	**P**	**23 11 54.5**	**+0.1**
VNA3	**Neumayer Olymp**	**87.77**	**176**	P	**P**	**23 11 55.4**	**+0.5**
VNA2	**Neumayer--Watz**	**88.21**	**177**	P	**P**	**23 11 57.7**	**+0.7**
	baz=188,slow=5.0						
ILAR	**Eielson Array**	**88.64**	**13**	P	**P**	**23 11 58.8**	**-0.1**
	0.4nm,0.7s,baz=224,slow=6.3,SNR=4.6						
CMAR	**Chiang Mai Arr**	**90.38**	**290**	P	**P**	**23 12 09.5**	**+1.5**
	0.7nm,0.3s,baz=113,slow=3.4,SNR=4.0						
SONM	**Songino Array**	**96.12**	**319**	P	**P**	**23 12 34.2**	**+0.4**
	0.7nm,1.1s,baz=131,slow=4.0,SNR=3.5						
ZALV	**Zalesovo Beam**	**110.87**	**321**	PKiKP	**PKiKP**	**23 17 34.2**	**-1.4**
	0.3nm,0.3s,baz=288,slow=1.4,SNR=2.5						
MKAR	**Makanchi Array**	**111.56**	**313**	PKiKP	**PKiKP**	**23 17 36.6**	**-0.6**
	0.2nm,0.5s,baz=63,slow=2.7,SNR=3.6						
KURBB	**Kurchatov Arra**	**114.41**	**317**	PKP	PKPdf	23 17 41.2	-1.3
	0.2nm,0.5s,baz=41,slow=2.0,SNR=3.9						
BVAR	**Borovoye Array**	**119.45**	**320**	PKP	**PKPdf**	**23 17 51.5**	**-0.6**
	baz=48,slow=2.3						
ARCES	**ARCESS Array B**	**129.30**	**350**	PKP	**PKPdf**	**23 18 09.8**	**-0.7**
	1.9nm,0.8s,baz=5.7,slow=3.7,SNR=5.9						
FINES	**FINESS Array B**	**136.16**	**344**	PKP	**PKPdf**	**23 18 23.8**	**+0.2**
	2.6nm,1.0s,baz=20,slow=4.4,SNR=2.9						
AKASG	**Malin Array Be**	**143.40**	**331**	PKP	PKPab	23 18 34.0	-1.1
	1.8nm,0.5s,baz=45,slow=4.6,SNR=15						
KIEV	**Kiev**	**143.41**	**331**	⇓*i*P	PKPab	23 18 34.9	-0.2
BRTR	**Keskin Array B**	**147.19**	**312**	PKPbc	**PKPbc**	**23 18 46.9**	**-0.3**
	0.9nm,0.7s,baz=129,slow=5.7,SNR=4.7						
BURAR	**Bucovina Array**	**147.45**	**330**	⇑*i*P	**PKiKP**	**23 18 49.6**	**+0.5**
BIZ	**Bicaz**	**147.52**	**329**	⇓*i*P	**PKiKP**	**23 18 48.8**	**-0.4**
PLOR	**Plostina**	**148.00**	**327**	⇑*i*P	**PKPab**	**23 18 52.6**	**-0.7**
TRPA	**Tarpa**	**148.23**	**334**	⇑*i*P	**PKiKP**	**23 18 50.1**	**-0.5**

DOPR	Dopca	148.56	328	⇓*i*P	PKiKP	23 18 51.9	+0.5
MLR	Muntele Rosu	148.61	327	⇓*i*P	PKiKP	23 18 51.3	-0.3
MLR	Muntele Rosu	148.61	327	PKPbc	PKPbc	23 18 51.0	+0.5
	1.2nm,0.6s,baz=312,slow=7.0,SNR=5.6						
VOIR		149.10	328	⇓*i*P	PKPbc	23 18 52.0	+0.3
ARR	Arges	149.35	328	⇑*i*P	PKiKP	23 18 53.7	+0.6
HUMR	Humele	149.77	327	⇓*i*P	PKPbc	23 18 53.2	0.0
GZR	Gura Zlata	150.23	330	⇓*i*P	PKPbc	23 18 54.4	+0.1
BZS	Buzias	150.59	332	⇓*i*P	PKiKP	23 18 55.5	0.0
GERES	GERESS Array B	150.59	344	PKPbc	PKPbc	23 18 54.6	-0.4
	0.5nm,0.4s,baz=4.8,slow=3.2,SNR=5.2						
TORD	Torodi Ar. Bea	172.31	177	PKPab	PKPab	23 20 38.6	-0.7
	0.6nm,0.9s,baz=195,slow=2.8,SNR=3.8						

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*IDC **05** 23:02:45.4±1.8, 36°.91N×56°.73E, h0^{km}, mb3.0/3, mb1 3.2/5, mb1mx3.0/40, mbtmp3.1/5, ML2.4/2, Error ellipse: s-maj=22.5km s-min=14.7km az=177.0*

*TEH **05** 23:02:46.5, 37°.19N×56°.62E, h10^{km}, ML3.1*

*ISCJB **05** 23:02:47.4±0.4, 37°.20N±0°.04×56°.67E±0°.04, h10^{km}, mb2.9/3, Error ellipse: s-maj=6.2km s-min=4.3km az=5.4*

ISC 05 23:02:47.4±0.8**, 37°.14N**±0°.06×**56°.60E**±0°.03**, h10^{km}, n33, σ1^{s}97**/32**, mb3.0**/3**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMND	Minoodasht	0.96	278	*e*Pg	Pg	23 03 03.7	-2.1
IMND				IAMB	IAmb	23 03 32.5	
	comp=Z,2μm,0.6s						
SBZV	Sabzevar	1.11	132	IAMB	IAmb	23 03 08.3	
	comp=Z,0.0nm,0.3s						
SBZV				*e*Pg	Pg	23 03 07.5	-1.2
SBZV				*e*Sg	Sn	23 03 24.7	+0.1
ISFR	Sfrayin	1.13	94	IAMB	IAmb	23 03 33.0	
	comp=Z,4μm,0.5s						
ISFR				*e*Pg	Pg	23 03 07.3	-1.8
GEYT	Alibeck	1.45	56	Pg	Pb	23 03 12.8	-1.7
	comp=Z,35nm,0.3s,baz=228,slow=18,SNR=139						
GEYT				Lg	Lg	23 03 33.7	
	comp=Z,16nm,0.3s,baz=266,slow=11,SNR=8.0						
IKRD	Kardeh	1.58	103	*e*Pn	Pg	23 03 28.6	+11
IKRD				IAMB	IAmb	23 04 05.9	
	comp=Z,1μm,1.0s						
IEMG	Emamgholi	1.66	80	*e*Pn	Pb	23 03 16.9	-1.4
IEMG				IAMB	IAmb	23 03 44.9	
	comp=Z,2μm,0.5s						
IAKL	Akhelmad	1.81	106	*e*Pn	Pb	23 03 20.1	-0.7
IAKL				IAMB	IAmb	23 03 51.5	
	comp=N,4μm,0.6s						
IPAY	Payeh	2.04	109	*e*Pn	Pb	23 03 22.8	-2.0
IPAY				IAMB	IAmb	23 03 29.6	
	comp=Z,1μm,0.2s						
IMOG	Moghan	2.43	114	*e*Pn	Pb	23 03 29.0	-2.4
IMOG				IAMB	IAmb	23 04 02.0	
	comp=Z,1μm,0.6s						
IKIA	Kiasar	2.52	249	*e*Pn	Pb	23 03 31.4	-1.4
IKIA				IAMB	IAmb	23 03 39.5	
	comp=Z,726nm,0.3s						
IANJ	Anjilo	2.73	233	*e*Pn	Pn	23 03 33.1	+1.6
IANJ				IAMB	IAmb	23 04 21.1	
	comp=Z,531nm,0.3s						
IMYA	Miami	2.93	105	*e*Pn	Pn	23 03 35.8	+1.7
IMYA				IAMB	IAmb	23 03 44.6	
	comp=Z,608nm,0.4s						
ISHM	Shahmirzad	2.98	244	*e*Pn	Pb	23 03 37.5	-3.1
ISHM				IAMB	IAmb	23 04 27.9	
	comp=Z,911nm,0.5s						
TNSJ	Nastanj	3.17	180	*e*Pn	Pn	23 03 39.6	+2.2
IALA	Alasht	3.22	252	*e*Pn	Pn	23 03 40.1	+1.8
IALA				IAMB	IAmb	23 04 36.5	
	comp=Z,598nm,0.2s						
IFIR	Firoozkooh	3.44	245	*e*Pn	Pn	23 03 44.0	+2.7
IFIR				IAMB	IAmb	23 03 53.3	
	comp=Z,480nm,0.3s						
IPRN	Peran	3.54	257	*e*Pn	Pn	23 03 43.9	+1.4
IPRN				IAMB	IAmb	23 04 54.9	
	comp=Z,730nm,0.5s						
TKDS	Koohdasht(Taba	3.54	173	*e*Pn	Pn	23 03 44.4	+1.8
IDMV	Damavand	4.00	248	*e*Pn	Pn	23 03 52.9	+3.9
IDMV				IAMB	IAmb	23 04 05.4	
	comp=Z,249nm,0.4s						
TPRV	Parvadeh(Tabas	4.10	179	*e*Pn	Pn	23 03 52.0	+1.8
ANAR	Anarak	4.58	212	*e*Pn	Pn	23 03 58.5	+1.6
ITEG	Tejag	4.58	157	*e*Pn	Pn	23 03 58.9	+1.9
ITEG				IAMB	IAmb	23 04 03.9	
	comp=Z,105nm,0.3s						
IMON	Monand	4.67	147	*e*Pn	Pn	23 04 00.0	+1.8
IMON				IAMB	IAmb	23 04 06.5	
	comp=Z,275nm,0.2s						
KRSH	Karshahi	4.82	230	*e*Pn	Pn	23 04 01.2	+1.1
KRSH				IAMB	IAmb	23 05 34.4	
	comp=N,0.0nm,0.8s						
IKOO	Kooshah	5.10	156	IAMB	IAmb	23 04 36.6	
	comp=E,60nm,0.4s						
IKOO				*e*Pn	Pn	23 04 06.0	+1.9
IDAH	Dahanechah	5.14	148	IAMB	IAmb	23 04 10.4	
	comp=N,174nm,0.3s						
IDAH				*e*Pn	Pn	23 04 06.4	+1.7
IKLH	Kolahrood	5.60	229	*e*Pn	Pn	23 04 13.5	+2.5
IKLH				IAMB	IAmb	23 06 10.5	
	comp=Z,77nm,0.6s						
ISAD	Sadrabad	5.74	206	*e*Pn	Pn	23 04 14.6	+1.7
ISAD				IAMB	IAmb	23 06 03.4	
	comp=Z,78nm,0.7s						
GNI	Garni	9.75	292	Pn	Pn	23 05 12.0	+4.3
	comp=Z,0.3nm,0.3s,baz=110,slow=17,SNR=2.7						
BVAR	Borovoye Array	18.58	27	P	Pn	23 07 03.8	-0.9
	comp=Z,0.1nm,0.3s,baz=197,slow=9.5,SNR=3.7						
MKAR	Makanchi Array	21.32	55	P	P	23 07 34.1	-0.2
	comp=Z,0.3nm,0.6s,baz=244,slow=11,SNR=7.5						
AKASG	Malin Array Be	23.76	313	P	P	23 08 01.4	+1.6
	comp=Z,0.2nm,0.4s,baz=116,slow=10.0,SNR=2.7						
YKA	Yellowknife Ar	80.46	356	P	P	23 15 00.5	+1.6
	comp=Z,0.1nm,0.6s,baz=5.7,slow=6.2,SNR=3.3						

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*SJA **05** 23:09:53.4±0.6, 28°.76S×67°.36W, h140^{km}±7^{km}, ML3.6, MW3.7*

*ISCJB **05** 23:09:54.3±0.7, 28°.83S±0°.07×67°.38W±0°.08, h148^{km}±9^{km}, mb3.6/3, Error ellipse: s-maj=11.6km s-min=10.5km az=24.2*

*IDC **05** 23:09:55.1±4.2, 28°.78S×67°.42W, h138^{km}±32^{km}, mb3.5/3, mb1 3.5/5, mb1mx3.3/30, mbtmp3.8/5, MS2.8/1, Ms1 3.0/1, ms1mx2.5/19, Error ellipse: s-maj=46.0km s-min=24.4km az=28.0*

ISC 05 23:09:54.4±0.9**, 28°.71S**±0°.06×**67°.41W**±0°.08**, h136**^{km}±9^{km}**, n17, σ1^{s}25**/25**, mb3.8**/3**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLL	PUNTA DE LOS L	1.85	156	*i* P	Pn	23 10 26.6	-0.3
APLL				*i* S	Sn	23 10 50.5	-1.4
APLL				IAML		23 10 50.5	
	comp=Z,256nm,0.2s						
ACDV	Cuesta del Vie	2.08	225	*i* P	Pn	23 10 30.1	+0.3
ACDV				*i* S	Sn	23 10 57.2	+0.2
ACCO	Cerro Coronel	2.36	217	*i* P	Pn	23 10 33.7	+0.3
ACCO				*i* S	Sn	23 11 04.3	+0.9
RTLL	Cerro Villicun	2.77	199	*i* P	Pn	23 10 38.2	0.0
RTLL				*i* S	Sn	23 11 11.1	-1.1
RTLL				IAML		23 11 12.4	
	comp=Z,240nm,0.3s						
CFA	Coronel Fontan	2.97	194	*i* P	Pn	23 10 40.6	-0.3
CFA				*i* S	Sn	23 11 15.2	-1.6
ACAN	Cantantal	3.56	177	*i* P	Pn	23 10 48.1	-0.4
ACAN				*i* S	Sn	23 11 28.3	-2.1
ARCO	CERRO ARCO	4.32	197	*i* P	Pn	23 10 58.1	-0.5
ARCO				*i* S	Sn	23 11 46.9	-1.7
ARCO				IAML		23 11 51.2	
	comp=Z,77nm,0.6s						
LVC	Limon Verde	6.22	347	P	Pn	23 11 25.1	+0.8
	comp=Z,0.8nm,0.3s,baz=188,slow=2.9,SNR=8.4						
LVC				S	Sn	23 12 31.2	-3.2
	comp=Z,0.7nm,0.3s,baz=336,slow=18,SNR=4.3						
CPUP	Villa Florida	9.26	78	P	Pn	23 12 07.1	+2.4
	comp=Z,0.5nm,0.3s,baz=254,slow=11,SNR=6.4						
LPAZ	La Paz	12.38	357	LR	LR	23 18 13.8	
	comp=Z,46nm,19.1s,baz=46,slow=40						
TXAR	Lajitas Array	67.32	326	P	P	23 20 35.6	+0.9
	comp=Z,0.3nm,0.8s,baz=141,slow=4.4,SNR=2.2						
TORD	Torodi Ar. Bea	78.63	68	P	P	23 21 41.2	-0.4
	comp=Z,1.1nm,0.6s,baz=265,slow=5.2,SNR=11						
BOSA	Boshof	78.95	117	P	P	23 21 43.5	+0.2
	comp=Z,2.8nm,0.9s,baz=357,slow=14,SNR=3.2						
ASAR	Alice Springs	124.03	204	PKP	PKPdf	23 28 36.6	-0.7
	comp=Z,0.3nm,0.5s,baz=134,slow=1.1,SNR=3.9						
WRA	Warramunga Arr	127.27	206	PKP	PKiKP	23 28 43.9	-0.1
	comp=Z,0.5nm,0.5s,baz=166,slow=1.6,SNR=14						
ZALV	Zalesovo Beam	147.66	31	PKPbc	PKiKP	23 29 23.6	-0.7
	comp=Z,0.9nm,0.4s,baz=302,slow=5.6,SNR=6.3						
MKAR	Makanchi Array	150.27	44	PKPbc	PKiKP	23 29 30.3	+0.3
	comp=Z,0.3nm,0.6s,baz=308,slow=1.9,SNR=4.4						
MKAR				PKPab	PKPab	23 29 36.2	+0.3
	comp=Z,0.4nm,0.6s,baz=314,slow=2.5,SNR=7.4						

RSNC 05 23:35:19.7±0.7**, 11°.55N**×**72°.83W, h4**^{km}±11^{km}**, ML3.9, Mw4.0, 1C, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRC	Santa Marta, M	1.42	254	*e*P	Pn	23 35 42.3	-4.0
SMRC				*e*S	Sb	23 36 01.0	-4.1
SMRC				*i*		23 36 03.3	
	comp=N,760nm,0.3s						
CODC	Agustn Codazz	1.71	201	*e*P	Pn	23 35 46.7	-3.6
CODC				*e*S	Sn	23 36 07.6	-5.2
CODC				*i*		23 36 09.1	
	comp=N,501nm,0.2s						
SMLC	San Martn de	2.99	204	*e*P	Pn	23 36 04.0	-3.9
SMLC				*i*		23 36 43.0	
	comp=N,617nm,0.1s						
OCAC	Ocana	3.33	188	*e*P	Pn	23 36 09.2	-3.5
OCAC				*e*S	Sn	23 36 48.5	-4.2
OCAC				*i*		23 36 56.5	
	comp=N,679nm,0.2s						
SDV	Santo Domingo	3.42	141	⇑*i*P	Pn	23 36 11.2	-2.8
SDV				*e*S	Sn	23 36 50.3	-4.8
PAMC	Pamplona, Colo	4.19	178	*e*P	Pn	23 36 21.4	-3.4
PAMC				*e*S	Sn	23 37 10.2	-4.3
PAMC				*i*		23 37 15.8	
	comp=N,173nm,0.3s						
BRRC	Barranca, Sant	4.50	191	*e*P	Pn	23 36 25.4	-3.3
BRRC				*e*S	Sn	23 37 16.0	-5.5
BRRC				*i*		23 37 26.6	
	comp=N,200nm,0.3s						
ZARC	Zaragoza, Cauc	4.50	207	*e*P	Pn	23 36 26.7	-2.1
ZARC				*e*S	Sn	23 37 16.8	-4.8
BARC	Barichara	4.94	184	*e*P	Pn	23 36 32.2	-2.8
BARC				*i*		23 36 35.0	
	comp=Z,148nm,0.4s						
BARC				*e*S	Sn	23 37 28.5	-4.2
PTBC	PUERTO BERRIO,	5.23	198	*e*P	Pn	23 36 35.1	-3.7
PTBC				*i*		23 37 46.9	
	comp=N,99nm,0.2s						
NORC	Norcasia	6.28	199	*e*P	Pn	23 36 50.7	-2.6
NORC				*i*		23 38 15.0	
	comp=N,47nm,0.2s						
CHIC	Chingaza	6.93	187	*e*P	Pn	23 36 60.0	-2.6
CHIC				*i*		23 37 03.7	
	comp=Z,26nm,0.8s						
CHIC				*e*S	Sn	23 38 18.6	-3.5

ISC 05 23:41:20.2±0.8**, 50°.24N**±0°.04×**18°.79E**±0°.02**, h0^{km}, n29, σ0^{s}97**/44**, 3C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.14	67	*i* Pg	Pg	23 41 23.0	+0.1
CHZP				*i* Sg	Sg	23 41 25.0	+0.3
OKC	Ostrava-Krasne	0.58	226	*e*PG	Pb	23 41 32.6	-0.6
OKC				*e*SG	Sb	23 41 41.1	-0.9
	comp=Z,12nm,0.3s						
OJC	Ojcow	0.65	91	*e*Pg	Pg	23 41 32.4	-0.2
OJC				*e*Sg	Sg	23 41 40.8	-0.1
MORC	Moravsky Berou	0.93	241	⇑*i*P	Pg	23 41 38.4	+0.4
MORC	Moravsky Berou	0.93	241	S	Sg	23 41 51.3	+1.3
MORC	Moravsky Berou	0.93	241	*e*PG	Pg	23 41 38.5	+0.4
MORC				*e*SG	Sg	23 41 50.5	+0.5
NIE	Niedzica	1.27	130	*e*Pg	Pg	23 41 44.4	-0.2
NIE				*e*Sg	Sb	23 42 02.7	+0.7
KRLC	Kraliky	1.30	264	*e*PG	Pg	23 41 44.5	-0.7
KRLC				*e*SG	Sg	23 42 01.4	-0.7
	comp=Z,3.8nm,0.4s						
DPC	Dobruska-Polom	1.59	275	*e*PG	Pn	23 41 49.5	-0.1
DPC				*e*SG	Sg	23 42 11.1	-0.1
	comp=Z,15nm,0.4s						
VRAC	Vranov	1.70	238	⇑*i*P	Pn	23 41 51.0	-0.2
VRAC	Vranov	1.70	238	S	Sn	23 42 14.3	+0.6
VRAC	Vranov	1.70	238	*e*PN	Pb	23 41 51.9	-0.5
VRAC				*e*SG	Sb	23 42 14.5	+0.2
KSP	Ksiaz	1.71	292	*e*Pg	Pg	23 41 52.4	-0.5
KSP				*e*Sg	Sg	23 42 15.9	+0.9
VYHS	Vyhne	1.75	179	*e*PN	Pn	23 41 51.1	-0.7
VYHS				*e*SN	Sn	23 42 14.2	-0.5
VYHS				*e*LG	Lg	23 42 18.8	
UPC	Upice	1.80	280	*e*SG	Sb	23 42 16.9	-0.3
	comp=Z,4.8nm,0.3s						
KRUC	Moravsky	1.95	234	*e*PN	Pn	23 41 55.3	+0.7
KRUC				*e*SG	Sb	23 42 21.1	-0.4
TREC	Trest	2.34	247	*e*PG	Pb	23 42 02.2	-1.1
TREC				*e*SG	Sb	23 42 33.8	+1.0
PSZ	Piszkesteto	2.43	162	⇓*i*P	Pn	23 42 01.1	-0.1
PSZ	Piszkesteto	2.43	162	S	Sn	23 42 33.2	+1.5
PVCC	Panska Ves	2.72	278	*e*SG	Sg	23 42 47.1	-0.4
	comp=Z,7.9nm,0.2s						
PRU	Pruhonice	2.75	266	*e*PG	Pb	23 42 10.3	+0.1
PRU				*e*SG	Sb	23 42 45.6	+1.2
BRG	Berggiesshubel	3.16	283	PG	Pg	23 42 19.1	-1.6
BRG				SG	Sg	23 43 01.8	+0.2
	4.5nm,0.6s						
TRPA	Tarpa	3.24	129	⇓*i*P	Pn	23 42 11.8	-0.4
TRPA	Tarpa	3.24	129	S	Sn	23 42 51.2	-0.3
KHC	Kasperske Hory	3.56	254	*e*PG	Pb	23 42 24.1	0.0
KHC				*e*SG	Sb	23 43 11.1	+3.2
CLL	Collm	3.83	288	*e*Sg	Sb	23 43 18.0	+2.5
NKC	Novy Kostel	4.07	272	*e*SG	Sg	23 43 28.9	-2.1
DRGR		4.32	141	S	Sn	23 43 18.8	+0.5
BURAR	Bucovina Array	4.98	119	⇑*i*P	Pn	23 42 35.9	-0.4

IDC 06 00:03:25.8±1.7**, 10°.91S**×**165°.16E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/37**, mbtmp3.6**/4**, ML3.2**/1**, Error ellipse: s-maj=53.0km s-min=30.9km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.17	174	Pn	Pn	00 06 07.0	+0.1
	0.2nm,0.3s,baz=0.0,slow=20,SNR=3.2						
WRA	Warramunga Arr	30.99	249	P	P	00 09 45.7	+0.5
	0.4nm,0.9s,baz=81,slow=9.2,SNR=3.7						
ASAR	Alice Springs	32.34	243	P	P	00 09 56.5	-0.6
	0.6nm,0.6s,baz=69,slow=10,SNR=6.2						
ILAR	Eielson Array	83.57	19	P	P	00 15 55.5	0.0
	0.6nm,1.1s,baz=228,slow=5.9,SNR=2.9						

MEX 06 00:06:16.4±0.6**, 15°.02N**×**92°.99W, h63**^{km}±66^{km}**, MD3.5, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.71	342	*e*P	Pn	00 06 29.3	-1.7
PCIG				*e*S	Sn	00 06 40.1	-1.6
CCIG	Comitan	1.50	33	*e*P	Pn	00 06 40.5	-0.8
CCIG				*e*S	Sn	00 06 56.8	-3.2

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*IDC **06** 00:07:20.7±0.3, 10°.80S×165°.32E, h0^{km}, mb5.2/34, mb1 5.2/35, mb1mx5.2/42, mbtmp5.1/35, ML5.4/1, MS5.9/25, Ms1 5.9/25, ms1mx5.7/36, Error ellipse: s-maj=10.0km s-min=7.0km az=90.0*

*BJI **06** 00:07:20.6, 10°.80S×165°.10E, h8^{km}, mB6.1/81, mb5.4/68, Ms6.1/93, Ms7 5.9/87*

*ISCJB **06** 00:07:21.2±0.1, 10°.86S±0°.02×165°.23E±0°.02, h14^{km}, mb5.5/319, MS6.1/188, Error ellipse: s-maj=3.1km s-min=2.5km az=159.6*

*NEIC **06** 00:07:22.0±0.0, 11°.16S×165°.21E, h13^{km}, Moment Tensor Solution. s25 Moment tensor: Scale 10^{18}Nm; M_{rr}0.49; $M_{\theta\theta}$0.64; $M_{\phi\phi}$-1.13; $M_{r\theta}$0.44; $M_{\theta\phi}$0.58; $M_{\phi r}$0.15; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s23.00000°, δ66.00000°, λ153.00000°. NP2:ϕ_s124.00000°, δ65.00000°, λ26.00000°. Principal axes: T 1.1400, Plg35.0000°, Azm343.0000°; N 0.1600, Plg54.0000°, Azm164.0000°; P -1.3000, Plg0.0000°, Azm73.0000°;*

*NEIC **06** 00:07:22.1±0.1, 10°.86S×165°.25E, h11^{km}, mb5.6/242, ME5.7, MS6.1/125, MW6.0 Error ellipse: s-maj=2.2km s-min=1.9km az=132.0 Broadband fault plane solution: P waves. NP1:ϕ_s8.00000°, δ46.00000°, λ144.00000°. NP2:ϕ_s125.00000°, δ65.00000°, λ50.00000°. Principal axes: T Plg52.0000°, Azm347.0000°; N Plg0.0000°, Azm0.0000°; P Plg11.0000°, Azm243.0000°; Apparent Stress 0.17 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*MOS **06** 00:07:23.3±1.1, 10°.73S×165°.12E, h25^{km}, mb5.7/74, MS6.0/36 Error ellipse: s-maj=7.2km s-min=5.8km az=101.8*

*GCMT **06** 00:07:26.1±0.1, 10°.90S±0°.01×165°.18E, h12^{km}, MW6.0/137, Moment Tensor Solution. s137,c297; s135,c390; Duration: 2^{s}5 Moment tensor: Scale 10^{18} Nm; M_{rr}0.44±.01; $M_{\theta\theta}$0.79±.01; $M_{\phi\phi}$-1.23±.01; $M_{r\theta}$0.26±.03; $M_{\theta\phi}$0.70±.01; $M_{\phi r}$-0.37±.02; Best double couple: $M_0$1.29300×10^{18} NP1:ϕ_s119.00000°, δ89.00000°, λ19.00000°. NP2:ϕ_s28.00000°, δ71.00000°, λ179.00000°. Principal axes: T 1.0450, Plg14.0000°, Azm345.0000°; N 0.4980, Plg71.0000°, Azm123.0000°; P -1.5410, Plg12.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 00:07:21.7±0.5**, 10°.78S**±0°.03×**165°.33E**±0°.04**, h8**^{km}±2^{km}**, h8^{km}:pP-P, n899, σ1^{s}54**/908**, mb5.5**/327**, MS6.0**/189**, 52C-22D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.47	284	*e*P	Pn	00 08 43.0	-0.6
HNR				*e*S	Sn	00 09 50.0	+3.2
HNR	Honiara	5.47	284	*e*Pn	Pn	00 08 41.6	-2.0
HNR				*e*Sn	Sn	00 09 44.2	-2.6
HNR	Honiara	5.47	284	*e*P	Pn	00 08 41.6	-2.0
HNR				*e*		00 09 44.2	
HNR	Honiara	5.47	284	Pn	Pn	00 08 43.5	-0.1
	114nm,0.3s,baz=223,slow=4.1,SNR=80						
HNR				Sn	Sn	00 09 49.1	+2.3
	99nm,0.3s,baz=160,slow=22,SNR=6.1						
HNR				LR	LR	00 11 05.8	
	comp=Z,224μm,18.5s,baz=120,slow=41						
MARNC	Mare, Loyalty	10.95	167	*e*Pn	Pn	00 09 57.5	-1.3
DZM	Mont Dzumac	11.28	175	*e*Pn	Pn	00 09 59.8	-3.7
	934nm,1.4s						
DZM				*e*Sn	Sn	00 11 58.8	-11
	103nm,0.6s						
DZM				*e*LR	LR	00 12 33.0	
	comp=Z,96μm,24.9s						
DZM	Mont Dzumac	11.28	175	*e*Pn	Pn	00 10 01.1	-2.3
DZM				Sn	Sn	00 12 11.1	+1.2
DZM	Mont Dzumac	11.28	175	Pn	Pn	00 09 59.7	-3.7
	6.2nm,0.3s,baz=16,slow=12,SNR=36						
DZM				Sn	Sn	00 12 11.1	+1.2
	6.8nm,0.3s,baz=15,slow=18,SNR=3.1						
DZM				LR	LR	00 13 33.8	
	comp=Z,92μm,19.4s,baz=16,slow=33						
ONTNC	Ouen Toro	11.51	175	*e*Pn	Pn	00 10 06.1	-0.4
MSVF	Nonsavu	14.13	121	*e*Pn	Pn	00 10 43.0	+0.6
MSVF	Nonsavu	14.13	121	*i* P	Pn	00 10 45.7	+3.2
TARA	Tarawa	14.23	33	*e*Pn	Pn	00 10 45.1	+1.3
PATS	Pohnpei	18.84	338	*e*P	Pn	00 11 43.2	+0.4
	385nm,1.0s						
KWAJ	Kwajalein Atol	19.59	7	*e*P	Pn	00 11 51.4	-0.4
	3μm,1.9s						
KWAJ	Kwajalein Atol	19.59	7	*e*P	Pn	00 11 51.4	-0.4
KWAJ				pmax	pmax		
	comp=Z,3μm,1.9s						
EIDS	Eidsvold	19.82	221	P	P	00 11 52.7	-0.3
	baz=20,SNR=12						
CTA	Charters Tower	20.57	241	P	P	00 11 60.0	-1.2
	comp=Z,140nm,1.0s,baz=66,slow=13,SNR=30						
CTA				S	Sn	00 15 53.5	-2.2
	comp=Z,9.8nm,0.9s,baz=334,slow=23,SNR=3.6						
CTA				LR	LR	00 18 24.7	
	comp=Z,51μm,21.7s,baz=64,slow=32						
CTAO	Charters Tower	20.57	241	*e*P	P	00 11 59.7	-1.5
	comp=Z,634nm,1.1s						
CTAO				LR	LR		
	comp=Z,73μm,21.0s						
CTAO	Charters Tower	20.57	241	*e*P	P	00 11 59.7	-1.5
CTAO				pmax	pmax		
	comp=Z,634nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,73μm,21.0s						
LHI	Lord Howe Isla	21.44	195	P	P	00 12 13.8	+3.3
	baz=22,SNR=3.8						
MTSU	Mount Surprise	21.61	248	P	P	00 12 08.7	-3.8
	baz=21,SNR=26						
COEN	Coen	21.87	259	P	P	00 12 11.8	-3.5
	baz=22,SNR=20						
RMQ	Roma	22.11	223	P	P	00 12 18.9	+1.1
	baz=22,SNR=9.4						
ARMA	Armidale	23.33	211	P	P	00 12 30.0	-0.7
	baz=23,SNR=11						
KNTN	Kanton	24.12	72	*e*P	P	00 12 38.9	+0.5
	comp=Z,1μm,1.9s						
RAO	Raoul Island	24.14	142	LR	LR	00 20 46.5	
	comp=Z,30μm,19.1s,baz=306,slow=33						
QLP	Quilpie	25.36	229	P	P	00 12 49.8	+0.3
	baz=25,SNR=12						
JAY	Jayapura	25.78	287	P	P	00 12 52.8	-0.7
	comp=Z,1μm,1.0s,comp=Z,30μm						
MGCD	Mangrove Creek	25.87	208	P	P	00 12 55.5	+1.5
	baz=26,SNR=6.3						
GENI	Genyem	26.26	286	P	P	00 12 57.5	-0.3
	comp=Z,105nm,0.8s,comp=Z,7μmcomp=Z,22μm						
RIV	Riverview	26.36	207	P	P	00 12 59.9	+1.4
	baz=26,SNR=3.2						
QIS	Mount Isa	26.57	245	P	P	00 12 58.6	-2.0
	baz=26,SNR=17						
CMSA	Cobar Meteorol	27.51	218	P	P	00 13 08.4	-0.6
	baz=28,SNR=30						
YNG	Young	28.06	211	P	P	00 13 13.9	0.0
	baz=28,SNR=7.9						
CNB	Canberra Magne	28.42	208	P	P	00 13 17.6	+0.5
	baz=28,SNR=6.3						
CAN	Canberra	28.59	209	*e*P	P	00 13 17.0	-1.6
	comp=Z,174nm,1.9s						
CAN	Canberra	28.59	209	*e*P	P	00 13 17.0	-1.6
CAN				pmax	pmax		
	comp=Z,174nm,1.9s						
HIZ	Hauiti	28.90	164	*e*P	P	00 13 21.1	-0.1
	comp=Z,336nm,1.4s						
MXZ	Matakaoa Point	29.11	158	*e*P	P	00 13 22.8	-0.3
	comp=Z,200nm,1.1s						
H11S2	WAKE ISLAND Hy	29.12	3	T	T	00 43 54.3	
	baz=184,slow=76,SNR=839						
H11S3	WAKE ISLAND Hy	29.12	3	T	T	00 44 03.3	
	baz=184,slow=76,SNR=674						
H11S1	WAKE ISLAND Hy	29.13	3	T	T	00 43 56.2	
	baz=184,slow=76,SNR=1186						
URZ	Urewera	29.33	161	*e*P	P	00 13 24.7	-0.4
	comp=Z,330nm,1.1s						
URZ				S	S	00 18 23.5	+4.8
URZ	Urewera	29.33	161	P	P	00 13 24.6	-0.5
	comp=Z,153nm,1.0s,baz=112,slow=1.7,SNR=12						
URZ				S	S	00 18 23.5	+4.8
	comp=Z,6.2nm,0.6s,baz=91,slow=16,SNR=2.4						
URZ				LR	LR	00 24 23.1	
	comp=Z,37μm,18.9s,baz=352,slow=35						
WAKE	Wake Island	29.90	3	PFAKE		00 13 40.0	+10
WAKE				LR	LR		
	comp=Z,18μm,20.0s						
BKZ	Black Stump Fm	29.97	162	*e*P	P	00 13 30.1	-0.7
	comp=Z,292nm,1.3s						
H11N1	WAKE ISLAND Hy	30.34	3	T	T	00 45 31.5	
	baz=182,slow=76,SNR=1037						
H11N3	WAKE ISLAND Hy	30.35	3	T	T	00 45 26.3	
	baz=182,slow=76,SNR=526						
STKA	Stephens Creek	30.36	223	P	P	00 13 34.2	0.0
	baz=30,SNR=17						
STKA	Stephens Creek	30.36	223	*e*P	P	00 13 33.5	-0.8
	comp=Z,23nm,1.3s						
STKA				S	S	00 18 38.6	+3.6
STKA	Stephens Creek	30.36	223	P	P	00 13 32.6	-1.7
STKA				S	S	00 18 38.6	+3.6
STKA				pmax	pmax		
	comp=Z,15nm,0.7s						
STKA				smax	smax		

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      comp=N,1.0nm,0.3s
STKA                                MLR    MLR
      comp=Z,44µm,18.7s
STKA  Stephens Creek   30.36 223   P      P        00 13 32.5  -1.7
      comp=Z,7.2nm,0.7s,baz=50,slow=9.5,SNR=15
STKA                               S      S        00 18 38.6 +3.6
      comp=Z,1.3nm,0.3s,baz=330,slow=14,SNR=1.7
STKA                               LR     LR       00 25 13.5
      comp=Z,44µm,18.7s,baz=44,slow=35
H11N2 WAKE ISLAND Hy   30.36   3   T      T        00 45 32.8
      baz=182,slow=76,SNR=588
WRAB  Tennant Creek    31.18 249  eP      P        00 13 40.2  -1.5
      comp=Z,165nm,1.3s
WRAB                               LR     LR
      comp=Z,57µm,19.0s
WRAB  Tennant Creek    31.18 249ceP       P        00 13 39.3  -2.4
WRAB                               pmax   pmax
      comp=Z,118nm,1.7s
WB2   Warramunga Arr   31.18 249  eP      P        00 13 40.1  -1.6
      comp=Z,210nm,1.4s
WRA   Warramunga Arr   31.19 249   P      P        00 13 40.0  -1.8
      comp=Z,33nm,0.8s,baz=80,slow=8.4,SNR=35
WRA                                PcP    PcP      00 16 37.2 +0.4
      comp=Z,6.0nm,0.8s,baz=78,slow=2.7,SNR=4.7
WRA                                S      S        00 18 47.2  -1.2
      comp=Z,2.2nm,1.1s,baz=77,slow=26,SNR=3.1
WRA                                PKiKP  PKiKP    00 24 07.2 +0.2
      comp=Z,0.9nm,0.9s,baz=14,slow=0.9,SNR=5.1
WRA                                LR     LR       00 26 14.4
      comp=Z,55µm,18.2s,baz=70,slow=36
BFZ   Birch Farm       31.31 164  eP      P        00 13 42.6 +0.1
      comp=Z,300nm,1.2s
SNZO  South Karori     31.51 166  eP      P        00 13 44.3 +0.1
      comp=Z,144nm,0.8s
SNZO                               LR     LR
      comp=Z,29µm,19.0s
THZ   Tophouse         31.57 169  eP      P        00 13 44.5  -0.4
      comp=Z,102nm,0.8s
GUMO  Guam             31.60 320   LR     LR       00 26 02.8
      comp=Z,21µm,19.3s,baz=150,slow=36
KDU   Kakadu           32.21 263   P      P        00 13 48.8  -2.0
      baz=32,SNR=4.6
KHZ   Kahutara         32.32 169  eP      P        00 13 50.8  -0.6
      comp=Z,85nm,1.0s
LTZ   Lake Taylor      32.45 170  eP      P        00 13 51.9  -0.7
      comp=Z,121nm,0.8s
AS01  Alice Springs    32.51 243  eP      P        00 13 51.0  -2.3
AS31  Alice Springs    32.55 243  eP      P        00 13 52.0  -1.7
      comp=Z,27nm,1.0s
ASAR  Alice Springs    32.55 243   P      P        00 13 48.7  -5.0
      comp=Z,54nm,1.0s,baz=67,slow=10.0,SNR=50
ASAR                               PcP    PcP      00 16 40.5   0.0
      comp=Z,8.9nm,0.8s,baz=73,slow=2.5,SNR=7.3
ASAR                               S      S        00 19 13.1 +3.5
      comp=Z,3.4nm,1.1s,baz=63,slow=34,SNR=2.3
ASAR                               PKiKP  PKiKP    00 24 06.6  -1.3
      comp=Z,0.5nm,0.8s,baz=106,slow=2.0,SNR=3.2
ASAR                               LR     LR       00 26 10.1
      comp=Z,28µm,18.8s,baz=70,slow=35
FOZ   Fox Glacier      32.86 174  eP      P        00 13 55.1  -1.0
      comp=Z,145nm,1.0s
OXZ   Oxford           32.95 171  eP      P        00 13 56.4  -0.5
      comp=Z,155nm,1.0s
HTT   Hallett          33.09 223   P      P        00 13 58.1  -0.2
      baz=33,SNR=11
RPZ   Rata Peaks       33.19 172  eP      P        00 13 58.0  -1.0
      comp=Z,100nm,0.9s
RPZ                                S      S        00 19 22.9 +3.9
RPZ   Rata Peaks       33.19 172   P      P        00 13 58.6  -0.4
      comp=Z,20nm,0.5s,baz=294,slow=7.6,SNR=5.2
RPZ                                S      S        00 19 22.8 +3.9
      comp=Z,16nm,1.1s,baz=351,slow=18,SNR=2.8
RPZ                                LR     LR       00 26 25.3
      comp=Z,25µm,18.4s,baz=338,slow=34
CRLZ  Canterbury Las   33.28 170  eP      P        00 14 00.6 +0.9
      comp=Z,311nm,1.4s
ARPS  Mount Arapiles   33.45 215   P      P        00 14 02.0 +0.6
      baz=33,SNR=10
SARN  Sarigan          33.46 324  eP      P        00 14 01.2  -0.5
      comp=Z,94nm,1.0s
FAKI  Fak Fak          33.73 281  eP      P        00 14 03.4  -0.8
      comp=Z,26nm,1.0s
LBZ   Lake Benmore     33.74 174  eP      P        00 14 03.8   0.0
      comp=Z,302nm,2.0s
ODZ   Otahua Downs     34.45 173  eP      P        00 14 09.9   0.0
      comp=Z,66nm,1.2s
MLZ   Mavora Lakes     34.55 177  eP      P        00 14 10.9 +0.1
      comp=Z,66nm,1.1s
DCZ   Deep Cove        34.60 178  eP      P        00 14 11.2   0.0
      comp=Z,104nm,1.4s
BBOO  Buckleboo        34.71 226   P      P        00 14 11.5  -0.9
      baz=35,SNR=23
RAR   Rarotonga        35.04 112   LR     LR       00 25 37.5
      comp=Z,10µm,19.9s,baz=279,slow=31
WHZ   Wether Hill Ro   35.06 177  eP      P        00 14 15.3 +0.1
      comp=Z,66nm,1.3s
PALU  Palau            35.60 299   P      P        00 14 21.1 +0.8
      baz=36,SNR=7.3
BNDI  Bandanaira       35.63 277   P      P        00 14 21.3 +0.8
      comp=Z,290nm,1.1s,comp=Z,5µmcomp=Z,19µm
TAU   Tasmania Unive   35.65 203   PFAKE           00 14 30.0  +10
TAU                                LR     LR
      comp=Z,10µm,22.0s
KNRA  Kununurra        35.90 258   P      P        00 14 21.6  -1.2
      baz=36,SNR=14
JOHN  Johnston Islan   36.95  43   PFAKE           00 14 40.0 +8.3
JOHN                               LR     LR
      comp=Z,2µm,20.0s
WRKA  Warakurna        37.84 243   P      P        00 14 38.2  -1.1
      baz=38,SNR=28
NLAI  Namlea           38.64 278   P      P        00 14 45.9  -0.2
      comp=Z,93nm,1.5s,comp=Z,3µm
FITZ  Fitzroy Crossi   39.05 255   P      P        00 14 48.8  -0.7
      baz=39,SNR=19
TNTI  Ternate          39.45 285   P      P        00 14 52.9  -0.1
      comp=Z,46nm,1.6s,comp=Z,2µm
FORT  Forrest          39.86 234   P      P        00 14 55.3  -0.9
      baz=40,SNR=18
SANI  Sanana           40.00 280   P      P        00 14 55.5  -2.0
      comp=Z,69nm,1.1s,comp=Z,4µm
SOEI  Soe              40.40 268  eP      P        00 14 60.0  -1.0
      comp=Z,414nm,2.0s
SOEI  Soe              40.40 268   P      P        00 15 06.9 +6.0
      comp=Z,49nm,1.2s,comp=Z,3µm
BATI  Baumata          40.95 267   P      P        00 15 05.1  -0.3
      comp=Z,52nm,1.0s,comp=Z,1µm
MIDW  Midway           42.23  23   PFAKE           00 15 30.0  +14
MIDW                               LR     LR
      comp=Z,12µm,19.0s
MMRI  Maumere          42.50 269  eP      P        00 15 15.8  -2.3
      comp=Z,317nm,1.4s
MMRI  Maumere          42.50 269   P      P        00 15 16.1  -2.0
      comp=Z,80nm,1.2s,comp=Z,7µmcomp=Z,10µm
KMSI  Cibinong         42.63 283   P      P        00 15 20.8 +1.7
      comp=Z,340nm,1.4s,comp=Z,26µm
EDFI  Ende, Flores     43.03 269   P      P        00 15 21.2  -1.3
      comp=Z,35nm,1.3s,comp=Z,2µm
DAV   Davao City (W)   43.36 292   PFAKE           00 15 40.0  +15
DAV                                LR     LR
      comp=Z,5µm,20.0s
DAV   Davao City (W)   43.36 292⇑iP       P        00 15 23.1  -1.9
LUWI  Luwuk            43.36 280  eP      P        00 15 24.8  -0.3
      comp=Z,184nm,1.1s
LUWI  Luwuk            43.36 280   P      P        00 15 27.6 +2.5
      comp=Z,170nm,1.4s,comp=Z,12µm
JCJ   Chichijima       43.84 330   LR     LR       00 31 18.2
      comp=Z,11µm,21.1s,baz=138,slow=33
BUKP  Musuan           44.16 293  eP      P        00 15 32.3 +0.8
PPT   Papeete          44.16 104   LR     LR       00 30 01.1
      comp=Z,18µm,19.8s,baz=274,slow=31
PPT2  Papeete2         44.16 104  eS      S        00 22 05.4 +0.2
      comp=Z,7µm,26.2s
PPT2                              eLQ     LQ       00 25 57.7
      comp=Z,40µm,27.8s
PPT2                              eLR     LR       00 27 51.3
      comp=Z,25µm,22.2s,baz=271
APSI  Ampana           44.48 280   P      P        00 15 34.8 +0.7
      comp=Z,68nm,0.9s,comp=Z,2µm
MRSI  Marisa           44.56 282   P      P        00 15 46.2  +11
TBI   Tubuai           44.81 112  eS      S        00 22 14.6 +0.2
      comp=Z,4µm,28.8s
TBI                               eLQ     LQ       00 26 15.0
      comp=Z,66µm,30.0s
TBI                               eLR     LR       00 28 08.6
      comp=Z,26µm,28.5s,baz=287
MBWA  Marble Bar       44.90 251  eP      P        00 15 36.2  -1.1
      comp=Z,35nm,0.8s
MBWA                               LR     LR
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      comp=Z,23µm,21.0s
BKSI  Bulukumba        45.05 273   P      P        00 15 47.1 +8.5
BNSI  Bone             45.23 274   P      P        00 15 40.0  -0.1
      comp=Z,106nm,2.0s,comp=Z,3µm
MSLP  Maasin           45.29 296  eP      P        00 15 41.1 +0.6
BESP  Borongan         45.45 298  eP      P        00 15 43.1 +1.4
KAPI  Kappang          45.47 274   PFAKE           00 15 50.0 +8.0
KAPI                               LR     LR
      comp=Z,8µm,20.0s
SPSI  Sidrap Palu      45.65 275   P      P        00 15 43.7 +0.4
      comp=Z,28nm,1.2s,comp=Z,2µm
PAGZ  Pagadian         45.67 292  eP      P        00 15 43.7 +0.2
TTSI  Tana Toraja      45.78 276   P      P        00 15 57.4  +13
OCLP  Ormoc            45.92 297  eP      P        00 15 46.2 +0.7
PCI   Palu             46.24 279   P      P        00 15 49.7 +1.6
      comp=Z,131nm,1.1s,comp=Z,5µm
MPSI  Mapaga           46.49 281   P      P        00 15 49.5  -0.5
      comp=Z,30nm,1.4s,comp=Z,2µm
MEEK  Meekatharra      46.70 244   P      P        00 15 50.4  -1.1
      baz=46,SNR=46
PLAI  Plampang         46.86 268   P      P        00 15 58.4 +5.4
      comp=Z,120nm,1.9s,comp=Z,2µm
PVCP  Virac            47.49 300  eP      P        00 15 58.7 +1.0
GUIM  Jordan           47.52 295  eP      P        00 15 57.7  -0.3
RCP   Roxas            47.78 296⇑eP       P        00 16 00.6 +0.5
KIP   Kipapa           48.17  48   PFAKE           00 16 20.0  +17
KIP                                LR     LR
      comp=Z,19µm,19.0s
KIP   Kipapa           48.17  48ceP       P        00 16 03.3 +0.4
KIP                                pmax   pmax
      comp=Z,93nm,1.3s
OPA   Opana            48.33  48  eP      P        00 16 05.9 +1.7
      comp=Z,465nm,1.4s
OPA   Opana            48.33  48  eP      P        00 16 05.9 +1.7
OPA                                pmax   pmax
      comp=Z,465nm,1.4s
KLBR  Kellerberrin     48.51 237   P      P        00 16 04.8  -0.7
      baz=48,SNR=8.4
OTRP  Odiongan         48.77 297  eP      P        00 16 08.5 +0.8
HMH   Humu‘ula Sheep   49.01  52  eP      P        00 16 10.4 +0.6
      comp=Z,849nm,1.8s
CUYO  Cuyo Island      49.01 295  eP      P        00 16 10.5 +0.9
POHA  Pohakuloa        49.05  52  eP      P        00 16 09.5  -0.6
POHA                               LR     LR
      comp=Z,9µm,19.0s
HPAH  Hawaii Prepara   49.08  52  eP      P        00 16 12.4 +2.3
      comp=Z,139nm,0.9s
BLDU  Ballidu          49.15 239   P      P        00 16 09.3  -1.2
      baz=49,SNR=9.4
NWAO  Narrogin (SRO)   49.27 236   P      P        00 16 10.0  -1.3
      baz=49,SNR=11
NWAO  Narrogin (SRO)   49.27 236  eP      P        00 16 10.1  -1.3
      comp=Z,498nm,1.6s
NWAO                               LR     LR
      comp=Z,55µm,19.0s
NWAO  Narrogin (SRO)   49.27 236  eP      P        00 16 10.1  -1.3
NWAO                               pmax   pmax
      comp=Z,498nm,1.6s
NWAO                               MLR    MLR
      comp=Z,55µm,19.0s
MORW  Morawa           49.39 241   P      P        00 16 12.2  -0.1
      baz=49,SNR=18
BOAC  Boac             49.41 298  eP      P        00 16 13.4 +0.9
SRBI  Singaraja        49.47 269   P      P        00 16 13.0  -0.1
      comp=Z,28nm,1.1s,comp=Z,2µm
TSM   Tawau            49.56 285   P      P        00 16 14.1 +0.3
SJMP  San Jose         49.60 297  eP      P        00 16 15.1 +1.1
MUN   Mundaring        49.88 237   P      P        00 16 13.5  -2.5
      baz=50,SNR=12
POLP  Polilio Island   49.91 300  eP      P        00 16 19.1 +2.6
RKGY  Rocky Gully      49.93 234   P      P        00 16 15.0  -1.3
      baz=50,SNR=6.5
JHJ   Hachijo jima 2   49.99 332   P      P        00 16 17.1 +0.4
      comp=Z,198nm,0.8s,baz=178,slow=9.7,SNR=4.8
JAGI  Jajag, Banyuwa   50.46 268  eP      P        00 16 18.4  -2.3
      comp=Z,149nm,1.4s
ENPP  El Nido          50.58 294  eP      P        00 16 20.9  -0.6
PALP  Palanan          50.63 303  eP      P        00 16 22.9 +1.0
SMPP  San Manuel, Pa   51.65 301  eP      P        00 16 28.9  -0.7
KKM   Kota Kinabalu    51.67 287  eP      P        00 16 29.3  -0.5
      comp=Z,179nm,1.2s
KKM   Kota Kinabalu    51.67 287   P      P        00 16 30.1 +0.3
JOW   Kunigami         51.88 317  eP      P        00 16 32.0 +0.9
      comp=Z,61nm,0.9s
JOW   Kunigami         51.88 317   P      P        00 16 30.6  -0.5
      comp=Z,6.6nm,0.8s,baz=141,slow=13,SNR=6.8
INU   Inuyama          53.12 331  eP      P        00 16 41.1 +1.0
      comp=Z,390nm,2.0s
MJAR  Matsushiro Arr   53.55 333   P      P        00 16 42.7  -0.6
      comp=Z,36nm,0.8s,baz=170,slow=8.6,SNR=30
MJAR                               LR     LR       00 37 11.8
      comp=Z,5µm,20.8s,baz=140,slow=34
MAJO  Matsushiro       53.55 333  eP      P        00 16 43.1  -0.1
      comp=Z,76nm,0.8s
MAJO                               LR     LR
      comp=Z,9µm,20.0s
MAJO  Matsushiro       53.55 333c iP      P        00 16 42.7  -0.6
MAJO                               pmax   pmax
      comp=Z,87nm,0.9s
MAT   Matsushiro       53.55 333   P      P        00 16 43.5 +0.2
MAT                                S      S        00 24 18.4 +1.6
MJB9  Matsu-Tunnel     53.55 333  eP      P        00 16 43.9 +0.5
      comp=Z,80nm,0.8s
TAOE  Nuku Hiva Isla   53.70  93  eS      S        00 24 18.2  -1.6
      comp=Z,8µm,26.0s
TAOE                              eLQ     LQ       00 29 58.7
      comp=Z,8µm,24.4s
TAOE                              eLR     LR       00 32 07.4
      comp=Z,16µm,30.9s,baz=272
UGM   Wanagama         54.10 268  eP      P        00 16 46.7  -1.1
      comp=Z,404nm,1.7s
SMRI  Semarang         54.30 269  eP      P        00 16 48.5  -0.7
      comp=Z,524nm,1.9s
SBUM  Sibu             54.45 281  eP      P        00 16 50.3   0.0
      comp=Z,13nm,1.0s
SBUM  Sibu             54.45 281   P      P        00 16 50.7 +0.4
JNU   Nakatsue         54.63 324  eP      P        00 16 51.7 +0.4
      comp=Z,160nm,0.8s
JNU                                S      S        00 24 34.4 +2.8
JNU   Nakatsue         54.63 324   P      P        00 16 50.3  -1.0
      comp=Z,150nm,0.8s,baz=79,slow=2.7,SNR=32
JNU                                S      S        00 24 34.4 +2.8
      comp=Z,7.5nm,0.9s,baz=200,slow=20,SNR=2.4
YULB  Yu-li            54.85 309  eP      P        00 16 53.4 +0.4
      comp=Z,65nm,1.1s
NACB  Ninganchiao      55.06 310  eP      P        00 16 55.3 +0.8
      comp=Z,184nm,1.5s
TPUB  Ta-pu            55.32 308  eP      P        00 16 56.6 +0.2
      comp=Z,106nm,1.0s
SSLB  Suanglung        55.33 309  eP      P        00 16 56.8 +0.3
      comp=Z,51nm,1.1s
YHNB  Yeheng           55.50 310  eP      P        00 16 58.6 +0.9
      comp=Z,216nm,1.5s
KSM   Kuching          56.06 279  eP      P        00 17 01.1  -0.8
      comp=Z,51nm,1.1s
KSM   Kuching          56.06 279   P      P        00 17 01.6  -0.3
ERM   Erimo            56.35 340  eP      P        00 17 04.3 +0.9
      comp=Z,68nm,1.0s
ERM                                LR     LR
      comp=Z,5µm,21.0s
ERM   Erimo            56.35 340ceP       P        00 17 03.4   0.0
ERM                                pmax   pmax
      comp=Z,94nm,1.3s
CISI  Cisompet, Garu   56.80 268  eP      P        00 17 06.0  -1.3
      comp=Z,121nm,1.0s
YUK   Yuzh-Kuril'sk    57.35 343c iP      P        00 17 11.3 +0.8
YUK                               e                00 17 59.5
YUK                               i                00 19 18.9
YUK                               i PPP   PPP      00 20 35.1
YUK                                S      S        00 25 05.2  -2.1
YUK                               i                00 27 00.8
YUK                               eSS     SS       00 28 55.0  -2.1
YUK                                MLR    MLR
      comp=Z,6µm,16.0s
YUK                                MLR    MLR
      comp=N,6µm,17.0s
CBJI  Citeko           57.92 269   P      P        00 17 17.0 +1.9
KUR   Kuril'sk         57.94 346c iP      P        00 17 15.2 +0.6
KUR                               i                00 18 07.2
KUR                               i                00 19 25.2
KUR                               i S     S        00 25 27.4  +12
KUR                               eSS     SS       00 28 57.6  -8.7
KUR                                MLR    MLR
      comp=Z,7µm,15.0s
KUR                                MLR    MLR
      comp=E,2µm,11.0s
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KUR                                MLR    MLR
      comp=N,9µm,18.0s
RKT   Rikitea          58.06 111  eS      S        00 25 15.6  -1.9
      comp=N,2µm,31.2s
RKT                               eLQ     LQ       00 31 52.7
      comp=N,19µm,30.8s
RKT                               eLR     LR       00 34 17.4
      comp=N,17µm,26.2s,baz=280
ASAJ  Asahikawa        58.41 341   P      P        00 17 18.1 +0.2
ASAJ                               S      S        00 25 27.3 +6.1
ASAJ                               pmax   pmax
      comp=Z,87nm,0.8s
ASAJ                               smax   smax
      comp=N,5.0nm,0.9s
ASAJ  Asahikawa        58.41 341   P      P        00 17 18.1 +0.2
      comp=N,125nm,0.8s,baz=201,slow=11,SNR=4.7
ASAJ                               S      S        00 25 27.3 +6.1
      comp=N,5.2nm,0.9s,baz=148,slow=26,SNR=2.3
SSE   Sheshan          59.38 316   P      P        00 17 25.8 +0.9
SSE                                S      S        00 25 36.2 +2.0
SSE                                pmax   pmax
      comp=N,39nm,0.8s
SSE                                pmax   pmax
      comp=N,1µm,8.2s
SSE                                LR     LR
      comp=N,3µm,16.7s
SSE                                LR     LR
      comp=N,3µm,14.9s
SSE   Sheshan          59.38 316  eP      P        00 17 25.1 +0.2
      comp=N,120nm,0.8s
SSE                                LR     LR
      comp=Z,9µm,21.0s
KSRS  Korea Array      59.43 326   P      P        00 17 25.1  -0.1
      comp=Z,19nm,0.8s,baz=141,slow=6.7,SNR=7.2
KSRS                               LR     LR       00 40 38.5
      comp=Z,4µm,20.0s,baz=142,slow=34
KS15  Wonju Array Si   59.44 326  eP      P        00 17 26.1 +0.9
KSAR  Wonju Array Be   59.44 326   P      P        00 17 25.1  -0.1
KSAR  Wonju Array Be   59.44 326   P      P        00 17 25.1  -0.1
KS01  Wonju Array Si   59.46 326  eP      P        00 17 25.9 +0.5
MCO   Taipa Grande     60.38 303   P      P        00 17 34.0 +2.0
MDSI  Maura Dua        60.85 271   P      P        00 17 35.0  -0.4
      comp=Z,22nm,1.7s,comp=Z,1µm
YSS   Yuzh-Sakhalins   60.91 342  eP      P        00 17 35.6 +0.5
      comp=Z,166nm,1.1s
YSS                                LR     LR
      comp=Z,5µm,20.0s
YSS   Yuzh-Sakhalins   60.91 342⇓eP       P        00 17 36.4 +1.3
YSS                               e                00 18 15.0
YSS                               ePPP    PPP      00 21 17.0
YSS                               eS      S        00 25 50.9  -2.4
YSS                               eSS     SS       00 29 56.0 +3.1
YSS                                pmax   pmax
      comp=Z,80nm,1.0s
YSS                                pmax   pmax
      comp=N,30nm,0.9s
YSS                                pmax   pmax
      comp=E,50nm,0.8s
YSS                                pmax   pmax
      comp=Z,2µm,7.5s
YSS                                pmax   pmax
      comp=N,400nm,4.5s
YSS                                pmax   pmax
      comp=E,700nm,5.4s
YSS                                smax   smax
      comp=N,2µm,11.1s
YSS                                smax   smax
      comp=E,2µm,13.5s
GZH   Guangzhou        61.00 304   P      P        00 17 35.8  -0.4
GZH                                pmax   pmax
      comp=E,3µm,9.0s
TEY   Ternei           61.32 337⇓eP       P        00 17 39.4 +1.5
TEY                                pmax   pmax
      comp=Z,30nm,2.1s
NJ2   Nanjing          61.55 316  eP      P        00 17 41.2 +1.5
NJ2                                sP     pwP      00 17 44.8 +0.9
NJ2                                S      S        00 26 06.1 +4.2
NJ2                                sS     sS       00 26 13.2 +8.2
NJ2                                pmax   pmax
      comp=Z,52nm,0.9s
NJ2                                pmax   pmax
      comp=Z,3µm,9.3s
NJ2                                LR     LR
      comp=Z,7µm,19.1s
NJ2                                LR     LR
      comp=Z,6µm,16.2s
NJ2                                LR     LR
      comp=Z,9µm,17.6s
MSHR  Mys Shultsa      61.63 332 i P      P        00 17 39.3  -0.7
VLA   Vladivostok      61.72 333c iP      P        00 17 40.3  -0.3
VLA                                pmax   pmax
      comp=Z,62nm,0.9s
SKR   Severo-Kuril’s   61.73 353  eP      P        00 17 35.6  -4.9
SKR                               e                00 18 20.8
SKR                               eS      S        00 26 08.9 +5.4
SKR                                pmax   pmax
      comp=Z,2µm,6.2s
SKR                                pmax   pmax
      comp=Z,1µm,12.8s
SKR                                MLR    MLR
      comp=Z,5µm,17.0s
SKR                                MLR    MLR
      comp=Z,3µm,17.0s
QIZ   Qiongzhong       62.20 298   P      P        00 17 44.4 +0.1
QIZ                                pP     sP       00 17 46.8  -0.1
QIZ                                sP     pwP      00 17 50.8 +2.3
QIZ                                S      S        00 26 13.4 +2.8
QIZ                                sS     sS       00 26 16.1 +2.4
QIZ                                LR     LR
      comp=Z,4µm,16.7s
QIZ                                LR     LR
      comp=Z,5µm,25.5s
QIZ                                LR     LR
      comp=Z,10µm,23.5s
QIZ   Qiongzhong       62.20 298  eP      P        00 17 43.6  -0.8
      comp=Z,53nm,1.4s
QIZ                                LR     LR
      comp=Z,852nm,22.0s
MYKOM Kota Tinggi      62.41 278  eP      P        00 17 45.2  -0.7
      comp=Z,116nm,1.9s
USA0B Ussuriysk Arra   62.53 334  eP      P        00 17 45.9  -0.2
      comp=Z,178nm,1.4s
USRK  Ussuriysk Ar.    62.53 334   P      P        00 17 46.2 +0.1
      comp=Z,31nm,0.8s,baz=137,slow=6.7,SNR=41
USRK                               S      S        00 26 15.7 +1.8
      comp=Z,0.7nm,0.5s,baz=181,slow=31,SNR=2.3
USRK                               LR     LR       00 42 01.5
      comp=Z,5µm,21.4s,baz=135,slow=33
USRK                               PKPPKP          00 46 53.5
      comp=Z,0.6nm,0.6s,baz=162,slow=1.2,SNR=4.3
PTCN  Pitcairn Islan   62.56 113   PFAKE           00 18 00.0  +13
PTCN                               LR     LR
      comp=Z,10µm,21.0s
PET   Petropavlovsk    63.81 356   PFAKE           00 18 10.0  +16
PET                                LR     LR
      comp=Z,10µm,22.0s
PET   Petropavlovsk    63.81 356  eP      P        00 17 56.2 +1.9
PET                               eS      S        00 26 29.9 +0.4
PET                                pmax   pmax
      comp=Z,2µm,16.0s
PET                                pmax   pmax
      comp=Z,57nm,1.5s
WHN   Wuhan            63.91 312 ⇓P       P        00 17 56.0 +0.5
WHN                                S      S        00 26 34.0 +2.3
WHN                                LR     LR
      comp=Z,8µm,12.9s
WHN                                LR     LR
      comp=Z,17µm,18.1s
WHN                                LR     LR
      comp=Z,21µm,18.7s
MDJ   Mudanjiang       63.93 332   P      P        00 17 57.3 +2.0
MDJ                                pP     pwP      00 18 00.4 +0.8
MDJ                                sP     sP       00 18 01.6 +3.7
MDJ                                PP     PP       00 20 18.5 +2.4
MDJ                                S      S        00 26 35.3 +3.9
MDJ                                pmax   pmax
      comp=Z,71nm,0.9s
MDJ                                pmax   pmax
      comp=Z,3µm,6.5s
MDJ                                LR     LR
      comp=Z,9µm,18.4s
MDJ                                LR     LR
      comp=Z,5µm,13.5s
MDJ                                LR     LR
      comp=Z,9µm,31.9s
MDJ   Mudanjiang       63.93 332  eP      P        00 17 56.3 +0.9
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	comp=Z,62nm,1.0s						
MDJ				LR	LR		
	comp=Z,7µm,19.0s						
PEA0B	**Petropavlovsk-**	**63.97**	**355**	*e*P	**P**	**00 17 56.5**	**+1.1**
	comp=Z,174nm,1.4s						
PETK	**Petropavlovsk-**	**63.97**	**355**	*e*P	**P**	**00 17 56.4**	**+0.9**
PETK	**Petropavlovsk-**	**63.97**	**355**	*e*P	**P**	**00 17 56.4**	**+0.9**
PETK	**Petropavlovsk-**	**63.97**	**355**	P	**P**	**00 17 56.9**	**+1.5**
	comp=Z,29nm,0.9s,baz=154,slow=8.3,SNR=17						
PETK				LR	LR	00 40 21.9	
	comp=Z,8µm,21.3s,baz=179,slow=31						
DL2	**Dalian**	**64.02**	**323**	⇑*i*P	**P**	**00 17 56.5**	**+0.4**
DL2				S	**S**	**00 26 36.3**	**+3.5**
DL2				pmax	pmax		
	comp=Z,100nm,0.8s						
DL2				pmax	pmax		
	comp=Z,2µm,6.5s						
DL2				LR	LR		
	comp=Z,4µm,17.5s						
DL2				LR	LR		
	comp=Z,3µm,19.8s						
DL2				LR	LR		
	comp=Z,8µm,19.6s						
ADK	**Adak**	**64.31**	**12**	PFAKE		00 18 10.0	+12
ADK				LR	LR		
	comp=Z,12µm,21.0s						
TYV	**Tymovskoe**	**64.48**	**344**	*e*P	**P**	**00 17 58.4**	**-0.4**
TYV				*e*S	**S**	**00 26 38.5**	**+0.5**
TYV				pmax	pmax		
	comp=Z,39nm,1.6s						
TYV				pmax	pmax		
	comp=Z,2µm,6.2s						
TYV				smax	smax		
	comp=E,3µm,9.1s						
TYV				MLR	MLR		
	comp=N,6µm,19.0s						
TYV				MLR	MLR		
	comp=Z,8µm,19.0s						
SNY	**Shenyang**	**64.89**	**327**	⇑P	**P**	**00 18 01.3**	**-0.4**
SNY				PP	**PP**	**00 20 26.6**	**+2.0**
SNY				S	**S**	**00 26 46.9**	**+3.5**
SNY				SS	**SS**	**00 30 53.4**	**-1.9**
SNY				pmax	pmax		
	comp=Z,26nm,0.7s						
SNY				pmax	pmax		
	comp=Z,2µm,8.8s						
SNY				LR	LR		
	comp=Z,9µm,17.5s						
SNY				LR	LR		
	comp=Z,8µm,20.2s						
SNY				LR	LR		
	comp=Z,10µm,22.8s						
TIA	**Tai'an**	**65.15**	**318**	P	**P**	**00 18 02.7**	**-0.8**
TIA				S	**S**	**00 26 46.7**	**-0.1**
TIA				pmax	pmax		
	comp=Z,920nm,8.4s						
TIA				LR	LR		
	comp=Z,3µm,18.6s						
TIA				LR	LR		
	comp=Z,4µm,20.1s						
TIA				LR	LR		
	comp=Z,6µm,21.6s						
ATKA	**Atka Island**	**65.16**	**14**	*e*P	**P**	**00 18 04.2**	**+0.9**
	comp=Z,218nm,1.7s						
CN2	**Changchun**	**65.31**	**329**	*e*P	**P**	**00 18 05.1**	**+0.7**
CN2				*e*pP	pwP	00 18 09.9	+1.3
CN2				*e*sP	sP	00 18 12.0	+5.0
CN2				PP	**PP**	**00 20 31.7**	**+3.4**
CN2				*e*S	**S**	**00 26 48.1**	**-0.4**
CN2				SS	**SS**	**00 30 59.6**	**-2.2**
CN2				pmax	pmax		
	comp=Z,80nm,0.8s						
CN2				pmax	pmax		
	comp=Z,2µm,7.0s						
CN2				LR	LR		
	comp=Z,7µm,17.0s						
CN2				LR	LR		
	comp=Z,6µm,17.0s						
CN2				LR	LR		
	comp=Z,9µm,18.0s						
IPM	**Ipoh**	**65.77**	**280**	*e*P	**P**	**00 18 07.8**	**-0.3**
	comp=Z,54nm,0.9s						
GRNR	**Gornyy**	**66.26**	**340**	*e*P	**P**	**00 18 12.3**	**+1.9**
GRNR				pmax	pmax		
	comp=Z,46nm,1.0s						
KULM	**Kulim**	**66.33**	**281**	*e*P	**P**	**00 18 11.7**	**+0.1**
	comp=Z,65nm,1.4s						
CASY	**Casey**	**66.48**	**201**	*e*P	**P**	**00 18 10.7**	**-0.9**
	comp=Z,51nm,0.7s						
CASY				*e*PcP	**PcP**	**00 18 40.9**	**-0.3**
CASY				LR	LR		
	comp=Z,931nm,19.0s						
SKNT	**Sakolnakorn**	**66.61**	**294**	P	**P**	**00 18 13.6**	**+0.3**
	comp=Z,29nm,1.1s,comp=Z,879nm						
KLR	**Kul'dur**	**66.65**	**337**	P	**P**	**00 18 13.2**	**+0.2**
	comp=Z,49nm,0.8s,baz=146,slow=5.4,SNR=27						
KLR				S	**S**	**00 27 12.8**	**+8.1**
	comp=Z,0.4nm,0.6s,baz=253,slow=23,SNR=2.0						
KLR				LR	LR	00 45 44.6	
	comp=Z,5µm,19.2s,baz=148,slow=35						
VNDA	**Vanda**	**66.75**	**181**	*e*P	**P**	**00 18 13.0**	**-0.2**
	comp=Z,138nm,1.4s						
VNDA				S	**S**	**00 27 07.7**	**+2.5**
VNDA	**Vanda**	**66.75**	**181**	P	**P**	**00 18 12.8**	**-0.4**
	comp=Z,80nm,1.3s,baz=5.3,slow=5.7,SNR=9.1						
VNDA				S	**S**	**00 27 07.7**	**+2.5**
	comp=Z,4.3nm,1.1s,baz=8.9,slow=22,SNR=1.9						
VNDA				LR	LR	00 45 53.3	
	comp=Z,5µm,18.1s,baz=1.0,slow=35						
COCO	**West Island**	**66.97**	**261**	PFAKE		00 18 30.0	+14
COCO				LR	LR		
	comp=Z,7µm,19.0s						
SBA	**Scott Base**	**67.06**	**180**	*e*P	**P**	**00 18 14.8**	**-0.4**
SBA				LR	LR		
	comp=Z,5µm,19.0s						
SBA	**Scott Base**	**67.06**	**180**	*e*P	**P**	**00 18 14.8**	**-0.4**
SBA				MLR	MLR		
	comp=Z,5µm,19.0s						
NKL	**Nikolayevsk**	**67.08**	**344**	*e*P	**P**	**00 18 14.0**	**-1.5**
NKL				*e*		00 27 06.0	
NKL				pmax	pmax		
	comp=Z,93nm,0.9s						
NKL				pmax	pmax		
	comp=Z,300nm,7.0s						
NIKH	**Nikolski High**	**67.24**	**17**	*e*P	**P**	**00 18 17.0**	**+0.5**
	comp=Z,117nm,0.8s						
ENH	**Enshi**	**67.41**	**309**	*e*P	**P**	**00 18 17.7**	**-0.5**
	comp=Z,76nm,0.9s						
ENH				LR	LR		
	comp=Z,5µm,21.0s						
SRAK	**Srakaew**	**67.42**	**290**	P	**P**	**00 18 17.7**	**-0.8**
	comp=Z,30nm,1.3s,comp=Z,535nm						
NONG	**Nongkai**	**67.73**	**295**	P	**P**	**00 18 21.0**	**+0.6**
	comp=Z,1.4nm,1.0s						
TRTT	**Trang**	**67.89**	**283**	P	**P**	**00 18 25.1**	**+3.6**
	comp=Z,11nm,1.2s,comp=Z,936nm						
GYA	**Guiyang**	**67.93**	**304**	⇑*i*P	**P**	**00 18 22.2**	**+0.5**
GYA				PP	**PP**	**00 20 56.0**	**+4.3**
GYA				S	**S**	**00 27 22.0**	**+0.8**
GYA				SKS	**SKiKP**	**00 28 18.5**	**-0.5**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,2µm,8.1s						
GYA				LR	LR		
	comp=Z,3µm,19.5s						
GYA				LR	LR		
	comp=Z,5µm,20.5s						
GYA				LR	LR		
	comp=Z,6µm,22.3s						
BJT	**Baijiatuau**	**68.01**	**321**	*e*P	**P**	**00 18 21.6**	**-0.1**
	comp=Z,246nm,2.0s						
BJT				LR	LR		
	comp=Z,12µm,20.0s						
BJT	**Baijiatuau**	**68.01**	**321**	*e*P	**P**	**00 18 21.6**	**-0.1**
BJT				pmax	pmax		
	comp=Z,246nm,2.0s						
BJT				MLR	MLR		
	comp=Z,12µm,20.0s						
BJI	**Beijing**	**68.02**	**321**	P	**P**	**00 18 21.5**	**-0.3**
BJI				S	**S**	**00 27 24.4**	**+2.9**
BJI				SS	**SS**	**00 31 45.8**	**+1.8**
BJI				pmax	pmax		
	comp=Z,33nm,1.4s						
BJI				LR	LR		
	comp=Z,5µm,20.1s						
BJI				LR	LR		
	comp=Z,6µm,19.6s						
BJI				LR	LR		
	comp=Z,9µm,31.4s						
CHAI	**Chaiyaphum**	**68.06**	**292**	P	**P**	**00 18 23.8**	**+1.3**
	comp=Z,5.5nm,0.7s,comp=Z,101nm						
PATY	**Pattaya**	**68.18**	**289**	P	P	00 18 31.2	+7.9
GSI	**Gunungsitoli**	**68.43**	**276**	*e*P	**P**	**00 18 24.9**	**-0.1**
	comp=Z,52nm,0.8s						
UNV	**Unalaska Valle**	**68.68**	**17**	*e*P	**P**	**00 18 26.7**	**+1.1**
	comp=Z,45nm,1.0s						
TIY	**Taiyuan**	**69.09**	**317**	⇓P	**P**	**00 18 30.0**	**+1.4**
TIY				S	**S**	**00 27 35.1**	**+0.6**
TIY				ScS	**SKiKP**	**00 28 20.9**	**+0.6**
TIY				pmax	pmax		
	comp=Z,50nm,1.3s						
TIY				pmax	pmax		
	comp=Z,2µm,6.8s						
TIY				LR	LR		
	comp=Z,7µm,21.0s						
TIY				LR	LR		
	comp=Z,4µm,15.1s						
TIY				LR	LR		
	comp=Z,11µm,22.2s						
PBKT	**Sadao Pong**	**69.20**	**292**	P	**P**	**00 18 30.7**	**+1.1**
	comp=Z,35nm,2.3s,comp=Z,2µm						
PHET	**Kaeng Krachan**	**69.33**	**288**	P	**P**	**00 18 34.4**	**+3.9**
	comp=Z,7.9nm,1.0s						
XAN	**Xi'an**	**69.64**	**312**	P	**P**	**00 18 32.6**	**+0.5**
XAN				pP	pwP	00 18 41.6	+5.3
XAN				sP	PcP	00 18 46.1	-9.0
XAN				PP	**PP**	**00 21 02.4**	**-3.9**
XAN				PcS		00 23 02.7	
XAN				S	**S**	**00 27 34.8**	**-6.3**
XAN				ScS	**SKiKP**	**00 28 26.5**	**+5.3**
XAN				SS	**SS**	**00 32 07.7**	**-1.8**
XAN				pmax	pmax		
	comp=Z,41nm,1.0s						
XAN				pmax	pmax		
	comp=Z,2µm,9.0s						
XAN				LR	LR		
	comp=Z,4µm,17.3s						
XAN				LR	LR		
	comp=Z,4µm,19.2s						
XAN				LR	LR		
	comp=Z,7µm,19.6s						
XAN	**Xi'an**	**69.64**	**312**	*e*P	**P**	**00 18 32.1**	**0.0**
XAN	**Xi'an**	**69.64**	**312**	*e*P	**P**	**00 18 32.1**	**0.0**
UTTA	**Uttaradit**	**69.95**	**293**	P	**P**	**00 18 36.4**	**+2.1**
	comp=Z,4.7nm,0.8s,comp=Z,91nm						
SRDT	**SRDT**	**70.22**	**290**	P	**P**	**00 18 37.4**	**+1.5**
	comp=Z,33nm,1.2s,comp=Z,3µm						
UTHA	**Uthaitani**	**70.28**	**291**	P	**P**	**00 18 38.3**	**+2.0**
	comp=Z,7.7nm,1.1s,comp=Z,157nm						
KMI	**Kunming**	**70.64**	**301**	P	**P**	**00 18 36.3**	**-2.3**
KMI				pP	pP	00 18 40.1	-0.4
KMI				sP	pwP	00 18 43.8	+1.0
KMI				PP	**PP**	**00 21 18.3**	**+3.1**
KMI				S	**S**	**00 27 54.9**	**+1.5**
KMI				sS	sS	00 28 04.3	+7.7
KMI				SS	**SS**	**00 32 23.7**	**-1.7**
KMI				pmax	pmax		
	comp=Z,2µm,9.2s						
KMI				LR	LR		
	comp=Z,4µm,16.2s						
KMI				LR	LR		
	comp=Z,6µm,20.3s						
KMI				LR	LR		
	comp=Z,8µm,20.7s						
KMI	**Kunming**	**70.64**	**301**	*e*P	**P**	**00 18 38.0**	**-0.6**
	comp=Z,244nm,1.6s						
KMI	**Kunming**	**70.64**	**301**	*e*P	**P**	**00 18 38.0**	**-0.6**
KMI				pmax	pmax		
	comp=Z,244nm,1.6s						
SUKH	**Sukhothai**	**70.70**	**293**	P	P	00 18 44.2	+5.3
	comp=Z,6.4nm,1.0s						
UMPA	**Umpang Tak**	**71.01**	**291**	P	P	00 18 50.9	+10
MA2	**Magadan**	**71.09**	**352**	P	**P**	**00 18 39.3**	**-1.1**
MA2				LR	LR		
	comp=Z,13µm,22.0s						
MA2	**Magadan**	**71.09**	**352**	*c i*P	**P**	**00 18 39.4**	**-1.0**
MA2				pmax	pmax		
	comp=Z,14nm,1.4s						
MA2	**Magadan**	**71.09**	**352**	P	**P**	**00 18 39.3**	**-1.1**
	comp=Z,2.4nm,0.4s,baz=160,slow=13,SNR=3.8						
HHC	**Hu-ho-hao-te**	**71.37**	**320**	⇓*i*P	**P**	**00 18 44.4**	**+1.8**
HHC				pP	pwP	00 18 49.0	+2.2
HHC				sP	sP	00 18 51.5	+6.3
HHC				PP	**PP**	**00 21 25.0**	**+3.9**
HHC				S	**S**	**00 28 01.4**	**+0.3**
HHC				SS	**SS**	**00 32 38.2**	**+2.3**
HHC				pmax	pmax		
	comp=Z,29nm,1.5s						
HHC				pmax	pmax		
	comp=Z,2µm,5.8s						
HHC				LR	LR		
	comp=Z,7µm,19.6s						
HHC				LR	LR		
	comp=Z,6µm,21.6s						
HHC				LR	LR		
	comp=Z,11µm,20.6s						
CM01	**Chiang Mai Arr**	**71.61**	**294**	*e*P	**P**	**00 18 44.2**	**-0.1**
CM31	**Chiang Mai Arr**	**71.63**	**294**	*e*P	**P**	**00 18 44.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**71.63**	**294**	P	**P**	**00 18 45.6**	**+1.1**
	comp=Z,4.7nm,0.7s,baz=118,slow=4.2,SNR=28						
CMAR				S	**S**	**00 28 07.3**	**+2.6**
	comp=Z,0.8nm,0.4s,baz=42,slow=9.6,SNR=5.0						
CMAR				PKPPKP		00 46 40.8	
	comp=Z,0.5nm,0.3s,baz=285,slow=5.2,SNR=4.6						
CMAR				LR	LR	00 49 48.6	
	comp=Z,1µm,20.1s,baz=114,slow=36						
CMMT	**Chiang Mai**	**71.74**	**294**	P	**P**	**00 18 45.8**	**+0.6**
	comp=Z,39nm,1.2s,comp=Z,2µm						
CHTO	**Chiang Mai**	**71.74**	**294**	*e*P	**P**	**00 18 45.0**	**-0.1**
	comp=Z,53nm,1.3s						
CHTO				LR	LR		
	comp=Z,4µm,21.0s						
CHTO	**Chiang Mai**	**71.74**	**294**	*e*P	**P**	**00 18 45.1**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,53nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,4µm,21.0s						
CHTO	**Chiang Mai**	**71.74**	**294**	P	**P**	**00 18 45.9**	**+0.7**
	comp=Z,178nm,1.2s,comp=Z,7µmcomp=Z,26µm						
HIA	**Hailar**	**71.94**	**331**	*e*P	**P**	**00 18 46.5**	**+0.7**
	comp=Z,120nm,1.4s						
HIA				LR	LR		
	comp=Z,5µm,19.0s						
HIA	**Hailar**	**71.94**	**331**	*c i*P	**P**	**00 18 45.5**	**-0.2**
HIA				pmax	pmax		
	comp=Z,45nm,1.0s						
ZEA	**Zeya**	**71.94**	**337**	*e*P	**P**	**00 18 43.2**	**-2.4**
ZEA				*e*		00 19 02.0	
ZEA				*e*S	**S**	**00 28 12.5**	**+5.5**
ZEA				*e*PS		00 28 38.0	
ZEA				*e*SS	**SS**	**00 32 38.0**	**-5.9**
ZEA				pmax	pmax		
	comp=Z,2µm,8.0s						
ZEA				pmax	pmax		
	comp=N,700nm,9.0s						
ZEA				pmax	pmax		
	comp=E,600nm,9.0s						
ZEA				pmax	pmax		
	comp=Z,350nm,1.8s						
ZEA				smax	smax		
	comp=Z,2µm,13.0s						
ZEA				smax	smax		
	comp=E,3µm,14.0s						
ZEA				smax	smax		
	comp=N,1µm,10.0s						
ZEA				MLR	MLR		
	comp=N,2µm,14.0s						
ZEA				MLR	MLR		
	comp=E,1µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,4µm,14.0s						
CD2	**Chengdu**	**72.12**	**307**	⇓*i*P	**P**	**00 18 48.0**	**+0.7**
CD2				pP	pwP	00 18 52.6	+1.1
CD2				PP	**PP**	**00 21 28.3**	**+0.6**
CD2				S	**S**	**00 28 11.0**	**+0.9**
CD2				sS	sS	00 28 18.8	+5.6
CD2				SS	**SS**	**00 32 49.7**	**+2.0**
CD2				pmax	pmax		
	comp=Z,110nm,0.7s						
CD2				pmax	pmax		
	comp=Z,3µm,8.3s						
CD2				LR	LR		
	comp=Z,7µm,16.3s						
CD2				LR	LR		
	comp=Z,6µm,17.3s						
CD2				LR	LR		
	comp=Z,6µm,16.7s						
BTO	**Baotou**	**72.22**	**319**	*e*P	**P**	**00 18 49.2**	**+1.5**
SEY	**Seymchan**	**74.17**	**354**	P	**P**	**00 18 59.2**	**+0.6**
	comp=Z,12nm,0.8s,baz=134,slow=5.9,SNR=13						
LZH	**Lanzhou**	**74.28**	**312**	⇑P	**P**	**00 19 00.7**	**+0.6**
LZH				pP	pwP	00 19 04.0	-0.3
LZH				sP	sP	00 19 05.6	+2.9
LZH				PP	**PP**	**00 21 44.7**	**-1.4**
LZH				S	**S**	**00 28 33.0**	**-1.6**
LZH				sS	sS	00 28 40.9	+3.1
LZH				SS	**SS**	**00 33 13.1**	**-7.6**
LZH				pmax	pmax		
	comp=Z,180nm,1.3s						
LZH				pmax	pmax		
	comp=Z,890nm,7.5s						
LZH				LR	LR		
	comp=Z,8µm,17.3s						
LZH				LR	LR		
	comp=Z,9µm,16.8s						
LZH				LR	LR		
	comp=Z,13µm,19.0s						
GAMB	**Gambell**	**76.38**	**10**	*e*P	**P**	**00 19 11.2**	**-0.1**
	comp=Z,114nm,1.3s						
KDAK	**Kodiak Island**	**76.48**	**22**	*e*P	**P**	**00 19 12.5**	**+0.5**
	comp=Z,57nm,1.1s						
KDAK				LR	LR		
	comp=Z,2µm,19.0s						
KDAK	**Kodiak Island**	**76.48**	**22**	*i* P	**P**	**00 19 13.0**	**+1.0**
KDAK	**Kodiak Island**	**76.48**	**22**	P	**P**	**00 19 12.7**	**+0.7**
	comp=Z,26nm,0.9s,baz=101,slow=21,SNR=14						
CIT	**Chita**	**76.73**	**330**	*e*P	**P**	**00 19 14.4**	**+0.8**
CIT				pmax	pmax		
	comp=Z,227nm,1.6s						
YAK	**Yakutsk**	**77.73**	**344**	*c i*P	**P**	**00 19 18.4**	**-0.5**
YAK				*e*		00 19 25.3	
YAK				*e**PP	**PcP**	**00 19 28.6**	**-0.3**
YAK				*e*		00 22 11.7	
YAK				*e*PPP	PPP	00 24 00.4	
YAK				*e*S	**S**	**00 29 10.8**	**-0.4**
YAK				*e**SS	**SKKSac**	**00 29 34.1**	**+0.7**
YAK				pmax	pmax		
	comp=Z,46nm,1.5s						
YAK				pmax	pmax		
	comp=N,15nm,1.6s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,1µm,7.3s						
YAK				pmax	pmax		
	comp=E,465nm,7.1s						
YAK				pmax	pmax		
	comp=N,435nm,8.1s						
YAK				smax	smax		
	comp=N,980nm,9.4s						
YAK				smax	smax		
	comp=E,1µm,10.8s						
YAK				MLR	MLR		
	comp=Z,9µm,23.0s						
YAK				MLR	MLR		
	comp=E,6µm,24.0s						
YAK				MLR	MLR		
	comp=N,5µm,23.0s						
ULN	**Ulaanbaatar**	**77.85**	**324**	*e*P	**P**	**00 19 20.3**	**+0.2**
	comp=N,67nm,1.2s						
ULN				LR	LR		
	comp=Z,4µm,19.0s						
ULN	**Ulaanbaatar**	**77.85**	**324**	*e*P	**P**	**00 19 20.3**	**+0.2**
ULN				pmax	pmax		
	comp=Z,67nm,1.2s						
ULN				MLR	MLR		
	comp=Z,4µm,19.0s						
HOM	**Homer**	**78.20**	**21**	*e*P	**P**	**00 19 23.2**	**+1.6**
	comp=Z,225nm,0.9s						
SONM	**Songino Array**	**78.21**	**324**	P	**P**	**00 19 21.6**	**-0.5**
	comp=Z,8.7nm,0.9s,baz=139,slow=4.5,SNR=21						
SONM				S	**S**	**00 29 23.1**	**+5.8**
	comp=Z,0.2nm,0.4s,baz=95,slow=32,SNR=3.4						
SONM				PKKPbc	**PKKPbc**	**00 38 24.1**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=247,slow=1.0,SNR=4.3						
SONM				LR	LR	00 52 54.8	
	comp=Z,6µm,19.8s,baz=116,slow=35						
SONA1	**Songino Array**	**78.21**	**324**	*e*P	**P**	**00 19 22.2**	**+0.1**
ANM	**Nome**	**78.32**	**12**	*e*P	**P**	**00 19 23.2**	**+1.0**
	comp=Z,47nm,1.3s						
ANM	**Nome**	**78.32**	**12**	*e*P	**P**	**00 19 23.2**	**+1.0**
ANM				pmax	pmax		
	comp=Z,47nm,1.3s						
RSO	**Redoubt South**	**78.41**	**20**	*e*P	**P**	**00 19 23.6**	**+0.5**
BRLK	**Bradley Lake**	**78.54**	**21**	*e*P	**P**	**00 19 23.5**	**0.0**
	comp=Z,55nm,1.0s						
GTA	**Gaotai**	**78.58**	**314**	⇓P	**P**	**00 19 21.8**	**-2.6**
GTA				pP	pP	00 19 26.0	-0.3
GTA				sP	pwP	00 19 29.1	+0.5
GTA				S	**S**	**00 29 14.8**	**-6.9**
GTA				SKS	**SKSac**	**00 29 32.2**	**-7.9**
GTA				SS	**SS**	**00 34 22.6**	**-3.1**
GTA				pmax	pmax		
	comp=Z,1µm,6.7s						
GTA				LR	LR		
	comp=Z,6µm,18.4s						
GTA				LR	LR		
	comp=Z,6µm,20.3s						
GTA				LR	LR		
	comp=Z,6µm,20.6s						
BILL	**Bilibino**	**78.62**	**0**	*e*P	**P**	**00 19 24.4**	**+0.6**
	comp=Z,80nm,1.2s						
BILL				LR	LR		
	comp=Z,4µm,20.0s						
BILL	**Bilibino**	**78.62**	**0**	*c i*P	**P**	**00 19 23.2**	**-0.6**
BILL				*e*		00 19 30.5	
BILL				*e*		00 22 19.8	
BILL				pmax	pmax		
	comp=Z,39nm,1.0s						
BILL				MLR	MLR		
	comp=Z,3µm,18.0s						
QSPA	**South Pole Qui**	**79.22**	**180**	*e*P	**P**	**00 19 26.8**	**-0.6**
QSPA				LR	LR		
	comp=Z,5µm,20.0s						
SEW	**Seward**	**79.29**	**21**	*e*P	**P**	**00 19 28.5**	**+1.0**
	comp=Z,51nm,1.0s						
BRDH	**Bariadhala**	**79.42**	**296**	P	**P**	**00 19 30.4**	**+1.3**
	comp=Z,45nm,0.4s,baz=90,slow=4.3,SNR=6.8						
BRDH				S	**S**	**00 29 38.2**	**+7.3**
	comp=Z,29nm,0.3s,baz=264,slow=23,SNR=2.1						
SUA	**Susitna One**	**79.82**	**20**	*e*P	**P**	**00 19 30.8**	**+0.2**
	comp=Z,48nm,1.1s						
RC01	**Rabbit Creek A**	**79.89**	**20**	*e*P	**P**	**00 19 31.9**	**+1.1**
	comp=Z,44nm,1.1s						
SHL	**Shillong**	**80.03**	**298**	*e*P	**P**	**00 19 32.1**	**-0.5**
	comp=Z,288nm,1.9s						
SHL	**Shillong**	**80.03**	**298**	*e*P	**P**	**00 19 32.2**	**-0.5**
SHL				pmax	pmax		
	comp=Z,288nm,1.9s						
SHL	**Shillong**	**80.03**	**298**	*e*P	**P**	**00 19 30.0**	**-2.7**
SHL				*e*S	**S**	**00 29 40.0**	**+2.3**
BOD	**Bodaibo**	**80.12**	**335**	*e*P	**P**	**00 19 28.2**	**-3.9**
BOD				pmax	pmax		
	comp=Z,40nm,1.7s						
KNK	**Knik Glacier**	**80.56**	**21**	*e*P	**P**	**00 19 35.9**	**+1.4**
	comp=Z,115nm,1.7s						
GLI	**Glacier Island**	**80.67**	**21**	*e*P	**P**	**00 19 35.4**	**+0.3**
	comp=Z,82nm,1.2s						
SML	**Sawmill**	**80.87**	**20**	*e*P	**P**	**00 19 36.6**	**+0.5**
	comp=Z,83nm,1.5s						
SML	**Sawmill**	**80.87**	**20**	*e*P	**P**	**00 19 36.7**	**+0.5**
SML				pmax	pmax		
	comp=Z,83nm,1.5s						
EYAK	**Cordova Ski Ar**	**80.94**	**22**	*e*P	**P**	**00 19 37.8**	**+1.4**
	comp=Z,102nm,1.3s						
RPN	**Rapa Nui**	**81.06**	**116**	PFAKE		00 19 50.0	+12
RPN				LR	LR		
	comp=Z,4µm,21.0s						
ZAK	**Zakamensk**	**81.25**	**325**	*e*P	**P**	**00 19 38.2**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,27nm,1.5s						
DIV	**Divide**	**81.31**	**22**	*e*P	**P**	**00 19 38.8**	**+0.2**
	comp=Z,48nm,0.9s						
HMT	**Hamilton**	**81.36**	**23**	*e*P	**P**	**00 19 39.1**	**+0.3**
	comp=Z,60nm,1.0s						
TRF	**Thorofare Moun**	**81.40**	**19**	*e*P	**P**	**00 19 38.7**	**-0.5**
	comp=Z,25nm,1.0s						

KLU	Klutina	81.50	21	*e*P	P	00 19 40.0	+0.4
	comp=Z,32nm,1.0s						
IRK	Irkutsk	81.61	327	*e*P	P	00 19 39.3	-1.0
IRK				pmax	pmax		
	comp=Z,93nm,3.2s						
BPAW	Bear Paw Mtn.	81.66	18	*e*P	P	00 19 41.1	+0.8
	comp=Z,26nm,1.3s						
TLY	Talaya	81.68	326	*e*P	P	00 19 40.3	-0.4
	comp=Z,72nm,1.1s						
TLY	Talaya	81.68	326*c*	*i*P	P	00 19 40.0	-0.7
TLY	Talaya	81.68	326	P	P	00 19 40.2	-0.4
	comp=Z,5.2nm,0.7s,baz=170,slow=5.1,SNR=15						
TLY				LR	LR	00 53 09.9	
	comp=Z,8µm,21.5s,baz=122,slow=34						
RND	Reindeer	81.82	19	*e*P	P	00 19 41.3	+0.1
	comp=Z,90nm,1.6s						
RND	Reindeer	81.82	19	*e*P	P	00 19 41.3	+0.1
RND				pmax	pmax		
	comp=Z,90nm,1.6s						
RDOG	Red Dog Mine	81.85	12	*e*P	P	00 19 41.7	+0.5
	comp=Z,124nm,1.4s						
LSA	Lhasa	81.87	302	P	P	00 19 42.4	-0.3
LSA				S	S	00 29 46.6	-11
LSA				pmax	pmax		
	comp=Z,2µm,8.3s						
LSA				LR	LR		
	comp=Z,2µm,18.0s						
LSA				LR	LR		
	comp=Z,1µm,20.6s						
LSA				LR	LR		
	comp=Z,5µm,20.6s						
LSA	Lhasa	81.87	302	*e*P	P	00 19 43.1	+0.4
	comp=Z,23nm,1.2s						
LSA				LR	LR		
	comp=Z,6µm,21.0s						
MCK	McKinley	82.03	19	*e*P	P	00 19 42.9	+0.6
	comp=Z,103nm,1.6s						
MCK	McKinley	82.03	19	*e*P	P	00 19 42.9	+0.6
MCK				pmax	pmax		
	comp=Z,103nm,1.6s						
DHY	Denali Highway	82.08	20	*e*P	P	00 19 43.3	+0.7
	comp=Z,33nm,1.3s						
HARP	HAARP	82.38	21	*e*P	P	00 19 44.4	+0.3
	comp=Z,51nm,0.9s						
MLY	Manley	82.41	17	*e*P	P	00 19 44.2	0.0
	comp=Z,63nm,1.6s						
MCCM	Marconi Confer	82.66	49	*e*P	P	00 19 46.5	+0.4
	comp=Z,202nm,0.9s						
KCPM	Cahto Peak	82.67	47	*e*P	P	00 19 46.9	+0.6
	comp=Z,33nm,0.9s						
KMRM	Mail Ridge	82.77	47	*e*P	P	00 19 47.0	+0.3
	comp=Z,42nm,1.0s						
HOPS	Hopland Field	82.81	48	*e*P	P	00 19 47.1	+0.2
	comp=Z,48nm,1.2s						
WRH	Wood River Hil	82.81	18	*e*P	P	00 19 46.2	-0.1
	comp=Z,29nm,1.0s						
GDXM	Geysers	82.95	48	*e*P	P	00 19 48.4	+0.8
	comp=Z,25nm,1.0s						
KHMM	Horse Mountain	82.98	46	*e*P	P	00 19 48.8	+0.9
	comp=Z,87nm,1.5s						
MDM	Murphy Dome	83.11	18	*e*P	P	00 19 47.8	0.0
	comp=Z,42nm,1.2s						
HDA	Harding Lake	83.13	19	*e*P	P	00 19 48.3	+0.3
	comp=Z,64nm,1.0s						
HDA	Harding Lake	83.13	19	P	P	00 19 47.6	-0.4
	baz=227						
MOY	Mondy	83.13	326	*e*P	P	00 19 48.6	+0.2
MOY				*e*		00 19 59.5	
TCOL	CIGO, UAF Yank	83.16	18	P	P	00 19 47.5	-0.5
	baz=226						
COLA	College	83.16	18	*e*P	P	00 19 47.2	-0.8
	comp=Z,40nm,0.8s						
COLA				LR	LR		
	comp=Z,5µm,20.0s						
COLA	College	83.16	18*c*	*i*P	P	00 19 47.4	-0.7
COLA				pmax	pmax		
	comp=Z,17nm,0.8s						
SAO	San Andreas Ge	83.28	51	*e*P	P	00 19 49.8	+0.5
	comp=Z,20nm,0.9s						
RIDG	Independ'e Rid	83.37	20	*e*P	P	00 19 50.0	+0.8
	comp=Z,61nm,1.2s						
IL1	Eielson Array	83.39	19	*e*P	P	00 19 49.5	+0.2
ILAR	Eielson Array	83.39	19	P	P	00 19 48.8	-0.5
	comp=Z,7.5nm,0.7s,baz=237,slow=5.1,SNR=32						
ILB	Eielson Array	83.39	19	*e*P	P	00 19 48.5	-0.8
O02D	Mt. Diablo Mer	83.42	47	P	P	00 19 50.2	+0.1
	baz=250						
POKR	Poker Plat Res	83.46	18	P	P	00 19 49.3	-0.4
	baz=227						
L02E	Cave Junction	83.53	45	P	P	00 19 50.0	-0.6
	baz=249						
K02D	Willamette Mer	83.67	45	P	P	00 19 51.2	-0.2
	baz=249						
SNCC	San Nicolas Is	83.70	55	P	P	00 19 51.1	-0.5
	baz=253						
WDC	Whiskeytown Da	83.73	47	*e*P	P	00 19 52.3	+0.7
	comp=Z,38nm,1.4s						
WDC	Whiskeytown Da	83.73	47	*e*P	P	00 19 52.3	+0.7
WDC				pmax	pmax		
	comp=Z,38nm,1.4s						
N02D	Trinity Center	83.75	46	P	P	00 19 51.9	+0.1
	baz=250						
M02C	Callahan	83.78	46	P	P	00 19 52.7	+0.8
	baz=250						
SCRK	Sand Creek	83.81	20	*e*P	P	00 19 52.6	+1.0
	comp=Z,97nm,1.3s						
SCZ2	Santa Cruz Isl	83.84	54	P	P	00 19 52.6	+0.3
	baz=253						
PAGB	Antelope Grade	83.88	52	*e*P	P	00 19 52.9	+0.4
	comp=Z,25nm,1.0s						
SBC	Santa Barbara	83.91	53	P	P	00 19 50.7	-1.9
	baz=252						
SMMC	Simmler	83.95	52	P	P	00 19 52.7	-0.2
	baz=252						
PKM	Mcpherson Peak	83.96	53	P	P	00 19 52.7	-0.5
	baz=252						
YBH	Yreka Blue Hor	84.00	46	*e*P	P	00 19 53.2	+0.1
	comp=Z,25nm,1.0s						
YBH	Yreka Blue Hor	84.00	46	*e*P	P	00 19 53.2	+0.1
YBH				pmax	pmax		
	comp=Z,25nm,1.0s						
HUMO	Hull Mountain	84.13	45	*e*P	P	00 19 54.4	+0.7
	comp=Z,29nm,1.0s						
ORV	Oroville	84.14	48	*e*P	P	00 19 53.7	0.0
	comp=Z,16nm,0.9s						
ORV	Oroville	84.14	48	*e*P	P	00 19 53.7	0.0
ORV				pmax	pmax		
	comp=Z,16nm,0.9s						
COLD	Coldfoot	84.16	16	*e*P	P	00 19 54.4	+1.2
	comp=Z,12nm,1.0s						
O03E	Paynes Creek	84.17	47	P	P	00 19 53.8	-0.2
	baz=251,SNR=14						
I03D	Drain, OR	84.24	44	P	P	00 19 53.3	-0.8
	baz=249						
WRAK	Wrangell Islan	84.31	30	PFAKE		00 20 10.0	+16
WRAK				LR	LR		
	comp=Z,9µm,19.0s						
HYT	Haines Junctio	84.32	24	*e*P	P	00 19 54.1	-0.2
	comp=Z,36nm,1.2s						
BLG	Laguna Peak, P	84.32	54	P	P	00 19 53.8	-1.0
	baz=253						
PRP	Porcupine Dome	84.33	18	*e*P	P	00 19 54.6	+0.3
	comp=Z,21nm,1.2s						
AFDM	Forest Hills D	84.33	49	*e*P	P	00 19 54.9	+0.2
	comp=Z,33nm,1.0s						
L04D	Klamath Falls	84.45	45	P	P	00 19 54.3	-1.1
	baz=250						
CMB	Columbia Colle	84.48	50	*e*P	P	00 19 55.4	-0.2
	comp=Z,20nm,0.9s						
CMB	Columbia Colle	84.48	50	*e*P	P	00 19 55.4	-0.2
CMB				pmax	pmax		
	comp=Z,20nm,0.9s						
M04C	Macdoel	84.63	46	P	P	00 19 56.3	0.0
	baz=250						
CIS	Catalina Islan	84.64	55	P	P	00 19 56.4	0.0
	baz=253						
VOG	Valley Oaks Go	84.73	52	P	P	00 19 56.0	-0.8
	baz=253						
OSI	Osito Audit: C	84.74	53	P	P	00 19 56.9	0.0
	baz=253						
ARVC	Arvin	84.80	53	P	P	00 19 56.8	-0.4
	baz=253						
VES	Vestal, Richgr	84.81	52	P	P	00 19 56.2	-1.0
	baz=253						
FMP	Fort Macarthur	84.82	54	P	P	00 19 56.5	-0.8
	baz=253						
J04D	Umpqua Nationa	84.93	44	P	P	00 19 57.3	-0.6
	baz=250						
DECC	Green Verdugo	84.94	54	P	P	00 19 57.1	-0.8
	baz=253						
H04D	Lebanon	84.94	43	P	P	00 19 57.4	-0.3
	baz=250						
K04D	Chiloquin, OR	84.97	45	P	P	00 19 57.5	-0.5
	baz=250						
RAMN	Ramite	84.97	299	*e*P	P	00 19 58.6	+0.1
	comp=Z,23nm,0.8s						
MWC	Mount Wilson	85.16	54	*e*P	P	00 19 59.0	-0.2
	comp=Z,41nm,1.3s						
MWC	Mount Wilson	85.16	54	*e*P	P	00 19 59.0	-0.2
MWC				pmax	pmax		
	comp=Z,41nm,1.3s						
NLWA	Neilton Lookou	85.23	40	PFAKE		00 20 10.0	+11
NLWA				LR	LR		
	comp=Z,7µm,20.0s						
ISA	Isabella, Lake	85.24	53	*e*P	P	00 19 59.6	+0.2
	comp=Z,99nm,1.9s						
ISA	Isabella, Lake	85.24	53	*e*P	P	00 19 59.6	+0.2
ISA				pmax	pmax		
	comp=Z,99nm,1.9s						
ISA	Isabella, Lake	85.24	53	P	P	00 19 59.2	-0.3
	baz=253,SNR=9.3						
F04D	Rainier, OR	85.31	42	P	P	00 20 00.7	+1.2
	baz=249						
WHY	Whitehorse	85.31	25	*e*P	P	00 19 59.1	-0.1
	comp=Z,62nm,1.9s						
WAKR	Walker	85.34	50	*e*P	P	00 20 00.7	+0.6
	comp=Z,89nm,1.6s						
MDPB	Devils Postpil	85.35	50	*e*P	P	00 20 00.5	+0.3
	comp=Z,30nm,1.0s						
EDW2	Edwards Air Fo	85.39	53	P	P	00 19 59.9	-0.3
	baz=254,SNR=13						
PNTR	Pine Nut	85.39	49	*e*P	P	00 20 01.4	+1.0
	comp=Z,71nm,1.5s						
OMMB	Old Mammoth Mi	85.40	51	*e*P	P	00 20 01.1	+0.5
	comp=Z,56nm,1.7s						
DAWY	Dawson	85.46	21	*e*P	P	00 20 00.6	+0.7
	comp=Z,29nm,1.0s						
BFSC	Mount Baldy Ra	85.48	54	P	P	00 19 59.8	-1.0
	baz=254,SNR=13						
JIRN	Jiri	85.50	299	*e*P	P	00 20 01.5	+0.2
MLAC	Mammoth, Mammo	85.53	51	P	P	00 20 01.1	0.0
	baz=253						
J05D	Fort Rock, OR	85.55	45	P	P	00 20 01.0	+0.1
	baz=251						
109C	Camp Elliot, M	85.55	56	P	P	00 20 01.0	+0.1
	baz=254						
MURC	Murrieta	85.67	55	P	P	00 20 01.4	-0.2
	baz=254						
PAHR	Pah Rah Range	85.74	48	*e*P	P	00 20 01.8	-0.2
	comp=Z,20nm,1.0s						
TIXI	Tiksi	85.75	349	*e*P	P	00 20 00.7	-0.4
	comp=Z,42nm,1.2s						
TIXI				S	S	00 30 28.5	-5.3
TIXI	Tiksi	85.75	349*c*	*i*P	P	00 20 00.3	-0.8
TIXI				pmax	pmax		
	comp=Z,13nm,0.9s						
TIXI	Tiksi	85.75	349	P	P	00 20 00.2	-0.9
	comp=Z,13nm,0.9s,baz=143,slow=6.0,SNR=17						
TIXI				S	S	00 30 28.5	-5.3
	comp=Z,2.0nm,0.2s,baz=43,slow=1.3,SNR=4.0						
TIXI				LR	LR	00 54 58.3	
	comp=Z,5µm,20.9s,baz=118,slow=33						
MOD	Modoc Plateau	85.76	46	*e*P	P	00 20 01.9	-0.1
	comp=Z,18nm,0.9s						
E04D	Cinebar	85.76	41	P	P	00 20 02.1	+0.4
	baz=250						
CWC	Cottonwood Cre	85.77	52	P	P	00 20 02.1	0.0
	baz=253						
D03D	Eldon	85.77	40	P	P	00 20 03.3	+1.6
	baz=249						
LRMC	Laurel Mtn Rad	85.80	53	P	P	00 20 02.3	0.0
	baz=254						
I05D	Terrebonne, OR	85.83	44	P	P	00 20 03.4	+1.3
	baz=251						
TIN	Tinemaha, Big	85.83	51	P	P	00 20 02.7	+0.3
	baz=253						
GUN	Gumba	85.83	299	*e*P	P	00 20 02.9	0.0
	comp=Z,114nm,1.2s						
BAR	Barrett	85.85	56	*e*P	P	00 20 02.8	+0.3
	comp=Z,53nm,1.9s						
PINE	Pine Mountain	85.92	44	*e*P	P	00 20 03.0	+0.2
	comp=Z,28nm,1.1s						
PGC	Sidney	85.95	39	*e*P	P	00 20 02.6	+0.1
	comp=Z,9.2nm,0.3s						
RYN	Ryan	86.06	50	*e*P	P	00 20 04.0	+0.4
	comp=Z,24nm,1.1s						
DAC	Darwin (Calif)	86.10	52	*e*P	P	00 20 04.7	+0.9
	comp=Z,17nm,1.0s						
MONP2	Monument Peak	86.11	56	P	P	00 20 03.7	-0.3
	baz=254,SNR=12						
PALK	Pallekele	86.11	278	*e*P	P	00 20 04.1	-0.1
	comp=Z,15nm,0.8s						
MPMC	Manual Prospec	86.12	52	P	P	00 20 03.9	-0.1
	baz=254,SNR=12						
G05D	Wamic, OR	86.14	43	P	P	00 20 03.6	0.0
	baz=251						
PKI	Pulchoki	86.15	299	*e*P	P	00 20 04.0	-0.5
	comp=Z,94nm,1.2s						
PKIN	Phulchoki	86.17	299	*e*P	P	00 20 04.1	-0.4
	comp=Z,96nm,1.3s						
NV01	Mina Array Sit	86.17	50	*e*P	P	00 20 04.2	0.0
NVAR	Mina Array Bea	86.17	50	P	P	00 20 03.5	-0.7
	comp=Z,8.5nm,0.9s,baz=230,slow=7.4,SNR=7.1						
NVAR				PKPPKP	P'P'df	00 46 10.0	+0.8
	comp=Z,0.7nm,0.8s,baz=103,slow=4.7,SNR=4.0						
RRX	Edison Barstow	86.18	54	P	P	00 20 04.1	+0.1
	baz=254						
F05D	White Salmon	86.26	42	P	P	00 20 05.7	+1.5
	baz=250						
PFO	Pinyon Flats O	86.27	55	*e*P	P	00 20 03.5	-1.1
	comp=Z,27nm,1.4s						
PFO				LR	LR		
	comp=Z,6µm,21.0s						
PFO	Pinyon Flats O	86.27	55	*e*P	P	00 20 03.5	-1.1
PFO				pmax	pmax		
	comp=Z,27nm,1.4s						
PFO				MLR	MLR		
	comp=Z,6µm,21.0s						
PFO	Pinyon Flats O	86.27	55	P	P	00 20 04.4	-0.2
	baz=254,SNR=8.4						
XPFO	Pion Flat	86.27	55	*e*P	P	00 20 04.7	0.0
	comp=Z,31nm,1.4s						
NV11	Mina Array Sit	86.28	50	*e*P	P	00 20 04.5	-0.2
	comp=Z,2.6nm,1.1s						
IKP	In-Ko-Pah, Jac	86.30	56	P	P	00 20 04.9	+0.1
	baz=255						
LON	Longmire	86.32	41	*e*P	P	00 20 04.8	+0.3
	comp=Z,68nm,1.8s						
LON	Longmire	86.32	41	*e*P	P	00 20 04.8	+0.3
LON				pmax	pmax		
	comp=Z,68nm,1.8s						
D05A	Enumclaw	86.36	41	*e*P	P	00 20 05.5	+0.8
	comp=Z,206nm,1.8s						
DLBC	Dease Lake	86.37	28	*e*P	P	00 20 05.2	+0.6
	comp=Z,25nm,1.3s						
DMN	Daman	86.42	299	*e*P	P	00 20 05.8	+0.1
	comp=Z,153nm,1.1s						
A04D	Lummi Island	86.43	39	P	P	00 20 05.2	+0.3
	baz=249						
GSC	Goldstone, Bar	86.44	53	*e*P	P	00 20 06.3	+0.9
	comp=Z,54nm,1.7s						
GSC	Goldstone, Bar	86.44	53	P	P	00 20 05.3	-0.1
	baz=254						
GRAC	Grapevine Rang	86.47	51	P	P	00 20 05.2	-0.4
	baz=254,SNR=9.7						
KVN	Kaiserville	86.50	49	*e*P	P	00 20 05.8	0.0
	comp=Z,19nm,1.1s						
KVN	Kaiserville	86.50	49	*e*P	P	00 20 05.8	0.0
KVN				pmax	pmax		
	comp=Z,19nm,1.1s						
SWSC	Sam W. Stewart	86.62	56	P	P	00 20 06.3	0.0
	baz=255						
B05A	Bryant	86.66	40	P	P	00 20 06.4	+0.3
	baz=250						
HEC	Hector,Ludlow	86.69	54	P	P	00 20 06.4	-0.3
	baz=254,SNR=12						
FURC	Furnace Creek,	86.72	52	P	P	00 20 06.8	+0.2
	baz=254,SNR=12						
BELC	Belle Mtn. Jos	86.74	55	P	P	00 20 06.9	-0.1
	baz=255,SNR=19						
I07A	Izee	86.99	44	*e*P	P	00 20 08.2	+0.2
	comp=Z,20nm,1.0s						
SHOC	Shoshone, Teco	87.02	53	P	P	00 20 07.9	-0.3
	baz=254						
BC3	Big Chuckawall	87.09	55	P	P	00 20 08.4	-0.2
	baz=255,SNR=9.1						
WVOR	Wild Horse Val	87.10	46	*e*P	P	00 20 09.1	+0.5
	comp=Z,62nm,1.5s						
WVOR				LR	LR		
	comp=Z,5µm,20.0s						
WVOR	Wild Horse Val	87.10	46	*e*P	P	00 20 09.1	+0.5
WVOR				pmax	pmax		
	comp=Z,62nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,5µm,20.0s						
TUQ	Turquoise Moun	87.17	53	P	P	00 20 08.8	-0.3
	baz=255						
GMRC	Granite Mounta	87.21	54	P	P	00 20 08.9	-0.4
	baz=255,SNR=11						
LTY	Liberty	87.22	41	*e*P	P	00 20 09.5	+0.5
	comp=Z,68nm,1.9s						
C06D	Leavenworth	87.30	40	P	P	00 20 09.2	0.0
	baz=251						
TPNV	Topopah Spring	87.32	52	*e*P	P	00 20 10.0	+0.2
	comp=Z,41nm,1.4s						
TPNV	Topopah Spring	87.32	52	*e*P	P	00 20 10.0	+0.2
TPNV				pmax	pmax		
	comp=Z,41nm,1.4s						
TPNV	Topopah Spring	87.32	52	P	P	00 20 09.6	-0.2
	baz=254,SNR=6.2						
GLA	Glamis	87.44	56	*e*P	P	00 20 11.1	+0.8
	comp=Z,137nm,1.8s						
GLA	Glamis	87.44	56	*e*P	P	00 20 11.1	+0.8
GLA				pmax	pmax		
	comp=Z,137nm,1.8s						
GLA	Glamis	87.44	56	P	P	00 20 10.7	+0.4
	baz=255						
IRM	Iron Mountain	87.46	55	P	P	00 20 10.6	+0.2
	baz=255,SNR=12						
J08A	Circle Bar Ran	87.49	45	*e*P	P	00 20 10.6	+0.2
	comp=Z,37nm,1.2s						
HAWA	Hanford	87.69	42	*e*P	P	00 20 11.6	+0.5
	comp=Z,44nm,1.4s						
HAWA				LR	LR		
	comp=Z,5µm,21.0s						
G08A	Pilot Rock	87.73	43	*e*P	P	00 20 12.0	+0.5
	comp=Z,25nm,1.1s						
DANN	Dangsing	87.75	299	*e*P	P	00 20 11.2	-1.0
	comp=Z,28nm,0.7s						
KOLN	Koldanda	87.76	299	*e*P	P	00 20 11.2	-1.0
	comp=Z,21nm,0.9s						
Y12C	Blythe	87.86	55	*e*P	P	00 20 12.4	+0.2
	comp=Z,31nm,1.0s						
Y12C	Blythe	87.86	55	P	P	00 20 12.2	0.0
	baz=256,SNR=9.2						
E08A	Dider Farm, El	88.03	42	*e*P	P	00 20 13.6	+0.8
	comp=Z,46nm,1.4s						
NEE2	Needles Airpor	88.04	54	P	P	00 20 13.8	+0.7
	baz=256						
SHPR	Sheep Range	88.05	52	*e*P	P	00 20 14.0	+0.7
	comp=Z,73nm,1.8s						
R11A	Troy Canyon, C	88.20	51	*e*P	P	00 20 14.7	+0.7
	comp=Z,21nm,1.4s						
R11A	Troy Canyon, C	88.20	51	P	P	00 20 13.5	-0.5
	baz=255,SNR=12						
113A	Mohawk Valley,	88.24	56	*e*P	P	00 20 14.6	+0.6
	comp=Z,31nm,1.2s						
D08A	Wollman Farm,	88.30	42	*e*P	P	00 20 14.6	+0.6
	comp=Z,38nm,1.4s						
PDMCI	Parker Dam,Lak	88.31	55	P	P	00 20 14.1	-0.2
	baz=256						
PYUN	Piuthan	88.36	299	*e*P	P	00 20 13.8	-1.2
	comp=Z,31nm,0.8s						
B08A	Colville Reser	88.43	40	*e*P	P	00 20 15.4	+0.8
	comp=Z,40nm,1.4s						
WMQ	Urumqi	88.62	315	P	P	00 20 16.1	+0.4
WMQ				pP	pwP	00 20 21.8	+1.8
WMQ				PP	PP	00 23 47.0	+2.7
WMQ				SKS	SKSac	00 30 46.3	+0.8
WMQ				S	SKKSac	00 30 55.9	-0.6
WMQ				SS	SS	00 36 54.9	+0.9
WMQ				pmax	pmax		
	comp=Z,47nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,3µm,10.5s						
WMQ				LR	LR		
	comp=Z,7µm,22.1s						
WMQ				LR	LR		
	comp=Z,7µm,18.1s						
WMQ				LR	LR		
	comp=Z,7µm,20.7s						
WMQ	Urumqi	88.62	315	*e*P	P	00 20 15.5	-0.2
	comp=Z,82nm,1.6s						
WMQ	Urumqi	88.62	315	*e*P	P	00 20 15.5	-0.2
WMQ				pmax	pmax		
	comp=Z,82nm,1.6s						
E09A	Wood Farm, Sta	88.64	42	*e*P	P	00 20 15.9	+0.3
	comp=Z,24nm,1.2s						
W13A	Hualapai Mount	88.70	54	*e*P	P	00 20 16.9	+0.4
	comp=Z,23nm,1.1s						
BMO	Blue Mountains	88.72	44	*e*P	P	00 20 16.1	-0.1
	comp=Z,30nm,1.4s						
BMO	Blue Mountains	88.72	44	*e*P	P	00 20 16.1	-0.1
BMO				pmax	pmax		
	comp=Z,30nm,1.4s						
214A	Organ Pipe Nat	88.83	57	P	P	00 20 17.3	+0.4
	baz=256,SNR=22						
ELK	Elko	89.08	48	*e*P	P	00 20 18.5	+0.3
	comp=Z,36nm,1.6s						
ELK	Elko	89.08	48	*e*P	P	00 20 18.5	+0.3
ELK				pmax	pmax		
	comp=Z,36nm,1.6s						
F10A	Beach Ranch, E	89.09	43	*e*P	P	00 20 18.5	+0.5
	comp=Z,30nm,1.2s						
Y14A	Wickenburg	89.13	55	*e*P	P	00 20 19.4	+1.1
	comp=Z,20nm,1.3s						
MFID	Camas Ranch	89.35	46	*e*P	P	00 20 20.1	+0.9
	comp=Z,33nm,1.4s						
SLBS	Sierra La Lagu	89.51	66	*e*P	P	00 20 20.1	-0.3
	comp=Z,22nm,1.1s						
PSUT	Pine Spring	89.56	51	*e*P	P	00 20 20.8	+0.4
	comp=Z,22nm,1.1s						
LCMT	Little Creek M	89.67	52	*e*P	P	00 20 21.1	+0.2
	comp=Z,40nm,1.3s						
CCUT	Cedar City	89.70	52	*e*P	P	00 20 21.7	+0.6
	comp=Z,31nm,1.2s						
INK	Inuvik	89.79	19	*e*P	P	00 20 20.3	-0.2
	comp=Z,50nm,2.0s						
INK	Inuvik	89.79	19	*e*P	P	00 20 20.3	-0.2
INK				pmax	pmax		
	comp=Z,50nm,2.0s						
INK	Inuvik	89.79	19	P	P	00 20 18.8	-1.7
	comp=Z,2.4nm,1.1s,baz=200,slow=6.9,SNR=3.3						
NEW	Newport	89.81	41	*e*P	P	00 20 21.2	+0.1
	comp=Z,54nm,1.8s						
NEW				LR	LR		
	comp=Z,5µm,19.0s						
NEW	Newport	89.81	41	*e*P	P	00 20 21.2	+0.1
NEW				pmax	pmax		
	comp=Z,54nm,1.8s						
NEW				MLR	MLR		
	comp=Z,5µm,19.0s						
NEW	Newport	89.81	41	P	P	00 20 21.5	+0.3
	baz=254						
KNB	Kanab	89.99	52	*e*P	P	00 20 23.1	+0.6
	comp=Z,97nm,1.7s						
KNB	Kanab	89.99	52	*e*P	P	00 20 23.1	+0.6
KNB				pmax	pmax		
	comp=Z,97nm,1.7s						
HYB	Hyderabad	90.14	288	*i* P	P	00 20 23.0	-0.4
U15A	North Rim	90.27	53	*e*P	P	00 20 24.2	+0.3
	comp=Z,56nm,1.4s						
HLID	Hailey	90.39	46	*e*P	P	00 20 24.1	0.0
	comp=Z,28nm,1.3s						
HLID				LR	LR		
	comp=Z,5µm,21.0s						
HLID	Hailey	90.39	46	P	P	00 20 24.1	0.0
	baz=256						
DGZ	Jazzator, Alta	90.43	321	*i* P	P	00 20 24.0	-0.2
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PKCU	Pink Cliffs	90.49	52	*e*P	P	00 20 26.2	+1.2
	comp=Z,242nm,1.8s						
X16A	Lo Mia Camp, P	90.50	55	*e*P	P	00 20 25.3	+0.4
	comp=Z,17nm,0.9s						
TUC	Tucson	90.59	57	*e*P	P	00 20 25.8	+0.6
	comp=Z,46nm,1.5s						
TUC				LR	LR		
	comp=Z,9µm,21.0s						
TUC	Tucson	90.59	57	*e*P	P	00 20 25.8	+0.6
TUC				pmax	pmax		
	comp=Z,46nm,1.5s						
TUC				MLR	MLR		

	comp=Z,9µm,21.0s						
TUC	Tucson	90.59	57	P	P	00 20 24.5	-0.7
	baz=258						
MTPU	Mount Pierson	90.72	52	*e*P	P	00 20 26.1	+0.1
	comp=Z,57nm,1.5s						
DUG	Dugway, Tooele	90.74	49	*e*P	P	00 20 26.4	+0.6
	comp=Z,22nm,1.3s						
DUG				LR	LR		
	comp=Z,4µm,20.0s						
DUG	Dugway, Tooele	90.74	49	*e*P	P	00 20 26.4	+0.6
DUG				pmax	pmax		
	comp=Z,22nm,1.3s						
DUG				MLR	MLR		
	comp=Z,4µm,20.0s						
DUG	Dugway, Tooele	90.74	49	P	P	00 20 25.4	-0.4
	baz=256						
BGU	Big Grassy Mou	90.75	49	*e*P	P	00 20 26.4	+0.6
	comp=Z,42nm,1.6s						
WUAZ	Wupatki	90.80	54	*e*P	P	00 20 26.8	+0.6
	comp=Z,40nm,1.3s						
WUAZ				LR	LR		
	comp=Z,4µm,21.0s						
WUAZ	Wupatki	90.80	54	P	P	00 20 25.6	-0.6
	baz=257						
MSU	Marysvale	90.83	51	*e*P	P	00 20 26.8	+0.4
MSU	Marysvale	90.83	51	*e*P	P	00 20 26.8	+0.4
HVU	Hansel Valley	91.13	48	*e*P	P	00 20 28.1	+0.4
	comp=Z,72nm,1.5s						
HVU	Hansel Valley	91.13	48	*e*P	P	00 20 28.1	+0.4
HVU				pmax	pmax		
	comp=Z,72nm,1.5s						
NLU	North Lily Min	91.23	50	*e*P	P	00 20 28.5	+0.3
	comp=Z,27nm,1.2s						
SPUT	South Promonto	91.26	48	*e*P	P	00 20 28.8	+0.6
	comp=Z,88nm,1.9s						
DGAR	Diego Garcia	91.44	262	PFAKE		00 20 40.0	+11
DGAR				LR	LR		
	comp=Z,4µm,20.0s						
MSO	Missoula	91.52	43	P	P	00 20 29.4	+0.2
	baz=256						
MPU	Maple Canyon	91.58	50	*e*P	P	00 20 30.4	+0.6
	comp=Z,62nm,1.7s						
CTU	Camp Tracy	91.64	49	*e*P	P	00 20 30.4	+0.4
	comp=Z,44nm,1.5s						
319A	Douglas	91.65	59	*e*P	P	00 20 30.4	+0.2
	comp=Z,51nm,1.4s						
Q16A	Castle Valley	91.69	51	*e*P	P	00 20 30.1	-0.2
	comp=Z,78nm,1.6s						
X18A	Snowflake	91.73	55	*e*P	P	00 20 31.1	+0.5
	comp=Z,43nm,1.4s						
TMUT	Trail Mountain	91.74	50	*e*P	P	00 20 31.2	+0.5
	comp=Z,22nm,1.1s						
MCMT	McKenzie Canyo	91.78	45	*e*P	P	00 20 31.2	+0.5
JLU	Jordanelle	91.84	49	*e*P	P	00 20 31.3	+0.3
	comp=Z,44nm,1.5s						
SYO	Syowa Base	91.92	197	⇓*e*P	P	00 20 29.4	-1.1
SYO	Syowa Base	91.92	197	⇓*e*pP	pP	00 20 34.2	+1.7
SYO	Syowa Base	91.92	197	⇓*i*sP	sP	00 20 36.6	+3.5
HWUT	Hardware Ranch	91.98	48	*e*P	P	00 20 32.0	+0.4
	comp=Z,5.6nm,0.9s						
HWUT				LR	LR		
	comp=Z,70nm,20.0s						
TCUT	Toone Canyon	91.99	49	*e*P	P	00 20 32.2	+0.4
	comp=Z,121nm,1.8s						
W18A	Petrified Fore	92.02	55	P	P	00 20 31.6	-0.4
	baz=258						
WALA	Waterton Lakes	92.07	41	*e*P	P	00 20 32.6	+0.8
	comp=Z,76nm,1.6s						
DLMT	Dillon	92.08	44	*e*P	P	00 20 32.8	+0.8
	comp=Z,54nm,1.2s						
P17A	Butcher Ranch,	92.14	50	*e*P	P	00 20 33.0	+0.7
	comp=Z,28nm,1.5s						
SRU	San Rafael Swe	92.22	51	*e*P	P	00 20 33.6	+0.8
	comp=Z,39nm,1.6s						
SRU	San Rafael Swe	92.22	51	*e*P	P	00 20 33.6	+0.8
SRU				pmax	pmax		
	comp=Z,39nm,1.6s						
LRM	Limekiln Ridge	92.28	44	*e*P	P	00 20 33.0	0.0
AHID	Auburn Hatcher	92.56	47	*e*P	P	00 20 33.7	-0.6
	comp=Z,14nm,1.1s						
AHID				LR	LR		
	comp=Z,4µm,20.0s						
QLMT	Earthquake Lak	92.77	45	*e*P	P	00 20 35.8	+0.6
BOZ	Bozeman (W)	92.79	44	*e*P	P	00 20 35.6	+0.4
	comp=Z,34nm,1.3s						
BOZ				LR	LR		
	comp=Z,6µm,20.0s						
BOZ	Bozeman (W)	92.79	44	P	P	00 20 35.4	+0.1
	baz=258						
FXWY	Fox Creek	92.80	46	*e*P	P	00 20 36.0	+0.6
	comp=Z,8.9nm,0.9s						
TPAW	Teton Pass	92.82	46	*e*P	P	00 20 35.1	-0.4
	comp=Z,30nm,1.4s						
REDW	Red Top Meadow	92.86	47	*e*P	P	00 20 35.4	-0.3
	comp=Z,41nm,1.6s						
HRY	Holter Researc	92.90	43	*e*P	P	00 20 36.1	+0.5
YHB	Horse Butte	92.91	45	*e*P	P	00 20 36.5	+0.6
	comp=Z,25nm,1.1s						
IMW	Indian Meadow	92.92	46	*e*P	P	00 20 36.1	+0.1
	comp=Z,29nm,1.5s						
SNOW	Snow King Moun	92.95	46	*e*P	P	00 20 35.3	-0.8
	comp=Z,71nm,2.0s						
MOOW	Moose Ponds	93.02	46	*e*P	P	00 20 36.1	-0.3
	comp=Z,11nm,1.2s						
MK01	Makanchi Array	93.04	317	*e*P	P	00 20 35.6	-0.6
MK31	Makanchi Array	93.05	317	*e*P	P	00 20 35.1	-1.1
MK31	Makanchi Array	93.05	317	*i* P	P	00 20 35.4	-0.8
MK31				pmax	pmax		
	comp=Z,19nm,0.9s						
MKAR	Makanchi Array	93.05	317	*e*P	P	00 20 35.3	-0.9
	comp=Z,138nm,1.1s						
MKAR				PKKPbc	PKKPdf	00 37 45.0	-0.9
MKAR				P'P'		00 46 03.6	
MKAR	Makanchi Array	93.05	317	P	P	00 20 35.0	-1.2
MKAR				pmax	pmax		
	comp=Z,15nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	93.05	317	P	P	00 20 35.0	-1.2
	comp=Z,15nm,0.7s,baz=90,slow=6.8,SNR=14						
MKAR				PKKPbc	PKKPdf	00 37 45.0	-0.9
	comp=Z,2.1nm,0.7s,baz=282,slow=2.4,SNR=12						
MKAR				PKPPKP	P'P'df	00 46 03.6	+8.0
	comp=Z,2.6nm,1.3s,baz=259,slow=2.5,SNR=5.1						
YMR	Madison River	93.06	45	*e*P	P	00 20 36.5	0.0
	comp=Z,30nm,1.3s						
LOHW	Long Hollow	93.09	46	*e*P	P	00 20 36.6	-0.1
	comp=Z,25nm,1.5s						
YFT	Old Faithful	93.10	45	*e*P	P	00 20 37.0	+0.2
	comp=Z,58nm,1.9s						
ZAA0	Zalesovo Array	93.10	324	*e*P	P	00 20 35.0	-1.2
	comp=Z,18nm,0.6s						
ZALV	Zalesovo Beam	93.10	324	P	P	00 20 34.6	-1.6
	comp=Z,7.8nm,0.8s,baz=90,slow=3.0,SNR=7.3						
ZALV				PKKPbc	PKKPbc	00 37 46.8	-0.6
	comp=Z,1.2nm,0.8s,baz=295,slow=2.2,SNR=5.2						
ZALV				LR	LR	01 00 09.2	
	comp=Z,4µm,22.0s,baz=56,slow=34						
121A	Cookes Peak, D	93.12	58	P	P	00 20 37.0	0.0
	baz=259						
FLWY	Flagg Ranch	93.12	46	*e*P	P	00 20 36.8	-0.1
	comp=Z,47nm,1.7s						
PV09	Paradox Valley	93.17	52	*e*P	P	00 20 38.1	+0.8
PV10	Paradox Valley	93.22	52	*e*P	P	00 20 43.3	+5.8
	comp=Z,22nm,1.1s						
PV14	Lion Creek, Pa	93.23	52	*e*P	P	00 20 37.9	+0.4
	comp=Z,78nm,1.9s						
PV19	Morning Glory	93.25	52	*e*P	P	00 20 37.3	-0.2
	comp=Z,64nm,1.9s						
PV23	Carpenter Ridg	93.25	52	*e*P	P	00 20 38.0	+0.3
	comp=Z,17nm,0.8s						
PV17	East Wray Mesa	93.26	52	*e*P	P	00 20 38.2	+0.6
	comp=Z,44nm,1.7s						
PV20	West Nyswonger	93.26	52	*e*P	P	00 20 37.9	+0.3
	comp=Z,41nm,1.7s						
MAKZ	Makanchi	93.26	317	*e*P	P	00 20 36.9	-0.3
	comp=Z,50nm,1.4s						
MAKZ	Makanchi	93.26	317	P	P	00 20 36.9	-0.3
H17A	Grant Village	93.27	46	*e*P	P	00 20 37.8	+0.1
	comp=Z,19nm,1.3s						
H17A	Grant Village	93.27	46	P	P	00 20 37.7	+0.1
	baz=258						
PV16	Nyswonger Mesa	93.30	52	*e*P	P	00 20 37.6	-0.2
	comp=Z,39nm,1.6s						
PV21	Cone Mtn., Par	93.30	52	*e*P	P	00 20 38.4	+0.5
	comp=Z,29nm,1.4s						
PV04	Paradox Valley	93.32	52	*e*P	P	00 20 38.3	+0.5
	comp=Z,33nm,1.4s						
PV12	Saucer Basin,	93.39	52	*e*P	P	00 20 39.0	+0.7
	comp=Z,28nm,1.4s						
MVCO	Mesa Verde	93.41	53	PFAKE		00 20 50.0	+12
MVCO				LR	LR		
	comp=Z,4µm,20.0s						
LKWY	Lake	93.43	45	PFAKE		00 20 50.0	+12
LKWY				LR	LR		
	comp=Z,10µm,21.0s						
PV07	Paradox Valley	93.53	52	*e*P	P	00 20 39.3	+0.4
	comp=Z,15nm,1.2s						
PV01	Paradox Valley	93.53	52	*e*P	P	00 20 39.1	+0.2
	comp=Z,46nm,2.0s						
BW06	Boulder Array	93.67	47	*e*P	P	00 20 40.1	+0.7
	comp=Z,11nm,1.1s						
BW06				LR	LR		
	comp=Z,4µm,21.0s						
BW06	Boulder Array	93.67	47	P	P	00 20 39.3	-0.1
	baz=259						
PD31	Pinedale Array	93.67	47	*e*P	P	00 20 38.6	-0.8
PDAR	Pinedale Array	93.67	47	*e*P	P	00 20 39.2	-0.3
PDAR				PKKPbc	PKKPdf	00 37 43.8	-1.2
PDAR	Pinedale Array	93.67	47	P	P	00 20 38.3	-1.1
	comp=Z,4.1nm,0.9s,baz=250,slow=3.8,SNR=17						
PDAR				PKKPbc	PKKPdf	00 37 43.8	-1.2
	comp=Z,0.7nm,0.8s,baz=76,slow=5.5,SNR=6.8						
O20A	White River Ci	94.15	50	P	P	00 20 41.5	-0.2
	baz=259						
NVS	Novosibirsk	94.21	325	*e*P	P	00 20 40.5	-0.8
NVS				pmax	pmax		
	comp=Z,28nm,1.4s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.6s						
RLMT	Red Lodge	94.33	45	PFAKE		00 20 50.0	+7.6
RLMT				LR	LR		
	comp=Z,6µm,22.0s						
EGMT	Eagleton	94.55	42	*e*P	P	00 20 42.8	-0.4
	comp=Z,21nm,1.1s						
EGMT				LR	LR		
	comp=Z,3µm,20.0s						
EGMT	Eagleton	94.55	42	P	P	00 20 43.2	+0.1
	baz=259						
ANMO	Albuquerque	94.64	55	*e*P	P	00 20 44.0	0.0
	comp=Z,19nm,1.6s						
ANMO				LR	LR		
	comp=Z,4µm,20.0s						
ANMO	Albuquerque	94.64	55	*ce*P	P	00 20 44.0	0.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANMO	Albuquerque	94.64	55	P	P	00 20 43.8	-0.2
	baz=260						
S22A	4UR Ranch, Cre	94.82	53	*e*P	P	00 20 45.1	+0.2
	comp=Z,6.3nm,1.0s						
S22A	4UR Ranch, Cre	94.82	53	P	P	00 20 45.1	+0.2
	baz=260						
YKA	Yellowknife Ar	94.93	27	P	P	00 20 42.7	-1.7
	comp=Z,2.9nm,0.8s,baz=256,slow=4.6,SNR=39						
YKA				PKKPbc	PKKPbc	00 37 40.7	-2.1
	comp=Z,0.7nm,1.0s,baz=85,slow=2.6,SNR=4.4						
YKW3	Yellowknife Ar	94.94	27	*e*P	P	00 20 43.8	-0.7
	comp=Z,45nm,2.0s						
MNTX	Cornudas Mount	94.98	59	*e*P	P	00 20 45.1	-0.4
	comp=Z,5.3nm,1.0s						
MNTX				LR	LR		
	comp=Z,8µm,20.0s						
MNTX	Cornudas Mount	94.98	59	P	P	00 20 45.4	0.0
	baz=260						
NRIK	Noril'sk	95.73	340	P	P	00 20 47.6	-0.4
	comp=Z,8.1nm,0.8s,baz=92,slow=4.2,SNR=16						
NRIK				LR	LR	01 03 20.9	
	comp=Z,7µm,20.7s,baz=94,slow=35						
SDCO	Great Sand Dun	95.85	53	PFAKE		00 21 00.0	+10
SDCO				LR	LR		
	comp=Z,4µm,19.0s						
TX31	Lajitas Ar. Si	96.06	61	*e*P	P	00 20 49.7	-0.9
TXAR	Lajitas Array	96.06	61	P	P	00 20 51.0	+0.5
	comp=Z,1.5nm,0.7s,baz=234,slow=4.4,SNR=12						
TXAR				PP	PP	00 24 44.0	+0.6
	comp=Z,3.0nm,1.0s,baz=251,slow=7.6,SNR=8.2						
TXAR				PKKPbc	PKKPbc	00 37 38.9	+0.2
	comp=Z,0.4nm,0.7s,baz=95,slow=3.5,SNR=4.0						
ISCO	Idaho Springs	96.09	51	PFAKE		00 21 00.0	+9.3
ISCO				LR	LR		
	comp=Z,9µm,20.0s						
PMSA	Palmer Station	96.10	161	PFAKE		00 21 00.0	+10
PMSA				LR	LR		
	comp=Z,6µm,20.0s						
KURK	Kurchatov	96.18	320	*e*P	P	00 20 49.3	-1.1
KURK				LR	LR		
	comp=Z,10µm,20.0s						
KURK	Kurchatov	96.18	320	*ce*P	P	00 20 49.3	-1.1
KURK				pmax	pmax		
	comp=Z,12nm,1.2s						
KURBB	Kurchatov Arra	96.22	320	P	P	00 20 49.9	-0.6
	comp=Z,1.3nm,0.3s,baz=96,slow=3.9,SNR=9.1						
NVL	N'lazarevskaya	96.67	189	*e*P	P	00 20 55.7	+3.4
NVL				*e*		00 24 55.9	
NVL				*i* S	SKSac	00 31 29.8	+0.5
NVL				*e*		00 32 16.7	
NVL				*e*PS	PS	00 33 45.3	+11
NVL				*e*SSS	SSS	00 42 32.1	
NVL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NVL				MLR	MLR		
	comp=Z,7µm,18.0s						
LAO	LASA Array	96.69	44	PFAKE		00 21 00.0	+7.1
LAO				LR	LR		
	comp=Z,5µm,20.0s						
SNAA	Sanae	97.35	184	P	P	00 20 54.7	-0.8
SNAA	Sanae	97.35	184	*e*P	P	00 20 54.8	-0.8
	comp=Z,51nm,1.7s						
SNAA	Sanae	97.35	184	*e*P	P	00 20 54.8	-0.7
SNAA				pmax	pmax		
	comp=Z,51nm,1.7s						
NIL	Nilore	97.60	303	*e*P	P	00 20 56.3	-1.0
NIL				LR	LR		
	comp=Z,1µm,21.0s						
NIL	Nilore	97.60	303	*e*P	P	00 20 56.3	-1.0
NIL				MLR	MLR		
	comp=Z,1µm,21.0s						
AAK	Ala-Archa	97.82	312	*e*P	P	00 20 57.4	-0.9
	comp=Z,2.3nm,0.7s						
AAK				LR	LR		
	comp=Z,3µm,20.0s						
AAK	Ala-Archa	97.82	312	*e*P	P	00 20 57.4	-0.9
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK				MLR	MLR		
	comp=Z,3µm,20.0s						
AAK	Ala-Archa	97.82	312	P	P	00 20 57.2	-1.0
	comp=Z,1.5nm,0.8s,baz=150,slow=7.0,SNR=5.0						
VNA3	Neumayer Olymp	98.09	182	P	Pdif	00 21 01.0	+2.2
DGMT	Dagmar	98.29	42	PFAKE		00 21 10.0	+10
DGMT				LR	LR		
	comp=Z,3µm,21.0s						
VNA2	Neumayer--Watz	98.33	182	P	Pdif	00 21 02.9	+3.0
	baz=172,slow=5.2						
OGNE	Ogallala	98.95	50	PFAKE		00 21 10.0	+6.7
OGNE				LR	LR		
	comp=Z,5µm,20.0s						
JCT	Junction City	99.54	61	PFAKE		00 21 20.0	+14
JCT				LR	LR		
	comp=Z,7µm,20.0s						
FFC	Flin Flon	100.26	36	*e*Pdif	Pdif	00 21 08.3	-0.4
FFC				LR	LR		
	comp=Z,4µm,20.0s						
FFC	Flin Flon	100.26	36	*e*P	Pdif	00 21 08.3	-0.4
FFC				MLR	MLR		
	comp=Z,4µm,20.0s						
CBKS	Cedar Bluff	100.49	52	PFAKE		00 21 20.0	+10
CBKS				LR	LR		
	comp=Z,3µm,19.0s						
KK31	Karatay Array	100.78	312	*e*Pdif	Pdif	00 21 11.1	-0.2
KK31	Karatay Array	100.78	312	*e*P	Pdif	00 21 11.1	-0.2
KKAR	Karatay Array	100.78	312	*e*Pdif	Pdif	00 21 11.1	-0.2
KKAR	Karatay Array	100.78	312	*e*P	Pdif	00 21 11.1	-0.2
KVTX	Kingsville	100.86	64	PFAKE		00 21 20.0	+8.1
KVTX				LR	LR		
	comp=Z,4µm,22.0s						
WMOK	Wichita Mounta	100.86	57	PFAKE		00 21 20.0	+8.1
WMOK				LR	LR		
	comp=Z,7µm,21.0s						
BVA0	Borovoye Array	101.49	322	P	Pdif	00 21 12.9	-1.3
BVA0				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BVAR	Borovoye Array	101.49	322	P	Pdif	00 21 13.4	-0.7
	comp=Z,2.8nm,0.8s,baz=103,slow=4.7,SNR=20						
BVAR				PP	PP	00 25 18.5	-5.5
	comp=Z,0.9nm,0.7s,baz=95,slow=9.1,SNR=4.7						
BRVK	Borovoye	101.56	322	*e*Pdif	Pdif	00 21 13.8	-0.6
BRVK				LR	LR		
	comp=Z,5µm,22.0s						
BRVK	Borovoye	101.56	322	*e*P	Pdif	00 21 13.8	-0.6
BRVK				MLR	MLR		
	comp=Z,5µm,22.0s						
RES	Resolute Bay	102.91	16	*e*Pdif	Pdif	00 21 20.5	+0.5
RES	Resolute Bay	102.91	16	*e*P	Pdif	00 21 20.5	+0.5
KSU1	Kansas State U	102.94	52	PFAKE		00 21 30.0	+9.0
KSU1				LR	LR		
	comp=Z,5µm,20.0s						
ECSD	EROS Data Cent	103.17	47	PFAKE		00 21 30.0	+8.1
ECSD				LR	LR		
	comp=Z,5µm,21.0s						
NATX	Nacogdoches	104.05	60	PFAKE		00 21 40.0	+14
NATX				LR	LR		
	comp=Z,8µm,19.0s						
FCC	Fort Churchill	104.64	32	*e*Pdif	Pdif	00 21 28.2	+0.2
FCC	Fort Churchill	104.64	32	*e*P	Pdif	00 21 28.2	+0.2
MIAR	Mount Ida	105.13	57	PFAKE		00 26 00.0	+15
MIAR				LR	LR		
	comp=Z,8µm,20.0s						
SCIA	State Center	105.62	49	PFAKE		00 26 00.0	+14
SCIA				LR	LR		
	comp=Z,4µm,21.0s						
EYMN	Ely	106.75	43	PFAKE		00 26 00.0	+12
EYMN				LR	LR		
	comp=Z,8µm,22.0s						
EFI	East Falkland	107.41	153	PFAKE		00 26 00.0	+11
EFI				LR	LR		
	comp=Z,5µm,20.0s						
JFWS	Jewell Farm	107.81	48	PFAKE		00 26 00.0	+10
JFWS				LR	LR		
	comp=Z,6µm,20.0s						
ARU	Arti	108.18	326	*e*PKP	PKiKP	00 25 50.2	-0.1
ARU				LR	LR		
	comp=Z,3µm,19.0s						
COWI	Conover	108.46	45	PFAKE		00 26 00.0	+8.8
COWI				LR	LR		
	comp=Z,8µm,22.0s						
HDIL	Hopedale	108.59	51	PFAKE		00 26 00.0	+8.4
HDIL				LR	LR		
	comp=Z,8µm,21.0s						
AKTO	Aktyubinsk	109.26	320	PKKPbc	PKKPbc	00 36 59.2	-1.1
	comp=Z,2.3nm,0.9s,baz=264,slow=5.1,SNR=4.7						
BRAL	Brewton	110.53	61	PFAKE		00 26 10.0	+14
BRAL				LR	LR		
	comp=Z,5µm,20.0s						
KBS	Kingsbay	110.62	355	PFAKE		00 26 10.0	+16
KBS				LR	LR		
	comp=Z,4µm,20.0s						
JTS	JuntasAbangare	111.05	83	PFAKE		00 26 10.0	+13
JTS				LR	LR		
	comp=Z,4µm,22.0s						
GLMI	Grayling	111.74	46	PFAKE		00 26 10.0	+13
GLMI				LR	LR		
	comp=Z,6µm,20.0s						
ABPO	Ambohimpanom	112.19	244	PFAKE		00 26 10.0	+11
ABPO				LR	LR		
	comp=Z,8µm,22.0s						
HOPE	Hope Point	112.60	166	PFAKE		00 26 10.0	+11
HOPE				LR	LR		
	comp=Z,8µm,21.0s						
AAM	Ann Arbor	112.71	49	PFAKE		00 26 10.0	+11
AAM				LR	LR		
	comp=Z,7µm,21.0s						
LCO	Las Campanas	113.03	128	*e*PKP	PKiKP	00 25 59.5	-1.3
LCO				LR	LR		
	comp=Z,6µm,20.0s						
LCO	Las Campanas	113.03	128	*e*PKIKP	PKiKP	00 25 59.5	-1.3
LCO				MLR	MLR		
	comp=Z,6µm,20.0s						
ACSO	Alum Creek Sta	113.43	51	PFAKE		00 26 10.0	+9.2
ACSO				LR	LR		
	comp=Z,9µm,20.0s						
GOGA	Godfrey	113.52	58	PFAKE		00 26 10.0	+8.8
GOGA				LR	LR		
	comp=Z,9µm,21.0s						
NNA	Nana	114.23	108	PFAKE		00 26 10.0	+6.9
NNA				LR	LR		
	comp=Z,4µm,19.0s						
TRQA	Tornquist	114.32	140	PFAKE		00 26 10.0	+7.3
TRQA				LR	LR		
	comp=Z,7µm,22.0s						
LVZ	Lovozero	114.48	342	PFAKE		00 26 10.0	+8.0
LVZ				LR	LR		
	comp=Z,8µm,21.0s						
APA	Apatity	115.06	342	⇓*i*PKIKP	PKPdf	00 26 05.5	+2.4
APA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,7µm,23.0s						
KEV	Kevo	115.45	345	PFAKE		00 26 20.0	+16
KEV				LR	LR		
	comp=Z,8µm,20.0s						
BLA	Blacksburg	115.73	54	PFAKE		00 26 20.0	+15
BLA				LR	LR		
	comp=Z,9µm,20.0s						
OTAV	Otavalo	115.78	95	PFAKE		00 26 20.0	+13
OTAV				LR	LR		
	comp=Z,7µm,22.0s						
BCIP	Isla Barro Col	115.91	85	PFAKE		00 26 20.0	+14
BCIP				LR	LR		
	comp=Z,7µm,22.0s						
ARCES	ARCESS Array B	115.98	345	PKP	PKPdf	00 26 05.3	+0.5
	comp=Z,2.8nm,0.8s,baz=66,slow=2.0,SNR=10						
ARCES				PKKPbc	PKKPbc	00 36 36.4	-1.8
	comp=Z,1.7nm,0.8s,baz=191,slow=1.2,SNR=7.1						
NHSC	New Hope	116.29	58	PFAKE		00 26 20.0	+14
NHSC				LR	LR		
	comp=Z,8µm,22.0s						
KLMR	Klimovskoe	116.33	334	*e*PKIKP	PKPdf	00 26 00.9	-4.8
KLMR				pmax	pmax		
	comp=Z,12nm,1.5s						
KLMR	Klimovskoe	116.33	334	*e*PKPdf	PKPdf	00 26 00.9	-4.8
KLMR				AMP		00 26 13.9	
	comp=Z,12nm,1.6s						
LVC	Limon Verde	117.36	122	*e*PKPdf	PKiKP	00 26 09.6	+0.2
LVC				LR	LR		
	comp=Z,7µm,19.0s						
LVC	Limon Verde	117.36	122	*e*PKIKP	PKiKP	00 26 09.6	+0.2
LVC				MLR	MLR		
	comp=Z,7µm,19.0s						
MAK	Makhachkala	117.57	313	*i* P	Pdif	00 22 23.1	-2.8
MAK				*i*		00 26 05.9	
MAK				*e*		00 27 16.2	
MAK				*e*PS	PS	00 37 08.6	+2.7
MAK				pmax	pmax		
	comp=Z,73nm,0.8s						
MAK				MLR	MLR		
	comp=Z,4µm,17.0s						
CNNC	Cliffs of the	117.98	56	PFAKE		00 26 20.0	+10
CNNC				LR	LR		
	comp=Z,11µm,20.0s						
CBN	Corbin Frederi	118.00	52	PFAKE		00 26 20.0	+10
CBN				LR	LR		
	comp=Z,9µm,21.0s						
MNMC	Minye Minye	118.25	119	*e*PKPdf	PKPdf	00 26 09.7	-1.4
BINY	Binghamton	118.35	48	PFAKE		00 26 20.0	+10
BINY				LR	LR		
	comp=Z,16µm,21.0s						
GROC	Groznyy	118.75	313	*i* PKIKP	PKPdf	00 26 06.7	-4.2
GROC				pmax	pmax		
	comp=Z,24nm,1.6s						
LONY	Lake Ozonia	118.81	45	PFAKE		00 26 20.0	+8.9
LONY				LR	LR		
	comp=Z,11µm,21.0s						
SFJD	Kangerlussuaq	118.92	15	PFAKE		00 26 20.0	+9.4
SFJD				LR	LR		
	comp=Z,11µm,19.0s						
MTDJ	Mount Denham	118.93	75	PFAKE		00 26 20.0	+7.9
MTDJ				LR	LR		
	comp=Z,7µm,21.0s						
VRH	Novokhopyorsk	119.12	323	*e*PKIKP	PKPdf	00 26 10.8	-0.6
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GNI	Garni	120.17	310	*e*PKPdf	PKiKP	00 26 14.7	+0.6
GNI				LR	LR		
	comp=Z,12µm,19.0s						
GNI	Garni	120.17	310	*i* PKIKP	PKPdf	00 26 12.7	-1.3

LPSR	Galich'ya Gora	120.19	325	ePKIKP	PKiKP	00 26 14.4	+0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEI	Tsey	120.19	313	i PKIKP	PKiKP	00 26 18.0	+3.9
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	Obninsk	120.37	329	PFAKE		00 26 20.0	+6.3
OBN				LR	LR		
	comp=Z,9µm,19.0s						
OBN	Obninsk	120.37	329	ePKIKP	PKPdf	00 26 12.3	-1.3
OBN				e		00 27 44.7	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,3µm,17.0s						
VSR	Storozhevoye	120.61	324	ePKIKP	PKPdf	00 26 12.1	-2.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LPAZ	La Paz	120.67	116	ePKPdf	PKPdf	00 26 15.8	-0.4
LPAZ	La Paz	120.67	116	PKP	PKiKP	00 26 16.3	+0.1
	comp=Z,4.7nm,0.9s,baz=304,slow=2.7,SNR=12						
KIV	Kislovodsk	120.75	315	ePKPdf	PKPdf	00 26 13.7	-1.2
KIV				LR	LR		
	comp=Z,9µm,20.0s						
KIV	Kislovodsk	120.75	315	i PKIKP	PKPdf	00 26 12.8	-2.1
KIV				e		00 27 39.9	
KIV				ePS	PKKPdf	00 37 30.9	+37
KIV				eSS	SS	00 44 11.1	-2.9
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,3µm,23.0s						
FINES	FINESS Array B	121.38	338	PKP	PKPdf	00 26 14.3	-1.1
	comp=Z,1.7nm,0.7s,baz=318,slow=2.6,SNR=5.6						
PKME	Peaks-Kenny Pk	122.23	43	PFAKE		00 26 30.0	+12
PKME				LR	LR		
	comp=Z,8µm,19.0s						
ANN	Anapa	124.07	317	i PKIKP	PKPdf	00 26 17.2	-3.9
ANN				e		00 33 17.0	
ANN				eSS	SS	00 44 47.5	-8.3
ANN				pmax	pmax		
	comp=Z,28nm,1.1s						
CPUP	Villa Florida	124.51	132	ePKPdf	PKPdf	00 26 21.9	-0.6
CPUP	Villa Florida	124.51	132	PKP	PKPdf	00 26 22.1	-0.5
	comp=Z,10nm,1.0s,baz=304,slow=2.1,SNR=12						
SDDR	Presa de Saban	124.87	74	PFAKE		00 26 30.0	+6.2
SDDR				LR	LR		
	comp=Z,15µm,19.0s						
SDV	Santo Domingo	124.89	87	ePKPdf	PKPdf	00 26 22.8	-1.0
SDV				LR	LR		
	comp=Z,16µm,20.0s						
GRTK	Grand Turk	124.98	71	PFAKE		00 26 30.0	+6.2
GRTK				LR	LR		
	comp=Z,10µm,20.0s						
BOSA	Boshof	125.03	224	ePKPdf	PKPdf	00 26 22.9	-0.8
BOSA	Boshof	125.03	224	PKP	PKPdf	00 26 23.5	-0.2
	comp=Z,14nm,0.8s,baz=96,slow=1.5,SNR=7.5						
SUR	Sutherland	125.31	217	ePKPdf	PKPdf	00 26 24.2	+0.1
SUR				LR	LR		
	comp=Z,16µm,22.0s						
BORG	Borgarnes	125.91	4	PFAKE		00 26 40.0	+16
BORG				LR	LR		
	comp=Z,5µm,22.0s						
NB2	NORSAR Subarra	126.34	345	PKPdf	PKPdf	00 26 23.3	-1.7
	comp=Z,2.9nm,1.0s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.34	345	PKP	PKPdf	00 26 24.8	-0.3
	comp=Z,1.9nm,0.9s,baz=31,slow=1.9,SNR=6.6						
AKASG	Malin Array Be	126.42	327	PKP	PKPdf	00 26 25.1	-0.3
	comp=Z,1.6nm,0.7s,baz=61,slow=2.0,SNR=13						
AKBB	Malin Array Si	126.42	327	ePKPdf	PKPdf	00 26 25.4	0.0
KIEV	Kiev	126.43	327	ePKPdf	PKPdf	00 26 25.4	-0.1
KIEV				LR	LR		
	comp=Z,14µm,20.0s						
KIEV	Kiev	126.43	327	⇓iP	PKPdf	00 26 25.3	-0.1
KIEV	Kiev	126.43	327	⇓PKIKP	PKPdf	00 26 25.3	-0.1
AK11	Malin Array Si	126.46	327	ePKPdf	PKPdf	00 26 25.5	0.0
LBTB	Lobatse	127.02	227	ePKPdf	PKPdf	00 26 26.7	-0.8
LBTB	Lobatse	127.02	227	ePKIKP	PKPdf	00 26 26.7	-0.8
KMBO	Kilima Mbogo	127.03	260	PKP	PKiKP	00 26 29.2	+0.7
KMBO				LR	LR		
	comp=Z,16µm,19.0s						
KMBO	Kilima Mbogo	127.03	260	PKIKP	PKiKP	00 26 29.2	+0.7
KMBO				MLR	MLR		
	comp=Z,16µm,19.0s						
KMBO	Kilima Mbogo	127.03	260	PKP	PKiKP	00 26 29.2	+0.7
	comp=Z,2.4nm,0.9s,baz=54,slow=0.1,SNR=5.1						
BRTR	Keskin Array B	128.49	313	PKP	PKPdf	00 26 30.0	+0.1
	comp=Z,1.6nm,0.9s,baz=158,slow=3.9,SNR=7.6						
BRTR				PP	PP	00 28 36.0	+1.1
	comp=Z,4.1nm,1.1s,baz=56,slow=5.4,SNR=4.6						
KIS	Kishinev	128.57	323	ePKP	PKPdf	00 26 25.0	-4.6
KIS	Kishinev	128.57	323	ePP	PP	00 28 40.0	+5.3
KIS				eSKP		00 29 45.0	
KIS	Kishinev	128.57	323	ePKIKP	PKPdf	00 26 25.0	-4.6
KIS				e		00 28 40.0	
KIS				ePS	PS	00 40 06.0	+83
KIS				MLR	MLR		
	comp=Z,4µm,22.0s						
KIS				MLR	MLR		
	comp=N,4µm,23.0s						
ANTO	Ankara	129.04	313	PFAKE		00 26 40.0	+8.4
ANTO				LR	LR		
	comp=Z,14µm,20.0s						
ANTO	Ankara	129.04	313	⇑iP	PKiKP	00 26 31.5	-0.1
ANTO	Ankara	129.04	313	⇑PKIKP	PKiKP	00 26 31.5	-0.1
LEOM	Leova	129.17	323	⇑iP	PKPdf	00 26 30.4	-0.4
LEOM	Leova	129.17	323	⇑PKIKP	PKPdf	00 26 30.4	-0.4
LVV	L'vov	129.66	328	ePKIKP	PKiKP	00 26 32.3	-0.1
SJG	San Juan	129.75	75	ePKPdf	PKPdf	00 26 32.1	-0.6
SJG				LR	LR		
	comp=Z,17µm,19.0s						
SJG	San Juan	129.75	75	ePKIKP	PKPdf	00 26 32.1	-0.6
SJG				MLR	MLR		
	comp=Z,17µm,19.0s						
PRAR	RASCA	129.88	325	⇑iP	PKiKP	00 26 33.1	+0.2
CFR	Carcaliu	129.88	321	⇑iP	PKPdf	00 26 32.2	0.0
CFR	Carcaliu	129.88	321	⇑PKIKP	PKPdf	00 26 32.2	0.0
HUMP	Col San Antoni	130.03	75	ePKPdf	PKPdf	00 26 32.5	-0.7
BIZ	Bicaz	130.18	324	⇑iP	PKiKP	00 26 33.2	-0.3
TLB	Topalu	130.23	321	⇑iP	PKiKP	00 26 33.3	-0.4
TLB	Topalu	130.23	321	⇑PKIKP	PKiKP	00 26 33.3	-0.4
LSZ	Lusaka	130.28	239	ePKPdf	PKPdf	00 26 33.6	-0.4
LSZ				LR	LR		
	comp=Z,46µm,22.0s						
LSZ	Lusaka	130.28	239	ePKIKP	PKPdf	00 26 33.6	-0.4
LSZ				MLR	MLR		
	comp=Z,46µm,22.0s						
BUR04	Bucovina Ar. S	130.31	325	ePKPdf	PKPdf	00 26 33.4	+0.3
BURAR	Bucovina Array	130.31	325	⇓iP	PKiKP	00 26 33.8	-0.1
BURAR	Bucovina Array	130.31	325	⇓PKIKP	PKiKP	00 26 33.8	-0.1
MLR	Muntele Rosu	131.05	323	ePKPdf	PKPdf	00 26 34.3	-0.3
MLR	Muntele Rosu	131.05	323	⇑iP	PKiKP	00 26 35.2	-0.3
MLR	Muntele Rosu	131.05	323	⇑PKIKP	PKiKP	00 26 35.2	-0.3
DOPR	Dopca	131.12	323	⇑iP	PKiKP	00 26 35.7	+0.2
UZH	Uzhgorod	131.29	328	ePKHKP	PKPpre	00 26 19.4	
UZH				e		00 26 32.6	
VOIR		131.61	323	⇓iP	PKPdf	00 26 35.4	-0.2
VOIR		131.61	323	⇓PKIKP	PKPdf	00 26 35.4	-0.2
CJR	Cluj-Napoca	131.73	325	⇓iP	PKPdf	00 26 35.3	-0.4
CJR	Cluj-Napoca	131.73	325	⇓PKIKP	PKPdf	00 26 35.3	-0.4
ARR	Arges	131.90	323	⇑iP	PKiKP	00 26 37.1	0.0
HUMR	Humele	132.14	322	⇑iP	PKPdf	00 26 35.8	-0.7
DRGR		132.18	326	⇓iP	PKPdf	00 26 36.7	+0.1
DRGR		132.18	326	⇓PKIKP	PKPdf	00 26 36.7	+0.1
TRIS	Tristan da Cun	132.35	183	PFAKE		00 26 50.0	+12
TRIS				LR	LR		
	comp=Z,17µm,19.0s						
OKC	Ostrava-Krasne	132.55	332	AMS	AMS	01 21 10.0	
	comp=Z,5µm,23.7s						
MORC	Moravsky Berou	132.88	332	ePKPdf	PKPdf	00 26 37.8	0.0
MORC	Moravsky Berou	132.88	332	⇑iP	PKiKP	00 26 38.8	-0.2
MORC	Moravsky Berou	132.88	332	⇑PKIKP	PKiKP	00 26 38.9	-0.1
MORC	Moravsky Berou	132.88	332	ePKP	PKPdf	00 26 32.6	-5.2
GZR	Gura Zlata	132.96	324	⇑iP	PKPdf	00 26 37.7	-0.4
GZR	Gura Zlata	132.96	324	⇑PKIKP	PKPdf	00 26 37.7	-0.4
PSZ	Piszkesteto	132.98	329	⇑iP	PKiKP	00 26 38.9	-0.4
PSZ	Piszkesteto	132.98	329	⇑PKIKP	PKiKP	00 26 38.9	-0.4
DPC	Dobruska-Polom	133.02	333	ePKPDF	PKPdf	00 26 38.5	+0.4
DPC				AMS	AMS	01 24 30.0	
	comp=Z,4µm,20.6s						
DPC	Dobruska-Polom	133.02	333	ePKIKP	PKPdf	00 26 38.5	+0.4
DPC				MLR	MLR		
	comp=Z,4µm,20.6s						
SIRR	Siria	133.08	326	⇓iP	PKPdf	00 26 37.8	-0.4
VYHS	Vyhne	133.14	330	ePKIKP	PKiKP	00 26 38.9	-0.6
VYHS				e		00 29 06.0	
VYHS	Vyhne	133.14	330	ePKP	PKiKP	00 26 38.9	-0.6
VYHS				ePP	PP	00 29 06.0	+1.9
BZS	Buzias	133.49	325	⇑iP	PKPdf	00 26 39.0	0.0
BZS	Buzias	133.49	325	⇑PKIKP	PKPdf	00 26 39.0	0.0
PTGA	Pitinga	133.53	101	PFAKE		00 26 50.0	+8.7
PTGA				LR	LR		
	comp=Z,14µm,22.0s						
PLD	Plovdiv	133.58	319	eP	SKPbc	00 30 08.7	+0.3
VRAC	Vranov	133.65	332	⇑iP	PKiKP	00 26 40.0	-0.5
VRAC	Vranov	133.65	332	⇑PKIKP	PKiKP	00 26 40.0	-0.5
PVCC	Panska Ves	133.65	334	AMS	AMS	01 22 50.0	
	comp=Z,6µm,25.3s						
BRG	Berggiesshubel	133.65	335	ePKP	PKPdf	00 26 39.1	-0.1
	comp=Z,134nm,2.6s						
BRG				SKP		00 30 14.0	
BRG				SS	SS	00 46 58.0	+4.8
	comp=N,4µm,21.1s						
	comp=E,2µm,16.1s						
	comp=Z,6µm,24.9s						
BRG	Berggiesshubel	133.65	335	ePKIKP	PKPdf	00 26 39.1	-0.1
BRG				SS	SS	00 46 58.0	+4.8
BRG				pmax	pmax		
	comp=Z,134nm,2.6s						
BRG				MLR	MLR		
	comp=N,4µm,21.1s						
BRG				MLR	MLR		
	comp=E,2µm,16.1s						
BRG				MLR	MLR		
	comp=Z,6µm,24.9s						
CLL	Collm	133.70	336	ePKPdf	PKiKP	00 26 40.0	-0.5
CLL				e		00 26 52.0	
CLL				ePP	PP	00 29 07.0	-0.4
CLL				ePKSdf	PKSdf	00 30 18.0	+2.6
CLL				ePPP	PPP	00 32 00.0	
CLL				ePPPP		00 34 12.0	
CLL				ePSKS		00 39 12.0	
CLL				ePPPPrev		00 46 13.0	
CLL				eSS	SS	00 46 54.0	+0.4
CLL				eSSS	SSS	00 51 51.0	
CLL				Lm	MLR	01 24 00.0	
	comp=Z,5µm,21.4s						
CLL	Collm	133.70	336	ePKIKP	PKiKP	00 26 40.0	-0.5
CLL				e		00 26 52.0	
CLL				MLR	MLR		
	comp=Z,5µm,21.4s						
RZN	Rozhen	133.78	319	eP	SKPbc	00 30 04.3	-5.0
KRUC	Moravsky	133.91	332	ePKP	PKPdf	00 26 38.9	-0.8
ANWB	Willy Bob	133.91	76	PFAKE		00 26 50.0	+8.1
ANWB				LR	LR		
	comp=Z,19µm,22.0s						
MODS	Modra-Piesok	133.98	331	ePKIKP	PKiKP	00 26 40.9	-0.3
MODS	Modra-Piesok	133.98	331	ePKP	PKiKP	00 26 40.9	-0.3
PRA	Prague	134.05	334	AMS	AMS	01 23 40.0	
	comp=Z,5µm,20.3s						
PRU	Pruhonice	134.07	334	ePKPDF	PKiKP	00 26 41.3	0.0
PRU				AMS	AMS	01 23 40.0	
	comp=Z,6µm,21.0s						
PRU	Pruhonice	134.07	334	ePKIKP	PKiKP	00 26 41.3	0.0
PRU				MLR	MLR		
	comp=Z,6µm,21.0s						
VTS	Vitosha	134.24	321	ePKPdf	PKPdf	00 26 39.7	-1.1
VTS	Vitosha	134.24	321	⇑iP	PKPdf	00 26 41.2	+0.5
VTS	Vitosha	134.24	321	⇑PKIKP	PKPdf	00 26 41.2	+0.5
MMB	Musomiste	134.47	319	eP	SKPbc	00 30 11.8	+0.4
ESK	Eskdalemuir	134.66	351	PFAKE		00 26 50.0	+7.7
ESK				LR	LR		
	comp=Z,29µm,22.0s						
NKC	Novy Kostel	134.76	336	AMS	AMS	01 24 50.0	
	comp=Z,5µm,19.9s						
CONA	Conrad Observa	134.97	331	ePKiKP	PKiKP	00 26 43.5	+0.2
	comp=Z,6.8nm,1.1s						
CONA				i pPKPdf	sPKPdf	00 26 45.1	+0.6
KHC	Kasperske Hory	135.13	334	ePKPdf	PKPdf	00 26 42.0	0.0
KHC	Kasperske Hory	135.13	334	ePKPDF	PKPdf	00 26 42.5	+0.5
KHC				AMS	AMS	01 24 20.0	
	comp=Z,7µm,24.2s						
KHC	Kasperske Hory	135.13	334	ePKIKP	PKPdf	00 26 42.5	+0.5
KHC				MLR	MLR		
	comp=Z,7µm,24.2s						
GERES	GERESS Array B	135.29	334	PKP	PKPdf	00 26 42.2	-0.2
	comp=Z,1.9nm,0.9s,baz=64,slow=6.1,SNR=7.6						
GERES				PKKP	PKKPdf	00 36 29.5	+3.1
	comp=Z,0.2nm,0.3s,baz=149,slow=2.8,SNR=3.5						
GEA0	GERESS Array S	135.29	333	ePKPdf	PKPdf	00 26 42.4	0.0
DIVS	Divibare	135.33	324	ePKPdf	PKPdf	00 26 41.7	-0.9
SKO	Skopje	135.71	321	i P	PKPdf	00 26 39.7	-3.6
MOA	Molln	135.77	332	ePKPdf	PKPdf	00 26 42.3	-0.9
	comp=Z,7.8nm,1.6s						
BBGH	Gun Hill	136.07	82	PFAKE		00 27 00.0	+14
BBGH				LR	LR		
	comp=Z,44µm,22.0s						
KRUS	Krusevo	136.16	320	i P	PKPdf	00 26 44.0	-0.2
SOKA	Soboth	136.25	330	ePKiKP	PKiKP	00 26 46.0	+0.1
	comp=Z,14nm,2.3s						
TSUM	Tsumeb	136.43	227	PFAKE		00 27 00.0	+13
TSUM				LR	LR		
	comp=Z,29µm,21.0s						
OHR	Ohrid	136.59	320	i P	PKiKP	00 26 51.4	+4.7
KBA	Koelnbreinsper	136.76	332	ePKPdf	PKPdf	00 26 44.9	-0.4
	comp=Z,7.7nm,1.1s						
PDG	Podgorica	136.76	323	⇑iP	PKPdf	00 26 45.2	0.0
MEM	Membach	136.80	341	⇑PKiKP	PKiKP	00 26 47.0	+0.2
VISS	Visnje	136.97	330	i PKPdf	PKiKP	00 26 52.2	+4.9
BOJS	Bojanci	136.97	329	i PKPdf	PKiKP	00 26 51.0	+3.6
ABTA	Abfaltersbach	137.39	332	ePKPdf	PKPdf	00 26 43.9	-2.4
	comp=Z,13nm,1.7s						
WLF	Walferdange	137.56	340	⇑PKiKP	PKPdf	00 26 46.0	-0.4
SQTA	Sankt Quirin	137.61	334	ePKPdf	PKPdf	00 26 46.6	-0.2
	comp=Z,3.7nm,0.8s						
BDFB	Brasilia	137.82	128	ePKPdf	PKPdf	00 26 46.9	-1.2
BDFB	Brasilia	137.82	128	ePKIKP	PKPdf	00 26 46.9	-1.2
BDFB	Brasilia	137.82	128	PKP	PKPdf	00 26 46.4	-1.7
	comp=Z,8.3nm,0.8s,baz=297,slow=2.8,SNR=7.0						
FETA	Feichten	137.97	334	ePKPdf	PKPdf	00 26 44.6	-3.0
	comp=Z,6.5nm,1.5s						
KEST	Kesra	146.96	323	ePKPdf	PKPbc	00 27 05.1	-0.5
KEST	Kesra	146.96	323	PKPbc	PKPbc	00 27 05.9	+0.3
	comp=Z,45nm,0.8s,baz=311,slow=1.3,SNR=26						
CMAH	Djebel Manchou	147.44	326	P	PKiKP	00 27 09.0	-0.2
CAEH	'Ain El Ouahch	147.64	327	P	PKPab	00 27 12.5	+2.9
ABSA	Djebel Ababsia	147.66	325	P	PKPab	00 27 10.3	+0.5
DFRA	Djebel Bou Aff	148.33	327	P	PKPbc	00 27 10.1	+0.7
SET	Setif	148.84	328	P	PKiKP	00 27 12.0	-0.1
POLO	Lamas de Olo	148.93	350	ePKPdf	PKPbc	00 27 10.9	+0.1
MVO	Moncorvo	149.00	349	ePKPab	PKPab	00 27 14.2	-0.7
PVRL	Vila Real	149.01	350	ePKPdf	PKiKP	00 27 11.6	-0.6
PVIS	Viseu	149.59	350	ePKPdf	PKPbc	00 27 12.8	+0.4
ES19	SONSECA Array	149.65	343	ePKPbc	PKPbc	00 27 12.7	+0.1
ES19				ePKPab	PKPab	00 27 18.6	+1.0
ESDC	Sonseca Array	149.69	343	PKPbc	PKPbc	00 27 12.6	-0.1
	comp=Z,2.8nm,0.9s,baz=7.6,slow=2.5,SNR=9.4						
ESDC				PKPab	pPKPab	00 27 18.8	-0.9
	comp=Z,7.6nm,0.8s,baz=12,slow=3.9,SNR=21						
MTE	Manteigas	149.83	349	ePKPdf	PKPdf	00 27 08.0	-0.2
MTE	Manteigas	149.83	349	ePKPdf	PKPbc	00 27 12.8	-0.2
PAB	San Pablo	149.92	344	ePKPbc	PKPbc	00 27 13.2	-0.1
PAB				LR	LR		
	comp=Z,21µm,19.0s						
PAB	San Pablo	149.92	344	ePKP2	PKPbc	00 27 13.2	-0.1
PAB				MLR	MLR		
	comp=Z,21µm,19.0s						
PMRV	Marv??o	150.74	348	ePKPdf	PKiKP	00 27 15.6	-0.2
PTOM	Tomar	150.75	350	ePKPdf	PKiKP	00 27 15.8	0.0
PMTG	Montargil	151.25	350	ePKPdf	PKiKP	00 27 16.7	-0.1
CMLA	Cha da Macela	151.42	18	PFAKE		00 27 20.0	+2.7
CMLA				LR	LR		
	comp=Z,35µm,22.0s						
SHEL	Horse Pasture	152.00	199	PFAKE		00 27 20.0	+0.9
SHEL				LR	LR		
	comp=Z,18µm,22.0s						
PBEJ	Beja	152.19	348	ePKPab	PKPab	00 27 31.4	+3.4
MESJ	Messejana	152.44	349	ePKPdf	PKPdf	00 27 11.5	-0.7
MESJ	Messejana	152.44	349	ePKPdf	PKPdf	00 27 11.2	-1.0
MESJ	Messejana	152.44	349	ePKPab	PKPab	00 27 28.1	-1.0
MORF	Marmelete	153.04	349	ePKPab	PKPab	00 27 34.0	+2.3
RCBR	Riachuelo	153.19	127	ePKPbc	PKiKP	00 27 22.1	+0.4
TAM	Tamanrasset	157.31	304	ePKPdf	PKPdf	00 27 19.6	+0.1
TAM	Tamanrasset	157.31	304	ePKIKP	PKPdf	00 27 19.6	+0.1
ASCN	Ascension	161.41	181	PFAKE		00 27 30.0	+5.7
ASCN				LR	LR		
	comp=Z,5µm,21.0s						
TOA0	Torodi Ar. Sit	163.82	280	ePKPdf	PKPdf	00 27 26.6	-0.1
TORD	Torodi Ar. Bea	163.82	280	PKP	PKPdf	00 27 26.5	-0.2
	comp=Z,4.2nm,0.9s,baz=17,slow=1.2,SNR=17						
TORD				PKPab	PKPab	00 28 18.5	-0.5
	comp=Z,2.3nm,0.8s,baz=99,slow=3.1,SNR=5.2						
DBIC	Dimbokro	169.47	248	ePKIKP	PKPdf	00 27 30.3	-0.7
DBIC	Dimbokro	169.47	248	PKP	PKPdf	00 27 30.0	-1.0
	comp=Z,9.4nm,1.0s,baz=32,slow=1.1,SNR=7.4						
DBIC				PKPab	PKPab	00 28 44.4	+0.4
	comp=Z,4.2nm,0.7s,baz=93,slow=4.8,SNR=4.0						
SACV	Santiago Islan	170.34	64	PFAKE		00 27 40.0	+8.5
SACV				LR	LR		
	comp=Z,37µm,22.0s						

MEX 06 00:07:53.8±0.3, 27°.38N×111°.26W, h10^{km}, MD3.9, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUYB	Guaymas	0.62	33	eP	Pg	00 08 04.5	-1.3
GUYB				eS	Sg	00 08 12.9	-1.1
SRIG	Santa Rosalia	0.88	266	eP	Pg	00 08 08.4	-2.3
SRIG				i S	Sg	00 08 19.3	-2.8
HSIG		1.66	9	eP	Pn	00 08 20.0	-2.9
HSIG				eS	Sn	00 08 39.2	-5.1

MEX 06 00:09:47.4±0.7, 14°.82N×91°.91W, h114^{km}±21^{km}, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.35	285	i P	Pn	00 10 02.5	-1.3
THIG				i S	Sn	00 10 14.5	-1.8
CCIG	Comitan	1.47	352	eP	Pn	00 10 11.6	-2.7
CCIG				eS	Sn	00 10 32.9	-2.0
PCIG		1.54	305	eS	Sn	00 10 33.9	-1.9

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*IDC **06** 00:11:50.1±1.0, 10°.90S×165°.40E, h0^{km}, mb4.4/9, mb1 4.7/11, mb1mx4.3/44, mbtmp4.4/11, ML4.4/2, Error ellipse: s-maj=32.4km s-min=20.3km az=139.0*

*NEIC **06** 00:11:51.5±0.8, 10°.88S×165°.23E, h10^{km}, mb4.5/1, Error ellipse: s-maj=28.3km s-min=13.7km az=156.0*

*ISCJB **06** 00:11:52.9±0.6, 11°.0S±0°.1×165°.3E±0°.1, h30^{km}, mb4.4/9, Error ellipse: s-maj=17.4km s-min=13.0km az=40.4*

ISC 06 00:11:54.7±0.8, 10°.9S±0°.1×165°.4E±0°.1, h30^{km}, n14, σ1^{s}05/13, mb4.4/9, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.51	285	ePn	Pn	00 13 10.6	-4.2
HNR	Honiara	5.51	285	Pn	Pn	00 13 14.3	-0.5
	21nm,0.3s,baz=164,slow=19,SNR=2.1						
DZM	Mont Dzumac	11.18	175	Pn	Pn	00 14 32.7	+0.2
	1.8nm,0.3s,baz=319,slow=20,SNR=3.6						
CTA	Charters Tower	20.53	241	P	P	00 16 32.5	+1.7
	48nm,1.1s,baz=69,slow=8.6,SNR=5.2						
WRA	Warramunga Arr	31.17	249	P	P	00 18 11.0	-0.4
	6.7nm,1.1s,baz=80,slow=9.1,SNR=3.5						
AS31	Alice Springs	32.52	243	eP	P	00 18 21.9	-1.3
	9.5nm,1.4s						
ASAR	Alice Springs	32.52	243	P	P	00 18 21.9	-1.3
	7.7nm,1.0s,baz=71,slow=9.1,SNR=5.6						
USRK	Ussuriysk Ar.	62.63	334	P	P	00 22 17.6	+1.4
	2.4nm,0.7s,baz=144,slow=5.2,SNR=3.2						
KLR	Kul'dur	66.75	337	P	P	00 22 43.7	+0.6
	3.9nm,0.9s,baz=138,slow=3.3,SNR=5.2						
ILAR	Eielson Array	83.48	19	P	P	00 24 19.1	-0.1
	2.0nm,0.7s,baz=242,slow=4.8,SNR=8.3						
NV01	Mina Array Sit	86.22	50	eP	P	00 24 34.1	+0.3
NVAR	Mina Array Bea	86.22	50	P	P	00 24 34.6	+0.8
	4.5nm,1.0s,baz=232,slow=6.7,SNR=7.1						
PDAR	Pinedale Array	93.73	47	P	P	00 25 09.0	-0.1
	0.8nm,0.9s,baz=241,slow=1.7,SNR=3.4						
YKA	Yellowknife Ar	95.01	27	P	P	00 25 12.8	-1.3
	0.6nm,0.8s,baz=253,slow=5.1,SNR=4.0						

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*ISCJB **06** 00:20:23.7±0.7, 51°.82N±0°.07×95°.76E±0°.08, h10^{km}, mb3.5/1, Error ellipse: s-maj=10.5km s-min=6.9km az=170.7*

*MOS **06** 00:20:23.4±2.0, 51°.83N×95°.83E, h10^{km}, mb4.3/1, Error ellipse: s-maj=13.6km s-min=12.1km az=102.3*

*IDC **06** 00:20:23.2±1.4, 51°.86N×95°.91E, h0^{km}, mb3.7/1, mb1 3.5/3, mb1mx3.2/42, mbtmp3.5/3, ML2.5/2, Error ellipse: s-maj=37.4km s-min=11.9km az=0.0*

ISC 06 00:20:23.8±0.9, 51°.85N±0°.06×95°.89E±0°.04, h10^{km}, n15, σ2^{s}13/16, 2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	Todzha	0.57	13	⇓iPG	Pg	00 20 35.1	+0.3
TDJR				e		00 20 43.3	
TDJR				pmax	pmax		
	comp=Z,824nm,0.4s						
TDJR				smax	smax		
	comp=E,2µm,0.4s						
KZLR	Kyzyl	0.90	261	ePG	Pg	00 20 39.7	-1.4
KZLR				eS	Sg	00 20 50.9	-2.0
KNGR	Kungurtug, Tuv	1.61	140	⇓iPN	Pn	00 20 52.1	-0.3
KNGR				e		00 21 13.9	
KNGR				pmax	pmax		
	comp=Z,189nm,0.4s						
KNGR				smax	smax		
	comp=E,1µm,0.9s						
ERNS	Erzin	1.65	197	ePN	Pn	00 20 52.2	-0.7
ERNS				e		00 21 13.5	
ERNS				pmax	pmax		
	comp=Z,40nm,0.1s						
ERNS				smax	smax		
	comp=N,712nm,0.4s						
ORL	Orlik	2.51	72	ePN	Pb	00 21 08.4	-0.6
ORL				e		00 21 42.3	
ORL				pmax	pmax		
	comp=Z,44nm,0.5s						
ORL				smax	smax		
	comp=E,185nm,0.7s						
CERR	Cheremushki	2.92	292	ePN	Pn	00 21 11.4	+1.1
CERR				e		00 21 52.9	
MOY	Mondy	3.18	91	ePN	Pb	00 21 20.6	+0.2
MOY				e		00 22 02.2	
MOY				pmax	pmax		
	comp=Z,52nm,0.6s						
MOY				smax	smax		
	comp=N,203nm,0.9s						
MINR	Mina	3.22	342	ePN	Pg	00 21 23.3	-2.1
ARS	Arshan	4.05	86	ePN	Pb	00 21 37.6	+2.4
ARS				e		00 22 29.2	
ARS				pmax	pmax		
	comp=Z,38nm,0.4s						
ARS				smax	smax		
	comp=E,435nm,0.8s						
TLY	Talaya	4.82	89	Pg	Pb	00 21 48.8	+0.5
	comp=E,0.0nm,0.3s,baz=278,slow=15,SNR=5.2						
TLY				Lg	Lg	00 22 54.5	
	comp=E,0.0nm,0.3s,baz=45,slow=22,SNR=10						
ZAK	Zakamensk	4.88	105	ePN	Pg	00 21 53.8	-3.4
ZAK				e		00 22 56.2	
ZAK				pmax	pmax		
	comp=Z,12nm,0.5s						
ZAK				smax	smax		
	comp=N,85nm,0.8s						
ZALV	Zalesovo Beam	7.02	292	Pn	Pn	00 22 07.7	+1.2
	comp=N,0.3nm,0.3s,baz=102,slow=12,SNR=4.6						
ZALV				Pg	Pg	00 22 31.2	-6.9
	comp=N,0.4nm,0.3s,baz=98,slow=18,SNR=4.7						
ZALV				Lg	Lg	00 23 59.1	
	comp=N,1.5nm,0.3s,baz=121,slow=26,SNR=8.8						
SONM	Songino Array	7.89	116	Pg	Pb	00 22 45.3	+4.8
	comp=N,0.2nm,0.3s,baz=306,slow=16,SNR=3.9						
SONM				Lg	Lg	00 24 30.2	
	comp=N,0.6nm,0.3s,baz=301,slow=28,SNR=6.0						
MKAR	Makanchi Array	10.21	246	Pn	Pn	00 22 52.3	+2.0
	comp=N,0.1nm,0.3s,baz=52,slow=16,SNR=3.7						
MKAR				Lg	Lg	00 25 46.9	
	comp=N,0.2nm,0.3s,baz=56,slow=30,SNR=5.1						
AKTO	Aktyubinsk	23.63	282	P	P	00 25 34.3	-0.5
	comp=N,1.0nm,0.5s,baz=78,slow=14,SNR=7.4						

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*IDC **06** 00:22:39.4±1.4, 10°.86S×165°.36E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.7/33, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=47.5km s-min=25.7km az=125.0*

*ISCJB **06** 00:22:42.0±0.9, 11°.0S±0°.1×165°.3E±0°.2, h30^{km}, mb3.7/5, Error ellipse: s-maj=27.6km s-min=17.1km az=8.8*

ISC 06 00:22:44.0±1.0**, 10°.9S**±0°.1×**165°.4E**±0°.2**, h30**^{km}**, n12, σ1^{s}26**/6**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.18	175	Pn	Pn	00 25 22.5	+0.4
	0.8nm,0.3s,baz=298,slow=15,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.21	3	T	T	00 59 17.8	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.21	3	T	T	00 59 19.2	
	baz=184,slow=76,SNR=8.4						
H11S1	WAKE ISLAND Hy	29.23	3	T	T	00 59 19.9	
	baz=184,slow=76,SNR=9.2						
H11N1	WAKE ISLAND Hy	30.43	3	T	T	01 00 52.2	
	baz=182,slow=76,SNR=8.0						
H11N3	WAKE ISLAND Hy	30.44	3	T	T	01 00 50.0	
	baz=182,slow=76,SNR=9.1						
H11N2	WAKE ISLAND Hy	30.45	3	T	T	01 00 50.9	
	baz=182,slow=76,SNR=6.7						
WRA	Warramunga Arr	31.18	249	P	P	00 29 00.3	-0.4
	0.4nm,0.6s,baz=79,slow=9.2,SNR=4.5						
ASAR	Alice Springs	32.52	243	P	P	00 29 12.0	-0.6
	1.1nm,0.9s,baz=70,slow=9.8,SNR=8.1						
KLR	Kul'dur	66.75	337	P	P	00 33 33.6	+1.3
	0.8nm,0.8s,baz=135,slow=4.3,SNR=4.0						
ILAR	Eielson Array	83.47	19	P	P	00 35 08.9	+0.4
	0.6nm,0.8s,baz=234,slow=5.2,SNR=6.4						
YKA	Yellowknife Ar	95.00	27	P	P	00 36 01.9	-1.5
	0.2nm,0.7s,baz=257,slow=5.0,SNR=2.6						

*SJA **06** 00:32:27.5±0.4, 24°.26S×68°.22W, h160^{km}±31^{km}, ML3.0, MW3.2*

*ISCJB **06** 00:32:28.5±0.4, 24°.38S±0°.02×67°.89W±0°.05, h118^{km}±4^{km}, mb4.1/12, Error ellipse: s-maj=7.8km s-min=3.4km az=172.8*

*NEIC **06** 00:32:28.6±0.4, 24°.42S×67°.79W, h107^{km}±4^{km}, mb4.4/5, Error ellipse: s-maj=6.8km s-min=5.4km az=89.0*

*IDC **06** 00:32:30.9±1.8, 24°.26S×67°.75W, h121^{km}±12^{km}, mb3.9/10, mb1 4.0/14, mb1mx3.9/26, mbtmp4.3/14, Error ellipse: s-maj=22.1km s-min=12.9km az=22.0*

*GUC **06** 00:32:32.2±0.5, 24°.26S×68°.28W, h134^{km}±8^{km}, ML4.2*

ISC 06 00:32:29.6±0.8**, 24°.38S**±0°.04×**68°.00W**±0°.06**, h115**^{km}±8^{km}**, n69, σ1^{s}43**/87**, mb4.2**/12**, 4C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	1.65	241	ePn	Pn	00 33 01.3	+2.6
GO02				eSn	Sn	00 33 24.2	+3.4
PB15	IPOC Station P	1.78	310	⇓iP	Pn	00 33 02.3	+2.0
PB15				iS	Sn	00 33 24.2	+0.5
LVC	Limon Verde	1.95	334	ePn	Pn	00 33 04.2	+1.6
LVC				eSn	Sn	00 33 29.0	+1.5
LVC				eSn	Sn	00 33 29.7	+2.1
LVC	Limon Verde	1.95	334	⇑iP	Pn	00 33 04.5	+2.0
LVC				iS	Sn	00 33 29.2	+1.6
LVC	Limon Verde	1.95	334	P	Pn	00 33 04.5	+2.0
	58nm,0.3s,baz=154,slow=7.6,SNR=659						
LVC				S	Sn	00 33 29.7	+2.1
	50nm,0.3s,baz=207,slow=3.4,SNR=8.5						
PB06	IPOC Station P	2.20	319	⇓iP	Pn	00 33 07.2	+1.7
PB06				iS	Sn	00 33 33.4	+0.4
PB06				IAML		00 33 36.9	
	comp=E,2μm,0.4s						
PB14	IPOC Station P	2.21	263	⇑iP	Pn	00 33 07.2	+1.5
PB14				iS	Sn	00 33 34.5	+1.1
PB14				IAML		00 33 36.9	
	comp=E,1μm,0.3s						
PB10	IPOC Station P	2.49	290	ePn	Pn	00 33 10.5	+1.5
PB10				eSn	Sn	00 33 38.5	-0.9
PB10	IPOC Station P	2.49	290	⇑iP	Pn	00 33 10.6	+1.5
PB10				iS	Sn	00 33 39.4	0.0
PB10				IAML		00 33 49.5	
	comp=N,2μm,0.5s						
PB05	IPOC Station P	2.53	306	⇑iP	Pn	00 33 11.1	+1.4
PB05				iS	Sn	00 33 39.9	-0.6
PB05				IAML		00 33 43.4	
	comp=N,1μm,0.4s						
PB09	IPOC Station P	2.81	336	⇓iP	Pn	00 33 15.6	+2.2
PB09				iS	Sn	00 33 48.8	+1.7
PB09				IAML		00 33 55.7	
	comp=N,425nm,0.4s						
PB03	IPOC Station P	2.83	325	⇓iP	Pn	00 33 14.9	+1.3
PB03				iS	Sn	00 33 47.4	0.0
PB03				IAML		00 33 49.3	
	comp=E,1μm,0.3s						
PB04	IPOC Station P	2.84	315	ePn	Pn	00 33 14.6	+0.8
PB04				eSn	Sn	00 33 47.7	0.0
PB04	IPOC Station P	2.84	315	eP	Pn	00 33 14.2	+0.4
PB04				iS	Sn	00 33 46.1	-1.6
PB04				IAML		00 33 54.8	
	comp=N,1μm,0.4s						
PB07	IPOC Station P	3.16	326	⇓iP	Pn	00 33 18.8	+0.8
PB07				iS	Sn	00 33 55.0	-0.3
PB07				IAML		00 34 05.4	
	comp=E,666nm,0.3s						
PB01	IPOC Station P	3.59	337	ePn	Pn	00 33 24.2	+0.6
PB01				eSn	Sn	00 34 01.1	-4.4
CYA	Choya	4.50	155	iP	Pn	00 33 38.0	+2.2
CYA				IAML		00 34 18.3	
	comp=Z,6.3nm,0.4s						
PB11	IPOC Station P	4.84	341	ePn	Pn	00 33 39.9	-0.6
PB11				eSn	Sn	00 34 34.5	-1.2
LCO	Las Campanas	5.21	207	ePn	Pn	00 33 44.8	-0.8
LCO	Las Campanas	5.21	207	iP	Pn	00 33 44.9	-0.6
MNMC	Minye Minye	5.43	344	ePn	Pn	00 33 47.8	-0.7
ACDV	Cuesta del Vie	5.86	190	iP	Pn	00 33 54.8	+0.7
ACDV				iS	Sn	00 34 59.2	-0.9
AROD	Rodeo	5.92	193	iP	Pn	00 33 56.1	+1.0
AROD				iS	Sn	00 35 01.1	-0.7
APLL	PUNTA DE LOS L	6.13	168	iP	Pn	00 33 58.9	+1.1
APLL				IAML		00 34 00.8	
	comp=Z,6.2nm,0.3s						
ACCO	Cerro Coronel	6.26	188	iP	Pn	00 34 00.8	+1.0
ACCO				iS	Sn	00 35 09.7	-0.4
GO04	Tololo Observa	6.29	203	ePn	Pn	00 33 59.1	-0.9
RTLL	Cerro Villicun	6.94	183	iP	Pn	00 34 08.7	0.0
RTCV	Cerro Valdivia	7.47	184	iP	Pn	00 34 15.9	-0.1
RTCV				iS	Sn	00 35 35.9	-3.3
AUSP	Uspallata	7.91	189	iP	Pn	00 34 21.8	-0.3
LPAZ	La Paz	8.05	359	ePn	Pn	00 34 24.5	+0.2
LPAZ				eSn	Sn	00 35 54.4	+0.3
LPAZ	La Paz	8.05	359	P	Pn	00 34 25.2	+0.9
	comp=Z,1.9nm,0.3s,baz=145,slow=8.3,SNR=32						
LPAZ				S	Sn	00 35 54.4	+0.3
	comp=Z,0.3nm,0.3s,baz=292,slow=18,SNR=3.0						
ASAL	Salagasta	8.22	185	iP	Pn	00 34 26.1	+0.1
ROC1	El Roble	8.97	197	ePn	Pn	00 34 33.7	-2.6
CPUP	Villa Florida	9.84	104	ePn	Pn	00 34 46.1	-1.8
CPUP	Villa Florida	9.84	104	P	Pn	00 34 47.0	-1.0
	comp=Z,0.5nm,0.3s,baz=275,slow=12,SNR=12						
SIV	San Ignacio	10.57	39	P	Pn	00 34 54.9	-3.0
	comp=Z,5.2nm,0.3s,baz=230,slow=11,SNR=70						
SIV				S	Sn	00 36 50.2	-4.3
	comp=Z,0.5nm,0.3s,baz=243,slow=16,SNR=3.6						
ATAH	Atahualpa	19.83	328	P	Pn	00 36 52.2	-2.3
	comp=Z,4.1nm,0.3s,baz=142,slow=12,SNR=16						
BDFB	Brasilia	20.67	69	P	P	00 36 59.1	-1.4
	comp=Z,13nm,0.4s,baz=220,slow=6.3,SNR=25						
PTGA	Pitinga	24.76	19	P	P	00 37 40.3	-0.3
	comp=Z,4.4nm,0.2s,baz=295,slow=21,SNR=8.5						
LTX	Lajitas	63.46	325	eP	P	00 42 48.6	+1.1
TXAR	Lajitas Array	63.46	325	P	P	00 42 48.6	+1.1
	comp=Z,0.6nm,0.6s,baz=159,slow=8.8,SNR=7.8						
TX31	Lajitas Ar. Si	63.46	325	eP	P	00 42 48.1	+0.6
DBIC	Dimbokro	68.78	72	eP	P	00 43 21.6	-0.2
	comp=Z,30nm,1.8s						
DBIC	Dimbokro	68.78	72	P	P	00 43 21.6	-0.2
	comp=Z,1.3nm,0.5s,baz=222,slow=7.1,SNR=3.6						
CCUT	Cedar City	74.92	324	eP	P	00 44 00.1	+1.8
	comp=Z,2.9nm,0.8s						
MSU	Marysvale	75.02	326	eP	P	00 44 00.3	+1.5
PD31	Pinedale Array	77.01	330	eP	P	00 44 10.5	+0.5
PDAR	Pinedale Array	77.01	330	eP	P	00 44 10.3	+0.4
PDAR	Pinedale Array	77.01	330	P	P	00 44 10.9	+1.0
	comp=Z,0.5nm,0.6s,baz=133,slow=7.1,SNR=7.1						
MDND	Maddock	77.31	339	eP	P	00 44 11.9	+0.7
	comp=Z,16nm,0.8s						
TOA0	Torodi Ar. Sit	77.55	69	eP	P	00 44 12.1	-1.2
TOA1	Torodi Ar. Sit	77.55	69	eP	P	00 44 11.5	-1.8
TORD	Torodi Ar. Bea	77.55	69	P	P	00 44 11.5	-1.8
	comp=Z,3.7nm,0.6s,baz=264,slow=5.1,SNR=62						
NV01	Mina Array Sit	78.27	322	eP	P	00 44 17.8	+0.8
NVAR	Mina Array Bea	78.27	322	P	P	00 44 18.9	+1.9
	comp=Z,0.2nm,0.4s,baz=147,slow=5.4,SNR=3.5						
ULM	Lac du Bonnet	78.30	342	P	P	00 44 17.0	+0.4
	comp=Z,3.3nm,0.6s,baz=162,slow=7.3,SNR=11						
HLID	Hailey	79.91	328	eP	P	00 44 27.5	+1.7
	comp=Z,3.2nm,0.8s						
BOSA	Boshof	81.37	117	P	P	00 44 35.0	+0.9
	comp=Z,1.6nm,0.5s,baz=221,slow=3.8,SNR=7.9						
YKA	Yellowknife Ar	94.17	340	P	P	00 45 35.3	+0.5
	comp=Z,0.9nm,0.6s,baz=135,slow=4.4,SNR=18						
YKB5	Yellowknife Ar	94.17	340	eP	P	00 45 35.3	+0.5
ASAR	Alice Springs	127.73	206	PKP	PKPdf	00 51 22.6	+0.4
	comp=Z,0.8nm,0.6s,baz=153,slow=1.7,SNR=8.5						
WR1	Warramunga Arr	130.87	208	ePKPdf	PKPdf	00 51 28.2	0.0
WRA	Warramunga Arr	130.87	208	PKP	PKPdf	00 51 28.2	0.0
	comp=Z,0.5nm,0.4s,baz=151,slow=1.7,SNR=19						
FITZ	Fitzroy Crossi	135.74	199	PKP	PKPdf	00 51 37.7	+0.3
	comp=Z,1.8nm,0.8s,baz=156,slow=4.0,SNR=4.2						
ZAA1	Zalesovo Array	144.15	27	ePKPdf	PKPbc	00 51 51.0	+1.1
ZALV	Zalesovo Beam	144.15	27	PKP	PKPbc	00 51 50.9	+1.1
	comp=Z,3.8nm,0.6s,baz=302,slow=3.9,SNR=32						
MK32	Makanchi Array	147.39	39	ePKPdf	PKPdf	00 51 58.5	+1.2
MKAR	Makanchi Array	147.39	39	PKPbc	PKPdf	00 51 58.5	+1.2
	comp=Z,3.6nm,0.7s,baz=302,slow=2.9,SNR=42						
KLR	Kul'dur	150.76	333	PKPbc	PKiKP	00 52 08.5	-0.3
	comp=Z,0.8nm,0.6s,baz=79,slow=5.2,SNR=8.4						

*IDC **06** 00:45:59.0±0.5, 10°.91S×165°.04E, h0^{km}, mb4.5/27, mb1 4.7/29, mb1mx4.6/38, mbtmp4.5/29, ML4.8/2, MS5.3/8, Ms1 5.3/8, ms1mx5.0/39, Error ellipse: s-maj=17.4km s-min=13.0km az=114.0*

*NEIC **06** 00:46:00.2±1.9, 10°.85S×165°.01E, h7^{km}±11^{km}, mb5.3/96, Error ellipse: s-maj=4.0km s-min=3.9km az=155.0*

*BJI **06** 00:46:00.5, 10°.79S×164°.86E, h9^{km}, mB5.9/23, mb5.0/53, Ms5.7/15, Ms7 5.4/14*

*ISCJB **06** 00:46:02.3±0.1, 10°.90S±0°.03×164°.96E±0°.03, h31^{km}, mb5.0/138, MS5.3/12, Error ellipse: s-maj=4.1km s-min=3.6km az=31.1*

*MOS **06** 00:46:03.3±1.1, 10°.85S×164°.90E, h37^{km}, mb5.3/33, Error ellipse: s-maj=8.5km s-min=7.6km az=102.8*

ISC 06 00:46:04.2±0.3**, 10°.93S**±0°.05×**165°.04E**±0°.05**, h31**^{km}**, n326, σ1^{s}41**/328**, mb5.2**/138**, MS5.3**/12**, 2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.22	286	ePn	Pn	00 47 18.2	-2.0
HNR				eSn	Sn	00 48 16.3	-3.1
HNR	Honiara	5.22	286	eP	Pn	00 47 18.2	-2.0
HNR				e		00 48 16.3	
HNR	Honiara	5.22	286	Pn	Pn	00 47 18.8	-1.4
	55nm,0.3s,baz=117,slow=5.0,SNR=38						
HNR				Sn	Sn	00 48 19.9	+0.4
	baz=330,slow=19,SNR=1.8						
HNR				LR	LR	00 49 32.2	
	comp=Z,54μm,18.6s,baz=118,slow=41						
MARNC	Mare, Loyalty	10.88	165	ePn	Pn	00 48 37.7	-0.1
DZM	Mont Dzumac	11.16	173	ePn	Pn	00 48 40.2	-1.6
	431nm,1.2s						
DZM				eLR	LR	00 51 14.0	
	comp=Z,9μm,27.8s						
DZM	Mont Dzumac	11.16	173	Pn	Pn	00 48 41.7	-0.1
	3.4nm,0.3s,baz=296,slow=16,SNR=21						
DZM				Sn	Sn	00 50 43.1	-2.5
	1.0nm,0.3s,baz=189,slow=9.7,SNR=2.4						
DZM				LR	LR	00 52 07.6	
	comp=Z,10μm,18.6s,baz=26,slow=33						
ONTNC	Ouen Toro	11.40	173	ePn	Pn	00 48 45.2	+0.3
OUENC	Ouen Island, N	11.56	172	ePn	Pn	00 48 47.9	+0.8
PINNC	Pines Island,	11.85	169	ePn	Pn	00 48 50.9	-0.2
MSVF	Nonsavu	14.31	120	ePn	Pn	00 49 26.3	+1.5
MSVF	Nonsavu	14.31	120	eP	Pn	00 49 26.3	+1.5
TARA	Tarawa	14.51	33	ePn	Pn	00 49 25.2	-2.3
PATS	Pohnpei	18.87	339	eP	P	00 50 18.6	-3.5
	427nm,1.6s						
EIDS	Eidsvold	19.52	221	P	P	00 50 29.6	+0.5
	baz=19,SNR=5.3						
KWAJ	Kwajalein Atol	19.77	8	eP	P	00 50 30.1	-1.7
	625nm,1.2s						
KWAJ	Kwajalein Atol	19.77	8	eP	P	00 50 30.1	-1.7
KWAJ				pmax	pmax		
	comp=Z,625nm,1.2s						
CTA	Charters Tower	20.24	241	P	P	00 50 36.9	-0.2
	comp=Z,81nm,0.8s,baz=69,slow=13,SNR=46						
CTA				LR	LR	00 57 40.5	
	comp=Z,9μm,18.4s,baz=58,slow=35						
CTAO	Charters Tower	20.24	241	eP	P	00 50 36.3	-0.7
CTAO	Charters Tower	20.24	241	eP	P	00 50 36.3	-0.7
MTSU	Mount Surprise	21.28	248	P	P	00 50 47.6	-0.8
	baz=21,SNR=14						
COEN	Coen	21.56	260	P	P	00 50 50.3	-1.0
	baz=21,SNR=7.7						
RMQ	Roma	21.80	223	P	P	00 50 54.8	+1.0
	baz=22,SNR=17						
ARMA	Armidale	23.05	211	P	P	00 51 07.3	+0.2
	baz=23,SNR=9.5						
KNTN	Kanton	24.44	72	eP	P	00 51 20.0	-0.5
	comp=Z,198nm,1.1s						
QLP	Quilpie	25.05	229	P	P	00 51 26.7	+0.9
	baz=25,SNR=11						
OUZ	Omahuta	25.41	163	eP	P	00 51 30.0	+1.0
	comp=Z,300nm,1.7s						
QIS	Mount Isa	26.25	245	P	P	00 51 37.1	+0.3
	baz=26,SNR=7.2						
CMSA	Cobar Meteorol	27.22	218	P	P	00 51 45.6	+0.2
	baz=27,SNR=16						
CNB	Canberra Magne	28.15	208	P	P	00 51 56.5	+2.7
	baz=28,SNR=4.6						
H11S2	WAKE ISLAND Hy	29.28	3	T	T	01 22 34.8	
	baz=184,slow=76,SNR=95						
H11S3	WAKE ISLAND Hy	29.28	3	T	T	01 22 37.0	
	baz=184,slow=76,SNR=60						
URZ	Urewera	29.29	160	eP	P	00 52 04.2	+0.4
	comp=Z,88nm,1.3s						
URZ	Urewera	29.29	160	P	P	00 52 07.4	+3.7
	comp=Z,12nm,0.8s,baz=64,slow=7.8,SNR=2.7						
URZ	Urewera	29.29	160	P	P	00 52 17.7	+14
H11S1	WAKE ISLAND Hy	29.30	3	T	T	01 22 38.4	
	baz=184,slow=76,SNR=65						
RAHZ	Arahi	29.88	161	P	P	00 52 15.2	+6.2
BKZ	Black Stump Fm	29.92	162	eP	P	00 52 09.9	+0.5
	comp=Z,45nm,0.8s						
BKZ	Black Stump Fm	29.92	162	P	P	00 52 10.3	+0.9
STKA	Stephens Creek	30.05	223	P	P	00 52 11.5	+0.9
	baz=30,SNR=12						
STKA	Stephens Creek	30.05	223	eP	P	00 52 10.7	0.0
	comp=Z,6.1nm,1.0s						
STKA	Stephens Creek	30.05	223	eP	P	00 52 10.7	0.0
STKA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
STKA	Stephens Creek	30.05	223	P	P	00 52 10.7	0.0
	comp=Z,7.8nm,0.8s,baz=33,slow=9.0,SNR=12						
STKA				LR	LR	01 03 50.0	
	comp=Z,10μm,18.6s,baz=46,slow=36						
BHHZ	Black Hill Sta	30.09	163	P	P	00 52 13.3	+2.4
H11N1	WAKE ISLAND Hy	30.50	3	T	T	01 24 05.8	
	baz=182,slow=76,SNR=82						
QRZ	Quartz Range	30.51	169	P	P	00 52 23.0	+8.5
H11N3	WAKE ISLAND Hy	30.51	3	T	T	01 24 06.1	
	baz=182,slow=76,SNR=56						
H11N2	WAKE ISLAND Hy	30.52	3	T	T	01 24 10.2	
	baz=182,slow=76,SNR=83						
TSZ	Takapari Road	30.59	163	P	P	00 52 17.0	+1.7
WRAB	Tennant Creek	30.86	249	eP	P	00 52 16.5	-1.5
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	30.86	249	iP	P	00 52 17.6	-0.3
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WB2	Warramunga Arr	30.86	249	eP	P	00 52 16.2	-1.7
WRA	Warramunga Arr	30.87	249	P	P	00 52 15.9	-2.1
	comp=Z,5.2nm,1.0s,baz=79,slow=9.0,SNR=22						
WRA				LR	LR	01 05 01.0	
	comp=Z,9μm,18.0s,baz=75,slow=37						
MRZ	Mangatainoka R	31.05	164	P	P	00 52 21.8	+2.5
OGWZ	Otaki Gorge	31.09	165	P	P	00 52 21.4	+1.7
BFZ	Birch Farm	31.25	163	P	P	00 52 24.4	+3.4
HOWZ	Holdsworth Sta	31.25	165	P	P	00 52 22.7	+1.5
GUMO	Guam	31.52	320	LR	LR	01 04 35.3	
	comp=Z,2μm,19.5s,baz=152,slow=35						
TMWZ	Te Maipa	31.55	164	P	P	00 52 29.1	+5.3
PAWZ	Paruwai Farm	31.68	165	P	P	00 52 26.3	+1.4
TOO	Toolangi	31.82	210	P	P	00 52 27.4	+1.2
	baz=32,SNR=4.0						
PLWZ	Palliser	31.82	165	P	P	00 52 27.8	+1.7
KDU	Kakadu	31.91	264	P	P	00 52 24.0	-3.2
	baz=32,SNR=3.6						
AS01	Alice Springs	32.18	243	eP	P	00 52 27.9	-1.6
AS31	Alice Springs	32.22	243	eP	P	00 52 28.6	-1.3
	comp=Z,2.8nm,0.7s						
ASAR	Alice Springs	32.22	243	P	P	00 52 28.0	-2.0
ASAR	Alice Springs	32.22	243	P	P	00 52 27.9	-2.0
	comp=Z,6.1nm,0.8s,baz=71,slow=9.8,SNR=46						
ASAR				ScP	ScP	00 59 01.5	+1.6
	comp=Z,1.0nm,0.7s,baz=73,slow=3.2,SNR=4.6						
ASAR				LR	LR	01 04 56.0	
	comp=Z,4μm,18.4s,baz=68,slow=35						
LTZ	Lake Taylor	32.36	170	eP	P	00 52 30.7	-0.2
	comp=Z,97nm,1.4s						
HTT	Hallett	32.78	223	P	P	00 52 35.6	+0.9
	baz=33,SNR=8.3						
RPZ	Rata Peaks	33.08	172	eP	P	00 52 37.5	+0.3
	comp=Z,50nm,1.0s						
RPZ	Rata Peaks	33.08	172	P	P	00 52 37.4	+0.3
	comp=Z,15nm,1.0s,baz=215,slow=7.0,SNR=2.8						
BBOO	Buckleboo	34.40	226	P	P	00 52 48.5	-0.3
	baz=34,SNR=8.3						
KNRA	Kununurra	35.58	258	P	P	00 52 57.6	-1.6
	baz=35,SNR=3.9						
WRKA	Warakurna	37.51	243	P	P	00 53 14.2	-1.4
	baz=37,SNR=15						
FITZ	Fitzroy Crossi	38.74	255	P	P	00 53 24.9	-1.1
	baz=38,SNR=7.5						
FITZ	Fitzroy Crossi	38.74	255	P	P	00 53 24.8	-1.1
	comp=Z,5.2nm,0.8s,baz=107,slow=8.1,SNR=14						
FORT	Forrest	39.54	234	P	P	00 53 32.0	-0.5
	baz=39,SNR=9.8						
PPT2	Papeete2	44.40	104	eS	S	01 00 35.7	-10
	comp=Z,2μm,24.8s						
PPT2				eLR	LR	01 06 17.5	
	comp=Z,3μm,28.8s						
MBWA	Marble Bar	44.57	251	eP	P	00 54 12.8	-1.0
TBI	Tubuai	45.02	112	eS	S	01 00 43.5	-11
	comp=Z,857nm,28.8s						
TBI				eLR	LR	01 06 37.2	
	comp=Z,2μm,25.5s						
MEEK	Meekatharra	46.37	244	P	P	00 54 27.9	0.0
	baz=46,SNR=4.1						
NWAO	Narrogin (SRO)	48.95	236	P	P	00 54 50.0	+2.2
	baz=49,SNR=4.3						
NWAO	Narrogin (SRO)	48.95	236	eP	P	00 54 47.2	-0.6
NWAO	Narrogin (SRO)	48.95	236	eP	P	00 54 47.2	-0.6
JAGI	Jajag, Banyuwa	50.17	268	eP	P	00 54 54.8	-2.6
	comp=Z,60nm,1.3s						
TGY	Tagaytay City	50.30	299	LR	LR	01 15 21.6	
	comp=Z,2μm,18.9s,baz=120,slow=35						
KKM	Kota Kinabalu	51.44	287	eP	P	00 55 06.2	-0.9
	comp=Z,84nm,1.2s						
MJAR	Matsushiro Arr	53.55	333	P	P	00 55 21.1	-1.1
	comp=Z,4.6nm,0.9s,baz=170,slow=9.9,SNR=3.6						
MAJO	Matsushiro	53.55	333	eP	P	00 55 20.8	-1.4
	comp=Z,5.7nm,0.4s						
MAJO	Matsushiro	53.55	333	eP	P	00 55 20.8	-1.4
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MJB9	Matsu-Tunnel	53.55	333	eP	P	00 55 22.2	0.0
	comp=Z,57nm,1.5s						
SBUM	Sibu	54.19	281	eP	P	00 55 27.6	+0.3
	comp=Z,10nm,1.3s						
JNU	Nakatsue	54.58	325	eP	P	00 55 29.1	-0.7
JNU	Nakatsue	54.58	325	P	P	00 55 29.6	-0.2
	comp=Z,25nm,1.0s,baz=158,slow=4.0,SNR=7.2						
TPUB	Ta-pu	55.18	308	eP	P	00 55 34.4	+0.1
	comp=Z,88nm,1.4s						
YHNB	Yeheng	55.37	310	eP	P	00 55 35.1	-0.6
	comp=Z,241nm,2.0s						
RKT	Rikitea	58.28	110	eLR	LR	01 12 41.6	
	comp=Z,2μm,29.2s						
ASAJ	Asahikawa	58.45	341	P	P	00 55 57.4	+0.3
	comp=Z,11nm,0.9s,baz=232,slow=6.1,SNR=5.0						
SSE	Sheshan	59.28	316	P	P	00 56 03.1	0.0
SSE				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,450nm,8.4s						
SSE	Sheshan	59.28	316	eP	P	00 56 02.4	-0.7
	comp=Z,68nm,1.1s						
KSRS	Korea Array	59.39	326	P	P	00 56 03.8	+0.1
	comp=Z,5.4nm,1.0s,baz=145,slow=7.2,SNR=9.7						
KSAR	Wonju Array Be	59.40	326	P	P	00 56 03.8	0.0
KSAR	Wonju Array Be	59.40	326	P	P	00 56 03.8	0.0
KS01	Wonju Array Si	59.42	326	eP	P	00 56 03.9	-0.1
YSS	Yuzh-Sakhalins	60.97	343	eP	P	00 56 15.6	+1.3
YSS				e		00 56 27.8	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2	Nanjing	61.45	316	eP	P	00 56 19.3	+1.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
MSHR	Mys Shultsa	61.62	332	iP	P	00 56 21.0	+2.1
SKR	Severo-Kuril's	61.84	354	eP	P	00 56 07.4	-13
SKR				pmax	pmax		
	comp=Z,71nm,2.7s						
USA0B	Ussuriysk Arra	62.53	334	eP	P	00 56 25.0	+0.1
	comp=Z,84nm,1.6s						
USRK	Ussuriysk Ar.	62.53	334	P	P	00 56 25.7	+0.7
	comp=Z,3.2nm,0.7s,baz=145,slow=4.7,SNR=8.7						
MDJ	Mudanjiang	63.92	333	P	P	00 56 36.9	+2.7
MDJ				S	S	01 05 13.0	+5.1
MDJ				pmax	pmax		
	comp=Z,20nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,3μm,12.5s						
MDJ				LR	LR		
	comp=Z,2μm,14.2s						
MDJ				LR	LR		
	comp=Z,1μm,13.1s						
MDJ				LR	LR		
	comp=Z,2μm,16.1s						
PETK	Petropavlovsk-	64.09	355	eP	P	00 56 35.4	+0.3
PETK	Petropavlovsk-	64.09	355	P	P	00 56 34.9	-0.2
PETK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PETK	Petropavlovsk-	64.09	355	P	P	00 56 34.9	-0.2
	comp=Z,3.8nm,0.7s,baz=131,slow=6.7,SNR=3.7						
TYV	Tymovskoe	64.54	345	eP	P	00 56 37.0	-1.1
TYV				eS	S	01 05 18.2	+2.9
TYV				pmax	pmax		
	comp=Z,10.0nm,1.6s						
TYV				smax	smax		
	comp=N,700nm,7.3s						
TIA	Tai'an	65.06	319	P	P	00 56 42.1	+0.3
CN2	Changchun	65.28	329	eP	P	00 56 42.8	-0.3
CN2				esP	pP	00 56 49.7	-1.3
CN2				eS	S	01 05 24.8	+0.1
CN2				pmax	pmax		
	comp=N,10.0nm,1.0s						
CN2				LR	LR		
	comp=N,2μm,16.0s						
CN2				LR	LR		
	comp=N,1μm,16.0s						
CN2				LR	LR		
	comp=N,1μm,15.0s						
IPM	Ipoh	65.51	280	eP	P	00 56 44.9	-0.3
	comp=N,44nm,1.2s						
KULM	Kulim	66.07	281	eP	P	00 56 48.4	-0.4
	comp=N,92nm,1.9s						
CASY	Casey	66.24	201	eP	P	00 56 49.5	+0.6
SKNT	Sakolnakorn	66.41	294	P	P	00 56 51.9	+1.0
	comp=N,9.5nm,1.2s,comp=N,652nm						
VNDA	Vanda	66.60	181	P	P	00 56 51.0	-0.1
	comp=N,16nm,1.2s,baz=7.8,slow=9.0,SNR=3.6						
KLR	Kul'dur	66.67	337	iP	P	00 56 51.9	0.0
ENH	Enshi	67.28	309	eP	P	00 56 55.9	-0.4
NIKH	Nikolski High	67.46	17	eP	P	00 56 56.4	-0.4
	comp=N,150nm,1.3s						
NONG	Nongkai	67.53	295	P	P	00 56 59.2	+1.2
GYA	Guiyang	67.78	304	⇑iP	P	00 57 00.7	+1.2
GYA				PP	PP	00 59 32.8	+3.4
GYA				S	S	01 05 58.4	+2.6
GYA				SKS	SKiKP	01 06 55.0	+0.2
GYA				SS	SS	01 10 21.2	+3.3
GYA				pmax	pmax		
	comp=N,30nm,1.0s						
GYA				pmax	pmax		
	comp=N,140nm,6.2s						
GYA				LR	LR		

	comp=N,640nm,19.5s						
GYA				LR	LR		
	comp=N,580nm,20.5s						
GYA				LR	LR		
	comp=N,610nm,22.3s						
CHAI	**Chaiyaphum**	**67.85**	**292**	P	P	00 57 10.2	+10
BJT	**Baijiatuau**	**67.94**	**321**	*e*P	**P**	**00 56 59.8**	**-0.4**
	comp=N,67nm,1.5s						
BJT	**Baijiatuau**	**67.94**	**321**	*e*P	**P**	**00 56 59.8**	**-0.4**
BJT				pmax	pmax		
	comp=Z,67nm,1.5s						
BJI	**Beijing**	**67.95**	**321**	P	**P**	**00 57 01.8**	**+1.6**
BJI				pmax	pmax		
	comp=Z,22nm,2.0s						
PBKT	**Sadao Pong**	**68.99**	**293**	*e*P	**P**	**00 57 07.3**	**+0.2**
	comp=Z,16nm,1.1s						
PBKT	**Sadao Pong**	**68.99**	**293**	P	**P**	**00 57 08.9**	**+1.8**
XAN	**Xi'an**	**69.53**	**313**	P	**P**	**00 57 11.0**	**+0.8**
XAN				pP	pP	00 57 19.0	+0.7
XAN				sP	pwP	00 57 23.6	-1.3
XAN				PcP	**PcP**	**00 57 33.9**	**+0.6**
XAN				pmax	pmax		
	comp=Z,18nm,2.1s						
XAN				pmax	pmax		
	comp=Z,1µm,10.4s						
XAN				LR	LR		
	comp=Z,1µm,16.2s						
XAN				LR	LR		
	comp=Z,1µm,15.2s						
XAN				LR	LR		
	comp=Z,2µm,15.7s						
XAN	**Xi'an**	**69.53**	**313**	*e*P	**P**	**00 57 09.8**	**-0.4**
	comp=Z,35nm,1.3s						
XAN	**Xi'an**	**69.53**	**313**	*e*P	**P**	**00 57 09.8**	**-0.4**
XAN				pmax	pmax		
	comp=Z,35nm,1.3s						
UTTA	**Uttaradit**	**69.75**	**294**	P	P	00 57 22.3	+11
UTHA	**Uthaitani**	**70.06**	**291**	P	**P**	**00 57 16.6**	**+2.8**
KMI	**Kunming**	**70.47**	**302**	P	**P**	**00 57 16.8**	**+0.4**
KMI				pP	pP	00 57 20.9	-3.6
KMI				sP	sP	00 57 23.2	-4.3
KMI				PcP	**PcP**	**00 57 36.8**	**-0.9**
KMI				S	**S**	**01 06 32.3**	**+4.4**
KMI				SS	**SS**	**01 10 56.5**	**-3.2**
KMI				pmax	pmax		
	comp=Z,29nm,1.4s						
KMI				pmax	pmax		
	comp=Z,1µm,11.8s						
KMI	**Kunming**	**70.47**	**302**	*e*P	**P**	**00 57 15.9**	**-0.5**
	comp=Z,86nm,1.4s						
KMI	**Kunming**	**70.47**	**302**	*e*P	**P**	**00 57 15.9**	**-0.5**
KMI				pmax	pmax		
	comp=Z,86nm,1.4s						
SUKH	**Sukhothai**	**70.50**	**293**	P	P	00 57 26.0	+10
MA2	**Magadan**	**71.20**	**352**	P	**P**	**00 57 19.3**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=175,slow=16,SNR=2.4						
HHC	**Hu-ho-hao-te**	**71.29**	**320**	*e*P	**P**	**00 57 22.5**	**+1.6**
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
CM01	**Chiang Mai Arr**	**71.40**	**294**	*e*P	**P**	**00 57 21.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**71.43**	**294**	P	**P**	**00 57 22.1**	**0.0**
	comp=Z,3.8nm,1.0s,baz=114,slow=4.3,SNR=18						
CMMT	**Chiang Mai**	**71.53**	**294**	P	**P**	**00 57 24.6**	**+1.9**
	comp=Z,15nm,1.4s,comp=Z,0.1nm						
CHTO	**Chiang Mai**	**71.54**	**294**	*e*P	**P**	**00 57 22.0**	**-0.8**
	comp=Z,29nm,1.4s						
CHTO	**Chiang Mai**	**71.54**	**294**	*e*P	**P**	**00 57 22.0**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,29nm,1.4s						
CHTO	**Chiang Mai**	**71.54**	**294**	P	**P**	**00 57 24.6**	**+1.8**
	comp=Z,60nm,1.1s						
CHTO	**Chiang Mai**	**71.54**	**294**	P	**P**	**00 57 24.6**	**+1.8**
	comp=Z,60nm,1.1s,comp=Z,0.4nm						
HIA	**Hailar**	**71.92**	**331**	*e*P	**P**	**00 57 22.9**	**-1.5**
	comp=Z,30nm,1.1s						
HIA	**Hailar**	**71.92**	**331**	*e*P	**P**	**00 57 22.9**	**-1.5**
HIA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA	**Zeya**	**71.97**	**337**	*e*P	**P**	**00 57 24.2**	**-0.4**
ZEA				pmax	pmax		
	comp=N,100nm,2.0s						
ZEA				pmax	pmax		
	comp=E,84nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,130nm,1.8s						
CD2	**Chengdu**	**71.98**	**308**	*e*P	**P**	**00 57 25.0**	**-0.2**
CD2				pmax	pmax		
	comp=Z,110nm,1.1s						
LZH	**Lanzhou**	**74.16**	**312**	⇑P	**P**	**00 57 38.2**	**0.0**
LZH				pP	pP	00 57 43.2	-3.1
LZH				sP	sP	00 57 47.6	-1.7
LZH				S	**S**	**01 07 15.4**	**+5.6**
LZH				sS	pS	01 07 19.6	-0.3
LZH				pmax	pmax		
	comp=Z,35nm,1.8s						
LZH				pmax	pmax		
	comp=Z,210nm,6.5s						
SEY	**Seymchan**	**74.28**	**354**	P	**P**	**00 57 38.2**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=156,slow=6.5,SNR=2.5						
GAMB	**Gambell**	**76.58**	**10**	*e*P	**P**	**00 57 51.0**	**-0.2**
	comp=Z,32nm,1.1s						
KDAK	**Kodiak Island**	**76.73**	**22**	P	**P**	**00 57 51.8**	**-0.3**
	comp=Z,8.3nm,1.0s,baz=229,slow=6.4,SNR=2.8						
ULN	**Ulaanbaatar**	**77.80**	**324**	*e*P	**P**	**00 57 58.3**	**-0.3**
	comp=Z,102nm,1.9s						
ULN	**Ulaanbaatar**	**77.80**	**324**	*i* P	**P**	**00 57 58.3**	**-0.3**
ULN				pmax	pmax		
	comp=Z,15nm,1.2s						
SONM	**Songino Array**	**78.16**	**324**	P	**P**	**00 58 00.8**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=141,slow=6.1,SNR=10.0						
SONA1	**Songino Array**	**78.16**	**324**	*e*P	**P**	**00 58 00.2**	**-0.4**
GTA	**Gaotai**	**78.47**	**314**	⇓P	**P**	**00 58 03.6**	**+1.0**
GTA				pP	pP	00 58 08.0	-2.7
GTA				sP	PcP	00 58 10.5	-1.1
GTA				S	**S**	**01 08 02.4**	**+5.5**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,1µm,6.4s						
GTA				LR	LR		
	comp=Z,1µm,19.0s						
GTA				LR	LR		
	comp=Z,810nm,18.7s						
GTA				LR	LR		
	comp=Z,1µm,18.7s						
ANM	**Nome**	**78.53**	**13**	*e*P	**P**	**00 58 01.7**	**-0.4**
	comp=Z,43nm,1.4s						
ANM	**Nome**	**78.53**	**13**	*e*P	**P**	**00 58 01.7**	**-0.4**
ANM				pmax	pmax		
	comp=Z,43nm,1.4s						
RSO	**Redoubt South**	**78.65**	**20**	*e*P	**P**	**00 58 03.1**	**0.0**
BILL	**Bilibino**	**78.77**	**0**	*e*P	**P**	**00 58 02.8**	**-0.6**
	comp=Z,34nm,1.2s						
BILL	**Bilibino**	**78.77**	**0**	*i* P	**P**	**00 58 03.1**	**-0.2**
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
BRLK	**Bradley Lake**	**78.78**	**21**	*e*P	**P**	**00 58 03.9**	**+0.3**
	comp=Z,50nm,1.3s						
QSPA	**South Pole Qui**	**79.08**	**180**	*e*P	**P**	**00 58 05.1**	**-0.3**
SUA	**Susitna One**	**80.05**	**20**	*e*P	**P**	**00 58 11.1**	**+0.4**
	comp=Z,33nm,1.4s						
BOD	**Bodaibo**	**80.13**	**335**	*e*P	**P**	**00 58 10.4**	**-0.6**
BOD				pmax	pmax		
	comp=Z,24nm,1.8s						
CAST	**Castle Rocks**	**81.05**	**18**	*e*P	**P**	**00 58 14.3**	**-1.6**
	comp=Z,78nm,2.0s						
SML	**Sawmill**	**81.11**	**20**	*e*P	**P**	**00 58 16.4**	**+0.2**
	comp=Z,30nm,1.2s						
SML	**Sawmill**	**81.11**	**20**	*e*P	**P**	**00 58 16.4**	**+0.2**
SML				pmax	pmax		
	comp=Z,31nm,1.2s						
ZAK	**Zakamensk**	**81.21**	**325**	*e*P	**P**	**00 58 16.8**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,12nm,1.5s						
DIV	**Divide**	**81.56**	**22**	*e*P	**P**	**00 58 18.3**	**-0.3**
	comp=Z,42nm,1.2s						
TRF	**Thorofare Moun**	**81.63**	**19**	*e*P	**P**	**00 58 19.2**	**+0.1**
	comp=Z,68nm,2.0s						
TLY	**Talaya**	**81.64**	**326**	*i* P	**P**	**00 58 19.6**	**+0.4**
KLU	**Klutina**	**81.74**	**21**	*e*P	**P**	**00 58 20.3**	**+0.7**
	comp=Z,34nm,1.3s						
RDOG	**Red Dog Mine**	**82.05**	**12**	*e*P	**P**	**00 58 21.3**	**+0.3**
	comp=Z,62nm,1.4s						
RND	**Reindeer**	**82.05**	**19**	*e*P	**P**	**00 58 21.6**	**+0.4**
	comp=Z,41nm,1.4s						
RND	**Reindeer**	**82.05**	**19**	*e*P	**P**	**00 58 21.6**	**+0.4**
RND				pmax	pmax		
	comp=Z,41nm,1.4s						
MCK	**McKinley**	**82.26**	**19**	*e*P	**P**	**00 58 22.6**	**+0.4**
	comp=Z,61nm,1.6s						
MCK	**McKinley**	**82.26**	**19**	*e*P	**P**	**00 58 22.6**	**+0.4**
MCK				pmax	pmax		
	comp=Z,61nm,1.6s						
DHY	**Denali Highway**	**82.31**	**20**	*e*P	**P**	**00 58 23.1**	**+0.4**
	comp=Z,43nm,1.4s						
IM3	**Indian Mountai**	**82.50**	**16**	*e*P	**P**	**00 58 19.8**	**-3.6**
MLY	**Manley**	**82.64**	**17**	*e*P	**P**	**00 58 23.9**	**-0.2**
	comp=Z,33nm,1.5s						
WRH	**Wood River Hil**	**83.04**	**19**	*e*P	**P**	**00 58 26.2**	**0.0**
	comp=Z,9.8nm,0.8s						
MOY	**Mondy**	**83.09**	**326**	*e*P	**P**	**00 58 31.5**	**+4.6**
MDM	**Murphy Dome**	**83.34**	**18**	*e*P	**P**	**00 58 27.3**	**-0.5**
	comp=Z,20nm,1.1s						
HDA	**Harding Lake**	**83.36**	**19**	*e*P	**P**	**00 58 27.0**	**-1.0**
	comp=Z,30nm,1.1s						
HDA	**Harding Lake**	**83.36**	**19**	P	**P**	**00 58 26.9**	**-1.0**
	baz=227						
COLA	**College**	**83.39**	**18**	*e*P	**P**	**00 58 27.7**	**-0.3**
	comp=Z,16nm,0.9s						
COLA	**College**	**83.39**	**18**	*i* P	**P**	**00 58 27.2**	**-0.8**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
RIDG	**Independ'e Rid**	**83.60**	**20**	*e*P	**P**	**00 58 28.0**	**-1.2**
	comp=Z,35nm,1.2s						
ILAR	**Eielson Array**	**83.62**	**19**	P	**P**	**00 58 28.0**	**-1.2**
	comp=Z,2.6nm,0.7s,baz=227,slow=4.7,SNR=27						
ILB	**Eielson Array**	**83.62**	**19**	*e*P	**P**	**00 58 27.4**	**-1.8**
IL1	**Eielson Array**	**83.62**	**19**	*e*P	**P**	**00 58 27.0**	**-2.3**
POKR	**Poker Plat Res**	**83.69**	**18**	P	**P**	**00 58 28.4**	**-1.2**
	baz=227						
O02D	**Mt. Diablo Mer**	**83.73**	**47**	P	**P**	**00 58 29.6**	**-0.9**
	baz=250						
WDC	**Whiskeytown Da**	**84.04**	**47**	*e*P	**P**	**00 58 31.7**	**-0.2**
	comp=Z,44nm,1.8s						
WDC	**Whiskeytown Da**	**84.04**	**47**	*e*P	**P**	**00 58 31.7**	**-0.2**
WDC				pmax	pmax		
	comp=Z,44nm,1.8s						
SCRK	**Sand Creek**	**84.05**	**20**	*e*P	**P**	**00 58 30.5**	**-1.0**
	comp=Z,95nm,1.9s						
N02D	**Trinity Center**	**84.06**	**46**	P	**P**	**00 58 34.4**	**+2.3**
	baz=250						
M02C	**Callahan**	**84.09**	**46**	P	**P**	**00 58 31.6**	**-0.7**
	baz=250						
YBH	**Yreka Blue Hor**	**84.31**	**46**	*e*P	**P**	**00 58 33.1**	**-0.3**
	comp=Z,35nm,1.6s						
ORV	**Oroville**	**84.45**	**48**	*e*P	**P**	**00 58 32.8**	**-1.3**
	comp=Z,20nm,1.4s						
ORV	**Oroville**	**84.45**	**48**	*e*P	**P**	**00 58 32.8**	**-1.3**
ORV				pmax	pmax		
	comp=Z,20nm,1.4s						
HYT	**Haines Junctio**	**84.57**	**25**	*e*P	**P**	**00 58 34.1**	**-0.2**
	comp=Z,19nm,1.2s						
KNGR	**Kungurtug, Tuv**	**84.60**	**324**	*i* P	**P**	**00 58 35.2**	**+0.5**
AFDM	**Forest Hills D**	**84.65**	**49**	*e*P	**P**	**00 58 34.0**	**-1.1**
	comp=Z,14nm,1.2s						
CMB	**Columbia Colle**	**84.80**	**50**	*e*P	**P**	**00 58 34.7**	**-1.2**
	comp=Z,15nm,1.2s						
CMB	**Columbia Colle**	**84.80**	**50**	*e*P	**P**	**00 58 34.7**	**-1.2**
CMB				pmax	pmax		
	comp=Z,15nm,1.2s						
DAWY	**Dawson**	**85.70**	**21**	*e*P	**P**	**00 58 38.9**	**-0.9**
	comp=Z,24nm,1.1s						
TIXI	**Tiksi**	**85.84**	**349**	*e*P	**P**	**00 58 39.0**	**-1.1**
	comp=Z,36nm,1.5s						
TIXI	**Tiksi**	**85.84**	**349**	*i* P	**P**	**00 58 38.9**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,32nm,1.7s						
TIXI	**Tiksi**	**85.84**	**349**	P	**P**	**00 58 39.1**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=128,slow=7.1,SNR=4.3						
J05D	**Fort Rock, OR**	**85.86**	**45**	P	**P**	**00 58 40.2**	**-1.0**
	baz=251						
PAHR	**Pah Rah Range**	**86.05**	**48**	*e*P	**P**	**00 58 42.3**	**0.0**
	comp=Z,25nm,1.4s						
CWC	**Cottonwood Cre**	**86.08**	**52**	P	**P**	**00 58 40.9**	**-1.5**
	baz=254						
PINE	**Pine Mountain**	**86.22**	**44**	*e*P	**P**	**00 58 42.6**	**-0.5**
	comp=Z,15nm,1.1s						
RYN	**Ryan**	**86.37**	**50**	*e*P	**P**	**00 58 43.2**	**-0.7**
	comp=Z,22nm,1.6s						
MPMC	**Manual Prospec**	**86.43**	**52**	P	**P**	**00 58 44.7**	**+0.5**
	baz=254						
NV01	**Mina Array Sit**	**86.48**	**50**	*e*P	**P**	**00 58 42.6**	**-1.9**
NVAR	**Mina Array Bea**	**86.48**	**50**	P	**P**	**00 58 43.8**	**-0.7**
	comp=Z,4.5nm,1.0s,baz=229,slow=7.2,SNR=15						
NV11	**Mina Array Sit**	**86.59**	**50**	*e*P	**P**	**00 58 44.4**	**-0.5**
	comp=Z,1.3nm,1.1s						
GRAC	**Grapevine Rang**	**86.79**	**52**	P	**P**	**00 58 45.9**	**+0.1**
	baz=254						
KVN	**Kaiserville**	**86.81**	**49**	*e*P	**P**	**00 58 45.2**	**-0.9**
	comp=Z,16nm,1.5s						
KVN	**Kaiserville**	**86.81**	**49**	*e*P	**P**	**00 58 45.2**	**-0.9**
KVN				pmax	pmax		
	comp=Z,16nm,1.5s						
HEC	**Hector,Ludlow**	**87.01**	**54**	P	**P**	**00 58 47.1**	**+0.1**
	baz=255						
BELC	**Belle Mtn. Jos**	**87.06**	**55**	P	**P**	**00 58 46.3**	**-1.0**
	baz=255						
I07A	**Izee**	**87.30**	**44**	*e*P	**P**	**00 58 47.5**	**-0.7**
	comp=Z,24nm,1.4s						
BC3	**Big Chuckawall**	**87.41**	**55**	P	**P**	**00 58 48.3**	**-0.7**
	baz=255						
WVOR	**Wild Horse Val**	**87.41**	**46**	*e*P	**P**	**00 58 48.6**	**-0.2**
	comp=Z,17nm,1.3s						
WVOR	**Wild Horse Val**	**87.41**	**46**	*e*P	**P**	**00 58 48.6**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,17nm,1.3s						
TUQ	**Turquoise Moun**	**87.49**	**53**	P	**P**	**00 58 47.3**	**-2.0**
	baz=255						
GMRC	**Granite Mounta**	**87.53**	**54**	P	**P**	**00 58 48.3**	**-1.3**
	baz=255						
IRM	**Iron Mountain**	**87.78**	**55**	P	**P**	**00 58 51.4**	**+0.7**
	baz=255						
J08A	**Circle Bar Ran**	**87.79**	**45**	*e*P	**P**	**00 58 50.4**	**-0.2**
	comp=Z,10.0nm,1.0s						
G08A	**Pilot Rock**	**88.04**	**43**	*e*P	**P**	**00 58 51.6**	**-0.1**
	comp=Z,13nm,1.3s						
SHPR	**Sheep Range**	**88.37**	**52**	*e*P	**P**	**00 58 53.5**	**0.0**
	comp=Z,47nm,1.9s						
R11A	**Troy Canyon, C**	**88.51**	**51**	*e*P	**P**	**00 58 55.1**	**+0.9**
	comp=Z,11nm,0.5s						
R11A	**Troy Canyon, C**	**88.51**	**51**	P	**P**	**00 58 54.5**	**+0.3**
	baz=255						
WMQ	**Urumqi**	**88.52**	**315**	*e*P	**P**	**00 58 56.3**	**+2.3**
WMQ				sP	pP	00 59 01.5	-0.7
WMQ				PP	**PP**	**01 02 20.6**	**-1.9**
WMQ				pmax	pmax		
	comp=Z,33nm,1.3s						
WMQ				LR	LR		
	comp=Z,4µm,23.1s						
WMQ				LR	LR		
	comp=Z,5µm,23.1s						
WMQ				LR	LR		
	comp=Z,7µm,30.7s						
PDMCI	**Parker Dam,Lak**	**88.62**	**55**	P	**P**	**00 58 54.8**	**+0.3**
	baz=256						
W13A	**Hualapai Mount**	**89.02**	**54**	*e*P	**P**	**00 58 56.4**	**-0.3**
	comp=Z,18nm,1.5s						
BMO	**Blue Mountains**	**89.03**	**44**	*e*P	**P**	**00 58 56.1**	**-0.2**
	comp=Z,19nm,1.6s						
BMO	**Blue Mountains**	**89.03**	**44**	*e*P	**P**	**00 58 56.2**	**-0.2**
BMO				pmax	pmax		
	comp=Z,19nm,1.6s						
214A	**Organ Pipe Nat**	**89.15**	**57**	P	**P**	**00 58 57.3**	**+0.1**
	baz=257						
ELK	**Elko**	**89.39**	**48**	*e*P	**P**	**00 58 58.1**	**-0.2**
	comp=Z,19nm,1.6s						
MFID	**Camas Ranch**	**89.66**	**46**	*e*P	**P**	**00 58 58.6**	**-0.8**
	comp=Z,14nm,1.4s						
PSUT	**Pine Spring**	**89.88**	**51**	*e*P	**P**	**00 58 59.9**	**-0.8**
	comp=Z,12nm,0.5s						
LCMT	**Little Creek M**	**89.98**	**52**	*e*P	**P**	**00 59 00.6**	**-0.5**
	comp=Z,8.9nm,0.7s						
CCUT	**Cedar City**	**90.02**	**52**	*e*P	**P**	**00 59 01.0**	**-0.3**
	comp=Z,10nm,0.6s						
INK	**Inuvik**	**90.02**	**19**	*e*P	**P**	**00 58 57.6**	**-2.7**
	comp=Z,7.8nm,1.2s						
INK	**Inuvik**	**90.02**	**19**	*e*P	**P**	**00 58 57.6**	**-2.7**
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SZCU	**Shurtz Canyon**	**90.24**	**52**	*e*P	**P**	**00 59 02.3**	**-0.1**
	comp=Z,17nm,1.3s						
KNB	**Kanab**	**90.31**	**52**	*e*P	**P**	**00 59 02.8**	**+0.1**
	comp=Z,54nm,1.8s						
KNB	**Kanab**	**90.31**	**52**	*e*P	**P**	**00 59 02.8**	**+0.1**
KNB				pmax	pmax		
	comp=Z,55nm,1.8s						
DGZ	**Jazzator, Alta**	**90.36**	**321**	*i* P	**P**	**00 59 03.0**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
U15A	**North Rim**	**90.59**	**53**	*e*P	**P**	**00 59 03.0**	**-1.1**
	comp=Z,25nm,1.2s						
HLID	**Hailey**	**90.69**	**46**	*e*P	**P**	**00 59 03.0**	**-1.4**
	comp=Z,29nm,1.8s						
HLID	**Hailey**	**90.69**	**46**	P	**P**	**00 59 03.2**	**-1.1**
	baz=256						
PKCU	**Pink Cliffs**	**90.81**	**52**	*e*P	**P**	**00 59 04.3**	**-0.9**
	comp=Z,93nm,1.8s						
X16A	**Lo Mia Camp, P**	**90.83**	**55**	*e*P	**P**	**00 59 05.2**	**0.0**
	comp=Z,8.0nm,1.1s						
TUC	**Tucson**	**90.91**	**57**	*e*P	**P**	**00 59 05.1**	**-0.3**
	comp=Z,19nm,1.6s						
TUC	**Tucson**	**90.91**	**57**	*e*P	**P**	**00 59 05.1**	**-0.3**
TUC				pmax	pmax		
	comp=Z,19nm,1.6s						
TUC	**Tucson**	**90.91**	**57**	P	**P**	**00 59 05.5**	**+0.1**
	baz=258						
MTPU	**Mount Pierson**	**91.04**	**52**	*e*P	**P**	**00 59 06.4**	**+0.1**
	comp=Z,13nm,1.2s						
DUG	**Dugway, Tooele**	**91.05**	**49**	*e*P	**P**	**00 59 05.4**	**-0.6**
	comp=Z,22nm,1.6s						
DUG	**Dugway, Tooele**	**91.05**	**49**	*e*P	**P**	**00 59 05.4**	**-0.6**
DUG				pmax	pmax		
	comp=Z,22nm,1.6s						
DUG	**Dugway, Tooele**	**91.05**	**49**	P	**P**	**00 59 04.8**	**-1.2**
	baz=257						
BGU	**Big Grassy Mou**	**91.06**	**49**	*e*P	**P**	**00 59 05.6**	**-0.5**
	comp=Z,19nm,1.6s						
WUAZ	**Wupatki**	**91.12**	**54**	*e*P	**P**	**00 59 06.0**	**-0.4**
	comp=Z,17nm,1.3s						
MSU	**Marysvale**	**91.15**	**51**	*e*P	**P**	**00 59 05.6**	**-1.0**
MSU	**Marysvale**	**91.15**	**51**	*e*P	**P**	**00 59 05.6**	**-1.0**
HVU	**Hansel Valley**	**91.44**	**48**	*e*P	**P**	**00 59 07.2**	**-0.6**
	comp=Z,21nm,1.3s						
HVU	**Hansel Valley**	**91.44**	**48**	*e*P	**P**	**00 59 07.2**	**-0.6**
HVU				pmax	pmax		
	comp=Z,21nm,1.3s						
NLU	**North Lily Min**	**91.55**	**50**	*e*P	**P**	**00 59 08.2**	**-0.2**
	comp=Z,8.2nm,1.1s						
JLU	**Jordanelle**	**92.16**	**49**	*e*P	**P**	**00 59 10.7**	**-0.6**
	comp=Z,26nm,1.7s						
HWUT	**Hardware Ranch**	**92.29**	**48**	*e*P	**P**	**00 59 10.4**	**-1.3**
	comp=Z,1.6nm,0.6s						
DLMT	**Dillon**	**92.39**	**44**	*e*P	**P**	**00 59 11.4**	**-0.7**
LRM	**Limekiln Ridge**	**92.59**	**44**	*e*P	**P**	**00 59 12.0**	**-1.1**
MK01	**Makanchi Array**	**92.95**	**317**	*e*P	**P**	**00 59 13.9**	**-0.5**
MK31	**Makanchi Array**	**92.96**	**317**	*e*P	**P**	**00 59 14.3**	**-0.2**
MKAR	**Makanchi Array**	**92.96**	**317**	P	**P**	**00 59 13.9**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=95,slow=5.8,SNR=12						
ZAA0	**Zalesovo Array**	**93.05**	**324**	*e*P	**P**	**00 59 14.0**	**-0.7**
	comp=Z,35nm,1.8s						
ZALV	**Zalesovo Beam**	**93.05**	**324**	P	**P**	**00 59 13.2**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=108,slow=4.8,SNR=5.3						
FXWY	**Fox Creek**	**93.11**	**46**	*e*P	**P**	**00 59 13.8**	**-1.7**
	comp=Z,10nm,1.4s						
MAKZ	**Makanchi**	**93.17**	**317**	*e*P	**P**	**00 59 15.0**	**-0.5**
	comp=Z,26nm,1.3s						
MAKZ	**Makanchi**	**93.17**	**317**	*e*P	**P**	**00 59 15.0**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,26nm,1.3s						
PDAR	**Pinedale Array**	**93.99**	**47**	P	**P**	**00 59 18.4**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=256,slow=3.5,SNR=12						
NVS	**Novosibirsk**	**94.16**	**325**	*i* P	**P**	**00 59 23.2**	**+3.4**
ANMO	**Albuquerque**	**94.96**	**56**	*i* P	**P**	**00 59 24.0**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**95.19**	**27**	P	**P**	**00 59 21.9**	**-2.4**
	comp=Z,1.0nm,0.9s,baz=257,slow=4.5,SNR=11						
MNTX	**Cornudas Mount**	**95.30**	**59**	*e*P	**P**	**00 59 25.3**	**-0.3**
	comp=Z,1.0nm,0.8s						
MNTX	**Cornudas Mount**	**95.30**	**59**	P	**P**	**00 59 26.3**	**+0.7**
	baz=260						
NRIK	**Noril'sk**	**95.77**	**340**	P	**P**	**00 59 25.4**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=31,slow=9.2,SNR=2.1						
KSH	**Kashi**	**96.14**	**309**	P	**P**	**00 59 30.7**	**+1.3**
KSH				pP	pP	00 59 36.0	-1.7
KSH				PP	**PP**	**01 03 26.1**	**+3.4**
KSH				SKS	**SKSac**	**01 10 07.5**	**+3.5**
KSH				S	**ScS**	**01 10 47.9**	**+0.5**
KSH				sS	pS	01 10 55.1	-2.4
TXAR	**Lajitas Array**	**96.39**	**61**	P	**P**	**00 59 30.1**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=233,slow=6.1,SNR=3.6						
NVL	**N'lazarevskaya**	**96.48**	**189**	*e*P	P	00 59 17.7	-12
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SNAA	**Sanae**	**97.19**	**184**	P	**P**	**00 59 33.1**	**-0.4**
NIL	**Nilore**	**97.43**	**303**	*e*P	**P**	**00 59 33.8**	**-1.5**
NIL	**Nilore**	**97.43**	**303**	*e*P	**P**	**00 59 33.8**	**-1.5**
VNA3	**Neumayer Olymp**	**97.94**	**182**	P	Pdif	00 59 38.4	+1.6
VNA2	**Neumayer--Watz**	**98.17**	**183**	P	**P**	**00 59 36.4**	**-1.4**
LRAL	**Lakeview Retre**	**110.90**	**59**	*e*PKP	**PKiKP**	**01 04 34.5**	**-0.3**
LVC	**Limon Verde**	**117.53**	**123**	*e*PKPdf	**PKiKP**	**01 04 48.5**	**+0.2**
LVC	**Limon Verde**	**117.53**	**123**	*e*PKIKP	**PKiKP**	**01 04 48.5**	**+0.2**
LPAZ	**La Paz**	**120.86**	**116**	PKP	**PKiKP**	**01 04 55.6**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=143,slow=4.3,SNR=3.0						
CPUP	**Villa Florida**	**124.62**	**133**	PKP	**PKiKP**	**01 05 01.8**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=214,slow=18,SNR=3.1						
BOSA	**Boshof**	**124.72**	**224**	PKP	**PKiKP**	**01 05 05.7**	**+3.7**
	comp=Z,1.4nm,0.7s,baz=111,slow=9.4,SNR=3.7						
SDV	**Santo Domingo**	**125.19**	**87**	*e*PKPdf	**PKiKP**	**01 05 03.6**	**+0.3**
AKASG	**Malin Array Be**	**126.38**	**327**	PKP	**PKiKP**	**01 05 04.2**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=46,slow=2.7,SNR=2.6						
BRTR	**Keskin Array B**	**128.37**	**312**	PKP	**PKiKP**	**01 05 11.1**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=130,slow=31,SNR=2.8						
LSZ	**Lusaka**	**129.95**	**239**	*e*PKPdf	**PKPdf**	**01 05 12.3**	**+0.4**
LSZ	**Lusaka**	**129.95**	**239**	*e*PKIKP	**PKPdf**	**01 05 12.3**	**+0.4**
VYHS	**Vyhne**	**133.12**	**330**	*e*PKIKP	**PKiKP**	**01 05 20.7**	**+2.7**
VYHS				*e*		01 07 45.9	
VYHS	**Vyhne**	**133.12**	**330**	*e*PKP	**PKiKP**	**01 05 20.7**	**+2.7**
VYHS				*e*PP	**PP**	**01 07 45.9**	**+3.1**
GERES	**GERESS Array B**	**135.29**	**333**	PKP	**PKPdf**	**01 05 21.8**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=101,slow=1.4,SNR=4.5						
BDFB	**Brasilia**	**137.96**	**128**	PKP	**PKPdf**	**01 05 26.6**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=351,slow=13,SNR=2.2						
KEST	**Kesra**	**146.90**	**322**	PKPbc	**PKPbc**	**01 05 44.4**	**+0.3**
	comp=Z,4.3nm,1.0s,baz=2.8,slow=18,SNR=2.2						
ES19	**SONSECA Array**	**149.70**	**343**	*e*PKPbc	**PKPbc**	**01 05 50.8**	**-0.5**
ESDC	**Sonseca Array**	**149.75**	**343**	PKPbc	**PKPbc**	**01 05 51.8**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=348,slow=3.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**163.56**	**279**	PKP	**PKPdf**	**01 06 06.6**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=90,slow=0.3,SNR=2.8						
TORD				PKPab	**PKPab**	**01 06 56.2**	**-0.4**
	comp=Z,1.0nm,1.0s,baz=338,slow=6.2,SNR=2.5						

IDC ***06*** *00:49:39.0±0.6, 10.°77S×165.°23E, h0km, mb4.4/22, mb1 4.6/24, mb1mx4.5/36, mbtmp4.4/24, ML4.8/2, Error ellipse: s-maj=18.2km s-min=14.5km az=113.0*

NEIC ***06*** *00:49:40.5±0.2, 10.°81S×165.°25E, h10km, mb4.6/22, Error ellipse: s-maj=5.0km s-min=4.6km az=103.0*

ISCJB ***06*** *00:49:41.6±0.3, 10.°89S±0.°05×165.°20E±0.°05, h31km, mb4.4/42, Error ellipse: s-maj=7.2km s-min=6.4km az=12.2*

ISC 06 00:49:43.5±0.4**, 10.°85S**±0.°08×**165.°29E**±0.°07**, h31km, n83, σ0.s85**/81**, mb4.5**/42**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.44**	**284**	*e*Pn	**Pn**	**00 51 01.1**	**-1.5**
HNR				*e*Sn	**Sn**	**00 52 05.3**	**+1.1**
HNR	**Honiara**	**5.44**	**284**	Pn	**Pn**	**00 51 01.8**	**-0.7**
	46nm,0.3s,baz=112,slow=1.4,SNR=5.2						
HNR				Sn	**Sn**	**00 52 05.3**	**+1.1**
	15nm,0.3s,baz=228,slow=23,SNR=2.1						
DZM	**Mont Dzumac**	**11.22**	**174**	Pn	**Pn**	**00 52 20.8**	**-1.0**
	5.1nm,0.3s,baz=300,slow=17,SNR=12						
DZM				Sn	Sn	00 54 18.5	-7.8
	baz=131,slow=20,SNR=1.6						
ONTNC	**Ouen Toro**	**11.45**	**175**	*e*Pn	**Pn**	**00 52 22.8**	**-2.2**
MSVF	**Nonsavu**	**14.13**	**120**	*e*Pn	**Pn**	**00 53 01.3**	**-0.4**
CTA	**Charters Tower**	**20.50**	**241**	P	**P**	**00 54 20.1**	**+1.0**
	24nm,0.8s,baz=74,slow=12,SNR=9.9						
CTAO	**Charters Tower**	**20.50**	**241**	*e*P	**P**	**00 54 19.1**	**-0.1**
H11S2	**WAKE ISLAND Hy**	**29.18**	**3**	T	T	01 26 10.2	
	baz=183,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**29.19**	**3**	T	T	01 26 14.9	
	baz=183,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**29.20**	**3**	T	T	01 26 13.3	
	baz=183,slow=76,SNR=14						

URZ	Urewera	29.28	161	P	P	00 55 44.3	+1.3
	8.6nm,0.7s,baz=22,slow=6.9,SNR=4.3						
BKZ	Black Stump Fm	29.92	162	eP	P	00 55 49.6	+0.8
	19nm,0.8s						
STKA	Stephens Creek	30.28	223	P	P	00 55 52.8	+0.8
	2.1nm,0.5s,baz=38,slow=11,SNR=2.7						
H11N1	WAKE ISLAND Hy	30.41	3	T	T	01 27 51.3	
	baz=182,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.41	3	T	T	01 27 44.1	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.43	3	T	T	01 27 53.5	
	baz=182,slow=76,SNR=13						
WRAB	Tennant Creek	31.12	249	eP	P	00 55 58.3	-1.3
	3.2nm,0.5s						
WB2	Warramunga Arr	31.12	249	eP	P	00 55 58.6	-1.0
	8.6nm,0.9s						
WRA	Warramunga Arr	31.13	249	P	P	00 55 58.0	-1.7
	2.9nm,0.5s,baz=78,slow=9.1,SNR=22						
AS31	Alice Springs	32.48	243	eP	P	00 56 10.4	-1.1
	2.4nm,0.8s						
ASAR	Alice Springs	32.48	243	P	P	00 56 09.9	-1.7
	4.9nm,0.5s,baz=65,slow=10.0,SNR=26						
RPZ	Rata Peaks	33.13	172	P	P	00 56 18.3	+1.4
	6.1nm,0.7s,baz=42,slow=12,SNR=2.4						
FITZ	Fitzroy Crossi	39.00	255	eP	P	00 57 06.8	-0.6
	4.7nm,0.9s						
FITZ	Fitzroy Crossi	39.00	255	P	P	00 57 06.0	-1.4
	3.2nm,0.8s,baz=81,slow=7.1,SNR=5.3						
MJAR	Matsushiro Arr	53.59	333	P	P	00 59 00.9	-0.9
	2.2nm,0.6s,baz=170,slow=8.2,SNR=5.6						
MAJO	Matsushiro	53.59	333	eP	P	00 59 00.9	-0.9
JNU	Nakatsue	54.66	324	eP	P	00 59 08.8	-0.9
	16nm,0.9s						
ASAJ	Asahikawa	58.46	341	P	P	00 59 36.3	-0.2
	12nm,0.7s,baz=189,slow=8.4,SNR=7.1						
KSRS	Korea Array	59.46	326	P	P	00 59 43.1	-0.4
	1.4nm,0.7s,baz=149,slow=5.8,SNR=4.9						
KS15	Wonju Array Si	59.47	326	eP	P	00 59 43.5	-0.1
	20nm,1.1s						
KSAR	Wonju Array Be	59.47	326	P	P	00 59 43.1	-0.5
KS01	Wonju Array Si	59.49	326	eP	P	00 59 43.5	-0.2
QIZ	Qiongzhong	62.19	298	eP	P	01 00 02.5	0.0
	1.3nm,0.7s						
USRK	Ussuriysk Ar.	62.57	334	P	P	01 00 03.6	-0.9
	3.2nm,0.7s,baz=122,slow=7.2,SNR=6.4						
PETK	Petropavlovsk-	64.03	355	P	P	01 00 13.6	-0.5
	6.2nm,0.9s,baz=175,slow=8.5,SNR=4.1						
PEA1	Petropavlovsk-	64.03	355	eP	P	01 00 13.6	-0.5
ENH	Enshi	67.42	309	eP	P	01 00 36.2	-0.2
XAN	Xi'an	69.66	312	eP	P	01 00 50.2	-0.1
CMAR	Chiang Mai Arr	71.62	294	P	P	01 01 03.6	+1.0
	1.4nm,0.3s,baz=134,slow=4.5,SNR=4.5						
CHTO	Chiang Mai	71.73	294	eP	P	01 01 03.5	+0.2
	1.4nm,0.5s						
SEY	Seymchan	74.23	354	P	P	01 01 17.3	+0.3
	3.2nm,1.0s,baz=94,slow=22,SNR=2.6						
ULN	Ulaanbaatar	77.88	324	eP	P	01 01 38.5	+0.1
	3.5nm,0.8s						
SONA0	Songino Array	78.24	324	eP	P	01 01 40.9	+0.5
SONM	Songino Array	78.24	324	P	P	01 01 40.9	+0.5
	3.8nm,1.1s,baz=141,slow=6.0,SNR=4.2						
SONA1	Songino Array	78.24	324	eP	P	01 01 40.1	-0.3
BILL	Bilibino	78.68	0	eP	P	01 01 42.8	+0.6
	4.6nm,0.8s						
QSPA	South Pole Qui	79.16	180	eP	P	01 01 46.2	+1.1
CAST	Castle Rocks	80.90	18	eP	P	01 01 55.0	+0.6
	4.7nm,0.8s						
COLA	College	83.24	18	eP	P	01 02 06.3	-0.3
IL1	Eielson Array	83.47	19	eP	P	01 02 07.3	-0.5
ILAR	Eielson Array	83.47	19	P	P	01 02 07.2	-0.6
	3.1nm,0.7s,baz=235,slow=4.9,SNR=20						
ILB	Eielson Array	83.47	19	eP	P	01 02 07.9	+0.2
	4.1nm,0.7s						
SCRK	Sand Creek	83.88	20	eP	P	01 02 09.9	-0.1
	4.3nm,0.8s						
HUMO	Hull Mountain	84.20	45	eP	P	01 02 12.5	+0.4
CMB	Columbia Colle	84.56	50	eP	P	01 02 13.6	-0.4
DAWY	Dawson	85.53	21	eP	P	01 02 18.7	+0.4
	2.4nm,0.6s						
MOD	Modoc Plateau	85.83	46	eP	P	01 02 20.8	+0.4
NV01	Mina Array Sit	86.24	50	eP	P	01 02 22.3	-0.3
NVAR	Mina Array Bea	86.24	50	P	P	01 02 22.9	+0.3
	1.1nm,0.8s,baz=228,slow=6.6,SNR=3.9						
NV11	Mina Array Sit	86.35	50	eP	P	01 02 23.1	0.0
	0.4nm,1.1s						
U15A	North Rim	90.34	53	eP	P	01 02 41.8	-0.5
	3.2nm,0.9s						
HLID	Hailey	90.46	46	eP	P	01 02 43.3	+0.7
	0.8nm,0.6s						
DUG	Dugway, Tooele	90.81	49	eP	P	01 02 44.6	+0.4
	1.2nm,0.7s						
WUAZ	Wupatki	90.87	54	eP	P	01 02 44.6	0.0
	1.7nm,0.6s						
HVU	Hansel Valley	91.20	48	eP	P	01 02 45.7	-0.3
	3.5nm,0.9s						
MK01	Makanchi Array	93.06	317	eP	P	01 02 54.2	-0.1
MK31	Makanchi Array	93.07	317	eP	P	01 02 54.6	+0.2
	1.6nm,0.8s						
MK32	Makanchi Array	93.07	317	eP	P	01 02 53.9	-0.5
MKAR	Makanchi Array	93.07	317	P	P	01 02 53.9	-0.5
	1.7nm,0.7s,baz=96,slow=6.5,SNR=7.7						
ZALV	Zalesovo Beam	93.13	324	eP	P	01 02 53.8	-0.6
ZALV	Zalesovo Beam	93.13	324	P	P	01 02 53.4	-1.0
	0.9nm,0.6s,baz=101,slow=4.0,SNR=4.3						
ZAA1	Zalesovo Array	93.13	324	eP	P	01 02 53.4	-1.0
PDAR	Pinedale Array	93.75	47	P	P	01 02 58.9	+1.1
	0.5nm,0.7s,baz=238,slow=2.8,SNR=3.9						
EGMT	Eagleton	94.62	42	eP	P	01 03 02.0	+0.5
	2.2nm,0.5s						
YKA	Yellowknife Ar	95.00	27	P	P	01 03 01.4	-1.3
	0.5nm,0.7s,baz=254,slow=4.6,SNR=6.4						
LTX	Lajitas	96.13	61	eP	P	01 03 08.8	-0.1
TXAR	Lajitas Array	96.13	61	P	P	01 03 08.8	-0.1
	0.4nm,0.7s,baz=223,slow=4.6,SNR=3.9						
SDV	Santo Domingo	124.93	87	ePKPdf	PKPdf	01 08 42.3	+0.4
BOSA	Boshof	124.95	224	PKP	PKPdf	01 08 41.0	-0.5
	2.0nm,0.9s,baz=172,slow=4.9,SNR=3.8						
KEST	Kesra	146.99	323	PKPbc	PKPbc	01 09 24.3	+0.6
	5.7nm,0.8s,baz=339,slow=4.3,SNR=3.7						
ESDC	Sonseca Array	149.74	343	PKPbc	PKiKP	01 09 32.2	+0.5
	1.0nm,0.8s,baz=17,slow=3.3,SNR=2.9						
TORD	Torodi Ar. Bea	163.79	280	PKP	PKPdf	01 09 46.5	+1.9
	0.7nm,1.0s,baz=202,slow=1.6,SNR=2.7						
TORD				PKPab	PKPab	01 10 38.1	+1.2
	0.7nm,0.9s,baz=104,slow=6.1,SNR=2.8						
TOA1	Torodi Ar. Sit	163.79	280	ePKPdf	PKPdf	01 09 46.5	+1.9
TOA1				ePKPab	PKPab	01 10 38.1	+1.1

MEX 06 00:50:53.5±0.7, 15°.90N×97°.01W, h20^{km}±20^{km}, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.88	98	i P	Pb	00 51 07.7	-2.4
HUIG				eS	Sb	00 51 17.7	-3.7
PNIG	Pinotepa	1.18	295	i P	Pn	00 51 12.1	-2.9
PNIG				eS	Sb	00 51 25.3	-4.9
VHO	Vista Hermosa	1.20	13	eP	Pn	00 51 11.4	-3.9

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*ISCJB **06** 01:00:42.3±0.3, 4°.61S±0°.03×134°.78E±0°.04, h16^{km}, mb4.4/22, Error ellipse: s-maj=5.5km s-min=4.3km az=179.4*

*IDC **06** 01:00:42.3±0.8, 4°.38S×134°.81E, h0^{km}, mb4.2/7, mb1 4.6/10, mb1mx4.3/25, mbtmp4.4/10, ML4.7/3, MS4.4/1, Ms1 4.4/1, ms1mx3.9/45, Error ellipse: s-maj=35.8km s-min=17.2km az=67.0*

*DJA **06** 01:00:45.5±1.6, 4°S±3°×13°5E±°, h27^{km}±17^{km}, M5.1/10, mb5.1/10, MLv5.2/10*

*NEIC **06** 01:00:47.4±0.4, 4°.59S×134°.62E, h35^{km}, mb4.6/17, Error ellipse: s-maj=10.9km s-min=7.0km az=73.0*

ISC 06 01:00:44.4±0.5, 4°.55S±0°.05×134°.75E±0°.06, h16^{km}, n80, σ2^{s}.22/86, mb4.6/28, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.98	303	ePn	Pn	01 01 30.2	-0.9
FAKI				eSn	Sn	01 02 03.5	-2.9
FAKI	Fak Fak	2.98	303	P	Pn	01 01 30.7	-0.3
SRPI	Serui, Papua	3.05	29	P	Pn	01 01 27.5	-4.5
RKPI	Ransiki, Papua	3.08	349	P	Pn	01 01 31.9	-0.5
BNDI	Bandanaira	4.83	270	P	Pn	01 02 00.3	+3.8
BNDI				S	Sn	01 02 53.5	+1.3
SAUI	Saumlaki	4.84	225	ePn	Pn	01 01 59.7	+3.1
SAUI				eSn	Sn	01 02 55.3	+3.0
SAUI	Saumlaki	4.84	225	P	Pn	01 01 58.6	+2.1
	244nm,0.7s,2.7nm						
SWI	Sorong	5.06	316	P	Pn	01 01 58.3	-1.3
GENI	Genyem	5.74	70	P	Pn	01 02 07.9	-1.1
	148nm,0.8s,1.1nm						
JAY	Jayapura	6.28	71	P	Pn	01 02 15.6	-0.8
NLAI	Namlea	7.75	279	P	Pn	01 02 39.2	+2.6
SANI	Sanana	9.10	286	P	Pn	01 02 51.4	-3.7
SOEI	Soe	11.61	243	ePn	Pn	01 03 31.4	+1.6
SOEI				eSn	Sn	01 05 37.9	-1.4
SOEI	Soe	11.61	243	P	Pn	01 03 30.8	+1.1
	129nm,0.7s						
BBSI	Bau Bau	12.17	265	P	P	01 03 49.5	-0.3
BATI	Baumata	12.35	242	P	Pn	01 03 41.5	+1.9
	44nm,0.8s						
BATI	Baumata	12.35	242	Pn	Pn	01 03 39.7	+0.1
	5.9nm,0.3s,baz=178,slow=2.4,SNR=12						
BATI				Sn	Sn	01 05 56.6	-0.5
	11nm,0.3s,baz=112,slow=24,SNR=3.9						
APSI	Ampana	13.58	285	P	Pn	01 03 58.6	+2.1
EDFI	Ende, Flores	13.63	252	P	P	01 04 04.1	-2.0
DAV	Davao City (W)	14.74	322	LR	LR	01 10 42.6	
	comp=Z,1µm,18.9s,baz=104,slow=41						
WRAB	Tennant Creek	15.29	181	ePn	Pn	01 04 17.9	-1.8
	27nm,0.8s						
WRAB				eSn	Sn	01 07 00.7	-8.2
WB2	Warramunga Arr	15.30	181	ePn	Pn	01 04 18.1	-1.8
WB2				eSn	Sn	01 07 02.6	-6.5
WR1	Warramunga Arr	15.30	181	ePn	Pn	01 04 17.7	-2.2
	41nm,0.8s						
WR1				eSn	Sn	01 07 03.0	-6.2
WRA	Warramunga Arr	15.30	181	Pn	Pn	01 04 17.7	-2.2
	0.6nm,0.3s,baz=2.6,slow=13,SNR=23						
WRA				Sn	Sn	01 07 03.0	-6.2
	2.2nm,0.3s,baz=8.7,slow=22,SNR=8.6						
WRA				Lg	Lg	01 08 54.7	
	1.2nm,0.3s,baz=5.7,slow=29,SNR=5.5						
MPSI	Mapaga	15.62	288	P	P	01 04 40.3	+12
FITZ	Fitzroy Crossi	16.14	213	ePn	Pn	01 04 29.4	-1.3
	25nm,0.8s						
FITZ				eSn	Sn	01 07 23.1	-6.6
FITZ	Fitzroy Crossi	16.14	213	Pn	Pn	01 04 29.4	-1.3
	2.1nm,0.3s,baz=39,slow=10.0,SNR=60						
FITZ				Sn	Sn	01 07 23.1	-6.6
	6.0nm,0.3s,baz=174,slow=14,SNR=10						
AS01	Alice Springs	19.02	182	eP	P	01 05 07.1	+1.4
AS31	Alice Springs	19.02	182	eP	P	01 05 07.8	+2.1
	14nm,0.6s						
AS31				eSn	Sn	01 08 31.0	-8.3
ASAR	Alice Springs	19.02	182	P	P	01 05 06.9	+1.2
	2.7nm,0.3s,baz=5.0,slow=11,SNR=184						
ASAR				S	Sn	01 08 31.0	-8.3
	0.4nm,0.3s,baz=355,slow=20,SNR=6.0						
ASAR				Lg	Lg	01 10 56.2	
	0.5nm,0.3s,baz=12,slow=29,SNR=5.4						
CTA	Charters Tower	19.07	145	P	Pn	01 05 08.8	+1.7
	1.4nm,0.3s,baz=338,slow=14,SNR=6.2						
CTA				Lg	Lg	01 10 56.1	
	1.3nm,0.3s,baz=296,slow=10.0,SNR=5.7						
CTAO	Charters Tower	19.07	145	eP	P	01 05 07.2	+0.9
	21nm,0.7s						
KMMI	Kalianget	20.83	262	P	Pn	01 05 34.9	+6.9
JAGI	Jajag, Banyuwa	20.83	258	eP	P	01 05 23.6	-1.9
	30nm,0.8s						
MBWA	Marble Bar	22.03	220	eP	P	01 05 38.3	-0.1
	51nm,1.3s						
KSM	Kuching	25.15	283	eP	P	01 06 08.3	-0.8
	15nm,1.1s						
FORT	Forrest	26.84	193	eP	P	01 06 25.1	+0.9
	30nm,0.9s						
STKA	Stephens Creek	27.93	168	eP	P	01 06 36.8	+2.8
	1.4nm,1.0s						
STKA	Stephens Creek	27.93	168	P	P	01 06 36.0	+2.0
	2.3nm,0.7s,baz=2.5,slow=9.5,SNR=6.7						
BBOO	Buckleboo	28.14	178	eP	P	01 06 37.1	+1.3
	23nm,1.4s						
NJ2	Nanjing	39.42	339	eP	P	01 08 12.2	-1.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CM31	Chiang Mai Arr	42.05	304	eP	P	01 08 34.9	-0.8
CMAR	Chiang Mai Arr	42.05	304	P	P	01 08 34.9	-0.8
	comp=Z,3.5nm,1.0s,baz=124,slow=6.5,SNR=16						
CHTO	Chiang Mai	42.23	304	eP	P	01 08 37.2	+0.1
	comp=Z,5.7nm,1.1s						
XAN	Xi'an	45.48	330	P	P	01 09 08.4	+5.3
XAN				pP	sP	01 09 16.3	+6.3
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC	Hu-ho-hao-te	49.93	337	eP	P	01 09 39.4	+1.8
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA	Gaotai	54.32	327	eP	P	01 10 11.2	+0.9
GTA				pP	pP	01 10 15.5	+0.1
GTA				sP	sP	01 10 18.4	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAMN	Ramite	56.08	307	eP	P	01 10 23.7	+0.3
	comp=Z,12nm,0.7s						
JIRN	Jiri	56.72	307	eP	P	01 10 28.1	0.0
	comp=Z,36nm,1.0s						
GUN	Gumba	57.08	307	eP	P	01 10 30.5	-0.1
	comp=Z,19nm,0.8s						
DMN	Daman	57.56	307	eP	P	01 10 34.0	+0.1
	comp=Z,15nm,0.8s						
SONA0	Songino Array	57.81	338	eP	P	01 10 34.9	-0.2
SONM	Songino Array	57.81	338	P	P	01 10 34.9	-0.2
	comp=Z,0.7nm,0.8s,baz=121,slow=6.9,SNR=3.5						
KOLN	Koldanda	58.83	306	eP	P	01 10 43.0	+0.2
DANN	Dangsing	58.95	307	eP	P	01 10 44.5	+0.8
	comp=Z,8.7nm,0.6s						
PYUN	Piuthan	59.46	306	eP	P	01 10 47.4	+0.3
	comp=Z,35nm,0.9s						
WMQ	Urumqi	64.08	324	eP	P	01 11 18.8	+1.0
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
MK01	Makanchi Array	68.88	324	eP	P	01 11 49.0	+0.6
MK31	Makanchi Array	68.90	324	eP	P	01 11 49.5	+0.9
MK32	Makanchi Array	68.90	324	eP	P	01 11 49.0	+0.4
MKAR	Makanchi Array	68.90	324	eP	P	01 11 49.5	+0.9
	comp=Z,17nm,0.9s						
MKAR	Makanchi Array	68.90	324	P	P	01 11 49.0	+0.4
	comp=Z,1.5nm,0.8s,baz=123,slow=7.8,SNR=15						
MAKZ	Makanchi	69.09	324	eP	P	01 11 51.1	+1.4
	comp=Z,4.4nm,0.9s						
KSH	Kashi	69.53	315	P	P	01 11 54.9	+2.2
KSH				pP	sP	01 12 04.3	+4.5
KSH				PP	PP	01 14 30.9	+4.3
ZALV	Zalesovo Beam	71.60	332	eP	P	01 12 05.9	+1.1
ZALV	Zalesovo Beam	71.60	332	P	P	01 12 05.0	+0.1
	comp=Z,2.4nm,0.9s,baz=72,slow=4.8,SNR=8.7						
ZAA1	Zalesovo Array	71.60	332	eP	P	01 12 05.0	+0.1
KURK	Kurchatov	73.01	326	eP	P	01 12 14.8	+1.5
	comp=Z,3.8nm,0.9s						
NRIK	Noril'sk	80.41	345	P	P	01 12 54.9	+0.1
	comp=Z,1.6nm,0.3s,baz=153,slow=9.0,SNR=2.1						
MLY	Manley	87.61	24	eP	P	01 13 31.6	-0.1
	comp=Z,2.9nm,0.8s						
RND	Reindeer	87.99	26	eP	P	01 13 32.2	-1.3
	comp=Z,10nm,1.2s						
DHY	Denali Highway	88.56	26	eP	P	01 13 36.1	-0.3
	comp=Z,7.0nm,1.2s						
ILAR	Eielson Array	89.14	25	P	P	01 13 36.9	-2.0
	comp=Z,0.7nm,0.8s,baz=265,slow=4.2,SNR=6.6						
ILB	Eielson Array	89.14	25	eP	P	01 13 36.9	-2.0
TORD	Torodi Ar. Bea	132.91	284	PKP	PKiKP	01 20 02.8	+1.6
	comp=Z,0.7nm,0.9s,baz=70,slow=1.7,SNR=3.8						
TOA1	Torodi Ar. Sit	132.91	284	ePKPdf	PKiKP	01 20 02.8	+1.6
CPUP	Villa Florida	147.14	160	PKPbc	PKPab	01 20 28.9	-0.2
	comp=Z,0.5nm,0.4s,baz=179,slow=4.0,SNR=2.7						
LPAZ	La Paz	149.32	133	PKPbc	PKPbc	01 20 33.0	-1.4
	comp=Z,0.4nm,0.4s,baz=236,slow=3.6,SNR=2.5						
ROSC	El Rosal	151.02	88	ePKPab	PKPab	01 20 46.9	+1.1
SPB	Sao Paulo	151.94	176	ePKPbc	PKPbc	01 20 37.9	-1.6

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*IDC **06** 01:12:21.8±0.3, 10°.74S×165°.08E, h0^{km}, mb5.3/36, mb1 5.3/38, mb1mx5.3/41, mbtmp5.2/38, ML5.1/2, MS7.1/40, Ms1 7.1/40, ms1mx7.1/46, Error ellipse: s-maj=12.5km s-min=10.8km az=106.0*

*NEIC **06** 01:12:23.0±0.0, 11°.05S×165°.09E, h15^{km} Best double couple: NP1:ϕ_s159.00000°, δ75.00000°, λ99.00000°. NP2:ϕ_s309.00000°, δ17.00000°, λ61.00000°. Principal axes: T 1.1800, Plg59.0000°, Azm81.0000°; N -0.0400, Plg8.0000°, Azm336.0000°; P -1.1400, Plg29.0000°, Azm242.0000°;*

*MOS **06** 01:12:25.4±1.2, 10°.76S×165°.04E, h34^{km}, mb6.4/57, MS7.2/79 Error ellipse: s-maj=6.7km s-min=5.9km az=105.7*

*ISCJB **06** 01:12:25.0±0.1, 10°.71S±0°.02×165°.08E±0°.02, h29^{km}, mb6.2/407, MS7.4/680, Error ellipse: s-maj=2.8km s-min=2.3km az=157.5*

*NEIC **06** 01:12:25.8±0.1, 10°.80S×165°.11E, h24^{km}, mb6.4/299, ME7.1, MS7.4/304, MW7.9, MW8.0, Error ellipse: s-maj=4.3km s-min=3.3km az=150.0 Broadband fault plane solution: P waves. NP1:ϕ_s330.00000°, δ5.00000°, λ90.00000°. NP2:ϕ_s150.00000°, δ85.00000°, λ90.00000°. Principal axes: T Plg50.0000°, Azm60.0000°; N Plg0.0000°, Azm0.0000°; P Plg40.0000°, Azm240.0000°; Complex earthquake, with at least one larger event occurring about 10 seconds after the onset, observed on broadband displacement seismograms. Depth based on second event. Energy computed from BB mechanism.*

NEIC Nine people killed, 17 injured, 5 missing and at least 684 houses destroyed or damaged in several villages on Nendo; 1 person killed, 1 injured and at least 39 houses destroyed or damaged in several villages on Tomotu Noi. All casualties and most of the damage were caused by a strong tsunami. The dock at Lata Wharf was damaged by the tsunami then damaged further by shaking in subsequent aftershocks. Felt [VIII] at Lata. Also felt at Honiara and Kirakira. Felt at Port-Olry and Port-Vila, Vanuatu. The tsunami was recorded with the following amplitudes [one half peak-to-trough in centimeters] at these selected tide stations: 104 at Lata Wharf and 10 at Honiara, Solomon Islands; 77 at Hienghene, 57 at Ouinne, 51 at Mare Island and 48 at Lifou Island, New Caledonia; 40 at Cape Ferguson and 24 at Rosslyn Bay, Australia; 33 at Port-Vila and 27 at Luganville, Vanuatu; 38 at Aburatsu, 19 on Chichi Jima and 18 at Kushimoto, Japan; 18 at Korotiti Bay, 13 at Port Taranaki and 12 at Great Barrier Island, New Zealand.

*BJI **06** 01:12:26.8, 10°.65S×164°.95E, h22^{km}, mb5.8/35, mB6.8/63, Ms7.4/94, Ms7 7.2/87*

*GCMT **06** 01:12:54.8±0.1, 11°.18S±0°.01×165°.21E±0°.01, h20^{km}, MW7.9/151, Moment Tensor Solution. s129,c275; s151,c667; Duration: 22^{s}.1 Moment tensor: Scale 10^{21} Nm; M_{rr}0.61±.00; $M_{\theta\theta}$-0.24±.00; $M_{\phi\phi}$-0.37±.00; $M_{r\theta}$0.44±.02; $M_{\theta\phi}$0.30±.00; $M_{\phi r}$-0.56±.02; Best double couple: $M_0$0.93700×10^{21} NP1:ϕ_s142.00000°, δ70.00000°, λ90.00000°. NP2:ϕ_s320.00000°, δ20.00000°, λ89.00000°. Principal axes: T 0.9400, Plg65.0000°, Azm52.0000°; N -0.0050, Plg0.0000°, Azm322.0000°; P -0.9350, Plg25.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*

*NEIC **06** 01:13:11.2±0.0, 10°.69S×164°.59E, h32^{km}, Moment Tensor Solution. s202 Moment tensor: Scale 10^{20}Nm; M_{rr}6.23; $M_{\theta\theta}$-2.42; $M_{\phi\phi}$-3.81; $M_{r\theta}$1.26; $M_{\theta\phi}$2.80; $M_{\phi r}$-4.74; Best double couple: $M_0$7.80000×10^{20} NP1:ϕ_s156.00000°, δ64.00000°, λ101.00000°. NP2:ϕ_s311.00000°, δ28.00000°, λ68.00000°. Principal axes: T 8.1200, Plg68.0000°, Azm88.0000°; N -0.5900, Plg10.0000°, Azm331.0000°; P -7.5300, Plg19.0000°, Azm237.0000°;*

ISC 06 01:12:26.4±0.3, 10°.86S±0°.03×165°.14E±0°.03, h24^{km}±1^{km}, h24^{km}:pP-P, n2386, σ2^{s}.63/2035, mb6.3/408, MS7.5/682, 63C-41D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.31	285	i P	Pn	01 13 43.0	-1.2
HNR				i S	Sn	01 14 36.0	-8.7
HNR	Honiara	5.31	285	ePn	Pn	01 13 42.7	-1.5
HNR				eSn	Sn	01 14 40.3	-4.4
HNR	Honiara	5.31	285	P	Pn	01 13 42.4	-1.8
HNR						01 14 50.2	
HNR				pmax	pmax		
	comp=Z,89nm,0.3s						
HNR				smax	smax		
	comp=N,577nm,0.3s						
HNR				MLR	MLR		
	comp=Z,189µm,18.1s						
HNR	Honiara	5.31	285	Pn	Pn	01 13 42.4	-1.8
	comp=Z,89nm,0.3s,baz=134,slow=3.9,SNR=45						
HNR				Sn	Sn	01 14 50.2	+5.5
	comp=Z,577nm,0.3s,baz=319,slow=19,SNR=1.7						
HNR				LR	LR	01 16 02.8	
	comp=Z,5189µm,18.1s,baz=174,slow=42						
MARNC	Mare, Loyalty	10.91	166	ePn	Pn	01 15 01.6	+0.4
MARNC				eSn	Sn	01 16 59.7	-2.9
DZM	Mont Dzumac	11.21	174	ePn	Pn	01 15 04.0	-1.4
	comp=Z,12µm,1.4s						
DZM				eLR	LR	01 17 42.6	
	comp=Z,8618µm,33.5s						
DZM	Mont Dzumac	11.21	174	ePn	Pn	01 15 03.4	-1.9
DZM				eSn	Sn	01 17 10.4	+0.3
DZM	Mont Dzumac	11.21	174	Pn	Pn	01 15 03.5	-1.9
	comp=Z,10.0nm,0.3s,baz=36,slow=20,SNR=43						
ONTNC	Ouen Toro	11.45	174	ePn	Pn	01 15 07.1	-1.4
ONTNC				eSn	Sn	01 17 15.1	-0.6
PINNC	Pines Island,	11.89	170	ePn	Pn	01 15 13.3	-1.3
PINNC				eSn	Sn	01 17 20.6	-5.9
FUNA	Funafuti	14.05	82	ePn	Pn	01 15 42.8	-1.3
FUNA				eSn	Sn	01 18 10.6	-8.8
MSVF	Nonsavu	14.25	120	ePn	Pn	01 15 48.0	+1.1
MSVF				eSn	Sn	01 18 20.2	-4.1
MSVF	Nonsavu	14.25	120	eP	Pn	01 15 46.7	-0.2
TARA	Tarawa	14.40	33	ePn	Pn	01 15 48.2	-0.6
TARA				eSn	Sn	01 18 23.9	-3.9
PATS	Pohnpei	18.85	339	P	Pn	01 16 48.3	+2.7
	baz=19,SNR=4.9						
PATS	Pohnpei	18.85	339	eP	Pn	01 16 47.7	+2.2
	comp=Z,4µm,1.4s						
EIDS	Eidsvold	19.64	221	P	P	01 16 52.8	-0.7
	baz=19,SNR=18						
EIDS	Eidsvold	19.64	221	eP	P	01 16 52.8	-0.7
	comp=Z,6µm,1.9s						
EIDS				eS	S	01 20 16.4	-18
KWAJ	Kwajalein Atol	19.69	7	eP	Pn	01 16 57.6	+2.0
	comp=Z,2µm,0.9s						
KWAJ	Kwajalein Atol	19.69	7	eP	Pn	01 16 57.6	+2.0
KWAJ				pmax	pmax		
	comp=Z,2µm,0.9s						
MANU	Manus Island	19.70	295	eP	P	01 16 53.9	-0.4
	comp=Z,13µm,1.4s						
CTA	Charters Tower	20.36	241	P	P	01 17 00.5	-1.0
	comp=Z,423nm,1.0s,baz=65,slow=12,SNR=43						
CTA				LR	LR	01 25 02.2	
	comp=Z,833µm,18.2s,baz=91,slow=37						
CTAO	Charters Tower	20.36	241	eP	P	01 17 00.9	-0.5
	comp=Z,3µm,1.1s						
CTAO				LR	LR		
	comp=Z,1347µm,20.0s						
CTAO	Charters Tower	20.36	241	eP	P	01 17 00.9	-0.5
CTAO				pmax	pmax		
	comp=Z,3µm,1.1s						
CTAO				MLR	MLR		
	comp=Z,1347µm,20.0s						
LHI	Lord Howe Isla	21.31	194	P	P	01 17 12.9	+1.4
	baz=21,SNR=3.6						
LHI	Lord Howe Isla	21.31	194	eP	P	01 17 10.4	-1.1
	comp=Z,3µm,1.4s						
MTSU	Mount Surprise	21.40	248	P	P	01 17 10.8	-1.9
	baz=21,SNR=27						
COEN	Coen	21.67	260	P	P	01 17 13.3	-2.3
	baz=21,SNR=7.4						
COEN	Coen	21.67	260	eP	P	01 17 12.2	-3.4
	comp=Z,2µm,1.3s						
RMQ	Roma	21.92	223	P	P	01 17 18.5	+0.4
	baz=22,SNR=46						
ARMA	Armidale	23.16	211	eP	P	01 17 28.9	-2.4
	comp=Z,3µm,1.8s						
RAO	Raoul Island	24.19	142	LR	LR	01 25 52.3	
	comp=Z,948µm,21.4s,baz=308,slow=33						
KNTN	Kanton	24.32	72	eP	P	01 17 39.9	-2.6
	comp=Z,7µm,1.8s						
KNTN				LR	LR		
	comp=Z,1158µm,20.0s						
QLP	Quilpie	25.17	229	P	P	01 17 49.6	-0.5
	baz=25,SNR=21						
NIUE	Niue	25.41	112	eP	P	01 17 49.8	-2.5

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       comp=Z,933nm,1.2s
OUZ    Omahuta           25.44 164 eP      P         01 17 54.7 +2.3
       comp=Z,2µm,1.2s
OUZ                                 LR      LR
       comp=Z,889µm,18.0s
JAY    Jayapura          25.63 287  P       P         01 17 53.0  -1.4
MGCD   Mangrove Creek    25.71 208  P       P         01 17 57.8 +2.9
       baz=26,SNR=14
GENI   Genyem            26.11 287  P       P         01 17 58.2  -0.5
RIV    Riverview         26.20 207  P       P         01 18 00.8 +1.4
       baz=26,SNR=8.1
QIS    Mount Isa         26.37 245  P       P         01 17 59.8  -1.3
       baz=26,SNR=24
CMSA   Cobar Meteorol    27.33 218  P       P         01 18 10.0 +0.4
       baz=27,SNR=14
YNG    Young             27.90 211  P       P         01 18 15.7 +1.1
       baz=28,SNR=16
CNB    Canberra Magne    28.26 208  P       P         01 18 19.6 +1.7
       baz=28,SNR=10
CAN    Canberra          28.43 209 eP       P         01 18 20.3 +0.9
       comp=Z,325nm,1.3s
CAN                                 LR      LR
       comp=Z,492µm,22.0s
CAN    Canberra          28.43 209 eP       P         01 18 20.3 +0.9
CAN                                 pmax    pmax
       comp=Z,325nm,1.3s
CAN                                 MLR     MLR
       comp=Z,492µm,22.0s
HIZ    Hauiti            28.87 164 eP       P         01 18 21.0  -2.2
       comp=Z,2µm,1.4s
HIZ                                ePcP     PcP       01 21 28.7  -3.6
HIZ                                 LR      LR
       comp=Z,1091µm,18.0s
WHRZ   Whale Island      28.90 160  P       P         01 18 27.1 +3.6
OMRZ   Omania            28.94 161  P       P         01 18 27.1 +3.3
EDRZ   Edgecumbe         29.05 161  P       P         01 18 27.4 +2.5
HAZ    Te Kaha           29.09 159  P       P         01 18 27.1 +2.0
HAZ                                 S       S         01 23 35.3  +20
TARZ   Mount Tarawera    29.10 161  P       P         01 18 28.7 +3.3
MXZ    Matakaoa Point    29.10 158 eP       P         01 18 26.2 +1.0
       comp=Z,3µm,1.6s
MXZ                                ePcP     PcP       01 21 29.3  -3.6
MXZ                                 LR      LR
       comp=Z,1381µm,22.0s
MXZ    Matakaoa Point    29.10 158  P       P         01 18 27.2 +1.9
H11S2  WAKE ISLAND Hy    29.21   3  T       T         01 49 16.0
       baz=184,slow=76,SNR=2741
H11S3  WAKE ISLAND Hy    29.21   3  T       T         01 49 19.8
       baz=184,slow=76,SNR=3503
H11S1  WAKE ISLAND Hy    29.23   3  T       T         01 49 19.5
       baz=184,slow=76,SNR=4331
RUGZ   Raukumara Rang    29.24 159  P       P         01 18 29.1 +2.5
URZ    Urewera           29.31 161 eP       P         01 18 27.7 +0.6
       comp=Z,1µm,1.2s
URZ                                 LR      LR
       comp=Z,1143µm,20.0s
URZ    Urewera           29.31 161  P       P         01 18 27.1   0.0
       comp=Z,80nm,1.1s,baz=271,slow=2.6,SNR=9.4
URZ                                 LR      LR        01 28 54.3
       comp=Z,1161µm,19.7s,baz=345,slow=34
URZ    Urewera           29.31 161  P       P         01 18 32.1 +5.0
URZ                                 S       S         01 23 31.6  +13
ALRZ   Allen Road        29.34 162  P       P         01 18 38.3  +11
WMGZ   Waiomatatini S    29.37 158  P       P         01 18 28.5 +0.8
WMGZ                                S       S         01 23 26.7 +6.7
MUGZ   Murupara          29.40 161  P       P         01 18 34.0 +6.1
MWZ    Matawai           29.52 160  P       P         01 18 31.3 +2.3
MWZ                                 S       S         01 23 34.0  +12
TWGZ   Tauwhareparae     29.53 159  P       P         01 18 32.2 +3.1
PUZ    Puketiti          29.54 159  P       P         01 18 29.8 +0.6
RTZ    Ruatahuna         29.59 161  P       P         01 18 32.0 +2.3
RTZ                                 S       S         01 23 30.5 +6.8
TKGZ   Te Karaka         29.72 160  P       P         01 18 34.5 +3.7
MILA   Mila              29.80 206  P       P         01 18 32.9 +1.4
       baz=30,SNR=8.0
SNGZ   Shannon Statio    29.86 161  P       P         01 18 34.6 +2.6
CNGZ   Carnagh Statio    29.89 159  P       P         01 18 33.9 +1.7
RAHZ   Arahi             29.90 161  P       P         01 18 34.8 +2.4
RIGZ   Rimuhau           29.93 160  P       P         01 18 33.9 +1.2
BKZ    Black Stump Fm    29.95 162 eP       P         01 18 33.6 +0.8
       comp=Z,5µm,1.8s
BKZ                                 LR      LR
       comp=Z,1011µm,20.0s
NMHZ   Naumai            29.98 162  P       P         01 18 34.1 +1.0
WAKE   Wake Island       29.99   3 eP       P         01 18 32.7  -0.6
       comp=Z,2µm,1.8s
WAKE                                LR      LR
       comp=Z,359µm,18.0s
KWHZ   Kaweka Forest     30.16 162  P       P         01 18 39.8 +5.1
STKA   Stephens Creek    30.17 223  P       P         01 18 34.1  -0.8
       baz=30,SNR=15
STKA   Stephens Creek    30.17 223 eP       P         01 18 34.0  -0.8
       comp=Z,330nm,1.8s
STKA                                LR      LR
       comp=Z,180µm,18.0s
STKA   Stephens Creek    30.17 223 eP       P         01 18 34.0  -0.8
STKA                                pmax    pmax
       comp=Z,330nm,1.8s
STKA                                MLR     MLR
       comp=Z,180µm,18.0s
STKA   Stephens Creek    30.17 223  P       P         01 18 34.4  -0.4
       comp=Z,27nm,0.8s,baz=42,slow=12,SNR=12
STKA                                LR      LR        01 30 20.2
       comp=Z,819µm,18.2s,baz=52,slow=36
ARHZ   Aropaoanui        30.19 162  P       P         01 18 38.6 +3.7
MCHZ   McNeill Hill      30.26 162  P       P         01 18 40.5 +4.9
H11N1  WAKE ISLAND Hy    30.43   3  T       T         01 50 33.9
       baz=184,slow=76,SNR=865
H11N3  WAKE ISLAND Hy    30.44   3  T       T         01 50 52.6
       baz=184,slow=76,SNR=2311
H11N2  WAKE ISLAND Hy    30.45   3  T       T         01 51 03.0
       baz=184,slow=76,SNR=2943
WRAB   Tennant Creek     30.98 249 eP       P         01 18 41.0  -1.2
       comp=Z,2µm,1.8s
WRAB                                LR      LR
       comp=Z,1121µm,18.0s
WRAB   Tennant Creek     30.98 249 i P      P         01 18 41.4  -0.8
WRAB                                pmax    pmax
       comp=Z,244nm,1.4s
WRAB                                MLR     MLR
       comp=Z,1090µm,17.0s
WB2    Warramunga Arr    30.98 249 eP       P         01 18 40.9  -1.3
WC1    Warramunga Arr    30.99 249  PFAKE             01 18 50.0 +7.8
WC1                                 LR      LR
       comp=Z,860µm,18.0s
WR1    Warramunga Arr    30.99 249 eP       P         01 18 39.4  -2.8
       comp=Z,1µm,1.4s
WRA    Warramunga Arr    30.99 249  P       P         01 18 39.4  -2.8
       comp=Z,50nm,1.0s,baz=77,slow=8.7,SNR=30
WRA                                 LR      LR        01 31 32.6
       comp=Z,1054µm,18.1s,baz=70,slow=37
BFZ    Birch Farm        31.28 164 eP       P         01 18 45.4 +0.9
       comp=Z,1µm,0.9s
BFZ                                 LR      LR
       comp=Z,1215µm,19.0s
SNZO   South Karori      31.47 166 eP       P         01 18 47.7 +1.5
       comp=Z,1µm,1.2s
SNZO                                LR      LR
       comp=Z,1279µm,18.0s
THZ    Tophouse          31.52 169 eP       P         01 18 50.0 +3.3
       comp=Z,945nm,0.9s
THZ                                 LR      LR
       comp=Z,681µm,18.0s
GUMO   Guam              31.54 320 eP       P         01 18 45.8  -1.3
       comp=Z,3µm,1.9s
GUMO                               ePcP     PcP       01 21 44.2 +4.6
GUMO                                LR      LR
       comp=Z,603µm,18.0s
GUMO   Guam              31.54 320 eP       P         01 18 45.8  -1.3
GUMO                               e                  01 21 44.3
GUMO                                pmax    pmax
       comp=Z,3µm,1.9s
GUMO                                MLR     MLR
       comp=Z,603µm,18.0s
GUMO   Guam              31.54 320  P       P         01 18 46.2  -0.9
       comp=Z,38nm,0.6s,baz=45,slow=18,SNR=2.1
GUMO                                LR      LR        01 30 47.7
       comp=Z,547µm,19.9s,baz=169,slow=35
TOO    Toolangi          31.92 210  P       P         01 18 49.6  -0.7
       baz=32,SNR=28
TOO    Toolangi          31.92 210 eP       P         01 18 53.5 +3.2
       comp=Z,353nm,1.1s
TOO                                eS       S         01 23 59.8  -0.3
KHZ    Kahutara          32.28 168 eP       P         01 18 59.1 +5.9
KHZ                                 LR      LR
       comp=Z,907µm,18.0s
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AS01   Alice Springs     32.30 243 eP       P         01 18 52.2  -1.6
AS31   Alice Springs     32.34 243 eP       P         01 18 51.0  -3.1
       comp=Z,66nm,0.8s
AS31                                LR      LR
       comp=Z,14µm,20.0s
ASAR   Alice Springs     32.35 243  P       P         01 18 51.6  -2.6
       comp=Z,34nm,0.8s,baz=66,slow=9.8,SNR=68
LTZ    Lake Taylor       32.40 170 eP       P         01 18 55.7 +1.3
       comp=Z,627nm,0.9s
LTZ                                 LR      LR
       comp=Z,817µm,18.0s
FOZ    Fox Glacier       32.80 174 eP       P         01 19 01.2 +3.4
       comp=Z,554nm,1.0s
FOZ                                 LR      LR
       comp=Z,735µm,20.0s
OXZ    Oxford            32.89 171 eP       P         01 19 01.8 +3.2
       comp=Z,1µm,1.4s
OXZ                                 LR      LR
       comp=Z,988µm,18.0s
HTT    Hallett           32.90 223  P       P         01 18 58.6  -0.4
       baz=33,SNR=63
RPZ    Rata Peaks        33.13 172 eP       P         01 19 02.3 +1.5
RPZ                                eS       S         01 24 21.5 +2.8
RPZ                                 LR      LR
       comp=Z,547µm,21.0s
RPZ    Rata Peaks        33.13 172  P       P         01 19 02.3 +1.5
       comp=Z,47nm,0.7s,baz=355,slow=5.2,SNR=6.1
RPZ                                 LR      LR        01 30 17.5
       comp=Z,493µm,21.2s,baz=344,slow=32
ANA2   Anatahan          33.17 324 eP       P         01 19 00.8  -0.6
       comp=Z,414nm,1.0s
CRLZ   Canterbury Las    33.23 170 eP       P         01 19 05.3 +3.7
       comp=Z,4µm,1.5s
CRLZ                                LR      LR
       comp=Z,491µm,18.0s
ARPS   Mount Arapiles    33.28 215  P       P         01 19 03.2 +1.1
       baz=33,SNR=24
MTN    Manton Dam        33.33 263 eP       P         01 19 00.1  -2.7
       comp=Z,268nm,1.0s
MTN                                eS       S         01 24 16.7  -5.7
MTN                                 LR      LR
       comp=Z,695µm,22.0s
MQZ    McQueen's Vall    33.36 170 eP       P         01 19 07.7 +5.0
MQZ                                 LR      LR
       comp=Z,488µm,18.0s
SARN   Sarigan           33.42 325  PFAKE             01 19 10.0 +6.5
SARN                                LR      LR
       comp=Z,209µm,19.0s
SAUI   Saumlaki          33.50 272 eP       P         01 19 05.0 +0.7
       comp=Z,2µm,1.7s
SAUI                               ePcP     PcP       01 21 45.8 +0.6
SAUI                               eS       S         01 24 17.1  -7.9
SAUI                                LR      LR
       comp=Z,609µm,18.0s
FAKI   Fak Fak           33.57 281 eP       P         01 18 58.3  -6.6
       comp=Z,333nm,1.6s
FAKI                                LR      LR
       comp=Z,684µm,22.0s
FAKI   Fak Fak           33.57 281  P       P         01 19 19.6  +15
LBZ    Lake Benmore      33.68 173 eP       P         01 19 11.2 +5.7
LBZ                                 LR      LR
       comp=Z,554µm,19.0s
WKZ    Wanaka            34.01 175 eP       P         01 19 14.1 +5.7
WKZ                                 LR      LR
       comp=Z,687µm,20.0s
ODZ    Otahua Downs      34.39 173 eP       P         01 19 14.0 +2.4
       comp=Z,699nm,1.5s
ODZ                                epP      sP        01 19 21.6 +1.9
ODZ                                 LR      LR
       comp=Z,439µm,21.0s
MLZ    Mavora Lakes      34.48 176 eP       P         01 19 11.2  -1.2
       comp=Z,822nm,1.8s
MLZ                                epP      sP        01 19 20.8 +0.3
MLZ                                 LR      LR
       comp=Z,1080µm,19.0s
BBOO   Buckleboo         34.52 226  P       P         01 19 11.9  -1.1
       baz=34,SNR=40
DCZ    Deep Cove         34.52 178 eP       P         01 19 14.3 +1.6
       comp=Z,630nm,1.2s
DCZ                                 LR      LR
       comp=Z,477µm,22.0s
WHZ    Wether Hill Ro    34.99 177 eP       P         01 19 22.6 +5.7
WHZ                                eS       S         01 24 51.1 +3.7
WHZ                                 LR      LR
       comp=Z,817µm,18.0s
MOO    Moorlands         35.15 203  P       P         01 19 19.9 +1.6
       baz=35,SNR=4.9
RAR    Rarotonga         35.18 111 eP       P         01 19 18.8   0.0
       comp=Z,715nm,1.8s
RAR                                eS       S         01 24 48.0  -2.9
RAR                                 LR      LR
       comp=Z,604µm,18.0s
RAR    Rarotonga         35.18 111 eP       P         01 19 18.8   0.0
RAR                                eS       S         01 24 48.0  -2.9
RAR                                 pmax    pmax
       comp=Z,715nm,1.8s
RAR                                 MLR     MLR
       comp=Z,604µm,18.0s
RAR    Rarotonga         35.18 111  LR      LR        01 31 27.5
       comp=Z,346µm,20.5s,baz=304,slow=32
PYZ    Puysegur Point    35.21 178  PFAKE             01 19 30.0  +11
PYZ                                 LR      LR
       comp=Z,773µm,22.0s
BNDI   Bandanaira        35.46 277  P       P         01 19 22.3 +1.0
TAU    Tasmania Unive    35.50 203 eP       P         01 19 23.5 +2.2
       comp=Z,372nm,1.1s
TAU                                eS       S         01 24 50.7  -4.6
TAU                                 LR      LR
       comp=Z,357µm,20.0s
TAU    Tasmania Unive    35.50 203 eP       P         01 19 23.5 +2.2
TAU                                eS       S         01 24 50.7  -4.6
TAU                                 pmax    pmax
       comp=Z,372nm,1.1s
TAU                                 MLR     MLR
       comp=Z,357µm,20.0s
KNRA   Kununurra         35.70 258  P       P         01 19 20.5  -2.8
       baz=35,SNR=8.9
JOHN   Johnston Islan    37.14  43 eP       P         01 19 33.5  -2.0
       comp=Z,2µm,1.4s
JOHN                                LR      LR
       comp=Z,336µm,18.0s
WRKA   Warakurna         37.64 243  P       P         01 19 36.8  -3.0
       baz=37,SNR=60
NLAI   Namlea            38.47 279  P       P         01 19 45.0  -1.9
       comp=Z,451nm,1.6s,comp=Z,29µmcomp=Z,587µm
FITZ   Fitzroy Crossi    38.85 255  P       P         01 19 47.3  -2.8
       baz=38,SNR=39
FITZ   Fitzroy Crossi    38.85 255 eP       P         01 19 48.4  -1.7
       comp=Z,260nm,1.0s
FITZ   Fitzroy Crossi    38.85 255  P       P         01 19 48.4  -1.7
       comp=Z,16nm,0.5s,baz=56,slow=8.8,SNR=17
FITZ                                LR      LR        01 35 03.0
       comp=Z,811µm,21.7s,baz=84,slow=35
TNTI   Ternate           39.30 285 eP       P         01 19 50.8  -3.1
       comp=Z,1µm,1.8s
TNTI                                LR      LR
       comp=Z,129µm,19.0s
TNTI   Ternate           39.30 285  P       P         01 20 00.3 +6.4
XMAS   Kiritimati        39.37  73 eP       P         01 19 57.4 +3.0
       comp=Z,479nm,1.4s
XMAS                                LR      LR
       comp=Z,538µm,20.0s
FORT   Forrest           39.66 234  P       P         01 19 54.8  -1.9
       baz=39,SNR=27
SANI   Sanana            39.83 280  P       P         01 19 54.4  -3.9
       comp=Z,347nm,1.2s,comp=Z,30µmcomp=Z,553µm
SOEI   Soe               40.21 268 eP       P         01 20 04.5 +2.9
       comp=Z,971nm,1.3s
SOEI                                LR      LR
       comp=Z,481µm,19.0s
SOEI   Soe               40.21 268  P       P         01 19 57.7  -3.9
       comp=Z,134nm,1.4s,comp=Z,34µmcomp=Z,871µm
BATI   Baumata           40.76 267  P       P         01 20 07.5 +1.4
       comp=Z,190nm,1.0s,comp=Z,14µm
BATI   Baumata           40.76 267  P       P         01 20 03.0  -3.1
       comp=Z,58nm,0.7s,baz=188,slow=2.3,SNR=6.9
SGSI   Sangihe           41.99 288  P       P         01 20 28.9  +13
MMRI   Maumere           42.32 269 eP       P         01 20 20.6 +1.8
       comp=Z,1µm,1.3s
MMRI                                LR      LR
       comp=Z,222µm,19.0s
MMRI   Maumere           42.32 269  P       P         01 20 16.9  -1.9
       comp=Z,437nm,1.1s,comp=Z,25µmcomp=Z,637µm
MIDW   Midway            42.38  23 eP       P         01 20 16.1  -2.9
       comp=Z,650nm,1.4s
KMSI   Cibinong          42.47 283  P       P         01 20 25.1 +5.1
MATI   Mati              42.56 293 eP       P         01 20 23.8 +3.1
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DDMP   Don Marcelino,    42.72 291 eP       P         01 20 24.8 +2.8
EDFI   Ende, Flores      42.84 269  P       P         01 20 19.6  -3.6
       comp=Z,152nm,1.1s,comp=Z,23µm
LUWI   Luwuk             43.20 280 eP       P         01 20 20.2  -5.7
       comp=Z,4µm,2.0s
LUWI   Luwuk             43.20 280  P       P         01 20 31.7 +5.8
DAV    Davao City (W)    43.22 293 eP       P         01 20 20.2  -5.9
       comp=Z,716nm,1.1s
DAV                                 LR      LR
       comp=Z,241µm,21.0s
DAV    Davao City (W)    43.22 293  P       P         01 20 25.3  -0.8
KCP    Kidapawan         43.64 292⇓eP       P         01 20 28.7  -0.8
MCQ    Macquarie Isla    43.80 185 eP       P         01 20 29.9  -0.3
       comp=Z,744nm,1.4s
MCQ    Macquarie Isla    43.80 185 eP       P         01 20 29.9  -0.3
MCQ                                 pmax    pmax
       comp=Z,744nm,1.4s
JCJ    Chichijima        43.82 330  P       P         01 20 29.7  -1.0
       comp=Z,61nm,0.7s,baz=219,slow=13,SNR=1.6
CBIJ   Chichi jima       43.82 330 eP       P         01 20 29.7  -1.0
SKMP   Bagumbayan, Su    43.95 291 eP       P         01 20 30.2  -1.8
BUTP   Butuan            43.98 295 eP       P         01 20 46.9  +15
BUKP   Musuan            44.02 293 eP       P         01 20 32.0  -0.6
PAE    Paea              44.31 104 eP       P         01 20 37.4 +2.5
       comp=Z,20nm,0.9s
PPT    Papeete           44.31 104  P       P         01 20 36.2 +1.3
       comp=Z,84nm,0.9s,baz=48,slow=15,SNR=2.8
PPT                                 LR      LR        01 35 09.6
       comp=Z,928µm,21.6s,baz=270,slow=31
PPT2   Papeete2          44.31 104 eP       P         01 20 37.5 +2.5
       comp=Z,168nm,1.2s
PPT2                               eS       S         01 27 13.4 +5.3
       comp=Z,971µm,29.2s
PPT2                               eLQ      LQ        01 31 16.9
       comp=Z,2251µm,35.2s
PPT2                               eLR      LR        01 33 12.0
       comp=Z,1370µm,22.5s,baz=275
APSI   Ampana            44.32 280  P       P         01 20 32.8  -2.1
       comp=Z,214nm,1.2s,comp=Z,17µmcomp=Z,329µm
PPTF   Pamatai, Papee    44.33 104 eP       P         01 20 38.3 +3.3
       comp=Z,1µm,1.7s
PPTF                                LR      LR
       comp=Z,787µm,20.0s
MRSI   Marisa            44.40 282  P       P         01 20 32.8  -2.8
       comp=Z,61nm,1.0s,comp=Z,12µmcomp=Z,291µm
CTBH   Cotabato--PC H    44.49 292⇓eP       P         01 20 36.1  -0.2
TIAR   Tiarei            44.53 104 eP       P         01 20 39.5 +2.8
       comp=Z,34nm,0.8s
TVO    Taravao           44.63 104 eP       P         01 20 40.2 +2.7
       comp=Z,38nm,0.8s
MBWA   Marble Bar        44.69 251 eP       P         01 20 38.8 +0.9
       comp=Z,1µm,1.9s
MBWA                                LR      LR
       comp=Z,534µm,18.0s
MBWA   Marble Bar        44.69 251  P       P         01 20 38.1 +0.2
       SNR=24
TBI    Tubuai            44.95 112 eP       P         01 20 42.8 +2.9
       comp=Z,658nm,1.1s
TBI                                eS       S         01 27 22.2 +5.2
       comp=Z,737µm,30.5s
TBI                                eLQ      LQ        01 31 37.4
       comp=Z,3574µm,33.2s
TBI                                eLR      LR        01 33 32.9
       comp=Z,1536µm,25.8s,baz=285
BNSI   Bone              45.05 275  P       P         01 20 39.3  -1.5
       comp=Z,312nm,1.2s,comp=Z,31µmcomp=Z,517µm
MSLP   Maasin            45.16 296 eP       P         01 20 42.2 +0.6
KAPI   Kappang           45.29 274  PFAKE             01 20 50.0 +7.3
KAPI                                LR      LR
       comp=Z,168µm,21.0s
BESP   Borongan          45.32 298 eP       P         01 20 47.2 +4.3
PLP    Palo              45.52 297⇓eP       P         01 20 44.0  -0.5
PAGZ   Pagadian          45.53 292 eP       P         01 20 44.0  -0.5
PMOR   Pomariorio Ree    45.89 100 eP       P         01 20 50.1 +2.7
       comp=Z,473nm,1.2s
LLP    Lapu-Lapu         46.03 296 eP       P         01 20 49.8 +1.2
PCI    Palu              46.07 279  P       P         01 20 49.9 +1.0
       comp=Z,603nm,1.1s,comp=Z,34µmcomp=Z,505µm
VAH    Vaihoa            46.15 101 eP       P         01 20 52.0 +2.6
       comp=Z,559nm,1.3s
IPIL   Ipil              46.24 292 eP       P         01 20 55.7 +5.5
MPSI   Mapaga            46.33 281  P       P         01 20 48.4  -2.5
       comp=Z,107nm,1.3s,comp=Z,11µmcomp=Z,298µm
CNP    Catarman          46.42 299 eP       P         01 20 58.3 +6.7
MEEK   Meekatharra       46.49 244  P       P         01 20 51.2  -0.9
       baz=46,SNR=14
PLAI   Plampang          46.68 268  P       P         01 20 51.8  -1.9
       comp=Z,182nm,0.9s,comp=Z,23µmcomp=Z,617µm
PVCP   Virac             47.37 300 eP       P         01 21 01.4 +2.4
GUIM   Jordan            47.38 295 eP       P         01 21 03.9 +4.8
KEKH   Kekaha            47.48  46 eP       P         01 20 57.0  -2.7
       comp=Z,539nm,1.0s
KEKH                                LR      LR
       comp=Z,259µm,20.0s
RCP    Roxas             47.65 297⇑eP       P         01 21 04.5 +3.3
KLBR   Kellerberrin      48.30 237  P       P         01 21 06.7 +0.6
       baz=48,SNR=17
HON    Honolulu          48.31  48 eP       P         01 21 03.5  -2.7
       comp=Z,511nm,1.0s
HON                                 LR      LR
       comp=Z,202µm,21.0s
KIP    Kipapa            48.36  48 eP       P         01 21 03.0  -3.6
       comp=Z,494nm,1.1s
KIP                                 LR      LR
       comp=Z,174µm,18.0s
KIP    Kipapa            48.36  48 i P      P         01 21 04.6  -2.0
KIP                                 pmax    pmax
       comp=Z,190nm,1.1s
AUQP   San Andres        48.51 299 eP       P         01 21 15.5 +7.7
OPA    Opana             48.52  48 eP       P         01 21 07.2  -0.6
       comp=Z,1µm,0.9s
OPA                                 LR      LR
       comp=Z,277µm,21.0s
OPA    Opana             48.52  48 eP       P         01 21 07.2  -0.6
OPA                                 pmax    pmax
       comp=Z,1µm,0.9s
OPA                                 MLR     MLR
       comp=Z,277µm,21.0s
OTRP   Odiongan          48.64 297 eP       P         01 21 07.6  -1.3
KKH    Kailua Kona       48.82  52 eP       P         01 21 08.3  -1.8
KKH    Kailua Kona       48.82  52 eP       P         01 21 08.3  -1.8
CUYO   Cuyo Island       48.88 295 eP       P         01 21 11.2 +0.5
KHLU   Kahalu`u          48.88  52 eP       P         01 21 11.6 +0.9
       comp=Z,1µm,1.4s
KHLU                                LR      LR
       comp=Z,344µm,20.0s
KHU    Kahuku            48.90  52 eP       P         01 21 12.0 +1.0
       comp=Z,1µm,1.1s
KHU                                 LR      LR
       comp=Z,339µm,20.0s
BLDU   Ballidu           48.95 239  P       P         01 21 11.8 +0.7
       baz=48,SNR=12
HUH    Hualalai          48.97  52 eP       P         01 21 07.9  -3.7
       comp=Z,827nm,1.2s
HUH                                 LR      LR
       comp=Z,330µm,20.0s
MWH    Moku'aweowe       49.05  52 eP       P         01 21 12.7 +0.2
       comp=Z,783nm,1.2s
MWH                                 LR      LR
       comp=Z,325µm,20.0s
NWAO   Narrogin (SRO)    49.07 236  P       P         01 21 12.0   0.0
       baz=49,SNR=27
NWAO   Narrogin (SRO)    49.07 236 eP       P         01 21 12.0   0.0
       comp=Z,1µm,1.5s
NWAO                               eS       S         01 28 13.8  -2.0
NWAO                                LR      LR
       comp=Z,1099µm,20.0s
NWAO   Narrogin (SRO)    49.07 236  P       P         01 21 10.9  -1.1
NWAO                                pmax    pmax
       comp=Z,126nm,1.1s
NWAO                                MLR     MLR
       comp=Z,37µm,20.1s
NWAO   Narrogin (SRO)    49.07 236  P       P         01 21 12.9 +0.9
       SNR=22
NWAO                                P       P         01 21 12.9 +0.9
       SNR=22
NWAO   Narrogin (SRO)    49.07 236  P       P         01 21 10.9  -1.1
       comp=Z,126nm,1.1s,baz=307,slow=8.4,SNR=15
NWAO                                LR      LR        01 42 00.8
       comp=Z,1037µm,20.1s,baz=316,slow=36
AIN    Ainahou           49.09  52 eP       P         01 21 13.5 +1.0
       comp=Z,1µm,1.1s
MLOA   Mauna Loa Obse    49.09  52  PFAKE             01 21 20.0 +7.3
MLOA                                LR      LR
       comp=Z,314µm,20.0s
KBKI   Kotabaru          49.12 275  P       P         01 21 08.5  -4.1
       comp=Z,25nm,1.3s,comp=Z,2µm
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HLP    Hilina Pali        49.16  53   PFAKE           01 21 20.0 +7.1
HLP                                   LR      LR
       comp=Z,300µm,20.0s
MORW   Morawa             49.19 241   P       P       01 21 12.5 -0.5
       baz=49,SNR=7.7
MORW   Morawa             49.19 241  eP       P       01 21 12.4 -0.5
       comp=Z,535nm,1.1s
HMH    Humu‘ula Sheep     49.20  52  eP       P       01 21 13.4  0.0
       comp=Z,1µm,1.1s
HMH                                   LR      LR
       comp=Z,359µm,18.0s
MHA    Mahukona           49.21  51  eP       P       01 21 14.8 +1.7
MLH    Mauna Loa          49.22  52  eP       P       01 21 15.1 +1.6
       comp=Z,720nm,1.2s
KHLH   Kahului Airpor     49.23  50  eP       P       01 21 15.6 +2.4
       comp=Z,1µm,1.3s
KHLH                                  LR      LR
       comp=Z,299µm,19.0s
SDHHI  Sand Hill          49.23  53  eP       P       01 21 12.2 -1.2
       comp=Z,508nm,0.9s
SDHHI                                 LR      LR
       comp=Z,302µm,18.0s
WRMHI  West Rim           49.23  53  eP       P       01 21 12.3 -1.2
       comp=Z,1µm,1.5s
WRMHI                                 LR      LR
       comp=Z,299µm,18.0s
UWE    Uwekahuna          49.25  53  eP       P       01 21 11.2 -2.4
       comp=Z,735nm,1.1s
UWE                                   LR      LR
       comp=Z,303µm,18.0s
RIM    Rim                49.25  53  eP       P       01 21 10.9 -2.7
       comp=Z,419nm,1.0s
RIM                                   LR      LR
       comp=Z,290µm,19.0s
POHA   Pohakuloa          49.25  52  eP       P       01 21 14.0 +0.3
       comp=Z,1µm,1.2s
NPH    North Pit          49.25  53  eP       P       01 21 11.2 -2.4
       comp=Z,1µm,1.7s
NPH                                   LR      LR
       comp=Z,291µm,19.0s
NPH    North Pit          49.25  53  eP       P       01 21 11.2 -2.4
NPH                                   pmax    pmax
       comp=Z,1µm,1.7s
NPH                                   MLR     MLR
       comp=Z,291µm,19.0s
OBL    Observatory Le     49.25  53  eP       P       01 21 11.2 -2.4
       comp=Z,442nm,0.9s
OBL                                   LR      LR
       comp=Z,301µm,18.0s
KKO    Keanakako`i        49.25  53  eP       P       01 21 11.3 -2.3
       comp=Z,497nm,1.0s
KKO                                   LR      LR
       comp=Z,292µm,19.0s
UWB    Uwekahuna B        49.26  53  eP       P       01 21 11.7 -2.0
       comp=Z,474nm,1.1s
BYL    Byron's Ledge      49.27  53   PFAKE           01 21 20.0 +6.3
BYL                                   LR      LR
       comp=Z,287µm,19.0s
SBLHI  Steaming Bluff     49.27  53  eP       P       01 21 12.1 -1.7
       comp=Z,368nm,1.0s
SBLHI                                 LR      LR
       comp=Z,299µm,18.0s
HATHI  Halema‘uma‘u T     49.27  53  eP       P       01 21 10.8 -3.0
       comp=Z,578nm,1.1s
HATHI                                 LR      LR
       comp=Z,306µm,18.0s
HPAH   Hawaii Prepara     49.28  52  eP       P       01 21 14.6 +0.8
       comp=Z,591nm,0.9s
HPAH                                  LR      LR
       comp=Z,305µm,20.0s
HLK    Haleakala          49.28  50  eP       P       01 21 15.0 +1.1
       comp=Z,1µm,1.2s
HLK                                   LR      LR
       comp=Z,278µm,20.0s
PUH    Pauahi             49.28  53  eP       P       01 21 11.1 -2.7
       comp=Z,649nm,1.2s
PUH                                   LR      LR
       comp=Z,298µm,18.0s
SRBI   Singaraja          49.28 269   P       P       01 21 11.6 -2.2
       comp=Z,79nm,0.9s,comp=Z,15µmcomp=Z,323µm
BOAC   Boac               49.29 298  eP       P       01 21 14.2 +0.4
STCH   Steam Cracks       49.36  53  eP       P       01 21 12.1 -2.3
       comp=Z,510nm,0.8s
STCH                                  LR      LR
       comp=Z,289µm,19.0s
NPOC   North of Pu‘u      49.37  53  eP       P       01 21 11.1 -3.4
       comp=Z,2µm,1.6s
JCUZ   Jacuzzi            49.38  53  eP       P       01 21 11.5 -3.0
       comp=Z,514nm,0.9s
JCUZ                                  LR      LR
       comp=Z,304µm,18.0s
TSM    Tawau              49.40 285   P       P       01 21 13.7 -1.0
SJMP   San Jose           49.48 297  eP       P       01 21 14.9 -0.4
LPH    Laupahoehoe        49.48  52  eP       P       01 21 12.4 -2.9
MUN    Mundaring          49.68 237   P       P       01 21 16.3 -0.3
       baz=49,SNR=6.8
RKGY   Rocky Gully        49.74 234   P       P       01 21 17.1 +0.1
       baz=49,SNR=9.1
POLP   Polilio Island     49.80 300  eP       P       01 21 22.7 +5.1
GIRL   Giralia            49.91 250  eP       P       01 21 19.5 +0.9
       comp=Z,2µm,1.5s
JHJ2   Mitsune            49.95 332  eP       P       01 21 17.9 -0.6
       comp=Z,2µm,1.4s
JHJ2                                 epP      pP      01 21 26.0 +1.1
JHJ2                                 ePcP     PcP     01 22 36.9 -1.7
JHJ2                                  LR      LR
       comp=Z,148µm,18.0s
BUSP   Coron              50.09 296  eP       P       01 21 24.6 +4.7
JAGI   Jajag, Banyuwa     50.28 268  eP       P       01 21 19.4 -2.0
       comp=Z,1µm,1.6s
JAGI                                  LR      LR
       comp=Z,153µm,19.0s
JAGI   Jajag, Banyuwa     50.28 268   P       P       01 21 18.4 -3.0
       comp=Z,229nm,1.2s,comp=Z,22µmcomp=Z,560µm
TGY    Tagaytay City      50.37 299   LR      LR      01 41 23.5
       comp=Z,281µm,19.6s,baz=121,slow=35
ENPP   El Nido            50.45 294  eP       P       01 21 23.1 +0.5
SDKM   Sandakan           50.47 287   P       P       01 21 24.1 +1.2
PALP   Palanan            50.52 303  eP       P       01 21 24.6 +1.4
BALP   Baler              50.59 301  eP       P       01 21 26.2 +2.6
CAUP   Cauayan            50.97 302  eP       P       01 21 31.4 +4.9
BATP   Bataraza           50.99 291  eP       P       01 21 27.1 +0.4
GMJI   Gumukmas           51.00 268   P       P       01 21 24.7 -2.1
       comp=Z,189nm,1.4s,comp=Z,20µmcomp=Z,500µm
SGCP   Mt. Cagua          51.43 304  eP       P       01 21 33.1 +3.2
KKM    Kota Kinabalu      51.52 287  eP       P       01 21 30.8 -0.1
       comp=Z,1µm,1.5s
KKM    Kota Kinabalu      51.52 287   P       P       01 21 32.4 +1.5
SMPP   San Manuel, Pa     51.54 301  eP       P       01 21 28.4 -2.5
JOW    Kunigami           51.82 317   LR      LR      01 39 39.0
       comp=Z,17µm,21.4s,baz=68,slow=32
APYP   Conner             51.90 303  eP       P       01 21 36.7 +3.2
H01W1  Cape Leeuwin H     52.05 234   P       P       01 21 33.7 -0.5
       baz=104,slow=7.3,SNR=8.3
H01W3  Cape Leeuwin H     52.06 234   P       P       01 21 38.5 +4.2
       baz=104,slow=7.3,SNR=6.8
H01W2  Cape Leeuwin H     52.07 234   P       P       01 21 44.9  +11
       baz=104,slow=7.3,SNR=3.5
ABRA   Dolores            52.23 302  eP       P       01 21 40.2 +4.2
BOLP   Bolinao            52.29 301  eP       P       01 21 44.4 +7.9
PWJI   Pagerwojo          52.64 268   P       P       01 21 38.1 -1.0
       comp=Z,155nm,0.9s,comp=Z,19µmcomp=Z,508µm
NGJI   Ngawi              53.06 269   P       P       01 21 39.1 -3.1
       comp=Z,266nm,1.8s,comp=Z,41µmcomp=Z,558µm
INU    Inuyama            53.11 331  eP       P       01 21 43.0 +0.9
       comp=Z,719nm,1.4s
PCJI   Pacitan            53.23 268   P       P       01 21 42.8 -0.7
       comp=Z,617nm,1.3s,comp=Z,27µmcomp=Z,471µm
MJAR   Matsushiro Arr     53.54 333   P       P       01 21 43.3 -2.0
       comp=Z,22nm,1.1s,baz=169,slow=7.8,SNR=20
MJAR                                  LR      LR      01 40 32.5
       comp=Z,62µm,21.4s,baz=115,slow=32
MJAR                                  PKP2bc          01 52 16.6
       comp=Z,6.7nm,1.1s,baz=55,slow=34,SNR=5.1
MAJO   Matsushiro         53.54 333  eP       P       01 21 45.4 +0.1
       comp=Z,320nm,1.0s
MAJO                                ⇑e                01 52 16.6
MAJO                                  LR      LR
       comp=Z,148µm,19.0s
MAJO   Matsushiro         53.54 333 i P       P       01 21 43.2 -2.1
MAJO                                  pmax    pmax
       comp=Z,111nm,0.8s
MAT    Matsushiro         53.54 333   P       P       01 21 43.2 -2.1
MAT                                   S       S       01 29 21.4 +4.2
MJB9   Matsu-Tunnel       53.55 333  eP       P       01 21 45.4 +0.1
       comp=Z,326nm,1.0s
MJB9                                  LR      LR
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       comp=Z,183µm,18.0s
BTM    Bintulu            53.65 282   P       P       01 21 47.4 +0.8
TAOE   Nuku Hiva Isla     53.88  93  eP       P       01 21 50.5 +2.1
       comp=Z,488nm,1.0s
TAOE                                 eS       S       01 29 25.7 +3.0
       comp=Z,689µm,29.8s
TAOE                                 eLQ      LQ      01 35 18.0
       comp=Z,403µm,24.6s
TAOE                                 eLR      LR      01 37 25.8
       comp=Z,335µm,21.9s,baz=265
TAOE   Nuku Hiva Isla     53.88  93  eP       P       01 21 45.7 -2.7
       comp=Z,205nm,0.9s
TAOE                                  LR      LR
       comp=Z,347µm,21.0s
UGM    Wanagama           53.91 268  eP       P       01 21 47.4 -1.2
       comp=Z,4µm,1.9s
UGM                                   LR      LR
       comp=Z,119µm,20.0s
UGM    Wanagama           53.91 268   P       P       01 21 40.4 -8.1
YOJ    Yonaguni jima      54.07 311  eP       P       01 21 46.1 -3.3
       comp=Z,558nm,1.2s
YOJ                                   LR      LR
       comp=Z,244µm,20.0s
YOJ    Yonaguni jima      54.07 311  eP       P       01 21 46.1 -3.3
YOJ                                   pmax    pmax
       comp=Z,558nm,1.2s
YOJ                                   MLR     MLR
       comp=Z,244µm,20.0s
SMRI   Semarang           54.11 269  eP       P       01 21 49.5 -0.5
       comp=Z,3µm,1.9s
SMRI                                 epP      sP      01 21 58.8 +0.6
SMRI                                  LR      LR
       comp=Z,126µm,18.0s
SBUM   Sibu               54.28 281  eP       P       01 21 50.7 -0.5
       comp=Z,261nm,1.5s
SBUM   Sibu               54.28 281   P       P       01 21 52.2 +1.0
JNU    Nakatsue           54.59 325  eP       P       01 21 51.9 -1.1
       comp=Z,845nm,1.3s
JNU    Nakatsue           54.59 325   LR      LR      01 41 59.8
       comp=Z,56µm,22.0s,baz=127,slow=33
TWG    Pinlang            54.62 308  eP       P       01 21 52.0 -1.5
       comp=Z,1µm,1.4s
TWG                                  epP      pP      01 21 59.9 +0.4
TWG                                   LR      LR
       comp=Z,701µm,20.0s
YULB   Yu-li              54.76 309  eP       P       01 21 54.4 -0.1
       comp=Z,203nm,1.0s
NACB   Ninganchiao        54.97 310  eP       P       01 21 53.4 -2.5
       comp=Z,903nm,1.5s
NACB                                  LR      LR
       comp=Z,194µm,20.0s
TPUB   Ta-pu              55.22 308  eP       P       01 21 57.2 -0.7
       comp=Z,728nm,1.3s
TPUB                                  LR      LR
       comp=Z,253µm,21.0s
SSLB   Suanglung          55.24 309  eP       P       01 21 55.8 -2.1
       comp=Z,851nm,1.8s
SSLB                                  LR      LR
       comp=Z,213µm,19.0s
YHNB   Yeheng             55.41 310  eP       P       01 21 58.4 -0.9
       comp=Z,697nm,1.3s
YHNB                                  LR      LR
       comp=Z,284µm,20.0s
TATO   Taipei             55.50 311  eP       P       01 21 59.0 -0.8
       comp=Z,639nm,1.3s
TATO                                 epP      pP      01 22 05.9 +0.1
TATO                                  LR      LR
       comp=Z,324µm,21.0s
KSM    Kuching            55.89 279  eP       P       01 22 01.6 -1.2
       comp=Z,564nm,1.5s
KSM    Kuching            55.89 279   P       P       01 22 03.3 +0.5
ERM    Erimo              56.36 340  eP       P       01 22 04.4 -1.2
ERM                                  ePcP     PcP     01 23 00.9 -1.7
ERM                                   LR      LR
       comp=Z,193µm,18.0s
ERM    Erimo              56.36 340  eP       P       01 22 04.4 -1.2
ERM                                  e                01 23 00.9
ERM                                   MLR     MLR
       comp=Z,193µm,18.0s
CISI   Cisompet, Garu     56.62 268  eP       P       01 22 07.0 -1.1
       comp=Z,2µm,1.5s
YUK    Yuzh-Kuril'sk      57.38 344d iP       P       01 22 18.0 +5.2
YUK                                  e                01 23 01.5
YUK                                  i S      S       01 30 10.3 +2.2
YUK                                  e                01 31 53.7
YUK                                   pmax    pmax
       comp=Z,2µm,9.5s
YUK                                   pmax    pmax
       comp=Z,431nm,1.6s
YUK                                   pmax    pmax
       comp=E,243nm,0.8s
YUK                                   pmax    pmax
       comp=N,155nm,1.2s
YUK                                   MLR     MLR
       comp=Z,166µm,18.0s
YUK                                   MLR     MLR
       comp=E,14µm,22.0s
YUK                                   MLR     MLR
       comp=N,147µm,17.0s
KUR    Kuril'sk           57.98 346d iP       P       01 22 22.5 +5.6
KUR                                  i S      S       01 30 26.5  +11
KUR                                                   01 31 59.8
KUR                                   pmax    pmax
       comp=Z,835nm,1.2s
KUR                                   MLR     MLR
       comp=Z,135µm,17.0s
KUR                                   MLR     MLR
       comp=N,106µm,15.0s
KUR                                   MLR     MLR
       comp=E,10µm,10.0s
RKT    Rikitea            58.21 110  eP       P       01 22 21.9 +2.8
       comp=E,376nm,1.5s
RKT                                  eS       S       01 30 22.4 +2.6
       comp=E,391µm,32.2s
RKT                                  eSS      SS      01 34 17.5 +5.7
       comp=E,253µm,33.2s
RKT                                  eLQ      LQ      01 37 12.0
       comp=E,1145µm,35.0s
RKT                                  eLR      LR      01 39 39.3
       comp=E,964µm,25.2s,baz=271
XMIS   Christmas Isla     58.38 264  eP       P       01 22 20.3 -0.1
       comp=E,368nm,1.2s
ASAJ   Asahikawa          58.43 341   LR      LR      01 44 57.6
       comp=E,92µm,20.5s,baz=165,slow=34
SSE    Sheshan            59.31 316   P       P       01 22 27.8 +1.3
SSE                                   S       S       01 30 34.8 +1.0
SSE                                   pmax    pmax
       comp=E,4µm,10.8s
SSE    Sheshan            59.31 316  eP       P       01 22 27.2 +0.7
       comp=E,1µm,1.4s
SSE                                   LR      LR
       comp=Z,190µm,19.0s
KSRS   Korea Array        59.40 326   P       P       01 22 26.0 -1.0
       comp=Z,13nm,0.9s,baz=142,slow=6.9,SNR=20
KSRS                                  LR      LR      01 46 47.0
       comp=Z,91µm,19.3s,baz=131,slow=35
KSRS                                  PKP2bc          01 52 05.0
       comp=Z,4.9nm,1.0s,baz=302,slow=3.8,SNR=5.3
KS15   Wonju Array Si     59.41 326  eP       P       01 22 26.6 -0.5
KSAR   Wonju Array Be     59.41 326   P       P       01 22 26.0 -1.1
KSAR   Wonju Array Be     59.41 326   P       P       01 22 26.0 -1.1
KS01   Wonju Array Si     59.43 326  eP       P       01 22 25.4 -1.8
HKC    Hong Kong Obse     59.85 304  ⇑P       P       01 22 35.0 +4.6
MCO    Taipa Grande       60.27 303   P       P       01 22 38.0 +4.7
GZH    Guangzhou          60.90 304   P       P       01 22 38.4 +0.8
GZH                                   PP      PP      01 24 49.6 -2.4
GZH                                   ScP     ScP     01 27 23.3 +2.1
GZH                                   S       S       01 30 57.6 +3.2
GZH                                   ScS     SKKSac  01 32 27.1 -0.4
GZH                                   LR      LR
       comp=Z,72µm,13.9s
GZH                                   LR      LR
       comp=Z,94µm,18.7s
YSS    Yuzh-Sakhalins     60.94 343  eP       P       01 22 37.2 -0.2
       comp=Z,871nm,1.3s
YSS                                   LR      LR
       comp=Z,213µm,19.0s
YSS    Yuzh-Sakhalins     60.94 343ceP        P       01 22 36.7 -0.6
YSS                                  e                01 23 17.4
YSS                                  eS       S       01 30 52.8 -1.3
YSS                                  ePS      PnS     01 31 21.5  +12
YSS                                  e                01 32 16.4
YSS                                  eSS      SS      01 34 46.0 -8.0
YSS                                   pmax    pmax
       comp=Z,100nm,1.2s
YSS                                   pmax    pmax
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       comp=N,30nm,0.8s
YSS                                   pmax    pmax
       comp=E,50nm,1.2s
YSS                                   pmax    pmax
       comp=Z,12µm,11.2s
YSS                                   pmax    pmax
       comp=N,6µm,11.3s
YSS                                   pmax    pmax
       comp=E,6µm,14.6s
YSS                                   smax    smax
       comp=E,18µm,11.8s
YSS                                   MLR     MLR
       comp=E,94µm,15.0s
TEY    Ternei             61.33 337⇓eP        P       01 22 39.5 -0.5
TEY                                  e                01 31 09.1
TEY                                   pmax    pmax
       comp=E,20nm,1.1s
TEY                                   pmax    pmax
       comp=N,20nm,1.0s
TEY                                   pmax    pmax
       comp=Z,40nm,1.2s
NJ2    Nanjing            61.48 316  eP       P       01 22 40.5 -0.8
NJ2                                   pP      pP      01 22 47.7 -0.2
NJ2                                   sP      pwP     01 22 53.6 +1.6
NJ2                                   S       S       01 31 06.8 +5.3
NJ2                                   pmax    pmax
       comp=Z,62nm,1.0s
NJ2                                   pmax    pmax
       comp=Z,32µm,10.7s
NJ2                                   LR      LR
       comp=Z,138µm,17.2s
NJ2                                   LR      LR
       comp=Z,134µm,19.6s
NJ2                                   LR      LR
       comp=Z,189µm,19.1s
MSHR   Mys Shultsa        61.62 332  eP       P       01 22 40.8 -1.3
VLA    Vladivostok        61.71 333c iP       P       01 22 40.2 -2.5
VLA                                   pmax    pmax
       comp=Z,84nm,1.0s
SKR    Severo-Kuril’s     61.79 353  eP       P       01 22 43.5 +0.5
SKR                                  eS       S       01 31 08.9 +4.1
SKR                                   pmax    pmax
       comp=Z,220nm,2.7s
SKR                                   MLR     MLR
       comp=Z,142µm,16.0s
SKR                                   MLR     MLR
       comp=Z,141µm,16.0s
QIZ    Qiongzhong         62.07 298   P       P       01 22 46.4 +0.8
QIZ                                   S       S       01 31 10.3 +0.8
QIZ                                   sS      sS      01 31 23.1 +3.4
QIZ                                   pmax    pmax
       comp=Z,11µm,11.8s
QIZ                                   LR      LR
       comp=Z,100µm,22.5s
QIZ                                   LR      LR
       comp=Z,129µm,20.6s
QIZ                                   LR      LR
       comp=Z,239µm,22.6s
QIZ    Qiongzhong         62.07 298  eP       P       01 22 47.2 +1.6
       comp=Z,375nm,1.4s
QIZ                                   LR      LR
       comp=Z,226µm,20.0s
MYKOM  Kota Tinggi        62.24 278  eP       P       01 22 44.0 -2.9
       comp=Z,563nm,1.7s
MYKOM                                epP      pP      01 22 51.7 -1.2
MYKOM                                 LR      LR
       comp=Z,107µm,20.0s
MYKOM  Kota Tinggi        62.24 278   P       P       01 22 52.3 +5.5
USA0B  Ussuriysk Arra     62.52 334  eP       P       01 22 47.5 -0.6
       comp=Z,732nm,1.4s
USRK   Ussuriysk Ar.      62.52 334   P       P       01 22 47.2 -0.9
       comp=Z,36nm,1.0s,baz=141,slow=6.4,SNR=36
USRK                                  PKP2bc          01 51 58.6
       comp=Z,7.6nm,1.0s,baz=335,slow=6.4,SNR=4.8
PTCN   Pitcairn Islan     62.70 113   PFAKE           01 23 00.0  +10
PTCN                                  LR      LR
       comp=Z,474µm,22.0s
KGM    Kluang             62.80 278   P       P       01 22 56.3 +5.7
KTGM   Kuala Trenggan     63.78 281   P       P       01 23 01.1 +4.0
WHN    Wuhan              63.83 312  ⇓P       P       01 22 55.6 -1.5
WHN                                   S       S       01 31 32.6 +1.4
WHN                                   LR      LR
       comp=Z,503µm,14.9s
WHN                                   LR      LR
       comp=Z,385µm,19.7s
WHN                                   LR      LR
       comp=Z,905µm,19.3s
PET    Petropavlovsk      63.88 356  eP       P       01 22 56.5 -0.4
       comp=Z,506nm,1.6s
PET                                   LR      LR
       comp=Z,124µm,18.0s
PET    Petropavlovsk      63.88 356ceP        P       01 22 55.9 -1.0
PET                                  eS       S       01 31 24.4 -6.4
PET                                  eSS      SS      01 35 29.3  -10
PET                                   pmax    pmax
       comp=Z,6µm,15.3s
PET                                   pmax    pmax
       comp=Z,40µm,20.0s
PET                                   pmax    pmax
       comp=Z,193nm,1.4s
MDJ    Mudanjiang         63.91 332   P       P       01 22 58.6 +1.2
MDJ                                   PP      PP      01 25 19.7 +1.4
MDJ                                   S       S       01 31 35.5 +3.8
MDJ                                   pmax    pmax
       comp=Z,34µm,12.9s
MDJ                                   LR      LR
       comp=Z,107µm,14.7s
MDJ                                   LR      LR
       comp=Z,109µm,15.1s
MDJ                                   LR      LR
       comp=Z,177µm,24.9s
MDJ    Mudanjiang         63.91 332  eP       P       01 22 56.5 -0.9
       comp=Z,426nm,1.2s
MDJ                                   LR      LR
       comp=Z,127µm,19.0s
DL2    Dalian             63.98 323⇓iP        P       01 22 58.4 +0.5
DL2                                   S       S       01 31 36.7 +4.0
DL2                                   ScS     SKSac   01 32 46.7 -3.6
DL2                                   SS      SS      01 35 42.8 +0.9
DL2                                   pmax    pmax
       comp=Z,8µm,9.8s
DL2                                   LR      LR
       comp=Z,131µm,15.3s
DL2                                   LR      LR
       comp=Z,40µm,20.1s
DL2                                   LR      LR
       comp=Z,154µm,20.3s
PEA0B  Petropavlovsk-     64.03 355  eP       P       01 22 59.0 +1.0
       comp=Z,1µm,1.5s
PEA0B                                 LR      LR
       comp=Z,151µm,22.0s
PETK   Petropavlovsk-     64.03 355  eP       P       01 22 57.0 -1.0
PETK   Petropavlovsk-     64.03 355  eP       P       01 22 57.0 -1.0
PETK   Petropavlovsk-     64.03 355   P       P       01 22 56.8 -1.1
       comp=Z,30nm,0.9s,baz=125,slow=7.4,SNR=13
PETK                                  LR      LR      01 47 04.3
       comp=Z,124µm,20.5s,baz=175,slow=33
PEA1   Petropavlovsk-     64.04 355  eP       P       01 22 56.8 -1.2
KIWB   Kanaga Island      64.31  12  eP       P       01 23 00.8 +1.0
ADK    Adak               64.44  12  eP       P       01 23 02.0 +1.4
       comp=Z,881nm,1.3s
ADK                                   LR      LR
       comp=Z,231µm,22.0s
ADK    Adak               64.44  12  eP       P       01 23 02.0 +1.4
ADK                                   pmax    pmax
       comp=Z,881nm,1.3s
ADK                                   MLR     MLR
       comp=Z,231µm,22.0s
TYV    Tymovskoe          64.51 344  eP       P       01 23 02.3 +1.2
TYV                                  eS       S       01 31 44.4 +5.6
TYV                                   pmax    pmax
       comp=Z,55nm,1.8s
TYV                                   pmax    pmax
       comp=Z,5µm,7.5s
TYV                                   smax    smax
       comp=E,25µm,10.4s
BKNI   Bangkinang         64.66 276  eP       P       01 23 01.9 -1.0
       comp=E,1µm,1.0s
BKNI                                  LR      LR
       comp=Z,99µm,20.0s
FRIM   Kepong             64.73 279   P       P       01 23 08.8 +5.4
GSTR   Great Sitkin T     64.77  13  eP       P       01 23 05.3 +2.5
SNY    Shenyang           64.86 327  ⇓P       P       01 23 07.4 +3.8
SNY                                   S       S       01 31 45.7 +2.3
SNY                                   pmax    pmax
       comp=Z,10µm,9.5s
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SNY				LR	LR		
	comp=Z,72μm,17.3s						
SNY				LR	LR		
	comp=Z,83μm,16.6s						
SNY				LR	LR		
	comp=Z,155μm,19.0s						
TIA	**Tai'an**	**65.09**	**318**	P	**P**	**01 23 09.8**	**+4.6**
TIA				S	**S**	**01 31 50.9**	**+4.4**
TIA				LR	LR		
	comp=Z,51μm,23.0s						
TIA				LR	LR		
	comp=Z,66μm,20.1s						
TIA				LR	LR		
	comp=Z,141μm,20.6s						
CN2	**Changchun**	**65.28**	**329**	⇑*i*P	**P**	**01 23 05.0**	**-1.3**
CN2				PP	**PP**	**01 25 31.4**	**+1.1**
CN2				*e*S	**S**	**01 31 47.5**	**-1.1**
CN2				SS	**SS**	**01 36 02.3**	**+0.2**
CN2				pmax	pmax		
	comp=Z,60nm,1.1s						
CN2				pmax	pmax		
	comp=Z,28μm,10.0s						
CN2				LR	LR		
	comp=Z,139μm,17.0s						
CN2				LR	LR		
	comp=Z,98μm,17.0s						
CN2				LR	LR		
	comp=Z,129μm,17.0s						
ATKA	**Atka Island**	**65.29**	**14**	*e*P	**P**	**01 23 06.9**	**+0.8**
	comp=Z,1μm,1.5s						
ATKA				LR	LR		
	comp=Z,229μm,20.0s						
IPM	**Ipoh**	**65.61**	**280**	*e*P	**P**	**01 23 09.7**	**+0.6**
	comp=Z,2μm,2.0s						
IPM				LR	LR		
	comp=Z,69μm,22.0s						
IPM	**Ipoh**	**65.61**	**280**	P	**P**	**01 23 09.8**	**+0.7**
KULM	**Kulim**	**66.17**	**281**	*e*P	**P**	**01 23 13.0**	**+0.4**
	comp=Z,388nm,1.3s						
KULM	**Kulim**	**66.17**	**281**	P	**P**	**01 23 14.5**	**+1.9**
GRNR	**Gornyy**	**66.27**	**341**	*e*P	**P**	**01 23 12.8**	**+0.2**
GRNR				*e*		01 33 06.0	
GRNR				pmax	pmax		
	comp=Z,59nm,1.0s						
CASY	**Casey**	**66.33**	**201**	*e*P	**P**	**01 23 13.8**	**+1.0**
	comp=Z,446nm,1.1s						
SKNT	**Sakolnakorn**	**66.48**	**294**	P	**P**	**01 23 14.4**	**-0.1**
	comp=Z,144nm,2.1s,comp=Z,8μmcomp=Z,55μm						
KLR	**Kul'dur**	**66.66**	**337**	*i* P	**P**	**01 23 14.0**	**-1.0**
KLR	**Kul'dur**	**66.66**	**337**	PKPPKP	**P'P'ab**	**01 51 49.4**	**+0.7**
	comp=Z,6.9nm,1.0s,baz=112,slow=2.1,SNR=5.1						
VNDA	**Vanda**	**66.67**	**181**	*e*P	**P**	**01 23 13.0**	**-1.7**
VNDA	**Vanda**	**66.67**	**181**	*e*P	**P**	**01 23 13.0**	**-1.7**
VNDA	**Vanda**	**66.67**	**181**	P	**P**	**01 23 15.6**	**+0.9**
	comp=Z,44nm,1.0s,baz=357,slow=5.9,SNR=12						
VNDA				LR	LR	01 49 33.5	
	comp=Z,190μm,18.6s,baz=8.0,slow=33						
COCO	**West Island**	**66.78**	**261**	*e*P	**P**	**01 23 16.4**	**-0.1**
	comp=Z,1μm,1.6s						
COCO				LR	LR		
	comp=Z,167μm,19.0s						
COCO	**West Island**	**66.78**	**261**	*e*P	**P**	**01 23 16.4**	**-0.1**
COCO				pmax	pmax		
	comp=Z,1μm,1.6s						
COCO				MLR	MLR		
	comp=Z,167μm,19.0s						
SBA	**Scott Base**	**66.98**	**180**	*e*P	**P**	**01 23 16.8**	**0.0**
	comp=Z,519nm,1.3s						
SBA	**Scott Base**	**66.98**	**180**	*e*P	**P**	**01 23 16.8**	**0.0**
SBA				pmax	pmax		
	comp=Z,519nm,1.3s						
NKL	**Nikolayevsk**	**67.10**	**344**	*e*P	**P**	**01 23 16.0**	**-1.8**
NKL				*e*		01 23 25.0	
NKL				pmax	pmax		
	comp=Z,42nm,0.9s						
SRAK	**Srakaew**	**67.27**	**290**	P	**P**	**01 23 18.6**	**-1.0**
	comp=Z,169nm,1.6s,comp=Z,3μm						
ENH	**Enshi**	**67.32**	**309**	*e*P	**P**	**01 23 17.9**	**-1.9**
	comp=Z,461nm,1.1s						
NIKH	**Nikolski High**	**67.37**	**17**	*e*P	**P**	**01 23 20.1**	**+0.6**
	comp=Z,1μm,1.2s						
NIKH				LR	LR		
	comp=Z,151μm,22.0s						
NONG	**Nongkai**	**67.60**	**295**	P	**P**	**01 23 22.1**	**+0.4**
	comp=Z,5.6nm,1.6s,comp=Z,377nm						
TRTT	**Trang**	**67.73**	**283**	P	**P**	**01 23 25.7**	**+3.1**
	comp=Z,64nm,2.3s,comp=Z,8μmcomp=Z,67μm						
GYA	**Guiyang**	**67.83**	**304**	⇑*i*P	**P**	**01 23 21.7**	**-1.4**
GYA				pP	sP	01 23 33.0	+0.9
GYA				PP	**PP**	**01 25 56.4**	**+3.4**
GYA				S	**S**	**01 32 20.7**	**+0.3**
GYA				SS	**SS**	**01 36 43.2**	**+0.7**
GYA				pmax	pmax		
	comp=Z,170nm,1.0s						
GYA				pmax	pmax		
	comp=Z,24μm,13.0s						
GYA				LR	LR		
	comp=Z,103μm,19.0s						
GYA				LR	LR		
	comp=Z,85μm,19.3s						
GYA				LR	LR		
	comp=Z,111μm,21.1s						
CHAI	**Chaiyaphum**	**67.92**	**292**	P	**P**	**01 23 25.7**	**+2.0**
	comp=Z,33nm,0.7s,comp=Z,401nm						
BJT	**Baijiatuau**	**67.96**	**321**	*e*P	**P**	**01 23 24.1**	**+0.6**
	comp=Z,758nm,1.6s						
BJT				LR	LR		
	comp=Z,214μm,20.0s						
BJT	**Baijiatuau**	**67.96**	**321**	*e*P	**P**	**01 23 24.1**	**+0.6**
BJT				pmax	pmax		
	comp=Z,758nm,1.6s						
BJT				MLR	MLR		
	comp=Z,214μm,20.0s						
PATY	**Pattaya**	**68.03**	**289**	P	**P**	**01 23 28.0**	**+3.6**
	comp=Z,57nm,1.0s,comp=Z,4μm						
GSI	**Gunungsitoli**	**68.25**	**276**	*e*P	**P**	**01 23 26.2**	**+0.3**
	comp=Z,867nm,1.3s						
GSI				LR	LR		
	comp=Z,154μm,22.0s						
UNV	**Unalaska Valle**	**68.82**	**18**	*e*P	**P**	**01 23 28.5**	**0.0**
	comp=Z,206nm,1.1s						
UNV				LR	LR		
	comp=Z,140μm,22.0s						
TIY	**Taiyuan**	**69.03**	**317**	*e*P	**P**	**01 23 34.1**	**+3.8**
TIY				sP	**pwP**	**01 23 42.6**	**+1.4**
TIY				S	**S**	**01 32 36.1**	**+1.9**
TIY				pmax	pmax		
	comp=Z,88nm,1.1s						
TIY				pmax	pmax		
	comp=Z,5μm,8.0s						
TIY				LR	LR		
	comp=Z,35μm,12.9s						
TIY				LR	LR		
	comp=Z,84μm,15.1s						
TIY				LR	LR		
	comp=Z,143μm,19.2s						
PBKT	**Sadao Pong**	**69.06**	**292**	*e*P	**P**	**01 23 31.3**	**+0.4**
	comp=Z,230nm,1.1s						
PBKT	**Sadao Pong**	**69.06**	**292**	P	**P**	**01 23 31.7**	**+0.9**
	comp=Z,232nm,2.1s,comp=Z,20μm						
PHET	**Kaeng Krachan**	**69.18**	**288**	P	**P**	**01 23 35.1**	**+3.5**
	comp=Z,30nm,1.2s,comp=Z,618nm						
XAN	**Xi'an**	**69.56**	**313**	P	**P**	**01 23 32.2**	**-1.4**
XAN				pP	pwP	01 23 45.9	+1.4
XAN				PP	**PP**	**01 26 11.3**	**+3.5**
XAN				S	**S**	**01 32 40.5**	**-0.1**
XAN				sS	sS	01 32 57.1	+6.3
XAN				ScS	**SKSac**	**01 33 29.2**	**-3.9**
XAN				SS	**SS**	**01 37 11.5**	**+2.6**
XAN				pmax	pmax		
	comp=Z,120nm,1.5s						
XAN				pmax	pmax		
	comp=Z,24μm,10.2s						
XAN				LR	LR		
	comp=Z,140μm,18.1s						
XAN				LR	LR		
	comp=Z,116μm,20.1s						
XAN				LR	LR		
	comp=Z,231μm,20.6s						
XAN	**Xi'an**	**69.56**	**313**	*e*P	**P**	**01 23 32.3**	**-1.4**
	comp=Z,412nm,1.3s						
XAN				LR	LR		
	comp=Z,244μm,20.0s						
XAN	**Xi'an**	**69.56**	**313**	*e*P	**P**	**01 23 32.3**	**-1.4**
XAN				pmax	pmax		
	comp=Z,413nm,1.3s						
XAN				MLR	MLR		
	comp=Z,244μm,20.0s						
LHMI	**Lhok Sumawe**	**69.73**	**280**	*e*P	**P**	**01 23 33.4**	**-1.7**
	comp=Z,1μm,1.7s						
LHMI				*e*PP	**PP**	**01 26 09.6**	**0.0**
UTTA	**Uttaradit**	**69.82**	**293**	P	**P**	**01 23 38.0**	**+2.5**
	comp=Z,28nm,1.1s,comp=Z,340nm						
SRDT	**SRDT**	**70.07**	**290**	P	**P**	**01 23 39.0**	**+1.9**
	comp=Z,131nm,1.9s,comp=Z,20μm						
UTHA	**Uthaitani**	**70.14**	**291**	P	**P**	**01 23 40.2**	**+2.7**
	comp=Z,39nm,1.1s,comp=Z,490nm						
KMI	**Kunming**	**70.52**	**302**	P	**P**	**01 23 41.5**	**+1.5**
KMI				pP	pwP	01 23 52.3	+0.3
KMI				sP	PcP	01 23 55.9	-5.3
KMI				S	**S**	**01 32 55.0**	**+2.5**
KMI				SKS	**SKSac**	**01 33 35.6**	**-5.5**
KMI				pmax	pmax		
	comp=Z,26μm,14.1s						
KMI				LR	LR		
	comp=Z,116μm,22.4s						
KMI				LR	LR		
	comp=Z,56μm,19.9s						
KMI				LR	LR		
	comp=Z,111μm,21.9s						
KMI	**Kunming**	**70.52**	**302**	*e*P	**P**	**01 23 39.3**	**-0.7**
	comp=Z,658nm,1.4s						
KMI				LR	LR		
	comp=Z,120μm,22.0s						
KMI	**Kunming**	**70.52**	**302**	*e*P	**P**	**01 23 39.3**	**-0.7**
KMI				pmax	pmax		
	comp=Z,658nm,1.4s						
KMI				MLR	MLR		
	comp=Z,120μm,22.0s						
SUKH	**Sukhothai**	**70.57**	**293**	P	**P**	**01 23 43.4**	**+3.3**
	comp=Z,23nm,1.1s,comp=Z,431nm						
FALS	**False Pass**	**70.62**	**19**	*e*P	**P**	**01 23 35.1**	**-4.5**
	comp=Z,585nm,1.6s						
SPIA	**Saint Paul Isl**	**70.77**	**14**	*e*P	**P**	**01 23 42.3**	**+1.8**
	comp=Z,636nm,1.0s						
SPIA				LR	LR		
	comp=Z,255μm,21.0s						
UMPA	**Umpang Tak**	**70.87**	**291**	P	**P**	**01 23 45.7**	**+3.7**
	comp=Z,29nm,1.3s						
MA2	**Magadan**	**71.15**	**352**	*e*P	**P**	**01 23 40.7**	**-2.1**
	comp=Z,446nm,1.7s						
MA2	**Magadan**	**71.15**	**352**	*ce*P	**P**	**01 23 40.6**	**-2.2**
MA2				pmax	pmax		
	comp=Z,419nm,2.3s						
MA2				MLR	MLR		
	comp=Z,114μm,18.0s						
MA2	**Magadan**	**71.15**	**352**	LR	LR	01 51 41.0	
	comp=Z,67μm,20.4s,baz=170,slow=33						
HHC	**Hu-ho-hao-te**	**71.31**	**320**	⇑*i*P	**P**	**01 23 45.7**	**+1.4**
HHC				pP	pP	01 23 50.4	-0.5
HHC				sP	sP	01 23 52.8	-0.5
HHC				PP	**PP**	**01 26 26.1**	**+3.3**
HHC				S	**S**	**01 33 02.1**	**+1.2**
HHC				sS	pS	01 33 09.9	+1.3
HHC				SKS	**SKSac**	**01 33 43.9**	**-2.2**
HHC				ScS	**SKKSac**	**01 33 46.4**	**+0.2**
HHC				SS	**SS**	**01 37 38.5**	**+2.8**
HHC				pmax	pmax		
	comp=Z,8μm,6.3s						
HHC				LR	LR		
	comp=Z,130μm,17.1s						
HHC				LR	LR		
	comp=Z,114μm,19.0s						
HHC				LR	LR		
	comp=Z,152μm,17.5s						
CM01	**Chiang Mai Arr**	**71.47**	**294**	*e*P	**P**	**01 23 45.7**	**+0.1**
CM31	**Chiang Mai Arr**	**71.50**	**294**	*e*P	**P**	**01 23 49.1**	**+3.3**
CMAR	**Chiang Mai Arr**	**71.50**	**294**	P	**P**	**01 23 45.4**	**-0.4**
	comp=Z,14nm,0.8s,baz=119,slow=4.3,SNR=20						
CMAR				LR	LR	01 54 27.2	
	comp=Z,39μm,20.3s,baz=107,slow=35						
CMMT	**Chiang Mai**	**71.61**	**294**	P	**P**	**01 23 47.2**	**+0.8**
	comp=Z,118nm,1.4s,comp=Z,18μmcomp=Z,205μm						
CHTO	**Chiang Mai**	**71.61**	**294**	*e*P	**P**	**01 23 46.9**	**+0.5**
	comp=Z,223nm,1.3s						
CHTO	**Chiang Mai**	**71.61**	**294**	P	**P**	**01 23 47.1**	**+0.6**
	SNR=73						
CHTO				P	**P**	**01 23 47.1**	**+0.6**
	SNR=73						
CHTO	**Chiang Mai**	**71.61**	**294**	P	**P**	**01 23 47.3**	**+0.9**
	comp=Z,535nm,1.3s,comp=Z,81μmcomp=Z,820μm						
HIA	**Hailar**	**71.92**	**331**	*e*P	**P**	**01 23 46.5**	**-1.2**
	comp=Z,389nm,1.2s						
HIA	**Hailar**	**71.92**	**331**	*i* P	**P**	**01 23 46.2**	**-1.5**
HIA				pmax	pmax		
	comp=Z,175nm,1.2s						
ZEA	**Zeya**	**71.95**	**337**	*e*P	**P**	**01 23 46.8**	**-0.9**
ZEA				*e*		01 24 07.0	
ZEA				*e*PPP	PPP	01 28 12.0	
ZEA				*e*S	**S**	**01 33 02.0**	**-5.4**
ZEA				*e*PS	**PnS**	**01 33 33.0**	**-6.1**
ZEA				pmax	pmax		
	comp=E,290nm,2.0s						
ZEA				pmax	pmax		
	comp=N,340nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,660nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,7μm,9.0s						
ZEA				pmax	pmax		
	comp=E,2μm,10.0s						
ZEA				smax	smax		
	comp=N,33μm,13.0s						
ZEA				smax	smax		
	comp=E,24μm,13.0s						
CD2	**Chengdu**	**72.02**	**308**	P	**P**	**01 23 48.4**	**-0.3**
CD2				pP	sP	01 23 57.5	-0.2
CD2				sP	pwP	01 24 01.1	+1.5
CD2				PP	**PP**	**01 26 28.4**	**-0.7**
CD2				S	**S**	**01 33 11.4**	**+2.1**
CD2				sS	SKiKP	01 33 24.4	-0.5
CD2				SS	**SS**	**01 37 47.1**	**+0.2**
CD2				pmax	pmax		
	comp=E,350nm,0.9s						
CD2				pmax	pmax		
	comp=E,22μm,8.7s						
CD2				LR	LR		
	comp=E,171μm,18.9s						
CD2				LR	LR		
	comp=E,190μm,17.1s						
CD2				LR	LR		
	comp=E,173μm,19.5s						
BTO	**Baotou**	**72.17**	**319**	*e*P	**P**	**01 23 50.7**	**+1.2**
BTO				S	**S**	**01 33 06.0**	**-4.7**
CMBY	**CAMPBELL BAY**	**73.06**	**281**	*e*P	**P**	**01 23 52.7**	**-2.5**
LZH	**Lanzhou**	**74.20**	**312**	⇑P	**P**	**01 24 01.8**	**+0.1**
LZH				pP	pP	01 24 06.5	-1.8
LZH				PP	**PP**	**01 26 50.2**	**+2.5**
LZH				S	**S**	**01 33 33.2**	**-0.9**
LZH				SS	**SS**	**01 38 20.5**	**+0.4**
LZH				pmax	pmax		
	comp=E,740nm,1.3s						
LZH				pmax	pmax		
	comp=E,48μm,7.6s						
LZH				LR	LR		
	comp=E,191μm,17.3s						
LZH				LR	LR		
	comp=E,210μm,18.0s						
LZH				LR	LR		
	comp=E,314μm,18.4s						
SEY	**Seymchan**	**74.23**	**354**	*ce*P	**P**	**01 23 58.5**	**-2.5**
SEY	**Seymchan**	**74.23**	**354**	P	**P**	**01 23 59.9**	**-1.1**
	comp=E,22nm,1.2s,baz=151,slow=6.0						
SEY				LR	LR	01 53 16.3	
	comp=E,112μm,20.1s,baz=165,slow=33						
SII	**Sitkinak Islan**	**75.14**	**22**	*e*P	**P**	**01 24 05.5**	**-0.9**
	comp=E,487nm,1.4s						
SII				LR	LR		
	comp=Z,179μm,20.0s						
PBA	**Port Blair**	**75.32**	**285**	*e*P	P	01 24 06.6	-1.8
	comp=Z,754nm,1.5s						
PBA	**Port Blair**	**75.32**	**285**	*e*P	P	01 24 06.7	-1.7
GAMB	**Gambell**	**76.50**	**10**	*e*P	**P**	**01 24 13.1**	**-0.9**
	comp=Z,541nm,1.2s						
GAMB				LR	LR		
	comp=Z,149μm,20.0s						
KDAK	**Kodiak Island**	**76.63**	**22**	*e*P	**P**	**01 24 14.2**	**-0.6**
	comp=Z,290nm,1.2s						
KDAK				LR	LR		
	comp=Z,143μm,19.0s						
KDAK	**Kodiak Island**	**76.63**	**22**	*i* P	**P**	**01 24 16.5**	**+1.6**
KDAK	**Kodiak Island**	**76.63**	**22**	P	**P**	**01 24 14.1**	**-0.8**
	comp=Z,33nm,0.9s,baz=151,slow=1.2,SNR=14						
KDAK				LR	LR	01 54 28.6	
	comp=Z,123μm,19.0s,baz=229,slow=33						
CIT	**Chita**	**76.71**	**330**	*e*P	**P**	**01 24 16.8**	**+1.2**
CIT				pmax	pmax		
	comp=Z,951nm,1.7s						
YAK	**Yakutsk**	**77.76**	**344**	*e*P	**P**	**01 24 18.6**	**-2.5**
YAK				*e*S	**S**	**01 34 08.6**	**-3.2**
YAK				*e**SS	**ScS**	**01 34 41.4**	**+3.2**
YAK				pmax	pmax		
	comp=Z,254nm,1.2s						
YAK				pmax	pmax		
	comp=N,76nm,1.5s						
YAK				pmax	pmax		
	comp=E,36nm,1.0s						
YAK				pmax	pmax		
	comp=Z,22μm,7.1s						
YAK				pmax	pmax		
	comp=E,1μm,4.4s						
YAK				pmax	pmax		
	comp=N,3μm,4.8s						
YAK				smax	smax		
	comp=N,11μm,9.6s						
YAK				smax	smax		
	comp=E,35μm,15.1s						
YAK				MLR	MLR		
	comp=Z,149μm,20.0s						
YAK				MLR	MLR		
	comp=E,87μm,20.0s						
YAK				MLR	MLR		
	comp=N,69μm,21.0s						
ULN	**Ulaanbaatar**	**77.81**	**324**	*e*P	**P**	**01 24 20.2**	**-1.8**
	comp=N,2μm,2.0s						
ULN	**Ulaanbaatar**	**77.81**	**324**	*ce*P	**P**	**01 24 20.6**	**-1.4**
ULN				pmax	pmax		
	comp=Z,268nm,1.3s						
ULN				MLR	MLR		
	comp=Z,82μm,18.0s						
ULN	**Ulaanbaatar**	**77.81**	**324**	P	**P**	**01 24 23.8**	**+1.8**
	SNR=110						
ULN				P	**P**	**01 24 23.8**	**+1.8**
	SNR=110						
SONA0	**Songino Array**	**78.17**	**324**	*e*P	**P**	**01 24 22.3**	**-1.7**
SONM	**Songino Array**	**78.17**	**324**	P	**P**	**01 24 22.3**	**-1.7**
	comp=Z,16nm,1.1s,baz=138,slow=5.7,SNR=38						
SONM				PKPPKP		01 51 26.2	
	comp=Z,4.8nm,1.1s,baz=318,slow=1.9,SNR=3.7						
SONM				LR	LR	01 58 05.5	
	comp=Z,101μm,19.5s,baz=118,slow=35						
SONA1	**Songino Array**	**78.17**	**324**	*e*P	**P**	**01 24 22.4**	**-1.5**
HOM	**Homer**	**78.34**	**21**	*e*P	**P**	**01 24 23.9**	**-0.5**
	comp=Z,940nm,1.0s						
ANM	**Nome**	**78.44**	**13**	*e*P	**P**	**01 24 24.4**	**-0.5**
	comp=Z,445nm,1.4s						
ANM				LR	LR		
	comp=Z,160μm,20.0s						
GTA	**Gaotai**	**78.51**	**314**	⇑P	**P**	**01 24 25.5**	**-0.5**
GTA				S	**S**	**01 34 22.2**	**+1.0**
GTA				sS	sS	01 34 31.7	+0.2
GTA				SKS	**SKSac**	**01 34 37.9**	**-1.9**
GTA				SS	**SS**	**01 39 27.0**	**+1.8**
GTA				pmax	pmax		
	comp=Z,8μm,8.7s						
GTA				LR	LR		
	comp=Z,140μm,20.0s						
GTA				LR	LR		
	comp=Z,193μm,20.3s						
GTA				LR	LR		
	comp=Z,272μm,20.9s						
RSO	**Redoubt South**	**78.55**	**20**	*e*P	**P**	**01 24 23.7**	**-2.1**
BRLK	**Bradley Lake**	**78.68**	**21**	*e*P	**P**	**01 24 25.0**	**-1.4**
	comp=Z,272nm,0.9s						
BRLK				LR	LR		
	comp=Z,232μm,21.0s						
BILL	**Bilibino**	**78.70**	**0**	*e*P	**P**	**01 24 23.7**	**-2.6**
	comp=Z,431nm,1.1s						
BILL	**Bilibino**	**78.70**	**0**	*ce*P	**P**	**01 24 23.7**	**-2.6**
BILL				pmax	pmax		
	comp=Z,179nm,0.9s						
BILL				MLR	MLR		
	comp=Z,54μm,19.0s						
QSPA	**South Pole Qui**	**79.14**	**180**	*e*P	**P**	**01 24 28.3**	**-0.7**
QSPA				*e*S	**S**	**01 34 29.8**	**+2.7**
QSPA				LR	LR		
	comp=Z,431μm,18.0s						
QSPA	**South Pole Qui**	**79.14**	**180**	P	**P**	**01 24 28.3**	**-0.7**
	comp=Z,52nm,1.1s,baz=7.4,slow=3.0,SNR=3.7						
QSPA				LR	LR	01 57 03.9	
	comp=Z,210μm,18.6s,baz=22,slow=34						
BRDH	**Bariadhala**	**79.29**	**296**	LR	LR	02 01 48.1	
	comp=Z,16μm,19.5s,baz=152,slow=38						
SEW	**Seward**	**79.43**	**21**	*e*P	**P**	**01 24 29.9**	**-0.5**
	comp=Z,187nm,1.0s						
SHL	**Shillong**	**79.91**	**299**	*e*P	**P**	**01 24 33.0**	**-1.0**
	comp=Z,592nm,1.4s						
SHL	**Shillong**	**79.91**	**299**	*e*P	**P**	**01 24 33.1**	**-1.0**
SHL				pmax	pmax		
	comp=Z,592nm,1.4s						
SHL	**Shillong**	**79.91**	**299**	*e*P	**P**	**01 24 33.0**	**-1.0**
SHL				*i* x	x	01 34 40.0	
SUA	**Susitna One**	**79.96**	**20**	*e*P	**P**	**01 24 31.5**	**-1.9**
	comp=Z,838nm,1.8s						
RC01	**Rabbit Creek A**	**80.03**	**20**	*e*P	**P**	**01 24 33.6**	**0.0**
	comp=Z,544nm,1.5s						
BOD	**Bodaibo**	**80.12**	**335**	*e*P	**P**	**01 24 32.9**	**-1.3**
BOD				pmax	pmax		
	comp=Z,214nm,1.6s						
PPLA	**Purkeypile**	**80.54**	**18**	*e*PcP	**PcP**	**01 24 41.9**	**-1.5**
KNK	**Knik Glacier**	**80.70**	**21**	*e*P	**P**	**01 24 36.7**	**-0.6**
KNK				LR	LR		
	comp=Z,172μm,20.0s						
GHO	**Glory Hole Cre**	**80.79**	**20**	PFAKE		01 24 50.0	+12
GHO				LR	LR		
	comp=Z,203μm,19.0s						
GLI	**Glacier Island**	**80.81**	**22**	*e*P	**P**	**01 24 38.4**	**+0.5**
GLI				LR	LR		
	comp=Z,142μm,19.0s						
CAST	**Castle Rocks**	**80.96**	**18**	*e*P	**P**	**01 24 36.4**	**-2.2**
SML	**Sawmill**	**81.02**	**20**	*e*P	**P**	**01 24 39.1**	**+0.1**
SML				LR	LR		
	comp=Z,202μm,20.0s						
EYAK	**Cordova Ski Ar**	**81.08**	**22**	*e*P	**P**	**01 24 40.0**	**+0.7**
EYAK				LR	LR		
	comp=Z,192μm,20.0s						
RPN	**Rapa Nui**	**81.19**	**116**	*e*P	**P**	**01 24 37.5**	**-3.2**
	comp=Z,2μm,1.8s						
RPN	**Rapa Nui**	**81.19**	**116**	*e*P	**P**	**01 24 37.5**	**-3.2**
RPN				pmax	pmax		
	comp=Z,2μm,1.8s						
RPN	**Rapa Nui**	**81.19**	**116**	LR	LR	01 53 08.5	
	comp=Z,233μm,20.9s,baz=265,slow=30						
ZAK	**Zakamensk**	**81.22**	**325**	*e*P	**P**	**01 24 38.1**	**-2.3**
ZAK				pmax	pmax		
	comp=Z,116nm,1.5s						
SCM	**Sheep Creek Mo**	**81.38**	**21**	PFAKE		01 24 50.0	+9.0
SCM				LR	LR		
	comp=Z,106μm,20.0s						
DIV	**Divide**	**81.46**	**22**	*e*P	**P**	**01 24 40.1**	**-1.3**
	comp=Z,247nm,1.0s						
HMT	**Hamilton**	**81.51**	**23**	PFAKE		01 24 50.0	+8.4
HMT				LR	LR		
	comp=Z,226μm,20.0s						
TRF	**Thorofare Moun**	**81.54**	**19**	PFAKE		01 24 50.0	+8.1
TRF				LR	LR		
	comp=Z,56μm,21.0s						
IRK	**Irkutsk**	**81.58**	**327**	*e*P	**P**	**01 24 40.7**	**-1.5**
TLY	**Talaya**	**81.64**	**326**	*e*P	**P**	**01 24 40.3**	**-2.2**
	comp=Z,217nm,0.9s						
TLY				LR	LR		
	comp=Z,67μm,22.0s						
TLY	**Talaya**	**81.64**	**326**	*d i*P	**P**	**01 24 40.6**	**-1.9**
TLY	**Talaya**	**81.64**	**326**	P	**P**	**01 24 45.8**	**+3.2**
	SNR=65						
TLY				P	**P**	**01 24 45.8**	**+3.2**
	SNR=65						
KLU	**Klutina**	**81.65**	**21**	*e*P	**P**	**01 24 41.3**	**-1.1**
	comp=Z,276nm,1.0s						
LSA	**Lhasa**	**81.76**	**302**	P	**P**	**01 24 46.6**	**+2.4**
LSA				S	**S**	**01 34 55.1**	**-1.4**
LSA				LR	LR		
	comp=Z,35μm,20.9s						
LSA				LR	LR		
	comp=Z,24μm,20.9s						
LSA				LR	LR		
	comp=Z,101μm,20.9s						
LSA	**Lhasa**	**81.76**	**302**	*e*P	**P**	**01 24 48.2**	**+4.0**

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LSA                                  LR     LR
      comp=Z,41µm,19.0s
BMRM  Bremner River     81.78  22    PFAKE         01 24 50.0 +6.9
BMRM                                 LR     LR
      comp=Z,300nm,20.0s
BPAW  Bear Paw Mtn.     81.79  18    PFAKE         01 24 50.0 +7.0
BPAW                                 LR     LR
      comp=Z,42µm,19.0s
RND   Reindeer          81.96  19    PFAKE         01 24 50.0 +6.0
RND                                  LR     LR
      comp=Z,30µm,22.0s
RDOG  Red Dog Mine      81.97  12   eP      P      01 24 43.5 -0.4
      comp=Z,646nm,1.4s
MCK   McKinley          82.16  19    PFAKE         01 25 00.0  +15
MCK                                  LR     LR
      comp=Z,25µm,18.0s
DHY   Denali Highway    82.22  20    PFAKE         01 25 00.0  +15
DHY                                  LR     LR
      comp=Z,183µm,20.0s
HARP  HAARP             82.53  21    PFAKE         01 25 00.0  +13
HARP                                 LR     LR
      comp=Z,27µm,18.0s
MLY   Manley            82.54  17    PFAKE         01 25 00.0  +13
MLY                                  LR     LR
      comp=Z,135µm,20.0s
MCCM  Marconi Confer    82.85  49   eP      P      01 24 51.5 +2.4
MCCM                                 LR     LR
      comp=Z,229µm,20.0s
DIB   Dawson Inlet,     82.86  32   eP      P      01 24 49.7 +0.9
      comp=Z,316nm,1.4s
KCPM  Cahto Peak        82.86  47   eP      P      01 24 48.5 -0.9
      comp=Z,271nm,0.9s
KCPM                                 LR     LR
      comp=Z,176µm,21.0s
JCC   Jacoby Creek,     82.94  46   eP      P      01 24 52.2 +2.7
JCC                                  LR     LR
      comp=Z,175µm,18.0s
KMRM  Mail Ridge        82.96  47   eP      P      01 24 49.2 -0.6
      comp=Z,300nm,1.1s
KMRM                                 LR     LR
      comp=Z,223µm,19.0s
HOPS  Hopland Field     83.00  48   eP      P      01 24 50.2 +0.4
      comp=Z,287nm,1.1s
HOPS                                 LR     LR
      comp=Z,206µm,20.0s
MOY   Mondy             83.09 326   eP      P      01 24 49.1 -1.1
MOY                                  pmax   pmax
      comp=Z,520nm,3.8s
GDXM  Geysers           83.14  48   eP      P      01 24 51.2 +0.5
      comp=Z,158nm,0.9s
GDXM                                 LR     LR
      comp=Z,290µm,20.0s
KHMM  Horse Mountain    83.17  46   eP      P      01 24 51.0 +0.1
      comp=Z,633nm,1.5s
KHMM                                 LR     LR
      comp=Z,200µm,18.0s
MDM   Murphy Dome       83.24  18    PFAKE         01 25 00.0 +9.4
MDM                                  LR     LR
      comp=Z,125µm,20.0s
HDA   Harding Lake      83.26  19    PFAKE         01 25 00.0 +9.3
HDA                                  LR     LR
      comp=Z,142µm,20.0s
HDA   Harding Lake      83.26  19    P      P      01 24 48.0 -2.6
      baz=227
HDA                                  S      S      01 35 12.6 +3.1
      baz=227
TCOL  CIGO, UAF Yank    83.30  18    P      P      01 24 47.5 -3.3
      baz=226
COLA  College           83.30  18   eP      P      01 24 47.9 -2.9
      comp=Z,211nm,1.0s
COLA                                 LR     LR
      comp=Z,122µm,20.0s
COLA  College           83.30  18   i P     P      01 24 48.3 -2.5
COLA                                 pmax   pmax
      comp=Z,177nm,1.0s
COLA                                 MLR    MLR
      comp=Z,45µm,19.0s
KEBM  Edson Butte       83.46  44    PFAKE         01 25 00.0 +7.7
KEBM                                 LR     LR
      comp=Z,221µm,19.0s
SAO   San Andreas Ge    83.48  51   eP      P      01 24 52.7 +0.3
      comp=Z,223nm,1.0s
SAO                                  LR     LR
      comp=Z,382µm,18.0s
RIDG  Independ'e Rid    83.51  20    PFAKE         01 25 00.0 +8.0
RIDG                                 LR     LR
      comp=Z,185µm,20.0s
ILAR  Eielson Array     83.53  19    P      P      01 24 50.1 -1.9
      comp=Z,16nm,1.1s,baz=226,slow=6.1,SNR=16
ILAR                                 LR     LR     02 00 04.3
      comp=Z,77µm,19.2s,baz=244,slow=34
ILB   Eielson Array     83.53  19   eP      P      01 24 50.1 -1.9
      comp=Z,567nm,1.6s
POKR  Poker Plat Res    83.60  18    P      P      01 24 49.6 -2.8
      baz=227
O02D  Mt. Diablo Mer    83.61  47    P      P      01 24 51.8 -1.3
      baz=250,SNR=20
DOT   Dot Lake          83.71  20    PFAKE         01 25 00.0 +7.0
DOT                                  LR     LR
      comp=Z,94µm,20.0s
L02E  Cave Junction     83.71  45    P      P      01 24 50.7 -2.9
      baz=249
J01E  Myrtle Point      83.84  44    P      P      01 24 51.7 -2.4
      baz=249
K02D  Willamette Mer    83.86  45    P      P      01 24 52.3 -2.0
      baz=249,SNR=8.8
SNCC  San Nicolas Is    83.90  55    PFAKE         01 25 10.0  +15
SNCC                                 LR     LR
      comp=Z,225µm,18.0s
SNCC  San Nicolas Is    83.90  55    P      P      01 24 52.3 -2.4
      baz=253
WDC   Whiskeytown Da    83.92  47   eP      P      01 24 53.1 -1.5
      comp=Z,790nm,1.9s
WDC                                  LR     LR
      comp=Z,156µm,19.0s
WDC   Whiskeytown Da    83.92  47   eP      P      01 24 53.1 -1.5
WDC                                  pmax   pmax
      comp=Z,790nm,1.9s
WDC                                  MLR    MLR
      comp=Z,156µm,19.0s
N02D  Trinity Center    83.94  46    P      P      01 24 53.5 -1.3
      baz=250,SNR=7.9
SCRK  Sand Creek        83.95  20    PFAKE         01 25 00.0 +5.6
SCRK                                 LR     LR
      comp=Z,113µm,20.0s
M02C  Callahan          83.97  46    P      P      01 24 52.1 -2.9
      baz=250,SNR=16
SCZ2  Santa Cruz Isl    84.03  54    P      P      01 24 50.8 -4.6
      baz=253
PAGB  Antelope Grade    84.07  52   eP      P      01 24 56.2 +0.7
      comp=Z,329nm,1.4s
PAGB                                 LR     LR
      comp=Z,263µm,19.0s
SBC   Santa Barbara     84.11  53    P      P      01 24 53.1 -2.6
      baz=253
SMMC  Simmler           84.14  53    P      P      01 24 52.7 -3.2
      baz=252
PKM   Mcpherson Peak    84.16  53    P      P      01 24 53.9 -2.2
      baz=253
YBH   Yreka Blue Hor    84.19  46   eP      P      01 24 54.8 -1.3
      comp=Z,206nm,0.9s
YBH                                  LR     LR
      comp=Z,131µm,20.0s
I02D  Swisshome         84.24  43    P      P      01 24 54.5 -1.6
      baz=249
COLD  Coldfoot          84.29  16   eP      P      01 24 56.3 +0.5
      comp=Z,62nm,1.0s
COLD                                 LR     LR
      comp=Z,115µm,20.0s
HUMO  Hull Mountain     84.32  45   eP      P      01 24 55.8 -0.8
      comp=Z,240nm,1.0s
HUMO                                 LR     LR
      comp=Z,187µm,20.0s
ORV   Oroville          84.33  48   eP      P      01 24 54.7 -2.0
      comp=Z,560nm,1.8s
ORV                                  LR     LR
      comp=Z,114µm,20.0s
ORV   Oroville          84.33  48   eP      P      01 24 54.7 -2.0
ORV                                  pmax   pmax
      comp=Z,560nm,1.8s
ORV                                  MLR    MLR
      comp=Z,114µm,20.0s
O03E  Paynes Creek      84.36  47    P      P      01 24 53.1 -3.8
      baz=251,SNR=35
BESE  Bessie Mountai    84.39  27   eP      P      01 24 59.8 +3.2
BESE                                 LR     LR
      comp=Z,259µm,19.0s
I03D  Drain, OR         84.43  44    P      P      01 24 54.5 -2.6
      baz=249
JIS   Juneau Island     84.44  28   eP      P      01 24 59.9 +3.2
PRP   Porcupine Dome    84.46  19    PFAKE         01 25 10.0  +13
PRP                                  LR     LR
      comp=Z,97µm,20.0s
HYT   Haines Junctio    84.47  24   eP      P      01 24 56.0 -1.0
      comp=Z,174nm,1.0s
HYT                                  LR     LR
      comp=Z,224µm,19.0s
WRAK  Wrangell Islan    84.48  30   eP      P      01 24 57.3 +0.3
      comp=Z,731nm,1.6s
WRAK                                 LR     LR
      comp=Z,158µm,20.0s
BLG   Laguna Peak, P    84.52  54    P      P      01 24 55.1 -2.7
      baz=253
AFDM  Forest Hills D    84.53  49   eP      P      01 24 55.9 -1.8
      comp=Z,233nm,1.0s
AFDM                                 LR     LR
      comp=Z,181µm,20.0s
KNGR  Kungurtug, Tuv    84.61 324   eP      P      01 24 55.0 -3.0
SCI2  San Clemente I    84.61  55    P      P      01 24 55.6 -2.7
      baz=254
L04D  Klamath Falls     84.64  45    P      P      01 24 55.7 -2.7
      baz=250,SNR=10
MAW   Mawson            84.67 202    P      P      01 24 59.3 +1.4
MAW                                  LR     LR
      comp=Z,45µm,22.0s
MAW   Mawson            84.67 202    P      P      01 24 59.3 +1.4
MAW                                  MLR    MLR
      comp=Z,45µm,22.0s
MAW   Mawson            84.67 202    P      P      01 24 59.3 +1.4
      comp=Z,61nm,1.0s,baz=244,slow=7.1,SNR=2.1
MAW                                  LR     LR     01 57 46.8
      comp=Z,199µm,21.7s,baz=109,slow=32
CMB   Columbia Colle    84.68  50   eP      P      01 24 56.7 -1.9
      comp=Z,141nm,0.9s
CMB                                  LR     LR
      comp=Z,342µm,20.0s
CMB   Columbia Colle    84.68  50   eP      P      01 24 56.7 -1.9
CMB                                  pmax   pmax
      comp=Z,141nm,0.9s
CMB                                  MLR    MLR
      comp=Z,342µm,20.0s
BOK   Bokaro            84.69 295   eP      P      01 24 57.9 -1.0
BBB   Bella Bella       84.77  35    PFAKE         01 25 10.0  +11
BBB                                  LR     LR
      comp=Z,282µm,20.0s
COR   Corvallis         84.78  43    PFAKE         01 25 10.0  +11
COR                                  LR     LR
      comp=Z,129µm,19.0s
M04C  Macdoel           84.82  46    P      P      01 24 56.6 -2.7
      baz=251,SNR=15
CIS   Catalina Islan    84.84  55    P      P      01 24 57.0 -2.4
      baz=254
RAMN  Ramite            84.85 299   eP      P      01 25 00.0 +0.1
      comp=Z,2µm,1.9s
VOG   Valley Oaks Go    84.92  52    P      P      01 24 57.1 -2.6
      baz=253
OSI   Osito Audit: C    84.94  54    PFAKE         01 25 10.0  +10
OSI                                  LR     LR
      comp=Z,289µm,19.0s
OSI   Osito Audit: C    84.94  54    P      P      01 24 58.2 -1.7
      baz=253
ARVC  Arvin             85.00  53    P      P      01 24 59.9 -0.3
      baz=253
VES   Vestal, Richgr    85.01  52    P      P      01 24 57.2 -3.0
      baz=253,SNR=10.0
FMP   Fort Macarthur    85.02  54    P      P      01 24 58.6 -1.7
      baz=254
G03D  McMinnville, O    85.02  42    P      P      01 24 58.0 -2.1
      baz=249
PAF   Port-aux-Franc    85.04 221    PFAKE         01 25 10.0  +10
PAF                                  LR     LR
      comp=Z,177µm,20.0s
I04A  Tendick Farm,     85.10  44    P      P      01 24 58.7 -1.8
      baz=250
J04D  Umpqua Nationa    85.12  44    P      P      01 24 59.1 -1.7
      baz=250
H04D  Lebanon           85.13  43    P      P      01 24 59.5 -1.1
      baz=250
DECC  Green Verdugo     85.14  54    P      P      01 24 58.6 -2.4
      baz=254
K04D  Chiloquin, OR     85.16  45    P      P      01 24 58.0 -3.0
      baz=251
RUBR  Rubicon Trail     85.17  49    PFAKE         01 25 10.0 +8.8
RUBR                                 LR     LR
      comp=Z,222µm,20.0s
PASC  Pasadena Art C    85.24  54   eP      P      01 25 01.8 +0.4
      comp=Z,103nm,1.0s
PASC                                 LR     LR
      comp=Z,306µm,19.0s
FYU   Fort Yukon        85.25  18   eP      P      01 25 02.1 +1.5
      comp=Z,268nm,1.3s
FYU                                  LR     LR
      comp=Z,121µm,19.0s
BEKR  Beckworth         85.27  48   eP      P      01 25 00.4 -1.3
      comp=Z,147nm,1.0s
BEKR                                 LR     LR
      comp=Z,144µm,20.0s
MWC   Mount Wilson      85.35  54   eP      P      01 25 01.7 -0.5
      comp=Z,483nm,1.4s
MWC                                  LR     LR
      comp=Z,310µm,19.0s
JIRN  Jiri              85.38 299   eP      P      01 25 01.6 -1.1
      comp=Z,1µm,1.7s
NLWA  Neilton Lookou    85.41  40   eP      P      01 25 04.7 +2.7
NLWA                                 LR     LR
      comp=Z,168µm,18.0s
EGAK  Eagle             85.41  20    PFAKE         01 25 10.0 +8.5
EGAK                                 LR     LR
      comp=Z,92µm,22.0s
ISA   Isabella, Lake    85.43  53   eP      P      01 25 01.2 -1.3
      comp=Z,144nm,1.0s
ISA                                  LR     LR
      comp=Z,207µm,19.0s
ISA   Isabella, Lake    85.43  53    P      P      01 24 59.7 -2.8
      baz=253,SNR=18
WHY   Whitehorse        85.46  25   eP      P      01 25 00.5 -1.6
      comp=Z,176nm,1.4s
WHY                                  LR     LR
      comp=Z,236µm,19.0s
F04D  Rainier, OR       85.49  42    P      P      01 25 00.7 -1.7
      baz=249
WAKR  Walker            85.53  50   eP      P      01 25 01.6 -1.4
      comp=Z,399nm,1.3s
WAKR                                 LR     LR
      comp=Z,406µm,20.0s
MDPB  Devils Postpil    85.54  51   eP      P      01 25 00.4 -2.8
      comp=Z,161nm,0.9s
MDPB                                 LR     LR
      comp=Z,282µm,20.0s
H04A  Detroit Lake      85.56  43   eP      P      01 25 03.0 +0.2
      comp=Z,170nm,1.1s
H04A                                 LR     LR
      comp=Z,142µm,20.0s
EDW2  Edwards Air Fo    85.59  53    P      P      01 25 00.1 -3.1
      baz=254,SNR=48
PNTR  Pine Nut          85.59  49   eP      P      01 25 03.7 +0.4
      comp=Z,685nm,1.7s
PNTR                                 LR     LR
      comp=Z,228µm,20.0s
OMMB  Old Mammoth Mi    85.60  51   eP      P      01 25 03.7 +0.2
      comp=Z,171nm,1.2s
OMMB                                 LR     LR
      comp=Z,344µm,19.0s
DAWY  Dawson            85.60  21   eP      P      01 25 01.6 -1.0
      comp=Z,192nm,1.1s
DAWY                                 LR     LR
      comp=Z,138µm,20.0s
VCNR  Virginia City     85.61  49   eP      P      01 25 04.3 +0.9
      comp=Z,304nm,1.6s
VCNR                                 LR     LR
      comp=Z,210µm,19.0s
BFSC  Mount Baldy Ra    85.67  54    P      P      01 25 01.2 -2.5
      baz=254,SNR=34
GUN   Gumba             85.71 299   eP      P      01 25 03.1 -1.2
      comp=Z,2µm,1.6s
MLAC  Mammoth, Mammo85.73  51    P      P      01 25 02.8 -1.2
      baz=253
J05D  Fort Rock, OR     85.74  45    P      P      01 25 03.9  0.0
      baz=251
109C  Camp Elliot, M    85.75  56    P      P      01 25 01.6 -2.4
      baz=254
CPE   Camp Elliot       85.75  56   eP      P      01 25 04.1 +0.1
      comp=Z,469nm,1.6s
CPE                                  LR     LR
      comp=Z,200µm,19.0s
TIXI  Tiksi             85.80 349   eP      P      01 24 59.9 -3.5
TIXI                                 LR     LR
      comp=Z,75µm,20.0s
TIXI  Tiksi             85.80 349  ceP      P      01 25 01.6 -1.7
TIXI                                 pmax   pmax
      comp=Z,336nm,1.8s
TIXI                                 MLR    MLR
      comp=Z,57µm,18.0s
TIXI  Tiksi             85.80 349    LR     LR     02 01 16.2
      comp=Z,49µm,20.3s,baz=144,slow=34
YERR  Yerington         85.82  49   eP      P      01 25 03.2 -1.3
      comp=Z,212nm,1.3s
YERR                                 LR     LR
      comp=Z,259µm,19.0s
MURC  Murrieta          85.87  55    P      P      01 25 02.5 -2.1
      baz=254
PAHR  Pah Rah Range     85.93  48   eP      P      01 25 03.3 -1.7
      comp=Z,274nm,1.2s
PAHR                                 LR     LR
      comp=Z,181µm,20.0s
PALK  Pallekele         85.94 278   eP      P      01 25 07.9 +2.5
PALK                                 LR     LR
      comp=Z,92µm,21.0s
PALK  Pallekele         85.94 278    P      P      01 25 07.0 +1.6
      SNR=7.7
PALK  Pallekele         85.94 278    LR     LR     02 06 32.9
      comp=Z,70µm,20.6s,baz=116,slow=38
MOD   Modoc Plateau     85.95  46   eP      P      01 25 03.2 -1.8
      comp=Z,233nm,1.3s
MOD                                  LR     LR
      comp=Z,164µm,19.0s
E04D  Cinebar           85.95  41    P      P      01 25 03.2 -1.4
      baz=250
D03D  Eldon             85.96  40    P      P      01 25 02.9 -1.7
      baz=249
CWC   Cottonwood Cre    85.96  52    P      P      01 25 02.6 -2.5
      baz=254
LRMC  Laurel Mtn Rad    86.00  53    P      P      01 25 03.5 -1.8
      baz=254,SNR=6.5
I05D  Terrebonne, OR    86.01  44    P      P      01 25 02.9 -2.2
      baz=251
TIN   Tinemaha, Big     86.02  51    P      P      01 25 02.2 -3.1
      baz=253,SNR=8.2
PKI   Pulchoki          86.03 299   eP      P      01 25 04.9 -1.0
      comp=Z,771nm,1.3s
D04E  Lakebay           86.03  41    P      P      01 25 04.0 -1.0
      baz=250
PKIN  Phulchoki         86.04 299   eP      P      01 25 05.3 -0.6
      comp=Z,896nm,1.6s
BAR   Barrett           86.05  56   eP      P      01 25 05.3 -0.2
      comp=Z,248nm,1.4s
BAR                                  LR     LR
      comp=Z,159µm,19.0s
PINE  Pine Mountain     86.11  44   eP      P      01 25 04.4 -1.3
      comp=Z,235nm,1.1s
PINE                                 LR     LR
      comp=Z,207µm,20.0s
PGC   Sidney            86.13  39   eP      P      01 25 04.2 -1.2
RYN   Ryan              86.25  50   eP      P      01 25 05.0 -1.6
      comp=Z,135nm,1.0s
RYN                                  LR     LR
      comp=Z,337µm,19.0s
BBRC  Big Bear Solar    86.27  54    P      P      01 25 04.1 -2.7
      baz=254
DAC   Darwin (Calif)    86.29  52   eP      P      01 25 04.6 -2.2
      comp=Z,142nm,1.0s
DAC                                  LR     LR
      comp=Z,243µm,21.0s
DAC   Darwin (Calif)    86.29  52   eP      P      01 25 04.6 -2.2
DAC                                  pmax   pmax
      comp=Z,142nm,1.0s
DAC                                  MLR    MLR
      comp=Z,243µm,21.0s
DMN   Daman             86.30 299   eP      P      01 25 06.8 -0.4
      comp=Z,1µm,1.4s
MONP2 Monument Peak     86.30  56    P      P      01 25 05.7 -1.3
      baz=255,SNR=21
MPMC  Manual Prospec    86.31  52    P      P      01 25 05.0 -1.9
      baz=254,SNR=42
G05D  Wamic, OR         86.33  43    P      P      01 25 04.4 -2.2
      baz=251
NV01  Mina Array Sit    86.36  50   eP      P      01 25 04.3 -2.8
NVAR  Mina Array Bea    86.36  50    P      P      01 25 05.5 -1.6
      comp=Z,18nm,0.9s,baz=233,slow=7.9,SNR=32
NVAR                                 LR     LR     02 00 02.0
      comp=Z,253µm,18.2s,baz=267,slow=33
RRX   Edison Barstow    86.37  54    P      P      01 25 05.7 -1.4
      baz=254
F05D  White Salmon      86.44  42    P      P      01 25 06.3 -0.8
      baz=251
PFO   Pinyon Flats O    86.46  55   eP      P      01 25 05.9 -1.8
      comp=Z,238nm,1.4s
PFO                                  LR     LR
      comp=Z,228µm,18.0s
PFO   Pinyon Flats O    86.46  55    P      P      01 25 05.4 -2.2
      baz=255,SNR=18
PFO   Pinyon Flats O    86.46  55    P      P      01 25 06.1 -1.5
      comp=Z,17nm,0.8s,baz=257,slow=4.2,SNR=11
XPFO  Pion Flat         86.47  55   eP      P      01 25 05.9 -1.8
      comp=Z,231nm,1.4s
XPFO                                 LR     LR
      comp=Z,228µm,20.0s
NV11  Mina Array Sit    86.47  50   eP      P      01 25 05.8 -1.9
      comp=Z,27nm,1.2s
NV11                                 LR     LR
      comp=Z,25µm,20.0s
IKP   In-Ko-Pah, Jac    86.50  56    P      P      01 25 06.9 -0.8
      baz=255,SNR=12
LON   Longmire          86.50  41   eP      P      01 25 07.2 -0.3
      comp=Z,424nm,1.8s
LON                                  LR     LR
      comp=Z,139µm,20.0s
DLBC  Dease Lake        86.53  28   eP      P      01 25 06.1 -1.2
      comp=Z,134nm,1.3s
DLBC                                 LR     LR
      comp=Z,182µm,19.0s
D05A  Enumclaw          86.54  41   eP      P      01 25 08.7 +1.1
      comp=Z,1µm,1.4s
D05A                                 LR     LR
      comp=Z,120µm,20.0s
A04D  Lummi Island      86.61  39    P      P      01 25 05.8 -2.0
      baz=250
GSC   Goldstone, Bar    86.64  53   eP      P      01 25 07.2 -1.2
      comp=Z,294nm,1.5s
GSC                                  LR     LR
      comp=Z,287µm,19.0s
GSC   Goldstone, Bar    86.64  53    P      P      01 25 07.3 -1.2
      baz=254,SNR=16
GRAC  Grapevine Rang    86.67  52    P      P      01 25 06.8 -1.7
      baz=254,SNR=19
KVN   Kaiserville       86.69  49   eP      P      01 25 06.9 -1.8
      comp=Z,178nm,1.1s
KVN   Kaiserville       86.69  49   eP      P      01 25 06.9 -1.8
KVN                                  pmax   pmax
      comp=Z,178nm,1.1s
SWSC  Sam W. Stewart    86.82  56    P      P      01 25 07.5 -1.7
      baz=255,SNR=17
B05A  Bryant            86.84  40    P      P      01 25 06.9 -2.0
      baz=250
HEC   Hector,Ludlow     86.89  54    P      P      01 25 06.8 -2.8
      baz=255,SNR=18
FURC  Furnace Creek,    86.91  52    P      P      01 25 07.6 -2.0
      baz=254,SNR=6.8
BELC  Belle Mtn. Jos    86.94  55    P      P      01 25 08.1 -1.9
      baz=255,SNR=25
I07A  Izee              87.18  44   eP      P      01 25 09.3 -1.6
      comp=Z,364nm,1.4s
I07A                                 LR     LR
      comp=Z,173µm,18.0s
SHOC  Shoshone, Teco    87.22  53    P      P      01 25 08.1 -3.1
      baz=255,SNR=7.8
BC3   Big Chuckawall    87.28  55    P      P      01 25 09.1 -2.6
      baz=255,SNR=22
WVOR  Wild Horse Val    87.29  46   eP      P      01 25 09.9 -1.6
      comp=Z,304nm,1.1s
WVOR                                 LR     LR
      comp=Z,131µm,19.0s
WVOR  Wild Horse Val    87.29  46   eP      P      01 25 09.9 -1.6
WVOR                                 pmax   pmax
      comp=Z,304nm,1.1s
WVOR                                 MLR    MLR
      comp=Z,131µm,19.0s
B06A  Marblemount       87.31  40   eP      P      01 25 11.6 +0.4
      comp=Z,354nm,1.6s
B06A                                 LR     LR
      comp=Z,190µm,19.0s
TUQ   Turquoise Moun    87.37  53    P      P      01 25 08.8 -3.2
      baz=255,SNR=11
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LTY	**Liberty**	87.41	41	*e*P	P	01 25 11.7	-0.2
	comp=Z,212nm,1.3s						
LTY				LR	LR		
	comp=Z,126µm,19.0s						
GMRC	**Granite Mounta**	87.41	54	P	P	01 25 09.0	-3.3
	baz=255,SNR=39						
F07A	**Phinny Hill Vi**	87.46	42	*e*P	P	01 25 12.2	+0.1
	comp=Z,207nm,1.1s						
F07A				LR	LR		
	comp=Z,94µm,20.0s						
C06D	**Leavenworth**	87.48	40	P	P	01 25 10.7	-1.4
	baz=251						
TPNV	**Topopah Spring**	87.52	52	*e*P	P	01 25 12.6	-0.1
	comp=Z,258nm,1.4s						
TPNV				LR	LR		
	comp=Z,227µm,21.0s						
TPNV	**Topopah Spring**	87.52	52	*e*P	P	01 25 12.6	-0.1
TPNV				pmax	pmax		
	comp=Z,258nm,1.4s						
TPNV				MLR	MLR		
	comp=Z,227µm,21.0s						
TPNV	**Topopah Spring**	87.52	52	P	P	01 25 10.5	-2.2
	baz=255,SNR=9.6						
TPNV				S	S	01 35 51.6	-1.4
	baz=255						
MDRS	**Chennai**	87.53	284	*e*P	P	01 25 11.8	-1.2
DANN	**Dangsing**	87.63	299	*e*P	P	01 25 10.2	-3.5
	comp=Z,1µm,1.7s						
GLA	**Glamis**	87.64	56	*e*P	P	01 25 12.8	-0.5
	comp=Z,348nm,1.1s						
GLA				LR	LR		
	comp=Z,146µm,19.0s						
GLA	**Glamis**	87.64	56	P	P	01 25 12.1	-1.2
	baz=256,SNR=17						
IRM	**Iron Mountain**	87.66	55	P	P	01 25 11.9	-1.5
	baz=255,SNR=33						
J08A	**Circle Bar Ran**	87.67	45	*e*P	P	01 25 11.7	-1.6
	comp=Z,308nm,1.1s						
J08A				LR	LR		
	comp=Z,160µm,20.0s						
BMN	**Battle Mountai**	87.73	48	*e*P	P	01 25 12.7	-1.0
	comp=Z,376nm,1.8s						
BMN				LR	LR		
	comp=Z,121µm,19.0s						
BMN	**Battle Mountai**	87.73	48	*e*P	P	01 25 12.7	-1.0
BMN				pmax	pmax		
	comp=Z,377nm,1.8s						
BMN				MLR	MLR		
	comp=Z,121µm,19.0s						
LLLB	**Lillooet**	87.77	38	*e*P	P	01 25 13.4	-0.1
	comp=Z,335nm,1.7s						
LLLB				LR	LR		
	comp=Z,278µm,19.0s						
HAWA	**Hanford**	87.88	42	*e*P	P	01 25 14.4	+0.3
	comp=Z,241nm,1.4s						
HAWA				LR	LR		
	comp=Z,104µm,20.0s						
G08A	**Pilot Rock**	87.92	43	*e*P	P	01 25 12.3	-2.1
	comp=Z,257nm,1.1s						
G08A				LR	LR		
	comp=Z,136µm,19.0s						
LDFC	**Landfair**	87.92	54	*e*P	P	01 25 13.4	-1.3
	comp=Z,610nm,1.2s						
LDFC				LR	LR		
	comp=Z,326µm,19.0s						
Y12C	**Blythe**	88.06	55	*e*P	P	01 25 14.0	-1.2
	comp=Z,453nm,1.4s						
Y12C				LR	LR		
	comp=Z,148µm,21.0s						
Y12C	**Blythe**	88.06	55	P	P	01 25 14.8	-0.4
	baz=256,SNR=26						
E08A	**Dider Farm, El**	88.22	42	*e*P	P	01 25 14.2	-1.5
	comp=Z,410nm,1.4s						
E08A				LR	LR		
	comp=Z,106µm,18.0s						
NEE2	**Needles Airpor**	88.23	54	P	P	01 25 14.3	-1.8
	baz=256						
PYUN	**Piuthan**	88.24	299	*e*P	P	01 25 14.0	-2.4
	comp=Z,94nm,1.1s						
SHPR	**Sheep Range**	88.25	52	*e*P	P	01 25 15.0	-1.2
	comp=Z,613nm,1.9s						
SHPR				LR	LR		
	comp=Z,239µm,19.0s						
R11A	**Troy Canyon, C**	88.39	51	*e*P	P	01 25 15.1	-1.9
	comp=Z,319nm,1.8s						
R11A				LR	LR		
	comp=Z,289µm,19.0s						
R11A	**Troy Canyon, C**	88.39	51	P	P	01 25 15.0	-1.9
	baz=255						
113A	**Mohawk Valley,**	88.44	56	*e*P	P	01 25 16.2	-0.8
	comp=Z,599nm,2.0s						
113A				LR	LR		
	comp=Z,292µm,19.0s						
SRIG	**Santa Rosalia**	88.46	62	*e*P	P	01 25 16.5	-0.7
	comp=Z,652nm,1.9s						
SRIG				LR	LR		
	comp=Z,178µm,22.0s						
D08A	**Wollman Farm,**	88.48	42	*e*P	P	01 25 15.2	-1.7
	comp=Z,273nm,1.4s						
D08A				LR	LR		
	comp=Z,124µm,20.0s						
PDMCI	**Parker Dam,Lak**	88.50	55	P	P	01 25 15.2	-2.1
	baz=256,SNR=23						
WMQ	**Urumqi**	88.55	315	P	P	01 25 17.5	+0.1
WMQ				pP	pwP	01 25 29.0	+0.4
WMQ				PP	PP	01 28 45.2	-0.7
WMQ				SKS	SKSac	01 35 44.2	-1.0
WMQ				S	S	01 36 02.7	+0.4
WMQ				sS	sS	01 36 14.9	+2.1
WMQ				pmax	pmax		
	comp=Z,360nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,48µm,11.5s						
WMQ				LR	LR		
	comp=Z,180µm,16.1s						
WMQ				LR	LR		
	comp=Z,93µm,22.5s						
WMQ				LR	LR		
	comp=Z,123µm,28.9s						
WMQ	**Urumqi**	88.55	315	*e*P	P	01 25 18.3	+0.9
	comp=Z,694nm,1.7s						
WMQ				LR	LR		
	comp=Z,137µm,21.0s						
B08A	**Colville Reser**	88.61	40	*e*P	P	01 25 15.2	-2.3
	comp=Z,319nm,1.5s						
B08A				LR	LR		
	comp=Z,78µm,20.0s						
E09A	**Wood Farm, Sta**	88.83	42	*e*P	P	01 25 18.5	0.0
	comp=Z,427nm,1.7s						
E09A				LR	LR		
	comp=Z,98µm,20.0s						
W13A	**Hualapai Mount**	88.90	54	*e*P	P	01 25 17.3	-2.1
	comp=Z,436nm,1.6s						
W13A				LR	LR		
	comp=Z,227µm,18.0s						
BMO	**Blue Mountains**	88.91	44	*e*P	P	01 25 17.1	-2.0
	comp=Z,259nm,1.5s						
BMO				LR	LR		
	comp=Z,160µm,20.0s						
BMO	**Blue Mountains**	88.91	44	*e*P	P	01 25 17.1	-2.0
BMO				pmax	pmax		
	comp=Z,259nm,1.5s						
BMO				MLR	MLR		
	comp=Z,160µm,20.0s						
214A	**Organ Pipe Nat**	89.03	57	P	P	01 25 18.3	-1.5
	baz=257,SNR=67						
C09A	**Chrisman Ranch**	89.12	41	*e*P	P	01 25 19.6	-0.3
	comp=Z,221nm,1.5s						
C09A				LR	LR		
	comp=Z,129µm,20.0s						
KRAR	**Krasnoyarsk**	89.25	328	*i* P	P	01 25 19.8	-0.4
ELK	**Elko**	89.27	48	*e*P	P	01 25 19.5	-1.6
	comp=Z,190nm,1.5s						
ELK				LR	LR		
	comp=Z,183µm,20.0s						
ELK	**Elko**	89.27	48	*e*P	P	01 25 19.5	-1.6
ELK				pmax	pmax		
	comp=Z,190nm,1.5s						
ELK				MLR	MLR		
	comp=Z,183µm,20.0s						
F10A	**Beach Ranch, E**	89.28	43	*e*P	P	01 25 18.8	-2.0
	comp=Z,770nm,1.8s						
F10A				LR	LR		
	comp=Z,97µm,19.0s						
Y14A	**Wickenburg**	89.33	55	*e*P	P	01 25 19.9	-1.4
	comp=Z,264nm,1.6s						
Y14A				LR	LR		
	comp=Z,192µm,21.0s						
LPIG	**La Paz**	89.47	65	P	P	01 25 21.7	-0.4
	comp=Z,19nm,0.5s,baz=157,slow=7.7,SNR=3.5						
MFID	**Camas Ranch**	89.54	46	*e*P	P	01 25 21.0	-1.2
	comp=Z,489nm,1.8s						
MFID				LR	LR		
	comp=Z,177µm,20.0s						
SLBS	**Sierra La Lagu**	89.71	66	*e*P	P	01 25 24.0	+0.7
	comp=Z,247nm,1.4s						
SLBS				LR	LR		
	comp=Z,208µm,20.0s						
PSUT	**Pine Spring**	89.75	51	*e*P	P	01 25 21.8	-1.5
	comp=Z,150nm,1.0s						
PSUT				LR	LR		
	comp=Z,220µm,20.0s						
TRD	**Trivandrum**	89.81	279	*e*P	P	01 25 22.0	-1.9
JBP	**Jabalpur**	89.83	294⇑	*e*P	P	01 25 23.0	-0.7
JBP				*e*x	x	01 29 32.9	
JBP				AMS	AMS	02 04 47.0	
	comp=Z,57µm,26.8s						
LCMT	**Little Creek M**	89.86	52	*e*P	P	01 25 22.5	-1.3
	comp=Z,354nm,1.5s						
LCMT				LR	LR		
	comp=Z,184µm,20.0s						
CCUT	**Cedar City**	89.90	52	*e*P	P	01 25 23.0	-1.1
	comp=Z,178nm,1.1s						
INK	**Inuvik**	89.92	19	*e*P	P	01 25 22.6	-0.5
	comp=Z,219nm,1.8s						
INK	**Inuvik**	89.92	19	P	P	01 25 21.7	-1.4
	comp=Z,3.6nm,1.1s,baz=229,slow=9.7,SNR=7.6						
INK				LR	LR	02 02 52.4	
	comp=Z,128µm,20.2s,baz=225,slow=34						
HSIG		89.95	61	*e*P	P	01 25 23.9	-0.3
	comp=Z,282nm,1.3s						
HSIG				LR	LR		
	comp=Z,187µm,20.0s						
NEW	**Newport**	89.99	41	*e*P	P	01 25 22.3	-1.7
	comp=Z,209nm,1.5s						
NEW				LR	LR		
	comp=Z,84µm,19.0s						
NEW	**Newport**	89.99	41	*e*P	P	01 25 22.3	-1.7
NEW				pmax	pmax		
	comp=Z,209nm,1.5s						
NEW				MLR	MLR		
	comp=Z,84µm,19.0s						
NEW	**Newport**	89.99	41	P	P	01 25 22.1	-1.9
	baz=254						
HYB	**Hyderabad**	90.00	288	*i* P	P	01 25 28.0	+3.3
HYB				*e*PP	PP	01 29 00.0	+2.0
HYB				*e*SKS	SKSac	01 35 56.0	+1.3
HYB				*e*S	SKKSac	01 36 12.0	+4.0
HYB	**Hyderabad**	90.00	288	*e*P	P	01 25 24.5	-0.2
HYB				IAmb	IAmb	01 25 45.5	
	comp=Z,7µm,6.5s						
SZCU	**Shurtz Canyon**	90.12	52	*e*P	P	01 25 24.4	-0.7
	comp=Z,474nm,1.7s						
SZCU				LR	LR		
	comp=Z,285µm,19.0s						
KNB	**Kanab**	90.19	52	*e*P	P	01 25 24.7	-0.7
	comp=Z,856nm,1.7s						
KNB				LR	LR		
	comp=Z,186µm,19.0s						
KNB	**Kanab**	90.19	52	*e*P	P	01 25 24.7	-0.7
KNB				pmax	pmax		
	comp=Z,856nm,1.7s						
KNB				MLR	MLR		
	comp=Z,186µm,19.0s						
NGP	**Nagpur**	90.27	291	*e*P	P	01 25 24.2	-1.7
NGP				*e*x	x	01 35 47.8	
DGZ	**Jazzator, Alta**	90.38	321*c*	*i*P	P	01 25 23.6	-2.3
DGZ				pmax	pmax		
	comp=Z,39nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,55µm,17.0s						
U15A	**North Rim**	90.47	53	*e*P	P	01 25 25.1	-1.7
	comp=Z,201nm,0.9s						
U15A				LR	LR		
	comp=Z,203µm,19.0s						
HLID	**Hailey**	90.58	46	*e*P	P	01 25 25.2	-1.8
	comp=Z,119nm,1.0s						
HLID				LR	LR		
	comp=Z,179µm,20.0s						
HLID	**Hailey**	90.58	46	P	P	01 25 27.5	+0.5
	baz=256						
PKCU	**Pink Cliffs**	90.69	52	*e*P	P	01 25 27.5	-0.3
	comp=Z,1µm,1.9s						
PKCU				LR	LR		
	comp=Z,238µm,21.0s						
X16A	**Lo Mia Camp, P**	90.70	55	*e*P	P	01 25 26.7	-1.1
	comp=Z,128nm,0.9s						
X16A				LR	LR		
	comp=Z,206µm,22.0s						
TUC	**Tucson**	90.79	57	*e*P	P	01 25 27.2	-0.9
	comp=Z,158nm,1.3s						
TUC				LR	LR		
	comp=Z,270µm,19.0s						
TUC	**Tucson**	90.79	57	*e*P	P	01 25 27.2	-0.9
TUC				pmax	pmax		
	comp=Z,158nm,1.3s						
TUC				MLR	MLR		
	comp=Z,270µm,19.0s						
TUC	**Tucson**	90.79	57	P	P	01 25 26.5	-1.6
	baz=258						
MTPU	**Mount Pierson**	90.92	52	*e*P	P	01 25 28.2	-0.8
	comp=Z,172nm,1.0s						
MTPU				LR	LR		
	comp=Z,287µm,19.0s						
DUG	**Dugway, Tooele**	90.93	49	*e*P	P	01 25 27.2	-1.4
	comp=Z,355nm,1.7s						
DUG				LR	LR		
	comp=Z,222µm,20.0s						
DUG	**Dugway, Tooele**	90.93	49	*e*P	P	01 25 27.3	-1.4
DUG				pmax	pmax		
	comp=Z,355nm,1.7s						
DUG				MLR	MLR		
	comp=Z,222µm,20.0s						
DUG	**Dugway, Tooele**	90.93	49	P	P	01 25 27.5	-1.2
	baz=257						
BGU	**Big Grassy Mou**	90.94	49	*e*P	P	01 25 27.1	-1.7
	comp=Z,437nm,1.8s						
BGU				LR	LR		
	comp=Z,209µm,19.0s						
WUAZ	**Wupatki**	91.00	54	*e*P	P	01 25 28.4	-0.7
	comp=Z,168nm,1.0s						
WUAZ				LR	LR		
	comp=Z,155µm,20.0s						
WUAZ	**Wupatki**	91.00	54	P	P	01 25 27.8	-1.3
	baz=258						
MSU	**Marysvale**	91.03	51	*e*P	P	01 25 28.6	-0.7
MSU	**Marysvale**	91.03	51	*e*P	P	01 25 28.6	-0.7
DGAR	**Diego Garcia**	91.24	262	*e*P	P	01 25 29.1	-1.4
	comp=Z,277nm,1.4s						
DGAR				LR	LR		
	comp=Z,134µm,19.0s						
DGAR	**Diego Garcia**	91.24	262	*i* P	P	01 25 29.7	-0.8
DGAR				pmax	pmax		
	comp=Z,185nm,1.4s						
DGAR				MLR	MLR		
	comp=Z,121µm,19.0s						
HVU	**Hansel Valley**	91.32	48	*e*P	P	01 25 28.6	-1.9
	comp=Z,196nm,1.0s						
HVU				LR	LR		
	comp=Z,141µm,20.0s						
HVU	**Hansel Valley**	91.32	48	*e*P	P	01 25 28.6	-1.9
HVU				pmax	pmax		
	comp=Z,197nm,1.0s						
HVU				MLR	MLR		
	comp=Z,141µm,20.0s						
NLU	**North Lily Min**	91.43	50	*e*P	P	01 25 29.6	-1.5
	comp=Z,128nm,1.0s						
NLU				LR	LR		
	comp=Z,391µm,19.0s						
ZSN	**Zaisan**	91.43	318	*e*P	P	01 25 28.9	-1.8
ZSN				MLR	MLR		
	comp=Z,7µm,16.0s						
ZSN	**Zaisan**	91.43	318	*e*P	P	01 25 28.9	-1.8
ZSN				*e*LRM	MLR	02 07 38.2	
	comp=Z,7µm,15.9s						
SPUT	**South Promonto**	91.45	48	*e*P	P	01 25 29.7	-1.4
	comp=Z,446nm,1.7s						
SPUT				LR	LR		
	comp=Z,164µm,19.0s						
MSO	**Missoula**	91.70	43	*e*P	P	01 25 32.0	-0.1
	comp=Z,75nm,1.0s						
MSO				LR	LR		
	comp=Z,94µm,19.0s						
MSO	**Missoula**	91.70	43	P	P	01 25 31.7	-0.4
	baz=256						
MPU	**Maple Canyon**	91.77	50	*e*P	P	01 25 31.9	-0.8
	comp=Z,401nm,1.7s						
MPU				LR	LR		
	comp=Z,376µm,19.0s						
SYO	**Syowa Base**	91.78	197⇑	*i*P	P	01 25 29.0	-2.9
SYO	**Syowa Base**	91.78	197⇓	*i*P	P	01 25 34.8	+2.9
CTU	**Camp Tracy**	91.83	49	*e*P	P	01 25 32.0	-1.0
	comp=Z,138nm,1.0s						
CTU				LR	LR		
	comp=Z,212µm,18.0s						
319A	**Douglas**	91.85	59	*e*P	P	01 25 33.8	+0.6
	comp=Z,184nm,1.3s						
319A				LR	LR		
	comp=Z,230µm,20.0s						
Q16A	**Castle Valley**	91.89	51	*e*P	P	01 25 32.8	-0.5
	comp=Z,491nm,1.7s						
Q16A				LR	LR		
	comp=Z,227µm,20.0s						
X18A	**Snowflake**	91.93	55	*e*P	P	01 25 32.8	-0.8
	comp=Z,406nm,1.9s						
X18A				LR	LR		
	comp=Z,193µm,21.0s						
TMUT	**Trail Mountain**	91.94	51	*e*P	P	01 25 33.1	-0.5
	comp=Z,215nm,1.4s						
TMUT				LR	LR		
	comp=Z,154µm,20.0s						
MCMT	**McKenzie Canyo**	91.97	45	*e*P	P	01 25 32.2	-1.4
JLU	**Jordanelle**	92.04	49	*e*P	P	01 25 32.5	-1.5
	comp=Z,376nm,1.6s						
JLU				LR	LR		
	comp=Z,205µm,20.0s						
BHPL	**Bhopal**	92.15	293	*e*P	P	01 25 34.2	-0.3
BHPL				IAmb	IAmb	01 25 45.2	
	comp=Z,894nm,4.5s						
HWUT	**Hardware Ranch**	92.17	48	*e*P	P	01 25 32.9	-1.6
	comp=Z,35nm,0.9s						
TCUT	**Toone Canyon**	92.18	49	*e*P	P	01 25 33.6	-1.0
	comp=Z,157nm,0.9s						
TCUT				LR	LR		
	comp=Z,273µm,19.0s						
W18A	**Petrified Fore**	92.22	55	*e*P	P	01 25 35.4	+0.5
	comp=Z,92nm,0.9s						
W18A				LR	LR		
	comp=Z,143µm,20.0s						
W18A	**Petrified Fore**	92.22	55	P	P	01 25 33.1	-1.7
	baz=258						
WALA	**Waterton Lakes**	92.26	41	*e*P	P	01 25 33.6	-1.1
	comp=Z,278nm,1.3s						
DLMT	**Dillon**	92.27	44	*e*P	P	01 25 33.2	-1.6
	comp=Z,330nm,1.0s						
DLMT				LR	LR		
	comp=Z,162µm,20.0s						
P17A	**Butcher Ranch,**	92.33	50	*e*P	P	01 25 35.2	-0.1
	comp=Z,206nm,1.4s						
P17A				LR	LR		
	comp=Z,191µm,20.0s						
SRU	**San Rafael Swe**	92.42	51	*e*P	P	01 25 35.8	+0.1
	comp=Z,166nm,1.5s						
SRU				LR	LR		
	comp=Z,290µm,19.0s						
LRM	**Limekiln Ridge**	92.47	44	*e*P	P	01 25 33.8	-2.0
AHID	**Auburn Hatcher**	92.75	47	*e*P	P	01 25 36.5	-0.7
	comp=Z,190nm,1.5s						
AHID				LR	LR		
	comp=Z,114µm,21.0s						
DDI	**Dehra Dun**	92.92	300	*e*P	P	01 25 37.5	-0.5
DDI				IAmb	IAmb	01 25 55.1	
QLMT	**Earthquake Lak**	92.96	45	*e*P	P	01 25 38.7	+0.7
MK01	**Makanchi Array**	92.97	317	*e*P	P	01 25 36.0	-1.8
BOZ	**Bozeman (W)**	92.98	44	*e*P	P	01 25 37.8	-0.3
	comp=Z,264nm,1.3s						
BOZ				LR	LR		
	comp=Z,135µm,20.0s						
BOZ	**Bozeman (W)**	92.98	44	P	P	01 25 36.3	-1.8
	baz=258						
MK31	**Makanchi Array**	92.98	317	*e*P	P	01 25 36.1	-1.8
MK31	**Makanchi Array**	92.98	317	*i* P	P	01 25 36.6	-1.3
MK31				pmax	pmax		
	comp=Z,167nm,1.1s						
MK32	**Makanchi Array**	92.98	317	*e*P	P	01 25 36.1	-1.8
MKAR	**Makanchi Array**	92.98	317	*e*P	P	01 25 36.1	-1.8
	comp=Z,631nm,1.0s						
MKAR				LR	LR		
	comp=Z,18µm,20.0s						
MKAR	**Makanchi Array**	92.98	317	P	P	01 25 36.1	-1.8
	comp=Z,4.4nm,0.8s,baz=92,slow=6.1,SNR=28						
MKAR				LR	LR	02 06 44.5	
	comp=Z,76µm,22.0s,baz=92,slow=35						
FXWY	**Fox Creek**	92.99	46	*e*P	P	01 25 37.1	-1.1
	comp=Z,49nm,0.8s						
TPAW	**Teton Pass**	93.01	46	*e*P	P	01 25 36.3	-2.1
	comp=Z,374nm,2.0s						
TPAW				LR	LR		
	comp=Z,132µm,21.0s						
REDW	**Red Top Meadow**	93.06	47	*e*P	P	01 25 37.4	-1.2
	comp=Z,110nm,1.1s						
REDW				LR	LR		
	comp=Z,170µm,21.0s						
ZAA0	**Zalesovo Array**	93.06	324	*e*P	P	01 25 35.7	-2.4
	comp=Z,156nm,1.1s						
ZAA0				LR	LR		
	comp=Z,86µm,20.0s						
ZALV	**Zalesovo Beam**	93.06	324	*e*P	P	01 25 34.7	-3.3
ZALV	**Zalesovo Beam**	93.06	324	P	P	01 25 35.5	-2.5
	comp=Z,8.1nm,1.0s,baz=108,slow=4.8,SNR=27						
ZALV				LR	LR	02 08 42.8	
	comp=Z,48µm,18.0s,baz=115,slow=36						
ZAA1	**Zalesovo Array**	93.06	324	*e*P	P	01 25 35.5	-2.5
HRY	**Holter Researc**	93.08	43	*e*P	P	01 25 36.9	-1.6
YHB	**Horse Butte**	93.10	45	*e*P	P	01 25 38.1	-0.6
	comp=Z,122nm,1.1s						
YHB				LR	LR		
	comp=Z,168µm,19.0s						
IMW	**Indian Meadow**	93.11	46	*e*P	P	01 25 37.8	-1.1
	comp=Z,209nm,1.6s						
IMW				LR	LR		
	comp=Z,112µm,19.0s						
SNOW	**Snow King Moun**	93.15	46	*e*P	P	01 25 39.4	+0.3
	comp=Z,343nm,1.6s						
SNOW				LR	LR		
	comp=Z,186µm,22.0s						
MAKZ	**Makanchi**	93.20	317	*e*P	P	01 25 37.3	-1.6
	comp=Z,211nm,1.1s						
MAKZ				LR	LR		
	comp=Z,107µm,22.0s						
MAKZ	**Makanchi**	93.20	317	P	P	01 25 36.5	-2.4
MAKZ				pmax	pmax		
	comp=Z,260nm,1.2s						
MOOW	**Moose Ponds**	93.21	46	*e*P	P	01 25 37.5	-1.8
	comp=Z,72nm,1.3s						
MOOW				LR	LR		
	comp=Z,125µm,21.0s						
YMR	**Madison River**	93.25	45	*e*P	P	01 25 39.0	-0.4
	comp=Z,157nm,1.2s						
YMR				LR	LR		
	comp=Z,150µm,19.0s						
YPP	**Pitchstone Pla**	93.28	46	*e*P	P	01 25 40.4	+0.7
	comp=Z,74nm,1.3s						
YPP				LR	LR		
	comp=Z,244µm,20.0s						
LOHW	**Long Hollow**	93.28	46	*e*P	P	01 25 38.2	-1.4
	comp=Z,72nm,1.1s						
LOHW				LR	LR		
	comp=Z,166µm,22.0s						
YFT	**Old Faithful**	93.29	46	*e*P	P	01 25 41.0	+1.3
	comp=Z,213nm,1.6s						
YFT				LR	LR		
	comp=Z,261µm,19.0s						
PV05	**Paradox Valley**	93.31	52	*e*P	P	01 25 40.5	+0.6
	comp=Z,64nm,0.9s						
FLWY	**Flagg Ranch**	93.31	46	*e*P	P	01 25 38.8	-0.9
	comp=Z,102nm,1.0s						
121A	**Cookes Peak, D**	93.32	58	P	P	01 25 37.1	-2.8
	baz=259						
NDI	**New Delhi**	93.33	298	*e*P	P	01 25 39.0	-0.9
PV09	**Paradox Valley**	93.36	52	*e*P	P	01 25 40.4	+0.2
PV10	**Paradox Valley**	93.41	52	*e*P	P	01 25 43.4	+3.0
PV10				LR	LR		
	comp=Z,173µm,21.0s						
PV14	**Lion Creek, Pa**	93.42	52	*e*P	P	01 25 40.5	+0.1
PV14				LR	LR		
	comp=Z,176µm,21.0s						
PV19	**Morning Glory**	93.44	52	*e*P	P	01 25 41.3	+0.8
	comp=Z,61nm,0.8s						
PV23	**Carpenter Ridg**	93.45	52	*e*P	P	01 25 40.0	-0.6
	comp=Z,96nm,0.7s						
PV23				LR	LR		

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      comp=Z,174µm,22.0s
PV17  East Wray Mesa    93.45  52 eP      P       01 25 40.6  0.0
      comp=Z,195nm,1.5s
PV17                               LR      LR
      comp=Z,173µm,21.0s
YNR   Norris Junctio    93.46  45 eP      P       01 25 42.2 +1.8
      comp=Z,150nm,1.4s
YNR                                LR      LR
      comp=Z,152µm,19.0s
PV20  West Nyswonger    93.46  52 eP      P       01 25 40.7 +0.2
      comp=Z,72nm,1.0s
PV20                               LR      LR
      comp=Z,145µm,21.0s
H17A  Grant Village     93.46  46 eP      P       01 25 40.0 -0.5
      comp=Z,52nm,0.8s
H17A                               LR      LR
      comp=Z,202µm,18.0s
H17A  Grant Village     93.46  46  P      P       01 25 40.8 +0.3
      baz=258
PV16  Nyswonger Mesa    93.49  52 eP      P       01 25 40.7  0.0
      comp=Z,277nm,1.8s
PV16                               LR      LR
      comp=Z,130µm,20.0s
PV21  Cone Mtn., Par    93.50  52 eP      P       01 25 41.1 +0.3
      comp=Z,59nm,0.9s
PV04  Paradox Valley    93.52  52 eP      P       01 25 41.0 +0.3
      comp=Z,361nm,1.8s
PV11  David Mesa, Pa    93.52  52 eP      P       01 25 41.7 +0.8
      comp=Z,75nm,1.0s
PV11                               LR      LR
      comp=Z,168µm,21.0s
PV03  Paradox Valley    93.53  52 eP      P       01 25 39.9 -1.0
      comp=Z,155nm,1.6s
PV03                               LR      LR
      comp=Z,136µm,20.0s
PV13  Radium Mtn., P    93.54  52 eP      P       01 25 41.0  0.0
      comp=Z,263nm,1.9s
MNCI  Minicoy           93.56 278  PFAKE          01 25 50.0 +8.8
MNCI                               LR      LR
      comp=Z,85µm,19.0s
PV12  Saucer Basin,     93.58  52 eP      P       01 25 41.3 +0.2
      comp=Z,66nm,1.0s
PV12                               LR      LR
      comp=Z,166µm,20.0s
MNCY  Minicoy           93.58 278 eP      P       01 25 40.4 -1.0
MVCO  Mesa Verde        93.61  53 eP      P       01 25 45.7 +4.4
MVCO                               LR      LR
      comp=Z,147µm,20.0s
MVCO  Mesa Verde        93.61  53  P      P       01 25 39.2 -2.1
      baz=259
PV02  Paradox Valley    93.61  52 eP      P       01 25 41.5 +0.2
      comp=Z,158nm,1.5s
PV02                               LR      LR
      comp=Z,137µm,19.0s
LKWY  Lake              93.62  45 eP      P       01 25 42.7 +1.5
      comp=Z,334nm,2.0s
LKWY  Lake              93.62  45 eP      P       01 25 42.7 +1.5
LKWY                               pmax    pmax
      comp=Z,334nm,2.0s
PV07  Paradox Valley    93.72  52 eP      P       01 25 42.4 +0.7
      comp=Z,56nm,0.9s
PV07                               LR      LR
      comp=Z,142µm,22.0s
PV01  Paradox Valley    93.73  52 eP      P       01 25 41.9 +0.1
      comp=Z,137nm,1.6s
PV01                               LR      LR
      comp=Z,131µm,20.0s
SMLA  Simla             93.82 301 eP      P       01 25 41.4 -0.6
SMLA                               IAmb    IAmb   01 25 54.8
      comp=Z,36µm,8.7s
PV15  Paradox Valley    93.83  52 eP      P       01 25 45.4 +3.1
PV15                               LR      LR
      comp=Z,136µm,20.0s
BW06  Boulder Array     93.87  47 eP      P       01 25 39.9 -2.4
      comp=Z,116nm,1.4s
BW06                               LR      LR
      comp=Z,106µm,21.0s
BW06  Boulder Array     93.87  47  P      P       01 25 40.0 -2.4
      baz=259
PD31  Pinedale Array    93.87  47 eP      P       01 25 39.9 -2.5
PDAR  Pinedale Array    93.87  47 eP      P       01 25 39.3 -3.1
PDAR  Pinedale Array    93.87  47  P      P       01 25 39.8 -2.5
      comp=Z,5.3nm,0.9s,baz=222,slow=2.0,SNR=25
GOA   Goa               94.10 285 eP      P       01 25 44.8 +1.2
GOA                                IAmb    IAmb   01 26 06.3
      comp=Z,11µm,7.7s
HPIG                    94.13  64 eP      P       01 25 44.2 +0.3
      comp=Z,86nm,1.5s
HPIG                               LR      LR
      comp=Z,194µm,22.0s
NVS   Novosibirsk       94.17 325 eP      P       01 25 43.2 +0.1
NVS                                pmax    pmax
      comp=Z,246nm,1.7s
NVS                                pmax    pmax
      comp=N,5.0nm,0.6s
PDGK  Podgornoye        94.23 313  P      P       01 25 47.3 +3.5
PDGK                               pmax    pmax
      comp=Z,35nm,1.1s
LENM  Lemitar           94.28  56 eP      P       01 25 46.8 +2.4
O20A  White River Ci    94.35  50 eP      P       01 25 44.4 -0.1
      comp=Z,430nm,1.9s
O20A                               LR      LR
      comp=Z,228µm,20.0s
O20A  White River Ci    94.35  50  P      P       01 25 42.8 -1.7
      baz=260
GCMT  Greycliff         94.37  44 eP      P       01 25 44.9 +0.4
RLMT  Red Lodge         94.52  45 eP      P       01 25 40.9 -4.4
      comp=Z,58nm,1.0s
RLMT                               LR      LR
      comp=Z,198µm,19.0s
RLMT  Red Lodge         94.52  45  P      P       01 25 43.6 -1.6
      baz=259
UZB   Uzynbulak         94.53 313 eP      P       01 25 43.4 -1.8
UZB                                MLR     MLR
      comp=Z,20µm,20.0s
UZB   Uzynbulak         94.53 313 eP      P       01 25 43.5 -1.8
      comp=Z,860nm,5.4s
UZB                               eS      SKSac   01 36 23.9 +4.5
UZB                               eLRM    MLR     02 09 51.8
      comp=Z,20µm,19.6s
BNM   Barren Site       94.56  56 eP      P       01 25 47.6 +1.9
POO   Poona             94.60 288 eP      P       01 25 44.7 -1.2
POO                                IAmb    IAmb   01 26 04.9
      comp=Z,404nm,2.2s
EGMT  Eagleton          94.73  42 eP      P       01 25 44.2 -1.8
      comp=Z,324nm,1.6s
EGMT                               LR      LR
      comp=Z,87µm,20.0s
EGMT  Eagleton          94.73  42  P      P       01 25 44.2 -1.8
      baz=259
DHRM  DHARAMSHALA       94.74 302 eP      P       01 25 44.8 -1.7
DHRM                               IAmb    IAmb   01 26 02.9
      comp=Z,63nm,0.9s
KPKS  Kokpek            94.83 313 eP      P       01 25 43.4 -3.1
KPKS                               MLR     MLR
      comp=Z,49µm,22.0s
KPKS  Kokpek            94.83 313 eP      P       01 25 43.4 -3.1
      comp=Z,2µm,5.0s
KPKS                             ⇓eS      SKSac   01 36 26.9 +6.0
      comp=Z,4µm,7.0s
KPKS                              eLRM    MLR     02 06 58.1
      comp=Z,49µm,22.2s
ANMO  Albuquerque       94.83  55 eP      P       01 25 46.3 -0.6
      comp=Z,32nm,0.9s
ANMO                               LR      LR
      comp=Z,133µm,20.0s
ANMO  Albuquerque       94.83  55ceP      P       01 25 45.8 -1.1
ANMO                               pmax    pmax
      comp=Z,19nm,0.9s
ANMO                               MLR     MLR
      comp=Z,58µm,17.0s
ANMO  Albuquerque       94.83  55  P      P       01 25 44.4 -2.5
      baz=260
ANMO  Albuquerque       94.83  55  P      P       01 25 46.2 -0.7
      comp=Z,5.5nm,1.0s,baz=244,slow=5.8,SNR=8.1
PRZ   Przheval'sk       94.86 312  PFAKE          01 26 00.0  +13
PRZ                                LR      LR
      comp=Z,89µm,20.0s
SATY  Saty              94.96 313 eP      P       01 25 49.9 +2.7
SATY                               MLR     MLR
      comp=Z,17µm,15.0s
SATY  Saty              94.96 313 eP      P       01 25 50.0 +2.7
SATY                             ⇓eS      SKSac   01 36 27.4 +5.8
      comp=Z,6µm,10.7s
SATY                              eLRM    MLR     02 10 46.0
      comp=Z,17µm,15.3s
S22A  4UR Ranch, Cre    95.01  53 eP      P       01 25 48.2 +0.4
      comp=Z,94nm,1.5s
S22A                               LR      LR
      comp=Z,176µm,21.0s
S22A  4UR Ranch, Cre    95.01  53  P      P       01 25 46.9 -0.9
      baz=260
SEM   Semipalatinsk     95.05 320 eP      P       01 25 50.4 +2.9
SEM                                MLR     MLR
      comp=Z,35µm,22.0s
SEM   Semipalatinsk     95.05 320 eP      P       01 25 50.5 +2.9
SEM                               eS      SKSac   01 36 33.6  +12
      comp=Z,15µm,11.7s
SEM                               eLRM    MLR     02 08 17.2
      comp=Z,35µm,22.3s
YKA   Yellowknife Ar    95.08  27  P      P       01 25 44.1 -3.0
      comp=Z,5.1nm,0.8s,baz=254,slow=4.5,SNR=29
YKA                                PP      PP     01 29 26.2  -11
      comp=Z,4.7nm,0.9s,baz=255,slow=5.6,SNR=4.3
YKA                                LR      LR     02 04 29.0
      comp=Z,13µm,19.5s,baz=262,slow=33
YKB5  Yellowknife Ar    95.08  27 eP      P       01 25 43.6 -3.5
YKB5                              ePP     PP      01 29 26.2  -11
YKW3  Yellowknife Ar    95.10  27 eP      P       01 25 44.2 -3.0
      comp=Z,48nm,1.1s
YKW3                               LR      LR
      comp=Z,128µm,20.0s
SMCO  Snowmass          95.14  51 eP      P       01 25 50.1 +1.6
      comp=Z,69nm,1.4s
SMCO                               LR      LR
      comp=Z,213µm,19.0s
MNTX  Cornudas Mount    95.18  59 eP      P       01 25 48.0 -0.3
      comp=Z,33nm,1.0s
MNTX                               LR      LR
      comp=Z,202µm,22.0s
MNTX  Cornudas Mount    95.18  59  P      P       01 25 47.0 -1.3
      baz=260
TDK   Taldyqorghan      95.30 315 eP      P       01 25 49.5 +1.0
TDK                                MLR     MLR
      comp=Z,58µm,18.0s
TDK   Taldyqorghan      95.30 315 eP      P       01 25 49.5 +1.0
      comp=Z,5µm,6.6s
TDK                               eS      SKSac   01 36 27.6 +4.5
      comp=Z,8µm,14.3s
TDK                               eLRM    MLR     02 07 41.7
      comp=Z,58µm,18.4s
RWWY  Rawlins           95.39  49 eP      P       01 25 49.6 +0.2
      comp=Z,80nm,1.3s
RWWY                               LR      LR
      comp=Z,179µm,20.0s
BOM   Bombay            95.63 288 ex      P       01 25 42.3 -8.3
BOM                                AMS     AMS    01 26 41.6
      comp=Z,5µm,16.9s
BOM                               ex      SKSac   01 36 31.5 +5.6
NRIK  Noril'sk          95.75 340  P      P       01 25 48.4 -1.6
      comp=Z,2.3nm,0.5s,baz=140,slow=5.0,SNR=8.7
NRIK                               LR      LR     02 10 57.6
      comp=Z,55µm,18.5s,baz=104,slow=37
MDOK  Medeo             95.95 313 eP      P       01 25 50.3 -1.4
MDOK                              eS      SKSac   01 36 24.7 -2.3
MDOK                               MLR     MLR
      comp=Z,22µm,22.0s
MDOK  Medeo             95.95 313 eP      P       01 25 50.4 -1.4
      comp=Z,2µm,7.1s
MDOK                              eS      SKSac   01 36 24.8 -2.3
      comp=Z,8µm,13.4s
MDOK                              eLRM    MLR     02 08 05.4
      comp=Z,22µm,22.2s
K22A  Casper            96.05  48 eP      P       01 25 54.3 +2.0
      comp=Z,57nm,1.1s
K22A                               LR      LR
      comp=Z,150µm,19.0s
K22A  Casper            96.05  48  P      P       01 25 50.5 -1.7
      baz=261
SDCO  Great Sand Dun    96.05  53 eP      P       01 25 52.8 +0.2
      comp=Z,13nm,1.0s
SDCO                               LR      LR
      comp=Z,154µm,21.0s
SDCO  Great Sand Dun    96.05  53  P      P       01 25 49.9 -2.6
      baz=261
AAA   Alma-Ata          96.06 313 eP      P       01 25 48.4 -3.7
AAA                               eS      SKSac   01 36 27.6 +0.2
AAA                                smax    smax
      comp=N,9µm,15.5s
AAA                                MLR     MLR
      comp=Z,11µm,20.0s
AAA   Alma-Ata          96.06 313 eP      P       01 25 48.4 -3.7
      comp=Z,2µm,20.7s
AAA                               eS      SKSac   01 36 27.6 +0.2
      comp=Z,9µm,15.5s
AAA                               eLRM    MLR     02 08 22.9
      comp=Z,11µm,20.0s
PMSA  Palmer Station    96.08 161  PFAKE          01 26 00.0 +8.3
PMSA                               LR      LR
      comp=Z,103µm,20.0s
PMSA  Palmer Station    96.08 161  LR      LR     02 01 58.0
      comp=Z,49µm,21.4s,baz=226,slow=31
CHKK  Chushkaly         96.11 313 eP      P       01 25 53.9 +1.6
CHKK                              e               01 29 42.9
CHKK                               pmax    pmax
      comp=Z,64nm,1.4s
CHKK  Chushkaly         96.11 313 eP      P       01 25 54.0 +1.6
      comp=Z,64nm,1.4s
CHKK                              ePP     PP      01 29 43.0 -2.4
KURK  Kurchatov         96.12 320 eP      P       01 25 51.9 -0.2
      comp=Z,210nm,1.5s
KURK                               LR      LR
      comp=Z,107µm,20.0s
KURK  Kurchatov         96.12 320ceP      P       01 25 50.6 -1.5
KURK                               pmax    pmax
      comp=Z,136nm,1.4s
KURK                               MLR     MLR
      comp=Z,87µm,18.0s
KURK  Kurchatov         96.12 320  P      P       01 25 53.4 +1.3
      SNR=27
KURK                               P       P      01 25 53.4 +1.3
      SNR=27
KURBB Kurchatov Arra    96.16 320  PKKPbc  PKKPbc 01 42 41.5 +0.5
      comp=Z,8.8nm,1.2s,baz=275,slow=3.5,SNR=2.2
KURBB                              PKPPKP         01 50 54.4
      comp=Z,2.4nm,1.0s,baz=298,slow=3.5,SNR=3.2
KSH   Kashi             96.18 309  P       P      01 25 57.8 +4.9
KSH                                pP      sP     01 26 03.7 +1.8
KSH                                SKS     SKSac  01 36 31.1 +2.8
KSH                                S       ScS    01 37 13.0 +1.2
KSH                                SS      SS     01 43 46.3 +2.8
KSH                                pmax    pmax
      comp=Z,12nm,1.0s
KSH                                pmax    pmax
      comp=Z,6µm,10.3s
KSH                                LR      LR
      comp=Z,121µm,19.4s
KSH                                LR      LR
      comp=Z,119µm,16.0s
KSH                                LR      LR
      comp=Z,132µm,18.6s
N23A  Red Feather La    96.20  50 eP      P       01 25 54.0 +0.8
      comp=Z,92nm,1.4s
N23A                               LR      LR
      comp=Z,126µm,20.0s
N23A  Red Feather La    96.20  50  P      P       01 25 50.2 -2.9
      baz=261
ZAIG  Zacatecas         96.22  68 eP      P       01 25 55.0 +1.4
      comp=Z,62nm,1.5s
ZAIG                               LR      LR
      comp=Z,190µm,18.0s
TX31  Lajitas Ar. Si    96.26  61 eP      P       01 25 53.0 -0.4
LTX   Lajitas           96.26  61 eP      P       01 25 53.4 -0.1
LTX                               ePP     PP      01 29 49.8 +2.7
LTX   Lajitas           96.26  61 eP      P       01 25 53.4 -0.1
LTX                               e               01 29 49.8
TXAR  Lajitas Array     96.26  61  P      P       01 25 53.4 -0.1
      comp=Z,0.9nm,0.7s,baz=228,slow=3.4,SNR=13
TXAR                               PP      PP     01 29 49.8 +2.7
      comp=Z,39nm,1.1s,baz=240,slow=7.0,SNR=5.6
TXAR                               LR      LR     02 00 45.5
      comp=Z,189µm,22.0s,baz=0.0,slow=30
ISCO  Idaho Springs     96.28  51 eP      P       01 25 54.7 +1.1
      comp=Z,37nm,1.4s
ISCO                               LR      LR
      comp=Z,321µm,22.0s
ISCO  Idaho Springs     96.28  51 eP      P       01 25 54.7 +1.1
ISCO                               pmax    pmax
      comp=Z,37nm,1.4s
ISCO                               MLR     MLR
      comp=Z,321µm,22.0s
ISCO  Idaho Springs     96.28  51  P      P       01 25 51.9 -1.6
      baz=261
NRN   Naryn             96.45 311  PFAKE          01 26 00.0 +5.7
NRN                                LR      LR
      comp=Z,103µm,20.0s
Q24A  Divide            96.51  52  PFAKE          01 26 10.0  +15
Q24A                               LR      LR
      comp=Z,106µm,22.0s
Q24A  Divide            96.51  52  P      P       01 25 55.0 +0.4
      baz=261
NVL   N'lazarevskaya    96.56 189 eP      P       01 26 04.4  +11
NVL                               e               01 29 52.1
NVL                               eSP     SP      01 38 41.1 +9.0
NVL                                MLR     MLR
      comp=Z,186µm,18.0s
KUU   Kurty             96.58 313 eP      P       01 25 54.9 +0.5
KUU                               e               01 29 48.7
KUU                               eS      SKSac   01 36 29.4 -0.5
KUU                                smax    smax
      comp=N,4µm,9.9s
KUU                                MLR     MLR
      comp=Z,17µm,20.0s
KUU   Kurty             96.58 313 eP      P       01 25 55.0 +0.5
      comp=Z,644nm,5.5s
KUU                               ePP     PP      01 29 48.8 -0.3
KUU                              ⇑eS      SKSac   01 36 29.4 -0.5
      comp=Z,4µm,9.9s
KUU                               eLRM    MLR     02 08 06.9
      comp=Z,17µm,19.8s
PHWY  Pilot Hill        96.63  49  PFAKE          01 26 10.0  +15
PHWY                               LR      LR
      comp=Z,160µm,18.0s
T25A  Trinidad          96.82  54 epP     pP      01 26 04.6 +1.7
T25A                               LR      LR
      comp=Z,180µm,22.0s
T25A  Trinidad          96.82  54  P      P       01 25 53.7 -2.3
      baz=262
LAO   LASA Array        96.88  44 eP      P       01 25 56.8 +1.1
      comp=Z,243nm,1.5s
LAO                                LR      LR
      comp=Z,93µm,20.0s
LAO   LASA Array        96.88  44  P      P       01 25 55.9 +0.2
      baz=262
TKM2  Tokmak 2          96.97 312  P      P       01 26 00.7 +4.2
TKM2                               pmax    pmax
      comp=Z,19nm,1.3s
SNAA  Sanae             97.26 184  P      Pdif    01 26 00.0 +2.9
SNAA  Sanae             97.26 184 eP      Pdif    01 25 59.7 +2.6
      comp=Z,116nm,1.1s
SNAA                               LR      LR
      comp=Z,337µm,18.0s
SNAA  Sanae             97.26 184  P      Pdif    01 25 58.3 +1.2
      comp=Z,17nm,1.1s,baz=159,slow=1.9,SNR=13
CRZF  Crozet Islands    97.66 220  PFAKE          01 26 10.0  +11
CRZF                               LR      LR
      comp=Z,122µm,20.0s
MSTX  Muleshoe          97.69  57  PFAKE          01 26 10.0  +10
MSTX                               LR      LR
      comp=Z,246µm,20.0s
MSTX  Muleshoe          97.69  57  P      P       01 25 57.6 -2.2
      baz=262
AAK   Ala-Archa         97.73 312 eP      P       01 25 58.7 -1.2
      comp=Z,94nm,1.7s
AAK                               epP     sP      01 26 10.7 +1.8
AAK                                LR      LR
      comp=Z,93µm,21.0s
AAK   Ala-Archa         97.73 312 i P     P       01 25 57.7 -2.2
AAK                                pmax    pmax
      comp=Z,29nm,2.2s
AAK                                MLR     MLR
      comp=Z,47µm,18.0s
AAK   Ala-Archa         97.73 312  LR      LR     02 09 55.1
      comp=Z,60µm,21.8s,baz=71,slow=35
VNA3  Neumayer Olymp    98.01 182  P      Pdif    01 26 05.4 +5.0
RSSD  Black Hills       98.05  47 eP      Pdif    01 26 04.8 +3.4
RSSD                               LR      LR
      comp=Z,152µm,21.0s
RSSD  Black Hills       98.05  47 eP      Pdif    01 26 04.8 +3.4
RSSD                               MLR     MLR
      comp=Z,152µm,21.0s
RSSD  Black Hills       98.05  47  P      P       01 26 00.2 -1.2
      baz=263
SFK   Sufi-Kurgan       98.14 309  P      Pdif    01 26 03.2 +1.3
SFK                                pmax    pmax
      comp=Z,10.0nm,0.9s
VNA2  Neumayer--Watz    98.24 182  P      Pdif    01 26 04.8 +3.3
      baz=166,slow=4.4
BTLS  Baital            98.36 314 eP      P       01 26 00.3 -2.1
BTLS                              i               01 29 57.2
BTLS                               pmax    pmax
      comp=Z,213nm,2.7s
BTLS                               pmax    pmax
      comp=Z,242nm,2.1s
BTLS                               MLR     MLR
      comp=Z,14µm,16.0s
BTLS  Baital            98.36 314 eP      P       01 26 00.3 -2.1
      comp=Z,213nm,2.7s
BTLS                             ⇑iPP     PP      01 29 57.2 -5.4
      comp=Z,242nm,2.1s
BTLS                              eS      SKSac   01 36 53.9  +15
      comp=Z,5µm,5.7s
BTLS                              eLRM    MLR     02 12 40.4
      comp=Z,14µm,16.2s
KSCO  Kaye Shedlock'    98.46  52  PFAKE          01 26 10.0 +6.8
KSCO                               LR      LR
      comp=Z,192µm,20.0s
KSCO  Kaye Shedlock'    98.46  52  Pdiff  P       01 26 01.0 -2.2
      baz=263
DGMT  Dagmar            98.47  42 eP      P       01 26 02.8 -0.1
      comp=Z,90nm,0.9s
DGMT                               LR      LR
      comp=Z,93µm,19.0s
DGMT  Dagmar            98.47  42  Pdiff  P       01 25 59.3 -3.6
      baz=263
VNA1  Neumayer--Stat    98.55 182  P      Pdif    01 26 07.4 +4.6
AMTX  Amarillo          98.71  56 eP      Pdif    01 26 07.5 +3.2
AMTX                               LR      LR
      comp=Z,184µm,20.0s
AMTX  Amarillo          98.71  56  Pdiff  P       01 26 02.9 -1.4
      baz=263
UNM   Universidad Na    98.83  72  PFAKE          01 26 20.0  +15
UNM                                LR      LR
      comp=Z,130µm,20.0s
OGNE  Ogallala          99.14  50  PFAKE          01 26 20.0  +14
OGNE                               LR      LR
      comp=Z,289µm,19.0s
OGNE  Ogallala          99.14  50  Pdiff  Pdif    01 26 04.0 -2.2
      baz=264
BHJ   Bhuj              99.20 292 eP      Pdif    01 26 05.1 -1.5
LNIG  Linares           99.34  66 eP      Pdif    01 26 11.5 +4.3
LNIG                               LR      LR
      comp=Z,172µm,20.0s
JCT   Junction City     99.74  61  PFAKE          01 26 20.0  +11
JCT                                LR      LR
      comp=Z,222µm,21.0s
JCT   Junction City     99.74  61  Pdiff  Pdif    01 26 05.0 -4.0
      baz=263
833A  Chaparral WMA,    99.84  63  PFAKE          01 26 20.0  +11
833A                               LR      LR
      comp=Z,137µm,21.0s
833A  Chaparral WMA,    99.84  63  Pdiff  Pdif    01 26 08.0 -1.4
      baz=263
ABTX  Abilene, Hawle   100.13  59  PFAKE          01 26 20.0 +9.4
ABTX                               LR      LR
      comp=Z,157µm,19.0s
ABTX  Abilene, Hawle   100.13  59  Pdiff  Pdif    01 26 05.8 -4.8
      baz=264
BTK   Batken           100.19 309  PFAKE          01 26 20.0 +9.2
BTK                                LR      LR
      comp=Z,64µm,21.0s
GO10  Punta Arenas     100.35 149  PFAKE          01 26 20.0 +8.8
GO10                               LR      LR
      comp=Z,142µm,18.0s
FFC   Flin Flon        100.44  36 ePdif   Pdif    01 26 09.5 -1.9
FFC                                LR      LR
      comp=Z,289µm,19.0s
FFC   Flin Flon        100.44  36 eP      Pdif    01 26 09.5 -1.9
FFC                                MLR     MLR
      comp=Z,289µm,19.0s
CBKS  Cedar Bluff      100.68  52 ePdif   Pdif    01 26 12.0 -1.0
      comp=Z,9.6nm,0.8s
CBKS                               LR      LR
      comp=Z,143µm,18.0s
CBKS  Cedar Bluff      100.68  52 eP      Pdif    01 26 12.0 -1.0
CBKS                               pmax    pmax
      comp=Z,10.0nm,0.8s
CBKS                               MLR     MLR
      comp=Z,143µm,18.0s
CBKS  Cedar Bluff      100.68  52  Pdiff  Pdif    01 26 11.7 -1.3
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	baz=265						
KK31	Karatay Array	100.69	312	*i* P	Pdif	01 26 23.4	+10
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
IUG	Iuzhnay	100.97	311	*e*P	Pdif	01 26 18.5	+4.3
IUG				MLR	MLR		
	comp=Z,14µm,19.0s						
IUG	Iuzhnay	100.97	311	*e*P	Pdif	01 26 18.6	+4.3
IUG				⇓*i*S	SKSac	01 36 57.4	+5.2
	comp=Z,4µm,8.3s						
IUG				*e*LRM	MLR	02 11 55.2	
	comp=Z,14µm,18.5s						
U32A	Winter Ranch,	101.04	55	PFAKE		01 26 30.0	+15
U32A				LR	LR		
	comp=Z,160µm,18.0s						
KBL	Kabul	101.06	303	PFAKE		01 26 30.0	+15
KBL				LR	LR		
	comp=Z,40µm,21.0s						
WMOK	Wichita Mounta	101.06	57	PFAKE		01 26 30.0	+15
WMOK				LR	LR		
	comp=Z,232µm,19.0s						
WMOK	Wichita Mounta	101.06	57	Pdiff	Pdif	01 26 12.5	-2.2
	baz=264						
BVA0	Borovoye Array	101.44	322	P	Pdif	01 26 18.4	+2.4
BVA0				pmax	pmax		
	comp=Z,28nm,1.3s						
MDND	Maddock	101.48	43	PFAKE		01 26 30.0	+14
MDND				LR	LR		
	comp=Z,99µm,20.0s						
MDND	Maddock	101.48	43	Pdiff	Pdif	01 26 14.3	-2.0
	baz=267						
BRVK	Borovoye	101.51	322	*e*Pdif	Pdif	01 26 15.2	-1.0
	comp=Z,267nm,1.6s						
BRVK				LR	LR		
	comp=Z,126µm,19.0s						
BRVK	Borovoye	101.51	322	*e*P	Pdif	01 26 15.2	-1.0
BRVK				pmax	pmax		
	comp=Z,267nm,1.6s						
BRVK				MLR	MLR		
	comp=Z,126µm,19.0s						
BRVK	Borovoye	101.51	322	P	Pdif	01 26 16.8	+0.5
	SNR=9.4						
435B	Jarrell	101.68	61	PFAKE		01 26 30.0	+12
435B				LR	LR		
	comp=Z,222µm,22.0s						
435B	Jarrell	101.68	61	Pdiff	Pdif	01 26 14.4	-3.1
	baz=264						
SUSD	Miller	101.71	47	Pdiff	Pdif	01 26 13.6	-3.8
	baz=266						
WHTX	Lake Whitney,	101.90	59	PFAKE		01 26 30.0	+12
WHTX				LR	LR		
	comp=Z,142µm,20.0s						
WHTX	Lake Whitney,	101.90	59	Pdiff	Pdif	01 26 18.0	-0.5
	baz=265						
BGNE	Belgrade	102.11	50	PFAKE		01 26 30.0	+11
BGNE				LR	LR		
	comp=Z,290µm,19.0s						
BGNE	Belgrade	102.11	50	Pdiff	Pdif	01 26 15.4	-3.8
	baz=266						
MRIV	Mauritius Mete	102.41	246	PFAKE		01 26 30.0	+8.9
MRIV				LR	LR		
	comp=Z,33µm,20.0s						
RES	Resolute Bay	103.04	16	PFAKE		01 26 30.0	+7.4
RES				LR	LR		
	comp=Z,110µm,21.0s						
KSU1	Kansas State U	103.14	52	PFAKE		01 26 30.0	+6.2
KSU1				LR	LR		
	comp=Z,139µm,20.0s						
KSU1	Kansas State U	103.14	52	Pdiff	Pdif	01 26 20.8	-3.0
	baz=267						
ECSD	EROS Data Cent	103.36	48	Pdiff	Pdif	01 26 22.6	-2.1
	baz=268						
TUL1	Leonard	103.59	56	PFAKE		01 26 40.0	+14
TUL1				LR	LR		
	comp=Z,251µm,19.0s						
TUL1	Leonard	103.59	56	Pdiff	Pdif	01 26 25.4	-0.5
	baz=266						
RER	Riviere de l'E	103.73	245	PFAKE		01 26 40.0	+13
RER				LR	LR		
	comp=Z,122µm,18.0s						
X37A	Clayton	103.85	57	PFAKE		01 26 40.0	+13
X37A				LR	LR		
	comp=Z,218µm,20.0s						
AGMN	Agassiz Nation	104.00	43	PFAKE		01 26 40.0	+13
AGMN				LR	LR		
	comp=Z,128µm,20.0s						
ULM	Lac du Bonnet	104.01	41	Pdif	Pdif	01 26 30.4	+3.0
ULM				LR	LR		
	comp=Z,117µm,20.0s						
ULM	Lac du Bonnet	104.01	41	P	Pdif	01 26 30.4	+3.0
ULM				MLR	MLR		
	comp=Z,117µm,20.0s						
ULM	Lac du Bonnet	104.01	41	Pdiff	Pdif	01 26 30.4	+3.0
	comp=Z,3.3nm,0.8s,baz=293,slow=7.7,SNR=4.3						
PAYG	Puerto Ayora	104.18	93	PFAKE		01 26 40.0	+11
PAYG				LR	LR		
	comp=Z,150µm,20.0s						
NATX	Nacogdoches	104.25	60	PFAKE		01 26 40.0	+11
NATX				LR	LR		
	comp=Z,173µm,20.0s						
NATX	Nacogdoches	104.25	60	Pdiff	Pdif	01 26 23.3	-5.7
	baz=266						
FCC	Fort Churchill	104.80	32	*e*Pdif	Pdif	01 26 32.1	+1.4
FCC				LR	LR		
	comp=Z,160µm,19.0s						
FCC	Fort Churchill	104.80	32	*e*P	Pdif	01 26 32.1	+1.4
FCC				MLR	MLR		
	comp=Z,160µm,19.0s						
W39A	Magazine	105.19	56	PFAKE		01 31 00.0	+13
W39A				LR	LR		
	comp=Z,200µm,22.0s						
W39A	Magazine	105.19	56	Pdiff	Pdif	01 26 27.7	-5.3
	baz=267						
MIAR	Mount Ida	105.33	57	PFAKE		01 31 00.0	+12
MIAR				LR	LR		
	comp=Z,231µm,20.0s						
MIAR	Mount Ida	105.33	57	Pdiff	Pdif	01 26 28.0	-5.7
	baz=267						
SCIA	State Center	105.82	49	PFAKE		01 31 00.0	+12
SCIA				LR	LR		
	comp=Z,218µm,19.0s						
SCIA	State Center	105.82	49	Pdiff	Pdif	01 26 30.5	-5.1
	baz=270						
Z41A	Richland Creek	105.91	58	PFAKE		01 31 00.0	+11
Z41A				LR	LR		
	comp=Z,173µm,20.0s						
Z41A	Richland Creek	105.91	58	Pdiff	Pdif	01 26 29.9	-6.4
	baz=267						
X40A	Basin Creek Fa	105.94	57	PFAKE		01 31 00.0	+11
X40A				LR	LR		
	comp=Z,174µm,20.0s						
X40A	Basin Creek Fa	105.94	57	Pdiff	Pdif	01 26 33.3	-3.0
	baz=268						
U40A	Yellville	105.99	55	Pdiff	Pdif	01 26 33.4	-3.2
	baz=268						
Y41A	Eaglette Beard	106.10	58	Pdiff	Pdif	01 26 34.5	-2.6
	baz=268						
SPMN	Marine on St.	106.11	46	PFAKE		01 31 00.0	+11
SPMN				LR	LR		
	comp=Z,229µm,18.0s						
SPMN	Marine on St.	106.11	46	Pdiff	Pdif	01 26 32.8	-4.1
	baz=271						
X41A	Kaden, Bauxite	106.20	57	Pdiff	Pdif	01 26 33.8	-3.7
	baz=268						
F37A	Hinrichs Farm,	106.23	45	Pdiff	Pdif	01 26 34.7	-2.7
	baz=271						
UALR	University of	106.35	57	PFAKE		01 31 00.0	+10
UALR				LR	LR		
	comp=Z,238µm,20.0s						
W41B	Gary Mavity, V	106.44	56	PFAKE		01 31 00.0	+10
W41B				LR	LR		
	comp=Z,331µm,19.0s						
W41B	Gary Mavity, V	106.44	56	Pdiff	Pdif	01 26 38.5	-0.1
	baz=268						
H38A	Maiden Rock	106.49	47	Pdiff	Pdif	01 26 36.0	-2.6
	baz=271						
V41A	Mountainview	106.54	56	Pdiff	Pdif	01 26 37.8	-1.2
	baz=268						
M39A	Webster	106.60	50	Pdiff	Pdif	01 26 36.2	-2.9
	baz=270						
L39A	Vinton	106.72	49	Pdiff	Pdif	01 26 36.5	-3.2
	baz=270						
U41A	Viola	106.74	55	Pdiff	Pdif	01 26 38.2	-1.7
	baz=269						
F38A	Pierce - Schro	106.74	45	Pdiff	Pdif	01 26 39.0	-0.7
	baz=272						
Y42A	Garnett, Star	106.78	58	Pdiff	Pdif	01 26 40.9	+0.7
	baz=268						
G38A	Ridgeland	106.78	46	Pdiff	Pdif	01 26 40.8	+0.9
	baz=272						
K39A	Oelwein	106.80	49	Pdiff	Pdif	01 26 37.5	-2.6
	baz=271						
T41A	Mountain View	106.88	55	Pdiff	Pdif	01 26 37.6	-2.9
	baz=269						
S41A	Jillco Farms,	106.90	54	Pdiff	Pdif	01 26 39.4	-1.3
	baz=269						
J39A	Decorah	106.93	48	Pdiff	Pdif	01 26 40.2	-0.3
	baz=271						
EYMN	Ely	106.93	43	PFAKE		01 31 00.0	+10
EYMN				LR	LR		
	comp=Z,117µm,21.0s						
EYMN	Ely	106.93	43	Pdiff	Pdif	01 26 40.2	-0.3
	baz=273						
X42A	Stuttgart	106.94	57	Pdiff	Pdif	01 26 41.1	+0.3
	baz=268						
E38A	The Farm, Brul	106.95	45	PFAKE		01 31 00.0	+10
E38A				LR	LR		
	comp=Z,196µm,19.0s						
E38A	The Farm, Brul	106.95	45	Pdiff	Pdif	01 26 38.6	-2.0
	baz=272						
W42A	Bald Knob	107.04	56	Pdiff	Pdif	01 26 42.2	+0.9
	baz=269						
N40A	Mertquake, Sal	107.04	51	Pdiff	Pdif	01 26 38.8	-2.4
	baz=270						
I39A	Houston	107.05	47	PFAKE		01 31 00.0	+9.4
I39A				LR	LR		
	comp=Z,151µm,20.0s						
I39A	Houston	107.05	47	Pdiff	Pdif	01 26 40.5	-0.7
	baz=271						
M40A	Post Highland	107.09	50	Pdiff	Pdif	01 26 38.0	-3.4
	baz=271						
V42A	Cord	107.16	56	Pdiff	Pdif	01 26 41.5	-0.2
	baz=269						
H39A	Augusta	107.20	47	Pdiff	Pdif	01 26 39.0	-2.7
	baz=272						
R41A	Rosebud	107.20	53	Pdiff	Pdif	01 26 41.6	-0.3
	baz=270						
Z43A	Armstrong Fami	107.21	59	Pdiff	Pdif	01 26 40.0	-2.1
	baz=268						
G39A	Holcombe	107.26	46	Pdiff	Pdif	01 26 42.5	+0.5
	baz=272						
U42A	Revenden	107.29	55	Pdiff	Pdif	01 26 38.4	-4.0
	baz=269						
L40A	Anamosa	107.30	49	PFAKE		01 31 00.0	+8.9
L40A				LR	LR		
	comp=Z,265µm,19.0s						
L40A	Anamosa	107.30	49	Pdiff	Pdif	01 26 40.1	-2.2
	baz=271						
CCM	Cathedral Cave	107.31	53	PFAKE		01 31 00.0	+8.8
CCM				LR	LR		
	comp=Z,139µm,18.0s						
CCM	Cathedral Cave	107.31	53	Pdiff	Pdif	01 26 39.3	-3.1
	baz=270						
Q41A	Truxton	107.32	53	Pdiff	Pdif	01 26 42.7	+0.3
	baz=270						
K40A	Colesburg	107.35	49	Pdiff	Pdif	01 26 44.4	+1.9
	baz=271						
F39A	Loretta	107.41	45	Pdiff	Pdif	01 26 44.5	+1.8
	baz=272						
EFI	East Falkland	107.42	153	PFAKE		01 31 00.0	+8.9
EFI				LR	LR		
	comp=Z,114µm,18.0s						
T42A	Van Buren	107.42	55	PFAKE		01 31 00.0	+8.5
T42A				LR	LR		
	comp=Z,199µm,18.0s						
T42A	Van Buren	107.42	55	Pdiff	Pdif	01 26 44.6	+1.7
	baz=270						
P41A	Barry, Barry	107.45	52	Pdiff	Pdif	01 26 42.9	-0.1
	baz=270						
Y43A	Makayla and Ka	107.50	58	Pdiff	Pdif	01 26 48.1	+4.8
	baz=269						
X43A	Marvell	107.55	57	PFAKE		01 31 00.0	+8.2
X43A				LR	LR		
	comp=Z,123µm,20.0s						
X43A	Marvell	107.55	57	Pdiff	Pdif	01 26 44.0	+0.5
	baz=269						
O41A	Passleys Farm,	107.58	51	Pdiff	Pdif	01 26 43.2	-0.4
	baz=271						
N41A	Harden Midland	107.60	51	PFAKE		01 31 00.0	+8.3
N41A				LR	LR		
	comp=Z,207µm,20.0s						
N41A	Harden Midland	107.60	51	Pdiff	Pdif	01 26 42.3	-1.3
	baz=271						
J40A	Soldiers Grove	107.63	48	Pdiff	Pdif	01 26 45.8	+2.1
	baz=272						
E39A	Mellen	107.65	45	Pdiff	Pdif	01 26 45.0	+1.2
	baz=273						
R42A	Luebbering	107.66	53	Pdiff	Pdif	01 26 45.0	+1.1
	baz=270						
S42A	Caledonia	107.66	54	Pdiff	Pdif	01 26 45.9	+1.9
	baz=270						
I40A	Norwalk	107.70	47	Pdiff	Pdif	01 26 47.6	+3.6
	baz=272						
W43A	Forest City	107.70	57	Pdiff	Pdif	01 26 48.5	+4.3
	baz=269						
VBMS	Vicksburg	107.79	60	PFAKE		01 31 00.0	+7.7
VBMS				LR	LR		
	comp=Z,143µm,21.0s						
VBMS	Vicksburg	107.79	60	Pdiff	Pdif	01 26 41.0	-3.6
	baz=268						
MYIG	Mrida	107.82	71	PFAKE		01 31 00.0	+7.4
MYIG				LR	LR		
	comp=Z,161µm,20.0s						
M41A	Milan	107.83	50	Pdiff	Pdif	01 26 45.3	+0.7
	baz=271						
H40A	Chili	107.84	47	Pdiff	Pdif	01 26 43.6	-1.0
	baz=272						
L41A	Preston	107.84	49	Pdiff	Pdif	01 26 43.6	-1.0
	baz=272						
V43A	Jonesboro	107.85	56	Pdiff	Pdif	01 26 43.7	-1.1
	baz=269						
Q42A	Golden Eagle	107.86	53	Pdiff	Pdif	01 26 42.0	-2.8
	baz=270						
G40A	Rib Lake	107.95	46	PFAKE		01 31 00.0	+7.8
G40A				LR	LR		
	comp=Z,201µm,19.0s						
G40A	Rib Lake	107.95	46	Pdiff	Pdif	01 26 38.7	-6.4
	baz=273						
PBMO	Poplar Bluff	107.95	55	PFAKE		01 31 00.0	+7.5
PBMO				LR	LR		
	comp=Z,205µm,19.0s						
U43A	Rector	107.97	55	Pdiff	Pdif	01 26 42.2	-3.1
	baz=270						
F40A	Park Falls	107.97	45	Pdiff	Pdif	01 26 43.0	-2.2
	baz=273						
K41A	Shullsburg	107.97	49	Pdiff	Pdif	01 26 42.2	-3.1
	baz=272						
JFWS	Jewell Farm	108.00	48	PFAKE		01 31 00.0	+7.6
JFWS				LR	LR		
	comp=Z,189µm,20.0s						
JFWS	Jewell Farm	108.00	48	Pdiff	Pdif	01 26 42.2	-3.1
	baz=272						
P42A	Winchester	108.00	52	PFAKE		01 31 00.0	+7.5
P42A				LR	LR		
	comp=Z,209µm,20.0s						
P42A	Winchester	108.00	52	Pdiff	Pdif	01 26 42.3	-3.2
	baz=271						
T43A	Greenville	108.06	54	Pdiff	Pdif	01 26 43.2	-2.5
	baz=270						
AB31	Akbulak array	108.07	318	*i* P	Pdif	01 26 50.9	+5.4
AB31				pmax	pmax		
	comp=Z,7.0nm,1.3s						
Y44A	Strider, Charl	108.09	58	Pdiff	Pdif	01 26 41.6	-4.4
	baz=269						
E40A	Wakefield	108.10	45	Pdiff	Pdif	01 26 43.2	-2.5
	baz=273						
SLM	Saint Louis	108.10	53	PFAKE		01 31 00.0	+7.3
SLM				LR	LR		
	comp=Z,157µm,21.0s						
ARU	Arti	108.14	326	P	Pdif	01 26 58.8	+13
ARU				PS	PKKPbc	01 41 29.5	-37
X44A	Crenshaw	108.16	57	Pdiff	Pdif	01 26 43.4	-2.8
	baz=269						
J41A	Loganville	108.16	48	Pdiff	Pdif	01 26 47.6	+1.6
	baz=272						
O42A	Bath	108.20	51	Pdiff	Pdif	01 26 46.0	-0.3
	baz=271						
N42A	Yates City	108.22	51	Pdiff	Pdif	01 26 44.4	-2.0
	baz=271						
S43A	Fulton Ridge,	108.23	54	Pdiff	Pdif	01 26 43.5	-3.0
	baz=270						
I41A	Arkdale	108.24	47	PFAKE		01 31 00.0	+7.2
I41A				LR	LR		
	comp=Z,164µm,20.0s						
I41A	Arkdale	108.24	47	Pdiff	Pdif	01 26 45.2	-1.2
	baz=273						
145A	Houston Renfro	108.30	59	Pdiff	Pdif	01 26 47.1	+0.2
	baz=269						
MET	Memphis--Engin	108.34	57	PFAKE		01 31 00.0	+6.8
MET				LR	LR		
	comp=Z,234µm,19.0s						
R43A	Red Bud	108.34	53	Pdiff	Pdif	01 26 44.6	-2.4
	baz=271						
H41A	Junction City	108.36	47	PFAKE		01 31 00.0	+7.0
H41A				LR	LR		
	comp=Z,133µm,20.0s						
H41A	Junction City	108.36	47	Pdiff	Pdif	01 26 42.9	-4.0
	baz=273						
V44A	Blytheville	108.38	56	Pdiff	Pdif	01 26 45.5	-1.7
	baz=270						
M42A	Sheffield	108.41	50	Pdiff	Pdif	01 26 44.7	-2.5
	baz=272						
W44A	Shelby Farms P	108.44	57	Pdiff	Pdif	01 26 45.6	-1.8
	baz=270						
L42A	Oliver, Polo	108.46	49	PFAKE		01 31 00.0	+6.7
L42A				LR	LR		
	comp=Z,228µm,20.0s						
L42A	Oliver, Polo	108.46	49	Pdiff	Pdif	01 26 45.6	-1.8
	baz=272						
C40A	Isle Royale Na	108.51	43	PFAKE		01 31 00.0	+6.8
C40A				LR	LR		
	comp=Z,116µm,20.0s						
C40A	Isle Royale Na	108.51	43	Pdiff	Pdif	01 26 45.7	-1.8
	baz=274						
Q43A	New Douglas	108.51	53	Pdiff	Pdif	01 26 44.1	-3.7
	baz=271						
PVMO	Portageville	108.53	55	PFAKE		01 31 00.0	+6.4
PVMO				LR	LR		
	comp=Z,199µm,19.0s						
U44A	Portageville	108.55	55	Pdiff	Pdif	01 26 45.0	-2.9
	baz=270						
P43A	Skaggs, Pawnee	108.64	52	Pdiff	Pdif	01 26 48.5	+0.3
	baz=271						
COWI	Conover	108.64	45	PFAKE		01 31 00.0	+6.5
COWI				LR	LR		
	comp=Z,149µm,19.0s						
Y45A	Yeager Farm, C	108.65	58	Pdiff	Pdif	01 26 46.0	-2.4
	baz=269						
G41A	Antigo	108.67	46	Pdiff	Pdif	01 26 44.3	-4.0
	baz=273						
K42A	Prairie Point,	108.67	48	Pdiff	Pdif	01 26 47.7	-0.6
	baz=272						
F41A	Three Lakes	108.69	45	PFAKE		01 31 00.0	+6.4
F41A				LR	LR		
	comp=Z,209µm,19.0s						
F41A	Three Lakes	108.69	45	Pdiff	Pdif	01 26 47.8	-0.6
	baz=274						
E41A	Kenton	108.74	45	Pdiff	Pdif	01 26 44.4	-4.1
	baz=274						
OXF	Oxford	108.77	57	PFAKE		01 31 10.0	+16
OXF				LR	LR		
	comp=Z,138µm,20.0s						
OXF	Oxford	108.77	57	Pdiff	Pdif	01 26 51.3	+2.4
	baz=270						
X45A	UM Field Stati	108.78	57	Pdiff	Pdif	01 26 48.8	-0.2
	baz=270						
O43A	Sugar Creek Fa	108.78	51	Pdiff	Pdif	01 26 48.8	-0.1
	baz=272						
HDIL	Hopedale	108.79	51	PFAKE		01 31 00.0	+6.1
HDIL				LR	LR		
	comp=Z,199µm,20.0s						
HDIL	Hopedale	108.79	51	Pdiff	Pdif	01 26 51.4	+2.4
	baz=272						
J42A	Columbus	108.81	48	Pdiff	Pdif	01 26 49.7	+0.7
	baz=273						
U44B	Burton Farm, H	108.82	55	Pdiff	Pdif	01 26 51.4	+2.3
	baz=270						
HALT	Halls	108.83	56	PFAKE		01 31 10.0	+16
HALT				LR	LR		
	comp=Z,191µm,20.0s						
N43A	Stutzman Famil	108.87	50	Pdiff	Pdif	01 26 48.1	-1.1
	baz=272						
S44A	Carbondale	108.88	54	Pdiff	Pdif	01 26 48.1	-1.2
	baz=271						
SIUC	Southern Illin	108.91	54	PFAKE		01 31 10.0	+16
SIUC				LR	LR		
	comp=Z,244µm,20.0s						
I42A	Draeger Farm,	108.93	47	PFAKE		01 31 10.0	+16
I42A				LR	LR		
	comp=Z,141µm,18.0s						
I42A	Draeger Farm,	108.93	47	Pdiff	Pdif	01 26 49.1	-0.4
	baz=273						
W45A	Hickory Valley	108.95	57	Pdiff	Pdif	01 26 50.0	+0.2
	baz=270						
246A	Jackson Lee, B	108.97	60	Pdiff	Pdif	01 26 49.2	-0.7
	baz=269						
D41A	Chassel	108.97	44	PFAKE		01 31 10.0	+16
D41A				LR	LR		
	comp=Z,173µm,20.0s						
D41A	Chassel	108.97	44	Pdiff	Pdif	01 26 50.0	+0.4
	baz=274						
R44A	Waltonville	109.01	53	Pdiff	Pdif	01 26 50.1	+0.1
	baz=271						
M43A	Waltham Townsh	109.01	50	Pdiff	Pdif	01 26 49.2	-0.7
	baz=272						
Q44A	Meyer Farm, Va	109.05	53	PFAKE		01 31 10.0	+16
Q44A				LR	LR		
	comp=Z,207µm,22.0s						
Q44A	Meyer Farm, Va	109.05	53	Pdiff	Pdif	01 26 55.3	+5.2
	baz=271						
TEIG	Tepich	109.12	72	PFAKE		01 31 10.0	+15
TEIG				LR	LR		
	comp=Z,126µm,20.0s						
V45A	Humboldt	109.14	56	Pdiff	Pdif	01 26 48.6	-1.9
	baz=270						
L43A	Garden Prairie	109.14	49	Pdiff	Pdif	01 26 52.0	+1.6
	baz=273						
H42A	Shiocton	109.17	47	PFAKE		01 31 10.0	+15
H42A				LR	LR		
	comp=Z,158µm,20.0s						
H42A	Shiocton	109.17	47	Pdiff	Pdif	01 26 47.0	-3.6
	baz=274						
G42A	Mountain	109.20	46	PFAKE		01 31 10.0	+15
G42A				LR	LR		
	comp=Z,210µm,19.0s						
G42A	Mountain	109.20	46	Pdiff	Pdif	01 26 45.3	-5.3
	baz=274						
Y46A	Houston	109.22	58	Pdiff	Pdif	01 26 44.5	-6.4
	baz=270						
U45A	Rockin P Farm,	109.29	55	Pdiff	Pdif	01 26 48.9	-2.3
	baz=271						
J43A	Natural Harves	109.32	48	Pdiff	Pdif	01 26 44.7	-6.5
	baz=273						
P44A	Sand Creek, Wi	109.34	52	Pdiff	Pdif	01 26 47.3	-4.1
	baz=272						
F42A	Maple Grove Fa	109.37	45	Pdiff	Pdif	01 26 51.6	+0.2
	baz=274						
T45A	Paducah	109.38	55	PFAKE		01 31 10.0	+15
T45A				LR	LR		
	comp=Z,196µm,20.0s						
T45A	Paducah	109.38	55	Pdiff	Pdif	01 26 49.9	-1.7
	baz=271						
S45A	Carrier Mills	109.42	54	Pdiff	Pdif	01 26 50.9	-0.9
	baz=271						
K43A	Burlington	109.42	49	PFAKE		01 31 10.0	+15
K43A				LR	LR		
	comp=Z,197µm,19.0s						
K43A	Burlington	109.42	49	Pdiff	Pdif	01 26 51.7	0.0
	baz=273						
O44A	Mansfield	109.44	51	Pdiff	Pdif	01 26 51.7	-0.1
	baz=272						
X46A	Booneville	109.45	57	Pdiff	Pdif	01 26 45.8	-6.1
	baz=270						
E42A	Champion	109.47	45	Pdiff	Pdif	01 26 50.1	-1.8
	baz=275						
I43A	Langenfeld Bro	109.49	47	Pdiff	Pdif	01 26 48.4	-3.5
	baz=274						
W46A	Michie	109.61	57	Pdiff	Pdif	01 26 50.4	-2.3
	baz=270						
R45A	Skylar, Fairfi	109.64	53	Pdiff	Pdif	01 26 47.9	-4.9
	baz=272						
N44A	Piper City	109.66	51	Pdiff	Pdif	01 26 49.6	-3.2
	baz=273						
147A	Livingston	109.70	59	PFAKE		01 31 10.0	+14
147A				LR	LR		
	comp=Z,134µm,20.0s						
147A	Livingston	109.70	59	Pdiff	Pdif	01 26 51.4	-1.7
	baz=270						
M44A	Midewin, Midew	109.70	50	PFAKE		01 31 10.0	+14
M44A				LR	LR		
	comp=Z,229µm,19.0s						

M44A	Midewin, Midew	109.70	50	Pdiff	Pdif	01 26 48.0	-5.0
	baz=273						
H43A	Windswept, Lux	109.72	47	PFAKE		01 31 10.0	+14
H43A				LR	LR		
	comp=Z,130µm,20.0s						
H43A	Windswept, Lux	109.72	47	Pdiff	Pdif	01 26 50.5	-2.4
	baz=274						
G43A	Wallace	109.72	46	PFAKE		01 31 10.0	+14
G43A				LR	LR		
	comp=Z,177µm,20.0s						
G43A	Wallace	109.72	46	Pdiff	Pdif	01 26 48.0	-4.9
	baz=274						
Q45A	Warren Harvey,	109.72	53	Pdiff	Pdif	01 26 53.1	0.0
	baz=272						
L44A	Lake County Fo	109.76	49	Pdiff	Pdif	01 26 54.0	+0.8
	baz=273						
U46A	Springville	109.76	55	Pdiff	Pdif	01 26 49.0	-4.4
	baz=271						
OLIL	Olney	109.77	53	PFAKE		01 31 10.0	+14
OLIL				LR	LR		
	comp=Z,169µm,20.0s						
V46A	Holladay	109.82	56	Pdiff	Pdif	01 26 49.1	-4.5
	baz=271						
PLAL	Pickwick Lake	109.86	57	PFAKE		01 31 10.0	+14
PLAL				LR	LR		
	comp=Z,233µm,19.0s						
T46A	Princeton	109.98	55	Pdiff	Pdif	01 26 52.8	-1.5
	baz=271						
O45A	Potomac	110.00	51	Pdiff	Pdif	01 26 51.9	-2.4
	baz=273						
P45A	Graceland, Par	110.02	52	PFAKE		01 31 10.0	+14
P45A				LR	LR		
	comp=Z,268µm,19.0s						
P45A	Graceland, Par	110.02	52	Pdiff	Pdif	01 26 52.8	-1.6
	baz=272						
448A	Bay Minette	110.03	61	Pdiff	Pdif	01 26 51.2	-3.4
	baz=269						
F43A	Flat Rock, Esc	110.03	45	Pdiff	Pdif	01 26 55.4	+1.1
	baz=275						
X47A	Russelville	110.05	57	Pdiff	Pdif	01 26 53.8	-0.9
	baz=270						
WVT	Waverly	110.05	55	PFAKE		01 31 10.0	+14
WVT				LR	LR		
	comp=Z,193µm,20.0s						
WVT	Waverly	110.05	55	Pdiff	Pdif	01 26 52.0	-2.6
	baz=271						
S46A	Don Dixon Farm	110.10	54	Pdiff	Pdif	01 26 53.8	-1.0
	baz=272						
E43A	Lone Tree Farm	110.11	45	PFAKE		01 31 10.0	+14
E43A				LR	LR		
	comp=Z,83µm,22.0s						
E43A	Lone Tree Farm	110.11	45	Pdiff	Pdif	01 26 52.1	-2.5
	baz=275						
N45A	Kentland	110.13	50	Pdiff	Pdif	01 26 56.4	+1.6
	baz=273						
USIN	University of	110.13	54	PFAKE		01 31 10.0	+13
USIN				LR	LR		
	comp=Z,194µm,20.0s						
ESTN	Estel	110.22	80	PFAKE		01 31 10.0	+13
ESTN				LR	LR		
	comp=Z,126µm,21.0s						
R46A	Gibon Southern	110.25	53	Pdiff	Pdif	01 26 48.2	-7.3
	baz=272						
W47A	Westpoint	110.25	56	Pdiff	Pdif	01 26 43.9	-12
	baz=271						
148A	Greensboro	110.29	59	Pdiff	Pdif	01 26 52.5	-3.2
	baz=270						
M45A	Boilermakers S	110.30	50	Pdiff	Pdif	01 26 53.3	-2.3
	baz=273						
V47A	Nunnelly	110.31	56	Pdiff	Pdif	01 26 54.2	-1.5
	baz=271						
Q46A	CEJHS Indians,	110.34	52	Pdiff	Pdif	01 26 53.4	-2.4
	baz=272						
P46A	Rosedale	110.43	52	Pdiff	Pdif	01 26 56.1	-0.1
	baz=273						
SFIN	Lafayette	110.47	51	PFAKE		01 31 10.0	+13
SFIN				LR	LR		
	comp=Z,179µm,20.0s						
SFIN	Lafayette	110.47	51	Pdiff	Pdif	01 26 57.1	+0.7
	baz=273						
U47A	Clarksville	110.48	55	Pdiff	Pdif	01 26 54.6	-2.0
	baz=272						
F44A	Big Bay de Noc	110.54	45	Pdiff	Pdif	01 26 53.8	-2.8
	baz=276						
449A	Pace	110.58	61	Pdiff	Pdif	01 26 55.6	-1.5
	baz=270						
349A	Repton	110.61	61	Pdiff	Pdif	01 26 55.7	-1.5
	baz=270						
T47A	Sharon Grove	110.61	55	Pdiff	Pdif	01 26 53.1	-4.0
	baz=272						
Y48A	Jasper	110.62	58	Pdiff	Pdif	01 26 55.7	-1.5
	baz=271						
249A	Camden	110.67	60	Pdiff	Pdif	01 26 56.6	-0.8
	baz=270						
N46A	Monticello	110.72	50	Pdiff	Pdif	01 26 54.1	-3.3
	baz=274						
X48A	Hartselle	110.72	57	PFAKE		01 31 10.0	+12
X48A				LR	LR		
	comp=Z,171µm,20.0s						
X48A	Hartselle	110.72	57	Pdiff	Pdif	01 26 54.2	-3.5
	baz=271						
BRAL	Brewton	110.73	61	PFAKE		01 31 10.0	+12
BRAL				LR	LR		
	comp=Z,117µm,22.0s						
BRAL	Brewton	110.73	61	Pdiff	Pdif	01 26 58.4	+0.7
	baz=270						
S47A	Hartford	110.77	54	Pdiff	Pdif	01 26 53.4	-4.4
	baz=272						
LRAL	Lakeview Retre	110.77	59	PFAKE		01 31 10.0	+12
LRAL				LR	LR		
	comp=Z,219µm,21.0s						
LRAL	Lakeview Retre	110.77	59	Pdiff	Pdif	01 26 58.5	+0.6
	baz=270						
J45A	Montague	110.79	48	Pdiff	Pdif	01 26 58.5	+0.8
	baz=275						
W48A	Pulaski	110.80	57	Pdiff	Pdif	01 26 57.7	-0.3
	baz=271						
I45A	Fountain	110.85	47	Pdiff	Pdif	01 26 56.1	-1.9
	baz=275						
V48A	Smith Brothers	110.88	56	PFAKE		01 31 10.0	+12
V48A				LR	LR		
	comp=Z,159µm,20.0s						
V48A	Smith Brothers	110.88	56	Pdiff	Pdif	01 26 58.7	+0.4
	baz=272						
149A	Jones	110.95	59	Pdiff	Pdif	01 26 55.5	-3.2
	baz=270						
L46A	Eue Claire	110.97	49	Pdiff	Pdif	01 26 55.5	-3.1
	baz=274						
M46A	Old House Fiel	110.97	50	PFAKE		01 31 10.0	+12
M46A				LR	LR		
	comp=Z,225µm,20.0s						
M46A	Old House Fiel	110.97	50	Pdiff	Pdif	01 26 52.9	-5.7
	baz=274						
BLO	Bloomington	110.98	52	PFAKE		01 31 10.0	+12
BLO				LR	LR		
	comp=Z,221µm,20.0s						
ROC1	El Roble	111.00	132	PFAKE		01 31 10.0	+11
ROC1				LR	LR		
	comp=Z,400nm,18.0s						
R47A	Wooly Knot Far	111.02	53	Pdiff	Pdif	01 26 56.4	-2.5
	baz=273						
Q47A	Bedord North L	111.06	52	Pdiff	Pdif	01 26 59.9	+0.8
	baz=273						
U48A	Cassie Pea, Po	111.08	55	Pdiff	Pdif	01 26 58.2	-1.0
	baz=272						
450A	Crestview	111.13	61	Pdiff	Pdif	01 26 58.4	-1.2
	baz=270						
P47A	Martinsville	111.16	52	Pdiff	Pdif	01 26 56.7	-2.8
	baz=273						
PEL	Peldehue	111.16	132	PFAKE		01 31 10.0	+11
PEL				LR	LR		
	comp=Z,89µm,18.0s						
Z49A	Columbiana	111.16	59	Pdiff	Pdif	01 26 59.3	-0.4
	baz=271						
G45A	Suttons Bay	111.17	46	Pdiff	Pdif	01 26 56.7	-2.7
	baz=276						
T48A	Bowling Green	111.17	54	Pdiff	Pdif	01 26 55.9	-3.7
	baz=272						
O47A	Sheridan	111.19	51	Pdiff	Pdif	01 26 58.4	-1.2
	baz=274						
F45A	CMU Biological	111.20	45	Pdiff	Pdif	01 26 59.3	-0.2
	baz=276						
WCI	Wyandotte Cave	111.20	53	PFAKE		01 31 10.0	+11
WCI				LR	LR		
	comp=Z,246µm,20.0s						
WCI	Wyandotte Cave	111.20	53	Pdiff	Pdif	01 26 58.5	-1.2
	baz=273						
JTS	JuntasAbangare	111.25	83	*e*PKKPbc	PKKPbc	01 41 58.5	+3.7
JTS				LR	LR		
	comp=Z,182µm,21.0s						
JTS	JuntasAbangare	111.25	83	PKKPbc	PKKPbc	01 41 58.5	+3.7
	comp=Z,14nm,1.0s,baz=310,slow=6.1,SNR=6.3						
Y49A	Blount Mountai	111.25	58	PFAKE		01 31 10.0	+11
Y49A				LR	LR		
	comp=Z,133µm,20.0s						
Y49A	Blount Mountai	111.25	58	Pdiff	Pdif	01 26 56.9	-3.2
	baz=271						
K46A	Dorr	111.30	48	Pdiff	Pdif	01 26 58.6	-1.4
	baz=275						
X49A	Woodville	111.31	57	Pdiff	Pdif	01 26 59.5	-0.7
	baz=271						
J46A	Howard City	111.34	48	Pdiff	Pdif	01 26 58.7	-1.5
	baz=275						
350A	Dozier	111.34	60	Pdiff	Pdif	01 27 03.0	+2.5
	baz=270						
W49A	Belvidere	111.35	57	Pdiff	Pdif	01 26 58.7	-1.7
	baz=272						
E45A	Wooded Hills,	111.36	44	Pdiff	Pdif	01 27 01.3	+1.1
	baz=277						
250A	Grady	111.40	60	PFAKE		01 31 10.0	+11
250A				LR	LR		
	comp=Z,104µm,19.0s						
250A	Grady	111.40	60	Pdiff	Pdif	01 26 57.2	-3.5
	baz=270						
S48A	Wiedeman Farm,	111.42	54	Pdiff	Pdif	01 26 57.2	-3.5
	baz=273						
N47A	Urbana	111.51	50	Pdiff	Pdif	01 26 58.2	-2.8
	baz=274						
M47A	Cromwell	111.53	50	Pdiff	Pdif	01 27 00.8	-0.3
	baz=274						
R48A	Northridge Ran	111.53	53	Pdiff	Pdif	01 26 55.7	-5.5
	baz=273						
H46A	Fife Lake	111.54	46	Pdiff	Pdif	01 26 59.1	-2.0
	baz=276						
UOSS	Minazif	111.59	293	PFAKE		01 31 10.0	+10
UOSS				LR	LR		
	comp=Z,30µm,22.0s						
150A	Eclectic	111.60	59	Pdiff	Pdif	01 27 00.1	-1.5
	baz=271						
Q48A	North Vernon	111.61	52	Pdiff	Pdif	01 27 00.1	-1.4
	baz=274						
V49A	McMinnville	111.62	56	Pdiff	Pdif	01 26 59.3	-2.4
	baz=272						
Z50A	Ashland	111.67	59	PFAKE		01 31 10.0	+10
Z50A				LR	LR		
	comp=Z,166µm,20.0s						
Z50A	Ashland	111.67	59	Pdiff	Pdif	01 26 58.5	-3.4
	baz=271						
U49A	Red Boiling Sp	111.69	55	Pdiff	Pdif	01 26 59.4	-2.5
	baz=272						
G46A	Petoskey	111.70	46	Pdiff	Pdif	01 26 57.7	-4.1
	baz=277						
F46A	Macinaw City C	111.72	45	Pdiff	Pdif	01 27 01.9	+0.1
	baz=277						
L47A	Sherwood	111.79	49	Pdiff	Pdif	01 26 58.7	-3.5
	baz=275						
P48A	Milroy	111.81	52	Pdiff	Pdif	01 27 02.2	-0.2
	baz=274						
Y50A	Piedmont	111.82	58	Pdiff	Pdif	01 26 58.8	-3.7
	baz=272						
451A	Vernon	111.85	61	PFAKE		01 31 10.0	+10
451A				LR	LR		
	comp=Z,115µm,21.0s						
451A	Vernon	111.85	61	Pdiff	Pdif	01 27 00.6	-2.2
	baz=270						
T49A	Edmonton	111.86	54	PFAKE		01 31 10.0	+10
T49A				LR	LR		
	comp=Z,175µm,18.0s						
T49A	Edmonton	111.86	54	Pdiff	Pdif	01 27 00.6	-2.1
	baz=273						
X50B	Fort Payne	111.87	57	Pdiff	Pdif	01 27 02.3	-0.5
	baz=272						
K47A	Vermontville	111.87	48	Pdiff	Pdif	01 27 01.4	-1.2
	baz=276						
GLMI	Grayling	111.93	46	PFAKE		01 31 10.0	+10
GLMI				LR	LR		
	comp=Z,126µm,18.0s						
GLMI	Grayling	111.93	46	Pdiff	Pdif	01 27 01.5	-1.3
	baz=277						
J47A	Sunmer	111.95	48	Pdiff	Pdif	01 26 56.4	-6.5
	baz=276						
E46A	Sault Ste Mari	111.96	44	Pdiff	Pdif	01 27 01.5	-1.3
	baz=278						
O48A	Farmland	111.96	51	Pdiff	Pdif	01 26 59.9	-3.2
	baz=274						
351A	Pinckard	111.97	61	Pdiff	Pdif	01 27 01.6	-1.6
	baz=270						
HSPB	Hornsund (broa	111.97	353	*e*P	Pdif	01 27 19.3	+17
ABPO	Ambohimpanom	111.99	244	PFAKE		01 31 10.0	+9.2
ABPO				LR	LR		
	comp=Z,89µm,18.0s						
KULLO	Kullorsuaq	112.00	11	*i* P	PP	01 31 49.1	+6.5
N48A	Decatur	112.01	50	Pdiff	Pdif	01 27 00.8	-2.4
	baz=275						
S49A	Springfield	112.02	54	Pdiff	Pdif	01 26 58.3	-5.0
	baz=273						
HDC	Heredia	112.03	84	PFAKE		01 31 10.0	+9.1
HDC				LR	LR		
	comp=Z,153µm,21.0s						
D46A	Sault St. Mari	112.07	44	Pdiff	Pdif	01 26 57.5	-5.9
	baz=278						
R49A	Shelbyville	112.08	53	Pdiff	Pdif	01 26 59.3	-4.3
	baz=274						
I47A	Gladwin	112.09	47	Pdiff	Pdif	01 26 57.6	-6.0
	baz=276						
ESPN	Las Esperanzas	112.12	81	PFAKE		01 31 10.0	+9.1
ESPN				LR	LR		
	comp=Z,116µm,21.0s						
W50A	Signal Mountai	112.12	56	PFAKE		01 31 10.0	+10
W50A				LR	LR		
	comp=Z,176µm,19.0s						
W50A	Signal Mountai	112.12	56	Pdiff	Pdif	01 26 59.4	-4.6
	baz=272						
251A	Midway	112.12	60	Pdiff	Pdif	01 27 01.9	-2.0
	baz=271						
151A	Opelika	112.19	59	Pdiff	Pdif	01 27 02.1	-2.2
	baz=271						
M48A	Edgerton	112.19	50	PFAKE		01 31 10.0	+10
M48A				LR	LR		
	comp=Z,181µm,20.0s						
M48A	Edgerton	112.19	50	Pdiff	Pdif	01 26 59.5	-4.6
	baz=275						
552A	Lynn Haven	112.24	62	Pdiff	Pdif	01 27 05.6	+1.1
	baz=270						
H47A	Mio	112.24	46	Pdiff	Pdif	01 27 04.6	+0.5
	baz=277						
Q49A	Aurora	112.25	52	Pdiff	Pdif	01 27 04.7	+0.3
	baz=274						
V50A	Pikevile	112.28	56	Pdiff	Pdif	01 27 02.2	-2.3
	baz=273						
Z51A	Franklin	112.30	58	Pdiff	Pdif	01 27 04.0	-0.7
	baz=272						
452A	Marianna	112.33	61	Pdiff	Pdif	01 27 04.0	-0.8
	baz=271						
P49A	Miami Univ. Ec	112.35	52	Pdiff	Pdif	01 27 03.2	-1.6
	baz=274						
L48A	N Adams	112.36	49	Pdiff	Pdif	01 27 04.0	-0.8
	baz=276						
Y51A	Rockmart	112.37	58	Pdiff	Pdif	01 27 03.3	-1.8
	baz=272						
G47A	Hillman	112.42	46	Pdiff	Pdif	01 27 02.4	-2.5
	baz=277						
T50A	Nancy	112.42	54	Pdiff	Pdif	01 27 01.6	-3.5
	baz=273						
U50A	Jamestown	112.45	55	Pdiff	Pdif	01 27 03.4	-2.0
	baz=273						
GO04	Tololo Observa	112.50	129	PFAKE		01 31 10.0	+8.4
GO04				LR	LR		
	comp=Z,120µm,18.0s						
K48A	Perry	112.51	48	Pdiff	Pdif	01 27 06.0	+0.6
	baz=276						
KIRV	Kirov	112.51	329	PKKPbc	PKKPbc	01 41 49.8	-2.1
	comp=Z,18nm,0.9s,baz=260,slow=7.6,SNR=4.4						
X51A	Calhoun	112.52	57	PFAKE		01 31 10.0	+8.8
X51A				LR	LR		
	comp=Z,162µm,20.0s						
X51A	Calhoun	112.52	57	Pdiff	Pdif	01 27 06.1	+0.4
	baz=272						
352A	Blakely	112.55	60	PFAKE		01 31 10.0	+8.7
352A				LR	LR		
	comp=Z,88µm,18.0s						
352A	Blakely	112.55	60	Pdiff	Pdif	01 27 02.7	-3.1
	baz=271						
HOPE	Hope Point	112.56	166	PFAKE		01 31 10.0	+9.3
HOPE				LR	LR		
	comp=Z,154µm,20.0s						
W51A	Cleveland	112.58	56	Pdiff	Pdif	01 27 06.2	+0.3
	baz=273						
O49A	Covington	112.59	51	PFAKE		01 31 10.0	+8.9
O49A				LR	LR		
	comp=Z,248µm,21.0s						
O49A	Covington	112.59	51	Pdiff	Pdif	01 27 03.6	-2.2
	baz=275						
N49A	Columbus Grove	112.64	50	PFAKE		01 31 10.0	+8.8
N49A				LR	LR		
	comp=Z,220µm,20.0s						
N49A	Columbus Grove	112.64	50	Pdiff	Pdif	01 27 05.4	-0.6
	baz=275						
E47A	Iron Bridge	112.65	44	Pdiff	Pdif	01 27 02.9	-3.1
	baz=278						
I48A	Sherman Twp	112.65	47	Pdiff	Pdif	01 27 06.3	+0.3
	baz=277						
D47A	Chapleau	112.68	43	Pdiff	Pdif	01 27 04.6	-1.5
	baz=279						
J48A	Bridge Port	112.69	48	Pdiff	Pdif	01 27 06.9	+0.7
	baz=277						
152A	Waverly Hall	112.70	59	PFAKE		01 31 10.0	+8.4
152A				LR	LR		
	comp=Z,179µm,22.0s						
152A	Waverly Hall	112.70	59	Pdiff	Pdif	01 27 03.9	-2.6
	baz=272						
252A	Lumpkin	112.70	60	Pdiff	Pdif	01 27 05.6	-0.9
	baz=271						
S50A	Richmond	112.73	54	Pdiff	Pdif	01 27 08.2	+1.6
	baz=274						
R50A	Paris	112.75	53	Pdiff	Pdif	01 27 07.3	+0.8
	baz=274						
M49A	Liberty Center	112.75	50	Pdiff	Pdif	01 27 09.9	+3.4
	baz=276						
L49A	Milan	112.84	49	Pdiff	Pdif	01 27 05.8	-1.1
	baz=276						
H48A	Harrisville	112.86	46	Pdiff	Pdif	01 27 05.8	-1.1
	baz=278						
V51A	Loudon	112.88	56	PFAKE		01 31 10.0	+8.2
V51A				LR	LR		
	comp=Z,203µm,20.0s						
V51A	Loudon	112.88	56	Pdiff	Pdif	01 27 05.1	-2.2
	baz=273						
AAM	Ann Arbor	112.90	49	PFAKE		01 31 10.0	+8.4
AAM				LR	LR		
	comp=Z,228µm,20.0s						
AAM	Ann Arbor	112.90	49	Pdiff	Pdif	01 27 02.5	-4.6
	baz=276						
Z52A	Williamson	112.94	59	Pdiff	Pdif	01 27 06.0	-1.5
	baz=272						
Q50A	Georgetown	112.98	52	Pdiff	Pdif	01 27 06.9	-0.7
	baz=275						
553A	Crawfordville	112.99	62	Pdiff	Pdif	01 27 08.7	+0.9
	baz=271						
K49A	Clarkson	112.99	48	Pdiff	Pdif	01 27 10.3	+2.8
	baz=277						
P50A	Jamestown	113.05	52	Pdiff	Pdif	01 27 09.6	+1.7
	baz=275						
453A	Whigham	113.08	61	PFAKE		01 31 10.0	+7.7
453A				LR	LR		
	comp=Z,114µm,21.0s						
453A	Whigham	113.08	61	Pdiff	Pdif	01 27 07.2	-1.0
	baz=271						
U51A	La Follette	113.12	55	Pdiff	Pdif	01 27 08.9	+0.6
	baz=274						
LCO	Las Campanas	113.12	128	PFAKE		01 31 10.0	+7.1
LCO				LR	LR		
	comp=Z,138µm,20.0s						
T51A	Gray	113.14	54	Pdiff	Pdif	01 27 05.5	-2.8
	baz=274						
O50A	Cable	113.14	51	Pdiff	Pdif	01 27 06.4	-1.9
	baz=275						
353A	Camilla	113.15	61	Pdiff	Pdif	01 27 09.0	+0.5
	baz=271						
J49A	Marlette	113.16	47	Pdiff	Pdif	01 27 07.2	-1.0
	baz=277						
F48A	Evansville	113.19	45	Pdiff	Pdif	01 27 07.3	-1.1
	baz=278						
Y52A	Lilburn	113.21	58	PFAKE		01 31 10.0	+7.5
Y52A				LR	LR		
	comp=Z,194µm,20.0s						
Y52A	Lilburn	113.21	58	Pdiff	Pdif	01 27 08.2	-0.5
	baz=272						
253A	Americus	113.21	60	PFAKE		01 31 10.0	+7.5
253A				LR	LR		
	comp=Z,122µm,22.0s						
253A	Americus	113.21	60	Pdiff	Pdif	01 27 09.1	+0.3
	baz=272						
W52A	Murphy	113.26	56	PFAKE		01 31 10.0	+7.4
W52A				LR	LR		
	comp=Z,140µm,20.0s						
W52A	Murphy	113.26	56	Pdiff	Pdif	01 27 09.2	+0.2
	baz=273						
PRGR	Permogore	113.31	333	*e*P	Pdif	01 27 20.5	+12
PRGR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
I49A	Point Hope	113.31	47	Pdiff	Pdif	01 27 09.2	+0.3
	baz=278						
X52A	Dahlonega	113.31	57	Pdiff	Pdif	01 27 11.0	+1.8
	baz=273						
R51A	Hillsboro	113.33	53	Pdiff	Pdif	01 27 07.6	-1.6
	baz=275						
TKL	Tuckaleechee C	113.36	56	PFAKE		01 31 10.0	+7.3
TKL				LR	LR		
	comp=Z,190µm,20.0s						
S51A	Beattyville	113.37	54	PFAKE		01 31 10.0	+7.3
S51A				LR	LR		
	comp=Z,206µm,18.0s						
S51A	Beattyville	113.37	54	Pdiff	Pdif	01 27 06.8	-2.5
	baz=274						
E48A	Lockeyer	113.41	44	Pdiff	Pdif	01 27 05.1	-4.2
	baz=279						
N50A	Nevada	113.44	50	Pdiff	Pdif	01 27 10.3	+0.7
	baz=276						
153A	Fort Valley	113.45	59	Pdiff	Pdif	01 27 08.7	-1.1
	baz=272						
M50A	Fremont	113.45	50	PFAKE		01 31 10.0	+7.3
M50A				LR	LR		
	comp=Z,229µm,21.0s						
M50A	Fremont	113.45	50	Pdiff	Pdif	01 27 08.7	-1.0
	baz=276						
Q51A	Peebles	113.45	52	PFAKE		01 31 10.0	+7.2
Q51A				LR	LR		
	comp=Z,330µm,20.0s						
Q51A	Peebles	113.45	52	Pdiff	Pdif	01 27 12.9	+3.2
	baz=275						
TZTN	Tazewell	113.48	55	PFAKE		01 31 10.0	+7.0
TZTN				LR	LR		
	comp=Z,76µm,18.0s						
TZTN	Tazewell	113.48	55	Pdiff	Pdif	01 27 10.5	+0.5
	baz=274						
V52A	Sevierville	113.49	56	PFAKE		01 31 10.0	+7.0
V52A				LR	LR		
	comp=Z,199µm,20.0s						
V52A	Sevierville	113.49	56	Pdiff	Pdif	01 27 10.5	+0.5
	baz=274						
D48A	Paudash Townsh	113.53	43	Pdiff	Pdif	01 27 10.5	+0.6
	baz=280						
L50A	Kingsville	113.55	49	Pdiff	Pdif	01 27 08.0	-2.1
	baz=277						
F49A	Sandfield	113.60	45	Pdiff	Pdif	01 27 11.5	+1.3
	baz=279						
Y53A	Monroe	113.61	58	Pdiff	Pdif	01 27 09.0	-1.5
	baz=273						
ACSO	Alum Creek Sta	113.62	51	PFAKE		01 31 10.0	+6.9
ACSO				LR	LR		
	comp=Z,222µm,20.0s						
ACSO	Alum Creek Sta	113.62	51	Pdiff	Pdif	01 27 13.2	+2.8
	baz=276						
P51A	Williamsport	113.63	52	PFAKE		01 31 10.0	+6.9
P51A				LR	LR		
	comp=Z,179µm,20.0s						
P51A	Williamsport	113.63	52	Pdiff	Pdif	01 27 09.0	-1.5
	baz=276						
554A	Perry	113.64	62	Pdiff	Pdif	01 27 04.8	-5.9
	baz=271						
U52A	Thorn Hill	113.64	55	Pdiff	Pdif	01 27 07.4	-3.3
	baz=274						
Z53A	Monticello	113.64	58	Pdiff	Pdif	01 27 09.1	-1.6
	baz=272						
454A	Quitman	113.67	61	Pdiff	Pdif	01 27 10.0	-0.8
	baz=271						
TIGA	Tifton	113.69	60	PFAKE		01 31 10.0	+6.5
TIGA				LR	LR		
	comp=Z,82µm,19.0s						
TIGA	Tifton	113.69	60	Pdiff	Pdif	01 27 08.3	-2.6

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      baz=272
GOGA  Godfrey         113.72  58 PFAKE                01 31 10.0 +6.5
GOGA                             LR          LR
      comp=Z,145µm,19.0s
GOGA  Godfrey         113.72  58 Pdiff       Pdif     01 27 07.5 -3.5
      baz=273
S52A  Salyersville    113.78  54 Pdiff       Pdif     01 27 06.8 -4.4
      baz=275
X53A  Estanollee      113.81  57 Pdiff       Pdif     01 27 09.4 -2.0
      baz=273
D49A  Beulah Townshi  113.82  43 Pdiff       Pdif     01 27 09.3 -1.8
      baz=280
W53A  Cullowhee       113.88  56 Pdiff       Pdif     01 27 12.9 +1.1
      baz=274
T52A  Hallie          113.89  54 Pdiff       Pdif     01 27 10.4 -1.4
      baz=274
O51A  Pataskala       113.92  51 Pdiff       Pdif     01 27 09.6 -2.2
      baz=276
254A  Abbeville       113.93  60 Pdiff       Pdif     01 27 13.0 +1.1
      baz=272
655A  Horseshoe Beac  114.02  63 Pdiff       Pdif     01 27 10.7 -1.7
      baz=271
TOBO  Tobermory, Bru  114.05  45 Pdiff       Pdif     01 27 14.0 +1.9
      baz=279
154A  Montrose        114.06  59 PFAKE                01 31 20.0  +16
154A                             LR          LR
      comp=Z,183µm,20.0s
154A  Montrose        114.06  59 Pdiff       Pdif     01 27 12.4 -0.1
      baz=272
R52A  Catlettsburg    114.06  53 Pdiff       Pdif     01 27 08.1 -4.3
      baz=275
M51A  Elyria          114.10  50 Pdiff       Pdif     01 27 09.9 -2.6
      baz=277
BASO  Ashfield        114.13  47 Pdiff       Pdif     01 27 09.9 -2.6
      baz=278
V53A  Saluda          114.14  56 PFAKE                01 31 20.0  +16
V53A                             LR          LR
      comp=Z,195µm,20.0s
V53A  Saluda          114.14  56 Pdiff       Pdif     01 27 11.7 -1.2
      baz=274
455A  Stateville      114.19  61 Pdiff       Pdif     01 27 12.7 -0.5
      baz=272
BRCO  Bruce Peninsul  114.25  46 Pdiff       Pdif     01 27 10.2 -3.0
      baz=279
Z54A  Sparta          114.25  58 Pdiff       Pdif     01 27 09.4 -4.0
      baz=273
555A  McAlpin         114.26  62 PFAKE                01 31 20.0  +15
555A                             LR          LR
      comp=Z,107µm,21.0s
555A  McAlpin         114.26  62 Pdiff       Pdif     01 27 10.3 -3.2
      baz=271
T53A  Wise            114.26  54 Pdiff       Pdif     01 27 11.9 -1.5
      baz=275
U53A  Fall Branch     114.28  55 Pdiff       Pdif     01 27 09.4 -4.1
      baz=274
Q52A  Bidwell         114.30  52 Pdiff       Pdif     01 27 12.8 -0.6
      baz=276
355A  Pearson         114.32  61 Pdiff       Pdif     01 27 13.8 +0.1
      baz=272
P52A  Corning         114.33  51 Pdiff       Pdif     01 27 13.8 +0.2
      baz=276
Y54A  Tignall         114.35  58 Pdiff       Pdif     01 27 11.3 -2.5
      baz=273
TRQA  Tornquist       114.37 141 PFAKE                01 31 20.0  +15
TRQA                             LR          LR
      comp=Z,151µm,18.0s
NNA   Nana            114.38 108 PFAKE                01 31 20.0  +15
NNA                              LR          LR
      comp=Z,185µm,22.0s
E50A  Wahnapitae      114.39  44 Pdiff       Pdif     01 27 13.0 -0.7
      baz=280
K51A  Iona Station    114.42  48 Pdiff       Pdif     01 27 09.7 -4.3
      baz=278
ELFO  Elginfield      114.50  47 Pdiff       Pdif     01 27 11.5 -2.7
      baz=278
LVZ   Lovozero        114.50 342 PFAKE                01 31 10.0 +6.0
LVZ                              LR          LR
      comp=Z,116µm,22.0s
O52A  Adamsville      114.51  51 PFAKE                01 31 20.0  +15
O52A                             LR          LR
      comp=Z,281µm,20.0s
O52A  Adamsville      114.51  51 Pdiff       Pdif     01 27 12.4 -2.0
      baz=277
S53A  Williamson      114.53  54 Pdiff       Pdif     01 27 10.7 -3.8
      baz=275
N52A  McGinn’s Farm,  114.54  50 Pdiff       Pdif     01 27 11.6 -2.9
      baz=277
155A  Kite            114.60  59 Pdiff       Pdif     01 27 14.3 -0.6
      baz=273
R53A  Hurricane       114.61  53 Pdiff       Pdif     01 27 18.5 +3.7
      baz=276
I51A  Listowel        114.62  47 Pdiff       Pdif     01 27 12.6 -2.2
      baz=279
255A  Hazlehurst      114.62  60 PFAKE                01 31 20.0  +15
255A                             LR          LR
      comp=Z,104µm,19.0s
255A  Hazlehurst      114.62  60 Pdiff       Pdif     01 27 16.0 +1.0
      baz=272
656A  Willston        114.65  63 PFAKE                01 31 20.0  +15
656A                             LR          LR
      comp=Z,108µm,22.0s
M52A  Chesterland     114.69  49 Pdiff       Pdif     01 27 15.3 +0.1
      baz=278
556A  Lake Butler     114.75  62 Pdiff       Pdif     01 27 15.4 -0.2
      baz=272
Z55A  Blythe          114.84  58 Pdiff       Pdif     01 27 15.6 -0.4
      baz=273
D50A  G1974 Best Tow  114.86  43 Pdiff       Pdif     01 27 13.0 -2.7
      baz=281
P53A  Whipple         114.92  52 PFAKE                01 31 20.0  +14
P53A                             LR          LR
      comp=Z,258µm,20.0s
P53A  Whipple         114.92  52 Pdiff       Pdif     01 27 17.4 +1.2
      baz=277
857A  Zephyrhills     114.94  64 Pdiff       Pdif     01 27 15.0 -1.5
      baz=271
KLBO  Killbear Provi  114.94  45 Pdiff       Pdif     01 27 12.3 -3.8
      baz=280
957A  Wimauma         114.94  65 PFAKE                01 31 20.0  +14
957A                             LR          LR
      comp=Z,84µm,20.0s
957A  Wimauma         114.94  65 Pdiff       Pdif     01 27 17.5 +1.0
      baz=271
356A  Blackshear      114.94  61 Pdiff       Pdif     01 27 15.8 -0.6
      baz=272
O53A  New Philadelph  114.97  51 Pdiff       Pdif     01 27 16.7 +0.3
      baz=277
K52A  Tillsonburg     115.00  48 Pdiff       Pdif     01 27 17.5 +1.1
      baz=279
T54A  Tazewell        115.02  54 Pdiff       Pdif     01 27 10.0 -6.8
      baz=275
F51A  Arnstein        115.04  44 Pdiff       Pdif     01 27 17.6 +1.0
      baz=281
456A  Hilliard        115.06  61 PFAKE                01 31 20.0  +14
456A                             LR          LR
      comp=Z,78µm,20.0s
456A  Hilliard        115.06  61 Pdiff       Pdif     01 27 14.3 -2.6
      baz=272
757A  Oxford          115.06  63 Pdiff       Pdif     01 27 20.3 +3.2
      baz=271
APA   Apatity         115.08 342⇓iPKIKP      PKPdf    01 31 18.0  +13
APA                             i                     01 32 08.0
APA                             i                     01 38 06.0
APA                             iPS          PKKPab   01 41 49.0 +2.8
APA                              pmax        pmax
      comp=Z,27nm,1.0s
J52A  Paris           115.10  47 Pdiff       Pdif     01 27 16.0 -0.9
      baz=279
PRVC  Isla de Provid  115.10  80 eP          PP       01 31 59.8 -6.8
PRVC  Isla de Provid  115.10  80 eP          PP       01 31 59.8 -6.8
256A  Glennville      115.12  60 Pdiff       Pdif     01 27 18.7 +1.5
      baz=273
N53A  Lisbon          115.18  50 Pdiff       Pdif     01 27 17.9 +0.6
      baz=278
I52A  Shelburne       115.18  46 Pdiff       Pdif     01 27 18.7 +1.4
      baz=280
D51A  Lot 18 Range I  115.18  43 Pdiff       Pdif     01 27 19.6 +2.4
      baz=282
E51A  G1948 Merrick   115.21  44 Pdiff       Pdif     01 27 17.1 -0.3
      baz=281
M53A  WI Miller and   115.22  49 Pdiff       Pdif     01 27 17.1 -0.4
      baz=278
657A  Interlachen     115.23  62 Pdiff       Pdif     01 27 17.2 -0.5
      baz=272
058A  Arcadia         115.33  65 Pdiff       Pdif     01 27 18.3  0.0
      baz=270
557A  Orange Park     115.33  62 Pdiff       Pdif     01 27 18.3  0.0
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      baz=272
ACTO  Acton           115.34  47 Pdiff       Pdif     01 27 18.2 +0.2
      baz=280
TMCR  Tamitsa         115.34 337 ePKIKP      PKiKP    01 31 03.6 -2.0
TMCR                             pmax        pmax
      comp=Z,5.0nm,0.8s
958A  Wauchula        115.36  65 Pdiff       Pdif     01 27 18.3 -0.1
      baz=271
R54A  Victor          115.37  53 Pdiff       Pdif     01 27 17.4 -0.8
      baz=276
KMSC  Kings Mountain  115.38  56 PFAKE                01 31 20.0  +13
KMSC                             LR          LR
      comp=Z,151µm,20.0s
KMSC  Kings Mountain  115.38  56 Pdiff       Pdif     01 27 16.6 -1.7
      baz=275
Q54A  Coxs Mills      115.41  52 Pdiff       Pdif     01 27 19.2 +0.8
      baz=277
156A  Sylvania        115.42  59 Pdiff       Pdif     01 27 19.3 +0.7
      baz=273
L53A  Girard          115.45  49 Pdiff       Pdif     01 27 16.7 -1.8
      baz=279
457A  Yulee           115.46  61 Pdiff       Pdif     01 27 16.8 -2.0
      baz=272
F52A  Sundridge       115.47  44 Pdiff       Pdif     01 27 18.4 -0.1
      baz=281
KEV   Kevo            115.48 345 PFAKE                01 31 20.0  +14
KEV                              LR          LR
      comp=Z,69µm,20.0s
BUKO  Buck Lake       115.48  45 Pdiff       Pdif     01 27 18.5 -0.1
      baz=281
357A  Townsend        115.49  60 Pdiff       Pdif     01 27 16.9 -2.0
      baz=273
TYNO  Tyneside        115.56  47 Pdiff       Pdif     01 27 18.6 -0.3
      baz=279
ALLY  Alegheny Colle  115.58  49 PFAKE                01 31 20.0  +13
ALLY                             LR          LR
      comp=Z,256µm,21.0s
P54A  Burton          115.60  51 Pdiff       Pdif     01 27 23.0 +3.7
      baz=277
O54A  Avella          115.61  51 Pdiff       Pdif     01 27 20.4 +1.2
      baz=278
ERPA  Erie            115.62  48 PFAKE                01 31 20.0  +13
ERPA                             LR          LR
      comp=Z,180µm,21.0s
ERPA  Erie            115.62  48 Pdiff       Pdif     01 27 14.5 -4.8
      baz=279
I53A  Kortright Cn E  115.64  47 Pdiff       Pdif     01 27 23.9 +4.6
      baz=280
DWPF  Disney Wildern  115.64  64 PFAKE                01 31 20.0  +13
DWPF                             LR          LR
      comp=Z,102µm,20.0s
DWPF  Disney Wildern  115.64  64 Pdiff       Pdif     01 27 23.1 +3.5
      baz=271
059Z  Ave Maria       115.65  66 Pdiff       Pdif     01 27 22.3 +2.6
      baz=270
858A  St. Cloud       115.70  64 Pdiff       Pdif     01 27 23.2 +3.3
      baz=271
PB10  IPOC Station P  115.72 123 PFAKE                01 31 20.0  +12
PB10                             LR          LR
      comp=Z,154µm,20.0s
MATQ  Matagami        115.72  40 Pdiff       Pdif     01 27 22.3 +2.8
      baz=284
658A  Bunnell         115.76  63 PFAKE                01 31 20.0  +13
658A                             LR          LR
      comp=Z,71µm,20.0s
658A  Bunnell         115.76  63 Pdiff       Pdif     01 27 20.8 +0.6
      baz=272
GO02  Mina Guanaco    115.77 125 ePKPdf      PKPdf    01 31 10.8 +2.7
GO02                             LR          LR
      comp=Z,198µm,20.0s
SADO  Sadowa          115.79  45 PFAKE                01 31 20.0  +13
SADO                             LR          LR
      comp=Z,118µm,21.0s
N54A  Moraine State   115.79  50 PFAKE                01 31 20.0  +13
N54A                             LR          LR
      comp=Z,195µm,21.0s
N54A  Moraine State   115.79  50 Pdiff       Pdif     01 27 19.9 -0.2
      baz=278
S55A  Lewisburg       115.80  53 Pdiff       Pdif     01 27 12.3 -7.9
      baz=276
758A  Lake Helen      115.83  63 Pdiff       Pdif     01 27 19.2 -1.2
      baz=272
E52A  Mattawa         115.83  44 Pdiff       Pdif     01 27 18.3 -1.8
      baz=282
257A  Skidaway Islan  115.85  60 PFAKE                01 31 20.0  +12
257A                             LR          LR
      comp=Z,108µm,20.0s
257A  Skidaway Islan  115.85  60 Pdiff       Pdif     01 27 14.1 -6.3
      baz=273
D52A  ZEK Kipawa Sen  115.85  43 Pdiff       Pdif     01 27 11.5 -8.7
      baz=282
TORO  Toronto--Lesli  115.85  47 Pdiff       Pdif     01 27 14.9 -5.3
      baz=280
059A  Moore Haven     115.92  65 PFAKE                01 31 20.0  +12
059A                             LR          LR
      comp=Z,83µm,22.0s
059A  Moore Haven     115.92  65 Pdiff       Pdif     01 27 20.2 -0.6
      baz=271
BLA   Blacksburg      115.93  54 PFAKE                01 31 20.0  +12
BLA                              LR          LR
      comp=Z,170µm,20.0s
BLA   Blacksburg      115.93  54 Pdiff       Pdif     01 27 19.4 -1.4
      baz=276
OTAV  Otavalo         115.95  95 PFAKE                01 31 20.0  +11
OTAV                             LR          LR
      comp=Z,148µm,18.0s
OTAV  Otavalo         115.95  95 eP          PP       01 32 24.6  +11
OTAV  Otavalo         115.95  95 eP          PP       01 32 24.6  +11
M54A  Oil Creek Stat  115.96  49 PFAKE                01 31 20.0  +12
M54A                             LR          LR
      comp=Z,240µm,20.0s
M54A  Oil Creek Stat  115.96  49 Pdiff       Pdif     01 27 16.8 -4.0
      baz=279
PKRO  Pickering       115.98  46 Pdiff       Pdif     01 27 19.4 -1.4
      baz=280
Q55A  Buckhannon      115.99  52 Pdiff       Pdif     01 27 19.5 -1.6
      baz=277
TUMC  Tumaco          116.00  93 eP          PP       01 32 18.5 +5.6
TUMC  Tumaco          116.00  93 eP          PP       01 32 18.5 +5.6
062Z  Marathon        116.01  68 Pdiff       Pdif     01 27 22.1 +0.8
      baz=270
ARA0  ARCESS Array S  116.01 345 ePKPdf      PKiKP    01 31 04.1 -2.8
ARA0                             ePKKPbc     PKKPbc   01 41 39.8 -0.4
ARCES ARCESS Array B  116.01 345 PKP         PKiKP    01 31 04.1 -2.8
      comp=Z,4.4nm,1.0s,baz=344,slow=3.5,SNR=7.1
ARCES                            PKKPbc      PKKPbc   01 41 39.8 -0.4
      comp=Z,2.4nm,0.7s,baz=191,slow=0.9,SNR=2.8
R55A  Marlinton       116.04  53 Pdiff       Pdif     01 27 23.0 +1.6
      baz=277
STCO  Saint Catharin  116.05  47 Pdiff       Pdif     01 27 21.2 +0.2
      baz=280
MCWV  Mont Chateau    116.08  51 PFAKE                01 31 20.0  +12
MCWV                             LR          LR
      comp=Z,121µm,20.0s
MCWV  Mont Chateau    116.08  51 Pdiff       Pdif     01 27 21.3  0.0
      baz=278
G53A  Haliburton      116.08  45 Pdiff       Pdif     01 27 23.0 +1.8
      baz=281
BCIP  Isla Barro Col  116.09  85 PFAKE                01 31 20.0  +11
BCIP                             LR          LR
      comp=Z,102µm,20.0s
859A  Kempfer Cattle  116.11  64 Pdiff       Pdif     01 27 23.2 +1.4
      baz=271
P55A  Reedsville      116.12  51 Pdiff       Pdif     01 27 18.0 -3.6
      baz=278
061Z  Ochoppi         116.14  67 PFAKE                01 31 20.0  +12
061Z                             LR          LR
      comp=Z,94µm,20.0s
061Z  Ochoppi         116.14  67 Pdiff       Pdif     01 27 22.4 +0.5
      baz=270
959A  Okeechobee      116.14  65 Pdiff       Pdif     01 27 18.1 -3.8
      baz=271
VLDQ  Val d'Or        116.23  42 PFAKE                01 31 20.0  +12
VLDQ                             LR          LR
      comp=Z,145µm,20.0s
DRWO  Darlington Wes  116.24  46 Pdiff       Pdif     01 27 17.4 -4.6
      baz=281
DRCO  St. Marys Ceme  116.26  46 Pdiff       Pdif     01 27 21.7 -0.4
      baz=281
D53A  Lac Vacive, Po  116.30  43 Pdiff       Pdif     01 27 20.9 -1.3
      baz=283
LSQQ  Lebel-sur-Quev  116.31  40 Pdiff       Pdif     01 27 20.9 -1.3
      baz=284
ALGO  Algonquin Park  116.31  44 Pdiff       Pdif     01 27 16.6 -5.6
      baz=282
KLMR  Klimovskoe      116.32 334 ePKIKP      PKiKP    01 31 08.0 +0.4
KLMR                             pmax        pmax
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      comp=Z,43nm,1.3s
KLMR  Klimovskoe      116.32 334 ePKPdf      PKiKP    01 31 08.0 +0.4
KLMR                             AMP                  01 31 25.7
      comp=Z,43nm,1.2s
O55A  Ligonier        116.42  50 Pdiff       Pdif     01 27 18.6 -4.3
      baz=278
060Z  West Palm Beac  116.45  66 Pdiff       Pdif     01 27 19.6 -3.7
      baz=271
WLVO  Wesleyville     116.47  46 Pdiff       Pdif     01 27 22.9 -0.1
      baz=281
E53A  Dumoine, Ponti  116.48  43 Pdiff       Pdif     01 27 21.2 -1.8
      baz=283
NHSC  New Hope        116.49  58 PFAKE                01 31 20.0  +11
NHSC                             LR          LR
      comp=Z,180µm,18.0s
NHSC  New Hope        116.49  58 Pdiff       Pdif     01 27 23.0 -0.3
      baz=274
MEDO  Medina          116.57  47 Pdiff       Pdif     01 27 18.8 -4.6
      baz=280
N55A  Marion Center   116.57  50 Pdiff       Pdif     01 27 20.6 -3.0
      baz=279
BANO  Bancroft        116.59  45 Pdiff       Pdif     01 27 19.7 -3.8
      baz=282
060A  Indiantown      116.61  65 PFAKE                01 31 20.0  +11
060A                             LR          LR
      comp=Z,96µm,20.0s
060A  Indiantown      116.61  65 Pdiff       Pdif     01 27 20.7 -3.2
      baz=271
M55A  Ridgway         116.63  49 Pdiff       Pdif     01 27 20.7 -3.1
      baz=279
SUMG  Summit          116.73   8 PFAKE                01 31 20.0  +11
SUMG                             LR          LR
      comp=Z,66µm,19.0s
SUMG  Summit          116.73   8 iP          PP       01 32 07.2 -9.3
L55A  Hinsdale        116.75  48 Pdiff       Pdif     01 27 23.5 -0.9
      baz=280
E54A  Lac Daplat, Po  116.79  43 Pdiff       Pdif     01 27 21.8 -2.6
      baz=283
DELO  Deloro Mine     116.90  45 Pdiff       Pdif     01 27 19.5 -5.4
      baz=282
PEMO  Pembroke        116.92  44 Pdiff       Pdif     01 27 19.5 -5.4
      baz=283
I55A  Frankford       116.92  46 Pdiff       Pdif     01 27 23.8 -1.2
      baz=282
K55A  Perry           116.92  48 Pdiff       Pdif     01 27 23.8 -1.3
      baz=280
O56A  Blue Knob Stat  116.97  50 PFAKE                01 31 20.0  +10
O56A                             LR          LR
      comp=Z,191µm,20.0s
O56A  Blue Knob Stat  116.97  50 Pdiff       Pdif     01 27 22.2 -3.2
      baz=279
D54A  Lac Fusel, La   116.98  42 Pdiff       Pdif     01 27 19.6 -5.6
      baz=284
J55A  Hilton          117.01  47 Pdiff       Pdif     01 27 25.6 +0.3
      baz=281
MMNY  Mt. Morris Dam  117.04  48 PFAKE                01 31 20.0  +10
MMNY                             LR          LR
      comp=Z,136µm,19.0s
PLVO  Plevna          117.17  45 PFAKE                01 31 20.0  +10
PLVO                             LR          LR
      comp=Z,148µm,19.0s
PLVO  Plevna          117.17  45 Pdiff       Pdif     01 27 30.2 +4.1
      baz=282
H55A  Tweed           117.20  45 Pdiff       Pdif     01 27 25.1 -1.1
      baz=282
GCUF  Volcan Galeras  117.24  94 eP          PP       01 32 31.8  +10
GCUF  Volcan Galeras  117.24  94 eP          PP       01 32 31.8  +10
ILULI Ilulissat       117.24  14 PFAKE                01 31 20.0  +11
ILULI                            LR          LR
      comp=Z,86µm,19.0s
ILULI Ilulissat       117.24  14 iP          PP       01 32 27.4 +7.8
G55A  Calabogie       117.37  45 Pdiff       Pdif     01 27 26.3 -0.7
      baz=283
SSPA  Standing Stone  117.42  50 PFAKE                01 31 20.0  +10
SSPA                             LR          LR
      comp=Z,224µm,20.0s
SSPA  Standing Stone  117.42  50 Pdiff       Pdif     01 27 24.7 -2.6
      baz=280
LVC   Limon Verde     117.47 123 ePKPdf      PKPdf    01 31 10.6 -0.9
LVC                              ePKPdf      PKPdf    01 31 11.3 -0.2
LVC                              LR          LR
      comp=Z,127µm,20.0s
LVC   Limon Verde     117.47 123 ePKIKP      PKPdf    01 31 10.6 -0.9
LVC                              MLR         MLR
      comp=Z,127µm,20.0s
LVC   Limon Verde     117.47 123 PKP         PKPdf    01 31 11.3 -0.2
      comp=Z,4.5nm,0.8s,baz=239,slow=7.6,SNR=2.7
MAK   Makhachkala     117.49 313 iP          Pdif     01 27 23.7 -3.8
MAK                              i                    01 31 07.7
MAK                              e                    01 32 22.3
MAK                              ePS         PKKPdf   01 42 03.7 +1.5
MAK                              eSS         SS       01 48 29.3 -3.0
MAK                              pmax        pmax
      comp=Z,143nm,1.3s
MAK                              pmax        pmax
      comp=Z,4µm,10.7s
F55A  Otter Lake      117.50  44 Pdiff       Pdif     01 27 28.2 +0.7
      baz=283
PB01  IPOC Station P  117.67 121 PFAKE                01 31 20.0 +8.4
PB01                             LR          LR
      comp=Z,163µm,19.0s
CHGQ  Chibougamau     117.71  39 Pdiff       Pdif     01 27 26.9 -1.5
      baz=287
R58B  Mineral         117.84  53 PFAKE                01 31 20.0 +8.7
R58B                             LR          LR
      comp=Z,183µm,20.0s
R58B  Mineral         117.84  53 Pdiff       Pdif     01 27 29.8 +0.6
      baz=278
H56A  Elgin           117.84  45 Pdiff       Pdif     01 27 29.8 +0.7
      baz=283
PB11  IPOC Station P  118.06 119 ePKPdf      PKPdf    01 31 12.3 -0.1
PB11                             LR          LR
      comp=Z,324µm,22.0s
SOTA  Rioblanco       118.14  93 eP          PP       01 32 32.1 +3.7
SOTA  Rioblanco       118.14  93 eP          PP       01 32 32.1 +3.7
ORHO  Orleans, Herit  118.14  44 Pdiff       Pdif     01 27 24.4 -6.0
      baz=284
POPC  Popayan, Colom  118.15  93 eP          PP       01 32 32.8 +4.6
POPC  Popayan, Colom  118.15  93 eP          PP       01 32 32.8 +4.6
CNNC  Cliffs of the   118.18  56 PFAKE                01 31 20.0 +8.0
CNNC                             LR          LR
      comp=Z,162µm,20.0s
CNNC  Cliffs of the   118.18  56 Pdiff       Pdif     01 27 31.3 +0.6
      baz=277
CBN   Corbin Frederi  118.20  52 PFAKE                01 31 20.0 +8.0
CBN                              LR          LR
      comp=Z,205µm,20.0s
CBN   Corbin Frederi  118.20  52 Pdiff       Pdif     01 27 25.4 -5.4
      baz=279
PAGS  Pennsylvania G  118.37  50 PFAKE                01 31 20.0 +7.8
PAGS                             LR          LR
      comp=Z,216µm,21.0s
MNMC  Minye Minye     118.37 119 ePKPdf      PKiKP    01 31 13.5 +0.3
MNMC                             LR          LR
      comp=Z,228µm,21.0s
PCON  Cinco Dias      118.38  93 eP          PP       01 32 36.6 +6.4
PCON  Cinco Dias      118.38  93 eP          PP       01 32 36.6 +6.4
SDMD  Soldier’s Deli  118.42  51 PFAKE                01 31 20.0 +7.6
SDMD                             LR          LR
      comp=Z,127µm,20.0s
BINY  Binghamton      118.54  48 PFAKE                01 31 20.0 +7.4
BINY                             LR          LR
      comp=Z,139µm,20.0s
BINY  Binghamton      118.54  48 Pdiff       Pdif     01 27 29.4 -2.9
      baz=282
ALFO  Alfred          118.54  44 Pdiff       Pdif     01 27 24.3 -7.8
      baz=284
GROC  Groznyy         118.67 313 iPKIKP      PKiKP    01 31 15.5 +2.8
GROC                             e                    01 32 27.7
GROC                             pmax        pmax
      comp=Z,86nm,1.4s
MVL   Millersville    118.69  50 PFAKE                01 31 20.0 +7.1
MVL                              LR          LR
      comp=Z,176µm,19.0s
KSPA  Keystone Colle  118.83  48 PFAKE                01 31 20.0 +6.9
KSPA                             LR          LR
      comp=Z,299µm,19.0s
MARP  Paez Belalcaza  118.91  93 eP          PP       01 32 43.0 +9.5
MARP  Paez Belalcaza  118.91  93 eP          PP       01 32 43.0 +9.5
PLMC  San Jos del P   118.95  90 eP          PP       01 32 34.8 +1.3
PLMC  San Jos del P   118.95  90 eP          PP       01 32 34.8 +1.3
N59A  State Game Lan  118.95  49 PFAKE                01 31 20.0 +6.6
N59A                             LR          LR
      comp=Z,214µm,20.0s
N59A  State Game Lan  118.95  49 Pdiff       Pdif     01 27 31.1 -3.1
      baz=281
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LONY	Lake Ozonia	119.00	45	Pdiff	Pdif	01 27 33.7	-0.6
	baz=284						
SFJD	Kangerlussuaq	119.04	15	PFAKE		01 31 20.0	+7.3
SFJD				LR	LR		
	comp=Z,110µm,19.0s						
SFJD	Kangerlussuaq	119.04	15	i P	PKiKP	01 31 19.1	+6.4
SFJD	Kangerlussuaq	119.04	15	ePKIKP	PKiKP	01 31 19.1	+6.4
VRH	Novokhopyorsk	119.07	323	ePKIKP	PKiKP	01 31 15.5	+2.3
VRH				e		01 32 37.0	
VRH				eSP	SP	01 42 19.2	+1.8
VRH				eSS	SKKSdf	01 49 06.4	-4.3
VRH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VRH				MLR	MLR		
	comp=Z,92µm,19.0s						
MTDJ	Mount Denham	119.13	75	PFAKE		01 31 30.0	+16
MTDJ				LR	LR		
	comp=Z,80µm,20.0s						
MTDJ	Mount Denham	119.13	75	eP	PP	01 32 33.8	-0.9
MTDJ	Mount Denham	119.13	75	eP	PP	01 32 33.8	-0.9
NCB	Newcomb	119.40	45	PFAKE		01 31 30.0	+16
NCB				LR	LR		
	comp=Z,104µm,20.0s						
LATQ	La Tuque	119.46	41	Pdiff	Pdif	01 27 33.7	-2.5
	baz=287						
MOS	Moscow	119.52	329	i PKIKP	PKiKP	01 31 22.4	+8.4
MOS				e		01 38 14.2	
MOS				eSS	SS	01 49 08.3	+11
MOS				pmax	pmax		
	comp=Z,50nm,1.2s						
FRNY	Flat Rock	119.63	44	PFAKE		01 31 30.0	+15
FRNY				LR	LR		
	comp=Z,108µm,20.0s						
ANIL	Santa Ana	119.75	91	eP	PP	01 32 39.7	+0.3
ANIL	Santa Ana	119.75	91	eP	PP	01 32 39.7	+0.3
TBLG	Delisi	119.75	312	eP	PKiKP	01 31 30.1	+15
ODNJ	Ogdensburg	119.78	49	PFAKE		01 31 30.0	+15
ODNJ				LR	LR		
	comp=Z,209µm,20.0s						
BRNJ	Basking Ridge	119.89	49	PFAKE		01 31 30.0	+15
BRNJ				LR	LR		
	comp=Z,228µm,20.0s						
ACCN	Adirondack Com	119.94	46	PFAKE		01 31 30.0	+15
ACCN				LR	LR		
	comp=Z,192µm,20.0s						
GNI	Garni	120.08	310	eP	PKiKP	01 31 21.6	+5.8
GNI	Garni	120.08	310	PFAKE		01 31 30.0	+14
GNI				LR	LR		
	comp=Z,43µm,21.0s						
GNI	Garni	120.08	310	i PKIKP	PKiKP	01 31 16.5	+0.7
GNI				MLR	MLR		
	comp=Z,79µm,20.0s						
ZEI	Tsey	120.12	313	i PKIKP	PKPdf	01 31 12.1	-3.7
ZEI				pmax	pmax		
	comp=Z,15nm,1.4s						
UREC	San Jos de Ur	120.12	87	eP	PP	01 32 42.0	+0.4
UREC	San Jos de Ur	120.12	87	eP	PP	01 32 42.0	+0.4
GOF	Gofitskoye	120.14	316	ePKIKP	PKPdf	01 31 12.7	-2.8
GOF				pmax	pmax		
	comp=Z,40nm,1.0s						
LPSR	Galich'ya Gora	120.16	325	ePKIKP	PKPdf	01 31 13.9	-1.3
LPSR				e		01 32 41.7	
LPSR				eSP	SP	01 42 20.2	-6.8
LPSR				ePS	PKKPdf	01 42 23.0	+26
LPSR				eSS	SKKSdf	01 49 17.8	+9.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LPSR				MLR	MLR		
	comp=Z,60µm,18.0s						
SCHQ	Schefferville	120.19	32	ePKPdf	PKiKP	01 31 15.8	+0.4
SCHQ				LR	LR		
	comp=Z,182µm,19.0s						
SCHQ	Schefferville	120.19	32	PKP	PKiKP	01 31 15.8	+0.4
	comp=Z,6.9nm,1.1s,baz=242,slow=15,SNR=2.0						
SCO	Scoresbysund	120.26	3	i P	PKiKP	01 31 27.6	+13
SCO	Scoresbysund	120.26	3	ePKIKP	PKiKP	01 31 27.6	+13
PAL	Palisades	120.31	49	PFAKE		01 31 30.0	+14
PAL				LR	LR		
	comp=Z,220µm,19.0s						
PAL	Palisades	120.31	49	Pdiff	Pdif	01 27 39.6	-0.5
	baz=283						
CPNY	Central Park	120.32	49	PFAKE		01 31 30.0	+14
CPNY				LR	LR		
	comp=Z,236µm,20.0s						
OBN	Obninsk	120.34	329	PFAKE		01 31 30.0	+14
OBN				LR	LR		
	comp=Z,86µm,21.0s						
OBN	Obninsk	120.34	329	i PKIKP	PKiKP	01 31 17.4	+1.8
OBN				e		01 32 43.0	
OBN				i PPP	PPP	01 35 15.3	
OBN				i		01 38 05.7	
OBN				eSS	SS	01 49 08.2	+0.2
OBN				pmax	pmax		
	comp=Z,59nm,2.0s						
OBN				MLR	MLR		
	comp=Z,51µm,18.0s						
VORR	Voronezh	120.36	324	ePKIKP	PKPdf	01 31 12.0	-3.7
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
TASB	TASBURUN-IGDIR	120.50	310	eP	PKiKP	01 31 23.8	+7.3
VSR	Storozhevoye	120.56	324	ePKIKP	PKPdf	01 31 15.7	-0.4
VSR				e		01 32 42.7	
VSR				ePS	PS	01 42 37.3	+2.6
VSR				eSS	SS	01 49 12.1	+0.8
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VSR				MLR	MLR		
	comp=Z,97µm,19.0s						
KBZ	Khabaz	120.59	315	PKP	PKiKP	01 31 16.8	+0.3
	comp=Z,1.6nm,0.9s,baz=348,slow=9.3,SNR=2.6						
KIV	Kislovodsk	120.68	315	PFAKE		01 31 30.0	+13
KIV				LR	LR		
	comp=Z,72µm,22.0s						
KIV	Kislovodsk	120.68	315	⇓iP	PKiKP	01 31 18.5	+1.7
KIV	Kislovodsk	120.68	315	eP	Pdif	01 27 38.2	-3.6
KIV				i		01 31 13.9	
KIV				e		01 32 40.3	
KIV				ePPP	PPP	01 35 13.1	
KIV				e		01 38 10.5	
KIV				ePS	PS	01 42 31.1	-5.2
KIV				eSS	SS	01 49 09.9	-3.7
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,63µm,23.0s						
BGD	Bogdanovka	120.69	312	eP	PKiKP	01 31 28.6	+12
ZARC	Zaragoza, Cauc	120.75	88	eP	PP	01 32 50.2	+4.3
ZARC	Zaragoza, Cauc	120.75	88	eP	PP	01 32 50.2	+4.3
PUL	Pulkovo	120.79	335	i PKIKP	PKPdf	01 31 15.2	-1.0
LPAZ	La Paz	120.79	116	ePKPdf	PKPdf	01 31 16.9	-1.4
LPAZ	La Paz	120.79	116	PKP	PKPdf	01 31 16.8	-1.6
	comp=Z,5.5nm,0.6s,baz=12,slow=3.5,SNR=12						
ROSC	El Rosal	120.87	91	PKP	PKiKP	01 31 18.6	+0.3
ROSC				ePKPdf	pPKPdf	01 31 22.2	-2.6
ROSC	El Rosal	120.87	91	eP	PP	01 32 48.1	+1.0
ROSC	El Rosal	120.87	91	eP	PP	01 32 48.1	+1.0
ROSC	El Rosal	120.87	91	PKP	PKiKP	01 31 18.7	+0.3
	comp=Z,5.0nm,0.5s,baz=120,slow=20,SNR=3.5						
CLDR	Caldiran	120.91	309	eP	PKiKP	01 31 26.0	+8.4
LBNH	Lisbon	120.93	45	PFAKE		01 31 30.0	+13
LBNH				LR	LR		
	comp=Z,140µm,22.0s						
LBNH	Lisbon	120.93	45	Pdiff	Pdif	01 27 43.3	+0.5
	baz=286						
YLE	Yale	120.96	48	PFAKE		01 31 30.0	+13
YLE				LR	LR		
	comp=Z,209µm,21.0s						
PTBC	PUERTO BERRIO,	121.00	89	eP	PP	01 32 44.7	-3.0
PTBC	PUERTO BERRIO,	121.00	89	eP	PP	01 32 44.7	-3.0
FIA0	FINESS Array S	121.39	338	ePKPdf	PKPdf	01 31 15.5	-1.8
FIA0	FINESS Array S	121.39	338	ePKIKP	PKPdf	01 31 15.5	-1.8
FINES	FINESS Array B	121.39	338	PKP	PKPdf	01 31 15.5	-1.8
	comp=Z,2.0nm,0.9s,baz=323,slow=2.1,SNR=4.7						
VANB	Van	121.43	309	eP	PKiKP	01 31 34.3	+16
AGRB	Hanur-Agry	121.52	310	eP	PKiKP	01 31 28.4	+10
CUKT	Cukurca	121.52	307	eP	PKiKP	01 31 22.4	+3.7
HRV	Adam Dziewonsk	121.66	47	PFAKE		01 31 30.0	+11
HRV				LR	LR		
	comp=Z,128µm,20.0s						
HRV	Adam Dziewonsk	121.66	47	Pdiff	Pdif	01 27 45.5	-0.5
	baz=285						
SMLC	San Martn de	121.70	86	eP	PP	01 32 51.2	-1.1
SMLC	San Martn de	121.70	86	eP	PP	01 32 51.2	-1.1
AKDM	Akdamar-Van	121.80	308	eP	PKiKP	01 31 25.8	+6.5
SMRC	Santa Marta, M	121.82	84	eP	PP	01 32 55.3	+2.2
SMRC	Santa Marta, M	121.82	84	eP	PP	01 32 55.3	+2.2
BRRC	Barranca, Sant	121.82	88	eP	PP	01 32 56.3	+3.2
BRRC	Barranca, Sant	121.82	88	eP	PP	01 32 56.3	+3.2
WES	Weston	121.86	47	PFAKE		01 31 30.0	+11
WES				LR	LR		
	comp=Z,148µm,19.0s						
MLAZ	Malazgirt-MUS	121.95	309	eP	PKiKP	01 31 32.3	+13
BCA	Borcka	122.09	312	eP	PKiKP	01 31 23.0	+3.4
DAMY	Dhamar	122.22	280	PFAKE		01 31 30.0	+9.2
DAMY				LR	LR		
	comp=Z,79µm,20.0s						
KOPR	Koprukoy-ERZUR	122.28	311	eP	PKiKP	01 31 27.6	+7.4
SIRT	Sirnak	122.39	308	eP	PKiKP	01 31 35.5	+15
PKME	Peaks-Kenny Pk	122.42	43	PFAKE		01 31 30.0	+10
PKME				LR	LR		
	comp=Z,130µm,20.0s						
PKME	Peaks-Kenny Pk	122.42	43	Pdiff	Pdif	01 27 47.8	-1.6
	baz=289						
CODC	Agustn Codazz	122.45	85	eP	PP	01 32 55.4	-2.0
CODC	Agustn Codazz	122.45	85	eP	PP	01 32 55.4	-2.0
GURO	Guroymak-BITLI	122.48	309	eP	PKiKP	01 31 32.3	+12
M65A	Busby, Falmout	122.56	47	Pdiff	Pdif	01 27 49.0	-1.1
	baz=286						
CHOM	Cayeli-Rize	122.81	312	eP	PKiKP	01 31 31.1	+10
SOC	Sochi	122.85	315	i PKIKP	PKiKP	01 31 26.3	+5.4
SOC				e		01 33 04.3	
SOC				ePS	PS	01 42 49.0	-6.3
SOC				MLR	MLR		
	comp=Z,49µm,20.0s						
VSU	Vasula	123.06	335	eP	PKiKP	01 31 28.7	+7.8
VSU				IAmb	IAmb	01 31 57.5	
	comp=Z,179nm,0.9s						
VSU	Vasula	123.06	335	eP	PKKPbc	01 41 08.2	-5.6
VSU				IAmb	IAmb	01 41 20.1	
	comp=Z,74nm,1.0s						
ANGG	Ammassalik, Gr	123.12	11	PFAKE		01 31 30.0	+9.2
ANGG				LR	LR		
	comp=Z,62µm,20.0s						
SVAN	Silvan-Diyarba	123.20	309	eP	PKiKP	01 31 29.5	+7.6
BNGB	Bingl	123.40	310	eP	PKiKP	01 31 26.6	+4.3
BAYT	Aydıntepe-Bayb	123.45	311	eP	PKiKP	01 31 29.9	+7.4
ATD	Arta Tunnel	123.47	277	PFAKE		01 31 30.0	+6.9
ATD				LR	LR		
	comp=Z,131µm,20.0s						
ATD	Arta Tunnel	123.47	277	eP	PP	01 33 05.3	+0.8
ATD				eS	Sdif	01 41 19.7	+19
ATD	Arta Tunnel	123.47	277	eP	PP	01 33 05.3	+0.8
ATD				eS	Sdif	01 41 19.7	+19
TAMC	Tame, Arauca	123.61	89	eP	PP	01 33 09.6	+4.3
TAMC	Tame, Arauca	123.61	89	eP	PP	01 33 09.6	+4.3
BATG	Bathurst New B	123.80	40	ePKPdf	PKiKP	01 31 24.5	+1.8
BATG				LR	LR		
	comp=Z,176µm,19.0s						
MAZI	Mazidag	123.94	308	eP	PKiKP	01 31 29.3	+5.8
ANN	Anapa	124.00	317	eP	Pdif	01 27 52.7	-3.7
ANN				i		01 31 19.1	
ANN				i		01 33 02.2	
ANN				i PPP	PPP	01 35 45.7	
ANN				e		01 38 22.5	
ANN				pmax	pmax		
	comp=Z,50nm,1.3s						
ANN				pmax	pmax		
	comp=Z,43nm,1.1s						
GGN	Saint George	124.10	42	PFAKE		01 31 30.0	+6.7
GGN				LR	LR		
	comp=Z,148µm,19.0s						
PTK	Pertek	124.40	310	eP	PKiKP	01 31 26.9	+2.5
CPUP	Villa Florida	124.59	133	ePKPdf	PKPdf	01 31 23.3	-1.3
CPUP	Villa Florida	124.59	133	ePKIKP	PKPdf	01 31 23.3	-1.3
CPUP	Villa Florida	124.59	133	PKP	PKPdf	01 31 22.9	-1.8
	comp=Z,15nm,0.9s,baz=252,slow=1.9,SNR=15						
BOSA	Boshof	124.84	224	i P	PKiKP	01 31 30.0	+4.5
BOSA	Boshof	124.84	224	ePKPdf	PKPdf	01 31 25.3	0.0
BOSA				ePKPdf	PKiKP	01 31 26.2	+0.6
BOSA	Boshof	124.84	224	i P	PKiKP	01 31 26.3	+0.7
BOSA	Boshof	124.84	224	PKP	PKPdf	01 31 25.3	0.0
	comp=Z,8.6nm,0.9s,baz=124,slow=3.4,SNR=7.3						
MICGM	Minsk	124.95	331	ePKP	PKiKP	01 31 27.0	+2.3
MICGM				ePP	PP	01 33 28.0	+15
MICGM				ePPP	PPP	01 35 46.0	
MICGM				eSKS	SKSdf	01 38 40.0	+5.2
MICGM				eSKKS	SKKSac	01 40 07.0	-2.8
MICGM				ePS	PS	01 43 27.0	+14
MICGM				eSS	SS	01 50 16.0	+9.5
MICGM				eSSS	SSS	01 54 16.0	
MICGM				eLR	LR	02 22 09.0	
MICGM				LRM	MLR	02 27 06.0	
	comp=Z,167nm,16.0s						
MICGM				LRM	MLR	02 27 16.0	
	comp=N,49nm,18.0s						
MICGM				LRM	MLR	02 27 32.0	
	comp=E,51nm,19.0s						
MNK	Minsk	124.95	331	ePKIKP	PKiKP	01 31 27.0	+2.3
MNK				MLR	MLR		
	comp=Z,167µm,16.0s						
IZAR	Zarasai	124.96	333	eP	PKiKP	01 31 36.3	+12
IZAR				IAmb	IAmb	01 31 53.1	
	comp=Z,31nm,1.1s						
IDID	Didziasalis	125.00	332	eP	PKiKP	01 31 33.5	+8.7
IDID				IAmb	IAmb	01 31 53.2	
	comp=Z,31nm,0.9s						
SDDR	Presa de Saban	125.07	74	PFAKE		01 31 40.0	+14
SDDR				LR	LR		
	comp=Z,174µm,20.0s						
SDV	Santo Domingo	125.08	87	ePKPdf	PKPdf	01 31 23.9	-2.1
SDV				LR	LR		
	comp=Z,93µm,22.0s						
ISAL	Salakas	125.12	333	eP	PKiKP	01 31 34.0	+8.9
ISAL				IAmb	IAmb	01 31 53.5	
	comp=Z,27nm,1.1s						
SUR	Sutherland	125.13	217	PFAKE		01 31 40.0	+14
SUR				LR	LR		
	comp=Z,124µm,19.0s						
LMN	Caledonia Moun	125.15	41	ePKPdf	PKiKP	01 31 25.9	+0.5
LMN				LR	LR		
	comp=Z,181µm,20.0s						
URFA	Urfa	125.20	308	eP	PKiKP	01 31 38.3	+12
IIGN	Ignalina	125.21	333	eP	PKiKP	01 31 35.4	+10
IIGN				IAmb	IAmb	01 31 53.8	
	comp=Z,52nm,1.2s						
NACGM	Naroch	125.23	332	ePKP	PKiKP	01 31 38.0	+13
NACGM				ePP	PP	01 33 24.0	+10
NACGM				ePPP	PPP	01 35 58.0	
NACGM				eSKS	SKSdf	01 38 30.0	-5.3
NACGM				eSKKS	SKKSac	01 39 44.0	-28
NACGM				ePS	PS	01 43 10.0	-5.7
NACGM				eSS	SS	01 50 32.0	+22
NACGM				eSSS	SSS	01 54 54.0	
NACGM				eLQ	LQ	02 10 32.0	
NACGM				eLR	LR	02 18 36.0	
RSDY	Resadiye-TOKAT	125.51	312	eP	PKiKP	01 31 37.3	+11
SVSK	Karacayir	125.89	312	i P	PKiKP	01 31 36.7	+10
DARE	Darende-Malaty	125.92	310	eP	PKPdf	01 31 23.2	-3.7
KVT	Kavak	126.22	313	eP	PKiKP	01 31 39.9	+12
ANKE	Ethiopia-Afar	126.32	274	eP	PKiKP	01 31 44.5	+15
ANKE				i S	SKKSac	01 40 34.5	+13
NB2	NORSAR Subarra	126.37	345	PKPdf	PKiKP	01 31 35.3	+7.8
	comp=Z,482nm,3.3s,baz=32,slow=2.0						
NB2	NORSAR Subarra	126.37	345	PKPdf	PKiKP	01 31 35.3	+7.8
	baz=32,slow=2.0						
NB200	NORSAR Array S	126.37	345	ePKPdf	PKPdf	01 31 25.3	-1.7
NOA	NORSAR Array B	126.37	345	PKP	PKPdf	01 31 25.3	-1.7
	comp=Z,2.2nm,1.0s,baz=37,slow=2.2,SNR=4.1						
AKASG	Malin Array Be	126.39	327	PKP	PKPdf	01 31 26.8	-0.5
	comp=Z,1.1nm,0.6s,baz=61,slow=2.1,SNR=9.2						
AKBB	Malin Array Si	126.39	327	ePKPdf	PKPdf	01 31 27.3	0.0
AKBB				LR	LR		
	comp=Z,100µm,20.0s						
KIEV	Kiev	126.40	327	ePKPdf	PKPdf	01 31 27.3	0.0
KIEV				LR	LR		
	comp=Z,96µm,20.0s						
KIEV	Kiev	126.40	327	⇑iP	PKPdf	01 31 27.1	-0.2
KIEV	Kiev	126.40	327	i PKIKP	PKPdf	01 31 26.6	-0.7
HAL	Halifax	126.42	42	PFAKE		01 31 40.0	+12
HAL				LR	LR		
	comp=Z,176µm,20.0s						
AK11	Malin Array Si	126.43	327	ePKPdf	PKPdf	01 31 26.9	-0.5
SNOP	Sinop	126.50	315	PFAKE		01 31 40.0	+12
SNOP				LR	LR		
	comp=Z,41µm,20.0s						
GAZ	Gaziantep	126.51	308	eP	PKiKP	01 31 38.5	+10
DESE	Dese	126.57	276	eP	PKiKP	01 31 31.7	+2.1
PBUR	Paburg	126.63	335	eP	PKiKP	01 31 35.4	+7.4
PBUR				IAmb	IAmb	01 31 55.2	
	comp=Z,148nm,0.9s						
LBTB	Lobatse	126.83	227	ePKPdf	PKiKP	01 31 30.2	+0.6
LBTB	Lobatse	126.83	227	ePKIKP	PKiKP	01 31 30.2	+0.6
KMBO	Kilima Mbogo	126.83	260	ePKPdf	PKiKP	01 31 30.5	+0.5
KMBO				LR	LR		
	comp=Z,140µm,20.0s						
KMBO	Kilima Mbogo	126.83	260	eP	SKPdf	01 35 01.0	-2.7
KMBO				eS	SKKPbc	01 44 43.1	-5.2
KMBO	Kilima Mbogo	126.83	260	PKP	PKiKP	01 31 30.5	+0.5
	comp=Z,3.9nm,0.9s,baz=88,slow=1.9,SNR=5.9						
SIV	San Ignacio	127.05	120	ePKPdf	PKPdf	01 31 28.0	-1.6
SIV	San Ignacio	127.05	120	PKP	PKPdf	01 31 28.0	-1.6
	comp=Z,16nm,1.0s,baz=257,slow=3.0,SNR=15						
BNN	Bunyan	127.07	311	eP	PKiKP	01 31 34.1	+4.4
AAE	Adis Abeba	127.20	273	eP	PP	01 33 28.4	-1.3
AAE	Adis Abeba	127.20	273	eP	PP	01 33 28.4	-1.3
AAE				eS	SKKSac	01 40 51.8	+25
AAE	Adis Abeba	127.20	273	eP	PKiKP	01 31 45.0	+14
MATP	Matopo	127.22	234	i P	PKiKP	01 31 33.5	+3.0
MATP	Matopo	127.22	234	i P	PKiKP	01 31 31.5	+1.0
FURI	Furi	127.28	273	PFAKE		01 31 40.0	+9.0
FURI				LR	LR		
	comp=Z,102µm,18.0s						
FURI	Furi	127.28	273	eP	PP	01 33 31.3	+1.2
FURI				eS	Sdif	01 41 59.6	+27
BLWY	Bulawayo	127.28	234	i P	PKiKP	01 31 35.2	+4.6
BLWY	Bulawayo	127.28	234	i P	PKiKP	01 31 32.8	+2.2
BZK	Bozkurt	127.35	315	eP	PKiKP	01 31 53.9	+24
SUW	Suwalki	127.43	333	ePKPdf	PKPdf	01 31 29.1	0.0
SUW				ePP	PP	01 33 28.8	-0.1
SUW				e		01 33 53.0	
SUW				eSS	SS	01 50 41.0	+3.6
SUW				LME		02 11 26.0	
	comp=Z,134µm,39.9s						
SUW	Suwalki	127.43	333	PFAKE		01 31 40.0	+10
SUW				LR	LR		
	comp=Z,118µm,22.0s						
SUW	Suwalki	127.43	333	ePKIKP	PKPdf	01 31 29.1	0.0
SUW				e		01 33 28.8	
SUW				eSS	SS	01 50 41.0	+3.6
GBN	Guysborough	127.44	40	PFAKE		01 31 40.0	+10
GBN				LR	LR		
	comp=Z,198µm,20.0s						
KOZT	Kozan	127.49	309	eP	PKiKP	01 31 39.1	+8.7
TAHT	Tahtakopru-Hat	127.52	308	eP	PKiKP	01 31 34.1	+3.6
CEYT	Ceyhan	127.68	309	eP	PKiKP	01 31 41.2	+10
YURE	YUREGIR	127.82	308	eP	PKiKP	01 31 38.9	+7.8
ILGA	Ilgaz	127.88	314	PFAKE		01 31 40.0	+8.7
ILGA				LR	LR		
	comp=Z,50µm,20.0s						
DRLN	Deer Lake	127.94	34	PFAKE		01 31 40.0	+9.1
DRLN				LR	LR		
	comp=Z,282µm,20.0s						
ASF	Jabal al Asfar	127.94	302	P	PKiKP	01 31 40.2	+8.6
KONO	Kongsberg	127.98	345	PFAKE		01 31 40.0	+9.4
KONO				LR	LR		
	comp=Z,78µm,22.0s						
KARA	Karaisali	128.14	309	eP	PKiKP	01 31 40.3	+8.6
BR101	Keskin Array S	128.41	313	ePKPdf	PKPdf	01 31 31.1	-0.6
BR131	Keskin Array S	128.41	313	ePKPdf	PKPdf	01 31 31.7	0.0
BRTR	Keskin Array B	128.41	313	PKP	PKPdf	01 31 31.1	-0.6
	comp=Z,2.1nm,1.0s,baz=103,slow=2.8,SNR=5.4						
KIS	Kishinev	128.52	323	ePKP	PKiKP	01 31 34.0	+1.9
KIS	Kishinev	128.52	323	i PsP		01 31 55.0	
KIS	Kishinev	128.52	323	i PP	PP	01 33 40.0	+3.5
	comp=Z,13µm,20.0s						
KIS	Kishinev	128.52	323	i PPP	PPP	01 37 20.0	
KIS				i SKS	SKSdf	01 38 08.0	-34
KIS				i SKKS	SKKSac	01 40 57.0	+24
KIS	Kishinev	128.52	323	i PS	PS	01 43 40.0	-4.9
KIS	Kishinev	128.52	323	ePKIKP	PKiKP	01 31 34.0	+1.9
KIS				i		01 33 40.0	
KIS				i PS	PS	01 43 40.0	-4.9
KIS				pmax	pmax		
	comp=Z,13µm,20.0s						
HSUJ	Al Zarqa	128.54	302	P	PKiKP	01 31 46.6	+14
YAYX	Yaylak	128.54	312	eP	PKiKP	01 31 39.5	+6.9
SERE	Sereflikochisa	128.72	312	eP	PKiKP	01 31 45.6	+13
KSDI	Kefar Szold	128.74	304	P	PKiKP	01 31 41.2	+8.2
AFSR	Afar-Bala (An	128.91	312	eP	PKPdf	01 31 28.4	-4.2
ANTO	Ankara	128.97	313	eP	PKiKP	01 31 33.9	+0.6
ANTO	Ankara	128.97	313	ePKPdf	PKiKP	01 31 33.5	+0.2
ANTO	Ankara	128.97	313	⇓iP	PKiKP	01 31 35.1	+1.8
ANTO	Ankara	128.97	313	⇓PKIKP	PKiKP	01 31 35.1	+1.8
AGP	Aguadilla	129.00	75	PFAKE		01 31 40.0	+6.1
AGP				LR	LR		
	comp=Z,120µm,21.0s						
SULT	Sultanhani-AKS	129.01	311	eP	PKiKP	01 31 45.2	+12
KULU	Kulu	129.10	312	eP	PKiKP	01 31 39.3	+5.6
MMLI	Mount Malkishu	129.11	303	eP	PKiKP	01 31 39.7	+5.9
MMLI	Mount Malkishu	129.11	303	P	PKiKP	01 31 38.8	+5.0
LEOM	Leova	129.12	322	⇑iP	PKPdf	01 31 32.8	+0.2
LEOM	Leova	129.12	322	⇑PKIKP	PKPdf	01 31 32.8	+0.2
GHAJ	Ghor Haditha	129.24	302	P	PKiKP	01 31 38.3	+4.3
CHBY	Cihanbeyli	129.34	311	eP	PKPdf	01 31 31.1	-2.4
HSNJ	Maan	129.34	300	P	PKiKP	01 31 48.2	+14
TLCR		129.41	321	⇑iP	PKiKP	01 31 35.1	+1.2
TLCR		129.41	321	⇑PKIKP	PKiKP	01 31 35.1	+1.2
IKL	Isikli	129.49	308	eP	PKiKP	01 31 54.7	+20
OBIP	Obispado Ponce	129.51	76	PFAKE		01 31 50.0	+15
OBIP				LR	LR		
	comp=Z,109µm,20.0s						
EMPR	Esperanza - Ma	129.58	75	PFAKE		01 31 50.0	+15
EMPR				LR	LR		
	comp=Z,113µm,20.0s						
ICMP	Isla Caja de M	129.59	76	PFAKE		01 31 50.0	+15
ICMP				LR	LR		
	comp=Z,115µm,20.0s						
LVV	L'vov	129.64	328	i PKIKP	PKiKP	01 31 42.2	+7.9
LVV				pmax	pmax		
	comp=N,37µm,20.0s						
LVV				pmax	pmax		
	comp=E,64µm,20.0s						
LVV				pmax	pmax		
	comp=Z,69µm,20.0s						
AMAZ	Amatzia	129.73	302	P	PKiKP	01 31 40.4	+5.3
BERE	Bereket-Mersin	129.82	309	eP	PKiKP	01 31 37.5	+2.2
CFR	Carcaliu	129.83	321	⇑iP	PKiKP	01 31 35.3	+0.5
CFR	Carcaliu	129.83	321	⇑PKIKP	PKiKP	01 31 35.3	+0.5
PRAR	RASCA	129.84	324	⇓iP	PKiKP	01 31 34.5	-0.3
MDUB	Mudurnu	129.88	314	eP	PKiKP	01 31 38.7	+3.5
AUMIH	MIHALICIK	129.90	313	eP	PKiKP	01 31 43.2	+7.9
HRFI	Mount Harif	129.94	300	eP	PKiKP	01 31 46.8	+11
HRFI	Mount Harif	129.94	300	P	PKiKP	01 31 51.7	+16
SJG	San Juan	129.95	75	ePKPdf	PKPdf	01 31 35.1	+0.1
SJG	San Juan	129.95	75	ePKIKP	PKPdf	01 31 35.1	+0.1
KONT	Konya--Tatoy	129.95	311	eP	PKPdf	01 31 31.9	-2.6
BEL	Belsk	129.95	332	ePKPdf	PKiKP	01 31 34.5	-0.3
BEL				ePP	PP	01 33 56.5	+11
BEL				e		01 35 15.2	
BEL				eSS	SS	01 51 10.4	+1.8
BEL				LMZ	LR	02 27 01.8	
	comp=Z,80µm,22.9s						
BEL	Belsk	129.95	332	ePKIKP	PKiKP	01 31 34.5	-0.3
BEL				eSS	SS	01 51 10.4	+1.8
BEL				MLR	MLR		
	comp=Z,80µm,22.9s						
AQBJ	Aqaba	129.99	300	P	PKiKP	01 31 51.3	+16
TIRR	Tirgusor	130.01	320	PFAKE		01 31 50.0	+15
TIRR				LR	LR		
	comp=Z,89µm,20.0s						
TIRR	Tirgusor	130.01	320	⇑iP	PKiKP	01 31 36.8	+1.6
TIRR	Tirgusor	130.01	320	⇑PKIKP	PKiKP	01 31 36.8	+1.6
LSZ	Lusaka	130.07	239	ePKPdf	PKiKP	01 31 36.5	+0.2
LSZ				LR	LR		
	comp=Z,148µm,19.0s						
EIL	Elat	130.09	300	eP	PKPdf	01 31 35.1	+0.1
BIZ	Bicaz	130.14	324	⇓iP	PKiKP	01 31 36.0	+0.6
CSS	Mathiatis	130.14	307	eP	PKiKP	01 31 44.6	+8.8
CSS	Mathiatis	130.14	307	P	PKiKP	01 31 44.7	+8.9
CSS				LR	LR		
	comp=Z,61µm,22.0s						
CSS	Mathiatis	130.14	307	P	PKiKP	01 31 44.7	+8.9
CSS	Mathiatis	130.14	307	PKP	PKiKP	01 31 53.3	+18
TLB	Topalu	130.18	320	⇑iP	PKiKP	01 31 36.2	+0.7
TLB	Topalu	130.18	320	⇑PKIKP	PKiKP	01 31 36.2	+0.7
HUMP	Col San Antoni	130.23	75	ePKPdf	PKPdf	01 31 35.4	-0.1
BUR08	Bucovina Ar. S	130.27	325	ePKPdf	PKiKP	01 31 37.2	+1.5
BUR04	Bucovina Ar. S	130.28	325	ePKPdf	PKiKP	01 31 37.0	+1.2
BURAR	Bucovina Array	130.28	325	⇑iP	PKiKP	01 31 36.3	+0.5

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BURAR Bucovina Array    130.28 325 ⇑PKIKP    PKiKP    01 31 36.3 +0.5
KZIT  Kziot             130.30 301  eP       PKiKP    01 31 40.7 +4.5
KZIT  Kziot             130.30 301   P       PKiKP    01 31 41.0 +4.8
VRI   Vrincioaia        130.34 323  eP       PKiKP    01 31 41.6 +5.8
VRI   Vrincioaia        130.34 323 ⇓iP       PKiKP    01 31 35.8  0.0
VRI   Vrincioaia        130.34 323 ⇓PKIKP    PKiKP    01 31 35.8  0.0
GULT  Gulveren          130.37 315  i P      PKiKP    01 31 38.3 +2.1
PLOR  Plostina          130.40 323 ⇑iP       PKiKP    01 31 36.6 +0.6
PLOR  Plostina          130.40 323 ⇑PKIKP    PKiKP    01 31 36.6 +0.6
KWP   Kalwaria Pacla    130.43 329  ePKPdf   PKiKP    01 31 36.1 +0.2
KWP                                 ePS      PS       01 44 01.1 -0.3
KWP                                  LME              02 17 37.7
      comp=Z,104µm,30.1s
KWP   Kalwaria Pacla    130.43 329   PFAKE            01 31 50.0  +14
KWP                                  LR      LR
      comp=Z,758µm,20.0s
KWP   Kalwaria Pacla    130.43 329  ePKIKP   PKiKP    01 31 36.1 +0.2
KWP                                 ePS      PS       01 44 01.1 -0.3
LEF   Lefka             130.44 307  eP       PKiKP    01 31 47.6  +11
GKP   Gorka Klasztor    130.51 335  ePKPdf   PKiKP    01 31 38.8 +2.9
GKP                                 e                 01 34 12.6
GKP                                 e                 01 35 17.9
GKP                                 ePS      PS       01 43 59.1 -2.6
GKP                                  LMZ     LR       02 23 16.2
      comp=Z,113µm,27.6s
GKP   Gorka Klasztor    130.51 335  ePKIKP   PKiKP    01 31 38.8 +2.9
GKP                                 ePS      PS       01 43 59.1 -2.6
MTP   Monte Pirata      130.52  75  ePKPdf   PKiKP    01 31 38.8 +1.9
MTP                                  LR      LR
      comp=Z,73µm,20.0s
ICOR  Ion Corvin        130.56 320 ⇑iP       PKiKP    01 31 37.4 +1.1
BORA  Eskisehir         130.63 314  eP       PKiKP    01 31 45.8 +9.1
SILT  Sile              130.68 316  eP       PKiKP    01 31 45.2 +8.6
CUPR  Culebra, Puert    130.77  75   PFAKE            01 31 50.0  +13
CUPR                                 LR      LR
      comp=Z,89µm,22.0s
MLR   Muntele Rosu      131.01 322  ePKPdf   PKPdf    01 31 36.7 +0.3
MLR   Muntele Rosu      131.01 322 ⇓iP       PKPdf    01 31 36.8 +0.3
MLR   Muntele Rosu      131.01 322 ⇓PKIKP    PKPdf    01 31 36.8 +0.3
RGN   Rugen             131.05 339   PFAKE            01 31 50.0  +13
RGN                                  LR      LR
      comp=Z,86µm,19.0s
ARCR  ARCALIA           131.06 325 ⇓iP       PKiKP    01 31 37.3 +0.1
SHUT  Suhut-Afyon       131.07 312  eP       PKiKP    01 31 42.4 +4.7
STVI  Saint Thomas      131.08  75  ePKPdf   PKiKP    01 31 39.2 +1.2
DOPR  Dopca             131.08 323 ⇑iP       PKiKP    01 31 38.2 +0.9
SUTC  Sutluce-Ispart    131.13 311  eP       PKiKP    01 31 47.4  +10
SECR                    131.17 322 ⇑iP       PKiKP    01 31 37.2 -0.3
KTWE  Kitwe             131.20 242  i P      PKiKP    01 31 44.9 +6.3
PRD   Provadia          131.25 319  eP       PKiKP    01 31 43.0 +5.3
UZH   Uzhgorod          131.26 328  i PKIKP  PKiKP    01 31 42.0 +4.4
UZH                                 e                 01 33 51.3
UZH                                 e                 01 38 42.3
ISP   Isparta           131.36 311   P       PKiKP    01 31 41.4 +3.1
ISP   Isparta           131.36 311   P       PKiKP    01 31 41.4 +3.1
CTKS  Kestanelik-??a    131.42 316  eP       PKiKP    01 31 42.6 +4.5
TRPA  Tarpa             131.44 327 ⇑iP       PKiKP    01 31 38.1 +0.2
TRPA  Tarpa             131.44 327  eP       PKiKP    01 31 42.0 +4.1
TRPA                                ePKiKP   PP       01 33 56.0 +0.7
TRPA                                ePP      PP       01 34 06.1  +11
TRPA                               ⇓iSS      SS       01 51 33.0 +5.9
OJC   Ojcow             131.50 331  ePKPdf   PKiKP    01 31 39.5 +1.5
OJC                                 eSKPdf   SKPab    01 35 04.8 +3.3
OJC                                 eSKKPdf  SKKPbc   01 44 55.1  +21
OJC                                 eSS      SS       01 51 36.9 +9.3
OJC                                  LME              02 17 47.1
      comp=Z,116µm,27.7s
OJC   Ojcow             131.50 331  ePKIKP   PKiKP    01 31 38.2 +0.2
OJC                                 eSS      SS       01 51 31.3 +3.6
MDNY  Mudanya-Bursa     131.53 315  eP       PKiKP    01 31 41.6 +3.2
VOIR                    131.57 323 ⇑iP       PKPdf    01 31 37.7 +0.3
VOIR                    131.57 323 ⇑PKIKP    PKPdf    01 31 37.7 +0.3
SLVT  Silivri           131.62 316  eP       PKiKP    01 31 42.9 +4.4
CJR   Cluj-Napoca       131.70 325 ⇑iP       PKPdf    01 31 37.5 -0.1
CJR   Cluj-Napoca       131.70 325 ⇑PKIKP    PKPdf    01 31 37.5 -0.1
GEDZ  Gediz             131.70 313  eP       PKiKP    01 31 46.4 +7.5
KORT  Korkueli          131.78 310  eP       PKiKP    01 31 42.8 +3.6
NIE   Niedzica          131.78 330  ePKPdf   PKiKP    01 31 38.2 -0.5
NIE                                 ePP      PP       01 34 05.1 +7.6
NIE                                 eSKPdf   SKPab    01 35 07.5 +4.7
NIE                                 e                 01 35 25.6
NIE                                 eSKKPdf  SKKPdf   01 44 59.3  -10
NIE                                 eSS      SS       01 51 31.3  0.0
NIE                                  LMN              02 12 59.2
      comp=Z,155µm,51.1s
ARR   Arges             131.85 323 ⇓iP       PKiKP    01 31 39.3 +0.3
KCTX  Karacabey (Bur    131.94 315  eP       PKiKP    01 31 43.6 +4.3
HUMR  Humele            132.09 322 ⇓iP       PKPdf    01 31 38.8 +0.5
DRGR                    132.15 326 ⇓iP       PKPdf    01 31 38.7 +0.2
DRGR                    132.15 326 ⇓PKIKP    PKPdf    01 31 38.7 +0.2
SZH   Strazhica         132.16 320  eP       PKiKP    01 31 55.0  +15
LTVH  Ltavrtes, Hu      132.23 327  eP       PKPdf    01 31 30.0 -8.4
LTVH                                ePKiKP   PKiKP    01 31 32.0 -7.5
LTVH                                ePP      PP       01 34 19.0  +19
LTVH                                eSS      SS       01 51 56.1  +19
TRIS  Tristan da Cun    132.26 183   PFAKE            01 31 50.0  +10
TRIS                                 LR      LR
      comp=Z,93µm,20.0s
EDRB  Edirne            132.32 318  eP       PKPdf    01 31 39.3 +0.5
KULA  Kula-Manisa       132.45 313  i P      PKiKP    01 31 41.4 +1.0
KULA  Kula-Manisa       132.45 313   P       PKPdf    01 31 35.2 -4.1
KULA  Kula-Manisa       132.45 313   P       PKPdf    01 31 35.2 -4.1
RUE   Ruedersdorf       132.49 337  eP       PKiKP    01 31 43.1 +3.2
RUE                                  IAmb    IAmb     01 32 16.6
      comp=Z,369nm,1.8s
BALB  Balikesir         132.54 315  eP       PKiKP    01 31 46.4 +6.0
OKC   Ostrava-Krasne    132.54 331  epPKP    pPKPdf   01 31 44.4 -1.3
OKC                                 ex       x        01 31 58.5
OKC                                 ex       x        01 34 12.4
OKC                                 eSKP              01 35 03.3
OKC                                  AMS     AMS      02 26 50.0
      comp=Z,80µm,22.8s
OKC   Ostrava-Krasne    132.54 331  ePKIKP   pPKPdf   01 31 44.4 -1.3
OKC                                 e                 01 31 58.5
OKC                                  MLR     MLR
      comp=Z,80µm,22.8s
KRBG  Karabiga-Canak    132.61 316  eP       PKiKP    01 31 44.6 +4.1
KSP   Ksiaz             132.67 334  ePKPdf   PKiKP    01 31 43.5 +3.1
KSP                                 e                 01 34 28.3
KSP                                 eSKPdf   SKPdf    01 35 12.3 -0.8
KSP                                 eSKS     SKSac    01 39 00.5  +11
KSP                                 eSKKPdf  SKKPdf   01 45 14.1 +6.7
KSP                                 eSS      SS       01 51 54.1  +12
KSP                                  LME              02 15 31.8
      comp=Z,146µm,36.8s
KSP   Ksiaz             132.67 334  ePKIKP   PKiKP    01 31 43.5 +3.1
VLAD  Vladila           132.73 322 ⇑iP       PKiKP    01 31 41.3 +0.6
FETY  Fethiye           132.86 310  eP       PKiKP    01 31 52.4  +11
MORC  Moravsky Berou    132.86 332  ePKPdf   PKiKP    01 31 40.5 -0.3
MORC                                 LR      LR
      comp=Z,73µm,20.0s
MORC  Moravsky Berou    132.86 332 ⇑iP       PKPdf    01 31 39.2 -0.5
MORC  Moravsky Berou    132.86 332 ⇑PKIKP    PKPdf    01 31 39.2 -0.5
MORC  Moravsky Berou    132.86 332  ePKP     PKPdf    01 31 39.5 -0.2
MORC                                ePP      PP       01 34 20.1  +16
MORC                                eSS      SS       01 51 53.3 +8.9
SMRT  St. Maarten       132.87  75  eP       PKPdf    01 31 37.7 -2.9
GZR   Gura Zlata        132.92 324 ⇓iP       PKiKP    01 31 41.0 -0.1
GZR   Gura Zlata        132.92 324 ⇓PKIKP    PKiKP    01 31 41.0 -0.1
PSZ   Piszkesteto       132.96 328   PFAKE            01 31 50.0 +8.9
PSZ                                  LR      LR
      comp=Z,99µm,19.0s
PSZ   Piszkesteto       132.96 328 ⇑iP       PKiKP    01 31 40.7 -0.4
PSZ   Piszkesteto       132.96 328  eP       PKiKP    01 31 48.0 +6.9
PSZ                                 ePKiKP   PKiKP    01 31 41.1 -0.1
PSZ                                 ePKiKP   PP       01 34 15.0  +10
PSZ                                 ePP      PP       01 34 19.0  +14
PSZ                                 eSS      SS       01 52 13.1  +27
PSZ   Piszkesteto       132.96 328 ⇑PKIKP    PKiKP    01 31 40.7 -0.4
SEUS  St. Eustatius     132.98  76   PFAKE            01 31 50.0 +8.1
SEUS                                 LR      LR
      comp=Z,101µm,19.0s
SEUS  St. Eustatius     132.98  76  eP       PKiKP    01 31 56.1  +14
LPK   Lapseki           132.99 316  eP       PKiKP    01 31 49.2 +7.9
DPC   Dobruska-Polom    133.01 333  epPKP    pPKPdf   01 31 44.9 -1.8
DPC                                 ex       x        01 34 25.8
DPC                                 eSKP              01 35 04.4
DPC                                 eSKKP             01 45 01.7
DPC                                 eSS      SS       01 51 59.0  +13
DPC                                  AMS     AMS      02 30 50.0
      comp=Z,72µm,21.8s
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DPC   Dobruska-Polom    133.01 333  ePKIKP   pPKPdf   01 31 44.9 -1.8
DPC                                  MLR     MLR
      comp=Z,72µm,21.8s
ERIK  Erikli-Kesan      133.02 317  eP       PKiKP    01 31 57.7  +16
UPC   Upice             133.04 333  ePP      PP       01 34 25.8  +20
UPC                                 eSKP              01 35 07.3
UPC                                 eSKKP             01 45 05.1
UPC                                 eSS      SS       01 52 00.6  +14
UPC                                  AMS     AMS      02 29 30.0
      comp=Z,90µm,22.6s
SIRR  Siria             133.04 326 ⇓iP       PKiKP    01 31 41.3  0.0
VYHS  Vyhne             133.12 330  ePKIKP   PKPdf    01 31 39.7 -0.5
VYHS                                e                 01 31 52.6
VYHS                                 MLR     MLR
      comp=Z,53µm,22.4s
VYHS  Vyhne             133.12 330  ePKP     PKPdf    01 31 39.7 -0.5
VYHS                                e                 01 31 52.6
VYHS                                ePP      PP       01 34 23.1  +17
VYHS                                eSS      SS       01 51 53.1 +5.6
GELI  Tayfur-Gelibol    133.17 316  eP       PKiKP    01 31 48.8 +7.1
SPB   Sao Paulo         133.23 137  ePKPdf   PKiKP    01 31 42.8 +0.5
SPB                                  LR      LR
      comp=Z,177µm,18.0s
ALN   Alexandroupoli    133.23 317  eP       PKiKP    01 31 41.6 -0.2
AYDB  Zeytinkoy-Aydi    133.23 313  eP       PKiKP    01 31 51.0 +8.9
MBAR  Mbarara           133.26 259   PFAKE            01 31 50.0 +7.1
MBAR                                 LR      LR
      comp=Z,124µm,20.0s
KOLL  Kolacno           133.27 330  ePKIKP   PKiKP    01 31 51.1 +9.5
KOLL  Kolacno           133.27 330  ePKP     PKiKP    01 31 51.1 +9.5
HERR  Herculane         133.43 324 ⇑iP       PKiKP    01 31 41.5 -0.6
RDO   Rodhopi           133.45 318  eP       PKiKP    01 31 46.2 +4.0
RDO   Rodhopi           133.45 318   P       PKPdf    01 31 39.7 -1.3
RDO   Rodhopi           133.45 318   P       PKPdf    01 31 39.7 -1.3
BZS   Buzias            133.45 325 ⇑iP       PKPdf    01 31 41.4 +0.5
BZS   Buzias            133.45 325 ⇑PKIKP    PKPdf    01 31 41.4 +0.5
EZN   Ezine             133.53 316  eP       PKiKP    01 31 56.9  +14
EZN   Ezine             133.53 316   P       PKPdf    01 31 40.0 -1.2
EZN   Ezine             133.53 316   P       PKPdf    01 31 40.0 -1.2
MLSB  Milas             133.57 312  eP       PKPdf    01 31 36.5 -4.9
VRAC  Vranov            133.63 332 ⇓iP       PKPdf    01 31 41.0 -0.1
VRAC  Vranov            133.63 332 ⇓PKIKP    PKPdf    01 31 41.0 -0.1
VRAC  Vranov            133.63 332  ePKP     PKPdf    01 31 40.5 -0.6
VRAC                                ePP      PP       01 34 27.2  +18
VRAC                                eSS      SS       01 51 56.7 +3.1
PVCC  Panska Ves        133.65 334   AMS     AMS      02 27 20.0
      comp=Z,88µm,21.4s
BRG   Berggiesshubel    133.65 335  i PKP    PKiKP    01 31 44.6 +2.3
      comp=Z,134nm,2.3s
BRG                                 i                 01 31 53.4
      comp=Z,43nm,1.1s
BRG                                 i                 01 32 13.4
      comp=Z,786nm,2.6s
BRG                                 i PP     PP       01 34 17.8 +8.5
      comp=Z,141nm,1.8s
BRG                                 i SKP             01 35 08.9
      comp=Z,82nm,1.5s
BRG                                  SDIFF            01 42 43.0
BRG                                  SS      SS       01 52 12.0  +18
      comp=N,86µm,32.5s
      comp=E,61µm,32.1s
      comp=Z,72µm,21.1s
BRG   Berggiesshubel    133.65 335  i PKIKP  PKiKP    01 31 44.6 +2.3
BRG                                 i                 01 31 53.4
BRG                                 i                 01 34 17.8
BRG                                  SS      SS       01 52 12.0  +18
BRG                                  pmax    pmax
      comp=Z,134nm,2.3s
BRG                                  pmax    pmax
      comp=Z,141nm,1.8s
BRG                                  pmax    pmax
      comp=N,82nm,1.5s
BRG                                  MLR     MLR
      comp=Z,61µm,21.1s
BUD   Budapest          133.69 328  eP       sPKPdf   01 31 52.1 +1.8
BUD                                 ePKiKP   PKiKP    01 31 45.0 +2.5
BUD                                 ePP      SKPdf    01 35 21.1 +6.0
BUD                                ⇑eSS      SS       01 51 59.0 +4.6
BUD                                 i SS     SS       01 52 45.0  +51
PTGA  Pitinga           133.70 102  ePKPdf   PKiKP    01 31 43.0 -0.5
CLL   Collm             133.70 336   PFAKE            01 31 50.0 +7.6
CLL                                  LR      LR
      comp=Z,76µm,20.0s
CLL   Collm             133.70 336  ePKPdf   PKiKP    01 31 42.0 -0.4
CLL                                 ePKPmax           01 31 56.0
CLL                                 e                 01 32 00.0
      comp=Z,54nm,1.1s
CLL                                 i                 01 32 09.0
      comp=Z,47nm,0.9s
CLL                                 e                 01 32 46.0
CLL                                 ePP      PP       01 34 07.0 -2.5
CLL                                 e                 01 34 33.0
CLL                                 i                 01 34 41.0
CLL                                 ePKSdf   PKSdf    01 35 18.0 +0.7
CLL                                 eSdif    Sdif     01 42 54.0  +30
CLL                                 ePS      PS       01 44 30.0 +0.7
CLL                                 e                 01 45 12.0
CLL                                 ePPS     PPS      01 46 11.0
CLL                                 eSS      SS       01 52 03.0 +8.9
CLL                                 eSSS     SSS      01 56 52.0
CLL                                 eSSSS             02 00 30.0
CLL                                  Lmax             02 37 00.0
CLL                                  LmV              02 39 00.0
      comp=Z,75µm,19.0s
CLL   Collm             133.70 336  ePKIKP   PKiKP    01 31 43.0 +0.6
CLL                                 e                 01 31 56.0
CLL                                  MLR     MLR
      comp=Z,75µm,19.0s
RZN   Rozhen            133.72 319  eP       PKiKP    01 31 50.0 +7.0
ARG   Arkhangelos       133.73 310   P       PKiKP    01 31 52.0 +9.0
MLYT  Lee's Yard        133.75  77  eP       PKiKP    01 31 43.8 +0.3
SMTH  Samothraki Isl    133.78 317   P       PKiKP    01 31 42.4 -0.5
SMTH  Samothraki Isl    133.78 317   P       PKiKP    01 31 42.4 -0.5
GCAM  G?zelcaml?        133.81 313  eP       PKiKP    01 31 44.6 +1.6
PRK   Paraskevi         133.83 315   P       PKiKP    01 31 42.4 -0.6
PRK   Paraskevi         133.83 315   P       PKiKP    01 31 42.4 -0.6
SRO   Srobarova         133.83 329  ePKIKP   PKiKP    01 31 52.6  +10
SRO   Srobarova         133.83 329  ePKP     PKiKP    01 31 52.6  +10
MDVR  Moldovita         133.89 324 ⇑iP       PKPdf    01 31 42.2 +0.4
KRUC  Moravsky          133.90 332  ePKP     PKPdf    01 31 41.3 -0.3
KRUC                                ePP      PP       01 34 28.1  +17
KRUC                                eSS      SS       01 51 58.0 +1.2
DAT   Datca             133.94 311  eP       PKPpre   01 31 24.6
MODS  Modra-Piesok      133.96 330  ePKIKP   PKPdf    01 31 42.0 +0.2
MODS                                e                 01 31 56.1
MODS                                eSS      SS       01 51 58.5 +0.9
MODS  Modra-Piesok      133.96 330  ePKP     PKPdf    01 31 42.0 +0.2
MODS                                e                 01 31 56.1
MODS                                ePP      PP       01 34 29.4  +18
MODS                                eSS      SS       01 51 58.5 +0.9
MODS                                eL       L        02 25 53.1
URLA  Izmir             133.99 314  eP       PKPdf    01 31 39.5 -2.7
BODT  Bodrum            134.01 312  eP       PKiKP    01 31 48.6 +5.1
BODT  Bodrum            134.01 312   P       PKiKP    01 31 48.0 +4.5
BODT  Bodrum            134.01 312   P       PKiKP    01 31 48.0 +4.5
PRA   Prague            134.05 334  ePP      PP       01 34 30.3  +18
PRA                                 eSS      SS       01 52 10.1  +12
PRA                                  AMS     AMS      02 30 20.0
      comp=Z,85µm,20.8s
PRU   Pruhonice         134.06 334  epPKP    PKiKP    01 31 46.2 +3.0
PRU                                 ex       x        01 31 55.3
PRU                                 ex       x        01 34 27.7
PRU                                 eSKP              01 35 11.9
PRU                                 eSS      SS       01 51 57.0 -1.6
PRU                                  AMS     AMS      02 30 10.0
      comp=Z,97µm,21.0s
PRU   Pruhonice         134.06 334  ePKIKP   PKiKP    01 31 46.2 +3.0
PRU                                 e                 01 31 55.3
PRU                                 eSS      SS       01 51 57.0 -1.6
PRU                                  MLR     MLR
      comp=Z,97µm,21.0s
SMG   Samos             134.09 313   P       PKiKP    01 31 48.5 +4.8
SMG   Samos             134.09 313   P       PKiKP    01 31 48.5 +4.8
ANWB  Willy Bob         134.11  76   PFAKE            01 31 50.0 +5.8
ANWB                                 LR      LR
      comp=Z,97µm,22.0s
ANWB  Willy Bob         134.11  76  eP       PKPpre   01 31 32.4
SIGR  SIGRI             134.14 315   P       PKPpre   01 31 33.2
SIGR  SIGRI             134.14 315   P       PKPpre   01 31 33.2
TREC  Trest             134.15 333  ePP      PP       01 34 32.9  +20
TREC                                eSS      SS       01 52 11.2  +11
TREC                                 AMS     AMS      02 33 20.0
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      comp=Z,78µm,21.0s
ZST   Bratislava        134.17 330  ePKP     PKPdf    01 31 40.2 -1.9
ZST                                 e                 01 31 57.2
ZST                                 ePP      PP       01 34 37.2  +24
VTS   Vitosha           134.19 321  ePKPdf   PKiKP    01 31 43.8 -0.1
VTS   Vitosha           134.19 321 ⇓iP       PKiKP    01 31 43.7 -0.2
VTS   Vitosha           134.19 321 ⇓PKIKP    PKiKP    01 31 43.7 -0.2
VTS   Vitosha           134.19 321  eP       PKiKP    01 31 49.0 +5.1
KAVA  Kavala            134.20 318   P       PKPdf    01 31 39.8 -2.6
KAVA  Kavala            134.20 318   P       PKPdf    01 31 39.8 -2.6
THAS  Thassos island    134.25 317   P       PKPpre   01 31 37.5
LIA   Limnos Island     134.28 316   P       PKiKP    01 31 46.7 +2.8
LIA   Limnos Island     134.28 316   P       PKiKP    01 31 46.7 +2.8
NISR  Nisiros           134.32 311   P       PKPpre   01 31 34.3
NISR  Nisiros           134.32 311   P       PKPpre   01 31 34.3
CHOS  Chios island      134.36 314   P       PKiKP    01 31 45.9 +1.6
CHOS  Chios island      134.36 314   P       PKiKP    01 31 45.9 +1.6
MMB   Musomiste         134.41 319  eP       PKiKP    01 31 47.0 +2.8
NVR   Nevrokopi         134.45 319   P       PKPpre   01 31 33.9
NVR   Nevrokopi         134.45 319   P       PKPpre   01 31 33.9
BBL   Barber's Block    134.45  79  eP       PKPpre   01 31 39.4
DWS   Wesley            134.60  79  eP       PKiKP    01 31 50.0 +4.8
SVB   Belmont           134.62  82   PFAKE            01 32 00.0  +15
SVB                                  LR      LR
      comp=Z,90µm,21.0s
SVB   Belmont           134.62  82  eP       PKiKP    01 31 48.5 +3.2
TIH   Tihany            134.65 329  eP       sPKPdf   01 31 55.1 +3.0
TIH                                 ePKiKP   PKiKP    01 31 42.0 -2.5
TIH                                 ePP      PP       01 34 18.0 +2.2
TIH                                 ePKiKP   PP       01 34 18.1 +2.2
TIH                                 eSS      SS       01 52 19.1  +13
DLPL  La Plaine         134.66  79  eP       PKiKP    01 32 00.1  +15
MORH  Mrgy, Hungar      134.71 327  eP       sPKPdf   01 31 53.1 +0.9
MORH                                ePKiKP   PKiKP    01 31 44.0 -0.6
MORH                                ePKiKP   PP       01 34 12.1 -4.2
MORH                                ePP      PP       01 34 32.0  +16
MORH                                eSS      SS       01 52 12.1 +5.3
MORH                                eSS      SS       01 52 15.1 +8.3
ESK   Eskdalemuir       134.72 351   PFAKE            01 31 50.0 +5.6
ESK                                  LR      LR
      comp=Z,99µm,20.0s
SVCV  St. Vincent, C    134.72  82  eP       PKPpre   01 31 25.2
SRS   Serrai            134.74 319   P       PKiKP    01 31 47.5 +2.6
SRS   Serrai            134.74 319   P       PKiKP    01 31 47.5 +2.6
FDF   Fort de France    134.75  80  eP       PKiKP    01 31 47.5 +1.8
NKC   Novy Kostel       134.76 335  ePP      PP       01 34 36.1  +20
NKC                                 ex       x        01 44 42.0
NKC                                 eSS      SS       01 52 18.6  +12
NKC                                  AMS     AMS      02 31 10.0
      comp=Z,62µm,21.0s
SOP   Sopron            134.79 330  ePKiKP   PP       01 34 18.0 +1.4
SOP                                 ePKiKP   PKPdf    01 31 39.1 -4.2
SOP                                 ePP      PP       01 34 27.0  +10
OUR   Ouranopolis       134.88 317  eP       PKiKP    01 31 53.1 +8.0
OUR   Ouranopolis       134.88 317   P       PKPpre   01 31 38.2
OUR   Ouranopolis       134.88 317   P       PKPpre   01 31 38.2
MCLT  Moule a Chique    134.93  81  eP       PKiKP    01 31 53.7 +7.8
CONA  Conrad Observa    134.95 331   PKiKP   PKPdf    01 31 43.6 -0.1
      comp=Z,8.1nm,1.1s
BOT   Bacolet           135.02  85  eP       PKiKP    01 31 50.1 +4.0
SOH   Sokhos            135.05 318   P       PKiKP    01 31 53.1 +7.5
SOH   Sokhos            135.05 318   P       PKiKP    01 31 53.1 +7.5
KHC   Kasperske Hory    135.12 334  ePKPdf   PKPdf    01 31 44.1 +0.1
KHC                                  LR      LR
      comp=Z,45µm,21.0s
KHC   Kasperske Hory    135.12 334  ePKPDF   PKPdf    01 31 43.9 -0.1
KHC                                 epPKP    pPKPdf   01 31 51.1 +0.4
KHC                                 ex       x        01 31 58.4
KHC                                 ex       x        01 34 38.0
KHC                                 ex       x        01 45 19.4
KHC                                  AMS     AMS      02 31 00.0
      comp=Z,108µm,19.9s
KHC   Kasperske Hory    135.12 334  ePKIKP   PKPdf    01 31 43.9 -0.1
KHC                                 e                 01 31 51.1
KHC                                 e                 01 31 58.4
KHC                                  MLR     MLR
      comp=Z,108µm,19.9s
AMGA  Amorgos Island    135.14 312   P       PKiKP    01 31 56.1  +10
KNT   Kendrikon         135.17 319  eP       PKiKP    01 31 46.8 +1.1
KNT   Kendrikon         135.17 319   P       PKPdf    01 31 42.5 -1.7
KNT   Kendrikon         135.17 319   P       PKPdf    01 31 42.5 -1.7
SKY   Skiros Island     135.19 315   P       PKPdf    01 31 41.1 -3.2
SKY   Skiros Island     135.19 315   P       PKPdf    01 31 41.1 -3.2
TOSP  Speyside          135.21  85  eP       PKiKP    01 31 59.1  +13
PLG   Polygyros         135.21 318   P       PKPpre   01 31 35.4
PLG   Polygyros         135.21 318   P       PKPpre   01 31 35.4
PLG   Polygyros         135.21 318   PKIKP   PKPpre   01 31 35.4
GEC2  GERESS Array S    135.28 333  ePKPdf   PKPdf    01 31 44.4 +0.1
GEC2                                 LR      LR
      comp=Z,93µm,22.0s
GERES GERESS Array B    135.28 333   PKP     PKPdf    01 31 44.0 -0.3
      comp=Z,2.6nm,0.9s,baz=46,slow=5.8,SNR=7.6
PAIG  Paliouri          135.28 317   P       PKPpre   01 31 40.1
PAIG  Paliouri          135.28 317   P       PKPpre   01 31 40.1
GEA0  GERESS Array S    135.28 333  ePKPdf   PKPdf    01 31 43.7 -0.7
DIVS  Divibare          135.29 324  ePKPdf   PKPdf    01 31 43.9 -0.5
VAY   Valandovo         135.29 319   P       PKPpre   01 31 38.5
VAY   Valandovo         135.29 319   P       PKPpre   01 31 38.5
VAY   Valandovo         135.29 319  i P      PKiKP    01 31 56.2  +10
VAY   Valandovo         135.29 319   PKIKP   PKPpre   01 31 38.5
APE   Apeiranthos       135.30 313  eP       PKiKP    01 31 49.2 +3.0
APE   Apeiranthos       135.30 313   P       PKiKP    01 31 57.9  +12
APE   Apeiranthos       135.30 313   P       PKiKP    01 31 57.9  +12
HORT  Hortiatis         135.33 318  eP       PKiKP    01 31 49.4 +3.2
HORT  Hortiatis         135.33 318   P       PKPpre   01 31 39.5
HORT  Hortiatis         135.33 318   P       PKPpre   01 31 39.5
STIP  Stip              135.34 320  i P      PKiKP    01 31 57.9  +12
WTSB  Winterswijk       135.40 341  ePKP     PKiKP    01 31 56.4  +11
WTSB                                ePP      PP       01 34 35.2  +15
THE   Thessaloniki      135.40 318   P       PKPpre   01 31 39.2
THE   Thessaloniki      135.40 318   P       PKPpre   01 31 39.2
THE   Thessaloniki      135.40 318   PKIKP   PKPpre   01 31 39.2
BEHE  Becsehely         135.51 329  eP       PKiKP    01 31 48.1 +1.8
BEHE                                ePKiKP   PKiKP    01 31 48.0 +1.8
BEHE                                ePP      PP       01 34 38.1  +17
BEHE                                eSS      SS       01 52 14.0 -2.3
BEHE                                i SS     SS       01 52 53.1  +37
AOS   Alonnisos         135.51 316  eP       PKiKP    01 31 50.4 +3.9
AOS   Alonnisos         135.51 316   P       PKiKP    01 31 51.2 +4.7
AOS   Alonnisos         135.51 316   P       PKiKP    01 31 51.2 +4.7
IDGL  Inch Island, C    135.52 354  ePP      PP       01 34 17.8 -2.9
IDGL                                eSS      SS       01 52 21.8 +6.5
ARSA  Arzberg           135.59 331   PKiKP   PKiKP    01 31 47.0 +0.6
      comp=Z,11nm,1.2s
GRG   Griva             135.59 319  eP       PKPdf    01 31 44.9 -0.2
GRG   Griva             135.59 319   P       PKiKP    01 31 46.5 -0.2
GRG   Griva             135.59 319   P       PKiKP    01 31 46.5 -0.2
SANT  Santorini         135.65 312   P       PKPpre   01 31 27.9
SANT  Santorini         135.65 312   P       PKPpre   01 31 27.9
SKO   Skopje            135.65 321   P       PKPdf    01 31 45.1  0.0
SKO   Skopje            135.65 321   P       PKPdf    01 31 45.1  0.0
SKO   Skopje            135.65 321  i P      PKiKP    01 32 00.4  +14
THT1  Athinios (Pele    135.66 312   P       PKiKP    01 31 50.1 +3.3
GRA1  Grafenberg Arr    135.67 336   PFAKE            01 32 00.0  +13
GRA1                                 LR      LR
      comp=Z,57µm,20.0s
GRFO  Grafenberg        135.68 336   PFAKE            01 32 00.0  +13
GRFO                                 LR      LR
      comp=Z,56µm,20.0s
MOA   Molln             135.76 332  ePKiKP   PKiKP    01 31 47.0 +0.3
      comp=Z,7.2nm,0.8s
XOR   Xorichti          135.88 317   P       PKPpre   01 31 41.2
XOR   Xorichti          135.88 317   P       PKPpre   01 31 41.2
NEO   Neokhori          135.89 317   P       PKiKP    01 31 47.0 -0.3
NEO   Neokhori          135.89 317   P       PKiKP    01 31 47.0 -0.3
MRKA  Markates          135.94 316   P       PKiKP    01 31 51.8 +4.4
LIT   Litokhoron        135.98 318   P       PKiKP    01 31 48.4 +0.9
LIT                                  LR      LR
      comp=Z,37µm,19.0s
LIT   Litokhoron        135.98 318   P       PKiKP    01 31 48.4 +0.9
SERI  Serifos           136.02 313   P       PKiKP    01 31 50.4 +2.8
FYTO  Fytoko, Volos     136.03 317   P       PKPpre   01 31 41.1
FYTO  Fytoko, Volos     136.03 317   P       PKPpre   01 31 41.1
PTL   Penteli           136.05 315   P       PKPpre   01 31 30.7
PTL   Penteli           136.05 315   P       PKPpre   01 31 30.7
KRUS  Krusevo           136.11 320  i P      PKPdf    01 31 46.3 +0.2
SMIA  Simia             136.11 316   P       PKiKP    01 31 50.5 +2.7
LAST  Lasithi           136.12 310   P       PKPpre   01 31 35.8
LAST  Lasithi           136.12 310   P       PKPpre   01 31 35.8
ATHU  Athens Univers    136.15 315   P       PKiKP    01 31 49.5 +1.7
ATHU  Athens Univers    136.15 315   P       PKiKP    01 31 49.5 +1.7
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ATH	Athens Observa	136.19	315	P	PKiKP	01 31 48.8	+0.9
ATH	Athens Observa	136.19	315	P	PKiKP	01 31 48.8	+0.9
VLY	Voula,Athens	136.19	314	P	PKPpre	01 31 39.6	
VLY	Voula,Athens	136.19	314	P	PKPpre	01 31 39.6	
PERS	Pernice	136.22	330	ePKPdf	PKiKP	01 31 50.8	+3.0
SOKA	Soboth	136.24	330	ePKiKP	PKiKP	01 31 47.6	-0.3
	comp=Z,23nm,1.4s						
TSUM	Tsumeb	136.24	227	ePKPdf	PKPdf	01 31 44.1	-2.9
TSUM				LR	LR		
	comp=Z,270µm,21.0s						
BIA	Bitola	136.25	320	iP	PKiKP	01 32 01.3	+13
BBGH	Gun Hill	136.26	82	eP	PKiKP	01 31 51.0	+2.4
BCI	Bajram Curri	136.27	322	iP	PKiKP	01 32 16.0	+28
MHLO	Agia Marina, M	136.28	313	P	PKiKP	01 31 48.4	+0.3
ATAL	Atalanti	136.33	316	P	PKPpre	01 31 43.2	
ATAL	Atalanti	136.33	316	P	PKPpre	01 31 43.2	
KZN	Kozani	136.34	319	P	PKPpre	01 31 39.3	
KZN	Kozani	136.34	319	P	PKPpre	01 31 39.3	
KZN	Kozani	136.34	319	PKIKP	PKPpre	01 31 39.3	
BBSP	Saint Philip	136.36	82	eP	PKiKP	01 31 57.8	+9.0
LKR	Lokris	136.37	316	P	PKPpre	01 31 35.1	
LKR	Lokris	136.37	316	P	PKPpre	01 31 35.1	
VILL	Villia	136.38	315	P	PKPpre	01 31 43.2	
PHP	Peshkopia	136.43	321	iP	PKiKP	01 32 01.1	+13
BLY	Banja Luka	136.44	327	PFAKE		01 32 00.0	+12
BLY				LR	LR		
	comp=Z,91µm,21.0s						
BLY	Banja Luka	136.44	327	⇓iP	PKPdf	01 31 46.8	+0.3
IDI	Anoyia	136.51	311	eP	PKiKP	01 31 55.3	+6.6
OHR	Ohrid	136.53	320	iP	PKiKP	01 32 02.4	+14
PUK	Puka	136.56	322	iP	PKiKP	01 32 12.0	+23
THL	Klokotos Trika	136.57	318	P	PKPdf	01 31 44.8	-2.1
OBKA	Obir	136.59	330	pPKPdf	PKiKP	01 31 50.9	+2.3
	comp=Z,41nm,1.6s						
PROD	Prodromos	136.62	315	P	PKPpre	01 31 38.3	
AGG	Agios Georgios	136.64	317	eP	PKPpre	01 31 30.5	
AGG	Agios Georgios	136.64	317	P	PKiKP	01 31 52.3	+3.5
AGG				LR	LR		
	comp=Z,64µm,21.0s						
AGG	Agios Georgios	136.64	317	P	PKiKP	01 31 52.3	+3.5
LTK	Loutraki	136.69	315	P	PKPpre	01 31 43.3	
LTK	Loutraki	136.69	315	P	PKPpre	01 31 43.3	
LOUT	Loutraki	136.70	315	P	PKiKP	01 31 50.9	+1.9
HGN	Heimansgroeve	136.71	341	ePKP	PKiKP	01 31 56.4	+7.8
HGN				ePP	PP	01 34 30.4	+2.0
HGN				ePKP		01 42 45.2	
	comp=Z,2µm,3.6s						
HGN				eSS	SS	01 52 42.5	+13
TTG	Podgorica	136.72	323	PFAKE		01 32 00.0	+11
TTG				LR	LR		
	comp=Z,87µm,21.0s						
DID	Didima	136.75	314	P	PKPpre	01 31 41.4	
DID	Didima	136.75	314	P	PKPpre	01 31 41.4	
KBA	Koelnbreinsper	136.75	332	ePKPdf	PKPdf	01 31 45.0	-2.2
	comp=Z,47nm,1.3s						
NEST	Nestorio	136.75	319	P	PKPpre	01 31 40.9	
BEBN	Eben Emael	136.76	341	⇑PKiKP	PKiKP	01 31 49.2	+0.6
BEBN				⇑PP	PP	01 34 28.2	-0.4
DSF	Desfina	136.81	316	P	PKiKP	01 31 49.0	-0.2
DSF	Desfina	136.81	316	P	PKiKP	01 31 49.0	-0.2
PENT	Pentalofos	136.81	319	P	PKiKP	01 31 53.2	+3.9
MEM	Membach	136.82	341	⇑PKiKP	PKiKP	01 31 59.4	+11
MEM				⇑PP	PP	01 34 30.6	+1.5
KRND	KRANIDI	136.86	314	P	PKPpre	01 31 36.5	
LJU	Ljubljana	136.93	330	iPKPdf	PKiKP	01 31 51.7	+2.5
LJU				i		01 31 57.5	
LJU				e		01 32 05.5	
LJU				e		01 35 39.5	
LJU				eSS	SS	01 52 34.8	+1.6
MYKA	Terra Mystica	136.94	331	ePKiKP	PKiKP	01 31 49.9	+0.6
	comp=Z,8.5nm,1.0s						
VISS	Visnje	136.95	329	iPKPdf	PKiKP	01 31 57.0	+7.8
BOJS	Bojanci	136.95	329	ePdiff	Pdif	01 28 42.1	-12
BOJS				ePKPdf	sPKPdf	01 31 56.3	-0.1
BOJS				i		01 32 05.9	
BOJS				ePP	PP	01 34 56.1	+26
BOJS				iSdiff		01 42 48.3	
BOJS				e		01 45 23.2	
BOJS				e		01 46 19.0	
TIR	Tirane	136.98	321	P	PKPdf	01 31 43.5	-4.1
TIR				LR	LR		
	comp=Z,70µm,21.0s						
TIR	Tirane	136.98	321	P	PKPdf	01 31 43.5	-4.1
TIR	Tirane	136.98	321	iP	PKiKP	01 32 17.4	+28
VAM	Vamos	136.98	311	P	PKPdf	01 31 44.3	-3.5
VAM	Vamos	136.98	311	P	PKPdf	01 31 44.3	-3.5
EVR	Evrytania	137.04	317	P	PKPdf	01 31 46.0	-1.9
EVR	Evrytania	137.04	317	P	PKPdf	01 31 46.0	-1.9
KALE	Kalithea	137.08	316	P	PKPdf	01 31 48.2	+0.2
KALE	Kalithea	137.08	316	P	PKPdf	01 31 48.2	+0.2
IMMV	Iera Moni Meta	137.12	311	eP	PKiKP	01 31 56.7	+6.8
SERG	Sergoula	137.13	316	P	PKPpre	01 31 36.0	
ANX	Ano Chora	137.13	316	P	PKiKP	01 31 49.3	-0.6
TRIZ	Trizonia	137.14	316	P	PKiKP	01 31 49.0	-0.8
GUR	Goura	137.16	315	P	PKPdf	01 31 47.7	-0.5
GUR	Goura	137.16	315	P	PKPdf	01 31 47.7	-0.5
UCC	Uccle	137.17	342	PFAKE		01 32 00.0	+11
UCC				LR	LR		
	comp=Z,66µm,20.0s						
UCC	Uccle	137.17	342	⇑PKiKP	PKiKP	01 31 55.0	+5.5
DSB	Dublin	137.19	353	ePP	PP	01 34 23.4	-7.8
DSB				eSS	SS	01 52 43.5	+8.3
STU	Stuttgart	137.21	337	PFAKE		01 32 00.0	+10
STU				LR	LR		
	comp=Z,63µm,21.0s						
EFP	Efpalio	137.22	316	P	PKPdf	01 31 45.3	-2.8
KLV	Kalavryta, Ach	137.24	316	P	PKPpre	01 31 42.2	
KLV	Kalavryta, Ach	137.24	316	P	PKPpre	01 31 42.2	
JAVS	Javornik	137.26	330	ePKPdf	PKiKP	01 31 53.1	+3.1
LAKA	Lakka	137.26	316	P	PKPpre	01 31 42.7	
LAKA	Lakka	137.26	316	P	PKPpre	01 31 42.7	
JAN	Janina	137.29	318	P	PKPdf	01 31 45.9	-2.4
JAN	Janina	137.29	318	P	PKPdf	01 31 45.9	-2.4
GVD	Gavdhos	137.30	310	eP	PKPdf	01 31 48.4	0.0
GVD	Gavdhos	137.30	310	P	PKPdf	01 31 47.3	-1.1
GVD	Gavdhos	137.30	310	P	PKPdf	01 31 47.3	-1.1
VLI	Veliai	137.32	313	P	PKiKP	01 31 51.3	+1.1
VLI	Veliai	137.32	313	P	PKiKP	01 31 51.3	+1.1
IGLA	Glengowla, Co	137.33	355	ePP	PP	01 34 27.7	-4.3
IGLA				eSS	SS	01 52 48.0	+11
WATA	Walderalm	137.35	333	PKiKP	PKPdf	01 31 47.9	-0.4
	comp=Z,21nm,0.9s						
ABTA	Abfaltersbach	137.38	332	PKiKP	PKPdf	01 31 49.1	+0.8
	comp=Z,46nm,1.0s						
WTTA	Wattenberg	137.38	333	ePKiKP	PKiKP	01 31 49.6	-0.6
	comp=Z,41nm,1.1s						
PVO	Paravola	137.38	317	P	PKPpre	01 31 43.8	
VLX	Vlachokerasia	137.41	315	P	PKPpre	01 31 39.6	
VLX	Vlachokerasia	137.41	315	P	PKPpre	01 31 39.6	
TRIP	Tripoli	137.41	315	P	PKiKP	01 31 53.1	+2.6
ANKY	Antikythira Is	137.44	312	P	PKiKP	01 31 51.6	+1.1
ANKY	Antikythira Is	137.44	312	P	PKiKP	01 31 51.6	+1.1
SNF	Seneffe	137.45	342	⇓PKiKP	PKPpre	01 31 44.6	
KYTH	Kithira	137.45	313	P	PKiKP	01 31 54.9	+4.3
KYTH	Kithira	137.45	313	P	PKiKP	01 31 54.9	+4.3
KTHR	Kythira	137.48	313	P	PKPdf	01 31 48.5	-0.2
TPE	Tepelena	137.48	320	P	PKPpre	01 31 44.5	
TPE	Tepelena	137.48	320	P	PKPpre	01 31 44.5	
TPE	Tepelena	137.48	320	iP	PKiKP	01 31 55.2	+4.7
TRI	Trieste	137.54	330	PFAKE		01 32 00.0	+10
TRI				LR	LR		
	comp=Z,73µm,20.0s						
MOTA	Moosalm	137.55	334	PKPdf	PKPdf	01 31 47.8	-0.9
	comp=Z,26nm,1.0s						
WLF	Walferdange	137.58	340	PFAKE		01 32 00.0	+10
WLF				LR	LR		
	comp=Z,461µm,20.0s						
WLF	Walferdange	137.58	340	⇓PKiKP	PKiKP	01 31 51.8	+1.4
RETA	Reutte	137.59	334	PKiKP	PKPdf	01 31 49.6	+0.9
	comp=Z,31nm,1.1s						
DRO	Drossia	137.59	316	P	PKPpre	01 31 39.8	
SQTA	Sankt Quirin	137.60	334	PKiKP	PKiKP	01 31 50.3	-0.3
	comp=Z,49nm,0.9s						
IGT	Igoumenitsa	137.69	319	P	PKiKP	01 31 50.5	-0.4
IGT	Igoumenitsa	137.69	319	P	PKiKP	01 31 50.5	-0.4
AXS	Araxos	137.70	316	P	PKPdf	01 31 48.0	-1.0
RLS	Riolos of Patr	137.71	316	P	PKPpre	01 31 44.9	
RLS	Riolos of Patr	137.71	316	P	PKPpre	01 31 44.9	
VLO	Vlora	137.71	320	P	PKiKP	01 31 59.9	+9.0
VLO	Vlora	137.71	320	P	PKiKP	01 31 59.9	+9.0
VLO	Vlora	137.71	320	iP	PKiKP	01 31 54.0	+3.1
DOU	Dourbes	137.71	341	⇑PKiKP	PKiKP	01 31 50.0	-0.6
SRN	Sarande	137.72	319	P	PKPdf	01 31 48.7	-0.3
SRN	Sarande	137.72	319	P	PKPdf	01 31 48.7	-0.3
SRN	Sarande	137.72	319	iP	PKiKP	01 32 07.2	+16
AMT	Artemida-Makis	137.80	315	P	PKiKP	01 31 55.6	+4.4
ITM	Ithomi	137.82	315	eP	PKPdf	01 31 49.2	-0.1
ITM	Ithomi	137.82	315	P	PKPpre	01 31 45.3	
ITM				LR	LR		
	comp=Z,47µm,22.0s						
ITM	Ithomi	137.82	315	P	PKPpre	01 31 45.3	
LKD2	Lefkada island	137.88	317	P	PKPpre	01 31 34.5	
LKD2	Lefkada island	137.88	317	P	PKPpre	01 31 34.5	
BFO	Black Forest	137.91	337	PFAKE		01 32 00.0	+8.9
BFO				LR	LR		
	comp=Z,73µm,20.0s						
BDFB	Brasilia	137.91	128	ePKPpre	PKPpre	01 31 41.7	
BDFB				ePKPpre	PKPpre	01 31 43.0	
BDFB				ePKPdf	PKPdf	01 31 49.9	-0.3
BDFB				LR	LR		
	comp=Z,170µm,22.0s						
BDFB	Brasilia	137.91	128	ePKHKP	PKPpre	01 31 41.7	
BDFB				e		01 31 49.9	
BDFB				MLR	MLR		
	comp=Z,170µm,22.0s						
BDFB	Brasilia	137.91	128	PKhKP	PKPpre	01 31 41.7	
	comp=Z,6.3nm,0.8s,baz=176,slow=9.5,SNR=6.8						
BDFB				PKP	PKPdf	01 31 49.9	-0.3
	comp=Z,18nm,1.0s,baz=344,slow=0.2,SNR=8.5						
KEK	Kerkira	137.94	319	P	PKiKP	01 31 51.3	-0.1
KEK	Kerkira	137.94	319	P	PKiKP	01 31 51.3	-0.1
EVGI	Lefkada island	137.97	317	P	PKPdf	01 31 49.7	+0.2
FETA	Feichten	137.97	334	PKiKP	PKiKP	01 31 50.9	-0.6
	comp=Z,70nm,1.1s						
DAVA	Damuels	138.12	335	PKiKP	PKiKP	01 31 52.0	+0.2
	comp=Z,54nm,1.0s						
VLS	Valsamata	138.24	317	P	PKPdf	01 31 49.8	-0.2
VLS	Valsamata	138.24	317	P	PKPdf	01 31 49.8	-0.2
VLS	Valsamata	138.24	317	PKIKP	PKPdf	01 31 49.8	-0.2
ECH	Echery	138.44	338	PFAKE		01 32 00.0	+7.8
ECH				LR	LR		
	comp=Z,54µm,20.0s						
FUORN	Ofenpass-Fuorn	138.48	334	ePKPdf	PKiKP	01 31 52.7	+0.1
FUORN				LR	LR		
	comp=Z,68µm,21.0s						
VAL	Valentia	138.87	356	ePP	PP	01 34 30.8	-11
VAL				eSS	SS	01 53 06.2	+11
TUE	Stuetta	138.99	334	PFAKE		01 32 00.0	+6.4
TUE				LR	LR		
	comp=Z,93µm,20.0s						
MATE	Matera	139.32	322	⇑iP	PKiKP	01 31 53.1	-1.1
SENIN	Lac Senin/Sane	139.92	336	PFAKE		01 32 00.0	+4.5
SENIN				LR	LR		
	comp=Z,89µm,22.0s						
TIP	Timpagrande	140.18	320	P	PKPdf	01 31 47.9	-5.7
TIP				LR	LR		
	comp=Z,63µm,22.0s						
TIP	Timpagrande	140.18	320	⇓iP	PKPdf	01 31 54.8	+1.2
TIP	Timpagrande	140.18	320	P	PKPdf	01 31 47.9	-5.7
CUC	Castrocucco	140.26	322	PFAKE		01 32 00.0	+3.8
CUC				LR	LR		
	comp=Z,66µm,21.0s						
CLF	Chambon-Foret	140.26	342	PFAKE		01 32 00.0	+4.1
CLF				LR	LR		
	comp=Z,95µm,20.0s						
VLC	Villacollemand	140.31	331	PFAKE		01 32 00.0	+3.8
VLC				LR	LR		
	comp=Z,91µm,20.0s						
BNI	Bardonecchia	141.24	335	PFAKE		01 32 10.0	+12
BNI				LR	LR		
	comp=Z,87µm,19.0s						
CEL	Celeste	141.26	320	PFAKE		01 32 10.0	+12
CEL				LR	LR		
	comp=Z,45µm,20.0s						
SSB	Saint Sauveur	141.89	338	PFAKE		01 32 10.0	+11
SSB				LR	LR		
	comp=Z,78µm,19.0s						
WDD	Wied Dalam	143.58	318	PFAKE		01 32 10.0	+6.9
WDD				LR	LR		
	comp=Z,38µm,21.0s						
TAMR	Tamra	146.15	324	PFAKE		01 32 10.0	+1.7
TAMR				LR	LR		
	comp=Z,61µm,21.0s						
MAHO	Mahon	146.47	333	iPKP	PKiKP	01 32 10.2	+1.3
MAHO				iSS	SS	01 55 08.0	+44
KEST	Kesra	146.91	322	ePKPdf	PKPbc	01 32 06.5	-1.0
KEST	Kesra	146.91	322	PKPbc	PKPdf	01 32 06.1	+0.5
	comp=Z,34nm,1.0s,baz=282,slow=2.8,SNR=15						
CAEH	'Ain El Ouahch	147.60	326	P	PKPab	01 32 13.8	+2.4
ABSA	Djebel Ababsia	147.62	325	P	PKPab	01 32 12.3	+0.7
H07N1	FLORES T-PHASE	147.86	24	ePKP	PKPbc	01 32 10.7	+0.8
H07S1	FLORES T-PHASE	148.09	24	ePKP	PKPab	01 32 14.6	+1.3
DFRA	Djebel Bou Aff	148.30	327	P	PKPbc	01 32 11.9	+0.6
PBRG	Braganca	148.37	348	ePKPab	PKPab	01 32 13.6	-0.7
PGAV	Gavieira, Arco	148.49	351	ePKPab	PKPab	01 32 16.9	+2.1
PCAB	Cabril	148.69	350	ePKPab	PKPab	01 32 18.4	+2.8
SET	Setif	148.81	327	P	PKPbc	01 32 13.0	+0.4
CKHR	Kef el Ahmar	148.89	327	P	PKPab	01 32 18.9	+2.2
UCM	Universidad Co	148.92	343	iPKP	PKPab	01 32 18.4	+1.9
UCM				iSS	SS	01 55 27.6	+36
POLO	Lamas de Olo	148.98	350	ePKPdf	PKPdf	01 32 10.3	+1.5
POLO	Lamas de Olo	148.98	350	ePKPab	PKPab	01 32 22.9	+6.1
MVO	Moncorvo	149.04	348	ePKPdf	PKPbc	01 32 12.7	-0.3
PVRL	Vila Real	149.06	349	ePKPdf	PKPbc	01 32 11.3	-1.7
PVRL	Vila Real	149.06	349	ePKPab	PKPab	01 32 18.5	+1.4
ABMS	Boumerdes	149.37	330	P	PKPab	01 32 25.4	+7.0
ABA	Alger-Bouzarea	149.54	331	P	PKPab	01 32 25.0	+5.8
SRBC	Serra Branca	149.58	21	ePKP	PKiKP	01 32 15.1	-0.3
PGRA	Graciosa	149.61	20	ePKP	PKiKP	01 32 15.8	+0.4
ES19	SONSECA Array	149.67	343	ePKPdf	PKPbc	01 32 12.3	-2.2
ESDC	Sonseca Array	149.72	343	PKPbc	PKPdf	01 32 12.1	+2.1
	comp=Z,6.0nm,1.0s,baz=23,slow=1.9,SNR=15						
ESLA	Sonseca Array	149.72	343	PFAKE		01 32 20.0	+0.2
ESLA				LR	LR		
	comp=Z,86µm,22.0s						
AKET	Djebel Ketaf	149.72	329	P	PKiKP	01 32 15.9	0.0
ROSA	Rosais	149.79	21	ePKP	PKPbc	01 32 14.2	-0.6
ROSA	Rosais	149.79	21	PFAKE		01 32 20.0	-0.1
ROSA				LR	LR		
	comp=Z,72µm,20.0s						
HOR	Horta	149.82	22	ePKP	PKiKP	01 32 16.0	+0.2
ADJB	Djebel Djouab	149.86	330	P	PKPbc	01 32 14.4	-0.8
MTE	Manteigas	149.88	349	ePKPdf	PKPdf	01 32 09.7	-0.5
MTE	Manteigas	149.88	349	ePKPab	PKPab	01 32 20.0	-0.5
MTE	Manteigas	149.88	349	ePKPbc	PKiKP	01 32 15.9	-0.1
MTE				LR	LR		
	comp=Z,102µm,22.0s						
PICO	Pico	149.92	22	ePKP	PKPbc	01 32 14.0	-1.2
PMAN	Manadas	149.92	21	ePKP	PKPdf	01 32 12.1	+1.8
PCAN	Candelaria	149.93	22	ePKP	PKiKP	01 32 15.7	-0.4
PAB	San Pablo	149.94	344	ePKPbc	PKiKP	01 32 16.1	-0.1
PAB				LR	LR		
	comp=Z,76µm,21.0s						
PAB	San Pablo	149.94	344	ePKP2	PKiKP	01 32 16.1	-0.1
PAB				MLR	MLR		
	comp=Z,76µm,21.0s						
ADH	Angra Heroismo	150.19	20	ePKP	PKPbc	01 32 15.4	-0.4
PCAS	Casmilo, Conde	150.39	350	ePKPdf	PKPbc	01 32 14.0	-2.2
PCAS	Casmilo, Conde	150.39	350	ePKPab	PKPab	01 32 25.9	+3.4
PCBR	Castelo Branco	150.41	348	ePKPdf	PKPbc	01 32 16.5	+0.3
CART	Cartagena	150.62	337	iPKP	PKPab	01 32 26.2	+2.7
CART				iSS	SS	01 55 53.3	+43
EBNR	Beni Rached	150.66	332	P	PKPab	01 32 30.0	+6.2
PMRV	Marv??o	150.79	348	ePKPdf	PKPbc	01 32 15.1	-2.1
PMRV	Marv??o	150.79	348	ePKPab	PKPab	01 32 28.1	+3.9
PTOM	Tomar	150.79	350	ePKPdf	PKiKP	01 32 17.9	+0.1
PTOM	Tomar	150.79	350	ePKPab	PKPab	01 32 29.2	+5.0
ECHA	Ech Chlef	150.85	332	P	PKPab	01 32 30.0	+5.5
EANR	'Ain N'Sour	151.14	332	P	PKPab	01 32 24.0	-1.8
PMTG	Montargil	151.29	349	ePKPab	PKPab	01 32 29.0	+2.7
PESTR	Estremoz	151.37	348	ePKPab	PKPab	01 32 29.3	+2.7
PESTR	Estremoz	151.37	348	ePKPab	PKPab	01 32 24.5	-2.1
PSET	Sete Cidades	151.44	18	ePKP	PKPdf	01 32 14.6	+1.9
ETRT	Tiaret	151.51	332	P	PKPab	01 32 25.0	-2.5
PDA	Ponta Delgada	151.53	18	ePKP	PKPdf	01 32 15.4	+2.7
PCALD	Caldeiras da R	151.53	18	ePKP	PKPdf	01 32 15.6	+2.8
GRON	Grota Negra	151.55	18	ePKP	PKPbc	01 32 16.3	-2.7
CMLA	Cha da Macela	151.55	18	ePKP	PKPbc	01 32 16.2	-2.8
CMLA	Cha da Macela	151.55	18	ePKPab	PKPab	01 32 25.7	-1.7
PMAFR	Mafra	151.59	351	ePKPab	PKPab	01 32 30.2	+2.7
BART	Pico Bartolome	151.65	17	ePKP	PKPdf	01 32 15.9	+2.8
OJGS	Djebel Guires	151.66	332	P	PKPab	01 32 25.0	-3.1
OJBR	Djebel Berber	151.78	333	P	PKPab	01 32 34.0	+5.5
PMST	Lisbon--Monsan	151.78	351	ePKPdf	PKPdf	01 32 11.1	-2.0
PMST	Lisbon--Monsan	151.78	351	ePKPab	PKPab	01 32 25.9	-2.4
LIS	Lisbon	151.80	351	ePKPdf	PKPdf	01 32 10.8	-2.4
SHEL	Horse Pasture	151.87	199	PFAKE		01 32 20.0	-0.4
SHEL				LR	LR		
	comp=Z,118µm,18.0s						
USTO	Oran	152.04	335	P	PKPab	01 32 55.0	+26
ODJA	Bouhanifia	152.21	334	P	PKiKP	01 32 23.0	+2.0
PBEJ	Beja	152.24	348	ePKPdf	PKPdf	01 32 12.7	-1.1
PBEJ	Beja	152.24	348	ePKPab	PKPab	01 32 27.1	-3.1
PNCL	Nicolau / Gran	152.28	349	ePKPdf	PKPdf	01 32 14.0	+0.1
PNCL	Nicolau / Gran	152.28	349	ePKPab	PKPab	01 32 27.3	-3.1
PSMA	Santa Maria	152.38	18	ePKP	PKPdf	01 32 16.0	+1.9
PSMN	Pico do Norte,	152.39	18	ePKP	PKPbc	01 32 18.0	-2.9
MESJ	Messejana	152.49	349	ePKPdf	PKPdf	01 32 12.2	-2.0
MESJ	Messejana	152.49	349	ePKPdf	PKPdf	01 32 14.7	+0.5
MESJ	Messejana	152.49	349	ePKPab	PKPab	01 32 30.9	-0.3
EMAL	Malaga-Limoner	152.55	342	iPKP	PKPab	01 32 32.9	+1.4
EMAL				iSS	SS	01 56 04.2	+33
LIJA	Lijar	152.70	343	ePKP	PKPbc	01 32 20.0	-1.8
PVAQ	Vaqueiros	152.80	347	ePKPdf	PKPbc	01 32 21.0	-0.8
PVAQ	Vaqueiros	152.80	347	ePKPab	PKPab	01 32 33.9	+1.3
OLHC	Oulhaca	152.82	335	P	PKPab	01 32 36.0	+3.2
PTEO	Sao Teotonio	152.87	349	ePKPdf	PKPbc	01 32 21.9	0.0
PTEO	Sao Teotonio	152.87	349	ePKPab	PKPab	01 32 43.8	+11
GIBL	Gibalbin	152.93	344	ePKP	PKiKP	01 32 24.2	+1.9
PBDV	Barranco-do-Ve	153.00	348	ePKPdf	PKiKP	01 32 25.3	+2.8
MORF	Marmelete	153.09	349	ePKPdf	PKPdf	01 32 12.6	-2.5
MORF	Marmelete	153.09	349	ePKPdf	PKPdf	01 32 17.2	+2.0
MORF	Marmelete	153.09	349	ePKPab	PKPab	01 32 34.5	+0.6
RCBR	Riachuelo	153.28	127	ePKPbc	PKPbc	01 32 21.8	-1.9
RCBR				LR	LR		
	comp=Z,125µm,20.0s						
RCBR	Riachuelo	153.28	127	ePKIKP	PKPbc	01 32 21.8	-1.9
RCBR				MLR	MLR		
	comp=Z,125µm,20.0s						
PFVI	Vila Bisbo	153.29	349	ePKPdf	PKPbc	01 32 20.4	-2.5
PFVI	Vila Bisbo	153.29	349	ePKPab	PKPab	01 32 34.9	+0.3
SFS	San Fernando	153.34	344	iPKP	PKPab	01 32 32.8	-2.0
SFS				iSS	SS	01 56 05.3	+26
MELI	Melilla	153.37	338	iPKP	PKPab	01 32 31.9	-3.2
MELI				iSS	SS	01 55 56.0	+16
CNIL	Conil	153.39	344	ePKP	PKPbc	01 32 21.0	-2.1
CEU	Ceuta	153.63	342	iPKP	PKiKP	01 32 26.9	+3.2
CEU				iSS	SS	01 55 52.3	+9.2
MDT	Midelt	156.20	338	PKP	PKPdf	01 32 19.2	-0.6
	comp=Z,4.0nm,1.2s,baz=138,slow=2.1,SNR=4.6						
AVE	Averroes	156.65	344	ePKP	PKPdf	01 32 15.6	-4.5
AVE				iSS	SS	01 56 29.3	+14
TAM	Tamanrasset	157.20	304	ePKPdf	PKPdf	01 32 21.8	+0.5
TAM				LR	LR		
	comp=Z,133µm,19.0s						
TAM	Tamanrasset	157.20	304	ePKIKP	PKPdf	01 32 21.8	+0.5
TAM				MLR	MLR		
	comp=Z,133µm,19.0s						
TOA0	Torodi Ar. Sit	163.65	280	ePKPdf	PKPdf	01 32 26.4	-2.1
TOA0				ePKPdf	PKPdf	01 32 28.4	-0.1
TORD	Torodi Ar. Bea	163.65	280	PKP	PKPdf	01 32 26.3	-2.1
	comp=Z,5.2nm,1.0s,baz=112,slow=0.3,SNR=16						
TOA1	Torodi Ar. Sit	163.65	280	ePKPdf	PKPdf	01 32 26.3	-2.1
KIC	Kosan Boka	169.04	247	ePKP1	PKPdf	01 32 31.3	-1.4
	comp=Z,701nm,1.5s						
LIC	Lamto	169.24	245	ePKP1	PKPdf	01 32 31.2	-1.6
	comp=Z,1µm,2.3s						
DBIC	Dimbokro	169.27	248	PKP	PKPdf	01 32 32.6	-0.2
	comp=Z,9.6nm,1.0s,baz=257,slow=1.4,SNR=7.0						
TIC	Toumodi	169.41	247	ePKP1	PKPdf	01 32 30.5	-2.4

IDC ***06*** *01:15:32.8±1.8, 11.°18S×165.°92E, h0^{km}, mb5.0/8, mb1 5.1/8, mb1mx4.8/40, mbtmp4.9/8, Error ellipse: s-maj=67.0km s-min=23.2km az=127.0*

ISCJB ***06*** *01:15:33.0±1.5, 11.°1S±0.°3×165.°8E±0.°3, h10^{km}, mb5.0/8, Error ellipse: s-maj=56.1km s-min=18.9km az=37.2*

ISC 06 01:15:34.3±1.5**, 11.°2S**±0.°3×**165.°9E**±0.°3**, h10**^{km}**, n9, σ1.^{s}66**/9**, mb5.1**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	30.44	224	P	P	01 21 46.3	-0.8
	35nm,0.7s,baz=61,slow=10,SNR=2.4						
WRA	Warramunga Arr	31.58	250	P	P	01 21 59.5	+2.2
	18nm,0.8s,baz=81,slow=9.3,SNR=3.2						
ASAR	Alice Springs	32.87	244	P	P	01 22 09.4	+0.8
	16nm,0.6s,baz=61,slow=10,SNR=4.2						
KSRS	Korea Array	60.08	326	P	P	01 25 40.4	-1.3
	10nm,1.0s,baz=128,slow=6.3,SNR=2.4						
PETK	Petropavlovsk-	64.42	355	P	P	01 26 11.9	+1.3
	18nm,1.0s,baz=165,slow=5.4,SNR=1.9						
ILAR	Eielson Array	83.60	18	P	P	01 28 04.2	+1.8
	6.6nm,0.7s,baz=233,slow=5.2,SNR=3.4						
MKAR	Makanchi Array	93.73	317	P	P	01 28 49.7	-1.7
	7.0nm,0.8s,baz=88,slow=7.4,SNR=1.9						
YKA	Yellowknife Ar	95.03	27	P	P	01 28 56.3	-0.7
	0.9nm,0.6s,baz=260,slow=5.0,SNR=3.5						
ARCES	ARCESS Array B	116.51	345	PKP	PKiKP	01 34 17.2	-0.7
	2.5nm,0.8s,baz=77,slow=1.9,SNR=2.4						

IDC ***06*** *01:16:36.7±0.4, 11.°06S×164.°79E, h0^{km}, mb5.7/30, mb1 5.8/32, mb1mx5.7/41, mbtmp5.7/32, ML5.8/2, Error ellipse: s-maj=14.2km s-min=12.1km az=103.0*

BJI ***06*** *01:16:36.5, 11.°00S×164.°80E, h10^{km}, mb5.8/16*

NEIC ***06*** *01:16:38.5±0.2, 11.°08S×164.°77E, h10^{km}, mb5.9/48, Error ellipse: s-maj=6.4km s-min=5.2km az=121.0*

ISCJB ***06*** *01:16:40.2±0.2, 11.°06S±0.°04×164.°63E±0.°04, h29^{km}, mb5.8/84, MS6.4/2, Error ellipse: s-maj=5.7km s-min=4.9km az=154.0*

MOS ***06*** *01:16:41.3±1.1, 10.°96S×164.°63E, h37^{km}, mb6.0/33, MS6.4/5, Error ellipse: s-maj=8.7km s-min=7.6km az=103.5*

ISC 06 01:16:41.6±0.3**, 11.°05S**±0.°06×**164.°73E**±0.°06**, h29**^{km}**, n329, σ1.^{s}56**/325**, mb5.8**/84**, 9C-10D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.97	288	Pn	Pn	01 17 54.3	0.0
	1µm,0.3s,baz=126,slow=6.7,SNR=6.0						
HNR				Sn	Sn	01 18 53.1	+2.1
	124nm,0.3s,baz=37,slow=20,SNR=2.5						
MSVF	Nonsavu	14.51	119	iP	Pn	01 20 06.8	+1.7
MANU	Manus Island	19.42	296	eP	P	01 21 05.4	-0.4
	4µm,1.4s						
CTA	Charters Tower	19.92	241	P	P	01 21 11.6	+0.4
	7.7nm,0.3s,baz=67,slow=13,SNR=11						
CTAO	Charters Tower	19.92	241	eP	P	01 21 11.8	+0.7
	734nm,1.1s						
CTAO	Charters Tower	19.92	241	eP	P	01 21 11.9	+0.7
CTAO				pmax	pmax		
	comp=Z,734nm,1.1s						
LHI	Lord Howe Isla	21.03	194	eP	P	01 21 22.3	-0.8
	comp=Z,498nm,1.0s						
COEN	Coen	21.24	260	eP	P	01 21 25.6	+0.1
	comp=Z,594nm,1.3s						
ARMA	Armidale	22.80	210	eP	P	01 21 42.3	+0.2
	comp=Z,592nm,1.1s						
MXZ	Matakaoa Point	29.08	157	eP	P	01 22 39.5	-0.2
	comp=Z,186nm,1.1s						
STKA	Stephens Creek	29.76	222	eP	P	01 22 44.9	-0.8
	comp=Z,29nm,1.1s						
STKA	Stephens Creek	29.76	222	eP	P	01 22 44.9	-0.8
STKA				pmax	pmax		
	comp=Z,29nm,1.1s						
STKA	Stephens Creek	29.76	222	P	P	01 22 44.9	-0.8
	comp=Z,70nm,1.0s,baz=59,slow=9.2,SNR=2.3						
BKZ	Black Stump Fm	29.90	161	eP	P	01 22 47.4	+0.5
	comp=Z,96nm,0.8s						
WRAB	Tennant Creek	30.53	249	eP	P	01 22 51.5	-1.2
	comp=Z,433nm,1.2s						
WRAB	Tennant Creek	30.53	249	eP	P	01 22 53.3	+0.6
WRAB				pmax	pmax		
	comp=Z,300nm,1.1s						
WR1	Warramunga Arr	30.55	249	eP	P	01 22 52.0	-0.8
	comp=Z,431nm,1.1s						
WRA	Warramunga Arr	30.55	249	P	P	01 22 52.0	-0.8
	comp=Z,220nm,0.9s,baz=78,slow=9.2,SNR=11						
H11N1	WAKE ISLAND Hy	30.64	4	T	T	01 55 21.2	
	baz=193,slow=75,SNR=6.9						
H11N3	WAKE ISLAND Hy	30.65	4	T	T	01 55 24.1	
	baz=193,slow=75,SNR=6.2						
H11N2	WAKE ISLAND Hy	30.66	4	T	T	01 55 05.7	
	baz=193,slow=75,SNR=5.6						
TOO	Toolangi	31.56	210	eP	P	01 23 01.4	-0.2

	comp=Z,159nm,0.9s						
TOO	**Toolangi**	31.56	210	*e*P	P	01 23 01.4	-0.2
TOO				pmax	pmax		
	comp=Z,159nm,0.9s						
AS31	**Alice Springs**	31.90	243	*e*P	P	01 23 04.8	+0.1
	comp=Z,41nm,0.7s						
ASAR	**Alice Springs**	31.90	243	P	P	01 23 04.8	+0.1
	comp=Z,125nm,0.7s,baz=71,slow=9.9,SNR=10						
FOZ	**Fox Glacier**	32.66	173	*e*P	P	01 23 12.4	+1.3
	comp=Z,202nm,1.1s						
MTN	**Manton Dam**	32.90	263	*e*P	P	01 23 13.4	-0.2
	comp=Z,96nm,0.8s						
RPZ	**Rata Peaks**	33.00	172	*e*P	P	01 23 15.0	+0.9
	comp=Z,240nm,1.1s						
RPZ	**Rata Peaks**	33.00	172	P	P	01 23 15.0	+0.9
	comp=Z,144nm,0.9s,baz=341,slow=3.9,SNR=4.2						
FITZ	**Fitzroy Crossi**	38.41	255	*e*P	P	01 24 00.3	-0.5
	comp=Z,299nm,1.1s						
FITZ	**Fitzroy Crossi**	38.41	255	P	P	01 24 00.4	-0.5
	comp=Z,195nm,1.0s,baz=80,slow=8.6,SNR=4.9						
BATI	**Baumata**	40.35	267	P	P	01 24 16.3	-0.9
	comp=Z,97nm,0.6s,baz=138,slow=1.3,SNR=3.7						
KIP	**Kipapa**	48.79	49	*i* P	P	01 25 23.1	-1.2
KIP				pmax	pmax		
	comp=Z,108nm,1.1s						
OPA	**Opana**	48.95	48	*e*P	P	01 25 26.1	+0.5
	comp=Z,330nm,1.1s						
OPA	**Opana**	48.95	48	*e*P	P	01 25 26.1	+0.5
OPA				pmax	pmax		
	comp=Z,330nm,1.1s						
KHU	**Kahuku**	49.33	53	*e*P	P	01 25 29.4	+0.6
	comp=Z,433nm,1.3s						
KHU	**Kahuku**	49.33	53	*e*P	P	01 25 29.4	+0.6
KHU				pmax	pmax		
	comp=Z,433nm,1.3s						
POHA	**Pohakuloa**	49.68	52	*e*P	P	01 25 31.7	+0.2
	comp=Z,248nm,1.0s						
MJAR	**Matsushiro Arr**	53.52	333	P	P	01 25 58.6	-1.1
	comp=Z,46nm,0.9s,baz=174,slow=8.9,SNR=9.5						
MAJO	**Matsushiro**	53.52	333	*e*P	P	01 26 00.3	+0.6
	comp=Z,140nm,1.3s						
MAJO	**Matsushiro**	53.52	333	*i* P	P	01 25 59.8	+0.1
MAJO				pmax	pmax		
	comp=Z,75nm,0.9s						
MAT	**Matsushiro**	53.52	333	P	P	01 25 58.4	-1.3
MJB9	**Matsu-Tunnel**	53.53	333	*e*P	P	01 26 00.2	+0.5
	comp=Z,136nm,1.2s						
ERM	**Erimo**	56.41	341	*i* P	P	01 26 20.0	-0.4
ERM				pmax	pmax		
	comp=Z,62nm,0.9s						
ASAJ	**Asahikawa**	58.48	341	P	P	01 26 35.1	+0.1
	comp=Z,204nm,0.9s,baz=217,slow=11,SNR=17						
SSE	**Sheshan**	59.17	317	*e*P	P	01 26 41.2	+1.2
	comp=Z,198nm,0.9s						
KSRS	**Korea Array**	59.32	326	P	P	01 26 40.9	0.0
	comp=Z,39nm,0.9s,baz=136,slow=7.3,SNR=10						
KS15	**Wonju Array Si**	59.34	326	*e*P	P	01 26 42.7	+1.7
	comp=Z,47nm,0.9s						
KSAR	**Wonju Array Be**	59.34	326	P	P	01 26 40.9	-0.1
KSAR	**Wonju Array Be**	59.34	326	P	P	01 26 40.9	-0.1
YSS	**Yuzh-Sakhalins**	60.99	343	*e*P	P	01 26 53.9	+1.7
	comp=Z,234nm,1.2s						
YSS	**Yuzh-Sakhalins**	60.99	343	*i* P	P	01 26 51.7	-0.5
YSS				pmax	pmax		
	comp=Z,162nm,1.0s						
MSHR	**Mys Shultsa**	61.59	332	*i* P	P	01 26 57.1	+0.8
VLA	**Vladivostok**	61.69	333	*i* P	P	01 26 58.0	+1.0
VLA				pmax	pmax		
	comp=Z,87nm,1.0s						
SKR	**Severo-Kuril's**	61.93	354	*i* P	P	01 26 56.9	-1.5
USRK	**Ussuriysk Ar.**	62.51	334	P	P	01 27 02.7	+0.2
	comp=Z,84nm,0.9s,baz=134,slow=6.8,SNR=13						
USRK				PKP2bc		01 56 05.5	
	comp=Z,9.0nm,1.1s,baz=332,slow=1.4,SNR=4.4						
DL2	**Dalian**	63.89	324	P	P	01 27 12.6	+0.9
DL2				pmax	pmax		
	comp=Z,99nm,0.8s						
MDJ	**Mudanjiang**	63.89	333	P	P	01 27 13.3	+1.6
MDJ				pmax	pmax		
	comp=Z,120nm,0.8s						
MDJ	**Mudanjiang**	63.89	333	*e*P	P	01 27 13.3	+1.6
	comp=Z,118nm,1.0s						
PET	**Petropavlovsk**	64.03	356	*e*P	P	01 27 11.2	-1.1
PET	**Petropavlovsk**	64.03	356⇑	*i*P	P	01 27 11.1	-1.2
PET				pmax	pmax		
	comp=Z,133nm,1.1s						
PEA0B	**Petropavlovsk-**	64.19	355	*e*P	P	01 27 14.6	+1.1
	comp=Z,219nm,1.1s						
PETK	**Petropavlovsk-**	64.19	355	*e*P	P	01 27 14.2	+0.8
PETK	**Petropavlovsk-**	64.19	355	*e*P	P	01 27 14.2	+0.8
PETK	**Petropavlovsk-**	64.19	355	P	P	01 27 13.1	-0.4
	comp=Z,106nm,0.9s,baz=157,slow=8.2,SNR=15						
PEA1	**Petropavlovsk-**	64.19	355	*e*P	P	01 27 13.1	-0.4
TYV	**Tymovskoe**	64.58	345	*e*P	P	01 27 17.0	+1.0
TYV				*e*S	S	01 35 57.9	+4.2
TYV				pmax	pmax		
	comp=Z,59nm,1.5s						
TYV				smax	smax		
	comp=N,9µm,8.6s						
CN2	**Changchun**	65.24	330	*e*P	P	01 27 19.9	-0.6
CN2				*e*pP	pP	01 27 24.6	-3.1
CN2				pmax	pmax		
	comp=N,150nm,0.8s						
CASY	**Casey**	66.01	201	*e*P	P	01 27 26.2	+1.1
	comp=N,206nm,1.1s						
VNDA	**Vanda**	66.47	181	P	P	01 27 27.5	-0.4
	comp=N,152nm,1.1s,baz=350,slow=6.1,SNR=7.0						
KLR	**Kul'dur**	66.67	337	*i* P	P	01 27 29.8	+0.2
KLR	**Kul'dur**	66.67	337	PKP2bc	P'P'df	01 55 59.4	+1.8
	comp=N,18nm,1.2s,baz=328,slow=4.4,SNR=5.6						
SBA	**Scott Base**	66.80	180	*e*P	P	01 27 31.3	+1.3
	comp=N,253nm,1.1s						
SBA	**Scott Base**	66.80	180	*e*P	P	01 27 31.3	+1.3
SBA				pmax	pmax		
	comp=Z,253nm,1.1s						
KMI	**Kunming**	70.27	302	P	P	01 27 53.9	+1.0
KMI				sP	sP	01 28 05.4	+1.8
KMI				pmax	pmax		
	comp=Z,82nm,1.4s						
HHC	**Hu-ho-hao-te**	71.19	320	*e*P	P	01 27 59.4	+1.4
HHC				S	S	01 37 09.3	-4.2
HHC				pmax	pmax		
	comp=Z,66nm,0.9s						
CM31	**Chiang Mai Arr**	71.20	294	*e*P	P	01 27 59.8	+1.4
	comp=Z,116nm,1.4s						
CMAR	**Chiang Mai Arr**	71.20	294	P	P	01 27 59.8	+1.4
	comp=Z,18nm,0.9s,baz=126,slow=5.0,SNR=5.4						
CMAR				PKPPKP	P'P'df	01 55 49.0	-4.7
	comp=Z,1.4nm,0.3s,baz=289,slow=5.0,SNR=9.0						
MA2	**Magadan**	71.28	353	*i* P	P	01 27 57.6	-0.4
MA2				pmax	pmax		
	comp=Z,60nm,1.0s						
MA2	**Magadan**	71.28	353	P	P	01 27 58.2	+0.2
	comp=Z,40nm,0.7s,baz=160,slow=6.1,SNR=8.6						
HIA	**Hailar**	71.89	331	*e*P	P	01 28 03.3	+1.4
	comp=Z,136nm,0.9s						
HIA	**Hailar**	71.89	331	*i* P	P	01 28 02.1	+0.2
HIA				pmax	pmax		
	comp=Z,162nm,1.0s						
SEY	**Seymchan**	74.38	354	P	P	01 28 15.8	-0.5
	comp=Z,47nm,0.9s,baz=154,slow=6.3,SNR=5.1						
SEY				PKPPKP	P'P'df	01 55 46.4	+2.7
	comp=Z,2.7nm,0.8s,baz=197,slow=1.4,SNR=4.1						
SII	**Sitkinak Islan**	75.46	22	*e*P	P	01 28 23.3	+0.6
	comp=Z,130nm,1.0s						
CIT	**Chita**	76.67	330	*e*P	P	01 28 29.9	+0.1
CIT				*e*		01 28 42.6	
CIT				*e*		01 28 48.3	
KDAK	**Kodiak Island**	76.95	22	*e*P	P	01 28 30.9	-0.2
	comp=Z,79nm,1.1s						
KDAK	**Kodiak Island**	76.95	22	*e*P	P	01 28 31.0	-0.2
KDAK				pmax	pmax		
	comp=Z,79nm,1.1s						
KDAK	**Kodiak Island**	76.95	22	P	P	01 28 31.0	-0.2
	comp=Z,52nm,0.9s,baz=120,slow=3.1,SNR=5.2						
ULN	**Ulaanbaatar**	77.72	324	*i* P	P	01 28 37.2	+1.3
ULN				pmax	pmax		
	comp=Z,122nm,1.0s						
SONA0	**Songino Array**	78.08	324	*e*P	P	01 28 38.5	+0.6
SONM	**Songino Array**	78.08	324	P	P	01 28 38.5	+0.6
	comp=Z,41nm,0.9s,baz=146,slow=6.4,SNR=6.8						
GTA	**Gaotai**	78.35	314	*e*P	P	01 28 42.0	+2.5
GTA				pP	pP	01 28 46.3	-0.6
GTA				sP	sP	01 28 49.2	-1.1
GTA				pmax	pmax		
	comp=Z,120nm,1.5s						
SVW2	**Sparrevohn**	78.43	18	*e*P	P	01 28 40.9	+1.5
	comp=Z,91nm,1.1s						
BILL	**Bilibino**	78.89	1	*i* P	P	01 28 42.9	+1.2
BILL				pmax	pmax		
	comp=Z,106nm,1.0s						
QSPA	**South Pole Qui**	78.95	180	P	P	01 28 43.0	+0.5
	comp=Z,342nm,1.1s,baz=29,slow=2.8,SNR=8.5						
EYAK	**Cordova Ski Ar**	81.41	22	*e*P	P	01 28 56.3	+0.8
	comp=Z,127nm,1.2s						
RPN	**Rapa Nui**	81.47	116	*e*P	P	01 28 57.7	+1.1
	comp=Z,381nm,1.4s						
RPN	**Rapa Nui**	81.47	116	*e*P	P	01 28 57.7	+1.1
RPN				pmax	pmax		
	comp=Z,381nm,1.4s						
RPN	**Rapa Nui**	81.47	116	P	P	01 28 57.7	+1.1
	comp=Z,38nm,0.7s,baz=322,slow=1.8,SNR=3.4						
TLY	**Talaya**	81.58	327	*i* P	P	01 28 57.4	+0.8
HMT	**Hamilton**	81.84	23	*e*P	P	01 28 58.5	+0.8
	comp=Z,92nm,0.9s						
DIB	**Dawson Inlet,**	83.23	33	*e*P	P	01 29 06.1	+1.0
	comp=Z,75nm,1.2s						
HDA	**Harding Lake**	83.57	19	P	P	01 29 05.9	-0.8
	baz=228						
TCOL	**CIGO, UAF Yank**	83.60	18	P	P	01 29 05.4	-1.3
	baz=227						
COLA	**College**	83.61	18	*e*P	P	01 29 07.1	+0.3
	comp=Z,102nm,0.9s						
COLA	**College**	83.61	18	*i* P	P	01 29 06.5	-0.3
COLA				pmax	pmax		
	comp=Z,114nm,1.0s						
ILAR	**Eielson Array**	83.84	19	P	P	01 29 07.0	-1.1
ILAR	**Eielson Array**	83.84	19	P	P	01 29 06.9	-1.1
	comp=Z,67nm,1.1s,baz=223,slow=6.1,SNR=7.2						
ILB	**Eielson Array**	83.84	19	*e*P	P	01 29 07.0	-1.1
	comp=Z,52nm,1.0s						
POKR	**Poker Plat Res**	83.90	18	P	P	01 29 07.5	-0.9
	baz=227						
SAO	**San Andreas Ge**	83.91	51	*e*P	P	01 29 08.3	-0.7
	comp=Z,59nm,1.1s						
SAO	**San Andreas Ge**	83.91	51	*e*P	P	01 29 08.4	-0.7
SAO				pmax	pmax		
	comp=Z,59nm,1.1s						
O02D	**Mt. Diablo Mer**	84.03	47	P	P	01 29 09.2	-0.5
	baz=250						
L02E	**Cave Junction**	84.13	45	P	P	01 29 10.4	+0.4
	baz=249						
J01E	**Myrtle Point**	84.26	44	P	P	01 29 11.6	+0.9
	baz=249						
K02D	**Willamette Mer**	84.28	45	P	P	01 29 11.7	+0.8
	baz=249						
MAW	**Mawson**	84.34	202	*e*P	P	01 29 10.3	-0.3
	comp=Z,52nm,1.2s						
MAW	**Mawson**	84.34	202	P	P	01 29 11.3	+0.7
	comp=Z,119nm,1.1s,baz=87,slow=4.3,SNR=5.8						
N02D	**Trinity Center**	84.36	47	P	P	01 29 11.9	+0.5
	baz=250						
M02C	**Callahan**	84.39	46	P	P	01 29 12.0	+0.5
	baz=250						
SMMC	**Simmler**	84.58	53	P	P	01 29 13.9	+1.4
	baz=252						
PKM	**Mcpherson Peak**	84.59	53	P	P	01 29 13.9	+1.1
	baz=252						
PAF	**Port-aux-Franc**	84.63	221	*e*P	P	01 29 12.1	-0.4
	comp=Z,699nm,1.2s						
PAF	**Port-aux-Franc**	84.63	221	*e*P	P	01 29 12.1	-0.4
PAF				pmax	pmax		
	comp=Z,699nm,1.2s						
I02D	**Swisshome**	84.65	43	P	P	01 29 13.8	+1.2
	baz=249						
O03E	**Paynes Creek**	84.78	47	P	P	01 29 14.2	+0.7
	baz=251						
I03D	**Drain, OR**	84.85	44	P	P	01 29 14.5	+0.9
	baz=249						
BLG	**Laguna Peak, P**	84.96	54	P	P	01 29 14.1	-0.3
	baz=253						
L04D	**Klamath Falls**	85.06	45	P	P	01 29 15.4	+0.5
	baz=250						
M04C	**Macdoel**	85.24	46	P	P	01 29 16.8	+1.0
	baz=251						
G03D	**McMinnville, O**	85.43	42	P	P	01 29 17.7	+1.2
	baz=249						
I04A	**Tendick Farm,**	85.52	44	P	P	01 29 17.5	+0.4
	baz=250						
J04D	**Umpqua Nationa**	85.54	45	P	P	01 29 18.1	+0.8
	baz=250						
PALK	**Pallekele**	85.56	278*c*	*e*P	P	01 29 21.2	+3.3
TIXI	**Tiksi**	85.91	349	*i* P	P	01 29 17.0	-1.3
TIXI				pmax	pmax		
	comp=Z,65nm,1.2s						
EDW2	**Edwards Air Fo**	86.03	54	P	P	01 29 20.4	+0.6
	baz=254						
BFSC	**Mount Baldy Ra**	86.11	54	P	P	01 29 20.3	0.0
	baz=254						
J05D	**Fort Rock, OR**	86.16	45	P	P	01 29 21.1	+0.7
	baz=251						
MURC	**Murrieta**	86.31	55	P	P	01 29 21.3	+0.2
	baz=254						
E04D	**Cinebar**	86.36	41	P	P	01 29 22.3	+1.3
	baz=250						
D03D	**Eldon**	86.36	40	P	P	01 29 21.9	+0.9
	baz=249						
CWC	**Cottonwood Cre**	86.39	52	P	P	01 29 22.7	+1.0
	baz=254						
I05D	**Terrebonne, OR**	86.43	44	P	P	01 29 22.3	+0.7
	baz=251						
LRMC	**Laurel Mtn Rad**	86.44	53	P	P	01 29 22.8	+0.9
	baz=254						
NV01	**Mina Array Sit**	86.79	50	*e*P	P	01 29 23.8	+0.1
NVAR	**Mina Array Bea**	86.79	50	P	P	01 29 23.8	+0.1
	comp=Z,54nm,1.0s,baz=234,slow=7.9,SNR=7.1						
PFO	**Pinyon Flats O**	86.90	55	*e*P	P	01 29 23.3	-0.9
	comp=Z,56nm,1.2s						
PFO	**Pinyon Flats O**	86.90	55	*e*P	P	01 29 23.3	-0.9
PFO				pmax	pmax		
	comp=Z,56nm,1.2s						
PFO	**Pinyon Flats O**	86.90	55	P	P	01 29 23.3	-0.9
	comp=Z,24nm,1.0s,baz=269,slow=2.4,SNR=3.8						
A04D	**Lummi Island**	87.01	39	P	P	01 29 25.4	+1.2
	baz=250						
GSC	**Goldstone, Bar**	87.08	53	P	P	01 29 26.0	+1.0
	baz=254						
B05A	**Bryant**	87.24	40	P	P	01 29 26.6	+1.3
	baz=250						
SWSC	**Sam W. Stewart**	87.26	56	P	P	01 29 26.8	+1.0
	baz=255						
BELC	**Belle Mtn. Jos**	87.38	55	P	P	01 29 27.5	+1.0
	baz=255						
IRM	**Iron Mountain**	88.10	55	P	P	01 29 31.1	+1.2
	baz=255						
Y12C	**Blythe**	88.50	55	P	P	01 29 32.8	+1.1
	baz=256						
PDMCI	**Parker Dam,Lak**	88.94	55	P	P	01 29 34.4	+0.6
	baz=256						
214A	**Organ Pipe Nat**	89.47	57	P	P	01 29 38.1	+1.8
	baz=257						
HLID	**Hailey**	91.00	46	*e*P	P	01 29 44.4	+1.0
	comp=Z,93nm,1.4s						
HLID	**Hailey**	91.00	46	P	P	01 29 44.4	+1.0
	baz=256						
ZSN	**Zaisan**	91.30	318*d*	*e*P	P	01 29 43.9	-0.6
ZSN				pmax	pmax		
	comp=Z,222nm,2.8s						
ZSN				MLR	MLR		
	comp=Z,6µm,16.0s						
ZSN	**Zaisan**	91.30	318⇓	*e*P	P	01 29 43.9	-0.6
	comp=Z,222nm,2.9s						
ZSN				*e*LR	LR	02 11 53.1	
	comp=Z,6µm,16.5s						
WUAZ	**Wupatki**	91.43	54	*e*P	P	01 29 46.7	+1.1
	comp=Z,36nm,0.9s						
WUAZ	**Wupatki**	91.43	54	P	P	01 29 47.1	+1.5
	baz=257						
MK32	**Makanchi Array**	92.84	317	*e*P	P	01 29 52.7	+1.0
MKAR	**Makanchi Array**	92.84	317	P	P	01 29 52.7	+1.0
	comp=Z,38nm,0.9s,baz=101,slow=6.3,SNR=6.5						
ZALV	**Zalesovo Beam**	92.98	324	P	P	01 29 52.0	-0.1
ZALV	**Zalesovo Beam**	92.98	324	P	P	01 29 52.0	-0.1
	comp=Z,20nm,0.9s,baz=113,slow=3.9,SNR=4.6						
ZAA1	**Zalesovo Array**	92.98	324	*e*P	P	01 29 52.0	-0.1
QLMT	**Earthquake Lak**	93.38	45	*e*P	P	01 29 53.4	-1.0
PD31	**Pinedale Array**	94.29	47	*e*P	P	01 29 59.0	+0.3
	comp=Z,44nm,1.3s						
PDAR	**Pinedale Array**	94.29	47	P	P	01 29 59.0	+0.3
	comp=Z,18nm,1.0s,baz=250,slow=2.6,SNR=6.6						
UZB	**Uzynbulak**	94.36	313	*e*P	P	01 29 54.4	-4.5
UZB				pmax	pmax		
	comp=Z,180nm,1.3s						
UZB				MLR	MLR		
	comp=Z,11µm,16.0s						
UZB	**Uzynbulak**	94.36	313	*e*P	P	01 29 54.4	-4.5
	comp=Z,180nm,1.3s						
UZB				*e*LR	LR	02 13 23.5	
	comp=Z,11µm,15.7s						
KPKS	**Kokpek**	94.66	313	*e*P	P	01 29 59.9	-0.3
KPKS				pmax	pmax		
	comp=Z,584nm,1.6s						
KPKS				MLR	MLR		
	comp=Z,30µm,18.0s						
KPKS	**Kokpek**	94.66	313	*e*P	P	01 29 59.9	-0.3
	comp=Z,584nm,1.6s						
KPKS				*e*LR	LR	02 12 43.3	
	comp=Z,30µm,18.4s						
SATY	**Saty**	94.78	313*c*	*e*P	P	01 29 57.5	-3.3
SATY				pmax	pmax		
	comp=Z,776nm,1.8s						
SATY	**Saty**	94.78	313⇑	*e*P	P	01 29 57.5	-3.3
	comp=Z,776nm,1.8s						
SEM	**Semipalatinsk**	94.93	320	*e*LR	LR	02 13 52.6	
	comp=Z,37µm,16.8s						
TDK	**Taldyqorghan**	95.14	315*d*	*e*P	P	01 30 10.4	+8.1
TDK				pmax	pmax		
	comp=Z,855nm,2.9s						
TDK				MLR	MLR		
	comp=Z,56µm,18.0s						
TDK	**Taldyqorghan**	95.14	315⇓	*e*P	P	01 30 10.5	+8.2
	comp=Z,855nm,2.9s						
TDK				*e*LR	LR	02 14 12.3	
	comp=Z,56µm,17.8s						
EGMT	**Eagleton**	95.14	42	P	P	01 30 02.8	+0.5
	baz=259						
ANMO	**Albuquerque**	95.27	56	*e*P	P	01 30 02.3	-1.0
	comp=Z,43nm,1.3s						
ANMO	**Albuquerque**	95.27	56	*i* P	P	01 30 01.0	-2.4
ANMO				pmax	pmax		
	comp=Z,24nm,1.2s						
ANMO	**Albuquerque**	95.27	56	P	P	01 30 02.3	-1.0
	comp=Z,18nm,1.1s,baz=253,slow=4.9,SNR=5.1						
YKA	**Yellowknife Ar**	95.44	27	P	P	01 30 01.8	-1.4
	comp=Z,11nm,0.9s,baz=256,slow=5.2,SNR=6.9						
YKB5	**Yellowknife Ar**	95.44	27	*e*P	P	01 30 01.8	-1.3
NRIK	**Noril'sk**	95.78	340	P	P	01 30 04.3	-0.3
	comp=Z,34nm,1.1s,baz=125,slow=7.1,SNR=4.3						
MDOK	**Medeo**	95.78	313	*e*LR	LR	02 14 32.3	
	comp=Z,29µm,16.3s						
KURK	**Kurchatov**	96.01	320	*e*PKKPbc	PKKPbc	01 46 53.3	-2.6
KURK	**Kurchatov**	96.01	320	*i* P	P	01 30 06.5	+0.5
KURK				pmax	pmax		
	comp=Z,69nm,1.2s						
KURBB	**Kurchatov Arra**	96.05	320	PKKPbc	PKKPbc	01 46 53.3	-2.4
	comp=Z,6.4nm,0.9s,baz=281,slow=3.0,SNR=6.4						
KUU	**Kurty**	96.41	313*d*	*e*P	P	01 30 01.2	-6.9
KUU				pmax	pmax		
	comp=Z,2µm,6.7s						
KUU	**Kurty**	96.41	313⇓	*e*P	P	01 30 01.2	-6.9
	comp=Z,2µm,6.7s						
LTX	**Lajitas**	96.71	62	*e*PKKPbc	PKKPbc	01 46 52.1	-1.2
TXAR	**Lajitas Array**	96.71	62	PKKPbc	PKKPbc	01 46 52.1	-1.2
	comp=Z,2.7nm,1.0s,baz=97,slow=3.7,SNR=2.9						
SNAA	**Sanae**	97.04	184	*e*P	P	01 30 08.4	-2.2
	comp=Z,67nm,1.0s						
SNAA	**Sanae**	97.04	184*c*	*e*P	Pdif	01 30 10.9	+0.3
SNAA	**Sanae**	97.04	184	P	P	01 30 08.4	-2.2
	comp=Z,54nm,1.1s,baz=190,slow=3.9,SNR=6.4						
BTLS	**Baital**	98.20	314*d*	*i*P	Pdif	01 30 20.1	+4.0
BTLS				pmax	pmax		
	comp=Z,4µm,9.9s						
BTLS				MLR	MLR		
	comp=Z,8µm,15.0s						
BTLS	**Baital**	98.20	314⇓	*i*P	Pdif	01 30 20.1	+4.0
	comp=Z,4µm,9.9s						
BTLS				*e*LR	LR	02 16 05.5	
	comp=Z,8µm,15.2s						
IUG	**Iuzhnay**	100.78	311*d*	*i*P	Pdif	01 30 25.1	-2.7
IUG				pmax	pmax		
	comp=Z,2µm,6.2s						
IUG				MLR	MLR		
	comp=Z,18µm,21.0s						
IUG	**Iuzhnay**	100.78	311⇓	*i*P	Pdif	01 30 25.2	-2.7
	comp=Z,2µm,6.2s						
IUG				*e*LR	LR	02 17 45.8	
	comp=Z,18µm,20.6s						
ULM	**Lac du Bonnet**	104.41	41	Pdiff	Pdif	01 30 44.9	+1.3
	comp=Z,4.7nm,0.9s,baz=289,slow=9.4,SNR=2.7						
ULM				PP	PKiKP	01 35 01.1	+1.2
	comp=Z,6.0nm,1.0s,baz=313,slow=5.5,SNR=2.9						
AKTO	**Aktyubinsk**	109.08	320	PKKPbc	PKKPbc	01 46 15.5	-1.8
	comp=Z,4.7nm,1.0s,baz=232,slow=3.4,SNR=3.6						
GEYT	**Alibeck**	109.79	306	Pdiff	Pdif	01 31 11.6	+3.7
	comp=Z,5.9nm,1.0s,baz=20,slow=4.7,SNR=3.6						
SPA0	**Spitsbergen Ar**	111.02	353	*e*Pdif	Pdif	01 31 13.1	+0.6
HSPB	**Hornsund (broa**	112.11	353	*e*Pdif	Pdif	01 31 16.6	-0.7
N49A	**Columbus Grove**	113.08	50	P	PKiKP	01 35 16.7	+0.3
	baz=275						
152A	**Waverly Hall**	113.14	59	P	PKiKP	01 35 16.9	+0.1
	baz=272						
S50A	**Richmond**	113.17	54	P	PKiKP	01 35 16.7	0.0
	baz=274						
PRGR	**Permogore**	113.29	333	*i* PKIKP	PKiKP	01 35 15.5	-0.6
PRGR				pmax	pmax		
	comp=Z,22nm,1.0s						
LCO	**Las Campanas**	113.33	128*c*	*i*PKIKP	PKiKP	01 35 18.8	+1.1
W52A	**Murphy**	113.70	57	P	PKiKP	01 35 17.9	+0.1
	baz=273						
L50A	**Kingsville**	113.98	49	P	PKiKP	01 35 18.1	0.0
	baz=277						
GOGA	**Godfrey**	114.17	58	*e*Pdif	Pdif	01 31 25.7	-1.7
GOGA	**Godfrey**	114.17	58	*e*P	Pdif	01 31 25.7	-1.7
TRQA	**Tornquist**	114.49	141*c*	*i*PKIKP	PKPdf	01 35 20.5	+1.2
TRQA				pmax	pmax		
	comp=Z,29nm,1.7s						
V53A	**Saluda**	114.58	56	P	PKiKP	01 35 20.0	+0.4
	baz=274						
NNA	**Nana**	114.71	109*c*	*i*PKIKP	PKiKP	01 35 21.6	+1.2
NNA				pmax	pmax		
	comp=Z,81nm,2.5s						
P52A	**Corning**	114.77	51	P	PKiKP	01 35 19.7	0.0
	baz=276						
155A	**Kite**	115.04	59	P	PKiKP	01 35 20.7	+0.3
	baz=273						
P53A	**Whipple**	115.35	52	P	PKPdf	01 35 21.2	+0.4
	baz=277						
456A	**Hilliard**	115.50	61	*e*PKPdf	PKPdf	01 35 20.7	-0.6
256A	**Glennville**	115.56	60	P	PKPdf	01 35 21.0	-0.4
	baz=273						
N53A	**Lisbon**	115.61	50	P	PKPdf	01 35 21.9	+0.6
	baz=278						
M53A	**WI Miller and**	115.64	49	P	PKPdf	01 35 21.7	+0.3
	baz=278						
HAMF	**Hammerfest**	115.73	347	*e*Pdif	Pdif	01 31 33.8	+0.3
KMSC	**Kings Mountain**	115.82	56	P	PKiKP	01 35 22.2	+0.4
	baz=275						
Q54A	**Coxs Mills**	115.84	52	P	PKiKP	01 35 22.2	+0.4
	baz=277						
ARA0	**ARCESS Array S**	116.09	345	*e*PKPdf	PKiKP	01 35 19.6	-1.8
ARCES	**ARCESS Array B**	116.09	345	PKP	PKiKP	01 35 19.6	-1.8
	comp=Z,6.3nm,0.7s,baz=48,slow=1.3,SNR=4.3						
ARE0	**ARCESS Array S**	116.09	345	*e*Pdif	Pdif	01 31 38.1	+2.9
OTAV	**Otavalo**	116.34	95	*e*P	PKPdf	01 35 20.6	-3.5
OTAV	**Otavalo**	116.34	95	*e*P	PKPdf	01 35 20.6	-3.5
M54A	**Oil Creek Stat**	116.39	49	P	PKiKP	01 35 23.1	+0.3
	baz=279						
R55A	**Marlinton**	116.48	53	P	PKiKP	01 35 23.4	+0.3
	baz=277						
N55A	**Marion Center**	117.00	50	P	PKiKP	01 35 24.0	0.0
	baz=279						
KTK1	**Kautokeino**	117.03	345	*e*Pdif	Pdif	01 31 34.5	-4.8
KTK1				*e*PKPdf	PKPdf	01 35 22.5	-0.7
M55A	**Ridgway**	117.06	49	P	PKiKP	01 35 24.3	+0.2
	baz=279						
TRO	**Tromso**	117.56	347	*e*PKPdf	PKPdf	01 35 23.5	-0.7
TRO				*e*PP	PP	01 36 36.3	0.0
GCUF	**Volcan Galeras**	117.63	94	*e*P	PKPdf	01 35 24.7	-1.9
GCUF	**Volcan Galeras**	117.63	94	*e*P	PKPdf	01 35 24.7	-1.9
LVC	**Limon Verde**	117.71	123*c*	*i*PKIKP	PKiKP	01 35 28.7	+2.3
LVC				pmax	pmax		
	comp=Z,28nm,2.5s						
SOTA	**Rioblanco**	118.53	94	*e*P	PKPdf	01 35 24.7	-3.6
SOTA	**Rioblanco**	118.53	94	*e*P	PKPdf	01 35 24.7	-3.6
POPC	**Popayan, Colom**	118.54	93	*e*P	PKPdf	01 35 25.7	-2.3
POPC	**Popayan, Colom**	118.54	93	*e*P	PKPdf	01 35 25.7	-2.3
PCON	**Cinco Dias**	118.77	93	*e*P	PKPdf	01 35 22.6	-6.2
PCON	**Cinco Dias**	118.77	93	*e*P	PKPdf	01 35 22.6	-6.2
BINY	**Binghamton**	118.97	48	P	PKiKP	01 35 28.2	+0.4

	baz=282						
MARP	Paez Belalcaza	119.31	93	*e*P	PKPdf	01 35 28.8	-0.8
MARP	Paez Belalcaza	119.31	93	*e*P	PKPdf	01 35 28.8	-0.8
STEI	Steigen	119.73	347	*e*PKPdf	PKPdf	01 35 24.8	-3.6
STEI				*e*PP	PP	01 36 50.4	-0.8
LOF	Lofoten	119.92	348	*e*Pdif	Pdif	01 31 52.6	+0.4
LOF				*e*PKPdf	PKPdf	01 35 28.3	-0.5
LOF				*e*PP	PP	01 36 53.0	+0.5
LOF				*e*SKSdf	SKSdf	01 42 41.2	+2.7
ANIL	Santa Ana	120.15	91	*e*P	PKiKP	01 35 31.9	+0.6
ANIL	Santa Ana	120.15	91	*e*P	PKiKP	01 35 31.9	+0.6
OBN	Obninsk	120.29	328	*e*PKIKP	PKPdf	01 35 29.2	-0.6
OBN				pmax	pmax		
	comp=Z,25nm,1.0s						
KIV	Kislovodsk	120.52	315	*e*PKIKP	PKPdf	01 35 30.0	-0.8
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
UREC	San Jos de Ur	120.54	87	*e*P	PKiKP	01 35 31.9	+0.2
UREC	San Jos de Ur	120.54	87	*e*P	PKiKP	01 35 31.9	+0.2
LPAZ	La Paz	121.07	117	PKP	PKPdf	01 35 32.4	-0.9
	comp=Z,27nm,0.9s,baz=348,slow=2.8,SNR=9.3						
ZARC	Zaragoza, Cauc	121.16	88	*e*P	PKPdf	01 35 30.8	-1.9
ZARC	Zaragoza, Cauc	121.16	88	*e*P	PKPdf	01 35 30.8	-1.9
ROSC	El Rosal	121.27	91	*e*PKPdf	PKiKP	01 35 34.3	+0.7
ROSC	El Rosal	121.27	91	*e*P	PKPdf	01 35 29.8	-3.6
ROSC	El Rosal	121.27	91	*e*P	PKPdf	01 35 29.8	-3.6
ROSC	El Rosal	121.27	91	PKP	PKPdf	01 35 31.9	-1.6
	comp=Z,17nm,0.6s,baz=119,slow=11,SNR=7.3						
MOR8	Moi Rana	121.36	346	*e*PP	PP	01 36 58.7	-3.8
KONS	Konsvik	121.39	347	*e*PKPdf	PKiKP	01 35 31.8	0.0
FIA0	FINESS Array S	121.41	338	*e*PKPdf	PKPdf	01 35 29.5	-2.3
FIA0	FINESS Array S	121.41	338	*e*PKIKP	PKPdf	01 35 29.5	-2.3
FINES	FINESS Array B	121.41	338	PKP	PKPdf	01 35 29.5	-2.3
	comp=Z,19nm,0.9s,baz=84,slow=5.9,SNR=5.1						
PTBC	PUERTO BERRIO,	121.41	89	*e*P	PKPdf	01 35 29.8	-3.4
PTBC	PUERTO BERRIO,	121.41	89	*e*P	PKPdf	01 35 29.8	-3.4
SMLC	San Martn de	122.11	86	*e*P	PKPdf	01 35 31.9	-2.7
SMLC	San Martn de	122.11	86	*e*P	PKPdf	01 35 31.9	-2.7
BRRC	Barranca, Sant	122.23	89	*e*P	PKPdf	01 35 30.8	-3.9
BRRC	Barranca, Sant	122.23	89	*e*P	PKPdf	01 35 30.8	-3.9
SMRC	Santa Marta, M	122.24	84	*e*P	PKPdf	01 35 32.9	-1.9
SMRC	Santa Marta, M	122.24	84	*e*P	PKPdf	01 35 32.9	-1.9
CODC	Agustn Codazz	122.87	85	*e*P	PKPdf	01 35 33.9	-2.1
CODC	Agustn Codazz	122.87	85	*e*P	PKPdf	01 35 33.9	-2.1
NSS	Namsos	123.31	346	*e*Pdif	Pdif	01 32 04.7	-2.7
NSS				*e*PP	PP	01 37 15.7	+0.1
TAMC	Tame, Arauca	124.01	90	*e*P	PKPdf	01 35 34.9	-3.3
TAMC	Tame, Arauca	124.01	90	*e*P	PKPdf	01 35 34.9	-3.3
BOSA	Boshof	124.42	224	PKP	PKPdf	01 35 37.9	-0.9
	comp=Z,33nm,0.9s,baz=128,slow=1.6,SNR=7.4						
CPUP	Villa Florida	124.76	133	PKP	PKPdf	01 35 38.3	-1.1
	comp=Z,51nm,1.0s,baz=224,slow=1.8,SNR=13						
SDV	Santo Domingo	125.49	87	*e*PKPdf	PKPdf	01 35 40.0	-1.3
AKASG	Malin Array Be	126.32	326	PKP	PKPdf	01 35 40.6	-1.0
	comp=Z,11nm,0.8s,baz=65,slow=2.2,SNR=7.2						
AKBB	Malin Array Si	126.32	326	*e*PKPdf	PKPdf	01 35 40.6	-0.9
AKBB	Malin Array Si	126.32	326	*e*PKIKP	PKPdf	01 35 40.6	-0.9
KMBO	Kilima Mbogo	126.40	260	PKP	PKPdf	01 35 42.8	-0.3
	comp=Z,8.3nm,0.9s,baz=48,slow=4.5,SNR=5.2						
NB2	NORSAR Subarra	126.44	344	PKPdf	PKPdf	01 35 40.8	-0.7
	comp=Z,20nm,1.2s,baz=31,slow=1.9						
NB2	NORSAR Subarra	126.44	344	PKPdf	PKPdf	01 35 40.8	-0.7
	baz=31,slow=1.9						
NB200	NORSAR Array S	126.44	344	*e*PKPdf	PKPdf	01 35 41.2	-0.4
NOA	NORSAR Array B	126.44	344	PKP	PKPdf	01 35 41.2	-0.4
	comp=Z,9.5nm,0.9s,baz=34,slow=2.0,SNR=6.0						
NC602	NORSAR Array S	126.61	344	*e*pPKPdf	PKiKP	01 35 45.2	+2.9
SIV	San Ignacio	127.31	120	PKP	PKPdf	01 35 43.5	-1.0
	comp=Z,44nm,0.9s,baz=260,slow=3.2,SNR=12						
SUW	Suwalki	127.41	332	*e*PKPdf	PKiKP	01 35 44.9	+0.9
KONO	Kongsberg	128.05	344	*e*Pdif	Pdif	01 32 26.2	-2.3
BR101	Keskin Array S	128.23	312	*e*PKPdf	PKPdf	01 35 44.6	-1.1
BR101				*e*PP	PP	01 37 47.1	-2.7
BRTR	Keskin Array B	128.23	312	PKP	PKPdf	01 35 44.6	-1.1
	comp=Z,14nm,1.0s,baz=14,slow=1.1,SNR=3.6						
BRTR				PP	PP	01 37 47.1	-2.7
	comp=Z,5.4nm,1.1s,baz=90,slow=4.3,SNR=3.4						
BR231	Keskin MP Arra	128.82	313	*e*PKPdf	PKiKP	01 35 48.5	+1.0
SJG	San Juan	130.39	76	*e*PKPdf	PKiKP	01 35 50.9	-0.1
SJG	San Juan	130.39	76	*e*PKIKP	PKiKP	01 35 50.9	-0.1
UZH	Uzhgorod	131.20	327	*e*PKHKP	PKPpre	01 35 36.6	
BRG	Berggiesshubel	133.65	335	*i* PKP	PKiKP	01 36 08.7	+12
	comp=Z,102nm,1.5s						
CLL	Collm	133.71	336	*e*PKPdf	PKiKP	01 35 57.0	+0.2
CLL	Collm	133.71	336	*e*PKIKP	PKiKP	01 35 57.0	+0.2
MODS	Modra-Piesok	133.92	330	*e*PKIKP	PKiKP	01 35 58.1	+0.7
MODS	Modra-Piesok	133.92	330	*e*PKP	PKiKP	01 35 58.1	+0.7
GEC2	GERESS Array S	135.26	333	*e*PKPdf	PKPdf	01 35 57.8	-0.9
GERES	GERESS Array B	135.26	333	PKP	PKPdf	01 35 57.8	-0.9
	comp=Z,11nm,0.9s,baz=48,slow=2.0,SNR=5.5						
KRUS	Krusevo	135.99	320	*i* P	PKPdf	01 35 60.0	-0.3
ITM	Ithomi	137.66	314	*e*PKPdf	PKPdf	01 36 03.4	-0.1
BDFB	Brasilia	138.12	129	PKhKP	PKPpre	01 35 56.2	
	comp=Z,32nm,1.2s,baz=100,slow=5.0,SNR=2.5						
KEST	Kesra	146.81	322	PKPbc	PKPab	01 36 22.8	0.0
	comp=Z,131nm,0.9s,baz=286,slow=2.2,SNR=6.2						
ESDC	Sonseca Array	149.78	343	PKPbc	PKiKP	01 36 29.9	-0.3
	comp=Z,22nm,0.9s,baz=27,slow=1.9,SNR=5.5						
CART	Cartagena	150.63	336	*e*PKPbc	PKiKP	01 36 31.8	-0.1
SHEL	Horse Pasture	151.56	200	*e*PKPbc	PKiKP	01 36 35.6	+1.1
SHEL	Horse Pasture	151.56	200	*e*PKIKP	PKiKP	01 36 35.6	+1.1
MDT	Midelt	156.22	337	PKP	PKPdf	01 36 34.0	-0.1
	comp=Z,8.6nm,0.9s,baz=85,slow=2.0,SNR=2.5						
MDT				PKPab	PKPab	01 37 03.3	+1.5
	comp=Z,23nm,1.0s,baz=62,slow=6.0,SNR=3.8						
TORD	Torodi Ar. Bea	163.28	279	PKP	PKPdf	01 36 42.9	+0.4
	comp=Z,18nm,1.0s,baz=26,slow=1.3,SNR=3.7						
TORD				PKPab	PKPab	01 37 30.9	-2.2
	comp=Z,20nm,1.1s,baz=104,slow=6.1,SNR=3.7						
TOA1	Torodi Ar. Sit	163.28	279	*e*PKPdf	PKPdf	01 36 42.9	+0.4
TOA1				*e*PKPab	PKPab	01 37 30.9	-2.3
KIC	Kosan Boka	168.60	247	*e*PKP1	PKPdf	01 36 47.0	+0.2
	comp=Z,74nm,1.0s						
LIC	Lamto	168.80	245	*e*PKP1	PKPdf	01 36 47.1	+0.2
	comp=Z,111nm,1.1s						
DBIC	Dimbokro	168.83	248	PKP	PKPdf	01 36 47.4	+0.5
	comp=Z,33nm,1.0s,baz=85,slow=3.7,SNR=4.4						
TIC	Toumodi	168.97	247	*e*PKP1	PKPdf	01 36 46.1	-1.0

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*IDC **06** 01:19:25.9±0.6, 11°.23S×165°.18E, h0^{km}, mb4.8/15, mb1 5.0/15, mb1mx4.8/38, mbtmp4.8/15, Error ellipse: s-maj=24.8km s-min=21.5km az=110.0*

*NEIC **06** 01:19:27.7±0.3, 11°.16S×165°.17E, h10^{km}, mb5.4/14, Error ellipse: s-maj=10.2km s-min=7.7km az=117.0*

*ISCJB **06** 01:19:29.3±0.3, 11°.22S±0°.04×165°.09E±0°.06, h31^{km}, mb5.0/24, Error ellipse: s-maj=8.7km s-min=6.2km az=4.3*

ISC 06 01:19:31.0±0.5**, 11°.17S**±0°.10×**165°.2E**±0°.1**, h31^{km}, n83, σ1^{s}.12**/83**, mb5.0**/24**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIDS	Eidsvold	19.42	221	*e*P	P	01 23 53.1	-1.8
COEN	Coen	21.63	260	*e*P	P	01 24 20.1	+1.1
OUZ	Omahuta	25.14	164	*e*P	P	01 24 51.6	-1.8
	105nm,1.3s						
MTHZ	Maungataniwha	29.47	161	P	P	01 25 33.7	+1.3
CNGZ	Carnagh Statio	29.60	159	P	P	01 25 34.1	+0.8
RAHZ	Arahi	29.61	161	P	P	01 25 34.0	+0.5
BKZ	Black Stump Fm	29.65	162	*e*P	P	01 25 33.4	-0.5
	175nm,1.5s						
BKZ	Black Stump Fm	29.65	162	P	P	01 25 34.7	+0.7
MOVZ	Moawhango	29.66	163	P	P	01 25 35.7	+1.7
STKA	Stephens Creek	29.96	223	*e*P	P	01 25 38.0	+1.4
	18nm,1.1s						
STKA	Stephens Creek	29.96	223	P	P	01 25 38.0	+1.4
	48nm,1.2s,baz=47,slow=13,SNR=4.0						
MRZ	Mangatainoka R	30.78	164	P	P	01 25 44.2	+0.4
OGWZ	Otaki Gorge	30.82	165	P	P	01 25 45.0	+0.9
WB2	Warramunga Arr	30.89	250	*e*P	P	01 25 45.7	+0.6
WR1	Warramunga Arr	30.90	250	*e*P	P	01 25 42.7	-2.4
	127nm,1.1s						
WRA	Warramunga Arr	30.90	250	P	P	01 25 42.7	-2.4
	20nm,0.9s,baz=78,slow=9.2,SNR=2.9						
TIWZ	Tintock	30.97	164	P	P	01 25 41.8	-3.7
BFZ	Birch Farm	30.98	163	P	P	01 25 45.4	-0.1
HOWZ	Holdsworth Sta	30.99	165	P	P	01 25 46.6	+0.9
CAW	Cannon Point	31.07	165	P	P	01 25 48.2	+1.8
THZ	Tophouse	31.22	169	*e*P	P	01 25 49.1	+1.3
	33nm,0.8s						
MTW	Mount Morrison	31.23	165	P	P	01 25 48.3	+0.6
TMWZ	Te Maipa	31.28	164	P	P	01 25 46.3	-2.0
MSWZ	Moikau Station	31.41	165	P	P	01 25 49.7	+0.4
PAWZ	Paruwai Farm	31.42	165	P	P	01 25 49.5	0.0
TOO	Toolangi	31.67	211	*e*P	P	01 25 54.3	+2.6
	106nm,1.4s						
KHZ	Kahutara	31.98	168	*e*P	P	01 25 54.5	+0.2
	174nm,1.4s						
LTZ	Lake Taylor	32.10	170	*e*P	P	01 25 56.1	+0.7
	58nm,1.0s						
AS01	Alice Springs	32.18	243	*e*P	P	01 25 54.7	-1.7
AS31	Alice Springs	32.22	243	*e*P	P	01 25 54.9	-1.9
	12nm,0.9s						
ASAR	Alice Springs	32.22	243	P	P	01 25 54.9	-1.9
	8.6nm,0.9s,baz=69,slow=1.8,SNR=5.8						
RPZ	Rata Peaks	32.83	172	*e*P	P	01 26 00.6	-1.1
	226nm,1.4s						
RPZ	Rata Peaks	32.83	172	P	P	01 26 00.6	-1.1
	30nm,0.8s,baz=29,slow=12,SNR=3.0						
JNU	Nakatsue	54.85	325	*e*P	P	01 28 59.2	+0.6
	85nm,1.5s						
JNU	Nakatsue	54.85	325	P	P	01 28 59.2	+0.6
	13nm,0.8s,baz=180,slow=12,SNR=3.8						
USRK	Ussuriysk Ar.	62.80	334	P	P	01 29 52.2	-1.4
	3.4nm,0.8s,baz=132,slow=4.1,SNR=2.8						
SONA0	Songino Array	78.43	324	*e*P	P	01 31 29.9	+1.0
SONM	Songino Array	78.43	324	P	P	01 31 30.0	+1.0
	4.8nm,0.8s,baz=125,slow=6.8,SNR=3.5						
QSPA	South Pole Qui	78.84	180	P	P	01 31 31.4	+0.5
	6.3nm,0.6s,baz=326,slow=3.6,SNR=3.9						
HDA	Harding Lake	83.55	19	P	P	01 31 57.3	+1.6
	baz=227						
TCOL	CIGO, UAF Yank	83.58	18	P	P	01 31 57.2	+1.4
	baz=226						
O02D	Mt. Diablo Mer	83.80	47	P	P	01 31 57.6	0.0
	baz=250						
ILAR	Eielson Array	83.81	19	P	P	01 31 56.6	-0.4
	4.5nm,0.7s,baz=238,slow=6.0,SNR=4.6						
ILB	Eielson Array	83.81	19	*e*P	P	01 31 56.6	-0.4
	28nm,1.3s						
K02D	Willamette Mer	84.06	45	P	P	01 31 58.6	-0.3
	baz=249						
M02C	Callahan	84.17	46	P	P	01 31 59.5	-0.1
	baz=250						
O03E	Paynes Creek	84.55	47	P	P	01 32 01.6	+0.2
	baz=250						
I04A	Tendick Farm,	85.31	44	P	P	01 32 04.8	-0.4
	baz=250						
J04D	Umpqua Nationa	85.33	44	P	P	01 32 05.1	-0.4
	baz=250						
BFSC	Mount Baldy Ra	85.84	54	P	P	01 32 06.7	-1.4
	baz=254						
J05D	Fort Rock, OR	85.94	45	P	P	01 32 08.0	-0.4
	baz=251						
LRMC	Laurel Mtn Rad	86.17	53	P	P	01 32 08.8	-1.0
	baz=253						
NV01	Mina Array Sit	86.54	50	*e*P	P	01 32 10.2	-1.5
NVAR	Mina Array Bea	86.54	50	P	P	01 32 10.1	-1.5
	6.5nm,0.9s,baz=236,slow=6.4,SNR=4.2						
PFO	Pinyon Flats O	86.62	55	*e*P	P	01 32 10.9	-1.1
	5.6nm,0.8s						
PFO	Pinyon Flats O	86.62	55	P	P	01 32 11.0	-1.0
	baz=254						
PFO	Pinyon Flats O	86.62	55	P	P	01 32 10.9	-1.1
	2.9nm,0.5s,baz=266,slow=3.4,SNR=4.5						
BELC	Belle Mtn. Jos	87.10	55	P	P	01 32 13.6	-0.7
	baz=254						
MK32	Makanchi Array	93.22	317	*e*P	P	01 32 42.7	+0.2
MKAR	Makanchi Array	93.22	317	P	P	01 32 42.7	+0.2
	8.3nm,0.8s,baz=100,slow=7.5,SNR=5.3						
HRY	Holter Researc	93.29	43	*e*P	P	01 32 43.0	0.0
ZALV	Zalesovo Beam	93.32	324	P	P	01 32 43.5	+0.7
	9.6nm,1.0s,baz=131,slow=3.0,SNR=2.7						
ZAA1	Zalesovo Array	93.32	324	*e*P	P	01 32 43.5	+0.7
PD31	Pinedale Array	94.06	47	*e*P	P	01 32 46.2	-0.6
	13nm,1.3s						
PDAR	Pinedale Array	94.06	47	P	P	01 32 46.2	-0.6
	1.4nm,0.8s,baz=216,slow=4.5,SNR=2.9						
YKA	Yellowknife Ar	95.35	27	P	P	01 32 52.5	+0.6
	1.5nm,0.8s,baz=262,slow=4.5,SNR=3.2						
YKB5	Yellowknife Ar	95.35	27	*e*P	P	01 32 52.5	+0.6
LTX	Lajitas	96.39	61	*e*P	P	01 32 57.1	-0.5
TXAR	Lajitas Array	96.39	61	P	P	01 32 57.1	-0.5
	2.1nm,0.9s,baz=220,slow=6.9,SNR=3.3						
ARA0	ARCESS Array S	116.31	345	*e*PKPdf	PKiKP	01 38 11.2	+0.3
ARCES	ARCESS Array B	116.31	345	PKP	PKiKP	01 38 11.2	+0.3
	1.7nm,0.5s,baz=82,slow=2.1,SNR=8.4						
LPAZ	La Paz	120.64	117	PKP	PKPdf	01 38 21.4	-0.2
	3.5nm,0.9s,baz=227,slow=3.0,SNR=3.0						
FIA0	FINESS Array S	121.67	338	*e*PKPdf	PKiKP	01 38 21.8	+0.2
FINES	FINESS Array B	121.67	338	PKP	PKiKP	01 38 21.8	+0.2
	2.6nm,0.6s,baz=26,slow=3.1,SNR=5.4						
CPUP	Villa Florida	124.37	133	PKP	PKPdf	01 38 27.2	-0.5
	2.2nm,0.7s,baz=359,slow=2.8,SNR=3.4						
BOSA	Boshof	124.63	223	PKP	PKiKP	01 38 29.1	+0.5
	3.7nm,0.8s,baz=110,slow=2.9,SNR=3.5						
AKASG	Malin Array Be	126.65	327	PKP	PKiKP	01 38 31.9	+0.1
	0.4nm,0.3s,baz=48,slow=3.2,SNR=3.4						
AKBB	Malin Array Si	126.65	327	*e*PKPdf	PKiKP	01 38 31.9	+0.1
NB200	NORSAR Array S	126.67	345	*e*PKPdf	PKiKP	01 38 31.4	-0.1
NOA	NORSAR Array B	126.67	345	PKP	PKiKP	01 38 31.4	-0.1
	1.2nm,0.7s,baz=33,slow=2.0,SNR=3.4						
SIV	San Ignacio	126.88	120	PKP	PKPdf	01 38 32.3	-0.5
	1.1nm,0.6s,baz=248,slow=11,SNR=3.0						
KEST	Kesra	147.16	322	PKPbc	PKPab	01 39 12.7	-0.7
	20nm,0.8s,baz=346,slow=3.2,SNR=6.3						
ESDC	Sonseca Array	150.01	343	PKPbc	PKPbc	01 39 18.7	-0.2
	1.2nm,0.6s,baz=354,slow=2.3,SNR=3.8						

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*IDC **06** 01:21:01.4±2.1, 11°.31S×165°.48E, h0^{km}, mb4.7/6, mb1 4.9/6, mb1mx4.4/40, mbtmp4.7/6, Error ellipse: s-maj=90.7km s-min=31.6km az=139.0*

*ISCJB **06** 01:21:03.1±3.1, 11°.5S±0°.5×165°.5E±0°.6, h24^{km}, mb4.7/6, Error ellipse: s-maj=109.2km s-min=24.8km az=43.1*

ISC 06 01:21:05.0±2.0**, 11°.4S**±0°.5×**165°.5E**±0°.4**, h24^{km}, n11, σ0^{s}.31**/11**, mb4.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.15	250	P	P	01 27 22.3	+0.1
	12nm,0.7s,baz=83,slow=8.9,SNR=4.7						
ASAR	Alice Springs	32.44	244	P	P	01 27 33.4	-0.1
	7.0nm,0.9s,baz=66,slow=10,SNR=2.6						
SONM	Songino Array	78.80	324	P	P	01 33 05.9	-0.1
	4.0nm,0.9s,baz=134,slow=4.7,SNR=4.2						
ILAR	Eielson Array	83.90	19	P	P	01 33 32.4	0.0
	3.0nm,0.7s,baz=241,slow=4.6,SNR=3.9						
MKAR	Makanchi Array	93.60	317	P	P	01 34 19.4	+0.1
	3.9nm,0.8s,baz=94,slow=6.9,SNR=4.1						
ZALV	Zalesovo Beam	93.69	324	P	P	01 34 19.5	0.0
	5.2nm,1.0s,baz=93,slow=2.8,SNR=2.1						
ARCES	ARCESS Array B	116.60	345	PKP	PKPdf	01 39 46.6	+0.1
	1.7nm,0.6s,baz=84,slow=2.8,SNR=3.6						
FINES	FINESS Array B	121.99	338	PKP	PKiKP	01 39 57.6	+0.4
	2.6nm,0.9s,baz=101,slow=2.1,SNR=2.7						
NOA	NORSAR Array B	126.96	345	PKP	PKPdf	01 40 06.2	-0.5
	1.5nm,0.8s,baz=30,slow=2.0,SNR=3.3						
KEST	Kesra	147.54	322	PKPbc	PKPbc	01 40 47.3	-0.5
	12nm,1.0s,baz=25,slow=2.6,SNR=4.9						
ESDC	Sonseca Array	150.31	343	PKPbc	PKPbc	01 40 55.1	+0.4
	2.0nm,0.8s,baz=5.7,slow=3.6,SNR=2.8						

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*IDC **06** 01:22:04.1±2.0, 11°.78S×165°.88E, h0^{km}, mb5.2/5, mb1 5.3/6, mb1mx4.8/39, mbtmp5.2/6, ML5.2/1, Error ellipse: s-maj=63.9km s-min=34.2km az=147.0*

*ISCJB **06** 01:22:05.3±1.4, 11°.8S±0°.2×165°.7E±0°.2, h10^{km}, Error ellipse: s-maj=35.9km s-min=23.9km az=158.2*

ISC 06 01:22:06.1±1.5**, 11°.7S**±0°.3×**165°.8E**±0°.2**, h10^{km}, n8, σ0^{s}.93**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.19	291	Pn	Pn	01 23 37.3	-0.3
	50nm,0.3s,baz=247,slow=13,SNR=5.5						
WRA	Warramunga Arr	31.31	251	P	P	01 28 26.5	-0.3
	36nm,1.0s,baz=83,slow=9.1,SNR=1.3						
ASAR	Alice Springs	32.54	244	P	P	01 28 38.1	+0.5
	9.4nm,0.7s,baz=67,slow=9.5,SNR=3.5						
SONM	Songino Array	79.25	324	P	P	01 34 12.2	+0.4
	15nm,1.1s,baz=144,slow=5.9,SNR=1.7						
MK32	Makanchi Array	94.06	317	*e*P	P	01 35 25.5	+0.7
MKAR	Makanchi Array	94.06	317	P	P	01 35 25.5	+0.7
	8.0nm,0.9s,baz=88,slow=4.7,SNR=4.4						
YKA	Yellowknife Ar	95.55	27	P	P	01 35 31.1	0.0
	0.5nm,0.6s,baz=257,slow=4.5,SNR=1.4						
ARCES	ARCESS Array B	117.01	345	PKP	PKiKP	01 40 49.1	-1.7
	2.9nm,0.9s,baz=39,slow=1.7,SNR=3.7						

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*IDC **06** 01:22:10.4±0.4, 11°.40S×165°.84E, h0^{km}, mb5.2/30, mb1 5.2/31, mb1mx5.2/39, mbtmp5.1/31, ML5.3/1, Error ellipse: s-maj=17.8km s-min=12.9km az=75.0*

*BJI **06** 01:22:12.9, 10°.93S×165°.60E, h9^{km}, mb5.6/57, mB5.5/2, Ms5.6/2, Ms7 5.3/2*

*NEIC **06** 01:22:12.3±3.5, 11°.34S×165°.90E, h13^{km}±21^{km}, mb5.6/110, Error ellipse: s-maj=7.0km s-min=5.8km az=52.0*

*ISCJB **06** 01:22:14.2±0.1, 11°.42S±0°.03×165°.74E±0°.03, h37^{km}, mb5.4/166, Error ellipse: s-maj=4.3km s-min=3.8km az=28.8*

*MOS **06** 01:22:15.0±1.3, 11°.15S×165°.75E, h33^{km}, mb5.6/39, Error ellipse: s-maj=10.9km s-min=8.2km az=124.9*

ISC 06 01:22:15.9±0.3**, 11°.46S**±0°.05×**165°.79E**±0°.06**, h37^{km}, n438, σ1^{s}.45**/441**, mb5.5**/166**, 5C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.09	289	*e*Pn	Pn	01 23 43.1	-0.3
HNR	Honiara	6.09	289	*e*P	Pn	01 23 43.1	-0.3
HNR	Honiara	6.09	289	Pn	Pn	01 23 41.6	-1.9
	66nm,0.3s,baz=103,slow=18,SNR=4.4						
MARNC	Mare, Loyalty	10.19	168	*e*Pn	Pn	01 24 39.9	+0.3
DZM	Mont Dzumac	10.57	177	*e*Pn	Pn	01 24 44.8	-0.1
ONTNC	Ouen Toro	10.80	177	*e*Pn	Pn	01 24 48.2	+0.2
PINNC	Pines Island,	11.20	172	*e*Pn	Pn	01 24 53.5	+0.1
MSVF	Nonsavu	13.40	119	*i* P	Pn	01 25 26.6	+2.9
EIDS	Eidsvold	19.62	223	P	P	01 26 41.7	+0.4
	baz=20,SNR=3.9						
LHI	Lord Howe Isla	20.91	196	P	Pn	01 26 56.9	-0.9
	baz=21						
MTSU	Mount Surprise	21.78	250	P	P	01 27 04.6	-0.2
	baz=22,SNR=9.3						
RMQ	Roma	21.93	225	P	P	01 27 06.7	+0.4
	baz=22,SNR=4.0						
COEN	Coen	22.20	261	P	P	01 27 05.7	-3.5
	baz=22,SNR=4.7						
ARMA	Armidale	22.99	213	P	P	01 27 17.8	+0.1
	baz=23,SNR=5.2						
OUZ	Omahuta	24.69	165	*e*P	P	01 27 34.8	+1.4
	496nm,1.4s						
MGCD	Mangrove Creek	25.49	210	P	P	01 27 40.4	-0.4
	baz=26,SNR=6.1						
RIV	Riverview	25.98	209	P	P	01 27 47.6	+2.4
	baz=26,SNR=6.1						
QIS	Mount Isa	26.71	247	P	P	01 27 51.5	-0.5
	baz=27,SNR=4.9						
CMSA	Cobar Meteorol	27.27	220	P	P	01 27 58.3	+1.4
	baz=27						
YNG	Young	27.72	212	P	P	01 28 02.6	+1.6
	baz=28						
URZ	Urewera	28.54	161	*e*P	P	01 28 09.4	+1.3
URZ	Urewera	28.54	161	P	P	01 28 09.4	+1.3
	26nm,0.8s,baz=328,slow=9.5,SNR=3.5						
BKZ	Black Stump Fm	29.19	163	*e*P	P	01 28 14.8	+0.9
	213nm,1.4s						
THZ	Tophouse	30.82	170	*e*P	P	01 28 29.4	+1.1
	217nm,1.1s						
WRAB	Tennant Creek	31.37	251	*i* P	P	01 28 29.5	-4.0
WRAB				pmax	pmax		
	comp=Z,163nm,1.2s						
WR1	Warramunga Arr	31.38	250	*e*P	P	01 28 26.5	-7.0
	comp=Z,338nm,1.3s						
WRA	Warramunga Arr	31.38	250	P	P	01 28 34.2	+0.6
WRA	Warramunga Arr	31.38	250	P	P	01 28 34.2	+0.6
	comp=Z,45nm,0.9s,baz=80,slow=9.4,SNR=7.8						
KHZ	Kahutara	31.57	169	*e*P	P	01 28 37.0	+2.2
	comp=Z,148nm,1.1s						
LTZ	Lake Taylor	31.71	171	*e*P	P	01 28 37.9	+1.8
OXZ	Oxford	32.20	171	*e*P	P	01 28 41.9	+1.4
	comp=Z,146nm,1.1s						
RPZ	Rata Peaks	32.46	173	*e*P	P	01 28 44.1	+1.5
	comp=Z,102nm,0.9s						
RPZ	Rata Peaks	32.46	173	P	P	01 28 43.6	+0.9
	comp=Z,61nm,0.8s,baz=167,slow=6.4,SNR=5.9						
CRLZ	Canterbury Las	32.54	171	*e*P	P	01 28 45.6	+2.3
	comp=Z,621nm,1.5s						
KDU	Kakadu	32.59	264	P	P	01 28 44.1	-0.1
	baz=32,SNR=3.2						
AS31	Alice Springs	32.65	244	*e*P	P	01 28 43.3	-1.3
	comp=Z,38nm,1.1s						
ASAR	Alice Springs	32.65	244	P	P	01 28 44.3	-0.4
ASAR	Alice Springs	32.65	244	P	P	01 28 44.3	-0.4
	comp=Z,14nm,0.8s,baz=73,slow=9.4,SNR=4.5						
MQZ	McQueen’s Vall	32.67	171	*e*P	P	01 28 45.1	+0.6
	comp=Z,267nm,1.2s						
HTT	Hallett	32.91	224	P	P	01 28 46.3	-0.5
	baz=33,SNR=3.8						
ODZ	Otahua Downs	33.72	174	*e*P	P	01 28 54.6	+0.9
	comp=Z,126nm,1.4s						
DCZ	Deep Cove	33.90	178	*e*P	P	01 28 55.3	0.0
	comp=Z,79nm,1.2s						
BBOO	Buckleboo	34.58	227	P	P	01 29 00.5	-0.8
	baz=35						
KNRA	Kununurra	36.20	259	P	P	01 29 14.6	-0.9
	baz=36,SNR=3.0						
WRKA	Warakurna	37.94	244	P	P	01 29 25.6	-4.6
	baz=38,SNR=7.5						
FITZ	Fitzroy Crossi	39.32	255	P	P	01 29 40.3	-1.4
	baz=39,SNR=6.0						
KIP	Kipapa	48.29	47	*i* P	P	01 30 54.1	+0.4
KIP				pmax	pmax		
	comp=Z,66nm,1.1s						
NWAO	Narrogin (SRO)	49.27	236	P	P	01 31 01.1	-0.2
	baz=49,SNR=3.9						
MORW	Morawa	49.46	242	P	P	01 31 02.1	-0.6
	baz=49,SNR=3.8						
MUN	Mundaring	49.89	238	P	P	01 31 04.2	-1.8
	baz=50,SNR=6.2						
SDKM	Sandakan	51.25	287	P	P	01 31 15.3	-1.2
KDM	Kudat	52.02	288	P	P	01 31 21.9	-0.3
KKM	Kota Kinabalu	52.30	287	*e*P	P	01 31 23.2	-1.2
	comp=Z,308nm,1.3s						
KKM	Kota Kinabalu	52.30	287	P	P	01 31 24.3	-0.1
ABRA	Dolores	53.09	302	*e*P	P	01 31 29.7	-0.3
MJAR	Matsushiro Arr	54.36	333	P	P	01 31 37.8	-1.2
MJAR				pmax	pmax		
	comp=Z,15nm,1.0s						
MJAR	Matsushiro Arr	54.36	333	P	P	01 31 37.8	-1.2
	comp=Z,14nm,1.0s,baz=170,slow=7.6,SNR=8.5						
MAJO	Matsushiro	54.36	333	*e*P	P	01 31 38.3	-0.7
	comp=Z,40nm,0.8s						
MAJO	Matsushiro	54.36	333	*i* P	P	01 31 37.5	-1.6
MAJO				pmax	pmax		
	comp=Z,21nm,1.0s						
MAT	Matsushiro	54.36	333	P	P	01 31 37.8	-1.3
MJB9	Matsu-Tunnel	54.37	333	*e*P	P	01 31 38.8	-0.3
	comp=Z,40nm,0.8s						
BTM	Bintulu	54.40	282	P	P	01 31 40.2	+0.4
UGM	Wanagama	54.53	268	*e*P	P	01 31 38.9	-1.9
	comp=Z,381nm,1.2s						
SMRI	Semarang	54.74	269	*e*P	P	01 31 42.9	+0.7
	comp=Z,173nm,0.9s						
SBUM	Sibu	55.02	281	*e*P	P	01 31 45.4	+1.1
	comp=Z,50nm,1.3s						
SBUM	Sibu	55.02	281	P	P	01 31 45.3	+1.1
JNU	Nakatsue	55.44	324	*e*P	P	01 31 46.6	-0.3
	comp=Z,124nm,1.0s						
JNU	Nakatsue	55.44	324	P	P	01 31 46.9	-0.1
	comp=Z,68nm,0.9s,baz=113,slow=3.1,SNR=12						
YULB	Yu-li	55.63	309	*e*P	P	01 31 47.6	-0.9
	comp=Z,74nm,1.1s						
NACB	Ninganchiao	55.84	310	*e*P	P	01 31 50.2	+0.3
	comp=Z,76nm,1.2s						
TPUB	Ta-pu	56.09	308	*e*P	P	01 31 53.6	+1.8
	comp=Z,98nm,0.9s						
SSLB	Suanglung	56.11	309	*e*P	P	01 31 51.8	-0.2
	comp=Z,79nm,1.3s						
YHNB	Yeheng	56.28	310	*e*P	P	01 31 53.3	+0.1
	comp=Z,143nm,1.2s						
KSM	Kuching	56.61	279	*e*P	P	01 31 56.1	+0.4
	comp=Z,67nm,1.0s						
ASAJ	Asahikawa	59.20	341	*e*P	P	01 32 13.4	+0.2
ASAJ	Asahikawa	59.20	341	P	P	01 32 13.4	+0.2
	comp=Z,20nm,0.8s,baz=221,slow=11,SNR=5.4						
SSE	Sheshan	60.18	316	P	P	01 32 20.1	-0.1
SSE				pmax	pmax		
	comp=Z,39nm,0.8s						
SSE	Sheshan	60.18	316	*e*P	P	01 32 19.4	-0.9
	comp=Z,248nm,1.1s						
KSRS	Korea Array	60.24	326	P	P	01 32 20.8	+0.3
	comp=Z,13nm,0.9s,baz=138,slow=7.1,SNR=12						
KS15	Wonju Array Si	60.26	326	*e*P	P	01 32 21.3	+0.7
KS01	Wonju Array Si	60.28	326	*e*P	P	01 32 20.3	-0.4

YSS	Yuzh-Sakhalins	61.70	342	*e*P	P	01 32 30.9	+0.7
	comp=Z,62nm,1.1s						
YSS	Yuzh-Sakhalins	61.70	342	*e*P	P	01 32 25.6	-4.6
YSS				*e*		01 32 33.5	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2	Nanjing	62.35	316	*e*P	P	01 32 35.1	+0.2
NJ2				pmax	pmax		
	comp=Z,120nm,1.0s						
MSHR	Mys Shultsa	62.44	332	*i* P	P	01 32 35.6	+0.3
VLA	Vladivostok	62.53	333	*i* P	P	01 32 33.7	-2.2
VLA				pmax	pmax		
	comp=Z,39nm,1.2s						
MYKOM	Kota Tinggi	62.95	278	P	P	01 32 38.9	-0.3
USA0B	Ussuriysk Arra	63.34	333	*e*P	P	01 32 42.0	+0.7
	comp=Z,125nm,1.3s						
USRK	Ussuriysk Ar.	63.34	333	P	P	01 32 41.1	-0.1
	comp=Z,31nm,1.0s,baz=141,slow=5.7,SNR=12						
PET	Petropavlovsk	64.52	355	*i* P	P	01 32 49.5	+0.7
PET				pmax	pmax		
	comp=Z,58nm,1.2s						
PETK	Petropavlovsk-	64.69	355	*e*P	P	01 32 50.8	+0.9
PETK	Petropavlovsk-	64.69	355	*e*P	P	01 32 50.8	+0.9
PETK	Petropavlovsk-	64.69	355	P	P	01 32 50.3	+0.4
	comp=Z,13nm,0.9s,baz=148,slow=8.5,SNR=5.2						
PEA1	Petropavlovsk-	64.69	355	*e*P	P	01 32 50.3	+0.4
MDJ	Mudanjiang	64.74	332	P	P	01 32 50.0	-0.4
MDJ				pmax	pmax		
	comp=Z,51nm,1.5s						
MDJ	Mudanjiang	64.74	332	*e*P	P	01 32 51.4	+0.9
	comp=Z,58nm,1.1s						
DL2	Dalian	64.84	323	P	P	01 32 48.5	-2.7
DL2				pmax	pmax		
	comp=Z,130nm,1.1s						
BKNI	Bangkinang	65.35	276	*e*P	P	01 32 56.6	+1.5
	comp=Z,321nm,0.9s						
FRIM	Kepong	65.45	279	P	P	01 32 55.7	0.0
SNY	Shenyang	65.70	327	⇑P	P	01 33 06.1	+9.4
SNY				pmax	pmax		
	comp=Z,36nm,1.1s						
CASY	Casey	66.01	201	*e*P	P	01 32 58.0	-0.3
	comp=Z,111nm,1.2s						
VNDA	Vanda	66.08	181	*e*P	P	01 32 58.5	-0.1
VNDA	Vanda	66.08	181	P	P	01 32 58.5	-0.1
	comp=Z,14nm,1.0s,baz=309,slow=4.9,SNR=4.2						
CN2	Changchun	66.12	329	*e*P	P	01 32 59.6	+0.2
CN2				*e*sP	pP	01 33 07.7	-1.3
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
IPM	Ipoh	66.34	280	*e*P	P	01 33 01.5	0.0
	comp=Z,208nm,1.0s						
IPM	Ipoh	66.34	280	P	P	01 32 59.1	-2.4
KULM	Kulim	66.90	281	*e*P	P	01 33 05.8	+0.7
	comp=Z,103nm,1.2s						
KULM	Kulim	66.90	281	P	P	01 33 02.6	-2.4
SKNT	Sakolnakorn	67.30	294	P	P	01 33 08.7	+1.2
	comp=Z,58nm,1.3s						
KLR	Kul'dur	67.45	337	*i* P	P	01 33 07.3	-0.5
NIKH	Nikolski High	67.76	16	*e*P	P	01 33 09.3	-0.3
	comp=Z,190nm,1.1s						
ENH	Enshi	68.19	309	*e*P	P	01 33 13.2	+0.3
	comp=Z,213nm,1.0s						
TRTT	Trang	68.48	283	P	P	01 33 16.9	+1.9
	comp=Z,35nm,1.4s						
GYA	Guiyang	68.69	304	⇑*i*P	P	01 33 16.8	+0.6
GYA				PP	PP	01 35 52.5	+4.2
GYA				S	S	01 42 20.8	+3.7
GYA				SKS	ScS	01 43 14.0	+0.1
GYA				pmax	pmax		
	comp=Z,60nm,1.1s						
GYA				pmax	pmax		
	comp=Z,180nm,7.8s						
GYA				LR	LR		
	comp=Z,840nm,18.8s						
GYA				LR	LR		
	comp=Z,780nm,18.5s						
GYA				LR	LR		
	comp=Z,810nm,19.3s						
CHAI	Chaiyaphum	68.74	292	P	P	01 33 20.3	+3.8
	comp=Z,13nm,1.3s						
BJT	Baijiatuau	68.82	321	*e*P	P	01 33 16.6	0.0
	comp=Z,112nm,1.2s						
BJT	Baijiatuau	68.82	321	*e*P	P	01 33 16.6	0.0
BJT				pmax	pmax		
	comp=Z,112nm,1.2s						
PATY	Pattaya	68.83	289	P	P	01 33 19.9	+2.8
	comp=Z,19nm,1.1s,comp=Z,2µm						
GSI	Gunungsitoli	68.94	276	*e*P	P	01 33 14.0	-3.9
	comp=Z,226nm,1.0s						
PBKT	Sadao Pong	69.88	292	*e*P	P	01 33 23.1	-0.4
	comp=Z,61nm,1.2s						
PBKT	Sadao Pong	69.88	292	P	P	01 33 26.8	+3.3
	comp=Z,76nm,1.3s						
TIY	Taiyuan	69.89	317	*e*P	P	01 33 24.0	+0.6
TIY				pmax	pmax		
	comp=Z,34nm,0.8s						
PHET	Kaeng Krachan	69.97	288	P	P	01 33 29.0	+4.8
	comp=Z,11nm,1.1s						
XAN	Xi'an	70.43	312	P	P	01 33 27.0	+0.3
XAN				pP	pP	01 33 35.5	-1.0
XAN				sP	sP	01 33 39.4	-0.9
XAN				pmax	pmax		
	comp=Z,71nm,1.2s						
XAN	Xi'an	70.43	312	*e*P	P	01 33 26.5	-0.2
	comp=Z,102nm,1.1s						
XAN	Xi'an	70.43	312	*e*P	P	01 33 26.5	-0.2
XAN				pmax	pmax		
	comp=Z,102nm,1.1s						
UTTA	Uttaradit	70.64	293	P	P	01 33 38.2	+10
	comp=Z,6.8nm,1.1s,comp=Z,427nm						
SRDT	SRDT	70.87	290	P	P	01 33 31.8	+2.1
	comp=Z,52nm,2.1s						
KMI	Kunming	71.38	301	P	P	01 33 33.9	+1.1
KMI				sP	pP	01 33 42.8	+0.2
KMI				pmax	pmax		
	comp=Z,92nm,1.7s						
KMI	Kunming	71.38	301	*e*P	P	01 33 34.9	+2.1
	comp=Z,232nm,1.3s						
KMI	Kunming	71.38	301	*e*P	P	01 33 34.9	+2.1
KMI				pmax	pmax		
	comp=Z,232nm,1.3s						
UMPA	Umpang Tak	71.68	291	P	P	01 33 45.8	+11
MA2	Magadan	71.83	352	*e*P	P	01 33 35.0	+0.5
MA2	Magadan	71.83	352	*i* P	P	01 33 32.8	-1.7
MA2				pmax	pmax		
	comp=Z,22nm,1.3s						
MA2	Magadan	71.83	352	P	P	01 33 35.0	+0.5
	comp=Z,4.1nm,0.4s,baz=196,slow=20,SNR=2.8						
HHC	Hu-ho-hao-te	72.18	320	*e*P	P	01 33 39.3	+2.1
HHC				pmax	pmax		
	comp=Z,36nm,1.2s						
CM01	Chiang Mai Arr	72.29	294	*e*P	P	01 33 37.4	-0.8
CM31	Chiang Mai Arr	72.32	294	*e*P	P	01 33 39.0	+0.7
CMAR	Chiang Mai Arr	72.32	294	P	P	01 33 39.0	+0.7
CMAR	Chiang Mai Arr	72.32	294	P	P	01 33 39.0	+0.7
	comp=Z,20nm,0.9s,baz=117,slow=4.3,SNR=13						
CHTO	Chiang Mai	72.43	294	*e*P	P	01 33 40.0	+1.0
	comp=Z,94nm,1.4s						
CHTO	Chiang Mai	72.43	294	*e*P	P	01 33 40.0	+1.0
CHTO				pmax	pmax		
	comp=Z,94nm,1.4s						
CHTO	Chiang Mai	72.43	294	P	P	01 33 40.7	+1.7
	comp=Z,321nm,1.4s						
HIA	Hailar	72.75	330	*e*P	P	01 33 40.8	+0.4
	comp=Z,93nm,1.2s						
HIA	Hailar	72.75	330	*i* P	P	01 33 40.6	+0.3
HIA				pmax	pmax		
	comp=Z,33nm,1.0s						
CD2	Chengdu	72.89	307	*e*P	P	01 33 42.5	+0.9
CD2				pmax	pmax		
	comp=Z,250nm,0.9s						
SEY	Seymchan	74.89	354	*e*P	P	01 33 52.0	-0.5
SEY	Seymchan	74.89	354	*i* P	P	01 33 51.8	-0.7
SEY	Seymchan	74.89	354	P	P	01 33 52.0	-0.5
	comp=Z,14nm,1.0s,baz=168,slow=9.0,SNR=5.6						
LZH	Lanzhou	75.07	312	⇑P	P	01 33 55.4	+1.1
LZH				pP	pP	01 34 01.3	-2.9
LZH				sP	PcP	01 34 05.3	-2.6
LZH				S	S	01 43 29.0	-1.2
LZH				sS	pS	01 43 40.4	-2.4
LZH				SS	SS	01 48 22.3	+2.2
LZH				pmax	pmax		
	comp=Z,170nm,1.7s						
LZH				LR	LR		
	comp=Z,3µm,18.4s						
LZH				LR	LR		
	comp=Z,2µm,17.3s						
LZH				LR	LR		
	comp=Z,3µm,19.5s						
KDAK	Kodiak Island	76.95	21	*e*P	P	01 34 04.6	+0.3
	comp=Z,41nm,1.1s						
KDAK	Kodiak Island	76.95	21	P	P	01 34 04.3	0.0
	comp=Z,18nm,1.0s,baz=181,slow=3.8,SNR=5.0						
GAMB	Gambell	76.97	10	*e*P	P	01 34 04.9	+0.6
	comp=Z,50nm,0.9s						
QSPA	South Pole Qui	78.54	180	*e*P	P	01 34 14.3	+1.0
QSPA	South Pole Qui	78.54	180	P	P	01 34 14.3	+1.0
	baz=358,slow=4.6						
ULN	Ulaanbaatar	78.66	324	*i* P	P	01 34 14.3	0.0
ULN				pmax	pmax		
	comp=Z,50nm,1.0s						
ANM	Nome	78.89	12	*e*P	P	01 34 15.7	+0.7
	comp=Z,38nm,1.2s						
ANM	Nome	78.89	12	*e*P	P	01 34 15.7	+0.7
ANM				pmax	pmax		
	comp=Z,39nm,1.2s						
RSO	Redoubt South	78.90	20	*e*P	P	01 34 11.2	-4.2
BRLK	Bradley Lake	79.01	21	*e*P	P	01 34 12.4	-3.4
	comp=Z,39nm,0.8s						
SONA0	Songino Array	79.03	324	*e*P	P	01 34 12.2	-4.1
SONM	Songino Array	79.03	324	P	P	01 34 17.2	+0.9
SONM	Songino Array	79.03	324	P	P	01 34 17.2	+0.9
	comp=Z,23nm,1.0s,baz=146,slow=5.1,SNR=12						
BILL	Bilibino	79.29	0	*i* P	P	01 34 17.3	+0.2
BILL				pmax	pmax		
	comp=Z,52nm,1.1s						
GTA	Gaotai	79.38	314	⇑P	P	01 34 19.8	+1.4
GTA				pP	PcP	01 34 25.4	-1.0
GTA				sP	pP	01 34 28.4	+0.1
GTA				pmax	pmax		
	comp=Z,74nm,1.3s						
BRDH	Bariadhala	80.12	296	P	P	01 34 23.2	+0.6
BRDH	Bariadhala	80.12	296	P	P	01 34 23.2	+0.6
	comp=Z,34nm,0.4s,baz=92,slow=5.6,SNR=7.8						
SUA	Susitna One	80.30	20	*e*P	P	01 34 22.3	-0.6
	comp=Z,121nm,1.5s						
RC01	Rabbit Creek A	80.37	20	*e*P	P	01 34 22.9	-0.2
	comp=Z,43nm,1.1s						
SHL	Shillong	80.75	298	*e*P	P	01 34 27.3	+1.1
	comp=Z,129nm,1.4s						
BOD	Bodaibo	80.92	335	*e*P	P	01 34 23.2	-2.9
BOD				pmax	pmax		
	comp=Z,36nm,1.6s						
KNK	Knik Glacier	81.03	20	*e*P	P	01 34 25.9	-0.8
	comp=Z,27nm,0.9s						
GLI	Glacier Island	81.14	21	*e*P	P	01 34 26.0	-1.2
	comp=Z,70nm,1.2s						
CAST	Castle Rocks	81.33	18	*e*P	P	01 34 26.6	-1.6
	comp=Z,31nm,0.8s						
SML	Sawmill	81.35	20	*e*P	P	01 34 26.9	-1.5
	comp=Z,54nm,1.1s						
SML	Sawmill	81.35	20	*e*P	P	01 34 26.9	-1.5
SML				pmax	pmax		
	comp=Z,55nm,1.1s						
EYAK	Cordova Ski Ar	81.40	22	*e*P	P	01 34 28.7	+0.2
	comp=Z,85nm,1.3s						
DIV	Divide	81.78	22	*e*P	P	01 34 30.8	+0.1
	comp=Z,49nm,1.0s						
KLU	Klutina	81.97	21	*e*P	P	01 34 32.0	+0.3
	comp=Z,39nm,1.1s						
ZAK	Zakamensk	82.07	325	*e*P	P	01 34 31.3	-1.2
ZAK				pmax	pmax		
	comp=Z,41nm,1.1s						
RND	Reindeer	82.32	19	*e*P	P	01 34 32.9	-0.6
	comp=Z,37nm,0.9s						
RDOG	Red Dog Mine	82.42	11	*e*P	P	01 34 34.5	+0.6
	comp=Z,59nm,0.9s						
TLY	Talaya	82.49	326	*e*P	P	01 34 34.9	+0.3
TLY	Talaya	82.49	326	*i* P	P	01 34 33.9	-0.7
TLY	Talaya	82.49	326	P	P	01 34 34.5	-0.1
	comp=Z,8.0nm,0.8s,baz=222,slow=4.9						
MCK	McKinley	82.52	19	*e*P	P	01 34 32.8	-1.7
	comp=Z,69nm,1.2s						
MCK	McKinley	82.52	19	*e*P	P	01 34 32.8	-1.7
MCK				pmax	pmax		
	comp=Z,69nm,1.2s						
DHY	Denali Highway	82.56	20	*e*P	P	01 34 32.3	-2.6
	comp=Z,39nm,1.3s						
LSA	Lhasa	82.61	302	*e*P	P	01 34 38.3	+2.0
	comp=Z,28nm,1.1s						
BWN	Browne	82.67	18	*e*P	P	01 34 35.8	+0.5
	comp=Z,94nm,1.1s						
KCPM	Cahto Peak	82.80	47	*e*P	P	01 34 34.2	-2.4
	comp=Z,27nm,0.8s						
HARP	HAARP	82.86	21	*e*P	P	01 34 33.3	-3.0
	comp=Z,60nm,0.9s						
KMRM	Mail Ridge	82.90	47	*e*P	P	01 34 34.6	-2.5
	comp=Z,40nm,0.8s						
HOPS	Hopland Field	82.92	48	*e*P	P	01 34 35.3	-1.8
	comp=Z,32nm,0.9s						
MLY	Manley	82.92	17	*e*P	P	01 34 33.2	-3.4
	comp=Z,26nm,1.1s						
GDXM	Geysers	83.06	48	*e*P	P	01 34 36.9	-1.0
	comp=Z,19nm,0.9s						
KHMM	Horse Mountain	83.13	46	*e*P	P	01 34 35.9	-2.4
	comp=Z,58nm,1.2s						
WRH	Wood River Hil	83.31	18	*e*P	P	01 34 36.0	-2.5
	comp=Z,38nm,0.9s						
SAO	San Andreas Ge	83.36	51	*e*P	P	01 34 37.5	-1.9
	comp=Z,31nm,1.1s						
SAO	San Andreas Ge	83.36	51	*e*P	P	01 34 37.5	-1.9
SAO				pmax	pmax		
	comp=Z,31nm,1.1s						
O02D	Mt. Diablo Mer	83.55	47	P	P	01 34 38.7	-1.7
	baz=249						
MDM	Murphy Dome	83.61	18	*e*P	P	01 34 36.6	-3.5
	comp=Z,107nm,1.5s						
HDA	Harding Lake	83.62	19	*e*P	P	01 34 36.7	-3.5
	comp=Z,77nm,0.9s						
HDA	Harding Lake	83.62	19	P	P	01 34 36.6	-3.5
	baz=226						
COLA	College	83.67	18	*i* P	P	01 34 39.6	-0.7
COLA				pmax	pmax		
	comp=Z,44nm,1.0s						
RIDG	Independ'e Rid	83.85	20	*e*P	P	01 34 38.4	-3.0
	comp=Z,107nm,1.1s						
WDC	Whiskeytown Da	83.86	47	*e*P	P	01 34 42.3	+0.4
	comp=Z,29nm,1.3s						
ILAR	Eielson Array	83.89	18	P	P	01 34 41.2	-0.3
ILAR	Eielson Array	83.89	18	P	P	01 34 41.2	-0.3
	comp=Z,15nm,0.8s,baz=239,slow=4.7,SNR=18						
ILB	Eielson Array	83.89	18	*e*P	P	01 34 41.2	-0.3
	comp=Z,42nm,1.1s						
M02C	Callahan	83.93	46	P	P	01 34 40.5	-1.8
	baz=249						
MOY	Mondy	83.94	325	*e*P	P	01 34 46.0	+3.8
MOY				pmax	pmax		
	comp=Z,1µm,2.5s						
POKR	Poker Plat Res	83.97	18	P	P	01 34 40.2	-1.7
	baz=226						
YBH	Yreka Blue Hor	84.15	46	*e*P	P	01 34 40.7	-2.8
	comp=Z,26nm,0.9s						
YBH	Yreka Blue Hor	84.15	46	*e*P	P	01 34 40.7	-2.8
YBH				pmax	pmax		
	comp=Z,26nm,0.9s						
ORV	Oroville	84.26	48	*e*P	P	01 34 41.8	-2.2
	comp=Z,24nm,1.1s						
ORV	Oroville	84.26	48	*e*P	P	01 34 41.8	-2.2
ORV				pmax	pmax		
	comp=Z,24nm,1.1s						
SCRK	Sand Creek	84.29	20	*e*P	P	01 34 41.0	-2.8
	comp=Z,74nm,1.1s						
HUMO	Hull Mountain	84.29	45	*e*P	P	01 34 41.0	-3.1
	comp=Z,42nm,0.9s						
O03E	Paynes Creek	84.29	47	P	P	01 34 44.2	0.0
	baz=250						
MAW	Mawson	84.35	202	*e*P	P	01 34 43.9	0.0
	comp=Z,25nm,1.1s						
MAW	Mawson	84.35	202	*e*P	P	01 34 43.9	0.0
MAW				pmax	pmax		
	comp=Z,25nm,1.1s						
MAW	Mawson	84.35	202	P	P	01 34 43.9	0.0
	comp=Z,47nm,1.0s,baz=79,slow=5.2,SNR=3.5						
AFDM	Forest Hills D	84.44	49	*e*P	P	01 34 42.3	-2.7
	comp=Z,32nm,1.0s						
CMB	Columbia Colle	84.58	50	*e*P	P	01 34 45.1	-0.6
	comp=Z,22nm,1.0s						
L04D	Klamath Falls	84.61	45	P	P	01 34 46.2	+0.4
	baz=249						
WRAK	Wrangell Islan	84.68	29	*e*P	P	01 34 44.9	-0.7
	comp=Z,50nm,1.3s						
M04C	Macdoel	84.78	46	P	P	01 34 47.3	+0.6
	baz=250						
J04D	Umpqua Nationa	85.10	44	P	P	01 34 48.9	+0.5
	baz=249						
MWC	Mount Wilson	85.19	54	*e*P	P	01 34 48.3	-0.7
	comp=Z,31nm,1.1s						
MWC	Mount Wilson	85.19	54	*e*P	P	01 34 48.3	-0.7
MWC				pmax	pmax		
	comp=Z,31nm,1.1s						
ISA	Isabella, Lake	85.29	52	P	P	01 34 47.4	-2.0
	baz=252						
EDW2	Edwards Air Fo	85.43	53	P	P	01 34 48.6	-1.4
	baz=253						
WAKR	Walker	85.44	49	*e*P	P	01 34 50.7	+0.6
	comp=Z,45nm,1.3s						
KNGR	Kungurtug, Tuv	85.47	324	*i* P	P	01 34 49.1	-0.8
BFSC	Mount Baldy Ra	85.51	54	P	P	01 34 50.7	+0.2
	baz=253						
MURC	Murrieta	85.69	55	P	P	01 34 51.9	+0.5
	baz=253						
PAHR	Pah Rah Range	85.85	48	*e*P	P	01 34 52.8	+0.7
	comp=Z,42nm,1.3s						
LRMC	Laurel Mtn Rad	85.85	53	P	P	01 34 50.7	-1.5
	baz=253						
MOD	Modoc Plateau	85.90	46	*e*P	P	01 34 49.0	-3.3
	comp=Z,18nm,0.8s						
E04D	Cinebar	85.98	41	P	P	01 34 53.6	+1.2
	baz=249						
I05D	Terrebonne, OR	86.00	43	P	P	01 34 53.0	+0.3
	baz=250						
PINE	Pine Mountain	86.09	44	*e*P	P	01 34 50.9	-2.3
	comp=Z,41nm,1.0s						
MPMC	Manual Prospec	86.17	52	P	P	01 34 54.4	+0.5
	baz=253						
NV01	Mina Array Sit	86.26	50	*e*P	P	01 34 51.7	-2.5
NVAR	Mina Array Bea	86.26	50	P	P	01 34 55.6	+1.4
NVAR	Mina Array Bea	86.26	50	P	P	01 34 55.6	+1.4
	comp=Z,14nm,1.1s,baz=237,slow=6.9,SNR=6.5						
TPFO	Pinon Flats	86.29	55	P	P	01 34 54.9	+0.5
	baz=254						
XPFO	Pion Flat	86.29	55	*e*P	P	01 34 54.0	-0.4
	comp=Z,23nm,1.1s						
NV11	Mina Array Sit	86.37	50	*e*P	P	01 34 58.0	+3.2
	comp=Z,2.6nm,1.1s						
F05D	White Salmon	86.46	42	P	P	01 34 55.3	+0.5
	baz=250						
GSC	Goldstone, Bar	86.49	53	P	P	01 34 54.3	-1.0
	baz=253						
TIXI	Tiksi	86.51	349	*e*P	P	01 34 54.3	-0.1
	comp=Z,43nm,1.2s						
TIXI	Tiksi	86.51	349	*i* P	P	01 34 54.6	+0.2
TIXI				pmax	pmax		
	comp=Z,28nm,1.1s						
GRAC	Grapevine Rang	86.54	51	P	P	01 34 56.1	+0.6
	baz=253						
PALK	Pallekele	86.65	278	*e*P	P	01 34 56.1	-0.4
	comp=Z,115nm,1.5s						
PALK	Pallekele	86.65	278	*e*P	P	01 34 56.1	-0.4
PALK				pmax	pmax		
	comp=Z,115nm,1.5s						
HEC	Hector,Ludlow	86.72	54	P	P	01 34 54.7	-1.8
	baz=254						
BELC	Belle Mtn. Jos	86.76	55	P	P	01 34 57.2	+0.5
	baz=254						
I07A	Izee	87.17	44	*e*P	P	01 34 59.2	+0.8
	comp=Z,18nm,1.0s						
TUQ	Turquoise Moun	87.22	53	P	P	01 34 59.0	+0.1
	baz=254						
WVOR	Wild Horse Val	87.25	46	*e*P	P	01 34 59.8	+0.9
	comp=Z,35nm,1.2s						
WVOR	Wild Horse Val	87.25	46	*e*P	P	01 34 59.8	+0.9
WVOR				pmax	pmax		
	comp=Z,35nm,1.2s						
GMRC	Granite Mounta	87.25	54	P	P	01 34 57.6	-1.5
	baz=254						
TPNV	Topopah Spring	87.39	52	P	P	01 34 58.8	-0.9
	baz=254						
IRM	Iron Mountain	87.49	55	P	P	01 35 00.8	+0.7
	baz=254						
J08A	Circle Bar Ran	87.64	45	*e*P	P	01 35 01.7	+1.0
	comp=Z,33nm,1.3s						
LDFC	Landfair	87.76	54	*e*P	P	01 35 02.3	+0.8
	comp=Z,71nm,1.1s						
Y12C	Blythe	87.88	55	*e*P	P	01 35 03.1	+1.2
	comp=Z,36nm,1.0s						
Y12C	Blythe	87.88	55	P	P	01 35 02.5	+0.6
	baz=255						
HAWA	Hanford	87.89	42	*e*P	P	01 35 02.5	+0.8
	comp=Z,24nm,1.0s						
G08A	Pilot Rock	87.92	43	*e*P	P	01 35 02.6	+0.6
	comp=Z,32nm,1.1s						
R11A	Troy Canyon, C	88.28	50	P	P	01 35 04.3	+0.3
	baz=254						
W13A	Hualapai Mount	88.73	54	*e*P	P	01 35 07.5	+1.3
	comp=Z,17nm,1.1s						
214A	Organ Pipe Nat	88.82	57	P	P	01 35 07.6	+1.2
	baz=256						
WMQ	Urumqi	89.42	315	P	P	01 35 09.8	+0.7
WMQ				sP	pP	01 35 18.2	-0.8
WMQ				pmax	pmax		
	comp=Z,31nm,1.3s						
LCMT	Little Creek M	89.72	52	*e*P	P	01 35 09.5	-1.3
	comp=Z,24nm,1.1s						
CCUT	Cedar City	89.77	52	*e*P	P	01 35 12.4	+1.4
	comp=Z,19nm,1.0s						
NEW	Newport	90.03	41	P	P	01 35 11.5	-0.2
	baz=253						
INK	Inuvik	90.28	19	*e*P	P	01 35 10.4	-2.0
	comp=Z,17nm,1.4s						
INK	Inuvik	90.28	19	*e*P	P	01 35 10.4	-2.0
INK				pmax	pmax		
	comp=Z,17nm,1.4s						
INK	Inuvik	90.28	19	P	P	01 35 10.4	-2.0
	comp=Z,4.1nm,0.9s,baz=221,slow=9.3,SNR=2.4						
HLID	Hailey	90.54	46	*e*P	P	01 35 12.3	-2.1
	comp=Z,13nm,1.1s						
BGU	Big Grassy Mou	90.86	48	*e*P	P	01 35 13.9	-2.1
	comp=Z,20nm,1.2s						
MSU	Marysvale	90.91	51	*e*P	P	01 35 14.3	-2.0
MSU	Marysvale	90.91	51	*e*P	P	01 35 14.3	-2.0
DGZ	Jazzator, Alta	91.25	320	*i* P	P	01 35 17.3	-0.2
DGZ				pmax	pmax		
	comp=Z,15nm,1.0s						
NLU	North Lily Min	91.33	50	*e*P	P	01 35 15.4	-2.8
	comp=Z,17nm,1.0s						
SYO	Syowa Base	91.40	197	⇓*i*P	P	01 35 18.6	+0.9
SYO	Syowa Base	91.40	197	⇑*i*PcP	PcP	01 35 20.5	+1.9
MPU	Maple Canyon	91.67	50	*e*P	P	01 35 21.7	+1.9
	comp=Z,32nm,1.3s						
MSO	Missoula	91.71	43	P	P	01 35 20.0	+0.3
	baz=255						
CTU	Camp Tracy	91.74	49	*e*P	P	01 35 21.0	+0.9
	comp=Z,18nm,1.1s						
MCMT	McKenzie Canyo	91.94	45	*e*P	P	01 35 23.7	+2.6
WALA	Waterton Lakes	92.30	40	*e*P	P	01 35 23.2	+0.8
	comp=Z,51nm,1.4s						
LRM	Limekiln Ridge	92.46	44	*e*P	P	01 35 23.9	+0.6
BOZ	Bozeman (W)	92.97	44	*e*P	P	01 35 19.0	-6.6
	comp=Z,20nm,1.0s						
BOZ	Bozeman (W)	92.97	44	*e*P	P	01 35 19.0	-6.6
BOZ				pmax	pmax		
	comp=Z,20nm,1.0s						
BOZ	Bozeman (W)	92.97	44	P	P	01 35 26.7	+1.1
	baz=257						
HRY	Holter Researc	93.08	43	*e*P	P	01 35 24.9	-1.2
H17A	Grant Village	93.42	46	P	P	01 35 29.3	+1.4
	baz=257						
PD31	Pinedale Array	93.80	47	*e*P	P	01 35 29.9	+0.2
PDAR	Pinedale Array	93.80	47	P	P	01 35 29.9	+0.2
PDAR	Pinedale Array	93.80	47	P	P	01 35 29.8	+0.2
	comp=Z,4.3nm,1.0s,baz=321,slow=1.9,SNR=4.5						
MK32	Makanchi Array	93.85	317	*e*PcP	P	01 35 29.6	+0.1
MKAR	Makanchi Array	93.85	317	P	P	01 35 29.6	+0.1
MKAR	Makanchi Array	93.85	317	P	P	01 35 29.6	+0.1
	comp=Z,28nm,0.8s,baz=93,slow=6.2,SNR=16						
MKAR				PKKP	PKKPdf	01 52 32.4	-1.6
	comp=Z,1.9nm,0.6s,baz=265,slow=3.4,SNR=9.6						
ZALV	Zalesovo Beam	93.92	324	P	P	01 35 29.3	-0.3
ZALV	Zalesovo Beam	93.92	324	P	P	01 35 29.3	-0.3
	comp=Z,34nm,1.1s,baz=108,slow=4.8,SNR=11						
ZAA1	Zalesovo Array	93.92	324	*e*P	P	01 35 29.3	-0.3
ANMO	Albuquerque	94.65	55	*i* P	P	01 35 34.7	+1.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NVS	Novosibirsk	95.03	325	*e*P	P	01 35 34.9	+0.3
YKA	Yellowknife Ar	95.32	27	P	P	01 35 34.0	-1.8
YKA	Yellowknife Ar	95.32	27	P	P	01 35 34.0	-1.8
	comp=Z,2.8nm,0.6s,baz=259,slow=4.4,SNR=15						

YKB5	Yellowknife Ar	95.32	27	eP	P	01 35 31.1	-4.6
LTX	Lajitas	95.99	61	eP	P	01 35 41.0	+1.2
LTX	Lajitas	95.99	61	eP	P	01 35 41.0	+1.2
TXAR	Lajitas Array	95.99	61	P	P	01 35 41.0	+1.2
TXAR	Lajitas Array	95.99	61	P	P	01 35 41.0	+1.2
	comp=Z,1.3nm,0.9s,baz=200,slow=2.4,SNR=2.9						
NRIK	Noril'sk	96.53	340	P	P	01 35 40.9	-0.2
	comp=Z,4.1nm,0.6s,baz=114,slow=5.8,SNR=2.9						
KURK	Kurchatov	96.99	320	eP	P	01 35 43.1	-0.5
KURK	Kurchatov	96.99	320	i P	P	01 35 43.0	-0.6
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
KURBB	Kurchatov Arra	97.03	320	P	P	01 35 43.1	-0.7
	comp=Z,2.9nm,0.9s,baz=95,slow=5.5,SNR=3.5						
KSH	Kashi	97.05	309	P	Pdif	01 35 45.8	+1.3
KSH				PP	PP	01 39 47.1	+6.4
KSH				S	S	01 47 05.4	+0.5
KSH				sS	pS	01 47 16.7	-1.3
KSH				SS	SS	01 53 47.4	+5.0
KSH				pmax	pmax		
	comp=Z,19nm,0.9s						
AAK	Ala-Archa	98.61	312	eP	P	01 35 50.4	-1.0
AAK	Ala-Archa	98.61	312	P	P	01 35 50.4	-1.0
	comp=Z,5.8nm,1.0s,baz=264,slow=5.1,SNR=3.9						
BVAR	Borovoye Array	102.30	322	P	Pdif	01 36 07.0	-0.4
BVAR	Borovoye Array	102.30	322	P	Pdif	01 36 07.0	-0.4
BVAR	Borovoye Array	102.30	322	P	Pdif	01 36 07.0	-0.4
	comp=Z,4.3nm,0.9s,baz=108,slow=4.7,SNR=2.8						
APA	Apatity	115.84	342	⇓iPKIKP	PKPdf	01 40 59.2	+5.1
APA				pmax	pmax		
	comp=Z,14nm,1.1s						
APA				MLR	MLR		
	comp=Z,58µm,21.0s						
G53A	Haliburton	116.05	45	P	PKPdf	01 40 54.5	-0.7
	baz=280						
D53A	Lac Vacive, Po	116.31	43	P	PKPdf	01 40 54.8	-0.8
	baz=282						
L55A	Hinsdale	116.67	49	P	PKPdf	01 40 55.3	-1.2
	baz=279						
ARCES	ARCESS Array B	116.75	345	PKP	PKPdf	01 40 55.5	-0.2
ARCES	ARCESS Array B	116.75	345	PKP	PKPdf	01 40 55.5	-0.2
	comp=Z,4.0nm,0.5s,baz=78,slow=1.8,SNR=14						
G55A	Calabogie	117.35	45	P	PKPdf	01 40 57.3	-0.3
	baz=282						
R58B	Mineral	117.69	53	P	PKPdf	01 40 56.7	-1.8
	baz=277						
CHGQ	Chibougamau	117.77	39	P	PKPdf	01 40 57.0	-1.3
	baz=286						
H56A	Elgin	117.80	46	P	PKPdf	01 40 58.1	-0.4
	baz=282						
GROC	Groznyy	119.54	313	i PKIKP	PKPdf	01 40 59.8	-2.1
GROC				pmax	pmax		
	comp=Z,34nm,1.3s						
LPAZ	La Paz	119.96	116	ePKPdf	PKPdf	01 41 03.5	-0.8
LPAZ	La Paz	119.96	116	PKP	PKPdf	01 41 03.5	-0.8
	comp=Z,5.3nm,1.0s,baz=338,slow=5.1,SNR=4.2						
SCHQ	Schefferville	120.36	32	ePKPdf	PKPdf	01 41 02.7	-0.5
SCHQ	Schefferville	120.36	32	PKP	PKPdf	01 41 02.7	-0.5
	comp=Z,6.6nm,0.8s,baz=226,slow=6.1,SNR=6.1						
GNI	Garni	120.95	310	ePKPdf	PKPdf	01 41 04.8	-0.1
GNI	Garni	120.95	310	i PKIKP	PKPdf	01 41 04.2	-0.8
GNI	Garni	120.95	310	PKP	PKPdf	01 41 04.8	-0.1
	comp=Z,6.4nm,0.9s,baz=212,slow=13,SNR=3.6						
ZEI	Tsey	120.99	313	i PKIKP	PKPdf	01 41 04.5	-0.5
ZEI				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN	Obninsk	121.18	329	ePKIKP	PKPdf	01 41 03.8	-0.8
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBZ	Khabaz	121.46	314	ePKPdf	PKiKP	01 41 06.8	+1.1
KBZ	Khabaz	121.46	314	PKP	PKiKP	01 41 06.8	+1.1
	comp=Z,3.9nm,1.0s,baz=93,slow=18,SNR=3.0						
KVAR	Kislovodsk Arr	121.54	315	PKP	PKiKP	01 41 06.7	+0.6
KVAR	Kislovodsk Arr	121.54	315	PKP	PKiKP	01 41 06.7	+0.6
	comp=Z,5.2nm,0.9s,baz=53,slow=15,SNR=2.9						
KIV	Kislovodsk	121.55	315	ePKIKP	PKPdf	01 41 03.8	-2.1
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
FIA1	FINESS Array S	122.17	338	ePKPdf	PKPdf	01 41 06.3	-0.1
FIA0	FINESS Array S	122.17	338	ePKPdf	PKiKP	01 41 06.5	0.0
FIA0	FINESS Array S	122.17	338	ePKIKP	PKiKP	01 41 06.6	0.0
FINES	FINESS Array B	122.17	338	PKP	PKiKP	01 41 06.5	0.0
FINES	FINESS Array B	122.17	338	PKP	PKiKP	01 41 06.5	0.0
	comp=Z,11nm,1.0s,baz=76,slow=8.0,SNR=7.4						
SIRT	Sirnak	123.25	307	ePKPdf	PKiKP	01 41 09.7	+0.1
CPUP	Villa Florida	123.71	132	ePKPdf	PKPdf	01 41 10.2	-0.3
CPUP	Villa Florida	123.71	132	ePKIKP	PKPdf	01 41 10.2	-0.3
CPUP	Villa Florida	123.71	132	PKP	PKPdf	01 41 09.8	-0.6
	comp=Z,13nm,0.9s,baz=240,slow=1.4,SNR=10						
SDV	Santo Domingo	124.47	87	ePKPdf	PKPdf	01 41 10.6	-1.9
SDV	Santo Domingo	124.47	87	PKP	PKPdf	01 41 10.6	-1.9
	comp=Z,9.8nm,0.8s,baz=102,slow=1.9,SNR=4.0						
BOSA	Boshof	124.84	223	ePKPdf	PKiKP	01 41 13.7	+0.6
BOSA	Boshof	124.84	223	PKP	PKiKP	01 41 13.7	+0.6
	comp=Z,2.9nm,0.7s,baz=199,slow=3.0,SNR=3.6						
IZAR	Zarasai	125.78	333	eP	PKiKP	01 41 14.2	+0.3
IZAR				IAmb	IAmb	01 41 24.1	
	comp=Z,15nm,1.1s						
IDID	Didziasalis	125.82	332	eP	PKiKP	01 41 14.2	+0.2
IDID				IAmb	IAmb	01 41 24.2	
	comp=Z,31nm,1.2s						
ISAL	Salakas	125.94	333	eP	PKiKP	01 41 14.7	+0.5
ISAL				IAmb	IAmb	01 41 24.5	
	comp=Z,21nm,1.1s						
IIGN	Ignalina	126.03	333	eP	PKiKP	01 41 14.5	+0.1
IIGN				IAmb	IAmb	01 41 24.8	
	comp=Z,28nm,1.1s						
NACGM	Naroch	126.05	332	e	PKiKP	01 41 16.0	+1.6
SIV	San Ignacio	126.20	120	ePKPdf	PKPdf	01 41 14.3	-1.2
SIV	San Ignacio	126.20	120	PKP	PKPdf	01 41 14.3	-1.2
	comp=Z,7.4nm,0.8s,baz=260,slow=5.3,SNR=8.5						
NB2	NORSAR Subarra	127.11	345	PKPdf	PKiKP	01 41 16.4	-0.1
	comp=Z,1.0nm,0.6s,baz=31,slow=1.9						
NB200	NORSAR Array S	127.11	345	ePKPdf	PKiKP	01 41 16.2	-0.3
NOA	NORSAR Array B	127.11	345	PKP	PKiKP	01 41 16.2	-0.3
NOA	NORSAR Array B	127.11	345	PKP	PKiKP	01 41 16.2	-0.3
	comp=Z,4.9nm,0.8s,baz=33,slow=1.9,SNR=9.6						
AKASG	Malin Array Be	127.23	327	PKP	PKiKP	01 41 16.8	-0.2
AKASG	Malin Array Be	127.23	327	PKP	PKiKP	01 41 16.8	-0.2
	comp=Z,3.9nm,0.7s,baz=55,slow=2.2,SNR=8.5						
AKBB	Malin Array Si	127.23	327	ePKPdf	PKiKP	01 41 16.8	-0.1
AKBB	Malin Array Si	127.23	327	ePKIKP	PKiKP	01 41 16.8	-0.1
AK11	Malin Array Si	127.28	327	ePKPdf	PKiKP	01 41 17.0	-0.1
SUW	Suwalki	128.25	333	ePKPdf	PKiKP	01 41 19.4	+0.5
SUW	Suwalki	128.25	333	ePKIKP	PKiKP	01 41 19.4	+0.5
BR101	Keskin Array S	129.28	312	ePKPdf	PKPdf	01 41 20.0	-0.9
BRTR	Keskin Array B	129.28	312	PKP	PKPdf	01 41 20.0	-0.9
BRTR	Keskin Array B	129.28	312	PKP	PKPdf	01 41 20.0	-0.9
	comp=Z,2.8nm,1.0s,baz=144,slow=3.7,SNR=4.7						
SJG	San Juan	129.48	76	ePKPdf	PKiKP	01 41 23.5	+1.1
SJG	San Juan	129.48	76	PKP	PKiKP	01 41 23.5	+1.1
	comp=Z,24nm,1.0s,baz=196,slow=1.0						
HUMP	Col San Antoni	129.76	76	ePKPdf	PKPdf	01 41 21.9	-0.2
BUR04	Bucovina Ar. S	131.13	325	ePKPdf	PKPdf	01 41 23.6	-0.5
KWP	Kalwaria Pacla	131.27	329	eSKKPdf	SKPab	01 44 48.4	+1.7
UZH	Uzhgorod	132.11	328	ePKIKP	PKPdf	01 41 24.0	-1.7
UZH				i		01 41 34.5	
PTGA	Pitinga	132.95	102	PKP	PKPdf	01 41 28.8	+0.4
PTGA	Pitinga	132.95	102	PKP	PKPdf	01 41 28.8	+0.4
	comp=Z,4.7nm,0.5s,baz=239,slow=3.9,SNR=11						
VYHS	Vyhne	133.95	330	ePKIKP	PKiKP	01 41 30.1	-0.5
VYHS	Vyhne	133.95	330	ePKP	PKiKP	01 41 30.1	-0.5
KOLL	Kolacno	134.11	330	ePKIKP	PKiKP	01 41 31.3	+0.4
KOLL	Kolacno	134.11	330	ePKP	PKiKP	01 41 31.2	+0.4
BRG	Berggiesshubel	134.46	335	PG	Pdif	01 38 28.2	-2.2
BRG	Berggiesshubel	134.46	335	P	Pdif	01 38 28.2	-2.2
CLL	Collm	134.50	336	ePKPdf	PKiKP	01 41 32.0	+0.4
	comp=Z,36nm,1.4s						
CLL				e		01 41 39.0	
CLL	Collm	134.50	336	ePKIKP	PKiKP	01 41 32.0	+0.4
CLL				e		01 41 39.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
CLL	Collm	134.50	336	ePKKPdf	PKiKP	01 41 32.0	+0.4
MODS	Modra-Piesok	134.79	331	ePKIKP	PKiKP	01 41 32.0	-0.3
MODS	Modra-Piesok	134.79	331	ePKP	PKiKP	01 41 32.0	-0.3
ZST	Bratislava	135.00	331	ePKP	PKPdf	01 41 31.7	+0.5
VTS	Vitosha	135.05	321	ePKPdf	PKiKP	01 41 33.8	+0.6
VTS	Vitosha	135.05	321	ePKIKP	PKiKP	01 41 33.8	+0.6
KHC	Kasperske Hory	135.93	334	ePKPDF	PKiKP	01 41 35.0	+0.4
KHC				epPKP	pPKPdf	01 41 41.0	-2.4
KHC	Kasperske Hory	135.93	334	ePKIKP	PKiKP	01 41 35.0	+0.4
KHC				e		01 41 41.0	
GEC2	GERESS Array S	136.10	334	ePKPdf	PKiKP	01 41 34.5	-0.5
GEC2	GERESS Array S	136.10	334	ePKIKP	PKiKP	01 41 34.5	-0.5
GERES	GERESS Array B	136.10	334	PKP	PKiKP	01 41 34.5	-0.5
GERES	GERESS Array B	136.10	334	PKP	PKiKP	01 41 34.5	-0.5
	comp=Z,8.0nm,0.9s,baz=70,slow=1.6,SNR=8.5						
GEA0	GERESS Array S	136.10	334	ePKPdf	PKiKP	01 41 35.4	+0.3
DIVS	Divibare	136.14	324	ePKPdf	PKiKP	01 41 35.6	+0.3
BDFB	Brasilia	137.04	128	ePKPdf	PKPdf	01 41 36.2	+0.1
BDFB	Brasilia	137.04	128	PKP	PKPdf	01 41 36.2	+0.1
	comp=Z,14nm,0.9s,baz=176,slow=5.0,SNR=4.9						
FUORN	Ofenpass-Fuorn	139.29	334	ePKPdf	PKiKP	01 41 42.1	+0.3
BNI	Bardonecchia	142.04	336	ePKPdf	PKiKP	01 41 48.3	+0.9
BNI	Bardonecchia	142.04	336	ePKIKP	PKiKP	01 41 48.3	+0.9
CLTB	Caltabellotta	144.22	321	ePKPdf	PKPbc	01 41 46.8	+0.2
KEST	Kesra	147.77	322	ePKPdf	PKPdf	01 41 52.4	-2.1
KEST				ePKPbc	PKiKP	01 41 58.5	-0.8
KEST	Kesra	147.77	322	PKPbc	PKPbc	01 41 57.5	+0.1
	comp=Z,84nm,0.9s,baz=282,slow=1.6,SNR=15						
ES19	SONSECA Array	150.43	344	ePKPdf	PKPdf	01 41 58.9	+0.3
ES19				ePKPbc	PKiKP	01 42 04.7	0.0
ESDC	Sonseca Array	150.47	344	ePKPbc	PKiKP	01 42 04.8	0.0
ESDC	Sonseca Array	150.47	344	PKPbc	PKiKP	01 42 04.8	0.0
	comp=Z,8.3nm,0.8s,baz=23,slow=2.4,SNR=8.1						
MTE	Manteigas	150.58	350	ePKPdf	PKPdf	01 41 57.5	-1.4
MTE				ePKPbc	PKiKP	01 42 05.3	+0.3
PAB	San Pablo	150.69	344	ePKPbc	PKiKP	01 42 05.4	+0.1
PAB	San Pablo	150.69	344	ePKIKP	PKiKP	01 42 05.4	+0.1
CART	Cartagena	151.41	338	ePKPab	PKPab	01 42 15.7	+1.3
RCBR	Riachuelo	152.42	127	ePKPbc	PKPbc	01 42 09.3	0.0
RCBR	Riachuelo	152.42	127	ePKIKP	PKPbc	01 42 09.3	0.0
TORD	Torodi Ar. Bea	164.37	278	PKP	PKPdf	01 42 17.2	+0.7
TORD	Torodi Ar. Bea	164.37	278	PKP	PKPdf	01 42 17.2	+0.7
	comp=Z,9.6nm,1.0s,baz=38,slow=1.1,SNR=4.2						
TOA1	Torodi Ar. Sit	164.37	278	ePKPdf	PKPdf	01 42 17.2	+0.6

BJI ***06*** *01:23:17.4, 11.°24S×165.°00E, h10^{km}, mB7.2/44, mb6.0/73, Ms7.3/57, Ms7 7.1/51*

IDC ***06*** *01:23:17.9±0.3, 11.°11S×164.°98E, h0^{km}, mb5.9/37, mb1 6.0/39, mb1mx6.0/40, mbtmp5.9/39, ML6.0/2, MS6.8/4, Ms1 6.8/4, ms1mx6.1/43, Error ellipse: s-maj=12.4km s-min=9.7km az=61.0*

NEIC ***06*** *01:23:19.0±0.0, 11.°63S×164.°31E, h11^{km}, Moment Tensor Solution. s2 Moment tensor: Scale 10^{19}Nm; M_{rr}-4.96; $M_{\theta\theta}$1.32; $M_{\phi\phi}$3.64; $M_{r\theta}$0.02; $M_{\theta\phi}$-2.95; $M_{\phi r}$1.99; Best double couple: $M_0$5.70000×10^{19} NP1:ϕ_s158.00000°, δ55.00000°, λ-74.00000°. NP2:ϕ_s312.00000°, δ38.00000°, λ-111.00000°. Principal axes: T 5.9000, Plg8.0000°, Azm237.0000°; N -0.4300, Plg12.0000°, Azm329.0000°; P -5.4600, Plg74.0000°, Azm113.0000°;*

NEIC ***06*** *01:23:19.8±0.1, 11.°18S×164.°88E, h10^{km}, mb6.6/299, MW7.1 Error ellipse: s-maj=3.9km s-min=3.3km az=150.0*

ISCJB ***06*** *01:23:21.9±0.1, 11.°20S±0.°02×164.°81E±0.°02, h34^{km}, mb6.4/420, MS6.7/33, Error ellipse: s-maj=3.0km s-min=2.4km az=157.7*

MOS ***06*** *01:23:22.4±1.4, 10.°98S×164.°84E, h34^{km}, mb6.7/96, MS6.4/12, Error ellipse: s-maj=6.6km s-min=5.4km az=110.7*

GCMT ***06*** *01:23:29.8±0.2, 11.°32S±0.°02×164.°86E±0.°01, h22^{km}, MW7.1/128, Moment Tensor Solution. s44,c47; s128,c378; Duration: 8.^{s}6 Moment tensor: Scale 10^{19} Nm; M_{rr}-5.42±.12; $M_{\theta\theta}$0.63±.07; $M_{\phi\phi}$4.79±.08; $M_{r\theta}$-0.04±.21; $M_{\theta\phi}$-1.51±.05; $M_{\phi r}$1.39±.16; Best double couple: $M_0$5.52700×10^{19} NP1:ϕ_s166.00000°, δ52.00000°, λ-85.00000°. NP2:ϕ_s338.00000°, δ38.00000°, λ-96.00000°. Principal axes: T 5.4450, Plg7.0000°, Azm253.0000°; N 0.1690, Plg4.0000°, Azm343.0000°; P -5.6100, Plg82.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 01:23:23.6±0.1**, 11.°26S**±0.°03×**164.°93E**±0.°04**, h34**^{km}**, n2112, σ1.^{s}88**/2122**, mb6.5**/416**, MS6.8**/33**, 63C-54D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.23	290	ePn	Pn	01 24 37.4	-2.0
HNR				eSn	Sn	01 25 42.3	+3.7
HNR	Honiara	5.23	290	eP	Pn	01 24 37.4	-2.0
HNR				e		01 25 42.3	
HNR	Honiara	5.23	290	Pn	Pn	01 24 36.8	-2.7
	381nm,0.3s,baz=169,slow=5.2,SNR=5.8						
HNR				Sn	Sn	01 25 41.2	+2.7
	4µm,0.3s,baz=360,slow=23,SNR=8.6						
MARNC	Mare, Loyalty	10.59	164	ePn	Pn	01 25 51.7	-1.3
MARNC				eSn	Sn	01 27 38.9	-12
DZM	Mont Dzumac	10.85	173	ePn	Pn	01 25 52.6	-4.1
	9µm,1.4s						
DZM	Mont Dzumac	10.85	173	ePn	Pn	01 25 55.5	-1.1
DZM				eSn	Sn	01 27 55.9	-1.1
DZM	Mont Dzumac	10.85	173	Pn	Pn	01 25 55.6	-1.1
	178nm,0.3s,baz=3.4,slow=19,SNR=15						
DZM				Sn	Sn	01 27 53.6	-3.5
	25nm,0.3s,baz=318,slow=18,SNR=2.3						
ONTNC	Ouen Toro	11.09	173	ePn	Pn	01 25 59.6	-0.2
ONTNC				eSn	Sn	01 28 01.3	-1.3
PINNC	Pines Island,	11.55	168	ePn	Pn	01 26 03.7	-2.4
MSVF	Nonsavu	14.24	118	eP	P	01 26 53.5	+3.7
MSVF	Nonsavu	14.24	118	ePn	Pn	01 26 40.8	-2.1
MSVF	Nonsavu	14.24	118	i P	Pn	01 26 44.1	+1.1
MSVF				pmax	pmax		
	comp=Z,883nm,1.0s						
FUNA	Funafuti	14.31	80	ePn	Pn	01 26 44.0	0.0
TARA	Tarawa	14.84	33	ePn	Pn	01 26 49.4	-1.7
NFK	Norfolk Island	17.92	171	P	P	01 27 31.0	+0.4
	baz=18						
PATS	Pohnpei	19.14	340	P	Pn	01 27 45.4	+0.2
	baz=19,SNR=9.9						
PATS	Pohnpei	19.14	340	eP	Pn	01 27 45.2	+0.1
	comp=Z,6µm,1.2s						
EIDS	Eidsvold	19.21	221	P	Pn	01 27 46.2	+0.4
	baz=19,SNR=9.7						
CTA	Charters Tower	19.99	242	P	Pn	01 27 54.6	-0.7
	baz=20						
CTA	Charters Tower	19.99	242	P	P	01 27 53.4	-0.1
CTA	Charters Tower	19.99	242	P	P	01 27 53.4	-0.1
CTA	Charters Tower	19.99	242	P	P	01 27 53.3	-0.1
	comp=Z,954nm,0.9s,baz=69,slow=14,SNR=19						
CTAO	Charters Tower	19.99	242	eP	Pn	01 27 54.8	-0.5
KWAJ	Kwajalein Atol	20.11	8	eP	P	01 27 54.5	-0.1
	comp=Z,3µm,0.8s						
KWAJ	Kwajalein Atol	20.11	8	eP	P	01 27 54.5	-0.1
KWAJ				pmax	pmax		
	comp=Z,3µm,0.8s						
LHI	Lord Howe Isla	20.88	194	P	Pn	01 28 04.2	-1.3
	baz=21,SNR=7.5						
MTSU	Mount Surprise	21.07	249	P	P	01 28 06.1	+1.0
	baz=21,SNR=20						
COEN	Coen	21.40	260	P	P	01 28 10.6	+2.0
	baz=22,SNR=32						
RMQ	Roma	21.49	223	P	P	01 28 11.4	+1.8
	baz=22,SNR=13						
ARMA	Armidale	22.72	211	P	P	01 28 24.2	+1.4
	baz=23,SNR=14						
RAO	Raoul Island	24.01	141	eP	P	01 28 35.4	0.0
	comp=Z,2µm,0.6s						
RAO	Raoul Island	24.01	141	eP	P	01 28 35.4	0.0
RAO				pmax	pmax		
	comp=Z,2µm,0.6s						
RAO	Raoul Island	24.01	141	P	P	01 28 35.5	0.0
	comp=Z,915nm,0.9s,baz=34,slow=4.1,SNR=5.2						
MMPI	Merauke	24.34	274	P	P	01 28 44.9	+6.4
KNTN	Kanton	24.64	72	eP	P	01 28 40.0	-1.3
	comp=Z,2µm,1.0s						
QLP	Quilpie	24.75	229	P	P	01 28 43.1	+1.0
	baz=25,SNR=9.7						
OUZ	Omahuta	25.12	163	eP	P	01 28 48.0	+2.6
	comp=Z,2µm,1.1s						
NIUE	Niue	25.46	111	P	P	01 28 49.0	+0.4
	baz=25,SNR=4.4						
JAY	Jayapura	25.55	288	P	P	01 28 46.3	-3.3
QIS	Mount Isa	26.02	246	P	P	01 28 54.5	+0.7
	baz=26,SNR=16						
GENI	Genyem	26.02	287	P	P	01 28 51.3	-2.5
CMSA	Cobar Meteorol	26.90	218	P	P	01 29 02.3	+0.7
	baz=27,SNR=12						
YNG	Young	27.46	211	P	P	01 29 08.3	+1.7
	baz=28,SNR=5.9						
CNB	Canberra Magne	27.81	208	P	P	01 29 09.6	-0.2
	baz=28,SNR=7.3						
CAN	Canberra	27.99	209	P	P	01 29 13.0	+1.6
	baz=28						
CAN	Canberra	27.99	209	eP	P	01 29 14.7	+3.3
	comp=Z,903nm,1.5s						
CAN	Canberra	27.99	209	eP	P	01 29 14.7	+3.3
CAN				pmax	pmax		
	comp=Z,903nm,1.5s						
OPRZ	Ohinepanea	28.45	160	P	P	01 29 22.0	+6.6
WHRZ	Whale Island	28.60	160	P	P	01 29 21.2	+4.5
MARZ	Manawahe	28.62	160	P	P	01 29 21.9	+5.0
HAZ	Te Kaha	28.80	159	P	P	01 29 18.4	0.0
MXZ	Matakaoa Point	28.82	158	eP	P	01 29 18.4	-0.3
	comp=Z,2µm,1.1s						
MXZ	Matakaoa Point	28.82	158	P	P	01 29 17.9	-0.7
RUGZ	Raukumara Rang	28.95	159	P	P	01 29 19.5	-0.4
URZ	Urewera	29.01	160	eP	P	01 29 21.6	+1.2
	comp=Z,1µm,1.5s						
URZ	Urewera	29.01	160	P	P	01 29 20.7	+0.3
	comp=Z,161nm,0.6s,baz=68,slow=6.2,SNR=13						
URZ	Urewera	29.01	160	P	P	01 29 20.6	+0.3
WMGZ	Waiomatatini S	29.08	158	P	P	01 29 19.8	-1.2
MWZ	Matawai	29.22	159	P	P	01 29 22.5	+0.2
TWGZ	Tauwhareparae	29.24	159	P	P	01 29 22.6	+0.2
PUZ	Puketiti	29.25	158	P	P	01 29 21.1	-1.3
RTZ	Ruatahuna	29.29	160	P	P	01 29 23.0	+0.1
MILA	Mila	29.35	206	P	P	01 29 24.7	+1.2
	baz=30,SNR=11						
TKGZ	Te Karaka	29.43	159	P	P	01 29 22.9	-1.1
H11S2	WAKE ISLAND Hy	29.61	3	T	T	02 00 53.4	
	baz=184,slow=76,SNR=74						
H11S3	WAKE ISLAND Hy	29.61	3	T	T	02 00 52.8	
	baz=184,slow=76,SNR=75						
H11S1	WAKE ISLAND Hy	29.63	3	T	T	02 00 49.3	
	baz=184,slow=76,SNR=79						
BKZ	Black Stump Fm	29.64	162	eP	P	01 29 26.7	+0.7
	comp=Z,844nm,1.1s						
BKZ				eS	S	01 34 23.4	+4.1
STKA	Stephens Creek	29.74	223	P	P	01 29 26.8	-0.1
	baz=30,SNR=19						
STKA	Stephens Creek	29.74	223	eP	P	01 29 28.1	+1.3
	comp=Z,91nm,1.0s						
STKA	Stephens Creek	29.74	223	eP	P	01 29 28.2	+1.3
STKA				pmax	pmax		
	comp=Z,91nm,1.0s						
STKA	Stephens Creek	29.74	223	P	P	01 29 26.8	-0.1
	comp=Z,113nm,0.7s,baz=47,slow=9.5,SNR=14						
WAKE	Wake Island	30.39	3	eP	P	01 29 34.6	+1.9
	comp=Z,2µm,1.3s						
WR0	Warramunga Arr	30.48	250	P	P	01 29 34.0	+0.5
	baz=31						
WRAB	Tennant Creek	30.65	250	eP	P	01 29 33.9	-1.2
	comp=Z,2µm,1.4s						
WRAB	Tennant Creek	30.65	250	ceP	P	01 29 36.6	+1.5
WRAB				pmax	pmax		
	comp=Z,2µm,1.5s						
WB2	Warramunga Arr	30.65	250	eP	P	01 29 34.2	-0.9
	comp=Z,2µm,1.4s						
WRA	Warramunga Arr	30.66	250	P	P	01 29 34.6	-0.6
WRA	Warramunga Arr	30.66	250	P	P	01 29 34.6	-0.6
WRA	Warramunga Arr	30.66	250	P	P	01 29 34.6	-0.6
	comp=Z,236nm,0.9s,baz=81,slow=9.5,SNR=23						
WRA				PcP	PcP	01 32 34.8	+1.8
	comp=Z,93nm,0.9s,baz=77,slow=2.6,SNR=0.5						
WRA				LR	LR	01 40 36.1	
	comp=Z,150µm,21.9s,baz=80,slow=34						
H11N1	WAKE ISLAND Hy	30.84	4	P	P	01 29 35.9	-0.5
	baz=204,slow=12,SNR=4.3						
H11N1				T	T	02 02 21.8	
	baz=184,slow=76,SNR=50						
H11N3	WAKE ISLAND Hy	30.84	4	P	P	01 29 38.7	+2.3
	baz=204,slow=12,SNR=5.6						
H11N3				T	T	02 02 13.7	
	baz=184,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	30.85	4	P	P	01 29 38.3	+1.8
	baz=204,slow=12,SNR=2.8						
H11N2				T	T	02 02 17.2	
	baz=184,slow=76,SNR=28						
BFZ	Birch Farm	30.96	163	eP	P	01 29 40.0	+2.4
	comp=Z,2µm,1.3s						
TOO	Toolangi	31.48	210	P	P	01 29 42.1	-0.2
	baz=32,SNR=21						
GUMO	Guam	31.71	321	eP	P	01 29 42.9	-1.4
	comp=Z,368nm,0.8s						
GUMO	Guam	31.71	321	P	P	01 29 42.6	-1.8
GUMO				pmax	pmax		
	comp=Z,305nm,0.6s						
GUMO				MLR	MLR		
	comp=Z,103µm,21.6s						
GUMO	Guam	31.71	321	P	P	01 29 42.6	-1.8
	comp=Z,305nm,0.6s,baz=180,slow=24,SNR=16						
GUMO				LR	LR	01 41 38.0	
	comp=Z,103µm,21.6s,baz=133,slow=35						
KHZ	Kahutara	31.94	168	eP	P	01 29 47.0	+0.9
	comp=Z,715nm,1.5s						
AS01	Alice Springs	31.94	243	eP	P	01 29 45.2	-1.3
AS31	Alice Springs	31.98	243	eP	P	01 29 46.6	-0.2
	comp=Z,160nm,1.0s						
ASAR	Alice Springs	31.98	243	P	P	01 29 47.1	+0.3
ASAR	Alice Springs	31.98	243	P	P	01 29 47.1	+0.3
ASAR	Alice Springs	31.98	243	P	P	01 29 47.1	+0.3
	comp=Z,124nm,0.6s,baz=75,slow=9.3,SNR=16						
ASAR				PcP	PcP	01 32 38.0	+1.5
	comp=Z,111nm,0.9s,baz=83,slow=2.7,SNR=8.5						
FOZ	Fox Glacier	32.43	173	eP	P	01 29 50.5	0.0
	comp=Z,443nm,0.8s						
HTT	Hallett	32.47	223	P	P	01 29 50.6	-0.4
	baz=33,SNR=23						
RPZ	Rata Peaks	32.77	172	eP	P	01 29 50.3	-3.2
	comp=Z,427nm,0.8s						
RPZ	Rata Peaks	32.77	172	P	P	01 29 52.2	-1.3
	comp=Z,249nm,0.7s,baz=311,slow=3.2,SNR=14						
ARPS	Mount Arapiles	32.84	216	P	P	01 29 54.1	0.0
	baz=33,SNR=9.6						
CRLZ	Canterbury Las	32.88	170	eP	P	01 29 57.2	+2.9
	comp=Z,2µm,1.5s						
MQZ	McQueen's Vall	33.02	170	eP	P	01 29 55.9	+0.3
	comp=Z,488nm,0.9s						
SAUI	Saumlaki	33.30	273	eP	P	01 29 57.8	-0.7
	comp=Z,641nm,0.9s						
SAUI	Saumlaki	33.30	273	P	P	01 30 04.0	+5.5
LBZ	Lake Benmore	33.32	173	eP	P	01 30 01.2	+3.0
	comp=Z,112nm,0.8s						
ANA2	Anatahan	33.37	325	eP	P	01 30 02.4	+3.5
	comp=Z,517nm,0.8s						
SARN	Sarigan	33.62	325	eP	P	01 30 00.2	-0.9
	comp=Z,1µm,1.4s						
WKZ	Wanaka	33.63	175	eP	P	01 30 04.4	+3.4
	comp=Z,486nm,1.0s						
ODZ	Otahua Downs	34.02	173	eP	P	01 30 06.5	+2.2
	comp=Z,166nm,1.0s						
MLZ	Mavora Lakes	34.10	176	eP	P	01 30 04.0	-1.1
	comp=Z,498nm,1.4s						
DCZ	Deep Cove	34.14	177	eP	P	01 30 03.9	-1.5
	comp=Z,733nm,1.2s						
WHZ	Wether Hill Ro	34.61	176	eP	P	01 30 08.0	-1.4
	comp=Z,165nm,1.2s						
MOO	Moorlands	34.71	203	P	P	01 30 11.9	+1.6
	baz=35,SNR=8.7						
PYZ	Puysegur Point	34.82	178	eP	P	01 30 11.1	-0.1
	comp=Z,237nm,1.1s						
TAU	Tasmania Unive	35.06	203	eP	P	01 30 12.7	-0.6
	comp=Z,573nm,1.5s						
TAU	Tasmania Unive	35.06	203	eP	P	01 30 12.7	-0.6
TAU				pmax	pmax		
	comp=Z,573nm,1.5s						
RAR	Rarotonga	35.23	111	LR	LR	01 42 00.5	
	comp=Z,108µm,18.8s,baz=282,slow=32						
BNDI	Bandanaira	35.31	278	P	P	01 30 15.7	-0.1
PALU	Palau	35.49	300	P	P	01 30 18.9	+1.5
	baz=36,SNR=4.5						
WRKA	Warakurna	37.27	243	P	P	01 30 32.1	-0.5
	baz=37,SNR=15						
FITZ	Fitzroy Crossi	38.55	255	P	P	01 30 43.1	-0.2
	baz=39,SNR=29						
FITZ	Fitzroy Crossi	38.55	255	LR	LR	01 45 36.0	
	comp=Z,302µm,20.3s,baz=81,slow=35						
TNTI	Ternate	39.20	285	eP	P	01 30 50.6	+1.8
TNTI	Ternate	39.20	285	eP	P	01 30 47.2	-1.7
	comp=Z,389nm,1.4s						
FORT	Forrest	39.27	235	P	P	01 30 49.9	+0.7
	baz=39,SNR=11						
SANI	Sanana	39.70	280	P	P	01 30 54.4	+1.4
SOEI	Soe	39.99	268	eP	P	01 30 53.4	-2.2
	comp=Z,554nm,0.9s						
SOEI	Soe	39.99	268	P	P	01 30 54.4	-1.2
BATI	Baumata	40.54	267	P	P	01 30 59.6	-0.4
MMRI	Maumere	42.10	270	eP	P	01 31 10.0	-2.9
	comp=Z,994nm,0.9s						

MMRI	Maumere	42.10	270	P	P	01 31 13.8	+0.9
BBSI	Bau Bau	42.27	274	P	P	01 31 19.9	+5.7
MATI	Mati	42.52	293	eP	P	01 31 17.8	+1.5
EDFI	Ende, Flores	42.63	269	P	P	01 31 17.6	+0.3
LUWI	Luwuk	43.06	281	eP	P	01 31 22.2	+1.5
	comp=Z,1μm,1.1s						
LUWI	Luwuk	43.06	281	P	P	01 31 23.2	+2.5
DAV	Davao City (W)	43.18	293	P	P	01 31 22.1	+0.5
DAV	Davao City (W)	43.18	293	P	P	01 31 22.1	+0.5
	comp=Z,138nm,0.4s,baz=180,slow=20,SNR=3.3						
DAV	Davao City (W)	43.18	293	eP	P	01 31 22.6	+1.0
MCQ	Macquarie Isla	43.39	185	P	P	01 31 24.2	+1.5
	baz=44,SNR=7.0						
BASI	Baing, Sumba	43.56	267	P	P	01 31 29.2	+4.5
KCP	Kidapawan	43.60	293	⇑eP	P	01 31 25.0	0.0
SKMP	Bagumbayan, Su	43.90	292	eP	P	01 31 34.5	+7.1
BUTP	Butuan	43.96	296	eP	P	01 31 31.4	+3.6
BUKP	Musuan	43.98	294	eP	P	01 31 31.4	+3.3
CBIJ	Chichi jima	44.05	330	P	P	01 31 28.1	-0.3
JCJ	Chichijima	44.05	330	P	P	01 31 28.1	-0.3
	comp=Z,420nm,0.9s,baz=143,slow=3.0,SNR=9.7						
APSI	Ampana	44.18	280	P	P	01 31 30.8	+1.1
MRSI	Marisa	44.28	282	P	P	01 31 31.4	+1.0
MBWA	Marble Bar	44.37	251	eP	P	01 31 29.0	-2.1
	comp=Z,1μm,1.0s						
MBWA	Marble Bar	44.37	251	eP	P	01 31 33.5	+2.4
PPT	Papeete	44.42	104	P	P	01 31 32.2	+0.6
PPT	Papeete	44.42	104	P	P	01 31 32.2	+0.6
PPT	Papeete	44.42	104	P	P	01 31 32.2	+0.6
	comp=Z,50nm,0.6s,baz=42,slow=13,SNR=6.3						
PPT2	Papeete2	44.42	104	eP	P	01 31 29.3	-2.4
	comp=Z,260nm,1.4s						
CTBH	Cotabato--PC H	44.45	293	⇑iP	P	01 31 35.8	+4.0
TIAR	Tiarei	44.64	104	eP	P	01 31 30.8	-2.5
	comp=Z,64nm,1.0s						
BKSI	Bulukumba	44.69	274	P	P	01 31 35.3	+1.6
TVO	Taravao	44.74	104	eP	P	01 31 31.8	-2.4
	comp=Z,56nm,0.9s						
BNSI	Bone	44.88	275	P	P	01 31 35.4	+0.1
TBI	Tubuai	45.00	112	eP	P	01 31 33.5	-2.5
	comp=Z,508nm,1.0s						
MSLP	Maasin	45.15	297	eP	P	01 31 36.0	-1.4
SPSI	Sidrap Palu	45.30	276	P	P	01 31 39.9	+1.3
BESP	Borongan	45.33	299	eP	P	01 31 40.1	+1.3
TTSI	Tana Toraja	45.44	277	P	P	01 31 41.1	+1.4
PAGZ	Pagadian	45.48	293	eP	P	01 31 38.0	-2.0
OCLP	Ormoc	45.79	298	eP	P	01 31 43.5	+1.1
PCI	Palu	45.93	280	P	P	01 31 48.3	+4.7
	comp=Z,2μm,1.1s						
LLP	Lapu-Lapu	46.02	296	eP	P	01 31 44.3	0.0
PMOR	Pomariorio Ree	46.03	100	eP	P	01 31 41.6	-2.7
	comp=Z,900nm,1.4s						
MEEK	Meekatharra	46.14	244	P	P	01 31 44.9	-0.2
	baz=46,SNR=14						
IPIL	Ipil	46.20	292	eP	P	01 31 44.2	-1.4
MPSI	Mapaga	46.20	281	P	P	01 31 45.3	-0.4
VAH	Vaihoa	46.28	100	eP	P	01 31 43.2	-3.1
	comp=Z,535nm,1.3s						
PLAI	Plampang	46.46	268	P	P	01 31 48.2	+0.5
GUIM	Jordan	47.37	296	eP	P	01 31 54.1	-0.7
RCP	Roxas	47.64	297	⇑eP	P	01 31 57.4	+0.4
KEKH	Kekaha	47.90	46	eP	P	01 31 56.9	-1.9
	comp=Z,552nm,0.9s						
AUQP	San Andres	48.52	299	eP	P	01 32 03.8	+0.1
BLDU	Ballidu	48.57	239	P	P	01 32 04.2	+0.3
	baz=49,SNR=8.7						
OTRP	Odiongan	48.64	298	eP	P	01 32 02.5	-2.1
NWAO	Narrogin (SRO)	48.68	236	eP	P	01 32 02.5	-2.3
	comp=Z,748nm,1.1s						
NWAO	Narrogin (SRO)	48.68	236	eP	P	01 32 02.5	-2.3
NWAO				pmax	pmax		
	comp=Z,748nm,1.1s						
KIP	Kipapa	48.77	48	eP	P	01 32 04.1	-1.4
	comp=Z,693nm,1.0s						
KIP	Kipapa	48.77	48	ceP	P	01 32 03.0	-2.5
KIP				pmax	pmax		
	comp=Z,639nm,1.3s						
MORW	Morawa	48.82	241	P	P	01 32 04.6	-1.3
	baz=49,SNR=14						
CUYO	Cuyo Island	48.85	295	eP	P	01 32 04.9	-1.4
OPA	Opana	48.94	48	eP	P	01 32 05.1	-1.7
	comp=Z,2μm,0.9s						
OPA	Opana	48.94	48	eP	P	01 32 05.1	-1.7
OPA				pmax	pmax		
	comp=Z,2μm,0.9s						
KBKI	Kotabaru	48.95	275	P	P	01 32 09.4	+2.3
SRBI	Singaraja	49.07	269	P	P	01 32 10.2	+2.2
KHLU	Kahalu`u	49.28	52	eP	P	01 32 08.2	-1.4
	comp=Z,958nm,1.4s						
MUN	Mundaring	49.29	237	P	P	01 32 08.6	-0.8
	baz=49,SNR=12						
BOAC	Boac	49.29	299	eP	P	01 32 09.0	-0.6
KHU	Kahuku	49.30	52	eP	P	01 32 08.6	-1.3
	comp=Z,3μm,1.5s						
KHU	Kahuku	49.30	52	eP	P	01 32 08.6	-1.3
KHU				pmax	pmax		
	comp=Z,3μm,1.5s						
RKGY	Rocky Gully	49.34	234	P	P	01 32 10.8	+1.1
	baz=49,SNR=10						
HUH	Hualalai	49.38	52	eP	P	01 32 09.0	-1.5
	comp=Z,784nm,1.1s						
MWH	Moku‘aweowe	49.45	52	eP	P	01 32 10.0	-1.3
	comp=Z,953nm,1.2s						
SJMP	San Jose	49.47	297	eP	P	01 32 12.3	+1.3
AIN	Ainahou	49.49	52	eP	P	01 32 10.1	-1.2
	comp=Z,993nm,1.0s						
MLOA	Mauna Loa Obse	49.49	52	eP	P	01 32 11.5	-0.1
	comp=Z,985nm,1.2s						
GIRL	Giralia	49.59	250	P	P	01 32 12.2	+0.4
	baz=50,SNR=7.5						
HMH	Humu‘ula Sheep	49.60	52	eP	P	01 32 10.4	-1.9
	comp=Z,3μm,1.4s						
MHA	Mahukona	49.62	51	eP	P	01 32 11.1	-0.9
MHA	Mahukona	49.62	51	eP	P	01 32 11.1	-0.9
MLH	Mauna Loa	49.62	52	eP	P	01 32 10.9	-1.4
	comp=Z,1μm,1.3s						
MLH	Mauna Loa	49.62	52	eP	P	01 32 11.0	-1.4
MLH				pmax	pmax		
	comp=Z,1μm,1.3s						
SDHHI	Sand Hill	49.63	52	eP	P	01 32 13.7	+1.4
	comp=Z,453nm,0.9s						
WRMHI	West Rim	49.63	52	eP	P	01 32 09.6	-2.8
	comp=Z,373nm,0.8s						
KHLH	Kahului Airpor	49.64	50	eP	P	01 32 11.4	-0.7
	comp=Z,2μm,1.3s						
RIM	Rim	49.65	52	eP	P	01 32 13.1	+0.7
	comp=Z,476nm,0.9s						
UWE	Uwekahuna	49.65	52	eP	P	01 32 14.3	+1.9
	comp=Z,706nm,1.1s						
NPH	North Pit	49.65	52	eP	P	01 32 14.1	+1.6
	comp=Z,284nm,1.0s						
NPH	North Pit	49.65	52	eP	P	01 32 14.1	+1.6
NPH				pmax	pmax		
	comp=Z,284nm,1.0s						
OBL	Observatory Le	49.65	52	eP	P	01 32 14.3	+1.8
	comp=Z,648nm,1.1s						
POHA	Pohakuloa	49.65	52	eP	P	01 32 12.7	+0.1
	comp=Z,2μm,1.4s						
KKO	Keanakako`i	49.66	52	eP	P	01 32 14.0	+1.5
	comp=Z,391nm,0.8s						
UWB	Uwekahuna B	49.66	52	eP	P	01 32 13.8	+1.2
	comp=Z,415nm,1.0s						
BYL	Byron's Ledge	49.67	52	eP	P	01 32 14.7	+2.1
	comp=Z,339nm,0.8s						
SBLHI	Steaming Bluff	49.67	52	eP	P	01 32 15.3	+2.7
	comp=Z,365nm,1.0s						
HATHI	Halema‘uma‘u T	49.67	52	eP	P	01 32 14.3	+1.7
	comp=Z,544nm,1.1s						
PUH	Pauahi	49.68	53	eP	P	01 32 12.2	-0.5
	comp=Z,2μm,1.5s						
HPAH	Hawaii Prepara	49.68	51	eP	P	01 32 12.5	-0.1
	comp=Z,1μm,1.2s						
HLK	Haleakala	49.69	50	eP	P	01 32 11.5	-1.4
	comp=Z,2μm,1.1s						
STCH	Steam Cracks	49.76	53	eP	P	01 32 15.6	+2.3
	comp=Z,592nm,0.9s						
JAGI	Jajag, Banyuwa	50.06	268	eP	P	01 32 15.8	+0.3
	comp=Z,734nm,0.9s						
BUSP	Coron	50.07	296	eP	P	01 32 13.2	-2.4
JHJ2	Mitsune	50.20	332	eP	P	01 32 18.0	+1.7
	comp=Z,1μm,1.0s						
BALP	Baler	50.61	301	eP	P	01 32 16.8	-2.8
BATP	Bataraza	50.93	291	eP	P	01 32 20.5	-1.7
CAUP	Cauayan	51.00	303	eP	P	01 32 22.7	+0.2
KDM	Kudat	51.15	288	P	P	01 32 23.5	-0.3
KKM	Kota Kinabalu	51.43	287	eP	P	01 32 24.2	-1.8
	comp=Z,910nm,1.0s						
KKM	Kota Kinabalu	51.43	287	P	P	01 32 24.3	-1.7
SGCP	Mt. Cagua	51.48	304	eP	P	01 32 24.2	-1.9
SMPP	San Manuel, Pa	51.56	301	eP	P	01 32 28.3	+1.6
H01W1	Cape Leeuwin H	51.66	234	P	P	01 32 32.6	+5.5
	baz=96,slow=7.1,SNR=11						
H01W3	Cape Leeuwin H	51.67	234	P	P	01 32 32.6	+5.5
	baz=96,slow=7.1,SNR=7.4						
H01W2	Cape Leeuwin H	51.67	234	P	P	01 32 32.7	+5.5
	baz=96,slow=7.1,SNR=6.7						
APYP	Conner	51.94	303	eP	P	01 32 31.6	+2.0
JOW	Kunigami	51.96	317	eP	P	01 32 28.7	-0.9
	comp=Z,226nm,0.9s						
SCZP	Santa Cruz	52.03	300	eP	P	01 32 32.9	+2.6
INU	Inuyama	53.35	332	eP	P	01 32 38.1	-1.6
	comp=Z,1μm,1.4s						
BTM	Bintulu	53.53	282	P	P	01 32 40.4	-1.1
UGM	Wanagama	53.69	268	eP	P	01 32 41.9	-0.8
	comp=Z,858nm,1.0s						
MJAR	Matsushiro Arr	53.79	333	P	P	01 32 40.8	-2.2
MJAR	Matsushiro Arr	53.79	333	P	P	01 32 40.8	-2.2
MJAR	Matsushiro Arr	53.79	333	P	P	01 32 40.8	-2.2
	comp=Z,101nm,1.0s,baz=167,slow=8.0,SNR=20						
MJAR				PKPPKP	P'P'df	02 03 04.8	+5.6
	comp=Z,5.1nm,1.0s,baz=105,slow=1.3,SNR=4.1						
MAJO	Matsushiro	53.80	333	eP	P	01 32 41.4	-1.6
	comp=Z,536nm,0.9s						
MAJO	Matsushiro	53.80	333	i P	P	01 32 40.6	-2.4
MAJO				pmax	pmax		
	comp=Z,682nm,1.0s						
MAJO	Matsushiro	53.80	333	eP	P	01 32 41.4	-1.6
MAT	Matsushiro	53.80	333	P	P	01 32 40.6	-2.4
MJB9	Matsu-Tunnel	53.80	333	eP	P	01 32 41.7	-1.3
	comp=Z,586nm,0.9s						
SMRI	Semarang	53.90	269	eP	P	01 32 43.6	-0.6
	comp=Z,912nm,1.2s						
TAOE	Nuku Hiva Isla	54.07	93	eP	P	01 32 42.7	-2.8
	comp=Z,872nm,1.2s						
SBUM	Sibu	54.16	281	eP	P	01 32 45.2	-0.9
	comp=Z,160nm,1.1s						
SBUM	Sibu	54.16	281	P	P	01 32 45.2	-0.9
YOJ	Yonaguni jima	54.17	311	eP	P	01 32 49.0	+3.1
	comp=Z,816nm,1.0s						
YOJ	Yonaguni jima	54.17	311	eP	P	01 32 49.0	+3.1
YOJ				pmax	pmax		
	comp=Z,816nm,1.0s						
TWG	Pinlang	54.70	308	eP	P	01 32 49.8	0.0
	comp=Z,959nm,1.0s						
JNU	Nakatsue	54.79	325	eP	P	01 32 48.4	-1.9
	comp=Z,784nm,1.0s						
JNU	Nakatsue	54.79	325	P	P	01 32 48.5	-1.9
	comp=Z,230nm,0.8s,baz=71,slow=4.4,SNR=25						
YULB	Yu-li	54.84	309	eP	P	01 32 50.5	-0.4
	comp=Z,742nm,1.3s						
NACB	Ninganchiao	55.06	310	eP	P	01 32 50.7	-1.7
	comp=Z,1μm,1.3s						
TPUB	Ta-pu	55.30	309	eP	P	01 32 52.1	-2.1
	comp=Z,889nm,1.1s						
SSLB	Suanglung	55.33	309	eP	P	01 32 54.4	0.0
	comp=Z,434nm,1.0s						
YHNB	Yeheng	55.51	310	eP	P	01 32 53.8	-1.9
	comp=Z,1μm,1.2s						
TATO	Taipei	55.60	311	eP	P	01 32 56.0	-0.3
	comp=Z,933nm,1.4s						
KSM	Kuching	55.75	280	eP	P	01 32 55.5	-2.1
	comp=Z,552nm,1.0s						
CISI	Cisompet, Garu	56.40	268	eP	P	01 32 59.8	-2.5
	comp=Z,2μm,1.4s						
ERM	Erimo	56.66	341	eP	P	01 33 02.7	-0.8
	comp=Z,342nm,1.1s						
ERM	Erimo	56.66	341	i P	P	01 33 02.5	-1.0
ERM				pmax	pmax		
	comp=Z,405nm,1.1s						
YUK	Yuzh-Kuril'sk	57.70	344	i P	P	01 33 08.7	-2.1
RKT	Rikitea	58.27	110	eP	P	01 33 13.5	-1.8
	comp=Z,212nm,1.3s						
KUR	Kuril'sk	58.30	346	⇑iP	P	01 33 14.2	-0.8
ASAJ	Asahikawa	58.73	341	P	P	01 33 17.5	-0.5
ASAJ	Asahikawa	58.73	341	P	P	01 33 17.5	-0.5
ASAJ				pmax	pmax		
	comp=Z,343nm,1.0s						
ASAJ	Asahikawa	58.73	341	P	P	01 33 17.5	-0.5
	comp=Z,343nm,1.0s,baz=211,slow=14,SNR=12						
SSE	Sheshan	59.45	316	P	P	01 33 21.6	-1.7
SSE				pmax	pmax		
	comp=Z,34nm,1.2s						
SSE				pmax	pmax		
	comp=Z,5μm,8.3s						
SSE	Sheshan	59.45	316	eP	P	01 33 22.2	-1.0
	comp=Z,2μm,1.4s						
KSRS	Korea Array	59.60	326	P	P	01 33 23.0	-1.2
KSRS				pmax	pmax		
	comp=Z,59nm,0.8s						
KSRS	Korea Array	59.60	326	P	P	01 33 23.0	-1.2
	comp=Z,136nm,1.1s,baz=137,slow=6.5,SNR=24						
KSRS				PKP2bc		02 02 56.9	
	comp=Z,11nm,1.2s,baz=311,slow=3.5,SNR=7.5						
KS15	Wonju Array Si	59.62	326	eP	P	01 33 23.8	-0.5
KSAR	Wonju Array Be	59.62	326	P	P	01 33 23.0	-1.3
KSAR	Wonju Array Be	59.62	326	P	P	01 33 23.0	-1.3
KS01	Wonju Array Si	59.63	326	eP	P	01 33 22.4	-2.0
MCO	Taipa Grande	60.31	304	P	P	01 33 29.0	-0.4
GZH	Guangzhou	60.94	304	P	P	01 33 33.3	-0.3
GZH				PP	PP	01 35 46.1	-2.2
GZH				S	S	01 41 50.4	+0.6
GZH				LR	LR		
	comp=Z,60μm,15.4s						
GZH				LR	LR		
	comp=Z,55μm,15.2s						
YSS	Yuzh-Sakhalins	61.25	343	eP	P	01 33 34.7	-0.5
	comp=Z,1μm,1.4s						
YSS	Yuzh-Sakhalins	61.25	343	⇑eP	P	01 33 34.6	-0.6
YSS				e		01 34 15.4	
YSS				e		01 35 58.1	
YSS				ePPP	PPP	01 37 14.8	
YSS				eS	S	01 41 51.5	-1.3
YSS				eSS	SS	01 45 55.0	+1.2
YSS				eSSS	SSS	01 48 21.0	
YSS				pmax	pmax		
	comp=Z,70nm,1.3s						
YSS				pmax	pmax		
	comp=N,80nm,1.4s						
YSS				pmax	pmax		
	comp=E,50nm,1.3s						
YSS				pmax	pmax		
	comp=Z,37μm,11.1s						
YSS				MLR	MLR		
	comp=Z,43μm,15.0s						
YSS				MLR	MLR		
	comp=N,37μm,16.0s						
TEY	Ternei	61.61	338	⇓eP	P	01 33 35.4	-2.3
TEY				pmax	pmax		
	comp=E,10.0nm,2.7s						
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
TEY				MLR	MLR		
	comp=E,2μm,17.0s						
TEY				MLR	MLR		
	comp=N,3μm,16.0s						
TEY				MLR	MLR		
	comp=Z,5μm,16.0s						
NJ2	Nanjing	61.61	316	eP	P	01 33 37.6	-0.4
NJ2				pP	pP	01 33 41.0	-5.8
NJ2				PP	PP	01 35 53.4	-0.6
NJ2				S	S	01 42 01.7	+3.7
NJ2				pmax	pmax		
	comp=Z,320nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,29μm,7.8s						
NJ2				LR	LR		
	comp=Z,138μm,16.2s						
NJ2				LR	LR		
	comp=Z,133μm,19.1s						
NJ2				LR	LR		
	comp=Z,189μm,18.6s						
MSHR	Mys Shultsa	61.87	332	i P	P	01 33 37.5	-2.0
VLA	Vladivostok	61.96	333	⇑iP	P	01 33 39.7	-0.4
VLA				pmax	pmax		
	comp=Z,678nm,1.4s						
QIZ	Qiongzhong	62.08	299	eP	P	01 33 40.9	-0.5
	comp=Z,382nm,1.1s						
MYKOM	Kota Tinggi	62.09	278	eP	P	01 33 40.1	-1.5
	comp=Z,315nm,1.1s						
MYKOM	Kota Tinggi	62.09	278	P	P	01 33 40.5	-1.1
SKR	Severo-Kuril’s	62.16	354	eP	P	01 33 41.7	+0.5
SKR				pmax	pmax		
	comp=Z,579nm,1.8s						
KGM	Kluang	62.65	278	P	P	01 33 44.3	-1.1
USA0B	Ussuriysk Arra	62.78	334	eP	P	01 33 45.1	-0.4
	comp=Z,641nm,1.3s						
USRK	Ussuriysk Ar.	62.78	334	P	P	01 33 44.5	-1.1
USRK	Ussuriysk Ar.	62.78	334	P	P	01 33 44.5	-1.1
	comp=Z,141nm,0.9s,baz=128,slow=4.4,SNR=22						
USRK				PKPPKP		02 02 44.0	
	comp=Z,3.7nm,0.8s,baz=323,slow=2.9,SNR=4.6						
WHN	Wuhan	63.94	312	P	P	01 33 52.0	-1.5
MDJ	Mudanjiang	64.17	333	P	P	01 33 52.5	-2.2
MDJ				S	S	01 41 33.2	-56
MDJ				pmax	pmax		
	comp=Z,110nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,26μm,9.2s						
MDJ				LR	LR		
	comp=N,77μm,15.3s						
MDJ				LR	LR		
	comp=E,21μm,10.2s						
MDJ				LR	LR		
	comp=Z,113μm,15.2s						
MDJ	Mudanjiang	64.17	333	P	P	01 33 55.5	+0.8
MDJ				PP	PP	01 36 16.9	+0.6
MDJ				S	S	01 42 34.4	+4.8
MDJ				SS	SS	01 46 45.3	+5.7
MDJ				pmax	pmax		
	comp=Z,190nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,26μm,8.2s						
MDJ				LR	LR		
	comp=Z,59μm,13.3s						
MDJ				LR	LR		
	comp=Z,64μm,13.1s						
MDJ				LR	LR		
	comp=Z,85μm,15.5s						
MDJ	Mudanjiang	64.17	333	eP	P	01 33 54.1	-0.6
	comp=Z,853nm,1.4s						
DL2	Dalian	64.17	324	P	P	01 33 53.2	-1.7
DL2				eS	S	01 42 29.2	-0.6
DL2				pmax	pmax		
	comp=Z,150nm,1.5s						
DL2				pmax	pmax		
	comp=Z,9μm,10.8s						
DL2				LR	LR		
	comp=Z,38μm,13.7s						
DL2				LR	LR		
	comp=Z,54μm,14.7s						
DL2				LR	LR		
	comp=Z,57μm,16.6s						
PET	Petropavlovsk	64.25	356	eP	P	01 33 55.7	+0.7
	comp=Z,188nm,1.0s						
PET	Petropavlovsk	64.25	356	eP	P	01 33 55.7	+0.7
PET				eS	S	01 42 32.5	+2.3
PET				pmax	pmax		
	comp=Z,429nm,1.5s						
PEA0B	Petropavlovsk-	64.41	355	eP	P	01 33 56.4	+0.2
	comp=Z,810nm,1.3s						
PETK	Petropavlovsk-	64.41	355	eP	P	01 33 55.0	-1.1
PETK	Petropavlovsk-	64.41	355	eP	P	01 33 55.0	-1.1
PETK	Petropavlovsk-	64.41	355	P	P	01 33 56.1	-0.1
	comp=Z,95nm,0.9s,baz=128,slow=6.6,SNR=18						
PETK				PKP2bc		02 02 49.0	
	comp=Z,22nm,1.2s,baz=59,slow=5.6,SNR=5.2						
BKNI	Bangkinang	64.49	276	eP	P	01 33 58.5	+1.0
	comp=Z,1μm,1.0s						
FRIM	Kepong	64.59	279	P	P	01 33 57.1	-1.1
KIWB	Kanaga Island	64.73	12	eP	P	01 34 01.0	+2.7
TYV	Tymovskoe	64.83	345	eP	P	01 33 59.7	+0.8
TYV				eS	S	01 42 42.7	+5.1
TYV				pmax	pmax		
	comp=Z,373nm,2.0s						
TYV				pmax	pmax		
	comp=Z,12μm,6.8s						
TYV				smax	smax		
	comp=N,66μm,10.9s						
ADK	Adak	64.86	12	eP	P	01 33 60.0	+0.9
	comp=N,873nm,1.2s						
ADK	Adak	64.86	12	eP	P	01 34 00.0	+0.9
ADK				pmax	pmax		
	comp=Z,873nm,1.2s						
SNY	Shenyang	65.07	327	⇓P	P	01 33 59.8	-0.9
SNY				pmax	pmax		
	comp=Z,250nm,2.5s						
TIA	Tai'an	65.24	319	P	P	01 33 59.7	-2.3
TIA				S	S	01 42 43.8	+0.6
TIA				pmax	pmax		
	comp=Z,79nm,2.3s						
TIA				LR	LR		
	comp=Z,57μm,17.2s						
TIA				LR	LR		
	comp=Z,54μm,16.7s						
TIA				LR	LR		
	comp=Z,81μm,19.1s						
IPM	Ipoh	65.47	280	eP	P	01 34 02.3	-1.6
	comp=Z,808nm,1.2s						
IPM	Ipoh	65.47	280	P	P	01 34 02.7	-1.2
CN2	Changchun	65.52	330	eP	P	01 34 02.1	-1.5
CN2				eS	S	01 42 44.9	-1.3
CN2				pmax	pmax		
	comp=Z,170nm,1.3s						
CN2				LR	LR		
	comp=Z,62μm,15.0s						
CN2				LR	LR		
	comp=Z,67μm,15.0s						
CN2				LR	LR		
	comp=Z,97μm,17.0s						
ATKA	Atka Island	65.72	14	eP	P	01 34 04.9	+0.2
	comp=Z,1μm,1.4s						
CASY	Casey	65.89	201	eP	P	01 34 04.5	-1.1
	comp=Z,692nm,1.4s						
KULM	Kulim	66.03	281	eP	P	01 34 07.4	-0.1
	comp=Z,825nm,1.4s						
KULM	Kulim	66.03	281	P	P	01 34 06.6	-0.9
VNDA	Vanda	66.27	181	eP	P	01 34 06.5	-1.4
	comp=Z,610nm,1.1s						
VNDA	Vanda	66.27	181	eP	P	01 34 06.5	-1.4
VNDA				pmax	pmax		
	comp=Z,611nm,1.1s						
VNDA	Vanda	66.27	181	P	P	01 34 08.6	+0.6
	comp=Z,214nm,1.1s,baz=351,slow=6.2,SNR=10						
VNDA				PKP2bc		02 02 44.1	
	comp=Z,8.7nm,1.1s,baz=248,slow=2.2,SNR=5.0						
COCO	West Island	66.51	262	eP	P	01 34 11.0	+0.4
	comp=Z,2μm,1.2s						
SBA	Scott Base	66.59	180	eP	P	01 34 10.1	+0.1
	comp=Z,1μm,1.4s						
SBA	Scott Base	66.59	180	eP	P	01 34 10.1	+0.1
SBA				pmax	pmax		
	comp=Z,1μm,1.4s						
KLR	Kul'dur	66.94	337	i P	P	01 34 10.7	-1.8
KLR	Kul'dur	66.94	337	PKP2bc	P'P'bc	02 02 41.4	-0.1
	comp=Z,36nm,1.3s,baz=328,slow=5.3,SNR=7.6						
ENH	Enshi	67.41	309	eP	P	01 34 14.2	-1.8
	comp=Z,1μm,1.0s						
NKL	Nikolayevsk	67.42	344	eP	P	01 34 14.0	-1.5
NKL				pmax	pmax		
	comp=N,190nm,1.0s						
NKL				pmax	pmax		
	comp=Z,550nm,1.0s						
NIKH	Nikolski High	67.80	17	eP	P	01 34 15.8	-2.2
	comp=Z,2μm,1.0s						
GYA	Guiyang	67.88	305	⇑iP	P	01 34 18.3	-0.9
GYA				PP	PP	01 36 53.2	+3.9
GYA				S	S	01 43 18.6	+2.8
GYA				SKS	SKKSac	01 44 15.5	+0.1
GYA				SS	SS	01 47 42.2	+4.0
GYA				pmax	pmax		
	comp=Z,290nm,1.0s						
GYA				LR	LR		
	comp=Z,113μm,19.0s						
GYA				LR	LR		
	comp=Z,95μm,19.3s						
GYA				LR	LR		
	comp=Z,120μm,21.1s						
GSI	Gunungsitoli	68.08	276	eP	P	01 34 18.9	-1.7
	comp=Z,1μm,1.2s						
BJT	Baijiatuau	68.14	322	eP	P	01 34 18.9	-1.4
	comp=Z,694nm,1.4s						
BJT	Baijiatuau	68.14	322	eP	P	01 34 18.9	-1.4
BJT				pmax	pmax		
	comp=Z,694nm,1.4s						
BJI	Beijing	68.15	322	P	P	01 34 18.7	-1.7
BJI				pmax	pmax		
	comp=Z,230nm,2.8s						

BJI	Beijing	68.15	322	P	P	01 34 20.7	+0.3
BJI				pmax	pmax		
	comp=Z,230nm,2.8s						
BJI				LR	LR		
	comp=Z,7µm,16.2s						
BJI				LR	LR		
	comp=Z,9µm,17.2s						
TIY	Taiyuan	69.17	318	eP	P	01 34 27.0	0.0
TIY				pmax	pmax		
	comp=Z,420nm,1.3s						
TIY				LR	LR		
	comp=Z,40µm,16.6s						
TIY				LR	LR		
	comp=Z,57µm,17.1s						
TIY				LR	LR		
	comp=Z,70µm,16.6s						
UNV	Unalaska Valle	69.25	18	eP	P	01 34 25.1	-1.8
	comp=Z,310nm,1.0s						
XAN	Xi'an	69.67	313	P	P	01 34 28.9	-1.2
XAN				pP	sP	01 34 41.4	-1.0
XAN				S	S	01 43 33.3	-3.4
XAN				sS	sS	01 43 50.3	-1.1
XAN				ScS	SKSac	01 44 25.0	-3.5
XAN				pmax	pmax		
	comp=Z,310nm,0.8s						
XAN				pmax	pmax		
	comp=Z,28µm,12.0s						
XAN				LR	LR		
	comp=Z,53µm,15.2s						
XAN				LR	LR		
	comp=Z,34µm,16.3s						
XAN				LR	LR		
	comp=Z,68µm,18.1s						
XAN	Xi'an	69.67	313	eP	P	01 34 28.9	-1.2
	comp=Z,705nm,1.0s						
XAN	Xi'an	69.67	313	eP	P	01 34 28.9	-1.2
XAN				pmax	pmax		
	comp=Z,705nm,1.0s						
AKUT	Akutan	69.72	18	eP	P	01 34 29.1	-0.7
	comp=Z,463nm,1.1s						
KMI	Kunming	70.55	302	P	P	01 34 35.7	-0.1
KMI				pP	pP	01 34 41.0	-4.1
KMI				sP	sP	01 34 45.4	-2.5
KMI				pmax	pmax		
	comp=Z,240nm,2.0s						
KMI	Kunming	70.55	302	eP	P	01 34 35.8	-0.1
	comp=Z,1µm,1.4s						
KMI	Kunming	70.55	302	eP	P	01 34 35.8	-0.1
KMI				pmax	pmax		
	comp=Z,1µm,1.4s						
FALS	False Pass	71.06	19	eP	P	01 34 39.9	+1.9
	comp=Z,592nm,1.1s						
SPIA	Saint Paul Isl	71.20	14	eP	P	01 34 38.7	-0.1
	comp=Z,2µm,1.2s						
CM01	Chiang Mai Arr	71.44	294	eP	P	01 34 40.2	-0.9
CM31	Chiang Mai Arr	71.46	294	eP	P	01 34 41.3	0.0
CMAR	Chiang Mai Arr	71.46	294	P	P	01 34 40.9	-0.4
CMAR	Chiang Mai Arr	71.46	294	P	P	01 34 40.9	-0.4
CMAR				pmax	pmax		
	comp=Z,62nm,0.8s						
CMAR	Chiang Mai Arr	71.46	294	P	P	01 34 40.9	-0.4
	comp=Z,62nm,0.8s,baz=124,slow=4.5,SNR=25						
CMAR				PKP2bc		02 02 28.6	
	comp=Z,4.7nm,0.9s,baz=280,slow=3.5,SNR=5.9						
HHC	Hu-ho-hao-te	71.48	320	eP	P	01 34 42.8	+1.8
HHC				sP	pP	01 34 49.8	-0.2
HHC				S	S	01 44 00.3	+2.8
HHC				pmax	pmax		
	comp=Z,320nm,1.6s						
HHC				pmax	pmax		
	comp=Z,20µm,5.8s						
HHC				LR	LR		
	comp=Z,57µm,18.2s						
HHC				LR	LR		
	comp=Z,52µm,16.7s						
HHC				LR	LR		
	comp=Z,78µm,15.9s						
MA2	Magadan	71.51	352	eP	P	01 34 39.9	-0.8
	comp=Z,348nm,1.4s						
MA2	Magadan	71.51	352	ceP	P	01 34 37.8	-2.9
MA2				pmax	pmax		
	comp=Z,54nm,0.7s						
MA2	Magadan	71.51	352	P	P	01 34 38.4	-2.3
	comp=Z,38nm,0.8s,baz=163,slow=8.2,SNR=13						
CHTO	Chiang Mai	71.58	294	eP	P	01 34 41.2	-0.8
	comp=Z,557nm,1.3s						
CHTO	Chiang Mai	71.58	294	eP	P	01 34 41.2	-0.8
CHTO				pmax	pmax		
	comp=Z,557nm,1.3s						
CHTO	Chiang Mai	71.58	294	eP	P	01 34 41.9	-0.1
CD2	Chengdu	72.10	308	eP	P	01 34 45.2	+0.3
CD2				pmax	pmax		
	comp=Z,240nm,1.3s						
HIA	Hailar	72.16	331	eP	P	01 34 44.0	-0.9
	comp=Z,797nm,1.2s						
HIA	Hailar	72.16	331	i P	P	01 34 43.3	-1.6
HIA				pmax	pmax		
	comp=Z,272nm,1.0s						
ZEA	Zeya	72.23	338	eP	P	01 34 42.3	-2.8
ZEA				pmax	pmax		
	comp=N,1µm,2.0s						
ZEA				pmax	pmax		
	comp=E,1µm,2.5s						
ZEA				pmax	pmax		
	comp=Z,4µm,2.5s						
SDPT	Sand Point	72.42	20	eP	P	01 34 45.6	-0.5
	comp=Z,513nm,1.1s						
CHGN	Chignik	73.88	20	eP	P	01 34 54.3	-0.4
	comp=Z,415nm,1.1s						
LZH	Lanzhou	74.31	313	⇑P	P	01 34 58.1	+0.1
LZH				pP	pP	01 35 03.9	-3.1
LZH				sP	sP	01 35 07.1	-3.3
LZH				PP	PP	01 37 42.9	-1.6
LZH				pmax	pmax		
	comp=Z,700nm,1.8s						
LZH				pmax	pmax		
	comp=Z,5µm,6.0s						
LZH				LR	LR		
	comp=Z,8µm,17.3s						
LZH				LR	LR		
	comp=Z,10µm,17.2s						
LZH				LR	LR		
	comp=Z,13µm,19.0s						
SEY	Seymchan	74.60	354	ceP	P	01 34 56.1	-2.8
PBA	Port Blair	75.22	285	eP	P	01 35 06.0	+2.5
	comp=Z,357nm,1.0s						
SII	Sitkinak Islan	75.58	22	eP	P	01 35 03.8	-0.9
	comp=Z,953nm,1.2s						
OHAK	Old Harbor	76.40	22	eP	P	01 35 08.1	-1.2
	comp=Z,839nm,1.1s						
GAMB	Gambell	76.92	10	eP	P	01 35 11.1	-0.9
	comp=Z,1µm,1.2s						
CIT	Chita	76.94	330	eP	P	01 35 10.0	-2.6
CIT				e		01 35 29.5	
CIT				pmax	pmax		
	comp=Z,2µm,2.7s						
KDAK	Kodiak Island	77.07	22	eP	P	01 35 12.0	-1.1
	comp=Z,493nm,1.1s						
KDAK	Kodiak Island	77.07	22	ceP	P	01 35 11.8	-1.3
KDAK	Kodiak Island	77.07	22	P	P	01 35 11.8	-1.3
	comp=Z,89nm,0.9s,baz=84,slow=4.3,SNR=11						
ULN	Ulaanbaatar	78.00	324	eP	P	01 35 16.7	-2.0
	comp=Z,599nm,1.0s						
ULN	Ulaanbaatar	78.00	324	ceP	P	01 35 16.9	-1.9
ULN				pmax	pmax		
	comp=Z,267nm,1.0s						
YAK	Yakutsk	78.07	344	eP	P	01 35 17.1	-1.5
YAK				e		01 35 28.2	
YAK				e		01 38 22.7	
YAK				eS	S	01 45 12.1	+2.1
YAK				e*SS	ScS	01 46 05.7	+30
YAK				pmax	pmax		
	comp=Z,341nm,1.3s						
YAK				pmax	pmax		
	comp=N,119nm,1.5s						
YAK				pmax	pmax		
	comp=E,73nm,1.2s						
YAK				pmax	pmax		
	comp=Z,18µm,12.9s						
YAK				pmax	pmax		
	comp=E,7µm,8.6s						
YAK				pmax	pmax		
	comp=N,9µm,10.6s						
YAK				smax	smax		
	comp=N,19µm,10.1s						
YAK				MLR	MLR		
	comp=Z,109µm,21.0s						
YAK				MLR	MLR		
	comp=E,71µm,19.0s						
YAK				MLR	MLR		
	comp=N,50µm,20.0s						
SONM	Songino Array	78.36	324	P	P	01 35 20.1	-0.6
SONM	Songino Array	78.36	324	P	P	01 35 20.1	-0.6
SONM	Songino Array	78.36	324	P	P	01 35 20.1	-0.6
	comp=N,112nm,0.8s,baz=141,slow=4.6,SNR=31						
SONA1	Songino Array	78.37	324	eP	P	01 35 19.6	-1.1
SVW2	Sparrevohn	78.56	18	eP	P	01 35 20.5	-0.8
	comp=N,1µm,1.4s						
GTA	Gaotai	78.63	314	⇓P	P	01 35 21.8	-0.6
GTA				pP	PcP	01 35 26.1	-5.2
GTA				sP	pP	01 35 28.8	-2.6
GTA				S	S	01 45 18.9	+1.6
GTA				pmax	pmax		
	comp=N,91nm,1.2s						
GTA				pmax	pmax		
	comp=N,29µm,6.8s						
GTA				LR	LR		
	comp=N,41µm,18.1s						
GTA				LR	LR		
	comp=N,57µm,18.1s						
GTA				LR	LR		
	comp=N,75µm,17.8s						
QSPA	South Pole Qui	78.75	180	eP	P	01 35 21.3	-1.3
	comp=N,2µm,1.4s						
HOM	Homer	78.78	21	eP	P	01 35 21.9	-0.7
ANM	Nome	78.87	13	eP	P	01 35 22.8	-0.2
	comp=N,570nm,1.4s						
RSO	Redoubt South	78.99	20	eP	P	01 35 22.2	-1.8
BILL	Bilibino	79.09	1	eP	P	01 35 22.3	-1.8
	comp=N,1µm,1.1s						
BILL	Bilibino	79.09	1	⇓eP	P	01 35 22.1	-2.0
BILL				pmax	pmax		
	comp=Z,832nm,1.0s						
BRLK	Bradley Lake	79.12	21	eP	P	01 35 22.8	-1.7
	comp=Z,689nm,1.1s						
BRDH	Bariadhala	79.27	296	P	P	01 35 26.1	0.0
BRDH	Bariadhala	79.27	296	P	P	01 35 26.1	0.0
	comp=Z,174nm,0.6s,baz=91,slow=8.1,SNR=14						
SEW	Seward	79.87	21	eP	P	01 35 27.3	-1.1
	comp=Z,483nm,1.1s						
SHL	Shillong	79.91	299	eP	P	01 35 29.4	-0.4
	comp=Z,1µm,1.4s						
SHL	Shillong	79.91	299	eP	P	01 35 29.4	-0.4
SHL				pmax	pmax		
	comp=Z,1µm,1.4s						
BOD	Bodaibo	80.38	335	eP	P	01 35 28.9	-2.4
BOD				pmax	pmax		
	comp=Z,341nm,2.0s						
SUA	Susitna One	80.39	20	eP	P	01 35 31.3	-0.1
	comp=Z,588nm,1.5s						
RC01	Rabbit Creek A	80.47	21	eP	P	01 35 31.8	+0.1
	comp=Z,580nm,1.3s						
PPLA	Purkeypile	80.98	18	eP	P	01 35 34.2	-0.3
	comp=Z,372nm,1.4s						
PMR	Palmer	81.03	20	eP	P	01 35 33.7	-1.0
	comp=Z,562nm,1.4s						
PMR	Palmer	81.03	20	eP	P	01 35 33.7	-1.0
PMR				pmax	pmax		
	comp=Z,562nm,1.4s						
KNK	Knik Glacier	81.14	21	eP	P	01 35 35.1	-0.2
	comp=Z,246nm,1.0s						
RPN	Rapa Nui	81.20	116	P	P	01 35 36.0	-0.5
RPN	Rapa Nui	81.20	116	P	P	01 35 36.0	-0.5
RPN	Rapa Nui	81.20	116	P	P	01 35 36.0	-0.5
	baz=39,slow=6.5						
GLI	Glacier Island	81.25	22	eP	P	01 35 33.7	-2.2
	comp=Z,1µm,1.4s						
CAST	Castle Rocks	81.39	18	eP	P	01 35 37.2	+0.6
	comp=Z,405nm,1.2s						
ZAK	Zakamensk	81.42	325	eP	P	01 35 34.9	-2.3
ZAK				pmax	pmax		
	comp=Z,246nm,1.0s						
SML	Sawmill	81.45	20	eP	P	01 35 36.9	-0.1
	comp=Z,885nm,1.4s						
SML	Sawmill	81.45	20	eP	P	01 35 36.9	-0.1
SML				pmax	pmax		
	comp=Z,885nm,1.4s						
EYAK	Cordova Ski Ar	81.52	22	eP	P	01 35 35.9	-1.4
	comp=Z,738nm,1.2s						
LSA	Lhasa	81.79	302	eP	P	01 35 38.5	-1.6
	comp=Z,289nm,1.1s						
IRK	Irkutsk	81.80	327	eP	P	01 35 39.7	+0.7
IRK				pmax	pmax		
	comp=Z,992nm,3.1s						
TLY	Talaya	81.86	327	eP	P	01 35 38.0	-1.3
	comp=Z,738nm,1.1s						
TLY	Talaya	81.86	327	i P	P	01 35 39.3	0.0
TLY	Talaya	81.86	327	P	P	01 35 38.8	-0.5
	comp=Z,50nm,0.8s,baz=255,slow=2.2,SNR=19						
TLY				PKKPbc	PKKPbc	01 54 16.8	+4.1
	comp=Z,1.1nm,0.4s,baz=171,slow=2.1,SNR=4.7						
DIV	Divide	81.90	22	eP	P	01 35 37.5	-1.9
	comp=Z,726nm,1.0s						
HMT	Hamilton	81.95	23	eP	P	01 35 38.8	-0.8
	comp=Z,396nm,1.0s						
TRF	Thorofare Moun	81.97	19	eP	P	01 35 39.6	-0.2
	comp=Z,180nm,1.1s						
KLU	Klutina	82.09	21	eP	P	01 35 39.7	-0.7
	comp=Z,498nm,1.2s						
BPAW	Bear Paw Mtn.	82.23	18	eP	P	01 35 40.6	-0.4
	comp=Z,213nm,1.4s						
RDOG	Red Dog Mine	82.39	12	eP	P	01 35 41.6	-0.2
	comp=Z,1µm,1.3s						
RND	Reindeer	82.40	19	eP	P	01 35 41.4	-0.6
	comp=Z,585nm,1.3s						
RND	Reindeer	82.40	19	eP	P	01 35 41.4	-0.6
RND				pmax	pmax		
	comp=Z,585nm,1.3s						
MCK	McKinley	82.60	19	eP	P	01 35 42.3	-0.7
	comp=Z,792nm,1.4s						
MCK	McKinley	82.60	19	eP	P	01 35 42.3	-0.7
MCK				pmax	pmax		
	comp=Z,792nm,1.4s						
DHY	Denali Highway	82.65	20	eP	P	01 35 43.6	+0.2
	comp=Z,459nm,1.5s						
BWN	Browne	82.75	18	eP	P	01 35 43.6	-0.1
	comp=Z,653nm,1.1s						
IM3	Indian Mountai	82.84	16	eP	P	01 35 41.2	-3.0
HARP	HAARP	82.96	21	eP	P	01 35 47.9	+3.0
	comp=Z,470nm,1.0s						
MLY	Manley	82.98	17	eP	P	01 35 44.6	-0.4
	comp=Z,299nm,1.4s						
MCCM	Marconi Confer	83.26	49	eP	P	01 35 45.8	-1.1
	comp=Z,418nm,0.9s						
KCPM	Cahto Peak	83.28	47	eP	P	01 35 46.1	-1.1
	comp=Z,600nm,1.2s						
DIB	Dawson Inlet,	83.30	33	eP	P	01 35 45.9	-0.8
	comp=Z,532nm,1.3s						
H02S1	DAWSON INLET T	83.30	33	P	P	01 35 48.9	+2.2
JCC	Jacoby Creek,	83.36	46	eP	P	01 35 46.3	-1.0
	comp=Z,560nm,1.3s						
KMRM	Mail Ridge	83.38	47	eP	P	01 35 47.3	-0.3
	comp=Z,776nm,1.3s						
WRH	Wood River Hil	83.38	19	eP	P	01 35 49.1	+2.2
	comp=Z,256nm,1.0s						
HOPS	Hopland Field	83.41	48	eP	P	01 35 47.0	-0.7
	comp=Z,862nm,1.4s						
GDXM	Geysers	83.55	48	eP	P	01 35 48.1	-0.4
	comp=Z,234nm,1.0s						
KHMM	Horse Mountain	83.59	46	eP	P	01 35 48.5	-0.2
	comp=Z,717nm,1.4s						
MDM	Murphy Dome	83.68	18	eP	P	01 35 49.0	+0.5
	comp=Z,265nm,1.0s						
HDA	Harding Lake	83.70	19	P	P	01 35 49.6	+1.0
	baz=227						
TCOL	CIGO, UAF Yank	83.73	18	P	P	01 35 50.1	+1.3
	baz=226						
COLA	College	83.74	18	eP	P	01 35 46.7	-2.1
	comp=Z,341nm,0.9s						
COLA	College	83.74	18	i P	P	01 35 49.9	+1.2
COLA				pmax	pmax		
	comp=Z,1µm,2.3s						
COLA	College	83.74	18	eP	P	01 35 49.1	+0.3
SAO	San Andreas Ge	83.88	51	eP	P	01 35 50.1	-0.1
	comp=Z,509nm,1.4s						
KEBM	Edson Butte	83.89	44	eP	P	01 35 49.6	-0.5
	comp=Z,374nm,1.1s						
IL1	Eielson Array	83.97	19	eP	P	01 35 49.3	-0.6
ILAR	Eielson Array	83.97	19	P	P	01 35 49.1	-0.8
ILAR	Eielson Array	83.97	19	P	P	01 35 49.1	-0.8
ILAR	Eielson Array	83.97	19	P	P	01 35 49.1	-0.8
	comp=Z,74nm,0.8s,baz=231,slow=5.9,SNR=26						
ILAR				PKKPbc	PKKPbc	01 54 07.2	-1.0
	comp=Z,4.9nm,1.0s,baz=37,slow=2.2,SNR=7.2						
O02D	Mt. Diablo Mer	84.02	47	P	P	01 35 53.9	+2.9
	baz=250						
POKR	Poker Plat Res	84.03	18	P	P	01 35 51.6	+1.3
	baz=227						
CRAG	Craig	84.07	30	eP	P	01 35 53.3	+2.7
	comp=Z,209nm,1.3s						
L02E	Cave Junction	84.14	45	P	P	01 35 52.9	+1.5
	baz=249						
MAW	Mawson	84.23	202	eP	P	01 35 52.7	+1.4
	comp=Z,194nm,1.5s						
MAW	Mawson	84.23	202	P	P	01 35 51.7	+0.4
MAW				pmax	pmax		
	comp=Z,342nm,1.1s						
MAW	Mawson	84.23	202	P	P	01 35 51.7	+0.4
	comp=Z,342nm,1.1s,baz=134,slow=6.2,SNR=11						
J01E	Myrtle Point	84.27	44	P	P	01 35 53.5	+1.6
	baz=249						
K02D	Willamette Mer	84.28	45	P	P	01 35 52.7	+0.5
	baz=249						
SNCC	San Nicolas Is	84.30	55	P	P	01 35 52.9	+0.6
	baz=253						
WDC	Whiskeytown Da	84.34	47	eP	P	01 35 51.2	-1.2
	comp=Z,381nm,1.4s						
WDC	Whiskeytown Da	84.34	47	eP	P	01 35 51.2	-1.2
WDC				pmax	pmax		
	comp=Z,381nm,1.4s						
N02D	Trinity Center	84.36	46	P	P	01 35 53.0	+0.4
	baz=250						
SCRK	Sand Creek	84.39	20	eP	P	01 35 49.9	-2.4
	comp=Z,2µm,1.4s						
M02C	Callahan	84.39	46	P	P	01 35 54.2	+1.4
	baz=250						
SCZ2	Santa Cruz Isl	84.43	54	P	P	01 35 53.9	+0.9
	baz=253						
PAGB	Antelope Grade	84.48	52	eP	P	01 35 54.0	+0.7
	comp=Z,494nm,1.3s						
SBC	Santa Barbara	84.50	53	P	P	01 35 54.3	+0.9
	baz=252						
SMMC	Simmler	84.55	53	P	P	01 35 54.5	+0.9
	baz=252						
PKM	Mcpherson Peak	84.56	53	P	P	01 35 54.6	+0.7
	baz=252						
PAF	Port-aux-Franc	84.61	221	eP	P	01 35 52.0	-1.6
	comp=Z,1µm,1.5s						
PAF	Port-aux-Franc	84.61	221	eP	P	01 35 52.0	-1.6
PAF				pmax	pmax		
	comp=Z,1µm,1.5s						
YBH	Yreka Blue Hor	84.61	46	eP	P	01 35 52.9	-1.0
	comp=Z,497nm,1.3s						
I02D	Swisshome	84.67	43	P	P	01 35 55.2	+1.3
	baz=249						
COLD	Coldfoot	84.72	16	eP	P	01 35 58.0	+4.3
	comp=Z,225nm,1.4s						
HUMO	Hull Mountain	84.74	45	eP	P	01 35 54.0	-0.5
	comp=Z,370nm,1.1s						
ORV	Oroville	84.75	48	eP	P	01 35 53.0	-1.5
	comp=Z,369nm,1.3s						
ORV	Oroville	84.75	48	eP	P	01 35 53.0	-1.5
ORV				pmax	pmax		
	comp=Z,369nm,1.3s						
O03E	Paynes Creek	84.77	47	P	P	01 35 55.1	+0.4
	baz=251						
KNGR	Kungurtug, Tuv	84.80	324	i P	P	01 35 55.0	+0.3
BESE	Bessie Mountai	84.83	27	eP	P	01 35 54.5	-0.1
	comp=Z,684nm,1.4s						
RAMN	Ramite	84.85	299	eP	P	01 35 54.0	-1.6
	comp=Z,2µm,1.5s						
I03D	Drain, OR	84.86	44	P	P	01 35 56.5	+1.6
	baz=249						
JIS	Juneau Island	84.89	28	eP	P	01 35 54.0	-0.7
	comp=Z,406nm,1.3s						
PRP	Porcupine Dome	84.90	19	eP	P	01 35 54.9	0.0
	comp=Z,143nm,1.2s						
HYT	Haines Junctio	84.91	25	eP	P	01 35 54.3	-0.7
	comp=Z,390nm,1.1s						
BLG	Laguna Peak, P	84.92	54	P	P	01 35 56.7	+1.2
	baz=253						
WRAK	Wrangell Islan	84.92	30	eP	P	01 35 54.0	-1.0
	comp=Z,492nm,1.1s						
AFDM	Forest Hills D	84.94	49	eP	P	01 35 54.1	-1.4
	comp=Z,549nm,1.3s						
SCI2	San Clemente I	85.00	55	P	P	01 35 56.2	+0.2
	baz=253						
L04D	Klamath Falls	85.06	45	P	P	01 35 57.8	+1.6
	baz=250						
SKAG	Skagway	85.08	26	eP	P	01 35 54.6	-1.1
	comp=Z,353nm,1.2s						
CMB	Columbia Colle	85.09	50	eP	P	01 35 55.1	-1.2
	comp=Z,421nm,1.3s						
CMB	Columbia Colle	85.09	50	eP	P	01 35 55.1	-1.2
CMB				pmax	pmax		
	comp=Z,421nm,1.3s						
CIS	Catalina Islan	85.23	55	P	P	01 35 57.6	+0.5
	baz=253						
M04C	Macdoel	85.24	46	P	P	01 35 57.8	+0.7
	baz=250						
VOG	Valley Oaks Go	85.33	52	P	P	01 35 58.1	+0.7
	baz=252						
OSI	Osito Audit: C	85.34	54	eP	P	01 36 01.1	+3.5
	comp=Z,474nm,1.4s						
OSI	Osito Audit: C	85.34	54	P	P	01 35 59.1	+1.5
	baz=253						
JIRN	Jiri	85.39	299	eP	P	01 35 56.8	-1.7
	comp=Z,6µm,1.8s						
ARVC	Arvin	85.40	53	P	P	01 35 59.8	+1.9
	baz=253						
VES	Vestal, Richgr	85.41	52	P	P	01 35 58.9	+1.0
	baz=253						
FMP	Fort Macarthur	85.42	54	P	P	01 35 58.9	+0.9
	baz=253						
G03D	McMinnville, O	85.45	42	P	P	01 35 58.8	+1.0
	baz=249						
F03A	Seaside	85.51	42	eP	P	01 36 00.3	+2.1
	comp=Z,771nm,1.4s						
I04A	Tendick Farm,	85.53	44	P	P	01 35 59.2	+0.8
	baz=250						
DECC	Green Verdugo	85.54	54	P	P	01 36 00.1	+1.5
	baz=253						
J04D	Umpqua Nationa	85.55	44	P	P	01 35 59.0	+0.3
	baz=250						
H04D	Lebanon	85.56	43	P	P	01 35 59.4	+0.9
	baz=250						
K04D	Chiloquin, OR	85.58	45	P	P	01 35 59.5	+0.7
	baz=250						
PASC	Pasadena Art C	85.63	54	eP	P	01 35 59.9	+0.8
	comp=Z,585nm,1.5s						
FYU	Fort Yukon	85.68	18	eP	P	01 35 59.2	+0.7
	comp=Z,171nm,1.3s						
BEKR	Beckworth	85.68	48	eP	P	01 35 58.1	-1.3
	comp=Z,216nm,1.0s						
GUN	Gumba	85.72	299	eP	P	01 35 58.7	-1.4
	comp=Z,4µm,1.7s						
MWC	Mount Wilson	85.75	54	eP	P	01 35 58.8	-1.1
	comp=Z,516nm,1.2s						
PALK	Pallekele	85.79	278	eP	P	01 36 00.1	-0.2
	comp=Z,650nm,1.3s						
PALK	Pallekele	85.79	278	ceP	P	01 36 00.6	+0.3
PALK	Pallekele	85.79	278	P	P	01 35 59.6	-0.7
	comp=Z,101nm,0.8s,baz=115,slow=4.4						
ISA	Isabella, Lake	85.84	53	eP	P	01 35 58.6	-1.5
	comp=Z,559nm,1.4s						
ISA	Isabella, Lake	85.84	53	eP	P	01 35 58.6	-1.5
ISA				pmax	pmax		
	comp=Z,559nm,1.4s						
ISA	Isabella, Lake	85.84	53	P	P	01 36 00.3	+0.2
	baz=253						
NLWA	Neilton Lookou	85.84	40	eP	P	01 36 01.6	+1.8
	comp=Z,590nm,1.5s						
WHY	Whitehorse	85.91	25	eP	P	01 36 00.1	+0.1
	comp=Z,96nm,1.0s						
F04D	Rainier, OR	85.92	42	P	P	01 36 00.5	+0.3
	baz=249						
WAKR	Walker	85.94	50	eP	P	01 36 00.2	-0.5
	comp=Z,835nm,1.4s						
MDPB	Devils Postpil	85.95	51	eP	P	01 36 00.0	-0.9
	comp=Z,588nm,1.3s						
H04A	Detroit Lake	85.98	43	eP	P	01 35 58.7	-1.9
	comp=Z,393nm,1.3s						
EDW2	Edwards Air Fo	85.99	53	P	P	01 36 01.1	+0.2
	baz=253						
PNTR	Pine Nut	86.00	49	eP	P	01 36 00.5	-0.6
	comp=Z,248nm,1.1s						
OMMB	Old Mammoth Mi	86.00	51	eP	P	01 36 00.5	-0.7
	comp=Z,557nm,1.5s						
VCNR	Virginia City	86.03	49	eP	P	01 36 04.5	+3.4
	comp=Z,378nm,1.5s						
PKI	Pulchoki	86.04	299	eP	P	01 35 59.9	-1.7

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       comp=Z,2µm,1.2s
DAWY   Dawson            86.04  21   eP      P       01 36 00.2 -0.2
       comp=Z,351nm,1.3s
PKIN   Phulchoki         86.05 299   eP      P       01 35 59.4 -2.2
       comp=Z,3µm,1.6s
BFSC   Mount Baldy Ra    86.07  54    P      P       01 36 02.1 +0.7
       baz=254
MLAC   Mammoth, Mammo    86.13  51    P      P       01 36 01.8  0.0
       baz=253
109C   Camp Elliot, M    86.14  56    P      P       01 36 01.8 +0.2
       baz=254
CPE    Camp Elliot       86.14  56   eP      P       01 36 01.6  0.0
       comp=Z,369nm,1.4s
TIXI   Tiksi             86.15 349   eP      P       01 35 58.9 -1.9
       comp=Z,398nm,1.2s
TIXI   Tiksi             86.15 349 ceP       P       01 35 57.9 -2.8
TIXI                              pmax      pmax
       comp=Z,679nm,2.5s
J05D   Fort Rock, OR     86.16  45    P      P       01 36 02.6 +1.0
       baz=251
YERR   Yerington         86.24  49   eP      P       01 36 02.1 -0.1
       comp=Z,82nm,1.0s
MURC   Murrieta          86.26  55    P      P       01 36 03.7 +1.4
       baz=254
DMN    Daman             86.31 299   eP      P       01 36 01.3 -1.6
       comp=Z,2µm,1.3s
PAHR   Pah Rah Range     86.35  49   eP      P       01 36 01.5 -1.1
       comp=Z,814nm,1.4s
CWC    Cottonwood Cre    86.37  52    P      P       01 36 03.6 +0.7
       baz=253
MOD    Modoc Plateau     86.37  46   eP      P       01 36 01.2 -1.5
       comp=Z,234nm,1.1s
E04D   Cinebar           86.38  41    P      P       01 36 03.1 +0.7
       baz=250
D03D   Eldon             86.39  40    P      P       01 36 03.5 +1.0
       baz=249
LRMC   Laurel Mtn Rad    86.40  53    P      P       01 36 03.7 +0.7
       baz=254
TIN    Tinemaha, Big     86.43  51    P      P       01 36 03.9 +0.8
       baz=253
BAR    Barrett           86.44  56   eP      P       01 36 03.0 -0.1
       comp=Z,161nm,1.1s
I05D   Terrebonne, OR    86.44  44    P      P       01 36 03.4 +0.5
       baz=251
D04E   Lakebay           86.47  41    P      P       01 36 03.5 +0.7
       baz=250
PINE   Pine Mountain     86.53  44   eP      P       01 36 02.4 -1.1
       comp=Z,290nm,0.9s
BBRC   Big Bear Solar    86.67  54    P      P       01 36 05.0 +0.6
       baz=254
RYN    Ryan              86.67  50   eP      P       01 36 03.4 -0.9
       comp=Z,686nm,1.4s
DAC    Darwin (Calif)    86.70  52   eP      P       01 36 03.7 -0.8
       comp=Z,664nm,1.4s
DAC    Darwin (Calif)    86.70  52   eP      P       01 36 03.7 -0.8
DAC                               pmax      pmax
       comp=Z,664nm,1.4s
MONP2  Monument Peak     86.70  56    P      P       01 36 04.8 +0.2
       baz=254
MPMC   Manual Prospec    86.72  52    P      P       01 36 04.3 -0.3
       baz=254
G05D   Wamic, OR         86.75  43    P      P       01 36 04.9 +0.5
       baz=251
NV01   Mina Array Sit    86.77  50   eP      P       01 36 03.0 -1.9
NVAR   Mina Array Bea    86.77  50    P      P       01 36 04.0 -0.9
NVAR   Mina Array Bea    86.77  50    P      P       01 36 04.0 -0.9
       comp=Z,26nm,0.8s,baz=234,slow=7.5,SNR=20
NVAR                              PKKPbc    PKKPbc   01 54 01.9 +1.3
       comp=Z,5.6nm,0.8s,baz=141,slow=1.1,SNR=5.5
RRX    Edison Barstow    86.77  54    P      P       01 36 05.2 +0.5
       baz=254
PFO    Pinyon Flats O    86.86  55   eP      P       01 36 04.4 -0.9
       comp=Z,558nm,1.5s
PFO    Pinyon Flats O    86.86  55   eP      P       01 36 04.4 -0.9
PFO                               pmax      pmax
       comp=Z,557nm,1.5s
PFO    Pinyon Flats O    86.86  55    P      P       01 36 05.3  0.0
       baz=254
XPFO   Pion Flat         86.86  55   eP      P       01 36 04.4 -0.9
       comp=Z,596nm,1.5s
F05D   White Salmon      86.87  42    P      P       01 36 05.2 +0.3
       baz=250
NV11   Mina Array Sit    86.88  50   eP      P       01 36 04.4 -0.9
       comp=Z,68nm,1.5s
IKP    In-Ko-Pah, Jac    86.89  56    P      P       01 36 06.1 +0.7
       baz=255
LON    Longmire          86.94  41   eP      P       01 36 04.7 -0.6
       comp=Z,278nm,1.4s
LON    Longmire          86.94  41   eP      P       01 36 04.7 -0.6
LON                               pmax      pmax
       comp=Z,278nm,1.4s
D05A   Enumclaw          86.97  41   eP      P       01 36 05.0 -0.4
       comp=Z,2µm,1.5s
DLBC   Dease Lake        86.97  29   eP      P       01 36 02.4 -2.8
       comp=Z,132nm,1.3s
GSC    Goldstone, Bar    87.04  53   eP      P       01 36 06.6 +0.5
       comp=Z,676nm,1.5s
GSC    Goldstone, Bar    87.04  53    P      P       01 36 06.2 +0.1
       baz=254
A04D   Lummi Island      87.05  39    P      P       01 36 06.4 +0.7
       baz=249
GRAC   Grapevine Rang    87.07  52    P      P       01 36 06.4 +0.2
       baz=254
KVN    Kaiserville       87.10  49   eP      P       01 36 05.4 -1.0
       comp=Z,609nm,1.4s
KVN    Kaiserville       87.10  49   eP      P       01 36 05.4 -1.0
KVN                               pmax      pmax
       comp=Z,609nm,1.4s
SWSC   Sam W. Stewart    87.21  56    P      P       01 36 07.3 +0.5
       baz=255
B05A   Bryant            87.27  40    P      P       01 36 07.7 +1.0
       baz=250
HEC    Hector,Ludlow     87.28  54    P      P       01 36 07.4 +0.1
       baz=254
FURC   Furnace Creek,    87.31  52    P      P       01 36 07.2  0.0
       baz=254
BELC   Belle Mtn. Jos    87.33  55    P      P       01 36 07.9 +0.3
       baz=255
I07A   Izee              87.61  44   eP      P       01 36 07.4 -1.3
       comp=Z,137nm,0.8s
SHOC   Shoshone, Teco    87.62  53    P      P       01 36 09.3 +0.5
       baz=254
KOLN   Koldanda          87.64 299   eP      P       01 36 06.8 -2.5
       comp=Z,1µm,1.3s
DANN   Dangsing          87.64 299   eP      P       01 36 06.8 -2.6
       comp=Z,1µm,1.0s
BC3    Big Chuckawall    87.68  55    P      P       01 36 10.5 +1.3
       baz=255
WVOR   Wild Horse Val    87.71  46   eP      P       01 36 08.5 -0.7
       comp=Z,266nm,1.2s
WVOR   Wild Horse Val    87.71  46   eP      P       01 36 08.5 -0.7
WVOR                              pmax      pmax
       comp=Z,266nm,1.2s
B06A   Marblemount       87.74  40   eP      P       01 36 07.8 -1.1
       comp=Z,121nm,1.0s
TUQ    Turquoise Moun    87.77  53    P      P       01 36 10.3 +0.7
       baz=255
GMRC   Granite Mounta    87.81  54    P      P       01 36 10.2 +0.3
       baz=255
LTY    Liberty           87.84  41   eP      P       01 36 07.8 -1.8
       comp=Z,155nm,1.0s
F07A   Phinny Hill Vi    87.89  42   eP      P       01 36 08.4 -1.3
       comp=Z,364nm,1.3s
C06D   Leavenworth       87.91  40    P      P       01 36 10.5 +0.6
       baz=251
TPNV   Topopah Spring    87.92  52   eP      P       01 36 10.4  0.0
       comp=Z,261nm,1.5s
TPNV   Topopah Spring    87.92  52    P      P       01 36 11.1 +0.7
       baz=254
GLA    Glamis            88.03  56   eP      P       01 36 10.3 -0.5
       comp=Z,866nm,1.3s
GLA    Glamis            88.03  56   eP      P       01 36 10.3 -0.5
GLA                               pmax      pmax
       comp=Z,866nm,1.3s
GLA    Glamis            88.03  56    P      P       01 36 11.2 +0.4
       baz=255
IRM    Iron Mountain     88.06  55    P      P       01 36 11.7 +0.8
       baz=255
J08A   Circle Bar Ran    88.10  45   eP      P       01 36 09.8 -1.2
       comp=Z,190nm,0.9s
H06E1  SOCORRO T-PHAS    88.12  71    P      P       01 36 14.1 +2.6
LLLB   Lillooet          88.21  38   eP      P       01 36 11.7 +0.5
       comp=Z,146nm,1.3s
PYUN   Piuthan           88.24 299   eP      P       01 36 09.7 -2.5
       comp=Z,1µm,1.0s
HAWA   Hanford           88.30  42   eP      P       01 36 10.5 -1.2
LDFC   Landfair          88.32  54   eP      P       01 36 12.7 +0.5
       comp=Z,2µm,1.5s
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G08A   Pilot Rock        88.35  43   eP      P       01 36 10.6 -1.5
       comp=Z,250nm,1.0s
Y12C   Blythe            88.45  55   eP      P       01 36 11.8 -0.9
       comp=Z,1µm,1.5s
Y12C   Blythe            88.45  55    P      P       01 36 13.5 +0.8
       baz=256
NEE2   Needles Airpor    88.63  54    P      P       01 36 14.4 +0.8
       baz=255
E08A   Dider Farm, El    88.65  42   eP      P       01 36 12.4 -1.0
       comp=Z,272nm,1.1s
SHPR   Sheep Range       88.65  53   eP      P       01 36 13.5 -0.3
       comp=Z,359nm,1.4s
WMQ    Urumqi            88.68 315    P      P       01 36 12.4 -1.3
WMQ                                  pP      PcP     01 36 17.8 +2.6
WMQ                                  sP      sP      01 36 24.7 -1.0
WMQ                                  PP      PP      01 39 41.4 -1.4
WMQ                                  SKS     SKSac   01 46 42.4 +1.8
WMQ                                  S       SKKSac  01 46 53.4 +1.6
WMQ                               pmax      pmax
       comp=Z,790nm,1.5s
WMQ                               pmax      pmax
       comp=Z,19µm,11.8s
WMQ                                  LR      LR
       comp=Z,190µm,19.3s
WMQ                                  LR      LR
       comp=Z,163µm,16.7s
WMQ                                  LR      LR
       comp=Z,58µm,19.9s
WMQ    Urumqi            88.68 315   eP      P       01 36 12.4 -1.3
       comp=Z,974nm,1.4s
WMQ    Urumqi            88.68 315   eP      P       01 36 12.4 -1.3
WMQ                               pmax      pmax
       comp=Z,974nm,1.4s
R11A   Troy Canyon, C    88.80  51   eP      P       01 36 13.6 -0.9
       comp=Z,205nm,1.3s
R11A   Troy Canyon, C    88.80  51    P      P       01 36 15.5 +1.0
       baz=255
113A   Mohawk Valley,    88.83  56   eP      P       01 36 14.2 -0.3
       comp=Z,656nm,1.5s
SRIG   Santa Rosalia     88.83  62   eP      P       01 36 13.4 -1.3
       comp=Z,560nm,1.5s
PDMCI  Parker Dam,Lak    88.90  55    P      P       01 36 16.6 +1.8
       baz=256
D08A   Wollman Farm,     88.91  42   eP      P       01 36 13.2 -1.3
       comp=Z,143nm,1.0s
B08A   Colville Reser    89.04  40   eP      P       01 36 13.4 -1.8
       comp=Z,192nm,1.3s
E09A   Wood Farm, Sta    89.25  42   eP      P       01 36 14.8 -1.4
       comp=Z,199nm,1.1s
W13A   Hualapai Mount    89.30  54   eP      P       01 36 16.6 -0.4
       comp=Z,242nm,1.1s
BMO    Blue Mountains    89.34  44   eP      P       01 36 14.7 -2.1
       comp=Z,242nm,1.3s
BMO    Blue Mountains    89.34  44   eP      P       01 36 14.7 -2.1
BMO                               pmax      pmax
       comp=Z,242nm,1.3s
214A   Organ Pipe Nat    89.42  57    P      P       01 36 18.7 +1.3
       baz=256
C09A   Chrisman Ranch    89.55  41   eP      P       01 36 17.9 +0.3
       comp=Z,51nm,0.9s
ELK    Elko              89.69  48   eP      P       01 36 18.3 -0.4
       comp=Z,669nm,1.5s
ELK    Elko              89.69  48   eP      P       01 36 18.3 -0.4
ELK                               pmax      pmax
       comp=Z,669nm,1.5s
F10A   Beach Ranch, E    89.71  43   eP      P       01 36 16.9 -1.6
       comp=Z,121nm,0.8s
Y14A   Wickenburg        89.72  55   eP      P       01 36 19.2 +0.4
       comp=Z,310nm,1.5s
HYB    Hyderabad         89.92 288  i P      P       01 36 18.0 -2.0
       comp=Z,250nm,1.2s
MFID   Camas Ranch       89.97  46   eP      P       01 36 18.4 -1.4
       comp=Z,631nm,1.5s
SLBS   Sierra La Lagu    90.06  66   eP      P       01 36 19.8 -0.8
       comp=Z,249nm,1.0s
PSUT   Pine Spring       90.16  51   eP      P       01 36 20.4 -0.6
       comp=Z,664nm,1.5s
LCMT   Little Creek M    90.26  52   eP      P       01 36 21.0 -0.4
       comp=Z,827nm,1.3s
CCUT   Cedar City        90.30  52   eP      P       01 36 21.6 -0.1
       comp=Z,987nm,1.5s
HSIG                     90.32  61   eP      P       01 36 20.2 -1.4
       comp=Z,503nm,1.4s
INK    Inuvik            90.36  19   eP      P       01 36 19.9 -1.0
       comp=Z,297nm,1.4s
INK    Inuvik            90.36  19    P      P       01 36 19.5 -1.4
INK                               pmax      pmax
       comp=Z,30nm,1.1s
INK    Inuvik            90.36  19    P      P       01 36 19.5 -1.4
       comp=Z,30nm,1.1s,baz=228,slow=2.8,SNR=5.6
INK                               PKKPbc    PKKPdf   01 53 47.3 -1.5
       comp=Z,5.4nm,0.7s,baz=53,slow=2.5,SNR=7.6
NEW    Newport           90.42  41   eP      P       01 36 20.0 -1.7
       comp=Z,112nm,1.2s
NEW    Newport           90.42  41   eP      P       01 36 20.0 -1.7
NEW                               pmax      pmax
       comp=Z,112nm,1.2s
NEW    Newport           90.42  41    P      P       01 36 23.8 +2.1
       baz=254
SZCU   Shurtz Canyon     90.52  52   eP      P       01 36 22.4 -0.3
       comp=Z,314nm,1.2s
DGZ    Jazzator, Alta    90.55 321  i P      P       01 36 22.5 +0.1
DGZ                               pmax      pmax
       comp=Z,102nm,1.3s
KNB    Kanab             90.59  52   eP      P       01 36 22.3 -0.7
       comp=Z,868nm,1.5s
KNB    Kanab             90.59  52   eP      P       01 36 22.3 -0.7
KNB                               pmax      pmax
       comp=Z,868nm,1.5s
U15A   North Rim         90.87  53   eP      P       01 36 23.8 -0.6
       comp=Z,669nm,1.2s
DGAR   Diego Garcia      90.99 262  i P      P       01 36 26.1 +1.1
DGAR                              pmax      pmax
       comp=Z,188nm,1.2s
HLID   Hailey            91.00  46   eP      P       01 36 23.8 -0.9
       comp=Z,682nm,1.5s
HLID   Hailey            91.00  46    P      P       01 36 25.5 +0.8
       baz=256
PKCU   Pink Cliffs       91.09  52   eP      P       01 36 26.0 +0.6
       comp=Z,2µm,1.4s
X16A   Lo Mia Camp, P    91.10  55   eP      P       01 36 24.9 -0.5
       comp=Z,232nm,1.0s
TUC    Tucson            91.17  57   eP      P       01 36 25.7 +0.1
       comp=Z,569nm,1.5s
TUC    Tucson            91.17  57   eP      P       01 36 25.7 +0.1
TUC                               pmax      pmax
       comp=Z,569nm,1.5s
TUC    Tucson            91.17  57    P      P       01 36 25.9 +0.3
       baz=258
MTPU   Mount Pierson     91.32  52   eP      P       01 36 26.9 +0.3
       comp=Z,769nm,1.3s
DUG    Dugway, Tooele    91.34  49   eP      P       01 36 25.8 -0.5
       comp=Z,430nm,1.4s
DUG    Dugway, Tooele    91.34  49   eP      P       01 36 25.8 -0.5
DUG                               pmax      pmax
       comp=Z,430nm,1.4s
DUG    Dugway, Tooele    91.34  49    P      P       01 36 26.4 +0.1
       baz=256
BGU    Big Grassy Mou    91.35  49   eP      P       01 36 25.3 -1.0
       comp=Z,456nm,1.4s
WUAZ   Wupatki           91.39  54   eP      P       01 36 27.2 +0.6
       comp=Z,548nm,1.3s
WUAZ   Wupatki           91.39  54    P      P       01 36 26.0 -0.7
       baz=257
MSU    Marysvale         91.44  51   eP      P       01 36 27.2 +0.3
MSU    Marysvale         91.44  51   eP      P       01 36 27.2 +0.3
ZSN    Zaisan            91.58 318   eP      P       01 36 25.0 -2.0
ZSN                               pmax      pmax
       comp=Z,347nm,2.1s
ZSN                                  MLR     MLR
       comp=Z,8µm,19.0s
ZSN    Zaisan            91.58 318   eP      P       01 36 25.1 -2.0
       comp=Z,347nm,2.1s
ZSN                                  eLR     LR      02 19 13.0
       comp=Z,8µm,18.7s
HVU    Hansel Valley     91.74  48   eP      P       01 36 27.4 -0.8
       comp=Z,1µm,1.5s
HVU    Hansel Valley     91.74  48   eP      P       01 36 27.4 -0.8
HVU                               pmax      pmax
       comp=Z,1µm,1.5s
NLU    North Lily Min    91.84  50   eP      P       01 36 28.9 +0.2
       comp=Z,585nm,1.4s
SPUT   South Promonto    91.87  48   eP      P       01 36 27.8 -1.0
       comp=Z,104nm,1.0s
MSO    Missoula          92.13  43   eP      P       01 36 28.9 -0.9
       comp=Z,40nm,0.8s
MSO    Missoula          92.13  43    P      P       01 36 30.0 +0.3
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       baz=256
MPU    Maple Canyon      92.18  50   eP      P       01 36 30.5 +0.2
       comp=Z,618nm,1.4s
CTU    Camp Tracy        92.25  49   eP      P       01 36 31.2 +0.7
       comp=Z,353nm,1.4s
Q16A   Castle Valley     92.29  51   eP      P       01 36 31.2 +0.4
       comp=Z,317nm,1.4s
X18A   Snowflake         92.32  55   eP      P       01 36 30.4 -0.7
       comp=Z,352nm,1.4s
MCMT   McKenzie Canyo    92.39  45   eP      P       01 36 29.7 -1.5
JLU    Jordanelle        92.45  49   eP      P       01 36 31.0 -0.6
       comp=Z,70nm,1.1s
HWUT   Hardware Ranch    92.58  48   eP      P       01 36 33.2 +1.2
       comp=Z,50nm,0.9s
TCUT   Toone Canyon      92.59  49   eP      P       01 36 31.7 -0.5
       comp=Z,284nm,1.1s
W18A   Petrified Fore    92.62  55   eP      P       01 36 33.5 +1.1
       comp=Z,514nm,1.4s
W18A   Petrified Fore    92.62  55    P      P       01 36 33.2 +0.8
       baz=258
WALA   Waterton Lakes    92.69  41   eP      P       01 36 31.6 -0.7
       comp=Z,573nm,1.3s
DLMT   Dillon            92.69  44   eP      P       01 36 31.5 -0.9
       comp=Z,459nm,1.3s
P17A   Butcher Ranch,    92.74  50   eP      P       01 36 33.6 +0.8
       comp=Z,112nm,1.3s
SRU    San Rafael Swe    92.83  51   eP      P       01 36 34.6 +1.4
       comp=Z,64nm,1.0s
LRM    Limekiln Ridge    92.89  44   eP      P       01 36 32.0 -1.5
MK31   Makanchi Array    93.13 317  i P      P       01 36 31.3 -3.0
MK31                              pmax      pmax
       comp=Z,581nm,1.1s
MKAR   Makanchi Array    93.13 317    P      P       01 36 32.2 -2.0
MKAR   Makanchi Array    93.13 317    P      P       01 36 32.2 -2.0
MKAR                              pmax      pmax
       comp=Z,210nm,0.8s
MKAR   Makanchi Array    93.13 317    P      P       01 36 32.2 -2.0
       comp=Z,210nm,0.8s,baz=97,slow=5.8,SNR=35
MKAR                              PKKPbc    PKKPdf   01 53 43.3  0.0
       comp=Z,18nm,0.9s,baz=280,slow=2.6,SNR=12
AHID   Auburn Hatcher    93.17  47   eP      P       01 36 35.4 +0.6
       comp=Z,101nm,1.1s
ZAA0   Zalesovo Array    93.26 324   eP      P       01 36 32.3 -2.3
       comp=Z,300nm,1.0s
ZALV   Zalesovo Beam     93.26 324   eP      P       01 36 31.8 -2.8
ZALV   Zalesovo Beam     93.26 324   eP      P       01 36 31.8 -2.8
ZALV   Zalesovo Beam     93.26 324    P      P       01 36 32.5 -2.2
       comp=Z,164nm,1.0s,baz=115,slow=3.1,SNR=29
ZALV                              PKKPbc    PKKPdf   01 53 41.8 -1.5
       comp=Z,4.3nm,0.6s,baz=271,slow=2.9,SNR=6.7
NDI    New Delhi         93.34 298   ex      P       01 36 34.0 -1.6
MAKZ   Makanchi          93.34 317   eP      P       01 36 33.0 -2.3
       comp=Z,651nm,1.1s
MAKZ   Makanchi          93.34 317    P      P       01 36 34.4 -0.8
MAKZ                              pmax      pmax
       comp=Z,829nm,1.3s
QLMT   Earthquake Lak    93.38  45   eP      P       01 36 34.6 -1.1
BOZ    Bozeman (W)       93.41  44   eP      P       01 36 34.6 -1.1
       comp=Z,504nm,1.4s
BOZ    Bozeman (W)       93.41  44   eP      P       01 36 34.6 -1.1
BOZ                               pmax      pmax
       comp=Z,505nm,1.4s
BOZ    Bozeman (W)       93.41  44    P      P       01 36 36.9 +1.2
       baz=258
MNCI   Minicoy           93.41 278   eP      P       01 36 37.3 +1.1
       comp=Z,433nm,1.3s
FXWY   Fox Creek         93.41  46   eP      P       01 36 35.2 -0.7
       comp=Z,89nm,0.9s
TPAW   Teton Pass        93.43  46   eP      P       01 36 34.9 -1.2
       comp=Z,48nm,0.8s
REDW   Red Top Meadow    93.47  47   eP      P       01 36 36.8 +0.6
       comp=Z,308nm,1.3s
HRY    Holter Researc    93.51  43   eP      P       01 36 34.9 -1.3
IMW    Indian Meadow     93.53  46   eP      P       01 36 37.4 +0.9
       comp=Z,175nm,1.1s
YHB    Horse Butte       93.53  45   eP      P       01 36 36.3 -0.1
       comp=Z,260nm,1.2s
SNOW   Snow King Moun    93.56  47   eP      P       01 36 36.6 -0.1
       comp=Z,145nm,1.0s
MOOW   Moose Ponds       93.63  46   eP      P       01 36 36.0 -0.9
       comp=Z,147nm,1.3s
YMR    Madison River     93.67  45   eP      P       01 36 38.1 +1.0
       comp=Z,136nm,1.1s
YPP    Pitchstone Pla    93.70  46   eP      P       01 36 40.3 +3.0
       comp=Z,32nm,1.1s
121A   Cookes Peak, D    93.70  58    P      P       01 36 38.8 +1.3
       baz=259
LOHW   Long Hollow       93.70  46   eP      P       01 36 35.3 -1.9
       comp=Z,109nm,1.3s
PV05   Paradox Valley    93.71  52   eP      P       01 36 39.5 +2.1
       comp=Z,111nm,1.1s
YFT    Old Faithful      93.71  46   eP      P       01 36 39.5 +2.2
       comp=Z,240nm,1.5s
FLWY   Flagg Ranch       93.73  46   eP      P       01 36 39.3 +1.9
       comp=Z,91nm,0.9s
PV09   Paradox Valley    93.77  52   eP      P       01 36 39.7 +2.0
PV10   Paradox Valley    93.81  52   eP      P       01 36 40.9 +2.9
       comp=Z,250nm,1.3s
PV14   Lion Creek, Pa    93.83  52   eP      P       01 36 38.8 +0.8
       comp=Z,76nm,0.8s
PV19   Morning Glory     93.85  52   eP      P       01 36 39.5 +1.5
       comp=Z,110nm,1.0s
PV23   Carpenter Ridg    93.85  52   eP      P       01 36 38.1  0.0
       comp=Z,292nm,1.4s
PV17   East Wray Mesa    93.86  52   eP      P       01 36 39.6 +1.5
       comp=Z,310nm,1.5s
PV20   West Nyswonger    93.86  52   eP      P       01 36 38.9 +0.8
       comp=Z,78nm,0.9s
YNR    Norris Junctio    93.88  45   eP      P       01 36 39.9 +1.8
       comp=Z,96nm,1.1s
H17A   Grant Village     93.88  46   eP      P       01 36 38.6 +0.5
       comp=Z,90nm,0.9s
H17A   Grant Village     93.88  46    P      P       01 36 40.0 +1.9
       baz=258
PV16   Nyswonger Mesa    93.90  52   eP      P       01 36 39.5 +1.2
       comp=Z,95nm,1.0s
PV21   Cone Mtn., Par    93.90  52   eP      P       01 36 38.3  0.0
       comp=Z,336nm,1.4s
PV04   Paradox Valley    93.92  52   eP      P       01 36 38.4 +0.1
       comp=Z,209nm,1.4s
PV11   David Mesa, Pa    93.93  52   eP      P       01 36 39.2 +0.8
       comp=Z,166nm,1.3s
PV03   Paradox Valley    93.94  52   eP      P       01 36 39.9 +1.4
       comp=Z,85nm,1.2s
PV13   Radium Mtn., P    93.94  52   eP      P       01 36 40.1 +1.6
       comp=Z,82nm,1.3s
PV12   Saucer Basin,     93.99  52   eP      P       01 36 38.9 +0.2
       comp=Z,466nm,1.5s
MVCO   Mesa Verde        94.01  53   eP      P       01 36 41.5 +2.7
       comp=Z,59nm,1.0s
MVCO   Mesa Verde        94.01  53    P      P       01 36 39.6 +0.7
       baz=259
PV02   Paradox Valley    94.02  52   eP      P       01 36 38.7 -0.1
       comp=Z,53nm,1.1s
PV07   Paradox Valley    94.13  52   eP      P       01 36 40.2 +0.8
       comp=Z,100nm,1.1s
PV01   Paradox Valley    94.13  52   eP      P       01 36 37.4 -1.9
       comp=Z,186nm,1.3s
PV15   Paradox Valley    94.24  52   eP      P       01 36 42.9 +3.0
       comp=Z,113nm,1.3s
BW06   Boulder Array     94.28  47   eP      P       01 36 38.5 -1.4
       comp=Z,97nm,1.1s
BW06   Boulder Array     94.28  47    P      P       01 36 39.9 -0.1
       baz=259
PD31   Pinedale Array    94.28  47   eP      P       01 36 38.5 -1.4
PDAR   Pinedale Array    94.28  47   eP      P       01 36 37.9 -2.0
PDAR   Pinedale Array    94.28  47    P      P       01 36 38.6 -1.3
       comp=Z,17nm,0.8s,baz=250,slow=2.3,SNR=21
PDAR                              PKKPbc    PKKPdf   01 53 40.5 -0.8
       comp=Z,2.7nm,0.7s,baz=108,slow=3.2,SNR=6.5
PDAR                              PKPPKP    P'P'df   02 01 52.9 +1.2
       comp=Z,1.8nm,0.9s,baz=103,slow=2.9,SNR=6.9
NVS    Novosibirsk       94.37 325   eP      P       01 36 38.0 -1.7
NVS                                  eS      SKSac   01 47 16.1 +3.9
NVS                               pmax      pmax
       comp=Z,328nm,0.9s
NVS                               pmax      pmax
       comp=N,62nm,0.8s
NVS                               pmax      pmax
       comp=E,281nm,1.5s
NVS                               smax      smax
       comp=N,95nm,1.8s
NVS                               smax      smax
       comp=E,949nm,3.1s
HPIG                     94.49  64   eP      P       01 36 42.1 +0.9
       comp=E,162nm,1.5s
POO    Poona             94.52 288 ⇓iP       P       01 36 38.0 -3.3
       comp=E,5.0nm,1.0s
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LAZ	Ladron	94.58	56	eP	P	01 36 42.5	+1.0
UZB	Uzynbulak	94.64	313c	iP	P	01 36 38.8	-2.7
UZB				pmax	pmax		
	comp=Z,731nm,1.6s						
UZB				MLR	MLR		
	comp=Z,11µm,19.0s						
UZB	Uzynbulak	94.64	313⇑	iP	P	01 36 38.8	-2.7
	comp=Z,731nm,1.6s						
UZB				eLR	LR	02 20 05.2	
	comp=Z,11µm,18.8s						
LENM	Lemitar	94.67	56	eP	P	01 36 44.6	+2.7
O20A	White River Ci	94.76	50	eP	P	01 36 43.7	+1.6
	comp=Z,248nm,1.5s						
O20A	White River Ci	94.76	50	P	P	01 36 41.4	-0.7
	baz=259						
GCMT	Greycliff	94.79	44	eP	P	01 36 43.5	+1.4
RLMT	Red Lodge	94.94	45	eP	P	01 36 44.7	+1.8
	comp=Z,48nm,1.0s						
RLMT	Red Lodge	94.94	45	P	P	01 36 43.5	+0.6
	baz=259						
KPKS	Kokpek	94.94	313	eP	P	01 36 40.0	-2.7
KPKS				pmax	pmax		
	comp=Z,947nm,1.6s						
KPKS				MLR	MLR		
	comp=Z,21µm,16.0s						
KPKS	Kokpek	94.94	313	eP	P	01 36 40.1	-2.7
	comp=Z,947nm,1.6s						
KPKS				eLR	LR	02 21 27.1	
	comp=Z,21µm,16.1s						
BNM	Barren Site	94.95	56	eP	P	01 36 43.2	0.0
PRZ	Przheval'sk	94.97	312	eP	P	01 36 44.5	+1.5
	comp=Z,617nm,1.4s						
LPM	Los Pinos Moun	94.97	56	eP	P	01 36 47.2	+3.9
SATY	Saty	95.07	313	eP	P	01 36 40.7	-2.7
SATY				pmax	pmax		
	comp=Z,734nm,1.6s						
SATY				MLR	MLR		
	comp=Z,16µm,18.0s						
SATY	Saty	95.07	313	eP	P	01 36 40.8	-2.7
	comp=Z,734nm,1.6s						
SATY				eLR	LR	02 20 39.5	
	comp=Z,16µm,18.1s						
EGMT	Eagleton	95.16	42	eP	P	01 36 42.1	-1.6
	comp=Z,495nm,1.4s						
EGMT	Eagleton	95.16	42	P	P	01 36 44.8	+1.2
	baz=259						
ANMO	Albuquerque	95.23	56	eP	P	01 36 44.5	+0.1
	comp=Z,182nm,1.5s						
ANMO	Albuquerque	95.23	56c	eP	P	01 36 48.1	+3.7
ANMO				pmax	pmax		
	comp=Z,104nm,1.3s						
ANMO	Albuquerque	95.23	56	P	P	01 36 45.1	+0.7
	baz=260						
TARG	Taragay, Kyrgy	95.27	311	eP	P	01 36 44.9	+0.2
	comp=Z,373nm,1.5s						
S22A	4UR Ranch, Cre	95.41	53	eP	P	01 36 45.9	+0.5
	comp=Z,225nm,1.5s						
S22A	4UR Ranch, Cre	95.41	53	P	P	01 36 46.3	+0.9
	baz=260						
TDK	Taldyqorghan	95.42	315d	eP	P	01 36 42.3	-2.5
TDK				pmax	pmax		
	comp=Z,620nm,1.5s						
TDK				MLR	MLR		
	comp=Z,54µm,18.0s						
TDK	Taldyqorghan	95.42	315⇓	eP	P	01 36 42.4	-2.5
	comp=Z,620nm,1.5s						
TDK				eLR	LR	02 20 50.7	
	comp=Z,54µm,17.6s						
YKA	Yellowknife Ar	95.53	27	P	P	01 36 41.9	-2.9
YKA	Yellowknife Ar	95.53	27	P	P	01 36 41.9	-2.9
YKA	Yellowknife Ar	95.53	27	P	P	01 36 41.9	-2.9
	comp=Z,25nm,0.8s,baz=257,slow=4.6,SNR=17						
YKA				PKKPbc	PKKPbc	01 53 35.6	-3.3
	comp=Z,1.8nm,0.6s,baz=77,slow=2.5,SNR=8.8						
YKA				PKPPKP	P'P'df	02 01 45.8	-1.6
	comp=Z,0.8nm,0.8s,baz=44,slow=2.2,SNR=5.8						
YKB5	Yellowknife Ar	95.53	27	eP	P	01 36 41.4	-3.4
YKW3	Yellowknife Ar	95.54	27	eP	P	01 36 41.5	-3.4
	comp=Z,164nm,1.3s						
SMCO	Snowmass	95.55	51	eP	P	01 36 50.2	+4.2
	comp=Z,100nm,1.4s						
MNTX	Cornudas Mount	95.56	59	eP	P	01 36 46.8	+1.1
	comp=Z,61nm,1.0s						
MNTX	Cornudas Mount	95.56	59	P	P	01 36 46.9	+1.1
	baz=260						
KDJ	Kajisay	95.80	312	eP	P	01 36 48.5	+1.6
	comp=Z,174nm,1.1s						
RWWY	Rawlins	95.80	49	eP	P	01 36 46.0	-1.0
	comp=Z,56nm,1.1s						
NRIK	Noril'sk	96.04	340	P	P	01 36 44.4	-2.6
NRIK				pmax	pmax		
	comp=Z,92nm,1.1s						
NRIK	Noril'sk	96.04	340	P	P	01 36 44.4	-2.6
	comp=Z,38nm,0.8s,baz=89,slow=4.0,SNR=13						
MDOK	Medeo	96.07	313	eP	P	01 36 48.1	+0.1
MDOK				pmax	pmax		
	comp=Z,600nm,2.0s						
MDOK				MLR	MLR		
	comp=Z,19µm,18.0s						
MDOK	Medeo	96.07	313	eP	P	01 36 48.1	+0.1
	comp=Z,600nm,2.0s						
MDOK				eLR	LR	02 21 07.3	
	comp=Z,19µm,17.7s						
NVL	N'lazarevskaya	96.14	189	eP	P	01 36 45.9	-1.7
NVL				eS	SKSac	01 47 20.8	-0.5
NVL				pmax	pmax		
	comp=Z,117nm,1.1s						
AAA	Alma-Ata	96.17	313	eP	P	01 36 46.3	-2.0
AAA				pmax	pmax		
	comp=Z,98nm,0.7s						
AAA				MLR	MLR		
	comp=Z,7µm,19.0s						
AAA	Alma-Ata	96.17	313	eP	P	01 36 46.3	-2.0
	comp=Z,98nm,0.7s						
AAA				eLR	LR	02 21 14.8	
	comp=Z,7µm,19.1s						
KSH	Kashi	96.26	309	P	P	01 36 51.9	+3.0
KSH				pP	pP	01 36 55.1	-3.0
KSH				PP	PP	01 40 47.4	+4.7
KSH				SKS	SKSac	01 47 26.2	+2.9
KSH				S	S	01 48 05.2	-1.4
KSH				pmax	pmax		
	comp=Z,100nm,0.8s						
KURK	Kurchatov	96.29	320	eP	P	01 36 46.8	-1.7
	comp=Z,385nm,1.5s						
KURK	Kurchatov	96.29	320c	eP	P	01 36 47.6	-1.0
KURK				pmax	pmax		
	comp=Z,331nm,2.5s						
KURBB	Kurchatov Arra	96.33	320	P	P	01 36 46.4	-2.3
	comp=Z,22nm,0.9s,baz=98,slow=4.4,SNR=16						
KURBB				PKKPbc	PKKPbc	01 53 35.5	-0.8
	comp=Z,8.4nm,0.8s,baz=285,slow=3.0,SNR=15						
KURBB				PKPPKP	P'P'df	02 01 49.2	+2.3
	comp=Z,1.7nm,0.9s,baz=292,slow=2.9,SNR=4.6						
SDCO	Great Sand Dun	96.45	53	eP	P	01 36 52.8	+2.7
	comp=Z,13nm,1.0s						
SDCO	Great Sand Dun	96.45	53	P	P	01 36 48.7	-1.3
	baz=261						
K22A	Casper	96.46	48	eP	P	01 36 48.6	-1.2
	comp=Z,116nm,1.4s						
K22A	Casper	96.46	48	P	P	01 36 49.7	-0.1
	baz=261						
GDL2	Guadalupe Moun	96.49	59	eP	P	01 36 50.6	+0.4
NRN	Naryn	96.55	311	eP	P	01 36 50.1	-0.3
	comp=Z,112nm,1.4s						
ZAIG	Zacatecas	96.56	68	eP	P	01 36 50.6	-0.2
	comp=Z,97nm,1.2s						
N23A	Red Feather La	96.61	50	eP	P	01 36 52.4	+1.7
	comp=Z,84nm,1.2s						
N23A	Red Feather La	96.61	50	P	P	01 36 50.1	-0.6
	baz=261						
TX31	Lajitas Ar. Si	96.63	61	eP	P	01 36 49.7	-1.1
TXAR	Lajitas Array	96.63	61	P	P	01 36 50.0	-0.8
TXAR	Lajitas Array	96.63	61	P	P	01 36 50.0	-0.8
TXAR	Lajitas Array	96.63	61	P	P	01 36 50.0	-0.8
	comp=Z,6.4nm,0.9s,baz=226,slow=5.2,SNR=11						
TXAR				PKKPbc	PKKPdf	01 53 36.3	-0.2
	comp=Z,3.6nm,0.7s,baz=111,slow=3.4,SNR=12						
TXAR				PKPPKP	P'P'df	02 01 50.2	+1.9
	comp=Z,2.0nm,0.9s,baz=146,slow=0.7,SNR=6.6						
ISCO	Idaho Springs	96.69	51	eP	P	01 36 52.0	+0.9
	comp=Z,49nm,1.4s						
ISCO	Idaho Springs	96.69	51	P	P	01 36 52.0	+0.9
	baz=261						
KUU	Kurty	96.69	313	eP	P	01 36 47.5	-3.1
KUU				pmax	pmax		
	comp=Z,493nm,1.6s						
KUU				MLR	MLR		
	comp=Z,7µm,16.0s						
KUU	Kurty	96.69	313	eP	P	01 36 47.6	-3.1
	comp=Z,493nm,1.6s						
KUU				eLR	LR	02 21 13.7	
	comp=Z,7µm,15.9s						
SNAA	Sanae	96.85	184	P	P	01 36 49.8	-1.1
SNAA	Sanae	96.85	184	eP	P	01 36 48.0	-2.9
	comp=Z,403nm,1.3s						
SNAA	Sanae	96.85	184	eP	P	01 36 48.0	-2.9
SNAA				pmax	pmax		
	comp=Z,403nm,1.3s						
SNAA	Sanae	96.85	184	PKKPbc	PKKPbc	01 53 33.9	-1.4
	comp=Z,5.0nm,0.8s,baz=238,slow=3.8,SNR=6.1						
Q24A	Divide	96.92	52	eP	P	01 36 53.1	+0.9
	comp=Z,59nm,1.2s						
Q24A	Divide	96.92	52	P	P	01 36 53.0	+0.9
	baz=261						
T25A	Trinidad	97.22	54	P	Pdif	01 36 56.9	+3.4
	baz=262						
LAO	LASA Array	97.30	44	eP	Pdif	01 36 53.9	+0.4
	comp=Z,448nm,1.5s						
LAO	LASA Array	97.30	44	P	Pdif	01 36 56.0	+2.6
	baz=262						
NIL	Nilore	97.52	303	eP	P	01 36 53.8	-0.9
	comp=Z,253nm,1.4s						
NIL	Nilore	97.52	303	eP	P	01 36 53.8	-0.9
NIL				pmax	pmax		
	comp=Z,253nm,1.4s						
VNA3	Neumayer Olymp	97.61	182	P	P	01 36 52.7	-1.6
VNA3	Neumayer Olymp	97.61	182	PKiKP	PKiKP	01 41 35.0	+6.6
FRU1	Bishkek	97.77	312	eP	Pdif	01 36 58.1	+2.5
	comp=Z,128nm,1.2s						
AAK	Ala-Archa	97.84	312	eP	Pdif	01 36 56.2	+0.1
	comp=Z,92nm,1.3s						
AAK	Ala-Archa	97.84	312c	eP	Pdif	01 36 56.4	+0.3
AAK				pmax	pmax		
	comp=Z,127nm,2.5s						
AAK	Ala-Archa	97.84	312	P	P	01 36 55.0	-1.0
	comp=Z,18nm,0.7s,baz=128,slow=5.9,SNR=21						
VNA2	Neumayer--Watz	97.84	183	P	P	01 36 53.5	-1.8
VNA2	Neumayer--Watz	97.84	183	PKiKP	PKiKP	01 41 35.9	+7.0
MSTX	Muleshoe	98.08	57	eP	P	01 36 56.4	-0.9
	comp=Z,134nm,1.3s						
MSTX	Muleshoe	98.08	57	Pdiff	Pdif	01 36 58.8	+1.5
	baz=262						
VNA1	Neumayer--Stat	98.15	182	P	P	01 36 56.1	-0.6
RSSD	Black Hills	98.47	47	eP	Pdif	01 37 00.8	+1.9
	comp=Z,20nm,0.9s						
RSSD	Black Hills	98.47	47	eP	Pdif	01 37 00.8	+1.9
RSSD				pmax	pmax		
	comp=Z,20nm,0.9s						
RSSD	Black Hills	98.47	47	Pdiff	Pdif	01 37 00.6	+1.7
	baz=263						
BTLS	Baital	98.48	314d	iP	P	01 36 56.0	-2.6
BTLS				pmax	pmax		
	comp=Z,459nm,1.8s						
BTLS				MLR	MLR		
	comp=Z,7µm,19.0s						
BTLS	Baital	98.48	314⇓	iP	P	01 36 56.1	-2.6
	comp=Z,459nm,1.8s						
BTLS				eLR	LR	02 22 19.4	
	comp=Z,7µm,19.3s						
ARSB	Arslanbob	98.78	310	eP	P	01 36 59.1	-1.2
	comp=Z,250nm,1.4s						
KSCO	Kaye Shedlock'	98.87	52	Pdiff	Pdif	01 37 02.7	+2.0
	baz=263						
DGMT	Dagmar	98.90	42	eP	Pdif	01 37 00.7	+0.2
	comp=Z,278nm,1.4s						
DGMT	Dagmar	98.90	42	Pdiff	P	01 36 59.6	-0.8
	baz=263						
AMTX	Amarillo	99.10	56	eP	Pdif	01 37 02.2	+0.5
	comp=Z,109nm,1.4s						
AMTX	Amarillo	99.10	56	Pdiff	Pdif	01 37 03.7	+1.9
	baz=263						
OGNE	Ogallala	99.56	50	Pdiff	Pdif	01 37 04.7	+1.1
	baz=264						
JCT	Junction City	100.12	61	Pdiff	Pdif	01 37 07.5	+1.2
	baz=263						
833A	Chaparral WMA,	100.20	63	Pdiff	Pdif	01 37 04.4	-2.3
	baz=263						
USHA	Ushuaia	100.40	152	PKPPKP	P'P'df	02 01 38.2	-3.7
	comp=Z,8.6nm,1.1s,baz=12,slow=3.3,SNR=4.7						
ABTX	Abilene, Hawle	100.51	59	Pdiff	Pdif	01 37 08.0	0.0
	baz=263						
JBG	Jabagly	100.71	311	eP	Pdif	01 37 05.6	-3.2
JBG				pmax	pmax		
	comp=Z,422nm,2.1s						
JBG				MLR	MLR		
	comp=Z,13µm,15.0s						
KK31	Karatay Array	100.80	312	ePdif	Pdif	01 37 08.7	-0.3
KK31	Karatay Array	100.80	312	eP	Pdif	01 37 08.7	-0.3
KKAR	Karatay Array	100.80	312	ePdif	Pdif	01 37 08.7	-0.3
KKAR	Karatay Array	100.80	312	eP	Pdif	01 37 08.7	-0.3
IUG	Iuzhnay	101.07	311	eP	Pdif	01 37 10.8	+0.4
IUG				pmax	pmax		
	comp=Z,298nm,0.9s						
IUG				MLR	MLR		
	comp=Z,8µm,15.0s						
IUG	Iuzhnay	101.07	311	eP	Pdif	01 37 10.8	+0.4
	comp=Z,298nm,0.9s						
IUG				eLR	LR	02 23 26.3	
	comp=Z,8µm,15.3s						
CBKS	Cedar Bluff	101.09	52	Pdiff	Pdif	01 37 09.6	-0.8
	baz=264						
KBL	Kabul	101.10	303	ePdif	Pdif	01 37 10.3	-0.5
KBL	Kabul	101.10	303	eP	Pdif	01 37 10.3	-0.5
WMOK	Wichita Mounta	101.45	57	Pdiff	Pdif	01 37 11.2	-0.9
	baz=264						
BVA0	Borovoye Array	101.62	322	i P	Pdif	01 37 12.2	-0.2
BVA0				pmax	pmax		
	comp=Z,135nm,1.2s						
BVAR	Borovoye Array	101.62	322	P	Pdif	01 37 11.4	-1.1
BVAR	Borovoye Array	101.62	322	P	Pdif	01 37 11.4	-1.1
BVAR	Borovoye Array	101.62	322	P	Pdif	01 37 11.4	-1.1
	comp=Z,37nm,0.9s,baz=94,slow=4.0,SNR=20						
BVAR				PKiKP	PKiKP	01 41 36.8	+0.8
	comp=Z,21nm,1.0s,baz=67,slow=4.8,SNR=3.6						
BVAR				PKKPbc	PKKPbc	01 53 19.7	-1.7
	comp=Z,2.7nm,0.6s,baz=295,slow=3.4,SNR=9.1						
BVAR				PKPPKP	P'P'df	02 01 38.9	+2.1
	comp=Z,0.9nm,0.8s,baz=232,slow=7.1,SNR=2.7						
BRVK	Borovoye	101.69	322	P	Pdif	01 37 10.3	-2.4
BRVK				pmax	pmax		
	comp=Z,126nm,1.3s						
MDND	Maddock	101.91	43	Pdiff	Pdif	01 37 11.3	-2.5
	baz=266						
435B	Jarrell	102.05	61	Pdiff	Pdif	01 37 14.2	-0.7
	baz=264						
SUSD	Miller	102.13	47	Pdiff	Pdif	01 37 13.0	-2.0
	baz=266						
WHTX	Lake Whitney,	102.28	60	Pdiff	Pdif	01 37 17.1	+1.3
	baz=264						
BGNE	Belgrade	102.52	50	Pdiff	Pdif	01 37 19.8	+3.0
	baz=266						
RES	Resolute Bay	103.47	16	PKKPbc	PKKPbc	01 53 14.4	-2.1
	baz=105,slow=5.5						
KSU1	Kansas State U	103.54	52	Pdiff	Pdif	01 37 24.6	+3.3
	baz=266						
ECSD	EROS Data Cent	103.78	48	Pdiff	Pdif	01 37 22.2	-0.1
	baz=268						
TUL1	Leonard	103.98	56	Pdiff	Pdif	01 37 25.6	+2.3
	baz=266						
ULM	Lac du Bonnet	104.44	41	ePdif	Pdif	01 37 25.4	+0.4
ULM	Lac du Bonnet	104.44	41	eP	Pdif	01 37 25.4	+0.4
ULM	Lac du Bonnet	104.44	41	Pdiff	Pdif	01 37 24.6	-0.4
	comp=Z,8.3nm,0.8s,baz=322,slow=4.3,SNR=5.4						
ULM				PKiKP	PKiKP	01 41 40.2	-1.0
	comp=Z,34nm,1.0s,baz=279,slow=3.4,SNR=8.7						
ULM				PKKPbc	PKKPbc	01 53 10.8	-2.2
	comp=Z,2.5nm,0.9s,baz=22,slow=5.4,SNR=2.8						
ULM				PKPPKP	P'P'df	02 01 33.2	+1.5
	comp=Z,6.8nm,1.1s,baz=70,slow=3.3,SNR=4.7						
NATX	Nacogdoches	104.63	60	Pdiff	Pdif	01 37 27.2	+0.9
	baz=266						
FCC	Fort Churchill	105.24	32	ePdif	Pdif	01 37 27.5	-0.8
FCC	Fort Churchill	105.24	32	eP	Pdif	01 37 27.5	-0.8
W39A	Magazine	105.58	56	Pdiff	Pdif	01 37 30.7	+0.3
	baz=267						
MIAR	Mount Ida	105.71	57	Pdiff	Pdif	01 37 29.1	-2.0
	baz=267						
SCIA	State Center	106.23	50	Pdiff	Pdif	01 37 29.4	-3.8
	baz=269						
Z41A	Richland Creek	106.29	59	Pdiff	Pdif	01 37 30.8	-2.8
	baz=267						
X40A	Basin Creek Fa	106.32	57	Pdiff	Pdif	01 37 30.2	-3.6
	baz=268						
U40A	Yellville	106.38	55	Pdiff	Pdif	01 37 30.6	-3.4
	baz=268						
Y41A	Eaglette Beard	106.48	58	Pdiff	Pdif	01 37 30.8	-3.6
	baz=267						
SPMN	Marine on St.	106.53	46	Pdiff	Pdif	01 37 29.3	-5.1
	baz=271						
X41A	Kaden, Bauxite	106.59	57	Pdiff	Pdif	01 37 31.7	-3.3
	baz=268						
F37A	Hinrichs Farm,	106.65	46	Pdiff	Pdif	01 37 30.2	-4.8
	baz=271						
W41B	Gary Mavity, V	106.83	57	Pdiff	Pdif	01 37 33.2	-2.8
	baz=268						
H38A	Maiden Rock	106.91	47	Pdiff	Pdif	01 37 31.6	-4.5
	baz=271						
V41A	Mountainview	106.93	56	Pdiff	Pdif	01 37 33.2	-3.2
	baz=268						
M39A	Webster	107.01	50	Pdiff	Pdif	01 37 31.8	-4.9
	baz=270						
U41A	Viola	107.14	55	Pdiff	Pdif	01 37 33.3	-4.1
	baz=269						
L39A	Vinton	107.14	49	Pdiff	Pdif	01 37 33.6	-3.6
	baz=270						
Y42A	Garnett, Star	107.16	58	Pdiff	Pdif	01 37 34.9	-2.6
	baz=268						
F38A	Pierce - Schro	107.17	45	Pdiff	Pdif	01 37 33.7	-3.6
	baz=272						
G38A	Ridgeland	107.20	46	Pdiff	Pdif	01 37 33.1	-4.3
	baz=271						
K39A	Oelwein	107.22	49	Pdiff	Pdif	01 37 33.1	-4.5
	baz=271						
T41A	Mountain View	107.28	55	Pdiff	Pdif	01 37 35.8	-2.2
	baz=269						
S41A	Jillco Farms,	107.30	54	Pdiff	Pdif	01 37 34.2	-3.8
	baz=269						
X42A	Stuttgart	107.32	57	Pdiff	Pdif	01 37 36.8	-1.4
	baz=268						
J39A	Decorah	107.34	48	Pdiff	Pdif	01 37 33.4	-4.7
	baz=271						
EYMN	Ely	107.36	43	Pdiff	Pdif	01 37 33.4	-4.7
	baz=272						
E38A	The Farm, Brul	107.37	45	Pdiff	Pdif	01 37 35.0	-3.1
	baz=272						
W42A	Bald Knob	107.43	56	Pdiff	Pdif	01 37 37.3	-1.3
	baz=268						
N40A	Mertquake, Sal	107.45	51	Pdiff	Pdif	01 37 36.4	-2.2
	baz=270						
I39A	Houston	107.47	48	Pdiff	Pdif	01 37 35.8	-2.8
	baz=271						
M40A	Post Highland	107.50	50	Pdiff	Pdif	01 37 34.9	-3.9
	baz=270						
V42A	Cord	107.55	56	Pdiff	Pdif	01 37 34.7	-4.5
	baz=269						
Z43A	Armstrong Fami	107.59	59	Pdiff	Pdif	01 37 38.3	-1.1
	baz=268						
R41A	Rosebud	107.60	53	Pdiff	Pdif	01 37 36.3	-3.1
	baz=270						
H39A	Augusta	107.62	47	Pdiff	Pdif	01 37 35.8	-3.5
	baz=272						
G39A	Holcombe	107.68	46	Pdiff	Pdif	01 37 36.2	-3.4
	baz=272						
U42A	Revenden	107.69	55	Pdiff	Pdif	01 37 38.1	-1.7
	baz=269						
CCM	Cathedral Cave	107.70	54	Pdiff	Pdif	01 37 38.1	-1.7
	baz=270						
L40A	Anamosa	107.72	49	Pdiff	Pdif	01 37 35.6	-4.1
	baz=271						
Q41A	Truxton	107.72	53	Pdiff	Pdif	01 37 36.6	-3.3
	baz=270						
K40A	Colesburg	107.77	49	Pdiff	Pdif	01 37 35.8	-4.2
	baz=271						
T42A	Van Buren	107.81	55	Pdiff	Pdif	01 37 40.0	-0.4
	baz=269						
F39A	Loretta	107.84	45	Pdiff	Pdif	01 37 37.5	-2.8
	baz=272						
P41A	Barry, Barry	107.85	52	Pdiff	Pdif	01 37 38.1	-2.3
	baz=270						
Y43A	Makayla and Ka	107.88	58	Pdiff	Pdif	01 37 40.1	-0.6
	baz=268						
X43A	Marvell	107.94	57	Pdiff	Pdif	01 37 41.1	+0.2
	baz=269						
O41A	Passleys Farm,	107.99	51	Pdiff	Pdif	01 37 41.2	+0.1
	baz=270						
N41A	Harden Midland	108.01	51	Pdiff	Pdif	01 37 40.3	-0.8
	baz=271						
J40A	Soldiers Grove	108.05	48	Pdiff	Pdif	01 37 36.3	-4.9
	baz=272						
S42A	Caledonia	108.06	54	Pdiff	Pdif	01 37 37.6	-3.9
	baz=270						
R42A	Luebbering	108.06	53	Pdiff	Pdif	01 37 39.5	-1.9
	baz=270						
E39A	Mellen	108.07	45	Pdiff	Pdif	01 37 39.7	-1.6
	baz=273						
W43A	Forest City	108.09	57	Pdiff	Pdif	01 37 39.5	-2.1
	baz=269						
I40A	Norwalk	108.12	47	Pdiff	Pdif	01 37 39.8	-1.8
	baz=272						
VBMS	Vicksburg	108.17	60	Pdiff	Pdif	01 37 43.2	+1.2
	baz=268						
M41A	Milan	108.23	50	Pdiff	Pdif	01 37 41.6	-0.5
	baz=271						
V43A	Jonesboro	108.24	56	Pdiff	Pdif	01 37 40.1	-2.1
	baz=269						
L41A	Preston	108.25	49	Pdiff	Pdif	01 37 39.2	-3.0
	baz=271						
H40A	Chili	108.26	47	Pdiff	Pdif	01 37 39.5	-2.6
	baz=272						
Q42A	Golden Eagle	108.27	53	Pdiff	Pdif	01 37 41.1	-1.2
	baz=270						
ARU	Arti	108.35	326	P	Pdif	01 37 42.3	0.0
U43A	Rector	108.36	55	Pdiff	Pdif	01 37 41.0	-1.8
	baz=270						
G40A	Rib Lake	108.37	46	Pdiff	Pdif	01 37 38.6	-4.1
	baz=273						
K41A	Shullsburg	108.39	49	Pdiff	Pdif	01 37 40.3	-2.5
	baz=272						
F40A	Park Falls	108.39	45	Pdiff	Pdif	01 37 41.3	-1.4
	baz=273						
P42A	Winchester	108.41	52	Pdiff	Pdif	01 37 41.1	-1.9
	baz=271						
JFWS	Jewell Farm	108.42	48	Pdiff	Pdif	01 37 41.7	-1.2
	baz=272						
T43A	Greenville	108.46	55	Pdiff	Pdif	01 37 42.1	-1.1
	baz=270						
Y44A	Strider, Charl	108.48	58	Pdiff	Pdif	01 37 42.1	-1.2
	baz=269						
E40A	Wakefield	108.52	45	Pdiff	Pdif	01 37 41.6	-1.7
	baz=273						
X44A	Crenshaw	108.54	57	Pdiff	Pdif	01 37 43.9	+0.2
	baz=269						
J41A	Loganville	108.58	48	Pdiff	Pdif	01 37 40.7	-2.9
	baz=272						
O42A	Bath	108.60	51	Pdiff	Pdif	01 37 43.1	-0.6
	baz=271						
N42A	Yates City	108.63	51	Pdiff	Pdif	01 37 40.5	-3.3
	baz=271						
S43A	Fulton Ridge,	108.63	54	Pdiff	Pdif	01 37 44.1	+0.1
	baz=270						
I41A	Arkdale	108.65	47	Pdiff	Pdif	01 37 41.2	-2.7
	baz=272						
145A	Houston Renfro	108.68	59	Pdiff	Pdif	01 37 40.8	-3.5
	baz=268						
R43A	Red Bud	108.74	53	Pdiff	Pdif	01 37 41.7	-2.7
	baz=270						
V44A	Blytheville	108.77	56	Pdiff	Pdif	01 37 41.0	-3.6
	baz=270						
H41A	Junction City	108.78	47	Pdiff	Pdif	01 37 43.0	-1.5
	baz=273						
M42A	Sheffield	108.82	50	Pdiff	Pdif	01 37 41.9	-2.9
	baz=272						
W44A	Shelby Farms P	108.82	57	Pdiff	Pdif	01 37 42.2	-2.7
	baz=269						
L42A	Oliver, Polo	108.88	49	Pdiff	Pdif	01 37 42.6	-2.4
	baz=272						
Q43A	New Douglas	108.92	53	Pdiff	Pdif	01 37 45.5	+0.3
	baz=271						
C40A	Isle Royale Na	108.94	43	Pdiff	Pdif	01 37 46.2	+1.1
	baz=274						
U44A	Portageville	108.94	55	Pdiff	Pdif	01 37 44.6	-0.7
	baz=270						
Y45A	Yeager Farm, C	109.03	58	Pdiff	Pdif	01 37 43.1	-2.7
	baz=269						
P43A	Skaggs, Pawnee	109.04	52	Pdiff	Pdif	01 37 44.8	-0.9
	baz=271						
K42A	Prairie Point,	109.09	49	Pdiff	Pdif	01 37 44.9	-1.0
	baz=272						
G41A	Antigo	109.09	46	Pdiff	Pdif	01 37 46.5	+0.6
	baz=273						
F41A	Three Lakes	109.11	45	Pdiff	Pdif	01 37 46.5	+0.6

	baz=274						
OXF	Oxford	109.15	57	Pdiff	Pdif	01 37 45.3	-1.0
	baz=269						
E41A	Kenton	109.16	45	Pdiff	Pdif	01 37 47.9	+1.7
	baz=274						
X45A	UM Field Stati	109.16	57	Pdiff	Pdif	01 37 48.8	+2.4
	baz=269						
O43A	Sugar Creek Fa	109.19	51	Pdiff	Pdif	01 37 47.0	+0.6
	baz=272						
HDIL	Hopedale	109.20	51	Pdiff	Pdif	01 37 46.7	+0.3
	baz=272						
U44B	Burton Farm, H	109.21	55	Pdiff	Pdif	01 37 45.4	-1.1
	baz=270						
J42A	Columbus	109.23	48	Pdiff	Pdif	01 37 46.1	-0.4
	baz=273						
WSAR	Wadi Sarin	109.23	291	PKKPbc	PKKPbc	01 52 56.4	-0.8
	comp=Z,14nm,1.0s,baz=14,slow=1.7,SNR=8.9						
N43A	Stutzman Famil	109.28	51	Pdiff	Pdif	01 37 47.1	+0.4
	baz=272						
S44A	Carbondale	109.28	54	Pdiff	Pdif	01 37 45.2	-1.6
	baz=271						
W45A	Hickory Valley	109.34	57	Pdiff	Pdif	01 37 44.7	-2.4
	baz=270						
246A	Jackson Lee, B	109.34	60	Pdiff	Pdif	01 37 46.2	-1.1
	baz=269						
I42A	Draeger Farm,	109.35	47	Pdiff	Pdif	01 37 44.4	-2.6
	baz=273						
AKTO	Aktyubinsk	109.37	320	PKiKP	PKiKP	01 41 51.0	+0.6
AKTO	Aktyubinsk	109.37	320	PKiKP	PKiKP	01 41 51.0	+0.6
	comp=Z,19nm,1.0s,baz=142,slow=2.9,SNR=5.4						
AKTO				PKKPbc	PKKPbc	01 52 56.5	-1.1
	comp=Z,6.6nm,0.8s,baz=272,slow=2.6,SNR=7.3						
D41A	Chassel	109.39	44	Pdiff	Pdif	01 37 44.8	-2.3
	baz=274						
R44A	Waltonville	109.41	53	Pdiff	Pdif	01 37 45.8	-1.6
	baz=271						
M43A	Waltham Townsh	109.42	50	Pdiff	Pdif	01 37 45.5	-1.8
	baz=272						
Q44A	Meyer Farm, Va	109.45	53	Pdiff	Pdif	01 37 45.2	-2.3
	baz=271						
V45A	Humboldt	109.53	56	Pdiff	Pdif	01 37 46.7	-1.3
	baz=270						
L43A	Garden Prairie	109.56	49	Pdiff	Pdif	01 37 46.7	-1.3
	baz=273						
H42A	Shiocton	109.59	47	Pdiff	Pdif	01 37 45.5	-2.6
	baz=274						
Y46A	Houston	109.60	58	Pdiff	Pdif	01 37 45.9	-2.5
	baz=270						
G42A	Mountain	109.62	46	Pdiff	Pdif	01 37 45.5	-2.6
	baz=274						
U45A	Rockin P Farm,	109.68	55	Pdiff	Pdif	01 37 47.7	-1.0
	baz=270						
J43A	Natural Harves	109.74	48	Pdiff	Pdif	01 37 46.7	-2.0
	baz=273						
P44A	Sand Creek, Wi	109.74	52	Pdiff	Pdif	01 37 45.5	-3.4
	baz=272						
T45A	Paducah	109.77	55	Pdiff	Pdif	01 37 46.2	-2.8
	baz=271						
F42A	Maple Grove Fa	109.79	45	Pdiff	Pdif	01 37 46.2	-2.7
	baz=274						
S45A	Carrier Mills	109.81	54	Pdiff	Pdif	01 37 48.1	-1.1
	baz=271						
X46A	Booneville	109.83	57	Pdiff	Pdif	01 37 46.3	-3.1
	baz=270						
K43A	Burlington	109.84	49	Pdiff	Pdif	01 37 48.0	-1.2
	baz=273						
O44A	Mansfield	109.84	51	Pdiff	Pdif	01 37 46.3	-3.0
	baz=272						
E42A	Champion	109.89	45	Pdiff	Pdif	01 37 47.3	-2.1
	baz=275						
I43A	Langenfeld Bro	109.91	47	Pdiff	Pdif	01 37 46.1	-3.4
	baz=274						
W46A	Michie	110.00	57	Pdiff	Pdif	01 37 46.6	-3.5
	baz=270						
R45A	Skylar, Fairfi	110.04	53	Pdiff	Pdif	01 37 47.9	-2.3
	baz=272						
GEYT	Alibeck	110.07	306	PKiKP	PKiKP	01 41 53.4	+1.3
GEYT	Alibeck	110.07	306	Pdiff	Pdif	01 37 50.7	+0.3
	comp=Z,4.4nm,0.9s,baz=118,slow=8.3,SNR=4.1						
GEYT				PKiKP	PKiKP	01 41 53.4	+1.3
	comp=Z,8.9nm,1.0s,baz=48,slow=2.2,SNR=4.1						
GEYT				PKKPbc	PKKPbc	01 52 54.6	-0.4
	comp=Z,9.4nm,0.9s,baz=289,slow=4.5,SNR=5.9						
N44A	Piper City	110.07	51	Pdiff	Pdif	01 37 47.7	-2.6
	baz=272						
147A	Livingston	110.08	59	Pdiff	Pdif	01 37 48.3	-2.2
	baz=269						
M44A	Midewin, Midew	110.11	50	Pdiff	Pdif	01 37 48.4	-2.1
	baz=273						
Q45A	Warren Harvey,	110.12	53	Pdiff	Pdif	01 37 48.1	-2.5
	baz=272						
H43A	Windswept, Lux	110.14	47	Pdiff	Pdif	01 37 48.7	-1.7
	baz=274						
G43A	Wallace	110.14	46	Pdiff	Pdif	01 37 48.8	-1.7
	baz=274						
U46A	Springville	110.16	55	Pdiff	Pdif	01 37 51.0	+0.3
	baz=271						
L44A	Lake County Fo	110.17	49	Pdiff	Pdif	01 37 48.5	-2.2
	baz=273						
V46A	Holladay	110.21	56	Pdiff	Pdif	01 37 50.2	-0.9
	baz=271						
T46A	Princeton	110.37	55	Pdiff	Pdif	01 37 49.8	-1.9
	baz=271						
448A	Bay Minette	110.40	61	Pdiff	Pdif	01 37 50.7	-1.2
	baz=269						
O45A	Potomac	110.41	51	Pdiff	Pdif	01 37 49.9	-1.9
	baz=272						
P45A	Graceland, Par	110.42	52	Pdiff	Pdif	01 37 50.9	-1.0
	baz=272						
X47A	Russelville	110.43	57	Pdiff	Pdif	01 37 48.0	-4.0
	baz=270						
WVT	Waverly	110.44	56	Pdiff	Pdif	01 37 51.2	-0.8
	baz=271						
F43A	Flat Rock, Esc	110.46	45	Pdiff	Pdif	01 37 49.0	-2.8
	baz=275						
S46A	Don Dixon Farm	110.50	54	Pdiff	Pdif	01 37 50.4	-1.9
	baz=272						
E43A	Lone Tree Farm	110.53	45	Pdiff	Pdif	01 37 52.0	-0.2
	baz=275						
N45A	Kentland	110.54	51	Pdiff	Pdif	01 37 51.4	-1.0
	baz=273						
W47A	Westpoint	110.64	57	Pdiff	Pdif	01 37 52.6	-0.4
	baz=271						
R46A	Gibon Southern	110.65	53	Pdiff	Pdif	01 37 52.6	-0.3
	baz=272						
148A	Greensboro	110.67	59	Pdiff	Pdif	01 37 54.5	+1.4
	baz=270						
V47A	Nunnelly	110.70	56	Pdiff	Pdif	01 37 54.9	+1.7
	baz=271						
M45A	Boilermakers S	110.71	50	Pdiff	Pdif	01 37 52.1	-1.1
	baz=273						
Q46A	CEJHS Indians,	110.74	53	Pdiff	Pdif	01 37 53.4	+0.1
	baz=272						
P46A	Rosedale	110.83	52	Pdiff	Pdif	01 37 52.9	-0.8
	baz=273						
U47A	Clarksville	110.87	55	Pdiff	Pdif	01 37 55.2	+1.3
	baz=271						
SFIN	Lafayette	110.88	51	Pdiff	Pdif	01 37 53.3	-0.6
	baz=273						
449A	Pace	110.95	61	Pdiff	Pdif	01 37 54.1	-0.3
	baz=269						
F44A	Big Bay de Noc	110.96	45	Pdiff	Pdif	01 37 52.5	-1.6
	baz=276						
349A	Repton	110.98	61	Pdiff	Pdif	01 37 54.8	+0.3
	baz=270						
T47A	Sharon Grove	111.00	55	Pdiff	Pdif	01 37 54.8	+0.3
	baz=272						
Y48A	Jasper	111.01	58	Pdiff	Pdif	01 37 56.1	+1.5
	baz=270						
249A	Camden	111.05	60	Pdiff	Pdif	01 37 58.4	+3.6
	baz=270						
BRAL	Brewton	111.10	61	Pdiff	Pdif	01 37 57.2	+2.2
	baz=270						
X48A	Hartselle	111.10	57	Pdiff	Pdif	01 37 57.3	+2.2
	baz=271						
N46A	Monticello	111.13	50	Pdiff	Pdif	01 37 56.6	+1.7
	baz=273						
LRAL	Lakeview Retre	111.15	59	Pdiff	Pdif	01 37 58.3	+3.0
	baz=270						
S47A	Hartford	111.17	54	Pdiff	Pdif	01 37 57.4	+2.1
	baz=272						
W48A	Pulaski	111.19	57	Pdiff	Pdif	01 37 58.0	+2.6
	baz=271						
J45A	Montague	111.21	48	Pdiff	Pdif	01 37 56.2	+0.9
	baz=275						
V48A	Smith Brothers	111.27	56	Pdiff	Pdif	01 37 57.9	+2.1
	baz=271						
I45A	Fountain	111.27	47	Pdiff	Pdif	01 37 57.9	+2.3
	baz=275						
149A	Jones	111.33	59	Pdiff	Pdif	01 37 57.4	+1.3
	baz=270						
M46A	Old House Fiel	111.38	50	Pdiff	Pdif	01 37 58.7	+2.6
	baz=274						
L46A	Eue Claire	111.38	49	Pdiff	Pdif	01 37 58.1	+2.0
	baz=274						
R47A	Wooly Knot Far	111.42	53	Pdiff	Pdif	01 37 57.8	+1.5
	baz=273						
Q47A	Bedord North L	111.47	53	Pdiff	Pdif	01 37 58.3	+1.7
	baz=273						
U48A	Cassie Pea, Po	111.47	55	Pdiff	Pdif	01 37 57.6	+1.0
	baz=272						
450A	Crestview	111.50	61	Pdiff	Pdif	01 38 00.2	+3.4
	baz=270						
Z49A	Columbiana	111.54	59	Pdiff	Pdif	01 37 60.0	+3.0
	baz=271						
P47A	Martinsville	111.56	52	Pdiff	Pdif	01 37 59.4	+2.4
	baz=273						
T48A	Bowling Green	111.57	55	Pdiff	Pdif	01 37 59.1	+2.0
	baz=272						
G45A	Suttons Bay	111.59	46	Pdiff	Pdif	01 37 58.2	+1.2
	baz=276						
O47A	Sheridan	111.59	51	Pdiff	Pdif	01 37 57.2	+0.1
	baz=274						
WCI	Wyandotte Cave	111.61	53	Pdiff	Pdif	01 37 58.5	+1.3
	baz=273						
F45A	CMU Biological	111.62	45	Pdiff	Pdif	01 37 57.6	+0.5
	baz=276						
Y49A	Blount Mountai	111.64	58	Pdiff	Pdif	01 38 00.8	+3.4
	baz=271						
X49A	Woodville	111.70	57	Pdiff	Pdif	01 37 59.0	+1.3
	baz=271						
K46A	Dorr	111.71	49	Pdiff	Pdif	01 37 59.7	+2.1
	baz=275						
350A	Dozier	111.72	61	Pdiff	Pdif	01 38 02.2	+4.4
	baz=270						
W49A	Belvidere	111.73	57	Pdiff	Pdif	01 38 00.3	+2.5
	baz=272						
J46A	Howard City	111.75	48	Pdiff	Pdif	01 37 58.8	+1.1
	baz=275						
250A	Grady	111.77	60	Pdiff	Pdif	01 37 59.8	+1.7
	baz=270						
E45A	Wooded Hills,	111.78	45	Pdiff	Pdif	01 38 00.4	+2.7
	baz=277						
S48A	Wiedeman Farm,	111.82	54	Pdiff	Pdif	01 38 00.5	+2.4
	baz=273						
OPO	Ambohidratompo	111.83	245	PKKPbc	PKKPbc	01 52 47.7	-1.2
	comp=Z,14nm,0.9s,baz=225,slow=4.3,SNR=2.8						
N47A	Urbana	111.92	50	Pdiff	Pdif	01 38 01.0	+2.5
	baz=274						
R48A	Northridge Ran	111.93	53	Pdiff	Pdif	01 38 01.0	+2.4
	baz=273						
M47A	Cromwell	111.94	50	Pdiff	Pdif	01 38 00.4	+1.8
	baz=274						
H46A	Fife Lake	111.96	46	Pdiff	Pdif	01 38 00.1	+1.5
	baz=276						
150A	Eclectic	111.98	59	Pdiff	Pdif	01 38 02.4	+3.5
	baz=271						
Q48A	North Vernon	112.01	53	Pdiff	Pdif	01 38 00.9	+1.9
	baz=273						
V49A	McMinnville	112.01	56	Pdiff	Pdif	01 38 00.2	+1.2
	baz=272						
Z50A	Ashland	112.05	59	Pdiff	Pdif	01 38 03.2	+3.9
	baz=271						
U49A	Red Boiling Sp	112.09	55	Pdiff	Pdif	01 38 02.0	+2.6
	baz=272						
G46A	Petoskey	112.12	46	Pdiff	Pdif	01 38 00.1	+0.8
	baz=276						
F46A	Macinaw City C	112.14	45	Pdiff	Pdif	01 38 00.8	+1.4
	baz=277						
L47A	Sherwood	112.20	49	Pdiff	Pdif	01 38 01.2	+1.5
	baz=275						
Y50A	Piedmont	112.20	58	Pdiff	Pdif	01 38 02.5	+2.6
	baz=271						
P48A	Milroy	112.22	52	Pdiff	Pdif	01 38 03.5	+3.6
	baz=274						
451A	Vernon	112.22	61	Pdiff	Pdif	01 38 04.4	+4.4
	baz=270						
X50B	Fort Payne	112.26	57	Pdiff	Pdif	01 38 02.3	+2.1
	baz=272						
T49A	Edmonton	112.26	54	Pdiff	Pdif	01 38 03.9	+3.8
	baz=273						
K47A	Vermontville	112.29	48	Pdiff	Pdif	01 38 00.4	+0.3
	baz=275						
351A	Pinckard	112.34	61	Pdiff	Pdif	01 38 04.4	+3.8
	baz=270						
GLMI	Grayling	112.35	46	Pdiff	Pdif	01 38 01.8	+1.5
	baz=276						
J47A	Sunmer	112.36	48	Pdiff	Pdif	01 38 01.8	+1.4
	baz=276						
O48A	Farmland	112.37	51	Pdiff	Pdif	01 38 03.4	+2.9
	baz=274						
E46A	Sault Ste Mari	112.38	44	Pdiff	Pdif	01 38 03.8	+3.4
	baz=277						
S49A	Springfield	112.42	54	Pdiff	Pdif	01 38 03.2	+2.4
	baz=273						
N48A	Decatur	112.42	50	Pdiff	Pdif	01 38 04.8	+4.1
	baz=275						
KULLO	Kullorsuaq	112.42	11	*i* P	PKiKP	01 41 57.3	+1.9
KULLO	Kullorsuaq	112.42	11	*i* PKIKP	PKiKP	01 41 57.3	+1.9
R49A	Shelbyville	112.48	53	Pdiff	Pdif	01 38 05.3	+4.2
	baz=273						
D46A	Sault St. Mari	112.50	44	Pdiff	Pdif	01 38 03.7	+2.7
	baz=278						
251A	Midway	112.50	60	Pdiff	Pdif	01 38 04.0	+2.7
	baz=271						
I47A	Gladwin	112.51	47	Pdiff	Pdif	01 38 04.3	+3.3
	baz=276						
W50A	Signal Mountai	112.51	57	Pdiff	Pdif	01 38 00.2	-1.1
	baz=272						
151A	Opelika	112.56	59	Pdiff	Pdif	01 38 05.1	+3.5
	baz=271						
M48A	Edgerton	112.60	50	Pdiff	Pdif	01 38 04.5	+3.0
	baz=275						
552A	Lynn Haven	112.61	62	Pdiff	Pdif	01 38 03.3	+1.5
	baz=270						
Q49A	Aurora	112.66	52	Pdiff	Pdif	01 38 04.0	+2.2
	baz=274						
H47A	Mio	112.66	46	Pdiff	Pdif	01 38 04.6	+2.9
	baz=277						
V50A	Pikevile	112.67	56	Pdiff	Pdif	01 38 01.8	-0.2
	baz=272						
Z51A	Franklin	112.68	59	Pdiff	Pdif	01 38 06.9	+4.8
	baz=271						
452A	Marianna	112.70	61	Pdiff	Pdif	01 38 03.8	+1.6
	baz=270						
Y51A	Rockmart	112.76	58	Pdiff	Pdif	01 38 04.5	+2.1
	baz=272						
P49A	Miami Univ. Ec	112.76	52	Pdiff	Pdif	01 38 06.1	+3.8
	baz=274						
L48A	N Adams	112.77	49	Pdiff	Pdif	01 38 04.9	+2.5
	baz=275						
T50A	Nancy	112.82	55	Pdiff	Pdif	01 38 05.3	+2.7
	baz=273						
G47A	Hillman	112.84	46	Pdiff	Pdif	01 38 06.6	+4.1
	baz=277						
U50A	Jamestown	112.84	55	Pdiff	Pdif	01 38 03.4	+0.6
	baz=273						
X51A	Calhoun	112.91	57	Pdiff	Pdif	01 38 04.5	+1.4
	baz=272						
352A	Blakely	112.92	61	Pdiff	Pdif	01 38 07.4	+4.2
	baz=271						
K48A	Perry	112.92	48	Pdiff	Pdif	01 38 05.4	+2.5
	baz=276						
W51A	Cleveland	112.97	57	Pdiff	Pdif	01 38 05.5	+2.2
	baz=272						
O49A	Covington	113.00	51	Pdiff	Pdif	01 38 08.8	+5.4
	baz=275						
N49A	Columbus Grove	113.05	50	Pdiff	Pdif	01 38 05.4	+1.8
	baz=275						
I48A	Sherman Twp	113.07	47	Pdiff	Pdif	01 38 04.8	+1.2
	baz=277						
252A	Lumpkin	113.07	60	Pdiff	Pdif	01 38 06.1	+2.2
	baz=271						
E47A	Iron Bridge	113.07	44	Pdiff	Pdif	01 38 05.4	+1.9
	baz=278						
152A	Waverly Hall	113.08	59	Pdiff	Pdif	01 38 08.6	+4.8
	baz=271						
D47A	Chapleau	113.11	44	Pdiff	Pdif	01 38 08.0	+4.3
	baz=279						
J48A	Bridge Port	113.11	48	Pdiff	Pdif	01 38 08.5	+4.7
	baz=276						
S50A	Richmond	113.13	54	Pdiff	Pdif	01 38 09.0	+5.1
	baz=274						
R50A	Paris	113.15	53	Pdiff	Pdif	01 38 08.7	+4.7
	baz=274						
M49A	Liberty Center	113.16	50	Pdiff	Pdif	01 38 08.4	+4.4
	baz=276						
L49A	Milan	113.25	49	Pdiff	Pdif	01 38 07.0	+2.6
	baz=276						
V51A	Loudon	113.27	56	Pdiff	Pdif	01 38 08.7	+4.0
	baz=273						
H48A	Harrisville	113.28	46	Pdiff	Pdif	01 38 06.8	+2.3
	baz=277						
AAM	Ann Arbor	113.31	49	Pdiff	Pdif	01 38 08.7	+4.1
	baz=276						
Z52A	Williamson	113.32	59	Pdiff	Pdif	01 38 11.0	+6.1
	baz=272						
553A	Crawfordville	113.36	62	Pdiff	Pdif	01 38 04.7	-0.4
	baz=270						
Q50A	Georgetown	113.38	53	Pdiff	Pdif	01 38 03.5	-1.6
	baz=274						
K49A	Clarkson	113.41	48	Pdiff	Pdif	01 38 07.0	+1.9
	baz=276						
453A	Whigham	113.45	61	Pdiff	Pdif	01 38 06.8	+1.3
	baz=271						
P50A	Jamestown	113.46	52	Pdiff	Pdif	01 38 07.4	+2.0
	baz=275						
U51A	La Follette	113.51	55	Pdiff	Pdif	01 38 05.3	-0.4
	baz=273						
353A	Camilla	113.53	61	Pdiff	Pdif	01 38 05.4	-0.5
	baz=271						
T51A	Gray	113.53	55	Pdiff	Pdif	01 38 07.9	+2.1
	baz=274						
O50A	Cable	113.55	51	Pdiff	Pdif	01 38 11.7	+5.9
	baz=275						
J49A	Marlette	113.57	48	Pdiff	Pdif	01 38 08.0	+2.2
	baz=277						
253A	Americus	113.59	60	Pdiff	Pdif	01 38 08.3	+2.2
	baz=271						
Y52A	Lilburn	113.59	58	Pdiff	Pdif	01 38 06.7	+0.6
	baz=272						
F48A	Evansville	113.62	45	Pdiff	Pdif	01 38 04.5	-1.4
	baz=278						
W52A	Murphy	113.65	57	Pdiff	Pdif	01 38 09.7	+3.3
	baz=273						
X52A	Dahlonega	113.70	57	Pdiff	Pdif	01 38 05.7	-0.9
	baz=273						
I49A	Point Hope	113.73	47	Pdiff	Pdif	01 38 04.8	-1.7
	baz=277						
R51A	Hillsboro	113.73	53	Pdiff	Pdif	01 38 08.0	+1.3
	baz=274						
S51A	Beattyville	113.77	54	Pdiff	Pdif	01 38 09.9	+3.1
	baz=274						
153A	Fort Valley	113.83	59	Pdiff	Pdif	01 38 08.5	+1.3
	baz=272						
E48A	Lockeyer	113.83	44	Pdiff	Pdif	01 38 07.2	+0.3
	baz=279						
N50A	Nevada	113.85	50	Pdiff	Pdif	01 38 12.0	+4.9
	baz=276						
Q51A	Peebles	113.86	52	Pdiff	Pdif	01 38 10.1	+2.9
	baz=275						
M50A	Fremont	113.86	50	Pdiff	Pdif	01 38 11.4	+4.2
	baz=276						
TZTN	Tazewell	113.88	55	Pdiff	Pdif	01 38 07.9	+0.6
	baz=274						
V52A	Sevierville	113.88	56	Pdiff	Pdif	01 38 08.2	+0.9
	baz=273						
D48A	Paudash Townsh	113.96	43	Pdiff	Pdif	01 38 08.7	+1.2
	baz=280						
L50A	Kingsville	113.97	49	Pdiff	Pdif	01 38 08.2	+0.6
	baz=277						
Y53A	Monroe	113.99	58	Pdiff	Pdif	01 38 09.1	+1.2
	baz=272						
554A	Perry	114.00	62	Pdiff	Pdif	01 38 08.8	+0.8
	baz=271						
Z53A	Monticello	114.02	59	Pdiff	Pdif	01 38 08.5	+0.5
	baz=272						
F49A	Sandfield	114.03	45	Pdiff	Pdif	01 38 09.4	+1.7
	baz=279						
ACSO	Alum Creek Sta	114.03	51	Pdiff	Pdif	01 38 12.0	+4.1
	baz=276						
U52A	Thorn Hill	114.03	55	Pdiff	Pdif	01 38 09.5	+1.4
	baz=274						
P51A	Williamsport	114.04	52	Pdiff	Pdif	01 38 10.4	+2.5
	baz=275						
454A	Quitman	114.04	61	Pdiff	Pdif	01 38 08.9	+0.7
	baz=271						
TIGA	Tifton	114.06	61	Pdiff	Pdif	01 38 09.2	+1.0
	baz=271						
GOGA	Godfrey	114.11	58	Pdiff	Pdif	01 38 09.0	+0.6
	baz=272						
S52A	Salyersville	114.17	54	Pdiff	Pdif	01 38 09.4	+0.8
	baz=274						
X53A	Estanollee	114.19	57	Pdiff	Pdif	01 38 10.4	+1.7
	baz=273						
D49A	Beulah Townshi	114.25	43	Pdiff	Pdif	01 38 12.7	+4.0
	baz=280						
W53A	Cullowhee	114.27	56	Pdiff	Pdif	01 38 12.5	+3.2
	baz=273						
T52A	Hallie	114.29	54	Pdiff	Pdif	01 38 10.9	+1.8
	baz=274						
254A	Abbeville	114.30	60	Pdiff	Pdif	01 38 12.2	+2.9
	baz=272						
O51A	Pataskala	114.32	51	Pdiff	Pdif	01 38 13.2	+4.0
	baz=276						
655A	Horseshoe Beac	114.38	63	Pdiff	Pdif	01 38 12.4	+2.7
	baz=271						
ATAH	Atahualpa	114.40	103	PKP	PKiKP	01 42 02.4	+0.9
ATAH	Atahualpa	114.40	103	PKP	PKiKP	01 42 02.4	+0.9
	comp=Z,13nm,0.7s,baz=72,slow=4.6,SNR=6.2						
154A	Montrose	114.44	59	Pdiff	Pdif	01 38 11.9	+2.0
	baz=272						
NNA	Nana	114.45	109	PKP	PKiKP	01 42 02.0	+0.9
NNA	Nana	114.45	109	PKIKP	PKiKP	01 42 02.0	+0.9
NNA				pmax	pmax		
	comp=Z,12nm,0.8s						
NNA	Nana	114.45	109	PKP	PKiKP	01 42 02.0	+0.9
	comp=Z,12nm,0.8s,baz=222,slow=12,SNR=3.4						
R52A	Catlettsburg	114.46	53	Pdiff	Pdif	01 38 11.9	+2.0
	baz=275						
TOBO	Tobermory, Bru	114.47	45	Pdiff	Pdif	01 38 12.2	+2.5
	baz=279						
M51A	Elyria	114.52	50	Pdiff	Pdif	01 38 11.0	+1.0
	baz=277						
V53A	Saluda	114.53	56	Pdiff	Pdif	01 38 14.2	+3.9
	baz=274						
BASO	Ashfield	114.55	47	Pdiff	Pdif	01 38 11.4	+1.3
	baz=278						
455A	Stateville	114.56	61	Pdiff	Pdif	01 38 12.4	+1.9
	baz=271						
555A	McAlpin	114.62	62	Pdiff	Pdif	01 38 12.5	+1.8
	baz=271						
Z54A	Sparta	114.64	59	Pdiff	Pdif	01 38 12.2	+1.5
	baz=273						
T53A	Wise	114.66	54	Pdiff	Pdif	01 38 13.9	+3.0
	baz=274						
BRCO	Bruce Peninsul	114.67	46	Pdiff	Pdif	01 38 12.0	+1.3
	baz=279						
U53A	Fall Branch	114.67	55	Pdiff	Pdif	01 38 13.9	+3.0
	baz=274						
355A	Pearson	114.69	61	Pdiff	Pdif	01 38 13.6	+2.6
	baz=272						
Q52A	Bidwell	114.70	52	Pdiff	Pdif	01 38 11.1	+0.2
	baz=276						
Y54A	Tignall	114.73	58	Pdiff	Pdif	01 38 14.3	+3.1
	baz=273						
P52A	Corning	114.74	52	Pdiff	Pdif	01 38 13.4	+2.3
	baz=276						
E50A	Wahnapitae	114.81	44	Pdiff	Pdif	01 38 12.2	+1.0
	baz=280						
K51A	Iona Station	114.84	48	Pdiff	Pdif	01 38 11.3	-0.1
	baz=278						
BWLO	Walkerton	114.91	47	Pdiff	Pdif	01 38 13.0	+1.3
	baz=279						
O52A	Adamsville	114.91	51	Pdiff	Pdif	01 38 12.4	+0.6
	baz=276						
ELFO	Elginfield	114.92	48	Pdiff	Pdif	01 38 13.4	+1.6
	baz=278						
S53A	Williamson	114.93	54	Pdiff	Pdif	01 38 14.4	+2.4
	baz=275						
N52A	McGinn’s Farm,	114.95	50	Pdiff	Pdif	01 38 14.1	+2.1
	baz=277						
155A	Kite	114.98	59	Pdiff	Pdif	01 38 14.8	+2.5
	baz=273						
255A	Hazlehurst	115.00	60	Pdiff	Pdif	01 38 14.8	+2.5
	baz=272						
R53A	Hurricane	115.01	53	Pdiff	Pdif	01 38 14.2	+1.9
	baz=276						
656A	Willston	115.01	63	Pdiff	Pdif	01 38 14.5	+2.0
	baz=271						
I51A	Listowel	115.04	47	Pdiff	Pdif	01 38 13.6	+1.3
	baz=279						
M52A	Chesterland	115.11	49	Pdiff	Pdif	01 38 15.3	+2.6
	baz=277						

556A	Lake Butler	115.11	62	Pdiff	Pdif	01 38 16.0	+3.1
	baz=271						
Z55A	Blythe	115.23	59	Pdiff	Pdif	01 38 16.5	+3.2
	baz=273						
D50A	G1974 Best Tow	115.28	43	Pdiff	Pdif	01 38 15.7	+2.3
	baz=281						
957A	Wimauma	115.29	65	Pdiff	Pdif	01 38 15.4	+1.6
	baz=270						
857A	Zephyrhills	115.29	64	Pdiff	Pdif	01 38 15.4	+1.6
	baz=271						
356A	Blackshear	115.31	61	Pdiff	Pdif	01 38 16.1	+2.3
	baz=272						
P53A	Whipple	115.33	52	*e*PKPdf	PKPdf	01 42 02.6	+0.6
P53A	Whipple	115.33	52	Pdiff	Pdif	01 38 15.4	+1.8
	baz=276						
KLBO	Killbear Provi	115.36	45	Pdiff	Pdif	01 38 15.2	+1.5
	baz=280						
O53A	New Philadelph	115.37	51	Pdiff	Pdif	01 38 14.3	+0.4
	baz=277						
APA	Apatity	115.38	341	⇓*i*PKIKP	PKiKP	01 42 01.0	-0.3
APA				pmax	pmax		
	comp=Z,50nm,1.0s						
PAULI	Pauline	115.40	57	*e*PKPdf	PKPdf	01 42 03.4	+1.1
K52A	Tillsonburg	115.41	48	Pdiff	Pdif	01 38 16.2	+2.2
	baz=278						
T54A	Tazewell	115.42	54	Pdiff	Pdif	01 38 16.9	+2.6
	baz=275						
456A	Hilliard	115.42	61	Pdiff	Pdif	01 38 16.6	+2.3
	baz=272						
757A	Oxford	115.43	63	Pdiff	Pdif	01 38 16.0	+1.6
	baz=271						
F51A	Arnstein	115.46	44	Pdiff	Pdif	01 38 16.6	+2.5
	baz=281						
256A	Glennville	115.49	60	Pdiff	Pdif	01 38 17.7	+3.1
	baz=273						
J52A	Paris	115.52	47	Pdiff	Pdif	01 38 16.4	+2.0
	baz=279						
N53A	Lisbon	115.59	50	Pdiff	Pdif	01 38 15.9	+1.1
	baz=277						
657A	Interlachen	115.59	63	Pdiff	Pdif	01 38 16.3	+1.2
	baz=271						
I52A	Shelburne	115.60	46	Pdiff	Pdif	01 38 16.3	+1.4
	baz=280						
D51A	Lot 18 Range I	115.61	43	Pdiff	Pdif	01 38 13.7	-1.0
	baz=282						
TMCR	Tamitsa	115.62	337	*e*PKIKP	PKiKP	01 42 01.1	-0.7
TMCR				pmax	pmax		
	comp=Z,50nm,1.4s						
M53A	WI Miller and	115.63	49	Pdiff	Pdif	01 38 16.3	+1.3
	baz=278						
E51A	G1948 Merrick	115.64	44	Pdiff	Pdif	01 38 18.2	+3.3
	baz=281						
058A	Arcadia	115.68	65	Pdiff	Pdif	01 38 16.1	+0.6
	baz=270						
557A	Orange Park	115.70	62	Pdiff	Pdif	01 38 19.3	+3.8
	baz=272						
958A	Wauchula	115.72	65	Pdiff	Pdif	01 38 18.1	+2.4
	baz=270						
GO02	Mina Guanaco	115.72	125	*e*PKPdf	PKPdf	01 42 05.3	+1.7
ACTO	Acton	115.76	47	Pdiff	Pdif	01 38 18.2	+2.6
	baz=279						
KMSC	Kings Mountain	115.77	56	*e*PKPdf	PKiKP	01 42 03.9	+0.9
KMSC	Kings Mountain	115.77	56	Pdiff	Pdif	01 38 20.4	+4.7
	baz=274						
R54A	Victor	115.77	53	Pdiff	Pdif	01 38 17.3	+1.5
	baz=276						
156A	Sylvania	115.79	59	Pdiff	Pdif	01 38 21.1	+5.2
	baz=273						
KEV	Kevo	115.80	345	*e*PKPdf	PKPdf	01 42 02.8	+0.8
Q54A	Coxs Mills	115.81	52	Pdiff	Pdif	01 38 18.6	+2.7
	baz=277						
457A	Yulee	115.83	61	Pdiff	Pdif	01 38 18.3	+2.2
	baz=272						
WBCY	West Bay, Gran	115.84	74	*e*PKPdf	PKiKP	01 42 05.3	+1.8
357A	Townsend	115.86	61	Pdiff	Pdif	01 38 20.0	+3.8
	baz=272						
L53A	Girard	115.86	49	Pdiff	Pdif	01 38 18.7	+2.6
	baz=278						
JSC	Jenkinsville	115.89	57	*e*PKPdf	PKiKP	01 42 03.9	+0.6
F52A	Sundridge	115.89	44	Pdiff	Pdif	01 38 17.5	+1.4
	baz=281						
BUKO	Buck Lake	115.91	45	Pdiff	Pdif	01 38 16.5	+0.4
	baz=281						
TYNO	Tyneside	115.98	48	Pdiff	Pdif	01 38 20.2	+3.7
	baz=279						
DWPF	Disney Wildern	116.00	64	Pdiff	Pdif	01 38 20.2	+3.3
	baz=271						
059Z	Ave Maria	116.00	66	Pdiff	Pdif	01 38 20.9	+3.9
	baz=270						
P54A	Burton	116.01	51	Pdiff	Pdif	01 38 20.2	+3.5
	baz=277						
O54A	Avella	116.02	51	Pdiff	Pdif	01 38 20.2	+3.5
	baz=278						
FSCY	Frank Sound, G	116.03	74	*e*PKPdf	PKiKP	01 42 06.0	+2.0
ERPA	Erie	116.04	49	*e*PKPdf	PKiKP	01 42 04.3	+1.0
ERPA	Erie	116.04	49	Pdiff	Pdif	01 38 19.3	+2.5
	baz=279						
I53A	Kortright Cn E	116.06	47	Pdiff	Pdif	01 38 18.4	+1.6
	baz=280						
858A	St. Cloud	116.06	64	Pdiff	Pdif	01 38 20.7	+3.5
	baz=271						
658A	Bunnell	116.12	63	Pdiff	Pdif	01 38 21.4	+4.0
	baz=272						
MATQ	Matagami	116.15	40	Pdiff	Pdif	01 38 19.2	+2.1
	baz=284						
758A	Lake Helen	116.19	63	Pdiff	Pdif	01 38 22.5	+4.8
	baz=272						
S55A	Lewisburg	116.20	53	Pdiff	Pdif	01 38 24.4	+6.7
	baz=276						
N54A	Moraine State	116.20	50	Pdiff	Pdif	01 38 18.4	+0.8
	baz=278						
257A	Skidaway Islan	116.22	60	Pdiff	Pdif	01 38 24.2	+6.3
	baz=273						
E52A	Mattawa	116.25	44	Pdiff	Pdif	01 38 19.7	+2.1
	baz=282						
059A	Moore Haven	116.27	65	Pdiff	Pdif	01 38 19.5	+1.4
	baz=270						
TORO	Toronto--Lesli	116.27	47	Pdiff	Pdif	01 38 21.4	+3.6
	baz=280						
D52A	ZEK Kipawa Sen	116.28	43	Pdiff	Pdif	01 38 19.5	+1.7
	baz=282						
BLA	Blacksburg	116.32	54	*e*PKPdf	PKiKP	01 42 04.2	+0.1
BLA	Blacksburg	116.32	54	*e*PKIKP	PKiKP	01 42 04.2	+0.1
BLA	Blacksburg	116.32	54	Pdiff	Pdif	01 38 17.7	-0.6
	baz=276						
ARCES	ARCESS Array B	116.33	345	*e*PKPdf	PKiKP	01 42 00.3	-2.8
ARCES	ARCESS Array B	116.33	345	*e*PKIKP	PKiKP	01 42 00.3	-2.8
ARCES	ARCESS Array B	116.33	345	PKP	PKiKP	01 42 03.0	-0.1
	comp=Z,28nm,0.6s,baz=69,slow=1.3,SNR=20						
ARCES				PKKPbc	PKKPbc	01 52 30.9	-3.8
	comp=Z,8.8nm,0.7s,baz=193,slow=1.4,SNR=8.5						
ARE0	ARCESS Array S	116.33	345	*e*PKPdf	PKiKP	01 42 01.6	-1.5
062Z	Marathon	116.35	68	Pdiff	Pdif	01 38 21.9	+3.3
	baz=269						
M54A	Oil Creek Stat	116.37	49	Pdiff	Pdif	01 38 20.3	+2.0
	baz=279						
Q55A	Buckhannon	116.39	52	Pdiff	Pdif	01 38 21.9	+3.4
	baz=277						
PKRO	Pickering	116.40	46	Pdiff	Pdif	01 38 19.1	+0.7
	baz=280						
R55A	Marlinton	116.44	53	Pdiff	Pdif	01 38 20.8	+2.0
	baz=277						
STCO	Saint Catharin	116.46	47	Pdiff	Pdif	01 38 18.6	-0.1
	baz=280						
859A	Kempfer Cattle	116.47	64	Pdiff	Pdif	01 38 20.2	+1.2
	baz=271						
061Z	Ochoppi	116.48	67	Pdiff	Pdif	01 38 21.8	+2.7
	baz=270						
MCWV	Mont Chateau	116.49	51	Pdiff	Pdif	01 38 23.4	+4.5
	baz=278						
959A	Okeechobee	116.50	65	Pdiff	Pdif	01 38 20.2	+1.1
	baz=271						
G53A	Haliburton	116.51	45	Pdiff	Pdif	01 38 22.4	+3.6
	baz=281						
P55A	Reedsville	116.52	51	Pdiff	Pdif	01 38 21.2	+2.2
	baz=278						
KLMR	Klimovskoe	116.58	334	*e*PKIKP	PKiKP	01 42 07.3	+3.6
KLMR				pmax	pmax		
	comp=Z,147nm,1.6s						
KLMR	Klimovskoe	116.58	334	*e*PKPdf	PKiKP	01 42 07.4	+3.7
KLMR				AMP		01 42 10.7	
	comp=Z,147nm,1.6s						
VLDQ	Val d'Or	116.66	42	*e*PKPdf	PKPdf	01 42 03.9	-0.4
DRWO	Darlington Wes	116.66	46	Pdiff	Pdif	01 38 21.2	+1.7
	baz=280						
DRCO	St. Marys Ceme	116.68	46	Pdiff	Pdif	01 38 22.1	+2.6
	baz=280						
D53A	Lac Vacive, Po	116.73	43	Pdiff	Pdif	01 38 21.3	+1.5
	baz=283						
ALGO	Algonquin Park	116.73	44	Pdiff	Pdif	01 38 21.3	+1.5
	baz=282						
LSQQ	Lebel-sur-Quev	116.74	41	Pdiff	Pdif	01 38 21.6	+1.9
	baz=284						
060Z	West Palm Beac	116.80	66	Pdiff	Pdif	01 38 23.4	+2.9
	baz=270						
O55A	Ligonier	116.83	51	Pdiff	Pdif	01 38 20.5	+0.1
	baz=278						
NHSC	New Hope	116.87	59	*e*PKPdf	PKiKP	01 42 07.5	+2.3
NHSC	New Hope	116.87	59	Pdiff	Pdif	01 38 21.3	+0.6
	baz=274						
CMBC	Cumbal	116.89	95	⇑*e*P	PKPdf	01 42 06.3	-0.1
CMBC	Cumbal	116.89	95	*e*P	PKiKP	01 42 07.8	+1.4
CMBC	Cumbal	116.89	95	⇑*e*P	PKPdf	01 42 06.3	-0.1
CMBC	Cumbal	116.89	95	*e*P	PKiKP	01 42 07.8	+1.4
WLVO	Wesleyville	116.89	46	Pdiff	Pdif	01 38 21.0	+0.4
	baz=281						
E53A	Dumoine, Ponti	116.91	44	Pdiff	Pdif	01 38 24.2	+3.6
	baz=282						
060A	Indiantown	116.97	65	Pdiff	Pdif	01 38 24.3	+3.1
	baz=271						
N55A	Marion Center	116.98	50	Pdiff	Pdif	01 38 22.7	+1.6
	baz=279						
MEDO	Medina	116.99	47	Pdiff	Pdif	01 38 21.5	+0.5
	baz=280						
BANO	Bancroft	117.01	45	Pdiff	Pdif	01 38 24.0	+3.0
	baz=282						
M55A	Ridgway	117.04	49	Pdiff	Pdif	01 38 25.1	+3.7
	baz=279						
SUMG	Summit	117.14	8	*i* P	PKiKP	01 42 05.3	+0.2
SUMG	Summit	117.14	8	*i* P	PKKPbc	01 52 33.1	+0.7
SUMG	Summit	117.14	8	*e*PKIKP	PKiKP	01 42 05.3	+0.2
L55A	Hinsdale	117.17	48	Pdiff	Pdif	01 38 23.1	+1.2
	baz=280						
E54A	Lac Daplat, Po	117.22	43	Pdiff	Pdif	01 38 23.8	+1.9
	baz=283						
DELO	Deloro Mine	117.33	46	Pdiff	Pdif	01 38 24.3	+1.9
	baz=282						
I55A	Frankford	117.34	46	Pdiff	Pdif	01 38 22.8	+0.3
	baz=281						
K55A	Perry	117.34	48	Pdiff	Pdif	01 38 24.4	+1.7
	baz=280						
PEMO	Pembroke	117.34	44	Pdiff	Pdif	01 38 22.4	-0.1
	baz=282						
O56A	Blue Knob Stat	117.38	50	Pdiff	Pdif	01 38 23.2	+0.3
	baz=279						
D54A	Lac Fusel, La	117.41	43	Pdiff	Pdif	01 38 22.9	+0.1
	baz=284						
GCUF	Volcan Galeras	117.41	94	*e*P	PKiKP	01 42 07.8	+0.3
GCUF	Volcan Galeras	117.41	94	*e*P	PKiKP	01 42 07.8	+0.3
J55A	Hilton	117.43	47	Pdiff	Pdif	01 38 23.9	+1.0
	baz=281						
LVC	Limon Verde	117.44	123	*e*PKPdf	PKiKP	01 42 08.2	+1.1
LVC	Limon Verde	117.44	123	PKIKP	PKiKP	01 42 07.3	+0.2
LVC						01 43 21.7	
LVC				pmax	pmax		
	comp=Z,57nm,1.3s						
LVC	Limon Verde	117.44	123	PKP	PKiKP	01 42 07.3	+0.2
	comp=Z,8.1nm,0.8s,baz=352,slow=5.0,SNR=3.8						
LVC				PP	PP	01 43 21.7	+3.2
	comp=Z,57nm,1.3s,baz=227,slow=6.1,SNR=8.0						
LVC				PKKPbc	PKKPbc	01 52 30.7	+0.6
	comp=Z,20nm,0.9s,baz=2.6,slow=2.3,SNR=8.6						
PLVO	Plevna	117.60	45	*e*PKPdf	PKiKP	01 42 06.7	+0.4
PLVO	Plevna	117.60	45	Pdiff	Pdif	01 38 25.5	+1.8
	baz=282						
H55A	Tweed	117.62	46	Pdiff	Pdif	01 38 23.3	-0.5
	baz=282						
PB01	IPOC Station P	117.64	121	*e*PKPdf	PKiKP	01 42 08.1	+0.9
ILULI	Ilulissat	117.67	14	*e*PKPdf	PKiKP	01 42 06.4	+0.8
ILULI	Ilulissat	117.67	14	*i* P	PKiKP	01 42 06.5	+0.8
ILULI	Ilulissat	117.67	14	*e*PKIKP	PKiKP	01 42 06.4	+0.8
G55A	Calabogie	117.80	45	Pdiff	Pdif	01 38 24.3	-0.3
	baz=283						
SSPA	Standing Stone	117.83	50	*e*PKPdf	PKPdf	01 42 05.7	-1.1
SSPA	Standing Stone	117.83	50	Pdiff	Pdif	01 38 24.7	-0.1
	baz=279						
CRUC	La Cruz	117.87	94	*e*P	PKiKP	01 42 09.8	+1.7
CRUC	La Cruz	117.87	94	*e*P	PKiKP	01 42 09.8	+1.7
F55A	Otter Lake	117.92	44	Pdiff	Pdif	01 38 23.9	-1.2
	baz=283						
MALC	Bahia Malaga	117.96	91	*e*P	PKiKP	01 42 09.8	+1.9
MALC	Bahia Malaga	117.96	91	*e*P	PKiKP	01 42 09.8	+1.9
PB11	IPOC Station P	118.05	120	*e*PKPdf	PKiKP	01 42 08.9	+0.9
CHGQ	Chibougamau	118.15	39	Pdiff	Pdif	01 38 24.3	-1.7
	baz=287						
R58B	Mineral	118.24	53	*e*PKPdf	PKiKP	01 42 08.2	+0.5
R58B	Mineral	118.24	53	Pdiff	Pdif	01 38 28.3	+1.7
	baz=278						
H56A	Elgin	118.26	45	Pdiff	Pdif	01 38 27.1	+0.5
	baz=283						
POPC	Popayan, Colom	118.33	93	*e*P	PKPdf	01 42 08.5	-0.3
POPC	Popayan, Colom	118.33	93	*e*P	PKPdf	01 42 07.8	-1.1
POPC	Popayan, Colom	118.33	93	*e*P	PKPdf	01 42 08.5	-0.3
POPC	Popayan, Colom	118.33	93	*e*P	PKPdf	01 42 07.8	-1.1
MNMC	Minye Minye	118.36	119	*e*PKPdf	PKiKP	01 42 09.1	+0.3
ORHO	Orleans, Herit	118.56	44	Pdiff	Pdif	01 38 27.3	-0.6
	baz=284						
PCON	Cinco Dias	118.56	93	⇑*e*P	PKiKP	01 42 14.9	+5.1
PCON	Cinco Dias	118.56	93	⇑*e*P	PKiKP	01 42 14.9	+5.1
CNNC	Cliffs of the	118.57	56	Pdiff	Pdif	01 38 25.5	-2.7
	baz=277						
CBN	Corbin Frederi	118.60	53	Pdiff	Pdif	01 38 30.3	+2.0
	baz=278						
PAGS	Pennsylvania G	118.78	50	*e*PKPdf	PKiKP	01 42 09.0	+0.4
GROC	Groznyy	118.79	313	*i* PKIKP	PKPdf	01 42 02.5	-6.1
GROC				*e*		01 43 24.8	
GROC				*e*PS	PS	01 53 07.5	-7.5
GROC				pmax	pmax		
	comp=Z,167nm,1.3s						
SDMD	Soldier's Deli	118.82	51	*e*PKPdf	PKiKP	01 42 09.0	+0.2
YOTC	Yotoco, Valle	118.93	92	*e*P	PKPdf	01 42 07.5	-2.4
YOTC	Yotoco, Valle	118.93	92	*e*P	PKPdf	01 42 07.5	-2.4
BINY	Binghamton	118.95	48	*e*PKPdf	PKiKP	01 42 09.8	+0.8
BINY	Binghamton	118.95	48	Pdiff	Pdif	01 38 29.7	-0.1
	baz=282						
ALFO	Alfred	118.97	44	Pdiff	Pdif	01 38 27.8	-1.9
	baz=284						
TRQ	Mont Tremblant	119.04	43	*e*PKPdf	PKiKP	01 42 09.3	+0.2
MVL	Millersville	119.10	50	*e*PKPdf	PKPdf	01 42 09.1	-0.1
MARP	Paez Belalcaza	119.10	93	*e*P	PKPdf	01 42 08.8	-1.6
MARP	Paez Belalcaza	119.10	93	*e*P	PKPdf	01 42 08.8	-1.6
KSPA	Keystone Colle	119.24	49	*e*PKPdf	PKPdf	01 42 09.4	-0.1
VRH	Novokhopyorsk	119.26	323	*e*PKIKP	PKPdf	01 42 08.7	-0.5
VRH				pmax	pmax		
	comp=Z,110nm,0.8s						
N59A	State Game Lan	119.36	49	*e*PKPdf	PKiKP	01 42 10.2	+0.4
N59A	State Game Lan	119.36	49	Pdiff	Pdif	01 38 33.3	+1.6
	baz=281						
LONY	Lake Ozonia	119.42	45	*e*PKPdf	PKiKP	01 42 10.2	+0.3
LONY	Lake Ozonia	119.42	45	Pdiff	Pdif	01 38 34.3	+2.5
	baz=284						
MTDJ	Mount Denham	119.43	75	*e*PKPdf	PKiKP	01 42 12.2	+1.6
MTDJ	Mount Denham	119.43	75	*e*P	PKiKP	01 42 10.8	+0.1
MTDJ	Mount Denham	119.43	75	*e*P	PKiKP	01 42 10.8	+0.1
SFJD	Kangerlussuaq	119.47	15	*e*PKPdf	PKiKP	01 42 09.8	+0.6
SFJD	Kangerlussuaq	119.47	15	*i* P	PKPdf	01 42 08.4	-0.7
SFJD	Kangerlussuaq	119.47	15	*i* PKIKP	PKPdf	01 42 08.4	-0.7
SFJD	Kangerlussuaq	119.47	15	PKKPbc	PKKPbc	01 52 20.8	-2.5
	comp=Z,9.8nm,0.9s,baz=97,slow=6.8,SNR=3.0						
BETC	Betania	119.57	93	*e*P	PKPdf	01 42 10.8	-0.2
BETC	Betania	119.57	93	*e*P	PKPdf	01 42 10.8	-0.2
PTLC	Puerto Leguiza	119.68	96	*e*P	PKiKP	01 42 11.8	+0.6
PTLC	Puerto Leguiza	119.68	96	*e*P	PKiKP	01 42 11.8	+0.6
MOS	Moscow	119.75	329	*i* PKIKP	PKPdf	01 42 09.1	-0.9
MOS				*e*		01 43 33.0	
MOS				pmax	pmax		
	comp=Z,118nm,1.0s						
NCB	Newcomb	119.83	46	*e*PKPdf	PKPdf	01 42 09.6	-1.0
TBLG	Delisi	119.86	312	*e*P	PKiKP	01 42 12.2	+1.4
TBLG	Delisi	119.86	312	*e*PKPdf	PKiKP	01 42 10.8	0.0
TBLG	Delisi	119.86	312	*e*PKIKP	PKiKP	01 42 10.8	0.0
LATQ	La Tuque	119.89	42	Pdiff	Pdif	01 38 38.1	+4.3
	baz=287						
ANIL	Santa Ana	119.94	91	*e*P	PKiKP	01 42 12.9	+0.8
ANIL	Santa Ana	119.94	91	*e*P	PKiKP	01 42 12.9	+0.8
FRNY	Flat Rock	120.05	45	*e*PKPdf	PKiKP	01 42 11.2	+0.2
HELC	Santa Helena	120.11	89	*e*P	PKPdf	01 42 10.4	-2.0
HELC	Santa Helena	120.11	89	*e*P	PKPdf	01 42 11.8	-0.6
HELC	Santa Helena	120.11	89	*e*P	PKPdf	01 42 10.4	-2.0
HELC	Santa Helena	120.11	89	*e*P	PKPdf	01 42 11.8	-0.6
GNI	Garni	120.18	310	*e*P	PKPdf	01 42 10.3	-1.3
GNI	Garni	120.18	310	*e*PKPdf	PKiKP	01 42 13.4	+1.8
GNI	Garni	120.18	310	*c i*PKIKP	PKiKP	01 42 11.9	+0.2
GNI				pmax	pmax		
	comp=Z,774nm,1.0s						
GNI	Garni	120.18	310	PKP	PKiKP	01 42 12.4	+0.7
	comp=Z,33nm,1.0s,baz=207,slow=12,SNR=3.1						
GNI				PKKPbc	PKKPab	01 52 20.7	+0.3
	comp=Z,8.1nm,0.9s,baz=278,slow=4.6,SNR=3.7						
ODNJ	Ogdensburg	120.20	49	*e*PKPdf	PKiKP	01 42 12.1	+0.7
ZEI	Tsey	120.23	313	*i* PKIKP	PKiKP	01 42 14.9	+3.2
ZEI				pmax	pmax		
	comp=Z,78nm,1.3s						
GOF	Gofitskoye	120.27	316	*e*PKIKP	PKiKP	01 42 16.6	+5.1
GOF				pmax	pmax		
	comp=Z,120nm,1.1s						
BRNJ	Basking Ridge	120.31	49	*e*PKPdf	PKiKP	01 42 12.6	+1.0
ACCN	Adirondack Com	120.36	46	*e*PKPdf	PKiKP	01 42 12.0	+0.3
LPSR	Galich'ya Gora	120.36	325	*e*PKIKP	PKPdf	01 42 10.9	-0.4
LPSR				pmax	pmax		
	comp=Z,220nm,1.2s						
TRY	Troy	120.52	47	*e*PKPdf	PKiKP	01 42 12.1	+0.1
VORR	Voronezh	120.56	324	*e*PKIKP	PKPdf	01 42 09.0	-2.7
VORR				pmax	pmax		
	comp=Z,300nm,1.6s						
OBN	Obninsk	120.57	328	*e*PKPdf	PKiKP	01 42 11.8	+0.1
OBN	Obninsk	120.57	328	⇓*i*P	PKiKP	01 42 13.0	+1.3
OBN	Obninsk	120.57	328	*c i*PKIKP	PKPdf	01 42 10.6	-1.0
OBN				*e*		01 42 22.7	
OBN				*e*		01 43 38.7	
OBN				*e*PPP	PPP	01 46 07.9	
OBN				pmax	pmax		
	comp=Z,113nm,1.2s						
OBN				MLR	MLR		
	comp=Z,30µm,18.0s						
TASB	TASBURUN-IGDIR	120.59	310	*e*P	PKiKP	01 42 13.6	+1.3
SCHQ	Schefferville	120.63	32	*e*PKPdf	PKiKP	01 42 12.7	+0.8
SCHQ	Schefferville	120.63	32	PKP	PKPdf	01 42 11.7	-0.1
	comp=Z,35nm,0.9s,baz=7.8,slow=1.5,SNR=9.5						
SCHQ				PKKPbc	PKKPbc	01 52 20.4	+1.6
	comp=Z,13nm,0.9s,baz=262,slow=6.9,SNR=5.3						
SCO	Scoresbysund	120.66	3	*e*PKPdf	PKiKP	01 42 13.0	+1.5
SCO	Scoresbysund	120.66	3	*i* P	PKiKP	01 42 12.0	+0.5
SCO	Scoresbysund	120.66	3	*i* P	PKKPbc	01 52 21.5	+2.6
SCO	Scoresbysund	120.66	3	*i* PKIKP	PKiKP	01 42 12.0	+0.5
KBZ	Khabaz	120.72	314	PKP	PKiKP	01 42 13.2	+0.9
KBZ	Khabaz	120.72	314	PKIKP	PKiKP	01 42 13.2	+0.9
KBZ						01 43 42.1	
KBZ				pmax	pmax		
	comp=Z,22nm,0.9s						
KBZ				pmax	pmax		
	comp=Z,27nm,1.1s						
KBZ	Khabaz	120.72	314	PKP	PKiKP	01 42 13.2	+0.9
	comp=Z,10nm,0.9s,baz=108,slow=4.0,SNR=6.1						
KBZ				PP	PP	01 43 42.0	+1.7
	comp=Z,27nm,1.1s,baz=83,slow=6.8,SNR=5.3						
KBZ				PKKPbc	PKKPbc	01 52 19.8	+1.8
	comp=Z,2.8nm,0.9s,baz=227,slow=16,SNR=2.9						
PAL	Palisades	120.73	49	*e*PKPdf	PKPdf	01 42 12.3	0.0
PAL	Palisades	120.73	49	*e*PKIKP	PKPdf	01 42 12.3	0.0
PAL	Palisades	120.73	49	Pdiff	Pdif	01 38 40.0	+2.4
	baz=283						
CPNY	Central Park	120.73	49	*e*PKPdf	PKiKP	01 42 13.7	+1.2
VSR	Storozhevoye	120.76	324	*e*PKIKP	PKPdf	01 42 10.4	-1.7
VSR				pmax	pmax		
	comp=Z,130nm,1.3s						
BGD	Bogdanovka	120.80	311	*e*P	PKPdf	01 42 11.2	-1.6
KVAR	Kislovodsk Arr	120.80	315	PKP	PKiKP	01 42 14.5	+1.8
KVAR	Kislovodsk Arr	120.80	315	PKP	PKiKP	01 42 14.5	+1.8
	comp=Z,18nm,1.1s,baz=248,slow=22,SNR=3.5						
LPAZ	La Paz	120.81	117	*e*PKPdf	PKiKP	01 42 14.4	+0.3
LPAZ	La Paz	120.81	117	PKIKP	PKPdf	01 42 14.0	0.0
LPAZ				pmax	pmax		
	comp=Z,18nm,0.7s						
LPAZ	La Paz	120.81	117	PKP	PKPdf	01 42 13.9	0.0
	comp=Z,18nm,0.7s,baz=251,slow=0.2,SNR=15						
LPAZ				PKKPbc	PKKPbc	01 52 17.5	-0.4
	comp=Z,15nm,0.9s,baz=65,slow=4.2,SNR=7.2						
LPAZ	La Paz	120.81	117	*e*P	PKiKP	01 42 14.8	+0.7
KIV	Kislovodsk	120.81	315	⇓*i*P	PKiKP	01 42 13.4	+0.7
KIV	Kislovodsk	120.81	315	*e*PKIKP	PKPdf	01 42 11.4	-1.2
KIV				pmax	pmax		
	comp=Z,94nm,1.1s						
MOQ	Mont Orford	120.84	44	*e*PKPdf	PKPdf	01 42 11.8	-0.7
NEY	Neytrino	120.96	314	*i* PKIKP	PKiKP	01 42 15.1	+2.0
PUL	Pulkovo	121.06	335	*c i*PKIKP	PKiKP	01 42 13.4	+0.9
PUL				pmax	pmax		
	comp=Z,255nm,1.0s						
ROSC	El Rosal	121.07	91	*e*PKPdf	PKPdf	01 42 14.1	-0.2
ROSC	El Rosal	121.07	91	*e*P	PKPdf	01 42 11.8	-2.5
ROSC	El Rosal	121.07	91	*e*P	PKPdf	01 42 11.8	-2.5
ROSC	El Rosal	121.07	91	PKP	PKPdf	01 42 13.2	-1.1
	comp=Z,33nm,0.7s,baz=190,slow=13,SNR=12						
ROSC				PKKPbc	PKKPab	01 52 17.7	-0.2
	comp=Z,5.0nm,0.6s,baz=137,slow=19,SNR=2.4						
PTBC	PUERTO BERRIO,	121.22	89	*e*P	PKiKP	01 42 14.9	+0.7
PTBC	PUERTO BERRIO,	121.22	89	*e*P	PKiKP	01 42 14.9	+0.7
HNH	Hanover	121.25	45	*e*PKPdf	PKiKP	01 42 14.6	+1.2
LBNH	Lisbon	121.36	45	*e*PKPdf	PKiKP	01 42 13.7	0.0
LBNH	Lisbon	121.36	45	Pdiff	Pdif	01 38 45.7	+5.2
	baz=286						
YLE	Yale	121.37	48	*e*PKPdf	PKiKP	01 42 14.8	+1.1
VANB	Van	121.51	308	*e*P	PKiKP	01 42 17.4	+3.1
QUA2	Belchertown	121.57	47	*e*PKPdf	PKiKP	01 42 15.0	+0.9
CUKT	Cukurca	121.59	307	*e*P	PKiKP	01 42 14.9	+0.4
CHIC	Chingaza	121.61	91	*e*P	PKPdf	01 42 14.9	-0.5
CHIC	Chingaza	121.61	91	*e*P	PKiKP	01 42 16.9	+1.4
CHIC	Chingaza	121.61	91	*e*P	PKPdf	01 42 14.9	-0.5
CHIC	Chingaza	121.61	91	*e*P	PKiKP	01 42 16.9	+1.4
AGRB	Hanur-Agry	121.61	310	*e*P	PKPdf	01 42 14.4	0.0
FIA1	FINESS Array S	121.67	338	*e*PKPdf	PKPdf	01 42 11.8	-1.8
FIA1				*e*PKPdf	PKiKP	01 42 12.2	-1.4
FINES	FINESS Array B	121.67	338	PKP	PKPdf	01 42 13.6	0.0
FINES	FINESS Array B	121.67	338	PKIKP	PKPdf	01 42 13.6	0.0
FINES	FINESS Array B	121.67	338	PKP	PKPdf	01 42 13.6	0.0
	comp=Z,42nm,0.9s,baz=107,slow=3.0,SNR=21						
FINES				PKKPbc	PKKPbc	01 52 17.4	+2.4
	comp=Z,4.8nm,0.9s,baz=204,slow=1.9,SNR=4.4						
AKDM	Akdamar-Van	121.88	308	*e*P	PKPdf	01 42 13.9	-1.0
BRRC	Barranca, Sant	122.04	89	*e*P	PKiKP	01 42 17.6	+1.7
BRRC	Barranca, Sant	122.04	89	*e*P	PKPdf	01 42 14.9	-0.8
BRRC	Barranca, Sant	122.04	89	*e*P	PKiKP	01 42 17.6	+1.7
BRRC	Barranca, Sant	122.04	89	*e*P	PKPdf	01 42 14.9	-0.8
MLAZ	Malazgirt-MUS	122.04	309	*e*P	PKPdf	01 42 12.9	-2.3
HRV	Adam Dziewonsk	122.08	47	*e*PKPdf	PKiKP	01 42 15.9	+0.8
HRV	Adam Dziewonsk	122.08	47	*e*PKIKP	PKiKP	01 42 15.9	+0.8
HRV	Adam Dziewonsk	122.08	47	Pdiff	Pdif	01 38 43.5	-0.1
	baz=285						
DAMY	Dhamar	122.08	280	*e*PKPdf	PKPdf	01 42 15.9	-0.1
BCA	Borcka	122.20	312	*e*P	PKiKP	01 42 15.4	0.0
BRYW	Bryant College	122.24	47	*e*PKPdf	PKPdf	01 42 15.3	0.0
WES	Weston	122.28	47	*e*PKPdf	PKiKP	01 42 16.3	+0.9
WES	Weston	122.28	47	*e*PKIKP	PKiKP	01 42 16.3	+0.9
SIRT	Sirnak	122.46	307	*e*P	PKPdf	01 42 14.8	-1.1
RUSC	La Rusia	122.46	90	*e*P	PKPdf	01 42 15.6	-1.5
RUSC	La Rusia	122.46	90	*e*P	PKPdf	01 42 13.9	-3.2
RUSC	La Rusia	122.46	90	*e*P	PKPdf	01 42 15.6	-1.5
RUSC	La Rusia	122.46	90	*e*P	PKPdf	01 42 13.9	-3.2
BARC	Barichara	122.48	89	*e*P	PKPdf	01 42 15.8	-1.1
BARC	Barichara	122.48	89	*e*P	PKiKP	01 42 20.0	+3.0
BARC	Barichara	122.48	89	*e*P	PKPdf	01 42 15.8	-1.1
BARC	Barichara	122.48	89	*e*P	PKiKP	01 42 20.0	+3.0
GURO	Guroymak-BITLI	122.56	309	*e*P	PKPdf	01 42 14.9	-1.3
OCAC	Ocana	122.59	87	*e*P	PKPdf	01 42 13.9	-3.0
OCAC	Ocana	122.59	87	*e*P	PKPdf	01 42 13.9	-3.0
CODC	Agustn Codazz	122.69	85	*e*P	PKPdf	01 42 16.6	-0.3
CODC	Agustn Codazz	122.69	85	*e*P	PKiKP	01 42 17.9	+0.9
CODC	Agustn Codazz	122.69	85	*e*P	PKPdf	01 42 16.6	-0.3
CODC	Agustn Codazz	122.69	85	*e*P	PKiKP	01 42 17.9	+0.9
WVL	Waterville	122.82	44	*e*PKPdf	PKiKP	01 42 17.0	+0.6
PKME	Peaks-Kenny Pk	122.84	43	*e*PKPdf	PKiKP	01 42 16.6	+0.1
PKME	Peaks-Kenny Pk	122.84	43	Pdiff	Pdif	01 38 48.2	+1.2
	baz=289						
CHOM	Cayeli-Rize	122.92	312	*e*P	PKPdf	01 42 14.2	-2.4
SOC	Sochi	122.98	315	*e*PKIKP	PKiKP	01 42 20.3	+3.5
SOC				pmax	pmax		
	comp=Z,115nm,1.3s						
M65A	Busby, Falmout	122.98	48	Pdiff	Pdif	01 38 46.9	-0.8
	baz=285						
PAMC	Pamplona, Colo	123.06	89	*e*P	PKiKP	01 42 19.6	+1.1
PAMC	Pamplona, Colo	123.06	89	*e*P	PKPdf	01 42 17.9	-0.3
PAMC	Pamplona, Colo	123.06	89	*e*P	PKiKP	01 42 19.6	+1.1
PAMC	Pamplona, Colo	123.06	89	*e*P	PKPdf	01 42 17.9	-0.3
PQI	Presque Isle	123.21	41	*e*PKPdf	PKPdf	01 42 14.9	-2.1

SVAN	Silvan-Diyarba	123.28	308	*e*P	PKPdf	01 42 16.4	-1.0
VSU	Vasula	123.32	335c	*i*PKIKP	PKiKP	01 42 17.2	+0.2
VSU				pmax	pmax		
	comp=Z,542nm,2.5s						
VSU	Vasula	123.32	335	*e*P	PKPdf	01 42 15.0	-1.8
VSU				IAmb	IAmb	01 42 22.9	
	comp=Z,902nm,1.4s						
BNGB	Bingl	123.49	309	*e*P	PKiKP	01 42 18.2	+0.1
PLTB	Pedras Altas	123.51	140	*e*P	PKiKP	01 42 21.3	+3.0
ANGG	Ammassalik, Gr	123.54	11	*e*PKPdf	PKPdf	01 42 16.8	-0.1
BAYT	Aydıntepe-Bayb	123.55	311	*e*P	PKiKP	01 42 19.8	+1.5
KTUT	Trabzon	123.67	312	*e*P	PKiKP	01 42 20.6	+2.3
TAMC	Tame, Arauca	123.82	90	*e*P	PKiKP	01 42 19.3	-0.1
TAMC	Tame, Arauca	123.82	90	*e*P	PKiKP	01 42 19.3	-0.1
MAZI	Mazidag	124.02	308	*e*P	PKiKP	01 42 19.4	+0.2
ANN	Anapa	124.15	317	*i* PKIKP	PKPdf	01 42 17.9	-0.9
ANN				*i*		01 42 22.4	
ANN				*e*		01 49 21.9	
ANN				pmax	pmax		
	comp=Z,102nm,1.5s						
BATG	Bathurst New B	124.23	40	*e*PKPdf	PKPdf	01 42 17.3	-1.6
EMMW	East Machias	124.26	43	*e*PKPdf	PKPdf	01 42 18.5	-0.5
BOSA	Boshof	124.41	224	*i* P	PKPdf	01 42 19.7	-0.3
BOSA	Boshof	124.41	224	*e*PKPdf	PKPdf	01 42 18.4	-1.6
BOSA	Boshof	124.41	224	PKIKP	PKPdf	01 42 18.0	-2.0
BOSA				pmax	pmax		
	comp=Z,56nm,0.9s						
BOSA	Boshof	124.41	224	*i* P	PKPdf	01 42 19.7	-0.3
BOSA	Boshof	124.41	224	PKP	PKPdf	01 42 18.0	-2.0
	comp=Z,50nm,0.7s,baz=122,slow=2.3,SNR=20						
BOSA	Boshof	124.41	224	*e*P	PKiKP	01 42 20.9	+0.5
CPUP	Villa Florida	124.47	133	*e*PKPdf	PKPdf	01 42 17.4	-2.6
CPUP	Villa Florida	124.47	133	*e*PKIKP	PKPdf	01 42 17.5	-2.6
CPUP	Villa Florida	124.47	133	PKP	PKPdf	01 42 19.9	-0.1
	comp=Z,30nm,0.8s,baz=295,slow=1.5,SNR=15						
CPUP				PP	PP	01 44 06.5	+0.8
	comp=Z,28nm,1.1s,baz=251,slow=9.6,SNR=4.1						
CPUP	Villa Florida	124.47	133	*e*P	PKiKP	01 42 23.4	+3.1
GGN	Saint George	124.53	42	*e*PKPdf	PKPdf	01 42 19.3	-0.2
CPSB	Cacapava Do Su	124.53	139	*e*P	PKiKP	01 42 23.4	+3.0
IVI	Ivigtut	124.58	19	*e*PKPdf	PKiKP	01 42 20.2	+0.8
SUR	Sutherland	124.69	217	*e*PKPdf	PKPdf	01 42 19.3	-1.3
MICGM	Minsk	125.19	331	*e*	PKPdf	01 42 20.0	-0.5
MNK	Minsk	125.19	331	*e*PKIKP	PKPdf	01 42 20.0	-0.5
IZAR	Zarasai	125.21	333	*e*P	PKPdf	01 42 19.1	-1.3
IZAR				IAmb	IAmb	01 42 27.0	
	comp=Z,84nm,1.0s						
IDID	Didziasalis	125.25	332	*e*P	PKPdf	01 42 19.6	-0.9
IDID				IAmb	IAmb	01 42 28.0	
	comp=Z,108nm,1.0s						
URFA	Urfa	125.28	308	*e*P	PKPdf	01 42 20.2	-1.1
SDV	Santo Domingo	125.31	87	*e*PKPdf	PKPdf	01 42 20.4	-1.7
SDV	Santo Domingo	125.31	87	*e*P	PKPdf	01 42 21.6	-0.5
SDV	Santo Domingo	125.31	87	*e*P	PKPdf	01 42 22.0	-0.1
SDV	Santo Domingo	125.31	87	*e*P	PKPdf	01 42 21.6	-0.5
SDV	Santo Domingo	125.31	87	*e*P	PKPdf	01 42 22.0	-0.1
SDV	Santo Domingo	125.31	87	PKP	PKPdf	01 42 20.2	-2.0
	comp=Z,100nm,0.7s,baz=144,slow=7.0,SNR=23						
SDV	Santo Domingo	125.31	87	*e*P	PKiKP	01 42 22.5	0.0
SDDR	Presa de Saban	125.37	75	*e*PKPdf	PKPdf	01 42 21.6	-0.3
ISAL	Salakas	125.37	333	*e*P	PKPdf	01 42 19.5	-1.3
ISAL				IAmb	IAmb	01 42 27.3	
	comp=Z,58nm,0.9s						
NRS	Narsarsuaq	125.46	18	*i* P	PKiKP	01 42 21.5	+0.3
NRS	Narsarsuaq	125.46	18	*i* PKIKP	PKiKP	01 42 21.5	+0.3
IIGN	Ignalina	125.46	332	*e*P	PKPdf	01 42 20.1	-0.9
IIGN				IAmb	IAmb	01 42 28.6	
	comp=Z,154nm,1.1s						
NACGM	Naroch	125.47	332	*e*	PKPdf	01 42 19.0	-2.0
GRTK	Grand Turk	125.50	72	*e*PKPdf	PKiKP	01 42 23.8	+1.4
LMN	Caledonia Moun	125.58	41	*e*PKPdf	PKPdf	01 42 19.8	-1.8
RSDY	Resadiye-TOKAT	125.62	312	*e*P	PKiKP	01 42 22.9	+0.7
SVSK	Karacayir	126.00	311	*e*P	PKiKP	01 42 24.6	+1.7
DARE	Darende-Malaty	126.02	310	*e*P	PKiKP	01 42 23.2	0.0
TOKT	Tokat	126.21	312	*e*P	PKiKP	01 42 23.4	0.0
KVT	Kavak	126.33	313	*e*P	PKiKP	01 42 24.4	+0.8
LBTB	Lobatse	126.41	227	*e*PKPdf	PKPdf	01 42 22.7	-1.2
NC303	NORSAR Array S	126.50	344	*e*PKPdf	PKPdf	01 42 21.5	-1.3
KMBO	Kilima Mbogo	126.56	260	PKP	PKPdf	01 42 24.1	-0.6
KMBO	Kilima Mbogo	126.56	260	PKIKP	PKPdf	01 42 24.1	-0.6
KMBO				pmax	pmax		
	comp=Z,45nm,1.2s						
KMBO	Kilima Mbogo	126.56	260	PKP	PKPdf	01 42 24.1	-0.6
	comp=Z,44nm,1.2s,baz=68,slow=3.9,SNR=7.8						
GAZ	Gaziantep	126.59	308	*e*P	PKPdf	01 42 22.6	-1.2
AKASG	Malin Array Be	126.60	326	PKP	PKPdf	01 42 21.9	-1.4
AKASG	Malin Array Be	126.60	326	PKIKP	PKPdf	01 42 21.9	-1.4
AKASG						01 44 19.1	
AKASG				pmax	pmax		
	comp=Z,22nm,1.0s						
AKASG	Malin Array Be	126.60	326	PKP	PKPdf	01 42 21.9	-1.4
	comp=Z,22nm,1.0s,baz=56,slow=2.1,SNR=18						
AKASG				PP	PP	01 44 19.1	-0.3
	comp=Z,11nm,1.0s,baz=55,slow=8.3,SNR=2.8						
AKBB	Malin Array Si	126.60	326	*e*PKPdf	PKPdf	01 42 22.0	-1.3
NC204	NORSAR Array S	126.61	345	*e*PKPdf	PKiKP	01 42 23.4	-0.2
KIEV	Kiev	126.61	326	*e*PKPdf	PKPdf	01 42 21.2	-2.1
KIEV	Kiev	126.61	326	⇑*i*P	PKiKP	01 42 23.8	0.0
KIEV	Kiev	126.61	326	*i* PKIKP	PKPdf	01 42 22.6	-0.7
SNOP	Sinop	126.62	314	*e*PKPdf	PKiKP	01 42 26.1	+2.0
NB201	NORSAR Array S	126.66	344	*e*PKPdf	PKiKP	01 42 24.1	+0.4
NB2	NORSAR Subarra	126.69	344	PKPdf	PKiKP	01 42 23.7	0.0
	comp=Z,264nm,1.7s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.69	344	PKP	PKPdf	01 42 21.4	-1.9
NOA	NORSAR Array B	126.69	344	PKIKP	PKPdf	01 42 21.4	-1.9
NOA	NORSAR Array B	126.69	344	PKP	PKPdf	01 42 21.4	-1.9
	comp=Z,27nm,0.8s,baz=35,slow=1.9,SNR=34						
DIKM	Dikmen	126.71	314	*e*P	PKPdf	01 42 23.9	+0.1
KMRS	Kahramanmaras	126.74	309	*e*P	PKPdf	01 42 21.6	-2.5
NBO00	NORSAR Array S	126.81	345	*e*PKPdf	PKPdf	01 42 22.8	-0.7
MATP	Matopo	126.82	234	*i* P	PKPdf	01 42 23.4	-1.4
MATP	Matopo	126.82	234	*i* P	PKPpre	01 42 10.6	
HAL	Halifax	126.85	42	*e*PKPdf	PKiKP	01 42 24.2	-0.2
HAL	Halifax	126.85	42	*e*PKIKP	PKiKP	01 42 24.3	-0.2
NC602	NORSAR Array S	126.86	344	*e*PKPdf	PKPdf	01 42 23.5	-0.1
PBUR	Paburg	126.90	335	*e*P	PKPdf	01 42 22.5	-1.2
PBUR				IAmb	IAmb	01 42 31.1	
	comp=Z,652nm,1.2s						
CNLB	Canela	126.91	140	*e*P	PKiKP	01 42 28.1	+2.9
NAO01	NORSAR Array S	126.94	344	*e*PKPdf	PKiKP	01 42 24.0	-0.2
SIV	San Ignacio	127.03	120	PKP	PKPdf	01 42 24.3	-0.9
SIV	San Ignacio	127.03	120	PKP	PKPdf	01 42 24.3	-0.9
	comp=Z,28nm,0.8s,baz=244,slow=1.2,SNR=20						
BNN	Bunyan	127.16	310	*e*P	PKiKP	01 42 28.9	+3.4
YOZ	Yozgat	127.31	312	*e*P	PKPdf	01 42 24.6	-0.6
BZK	Bozkurt	127.48	315	*e*P	PKiKP	01 42 25.9	+0.1
ITAB	Concordia	127.50	137	*e*P	PKiKP	01 42 29.1	+2.8
KOZT	Kozan	127.57	309	*e*P	PKPdf	01 42 24.2	-1.4
TAHT	Tahtakopru-Hat	127.59	307	*e*P	PKiKP	01 42 26.6	+0.4
SUW	Suwalki	127.68	333	*e*PKPdf	PKiKP	01 42 26.4	+0.6
CEYT	Ceyhan	127.76	308	*e*P	PKiKP	01 42 26.8	+0.3
GBN	Guysborough	127.87	40	*e*PKPdf	PKPdf	01 42 25.5	-0.4
YURE	YUREGIR	127.90	308	*e*P	PKPdf	01 42 25.6	-0.7
ASF	Jabal al Asfar	127.98	302	PKP	PKPdf	01 42 25.2	-1.4
ASF	Jabal al Asfar	127.98	302	PKIKP	PKPdf	01 42 25.2	-1.4
ASF	Jabal al Asfar	127.98	302	PKP	PKPdf	01 42 25.2	-1.4
	comp=Z,12nm,0.9s,baz=136,slow=0.9,SNR=3.1						
ILGA	Ilgaz	128.00	314	*e*PKPdf	PKPdf	01 42 26.4	-0.3
KARA	Karaisali	128.22	309	*e*P	PKPdf	01 42 25.4	-1.5
KONO	Kongsberg	128.30	344	*e*PKPdf	PKPdf	01 42 26.3	0.0
KONO	Kongsberg	128.30	344c	*i*PKIKP	PKPdf	01 42 25.6	-0.7
KONO				pmax	pmax		
	comp=Z,147nm,2.5s						
BR131	Keskin Array S	128.51	312	*e*PKPdf	PKPdf	01 42 25.7	-1.8
BRTR	Keskin Array B	128.51	312	PKP	PKPdf	01 42 25.4	-2.2
BRTR	Keskin Array B	128.51	312	PKIKP	PKPdf	01 42 25.4	-2.2
BRTR	Keskin Array B	128.51	312	PKP	PKPdf	01 42 25.4	-2.2
	comp=Z,13nm,1.0s,baz=131,slow=2.5,SNR=11						
BRTR				PP	PP	01 44 34.3	+1.5
	comp=Z,14nm,1.1s,baz=90,slow=3.6,SNR=4.0						
HSUJ	Al Zarqa	128.58	302	P	PKiKP	01 42 30.5	+2.1
YAYX	Yaylak	128.65	311	*e*P	PKPpre	01 42 23.4	
KIS	Kishinev	128.71	323	*i* PPS	PPS	01 45 36.0	
KIS				LRM	MLR	02 28 50.0	
	comp=Z,107µm,21.0s						
SERE	Sereflikochisa	128.83	311	*e*P	PKiKP	01 42 29.6	+0.8
SWQJ	Swaqa	128.86	301	P	PKiKP	01 42 35.4	+6.4
WALJ	Wala	129.00	302	P	PKiKP	01 42 30.6	+1.4
AFSR	Afar-Bala (An	129.02	312	*e*P	PKPdf	01 42 25.2	-3.2
ANTO	Ankara	129.08	313	*e*P	PKPdf	01 42 27.2	-1.3
ANTO	Ankara	129.08	313	*e*PKPdf	PKPdf	01 42 27.7	-0.8
ANTO	Ankara	129.08	313	⇓*i*P	PKPdf	01 42 27.7	-0.8
ANTO	Ankara	129.08	313	⇓PKIKP	PKPdf	01 42 27.7	-0.8
ANTO	Ankara	129.08	313	*e*P	PKiKP	01 42 28.9	-0.3
AQDB	Aquidauana	129.09	128	*e*P	PKiKP	01 42 31.5	+1.8
BR231	Keskin MP Arra	129.10	313	*e*PKPdf	PKPdf	01 42 28.0	-0.6
MMLI	Mount Malkishu	129.15	303	*e*P	PKPdf	01 42 27.6	-1.2
PTGB	Pitanga	129.19	135	*e*P	PKiKP	01 42 31.8	+1.9
KULU	Kulu	129.21	312	*e*P	PKPdf	01 42 28.4	-0.4
KARJ		129.22	301	P	PKiKP	01 42 34.6	+5.0
JDRJ	Daraweish	129.29	301	P	PKiKP	01 42 32.3	+2.3
LEOM	Leova	129.31	322	⇓*i*P	PKiKP	01 42 29.3	0.0
LEOM	Leova	129.31	322	⇓PKIKP	PKiKP	01 42 29.3	0.0
HSNJ	Maan	129.36	300	P	PKiKP	01 42 31.6	+1.5
CHBY	Cihanbeyli	129.44	311	*e*P	PKPdf	01 42 24.8	-4.5
IKL	Isikli	129.57	308	*e*P	PKPdf	01 42 29.6	+0.2
TLCR		129.58	321	⇑*i*P	PKiKP	01 42 31.8	+1.9
TLCR		129.58	321	⇑PKIKP	PKiKP	01 42 31.8	+1.9
LSZ	Lusaka	129.70	239	*e*PKPdf	PKPdf	01 42 29.9	-0.6
AMAZ	Amatzia	129.76	302	P	PKPpre	01 42 21.4	
OBIP	Obispado Ponce	129.81	76	*e*PKPdf	PKPdf	01 42 27.6	-2.8
LVV	L'vov	129.86	328	*i* PKIKP	PKPdf	01 42 28.7	-0.9
EMPR	Esperanza - Ma	129.88	75	*e*PKPdf	PKiKP	01 42 32.9	+1.7
ICMP	Isla Caja de M	129.89	76	*e*PKPdf	PKiKP	01 42 31.2	-0.1
BERE	Bereket-Mersin	129.90	308	*e*P	PKPdf	01 42 26.9	-3.4
HRFI	Mount Harif	129.96	300	*e*P	PKPdf	01 42 28.4	-2.0
HRFI	Mount Harif	129.96	300	P	PKiKP	01 42 33.7	+2.5
MDUB	Mudurnu	130.00	314	*e*P	PKiKP	01 42 31.8	+0.7
AQBJ	Aqaba	130.00	299	P	PKiKP	01 42 32.6	+1.3
CFR	Carcaliu	130.00	321	⇑*i*P	PKPdf	01 42 29.7	-0.3
CFR	Carcaliu	130.00	321	⇑PKIKP	PKPdf	01 42 29.7	-0.3
TRCB	Terra Rica	130.01	133	*e*P	PKiKP	01 42 33.5	+2.0
AUMIH	MIHALICIK	130.02	313	*e*P	PKPdf	01 42 27.2	-3.2
PRAR	RASCA	130.04	324	⇓*i*P	PKiKP	01 42 31.3	+0.5
KONT	Konya--Tatoy	130.05	310	*e*P	PKPdf	01 42 28.6	-1.8
EIL	Elat	130.10	299	*e*P	PKiKP	01 42 31.6	+0.1
EIL	Elat	130.10	299	P	PKiKP	01 42 38.5	+7.0
TIRR	Tirgusor	130.17	320	*e*PKPdf	PKPdf	01 42 30.2	-0.1
TIRR	Tirgusor	130.17	320	⇑*i*P	PKiKP	01 42 33.2	+2.1
TIRR	Tirgusor	130.17	320	⇑PKIKP	PKiKP	01 42 33.2	+2.1
CSS	Mathiatis	130.21	306	*e*P	PKPdf	01 42 29.9	-0.8
CSS	Mathiatis	130.21	306	*e*PKPdf	PKiKP	01 42 33.0	+1.4
SJG	San Juan	130.25	76	*e*PKPdf	PKPdf	01 42 29.1	-2.1
SJG	San Juan	130.25	76	*e*P	PKPdf	01 42 30.1	-1.0
SJG	San Juan	130.25	76	*e*P	PKiKP	01 42 34.2	+2.2
SJG	San Juan	130.25	76	*e*PKIKP	PKPdf	01 42 29.1	-2.1
SJG	San Juan	130.25	76	*e*P	PKPdf	01 42 30.1	-1.0
SJG	San Juan	130.25	76	*e*P	PKiKP	01 42 34.2	+2.2
SJG	San Juan	130.25	76	PKP	PKiKP	01 42 32.2	+0.2
	comp=Z,215nm,0.9s,baz=325,slow=1.1,SNR=9.8						
HDMB	Hadim	130.27	309	*e*P	PKPdf	01 42 27.9	-3.2
BSD	Bornholm Skovb	130.31	338	*i* P	PKPdf	01 42 29.3	-0.9
BSD	Bornholm Skovb	130.31	338	*i* PKIKP	PKPdf	01 42 29.3	-0.9
KZIT	Kziot	130.32	301	*e*P	PKPpre	01 42 26.9	
BIZ	Bicaz	130.33	324	⇓*i*P	PKPdf	01 42 29.7	-0.9
TLB	Topalu	130.35	320	⇑*i*P	PKiKP	01 42 32.1	+0.6
TLB	Topalu	130.35	320	⇑PKIKP	PKiKP	01 42 32.1	+0.6
HARR	Harsova	130.37	320	⇑*i*P	PKiKP	01 42 33.6	+2.1
HARR	Harsova	130.37	320	⇑PKIKP	PKiKP	01 42 33.6	+2.1
BUR08	Bucovina Ar. S	130.47	325	*e*PKPdf	PKiKP	01 42 31.7	-0.1
BUR04	Bucovina Ar. S	130.48	325	*e*PKPdf	PKPdf	01 42 31.3	+0.3
BURAR	Bucovina Array	130.48	325	⇓*i*P	PKiKP	01 42 32.0	+0.2
BURAR	Bucovina Array	130.48	325	⇓PKIKP	PKiKP	01 42 32.0	+0.2
GULT	Gulveren	130.49	314	*e*P	PKPdf	01 42 30.6	-0.6
SAUV	Serdivan-Sakar	130.50	315	*e*P	PKiKP	01 42 32.6	+0.7
LEF	Lefka	130.51	307	*e*P	PKPdf	01 42 29.9	-1.4
CBYP	Canovanas	130.52	76	*e*PKPdf	PKiKP	01 42 33.2	+0.6
VRI	Vrincioaia	130.52	322	*e*P	PKPdf	01 42 29.8	-1.2
VRI	Vrincioaia	130.52	322	⇓*i*P	PKiKP	01 42 33.1	+1.3
VRI	Vrincioaia	130.52	322	⇓PKIKP	PKiKP	01 42 33.1	+1.3
HUMP	Col San Antoni	130.53	76	*e*PKPdf	PKPdf	01 42 30.1	-1.6
PLOR	Plostina	130.58	322	⇓*i*P	PKPdf	01 42 28.8	-2.3
PLOR	Plostina	130.58	322	⇓PKIKP	PKPdf	01 42 28.8	-2.3
KWP	Kalwaria Pacla	130.66	328	*e*PKPdf	PKPdf	01 42 30.1	-1.0
KWP	Kalwaria Pacla	130.66	328	*e*PKIKP	PKPdf	01 42 30.1	-1.0
ICOR	Ion Corvin	130.72	320	⇑*i*P	PKiKP	01 42 34.6	+2.4
COP	Copenhagen	130.74	340	*i* P	PKPdf	01 42 31.1	+0.1
COP	Copenhagen	130.74	340	*i* PKIKP	PKPdf	01 42 31.1	+0.1
BORA	Eskisehir	130.75	314	*e*P	PKPdf	01 42 30.4	-1.3
SILT	Sile	130.81	315	*e*P	PKPdf	01 42 29.9	-1.7
MTP	Monte Pirata	130.81	76	*e*PKPdf	PKPdf	01 42 32.7	+0.4
OZUR		130.97	323	⇑*i*P	PKiKP	01 42 33.0	+0.2
CUPR	Culebra, Puert	131.07	76	*e*PKPdf	PKiKP	01 42 35.0	+1.4
RASA	Rasa	131.09	320	⇓*i*P	PKiKP	01 42 35.1	+2.1
MUD	Monsted U'grnd	131.14	342	*i* P	PKiKP	01 42 32.8	+0.1
MUD	Monsted U'grnd	131.14	342	*i* PKIKP	PKiKP	01 42 32.8	+0.1
SHUT	Suhut-Afyon	131.17	312	*e*P	PKPdf	01 42 31.6	-1.0
MLR	Muntele Rosu	131.19	322	*e*PKPdf	PKPdf	01 42 31.4	-1.0
MLR	Muntele Rosu	131.19	322	⇓*i*P	PKPdf	01 42 31.7	-0.7
MLR	Muntele Rosu	131.19	322	⇓PKIKP	PKPdf	01 42 31.7	-0.7
SUTC	Sutluce-Ispart	131.22	310	*e*P	PKPdf	01 42 26.4	-6.3
YLV	Yalova	131.24	315	*e*P	PKPdf	01 42 32.6	0.0
KAVV	Kandilli-Istan	131.25	316	*e*P	PKPdf	01 42 32.4	-0.1
ARCR	ARCALIA	131.26	325	⇑*i*P	PKiKP	01 42 32.8	-0.5
DOPR	Dopca	131.27	323	⇑*i*P	PKiKP	01 42 35.2	+1.8
BUY	Buyukada	131.30	315	*e*P	PKPdf	01 42 30.9	-1.7
SECR		131.35	322	⇓*i*P	PKPdf	01 42 33.0	+0.4
STVI	Saint Thomas	131.38	75	*e*PKPdf	PKiKP	01 42 33.9	-0.3
BGKT	Bogazkoy	131.40	316	*e*P	PKiKP	01 42 33.4	-0.3
BMR	Baia Mare	131.40	326	⇓*i*P	PKiKP	01 42 33.5	0.0
BMR	Baia Mare	131.40	326	⇓PKIKP	PKiKP	01 42 33.5	0.0
PRD	Provadia	131.41	319	*e*P	PKPdf	01 42 32.9	+0.2
SULR		131.41	321	⇑*i*P	PKiKP	01 42 35.3	+1.7
UZH	Uzhgorod	131.48	327	*e*PKHKP	PKPpre	01 42 19.0	
UZH				*e*		01 42 30.0	
UZH				*e*		01 42 40.3	
SBT5	Esenkoy-Cinarc	131.56	315	*e*P	PKPdf	01 42 32.2	-0.8
CTKS	Kestanelik-??a	131.56	316	*e*P	PKPdf	01 42 32.2	-0.8
CDVI	St. Croix	131.57	76	*e*PKPdf	PKiKP	01 42 34.8	+0.1
TRPA	Tarpa	131.65	327	⇑*i*P	PKPdf	01 42 33.4	+0.4
TRPA	Tarpa	131.65	327	*e*PKiKP	PKiKP	01 42 39.0	+5.1
MDNY	Mudanya-Bursa	131.66	315	*e*P	PKiKP	01 42 34.9	+0.6
OJC	Ojcow	131.74	331	*e*PKPdf	PKPdf	01 42 32.6	-0.5
VOIR		131.75	323	⇓*i*P	PKiKP	01 42 36.9	+2.5
VOIR		131.75	323	⇓PKIKP	PKiKP	01 42 36.9	+2.5
SLVT	Silivri	131.76	316	*e*P	PKPdf	01 42 32.6	-0.8
FRTB	Fartura	131.81	136	*e*P	PKiKP	01 42 37.1	+1.9
GEDZ	Gediz	131.82	313	*e*P	PKPdf	01 42 30.8	-2.9
KORT	Korkueli	131.87	310	*e*P	PKPdf	01 42 31.4	-2.6
CJR	Cluj-Napoca	131.90	325	⇑*i*P	PKPdf	01 42 33.9	+0.3
CJR	Cluj-Napoca	131.90	325	⇑PKIKP	PKPdf	01 42 33.9	+0.3
ARR	Arges	132.04	323	⇓*i*P	PKPdf	01 42 34.2	+0.3
KCTX	Karacabey (Bur	132.07	315	*e*P	PKPdf	01 42 32.6	-1.5
CRLT	Corlu	132.13	316	*e*P	PKPdf	01 42 32.6	-1.5
HUMR	Humele	132.27	322	⇓*i*P	PKiKP	01 42 36.2	+0.8
JMB	Yambol	132.29	318	*e*P	PKiKP	01 42 35.9	+0.4
ELL	Elmali	132.29	310	*e*P	PKPdf	01 42 33.2	-1.6
SZH	Strazhica	132.32	320	*e*P	PKiKP	01 42 36.7	+1.2
DRGR		132.35	325	⇓*i*P	PKPdf	01 42 34.3	-0.2
DRGR		132.35	325	⇓PKIKP	PKPdf	01 42 34.3	-0.2
EDC	Edincik	132.38	315	*e*P	PKPdf	01 42 31.6	-3.0
LTVH	Ltavrtes, Hu	132.45	326	*e*PKiKP	PKiKP	01 42 36.1	+0.5
LTVH				*e*S	SKKSac	01 51 46.1	-5.4
LTVH				*e*PS	PKKPdf	01 52 28.0	-1.2
EDRB	Edirne	132.47	318	*e*P	PKPdf	01 42 33.2	-1.6
ZIMR		132.48	320	⇑*i*P	PKiKP	01 42 35.6	-0.2
ZIMR		132.48	320	⇑PKIKP	PKiKP	01 42 35.6	-0.2
KULA	Kula-Manisa	132.56	313	*e*P	PKPdf	01 42 34.2	-1.0
MANT	Manisa	132.65	313	*e*PKPdf	PKiKP	01 42 36.3	-0.3
BALB	Balikesir	132.66	314	*e*P	PKPdf	01 42 34.6	-0.6
AKAS	Kas	132.70	309	*e*P	PKPdf	01 42 33.9	-1.7
PVL	Pavlikeni	132.72	320	*e*P	PKiKP	01 42 37.8	+1.5
KRBG	Karabiga-Canak	132.75	316	*e*P	PKPdf	01 42 34.4	-0.9
RUE	Ruedersdorf	132.76	336	*e*P	PKPdf	01 42 33.8	-1.2
RUE				IAmb	IAmb	01 42 43.5	
	comp=Z,406nm,1.4s						
OKC	Ostrava-Krasne	132.78	331	*e*PKPDF	PKiKP	01 42 37.9	+1.7
OKC				*e*PP	PP	01 45 09.5	+10
OKC	Ostrava-Krasne	132.78	331	*e*PKIKP	PKiKP	01 42 37.9	+1.7
VLAD	Vladila	132.90	321	⇑*i*P	PKiKP	01 42 36.1	-0.6
FETY	Fethiye	132.95	310	*e*P	PKPdf	01 42 34.8	-1.1
MBAR	Mbarara	132.98	259	*e*PKPdf	PKiKP	01 42 39.0	+1.0
SPB	Sao Paulo	133.08	138	*e*PKPdf	PKiKP	01 42 37.2	-0.4
CRAR	CRAIOVA	133.10	322	⇓*i*P	PKiKP	01 42 36.9	-0.1
MORC	Moravsky Berou	133.11	331	*e*PKPdf	PKiKP	01 42 36.6	-0.3
MORC	Moravsky Berou	133.11	331	⇓*i*P	PKiKP	01 42 37.0	0.0
MORC	Moravsky Berou	133.11	331	⇓PKIKP	PKiKP	01 42 37.0	0.0
MORC	Moravsky Berou	133.11	331	*e*PKP	PKPdf	01 42 36.2	+0.4
MORC				*e*PP	PP	01 45 04.9	+3.2
GZR	Gura Zlata	133.12	324	⇑*i*P	PKPdf	01 42 36.1	+0.1
GZR	Gura Zlata	133.12	324	⇑PKIKP	PKPdf	01 42 36.1	+0.1
LPK	Lapseki	133.13	316	*e*P	PKPdf	01 42 36.6	+0.6
ERIK	Erikli-Kesan	133.16	316	*e*P	PKPdf	01 42 36.6	+0.5
DIM	Dimitrovgrad	133.17	318	*e*P	PKPdf	01 42 36.3	+0.2
PSZ	Piszkesteto	133.18	328	*e*PKPdf	PKPdf	01 42 36.1	+0.1
PSZ	Piszkesteto	133.18	328	⇓*i*P	PKiKP	01 42 36.7	-0.5
PSZ	Piszkesteto	133.18	328	⇓PKIKP	PKiKP	01 42 36.7	-0.5
PSZ	Piszkesteto	133.18	328	*e*PKiKP	PKPdf	01 42 36.1	+0.1
PSZ				*e*S	SKKSac	01 51 46.1	-10
DALY	Dalyan (Mula)	133.21	310	*e*P	PKPpre	01 42 30.9	
TURN	Turunc	133.23	311	*e*P	PKPdf	01 42 36.8	+0.5
KRLC	Kraliky	133.25	332	*e*PKPDF	PKiKP	01 42 39.0	+1.7
KRLC	Kraliky	133.25	332	*e*PKIKP	PKiKP	01 42 39.0	+1.7
DPC	Dobruska-Polom	133.27	333	*e*PKPDF	PKiKP	01 42 39.8	+2.5
DPC	Dobruska-Polom	133.27	333	*e*PKIKP	PKiKP	01 42 39.8	+2.5
SEUS	St. Eustatius	133.27	77	*e*		01 52 22.1	
UPC	Upice	133.29	333	*e*PKPDF	PKiKP	01 42 39.5	+2.2
UPC				*e*PP	PP	01 45 07.6	+4.8
UPC	Upice	133.29	333	*e*PKIKP	PKiKP	01 42 39.5	+2.2
UPC				*e*		01 45 07.6	
GELI	Tayfur-Gelibol	133.31	316	*e*P	PKPpre	01 42 28.8	
AYDB	Zeytinkoy-Aydi	133.34	312	*e*P	PKPpre	01 42 31.4	
VYHS	Vyhne	133.35	329	*e*PKIKP	PKPdf	01 42 36.4	+0.2
VYHS	Vyhne	133.35	329	*e*PKP	PKPdf	01 42 36.4	+0.2
ALN	Alexandroupoli	133.37	317	*e*P	PKPpre	01 42 30.9	
ALN	Alexandroupoli	133.37	317	*e*PKPdf	PKPdf	01 42 36.6	+0.2
ENEZ	Enez	133.38	316	*e*P	PKPdf	01 42 32.8	-3.7
KDZ	Kurdzhali	133.44	318	*e*P	PKiKP	01 42 42.6	+4.7
KOLL	Kolacno	133.51	330	*e*PKIKP	PKPdf	01 42 36.9	+0.4
KOLL	Kolacno	133.51	330	*e*PKP	PKPdf	01 42 36.9	+0.4
ITRB	Iturama	133.59	131	*e*P	PKiKP	01 42 40.2	+1.3
RDO	Rodhopi	133.60	317	*e*P	PKPdf	01 42 34.2	-2.7
HERR	Herculane	133.62	323	⇓*i*P	PKPdf	01 42 36.8	0.0
EZN	Ezine	133.67	315	*e*P	PKPdf	01 42 32.4	-4.7
MLSB	Milas	133.68	311	*e*P	PKPpre	01 42 32.8	
BLCB	Balcova	133.78	313	*e*P	PKPdf	01 42 35.9	-1.4
PGB	Panagyurishte	133.80	320	*e*P	PKiKP	01 42 38.5	-0.1
RCLB	Rio Claro- Sao	133.82	137	*e*P	PKiKP	01 42 41.3	+2.0
PTGA	Pitinga	133.82	102	*e*PKPdf	PKPdf	01 42 37.7	-0.4
PTGA	Pitinga	133.82	102	PKP	PKPdf	01 42 37.1	-1.0
	comp=Z,50nm,0.7s,baz=253,slow=1.7,SNR=18						
PTGA	Pitinga	133.82	102	*e*P	PKiKP	01 42 41.6	+2.2
VRAC	Vranov	133.88	332	⇓*i*P	PKiKP	01 42 39.9	+1.4
VRAC	Vranov	133.88	332	⇓PKIKP	PKiKP	01 42 39.9	+1.4
VRAC	Vranov	133.88	332	*e*PKP	PKiKP	01 42 38.5	0.0
VRAC				*e*PP	PP	01 45 09.8	+3.2
PVCC	Panska Ves	133.91	334	*e*PKPpre	PKPpre	01 42 29.2	
PVCC				*e*PKPDF	PKiKP	01 42 39.5	+1.0
PVCC	Panska Ves	133.91	334	*e*PKIKP	PKPpre	01 42 29.2	
PVCC				*e*		01 42 39.5	
BUD	Budapest	133.91	328	*e*PKiKP	PKPdf	01 42 35.1	-2.2
BRG	Berggiesshubel	133.92	335	*i* PKP	PKPpre	01 42 26.1	
	comp=Z,14nm,0.9s						
BRG				*i*		01 42 37.9	
	comp=Z,455nm,1.8s						
BRG	Berggiesshubel	133.92	335	*i* PKHKP	PKPpre	01 42 26.1	
BRG				*i*		01 42 37.8	
BRG	Berggiesshubel	133.92	335	SG	Pdif	01 39 39.8	+3.7
	comp=Z,12nm,0.5s						
GCAM	G?zelcaml?	133.92	312	*e*P	PKPpre	01 42 30.2	
CLL	Collm	133.97	336	*e*PKPdf	PKiKP	01 42 39.5	+0.9
CLL	Collm	133.97	336	*e*PKPpre	PKPpre	01 42 29.0	
CLL				*i* PKPdf	PKiKP	01 42 38.4	-0.2
	comp=Z,182nm,1.5s						
CLL				*i*		01 42 43.0	
	comp=Z,165nm,1.2s						
CLL				*i*		01 42 48.0	
	comp=Z,229nm,1.4s						
CLL				*e*		01 44 33.0	
CLL				*e*		01 44 54.0	
CLL				*e*PP	PP	01 45 06.0	-1.0
CLL				*e*PKSbc	PKSbc	01 46 05.0	-2.5
CLL				*e*PKSdf	PKSdf	01 46 13.0	-0.5
CLL				*e*PPP	PPP	01 47 59.0	
CLL	Collm	133.97	336	*i* PKIKP	PKiKP	01 42 38.4	-0.2
CLL				*i*		01 42 48.0	
CLL				pmax	pmax		
	comp=Z,36nm,1.5s						
SMOL	Smolenice	134.03	330	*e*PKIKP	PKiKP	01 42 39.7	+0.9
SMOL	Smolenice	134.03	330	*e*PKP	PKiKP	01 42 39.7	+0.9
BB19B	Bebedouro	134.04	134	*e*P	PKiKP	01 42 40.2	+0.4
DAT	Datca	134.04	311	*e*P	PKPdf	01 42 35.4	-2.6
SRO	Srobarova	134.06	329	*e*PKIKP	PKiKP	01 42 38.5	-0.4
SRO	Srobarova	134.06	329	*e*PKP	PKiKP	01 42 38.5	-0.4
BANR	Banloc	134.06	325	⇓*i*P	PKPdf	01 42 37.4	-0.2
MDVR	Moldovita	134.08	324	⇓*i*P	PKiKP	01 42 38.9	-0.2
URLA	Izmir	134.11	313	*e*P	PKPdf	01 42 38.2	+0.2
BODT	Bodrum	134.11	311	*e*P	PKPdf	01 42 37.4	-0.6
KRUC	Moravsky	134.15	331	*e*PKP	PKiKP	01 42 39.0	0.0
KRUC				*e*PP	PP	01 45 09.8	+1.5
MODS	Modra-Piesok	134.20	330	*e*PKIKP	PKiKP	01 42 40.0	+0.8
MODS	Modra-Piesok	134.20	330	*e*PKP	PKiKP	01 42 40.0	+0.8
SIGR	SIGRI	134.26	315	*e*P	PKPpre	01 42 28.6	
PRA	Prague	134.31	334	*e*PKPDF	PKiKP	01 42 41.0	+1.7
PRA				*e*PP	PP	01 45 11.4	+2.2
PRA	Prague	134.31	334	*e*PKIKP	PKiKP	01 42 41.0	+1.7
PRA				*e*		01 45 11.4	
PRU	Pruhonice	134.32	334	*e*PKPpre	PKPpre	01 42 29.4	
PRU				*e*PKPDF	PKiKP	01 42 40.5	+1.1
PRU				*e*SKP		01 46 11.3	
PRU	Pruhonice	134.32	334	*e*PKIKP	PKPpre	01 42 29.4	
PRU				*e*		01 42 40.5	
VTS	Vitosha	134.35	320	*e*PKPdf	PKiKP	01 42 40.7	+0.9
VTS	Vitosha	134.35	320	⇓*i*P	PKPdf	01 42 39.1	+0.6
VTS	Vitosha	134.35	320	⇓PKIKP	PKPdf	01 42 39.1	+0.6
TREC	Trest	134.40	332	*e*PKPDF	PKiKP	01 42 40.2	+0.6
TREC	Trest	134.40	332	*e*PKIKP	PKiKP	01 42 40.2	+0.6
ZST	Bratislava	134.41	330	*e*PKP	PKPdf	01 42 38.6	+0.4
CHOS	Chios island	134.48	314	*e*P	PKPpre	01 42 24.6	
MMB	Musomiste	134.57	319	*e*P	PKiKP	01 42 40.7	+0.5
KARP	Karpathos	134.80	309	*e*P	PKPpre	01 42 29.4	
KARP	Karpathos	134.80	309	*e*PKPdf	PKiKP	01 42 42.2	+1.4
KKB	Krupnik	134.84	319	*e*P	PKiKP	01 42 41.1	+0.4
TIH	Tihany	134.88	328	*e*PKiKP	PKiKP	01 42 42.1	+1.5
TIH				*e*S	SKKSac	01 52 15.0	+8.8
TIH				*e*PS	PKKPdf	01 52 46.1	+22
MORH	Mrgy, Hungar	134.93	327	⇓*e*PKiKP	PKiKP	01 42 40.0	-0.7
MORH				*e*PS	PKKPdf	01 52 58.1	+34
SOP	Sopron	135.02	330	*e*PKiKP	PKiKP	01 42 41.1	+0.2
SOP				*e*SS	SKKSac	01 52 14.0	+6.9
SOP				*i* SS	SKKSac	01 52 26.0	+19
SOP				*e*PS	PKKPdf	01 52 40.0	+16
NKC	Novy Kostel	135.02	335	*e*PKPpre	PKPpre	01 42 31.3	
NKC				*e*PKPDF	PKiKP	01 42 43.0	+2.2
NKC				*e*PP	PP	01 45 13.3	-0.5
NKC	Novy Kostel	135.02	335	*e*PKIKP	PKPpre	01 42 31.3	
NKC				*e*		01 42 43.0	
NKC				*e*		01 45 13.3	
OUR	Ouranopolis	135.02	317	*e*P	PKPpre	01 42 25.2	
H05N1	Guadeloupe/Mar	135.13	78	PKP	PKiKP	01 42 43.1	+1.2
CONA	Conrad Observa	135.19	331	PKPdf	PKPdf	01 42 38.9	-1.0
	comp=Z,77nm,1.3s						
CONA				*i* PP	PP	01 45 18.3	+3.2
MCLT	Moule a Chique	135.20	82	*e*		01 52 36.3	
KNT	Kendrikon	135.32	319	*e*P	PKPpre	01 42 25.8	
KHC	Kasperske Hory	135.38	333	*e*PKPdf	PKiKP	01 42 41.8	+0.2
KHC	Kasperske Hory	135.38	333	*e*PKPpre	PKPpre	01 42 29.9	
KHC				*e*PKPDF	PKiKP	01 42 42.0	+0.4
KHC	Kasperske Hory	135.38	333	*e*PKHKP	PKPpre	01 42 29.9	
APE	Apeiranthos	135.41	312	*e*P	PKPdf	01 42 39.4	-1.1
APE	Apeiranthos	135.41	312	⇓*i*P	PKPdf	01 42 38.4	-2.1
APE	Apeiranthos	135.41	312	⇓PKIKP	PKPdf	01 42 38.4	-2.1
ESAR	Angra dos Reis	135.42	140	*e*P	PKiKP	01 42 44.8	+2.4
TOSP	Speyside	135.45	85	*e*		01 52 17.7	
VAY	Valandovo	135.45	319	*i* P	PKPdf	01 42 40.0	-0.4
HORT	Hortiatis	135.48	318	*e*P	PKPpre	01 42 26.2	
DIVS	Divibare	135.48	324	*e*PKPdf	PKPdf	01 42 39.7	-0.7
STIP	Stip	135.50	320	*i* P	PKiKP	01 42 41.6	-0.4
GEC2	GERESS Array S	135.53	333	*e*PKPpre	PKPpre	01 42 30.4	
GEC2				*e*PKPdf	PKiKP	01 42 42.9	+0.9
GEC2	GERESS Array S	135.53	333	*e*PKHKP	PKPpre	01 42 30.4	
GERES	GERESS Array B	135.53	333	PKPpre	PKPpre	01 42 30.4	
GERES				PKP	PKPdf	01 42 40.0	-0.4
GERES	GERESS Array B	135.53	333	PKHKP	PKPpre	01 42 30.4	
GERES						01 42 40.0	
GERES	GERESS Array B	135.53	333	PKhKP	PKPpre	01 42 30.4	
	comp=Z,10.0nm,0.7s,baz=48,slow=2.0,SNR=9.9						
GERES				PKP	PKPdf	01 42 40.0	-0.4
	comp=Z,11nm,0.7s,baz=90,slow=2.0,SNR=5.9						
GEA0	GERESS Array S	135.54	333	*e*PKPpre	PKPpre	01 42 31.2	
GEA0				*e*PKPdf	PKPdf	01 42 40.5	0.0

AOS	Alonnisos	135.65	316	*e*P	PKPdf	01 42 36.9	-3.9
ZKR	Zakros	135.68	309	*e*P	PKPpre	01 42 24.9	
WTSB	Winterswijk	135.70	341	*e*PKP	PKiKP	01 42 42.8	+0.8
	comp=Z,4µm,3.4s						
BEHE	Becsehely	135.74	328	*e*PKiKP	PKiKP	01 42 43.1	+0.7
BEHE				*e*PS	PKKPdf	01 52 34.0	+11
SANT	Santorini	135.75	311	*e*P	PKPpre	01 42 34.2	
SANT	Santorini	135.75	311	*e*PKPdf	PKiKP	01 42 43.0	+0.2
GRG	Griva	135.75	319	*e*P	PKPpre	01 42 31.9	
SKO	Skopje	135.82	320	*i* P	PKPdf	01 42 41.4	+0.4
ARSA	Arzberg	135.83	330	*e*PKiKP	PKPdf	01 42 41.4	+0.4
	comp=Z,69nm,1.7s						
MOA	Molln	136.00	332	*e*PKiKP	PKiKP	01 42 42.2	-0.6
	comp=Z,29nm,0.8s						
LIT	Litokhoron	136.13	318	*e*PKPpre	PKPpre	01 42 30.9	
LIT	Litokhoron	136.13	318	*e*PKHKP	PKPpre	01 42 30.9	
IPMB	Ipameri, GO	136.24	131	*e*P	PKiKP	01 42 46.0	+1.7
KRUS	Krusevo	136.27	320	*i* P	PKiKP	01 42 44.6	+0.8
BIA	Bitola	136.41	319	*i* P	PKiKP	01 42 44.7	+0.8
SOKA	Soboth	136.47	330	*e*PKPdf	PKPdf	01 42 38.2	-4.0
	comp=Z,101nm,1.0s						
VAS01	Vassouras-RJ	136.58	140	*e*P	PKiKP	01 42 46.8	+1.9
IDI	Anoyia	136.61	310	*e*P	PKPpre	01 42 34.2	
IDI	Anoyia	136.61	310	*e*PKPdf	PKiKP	01 42 44.6	0.0
IDI	Anoyia	136.61	310	⇑*i*P	PKPdf	01 42 40.9	-1.9
BSCB	Bom Sucesso	136.65	138	*e*P	PKiKP	01 42 45.1	0.0
BLY	Banja Luka	136.66	326	*e*PKPpre	PKPpre	01 42 34.0	
OHR	Ohrid	136.70	320	*i* P	PKPdf	01 42 42.4	-0.4
AGG	Agios Georgios	136.78	316	*e*P	PKPpre	01 42 33.4	
AGG	Agios Georgios	136.78	316	*e*PKPdf	PKiKP	01 42 44.2	-0.6
OBKA	Obir	136.83	330	*e*PKPdf	PKPdf	01 42 39.9	-3.0
	comp=Z,51nm,1.3s						
TTG	Podgorica	136.90	322	*e*PKPpre	PKPpre	01 42 34.3	
TTG	Podgorica	136.90	322	*e*PKHKP	PKPpre	01 42 34.3	
KBA	Koelnbreinsper	136.99	332	PKiKP	PKPdf	01 42 43.8	+0.5
	comp=Z,124nm,1.1s,SNR=6.5						
BEBN	Eben Emael	137.06	341	⇑PKiKP	PKiKP	01 42 46.0	+1.1
BEBN				⇑PP	PP	01 45 25.7	-0.6
MEM	Membach	137.12	340	⇑PKiKP	PKPpre	01 42 35.1	
MEM				⇑PP	PP	01 45 30.0	+3.3
TIR	Tirane	137.15	321	*e*PKPdf	PKiKP	01 42 45.8	+0.4
MYKA	Terra Mystica	137.18	331	*e*PKPdf	PKPdf	01 42 41.1	-2.5
	comp=Z,39nm,0.8s						
IMMV	Iera Moni Meta	137.22	311	*e*P	PKPpre	01 42 34.8	
GVD	Gavdhos	137.39	310	*e*P	PKPpre	01 42 34.2	
DUB01	Friburgo-RJ	137.40	141	*e*P	PKiKP	01 42 48.6	+2.0
UCC	Uccle	137.48	342	⇑PKiKP	PKiKP	01 42 45.2	-0.5
UCC				⇓PP	PP	01 45 28.7	-0.2
STU	Stuttgart	137.49	336	*e*PKPdf	PKPdf	01 42 44.5	+0.6
WATA	Walderalm	137.61	333	*e*PKPdf	PKPdf	01 42 42.4	-2.0
	comp=Z,22nm,0.8s						
ABTA	Abfaltersbach	137.62	332	*e*PKPdf	PKPdf	01 42 42.0	-2.3
	comp=Z,84nm,0.8s						
WTTA	Wattenberg	137.64	333	*e*PKPdf	PKPdf	01 42 42.6	-1.9
	comp=Z,113nm,0.9s						
SNF	Seneffe	137.75	342	⇑PKiKP	PKiKP	01 42 46.2	-0.1
TRI	Trieste	137.78	330	*e*PKPdf	PKPdf	01 42 44.9	+0.3
BDFB	Brasilia	137.83	129	PKPpre	PKPpre	01 42 38.5	
BDFB				PKP	PKPdf	01 42 46.1	+0.4
BDFB	Brasilia	137.83	129	PKHKP	PKPpre	01 42 38.5	
BDFB						01 42 46.1	
BDFB	Brasilia	137.83	129	PKhKP	PKPpre	01 42 38.5	
	comp=Z,13nm,0.7s,baz=286,slow=3.1,SNR=5.2						
BDFB				PKP	PKPdf	01 42 46.1	+0.4
	comp=Z,49nm,0.9s,baz=158,slow=3.0,SNR=9.6						
RETA	Reutte	137.85	334	*e*PKPdf	PKPpre	01 42 38.1	
	comp=Z,62nm,1.0s						
SQTA	Sankt Quirin	137.86	333	PKPdf	PKPpre	01 42 36.4	
	comp=Z,239nm,1.6s,SNR=7.0						
WLF	Walferdange	137.87	339	*e*PKPpre	PKPpre	01 42 38.1	
WLF	Walferdange	137.87	339	*e*PKIKP	PKPpre	01 42 38.1	
WLF	Walferdange	137.87	339	⇑PKiKP	PKPpre	01 42 35.1	
WLF				⇓PP	PP	01 45 32.1	+0.7
ITM	Ithomi	137.94	314	*e*P	PKPpre	01 42 33.8	
ITM	Ithomi	137.94	314	*e*PKPpre	PKPpre	01 42 38.0	
DOU	Dourbes	138.02	341	⇑PKiKP	PKPpre	01 42 39.5	
DOU				⇓PP	PP	01 45 33.9	+1.6
CAM01	Campos-RJ	138.03	142	*e*P	PKiKP	01 42 48.2	+0.5
FETA	Feichten	138.22	333	*e*PKPdf	PKPpre	01 42 40.0	
	comp=Z,135nm,1.8s						
DAVA	Damuels	138.38	334	*e*PKPdf	PKPpre	01 42 39.7	
	comp=Z,142nm,0.9s						
ECH	Echery	138.72	337	*e*PKPpre	PKPpre	01 42 40.3	
ECH	Echery	138.72	337	*e*PKIKP	PKPpre	01 42 40.3	
FUORN	Ofenpass-Fuorn	138.74	333	*e*PKPpre	PKPpre	01 42 41.0	
ALF01	Guarapari-ES	139.50	141	*e*P	PKiKP	01 42 52.8	+2.0
MCI6	Montes Claros	140.13	134	*e*P	PKiKP	01 42 53.1	+0.8
SENIN	Lac Senin/Sane	140.19	336	*e*PKPdf	PKPdf	01 42 46.0	-3.2
MCI7	Montes Claros	140.20	134	*e*P	PKiKP	01 42 52.0	-0.4
MCI9	Montes Claros	140.20	134	*e*P	PKiKP	01 42 52.6	+0.2
MCI8	Montes Claros	140.21	134	*e*P	PKiKP	01 42 52.9	+0.5
AQU	L'Aquila	140.30	326	*e*PKPdf	PKPdf	01 42 47.8	-1.6
CUC	Castrocucco	140.44	322	*e*PKPdf	PKPdf	01 42 49.0	-0.7
CLF	Chambon-Foret	140.57	342	*e*PKPdf	PKiKP	01 42 51.5	-0.6
SJMB	Sao Joao De Ma	140.63	139	*e*P	PKPdf	01 42 51.4	+0.8
RIB01	Linhares ES	140.69	140	*e*P	PKiKP	01 42 52.0	-1.2
BSFB	Barra de Sao F	140.76	139	*e*P	PKiKP	01 42 52.9	-0.6
JANB	Januaria	140.98	131	*e*P	PKPdf	01 42 52.6	+1.2
BNI	Bardonecchia	141.51	335	*e*PKPpre	PKPpre	01 42 46.1	
BNI	Bardonecchia	141.51	335	*e*PKIKP	PKPpre	01 42 46.2	
SSB	Saint Sauveur	142.17	337	*e*PKPpre	PKPpre	01 42 47.1	
SSB	Saint Sauveur	142.17	337	*e*PKHKP	PKPpre	01 42 47.1	
MDP	Montagnes des	142.34	96	PKP	PKPdf	01 42 52.2	-1.6
MDP	Montagnes des	142.34	96	PKP	PKPdf	01 42 52.2	-1.6
	comp=Z,83nm,0.8s,baz=275,slow=4.4,SNR=10						
WDD	Wied Dalam	143.72	317	*e*PKPdf	PKPdf	01 42 57.2	+1.6
MAHO	Mahon	146.72	332	*i* P	PKPbc	01 43 02.6	+0.3
KEST	Kesra	147.09	322	PKPbc	PKPbc	01 43 03.0	-0.6
KEST	Kesra	147.09	322	PKPbc	PKPbc	01 43 03.0	-0.6
	comp=Z,408nm,0.8s,baz=227,slow=1.0,SNR=30						
CMAH	Djebel Manchou	147.61	325	P	PKPdf	01 43 02.2	-0.1
CAEH	'Ain El Ouahch	147.81	326	P	PKPdf	01 43 03.5	+0.9
ABSA	Djebel Ababsia	147.82	324	P	PKPbc	01 43 04.3	-1.3
H07N1	FLORES T-PHASE	148.30	24	*e*PKP	PKiKP	01 43 07.6	-0.8
H07N1	FLORES T-PHASE	148.30	24	PKPbc	PKiKP	01 43 08.2	-0.2
	SNR=194						
DFRA	Djebel Bou Aff	148.52	327	P	PKPbc	01 43 06.8	-0.7
H07S1	FLORES T-PHASE	148.53	24	*e*PKP	PKPdf	01 43 03.6	-0.1
H07S1	FLORES T-PHASE	148.53	24	PKPbc	PKPab	01 43 10.8	+0.1
	SNR=27						
PBRG	Braganca	148.71	348	*e*PKPdf	PKPbc	01 43 08.3	+0.6
PGAV	Gavieira, Arco	148.84	350	*e*PKPdf	PKPdf	01 43 05.8	+1.6
SET	Setif	149.03	327	P	PKPbc	01 43 08.0	-0.8
PCAB	Cabril	149.04	350	*e*PKPdf	PKPdf	01 43 06.1	+1.6
CKHR	Kef el Ahmar	149.10	326	P	PKPbc	01 43 07.4	-1.6
UCM	Universidad Co	149.23	342	*i* P	PKiKP	01 43 10.1	-0.2
POLO	Lamas de Olo	149.33	349	*e*PKPdf	PKPdf	01 43 06.3	+1.3
MVO	Moncorvo	149.38	348	*e*PKPdf	PKPbc	01 43 07.4	-2.0
PVRL	Vila Real	149.41	349	*e*PKPdf	PKPdf	01 43 05.8	+0.7
ABMS	Boumerdes	149.60	330	P	PKPbc	01 43 08.6	-1.4
PTO	Porto	149.70	350	*e*PKPdf	PKPbc	01 43 10.3	+0.2
ABA	Alger-Bouzarea	149.78	330	P	PKPab	01 43 14.5	-1.3
AKET	Djebel Ketaf	149.95	328	P	PKPbc	01 43 11.0	-0.1
PVIS	Viseu	149.98	349	*e*PKPdf	PKPdf	01 43 07.8	+1.8
ES19	SONSECA Array	149.99	343	*e*PKPbc	PKPbc	01 43 10.0	-1.0
SRBC	Serra Branca	150.02	20	*e*PKP	PKPdf	01 43 07.7	+1.7
ESDC	Sonseca Array	150.03	343	PKPbc	PKPbc	01 43 09.8	-1.2
ESDC	Sonseca Array	150.03	343	PKPbc	PKPbc	01 43 09.8	-1.2
	comp=Z,65nm,0.8s,baz=17,slow=2.4,SNR=28						
PGRA	Graciosa	150.04	20	*e*PKP	PKPdf	01 43 08.1	+2.0
ADJB	Djebel Djouab	150.09	329	P	PKPbc	01 43 10.8	-0.6
PCED	Cedros	150.15	22	*e*PKP	PKPdf	01 43 08.0	+1.8
CALA	Caldeira	150.19	22	*e*PKP	PKPbc	01 43 11.1	-0.4
MTE	Manteigas	150.22	348	*e*PKPdf	PKPdf	01 43 07.6	+1.2
MTE	Manteigas	150.22	348	*e*PKPbc	PKPbc	01 43 10.2	-1.3
ROSA	Rosais	150.23	21	*e*PKP	PKPdf	01 43 08.6	+2.2
ROSA	Rosais	150.23	21	*e*PKPbc	PKPbc	01 43 09.9	-1.6
PAB	San Pablo	150.26	343	*e*PKPbc	PKPbc	01 43 10.8	-0.9
PAB	San Pablo	150.26	343	*e*PKP2	PKPbc	01 43 10.8	-0.9
HOR	Horta	150.26	22	*e*PKP	PKiKP	01 43 12.8	+0.4
PICO	Pico	150.36	22	*e*PKP	PKPdf	01 43 08.0	+1.3
PMAN	Manadas	150.36	21	*e*PKP	PKPdf	01 43 08.3	+1.7
PCAN	Candelaria	150.37	22	*e*PKP	PKPdf	01 43 08.2	+1.6
ADH	Angra Heroismo	150.63	20	*e*PKP	PKPbc	01 43 10.7	-1.7
PCAS	Casmilo, Conde	150.74	350	*e*PKPdf	PKPdf	01 43 07.8	+0.7
PCBR	Castelo Branco	150.75	348	*e*PKPdf	PKPdf	01 43 09.4	+2.3
CART	Cartagena	150.90	337	*i* P	PKiKP	01 43 15.2	+1.4
EBNR	Beni Rached	150.91	332	P	PKiKP	01 43 14.0	+0.1
ECHA	Ech Chlef	151.10	332	P	PKiKP	01 43 15.0	+0.8
PMRV	Marv??o	151.12	348	*e*PKPdf	PKPdf	01 43 08.3	+0.5
PTOM	Tomar	151.14	349	*e*PKPdf	PKPdf	01 43 08.7	+0.9
EANR	'Ain N'Sour	151.39	332	P	PKPdf	01 43 10.0	+1.7
SHEL	Horse Pasture	151.43	199	*e*PKPbc	PKPbc	01 43 15.2	+0.2
PMTG	Montargil	151.64	349	*e*PKPdf	PKPdf	01 43 10.1	+1.6
PESTR	Estremoz	151.71	348	*e*PKPdf	PKPbc	01 43 13.6	-1.4
PESTR	Estremoz	151.71	348	*e*PKPbc	PKPbc	01 43 13.6	-1.4
PESTR	Estremoz	151.71	348	P	PKiKP	01 43 16.7	+1.3
ETRT	Tiaret	151.75	331	P	PKPbc	01 43 13.0	-2.3
PSET	Sete Cidades	151.87	18	*e*PKP	PKPdf	01 43 07.9	-1.1
OJGS	Djebel Guires	151.91	332	P	PKPdf	01 43 12.0	+2.8
PMAFR	Mafra	151.94	350	*e*PKPdf	PKPdf	01 43 10.2	+1.2
PDA	Ponta Delgada	151.96	18	*e*PKP	PKPdf	01 43 09.5	+0.5
PCALD	Caldeiras da R	151.97	18	*e*PKP	PKPdf	01 43 09.2	+0.1
GRON	Grota Negra	151.98	18	*e*PKP	PKPdf	01 43 11.1	+1.9
CMLA	Cha da Macela	151.99	18	*e*PKP	PKPdf	01 43 09.0	-0.1
CMLA	Cha da Macela	151.99	18	*e*PKPbc	PKPbc	01 43 15.3	-0.3
OJBR	Djebel Berber	152.03	332	P	PKPdf	01 43 12.0	+2.7
BART	Pico Bartolome	152.08	17	*e*PKP	PKPdf	01 43 10.1	+0.7
PMST	Lisbon--Monsan	152.13	350	*e*PKPdf	PKiKP	01 43 16.5	+0.3
LIS	Lisbon	152.15	350	*e*PKPdf	PKPdf	01 43 08.4	-0.9
USTO	Oran	152.30	334	P	PKiKP	01 43 19.0	+2.3
ODJA	Bouhanifia	152.47	333	P	PKPdf	01 43 07.0	-3.0
PBEJ	Beja	152.57	348	*e*PKPdf	PKPdf	01 43 12.4	+2.4
PNCL	Nicolau / Gran	152.62	349	*e*PKPdf	PKPdf	01 43 11.8	+1.8
PNCL	Nicolau / Gran	152.62	349	*e*PKPab	PKPab	01 43 27.3	-0.2
PSMA	Santa Maria	152.82	18	*e*PKP	PKPdf	01 43 09.0	-1.3
MESJ	Messejana	152.83	348	*e*PKPdf	PKPdf	01 43 09.3	-1.1
MESJ	Messejana	152.83	348	*e*PKPdf	PKPdf	01 43 11.9	+1.6
MESJ	Messejana	152.83	348	*e*PKPab	PKPab	01 43 32.4	+4.0
PSMN	Pico do Norte,	152.83	18	*e*PKP	PKPdf	01 43 08.1	-2.3
EMAL	Malaga-Limoner	152.85	341	*i* P	PKPbc	01 43 16.6	-1.0
LIJA	Lijar	153.02	343	*i* P	PKPbc	01 43 17.0	-1.1
OLHC	Oulhaca	153.09	335	P	PKPbc	01 43 16.0	-2.2
PVAQ	Vaqueiros	153.14	347	*e*PKPdf	PKPdf	01 43 12.4	+1.6
PVAQ	Vaqueiros	153.14	347	P	PKPbc	01 43 17.7	-0.5
RCBR	Riachuelo	153.21	128	*e*PKPdf	PKPdf	01 43 13.0	+1.4
RCBR				PKPbc	PKiKP	01 43 21.0	+1.7
RCBR	Riachuelo	153.21	128	*e*PKIKP	PKPdf	01 43 13.0	+1.4
RCBR						01 43 21.0	
RCBR	Riachuelo	153.21	128	PKPbc	PKiKP	01 43 21.0	+1.7
	comp=Z,96nm,0.8s,baz=209,slow=2.9,SNR=6.4						
RCBR	Riachuelo	153.21	128	*e*P	PKPdf	01 43 15.1	+3.4
PTEO	Sao Teotonio	153.21	349	*e*PKPdf	PKPdf	01 43 13.3	+2.4
GIBL	Gibalbin	153.25	344	*e*P	PKPdf	01 43 11.0	0.0
PBDV	Barranco-do-Ve	153.34	347	*e*PKPdf	PKPdf	01 43 13.1	+1.9
MORF	Marmelete	153.43	349	*e*PKPdf	PKPdf	01 43 10.4	-0.9
MORF	Marmelete	153.43	349	*e*PKPdf	PKPdf	01 43 13.7	+2.4
PFVI	Vila Bisbo	153.63	349	*e*PKPdf	PKPdf	01 43 14.4	+2.9
PFVI	Vila Bisbo	153.63	349	*e*PKPbc	PKPbc	01 43 17.6	-1.7
MELI	Melilla	153.65	337	*i* P	PKPdf	01 43 12.4	+0.9
SFS	San Fernando	153.66	344	*e*P	PKPdf	01 43 12.6	+1.0
CNIL	Conil	153.70	343	*e*P	PKPdf	01 43 12.2	+0.6
TAF	Taforalt	153.87	336	P	PKiKP	01 43 24.0	+3.9
CEUT	Ceuta	153.94	342	P	PKiKP	01 43 21.1	+1.1
MDT	Midelt	156.49	337	P	PKPdf	01 43 22.8	+7.1
TOA0	Torodi Ar. Sit	163.50	278	*e*PKPdf	PKPdf	01 43 22.8	-1.1
TOA0				*e*PKPdf	PKPdf	01 43 23.4	-0.5
TORD	Torodi Ar. Bea	163.50	278	PKP	PKPdf	01 43 24.6	+0.7
TORD	Torodi Ar. Bea	163.50	278	PKP	PKPdf	01 43 24.6	+0.7
	comp=Z,88nm,1.0s,baz=0.0,slow=1.5,SNR=16						
TORD				PKPab	PKPab	01 44 17.0	+1.6
	comp=Z,49nm,1.0s,baz=81,slow=5.6,SNR=6.6						
KIC	Kosan Boka	168.69	245	*e*P	PKPdf	01 43 24.9	-3.2
	comp=Z,934nm,1.5s						
LIC	Lamto	168.89	244	*e*P	PKPdf	01 43 26.1	-2.1
	comp=Z,896nm,1.6s						
DBIC	Dimbokro	168.93	247	*e*PKPdf	PKPdf	01 43 27.8	-0.5
DBIC	Dimbokro	168.93	247	PKP	PKPdf	01 43 27.6	-0.7
	comp=Z,28nm,0.9s,baz=135,slow=1.1,SNR=11						
DBIC				PKPab	PKPab	01 44 41.2	+1.9
	comp=Z,31nm,0.9s,baz=18,slow=5.6,SNR=2.4						
DBIC	Dimbokro	168.93	247	*e*P	PKPdf	01 43 32.4	+4.2
TIC	Toumodi	169.07	246	*e*P	PKPdf	01 43 26.2	-2.2

IDC ***06*** *01:29:12.8±0.7, 10.°68S×164.°67E, h0^{km}, mb4.9/18, mb1 5.0/20, mb1mx4.8/46, mbtmp4.9/20, ML5.3/2, Error ellipse: s-maj=27.4km s-min=18.5km az=62.0*

NEIC ***06*** *01:29:13.9±0.2, 10.°77S×164.°63E, h10^{km}, mb5.5/17, Error ellipse: s-maj=7.6km s-min=5.2km az=82.0*

ISCJB ***06*** *01:29:14.1±0.3, 10.°80S±0.°05×164.°59E±0.°07, h24^{km}, mb5.2/28, Error ellipse: s-maj=9.6km s-min=6.9km az=167.8*

ISC 06 01:29:15.9±0.5**, 10.°77S**±0.°07×**164.°68E**±0.°08**, h24**^{km}**, n54, σ0.^{s}92**/55**, mb5.2**/28**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.84	286	Pn	Pn	01 30 27.0	-0.3
	158nm,0.3s,baz=113,slow=12,SNR=4.0						
HNR				Sn	Sn	01 31 25.0	+2.3
	117nm,0.3s,baz=180,slow=17,SNR=2.2						
DZM	Mont Dzumac	11.36	172	Pn	Pn	01 31 56.7	-0.1
	17nm,0.3s,baz=353,slow=16,SNR=4.3						
PATS	Pohnpei	18.60	340	*e*P	Pn	01 33 31.4	-0.5
	140nm,0.9s						
EIDS	Eidsvold	19.41	220	*e*P	P	01 33 39.8	-0.6
	73nm,0.9s						
CTAO	Charters Tower	20.01	240	*e*P	P	01 33 47.0	-0.1
OUZ	Omahuta	25.66	163	*e*P	P	01 34 44.6	+0.8
URZ	Urewera	29.55	160	P	P	01 35 19.9	+1.2
	18nm,0.8s,baz=0.0,slow=6.1,SNR=2.1						
BKZ	Black Stump Fm	30.18	162	*e*P	P	01 35 21.9	-2.5
	279nm,1.5s						
WB2	Warramunga Arr	30.59	249	*e*P	P	01 35 25.9	-2.2
WB2				*e*PcP	PcP	01 38 27.3	+0.7
BFZ	Birch Farm	31.50	163	*e*P	P	01 35 37.3	+1.4
	273nm,1.4s						
TOO	Toolangi	31.77	210	*e*P	P	01 35 39.1	+0.7
	55nm,1.2s						
ANA2	Anatahan	32.83	325	*e*P	P	01 35 47.6	-0.3
	156nm,0.4s						
MTN	Manton Dam	32.89	263	*e*P	P	01 35 47.8	-0.6
	56nm,1.2s						
RPZ	Rata Peaks	33.28	172	*e*P	P	01 35 51.5	0.0
	204nm,1.3s						
BBOO	Buckleboo	34.26	226	*e*P	P	01 35 59.1	-1.0
	82nm,1.1s						
HMH	Humu'ula Sheep	49.51	53	*e*P	P	01 38 04.2	-1.0
	448nm,1.5s						
MJAR	Matsushiro Arr	53.25	333	P	P	01 38 32.7	0.0
	6.4nm,0.9s,baz=171,slow=9.6,SNR=4.6						
MAJO	Matsushiro	53.25	333	*e*P	P	01 38 32.7	0.0
MAT	Matsushiro	53.25	333	P	P	01 38 38.8	+6.1
JNU	Nakatsue	54.25	325	*e*P	P	01 38 39.4	-0.6
	94nm,1.1s						
JNU	Nakatsue	54.25	325	P	P	01 38 39.6	-0.5
	27nm,0.8s,baz=109,slow=3.5,SNR=5.9						
ASAJ	Asahikawa	58.20	341	P	P	01 39 08.0	0.0
	22nm,0.9s,baz=218,slow=11,SNR=3.6						
KSRS	Korea Array	59.06	326	P	P	01 39 14.3	+0.2
	6.9nm,1.1s,baz=143,slow=6.7,SNR=3.7						
KS15	Wonju Array Si	59.08	326	*e*P	P	01 39 14.3	+0.1
	92nm,1.5s						
KSAR	Wonju Array Be	59.08	326	P	P	01 39 14.3	+0.1
QIZ	Qiongzhong	61.63	298	*e*P	P	01 39 31.7	-0.4
USRK	Ussuriysk Ar.	62.24	334	P	P	01 39 36.2	+0.6
	8.8nm,1.0s,baz=134,slow=5.8,SNR=4.2						
MDJ	Mudanjiang	63.62	333	*e*P	P	01 39 44.7	-0.2
PETK	Petropavlovsk-	63.91	355	P	P	01 39 46.2	-0.4
	9.0nm,0.9s,baz=178,slow=9.5,SNR=3.7						
PEA1	Petropavlovsk-	63.91	355	*e*P	P	01 39 46.2	-0.4
VNDA	Vanda	66.75	181	P	P	01 40 06.3	+1.6
	14nm,1.0s,baz=50,slow=7.9,SNR=2.9						
CM31	Chiang Mai Arr	71.04	294	*e*P	P	01 40 32.8	+0.4
	50nm,1.2s						
CMAR	Chiang Mai Arr	71.04	294	P	P	01 40 32.8	+0.4
	4.5nm,0.8s,baz=106,slow=4.6,SNR=3.4						
KDAK	Kodiak Island	76.72	22	*e*P	P	01 41 05.3	+0.5
	53nm,1.4s						
KDAK	Kodiak Island	76.72	22	P	P	01 41 05.3	+0.5
	31nm,1.3s,baz=288,slow=3.2,SNR=2.8						
SONA0	Songino Array	77.83	324	*e*P	P	01 41 12.1	+0.6
SONM	Songino Array	77.83	324	P	P	01 41 12.1	+0.6
	8.6nm,0.9s,baz=116,slow=6.6,SNR=3.6						
TLY	Talaya	81.32	327	P	P	01 41 29.1	-1.1
	1.7nm,0.5s,baz=256,slow=17,SNR=2.8						
ILAR	Eielson Array	83.59	19	P	P	01 41 41.5	-0.3
	4.6nm,0.7s,baz=231,slow=5.3,SNR=4.6						
ILB	Eielson Array	83.59	19	*e*P	P	01 41 41.5	-0.3
	35nm,1.4s						
TIXI	Tiksi	85.62	349	*e*P	P	01 41 52.3	+0.4
	32nm,1.2s						
TIXI	Tiksi	85.62	349	P	P	01 41 53.3	+1.4
	9.4nm,0.9s,baz=78,slow=3.1,SNR=2.2						
NVAR	Mina Array Bea	86.65	50	P	P	01 41 58.9	+0.8
	20nm,1.1s,baz=237,slow=5.7,SNR=5.3						
NV01	Mina Array Sit	86.65	50	*e*P	P	01 41 58.9	+0.8
MK32	Makanchi Array	92.61	317	*e*P	P	01 42 25.8	+0.2
MKAR	Makanchi Array	92.61	317	P	P	01 42 25.8	+0.2
	7.9nm,0.8s,baz=85,slow=4.3,SNR=3.3						
ZALV	Zalesovo Beam	92.72	324	P	P	01 42 26.4	+0.5
	6.9nm,0.9s,baz=41,slow=1.6,SNR=2.2						
ZAA1	Zalesovo Array	92.72	324	*e*P	P	01 42 26.4	+0.4
PD31	Pinedale Array	94.14	47	*e*P	P	01 42 34.3	+1.2
	23nm,1.4s						
PDAR	Pinedale Array	94.14	47	P	P	01 42 34.3	+1.2
	6.7nm,1.1s,baz=264,slow=5.3,SNR=3.1						
KURK	Kurchatov	95.76	320	*e*P	P	01 42 41.5	+1.6
KEST	Kesra	146.56	322	*e*PKPdf	PKPab	01 48 55.6	-1.3
KEST	Kesra	146.56	322	PKPbc	PKiKP	01 48 58.1	-0.7
	13nm,1.0s,baz=270,slow=7.1,SNR=2.4						
ESDC	Sonseca Array	149.50	343	PKPbc	PKPbc	01 49 03.3	-0.3
	2.8nm,0.9s,baz=1.8,slow=2.6,SNR=2.7						

ISCJB ***06*** *01:31:08.8±0.3, 11.°78S±0.°08×165.°09E±0.°07, h10^{km}, mb5.0/16, Error ellipse: s-maj=13.5km s-min=8.6km az=146.3*

IDC ***06*** *01:31:08.8±1.0, 11.°69S×165.°27E, h0^{km}, mb4.9/11, mb1 5.0/11, mb1mx4.6/47, mbtmp4.8/11, Error ellipse: s-maj=35.4km s-min=28.2km az=169.0*

NEIC ***06*** *01:31:10.0±0.2, 11.°77S×165.°26E, h10^{km}, mb5.1/5, Error ellipse: s-maj=9.7km s-min=6.9km az=127.0*

ISC 06 01:31:10.0±0.6**, 11.°8S**±0.°1×**165.°2E**±0.°1**, h10**^{km}**, n63, σ0.^{s}75**/61**, mb5.0**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATS	Pohnpei	19.72	339	*e*P	P	01 35 32.1	-7.8
	408nm,0.6s						
CTAO	Charters Tower	20.03	243	*e*P	P	01 35 43.7	+0.4
HIZ	Hauiti	27.99	164	*e*P	P	01 37 00.1	-0.9
	17nm,0.8s						
WR1	Warramunga Arr	30.77	251	*e*P	P	01 37 26.6	+0.6
	28nm,1.0s						
WRA	Warramunga Arr	30.77	251	P	P	01 37 26.6	+0.6
	25nm,0.9s,baz=83,slow=8.7,SNR=3.8						
TOO	Toolangi	31.20	211	*e*P	P	01 37 28.8	-0.8
RPZ	Rata Peaks	32.23	172	*e*P	P	01 37 39.1	+0.6
LUWI	Luwuk	43.45	281	*e*P	P	01 39 13.6	-0.1
	166nm,1.4s						
NWAO	Narrogin (SRO)	48.65	236	P	P	01 39 54.3	-0.2
MAJO	Matsushiro	54.38	333	*e*P	P	01 40 32.5	-4.7
JNU	Nakatsue	55.37	325	P	P	01 40 44.0	-0.4
	8.8nm,0.9s,baz=262,slow=19,SNR=5.6						
ASAJ	Asahikawa	59.31	341	P	P	01 41 12.0	0.0
	23nm,0.9s,baz=234,slow=12,SNR=4.8						
USRK	Ussuriysk Ar.	63.37	334	P	P	01 41 40.0	+0.6
	7.2nm,0.8s,baz=131,slow=7.1,SNR=4.5						
PETK	Petropavlovsk-	64.93	355	P	P	01 41 49.7	+0.1
	5.9nm,0.9s,baz=188,slow=8.7,SNR=3.0						
PEA1	Petropavlovsk-	64.94	355	*e*P	P	01 41 49.7	0.0
HDA	Harding Lake	84.08	19	P	P	01 43 40.7	+0.1
	baz=227						
O02D	Mt. Diablo Mer	84.14	47	P	P	01 43 42.9	+1.2
	baz=249						
ILAR	Eielson Array	84.35	19	P	P	01 43 42.1	+0.1
	6.2nm,0.7s,baz=241,slow=4.9,SNR=6.8						
ILB	Eielson Array	84.35	19	*e*P	P	01 43 42.1	+0.1
	15nm,1.1s						
POKR	Poker Plat Res	84.42	18	P	P	01 43 42.0	-0.3
	baz=226						
K02D	Willamette Mer	84.43	44	P	P	01 43 43.5	+0.4
	baz=248						
N02D	Trinity Center	84.48	46	P	P	01 43 44.2	+0.9
	baz=249						
CMB	Columbia Colle	85.18	50	*e*P	P	01 43 46.8	-0.1
	32nm,0.9s						
L04D	Klamath Falls	85.20	45	P	P	01 43 47.8	+0.8
	baz=250						
VES	Vestal, Richgr	85.48	52	P	P	01 43 48.5	+0.2
	baz=252						
J04D	Umpqua Nationa	85.69	44	P	P	01 43 50.1	+0.6
	baz=250						
ISA	Isabella, Lake	85.90	52	P	P	01 43 51.3	+0.8
	baz=252						
EDW2	Edwards Air Fo	86.05	53	P	P	01 43 52.2	+0.9
	baz=253						
BFSC	Mount Baldy Ra	86.12	54	P	P	01 43 51.9	+0.1
	baz=253						
J05D	Fort Rock, OR	86.31	45	P	P	01 43 53.5	+1.0
	baz=250						
CWC	Cottonwood Cre	86.44	52	P	P	01 43 54.0	+0.6
	baz=253						
LRMC	Laurel Mtn Rad	86.46	53	P	P	01 43 54.2	+0.8
	baz=253						
TIN	Tinemaha, Big	86.51	51	P	P	01 43 54.3	+0.7
	baz=252						
MPMC	Manual Prospec	86.78	52	P	P	01 43 56.0	+0.9
	baz=253						
NV01	Mina Array Sit	86.86	50	*e*P	P	01 43 55.7	+0.2
NVAR	Mina Array Bea	86.86	50	P	P	01 43 55.7	+0.2
	9.1nm,0.9s,baz=232,slow=7.1,SNR=5.1						
IKP	In-Ko-Pah, Jac	86.92	56	P	P	01 43 56.6	+1.0
	baz=254						
GRAC	Grapevine Rang	87.15	51	P	P	01 43 57.4	+0.8
	baz=253						
SWSC	Sam W. Stewart	87.25	56	P	P	01 43 57.9	+0.8
	baz=254						
HEC	Hector,Ludlow	87.34	54	P	P	01 43 58.0	+0.4
	baz=254						
BELC	Belle Mtn. Jos	87.38	55	P	P	01 43 58.8	+0.8
	baz=254						
FURC	Furnace Creek,	87.39	52	P	P	01 43 58.5	+0.8
	baz=253						
BC3	Big Chuckawall	87.72	55	P	P	01 44 00.5	+0.9
	baz=254						
TUQ	Turquoise Moun	87.83	53	P	P	01 44 00.9	+0.8
	baz=254						
GMRC	Granite Mounta	87.86	54	P	P	01 44 00.8	+0.6
	baz=254						
GLA	Glamis	88.06	56	P	P	01 44 02.7	+1.6
	baz=255						
IRM	Iron Mountain	88.10	55	P	P	01 44 02.1	+0.9
	baz=254						
LDFC	Landfair	88.37	54	*e*P	P	01 44 03.8	+1.2
	50nm,1.2s						
Y12C	Blythe	88.49	55	P	P	01 44 04.0	+0.9
	baz=255						
PDMCI	Parker Dam,Lak	88.94	55	P	P	01 44 06.5	+1.4
	baz=255						
214A	Organ Pipe Nat	89.43	57	P	P	01 44 09.0	+1.4
	baz=256						
MK32	Makanchi Array	93.70	317	*e*P	P	01 44 27.4	+0.4
MKAR	Makanchi Array	93.70	317	P	P	01 44 27.4	+0.4
	4.0nm,0.8s,baz=108,slow=3.8,SNR=1.8						
PD31	Pinedale Array	94.40	47	*e*P	P	01 44 30.1	-0.5
	8.1nm,1.2s						
PDAR	Pinedale Array	94.40	47	P	P	01 44 30.1	-0.5
	4.3nm,1.0s,baz=207,slow=1.6,SNR=2.7						
YKA	Yellowknife Ar	95.83	27	P	P	01 44 35.0	-1.4
	1.9nm,0.8s,baz=260,slow=4.8,SNR=3.3						
YKB5	Yellowknife Ar	95.83	27	*e*P	P	01 44 35.0	-1.4
LTX	Lajitas	96.61	62	*e*P	P	01 44 41.3	+0.5
TXAR	Lajitas Array	96.61	62	P	P	01 44 41.3	+0.5
	1.7nm,0.9s,baz=266,slow=3.5,SNR=2.8						
SDV	Santo Domingo	125.03	87	PKP	PKiKP	01 50 12.3	+0.1
	9.7nm,0.8s,baz=149,slow=2.7,SNR=3.5						
SIV	San Ignacio	126.52	120	PKP	PKiKP	01 50 14.9	0.0
	2.2nm,0.8s,baz=180,slow=7.1,SNR=3.1						
KEST	Kesra	147.68	322	PKPbc	PKPbc	01 50 54.6	-0.8
	9.0nm,0.8s,baz=347,slow=14,SNR=4.0						
ESDC	Sonseca Array	150.60	343	PKPbc	PKiKP	01 51 03.4	0.0
	3.7nm,0.9s,baz=9.3,slow=3.2,SNR=4.0						

IDC ***06*** *01:31:46.2±0.5, 11.°21S×165.°59E, h0^{km}, mb5.1/27, mb1 5.1/29, mb1mx5.0/49, mbtmp5.1/29, ML5.2/2, Error ellipse: s-maj=16.2km s-min=14.1km az=99.0*

ISCJB ***06*** *01:31:48.1±0.2, 11.°33S±0.°04×165.°53E±0.°04, h24^{km}, mb5.3/61, Error ellipse: s-maj=6.3km s-min=5.2km az=16.0*

NEIC ***06*** *01:31:49.7±2.3, 11.°29S×165.°59E, h23^{km}±15^{km}, mb5.5/39, Error ellipse: s-maj=6.2km s-min=4.9km az=53.0*

MOS ***06*** *01:31:50.7±1.3, 11.°23S×165.°38E, h33^{km}, mb5.5/10, Error ellipse: s-maj=12.1km s-min=10.8km az=169.3*

ISC 06 01:31:49.7±0.3**, 11.°29S**±0.°06×**165.°62E**±0.°07**, h24**^{km}**, n233,**

σ**1§11**/238,**mb5.4**/61,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.88	288	*e*Pn	Pn	01 33 15.9	+0.5
HNR	Honiara	5.88	288	*e*P	Pn	01 33 15.9	+0.5
HNR	Honiara	5.88	288	Pn	Pn	01 33 15.9	+0.5
	49nm,0.3s,baz=342,slow=20,SNR=1.9						
DZM	Mont Dzumac	10.75	176	*e*Pn	Pn	01 34 22.4	+0.1
DZM	Mont Dzumac	10.75	176	Pn	Pn	01 34 23.1	+0.8
	24nm,0.3s,baz=107,slow=17,SNR=5.7						
ONTNC	Ouen Toro	10.99	176	*e*Pn	Pn	01 34 26.1	+0.7
EIDS	Eidsvold	19.64	223	*e*P	P	01 36 17.1	+0.4
CTA	Charters Tower	20.58	242	*e*P	P	01 36 28.1	+1.0
CTA	Charters Tower	20.58	242	*e*P	P	01 36 28.1	+1.0
CTA	Charters Tower	20.58	242	P	P	01 36 28.1	+1.0
	115nm,0.9s,baz=67,slow=15,SNR=8.5						
CTAO	Charters Tower	20.58	242	*e*P	P	01 36 27.5	+0.4
CTAO	Charters Tower	20.58	242	*e*P	P	01 36 27.5	+0.4
COEN	Coen	22.07	261	*e*P	P	01 36 42.8	-0.3
	214nm,1.2s						
ARMA	Armidale	23.05	212	*e*P	P	01 36 53.4	-0.1
OUZ	Omahuta	24.91	164	*e*P	P	01 37 10.3	-0.5
MXZ	Matakaoa Point	28.54	159	*e*P	P	01 37 43.5	0.0
	87nm,1.2s						
URZ	Urewera	28.76	161	*e*P	P	01 37 46.2	+0.7
	12nm,0.6s						
URZ	Urewera	28.76	161	P	P	01 37 47.0	+1.5
	46nm,0.9s,baz=357,slow=3.6,SNR=4.0						
BKZ	Black Stump Fm	29.40	163	*e*P	P	01 37 51.7	+0.4
BFZ	Birch Farm	30.74	164	*e*P	P	01 38 01.9	-1.2
	84nm,0.9s						
SNZO	South Karori	30.95	167	*e*P	P	01 38 03.1	-1.8
	82nm,1.0s						
WRAB	Tennant Creek	31.28	250	*e*P	P	01 38 05.6	-2.4
	76nm,1.2s						
WRAB	Tennant Creek	31.28	250	*e*P	P	01 38 05.6	-2.4
WRAB				pmax	pmax		
	comp=Z,76nm,1.2s						
WR1	Warramunga Arr	31.29	250	*e*P	P	01 38 06.7	-1.4
	comp=Z,29nm,0.8s						
WRA	Warramunga Arr	31.29	250	P	P	01 38 06.7	-1.5
WRA	Warramunga Arr	31.29	250	P	P	01 38 06.7	-1.5
WRA	Warramunga Arr	31.29	250	P	P	01 38 06.7	-1.5
	comp=Z,79nm,0.9s,baz=80,slow=9.2,SNR=9.5						
TOO	Toolangi	31.81	211	*e*P	P	01 38 13.3	+0.8
	comp=Z,33nm,1.2s						
TOO	Toolangi	31.81	211	*e*P	P	01 38 13.3	+0.8
TOO				pmax	pmax		
	comp=Z,33nm,1.2s						
LTZ	Lake Taylor	31.91	171	*e*P	P	01 38 15.1	+1.8
OXZ	Oxford	32.40	171	*e*P	P	01 38 18.8	+1.2
	comp=Z,39nm,0.7s						
AS31	Alice Springs	32.58	244	*e*P	P	01 38 18.3	-1.2
	comp=Z,7.7nm,0.8s						
ASAR	Alice Springs	32.58	244	P	P	01 38 18.3	-1.2
ASAR	Alice Springs	32.58	244	P	P	01 38 18.3	-1.2
ASAR	Alice Springs	32.58	244	P	P	01 38 18.3	-1.2
	comp=Z,19nm,0.8s,baz=73,slow=9.5,SNR=5.4						
RPZ	Rata Peaks	32.65	173	*e*P	P	01 38 21.3	+1.5
RPZ	Rata Peaks	32.65	173	P	P	01 38 21.3	+1.5
	comp=Z,23nm,0.8s,baz=291,slow=4.3,SNR=3.8						
LBZ	Lake Benmore	33.22	174	*e*P	P	01 38 23.2	-1.5
	comp=Z,26nm,0.8s						
BBOO	Buckleboo	34.58	227	*e*P	P	01 38 36.0	-0.8
	comp=Z,71nm,1.0s						
FITZ	Fitzroy Crossi	39.20	255	*e*P	P	01 39 16.4	+0.1
FITZ	Fitzroy Crossi	39.20	255	P	P	01 39 16.4	+0.1
	comp=Z,47nm,0.9s,baz=205,slow=3.7,SNR=4.4						
FORT	Forrest	39.81	235	*e*P	P	01 39 20.8	-0.4
	comp=Z,31nm,0.8s						
BATI	Baumata	41.21	267	*e*P	P	01 39 32.7	-0.3
BATI	Baumata	41.21	267	P	P	01 39 32.7	-0.3
	comp=Z,32nm,0.7s,baz=130,slow=17,SNR=2.4						
MBWA	Marble Bar	45.01	251	*e*P	P	01 40 02.3	-1.3
OBL	Observatory Le	49.13	52	*e*P	P	01 40 35.1	-0.8
	comp=Z,99nm,1.0s						
NWAO	Narrogin (SRO)	49.23	236	*e*P	P	01 40 36.1	-0.3
NWAO	Narrogin (SRO)	49.23	236	*e*P	P	01 40 36.2	-0.3
NWAO	Narrogin (SRO)	49.23	236	P	P	01 40 36.1	-0.3
	comp=Z,46nm,0.9s,baz=287,slow=8.5,SNR=5.6						
KKM	Kota Kinabalu	52.09	287	*e*P	P	01 40 58.7	+0.3
	comp=Z,118nm,1.2s						
MJAR	Matsushiro Arr	54.13	333	P	P	01 41 11.4	-1.5
MJAR	Matsushiro Arr	54.13	333	P	P	01 41 11.4	-1.5
	comp=Z,4.2nm,0.8s,baz=168,slow=8.4,SNR=3.5						
MAJO	Matsushiro	54.13	333	*e*P	P	01 41 11.4	-1.5
UGM	Wanagama	54.37	268	*e*P	P	01 41 14.7	-0.5
	comp=Z,233nm,1.2s						
JNU	Nakatsue	55.20	324	*e*P	P	01 41 20.5	-0.3
	comp=Z,71nm,1.2s						
JNU	Nakatsue	55.20	324	P	P	01 41 20.5	-0.3
	comp=Z,29nm,1.2s,baz=143,slow=20,SNR=3.0						
KSM	Kuching	56.42	279	*e*P	P	01 41 30.1	+0.2
	comp=Z,44nm,1.0s						
ASAJ	Asahikawa	58.98	341	*e*P	P	01 41 47.2	-0.1
ASAJ	Asahikawa	58.98	341	P	P	01 41 47.2	-0.1
ASAJ				pmax	pmax		
	comp=Z,15nm,0.9s						
ASAJ	Asahikawa	58.98	341	P	P	01 41 47.2	-0.1
	comp=Z,15nm,0.9s,baz=20,slow=13,SNR=3.5						
KSRS	Korea Array	60.01	326	P	P	01 41 56.1	+1.6
KSRS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSRS	Korea Array	60.01	326	P	P	01 41 56.1	+1.6
	comp=Z,7.1nm,1.1s,baz=146,slow=6.9,SNR=2.9						
KS15	Wonju Array Si	60.02	326	*e*P	P	01 41 56.1	+1.5
	comp=Z,31nm,1.4s						
KSAR	Wonju Array Be	60.02	326	P	P	01 41 56.1	+1.5
KSAR	Wonju Array Be	60.02	326	P	P	01 41 56.1	+1.5
MYKOM	Kota Tinggi	62.76	278	*e*P	P	01 42 15.8	+2.1
	comp=Z,50nm,1.2s						
USRK	Ussuriysk Ar.	63.11	333	P	P	01 42 15.2	-0.1
USRK	Ussuriysk Ar.	63.11	333	P	P	01 42 15.2	-0.1
	comp=Z,16nm,1.1s,baz=110,slow=7.8,SNR=2.6						
PEA0B	Petropavlovsk-	64.49	355	*e*S	P	01 42 35.4	+11
PETK	Petropavlovsk-	64.49	355	P	P	01 42 24.5	+0.3
PETK	Petropavlovsk-	64.49	355	P	P	01 42 24.5	+0.3
PETK	Petropavlovsk-	64.49	355	P	P	01 42 24.5	+0.3
	comp=Z,5.5nm,0.9s,baz=171,slow=10,SNR=2.5						
PEA1	Petropavlovsk-	64.50	355	*e*P	P	01 42 24.5	+0.2
BKNI	Bangkinang	65.17	276	*e*P	P	01 42 29.9	+0.4
	comp=Z,191nm,0.9s						
IPM	Ipoh	66.14	280	*e*P	P	01 42 34.9	-0.9
	comp=Z,107nm,0.9s						
VNDA	Vanda	66.25	181	*e*P	P	01 42 36.3	+0.9
VNDA	Vanda	66.25	181	*e*P	P	01 42 36.3	+0.9
VNDA	Vanda	66.25	181	P	P	01 42 36.3	+0.9
	comp=Z,9.5nm,0.9s,baz=3.8,slow=6.0,SNR=4.0						
NIKH	Nikolski High	67.64	16	*e*P	P	01 42 45.0	+0.6
	comp=Z,160nm,0.8s						
GSI	Gunungsitoli	68.76	276	*e*P	P	01 42 52.0	-0.4
	comp=Z,140nm,1.1s						
CM01	Chiang Mai Arr	72.07	294	*e*P	P	01 43 12.8	+0.3
CM31	Chiang Mai Arr	72.10	294	*e*P	P	01 43 13.9	+1.3
	comp=Z,33nm,1.0s						
CMAR	Chiang Mai Arr	72.10	294	P	P	01 43 13.5	+0.9
CMAR	Chiang Mai Arr	72.10	294	P	P	01 43 13.5	+0.9
CMAR	Chiang Mai Arr	72.10	294	P	P	01 43 13.5	+0.9
	comp=Z,15nm,0.8s,baz=120,slow=4.4,SNR=11						
CHTO	Chiang Mai	72.21	294	*e*P	P	01 43 14.6	+1.3
	comp=Z,41nm,1.2s						
CHTO	Chiang Mai	72.21	294	*e*P	P	01 43 14.6	+1.3
CHTO				pmax	pmax		
	comp=Z,41nm,1.2s						
KDAK	Kodiak Island	76.84	22	*e*P	P	01 43 39.6	+0.3
	comp=Z,19nm,0.8s						
KDAK	Kodiak Island	76.84	22	*e*P	P	01 43 39.6	+0.3
KDAK				pmax	pmax		
	comp=Z,19nm,0.8s						
KDAK	Kodiak Island	76.84	22	P	P	01 43 39.6	+0.3
	comp=Z,21nm,1.0s,baz=202,slow=2.7,SNR=4.4						
QSPA	South Pole Qui	78.72	180	*e*P	P	01 43 51.1	+1.1
	comp=Z,80nm,1.2s						
RSO	Redoubt South	78.79	20	*e*P	P	01 43 51.4	+1.0
SONA0	Songino Array	78.79	324	*e*P	P	01 43 50.2	-0.4
SONM	Songino Array	78.79	324	P	P	01 43 50.2	-0.4
SONM				PKKP	PKKPdf	02 02 29.8	-6.1
SONM	Songino Array	78.79	324	P	P	01 43 50.2	-0.4
SONM	Songino Array	78.79	324	P	P	01 43 50.2	-0.4
	comp=Z,17nm,1.0s,baz=143,slow=5.7,SNR=4.4						
SONM				PKKP	PKKPdf	02 02 29.8	-6.1
	comp=Z,11nm,1.1s,baz=270,slow=2.3,SNR=4.7						
BILL	Bilibino	79.12	0	*e*P	P	01 43 50.8	-1.0
BILL				pmax	pmax		
	comp=Z,26nm,1.1s						
BRDH	Bariadhala	79.89	296	P	P	01 43 57.3	+0.3
BRDH				PKKP	PKKPdf	02 02 29.6	-3.1
BRDH	Bariadhala	79.89	296	P	P	01 43 57.3	+0.3
	comp=Z,25nm,0.4s,baz=69,slow=7.6,SNR=4.9						
BRDH				PKKP	PKKPdf	02 02 29.6	-3.1
	comp=Z,6.9nm,0.4s,baz=95,slow=5.0,SNR=4.6						
SHL	Shillong	80.53	298	*e*P	P	01 44 01.7	+1.1
	comp=Z,61nm,1.2s						
SHL	Shillong	80.53	298	*e*P	P	01 44 01.7	+1.1
SHL				pmax	pmax		
	comp=Z,61nm,1.2s						
DIV	Divide	81.67	22	*e*P	P	01 44 06.6	+0.8
	comp=Z,50nm,1.0s						
TLY	Talaya	82.26	326	*e*P	P	01 44 08.7	-0.3
TLY	Talaya	82.26	326	*e*P	P	01 44 08.7	-0.3
TLY	Talaya	82.26	326	P	P	01 44 08.7	-0.3
	comp=Z,6.4nm,0.9s,baz=259,slow=1.3,SNR=4.1						
HARP	HAARP	82.75	21	*e*P	P	01 44 12.4	+1.1
	comp=Z,67nm,0.8s						
WRH	Wood River Hil	83.19	18	*e*P	P	01 44 17.0	+3.4
	comp=Z,37nm,0.9s						
MDM	Murphy Dome	83.50	18	*e*P	P	01 44 15.2	+0.1
	comp=Z,36nm,0.8s						
HDA	Harding Lake	83.51	19	*e*P	P	01 44 14.9	-0.3
	comp=Z,110nm,0.8s						
HDA	Harding Lake	83.51	19	P	P	01 44 15.0	-0.1
	baz=227						
TCOL	CIGO, UAF Yank	83.55	18	P	P	01 44 15.3	0.0
	baz=226						
COLA	College	83.55	18	*e*P	P	01 44 15.6	+0.2
	comp=Z,68nm,0.8s						
COLA	College	83.55	18	*e*P	P	01 44 15.6	+0.2
COLA				pmax	pmax		
	comp=Z,68nm,0.8s						
ILAR	Eielson Array	83.78	19	P	P	01 44 16.1	-0.4
ILAR	Eielson Array	83.78	19	P	P	01 44 16.1	-0.4
ILAR	Eielson Array	83.78	19	P	P	01 44 16.1	-0.4
	comp=Z,13nm,0.8s,baz=238,slow=4.7,SNR=7.4						
ILB	Eielson Array	83.78	19	*e*P	P	01 44 17.1	+0.5
	comp=Z,22nm,0.7s						
POKR	Poker Plat Res	83.85	18	P	P	01 44 16.1	-0.8
	baz=226						
SCRK	Sand Creek	84.18	20	*e*P	P	01 44 19.6	+0.8
	comp=Z,35nm,0.8s						
AFDM	Forest Hills D	84.45	49	*e*P	P	01 44 21.5	+0.9
	comp=Z,38nm,1.3s						
SKAG	Skagway	84.81	26	*e*P	P	01 44 25.5	+3.7
EDW2	Edwards Air Fo	85.46	53	P	P	01 44 26.3	+0.4
	baz=253						
J05D	Fort Rock, OR	85.70	44	P	P	01 44 28.2	+1.2
	baz=250						
CWC	Cottonwood Cre	85.85	52	P	P	01 44 28.5	+0.7
	baz=253						
LRMC	Laurel Mtn Rad	85.88	53	P	P	01 44 28.9	+0.9
	baz=253						
TIN	Tinemaha, Big	85.92	51	P	P	01 44 29.3	+1.1
	baz=253						
NV01	Mina Array Sit	86.27	50	*e*P	P	01 44 29.9	-0.1
NVAR	Mina Array Bea	86.27	50	P	P	01 44 29.9	-0.1
NVAR	Mina Array Bea	86.27	50	P	P	01 44 29.9	-0.1
	comp=Z,8.9nm,0.9s,baz=241,slow=9.0,SNR=3.5						
SWSC	Sam W. Stewart	86.67	56	P	P	01 44 32.5	+0.7
	baz=254						
B05A	Bryant	86.86	40	P	P	01 44 32.8	+0.5
	baz=249						
TUQ	Turquoise Moun	87.24	53	P	P	01 44 35.6	+0.9
	baz=254						
IRM	Iron Mountain	87.52	55	P	P	01 44 37.2	+1.3
	baz=255						
Y12C	Blythe	87.91	55	P	P	01 44 38.7	+0.9
	baz=255						
MK01	Makanchi Array	93.60	317	*e*P	P	01 45 03.9	-0.1
MK32	Makanchi Array	93.61	317	*e*P	P	01 45 03.8	-0.2
MKAR	Makanchi Array	93.61	317	P	P	01 45 03.8	-0.3
MKAR	Makanchi Array	93.61	317	P	P	01 45 03.8	-0.3
MKAR				pmax	pmax		
	comp=Z,17nm,0.8s						
MKAR	Makanchi Array	93.61	317	P	P	01 45 03.8	-0.2
	comp=Z,17nm,0.8s,baz=106,slow=5.1,SNR=6.4						
ZALV	Zalesovo Beam	93.68	324	P	P	01 45 03.6	-0.5
ZALV	Zalesovo Beam	93.68	324	P	P	01 45 03.7	-0.5
ZALV	Zalesovo Beam	93.68	324	P	P	01 45 03.6	-0.5
	comp=Z,13nm,1.0s,baz=108,slow=4.8,SNR=5.1						
ZAA1	Zalesovo Array	93.68	324	*e*P	P	01 45 03.6	-0.5
PD31	Pinedale Array	93.80	47	*e*P	P	01 45 07.2	+1.8
	comp=Z,15nm,1.3s						
PDAR	Pinedale Array	93.80	47	P	P	01 45 07.2	+1.8
PDAR	Pinedale Array	93.80	47	P	P	01 45 07.1	+1.8
	comp=Z,1.7nm,0.9s,baz=274,slow=3.5,SNR=2.6						
EGMT	Eagleton	94.73	42	P	P	01 45 09.5	+0.2
	baz=258						
YKA	Yellowknife Ar	95.24	27	P	P	01 45 09.4	-1.7
YKA	Yellowknife Ar	95.24	27	P	P	01 45 09.4	-1.7
YKA	Yellowknife Ar	95.24	27	P	P	01 45 09.4	-1.7
	comp=Z,1.1nm,0.5s,baz=260,slow=4.4,SNR=5.9						
YKB5	Yellowknife Ar	95.24	27	*e*P	P	01 45 09.4	-1.7
KURK	Kurchatov	96.75	320	*e*P	P	01 45 18.5	+0.3
KURK	Kurchatov	96.75	320	*e*P	P	01 45 18.5	+0.3
KURBB	Kurchatov Arra	96.79	320	P	P	01 45 18.5	+0.1
	comp=Z,2.2nm,0.8s,baz=71,slow=3.3,SNR=4.1						
I39A	Houston	106.98	48	P	PKiKP	01 50 13.8	+0.1
	baz=271						
ARA0	ARCESS Array S	116.53	345	*e*PKPdf	PKiKP	01 50 31.8	+0.7
ARCES	ARCESS Array B	116.53	345	PKP	PKiKP	01 50 31.8	+0.7
ARCES	ARCESS Array B	116.53	345	PKIKP	PKiKP	01 50 31.8	+0.7
ARCES	ARCESS Array B	116.53	345	PKP	PKiKP	01 50 31.8	+0.7
	comp=Z,5.2nm,0.9s,baz=105,slow=2.1,SNR=3.8						
LPAZ	La Paz	120.18	116	*e*PKPdf	PKiKP	01 50 40.9	+0.4
LPAZ	La Paz	120.18	116	*e*PKIKP	PKiKP	01 50 40.9	+0.4
LPAZ	La Paz	120.18	116	PKP	PKiKP	01 50 40.9	+0.4
	comp=Z,7.5nm,1.0s,baz=18,slow=5.9,SNR=3.1						
SCHQ	Schefferville	120.29	32	*e*PKPdf	PKiKP	01 50 39.6	+0.8
SCHQ	Schefferville	120.29	32	PKP	PKiKP	01 50 39.6	+0.8
	comp=Z,8.2nm,0.9s,baz=244,slow=8.6,SNR=3.6						
OBN	Obninsk	120.95	329	*e*PKIKP	PKiKP	01 50 41.8	+1.8
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FIA0	FINESS Array S	121.95	338	*e*PKPdf	PKPdf	01 50 41.5	-0.2
FIA0	FINESS Array S	121.95	338	*e*PKIKP	PKPdf	01 50 41.5	-0.2
FINES	FINESS Array B	121.95	338	PKP	PKPdf	01 50 41.5	-0.2
FINES	FINESS Array B	121.95	338	PKIKP	PKPdf	01 50 41.5	-0.2
FINES	FINESS Array B	121.95	338	PKP	PKPdf	01 50 41.5	-0.2
	comp=Z,6.4nm,0.9s,baz=342,slow=0.4,SNR=4.8						
CPUP	Villa Florida	123.95	133	*e*PKPdf	PKiKP	01 50 47.0	0.0
CPUP	Villa Florida	123.95	133	*e*PKIKP	PKiKP	01 50 47.0	0.0
CPUP	Villa Florida	123.95	133	PKP	PKiKP	01 50 46.9	0.0
	comp=Z,5.3nm,0.9s,baz=233,slow=2.5,SNR=4.0						
SDV	Santo Domingo	124.63	87	*e*PKPdf	PKPdf	01 50 47.8	-0.7
SDV	Santo Domingo	124.63	87	PKP	PKPdf	01 50 47.8	-0.7
	comp=Z,15nm,1.0s,baz=284,slow=1.8,SNR=5.7						
BOSA	Boshof	124.86	223	*e*PKPdf	PKiKP	01 50 49.5	+0.7
BOSA	Boshof	124.86	223	*e*PKIKP	PKiKP	01 50 49.5	+0.7
BOSA	Boshof	124.86	223	PKP	PKiKP	01 50 49.5	+0.7
	comp=Z,4.2nm,0.9s,baz=171,slow=2.8,SNR=3.2						
SIV	San Ignacio	126.43	120	*e*PKPdf	PKPdf	01 50 51.7	0.0
SIV	San Ignacio	126.43	120	PKP	PKPdf	01 50 51.7	0.0
	comp=Z,4.3nm,0.9s,baz=357,slow=5.1,SNR=3.0						
NB2	NORSAR Subarra	126.90	345	PKPdf	PKPdf	01 50 51.5	+0.2
	comp=Z,0.4nm,0.6s,baz=31,slow=1.9						
NB200	NORSAR Array S	126.90	345	*e*PKPdf	PKiKP	01 50 51.9	+0.1
NOA	NORSAR Array B	126.90	345	PKP	PKiKP	01 50 51.9	+0.1
NOA	NORSAR Array B	126.90	345	PKIKP	PKiKP	01 50 51.9	+0.1
NOA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NOA	NORSAR Array B	126.90	345	PKP	PKiKP	01 50 51.9	+0.1
	comp=Z,2.9nm,1.0s,baz=34,slow=1.9,SNR=4.3						
AKASG	Malin Array Be	127.00	327	PKP	PKPdf	01 50 51.6	-0.1
AKASG	Malin Array Be	127.00	327	PKIKP	PKPdf	01 50 51.6	-0.1
AKASG	Malin Array Be	127.00	327	PKP	PKPdf	01 50 51.6	-0.1
	comp=Z,4.0nm,1.0s,baz=60,slow=2.1,SNR=4.5						
AKBB	Malin Array Si	127.00	327	*e*PKPdf	PKPdf	01 50 51.6	-0.1
AKBB	Malin Array Si	127.00	327	*e*PKIKP	PKPdf	01 50 51.6	-0.1
AK11	Malin Array Si	127.04	327	*e*PKPdf	PKiKP	01 50 52.2	-0.1
MATP	Matopo	127.35	233	*e*PKPdf	PKPdf	01 50 53.7	+0.2
MATP	Matopo	127.35	233	PKP	PKPdf	01 50 53.7	+0.2
	comp=Z,4.3nm,0.9s,baz=132,slow=3.8,SNR=2.8						
ASF	Jabal al Asfar	128.57	302	*e*PKPdf	PKPdf	01 50 55.6	+0.2
ASF	Jabal al Asfar	128.57	302	*e*PKIKP	PKPdf	01 50 55.6	+0.2
ASF	Jabal al Asfar	128.57	302	PKP	PKPdf	01 50 55.6	+0.2
	comp=Z,3.4nm,0.9s,baz=66,slow=12,SNR=2.7						
BR101	Keskin Array S	129.04	312	*e*PKPdf	PKPdf	01 50 55.9	-0.3
BRTR	Keskin Array B	129.04	312	PKP	PKPdf	01 50 55.9	-0.3
BRTR	Keskin Array B	129.04	312	PKIKP	PKPdf	01 50 55.9	-0.3
BRTR	Keskin Array B	129.04	312	PKP	PKPdf	01 50 55.9	-0.3
	comp=Z,3.0nm,0.9s,baz=159,slow=3.8,SNR=3.6						
SJG	San Juan	129.59	76	*e*PKPdf	PKPdf	01 50 57.9	+0.3
SJG				*e*PKPdf	PKiKP	01 50 58.1	-0.2
SJG	San Juan	129.59	76	*e*PKIKP	PKPdf	01 50 57.9	+0.3
SJG	San Juan	129.59	76	PKP	PKPdf	01 50 57.9	+0.3
	comp=Z,23nm,0.8s,baz=46,slow=3.6,SNR=6.2						
ANTO	Ankara	129.60	313	*e*PKPdf	PKiKP	01 51 00.4	+2.5
HUMP	Col San Antoni	129.88	76	*e*PKPdf	PKPdf	01 50 57.5	-0.6
PTGA	Pitinga	133.15	102	*e*PKPdf	PKPdf	01 51 03.8	-0.7
PTGA	Pitinga	133.15	102	PKP	PKPdf	01 51 03.8	-0.7
	comp=Z,4.7nm,0.6s,baz=24,slow=20,SNR=3.4						
DPC	Dobruska-Polom	133.60	333	*e*PKPDF	PKiKP	01 51 07.9	+2.3
BRG	Berggiesshubel	134.23	335	*i* PKP	PKiKP	01 51 08.5	+1.7
	comp=Z,12nm,1.2s						
BRG	Berggiesshubel	134.23	335	*i* PKIKP	PKiKP	01 51 08.5	+1.7
BRG				pmax	pmax		
	comp=Z,455nm,1.2s						
CLL	Collm	134.28	336	*e*PKPdf	PKPdf	01 51 06.0	+0.5
PRU	Pruhonice	134.65	334	*e*PKPDF	PKiKP	01 51 08.0	+0.4
PRU	Pruhonice	134.65	334	*e*PKIKP	PKiKP	01 51 08.0	+0.4
TREC	Trest	134.74	333	*e*PKPDF	PKiKP	01 51 07.8	-0.1
TREC	Trest	134.74	333	*e*PKIKP	PKiKP	01 51 07.8	-0.1
CONA	Conrad Observa	135.55	331	*i* pPKPdf	pPKPdf	01 51 16.1	+1.5
KHC	Kasperske Hory	135.70	334	*e*PKPDF	PKiKP	01 51 10.3	+0.4
KHC				*e*x	x	01 51 19.8	
KHC	Kasperske Hory	135.70	334	*e*PKIKP	PKiKP	01 51 10.3	+0.4
KHC				*e*		01 51 19.8	
GEC2	GERESS Array S	135.87	333	*e*PKPdf	PKPdf	01 51 08.4	-0.3
GEC2	GERESS Array S	135.87	333	*e*PKIKP	PKPdf	01 51 08.4	-0.3
GERES	GERESS Array B	135.87	333	PKP	PKPdf	01 51 08.4	-0.3
GERES	GERESS Array B	135.87	333	PKIKP	PKPdf	01 51 08.4	-0.3
GERES	GERESS Array B	135.87	333	PKP	PKPdf	01 51 08.4	-0.3
	comp=Z,5.3nm,1.0s,baz=135,slow=0.9,SNR=5.7						
BDFB	Brasilia	137.28	128	*e*PKPdf	PKiKP	01 51 13.2	-0.9
BDFB	Brasilia	137.28	128	*e*PKIKP	PKiKP	01 51 13.3	-0.9
BDFB	Brasilia	137.28	128	PKP	PKiKP	01 51 13.3	-0.9
	comp=Z,13nm,0.9s,baz=160,slow=9.6,SNR=3.1						
KEST	Kesra	147.53	322	*e*PKPbc	PKPab	01 51 33.9	-0.7
KEST	Kesra	147.53	322	PKPbc	PKPdf	01 51 31.1	+1.2
	comp=Z,34nm,0.9s,baz=346,slow=4.2,SNR=7.2						
ES19	SONSECA Array	150.21	344	*e*PKPbc	PKiKP	01 51 39.6	-0.3
ESDC	Sonseca Array	150.25	344	*e*PKPdf	PKPdf	01 51 35.1	+1.0
ESDC				*e*PKPbc	PKPbc	01 51 39.2	0.0
ESDC	Sonseca Array	150.25	344	PKP	PKPdf	01 51 35.1	+1.0
	comp=Z,4.6nm,0.9s,baz=352,slow=2.9,SNR=2.8						
ESDC				PKPbc	PKPbc	01 51 39.2	0.0
	comp=Z,7.4nm,1.0s,baz=1.0,slow=4.8,SNR=4.6						
RCBR	Riachuelo	152.65	127	*e*PKPbc	PKiKP	01 51 46.6	+0.9
RCBR	Riachuelo	152.65	127	*e*PKIKP	PKiKP	01 51 46.6	+0.9

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*ISCJB **06** 01:32:44.7±0.2, 11.°09S±0.°05×165.°76E±0.°06, $h10^{km}$, mb5.0/28, Error ellipse: s-maj=8.2km s-min=6.9km az=34.3*

*IDC **06** 01:32:44.5±0.5, 11.°03S×165.°91E, $h0^{km}$, mb5.0/17, mb1 5.1/19, mb1mx4.8/47, mbtmp5.0/19, ML5.4/2, Error ellipse: s-maj=19.5km s-min=17.7km az=108.0*

*NEIC **06** 01:32:45.9±0.2, 11.°04S×165.°89E, $h10^{km}$, mb5.3/12, Error ellipse: s-maj=6.8km s-min=5.7km az=96.0*

ISC 06 01:32:45.8±0.4,**11.°04S**±0.°08×**165.°89E**±0.°09,**h10**^{km},**n88,**
σ**1§29**/92,**mb5.1**/28,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.06	285	Pn	Pn	01 34 16.6	+1.0
	238nm,0.3s,baz=233,slow=5.1,SNR=3.2						
DZM	Mont Dzumac	10.99	177	Pn	Pn	01 35 25.3	+2.1
	12nm,0.3s,baz=16,slow=15,SNR=4.7						
ARMA	Armidale	23.40	212	*e*P	P	01 37 56.0	+0.8
	56nm,1.2s						
MXZ	Matakaoa Point	28.68	159	*e*P	P	01 38 44.6	+1.7
	62nm,0.8s						
URZ	Urewera	28.91	162	*e*P	P	01 38 45.3	+0.3
	3.2nm,0.3s						
BKZ	Black Stump Fm	29.57	163	*e*P	P	01 38 51.2	+0.3
	38nm,0.7s						
BFZ	Birch Farm	30.91	165	*e*P	P	01 39 02.5	-0.2
WR1	Warramunga Arr	31.62	250	*e*PcP	PcP	01 42 02.7	+1.0
WRA	Warramunga Arr	31.62	250	PcP	PcP	01 42 02.7	+1.0
	4.6nm,0.6s,baz=84,slow=2.6,SNR=3.0						
LTZ	Lake Taylor	32.11	171	*e*P	P	01 39 11.4	-1.9
	14nm,0.7s						
TOO	Toolangi	32.16	211	*e*P	P	01 39 13.6	-0.2
RPZ	Rata Peaks	32.87	173	*e*P	P	01 39 20.5	+0.6
RPZ	Rata Peaks	32.87	173	P	P	01 39 21.0	+1.1
	56nm,0.7s,baz=332,slow=3.6,SNR=7.3						
AS31	Alice Springs	32.92	243	*e*P	P	01 39 19.9	-0.8
	8.8nm,0.9s						
AS31				*e*PcP	PcP	01 42 06.2	+1.0
ASAR	Alice Springs	32.92	243	P	P	01 39 19.9	-0.8
	12nm,0.7s,baz=62,slow=10,SNR=2.7						
ASAR				PcP	PcP	01 42 06.2	+1.0
	4.2nm,0.6s,baz=71,slow=3.3,SNR=2.8						
BBOO	Buckleboo	34.94	227	*e*P	P	01 39 36.5	-1.6
	151nm,1.4s						
FITZ	Fitzroy Crossi	39.52	255	P	P	01 40 17.2	0.0
	27nm,0.6s,baz=75,slow=8.5,SNR=6.5						
BATI	Baumata	41.49	267	P	P	01 40 33.8	+0.2
	28nm,0.5s,baz=153,slow=4.5,SNR=2.3						
MBWA	Marble Bar	45.34	251	*e*P	P	01 41 04.0	-0.5
PUH	Pauahi	48.80	52	*e*P	P	01 41 31.0	-0.7
	38nm,0.7s						
NWAO	Narrogin (SRO)	49.59	236	P	P	01 41 37.4	0.0
	15nm,0.7s,baz=326,slow=15,SNR=4.8						
JAGI	Jajag, Banyuwa	51.01	268	*e*P	P	01 41 47.6	-0.9
	155nm,1.4s						
MJAR	Matsushiro Arr	54.03	332	P	P	01 42 10.6	+0.1
	5.4nm,0.7s,baz=170,slow=8.8,SNR=4.1						
MAJO	Matsushiro	54.03	332	*e*P	P	01 42 10.6	+0.1
UGM	Wanagama	54.64	268	*e*P	P	01 42 14.8	-0.6
	254nm,1.3s						
ASAJ	Asahikawa	58.83	341	P	P	01 42 45.3	+0.8
	13nm,0.8s,baz=199,slow=8.9,SNR=2.9						
USRK	Ussuriysk Ar.	63.00	333	P	P	01 43 13.9	+1.0
	8.4nm,0.8s,baz=114,slow=5.9,SNR=4.3						
PETK	Petropavlovsk-	64.27	355	P	P	01 43 22.0	+0.9
	6.3nm,0.8s,baz=147,slow=7.7,SNR=2.7						
PEA1	Petropavlovsk-	64.28	355	*e*P	P	01 43 22.0	+0.9
CM31	Chiang Mai Arr	72.24	293	*e*P	P	01 44 12.7	+0.8
	24nm,1.1s						
CMAR	Chiang Mai Arr	72.24	293	P	P	01 44 12.7	+0.8
	6.3nm,0.7s,baz=128,slow=5.6,SNR=3.6						
BRDH	Bariadhala	80.02	296	P	P	01 44 55.5	-0.5
	17nm,0.5s,baz=254,slow=20,SNR=2.0						
O02D	Mt. Diablo Mer	83.18	47	P	P	01 45 14.4	+1.9
	baz=249						
HDA	Harding Lake	83.19	19	P	P	01 45 12.9	+1.0
	baz=226						
TCOL	CIGO, UAF Yank	83.23	18	P	P	01 45 12.7	+0.6
	baz=226						
CRAG	Craig	83.41	30	*e*P	P	01 45 10.8	-2.4
ILAR	Eielson Array	83.46	18	P	P	01 45 14.1	+0.8
	10nm,0.7s,baz=250,slow=5.1,SNR=5.3						
ILB	Eielson Array	83.46	18	*e*P	P	01 45 14.1	+0.8
	18nm,1.0s						
K02D	Willamette Mer	83.47	44	P	P	01 45 15.4	+1.5
	baz=249						
N02D	Trinity Center	83.52	46	P	P	01 45 16.1	+1.8
	baz=249						
POKR	Poker Plat Res	83.53	18	P	P	01 45 14.1	+0.4
	baz=226						
M02C	Callahan	83.56	46	P	P	01 45 16.3	+1.8
	baz=249						
J05D	Fort Rock, OR	85.34	44	P	P	01 45 25.1	+1.6
	baz=250						
CWC	Cottonwood Cre	85.49	52	P	P	01 45 25.5	+1.0
	baz=253						
TIN	Tinemaha, Big	85.55	51	P	P	01 45 26.1	+1.4
	baz=253						
NV01	Mina Array Sit	85.91	50	*e*P	P	01 45 27.7	+1.1
NVAR	Mina Array Bea	85.91	50	P	P	01 45 27.7	+1.1
	5.4nm,0.8s,baz=243,slow=8.0,SNR=3.1						
BELC	Belle Mtn. Jos	86.44	55	P	P	01 45 30.3	+1.1
	baz=254						
GMRC	Granite Mounta	86.92	54	P	P	01 45 32.5	+1.0
	baz=254						
TPNV	Topopah Spring	87.04	52	P	P	01 45 33.0	+0.8
	baz=254						
GLA	Glamis	87.13	56	P	P	01 45 33.7	+1.2
	baz=255						
Y12C	Blythe	87.55	55	P	P	01 45 35.9	+1.5
	baz=255						
PDMCI	Parker Dam,Lak	88.00	55	P	P	01 45 38.3	+1.7
	baz=255						
214A	Organ Pipe Nat	88.50	57	P	P	01 45 40.6	+1.6
	baz=256						

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TUC   Tucson             90.26  57  P        P        01 45 49.2 +1.9
      baz=257
MK32  Makanchi Array     93.61 317  eP       P        01 46 02.5  0.0
MKAR  Makanchi Array     93.61 317  P        P        01 46 02.5  0.0
      5.8nm,0.8s,baz=86,slow=4.6,SNR=3.4
MKAR                                PKKPbc   PKKPdf   02 03 07.4 -1.2
      5.0nm,0.6s,baz=256,slow=4.7,SNR=5.9
ZALV  Zalesovo Beam      93.63 324  PKKPbc   PKKPbc   02 03 07.0 -2.6
      0.8nm,0.4s,baz=280,slow=3.1,SNR=5.1
YKA   Yellowknife Ar     94.90  27  P        P        01 46 07.1 -0.8
      1.9nm,0.7s,baz=255,slow=4.8,SNR=4.9
YKB5  Yellowknife Ar     94.90  27  eP       P        01 46 07.1 -0.8
LTX   Lajitas            95.70  61  eP       P        01 46 12.7 +0.2
TXAR  Lajitas Array      95.70  61  P        P        01 46 12.7 +0.2
      1.0nm,0.6s,baz=276,slow=2.5,SNR=4.4
TXAR                                PKKPbc   PKKPdf   02 03 04.0 -0.3
      0.4nm,0.7s,baz=103,slow=4.2,SNR=4.8
KURK  Kurchatov          96.72 320  eP       P        01 46 16.8 +0.2
KURBB Kurchatov Arra     96.77 320  P        P        01 46 16.8 +0.1
      1.7nm,0.9s,baz=86,slow=3.2,SNR=2.8
KURBB                               PKKPbc   PKKPdf   02 03 00.8 -2.1
      1.6nm,0.9s,baz=274,slow=3.0,SNR=4.8
ARA0  ARCESS Array S    116.36 346  ePKPdf   PKPdf    01 51 29.0 -0.2
ARCES ARCESS Array B    116.36 346  PKP      PKPdf    01 51 29.0 -0.2
      3.5nm,0.6s,baz=76,slow=2.0,SNR=7.5
LPAZ  La Paz            120.06 116  PKP      PKiKP    01 51 38.5 -0.2
      2.8nm,0.7s,baz=280,slow=2.0,SNR=3.6
FIA0  FINESS Array S    121.81 339  ePKPdf   PKiKP    01 51 39.2 -0.8
FINES FINESS Array B    121.81 339  PKP      PKiKP    01 51 39.2 -0.8
      1.9nm,0.7s,baz=44,slow=3.3,SNR=4.9
CPUP  Villa Florida     123.93 132  PKP      PKiKP    01 51 44.6 -0.7
      4.8nm,0.7s,baz=327,slow=2.1,SNR=7.0
SDV   Santo Domingo     124.35  87  PKP      PKiKP    01 51 45.6 -1.2
      9.2nm,0.6s,baz=287,slow=11,SNR=3.8
BOSA  Boshof            125.22 223  PKP      PKiKP    01 51 48.3 +0.3
      5.7nm,0.6s,baz=157,slow=2.0,SNR=9.3
SIV   San Ignacio       126.32 119  PKP      PKiKP    01 51 49.2 -1.2
      2.3nm,0.6s,baz=292,slow=5.4,SNR=4.1
NB2   NORSAR Subarra126.73 345      PKPdf    PKiKP    01 51 49.5 -0.5
      comp=Z,0.6nm,0.6s,baz=31,slow=1.9
NB200 NORSAR Array S    126.73 345  ePKPdf   PKiKP    01 51 49.4 -0.5
NOA   NORSAR Array B    126.73 345  PKP      PKiKP    01 51 49.4 -0.5
      comp=Z,1.3nm,0.6s,baz=32,slow=2.0,SNR=4.4
LBTB  Lobatse           127.25 227  PKP      PKiKP    01 51 52.4 +0.2
      comp=Z,4.2nm,0.7s,baz=144,slow=6.1,SNR=5.1
MATP  Matopo            127.71 233  PKP      PKiKP    01 51 53.1 -0.1
      comp=Z,10nm,1.1s,baz=90,slow=7.0,SNR=2.4
SJG   San Juan          129.28  76  PKP      PKiKP    01 51 54.5 -1.6
      comp=Z,16nm,0.8s,baz=54,slow=8.7,SNR=2.1
TRPA  Tarpa             131.98 327  ePS      PKPdf    01 52 03.1 +3.4
PTGA  Pitinga           132.94 101  PKP      PKiKP    01 52 02.6 -1.2
      comp=Z,3.7nm,0.6s,baz=311,slow=19,SNR=3.6
PSZ   Piszkesteto       133.49 329  ePS      PKPdf    01 52 09.1 +6.4
GEC2  GERESS Array S    135.76 334  ePKPdf   PKiKP    01 52 07.5 -1.0
GERES GERESS Array B    135.76 334  PKP      PKiKP    01 52 07.5 -1.0
      comp=Z,1.2nm,0.6s,baz=62,slow=2.7,SNR=2.6
KEST  Kesra             147.49 323  PKPbc    PKPab    01 52 31.4 -1.4
      comp=Z,15nm,0.7s,baz=340,slow=7.2,SNR=2.5
ESDC  Sonseca Array     150.09 344  PKPbc    PKiKP    01 52 37.9 -0.3
      comp=Z,2.0nm,0.6s,baz=5.1,slow=3.8,SNR=4.4
TORD  Torodi Ar. Bea    164.40 279  PKP      PKPdf    01 52 50.2 -0.6
      comp=Z,3.1nm,0.8s,baz=120,slow=1.1,SNR=5.6
TOA1  Torodi Ar. Sit    164.41 279  ePKPdf   PKPdf    01 52 50.2 -0.6
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*IDC **06** 01:33:35.4±0.4, 10°.94S×165°.26E, h0km, mb5.1/32, mb1 5.2/34, mb1mx5.1/50, mbtmp5.1/34, ML5.5/2, Error ellipse: s-maj=15.7km s-min=12.7km az=85.0*

*BJI **06** 01:33:36.2, 10°.69S×165°.16E, h6km, mB5.4/3, mb5.3/26, Ms5.7/3, Ms7 5.5/3*

*NEIC **06** 01:33:37.2±1.9, 10°.98S×165°.21E, h10km±2km, mb5.6/63, Error ellipse: s-maj=14.7km s-min=13.4km az=56.0*

*ISCJB **06** 01:33:38.4±0.1, 11°.02S±0°.03×165°.10E±0°.03, h30km, mb5.4/100, Error ellipse: s-maj=5.1km s-min=4.3km az=41.7*

*MOS **06** 01:33:39.0±0.9, 10°.88S×165°.05E, h33km, mb5.4/30, Error ellipse: s-maj=12.8km s-min=9.8km az=80.8*

ISC 06 01:33:40.0±0.3, **11°.00S**±0°.06×**165°.28E**±0°.06, **h30**km, **n283**, σ**1s10**/289, **mb5.4**/99, **2C-1D, Santa Cruz Islands**

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Code  Station Name        Δ°   AZ°  Phase ID          Time       Res
                                    Op       ISC      h  m  s    ISC
HNR   Honiara             5.47 286  Pn       Pn       01 34 59.8 +0.3
      124nm,0.3s,baz=330,slow=20,SNR=2.8
HNR                                 Sn       Sn       01 36 04.2 +2.7
      66nm,0.3s,baz=204,slow=20,SNR=1.9
MARNC Mare, Loyalty      10.75 166  ePn      Pn       01 36 13.9 +2.0
DZM   Mont Dzumac        11.06 174  Pn       Pn       01 36 15.6 -0.8
      39nm,0.3s,baz=67,slow=13,SNR=5.2
ONTNC Ouen Toro          11.30 174  ePn      Pn       01 36 19.0 -0.5
PINNC Pines Island,      11.73 170  ePn      Pn       01 36 26.6 +1.2
EIDS  Eidsvold           19.62 221  eP       P        01 38 06.8 +0.7
      54nm,0.8s
MANU  Manus Island       19.88 295  eP       P        01 38 06.5 -2.6
      669nm,1.0s
CTAO  Charters Tower     20.41 241  eP       P        01 38 15.2 +0.4
CTAO  Charters Tower     20.41 241  eP       P        01 38 15.3 +0.4
LHI   Lord Howe Isla     21.21 195  eP       P        01 38 22.1 -1.2
      336nm,1.2s
ARMA  Armidale           23.11 211  eP       P        01 38 41.8 -1.9
OUZ   Omahuta            25.27 164  eP       P        01 39 04.2 +0.6
      307nm,1.3s
URZ   Urewera            29.14 161  eP       P        01 39 38.8 +0.4
      318nm,1.2s
URZ   Urewera            29.14 161  P        P        01 39 38.5 +0.1
      98nm,1.0s,baz=13,slow=5.4,SNR=4.8
WB2   Warramunga Arr     31.05 250  ePcP     PcP      01 42 51.6 +0.6
WR1   Warramunga Arr     31.07 250  eP       P        01 39 55.1 -0.6
WRA   Warramunga Arr     31.07 250  P        P        01 39 55.1 -0.6
WRA                                 pmax     pmax
      comp=Z,27nm,1.0s
WRA   Warramunga Arr     31.07 250  P        P        01 39 55.1 -0.6
      comp=Z,27nm,1.0s,baz=79,slow=9.1,SNR=0.1
BFZ   Birch Farm         31.11 164  eP       P        01 39 54.0 -1.8
      comp=Z,279nm,1.3s
TOO   Toolangi           31.87 211  eP       P        01 40 02.9 +0.3
TOO   Toolangi           31.87 211  eP       P        01 40 02.9 +0.3
KHZ   Kahutara           32.12 168  eP       P        01 40 08.9 +4.3
      comp=Z,149nm,1.2s
LTZ   Lake Taylor        32.24 170  eP       P        01 40 05.9 +0.1
      comp=Z,57nm,0.8s
AS01  Alice Springs      32.36 243  eP       P        01 40 05.7 -1.4
AS31  Alice Springs      32.40 243  eP       P        01 40 06.2 -1.2
      comp=Z,23nm,0.7s
ASAR  Alice Springs      32.40 243  P        P        01 40 05.8 -1.7
ASAR                                pmax     pmax
      comp=Z,64nm,0.7s
ASAR  Alice Springs      32.40 243  P        P        01 40 05.8 -1.7
      comp=Z,64nm,0.7s,baz=68,slow=9.5,SNR=18
RPZ   Rata Peaks         32.98 172  P        P        01 40 12.9 +0.7
      comp=Z,26nm,0.7s,baz=9.5,slow=12,SNR=1.9
BBOO  Buckleboo          34.52 226  eP       P        01 40 24.7 -1.1
FITZ  Fitzroy Crossi     38.95 255  eP       P        01 41 03.9 +0.2
      comp=Z,132nm,1.5s
FITZ  Fitzroy Crossi     38.95 255  P        P        01 41 03.9 +0.2
      comp=Z,16nm,0.8s,baz=144,slow=19,SNR=2.6
BATI  Baumata            40.89 267  P        P        01 41 19.4 -0.4
      comp=Z,44nm,0.7s,baz=41,slow=20,SNR=2.9
NWAO  Narrogin (SRO)     49.10 236  P        P        01 42 24.5 -0.5
NWAO                                pmax     pmax
      comp=Z,26nm,0.8s
NWAO  Narrogin (SRO)     49.10 236  P        P        01 42 24.4 -0.5
      comp=Z,29nm,0.9s,baz=303,slow=5.0,SNR=3.7
HMH   Humu‘ula Sheep     49.18  52  eP       P        01 42 25.1 -0.9
      comp=Z,177nm,0.8s
MLH   Mauna Loa          49.19  52  eP       P        01 42 23.8 -2.3
      comp=Z,109nm,1.0s
MLH   Mauna Loa          49.19  52  eP       P        01 42 23.8 -2.3
MLH                                 pmax     pmax
      comp=Z,109nm,1.0s
WRMHI West Rim           49.21  52  eP       P        01 42 25.5 -0.6
      comp=Z,131nm,0.9s
POHA  Pohakuloa          49.23  52  eP       P        01 42 24.4 -2.0
      comp=Z,162nm,0.8s
KKO   Keanakako`i        49.23  52  eP       P        01 42 26.4 +0.1
      comp=Z,116nm,0.9s
MORW  Morawa             49.24 241  eP       P        01 42 23.9 -2.2
      comp=Z,109nm,0.9s
INU   Inuyama            53.29 331  eP       P        01 42 55.5 -0.7
      comp=Z,97nm,1.5s
MJAR  Matsushiro Arr     53.72 333  P        P        01 42 58.2 -1.2
      comp=Z,26nm,0.8s,baz=169,slow=8.8,SNR=15
MAJO  Matsushiro         53.72 333  eP       P        01 42 58.2 -1.2
MAJO  Matsushiro         53.72 333  i P      P        01 42 57.1 -2.3
MAJO                                pmax     pmax
      comp=Z,35nm,0.9s
MAT   Matsushiro         53.72 333  P        P        01 42 57.5 -1.9
MJB9  Matsu-Tunnel       53.73 333  eP       P        01 42 56.7 -2.7
      comp=Z,42nm,0.9s
JNU   Nakatsue           54.78 325  eP       P        01 43 06.3 -0.9
      comp=Z,90nm,0.9s
JNU   Nakatsue           54.78 325  P        P        01 43 05.8 -1.3
      comp=Z,70nm,0.8s,baz=102,slow=2.5,SNR=9.6
YULB  Yu-li              54.95 309  eP       P        01 43 07.4 -1.1
      comp=Z,30nm,1.0s
XMIS  Christmas Isla     58.49 264  eP       P        01 43 31.6 -2.4
      comp=Z,86nm,1.4s
ASAJ  Asahikawa          58.60 341  P        P        01 43 33.7 -0.4
ASAJ                                pmax     pmax
      comp=Z,60nm,0.9s
ASAJ  Asahikawa          58.60 341  P        P        01 43 33.7 -0.4
      comp=Z,60nm,0.9s,baz=223,slow=14,SNR=8.5
KSRS  Korea Array        59.58 326  P        P        01 43 40.5 -0.5
KSRS                                pmax     pmax
      comp=Z,11nm,0.9s
KSRS  Korea Array        59.58 326  P        P        01 43 40.5 -0.5
      comp=Z,11nm,0.8s,baz=140,slow=7.1,SNR=6.9
KS15  Wonju Array Si     59.59 326  eP       P        01 43 40.5 -0.6
      comp=Z,31nm,1.1s
YSS   Yuzh-Sakhalins     61.11 343⇓eP       P        01 43 50.0 -1.2
YSS                                 e                 01 43 58.1
YSS                                 pmax     pmax
      comp=Z,400nm,1.0s
YSS                                 pmax     pmax
      comp=N,160nm,1.4s
YSS                                 pmax     pmax
      comp=E,240nm,1.4s
YSS                                 MLR      MLR
      comp=Z,43µm,17.0s
NJ2   Nanjing            61.67 316  eP       P        01 43 53.7 -1.6
NJ2                                 pmax     pmax
      comp=Z,170nm,1.3s
MSHR  Mys Shultsa        61.80 332  i P      P        01 43 55.3 -0.7
VLA   Vladivostok        61.89 333  i P      P        01 43 56.4 -0.2
VLA                                 pmax     pmax
      comp=Z,39nm,1.4s
USRK  Ussuriysk Ar.      62.70 334  P        P        01 44 02.0 -0.1
      comp=Z,26nm,0.9s,baz=132,slow=6.4,SNR=9.2
MDJ   Mudanjiang         64.10 332  P        P        01 44 12.1 +0.8
MDJ                                 S        S        01 52 45.6 -0.5
MDJ                                 pmax     pmax
      comp=Z,31nm,0.9s
DL2   Dalian             64.17 323  P        P        01 44 11.2 -0.6
DL2                                 pmax     pmax
      comp=Z,15nm,0.6s
PETK  Petropavlovsk-     64.18 355  P        P        01 44 11.0 -0.6
PETK                                pmax     pmax
      comp=Z,8.0nm,0.8s
PETK  Petropavlovsk-     64.18 355  P        P        01 44 11.0 -0.6
      comp=Z,7.8nm,0.8s,baz=158,slow=8.8,SNR=3.4
PEA1  Petropavlovsk-     64.19 355  eP       P        01 44 11.0 -0.7
CN2   Changchun          65.47 329  eP       P        01 44 20.8 +0.6
CN2                                 pmax     pmax
      comp=Z,50nm,1.0s
VNDA  Vanda              66.53 181  eP       P        01 44 27.2 +0.6
VNDA  Vanda              66.53 181  P        P        01 44 27.2 +0.6
      comp=Z,21nm,1.1s,baz=345,slow=7.5,SNR=5.9
KLR   Kul'dur            66.83 337  i P      P        01 44 29.2 +0.3
GYA   Guiyang            68.01 304⇑iP       P        01 44 38.6 +1.6
GYA                                 PP       PP       01 47 09.2 +1.8
GYA                                 S        S        01 53 35.0 +0.3
GYA                                 SKS      SKSac    01 54 32.6 -1.2
GYA                                 SS       SS       01 57 58.9 +1.3
GYA                                 pmax     pmax
      comp=Z,60nm,1.1s
GYA                                 pmax     pmax
      comp=Z,180nm,7.8s
GYA                                 LR       LR
      comp=Z,810nm,18.6s
GYA                                 LR       LR
      comp=Z,760nm,18.3s
GYA                                 LR       LR
      comp=Z,790nm,19.0s
KMI   Kunming            70.71 302  P        P        01 44 54.6 +0.8
MA2   Magadan            71.30 352  i P      P        01 44 55.7 -0.7
MA2                                 pmax     pmax
      comp=Z,9.0nm,0.9s
MA2   Magadan            71.30 352  P        P        01 44 55.1 -1.3
      comp=Z,4.2nm,0.3s,baz=146,slow=11,SNR=2.9
HHC   Hu-ho-hao-te       71.50 320  eP       P        01 44 59.1 +0.9
CM31  Chiang Mai Arr     71.67 294  eP       P        01 45 01.2 +1.7
      comp=Z,24nm,1.0s
CMAR  Chiang Mai Arr     71.67 294  P        P        01 45 01.2 +1.7
CMAR                                pmax     pmax
      comp=Z,3.0nm,0.6s
CMAR  Chiang Mai Arr     71.67 294  P        P        01 45 01.2 +1.7
      comp=Z,2.3nm,0.7s,baz=133,slow=5.0,SNR=2.5
HIA   Hailar             72.11 331  i P      P        01 45 02.3 +0.8
HIA                                 pmax     pmax
      comp=Z,25nm,1.1s
CD2   Chengdu            72.21 307  eP       P        01 45 02.5 -0.1
SEY   Seymchan           74.38 354  i P      P        01 45 15.1 +0.5
SEY   Seymchan           74.38 354  P        P        01 45 14.5  0.0
      comp=Z,7.5nm,0.8s,baz=166,slow=12,SNR=2.4
LZH   Lanzhou            74.39 312  eP       P        01 45 16.4 +1.0
LZH                                 pP       pP       01 45 20.2 -3.6
LZH                                 sP       sP       01 45 22.8 -4.1
LZH                                 pmax     pmax
      comp=Z,40nm,1.4s
LZH                                 pmax     pmax
      comp=Z,280nm,6.0s
LZH                                 LR       LR
      comp=Z,1µm,16.5s
LZH                                 LR       LR
      comp=Z,2µm,16.9s
LZH                                 LR       LR
      comp=Z,3µm,19.3s
GAMB  Gambell            76.61  10  eP       P        01 45 28.3 +1.0
      comp=Z,78nm,1.1s
KDAK  Kodiak Island      76.71  22  eP       P        01 45 27.9 -0.1
      comp=Z,42nm,1.0s
KDAK  Kodiak Island      76.71  22  i P      P        01 45 28.4 +0.4
KDAK  Kodiak Island      76.71  22  P        P        01 45 27.9 -0.1
      comp=Z,32nm,1.0s,baz=267,slow=6.7,SNR=6.3
ULN   Ulaanbaatar        78.00 324  i P      P        01 45 34.9 -0.8
ULN                                 pmax     pmax
      comp=Z,20nm,0.9s
SONA0 Songino Array      78.36 324  eP       P        01 45 37.7  0.0
SONA0                               ePP      PP       01 48 39.6 +4.3
SONM  Songino Array      78.36 324  P        P        01 45 37.7  0.0
SONM                                                  01 48 39.6
SONM                                pmax     pmax
      comp=Z,7.0nm,0.7s
SONM                                pmax     pmax
      comp=Z,11nm,0.9s
SONM  Songino Array      78.36 324  P        P        01 45 37.7  0.0
      comp=Z,6.5nm,0.7s,baz=146,slow=7.8,SNR=3.8
SONM                                PP       PP       01 48 39.6 +4.3
      comp=Z,10nm,0.9s,baz=147,slow=6.1,SNR=6.4
RSO   Redoubt South      78.64  20  eP       P        01 45 41.9 +2.9
GTA   Gaotai             78.70 314  eP       P        01 45 41.6 +1.9
GTA                                 pP       pP       01 45 46.2 -1.9
GTA                                 sP       PcP      01 45 48.7 +0.1
GTA                                 pmax     pmax
      comp=Z,22nm,1.5s
BRLK  Bradley Lake       78.76  21  eP       P        01 45 39.8 +0.3
      comp=Z,34nm,0.9s
BILL  Bilibino           78.84   0  i P      P        01 45 38.9 -0.8
BILL                                pmax     pmax
      comp=Z,41nm,0.9s
TLY   Talaya             81.83 326  i P      P        01 45 54.8 -1.4
TLY   Talaya             81.83 326  P        P        01 45 57.5 +1.3
      comp=Z,2.5nm,0.7s,baz=241,slow=3.6,SNR=3.8
IM3   Indian Mountai     82.51  16  eP       P        01 45 59.7 +0.3
KCPM  Cahto Peak         82.86  47  eP       P        01 46 03.3 +1.3
      comp=Z,56nm,0.9s
KMRM  Mail Ridge         82.96  47  eP       P        01 46 04.0 +1.6
      comp=Z,50nm,0.8s
HOPS  Hopland Field      82.99  48  eP       P        01 46 03.2 +0.7
      comp=Z,36nm,0.9s
GDXM  Geysers            83.13  48  eP       P        01 46 04.1 +0.8
      comp=Z,33nm,0.9s
HDA   Harding Lake       83.35  19  P        P        01 46 04.0 +0.2
      baz=227
TCOL  CIGO, UAF Yank     83.39  18  P        P        01 46 03.5 -0.5
      baz=226
COLA  College            83.39  18  eP       P        01 46 05.1 +1.1
      comp=Z,44nm,0.4s
COLA  College            83.39  18  i P      P        01 46 01.8 -2.1
COLA                                pmax     pmax
      comp=Z,28nm,0.9s
SAO   San Andreas Ge     83.46  51  eP       P        01 46 05.7 +0.7
SAO   San Andreas Ge     83.46  51  eP       P        01 46 05.7 +0.7
O02D  Mt. Diablo Mer     83.60  47  P        P        01 46 06.6 +0.9
      baz=250,SNR=9.0
ILAR  Eielson Array      83.62  19  P        P        01 46 04.1 -1.1
ILAR                                pmax     pmax
      comp=Z,17nm,0.7s
ILAR  Eielson Array      83.62  19  P        P        01 46 04.1 -1.1
      comp=Z,17nm,0.7s,baz=233,slow=5.0,SNR=8.5
ILB   Eielson Array      83.62  19  eP       P        01 46 05.3 +0.2
      comp=Z,26nm,0.8s
IL1   Eielson Array      83.62  19  eP       P        01 46 05.0 -0.1
POKR  Poker Plat Res     83.69  18  P        P        01 46 04.9 -0.6
      baz=227
L02E  Cave Junction      83.72  45  P        P        01 46 06.3 +0.1
      baz=249
J01E  Myrtle Point       83.85  44  P        P        01 46 07.4 +0.6
      baz=249
K02D  Willamette Mer     83.86  45  P        P        01 46 07.7 +0.7
      baz=249,SNR=5.8
SNCC  San Nicolas Is     83.87  55  P        P        01 46 07.7 +0.5
      baz=253
N02D  Trinity Center     83.94  46  P        P        01 46 08.2 +0.8
      baz=250
M02C  Callahan           83.97  46  P        P        01 46 08.4 +0.8
      baz=250,SNR=6.0
SMMC  Simmler            84.12  52  P        P        01 46 09.2 +0.7
      baz=252
PKM   Mcpherson Peak     84.14  53  P        P        01 46 09.2 +0.5
      baz=252
HUMO  Hull Mountain      84.32  45  eP       P        01 46 10.7 +1.4
      comp=Z,37nm,0.9s
O03E  Paynes Creek       84.35  47  P        P        01 46 09.8 +0.3
      baz=251,SNR=5.5
I03D  Drain, OR          84.44  44  P        P        01 46 10.4 +0.6
      baz=249
AFDM  Forest Hills D     84.52  49  eP       P        01 46 10.8 +0.4
      comp=Z,39nm,0.9s
SCI2  San Clemente I     84.58  55  P        P        01 46 10.9 +0.1
      baz=253
L04D  Klamath Falls      84.64  45  P        P        01 46 11.5 +0.4
      baz=250
M04C  Macdoel            84.82  46  P        P        01 46 12.5 +0.5
      baz=250,SNR=7.1
VOG   Valley Oaks Go     84.90  52  P        P        01 46 13.0 +0.6
      baz=252
ARVC  Arvin              84.98  53  P        P        01 46 13.2 +0.5
      baz=253
VES   Vestal, Richgr     84.99  52  P        P        01 46 13.2 +0.4
      baz=253
FMP   Fort Macarthur     84.99  54  P        P        01 46 13.4 +0.6
      baz=253
G03D  McMinnville, O     85.03  42  P        P        01 46 13.3 +0.6
      baz=249
I04A  Tendick Farm,      85.11  44  P        P        01 46 13.6 +0.3
      baz=250
J04D  Umpqua Nationa     85.13  44  P        P        01 46 13.8 +0.2
      baz=250,SNR=6.5
K04D  Chiloquin, OR      85.16  45  P        P        01 46 14.1 +0.4
      baz=250
MWC   Mount Wilson       85.33  54  eP       P        01 46 15.1 +0.3
      comp=Z,26nm,0.9s
MWC   Mount Wilson       85.33  54  eP       P        01 46 15.1 +0.3
MWC                                 pmax     pmax
      comp=Z,26nm,0.9s
ISA   Isabella, Lake     85.41  53  P        P        01 46 15.1 +0.1
      baz=253,SNR=6.4
WAKR  Walker             85.52  50  eP       P        01 46 16.9 +1.3
      comp=Z,42nm,1.1s
MDPB  Devils Postpil     85.53  50  eP       P        01 46 16.4 +0.6
      comp=Z,35nm,0.9s
EDW2  Edwards Air Fo     85.56  53  P        P        01 46 16.0 +0.3
      baz=253,SNR=14
OMMB  Old Mammoth Mi     85.58  51  eP       P        01 46 16.7 +0.6
      comp=Z,19nm,0.9s
BFSC  Mount Baldy Ra     85.65  54  P        P        01 46 16.2 -0.1
      baz=254,SNR=8.3
109C  Camp Elliot, M     85.72  55  P        P        01 46 16.7 +0.2
      baz=254
J05D  Fort Rock, OR      85.74  45  P        P        01 46 17.1 +0.5
      baz=251
MURC  Murrieta           85.84  55  P        P        01 46 17.3 +0.1
      baz=254
CWC   Cottonwood Cre     85.94  52  P        P        01 46 18.0 +0.3
      baz=253
TIXI  Tiksi              85.96 349  i P      P        01 46 15.9 -0.9
TIXI                                pmax     pmax
      comp=Z,13nm,1.2s
E04D  Cinebar            85.96  41  P        P        01 46 18.0 +0.7
      baz=250
D03D  Eldon              85.97  40  P        P        01 46 18.1 +0.7
      baz=249
LRMC  Laurel Mtn Rad     85.98  53  P        P        01 46 18.3 +0.4
      baz=254,SNR=6.5
TIN   Tinemaha, Big      86.00  51  P        P        01 46 18.3 +0.3
      baz=253,SNR=7.1
I05D  Terrebonne, OR     86.02  44  P        P        01 46 18.2 +0.4
      baz=251
PALK  Pallekele          86.09 278  eP       P        01 46 19.1 +0.3
      comp=Z,38nm,1.5s
PALK  Pallekele          86.09 278  eP       P        01 46 19.1 +0.3
PALK                                pmax     pmax
      comp=Z,38nm,1.5s
PALK  Pallekele          86.09 278  P        P        01 46 19.1 +0.3
      comp=Z,4.6nm,0.7s,baz=122,slow=2.9,SNR=2.0
MONP2 Monument Peak      86.27  56  P        P        01 46 20.0 +0.5
      baz=254,SNR=7.7
MPMC  Manual Prospec     86.29  52  P        P        01 46 19.8 +0.3
      baz=254,SNR=5.2
G05D  Wamic, OR          86.34  43  P        P        01 46 19.8 +0.5
      baz=251
NV01  Mina Array Sit     86.35  50  eP       P        01 46 19.8  0.0
NVAR  Mina Array Bea     86.35  50  P        P        01 46 20.1 +0.3
      comp=Z,28nm,0.9s,baz=233,slow=7.4,SNR=11
PFO   Pinyon Flats O     86.43  55  P        P        01 46 20.3 +0.1
      baz=254,SNR=6.7
F05D  White Salmon       86.46  42  P        P        01 46 20.6 +0.7
      baz=250
IKP   In-Ko-Pah, Jac     86.46  56  P        P        01 46 20.7 +0.4
      baz=255
GSC   Goldstone, Bar     86.62  53  P        P        01 46 21.2 +0.2
      baz=254
A04D  Lummi Island       86.64  39  P        P        01 46 21.4 +0.8
      baz=249
GRAC  Grapevine Rang     86.65  51  P        P        01 46 21.7 +0.6
      baz=254,SNR=5.4
KVN   Kaiserville        86.68  49  eP       P        01 46 21.9 +0.5
      comp=Z,22nm,0.9s
KVN   Kaiserville        86.68  49  eP       P        01 46 21.9 +0.5
KVN                                 pmax     pmax
      comp=Z,22nm,0.9s
SWSC  Sam W. Stewart     86.79  56  P        P        01 46 22.0 +0.3
      baz=255,SNR=8.1
B05A  Bryant             86.86  40  P        P        01 46 22.1 +0.3
      baz=250
HEC   Hector,Ludlow      86.86  54  P        P        01 46 22.3 +0.1
      baz=254,SNR=9.1
FURC  Furnace Creek,     86.89  52  P        P        01 46 22.6 +0.5
      baz=254,SNR=5.9
BELC  Belle Mtn. Jos     86.91  55  P        P        01 46 22.9 +0.4
      baz=255,SNR=12
I07A  Izee               87.19  44  eP       P        01 46 24.3 +0.7
      comp=Z,21nm,0.9s
SHOC  Shoshone, Teco     87.19  53  P        P        01 46 24.0 +0.3
      baz=254
BC3   Big Chuckawall     87.25  55  P        P        01 46 24.6 +0.5
      baz=255,SNR=6.0
WVOR  Wild Horse Val     87.29  46  eP       P        01 46 24.8 +0.7
      comp=Z,28nm,1.1s
WVOR  Wild Horse Val     87.29  46  eP       P        01 46 24.8 +0.7
WVOR                                pmax     pmax
      comp=Z,28nm,1.1s
TUQ   Turquoise Moun     87.35  53  P        P        01 46 24.8 +0.2
      baz=255
GMRC  Granite Mounta     87.38  54  P        P        01 46 24.9 +0.1
      baz=255,SNR=5.6
TPNV  Topopah Spring     87.50  52  P        P        01 46 25.5 +0.2
      baz=254
C06D  Leavenworth        87.50  40  P        P        01 46 25.1 +0.2
      baz=251
GLA   Glamis             87.61  56  eP       P        01 46 26.9 +1.1
      comp=Z,42nm,0.8s
GLA   Glamis             87.61  56  eP       P        01 46 26.9 +1.1
GLA                                 pmax     pmax
      comp=Z,42nm,0.8s
GLA   Glamis             87.61  56  P        P        01 46 26.9 +1.1
      baz=255,SNR=9.7
IRM   Iron Mountain      87.63  55  P        P        01 46 26.5 +0.6
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	baz=255,SNR=8.0						
J08A	Circle Bar Ran	87.68	45	*e*P	P	01 46 26.5	+0.5
	comp=Z,30nm,0.9s						
LDFC	Landfair	87.90	54	*e*P	P	01 46 28.1	+0.9
	comp=Z,55nm,0.9s						
G08A	Pilot Rock	87.93	43	*e*P	P	01 46 27.5	+0.4
	comp=Z,28nm,1.0s						
Y12C	Blythe	88.03	55	*e*P	P	01 46 28.7	+1.0
	comp=Z,34nm,0.9s						
Y12C	Blythe	88.03	55	P	P	01 46 28.5	+0.8
	baz=256,SNR=7.3						
NEE2	Needles Airpor	88.21	54	P	P	01 46 29.1	+0.6
	baz=255						
R11A	Troy Canyon, C	88.38	51	P	P	01 46 29.7	+0.2
	baz=255						
PDMCI	Parker Dam,Lak	88.47	55	P	P	01 46 30.5	+0.7
	baz=256,SNR=10						
WMQ	Urumqi	88.74	315	*e*P	P	01 46 31.4	+0.5
WMQ				sP	pP	01 46 38.0	-1.4
WMQ				pmax	pmax		
	comp=Z,83nm,1.3s						
214A	Organ Pipe Nat	88.99	57	P	P	01 46 33.6	+1.3
	baz=256,SNR=9.2						
F10A	Beach Ranch, E	89.29	43	*e*P	P	01 46 33.6	+0.1
	comp=Z,18nm,0.8s						
SLBS	Sierra La Lagu	89.65	66	*e*P	P	01 46 35.7	0.0
	comp=Z,21nm,0.8s						
PSUT	Pine Spring	89.74	51	*e*P	P	01 46 37.2	+1.2
	comp=Z,20nm,0.9s						
INK	Inuvik	90.01	19	*e*P	P	01 46 37.5	+1.3
	comp=Z,9.7nm,1.3s						
INK	Inuvik	90.01	19	*e*P	P	01 46 37.5	+1.3
INK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
INK	Inuvik	90.01	19	P	P	01 46 37.5	+1.3
	comp=Z,1.9nm,0.7s,baz=178,slow=15,SNR=1.9						
NEW	Newport	90.01	41	P	P	01 46 36.8	0.0
	baz=254						
U15A	North Rim	90.45	53	*e*P	P	01 46 40.6	+1.3
	comp=Z,34nm,0.9s						
DGZ	Jazzator, Alta	90.57	321	*i* P	P	01 46 39.0	-0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HLID	Hailey	90.58	46	P	P	01 46 40.7	+1.0
	baz=256						
PKCU	Pink Cliffs	90.67	52	*e*P	P	01 46 40.6	+0.1
	comp=Z,43nm,1.0s						
X16A	Lo Mia Camp, P	90.67	55	*e*P	P	01 46 41.5	+1.2
	comp=Z,20nm,0.9s						
TUC	Tucson	90.75	57	P	P	01 46 41.7	+1.0
	baz=258						
TCRU	Three Creeks R	90.83	51	*e*P	P	01 46 43.0	+1.9
	comp=Z,30nm,0.8s						
MTPU	Mount Pierson	90.90	52	*e*P	P	01 46 43.6	+2.1
	comp=Z,30nm,1.0s						
DUG	Dugway, Tooele	90.92	49	P	P	01 46 41.7	+0.4
	baz=256						
WUAZ	Wupatki	90.97	54	*e*P	P	01 46 42.8	+1.0
	comp=Z,28nm,0.9s						
WUAZ	Wupatki	90.97	54	P	P	01 46 42.7	+1.0
	baz=257						
MSU	Marysvale	91.01	51	*e*P	P	01 46 43.5	+1.6
MSU	Marysvale	91.01	51	*e*P	P	01 46 43.5	+1.6
SYO	Syowa Base	91.69	197⇑	*i*P	P	01 46 44.4	+0.3
CTU	Camp Tracy	91.82	49	*e*P	P	01 46 46.3	+0.7
	comp=Z,20nm,1.1s						
X18A	Snowflake	91.90	55	*e*P	P	01 46 47.5	+1.4
	comp=Z,19nm,1.0s						
MCMT	McKenzie Canyo	91.97	45	*e*P	P	01 46 47.0	+0.8
W18A	Petrified Fore	92.19	55	P	P	01 46 48.1	+0.7
	baz=258						
LRM	Limekiln Ridge	92.48	44	*e*P	P	01 46 48.9	+0.4
BOZ	Bozeman (W)	92.99	44	*e*P	P	01 46 47.2	-3.6
	comp=Z,19nm,0.6s						
BOZ	Bozeman (W)	92.99	44	*e*P	P	01 46 47.2	-3.6
BOZ				pmax	pmax		
	comp=Z,19nm,0.6s						
BOZ	Bozeman (W)	92.99	44	P	P	01 46 51.7	+0.9
	baz=258						
FXWY	Fox Creek	92.99	46	*e*P	P	01 46 51.6	+0.7
	comp=Z,13nm,0.9s						
HRY	Holter Researc	93.09	43	*e*P	P	01 46 51.8	+0.6
MK32	Makanchi Array	93.17	317	*e*P	P	01 46 50.7	-0.7
MKAR	Makanchi Array	93.17	317	P	P	01 46 50.7	-0.7
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MKAR	Makanchi Array	93.17	317	P	P	01 46 50.7	-0.7
	comp=Z,6.4nm,0.8s,baz=95,slow=4.9,SNR=3.7						
ZALV	Zalesovo Beam	93.25	324	P	P	01 46 50.0	-1.5
ZALV				pmax	pmax		
	comp=Z,14nm,1.0s						
ZALV	Zalesovo Beam	93.25	324	P	P	01 46 50.0	-1.5
	comp=Z,14nm,1.0s,baz=116,slow=2.9,SNR=5.3						
ZAA1	Zalesovo Array	93.25	324	*e*P	P	01 46 50.0	-1.5
121A	Cookes Peak, D	93.28	58	P	P	01 46 53.3	+0.9
	baz=259						
H17A	Grant Village	93.46	46	P	P	01 46 54.2	+1.1
	baz=258						
BW06	Boulder Array	93.86	47	P	P	01 46 55.2	+0.2
	baz=259						
PD31	Pinedale Array	93.86	47	*e*P	P	01 46 55.7	+0.7
	comp=Z,14nm,1.3s						
PDAR	Pinedale Array	93.86	47	P	P	01 46 55.2	+0.3
	comp=Z,5.5nm,0.8s,baz=262,slow=1.5,SNR=7.4						
O20A	White River Ci	94.33	50	P	P	01 46 57.6	+0.5
	baz=259						
EGMT	Eagleton	94.75	42	P	P	01 46 59.4	+0.7
	baz=259						
ANMO	Albuquerque	94.80	55	*i* P	P	01 46 59.0	-0.4
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ANMO	Albuquerque	94.80	55	P	P	01 47 00.0	+0.6
	baz=260						
S22A	4UR Ranch, Cre	94.99	53	P	P	01 47 00.8	+0.4
	baz=260						
YKA	Yellowknife Ar	95.15	27	P	P	01 46 58.2	-1.9
YKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YKA	Yellowknife Ar	95.15	27	P	P	01 46 58.2	-1.9
	comp=Z,3.9nm,0.8s,baz=253,slow=4.8,SNR=6.1						
YKB5	Yellowknife Ar	95.15	27	*e*P	P	01 46 58.2	-1.9
PMSA	Palmer Station	95.91	161	P	P	01 47 03.4	-0.1
	comp=Z,28nm,0.9s,baz=229,slow=20,SNR=2.8						
N23A	Red Feather La	96.19	50	P	P	01 47 06.6	+0.9
	baz=261						
LTX	Lajitas	96.21	61	*e*P	P	01 47 06.1	+0.2
LTX	Lajitas	96.21	61	*e*P	P	01 47 06.1	+0.2
TXAR	Lajitas Array	96.21	61	P	P	01 47 06.1	+0.2
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TXAR	Lajitas Array	96.21	61	P	P	01 47 06.1	+0.2
	comp=Z,1.9nm,0.8s,baz=225,slow=3.7,SNR=4.1						
KURK	Kurchatov	96.31	320	*e*P	P	01 47 05.1	-0.6
KURK	Kurchatov	96.31	320	*e*P	P	01 47 05.1	-0.6
KURBB	Kurchatov Arra	96.35	320	P	P	01 47 05.1	-0.8
	comp=Z,2.0nm,0.9s,baz=93,slow=3.8,SNR=3.1						
KSH	Kashi	96.37	309	P	P	01 47 07.9	+1.5
KSH				pP	pP	01 47 11.6	-3.3
KSH				PP	PP	01 51 01.5	+1.1
KSH				S	S	01 58 23.2	-1.6
KSH				sS	ScS	01 58 30.7	+5.3
KSH				pmax	pmax		
	comp=Z,99nm,1.7s						
SNAA	Sanae	97.13	184	P	P	01 47 08.8	-0.4
SNAA	Sanae	97.13	184	*e*P	Pdif	01 47 09.2	0.0
	comp=Z,22nm,1.2s						
SNAA	Sanae	97.13	184	*e*P	Pdif	01 47 09.3	+0.1
SNAA				pmax	pmax		
	comp=Z,22nm,1.2s						
SNAA	Sanae	97.13	184	P	Pdif	01 47 09.3	0.0
	comp=Z,10nm,1.1s,baz=112,slow=5.2						
VNA2	Neumayer--Watz	98.11	182	P	Pdif	01 47 13.6	0.0
VNA1	Neumayer--Stat	98.42	182	P	P	01 47 14.1	-0.7
PB11	IPOC Station P	117.88	119	*e*PKPdf	PKiKP	01 52 25.8	+1.1
TRQ	Mont Tremblant	118.62	43	*e*PKPdf	PKiKP	01 52 28.6	+3.3
CPUP	Villa Florida	124.40	133	PKP	PKiKP	01 52 37.7	+0.5
	comp=Z,8.3nm,1.0s,baz=173,slow=1.8,SNR=3.4						
BOSA	Boshof	124.83	223	PKP	PKPdf	01 52 37.7	-0.1
	comp=Z,5.9nm,0.7s,baz=83,slow=2.2,SNR=3.3						
SDV	Santo Domingo	124.95	87	PKP	PKPdf	01 52 38.4	-0.1
	comp=Z,13nm,0.6s,baz=257,slow=2.6,SNR=6.1						
NB200	NORSAR Array S	126.54	345	*e*PKPdf	PKiKP	01 52 40.3	-0.1
NOA	NORSAR Array B	126.54	345	PKP	PKiKP	01 52 40.3	-0.1
	comp=Z,2.2nm,0.9s,baz=38,slow=2.0,SNR=3.2						
AKASG	Malin Array Be	126.57	327	PKP	PKPdf	01 52 40.1	-0.1
	comp=Z,0.8nm,0.4s,baz=60,slow=2.1,SNR=4.0						
AKBB	Malin Array Si	126.57	327	*e*PKPdf	PKPdf	01 52 40.1	-0.1
LBTB	Lobatse	126.83	227	PKP	PKiKP	01 52 42.9	+0.7
	comp=Z,14nm,1.1s,baz=121,slow=2.9,SNR=4.2						
SIV	San Ignacio	126.87	120	PKP	PKiKP	01 52 42.7	+0.3
	comp=Z,3.7nm,0.8s,baz=186,slow=4.5,SNR=2.5						
MATP	Matopo	127.25	234	PKP	PKPdf	01 52 42.0	-0.6
	comp=Z,5.3nm,1.0s,baz=113,slow=3.1,SNR=4.8						
BR101	Keskin Array S	128.59	312	*e*PKPdf	PKPdf	01 52 44.3	-0.4
BRTR	Keskin Array B	128.59	312	PKP	PKPdf	01 52 44.3	-0.4
	comp=Z,5.9nm,1.1s,baz=195,slow=3.3,SNR=3.6						
SJG	San Juan	129.85	76	PKP	PKiKP	01 52 47.9	-0.3
	comp=Z,13nm,0.5s,baz=106,slow=5.4,SNR=4.6						
PTGA	Pitinga	133.54	102	PKP	PKPdf	01 52 55.2	+0.6
	comp=Z,2.8nm,0.5s,baz=319,slow=19,SNR=2.6						
KEST	Kesra	147.10	322	PKPbc	PKPab	01 53 22.0	-0.2
	comp=Z,29nm,1.0s,baz=6.3,slow=4.9,SNR=3.3						
ESDC	Sonseca Array	149.89	343	PKPbc	PKiKP	01 53 29.0	+0.3
	comp=Z,4.2nm,0.8s,baz=38,slow=1.8,SNR=2.5						

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*ISCJB **06** 01:35:02.6±0.8, 11°.5S±0°.1×164°.8E±0°.2, h10^{km}, mb4.7/7, Error ellipse: s-maj=33.0km s-min=17.2km az=172.5*

*IDC **06** 01:35:02.7±1.4, 11°.45S×164°.84E, h0^{km}, mb4.8/7, mb1 4.9/8, mb1mx4.4/49, mbtmp4.7/8, ML4.2/1, Error ellipse: s-maj=43.5km s-min=31.6km az=111.0*

ISC 06 01:35:04.4±0.9**, 11°.4S**±0°.1×**164°.8E**±0°.2**, h10**^{km}**, n8, σ1**^{s}**31**/8**, mb4.5**/7**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.72	172	Pn	Pn	01 37 38.8	+0.6
	1.6nm,0.3s,baz=45,slow=17,SNR=2.4						
FITZ	Fitzroy Crossi	38.42	255	P	P	01 42 25.3	-1.2
	6.2nm,0.6s,baz=144,slow=4.9,SNR=3.0						
MJAR	Matsushiro Arr	53.88	333	P	P	01 44 28.5	+0.6
	4.4nm,0.8s,baz=173,slow=8.7,SNR=2.8						
SONM	Songino Array	78.42	324	P	P	01 47 07.3	+1.8
	3.8nm,0.8s,baz=126,slow=5.6,SNR=2.5						
ILAR	Eielson Array	84.14	19	P	P	01 47 35.4	+0.1
	5.7nm,0.8s,baz=233,slow=6.0,SNR=3.8						
MKAR	Makanchi Array	93.17	317	P	P	01 48 18.6	-0.4
	6.6nm,0.8s,baz=96,slow=4.7,SNR=3.3						
ZALV	Zalesovo Beam	93.32	324	P	P	01 48 19.8	+0.3
	5.4nm,0.8s,baz=104,slow=4.9,SNR=3.8						
YKA	Yellowknife Ar	95.70	27	P	P	01 48 28.4	-1.7
	1.5nm,0.8s,baz=257,slow=4.4,SNR=4.0						

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*ISCJB **06** 01:35:24.9±0.3, 44°.18N±0°.02×11°.85E±0°.03, h37^{km}±6^{km}, Error ellipse: s-maj=3.9km s-min=3.6km az=156.5*

*ROM **06** 01:35:24.8±0.2, 44°.186N±0°.007×11°.95E±0°.01, h26^{km}±1^{km}, ML2.7/17*

*LDG **06** 01:35:26.1±0.1, 44°.12N×11°.91E, h10^{km}, Ml3.1/6, Error ellipse: s-maj=3.7km s-min=2.0km az=65.0*

ISC 06 01:35:24.6±1.0**, 44°.14N**±0°.02×**11°.91E**±0°.03**, h28**^{km}±5^{km}**, n49, σ1**^{s}**24**/72**, 4C-3D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAEN	Faenza	0.15	350	P	Pb	01 35 29.1	-1.0
FAEN				S	Sb	01 35 33.1	-0.6
IMOL	Imola, Italy	0.25	330	P	Pb	01 35 31.0	-0.2
IMOL				S	Sn	01 35 36.4	+0.8
IMOL				AML	AML		
	comp=E,5540µm,0.5s						
IMOL				AML	AML		
	comp=N,8640µm,0.5s						
IMOL				AML	AML		
	comp=E,668µm,1.1s						
IMOL				AML	AML		
	comp=N,816µm,0.3s						
IMOL				AML	AML		
	comp=E,5545µm,0.5s						
IMOL				AML	AML		
	comp=N,8635µm,0.5s						
IMOL				AML	AML		
	comp=E,665µm,1.1s						
IMOL				AML	AML		
	comp=N,815µm,0.3s						
IMOL				AML	AML		
	comp=E,665µm,1.1s						
IMOL				AML	AML		
	comp=E,5545µm,0.5s						
IMOL				AML	AML		
	comp=N,815µm,0.3s						
IMOL				AML	AML		
	comp=N,8635µm,0.5s						
ASQU	Asqua	0.36	195	P	Pn	01 35 33.2	-0.9
ASQU				S	Sn	01 35 40.3	0.0
ASQU				AML	AML		
	comp=E,1205µm,1.4s						
ASQU				AML	AML		
	comp=N,1815µm,1.1s						
ASQU				AML	AML		
	comp=E,1205µm,1.4s						
ASQU				AML	AML		
	comp=N,1815µm,1.1s						
MTRZ	Monterenzio	0.40	306	P	Pn	01 35 34.0	-0.6
MTRZ				AML	AML		
	comp=E,1985µm,0.3s						
MTRZ				AML	AML		
	comp=N,2180µm,0.4s						
MTRZ				AML	AML		
	comp=E,1990µm,0.3s						
MTRZ				AML	AML		
	comp=N,2225µm,0.4s						
MTRZ				AML	AML		
	comp=E,1985µm,0.3s						
MTRZ				AML	AML		
	comp=N,2180µm,0.4s						
MTRZ				AML	AML		
	comp=E,1995µm,0.3s						
MTRZ				AML	AML		
	comp=N,2230µm,0.4s						
MTRZ				AML	AML		
	comp=N,2230µm,0.4s						
MTRZ				AML	AML		
	comp=N,2180µm,0.4s						
MTRZ				AML	AML		
	comp=E,1995µm,0.3s						
MTRZ				AML	AML		
	comp=E,1985µm,0.3s						
SEI	Scarperia	0.41	258	P	Pb	01 35 33.7	+0.1
SEI				S	Sn	01 35 40.9	-0.6
SEI				AML	AML		
	comp=E,2290µm,0.3s						
SEI				AML	AML		
	comp=N,3340µm,0.3s						
SEI				AML	AML		
	comp=E,2285µm,0.3s						
SEI				AML	AML		
	comp=N,3335µm,0.3s						
SEI				AML	AML		
	comp=E,2285µm,0.3s						
SEI				AML	AML		
	comp=N,3335µm,0.3s						
RSM	Repubblica di	0.44	119	P	Pn	01 35 34.5	-0.7
CRE	Caprese Michel	0.52	177	P	Pn	01 35 35.9	-0.5
CRE				AML	AML		
	comp=E,522µm,0.6s						
CRE				AML	AML		
	comp=N,809µm,1.4s						
CRE				AML	AML		
	comp=E,522µm,0.6s						
CRE				AML	AML		
	comp=N,809µm,1.4s						
CRE				AML	AML		
	comp=N,809µm,1.4s						
CRE				AML	AML		
	comp=E,522µm,0.6s						
PARC	Parchiule	0.55	155	P	Pn	01 35 36.3	-0.4
PARC				S	Sn	01 35 45.7	+0.8
PARC				AML	AML		
	comp=E,300µm,1.5s						
PARC				AML	AML		
	comp=N,594µm,0.3s						
PARC				AML	AML		
	comp=E,300µm,1.5s						
PARC				AML	AML		
	comp=N,594µm,0.3s						
PARC				AML	AML		
	comp=N,594µm,0.3s						
PARC				AML	AML		
	comp=E,300µm,1.5s						
FIU	Minerbio Fiu	0.58	329	P	Pn	01 35 36.8	-0.3
SSP9	Sansepolcro	0.59	164	P	Pn	01 35 36.8	-0.4
PTF	Prato	0.64	253	P	Pn	01 35 37.6	-0.2
MTCR	Monte La Croce	0.67	260	P	Pn	01 35 38.3	-0.1
MTCR				AML	AML		
	comp=E,305µm,1.2s						
MTCR				AML	AML		
	comp=N,425µm,1.2s						
MTCR				AML	AML		
	comp=E,305µm,1.2s						
MTCR				AML	AML		
	comp=N,425µm,1.2s						
BADI	Badiali	0.68	159	P	Pn	01 35 38.5	+0.1
BADI				S	Sn	01 35 49.2	+1.1
BADI				AML	AML		
	comp=E,438µm,0.7s						
BADI				AML	AML		
	comp=N,332µm,1.6s						
BADI				AML	AML		
	comp=N,332µm,1.6s						
BADI				AML	AML		
	comp=E,438µm,0.7s						
PIEI	Pieia	0.76	143	P	Pn	01 35 39.4	-0.1
PIEI				AML	AML		
	comp=E,373µm,0.5s						
PIEI				AML	AML		
	comp=N,214µm,0.8s						
PIEI				AML	AML		
	comp=E,373µm,0.5s						
PIEI				AML	AML		
	comp=N,215µm,0.8s						
PIEI				AML	AML		
	comp=E,373µm,0.5s						
PIEI				AML	AML		
	comp=N,215µm,0.8s						
CRMI	Carmignano	0.77	243	P	Pn	01 35 40.4	+0.7
CRMI				AML	AML		
	comp=E,216µm,1.6s						
CRMI				AML	AML		
	comp=N,304µm,1.5s						
CRMI				AML	AML		
	comp=E,89µm,1.6s						
CRMI				AML	AML		
	comp=N,124µm,1.5s						
CRMI				AML	AML		
	comp=N,304µm,1.5s						
CRMI				AML	AML		
	comp=N,124µm,1.5s						
CRMI				AML	AML		
	comp=E,89µm,1.6s						
CRMI				AML	AML		
	comp=E,216µm,1.6s						
CSNT	Castellina Chi	0.81	214	P	Pn	01 35 41.9	+1.6
CSNT				AML	AML		
	comp=E,168µm,0.9s						
CSNT				AML	AML		
	comp=N,208µm,1.5s						
CSNT				AML	AML		
	comp=N,208µm,1.5s						
CSNT				AML	AML		
	comp=E,168µm,0.9s						
RAVA	Ravarino	0.84	317	P	Pn	01 35 41.5	+0.9
ADRI	Adria, Italy	0.90	5⇓	*e*Pg	Pn	01 35 41.8	+0.4
ADRI				*e*Sg	Sn	01 35 55.6	+2.2
SERM	Sermide	0.97	333	P	Pb	01 35 43.7	+0.8
SERM				AML	AML		
	comp=E,798µm,0.3s						
SERM				AML	AML		
	comp=N,370µm,1.4s						
SERM				AML	AML		
	comp=E,798µm,0.3s						
SERM				AML	AML		
	comp=N,370µm,1.4s						
FROS	Frosini	1.08	211	P	Pb	01 35 46.4	+1.7
FROS				AML	AML		
	comp=E,281µm,1.6s						
FROS				AML	AML		
	comp=N,246µm,1.6s						
FROS				AML	AML		
	comp=N,246µm,1.6s						
FROS				AML	AML		
	comp=E,281µm,1.6s						
TEOL	Teolo	1.23	352	*e*Pg	Pn	01 35 46.1	+0.1
TEOL				*e*Sg	Sb	01 36 04.2	+1.5
TEOL	Teolo	1.23	352	P	Pn	01 35 45.9	-0.2
TEOL				AML	AML		
	comp=E,764µm,0.4s						
TEOL				AML	AML		
	comp=N,437µm,1.4s						
TEOL				AML	AML		
	comp=N,437µm,1.4s						
TEOL				AML	AML		
	comp=E,764µm,0.4s						
MARN	Marana (Italy)	1.58	342	*e*Pg	Pn	01 35 51.1	+0.3
MTLO	Montello	1.68	4	*e*Pg	Pn	01 35 52.2	+0.1
MTLO				*e*Sg	Sn	01 36 13.8	+1.1
CGRP	Cima Grappa	1.74	357⇑	*e*Pg	Pn	01 35 53.0	-0.2
DOSS	Dosso del Somm	1.81	344⇑	*e*Pn	Pn	01 35 54.5	+0.4
VARN	Col Varnada, M	1.85	4⇑	*e*Pn	Pn	01 35 54.4	-0.3
PANI	Panarotta	1.95	348⇓	*e*Pn	Pn	01 35 56.6	+0.5
TRI	Trieste	2.04	39⇓	*e*Pn	Pn	01 35 56.1	-1.0
MLNI	Malnisio	2.07	14⇑	*e*Pn	Pn	01 35 57.0	-0.5
MLNI				*e*Sn	Sn	01 36 22.3	-0.1
NVLJ	Novalja	2.16	78	*e*Pn	Pn	01 35 59.5	+0.7
NVLJ				Sn	Sn	01 36 24.3	-0.4
APPI	Appiano	2.38	349	AML	AML		
	comp=N,318µm,0.5s						
APPI				AML	AML		
	comp=E,266µm,0.7s						
APPI				AML	AML		
	comp=N,318µm,0.5s						
APPI				AML	AML		
	comp=E,266µm,0.7s						
BRES	Bressanone	2.56	357	AML	AML		
	comp=N,212µm,1.5s						
BRES				AML	AML		
	comp=E,158µm,0.9s						
BRES				AML	AML		
	comp=E,158µm,0.9s						
BRES				AML	AML		
	comp=N,212µm,1.5s						
PGF	Pioggiola	2.66	234	*e*P	Pb	01 36 09.0	-2.6
PGF				*e*Sn	Sn	01 36 34.5	-2.6
	comp=N,2.3nm,0.2s						
OZLJ	Ozalj	2.92	59	*e*Pn	Pn	01 36 09.6	+0.4
SBF	Sospel	3.24	267	*e*Pn	Pn	01 36 15.2	+1.5
SBF				*e*Sn	Sn	01 36 51.0	-0.5
	comp=N,4.2nm,0.2s						
LPG	La Plagne	3.92	292	*e*Pn	Pn	01 36 24.8	+1.6
LPG				*e*Sn	Sn	01 37 07.9	-0.4
LPL	La Plagne	3.93	292	*e*Pn	Pn	01 36 25.0	+1.6
LPL				*e*Sn	Sn	01 37 08.5	-0.2
LMR	La Mourre	4.00	260	*e*Pn	Pn	01 36 26.0	+1.9
LMR				*e*Sn	Sn	01 37 09.7	-0.3
SMRF	Simiane la Rot	4.57	270	*e*Pn	Pn	01 36 33.0	+1.0
SMRF	Simiane la Rot	4.57	270	*e*P	Pn	01 36 36.6	+4.6
SMRF				*e*Sn	Sn	01 37 23.1	-1.1
CABF	La Chapelle	4.79	303	*e*Pn	Pn	01 36 36.0	+1.0
CABF				*e*Sn	Sn	01 37 29.0	-0.6
HINF	Hinteralfeld	5.09	318	*e*Pn	Pn	01 36 40.0	+0.9
HINF				*e*Sn	Sn	01 37 34.9	-2.1
	comp=N,4.7nm,0.2s						
CDF	Champ du Feu	5.34	325	*e*Pn	Pn	01 36 43.6	+1.0
CDF				*e*Sn	Sn	01 37 42.0	-1.2
	comp=N,5.1nm,0.3s						
HAU	Haudompre	5.47	317	*e*Pn	Pn	01 36 44.7	+0.4
HAU				*e*Sn	Sn	01 37 45.2	-1.0
	comp=N,5.5nm,0.2s						
SMF	Signal de Mont	6.21	297	*e*Pn	Pn	01 36 55.5	+1.1
SMF				*e*Sn	Sn	01 38 02.4	-2.1
LOR	Lormes	6.45	302	*e*Pn	Pn	01 36 57.8	+0.1
LOR				*e*Sn	Sn	01 38 07.9	-2.4
	comp=N,2.6nm,0.2s						
AVF	Avril sur Loir	6.58	297	*e*Pn	Pn	01 37 00.2	+0.8
AVF				*e*Sn	Sn	01 38 11.3	-2.1
SSF	Saint Saulge	6.58	299	*e*Pn	Pn	01 36 59.9	+0.4
SSF				*e*Sn	Sn	01 38 11.4	-2.2

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*ISCJB **06** 01:36:05.7±0.3, 11°.81S±0°.08×165°.12E±0°.07, h10^{km}, mb5.0/17, Error ellipse: s-maj=12.2km s-min=8.8km az=149.9*

*IDC **06** 01:36:05.3±1.1, 11°.81S×165°.31E, h0^{km}, mb4.7/9, mb1 4.9/11, mb1mx4.5/52, mbtmp4.8/11, ML5.0/2, Error ellipse: s-maj=28.9km s-min=27.5km az=159.0*

*NEIC **06** 01:36:06.5±0.3, 11°.81S×165°.30E, h10^{km}, mb5.5/10, Error*

ellipse: s-maj=10.8km s-min=7.8km az=113.0

ISC 06 01:36:06.6±0.5**, 11°.81S**±0°.08×**165°.3E**±0°.1**, h10^{km}, n56,** σ**1^{s}.19**/56**, mb5.0**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.75	294	Pn	Pn	01 37 32.1	0.0
	116nm,0.3s,baz=74,slow=20,SNR=3.1						
DZM	**Mont Dzumac**	10.26	174	Pn	Pn	01 38 32.8	-1.2
	4.7nm,0.3s,baz=309,slow=14,SNR=2.7						
TARA	**Tarawa**	15.13	31	*e*Pn	Pn	01 39 39.9	-0.6
	1µm,1.1s						
WR1	**Warramunga Arr**	30.80	251	*e*P	P	01 42 23.5	+0.7
WRA	**Warramunga Arr**	30.80	251	P	P	01 42 23.5	+0.7
	8.7nm,0.5s,baz=80,slow=9.2,SNR=5.1						
WAKE	**Wake Island**	30.93	3	*e*P	P	01 42 21.4	-2.3
	174nm,1.1s						
TOO	**Toolangi**	31.18	211	*e*P	P	01 42 26.7	+0.7
PYZ	**Puysegur Point**	34.26	178	*e*P	P	01 42 52.9	+0.1
	74nm,1.2s						
TAU	**Tasmania Unive**	34.69	203	*e*P	P	01 42 55.2	-1.3
MBWA	**Marble Bar**	44.52	252	*e*P	P	01 44 18.5	-0.2
	13nm,0.4s						
MJAR	**Matsushiro Arr**	54.44	333	P	P	01 45 33.6	-0.7
	6.1nm,0.8s,baz=174,slow=7.9,SNR=4.6						
MAJO	**Matsushiro**	54.45	333	*e*P	P	01 45 33.6	-0.7
ASAJ	**Asahikawa**	59.37	341	P	P	01 46 08.8	-0.2
	24nm,1.0s,baz=244,slow=16,SNR=3.5						
USRK	**Ussuriysk Ar.**	63.43	334	P	P	01 46 36.6	+0.1
	4.5nm,0.6s,baz=119,slow=6.3,SNR=6.0						
ULN	**Ulaanbaatar**	78.65	324	*e*P	P	01 48 08.7	-0.3
	11nm,0.8s						
SONA0	**Songino Array**	79.02	324	*e*P	P	01 48 12.6	+1.6
SONM	**Songino Array**	79.02	324	P	P	01 48 12.6	+1.6
	1.5nm,0.7s,baz=126,slow=7.3,SNR=3.2						
KCPM	**Cahto Peak**	83.40	47	*e*P	P	01 48 34.9	+0.4
	34nm,0.8s						
O02D	**Mt. Diablo Mer**	84.15	47	P	P	01 48 40.1	+1.8
	baz=249						
TCOL	**CIGO, UAF Yank**	84.15	18	P	P	01 48 39.1	+1.6
	baz=226						
COLA	**College**	84.16	18	*e*P	P	01 48 36.9	-0.7
	32nm,0.8s						
ILAR	**Eielson Array**	84.38	19	P	P	01 48 39.4	+0.6
	3.2nm,0.5s,baz=231,slow=5.5,SNR=5.4						
ILB	**Eielson Array**	84.38	19	*e*P	P	01 48 37.7	-1.1
	17nm,0.8s						
K02D	**Willamette Mer**	84.44	44	P	P	01 48 41.2	+1.5
	baz=248						
M02C	**Callahan**	84.53	46	P	P	01 48 42.3	+2.2
	baz=249						
I04A	**Tendick Farm,**	85.69	44	P	P	01 48 46.4	+0.5
	baz=249						
J04D	**Umpqua Nationa**	85.70	44	P	P	01 48 47.6	+1.4
	baz=250						
EDW2	**Edwards Air Fo**	86.04	53	P	P	01 48 49.0	+1.1
	baz=253						
BFSC	**Mount Baldy Ra**	86.12	54	P	P	01 48 48.9	+0.6
	baz=253						
J05D	**Fort Rock, OR**	86.31	45	P	P	01 48 50.6	+1.4
	baz=250						
DAWY	**Dawson**	86.43	21	*e*P	P	01 48 49.5	+0.4
	13nm,0.7s						
CWC	**Cottonwood Cre**	86.44	52	P	P	01 48 51.1	+1.2
	baz=253						
LRMC	**Laurel Mtn Rad**	86.46	53	P	P	01 48 51.4	+1.4
	baz=253						
I05D	**Terrebonne, OR**	86.60	44	P	P	01 48 52.1	+1.7
	baz=250						
NV01	**Mina Array Sit**	86.86	50	*e*P	P	01 48 53.1	+1.1
NVAR	**Mina Array Bea**	86.86	50	P	P	01 48 53.1	+1.1
	8.5nm,1.1s,baz=249,slow=6.6,SNR=3.0						
PFO	**Pinyon Flats O**	86.89	55	P	P	01 48 53.2	+1.0
	baz=254						
TPFO	**Pinon Flats**	86.90	55	P	P	01 48 53.0	+0.8
	baz=254						
IKP	**In-Ko-Pah, Jac**	86.91	56	P	P	01 48 53.7	+1.4
	baz=254						
HEC	**Hector,Ludlow**	87.33	54	P	P	01 48 54.6	+0.4
	baz=254						
BELC	**Belle Mtn. Jos**	87.37	55	P	P	01 48 55.3	+0.8
	baz=254						
GMRC	**Granite Mounta**	87.86	54	P	P	01 48 57.8	+1.0
	baz=254						
R11A	**Troy Canyon, C**	88.89	51	P	P	01 49 02.6	+0.9
	baz=254						
PDMCI	**Parker Dam,Lak**	88.94	55	P	P	01 49 03.5	+1.7
	baz=255						
214A	**Organ Pipe Nat**	89.43	57	P	P	01 49 06.0	+1.9
	baz=256						
HLID	**Hailey**	91.14	46	P	P	01 49 13.5	+1.4
	baz=255						
TUC	**Tucson**	91.18	57	P	P	01 49 13.9	+1.5
	baz=257						
H17A	**Grant Village**	94.03	46	P	P	01 49 27.6	+2.1
	baz=258						
EGMT	**Eagleton**	95.34	42	*e*P	P	01 49 31.2	+0.1
	18nm,0.8s						
EGMT	**Eagleton**	95.34	42	P	P	01 49 32.1	+0.9
	baz=258						
YKA	**Yellowknife Ar**	95.86	27	P	P	01 49 31.6	-1.5
	0.5nm,0.5s,baz=258,slow=4.5,SNR=4.9						
YKB5	**Yellowknife Ar**	95.86	27	*e*P	P	01 49 31.6	-1.5
LTX	**Lajitas**	96.59	62	*e*P	P	01 49 38.2	+0.9
TXAR	**Lajitas Array**	96.59	62	P	P	01 49 38.2	+0.9
	2.8nm,1.1s,baz=237,slow=4.2,SNR=4.2						
ARA0	**ARCESS Array S**	116.96	345	*e*PKPdf	PKiKP	01 54 51.1	0.0
ARCES	**ARCESS Array B**	116.96	345	PKP	PKiKP	01 54 51.1	0.0
	1.9nm,0.6s,baz=52,slow=1.5,SNR=4.1						

IDC 06 01:36:25.0±1.6**, 11°.44S**×**164°.74E, h0^{km}, mb5.1**/6**, mb1 5.2**/8**, mb1mx4.6**/49**, mbtmp5.1**/8**, ML4.7**/2**, Error ellipse: s-maj=43.9km s-min=24.9km az=120.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	10.70	171	Pn	Pn	01 38 59.4	-0.3
	15nm,0.3s,baz=326,slow=12,SNR=6.4						
CTA	**Charters Tower**	19.74	242	P	P	01 40 55.1	-1.4
	0.9nm,0.3s,baz=84,slow=12,SNR=2.4						
WRA	**Warramunga Arr**	30.42	250	P	P	01 42 39.7	+0.3
	34nm,0.9s,baz=81,slow=9.0,SNR=6.4						
ASAR	**Alice Springs**	31.73	243	P	P	01 42 50.8	-0.2
	42nm,1.0s,baz=75,slow=9.2,SNR=6.9						
FITZ	**Fitzroy Crossi**	38.32	255	P	P	01 43 49.1	+1.2
	25nm,1.0s,baz=84,slow=10,SNR=1.9						
NWAO	**Narrogin (SRO)**	48.42	236	P	P	01 45 09.2	-0.1
	19nm,0.8s,baz=296,slow=9.8,SNR=3.5						
MJAR	**Matsushiro Arr**	53.87	334	P	P	01 45 48.9	-1.2
	9.4nm,0.8s,baz=164,slow=9.7,SNR=4.3						
CMAR	**Chiang Mai Arr**	71.36	294	P	P	01 47 51.8	+4.4
	9.8nm,0.7s,baz=126,slow=4.7,SNR=7.5						
ILAR	**Eielson Array**	84.20	19	P	P	01 48 58.5	+0.5
	15nm,0.7s,baz=238,slow=5.0,SNR=5.1						

*ROM **06** 01:36:50.1±0.1, 44°.186N±0°.006×11°.96E±0°.01, h26^{km}±1^{km}, ML3.4/69*

*LDG **06** 01:36:50.8±0.1, 44°.20N×12°.01E, h10^{km}, Ml3.5/19, Error ellipse: s-maj=2.2km s-min=2.2km az=121.0*

*STR **06** 01:36:55.4±1.3, 44°N±9°×1°2E±°, h20^{km}, M4.1/7, mB5.0/5, mb4.5/6, MLv3.8/7, Mw(mB)4.4/5*

ISC 06 01:36:50.0±0.9**, 44°.19N**±0°.02×**11°.96E**±0°.02**, h28^{km}**±6^{km}**, n165,** σ**1^{s}.85**/205**, 6C-9D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAEN	**Faenza**	0.12	328	P	Pb	01 36 54.3	-0.8
FAEN				S	Sb	01 36 58.4	-0.3
IMOL	**Imola, Italy**	0.23	317	P	Pb	01 36 56.1	-0.2
IMOL				S	Sb	01 37 01.8	+1.1
IMOL				AML	AML		
	comp=E,52000µm,0.6s						
IMOL				AML	AML		
	comp=N,56400µm,0.5s						
IMOL				AML	AML		
	comp=E,5500µm,1.1s						
IMOL				AML	AML		
	comp=N,5565µm,0.4s						
IMOL				AML	AML		
	comp=E,52000µm,0.6s						
IMOL				AML	AML		
	comp=N,56350µm,0.5s						
IMOL				AML	AML		
	comp=E,5495µm,1.1s						
IMOL				AML	AML		
	comp=N,5570µm,0.4s						
IMOL				AML	AML		
	comp=E,52000µm,0.6s						
IMOL				AML	AML		
	comp=N,56350µm,0.5s						
IMOL				AML	AML		
	comp=E,5495µm,1.1s						
IMOL				AML	AML		
	comp=N,5570µm,0.4s						
IMOL				AML	AML		
	comp=E,5495µm,1.1s						
IMOL				AML	AML		
	comp=E,52000µm,0.6s						
IMOL				AML	AML		
	comp=N,5570µm,0.4s						
IMOL				AML	AML		
	comp=N,56350µm,0.5s						
MTRZ	**Monterenzio**	0.40	298	P	Pb	01 36 59.1	+0.2
MTRZ				AML	AML		
	comp=E,9745µm,1.0s						
MTRZ				AML	AML		
	comp=N,17650µm,0.3s						
MTRZ				AML	AML		
	comp=E,9775µm,1.0s						
MTRZ				AML	AML		
	comp=N,17900µm,0.3s						
MTRZ				AML	AML		
	comp=E,9740µm,1.0s						
MTRZ				AML	AML		
	comp=N,17650µm,0.3s						
MTRZ				AML	AML		
	comp=E,9775µm,1.0s						
MTRZ				AML	AML		
	comp=N,17900µm,0.3s						
MTRZ				AML	AML		
	comp=E,9740µm,1.0s						
MTRZ				AML	AML		
	comp=N,17650µm,0.3s						
MTRZ				AML	AML		
	comp=E,9775µm,1.0s						
MTRZ				AML	AML		
	comp=N,17900µm,0.3s						
MTRZ				AML	AML		
	comp=E,9775µm,1.0s						
MTRZ				AML	AML		
	comp=E,9740µm,1.0s						
MTRZ				AML	AML		
	comp=N,17650µm,0.3s						
MTRZ				AML	AML		
	comp=N,17900µm,0.3s						
ASQU	**Asqua**	0.41	198	P	Pb	01 36 58.5	-0.5
ASQU				S	Sb	01 37 05.7	+0.6
ASQU				AML	AML		
	comp=E,7690µm,0.3s						
ASQU				AML	AML		
	comp=N,11530µm,0.3s						
ASQU				AML	AML		
	comp=E,7690µm,0.3s						
ASQU				AML	AML		
	comp=N,11530µm,0.3s						
ASQU				AML	AML		
	comp=N,11530µm,0.3s						
ASQU				AML	AML		
	comp=E,7690µm,0.3s						
RSM	**Repubblica di**	0.44	126	P	Pb	01 36 59.5	+0.2
RSM				AML	AML		
	comp=E,2445µm,1.1s						
RSM				AML	AML		
	comp=N,3485µm,1.2s						
RSM				AML	AML		
	comp=E,2445µm,1.1s						
RSM				AML	AML		
	comp=N,3490µm,1.2s						
RSM				AML	AML		
	comp=E,2445µm,1.1s						
RSM				AML	AML		
	comp=N,3490µm,1.2s						
RSM				AML	AML		
	comp=E,2445µm,1.1s						
RSM				AML	AML		
	comp=N,3490µm,1.2s						
SEI	**Scarperia**	0.46	253	P	Pb	01 36 58.9	-0.8
SEI				S	Sb	01 37 06.3	0.0
SEI				AML	AML		
	comp=E,20000µm,0.4s						
SEI				AML	AML		
	comp=N,26200µm,0.3s						
SEI				AML	AML		
	comp=E,20000µm,0.4s						
SEI				AML	AML		
	comp=N,26200µm,0.3s						
SEI				AML	AML		
	comp=E,20000µm,0.4s						
SEI				AML	AML		
	comp=N,26200µm,0.3s						
SEI				AML	AML		
	comp=N,26200µm,0.3s						
SEI				AML	AML		
	comp=E,20000µm,0.4s						
CPGN	**Carpegna, Ital**	0.47	146	P	Pb	01 37 00.2	+0.3
CPGN				AML	AML		
	comp=E,5835µm,1.4s						
CPGN				AML	AML		
	comp=N,5320µm,0.8s						
CPGN				AML	AML		
	comp=E,5380µm,0.5s						
CPGN				AML	AML		
	comp=N,4965µm,0.8s						
CPGN				AML	AML		
	comp=E,5835µm,1.4s						
CPGN				AML	AML		
	comp=N,5315µm,0.8s						
CPGN				AML	AML		
	comp=E,5385µm,0.5s						
CPGN				AML	AML		
	comp=N,4960µm,0.9s						
CPGN				AML	AML		
	comp=E,5835µm,1.4s						
CPGN				AML	AML		
	comp=N,5320µm,0.8s						
CPGN				AML	AML		
	comp=E,5835µm,1.4s						
CPGN				AML	AML		
	comp=N,5320µm,0.8s						
FIU	**Minerbio Fiu**	0.56	323	P	Pn	01 37 03.1	+0.9
FIU				AML	AML		
	comp=E,12775µm,0.6s						
FIU				AML	AML		
	comp=N,12115µm,0.7s						
FIU				AML	AML		
	comp=E,12785µm,0.6s						
FIU				AML	AML		
	comp=N,12070µm,0.7s						
FIU				AML	AML		
	comp=N,12070µm,0.7s						
FIU				AML	AML		
	comp=E,12785µm,0.6s						
CRE	**Caprese Michel**	0.57	181	P	Pb	01 37 01.2	-0.4
CRE				AML	AML		
	comp=E,4615µm,0.6s						
CRE				AML	AML		
	comp=N,6295µm,0.3s						
CRE				AML	AML		
	comp=E,4610µm,0.6s						
CRE				AML	AML		
	comp=N,6295µm,0.3s						
CRE				AML	AML		
	comp=E,4610µm,0.6s						
CRE				AML	AML		
	comp=N,6300µm,0.3s						
CRE				AML	AML		
	comp=E,4610µm,0.6s						
CRE				AML	AML		
	comp=N,6300µm,0.3s						
PARC	**Parchiule**	0.58	160	P	Pb	01 37 01.4	-0.3
PARC				S	Sn	01 37 11.1	+0.1
PARC				AML	AML		
	comp=E,2470µm,0.4s						
PARC				AML	AML		
	comp=N,4520µm,0.3s						
PARC				AML	AML		
	comp=E,2470µm,0.4s						
PARC				AML	AML		
	comp=N,4520µm,0.3s						
PARC				AML	AML		
	comp=E,2470µm,0.4s						
PARC				AML	AML		
	comp=N,4520µm,0.3s						
PARC				AML	AML		
	comp=E,2470µm,0.4s						
PARC				AML	AML		
	comp=N,4520µm,0.3s						
FNVD	**Fontana Vidola**	0.61	268	P	Pb	01 37 01.9	-0.3
PE3	**Peglio**	0.63	142	P	Pb	01 37 02.6	+0.1
PE3				AML	AML		
	comp=E,7870µm,0.6s						
PE3				AML	AML		
	comp=N,11800µm,0.4s						
PE3				AML	AML		
	comp=E,7870µm,0.6s						
PE3				AML	AML		
	comp=N,11800µm,0.4s						
PE3				AML	AML		
	comp=E,7870µm,0.6s						
PE3				AML	AML		
	comp=N,11800µm,0.4s						
SSP9	**Sansepolcro**	0.63	169	P	Pb	01 37 02.0	-0.5
SSP9				AML	AML		
	comp=E,2740µm,0.5s						
SSP9				AML	AML		
	comp=N,2670µm,0.6s						
SSP9				AML	AML		
	comp=E,2746µm,0.5s						
SSP9				AML	AML		
	comp=N,2670µm,0.6s						
SSP9				AML	AML		
	comp=E,2746µm,0.5s						
SSP9				AML	AML		
	comp=N,2670µm,0.6s						
PESA	**Pesaro**	0.68	111	P	Pb	01 37 03.5	+0.2
PESA				AML	AML		
	comp=E,4120µm,1.4s						
PESA				AML	AML		
	comp=N,4860µm,0.3s						
PESA				AML	AML		
	comp=E,4120µm,1.4s						
PESA				AML	AML		
	comp=N,4860µm,0.3s						
PESA				AML	AML		
	comp=E,4120µm,1.4s						
PESA				AML	AML		
	comp=N,4860µm,0.3s						
PTF	**Prato**	0.69	251	P	Pb	01 37 03.0	-0.4
BADI	**Badiali**	0.71	163	P	Pb	01 37 03.7	-0.2
BADI				AML	AML		
	comp=E,3415µm,0.6s						
BADI				AML	AML		
	comp=N,2435µm,0.8s						
BADI				AML	AML		
	comp=E,3415µm,0.6s						
BADI				AML	AML		
	comp=N,2440µm,0.8s						
BADI				AML	AML		
	comp=E,3415µm,0.6s						
BADI				AML	AML		
	comp=N,2440µm,0.8s						
MTCR	**Monte La Croce**	0.71	257	P	Pb	01 37 03.6	-0.4
ZCCA	**Zocca**	0.73	283	P	Pn	01 37 05.7	+1.1
NARO	**Abbazia di Nar**	0.73	142	P	Pb	01 37 03.9	-0.3
NARO				AML	AML		
	comp=E,1320µm,0.6s						
NARO				AML	AML		
	comp=N,1255µm,0.4s						
NARO				AML	AML		
	comp=E,1320µm,0.6s						
NARO				AML	AML		
	comp=N,1255µm,0.4s						
NARO				AML	AML		
	comp=E,1320µm,0.6s						
NARO				AML	AML		
	comp=N,1255µm,0.4s						
CDCA	**Citt' di Caste**	0.76	165	P	Pb	01 37 04.3	-0.3
CDCA				AML	AML		
	comp=E,4685µm,0.5s						
CDCA				AML	AML		
	comp=N,9205µm,0.5s						
CDCA				AML	AML		
	comp=E,3380µm,0.7s						
CDCA				AML	AML		
	comp=N,2895µm,0.8s						
CDCA				AML	AML		
	comp=E,4685µm,0.5s						
CDCA				AML	AML		
	comp=N,9205µm,0.5s						
CDCA				AML	AML		
	comp=E,3380µm,0.7s						
CDCA				AML	AML		
	comp=N,2900µm,0.8s						
CDCA				AML	AML		
	comp=E,4685µm,0.5s						
CDCA				AML	AML		
	comp=N,2900µm,0.8s						
CDCA				AML	AML		
	comp=N,9205µm,0.5s						
CDCA				AML	AML		
	comp=E,3380µm,0.7s						
ATMC	**Monte Cedrone**	0.76	167	P	Pb	01 37 04.5	-0.2
ATMC				AML	AML		
	comp=E,3575µm,0.6s						
ATMC				AML	AML		
	comp=N,3400µm,1.5s						
ATMC				AML	AML		
	comp=E,3575µm,0.6s						
ATMC				AML	AML		
	comp=N,3400µm,1.5s						
ATMC				AML	AML		
	comp=E,3575µm,0.6s						
ATMC				AML	AML		
	comp=N,3400µm,1.5s						
FSSB	**Fossombrone**	0.77	130	P	Pb	01 37 04.9	0.0
FSSB				AML	AML		
	comp=E,4100µm,0.7s						
FSSB				AML	AML		
	comp=N,4065µm,0.4s						
FSSB				AML	AML		
	comp=E,4100µm,0.7s						
FSSB				AML	AML		
	comp=N,4065µm,0.4s						
FSSB				AML	AML		
	comp=N,4065µm,0.4s						
FSSB				AML	AML		
	comp=E,4100µm,0.7s						
PIEI	**Pieia**	0.77	148	P	Pb	01 37 04.4	-0.5
PIEI				AML	AML		
	comp=E,3120µm,0.6s						
PIEI				AML	AML		
	comp=N,1575µm,0.8s						
PIEI				AML	AML		
	comp=E,3120µm,0.6s						
PIEI				AML	AML		
	comp=N,1575µm,0.8s						
PIEI				AML	AML		
	comp=E,3120µm,0.6s						
PIEI				AML	AML		
	comp=N,1575µm,0.8s						
ATPC	**Poggio Castell**	0.79	153	P	Pb	01 37 05.3	0.0
ATPC				AML	AML		
	comp=E,893µm,1.1s						
ATPC				AML	AML		
	comp=N,2120µm,0.6s						
ATPC				AML	AML		
	comp=E,2420µm,0.5s						
ATPC				AML	AML		
	comp=N,2085µm,0.6s						
ATPC				AML	AML		
	comp=E,892µm,1.1s						
ATPC				AML	AML		
	comp=N,2125µm,0.6s						
ATPC				AML	AML		
	comp=E,2420µm,0.5s						
ATPC				AML	AML		
	comp=N,2085µm,0.6s						
ATPC				AML	AML		
	comp=E,2420µm,0.5s						
ATPC				AML	AML		
	comp=N,2085µm,0.6s						
ATPC				AML	AML		
	comp=N,2125µm,0.6s						
ATPC				AML	AML		
	comp=E,892µm,1.1s						
MPAG	**Monte Paganucc**	0.80	134	P	Pb	01 37 05.3	-0.1
MPAG				AML	AML		
	comp=E,1116µm,0.3s						
MPAG				AML	AML		
	comp=N,1705µm,0.5s						

MPAG	comp=E,1184µm,0.6s			AML	AML		
MPAG	comp=N,1695µm,0.5s			AML	AML		
MPAG	comp=E,1120µm,0.3s			AML	AML		
MPAG	comp=N,1705µm,0.5s			AML	AML		
MPAG	comp=E,1185µm,0.6s			AML	AML		
MPAG	comp=N,1690µm,0.5s			AML	AML		
MPAG	comp=N,1705µm,0.5s			AML	AML		
MPAG	comp=N,1690µm,0.5s			AML	AML		
MPAG	comp=E,1185µm,0.6s			AML	AML		
MPAG	comp=E,1120µm,0.3s			AML	AML		
ATPI	**Pietralunga -**	**0.81**	**157**	P	**Pb**	**01 37 05.5**	**0.0**
ATPI	comp=E,2290µm,0.5s			AML	AML		
ATPI	comp=N,2050µm,1.0s			AML	AML		
ATPI	comp=E,2290µm,0.5s			AML	AML		
ATPI	comp=N,2050µm,1.0s			AML	AML		
ATPI	comp=E,2290µm,0.5s			AML	AML		
ATPI	comp=N,2050µm,1.0s			AML	AML		
CRMI	**Carmignano**	**0.82**	**241**	P	**Pb**	**01 37 05.7**	**-0.1**
CRMI	comp=E,1290µm,0.6s			AML	AML		
CRMI	comp=N,1500µm,0.4s			AML	AML		
CRMI	comp=E,550µm,0.7s			AML	AML		
CRMI	comp=N,630µm,0.4s			AML	AML		
CRMI	comp=E,1290µm,0.6s			AML	AML		
CRMI	comp=N,1500µm,0.4s			AML	AML		
CRMI	comp=E,549µm,0.7s			AML	AML		
CRMI	comp=N,630µm,0.4s			AML	AML		
CRMI	comp=N,1500µm,0.4s			AML	AML		
CRMI	comp=E,549µm,0.7s			AML	AML		
CRMI	comp=E,1290µm,0.6s			AML	AML		
CRMI	comp=N,630µm,0.4s			AML	AML		
RAVA	**Ravarino**	**0.83**	**313**	P	**Pn**	**01 37 07.2**	**+1.3**
RAVA	comp=E,9460µm,0.9s			AML	AML		
RAVA	comp=N,9585µm,0.6s			AML	AML		
RAVA	comp=E,9470µm,0.9s			AML	AML		
RAVA	comp=N,9570µm,0.6s			AML	AML		
RAVA	comp=E,9470µm,0.9s			AML	AML		
RAVA	comp=N,9570µm,0.6s			AML	AML		
ADRI	**Adria, Italy**	**0.85**	**3**	⇓*e*Pg	**Pb**	**01 37 06.5**	**+0.4**
CAFI	**Castiglion Fio**	**0.86**	**180**	P	**Pb**	**01 37 06.3**	**-0.1**
CAFI	comp=E,1415µm,0.5s			AML	AML		
CAFI	comp=N,20200µm,1.6s			AML	AML		
CAFI	comp=E,1420µm,0.5s			AML	AML		
CAFI	comp=N,1445µm,0.4s			AML	AML		
CAFI	comp=E,1415µm,0.5s			AML	AML		
CAFI	comp=N,20220µm,1.6s			AML	AML		
CAFI	comp=E,1425µm,0.5s			AML	AML		
CAFI	comp=N,1445µm,0.4s			AML	AML		
CAFI	comp=N,1445µm,0.4s			AML	AML		
CAFI	comp=E,1415µm,0.5s			AML	AML		
CAFI	comp=E,1425µm,0.5s			AML	AML		
CAFI	comp=N,20220µm,1.6s			AML	AML		
CSNT	**Castellina Chi**	**0.87**	**214**	P	**Pn**	**01 37 06.7**	**+0.3**
CSNT	comp=E,1470µm,0.4s			AML	AML		
CSNT	comp=N,1490µm,1.4s			AML	AML		
CSNT	comp=E,1470µm,0.4s			AML	AML		
CSNT	comp=N,1490µm,1.4s			AML	AML		
CSNT	comp=E,1470µm,0.4s			AML	AML		
CSNT	comp=N,1490µm,1.4s			AML	AML		
ATVO	**AVT- Monte Val**	**0.87**	**158**	P	**Pb**	**01 37 06.7**	**+0.2**
ATVO	comp=E,3775µm,0.5s			AML	AML		
ATVO	comp=N,2780µm,0.7s			AML	AML		
ATVO	comp=E,3775µm,0.5s			AML	AML		
ATVO	comp=N,2780µm,0.7s			AML	AML		
ATVO	comp=E,3775µm,0.5s			AML	AML		
ATVO	comp=N,2780µm,0.7s			AML	AML		
FRON	**Frontone** comp=N,1710µm,0.4s	**0.87**	**140**	AML	AML		
FRON	comp=E,1246µm,1.5s			AML	AML		
FRON	comp=N,1710µm,0.4s			AML	AML		
FRON	comp=E,1246µm,1.5s			AML	AML		
POPM	**Popiglio**	**0.88**	**261**	P	**Pn**	**01 37 07.1**	**+0.4**
POPM	comp=E,1360µm,0.3s			AML	AML		
POPM	comp=N,1455µm,1.2s			AML	AML		
POPM	comp=N,1455µm,1.2s			AML	AML		
POPM	comp=E,1360µm,0.3s			AML	AML		
SERM	**Sermide**	**0.95**	**330**	P	**Pn**	**01 37 08.9**	**+1.4**
SERM	comp=E,8220µm,0.3s			AML	AML		
SERM	comp=N,2645µm,0.3s			AML	AML		
SERM	comp=E,9665µm,0.3s			AML	AML		
SERM	comp=N,3990µm,0.4s			AML	AML		
SERM	comp=N,3990µm,0.4s			AML	AML		
SERM	comp=N,2645µm,0.3s			AML	AML		
SERM	comp=E,8220µm,0.3s			AML	AML		
SERM	comp=E,9665µm,0.3s			AML	AML		
ARVD	**Arcevia** comp=N,922µm,1.0s	**0.99**	**134**	AML	AML		
ARVD	comp=E,840µm,0.4s			AML	AML		
ARVD	comp=N,922µm,1.0s			AML	AML		
ARVD	comp=E,840µm,0.4s			AML	AML		
BDI	**Bagni Di Lucca**	**0.99**	**263**	P	**Pb**	**01 37 09.2**	**+0.5**
BDI	comp=E,1610µm,0.4s			AML	AML		
BDI	comp=N,1485µm,0.4s			AML	AML		
BDI	comp=E,1770µm,0.4s			AML	AML		
BDI	comp=N,1330µm,0.5s			AML	AML		
BDI	comp=E,1770µm,0.4s			AML	AML		
BDI	comp=N,1485µm,0.4s			AML	AML		
BDI	comp=N,1330µm,0.5s			AML	AML		
BDI	comp=E,1610µm,0.4s			AML	AML		
SENI	**Senigallia** comp=N,1750µm,0.9s	**1.04**	**117**	AML	AML		
SENI	comp=E,6385µm,0.2s			AML	AML		
SENI	comp=N,9145µm,0.5s			AML	AML		
SENI	comp=E,1412µm,0.9s			AML	AML		
SENI	comp=N,1750µm,0.9s			AML	AML		
SENI	comp=E,6385µm,0.2s			AML	AML		
SENI	comp=N,9145µm,0.5s			AML	AML		
SENI	comp=E,1412µm,0.9s			AML	AML		
CARD	**Cardoso**	**1.08**	**262**	P	**Pb**	**01 37 10.1**	**0.0**
CARD				S	**Sn**	**01 37 25.9**	**+2.5**
NOVE	**Novellara** comp=N,7135µm,0.4s	**1.08**	**305**	AML	AML		
NOVE	comp=E,4620µm,0.8s			AML	AML		
NOVE	comp=N,7135µm,0.4s			AML	AML		
NOVE	comp=E,4620µm,0.8s			AML	AML		
MAIM	**Mastiano**	**1.10**	**256**	P	**Pb**	**01 37 10.4**	**0.0**
MAIM				S	**Sn**	**01 37 26.7**	**+2.9**
MAIM	**Mastiano**	**1.10**	**256**	P	**Pb**	**01 37 10.4**	**0.0**
MAIM	comp=E,712µm,0.6s			AML	AML		
MAIM	comp=N,1160µm,0.3s			AML	AML		
MAIM	comp=E,712µm,0.6s			AML	AML		
MAIM	comp=N,1160µm,0.3s			AML	AML		
GAZZ	**Gazzo Veronese**	**1.11**	**326**	⇑*e*Pg	**Pb**	**01 37 11.5**	**+0.9**
GAZZ				*e*Sg	**Sb**	**01 37 27.1**	**+2.4**
SARO	**Sassorosso** comp=N,1030µm,0.5s	**1.12**	**270**	AML	AML		
SARO	comp=E,817µm,0.5s			AML	AML		
SARO	comp=N,1030µm,0.5s			AML	AML		
SARO	comp=E,817µm,0.5s			AML	AML		
VLC	**Villacollemand**	**1.14**	**269**	P	**Pb**	**01 37 12.1**	**+1.1**
VLC	comp=E,592µm,1.6s			AML	AML		
VLC	comp=N,662µm,1.1s			AML	AML		
VLC	comp=E,574µm,1.6s			AML	AML		
VLC	comp=N,665µm,0.7s			AML	AML		
VLC	comp=N,665µm,0.7s			AML	AML		
VLC	comp=E,574µm,1.6s			AML	AML		
VLC	comp=E,592µm,1.6s			AML	AML		
VLC	comp=N,662µm,1.1s			AML	AML		
SBPO	**S.Benedetto Po**	**1.14**	**319**	P	**Pb**	**01 37 12.4**	**+1.3**
FROS	**Frosini**	**1.14**	**211**	P	**Pb**	**01 37 11.2**	**+0.1**
FROS	comp=E,1910µm,0.5s			AML	AML		
FROS	comp=N,1068µm,0.6s			AML	AML		
FROS	comp=N,1068µm,0.6s			AML	AML		
FROS	comp=E,1910µm,0.5s			AML	AML		
SNTG	**Esanatoglia** comp=N,1165µm,0.5s	**1.17**	**143**	AML	AML		
SNTG	comp=E,1084µm,0.6s			AML	AML		
SNTG	comp=N,1165µm,0.5s			AML	AML		
SNTG	comp=E,1084µm,0.6s			AML	AML		
TEOL	**Teolo**	**1.19**	**350**	⇓*e*Pg	**Pn**	**01 37 11.1**	**+0.3**
TEOL				*e*Sg	**Sb**	**01 37 27.6**	**+0.7**
TEOL	**Teolo**	**1.19**	**350**	P	**Pn**	**01 37 11.1**	**+0.3**
TEOL	comp=E,6160µm,0.4s			AML	AML		
TEOL	comp=N,4445µm,1.6s			AML	AML		
TEOL	comp=E,6160µm,0.4s			AML	AML		
TEOL	comp=N,4445µm,1.6s			AML	AML		
ASSB	**Assisi San Ben**	**1.25**	**156**	P	**Pb**	**01 37 13.3**	**+0.3**
ASSB	comp=E,666µm,0.4s			AML	AML		
ASSB	comp=N,1034µm,0.6s			AML	AML		
ASSB	comp=E,666µm,0.4s			AML	AML		
ASSB	comp=N,1034µm,0.6s			AML	AML		
MGAB	**Montegabbione**	**1.28**	**175**	P	**Pb**	**01 37 13.2**	**-0.3**
MGAB	comp=E,1915µm,0.5s			AML	AML		
MGAB	comp=N,1295µm,0.6s			AML	AML		
MGAB	comp=E,2190µm,0.5s			AML	AML		
MGAB	comp=N,1380µm,0.5s			AML	AML		
MGAB	comp=N,1380µm,0.5s			AML	AML		
MGAB	comp=E,2190µm,0.5s			AML	AML		
MGAB	comp=E,1915µm,0.5s			AML	AML		
MGAB	comp=N,1295µm,0.6s			AML	AML		
EQUI	**Equi**	**1.30**	**270**	P	**Pb**	**01 37 14.6**	**+0.7**
EQUI				S	**Sb**	**01 37 33.0**	**+2.8**
ZOVE	**Zovencedo**	**1.31**	**345**	P	**Pn**	**01 37 12.8**	**+0.3**
TRIF	**Trifonti**	**1.32**	**216**	P	**Pb**	**01 37 14.0**	**-0.2**
TRIF	comp=E,574µm,0.5s			AML	AML		
TRIF	comp=N,472µm,1.5s			AML	AML		
TRIF	comp=E,574µm,0.5s			AML	AML		
TRIF	comp=N,472µm,1.5s			AML	AML		
SACS	**San Casciano d**	**1.34**	**182**	P	**Pb**	**01 37 14.6**	**0.0**
SACS	comp=E,656µm,0.5s			AML	AML		
SACS	comp=N,719µm,1.0s			AML	AML		
SACS	comp=E,674µm,0.6s			AML	AML		
SACS	comp=N,718µm,1.0s			AML	AML		
SACS	comp=N,719µm,1.0s			AML	AML		
SACS	comp=N,718µm,1.0s			AML	AML		
SACS	comp=E,656µm,0.5s			AML	AML		
SACS	comp=E,674µm,0.6s			AML	AML		
FDMO	**Fiordimonte** comp=N,664µm,0.7s	**1.41**	**144**	AML	AML		
FDMO	comp=E,504µm,1.1s			AML	AML		
FDMO	comp=N,664µm,0.7s			AML	AML		
FDMO	comp=E,504µm,1.1s			AML	AML		
MARN	**Marana (Italy)**	**1.54**	**340**	⇓*e*Pg	**Pn**	**01 37 16.2**	**+0.4**
MARN				*e*Sg	**Sn**	**01 37 35.1**	**+0.2**
ROVR	**Rover Verones**	**1.59**	**337**	P	**Pn**	**01 37 16.8**	**+0.3**
ASOL	**Asolo**	**1.61**	**358**	P	**Pn**	**01 37 17.2**	**+0.6**
MTLO	**Montello**	**1.62**	**3**	⇑*e*Pg	**Pn**	**01 37 17.2**	**+0.4**
CGRP	**Cima Grappa**	**1.69**	**356**	⇓*e*Pg	**Pn**	**01 37 18.1**	**+0.2**
CGRP				*e*Sg	**Sn**	**01 37 38.9**	**+0.1**
BALD	**Monte Baldo**	**1.70**	**332**	*e*Pg	**Pn**	**01 37 18.6**	**+0.6**
BALD				*e*Sg	**Sn**	**01 37 40.5**	**+1.5**
DOSS	**Dosso del Somm**	**1.78**	**342**	⇓*e*Pg	**Pn**	**01 37 19.4**	**+0.3**
DOSS				*e*Sg	**Sn**	**01 37 40.9**	**+0.1**
VARN	**Col Varnada, M**	**1.81**	**3**	⇓*e*Pg	**Pn**	**01 37 19.4**	**0.0**
VARN				*e*Sg	**Sn**	**01 37 42.7**	**+1.3**
CAE	**Caneva**	**1.85**	**10**	⇓*e*Pn	**Pn**	**01 37 19.8**	**-0.1**
CAE				*e*Sn	**Sn**	**01 37 43.7**	**+1.2**
MAGA	**Magasa**	**1.85**	**330**	P	**Pn**	**01 37 20.4**	**+0.4**
MAGA	comp=E,4685µm,0.8s			AML	AML		
MAGA	comp=N,3095µm,0.4s			AML	AML		
MAGA	comp=E,4685µm,0.8s			AML	AML		
MAGA	comp=N,3095µm,0.4s			AML	AML		
CTI	**Castel Tesino**	**1.87**	**353**	P	**Pn**	**01 37 20.7**	**+0.4**
CTI	comp=E,1200µm,0.6s			AML	AML		
CTI	comp=N,1850µm,0.2s			AML	AML		
CTI	comp=N,1850µm,0.2s			AML	AML		
CTI	comp=E,1200µm,0.6s			AML	AML		
POLC	**Polcenigo**	**1.88**	**11**	P	**Pn**	**01 37 20.5**	**+0.2**
POLC	comp=E,1555µm,1.3s			AML	AML		
POLC	comp=N,2210µm,0.5s			AML	AML		
POLC	comp=N,2210µm,0.5s			AML	AML		
POLC	comp=E,1555µm,1.3s			AML	AML		
SKDS	**Skadanscina**	**1.99**	**46**	*i* Pn	**Pn**	**01 37 21.6**	**-0.3**
AQU	**L'Aquila**	**2.12**	**150**	*e*Pn	**Pb**	**01 37 26.6**	**-1.1**
NVLJ	**Novalja**	**2.12**	**79**	*e*Pn	**Pn**	**01 37 24.5**	**+0.9**
NVLJ				Sn	**Sn**	**01 37 46.9**	**-2.0**
MABI	**Malga Bissina**	**2.13**	**332**	P	**Pn**	**01 37 24.6**	**+0.7**
MABI	comp=E,286µm,0.6s			AML	AML		
MABI	comp=N,260µm,1.3s			AML	AML		
MABI	comp=E,286µm,0.6s			AML	AML		
MABI	comp=N,260µm,1.3s			AML	AML		
STAL	**STALIGIAL** comp=E,1036µm,1.3s	**2.14**	**14**	AML	AML		
STAL	comp=E,820µm,1.2s			AML	AML		
STAL	comp=N,1050µm,0.3s			AML	AML		
STAL	comp=E,1036µm,1.3s			AML	AML		
STAL	comp=N,943µm,0.3s			AML	AML		
STAL	comp=N,943µm,0.3s			AML	AML		
STAL	comp=N,1050µm,0.3s			AML	AML		
STAL	comp=E,820µm,1.2s			AML	AML		
GEPF	**Gemona** comp=N,462µm,0.8s	**2.24**	**21**	AML	AML		
GEPF	comp=E,382µm,0.6s			AML	AML		
GEPF	comp=E,382µm,0.6s			AML	AML		
GEPF	comp=N,462µm,0.8s			AML	AML		
KOSI	**Kohlern** comp=N,732µm,0.6s	**2.31**	**350**	AML	AML		
KOSI	comp=E,913µm,0.6s			AML	AML		
KOSI	comp=N,732µm,0.6s			AML	AML		
KOSI	comp=E,913µm,0.6s			AML	AML		
CEY	**Cerknica**	**2.33**	**48**	*e*Pn	**Pn**	**01 37 26.3**	**-0.3**
APPI	**Appiano**	**2.35**	**347**	P	**Pn**	**01 37 27.7**	**+0.8**
APPI	comp=E,932µm,0.4s			AML	AML		
APPI	comp=N,818µm,0.2s			AML	AML		
APPI	comp=E,932µm,0.4s			AML	AML		
APPI	comp=N,818µm,0.2s			AML	AML		
BOSI	**Bolzano** comp=N,1610µm,0.6s	**2.35**	**349**	AML	AML		
BOSI	comp=E,1725µm,0.6s			AML	AML		
BOSI	comp=N,1610µm,0.6s			AML	AML		
BOSI	comp=E,1725µm,0.6s			AML	AML		
PTCC	**Patocco-Chiusa** comp=E,296µm,1.3s	**2.42**	**23**	AML	AML		
PTCC	comp=N,277µm,0.5s			AML	AML		
PTCC	comp=N,277µm,0.5s			AML	AML		
PTCC	comp=E,296µm,1.3s			AML	AML		
FVI	**Forni Avoltri** comp=E,401µm,0.5s	**2.47**	**13**	AML	AML		
FVI	comp=N,488µm,0.4s			AML	AML		
FVI	comp=N,488µm,0.4s			AML	AML		
FVI	comp=E,401µm,0.5s			AML	AML		
BRES	**Bressanone**	**2.51**	**356**	P	**Pn**	**01 37 30.3**	**+1.0**
BRES	comp=E,376µm,0.3s			AML	AML		
BRES	comp=N,606µm,0.8s			AML	AML		
BRES	comp=E,376µm,0.3s			AML	AML		
BRES	comp=N,606µm,0.8s			AML	AML		
BRMO	**Bormio** comp=N,248µm,0.3s	**2.55**	**334**	AML	AML		
BRMO	comp=E,253µm,0.5s			AML	AML		
BRMO	comp=N,248µm,0.3s			AML	AML		
BRMO	comp=E,253µm,0.5s			AML	AML		
ABSI	**Aberstueckl** comp=E,936µm,1.6s	**2.58**	**350**	AML	AML		
ABSI	comp=E,936µm,1.6s			AML	AML		
ABSI	comp=N,928µm,0.4s			AML	AML		
ABSI	comp=N,928µm,0.4s			AML	AML		
ABTA	**Abfaltersbach** comp=N,72nm,0.5s	**2.59**	**8**	Pn	**Pn**	**01 37 31.2**	**+1.1**
ABTA	comp=N,56nm,0.5s			Pg	Pb	01 37 40.8	+5.1
ABTA	comp=N,78nm,0.6s			Sn	**Sn**	**01 38 02.3**	**+1.6**
LJU	**Ljubljana**	**2.59**	**43**	*e*Pn	**Pn**	**01 37 30.0**	**-0.1**
FINB	**Finale Ligure** comp=E,102µm,1.2s	**2.62**	**271**	AML	AML		
FINB	comp=N,114µm,1.6s			AML	AML		
FINB	comp=E,102µm,1.2s			AML	AML		
FINB	comp=N,114µm,1.6s			AML	AML		
MOSI	**Grossmontoni** comp=E,884µm,0.8s	**2.62**	**338**	AML	AML		
MOSI				AML	AML		

	comp=N,1375µm,0.8s						
MOSI				AML	AML		
	comp=N,1375µm,0.8s						
MOSI				AML	AML		
	comp=E,884µm,0.8s						
MYKA	Terra Mystica	2.71	25	Pn	Pn	01 37 32.8	+1.0
	comp=E,8.5nm,0.4s						
PGF	Pioggiola	2.71	234	*e*Pn	Pn	01 37 32.8	+0.9
PGF				*e*Sn	Sn	01 38 04.5	+0.6
	comp=E,75nm,0.3s						
ROSI	Rosskopf	2.77	352	AML	AML		
	comp=E,611µm,1.5s						
ROSI				AML	AML		
	comp=E,611µm,1.5s						
ROSI				AML	AML		
	comp=N,740µm,0.8s						
ROSI				AML	AML		
	comp=N,740µm,0.8s						
OZLJ	Ozalj	2.87	59	*e*Pn	Pn	01 37 34.8	+0.9
OBKA	Obir	2.95	37	Pn	Pn	01 37 35.9	+0.8
	comp=N,5.8nm,0.2s						
FETA	Feichten	2.96	343	Pn	Pn	01 37 37.7	+2.4
	comp=N,15nm,0.2s,SNR=12						
FETA				Sn	Sn	01 38 13.0	+3.0
	comp=N,16nm,0.4s						
CRES	Cresnjev	2.97	55	*e*Pn	Pn	01 37 36.0	+0.7
DAVOX	Davos/Dischmat	2.98	331	AML	AML		
	comp=N,290µm,0.6s						
DAVOX				AML	AML		
	comp=E,284µm,1.6s						
DAVOX				AML	AML		
	comp=E,284µm,1.6s						
DAVOX				AML	AML		
	comp=N,290µm,0.6s						
KBA	Koelnbreinsper	3.05	18	*e*Pn	Pn	01 37 37.8	+1.2
	comp=N,24nm,0.3s						
SQTA	Sankt Quirin	3.08	350	*i* Pn	Pn	01 37 38.9	+2.0
	comp=N,19nm,0.2s,SNR=57						
SQTA				*e*Sn	Sn	01 38 14.1	+1.3
	comp=N,52nm,0.2s						
WTTA	Wattenberg	3.08	356	*e*Pn	Pn	01 37 39.4	+2.4
	comp=N,8.2nm,0.2s,SNR=5.9						
WTTA				*e*Sn	Sn	01 38 15.5	+2.5
	comp=N,38nm,0.3s						
WATA	Walderalm	3.16	355	*e*Pn	Pn	01 37 40.6	+2.5
	comp=N,17nm,0.1s,SNR=32						
MOTA	Moosalm	3.21	349	*e*Pn	Pn	01 37 41.4	+2.6
	comp=N,7.5nm,0.2s,SNR=13						
SBF	Sospel	3.28	266	*e*Pn	Pn	01 37 41.0	+1.3
SBF				*e*Sn	Sn	01 38 17.7	-0.1
	comp=N,48nm,0.3s						
SOKA	Soboth	3.29	40	*e*Pn	Pn	01 37 40.5	+0.6
	comp=N,4.8nm,0.3s						
RETA	Reutte	3.40	346	*e*Pn	Pn	01 37 43.8	+2.5
	comp=N,6.7nm,0.2s,SNR=20						
RETA				*e*Sn	Sn	01 38 23.8	+3.0
	comp=N,75nm,0.5s						
DAVA	Damuels	3.42	336	*e*Pn	Pn	01 37 44.6	+2.9
	comp=N,22nm,0.2s,SNR=18						
DAVA				*e*Sn	Sn	01 38 24.7	+3.3
	comp=N,93nm,0.3s						
ISO	Isola	3.54	272	P	Pn	01 37 44.9	+1.8
ISO				S	Sn	01 38 28.1	+4.1
BNALP	Bannalp	3.66	318	AML	AML		
	comp=N,363µm,0.4s						
BNALP				AML	AML		
	comp=E,294µm,1.4s						
BNALP				AML	AML		
	comp=N,363µm,0.4s						
BNALP				AML	AML		
	comp=E,294µm,1.4s						
SURF	Saint Ours	3.71	276	P	Pn	01 37 47.1	+1.5
SURF				S	Sn	01 38 31.4	+2.9
MBDF	Montbardon	3.76	280	*e*Pn	Pn	01 37 47.8	+1.5
MBDF				*e*Sn	Sn	01 38 29.3	-0.3
	comp=E,6.5nm,0.3s						
BLY	Banja Luka	3.78	80	*e*Pn	Pn	01 37 46.0	-0.4
LPG	La Plagne	3.93	291	*e*Pn	Pn	01 37 49.3	+0.5
LPG				*e*Sn	Sn	01 38 33.1	-1.0
	comp=E,4.6nm,0.2s						
ARSA	Arzberg	3.95	38	*e*Pn	Pn	01 37 49.1	+0.4
	comp=E,5.3nm,0.2s						
LPL	La Plagne	3.95	291	*e*Pn	Pn	01 37 49.9	+0.9
LPL				*e*Sn	Sn	01 38 33.6	-0.9
	comp=E,5.8nm,0.2s						
MOA	Molln	4.00	23	*i* Pn	Pn	01 37 50.9	+1.5
	comp=E,6.1nm,0.2s						
MOA				*e*Sn	Sn	01 38 36.4	+1.0
	comp=E,20nm,0.4s						
LMR	La Mourre	4.04	260	*e*Pn	Pn	01 37 51.5	+1.4
LMR				*e*Sn	Sn	01 38 36.1	-0.4
	comp=E,14nm,0.3s						
RSL	Roselend	4.08	293	P	Pn	01 37 52.7	+2.0
BEHE	Becsehely	4.09	54	*e*Pn	Pn	01 37 50.2	-0.5
ORIF	Oris-en-Rattie	4.41	282	*e*Pn	Pn	01 37 57.7	+2.5
ORIF				*e*Sn	Sn	01 38 44.7	-0.9
ORIF				*e*S	Sb	01 38 51.8	-7.7
	comp=E,10nm,0.4s						
ORIF	Oris-en-Rattie	4.41	282	P	Pn	01 37 57.1	+1.9
ORIF				S	Sn	01 38 48.6	+2.9
OG02	Monnetier-Morn	4.51	298	P	Pn	01 37 58.7	+2.1
SMRF	Simiane la Rot	4.61	270	*e*Pn	Pn	01 37 59.2	+1.3
SMRF				*e*Sn	Sn	01 38 49.3	-1.2
	comp=E,3.0nm,0.3s						
CONA	Conrad Observa	4.62	35	*e*Pn	Pn	01 37 58.7	+0.7
	comp=E,2.6nm,0.2s						
CONA				*e*Sn	Sn	01 38 52.0	+1.2
	comp=E,6.0nm,0.3s						
OGSM	Saint Maurice	4.67	290	P	Pn	01 38 00.3	+1.5
KIZ	Kirchzarten	4.70	325	P	Pn	01 38 00.7	+1.5
LOMF	Lomont	4.79	313	P	Pn	01 38 01.4	+1.1
CABF	La Chapelle	4.79	302	*e*Pn	Pn	01 38 01.9	+1.4
CABF				*e*Sn	Sn	01 38 53.5	-1.6
TREB	Trebinje	4.88	105	*e*Pn	Pn	01 37 59.6	-1.9
OG35	Corcelles	4.89	295	P	Pn	01 38 02.8	+1.1
BRY	Bratogost	4.95	103	*e*Pn	Pn	01 38 02.4	-0.3
MOF	Molkenrain	4.97	319	P	Pn	01 38 03.7	+0.8
HAPS	Han Pijesak,BI	5.03	89	*e*Pn	Pn	01 38 03.3	-0.4
OPP	Oppenau	5.04	330	P	Pn	01 38 04.7	+0.9
HINF	Hinteralfeld	5.08	317	*e*Pn	Pn	01 38 05.0	+0.6
HINF				*e*Sn	Sn	01 39 00.4	-1.7
	comp=E,50nm,0.3s						
MORH	Mrgy, Hungar	5.14	64	*e*Pn	Pn	01 38 04.0	-1.0
ECH	Echery	5.23	322	P	Pn	01 38 07.1	+0.8
VIVF	Saint-Julien-l	5.26	280	*e*Pn	Pn	01 38 07.7	+0.9
VIVF				*e*Sn	Sn	01 39 05.0	-1.4
	comp=E,1.3nm,0.2s						
WLS	Welschbruch	5.29	325	P	Pn	01 38 08.7	+1.4
CDF	Champ du Feu	5.33	324	*e*Pn	Pn	01 38 08.8	+1.0
CDF				*e*Sn	Sn	01 39 06.2	-2.0
	comp=E,33nm,0.3s						
ZST	Bratislava	5.36	40	*e*PN	Pn	01 38 07.1	-1.1
ZST				*e*SN	Sn	01 39 06.4	-2.6
HAU	Haudompre	5.46	316	*e*Pn	Pn	01 38 10.3	+0.8
HAU				*e*Sn	Sn	01 39 09.3	-2.1
	comp=E,197nm,0.4s						
MODS	Modra-Piesok	5.57	39	*e*PN	Pn	01 38 10.7	-0.4
PDG	Podgorica	5.60	106	*e*Pn	Pn	01 38 13.0	+1.5
DRME	Dracevica, Mon	5.64	108	*e*Pn	Pn	01 38 13.3	+1.2
KRUC	Moravsky	5.75	30	*e*PN	Pn	01 38 13.3	-0.2
KRUC				*e*SN	Sn	01 39 17.0	-1.5
THEF	They Montfort	5.79	316	P	Pn	01 38 15.4	+1.4
LASF	Ste Croix	5.84	272	*e*Pn	Pn	01 38 16.0	+1.3
LASF				*e*Sn	Sn	01 39 19.0	-1.7
	comp=E,0.4nm,0.2s						
PAGF	Fort de Pagny	6.14	318	*e*Pn	Pn	01 38 19.6	+0.8
PAGF				*e*Sn	Sn	01 39 21.3	-6.8
SMF	Signal de Mont	6.22	296	*e*Pn	Pn	01 38 20.8	+0.8
SMF				*e*Sn	Sn	01 39 28.1	-2.1
	comp=E,12nm,0.3s						
SFTF	Sexfontaines	6.26	312	*e*Pn	Pn	01 38 21.6	+1.1
SFTF				*e*Sn	Sn	01 39 28.8	-2.3
	comp=E,9.5nm,0.2s						
VYHS	Vyhne	6.41	45	*e*SN	Sn	01 39 31.8	-3.1
MEZF	Maizieres J'vi	6.44	314	*e*Pn	Pn	01 38 24.4	+1.5
MEZF				*e*Sn	Sn	01 39 33.0	-2.5
	comp=E,11nm,0.3s						
ABH	Alteburg	6.44	334	P	Pn	01 38 24.4	+1.3
LOR	Lormes	6.45	301	*e*Pn	Pn	01 38 24.1	+0.9
LOR				*e*Sn	Sn	01 39 33.2	-2.7
	comp=E,17nm,0.3s						
LOR	Lormes	6.45	301	P	Pn	01 38 24.1	+0.9
AVF	Avril sur Loir	6.59	296	*e*Pn	Pn	01 38 25.9	+0.9
AVF				*e*Sn	Sn	01 39 36.4	-2.7
	comp=E,2.7nm,0.2s						
SSF	Saint Saulge	6.59	299	*e*Pn	Pn	01 38 25.7	+0.7
SSF				*e*Sn	Sn	01 39 36.7	-2.5
	comp=E,6.6nm,0.2s						
WLF	Walferdange	6.77	326	⇑Pn	Pn	01 38 30.7	+3.2
WLF				⇑Sn	Sn	01 39 39.5	-4.0
	comp=N,14nm,0.0s						
BGF	Bois d'Agland	6.84	293	*e*Pn	Pn	01 38 28.7	+0.2
BGF				*e*Sn	Sn	01 39 41.9	-3.6
MTLF	Montolieu	7.11	267	*e*Pn	Pn	01 38 33.6	+1.4
MTLF				*e*Sn	Sn	01 39 49.5	-2.5
CLL	Collm	7.16	5	*i* Pn	Pn	01 38 32.6	-0.2
CLL				*e*Sg	Sb	01 40 46.0	+28
TCF	Toulx Ste Croi	7.20	290	*e*Pn	Pn	01 38 34.9	+1.5
TCF				*e*Sn	Sn	01 39 51.5	-2.7
	comp=N,5.5nm,0.3s						
MEM	Membach	7.58	330	⇑Pn	Pn	01 38 40.7	+2.0
MEM				⇓Sn	Sn	01 40 00.0	-3.6
	comp=N,8.7nm,0.0s						
GIVF	Givet	7.66	323	*e*Pn	Pn	01 38 41.7	+2.1
GIVF				*e*Sn	Sn	01 39 57.5	-7.9
DOU	Dourbes	7.75	322	⇓Pn	Pn	01 38 43.9	+3.0
DOU				⇑Sn	Sn	01 40 02.8	-4.9
	comp=N,7.9nm,0.0s						
BAIF	Baives	7.90	321	*e*Pn	Pn	01 38 44.9	+1.9
BAIF				*e*Sn	Sn	01 40 03.4	-7.9

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*IDC **06** 01:40:24.7±1.1, 10.°86S×165.°37E, h0^{km}, mb4.4/12, mb1 4.6/14, mb1mx4.4/52, mbtmp4.5/14, ML4.8/2, Error ellipse: s-maj=30.9km s-min=20.3km az=109.0*

*NEIC **06** 01:40:26.4±0.4, 10.°88S×165.°28E, h10^{km}, mb5.4/15, Error ellipse: s-maj=11.0km s-min=8.0km az=104.0*

*ISCJB **06** 01:40:27.1±0.4, 10.°91S±0.°06×165.°24E±0.°08, h30^{km}, mb5.0/24, Error ellipse: s-maj=10.9km s-min=7.9km az=7.5*

ISC 06 01:40:29.2±0.6, **10.°91S**±0.°08×**165.°2E**±0.°1, **h30**^{km}, **n49**, σ**1.^{s}26**/43, **mb5.1**/24, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.39	285	Pn	Pn	01 41 49.3	+1.6
	41nm,0.3s,baz=180,slow=12,SNR=3.2						
DZM	Mont Dzumac	11.16	174	Pn	Pn	01 43 07.8	+0.9
	4.4nm,0.3s,baz=54,slow=19,SNR=6.0						
EIDS	Eidsvold	19.65	221	*e*P	P	01 44 56.5	+0.7
CTA	Charters Tower	20.41	241	P	Pn	01 45 07.0	+0.7
	24nm,0.8s,baz=276,slow=19,SNR=3.1						
CTAO	Charters Tower	20.41	241	*e*P	P	01 45 04.5	+0.5
COEN	Coen	21.74	260	*e*P	P	01 45 17.4	-1.0
OUZ	Omahuta	25.37	164	*e*P	P	01 45 53.7	-0.2
BKZ	Black Stump Fm	29.88	162	*e*P	P	01 46 34.1	-0.1
	59nm,1.2s						
H11N1	WAKE ISLAND Hy	30.47	3	T	T	02 18 56.3	
	baz=188,slow=76						
H11N3	WAKE ISLAND Hy	30.48	3	T	T	02 18 44.4	
	baz=188,slow=76						
H11N2	WAKE ISLAND Hy	30.49	3	T	T	02 18 59.0	
	baz=188,slow=76						
WR1	Warramunga Arr	31.05	249	*e*P	P	01 46 45.1	+0.3
WRA	Warramunga Arr	31.05	249	P	P	01 46 45.1	+0.3
	4.2nm,0.8s,baz=146,slow=16,SNR=0.2						
THZ	Tophouse	31.47	169	*e*P	P	01 46 49.4	+1.2
	51nm,1.2s						
AS31	Alice Springs	32.39	243	*e*P	P	01 46 57.3	+0.7
	7.2nm,1.1s						
ASAR	Alice Springs	32.39	243	P	P	01 46 57.3	+0.7
	13nm,1.1s,baz=72,slow=10,SNR=4.8						
BBOO	Buckleboo	34.55	226	*e*P	P	01 47 13.0	-2.2
MJAR	Matsushiro Arr	53.61	333	P	P	01 49 47.9	+0.1
	3.4nm,0.8s,baz=170,slow=9.0,SNR=3.9						
MAJO	Matsushiro	53.62	333	*e*P	P	01 49 47.9	+0.1
JNU	Nakatsue	54.67	325	*e*P	P	01 49 55.7	+0.1
	47nm,1.2s						
JNU	Nakatsue	54.67	325	P	P	01 49 55.7	+0.1
	7.7nm,0.8s,baz=180,slow=7.1,SNR=3.5						
ASAJ	Asahikawa	58.50	341	P	P	01 50 22.2	-0.4
	6.5nm,0.7s,baz=156,slow=10.0,SNR=3.4						
KSRS	Korea Array	59.47	326	P	P	01 50 30.9	+1.4
	2.5nm,0.8s,baz=145,slow=7.0,SNR=3.4						
KS15	Wonju Array Si	59.49	326	*e*P	P	01 50 30.9	+1.3
	23nm,1.4s						
KSAR	Wonju Array Be	59.49	326	P	P	01 50 30.9	+1.3
USRK	Ussuriysk Ar.	62.59	334	P	P	01 50 50.3	-0.3
	2.0nm,0.7s,baz=181,slow=6.9,SNR=3.7						
PEA0B	Petropavlovsk-	64.09	355	*e*P	P	01 50 58.8	-1.5
	52nm,1.3s						
PETK	Petropavlovsk-	64.09	355	P	P	01 51 00.3	+0.1
	3.9nm,1.0s,baz=151,slow=3.3,SNR=2.3						
PEA1	Petropavlovsk-	64.09	355	*e*P	P	01 51 00.3	0.0
KIWB	Kanaga Island	64.34	12	*e*P	P	01 51 02.8	+0.8
BKNI	Bangkinang	64.74	276	*e*P	P	01 51 03.5	-1.8
	52nm,0.5s						
KLR	Kul'dur	66.73	337	P	P	01 51 17.4	-0.1
	4.1nm,1.0s,baz=135,slow=1.4,SNR=2.9						
MA2	Magadan	71.20	352	P	P	01 51 45.2	+0.2
	2.7nm,0.3s,baz=19,slow=18,SNR=2.0						
CM01	Chiang Mai Arr	71.56	294	*e*P	P	01 51 47.1	-0.9
GAMB	Gambell	76.53	10	*e*P	P	01 52 15.1	-1.0
	17nm,1.0s						
ILAR	Eielson Array	83.55	19	P	P	01 52 54.6	+0.6
	1.6nm,0.7s,baz=235,slow=4.9,SNR=4.0						
ILB	Eielson Array	83.55	19	*e*P	P	01 52 54.6	+0.6
	14nm,1.5s						
MK01	Makanchi Array	93.06	317	*e*P	P	01 53 42.5	+2.4
MK31	Makanchi Array	93.07	317	*e*P	P	01 53 42.4	+2.2
	40nm,1.3s						
MAKZ	Makanchi	93.28	317	*e*P	P	01 53 41.8	+0.6
	14nm,0.8s						
PV10	Paradox Valley	93.38	52	*e*P	P	01 53 47.3	+5.2
	37nm,1.3s						
PV14	Lion Creek, Pa	93.39	52	*e*P	P	01 53 46.7	+4.5
	32nm,1.3s						
PV07	Paradox Valley	93.69	52	*e*P	P	01 53 46.8	+3.3
	19nm,1.1s						
PV01	Paradox Valley	93.69	52	*e*P	P	01 53 45.3	+1.8
	20nm,1.1s						
PDAR	Pinedale Array	93.84	47	*e*P	P	01 53 42.7	-1.5
BNM	Barren Site	94.52	56	*e*P	P	01 53 44.7	-2.8
BOSA	Boshof	124.86	224	PKP	PKiKP	01 59 27.7	+0.2
	4.1nm,1.1s,baz=159,slow=10,SNR=3.0						
SDV	Santo Domingo	125.00	87	PKP	PKiKP	01 59 27.9	-0.3
	3.1nm,0.7s,baz=300,slow=14,SNR=3.2						
SUR	Sutherland	125.14	217	PKP	PKPdf	01 59 26.2	-1.5
	10nm,1.1s,baz=66,slow=18,SNR=2.2						

IDC 06 01:41:38.5±2.9, **12.°00S**×**165.°52E**, **h0**^{km}, **mb4.4**/2, **mb1 4.5**/2, **mb1mx3.9**/50, **mbtmp4.4**/2, **Error ellipse: s-maj=124.1km s-min=48.2km az=134.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	32.18	245	P	P	01 48 08.4	0.0
	5.2nm,0.8s,baz=66,slow=10,SNR=4.3						
SONM	Songino Array	79.30	324	P	P	01 53 46.5	+0.3
	1.5nm,0.6s,baz=104,slow=6.1,SNR=2.5						
ARCES	ARCESS Array B	117.20	345	PKP	PKPdf	02 00 24.6	-0.7
	3.9nm,0.8s,baz=66,slow=2.5,SNR=7.5						
ESDC	Sonseca Array	150.91	343	PKPbc	PKPbc	02 01 33.6	0.0
	0.6nm,0.6s,baz=41,slow=1.8,SNR=4.0						

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*ISCJB **06** 01:43:27.1±0.9, 11.°4S±0.°1×165.°8E±0.°2, h10^{km}, mb4.2/6, Error ellipse: s-maj=32.3km s-min=16.9km az=8.7*

*IDC **06** 01:43:27.1±1.2, 11.°33S×165.°88E, h0^{km}, mb4.3/6, mb1 4.4/7, mb1mx4.1/51, mbtmp4.3/7, ML4.4/1, Error ellipse: s-maj=53.6km s-min=25.5km az=117.0*

ISC 06 01:43:28.7±0.9, **11.°3S**±0.°1×**165.°8E**±0.°2, **h10**^{km}, **n9**, σ**1.^{s}34**/9, **mb4.3**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.72	177	Pn	Pn	01 46 02.9	+0.4
	2.9nm,0.3s,baz=351,slow=19,SNR=2.5						
STKA	Stephens Creek	30.32	224	P	P	01 49 41.0	+0.5
	3.2nm,0.6s,baz=60,slow=5.6,SNR=4.4						
ASAR	Alice Springs	32.76	244	P	P	01 50 00.9	-1.2
	1.9nm,0.8s,baz=65,slow=11,SNR=2.6						
SONM	Songino Array	78.93	324	P	P	01 55 34.8	+2.2
	2.9nm,1.0s,baz=129,slow=5.7,SNR=3.8						
ILAR	Eielson Array	83.73	18	P	P	01 55 58.0	+0.4
	1.8nm,0.7s,baz=231,slow=4.6,SNR=4.6						
MKAR	Makanchi Array	93.77	317	P	P	01 56 45.5	-0.6
	1.6nm,0.7s,baz=101,slow=4.9,SNR=3.0						
YKA	Yellowknife Ar	95.16	27	P	P	01 56 51.0	-1.0
	0.3nm,0.6s,baz=262,slow=4.6,SNR=3.9						
ARCES	ARCESS Array B	116.61	345	PKP	PKiKP	02 02 12.9	+0.3
	1.8nm,0.9s,baz=46,slow=2.6,SNR=2.3						
ESDC	Sonseca Array	150.33	344	PKPbc	PKiKP	02 03 19.9	-1.6
	0.6nm,0.7s,baz=356,slow=3.4,SNR=2.5						

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*IDC **06** 01:44:59.9±1.7, 11.°51S×165.°14E, h0^{km}, mb4.4/9, mb1 4.5/9, mb1mx4.2/49, mbtmp4.3/9, Error ellipse: s-maj=63.1km s-min=28.7km az=149.0*

*ISCJB **06** 01:45:04.0±1.4, 11.°5S±0.°3×165.°0E±0.°2, h34^{km}, mb4.3/9, Error ellipse: s-maj=50.2km s-min=21.9km az=149.1*

ISC 06 01:45:05.1±1.5, **11.°5S**±0.°3×**165.°1E**±0.°2, **h34**^{km}, **n10**, σ**0.^{s}97**/10, **mb4.2**/9, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	32.01	244	P	P	01 51 29.6	+1.0
	5.4nm,1.0s,baz=71,slow=9.3,SNR=5.1						
BATI	Baumata	40.69	268	P	P	01 52 41.1	-1.7
	18nm,0.3s,baz=106,slow=7.4,SNR=3.2						
KSRS	Korea Array	59.93	326	P	P	01 55 08.5	+0.5
	0.7nm,0.4s,baz=133,slow=8.4,SNR=3.0						
SONM	Songino Array	78.69	324	P	P	01 57 04.7	+0.6
	1.5nm,0.9s,baz=155,slow=4.8,SNR=2.6						
ILAR	Eielson Array	84.18	19	P	P	01 57 32.6	+0.1
	1.4nm,0.7s,baz=237,slow=5.6,SNR=3.8						
NVAR	Mina Array Bea	86.82	50	P	P	01 57 46.7	0.0
	1.2nm,0.8s,baz=235,slow=6.4,SNR=3.0						
MKAR	Makanchi Array	93.45	317	P	P	01 58 18.2	+1.0
	2.8nm,0.8s,baz=101,slow=5.7,SNR=4.9						
ZALV	Zalesovo Beam	93.59	324	P	P	01 58 16.9	-0.8
	1.2nm,0.6s,baz=101,slow=5.8,SNR=4.0						
YKA	Yellowknife Ar	95.70	27	P	P	01 58 26.5	-0.6
	0.5nm,0.8s,baz=250,slow=4.6,SNR=4.7						
ARCES	ARCESS Array B	116.65	345	PKP	PKiKP	02 03 45.1	-0.1
	2.6nm,0.8s,baz=90,slow=2.0,SNR=3.2						

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*ISCJB **06** 01:45:58.0±0.3, 11.°37S±0.°06×165.°86E±0.°06, h10^{km}, mb4.7/22, Error ellipse: s-maj=9.1km s-min=8.2km az=139.1*

*IDC **06** 01:45:58.5±0.7, 11.°24S×165.°86E, h0^{km}, mb4.3/12, mb1 4.5/13, mb1mx4.3/49, mbtmp4.3/13, ML4.8/1, Error ellipse: s-maj=30.5km s-min=18.0km az=139.0*

*NEIC **06** 01:45:59.7±0.2, 11.°31S×165.°88E, h10^{km}, mb5.1/12, Error ellipse: s-maj=7.0km s-min=6.1km az=129.0*

ISC 06 01:45:59.4±0.4, **11.°34S**±0.°08×**165.°99E**±0.°08, **h10**^{km}, **n48**, σ**1.^{s}39**/50, **mb4.6**/22, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.68	178	Pn	Pn	01 48 35.9	+3.3
	7.3nm,0.3s,baz=356,slow=15,SNR=6.2						
MSVF	Nonsavu	13.29	120	*e*Pn	Pn	01 49 09.1	+0.8
MSVF				*e*Sn	S	01 51 54.6	-6.2
CTA	Charters Tower	20.88	243	P	Pn	01 50 42.6	-1.8
	7.8nm,0.8s,baz=58,slow=13,SNR=2.7						
LHI	Lord Howe Isla	21.08	197	*e*P	P	01 50 42.0	-1.9
	167nm,1.4s						
ARMA	Armidale	23.20	213	*e*P	P	01 51 07.7	+0.9
NIUE	Niue	24.45	111	*e*P	P	01 51 20.5	+1.7
	484nm,1.4s						
STKA	Stephens Creek	30.40	224	P	P	01 52 12.7	+0.8
	3.5nm,0.7s,baz=49,slow=8.5,SNR=2.9						
THZ	Tophouse	30.91	170	*e*P	P	01 52 17.6	+1.3
WB2	Warramunga Arr	31.60	250	*e*P	P	01 52 21.9	-0.9
WR1	Warramunga Arr	31.61	250	*e*P	P	01 52 22.0	-0.8
WRA	Warramunga Arr	31.61	250	P	P	01 52 22.0	-0.8
	7.4nm,0.9s,baz=80,slow=9.1,SNR=3.7						
KHZ	Kahutara	31.65	169	*e*P	P	01 52 23.4	+0.5
AS31	Alice Springs	32.88	244	*e*P	P	01 52 32.5	-1.5
	0.9nm,0.2s						
ASAR	Alice Springs	32.88	244	P	P	01 52 32.5	-1.5
	2.0nm,0.7s,baz=68,slow=9.8,SNR=3.5						
MTN	Manton Dam	34.10	264	*e*P	P	01 52 43.1	-1.6
WHZ	Wether Hill Ro	34.47	178	*e*P	P	01 52 48.5	+1.0
	6.0nm,0.9s						
FITZ	Fitzroy Crossi	39.54	255	*e*P	P	01 53 29.5	-1.4
HPO	Honuapo	48.49	52	*e*P	P	01 54 42.6	-0.1
KKM	Kota Kinabalu	52.45	287	*e*P	P	01 55 12.4	-0.6
	61nm,1.5s						
UGM	Wanagama	54.73	268	*e*P	P	01 55 28.7	-1.0
	25nm,1.0s						
CASY	Casey	66.19	201	*e*P	P	01 56 46.0	-1.1
	5.5nm,1.1s						
SBA	Scott Base	66.50	180	*e*P	P	01 56 48.3	-0.6
	107nm,1.5s						
NIKH	Nikolski High	67.59	16	*e*P	P	01 56 56.6	+0.5
	89nm,1.4s						
CM31	Chiang Mai Arr	72.45	294	*e*P	P	01 57 27.6	+0.9
	6.6nm,0.7s						
CMAR	Chiang Mai Arr	72.45	294	P	P	01 57 27.6	+0.9
	5.9nm,0.8s,baz=126,slow=4.9,SNR=10.0						
SONA0	Songino Array	79.05	324	*e*P	P	01 58 04.6	+0.5
SONM	Songino Array	79.05	324	P	P	01 58 04.6	+0.5
	1.1nm,0.8s,baz=130,slow=4.3,SNR=2.6						
HDA	Harding Lake	83.44	19	*e*P	P	01 58 27.3	+0.5
	13nm,0.8s						
ILAR	Eielson Array	83.71	18	P	P	01 58 28.7	+0.5
	2.1nm,0.7s,baz=244,slow=4.8,SNR=6.5						
ILB	Eielson Array	83.71	18	*e*P	P	01 58 28.7	+0.5
	3.3nm,1.0s						
NV01	Mina Array Sit	86.03	50	*e*P	P	01 58 42.2	+1.4
NVAR	Mina Array Bea	86.03	50	P	P	01 58 42.2	+1.4
	0.7nm,0.7s,baz=243,slow=9.0,SNR=2.9						
MK32	Makanchi Array	93.90	317	*e*P	P	01 59 17.5	0.0
MKAR	Makanchi Array	93.90	317	P	P	01 59 17.5	+0.1
	2.2nm,0.7s,baz=93,slow=6.7,SNR=5.7						
ZALV	Zalesovo Beam	93.94	324	P	P	01 59 16.6	-0.7
	0.8nm,0.5s,baz=122,slow=5.4,SNR=3.1						
ZAA1	Zalesovo Array	93.94	324	*e*P	P	01 59 16.6	-0.7
YKA	Yellowknife Ar	95.12	27	P	P	01 59 21.7	-0.8
	0.4nm,0.6s,baz=258,slow=4.7,SNR=5.7						
YKB5	Yellowknife Ar	95.12	27	*e*P	P	01 59 21.7	-0.8
LTX	Lajitas	95.76	61	*e*P	P	01 59 27.3	+0.8
TXAR	Lajitas Array	95.76	61	P	P	01 59 27.3	+0.8
	0.3nm,0.8s,baz=244,slow=5.9,SNR=2.6						
ARA0	ARCESS Array S	116.68	345	*e*PKPdf	PKiKP	02 04 43.6	+0.2
ARCES	ARCESS Array B	116.68	345	PKP	PKiKP	02 04 43.6	+0.1
	0.6nm,0.5s,baz=58,slow=1.1,SNR=6.2						
SFJD	Kangerlussuaq	119.28	16	PKP	PKiKP	02 04 49.1	+0.6
	2.7nm,0.7s,baz=324,slow=9.3,SNR=3.7						
SIV	San Ignacio	126.09	119	PKP	PKiKP	02 05 03.8	+0.2
	0.6nm,0.5s,baz=233,slow=7.2,SNR=4.4						
KEST	Kesra	147.80	323	PKPbc	PKiKP	02 05 46.0	-1.3
	5.5nm,0.7s,baz=241,slow=10.0,SNR=4.1						
ESDC	Sonseca Array	150.41	344	PKPbc	PKiKP	02 05 51.5	-1.0
	1.1nm,0.6s,baz=15,slow=3.3,SNR=5.0						
TORD	Torodi Ar. Bea	164.55	278	PKP	PKPdf	02 06 04.8	+0.2
	1.2nm,0.9s,baz=65,slow=1.5,SNR=3.3						
TORD				PKPab	PKPab	02 06 58.7	-0.9
	3.3nm,1.4s,baz=84,slow=4.9,SNR=2.9						
TOA1	Torodi Ar. Sit	164.55	278	*e*PKPdf	PKPdf	02 06 04.8	+0.2
TOA1				*e*PKPab	PKPab	02 06 58.7	-0.9

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*IDC **06** 01:48:40.6±0.4, 11.°64S×166.°04E, h0^{km}, mb5.2/35, mb1 5.2/37, mb1mx5.2/49, mbtmp5.1/37, ML5.2/2, Error ellipse: s-maj=13.4km s-min=10.5km az=93.0*

*ISCJB **06** 01:48:41.8±0.1, 11.°67S±0.°02×166.°01E±0.°02, h19^{km}, mb5.4/266, MS7.0/1, Error ellipse: s-maj=3.4km s-min=2.9km az=43.9*

*NEIC **06** 01:48:42.1±0.1, 11.°64S×166.°02E, h10^{km}, mb5.5/190, Error ellipse: s-maj=4.1km s-min=3.3km az=113.0*

*BJI **06** 01:48:42.3, 11.°10S×166.°00E, h7^{km}, mB5.7/5, mb5.6/60, Ms5.8/4, Ms7 5.6/4*

*MOS **06** 01:48:44.0±1.3, 11.°51S×165.°84E, h27^{km}, mb5.6/53, Error ellipse: s-maj=7.7km s-min=6.6km az=115.7*

ISC 06 01:48:42.8±0.8, **11.°69S**±0.°04×**166.°06E**±0.°05, **h15**^{km}±4^{km}, **n674**, σ**1.^{s}45**/705, **mb5.4**/266, **26C-26D**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.41	290	*e*Pn	Pn	01 50 14.7	-2.1
HNR				*e*Sn	Sn	01 51 26.4	-3.4
HNR	Honiara	6.41	290	*e*P	Pn	01 50 14.7	-2.1
HNR				*e*		01 51 26.4	
HNR	Honiara	6.41	290	Pn	Pn	01 50 17.6	+0.8
	87nm,0.3s,baz=149,slow=4.3,SNR=7.1						
HNR				Sn	Sn	01 51 28.6	-1.2
	81nm,0.3s,baz=252,slow=19,SNR=4.1						

MARNC	Mare, Loyalty	9.92	169	ePn	Pn	01 51 05.0	+0.2
DZM	Mont Dzumac	10.33	178	ePn	Pn	01 51 12.3	+1.7
DZM				eSn	Sn	01 53 07.5	+1.3
DZM	Mont Dzumac	10.33	178	Pn	Pn	01 51 11.9	+1.3
	14nm,0.3s,baz=309,slow=13,SNR=8.7						
DZM				Sn	Sn	01 53 07.5	+1.3
	6.9nm,0.3s,baz=260,slow=18,SNR=2.6						
ONTNC	Ouen Toro	10.57	178	ePn	Pn	01 51 15.6	+1.9
ONTNC				eSn	Sn	01 53 10.5	-1.4
PINNC	Pines Island,	10.94	173	ePn	Pn	01 51 19.9	+1.0
MSVF	Nonsavu	13.06	119	iP	P	01 51 53.9	-4.4
EIDS	Eidsvold	19.64	224	P	Pn	01 53 12.9	+0.5
	baz=20,SNR=8.0						
EIDS	Eidsvold	19.64	224	eP	P	01 53 09.7	-1.4
KWAJ	Kwajalein Atol	20.42	4	eP	P	01 53 18.6	-0.9
	2µm,1.4s						
KWAJ	Kwajalein Atol	20.42	4	eP	P	01 53 18.6	-0.9
KWAJ				pmax	pmax		
	comp=Z,2µm,1.4s						
CTA	Charters Tower	20.78	244	P	P	01 53 24.3	+0.8
	comp=Z,60nm,0.9s,baz=72,slow=12,SNR=14						
CTAO	Charters Tower	20.78	244	eP	P	01 53 24.6	+1.1
	comp=Z,318nm,1.3s						
CTAO	Charters Tower	20.78	244	eP	P	01 53 24.6	+1.1
CTAO				pmax	pmax		
	comp=Z,318nm,1.3s						
MANU	Manus Island	20.87	296	eP	P	01 53 24.6	+0.1
	comp=Z,979nm,1.3s						
MTSU	Mount Surprise	21.95	250	P	P	01 53 36.7	+0.5
	baz=22,SNR=14						
RMQ	Roma	21.96	225	P	P	01 53 37.2	+1.1
	baz=22,SNR=28						
COEN	Coen	22.43	262	P	P	01 53 41.3	0.0
	baz=22,SNR=8.6						
COEN	Coen	22.43	262	eP	P	01 53 40.5	-0.8
	comp=Z,240nm,1.4s						
ARMA	Armidale	22.95	214	P	P	01 53 47.9	+1.1
	baz=23,SNR=30						
ARMA	Armidale	22.95	214	eP	P	01 53 46.1	-0.6
	comp=Z,241nm,1.1s						
RAO	Raoul Island	22.99	142	eS	S	01 57 53.0	-4.1
OUZ	Omahuta	24.40	165	eP	P	01 54 01.9	+1.2
	comp=Z,153nm,1.4s						
QLP	Quilpie	25.32	231	P	P	01 54 08.9	-0.2
	baz=25,SNR=4.3						
MGCD	Mangrove Creek	25.43	210	P	P	01 54 12.7	+2.7
	baz=26,SNR=7.6						
RIV	Riverview	25.91	209	P	P	01 54 15.7	+1.4
	baz=26,SNR=4.5						
QIS	Mount Isa	26.86	247	P	P	01 54 22.9	-0.3
	baz=27,SNR=8.9						
CMSA	Cobar Meteorol	27.27	220	P	P	01 54 27.9	+1.2
	baz=27,SNR=19						
HIZ	Hauiti	27.84	165	eP	P	01 54 33.0	+1.3
	comp=Z,217nm,1.7s						
URZ	Urewera	28.24	161	eP	P	01 54 34.6	-0.7
	comp=Z,20nm,0.9s						
URZ	Urewera	28.24	161	P	P	01 54 36.7	+1.4
	comp=Z,8.2nm,0.5s,baz=10.0,slow=18,SNR=6.0						
BKZ	Black Stump Fm	28.89	163	eP	P	01 54 41.2	0.0
STKA	Stephens Creek	30.19	224	P	P	01 54 53.0	+0.3
	baz=30,SNR=5.7						
STKA	Stephens Creek	30.19	224	eP	P	01 54 53.0	+0.3
	comp=Z,8.8nm,1.1s						
STKA				ePcP	PcP	01 57 53.6	-0.1
STKA	Stephens Creek	30.19	224	P	P	01 54 52.7	-0.1
	comp=Z,10nm,0.8s,baz=26,slow=10,SNR=5.3						
STKA				PcP	PcP	01 57 53.6	-0.1
	comp=Z,23nm,0.9s,baz=53,slow=2.9,SNR=5.5						
BFZ	Birch Farm	30.24	165	eP	P	01 54 51.8	-1.2
	comp=Z,87nm,1.2s						
SNZO	South Karori	30.47	167	eP	P	01 54 54.4	-0.6
	comp=Z,107nm,1.1s						
THZ	Tophouse	30.55	170	eP	P	01 54 57.1	+1.3
	comp=Z,111nm,1.0s						
KHZ	Kahutara	31.30	169	eP	P	01 55 04.1	+1.8
	comp=Z,244nm,1.9s						
LTZ	Lake Taylor	31.44	171	eP	P	01 55 03.9	+0.3
	comp=Z,62nm,0.9s						
WRAB	Tennant Creek	31.55	251	eP	P	01 55 03.5	-1.3
WRAB	Tennant Creek	31.55	251	ceP	P	01 55 03.2	-1.6
WRAB				pmax	pmax		
	comp=Z,229nm,1.7s						
WB2	Warramunga Arr	31.55	251	eP	P	01 55 03.5	-1.3
	comp=Z,15nm,0.8s						
WB2				ePcP	PcP	01 57 57.6	+0.1
WR1	Warramunga Arr	31.56	251	eP	P	01 55 04.2	-0.7
WR1				ePcP	PcP	01 57 57.9	+0.3
WRA	Warramunga Arr	31.56	251	P	P	01 55 04.2	-0.7
	comp=Z,39nm,1.1s,baz=81,slow=9.3,SNR=12						
WRA				PcP	PcP	01 57 57.9	+0.3
	comp=Z,5.9nm,0.8s,baz=69,slow=2.9,SNR=6.6						
TOO	Toolangi	31.69	212	P	P	01 55 06.8	+0.9
	baz=32,SNR=5.0						
TOO	Toolangi	31.69	212	eP	P	01 55 04.1	-1.8
	comp=Z,101nm,1.6s						
TOO	Toolangi	31.69	212	eP	P	01 55 04.1	-1.8
TOO				pmax	pmax		
	comp=Z,101nm,1.6s						
FOZ	Fox Glacier	31.89	175	eP	P	01 55 09.3	+1.8
	comp=Z,230nm,1.0s						
OXZ	Oxford	31.94	172	eP	P	01 55 08.8	+0.8
	comp=Z,96nm,1.1s						
RPZ	Rata Peaks	32.20	173	P	P	01 55 11.3	+1.1
	comp=Z,146nm,0.8s,baz=316,slow=1.6,SNR=42						
CRLZ	Canterbury Las	32.27	171	eP	P	01 55 12.5	+1.6
	comp=Z,267nm,1.4s						
MQZ	McQueen's Vall	32.41	171	eP	P	01 55 13.0	+1.0
	comp=Z,175nm,1.2s						
AS01	Alice Springs	32.74	244	eP	P	01 55 12.9	-2.4
AS01				ePcP	PcP	01 57 59.9	-0.8
LBZ	Lake Benmore	32.77	175	eP	P	01 55 15.6	+0.3
	comp=Z,131nm,1.4s						
AS31	Alice Springs	32.78	244	eP	P	01 55 14.3	-1.4
	comp=Z,12nm,0.9s						
AS31				ePcP	PcP	01 58 01.1	+0.2
ASAR	Alice Springs	32.78	244	P	P	01 55 14.5	-1.2
	comp=Z,27nm,0.8s,baz=74,slow=9.6,SNR=39						
ASAR				PcP	PcP	01 58 01.1	+0.2
	comp=Z,15nm,0.9s,baz=84,slow=2.6,SNR=12						
KDU	Kakadu	32.83	265	P	P	01 55 14.8	-1.3
	baz=33,SNR=12						
HTT	Hallett	32.93	225	P	P	01 55 17.0	+0.2
	baz=33,SNR=5.5						
WKZ	Wanaka	33.12	176	eP	P	01 55 19.5	+1.2
	comp=Z,718nm,1.7s						
ODZ	Otahua Downs	33.47	174	eP	P	01 55 21.9	+0.6
	comp=Z,52nm,1.1s						
MLZ	Mavora Lakes	33.61	177	eP	P	01 55 23.2	+0.6
	comp=Z,162nm,1.3s						
DCZ	Deep Cove	33.67	179	eP	P	01 55 24.1	+1.1
	comp=Z,134nm,1.1s						
WHZ	Wether Hill Ro	34.12	178	eP	P	01 55 27.8	+0.8
	comp=Z,364nm,1.9s						
MTN	Manton Dam	34.13	264	eP	P	01 55 25.9	-1.5
BBOO	Buckleboo	34.62	228	eP	P	01 55 30.6	-0.9
MOO	Moorlands	34.77	205	P	P	01 55 33.8	+1.2
	baz=35,SNR=7.9						
TAU	Tasmania Unive	35.11	204	eP	P	01 55 36.6	+1.1
	comp=Z,162nm,1.5s						
TAU	Tasmania Unive	35.11	204	eP	P	01 55 36.6	+1.1
TAU				pmax	pmax		
	comp=Z,162nm,1.5s						
KNRA	Kununurra	36.42	259	P	P	01 55 46.7	-0.5
	baz=36,SNR=14						
BNDI	Bandanaira	36.46	278	P	P	01 55 46.8	-0.8
	comp=Z,404nm,1.2s						
WRKA	Warakurna	38.08	244	P	P	01 56 00.4	-0.9
	baz=38,SNR=16						
NLAI	Namlea	39.49	279	P	P	01 56 13.3	+0.2
	comp=Z,140nm,2.0s						
FITZ	Fitzroy Crossi	39.51	256	P	P	01 56 12.6	-0.7
	baz=40,SNR=6.9						
FITZ	Fitzroy Crossi	39.51	256	P	P	01 56 12.6	-0.7
	comp=Z,36nm,0.9s,baz=96,slow=9.8,SNR=10						
FORT	Forrest	39.93	236	P	P	01 56 16.4	-0.2
	baz=40,SNR=6.4						
FORT	Forrest	39.93	236	eP	P	01 56 15.7	-0.9
	comp=Z,109nm,1.0s						
TNTI	Ternate	40.38	285	P	P	01 56 18.0	-2.5
	comp=Z,42nm,0.8s						
SANI	Sanana	40.86	280	P	P	01 56 24.3	-0.2
	comp=Z,122nm,1.4s						
SOEI	Soe	41.08	269	eP	P	01 56 27.4	+0.9
	comp=Z,184nm,1.3s						
SOEI	Soe	41.08	269	P	P	01 56 26.7	+0.2
BATI	Baumata	41.62	268	P	P	01 56 21.7	-9.1
BATI	Baumata	41.62	268	P	P	01 56 31.3	+0.5
	comp=Z,49nm,0.7s,baz=132,slow=17,SNR=8.4						
MMRI	Maumere	43.21	270	P	P	01 56 42.7	-1.0
	comp=Z,244nm,1.6s						
BBSI	Bau Bau	43.40	274	P	P	01 56 45.6	+0.3
	comp=Z,51nm,1.6s						
KMSI	Cibinong	43.53	283	P	P	01 56 43.5	-2.8
	comp=Z,642nm,1.3s,comp=Z,22µm						
KDI	Kendari	43.67	277	P	P	01 56 46.0	-1.4
	comp=Z,63nm,1.9s						
EDFI	Ende, Flores	43.73	270	P	P	01 56 47.0	-1.0
	comp=Z,62nm,2.5s						
LUWI	Luwuk	44.23	281	eP	P	01 56 51.6	-0.4
	comp=Z,431nm,1.2s						
LUWI	Luwuk	44.23	281	P	P	01 56 52.3	+0.4
	comp=Z,361nm,1.3s						
BASI	Baing, Sumba	44.64	267	P	P	01 56 53.8	-1.4
	comp=Z,269nm,1.4s						
WSI	Waingapu	44.98	268	P	P	01 56 57.2	-0.7
	comp=Z,739nm,0.5s						
MBWA	Marble Bar	45.28	252	eP	P	01 57 00.4	+0.2
	comp=Z,293nm,1.5s						
APSI	Ampana	45.35	280	P	P	01 57 01.6	+0.8
	comp=Z,195nm,1.3s						
MRSI	Marisa	45.45	282	P	P	01 57 00.6	-1.1
	comp=Z,48nm,1.2s						
MEEK	Meekatharra	46.94	244	P	P	01 57 12.9	-0.4
	baz=47,SNR=25						
KIP	Kipapa	48.25	47	iP	P	01 57 24.3	+0.9
KIP				pmax	pmax		
	comp=Z,67nm,1.0s						
OPA	Opana	48.42	47	eP	P	01 57 29.3	+4.6
	comp=Z,294nm,1.2s						
OPA	Opana	48.42	47	eP	P	01 57 29.3	+4.6
OPA				pmax	pmax		
	comp=Z,294nm,1.2s						
KLBR	Kellerberrin	48.63	238	P	P	01 57 25.7	-0.5
	baz=49,SNR=8.8						
BLDU	Ballidu	49.30	240	P	P	01 57 31.0	-0.4
	baz=49,SNR=4.4						
NWAO	Narrogin (SRO)	49.36	237	P	P	01 57 31.6	-0.3
	baz=49,SNR=5.1						
NWAO	Narrogin (SRO)	49.36	237	eP	P	01 57 31.6	-0.3
	comp=Z,139nm,1.4s						
NWAO	Narrogin (SRO)	49.36	237	P	P	01 57 31.7	-0.3
	comp=Z,37nm,0.9s,baz=304,slow=7.9,SNR=9.0						
MORW	Morawa	49.59	242	P	P	01 57 33.7	0.0
	baz=50,SNR=10						
RKGY	Rocky Gully	49.98	234	P	P	01 57 37.0	+0.4
	baz=50,SNR=3.8						
MUN	Mundaring	50.00	238	P	P	01 57 36.7	-0.1
	baz=50,SNR=10.0						
TSM	Tawau	50.48	286	P	P	01 57 41.8	+1.2
JAGI	Jajag, Banyuwa	51.15	268	eP	P	01 57 44.0	-1.8
	comp=Z,331nm,1.3s						
TGY	Tagaytay City	51.55	299	P	P	01 57 48.9	+0.2
	comp=Z,204nm,0.3s,baz=195,slow=16,SNR=3.0						
SDKM	Sandakan	51.56	287	P	P	01 57 51.0	+2.2
KKM	Kota Kinabalu	52.62	287	eP	P	01 57 57.2	+0.4
	comp=Z,363nm,1.6s						
KKM	Kota Kinabalu	52.62	287	P	P	01 57 58.3	+1.5
MJAR	Matsushiro Arr	54.68	333	P	P	01 58 10.3	-1.0
	comp=Z,16nm,0.8s,baz=170,slow=8.9,SNR=22						
MAJO	Matsushiro	54.68	333	eP	P	01 58 10.9	-0.5
	comp=Z,24nm,0.9s						
MAJO	Matsushiro	54.68	333	iP	P	01 58 09.9	-1.5
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s						
MAT	Matsushiro	54.68	333	P	P	01 58 09.8	-1.6
MJB9	Matsu-Tunnel	54.69	333	eP	P	01 58 10.9	-0.5
	comp=Z,25nm,0.9s						
BTM	Bintulu	54.71	282	P	P	01 58 13.4	+1.4
UGM	Wanagama	54.79	269	eP	P	01 58 12.1	-0.5
	comp=Z,168nm,0.9s						
SMRI	Semarang	55.00	270	eP	P	01 58 14.4	+0.2
	comp=Z,824nm,1.9s						
SBUM	Sibu	55.33	281	eP	P	01 58 16.6	+0.1
	comp=Z,107nm,1.8s						
SBUM	Sibu	55.33	281	P	P	01 58 18.0	+1.6
JNU	Nakatsue	55.78	324	eP	P	01 58 18.5	-0.9
	comp=Z,78nm,1.1s						
JNU	Nakatsue	55.78	324	P	P	01 58 18.9	-0.5
	comp=Z,35nm,0.8s,baz=83,slow=3.2,SNR=11						
YULB	Yu-li	55.98	309	eP	P	01 58 20.8	-0.1
	comp=Z,120nm,1.4s						
TPUB	Ta-pu	56.44	308	eP	P	01 58 23.0	-1.3
	comp=Z,112nm,1.2s						
YHNB	Yeheng	56.63	310	eP	P	01 58 25.7	0.0
	comp=Z,83nm,1.1s						
KSM	Kuching	56.91	280	eP	P	01 58 27.9	+0.1
	comp=Z,87nm,1.2s						
KSM	Kuching	56.91	280	P	P	01 58 28.9	+1.1
ERM	Erimo	57.44	340	iP	P	01 58 29.5	-1.4
ERM				pmax	pmax		
	comp=Z,49nm,1.3s						
CISI	Cisompet, Garu	57.49	268	eP	P	01 58 31.4	-0.6
	comp=Z,366nm,1.4s						
ASAJ	Asahikawa	59.50	341	P	P	01 58 45.5	+0.1
	comp=Z,22nm,0.7s,baz=221,slow=11,SNR=11						
SSE	Sheshan	60.53	316	P	P	01 58 52.6	0.0
SSE				pmax	pmax		
	comp=Z,39nm,0.8s						
SSE				pmax	pmax		
	comp=Z,280nm,9.0s						
SSE	Sheshan	60.53	316	eP	P	01 58 52.6	0.0
	comp=Z,144nm,1.0s						
KSRS	Korea Array	60.58	326	P	P	01 58 53.0	+0.1
	comp=Z,5.9nm,0.7s,baz=137,slow=7.2,SNR=16						
KSRS				PcP	PcP	01 59 38.5	+1.2
	comp=Z,14nm,1.0s,baz=140,slow=5.5,SNR=8.2						
KS15	Wonju Array Si	60.59	326	eP	P	01 58 53.0	0.0
	comp=Z,123nm,2.0s						
KSAR	Wonju Array Be	60.59	326	P	P	01 58 53.0	0.0
KSAR	Wonju Array Be	60.59	326	P	P	01 58 53.0	0.0
KS01	Wonju Array Si	60.61	326	eP	P	01 58 52.5	-0.6
YSS	Yuzh-Sakhalins	61.99	342	eP	P	01 59 02.5	+0.3
	comp=Z,45nm,0.9s						
YSS	Yuzh-Sakhalins	61.99	342	⇓eP	P	01 59 01.5	-0.7
YSS				e		01 59 08.3	
YSS				e		01 59 16.1	
YSS				e		02 02 53.3	
YSS				pmax	pmax		
	comp=Z,350nm,1.0s						
YSS				pmax	pmax		
	comp=N,170nm,1.3s						
YSS				pmax	pmax		
	comp=E,220nm,1.4s						
YSS				MLR	MLR		
	comp=Z,111µm,18.0s						
YSS				MLR	MLR		
	comp=N,68µm,20.0s						
YSS				MLR	MLR		
	comp=E,83µm,15.0s						
TEY	Ternei	62.43	337	eP	P	01 59 02.2	-3.0
TEY				MLR	MLR		
	comp=E,4µm,17.0s						
TEY				MLR	MLR		
	comp=N,4µm,19.0s						
TEY				MLR	MLR		
	comp=Z,6µm,19.0s						
NJ2	Nanjing	62.69	315	eP	P	01 59 07.4	+0.2
NJ2				pmax	pmax		
	comp=Z,80nm,1.0s						
MSHR	Mys Shultsa	62.77	332	iP	P	01 59 07.7	+0.2
VLA	Vladivostok	62.85	332	iP	P	01 59 07.4	-0.6
VLA				pmax	pmax		
	comp=Z,28nm,1.0s						
QIZ	Qiongzhong	63.25	298	eP	P	01 59 12.3	+1.1
	comp=Z,114nm,1.8s						
USA0B	Ussuriysk Arra	63.66	333	eP	P	01 59 13.8	+0.4
	comp=Z,67nm,1.2s						
USRK	Ussuriysk Ar.	63.66	333	P	P	01 59 13.8	+0.4
	comp=Z,22nm,0.9s,baz=136,slow=5.9,SNR=26						
KGM	Kluang	63.81	278	P	P	01 59 16.5	+1.5
KTGM	Kuala Trenggan	64.83	282	P	P	01 59 23.4	+1.7
PETK	Petropavlovsk-	64.93	354	eP	P	01 59 21.1	-0.5
PETK	Petropavlovsk-	64.93	354	eP	P	01 59 21.1	-0.5
PETK	Petropavlovsk-	64.93	354	P	P	01 59 21.5	-0.1
	comp=Z,15nm,0.9s,baz=150,slow=9.3,SNR=10.0						
PEA1	Petropavlovsk-	64.94	354	eP	P	01 59 21.5	-0.1
WHN	Wuhan	65.05	312	⇑P	P	01 59 22.7	-0.1
MDJ	Mudanjiang	65.06	332	P	P	01 59 23.1	+0.6
MDJ				S	S	02 07 54.8	-10
MDJ				pmax	pmax		
	comp=Z,46nm,1.0s						
MDJ	Mudanjiang	65.06	332	eP	P	01 59 23.2	+0.6
	comp=Z,36nm,1.0s						
DL2	Dalian	65.18	323	⇑P	P	01 59 23.6	+0.2
DL2				pmax	pmax		
	comp=Z,72nm,1.0s						
BKNI	Bangkinang	65.64	276	eP	P	01 59 27.9	+0.9
	comp=Z,439nm,1.3s						
FRIM	Kepong	65.75	279	P	P	01 59 28.3	+0.7
VNDA	Vanda	65.86	181	eP	P	01 59 28.4	+1.1
	comp=Z,134nm,1.5s						
VNDA	Vanda	65.86	181	P	P	01 59 27.8	+0.4
	comp=Z,47nm,1.2s,baz=353,slow=7.6,SNR=18						
CASY	Casey	65.89	201	eP	P	01 59 27.9	+0.2
	comp=Z,110nm,1.1s						
SBA	Scott Base	66.16	180	eP	P	01 59 31.2	+2.0
	comp=Z,113nm,1.0s						
SBA	Scott Base	66.16	180	eP	P	01 59 31.2	+2.0
SBA				pmax	pmax		
	comp=Z,113nm,1.0s						
CN2	Changchun	66.45	329	⇑iP	P	01 59 31.6	0.0
CN2				pmax	pmax		
	comp=Z,40nm,0.9s						
IPM	Ipoh	66.64	280	eP	P	01 59 33.6	+0.1
	comp=Z,149nm,1.1s						
KULM	Kulim	67.20	281	eP	P	01 59 37.2	+0.2
	comp=Z,213nm,1.9s						
KULM	Kulim	67.20	281	P	P	01 59 38.3	+1.3
SKNT	Sakolnakorn	67.63	294	P	P	01 59 40.2	+0.6
	comp=Z,27nm,2.4s						
KLR	Kul'dur	67.77	336	iP	P	01 59 39.3	-0.5
KLR	Kul'dur	67.77	336	P	P	01 59 40.1	+0.3
	comp=Z,13nm,0.8s,baz=130,slow=4.5,SNR=22						
ENH	Enshi	68.54	309	eP	P	01 59 45.0	-0.2
	comp=Z,128nm,1.0s						
NONG	Nongkai	68.76	295	P	P	01 59 47.6	+0.9
	comp=Z,1.2nm,1.2s						
TRTT	Trang	68.79	283	P	P	01 59 48.4	+1.4
	comp=Z,19nm,1.4s						
GYA	Guiyang	69.03	304	⇑iP	P	01 59 48.8	+0.4
GYA				PP	PP	02 02 25.3	+4.2
GYA				S	S	02 08 54.0	+0.6
GYA				SKS	SKSac	02 09 46.4	-1.8
GYA				SS	SS	02 13 21.2	+1.6
GYA				pmax	pmax		
	comp=Z,70nm,1.0s						
GYA				pmax	pmax		
	comp=Z,180nm,8.8s						
GYA				LR	LR		
	comp=Z,810nm,18.4s						
GYA				LR	LR		
	comp=Z,750nm,18.3s						
GYA				LR	LR		
	comp=Z,740nm,19.0s						
CHAI	Chaiyaphum	69.07	292	P	P	01 59 49.6	+1.0
	comp=Z,4.7nm,0.9s						
PATY	Pattaya	69.15	289	P	P	01 59 51.3	+2.2
	comp=Z,15nm,1.1s						
BJT	Baijiatuau	69.16	321	eP	P	01 59 48.9	+0.1
	comp=Z,47nm,0.9s						
BJT	Baijiatuau	69.16	321	eP	P	01 59 48.9	+0.1
BJT				pmax	pmax		
	comp=Z,47nm,0.9s						
BJI	Beijing	69.17	321	P	P	01 59 49.1	+0.3
BJI				pmax	pmax		
	comp=Z,41nm,1.0s						
GSI	Gunungsitoli	69.23	276	eP	P	01 59 50.1	+0.3
	comp=Z,138nm,1.2s						
PBKT	Sadao Pong	70.21	292	P	P	01 59 56.7	+1.1
	comp=Z,31nm,1.3s						
TIY	Taiyuan	70.24	317	eP	P	01 59 56.3	+0.7
TIY				pmax	pmax		
	comp=Z,85nm,1.1s						
XAN	Xi'an	70.78	312	P	P	01 59 58.9	0.0
XAN				pP	pwP	02 00 10.0	+2.8
XAN				pmax	pmax		
	comp=Z,83nm,1.3s						
XAN	Xi'an	70.78	312	eP	P	01 59 59.3	+0.4
	comp=Z,74nm,0.9s						
XAN	Xi'an	70.78	312	eP	P	01 59 59.3	+0.4
XAN				pmax	pmax		
	comp=Z,74nm,0.9s						
UTTA	Uttaradit	70.97	293	P	P	02 00 01.9	+1.6
	comp=Z,6.6nm,1.4s						
SRDT	SRDT	71.20	290	P	P	02 00 03.6	+1.9
	comp=Z,38nm,1.4s						
UTHA	Uthaitani	71.27	291	P	P	02 00 03.5	+1.3
	comp=Z,8.8nm,1.3s						
SUKH	Sukhothai	71.72	293	P	P	02 00 06.3	+1.5
	comp=Z,7.6nm,0.9s						
KMI	Kunming	71.72	301	P	P	02 00 06.4	+1.5
KMI				pP	sP	02 00 11.0	+1.4
KMI				sP	pwP	02 00 14.5	0.0
KMI				pmax	pmax		
	comp=Z,78nm,1.5s						
KMI	Kunming	71.72	301	eP	P	02 00 06.5	+1.5
	comp=Z,155nm,1.4s						
UMPA	Umpang Tak	72.01	291	P	P	02 00 08.3	+1.7
	comp=Z,8.4nm,1.4s,comp=Z,2µm						
MA2	Magadan	72.09	352	ceP	P	02 00 05.2	-1.0
MA2				pmax	pmax		
	comp=Z,53nm,2.5s						
MA2	Magadan	72.09	352	P	P	02 00 05.1	-1.1
	comp=Z,3.7nm,0.4s,baz=118,slow=4.8,SNR=4.2						
HHC	Hu-ho-hao-te	72.52	320	eP	P	02 00 11.1	+1.8
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
CM31	Chiang Mai Arr	72.65	294	eP	P	02 00 10.8	+0.3
	comp=Z,138nm,1.5s						
CMAR	Chiang Mai Arr	72.65	294	P	P	02 00 10.8	+0.3
	comp=Z,15nm,0.9s,baz=117,slow=4.7,SNR=37						
CMMT	Chiang Mai	72.76	294	P	P	02 00 11.9	+0.8
	comp=Z,40nm,1.6s						
CHTO	Chiang Mai	72.77	294	eP	P	02 00 11.9	+0.8
	comp=Z,76nm,1.4s						
CHTO	Chiang Mai	72.77	294	eP	P	02 00 11.9	+0.8
CHTO				pmax	pmax		
	comp=Z,76nm,1.4s						
CHTO	Chiang Mai	72.77	294	P	P	02 00 12.0	+0.9
	comp=Z,180nm,1.7s						
ZEA	Zeya	73.05	337	eP	P	02 00 12.7	+0.7
ZEA				pmax	pmax		
	comp=N,120nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,150nm,1.4s						
HIA	Hailar	73.08	330	eP	P	02 00 13.2	+0.8
	comp=Z,29nm,0.9s						
CD2	Chengdu	73.23	307	eP	P	02 00 14.0	+0.3
CD2				pmax	pmax		
	comp=Z,180nm,1.1s						
SEY	Seymchan	75.14	354	ceP	P	02 00 23.8	-0.2
LZH	Lanzhou	75.42	312	⇑P	P	02 00 28.0	+1.5
LZH				pP	sP	02 00 32.4	+0.7
LZH				sP	pwP	02 00 35.2	+0.4
LZH				PP	PP	02 03 20.5	+4.8
LZH				pmax	pmax		
	comp=Z,170nm,1.4s						
LZH				pmax	pmax		
	comp=Z,710nm,7.1s						
LZH				LR	LR		
	comp=Z,3µm,18.4s						
LZH				LR	LR		
	comp=Z,2µm,17.3s						
LZH				LR	LR		
	comp=Z,3µm,19.5s						
KDAK	Kodiak Island	77.06	21	eP	P	02 00 34.2	-0.9
	comp=Z,55nm,1.5s						
KDAK	Kodiak Island	77.06	21	eP	P	02 00 34.2	-0.9
KDAK				pmax	pmax		
	comp=Z,55nm,1.5s						
KDAK	Kodiak Island	77.06	21	P	P	02 00 34.2	-0.9
	comp=Z,15nm,0.9s,baz=154,slow=2.0,SNR=6.0						
GAMB	Gambell	77.15	10	eP	P	02 00 35.3	-0.1
CIT	Chita	77.87	330	eP	P	02 00 40.7	+0.9
CIT				e		02 00 54.2	
CIT				pmax	pmax		
	comp=Z,225nm,1.5s						
SVW2	Sparrevohn	78.63	18	eP	P	02 00 48.0	+4.3
	comp=Z,884nm,0.8s						
YAK	Yakutsk	78.80	343	eP	P	02 00 41.1	-3.5
YAK				pmax	pmax		
	comp=Z,77nm,1.5s						
YAK				pmax	pmax		
	comp=N,25nm,1.5s						
YAK				pmax	pmax		
	comp=E,19nm,1.4s						
ULN	Ulaanbaatar	79.00	324	eP	P	02 00 47.1	+0.8
	comp=E,65nm,1.0s						
ULN	Ulaanbaatar	79.00	324	ceP	P	02 00 46.7	+0.4

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ULN                              pmax    pmax
       comp=Z,129nm,1.7s
RSO    Redoubt South     79.02  19 eP      P           02 00 45.0 -1.2
ANM    Nome              79.05  12 eP      P           02 00 46.1 +0.1
       comp=Z,27nm,1.4s
ANM    Nome              79.05  12 eP      P           02 00 46.1 +0.1
ANM                              pmax    pmax
       comp=Z,27nm,1.4s
BRLK   Bradley Lake      79.13  21 eP      P           02 00 45.8 -0.8
       comp=Z,32nm,0.8s
SONA0  Songino Array     79.36 324 eP      P           02 00 48.8 +0.5
SONM   Songino Array     79.36 324  P      P           02 00 48.8 +0.5
       comp=Z,19nm,1.0s,baz=136,slow=5.5,SNR=40
SONA1  Songino Array     79.37 324 eP      P           02 00 48.3  0.0
BILL   Bilibino          79.52   0 eP      P           02 00 48.0 -0.5
       comp=Z,47nm,1.1s
BILL   Bilibino          79.52   0ceP      P           02 00 48.2 -0.3
BILL                             pmax    pmax
       comp=Z,31nm,0.8s
GTA    Gaotai            79.72 314 ⇓P      P           02 00 51.0 +0.6
GTA                              pP      sP            02 00 55.2 +0.2
GTA                              sP      PcP           02 00 58.1 -0.1
GTA                              pmax    pmax
       comp=Z,85nm,1.5s
SUA    Susitna One       80.43  19 eP      P           02 00 52.9 -0.8
       comp=Z,72nm,1.8s
BRDH   Bariadhala        80.45 296  P      P           02 00 55.9 +1.3
       comp=Z,27nm,0.8s,baz=89,slow=9.1,SNR=13
SHL    Shillong          81.09 298 eP      P           02 00 58.6 +0.4
       comp=Z,136nm,1.3s
SHL    Shillong          81.09 298 eP      P           02 00 58.6 +0.4
SHL                              pmax    pmax
       comp=Z,137nm,1.3s
KNK    Knik Glacier      81.15  20 eP      P           02 00 56.8 -0.7
       comp=Z,27nm,1.1s
BOD    Bodaibo           81.24 335 eP      P           02 00 55.9 -2.1
BOD                              pmax    pmax
       comp=Z,41nm,1.5s
CAST   Castle Rocks      81.47  18 eP      P           02 00 57.5 -1.6
       comp=Z,15nm,0.8s
SML    Sawmill           81.47  20 eP      P           02 00 58.6 -0.6
       comp=Z,22nm,0.9s
DIV    Divide            81.89  21 eP      P           02 01 00.8 -0.7
       comp=Z,30nm,0.8s
TRF    Thorofare Moun    82.03  18 eP      P           02 01 01.7 -0.6
       comp=Z,9.2nm,0.8s
KLU    Klutina           82.08  21 eP      P           02 01 04.8 +2.3
       comp=Z,20nm,0.9s
ZAK    Zakamensk         82.40 325 eP      P           02 01 04.0 -0.4
ZAK                              pmax    pmax
       comp=Z,45nm,1.3s
RND    Reindeer          82.44  19 eP      P           02 01 03.2 -1.1
       comp=Z,24nm,1.0s
RND    Reindeer          82.44  19 eP      P           02 01 03.2 -1.1
RND                              pmax    pmax
       comp=Z,24nm,1.0s
MCK    McKinley          82.65  18 eP      P           02 01 04.1 -1.2
       comp=Z,32nm,1.1s
MCK    McKinley          82.65  18 eP      P           02 01 04.1 -1.2
MCK                              pmax    pmax
       comp=Z,32nm,1.1s
DHY    Denali Highway    82.69  19 eP      P           02 01 05.0 -0.7
       comp=Z,16nm,1.0s
KCPM   Cahto Peak        82.76  47 eP      P           02 01 10.6 +4.0
       comp=Z,30nm,1.0s
BWN    Browne            82.81  18 eP      P           02 01 05.4 -0.6
       comp=Z,64nm,1.1s
TLY    Talaya            82.83 326 eP      P           02 01 06.7 +0.2
       comp=Z,588nm,2.0s
TLY    Talaya            82.83 326 i P     P           02 01 05.4 -1.1
TLY    Talaya            82.83 326  P      P           02 01 06.9 +0.4
       comp=Z,9.8nm,0.7s,baz=183,slow=2.8,SNR=13
KMRM   Mail Ridge        82.87  47 eP      P           02 01 11.4 +4.4
       comp=Z,25nm,0.9s
HOPS   Hopland Field     82.88  48 eP      P           02 01 09.2 +2.2
       comp=Z,40nm,1.2s
LSA    Lhasa             82.95 302 eP      P           02 01 09.5 +1.3
       comp=Z,53nm,1.4s
LSA    Lhasa             82.95 302 eP      P           02 01 09.5 +1.3
LSA                              pmax    pmax
       comp=Z,53nm,1.4s
IM3    Indian Mountai    82.96  15 eP      P           02 01 05.3 -1.5
MLY    Manley            83.06  17 eP      P           02 01 09.0 +1.5
       comp=Z,14nm,1.1s
KHMM   Horse Mountain    83.09  46 eP      P           02 01 13.0 +4.7
WRH    Wood River Hil    83.44  18 eP      P           02 01 08.0 -1.4
       comp=Z,31nm,1.0s
O02D   Mt. Diablo Mer    83.51  47  P      P           02 01 10.2 -0.2
       baz=249
L02E   Cave Junction     83.66  45  P      P           02 01 10.1 -1.0
       baz=248
MDM    Murphy Dome       83.75  18 eP      P           02 01 09.5 -1.4
       comp=Z,23nm,1.0s
HDA    Harding Lake      83.75  19 eP      P           02 01 10.0 -0.9
       comp=Z,50nm,0.8s
HDA    Harding Lake      83.75  19  P      P           02 01 10.4 -0.6
       baz=226
TCOL   CIGO, UAF Yank    83.80  18  P      P           02 01 10.0 -1.1
       baz=225
COLA   College           83.80  18 i P     P           02 01 13.2 +2.1
COLA                             pmax    pmax
       comp=Z,30nm,0.9s
K02D   Willamette Mer    83.82  44  P      P           02 01 11.4 -0.5
       baz=248
WDC    Whiskeytown Da    83.83  47 eP      P           02 01 12.3 +0.5
       comp=Z,44nm,1.7s
N02D   Trinity Center    83.85  46  P      P           02 01 11.1 -1.0
       baz=249
M02C   Callahan          83.90  46  P      P           02 01 11.8 -0.5
       baz=249
RIDG   Independ'e Rid    83.97  20 eP      P           02 01 11.6 -0.6
       comp=Z,65nm,1.1s
ILAR   Eielson Array     84.02  18  P      P           02 01 10.8 -1.5
       comp=Z,14nm,1.0s,baz=258,slow=5.3,SNR=20
ILB    Eielson Array     84.02  18 eP      P           02 01 10.9 -1.5
IL1    Eielson Array     84.02  18 eP      P           02 01 09.6 -2.7
POKR   Poker Plat Res    84.10  18  P      P           02 01 11.2 -1.5
       baz=226
YBH    Yreka Blue Hor    84.12  45 eP      P           02 01 13.4 -0.1
       comp=Z,22nm,1.0s
ORV    Oroville          84.22  48 eP      P           02 01 13.3 -0.6
       comp=Z,10nm,0.9s
ORV    Oroville          84.22  48 eP      P           02 01 13.3 -0.6
ORV                              pmax    pmax
       comp=Z,10.0nm,0.9s
O03E   Paynes Creek      84.25  47  P      P           02 01 12.8 -1.3
       baz=250
HUMO   Hull Mountain     84.27  45 eP      P           02 01 18.2 +4.1
       comp=Z,22nm,1.0s
MOY    Mondy             84.28 325 eP      P           02 01 14.3 +0.2
MOY                              pmax    pmax
       comp=Z,134nm,2.9s
AFDM   Forest Hills D    84.39  49 eP      P           02 01 14.9 +0.1
       comp=Z,20nm,1.1s
SCRK   Sand Creek        84.42  20 eP      P           02 01 13.8 -0.7
       comp=Z,42nm,1.0s
CMB    Columbia Colle    84.52  50 eP      P           02 01 18.0 +2.4
       comp=Z,18nm,1.4s
CMB    Columbia Colle    84.52  50 eP      P           02 01 18.0 +2.4
CMB                              pmax    pmax
       comp=Z,18nm,1.4s
L04D   Klamath Falls     84.58  45  P      P           02 01 15.0 -0.8
       baz=249
M04C   Macdoel           84.75  46  P      P           02 01 14.4 -2.3
       baz=249
HYT    Haines Junctio    84.84  24 eP      P           02 01 16.2 -0.5
       comp=Z,11nm,0.9s
PRP    Porcupine Dome    84.96  18 eP      P           02 01 19.4 +2.2
       comp=Z,21nm,1.3s
MWC    Mount Wilson      85.11  54 eP      P           02 01 22.5 +3.7
       comp=Z,15nm,1.0s
BEKR   Beckworth         85.15  48 eP      P           02 01 16.2 -2.6
       comp=Z,12nm,0.9s
ISA    Isabella, Lake    85.22  52 eP      P           02 01 19.3 +0.2
       comp=Z,32nm,1.5s
ISA    Isabella, Lake    85.22  52 eP      P           02 01 19.3 +0.2
ISA                              pmax    pmax
       comp=Z,32nm,1.5s
ISA    Isabella, Lake    85.22  52  P      P           02 01 18.5 -0.7
       baz=252
ODAN   Odare             85.33 298 eP      P           02 01 20.5 +0.4
EDW2   Edwards Air Fo    85.36  53  P      P           02 01 19.1 -0.7
       baz=252
MDPB   Devils Postpil    85.37  50 eP      P           02 01 22.1 +2.0
       comp=Z,47nm,1.6s
WAKR   Walker            85.38  49 eP      P           02 01 20.8 +0.7
       comp=Z,22nm,1.1s
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OMMB   Old Mammoth Mi    85.43  50 eP      P           02 01 24.4 +4.0
       comp=Z,8.4nm,1.2s
BFSC   Mount Baldy Ra    85.43  54  P      P           02 01 19.4 -0.9
       baz=253
MLAC   Mammoth, Mammo85.56  50  P      P           02 01 18.8 -2.2
       baz=252
MURC   Murrieta          85.61  55  P      P           02 01 18.7 -2.4
       baz=253
YERR   Yerington         85.68  49 eP      P           02 01 21.7 +0.2
       comp=Z,16nm,1.2s
J05D   Fort Rock, OR     85.69  44  P      P           02 01 20.3 -1.1
       baz=250
CWC    Cottonwood Cre    85.76  52  P      P           02 01 20.6 -1.3
       baz=252
LRMC   Laurel Mtn Rad    85.78  53  P      P           02 01 20.3 -1.7
       baz=253
KNGR   Kungurtug, Tuv    85.80 324 i P     P           02 01 20.9 -0.8
PAHR   Pah Rah Range     85.81  48 eP      P           02 01 22.3 +0.2
       comp=Z,26nm,1.3s
MOD    Modoc Plateau     85.87  46 eP      P           02 01 23.4 +1.1
       comp=Z,17nm,1.1s
E04D   Cinebar           85.97  41  P      P           02 01 21.7 -0.8
       baz=248
I05D   Terrebonne, OR    85.99  43  P      P           02 01 22.2 -0.6
       baz=250
MONP2  Monument Peak     86.03  55  P      P           02 01 21.5 -1.9
       baz=254
RAMN   Ramite            86.03 298 eP      P           02 01 23.9 +0.3
       comp=Z,226nm,1.5s
DAWY   Dawson            86.04  21 eP      P           02 01 22.0 -0.5
       comp=Z,10nm,0.9s
PINE   Pine Mountain     86.07  44 eP      P           02 01 24.7 +1.4
       comp=Z,22nm,1.1s
D04E   Lakebay           86.07  40  P      P           02 01 22.6 -0.4
       baz=248
DAC    Darwin (Calif)    86.09  52 eP      P           02 01 27.0 +3.4
       comp=Z,15nm,1.1s
RYN    Ryan              86.10  49 eP      P           02 01 27.1 +3.6
MPMC   Manual Prospec    86.10  52  P      P           02 01 23.4 -0.3
       baz=253,SNR=5.8
PFO    Pinyon Flats O    86.20  55 eP      P           02 01 27.5 +3.3
       comp=Z,8.1nm,1.0s
PFO    Pinyon Flats O    86.20  55  P      P           02 01 24.0 -0.1
       baz=253
PFO    Pinyon Flats O    86.20  55  P      P           02 01 26.1 +2.0
       comp=Z,5.4nm,0.8s,baz=315,slow=2.5,SNR=7.0
NV01   Mina Array Sit    86.20  50 eP      P           02 01 23.2 -0.9
NVAR   Mina Array Bea    86.20  50  P      P           02 01 24.1 -0.1
       comp=Z,9.0nm,0.9s,baz=233,slow=8.5,SNR=3.6
XPFO   Pion Flat         86.20  55 eP      P           02 01 27.5 +3.3
       comp=Z,9.4nm,1.1s
NV11   Mina Array Sit    86.31  50 eP      P           02 01 24.6  0.0
       comp=Z,3.1nm,1.4s
GSC    Goldstone, Bar    86.41  53 eP      P           02 01 27.9 +2.8
       comp=Z,6.6nm,1.1s
F05D   White Salmon      86.45  42  P      P           02 01 24.8 -0.1
       baz=249
GRAC   Grapevine Rang    86.48  51  P      P           02 01 24.8 -0.6
       baz=253,SNR=5.3
SWSC   Sam W. Stewart    86.54  56  P      P           02 01 24.5 -1.2
       baz=254
KVN    Kaiserville       86.55  49 eP      P           02 01 25.4 -0.4
       comp=Z,19nm,1.4s
JIRN   Jiri              86.57 299 eP      P           02 01 26.8 +0.4
       comp=Z,575nm,1.6s
HEC    Hector,Ludlow     86.65  54  P      P           02 01 24.8 -1.4
       baz=253,SNR=5.6
BELC   Belle Mtn. Jos    86.68  54  P      P           02 01 25.5 -1.0
       baz=254
FURC   Furnace Creek,    86.71  52  P      P           02 01 26.5 +0.2
       baz=253
TIXI   Tiksi             86.78 349 eP      P           02 01 25.1 -0.8
       comp=Z,40nm,1.3s
TIXI   Tiksi             86.78 349ceP      P           02 01 25.3 -0.6
TIXI                             pmax    pmax
       comp=Z,48nm,1.7s
TIXI   Tiksi             86.78 349  P      P           02 01 25.5 -0.4
       comp=Z,5.5nm,0.4s,baz=126,slow=7.8,SNR=13
GUN    Gumba             86.90 299 eP      P           02 01 28.3 +0.3
       comp=Z,672nm,2.0s
PALK   Pallekele         86.94 278 eP      P           02 01 29.6 +1.5
       comp=Z,26nm,1.1s
PALK   Pallekele         86.94 278  P      P           02 01 28.7 +0.6
PALK                             pmax    pmax
       comp=Z,14nm,1.0s
PALK   Pallekele         86.94 278  P      P           02 01 28.7 +0.6
       comp=Z,20nm,1.1s,baz=295,slow=1.5,SNR=4.3
BC3    Big Chuckawall    87.02  55  P      P           02 01 28.0 -0.1
       baz=254
TUQ    Turquoise Moun    87.14  53  P      P           02 01 26.6 -2.2
       baz=254
I07A   Izee              87.14  44 eP      P           02 01 28.7 +0.2
       comp=Z,20nm,1.3s
GMRC   Granite Mounta    87.17  54  P      P           02 01 27.1 -1.8
       baz=254
WVOR   Wild Horse Val    87.21  46 eP      P           02 01 32.6 +3.7
       comp=Z,25nm,1.3s
PKI    Pulchoki          87.22 299 eP      P           02 01 29.5  0.0
       comp=Z,285nm,1.5s
PKIN   Phulchoki         87.23 299 eP      P           02 01 29.4 -0.1
       comp=Z,188nm,1.4s
TPNV   Topopah Spring    87.32  52  P      P           02 01 27.0 -2.6
       baz=253
GLA    Glamis            87.36  56 eP      P           02 01 29.9 +0.2
       comp=Z,17nm,0.8s
GLA    Glamis            87.36  56 eP      P           02 01 29.9 +0.2
GLA                              pmax    pmax
       comp=Z,17nm,0.8s
GLA    Glamis            87.36  56  P      P           02 01 29.5 -0.2
       baz=254,SNR=9.8
IRM    Iron Mountain     87.40  55  P      P           02 01 30.3 +0.4
       baz=254
DMN    Daman             87.48 299 eP      P           02 01 30.9 +0.2
       comp=Z,200nm,1.2s
J08A   Circle Bar Ran    87.62  45 eP      P           02 01 30.4 -0.4
       comp=Z,13nm,1.0s
LDFC   Landfair          87.68  54 eP      P           02 01 33.4 +2.1
       comp=Z,61nm,1.3s
Y12C   Blythe            87.79  55 eP      P           02 01 34.8 +3.1
       comp=Z,22nm,1.1s
Y12C   Blythe            87.79  55  P      P           02 01 31.5 -0.2
       baz=254,SNR=6.7
HAWA   Hanford           87.88  42 eP      P           02 01 35.9 +4.1
       comp=Z,20nm,1.3s
G08A   Pilot Rock        87.90  43 eP      P           02 01 34.1 +1.9
       comp=Z,13nm,1.1s
SHPR   Sheep Range       88.03  52 eP      P           02 01 33.7 +0.7
       comp=Z,14nm,1.3s
113A   Mohawk Valley,    88.14  56 eP      P           02 01 37.3 +3.9
       comp=Z,7.1nm,1.4s
R11A   Troy Canyon, C    88.22  50 eP      P           02 01 34.0 +0.2
       comp=Z,1.9nm,1.0s
R11A   Troy Canyon, C    88.22  50  P      P           02 01 32.1 -1.8
       baz=254
PDMCI  Parker Dam,Lak    88.24  55  P      P           02 01 33.8  0.0
       baz=255,SNR=7.3
W13A   Hualapai Mount    88.66  54 eP      P           02 01 35.8 -0.3
       comp=Z,33nm,1.4s
B08A   Colville Reser    88.66  40 eP      P           02 01 39.0 +3.5
       comp=Z,9.8nm,1.1s
214A   Organ Pipe Nat    88.72  57  P      P           02 01 35.6 -0.6
       baz=256,SNR=5.2
DANN   Dangsing          88.82 299 eP      P           02 01 36.5 -0.6
       comp=Z,158nm,1.2s
KOLN   Koldanda          88.82 299 eP      P           02 01 36.3 -0.7
       comp=Z,89nm,1.1s
ELK    Elko              89.15  48 eP      P           02 01 38.5 +0.2
       comp=Z,15nm,1.3s
ELK    Elko              89.15  48 eP      P           02 01 38.5 +0.2
ELK                              pmax    pmax
       comp=Z,15nm,1.3s
F10A   Beach Ranch, E    89.27  43 eP      P           02 01 41.0 +2.5
       comp=Z,16nm,1.1s
PYUN   Piuthan           89.42 299 eP      P           02 01 38.8 -1.0
       comp=Z,76nm,1.0s
MFID   Camas Ranch       89.48  45 eP      P           02 01 43.5 +4.0
       comp=Z,5.5nm,0.8s
PSUT   Pine Spring       89.58  51 eP      P           02 01 40.7 +0.3
       comp=Z,12nm,1.0s
LCMT   Little Creek M    89.65  52 eP      P           02 01 40.7 +0.1
       comp=Z,12nm,1.0s
CCUT   Cedar City        89.70  52 eP      P           02 01 41.1 +0.2
       comp=Z,9.1nm,1.0s
WMQ    Urumqi            89.77 315  P      P           02 01 40.9  0.0
WMQ                              pP      pwP           02 01 51.2 +0.5
WMQ                              pmax    pmax
       comp=Z,88nm,1.9s
WMQ    Urumqi            89.77 315 eP      P           02 01 41.2 +0.4
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       comp=Z,230nm,1.6s
WMQ    Urumqi            89.77 315 eP      P           02 01 41.3 +0.4
WMQ                              pmax    pmax
       comp=Z,230nm,1.6s
SZCU   Shurtz Canyon     89.92  52 eP      P           02 01 46.0 +4.1
       comp=Z,5.0nm,0.8s
KNB    Kanab             89.98  52 eP      P           02 01 42.4 +0.2
       comp=Z,38nm,1.3s
KNB    Kanab             89.98  52 eP      P           02 01 42.4 +0.2
KNB                              pmax    pmax
       comp=Z,38nm,1.3s
NEW    Newport           90.03  41 eP      P           02 01 45.5 +3.5
       comp=Z,6.9nm,1.0s
U15A   North Rim         90.25  53 eP      P           02 01 43.6 +0.1
       comp=Z,19nm,1.0s
INK    Inuvik            90.41  19 eP      P           02 01 44.0 +0.9
       comp=Z,27nm,1.6s
INK    Inuvik            90.41  19 eP      P           02 01 44.0 +0.9
INK                              pmax    pmax
       comp=Z,27nm,1.6s
INK    Inuvik            90.41  19  P      P           02 01 44.0 +0.9
       comp=Z,0.7nm,0.7s,baz=202,slow=5.4,SNR=2.3
X16A   Lo Mia Camp, P    90.43  55 eP      P           02 01 44.7 +0.3
       comp=Z,11nm,1.0s
TUC    Tucson            90.47  57 eP      P           02 01 48.3 +3.8
       comp=Z,8.5nm,1.1s
TUC    Tucson            90.47  57  P      P           02 01 45.0 +0.6
       baz=257
HLID   Hailey            90.51  46 eP      P           02 01 44.3 -0.2
       comp=Z,8.2nm,1.0s
HLID   Hailey            90.51  46  P      P           02 01 44.0 -0.5
       baz=254
TCRU   Three Creeks R    90.67  51 eP      P           02 01 47.0 +1.6
       comp=Z,10nm,0.9s
MTPU   Mount Pierson     90.72  51 eP      P           02 01 46.4 +0.5
       comp=Z,32nm,1.4s
WUAZ   Wupatki           90.75  54 eP      P           02 01 49.0 +3.3
       comp=Z,98nm,1.8s
WUAZ   Wupatki           90.75  54  P      P           02 01 47.5 +1.8
       baz=256
DUG    Dugway, Tooele    90.78  49 eP      P           02 01 49.3 +3.5
       comp=Z,96nm,1.9s
DUG    Dugway, Tooele    90.78  49  P      P           02 01 46.1 +0.3
       baz=256
BGU    Big Grassy Mou    90.81  48 eP      P           02 01 45.7 -0.3
       comp=Z,6.0nm,0.9s
MSU    Marysvale         90.85  51 eP      P           02 01 50.6 +4.3
HYB    Hyderabad         91.10 287 i P     P           02 01 47.0 -0.6
HVU    Hansel Valley     91.21  48 eP      P           02 01 47.8  0.0
       comp=Z,16nm,1.0s
HVU    Hansel Valley     91.21  48 eP      P           02 01 47.8  0.0
HVU                              pmax    pmax
       comp=Z,16nm,1.0s
NLU    North Lily Min    91.28  50 eP      P           02 01 51.9 +3.7
       comp=Z,40nm,1.3s
SPUT   South Promonto    91.33  48 eP      P           02 01 48.9 +0.6
       comp=Z,64nm,2.0s
DGZ    Jazzator, Alta    91.59 320c iP     P           02 01 48.6 -0.7
DGZ                              pmax    pmax
       comp=Z,21nm,1.1s
MPU    Maple Canyon      91.62  50 eP      P           02 01 53.5 +3.8
       comp=Z,14nm,1.2s
X18A   Snowflake         91.66  55 eP      P           02 01 54.4 +4.3
       comp=Z,42nm,1.4s
CTU    Camp Tracy        91.69  49 eP      P           02 01 54.1 +4.1
       comp=Z,59nm,1.6s
MSO    Missoula          91.69  43  P      P           02 01 48.6 -1.2
       baz=255
JLU    Jordanelle        91.89  49 eP      P           02 01 55.2 +4.2
       comp=Z,5.1nm,1.0s
MCMT   McKenzie Canyo    91.92  45 eP      P           02 01 55.2 +4.1
DGAR   Diego Garcia      92.02 262 i P     P           02 01 51.9  0.0
TCUT   Toone Canyon      92.05  49 eP      P           02 01 56.2 +4.5
       comp=Z,155nm,1.9s
HWUT   Hardware Ranch    92.05  48 eP      P           02 01 55.4 +3.7
       comp=Z,4.9nm,1.0s
DLMT   Dillon            92.23  44 eP      P           02 01 53.8 +1.5
       comp=Z,27nm,1.2s
LRM    Limekiln Ridge    92.44  44 eP      P           02 01 53.0 -0.5
QLMT   Earthquake Lak    92.90  45 eP      P           02 01 55.6 +0.1
FXWY   Fox Creek         92.91  46 eP      P           02 01 53.4 -2.2
       comp=Z,84nm,2.0s
TPAW   Teton Pass        92.93  46 eP      P           02 01 53.9 -1.9
       comp=Z,80nm,1.6s
REDW   Red Top Meadow    92.97  46 eP      P           02 01 56.1 +0.2
       comp=Z,57nm,1.5s
121A   Cookes Peak, D    93.00  58  P      P           02 01 57.1 +0.8
       baz=258
IMW    Indian Meadow     93.03  46 eP      P           02 01 54.8 -1.5
       comp=Z,24nm,1.4s
YHB    Horse Butte       93.05  45 eP      P           02 01 55.8 -0.5
       comp=Z,68nm,1.6s
SNOW   Snow King Moun    93.06  46 eP      P           02 01 59.0 +2.6
       comp=Z,66nm,1.6s
HRY    Holter Researc    93.07  43 eP      P           02 01 56.4 +0.2
PV05   Paradox Valley    93.10  52 eP      P           02 01 57.8 +1.1
       comp=Z,46nm,1.4s
MOOW   Moose Ponds       93.13  46 eP      P           02 02 01.4 +4.7
       comp=Z,26nm,1.8s
PV09   Paradox Valley    93.17  52 eP      P           02 01 59.5 +2.4
PV14   Lion Creek, Pa    93.22  52 eP      P           02 01 57.2 -0.1
       comp=Z,90nm,1.8s
PV19   Morning Glory     93.24  52 eP      P           02 01 56.2 -1.1
       comp=Z,30nm,1.7s
PV23   Carpenter Ridg    93.25  52 eP      P           02 01 56.6 -0.9
       comp=Z,30nm,1.7s
PV17   East Wray Mesa    93.25  52 eP      P           02 01 57.9 +0.5
       comp=Z,136nm,1.9s
PV20   West Nyswonger    93.26  52 eP      P           02 02 01.6 +4.2
       comp=Z,32nm,1.8s
PV16   Nyswonger Mesa    93.30  52 eP      P           02 01 56.1 -1.4
       comp=Z,139nm,1.9s
PV21   Cone Mtn., Par    93.30  51 eP      P           02 01 56.4 -1.3
       comp=Z,89nm,1.7s
PV04   Paradox Valley    93.32  52 eP      P           02 01 56.2 -1.5
       comp=Z,110nm,1.6s
PV11   David Mesa, Pa    93.33  52 eP      P           02 01 56.0 -1.7
       comp=Z,186nm,2.0s
PV03   Paradox Valley    93.33  52 eP      P           02 01 56.9 -0.9
       comp=Z,89nm,1.9s
PV12   Saucer Basin,     93.38  52 eP      P           02 01 57.0 -1.0
       comp=Z,145nm,1.9s
PV02   Paradox Valley    93.41  52 eP      P           02 02 01.6 +3.4
       comp=Z,74nm,1.8s
PV01   Paradox Valley    93.52  52 eP      P           02 01 56.9 -1.8
       comp=Z,86nm,1.8s
PV07   Paradox Valley    93.53  52 eP      P           02 02 01.1 +2.5
       comp=Z,90nm,1.8s
LKWY   Lake              93.56  45 eP      P           02 01 57.2 -1.4
       comp=Z,57nm,1.8s
LKWY   Lake              93.56  45 eP      P           02 01 57.3 -1.4
LKWY                             pmax    pmax
       comp=Z,57nm,1.8s
PV15   Paradox Valley    93.64  52 eP      P           02 01 57.1 -2.0
       comp=Z,94nm,1.8s
PDAR   Pinedale Array    93.76  47  PKKPbc PKKPbc      02 19 04.7 -0.7
       comp=Z,0.8nm,0.8s,baz=89,slow=5.2,SNR=5.0
LAZ    Ladron            93.90  56 eP      P           02 02 00.6 +0.2
LENM   Lemitar           93.99  56 eP      P           02 01 58.5 -2.3
O20A   White River Ci    94.18  50 eP      P           02 01 60.0 -1.7
       comp=Z,25nm,1.4s
MK01   Makanchi Array    94.19 317 eP      P           02 01 59.0 -2.3
MK31   Makanchi Array    94.20 317 eP      P           02 02 01.4 +0.1
MK32   Makanchi Array    94.20 317 eP      P           02 02 01.5 +0.2
MKAR   Makanchi Array    94.20 317 eP      P           02 02 01.4 +0.2
       comp=Z,326nm,0.8s
MKAR   Makanchi Array    94.20 317  P      P           02 02 01.5 +0.2
       comp=Z,50nm,0.8s,baz=97,slow=6.3,SNR=115
ZAA0   Zalesovo Array    94.25 324 eP      P           02 01 59.0 -2.2
       comp=Z,53nm,1.0s
ZALV   Zalesovo Beam     94.25 324  P      P           02 02 00.7 -0.6
ZALV                             pmax    pmax
       comp=Z,29nm,0.9s
ZALV   Zalesovo Beam     94.25 324  P      P           02 02 00.7 -0.6
       comp=Z,28nm,0.9s,baz=113,slow=3.9,SNR=48
ZAA1   Zalesovo Array    94.26 324 eP      P           02 02 00.7 -0.7
BNM    Barren Site       94.27  56 eP      P           02 01 59.9 -2.3
MAKZ   Makanchi          94.41 317 eP      P           02 01 58.9 -3.4
       comp=Z,106nm,1.1s
MAKZ   Makanchi          94.41 317 eP      P           02 01 58.9 -3.4
MAKZ                             pmax    pmax
       comp=Z,106nm,1.1s
ANMO   Albuquerque       94.56  55 i P     P           02 02 02.3 -1.1
ANMO                             pmax    pmax
       comp=Z,4.0nm,1.1s
NVS    Novosibirsk       95.36 325 eP      P           02 01 51.7  -15
NVS                              pmax    pmax
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        comp=Z,93nm,1.7s
NVS                                pmax     pmax
        comp=N,28nm,1.8s
NVS                                pmax     pmax
        comp=E,42nm,1.7s
YKA     Yellowknife Ar     95.40  27 P       P        02 02 04.6 -1.8
        comp=E,1.6nm,0.9s,baz=258,slow=4.5,SNR=7.9
YKB5    Yellowknife Ar     95.40  27 eP      P        02 02 04.6 -1.8
LTX     Lajitas            95.87  61 eP      P        02 02 11.3 +1.9
TXAR    Lajitas Array      95.87  61 P       P        02 02 11.3 +1.9
        comp=E,2.0nm,0.9s,baz=216,slow=2.9,SNR=6.6
TXAR                                 PP      PP       02 06 02.6 +0.9
        comp=E,1.4nm,1.2s,baz=270,slow=7.8,SNR=3.4
TXAR                                 PKKPbc  PKKPdf   02 19 00.1  0.0
        comp=E,1.1nm,0.9s,baz=127,slow=2.7,SNR=3.7
SNAA    Sanae              96.50 184 P       P        02 02 10.3 -1.1
SNAA    Sanae              96.50 184 eP      P        02 02 10.5 -0.9
        comp=E,133nm,1.9s
SNAA    Sanae              96.50 184 eP      P        02 02 10.5 -0.9
SNAA                                 pmax    pmax
        comp=Z,133nm,1.9s
SNAA    Sanae              96.50 184 P       P        02 02 10.5 -0.9
        comp=Z,10nm,0.8s,baz=197,slow=11,SNR=14
NRIK    Noril'sk           96.83 339 P       P        02 02 11.4 -1.3
        comp=Z,8.3nm,0.9s,baz=116,slow=5.2,SNR=11
VNA3    Neumayer Olymp     97.21 181 P       P        02 02 13.7 -0.9
KURK    Kurchatov          97.33 320 eP      P        02 02 14.7 -0.7
KURK    Kurchatov          97.33 320ceP      P        02 02 13.5 -1.9
KURK                                 pmax    pmax
        comp=Z,25nm,1.3s
KURBB   Kurchatov Arra     97.37 320 P       P        02 02 14.7 -0.9
        comp=Z,2.4nm,0.7s,baz=98,slow=4.1,SNR=11
KSH     Kashi              97.39 309 P       Pdif     02 02 19.3 +3.1
KSH                                  sP      pwP      02 02 26.4 +0.5
KSH                                  pmax    pmax
        comp=Z,55nm,1.3s
VNA2    Neumayer--Watz     97.46 182 P       P        02 02 14.5 -1.2
        baz=175,slow=4.7
VNA1    Neumayer--Stat     97.76 182 P       P        02 02 12.8 -4.2
AAK     Ala-Archa          98.95 312 i P     P        02 02 21.2 -1.9
AAK                                  pmax    pmax
        comp=Z,10.0nm,1.2s
KK31    Karatay Array     101.91 312 ePdif   Pdif     02 02 36.0 -0.1
KK31    Karatay Array     101.91 312 eP      Pdif     02 02 36.0 -0.1
KKAR    Karatay Array     101.91 312 ePdif   Pdif     02 02 36.0 -0.1
KKAR    Karatay Array     101.91 312 eP      Pdif     02 02 36.0 -0.1
BVAR    Borovoye Array    102.64 322 P       Pdif     02 02 38.6 -0.5
        comp=Z,3.9nm,0.8s,baz=85,slow=5.1,SNR=12
AKTO    Aktyubinsk        110.41 320 PKiKP   PKiKP    02 07 16.2 +1.7
        comp=Z,1.7nm,0.9s,baz=99,slow=4.4,SNR=6.4
PRGR    Permogore         114.44 333 i PKIKP PKiKP    02 07 19.1 -2.7
APA     Apatity           116.14 342⇓iPKIKP  PKiKP    02 07 20.4 -4.5
APA                                  pmax    pmax
        comp=Z,5.0nm,1.1s
APA                                  MLR     MLR
        comp=Z,57μm,27.0s
TMCR    Tamitsa           116.44 337 ePKIKP  PKPdf    02 07 24.0 -1.6
TMCR                                 pmax    pmax
        comp=Z,5.0nm,0.5s
ARA0    ARCESS Array S    117.03 345 ePKPdf  PKPdf    02 07 25.6 -1.0
ARCES   ARCESS Array B    117.03 345 PKP     PKPdf    02 07 25.6 -1.0
        comp=Z,7.2nm,0.8s,baz=67,slow=1.8,SNR=18
KLMR    Klimovskoe        117.45 334 ePKIKP  PKPpre   02 07 21.7
KLMR                                 pmax    pmax
        comp=Z,12nm,1.5s
KLMR    Klimovskoe        117.45 334 ePKPdf  PKPpre   02 07 21.7
KLMR                                 AMP              02 07 31.9
        comp=Z,12nm,1.6s
LPAZ    La Paz            119.62 116 PKP     PKiKP    02 07 34.5 +0.5
        comp=Z,1.6nm,0.7s,baz=33,slow=12,SNR=6.0
GROC    Groznyy           119.89 313 i PKIKP PKPdf    02 07 32.0 -0.9
GROC                                 e                02 08 52.7
GROC                                 pmax    pmax
        comp=Z,34nm,1.6s
TBLG    Delisi            120.97 312 ePKPdf  PKiKP    02 07 36.0 +0.9
TBLG    Delisi            120.97 312 ePKIKP  PKiKP    02 07 36.1 +0.9
GNI     Garni             121.30 310 ePKPdf  PKiKP    02 07 36.6 +0.5
GNI                                  ePKPdf  PKPdf    02 07 36.9 +1.0
GNI     Garni             121.30 310 i PKIKP PKiKP    02 07 36.1 +0.1
GNI     Garni             121.30 310 PKP     PKiKP    02 07 36.6 +0.5
        comp=Z,14nm,0.9s,baz=333,slow=7.3,SNR=15
ZEI     Tsey              121.33 313 i PKIKP PKPdf    02 07 35.3 -0.7
ZEI                                  pmax    pmax
        comp=Z,10.0nm,1.0s
OBN     Obninsk           121.51 329 i PKIKP PKPdf    02 07 33.3 -2.3
OBN                                  ePPP    PPP      02 11 41.3
OBN                                  pmax    pmax
        comp=Z,19nm,1.3s
KBZ     Khabaz            121.81 314 PKP     PKiKP    02 07 36.9 +0.2
        comp=Z,3.5nm,0.8s,baz=161,slow=3.7,SNR=6.8
KIV     Kislovodsk        121.90 315⇓iP      PKPdf    02 07 36.9 +0.1
KIV     Kislovodsk        121.90 315 ⇓PKIKP  PKPdf    02 07 36.9 +0.1
FIA1    FINESS Array S    122.48 339 ePKPdf  PKPdf    02 07 36.8 -0.4
FIA0    FINESS Array S    122.48 339 ePKPdf  PKPdf    02 07 36.7 -0.6
FIA0    FINESS Array S    122.48 339 ePKIKP  PKPdf    02 07 36.7 -0.6
FINES   FINESS Array B    122.48 339 PKP     PKPdf    02 07 36.7 -0.6
        comp=Z,9.4nm,0.9s,baz=85,slow=4.6,SNR=13
CPUP    Villa Florida     123.37 132 PKP     PKPdf    02 07 40.2 +0.1
        comp=Z,1.4nm,0.8s,baz=196,slow=20,SNR=2.5
SIRT    Sirnak            123.60 307 ePKPdf  PKiKP    02 07 40.8 +0.2
VSU     Vasula            124.18 336 eP      PKPdf    02 07 40.2 -0.3
SDV     Santo Domingo     124.22  87 ePKPdf  PKPdf    02 07 42.0 -0.3
BOSA    Boshof            124.86 223 ePKPdf  PKiKP    02 07 43.3 -0.1
BOSA                                 ePKPdf  PKPdf    02 07 43.7 +0.6
BOSA    Boshof            124.86 223 PKP     PKiKP    02 07 43.3 -0.1
        comp=Z,28nm,0.9s,baz=110,slow=2.5,SNR=42
SUR     Sutherland        125.01 216 ePKPdf  PKiKP    02 07 44.2 +0.5
SIV     San Ignacio       125.86 120 PKP     PKPdf    02 07 45.1  0.0
        comp=Z,3.0nm,0.9s,baz=243,slow=3.8,SNR=5.9
IZAR    Zarasai           126.09 333 eP      PKPdf    02 07 43.8 -0.5
IZAR                                 IAmb    IAmb     02 07 45.8
        comp=Z,5.9nm,0.9s
IDID    Didziasalis       126.14 333 eP      PKiKP    02 07 44.8 -0.1
IDID                                 IAmb    IAmb     02 07 45.8
        comp=Z,8.8nm,0.9s
ISAL    Salakas           126.26 333 eP      PKiKP    02 07 45.0 -0.1
ISAL                                 IAmb    IAmb     02 07 46.0
        comp=Z,11nm,0.9s
IIGN    Ignalina          126.35 333 eP      PKiKP    02 07 45.3  0.0
IIGN                                 IAmb    IAmb     02 07 46.3
        comp=Z,8.9nm,1.0s
NACGM   Naroch            126.38 332 e       PKPdf    02 07 43.0 -1.9
LBTB    Lobatse           126.92 226 ePKPdf  PKiKP    02 07 47.7 +0.1
NB2     NORSAR Subarra    127.40 345 PKPdf   PKPdf    02 07 46.0 -0.8
        comp=Z,0.9nm,0.7s,baz=31,slow=1.9
NB200   NORSAR Array S    127.40 345 ePKPdf  PKPdf    02 07 46.2 -0.6
NOA     NORSAR Array B    127.40 345 PKP     PKPdf    02 07 46.2 -0.6
        comp=Z,4.4nm,0.9s,baz=34,slow=2.0,SNR=12
AKASG   Malin Array Be    127.57 327 PKP     PKPdf    02 07 47.1 -0.3
        comp=Z,8.1nm,1.1s,baz=54,slow=2.2,SNR=18
AKBB    Malin Array Si    127.57 327 ePKPdf  PKPdf    02 07 47.1 -0.2
KMBO    Kilima Mbogo      127.58 259 PKP     PKiKP    02 07 49.4 +0.1
        comp=Z,8.3nm,1.0s,baz=42,slow=3.6,SNR=14
KIEV    Kiev              127.58 327 ePKPdf  PKPdf    02 07 47.1 -0.3
KIEV    Kiev              127.58 327⇑iP      PKPdf    02 07 47.0 -0.3
KIEV    Kiev              127.58 327 i PKIKP PKPdf    02 07 47.2 -0.2
AK11    Malin Array Si    127.61 327 ePKPdf  PKPdf    02 07 47.1 -0.3
BR101   Keskin Array S    129.62 312 ePKPdf  PKPdf    02 07 51.7 -0.1
BR131   Keskin Array S    129.62 312 ePKPdf  PKPdf    02 07 51.3 -0.5
BRTR    Keskin Array B    129.62 312 PKP     PKPdf    02 07 51.7 -0.1
        comp=Z,7.8nm,1.1s,baz=130,slow=1.9,SNR=16
BRTR                                 PP      PP       02 09 59.0 -3.1
        comp=Z,2.0nm,0.9s,baz=80,slow=7.7,SNR=5.1
KIS     Kishinev          129.72 323 ePKP    PKPdf    02 07 49.0 -2.6
KIS     Kishinev          129.72 323 ePKIKP  PKPdf    02 07 49.0 -2.6
KIS                                  e                02 07 55.0
ANTO    Ankara            130.18 313 ePKPdf  PKPdf    02 07 53.0 +0.2
ANTO    Ankara            130.18 313⇑iP      PKPdf    02 07 52.7 -0.1
ANTO    Ankara            130.18 313 ⇑PKIKP  PKPdf    02 07 52.7 -0.1
LSZ     Lusaka            130.42 238 ePKPdf  PKiKP    02 07 54.9 +0.1
TLCR                      130.61 321⇓iP      PKiKP    02 07 54.2  0.0
TLCR                      130.61 321 ⇓PKIKP  PKiKP    02 07 54.2  0.0
LVV     L'vov             130.81 328 i PKIKP PKPdf    02 07 53.9 +0.3
CFR     Carcaliu          131.04 321⇓iP      PKPdf    02 07 54.5 +0.4
CFR     Carcaliu          131.04 321 ⇓PKIKP  PKPdf    02 07 54.5 +0.4
TIRR    Tirgusor          131.21 320⇑iP      PKiKP    02 07 56.0 +0.7
TIRR    Tirgusor          131.21 320 ⇑PKIKP  PKiKP    02 07 56.1 +0.7
BIZ     Bicaz             131.33 324⇑iP      PKiKP    02 07 55.8 +0.2
TLB     Topalu            131.38 320⇑iP      PKiKP    02 07 55.4 -0.3
TLB     Topalu            131.38 320 ⇑PKIKP  PKiKP    02 07 55.4 -0.3
BUR08   Bucovina Ar. S    131.46 325 ePKPdf  PKiKP    02 07 56.8 +0.8
BUR04   Bucovina Ar. S    131.46 325 ePKPdf  PKiKP    02 07 56.4 +0.4
BURAR   Bucovina Array    131.46 325⇓iP      PKiKP    02 07 55.9 -0.1
BURAR   Bucovina Array    131.46 325 ⇓PKIKP  PKiKP    02 07 55.9 -0.1
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VRI     Vrincioaia        131.54 323⇑iP      PKiKP    02 07 55.6 -0.5
VRI     Vrincioaia        131.54 323 ⇑PKIKP  PKiKP    02 07 55.6 -0.5
MLR     Muntele Rosu      132.20 322 ePKPdf  PKPdf    02 07 56.5  0.0
MLR                                  ePKPdf  PKiKP    02 07 57.2 -0.4
MLR     Muntele Rosu      132.20 322⇓iP      PKiKP    02 07 57.8 +0.2
MLR     Muntele Rosu      132.20 322 ⇓PKIKP  PKiKP    02 07 57.8 +0.2
MLR     Muntele Rosu      132.20 322 PKP     PKPdf    02 07 56.5  0.0
        comp=Z,6.4nm,1.1s,baz=135,slow=4.8,SNR=5.8
SECR                      132.37 322⇓iP      PKiKP    02 07 57.3 -0.5
UZH     Uzhgorod          132.44 328 ePKHKP  PKPpre   02 07 46.8
UZH                                  e                02 07 57.3
PTGA    Pitinga           132.65 102 PKP     PKPdf    02 07 57.0 -1.1
        comp=Z,2.1nm,0.3s,baz=256,slow=11,SNR=5.1
VOIR                      132.76 323⇑iP      PKiKP    02 07 59.5 +0.8
VOIR                      132.76 323 ⇑PKIKP  PKiKP    02 07 59.5 +0.8
ARR     Arges             133.05 323⇓iP      PKiKP    02 07 59.1 -0.1
HUMR    Humele            133.30 322⇓iP      PKPdf    02 07 59.0 +0.6
DRGR                      133.33 326⇓iP      PKPdf    02 07 58.4 -0.1
DRGR                      133.33 326 ⇓PKIKP  PKPdf    02 07 58.4 -0.1
MANT    Manisa            133.75 313 ePKPdf  PKPdf    02 08 00.2 +0.5
MBAR    Mbarara           133.98 258 ePKPdf  PKiKP    02 08 03.5 +1.4
MORC    Moravsky Berou    134.01 332⇓iP      PKiKP    02 08 00.5 -0.5
MORC    Moravsky Berou    134.01 332 ⇓PKIKP  PKiKP    02 08 00.5 -0.5
MORC    Moravsky Berou    134.01 332 ePKP    PKPdf    02 07 56.2 -3.5
MORC    Moravsky Berou    134.01 332 ePKP    SKPab    02 11 32.6 +1.4
DPC     Dobruska-Polom    134.15 333 ePKPDF  PKiKP    02 08 01.1 -0.2
DPC     Dobruska-Polom    134.15 333 ePKIKP  PKiKP    02 08 01.1 -0.2
UPC     Upice             134.17 334 ePKPDF  PKiKP    02 08 00.9 -0.3
UPC     Upice             134.17 334 ePKIKP  PKiKP    02 08 00.9 -0.3
VYHS    Vyhne             134.28 330 ePKIKP  PKPdf    02 07 59.6 -0.6
VYHS    Vyhne             134.28 330 ePKP    PKPdf    02 07 59.6 -0.6
BZS     Buzias            134.64 325⇓iP      PKPdf    02 08 00.9  0.0
BZS     Buzias            134.64 325 ⇓PKIKP  PKPdf    02 08 00.9  0.0
BRG     Berggiesshubel    134.77 335 ePKP    PKPdf    02 08 01.1 +0.1
        comp=Z,14nm,1.1s
BRG                                  e                02 10 36.6
        comp=Z,105nm,2.4s
BRG                                  e                02 11 32.9
        comp=Z,61nm,1.8s
BRG     Berggiesshubel    134.77 335 ePKP    SKPab    02 11 35.0 +0.6
        comp=Z,59nm,1.7s
BRG     Berggiesshubel    134.77 335 ePKIKP  PKPdf    02 08 01.1 +0.1
BRG                                  e                02 10 36.7
BRG                                  pmax    pmax
        comp=Z,12nm,1.1s
BRG                                  pmax    pmax
        comp=Z,14nm,2.4s
BRG                                  pmax    pmax
        comp=Z,105nm,1.8s
PVCC    Panska Ves        134.78 335 ePKPDF  PKiKP    02 08 03.5 +1.1
PVCC    Panska Ves        134.78 335 ePKIKP  PKiKP    02 08 03.5 +1.1
VRAC    Vranov            134.78 332⇓iP      PKPdf    02 07 58.2 -2.9
VRAC    Vranov            134.78 332 ⇓PKIKP  PKPdf    02 07 58.2 -2.9
VRAC    Vranov            134.78 332 ePKP    PKPdf    02 08 01.3 +0.2
VRAC    Vranov            134.78 332 ePKP    SKPdf    02 11 35.0 -0.9
VRAC    Vranov            134.78 332 PKP     PKPdf    02 08 00.5 -0.6
        comp=Z,2.1nm,0.7s,baz=61,slow=2.4,SNR=4.0
CLL     Collm             134.81 336 ePKPdf  PKPdf    02 08 00.8 -0.2
CLL     Collm             134.81 336 ePKPdf  PKPdf    02 08 01.0  0.0
        comp=Z,10.0nm,1.0s
CLL                                  e                02 08 06.0
        comp=Z,44nm,1.8s
CLL                                  e                02 08 20.0
CLL                                  e                02 10 16.0
CLL                                  i PKSbc PKSbc    02 11 33.8 +1.4
        comp=Z,41nm,1.6s
CLL     Collm             134.81 336 ePKIKP  PKPdf    02 08 01.0  0.0
CLL                                  e                02 08 06.0
CLL                                  pmax    pmax
        comp=Z,182nm,1.0s
KRUC    Moravsky          135.05 332 ePKP    PKPdf    02 08 01.9 +0.3
KRUC    Moravsky          135.05 332 ePKP    SKPab    02 11 35.8 +0.2
MODS    Modra-Piesok      135.12 331 ePKIKP  PKPdf    02 08 02.1 +0.3
MODS    Modra-Piesok      135.12 331 ePKP    PKPdf    02 08 02.1 +0.3
PRU     Pruhonice         135.19 334 ePKPDF  PKiKP    02 08 03.5 +0.2
PRU     Pruhonice         135.19 334 ePKIKP  PKiKP    02 08 03.5 +0.2
TREC    Trest             135.29 333 ePKPDF  PKiKP    02 08 04.0 +0.4
VTS     Vitosha           135.39 321 ePKPdf  PKPdf    02 08 02.8 +0.2
CONA    Conrad Observa    136.11 331 PKPdf   PKPdf    02 08 03.7  0.0
        comp=Z,7.2nm,1.5s
CONA                                 SKPdf   SKPdf    02 11 38.5  0.0
        comp=Z,20nm,1.4s
KHC     Kasperske Hory    136.25 334 ePKPdf  PKPdf    02 08 03.9  0.0
KHC     Kasperske Hory    136.25 334 ePKPDF  PKPdf    02 08 04.0 +0.1
KHC                                  epPKP   sPKPdf   02 08 11.5 +3.0
GEC2    GERESS Array S    136.41 334 ePKPpre PKPpre   02 07 52.6
GEC2                                 ePKPdf  PKiKP    02 08 05.6 -0.4
GEC2    GERESS Array S    136.41 334 ePKHKP  PKPpre   02 07 52.6
GEC2                                 e                02 08 05.6
GERES   GERESS Array B    136.41 334 PKhKP   PKPpre   02 07 52.6
        comp=Z,0.8nm,0.7s,baz=98,slow=2.7,SNR=5.8
GERES                                PKP     PKPdf    02 08 04.3 +0.1
        comp=Z,3.5nm,0.9s,baz=111,slow=3.0,SNR=14
GEA0    GERESS Array S    136.42 334 ePKPdf  PKPdf    02 08 04.0 -0.3
DIVS    Divibare          136.48 324 ePKPdf  PKPdf    02 08 04.8 +0.3
VAY     Valandovo         136.50 319 i P     PKPdf    02 08 03.6 -0.9
BDFB    Brasilia          136.70 128 PKhKP   PKPpre   02 08 01.9
        comp=Z,1.2nm,0.4s,baz=167,slow=11,SNR=2.3
MOA     Molln             136.90 332 ePKPdf  PKPdf    02 08 04.6 -0.5
        comp=Z,6.0nm,0.9s
MOA                                  eSKPdf  SKPdf    02 11 41.0 +1.2
        comp=Z,11nm,1.3s
KRUS    Krusevo           137.31 320 i P     PKPdf    02 08 05.7 -0.5
SOKA    Soboth            137.39 330 ePKiKP  PKiKP    02 08 07.8 -0.2
        comp=Z,12nm,1.5s
SOKA                                 eSKPdf  SKPdf    02 11 42.2 +1.4
        comp=Z,13nm,1.4s
BIA     Bitola            137.46 320 i P     PKPdf    02 08 06.0 -0.4
AGG     Agios Georgios    137.85 317 ePKPdf  PKPdf    02 08 06.7 -0.4
MEM     Membach           137.89 341 ⇑PKiKP  PKPdf    02 08 07.3 +0.5
KBA     Koelnbreinsper    137.90 332 PKiKP   PKPdf    02 08 07.6 +0.5
        comp=Z,4.4nm,0.9s
KBA                                  eSKPdf  SKiKP    02 11 43.7 -1.3
        comp=Z,13nm,1.3s
PDG     Podgorica         137.92 323⇓iP      PKPdf    02 08 06.1 -1.0
WATA    Walderalm         138.49 334 ePKiKP  PKiKP    02 08 10.0 -0.3
        comp=Z,2.9nm,0.7s
WATA                                 SKPdf   SKPdf    02 11 44.4 +1.6
        comp=Z,6.9nm,1.2s
WTTA    Wattenberg        138.52 334 eSKPdf  SKPdf    02 11 44.4 +1.5
        comp=Z,14nm,1.5s
ABTA    Abfaltersbach     138.52 332 ePKPdf  PKPdf    02 08 07.5 -0.7
        comp=Z,11nm,1.1s
ABTA                                 eSKPdf  SKPdf    02 11 44.3 +1.5
        comp=Z,21nm,2.0s
WLF     Walferdange       138.66 340 ⇓PKiKP  PKiKP    02 08 11.1 +0.7
MOTA    Moosalm           138.68 334 ePKPdf  PKPdf    02 08 07.8 -0.7
        comp=Z,11nm,0.8s
MOTA                                 eSKPdf  SKiKP    02 11 45.8 -0.8
        comp=Z,8.9nm,1.1s
SQTA    Sankt Quirin      138.74 334 ePKPdf  PKPdf    02 08 08.3 -0.4
        comp=Z,18nm,1.3s
SQTA                                 eSKPdf  SKiKP    02 11 46.2 -0.4
        comp=Z,20nm,1.7s
FETA    Feichten          139.10 334 ePKiKP  PKPdf    02 08 09.7 +0.3
        comp=Z,22nm,1.1s
DAVA    Damuels           139.24 335 epPKPdf PKiKP    02 08 11.9  0.0
        comp=Z,16nm,1.1s
DAVA                                 SKPbc   SKiKP    02 11 47.9 +0.2
        comp=Z,19nm,1.4s
DAVOX   Davos/Dischmat    139.65 335 PKhKP   PKPpre   02 08 02.6
        comp=Z,2.7nm,0.5s,baz=273,slow=5.7,SNR=8.4
DAVOX                                PKP     PKPdf    02 08 10.7 +0.3
        comp=Z,18nm,1.1s,baz=320,slow=1.3,SNR=10
TIP     Timpagrande       141.38 321 ePKPdf  PKPdf    02 08 12.4 -1.2
VAE     Valguarnera       143.88 320 PKP     PKPdf    02 08 19.8 +1.7
        comp=Z,62nm,1.1s,baz=324,slow=21,SNR=4.1
CLTB    Caltabellotta     144.56 321 ePKPdf  PKPdf    02 08 18.8 -0.5
KEST    Kesra             148.11 322 ePKPbc  PKPbc    02 08 29.2 +0.7
KEST    Kesra             148.11 322 PKPbc   PKPbc    02 08 29.1 +0.5
        comp=Z,135nm,1.1s,baz=276,slow=2.5,SNR=23
CMAH    Djebel Manchou    148.59 326 P       PKiKP    02 08 30.8 -0.5
CAEH    'Ain El Ouahch    148.78 327 P       PKiKP    02 08 31.0 -0.6
PBRG    Braganca          149.34 349 ePKPdf  PKPbc    02 08 31.4 -0.1
CASM    Ain Smara         149.36 326 P       PKPbc    02 08 31.6 -0.1
POLO    Lamas de Olo      149.94 351 ePKPdf  PKPbc    02 08 33.3 +0.3
MVO     Moncorvo          150.02 350 ePKPdf  PKPdf    02 08 28.4 +0.1
MVO     Moncorvo          150.02 350 ePKPdf  PKiKP    02 08 33.7 -0.4
PVRL    Vila Real         150.03 351 ePKPdf  PKPbc    02 08 33.4 +0.2
CKHR    Kef el Ahmar      150.07 327 P       PKiKP    02 08 36.6 +2.2
PTO     Porto             150.29 352 ePKPdf  PKiKP    02 08 34.3 -0.2
PVIS    Viseu             150.60 351 ePKPdf  PKPbc    02 08 34.8 +0.2
ES19    SONSECA Array     150.72 344 ePKPdf  PKPdf    02 08 29.6 +0.2
ESDC    Sonseca Array     150.76 344 PKP     PKPdf    02 08 29.7 +0.2
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        comp=Z,8.1nm,1.2s,baz=341,slow=3.1,SNR=4.4
ESDC                                 PKPbc   PKPbc    02 08 34.8 -0.1
        comp=Z,9.5nm,0.9s,baz=0.5,slow=2.5,SNR=28
MTE     Manteigas         150.85 350 ePKPdf  PKPdf    02 08 30.3 +0.7
MTE     Manteigas         150.85 350 ePKPbc  PKPbc    02 08 35.4 +0.2
PCAS    Casmilo, Conde    151.34 351 ePKPdf  PKPbc    02 08 36.3  0.0
PCBR    Castelo Branco    151.38 350 ePKPdf  PKPdf    02 08 30.8 +0.5
PCBR    Castelo Branco    151.38 350 ePKPdf  PKiKP    02 08 36.6 -0.2
PTOM    Tomar             151.75 351 ePKPdf  PKiKP    02 08 37.5 -0.1
PMRV    Marv??o           151.77 349 ePKPdf  PKPbc    02 08 37.4 +0.1
PMTG    Montargil         152.26 350 ePKPdf  PKPbc    02 08 38.2 -0.2
PBEJ    Beja              153.22 349 ePKPdf  PKPdf    02 08 35.7 +2.6
MESJ    Messejana         153.46 350 ePKPdf  PKPdf    02 08 33.1 -0.3
MESJ    Messejana         153.46 350 ePKPdf  PKPbc    02 08 40.2 -0.9
TOA0    Torodi Ar. Sit    164.66 277 ePKPdf  PKPdf    02 08 45.8 -1.3
TOA0                                 ePKPdf  pPKPdf   02 08 46.6 -4.1
TORD    Torodi Ar. Bea    164.66 277 PKP     PKPdf    02 08 46.2 -1.0
        comp=Z,11nm,0.9s,baz=347,slow=4.5,SNR=27
TORD                                 PP      PP       02 13 33.7 +4.6
        comp=Z,3.6nm,1.0s,baz=123,slow=4.9,SNR=4.3
TOA1    Torodi Ar. Sit    164.66 277 ePKPdf  PKPdf    02 08 46.2 -1.0
KIC     Kosan Boka        169.49 241 ePKP1   PKPab    02 10 03.9 +0.1
        comp=Z,103nm,1.2s
LIC     Lamto             169.66 239 ePKP1   PKPab    02 10 04.4 -0.2
        comp=Z,162nm,1.4s
DBIC    Dimbokro          169.74 242 PKP     PKPdf    02 08 49.7 -1.2
        comp=Z,11nm,1.1s,baz=45,slow=1.8,SNR=5.8
DBIC                                 PKPab   PKPab    02 10 04.9  0.0
        comp=Z,8.4nm,1.0s,baz=93,slow=7.9,SNR=6.9
TIC     Toumodi           169.87 241 ePKP1   PKPab    02 10 05.3 -0.2
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*SOME **06** 01:52:10.8, 42°.58N×79°.58E, h20km*

*KRNET **06** 01:52:10.8±0.1, 42°.59N×79°.62E, h19km, mb3.5*

*NNC **06** 01:52:12.1±2.0, 42°.65N×79°.54E, h0km, mb3.8, mpv3.5,*
Error ellipse: s-maj=13.2km s-min=8.0km az=142.0

ISC 06 01:52:11.2±1.5**, 42°.59N**±0°.05×**79°.63E**±0°.05**, h10km, n47,**
σ**0ˢ.97**/84**, 17C-10D, Lake Issyk-Kul region**

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Code    Station Name        Δ°   AZ°    Phase ID            Time      Res
                                     Op      ISC        h  m  s    ISC
UZB     Uzynbulak           0.72 322 P       Pg       01 52 24.2 -0.9
        48nm,0.2s
UZB                                  S       Sg       01 52 34.1 -0.4
        132nm,0.3s
UZB     Uzynbulak           0.72 322 eP      Pg       01 52 24.2 -0.9
        baz=22
UZB                                  eS      Sg       01 52 34.1 -0.4
        baz=22
UZB     Uzynbulak           0.72 322 eP      Pg       01 52 24.2 -0.9
        48nm,0.2s
UZB                                  eS      Sg       01 52 34.1 -0.4
        132nm,0.3s
PDGK    Podgornoye          0.75 352 ⇑P      Pg       01 52 24.8 -0.8
        31nm,0.4s
PDGK                                 ⇑S      Sg       01 52 35.5 -0.1
        11nm,0.2s
PDGK    Podgornoye          0.75 352⇓iP      Pg       01 52 24.9 -0.8
        baz=53
PDGK                                ⇓iS      Sg       01 52 35.2 -0.3
        baz=53
PRZ     Przheval'sk         0.92 264⇑iP      Pg       01 52 27.7 -1.2
        baz=63
PRZ                                 ⇑iS      Sg       01 52 40.2 -0.6
        baz=63
SATY    Saty                1.02 298 P       Pg       01 52 29.7 -1.1
        18nm,0.1s
SATY                                 S       Sg       01 52 43.0 -1.0
        132nm,0.1s
SATY    Saty                1.02 298 eP      Pg       01 52 29.7 -1.1
        18nm,0.1s
SATY                                 eS      Sg       01 52 43.0 -1.0
        132nm,0.1s
KURS    Kuram               1.40 311 P       Pb       01 52 36.8 -0.7
        4.6nm,0.1s
KURS                                 S       Sb       01 52 55.3 -0.1
        58nm,0.4s
KURS    Kuram               1.40 311 eP      Pb       01 52 36.8 -0.7
        baz=11
KURS                                 eS      Sb       01 52 55.3 -0.1
        baz=11
KURS    Kuram               1.40 311 eP      Pb       01 52 36.8 -0.7
        4.6nm,0.1s
KURS                                 eS      Sb       01 52 55.3 -0.1
        58nm,0.4s
DJR     Jarkent             1.75   4 P       Pb       01 52 42.5 -0.9
        5.4nm,0.2s
DJR                                  S       Sb       01 53 06.0 +0.5
        28nm,0.3s
DJR     Jarkent             1.75   4 eP      Pb       01 52 42.5 -0.9
        5.4nm,0.2s
DJR                                  eS      Sb       01 53 05.6 +0.1
        28nm,0.3s
KDJ     Kajisay             1.87 257⇑iP      Pb       01 52 44.6 -1.0
        baz=56
KDJ                                 ⇑iS      Sb       01 53 09.1 -0.1
        baz=56
KOTS    Kotyrbulak          1.96 290 Pg      Pb       01 52 47.0 -0.1
        32nm,0.3s
KOTS                                 Lg      Lg       01 53 13.2
        252nm,0.3s
KOTS    Kotyrbulak          1.96 290 eP      Pb       01 52 47.0 -0.1
        baz=90
KOTS                                 eS      Sg       01 53 13.2 -1.1
        baz=90
KOTS    Kotyrbulak          1.96 290 eP      Pb       01 52 47.0 -0.1
        32nm,0.3s
KOTS                                 eS      Sg       01 53 13.2 -1.1
        252nm,0.3s
MDOK    Medeo               1.98 288 Pg      Pb       01 52 46.0 -1.5
        2.9nm,0.2s
MDOK                                 Lg      Lg       01 53 15.5
        21nm,0.4s
MDOK    Medeo               1.98 288 eP      Pb       01 52 46.1 -1.4
        baz=88
MDOK                                 eS      Sb       01 53 11.7 -0.7
        baz=88
MDOK    Medeo               1.98 288 eP      Pb       01 52 46.1 -1.4
        17nm,0.2s
MDOK                                 eS      Sb       01 53 11.7 -0.7
        59nm,0.5s
TNSS    Tian-Shan           2.02 284 eP      Pb       01 52 46.6 -1.8
        baz=84
TNSS                                 eS      Sb       01 53 12.7 -1.1
        baz=84
TNSS    Tian-Shan           2.02 284 eP      Pb       01 52 46.6 -1.8
        15nm,0.4s
TNSS                                 eS      Sb       01 53 12.7 -1.1
        37nm,0.2s
KNDC    Almaty              2.06 289 ⇓Pg     Pb       01 52 48.0 -0.7
        31nm,0.3s
KNDC                                 ⇑Lg     Lg       01 53 15.2
        7.8nm,0.2s
ARXS    Arharly             2.09 322 Pg      Pb       01 52 49.0 -0.3
        11nm,0.3s
ARXS                                 Lg      Lg       01 53 16.1
        59nm,0.2s
ARXS    Arharly             2.09 322 eP      Pb       01 52 49.0 -0.3
        11nm,0.3s
ARXS                                 eS      Sb       01 53 16.1 +0.7
        59nm,0.2s
CHKK    Chushkaly           2.31 304 eP      Pb       01 52 52.4 -0.6
        baz=4.0
CHKK                                 eS      Sb       01 53 22.4 +0.8
        baz=4.0
CHKK    Chushkaly           2.31 304 eP      Pb       01 52 52.4 -0.6
        4.4nm,0.2s
CHKK                                 eS      Sb       01 53 22.4 +0.8
        74nm,0.2s
MTBS    Maitube             2.42 284 eP      Pb       01 52 53.9 -1.0
        baz=84
MTBS                                 eS      Sb       01 53 24.8 +0.1
        baz=84
MTBS    Maitube             2.42 284 eP      Pb       01 52 53.9 -1.0
        19nm,0.3s
MTBS                                 eS      Sb       01 53 24.7 +0.1
        57nm,0.3s
KTBS    Karatobe            2.43 299 Pg      Pb       01 52 55.1  0.0
        9.7nm,0.2s
KTBS                                 Lg      Lg       01 53 26.7
        149nm,0.3s
KTBS    Karatobe            2.43 299 eP      Pb       01 52 55.1  0.0
        baz=97
KTBS                                 eS      Sb       01 53 26.7 +1.5
        baz=97
KTBS    Karatobe            2.43 299 eP      Pb       01 52 55.1  0.0
        9.7nm,0.2s
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KTBS				eS	Sb	01 53 26.7	+1.5
	149nm,0.3s						
ULHL	Ulahol	2.53	263	⇑iP	Pn	01 52 53.6	+1.0
	baz=63						
ULHL				⇑iS	Sn	01 53 25.2	+1.6
	baz=63						
KAPS	Kapalarasan	2.70	356	eP	Pb	01 52 58.4	-1.3
	2.0nm,0.3s						
KAPS				eS	Sb	01 53 32.1	-0.8
	11nm,0.6s						
BOOM	Boomskoye usch	2.73	269	⇓eP	Pn	01 52 56.4	+1.1
	baz=69						
BOOM				⇓iS	Sn	01 53 29.9	+1.5
	baz=69						
KUU	Kurty	2.74	300	eP	Pb	01 52 59.2	-1.1
	baz=0.0						
KUU				eS	Sb	01 53 34.3	+0.4
	baz=0.0						
KUU	Kurty	2.74	300	eP	Pb	01 52 59.2	-1.1
	2.1nm,0.2s						
KUU				eS	Sb	01 53 34.2	+0.4
	49nm,0.3s						
DGS	Degeres	2.91	284	Pg	Pb	01 53 02.6	-0.7
	12nm,0.3s						
DGS				Lg	Lg	01 53 39.8	
	68nm,0.4s						
DGS	Degeres	2.91	284	eP	Pb	01 53 02.6	-0.7
	baz=84						
DGS				eS	Sb	01 53 39.8	+0.9
	baz=84						
DGS	Degeres	2.91	284	eP	Pb	01 53 02.6	-0.7
	12nm,0.3s						
DGS				eS	Sb	01 53 39.8	+0.9
	68nm,0.4s						
NRN	Naryn	2.94	248	⇓iP	Pn	01 52 59.5	+1.2
	baz=48						
NRN				⇓iS	Sn	01 53 35.5	+1.6
	baz=48						
TKM2	Tokmak 2	2.99	278	⇓Pg	Pb	01 53 02.3	-2.4
	3.5nm,0.5s						
TKM2				⇑Lg	Lg	01 53 42.3	
	20nm,0.4s						
TKM2	Tokmak 2	2.99	278	⇓iP	Pn	01 53 00.1	+1.2
	baz=78						
TKM2				⇓iS	Sn	01 53 36.2	+1.3
	baz=78						
KZA	Kyzart	3.29	263	⇑iP	Pn	01 53 04.6	+1.4
	baz=62						
KZA				⇑iS	Sn	01 53 43.2	+0.7
	baz=62						
KBK	Karagaybulak	3.46	273	⇑iP	Pn	01 53 06.8	+1.5
	baz=73						
KBK				⇑iS	Sn	01 53 47.1	+0.7
	baz=73						
AAK	Ala-Archa	3.79	272	⇑Pn	Pb	01 53 19.0	+0.7
	2.3nm,0.5s						
AAK				⇑Lg	Lg	01 54 07.1	
	4.3nm,0.4s						
KK31	Karatay Array	6.72	277	⇑Lg	Lg	01 55 39.8	
	0.8nm,0.3s,baz=86,slow=27,SNR=3.8						

IDC 06 01:52:17.3±1.5**, 10°.77S×165°.35E, h0km, mb4.2**/6**, mb1 4.6**/6**, mb1mx4.2**/43**, mbtmp4.2**/6**, Error ellipse: s-maj=117.8km s-min=23.5km az=146.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.22	249	P	P	01 58 38.7	-0.1
	3.2nm,0.6s,baz=80,slow=8.9,SNR=4.6						
ASAR	Alice Springs	32.57	243	P	P	01 58 50.5	-0.2
	6.1nm,0.7s,baz=64,slow=9.9,SNR=7.1						
ILAR	Eielson Array	83.37	19	P	P	02 04 46.6	+0.5
	1.2nm,0.8s,baz=234,slow=5.1,SNR=4.4						
NVAR	Mina Array Bea	86.14	50	P	P	02 05 01.2	+0.3
	1.6nm,0.8s,baz=240,slow=7.2,SNR=4.6						
PDAR	Pinedale Array	93.65	47	P	P	02 05 35.0	-1.2
	0.6nm,0.9s,baz=224,slow=3.8,SNR=3.0						
YKA	Yellowknife Ar	94.90	27	P	P	02 05 40.6	-0.6
	0.5nm,0.8s,baz=94,slow=8.1,SNR=3.6						
GERES	GERESS Array B	135.28	334	PKP	PKPdf	02 11 39.0	-0.3
	4.5nm,1.2s,baz=132,slow=2.0,SNR=4.5						
BDFB	Brasilia	137.81	128	PKhKP	PKPpre	02 11 37.1	
	20nm,1.3s,baz=28,slow=4.8,SNR=8.3						
BDFB				PKP	PKiKP	02 11 46.0	-0.9
	11nm,1.1s,baz=8.1,slow=7.5,SNR=6.0						
DAVOX	Davos/Dischmat	138.52	334	PKP	PKPdf	02 11 46.0	+0.5
	10nm,1.1s,baz=310,slow=4.1,SNR=4.5						

IDC ***06*** *01:53:38.8±0.8, 10°.97S×165°.39E, h0km, mb4.5/15, mb1 4.7/16, mb1mx4.4/47, mbtmp4.6/16, ML5.1/1, Error ellipse: s-maj=24.0km s-min=18.1km az=127.0*

NEIC ***06*** *01:53:40.3±0.3, 11°.07S×165°.27E, h10km, mb4.9/16, Error ellipse: s-maj=9.2km s-min=7.5km az=105.0*

ISCJB ***06*** *01:53:42.1±0.3, 11°.22S±0°.06×165°.25E±0°.06, h31km, mb4.7/28, Error ellipse: s-maj=9.2km s-min=8.0km az=17.0*

ISC 06 01:53:43.4±0.6**, 11°.11S**±0°.09×**165°.2E**±0°.1**, h31km, n47, σ1s.44**/46**, mb4.7**/28**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.96	174	Pn	Pn	01 56 18.5	+0.2
	14nm,0.3s,baz=350,slow=13,SNR=11						
PATS	Pohnpei	19.12	339	eP	P	01 58 00.8	-3.2
	122nm,0.5s						
EIDS	Eidsvold	19.51	221	eP	P	01 58 06.4	-1.8
CTA	Charters Tower	20.32	242	P	Pn	01 58 20.4	+1.0
	26nm,0.8s,baz=68,slow=11,SNR=5.9						
CTAO	Charters Tower	20.32	242	eP	P	01 58 12.2	-5.0
	35nm,1.3s						
COEN	Coen	21.71	260	eP	P	01 58 31.3	-1.0
	28nm,0.9s						
OUZ	Omahuta	25.17	164	eP	P	01 59 05.6	-0.5
URZ	Urewera	29.05	161	P	P	01 59 40.9	+0.1
	10nm,0.8s,baz=80,slow=18,SNR=2.9						
STKA	Stephens Creek	30.05	223	P	P	01 59 52.0	+2.2
	7.3nm,0.8s,baz=38,slow=11,SNR=4.4						
WC3	Warramunga Arr	30.96	250	eP	P	01 59 58.2	+0.1
	20nm,1.0s						
WRAB	Tennant Creek	30.98	250	eP	P	01 59 57.2	-1.0
	21nm,1.0s						
WR1	Warramunga Arr	30.99	250	eP	P	01 59 59.5	+1.1
	25nm,1.0s						
WRA	Warramunga Arr	30.99	250	P	P	01 59 59.5	+1.1
	6.1nm,0.8s,baz=83,slow=8.8,SNR=5.4						
BFZ	Birch Farm	31.02	164	eP	P	01 59 57.4	-0.9
	61nm,1.2s						
SNZO	South Karori	31.21	166	eP	P	02 00 00.4	+0.4
	119nm,1.3s						
THZ	Tophouse	31.26	169	eP	P	02 00 00.6	+0.1
	7.7nm,0.6s						
TOO	Toolangi	31.75	211	eP	P	02 00 02.3	-2.6
AS01	Alice Springs	32.27	243	eP	P	02 00 09.7	+0.1
AS31	Alice Springs	32.31	243	eP	P	02 00 11.2	+1.2
	2.9nm,0.8s						
ASAR	Alice Springs	32.31	243	P	P	02 00 11.2	+1.2
	4.5nm,0.6s,baz=62,slow=10,SNR=10						
FOZ	Fox Glacier	32.54	174	eP	P	02 00 12.2	+0.6
RPZ	Rata Peaks	32.87	172	P	P	02 00 16.1	+1.5
	16nm,0.8s						
RPZ	Rata Peaks	32.87	172	P	P	02 00 16.1	+1.5
	12nm,0.7s,baz=104,slow=4.4,SNR=3.8						
CRLZ	Canterbury Las	32.97	170	eP	P	02 00 14.6	-0.8
	16nm,0.9s						
FITZ	Fitzroy Crossi	38.88	255	P	P	02 01 08.2	+1.9
	7.9nm,0.8s,baz=132,slow=5.9,SNR=3.7						
NWAO	Narrogin (SRO)	49.01	236	P	P	02 02 28.6	+1.0
	9.8nm,0.9s,baz=63,slow=11,SNR=3.0						
CM01	Chiang Mai Arr	71.65	294	eP	P	02 05 03.9	+1.2
CM31	Chiang Mai Arr	71.68	294	eP	P	02 05 03.8	+1.0
	12nm,1.0s						
CMAR	Chiang Mai Arr	71.68	294	P	P	02 05 03.8	+1.0
	7.0nm,0.3s,baz=138,slow=5.6,SNR=3.3						
SONA0	Songino Array	78.42	324	eP	P	02 05 42.7	+1.4
SONM	Songino Array	78.42	324	P	P	02 05 42.7	+1.4
	1.6nm,0.9s,baz=162,slow=6.1,SNR=3.5						
GTA	Gaotai	78.74	314	eP	P	02 05 45.2	+1.9
GTA				pP	pP	02 05 50.1	-1.8
GTA				sP	PcP	02 05 52.2	+0.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HDA	Harding Lake	83.47	19	eP	P	02 06 07.6	-0.1
	comp=Z,14nm,1.0s						
ILAR	Eielson Array	83.74	19	P	P	02 06 08.1	-1.0
	comp=Z,1.6nm,0.8s,baz=241,slow=4.6,SNR=4.8						
ILB	Eielson Array	83.74	19	eP	P	02 06 08.1	-1.0
NV01	Mina Array Sit	86.45	50	eP	P	02 06 23.6	0.0
NVAR	Mina Array Bea	86.45	50	P	P	02 06 23.1	-0.5
	comp=Z,2.5nm,1.0s,baz=184,slow=3.6,SNR=3.6						
G08A	Pilot Rock	88.04	43	eP	P	02 06 31.6	+0.7
	comp=Z,3.6nm,1.0s						
LCMT	Little Creek M	89.94	52	eP	P	02 06 40.7	+0.6
HVU	Hansel Valley	91.42	48	eP	P	02 06 48.1	+1.1
	comp=Z,6.6nm,1.2s						
MK32	Makanchi Array	93.23	317	eP	P	02 06 54.4	-0.7
MKAR	Makanchi Array	93.23	317	P	P	02 06 54.3	-0.7
	comp=Z,3.4nm,0.9s,baz=103,slow=1.9,SNR=3.3						
YKA	Yellowknife Ar	95.27	27	P	P	02 07 03.7	-0.2
	comp=Z,0.5nm,0.8s,baz=262,slow=4.6,SNR=3.3						
YKB5	Yellowknife Ar	95.27	27	eP	P	02 07 03.7	-0.2
LTX	Lajitas	96.30	61	eP	P	02 07 10.1	+0.5
TXAR	Lajitas Array	96.30	61	P	P	02 07 10.1	+0.5
	comp=Z,0.2nm,0.7s,baz=219,slow=5.3,SNR=2.2						
ARCES	ARCESS Array B	116.27	345	PKP	PKiKP	02 12 21.3	-2.0
	comp=Z,2.9nm,1.0s,baz=90,slow=2.7,SNR=4.4						

IDC ***06*** *01:54:13.1±0.3, 10°.33S×165°.54E, h0km, mb5.4/44, mb1 5.5/45, mb1mx5.5/45, mbtmp5.4/45, ML5.6/1, MS6.9/28, Ms1 6.9/28, ms1mx6.8/38, Error ellipse: s-maj=11.2km s-min=9.8km az=79.0*

BJI ***06*** *01:54:13.4, 10°.51S×165°.74E, h10km, mB7.2/33, mb5.8/61, Ms7.3/67, Ms7 7.2/63*

ISCJB ***06*** *01:54:14.5±0.1, 10°.55S±0°.02×165°.66E±0°.02, h17km, mb6.2/473, MS7.0/63, Error ellipse: s-maj=3.1km s-min=2.4km az=171.6*

NEIC ***06*** *01:54:14.6±0.9, 10°.50S×165°.59E, h9km±5km, mb6.5/298, MW7.0, MW7.0, Error ellipse: s-maj=4.2km s-min=3.5km az=138.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.68; $M_{\theta\theta}$2.78; $M_{\phi\phi}$-2.10; $M_{r\theta}$1.04; $M_{\theta\phi}$-2.95; $M_{\phi r}$0.22; Best double couple: $M_0$4.00000×10^{19} NP1:ϕ_s160.00000°, δ74.00000°, λ-2.00000°. NP2: ϕ_s251.00000°, δ88.00000°, λ-164.00000°. Principal axes: T 4.3200, Plg10.0000°, Azm24.0000°; N -0.6800, Plg74.0000°, Azm258.0000°; P -3.6400, Plg13.0000°, Azm117.0000°;*

NEIC ***06*** *01:54:15.0±0.0, 10°.11S×165°.73E, h11km, Moment Tensor Solution. s16 Moment tensor: Scale 10^{19}Nm; M_{rr}0.00; $M_{\theta\theta}$3.11; $M_{\phi\phi}$-3.11; $M_{r\theta}$-0.32; $M_{\theta\phi}$-2.35; $M_{\phi r}$-0.80; Best double couple: $M_0$4.00000×10^{19} NP1:ϕ_s64.00000°, δ82.00000°, λ-170.00000°. NP2:ϕ_s333.00000°, δ81.00000°, λ-8.00000°. Principal axes: T 3.9000, Plg0.0000°, Azm198.0000°; N 0.1800, Plg77.0000°, Azm104.0000°; P -4.0800, Plg11.0000°, Azm288.0000°;*

MOS ***06*** *01:54:16.8±1.1, 10°.45S×165°.57E, h34km, mb6.3/55, MS6.9/9 Error ellipse: s-maj=6.7km s-min=6.0km az=94.6*

GCMT ***06*** *01:54:22.6±0.1, 10°.44S±0°.01×165°.56E±0°.01, h14km, MW7.0/143, Moment Tensor Solution. s82,c125; s143,c464; Duration: 7s.5 Moment tensor: Scale 10^{19} Nm; M_{rr}-0.17±.05; $M_{\theta\theta}$2.50±.04; $M_{\phi\phi}$-2.33±.04; $M_{r\theta}$0.32±.11; $M_{\theta\phi}$-2.77±.04; $M_{\phi r}$-0.41±.11; Best double couple: $M_0$3.71000×10^{19} NP1:ϕ_s160.00000°, δ88.00000°, λ7.00000°. NP2:ϕ_s69.00000°, δ83.00000°, λ178.00000°. Principal axes: T 3.8130, Plg7.0000°, Azm25.0000°; N -0.2040, Plg82.0000°, Azm173.0000°; P -3.6060, Plg4.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 01:54:15.0±0.7**, 10°.51S**±0°.04×**165°.82E**±0°.03**, h10km**±3km**, n1178, σ2s.26**/1236**, mb6.3**/471**, MS7.1**/63**, 34C-17D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.88	280	ePn	Pn	01 55 39.9	-2.4
HNR				eSn	Sn	01 56 45.6	-4.3
HNR	Honiara	5.88	280	eP	Pn	01 55 39.9	-2.4
HNR				e		01 56 45.6	
HNR	Honiara	5.88	280	Pn	Pn	01 55 41.5	-0.8
	1µm,0.3s,baz=140,slow=5.8,SNR=45						
HNR				Sn	Sn	01 56 50.7	+0.9
	246nm,0.3s,baz=81,slow=18,SNR=2.0						
MARNC	Mare, Loyalty	11.12	169	ePn	Pn	01 56 52.9	-1.3
DZM	Mont Dzumac	11.51	177	ePn	Pn	01 56 58.4	-1.3
	2µm,0.7s						
DZM				eSn	Sn	01 59 00.7	-7.8
	979nm,0.6s						
DZM				eLR	LR	01 59 39.4	
	comp=Z,2906µm,26.9s						
DZM	Mont Dzumac	11.51	177	ePn	Pn	01 56 56.4	-3.3
DZM	Mont Dzumac	11.51	177	Pn	Pn	01 57 01.0	+1.3
	43nm,0.3s,baz=32,slow=18,SNR=33						
DZM				Sn	Sn	01 59 06.1	-2.4
	14nm,0.3s,baz=114,slow=19,SNR=2.8						
DZM				LR	LR	02 00 58.6	
	comp=Z,1162µm,21.2s,baz=10.0,slow=35						
ONTNC	Ouen Toro	11.75	177	ePn	Pn	01 56 59.0	-3.8
PINNC	Pines Island,	12.14	173	ePn	Pn	01 57 06.1	-2.0
PINNC				eSn	Sn	01 59 22.8	-0.8
FUNA	Funafuti	13.34	83	ePn	Pn	01 57 21.6	-3.1
TARA	Tarawa	13.74	31	ePn	Pn	01 57 23.2	-6.9
TARA				eSn	Sn	01 59 55.4	-7.7
MSVF	Nonsavu	13.86	123	ePn	Pn	01 57 35.8	+4.0
MSVF	Nonsavu	13.86	123	eP	Pn	01 57 35.8	+4.0
PATS	Pohnpei	18.78	336	eP	P	01 58 34.6	0.0
KWAJ	Kwajalein Atol	19.27	5	eP	P	01 58 40.1	+0.1
KWAJ	Kwajalein Atol	19.27	5	eP	P	01 58 40.1	+0.1
CTA	Charters Tower	21.11	241	P	P	01 58 58.7	-1.5
	183nm,0.7s,baz=73,slow=13,SNR=16						
CTA				LR	LR	02 05 49.5	
	comp=Z,564µm,19.9s,baz=66,slow=33						
CTAO	Charters Tower	21.11	241	eP	P	01 58 58.3	-1.8
	1µm,1.1s						
CTAO	Charters Tower	21.11	241	eP	P	01 58 58.3	-1.8
CTAO				pmax	pmax		
	comp=Z,1µm,1.1s						
KNTN	Kanton	23.58	73	eP	P	01 59 24.7	-1.5
	comp=Z,11µm,1.9s						
RAO	Raoul Island	24.06	143	eP	P	01 59 34.1	+3.5
	comp=Z,578nm,0.8s						
RAO	Raoul Island	24.06	143	eP	P	01 59 34.1	+3.5
RAO				pmax	pmax		
	comp=Z,578nm,0.8s						
RAO	Raoul Island	24.06	143	P	P	01 59 34.4	+3.8
	comp=Z,164nm,0.3s,baz=54,slow=19,SNR=3.0						
RAO				LR	LR	02 07 27.2	
	comp=Z,133µm,21.1s,baz=313,slow=33						
OUZ	Omahuta	25.60	165	eP	P	01 59 45.6	+1.1
	comp=Z,3µm,1.8s						
OUZ				ePcP	PcP	02 03 15.6	+0.1
JAY	Jayapura	26.16	286	P	P	01 59 44.9	-5.1
	comp=Z,10µm,1.3s						
GENI	Genyem	26.65	285	P	P	01 59 52.6	-1.7
	comp=Z,820nm,1.1s						
H11S2	WAKE ISLAND Hy	28.83	2	T	T	02 30 24.8	
	baz=182						
H11S3	WAKE ISLAND Hy	28.83	2	T	T	02 30 25.1	
	baz=182,slow=74						
H11S1	WAKE ISLAND Hy	28.85	2	T	T	02 30 26.1	
	baz=182,slow=74						
HIZ	Hauiti	29.04	165	eP	P	02 00 15.9	+0.5
	comp=Z,1µm,1.2s						
CAN	Canberra	29.06	209	eP	P	02 00 15.2	-0.5
	comp=Z,288nm,1.1s						
MXZ	Matakaoa Point	29.19	159	eP	P	02 00 16.9	+0.2
	comp=Z,612nm,1.0s						
URZ	Urewera	29.43	162	P	P	02 00 19.6	+0.7
	comp=Z,165nm,0.5s,baz=280,slow=4.7,SNR=19						
WAKE	Wake Island	29.61	2	eP	P	02 00 19.0	-1.6
	comp=Z,950nm,1.4s						
WAKE				ePcP	PcP	02 03 22.9	-2.5
H11N1	WAKE ISLAND Hy	30.05	2	T	T	02 31 55.0	
	baz=182,slow=76,SNR=953						
H11N3	WAKE ISLAND Hy	30.05	2	T	T	02 31 55.4	
	baz=182,slow=76,SNR=1199						
H11N2	WAKE ISLAND Hy	30.07	2	T	T	02 31 59.0	
	baz=182,slow=76,SNR=1017						
BKZ	Black Stump Fm	30.09	163	eP	P	02 00 23.1	-1.7
	comp=Z,1µm,1.1s						
WAZ	Wanganui	30.25	166	P	P	02 00 34.8	+8.6
SRPI	Serui, Papua	30.60	284	P	P	02 00 31.8	+2.2
OHWZ	Ohakea	30.75	166	P	P	02 00 36.3	+5.7
STKA	Stephens Creek	30.88	223	eP	P	02 00 29.3	-2.6
	comp=Z,121nm,1.2s						
STKA				ePcP	PcP	02 03 26.8	-1.8
STKA	Stephens Creek	30.88	223	P	P	02 00 31.1	-0.7
	comp=Z,65nm,0.7s,baz=29,slow=8.9,SNR=28						
STKA				LR	LR	02 11 36.0	
	comp=Z,747µm,19.8s,baz=41,slow=34						
WPHZ	Waipukurau	30.91	164	P	P	02 00 35.5	+3.6
DUWZ	D'Urville Isla	31.01	168	P	P	02 00 38.1	+5.2
POWZ	Post Office Ro	31.04	165	P	P	02 00 37.7	+4.6
PRHZ	Porangahau	31.15	164	P	P	02 00 36.6	+2.5
PRWZ	Pori Road	31.25	165	P	P	02 00 36.9	+2.0
MRZ	Mangatainoka R	31.25	166	P	P	02 00 34.2	-0.8
KIW	Kapiti Island	31.28	167	P	P	02 00 38.1	+2.9
ANWZ	Angora Road	31.29	164	P	P	02 00 36.5	+1.2
OGWZ	Otaki Gorge	31.30	166	P	P	02 00 36.5	+1.1
BFZ	Birch Farm	31.44	165	eP	P	02 00 34.4	-2.2
	comp=Z,1µm,1.4s						
HOWZ	Holdsworth Sta	31.46	166	P	P	02 00 35.6	-1.2
TCW	Tory Channel	31.48	168	P	P	02 00 37.8	+0.9
CAW	Cannon Point	31.55	167	P	P	02 00 39.4	+1.8
TUWZ	Tuamarina	31.62	168	P	P	02 00 38.7	+0.5
SNZO	South Karori	31.66	167	eP	P	02 00 38.0	-0.6
	comp=Z,689nm,1.1s						
MTW	Mount Morrison	31.70	166	P	P	02 00 39.2	+0.3
GUMO	Guam	31.71	319	eP	P	02 00 38.4	-0.8
	comp=Z,840nm,1.4s						
GUMO	Guam	31.71	319	P	P	02 00 37.4	-1.9
	comp=Z,131nm,0.9s,baz=264,slow=9.2,SNR=3.5						
GUMO				LR	LR	02 12 31.9	
	comp=Z,242µm,20.4s,baz=131,slow=35						
WRAB	Tennant Creek	31.72	249	eP	P	02 00 38.0	-1.5
	comp=Z,375nm,1.1s						
WRAB	Tennant Creek	31.72	249	i P	P	02 00 37.4	-2.0
WRAB				pmax	pmax		
	comp=Z,316nm,1.1s						
WB2	Warramunga Arr	31.73	249	eP	P	02 00 39.3	-0.2
WR1	Warramunga Arr	31.73	249	eP	P	02 00 38.0	-1.5
	comp=Z,426nm,1.1s						
WRA	Warramunga Arr	31.74	249	P	P	02 00 38.0	-1.5
	comp=Z,191nm,1.0s,baz=80,slow=9.3,SNR=26						
WRA				LR	LR	02 12 13.5	
	comp=Z,349µm,18.2s,baz=75,slow=34						
THZ	Tophouse	31.75	170	eP	P	02 00 37.0	-2.5
	comp=Z,661nm,1.0s						
KHZ	Kahutara	32.50	169	eP	P	02 00 43.6	-2.2
	comp=Z,489nm,0.9s						
LTZ	Lake Taylor	32.64	171	eP	P	02 00 45.2	-2.0
	comp=Z,456nm,0.7s						
RKPI	Ransiki, Papua	32.68	284	P	P	02 00 46.6	-1.2
AS01	Alice Springs	33.06	243	eP	P	02 00 49.1	-2.1
AS01				ePP	PP	02 02 06.7	+0.8
AS01				ePcP	PcP	02 03 34.8	0.0
FOZ	Fox Glacier	33.08	175	eP	P	02 00 52.3	+1.3
	comp=Z,2µm,1.6s						
AS31	Alice Springs	33.10	243	eP	P	02 00 49.0	-2.5
	comp=Z,34nm,0.6s						
AS31				ePcP	PcP	02 03 35.3	+0.4
ASAR	Alice Springs	33.10	243	P	P	02 00 48.3	-3.2
	comp=Z,18nm,0.6s,baz=64,slow=10,SNR=20						
ASAR				PcP	PcP	02 03 35.3	+0.4
	comp=Z,39nm,1.0s,baz=64,slow=4.2,SNR=3.3						
ASAR				LR	LR	02 13 05.7	
	comp=Z,353µm,18.6s,baz=72,slow=34						
OXZ	Oxford	33.14	172	eP	P	02 00 50.5	-1.1
	comp=Z,534nm,0.8s						
ANA2	Anatahan	33.28	323	eP	P	02 00 52.6	-0.4
	comp=Z,930nm,1.8s						
RPZ	Rata Peaks	33.39	173	eP	P	02 00 53.0	-0.8
	comp=Z,579nm,0.9s						
RPZ	Rata Peaks	33.39	173	P	P	02 00 53.7	0.0
	comp=Z,91nm,0.7s,baz=300,slow=4.3,SNR=24						
RPZ				LR	LR	02 13 29.5	
	comp=Z,538µm,19.6s,baz=340,slow=34						
CRLZ	Canterbury Las	33.47	171	eP	P	02 00 53.9	-0.4
	comp=Z,4µm,1.9s						
SARN	Sarigan	33.52	324	eP	P	02 00 52.9	-2.3
	comp=Z,317nm,1.2s						
MQZ	McQueen's Vall	33.60	171	eP	P	02 00 54.9	-0.6
	comp=Z,1µm,1.2s						
LBZ	Lake Benmore	33.96	174	eP	P	02 00 58.4	-0.3
	comp=Z,321nm,1.1s						
SAUI	Saumlaki	34.15	271	eP	P	02 00 57.8	-2.9
	comp=Z,317nm,1.0s						
FAKI	Fak Fak	34.15	280	eP	P	02 00 57.9	-2.8
	comp=Z,679nm,1.8s						
FAKI	Fak Fak	34.15	280	P	P	02 00 58.2	-2.5
	comp=Z,298nm,2.6s						
WKZ	Wanaka	34.31	176	eP	P	02 01 01.4	-0.3
	comp=Z,666nm,1.4s						
ODZ	Otahua Downs	34.66	174	eP	P	02 01 04.0	-0.8
	comp=Z,494nm,1.5s						
RAR	Rarotonga	34.69	112	eP	P	02 01 05.5	+0.2
	comp=Z,111nm,1.3s						
RAR	Rarotonga	34.69	112	P	P	02 01 07.5	+2.2
	comp=Z,29nm,0.9s,baz=126,slow=19,SNR=1.7						
RAR				LR	LR	02 12 59.8	
	comp=Z,73µm,21.3s,baz=268,slow=32						
MLZ	Mavora Lakes	34.79	177	eP	P	02 01 06.2	+0.4
	comp=Z,104nm,0.9s						
DCZ	Deep Cove	34.85	178	eP	P	02 01 06.3	0.0
	comp=Z,135nm,1.0s						
WHZ	Wether Hill Ro	35.31	177	eP	P	02 01 10.6	+0.3
	comp=Z,626nm,2.0s						
PYZ	Puysegur Point	35.54	179	eP	P	02 01 15.3	+3.0
	comp=Z,181nm,1.3s						
SWI	Sorong	35.65	283	P	P	02 01 14.6	+0.9
BNDI	Bandanaira	36.07	277	P	P	02 01 13.0	-4.3
	comp=Z,4µm,1.6s,comp=Z,69µm						
TAU	Tasmania Unive	36.09	203	eP	P	02 01 16.6	-0.4
	comp=Z,404nm,1.3s						
TAU	Tasmania Unive	36.09	203	eP	P	02 01 16.6	-0.4
TAU				pmax	pmax		
	comp=Z,404nm,1.3s						
JOHN	Johnston Islan	36.43	42	eP	P	02 01 20.2	0.0
	comp=Z,3µm,1.6s						
XMAS	Kiritimati	38.63	73	eP	P	02 01 37.0	-2.0
	comp=Z,728nm,1.5s						
NLAI	Namlea	39.08	278	P	P	02 01 38.1	-4.7
	comp=Z,1µm,1.4s						
FITZ	Fitzroy Crossi	39.59	254	eP	P	02 01 43.8	-3.2
	comp=Z,216nm,1.1s						
FITZ	Fitzroy Crossi	39.59	254	P	P	02 01 43.8	-3.2
	comp=Z,80nm,0.7s,baz=43,slow=9.0,SNR=18						
FITZ				LR	LR	02 18 11.3	
	comp=Z,453µm,18.4s,baz=82,slow=36						
TNTI	Ternate	39.85	284	eP	P	02 01 48.1	-1.1
	comp=Z,2µm,1.6s						
TNTI	Ternate	39.85	284	P	P	02 01 49.6	+0.4
	comp=Z,724nm,1.6s						
SANI	Sanana	40.43	279	P	P	02 01 49.7	-4.3
	comp=Z,1µm,1.4s						
SOEI	Soe	40.89	267	eP	P	02 01 57.0	-0.9
	comp=Z,323nm,1.1s						
SOEI	Soe	40.89	267	P	P	02 02 01.7	+3.8
BATI	Baumata	41.45	266	P	P	02 02 00.4	-2.0
	comp=Z,296nm,1.5s						
BATI	Baumata	41.45	266	P	P	02 01 59.0	-3.5
	comp=Z,70nm,0.9s,baz=171,slow=2.1,SNR=9.1						
MIDW	Midway	41.79	23	eP	P	02 02 05.1	+0.2
	comp=Z,164nm,0.9s						
SGSI	Sangihe	42.52	287	P	P	02 02 16.1	+4.9
MMRI	Maumere	42.99	269	eP	P	02 02 09.2	-5.8
	comp=Z,3µm,1.7s						
MMRI	Maumere	42.99	269	P	P	02 02 09.8	-5.2
MATI	Mati	43.03	292	eP	P	02 02 12.8	-2.5
KMSI	Cibinong	43.04	282	P	P	02 02 12.8	-2.6
	comp=Z,4µm,1.4s,comp=Z,60µm						
BBSI	Bau Bau	43.09	273	P	P	02 02 16.4	+0.6
	comp=Z,207nm,1.6s						
DDMP	Don Marcelino,	43.21	291	eP	P	02 02 22.7	+5.9
KDI	Kendari	43.31	275	P	P	02 02 17.6	0.0
	comp=Z,306nm,2.0s						
EDFI	Ende, Flores	43.52	268	P	P	02 02 16.0	-3.4
	comp=Z,586nm,1.8s						
DAV	Davao City (W)	43.70	292	eP	P	02 02 18.2	-2.6
	comp=Z,3µm,2.0s						
DAV	Davao City (W)	43.70	292	P	P	02 02 26.4	+5.6
	SNR=10						
DAV				P	P	02 02 26.4	+5.6
	SNR=10						
DAV	Davao City (W)	43.70	292	P	P	02 02 22.7	+2.0
	comp=Z,276nm,0.5s,baz=45,slow=4.3,SNR=3.2						
DAV				LR	LR	02 20 36.7	
	comp=Z,187µm,18.0s,baz=88,slow=36						
PPT	Papeete	43.76	104	eP	P	02 02 19.2	-2.0
PPT	Papeete	43.76	104	eP	P	02 02 19.2	-2.0

PPT	Papeete	43.76	104	P	P	02 02 23.4	+2.2
	comp=Z,58nm,1.1s,baz=242,slow=18,SNR=3.2						
PPT				LR	LR	02 18 33.4	
	comp=Z,51µm,18.4s,baz=274,slow=33						
PPT2	Papeete2	43.76	104	eP	P	02 02 20.5	-0.8
	comp=Z,202nm,1.3s						
PPT2				eS	S	02 08 47.0	-5.1
	comp=Z,91µm,28.0s						
PPT2				eLQ	LQ	02 12 37.7	
	comp=Z,563µm,35.0s						
PPT2				eLR	LR	02 14 33.6	
	comp=Z,290µm,31.8s						
PPTF	Pamatai, Papee	43.77	104	eP	P	02 02 20.0	-1.4
	comp=Z,775nm,1.8s						
LUWI	Luwuk	43.79	280	eP	P	02 02 17.9	-3.6
	comp=Z,2µm,1.2s						
LUWI	Luwuk	43.79	280	P	P	02 02 21.6	+0.1
	comp=Z,1µm,1.4s						
CBIJ	Chichi jima	43.85	329	eP	P	02 02 22.2	+0.5
JCJ	Chichijima	43.85	329	P	P	02 02 22.2	+0.5
	comp=Z,264nm,1.2s,baz=165,slow=5.2,SNR=6.6						
TIAR	Tiarei	43.98	104	eP	P	02 02 22.4	-0.6
	comp=Z,65nm,1.2s						
TVO	Taravao	44.08	105	eP	P	02 02 23.1	-0.7
	comp=Z,94nm,1.3s						
KCP	Kidapawan	44.12	292	⇓iP	P	02 02 25.2	+1.0
BUTP	Butuan	44.43	294	eP	P	02 02 31.8	+5.2
SKMP	Bagumbayan, Su	44.44	291	eP	P	02 02 26.0	-0.7
TBI	Tubuai	44.47	113	eP	P	02 02 26.4	-0.4
	comp=Z,487nm,1.2s						
TBI				eS	S	02 08 57.4	-4.8
	comp=Z,109µm,29.8s						
TBI				eLQ	LQ	02 12 56.8	
	comp=Z,263µm,33.0s						
TBI				eLR	LR	02 14 49.3	
	comp=Z,505µm,32.2s						
BASI	Baing, Sumba	44.47	266	P	P	02 02 22.2	-4.7
BUKP	Musuan	44.49	293	eP	P	02 02 26.5	-0.6
WSI	Waingapu	44.79	267	P	P	02 02 21.1	-8.4
APSI	Ampana	44.91	279	P	P	02 02 26.4	-4.1
MRSI	Marisa	44.98	281	P	P	02 02 29.9	-1.1
	comp=Z,188nm,1.3s						
CTBH	Cotabato--PC H	44.98	291	⇑iP	P	02 02 30.9	-0.1
PMOR	Pomariorio Ree	45.31	101	eP	P	02 02 33.2	-0.3
	comp=Z,572nm,1.3s						
MBWA	Marble Bar	45.44	251	eP	P	02 02 33.2	-1.4
	comp=Z,228nm,1.1s						
MBWA	Marble Bar	45.44	251	P	P	02 02 34.5	-0.1
	SNR=8.7						
BKSI	Bulukumba	45.52	273	P	P	02 02 33.9	-1.4
	comp=Z,260nm,1.5s						
VAH	Vaihoa	45.56	101	eP	P	02 02 35.0	-0.6
	comp=Z,545nm,1.5s						
MSLP	Maasin	45.61	295	eP	P	02 02 35.9	-0.1
BNSI	Bone	45.69	274	P	P	02 02 33.8	-2.8
	comp=Z,1µm,1.5s						
BESP	Borongan	45.74	298	eP	P	02 02 43.2	+6.2
PAGZ	Pagadian	46.01	292	eP	P	02 02 36.9	-2.3
SPSI	Sidrap Palu	46.10	275	P	P	02 02 38.4	-1.5
	comp=Z,349nm,1.1s						
OCLP	Ormoc	46.23	296	eP	P	02 02 46.6	+5.8
TTSI	Tana Toraja	46.23	276	P	P	02 02 41.8	+0.9
	comp=Z,369nm,1.3s						
LLP	Lapu-Lapu	46.48	295	eP	P	02 02 42.1	-0.7
PCI	Palu	46.67	279	P	P	02 02 43.8	-0.6
	comp=Z,2µm,1.4s,comp=Z,52µm						
IPIL	Ipil	46.73	291	eP	P	02 02 45.0	+0.2
KEKH	Kekaha	46.76	46	eP	P	02 02 45.5	+0.6
	comp=Z,2µm,1.4s						
MPSI	Mapaga	46.91	280	P	P	02 02 43.4	-2.9
	comp=Z,264nm,2.5s						
PLAI	Plampang	47.35	268	P	P	02 02 47.9	-1.8
	comp=Z,1µm,1.6s						
KIP	Kipapa	47.63	48	eP	P	02 02 52.3	+0.6
	comp=Z,1µm,1.4s						
KIP	Kipapa	47.63	48	ceP	P	02 02 51.8	+0.1
KIP				pmax	pmax		
	comp=Z,579nm,1.7s						
PVCP	Virac	47.77	299	eP	P	02 02 58.5	+5.6
OPA	Opana	47.80	48	eP	P	02 02 53.2	+0.2
	comp=Z,1µm,1.0s						
OPA	Opana	47.80	48	eP	P	02 02 53.2	+0.2
OPA				pmax	pmax		
	comp=Z,1µm,1.0s						
GUIM	Jordan	47.84	295	eP	P	02 02 52.5	-0.9
RCP	Roxas	48.09	296	⇑eP	P	02 02 55.4	0.0
KHLU	Kahalu`u	48.14	52	eP	P	02 02 58.0	+2.2
	comp=Z,3µm,1.7s						
KHU	Kahuku	48.16	52	eP	P	02 02 57.0	+0.9
	comp=Z,2µm,1.3s						
KHU	Kahuku	48.16	52	eP	P	02 02 57.0	+0.9
KHU				pmax	pmax		
	comp=Z,2µm,1.3s						
HUH	Hualalai	48.23	52	eP	P	02 02 56.2	-0.5
	comp=Z,727nm,1.3s						
MWH	Moku‘aweowe	48.30	52	eP	P	02 02 58.1	+0.6
	comp=Z,2µm,1.6s						
AIN	Ainahou	48.35	52	eP	P	02 02 58.1	+0.6
	comp=Z,2µm,1.4s						
AIN				ePcP	PcP	02 04 23.5	-0.7
MLOA	Mauna Loa Obse	48.35	52	eP	P	02 02 58.5	+0.6
	comp=Z,752nm,1.5s						
HLP	Hilina Pali	48.42	52	eP	P	02 03 02.1	+4.1
	comp=Z,3µm,1.8s						
HMH	Humu‘ula Sheep	48.46	52	eP	P	02 02 59.4	+0.9
	comp=Z,2µm,1.3s						
MHA	Mahukona	48.47	51	eP	P	02 02 59.7	+1.5
MHA	Mahukona	48.47	51	eP	P	02 02 59.7	+1.5
MLH	Mauna Loa	48.47	52	eP	P	02 02 59.9	+1.3
	comp=Z,941nm,1.4s						
MLH	Mauna Loa	48.47	52	eP	P	02 02 59.9	+1.3
MLH				pmax	pmax		
	comp=Z,941nm,1.4s						
SDHHI	Sand Hill	48.49	52	eP	P	02 02 56.5	-2.0
	comp=Z,987nm,1.6s						
KHLH	Kahului Airpor	48.49	50	eP	P	02 02 59.9	+1.5
	comp=Z,3µm,1.6s						
WRMHI	West Rim	48.49	52	eP	P	02 02 59.1	+0.6
	comp=Z,2µm,1.9s						
UWE	Uwekahuna	48.51	52	eP	P	02 02 59.6	+1.0
	comp=Z,868nm,1.3s						
RIM	Rim	48.51	52	eP	P	02 02 59.3	+0.6
	comp=Z,1µm,1.8s						
NPH	North Pit	48.51	52	eP	P	02 03 01.0	+2.3
	comp=Z,171nm,1.0s						
NPH				ePcP	PcP	02 04 23.9	-0.9
NPH	North Pit	48.51	52	eP	P	02 03 01.0	+2.3
NPH				e		02 04 23.9	
NPH				pmax	pmax		
	comp=Z,171nm,1.0s						
OBL	Observatory Le	48.51	52	eP	P	02 02 59.8	+1.2
	comp=Z,449nm,1.1s						
POHA	Pohakuloa	48.51	52	eP	P	02 02 58.0	-0.8
	comp=Z,2µm,1.4s						
KKO	Keanakako`i	48.51	52	eP	P	02 02 59.0	+0.3
	comp=Z,2µm,1.8s						
UWB	Uwekahuna B	48.52	52	eP	P	02 02 59.3	+0.6
	comp=Z,435nm,1.3s						
BYL	Byron's Ledge	48.53	52	eP	P	02 02 59.8	+1.0
	comp=Z,406nm,1.2s						
SBLHI	Steaming Bluff	48.53	52	eP	P	02 03 01.7	+2.9
	comp=Z,307nm,1.2s						
HATHI	Halema‘uma‘u T	48.53	52	eP	P	02 03 02.8	+4.0
	comp=Z,1µm,1.6s						
HPAH	Hawaii Prepara	48.54	51	eP	P	02 02 59.5	+0.7
	comp=Z,3µm,1.7s						
PUH	Pauahi	48.54	52	eP	P	02 02 60.0	+1.1
	comp=Z,433nm,1.1s						
HLK	Haleakala	48.54	50	eP	P	02 02 59.8	+0.7
	comp=Z,4µm,1.7s						
AUQP	San Andres	48.93	298	eP	P	02 03 09.3	+7.5
SGKI	Sangatta, Kali	48.93	279	P	P	02 03 08.8	+6.9
OTRP	Odiongan	49.08	296	eP	P	02 02 57.8	-5.1
CUYO	Cuyo Island	49.34	294	eP	P	02 03 04.9	-0.1
SMKI	Samarinda	49.34	279	P	P	02 03 10.3	+5.3
BKB	Balikpapan	49.46	277	P	P	02 03 11.1	+5.2
KBKI	Kotabaru	49.76	275	P	P	02 03 08.7	+0.5
	comp=Z,90nm,1.5s,comp=Z,4µm						
NWAO	Narrogin (SRO)	49.82	236	eP	P	02 03 05.7	-2.8
	comp=Z,2µm,1.5s						
NWAO	Narrogin (SRO)	49.82	236	eP	P	02 03 05.7	-2.8
NWAO				pmax	pmax		
	comp=Z,2µm,1.5s						
NWAO	Narrogin (SRO)	49.82	236	P	P	02 03 06.4	-2.1
	SNR=35						
NWAO	Narrogin (SRO)	49.82	236	P	P	02 03 05.9	-2.6
	comp=Z,738nm,1.3s,baz=323,slow=5.8,SNR=16						
NWAO				LR	LR	02 24 18.2	
	comp=Z,612µm,18.5s,baz=312,slow=36						
DNP	Denpasar	49.89	267	P	P	02 03 10.9	+1.7
	comp=Z,1µm,1.6s						
SJMP	San Jose	49.91	296	eP	P	02 03 09.6	+0.2
SRBI	Singaraja	49.96	268	P	P	02 03 09.3	-0.4
	comp=Z,430nm,1.6s						
JHJ	Hachijo jima 2	49.98	331	P	P	02 03 08.0	-1.5
	comp=Z,105nm,0.8s,baz=75,slow=19,SNR=2.0						
POLP	Polilio Island	50.20	299	eP	P	02 03 15.2	+3.6
BUSP	Coron	50.54	295	eP	P	02 03 13.8	-0.2
TGY	Tagaytay City	50.78	298	P	P	02 03 13.7	-2.3
	comp=Z,86nm,0.3s,baz=138,slow=3.4,SNR=5.9						
PALP	Palanan	50.90	302	eP	P	02 03 17.1	+0.3
ENPP	El Nido	50.91	294	eP	P	02 03 17.9	+1.0
JAGI	Jajag, Banyuwa	50.95	268	eP	P	02 03 18.8	+1.4
	comp=Z,702nm,1.1s						
JAGI	Jajag, Banyuwa	50.95	268	P	P	02 03 18.9	+1.6
	comp=Z,752nm,1.5s						
BALP	Baler	50.98	300	eP	P	02 03 22.3	+4.9
KMMI	Kalianget	51.31	269	P	P	02 03 23.7	+3.7
	comp=Z,146nm,1.3s						
CAUP	Cauayan	51.34	302	eP	P	02 03 24.9	+4.9
MTKI	Muara Teweh, K	51.48	277	P	P	02 03 24.7	+3.4
	comp=Z,235nm,0.5s,comp=Z,37µm						
BATP	Bataraza	51.49	290	eP	P	02 03 20.9	-0.3
GMJI	Gumukmas	51.67	268	P	P	02 03 24.2	+1.5
	comp=Z,291nm,2.7s						
SGCP	Mt. Cagua	51.79	303	eP	P	02 03 23.6	+0.1
SMPP	San Manuel, Pa	51.93	300	eP	P	02 03 23.2	-1.3
KKM	Kota Kinabalu	52.05	286	eP	P	02 03 25.3	-0.3
	comp=Z,1µm,1.2s						
APYP	Conner	52.27	302	eP	P	02 03 36.0	+8.9
SCZP	Santa Cruz	52.42	299	eP	P	02 03 36.2	+8.1
ABRA	Dolores	52.61	302	eP	P	02 03 24.9	-4.6
H01W1	Cape Leeuwin H	52.80	234	P	P	02 03 34.5	+4.0
	baz=98,slow=7.7,SNR=9.0						
H01W3	Cape Leeuwin H	52.81	234	P	P	02 03 35.0	+4.4
	baz=98,slow=7.7,SNR=8.5						
H01W2	Cape Leeuwin H	52.81	234	P	P	02 03 35.9	+5.3
	baz=98,slow=7.7,SNR=8.7						
INU	Inuyama	53.12	331	eP	P	02 03 35.6	+2.5
	comp=Z,958nm,1.8s						
TAOE	Nuku Hiva Isla	53.24	93	eP	P	02 03 34.0	-0.4
	comp=Z,562nm,1.5s						
PWJI	Pagerwojo	53.31	268	P	P	02 03 36.2	+1.3
TBJI	Tambak Boyo	53.43	269	P	P	02 03 40.0	+4.3
	comp=Z,271nm,3.0s						
MJAR	Matsushiro Arr	53.53	332	P	P	02 03 32.0	-4.1
MJAR	Matsushiro Arr	53.53	332	P	P	02 03 31.9	-4.1
	comp=Z,22nm,0.8s,baz=172,slow=9.2,SNR=12						
MAJO	Matsushiro	53.53	332	eP	P	02 03 31.9	-4.1
MAJO	Matsushiro	53.53	332	i P	P	02 03 35.9	-0.2
MAJO				pmax	pmax		
	comp=Z,220nm,1.2s						
MAT	Matsushiro	53.53	332	P	P	02 03 32.0	-4.1
MAT				eS	S	02 11 02.2	-7.0
NGJI	Ngawi	53.73	269	P	P	02 03 43.6	+5.6
PCJI	Pacitan	53.91	267	P	P	02 03 38.7	-0.5
	comp=Z,1µm,1.5s						
WOJI	Wonogiri, Jawa	54.20	268	P	P	02 03 45.2	+3.8
	comp=Z,357nm,1.4s						
PBKI	Pangkalan Bun	54.28	274	P	P	02 03 51.3	+9.3
UGM	Wanagama	54.59	268	eP	P	02 03 41.8	-2.5
	comp=Z,2µm,1.8s						
UGM	Wanagama	54.59	268	P	P	02 03 47.4	+3.2
	comp=Z,970nm,2.0s						
JNU	Nakatsue	54.69	324	eP	P	02 03 42.0	-2.6
	comp=Z,808nm,1.3s						
JNU	Nakatsue	54.69	324	P	P	02 03 41.6	-3.0
	comp=Z,30nm,0.8s,baz=72,slow=3.9,SNR=9.0						
JNU				LR	LR	02 23 58.0	
	comp=Z,68µm,21.7s,baz=147,slow=33						
SMRI	Semarang	54.78	269	eP	P	02 03 49.1	+3.5
	comp=Z,2µm,1.9s						
SMRI	Semarang	54.78	269	P	P	02 03 49.1	+3.5
	comp=Z,871nm,1.8s						
SBUM	Sibu	54.87	281	eP	P	02 03 46.2	-0.1
	comp=Z,132nm,1.2s						
TWG	Pinlang	54.93	307	eP	P	02 03 48.3	+1.8
	comp=Z,3µm,1.8s						
YULB	Yu-li	55.06	308	eP	P	02 03 47.5	+0.1
	comp=Z,914nm,1.6s						
NACB	Ninganchiao	55.26	309	eP	P	02 03 48.9	+0.1
	comp=Z,2µm,1.8s						
TPUB	Ta-pu	55.53	308	eP	P	02 03 47.2	-3.6
	comp=Z,1µm,1.5s						
SSLB	Suanglung	55.54	308	eP	P	02 03 54.8	+3.8
	comp=Z,897nm,1.8s						
YHNB	Yeheng	55.70	310	eP	P	02 03 49.5	-2.6
	comp=Z,590nm,1.1s						
KPJI	Karang Pucung	56.23	268	P	P	02 04 00.3	+4.3
	comp=Z,496nm,1.8s						
ERM	Erimo	56.26	340	i P	P	02 03 56.5	+0.9
ERM				pmax	pmax		
	comp=Z,131nm,1.0s						
KSM	Kuching	56.49	279	eP	P	02 03 56.6	-1.3
	comp=Z,330nm,1.2s						
CMJI	Cimerak	56.64	268	P	P	02 04 03.2	+4.2
	comp=Z,285nm,1.9s						
JCJI	Jatiwangi	56.99	269	P	P	02 04 02.9	+1.4
	comp=Z,1µm,1.1s						
CISI	Cisompet, Garu	57.29	268	eP	P	02 04 01.2	-2.5
	comp=Z,913nm,1.2s						
CISI	Cisompet, Garu	57.29	268	P	P	02 04 04.4	+0.7
	comp=Z,754nm,1.7s						
RKT	Rikitea	57.71	111	eP	P	02 04 06.3	-0.1
	comp=Z,195nm,1.3s						
RKT				eS	S	02 12 00.2	-5.3
	comp=Z,41µm,34.5s						
RKT				eLQ	LQ	02 18 32.2	
	comp=Z,85µm,32.5s						
RKT				eLR	LR	02 20 57.6	
	comp=Z,162µm,33.5s						
TPI	Tanjungpandan	58.21	273	P	P	02 04 13.7	+3.6
	comp=Z,343nm,2.7s						
ASAJ	Asahikawa	58.31	341	P	P	02 04 07.8	-2.4
	comp=Z,82nm,0.8s,baz=229,slow=11,SNR=18						
ASAJ				LR	LR	02 24 59.4	
	comp=Z,119µm,21.9s,baz=166,slow=32						
CBJI	Citeko	58.40	269	P	P	02 04 15.7	+4.3
	comp=Z,420nm,1.3s						
DBJI	Dramaga	58.48	269	P	P	02 04 17.1	+5.1
	comp=Z,246nm,2.0s						
SKJI	Sukabumi	58.61	268	P	P	02 04 19.3	+6.5
KSRS	Korea Array	59.48	325	P	P	02 04 16.2	-2.2
	comp=Z,5.0nm,0.7s,baz=132,slow=7.1,SNR=7.5						
KSRS				LR	LR	02 27 07.3	
	comp=Z,94µm,20.2s,baz=125,slow=33						
KS15	Wonju Array Si	59.49	325	eP	P	02 04 16.2	-2.3
KSAR	Wonju Array Be	59.49	325	P	P	02 04 16.2	-2.3
KSAR	Wonju Array Be	59.49	325	P	P	02 04 16.2	-2.3
KS01	Wonju Array Si	59.51	325	eP	P	02 04 17.9	-0.7
SSE	Sheshan	59.52	316	P	P	02 04 18.5	-0.3
SSE				S	S	02 12 31.6	+2.9
SSE				pmax	pmax		
	comp=Z,31nm,1.0s						
SSE				pmax	pmax		
	comp=Z,9µm,7.5s						
SSE	Sheshan	59.52	316	eP	P	02 04 19.1	+0.3
	comp=Z,936nm,1.2s						
PPBI	Pangkal Pinang	59.81	274	P	P	02 04 24.3	+3.1
	comp=Z,204nm,1.5s						
HKC	Hong Kong Obse	60.21	303	⇓P	P	02 04 29.0	+5.3
MCO	Taipa Grande	60.64	303	P	P	02 04 27.0	+0.3
YSS	Yuzh-Sakhalins	60.80	342	eP	P	02 04 28.0	+0.7
	comp=Z,869nm,1.4s						
YSS	Yuzh-Sakhalins	60.80	342	⇑eP	P	02 04 27.3	+0.1
YSS				e		02 04 32.7	
YSS				e		02 04 40.9	
YSS				pmax	pmax		
	comp=Z,90nm,1.1s						
YSS				pmax	pmax		
	comp=N,40nm,0.8s						
YSS				pmax	pmax		
	comp=E,40nm,1.2s						
YSS				MLR	MLR		
	comp=Z,35µm,14.0s						
YSS				MLR	MLR		
	comp=N,41µm,16.0s						
YSS				MLR	MLR		
	comp=E,87µm,15.0s						
KASI	Kota Agung	60.85	270	P	P	02 04 31.7	+3.4
	comp=E,282nm,1.6s						
GZH	Guangzhou	61.25	304	P	P	02 04 31.5	+0.7
GZH				S	S	02 12 55.6	+4.4
GZH				LR	LR		
	comp=E,43µm,17.8s						
GZH				LR	LR		
	comp=E,117µm,18.4s						
TEY	Ternei	61.26	337	⇓eP	P	02 04 30.5	+0.1
TEY				pmax	pmax		
	comp=Z,40nm,1.0s						
TEY				pmax	pmax		
	comp=N,30nm,0.8s						
MDSI	Maura Dua	61.33	271	P	P	02 04 34.4	+2.9
	comp=N,214nm,1.8s						
LWLI	Liwa	61.36	270	P	P	02 04 37.2	+5.3
SKR	Severo-Kuril’s	61.52	353	eP	P	02 04 32.0	0.0
SKR				eS	S	02 12 56.7	+3.2
SKR				pmax	pmax		
	comp=Z,315nm,2.8s						
SKR				smax	smax		
	comp=E,25µm,13.0s						
SKR				smax	smax		
	comp=N,61µm,13.6s						
SKR				MLR	MLR		
	comp=Z,86µm,17.0s						
SKR				MLR	MLR		
	comp=Z,87µm,16.0s						
MSHR	Mys Shultsa	61.62	331	i P	P	02 04 32.5	-0.4
DSRI	Dabo	61.66	275	P	P	02 04 45.2	+11
NJ2	Nanjing	61.69	315	eP	P	02 04 33.5	-0.1
NJ2				sP	sP	02 04 39.3	+1.7
NJ2				S	S	02 12 55.1	-1.4
NJ2				SS	SS	02 16 52.2	-6.2
NJ2				pmax	pmax		
	comp=Z,350nm,1.6s						
NJ2				pmax	pmax		
	comp=Z,27µm,8.3s						
NJ2				LR	LR		
	comp=Z,111µm,18.1s						
NJ2				LR	LR		
	comp=Z,75µm,19.6s						
NJ2				LR	LR		
	comp=Z,135µm,21.1s						
VLA	Vladivostok	61.70	332	i P	P	02 04 33.5	+0.1
VLA				pmax	pmax		
	comp=Z,281nm,1.2s						
TPRI	Tanjung Pinang	62.00	277	P	P	02 04 41.5	+5.4
	comp=Z,159nm,2.2s						
LHSI	Lahat	62.08	271	P	P	02 04 39.8	+3.2
	comp=Z,231nm,2.0s						
JMBI	JAMBI	62.35	274	P	P	02 04 45.3	+6.8
QIZ	Qiongzhong	62.49	298	P	P	02 04 40.0	+0.8
QIZ				S	S	02 13 08.4	+1.3
QIZ				LR	LR		
	comp=Z,70µm,21.6s						
QIZ				LR	LR		
	comp=Z,98µm,21.6s						
QIZ				LR	LR		
	comp=Z,181µm,28.4s						
QIZ	Qiongzhong	62.49	298	eP	P	02 04 40.0	+0.8
	comp=Z,236nm,1.1s						
USA0B	Ussuriysk Arra	62.50	333	eP	P	02 04 35.6	-3.2
	comp=Z,1µm,1.7s						
USRK	Ussuriysk Ar.	62.50	333	P	P	02 04 35.5	-3.3
	comp=Z,16nm,0.8s,baz=125,slow=5.8,SNR=7.2						
USRK				LR	LR	02 30 59.2	
	comp=Z,46µm,19.1s,baz=132,slow=36						
MYKOM	Kota Tinggi	62.85	277	eP	P	02 04 44.1	+2.3
	comp=Z,360nm,1.3s						
SMY	Shemya	63.38	6	eP	P	02 04 46.2	+1.8
	comp=Z,618nm,1.1s						
SMY	Shemya	63.38	6	eP	P	02 04 46.2	+1.8
SMY				pmax	pmax		
	comp=Z,618nm,1.1s						
MASI	Maura Aman, Be	63.46	272	P	P	02 04 50.2	+4.3
	comp=Z,459nm,1.1s						
PET	Petropavlovsk	63.58	355	eP	P	02 04 45.2	-0.5
PET				eS	S	02 13 14.9	-4.4
PEA0B	Petropavlovsk-	63.74	355	eP	P	02 04 47.4	+0.5
	comp=Z,669nm,1.4s						
PETK	Petropavlovsk-	63.74	355	eP	P	02 04 46.5	-0.4
PETK	Petropavlovsk-	63.74	355	eP	P	02 04 46.5	-0.4
PETK	Petropavlovsk-	63.74	355	P	P	02 04 46.8	-0.1
	comp=Z,71nm,1.0s,baz=152,slow=7.7,SNR=24						
PETK				LR	LR	02 28 11.7	
	comp=Z,61µm,20.7s,baz=171,slow=32						
PEA1	Petropavlovsk-	63.75	355	eP	P	02 04 46.8	-0.1
KIWB	Kanaga Island	63.83	12	eP	P	02 04 48.5	+1.1
RGRI	Rengat	63.89	275	P	P	02 04 55.4	+6.8
MDJ	Mudanjiang	63.91	332	P	P	02 04 50.7	+2.5
MDJ				pP	sP	02 04 53.9	+1.7
MDJ				sP	pP	02 04 55.3	+4.2
MDJ				PP	PP	02 07 11.7	+2.8
MDJ				S	S	02 13 28.7	+4.8
MDJ				SS	SS	02 17 35.6	+2.9
MDJ				pmax	pmax		
	comp=Z,79nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,29µm,11.2s						
MDJ				LR	LR		
	comp=Z,94µm,16.5s						
MDJ				LR	LR		
	comp=Z,89µm,17.7s						
MDJ				LR	LR		
	comp=Z,156µm,20.2s						
MDJ	Mudanjiang	63.91	332	eP	P	02 04 49.0	+0.8
	comp=Z,881nm,1.6s						
ADK	Adak	63.95	12	eP	P	02 04 49.2	+1.0
	comp=Z,2µm,2.0s						
ADK	Adak	63.95	12	eP	P	02 04 49.2	+1.0
ADK				pmax	pmax		
	comp=Z,2µm,2.0s						
WHN	Wuhan	64.09	311	P	P	02 04 46.6	-3.0
WHN				S	S	02 13 27.5	+0.9
WHN				LR	LR		
	comp=Z,723µm,17.6s						
WHN				LR	LR		
	comp=Z,261µm,20.4s						
WHN				LR	LR		
	comp=Z,1015µm,21.9s						
DL2	Dalian	64.10	323	⇓iP	P	02 04 53.5	+4.0
DL2				S	S	02 13 32.7	+6.3
DL2				pmax	pmax		
	comp=Z,250nm,1.5s						
DL2				LR	LR		
	comp=Z,84µm,17.4s						
DL2				LR	LR		
	comp=Z,61µm,19.4s						
DL2				LR	LR		
	comp=Z,126µm,18.5s						
GSTR	Great Sitkin T	64.28	12	eP	P	02 04 53.9	+3.5
TYV	Tymovskoe	64.35	344	eP	P	02 04 50.7	-0.2
TYV				eS	S	02 13 31.0	+1.9
TYV				pmax	pmax		
	comp=Z,201nm,1.6s						
TYV				pmax	pmax		
	comp=Z,19µm,5.0s						
TYV				smax	smax		
	comp=N,27µm,12.7s						
KRJI	Kerinci	64.41	273	P	P	02 05 00.8	+8.6
SDSI	Sungai Dareh	64.66	274	P	P	02 05 00.1	+6.4
	comp=N,461nm,3.0s,comp=N,27µm						
TIA	Tai'an	65.27	318	P	P	02 04 59.4	+2.2
TIA				S	S	02 13 43.0	+2.0
TIA				pmax	pmax		
	comp=N,70nm,2.7s						
TIA				LR	LR		
	comp=N,37µm,20.5s						
TIA				LR	LR		
	comp=N,53µm,22.2s						
TIA				LR	LR		
	comp=N,81µm,22.2s						
BKNI	Bangkinang	65.29	275	eP	P	02 05 00.5	+2.7
	comp=N,1µm,1.2s						
BKNI	Bangkinang	65.29	275	P	P	02 05 00.9	+3.1
	comp=N,1µm,1.1s,comp=N,35µm						
CN2	Changchun	65.32	329	eP	P	02 04 54.4	-3.0
CN2				eS	S	02 13 37.0	-4.3
CN2				pmax	pmax		
	comp=N,30nm,1.0s						
CN2				LR	LR		
	comp=N,80µm,17.0s						
CN2				LR	LR		
	comp=N,89µm,17.0s						
CN2				LR	LR		
	comp=N,121µm,17.0s						
PDSI	Padang	65.61	274	P	P	02 05 05.0	+5.0
	comp=N,147nm,1.9s						

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PPSI  Pulau Pagai       65.72 272  P      P       02 05 06.4 +5.8
        comp=N,432nm,0.9s
GRNR  Gornyy            66.17 340  eP     P       02 05 01.8 -0.9
GRNR                               pmax   pmax
        comp=Z,69nm,1.0s
IPM   Ipoh              66.20 280  eP     P       02 05 02.8 -1.0
        comp=Z,390nm,1.1s
KLR   Kul'dur           66.60 336  i P    P       02 05 05.9 +0.4
KLR   Kul'dur           66.60 336  P      P       02 05 02.8 -2.7
        comp=Z,45nm,0.9s,baz=150,slow=2.1,SNR=16
KULM  Kulim             66.75 280  eP     P       02 05 09.3 +2.1
        comp=Z,794nm,1.9s
NIKH  Nikolski High     66.84  16  eP     P       02 05 06.2 -0.8
        comp=Z,948nm,1.2s
SISI  Saibi             66.88 273  P      P       02 05 13.3 +5.2
        comp=Z,187nm,2.0s
CASY  Casey             66.90 201  eP     P       02 05 05.7 -1.5
        comp=Z,1µm,1.5s
SKNT  Sakolnakorn       66.94 294  P      P       02 05 09.4 +1.0
        comp=Z,189nm,2.0s,comp=Z,8µm
VNDA  Vanda             67.03 181  eP     P       02 05 10.2 +2.3
        comp=Z,139nm,1.1s
VNDA  Vanda             67.03 181  P      P       02 05 08.9 +1.0
        comp=Z,56nm,1.0s,baz=338,slow=6.1,SNR=16
VNDA                               LR     LR      02 32 32.9
        comp=Z,144µm,18.1s,baz=10,slow=34
SKLT  Songkhla          67.24 282  P      P       02 05 17.2 +6.9
SBA   Scott Base        67.33 180  eP     P       02 05 14.8 +4.9
        comp=Z,170nm,1.0s
ENH   Enshi             67.62 309  eP     P       02 05 09.8 -2.6
        comp=Z,1µm,1.6s
NONG  Nongkai           68.06 294  P      P       02 05 16.9 +1.5
        comp=Z,6.8nm,1.7s
BJT   Baijiatuau        68.10 321  eP     P       02 05 12.7 -2.6
        comp=Z,2µm,1.9s
BJT   Baijiatuau        68.10 321  eP     P       02 05 12.7 -2.6
BJT                                pmax   pmax
        comp=Z,2µm,1.9s
BJI   Beijing           68.11 321  P      P       02 05 12.7 -2.6
BJI                                pmax   pmax
        comp=Z,160nm,2.0s
GYA   Guiyang           68.18 304⇑iP      P       02 05 14.1 -2.1
GYA                                PP     PP      02 07 50.0 +3.2
GYA                                S      S       02 14 16.2 -0.6
GYA                                SKS    SKiKP   02 15 12.0  0.0
GYA                                SS     SS      02 18 41.6 +1.7
GYA                                pmax   pmax
        comp=Z,220nm,1.0s
GYA                                pmax   pmax
        comp=Z,15µm,12.3s
GYA                                LR     LR
        comp=Z,83µm,18.0s
GYA                                LR     LR
        comp=Z,76µm,18.3s
GYA                                LR     LR
        comp=Z,90µm,20.1s
UNV   Unalaska Valle    68.28  17  eP     P       02 05 15.3 -0.7
        comp=Z,202nm,1.2s
TRTT  Trang             68.30 283  P      P       02 05 21.1 +4.1
TSI   Tuntungan         68.37 278  P      P       02 05 22.6 +5.1
        comp=Z,419nm,0.8s
PATY  Pattaya           68.55 288  P      P       02 05 21.0 +2.5
        comp=Z,66nm,1.0s,comp=Z,3µm
GSI   Gunungsitoli      68.88 275  eP     P       02 05 19.4 -1.3
        comp=Z,349nm,0.9s
KCSI  Kotacane, Aceh    69.15 278  P      P       02 05 26.2 +3.8
        comp=Z,183nm,0.8s
TIY   Taiyuan           69.22 317  eP     P       02 05 20.3 -2.1
TIY                                pmax   pmax
        comp=Z,100nm,1.1s
PBKT  Sadao Pong        69.54 292  P      P       02 05 28.3 +3.6
        comp=Z,196nm,2.8s
PKDT  Phuket            69.61 283  P      P       02 05 31.0 +5.8
PHET  Kaeng Krachan     69.70 288  P      P       02 05 30.0 +4.3
        comp=Z,36nm,1.0s,comp=Z,550nm
XAN   Xi'an             69.81 312  P      P       02 05 22.4 -3.7
XAN                                pP     sP      02 05 30.3 +0.2
XAN                                sP     pP      02 05 34.3 +5.3
XAN                                S      S       02 14 30.1 -5.7
XAN                                SS     SS      02 18 59.8 -5.0
XAN                                pmax   pmax
        comp=Z,320nm,1.4s
XAN                                LR     LR
        comp=Z,99µm,22.8s
XAN                                LR     LR
        comp=Z,98µm,21.7s
XAN                                LR     LR
        comp=Z,179µm,20.6s
XAN   Xi'an             69.81 312  eP     P       02 05 22.6 -3.5
        comp=Z,2µm,1.9s
XAN   Xi'an             69.81 312  eP     P       02 05 22.6 -3.5
XAN                                pmax   pmax
        comp=Z,2µm,1.9s
FALS  False Pass        70.08  18  eP     P       02 05 26.8 -0.4
        comp=Z,666nm,1.6s
SPIA  Saint Paul Isl    70.27  14  eP     P       02 05 28.8 +0.5
        comp=Z,1µm,1.4s
UTTA  Uttaradit         70.29 293  P      P       02 05 31.3 +2.1
        comp=Z,33nm,1.1s,comp=Z,452nm
SRDT  SRDT              70.58 289  P      P       02 05 35.0 +3.9
UTHA  Uthaitani         70.63 291  P      P       02 05 33.5 +2.1
        comp=Z,35nm,1.0s,comp=Z,541nm
MA2   Magadan           70.89 352  eP     P       02 05 31.0 -1.0
        comp=Z,476nm,1.7s
MA2   Magadan           70.89 352ceP      P       02 05 31.3 -0.8
MA2                                pmax   pmax
        comp=Z,172nm,1.7s
MA2   Magadan           70.89 352  P      P       02 05 30.8 -1.3
        comp=Z,43nm,1.0s,baz=167,slow=7.3,SNR=2.9
MA2                                LR     LR      02 31 54.5
        comp=Z,46µm,21.3s,baz=170,slow=32
KMI   Kunming           70.90 301  P      P       02 05 34.1 +0.9
KMI                                pP     sP      02 05 40.1 +2.9
KMI                                sP     pP      02 05 42.8 +6.7
KMI                                PP     PP      02 08 10.6 +0.1
KMI                                S      S       02 14 51.0 +1.8
KMI                                sS     sS      02 15 02.8 +8.8
KMI                                pmax   pmax
        comp=Z,550nm,1.7s
KMI                                pmax   pmax
        comp=Z,19µm,8.0s
KMI                                LR     LR
        comp=Z,88µm,20.8s
KMI                                LR     LR
        comp=Z,36µm,27.5s
KMI                                LR     LR
        comp=Z,131µm,19.8s
KMI   Kunming           70.90 301  eP     P       02 05 34.8 +1.6
        comp=Z,2µm,1.8s
SUKH  Sukhothai         71.04 293  P      P       02 05 35.7 +1.9
        comp=Z,22nm,2.1s,comp=Z,487nm
UMPA  Umpang Tak        71.36 291  P      P       02 05 40.2 +4.4
        comp=Z,37nm,1.3s,comp=Z,1µm
HHC   Hu-ho-hao-te      71.47 320  eP     P       02 05 37.8 +1.7
HHC                                pP     sP      02 05 42.6 +2.4
HHC                                sP     pP      02 05 44.8 +5.7
HHC                                S      S       02 14 55.4 +0.4
HHC                                SS     SS      02 19 32.5 +2.3
HHC                                pmax   pmax
        comp=Z,33nm,1.2s
HHC                                pmax   pmax
        comp=Z,9µm,5.6s
HHC                                LR     LR
        comp=Z,106µm,17.3s
HHC                                LR     LR
        comp=Z,54µm,16.7s
HHC                                LR     LR
        comp=Z,105µm,18.4s
ZEA   Zeya              71.88 337  eP     P       02 05 33.8 -4.3
ZEA                                pmax   pmax
        comp=E,430nm,1.6s
ZEA                                pmax   pmax
        comp=N,680nm,1.4s
ZEA                                pmax   pmax
        comp=Z,1µm,1.4s
HIA   Hailar            71.94 330  eP     P       02 05 34.2 -4.4
        comp=Z,1µm,1.8s
HIA   Hailar            71.94 330  i P    P       02 05 33.6 -5.1
HIA                                pmax   pmax
        comp=Z,281nm,1.3s
CM31  Chiang Mai Arr    71.96 293  eP     P       02 05 40.8 +1.3
CMAR  Chiang Mai Arr    71.96 293  P      P       02 05 38.0 -1.4
CMAR                               pmax   pmax
        comp=Z,12nm,0.3s
CMAR  Chiang Mai Arr    71.96 293  P      P       02 05 38.0 -1.4
        comp=Z,40nm,1.0s,baz=112,slow=4.3,SNR=18
CMAR                               LR     LR      02 34 09.3
        comp=Z,52µm,21.9s,baz=112,slow=33
BSI   Banda Aceh        71.99 279  P      P       02 05 45.1 +5.4
        comp=Z,161nm,2.5s
CMMT  Chiang Mai        72.07 294  P      P       02 05 40.8 +0.7
        comp=Z,204nm,2.2s
CHTO  Chiang Mai        72.07 294  eP     P       02 05 40.5 +0.4
        comp=Z,877nm,1.9s
CHTO  Chiang Mai        72.07 294  eP     P       02 05 40.5 +0.4
CHTO                               pmax   pmax
        comp=Z,877nm,1.9s
CHTO  Chiang Mai        72.07 294  P      P       02 05 41.3 +1.2
        SNR=24
CHTO  Chiang Mai        72.07 294  P      P       02 05 41.0 +0.9
        comp=Z,910nm,2.2s
CD2   Chengdu           72.34 307  P      P       02 05 42.0 +0.5
CD2                                pP     sP      02 05 45.3 -0.2
CD2                                PP     PP      02 08 22.6 +0.1
CD2                                S      S       02 15 06.3 +1.1
CD2                                SS     SS      02 19 45.6 +1.9
CD2                                pmax   pmax
        comp=Z,740nm,0.8s
CD2                                pmax   pmax
        comp=Z,54µm,11.4s
CD2                                LR     LR
        comp=Z,154µm,17.4s
CD2                                LR     LR
        comp=Z,168µm,20.9s
CD2                                LR     LR
        comp=Z,156µm,22.8s
CHGN  Chignik           72.88  20  eP     P       02 05 41.6 -2.4
        comp=Z,470nm,1.4s
CMBY  CAMPBELL BAY      73.65 281  eP     P       02 05 47.2 -2.4
SEY   Seymchan          73.95 354ceP      P       02 05 50.2  0.0
SEY   Seymchan          73.95 354  P      P       02 05 49.3 -1.0
        comp=Z,31nm,0.9s,baz=156,slow=6.3,SNR=3.1
LZH   Lanzhou           74.45 312 ⇑P      P       02 05 55.3 +1.3
LZH                                pP     sP      02 06 01.0 +3.0
LZH                                sP     pP      02 06 02.7 +5.8
LZH                                PP     PP      02 08 45.9 +5.3
LZH                                S      S       02 15 25.7 -3.6
LZH                                SS     SS      02 20 15.5 -0.6
LZH                                pmax   pmax
        comp=Z,76µm,7.6s
LZH                                LR     LR
        comp=Z,151µm,18.1s
LZH                                LR     LR
        comp=Z,190µm,18.4s
LZH                                LR     LR
        comp=Z,204µm,19.0s
SII   Sitkinak Islan    74.56  22  eP     P       02 05 54.1 +0.1
        comp=Z,682nm,1.4s
OHAK  Old Harbor        75.39  22  eP     P       02 05 58.3 -0.3
        comp=Z,1µm,1.8s
PBA   Port Blair        75.87 285  eP     P       02 06 00.5 -1.9
GAMB  Gambell           76.03  10  eP     P       02 06 02.5 +0.3
        comp=Z,531nm,1.2s
KDAK  Kodiak Island     76.06  21  eP     P       02 06 02.4 -0.1
        comp=Z,388nm,1.4s
KDAK  Kodiak Island     76.06  21  i P    P       02 06 02.4 -0.1
KDAK  Kodiak Island     76.06  21  P      P       02 06 02.1 -0.4
        comp=Z,81nm,1.0s,baz=121,slow=1.5,SNR=20
CIT   Chita             76.73 330  eP     P       02 06 07.2 +0.6
CIT                                e              02 06 19.6
CIT                                pmax   pmax
        comp=Z,2µm,2.6s
SVW2  Sparrevohn        77.58  18  eP     P       02 06 09.6 -1.5
YAK   Yakutsk           77.61 343  eP     P       02 06 10.3 -0.8
YAK                                e              02 06 18.6
YAK                                e*PP   PcP     02 06 22.9 +1.6
YAK                                e              02 09 03.5
YAK                                ePPP   PPP     02 10 50.9
YAK                                eS     S       02 16 02.2 -0.3
YAK                                e*SS   ScS     02 16 32.9 +3.5
YAK                                pmax   pmax
        comp=Z,546nm,1.8s
YAK                                pmax   pmax
        comp=E,148nm,1.9s
YAK                                pmax   pmax
        comp=N,212nm,1.6s
YAK                                pmax   pmax
        comp=Z,2µm,4.7s
YAK                                pmax   pmax
        comp=N,4µm,7.1s
YAK                                pmax   pmax
        comp=E,4µm,6.6s
YAK                                smax   smax
        comp=N,12µm,10.9s
YAK                                smax   smax
        comp=E,8µm,11.7s
YAK                                MLR    MLR
        comp=Z,86µm,21.0s
YAK                                MLR    MLR
        comp=N,54µm,18.0s
YAK                                MLR    MLR
        comp=E,56µm,22.0s
HOM   Homer             77.78  21  eP     P       02 06 13.0 +0.8
        comp=E,1µm,1.1s
ULN   Ulaanbaatar       77.91 324  eP     P       02 06 09.0 -4.4
        comp=E,268nm,1.2s
ULN   Ulaanbaatar       77.91 324ceP      P       02 06 14.3 +0.9
ULN                                pmax   pmax
        comp=Z,187nm,1.1s
ANM   Nome              77.95  12  eP     P       02 06 12.6 -0.5
RSO   Redoubt South     78.00  20  eP     P       02 06 12.8 -0.9
RSO                                eS     S       02 16 09.4 +2.1
BRLK  Bradley Lake      78.11  21  eP     P       02 06 14.0 -0.1
        comp=Z,805nm,1.6s
SONA0 Songino Array     78.28 324  eP     P       02 06 12.1 -3.4
SONM  Songino Array     78.28 324  P      P       02 06 12.1 -3.4
        comp=Z,11nm,1.0s,baz=139,slow=6.6,SNR=13
SONM                               LR     LR      02 39 02.6
        comp=Z,79µm,20.7s,baz=122,slow=34
BILL  Bilibino          78.35   0  eP     P       02 06 13.2 -2.0
        comp=Z,1µm,1.7s
BILL  Bilibino          78.35   0ceP      P       02 06 15.3 +0.1
BILL                               pmax   pmax
        comp=Z,405nm,1.3s
GTA   Gaotai            78.74 314 ⇑P      P       02 06 16.1 -2.1
GTA                                pP     sP      02 06 21.8 -0.4
GTA                                sP     PcP     02 06 24.3 -2.7
GTA                                S      S       02 16 15.4 -0.6
GTA                                pmax   pmax
        comp=Z,29nm,1.3s
GTA                                LR     LR
        comp=Z,72µm,19.7s
GTA                                LR     LR
        comp=Z,89µm,20.6s
GTA                                LR     LR
        comp=Z,148µm,20.9s
SEW   Seward            78.86  21  eP     P       02 06 18.0 -0.2
        comp=Z,545nm,1.5s
SUA   Susitna One       79.40  20  eP     P       02 06 20.6 -0.7
        comp=Z,1µm,1.8s
RC01  Rabbit Creek A    79.47  20  eP     P       02 06 21.4 -0.1
        comp=Z,933nm,1.8s
QSPA  South Pole Qui    79.49 180  eP     P       02 06 23.0 +1.2
        comp=Z,410nm,1.3s
BRDH  Bariadhala        79.73 295  PP     PP      02 09 24.7 -0.3
        comp=Z,96nm,1.1s,baz=252,slow=20,SNR=1.9
PPLA  Purkeypile        80.00  18  eP     P       02 06 23.3 -1.2
        comp=Z,243nm,1.4s
PMR   Palmer            80.03  20  eP     P       02 06 24.2 -0.3
PMR   Palmer            80.03  20  eP     P       02 06 24.2 -0.3
BOD   Bodaibo           80.08 335  eP     P       02 06 24.5 -0.3
BOD                                pmax   pmax
        comp=Z,298nm,2.1s
GLI   Glacier Island    80.24  21  eP     P       02 06 25.6 -0.1
        comp=Z,698nm,1.5s
SHL   Shillong          80.33 298  eP     P       02 06 27.9 +0.8
        comp=Z,2µm,1.9s
SHL   Shillong          80.33 298  eP     P       02 06 26.5 -0.7
CAST  Castle Rocks      80.42  18  eP     P       02 06 24.7 -1.9
        comp=Z,420nm,1.3s
SML   Sawmill           80.45  20  eP     P       02 06 26.8  0.0
        comp=Z,435nm,1.3s
SML   Sawmill           80.45  20  eP     P       02 06 26.8  0.0
SML                                pmax   pmax
        comp=Z,435nm,1.3s
EYAK  Cordova Ski Ar    80.51  22  eP     P       02 06 27.1  0.0
        comp=Z,430nm,1.4s
DIV   Divide            80.89  22  eP     P       02 06 29.1 -0.1
        comp=Z,514nm,1.4s
HMT   Hamilton          80.92  23  eP     P       02 06 30.1 +0.7
        comp=Z,607nm,1.5s
TRF   Thorofare Moun    80.99  18  eP     P       02 06 29.3 -0.6
        comp=Z,1µm,2.0s
KLU   Klutina           81.08  21  eP     P       02 06 30.5 +0.2
        comp=Z,388nm,1.5s
BPAW  Bear Paw Mtn.     81.25  18  eP     P       02 06 29.6 -1.5
        comp=Z,495nm,1.9s
ZAK   Zakamensk         81.31 325  eP     P       02 06 26.8 -5.0
ZAK                                pmax   pmax
        comp=Z,177nm,1.5s
RND   Reindeer          81.41  19  eP     P       02 06 31.4 -0.5
        comp=Z,1µm,1.7s
RDOG  Red Dog Mine      81.49  11  eP     P       02 06 31.5 -0.7
        comp=Z,371nm,1.2s
MCK   McKinley          81.62  19  eP     P       02 06 32.1 -0.9
        comp=Z,776nm,1.5s
MCK   McKinley          81.62  19  eP     P       02 06 32.1 -0.9
MCK                                pmax   pmax
        comp=Z,776nm,1.5s
IRK   Irkutsk           81.65 327  eP     P       02 06 36.8 +3.4
DHY   Denali Highway    81.66  20  eP     P       02 06 33.2 -0.2
        comp=Z,531nm,1.6s
TLY   Talaya            81.72 326  i P    P       02 06 34.0 +0.2
TLY   Talaya            81.72 326  P      P       02 06 30.0 -3.8
        comp=Z,14nm,0.8s,baz=280,slow=1.4,SNR=9.3
BWN   Browne            81.77  18  eP     P       02 06 33.2 -0.5
        comp=Z,1µm,1.4s
IM3   Indian Mountai    81.89  16  eP     P       02 06 32.4 -2.0
HARP  HAARP             81.96  21  eP     P       02 06 35.3 +0.5
        comp=Z,1µm,1.8s
MLY   Manley            82.01  17  eP     P       02 06 34.5 -0.5
        comp=Z,640nm,1.8s
MCCM  Marconi Confer    82.12  49  eP     P       02 06 36.4 +0.3
        comp=Z,1µm,1.8s
LSA   Lhasa             82.13 302  eP     P       02 06 36.2 -0.9
        comp=Z,517nm,1.7s
LSA   Lhasa             82.13 302  eP     P       02 06 36.2 -0.9
LSA                                pmax   pmax
        comp=Z,517nm,1.7s
KCPM  Cahto Peak        82.14  47  eP     P       02 06 37.1 +0.7
        comp=Z,1µm,1.8s
DIB   Dawson Inlet,     82.20  32  eP     P       02 06 38.2 +2.0
        comp=Z,635nm,1.9s
H02S1 DAWSON INLET T    82.20  32  P      P       02 06 39.0 +2.8
        SNR=3.8
JCC   Jacoby Creek,     82.22  46  eP     P       02 06 40.1 +3.5
        comp=Z,752nm,1.6s
KMRM  Mail Ridge        82.23  47  eP     P       02 06 37.9 +1.1
        comp=Z,930nm,1.6s
HOPS  Hopland Field     82.27  48  eP     P       02 06 37.5 +0.5
        comp=Z,703nm,1.5s
WRH   Wood River Hil    82.40  18  eP     P       02 06 35.9 -1.1
        comp=Z,334nm,1.2s
GDXM  Geysers           82.41  48  eP     P       02 06 39.1 +1.3
        comp=Z,555nm,1.6s
KHMM  Horse Mountain    82.45  46  eP     P       02 06 38.9 +0.8
        comp=Z,278nm,1.2s
MDM   Murphy Dome       82.70  18  eP     P       02 06 36.8 -1.9
        comp=Z,590nm,1.5s
HDA   Harding Lake      82.72  19  eP     P       02 06 37.3 -1.4
        comp=Z,810nm,1.3s
HDA   Harding Lake      82.72  19  P      P       02 06 37.4 -1.4
        baz=227,SNR=37
SAO   San Andreas Ge    82.74  51  eP     P       02 06 40.4 +0.9
        comp=Z,395nm,1.5s
TCOL  CIGO, UAF Yank    82.75  18  P      P       02 06 37.8 -1.1
        baz=226,SNR=19
COLA  College           82.76  18  eP     P       02 06 37.7 -1.2
        comp=Z,489nm,1.4s
COLA  College           82.76  18  i P    P       02 06 37.7 -1.2
COLA                               pmax   pmax
        comp=Z,240nm,1.2s
O02D  Mt. Diablo Mer    82.88  47  P      P       02 06 39.1 -1.1
        baz=250,SNR=32
RIDG  Independ'e Rid    82.95  20  eP     P       02 06 39.7 -0.3
        comp=Z,604nm,1.4s
IL1   Eielson Array     82.98  19  eP     P       02 06 37.3 -2.8
ILAR  Eielson Array     82.98  19  P      P       02 06 37.9 -2.3
        comp=Z,72nm,0.9s,baz=230,slow=5.5,SNR=45
ILAR                               LR     LR      02 43 39.5
        comp=Z,26µm,18.0s,baz=269,slow=36
ILB   Eielson Array     82.98  19  eP     P       02 06 36.0 -4.1
L02E  Cave Junction     83.00  45  P      P       02 06 40.2 -0.5
        baz=249
POKR  Poker Plat Res    83.06  18  P      P       02 06 39.0 -1.5
        baz=226,SNR=24
J01E  Myrtle Point      83.13  44  P      P       02 06 40.6 -0.8
        baz=249
K02D  Willamette Mer    83.14  44  P      P       02 06 41.3 -0.2
        baz=249,SNR=16
SNCC  San Nicolas Is    83.16  54  eP     P       02 06 43.6 +1.8
        comp=Z,323nm,1.1s
SNCC  San Nicolas Is    83.16  54  P      P       02 06 41.2 -0.5
        baz=253
MOY   Mondy             83.18 325  eP     P       02 06 44.4 +2.8
MOY                                pmax   pmax
        comp=Z,1µm,3.9s
WDC   Whiskeytown Da    83.19  47  eP     P       02 06 42.2 +0.5
        comp=Z,443nm,1.6s
WDC   Whiskeytown Da    83.19  47  eP     P       02 06 42.2 +0.5
WDC                                pmax   pmax
        comp=Z,443nm,1.6s
N02D  Trinity Center    83.21  46  P      P       02 06 42.3 +0.4
        baz=250,SNR=32
M02C  Callahan          83.25  46  P      P       02 06 42.4 +0.3
        baz=250,SNR=34
SCZ2  Santa Cruz Isl    83.29  54  P      P       02 06 42.7 +0.2
        baz=253,SNR=8.4
PAGB  Antelope Grade    83.33  52  eP     P       02 06 43.8 +1.2
        comp=Z,703nm,1.8s
SBC   Santa Barbara     83.36  53  P      P       02 06 43.1 +0.4
        baz=253
SMMC  Simmler           83.40  52  P      P       02 06 43.1 +0.1
        baz=252,SNR=12
PKM   Mcpherson Peak    83.42  53  P      P       02 06 43.3 +0.1
        baz=252,SNR=24
YBH   Yreka Blue Hor    83.47  46  eP     P       02 06 44.0 +0.7
        comp=Z,361nm,1.5s
I02D  Swisshome         83.53  43  P      P       02 06 44.2 +0.9
        baz=249
HUMO  Hull Mountain     83.60  45  eP     P       02 06 44.5 +0.7
        comp=Z,232nm,1.1s
ORV   Oroville          83.61  48  eP     P       02 06 43.9  0.0
        comp=Z,304nm,1.5s
ORV   Oroville          83.61  48  eP     P       02 06 43.9  0.0
ORV                                pmax   pmax
        comp=Z,304nm,1.5s
O03E  Paynes Creek      83.63  47  P      P       02 06 44.1  0.0
        baz=251,SNR=29
I03D  Drain, OR         83.72  44  P      P       02 06 44.5 +0.1
        baz=249,SNR=9.6
COLD  Coldfoot          83.77  16  eP     P       02 06 45.5 +1.4
        comp=Z,78nm,1.2s
BESE  Bessie Mountai    83.77  27  eP     P       02 06 45.0 +0.7
        comp=Z,540nm,1.6s
BLG   Laguna Peak, P    83.78  54  P      P       02 06 45.1 +0.2
        baz=253,SNR=5.3
AFDM  Forest Hills D    83.80  49  eP     P       02 06 43.7 -1.2
        comp=Z,670nm,1.6s
JIS   Juneau Island     83.83  27  eP     P       02 06 46.2 +1.7
        comp=Z,505nm,1.8s
WRAK  Wrangell Islan    83.84  30  eP     P       02 06 45.1 +0.5
        comp=Z,583nm,1.7s
SCI2  San Clemente I    83.86  55  P      P       02 06 45.0 -0.3
        baz=253
HYT   Haines Junctio    83.87  24  eP     P       02 06 45.6 +0.7
        comp=Z,208nm,1.2s
PRP   Porcupine Dome    83.92  18  eP     P       02 06 44.1 -0.9
        comp=Z,208nm,1.8s
L04D  Klamath Falls     83.92  45  P      P       02 06 45.7 +0.1
        baz=250,SNR=34
CMB   Columbia Colle    83.94  50  eP     P       02 06 45.8 +0.1
        comp=Z,112nm,1.1s
CMB   Columbia Colle    83.94  50  eP     P       02 06 45.8 +0.1
CMB                                pmax   pmax
        comp=Z,112nm,1.1s
CIS   Catalina Islan    84.09  55  P      P       02 06 46.4 -0.2
        baz=254,SNR=15
M04C  Macdoel           84.10  46  P      P       02 06 45.8 -0.7
        baz=250,SNR=26
VOG   Valley Oaks Go    84.18  52  P      P       02 06 46.2 -0.7
        baz=253
OSI   Osito Audit: C    84.19  53  eP     P       02 06 50.0 +2.9
        comp=Z,752nm,1.6s
OSI   Osito Audit: C    84.19  53  P      P       02 06 45.8 -1.3
        baz=253
ARVC  Arvin             84.26  53  P      P       02 06 47.5 +0.2
        baz=253,SNR=24
VES   Vestal, Richgr    84.27  52  P      P       02 06 45.6 -1.7
        baz=253,SNR=29
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FMP	Fort Macarthur	84.28	54	P	P	02 06 47.1	-0.3
	baz=254						
G03D	McMinnville, O	84.31	42	P	P	02 06 47.8	+0.5
	baz=249,SNR=7.9						
I04A	Tendick Farm,	84.39	44	P	P	02 06 47.5	-0.3
	baz=250,SNR=9.7						
DECC	Green Verdugo	84.40	54	P	P	02 06 48.0	-0.1
	baz=253						
J04D	Umpqua Nationa	84.40	44	P	P	02 06 47.7	-0.4
	baz=250,SNR=19						
H04D	Lebanon	84.42	43	P	P	02 06 48.4	+0.5
	baz=250,SNR=11						
RUBR	Rubicon Trail	84.43	49	*e*P	P	02 06 52.2	+3.8
	comp=Z,2µm,1.9s						
K04D	Chiloquin, OR	84.44	45	P	P	02 06 48.4	+0.1
	baz=250,SNR=14						
PASC	Pasadena Art C	84.49	54	*e*P	P	02 06 49.0	+0.5
	comp=Z,518nm,1.7s						
BEKR	Beckworth	84.54	48	*e*P	P	02 06 49.1	+0.2
	comp=Z,655nm,1.8s						
ODAN	Odare	84.56	298	*e*P	P	02 06 48.8	-0.5
MWC	Mount Wilson	84.61	54	*e*P	P	02 06 49.4	0.0
	comp=Z,1µm,1.6s						
MWC	Mount Wilson	84.61	54	*e*P	P	02 06 49.4	0.0
MWC				pmax	pmax		
	comp=Z,1µm,1.6s						
ISA	Isabella, Lake	84.69	52	*e*P	P	02 06 49.8	+0.2
	comp=Z,571nm,1.6s						
ISA	Isabella, Lake	84.69	52	P	P	02 06 49.8	+0.2
	baz=253,SNR=62						
FYU	Fort Yukon	84.71	18	*e*P	P	02 06 49.1	+0.3
	comp=Z,489nm,1.8s						
NLWA	Neilton Lookou	84.71	40	*e*P	P	02 06 52.5	+3.1
KNGR	Kungurtug, Tuv	84.72	324	*i* P	P	02 06 48.9	-0.5
F04D	Rainier, OR	84.79	41	P	P	02 06 49.9	+0.2
	baz=249						
WAKR	Walker	84.80	49	*e*P	P	02 06 50.6	+0.3
	comp=Z,718nm,1.6s						
MDPB	Devils Postpil	84.81	50	*e*P	P	02 06 50.5	+0.1
	comp=Z,556nm,1.7s						
EDW2	Edwards Air Fo	84.84	53	P	P	02 06 50.5	+0.2
	baz=254,SNR=45						
H04A	Detroit Lake	84.85	43	*e*P	P	02 06 50.4	+0.3
	comp=Z,333nm,1.5s						
PNTR	Pine Nut	84.86	49	*e*P	P	02 06 51.0	+0.5
	comp=Z,235nm,1.2s						
OMMB	Old Mammoth Mi	84.86	50	*e*P	P	02 06 51.0	+0.2
	comp=Z,363nm,1.5s						
WHY	Whitehorse	84.86	25	*e*P	P	02 06 49.2	-0.8
	comp=Z,38nm,1.1s						
VCNR	Virginia City	84.88	49	*e*P	P	02 06 53.8	+3.2
	comp=Z,118nm,1.1s						
BFSC	Mount Baldy Ra	84.93	54	P	P	02 06 50.9	-0.1
	baz=254,SNR=38						
MLAC	Mammoth, Mammo	84.99	50	P	P	02 06 51.4	+0.1
	baz=253,SNR=19						
109C	Camp Elliot, M	85.00	55	P	P	02 06 51.2	+0.1
	baz=254,SNR=12						
CPE	Camp Elliot	85.00	55	*e*P	P	02 06 52.0	+0.9
	comp=Z,730nm,1.8s						
J05D	Fort Rock, OR	85.02	44	P	P	02 06 50.4	-0.8
	baz=251,SNR=25						
DAWY	Dawson	85.03	21	*e*P	P	02 06 50.7	+0.1
	comp=Z,628nm,1.7s						
YERR	Yerington	85.09	49	*e*P	P	02 06 51.4	-0.3
	comp=Z,271nm,1.5s						
MURC	Murrieta	85.12	55	P	P	02 06 51.6	-0.2
	baz=254,SNR=26						
BOK	Bokaro	85.14	295	*e*P	P	02 06 51.6	-0.4
PAHR	Pah Rah Range	85.20	48	*e*P	P	02 06 50.7	-1.5
	comp=Z,337nm,1.4s						
CWC	Cottonwood Cre	85.22	52	P	P	02 06 51.8	-0.6
	baz=253						
MOD	Modoc Plateau	85.22	46	*e*P	P	02 06 52.4	+0.2
	comp=Z,603nm,1.7s						
MAW	Mawson	85.24	202	*e*P	P	02 06 52.4	+0.7
	comp=Z,129nm,1.3s						
MAW	Mawson	85.24	202	P	P	02 06 52.3	+0.7
	comp=Z,77nm,1.2s,baz=100,slow=6.1,SNR=3.1						
MAW				LR	LR	02 42 58.3	
	comp=Z,67µm,18.0s,baz=106,slow=34						
E04D	Cinebar	85.25	41	P	P	02 06 52.2	+0.2
	baz=250,SNR=15						
D03D	Eldon	85.26	40	P	P	02 06 52.4	+0.3
	baz=249,SNR=10.0						
LRMC	Laurel Mtn Rad	85.26	53	P	P	02 06 52.3	-0.3
	baz=254,SNR=20						
RAMN	Ramite	85.27	298	*e*P	P	02 06 52.5	-0.4
	comp=Z,1µm,1.9s						
TIN	Tinemaha, Big	85.28	51	P	P	02 06 52.5	-0.1
	baz=253,SNR=24						
BAR	Barrett	85.30	56	*e*P	P	02 06 52.8	+0.2
	comp=Z,376nm,1.8s						
I05D	Terrebonne, OR	85.30	43	P	P	02 06 51.3	-1.2
	baz=251,SNR=18						
D04E	Lakebay	85.33	40	P	P	02 06 53.1	+0.7
	baz=249						
PINE	Pine Mountain	85.39	44	*e*P	P	02 06 53.7	+0.6
	comp=Z,608nm,1.6s						
PGC	Sidney	85.44	39	*e*P	P	02 06 53.5	+0.6
	comp=Z,535nm,1.6s						
RYN	Ryan	85.52	50	*e*P	P	02 06 54.1	+0.3
	comp=Z,486nm,1.8s						
BBRC	Big Bear Solar	85.52	54	P	P	02 06 53.6	-0.4
	baz=254						
DAC	Darwin (Calif)	85.55	52	*e*P	P	02 06 52.9	-1.2
	comp=Z,387nm,1.6s						
DAC	Darwin (Calif)	85.55	52	*e*P	P	02 06 52.9	-1.2
DAC				pmax	pmax		
	comp=Z,387nm,1.6s						
MONP2	Monument Peak	85.56	56	P	P	02 06 54.0	-0.2
	baz=255,SNR=38						
MPMC	Manual Prospec	85.57	52	P	P	02 06 53.7	-0.5
	baz=254,SNR=37						
TIXI	Tiksi	85.58	349	*e*P	P	02 06 49.6	-3.5
	comp=Z,829nm,1.5s						
TIXI	Tiksi	85.58	349	*i* P	P	02 06 52.8	-0.3
TIXI				pmax	pmax		
	comp=Z,303nm,1.2s						
G05D	Wamic, OR	85.62	43	P	P	02 06 54.1	+0.1
	baz=251,SNR=10						
NV01	Mina Array Sit	85.63	50	*e*P	P	02 06 54.0	-0.5
NVAR	Mina Array Bea	85.63	50	P	P	02 06 54.0	-0.4
	comp=Z,53nm,1.0s,baz=236,slow=7.7,SNR=29						
NVAR				PKPPKP	P'P'df	02 33 09.0	+5.9
	comp=Z,2.0nm,0.8s,baz=153,slow=1.0,SNR=4.1						
NVAR				LR	LR	02 40 25.9	
	comp=Z,54µm,18.7s,baz=295,slow=32						
RRX	Edison Barstow	85.63	54	P	P	02 06 54.3	+0.1
	baz=254						
PFO	Pinyon Flats O	85.72	55	*e*P	P	02 06 55.0	+0.1
	comp=Z,460nm,1.8s						
PFO	Pinyon Flats O	85.72	55	P	P	02 06 54.5	-0.3
	baz=255,SNR=27						
PFO	Pinyon Flats O	85.72	55	P	P	02 06 54.6	-0.2
	comp=Z,23nm,1.0s,baz=270,slow=5.0,SNR=14						
XPFO	Pion Flat	85.72	55	*e*P	P	02 06 55.0	+0.1
	comp=Z,491nm,1.8s						
F05D	White Salmon	85.74	42	P	P	02 06 54.9	+0.4
	baz=250,SNR=12						
NV11	Mina Array Sit	85.74	50	*e*P	P	02 06 55.2	+0.3
	comp=Z,30nm,1.3s						
IKP	In-Ko-Pah, Jac	85.75	56	P	P	02 06 54.9	-0.1
	baz=255,SNR=33						
JIRN	Jiri	85.79	299	*e*P	P	02 06 54.9	-0.8
	comp=Z,3µm,1.8s						
LON	Longmire	85.80	41	*e*P	P	02 06 55.8	+0.9
	comp=Z,174nm,1.6s						
D05A	Enumclaw	85.84	41	*e*P	P	02 06 56.0	+1.0
	comp=Z,863nm,1.4s						
GSC	Goldstone, Bar	85.90	53	*e*P	P	02 06 55.9	+0.2
	comp=Z,809nm,1.9s						
GSC	Goldstone, Bar	85.90	53	P	P	02 06 55.5	-0.1
	baz=254,SNR=39						
DLBC	Dease Lake	85.91	28	*e*P	P	02 06 55.8	+0.6
	comp=Z,240nm,1.9s						
A04D	Lummi Island	85.92	39	P	P	02 06 55.6	+0.3
	baz=249						
GRAC	Grapevine Rang	85.93	51	P	P	02 06 55.7	0.0
	baz=254,SNR=41						
KVN	Kaiserville	85.96	49	*e*P	P	02 06 54.6	-1.4
	comp=Z,254nm,1.4s						
KVN	Kaiserville	85.96	49	*e*P	P	02 06 54.7	-1.4
KVN				pmax	pmax		
	comp=Z,254nm,1.4s						
SWSC	Sam W. Stewart	86.08	56	P	P	02 06 56.5	0.0
	baz=255,SNR=40						
GUN	Gumba	86.12	299	*e*P	P	02 06 55.2	-2.1
	comp=Z,3µm,1.9s						
B05A	Bryant	86.14	40	P	P	02 06 56.5	+0.1
	baz=250,SNR=28						
HEC	Hector,Ludlow	86.14	54	P	P	02 06 56.6	-0.3
	baz=255,SNR=43						
FURC	Furnace Creek,	86.17	52	P	P	02 06 56.9	+0.1
	baz=254,SNR=42						
BELC	Belle Mtn. Jos	86.19	55	P	P	02 06 57.0	-0.3
	baz=255,SNR=48						
PKI	Pulchoki	86.44	299	*e*P	P	02 06 56.7	-2.1
	comp=Z,2µm,1.7s						
PKIN	Phulchoki	86.45	299	*e*P	P	02 06 56.7	-2.1
I07A	Izee	86.47	44	*e*P	P	02 06 58.5	+0.1
	comp=Z,327nm,1.4s						
SHOC	Shoshone, Teco	86.47	53	P	P	02 06 58.5	+0.1
	baz=254,SNR=19						
BC3	Big Chuckawall	86.54	55	P	P	02 06 59.0	+0.1
	baz=255,SNR=47						
PALK	Pallekele	86.54	278	P	P	02 06 59.0	-0.3
PALK				pmax	pmax		
	comp=Z,18nm,1.0s						
PALK	Pallekele	86.54	278	P	P	02 07 05.4	+6.2
	SNR=7.8						
PALK	Pallekele	86.54	278	P	P	02 06 59.0	-0.3
	comp=Z,18nm,1.0s,baz=116,slow=7.6,SNR=3.3						
WVOR	Wild Horse Val	86.57	46	*e*P	P	02 06 59.7	+0.8
	comp=Z,524nm,1.6s						
KKN	Kakani	86.61	299	*e*P	P	02 06 58.1	-1.4
	comp=Z,2µm,1.8s						
B06A	Marblemount	86.61	39	*e*P	P	02 06 58.4	-0.3
	comp=Z,349nm,1.8s						
TUQ	Turquoise Moun	86.63	53	P	P	02 06 59.0	-0.3
	baz=255,SNR=28						
GMRC	Granite Mounta	86.67	54	P	P	02 06 59.3	-0.2
	baz=255,SNR=42						
LTY	Liberty	86.71	41	*e*P	P	02 06 59.1	-0.3
	comp=Z,192nm,1.4s						
DMN	Daman	86.71	299	*e*P	P	02 06 58.9	-1.2
	comp=Z,2µm,1.5s						
F07A	Phinny Hill Vi	86.75	42	*e*P	P	02 06 59.8	+0.3
	comp=Z,239nm,1.4s						
TPNV	Topopah Spring	86.78	52	*e*P	P	02 07 00.2	+0.1
	comp=Z,1µm,2.0s						
TPNV	Topopah Spring	86.78	52	P	P	02 07 00.1	0.0
	baz=254,SNR=35						
C06D	Leavenworth	86.78	40	P	P	02 06 59.8	+0.2
	baz=251						
GLA	Glamis	86.89	56	*e*P	P	02 06 59.7	-0.9
	comp=Z,1µm,1.8s						
GLA	Glamis	86.89	56	*e*P	P	02 06 59.7	-0.9
GLA				pmax	pmax		
	comp=Z,1µm,1.8s						
GLA	Glamis	86.89	56	P	P	02 07 01.4	+0.8
	baz=256,SNR=53						
IRM	Iron Mountain	86.92	55	P	P	02 07 01.5	+0.9
	baz=255,SNR=71						
J08A	Circle Bar Ran	86.96	45	*e*P	P	02 07 00.3	-0.4
	comp=Z,307nm,1.3s						
LLLB	Lillooet	87.09	37	*e*P	P	02 07 00.7	-0.4
	comp=Z,399nm,1.9s						
HAWA	Hanford	87.17	42	*e*P	P	02 07 01.8	+0.2
	comp=Z,289nm,1.4s						
LDFC	Landfair	87.18	54	*e*P	P	02 07 02.7	+0.7
	comp=Z,1µm,1.6s						
G08A	Pilot Rock	87.21	43	*e*P	P	02 07 02.0	+0.1
	comp=Z,616nm,1.8s						
Y12C	Blythe	87.31	55	*e*P	P	02 07 03.1	+0.6
	comp=Z,647nm,1.5s						
Y12C	Blythe	87.31	55	P	P	02 07 03.6	+1.0
	baz=256,SNR=43						
NEE2	Needles Airpor	87.49	54	P	P	02 07 04.0	+0.6
	baz=256,SNR=14						
SHPR	Sheep Range	87.50	52	*e*P	P	02 07 04.1	+0.5
	comp=Z,980nm,1.8s						
E08A	Dider Farm, El	87.51	42	*e*P	P	02 07 03.5	+0.4
	comp=Z,557nm,1.4s						
R11A	Troy Canyon, C	87.66	50	*e*P	P	02 07 04.4	+0.1
	comp=Z,474nm,1.8s						
R11A	Troy Canyon, C	87.66	50	P	P	02 07 04.9	+0.6
	baz=255,SNR=48						
113A	Mohawk Valley,	87.69	56	*e*P	P	02 07 05.1	+0.8
	comp=Z,860nm,1.8s						
SRIG	Santa Rosalia	87.71	62	*e*P	P	02 07 06.2	+1.7
	comp=Z,666nm,1.9s						
PDMCI	Parker Dam,Lak	87.76	55	P	P	02 07 05.1	+0.5
	baz=256,SNR=56						
D08A	Wollman Farm,	87.78	41	*e*P	P	02 07 04.5	+0.1
B08A	Colville Reser	87.91	40	*e*P	P	02 07 05.1	0.0
	comp=Z,447nm,1.9s						
DANN	Dangsing	88.04	299	*e*P	P	02 07 03.7	-2.8
KOLN	Koldanda	88.05	299	*e*P	P	02 07 04.4	-2.1
	comp=Z,1µm,1.9s						
MDRS	Chennai	88.09	284	*e*P	P	02 07 05.3	-1.3
E09A	Wood Farm, Sta	88.12	42	*e*P	P	02 07 06.2	+0.2
	comp=Z,545nm,1.6s						
W13A	Hualapai Mount	88.16	54	*e*P	P	02 07 07.4	+0.5
	comp=Z,584nm,1.6s						
BMO	Blue Mountains	88.20	44	*e*P	P	02 07 06.3	-0.3
	comp=Z,700nm,1.9s						
BMO	Blue Mountains	88.20	44	*e*P	P	02 07 06.4	-0.3
BMO				pmax	pmax		
	comp=Z,700nm,1.9s						
214A	Organ Pipe Nat	88.28	57	P	P	02 07 07.7	+0.4
	baz=257						
C09A	Chrisman Ranch	88.42	41	*e*P	P	02 07 07.8	+0.3
	comp=Z,291nm,1.6s						
ELK	Elko	88.54	48	*e*P	P	02 07 08.4	-0.2
	comp=Z,443nm,1.8s						
ELK	Elko	88.54	48	*e*P	P	02 07 08.4	-0.2
ELK				pmax	pmax		
	comp=Z,443nm,1.8s						
F10A	Beach Ranch, E	88.57	43	*e*P	P	02 07 07.3	-1.1
	comp=Z,1µm,1.9s						
Y14A	Wickenburg	88.58	55	*e*P	P	02 07 09.8	+1.1
	comp=Z,437nm,1.6s						
PYUN	Piuthan	88.65	299	*e*P	P	02 07 07.6	-1.7
	comp=Z,462nm,1.4s						
LPIG	La Paz	88.72	65	P	P	02 07 09.4	-0.1
	comp=Z,16nm,0.2s,baz=117,slow=2.8,SNR=8.0						
WMQ	Urumqi	88.77	315	P	P	02 07 09.1	-0.2
WMQ				pP	sP	02 07 14.9	+1.5
WMQ				PP	PP	02 10 42.1	+3.6
WMQ				SKS	SKSac	02 17 33.6	-5.4
WMQ				S	SKKSac	02 17 53.1	+2.8
WMQ				SS	SS	02 23 50.3	+1.4
WMQ				pmax	pmax		
	comp=Z,410nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,112µm,11.5s						
WMQ				LR	LR		
	comp=Z,56µm,32.7s						
WMQ				LR	LR		
	comp=Z,149µm,32.7s						
WMQ				LR	LR		
	comp=Z,169µm,32.7s						
WMQ	Urumqi	88.77	315	*e*P	P	02 07 09.6	+0.3
	comp=Z,961nm,1.8s						
MFID	Camas Ranch	88.82	46	*e*P	P	02 07 09.7	+0.1
	comp=Z,230nm,1.4s						
SLBS	Sierra La Lagu	88.96	66	*e*P	P	02 07 12.1	+1.4
	comp=Z,586nm,1.8s						
PSUT	Pine Spring	89.02	51	*e*P	P	02 07 11.2	+0.4
	comp=Z,386nm,1.5s						
LCMT	Little Creek M	89.12	52	*e*P	P	02 07 11.3	+0.1
	comp=Z,412nm,1.4s						
CCUT	Cedar City	89.16	52	*e*P	P	02 07 10.7	-0.8
	comp=Z,572nm,1.5s						
HSIG		89.20	60	*e*P	P	02 07 12.6	+1.0
	comp=Z,750nm,1.7s						
NEW	Newport	89.29	41	*e*P	P	02 07 11.2	-0.5
	comp=Z,176nm,1.6s						
NEW	Newport	89.29	41	P	P	02 07 11.6	-0.1
	baz=254,SNR=26						
INK	Inuvik	89.37	19	*e*P	P	02 07 11.1	-0.4
	comp=Z,294nm,1.7s						
INK	Inuvik	89.37	19	P	P	02 07 10.3	-1.2
	comp=Z,32nm,1.2s,baz=217,slow=5.4,SNR=15						
INK				LR	LR	02 42 40.2	
	comp=Z,63µm,21.0s,baz=226,slow=33						
SZCU	Shurtz Canyon	89.38	52	*e*P	P	02 07 13.9	+1.3
	comp=Z,906nm,1.7s						
KNB	Kanab	89.45	52	*e*P	P	02 07 12.6	-0.2
	comp=Z,1µm,1.7s						
KNB	Kanab	89.45	52	*e*P	P	02 07 12.6	-0.2
KNB				pmax	pmax		
	comp=Z,1µm,1.7s						
U15A	North Rim	89.73	53	*e*P	P	02 07 13.8	-0.5
	comp=Z,902nm,1.7s						
HLID	Hailey	89.86	46	*e*P	P	02 07 14.9	+0.3
	comp=Z,275nm,1.5s						
HLID	Hailey	89.86	46	P	P	02 07 14.9	+0.3
	baz=256						
PKCU	Pink Cliffs	89.94	52	*e*P	P	02 07 15.6	+0.3
	comp=Z,1µm,1.6s						
X16A	Lo Mia Camp, P	89.96	55	*e*P	P	02 07 14.9	-0.4
	comp=Z,357nm,1.4s						
TUC	Tucson	90.04	57	*e*P	P	02 07 16.9	+1.4
	comp=Z,267nm,1.4s						
TUC	Tucson	90.04	57	P	P	02 07 15.9	+0.3
	baz=258						
TCRU	Three Creeks R	90.11	51	*e*P	P	02 07 17.3	+1.4
	comp=Z,1µm,2.0s						
MTPU	Mount Pierson	90.18	51	*e*P	P	02 07 17.1	+0.7
	comp=Z,373nm,1.3s						
DUG	Dugway, Tooele	90.20	49	*e*P	P	02 07 16.1	-0.1
	comp=Z,605nm,1.9s						
DUG	Dugway, Tooele	90.20	49	P	P	02 07 17.0	+0.8
	baz=257						
BGU	Big Grassy Mou	90.21	48	*e*P	P	02 07 17.0	+0.8
	comp=Z,650nm,1.8s						
WUAZ	Wupatki	90.25	54	*e*P	P	02 07 16.6	0.0
	comp=Z,465nm,1.4s						
WUAZ	Wupatki	90.25	54	P	P	02 07 17.0	+0.4
	baz=257						
MSU	Marysvale	90.29	51	*e*P	P	02 07 16.8	0.0
TRD	Trivandrum	90.42	279	*e*P	P	02 07 15.7	-1.9
HYB	Hyderabad	90.52	288	*i* P	P	02 07 20.5	+2.5
	comp=Z,143nm,1.2s						
HYB	Hyderabad	90.52	288	*e*P	P	02 07 16.5	-1.6
HYB				IAmb	IAmb	02 07 24.6	
DGZ	Jazzator, Alta	90.53	321	*i* P	P	02 07 16.5	-1.0
DGZ				pmax	pmax		
	comp=Z,56nm,1.2s						
HVU	Hansel Valley	90.59	48	*e*P	P	02 07 16.0	-2.1
HVU	Hansel Valley	90.59	48	*e*P	P	02 07 16.0	-2.1
NLU	North Lily Min	90.69	50	*e*P	P	02 07 18.5	-0.1
	comp=Z,405nm,1.6s						
SPUT	South Promonto	90.72	48	*e*P	P	02 07 17.8	-0.9
	comp=Z,416nm,1.6s						
NGP	Nagpur	90.76	291	*e*P	P	02 07 18.0	-1.0
NGP				IAmb	IAmb	02 07 27.1	
	comp=Z,334nm,1.7s						
MSO	Missoula	90.99	43	*e*P	P	02 07 20.5	+0.8
	comp=Z,158nm,1.5s						
MSO	Missoula	90.99	43	P	P	02 07 19.6	-0.1
	baz=256,SNR=17						
MPU	Maple Canyon	91.04	50	*e*P	P	02 07 21.6	+1.4
	comp=Z,408nm,1.4s						
319A	Douglas	91.10	58	*e*P	P	02 07 22.3	+1.8
	comp=Z,439nm,1.6s						
CTU	Camp Tracy	91.10	49	*e*P	P	02 07 21.0	+0.6
	comp=Z,316nm,1.4s						
Q16A	Castle Valley	91.15	51	*e*P	P	02 07 21.1	+0.4
	comp=Z,1µm,1.8s						
X18A	Snowflake	91.18	55	*e*P	P	02 07 20.5	-0.5
	comp=Z,261nm,1.4s						
TMUT	Trail Mountain	91.20	50	*e*P	P	02 07 22.0	+0.9
	comp=Z,924nm,2.0s						
MCMT	McKenzie Canyo	91.25	45	*e*P	P	02 07 21.6	+0.4
JLU	Jordanelle	91.30	49	*e*P	P	02 07 22.1	+0.6
	comp=Z,1µm,1.9s						
HWUT	Hardware Ranch	91.44	48	*e*P	P	02 07 23.4	+1.4
	comp=Z,55nm,1.1s						
TCUT	Toone Canyon	91.45	49	*e*P	P	02 07 22.6	+0.4
	comp=Z,1µm,1.9s						
W18A	Petrified Fore	91.48	55	*e*P	P	02 07 24.1	+1.7
	comp=Z,344nm,1.4s						
W18A	Petrified Fore	91.48	55	P	P	02 07 22.6	+0.2
	baz=258						
DLMT	Dillon	91.55	44	*e*P	P	02 07 22.0	-0.4
	comp=Z,432nm,1.4s						
WALA	Waterton Lakes	91.56	40	*e*P	P	02 07 23.0	+0.7
	comp=Z,282nm,1.4s						
P17A	Butcher Ranch,	91.59	50	*e*P	P	02 07 24.4	+1.6
	comp=Z,439nm,1.7s						
ZSN	Zaisan	91.61	318	*e*P	P	02 07 21.2	-1.2
ZSN				pmax	pmax		
	comp=Z,148nm,1.7s						
ZSN				MLR	MLR		
	comp=Z,5µm,17.0s						
ZSN	Zaisan	91.61	318	*e*P	P	02 07 21.2	-1.2
	comp=Z,148nm,1.7s						
ZSN				*e*LR	LR	02 49 57.0	
	comp=Z,5µm,17.1s						
SRU	San Rafael Swe	91.68	51	*e*P	P	02 07 24.2	+1.0
	comp=Z,351nm,2.0s						
SRU	San Rafael Swe	91.68	51	*e*P	P	02 07 24.2	+1.0
SRU				pmax	pmax		
	comp=Z,351nm,2.0s						
LRM	Limekiln Ridge	91.76	44	*e*P	P	02 07 23.4	0.0
AHID	Auburn Hatcher	92.03	47	*e*P	P	02 07 26.7	+1.9
	comp=Z,164nm,1.6s						
QLMT	Earthquake Lak	92.24	45	*e*P	P	02 07 27.3	+1.6
FXWY	Fox Creek	92.27	46	*e*P	P	02 07 26.2	+0.4
	comp=Z,150nm,1.4s						
BOZ	Bozeman (W)	92.27	44	*e*P	P	02 07 26.6	+0.9
	comp=Z,398nm,1.5s						
BOZ	Bozeman (W)	92.27	44	P	P	02 07 26.4	+0.7
	baz=258,SNR=43						
TPAW	Teton Pass	92.29	46	*e*P	P	02 07 26.7	+0.7
	comp=Z,431nm,1.8s						
REDW	Red Top Meadow	92.33	46	*e*P	P	02 07 27.0	+0.8
	comp=Z,817nm,2.0s						
HRY	Holter Researc	92.37	43	*e*P	P	02 07 26.3	+0.2
IMW	Indian Meadow	92.38	46	*e*P	P	02 07 27.4	+1.0
	comp=Z,176nm,1.4s						
YHB	Horse Butte	92.38	45	*e*P	P	02 07 27.8	+1.4
	comp=Z,213nm,1.4s						
SNOW	Snow King Moun	92.42	46	*e*P	P	02 07 28.0	+1.4
	comp=Z,396nm,1.8s						
MOOW	Moose Ponds	92.49	46	*e*P	P	02 07 26.4	-0.4
	comp=Z,125nm,1.5s						
YMR	Madison River	92.53	45	*e*P	P	02 07 29.0	+1.9
	comp=Z,304nm,1.5s						
YPP	Pitchstone Pla	92.56	46	*e*P	P	02 07 28.9	+1.6
	comp=Z,274nm,1.9s						
LOHW	Long Hollow	92.56	46	*e*P	P	02 07 27.2	0.0
	comp=Z,310nm,1.8s						
121A	Cookes Peak, D	92.57	58	P	P	02 07 28.4	+0.9
	baz=259,SNR=16						
PV05	Paradox Valley	92.57	52	*e*P	P	02 07 29.8	+2.5
	comp=Z,110nm,1.4s						
YFT	Old Faithful	92.57	45	*e*P	P	02 07 30.6	+3.4
	comp=Z,288nm,1.8s						
FLWY	Flagg Ranch	92.59	46	*e*P	P	02 07 29.5	+2.2
	comp=Z,266nm,1.8s						
BHPL	Bhopal	92.62	293	*e*P	P	02 07 26.5	-1.1
PV09	Paradox Valley	92.62	51	*e*P	P	02 07 29.3	+1.6
PV10	Paradox Valley	92.67	52	*e*P	P	02 07 29.7	+1.8
	comp=Z,130nm,1.3s						
PV14	Lion Creek, Pa	92.68	52	*e*P	P	02 07 29.3	+1.4
	comp=Z,577nm,1.9s						
PV19	Morning Glory	92.70	52	*e*P	P	02 07 29.4	+1.4
	comp=Z,117nm,1.3s						
PV23	Carpenter Ridg	92.71	52	*e*P	P	02 07 29.6	+1.5
	comp=Z,494nm,1.9s						
PV17	East Wray Mesa	92.71	52	*e*P	P	02 07 29.9	+1.9
	comp=Z,132nm,1.4s						
PV20	West Nyswonger	92.72	52	*e*P	P	02 07 29.4	+1.4
	comp=Z,142nm,1.4s						
YNR	Norris Junctio	92.74	45	*e*P	P	02 07 30.9	+2.9
	comp=Z,341nm,1.8s						
H17A	Grant Village	92.74	45	*e*P	P	02 07 31.2	+3.1
	comp=Z,65nm,1.1s						
H17A	Grant Village	92.74	45	P	P	02 07 29.3	+1.3
	baz=258,SNR=26						
PV16	Nyswonger Mesa	92.75	52	*e*P	P	02 07 30.1	+1.9
	comp=Z,191nm,1.6s						
PV21	Cone Mtn., Par	92.76	51	*e*P	P	02 07 29.8	+1.5
	comp=Z,430nm,1.8s						
PV04	Paradox Valley	92.78	52	*e*P	P	02 07 29.7	+1.4
	comp=Z,606nm,1.9s						
PV11	David Mesa, Pa	92.78	52	*e*P	P	02 07 30.2	+1.9
	comp=Z,176nm,1.5s						
PV03	Paradox Valley	92.80	52	*e*P	P	02 07 30.1	+1.6
	comp=Z,92nm,1.4s						
PV13	Radium Mtn., P	92.80	52	*e*P	P	02 07 29.7	+1.2
	comp=Z,110nm,1.5s						
PV12	Saucer Basin,	92.84	52	*e*P	P	02 07 30.1	+1.4
	comp=Z,390nm,1.6s						
MVCO	Mesa Verde	92.87	53	*e*P	P	02 07 30.1	+1.3
	comp=Z,182nm,1.8s						
MVCO	Mesa Verde	92.87	53	P	P	02 07 29.8	+1.0
	baz=259,SNR=7.1						
PV02	Paradox Valley	92.87	52	*e*P	P	02 07 30.5	+1.7
	comp=Z,60nm,1.2s						

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LKWY  Lake               92.90  45 eP       P        02 07 32.0 +3.2
      comp=Z,120nm,1.4s
PV07  Paradox Valley     92.98  52 eP       P        02 07 30.6 +1.3
      comp=Z,64nm,1.1s
PV01  Paradox Valley     92.99  52 eP       P        02 07 30.4 +1.0
      comp=Z,225nm,1.9s
PV15  Paradox Valley     93.09  52 eP       P        02 07 31.7 +1.9
      comp=Z,366nm,1.9s
BW06  Boulder Array      93.14  47 eP       P        02 07 30.0 +0.1
      comp=Z,125nm,1.4s
BW06  Boulder Array      93.14  47  P       P        02 07 30.9 +1.0
      baz=259,SNR=37
PD31  Pinedale Array     93.14  47 eP       P        02 07 30.8 +0.9
PDAR  Pinedale Array     93.14  47 eP       P        02 07 28.8 -1.1
PDAR                                PKKPbc  PKKPdf   02 24 39.0 +0.2
PDAR                                P'P'             02 32 55.2
PDAR  Pinedale Array     93.14  47  P       P        02 07 29.8 -0.1
      comp=Z,8.6nm,0.9s,baz=242,slow=2.9,SNR=23
PDAR                                PKKPbc  PKKPdf   02 24 39.0 +0.2
      comp=Z,1.9nm,1.0s,baz=66,slow=1.1,SNR=2.1
PDAR                                PKPPKP           02 32 55.2
      comp=Z,1.3nm,0.9s,baz=108,slow=2.9,SNR=4.4
ZAA0  Zalesovo Array     93.16 324 eP       P        02 07 25.5 -3.9
      comp=Z,356nm,1.5s
ZALV  Zalesovo Beam      93.16 324 eP       P        02 07 25.1 -4.3
ZALV                                PKKPbc  PKKPbc   02 24 41.3 +1.1
ZALV  Zalesovo Beam      93.16 324 eP       P        02 07 25.1 -4.3
ZALV                                                 02 24 41.3
ZALV  Zalesovo Beam      93.16 324  P       P        02 07 26.5 -2.9
      comp=Z,31nm,1.0s,baz=120,slow=4.2,SNR=12
ZALV                                PKKPbc  PKKPbc   02 24 41.3 +1.1
      comp=Z,1.2nm,0.4s,baz=301,slow=4.7,SNR=3.5
ZAA1  Zalesovo Array     93.17 324 eP       P        02 07 26.5 -2.9
MK01  Makanchi Array     93.17 317 eP       P        02 07 25.4 -4.3
MK31  Makanchi Array     93.18 317 eP       P        02 07 25.3 -4.5
      comp=Z,887nm,1.9s
MK31  Makanchi Array     93.18 317 i P      P        02 07 25.2 -4.5
MK31                                pmax    pmax
      comp=Z,70nm,1.0s
MK32  Makanchi Array     93.18 317 eP       P        02 07 26.0 -3.8
MK32                               ePP      PP       02 11 13.0 -0.3
MKAR  Makanchi Array     93.18 317 eP       P        02 07 25.3 -4.4
      comp=Z,2µm,1.4s
MKAR                                PP      PP       02 11 13.0 -0.3
MKAR                                PKKPbc  PKKPbc   02 24 41.1 +1.2
MKAR  Makanchi Array     93.18 317 eP       P        02 07 25.3 -4.4
MKAR                                                 02 11 13.0
MKAR  Makanchi Array     93.18 317  P       P        02 07 26.0 -3.8
      comp=Z,15nm,0.8s,baz=93,slow=4.7,SNR=13
MKAR                                PP      PP       02 11 13.0 -0.3
      comp=Z,35nm,1.3s,baz=103,slow=12,SNR=4.5
MKAR                                PKKPbc  PKKPbc   02 24 41.1 +1.2
      comp=Z,7.2nm,0.9s,baz=296,slow=2.7,SNR=9.1
MKAR                                LR      LR       02 51 51.5
      comp=Z,37µm,18.6s,baz=92,slow=37
DDI   Dehra Dun          93.31 300 eP       P        02 07 29.5 -1.3
HPIG                     93.38  63 eP       P        02 07 35.4 +4.1
      comp=Z,182nm,1.9s
MAKZ  Makanchi           93.39 317 eP       P        02 07 27.3 -3.4
      comp=Z,752nm,1.6s
MAKZ  Makanchi           93.39 317  P       P        02 07 28.0 -2.7
MAKZ                                pmax    pmax
      comp=Z,46nm,1.2s
LAZ   Ladron             93.44  56 eP       P        02 07 33.4 +2.0
LENM  Lemitar            93.53  56 eP       P        02 07 36.3 +4.5
O20A  White River Ci     93.61  50 eP       P        02 07 32.5 +0.3
      comp=Z,100nm,1.4s
O20A  White River Ci     93.61  50  P       P        02 07 32.8 +0.7
      baz=260,SNR=18
GCMT  Greycliff          93.65  44 eP       P        02 07 34.0 +1.9
NDI   New Delhi          93.75 298 eP       P        02 07 32.0 -0.7
RLMT  Red Lodge          93.80  45 eP       P        02 07 35.0 +2.2
      comp=Z,199nm,1.6s
RLMT  Red Lodge          93.80  45  P       P        02 07 33.8 +0.9
      baz=259
BNM   Barren Site        93.81  56 eP       P        02 07 37.1 +3.9
EGMT  Eagleton           94.03  42 eP       P        02 07 34.8 +1.2
      comp=Z,434nm,1.8s
EGMT  Eagleton           94.03  42  P       P        02 07 34.9 +1.2
      baz=259
ANMO  Albuquerque        94.09  55 eP       P        02 07 34.6 +0.2
      comp=Z,51nm,1.3s
ANMO  Albuquerque        94.09  55 i P      P        02 07 33.5 -0.9
ANMO                                pmax    pmax
      comp=Z,22nm,1.4s
ANMO  Albuquerque        94.09  55  P       P        02 07 34.3 -0.1
      baz=260
MNCY  Minicoy            94.19 278 eP       P        02 07 32.5 -2.5
SMLA  Simla              94.21 301 eP       P        02 07 34.0 -0.7
NVS   Novosibirsk        94.27 325 eP       P        02 07 35.3 +0.9
NVS                                 pmax    pmax
      comp=N,140nm,1.9s
NVS                                 pmax    pmax
      comp=Z,511nm,1.9s
NVS                                 pmax    pmax
      comp=E,211nm,2.2s
S22A  4UR Ranch, Cre     94.27  53 eP       P        02 07 36.9 +1.6
      comp=E,221nm,1.8s
S22A  4UR Ranch, Cre     94.27  53  P       P        02 07 34.9 -0.4
      baz=260,SNR=30
SMCO  Snowmass           94.40  51 eP       P        02 07 37.7 +1.7
      comp=E,94nm,1.5s
MNTX  Cornudas Mount     94.43  59 eP       P        02 07 36.5 +0.6
      comp=E,83nm,1.4s
MNTX  Cornudas Mount     94.43  59  P       P        02 07 35.6 -0.2
      baz=260,SNR=20
YKA   Yellowknife Ar     94.47  27  P       P        02 07 33.3 -1.9
      comp=E,4.6nm,0.7s,baz=256,slow=4.6,SNR=24
YKA                                 PP      PP       02 11 14.0 -8.8
      comp=E,4.5nm,1.0s,baz=259,slow=7.8,SNR=5.7
YKA                                 PKKPbc  PKKPdf   02 24 36.0 -0.7
      comp=E,0.9nm,0.7s,baz=62,slow=2.4,SNR=4.1
YKA                                 PKPPKP           02 32 50.9
      comp=E,0.8nm,1.0s,baz=66,slow=2.9,SNR=3.6
YKA                                 LR      LR       02 47 26.4
      comp=E,7µm,18.1s,baz=284,slow=34
YKB5  Yellowknife Ar     94.47  27 eP       P        02 07 32.5 -2.7
YKB5                               ePP      PP       02 11 14.0 -8.8
PDGK  Podgornoye         94.47 313  P       P        02 07 36.0 +0.1
PDGK                                pmax    pmax
      comp=Z,72nm,1.3s
YKW3  Yellowknife Ar     94.48  27 eP       P        02 07 34.9 -0.4
      comp=Z,164nm,1.9s
GOA   Goa                94.65 285 eP       P        02 07 35.0 -2.0
RWWY  Rawlins            94.66  49 eP       P        02 07 37.2 +0.2
      comp=Z,272nm,1.8s
UZB   Uzynbulak          94.77 313 eP       P        02 07 35.1 -2.2
UZB                                 pmax    pmax
      comp=Z,86nm,1.4s
UZB                                 MLR     MLR
      comp=Z,12µm,19.0s
UZB   Uzynbulak          94.77 313 eP       P        02 07 35.2 -2.2
      comp=Z,86nm,1.4s
UZB                                eLR      LR       02 51 09.1
      comp=Z,12µm,18.5s
KPKS  Kokpek             95.07 313 eP       P        02 07 37.2 -1.4
KPKS                                pmax    pmax
      comp=Z,139nm,1.7s
KPKS                                MLR     MLR
      comp=Z,31µm,17.0s
KPKS  Kokpek             95.07 313 eP       P        02 07 37.2 -1.4
      comp=Z,138nm,1.7s
KPKS                               eLR      LR       02 50 02.5
      comp=Z,31µm,16.6s
DHRM  DHARAMSHALA        95.12 302 eP       P        02 07 36.8 -2.4
POO   Poona              95.12 288 eP       P        02 07 37.4 -1.8
SATY  Saty               95.20 313 eP       P        02 07 37.2 -2.1
      comp=Z,584nm,2.5s
SATY                               eLR      LR       02 48 47.7
      comp=Z,13µm,16.0s
SDCO  Great Sand Dun     95.31  53 eP       P        02 07 39.0 -1.0
      comp=Z,104nm,2.0s
SDCO  Great Sand Dun     95.31  53  P       P        02 07 39.2 -0.9
      baz=261
K22A  Casper             95.32  48 eP       P        02 07 41.0 +1.2
      comp=Z,100nm,1.4s
K22A  Casper             95.32  48  P       P        02 07 40.5 +0.7
      baz=261,SNR=13
N23A  Red Feather La     95.47  50 eP       P        02 07 42.7 +2.0
      comp=Z,256nm,1.6s
N23A  Red Feather La     95.47  50  P       P        02 07 41.0 +0.4
      baz=261,SNR=17
ZAIG  Zacatecas          95.47  68 eP       P        02 07 42.9 +1.8
      comp=Z,149nm,1.9s
TX31  Lajitas Ar. Si     95.51  61 eP       P        02 07 41.1 +0.2
LTX   Lajitas            95.51  61 eP       P        02 07 41.0  0.0
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LTX   Lajitas            95.51  61 eP       P        02 07 41.0  0.0
TXAR  Lajitas Array      95.51  61  P       P        02 07 40.9  0.0
      comp=Z,1.4nm,0.7s,baz=222,slow=5.5,SNR=9.3
TXAR                                PP      PP       02 11 31.6 -0.4
      comp=Z,3.8nm,0.6s,baz=194,slow=30,SNR=9.5
TDK   Taldyqorghan       95.52 315 eP       P        02 07 38.7 -1.8
TDK                                 pmax    pmax
      comp=Z,883nm,2.3s
TDK                                 MLR     MLR
      comp=Z,56µm,21.0s
TDK   Taldyqorghan       95.52 315 eP       P        02 07 38.8 -1.8
      comp=Z,883nm,2.3s
TDK                                eLR      LR       02 49 47.0
      comp=Z,56µm,20.8s
ISCO  Idaho Springs      95.55  51 eP       P        02 07 43.2 +2.1
      comp=Z,90nm,1.8s
ISCO  Idaho Springs      95.55  51  P       P        02 07 41.6 +0.5
      baz=261
NRIK  Noril'sk           95.65 340  P       P        02 07 39.7 -0.7
      comp=Z,52nm,1.1s,baz=100,slow=5.6,SNR=12
NRIK                                PP      PP       02 11 30.4 -1.5
      comp=Z,29nm,1.2s,baz=103,slow=8.4,SNR=2.5
Q24A  Divide             95.77  52 eP       P        02 07 44.1 +1.9
      comp=Z,56nm,1.2s
Q24A  Divide             95.77  52  P       P        02 07 42.5 +0.3
      baz=261,SNR=7.1
PHWY  Pilot Hill         95.89  49 eP       P        02 07 44.2 +1.5
      comp=Z,85nm,1.9s
T25A  Trinidad           96.07  53 eP       P        02 07 48.3 +4.8
      comp=Z,52nm,1.4s
T25A  Trinidad           96.07  53  P       P        02 07 43.7 +0.2
      baz=262
LAO   LASA Array         96.16  44 eP       P        02 07 45.7 +2.3
      comp=Z,451nm,1.8s
LAO   LASA Array         96.16  44  P       P        02 07 43.8 +0.4
      baz=262
MDOK  Medeo              96.20 313 eP       P        02 07 38.9 -4.9
MDOK                                pmax    pmax
      comp=Z,170nm,2.0s
MDOK                                MLR     MLR
      comp=Z,20µm,18.0s
MDOK  Medeo              96.20 313 eP       P        02 07 38.9 -4.9
      comp=Z,170nm,2.0s
MDOK                               eLR      LR       02 52 11.0
      comp=Z,20µm,17.6s
KURK  Kurchatov          96.28 320 eP       P        02 07 42.7 -1.0
      comp=Z,358nm,1.7s
KURK                                PP      PP       02 11 35.6 -1.6
KURK  Kurchatov          96.28 320ceP       P        02 07 42.7 -1.0
KURK                                pmax    pmax
      comp=Z,97nm,1.5s
KURK  Kurchatov          96.28 320  P       P        02 07 44.2 +0.4
      SNR=26
KURBB Kurchatov Arra     96.32 320  P       P        02 07 42.5 -1.5
      comp=Z,7.5nm,1.2s,baz=106,slow=3.6,SNR=11
KURBB                               PP      PP       02 11 35.6 -1.9
      comp=Z,9.1nm,1.1s,baz=94,slow=5.6,SNR=4.3
CHKK  Chushkaly          96.35 313 eP       P        02 07 42.2 -2.1
CHKK                                pmax    pmax
      comp=Z,34nm,1.3s
CHKK  Chushkaly          96.35 313 eP       P        02 07 42.3 -2.1
      comp=Z,34nm,1.2s
KSH   Kashi              96.47 309  P       P        02 07 52.1 +7.0
KSH                                 sP      sP       02 07 59.0  +10
KSH                                 PP      PP       02 11 48.7 +9.4
KSH   Kashi              96.47 309  SKS     SKSac    02 18 27.5 +5.2
KSH   Kashi              96.47 309  S       S        02 19 14.3 +8.2
KSH   Kashi              96.47 309  sS      sS       02 19 20.1 +9.0
KSH                                 pmax    pmax
      comp=Z,570nm,2.3s
KUU   Kurty              96.82 313 eP       P        02 07 46.6 +0.2
KUU                                 pmax    pmax
      comp=Z,172nm,1.5s
KUU                                 MLR     MLR
      comp=Z,18µm,18.0s
KUU   Kurty              96.82 313 eP       P        02 07 46.7 +0.2
      comp=Z,172nm,1.5s
KUU                                eLR      LR       02 50 17.1
      comp=Z,18µm,18.2s
MSTX  Muleshoe           96.94  57 eP       P        02 07 47.9 +0.5
      comp=Z,65nm,1.3s
MSTX  Muleshoe           96.94  57  P       P        02 07 46.9 -0.5
      baz=262
NVL   N'lazarevskaya     97.00 188 eP       P        02 07 32.6  -14
NVL                                 MLR     MLR
      comp=Z,168µm,17.0s
RSSD  Black Hills        97.33  47 eP       Pdif     02 07 50.1 +1.0
      comp=Z,187nm,2.0s
RSSD  Black Hills        97.33  47 eP       Pdif     02 07 50.1 +1.0
RSSD                                pmax    pmax
      comp=Z,187nm,2.0s
RSSD  Black Hills        97.33  47  P       Pdif     02 07 49.2 +0.1
      baz=263
SNAA  Sanae              97.65 184  P       Pdif     02 07 52.1 +2.3
SNAA  Sanae              97.65 184 eP       Pdif     02 07 52.4 +2.5
      comp=Z,79nm,1.3s
SNAA  Sanae              97.65 184 i P      P        02 07 47.5 -2.3
KSCO  Kaye Shedlock'     97.72  52  P       P        02 07 50.2 -0.6
      baz=263
DGMT  Dagmar             97.77  42 eP       Pdif     02 07 51.8 +1.1
      comp=Z,114nm,1.3s
DGMT  Dagmar             97.77  42  P       P        02 07 50.4 -0.2
      baz=263
AMTX  Amarillo           97.96  56 eP       Pdif     02 07 52.5 +0.6
      comp=Z,78nm,1.4s
AMTX  Amarillo           97.96  56  P       P        02 07 51.6 -0.3
      baz=263
AAK   Ala-Archa          97.99 312 i P      P        02 07 50.3 -1.7
AAK                                 pmax    pmax
      comp=Z,10.0nm,1.1s
AAK   Ala-Archa          97.99 312  P       P        02 07 50.8 -1.2
      comp=Z,1.1nm,0.6s,baz=331,slow=19,SNR=1.9
VNA3  Neumayer Olymp     98.38 181  P       Pdif     02 07 55.7 +2.7
BTLS  Baital             98.59 314 eP       P        02 07 52.8 -1.5
BTLS                                pmax    pmax
      comp=Z,54nm,1.9s
BTLS  Baital             98.59 314 eP       P        02 07 52.8 -1.5
      comp=Z,54nm,1.9s
VNA2  Neumayer--Watz     98.62 182  P       Pdif     02 07 57.5 +3.5
      baz=174,slow=3.9
VNA1  Neumayer--Stat     98.93 182  P       Pdif     02 07 59.8 +4.4
JCT   Junction City      98.99  61 eP       Pdif     02 07 56.8 +0.2
      comp=Z,45nm,1.4s
JCT   Junction City      98.99  61 eP       Pdif     02 07 56.8 +0.2
JCT                                 pmax    pmax
      comp=Z,45nm,1.4s
JCT   Junction City      98.99  61  Pdiff   P        02 07 55.9 -0.7
      baz=263
ABTX  Abilene, Hawle     99.38  58 eP       Pdif     02 08 02.2 +4.0
      comp=Z,57nm,1.5s
ABTX  Abilene, Hawle     99.38  58  Pdiff   Pdif     02 07 58.1 -0.1
      baz=264
BHJ   Bhuj               99.69 292 eP       Pdif     02 07 57.0 -2.8
FFC   Flin Flon          99.76  36 ePdif    Pdif     02 07 58.6 -0.7
      comp=Z,39nm,1.3s
FFC   Flin Flon          99.76  36 eP       Pdif     02 07 58.6 -0.7
FFC                                 pmax    pmax
      comp=Z,39nm,1.3s
CBKS  Cedar Bluff        99.94  52  Pdiff   Pdif     02 08 00.6  0.0
      baz=265
WMOK  Wichita Mounta    100.31  56  Pdiff   Pdif     02 08 02.3  0.0
      baz=264
MDND  Maddock           100.77  43  Pdiff   Pdif     02 08 04.5 +0.5
      baz=266
KK31  Karatay Array     100.95 312 i P      Pdif     02 08 07.9 +2.9
KK31                                pmax    pmax
      comp=Z,45nm,1.5s
IUG   Iuzhnay           101.24 311 eP       Pdif     02 08 05.5 -0.9
IUG                                 pmax    pmax
      comp=Z,64nm,1.5s
IUG   Iuzhnay           101.24 311 eP       Pdif     02 08 05.5 -0.9
      comp=Z,64nm,1.6s
BVAR  Borovoye Array    101.57 322  P       Pdif     02 08 06.2 -1.2
      comp=Z,11nm,0.9s,baz=104,slow=6.1,SNR=13
BVAR                                PP      PP       02 12 20.0 +2.4
      comp=Z,11nm,1.1s,baz=120,slow=8.5,SNR=3.9
BRVK  Borovoye          101.64 322 ePdif    Pdif     02 08 08.8 +1.1
BRVK  Borovoye          101.64 322 eP       Pdif     02 08 08.8 +1.1
BRVK  Borovoye          101.64 322  P       Pdif     02 08 09.2 +1.4
      SNR=14
ECSD  EROS Data Cent    102.63  47  Pdiff   Pdif     02 08 12.7 +0.2
      baz=268
TUL1  Leonard           102.84  55  Pdiff   Pdif     02 08 13.4 -0.1
      baz=266
ULM   Lac du Bonnet     103.31  41 ePdif    Pdif     02 08 17.6 +2.4
ULM                                 PP      PP       02 12 27.4 -3.3
ULM   Lac du Bonnet     103.31  41 eP       Pdif     02 08 17.6 +2.4
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ULM                                                  02 12 27.4
ULM   Lac du Bonnet     103.31  41  Pdiff   Pdif     02 08 15.1 -0.2
      comp=Z,1.5nm,0.7s,baz=294,slow=7.7,SNR=3.3
ULM                                 PP      PP       02 12 27.4 -3.3
      comp=Z,3.4nm,0.9s,baz=277,slow=11,SNR=3.4
FCC   Fort Churchill    104.15  32 ePdif    Pdif     02 08 18.6 -0.1
FCC   Fort Churchill    104.15  32 eP       Pdif     02 08 18.6 -0.1
W39A  Magazine          104.44  56  Pdiff   Pdif     02 08 20.7 +0.1
      baz=267
W41B  Gary Mavity, V    105.70  56  PKiKP   PKiKP    02 12 37.9 -1.4
      baz=268
L39A  Vinton            105.99  49  PKiKP   PKiKP    02 12 39.4 -0.3
      baz=270
J39A  Decorah           106.20  48  PKiKP   PKiKP    02 12 39.4 -0.6
      baz=271
EYMN  Ely               106.22  43  PKiKP   PKiKP    02 12 39.4 -0.5
      baz=272
I39A  Houston           106.32  47  PKiKP   PKiKP    02 12 37.4 -2.8
      baz=271
CCM   Cathedral Cave    106.56  53  PKiKP   PKiKP    02 12 40.1 -0.7
      baz=270
S42A  Caledonia         106.92  54  PKiKP   PKiKP    02 12 41.7 +0.2
      baz=270
J41A  Loganville        107.43  48  PKiKP   PKiKP    02 12 41.7 -0.6
      baz=272
L42A  Oliver, Polo      107.73  49  PKiKP   PKiKP    02 12 43.2 +0.3
      baz=272
ARU   Arti              108.22 326  P       Pdif     02 08 40.2 +3.3
AKTO  Aktyubinsk        109.36 320  Pdiff   Pdif     02 08 44.4 +2.2
      comp=Z,1.9nm,1.0s,baz=72,slow=13,SNR=3.1
GEYT  Alibeck           110.33 307  PP      PP       02 13 17.5 -5.2
      comp=Z,21nm,1.3s,baz=56,slow=6.1,SNR=7.0
KIRV  Kirov             112.55 329  PKiKP   PKiKP    02 12 53.2 +1.9
      comp=Z,8.1nm,1.1s,baz=89,slow=10,SNR=3.0
KIRV                                PKKPbc  PKKPab   02 23 52.8 +4.3
      comp=Z,19nm,0.8s,baz=255,slow=1.8,SNR=4.9
TKL   Tuckaleechee C    112.61  56  PKiKP   PKiKP    02 12 54.2 +1.9
      comp=Z,9.1nm,1.1s,baz=206,slow=10.0,SNR=3.1
TKL                                 PP      PP       02 13 34.6 -4.6
      comp=Z,8.2nm,1.0s,baz=305,slow=8.1,SNR=4.1
PRGR  Permogore         113.29 333 i PKIKP  PKiKP    02 12 47.7 -5.0
PRGR                                pmax    pmax
      comp=Z,16nm,1.1s
FRB   Frobisher Bay     114.65  23  PKP     PKPdf    02 12 55.3  0.0
      comp=Z,5.7nm,1.0s,baz=163,slow=4.6,SNR=3.2
FRB                                 PP      PP       02 13 49.9 -2.6
      comp=Z,18nm,1.1s,baz=288,slow=5.2,SNR=3.1
ARCES ARCESS Array B    115.84 346 ePKPdf   PKPdf    02 12 59.9 +2.4
ARCES                               PKKPbc  PKKPbc   02 23 27.6 -4.1
ARCES ARCESS Array B    115.84 346  PKP     PKiKP    02 12 55.8 -1.7
      comp=Z,3.7nm,0.6s,baz=52,slow=2.0,SNR=9.7
ARCES                               PKKPbc  PKKPbc   02 23 27.6 -4.1
      comp=Z,2.6nm,0.9s,baz=219,slow=1.6,SNR=6.3
KLMR  Klimovskoe        116.30 334 ePKPdf   PKiKP    02 13 01.1 +2.6
KLMR                                AMP              02 13 07.1
      comp=Z,39nm,1.6s
POPC  Popayan, Colom    117.50  93 eP       PKiKP    02 13 07.3 +4.7
POPC  Popayan, Colom    117.50  93 eP       PKiKP    02 13 07.3 +4.7
PCON  Cinco Dias        117.74  93 eP       PKiKP    02 13 10.7 +7.2
PCON  Cinco Dias        117.74  93 eP       PKiKP    02 13 10.7 +7.2
MAK   Makhachkala       117.74 313 i PKIKP  PKPdf    02 12 53.6 -8.3
MAK                                e                 02 14 09.6
MAK                                e                 02 19 44.7
MAK                                 pmax    pmax
      comp=Z,83nm,1.1s
YOTC  Yotoco, Valle     118.08  91 eP       PKiKP    02 13 07.3 +3.7
YOTC  Yotoco, Valle     118.08  91 eP       PKiKP    02 13 07.3 +3.7
PTLC  Puerto Leguiza    118.89  96 eP       PKiKP    02 13 09.8 +4.8
PTLC  Puerto Leguiza    118.89  96 eP       PKiKP    02 13 09.8 +4.8
HELC  Santa Helena      119.23  89 eP       PKiKP    02 13 13.6 +7.4
HELC  Santa Helena      119.23  89 eP       PKiKP    02 13 13.6 +7.4
SCHQ  Schefferville     119.54  32  PKP     PKPdf    02 13 04.6 -0.4
      comp=Z,9.2nm,1.2s,baz=21,slow=17,SNR=2.1
TBLG  Delisi            120.01 312 ePKPdf   PKiKP    02 13 09.4 +3.0
ZARC  Zaragoza, Cauc    120.07  87 eP       PKiKP    02 13 11.1 +3.8
ZARC  Zaragoza, Cauc    120.07  87 eP       PKiKP    02 13 11.1 +3.8
ROSC  El Rosal          120.21  90  PKP     PKiKP    02 13 10.9 +2.8
      comp=Z,2.4nm,0.3s,baz=143,slow=20,SNR=2.0
ROSC                                PP      PP       02 14 36.3 +2.8
      comp=Z,2.4nm,0.3s,baz=332,slow=9.4,SNR=3.9
LPAZ  La Paz            120.35 116  PKP     PKiKP    02 13 10.3 +1.7
      comp=Z,4.8nm,0.9s,baz=21,slow=3.6,SNR=1.5
GNI   Garni             120.36 310  PKP     PKPdf    02 13 06.9 -0.4
      comp=Z,2.7nm,0.7s,baz=117,slow=2.3,SNR=2.4
GNI                                 PP      PP       02 14 34.8 +1.5
      comp=Z,23nm,1.1s,baz=194,slow=5.0,SNR=3.9
GNI                                 PKKPbc  PKKPab   02 23 20.8 +5.9
      comp=Z,6.3nm,0.9s,baz=51,slow=5.0,SNR=4.2
OBN   Obninsk           120.38 329 ePKIKP   PKiKP    02 13 06.8 +0.2
OBN                                e                 02 14 32.0
OBN                                ePPP     PPP      02 17 03.0
OBN                                 pmax    pmax
      comp=Z,17nm,1.1s
OBN   Obninsk           120.38 329  PKP     PKPdf    02 13 05.9 -0.7
      comp=Z,2.1nm,0.5s,baz=125,slow=16,SNR=3.4
OBN                                 PP      PP       02 14 35.7 +3.2
      comp=Z,1.9nm,0.4s,baz=354,slow=0.9,SNR=5.8
CHIC  Chingaza          120.75  91 eP       PKiKP    02 13 11.4 +2.2
CHIC  Chingaza          120.75  91 eP       PKiKP    02 13 11.4 +2.2
KBZ   Khabaz            120.81 315  PKP     PKiKP    02 13 07.8  0.0
      comp=Z,2.0nm,0.9s,baz=353,slow=16,SNR=2.7
KBZ                                 PP      PP       02 14 37.7 +1.7
      comp=Z,7.6nm,1.0s,baz=45,slow=5.7,SNR=2.8
KBZ                                 PKKPbc  PKKPbc   02 23 13.6 +0.6
      comp=Z,1.6nm,0.9s,baz=87,slow=17,SNR=2.4
KVAR  Kislovodsk Arr    120.89 315  PKP     PKiKP    02 13 08.4 +0.2
      comp=Z,6.4nm,1.1s,baz=241,slow=19,SNR=2.1
KVAR                                PP      PP       02 14 39.1 +2.4
      comp=Z,8.8nm,1.1s,baz=108,slow=16,SNR=3.4
KIV   Kislovodsk        120.90 315 ePKPdf   PKiKP    02 13 08.4 +0.2
KIV                                ePP      PP       02 14 41.2 +4.4
KIV   Kislovodsk        120.90 315 i PKIKP  PKPdf    02 13 05.9 -2.2
KIV                                 pmax    pmax
      comp=Z,9.0nm,1.1s
KIV                                 MLR     MLR
      comp=Z,67µm,23.0s
FIA0  FINESS Array S    121.30 339 ePKPdf   PKPdf    02 13 07.0 -1.1
FINES FINESS Array B    121.30 339  PKP     PKPdf    02 13 07.0 -1.1
      comp=Z,3.1nm,0.8s,baz=60,slow=1.9,SNR=11
FINES                               PKKPbc  PKKPab   02 23 09.0 -0.9
      comp=Z,10nm,1.0s,baz=95,slow=2.1,SNR=6.9
RUSC  La Rusia          121.59  90 eP       PKiKP    02 13 14.8 +3.9
RUSC  La Rusia          121.59  90 eP       PKiKP    02 13 14.8 +3.9
BARC  Barichara         121.59  89 eP       PKiKP    02 13 19.2 +8.6
BARC  Barichara         121.59  89 eP       PKiKP    02 13 19.2 +8.6
OCAC  Ocana             121.68  87 eP       PKiKP    02 13 18.9 +8.3
OCAC  Ocana             121.68  87 eP       PKiKP    02 13 18.9 +8.3
PKME  Peaks-Kenny Pk    121.71  43 ePKPdf   PKPdf    02 13 08.6 -0.8
PAMC  Pamplona, Colo    122.17  88 eP       PKiKP    02 13 19.2 +7.2
PAMC  Pamplona, Colo    122.17  88 eP       PKiKP    02 13 19.2 +7.2
VSU   Vasula            123.01 336 eP       PKiKP    02 13 14.2 +2.5
VSU                                 IAmb    IAmb     02 13 21.2
      comp=Z,56nm,1.0s
CPUP  Villa Florida     124.33 132 ePKPdf   PKiKP    02 13 17.6 +2.2
CPUP  Villa Florida     124.33 132  PKP     PKiKP    02 13 16.2 +0.8
      comp=Z,6.7nm,0.8s,baz=268,slow=1.7,SNR=11
SDV   Santo Domingo     124.39  86 ePKPdf   PKiKP    02 13 17.2 +1.2
SDV   Santo Domingo     124.39  86 eP       PKiKP    02 13 20.4 +4.4
SDV   Santo Domingo     124.39  86 eP       PKiKP    02 13 20.4 +4.4
IZAR  Zarasai           124.94 333 eP       PKiKP    02 13 18.8 +3.2
IZAR                                IAmb    IAmb     02 13 30.9
      comp=Z,40nm,1.4s
MICGM Minsk             124.96 332 e        PKiKP    02 13 19.0 +3.3
IDID  Didziasalis       124.99 333 eP       PKiKP    02 13 18.4 +2.7
IDID                                IAmb    IAmb     02 13 25.4
      comp=Z,26nm,1.2s
ISAL  Salakas           125.11 333 eP       PKiKP    02 13 18.4 +2.5
ISAL                                IAmb    IAmb     02 13 25.7
      comp=Z,17nm,1.1s
IIGN  Ignalina          125.20 333 eP       PKiKP    02 13 18.8 +2.6
IIGN                                IAmb    IAmb     02 13 32.9
      comp=Z,40nm,1.3s
NACGM Naroch            125.23 332 e        PKPdf    02 13 10.0 -5.9
BOSA  Boshof            125.55 223  PKP     PKPdf    02 13 17.2 -0.4
      comp=Z,19nm,1.0s,baz=130,slow=2.1,SNR=16
NB2   NORSAR Subarra126.20 345  PKPdf   PKPdf    02 13 17.1 -0.6
      comp=Z,2.9nm,0.8s,baz=31,slow=1.9
NB200 NORSAR Array S 126.20 345 ePKPdf   PKPdf    02 13 16.9 -0.8
NB200                              ePP      PP       02 15 12.8 +1.3
NOA   NORSAR Array B 126.20 345  PKP     PKPdf    02 13 16.9 -0.8
      comp=Z,4.3nm,1.0s,baz=40,slow=2.0,SNR=7.3
NOA                                 PP      PP       02 15 12.8 +1.3
      comp=Z,10nm,1.2s,baz=30,slow=6.0,SNR=3.8
AKASG Malin Array Be    126.45 327  PKP     PKPdf    02 13 16.8 -1.6
      comp=Z,1.9nm,0.7s,baz=53,slow=2.0,SNR=11
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AKASG				PP	PP	02 15 14.8	+1.3
	comp=Z,9.4nm,1.1s,baz=48,slow=7.4,SNR=3.7						
AKASG				PKKPab	PKKPbc	02 22 53.8	+2.4
	comp=Z,2.1nm,0.8s,baz=241,slow=3.6,SNR=4.7						
AKBB	Malin Array Si	126.45	327	ePKPdf	PKiKP	02 13 20.6	+1.8
AKBB				ePP	PP	02 15 14.8	+1.3
KIEV	Kiev	126.47	327	ePKPdf	PKiKP	02 13 20.6	+1.7
KIEV	Kiev	126.47	327	⇑iP	PKiKP	02 13 21.0	+2.2
KIEV	Kiev	126.47	327	i PKIKP	PKPdf	02 13 15.9	-2.5
AK11	Malin Array Si	126.50	327	ePKPdf	PKPdf	02 13 17.1	-1.4
PBUR	Paburg	126.58	336	eP	PKiKP	02 13 22.0	+3.1
PBUR				IAmb	IAmb	02 13 26.4	
	comp=Z,210nm,1.2s						
KMBO	Kilima Mbogo	127.55	260	PKP	PKPdf	02 13 20.7	-1.2
	comp=Z,2.1nm,0.8s,baz=46,slow=4.3,SNR=3.3						
KMBO				PP	PP	02 15 23.6	+0.9
	comp=Z,3.8nm,1.0s,baz=106,slow=5.2,SNR=3.4						
LBTB	Lobatse	127.55	227	ePKPdf	PKPdf	02 13 21.3	-0.2
ASF	Jabal al Asfar	128.31	303	PKP	PKPdf	02 13 21.6	-1.0
	comp=Z,5.1nm,1.0s,baz=348,slow=4.1,SNR=3.2						
ASF				PP	PP	02 15 31.2	+4.3
	comp=Z,45nm,1.3s,baz=58,slow=2.8,SNR=6.9						
KIS	Kishinev	128.64	323	ePKP	PKiKP	02 13 38.0	+15
BR101	Keskin Array S	128.65	313	ePKPdf	PKPdf	02 13 21.6	-1.5
BR101				ePP	PP	02 15 30.2	+1.4
BR131	Keskin Array S	128.65	313	ePKPdf	PKiKP	02 13 25.9	+2.1
BRTR	Keskin Array B	128.65	313	PKP	PKPdf	02 13 21.6	-1.5
	comp=Z,2.4nm,1.0s,baz=150,slow=3.2,SNR=4.4						
BRTR				PP	PP	02 15 30.3	+1.4
	comp=Z,20nm,1.1s,baz=100,slow=5.1,SNR=4.2						
ANTO	Ankara	129.21	313	ePKPdf	PKiKP	02 13 24.6	-0.2
ANTO	Ankara	129.21	313	⇓iP	PKPdf	02 13 23.9	-0.2
SJG	San Juan	129.22	75	eP	PKiKP	02 13 29.1	+3.8
SJG	San Juan	129.22	75	eP	PKiKP	02 13 29.1	+3.8
SJG	San Juan	129.22	75	PKP	PKPdf	02 13 23.4	-1.1
	comp=Z,34nm,0.9s,baz=255,slow=2.6,SNR=5.4						
LEOM	Leova	129.25	323	⇑iP	PKiKP	02 13 29.3	+4.8
MMAI	Mount Meron Ar	129.34	304	PKP	PKPdf	02 13 22.9	-1.7
	comp=Z,5.7nm,1.0s,baz=97,slow=4.5,SNR=3.3						
HUMP	Col San Antoni	129.50	75	ePKPdf	PKiKP	02 13 26.2	+0.3
CFR	Carcaliu	129.97	322	⇑iP	PKPdf	02 13 23.8	-1.4
BIZ	Bicaz	130.24	325	⇑iP	PKiKP	02 13 26.5	-0.1
TLB	Topalu	130.33	321	⇑iP	PKiKP	02 13 29.8	+3.0
STVI	Saint Thomas	130.35	75	ePKPdf	PKiKP	02 13 29.9	+2.3
BUR08	Bucovina Ar. S	130.35	326	ePKPdf	PKiKP	02 13 29.4	+2.5
BUR08	Bucovina Ar. S	130.35	326	ePdif	PKiKP	02 13 29.4	+2.5
BURAR	Bucovina Array	130.36	326	⇓iP	PKiKP	02 13 28.4	+1.5
BUR04	Bucovina Ar. S	130.36	326	ePKPdf	PKiKP	02 13 27.9	+0.9
VRI	Vrincioaia	130.46	323	⇑iP	PKiKP	02 13 35.2	+8.1
EIL	Elat	130.49	300	PKP	PKPdf	02 13 26.5	-0.2
	comp=Z,11nm,1.1s,baz=0.0,slow=7.1,SNR=3.0						
EIL				PP	PP	02 15 43.4	+2.3
	comp=Z,8.5nm,1.0s,baz=57,slow=6.5,SNR=3.0						
PLOR	Plostina	130.52	323	⇑iP	PKiKP	02 13 28.7	+1.5
KZIT	Kziot	130.68	302	PKP	PKiKP	02 13 41.7	+14
LSZ	Lusaka	130.83	239	ePKPdf	PKPdf	02 13 26.5	-1.4
OZUR		130.89	324	⇑iP	PKiKP	02 13 31.6	+3.6
MLR	Muntele Rosu	131.13	323	⇑iP	PKiKP	02 13 30.3	+1.7
MLR	Muntele Rosu	131.13	323	PKP	PKPdf	02 13 27.6	-0.1
	comp=Z,14nm,1.3s,baz=51,slow=1.2,SNR=5.5						
MLR				PP	PP	02 15 48.1	+3.6
	comp=Z,15nm,1.1s,baz=349,slow=4.2,SNR=3.0						
ARCR	ARCALIA	131.15	326	⇑iP	PKiKP	02 13 31.9	+3.5
DOPR	Dopca	131.19	324	⇓iP	PKiKP	02 13 28.3	-0.2
TRPA	Tarpa	131.50	328	⇓iP	PKiKP	02 13 31.8	+2.8
TRPA	Tarpa	131.50	328	ePKiKP	PKPdf	02 13 28.0	0.0
TRPA				⇓ePP	PP	02 15 48.0	+1.5
ARR	Arges	131.97	324	⇑iP	PKiKP	02 13 31.9	+1.7
HUMR	Humele	132.22	322	⇑iP	PKPdf	02 13 29.6	0.0
DRGR		132.23	326	⇓iP	PKiKP	02 13 31.2	+0.5
LTVH	Ltavrtes, Hu	132.30	327	ePKiKP	PKPdf	02 13 29.1	-0.5
LTVH				⇑ePP	PP	02 15 59.0	+7.3
SZH	Strazhica	132.31	320	eP	PKiKP	02 13 36.0	+5.2
RUE	Ruedersdorf	132.43	337	eP	PKiKP	02 13 33.0	+2.3
OKC	Ostrava-Krasne	132.54	332	AMS	AMS	03 15 20.0	
	comp=Z,67µm,19.5s						
MORC	Moravsky Berou	132.86	332	⇑iP	PKiKP	02 13 35.2	+3.4
MORC	Moravsky Berou	132.86	332	ePKP	PKiKP	02 13 37.7	+5.9
MORC				ePP	PP	02 16 01.3	+6.1
KRLC	Kraliky	132.99	333	ePKPDF	PKiKP	02 13 35.3	+3.2
DPC	Dobruska-Polom	133.00	334	ePKPDF	PKiKP	02 13 33.0	+0.9
DPC				ex	x	02 13 38.7	
DPC				AMS	AMS	03 17 00.0	
	comp=Z,73µm,18.8s						
PSZ	Piszkesteto	133.00	329	⇓iP	PKiKP	02 13 38.3	+6.1
PSZ	Piszkesteto	133.00	329	ePKiKP	PKiKP	02 13 37.0	+4.8
PSZ				ePP	PP	02 16 04.0	+7.8
UPC	Upice	133.02	334	AMS	AMS	03 16 00.0	
	comp=Z,75µm,19.8s						
GZR	Gura Zlata	133.02	325	⇓iP	PKiKP	02 13 33.6	+1.3
PTGA	Pitinga	133.12	101	ePKPdf	PKiKP	02 13 35.0	+1.6
PTGA	Pitinga	133.12	101	PKP	PKPdf	02 13 31.9	-0.2
	comp=Z,3.1nm,0.8s,baz=317,slow=20,SNR=1.0						
VYHS	Vyhne	133.14	330	eP	Pdif	02 10 33.6	+5.6
VYHS				e		02 16 04.8	
VYHS	Vyhne	133.14	330	ePKP	Pdif	02 10 33.6	+5.6
VYHS				e		02 13 36.6	
VYHS				ePP	PP	02 16 04.8	+7.7
KOLL	Kolacno	133.30	331	ePKP	PKiKP	02 13 37.2	+4.5
BRG	Berggiesshubel	133.61	336	ePKP	PKPdf	02 13 28.6	-3.3
	comp=Z,13nm,1.4s						
BRG				i		02 13 39.3	
	comp=Z,469nm,2.4s						
BRG				i PP	PP	02 16 01.3	+1.5
	comp=Z,55nm,1.6s						
BRG				i SKP		02 16 57.0	
	comp=Z,188nm,2.1s						
PVCC	Panska Ves	133.61	335	ePKPDF	PKiKP	02 13 38.3	+5.1
PVCC				ex	x	02 13 43.3	
PVCC				AMS	AMS	03 16 30.0	
	comp=Z,83µm,18.9s						
VRAC	Vranov	133.63	332	ePKP	PKiKP	02 13 39.1	+5.7
VRAC				ePP	PP	02 16 04.0	+3.9
VRAC	Vranov	133.63	332	PKP	PKPdf	02 13 31.2	-0.9
	comp=Z,1.9nm,0.8s,baz=345,slow=12,SNR=2.4						
VRAC				PP	PP	02 16 00.4	+0.3
	comp=Z,4.7nm,0.9s,baz=65,slow=4.9,SNR=3.6						
CLL	Collm	133.64	337	ePKPpre	PKPpre	02 13 25.0	
CLL				ePKPdf	PKPdf	02 13 31.0	-1.0
CLL				i		02 13 37.7	
	comp=Z,310nm,2.3s						
CLL				i		02 13 46.9	
	comp=Z,504nm,2.6s						
CLL				e		02 15 43.0	
CLL				ePP	PP	02 16 01.0	+1.0
CLL				ePPP	PPP	02 18 50.0	
CLL				Lmax		03 16 00.0	
CLL				LmV		03 16 00.0	
	comp=Z,81µm,21.0s						
CLL				LmV(360		03 53 00.0	
	comp=Z,20µm,19.6s						
BUD	Budapest	133.73	329	ePKiKP	PKPdf	02 13 30.1	-2.2
BUD				ePP	PP	02 16 05.0	+4.2
PGB	Panagyurishte	133.79	321	eP	PKiKP	02 13 39.3	+5.4
SMOL	Smolenice	133.81	331	ePKP	PKiKP	02 13 40.6	+6.9
SMOL				ePP	PP	02 16 07.9	+6.6
SRO	Srobarova	133.86	330	ePKP	PKiKP	02 13 38.8	+5.0
SRO				ePP	PP	02 16 08.2	+6.6
RZN	Rozhen	133.89	319	eP	PKiKP	02 13 40.0	+5.7
KRUC	Moravsky	133.90	332	ePKP	PKiKP	02 13 40.3	+6.4
KRUC				ePP	PP	02 16 07.4	+5.6
MODS	Modra-Piesok	133.98	331	ePKP	PKiKP	02 13 38.0	+3.9
MODS				ePP	PP	02 16 10.6	+8.2
MBAR	Mbarara	133.98	259	ePKPdf	PKiKP	02 13 34.8	-0.5
MDVR	Moldovita	133.99	325	⇑iP	PKPdf	02 13 32.0	-1.0
PRA	Prague	134.02	335	AMS	AMS	03 19 00.0	
	comp=Z,73µm,17.8s						
PRU	Pruhonice	134.03	334	ePKPDF	PKiKP	02 13 36.8	+2.7
PRU				ex	x	02 13 42.9	
PRU				AMS	AMS	03 14 20.0	
	comp=Z,77µm,19.6s						
TREC	Trest	134.14	333	AMS	AMS	03 17 40.0	
	comp=Z,82µm,19.1s						
ZST	Bratislava	134.19	331	ePKP	PKiKP	02 13 36.8	+2.3
ZST				ePP	PP	02 16 08.7	+5.1
VTS	Vitosha	134.33	321	ePKPdf	PKPdf	02 13 33.9	+0.1
VTS	Vitosha	134.33	321	⇑iP	PKPdf	02 13 33.9	+0.1
VTS	Vitosha	134.33	321	eP	PKiKP	02 13 40.9	+5.7
EKA	Eskdalemuir Ar	134.45	351	PKP	PKPdf	02 13 33.7	+0.3
	comp=Z,2.1nm,0.7s,baz=26,slow=1.8,SNR=2.2						
EKA				PP	PP	02 16 10.7	+5.9
	comp=Z,21nm,1.2s,baz=30,slow=7.3,SNR=4.5						
MMB	Musomiste	134.58	320	eP	PKiKP	02 13 42.0	+6.5
TIH	Tihany	134.69	329	ePKiKP	PKPdf	02 13 34.1	-0.1
TIH				ePP	PP	02 16 02.0	-4.9
NKC	Novy Kostel	134.71	336	AMS	AMS	03 11 50.0	
	comp=Z,62µm,19.7s						
MORH	Mrgy, Hungar	134.77	328	⇓ePKiKP	PKiKP	02 13 41.0	+5.3
MORH				eP	PP	02 16 07.0	-0.4
MORH	Mrgy, Hungar	134.77	328	ePP	PP	02 16 12.0	+4.6
SOP	Sopron	134.81	331	ePKiKP	PKPdf	02 13 32.0	-2.3
SOP				ePP	PP	02 16 02.0	-5.6
CONA	Conrad Observa	134.96	332	PKiKP	PKPdf	02 13 35.4	+0.7
	comp=Z,14nm,0.6s						
CONA				PP	PP	02 16 05.8	-2.9
	comp=Z,41nm,1.8s						
KHC	Kasperske Hory	135.09	334	ePKPdf	PKPdf	02 13 34.2	-0.7
KHC	Kasperske Hory	135.09	334	ePKPDF	PKPdf	02 13 34.9	0.0
KHC				ex	x	02 13 43.0	
KHC				AMS	AMS	03 16 30.0	
	comp=Z,77µm,18.8s						
GERES	GERESS Array B	135.26	334	PKP	PKPdf	02 13 34.9	-0.4
	comp=Z,2.4nm,0.7s,baz=115,slow=1.9,SNR=6.1						
GERES				PP	PP	02 16 13.9	+3.4
	comp=Z,1.9nm,0.9s,baz=85,slow=2.2,SNR=4.6						
GEA0	GERESS Array S	135.26	334	ePKPdf	PKPdf	02 13 35.1	-0.2
VAY	Valandovo	135.45	320	i P	PKiKP	02 13 42.6	+5.3
STIP	Stip	135.49	321	eP	PKPdf	02 13 36.3	+0.5
BEHE	Becsehely	135.55	329	ePKiKP	PKiKP	02 13 39.0	+1.7
BEHE				ePP	PP	02 16 14.0	+1.7
ARSA	Arzberg	135.61	331	P	PKiKP	02 13 40.2	+2.7
	comp=Z,26nm,1.4s						
MOA	Molln	135.75	333	P	PKiKP	02 13 40.7	+3.0
	comp=Z,28nm,1.4s						
MOA				ePP	PP	02 16 10.2	-3.3
	comp=Z,18nm,1.4s						
SKO	Skopje	135.79	321	i P	PKiKP	02 13 42.0	+4.0
SOKA	Soboth	136.25	331	ePKPdf	PKPdf	02 13 34.7	-2.5
	comp=Z,16nm,1.5s						
SOKA				PP	PP	02 16 12.9	-3.9
	comp=Z,42nm,1.4s						
KRUS	Krusevo	136.25	321	i P	PKiKP	02 13 42.7	+3.7
BIA	Bitola	136.41	320	i P	PKiKP	02 13 43.1	+3.8
OBKA	Obir	136.61	331	eP	PKiKP	02 13 42.3	+2.7
	comp=Z,20nm,1.4s						
OBKA				PP	PP	02 16 21.6	+2.5
	comp=Z,43nm,1.5s						
BEBN	Eben Emael	136.64	342	⇓PP	PP	02 16 21.3	+2.6
OHR	Ohrid	136.68	321	i P	PKiKP	02 13 44.7	+4.8
MEM	Membach	136.70	341	⇑PKiKP	PKiKP	02 13 41.4	+1.9
MEM				⇑PP	PP	02 16 19.6	+0.4
KBA	Koelnbreinsper	136.75	333	ePKiKP	PKPdf	02 13 38.1	0.0
	comp=Z,24nm,1.3s						
KBA				ePP	PP	02 16 20.7	+0.7
	comp=Z,49nm,2.4s						
IDI	Anoyia	136.79	311	PKP	PKPdf	02 13 37.1	-1.4
	comp=Z,13nm,0.9s,baz=0.0,slow=3.0,SNR=3.0						
AGG	Agios Georgios	136.83	317	ePKPdf	PKiKP	02 13 41.1	+0.9
MYKA	Terra Mystica	136.94	332	epPKPdf	PKiKP	02 13 40.3	0.0
	comp=Z,5.2nm,0.6s						
MYKA				ePP	PP	02 16 23.1	+2.0
	comp=Z,48nm,1.5s						
TSUM	Tsumeb	136.96	227	ePKPdf	PKPdf	02 13 36.5	-2.8
VISS	Visnje	136.97	330	i PKPdf	PKiKP	02 13 44.6	+4.4
BOJS	Bojanci	136.98	330	i PKPdf	PKiKP	02 13 42.9	+2.6
UCC	Uccle	137.03	343	⇑PKiKP	PKiKP	02 13 44.0	+3.9
UCC				⇑PP	PP	02 16 24.1	+2.9
JAVS	Javornik	137.28	331	i PKPdf	PKiKP	02 13 44.7	+3.7
WATA	Walderalm	137.33	334	PKPdf	PKPdf	02 13 37.2	-2.0
	comp=Z,11nm,0.6s						
WATA				PP	PP	02 16 25.1	+1.6
	comp=Z,84nm,1.7s						
WTTA	Wattenberg	137.36	334	ePKiKP	PKPdf	02 13 40.0	+0.6
	comp=Z,79nm,1.5s						
WTTA				PP	PP	02 16 21.6	-2.1
	comp=Z,65nm,1.9s						
ABTA	Abfaltersbach	137.37	333	ePKiKP	PKPdf	02 13 39.0	-0.2
	comp=Z,16nm,1.1s						
ABTA				ePP	PP	02 16 23.4	-0.3
	comp=Z,24nm,1.5s						
WLF	Walferdange	137.47	340	⇓PKiKP	PKiKP	02 13 44.5	+3.4
WLF				⇑PP	PP	02 16 27.2	+3.2
MOTA	Moosalm	137.52	335	PKiKP	PKPdf	02 13 39.3	-0.3
	comp=Z,36nm,1.1s						
MOTA				ePP	PP	02 16 23.2	-1.5
	comp=Z,35nm,1.2s						
RETA	Reutte	137.56	335	pPKPdf	PKiKP	02 13 41.3	-0.2
	comp=Z,23nm,1.4s						
RETA				PP	PP	02 16 24.7	-0.2
	comp=Z,48nm,2.4s						
SQTA	Sankt Quirin	137.58	334	PKPdf	PKPdf	02 13 39.0	-0.7
	comp=Z,62nm,1.5s						
SQTA				PP	PP	02 16 25.1	+0.1
	comp=Z,48nm,1.4s						
DOU	Dourbes	137.59	342	⇑PKiKP	PKiKP	02 13 43.3	+2.0
DOU				⇓PP	PP	02 16 27.2	+2.5
BDFB	Brasilia	137.60	127	PKhKP	PKPpre	02 13 27.4	
	comp=Z,2.8nm,0.4s,baz=246,slow=8.1,SNR=6.8						
BDFB				PKP	PKPdf	02 13 39.8	-0.8
	comp=Z,3.8nm,0.8s,baz=306,slow=3.8,SNR=3.4						
BFO	Black Forest	137.84	338	i PKIKP	PKPdf	02 13 40.2	+0.2
FETA	Feichten	137.94	335	PKPdf	PKPdf	02 13 37.3	-3.1
	comp=Z,28nm,1.0s						
FETA				ePP	PP	02 16 28.8	+1.4
	comp=Z,54nm,1.4s						
DAVA	Damuels	138.08	335	epPKPdf	PKiKP	02 13 42.3	-0.3
	comp=Z,26nm,0.9s						
DAVA				PP	PP	02 16 30.4	+2.2
	comp=Z,90nm,1.6s						
FUORN	Ofenpass-Fuorn	138.45	335	ePKPdf	PKPdf	02 13 41.0	-0.5
DAVOX	Davos/Dischmat	138.48	335	PKP	PKPdf	02 13 39.5	-1.9
	comp=Z,6.5nm,0.8s,baz=63,slow=6.5,SNR=3.8						
MATE	Matera	139.44	323	⇓iP	PKiKP	02 13 52.4	+7.0
BNI	Bardonecchia	141.19	336	ePKPdf	PKiKP	02 13 48.3	-0.8
MDP	Montagnes des	141.54	95	PKP	PKPdf	02 13 48.7	+1.0
	comp=Z,15nm,1.0s,baz=225,slow=2.9,SNR=2.3						
SSB	Saint Sauveur	141.81	338	ePKPdf	PKiKP	02 13 50.4	+0.2
VAE	Valguarnera	142.82	321	PKP	PKPdf	02 13 47.7	-1.6
	comp=Z,4.2nm,0.9s,baz=311,slow=20,SNR=1.9						
KEST	Kesra	147.03	323	ePKPdf	PKPab	02 14 00.7	+0.5
KEST	Kesra	147.03	323	PKPbc	PKPbc	02 13 58.2	-0.6
	comp=Z,28nm,0.9s,baz=306,slow=2.5,SNR=7.9						
H07N1	FLORES T-PHASE	147.26	25	ePKP	PKPab	02 14 00.4	-0.5
H07S1	FLORES T-PHASE	147.49	25	ePKP	PKiKP	02 14 02.5	+0.5
PBRG	Braganca	148.15	349	ePKPab	PKiKP	02 14 03.0	-0.3
PGAV	Gavieira, Arco	148.24	352	ePKPdf	PKPdf	02 13 59.9	+1.3
PCAB	Cabril	148.45	351	ePKPab	PKPab	02 14 06.7	+1.2
POLO	Lamas de Olo	148.75	351	ePKPdf	PKPdf	02 14 01.1	+1.7
MVO	Moncorvo	148.82	350	ePKPdf	PKiKP	02 14 05.3	+0.5
PVRL	Vila Real	148.83	351	ePKPdf	PKPbc	02 14 03.7	+0.4
SET	Setif	148.87	328	P	PKPbc	02 14 04.0	+0.3
SRBC	Serra Branca	149.01	21	ePKP	PKiKP	02 14 05.5	+0.3
PGRA	Graciosa	149.04	21	ePKP	PKiKP	02 14 05.2	0.0
PTO	Porto	149.10	352	ePKPdf	PKPbc	02 14 04.0	+0.1
PCED	Cedros	149.13	23	ePKP	PKPbc	02 14 02.7	-1.4
ROSA	Rosais	149.22	22	ePKP	PKPbc	02 14 04.3	-0.1
HOR	Horta	149.25	22	ePKP	PKPdf	02 14 01.4	+1.3
PICO	Pico	149.35	22	ePKP	PKiKP	02 14 05.7	-0.2
PMAN	Manadas	149.35	22	ePKP	PKPbc	02 14 04.0	-0.7
PCAN	Candelaria	149.36	22	ePKP	PKPab	02 14 07.9	-1.4
PVIS	Viseu	149.40	351	ePKPdf	PKPdf	02 14 02.0	+1.6
ES19	SONSECA Array	149.52	344	epPKPdf	PKPbc	02 14 04.3	-0.8
ESDC	Sonseca Array	149.56	344	PKPbc	PKPbc	02 14 04.8	-0.5
	comp=Z,3.2nm,0.7s,baz=9.5,slow=3.2,SNR=8.3						
ESDC				PP	PP	02 17 34.8	-1.9
	comp=Z,2.6nm,0.8s,baz=12,slow=4.9,SNR=4.3						
ADH	Angra Heroismo	149.64	20	ePKP	PKPdf	02 14 01.1	+0.3
MTE	Manteigas	149.65	350	ePKPdf	PKPbc	02 14 06.0	+0.5
MTE	Manteigas	149.65	350	ePKPbc	PKiKP	02 14 06.9	+0.4
PCAS	Casmilo, Conde	150.15	351	ePKPdf	PKiKP	02 14 08.6	+1.1
PCBR	Castelo Branco	150.19	350	ePKPab	PKPab	02 14 13.3	+0.7
PTOM	Tomar	150.56	351	ePKPab	PKPab	02 14 15.1	+1.0
PMRV	Marv??o	150.57	349	ePKPdf	PKiKP	02 14 10.1	+1.7
EBNR	Beni Rached	150.65	333	P	PKPab	02 14 16.0	+1.3
ECHA	Ech Chlef	150.84	334	P	PKPab	02 14 18.0	+2.6
PSET	Sete Cidades	150.89	19	ePKP	PKPbc	02 14 05.8	-2.7
PDA	Ponta Delgada	150.98	19	ePKP	PKPbc	02 14 06.8	-1.8
PCALD	Caldeiras da R	150.99	19	ePKP	PKPdf	02 14 04.9	+2.0
GRON	Grota Negra	151.00	19	ePKP	PKPbc	02 14 06.3	-2.5
CMLA	Cha da Macela	151.01	19	ePKP	PKPbc	02 14 06.3	-2.4
PMTG	Montargil	151.07	350	ePKPdf	PKiKP	02 14 10.4	+1.0
PMTG	Montargil	151.07	350	ePKPab	PKPab	02 14 15.9	-0.3
BART	Pico Bartolome	151.11	18	ePKP	PKPdf	02 14 04.7	+1.5
EANR	'Ain N'Sour	151.12	334	P	PKiKP	02 14 12.0	+2.3
PESTR	Estremoz	151.15	349	ePKPab	PKPab	02 14 17.4	+0.8
PESTR	Estremoz	151.15	349	ePKPab	PKPab	02 14 14.8	-1.8
PMAFR	Mafra	151.34	352	ePKPab	PKPab	02 14 22.9	+5.5
ETRT	Tiaret	151.50	333	P	PKiKP	02 14 13.0	+2.4
PMST	Lisbon--Monsan	151.54	352	ePKPab	PKPab	02 14 19.0	+0.8
PSMA	Santa Maria	151.84	19	ePKP	PKPbc	02 14 08.5	-2.1
PSMN	Pico do Norte,	151.85	19	ePKP	PKPbc	02 14 09.3	-1.4
PBEJ	Beja	152.02	349	ePKPab	PKPab	02 14 19.6	-0.6
PNCL	Nicolau / Gran	152.05	350	ePKPdf	PKPbc	02 14 10.2	-0.9
PNCL	Nicolau / Gran	152.05	350	ePKPab	PKPab	02 14 18.3	-2.0
MESJ	Messejana	152.26	350	ePKPdf	PKPdf	02 14 03.7	-1.1
MESJ	Messejana	152.26	350	ePKPab	PKPab	02 14 20.9	-0.3
PVAQ	Vaqueiros	152.59	349	ePKPab	PKPab	02 14 21.3	-1.4
PTEO	Sao Teotonio	152.63	351	ePKPab	PKPab	02 14 22.2	-0.6
PBDV	Barranco-do-Ve	152.79	349	ePKPab	PKPab	02 14 22.2	-1.3
MORF	Marmelete	152.86	350	ePKPdf	PKPdf	02 14 04.4	-1.4
RCBR	Riachuelo	152.96	126	ePKPbc	PKPbc	02 14 12.6	-1.3
PFVI	Vila Bisbo	153.06	351	ePKPab	PKPab	02 14 22.6	-2.0
SFS	San Fernando	153.17	346	ePKPab	PKPab	02 14 23.3	-1.8
MDT	Midelt	156.11	340	PKP	PKPdf	02 14 09.1	-1.5
	comp=Z,2.6nm,0.9s,baz=146,slow=3.6,SNR=2.5						
MDT				PP	PP	02 18 13.3	-0.8
	comp=Z,2.9nm,0.9s,baz=48,slow=4.7,SNR=3.0						
TOA0	Torodi Ar. Sit	164.24	281	ePKPdf	PKPdf	02 14 22.1	+2.2
TOA0				ePKPdf	pPKPdf	02 14 22.2	-0.9
TORD	Torodi Ar. Bea	164.24	281	PKP	PKPdf	02 14 18.0	-2.0
	comp=Z,3.4nm,1.0s,baz=345,slow=3.8,SNR=7.9						
TORD				PP	PP	02 19 00.4	+0.4
	comp=Z,3.8nm,1.0s,baz=90,slow=1.8,SNR=2.8						
TOA1	Torodi Ar. Sit	164.24	281	ePKPdf	PKPdf	02 14 18.0	-2.0
TOA1				ePP	PP	02 19 00.4	+0.4
KIC	Kosan Boka	169.79	247	ePKIKP	PKPdf	02 14 28.4	+4.3
	comp=Z,758nm,2.1s						
LIC	Lamto	169.99	246	ePKIKP	PKPdf	02 14 28.3	+4.0
	comp=Z,514nm,2.1s						
DBIC	Dimbokro	170.02	248	ePKPdf	PKPdf	02 14 26.1	+1.9
DBIC	Dimbokro	170.02	248	PKP	PKPdf	02 14 24.1	-0.2
	comp=Z,17nm,0.9s,baz=48,slow=2.2,SNR=10.0						
DBIC				PP	PP	02 19 30.1	+0.7
	comp=Z,4.0nm,0.8s,baz=137,slow=3.3,SNR=2.6						
TIC	Toumodi	170.16	248	ePKIKP	PKPdf	02 14 28.5	+4.1

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*ISCJB **06** 01:57:26.6±0.4, 11°.48S±0°.07×165°.47E±0°.09, h24^{km}, mb5.1/17, Error ellipse: s-maj=13.5km s-min=9.5km az=166.2*

*IDC **06** 01:57:26.1±1.0, 11°.35S×165°.37E, h0^{km}, mb4.8/10, mb1 5.0/11, mb1mx4.7/46, mbtmp4.8/11, Error ellipse: s-maj=46.8km s-min=23.5km az=68.0*

*NEIC **06** 01:57:26.4±0.4, 11°.48S×165°.51E, h10^{km}, mb5.6/12, Error ellipse: s-maj=13.0km s-min=9.3km az=78.0*

ISC 06 01:57:28.8±0.6**, 11°.46S**±0°.09×**165°.5E**±0°.1**, h24^{km}, n34, σ1ˢ.33**/34**, mb5.1**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.59	175	ePn	Pn	01 59 57.3	-1.9
DZM	Mont Dzumac	10.59	175	Pn	Pn	01 59 59.6	+0.4
	baz=54,slow=17,SNR=1.3						
KWAJ	Kwajalein Atol	20.24	6	eP	P	02 02 01.3	-1.1
	1µm,1.0s						
MANU	Manus Island	20.28	296	eP	P	02 02 03.6	+0.7
	559nm,1.0s						
CTAO	Charters Tower	20.40	243	eP	P	02 02 04.4	+0.2
	137nm,1.1s						
URZ	Urewera	28.63	161	P	P	02 03 27.0	+3.5
	32nm,1.0s,baz=344,slow=18,SNR=2.0						
BKZ	Black Stump Fm	29.27	162	eP	P	02 03 27.2	-2.0
	106nm,1.2s						
BFZ	Birch Farm	30.61	164	eP	P	02 03 41.6	+0.6
LTZ	Lake Taylor	31.75	171	eP	P	02 03 51.5	+0.4
	19nm,0.9s						
OPA	Opana	48.66	47	eP	P	02 06 10.7	-0.5
	144nm,1.3s						
AIN	Ainahou	49.17	52	eP	P	02 06 14.9	-0.6
JOW	Kunigami	52.50	317	eP	P	02 06 39.5	-0.7
	52nm,1.4s						
MJAR	Matsushiro Arr	54.23	333	P	P	02 06 51.9	-0.8
	5.2nm,0.7s,baz=166,slow=8.3,SNR=3.7						
MAJO	Matsushiro	54.23	333	eP	P	02 06 52.0	-0.8
YOJ	Yonaguni jima	54.73	311	eP	P	02 06 54.2	-2.3
	240nm,1.2s						
JNU	Nakatsue	55.28	325	eP	P	02 07 01.0	+0.5
	104nm,1.2s						
JNU	Nakatsue	55.28	325	P	P	02 07 01.0	+0.5
	31nm,0.9s,baz=120,slow=5.2,SNR=3.9						
TATO	Taipei	56.16	311	eP	P	02 07 06.4	-0.4
	187nm,1.4s						
USRK	Ussuriysk Ar.	63.21	334	P	P	02 07 56.4	+1.4
	3.6nm,0.7s,baz=135,slow=4.9,SNR=4.3						
PETK	Petropavlovsk-	64.66	355	P	P	02 08 05.0	+0.6
	5.4nm,0.8s,baz=159,slow=6.7,SNR=2.6						
PEA1	Petropavlovsk-	64.66	355	eP	P	02 08 05.0	+0.5
SONA0	Songino Array	78.86	324	eP	P	02 09 31.1	+1.0
SONM	Songino Array	78.86	324	P	P	02 09 31.1	+1.0
	8.2nm,1.1s,baz=116,slow=4.8,SNR=2.7						
ILAR	Eielson Array	83.98	19	P	P	02 09 58.1	+1.5
	4.8nm,0.8s,baz=237,slow=4.8,SNR=4.8						
ILB	Eielson Array	83.98	19	eP	P	02 09 58.1	+1.5
	33nm,1.3s						
PAGB	Antelope Grade	84.16	52	eP	P	02 09 56.1	-2.2
	23nm,1.2s						
NV01	Mina Array Sit	86.47	50	eP	P	02 10 11.9	+1.9
NVAR	Mina Array Bea	86.47	50	P	P	02 10 11.9	+1.9
	6.6nm,0.9s,baz=250,slow=5.4,SNR=3.5						
MK32	Makanchi Array	93.66	317	eP	P	02 10 42.4	-1.0
MKAR	Makanchi Array	93.66	317	P	P	02 10 42.4	-1.0
	6.8nm,0.8s,baz=93,slow=7.4,SNR=3.4						
YKA	Yellowknife Ar	95.45	27	P	P	02 10 50.3	-0.8
	1.7nm,0.8s,baz=259,slow=4.7,SNR=4.8						
YKB5	Yellowknife Ar	95.45	27	eP	P	02 10 50.3	-0.8
ARA0	ARCESS Array S	116.67	345	ePKPdf	PKPdf	02 16 10.2	-0.3
ARCES	ARCESS Array B	116.67	345	PKP	PKPdf	02 16 10.2	-0.3
	2.6nm,0.9s,baz=104,slow=2.2,SNR=3.0						

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*IDC **06** 01:58:53.0±1.4, 11°.03S×165°.46E, h0^{km}, mb4.6/8, mb1 4.8/8, mb1mx4.4/45, mbtmp4.5/8, Error ellipse: s-maj=50.9km s-min=23.8km az=146.0*

*ISCJB **06** 01:58:56.3±1.2, 10°.9S±0°.3×165°.3E±0°.2, h30^{km}, mb4.5/8, Error ellipse: s-maj=48.2km s-min=19.9km az=145.0*

ISC 06 01:58:57.5±1.4**, 11°.0S**±0°.3×**165°.5E**±0°.3**, h30^{km}, n8, σ1ˢ.24**/8**, mb4.5**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.21	250	P	P	02 05 14.7	+0.2
	9.7nm,1.1s,baz=81,slow=8.9,SNR=2.5						
ASAR	Alice Springs	32.53	243	P	P	02 05 25.6	-0.5
	18nm,0.9s,baz=65,slow=10,SNR=6.4						
MJAR	Matsushiro Arr	53.83	333	P	P	02 08 16.7	-1.0
	3.2nm,0.6s,baz=151,slow=7.7,SNR=4.9						
SONM	Songino Array	78.48	324	P	P	02 10 57.5	+1.6
	6.0nm,1.3s,baz=122,slow=8.6,SNR=2.2						
ILAR	Eielson Array	83.59	19	P	P	02 11 22.8	+0.2
	1.9nm,0.7s,baz=238,slow=5.2,SNR=4.3						
NVAR	Mina Array Bea	86.24	50	P	P	02 11 37.9	+1.2
	3.4nm,0.8s,baz=243,slow=5.9,SNR=2.9						
PDAR	Pinedale Array	93.76	47	P	P	02 12 12.1	+0.1
	2.3nm,0.9s,baz=214,slow=0.7,SNR=3.0						
YKA	Yellowknife Ar	95.10	27	P	P	02 12 15.8	-1.5
	0.8nm,0.9s,baz=261,slow=4.7,SNR=2.6						

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*IDC **06** 01:59:32.5±0.6, 11°.12S×165°.40E, h0^{km}, mb4.6/15, mb1 4.8/16, mb1mx4.6/45, mbtmp4.6/16, ML5.0/1, Error ellipse: s-maj=19.6km s-min=19.3km az=73.0*

*NEIC **06** 01:59:34.0±0.2, 11°.11S×165°.39E, h10^{km}, mb5.5/18, Error ellipse: s-maj=7.8km s-min=5.8km az=84.0*

*ISCJB **06** 01:59:35.4±0.3, 11°.21S±0°.05×165°.29E±0°.06, h30^{km}, mb5.0/31, Error ellipse: s-maj=8.6km s-min=6.9km az=12.2*

ISC 06 01:59:36.7±0.4**, 11°.14S**±0°.08×**165°.41E**±0°.09**, h30^{km}, n82, σ0ˢ.94**/75**, mb5.0**/31**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.91	175	Pn	Pn	02 02 10.9	-0.1
	12nm,0.3s,baz=90,slow=23,SNR=13						
PATS	Pohnpei	19.21	338	eP	P	02 03 56.9	-1.5
	506nm,1.3s						
CTA	Charters Tower	20.47	242	P	P	02 04 12.8	+0.6
	48nm,1.0s,baz=71,slow=10,SNR=2.6						
COEN	Coen	21.89	260	eP	P	02 04 25.9	-1.5
	184nm,1.3s						
OUZ	Omahuta	25.10	164	eP	P	02 05 01.6	+2.8

	175nm,1.4s						
MXZ	Matakaoa Point	28.74	158	*e*P	P	02 05 31.5	-0.1
	181nm,1.4s						
URZ	Urewera	28.96	161	P	P	02 05 33.8	+0.2
	99nm,0.9s,baz=134,slow=17,SNR=5.0						
H11S2	WAKE ISLAND Hy	29.47	2	T	T	02 35 05.4	
	baz=193,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.48	2	T	T	02 35 03.1	
	baz=193,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	29.49	2	T	T	02 35 11.5	
	baz=193,slow=76,SNR=20						
BKZ	Black Stump Fm	29.60	162	*e*P	P	02 05 33.7	-5.5
	188nm,1.3s						
STKA	Stephens Creek	30.15	223	*e*P	P	02 05 43.3	-0.9
	4.3nm,1.1s						
H11N1	WAKE ISLAND Hy	30.70	3	T	T	02 36 43.8	
	baz=192,slow=76,SNR=42						
H11N3	WAKE ISLAND Hy	30.70	3	T	T	02 36 44.2	
	baz=192,slow=76,SNR=50						
H11N2	WAKE ISLAND Hy	30.71	3	T	T	02 36 43.5	
	baz=192,slow=76,SNR=38						
BFZ	Birch Farm	30.94	164	*e*P	P	02 05 51.9	+0.9
	234nm,1.3s						
SNZO	South Karori	31.14	166	*e*P	P	02 05 53.5	+0.7
	236nm,1.4s						
THZ	Tophouse	31.20	169	*e*P	P	02 05 54.3	+1.0
	131nm,1.4s						
TOO	Toolangi	31.82	211	*e*P	P	02 05 58.7	-0.2
LTZ	Lake Taylor	32.08	170	*e*P	P	02 06 01.5	+0.4
	35nm,1.0s						
AS31	Alice Springs	32.46	243	*e*P	P	02 06 04.1	-0.6
	20nm,1.3s						
ASAR	Alice Springs	32.46	243	P	P	02 06 04.1	-0.6
	8.1nm,0.6s,baz=65,slow=10.0,SNR=7.1						
RPZ	Rata Peaks	32.82	172	*e*P	P	02 06 07.7	+0.2
	96nm,1.5s						
MQZ	McQueen's Vall	33.04	170	*e*P	P	02 06 10.2	+0.7
	56nm,1.1s						
BBOO	Buckleboo	34.52	227	*e*P	P	02 06 21.4	-1.2
	62nm,1.2s						
RAR	Rarotonga	34.83	111	*e*P	P	02 06 25.8	+0.6
	165nm,1.4s						
RAR	Rarotonga	34.83	111	P	P	02 06 25.8	+0.6
	22nm,0.4s,baz=171,slow=6.8,SNR=6.6						
FITZ	Fitzroy Crossi	39.04	255	P	P	02 07 01.4	+0.2
	7.2nm,0.6s,baz=96,slow=6.3,SNR=3.5						
PPTF	Pamatai, Papee	44.00	104	*e*P	P	02 07 39.6	-2.3
	15nm,0.6s						
MLH	Mauna Loa	49.17	52	*e*P	P	02 08 21.1	-1.5
	178nm,1.3s						
MJAR	Matsushiro Arr	53.91	333	P	P	02 08 57.3	-0.2
	2.6nm,0.7s,baz=171,slow=10,SNR=3.1						
MAJO	Matsushiro	53.91	333	*e*P	P	02 08 57.3	-0.3
USRK	Ussuriysk Ar.	62.89	334	P	P	02 10 00.0	0.0
	2.5nm,0.8s,baz=175,slow=7.2,SNR=2.7						
PETK	Petropavlovsk-	64.34	355	P	P	02 10 09.0	-0.4
	4.1nm,0.9s,baz=167,slow=7.0,SNR=3.0						
PEA1	Petropavlovsk-	64.34	355	*e*P	P	02 10 09.0	-0.4
CM31	Chiang Mai Arr	71.85	294	*e*P	P	02 10 58.0	+0.7
	2.2nm,0.4s						
CMAR	Chiang Mai Arr	71.85	294	P	P	02 10 58.0	+0.7
	1.1nm,0.4s,baz=125,slow=4.7,SNR=3.2						
SONA0	Songino Array	78.55	324	*e*P	P	02 11 37.0	+1.5
SONM	Songino Array	78.55	324	P	P	02 11 37.0	+1.5
	2.6nm,0.8s,baz=123,slow=5.3,SNR=3.3						
ILAR	Eielson Array	83.71	19	P	P	02 12 03.0	+0.6
	2.4nm,0.6s,baz=236,slow=5.3,SNR=6.3						
ILB	Eielson Array	83.71	19	*e*P	P	02 12 03.0	+0.6
VES	Vestal, Richgr	84.97	52	P	P	02 12 11.0	+1.6
	baz=252						
I04A	Tendick Farm,	85.12	44	P	P	02 12 11.1	+1.1
	baz=250						
EDW2	Edwards Air Fo	85.54	53	P	P	02 12 13.4	+1.0
	baz=253						
BFSC	Mount Baldy Ra	85.62	54	P	P	02 12 13.3	+0.4
	baz=254						
J05D	Fort Rock, OR	85.75	45	P	P	02 12 14.4	+1.1
	baz=250						
CWC	Cottonwood Cre	85.92	52	P	P	02 12 15.1	+0.7
	baz=253						
MONP2	Monument Peak	86.24	56	P	P	02 12 16.6	+0.5
	baz=254						
PALK	Pallekele	86.24	278	*e*P	P	02 12 17.0	+0.7
	12nm,1.1s						
PALK	Pallekele	86.24	278	P	P	02 12 17.0	+0.7
	5.3nm,0.6s,baz=115,slow=9.7,SNR=3.8						
NVAR	Mina Array Bea	86.33	50	P	P	02 12 17.3	+0.8
	3.7nm,1.0s,baz=238,slow=5.2,SNR=3.3						
NV01	Mina Array Sit	86.34	50	*e*P	P	02 12 17.3	+0.8
PFO	Pinyon Flats O	86.41	55	P	P	02 12 17.8	+1.0
	baz=254						
TPFO	Pinon Flats	86.41	55	P	P	02 12 17.7	+1.0
	baz=254						
HEC	Hector,Ludlow	86.83	54	P	P	02 12 19.8	+1.0
	baz=254						
BELC	Belle Mtn. Jos	86.88	55	P	P	02 12 20.1	+1.0
	baz=254						
TUQ	Turquoise Moun	87.32	53	P	P	02 12 22.1	+0.9
	baz=254						
GMRC	Granite Mounta	87.36	54	P	P	02 12 23.3	+1.9
	baz=255						
MK32	Makanchi Array	93.37	317	*e*P	P	02 12 49.5	+0.5
MKAR	Makanchi Array	93.37	317	P	P	02 12 49.5	+0.5
	2.7nm,0.7s,baz=98,slow=5.1,SNR=3.6						
PD31	Pinedale Array	93.86	47	*e*P	P	02 12 53.5	+1.8
PDAR	Pinedale Array	93.86	47	P	P	02 12 53.5	+1.8
	1.4nm,0.8s,baz=240,slow=1.8,SNR=2.4						
YKA	Yellowknife Ar	95.21	27	P	P	02 12 56.9	-0.2
	1.0nm,0.8s,baz=354,slow=21,SNR=2.8						
YKB5	Yellowknife Ar	95.21	27	*e*P	P	02 12 56.9	-0.2
ARA0	ARCESS Array S	116.35	345	*e*PKPdf	PKiKP	02 18 17.1	+0.3
ARCES	ARCESS Array B	116.35	345	PKP	PKiKP	02 18 17.1	+0.3
	2.6nm,0.6s,baz=87,slow=2.3,SNR=15						
FIA0	FINESS Array S	121.74	338	*e*PKPdf	PKPdf	02 18 26.2	-1.2
FINES	FINESS Array B	121.74	338	PKP	PKPdf	02 18 26.2	-1.2
	1.6nm,0.6s,baz=72,slow=6.2,SNR=5.4						
CPUP	Villa Florida	124.20	133	PKP	PKPdf	02 18 32.6	-0.6
	2.0nm,0.7s,baz=208,slow=2.6,SNR=3.3						
NB2	NORSAR Subarra	126.71	345	PKPdf	PKPdf	02 18 37.2	+0.2
	comp=Z,0.6nm,0.6s,baz=31,slow=1.9						
NB200	NORSAR Array S	126.71	345	*e*PKPdf	PKiKP	02 18 37.4	-0.2
NOA	NORSAR Array B	126.71	345	PKP	PKiKP	02 18 37.4	-0.2
	comp=Z,1.0nm,0.7s,baz=76,slow=1.9,SNR=3.8						
AKASG	Malin Array Be	126.77	327	PKP	PKiKP	02 18 38.3	+0.5
	comp=Z,0.2nm,0.3s,baz=53,slow=3.7,SNR=2.8						
AKBB	Malin Array Si	126.77	327	*e*PKPdf	PKiKP	02 18 38.3	+0.5
BR101	Keskin Array S	128.79	312	*e*PKPdf	PKPdf	02 18 41.2	-0.6
BRTR	Keskin Array B	128.79	312	PKP	PKPdf	02 18 41.2	-0.6
	comp=Z,2.6nm,1.0s,baz=104,slow=5.2,SNR=2.8						
PTGA	Pitinga	133.38	102	PKP	PKiKP	02 18 52.6	+0.4
	comp=Z,6.5nm,0.8s,baz=76,slow=3.4,SNR=2.6						
CLL	Collm	134.06	336	*e*PKPpre	PKPpre	02 18 49.0	
CLL				*e*PKPdf	PKiKP	02 18 53.0	+0.5
CLL				*e*		02 18 59.0	
GEC2	GERESS Array S	135.65	333	*e*PKPdf	PKiKP	02 18 56.3	+0.3
GERES	GERESS Array B	135.65	333	PKP	PKiKP	02 18 56.3	+0.3
	comp=Z,1.3nm,0.8s,baz=318,slow=1.3,SNR=2.8						
KEST	Kesra	147.30	322	PKPbc	PKPab	02 19 19.0	-0.7
	comp=Z,16nm,0.8s,baz=81,slow=1.8,SNR=7.6						
ESDC	Sonseca Array	150.06	343	PKPbc	PKiKP	02 19 25.7	0.0
	comp=Z,2.9nm,0.9s,baz=360,slow=0.7,SNR=4.0						

IDC 06 02:00:07.0±1.6**,10°.93S**×**165°.19E,h0**^{km}**,mb4.6**/4**, mb1 4.9**/5**,mb1mx4.3**/45**,mbtmp4.8**/5**,ML4.8**/1**,Error ellipse: s-maj=51.9km s-min=28.4km az=125.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.14	174	Pn	Pn	02 02 47.9	+0.2
	6.2nm,0.3s,baz=68,slow=18,SNR=2.4						
STKA	Stephens Creek	30.16	223	P	P	02 06 18.6	-0.3
	6.6nm,0.8s,baz=23,slow=10,SNR=2.7						
WRA	Warramunga Arr	31.02	249	P	P	02 06 27.0	+0.4
	4.6nm,0.6s,baz=79,slow=8.9,SNR=3.4						
ASAR	Alice Springs	32.36	243	P	P	02 06 38.2	-0.3
	13nm,0.8s,baz=69,slow=9.7,SNR=6.7						
ILAR	Eielson Array	83.58	19	P	P	02 12 36.7	0.0
	2.5nm,0.7s,baz=232,slow=6.5,SNR=2.9						

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*IDC **06** 02:00:38.8±1.1, 10°.95S×165°.48E, h0^{km}, mb4.6/10, mb1 4.9/11, mb1mx4.5/46, mbtmp4.6/11, ML4.8/1, Error ellipse: s-maj=34.3km s-min=19.7km az=133.0*

*ISCJB **06** 02:00:41.6±0.8, 11°.0S±0°.1×165°.4E±0°.1, h30^{km}, mb4.5/9, Error ellipse: s-maj=20.8km s-min=14.3km az=21.6*

ISC 06 02:00:43.3±0.8**, 11°.0S**±0°.1×**165°.5E**±0°.2**, h30**^{km}**, n12, σ1^s.21**/12**, mb4.6**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.09	175	Pn	Pn	02 03 20.4	+0.3
	6.6nm,0.3s,baz=336,slow=19,SNR=2.4						
CTA	Charters Tower	20.60	242	P	P	02 05 21.9	+1.7
	26nm,0.9s,baz=66,slow=13,SNR=2.3						
WRA	Warramunga Arr	31.26	250	P	P	02 07 00.4	-0.3
	12nm,0.8s,baz=80,slow=9.1,SNR=4.1						
ASAR	Alice Springs	32.59	243	P	P	02 07 11.6	-0.9
	14nm,0.9s,baz=70,slow=9.7,SNR=4.0						
FITZ	Fitzroy Crossi	39.14	255	P	P	02 08 07.7	-0.8
	11nm,0.8s,baz=100,slow=8.1,SNR=2.5						
MJAR	Matsushiro Arr	53.77	333	P	P	02 10 02.2	-0.8
	5.9nm,0.8s,baz=165,slow=8.5,SNR=4.8						
KSRS	Korea Array	59.65	326	P	P	02 10 45.6	+0.8
	1.9nm,0.9s,baz=142,slow=6.9,SNR=4.3						
SONM	Songino Array	78.43	324	P	P	02 12 42.5	+1.1
	1.5nm,0.7s,baz=142,slow=5.4,SNR=2.6						
ILAR	Eielson Array	83.52	19	P	P	02 13 08.8	+0.9
	2.9nm,0.8s,baz=237,slow=5.5,SNR=3.9						
NVAR	Mina Array Bea	86.17	50	P	P	02 13 22.7	+0.5
	7.6nm,0.9s,baz=236,slow=7.5,SNR=5.9						
YKA	Yellowknife Ar	95.02	27	P	P	02 14 01.8	-1.0
	1.4nm,0.9s,baz=258,slow=4.5,SNR=2.8						
TORD	Torodi Ar. Bea	163.98	279	PKP	PKPdf	02 20 42.6	-2.1
	5.7nm,1.1s,baz=125,slow=0.1,SNR=6.6						

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*IDC **06** 02:01:04.8±0.9, 11°.13S×165°.41E, h0^{km}, mb4.7/6, mb1 5.1/7, mb1mx4.5/46, mbtmp4.8/7, ML4.5/1, Error ellipse: s-maj=51.5km s-min=21.2km az=139.0*

*NEIC **06** 02:01:06.0±0.3, 11°.11S×165°.37E, h10^{km}, mb5.3/8, Error ellipse: s-maj=10.7km s-min=7.9km az=130.0*

*ISCJB **06** 02:01:07.2±0.3, 11°.20S±0°.07×165°.29E±0°.07, h30^{km}, mb5.3/17, Error ellipse: s-maj=11.8km s-min=7.8km az=135.4*

ISC 06 02:01:08.8±0.5**, 11°.12S**±0°.10×**165°.4E**±0°.1**, h30**^{km}**, n51, σ0^s.92**/51**, mb5.4**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.94	175	Pn	Pn	02 03 43.5	0.0
	3.6nm,0.3s,baz=13,slow=9.2,SNR=3.0						
CTA	Charters Tower	20.42	242	P	P	02 05 45.1	+1.4
	43nm,1.0s,baz=0.0,slow=24,SNR=187						
COEN	Coen	21.83	260	*e*P	P	02 05 57.5	-1.4
	206nm,1.4s						
OUZ	Omahuta	25.14	164	*e*P	P	02 06 30.5	-0.7
	134nm,1.5s						
BFZ	Birch Farm	30.98	164	*e*P	P	02 07 23.0	-0.4
	112nm,1.1s						
WR1	Warramunga Arr	31.09	250	*e*P	P	02 07 25.6	+0.8
	8.3nm,0.6s						
WRA	Warramunga Arr	31.10	250	P	P	02 07 25.6	+0.8
	28nm,1.1s,baz=79,slow=9.5,SNR=3.5						
GUMO	Guam	31.87	320	*e*P	P	02 07 32.1	+0.6
	279nm,1.3s						
AS31	Alice Springs	32.41	243	*e*P	P	02 07 35.5	-0.8
	10nm,1.4s						
ASAR	Alice Springs	32.41	243	P	P	02 07 35.5	-0.8
	8.8nm,1.0s,baz=72,slow=8.9,SNR=2.6						
MQZ	McQueen's Vall	33.08	170	*e*P	P	02 07 42.0	+0.2
	80nm,1.2s						
LUWI	Luwuk	43.45	280	*e*P	P	02 09 07.9	-1.5
	204nm,1.5s						
KEKH	Kekaha	47.51	46	*e*P	P	02 09 40.7	-0.7
	124nm,1.1s						
OBL	Observatory Le	49.24	52	*e*P	P	02 09 54.5	-0.6
	241nm,0.7s						
HATHI	Halema'uma'u T	49.26	52	*e*P	P	02 09 55.1	-0.1
	176nm,0.9s						
RSO	Redoubt South	78.72	20	*e*P	P	02 13 07.2	-1.0
HDA	Harding Lake	83.44	19	*e*P	P	02 13 33.8	+0.7
	22nm,0.8s						
HDA	Harding Lake	83.44	19	P	P	02 13 34.3	+1.3
	baz=227						
TCOL	CIGO, UAF Yank	83.47	18	P	P	02 13 34.5	+1.4
	baz=226						
O02D	Mt. Diablo Mer	83.63	47	P	P	02 13 35.8	+1.2
	baz=250						
ILAR	Eielson Array	83.70	19	P	P	02 13 35.4	+1.0
	2.9nm,0.8s,baz=237,slow=4.9,SNR=5.3						
ILB	Eielson Array	83.70	19	*e*P	P	02 13 35.4	+1.0
	23nm,1.4s						
POKR	Poker Plat Res	83.77	18	P	P	02 13 35.2	+0.4
	baz=226						
K02D	Willamette Mer	83.90	45	P	P	02 13 37.2	+1.2
	baz=249						
N02D	Trinity Center	83.96	46	P	P	02 13 37.6	+1.2
	baz=250						
M02C	Callahan	84.00	46	P	P	02 13 37.4	+0.9
	baz=250						
J04D	Umpqua Nationa	85.16	44	P	P	02 13 43.5	+1.0
	baz=250						
EDW2	Edwards Air Fo	85.57	53	P	P	02 13 45.5	+0.9
	baz=253						
MONP2	Monument Peak	86.28	56	P	P	02 13 49.3	+1.0
	baz=254						
MPMC	Manual Prospec	86.30	52	P	P	02 13 49.1	+0.7
	baz=253						
NV01	Mina Array Sit	86.36	50	*e*P	P	02 13 49.0	+0.3
NVAR	Mina Array Bea	86.36	50	P	P	02 13 49.0	+0.3
	4.2nm,0.8s,baz=236,slow=7.5,SNR=3.7						
IKP	In-Ko-Pah, Jac	86.47	56	P	P	02 13 49.9	+0.8
	baz=254						
SWSC	Sam W. Stewart	86.79	56	P	P	02 13 50.3	-0.3
	baz=255						
HEC	Hector,Ludlow	86.87	54	P	P	02 13 51.2	+0.2
	baz=254						
FURC	Furnace Creek,	86.90	52	P	P	02 13 51.2	+0.2
	baz=254						
BC3	Big Chuckawall	87.26	55	P	P	02 13 54.0	+1.0
	baz=255						
IRM	Iron Mountain	87.64	55	P	P	02 13 55.8	+1.2
	baz=255						
EGMT	Eagleton	94.78	42	P	P	02 14 25.7	-2.0
	baz=259						
YKA	Yellowknife Ar	95.22	27	P	P	02 14 28.2	-1.0
	1.6nm,0.8s,baz=257,slow=4.7,SNR=4.9						
YKB5	Yellowknife Ar	95.22	27	*e*P	P	02 14 28.2	-1.0
ARA0	ARCESS Array S	116.31	345	*e*PKPdf	PKiKP	02 19 49.9	+1.0
ARCES	ARCESS Array B	116.31	345	PKP	PKiKP	02 19 49.9	+1.0
	1.7nm,0.7s,baz=64,slow=2.1,SNR=6.0						
FIA0	FINESS Array S	121.70	338	*e*PKPdf	PKiKP	02 20 00.3	+0.8
FINES	FINESS Array B	121.70	338	PKP	PKiKP	02 20 00.3	+0.8
	1.4nm,0.8s,baz=354,slow=1.4,SNR=3.5						
NB200	NORSAR Array S	126.67	345	*e*PKPdf	PKiKP	02 20 09.9	+0.5
NOA	NORSAR Array B	126.67	345	PKP	PKiKP	02 20 09.9	+0.5
	0.7nm,0.7s,baz=41,slow=2.3,SNR=3.3						
AKASG	Malin Array Be	126.71	327	PKP	PKiKP	02 20 10.4	+0.6
	1.2nm,0.6s,baz=44,slow=2.3,SNR=3.8						
AKBB	Malin Array Si	126.71	327	*e*PKPdf	PKiKP	02 20 10.4	+0.6
DAVOX	Davos/Dischmat	138.84	334	PKP	PKiKP	02 20 35.4	+0.7
	3.0nm,0.7s,baz=45,slow=5.7,SNR=4.5						
KEST	Kesra	147.24	322	PKPbc	PKPab	02 20 52.0	+0.5
	9.9nm,0.8s,baz=343,slow=4.8,SNR=4.7						

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*IDC **06** 02:01:27.9±1.1, 10°.65S×165°.40E, h0^{km}, mb4.8/11, mb1 5.0/12, mb1mx4.6/46, mbtmp4.8/12, ML3.9/1, Error ellipse: s-maj=28.2km s-min=19.1km az=102.0*

*ISCJB **06** 02:01:30.4±0.8, 10°.74S±0°.10×165°.4E±0°.2, h31^{km}, mb4.8/10, Error ellipse: s-maj=21.3km s-min=13.7km az=177.1*

ISC 06 02:01:32.5±1.0**, 10°.7S**±0°.1×**165°.4E**±0°.2**, h31**^{km}**, n12, σ0^s.96**/12**, mb4.8**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.36	175	Pn	Pn	02 04 12.4	-0.4
	0.8nm,0.3s,baz=79,slow=19,SNR=3.0						
CTA	Charters Tower	20.68	241	P	P	02 06 10.9	+0.7
	78nm,1.0s,baz=180,slow=24,SNR=10						
URZ	Urewera	29.38	161	P	P	02 07 32.9	0.0
	9.5nm,0.5s,baz=207,slow=2.3,SNR=3.2						
STKA	Stephens Creek	30.48	223	P	P	02 07 43.6	+0.9
	15nm,0.8s,baz=34,slow=15,SNR=3.1						
WRA	Warramunga Arr	31.31	249	P	P	02 07 49.2	-1.0
	14nm,0.8s,baz=78,slow=8.8,SNR=3.7						
ASAR	Alice Springs	32.67	243	P	P	02 08 01.6	-0.6
	28nm,0.7s,baz=67,slow=10.0,SNR=11						
FITZ	Fitzroy Crossi	39.16	255	P	P	02 08 58.4	+0.6
	15nm,0.8s,baz=87,slow=8.4,SNR=2.8						
MJAR	Matsushiro Arr	53.51	333	P	P	02 10 50.1	-0.1
	8.4nm,1.1s,baz=166,slow=7.8,SNR=3.2						
KSRS	Korea Array	59.41	326	P	P	02 11 32.8	+0.6
	3.0nm,0.8s,baz=130,slow=7.6,SNR=4.3						
ILAR	Eielson Array	83.28	19	P	P	02 13 56.8	+1.0
	3.6nm,0.7s,baz=240,slow=5.1,SNR=3.5						
MKAR	Makanchi Array	93.05	317	P	P	02 14 42.6	-0.6
	2.4nm,0.7s,baz=90,slow=6.8,SNR=3.1						
ZALV	Zalesovo Beam	93.08	324	P	P	02 14 41.3	-1.9
	3.4nm,0.8s,baz=149,slow=4.8,SNR=3.6						

IDC 06 02:02:30.4±1.3**, 11°.11S**×**165°.44E, h0**^{km}**, mb4.4**/5**, mb1 4.7**/6**, mb1mx4.2**/46**, mbtmp4.5**/6**, ML4.0**/1**, Error ellipse: s-maj=47.7km s-min=27.1km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.94	175	Pn	Pn	02 05 07.8	-0.7
	1.0nm,0.3s,baz=356,slow=18,SNR=2.2						
WRA	Warramunga Arr	31.18	250	P	P	02 08 51.5	-0.1
	11nm,1.0s,baz=81,slow=8.6,SNR=1.9						
ASAR	Alice Springs	32.50	243	P	P	02 09 03.3	+0.2
	8.2nm,0.9s,baz=65,slow=9.3,SNR=2.0						
PETK	Petropavlovsk-	64.30	355	P	P	02 13 07.7	+0.1
	2.7nm,0.8s,baz=175,slow=7.2,SNR=1.6						
ILAR	Eielson Array	83.67	19	P	P	02 15 00.1	-0.5
	1.2nm,0.7s,baz=240,slow=4.8,SNR=1.1						
NVAR	Mina Array Bea	86.29	50	P	P	02 15 15.2	+0.4
	1.7nm,0.9s,baz=238,slow=5.2,SNR=1.6						

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*IDC **06** 02:03:33.4±1.4, 11°.10S×165°.37E, h0^{km}, mb4.2/4, mb1 4.5/6, mb1mx4.0/45, mbtmp4.4/6, ML4.0/2, Error ellipse: s-maj=40.5km s-min=26.0km az=138.0*

*ISCJB **06** 02:03:36.1±1.1, 11°.2S±0°.1×165°.3E±0°.2, h30^{km}, mb4.1/4, Error ellipse: s-maj=22.0km s-min=18.5km az=150.4*

ISC 06 02:03:37.9±1.1**, 11°.1S**±0°.1×**165°.3E**±0°.2**, h30**^{km}**, n6, σ0^s.55**/6**, mb4.1**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.57	287	Pn	Pn	02 04 58.5	-0.2
	2.2nm,0.3s,baz=168,slow=19,SNR=1.7						
DZM	Mont Dzumac	10.92	175	Pn	Pn	02 06 12.2	-0.1
	2.7nm,0.3s,baz=351,slow=18,SNR=1.8						
WRA	Warramunga Arr	31.07	250	P	P	02 09 54.1	+0.4
	4.0nm,0.8s,baz=80,slow=8.6,SNR=3.1						
ASAR	Alice Springs	32.39	243	P	P	02 10 05.2	-0.1
	2.1nm,0.9s,baz=70,slow=9.0,SNR=2.7						
ILAR	Eielson Array	83.73	19	P	P	02 16 04.2	+0.6
	0.9nm,0.6s,baz=236,slow=5.3,SNR=4.2						
YKA	Yellowknife Ar	95.24	27	P	P	02 16 57.8	-0.6
	0.4nm,0.6s,baz=244,slow=3.0,SNR=4.2						

ISK 06 02:05:05.6, 36°.96N×**28°.93E, h8**^{km}**, ML2.4**/7**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALY	Dalyan (Mula)	0.27	238	PG	Pg	02 05 10.8	-0.1
DALY				SG	Sg	02 05 15.7	+1.3
TURN	Turunc	0.28	253	PG	Pn	02 05 17.2	+1.2
FETY	Fethiye	0.34	159	PG	Pg	02 05 13.0	+0.7
FETY				SG	Sg	02 05 18.1	+1.2
ELL	Elmali	0.81	105	PG	Pg	02 05 21.5	+0.3
MLSB	Milas	0.98	290	PG	Pb	02 05 25.2	+0.3
DAT	Datca	1.11	259	PN	Pb	02 05 27.2	+0.1
KORT	Korkueli	1.14	87	PN	Pb	02 05 27.6	+0.1
AYDB	Zeytinkoy-Aydi	1.29	320	PN	Pg	02 05 30.3	-0.1
GCAM	G?zelcaml?	1.54	299	PN	Pb	02 05 34.3	-0.2

IDC 06 02:05:30.2±2.1**, 11°.37S**×**165°.47E, h0**^{km}**, mb4.1**/7**, mb1 4.3**/7**, mb1mx4.0**/40**, mbtmp4.1**/7**, Error ellipse: s-maj=114.4km s-min=22.6km az=145.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.12	250	P	P	02 11 50.1	-0.7
	4.1nm,0.6s,baz=83,slow=9.2,SNR=7.3						
ASAR	Alice Springs	32.41	244	P	P	02 12 02.0	-0.1
	0.8nm,0.5s,baz=67,slow=10,SNR=4.3						
FITZ	Fitzroy Crossi	39.04	255	P	P	02 12 59.6	+0.5
	12nm,1.2s,baz=84,slow=6.3,SNR=4.2						
ILAR	Eielson Array	83.90	19	P	P	02 18 01.4	-0.2
	0.7nm,0.6s,baz=242,slow=5.0,SNR=5.0						
MKAR	Makanchi Array	93.57	317	P	P	02 18 48.4	+0.1
	0.9nm,0.7s,baz=88,slow=6.2,SNR=3.3						
PDAR	Pinedale Array	93.97	47	P	P	02 18 50.8	+0.3
	0.5nm,0.9s,baz=245,slow=3.9,SNR=2.2						
YKA	Yellowknife Ar	95.38	27	P	P	02 18 55.7	-0.4
	0.4nm,0.9s,baz=252,slow=4.4,SNR=2.9						

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*IDC **06** 02:06:17.5±0.5, 10°.57S×165°.68E, h0^{km}, mb4.9/28, mb1 5.0/30, mb1mx4.9/42, mbtmp4.9/30, ML5.6/2, Error ellipse: s-maj=15.6km s-min=11.7km az=99.0*

*NEIC **06** 02:06:20.4±0.2, 10°.62S×165°.43E, h10^{km}, mb5.3/114, Error ellipse: s-maj=6.4km s-min=5.1km az=97.0*

*MOS **06** 02:06:20.9±1.3, 10°.50S×165°.49E, h28^{km}, mb5.2/31, Error ellipse: s-maj=9.0km s-min=8.3km az=89.9*

*ISCJB **06** 02:06:21.7±0.1, 10°.72S±0°.02×165°.45E±0°.03, h31^{km}, mb5.2/161, Error ellipse: s-maj=3.9km s-min=3.0km az=160.6*

ISC 06 02:06:23.2±0.3**, 10°.62S**±0°.05×**165°.52E**±0°.06**, h31**^{km}**, n400, σ1^s.67**/374**, mb5.2**/161**, 6C-5D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.62	282	*e*Pn	Pn	02 07 45.5	+0.8
HNR				*e*Sn	Sn	02 08 50.2	+1.9
HNR	Honiara	5.62	282	*e*P	Pn	02 07 45.5	+0.8
HNR				*e*		02 08 50.2	
HNR	Honiara	5.62	282	Pn	Pn	02 07 45.5	+0.8
	196nm,0.3s,baz=284,slow=2.2,SNR=13						
HNR				Sn	Sn	02 08 50.2	+1.9
	184nm,0.3s,baz=163,slow=20,SNR=2.5						
DZM	Mont Dzumac	11.42	176	*e*Pn	Pn	02 09 05.7	+1.3
DZM				*e*Sn	Sn	02 11 11.7	+0.8
DZM	Mont Dzumac	11.42	176	Pn	Pn	02 09 04.4	+0.1
	42nm,0.3s,baz=358,slow=14,SNR=16						
DZM				Sn	Sn	02 11 11.7	+0.8
	6.8nm,0.3s,baz=50,slow=12,SNR=4.1						
ONTNC	Ouen Toro	11.65	176	*e*Pn	Pn	02 09 08.5	+1.0
PINNC	Pines Island,	12.06	171	*e*Pn	Pn	02 09 13.8	+0.7
MSVF	Nonsavu	14.05	122	*e*Pn	Pn	02 09 40.8	+0.5
MSVF	Nonsavu	14.05	122	*e*P	Pn	02 09 40.8	+0.5
EIDS	Eidsvold	20.06	221	*e*P	Pn	02 10 55.8	-0.2
	489nm,1.3s						
CTA	Charters Tower	20.81	241	*e*P	Pn	02 11 03.8	-1.0
CTA	Charters Tower	20.81	241	*e*P	Pn	02 11 03.8	-1.0
CTA	Charters Tower	20.81	241	P	Pn	02 11 03.8	-1.0
	57nm,0.7s,baz=74,slow=12,SNR=22						
CTAO	Charters Tower	20.81	241	*e*P	Pn	02 11 04.2	-0.7
	436nm,1.4s						
CTAO	Charters Tower	20.81	241	*e*P	Pn	02 11 04.2	-0.6
CTAO				pmax	pmax		
	comp=Z,436nm,1.4s						
COEN	Coen	22.08	259	*e*P	P	02 11 16.6	+0.5
ARMA	Armidale	23.56	211	*e*P	P	02 11 31.9	+0.6
	comp=Z,368nm,1.3s						
KNTN	Kanton	23.89	73	*e*P	P	02 11 37.1	+2.7
	comp=Z,307nm,1.4s						
OUZ	Omahuta	25.57	165	*e*P	P	02 11 50.3	+0.8
	comp=Z,280nm,1.4s						
JAY	Jayapura	25.92	286	P	P	02 11 54.3	+1.3
GENI	Genyem	26.40	286	P	P	02 11 58.7	+1.4
KUZ	Kuaotunu	27.59	162	P	P	02 12 06.9	-0.8
CAN	Canberra	28.82	209	*e*P	P	02 12 18.5	-0.3
	comp=Z,24nm,0.9s						
CAN	Canberra	28.82	209	*e*P	P	02 12 18.5	-0.3
CAN				pmax	pmax		
	comp=Z,25nm,0.9s						
H11S2	WAKE ISLAND Hy	28.95	2	T	T	02 42 24.8	
	baz=186,slow=74,SNR=10						
H11S3	WAKE ISLAND Hy	28.96	2	T	T	02 42 24.0	
	baz=186						
H11S1	WAKE ISLAND Hy	28.97	2	T	T	02 42 25.4	
	baz=186,slow=74,SNR=9.5						

HIZ	Hauiti	29.00	165	eP	P	02 12 20.4	+0.1
	comp=Z,182nm,1.3s						
HIZ	Hauiti	29.00	165	P	P	02 12 20.1	-0.2
WHRZ	Whale Island	29.00	161	P	P	02 12 20.6	+0.3
OMRZ	Omania	29.05	162	P	P	02 12 23.0	+2.2
HAZ	Te Kaha	29.18	160	P	P	02 12 22.4	+0.6
MXZ	Matakaoa Point	29.18	159	eP	P	02 12 21.1	-0.8
	comp=Z,72nm,0.8s						
MXZ	Matakaoa Point	29.18	159	P	P	02 12 21.5	-0.4
RUGZ	Raukumara Rang	29.33	160	P	P	02 12 22.1	-1.2
PKGZ	Pakihiroa	29.40	159	P	P	02 12 23.0	-0.9
PRRZ	Plateau Road	29.41	162	P	P	02 12 25.1	+1.1
URZ	Urewera	29.41	161	eP	P	02 12 22.8	-1.2
	comp=Z,168nm,1.3s						
URZ	Urewera	29.41	161	P	P	02 12 22.8	-1.2
	comp=Z,46nm,0.5s,baz=252,slow=3.4,SNR=15						
URZ	Urewera	29.41	161	P	P	02 12 23.6	-0.4
WMGZ	Waiomatatini S	29.45	159	P	P	02 12 24.1	-0.2
MUGZ	Murupara	29.51	162	P	P	02 12 25.2	+0.4
MWZ	Matawai	29.62	161	P	P	02 12 25.1	-0.7
PUZ	Puketiti	29.62	159	P	P	02 12 24.1	-1.7
TWGZ	Tauwhareparae	29.62	160	P	P	02 12 25.2	-0.7
RTZ	Ruatahuna	29.70	162	P	P	02 12 26.1	-0.5
RAGZ	Rawiri	29.73	161	P	P	02 12 26.7	-0.1
MRHZ	Matea Rd	29.73	163	P	P	02 12 27.8	+0.9
WTVZ	West Tongariro	29.76	164	P	P	02 12 28.1	+0.9
TKGZ	Te Karaka	29.82	160	P	P	02 12 26.5	-1.0
NGZ	Ngauruhoe	29.82	164	P	P	02 12 28.9	+1.2
MTHZ	Maungataniwha	29.88	162	P	P	02 12 27.8	-0.3
FWVZ	Far West T-bar	29.88	164	P	P	02 12 29.1	+0.7
TRVZ	Turoa	29.92	164	P	P	02 12 29.3	+0.5
SNGZ	Shannon Statio	29.96	161	P	P	02 12 27.6	-1.2
CNGZ	Carnagh Statio	29.98	160	P	P	02 12 27.9	-1.1
RAHZ	Arahi	30.01	162	P	P	02 12 28.9	-0.3
RIGZ	Rimuhau	30.03	161	P	P	02 12 28.9	-0.5
BKZ	Black Stump Fm	30.06	163	eP	P	02 12 28.8	-1.0
	comp=Z,430nm,1.5s						
BKZ	Black Stump Fm	30.06	163	P	P	02 12 29.3	-0.5
MOVZ	Moawhango	30.08	164	P	P	02 12 29.7	-0.2
NMHZ	Naumai	30.09	162	P	P	02 12 29.9	-0.1
H11N1	WAKE ISLAND Hy	30.18	3	T	T	02 43 54.5	
	baz=182,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	30.18	3	T	T	02 43 55.1	
	baz=182,slow=76,SNR=32						
H11N2	WAKE ISLAND Hy	30.19	3	T	T	02 43 55.8	
	baz=182,slow=76,SNR=26						
WHHZ	Waihua	30.20	162	P	P	02 12 29.8	-1.1
BHHZ	Black Hill Sta	30.24	164	P	P	02 12 31.4	0.0
KWHZ	Kaweka Forest	30.28	163	P	P	02 12 31.2	-0.5
ARHZ	Aropaoanui	30.30	162	P	P	02 12 31.5	-0.3
MCHZ	McNeill Hill	30.38	163	P	P	02 12 32.4	-0.1
MHGZ	Mahia Peninsul	30.48	161	P	P	02 12 32.4	-1.0
STKA	Stephens Creek	30.60	223	eP	P	02 12 35.0	+0.4
	comp=Z,129nm,1.2s						
STKA	Stephens Creek	30.60	223	eP	P	02 12 35.0	+0.4
STKA				pmax	pmax		
	comp=Z,129nm,1.2s						
TSZ	Takapari Road	30.74	164	P	P	02 12 35.1	-0.6
KAHZ	Kahuranaki	30.75	163	P	P	02 12 35.1	-0.8
BFZ	Birch Farm	31.40	164	eP	P	02 12 40.1	-1.4
	comp=Z,105nm,1.0s						
WRAB	Tennant Creek	31.41	249	eP	P	02 12 42.0	+0.1
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	31.41	249	i P	P	02 12 42.7	+0.8
WRAB				pmax	pmax		
	comp=Z,29nm,0.9s						
WR1	Warramunga Arr	31.43	249	eP	P	02 12 42.6	+0.6
	comp=Z,68nm,1.0s						
WRA	Warramunga Arr	31.43	249	P	P	02 12 42.6	+0.6
WRA	Warramunga Arr	31.43	249	P	P	02 12 42.7	+0.6
WRA	Warramunga Arr	31.43	249	P	P	02 12 42.6	+0.6
	comp=Z,32nm,0.9s,baz=81,slow=9.1,SNR=19						
SNZO	South Karori	31.62	167	eP	P	02 12 42.6	-0.7
	comp=Z,125nm,1.1s						
THZ	Tophouse	31.69	169	eP	P	02 12 43.9	-0.1
	comp=Z,235nm,1.2s						
TOO	Toolangi	32.32	211	eP	P	02 12 50.8	+1.1
TOO	Toolangi	32.32	211	eP	P	02 12 50.8	+1.1
KHZ	Kahutara	32.44	169	eP	P	02 12 50.4	-0.2
	comp=Z,164nm,1.4s						
LTZ	Lake Taylor	32.57	171	eP	P	02 12 52.4	+0.6
	comp=Z,127nm,1.2s						
AS01	Alice Springs	32.75	243	eP	P	02 12 53.0	-0.6
AS31	Alice Springs	32.79	243	eP	P	02 12 54.0	0.0
	comp=Z,8.3nm,0.6s						
AS31				ePcP	PcP	02 15 39.0	+0.1
ASAR	Alice Springs	32.79	243	P	P	02 12 54.0	0.0
ASAR	Alice Springs	32.79	243	P	P	02 12 54.0	0.0
ASAR	Alice Springs	32.79	243	P	P	02 12 54.0	0.0
	comp=Z,25nm,0.6s,baz=66,slow=10,SNR=70						
ASAR				PcP	PcP	02 15 39.0	+0.1
	comp=Z,3.6nm,0.8s,baz=73,slow=3.6,SNR=4.3						
FOZ	Fox Glacier	33.00	174	eP	P	02 13 01.7	+6.2
	comp=Z,178nm,1.0s						
OXZ	Oxford	33.07	171	eP	P	02 12 56.3	+0.2
	comp=Z,127nm,1.2s						
RPZ	Rata Peaks	33.32	173	eP	P	02 12 57.6	-0.6
	comp=Z,122nm,0.9s						
RPZ	Rata Peaks	33.32	173	P	P	02 12 57.6	-0.6
	comp=Z,91nm,1.1s,baz=330,slow=0.8,SNR=9.5						
CRLZ	Canterbury Las	33.40	171	eP	P	02 12 57.0	-2.0
	comp=Z,338nm,1.4s						
MQZ	McQueen's Vall	33.54	171	eP	P	02 12 58.9	-1.3
	comp=Z,114nm,0.9s						
MTN	Manton Dam	33.73	263	eP	P	02 13 00.4	-1.8
	comp=Z,8.6nm,0.8s						
LBZ	Lake Benmore	33.88	174	eP	P	02 13 01.9	-1.3
	comp=Z,48nm,0.9s						
WKZ	Wanaka	34.21	176	eP	P	02 13 05.4	-0.6
	comp=Z,139nm,1.4s						
ODZ	Otahua Downs	34.58	174	eP	P	02 13 07.7	-1.5
	comp=Z,38nm,1.0s						
DCZ	Deep Cove	34.75	178	eP	P	02 13 17.0	+6.4
	comp=Z,23nm,1.0s						
TAU	Tasmania Unive	35.87	203	eP	P	02 13 19.9	-0.4
	comp=Z,11nm,0.9s						
TAU	Tasmania Unive	35.87	203	eP	P	02 13 19.9	-0.4
TAU				pmax	pmax		
	comp=Z,11nm,0.9s						
NLAI	Namlea	38.81	278	P	P	02 13 46.3	+0.6
FITZ	Fitzroy Crossi	39.28	254	eP	P	02 13 49.4	-0.1
FITZ	Fitzroy Crossi	39.28	254	P	P	02 13 49.4	-0.1
	comp=Z,23nm,0.7s,baz=94,slow=6.5,SNR=25						
SANI	Sanana	40.16	279	P	P	02 13 57.4	+0.4
	comp=Z,73nm,1.2s						
BATI	Baumata	41.15	267	eP	P	02 14 05.0	-0.2
BATI	Baumata	41.15	267	P	P	02 14 05.0	-0.2
	comp=Z,39nm,0.7s,baz=196,slow=2.0,SNR=4.8						
KMSI	Cibinong	42.78	282	P	P	02 14 20.6	+2.1
EDFI	Ende, Flores	43.22	268	P	P	02 14 21.6	-0.6
LUWI	Luwuk	43.53	280	eP	P	02 14 24.8	+0.3
	comp=Z,183nm,1.1s						
LUWI	Luwuk	43.53	280	P	P	02 14 26.1	+1.6
APSI	Ampana	44.65	280	P	P	02 14 34.6	+1.1
	comp=Z,91nm,1.4s,comp=Z,26µm						
MRSI	Marisa	44.72	282	P	P	02 14 36.2	+2.2
BKSI	Bulukumba	45.24	273	P	P	02 14 38.8	+0.7
BNSI	Bone	45.41	274	P	P	02 14 40.3	+0.8
	comp=Z,159nm,1.0s						
SPSI	Sidrap Palu	45.82	275	P	P	02 14 42.7	-0.1
	comp=Z,43nm,2.5s						
TTSI	Tana Toraja	45.95	276	P	P	02 14 45.1	+1.3
PCI	Palu	46.41	279	P	P	02 14 49.3	+1.9
MPSI	Mapaga	46.65	281	P	P	02 14 49.4	+0.1
PLAI	Plampang	47.06	268	P	P	02 14 52.1	-0.4
	comp=Z,64nm,0.4s						
OPA	Opana	48.09	48	eP	P	02 15 04.7	+4.4
	comp=Z,141nm,0.9s						
OPA	Opana	48.09	48	eP	P	02 15 04.7	+4.4
OPA				pmax	pmax		
	comp=Z,141nm,0.9s						
NWAO	Narrogin (SRO)	49.52	236	eP	P	02 15 11.7	+0.4
NWAO	Narrogin (SRO)	49.52	236	eP	P	02 15 11.7	+0.4
NWAO	Narrogin (SRO)	49.52	236	P	P	02 15 11.7	+0.4
	comp=Z,77nm,1.1s,baz=310,slow=7.9,SNR=12						
SRBI	Singaraja	49.67	268	P	P	02 15 12.6	0.0
	comp=Z,45nm,1.6s						
JAGI	Jajag, Banyuwa	50.66	268	eP	P	02 15 18.6	-1.6
	comp=Z,52nm,0.8s						
JAGI	Jajag, Banyuwa	50.66	268	P	P	02 15 20.9	+0.7
KKM	Kota Kinabalu	51.81	286	eP	P	02 15 28.8	-0.1
	comp=Z,110nm,1.2s						
MJAR	Matsushiro Arr	53.50	333	P	P	02 15 39.0	-1.9
MJAR	Matsushiro Arr	53.50	333	P	P	02 15 39.0	-1.9
MJAR	Matsushiro Arr	53.50	333	P	P	02 15 39.0	-1.9
	comp=Z,18nm,1.2s,baz=169,slow=8.1,SNR=7.9						
MAJO	Matsushiro	53.50	333	eP	P	02 15 39.7	-1.2
	comp=Z,29nm,1.1s						
MAJO	Matsushiro	53.50	333	i P	P	02 15 39.5	-1.4
MAJO				pmax	pmax		
	comp=Z,31nm,1.1s						
MAT	Matsushiro	53.50	333	P	P	02 15 38.9	-2.0
MJB9	Matsu-Tunnel	53.50	333	eP	P	02 15 41.3	+0.3
	comp=Z,29nm,1.1s						
YULB	Yu-li	54.91	308	eP	P	02 15 51.3	-0.1
	comp=Z,49nm,1.4s						
ASAJ	Asahikawa	58.33	341	eP	P	02 16 14.6	-0.7
ASAJ	Asahikawa	58.33	341	P	P	02 16 14.6	-0.7
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ASAJ	Asahikawa	58.33	341	P	P	02 16 14.6	-0.7
	comp=Z,7.7nm,0.7s,baz=342,slow=20,SNR=3.5						
KSRS	Korea Array	59.41	326	P	P	02 16 21.9	-1.0
KSRS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSRS	Korea Array	59.41	326	P	P	02 16 21.9	-1.0
	comp=Z,5.9nm,1.0s,baz=137,slow=6.7,SNR=8.4						
KS15	Wonju Array Si	59.42	326	eP	P	02 16 21.9	-1.1
KSAR	Wonju Array Be	59.42	326	P	P	02 16 21.9	-1.1
KSAR	Wonju Array Be	59.42	326	P	P	02 16 21.9	-1.1
KS01	Wonju Array Si	59.44	326	eP	P	02 16 22.1	-1.0
YSS	Yuzh-Sakhalins	60.82	342	⇓eP	P	02 16 29.8	-2.6
YSS				e		02 16 36.6	
YSS				e		02 16 44.3	
YSS				pmax	pmax		
	comp=Z,230nm,1.5s						
YSS				pmax	pmax		
	comp=N,150nm,0.8s						
NJ2	Nanjing	61.57	315	eP	P	02 16 37.3	-0.5
NJ2				pmax	pmax		
	comp=Z,21nm,0.6s						
VLA	Vladivostok	61.67	333	eP	P	02 16 36.7	-1.5
VLA				pmax	pmax		
	comp=Z,29nm,1.1s						
USRK	Ussuriysk Ar.	62.48	333	P	P	02 16 43.1	-0.6
USRK	Ussuriysk Ar.	62.48	333	P	P	02 16 43.1	-0.6
	comp=Z,36nm,1.2s,baz=131,slow=5.8,SNR=16						
USA0B	Ussuriysk Arra	62.48	333	eP	P	02 16 43.7	+0.1
	comp=Z,79nm,1.4s						
PETK	Petropavlovsk-	63.83	355	eP	P	02 16 54.9	+2.4
PETK	Petropavlovsk-	63.83	355	eP	P	02 16 54.9	+2.4
PETK	Petropavlovsk-	63.83	355	P	P	02 16 51.8	-0.7
	comp=Z,16nm,1.1s,baz=163,slow=6.6,SNR=8.3						
PEA1	Petropavlovsk-	63.84	355	eP	P	02 16 51.8	-0.7
MDJ	Mudanjiang	63.88	332	P	P	02 16 53.2	+0.3
MDJ				pmax	pmax		
	comp=Z,28nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,27µm,12.0s						
WHN	Wuhan	63.95	312	⇓P	P	02 16 52.6	-1.1
CN2	Changchun	65.27	329	eP	P	02 17 04.7	+2.6
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
IPM	Ipoh	65.94	280	eP	P	02 17 07.5	+0.5
	comp=Z,43nm,1.0s						
KLR	Kul'dur	66.59	337	eP	P	02 17 09.6	-0.8
KLR	Kul'dur	66.59	337	i P	P	02 17 09.0	-1.4
KLR	Kul'dur	66.59	337	P	P	02 17 09.6	-0.8
	comp=Z,35nm,1.2s,baz=137,slow=6.1,SNR=9.1						
CASY	Casey	66.69	201	eP	P	02 17 10.7	-0.2
	comp=Z,18nm,0.8s						
VNDA	Vanda	66.91	181	eP	P	02 17 10.8	-1.3
VNDA	Vanda	66.91	181	eP	P	02 17 10.8	-1.3
VNDA	Vanda	66.91	181	P	P	02 17 10.8	-1.3
	comp=Z,15nm,1.2s,baz=307,slow=1.7,SNR=5.2						
NKL	Nikolayevsk	66.98	344	eP	P	02 17 11.7	-1.1
GYA	Guiyang	68.00	304	⇑iP	P	02 17 19.7	-0.3
GYA				PP	PP	02 19 48.0	-2.4
GYA				S	S	02 26 19.4	+1.8
GYA				SKS	SKSac	02 27 16.2	-0.6
GYA	Guiyang	68.00	304	SS	SS	02 30 43.8	+3.3
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,6.6s						
GYA				LR	LR		
	comp=N,610nm,18.6s						
GYA				LR	LR		
	comp=E,560nm,18.3s						
GYA				LR	LR		
	comp=Z,590nm,19.0s						
BJI	Beijing	68.02	321	pmax	pmax	02 17 20.0	
BJI				LR	LR		
	comp=E,4µm,20.6s						
BJI				LR	LR		
	comp=Z,10µm,26.3s						
GSI	Gunungsitoli	68.60	276	eP	P	02 17 24.1	+0.2
	comp=Z,55nm,0.9s						
AKUT	Akutan	68.94	18	eP	P	02 17 29.5	+4.4
TIY	Taiyuan	69.11	317	eP	P	02 17 26.8	+0.2
TIY				pmax	pmax		
	comp=Z,57nm,1.4s						
TIY				LR	LR		
	comp=N,33µm,15.0s						
TIY				LR	LR		
	comp=E,17µm,14.7s						
TIY				LR	LR		
	comp=Z,15µm,15.1s						
PBKT	Sadao Pong	69.32	292	eP	P	02 17 28.3	+0.1
XAN	Xi'an	69.68	312	P	P	02 17 29.2	-1.0
XAN				pP	pP	02 17 36.8	-2.2
XAN				sP	sP	02 17 40.4	-1.8
XAN				pmax	pmax		
	comp=Z,26nm,1.0s						
XAN				LR	LR		
	comp=N,30µm,16.7s						
XAN				LR	LR		
	comp=E,18µm,18.4s						
XAN				LR	LR		
	comp=Z,20µm,17.6s						
KMI	Kunming	70.72	301	P	P	02 17 37.6	+0.6
KMI				pP	pP	02 17 44.7	-1.0
KMI				sP	sP	02 17 49.1	+0.2
KMI				pmax	pmax		
	comp=Z,31nm,1.2s						
MA2	Magadan	70.96	352	i P	P	02 17 35.5	-2.0
MA2				pmax	pmax		
	comp=Z,15nm,1.3s						
HHC	Hu-ho-hao-te	71.37	320	eP	P	02 17 42.5	+2.0
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
CM01	Chiang Mai Arr	71.72	293	eP	P	02 17 41.9	-1.0
CM31	Chiang Mai Arr	71.75	293	eP	P	02 17 43.7	+0.6
CMAR	Chiang Mai Arr	71.75	293	P	P	02 17 43.7	+0.6
CMAR	Chiang Mai Arr	71.75	293	P	P	02 17 43.7	+0.6
CMAR	Chiang Mai Arr	71.75	293	P	P	02 17 43.7	+0.6
	comp=Z,4.4nm,0.7s,baz=115,slow=4.4,SNR=12						
CHTO	Chiang Mai	71.86	294	eP	P	02 17 44.1	+0.4
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	71.86	294	eP	P	02 17 44.1	+0.4
CHTO				pmax	pmax		
	comp=Z,13nm,1.0s						
ZEA	Zeya	71.87	337	eP	P	02 17 42.9	-0.2
ZEA				pmax	pmax		
	comp=Z,69nm,1.4s						
CD2	Chengdu	72.18	307	⇑P	P	02 17 46.0	+0.5
SEY	Seymchan	74.03	354	i P	P	02 17 54.7	-1.0
LZH	Lanzhou	74.31	312	eP	P	02 17 58.4	+0.2
LZH				pP	pP	02 18 06.8	-0.1
LZH				sP	sP	02 18 09.6	-0.5
LZH				PP	PP	02 20 47.8	+3.2
LZH				pmax	pmax		
	comp=Z,58nm,1.3s						
LZH				pmax	pmax		
	comp=Z,290nm,5.4s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
GAMB	Gambell	76.19	10	eP	P	02 18 07.5	-0.5
	comp=Z,24nm,0.9s						
KDAK	Kodiak Island	76.27	22	eP	P	02 18 08.7	0.0
	comp=Z,33nm,1.4s						
KDAK	Kodiak Island	76.27	22	eP	P	02 18 08.7	0.0
KDAK				pmax	pmax		
	comp=Z,33nm,1.4s						
KDAK	Kodiak Island	76.27	22	P	P	02 18 08.7	0.0
	comp=Z,6.2nm,0.9s,baz=221,slow=14,SNR=2.4						
YAK	Yakutsk	77.63	344	eP	P	02 18 11.5	-4.7
YAK				pmax	pmax		
	comp=Z,21nm,1.5s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
ULN	Ulaanbaatar	77.83	324	eP	P	02 18 17.6	-0.3
	comp=E,22nm,0.9s						
ULN	Ulaanbaatar	77.83	324	ceP	P	02 18 17.9	0.0
ULN				pmax	pmax		
	comp=Z,53nm,1.7s						
SONA0	Songino Array	78.20	324	eP	P	02 18 19.7	-0.2
SONM	Songino Array	78.20	324	P	P	02 18 19.7	-0.2
SONM	Songino Array	78.20	324	P	P	02 18 19.7	-0.2
SONM				pmax	pmax		
	comp=Z,12nm,1.0s						
SONM	Songino Array	78.20	324	P	P	02 18 19.7	-0.2
	comp=Z,12nm,1.0s,baz=141,slow=7.9,SNR=13						
RSO	Redoubt South	78.20	20	eP	P	02 18 24.0	+4.2
SONA1	Songino Array	78.20	324	eP	P	02 18 19.3	-0.7
BRLK	Bradley Lake	78.32	21	eP	P	02 18 20.6	+0.4
	comp=Z,28nm,1.0s						
BILL	Bilibino	78.46	0	eP	P	02 18 19.1	-1.7
	comp=Z,26nm,1.0s						
BILL	Bilibino	78.46	0	ceP	P	02 18 19.8	-0.9
BILL				pmax	pmax		
	comp=Z,22nm,1.3s						
GTA	Gaotai	78.61	314	⇓P	P	02 18 22.4	0.0
GTA				pP	pP	02 18 27.0	-4.2
GTA				sP	PcP	02 18 29.4	-1.9
GTA				pmax	pmax		
	comp=Z,29nm,1.6s						
GTA				LR	LR		
	comp=N,25µm,19.7s						
GTA				LR	LR		
	comp=E,33µm,17.5s						
GTA				LR	LR		
	comp=Z,50µm,17.8s						
QSPA	South Pole Qui	79.38	180	eP	P	02 18 26.7	+0.6
	comp=Z,49nm,1.1s						
SUA	Susitna One	79.61	20	eP	P	02 18 29.7	+2.4
	comp=Z,10nm,0.8s						
BOD	Bodaibo	80.06	335	eP	P	02 18 21.6	-8.1
BOD				pmax	pmax		
	comp=Z,23nm,2.0s						
SHL	Shillong	80.13	298	eP	P	02 18 31.4	+0.5
	comp=Z,26nm,1.3s						
SHL	Shillong	80.13	298	eP	P	02 18 31.5	+0.5
SHL				pmax	pmax		
	comp=Z,26nm,1.3s						
CAST	Castle Rocks	80.62	18	eP	P	02 18 32.9	+0.3
	comp=Z,18nm,1.0s						
DIV	Divide	81.10	22	eP	P	02 18 38.5	+3.3
	comp=Z,24nm,1.0s						
ZAK	Zakamensk	81.23	325	eP	P	02 18 34.3	-2.0
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s						
TLY	Talaya	81.65	326	eP	P	02 18 37.6	-0.8
	comp=Z,22nm,0.9s						
TLY	Talaya	81.65	326	i P	P	02 18 37.3	-1.1
TLY	Talaya	81.65	326	P	P	02 18 37.8	-0.6
	comp=Z,2.8nm,0.8s,baz=152,slow=5.8,SNR=6.7						
RDOG	Red Dog Mine	81.66	11	eP	P	02 18 38.2	+0.2
	comp=Z,15nm,0.8s						
MCK	McKinley	81.82	19	eP	P	02 18 44.2	+5.3
	comp=Z,64nm,1.5s						
MCK	McKinley	81.82	19	eP	P	02 18 44.2	+5.2
MCK				pmax	pmax		
	comp=Z,64nm,1.5s						
IM3	Indian Mountai	82.08	16	eP	P	02 18 38.9	-1.3
HARP	HAARP	82.17	21	eP	P	02 18 42.5	+1.7
	comp=Z,34nm,1.0s						
MDM	Murphy Dome	82.90	18	eP	P	02 18 45.8	+1.2
	comp=Z,12nm,1.0s						
HDA	Harding Lake	82.92	19	eP	P	02 18 43.6	-1.1
	comp=Z,22nm,0.9s						
HDA	Harding Lake	82.92	19	P	P	02 18 43.4	-1.2
	baz=227						
COLA	College	82.96	18	i P	P	02 18 42.6	-2.2
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RIDG	Independ'e Rid	83.16	20	eP	P	02 18 51.5	+5.5
	comp=Z,35nm,1.2s						
IL1	Eielson Array	83.19	19	eP	P	02 18 44.0	-2.0
ILAR	Eielson Array	83.19	19	P	P	02 18 45.3	-0.8
ILAR	Eielson Array	83.19	19	P	P	02 18 45.3	-0.8
ILAR	Eielson Array	83.19	19	P	P	02 18 45.3	-0.8
	comp=Z,3.6nm,0.8s,baz=233,slow=5.9,SNR=11						
ILB	Eielson Array	83.19	19	eP	P	02 18 46.4	+0.3
POKR	Poker Plat Res	83.25	18	P	P	02 18 44.7	-1.8
	baz=226						
N02D	Trinity Center	83.50	46	P	P	02 18 48.3	0.0
	baz=250						
M02C	Callahan	83.54	46	P	P	02 18 48.9	+0.4
	baz=250						
SCRK	Sand Creek	83.60	20	eP	P	02 18 50.0	+1.6
	comp=Z,16nm,0.9s						
YBH	Yreka Blue Hor	83.75	46	eP	P	02 18 54.8	+5.2
	comp=Z,17nm,1.1s						
HUMO	Hull Mountain	83.89	45	eP	P	02 18 51.6	+1.4
	comp=Z,20nm,1.0s						
ORV	Oroville	83.89	48	eP	P	02 18 51.3	+1.0
	comp=Z,6.6nm,0.9s						
ORV	Oroville	83.89	48	eP	P	02 18 51.3	+1.0
ORV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AFDM	Forest Hills D	84.09	49	eP	P	02 18 52.5	+1.2
	comp=Z,13nm,1.0s						
HYT	Haines Junctio	84.09	24	eP	P	02 18 52.9	+1.9
	comp=Z,9.5nm,1.1s						
CMB	Columbia Colle	84.24	50	eP	P	02 18 52.9	+0.8
	comp=Z,12nm,1.1s						
CMB	Columbia Colle	84.24	50	eP	P	02 18 52.9	+0.8
CMB				pmax	pmax		
	comp=Z,12nm,1.1s						
M04C	Macdoel	84.39	46	P	P	02 18 54.2	+1.3
	baz=250						
KNGR	Kungurtug, Tuv	84.64	324	i P	P	02 18 52.4	-1.5
ISA	Isabella, Lake	84.99	52	eP	P	02 18 59.9	+3.9
	comp=Z,3.7nm,0.9s						
MAW	Mawson	85.03	202	eP	P	02 18 55.9	+0.5
	comp=Z,30nm,1.4s						
MAW	Mawson	85.03	202	eP	P	02 18 55.9	+0.5
MAW				pmax	pmax		
	comp=Z,30nm,1.4s						
MAW	Mawson	85.03	202	P	P	02 18 55.9	+0.5
	comp=Z,21nm,0.9s,baz=96,slow=10,SNR=3.3						
WAKR	Walker	85.09	50	eP	P	02 19 02.2	+5.6
	comp=Z,44nm,1.5s						
MDPB	Devils Postpil	85.10	50	eP	P	02 18 58.1	+1.3
	comp=Z,18nm,1.1s						
EDW2	Edwards Air Fo	85.14	53	P	P	02 18 56.7	-0.1
	baz=254						
BFSC	Mount Baldy Ra	85.23	54	P	P	02 18 59.2	+1.9
	baz=254						
DAWY	Dawson	85.24	21	eP	P	02 18 58.0	+1.4
	comp=Z,19nm,1.1s						
J05D	Fort Rock, OR	85.30	45	P	P	02 18 57.8	+0.3
	baz=251						
PAHR	Pah Rah Range	85.49	48	eP	P	02 19 04.0	+5.4
	comp=Z,13nm,1.2s						
MOD	Modoc Plateau	85.51	46	eP	P	02 18 59.7	+1.1
	comp=Z,8.8nm,0.9s						
CWC	Cottonwood Cre	85.52	52	P	P	02 18 59.1	+0.3
	baz=253						
LRMC	Laurel Mtn Rad	85.56	53	P	P	02 18 58.5	-0.4
	baz=254						
TIN	Tinemaha, Big	85.58	51	P	P	02 18 57.9	-1.1
	baz=253						
TIXI	Tiksi	85.64	349	eP	P	02 18 58.6	+0.3
TIXI	Tiksi	85.64	349	ceP	P	02 18 56.2	-2.1
TIXI				pmax	pmax		
	comp=Z,31nm,2.5s						
TIXI	Tiksi	85.64	349	P	P	02 18 58.6	+0.3
	comp=Z,4.9nm,0.9s,baz=67,slow=3.7,SNR=3.7						
RYN	Ryan	85.81	50	eP	P	02 19 04.6	+4.4
	comp=Z,3.6nm,0.9s						
DAC	Darwin (Calif)	85.85	52	eP	P	02 19 04.2	+3.8
	comp=Z,11nm,1.2s						
MPMC	Manual Prospec	85.87	52	P	P	02 19 02.2	+1.6
	baz=254						
G05D	Wamic, OR	85.89	43	P	P	02 19 01.1	+0.9
	baz=251						
NV01	Mina Array Sit	85.92	50	eP	P	02 18 59.5	-1.3
NVAR	Mina Array Bea	85.92	50	P	P	02 18 59.7	-1.1
NVAR	Mina Array Bea	85.92	50	P	P	02 18 59.7	-1.1

	comp=Z,2.5nm,0.9s,baz=232,slow=4.4,SNR=7.3						
PFO	Pinyon Flats O	86.02	55	eP	P	02 19 06.5	+5.2
	comp=Z,4.4nm,1.0s						
NV11	Mina Array Sit	86.03	50	eP	P	02 19 05.7	+4.4
	comp=Z,1.9nm,1.4s						
GSC	Goldstone, Bar	86.20	53	P	P	02 19 03.6	+1.6
	baz=254						
GRAC	Grapevine Rang	86.22	51	P	P	02 19 03.8	+1.7
	baz=254						
KVN	Kaiserville	86.25	49	eP	P	02 19 04.0	+1.6
	comp=Z,13nm,1.2s						
KVN	Kaiserville	86.25	49	eP	P	02 19 04.0	+1.6
KVN				pmax	pmax		
	comp=Z,13nm,1.2s						
SWSC	Sam W. Stewart	86.38	56	P	P	02 19 02.8	-0.1
	baz=255						
HEC	Hector,Ludlow	86.44	54	P	P	02 19 02.7	-0.5
	baz=255						
FURC	Furnace Creek,	86.47	52	P	P	02 19 04.9	+1.7
	baz=254						
BELC	Belle Mtn. Jos	86.49	55	P	P	02 19 03.2	-0.4
	baz=255						
SHOC	Shoshone, Teco	86.77	53	P	P	02 19 06.7	+1.9
	baz=254						
BC3	Big Chuckawall	86.84	55	P	P	02 19 07.5	+2.2
	baz=255						
GMRC	Granite Mounta	86.97	54	P	P	02 19 07.4	+1.5
	baz=255						
GLA	Glamis	87.20	56	eP	P	02 19 08.9	+2.0
	comp=Z,19nm,1.1s						
GLA	Glamis	87.20	56	eP	P	02 19 08.9	+2.0
GLA				pmax	pmax		
	comp=Z,19nm,1.1s						
IRM	Iron Mountain	87.22	55	P	P	02 19 06.9	-0.1
	baz=255						
J08A	Circle Bar Ran	87.24	45	eP	P	02 19 11.9	+4.9
	comp=Z,13nm,1.1s						
LDFC	Landfair	87.48	54	eP	P	02 19 12.4	+4.0
	comp=Z,37nm,1.1s						
G08A	Pilot Rock	87.49	43	eP	P	02 19 10.3	+2.1
	comp=Z,21nm,1.4s						
Y12C	Blythe	87.61	55	eP	P	02 19 13.0	+4.1
	comp=Z,25nm,1.4s						
E08A	Dider Farm, El	87.79	42	eP	P	02 19 15.6	+6.2
	comp=Z,22nm,1.3s						
SHPR	Sheep Range	87.80	52	eP	P	02 19 16.1	+6.2
	comp=Z,8.4nm,1.2s						
R11A	Troy Canyon, C	87.95	51	eP	P	02 19 14.8	+4.1
	comp=Z,15nm,1.4s						
R11A	Troy Canyon, C	87.95	51	P	P	02 19 11.8	+1.2
	baz=255						
D08A	Wollman Farm,	88.05	41	eP	P	02 19 17.2	+6.5
	comp=Z,21nm,1.4s						
PDMCI	Parker Dam,Lak	88.06	55	P	P	02 19 10.6	-0.4
	baz=256						
W13A	Hualapai Mount	88.46	54	eP	P	02 19 13.4	+0.3
	comp=Z,4.9nm,0.9s						
BMO	Blue Mountains	88.48	44	eP	P	02 19 19.1	+6.2
	comp=Z,5.7nm,0.9s						
BMO	Blue Mountains	88.48	44	eP	P	02 19 19.1	+6.2
BMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
214A	Organ Pipe Nat	88.59	57	P	P	02 19 15.4	+1.9
	baz=257						
WMQ	Urumqi	88.65	315	eP	P	02 19 12.7	-0.9
WMQ				pP	pP	02 19 19.6	-2.9
WMQ	Urumqi	88.65	315	SS	SS	02 35 47.6	-2.6
WMQ				pmax	pmax		
	comp=Z,72nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,117µm,11.5s						
WMQ				LR	LR		
	comp=N,52µm,31.7s						
WMQ				LR	LR		
	comp=E,150µm,31.7s						
WMQ				LR	LR		
	comp=Z,165µm,28.1s						
Y14A	Wickenburg	88.89	55	eP	P	02 19 19.1	+4.2
	comp=Z,9.3nm,1.4s						
LCMT	Little Creek M	89.42	52	eP	P	02 19 20.6	+3.1
	comp=Z,15nm,1.2s						
CCUT	Cedar City	89.45	52	eP	P	02 19 19.3	+1.5
	comp=Z,19nm,1.3s						
SZCU	Shurtz Canyon	89.68	52	eP	P	02 19 20.6	+1.8
	comp=Z,9.3nm,1.1s						
U15A	North Rim	90.03	53	eP	P	02 19 22.1	+1.5
	comp=Z,19nm,1.1s						
HLID	Hailey	90.14	46	eP	P	02 19 20.0	-0.8
	comp=Z,11nm,1.3s						
HLID	Hailey	90.14	46	P	P	02 19 19.6	-1.2
	baz=256						
PKCU	Pink Cliffs	90.24	52	eP	P	02 19 25.5	+3.9
	comp=Z,27nm,1.1s						
X16A	Lo Mia Camp, P	90.26	55	eP	P	02 19 26.2	+4.6
	comp=Z,15nm,1.0s						
TUC	Tucson	90.34	57	eP	P	02 19 25.7	+3.8
	comp=Z,7.2nm,1.0s						
TUC	Tucson	90.34	57	eP	P	02 19 25.7	+3.8
TUC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TCRU	Three Creeks R	90.40	51	eP	P	02 19 25.7	+3.5
	comp=Z,10nm,0.9s						
DGZ	Jazzator, Alta	90.44	321	i P	P	02 19 19.9	-2.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MTPU	Mount Pierson	90.47	51	eP	P	02 19 25.4	+2.7
	comp=Z,28nm,1.5s						
BGU	Big Grassy Mou	90.50	49	eP	P	02 19 24.9	+2.4
	comp=Z,19nm,1.5s						
WUAZ	Wupatki	90.55	54	eP	P	02 19 27.4	+4.5
	comp=Z,17nm,1.0s						
WUAZ	Wupatki	90.55	54	P	P	02 19 24.1	+1.2
	baz=257						
MSU	Marysvale	90.59	51	eP	P	02 19 26.1	+3.1
HVU	Hansel Valley	90.89	48	eP	P	02 19 25.9	+1.6
	comp=Z,19nm,1.3s						
HVU	Hansel Valley	90.89	48	eP	P	02 19 25.9	+1.6
HVU				pmax	pmax		
	comp=Z,19nm,1.3s						
NLU	North Lily Min	90.99	50	eP	P	02 19 26.4	+1.6
	comp=Z,6.6nm,1.0s						
SPUT	South Promonto	91.02	48	eP	P	02 19 27.8	+2.9
	comp=Z,10.0nm,1.5s						
MPU	Maple Canyon	91.33	50	eP	P	02 19 30.8	+4.3
	comp=Z,4.2nm,0.9s						
CTU	Camp Tracy	91.39	49	eP	P	02 19 29.9	+3.2
	comp=Z,9.4nm,1.1s						
Q16A	Castle Valley	91.44	51	eP	P	02 19 31.7	+4.7
	comp=Z,22nm,1.4s						
X18A	Snowflake	91.48	55	eP	P	02 19 32.9	+5.7
	comp=Z,17nm,1.3s						
TMUT	Trail Mountain	91.50	50	eP	P	02 19 31.2	+3.9
	comp=Z,12nm,1.2s						
JLU	Jordanelle	91.60	49	eP	P	02 19 31.8	+4.1
	comp=Z,24nm,1.4s						
HWUT	Hardware Ranch	91.73	48	eP	P	02 19 31.0	+2.7
	comp=Z,4.9nm,0.9s						
DLMT	Dillon	91.83	44	eP	P	02 19 28.9	+0.4
	comp=Z,22nm,1.2s						
SYO	Syowa Base	92.12	197	⇓eP	P	02 19 28.0	-1.3
SYO	Syowa Base	92.12	197	⇓isP	P	02 19 31.2	+1.9
BOZ	Bozeman (W)	92.55	44	eP	P	02 19 32.7	+0.8
	comp=Z,8.4nm,0.9s						
BOZ	Bozeman (W)	92.55	44	P	P	02 19 31.3	-0.6
	baz=258						
HRY	Holter Researc	92.65	43	eP	P	02 19 33.2	+0.9
MK01	Makanchi Array	93.06	317	eP	P	02 19 32.6	-1.4
MK31	Makanchi Array	93.07	317	eP	P	02 19 33.6	-0.5
MK32	Makanchi Array	93.07	317	eP	P	02 19 33.1	-0.9
MKAR	Makanchi Array	93.07	317	eP	P	02 19 33.2	-0.9
	comp=Z,36nm,0.9s						
MKAR	Makanchi Array	93.07	317	P	P	02 19 33.2	-0.9
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	93.07	317	P	P	02 19 33.1	-0.9
	comp=Z,3.8nm,0.8s,baz=98,slow=5.1,SNR=8.0						
ZALV	Zalesovo Beam	93.09	324	eP	P	02 19 31.6	-2.3
ZALV	Zalesovo Beam	93.09	324	eP	P	02 19 31.6	-2.3
ZALV	Zalesovo Beam	93.09	324	P	P	02 19 31.9	-2.0
	comp=Z,4.3nm,0.9s,baz=111,slow=3.3,SNR=7.3						
ZAA1	Zalesovo Array	93.09	324	eP	P	02 19 31.9	-2.0
BW06	Boulder Array	93.43	47	P	P	02 19 36.4	+0.2
	baz=259						
PD31	Pinedale Array	93.43	47	eP	P	02 19 35.9	-0.2
PDAR	Pinedale Array	93.43	47	eP	P	02 19 36.2	+0.1
PDAR	Pinedale Array	93.43	47	P	P	02 19 35.9	-0.2
	comp=Z,1.2nm,0.9s,baz=253,slow=1.5,SNR=4.5						
ANMO	Albuquerque	94.39	55	i P	P	02 19 37.1	-3.6
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YKA	Yellowknife Ar	94.70	27	P	P	02 19 38.6	-2.5
YKA	Yellowknife Ar	94.70	27	P	P	02 19 38.7	-2.5
YKA	Yellowknife Ar	94.70	27	P	P	02 19 38.6	-2.5
	comp=Z,1.2nm,0.9s,baz=259,slow=4.7,SNR=5.8						
YKB5	Yellowknife Ar	94.70	27	eP	P	02 19 38.6	-2.5
KURK	Kurchatov	96.18	320	eP	P	02 19 46.2	-2.0
KURK	Kurchatov	96.18	320	ceP	P	02 19 45.7	-2.5
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURBB	Kurchatov Arra	96.22	320	P	P	02 19 46.2	-2.2
	comp=Z,0.7nm,0.8s,baz=90,slow=4.0,SNR=4.3						
KSH	Kashi	96.32	309	P	P	02 19 52.0	+2.7
KSH				pmax	pmax		
	comp=Z,5µm,8.2s						
SNAA	Sanae	97.52	184	i P	Pdif	02 19 57.2	+3.1
VNA3	Neumayer Olymp	98.26	182	P	P	02 19 48.9	-8.4
VNA2	Neumayer--Watz	98.50	182	P	P	02 19 54.1	-4.3
EYMN	Ely	106.50	43	P	PKiKP	02 24 47.2	+2.0
	baz=272						
E38A	The Farm, Brul	106.51	44	P	PKiKP	02 24 48.1	+2.8
	baz=272						
ARA0	ARCESS Array S	115.87	345	ePKPdf	PKiKP	02 25 00.1	-2.2
ARCES	ARCESS Array B	115.87	345	PKP	PKiKP	02 25 00.1	-2.2
ARCES	ARCESS Array B	115.87	345	PKP	PKiKP	02 25 00.1	-2.2
	comp=Z,4.2nm,0.8s,baz=67,slow=1.6,SNR=7.0						
FIA0	FINESS Array S	121.30	339	ePKPdf	PKPdf	02 25 10.8	-2.1
FINES	FINESS Array B	121.30	339	PKP	PKPdf	02 25 10.8	-2.1
FINES	FINESS Array B	121.30	339	PKP	PKPdf	02 25 10.8	-2.1
	comp=Z,4.1nm,0.9s,baz=318,slow=2.6,SNR=3.6						
CPUP	Villa Florida	124.47	132	ePKPdf	PKPdf	02 25 18.0	-2.1
CPUP	Villa Florida	124.47	132	PKP	PKPdf	02 25 18.0	-2.1
	comp=Z,1.2nm,0.7s,baz=213,slow=1.6,SNR=3.0						
SDV	Santo Domingo	124.69	87	ePKPdf	PKiKP	02 25 23.3	+1.9
BOSA	Boshof	125.27	224	ePKPdf	PKPdf	02 25 20.9	-1.0
BOSA	Boshof	125.27	224	PKP	PKPdf	02 25 20.9	-1.0
	comp=Z,4.0nm,0.7s,baz=222,slow=1.4,SNR=7.8						
NB2	NORSAR Subarra	126.24	345	PKPdf	PKPdf	02 25 21.4	-1.1
	comp=Z,0.9nm,0.8s,baz=33,slow=1.9						
NB200	NORSAR Array S	126.24	345	ePKPdf	PKPdf	02 25 21.4	-1.1
NOA	NORSAR Array B	126.24	345	PKP	PKPdf	02 25 21.4	-1.1
NOA	NORSAR Array B	126.24	345	PKP	PKPdf	02 25 21.4	-1.1
	comp=Z,1.3nm,0.8s,baz=36,slow=2.0,SNR=4.9						
VYHS	Vyhne	133.10	330	ePP	PP	02 28 06.0	+4.2
CLL	Collm	133.63	336	ePKPdf	PKiKP	02 25 40.0	+2.0
GEC2	GERESS Array S	135.23	334	ePKPdf	PKPdf	02 25 40.7	+0.7
GERES	GERESS Array B	135.23	334	PKP	PKPdf	02 25 40.7	+0.7
GERES	GERESS Array B	135.23	334	PKP	PKPdf	02 25 40.7	+0.7
	comp=Z,1.6nm,0.9s,baz=90,slow=1.5,SNR=4.3						
HGN	Heimansgroeve	136.60	341	eL	L	02 25 32.3	
	comp=Z,28µm,21.2s						
KEST	Kesra	146.95	323	ePKPdf	PKPbc	02 26 02.8	-0.5
KEST	Kesra	146.95	323	PKPbc	PKPbc	02 26 02.8	-0.5
	comp=Z,9.7nm,0.9s,baz=296,slow=2.2,SNR=4.3						
ESDC	Sonseca Array	149.59	344	ePKPdf	PKPdf	02 26 07.3	+1.8
ESDC	Sonseca Array	149.59	344	PKPbc	PKPdf	02 26 07.3	+1.8
	comp=Z,1.3nm,0.8s,baz=19,slow=2.6,SNR=3.1						
TORD	Torodi Ar. Bea	163.98	281	PKP	PKPdf	02 26 21.8	-2.7
TORD	Torodi Ar. Bea	163.98	281	PKP	PKPdf	02 26 21.8	-2.7
	comp=Z,2.8nm,1.2s,baz=196,slow=1.0,SNR=2.7						
TOA1	Torodi Ar. Sit	163.98	281	ePKPdf	PKPdf	02 26 21.8	-2.7

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*IDC **06** 02:07:23.8±1.4, 10°.57S×165°.53E, h0^{km}, mb4.6/8, mb1 4.9/9, mb1mx4.5/40, mbtmp4.7/9, ML5.3/1, Error ellipse: s-maj=50.0km s-min=36.2km az=80.0*

*ISCJB **06** 02:07:26.5±0.8, 10°.7S±0°.1×165°.5E±0°.3, h31^{km}, mb4.6/8, Error ellipse: s-maj=42.0km s-min=17.1km az=177.3*

ISC 06 02:07:28.4±0.9**, 10°.6S**±0°.1×**165°.5E**±0°.3**, h31**^{km}**, n9, σ0^{s}83**/9**, mb4.6**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.43	176	Pn	Pn	02 10 09.8	+0.1
	20nm,0.3s,baz=344,slow=18,SNR=3.3						
PETK	Petropavlovsk-	63.82	355	P	P	02 17 58.1	+0.6
	5.4nm,0.7s,baz=132,slow=8.0,SNR=3.4						
KDAK	Kodiak Island	76.26	22	P	P	02 19 13.9	+0.2
	11nm,1.0s,baz=162,slow=3.2,SNR=8.0						
SONM	Songino Array	78.19	324	P	P	02 19 25.4	+0.4
	4.8nm,0.8s,baz=137,slow=6.8,SNR=4.8						
ILAR	Eielson Array	83.17	19	P	P	02 19 52.0	+0.8
	2.7nm,0.5s,baz=228,slow=5.1,SNR=6.9						
NVAR	Mina Array Bea	85.91	50	P	P	02 20 06.6	+0.8
	5.9nm,1.0s,baz=231,slow=7.2,SNR=3.6						
ZALV	Zalesovo Beam	93.08	324	P	P	02 20 38.3	-0.8
	1.1nm,0.6s,baz=137,slow=4.2,SNR=2.2						
PDAR	Pinedale Array	93.42	47	P	P	02 20 40.4	-0.8
	2.6nm,1.0s,baz=251,slow=2.5,SNR=3.4						
YKA	Yellowknife Ar	94.69	27	P	P	02 20 45.1	-1.1
	1.6nm,0.8s,baz=254,slow=4.6,SNR=5.3						

MEX 06 02:07:54.5±0.5**, 27°.35N×111°.20W, h10**^{km}**, MD3.7, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUYB	Guaymas	0.62	28	eP	Pg	02 08 05.2	-1.3
GUYB				i S	Sg	02 08 13.5	-1.3
SRIG	Santa Rosalia	0.93	269	eP	Pg	02 08 09.5	-2.8
HSIG		1.68	8	eP	Pn	02 08 21.3	-2.7

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*IDC **06** 02:09:16.7±1.7, 11°.67S×165°.26E, h0^{km}, mb4.3/8, mb1 4.5/8, mb1mx4.2/36, mbtmp4.2/8, Error ellipse: s-maj=70.4km s-min=24.9km az=145.0*

*ISCJB **06** 02:09:18.8±1.6, 11°.8S±0°.4×165°.2E±0°.3, h24^{km}, mb4.2/8, Error ellipse: s-maj=65.4km s-min=21.4km az=144.0*

ISC 06 02:09:20.4±1.7**, 11°.7S**±0°.4×**165°.3E**±0°.3**, h24**^{km}**, n8, σ1^{s}23**/8**, mb4.3**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.82	251	P	P	02 15 34.6	-0.2
	4.3nm,0.8s,baz=81,slow=9.2,SNR=4.2						
ASAR	Alice Springs	32.08	244	P	P	02 15 45.9	0.0
	6.1nm,0.8s,baz=72,slow=7.2,SNR=4.4						
SONM	Songino Array	78.90	324	P	P	02 21 23.3	+1.3
	0.9nm,0.9s,baz=142,slow=7.3,SNR=2.1						
ILAR	Eielson Array	84.27	19	P	P	02 21 49.6	-0.2
	1.2nm,0.5s,baz=240,slow=4.6,SNR=4.4						
NVAR	Mina Array Bea	86.80	50	P	P	02 22 04.7	+1.4
	1.4nm,0.8s,baz=234,slow=8.4,SNR=4.1						
MKAR	Makanchi Array	93.66	317	P	P	02 22 35.1	+0.1
	1.0nm,0.6s,baz=95,slow=7.2,SNR=3.1						
ZALV	Zalesovo Beam	93.80	324	P	P	02 22 34.4	-1.0
	0.9nm,0.6s,baz=103,slow=3.1,SNR=3.2						
YKA	Yellowknife Ar	95.76	27	P	P	02 22 42.5	-1.7
	0.4nm,0.7s,baz=252,slow=4.5,SNR=3.5						

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*ISCJB **06** 02:09:31.1±1.0, 19°.64S±0°.06×67°.1W±0°.2, h302^{km}±21^{km}, Error ellipse: s-maj=29.4km s-min=9.5km az=2.4*

*GUC **06** 02:09:31.3±0.6, 19°.44S×66°.98W, h274^{km}±7^{km}, ML3.9*

*SJA **06** 02:09:46.5±0.4, 21°.57S×68°.28W, h424^{km}±79^{km}, ML4.1, MW3.5*

ISC 06 02:09:29.8±2.0**, 19°.59S**±0°.08×**67°.0W**±0°.2**, h301**^{km}±29^{km}**, n15, σ1^{s}68**/26**, 7C-2D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	2.09	254	⇑iP	Pn	02 10 19.1	+1.3
PB08				i S	S	02 10 56.0	-0.1
PB08				IAML		02 11 00.8	
	comp=N,131nm,0.6s						
MNMC	Minye Minye	2.48	280	⇑iP	Pn	02 10 22.4	+1.3
MNMC				i S	S	02 11 00.2	-1.8
MNMC				IAML		02 11 07.7	
	comp=N,173nm,0.3s						
PB11	IPOC Station P	2.50	266	⇑iP	Pn	02 10 22.2	+1.1
PB11				i S	S	02 11 01.3	-0.7
PB11				IAML		02 11 08.9	
	comp=N,191nm,0.4s						
PB01	IPOC Station P	2.74	238	eP	Pn	02 10 25.4	+2.2
PB01				i S	S	02 11 04.2	-1.7
PSGC	Pisagua	2.94	269	⇑iP	Pn	02 10 26.2	+1.1
PSGC				i S	S	02 11 08.4	-0.9
PB09	IPOC Station P	3.04	223	⇓iP	Pn	02 10 27.6	+1.5
PB09				i S	S	02 11 11.2	0.0
PB02	IPOC Station P	3.21	237	eP	Pn	02 10 30.2	+2.4
PB02				i S	S	02 11 13.1	-1.1
PB12	IPOC Station P	3.28	287	⇑iP	Pn	02 10 30.2	+1.6
PB12				i S	S	02 11 14.8	-0.9
PB07	IPOC Station P	3.44	231	⇑iP	Pn	02 10 32.3	+2.1
PB07				i S	S	02 11 16.3	-2.2
LPAZ	La Paz	3.45	342	eP	Pn	02 10 32.0	+1.1
LPAZ				i S	S	02 11 17.5	-2.3
PB03	IPOC Station P	3.55	226	⇓iP	Pn	02 10 33.2	+1.8
PB03				i S	S	02 11 18.4	-2.2
PB06	IPOC Station P	3.92	217	⇑iP	Pn	02 10 36.8	+1.5
CYA	Choya	8.89	173	i P	Pn	02 11 35.6	+1.3
CYA				IAML		02 11 35.6	
	comp=Z,7.3nm,0.5s						
ACLC	CERRO LA CRUZ	9.80	180	i P	Pn	02 11 43.9	-1.7
ACLC				i S	S	02 13 11.1	-25
APLL	PUNTA DE LOS L	10.77	178	i P	Pn	02 11 56.2	-1.2
APLL				IAML		02 11 58.2	
	comp=Z,11nm,0.5s						
APLL				i S	S	02 13 31.5	-27

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*IDC **06** 02:11:01.1±0.6, 11°.52S×165°.40E, h0^{km}, mb4.7/23, mb1 4.8/25, mb1mx4.7/39, mbtmp4.7/25, ML4.7/2, Error ellipse: s-maj=18.2km s-min=13.8km az=115.0*

*ISCJB **06** 02:11:03.0±0.2, 11°.60S±0°.04×165°.25E±0°.04, h24^{km}, mb4.7/39, Error ellipse: s-maj=6.2km s-min=5.3km az=148.3*

*NEIC **06** 02:11:02.5±0.2, 11°.57S×165°.39E, h10^{km}, mb5.0/20, Error ellipse: s-maj=6.8km s-min=5.1km az=94.0*

ISC 06 02:11:04.1±0.4**, 11°.58S**±0°.07×**165°.39E**±0°.07**, h24**^{km}**, n123, σ1^{s}25**/123**, mb4.7**/39**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.76	291	Pn	Pn	02 12 27.9	-0.3
	37nm,0.3s,baz=162,slow=19,SNR=2.7						
HNR				Sn	Sn	02 13 30.6	-3.0
	40nm,0.3s,baz=333,slow=18,SNR=3.1						
DZM	Mont Dzumac	10.48	175	Pn	Pn	02 13 34.2	+1.1
	4.2nm,0.3s,baz=348,slow=20,SNR=3.4						
EIDS	Eidsvold	19.27	223	eP	Pn	02 15 28.2	-0.1
CTA	Charters Tower	20.25	243	P	Pn	02 15 39.6	-0.3
	35nm,0.9s,baz=90,slow=20,SNR=3.1						
COEN	Coen	21.80	261	eP	P	02 15 50.7	-3.9
	27nm,0.9s						
ARMA	Armidale	22.69	212	eP	P	02 16 04.5	+0.3
	42nm,1.0s						
KNTN	Kanton	24.31	71	eP	P	02 16 15.2	-4.9
	78nm,0.9s						
OUZ	Omahuta	24.69	164	eP	P	02 16 20.3	-3.0
	24nm,1.2s						
NIUE	Niue	24.92	110	eP	P	02 16 21.4	-4.3
	265nm,1.3s						
URZ	Urewera	28.56	160	P	P	02 16 59.6	+1.4
	12nm,0.9s,baz=342,slow=13,SNR=3.9						
BKZ	Black Stump Fm	29.20	162	eP	P	02 17 04.5	+0.7
	9.8nm,0.7s						
STKA	Stephens Creek	29.82	224	P	P	02 17 10.4	+1.0
	7.0nm,0.8s,baz=51,slow=11,SNR=3.3						
BFZ	Birch Farm	30.53	164	eP	P	02 17 17.3	+1.7
	24nm,0.8s						
THZ	Tophouse	30.78	169	eP	P	02 17 18.5	+0.6
WRAB	Tennant Creek	30.97	251	eP	P	02 17 19.4	-0.3
	4.3nm,0.5s						
WR1	Warramunga Arr	30.98	251	eP	P	02 17 20.3	+0.4
	30nm,1.4s						
WRA	Warramunga Arr	30.98	251	P	P	02 17 20.3	+0.4
	28nm,0.8s,baz=82,slow=9.0,SNR=15						
KHZ	Kahutara	31.54	168	eP	P	02 17 26.1	+1.7
	70nm,1.5s						
FOZ	Fox Glacier	32.07	174	eP	P	02 17 29.3	+0.2
	23nm,1.0s						
AS31	Alice Springs	32.24	244	eP	P	02 17 30.3	-0.7
	4.2nm,1.4s						
ASAR	Alice Springs	32.25	244	P	P	02 17 30.3	-0.7
	7.8nm,0.9s,baz=73,slow=9.6,SNR=5.3						
RPZ	Rata Peaks	32.39	172	eP	P	02 17 29.8	-2.2
LBZ	Lake Benmore	32.95	174	eP	P	02 17 34.9	-2.0
MTN	Manton Dam	33.49	264	eP	P	02 17 42.4	+0.4
MLZ	Mavora Lakes	33.75	177	eP	P	02 17 42.5	-1.3
	9.4nm,1.0s						
FITZ	Fitzroy Crossi	38.91	256	P	P	02 18 27.7	-0.6
	8.0nm,1.0s,baz=123,slow=8.5,SNR=5.4						
NWAO	Narrogin (SRO)	48.88	236	P	P	02 19 49.0	+0.7
	15nm,1.0s,baz=18,slow=6.4,SNR=3.7						
MORW	Morawa	49.07	242	eP	P	02 19 49.7	0.0
	10nm,0.8s						
LPH	Laupahoehoe	49.73	51	eP	P	02 19 55.6	+0.8
MJAR	Matsushiro Arr	54.28	333	P	P	02 20 27.7	-0.7
	4.1nm,0.8s,baz=171,slow=9.0,SNR=7.7						
MAJO	Matsushiro	54.28	333	eP	P	02 20 27.7	-0.7
JNU	Nakatsue	55.31	325	eP	P	02 20 36.0	0.0
	11nm,0.8s						
JNU	Nakatsue	55.31	325	P	P	02 20 36.0	0.0
	7.4nm,0.8s,baz=76,slow=4.2,SNR=5.3						
ASAJ	Asahikawa	59.18	341	P	P	02 21 04.0	+0.9
	13nm,0.7s,baz=209,slow=11,SNR=6.4						
KSRS	Korea Array	60.12	326	P	P	02 21 10.3	+0.7
	2.4nm,0.7s,baz=135,slow=6.5,SNR=5.8						
KS15	Wonju Array Si	60.13	326	eP	P	02 21 10.3	+0.6
	33nm,1.4s						
KSAR	Wonju Array Be	60.13	326	P	P	02 21 10.3	+0.6
USRK	Ussuriysk Ar.	63.27	334	P	P	02 21 31.9	+1.2
	5.5nm,0.7s,baz=132,slow=6.4,SNR=12						
PETK	Petropavlovsk-	64.76	355	P	P	02 21 40.5	+0.1
	4.2nm,0.8s,baz=172,slow=4.5,SNR=4.3						
PEA1	Petropavlovsk-	64.77	355	eP	P	02 21 40.5	+0.1
KLR	Kul'dur	67.41	337	P	P	02 21 58.4	+0.9
	baz=130,slow=7.6						
CM31	Chiang Mai Arr	72.01	294	eP	P	02 22 28.2	+1.7
	7.4nm,0.8s						
CMAR	Chiang Mai Arr	72.01	294	P	P	02 22 28.2	+1.7
	2.8nm,0.6s,baz=129,slow=4.9,SNR=6.9						
KDAK	Kodiak Island	77.20	22	eP	P	02 22 56.1	+0.3
	26nm,1.1s						
KDAK	Kodiak Island	77.20	22	P	P	02 22 56.1	+0.3
	13nm,0.9s,baz=220,slow=4.1,SNR=7.1						
SONA0	Songino Array	78.89	324	eP	P	02 23 06.5	+0.9
SONM	Songino Array	78.89	324	P	P	02 23 06.5	+0.9
	2.6nm,0.9s,baz=127,slow=5.7,SNR=5.8						
TLY	Talaya	82.37	326	P	P	02 23 24.5	+0.4
	0.9nm,0.6s,baz=194,slow=12,SNR=2.8						
HDA	Harding Lake	83.86	19	P	P	02 23 31.9	+0.5
	baz=227						
TCOL	CIGO, UAF Yank	83.89	18	P	P	02 23 31.8	+0.3
	baz=226						
O02D	Mt. Diablo Mer	83.91	47	P	P	02 23 33.6	+1.2
	baz=249						
ILAR	Eielson Array	84.12	19	P	P	02 23 33.0	+0.3
	6.7nm,0.6s,baz=236,slow=5.2,SNR=26						
ILB	Eielson Array	84.12	19	eP	P	02 23 33.0	+0.3
	6.6nm,0.7s						
K02D	Willamette Mer	84.19	44	P	P	02 23 34.7	+0.9
	baz=248						
POKR	Poker Plat Res	84.19	18	P	P	02 23 32.9	-0.2
	baz=226						
N02D	Trinity Center	84.25	46	P	P	02 23 35.4	+1.4
	baz=249						
M02C	Callahan	84.29	46	P	P	02 23 35.6	+1.3
	baz=249						
SBC	Santa Barbara	84.33	53	P	P	02 23 36.3	+1.8
	baz=252						
O03E	Paynes Creek	84.66	47	P	P	02 23 36.6	+0.5
	baz=250						
L04D	Klamath Falls	84.96	45	P	P	02 23 38.6	+0.9
	baz=250						
M04C	Macdoel	85.14	46	P	P	02 23 39.7	+1.1
	baz=250						
I04A	Tendick Farm,	85.44	44	P	P	02 23 40.4	+0.4
	baz=249						
ISA	Isabella, Lake	85.67	52	P	P	02 23 42.0	+0.7
	baz=252						
EDW2	Edwards Air Fo	85.81	53	P	P	02 23 43.0	+0.9
	baz=253						
J05D	Fort Rock, OR	86.07	45	P	P	02 23 44.4	+1.2
	baz=250						
CWC	Cottonwood Cre	86.21	52	P	P	02 23 44.5	+0.4
	baz=253						
LRMC	Laurel Mtn Rad	86.23	53	P	P	02 23 44.8	+0.6
	baz=253						
TIN	Tinemaha, Big	86.27	51	P	P	02 23 45.2	+0.9
	baz=253						
MONP2	Monument Peak	86.50	56	P	P	02 23 45.9	+0.3
	baz=254						
MPMC	Manual Prospec	86.55	52	P	P	02 23 46.3	+0.5
	baz=253						
NV01	Mina Array Sit	86.63	50	eP	P	02 23 46.8	+0.7

NVAR	Mina Array Bea	86.63	50	P	P	02 23 46.8	+0.7
	8.2nm,0.9s,baz=232,slow=8.8,SNR=12						
TPFO	Pinon Flats	86.67	55	P	P	02 23 46.5	+0.1
	baz=254						
GSC	Goldstone, Bar	86.87	53	P	P	02 23 47.7	+0.5
	baz=254						
GRAC	Grapevine Rang	86.92	51	P	P	02 23 48.2	+0.8
	baz=253						
SWSC	Sam W. Stewart	87.02	56	P	P	02 23 48.7	+0.8
	baz=254						
HEC	Hector,Ludlow	87.11	54	P	P	02 23 49.0	+0.6
	baz=254						
BELC	Belle Mtn. Jos	87.15	55	P	P	02 23 49.6	+0.9
	baz=254						
FURC	Furnace Creek,	87.15	52	P	P	02 23 49.4	+1.0
	baz=253						
B05A	Bryant	87.22	40	P	P	02 23 49.5	+1.0
	baz=249						
SHOC	Shoshone, Teco	87.45	53	P	P	02 23 50.5	+0.6
	baz=254						
BC3	Big Chuckawall	87.49	55	P	P	02 23 51.3	+0.9
	baz=254						
TUQ	Turquoise Moun	87.60	53	P	P	02 23 51.7	+0.9
	baz=254						
GMRC	Granite Mounta	87.63	54	P	P	02 23 51.7	+0.7
	baz=254						
GLA	Glamis	87.83	56	P	P	02 23 53.0	+1.2
	baz=255						
IRM	Iron Mountain	87.87	55	P	P	02 23 53.1	+1.0
	baz=254						
Y12C	Blythe	88.26	55	P	P	02 23 55.0	+1.1
	baz=255						
R11A	Troy Canyon, C	88.65	51	P	P	02 23 56.7	+0.9
	baz=254						
PDMCI	Parker Dam,Lak	88.71	55	P	P	02 23 57.0	+1.0
	baz=255						
NEW	Newport	90.37	41	P	P	02 24 03.9	+0.4
	baz=253						
HLID	Hailey	90.89	46	P	P	02 24 07.4	+1.2
	baz=255						
TCRU	Three Creeks R	91.10	51	*e*P	P	02 24 09.5	+2.1
	14nm,0.8s						
DUG	Dugway, Tooele	91.21	49	P	P	02 24 08.7	+1.0
	baz=256						
WUAZ	Wupatki	91.21	54	P	P	02 24 09.1	+1.3
	baz=257						
MSO	Missoula	92.05	43	P	P	02 24 11.7	+0.3
	baz=255						
MK32	Makanchi Array	93.67	317	*e*P	P	02 24 19.6	+0.9
MKAR	Makanchi Array	93.67	317	P	P	02 24 19.6	+0.9
	1.9nm,0.7s,baz=92,slow=6.7,SNR=4.4						
ZALV	Zalesovo Beam	93.78	324	P	P	02 24 18.9	-0.2
	1.9nm,0.8s,baz=90,slow=3.1,SNR=3.2						
H17A	Grant Village	93.78	46	P	P	02 24 21.7	+2.0
	baz=258						
ZAA1	Zalesovo Array	93.78	324	*e*P	P	02 24 18.9	-0.2
BW06	Boulder Array	94.17	47	P	P	02 24 22.0	+0.5
	baz=258						
PD31	Pinedale Array	94.17	47	*e*P	P	02 24 21.2	-0.2
PDAR	Pinedale Array	94.17	47	P	P	02 24 21.2	-0.2
	2.1nm,0.9s,baz=242,slow=2.9,SNR=5.3						
EGMT	Eagleton	95.09	42	P	P	02 24 25.6	+0.3
	baz=258						
YKA	Yellowknife Ar	95.60	27	P	P	02 24 26.2	-1.0
	2.0nm,0.8s,baz=257,slow=4.7,SNR=12						
YKB5	Yellowknife Ar	95.60	27	*e*P	P	02 24 26.2	-1.0
CLNB	Carlsbad	96.69	59	*e*P	P	02 24 29.2	-3.8
ARA0	ARCESS Array S	116.76	345	*e*PKPdf	PKiKP	02 29 47.0	+1.1
ARCES	ARCESS Array B	116.76	345	PKP	PKiKP	02 29 47.0	+1.1
	1.2nm,0.6s,baz=82,slow=2.2,SNR=8.3						
FIA0	FINESS Array S	122.14	338	*e*PKPdf	PKiKP	02 29 57.8	+1.2
FINES	FINESS Array B	122.14	338	PKP	PKiKP	02 29 57.8	+1.2
	1.7nm,0.8s,baz=149,slow=4.0,SNR=4.1						
CPUP	Villa Florida	123.92	133	PKP	PKiKP	02 30 01.8	+0.5
	6.2nm,1.1s,baz=210,slow=1.1,SNR=5.1						
BOSA	Boshof	124.49	223	PKP	PKiKP	02 30 03.8	+1.2
	1.4nm,0.6s,baz=187,slow=5.4,SNR=3.7						
NB2	NORSAR Subarra	127.12	345	PKPdf	PKiKP	02 30 07.7	+1.1
	comp=Z,0.6nm,0.7s,baz=31,slow=1.9						
NB200	NORSAR Array S	127.12	345	*e*PKPdf	PKiKP	02 30 06.8	+0.1
NOA	NORSAR Array B	127.12	345	PKP	PKiKP	02 30 06.8	+0.1
	comp=Z,1.0nm,0.7s,baz=37,slow=2.1,SNR=3.7						
CLL	Collm	134.45	336	*e*PKPdf	PKiKP	02 30 21.0	-0.6
GEC2	GERESS Array S	136.02	333	*e*PKPdf	PKiKP	02 30 25.6	+0.6
GERES	GERESS Array B	136.02	333	PKP	PKiKP	02 30 25.6	+0.6
	comp=Z,1.4nm,0.9s,baz=0.0,slow=3.1,SNR=4.8						
BDFB	Brasilia	137.28	129	PKP	PKPdf	02 30 27.2	+0.5
	comp=Z,3.9nm,1.0s,baz=255,slow=5.3,SNR=3.3						
KEST	Kesra	147.62	322	PKPbc	PKiKP	02 30 48.2	-1.0
	comp=Z,13nm,0.8s,baz=301,slow=2.7,SNR=12						
ES19	SONSECA Array	150.42	343	*e*PKPbc	PKiKP	02 30 55.5	+0.6
ESDC	Sonseca Array	150.47	343	PKPbc	PKiKP	02 30 55.2	+0.3
	comp=Z,3.4nm,0.8s,baz=40,slow=1.9,SNR=9.6						

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*IDC **06** 02:11:20.8±7.0, 36.°57N×71.°06E, h97^{km}±33^{km}, mb3.4/3, mb1 3.5/8, mb1mx3.3/74, mbtmp3.8/8, Error ellipse: s-maj=94.2km s-min=27.8km az=159.0*

*NNC **06** 02:11:24.2±4.5, 37.°05N×70.°95E, h0^{km}, mb4.3, mpv3.8, Error ellipse: s-maj=47.1km s-min=30.6km az=139.0*

ISC 06 02:11:21.6±1.9, 36.°6N±0.°2×70.°94E±0.°10, h100^{km}, n11, σ1^{s}.14/16, 4C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.93	30	⇓P	Pn	02 12 21.3	+1.2
	1.9nm,0.2s						
SFK				⇑S	Sn	02 13 06.0	+0.6
	6.4nm,0.2s						
KK31	Karatay Array	6.47	357	P	Pn	02 12 55.6	+1.3
	2.2nm,0.2s,baz=179,slow=13,SNR=376						
KK31				⇑S	Sn	02 14 06.7	0.0
	2.8nm,0.3s,baz=190,slow=26,SNR=5.9						
AAK	Ala-Archa	6.60	23	⇑P	Pn	02 12 56.1	0.0
	6.8nm,0.4s						
AAK				⇑S	Sn	02 14 08.6	-1.3
	6.6nm,0.5s						
AAK	Ala-Archa	6.60	23	P	Pn	02 12 56.6	+0.5
	4.1nm,0.3s,baz=176,slow=5.5,SNR=43						
AAK				S	Sn	02 14 07.5	-2.4
	1.2nm,0.3s,baz=336,slow=21,SNR=11						
GEYT	Alibeck	10.30	281	P	Pn	02 13 45.8	-0.6
	0.4nm,0.3s,baz=84,slow=10,SNR=4.8						
GEYT				S	Sn	02 15 39.0	-0.9
	0.3nm,0.3s,baz=321,slow=31,SNR=2.5						
KURBB	Kurchatov Arra	15.02	19	P	Pn	02 14 48.8	+0.5
	0.0nm,0.3s,baz=204,slow=10,SNR=2.2						
AKTO	Aktyubinsk	16.65	330	P	P	02 15 10.2	+0.9
	0.3nm,0.3s,baz=144,slow=9.6,SNR=5.0						
ZALV	Zalesovo Beam	19.82	25	P	P	02 15 42.3	-1.7
	0.4nm,0.3s,baz=207,slow=11,SNR=5.5						
HFS	Hagfors	42.94	322	P	P	02 19 10.7	+0.5
	3.2nm,1.0s,baz=105,slow=11,SNR=2.8						
NOA	NORSAR Array B	44.25	323	P	P	02 19 21.3	+0.5
	0.9nm,0.9s,baz=100,slow=7.8,SNR=2.5						
YKA	Yellowknife Ar	81.12	3	P	P	02 23 25.2	-0.2
	0.1nm,0.4s,baz=353,slow=5.4,SNR=4.1						

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*ISCJB **06** 02:12:56.5±1.0, 11.°4S±0.°1×165.°9E±0.°2, h10^{km}, mb4.4/17, Error ellipse: s-maj=30.5km s-min=12.8km az=38.0*

*IDC **06** 02:12:56.5±0.9, 11.°40S×166.°01E, h0^{km}, mb4.4/17, mb1 4.5/17, mb1mx4.4/37, mbtmp4.4/17, Error ellipse: s-maj=29.2km s-min=16.4km az=127.0*

ISC 06 02:12:58.0±0.8, 11.°3S±0.°1×166.°0E±0.°2, h10^{km}, n33, σ1^{s}.01/33, mb4.4/17, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KWAJ	Kwajalein Atol	20.05	5	*e*P	P	02 17 27.8	-3.7
CTA	Charters Tower	20.88	243	*e*P	P	02 17 39.0	-1.5
CTA	Charters Tower	20.88	243	P	P	02 17 39.0	-1.5
	8.3nm,0.7s,baz=148,slow=19,SNR=1.7						
STKA	Stephens Creek	30.41	224	*e*P	P	02 19 10.7	+0.1
STKA	Stephens Creek	30.41	224	P	P	02 19 10.7	+0.1
	6.2nm,1.0s,baz=248,slow=19,SNR=2.8						
WRA	Warramunga Arr	31.61	250	P	P	02 19 21.4	+0.1
WRA	Warramunga Arr	31.61	250	P	P	02 19 21.4	+0.1
	13nm,1.0s,baz=82,slow=9.0,SNR=5.0						
ASAR	Alice Springs	32.88	244	P	P	02 19 32.4	-0.2
ASAR	Alice Springs	32.88	244	P	P	02 19 32.4	-0.2
	2.8nm,0.9s,baz=63,slow=10,SNR=4.0						
FITZ	Fitzroy Crossi	39.54	255	P	P	02 20 29.6	+0.1
FITZ	Fitzroy Crossi	39.54	255	P	P	02 20 29.6	+0.1
	4.3nm,0.6s,baz=104,slow=6.2,SNR=5.5						
NWAO	Narrogin (SRO)	49.51	236	*e*P	P	02 21 48.3	-0.7
NWAO	Narrogin (SRO)	49.51	236	P	P	02 21 48.3	-0.7
	15nm,1.0s,baz=235,slow=19,SNR=3.0						
MJAR	Matsushiro Arr	54.32	332	P	P	02 22 25.6	+0.9
	0.7nm,0.3s,baz=160,slow=8.9,SNR=2.6						
ASAJ	Asahikawa	59.13	341	P	P	02 22 59.0	+0.3
	4.9nm,0.8s,baz=132,slow=15,SNR=2.5						
KSRS	Korea Array	60.24	326	P	P	02 23 06.8	+0.3
	1.0nm,0.6s,baz=131,slow=7.0,SNR=3.5						
USRK	Ussuriysk Ar.	63.30	333	P	P	02 23 28.0	+1.0
	2.4nm,0.9s,baz=108,slow=4.7,SNR=3.4						
CM31	Chiang Mai Arr	72.44	294	*e*P	P	02 24 26.1	+0.9
	12nm,0.9s						
CMAR	Chiang Mai Arr	72.44	294	P	P	02 24 26.1	+0.9
CMAR	Chiang Mai Arr	72.44	294	P	P	02 24 26.1	+0.9
	3.1nm,0.7s,baz=113,slow=4.2,SNR=6.9						
SONM	Songino Array	79.03	324	P	P	02 25 03.7	+1.3
	0.7nm,0.8s,baz=113,slow=3.3,SNR=2.9						
ILAR	Eielson Array	83.70	18	P	P	02 25 26.9	+0.3
	1.6nm,0.5s,baz=232,slow=5.1,SNR=5.4						
NVAR	Mina Array Bea	86.02	50	P	P	02 25 40.1	+0.8
	1.4nm,0.9s,baz=230,slow=7.9,SNR=2.0						
MKAR	Makanchi Array	93.88	317	P	P	02 26 15.5	-0.4
	2.5nm,0.9s,baz=116,slow=3.4,SNR=2.9						
YKA	Yellowknife Ar	95.11	27	P	P	02 26 19.7	-1.3
	0.3nm,0.6s,baz=261,slow=4.8,SNR=2.2						
NRIK	Noril'sk	96.46	340	P	P	02 26 28.4	+1.3
	2.2nm,0.4s,baz=171,slow=19,SNR=3.2						
ARA0	ARCESS Array S	116.66	345	*e*PKPdf	PKiKP	02 31 41.6	-0.4
ARCES	ARCESS Array B	116.66	345	PKP	PKiKP	02 31 41.6	-0.4
	2.4nm,1.0s,baz=46,slow=2.6,SNR=3.6						
ARCES	ARCESS Array B	116.66	345	PKP	PKiKP	02 31 41.6	-0.4
CPUP	Villa Florida	123.67	132	*e*PKPdf	PKiKP	02 31 56.9	-0.1
CPUP	Villa Florida	123.67	132	PKP	PKiKP	02 31 56.9	-0.1
	1.7nm,1.1s,baz=0.0,slow=1.0,SNR=2.7						
BOSA	Boshof	125.08	223	*e*PKPdf	PKiKP	02 32 00.4	+0.5
BOSA	Boshof	125.08	223	PKP	PKiKP	02 32 00.4	+0.5
	1.8nm,0.7s,baz=132,slow=0.8,SNR=4.9						

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*NEIC **06** 02:13:05.1±0.3, 12.°10S×165.°51E, h10^{km}, mb5.2/26, Error ellipse: s-maj=10.2km s-min=7.1km az=116.0*

*IDC **06** 02:13:06.8±0.8, 11.°37S×165.°75E, h0^{km}, mb4.8/13, mb1 4.8/15, mb1mx4.6/39, mbtmp4.8/15, ML5.1/2, Error ellipse: s-maj=28.4km s-min=24.6km az=41.0*

*ISCJB **06** 02:13:07.6±0.3, 11.°97S±0.°04×165.°27E±0.°05, h33^{km}, mb4.9/36, Error ellipse: s-maj=8.0km s-min=5.7km az=156.0*

ISC 06 02:13:10.4±0.5, 11.°95S±0.°09×165.°32E±0.°09, h35^{km}, n90, σ1^{s}.84/86, mb5.1/36, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.84	295	Pn	Pn	02 14 35.3	+0.8
	47nm,0.3s,baz=331,slow=19,SNR=2.8						
HNR				Sn	Sn	02 15 38.6	-1.8
	29nm,0.3s,baz=211,slow=19,SNR=2.3						
DZM	Mont Dzumac	10.13	174	Pn	Pn	02 15 39.2	+5.8
	14nm,0.3s,baz=168,slow=20,SNR=12						
ONTNC	Ouen Toro	10.36	174	*e*Pn	Pn	02 15 41.7	+5.2
COEN	Coen	21.67	262	*e*P	P	02 17 54.4	-3.9
	4.7nm,0.8s						
ARMA	Armidale	22.34	213	*e*P	P	02 18 05.3	0.0
OUZ	Omahuta	24.36	163	*e*P	P	02 18 30.2	+5.1
	73nm,1.1s						
HAZ	Te Kaha	28.02	159	P	P	02 18 58.8	+0.6
URZ	Urewera	28.24	160	P	P	02 18 59.9	-0.2
MWZ	Matawai	28.45	160	P	P	02 19 04.1	+2.0
TWGZ	Tauwhareparae	28.46	159	P	P	02 19 01.3	-0.9
MTHZ	Maungataniwha	28.69	161	P	P	02 19 05.4	+1.2
SNGZ	Shannon Statio	28.79	160	P	P	02 19 03.8	-1.2
RAHZ	Arahi	28.83	161	P	P	02 19 06.2	+0.9
BKZ	Black Stump Fm	28.87	162	*e*P	P	02 19 02.7	-3.1
	22nm,0.7s						
BKZ	Black Stump Fm	28.87	162	P	P	02 19 05.5	-0.3
NMHZ	Naumai	28.90	161	P	P	02 19 05.9	-0.2
BHHZ	Black Hill Sta	29.04	163	P	P	02 19 04.5	-2.8
TSZ	Takapari Road	29.54	163	P	P	02 19 10.8	-0.9
MRZ	Mangatainoka R	30.00	164	P	P	02 19 16.0	+0.3
BFZ	Birch Farm	30.20	163	*e*P	P	02 19 13.3	-4.2
	73nm,1.1s						
THZ	Tophouse	30.44	169	*e*P	P	02 19 16.3	-3.3
	46nm,1.0s						
WRAB	Tennant Creek	30.78	251	*e*P	P	02 19 20.3	-2.6
WB2	Warramunga Arr	30.78	251	*e*P	P	02 19 21.4	-1.5
WR1	Warramunga Arr	30.79	251	*e*P	P	02 19 21.4	-1.6
TOO	Toolangi	31.09	211	*e*P	P	02 19 24.7	-0.7
AS01	Alice Springs	31.98	244	*e*P	P	02 19 39.1	+5.6
AS31	Alice Springs	32.02	244	*e*P	P	02 19 32.4	-1.5
	3.9nm,1.2s						
RPZ	Rata Peaks	32.04	172	*e*P	P	02 19 28.7	-5.0
	13nm,0.8s						
MQZ	McQueen's Vall	32.27	170	*e*P	P	02 19 33.7	-2.0
	44nm,1.1s						
BBOO	Buckleboo	33.91	228	*e*P	P	02 19 50.1	-0.2
MJAR	Matsushiro Arr	54.58	333	P	P	02 22 34.6	-0.7
	8.3nm,0.8s,baz=169,slow=8.5,SNR=9.2						
MAJO	Matsushiro	54.58	333	*e*P	P	02 22 34.6	-0.7
MAT	Matsushiro	54.58	333	P	P	02 22 35.5	+0.2
JNU	Nakatsue	55.57	325	*e*P	P	02 22 42.9	+0.3
	28nm,0.9s						
JNU	Nakatsue	55.57	325	P	P	02 22 42.9	+0.3
	24nm,0.9s,baz=71,slow=5.2,SNR=5.9						
ASAJ	Asahikawa	59.50	341	P	P	02 23 08.3	-1.6
	22nm,0.9s,baz=214,slow=12,SNR=7.3						
KSRS	Korea Array	60.38	326	P	P	02 23 16.2	+0.1
	3.8nm,0.8s,baz=138,slow=6.5,SNR=8.1						
KS15	Wonju Array Si	60.40	326	*e*P	P	02 23 16.2	0.0
	15nm,1.1s						
KSAR	Wonju Array Be	60.40	326	P	P	02 23 16.2	0.0
USRK	Ussuriysk Ar.	63.56	334	P	P	02 23 36.2	-1.2
	9.1nm,0.8s,baz=134,slow=6.2,SNR=5.1						
ENH	Enshi	68.14	310	*e*P	P	02 24 09.8	+2.5
	30nm,1.3s						
CM01	Chiang Mai Arr	72.06	294	*e*P	P	02 24 37.8	+6.3
CMAR	Chiang Mai Arr	72.09	294	P	P	02 24 35.1	+3.4
	3.7nm,0.8s,baz=124,slow=4.9,SNR=5.3						
GAMB	Gambell	77.52	10	*e*P	P	02 25 00.4	-1.7
	20nm,1.1s						
KDAK	Kodiak Island	77.56	22	*e*P	P	02 25 01.5	-0.9
	35nm,1.5s						
KDAK	Kodiak Island	77.56	22	P	P	02 25 01.5	-0.9
	7.7nm,1.0s,baz=210,slow=14,SNR=3.8						
SONA0	Songino Array	79.14	324	*e*P	P	02 25 12.8	+1.2
SONM	Songino Array	79.14	324	P	P	02 25 12.8	+1.2
	5.3nm,0.9s,baz=142,slow=5.3,SNR=9.2						
SONA1	Songino Array	79.14	324	*e*P	P	02 25 12.6	+0.9
ANM	Nome	79.45	12	*e*P	P	02 25 09.5	-3.2
	20nm,1.4s						
BILL	Bilibino	79.78	0	*e*P	P	02 25 12.9	-1.6
	26nm,1.2s						
SML	Sawmill	81.96	20	*e*P	P	02 25 26.3	0.0
	25nm,1.2s						
DIV	Divide	82.39	22	*e*P	P	02 25 27.9	-0.7
	24nm,1.1s						
KLU	Klutina	82.58	21	*e*P	P	02 25 30.0	+0.4
	16nm,1.2s						
RND	Reindeer	82.92	19	*e*P	P	02 25 31.1	-0.2
	26nm,1.4s						
MCK	McKinley	83.12	19	*e*P	P	02 25 31.1	-1.2
	23nm,1.2s						
BWN	Browne	83.27	18	*e*P	P	02 25 32.5	-0.5
IM3	Indian Mountai	83.40	16	*e*P	P	02 25 33.3	-0.4
MDM	Murphy Dome	84.21	18	*e*P	P	02 25 36.5	-1.4
	16nm,1.0s						
COLA	College	84.27	18	*e*P	P	02 25 36.8	-1.3
	16nm,0.8s						
RIDG	Independ'e Rid	84.46	20	*e*P	P	02 25 39.3	+0.1
	62nm,1.2s						
IL1	Eielson Array	84.49	19	*e*P	P	02 25 36.2	-3.1
ILAR	Eielson Array	84.49	19	P	P	02 25 38.4	-0.9
	4.1nm,0.5s,baz=237,slow=5.0,SNR=13						
ILB	Eielson Array	84.49	19	*e*P	P	02 25 38.4	-0.9
	7.8nm,0.7s						
SCRK	Sand Creek	84.90	20	*e*P	P	02 25 40.6	-0.8
	39nm,1.2s						
NV01	Mina Array Sit	86.92	50	*e*P	P	02 25 50.5	-1.7
NVAR	Mina Array Bea	86.92	50	P	P	02 25 50.5	-1.7
	2.6nm,0.8s,baz=233,slow=7.5,SNR=3.8						
MK31	Makanchi Array	93.89	317	*e*P	P	02 26 26.4	+2.0
	7.7nm,1.0s						
MK32	Makanchi Array	93.89	317	*e*P	P	02 26 25.9	+1.6
MKAR	Makanchi Array	93.89	317	P	P	02 26 25.9	+1.6
	7.7nm,0.8s,baz=87,slow=5.9,SNR=8.4						
ZALV	Zalesovo Beam	94.04	324	*e*P	P	02 26 24.9	0.0
ZALV	Zalesovo Beam	94.04	324	P	P	02 26 25.1	+0.3
	3.7nm,0.6s,baz=135,slow=3.9,SNR=7.5						
ZAA1	Zalesovo Array	94.04	324	*e*P	P	02 26 25.1	+0.3
YKA	Yellowknife Ar	95.96	27	P	P	02 26 30.6	-2.8
	0.7nm,0.5s,baz=258,slow=4.8,SNR=9.0						
YKB5	Yellowknife Ar	95.96	27	*e*P	P	02 26 30.6	-2.8
ARA0	ARCESS Array S	117.09	345	*e*PKPdf	PKiKP	02 31 52.2	+1.0
ARCES	ARCESS Array B	117.09	345	PKP	PKiKP	02 31 52.2	+1.1
ARCES	ARCESS Array B	117.09	345	PKP	PKiKP	02 31 52.2	+1.1
	2.1nm,0.7s,baz=88,slow=2.5,SNR=14						
FIA0	FINESS Array S	122.45	338	*e*PKPdf	PKiKP	02 32 03.4	+1.5
FINES	FINESS Array B	122.45	338	PKP	PKiKP	02 32 03.4	+1.5
	4.2nm,1.0s,baz=321,slow=2.7,SNR=4.0						
NB200	NORSAR Array S	127.45	344	*e*PKPdf	PKiKP	02 32 13.0	+1.1
NOA	NORSAR Array B	127.45	344	PKP	PKiKP	02 32 13.0	+1.1
	1.0nm,0.8s,baz=30,slow=2.0,SNR=3.6						
LSZ	Lusaka	129.67	239	PKP	PKiKP	02 32 20.5	+2.7
	1.2nm,0.5s,baz=241,slow=8.9,SNR=3.5						
HUMP	Col San Antoni	130.32	76	*e*PKPdf	PKiKP	02 32 20.4	+1.6
BDFB	Brasilia	137.11	129	PKP	PKiKP	02 32 32.7	-0.1
	5.2nm,1.1s,baz=204,slow=3.1,SNR=3.2						
KEST	Kesra	147.87	321	PKPbc	PKiKP	02 32 54.0	-0.3
	7.8nm,0.8s,baz=12,slow=3.2,SNR=5.5						
ESDC	Sonseca Array	150.80	343	PKPbc	PKPbc	02 32 58.5	-1.0
	1.5nm,0.8s,baz=14,slow=3.5,SNR=4.7						
RCBR	Riachuelo	152.48	129	*e*PKPab	PKPab	02 33 16.7	+2.4
TORD	Torodi Ar. Bea	163.97	276	PKPab	PKPab	02 34 08.6	+4.6
	2.0nm,1.0s,baz=59,slow=5.6,SNR=3.4						
TOA1	Torodi Ar. Sit	163.97	276	*e*PKPab	PKPab	02 34 08.6	+4.6

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*ISCJB **06** 02:14:01.4±0.8, 11.°6S±0.°1×165.°7E±0.°2, h10^{km}, mb4.5/10, Error ellipse: s-maj=26.9km s-min=15.5km az=2.2*

*IDC **06** 02:14:01.5±1.2, 11.°58S×165.°76E, h0^{km}, mb4.5/10, mb1 4.7/11, mb1mx4.4/38, mbtmp4.5/11, ML4.4/1, Error ellipse: s-maj=37.7km s-min=24.0km az=121.0*

ISC 06 02:14:03.2±0.9, 11.°5S±0.°1×165.°7E±0.°2, h10^{km}, n12, σ1^{s}.15/12, mb4.5/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.49	176	Pn	Pn	02 16 34.3	+0.4
	2.9nm,0.3s,baz=90,slow=20,SNR=2.8						
ASAR	Alice Springs	32.55	244	P	P	02 20 34.6	-0.3
	4.1nm,0.9s,baz=70,slow=9.0,SNR=3.2						
FITZ	Fitzroy Crossi	39.23	256	P	P	02 21 30.6	-1.6
	17nm,1.1s,baz=103,slow=7.9,SNR=2.5						
MJAR	Matsushiro Arr	54.40	333	P	P	02 23 29.3	-1.3
	1.1nm,0.3s,baz=87,slow=24,SNR=2.8						
USRK	Ussuriysk Ar.	63.38	333	P	P	02 24 34.0	+1.2
	5.3nm,0.9s,baz=116,slow=6.6,SNR=3.8						
CMAR	Chiang Mai Arr	72.29	294	P	P	02 25 31.1	+1.6
	2.1nm,0.6s,baz=121,slow=4.1,SNR=2.7						
SONM	Songino Array	79.05	324	P	P	02 26 08.9	+1.0
	4.2nm,1.0s,baz=137,slow=6.3,SNR=3.9						
ILAR	Eielson Array	83.99	18	P	P	02 26 33.2	-0.2
	6.1nm,1.0s,baz=236,slow=5.4,SNR=3.7						
MKAR	Makanchi Array	93.87	317	P	P	02 27 21.9	+0.9
	2.8nm,0.8s,baz=98,slow=6.0,SNR=2.8						
ZALV	Zalesovo Beam	93.94	324	P	P	02 27 20.5	-0.6
	1.7nm,0.7s,baz=106,slow=4.7,SNR=2.6						
YKA	Yellowknife Ar	95.42	27	P	P	02 27 26.5	-1.2
	0.5nm,0.6s,baz=259,slow=5.0,SNR=3.4						
ARCES	ARCESS Array B	116.81	345	PKP	PKiKP	02 32 47.8	+0.3
	4.3nm,1.0s,baz=78,slow=2.3,SNR=9.5						

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*IDC **06** 02:14:47.4±1.6, 11.°16S×165.°49E, h0^{km}, mb4.2/6, mb1 4.5/6, mb1mx4.1/36, mbtmp4.2/6, Error ellipse: s-maj=145.4km s-min=27.4km az=147.0*

*ISCJB **06** 02:14:50.7±1.2, 11.°1S±0.°7×165.°3E±0.°5, h30^{km}, mb4.2/5, Error ellipse: s-maj=119.8km s-min=19.4km az=146.6*

ISC 06 02:14:52.2±1.3, 11.°1S±0.°7×165.°4E±0.°5, h30^{km}, n6, σ1^{s}.73/6, mb4.2/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.47	242	P	P	02 19 29.3	+1.6
	7.6nm,0.9s,baz=34,slow=12,SNR=1.1						
ASAR	Alice Springs	32.46	243	P	P	02 21 18.9	-1.2
	5.2nm,0.9s,baz=72,slow=9.8,SNR=2.4						
ILAR	Eielson Array	83.65	19	P	P	02 27 17.9	+0.4
	1.0nm,0.7s,baz=231,slow=5.5,SNR=1.0						
NVAR	Mina Array Bea	86.31	50	P	P	02 27 32.6	+0.9
	2.3nm,0.9s,baz=224,slow=6.3,SNR=2.3						
PDAR	Pinedale Array	93.83	47	P	P	02 28 05.1	-1.9
	0.9nm,0.9s,baz=244,slow=3.9,SNR=2.5						
TXAR	Lajitas Array	96.15	61	P	P	02 28 18.3	+0.5
	0.5nm,0.9s,baz=255,slow=5.5,SNR=1.6						

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*IDC **06** 02:15:23.8±0.7, 10.°93S×165.°28E, h0^{km}, mb4.6/20, mb1 4.8/22, mb1mx4.6/39, mbtmp4.7/22, ML4.7/2, Error ellipse: s-maj=20.3km s-min=14.4km az=110.0*

*ISCJB **06** 02:15:26.5±0.5, 10.°97S±0.°07×165.°23E±0.°10, h30^{km}, mb4.6/19, Error ellipse: s-maj=13.9km s-min=10.4km az=6.0*

ISC 06 02:15:28.5±0.6, 10.°93S±0.°09×165.°3E±0.°1, h30^{km}, n25, σ0^{s}.75/25, mb4.6/19, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.44	285	Pn	Pn	02 16 47.3	-0.3
	66nm,0.3s,baz=0.0,slow=3.0,SNR=3.7						
DZM	Mont Dzumac	11.13	174	Pn	Pn	02 18 06.1	+0.3
	1.6nm,0.3s,baz=328,slow=14,SNR=2.9						
CTA	Charters Tower	20.44	241	P	P	02 20 04.7	+1.1
	84nm,1.0s,baz=68,slow=12,SNR=11						
URZ	Urewera	29.21	161	P	P	02 21 27.5	0.0
	7.2nm,0.8s,baz=346,slow=11,SNR=1.9						
STKA	Stephens Creek	30.20	223	P	P	02 21 37.0	+0.6
	12nm,0.9s,baz=30,slow=9.9,SNR=5.9						
WRA	Warramunga Arr	31.08	249	P	P	02 21 43.4	-0.9
	9.2nm,0.8s,baz=79,slow=9.3,SNR=5.4						
ASAR	Alice Springs	32.42	243	P	P	02 21 54.9	-1.3
	14nm,0.9s,baz=66,slow=10,SNR=10						
FITZ	Fitzroy Crossi	38.95	255	P	P	02 22 51.5	-0.6
	3.8nm,0.7s,baz=103,slow=11,SNR=3.7						
NWAO	Narrogin (SRO)	49.13	236	P	P	02 24 13.6	-0.1
	35nm,0.8s,baz=304,slow=7.7,SNR=9.7						
MJAR	Matsushiro Arr	53.65	333	P	P	02 24 46.6	-0.8
	5.6nm,0.8s,baz=172,slow=9.1,SNR=5.4						
JNU	Nakatsue	54.71	325	P	P	02 24 55.0	-0.3
	13nm,0.7s,baz=106,slow=4.1,SNR=5.3						
ASAJ	Asahikawa	58.53	341	P	P	02 25 23.0	+0.9
	20nm,0.8s,baz=232,slow=14,SNR=7.6						
KSRS	Korea Array	59.52	326	P	P	02 25 29.4	+0.3
	4.4nm,0.8s,baz=141,slow=7.4,SNR=7.4						
USRK	Ussuriysk Ar.	62.63	334	P	P	02 25 50.8	+0.7
	6.0nm,0.7s,baz=146,slow=6.2,SNR=7.1						
PETK	Petropavlovsk-	64.11	355	P	P	02 26 00.3	+0.6
	4.2nm,0.8s,baz=170,slow=8.8,SNR=3.4						
CMAR	Chiang Mai Arr	71.63	294	P	P	02 26 47.9	+0.1
	1.7nm,0.3s,baz=110,slow=4.2,SNR=4.1						
SONM	Songino Array	78.30	324	P	P	02 27 26.5	+0.6
	3.3nm,1.0s,baz=148,slow=6.7,SNR=3.7						
GTA	Gaotai	78.64	314	*e*P	P	02 27 28.9	+1.0
GTA				pP	pP	02 27 33.7	-2.9
GTA				sP	PcP	02 27 36.1	-0.7
ILAR	Eielson Array	83.56	19	P	P	02 27 53.6	+0.2
	1.7nm,0.8s,baz=231,slow=6.0,SNR=3.9						
NVAR	Mina Array Bea	86.31	50	P	P	02 28 08.2	+0.1
	1.5nm,0.9s,baz=243,slow=8.0,SNR=2.4						
MKAR	Makanchi Array	93.12	317	P	P	02 28 39.2	-0.5
	2.2nm,0.7s,baz=85,slow=5.7,SNR=5.2						
ZALV	Zalesovo Beam	93.19	324	P	P	02 28 38.6	-1.2
	1.3nm,0.6s,baz=129,slow=4.1,SNR=3.7						
YKA	Yellowknife Ar	95.09	27	P	P	02 28 46.8	-1.5
	0.6nm,0.7s,baz=256,slow=4.8,SNR=3.7						
CPUP	Villa Florida	124.45	133	PKP	PKPdf	02 34 25.5	0.0
	2.0nm,0.8s,baz=307,slow=3.2,SNR=3.8						
BOSA	Boshof	124.87	224	PKP	PKPdf	02 34 25.9	-0.5
	3.7nm,0.9s,baz=23,slow=2.4,SNR=5.2						

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*IDC **06** 02:15:37.6±1.0, 10.°99S×165.°50E, h0^{km}, mb4.6/7, mb1 4.8/8, mb1mx4.4/38, mbtmp4.6/8, ML4.7/1, Error ellipse: s-maj=31.1km s-min=21.6km az=103.0*

*ISCJB **06** 02:15:40.0±0.8, 11.°1S±0.°1×165.°5E±0.°2, h30^{km}, mb4.5/7, Error ellipse: s-maj=23.7km s-min=15.7km az=1.3*

ISC 06 02:15:42.0±0.9, 11.°0S±0.°1×165.°5E±0.°2, h30^{km}, n9, σ0^{s}.69/9, mb4.6/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.04	175	Pn	Pn	02 18 17.9	-0.1

	5.2nm,0.3s,baz=47,slow=17,SNR=5.2						
URZ	Urewera	29.06	161	P	P	02 21 40.2	+0.5
	15nm,0.8s,baz=351,slow=13,SNR=4.1						
STKA	Stephens Creek	30.31	223	P	P	02 21 51.0	+0.2
	5.8nm,0.8s,baz=46,slow=10.0,SNR=3.8						
WRA	Warramunga Arr	31.28	250	P	P	02 21 59.2	-0.3
	9.4nm,1.0s,baz=80,slow=9.2,SNR=5.0						
ASAR	Alice Springs	32.60	243	P	P	02 22 10.5	-0.7
	7.9nm,0.9s,baz=69,slow=9.4,SNR=3.8						
MJAR	Matsushiro Arr	53.83	333	P	P	02 25 03.1	+1.0
	1.3nm,0.4s,baz=172,slow=9.3,SNR=3.2						
ILAR	Eielson Array	83.55	19	P	P	02 28 06.7	-0.2
	3.5nm,0.6s,baz=236,slow=5.1,SNR=7.7						
YKA	Yellowknife Ar	95.05	27	P	P	02 29 00.6	-1.0
	0.6nm,0.7s,baz=257,slow=4.7,SNR=4.1						
BOSA	Boshof	124.98	223	PKP	PKiKP	02 34 40.8	+0.3
	2.1nm,0.6s,baz=173,slow=2.0,SNR=7.4						

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*IDC **06** 02:16:24.7±0.7, 11°.20S×165°.79E, h0km, mb4.6/16, mb1 4.7/18, mb1mx4.6/37, mbtmp4.6/18, ML4.9/2, Error ellipse: s-maj=26.7km s-min=15.6km az=139.0*

*ISCJB **06** 02:16:28.4±0.3, 11°.30S±0°.07×165°.57E±0°.04, h30km, mb4.9/42, Error ellipse: s-maj=10.1km s-min=5.8km az=164.9*

*NEIC **06** 02:16:28.2±4.5, 11°.24S×165°.69E, h19km±27km, mb5.1/28, Error ellipse: s-maj=10.8km s-min=8.2km az=154.0*

ISC 06 02:16:29.8±0.5, **11°.3S**±0°.1×**165°.68E**±0°.08, **h30km, n98, σ1s.03**/99, **mb5.0**/42, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.92	287	Pn	Pn	02 17 55.5	-0.1
	23nm,0.3s,baz=97,slow=21,SNR=2.0						
HNR				Sn	Sn	02 19 01.4	-1.0
	28nm,0.3s,baz=66,slow=20,SNR=2.8						
DZM	Mont Dzumac	10.78	176	Pn	Pn	02 19 02.3	0.0
	12nm,0.3s,baz=311,slow=15,SNR=7.2						
CTA	Charters Tower	20.64	242	P	P	02 21 06.7	-0.5
	32nm,1.1s,baz=61,slow=17,SNR=2.0						
STKA	Stephens Creek	30.25	224	P	P	02 22 38.1	0.0
	5.9nm,0.8s,baz=48,slow=9.9,SNR=5.1						
WRAB	Tennant Creek	31.34	250	*e*P	P	02 22 47.2	-0.7
WB2	Warramunga Arr	31.34	250	*e*P	P	02 22 48.7	+0.7
	5.7nm,0.6s						
WR1	Warramunga Arr	31.35	250	*e*P	P	02 22 47.2	-0.8
	46nm,1.3s						
WRA	Warramunga Arr	31.35	250	P	P	02 22 47.2	-0.8
	11nm,0.7s,baz=83,slow=9.0,SNR=9.1						
AS31	Alice Springs	32.64	244	*e*P	P	02 22 58.6	-0.8
	1.9nm,0.8s						
ASAR	Alice Springs	32.64	244	P	P	02 22 58.6	-0.8
	6.4nm,1.2s,baz=72,slow=10,SNR=2.4						
FITZ	Fitzroy Crossi	39.26	255	P	P	02 23 56.2	+0.1
	11nm,1.0s,baz=111,slow=8.2,SNR=2.2						
MJAR	Matsushiro Arr	54.12	333	P	P	02 25 51.6	-0.6
	2.7nm,0.7s,baz=172,slow=7.5,SNR=3.3						
MAJO	Matsushiro	54.12	333	*e*P	P	02 25 51.6	-0.6
KMI	Kunming	71.17	301	P	P	02 27 48.4	+1.9
KMI				pP	pP	02 27 55.9	+1.3
CM01	Chiang Mai Arr	72.11	294	*e*P	P	02 27 53.6	+1.7
CM31	Chiang Mai Arr	72.13	294	*e*P	P	02 27 52.8	+0.7
	8.9nm,0.9s						
CMAR	Chiang Mai Arr	72.13	294	P	P	02 27 52.8	+0.7
	2.7nm,0.5s,baz=116,slow=4.4,SNR=5.8						
CHTO	Chiang Mai	72.25	294	*e*P	P	02 27 54.6	+1.8
	13nm,1.3s						
KDAK	Kodiak Island	76.80	21	*e*P	P	02 28 17.3	-1.0
	22nm,1.1s						
KDAK	Kodiak Island	76.80	21	P	P	02 28 17.3	-1.0
	7.7nm,1.0s,baz=248,slow=5.4,SNR=3.4						
SONA0	Songino Array	78.79	324	*e*P	P	02 28 30.2	+0.3
SONM	Songino Array	78.79	324	P	P	02 28 30.2	+0.3
	2.2nm,0.9s,baz=147,slow=6.2,SNR=2.2						
BRLK	Bradley Lake	78.86	21	*e*P	P	02 28 30.1	+0.2
	25nm,0.8s						
GTA	Gaotai	79.15	314	*e*P	P	02 28 33.6	+1.5
GTA				pP	pP	02 28 39.1	-1.1
GTA				sP	sP	02 28 42.5	-0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SUA	Susitna One	80.14	20	*e*P	P	02 28 35.2	-1.7
	comp=Z,16nm,1.0s						
CAST	Castle Rocks	81.17	18	*e*P	P	02 28 42.0	-0.2
	comp=Z,15nm,0.8s						
DIV	Divide	81.63	22	*e*P	P	02 28 45.2	+0.4
	comp=Z,40nm,1.0s						
TRF	Thorofare Moun	81.74	18	*e*P	P	02 28 46.8	+1.3
	comp=Z,14nm,1.0s						
BWN	Browne	82.51	18	*e*P	P	02 28 49.1	-0.2
	comp=Z,44nm,0.9s						
IM3	Indian Mountai	82.64	16	*e*P	P	02 28 50.2	+0.3
HARP	HAARP	82.70	21	*e*P	P	02 28 51.7	+1.4
	comp=Z,46nm,1.0s						
WRH	Wood River Hil	83.15	18	*e*P	P	02 28 52.5	0.0
	comp=Z,20nm,1.0s						
MDM	Murphy Dome	83.45	18	*e*P	P	02 28 54.1	-0.1
	comp=Z,26nm,1.0s						
HDA	Harding Lake	83.46	19	*e*P	P	02 28 54.3	+0.1
	comp=Z,50nm,0.8s						
HDA	Harding Lake	83.46	19	P	P	02 28 54.3	+0.1
	baz=227						
TCOL	CIGO, UAF Yank	83.50	18	P	P	02 28 54.1	-0.3
	baz=226						
COLA	College	83.50	18	*e*P	P	02 28 54.4	+0.1
	comp=Z,31nm,0.8s						
IL1	Eielson Array	83.73	19	*e*P	P	02 28 55.1	-0.4
ILAR	Eielson Array	83.73	19	P	P	02 28 53.0	-2.6
	comp=Z,6.6nm,0.6s,baz=229,slow=5.5,SNR=22						
ILB	Eielson Array	83.73	19	*e*P	P	02 28 55.5	-0.1
	comp=Z,9.0nm,0.6s						
K02D	Willamette Mer	83.77	44	P	P	02 28 56.7	+0.3
	baz=249						
POKR	Poker Plat Res	83.80	18	P	P	02 28 55.6	-0.4
	baz=226						
N02D	Trinity Center	83.82	46	P	P	02 28 57.3	+0.6
	baz=249						
SCRK	Sand Creek	84.13	20	*e*P	P	02 28 58.5	+0.7
	comp=Z,32nm,1.0s						
L04D	Klamath Falls	84.54	45	P	P	02 29 00.8	+0.4
	baz=250						
HYT	Haines Junctio	84.60	24	*e*P	P	02 29 00.9	+0.6
	comp=Z,10nm,0.9s						
M04C	Macdoel	84.71	46	P	P	02 29 00.9	-0.4
	baz=250						
ISA	Isabella, Lake	85.25	52	P	P	02 29 04.7	+0.7
	baz=253						
EDW2	Edwards Air Fo	85.40	53	P	P	02 29 05.6	+0.8
	baz=253						
J05D	Fort Rock, OR	85.64	44	P	P	02 29 06.7	+0.7
	baz=250						
YERR	Yerington	85.68	49	*e*P	P	02 29 07.0	+0.7
	comp=Z,7.6nm,0.5s						
DAWY	Dawson	85.77	21	*e*P	P	02 29 06.9	+0.9
	comp=Z,14nm,1.0s						
CWC	Cottonwood Cre	85.79	52	P	P	02 29 07.2	+0.4
	baz=253						
MPMC	Manual Prospec	86.13	52	P	P	02 29 08.9	+0.3
	baz=253						
NV01	Mina Array Sit	86.21	50	*e*P	P	02 29 07.4	-1.5
NVAR	Mina Array Bea	86.21	50	P	P	02 29 07.4	-1.5
	comp=Z,2.9nm,0.8s,baz=238,slow=8.6,SNR=4.9						
GRAC	Grapevine Rang	86.50	51	P	P	02 29 11.4	+1.2
	baz=253						
HEC	Hector,Ludlow	86.69	54	P	P	02 29 11.4	+0.2
	baz=254						
BELC	Belle Mtn. Jos	86.73	55	P	P	02 29 11.8	+0.3
	baz=254						
BC3	Big Chuckawall	87.08	55	P	P	02 29 13.6	+0.4
	baz=254						
Y12C	Blythe	87.85	55	P	P	02 29 17.9	+1.2
	baz=255						
PDMCI	Parker Dam,Lak	88.30	55	P	P	02 29 19.6	+0.8
	baz=255						
214A	Organ Pipe Nat	88.80	57	P	P	02 29 22.2	+0.9
	baz=256						
LCMT	Little Creek M	89.68	52	*e*P	P	02 29 26.8	+1.3
	comp=Z,13nm,1.2s						
SZCU	Shurtz Canyon	89.94	52	*e*P	P	02 29 26.7	-0.1
	comp=Z,12nm,1.1s						
INK	Inuvik	90.12	19	*e*P	P	02 29 25.8	-0.7
	comp=Z,4.7nm,1.1s						
INK	Inuvik	90.12	19	P	P	02 29 25.8	-0.7
	comp=Z,0.6nm,0.6s,baz=224,slow=5.7,SNR=2.4						
U15A	North Rim	90.28	53	*e*P	P	02 29 29.6	+1.1
	comp=Z,12nm,1.0s						
HLID	Hailey	90.47	46	P	P	02 29 29.8	+0.8
	baz=255						
TUC	Tucson	90.55	57	P	P	02 29 30.3	+0.7
	baz=257						
DUG	Dugway, Tooele	90.78	49	P	P	02 29 31.4	+0.8
	baz=256						
WUAZ	Wupatki	90.80	54	P	P	02 29 31.9	+1.1
	baz=257						
MSU	Marysvale	90.86	51	*e*P	P	02 29 32.9	+1.9
HVU	Hansel Valley	91.19	48	*e*P	P	02 29 33.7	+1.3
	comp=Z,18nm,1.1s						
BOZ	Bozeman (W)	92.89	44	P	P	02 29 43.2	+3.0
	baz=257						
MK01	Makanchi Array	93.61	317	*e*P	P	02 29 44.0	+0.6
MK31	Makanchi Array	93.63	317	*e*P	P	02 29 40.7	-2.7
	comp=Z,7.1nm,1.0s						
MK32	Makanchi Array	93.63	317	*e*P	P	02 29 43.7	+0.3
MKAR	Makanchi Array	93.63	317	P	P	02 29 43.7	+0.3
	comp=Z,4.0nm,0.7s,baz=94,slow=6.3,SNR=6.9						
ZALV	Zalesovo Beam	93.69	324	P	P	02 29 42.8	-0.6
	comp=Z,3.2nm,1.0s,baz=113,slow=3.4,SNR=3.8						
ZAA1	Zalesovo Array	93.69	324	*e*P	P	02 29 42.8	-0.6
BW06	Boulder Array	93.74	47	P	P	02 29 44.4	+0.1
	baz=258						
PD31	Pinedale Array	93.74	47	*e*P	P	02 29 43.4	-0.9
	comp=Z,2.4nm,1.0s						
PDAR	Pinedale Array	93.74	47	P	P	02 29 43.4	-0.9
	comp=Z,1.0nm,0.9s,baz=217,slow=2.7,SNR=3.5						
YKA	Yellowknife Ar	95.19	27	P	P	02 29 48.3	-1.7
	comp=Z,0.9nm,0.6s,baz=257,slow=4.7,SNR=10						
YKB5	Yellowknife Ar	95.19	27	*e*P	P	02 29 48.4	-1.7
TXAR	Lajitas Array	95.99	61	P	P	02 29 51.1	-3.6
	comp=Z,0.4nm,1.0s,baz=226,slow=2.4,SNR=2.5						
ARA0	ARCESS Array S	116.52	345	*e*PKPdf	PKPdf	02 35 10.2	-0.1
ARCES	ARCESS Array B	116.52	345	PKP	PKPdf	02 35 10.2	-0.1
	comp=Z,1.7nm,0.6s,baz=20,slow=4.0,SNR=4.7						
CPUP	Villa Florida	123.94	132	PKP	PKPdf	02 35 26.2	+0.3
	comp=Z,1.3nm,0.9s,baz=186,slow=4.8,SNR=2.0						
NB200	NORSAR Array S	126.88	345	*e*PKPdf	PKPdf	02 35 30.6	+0.1
NOA	NORSAR Array B	126.88	345	PKP	PKPdf	02 35 30.6	+0.1
	comp=Z,0.5nm,0.7s,baz=34,slow=2.0,SNR=3.3						
GEC2	GERESS Array S	135.86	334	*e*PKPdf	PKPdf	02 35 48.5	+0.6
GERES	GERESS Array B	135.86	334	PKP	PKPdf	02 35 48.5	+0.6
	comp=Z,0.9nm,0.8s,baz=42,slow=1.6,SNR=3.5						
KEST	Kesra	147.54	323	PKPbc	PKPbc	02 36 12.6	+0.9
	comp=Z,12nm,0.9s,baz=276,slow=1.7,SNR=5.6						
ESDC	Sonseca Array	150.24	344	PKPbc	PKPbc	02 36 18.6	+0.2
	comp=Z,1.5nm,0.8s,baz=332,slow=3.4,SNR=3.3						
TORD	Torodi Ar. Bea	164.23	279	PKP	PKPdf	02 36 31.3	-0.1
	comp=Z,1.2nm,0.9s,baz=120,slow=1.5,SNR=2.5						
TOA1	Torodi Ar. Sit	164.23	279	*e*PKPdf	PKPdf	02 36 31.3	-0.1

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*IDC **06** 02:18:07.7±0.5, 11°.54S×165°.67E, h0km, mb4.9/24, mb1 5.0/26, mb1mx4.9/38, mbtmp4.9/26, ML5.2/2, Error ellipse: s-maj=16.5km s-min=13.1km az=97.0*

*ISCJB **06** 02:18:11.0±0.1, 11°.49S±0°.03×165°.52E±0°.03, h24km, mb5.1/154, Error ellipse: s-maj=4.1km s-min=3.6km az=7.8*

*NEIC **06** 02:18:12.0±2.3, 11°.49S×165°.50E, h21km±16km, mb5.2/111, Error ellipse: s-maj=5.9km s-min=5.1km az=212.0*

*MOS **06** 02:18:11.9±1.1, 11°.45S×165°.42E, h30km, mb5.3/33, Error ellipse: s-maj=9.4km s-min=8.2km az=123.9*

ISC 06 02:18:12.4±0.3, **11°.49S**±0°.06×**165°.62E**±0°.06, **h24km, n372, σ1s.48**/374, **mb5.2**/154, **10C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.94	290	Pn	Pn	02 19 38.0	-1.0
	75nm,0.3s,baz=169,slow=8.2,SNR=3.8						
HNR				Sn	Sn	02 20 43.3	-3.0
	61nm,0.3s,baz=156,slow=20,SNR=3.9						
MARNC	Mare, Loyalty	10.20	167	*e*Pn	Pn	02 20 35.6	-1.8
DZM	Mont Dzumac	10.55	176	*e*Pn	Pn	02 20 41.0	-1.4
DZM	Mont Dzumac	10.55	176	Pn	Pn	02 20 40.7	-1.6
	17nm,0.3s,baz=332,slow=10,SNR=7.9						
ONTNC	Ouen Toro	10.79	176	*e*Pn	Pn	02 20 44.2	-1.3
MSVF	Nonsavu	13.54	119	*e*Pn	Pn	02 21 25.0	+1.9
MSVF	Nonsavu	13.54	119	*e*P	Pn	02 21 25.0	+1.9
EIDS	Eidsvold	19.49	223	P	Pn	02 22 41.5	+2.4
	baz=20						
CTA	Charters Tower	20.48	243	P	P	02 22 48.4	-0.3
	baz=21						
CTAO	Charters Tower	20.48	243	*e*P	P	02 22 47.6	-1.1
	51nm,1.0s						
CTAO	Charters Tower	20.48	243	*e*P	P	02 22 47.6	-1.1
CTAO				pmax	pmax		
	comp=Z,51nm,1.0s						
MTSU	Mount Surprise	21.61	250	P	P	02 23 02.6	+1.6
	baz=22,SNR=11						
COEN	Coen	22.03	261	P	P	02 23 06.4	+1.0
	baz=22						
ARMA	Armidale	22.88	212	P	P	02 23 15.6	+1.1
	baz=23,SNR=5.1						
OUZ	Omahuta	24.71	164	*e*P	P	02 23 33.3	+1.4
	comp=Z,120nm,1.0s						
QLP	Quilpie	25.12	230	P	P	02 23 37.7	+2.1
	baz=25						
MGCD	Mangrove Creek	25.39	209	P	P	02 23 39.8	+1.8
	baz=26						
QIS	Mount Isa	26.54	247	P	P	02 23 50.9	+2.2
	baz=27,SNR=6.0						
MKAZ	Moumakai	26.91	163	P	P	02 23 46.8	-4.9
CMSA	Cobar Meteorol	27.14	220	P	P	02 23 55.2	+1.3
	baz=27						
YNG	Young	27.61	212	P	P	02 24 01.0	+2.9
	baz=28						
HIZ	Hauiti	28.15	165	*e*P	P	02 24 05.5	+2.7
	comp=Z,181nm,1.4s						
HAZ	Te Kaha	28.34	159	P	P	02 24 04.2	-0.3
MXZ	Matakaoa Point	28.35	158	*e*P	P	02 24 06.1	+1.5
	comp=Z,84nm,0.9s						
RUGZ	Raukumara Rang	28.49	160	P	P	02 24 07.5	+1.5
URZ	Urewera	28.57	161	*e*P	P	02 24 06.1	-0.5
URZ	Urewera	28.57	161	P	P	02 24 04.3	-2.2
	comp=Z,6.5nm,0.4s,baz=354,slow=18,SNR=2.8						
MWZ	Matawai	28.77	160	P	P	02 24 08.3	-0.1
TWGZ	Tauwhareparae	28.79	159	P	P	02 24 09.0	+0.4
PUZ	Puketiti	28.79	159	P	P	02 24 09.5	+0.9
KATZ	Kakaramea	28.81	164	P	P	02 24 11.3	+2.5
MTHZ	Maungataniwha	29.03	162	P	P	02 24 12.1	+1.4
SNGZ	Shannon Statio	29.12	161	P	P	02 24 11.3	-0.2
CNGZ	Carnagh Statio	29.14	159	P	P	02 24 12.4	+0.8
RAHZ	Arahi	29.16	161	P	P	02 24 12.3	+0.4
RIGZ	Rimuhau	29.19	160	P	P	02 24 12.5	+0.4
BKZ	Black Stump Fm	29.21	163	*e*P	P	02 24 12.2	-0.1
	comp=Z,142nm,1.4s						
BKZ	Black Stump Fm	29.21	163	P	P	02 24 12.2	-0.1
NMHZ	Naumai	29.24	162	P	P	02 24 13.0	+0.3
BHHZ	Black Hill Sta	29.39	163	P	P	02 24 14.5	+0.6
KWHZ	Kaweka Forest	29.43	163	P	P	02 24 14.4	+0.1
MILA	Mila	29.45	207	P	P	02 24 17.7	+3.2
	baz=30,SNR=6.2						
TSZ	Takapari Road	29.89	164	P	P	02 24 17.8	-0.5
STKA	Stephens Creek	30.04	224	P	P	02 24 20.0	+0.3
	baz=30,SNR=4.9						
STKA	Stephens Creek	30.04	224	P	P	02 24 18.3	-1.4
	comp=Z,6.5nm,0.9s,baz=36,slow=12,SNR=5.1						
BFZ	Birch Farm	30.55	164	*e*P	P	02 24 22.8	-1.3
	comp=Z,66nm,0.8s						
SNZO	South Karori	30.76	167	*e*P	P	02 24 26.6	+0.8
	comp=Z,54nm,0.8s						
THZ	Tophouse	30.83	169	*e*P	P	02 24 27.9	+1.3
	comp=Z,65nm,1.2s						
WRAB	Tennant Creek	31.20	250	*e*P	P	02 24 28.5	-1.7
	comp=Z,105nm,1.3s						
WRAB	Tennant Creek	31.20	250	*ce*P	P	02 24 28.4	-1.7
WRAB				pmax	pmax		
	comp=Z,61nm,1.3s						
WB2	Warramunga Arr	31.20	250	*e*P	P	02 24 32.1	+2.0
WR1	Warramunga Arr	31.21	250	*e*P	P	02 24 28.7	-1.5
	comp=Z,194nm,1.4s						
WR1				*e*PcP	PcP	02 27 24.4	-0.4
WRA	Warramunga Arr	31.21	250	P	P	02 24 28.7	-1.5
	comp=Z,16nm,0.9s,baz=83,slow=8.1,SNR=5.3						
WRA				PcP	PcP	02 27 24.4	-0.4
	comp=Z,2.7nm,0.8s,baz=76,slow=3.3,SNR=2.7						
KHZ	Kahutara	31.58	169	*e*P	P	02 24 32.6	-0.5
	comp=Z,36nm,0.9s						
LTZ	Lake Taylor	31.71	171	*e*P	P	02 24 35.8	+1.4
	comp=Z,28nm,0.7s						
FOZ	Fox Glacier	32.13	174	*e*P	P	02 24 36.8	-1.2
	comp=Z,47nm,1.0s						
OXZ	Oxford	32.20	171	*e*P	P	02 24 40.2	+1.6
	comp=Z,29nm,0.7s						
KDU	Kakadu	32.42	264	P	P	02 24 40.0	-0.9
	baz=32,SNR=3.5						
AS01	Alice Springs	32.44	244	*e*P	P	02 24 38.7	-2.3
RPZ	Rata Peaks	32.45	173	P	P	02 24 39.9	-0.9
	comp=Z,60nm,0.8s,baz=249,slow=0.8,SNR=10						
AS31	Alice Springs	32.48	244	*e*P	P	02 24 42.5	+1.2
	comp=Z,7.2nm,1.1s						
AS31				*e*PcP	PcP	02 27 27.4	-0.8
ASAR	Alice Springs	32.48	244	P	P	02 24 38.5	-2.8
	comp=Z,8.6nm,1.0s,baz=70,slow=11,SNR=4.2						
ASAR				PcP	PcP	02 27 27.4	-0.8
	comp=Z,2.9nm,1.0s,baz=76,slow=3.9,SNR=3.3						
MQZ	McQueen's Vall	32.67	171	*e*P	P	02 24 42.8	+0.1
	comp=Z,69nm,1.0s						
HTT	Hallett	32.77	224	P	P	02 24 46.7	+2.9
	baz=33,SNR=5.6						
LBZ	Lake Benmore	33.01	174	*e*P	P	02 24 45.9	+0.2
	comp=Z,12nm,0.7s						
MTN	Manton Dam	33.72	264	*e*P	P	02 24 51.9	-0.3
WHZ	Wether Hill Ro	34.34	177	*e*P	P	02 24 58.1	+0.9
	comp=Z,5.0nm,0.7s						
KNRA	Kununurra	36.03	259	P	P	02 25 11.5	-0.7
	baz=36,SNR=3.8						
FITZ	Fitzroy Crossi	39.15	255	P	P	02 25 39.0	+0.4
	baz=39,SNR=5.5						
FITZ	Fitzroy Crossi	39.15	255	P	P	02 25 36.5	-2.0
	comp=Z,12nm,0.7s,baz=86,slow=7.5,SNR=7.2						
MEEK	Meekatharra	46.64	244	P	P	02 26 41.6	+2.4
	baz=47,SNR=4.8						
NWAO	Narrogin (SRO)	49.11	236	*e*P	P	02 26 58.5	+0.2
NWAO	Narrogin (SRO)	49.11	236	*e*P	P	02 26 58.5	+0.2
NWAO	Narrogin (SRO)	49.11	236	P	P	02 26 57.7	-0.6
	comp=Z,12nm,0.7s,baz=324,slow=7.1,SNR=4.2						
MORW	Morawa	49.30	242	P	P	02 26 59.5	-0.3
	baz=50,SNR=3.5						
MUN	Mundaring	49.73	238	P	P	02 27 02.8	-0.3
	baz=50,SNR=3.9						
TGY	Tagaytay City	51.07	299	P	P	02 27 12.7	-0.7
	comp=Z,132nm,0.3s,baz=114,slow=19,SNR=2.2						
MJAR	Matsushiro Arr	54.30	333	P	P	02 27 35.5	-1.4
	comp=Z,6.7nm,0.7s,baz=172,slow=8.9,SNR=11						
MAJO	Matsushiro	54.31	333	*e*P	P	02 27 35.5	-1.5
MAJO	Matsushiro	54.31	333	*i* P	P	02 27 35.4	-1.5
MAT	Matsushiro	54.31	333	P	P	02 27 35.7	-1.2
UGM	Wanagama	54.36	268	*e*P	P	02 27 38.6	+0.8
	comp=Z,81nm,0.9s						
JNU	Nakatsue	55.37	324	*e*P	P	02 27 44.2	-0.5
	comp=Z,35nm,0.8s						
JNU	Nakatsue	55.37	324	P	P	02 27 44.2	-0.5
	comp=Z,27nm,0.7s,baz=131,slow=4.0,SNR=9.6						
TPUB	Ta-pu	55.98	308	*e*P	P	02 27 52.0	+2.8
	comp=Z,76nm,1.3s						
ASAJ	Asahikawa	59.17	341	P	P	02 28 11.5	+0.2
	comp=Z,24nm,0.8s,baz=218,slow=11,SNR=8.4						
KSRS	Korea Array	60.17	326	P	P	02 28 18.1	-0.3
	comp=Z,7.8nm,0.8s,baz=145,slow=7.3,SNR=8.8						
KS15	Wonju Array Si	60.18	326	*e*P	P	02 28 18.1	-0.4
KSAR	Wonju Array Be	60.18	326	P	P	02 28 18.1	-0.3
KSAR	Wonju Array Be	60.18	326	P	P	02 28 18.1	-0.3
KS01	Wonju Array Si	60.20	326	*e*P	P	02 28 18.2	-0.4
YSS	Yuzh-Sakhalins	61.67	342	*e*P	P	02 28 29.9	+1.6
	comp=Z,45nm,1.1s						
YSS	Yuzh-Sakhalins	61.67	342	*e*P	P	02 28 30.1	+1.8
YSS				*e*		02 28 39.6	
NJ2	Nanjing	62.25	316	*e*P	P	02 28 33.8	+1.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
USRK	Ussuriysk Ar.	63.28	334	P	P	02 28 39.4	+0.2
	comp=Z,18nm,0.9s,baz=130,slow=6.1,SNR=11						
USA0B	Ussuriysk Arra	63.29	334	*e*P	P	02 28 39.8	+0.6
	comp=Z,43nm,1.1s						
WHN	Wuhan	64.59	312	⇑P	P	02 28 45.0	-3.1
MDJ	Mudanjiang	64.68	332	P	P	02 28 51.6	+3.2
MDJ				pmax	pmax		
	comp=Z,29nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,64µm,21.6s						
MDJ	Mudanjiang	64.68	332	*e*P	P	02 28 48.9	+0.5
	comp=Z,27nm,1.0s						
PETK	Petropavlovsk-	64.69	355	P	P	02 28 47.2	-1.1
	comp=Z,3.5nm,0.9s,baz=161,slow=7.8,SNR=3.3						
PEA1	Petropavlovsk-	64.70	355	*e*P	P	02 28 47.2	-1.1
CN2	Changchun	66.06	329	*e*P	P	02 28 56.9	-0.4
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR	Gornyy	67.02	340	*e*P	P	02 29 03.0	-0.3
SKNT	Sakolnakorn	67.16	294	P	P	02 29 08.2	+3.3
KLR	Kul'dur	67.41	337	*i* P	P	02 29 06.1	+0.3
KLR	Kul'dur	67.41	337	P	P	02 29 05.8	0.0
	baz=141,slow=7.7						
ENH	Enshi	68.08	309	*e*P	P	02 29 10.0	-0.5
	comp=Z,47nm,1.3s						
NONG	Nongkai	68.28	295	P	P	02 29 15.4	+3.5
	comp=Z,0.9nm,1.1s						
TRTT	Trang	68.32	283	P	P	02 29 25.9	+14
	comp=Z,16nm,2.6s						
GYA	Guiyang	68.56	304	⇑*i*P	P	02 29 17.2	+3.5
GYA				pP	pwP	02 29 27.4	+0.1
GYA				PP	PP	02 31 50.0	+4.6
GYA				S	S	02 38 15.5	+0.4
GYA				SKS	SKSac	02 39 09.1	-2.8
GYA	Guiyang	68.56	304	SS	SS	02 42 42.0	+2.2
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,6.8s						
GYA				LR	LR		
	comp=N,590nm,18.6s						
GYA				LR	LR		
	comp=E,550nm,18.3s						
GYA				LR	LR		
	comp=Z,570nm,19.0s						
CHAI	Chaiyaphum	68.59	292	P	P	02 29 27.8	+14
PATY	Pattaya	68.67	289	P	P	02 29 29.5	+15
PBKT	Sadao Pong	69.73	293	*e*P	P	02 29 25.3	+4.3
	comp=Z,13nm,1.0s						
TIY	Taiyuan	69.80	317	*e*P	P	02 29 24.1	+3.0
TIY				pP	pwP	02 29 33.9	-0.8
TIY				pmax	pmax		
	comp=Z,96nm,1.7s						
TIY				LR	LR		
	comp=N,6µm,13.0s						
TIY				LR	LR		
	comp=E,9µm,10.5s						
TIY				LR	LR		
	comp=Z,21µm,15.7s						
XAN	Xi'an	70.33	313	P	P	02 29 24.9	+0.5
XAN				pP	sP	02 29 34.7	+2.4
XAN				sP	pwP	02 29 39.4	+1.4
XAN				pmax	pmax		
	comp=Z,17nm,1.2s						
XAN	Xi'an	70.33	313	*e*P	P	02 29 28.1	+3.7
	comp=Z,19nm,1.0s						
XAN	Xi'an	70.33	313	*e*P	P	02 29 28.1	+3.7
XAN				pmax	pmax		
	comp=Z,19nm,1.0s						
SRDT	SRDT	70.72	290	P	P	02 29 39.5	+12
	comp=Z,17nm,1.2s						
UTHA	Uthaitani	70.80	291	P	P	02 29 40.4	+13
	comp=Z,4.3nm,1.1s						
SUKH	Sukhothai	71.24	293	P	P	02 29 43.3	+13
KMI	Kunming	71.24	302	P	P	02 29 31.8	+1.4
KMI				pP	pwP	02 29 42.3	-1.6
KMI				sP	PcP	02 29 46.8	-3.4
KMI				pmax	pmax		
	comp=Z,16nm,1.5s						
KMI				pmax	pmax		
	comp=Z,28nm,2.0s						
MA2	Magadan	71.83	352	*ce*P	P	02 29 31.3	-1.6
MA2				pmax	pmax		
	comp=Z,32nm,1.7s						
HHC	Hu-ho-hao-te	72.09	320	*e*P	P	02 29 41.3	+6.3
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
CM01	Chiang Mai Arr	72.15	294	*e*P	P	02 29 36.0	+0.3
CM31	Chiang Mai Arr	72.17	294	*e*P	P	02 29 36.4	+0.5
CMAR	Chiang Mai Arr	72.17	294	P	P	02 29 36.4	+0.5
	comp=Z,12nm,1.1s,baz=119,slow=5.4,SNR=8.5						
CMMT	Chiang Mai	72.28	294	P	P	02 29 49.0	+13
CHTO	Chiang Mai	72.29	294	*e*P	P	02 29 36.7	+0.2
	comp=Z,20nm,1.1s						
CHTO	Chiang Mai	72.29	294	*e*P	P	02 29 36.7	+0.2
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s						

CHTO	Chiang Mai	72.29	294	P	P	02 29 49.1	+13
	comp=Z,91nm,1.2s						
HIA	Hailar	72.69	330	*e*P	P	02 29 38.6	+0.3
	comp=Z,34nm,1.1s						
HIA	Hailar	72.69	330	⇑*i*P	P	02 29 38.9	+0.6
HIA				pmax	pmax		
	comp=Z,22nm,1.1s						
ZEA	Zeya	72.70	337	*e*P	P	02 29 38.8	+0.6
ZEA				pmax	pmax		
	comp=Z,190nm,2.0s						
CD2	Chengdu	72.77	307	⇓P	P	02 29 40.6	+1.4
SEY	Seymchan	74.90	354	*ce*P	P	02 29 50.7	-0.2
LZH	Lanzhou	74.96	312	*e*P	P	02 29 55.0	+2.9
LZH				pP	pwP	02 30 04.8	-0.9
LZH				sP	PcP	02 30 09.7	+3.9
LZH				PP	PP	02 32 46.5	+6.3
LZH				pmax	pmax		
	comp=Z,56nm,1.3s						
LZH				pmax	pmax		
	comp=Z,310nm,6.5s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
GAMB	Gambell	77.03	10	*e*P	P	02 30 03.0	+0.1
	comp=Z,21nm,0.9s						
KDAK	Kodiak Island	77.04	21	*e*P	P	02 30 01.4	-1.7
	comp=Z,63nm,1.5s						
KDAK	Kodiak Island	77.04	21	*ce*P	P	02 30 04.0	+0.8
KDAK	Kodiak Island	77.04	21	P	P	02 30 01.4	-1.7
	comp=Z,10nm,0.9s,baz=219,slow=9.7,SNR=4.3						
YAK	Yakutsk	78.48	344	*e*P	P	02 30 09.1	-2.0
YAK				pmax	pmax		
	comp=Z,12nm,1.0s						
YAK				pmax	pmax		
	comp=N,13nm,1.6s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
SVW2	Sparrevohn	78.57	18	*e*P	P	02 30 11.6	-0.1
ULN	Ulaanbaatar	78.58	324	*e*P	P	02 30 12.8	+0.6
	comp=E,33nm,1.1s						
ULN	Ulaanbaatar	78.58	324	*ce*P	P	02 30 11.8	-0.5
ULN				pmax	pmax		
	comp=Z,79nm,2.5s						
SONA0	Songino Array	78.95	324	*e*P	P	02 30 14.2	0.0
SONM	Songino Array	78.95	324	P	P	02 30 14.2	0.0
	comp=Z,9.9nm,1.0s,baz=146,slow=5.3,SNR=9.9						
SONA1	Songino Array	78.95	324	*e*P	P	02 30 14.2	-0.1
RSO	Redoubt South	78.98	20	*e*P	P	02 30 15.9	+1.7
BRLK	Bradley Lake	79.09	21	*e*P	P	02 30 13.9	-0.7
	comp=Z,41nm,0.9s						
GTA	Gaotai	79.27	314	*e*P	P	02 30 17.2	+1.0
GTA				pP	pP	02 30 21.0	-1.1
GTA				sP	PcP	02 30 24.5	+0.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				LR	LR		
	comp=N,17µm,17.8s						
GTA				LR	LR		
	comp=E,19µm,18.4s						
GTA				LR	LR		
	comp=Z,19µm,18.7s						
BILL	Bilibino	79.32	0	*e*P	P	02 30 15.2	-0.4
	comp=Z,26nm,0.9s						
BILL	Bilibino	79.32	0	*ce*P	P	02 30 15.9	+0.3
BILL				pmax	pmax		
	comp=Z,34nm,1.0s						
SEW	Seward	79.84	21	*e*P	P	02 30 18.9	+0.3
	comp=Z,19nm,1.0s						
SUA	Susitna One	80.38	20	*e*P	P	02 30 20.4	-1.2
	comp=Z,24nm,1.1s						
BOD	Bodaibo	80.88	335	*e*P	P	02 30 20.4	-3.8
BOD				pmax	pmax		
	comp=Z,23nm,2.0s						
KNK	Knik Glacier	81.11	20	*e*P	P	02 30 25.0	-0.5
	comp=Z,17nm,0.9s						
CAST	Castle Rocks	81.41	18	*e*P	P	02 30 25.6	-1.4
	comp=Z,26nm,0.8s						
SML	Sawmill	81.44	20	*e*P	P	02 30 27.4	+0.2
	comp=Z,25nm,1.0s						
SML	Sawmill	81.44	20	*e*P	P	02 30 27.4	+0.2
SML				pmax	pmax		
	comp=Z,25nm,1.0s						
DIV	Divide	81.86	22	*e*P	P	02 30 29.1	-0.4
	comp=Z,32nm,1.0s						
ZAK	Zakamensk	81.99	325	*e*P	P	02 30 30.0	-0.5
ZAK				*e*		02 35 25.3	
ZAK				pmax	pmax		
	comp=Z,13nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,11nm,1.1s						
KLU	Klutina	82.06	21	*e*P	P	02 30 31.2	+0.6
	comp=Z,23nm,1.0s						
RND	Reindeer	82.40	19	*e*P	P	02 30 32.6	+0.3
	comp=Z,27nm,1.0s						
RND	Reindeer	82.40	19	*e*P	P	02 30 32.6	+0.3
RND				pmax	pmax		
	comp=Z,27nm,1.0s						
TLY	Talaya	82.42	326	*i* P	P	02 30 33.6	+1.0
MCK	McKinley	82.60	19	*e*P	P	02 30 33.8	+0.5
	comp=Z,37nm,1.1s						
MCK	McKinley	82.60	19	*e*P	P	02 30 33.8	+0.5
MCK				pmax	pmax		
	comp=Z,37nm,1.1s						
DHY	Denali Highway	82.64	20	*e*P	P	02 30 34.2	+0.5
	comp=Z,19nm,1.2s						
BWN	Browne	82.75	18	*e*P	P	02 30 34.7	+0.7
	comp=Z,84nm,1.4s						
IM3	Indian Mountai	82.88	16	*e*P	P	02 30 34.1	-0.5
HARP	HAARP	82.94	21	*e*P	P	02 30 38.2	+3.2
	comp=Z,55nm,1.0s						
MLY	Manley	83.00	17	*e*P	P	02 30 35.7	+0.3
	comp=Z,22nm,1.4s						
KMRM	Mail Ridge	83.05	47	*e*P	P	02 30 38.6	+2.4
	comp=Z,18nm,0.9s						
WRH	Wood River Hil	83.39	18	*e*P	P	02 30 36.1	-1.2
	comp=Z,22nm,0.9s						
O02D	Mt. Diablo Mer	83.69	47	P	P	02 30 39.8	+0.3
	baz=249						
MDM	Murphy Dome	83.69	18	*e*P	P	02 30 37.6	-1.2
	comp=Z,24nm,0.9s						
HDA	Harding Lake	83.70	19	*e*P	P	02 30 38.2	-0.7
	comp=Z,60nm,0.8s						
HDA	Harding Lake	83.70	19	P	P	02 30 38.3	-0.6
	baz=226						
TCOL	CIGO, UAF Yank	83.74	18	P	P	02 30 38.1	-1.0
	baz=226						
COLA	College	83.75	18	*e*P	P	02 30 38.4	-0.7
	comp=Z,44nm,0.8s						
COLA	College	83.75	18	*i* P	P	02 30 37.1	-2.0
COLA				pmax	pmax		
	comp=Z,34nm,0.8s						
MOY	Mondy	83.87	326	*e*P	P	02 30 40.2	0.0
MOY				pmax	pmax		
	comp=Z,100nm,2.7s						
RIDG	Independ'e Rid	83.93	20	*e*P	P	02 30 40.5	+0.3
	comp=Z,77nm,1.1s						
IL1	Eielson Array	83.97	19	*e*P	P	02 30 37.9	-2.3
ILAR	Eielson Array	83.97	19	P	P	02 30 39.2	-1.0
	comp=Z,8.0nm,0.7s,baz=229,slow=6.0,SNR=14						
ILB	Eielson Array	83.97	19	*e*P	P	02 30 39.4	-0.9
	comp=Z,12nm,0.7s						
POKR	Poker Plat Res	84.04	18	P	P	02 30 39.5	-1.1
	baz=226						
M02C	Callahan	84.07	46	P	P	02 30 41.4	0.0
	baz=249						
YBH	Yreka Blue Hor	84.29	46	*e*P	P	02 30 43.6	+1.1
	comp=Z,15nm,1.2s						
YBH	Yreka Blue Hor	84.29	46	*e*P	P	02 30 43.6	+1.1
YBH				pmax	pmax		
	comp=Z,15nm,1.2s						
SCRK	Sand Creek	84.37	20	*e*P	P	02 30 42.0	-0.5
	comp=Z,91nm,1.4s						
HUMO	Hull Mountain	84.43	45	*e*P	P	02 30 44.7	+1.6
	comp=Z,27nm,1.4s						
O03E	Paynes Creek	84.44	47	P	P	02 30 43.8	+0.5
	baz=250						
CMB	Columbia Colle	84.72	50	*e*P	P	02 30 45.7	+0.9
	comp=Z,11nm,1.1s						
CMB	Columbia Colle	84.72	50	*e*P	P	02 30 45.7	+0.9
CMB				pmax	pmax		
	comp=Z,11nm,1.1s						
L04D	Klamath Falls	84.75	45	P	P	02 30 44.1	-0.8
	baz=249						
WRAK	Wrangell Islan	84.78	30	*e*P	P	02 30 47.6	+3.1
	comp=Z,44nm,1.1s						
HYT	Haines Junctio	84.84	24	*e*P	P	02 30 45.7	+0.8
	comp=Z,13nm,0.9s						
I04A	Tendick Farm,	85.23	44	P	P	02 30 48.7	+1.6
	baz=249						
BEKR	Beckworth	85.34	48	*e*P	P	02 30 48.5	+0.5
	comp=Z,22nm,1.4s						
KNGR	Kungurtug, Tuv	85.39	324	*e*P	P	02 30 48.8	+0.9
ISA	Isabella, Lake	85.44	52	P	P	02 30 50.0	+1.6
	baz=252						
MDPB	Devils Postpil	85.58	50	*e*P	P	02 30 49.4	+0.1
	comp=Z,6.1nm,0.9s						
WAKR	Walker	85.58	49	*e*P	P	02 30 50.5	+1.3
	comp=Z,15nm,1.2s						
EDW2	Edwards Air Fo	85.58	53	P	P	02 30 49.4	+0.2
	baz=252						
J05D	Fort Rock, OR	85.85	44	P	P	02 30 50.1	-0.3
	baz=250						
PAHR	Pah Rah Range	86.00	48	*e*P	P	02 30 51.9	+0.6
	comp=Z,18nm,1.4s						
DAWY	Dawson	86.01	21	*e*P	P	02 30 51.8	+1.2
	comp=Z,12nm,0.8s						
PINE	Pine Mountain	86.23	44	*e*P	P	02 30 53.7	+1.3
	comp=Z,19nm,1.4s						
MONP2	Monument Peak	86.27	56	P	P	02 30 53.8	+0.9
	baz=253						
RYN	Ryan	86.30	50	*e*P	P	02 30 53.3	+0.6
	comp=Z,3.8nm,1.1s						
MPMC	Manual Prospec	86.32	52	P	P	02 30 53.6	+0.6
	baz=253						
NV01	Mina Array Sit	86.40	50	*e*P	P	02 30 52.7	-0.7
NVAR	Mina Array Bea	86.40	50	P	P	02 30 52.0	-1.3
	comp=Z,3.2nm,0.7s,baz=236,slow=6.4,SNR=7.9						
PFO	Pinyon Flats O	86.44	55	P	P	02 30 55.2	+1.7
PFO	Pinyon Flats O	86.44	55	P	P	02 30 54.0	+0.4
	baz=253						
TPFO	Pinon Flats	86.44	55	P	P	02 30 53.4	-0.1
	baz=253						
TIXI	Tiksi	86.50	349	*ce*P	P	02 30 52.6	-0.1
TIXI				pmax	pmax		
	comp=Z,49nm,2.5s						
KVN	Kaiserville	86.74	49	*e*P	P	02 30 55.8	+0.8
	comp=Z,6.2nm,1.1s						
KVN	Kaiserville	86.74	49	*e*P	P	02 30 55.8	+0.8
KVN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HEC	Hector,Ludlow	86.88	54	P	P	02 30 56.3	+0.7
	baz=253						
B05A	Bryant	87.02	40	P	P	02 30 57.1	+1.3
	baz=249						
BC3	Big Chuckawall	87.26	55	P	P	02 30 56.9	-0.6
	baz=254						
I07A	Izee	87.30	44	*e*P	P	02 30 58.2	+0.8
	comp=Z,7.4nm,0.9s						
TUQ	Turquoise Moun	87.37	53	P	P	02 30 57.6	-0.4
	baz=254						
WVOR	Wild Horse Val	87.39	46	*e*P	P	02 30 59.3	+1.4
	comp=Z,16nm,1.2s						
WVOR	Wild Horse Val	87.39	46	*e*P	P	02 30 59.3	+1.4
WVOR				pmax	pmax		
	comp=Z,16nm,1.2s						
GMRC	Granite Mounta	87.40	54	P	P	02 30 58.6	+0.5
	baz=254						
TPNV	Topopah Spring	87.53	52	*e*P	P	02 31 00.1	+1.4
	comp=Z,10nm,1.3s						
TPNV	Topopah Spring	87.53	52	*e*P	P	02 31 00.2	+1.4
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TPNV	Topopah Spring	87.53	52	P	P	02 30 58.7	-0.2
	baz=253						
LTY	Liberty	87.57	41	*e*P	P	02 30 59.3	+0.6
	comp=Z,22nm,1.4s						
IRM	Iron Mountain	87.64	55	P	P	02 30 58.5	-0.7
	baz=254						
J08A	Circle Bar Ran	87.78	45	*e*P	P	02 31 00.5	+0.7
	comp=Z,15nm,1.0s						
HAWA	Hanford	88.03	42	*e*P	P	02 31 01.9	+1.2
	comp=Z,5.0nm,0.9s						
Y12C	Blythe	88.03	55	P	P	02 31 00.7	-0.3
	baz=254						
G08A	Pilot Rock	88.05	43	*e*P	P	02 31 01.6	+0.5
	comp=Z,27nm,1.4s						
NEE2	Needles Airpor	88.22	54	P	P	02 31 02.9	+0.9
	baz=254						
SHPR	Sheep Range	88.25	52	*e*P	P	02 31 03.9	+1.6
	comp=Z,13nm,1.4s						
E08A	Dider Farm, El	88.37	42	*e*P	P	02 31 03.3	+1.0
	comp=Z,28nm,1.3s						
113A	Mohawk Valley,	88.39	56	*e*P	P	02 31 04.2	+1.5
	comp=Z,8.6nm,1.3s						
R11A	Troy Canyon, C	88.43	50	*e*P	P	02 31 04.1	+1.0
	comp=Z,14nm,1.4s						
PDMCI	Parker Dam,Lak	88.48	55	P	P	02 31 02.5	-0.6
	baz=255						
D08A	Wollman Farm,	88.64	41	*e*P	P	02 31 04.3	+0.7
	comp=Z,17nm,1.3s						
B08A	Colville Reser	88.78	40	*e*P	P	02 31 03.8	-0.6
	comp=Z,16nm,1.3s						
W13A	Hualapai Mount	88.89	54	*e*P	P	02 31 06.2	+0.9
	comp=Z,11nm,1.4s						
BMO	Blue Mountains	89.04	44	*e*P	P	02 31 06.8	+1.1
	comp=Z,0.4nm,0.8s						
BMO	Blue Mountains	89.04	44	*e*P	P	02 31 06.8	+1.1
WMQ	Urumqi	89.32	315	P	P	02 31 10.0	+3.0
WMQ				pP	pwP	02 31 18.4	-2.2
WMQ				sP	sP	02 31 22.7	+7.6
WMQ				pmax	pmax		
	comp=Z,48nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,17µm,11.6s						
WMQ				LR	LR		
	comp=N,34µm,15.1s						
WMQ				LR	LR		
	comp=E,31µm,14.1s						
WMQ				LR	LR		
	comp=Z,33µm,18.7s						
ELK	Elko	89.33	48	*e*P	P	02 31 06.8	-0.6
	comp=Z,14nm,1.3s						
ELK	Elko	89.33	48	*e*P	P	02 31 06.8	-0.6
ELK				pmax	pmax		
	comp=Z,14nm,1.3s						
F10A	Beach Ranch, E	89.42	43	*e*P	P	02 31 06.5	-0.9
	comp=Z,9.9nm,1.1s						
MFID	Camas Ranch	89.64	46	*e*P	P	02 31 09.3	+0.7
	comp=Z,12nm,1.4s						
PSUT	Pine Spring	89.79	51	*e*P	P	02 31 10.4	+0.9
	comp=Z,11nm,1.0s						
LCMT	Little Creek M	89.87	52	*e*P	P	02 31 10.0	+0.2
	comp=Z,8.8nm,1.4s						
CCUT	Cedar City	89.91	52	*e*P	P	02 31 11.5	+1.4
	comp=Z,12nm,1.3s						
SZCU	Shurtz Canyon	90.14	52	*e*P	P	02 31 12.9	+1.7
	comp=Z,9.2nm,1.2s						
NEW	Newport	90.16	41	*e*P	P	02 31 11.5	+0.7
NEW	Newport	90.16	41	*e*P	P	02 31 11.5	+0.7
NEW	Newport	90.16	41	P	P	02 31 10.9	+0.2
	baz=253						
KNB	Kanab	90.20	52	*e*P	P	02 31 12.9	+1.5
	comp=Z,18nm,1.3s						
KNB	Kanab	90.20	52	*e*P	P	02 31 12.9	+1.5
KNB				pmax	pmax		
	comp=Z,18nm,1.3s						
U15A	North Rim	90.47	53	*e*P	P	02 31 12.8	0.0
	comp=Z,13nm,0.8s						
X16A	Lo Mia Camp, P	90.67	55	*e*P	P	02 31 13.7	0.0
	comp=Z,6.6nm,0.8s						
HLID	Hailey	90.68	46	*e*P	P	02 31 14.5	+1.0
	comp=Z,15nm,1.4s						
HLID	Hailey	90.68	46	P	P	02 31 12.9	-0.6
	baz=254						
PKCU	Pink Cliffs	90.70	52	*e*P	P	02 31 17.0	+3.1
	comp=Z,16nm,0.9s						
TUC	Tucson	90.73	57	P	P	02 31 13.4	-0.5
	baz=256						
TCRU	Three Creeks R	90.87	51	*e*P	P	02 31 14.4	-0.2
	comp=Z,12nm,0.7s						
MTPU	Mount Pierson	90.94	51	*e*P	P	02 31 15.9	+0.9
	comp=Z,7.9nm,1.0s						
DUG	Dugway, Tooele	90.98	49	*e*P	P	02 31 15.8	+0.8
	comp=Z,0.7nm,0.9s						
DUG	Dugway, Tooele	90.98	49	*e*P	P	02 31 15.8	+0.8
DUG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
DUG	Dugway, Tooele	90.98	49	P	P	02 31 14.9	0.0
	baz=255						
WUAZ	Wupatki	90.98	54	*e*P	P	02 31 16.7	+1.6
	comp=Z,9.1nm,1.0s						
BGU	Big Grassy Mou	91.00	49	*e*P	P	02 31 15.6	+0.6
	comp=Z,4.0nm,0.8s						
MSU	Marysvale	91.06	51	*e*P	P	02 31 17.0	+1.6
MSU	Marysvale	91.06	51	*e*P	P	02 31 17.0	+1.6
DGZ	Jazzator, Alta	91.16	321	*i* P	P	02 31 13.9	-1.6
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SYO	Syowa Base	91.33	197	⇓*e*P	P	02 31 14.4	-1.4
HVU	Hansel Valley	91.40	48	*e*P	P	02 31 17.0	+0.2
	comp=Z,21nm,1.2s						
HVU	Hansel Valley	91.40	48	*e*P	P	02 31 17.0	+0.2
HVU				pmax	pmax		
	comp=Z,21nm,1.2s						
NLU	North Lily Min	91.47	50	*e*P	P	02 31 18.6	+1.3
	comp=Z,9.2nm,1.0s						
SPUT	South Promonto	91.52	48	*e*P	P	02 31 17.8	+0.3
MPU	Maple Canyon	91.82	50	*e*P	P	02 31 19.9	+1.0
	comp=Z,14nm,1.4s						
MSO	Missoula	91.84	43	P	P	02 31 18.8	0.0
	baz=255						
CTU	Camp Tracy	91.89	49	*e*P	P	02 31 20.4	+1.2
	comp=Z,13nm,1.4s						
Q16A	Castle Valley	91.92	51	*e*P	P	02 31 22.0	+2.6
	comp=Z,12nm,1.3s						
JLU	Jordanelle	92.09	49	*e*P	P	02 31 21.7	+1.5
	comp=Z,2.6nm,0.9s						
HWUT	Hardware Ranch	92.24	48	*e*P	P	02 31 22.8	+2.0
	comp=Z,2.2nm,0.8s						
BOZ	Bozeman (W)	93.10	44	P	P	02 31 25.4	+0.8
	baz=256						
HRY	Holter Researc	93.22	43	*e*P	P	02 31 24.9	-0.2
PV09	Paradox Valley	93.38	52	*e*P	P	02 31 24.9	-1.3
PV23	Carpenter Ridg	93.47	52	*e*P	P	02 31 27.2	+0.6
	comp=Z,6.9nm,0.7s						
PV04	Paradox Valley	93.54	52	*e*P	P	02 31 27.8	+0.9
	comp=Z,4.4nm,0.8s						
H17A	Grant Village	93.56	46	P	P	02 31 27.6	+0.6
	baz=257						
MK01	Makanchi Array	93.75	317	*e*P	P	02 31 26.9	-0.5
MK31	Makanchi Array	93.76	317	*e*P	P	02 31 26.9	-0.5
	comp=Z,11nm,0.9s						
MK32	Makanchi Array	93.76	317	*e*P	P	02 31 26.7	-0.8
MKAR	Makanchi Array	93.76	317	*e*P	P	02 31 26.9	-0.5
	comp=Z,62nm,0.8s						
MKAR	Makanchi Array	93.76	317	P	P	02 31 26.7	-0.8
	comp=Z,11nm,0.7s,baz=94,slow=5.5,SNR=15						
ZAA0	Zalesovo Array	93.84	324	*e*P	P	02 31 26.4	-1.2
	comp=Z,13nm,1.0s						
ZALV	Zalesovo Beam	93.84	324	*e*P	P	02 31 25.9	-1.7
ZALV	Zalesovo Beam	93.84	324	*e*P	P	02 31 25.9	-1.7
ZALV	Zalesovo Beam	93.84	324	P	P	02 31 26.2	-1.4
	comp=Z,10nm,1.0s,baz=116,slow=3.8,SNR=9.8						
ZAA1	Zalesovo Array	93.84	324	*e*P	P	02 31 26.2	-1.4
PD31	Pinedale Array	93.94	47	*e*P	P	02 31 27.7	-1.0
PDAR	Pinedale Array	93.94	47	*e*P	P	02 31 27.5	-1.1
PDAR	Pinedale Array	93.94	47	P	P	02 31 27.7	-1.0
	comp=Z,1.2nm,0.8s,baz=250,slow=2.3,SNR=5.2						
MAKZ	Makanchi	93.97	317	*e*P	P	02 31 28.2	-0.2
	comp=Z,19nm,1.1s						
MAKZ	Makanchi	93.97	317	*e*P	P	02 31 28.2	-0.2
MAKZ				pmax	pmax		
	comp=Z,19nm,1.1s						
YKA	Yellowknife Ar	95.42	27	P	P	02 31 32.3	-2.3
	comp=Z,2.3nm,0.7s,baz=258,slow=4.6,SNR=13						
YKB5	Yellowknife Ar	95.42	27	*e*P	P	02 31 32.1	-2.5
LTX	Lajitas	96.15	61	*e*P	P	02 31 37.5	-1.4
LTX	Lajitas	96.15	61	*e*P	P	02 31 37.5	-1.4
TXAR	Lajitas Array	96.15	61	P	P	02 31 37.5	-1.4
	comp=Z,0.4nm,0.7s,baz=224,slow=5.0,SNR=3.5						
NRIK	Noril'sk	96.49	340	P	P	02 31 37.3	-2.1
	comp=Z,3.9nm,0.6s,baz=167,slow=16,SNR=3.2						
KSH	Kashi	96.93	309	P	P	02 31 44.7	+2.4
ARA0	ARCESS Array S	116.73	345	*e*PKPdf	PKPdf	02 36 53.5	-0.8
ARCES	ARCESS Array B	116.73	345	PKP	PKPdf	02 36 53.5	-0.8
	comp=Z,2.7nm,0.6s,baz=88,slow=2.4,SNR=19						
MNMC	Minye Minye	117.66	119	*e*PKPdf	PKiKP	02 36 59.1	+1.2
OBN	Obninsk	121.11	329	*e*PKIKP	PKPdf	02 37 02.8	-0.2
OBN				*e*		02 38 32.4	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FIA0	FINESS Array S	122.14	338	*e*PKPdf	PKPdf	02 37 03.8	-1.0
FIA0	FINESS Array S	122.14	338	*e*PKIKP	PKPdf	02 37 03.8	-1.0
FINES	FINESS Array B	122.14	338	PKP	PKPdf	02 37 03.8	-1.0
	comp=Z,1.5nm,0.6s,baz=11,slow=1.9,SNR=5.0						
CPUP	Villa Florida	123.82	133	PKP	PKPdf	02 37 08.2	-0.9
	comp=Z,3.6nm,0.8s,baz=245,slow=2.6,SNR=2.8						
SDV	Santo Domingo	124.64	87	*e*PKPdf	PKPdf	02 37 10.0	-1.3
BOSA	Boshof	124.71	223	PKP	PKPdf	02 37 09.8	-1.1
	comp=Z,3.2nm,0.9s,baz=79,slow=2.0,SNR=5.0						
NB2	NORSAR Subarra	127.09	345	PKPdf	PKPdf	02 37 14.1	-0.3
	comp=Z,0.5nm,0.7s,baz=31,slow=1.9						
NB200	NORSAR Array S	127.09	345	*e*PKPdf	PKPdf	02 37 13.4	-1.0
NOA	NORSAR Array B	127.09	345	PKP	PKPdf	02 37 13.4	-1.0
	comp=Z,2.8nm,1.0s,baz=35,slow=2.1,SNR=5.7						
AKASG	Malin Array Be	127.16	327	PKP	PKPdf	02 37 13.2	-1.5
	comp=Z,0.5nm,0.5s,baz=63,slow=2.7,SNR=5.5						
AKBB	Malin Array Si	127.16	327	*e*PKPdf	PKPdf	02 37 13.2	-1.5
HFS	Hagfors	127.17	343	PKP	PKPdf	02 37 12.7	-1.7
	comp=Z,3.2nm,0.9s,baz=250,slow=1.7,SNR=5.2						
BR101	Keskin Array S	129.17	312	*e*PKPdf	PKPdf	02 37 19.5	+0.4
BRTR	Keskin Array B	129.17	312	PKP	PKPdf	02 37 19.5	+0.4
	comp=Z,0.7nm,0.9s,baz=70,slow=3.0,SNR=2.4						
SJG	San Juan	129.65	76	*e*PKPdf	PKiKP	02 37 21.0	-0.1
SJG	San Juan	129.65	76	*e*PKIKP	PKiKP	02 37 21.0	-0.1
VYHS	Vyhne	133.89	330	*e*PKIKP	PKiKP	02 37 30.6	+1.7
VYHS	Vyhne	133.89	330	*e*PKP	PKiKP	02 37 30.6	+1.7
BRG	Berggiesshubel	134.41	335	*e*PKP	PKiKP	02 37 31.8	+1.9
	comp=Z,101nm,2.4s						
BRG	Berggiesshubel	134.41	335	*e*PKIKP	PKiKP	02 37 31.8	+1.9
BRG				pmax	pmax		
	comp=Z,101nm,2.4s						
CLL	Collm	134.46	336	*e*PKPdf	PKPdf	02 37 29.0	+0.5
	comp=Z,200nm,3.2s						
CLL	Collm	134.46	336	*e*PKIKP	PKPdf	02 37 29.0	+0.5
CLL				pmax	pmax		
	comp=Z,41nm,3.2s						
EKA	Eskdalemuir Ar	135.38	351	PKP	PKPdf	02 37 30.8	+0.6
	comp=Z,3.0nm,0.8s,baz=22,slow=3.9,SNR=4.4						
CONA	Conrad Observa	135.72	331	PKPdf	PKPdf	02 37 26.7	-4.5
	comp=Z,3.8nm,1.3s						
GEC2	GERESS Array S	136.04	333	*e*PKPdf	PKPdf	02 37 32.5	+0.7
GEC2	GERESS Array S	136.04	333	*e*PKIKP	PKPdf	02 37 32.5	+0.7
GERES	GERESS Array B	136.04	333	PKP	PKPdf	02 37 32.5	+0.7
	comp=Z,1.9nm,1.0s,baz=44,slow=3.0,SNR=5.0						
MOA	Molln	136.53	332	PKPdf	PKPdf	02 37 28.5	-4.1
	comp=Z,2.9nm,0.8s						
BDFB	Brasilia	137.16	128	*e*PKPdf	PKPdf	02 37 34.2	-0.6
BDFB				*e*PKPdf	PKiKP	02 37 36.9	+0.3
BDFB	Brasilia	137.16	128	PKP	PKPdf	02 37 34.2	-0.6
	comp=Z,3.7nm,0.7s,baz=183,slow=6.5,SNR=3.8						
ABTA	Abfaltersbach	138.14	332	*e*PKPdf	PKPdf	02 37 31.3	-4.4
	comp=Z,6.1nm,1.0s						
WTTA	Wattenberg	138.15	333	*e*PKPdf	PKPdf	02 37 31.5	-4.3
	comp=Z,3.4nm,0.9s						
SQTA	Sankt Quirin	138.37	334	*e*PKPdf	PKPdf	02 37 32.0	-4.1
	comp=Z,4.5nm,1.0s						
KEST	Kesra	147.69	322	*e*PKPbc	PKPbc	02 37 56.5	+0.9
KEST	Kesra	147.69	322	PKPbc	PKPbc	02 37 56.0	+0.5
	comp=Z,39nm,0.9s,baz=303,slow=1.4,SNR=11						
POLO	Lamas de Olo	149.67	350	*e*PKPab	PKPbc	02 38 00.8	+0.3
MVO	Moncorvo	149.74	349	*e*PKPab	PKiKP	02 38 02.4	+0.7
PVRL	Vila Real	149.76	350	*e*PKPab	PKiKP	02 38 02.5	+0.8
PTO	Porto	150.03	351	*e*PKPab	PKPab	02 38 07.4	+0.5
PVIS	Viseu	150.33	350	*e*PKPab	PKiKP	02 38 04.9	+2.0
ES19	SONSECA Array	150.40	343	*e*PKPbc	PKPbc	02 38 02.5	+0.2
ESDC	Sonseca Array	150.45	344	PKP	PKPdf	02 37 56.0	-1.1
	comp=Z,0.5nm,0.7s,baz=14,slow=2.2,SNR=3.2						
ESDC				PKPbc	PKPbc	02 38 02.5	0.0
	comp=Z,5.3nm,0.8s,baz=16,slow=3.4,SNR=8.2						
MTE	Manteigas	150.58	349	*e*PKPab	PKiKP	02 38 03.3	-0.1
MTE	Manteigas	150.58	349	*e*PKPbc	PKiKP	02 38 03.3	-0.1
PCBR	Castelo Branco	151.11	349	*e*PKPab	PKiKP	02 38 05.3	+0.9
PTOM	Tomar	151.49	350	*e*PKPab	PKiKP	02 38 05.5	+0.3
PMRV	Marv??o	151.49	349	*e*PKPab	PKiKP	02 38 08.0	+2.7
PMTG	Montargil	151.99	350	*e*PKPab	PKiKP	02 38 08.0	+1.7
TORD	Torodi Ar. Bea	164.20	278	PKP	PKPdf	02 38 14.6	-0.3
	comp=Z,3.5nm,1.0s,baz=78,slow=1.4,SNR=4.7						
TOA1	Torodi Ar. Sit	164.21	278	*e*PKPdf	PKPdf	02 38 14.6	-0.3

IDC ***06*** *02:19:37.9±0.9, 10.°90S×165.°43E, h0km, mb4.5/8,*
mb1 4.7/9, mb1mx4.3/39, mbtmp4.6/9, ML4.6/1, Error
ellipse: s-maj=32.2km s-min=20.3km az=131.0
ISCJB ***06*** *02:19:40.7±0.8, 11.°0S±0.°1×165.°4E±0.°1, h30km, mb4.4/7,*
Error ellipse: s-maj=20.8km s-min=15.9km az=30.3

ISC 06 02:19:42.4±0.9, 10°.9S±0°.1×165°.4E±0°.2, h30^{km}, n9, σ0^{s}.76/9, mb4.5/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.11	175	Pn	Pn	02 22 19.6	+0.1
	4.7nm,0.3s,baz=286,slow=9.1,SNR=7.0						
CTA	Charters Tower	20.57	241	P	P	02 24 19.6	+0.6
	22nm,0.9s,baz=80,slow=15,SNR=2.5						
URZ	Urewera	29.15	161	P	P	02 25 40.9	0.0
	14nm,0.8s,baz=27,slow=2.3,SNR=2.5						
STKA	Stephens Creek	30.30	223	P	P	02 25 51.2	-0.1
	7.3nm,0.8s,baz=40,slow=11,SNR=3.0						
WRA	Warramunga Arr	31.23	250	P	P	02 25 59.7	+0.1
	12nm,0.8s,baz=80,slow=9.0,SNR=5.1						
ASAR	Alice Springs	32.56	243	P	P	02 26 10.5	-0.8
	9.8nm,1.0s,baz=65,slow=10,SNR=4.8						
ILAR	Eielson Array	83.51	19	P	P	02 32 08.0	+1.0
	1.9nm,0.6s,baz=237,slow=3.8,SNR=3.8						
NVAR	Mina Array Bea	86.19	50	P	P	02 32 21.7	+0.3
	0.7nm,0.7s,baz=237,slow=8.4,SNR=1.9						
YKA	Yellowknife Ar	95.02	27	P	P	02 33 00.7	-1.2
	0.4nm,0.6s,baz=258,slow=4.7,SNR=3.3						

MEX 06 02:21:26.4±0.4, 27°.37N×111°.22W, h10^{km}, MD3.6, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUYB	Guaymas	0.61	30	eP	Pg	02 21 37.0	-1.2
GUYB				i S	Sg	02 21 45.1	-1.1
SRIG	Santa Rosalia	0.91	267	eP	Pg	02 21 41.2	-2.7
HSIG		1.66	8	eP	Pn	02 21 53.0	-2.5

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*IDC **06** 02:21:38.4±0.9, 10°.84S×164°.90E, h0^{km}, mb4.4/11, mb1 4.6/12, mb1mx4.3/38, mbtmp4.4/12, ML4.3/1, Error ellipse: s-maj=34.9km s-min=20.5km az=135.0*

*ISCJB **06** 02:21:41.4±0.7, 11°.0S±0°.1×164°.9E±0°.1, h31^{km}, mb4.3/11, Error ellipse: s-maj=21.2km s-min=14.7km az=19.9*

ISC 06 02:21:43.2±0.8, 10°.9S±0°.1×164°.9E±0°.2, h31^{km}, n12, σ0^{s}.84/12, mb4.3/11, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.24	173	Pn	Pn	02 24 22.0	+0.2
	2.2nm,0.3s,baz=75,slow=20,SNR=3.5						
STKA	Stephens Creek	30.01	222	P	P	02 27 50.2	+0.9
	4.9nm,0.8s,baz=24,slow=9.8,SNR=3.0						
WRA	Warramunga Arr	30.77	249	P	P	02 27 55.0	-1.1
	3.2nm,0.9s,baz=79,slow=9.0,SNR=3.0						
ASAR	Alice Springs	32.14	243	P	P	02 28 06.8	-1.4
	2.0nm,0.6s,baz=64,slow=9.9,SNR=4.6						
CMAR	Chiang Mai Arr	71.28	294	P	P	02 33 01.0	+0.8
	1.2nm,0.3s,baz=112,slow=5.8,SNR=3.5						
SONM	Songino Array	78.03	324	P	P	02 33 39.7	+0.8
	3.5nm,1.1s,baz=137,slow=6.7,SNR=4.9						
ILAR	Eielson Array	83.61	19	P	P	02 34 08.6	+0.4
	1.2nm,0.8s,baz=242,slow=5.2,SNR=4.4						
NVAR	Mina Array Bea	86.54	50	P	P	02 34 23.7	0.0
	2.0nm,0.9s,baz=232,slow=5.4,SNR=3.6						
MKAR	Makanchi Array	92.83	317	P	P	02 34 52.8	-0.1
	3.8nm,0.9s,baz=98,slow=5.6,SNR=6.0						
ZALV	Zalesovo Beam	92.93	324	P	P	02 34 52.8	-0.3
	2.2nm,0.9s,baz=98,slow=3.0,SNR=4.5						
PDAR	Pinedale Array	94.04	47	P	P	02 34 58.3	-0.6
	1.3nm,1.0s,baz=259,slow=2.4,SNR=3.5						
YKA	Yellowknife Ar	95.19	27	P	P	02 35 02.6	-0.7
	0.5nm,0.9s,baz=246,slow=4.7,SNR=3.4						

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*IDC **06** 02:23:06.9±0.4, 10°.96S×165°.50E, h0^{km}, mb4.9/27, mb1 5.0/29, mb1mx5.0/38, mbtmp4.9/29, ML5.5/2, Error ellipse: s-maj=15.0km s-min=11.8km az=111.0*

*ISCJB **06** 02:23:09.8±0.1, 11°.00S±0°.02×165°.34E±0°.03, h26^{km}, mb5.2/223, MS4.9/2, Error ellipse: s-maj=3.9km s-min=3.2km az=3.4*

*BJI **06** 02:23:09.4, 11°.14S×165°.35E, h23^{km}, mB5.4/4, mb5.1/32, Ms5.2/3, Ms7 4.9/3*

*MOS **06** 02:23:10.7±0.9, 11°.01S×165°.34E, h33^{km}, mb5.3/50, Error ellipse: s-maj=8.7km s-min=7.8km az=47.4*

*NEIC **06** 02:23:11.3±0.6, 10°.94S×165°.37E, h24^{km}±4^{km}, mb5.3/187, Error ellipse: s-maj=3.6km s-min=3.0km az=120.0*

ISC 06 02:23:09.5±1.4, 11°.01S±0°.05×165°.37E±0°.05, h12^{km}±8^{km}, n491, σ1^{s}.21/502, mb5.3/223, 5C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.56	286	ePn	Pn	02 24 33.4	+1.3
HNR				eSn	Sn	02 25 28.2	-7.8
HNR	Honiara	5.56	286	eP	Pn	02 24 33.4	+1.3
HNR				e		02 25 28.2	
HNR	Honiara	5.56	286	Pn	Pn	02 24 34.0	+1.9
	226nm,0.3s,baz=159,slow=6.2,SNR=12						
HNR				Sn	Sn	02 25 36.9	+1.0
	49nm,0.3s,baz=9.0,slow=19,SNR=2.2						
MARNC	Mare, Loyalty	10.72	167	ePn	Pn	02 25 43.6	+0.6
DZM	Mont Dzumac	11.05	175	ePn	Pn	02 25 48.4	+0.8
DZM				eSn	Sn	02 27 49.6	-1.6
DZM	Mont Dzumac	11.05	175	Pn	Pn	02 25 48.1	+0.6
	25nm,0.3s,baz=111,slow=21,SNR=17						
ONTNC	Ouen Toro	11.29	175	ePn	Pn	02 25 51.7	+1.1
OUENC	Ouen Island, N	11.44	173	ePn	Pn	02 25 53.0	+0.3
PINNC	Pines Island,	11.71	170	ePn	Pn	02 25 57.3	+0.8
MSVF	Nonsavu	13.98	120	eP	P	02 26 36.8	+1.1
MSVF	Nonsavu	13.98	120	i P	Pn	02 26 29.4	+1.7
PATS	Pohnpei	19.07	338	eP	P	02 27 30.6	-1.3
CTA	Charters Tower	20.49	242	P	Pn	02 27 49.6	-0.1
	51nm,0.8s,baz=74,slow=14,SNR=11						
CTAO	Charters Tower	20.49	242	eP	P	02 27 47.3	-0.2
	625nm,1.5s						
CTAO	Charters Tower	20.49	242	eP	P	02 27 47.3	-0.2
OUZ	Omahuta	25.24	164	eP	P	02 28 35.9	+0.5
	107nm,1.2s						
MKAZ	Moumakai	27.44	163	P	P	02 28 55.7	+0.4
HIZ	Hauiti	28.68	164	eP	P	02 29 09.0	+2.7
	176nm,1.2s						
HAZ	Te Kaha	28.88	159	P	P	02 29 09.8	+1.7
URZ	Urewera	29.11	161	P	P	02 29 10.4	+0.3
	50nm,1.0s,baz=342,slow=5.6,SNR=8.3						
MWZ	Matawai	29.31	160	P	P	02 29 12.9	+0.9
TWGZ	Tauwhareparae	29.32	159	P	P	02 29 12.5	+0.4
PUZ	Puketiti	29.32	159	P	P	02 29 13.6	+1.5
H11S2	WAKE ISLAND Hy	29.34	3	T	T	02 59 47.2	
	baz=182,slow=76,SNR=7.6						
H11S3	WAKE ISLAND Hy	29.34	3	T	T	02 59 47.3	
	baz=182,slow=76,SNR=7.0						
H11S1	WAKE ISLAND Hy	29.36	3	T	T	02 59 47.5	
	baz=182,slow=76,SNR=12						
RTZ	Ruatahuna	29.39	161	P	P	02 29 13.1	+0.4
WTVZ	West Tongariro	29.44	164	P	P	02 29 15.0	+1.8
MTHZ	Maungataniwha	29.56	162	P	P	02 29 15.0	+0.8
TRVZ	Turoa	29.60	164	P	P	02 29 18.1	+3.4
CNGZ	Carnagh Statio	29.68	159	P	P	02 29 14.9	-0.3
RAHZ	Arahi	29.70	161	P	P	02 29 16.9	+1.6
RIGZ	Rimuhau	29.72	160	P	P	02 29 16.4	+0.8
BKZ	Black Stump Fm	29.75	162	eP	P	02 29 15.7	-0.1
	154nm,1.2s						
BKZ	Black Stump Fm	29.75	162	P	P	02 29 17.0	+1.1
MOVZ	Moawhango	29.76	164	P	P	02 29 17.2	+1.2
NMHZ	Naumai	29.78	162	P	P	02 29 17.5	+1.3
WHHZ	Waihua	29.89	161	P	P	02 29 18.2	+1.1
BHHZ	Black Hill Sta	29.92	163	P	P	02 29 19.0	+1.6
KWHZ	Kaweka Forest	29.96	163	P	P	02 29 18.6	+0.8
MCHZ	McNeill Hill	30.06	162	P	P	02 29 20.0	+1.4
STKA	Stephens Creek	30.21	223	eP	P	02 29 21.0	+0.9
	20nm,1.4s						
STKA				ePcP	PcP	02 32 21.4	+0.4
STKA	Stephens Creek	30.21	223	eP	P	02 29 21.0	+0.9
STKA				e		02 32 21.4	
STKA				pmax	pmax		
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	30.21	223	P	P	02 29 21.0	+0.9
	comp=Z,23nm,0.8s,baz=28,slow=10,SNR=15						
STKA				PcP	PcP	02 32 21.4	+0.4
	comp=Z,5.8nm,0.7s,baz=42,slow=4.3,SNR=3.4						
TSZ	Takapari Road	30.42	164	P	P	02 29 22.1	+0.3
KAHZ	Kahuranaki	30.44	162	P	P	02 29 22.0	0.0
H11N1	WAKE ISLAND Hy	30.56	3	T	T	03 01 20.2	
	baz=182,slow=76,SNR=8.5						
H11N3	WAKE ISLAND Hy	30.57	3	T	T	03 01 20.5	
	baz=182,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.58	3	T	T	03 01 20.5	
	baz=182,slow=76,SNR=8.6						
PXZ	Pawanui	30.65	163	P	P	02 29 23.7	-0.1
BFZ	Birch Farm	31.08	164	eP	P	02 29 27.7	+0.1
	comp=Z,148nm,1.0s						
WRAB	Tennant Creek	31.14	250	eP	P	02 29 28.3	0.0
	comp=Z,95nm,1.2s						
WRAB	Tennant Creek	31.14	250	i P	P	02 29 29.9	+1.5
WRAB				pmax	pmax		
	comp=Z,37nm,1.0s						
WB2	Warramunga Arr	31.14	250	eP	P	02 29 27.8	-0.5
WB2				ePcP	PcP	02 32 24.1	+0.5
WR1	Warramunga Arr	31.15	250	eP	P	02 29 28.1	-0.3
	comp=Z,108nm,1.1s						
WR1				ePcP	PcP	02 32 24.2	+0.5
WRA	Warramunga Arr	31.15	250	P	P	02 29 28.1	-0.3
	comp=Z,31nm,0.7s,baz=82,slow=8.9,SNR=41						
WRA				PcP	PcP	02 32 24.2	+0.5
	comp=Z,12nm,0.8s,baz=76,slow=3.1,SNR=7.7						
SNZO	South Karori	31.29	166	eP	P	02 29 30.2	+0.9
	comp=Z,94nm,0.8s						
THZ	Tophouse	31.34	169	eP	P	02 29 31.7	+1.7
	comp=Z,70nm,0.9s						
KHZ	Kahutara	32.10	169	eP	P	02 29 38.4	+2.0
	comp=Z,44nm,0.8s						
LTZ	Lake Taylor	32.22	170	eP	P	02 29 39.1	+1.4
	comp=Z,60nm,0.7s						
AS01	Alice Springs	32.44	243	eP	P	02 29 39.0	-0.8
AS31	Alice Springs	32.48	243	eP	P	02 29 39.6	-0.5
	comp=Z,16nm,0.8s						
AS31				ePcP	PcP	02 32 27.2	-0.1
ASAR	Alice Springs	32.48	243	P	P	02 29 39.6	-0.5
	comp=Z,55nm,0.7s,baz=73,slow=9.6,SNR=70						
ASAR				PcP	PcP	02 32 27.2	-0.1
	comp=Z,8.5nm,0.8s,baz=70,slow=2.3,SNR=8.8						
FOZ	Fox Glacier	32.63	174	eP	P	02 29 42.1	+0.9
	comp=Z,63nm,1.1s						
OXZ	Oxford	32.72	171	eP	P	02 29 44.4	+2.5
	comp=Z,70nm,1.0s						
RPZ	Rata Peaks	32.96	172	eP	P	02 29 47.5	+3.4
	comp=Z,57nm,1.0s						
RPZ	Rata Peaks	32.96	172	P	P	02 29 42.9	-1.2
	comp=Z,20nm,0.7s,baz=279,slow=0.6,SNR=4.5						
MQZ	McQueen's Vall	33.19	170	eP	P	02 29 46.4	+0.4
	comp=Z,98nm,1.1s						
NLAI	Namlea	38.71	279	P	P	02 30 33.1	-0.7
FITZ	Fitzroy Crossi	39.03	255	P	P	02 30 35.6	-0.8
	comp=Z,16nm,0.7s,baz=108,slow=6.5,SNR=16						
TNTI	Ternate	39.55	285	P	P	02 30 39.9	-0.9
BATI	Baumata	40.98	267	P	P	02 30 52.4	-0.3
BATI	Baumata	40.98	267	P	P	02 30 52.4	-0.3
	comp=Z,38nm,0.5s,baz=184,slow=1.9,SNR=6.3						
APSI	Ampana	44.56	280	P	P	02 31 21.2	-0.5
MBWA	Marble Bar	44.86	251	eP	P	02 31 25.6	+1.5
	comp=Z,33nm,1.2s						
MPSI	Mapaga	46.57	281	P	P	02 31 37.1	-0.6
	comp=Z,24nm,0.9s,comp=Z,11µm						
NWAO	Narrogin (SRO)	49.18	236	eP	P	02 31 58.1	+0.5
	comp=Z,24nm,0.8s						
NWAO	Narrogin (SRO)	49.18	236	P	P	02 31 57.2	-0.4
	comp=Z,24nm,0.8s,baz=311,slow=7.4,SNR=10						
MORW	Morawa	49.32	241	eP	P	02 31 58.9	+0.1
	comp=Z,31nm,0.8s						
TGY	Tagaytay City	50.63	299	P	P	02 32 08.7	-0.2
	comp=Z,122nm,0.3s,baz=225,slow=1.4,SNR=2.0						
PCJI	Pacitan	53.45	268	P	P	02 32 30.5	+0.6
MJAR	Matsushiro Arr	53.77	333	P	P	02 32 30.7	-1.1
	comp=Z,11nm,0.9s,baz=171,slow=8.8,SNR=13						
MAJO	Matsushiro	53.77	333	eP	P	02 32 30.6	-1.3
	comp=Z,20nm,0.9s						
MAJO	Matsushiro	53.77	333	eP	P	02 32 30.6	-1.3
MAJO				pmax	pmax		
	comp=Z,20nm,0.9s						
MAT	Matsushiro	53.77	333	P	P	02 32 30.7	-1.2
MJB9	Matsu-Tunnel	53.77	333	eP	P	02 32 31.6	-0.3
	comp=Z,21nm,0.9s						
UGM	Wanagama	54.13	268	eP	P	02 32 34.9	-0.1
	comp=Z,92nm,1.1s						
UGM	Wanagama	54.13	268	P	P	02 32 35.5	+0.5
SBUM	Sibu	54.53	281	eP	P	02 32 38.8	+0.9
	comp=Z,6.6nm,0.9s						
JNU	Nakatsue	54.83	324	eP	P	02 32 40.0	+0.3
	comp=Z,65nm,1.0s						
JNU	Nakatsue	54.83	324	P	P	02 32 39.5	-0.3
	comp=Z,42nm,0.9s,baz=99,slow=6.2,SNR=10						
KPJI	Karang Pucung	55.77	269	P	P	02 32 47.4	+0.6
CISI	Cisompet, Garu	56.83	268	eP	P	02 32 53.0	-1.5
	comp=Z,50nm,0.8s						
ASAJ	Asahikawa	58.63	341	P	P	02 33 06.0	-0.4
	comp=Z,11nm,0.8s,baz=211,slow=15,SNR=4.9						
KSRS	Korea Array	59.63	326	P	P	02 33 13.3	-0.2
	comp=Z,3.2nm,0.7s,baz=153,slow=6.4,SNR=7.1						
KS15	Wonju Array Si	59.65	326	eP	P	02 33 13.3	-0.3
KSAR	Wonju Array Be	59.65	326	P	P	02 33 13.3	-0.3
KSAR	Wonju Array Be	59.65	326	P	P	02 33 13.4	-0.3
KS01	Wonju Array Si	59.67	326	eP	P	02 33 13.6	-0.2
YSS	Yuzh-Sakhalins	61.14	342	eP	P	02 33 20.2	-3.4
YSS				e		02 33 27.6	
YSS				e		02 34 03.2	
YSS				pmax	pmax		
	comp=Z,270nm,1.7s						
TEY	Ternei	61.54	337	eP	P	02 33 34.5	+8.1
NJ2	Nanjing	61.73	316	eP	P	02 33 28.9	+0.9
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
PTCN	Pitcairn Islan	62.44	113	eP	P	02 33 30.9	-2.1
	comp=Z,438nm,1.4s						
MYKOM	Kota Tinggi	62.48	278	eP	P	02 33 32.6	-0.7
	comp=Z,18nm,1.1s						
USA0B	Ussuriysk Arra	62.75	334	eP	P	02 33 35.3	+0.8
	comp=Z,29nm,1.2s						
USRK	Ussuriysk Ar.	62.75	334	P	P	02 33 34.5	-0.1
	comp=Z,17nm,1.1s,baz=132,slow=5.7,SNR=12						
PET	Petropavlovsk	64.03	355	eP	P	02 33 44.0	+1.2
	comp=Z,111nm,1.4s						
WHN	Wuhan	64.09	312	⇑P	P	02 33 50.7	+7.0
MDJ	Mudanjiang	64.14	332	P	P	02 33 47.6	+3.8
MDJ				pmax	pmax		
	comp=Z,36nm,2.0s						
PEA0B	Petropavlovsk-	64.19	355	eP	P	02 33 43.5	-0.5
	comp=Z,66nm,1.4s						
PETK	Petropavlovsk-	64.19	355	eP	P	02 33 41.6	-2.3
PETK	Petropavlovsk-	64.19	355	eP	P	02 33 41.6	-2.3
PETK	Petropavlovsk-	64.19	355	P	P	02 33 43.5	-0.5
	comp=Z,5.6nm,0.7s,baz=156,slow=8.7,SNR=4.8						
PEA1	Petropavlovsk-	64.20	355	eP	P	02 33 43.5	-0.5
DL2	Dalian	64.22	323	eP	P	02 33 50.7	+6.3
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
TYV	Tymovskoe	64.71	344	eP	P	02 33 47.0	-0.3
TYV				pmax	pmax		
	comp=Z,28nm,1.6s						
CN2	Changchun	65.52	329	eP	P	02 33 45.5	-7.2
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CASY	Casey	66.28	201	eP	P	02 33 57.3	0.0
	comp=Z,68nm,1.3s						
VNDA	Vanda	66.53	181	P	P	02 33 58.5	-0.3
	comp=Z,9.4nm,1.0s,baz=17,slow=4.4,SNR=3.5						
SBA	Scott Base	66.84	180	eP	P	02 33 59.4	-1.4
	comp=Z,58nm,1.0s						
SBA	Scott Base	66.84	180	eP	P	02 33 59.4	-1.4
SBA				pmax	pmax		
	comp=Z,58nm,1.0s						
KLR	Kul'dur	66.87	337	i P	P	02 34 01.9	+0.6
NIKH	Nikolski High	67.44	17	eP	P	02 34 04.5	-0.4
	comp=Z,102nm,1.0s						
GYA	Guiyang	68.09	304	⇑iP	P	02 34 11.4	+1.7
GYA				pP	pwP	02 34 20.0	+3.8
GYA				PP	PP	02 36 44.8	+4.7
GYA				S	S	02 43 08.7	-0.9
GYA				SKS	SKiKP	02 44 04.9	-0.8
GYA				SS	SS	02 47 33.5	+1.0
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,6.6s						
GYA				LR	LR		
	comp=Z,590nm,18.6s						
GYA				LR	LR		
	comp=Z,550nm,18.3s						
GYA				LR	LR		
	comp=Z,570nm,19.0s						
BJI	Beijing	68.22	321	P	P	02 34 12.3	+2.3
GSI	Gunungsitoli	68.48	276	eP	P	02 34 12.3	0.0
	comp=Z,65nm,0.7s						
KMI	Kunming	70.78	302	P	P	02 34 28.1	+1.6
KMI				pP	pwP	02 34 36.0	+3.0
KMI				sP	sP	02 34 38.5	+7.8
KMI				pmax	pmax		
	comp=Z,45nm,2.0s						
MA2	Magadan	71.32	352	i P	P	02 34 29.8	+1.1
MA2				pmax	pmax		
	comp=Z,64nm,2.4s						
HHC	Hu-ho-hao-te	71.56	320	eP	P	02 34 35.3	+4.5
CM31	Chiang Mai Arr	71.76	294	eP	P	02 34 32.8	+0.5
CMAR	Chiang Mai Arr	71.76	294	P	P	02 34 32.8	+0.5
	comp=Z,6.5nm,0.6s,baz=125,slow=4.7,SNR=12						
HIA	Hailar	72.15	331	i P	P	02 34 36.0	+2.0
HIA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA	Zeya	72.16	337	eP	P	02 34 33.7	-0.2
ZEA				pmax	pmax		
	comp=Z,220nm,2.0s						
CD2	Chengdu	72.28	307	⇑P	P	02 34 35.5	+0.3
SEY	Seymchan	74.39	354	i P	P	02 34 48.4	+1.5
LZH	Lanzhou	74.46	312	eP	P	02 34 49.5	+1.4
LZH				pP	pwP	02 34 58.2	+3.6
LZH				sP	PcP	02 35 01.4	-1.3
LZH				PP	PP	02 37 34.6	-0.1
LZH				pmax	pmax		
	comp=Z,61nm,1.8s						
LZH				pmax	pmax		
	comp=Z,430nm,5.4s						
LZH				LR	LR		
	comp=Z,580nm,17.2s						
LZH				LR	LR		
	comp=Z,600nm,19.0s						
GAMB	Gambell	76.60	10	eP	P	02 34 59.5	0.0
	comp=Z,22nm,0.9s						
KDAK	Kodiak Island	76.68	22	eP	P	02 34 59.7	-0.4
	comp=Z,29nm,1.0s						
KDAK	Kodiak Island	76.68	22	eP	P	02 34 59.7	-0.4
KDAK				pmax	pmax		
	comp=Z,29nm,1.0s						
KDAK	Kodiak Island	76.68	22	P	P	02 34 59.7	-0.4
	comp=Z,16nm,1.0s,baz=217,slow=11,SNR=6.2						
YAK	Yakutsk	77.95	344	eP	P	02 35 08.4	+1.2
YAK				pmax	pmax		
	comp=Z,19nm,1.4s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
ULN	Ulaanbaatar	78.05	324	i P	P	02 35 08.9	+0.6
ULN				pmax	pmax		
	comp=Z,14nm,0.9s						
SONA0	Songino Array	78.42	324	eP	P	02 35 10.2	0.0
SONM	Songino Array	78.42	324	P	P	02 35 10.2	0.0
	comp=Z,5.1nm,0.8s,baz=144,slow=7.5,SNR=7.5						
SONA1	Songino Array	78.42	324	eP	P	02 35 11.3	+1.0
ANM	Nome	78.53	12	eP	P	02 35 10.4	+0.1
	comp=Z,9.4nm,1.0s						
ANM	Nome	78.53	12	eP	P	02 35 10.4	+0.1
ANM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RSO	Redoubt South	78.61	20	eP	P	02 35 10.6	-0.5
BRLK	Bradley Lake	78.73	21	eP	P	02 35 10.9	-0.7
	comp=Z,40nm,1.0s						
GTA	Gaotai	78.76	314	⇓P	P	02 35 12.9	+0.5
GTA				pP	sP	02 35 17.6	+1.0
GTA				sP	pwP	02 35 19.8	+0.9
BILL	Bilibino	78.84	0	eP	P	02 35 11.2	-0.8
	comp=Z,31nm,0.9s						
BILL	Bilibino	78.84	0	⇑iP	P	02 35 11.8	-0.2
BILL				pmax	pmax		
	comp=Z,36nm,1.0s						
QSPA	South Pole Qui	79.00	180	eP	P	02 35 12.9	-0.3
	comp=Z,41nm,0.9s						
SEW	Seward	79.48	21	eP	P	02 35 15.9	+0.3
	comp=Z,34nm,0.9s						
SUA	Susitna One	80.01	20	eP	P	02 35 17.4	-1.3
	comp=Z,19nm,0.9s						
KNK	Knik Glacier	80.75	21	eP	P	02 35 22.0	-0.6
	comp=Z,27nm,1.1s						
CAST	Castle Rocks	81.03	18	eP	P	02 35 23.5	-0.5
	comp=Z,14nm,0.9s						
SML	Sawmill	81.07	20	eP	P	02 35 23.7	-0.5
	comp=Z,24nm,1.0s						
SML	Sawmill	81.07	20	eP	P	02 35 23.7	-0.5
SML				pmax	pmax		
	comp=Z,24nm,1.0s						
DIV	Divide	81.51	22	eP	P	02 35 26.1	-0.6
	comp=Z,43nm,0.9s						
HMT	Hamilton	81.55	23	eP	P	02 35 26.4	-0.4
	comp=Z,42nm,1.0s						
TRF	Thorofare Moun	81.60	19	eP	P	02 35 26.4	-0.8
	comp=Z,16nm,1.2s						
KLU	Klutina	81.70	21	eP	P	02 35 27.2	-0.4
	comp=Z,22nm,0.9s						
BPAW	Bear Paw Mtn.	81.86	18	eP	P	02 35 27.4	-0.9
	comp=Z,7.0nm,1.0s						
TLY	Talaya	81.88	326	i P	P	02 35 31.3	+2.5
RND	Reindeer	82.02	19	eP	P	02 35 29.0	-0.3
	comp=Z,19nm,0.9s						
RND	Reindeer	82.02	19	eP	P	02 35 29.0	-0.3
RND				pmax	pmax		
	comp=Z,19nm,0.9s						
MCK	McKinley	82.23	19	eP	P	02 35 29.7	-0.6
	comp=Z,32nm,1.4s						
MCK	McKinley	82.23	19	eP	P	02 35 29.7	-0.6
MCK				pmax	pmax		
	comp=Z,32nm,1.4s						
DHY	Denali Highway	82.27	20	eP	P	02 35 30.6	-0.1
	comp=Z,11nm,1.0s						
BWN	Browne	82.37	18	eP	P	02 35 30.9	-0.1
	comp=Z,32nm,1.0s						
IM3	Indian Mountai	82.49	16	eP	P	02 35 31.8	+0.2
HARP	HAARP	82.58	21	eP	P	02 35 32.4	+0.3
	comp=Z,43nm,0.8s						
MLY	Manley	82.61	17	eP	P	02 35 32.4	+0.1
	comp=Z,20nm,1.4s						
KCPM	Cahto Peak	82.80	47	eP	P	02 35 33.8	-0.2
	comp=Z,43nm,0.9s						
KMRM	Mail Ridge	82.89	47	eP	P	02 35 34.5	+0.1
	comp=Z,34nm,0.8s						
WRH	Wood River Hil	83.01	18	eP	P	02 35 33.8	-0.5
	comp=Z,21nm,1.0s						
GDXM	Geysers	83.07	48	eP	P	02 35 35.2	-0.1
	comp=Z,26nm,0.9s						
KHMM	Horse Mountain	83.11	46	eP	P	02 35 35.7	+0.1
	comp=Z,56nm,1.2s						
MDM	Murphy Dome	83.31	18	eP	P	02 35 34.3	-1.6
	comp=Z,22nm,1.0s						
HDA	Harding Lake	83.33	19	eP	P	02 35 34.9	-1.0
	comp=Z,48nm,0.9s						
HDA	Harding Lake	83.33	19	P	P	02 35 35.1	-0.9
	baz=227						
TCOL	CIGO, UAF Yank	83.36	18	P	P	02 35 35.1	-1.0
	baz=226						
COLA	College	83.36	18	eP	P	02 35 36.2	+0.1
	comp=Z,36nm,0.8s						
COLA	College	83.36	18	i P	P	02 35 35.2	-0.9
COLA				pmax	pmax		
	comp=Z,13nm,0.8s						
SAO	San Andreas Ge	83.39	51	eP	P	02 35 40.6	+3.7
	comp=Z,18nm,0.9s						
O02D	Mt. Diablo Mer	83.54	47	P	P	02 35 36.9	-0.8
	baz=250,SNR=14						
RIDG	Independ'e Rid	83.56	20	eP	P	02 35 36.7	-0.6
	comp=Z,35nm,1.0s						
IL1	Eielson Array	83.59	19	eP	P	02 35 35.3	-2.0
ILAR	Eielson Array	83.59	19	P	P	02 35 36.0	-1.3
	comp=Z,8.7nm,0.8s,baz=244,slow=4.0,SNR=33						
ILB	Eielson Array	83.59	19	eP	P	02 35 36.3	-1.0
L02E	Cave Junction	83.66	45	P	P	02 35 37.2	-1.0
	baz=249						
POKR	Poker Plat Res	83.66	18	P	P	02 35 36.1	-1.6
	baz=226						
K02D	Willamette Mer	83.81	45	P	P	02 35 38.3	-0.8
	baz=249						
WDC	Whiskeytown Da	83.86	47	eP	P	02 35 38.7	-0.5
	comp=Z,19nm,1.3s						
WDC	Whiskeytown Da	83.86	47	eP	P	02 35 38.7	-0.5
WDC				pmax	pmax		
	comp=Z,19nm,1.3s						
N02D	Trinity Center	83.87	46	P	P	02 35 38.6	-0.8
	baz=250,SNR=10						
M02C	Callahan	83.91	46	P	P	02 35 38.9	-0.7
	baz=250,SNR=8.6						
SCRK	Sand Creek	84.01	20	eP	P	02 35 39.2	-0.4
	comp=Z,39nm,1.1s						
PKM	Mcpherson Peak	84.07	53	P	P	02 35 39.6	-1.1
	baz=252						

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YBH   Yreka Blue Hor   84.13  46 eP     P       02 35 40.3 -0.4
           comp=Z,22nm,0.9s
YBH   Yreka Blue Hor   84.13  46 eP     P       02 35 40.3 -0.4
YBH                                pmax   pmax
           comp=Z,22nm,0.9s
HUMO  Hull Mountain    84.26  45 eP     P       02 35 41.1 -0.2
           comp=Z,36nm,0.9s
ORV   Oroville         84.26  48 eP     P       02 35 40.4 -0.9
           comp=Z,17nm,0.9s
ORV   Oroville         84.26  48 eP     P       02 35 40.4 -0.9
ORV                                pmax   pmax
           comp=Z,17nm,0.9s
O03E  Paynes Creek     84.29  47  P     P       02 35 40.2 -1.3
           baz=250,SNR=11
AFDM  Forest Hills D   84.45  49 eP     P       02 35 41.4 -1.0
           comp=Z,36nm,0.9s
WRAK  Wrangell Islan   84.49  30 eP     P       02 35 43.0 +0.9
           comp=Z,37nm,1.0s
HYT   Haines Junctio   84.50  24 eP     P       02 35 41.8 -0.4
           comp=Z,17nm,0.8s
PRP   Porcupine Dome   84.53  18 eP     P       02 35 42.0 -0.2
           comp=Z,4.7nm,0.8s
L04D  Klamath Falls    84.58  45  P     P       02 35 42.2 -0.9
           baz=250
CMB   Columbia Colle   84.60  50 eP     P       02 35 41.9 -1.2
           comp=Z,19nm,0.9s
CMB   Columbia Colle   84.60  50 eP     P       02 35 41.9 -1.2
CMB                                pmax   pmax
           comp=Z,19nm,0.9s
M04C  Macdoel          84.76  46  P     P       02 35 43.1 -0.9
           baz=250
ARVC  Arvin            84.91  53  P     P       02 35 43.7 -1.0
           baz=253
VES   Vestal, Richgr   84.92  52  P     P       02 35 43.6 -1.1
           baz=253
I04A  Tendick Farm,    85.05  44  P     P       02 35 44.0 -1.3
           baz=250
J04D  Umpqua Nationa   85.07  44  P     P       02 35 44.6 -0.9
           baz=250
K04D  Chiloquin, OR    85.10  45  P     P       02 35 44.0 -1.7
           baz=250
BEKR  Beckworth        85.20  48 eP     P       02 35 45.3 -0.9
           comp=Z,22nm,0.8s
MWC   Mount Wilson     85.26  54 eP     P       02 35 45.0 -1.7
           comp=Z,28nm,1.0s
MWC   Mount Wilson     85.26  54 eP     P       02 35 45.0 -1.7
MWC                                pmax   pmax
           comp=Z,28nm,1.0s
ISA   Isabella, Lake   85.34  52 eP     P       02 35 46.3 -0.7
           comp=Z,18nm,1.1s
ISA   Isabella, Lake   85.34  52 eP     P       02 35 46.3 -0.7
ISA                                pmax   pmax
           comp=Z,18nm,1.1s
ISA   Isabella, Lake   85.34  52  P     P       02 35 45.7 -1.3
           baz=253,SNR=6.2
WAKR  Walker           85.46  50 eP     P       02 35 47.3 -0.4
           comp=Z,20nm,0.9s
MDPB  Devils Postpil   85.46  50 eP     P       02 35 47.1 -0.6
           comp=Z,32nm,0.9s
EDW2  Edwards Air Fo   85.50  53  P     P       02 35 46.6 -1.1
           baz=253,SNR=12
WHY   Whitehorse       85.50  25 eP     P       02 35 46.3 -0.9
           comp=Z,8.3nm,0.8s
PNTR  Pine Nut         85.51  49 eP     P       02 35 47.4 -0.5
           comp=Z,19nm,0.9s
OMMB  Old Mammoth Mi   85.52  51 eP     P       02 35 47.6 -0.5
           comp=Z,17nm,1.1s
BFSC  Mount Baldy Ra   85.58  54  P     P       02 35 46.9 -1.3
           baz=254,SNR=6.5
DAWY  Dawson           85.65  21 eP     P       02 35 47.8 -0.1
           comp=Z,13nm,0.8s
J05D  Fort Rock, OR    85.68  45  P     P       02 35 47.8 -0.8
           baz=251
MURC  Murrieta         85.77  55  P     P       02 35 48.0 -1.1
           baz=254
PAHR  Pah Rah Range    85.86  48 eP     P       02 35 48.9 -0.6
           comp=Z,15nm,0.9s
CWC   Cottonwood Cre   85.88  52  P     P       02 35 48.3 -1.4
           baz=253
MOD   Modoc Plateau    85.89  46 eP     P       02 35 48.6 -1.0
           comp=Z,18nm,0.8s
E04D  Cinebar          85.91  41  P     P       02 35 48.6 -0.8
           baz=249
LRMC  Laurel Mtn Rad   85.91  53  P     P       02 35 48.6 -1.3
           baz=254
D03D  Eldon            85.92  40  P     P       02 35 48.4 -1.0
           baz=249
I05D  Terrebonne, OR   85.96  44  P     P       02 35 48.7 -1.1
           baz=250
TIXI  Tiksi            85.98 349 eP     P       02 35 52.9 +3.7
           comp=Z,26nm,1.5s
TIXI  Tiksi            85.98 349 i P    P       02 35 50.2 +1.0
TIXI                               pmax   pmax
           comp=Z,42nm,2.3s
PINE  Pine Mountain    86.05  44 eP     P       02 35 49.8 -0.6
           comp=Z,40nm,0.9s
RYN   Ryan             86.18  50 eP     P       02 35 50.5 -0.7
           comp=Z,16nm,0.9s
MONP2 Monument Peak    86.20  56  P     P       02 35 50.5 -1.0
           baz=254,SNR=6.7
DAC   Darwin (Calif)   86.20  52 eP     P       02 35 50.7 -0.7
           comp=Z,12nm,1.0s
DAC   Darwin (Calif)   86.20  52 eP     P       02 35 50.7 -0.7
DAC                                pmax   pmax
           comp=Z,12nm,1.0s
MPMC  Manual Prospec   86.22  52  P     P       02 35 50.4 -1.1
           baz=254,SNR=6.4
G05D  Wamic, OR        86.28  43  P     P       02 35 50.5 -0.8
           baz=250
NVAR  Mina Array Bea   86.28  50  P     P       02 35 51.0 -0.8
           comp=Z,7.3nm,0.8s,baz=231,slow=8.0,SNR=18
NV01  Mina Array Sit   86.28  50 eP     P       02 35 50.5 -1.3
PFO   Pinyon Flats O   86.36  55 eP     P       02 35 50.9 -1.2
           comp=Z,14nm,1.1s
PFO   Pinyon Flats O   86.36  55 eP     P       02 35 50.9 -1.2
PFO                                pmax   pmax
           comp=Z,14nm,1.1s
PFO   Pinyon Flats O   86.36  55  P     P       02 35 51.1 -1.0
           baz=254
XPFO  Pion Flat        86.37  55 eP     P       02 35 50.9 -1.2
           comp=Z,17nm,1.2s
IKP   In-Ko-Pah, Jac   86.39  56  P     P       02 35 51.0 -1.2
           baz=255
NV11  Mina Array Sit   86.39  50 eP     P       02 35 51.5 -0.7
           comp=Z,1.9nm,0.9s
F05D  White Salmon     86.40  42  P     P       02 35 51.0 -0.9
           baz=250
D05A  Enumclaw         86.50  41 eP     P       02 35 53.1 +0.8
           comp=Z,33nm,1.0s
GSC   Goldstone, Bar   86.55  53 eP     P       02 35 51.8 -1.1
           comp=Z,10nm,0.9s
GSC   Goldstone, Bar   86.55  53 eP     P       02 35 51.8 -1.1
GSC                                pmax   pmax
           comp=Z,10.0nm,0.9s
GSC   Goldstone, Bar   86.55  53  P     P       02 35 51.5 -1.5
           baz=254
GRAC  Grapevine Rang   86.58  51  P     P       02 35 52.2 -0.8
           baz=254,SNR=7.2
A04D  Lummi Island     86.58  39  P     P       02 35 53.3 +0.7
           baz=249
KVN   Kaiserville      86.62  49 eP     P       02 35 52.6 -0.8
           comp=Z,15nm,1.0s
KVN   Kaiserville      86.62  49 eP     P       02 35 52.6 -0.8
KVN                                pmax   pmax
           comp=Z,15nm,1.0s
SWSC  Sam W. Stewart   86.72  56  P     P       02 35 52.8 -1.0
           baz=255
HEC   Hector,Ludlow    86.79  54  P     P       02 35 52.6 -1.6
           baz=254,SNR=6.3
B05A  Bryant           86.80  40  P     P       02 35 53.2 -0.5
           baz=250
FURC  Furnace Creek,   86.82  52  P     P       02 35 53.2 -0.9
           baz=254
BELC  Belle Mtn. Jos   86.84  55  P     P       02 35 53.7 -0.8
           baz=255,SNR=13
SHOC  Shoshone, Teco   87.13  53  P     P       02 35 54.5 -1.1
           baz=254
I07A  Izee             87.13  44 eP     P       02 35 54.8 -0.8
           comp=Z,25nm,1.2s
BC3   Big Chuckawall   87.19  55  P     P       02 35 55.1 -1.0
           baz=255,SNR=9.2
WVOR  Wild Horse Val   87.23  46 eP     P       02 35 56.6 +0.4
           comp=Z,40nm,1.3s
WVOR  Wild Horse Val   87.23  46 eP     P       02 35 56.6 +0.4
WVOR                               pmax   pmax
           comp=Z,40nm,1.3s
TUQ   Turquoise Moun   87.28  53  P     P       02 35 55.3 -1.3
           baz=255
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GMRC  Granite Mounta   87.31  54  P     P       02 35 55.5 -1.2
           baz=255,SNR=11
TPNV  Topopah Spring   87.43  52 eP     P       02 35 57.2 -0.1
           comp=Z,9.7nm,0.9s
TPNV  Topopah Spring   87.43  52 eP     P       02 35 57.2 -0.1
TPNV                               pmax   pmax
           comp=Z,10.0nm,0.9s
TPNV  Topopah Spring   87.43  52  P     P       02 35 56.1 -1.2
           baz=254,SNR=5.8
GLA   Glamis           87.54  56 eP     P       02 35 57.8  0.0
           comp=Z,22nm,0.8s
GLA   Glamis           87.54  56 eP     P       02 35 57.8  0.0
GLA                                pmax   pmax
           comp=Z,23nm,0.8s
GLA   Glamis           87.54  56  P     P       02 35 57.0 -0.7
           baz=255,SNR=5.6
IRM   Iron Mountain    87.56  55  P     P       02 35 56.9 -0.9
           baz=255,SNR=9.5
J08A  Circle Bar Ran   87.62  45 eP     P       02 35 57.4 -0.6
           comp=Z,22nm,0.8s
BMN   Battle Mountai   87.66  48 eP     P       02 35 58.7 +0.3
           comp=Z,6.9nm,0.9s
BMN   Battle Mountai   87.66  48 eP     P       02 35 58.7 +0.3
BMN                                pmax   pmax
           comp=Z,7.0nm,0.9s
LDFC  Landfair         87.83  54 eP     P       02 35 58.6 -0.6
           comp=Z,39nm,0.9s
HAWA  Hanford          87.83  42 eP     P       02 35 58.3 -0.5
           comp=Z,23nm,1.0s
G08A  Pilot Rock       87.87  43 eP     P       02 35 57.9 -1.3
           comp=Z,20nm,0.9s
Y12C  Blythe           87.96  55 eP     P       02 35 59.1 -0.6
           comp=Z,21nm,0.9s
Y12C  Blythe           87.96  55  P     P       02 35 58.5 -1.2
           baz=255,SNR=7.1
SHPR  Sheep Range      88.16  52 eP     P       02 36 00.4 -0.4
           comp=Z,17nm,1.4s
E08A  Dider Farm, El   88.17  42 eP     P       02 35 59.6 -0.8
           comp=Z,28nm,1.0s
R11A  Troy Canyon, C   88.31  51 eP     P       02 36 00.7 -0.8
           comp=Z,8.0nm,1.1s
R11A  Troy Canyon, C   88.31  51  P     P       02 36 00.4 -1.1
           baz=255
113A  Mohawk Valley,   88.33  56 eP     P       02 36 01.2 -0.3
           comp=Z,18nm,1.1s
PDMCI Parker Dam,Lak   88.40  55  P     P       02 36 00.9 -0.9
           baz=256,SNR=8.1
D08A  Wollman Farm,    88.44  42 eP     P       02 36 01.1 -0.6
           comp=Z,15nm,1.1s
B08A  Colville Reser   88.58  40 eP     P       02 36 00.7 -1.6
           comp=Z,11nm,1.0s
E09A  Wood Farm, Sta   88.78  42 eP     P       02 36 03.6 +0.4
           comp=Z,13nm,0.9s
W13A  Hualapai Mount   88.80  54 eP     P       02 36 03.2 -0.8
           comp=Z,18nm,1.1s
WMQ   Urumqi           88.80 315 eP     P       02 36 03.1 -0.5
WMQ                                pP     pwP   02 36 14.0 +3.9
WMQ                                pmax   pmax
           comp=Z,11nm,1.1s
BMO   Blue Mountains   88.86  44 eP     P       02 36 02.9 -0.9
           comp=Z,8.2nm,0.9s
BMO   Blue Mountains   88.86  44 eP     P       02 36 02.9 -0.9
BMO                                pmax   pmax
           comp=Z,8.0nm,0.9s
214A  Organ Pipe Nat   88.92  57  P     P       02 36 03.9 -0.5
           baz=256,SNR=9.1
C09A  Chrisman Ranch   89.08  41 eP     P       02 36 04.9 +0.2
           comp=Z,10nm,1.2s
ELK   Elko             89.20  48 eP     P       02 36 04.8 -0.9
           comp=Z,7.3nm,1.4s
ELK   Elko             89.20  48 eP     P       02 36 04.8 -0.9
ELK                                pmax   pmax
           comp=Z,7.0nm,1.4s
Y14A  Wickenburg       89.23  55 eP     P       02 36 05.4 -0.4
           comp=Z,11nm,1.0s
F10A  Beach Ranch, E   89.23  43 eP     P       02 36 04.6 -1.0
           comp=Z,22nm,1.1s
MFID  Camas Ranch      89.48  46 eP     P       02 36 06.2 -0.6
           comp=Z,7.7nm,0.9s
SLBS  Sierra La Lagu   89.57  66 eP     P       02 36 06.9 -0.7
           comp=Z,12nm,0.8s
PSUT  Pine Spring      89.67  51 eP     P       02 36 07.5 -0.5
           comp=Z,12nm,0.9s
LCMT  Little Creek M   89.77  52 eP     P       02 36 08.1 -0.3
           comp=Z,23nm,1.1s
CCUT  Cedar City       89.81  52 eP     P       02 36 08.6  0.0
           comp=Z,25nm,1.0s
NEW   Newport          89.96  41 eP     P       02 36 07.7 -1.1
           comp=Z,8.3nm,1.0s
NEW   Newport          89.96  41  P     P       02 36 07.7 -1.1
           baz=253
INK   Inuvik           89.98  19 eP     P       02 36 07.2 -1.1
           comp=Z,16nm,1.4s
INK   Inuvik           89.98  19 eP     P       02 36 07.3 -1.1
INK                                pmax   pmax
           comp=Z,16nm,1.4s
INK   Inuvik           89.98  19  P     P       02 36 07.2 -1.1
           comp=Z,1.6nm,0.9s,baz=236,slow=2.8,SNR=5.0
SZCU  Shurtz Canyon    90.03  52 eP     P       02 36 09.5 -0.2
           comp=Z,22nm,1.0s
KNB   Kanab            90.10  52 eP     P       02 36 09.9 -0.1
           comp=Z,35nm,1.2s
KNB   Kanab            90.10  52 eP     P       02 36 09.9 -0.1
KNB                                pmax   pmax
           comp=Z,35nm,1.2s
U15A  North Rim        90.38  53 eP     P       02 36 11.1 -0.3
           comp=Z,23nm,0.8s
HLID  Hailey           90.52  46 eP     P       02 36 11.1 -0.6
           comp=Z,12nm,1.0s
HLID  Hailey           90.52  46  P     P       02 36 11.0 -0.8
           baz=255
PKCU  Pink Cliffs      90.60  52 eP     P       02 36 13.0 +0.5
           comp=Z,27nm,0.9s
X16A  Lo Mia Camp, P   90.60  55 eP     P       02 36 12.3  0.0
           comp=Z,14nm,0.9s
DGZ   Jazzator, Alta   90.63 321 i P    P       02 36 11.0 -1.1
DGZ                                pmax   pmax
           comp=Z,3.0nm,1.0s
TUC   Tucson           90.68  57 eP     P       02 36 12.7 +0.1
           comp=Z,11nm,1.1s
TUC   Tucson           90.68  57  P     P       02 36 11.8 -0.8
           baz=258
TCRU  Three Creeks R   90.76  51 eP     P       02 36 13.3 +0.3
           comp=Z,30nm,0.9s
MTPU  Mount Pierson    90.83  52 eP     P       02 36 14.0 +0.5
           comp=Z,30nm,1.1s
DUG   Dugway, Tooele   90.86  49 eP     P       02 36 12.4 -1.0
           comp=Z,8.2nm,0.9s
DUG   Dugway, Tooele   90.86  49 eP     P       02 36 12.4 -1.0
DUG                                pmax   pmax
           comp=Z,8.0nm,0.9s
DUG   Dugway, Tooele   90.86  49  P     P       02 36 12.1 -1.3
           baz=256
BGU   Big Grassy Mou   90.87  49 eP     P       02 36 12.9 -0.5
           comp=Z,12nm,1.0s
WUAZ  Wupatki          90.90  54 eP     P       02 36 13.2 -0.5
           comp=Z,20nm,1.0s
WUAZ  Wupatki          90.90  54  P     P       02 36 12.6 -1.1
           baz=257
MSU   Marysvale        90.94  51 eP     P       02 36 13.8 -0.1
MSU   Marysvale        90.94  51 eP     P       02 36 13.8 -0.1
HVU   Hansel Valley    91.25  48 eP     P       02 36 14.9 -0.3
           comp=Z,26nm,0.9s
HVU   Hansel Valley    91.25  48 eP     P       02 36 14.9 -0.3
HVU                                pmax   pmax
           comp=Z,26nm,0.9s
NLU   North Lily Min   91.35  50 eP     P       02 36 15.3 -0.4
           comp=Z,18nm,0.9s
SPUT  South Promonto   91.38  48 eP     P       02 36 15.1 -0.7
           comp=Z,12nm,1.1s
MSO   Missoula         91.65  43 eP     P       02 36 16.0 -0.8
           comp=Z,12nm,1.5s
MSO   Missoula         91.65  43  P     P       02 36 15.7 -1.2
           baz=256
MPU   Maple Canyon     91.69  50 eP     P       02 36 17.8 +0.5
           comp=Z,12nm,1.1s
SYO   Syowa Base       91.71 197⇑ePcP   PcP     02 36 18.8 +1.4
319A  Douglas          91.73  59 eP     P       02 36 16.1 -1.4
           comp=Z,31nm,1.4s
CTU   Camp Tracy       91.76  49 eP     P       02 36 17.0 -0.6
           comp=Z,18nm,1.0s
Q16A  Castle Valley    91.80  51 eP     P       02 36 18.2 +0.4
           comp=Z,16nm,1.0s
X18A  Snowflake        91.83  55 eP     P       02 36 17.9 -0.2
           comp=Z,8.2nm,0.9s
TMUT  Trail Mountain   91.86  50 eP     P       02 36 18.2  0.0
           comp=Z,13nm,0.9s
MCMT  McKenzie Canyo   91.92  45 eP     P       02 36 17.5 -0.8
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JLU   Jordanelle       91.96  49 eP     P       02 36 18.1 -0.5
           comp=Z,9.9nm,0.9s
HWUT  Hardware Ranch   92.10  48 eP     P       02 36 18.1 -1.0
           comp=Z,6.9nm,0.8s
TCUT  Toone Canyon     92.11  49 eP     P       02 36 18.9 -0.4
           comp=Z,24nm,1.1s
W18A  Petrified Fore   92.12  55 eP     P       02 36 19.1 -0.3
           comp=Z,16nm,1.0s
W18A  Petrified Fore   92.12  55  P     P       02 36 18.7 -0.7
           baz=258
DLMT  Dillon           92.21  44 eP     P       02 36 18.9 -0.6
           comp=Z,25nm,0.9s
WALA  Waterton Lakes   92.22  41 eP     P       02 36 19.1 -0.4
           comp=Z,18nm,1.1s
SRU   San Rafael Swe   92.34  51 eP     P       02 36 20.8 +0.5
           comp=Z,7.6nm,1.0s
SRU   San Rafael Swe   92.34  51 eP     P       02 36 20.8 +0.5
SRU                                pmax   pmax
           comp=Z,8.0nm,1.0s
LRM   Limekiln Ridge   92.42  44 eP     P       02 36 19.7 -0.9
FXWY  Fox Creek        92.93  46 eP     P       02 36 22.4 -0.6
           comp=Z,9.0nm,0.8s
BOZ   Bozeman (W)      92.93  44 eP     P       02 36 22.0 -0.8
           comp=Z,11nm,0.9s
BOZ   Bozeman (W)      92.93  44 eP     P       02 36 22.0 -0.8
BOZ                                pmax   pmax
           comp=Z,11nm,0.9s
BOZ   Bozeman (W)      92.93  44  P     P       02 36 21.2 -1.6
           baz=257
TPAW  Teton Pass       92.95  46 eP     P       02 36 21.5 -1.6
           comp=Z,5.1nm,0.9s
REDW  Red Top Meadow   92.99  47 eP     P       02 36 23.6 +0.4
           comp=Z,6.1nm,0.9s
HRY   Holter Researc   93.04  43 eP     P       02 36 22.3 -1.0
IMW   Indian Meadow    93.04  46 eP     P       02 36 22.8 -0.8
           comp=Z,6.9nm,0.8s
YHB   Horse Butte      93.05  45 eP     P       02 36 23.7 +0.2
           comp=Z,9.8nm,0.9s
MOOW  Moose Ponds      93.15  46 eP     P       02 36 23.3 -0.7
           comp=Z,4.7nm,0.9s
YMR   Madison River    93.19  45 eP     P       02 36 24.3 +0.2
           comp=Z,9.3nm,0.8s
121A  Cookes Peak, D   93.21  58  P     P       02 36 23.5 -1.0
           baz=259
LOHW  Long Hollow      93.22  46 eP     P       02 36 23.5 -0.8
           comp=Z,5.2nm,0.9s
MK01  Makanchi Array   93.23 317 eP     P       02 36 23.3 -0.7
YFT   Old Faithful     93.23  45 eP     P       02 36 26.0 +1.7
           comp=Z,8.2nm,0.9s
MK31  Makanchi Array   93.24 317 eP     P       02 36 23.7 -0.4
MK32  Makanchi Array   93.24 317 eP     P       02 36 23.7 -0.4
MKAR  Makanchi Array   93.24 317 eP     P       02 36 23.7 -0.4
           comp=Z,42nm,0.8s
MKAR  Makanchi Array   93.24 317  P     P       02 36 23.7 -0.4
           comp=Z,3.1nm,0.7s,baz=82,slow=4.5,SNR=8.2
MKAR                               PKKPbc PKKPdf 02 53 31.5 -1.1
           comp=Z,0.4nm,0.5s,baz=275,slow=4.0,SNR=2.9
FLWY  Flagg Ranch      93.25  46 eP     P       02 36 24.1 -0.4
           comp=Z,12nm,1.1s
PV09  Paradox Valley   93.28  52 eP     P       02 36 25.1 +0.3
ZAA0  Zalesovo Array   93.31 324 eP     P       02 36 23.8 -0.3
           comp=Z,13nm,1.4s
ZALV  Zalesovo Beam    93.31 324 eP     P       02 36 22.3 -1.8
ZALV  Zalesovo Beam    93.31 324 eP     P       02 36 22.3 -1.8
ZALV  Zalesovo Beam    93.31 324  P     P       02 36 23.8 -0.4
           comp=Z,3.2nm,0.7s,baz=127,slow=3.1,SNR=8.8
ZAA1  Zalesovo Array   93.31 324 eP     P       02 36 23.8 -0.4
PV19  Morning Glory    93.36  52 eP     P       02 36 25.9 +0.8
           comp=Z,9.8nm,0.8s
PV23  Carpenter Ridg   93.36  52 eP     P       02 36 25.3 +0.1
           comp=Z,14nm,0.8s
PV17  East Wray Mesa   93.37  52 eP     P       02 36 26.2 +1.1
           comp=Z,12nm,0.9s
PV20  West Nyswonger   93.37  52 eP     P       02 36 25.8 +0.7
           comp=Z,10nm,0.8s
H17A  Grant Village    93.40  46 eP     P       02 36 25.7 +0.5
           comp=Z,11nm,0.9s
H17A  Grant Village    93.40  46  P     P       02 36 24.6 -0.6
           baz=258
PV21  Cone Mtn., Par   93.41  52 eP     P       02 36 26.0 +0.7
           comp=Z,11nm,0.9s
PV04  Paradox Valley   93.43  52 eP     P       02 36 25.2 -0.1
           comp=Z,11nm,0.9s
MAKZ  Makanchi         93.45 317 eP     P       02 36 24.6 -0.4
           comp=Z,14nm,1.3s
MAKZ  Makanchi         93.45 317 eP     P       02 36 24.6 -0.4
MAKZ                               pmax   pmax
           comp=Z,14nm,1.3s
PV12  Saucer Basin,    93.50  52 eP     P       02 36 25.8 +0.1
           comp=Z,14nm,1.1s
MVCO  Mesa Verde       93.52  53  P     P       02 36 23.9 -1.9
           baz=259
LKWY  Lake             93.56  45 eP     P       02 36 27.7 +1.8
           comp=Z,6.7nm,1.0s
LKWY  Lake             93.56  45 eP     P       02 36 27.7 +1.8
LKWY                               pmax   pmax
           comp=Z,7.0nm,1.0s
PV07  Paradox Valley   93.64  52 eP     P       02 36 26.6 +0.3
           comp=Z,8.9nm,0.8s
PV01  Paradox Valley   93.64  52 eP     P       02 36 22.8 -3.6
           comp=Z,4.6nm,0.9s
PV15  Paradox Valley   93.75  52 epP    pP      02 36 34.5 +4.5
BW06  Boulder Array    93.80  47 eP     P       02 36 27.0  0.0
           comp=Z,6.1nm,1.0s
BW06  Boulder Array    93.80  47  P     P       02 36 25.7 -1.3
           baz=259
PD31  Pinedale Array   93.80  47 eP     P       02 36 26.6 -0.5
PDAR  Pinedale Array   93.80  47 eP     P       02 36 25.1 -1.9
PDAR  Pinedale Array   93.80  47  P     P       02 36 25.7 -1.3
           comp=Z,2.6nm,0.7s,baz=223,slow=2.2,SNR=12
EGMT  Eagleton         94.69  42 eP     P       02 36 29.9 -0.9
           comp=Z,19nm,0.9s
EGMT  Eagleton         94.69  42  P     P       02 36 29.7 -1.1
           baz=259
ANMO  Albuquerque      94.73  55 eP     P       02 36 31.3 -0.1
           comp=Z,6.2nm,1.0s
ANMO  Albuquerque      94.73  55  P     P       02 36 31.2 -0.3
           baz=260
S22A  4UR Ranch, Cre   94.92  53  P     P       02 36 31.5 -0.9
           baz=260
MNTX  Cornudas Mount   95.06  59 eP     P       02 36 32.5 -0.3
           comp=Z,1.4nm,0.6s
MNTX  Cornudas Mount   95.06  59  P     P       02 36 31.5 -1.3
           baz=260
YKA   Yellowknife Ar   95.11  27  P     P       02 36 29.4 -2.8
           comp=Z,1.8nm,0.7s,baz=257,slow=4.7,SNR=22
YKA                                PKPPKP       03 01 36.1
           comp=Z,0.7nm,0.9s,baz=71,slow=3.9,SNR=7.0
YKB5  Yellowknife Ar   95.11  27 eP     P       02 36 29.4 -2.8
LTX   Lajitas          96.14  61 eP     P       02 36 36.5 -1.3
LTX                                ePP    PP    02 40 34.2 +3.2
LTX   Lajitas          96.14  61 eP     P       02 36 36.5 -1.3
LTX                                e            02 40 34.2
TXAR  Lajitas Array    96.14  61  P     P       02 36 36.5 -1.3
           comp=Z,1.0nm,0.7s,baz=220,slow=6.1,SNR=9.5
TXAR                               PP     PP    02 40 34.2 +3.2
           comp=Z,1.2nm,1.0s,baz=231,slow=7.9,SNR=4.8
TXAR                               PKKPbc PKKPbc 02 53 25.8 +0.3
           comp=Z,0.2nm,0.5s,baz=99,slow=2.8,SNR=4.8
KURK  Kurchatov        96.37 320 i P    P       02 36 39.2 +1.0
KURK                               pmax   pmax
           comp=Z,3.0nm,1.2s
KURBB Kurchatov Arra   96.41 320  PKKPbc PKKPbc 02 53 26.3 +0.9
           comp=Z,0.2nm,0.3s,baz=245,slow=3.8,SNR=3.5
KSH   Kashi            96.44 309  P     P       02 36 43.3 +4.3
LAO   LASA Array       96.82  44  P     P       02 36 38.9 -1.6
           baz=261
VNA3  Neumayer Olymp   97.87 182  P     Pdif    02 36 46.9 +2.1
AAK   Ala-Archa        97.99 312 i P    P       02 36 43.7 -2.3
AAK                                pmax   pmax
           comp=Z,5.0nm,1.2s
VNA2  Neumayer--Watz   98.11 182  P     Pdif    02 36 46.6 +0.7
           baz=186,slow=4.6
ARA0  ARCESS Array S  116.20 345 ePKPdf PKiKP   02 41 50.7 -1.5
ARA0                               ePKKPbc PKKPbc 02 52 21.7 -2.8
ARCES ARCESS Array B  116.20 345  PKP   PKiKP   02 41 50.7 -1.5
           comp=Z,1.3nm,0.6s,baz=109,slow=2.3,SNR=30
ARCES                              PKKPbc PKKPbc 02 52 21.7 -2.8
           comp=Z,2.1nm,0.9s,baz=204,slow=2.0,SNR=8.6
GNI   Garni           120.34 310 ePKIKP PKPdf   02 42 01.0 -0.3
GNI   Garni           120.34 310  PKP   PKPdf   02 42 01.0 -0.3
           comp=Z,1.9nm,0.5s,baz=163,slow=20,SNR=3.0
OBN   Obninsk         120.58 329 ePKIKP PKiKP   02 42 02.5 +1.4
OBN                                e            02 43 29.4
OBN                                ePPP   PPP   02 45 57.7
OBN                                pmax   pmax
           comp=Z,5.0nm,1.0s
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KBZ	Khabaz	120.85	315	PKP	PKPdf	02 42 01.1	-0.7
	comp=Z,0.7nm,0.7s,baz=270,slow=6.1,SNR=2.0						
FIA0	FINESS Array S	121.60	338	*e*PKPdf	PKPdf	02 42 01.4	-1.4
FIA0	FINESS Array S	121.60	338	*e*PKIKP	PKPdf	02 42 01.4	-1.4
FINES	FINESS Array B	121.60	338	PKP	PKPdf	02 42 01.4	-1.4
	comp=Z,3.3nm,0.9s,baz=27,slow=2.1,SNR=6.0						
FINES	FINESS Array B	121.60	338	PKP	PKPdf	02 42 01.4	-1.4
CPUP	Villa Florida	124.33	133	PKP	PKPdf	02 42 06.6	-2.5
	comp=Z,0.9nm,0.5s,baz=274,slow=6.4,SNR=3.3						
SDV	Santo Domingo	124.86	87	*e*PKPdf	PKPdf	02 42 09.4	-1.3
BOSA	Boshof	124.89	223	PKP	PKPdf	02 42 10.1	-0.3
	comp=Z,7.0nm,0.7s,baz=133,slow=3.0,SNR=18						
NACGM	Naroch	125.46	332	*e*	PKiKP	02 42 16.0	+5.2
NB200	NORSAR Array S	126.57	345	*e*PKPdf	PKPdf	02 42 11.2	-1.2
NOA	NORSAR Array B	126.57	345	PKP	PKPdf	02 42 11.2	-1.2
	comp=Z,1.2nm,0.8s,baz=32,slow=2.0,SNR=4.1						
AKASG	Malin Array Be	126.63	327	PKP	PKPdf	02 42 12.0	-0.8
	comp=Z,0.7nm,0.5s,baz=63,slow=2.1,SNR=8.5						
AKBB	Malin Array Si	126.63	327	*e*PKPdf	PKPdf	02 42 12.0	-0.8
AKBB	Malin Array Si	126.63	327	*e*PKIKP	PKPdf	02 42 12.0	-0.8
AK11	Malin Array Si	126.67	327	*e*PKPdf	PKiKP	02 42 13.4	+0.1
KMBO	Kilima Mbogo	127.03	260	PKP	PKiKP	02 42 16.0	+0.5
	comp=Z,2.0nm,0.9s,baz=355,slow=5.0,SNR=5.6						
BR101	Keskin Array S	128.66	313	*e*PKPdf	PKPdf	02 42 15.1	-2.1
BRTR	Keskin Array B	128.66	313	PKP	PKPdf	02 42 15.1	-2.1
	comp=Z,1.7nm,1.1s,baz=146,slow=2.8,SNR=5.8						
HUMP	Col San Antoni	130.06	76	*e*PKPdf	PKiKP	02 42 20.9	-0.1
LSZ	Lusaka	130.19	239	*e*PKPdf	PKiKP	02 42 21.4	-0.1
LSZ	Lusaka	130.19	239	PKIKP	PKPdf	02 42 20.9	+0.1
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LSZ	Lusaka	130.19	239	PKP	PKPdf	02 42 20.9	+0.1
	comp=Z,5.5nm,0.9s,baz=53,slow=0.2,SNR=9.7						
BUR04	Bucovina Ar. S	130.52	325	*e*PKPdf	PKiKP	02 42 21.1	-0.2
VYHS	Vyhne	133.35	330	*e*PKIKP	PKiKP	02 42 27.4	+0.5
VYHS				*e*		02 44 51.8	
VYHS	Vyhne	133.35	330	*e*PKP	PKiKP	02 42 27.4	+0.5
VYHS				*e*PP	PP	02 44 51.8	-0.7
MBAR	Mbarara	133.45	259	PKP	PKPdf	02 42 27.3	+0.3
	comp=Z,2.4nm,0.2s,baz=240,slow=20,SNR=3.3						
BRG	Berggiesshubel	133.87	335	*e*PKP	PKiKP	02 42 28.6	+0.8
	comp=Z,100nm,2.4s						
BRG	Berggiesshubel	133.87	335	*e*PKIKP	PKiKP	02 42 28.6	+0.8
BRG				pmax	pmax		
	comp=Z,100nm,2.4s						
CLL	Collm	133.92	336	*e*PKPdf	PKPdf	02 42 27.0	+0.4
CLL				*e*		02 42 31.0	
CLL	Collm	133.92	336	*e*PKIKP	PKPdf	02 42 27.0	+0.4
GEC2	GERESS Array S	135.50	333	*e*PKPdf	PKPdf	02 42 29.6	-0.2
GERES	GERESS Array B	135.50	333	PKP	PKPdf	02 42 29.6	-0.2
	comp=Z,1.6nm,0.8s,baz=132,slow=1.5,SNR=4.8						
BDFB	Brasilia	137.65	128	PKhKP	PKPpre	02 42 26.9	
	comp=Z,1.4nm,0.7s,baz=249,slow=8.6,SNR=2.4						
DAVOX	Davos/Dischmat	138.74	334	PKP	PKPdf	02 42 36.6	+0.7
	comp=Z,6.0nm,1.0s,baz=326,slow=3.6,SNR=3.6						
KEST	Kesra	147.16	322	*e*PKPbc	PKPab	02 42 55.0	+0.2
KEST	Kesra	147.16	322	PKPbc	PKPdf	02 42 51.3	+0.3
	comp=Z,17nm,1.0s,baz=309,slow=4.0,SNR=7.1						
POLO	Lamas de Olo	149.16	350	*e*PKPab	PKiKP	02 42 58.9	-0.7
MVO	Moncorvo	149.22	349	*e*PKPab	PKPab	02 43 03.3	+0.5
PVRL	Vila Real	149.24	350	*e*PKPab	PKPbc	02 42 58.2	-0.2
PVIS	Viseu	149.82	350	*e*PKPab	PKPbc	02 43 00.1	+0.2
ES19	SONSECA Array	149.87	343	*e*PKPbc	PKPbc	02 42 60.0	-0.1
ESDC	Sonseca Array	149.91	343	PKPbc	PKPdf	02 42 57.2	+1.8
	comp=Z,0.5nm,0.5s,baz=10,slow=2.9,SNR=4.2						
ESDC				PKPab	PKPab	02 43 06.4	+0.8
	comp=Z,3.6nm,0.8s,baz=22,slow=2.5,SNR=7.3						
MTE	Manteigas	150.06	349	*e*PKPab	PKPbc	02 42 58.8	-1.7
PMRV	Marv??o	150.97	348	*e*PKPab	PKPbc	02 43 02.6	-0.1
PTOM	Tomar	150.97	350	*e*PKPab	PKPbc	02 43 00.6	-2.0
PBDV	Barranco-do-Ve	153.19	348	*e*PKPab	PKiKP	02 43 08.5	+0.6
TOA0	Torodi Ar. Sit	163.89	279	*e*PKPdf	PKPdf	02 43 12.1	-1.6
TOA0				*e*PKPdf	pPKPdf	02 43 13.2	-3.4
TORD	Torodi Ar. Bea	163.89	279	PKP	PKPdf	02 43 13.3	-0.3
	comp=Z,3.7nm,0.9s,baz=154,slow=0.4,SNR=11						
TORD				PKPab	PKPab	02 44 07.6	+1.2
	comp=Z,3.3nm,0.9s,baz=82,slow=1.3,SNR=4.2						
TOA1	Torodi Ar. Sit	163.89	279	*e*PKPdf	PKPdf	02 43 13.3	-0.3
TOA1				*e*PKPab	PKPab	02 44 07.6	+1.2
DBIC	Dimbokro	169.42	247	PKP	PKPdf	02 43 17.4	-0.6
	comp=Z,4.5nm,0.9s,baz=171,slow=5.6,SNR=4.6						
DBIC				PKPab	PKPab	02 44 30.4	-0.4
	comp=Z,3.0nm,0.8s,baz=117,slow=6.1,SNR=2.8						

IDC 06 02:25:47.4±5.4,10°.91S×165°.54E,h0^{km},mb4.2/7,mb1 4.4/7,mb1mx4.1/37,mbtmp4.1/7,Error ellipse: s-maj=184.6km s-min=39.4km az=18.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USRK	Ussuriysk Ar.	62.74	333	P	P	02 36 14.8	+0.4
	2.4nm,0.8s,baz=120,slow=7.5,SNR=4.4						
SONM	Songino Array	78.44	324	P	P	02 37 50.1	-0.2
	1.2nm,0.8s,baz=154,slow=8.8,SNR=2.5						
ILAR	Eielson Array	83.45	19	P	P	02 38 16.4	0.0
	1.7nm,0.6s,baz=242,slow=4.8,SNR=5.6						
NVAR	Mina Array Bea	86.09	50	P	P	02 38 30.9	+0.2
	3.1nm,0.9s,baz=232,slow=6.7,SNR=6.2						
PDAR	Pinedale Array	93.61	47	P	P	02 39 06.3	+0.3
	0.4nm,0.9s,baz=230,slow=7.0,SNR=3.9						
YKA	Yellowknife Ar	94.95	27	P	P	02 39 10.1	-1.3
	0.4nm,0.6s,baz=256,slow=4.7,SNR=4.6						
TXAR	Lajitas Array	95.94	61	P	P	02 39 17.0	+0.1
	0.3nm,0.7s,baz=212,slow=4.3,SNR=3.5						

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*IDC **06** 02:26:07.4±1.6,10°.96S×165°.26E,h0^{km},mb4.3/7,mb1 4.5/8,mb1mx4.2/37,mbtmp4.3/8,ML4.4/1,Error ellipse: s-maj=58.0km s-min=33.7km az=67.0*

ISC 06 02:26:11.5±1.0,11°.1S±0°.1×165°.2E±0°.4,h30^{km},n8,σ1^{s}.18/8,mb4.4/7,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.02	174	Pn	Pn	02 28 47.1	-0.1
	2.5nm,0.3s,baz=300,slow=20,SNR=2.3						
USRK	Ussuriysk Ar.	62.70	334	P	P	02 36 34.4	+0.9
	2.4nm,0.8s,baz=114,slow=10,SNR=3.5						
PETK	Petropavlovsk-	64.22	355	P	P	02 36 42.7	-0.7
	1.5nm,0.4s,baz=162,slow=6.0,SNR=4.5						
ILAR	Eielson Array	83.70	19	P	P	02 38 37.3	+0.2
	2.9nm,0.8s,baz=243,slow=5.4,SNR=4.4						
NVAR	Mina Array Bea	86.46	50	P	P	02 38 51.8	0.0
	2.3nm,0.9s,baz=234,slow=7.7,SNR=4.5						
PDAR	Pinedale Array	93.98	47	P	P	02 39 27.7	+0.7
	0.4nm,0.6s,baz=274,slow=3.5,SNR=3.6						
YKA	Yellowknife Ar	95.24	27	P	P	02 39 30.0	-2.0
	0.6nm,0.8s,baz=255,slow=5.0,SNR=5.5						
TXAR	Lajitas Array	96.33	61	P	P	02 39 39.1	+1.2
	0.3nm,0.7s,baz=213,slow=3.1,SNR=3.3						

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*IDC **06** 02:26:34.3±0.6,11°.02S×165°.24E,h0^{km},mb4.5/14,mb1 4.7/15,mb1mx4.5/38,mbtmp4.5/15,ML5.0/1,Error ellipse: s-maj=23.8km s-min=16.3km az=97.0*

*NEIC **06** 02:26:35.8±0.2,10°.97S×165°.21E,h10^{km},mb5.0/14,Error ellipse: s-maj=9.4km s-min=6.4km az=90.0*

*ISCJB **06** 02:26:37.3±0.3,11°.04S±0°.06×165°.13E±0°.08,h30^{km},mb4.7/26,Error ellipse: s-maj=11.2km s-min=8.1km az=178.4*

ISC 06 02:26:38.6±0.5,11°.06S±0°.09×165°.3E±0°.1,h30^{km},n53,σ1^{s}.04/53,mb4.5/26,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.01	174	Pn	Pn	02 29 12.8	-1.4
	9.7nm,0.3s,baz=50,slow=18,SNR=7.0						
URZ	Urewera	29.10	161	P	P	02 32 37.6	+1.0
	23nm,0.7s,baz=42,slow=2.2,SNR=5.9						
BKZ	Black Stump Fm	29.73	162	*e*P	P	02 32 44.9	+2.6
	36nm,0.6s						
STKA	Stephens Creek	30.10	223	*e*P	P	02 32 46.1	+0.5
	0.4nm,0.6s						
STKA	Stephens Creek	30.10	223	P	P	02 32 46.1	+0.5
	5.8nm,0.7s,baz=47,slow=9.8,SNR=3.8						
WRAB	Tennant Creek	31.01	250	*e*P	P	02 32 53.3	-0.6
	1.3nm,0.6s						
WR1	Warramunga Arr	31.02	250	*e*P	P	02 32 53.9	-0.1
	2.3nm,0.6s						
WRA	Warramunga Arr	31.02	250	P	P	02 32 53.9	-0.1
	4.5nm,0.7s,baz=82,slow=8.9,SNR=4.5						
BFZ	Birch Farm	31.07	164	*e*P	P	02 32 55.6	+1.6
	53nm,1.1s						
SNZO	South Karori	31.26	166	*e*P	P	02 32 56.0	+0.3
	48nm,0.9s						
THZ	Tophouse	31.32	169	*e*P	P	02 32 58.0	+1.7
	26nm,0.7s						
KHZ	Kahutara	32.07	168	*e*P	P	02 33 04.1	+1.3
	28nm,0.7s						
LTZ	Lake Taylor	32.19	170	*e*P	P	02 33 05.8	+1.9
AS01	Alice Springs	32.31	243	*e*P	P	02 33 04.9	-0.4
AS31	Alice Springs	32.35	243	*e*P	P	02 33 05.6	0.0
	4.7nm,1.0s						
ASAR	Alice Springs	32.35	243	P	P	02 33 05.6	0.0
	9.6nm,0.7s,baz=65,slow=10,SNR=7.5						
OXZ	Oxford	32.69	171	*e*P	P	02 33 11.1	+2.9
	30nm,0.6s						
RPZ	Rata Peaks	32.93	172	*e*P	P	02 33 11.1	+0.7
	56nm,1.4s						
RPZ	Rata Peaks	32.93	172	P	P	02 33 11.1	+0.7
	14nm,0.7s,baz=18,slow=3.2,SNR=4.2						
MBWA	Marble Bar	44.73	251	*e*P	P	02 34 48.6	-0.9
	12nm,1.4s						
MJAR	Matsushiro Arr	53.76	333	P	P	02 35 58.3	0.0
	3.0nm,0.7s,baz=169,slow=8.5,SNR=5.6						
MAJO	Matsushiro	53.76	333	*e*P	P	02 35 58.3	0.0
PETK	Petropavlovsk-	64.23	355	P	P	02 37 11.8	+1.2
	2.8nm,0.7s,baz=176,slow=5.5,SNR=2.3						
PEA1	Petropavlovsk-	64.24	355	*e*P	P	02 37 11.8	+1.2
SONA0	Songino Array	78.39	324	*e*P	P	02 38 37.4	+1.0
SONM	Songino Array	78.39	324	P	P	02 38 37.4	+1.0
	2.3nm,1.0s,baz=116,slow=6.6,SNR=3.3						
ILAR	Eielson Array	83.68	19	P	P	02 39 03.2	-0.9
	2.1nm,0.6s,baz=233,slow=5.2,SNR=5.2						
ILB	Eielson Array	83.68	19	*e*P	P	02 39 03.2	-0.9
	4.1nm,1.1s						
JIS	Juneau Island	84.56	27	*e*P	P	02 39 06.3	-2.3
	12nm,0.5s						
NV01	Mina Array Sit	86.40	50	*e*P	P	02 39 19.6	+1.0
NVAR	Mina Array Bea	86.40	50	P	P	02 39 20.0	+1.4
	2.9nm,1.0s,baz=234,slow=7.7,SNR=4.8						
MK32	Makanchi Array	93.20	317	*e*P	P	02 39 50.6	+0.5
MKAR	Makanchi Array	93.20	317	P	P	02 39 50.6	+0.5
	2.1nm,0.8s,baz=103,slow=5.4,SNR=4.4						
ZALV	Zalesovo Beam	93.28	324	P	P	02 39 50.4	+0.1
	1.0nm,0.7s,baz=60,slow=3.5,SNR=3.2						
ZAA1	Zalesovo Array	93.28	324	*e*P	P	02 39 50.4	+0.1
YMR	Madison River	93.31	45	*e*P	P	02 39 50.0	-0.9
	50nm,0.3s						
PD31	Pinedale Array	93.92	47	*e*P	P	02 39 54.1	+0.3
	1.4nm,1.2s						
PDAR	Pinedale Array	93.92	47	P	P	02 39 54.1	+0.3
	0.8nm,1.0s,baz=268,slow=6.3,SNR=2.8						
YKA	Yellowknife Ar	95.20	27	P	P	02 39 58.3	-0.6
	0.8nm,0.8s,baz=257,slow=4.9,SNR=5.0						
YKB5	Yellowknife Ar	95.20	27	*e*P	P	02 39 58.3	-0.6
ARA0	ARCESS Array S	116.22	345	*e*PKPdf	PKiKP	02 45 18.5	0.0
ARCES	ARCESS Array B	116.22	345	PKP	PKiKP	02 45 18.5	0.0
	1.4nm,0.8s,baz=81,slow=2.8,SNR=2.6						
FIA0	FINESS Array S	121.60	338	*e*PKPdf	PKiKP	02 45 29.5	+0.3
FINES	FINESS Array B	121.60	338	PKP	PKiKP	02 45 29.5	+0.3
FINES	FINESS Array B	121.60	338	PKP	PKiKP	02 45 29.5	+0.3
	1.8nm,0.9s,baz=79,slow=7.2,SNR=3.5						
CPUP	Villa Florida	124.38	133	PKP	PKiKP	02 45 36.2	+0.5
	3.1nm,0.7s,baz=139,slow=1.2,SNR=7.1						
BOSA	Boshof	124.78	223	PKP	PKiKP	02 45 37.3	+0.6
	1.6nm,0.7s,baz=90,slow=3.0,SNR=3.2						
NB200	NORSAR Array S	126.58	345	*e*PKPdf	PKPdf	02 45 38.5	-0.2
NOA	NORSAR Array B	126.58	345	PKP	PKPdf	02 45 38.5	-0.2
	0.9nm,0.8s,baz=82,slow=6.8,SNR=3.6						
BDFB	Brasilia	137.71	128	PKP	PKPdf	02 46 00.1	-0.9
	4.9nm,0.9s,baz=151,slow=2.4,SNR=5.3						
ESDC	Sonseca Array	149.93	343	PKPbc	PKPbc	02 46 26.0	-0.4
	0.6nm,0.6s,baz=39,slow=1.9,SNR=3.3						
TORD	Torodi Ar. Bea	163.79	279	PKP	PKPdf	02 46 38.5	-1.3
	1.7nm,0.8s,baz=59,slow=0.1,SNR=4.3						
TOA1	Torodi Ar. Sit	163.79	279	*e*PKPdf	PKPdf	02 46 38.5	-1.3

IDC 06 02:27:21.0±1.7,11°.06S×165°.31E,h0^{km},mb4.2/5,mb1 4.5/5,mb1mx4.1/37,mbtmp4.2/5,Error ellipse: s-maj=56.5km s-min=32.0km az=143.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	32.41	243	P	P	02 33 52.8	-0.1
	5.0nm,0.7s,baz=72,slow=9.3,SNR=3.5						
MJAR	Matsushiro Arr	53.79	333	P	P	02 36 45.0	-0.4
	2.1nm,0.6s,baz=176,slow=8.5,SNR=2.9						
SONM	Songino Array	78.42	324	P	P	02 39 24.0	+0.2
	0.7nm,0.6s,baz=134,slow=6.2,SNR=2.4						
ILAR	Eielson Array	83.66	19	P	P	02 39 51.1	-0.1
	1.0nm,0.7s,baz=235,slow=6.4,SNR=2.5						
NVAR	Mina Array Bea	86.36	50	P	P	02 40 05.7	0.0
	1.3nm,0.8s,baz=242,slow=7.8,SNR=2.8						

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*IDC **06** 02:27:42.0±1.2,10°.85S×165°.22E,h0^{km},mb4.3/9,mb1 4.6/9,mb1mx4.2/38,mbtmp4.3/9,Error ellipse: s-maj=64.6km s-min=19.9km az=149.0*

*ISCJB **06** 02:27:45.3±1.1,10°.9S±0°.4×165°.1E±0°.2,h31^{km},mb4.2/9,Error ellipse: s-maj=61.5km s-min=16.9km az=149.3*

ISC 06 02:27:47.0±1.3,10°.8S±0°.4×165°.2E±0°.3,h31^{km},n9,σ1^{s}.14/9,mb4.3/9,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.01	249	P	P	02 34 02.0	-0.1
	4.4nm,0.7s,baz=82,slow=9.0,SNR=4.3						
ASAR	Alice Springs	32.37	243	P	P	02 34 13.9	-0.1
	13nm,0.8s,baz=64,slow=10,SNR=8.0						
FITZ	Fitzroy Crossi	38.88	255	P	P	02 35 09.5	-0.4
	4.2nm,0.7s,baz=142,slow=6.6,SNR=2.8						
SONM	Songino Array	78.17	324	P	P	02 39 44.3	+0.8
	1.3nm,0.8s,baz=132,slow=6.0,SNR=2.8						
ILAR	Eielson Array	83.51	19	P	P	02 40 10.2	-1.3
	0.7nm,0.6s,baz=244,slow=5.0,SNR=3.6						
NVAR	Mina Array Bea	86.33	50	P	P	02 40 25.0	-1.5
	2.1nm,0.9s,baz=238,slow=5.2,SNR=2.9						
PDAR	Pinedale Array	93.84	47	P	P	02 41 01.1	-0.6
	1.5nm,1.0s,baz=202,slow=1.0,SNR=2.3						
YKA	Yellowknife Ar	95.06	27	P	P	02 41 07.2	+0.7
	0.5nm,0.7s,baz=256,slow=4.5,SNR=4.2						
TXAR	Lajitas Array	96.24	61	P	P	02 41 14.3	+1.5
	0.3nm,0.7s,baz=263,slow=6.3,SNR=2.6						

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*ISCJB **06** 02:29:23.9±0.3,11°.27S±0°.05×165°.95E±0°.06,h10^{km},mb4.6/25,Error ellipse: s-maj=9.3km s-min=6.4km az=157.1*

*IDC **06** 02:29:23.9±0.6,11°.17S×166°.00E,h0^{km},mb4.6/14,mb1 4.8/16,mb1mx4.5/40,mbtmp4.7/16,ML5.2/2,Error ellipse: s-maj=20.1km s-min=16.3km az=128.0*

*NEIC **06** 02:29:25.4±0.3,11°.16S×165°.99E,h10^{km},mb4.9/14,Error ellipse: s-maj=8.3km s-min=6.3km az=99.0*

ISC 06 02:29:25.1±0.5,11°.12S±0°.09×166°.1E±0°.1,h10^{km},n65,σ1^{s}.02/63,mb4.8/26,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.23	285	Pn	Pn	02 30 57.7	+0.4
	98nm,0.3s,baz=324,slow=3.4,SNR=7.5						
DZM	Mont Dzumac	10.90	178	*e*Pn	Pn	02 32 02.1	+0.8
DZM	Mont Dzumac	10.90	178	Pn	Pn	02 32 01.8	+0.5
	12nm,0.3s,baz=3.8,slow=13,SNR=9.7						
ONTNC	Ouen Toro	11.13	178	*e*Pn	Pn	02 32 05.8	+1.3
CTA	Charters Tower	21.03	243	P	P	02 34 09.7	+0.4
	15nm,0.8s,baz=78,slow=12,SNR=7.4						
CTAO	Charters Tower	21.03	243	*e*P	P	02 34 10.1	+0.8
	74nm,1.2s						
URZ	Urewera	28.78	162	*e*P	P	02 35 23.5	+0.3
	15nm,1.4s						
URZ	Urewera	28.78	162	P	P	02 35 23.6	+0.3
	3.9nm,0.4s,baz=356,slow=15,SNR=4.7						
MTHZ	Maungataniwha	29.25	163	P	P	02 35 28.1	+0.7
BKZ	Black Stump Fm	29.44	163	*e*P	P	02 35 29.1	0.0
	26nm,1.0s						
BKZ	Black Stump Fm	29.44	163	P	P	02 35 29.4	+0.3
NMHZ	Naumai	29.46	163	P	P	02 35 29.4	+0.1
BHHZ	Black Hill Sta	29.62	164	P	P	02 35 31.5	+0.7
OHWZ	Ohakea	30.11	166	P	P	02 35 27.7	-7.3
QRZ	Quartz Range	30.14	170	P	P	02 35 36.1	+0.9
STKA	Stephens Creek	30.59	224	P	P	02 35 39.4	0.0
	15nm,0.7s,baz=35,slow=9.1,SNR=14						
MRZ	Mangatainoka R	30.60	166	P	P	02 35 37.7	-1.7
BFZ	Birch Farm	30.79	165	*e*P	P	02 35 40.1	-0.9
	60nm,1.2s						
BFZ	Birch Farm	30.79	165	P	P	02 35 40.0	-1.0
HOWZ	Holdsworth Sta	30.81	166	P	P	02 35 40.1	-1.1
CAW	Cannon Point	30.91	167	P	P	02 35 41.0	-1.1
MTW	Mount Morrison	31.06	166	P	P	02 35 42.2	-1.1
THZ	Tophouse	31.11	170	*e*P	P	02 35 44.3	+0.4
PAWZ	Paruwai Farm	31.25	166	P	P	02 35 44.4	-0.7
WRAB	Tennant Creek	31.72	250	*e*P	P	02 35 48.6	-0.9
WB2	Warramunga Arr	31.72	250	*e*P	P	02 35 48.1	-1.4
WR1	Warramunga Arr	31.73	250	*e*P	P	02 35 48.7	-0.9
	5.0nm,0.9s						
WRA	Warramunga Arr	31.73	250	P	P	02 35 48.7	-0.9
	5.4nm,0.5s,baz=82,slow=8.9,SNR=13						
LTZ	Lake Taylor	32.01	171	*e*P	P	02 35 51.6	-0.1
	41nm,1.3s						
RPZ	Rata Peaks	32.76	173	P	P	02 35 58.2	-0.2
	10nm,0.5s,baz=7.5,slow=2.7,SNR=3.7						
AS31	Alice Springs	33.02	244	*e*P	P	02 35 59.4	-1.6
	2.9nm,0.6s						
ASAR	Alice Springs	33.02	244	P	P	02 35 59.4	-1.6
	6.6nm,0.8s,baz=73,slow=9.5,SNR=7.3						
FITZ	Fitzroy Crossi	39.65	255	P	P	02 36 56.5	-1.1
	17nm,0.8s,baz=94,slow=7.4,SNR=14						
BATI	Baumata	41.64	267	P	P	02 37 13.6	-0.5
	36nm,0.5s,baz=97,slow=3.5,SNR=6.7						
CM01	Chiang Mai Arr	72.39	293	*e*P	P	02 40 53.0	+1.0
CM31	Chiang Mai Arr	72.41	293	*e*P	P	02 40 53.8	+1.6
	8.1nm,0.6s						
CMAR	Chiang Mai Arr	72.41	293	P	P	02 40 53.8	+1.6
	1.2nm,0.3s,baz=120,slow=4.0,SNR=6.0						
CHTO	Chiang Mai	72.53	294	*e*P	P	02 40 52.3	-0.5
SONA0	Songino Array	78.90	324	*e*P	P	02 41 30.0	+1.1
SONM	Songino Array	78.90	324	P	P	02 41 30.0	+1.1
	0.3nm,0.5s,baz=145,slow=3.5,SNR=2.4						
MCK	McKinley	82.12	19	*e*P	P	02 41 45.9	+0.1
	13nm,1.2s						
HDA	Harding Lake	83.22	19	*e*P	P	02 41 52.9	+1.4
	8.4nm,0.8s						
ILAR	Eielson Array	83.49	18	P	P	02 41 53.8	+0.9
	1.1nm,0.5s,baz=236,slow=4.9,SNR=14						
ILB	Eielson Array	83.49	18	*e*P	P	02 41 54.0	+1.2
	2.1nm,0.8s						
SCRK	Sand Creek	83.89	20	*e*P	P	02 41 56.6	+1.6
	8.3nm,1.0s						
NV01	Mina Array Sit	85.85	50	*e*P	P	02 42 06.8	+1.2
NVAR	Mina Array Bea	85.85	50	P	P	02 42 06.6	+1.0
	1.7nm,0.9s,baz=226,slow=4.8,SNR=2.7						
MK01	Makanchi Array	93.77	317	*e*P	P	02 42 42.1	-0.4
MK31	Makanchi Array	93.78	317	*e*P	P	02 42 42.7	+0.1
	5.2nm,1.0s						
MK32	Makanchi Array	93.78	317	*e*P	P	02 42 43.8	+1.2
MKAR	Makanchi Array	93.78	317	P	P	02 42 43.8	+1.2
	0.9nm,0.7s,baz=86,slow=4.8,SNR=4.3						
ZALV	Zalesovo Beam	93.79	324	P	P	02 42 43.1	+0.7
	0.4nm,0.4s,baz=112,slow=6.9,SNR=2.5						
ZAA1	Zalesovo Array	93.79	324	*e*P	P	02 42 43.1	+0.7
RLMT	Red Lodge	94.07	45	*e*P	P	02 42 42.1	-2.1
	4.8nm,1.0s						
YKA	Yellowknife Ar	94.90	27	P	P	02 42 46.7	-0.6
	0.3nm,0.5s,baz=260,slow=4.6,SNR=8.3						
YKB5	Yellowknife Ar	94.90	27	*e*P	P	02 42 46.7	-0.6
ARA0	ARCESS Array S	116.48	346	*e*PKPdf	PKPdf	02 48 08.6	-0.3
ARCES	ARCESS Array B	116.48	346	PKP	PKPdf	02 48 08.6	-0.3
	0.9nm,0.4s,baz=81,slow=2.2,SNR=17						
FIA0	FINESS Array S	121.95	339	*e*PKPdf	PKPdf	02 48 19.6	+0.1
FINES	FINESS Array B	121.95	339	PKP	PKPdf	02 48 19.6	+0.1
	1.4nm,0.7s,baz=104,slow=2.9,SNR=6.3						
BOSA	Boshof	125.26	223	PKP	PKPdf	02 48 27.2	+0.1
	2.8nm,0.6s,baz=125,slow=3.4,SNR=7.2						
GEC2	GERESS Array S	135.90	334	*e*PKPdf	PKPdf	02 48 43.5	-3.1
GERES	GERESS Array B	135.90	334	PKhKP	PKPpre	02 48 43.5	
	0.4nm,0.8s,baz=308,slow=3.6,SNR=2.5						
KEST	Kesra	147.65	323	PKPbc	PKPbc	02 49 10.2	-0.3
	4.4nm,1.0s,baz=291,slow=2.2,SNR=4.6						
ESDC	Sonseca Array	150.21	344	PKPbc	PKPbc	02 49 15.9	-1.0
	0.3nm,0.4s,baz=337,slow=2.8,SNR=3.1						

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*IDC **06** 02:30:42.2±0.4,10°.84S×165°.14E,h0^{km},mb5.0/32,mb1 5.1/34,mb1mx5.1/43,mbtmp5.0/34,ML5.3/2,MS5.8/2,Ms1 5.8/2,ms1mx5.0/46,Error ellipse: s-maj=13.7km s-min=11.4km az=124.0*

*BJI **06** 02:30:43.4,10°.50S×165°.37E,h9^{km},mB5.8/4,mb5.4/71,Ms5.8/5,Ms7 5.5/5*

*MOS **06** 02:30:44.7±1.1,10°.90S×165°.08E,h26^{km},mb5.7/72,Error ellipse: s-maj=9.1km s-min=7.2km az=114.6*

*NEIC **06** 02:30:44.3±0.1,10°.80S×165°.10E,h10^{km},mb5.6/218,Error ellipse: s-maj=2.6km s-min=2.3km az=125.0*

*ISCJB **06** 02:30:46.3±0.1,10°.84S±0°.02×165°.06E±0°.02,h31^{km},mb5.5/282,MS6.3/2,Error ellipse: s-maj=3.3km s-min=2.9km az=44.7*

ISC 06 02:30:47.9±0.2,10°.93S±0°.05×165°.11E±0°.05,h31^{km},n680,σ1^{s}.40/680,mb5.5/282,31C-8D,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.29	286	*e*Pn	Pn	02 32 03.8	-1.1
HNR				Sn	Sn	02 33 05.3	+0.4
HNR	Honiara	5.29	286	*e*P	Pn	02 32 03.8	-1.1
HNR						02 33 05.4	
HNR	Honiara	5.29	286	Pn	Pn	02 32 04.4	-0.5
	137nm,0.3s,baz=217,slow=6.1,SNR=20						
HNR				Sn	Sn	02 33 05.3	+0.4
	13nm,0.3s,baz=287,slow=19,SNR=3.7						
HNR				LR	LR	02 33 58.6	
	comp=Z,79μm,18.6s,baz=124,slow=37						
MARNC	Mare, Loyalty	10.86	165	*e*Pn	Pn	02 33 22.5	+1.2
DZM	Mont Dzumac	11.15	174	*e*Pn	Pn	02 33 26.4	+1.0
DZM	Mont Dzumac	11.15	174	Pn	Pn	02 33 25.7	+0.3
	16nm,0.3s,baz=7.5,slow=16,SNR=17						
ONTNC	Ouen Toro	11.38	174	*e*Pn	Pn	02 33 29.1	+0.6
OUENC	Ouen Island, N	11.54	172	*e*Pn	Pn	02 33 31.5	+0.9
PINNC	Pines Island,	11.83	169	*e*Pn	Pn	02 33 34.8	+0.2
MSVF	Nonsavu	14.24	120	*e*Pn	Pn	02 34 06.4	-1.3
MSVF	Nonsavu	14.24	120	*e*P	Pn	02 34 06.4	-1.3
EIDS	Eidsvold	19.56	221	P	Pn	02 35 15.7	+0.9
	baz=20,SNR=9.2						
CTA	Charters Tower	20.30	241	P	P	02 35 21.6	+0.3
	294nm,0.8s,baz=68,slow=12,SNR=65						
CTAO	Charters Tower	20.30	241	*e*P	P	02 35 21.8	+0.3
	2μm,1.4s						
CTAO	Charters Tower	20.30	241	*e*P	P	02 35 21.8	+0.3
CTAO				pmax	pmax		
	comp=Z,2μm,1.4s						
LHI	Lord Howe Isla	21.24	194	P	P	02 35 34.3	+2.9
	baz=21,SNR=4.9						
MTSU	Mount Surprise	21.34	248	P	P	02 35 32.9	+0.1
	baz=21,SNR=5.1						
COEN	Coen	21.62	260	P	P	02 35 36.0	+0.2
	baz=22,SNR=9.8						
RMQ	Roma	21.85	223	P	P	02 35 38.4	+0.3
	baz=22,SNR=17						
ARMA	Armidale	23.08	211	P	P	02 35 53.0	+1.8
	baz=23,SNR=27						
KNTN	Kanton	24.38	72	*e*P	P	02 36 08.6	+5.0
	comp=Z,421nm,1.4s						
QLP	Quilpie	25.09	229	P	P	02 36 10.3	+0.3
	baz=25,SNR=33						
OUZ	Omahuta	25.38	164	*e*P	P	02 36 13.6	+1.1
	comp=Z,194nm,1.1s						
MGCD	Mangrove Creek	25.63	208	P	P	02 36 17.3	+2.5
	baz=26,SNR=10						
RIV	Riverview	26.12	207	P	P	02 36 21.5	+2.2
	baz=26,SNR=11						
QIS	Mount Isa	26.31	246	P	P	02 36 20.9	-0.2
	baz=26,SNR=4.7						
CMSA	Cobar Meteorol	27.26	218	P	P	02 36 31.1	+1.6
	baz=27,SNR=28						
YNG	Young	27.82	211	P	P	02 36 36.7	+2.2
	baz=28,SNR=20						
CNB	Canberra Magne	28.18	208	P	P	02 36 39.9	+2.1
	baz=28,SNR=11						
URZ	Urewera	29.26	160	*e*P	P	02 36 47.6	+0.4
	comp=Z,157nm,1.4s						
H11S2	WAKE ISLAND Hy	29.28	3	T	T	03 07 19.8	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.28	3	T	T	03 07 25.2	
	baz=184,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.30	3	T	T	03 07 25.9	
	baz=184,slow=76,SNR=11						
MTHZ	Maungataniwha	29.71	161	P	P	02 36 55.3	+4.0
MILA	Mila	29.72	206	P	P	02 36 54.0	+2.5
	baz=30,SNR=4.1						
BKZ	Black Stump Fm	29.89	162	*e*P	P	02 36 53.6	+0.6
	comp=Z,130nm,1.1s						

NMHZ	Naumai	29.92	162	P	P	02 36 57.3	+4.0
BHHZ	Black Hill Sta	30.06	163	P	P	02 36 57.5	+3.0
STKA	Stephens Creek	30.09	223	P	P	02 36 56.5	+1.8
	baz=30,SNR=15						
STKA	Stephens Creek	30.09	223	*e*P	P	02 36 55.3	+0.5
	comp=Z,39nm,1.1s						
STKA	Stephens Creek	30.09	223	P	P	02 36 54.3	-0.5
	comp=Z,39nm,0.8s,baz=37,slow=8.1,SNR=21						
QRZ	Quartz Range	30.49	169	P	P	02 37 03.4	+5.3
H11N1	WAKE ISLAND Hy	30.50	3	T	T	03 08 52.2	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	30.51	3	T	T	03 08 56.3	
	baz=182,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	30.52	3	T	T	03 08 57.8	
	baz=182,slow=76,SNR=10						
WRAB	Tennant Creek	30.92	249	*e*P	P	02 37 01.2	-1.0
	comp=Z,208nm,1.4s						
WRAB	Tennant Creek	30.92	249	*ce*P	P	02 36 59.6	-2.7
WRAB				pmax	pmax		
	comp=Z,189nm,1.7s						
WB2	Warramunga Arr	30.92	249	*e*P	P	02 37 01.7	-0.5
	comp=Z,246nm,1.4s						
WRA	Warramunga Arr	30.93	249	P	P	02 37 00.7	-1.7
	comp=Z,9.3nm,0.7s,baz=78,slow=7.6,SNR=13						
WRA				PcP	PcP	02 39 58.7	+0.2
	comp=Z,2.4nm,0.8s,baz=77,slow=2.7,SNR=4.2						
MRZ	Mangatainoka R	31.02	164	P	P	02 37 04.2	+1.4
BFZ	Birch Farm	31.22	164	*e*P	P	02 37 04.7	+0.1
	comp=Z,287nm,1.5s						
BFZ	Birch Farm	31.22	164	P	P	02 37 06.9	+2.2
HOWZ	Holdsworth Sta	31.23	165	P	P	02 37 06.7	+2.0
CAW	Cannon Point	31.31	165	P	P	02 37 08.3	+2.9
THZ	Tophouse	31.46	169	*e*P	P	02 37 06.5	-0.3
	comp=Z,108nm,1.0s						
MTW	Mount Morrison	31.47	165	P	P	02 37 08.8	+2.1
GUMO	Guam	31.57	320	LR	LR	02 49 35.7	
	comp=Z,20µm,18.7s,baz=146,slow=36						
PAWZ	Paruwai Farm	31.66	165	P	P	02 37 11.1	+2.6
TOO	Toolangi	31.84	210	P	P	02 37 10.5	+0.3
	baz=32,SNR=25						
KDU	Kakadu	31.98	264	P	P	02 37 09.9	-1.7
	baz=32,SNR=5.4						
AS01	Alice Springs	32.24	243	*e*P	P	02 37 13.0	-0.9
AS31	Alice Springs	32.28	243	*e*P	P	02 37 13.0	-1.2
	comp=Z,16nm,0.9s						
ASAR	Alice Springs	32.28	243	P	P	02 37 12.2	-2.1
	comp=Z,28nm,0.7s,baz=65,slow=9.6,SNR=26						
ASAR				PcP	PcP	02 40 03.3	+1.1
	comp=Z,3.2nm,0.7s,baz=90,slow=1.9,SNR=3.6						
LTZ	Lake Taylor	32.34	170	*e*P	P	02 37 16.2	+1.7
	comp=Z,72nm,0.8s						
FOZ	Fox Glacier	32.73	174	*e*P	P	02 37 18.8	+1.0
	comp=Z,80nm,1.2s						
HTT	Hallett	32.83	223	P	P	02 37 20.2	+1.3
	baz=33,SNR=38						
OXZ	Oxford	32.83	171	*e*P	P	02 37 19.8	+1.1
	comp=Z,54nm,0.9s						
RPZ	Rata Peaks	33.06	172	*e*P	P	02 37 22.1	+1.4
	comp=Z,57nm,1.0s						
RPZ	Rata Peaks	33.06	172	P	P	02 37 21.7	+0.9
	comp=Z,26nm,0.7s,baz=239,slow=1.4,SNR=8.5						
ARPS	Mount Arapiles	33.20	215	P	P	02 37 23.5	+1.5
	baz=33,SNR=15						
MQZ	McQueen's Vall	33.30	170	*e*P	P	02 37 27.9	+5.1
	comp=Z,126nm,1.2s						
WKZ	Wanaka	33.94	175	*e*P	P	02 37 29.1	+0.7
	comp=Z,126nm,1.4s						
ODZ	Otahua Downs	34.32	173	*e*P	P	02 37 32.5	+0.8
	comp=Z,32nm,1.2s						
MLZ	Mavora Lakes	34.41	176	*e*P	P	02 37 33.1	+0.7
	comp=Z,50nm,1.3s						
BBOO	Buckleboo	34.45	226	P	P	02 37 32.5	-0.4
	baz=34,SNR=65						
DCZ	Deep Cove	34.45	177	*e*P	P	02 37 33.5	+0.8
	comp=Z,84nm,1.3s						
MOO	Moorlands	35.07	203	P	P	02 37 40.6	+2.4
	baz=35,SNR=9.8						
TAU	Tasmania Unive	35.42	203	*e*P	P	02 37 42.6	+1.5
	comp=Z,111nm,1.3s						
TAU	Tasmania Unive	35.42	203	*e*P	P	02 37 42.7	+1.5
TAU				pmax	pmax		
	comp=Z,111nm,1.3s						
PALU	Palau	35.48	299	P	P	02 37 43.3	+1.2
	baz=35,SNR=4.2						
KNRA	Kununurra	35.65	258	P	P	02 37 42.5	-0.9
	baz=36,SNR=9.7						
WRKA	Warakurna	37.57	243	P	P	02 37 58.2	-1.7
	baz=38,SNR=21						
FITZ	Fitzroy Crossi	38.80	255	P	P	02 38 08.5	-1.8
	baz=39,SNR=11						
FITZ	Fitzroy Crossi	38.80	255	P	P	02 38 07.7	-2.6
	comp=Z,18nm,0.6s,baz=98,slow=6.6,SNR=15						
TNTI	Ternate	39.28	285	*e*P	P	02 38 13.0	-1.3
	comp=Z,59nm,1.2s						
FORT	Forrest	39.59	234	P	P	02 38 17.7	+1.0
	baz=40,SNR=24						
BATI	Baumata	40.72	267	P	P	02 38 23.5	-2.8
	comp=Z,31nm,0.6s,baz=106,slow=4.7,SNR=5.1						
MMRI	Maumere	42.28	269	*e*P	P	02 38 37.3	-1.8
	comp=Z,194nm,1.5s						
LUWI	Luwuk	43.17	280	*e*P	P	02 38 44.2	-2.1
	comp=Z,107nm,1.3s						
MBWA	Marble Bar	44.64	251	*e*P	P	02 38 57.7	-0.3
	comp=Z,25nm,1.2s						
MEEK	Meekatharra	46.43	244	P	P	02 39 11.9	-0.3
	baz=46,SNR=16						
KLBR	Kellerberrin	48.24	237	P	P	02 39 25.6	-0.6
	baz=48,SNR=5.9						
KHU	Kahuku	48.97	52	*e*P	P	02 39 37.7	+5.6
	comp=Z,499nm,1.5s						
NWAO	Narrogin (SRO)	49.01	236	P	P	02 39 33.2	+1.2
	baz=49,SNR=13						
NWAO	Narrogin (SRO)	49.01	236	*e*P	P	02 39 32.3	+0.3
	comp=Z,342nm,1.4s						
NWAO	Narrogin (SRO)	49.01	236	*e*P	P	02 39 32.3	+0.3
NWAO				pmax	pmax		
	comp=Z,342nm,1.4s						
NWAO	Narrogin (SRO)	49.01	236	P	P	02 39 33.1	+1.1
	SNR=12						
MORW	Morawa	49.13	241	P	P	02 39 34.6	+1.6
	baz=49,SNR=8.5						
MUN	Mundaring	49.61	237	P	P	02 39 37.8	+1.2
	baz=50,SNR=7.0						
RKGY	Rocky Gully	49.67	234	P	P	02 39 37.4	+0.3
	baz=50,SNR=10						
JAGI	Jajag, Banyuwa	50.24	268	*e*P	P	02 39 41.2	-0.5
	comp=Z,64nm,1.2s						
TGY	Tagaytay City	50.37	299	P	P	02 39 43.0	+0.3
TGY	Tagaytay City	50.37	299	P	P	02 39 43.0	+0.3
	comp=Z,161nm,0.3s,baz=239,slow=8.6,SNR=6.7						
KKM	Kota Kinabalu	51.50	287	*e*P	P	02 39 50.7	-0.7
	comp=Z,313nm,1.4s						
INU	Inuyama	53.15	331	*e*P	P	02 40 02.4	-0.6
	comp=Z,210nm,1.4s						
MJAR	Matsushiro Arr	53.59	333	P	P	02 40 05.4	-0.8
	comp=Z,15nm,1.0s,baz=164,slow=7.6,SNR=14						
MAJO	Matsushiro	53.59	333	*e*P	P	02 40 05.7	-0.5
	comp=Z,219nm,1.4s						
MAJO	Matsushiro	53.59	333	*e*P	P	02 40 05.7	-0.5
MAJO				pmax	pmax		
	comp=Z,219nm,1.4s						
MAT	Matsushiro	53.59	333	P	P	02 40 06.1	-0.1
MJB9	Matsu-Tunnel	53.59	333	*e*P	P	02 40 05.5	-0.8
	comp=Z,204nm,1.4s						
SBUM	Sibu	54.26	281	*e*P	P	02 40 11.4	-0.2
	comp=Z,26nm,1.3s						
SBUM	Sibu	54.26	281	P	P	02 40 12.4	+0.8
JNU	Nakatsue	54.62	325	*e*P	P	02 40 13.2	-0.7
	comp=Z,394nm,1.4s						
JNU	Nakatsue	54.62	325	P	P	02 40 12.5	-1.4
	comp=Z,41nm,0.8s,baz=179,slow=5.6,SNR=12						
YULB	Yu-li	54.78	309	*e*P	P	02 40 13.9	-1.3
	comp=Z,151nm,1.2s						
NACB	Ninganchiao	54.99	310	*e*P	P	02 40 15.4	-1.3
	comp=Z,249nm,1.3s						
TPUB	Ta-pu	55.24	308	*e*P	P	02 40 16.8	-1.7
	comp=Z,205nm,1.1s						
SSLB	Suanglung	55.26	309	*e*P	P	02 40 17.9	-0.7
	comp=Z,86nm,1.2s						
YHNB	Yeheng	55.43	310	*e*P	P	02 40 19.4	-0.5
	comp=Z,388nm,1.4s						
TATO	Taipei	55.52	311	*e*P	P	02 40 20.0	-0.4
	comp=Z,323nm,1.4s						
KSM	Kuching	55.87	279	*e*P	P	02 40 22.5	-0.7
	comp=Z,63nm,1.1s						
KSM	Kuching	55.87	279	P	P	02 40 23.3	+0.1
ERM	Erimo	56.42	340	*i* P	P	02 40 24.5	-2.0
ERM				pmax	pmax		
	comp=Z,67nm,1.2s						
ASAJ	Asahikawa	58.48	341	P	P	02 40 40.0	-1.1
	comp=Z,25nm,0.7s,baz=224,slow=9.7,SNR=17						
SSE	Sheshan	59.34	316	P	P	02 40 47.1	-0.2
SSE				pmax	pmax		
	comp=Z,11nm,0.7s						
SSE	Sheshan	59.34	316	*e*P	P	02 40 46.4	-0.9
	comp=Z,297nm,1.1s						
KSRS	Korea Array	59.43	326	P	P	02 40 46.5	-1.2
	comp=Z,20nm,1.0s,baz=138,slow=7.1,SNR=19						
KS15	Wonju Array Si	59.45	326	*e*P	P	02 40 47.7	-0.2
KSAR	Wonju Array Be	59.45	326	P	P	02 40 46.5	-1.3
KSAR	Wonju Array Be	59.45	326	P	P	02 40 46.6	-1.3
KS01	Wonju Array Si	59.47	326	*e*P	P	02 40 47.1	-1.0
YSS	Yuzh-Sakhalins	60.99	343	*e*P	P	02 40 57.5	-0.7
	comp=Z,224nm,1.1s						
YSS	Yuzh-Sakhalins	60.99	343	⇑*e*P	P	02 41 00.0	+1.7
YSS				*e*		02 41 09.3	
YSS				pmax	pmax		
	comp=N,380nm,1.2s						
YSS				pmax	pmax		
	comp=Z,840nm,1.2s						
YSS				pmax	pmax		
	comp=E,330nm,1.3s						
TEY	Ternei	61.38	337	⇓*e*P	P	02 41 01.7	+0.8
TEY				*e*		02 41 11.4	
TEY				pmax	pmax		
	comp=N,10.0nm,2.4s						
TEY				pmax	pmax		
	comp=Z,30nm,1.5s						
TEY				MLR	MLR		
	comp=Z,1µm,15.0s						
NJ2	Nanjing	61.50	316	*e*P	P	02 41 02.8	+0.8
NJ2				pmax	pmax		
	comp=Z,70nm,1.1s						
MSHR	Mys Shultsa	61.66	332	*i* P	P	02 41 00.4	-2.5
VLA	Vladivostok	61.76	333	*i* P	P	02 41 01.4	-2.1
VLA				pmax	pmax		
	comp=Z,161nm,1.4s						
SKR	Severo-Kuril's	61.86	354	*e*P	P	02 41 13.8	+10
SKR				pmax	pmax		
	comp=Z,168nm,1.4s						
QIZ	Qiongzhong	62.08	298	P	P	02 41 07.5	+1.3
QIZ				S	S	02 49 30.9	+1.5
QIZ				pmax	pmax		
	comp=Z,49nm,1.5s						
QIZ	Qiongzhong	62.08	298	*e*P	P	02 41 06.2	0.0
	comp=Z,143nm,1.4s						
MYKOM	Kota Tinggi	62.21	278	*e*P	P	02 41 07.1	-0.1
	comp=Z,60nm,1.3s						
MYKOM	Kota Tinggi	62.21	278	P	P	02 41 08.7	+1.5
USRK	Ussuriysk Ar.	62.57	334	P	P	02 41 08.4	-0.6
	comp=Z,17nm,0.9s,baz=132,slow=5.7,SNR=23						
USA0B	Ussuriysk Arra	62.57	334	*e*P	P	02 41 08.0	-0.9
	comp=Z,275nm,1.4s						
KTGM	Kuala Trenggan	63.76	281	P	P	02 41 19.5	+2.0
WHN	Wuhan	63.85	312	⇑P	P	02 41 18.5	+0.8
PET	Petropavlovsk	63.94	356	*e*P	P	02 41 18.9	+1.1
PET				pmax	pmax		
	comp=Z,109nm,1.2s						
MDJ	Mudanjiang	63.96	333	P	P	02 41 19.6	+1.4
MDJ				pmax	pmax		
	comp=Z,50nm,1.2s						
MDJ	Mudanjiang	63.96	333	*e*P	P	02 41 17.6	-0.6
	comp=Z,218nm,1.3s						
DL2	Dalian	64.01	323	P	P	02 41 19.4	+0.8
DL2				S	S	02 49 53.2	+0.2
DL2				pmax	pmax		
	comp=Z,68nm,1.4s						
PEA0B	Petropavlovsk-	64.10	355	*e*P	P	02 41 18.1	-0.8
	comp=Z,498nm,1.4s						
PETK	Petropavlovsk-	64.10	355	*e*P	P	02 41 17.8	-1.1
PETK	Petropavlovsk-	64.10	355	*e*P	P	02 41 17.8	-1.1
PETK	Petropavlovsk-	64.10	355	P	P	02 41 17.6	-1.4
	comp=Z,42nm,0.9s,baz=152,slow=8.9,SNR=18						
TYV	Tymovskoe	64.57	344	*e*P	P	02 41 24.0	+2.0
TYV				pmax	pmax		
	comp=Z,79nm,1.3s						
SNY	Shenyang	64.89	327	⇓P	P	02 41 24.9	+0.6
SNY				pmax	pmax		
	comp=Z,18nm,1.2s						
TIA	Tai'an	65.11	319	P	P	02 41 25.9	0.0
TIA				pmax	pmax		
	comp=Z,37nm,1.6s						
CN2	Changchun	65.33	329	*e*P	P	02 41 26.2	-0.9
CN2				pmax	pmax		
	comp=Z,70nm,1.0s						
IPM	Ipoh	65.58	280	*e*P	P	02 41 29.2	-0.3
	comp=Z,116nm,1.2s						
KULM	Kulim	66.14	281	*e*P	P	02 41 32.8	-0.2
	comp=Z,77nm,1.4s						
CASY	Casey	66.25	201	*e*P	P	02 41 34.3	+1.5
	comp=Z,134nm,1.4s						
SKNT	Sakolnakorn	66.47	294	P	P	02 41 35.8	+0.8
	comp=Z,70nm,1.4s						
VNDA	Vanda	66.59	181	*e*P	P	02 41 36.4	+1.5
	comp=Z,246nm,1.5s						
VNDA	Vanda	66.59	181	P	P	02 41 35.1	+0.3
	comp=Z,118nm,1.3s,baz=354,slow=7.2,SNR=17						
KLR	Kul'dur	66.71	337	*i* P	P	02 41 34.9	-1.0
NKL	Nikolayevsk	67.16	344	*e*P	P	02 41 36.8	-1.8
SRAK	Srakaew	67.26	290	P	P	02 41 39.2	-0.9
	comp=Z,74nm,1.2s						
ENH	Enshi	67.34	309	*e*P	P	02 41 39.9	-0.5
	comp=Z,330nm,1.2s						
NIKH	Nikolski High	67.44	17	*e*P	P	02 41 39.6	-0.9
	comp=Z,470nm,1.4s						
NONG	Nongkai	67.60	295	P	P	02 41 43.3	+1.1
	comp=Z,3.4nm,1.2s						
TRTT	Trang	67.71	283	P	P	02 41 44.8	+1.8
	comp=Z,26nm,1.6s						
GYA	Guiyang	67.84	304	⇑*i*P	P	02 41 45.1	+1.4
GYA				pP	sP	02 41 55.2	+0.2
GYA				PP	PP	02 44 17.5	+3.8
GYA				S	S	02 50 39.0	-1.4
GYA				SKS	SKiKP	02 51 38.8	+0.1
GYA				SS	SS	02 55 03.6	+1.0
GYA				pmax	pmax		
	comp=Z,120nm,1.2s						
GYA				pmax	pmax		
	comp=Z,180nm,8.4s						
GYA				LR	LR		
	comp=Z,2µm,18.4s						
GYA				LR	LR		
	comp=Z,3µm,18.3s						
GYA				LR	LR		
	comp=Z,2µm,19.0s						
CHAI	Chaiyaphum	67.92	292	P	P	02 41 44.8	+0.6
	comp=Z,16nm,0.9s						
BJT	Baijiatuau	67.99	321	*e*P	P	02 41 44.0	-0.2
	comp=Z,306nm,1.5s						
BJT	Baijiatuau	67.99	321	*e*P	P	02 41 44.0	-0.2
BJT				pmax	pmax		
	comp=Z,307nm,1.5s						
BJI	Beijing	68.00	321	P	P	02 41 45.2	+0.9
BJI				pmax	pmax		
	comp=Z,37nm,1.6s						
PATY	Pattaya	68.02	289	P	P	02 41 46.9	+2.0
	comp=Z,29nm,1.1s,comp=Z,3µm						
UNV	Unalaska Valle	68.89	18	*e*P	P	02 41 53.9	+4.4
	comp=Z,87nm,1.4s						
TIY	Taiyuan	69.05	318	*e*P	P	02 41 52.6	+1.6
TIY				pP	sP	02 42 01.7	-0.6
TIY				pmax	pmax		
	comp=Z,21nm,0.5s						
PBKT	Sadao Pong	69.06	292	P	P	02 41 52.6	+1.3
	comp=Z,51nm,1.9s						
PHET	Kaeng Krachan	69.17	288	P	P	02 41 55.2	+3.1
	comp=Z,15nm,1.4s,comp=Z,173nm						
XAN	Xi'an	69.58	313	P	P	02 41 54.1	-0.2
XAN				pP	pP	02 42 00.5	-2.1
XAN				sP	sP	02 42 04.4	-1.2
XAN				PcP	PcP	02 42 15.4	-1.9
XAN				pmax	pmax		
	comp=Z,57nm,0.7s						
XAN	Xi'an	69.58	313	*e*P	P	02 41 53.9	-0.5
	comp=Z,158nm,1.1s						
XAN	Xi'an	69.58	313	*e*P	P	02 41 53.9	-0.5
XAN				pmax	pmax		
	comp=Z,158nm,1.1s						
UTTA	Uttaradit	69.81	294	P	P	02 41 57.4	+1.4
	comp=Z,13nm,0.9s,comp=Z,137nm						
SRDT	SRDT	70.06	290	P	P	02 41 59.2	+1.6
	comp=Z,67nm,1.3s						
UTHA	Uthaitani	70.13	291	P	P	02 41 59.5	+1.5
	comp=Z,18nm,1.3s,comp=Z,207nm						
KMI	Kunming	70.53	302	P	P	02 42 02.3	+1.8
KMI				pP	sP	02 42 12.0	+0.1
KMI				sP	pwP	02 42 15.9	+1.3
KMI				pmax	pmax		
	comp=Z,110nm,1.5s						
KMI	Kunming	70.53	302	*e*P	P	02 42 00.2	-0.3
	comp=Z,422nm,1.4s						
KMI	Kunming	70.53	302	*e*P	P	02 42 00.2	-0.3
KMI				pmax	pmax		
	comp=Z,423nm,1.4s						
SUKH	Sukhothai	70.56	293	P	P	02 42 02.2	+1.6
	comp=Z,14nm,1.1s						
UMPA	Umpang Tak	70.86	291	P	P	02 42 04.6	+2.1
	comp=Z,12nm,1.4s,comp=Z,666nm						
MA2	Magadan	71.22	352	*e*P	P	02 42 03.1	-0.5
	comp=Z,109nm,1.4s						
MA2				*e*pP	pP	02 42 09.8	-2.5
MA2	Magadan	71.22	352	*ce*P	P	02 42 03.2	-0.5
MA2				pmax	pmax		
	comp=Z,138nm,2.5s						
HHC	Hu-ho-hao-te	71.34	320	*e*P	P	02 42 09.9	+4.9
HHC				pmax	pmax		
	comp=Z,51nm,1.2s						
CM01	Chiang Mai Arr	71.47	294	*e*P	P	02 42 05.4	-0.6
CM31	Chiang Mai Arr	71.49	294	*e*P	P	02 42 06.1	-0.1
CMAR	Chiang Mai Arr	71.49	294	P	P	02 42 06.0	-0.3
CMAR	Chiang Mai Arr	71.49	294	P	P	02 42 06.0	-0.3
	comp=Z,11nm,0.8s,baz=126,slow=4.5,SNR=20						
CMMT	Chiang Mai	71.60	294	P	P	02 42 08.3	+1.4
	comp=Z,80nm,1.3s						
CHTO	Chiang Mai	71.61	294	*e*P	P	02 42 06.5	-0.4
	comp=Z,118nm,1.3s						
CHTO	Chiang Mai	71.61	294	*e*P	P	02 42 06.5	-0.4
CHTO				pmax	pmax		
	comp=Z,118nm,1.3s						
CHTO	Chiang Mai	71.61	294	P	P	02 42 08.4	+1.4
	SNR=28						
CHTO	Chiang Mai	71.61	294	P	P	02 42 08.3	+1.4
	comp=Z,361nm,1.4s						
HIA	Hailar	71.97	331	*e*P	P	02 42 07.6	-0.9
	comp=Z,305nm,1.3s						
HIA	Hailar	71.97	331	*i* P	P	02 42 07.4	-1.1
HIA				pmax	pmax		
	comp=Z,192nm,1.2s						
ZEA	Zeya	72.00	337	*e*P	P	02 42 09.4	+0.9
ZEA				pmax	pmax		
	comp=N,190nm,1.2s						
ZEA				pmax	pmax		
	comp=E,58nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,700nm,1.6s						
CD2	Chengdu	72.04	308	⇑P	P	02 42 08.5	-0.8
CD2				S	S	02 51 31.1	+1.8
CD2				pmax	pmax		
	comp=Z,340nm,0.9s						
LZH	Lanzhou	74.22	312	⇑P	P	02 42 24.2	+1.9
LZH				pP	sP	02 42 34.6	+1.0
LZH				S	S	02 51 52.2	-2.0
LZH				sS	sS	02 52 08.2	+0.5
LZH				SS	SS	02 56 43.7	+3.3
LZH				pmax	pmax		
	comp=Z,160nm,1.5s						
LZH				pmax	pmax		
	comp=Z,660nm,6.3s						
LZH				LR	LR		
	comp=Z,2µm,17.7s						
LZH				LR	LR		
	comp=Z,2µm,17.7s						
LZH				LR	LR		
	comp=Z,2µm,18.6s						
SEY	Seymchan	74.30	354	*ce*P	P	02 42 21.0	-0.9
OHAK	Old Harbor	76.04	22	*e*P	P	02 42 35.5	+3.4
GAMB	Gambell	76.57	10	*e*P	P	02 42 33.5	-1.4
	comp=Z,127nm,1.4s						
KDAK	Kodiak Island	76.71	22	P	P	02 42 35.1	-0.8
	comp=Z,13nm,1.1s,baz=270,slow=13,SNR=3.2						
CIT	Chita	76.75	330	*e*P	P	02 42 37.8	+1.5
CIT				*e*		02 42 52.1	
CIT				pmax	pmax		
	comp=Z,650nm,1.5s						
YAK	Yakutsk	77.81	344	*e*P	P	02 42 43.1	+1.2
YAK				*e**PP	pP	02 42 48.1	-2.0
YAK				*e*		02 42 51.7	
YAK				*e*S	S	02 52 33.0	+0.7
YAK				*e**SS	ScS	02 53 21.3	+23
YAK				*e*SS	SS	02 57 40.8	+7.4
YAK				*e*SSS	SSS	03 00 46.7	
YAK				pmax	pmax		
	comp=Z,149nm,1.5s						
YAK				pmax	pmax		
	comp=N,52nm,1.6s						
YAK				pmax	pmax		
	comp=E,26nm,1.5s						
YAK				smax	smax		
	comp=N,18µm,18.0s						
YAK				smax	smax		
	comp=E,9µm,17.4s						
YAK				MLR	MLR		
	comp=Z,18µm,21.0s						
YAK				MLR	MLR		
	comp=N,36µm,36.0s						
YAK				MLR	MLR		
	comp=E,58µm,44.0s						
ULN	Ulaanbaatar	77.84	324	*e*P	P	02 42 42.0	-0.6
	comp=E,196nm,1.2s						
ULN	Ulaanbaatar	77.84	324	*ce*P	P	02 42 40.9	-1.8
ULN				pmax	pmax		
	comp=Z,132nm,1.7s						
ULN	Ulaanbaatar	77.84	324	P	P	02 42 43.3	+0.7
	SNR=46						
SVW2	Sparrevohn	78.20	18	*e*P	P	02 42 42.9	-1.2
	comp=Z,76nm,1.3s						
SONM	Songino Array	78.21	324	P	P	02 42 44.0	-0.6
	comp=Z,13nm,0.8s,baz=144,slow=4.8,SNR=28						
SONA1	Songino Array	78.21	324	*e*P	P	02 42 43.6	-1.0
ANM	Nome	78.52	13	*e*P	P	02 42 44.3	-1.5
	comp=Z,60nm,1.4s						
ANM	Nome	78.52	13	*e*P	P	02 42 44.3	-1.5
ANM				pmax	pmax		
	comp=Z,60nm,1.4s						
GTA	Gaotai	78.53	314	⇑P	P	02 42 46.5	-0.1
GTA				pP	pP	02 42 52.0	-3.0
GTA				sP	PcP	02 42 55.2	-0.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RSO	Redoubt South	78.63	20	*e*P	P	02 42 45.2	-1.6
BRLK	Bradley Lake	78.76	21	*e*P	P	02 42 46.4	-0.9
	comp=Z,66nm,1.2s						
BILL	Bilibino	78.77	0	*e*P	P	02 42 46.2	-0.9
	comp=Z,170nm,1.2s						
BILL	Bilibino	78.77	0	*i* P	P	02 42 45.6	-1.6
BILL				pmax	pmax		
	comp=Z,138nm,1.2s						
QSPA	South Pole Qui	79.07	180	*e*P	P	02 42 49.6	+0.4
	comp=Z,337nm,1.5s						
SHL	Shillong	79.91	299	*e*P	P	02 42 54.0	-0.5
	comp=Z,241nm,1.3s						
SHL	Shillong	79.91	299	*e*P	P	02 42 54.0	-0.5
SHL				pmax	pmax		
	comp=Z,241nm,1.3s						
SUA	Susitna One	80.03	20	*e*P	P	02 42 53.0	-1.3
	comp=Z,60nm,1.3s						
RC01	Rabbit Creek A	80.11	20	*e*P	P	02 42 54.2	-0.3
	comp=Z,82nm,1.4s						
BOD	Bodaibo	80.16	335	*e*P	P	02 42 53.6	-1.3
BOD				pmax	pmax		
	comp=Z,106nm,1.4s						
PPLA	Purkeypile	80.62	18	*e*P	P	02 42 56.3	-1.2
PMR	Palmer	80.67	20	*e*P	P	02 42 57.1	-0.5
	comp=Z,84nm,1.4s						
PMR	Palmer	80.67	20	*e*P	P	02 42 57.1	-0.5
PMR				pmax	pmax		
	comp=Z,84nm,1.4s						
KNK	Knik Glacier	80.78	21	*e*P	P	02 42 57.3	-0.9
	comp=Z,47nm,1.2s						
CAST	Castle Rocks	81.04	18	*e*P	P	02 42 58.7	-0.9
	comp=Z,46nm,1.2s						
SML	Sawmill	81.09	20	*e*P	P	02 42 58.7	-1.2
	comp=Z,121nm,1.5s						
SML	Sawmill	81.09	20	*e*P	P	02 42 58.7	-1.2
SML				pmax	pmax		
	comp=Z,121nm,1.5s						
ZAK	Zakamensk	81.25	325	*e*P	P	02 42 59.9	-1.2
ZAK				pmax	pmax		
	comp=Z,76nm,1.3s						

DIV	**Divide**	81.54	22	*e*P	P	02 43 01.1	-1.2
	comp=Z,51nm,1.2s						
TRF	**Thorofare Moun**	81.61	19	*e*P	P	02 43 02.0	-0.8
	comp=Z,18nm,0.9s						
IRK	**Irkutsk**	81.62	327	*e*P	P	02 43 03.3	+0.4
IRK				pmax	pmax		
	comp=Z,102nm,2.2s						
TLY	**Talaya**	81.68	326	*e*P	P	02 43 02.1	-1.1
	comp=Z,208nm,1.2s						
TLY	**Talaya**	81.68	326	*i* P	P	02 43 01.6	-1.6
TLY	**Talaya**	81.68	326	P	P	02 43 03.9	+0.7
	SNR=22						
KLU	**Klutina**	81.72	21	*e*P	P	02 43 02.0	-1.3
	comp=Z,47nm,1.2s						
LSA	**Lhasa**	81.76	302	*e*P	P	02 43 04.1	-0.6
	comp=Z,39nm,1.1s						
BPAW	**Bear Paw Mtn.**	81.87	18	*e*P	P	02 43 02.9	-1.1
	comp=Z,23nm,1.3s						
RND	**Reindeer**	82.04	19	*e*P	P	02 43 03.5	-1.4
	comp=Z,55nm,1.3s						
RND	**Reindeer**	82.04	19	*e*P	P	02 43 03.5	-1.4
RND				pmax	pmax		
	comp=Z,55nm,1.3s						
RDOG	**Red Dog Mine**	82.04	12	*e*P	P	02 43 03.7	-1.0
	comp=Z,103nm,1.3s						
MCK	**McKinley**	82.24	19	*e*P	P	02 43 05.3	-0.6
	comp=Z,77nm,1.4s						
MCK	**McKinley**	82.24	19	*e*P	P	02 43 05.3	-0.6
MCK				pmax	pmax		
	comp=Z,77nm,1.4s						
DHY	**Denali Highway**	82.29	20	*e*P	P	02 43 05.4	-1.0
	comp=Z,21nm,1.1s						
IM3	**Indian Mountai**	82.49	16	*e*P	P	02 43 06.0	-1.1
HARP	**HAARP**	82.60	21	*e*P	P	02 43 07.1	-0.7
	comp=Z,49nm,1.0s						
MLY	**Manley**	82.62	17	*e*P	P	02 43 06.8	-1.1
	comp=Z,25nm,1.2s						
KCPM	**Cahto Peak**	82.94	47	*e*P	P	02 43 09.7	-0.5
	comp=Z,86nm,1.5s						
WRH	**Wood River Hil**	83.02	19	*e*P	P	02 43 09.1	-0.9
	comp=Z,21nm,1.2s						
KMRM	**Mail Ridge**	83.03	47	*e*P	P	02 43 09.5	-1.2
	comp=Z,129nm,1.4s						
MOY	**Mondy**	83.13	326	*e*P	P	02 43 11.7	+0.8
MOY				pmax	pmax		
	comp=Z,95nm,2.4s						
MDM	**Murphy Dome**	83.32	18	*e*P	P	02 43 10.0	-1.5
	comp=Z,41nm,1.2s						
HDA	**Harding Lake**	83.34	19	*e*P	P	02 43 10.3	-1.3
	comp=Z,45nm,0.9s						
HDA	**Harding Lake**	83.34	19	P	P	02 43 10.5	-1.1
	baz=227						
TCOL	**CIGO, UAF Yank**	83.38	18	P	P	02 43 10.6	-1.1
	baz=226						
COLA	**College**	83.38	18	*e*P	P	02 43 10.3	-1.4
	comp=Z,51nm,1.1s						
COLA	**College**	83.38	18	*e*P	P	02 43 10.3	-1.4
COLA				pmax	pmax		
	comp=Z,51nm,1.1s						
RIDG	**Independ’e Rid**	83.59	20	*e*P	P	02 43 12.2	-0.7
	comp=Z,96nm,1.4s						
ILAR	**Eielson Array**	83.61	19	P	P	02 43 12.0	-1.0
	comp=Z,5.2nm,0.7s,baz=229,slow=5.9,SNR=13						
ILAR				PP	PP	02 46 25.7	-0.3
	comp=Z,3.4nm,1.1s,baz=232,slow=5.8,SNR=5.1						
ILB	**Eielson Array**	83.61	19	*e*P	P	02 43 11.8	-1.1
IL1	**Eielson Array**	83.61	19	*e*P	P	02 43 10.9	-2.0
POKR	**Poker Plat Res**	83.67	18	P	P	02 43 12.1	-1.2
	baz=227						
O02D	**Mt. Diablo Mer**	83.68	47	P	P	02 43 14.0	0.0
	baz=250						
K02D	**Willamette Mer**	83.94	45	P	P	02 43 16.3	+1.1
	baz=249						
WDC	**Whiskeytown Da**	83.99	47	*e*P	P	02 43 14.9	-0.6
	comp=Z,65nm,1.5s						
WDC	**Whiskeytown Da**	83.99	47	*e*P	P	02 43 14.9	-0.6
WDC				pmax	pmax		
	comp=Z,65nm,1.5s						
N02D	**Trinity Center**	84.01	46	P	P	02 43 16.1	+0.5
	baz=250						
SCRK	**Sand Creek**	84.03	20	*e*P	P	02 43 14.1	-1.2
	comp=Z,111nm,1.4s						
M02C	**Callahan**	84.05	46	P	P	02 43 15.7	-0.1
	baz=250						
PAGB	**Antelope Grade**	84.14	52	*e*pP	pP	02 43 27.5	+1.9
ODAN	**Odare**	84.15	299	*e*P	P	02 43 17.7	+0.9
PKM	**Mcpherson Peak**	84.23	53	P	P	02 43 17.9	+0.8
	baz=253						
YBH	**Yreka Blue Hor**	84.27	46	*e*P	P	02 43 15.7	-1.2
	comp=Z,39nm,1.0s						
YBH	**Yreka Blue Hor**	84.27	46	*e*P	P	02 43 15.7	-1.2
YBH				pmax	pmax		
	comp=Z,39nm,1.0s						
HUMO	**Hull Mountain**	84.39	45	*e*P	P	02 43 16.4	-1.0
	comp=Z,47nm,1.1s						
ORV	**Oroville**	84.41	48	*e*P	P	02 43 16.4	-1.2
	comp=Z,31nm,1.2s						
ORV	**Oroville**	84.41	48	*e*P	P	02 43 16.4	-1.2
ORV				pmax	pmax		
	comp=Z,31nm,1.2s						
O03E	**Paynes Creek**	84.43	47	P	P	02 43 18.1	+0.3
	baz=251						
PRP	**Porcupine Dome**	84.54	19	*e*P	P	02 43 17.0	-0.9
	comp=Z,13nm,1.1s						
HYT	**Haines Junctio**	84.55	24	*e*P	P	02 43 16.5	-1.5
	comp=Z,25nm,1.1s						
MAW	**Mawson**	84.59	202	*e*P	P	02 43 18.4	+0.4
	comp=Z,51nm,1.4s						
MAW	**Mawson**	84.59	202	*e*P	P	02 43 18.4	+0.4
MAW				pmax	pmax		
	comp=Z,51nm,1.4s						
MAW	**Mawson**	84.59	202	P	P	02 43 17.2	-0.8
	comp=Z,46nm,0.8s,baz=98,slow=3.4,SNR=3.7						
AFDM	**Forest Hills D**	84.60	49	*e*P	P	02 43 17.1	-1.5
	comp=Z,43nm,1.2s						
KNGR	**Kungurtug, Tuv**	84.64	324	*i* P	P	02 43 16.9	-1.8
L04D	**Klamath Falls**	84.72	45	P	P	02 43 19.2	0.0
	baz=250						
CMB	**Columbia Colle**	84.75	50	*e*P	P	02 43 18.0	-1.4
	comp=Z,21nm,1.1s						
CMB	**Columbia Colle**	84.75	50	*e*P	P	02 43 18.0	-1.4
CMB				pmax	pmax		
	comp=Z,21nm,1.1s						
RAMN	**Ramite**	84.85	299	*e*P	P	02 43 21.2	+0.8
M04C	**Macdoel**	84.90	46	P	P	02 43 19.7	-0.5
	baz=251						
I04A	**Tendick Farm,**	85.18	44	P	P	02 43 19.9	-1.5
	baz=250						
J04D	**Umpqua Nationa**	85.19	44	P	P	02 43 22.9	+1.2
	baz=250						
H04D	**Lebanon**	85.21	43	P	P	02 43 22.5	+1.0
	baz=250						
BEKR	**Beckworth**	85.34	48	*e*P	P	02 43 21.1	-1.4
	comp=Z,31nm,1.1s						
JIRN	**Jiri**	85.39	299	*e*P	P	02 43 24.2	+1.0
	comp=Z,1µm,1.6s						
MWC	**Mount Wilson**	85.42	54	*e*P	P	02 43 21.7	-1.3
	comp=Z,56nm,1.3s						
MWC	**Mount Wilson**	85.42	54	*e*P	P	02 43 21.7	-1.3
MWC				pmax	pmax		
	comp=Z,56nm,1.3s						
ISA	**Isabella, Lake**	85.50	53	*e*P	P	02 43 22.5	-0.8
	comp=Z,25nm,1.1s						
ISA	**Isabella, Lake**	85.50	53	*e*P	P	02 43 22.5	-0.8
ISA				pmax	pmax		
	comp=Z,25nm,1.1s						
ISA	**Isabella, Lake**	85.50	53	P	P	02 43 24.3	+1.0
	baz=253						
WHY	**Whitehorse**	85.54	25	*e*P	P	02 43 21.5	-1.5
	comp=Z,8.6nm,0.9s						
WAKR	**Walker**	85.61	50	*e*P	P	02 43 23.4	-0.5
	comp=Z,79nm,1.4s						
MDPB	**Devils Postpil**	85.61	51	*e*P	P	02 43 22.8	-1.2
	comp=Z,38nm,1.2s						
H04A	**Detroit Lake**	85.63	43	*e*P	P	02 43 22.9	-0.7
	comp=Z,47nm,1.3s						
EDW2	**Edwards Air Fo**	85.66	53	P	P	02 43 25.1	+1.1
	baz=254						
OMMB	**Old Mammoth Mi**	85.67	51	*e*P	P	02 43 23.1	-1.3
	comp=Z,41nm,1.4s						
DAWY	**Dawson**	85.68	21	*e*P	P	02 43 22.6	-0.9
	comp=Z,39nm,1.2s						
GUN	**Gumba**	85.72	299	*e*P	P	02 43 25.4	+0.6
	comp=Z,383nm,1.5s						
BFSC	**Mount Baldy Ra**	85.74	54	P	P	02 43 25.2	+0.6
	baz=254						
J05D	**Fort Rock, OR**	85.81	45	P	P	02 43 24.0	-0.8
	baz=251						
CPE	**Camp Elliot**	85.82	56	*e*P	P	02 43 23.2	-1.6
	comp=Z,36nm,1.3s						
TIXI	**Tiksi**	85.86	349	*e*P	P	02 43 23.1	-1.0
	comp=Z,130nm,1.5s						
TIXI	**Tiksi**	85.86	349	*ce*P	P	02 43 22.5	-1.6
TIXI				pmax	pmax		
	comp=Z,120nm,2.5s						
YERR	**Yerington**	85.90	49	*e*P	P	02 43 24.2	-1.1
	comp=Z,30nm,1.4s						
PALK	**Pallekele**	85.91	278	*e*P	P	02 43 24.3	-1.4
	comp=Z,78nm,1.4s						
PALK	**Pallekele**	85.91	278	*e*P	P	02 43 24.3	-1.4
PALK				pmax	pmax		
	comp=Z,78nm,1.4s						
PAHR	**Pah Rah Range**	86.01	48	*e*P	P	02 43 24.7	-1.1
	comp=Z,33nm,1.2s						
MOD	**Modoc Plateau**	86.02	46	*e*P	P	02 43 24.8	-1.0
	comp=Z,35nm,1.3s						
CWC	**Cottonwood Cre**	86.03	52	P	P	02 43 25.1	-0.9
	baz=254						
PKI	**Pulchoki**	86.03	299	*e*P	P	02 43 26.5	+0.1
	comp=Z,487nm,1.5s						
PKIN	**Phulchoki**	86.05	299	*e*P	P	02 43 26.8	+0.4
	comp=Z,320nm,1.5s						
LRMC	**Laurel Mtn Rad**	86.07	53	P	P	02 43 26.1	-0.1
	baz=254						
I05D	**Terrebonne, OR**	86.09	44	P	P	02 43 25.9	0.0
	baz=251						
BAR	**Barrett**	86.11	56	*e*P	P	02 43 25.6	-0.8
	comp=Z,27nm,1.4s						
PINE	**Pine Mountain**	86.18	44	*e*P	P	02 43 26.0	-0.6
	comp=Z,53nm,1.2s						
KKN	**Kakani**	86.20	299	*e*P	P	02 43 27.7	+0.6
	comp=Z,268nm,1.4s						
PGC	**Sidney**	86.20	39	*e*P	P	02 43 25.5	-0.8
	comp=Z,81nm,1.3s						
DMN	**Daman**	86.30	299	*e*P	P	02 43 28.4	+0.7
	comp=Z,463nm,1.4s						
RYN	**Ryan**	86.33	50	*e*P	P	02 43 26.4	-1.0
	comp=Z,36nm,1.3s						
DAC	**Darwin (Calif)**	86.36	52	*e*P	P	02 43 26.7	-1.0
	comp=Z,24nm,1.1s						
DAC	**Darwin (Calif)**	86.36	52	*e*P	P	02 43 26.7	-1.0
DAC				pmax	pmax		
	comp=Z,24nm,1.1s						
MONP2	**Monument Peak**	86.37	56	P	P	02 43 27.1	-0.7
	baz=255						
MPMC	**Manual Prospec**	86.38	52	P	P	02 43 26.9	-0.9
	baz=254						
NV01	**Mina Array Sit**	86.43	50	*e*P	P	02 43 26.6	-1.4
NVAR	**Mina Array Bea**	86.43	50	P	P	02 43 25.4	-2.6
	comp=Z,12nm,1.1s,baz=238,slow=6.4,SNR=15						
F05D	**White Salmon**	86.52	42	P	P	02 43 28.7	+0.7
	baz=251						
PFO	**Pinyon Flats O**	86.53	55	*e*P	P	02 43 27.9	-0.6
	comp=Z,29nm,1.4s						
PFO	**Pinyon Flats O**	86.53	55	P	P	02 43 27.8	-0.7
	baz=255						
PFO	**Pinyon Flats O**	86.53	55	P	P	02 43 26.8	-1.7
	comp=Z,2.7nm,0.6s,baz=272,slow=2.0,SNR=4.7						
TPFO	**Pinon Flats**	86.54	55	P	P	02 43 27.7	-0.8
	baz=255						
XPFO	**Pion Flat**	86.54	55	*e*P	P	02 43 28.2	-0.3
	comp=Z,28nm,1.3s						
NV11	**Mina Array Sit**	86.55	50	*e*P	P	02 43 27.5	-1.0
	comp=Z,2.9nm,1.1s						
IKP	**In-Ko-Pah, Jac**	86.56	56	P	P	02 43 28.5	-0.1
	baz=255						
LON	**Longmire**	86.58	41	*e*P	P	02 43 27.5	-0.8
	comp=Z,22nm,1.3s						
LON	**Longmire**	86.58	41	*e*P	P	02 43 27.5	-0.8
LON				pmax	pmax		
	comp=Z,22nm,1.3s						
DLBC	**Dease Lake**	86.61	28	*e*P	P	02 43 27.3	-1.0
	comp=Z,22nm,1.1s						
DLBC				PP	PP	02 46 51.4	+0.9
DLBC	**Dease Lake**	86.61	28	P	P	02 43 26.1	-2.1
	comp=Z,2.5nm,0.8s,baz=297,slow=2.3,SNR=2.1						
DLBC				PP	PP	02 46 51.4	+0.9
	comp=Z,6.6nm,1.1s,baz=229,slow=9.3,SNR=2.4						
D05A	**Enumclaw**	86.61	41	*e*P	P	02 43 28.1	-0.3
	comp=Z,199nm,1.5s						
GSC	**Goldstone, Bar**	86.71	53	*e*P	P	02 43 28.6	-0.7
	comp=Z,19nm,1.3s						
GSC	**Goldstone, Bar**	86.71	53	P	P	02 43 29.2	0.0
	baz=254						
GRAC	**Grapevine Rang**	86.74	52	P	P	02 43 29.4	+0.1
	baz=254						
KVN	**Kaiserville**	86.76	49	*e*P	P	02 43 28.5	-1.1
	comp=Z,38nm,1.3s						
KVN	**Kaiserville**	86.76	49	*e*P	P	02 43 28.5	-1.1
KVN				pmax	pmax		
	comp=Z,38nm,1.3s						
SWSC	**Sam W. Stewart**	86.89	56	P	P	02 43 29.9	-0.2
	baz=255						
B05A	**Bryant**	86.91	40	P	P	02 43 30.4	+0.6
	baz=250						
FURC	**Furnace Creek,**	86.98	52	P	P	02 43 29.7	-0.7
	baz=254						
BELC	**Belle Mtn. Jos**	87.01	55	P	P	02 43 31.1	+0.3
	baz=255						
I07A	**Izee**	87.26	44	*e*P	P	02 43 31.6	-0.2
	comp=Z,39nm,1.2s						
BC3	**Big Chuckawall**	87.35	55	P	P	02 43 32.8	+0.3
	baz=255						
WVOR	**Wild Horse Val**	87.36	46	*e*P	P	02 43 31.4	-0.9
	comp=Z,35nm,1.1s						
WVOR	**Wild Horse Val**	87.36	46	*e*P	P	02 43 31.4	-0.9
WVOR				pmax	pmax		
	comp=Z,35nm,1.1s						
B06A	**Marblemount**	87.38	40	*e*P	P	02 43 32.4	+0.4
	comp=Z,45nm,1.3s						
TUQ	**Turquoise Moun**	87.44	53	P	P	02 43 33.5	+0.6
	baz=255						
GMRC	**Granite Mounta**	87.48	54	P	P	02 43 33.4	+0.3
	baz=255						
LTY	**Liberty**	87.48	41	*e*P	P	02 43 32.7	-0.1
	comp=Z,16nm,1.0s						
TPNV	**Topopah Spring**	87.59	52	*e*P	P	02 43 32.7	-0.9
	comp=Z,22nm,1.4s						
TPNV	**Topopah Spring**	87.59	52	*e*P	P	02 43 32.7	-0.9
TPNV				pmax	pmax		
	comp=Z,22nm,1.4s						
TPNV	**Topopah Spring**	87.59	52	P	P	02 43 33.6	+0.1
	baz=255						
DANN	**Dangsing**	87.64	299	*e*P	P	02 43 33.5	-0.7
	comp=Z,240nm,1.4s						
KOLN	**Koldanda**	87.64	299	*e*P	P	02 43 33.8	-0.3
	comp=Z,148nm,1.5s						
GLA	**Glamis**	87.71	56	*e*P	P	02 43 33.5	-0.6
	comp=Z,52nm,1.1s						
GLA	**Glamis**	87.71	56	*e*P	P	02 43 33.5	-0.6
GLA				pmax	pmax		
	comp=Z,52nm,1.1s						
GLA	**Glamis**	87.71	56	P	P	02 43 34.6	+0.6
	baz=256						
IRM	**Iron Mountain**	87.73	55	P	P	02 43 34.1	0.0
	baz=255						
J08A	**Circle Bar Ran**	87.75	45	*e*P	P	02 43 33.4	-0.7
	comp=Z,47nm,1.2s						
LLLB	**Lillooet**	87.85	38	*e*P	P	02 43 33.6	-0.7
	comp=Z,24nm,1.3s						
HAWA	**Hanford**	87.95	42	*e*P	P	02 43 34.2	-0.7
	comp=Z,58nm,1.4s						
LDFC	**Landfair**	87.99	54	*e*P	P	02 43 34.1	-1.4
	comp=Z,116nm,1.5s						
G08A	**Pilot Rock**	88.00	43	*e*P	P	02 43 33.7	-1.6
	comp=Z,30nm,1.0s						
Y12C	**Blythe**	88.13	55	*e*P	P	02 43 34.9	-1.1
	comp=Z,45nm,1.1s						
Y12C	**Blythe**	88.13	55	P	P	02 43 35.7	-0.3
	baz=256						
PYUN	**Piuthan**	88.24	299	*e*P	P	02 43 36.0	-0.9
	comp=Z,118nm,1.4s						
E08A	**Dider Farm, El**	88.29	42	*e*P	P	02 43 36.2	-0.3
	comp=Z,44nm,1.2s						
SHPR	**Sheep Range**	88.32	52	*e*P	P	02 43 36.8	-0.3
	comp=Z,45nm,1.4s						
R11A	**Troy Canyon, C**	88.46	51	*e*P	P	02 43 36.8	-0.9
	comp=Z,31nm,1.4s						
R11A	**Troy Canyon, C**	88.46	51	P	P	02 43 37.5	-0.2
	baz=255						
113A	**Mohawk Valley,**	88.50	56	*e*P	P	02 43 37.1	-0.7
	comp=Z,38nm,1.3s						
D08A	**Wollman Farm,**	88.56	42	*e*P	P	02 43 37.6	-0.1
	comp=Z,42nm,1.3s						
PDMCI	**Parker Dam,Lak**	88.57	55	P	P	02 43 37.9	-0.2
	baz=256						
WMQ	**Urumqi**	88.57	315	P	P	02 43 38.9	+0.9
WMQ				pP	pP	02 43 46.3	-0.1
WMQ				PP	PP	02 47 09.4	+2.7
WMQ				pmax	pmax		
	comp=Z,150nm,1.3s						
WMQ	**Urumqi**	88.57	315	*e*P	P	02 43 37.2	-0.8
	comp=Z,126nm,1.4s						
WMQ	**Urumqi**	88.57	315	*e*P	P	02 43 37.2	-0.8
WMQ				pmax	pmax		
	comp=Z,126nm,1.4s						
B08A	**Colville Reser**	88.69	40	*e*P	P	02 43 37.9	-0.4
	comp=Z,38nm,1.4s						
E09A	**Wood Farm, Sta**	88.90	42	*e*P	P	02 43 38.8	-0.6
	comp=Z,51nm,1.4s						
W13A	**Hualapai Mount**	88.97	54	*e*P	P	02 43 38.8	-1.4
	comp=Z,45nm,1.4s						
BMO	**Blue Mountains**	88.99	44	*e*P	P	02 43 39.2	-0.7
	comp=Z,33nm,1.3s						
BMO	**Blue Mountains**	88.99	44	*e*P	P	02 43 39.2	-0.7
BMO				pmax	pmax		
	comp=Z,33nm,1.3s						
214A	**Organ Pipe Nat**	89.10	57	P	P	02 43 40.8	+0.2
	baz=257						
C09A	**Chrisman Ranch**	89.20	41	*e*P	P	02 43 40.5	-0.3
	comp=Z,18nm,1.1s						
ELK	**Elko**	89.34	48	*e*P	P	02 43 41.5	-0.4
ELK	**Elko**	89.34	48	P	P	02 43 40.9	-1.0
	comp=Z,3.1nm,1.0s,baz=337,slow=3.0,SNR=5.0						
F10A	**Beach Ranch, E**	89.36	43	*e*P	P	02 43 40.7	-1.0
	comp=Z,39nm,1.1s						
Y14A	**Wickenburg**	89.40	55	*e*P	P	02 43 41.0	-1.1
	comp=Z,17nm,1.2s						
MFID	**Camas Ranch**	89.62	46	*e*P	P	02 43 42.2	-0.8
	comp=Z,40nm,1.3s						
PSUT	**Pine Spring**	89.83	51	*e*P	P	02 43 43.5	-0.7
	comp=Z,29nm,1.3s						
LCMT	**Little Creek M**	89.93	52	*e*P	P	02 43 43.9	-0.7
	comp=Z,30nm,1.2s						
CCUT	**Cedar City**	89.97	52	*e*P	P	02 43 44.3	-0.5
	comp=Z,31nm,1.2s						
HYB	**Hyderabad**	89.98	288	*i* P	P	02 43 50.0	+4.9
INK	**Inuvik**	90.00	19	*e*P	P	02 43 43.6	-0.4
	comp=Z,13nm,1.2s						
INK	**Inuvik**	90.00	19	P	P	02 43 42.6	-1.4
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	90.00	19	P	P	02 43 42.6	-1.4
	comp=Z,4.1nm,1.2s,baz=236,slow=4.5,SNR=4.8						
NEW	**Newport**	90.07	41	*e*P	P	02 43 44.0	-0.9
	comp=Z,23nm,1.2s						
NEW	**Newport**	90.07	41	P	P	02 43 45.5	+0.6
	baz=254						
NEW	**Newport**	90.07	41	P	P	02 43 43.5	-1.4
	comp=Z,2.2nm,0.5s,baz=189,slow=4.8,SNR=5.4						
SZCU	**Shurtz Canyon**	90.19	52	*e*P	P	02 43 45.7	-0.2
	comp=Z,31nm,1.1s						
KNB	**Kanab**	90.26	52	*e*P	P	02 43 45.7	-0.5
	comp=Z,64nm,1.4s						
KNB	**Kanab**	90.26	52	*e*P	P	02 43 45.7	-0.5
KNB				pmax	pmax		
	comp=Z,64nm,1.4s						
DGZ	**Jazzator, Alta**	90.41	321	*i* P	P	02 43 45.4	-1.2
DGZ				pmax	pmax		
	comp=Z,11nm,1.3s						
U15A	**North Rim**	90.54	53	*e*P	P	02 43 46.9	-0.8
	comp=Z,47nm,1.1s						
HLID	**Hailey**	90.65	46	*e*P	P	02 43 47.0	-0.8
	comp=Z,37nm,1.2s						
HLID	**Hailey**	90.65	46	P	P	02 43 47.6	-0.2
	baz=256						
PKCU	**Pink Cliffs**	90.76	52	*e*P	P	02 43 47.9	-0.8
	comp=Z,92nm,1.5s						
X16A	**Lo Mia Camp, P**	90.77	55	*e*P	P	02 43 48.0	-0.7
	comp=Z,17nm,1.1s						
TUC	**Tucson**	90.85	57	*e*P	P	02 43 49.0	0.0
	comp=Z,23nm,1.3s						
TUC	**Tucson**	90.85	57	P	P	02 43 50.0	+1.0
	baz=258						
MTPU	**Mount Pierson**	90.99	52	*e*P	P	02 43 49.2	-0.6
	comp=Z,42nm,1.2s						
DUG	**Dugway, Tooele**	91.00	49	*e*P	P	02 43 48.3	-1.3
	comp=Z,35nm,1.4s						
DUG	**Dugway, Tooele**	91.00	49	*e*P	P	02 43 48.3	-1.3
DUG				pmax	pmax		
	comp=Z,35nm,1.4s						
DUG	**Dugway, Tooele**	91.00	49	P	P	02 43 49.6	+0.1
	baz=257						
BGU	**Big Grassy Mou**	91.01	49	*e*P	P	02 43 48.5	-1.1
	comp=Z,38nm,1.2s						
WUAZ	**Wupatki**	91.06	54	*e*P	P	02 43 49.4	-0.6
	comp=Z,37nm,1.3s						
WUAZ	**Wupatki**	91.06	54	P	P	02 43 50.3	+0.3
	baz=258						
MSU	**Marysvale**	91.10	51	*e*P	P	02 43 49.8	-0.3
MSU	**Marysvale**	91.10	51	*e*P	P	02 43 49.8	-0.3
HVU	**Hansel Valley**	91.40	48	*e*P	P	02 43 50.5	-0.8
	comp=Z,43nm,1.1s						
HVU	**Hansel Valley**	91.40	48	*e*P	P	02 43 50.6	-0.8
HVU				pmax	pmax		
	comp=Z,43nm,1.1s						
NLU	**North Lily Min**	91.50	50	*e*P	P	02 43 51.3	-0.6
	comp=Z,25nm,1.1s						
SPUT	**South Promonto**	91.53	48	*e*P	P	02 43 51.5	-0.5
	comp=Z,20nm,1.1s						
SYO	**Syowa Base**	91.71	197	⇓*i*P	P	02 43 50.0	-2.0
MPU	**Maple Canyon**	91.84	50	*e*P	P	02 43 53.8	+0.3
	comp=Z,31nm,1.3s						
CTU	**Camp Tracy**	91.91	49	*e*P	P	02 43 53.5	-0.3
	comp=Z,23nm,1.1s						
Q16A	**Castle Valley**	91.96	51	*e*P	P	02 43 54.3	+0.3
	comp=Z,56nm,1.4s						
X18A	**Snowflake**	92.00	55	*e*P	P	02 43 54.0	-0.3
	comp=Z,13nm,1.1s						
TMUT	**Trail Mountain**	92.01	51	*e*P	P	02 43 54.3	-0.2
	comp=Z,19nm,1.1s						
MCMT	**McKenzie Canyo**	92.05	45	*e*P	P	02 43 53.5	-0.9
JLU	**Jordanelle**	92.11	49	*e*P	P	02 43 54.3	-0.5
	comp=Z,31nm,1.2s						
TCUT	**Toone Canyon**	92.25	49	*e*P	P	02 43 54.9	-0.5
	comp=Z,40nm,1.1s						
WALA	**Waterton Lakes**	92.33	41	*e*P	P	02 43 55.0	-0.4
	comp=Z,38nm,1.3s						
DLMT	**Dillon**	92.34	44	*e*P	P	02 43 55.0	-0.6
	comp=Z,59nm,1.1s						
P17A	**Butcher Ranch,**	92.40	50	*e*P	P	02 43 55.2	-0.8
	comp=Z,11nm,1.2s						
SRU	**San Rafael Swe**	92.49	51	*e*P	P	02 43 56.1	-0.4
	comp=Z,10nm,1.1s						
SRU	**San Rafael Swe**	92.49	51	*e*P	P	02 43 56.1	-0.4
SRU				pmax	pmax		
	comp=Z,11nm,1.1s						
LRM	**Limekiln Ridge**	92.55	44	*e*P	P	02 43 57.3	+0.6
MK01	**Makanchi Array**	93.00	317	*e*P	P	02 43 56.6	-1.8
MK31	**Makanchi Array**	93.01	317	*e*P	P	02 43 56.9	-1.6
MKAR	**Makanchi Array**	93.01	317	*e*P	P	02 43 56.7	-1.9
	comp=Z,319nm,1.2s						
MKAR				PP	PP	02 47 42.2	+0.4
MKAR				PKKPbc	PKKPdf	03 01 07.4	-1.0
MKAR	**Makanchi Array**	93.01	317	P	P	02 43 57.0	-1.5
	comp=Z,6.8nm,0.7s,baz=86,slow=7.5,SNR=18						
MKAR				PP	PP	02 47 42.2	+0.4
	comp=Z,1.8nm,1.1s,baz=96,slow=10,SNR=3.0						
MKAR				PKKPbc	PKKPdf	03 01 07.4	-1.0
	comp=Z,2.4nm,0.8s,baz=283,slow=3.2,SNR=7.3						
QLMT	**Earthquake Lak**	93.03	45	*e*P	P	02 43 58.8	-0.1
BOZ	**Bozeman (W)**	93.06	44	*e*P	P	02 43 58.9	0.0
	comp=Z,45nm,1.3s						
BOZ	**Bozeman (W)**	93.06	44	P	P	02 43 59.8	+0.9
	baz=258						
FXWY	**Fox Creek**	93.06	46	*e*P	P	02 43 58.8	-0.3
	comp=Z,11nm,1.0s						
TPAW	**Teton Pass**	93.09	46	*e*P	P	02 43 58.9	-0.4
	comp=Z,13nm,1.0s						
ZAA0	**Zalesovo Array**	93.10	324	*e*P	P	02 43 56.4	-2.3
	comp=Z,78nm,1.3s						
ZALV	**Zalesovo Beam**	93.10	324	P	P	02 43 56.6	-2.1
	comp=Z,21nm,1.1s,baz=123,slow=2.6,SNR=15						
REDW	**Red Top Meadow**	93.13	47	*e*P	P	02 43 59.8	+0.4
	comp=Z,28nm,1.3s						
HRY	**Holter Researc**	93.16	43	*e*P	P	02 43 58.9	-0.4
YHB	**Horse Butte**	93.18	45	*e*P	P	02 43 59.4	-0.2
	comp=Z,29nm,1.2s						
IMW	**Indian Meadow**	93.18	46	*e*P	P	02 43 59.2	-0.5
	comp=Z,19nm,1.2s						
SNOW	**Snow King Moun**	93.22	47	*e*P	P	02 43 59.8	-0.1
	comp=Z,12nm,1.0s						

MAKZ	**Makanchi**	**93.22**	**317**	*e*P	**P**	**02 43 58.0**	**-1.5**
	comp=Z,113nm,1.3s						
MAKZ	**Makanchi**	**93.22**	**317**	*e*P	**P**	**02 43 58.0**	**-1.5**
MAKZ				pmax	pmax		
	comp=Z,113nm,1.3s						
MOOW	**Moose Ponds**	**93.28**	**46**	*e*P	**P**	**02 43 59.1**	**-1.0**
	comp=Z,12nm,1.3s						
YMR	**Madison River**	**93.32**	**45**	*e*P	**P**	**02 43 59.8**	**-0.4**
	comp=Z,30nm,1.2s						
YPP	**Pitchstone Pla**	**93.35**	**46**	*e*P	**P**	**02 44 00.1**	**-0.4**
	comp=Z,11nm,1.5s						
LOHW	**Long Hollow**	**93.36**	**46**	*e*P	**P**	**02 43 59.6**	**-0.9**
	comp=Z,15nm,1.3s						
YFT	**Old Faithful**	**93.37**	**46**	*e*P	**P**	**02 43 59.8**	**-0.8**
	comp=Z,17nm,1.2s						
121A	**Cookes Peak, D**	**93.38**	**58**	P	**P**	**02 44 02.5**	**+1.7**
	baz=259						
FLWY	**Flagg Ranch**	**93.39**	**46**	*e*P	**P**	**02 44 00.1**	**-0.4**
	comp=Z,12nm,1.0s						
PV09	**Paradox Valley**	**93.43**	**52**	*e*P	**P**	**02 44 00.6**	**-0.4**
PV19	**Morning Glory**	**93.51**	**52**	*e*P	**P**	**02 44 01.6**	**+0.4**
	comp=Z,10nm,1.2s						
PV23	**Carpenter Ridg**	**93.52**	**52**	*e*P	**P**	**02 44 01.2**	**-0.2**
	comp=Z,9.3nm,0.9s						
PV17	**East Wray Mesa**	**93.52**	**52**	*e*P	**P**	**02 44 01.5**	**+0.2**
	comp=Z,8.8nm,1.0s						
H17A	**Grant Village**	**93.54**	**46**	*e*P	**P**	**02 44 01.5**	**+0.2**
	comp=Z,9.9nm,0.9s						
H17A	**Grant Village**	**93.54**	**46**	P	**P**	**02 44 01.9**	**+0.6**
	baz=258						
PV21	**Cone Mtn., Par**	**93.57**	**52**	*e*P	**P**	**02 44 01.7**	**+0.2**
	comp=Z,19nm,1.4s						
PV04	**Paradox Valley**	**93.59**	**52**	*e*P	**P**	**02 44 01.8**	**+0.3**
	comp=Z,10nm,1.0s						
PV03	**Paradox Valley**	**93.61**	**52**	*e*P	**P**	**02 44 00.8**	**-0.9**
	comp=Z,4.1nm,1.0s						
PV12	**Saucer Basin,**	**93.65**	**52**	*e*P	**P**	**02 44 01.4**	**-0.5**
	comp=Z,11nm,1.0s						
PV01	**Paradox Valley**	**93.80**	**52**	*e*P	**P**	**02 44 02.1**	**-0.5**
	comp=Z,14nm,1.4s						
BW06	**Boulder Array**	**93.94**	**47**	*e*P	**P**	**02 44 02.1**	**-1.1**
	comp=Z,11nm,1.0s						
BW06	**Boulder Array**	**93.94**	**47**	P	**P**	**02 44 03.4**	**+0.3**
	baz=259						
PD31	**Pinedale Array**	**93.94**	**47**	*e*P	**P**	**02 44 02.1**	**-1.1**
PDAR	**Pinedale Array**	**93.94**	**47**	P	**P**	**02 44 01.8**	**-1.4**
	comp=Z,6.1nm,0.9s,baz=240,slow=2.3,SNR=12						
PDAR				PP	**PP**	**02 47 54.0**	**+4.5**
	comp=Z,0.9nm,1.0s,baz=225,slow=1.9,SNR=4.2						
NVS	**Novosibirsk**	**94.21**	**325**	⇑*i*P	**P**	**02 44 04.9**	**+1.1**
NVS				pmax	pmax		
	comp=N,11nm,1.4s						
NVS				pmax	pmax		
	comp=Z,64nm,1.4s						
NVS				pmax	pmax		
	comp=E,38nm,1.7s						
EGMT	**Eagleton**	**94.81**	**42**	*e*P	**P**	**02 44 05.6**	**-1.2**
	comp=E,28nm,1.0s						
EGMT	**Eagleton**	**94.81**	**42**	P	**P**	**02 44 07.8**	**+1.0**
	baz=259						
ANMO	**Albuquerque**	**94.90**	**56**	*e*P	**P**	**02 44 06.8**	**-0.9**
	comp=E,4.4nm,1.0s						
ANMO	**Albuquerque**	**94.90**	**56**	*i* P	**P**	**02 44 06.6**	**-1.1**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANMO	**Albuquerque**	**94.90**	**56**	P	**P**	**02 44 05.5**	**-2.2**
	comp=Z,1.7nm,0.8s,baz=228,slow=6.3,SNR=5.5						
S22A	**4UR Ranch, Cre**	**95.08**	**53**	*e*P	**P**	**02 44 07.4**	**-1.2**
	comp=Z,5.0nm,1.2s						
YKA	**Yellowknife Ar**	**95.16**	**27**	P	**P**	**02 44 04.7**	**-3.2**
	comp=Z,2.1nm,0.9s,baz=253,slow=4.5,SNR=13						
YKA				PP	**PP**	**02 47 56.2**	**-1.8**
	comp=Z,1.1nm,1.0s,baz=255,slow=7.5,SNR=5.3						
NRIK	**Noril'sk**	**95.80**	**340**	P	**P**	**02 44 09.6**	**-1.1**
NRIK						02 48 09.7	
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NRIK	**Noril'sk**	**95.80**	**340**	P	**P**	**02 44 09.6**	**-1.1**
	comp=Z,3.2nm,0.6s,baz=111,slow=5.2,SNR=8.6						
NRIK				PP	**PP**	**02 48 09.7**	**+6.9**
	comp=Z,1.4nm,0.3s,baz=141,slow=5.7,SNR=3.9						
KURK	**Kurchatov**	**96.15**	**320**	*e*P	**P**	**02 44 12.1**	**-0.7**
	comp=Z,54nm,1.4s						
KURK				PKKPbc	**PKKPbc**	**03 01 00.6**	**-1.0**
KURK	**Kurchatov**	**96.15**	**320**	*ce*P	**P**	**02 44 12.3**	**-0.5**
KURK				pmax	pmax		
	comp=Z,36nm,1.5s						
KURK	**Kurchatov**	**96.15**	**320**	P	**P**	**02 44 13.3**	**+0.5**
	SNR=11						
KURBB	**Kurchatov Arra**	**96.19**	**320**	PKKPbc	PKKPbc	03 01 00.6	-0.9
	comp=Z,1.2nm,0.8s,baz=287,slow=3.2,SNR=6.4						
KSH	**Kashi**	**96.20**	**309**	P	**P**	**02 44 16.1**	**+2.7**
TX31	**Lajitas Ar. Si**	**96.33**	**61**	*e*P	**P**	**02 44 14.2**	**0.0**
TXAR	**Lajitas Array**	**96.33**	**61**	P	**P**	**02 44 14.2**	**0.0**
	comp=Z,0.7nm,0.8s,baz=228,slow=5.8,SNR=3.5						
TXAR				PP	**PP**	**02 48 08.9**	**+0.8**
	comp=Z,1.4nm,1.1s,baz=261,slow=6.2,SNR=5.4						
LAO	**LASA Array**	**96.95**	**44**	*e*P	**P**	**02 44 16.4**	**-0.2**
	comp=Z,27nm,1.3s						
LAO	**LASA Array**	**96.95**	**44**	P	**P**	**02 44 15.7**	**-0.9**
	baz=262						
SNAA	**Sanae**	**97.19**	**184**	P	Pdif	02 44 18.1	+0.8
SNAA	**Sanae**	**97.19**	**184**	*e*P	**P**	**02 44 17.1**	**-0.1**
	comp=Z,28nm,1.2s						
SNAA	**Sanae**	**97.19**	**184**	*i* P	**P**	**02 44 16.3**	**-0.9**
AAK	**Ala-Archa**	**97.75**	**312**	*i* P	**P**	**02 44 19.7**	**-0.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
VNA3	**Neumayer Olymp**	**97.94**	**182**	P	**P**	**02 44 19.8**	**-0.7**
VNA2	**Neumayer--Watz**	**98.17**	**182**	P	**P**	**02 44 20.8**	**-0.8**
	baz=160,slow=3.7						
BRVK	**Borovoye**	**101.54**	**322**	*e*Pdif	**Pdif**	**02 44 36.3**	**-0.6**
BRVK	**Borovoye**	**101.54**	**322**	*e*P	**Pdif**	**02 44 36.3**	**-0.6**
BRVK	**Borovoye**	**101.54**	**322**	P	**Pdif**	**02 44 37.1**	**+0.3**
	SNR=6.0						
ULM	**Lac du Bonnet**	**104.08**	**41**	Pdiff	**Pdif**	**02 44 45.4**	**-2.8**
	comp=Z,1.1nm,0.6s,baz=307,slow=9.0,SNR=2.8						
AKTO	**Aktyubinsk**	**109.23**	**320**	PKKPbc	PKKPbc	03 00 20.6	-2.2
	comp=Z,1.0nm,0.8s,baz=256,slow=4.2,SNR=3.3						
GEYT	**Alibeck**	**110.02**	**306**	PP	**PP**	**02 49 48.9**	**-1.4**
	comp=Z,3.8nm,0.9s,baz=90,slow=6.2,SNR=4.2						
APA	**Apatity**	**115.14**	**342**	⇓*i*PKIKP	**PKPdf**	**02 49 30.0**	**+4.4**
APA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TMCR	**Tamitsa**	**115.39**	**337**	*e*PKIKP	**PKiKP**	**02 49 25.3**	**-0.9**
TMCR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ARCES	**ARCESS Array B**	**116.07**	**345**	PKP	**PKiKP**	**02 49 25.3**	**-2.1**
	comp=Z,2.9nm,0.7s,baz=342,slow=0.4,SNR=8.7						
ARCES				PKKPbc	**PKKPbc**	**02 59 58.8**	**-1.6**
	comp=Z,3.5nm,0.9s,baz=256,slow=3.6,SNR=5.8						
KLMR	**Klimovskoe**	**116.37**	**334**	*e*PKIKP	PKPpre	02 49 21.2	
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
KLMR	**Klimovskoe**	**116.37**	**334**	*e*PKPdf	PKPpre	02 49 21.3	
KLMR				AMP		02 49 39.1	
	comp=Z,16nm,1.5s						
KLMR				*e*PP	PP	02 50 23.9	-10
MAK	**Makhachkala**	**117.52**	**313**	*i* P	**Pdif**	**02 45 42.1**	**-6.0**
MAK				*i*		02 49 25.5	
MAK				*e*		02 50 39.1	
MAK				*e*		02 56 14.7	
MAK				pmax	pmax		
	comp=Z,43nm,0.7s						
MAK				pmax	pmax		
	comp=Z,36µm,15.4s						
MNMC	**Minye Minye**	**118.37**	**119**	*e*PKPdf	**PKPdf**	**02 49 33.1**	**-0.5**
VRH	**Novokhopyorsk**	**119.11**	**323**	*e*PKIKP	**PKPdf**	**02 49 30.7**	**-3.0**
VRH				*e*		02 50 53.3	
VRH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GNI	**Garni**	**120.10**	**310**	*i* PKIKP	**PKPdf**	**02 49 34.5**	**-1.7**
ZEI	**Tsey**	**120.14**	**313**	*i* PKIKP	PKiKP	02 49 47.4	+11
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPSR	**Galich'ya Gora**	**120.19**	**325**	*e*PKIKP	**PKPdf**	**02 49 34.0**	**-1.8**
LPSR				*e*		02 51 01.0	
LPSR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
OBN	**Obninsk**	**120.38**	**329**	*e*PKIKP	**PKPdf**	**02 49 35.3**	**-0.7**
OBN				*e*		02 51 02.1	
OBN				*e*PPP	PPP	02 53 37.4	
OBN				pmax	pmax		
	comp=Z,15nm,1.2s						
VSR	**Storozhevoye**	**120.60**	**324**	*e*PKIKP	**PKPdf**	**02 49 33.0**	**-3.6**
VSR				*e*		02 50 59.4	
VSR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KBZ	**Khabaz**	**120.62**	**315**	PKIKP	**PKiKP**	**02 49 37.4**	**+0.5**
KBZ						02 51 05.5	
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	**Khabaz**	**120.62**	**315**	PKP	**PKiKP**	**02 49 37.4**	**+0.5**
	comp=Z,2.6nm,1.1s,baz=127,slow=10,SNR=3.5						
KBZ				PP	**PP**	**02 51 05.5**	**+1.1**
	comp=Z,5.7nm,1.1s,baz=79,slow=11,SNR=3.6						
KIV	**Kislovodsk**	**120.70**	**315**	*e*PKIKP	**PKPdf**	**02 49 35.8**	**-1.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FINES	**FINESS Array B**	**121.44**	**338**	PKP	**PKPdf**	**02 49 34.9**	**-3.0**
	comp=Z,2.8nm,0.8s,baz=20,slow=6.1,SNR=5.4						
SOC	**Sochi**	**122.87**	**315**	*e*PKIKP	**PKPdf**	**02 49 41.0**	**-0.2**
SOC				pmax	pmax		
	comp=Z,19nm,0.7s						
ANN	**Anapa**	**124.03**	**317**	*i* PKIKP	**PKPdf**	**02 49 40.5**	**-2.9**
ANN				*e*		02 56 40.4	
ANN				pmax	pmax		
	comp=Z,36nm,1.3s						
CPUP	**Villa Florida**	**124.56**	**133**	*e*PKPdf	**PKPdf**	**02 49 44.9**	**-0.1**
CPUP	**Villa Florida**	**124.56**	**133**	*e*PKIKP	**PKPdf**	**02 49 44.9**	**-0.1**
CPUP	**Villa Florida**	**124.56**	**133**	PKP	**PKiKP**	**02 49 45.4**	**+0.1**
	comp=Z,8.9nm,1.0s,baz=344,slow=0.7,SNR=10						
BOSA	**Boshof**	**124.77**	**224**	*e*PKPdf	**PKPdf**	**02 49 45.5**	**0.0**
BOSA	**Boshof**	**124.77**	**224**	PKIKP	**PKPdf**	**02 49 44.0**	**-1.6**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOSA	**Boshof**	**124.77**	**224**	PKP	**PKPdf**	**02 49 44.0**	**-1.6**
	comp=Z,4.7nm,0.9s,baz=166,slow=3.2,SNR=5.2						
IZAR	**Zarasai**	**125.00**	**333**	*e*P	**PKPdf**	**02 49 40.3**	**-4.6**
IZAR				IAmb	IAmb	02 49 56.5	
	comp=Z,7.5nm,0.9s						
IDID	**Didziasalis**	**125.05**	**332**	*e*P	**PKPdf**	**02 49 44.8**	**-0.2**
IDID				IAmb	IAmb	02 49 56.5	
	comp=Z,5.8nm,0.9s						
SDV	**Santo Domingo**	**125.12**	**87**	*e*PKPdf	**PKPdf**	**02 49 45.6**	**-1.0**
SDV	**Santo Domingo**	**125.12**	**87**	PKP	**PKPdf**	**02 49 46.2**	**-0.4**
	baz=350,slow=1.7						
ISAL	**Salakas**	**125.17**	**333**	*e*P	**PKPdf**	**02 49 44.2**	**-1.0**
ISAL				IAmb	IAmb	02 50 00.9	
	comp=Z,13nm,1.1s						
IIGN	**Ignalina**	**125.26**	**333**	*e*P	**PKPdf**	**02 49 44.6**	**-0.8**
IIGN				IAmb	IAmb	02 49 57.0	
	comp=Z,12nm,1.2s						
AKASG	**Malin Array Be**	**126.43**	**327**	PKP	**PKPdf**	**02 49 47.0**	**-0.8**
	comp=Z,2.6nm,0.8s,baz=56,slow=2.1,SNR=10.0						
AKASG				PP	**PP**	**02 51 42.3**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=46,slow=6.4,SNR=5.5						
AKBB	**Malin Array Si**	**126.43**	**327**	*e*PKPdf	**PKPdf**	**02 49 46.8**	**-1.0**
AKBB	**Malin Array Si**	**126.43**	**327**	*e*PKIKP	**PKPdf**	**02 49 46.8**	**-1.0**
NB2	**NORSAR Subarra**	**126.43**	**345**	PKPdf	**PKPdf**	**02 49 45.7**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=35,slow=2.0						
NOA	**NORSAR Array B**	**126.43**	**345**	PKP	**PKPdf**	**02 49 44.9**	**-2.7**
	comp=Z,2.3nm,0.9s,baz=34,slow=2.0,SNR=5.6						
KIEV	**Kiev**	**126.44**	**327**	⇑*i*P	**PKiKP**	**02 49 48.3**	**0.0**
KIEV	**Kiev**	**126.44**	**327**	⇑PKIKP	**PKiKP**	**02 49 48.3**	**0.0**
AK11	**Malin Array Si**	**126.47**	**327**	*e*PKPdf	**PKPdf**	**02 49 47.3**	**-0.6**
LBTB	**Lobatse**	**126.75**	**227**	PKP	**PKPdf**	**02 49 48.1**	**-1.3**
	comp=Z,3.0nm,0.8s,baz=170,slow=16,SNR=2.3						
KMBO	**Kilima Mbogo**	**126.79**	**260**	PKP	**PKiKP**	**02 49 50.9**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=198,slow=6.0,SNR=3.9						
BRTR	**Keskin Array B**	**128.43**	**312**	PKP	**PKPdf**	**02 49 51.5**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=202,slow=1.6,SNR=5.8						
BRTR				PP	**PP**	**02 51 57.5**	**+0.4**
	comp=Z,2.7nm,1.0s,baz=92,slow=7.2,SNR=5.4						
ANTO	**Ankara**	**128.99**	**313**	⇑*i*P	**PKPdf**	**02 49 53.0**	**-0.2**
ANTO	**Ankara**	**128.99**	**313**	⇑PKIKP	**PKPdf**	**02 49 53.0**	**-0.2**
LVV	**L'vov**	**129.68**	**328**	*i* PKIKP	**PKPdf**	**02 49 53.6**	**-0.5**
CFR	**Carcaliu**	**129.87**	**321**	⇓*i*P	**PKiKP**	**02 49 55.9**	**+0.6**
CFR	**Carcaliu**	**129.87**	**321**	⇓PKIKP	**PKiKP**	**02 49 55.9**	**+0.6**
LSZ	**Lusaka**	**130.01**	**239**	*e*PKPdf	**PKPdf**	**02 49 55.9**	**+0.1**
LSZ	**Lusaka**	**130.01**	**239**	*e*PKIKP	**PKPdf**	**02 49 55.9**	**+0.1**
LSZ	**Lusaka**	**130.01**	**239**	P	**PKPdf**	**02 49 53.4**	**-2.4**
BIZ	**Bicaz**	**130.18**	**324**	⇓*i*P	**PKiKP**	**02 49 57.1**	**+1.2**
HUMP	**Col San Antoni**	**130.28**	**75**	*e*PKPdf	**PKPdf**	**02 49 56.1**	**0.0**
BUR08	**Bucovina Ar. S**	**130.31**	**325**	*e*PKPdf	**PKiKP**	**02 49 55.9**	**-0.4**
BUR04	**Bucovina Ar. S**	**130.31**	**325**	*e*PKPdf	**PKPdf**	**02 49 55.8**	**+0.3**
BURAR	**Bucovina Array**	**130.31**	**325**	⇑*i*P	**PKiKP**	**02 49 58.3**	**+2.0**
BURAR	**Bucovina Array**	**130.31**	**325**	⇑PKIKP	**PKiKP**	**02 49 58.3**	**+2.0**
MLR	**Muntele Rosu**	**131.04**	**322**	*e*PKPdf	**PKPdf**	**02 49 56.9**	**-0.1**
MLR	**Muntele Rosu**	**131.04**	**322**	⇑*i*P	**PKiKP**	**02 50 00.3**	**+2.4**
MLR	**Muntele Rosu**	**131.04**	**322**	⇑PKIKP	**PKiKP**	**02 50 00.3**	**+2.4**
DOPR	**Dopca**	**131.12**	**323**	⇓*i*P	**PKiKP**	**02 49 59.4**	**+1.5**
UZH	**Uzhgorod**	**131.30**	**328**	*e*PKHKP	PKPpre	02 49 43.6	
MORC	**Moravsky Berou**	**132.91**	**332**	⇑*i*P	**PKiKP**	**02 50 02.7**	**+1.3**
MORC	**Moravsky Berou**	**132.91**	**332**	⇑PKIKP	**PKiKP**	**02 50 02.7**	**+1.3**
MORC	**Moravsky Berou**	**132.91**	**332**	*e*PKP	**PKiKP**	**02 50 02.3**	**+0.9**
MORC				*e*		02 50 12.2	
GZR	**Gura Zlata**	**132.96**	**324**	⇑*i*P	**PKiKP**	**02 50 02.1**	**+0.4**
GZR	**Gura Zlata**	**132.96**	**324**	⇑PKIKP	**PKiKP**	**02 50 02.1**	**+0.4**
PSZ	**Piszkesteto**	**133.00**	**328**	*e*PP	PP	02 52 32.0	+6.0
VYHS	**Vyhne**	**133.16**	**330**	*e*PKIKP	PKiKP	02 50 10.8	+8.9
VYHS				*e*		02 52 28.1	
VYHS	**Vyhne**	**133.16**	**330**	*e*PKP	PKiKP	02 50 10.8	+8.9
VYHS				*e*PP	**PP**	**02 52 28.1**	**+1.2**
BZS	**Buzias**	**133.49**	**325**	⇑*i*P	**PKPdf**	**02 49 59.9**	**-1.5**
BZS	**Buzias**	**133.49**	**325**	⇑PKIKP	**PKPdf**	**02 49 59.9**	**-1.5**
VRAC	**Vranov**	**133.68**	**332**	*e*PKP	**PKiKP**	**02 50 03.8**	**+0.9**
VRAC				*e*		02 50 13.4	
BRG	**Berggiesshubel**	**133.70**	**335**	*e*PKP	**PKiKP**	**02 50 08.8**	**+5.9**
	comp=Z,28nm,1.9s						
BRG				*e*		02 50 13.4	
	comp=Z,22nm,1.5s						
BRG				*e*PP	**PP**	**02 52 33.8**	**+3.7**
	comp=Z,27nm,1.6s						
BRG	**Berggiesshubel**	**133.70**	**335**	*e*PKIKP	**PKiKP**	**02 50 08.8**	**+5.9**
BRG				*e*		02 50 13.4	
BRG				*e*		02 52 33.8	
BRG				pmax	pmax		
	comp=Z,188nm,1.9s						
BRG				pmax	pmax		
	comp=Z,28nm,1.5s						
BRG				pmax	pmax		
	comp=Z,23nm,1.6s						
PTGA	**Pitinga**	**133.72**	**102**	*e*PKPdf	**PKPdf**	**02 50 02.0**	**-0.8**
PTGA	**Pitinga**	**133.72**	**102**	PKP	**PKPdf**	**02 50 01.2**	**-1.6**
	comp=Z,2.3nm,0.5s,baz=226,slow=18,SNR=4.7						
CLL	**Collm**	**133.75**	**336**	*e*PKPdf	**PKPdf**	**02 50 02.0**	**+0.3**
CLL				*e*		02 50 13.0	
CLL				*e*		02 52 14.0	
CLL				*e*(PP)		02 52 23.0	
CLL				*e*		02 52 42.0	
CLL	**Collm**	**133.75**	**336**	*e*PKIKP	**PKPdf**	**02 50 02.0**	**+0.3**
CLL				*e*		02 50 13.0	
CLL				MLR	MLR		
	comp=Z,20µm,19.6s						
KRUC	**Moravsky**	**133.94**	**332**	*e*PKP	**PKiKP**	**02 50 04.0**	**+0.5**
KRUC				*e*		02 50 13.6	
MODS	**Modra-Piesok**	**134.00**	**330**	*e*PKP	PKiKP	02 50 14.6	+11
PRU	**Pruhonice**	**134.11**	**334**	*e*PKPDF	**PKiKP**	**02 50 03.7**	**0.0**
PRU	**Pruhonice**	**134.11**	**334**	*e*PKIKP	**PKiKP**	**02 50 03.7**	**0.0**
VTS	**Vitosha**	**134.22**	**321**	⇑*i*P	**PKiKP**	**02 50 04.1**	**-0.3**
VTS	**Vitosha**	**134.22**	**321**	⇑PKIKP	**PKiKP**	**02 50 04.1**	**-0.3**
MORH	**Mrgy, Hungar**	**134.75**	**327**	*e*PP	PP	02 52 37.0	0.0
NKC	**Novy Kostel**	**134.81**	**335**	*e*PKPDF	**PKiKP**	**02 50 06.8**	**+1.6**
NKC	**Novy Kostel**	**134.81**	**335**	*e*PKIKP	**PKiKP**	**02 50 06.8**	**+1.6**
CONA	**Conrad Observa**	**135.00**	**331**	pPKPdf	**PKiKP**	**02 50 06.7**	**+0.9**
	comp=Z,5.0nm,1.0s						
KHC	**Kasperske Hory**	**135.17**	**334**	*e*PKPDF	**PKiKP**	**02 50 07.1**	**+1.1**
KHC				*e*x	x	02 50 14.2	
KHC	**Kasperske Hory**	**135.17**	**334**	*e*PKIKP	**PKiKP**	**02 50 07.1**	**+1.1**
KHC				*e*		02 50 14.2	
GEC2	**GERESS Array S**	**135.32**	**333**	*e*PKPdf	**PKPdf**	**02 50 05.1**	**+0.2**
GEC2	**GERESS Array S**	**135.32**	**333**	*e*PKIKP	**PKPdf**	**02 50 05.1**	**+0.2**
GERES	**GERESS Array B**	**135.32**	**333**	PKP	**PKPdf**	**02 50 04.6**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=4.1,slow=1.9,SNR=6.7						
GEA0	**GERESS Array S**	**135.33**	**333**	*e*PKPdf	**PKPdf**	**02 50 04.4**	**-0.5**
SKO	**Skopje**	**135.69**	**321**	*i* P	**PKiKP**	**02 50 08.2**	**+0.9**
MOA	**Molln**	**135.80**	**332**	*e*pPKPdf	**PKiKP**	**02 50 07.7**	**+0.4**
	comp=Z,5.0nm,1.3s						
KRUS	**Krusevo**	**136.14**	**320**	*e*P	**PKiKP**	**02 50 11.8**	**+3.5**
TSUM	**Tsumeb**	**136.16**	**227**	PKhKP	PKPpre	02 49 59.4	
	comp=Z,2.8nm,0.9s,baz=180,slow=2.0,SNR=2.5						
PERS	**Pernice**	**136.27**	**330**	*i* PKPdf	**PKiKP**	**02 50 13.1**	**+4.8**
SOKA	**Soboth**	**136.28**	**330**	*e*pPKPdf	**PKiKP**	**02 50 08.7**	**+0.3**
	comp=Z,15nm,1.7s						
SOKA	**Soboth**	**136.28**	**330**	*e*PP	PP	02 52 48.4	+1.7
	comp=Z,15nm,1.7s						
BIA	**Bitola**	**136.28**	**320**	*e*P	PKiKP	02 50 18.2	+10
OBKA	**Obir**	**136.63**	**330**	PP	PP	02 52 54.4	+5.5
	comp=Z,22nm,1.6s						
KBA	**Koelnbreinsper**	**136.79**	**332**	*e*PKPdf	**PKPdf**	**02 50 06.8**	**-0.9**
	comp=Z,7.7nm,0.8s						
KBA	**Koelnbreinsper**	**136.79**	**332**	*e*PP	PP	02 52 52.7	+2.7
	comp=Z,22nm,2.9s						
MEM	**Membach**	**136.87**	**341**	⇑PKiKP	**PKiKP**	**02 50 09.3**	**0.0**
MYKA	**Terra Mystica**	**136.98**	**331**	*e*pPKPdf	**PKiKP**	**02 50 10.2**	**+0.4**
	comp=Z,1.8nm,0.4s						
MYKA	**Terra Mystica**	**136.98**	**331**	PP	PP	02 52 55.2	+4.2
	comp=Z,11nm,1.2s						
VISS	**Visnje**	**136.99**	**329**	*e*PKPdf	**PKiKP**	**02 50 15.4**	**+5.7**
BOJS	**Bojanci**	**136.99**	**329**	*i* PKPdf	**PKiKP**	**02 50 15.1**	**+5.4**
WATA	**Walderalm**	**137.40**	**333**	*e*pPKPdf	**PKiKP**	**02 50 11.0**	**+0.3**
	comp=Z,4.6nm,0.8s						
WATA	**Walderalm**	**137.40**	**333**	*e*PP	PP	02 52 56.1	+2.4
	comp=Z,9.5nm,1.3s						
ABTA	**Abfaltersbach**	**137.42**	**332**	PKiKP	**PKiKP**	**02 50 10.1**	**-0.6**
	comp=Z,1.2nm,0.5s						
WTTA	**Wattenberg**	**137.43**	**333**	*e*P	**PKiKP**	**02 50 11.9**	**+1.1**
	comp=Z,8.6nm,1.0s						
WTTA	**Wattenberg**	**137.43**	**333**	*e*PP	PP	02 52 56.8	+2.9
	comp=Z,10nm,1.1s						
MOTA	**Moosalm**	**137.60**	**334**	*e*pPKPdf	**PKiKP**	**02 50 11.6**	**+0.5**
	comp=Z,7.2nm,0.8s						
MOTA	**Moosalm**	**137.60**	**334**	PP	PP	02 52 57.8	+2.9
	comp=Z,0.2nm,0.3s						
WLF	**Walferdange**	**137.63**	**340**	⇑PKiKP	**PKiKP**	**02 50 11.1**	**+0.2**
SQTA	**Sankt Quirin**	**137.65**	**334**	*e*PKiKP	**PKPdf**	**02 50 09.9**	**+0.7**
	comp=Z,12nm,1.0s						
SQTA	**Sankt Quirin**	**137.65**	**334**	PP	PP	02 52 55.7	+0.6
	comp=Z,12nm,1.3s						
BDFB	**Brasilia**	**137.90**	**128**	*e*PKPdf	**PKPdf**	**02 50 10.3**	**-0.3**
BDFB	**Brasilia**	**137.90**	**128**	PKhKP	PKPpre	02 50 06.0	
	comp=Z,5.6nm,0.9s,baz=92,slow=3.3,SNR=3.8						
FETA	**Feichten**	**138.01**	**334**	*e*pPKPdf	**PKiKP**	**02 50 12.5**	**+0.4**
	comp=Z,11nm,1.3s						
FETA	**Feichten**	**138.01**	**334**	PP	PP	02 52 59.5	+2.0
	comp=Z,8.6nm,1.2s						
DAVA	**Damuels**	**138.17**	**335**	*e*P	**PKiKP**	**02 50 13.4**	**+1.1**
	comp=Z,8.3nm,0.8s						
DAVA	**Damuels**	**138.17**	**335**	PP	PP	02 53 02.4	+3.9
	comp=Z,27nm,1.4s						
KEST	**Kesra**	**146.95**	**322**	*e*PKPdf	**PKPdf**	**02 50 26.9**	**+0.8**
KEST	**Kesra**	**146.95**	**322**	PKPbc	**PKPdf**	**02 50 27.0**	**+0.9**
	comp=Z,25nm,0.8s,baz=301,slow=2.5,SNR=16						
PCAB	**Cabril**	**148.76**	**350**	*e*PKPab	**PKPab**	**02 50 35.8**	**-0.5**
POLO	**Lamas de Olo**	**149.04**	**350**	*e*PKPab	**PKiKP**	**02 50 34.1**	**-0.7**
POLO	**Lamas de Olo**	**149.04**	**350**	*e*PKPab	**PKPab**	**02 50 39.7**	**+2.1**
MVO	**Moncorvo**	**149.10**	**348**	*e*PKPab	**PKPab**	**02 50 40.0**	**+2.2**
PVIS	**Viseu**	**149.70**	**349**	*e*PKPab	**PKiKP**	**02 50 36.3**	**+0.2**
ES19	**SONSECA Array**	**149.73**	**343**	*e*PKPdf	**PKPdf**	**02 50 31.8**	**+1.3**
ESDC	**Sonseca Array**	**149.77**	**343**	PKPbc	**PKPbc**	**02 50 34.0**	**-1.3**
	comp=Z,2.1nm,0.6s,baz=19,slow=4.1,SNR=6.3						
ESDC				PP	PP	02 54 15.7	+8.1
	comp=Z,12nm,1.3s,baz=26,slow=5.4,SNR=7.0						
MTE	**Manteigas**	**149.94**	**349**	*e*PKPab	**PKiKP**	**02 50 37.1**	**+0.5**
PAB	**San Pablo**	**150.00**	**344**	*e*PKPdf	**PKPdf**	**02 50 31.9**	**+1.0**
PMRV	**Marv??o**	**150.85**	**348**	*e*PKPab	**PKiKP**	**02 50 38.9**	**+0.5**
PTOM	**Tomar**	**150.86**	**350**	*e*PKPab	**PKPbc**	**02 50 36.8**	**-1.0**
PMTG	**Montargil**	**151.36**	**349**	*e*PKPab	**PKiKP**	**02 50 40.1**	**+0.6**
PESTR	**Estremoz**	**151.43**	**348**	*e*PKPdf	**PKPdf**	**02 50 34.0**	**+0.9**
TORD	**Torodi Ar. Bea**	**163.63**	**279**	PKP	**PKPdf**	**02 50 48.3**	**-0.5**
	comp=Z,1.7nm,1.0s,baz=105,slow=3.8,SNR=5.0						
TORD				PKPab	**PKPab**	**02 51 39.2**	**-1.5**
	comp=Z,4.1nm,1.2s,baz=353,slow=10,SNR=4.5						
DBIC	**Dimbokro**	**169.21**	**248**	PKP	**PKPdf**	**02 50 53.5**	**+0.3**
	comp=Z,9.3nm,1.3s,baz=126,slow=17,SNR=4.9						

TAP 06 02:32:30.1, 23°.16N×120°.97E, h6^{km}, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.05**	**60**	P	Pg	02 32 32.2	+0.4
	baz=65						
ELDTW				*i* S	Sg	02 32 33.4	+0.4
	baz=65						
STYT	**Tauyuan**	**0.19**	**270**	P	Pg	02 32 34.4	+0.3
	baz=270						
STYT				S	Sg	02 32 37.3	+0.6
	baz=270						
TPUB	**Ta-pu**	**0.34**	**294**	*e*P	Pn	02 32 43.2	+1.5
	65nm,1.1s						
TPUB	**Ta-pu**	**0.34**	**294**	*e*S	Sb	02 32 42.8	-1.5
	baz=303						
SLGT	**Liugui**	**0.34**	**240**	*e*P	Pg	02 32 37.7	+0.9
	baz=232						
TWG	**Pinlang**	**0.35**	**164**	*e*P	Pb	02 32 38.1	-0.7
	182nm,1.3s						
TWG	**Pinlang**	**0.35**	**164**	*e*P	Pg	02 32 37.8	+0.8
	baz=155						
TWG				S	Sg	02 32 43.2	+1.5
	baz=155						
TWF1	**Yuli**	**0.36**	**58**	*e*P	Pb	02 32 38.1	-0.8
	baz=58						
TWF1				*e*S	Sg	02 32 42.3	+0.5
	baz=58						
TWGBT	**Beinan**	**0.36**	**163**	*e*P	Pb	02 32 38.2	-0.7
	baz=155						
TWGBT				*e*S	Sg	02 32 43.3	+1.4
	baz=155						
YULB	**Yu-li**	**0.38**	**53**	*e*P	Pn	02 32 43.1	+0.9
	35nm,1.0s						
YULB	**Yu-li**	**0.38**	**53**	*e*P	Pg	02 32 38.0	+0.5
	baz=52						
YULB				*e*S	Sg	02 32 42.8	+0.3
	baz=52						
CHN4	**Tsaushan**	**0.39**	**299**	P	Pb	02 32 38.9	-0.6
	baz=307						
CHN4				S	Sb	02 32 45.5	-0.3
	baz=307						
CHN1	**Nanshi**	**0.41**	**273**	*e*P	Pb	02 32 40.1	+0.4
	baz=274						
CHN1				S	Sb	02 32 46.0	-0.1
	baz=274						
EHY	**Hungye**	**0.47**	**44**	*e*P	Pg	02 32 39.6	+0.3
	baz=43						
EHY				*e*S	Sg	02 32 45.8	+0.3
	baz=43						

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*IDC **06** 02:35:55.5±1.1, 10°.93S×165°.40E, h0^{km}, mb4.2/6, mb1 4.5/7, mb1mx4.0/47, mbtmp4.2/7, ML4.4/1, Error ellipse: s-maj=50.7km s-min=21.7km az=139.0*

*ISCJB **06** 02:35:58.5±0.9, 11°.1S±0°.1×165°.4E±0°.2, h30^{km}, mb4.2/5, Error ellipse: s-maj=25.1km s-min=16.8km az=34.6*

ISC 06 02:35:60.0±0.9**, 11°.0S**±0°.1×**165°.4E**±0°.2**, h30^{km}, n8, σ0^{s}.98**/8**, mb4.1**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.03**	**175**	Pn	**Pn**	**02 38 35.9**	**0.0**
	2.7nm,0.3s,baz=8.0,slow=12,SNR=3.9						
CTA	**Charters Tower**	**20.54**	**242**	P	**P**	**02 40 37.0**	**+0.8**
	2.8nm,0.6s,baz=94,slow=15,SNR=2.0						
WRA	**Warramunga Arr**	**31.20**	**250**	P	**P**	**02 42 16.9**	**0.0**
	21nm,1.0s,baz=79,slow=8.8,SNR=6.4						
ASAR	**Alice Springs**	**32.53**	**243**	P	**P**	**02 42 28.2**	**-0.3**
	2.3nm,0.8s,baz=80,slow=28,SNR=3.6						
ILAR	**Eielson Array**	**83.59**	**19**	P	**P**	**02 48 24.6**	**-0.4**
	1.0nm,0.6s,baz=234,slow=5.1,SNR=8.0						
NVAR	**Mina Array Bea**	**86.25**	**50**	P	**P**	**02 48 39.9**	**+0.7**
	0.8nm,0.8s,baz=236,slow=6.4,SNR=3.5						
YKA	**Yellowknife Ar**	**95.09**	**27**	P	**P**	**02 49 20.3**	**+0.5**
	0.4nm,0.7s,baz=261,slow=4.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**163.95**	**279**	PKP	**PKPdf**	**02 55 59.5**	**-1.8**
	3.3nm,1.2s,baz=128,slow=2.4,SNR=3.9						

IDC 06 02:42:07.6±1.6**, 11°.69S×164°.81E, h0^{km}, mb4.0**/4**, mb1 4.2**/5**, mb1mx3.8**/45**, mbtmp4.0**/5**, ML3.9**/1**, Error ellipse: s-maj=47.3km s-min=29.6km az=116.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.44**	**172**	Pn	Pn	02 44 40.2	+1.4
	1.0nm,0.3s,baz=300,slow=20,SNR=3.0						
WRA	**Warramunga Arr**	**30.40**	**251**	P	P	02 48 21.4	-0.5
	11nm,0.9s,baz=81,slow=8.6,SNR=4.7						
ASAR	**Alice Springs**	**31.69**	**244**	P	P	02 48 32.2	-1.0
	0.6nm,0.7s,baz=67,slow=9.9,SNR=3.2						
SONM	**Songino Array**	**78.65**	**324**	P	P	02 54 13.5	+1.9

	0.6nm,0.8s,baz=139,slow=7.7,SNR=3.6						
ILAR	Eielson Array	84.41	19	P	P	02 54 39.8	-1.8
	0.3nm,0.6s,baz=233,slow=5.3,SNR=4.6						

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*IDC **06** 02:44:20.7±0.4, 11°.24S×165°.26E, h0^{km}, mb4.6/27, mb1 4.7/29, mb1mx4.6/47, mbtmp4.6/29, ML4.9/2, Error ellipse: s-maj=15.6km s-min=13.3km az=98.0*

*NEIC **06** 02:44:21.6±0.2, 11°.27S×165°.16E, h10^{km}, mb4.9/49, Error ellipse: s-maj=5.4km s-min=5.0km az=105.0*

*ISCJB **06** 02:44:24.0±0.2, 11°.32S±0°.03×165°.20E±0°.03, h34^{km}, mb4.8/86, Error ellipse: s-maj=4.8km s-min=4.3km az=158.2*

ISC 06 02:44:25.6±0.3, **11°.29S**±0°.06×**165°.25E**±0°.06, **h34**^{km}, **n189**, σ**1**^{s}.**26**/195, **mb4.9**/86, **2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.53	289	*e*Pn	Pn	02 45 42.8	-2.8
HNR				Sn	Sn	02 46 47.0	-1.0
HNR	Honiara	5.53	289	Pn	Pn	02 45 46.0	+0.4
	93nm,0.3s,baz=145,slow=7.7,SNR=8.1						
HNR				Sn	Sn	02 46 47.0	-1.0
	16nm,0.3s,baz=195,slow=20,SNR=4.2						
DZM	Mont Dzumac	10.79	174	*e*Pn	Pn	02 46 56.9	-0.8
DZM	Mont Dzumac	10.79	174	Pn	Pn	02 46 57.2	-0.6
	3.8nm,0.3s,baz=162,slow=20,SNR=12						
ONTNC	Ouen Toro	11.02	174	*e*Pn	Pn	02 46 59.7	-1.2
OUENC	Ouen Island, N	11.17	172	*e*Pn	Pn	02 47 02.0	-1.0
PINNC	Pines Island,	11.46	170	*e*Pn	Pn	02 47 05.1	-1.8
MSVF	Nonsavu	13.95	119	*e*Pn	Pn	02 47 40.1	-1.0
EIDS	Eidsvold	19.39	222	P	Pn	02 48 51.0	+0.9
	baz=20,SNR=6.9						
CTA	Charters Tower	20.25	242	P	Pn	02 48 59.1	-1.3
	33nm,1.1s,baz=74,slow=13,SNR=7.6						
CTAO	Charters Tower	20.25	242	*e*P	P	02 48 54.6	-3.6
	81nm,1.3s						
MTSU	Mount Surprise	21.35	249	P	P	02 49 11.1	+1.0
	baz=21,SNR=27						
RMQ	Roma	21.68	224	P	P	02 49 14.8	+1.2
	baz=22,SNR=17						
COEN	Coen	21.70	261	P	P	02 49 14.9	+1.0
	baz=22,SNR=11						
ARMA	Armidale	22.86	212	P	P	02 49 27.5	+1.3
	baz=23,SNR=7.1						
QLP	Quilpie	24.97	230	P	P	02 49 46.7	+0.6
	baz=25,SNR=3.7						
QIS	Mount Isa	26.29	246	P	P	02 49 58.5	+0.3
	baz=26,SNR=6.7						
CMSA	Cobar Meteorol	27.07	219	P	P	02 50 06.1	+1.1
	baz=27,SNR=19						
URZ	Urewera	28.88	160	*e*P	P	02 50 20.9	-0.2
	20nm,0.9s						
URZ	Urewera	28.88	160	P	P	02 50 22.8	+1.7
	10nm,0.5s,baz=32,slow=5.6,SNR=13						
BKZ	Black Stump Fm	29.51	162	*e*P	P	02 50 26.4	-0.5
	34nm,0.9s						
BKZ	Black Stump Fm	29.51	162	P	P	02 50 26.7	-0.1
NMHZ	Naumai	29.55	162	P	P	02 50 29.2	+2.0
BHHZ	Black Hill Sta	29.69	163	P	P	02 50 29.3	+0.9
KWHZ	Kaweka Forest	29.73	162	P	P	02 50 30.6	+1.8
STKA	Stephens Creek	29.93	223	P	P	02 50 31.0	+0.5
	baz=30,SNR=27						
STKA	Stephens Creek	29.93	223	*e*P	P	02 50 29.2	-1.4
	3.3nm,0.8s						
STKA				PcP	PcP	02 53 33.1	+0.3
STKA	Stephens Creek	29.93	223	P	P	02 50 30.8	+0.2
	14nm,0.7s,baz=42,slow=8.7,SNR=32						
STKA				PcP	PcP	02 53 33.1	+0.3
	3.7nm,0.7s,baz=36,slow=5.3,SNR=4.4						
QRZ	Quartz Range	30.11	169	P	P	02 50 43.3	+11
TSZ	Takapari Road	30.19	164	P	P	02 50 34.4	+1.7
KAHZ	Kahuranaki	30.21	162	P	P	02 50 34.1	+1.1
DUWZ	D'Urville Isla	30.38	167	P	P	02 50 39.3	+4.8
DVHZ	Dannevirke	30.47	163	P	P	02 50 35.3	+0.1
MRZ	Mangatainoka R	30.64	164	P	P	02 50 36.3	-0.4
BFZ	Birch Farm	30.84	164	P	P	02 50 39.0	+0.4
TCW	Tory Channel	30.85	167	P	P	02 50 42.5	+4.0
HOWZ	Holdsworth Sta	30.85	165	P	P	02 50 39.8	+1.2
WRAB	Tennant Creek	30.93	250	*e*P	P	02 50 37.2	-2.3
	32nm,0.8s						
WB2	Warramunga Arr	30.93	250	*e*P	P	02 50 37.5	-2.1
CAW	Cannon Point	30.93	165	P	P	02 50 39.2	-0.2
WRA	Warramunga Arr	30.94	250	P	P	02 50 38.7	-1.0
	23nm,0.7s,baz=84,slow=8.9,SNR=59						
WRA				PcP	PcP	02 53 36.0	+0.3
	3.5nm,0.7s,baz=74,slow=3.1,SNR=10						
MTW	Mount Morrison	31.09	165	P	P	02 50 40.7	0.0
THZ	Tophouse	31.09	169	*e*P	P	02 50 40.8	0.0
	63nm,1.2s						
PAWZ	Paruwai Farm	31.28	165	P	P	02 50 41.7	-0.7
TOO	Toolangi	31.61	211	P	P	02 50 46.7	+1.3
	baz=32,SNR=3.9						
LTZ	Lake Taylor	31.97	170	*e*P	P	02 50 48.5	0.0
	17nm,0.7s						
KDU	Kakadu	32.08	264	P	P	02 50 47.9	-1.8
	baz=32,SNR=15						
AS01	Alice Springs	32.20	243	*e*P	P	02 50 48.3	-2.5
AS31	Alice Springs	32.25	243	*e*P	P	02 50 48.7	-2.4
	5.6nm,0.9s						
ASAR	Alice Springs	32.25	243	P	P	02 50 49.9	-1.3
	14nm,0.8s,baz=73,slow=9.4,SNR=50						
ASAR				PcP	PcP	02 53 40.0	+0.7
	4.7nm,0.7s,baz=70,slow=2.9,SNR=17						
HTT	Hallett	32.66	223	P	P	02 50 54.6	-0.1
	baz=33,SNR=12						
RPZ	Rata Peaks	32.70	172	P	P	02 50 55.2	+0.4
	12nm,0.7s,baz=228,slow=4.3,SNR=6.4						
BBOO	Buckleboo	34.31	227	P	P	02 51 08.9	0.0
	baz=34,SNR=13						
KNRA	Kununurra	35.72	259	P	P	02 51 21.6	+0.3
	baz=36,SNR=8.6						
WRKA	Warakurna	37.54	244	P	P	02 51 35.7	-1.1
	baz=38,SNR=8.7						
FITZ	Fitzroy Crossi	38.84	255	P	P	02 51 47.5	-0.3
	baz=39,SNR=11						
BATI	Baumata	40.84	267	P	P	02 52 05.1	+0.6
	20nm,0.5s,baz=112,slow=5.4,SNR=4.5						
MMRI	Maumere	42.42	270	*e*P	P	02 52 15.1	-2.3
	78nm,1.5s						
MEEK	Meekatharra	46.40	244	P	P	02 52 50.4	+1.2
	baz=46,SNR=7.5						
JAGI	Jajag, Banyuwa	50.37	268	*e*P	P	02 53 17.3	-2.5
	29nm,0.9s						
MJAR	Matsushiro Arr	53.96	333	P	P	02 53 44.8	-1.4
	5.1nm,0.9s,baz=170,slow=9.2,SNR=7.1						
UGM	Wanagama	54.00	268	*e*P	P	02 53 45.5	-1.4
	68nm,0.9s						
JNU	Nakatsue	54.99	325	P	P	02 53 52.6	-1.2
	10nm,0.9s,baz=138,slow=8.9,SNR=3.6						
ASAJ	Asahikawa	58.86	341	P	P	02 54 22.0	+1.1
	2.5nm,0.4s,baz=231,slow=17,SNR=4.0						
KSRS	Korea Array	59.80	326	P	P	02 54 28.8	+1.2
	1.6nm,0.8s,baz=146,slow=7.1,SNR=4.5						
KSAR	Wonju Array Be	59.81	326	P	P	02 54 28.8	+1.1
NJ2	Nanjing	61.85	316	*e*P	P	02 54 42.8	+1.2
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
USRK	Ussuriysk Ar.	62.95	334	P	P	02 54 49.0	+0.4
	comp=Z,1.0nm,0.5s,baz=133,slow=8.5,SNR=4.6						
PETK	Petropavlovsk-	64.46	355	P	P	02 54 59.6	+1.1
	comp=Z,4.7nm,0.8s,baz=170,slow=11,SNR=3.6						
CN2	Changchun	65.70	329	*e*P	P	02 55 07.1	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CASY	Casey	65.98	201	*e*P	P	02 55 07.9	-0.3
	comp=Z,29nm,1.4s						
SKNT	Sakolnakorn	66.74	294	P	P	02 55 14.6	+0.6
	comp=Z,12nm,1.4s						
KLR	Kul'dur	67.08	337	P	P	02 55 16.3	+0.8
	comp=Z,2.5nm,1.0s,baz=161,slow=3.9,SNR=4.0						
ENH	Enshi	67.67	309	*e*P	P	02 55 17.9	-1.8
	comp=Z,28nm,1.2s						
NONG	Nongkai	67.87	295	P	P	02 55 22.2	+1.1
	comp=Z,0.5nm,1.3s						
GYA	Guiyang	68.15	304⇑	*i*P	P	02 55 26.0	+3.1
GYA				pP	sP	02 55 36.2	+1.5
GYA				PP	PP	02 57 57.0	+3.4
GYA				S	S	03 04 21.6	+0.6
GYA				SKS	SKiKP	03 05 16.2	+0.3
GYA	Guiyang	68.15	304	SS	SS	03 08 45.8	+1.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.6s						
GYA				LR	LR		
	comp=N,490nm,18.6s						
GYA				LR	LR		
	comp=E,450nm,18.3s						
GYA				LR	LR		
	comp=Z,470nm,19.0s						
XAN	Xi'an	69.92	313	P	P	02 55 33.5	-0.1
XAN				pP	pP	02 55 39.6	-2.7
XAN				PcP	PcP	02 55 57.1	+1.2
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				LR	LR		
	comp=N,11μm,18.4s						
XAN	Xi'an	69.92	313	*e*P	P	02 55 32.6	-1.0
	comp=N,6.9nm,0.8s						
UTTA	Uttaradit	70.08	294	P	P	02 55 36.5	+1.7
	comp=N,3.3nm,1.0s						
SRDT	SRDT	70.31	290	P	P	02 55 38.2	+1.9
	comp=N,21nm,1.6s						
UTHA	Uthaitani	70.39	291	P	P	02 55 38.7	+2.0
	comp=N,4.5nm,0.9s						
SUKH	Sukhothai	70.83	293	P	P	02 55 41.5	+2.1
	comp=N,3.8nm,1.1s						
KMI	Kunming	70.83	302	P	P	02 55 41.3	+1.7
KMI				pP	sP	02 55 52.0	+0.6
KMI				sP	PcP	02 55 58.5	-1.6
KMI				pmax	pmax		
	comp=Z,26nm,1.4s						
HHC	Hu-ho-hao-te	71.70	320	*e*P	P	02 55 50.9	+6.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CM01	Chiang Mai Arr	71.73	294	*e*P	P	02 55 43.1	-1.8
CMAR	Chiang Mai Arr	71.76	294	P	P	02 55 46.0	+0.9
	comp=Z,5.5nm,0.7s,baz=123,slow=4.4,SNR=23						
CMMT	Chiang Mai	71.87	294	P	P	02 55 46.9	+1.2
CHTO	Chiang Mai	71.88	294	*e*P	P	02 55 43.6	-2.1
	comp=Z,7.9nm,1.1s						
CHTO	Chiang Mai	71.88	294	P	P	02 55 46.9	+1.2
	comp=Z,86nm,1.6s						
CD2	Chengdu	72.36	308	*e*P	P	02 55 47.5	-1.0
LZH	Lanzhou	74.56	312	*e*P	P	02 56 02.8	+1.4
LZH				pP	sP	02 56 14.1	+0.7
LZH				sP	pwP	02 56 17.7	-0.3
LZH				PP	PP	02 58 51.5	+2.9
LZH				pmax	pmax		
	comp=Z,32nm,1.5s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=N,260nm,16.5s						
LZH				LR	LR		
	comp=E,280nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
ULN	Ulaanbaatar	78.21	324	*e*P	P	02 56 20.9	-1.0
	comp=Z,15nm,1.5s						
SONM	Songino Array	78.57	324	P	P	02 56 24.5	+0.7
	comp=Z,2.1nm,0.8s,baz=131,slow=5.9,SNR=9.3						
SONA1	Songino Array	78.57	324	*e*P	P	02 56 22.0	-1.9
QSPA	South Pole Qui	78.72	180	*e*P	P	02 56 24.4	0.0
	comp=Z,14nm,1.0s						
GTA	Gaotai	78.87	314	⇓P	P	02 56 26.6	+0.9
GTA				pP	PcP	02 56 33.1	-1.2
GTA				sP	sP	02 56 36.1	-1.6
GTA				pmax	pmax		
	comp=Z,12nm,1.6s						
GTA				LR	LR		
	comp=N,14μm,17.8s						
GTA				LR	LR		
	comp=E,9μm,17.8s						
GTA				LR	LR		
	comp=Z,16μm,18.7s						
BILL	Bilibino	79.12	0	*e*P	P	02 56 21.5	-4.7
	comp=Z,24nm,1.5s						
BRDH	Bariadhala	79.56	296	P	P	02 56 31.2	+1.6
	comp=Z,12nm,0.3s,baz=96,slow=9.1,SNR=4.8						
SHL	Shillong	80.20	299	*e*P	P	02 56 31.5	-1.7
	comp=Z,34nm,1.3s						
TLY	Talaya	82.05	326	P	P	02 56 43.0	+0.7
	comp=Z,0.8nm,0.7s,baz=145,slow=1.9,SNR=3.6						
IM3	Indian Mountai	82.79	16	*e*P	P	02 56 44.9	-1.0
MDM	Murphy Dome	83.61	18	*e*P	P	02 56 48.4	-1.7
	comp=Z,9.9nm,1.0s						
HDA	Harding Lake	83.63	19	*e*P	P	02 56 49.0	-1.3
	comp=Z,17nm,0.9s						
IL1	Eielson Array	83.90	19	*e*P	P	02 56 50.5	-1.1
ILAR	Eielson Array	83.90	19	P	P	02 56 51.3	-0.3
	comp=Z,4.2nm,0.6s,baz=239,slow=5.1,SNR=42						
ILB	Eielson Array	83.90	19	*e*P	P	02 56 50.5	-1.1
DOT	Dot Lake	84.07	20	*e*P	P	02 56 52.0	-0.5
	comp=Z,11nm,1.0s						
SCRK	Sand Creek	84.31	20	*e*P	P	02 56 53.7	-0.2
	comp=Z,17nm,1.4s						
ODAN	Odare	84.44	299	*e*P	P	02 56 56.1	+0.6
RAMN	Ramite	85.14	299	*e*P	P	02 56 59.2	+0.1
JIRN	Jiri	85.68	299	*e*P	P	02 57 02.3	+0.4
DAWY	Dawson	85.96	21	*e*P	P	02 57 01.9	-0.1
	comp=Z,6.0nm,0.9s						
GUN	Gumba	86.01	299	*e*P	P	02 57 03.5	0.0
	comp=Z,50nm,1.1s						
PALK	Pallekele	86.10	278	P	P	02 57 05.9	+2.1
	comp=Z,11nm,0.7s,baz=115,slow=8.6,SNR=6.1						
TIXI	Tiksi	86.23	349	*e*P	P	02 57 02.6	-0.5
	comp=Z,5.8nm,0.5s						
PKI	Pulchoki	86.33	299	*e*P	P	02 57 05.0	0.0
	comp=Z,73nm,1.3s						
PKIN	Phulchoki	86.34	299	*e*P	P	02 57 05.3	+0.3
NV01	Mina Array Sit	86.55	50	*e*P	P	02 57 04.7	-1.0
NVAR	Mina Array Bea	86.55	50	P	P	02 57 05.8	0.0
	comp=Z,3.0nm,0.9s,baz=235,slow=8.1,SNR=11						
DMN	Daman	86.59	299	*e*P	P	02 57 06.4	+0.1
	comp=Z,88nm,1.2s						
NV11	Mina Array Sit	86.66	50	*e*P	P	02 57 05.7	-0.5
	comp=Z,0.7nm,1.3s						
KVN	Kaiserville	86.89	49	*e*P	P	02 57 07.1	-0.3
	comp=Z,2.7nm,1.1s						
J08A	Circle Bar Ran	87.90	45	*e*P	P	02 57 12.7	+0.7
	comp=Z,2.6nm,0.9s						
KOLN	Koldanda	87.93	299	*e*P	P	02 57 11.9	-0.7
DANN	Dangsing	87.93	299	*e*P	P	02 57 12.0	-0.7
LDFC	Landfair	88.09	54	*e*P	P	02 57 13.3	+0.2
	comp=Z,24nm,1.3s						
Y12C	Blythe	88.21	55	*e*P	P	02 57 13.9	+0.3
	comp=Z,14nm,1.3s						
SHPR	Sheep Range	88.42	52	*e*P	P	02 57 14.9	+0.1
	comp=Z,15nm,1.4s						
PYUN	Piuthan	88.53	299	*e*P	P	02 57 14.4	-1.1
	comp=Z,24nm,0.9s						
R11A	Troy Canyon, C	88.58	51	*e*P	P	02 57 15.1	-0.4
	comp=Z,7.1nm,1.4s						
WMQ	Urumqi	88.92	315	*e*P	P	02 57 18.0	+1.2
WMQ				pP	pwP	02 57 31.7	-1.3
WMQ				pmax	pmax		
	comp=Z,23nm,1.5s						
W13A	Hualapai Mount	89.06	54	*e*P	P	02 57 17.5	-0.3
	comp=Z,14nm,1.4s						
Y14A	Wickenburg	89.49	55	*e*P	P	02 57 20.2	+0.6
	comp=Z,11nm,1.5s						
PSUT	Pine Spring	89.94	51	*e*P	P	02 57 22.3	+0.4
	comp=Z,6.9nm,1.3s						
LCMT	Little Creek M	90.04	52	*e*P	P	02 57 22.6	+0.3
	comp=Z,4.3nm,1.0s						
CCUT	Cedar City	90.08	52	*e*P	P	02 57 22.9	+0.3
	comp=Z,4.9nm,1.2s						
KNB	Kanab	90.36	52	*e*P	P	02 57 24.0	+0.1
	comp=Z,9.8nm,1.3s						
U15A	North Rim	90.64	53	*e*P	P	02 57 25.5	+0.2
	comp=Z,7.3nm,1.0s						
HLID	Hailey	90.80	46	*e*P	P	02 57 26.1	+0.4
	comp=Z,1.3nm,1.0s						
X16A	Lo Mia Camp, P	90.86	55	*e*P	P	02 57 26.4	+0.2
	comp=Z,6.0nm,1.0s						
PKCU	Pink Cliffs	90.86	52	*e*P	P	02 57 26.4	+0.1
	comp=Z,19nm,1.3s						
TUC	Tucson	90.93	57	*e*P	P	02 57 26.6	+0.2
	comp=Z,5.9nm,1.1s						
MTPU	Mount Pierson	91.10	52	*e*P	P	02 57 27.4	-0.1
	comp=Z,6.0nm,1.1s						
BGU	Big Grassy Mou	91.14	49	*e*P	P	02 57 27.3	-0.1
	comp=Z,3.8nm,1.1s						
WUAZ	Wupatki	91.16	54	*e*P	P	02 57 27.5	-0.1
MSU	Marysvale	91.21	51	*e*P	P	02 57 27.7	-0.1
SYO	Syowa Base	91.41	197⇑	*e*pP	P	02 57 30.0	+2.2
HVU	Hansel Valley	91.53	48	*e*P	P	02 57 28.3	-0.9
	comp=Z,7.8nm,1.4s						
NLU	North Lily Min	91.62	50	*e*P	P	02 57 29.6	-0.1
	comp=Z,5.3nm,1.2s						
X18A	Snowflake	92.08	55	*e*P	P	02 57 31.9	0.0
	comp=Z,3.3nm,0.8s						
MK01	Makanchi Array	93.35	317	*e*P	P	02 57 35.4	-1.9
MK31	Makanchi Array	93.36	317	*e*P	P	02 57 35.7	-1.6
MKAR	Makanchi Array	93.36	317	*e*P	P	02 57 35.7	-1.6
	comp=Z,46nm,1.0s						
MKAR	Makanchi Array	93.36	317	P	P	02 57 37.6	+0.3
	comp=Z,6.2nm,0.8s,baz=98,slow=6.5,SNR=24						
ZAA0	Zalesovo Array	93.47	324	*e*P	P	02 57 35.4	-2.1
	comp=Z,9.1nm,1.3s						
ZALV	Zalesovo Beam	93.47	324	*e*P	P	02 57 35.3	-2.2
ZALV	Zalesovo Beam	93.47	324	P	P	02 57 36.3	-1.3
	comp=Z,4.1nm,0.9s,baz=108,slow=4.8,SNR=12						
PDAR	Pinedale Array	94.08	47	P	P	02 57 41.4	+0.4
	comp=Z,0.3nm,0.7s,baz=234,slow=3.0,SNR=3.2						
YKA	Yellowknife Ar	95.41	27	P	P	02 57 44.7	-1.5
	comp=Z,0.7nm,0.5s,baz=258,slow=4.7,SNR=16						
YKB5	Yellowknife Ar	95.41	27	*e*P	P	02 57 44.5	-1.8
TXAR	Lajitas Array	96.37	61	P	P	02 57 51.7	+0.1
	comp=Z,0.4nm,0.7s,baz=236,slow=3.7,SNR=5.7						
KURK	Kurchatov	96.51	320	P	P	02 57 50.6	-0.9
KURBB	Kurchatov Arra	96.55	320	P	P	02 57 50.6	-1.1
	comp=Z,0.8nm,0.8s,baz=94,slow=4.5,SNR=4.4						
SNAA	Sanae	96.84	184	P	P	02 57 52.7	-0.2
VNA3	Neumayer Olymp	97.59	182	P	P	02 57 55.9	-0.3
VNA2	Neumayer--Watz	97.83	182	P	Pdif	02 57 57.8	+0.5
	baz=184,slow=6.0						
BVAR	Borovoye Array	101.84	322	P	Pdif	02 58 14.9	-0.5
	comp=Z,0.9nm,0.9s,baz=101,slow=7.7,SNR=4.0						
ARCES	ARCESS Array B	116.44	345	PKP	PKiKP	03 03 05.5	+0.2
	comp=Z,3.2nm,0.8s,baz=79,slow=2.0,SNR=15						
FINES	FINESS Array B	121.81	338	PKP	PKPdf	03 03 15.4	-0.4
	comp=Z,1.7nm,0.7s,baz=88,slow=1.7,SNR=8.2						
CPUP	Villa Florida	124.22	133	PKP	PKiKP	03 03 22.9	+1.1
	comp=Z,1.0nm,0.6s,baz=5.4,slow=3.2,SNR=3.9						
BOSA	Boshof	124.61	223	PKP	PKPdf	03 03 22.1	-0.3
	comp=Z,2.5nm,0.6s,baz=107,slow=1.8,SNR=9.5						
SDV	Santo Domingo	125.00	87	PKP	PKiKP	03 03 24.4	+0.6
	comp=Z,9.7nm,0.7s,baz=135,slow=20,SNR=2.6						
SIV	San Ignacio	126.75	120	PKP	PKiKP	03 03 27.7	+0.6
	comp=Z,2.3nm,0.8s,baz=221,slow=20,SNR=3.6						
AKASG	Malin Array Be	126.80	327	PKP	PKPdf	03 03 25.0	-0.6
	comp=Z,2.0nm,0.9s,baz=51,slow=0.8,SNR=5.6						
NB2	NORSAR Subarra	126.81	345	PKPdf	PKiKP	03 03 26.2	+0.2
	comp=Z,0.4nm,0.7s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.81	345	PKP	PKiKP	03 03 26.2	+0.2
	comp=Z,2.1nm,0.9s,baz=33,slow=1.9,SNR=5.1						
BRTR	Keskin Array B	128.76	312	PKP	PKiKP	03 03 31.6	+1.0
	comp=Z,1.2nm,1.0s,baz=11,slow=1.3,SNR=4.2						
SJG	San Juan	129.95	76	PKP	PKPdf	03 03 32.6	0.0
	comp=Z,5.1nm,0.3s,baz=64,slow=2.5,SNR=3.6						
VYHS	Vyhne	133.53	329	*e*PKP	PKiKP	03 03 41.1	+1.3
VYHS	Vyhne	133.53	329	*e*PDIFF	Pdif	03 00 38.4	+1.9
CLL	Collm	134.13	336	*e*PKPdf	PKiKP	03 03 42.0	+1.1
GERES	GERESS Array B	135.70	333	PKP	PKiKP	03 03 43.6	-0.7
	comp=Z,1.2nm,0.8s,baz=90,slow=1.3,SNR=5.3						
KEST	Kesra	147.31	322	*e*PKPdf	PKPdf	03 04 04.5	+0.7
KEST	Kesra	147.31	322	PKPbc	PKPbc	03 04 06.7	+0.5
	comp=Z,21nm,0.8s,baz=80,slow=0.9,SNR=18						
ES19	SONSECA Array	150.11	343	*e*PKPdf	PKPdf	03 04 10.3	+2.1
ESDC	Sonseca Array	150.15	343	PKPbc	PKiKP	03 04 13.9	-0.2
	comp=Z,3.2nm,0.9s,baz=12,slow=2.8,SNR=9.6						
TOA0	Torodi Ar. Sit	163.82	278	*e*PKPdf	PKPdf	03 04 26.1	0.0
TORD	Torodi Ar. Bea	163.82	278	PKP	PKPdf	03 04 26.9	+0.7
	comp=Z,0.9nm,0.7s,baz=344,slow=4.1,SNR=4.4						
TORD				PKPab	PKPab	03 05 19.0	+0.3
	comp=Z,3.6nm,1.0s,baz=46,slow=5.2,SNR=8.0						

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*IDC **06** 02:44:45.6±6.6, 7°.76N×127°.62E, h0^{km}, mb4.1/7, mb1 4.1/7, mb1mx3.7/50, mbtmp4.1/7, Error ellipse: s-maj=145.9km s-min=138.2km az=20.0*

*ISCJB **06** 02:44:49.4±2.0, 8°.14N±0°.06×127°.50E±0°.07, h18^{km}±12^{km}, mb4.1/7, Error ellipse: s-maj=11.9km s-min=9.1km az=20.2*

*MAN **06** 02:44:56.6, 8°.04N×127°.10E, h20^{km}, MS3.2*

ISC 06 02:44:49.5±2.4, **8°.01N**±0°.07×**127°.38E**±0°.09, **h10**^{km}±15^{km}, **n13**, σ**1**^{s}.**03**/19, **mb4.3**/7, **1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	1.03	280⇑	*e*P	Pn	02 45 10.0	+0.1
BIPH				*e*S	Sb	02 45 22.1	-0.8
MATI	Mati	1.54	227	*e*P	Pg	02 45 20.3	+1.2
MATI				*e*S	Sg	02 45 38.1	-1.0
BUTP	Butuan	1.98	299	*e*P	Pn	02 45 23.3	+0.1
BUTP				*e*S	Sn	02 45 48.0	-0.1
BUKP	Musuan	2.30	267	*e*P	Pb	02 45 31.0	-0.2
BUKP				*e*S	Sb	02 45 59.4	-0.4
DDMP	Don Marcelino,	2.52	221	*e*P	Pb	02 45 34.6	-0.2
DDMP				*e*S	Sb	02 46 05.0	-0.9
MSLP	Maasin	3.26	310	*e*P	Pb	02 45 46.3	-1.3
MSLP				*e*S	Sn	02 46 22.6	+2.9
SONM	Songino Array	43.51	339	P	P	02 52 53.8	+0.5
	0.8nm,0.8s,baz=150,slow=7.2,SNR=4.6						
MKAR	Makanchi Array	54.48	323	P	P	02 54 17.9	+0.5
	2.0nm,0.5s,baz=123,slow=8.1,SNR=9.2						
ZALV	Zalesovo Beam	57.12	332	P	P	02 54 36.0	-0.1
	1.4nm,0.6s,baz=125,slow=6.3,SNR=6.8						
KURBB	Kurchatov Arra	58.54	326	P	P	02 54 46.4	+0.2
	2.0nm,0.7s,baz=127,slow=6.4,SNR=14						
BVAR	Borovoye Array	64.14	326	P	P	02 55 23.1	-0.9
	0.8nm,0.8s,baz=117,slow=8.5,SNR=4.1						
NRIK	Noril'sk	66.46	346	P	P	02 55 38.2	-0.5
	1.6nm,0.4s,baz=146,slow=7.3,SNR=3.6						
FINES	FINESS Array B	88.39	332	P	P	02 57 41.4	-0.2
	2.5nm,1.0s,baz=29,slow=3.2,SNR=5.1						

IDC 06 02:47:09.2±1.4, **10°.91S**×**165°.10E**, **h0**^{km}, **mb4.0**/4, **mb1 4.2**/5, **mb1mx3.8**/44, **mbtmp4.1**/5, **ML3.8**/1, **Error ellipse: s-maj=43.8km s-min=33.7km az=118.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.18	174	Pn	Pn	02 49 50.3	-0.1
	0.7nm,0.3s,baz=143,slow=20,SNR=2.3						
CTA	Charters Tower	20.31	241	P	P	02 51 47.1	+0.1
	6.9nm,0.9s,baz=72,slow=14,SNR=3.7						
SONM	Songino Array	78.18	324	P	P	02 59 10.7	+0.1
	1.4nm,0.9s,baz=141,slow=7.1,SNR=4.5						
NVAR	Mina Array Bea	86.42	50	P	P	02 59 54.2	0.0
	0.3nm,0.6s,baz=245,slow=5.9,SNR=2.7						
MKAR	Makanchi Array	92.99	317	P	P	03 00 24.5	-0.2
	1.3nm,0.7s,baz=92,slow=6.1,SNR=5.5						

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*ISCJB **06** 02:48:14.3±2.8, 11°.34S±0°.06×165°.11E±0°.05, h2^{km}±17^{km}, mb4.7/37, Error ellipse: s-maj=9.7km s-min=7.6km az=17.4*

*IDC **06** 02:48:15.1±0.6, 11°.24S×165°.23E, h0^{km}, mb4.6/15, mb1 4.7/17, mb1mx4.4/46, mbtmp4.6/17, ML4.7/2, Error ellipse: s-maj=20.3km s-min=17.1km az=132.0*

*NEIC **06** 02:48:17.0±0.2, 11°.26S×165°.12E, h10^{km}, mb4.9/27, Error ellipse: s-maj=7.5km s-min=6.6km az=153.0*

ISC 06 02:48:15.9±1.0, **11°.28S**±0°.08×**165°.18E**±0°.07, **h4**^{km}±5^{km}, **n70**, σ**1**^{s}.**14**/78, **mb4.8**/37, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.47	289	Pn	Pn	02 49 39.3	+1.1
	49nm,0.3s,baz=187,slow=19,SNR=3.7						
HNR				Sn	Sn	02 50 43.6	+2.0
	42nm,0.3s,baz=18,slow=19,SNR=3.4						
DZM	Mont Dzumac	10.80	174	Pn	Pn	02 50 50.7	-0.8
	2.5nm,0.3s,baz=306,slow=14,SNR=9.6						
MSVF	Nonsavu	14.01	119	*e*Pn	Pn	02 51 37.7	+2.4
CTA	Charters Tower	20.20	242	P	Pn	02 52 53.4	-0.3
	15nm,0.9s,baz=62,slow=14,SNR=3.2						
CTAO	Charters Tower	20.20	242	*e*P	P	02 52 51.1	-0.8
	20nm,0.9s						
URZ	Urewera	28.91	160	*e*P	P	02 54 16.5	+0.6
	17nm,0.9s						
URZ				*e*S	S	02 59 05.0	-2.0
URZ	Urewera	28.91	160	P	P	02 54 17.2	+1.2
	13nm,0.9s,baz=9.8,slow=3.7,SNR=3.4						
BKZ	Black Stump Fm	29.54	162	*e*P	P	02 54 22.3	+0.7
	22nm,0.9s						
STKA	Stephens Creek	29.89	223	*e*P	P	02 54 25.7	+0.9
	1.4nm,0.7s						
STKA	Stephens Creek	29.89	223	P	P	02 54 25.7	+0.9
	5.9nm,0.6s,baz=42,slow=8.6,SNR=8.3						
BFZ	Birch Farm	30.87	163	*e*P	P	02 54 33.5	+0.2

	47nm,1.1s						
WRAB	**Tennant Creek**	**30.87**	**250**	eP	**P**	**02 54 34.2**	**+0.5**
	34nm,1.3s						
WB2	**Warramunga Arr**	**30.87**	**250**	eP	**P**	**02 54 33.4**	**-0.2**
WR1	**Warramunga Arr**	**30.88**	**250**	eP	**P**	**02 54 33.5**	**-0.2**
	43nm,1.3s						
WR1				ePcP	**PcP**	**02 57 30.8**	**+0.1**
WRA	**Warramunga Arr**	**30.89**	**250**	P	**P**	**02 54 33.5**	**-0.2**
	11nm,0.7s,baz=82,slow=9.1,SNR=14						
WRA				PcP	**PcP**	**02 57 30.8**	**+0.1**
	1.1nm,0.6s,baz=70,slow=3.3,SNR=5.4						
THZ	**Tophouse**	**31.11**	**169**	eP	**P**	**02 54 37.7**	**+2.2**
	38nm,1.4s						
AS01	**Alice Springs**	**32.15**	**243**	eP	**P**	**02 54 43.8**	**-1.2**
AS01				ePcP	**PcP**	**02 57 33.6**	**-0.5**
AS31	**Alice Springs**	**32.19**	**243**	eP	**P**	**02 54 44.6**	**-0.6**
	5.2nm,1.1s						
AS31				ePcP	**PcP**	**02 57 33.6**	**-0.6**
ASAR	**Alice Springs**	**32.20**	**243**	P	**P**	**02 54 44.6**	**-0.6**
	9.5nm,0.9s,baz=62,slow=10,SNR=15						
ASAR				PcP	**PcP**	**02 57 33.6**	**-0.6**
	1.9nm,0.7s,baz=76,slow=2.9,SNR=8.9						
BATI	**Baumata**	**40.78**	**267**	P	**P**	**02 55 58.6**	**-0.1**
	22nm,0.5s,baz=95,slow=3.4,SNR=4.1						
MBWA	**Marble Bar**	**44.60**	**251**	eP	**P**	**02 56 28.4**	**-1.2**
	20nm,0.8s						
MJAR	**Matsushiro Arr**	**53.92**	**333**	P	**P**	**02 57 39.9**	**-0.8**
	2.1nm,0.7s,baz=175,slow=7.6,SNR=4.3						
MAJO	**Matsushiro**	**53.93**	**333**	eP	**P**	**02 57 39.9**	**-0.8**
UGM	**Wanagama**	**53.94**	**268**	eP	**P**	**02 57 40.3**	**-1.0**
	55nm,0.9s						
ENH	**Enshi**	**67.62**	**309**	eP	**P**	**02 59 14.6**	**+0.4**
	17nm,1.0s						
CM01	**Chiang Mai Arr**	**71.67**	**294**	eP	**P**	**02 59 40.4**	**+1.0**
CM31	**Chiang Mai Arr**	**71.70**	**294**	eP	**P**	**02 59 40.7**	**+1.1**
	14nm,1.0s						
CMAR	**Chiang Mai Arr**	**71.70**	**294**	P	**P**	**02 59 40.7**	**+1.1**
	2.2nm,0.3s,baz=116,slow=4.3,SNR=12						
SONA0	**Songino Array**	**78.53**	**324**	eP	**P**	**03 00 19.1**	**+0.5**
SONM	**Songino Array**	**78.53**	**324**	P	**P**	**03 00 19.1**	**+0.5**
	1.5nm,0.9s,baz=140,slow=6.2,SNR=4.0						
QSPA	**South Pole Qui**	**78.73**	**180**	eP	**P**	**03 00 20.4**	**+1.0**
	18nm,1.5s						
HDA	**Harding Lake**	**83.64**	**19**	eP	**P**	**03 00 45.2**	**-0.1**
	10nm,0.9s						
IL1	**Eielson Array**	**83.91**	**19**	eP	**P**	**03 00 46.0**	**-0.6**
ILAR	**Eielson Array**	**83.91**	**19**	P	**P**	**03 00 46.3**	**-0.3**
	2.1nm,0.7s,baz=241,slow=4.9,SNR=13						
ILB	**Eielson Array**	**83.91**	**19**	eP	**P**	**03 00 46.4**	**-0.3**
	3.9nm,1.0s						
ORV	**Oroville**	**84.58**	**48**	eP	**P**	**03 00 51.1**	**+0.5**
	1.2nm,0.8s						
WAKR	**Walker**	**85.77**	**50**	eP	**P**	**03 00 58.1**	**+1.2**
	9.4nm,1.3s						
WHY	**Whitehorse**	**85.82**	**25**	eP	**P**	**03 00 56.4**	**-0.1**
	8.0nm,0.8s						
PALK	**Pallekele**	**86.03**	**278**	eP	**P**	**03 00 59.7**	**+1.2**
	17nm,1.0s						
PALK	**Pallekele**	**86.03**	**278**	P	**P**	**03 00 59.7**	**+1.2**
	12nm,1.0s,baz=111,slow=1.6,SNR=3.6						
NV01	**Mina Array Sit**	**86.59**	**50**	eP	**P**	**03 01 00.6**	**-0.4**
NVAR	**Mina Array Bea**	**86.59**	**50**	P	**P**	**03 01 01.0**	**0.0**
	1.9nm,0.9s,baz=241,slow=6.7,SNR=5.8						
Y12C	**Blythe**	**88.26**	**55**	eP	**P**	**03 01 10.0**	**+1.2**
	10nm,1.3s						
W13A	**Hualapai Mount**	**89.11**	**54**	eP	**P**	**03 01 12.5**	**-0.6**
	2.2nm,1.0s						
LCMT	**Little Creek M**	**90.08**	**52**	eP	**P**	**03 01 18.7**	**+1.2**
	6.5nm,1.4s						
KNB	**Kanab**	**90.41**	**52**	eP	**P**	**03 01 20.9**	**+1.8**
	9.4nm,1.4s						
U15A	**North Rim**	**90.69**	**53**	eP	**P**	**03 01 21.8**	**+1.3**
	4.1nm,0.9s						
HVU	**Hansel Valley**	**91.57**	**48**	eP	**P**	**03 01 27.4**	**+3.1**
	7.1nm,1.2s						
MPU	**Maple Canyon**	**92.01**	**50**	eP	**P**	**03 01 28.8**	**+2.3**
	9.7nm,1.5s						
MK01	**Makanchi Array**	**93.30**	**317**	eP	**P**	**03 01 30.2**	**-1.9**
MK31	**Makanchi Array**	**93.31**	**317**	eP	**P**	**03 01 32.3**	**+0.2**
	4.3nm,1.0s						
MK32	**Makanchi Array**	**93.31**	**317**	eP	**P**	**03 01 32.1**	**0.0**
MKAR	**Makanchi Array**	**93.31**	**317**	P	**P**	**03 01 32.1**	**0.0**
	3.5nm,0.8s,baz=96,slow=6.2,SNR=8.7						
ZALV	**Zalesovo Beam**	**93.42**	**324**	eP	**P**	**03 01 31.3**	**-1.1**
ZALV	**Zalesovo Beam**	**93.42**	**324**	P	**P**	**03 01 31.6**	**-0.8**
	2.1nm,0.8s,baz=108,slow=4.8,SNR=8.3						
ZAA1	**Zalesovo Array**	**93.42**	**324**	eP	**P**	**03 01 31.6**	**-0.8**
YKA	**Yellowknife Ar**	**95.43**	**27**	P	**P**	**03 01 39.8**	**-1.6**
	0.6nm,0.8s,baz=253,slow=4.5,SNR=6.7						
ARA0	**ARCESS Array S**	**116.42**	**345**	ePKPdf	**PKPdf**	**03 06 59.5**	**-0.9**
ARCES	**ARCESS Array B**	**116.42**	**345**	PKP	**PKPdf**	**03 06 59.5**	**-0.9**
	3.6nm,1.1s,baz=68,slow=2.3,SNR=6.8						
FIA0	**FINESS Array S**	**121.78**	**338**	ePKPdf	**PKPdf**	**03 07 10.2**	**-0.6**
FINES	**FINESS Array B**	**121.78**	**338**	PKP	**PKPdf**	**03 07 10.2**	**-0.6**
	1.5nm,0.8s,baz=225,slow=2.2,SNR=6.3						
AKASG	**Malin Array Be**	**126.75**	**327**	PKP	**PKPdf**	**03 07 20.3**	**-0.4**
	0.5nm,0.4s,baz=63,slow=2.3,SNR=4.0						
NB2	**NORSAR Subarra**	**126.78**	**345**	PKPdf	**PKPdf**	**03 07 17.9**	**-2.7**
	comp=Z,0.3nm,0.6s,baz=31,slow=1.8						
NB200	**NORSAR Array S**	**126.78**	**345**	ePKPdf	**PKPdf**	**03 07 20.8**	**+0.2**
NOA	**NORSAR Array B**	**126.78**	**345**	PKP	**PKPdf**	**03 07 20.8**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=329,slow=2.6,SNR=3.6						
KEST	**Kesra**	**147.26**	**322**	PKPbc	**PKPbc**	**03 08 00.8**	**-0.3**
	comp=Z,8.9nm,0.8s,baz=254,slow=3.6,SNR=5.9						
ES19	**SONSECA Array**	**150.08**	**343**	ePKPbc	**PKPbc**	**03 08 08.7**	**+0.4**
ESDC	**Sonseca Array**	**150.12**	**343**	PKPbc	**PKiKP**	**03 08 08.9**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=29,slow=3.4,SNR=5.1						
TORD	**Torodi Ar. Bea**	**163.75**	**278**	PKP	**PKPdf**	**03 08 18.9**	**-2.4**
	comp=Z,0.7nm,0.9s,baz=276,slow=2.5,SNR=3.4						
TORD				PKPab	**sPKPab**	**03 09 12.0**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=90,slow=5.9,SNR=5.4						
TOA1	**Torodi Ar. Sit**	**163.76**	**278**	ePKPdf	**PKPdf**	**03 08 18.9**	**-2.4**
TOA1				ePKPab	**sPKPab**	**03 09 12.0**	**-0.7**

PRU 06 02:48:29.6±0.0, 49°.86N×18°.57E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.28**	**265**	ePG	Pg	02 48 35.2	+0.4
OKC				eSG	Sg	02 48 39.1	+0.7
VYHS	**Vyhne**	**1.38**	**173**	ePN	Pg	02 48 54.8	-1.2
VYHS				eSN	Sb	02 49 14.2	-0.2
DPC	**Dobruska-Polom**	**1.53**	**290**	ePG	Pn	02 48 57.7	-0.5
DPC				eSG	Sg	02 49 18.4	-0.3

IDC 06 02:52:19.0±1.8, 10°.98S×165°.60E, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.7/42, mbtmp4.0/4, ML4.0/1, Error ellipse: s-maj=54.7km s-min=33.1km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.06**	**176**	Pn	Pn	02 54 58.6	0.0
	1.1nm,0.3s,baz=37,slow=20,SNR=3.1						
WRA	**Warramunga Arr**	**31.37**	**250**	P	P	02 58 42.5	+0.7
	2.8nm,0.9s,baz=78,slow=7.8,SNR=6.5						
ASAR	**Alice Springs**	**32.70**	**243**	P	P	02 58 52.6	-0.8
	1.1nm,0.7s,baz=66,slow=11,SNR=4.3						
ILAR	**Eielson Array**	**83.50**	**19**	P	P	03 04 48.4	0.0
	0.5nm,0.7s,baz=238,slow=5.5,SNR=4.7						

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*IDC **06** 02:52:47.9±1.7, 10°.71S×165°.49E, h0km, mb4.1/4, mb1 4.5/6, mb1mx4.0/40, mbtmp4.4/6, ML4.7/2, Error ellipse: s-maj=31.5km s-min=28.8km az=125.0*

*ISCJB **06** 02:52:50.6±1.4, 10°.75S±0°.10×165°.5E±0°.1, h31km, mb4.1/3, Error ellipse: s-maj=19.1km s-min=9.2km az=140.3*

ISC 06 02:52:52.5±1.5, 10°.7S±0°.1×165°.5E±0°.1, h31km, n6, σ1s.02/8, mb4.2/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.62**	**282**	Pn	**Pn**	**02 54 14.0**	**0.0**
	51nm,0.3s,baz=25,slow=1.5,SNR=5.6						
HNR				Sn	**Sn**	**02 55 18.2**	**+0.7**
	baz=135,slow=19,SNR=1.4						
DZM	**Mont Dzumac**	**11.36**	**176**	Pn	**Pn**	**02 55 32.0**	**-0.7**
	2.8nm,0.3s,baz=13,slow=22,SNR=5.8						
DZM				Sn	**Sn**	**02 57 40.1**	**+1.4**
	0.8nm,0.3s,baz=92,slow=17,SNR=2.6						
CTA	**Charters Tower**	**20.77**	**241**	P	**P**	**02 57 31.3**	**+0.2**
	8.7nm,0.9s,baz=73,slow=14,SNR=3.8						
WRA	**Warramunga Arr**	**31.39**	**249**	P	**P**	**02 59 10.3**	**-0.6**
	5.6nm,1.2s,baz=81,slow=9.2,SNR=4.3						
ASAR	**Alice Springs**	**32.75**	**243**	P	**P**	**02 59 21.7**	**-1.2**
	2.2nm,0.7s,baz=64,slow=10,SNR=11						
ILAR	**Eielson Array**	**83.25**	**19**	P	**P**	**03 05 16.2**	**+0.6**
	1.0nm,0.8s,baz=233,slow=5.1,SNR=4.8						

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*IDC **06** 02:54:21.3±1.0, 1°.85N×75°.98W, h0km, mb3.5/5, mb1 3.8/10, mb1mx3.7/35, mbtmp3.8/10, ML3.4/5, Error ellipse: s-maj=24.8km s-min=15.6km az=95.0*

*ISCJB **06** 02:54:23.1±1.0, 1°.96N±0°.03×75°.89W±0°.03, h6km±7km, mb3.5/5, Error ellipse: s-maj=5.9km s-min=4.2km az=142.3*

*RSNC **06** 02:54:25.6±1.3, 2°.02N×76°.03W, h0km±6km, ML4.0, Mw4.2*

ISC 06 02:54:24.4±1.1, 1°.95N±0°.03×76°.00W±0°.03, h24km±10km, n41, σ2s.11/54, mb3.5/5, 4C-4D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCON	**Cinco Dias**	**0.55**	**313**	⇓iP	**Pb**	**02 54 34.9**	**-0.9**
PCON				eS	**Sb**	**02 54 43.1**	**-0.3**
SOTA	**Rioblanco**	**0.64**	**286**	⇑iP	**Pb**	**02 54 36.9**	**-0.4**
	comp=Z,17μm,0.9s						
SOTA				eS	**Sb**	**02 54 46.0**	**0.0**
SOTA				i		02 54 48.2	
	comp=Z,17μm,0.9s						
MARP	**Paez Belalcaza**	**0.89**	**3**	⇓iP	**Pb**	**02 54 39.8**	**-1.6**
	comp=Z,7μm,0.5s						
MARP				eS	**Sb**	**02 54 51.1**	**-1.8**
MARP				i		02 54 51.6	
	comp=Z,7μm,0.5s						
POPC	**Popayan, Colom**	**0.90**	**311**	⇓iP	**Pb**	**02 54 40.9**	**-0.6**
POPC				eS	**Sb**	**02 54 53.3**	**+0.2**
BETC	**Betania**	**0.91**	**37**	⇑iP	**Pb**	**02 54 41.3**	**-0.3**
BETC				eS	**Sb**	**02 54 54.8**	**+1.4**
BETC				i		02 54 56.0	
	comp=Z,656nm,0.3s						
CRUC	**La Cruz**	**1.03**	**248**	⇓iP	**Pn**	**02 54 43.9**	**+0.2**
CPAS2	**Pasto**	**1.45**	**240**	eP	**Pb**	**02 54 52.7**	**+1.7**
CPAS2	**Pasto**	**1.45**	**240**	eS	**Sb**	**02 55 12.8**	**+3.6**
CPAS2				IAML		02 55 17.5	
	comp=Z,7μm,0.5s						
CPAS1	**Pasto**	**1.53**	**240**	eP	**Pb**	**02 54 52.9**	**+0.6**
GCUF	**Volcan Galeras**	**1.53**	**242**	⇑iP	**Pb**	**02 54 52.9**	**+0.5**
GCUF				eS	**Sb**	**02 55 13.8**	**+2.2**
YOTC	**Yotoco, Valle**	**2.05**	**350**	eP	**Pn**	**02 54 59.2**	**+1.7**
YOTC				eS	**Sn**	**02 55 25.6**	**+3.3**
YOTC				i		02 55 29.9	
	comp=Z,660nm,0.5s						
CMBC	**Cumbal**	**2.09**	**241**	eP	**Pb**	**02 55 02.9**	**+0.9**
PTLC	**Puerto Leguiza**	**2.14**	**146**	eP	**Pb**	**02 55 04.3**	**+1.7**
PTLC				i		02 55 47.7	
	comp=Z,3μm,0.5s						
MALC	**Bahia Malaga**	**2.44**	**327**	eP	**Pb**	**02 55 06.2**	**-1.6**
MALC				i		02 55 54.3	
	comp=Z,471nm,0.6s						
ANIL	**Santa Ana**	**2.59**	**13**	eP	**Pn**	**02 55 08.2**	**+3.0**
ANIL				eS	**Sb**	**02 55 43.2**	**+1.2**
ANIL				i		02 55 49.6	
	comp=Z,1μm,0.4s						
TUMC	**Tumaco**	**2.73**	**267**	eP	**Pb**	**02 55 11.0**	**-1.6**
PLMC	**San Jos del P**	**2.95**	**354**	eP	**Pn**	**02 55 13.2**	**+3.4**
PLMC				i		02 56 11.0	
	comp=Z,312nm,0.6s						
OTAV	**Otavalo**	**2.99**	**235**	eP	**Pb**	**02 55 14.6**	**-2.7**
VILC	**Villavicencio,**	**3.14**	**47**	⇑iP	**Pn**	**02 55 15.3**	**+2.7**
ROSC	**El Rosal**	**3.32**	**30**	eP	**Pn**	**02 55 16.6**	**+1.4**
ROSC				i		02 56 20.9	
	comp=Z,444nm,0.5s						
ROSC	**El Rosal**	**3.32**	**30**	Pn	**Pn**	**02 55 16.0**	**+0.7**
	comp=Z,15nm,0.3s,baz=26,slow=3.5,SNR=30						
ROSC				Pg	**Pb**	**02 55 24.0**	**+1.1**
	comp=Z,29nm,0.3s,baz=323,slow=20,SNR=45						
ROSC				Lg	Lg	02 56 06.8	
	comp=Z,70nm,0.3s,baz=90,slow=20,SNR=3.1						
GUVC	**San Jose del G**	**3.42**	**80**	eP	**Pn**	**02 55 17.7**	**+1.5**
CHIC	**Chingaza**	**3.49**	**40**	eP	**Pn**	**02 55 19.8**	**+2.1**
CHIC				i		02 56 23.8	
	comp=Z,499nm,0.4s						
CTAB	**Cerro Tablazo,**	**3.52**	**30**	eP	**Pn**	**02 55 21.7**	**+3.6**
HELC	**Santa Helena**	**4.24**	**6**	eP	**Pn**	**02 55 30.5**	**+2.6**
PTBC	**PUERTO BERRIO,**	**4.81**	**19**	eP	**Pn**	**02 55 35.8**	**+0.4**
PTBC				i		02 56 55.6	
	comp=Z,96nm,0.6s						
RUSC	**La Rusia**	**4.87**	**37**	eP	**Pn**	**02 55 37.7**	**+0.9**
BARC	**Barichara**	**5.39**	**31**	eP	**Pn**	**02 55 44.0**	**+0.3**
BRRC	**Barranca, Sant**	**5.60**	**24**	i P	**Pn**	**02 55 46.3**	**0.0**
ZARC	**Zaragoza, Cauc**	**5.62**	**12**	eP	**Pn**	**02 55 48.8**	**+2.3**
ZARC				i		02 57 21.2	
	comp=Z,62nm,0.5s						
UREC	**San Jos de Ur**	**5.78**	**5**	eP	**Pn**	**02 55 51.2**	**+2.4**
SDV	**Santo Domingo**	**8.71**	**38**	Pn	**Pn**	**02 56 29.0**	**-0.2**
	comp=Z,5.0nm,0.3s,baz=232,slow=9.8,SNR=27						
SDV				Sn	**Sn**	**02 58 04.9**	**-2.0**
	comp=Z,4.5nm,0.3s,baz=48,slow=17,SNR=3.7						
SDV				Lg	Lg	02 58 60.0	
	comp=Z,5.2nm,0.3s,baz=49,slow=5.5,SNR=3.3						
ATAH	**Atahualpa**	**9.34**	**195**	Pn	**Pn**	**02 56 36.0**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=95,slow=11,SNR=2.9						
ATAH				Sn	**Sn**	**02 58 22.1**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=121,slow=18,SNR=2.4						
NNA	**Nana**	**13.88**	**183**	Pn	**Pn**	**02 57 38.4**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=351,slow=9.5,SNR=2.4						
NNA				Sn	**Sn**	**03 00 04.9**	**-8.3**
	comp=Z,0.8nm,0.3s,baz=264,slow=9.2,SNR=1.8						
PTGA	**Pitinga**	**16.25**	**99**	Pn	**P**	**02 58 13.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=318,slow=19,SNR=2.4						
PTGA				Sn	**Sn**	**03 01 09.7**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=80,slow=11,SNR=2.0						
PTGA				Lg	Lg	03 02 48.6	
	comp=Z,2.4nm,0.3s,baz=159,slow=24,SNR=6.7						
LPAZ	**La Paz**	**19.72**	**157**	P	**P**	**02 58 53.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=2.6						
LPAZ				Lg	Lg	03 04 37.1	
	comp=Z,0.2nm,0.3s,baz=0.0,slow=25,SNR=4.0						
SIV	**San Ignacio**	**23.14**	**141**	P	**P**	**02 59 28.2**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=297,slow=14,SNR=3.4						
SIV				Lg	Lg	03 06 25.4	
	comp=Z,28nm,1.1s,baz=279,slow=20,SNR=4.9						
TXAR	**Lajitas Array**	**37.87**	**319**	P	**P**	**03 01 39.9**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=132,slow=7.8,SNR=5.8						
YKA	**Yellowknife Ar**	**66.88**	**342**	P	**P**	**03 05 16.8**	**+2.5**
	comp=Z,0.3nm,0.5s,baz=137,slow=6.0,SNR=3.9						
DBIC	**Dimbokro**	**71.05**	**84**	P	**P**	**03 05 42.6**	**+1.4**
	comp=Z,1.1nm,0.6s,baz=246,slow=6.6,SNR=2.4						
TORD	**Torodi Ar. Bea**	**77.57**	**77**	P	**P**	**03 06 18.9**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=287,slow=5.0,SNR=2.3						

IDC 06 02:56:09.5±2.0, 10°.64S×165°.34E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.6/39, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=55.9km s-min=36.0km az=123.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.42**	**175**	Pn	Pn	02 58 53.9	-0.2
	1.3nm,0.3s,baz=47,slow=16,SNR=3.6						
WRA	**Warramunga Arr**	**31.25**	**249**	P	P	03 02 31.6	+0.3
	0.4nm,0.5s,baz=78,slow=8.5,SNR=2.3						
ASAR	**Alice Springs**	**32.62**	**243**	P	P	03 02 43.0	-0.3
	0.7nm,0.5s,baz=67,slow=10,SNR=3.3						
ILAR	**Eielson Array**	**83.25**	**19**	P	P	03 08 37.7	0.0
	0.2nm,0.7s,baz=240,slow=4.8,SNR=1.5						

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*IDC **06** 02:56:31.9±1.4, 10°.95S×165°.27E, h0km, mb3.9/9, mb1 4.1/9, mb1mx4.0/38, mbtmp3.9/9, Error ellipse: s-maj=63.8km s-min=20.5km az=142.0*

*ISCJB **06** 02:56:34.2±1.4, 11°.2S±0°.4×165°.3E±0°.3, h30km, mb3.9/8, Error ellipse: s-maj=65.2km s-min=16.8km az=142.4*

ISC 06 02:56:36.3±1.4, 11°.0S±0°.4×165°.3E±0°.3, h30km, n10, σ1s.24/10, mb3.9/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**20.39**	**241**	P	**P**	**03 01 09.3**	**-1.6**
	2.2nm,0.7s,baz=57,slow=17,SNR=2.6						
WRA	**Warramunga Arr**	**31.05**	**250**	P	**P**	**03 02 52.6**	**+0.8**
	0.9nm,0.7s,baz=81,slow=9.0,SNR=4.7						
ASAR	**Alice Springs**	**32.38**	**243**	P	**P**	**03 03 04.3**	**+0.7**
	1.2nm,0.6s,baz=65,slow=10,SNR=7.3						
FITZ	**Fitzroy Crossi**	**38.92**	**255**	P	**P**	**03 03 59.4**	**-0.4**
	1.5nm,0.7s,baz=85,slow=6.8,SNR=3.1						
SONM	**Songino Array**	**78.35**	**324**	P	**P**	**03 08 35.0**	**+1.1**
	0.4nm,0.6s,baz=136,slow=6.6,SNR=3.5						
ILAR	**Eielson Array**	**83.62**	**19**	P	**P**	**03 09 01.7**	**+0.2**
	1.1nm,0.8s,baz=237,slow=5.1,SNR=10						
NVAR	**Mina Array Bea**	**86.36**	**50**	P	**P**	**03 09 16.7**	**+0.5**
	0.5nm,0.6s,baz=226,slow=7.6,SNR=4.0						
MKAR	**Makanchi Array**	**93.16**	**317**	P	**P**	**03 09 47.2**	**-0.5**
	0.8nm,0.7s,baz=91,slow=6.6,SNR=5.9						
YKA	**Yellowknife Ar**	**95.16**	**27**	P	**P**	**03 09 54.5**	**-1.9**
	0.3nm,0.6s,baz=259,slow=4.6,SNR=5.1						
BOSA	**Boshof**	**124.82**	**224**	PKP	**PKiKP**	**03 15 35.8**	**+1.3**
	1.5nm,0.9s,baz=161,slow=8.6,SNR=4.0						

IDC 06 02:57:17.6±2.8, 11°.29S×164°.55E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.8/37, mbtmp4.0/5, Error ellipse: s-maj=98.4km s-min=29.5km az=133.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**30.30**	**250**	P	P	03 03 30.5	-0.5
	1.0nm,0.5s,baz=80,slow=9.3,SNR=7.1						
ASAR	**Alice Springs**	**31.63**	**243**	P	P	03 03 42.9	+0.2
	1.2nm,0.7s,baz=66,slow=10,SNR=3.5						
SONM	**Songino Array**	**78.17**	**324**	P	P	03 09 19.3	+0.3
	0.4nm,0.6s,baz=145,slow=5.3,SNR=3.1						
ILAR	**Eielson Array**	**84.12**	**19**	P	P	03 09 49.9	-0.3
	1.1nm,1.0s,baz=240,slow=5.4,SNR=3.2						
MKAR	**Makanchi Array**	**92.89**	**317**	P	P	03 10 32.8	+0.2
	1.2nm,0.7s,baz=98,slow=6.3,SNR=7.3						

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*ISCJB **06** 02:57:38.5±0.1, 10°.71S±0°.02×165°.00E±0°.03, h10km, mb5.0/168, Error ellipse: s-maj=3.8km s-min=3.3km az=37.1*

*IDC **06** 02:57:38.6±0.4, 10°.71S×165°.03E, h0km, mb4.9/29, mb1 5.0/31, mb1mx5.0/39, mbtmp5.0/31, ML5.4/2, Error ellipse: s-maj=14.6km s-min=11.1km az=97.0*

*NEIC **06** 02:57:39.6±0.1, 10°.71S×165°.04E, h10km, mb5.1/122, Error ellipse: s-maj=3.1km s-min=2.7km az=135.0*

*MOS **06** 02:57:40.8±0.8, 10°.75S×164°.97E, h28km, mb5.4/49, Error ellipse: s-maj=8.8km s-min=7.8km az=118.9*

ISC 06 02:57:39.7±0.3, 10°.65S±0°.05×165°.07E±0°.05, h10km, n436, σ1s.14/429, mb5.1/168, 6C-5D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.19**	**283**	ePn	**Pn**	**02 58 58.1**	**+0.6**
HNR	**Honiara**	**5.19**	**283**	eP	**Pn**	**02 58 58.1**	**+0.6**
HNR	**Honiara**	**5.19**	**283**	Pn	**Pn**	**02 58 58.2**	**+0.7**
	229nm,0.3s,baz=203,slow=4.1,SNR=24						
MARNC	**Mare, Loyalty**	**11.14**	**166**	ePn	**Pn**	**03 00 18.5**	**-0.7**
DZM	**Mont Dzumac**	**11.43**	**174**	ePn	**Pn**	**03 00 23.2**	**-0.1**
DZM	**Mont Dzumac**	**11.43**	**174**	Pn	**Pn**	**03 00 23.5**	**+0.2**
	18nm,0.3s,baz=96,slow=16,SNR=25						
ONTNC	**Ouen Toro**	**11.67**	**174**	ePn	**Pn**	**03 00 26.3**	**-0.1**
PINNC	**Pines Island,**	**12.11**	**169**	ePn	**Pn**	**03 00 31.6**	**-0.8**
FUNA	**Funafuti**	**14.09**	**83**	ePn	**Pn**	**03 00 56.0**	**-3.5**
TARA	**Tarawa**	**14.26**	**34**	ePn	**Pn**	**03 01 02.0**	**+0.2**
MSVF	**Nonsavu**	**14.41**	**121**	ePn	**Pn**	**03 01 05.7**	**+1.7**
MSVF	**Nonsavu**	**14.41**	**121**	eP	**Pn**	**03 01 05.7**	**+1.7**
PATS	**Pohnpei**	**18.63**	**339**	P	**Pn**	**03 01 59.9**	**+1.9**
	baz=19,SNR=3.9						
PATS	**Pohnpei**	**18.63**	**339**	eP	**P**	**03 01 56.5**	**-1.1**
	245nm,1.0s						
EIDS	**Eidsvold**	**19.76**	**220**	P	**Pn**	**03 02 12.8**	**+1.4**
	baz=20,SNR=22						
CTA	**Charters Tower**	**20.41**	**240**	P	Pn	03 02 17.6	-1.7
CTA	**Charters Tower**	**20.41**	**240**	P	Pn	03 02 17.6	-1.7
	75nm,0.8s,baz=62,slow=13,SNR=15						
CTAO	**Charters Tower**	**20.41**	**240**	eP	**P**	**03 02 15.9**	**-1.3**
	164nm,1.0s						
CTAO	**Charters Tower**	**20.41**	**240**	eP	**P**	**03 02 15.9**	**-1.3**
CTAO				pmax	pmax		
	comp=Z,164nm,1.0s						
MTSU	**Mount Surprise**	**21.42**	**247**	P	**P**	**03 02 29.0**	**+0.9**
	baz=21,SNR=16						
COEN	**Coen**	**21.64**	**259**	P	**P**	**03 02 30.8**	**+0.2**
	baz=22,SNR=12						
RMQ	**Roma**	**22.03**	**222**	P	**P**	**03 02 36.5**	**+1.9**
	baz=22,SNR=34						
ARMA	**Armidale**	**23.31**	**210**	P	**P**	**03 02 49.5**	**+1.4**
	baz=23,SNR=17						
QLP	**Quilpie**	**25.26**	**228**	P	**P**	**03 03 07.1**	**+0.9**
	baz=25,SNR=36						
JAY	**Jayapura**	**25.50**	**287**	P	**P**	**03 03 04.0**	**-4.6**
OUZ	**Omahuta**	**25.66**	**164**	eP	**P**	**03 03 07.3**	**-2.4**
	comp=Z,78nm,1.5s						
MGCD	**Mangrove Creek**	**25.86**	**208**	P	**P**	**03 03 13.3**	**+1.6**
	baz=26,SNR=10						
RIV	**Riverview**	**26.36**	**207**	P	**P**	**03 03 19.9**	**+3.8**
	baz=26,SNR=7.2						
QIS	**Mount Isa**	**26.40**	**245**	P	**P**	**03 03 16.3**	**-0.4**
	baz=26,SNR=6.9						
CMSA	**Cobar Meteorol**	**27.46**	**218**	P	**P**	**03 03 27.0**	**+0.9**
	baz=28,SNR=26						
YNG	**Young**	**28.05**	**210**	P	**P**	**03 03 33.0**	**+1.7**
	baz=28,SNR=15						
CNB	**Canberra Magne**	**28.41**	**208**	P	**P**	**03 03 35.8**	**+1.2**
	baz=28,SNR=6.0						
HIZ	**Hauiti**	**29.10**	**164**	epP	pP	03 03 48.5	+5.9
URZ	**Urewera**	**29.54**	**161**	P	**P**	**03 03 45.4**	**+1.0**
URZ				epP	**pwP**	**03 03 53.0**	**+2.0**
URZ	**Urewera**	**29.54**	**161**	P	**P**	**03 03 45.4**	**+1.0**
	comp=Z,6.8nm,0.6s,baz=330,slow=8.1,SNR=3.9						
MILA	**Mila**	**29.96**	**206**	P	**P**	**03 03 49.8**	**+1.5**
	baz=30,SNR=4.2						
BKZ	**Black Stump Fm**	**30.17**	**162**	eP	**P**	**03 03 49.2**	**-1.0**
	comp=Z,64nm,1.1s						
STKA	**Stephens Creek**	**30.28**	**222**	P	**P**	**03 03 52.3**	**+1.1**
	baz=30,SNR=51						
STKA	**Stephens Creek**	**30.28**	**222**	eP	**P**	**03 03 50.7**	**-0.5**
	comp=Z,31nm,1.1s						
STKA	**Stephens Creek**	**30.28**	**222**	eP	**P**	**03 03 50.7**	**-0.5**
STKA				pmax	pmax		
	comp=Z,31nm,1.1s						
STKA	**Stephens Creek**	**30.28**	**222**	P	**P**	**03 03 52.1**	**+0.9**
	comp=Z,74nm,0.8s,baz=32,slow=9.5,SNR=97						
BHHZ	**Black Hill Sta**	**30.34**	**163**	P	**P**	**03 03 53.0**	**+1.3**
KWHZ	**Kaweka Forest**	**30.39**	**162**	P	**P**	**03 03 54.3**	**+2.1**
MCHZ	**McNeill Hill**	**30.49**	**162**	P	P	03 03 58.7	+5.8
QRZ	**Quartz Range**	**30.77**	**169**	P	P	03 04 00.5	+5.2
TSZ	**Takapari Road**	**30.84**	**164**	P	**P**	**03 03 57.0**	**+0.9**
KAHZ	**Kahuranaki**	**30.86**	**162**	P	**P**	**03 03 58.7**	**+2.4**
WRAB	**Tennant Creek**	**30.99**	**249**	eP	**P**	**03 03 56.6**	**-1.0**
	comp=Z,36nm,1.3s						
WB2	**Warramunga Arr**	**30.99**	**249**	eP	**P**	**03 03 56.7**	**-0.9**
WRA	**Warramunga Arr**	**31.00**	**249**	P	**P**	**03 03 55.9**	**-1.9**
WRA	**Warramunga Arr**	**31.00**	**249**	P	**P**	**03 03 55.9**	**-1.9**
	comp=Z,8.4nm,0.6s,baz=79,slow=9.1,SNR=19						
PXZ	**Pawanui**	**31.08**	**162**	P	**P**	**03 03 59.9**	**+1.8**
DVHZ	**Dannevirke**	**31.12**	**163**	P	**P**	**03 03 59.7**	**+1.1**
MRZ	**Mangatainoka R**	**31.30**	**165**	P	**P**	**03 04 01.5**	**+1.4**
OGWZ	**Otaki Gorge**	**31.34**	**165**	P	**P**	**03 04 00.8**	**+0.3**
BFZ	**Birch Farm**	**31.50**	**164**	eP	**P**	**03 04 00.4**	**-1.5**
	comp=Z,68nm,1.1s						
BFZ	**Birch Farm**	**31.50**	**164**	P	**P**	**03 04 02.0**	**+0.1**
HOWZ	**Holdsworth Sta**	**31.51**	**165**	P	**P**	**03 04 01.6**	**-0.4**
MTW	**Mount Morrison**	**31.75**	**165**	P	**P**	**03 04 03.0**	**-1.0**
MSWZ	**Moikau Station**	**31.93**	**165**	P	**P**	**03 04 03.5**	**-2.1**
PAWZ	**Paruwai Farm**	**31.94**	**165**	P	**P**	**03 04 05.3**	**-0.4**
KDU	**Kakadu**	**31.98**	**263**	P	**P**	**03 04 04.9**	**-1.4**
	baz=32,SNR=11						
TRWZ	**Traveller**	**32.02**	**165**	P	**P**	**03 04 06.0**	**-0.5**
TOO	**Toolangi**	**32.07**	**210**	P	**P**	**03 04 07.9**	**+0.9**
	baz=32,SNR=18						
PLWZ	**Palliser**	**32.08**	**166**	P	**P**	**03 04 06.8**	**-0.1**
AS01	**Alice Springs**	**32.34**	**242**	eP	**P**	**03 04 08.5**	**-1.1**
AS31	**Alice Springs**	**32.38**	**242**	eP	**P**	**03 04 08.8**	**-1.1**
	comp=Z,5.2nm,0.8s						
ASAR	**Alice Springs**	**32.38**	**242**	P	**P**	**03 04 08.2**	**-1.7**
ASAR	**Alice Springs**	**32.38**	**242**	P	**P**	**03 04 08.2**	**-1.7**
	comp=Z,19nm,0.8s,baz=73,slow=9.6,SNR=29						
HTT	**Hallett**	**33.01**	**223**	P	**P**	**03 04 15.6**	**+0.3**
	baz=33,SNR=31						
RPZ	**Rata Peaks**	**33.35**	**172**	eP	**P**	**03 04 17.3**	**-0.8**
	comp=Z,17nm,0.8s						
RPZ	**Rata Peaks**	**33.35**	**172**	P	**P**	**03 04 17.5**	**-0.5**
	comp=Z,9.9nm,0.6s,baz=141,slow=6.4,SNR=4.4						
ARPS	**Mount Arapiles**	**33.41**	**215**	P	**P**	**03 04 20.0**	**+1.3**
	baz=33,SNR=8.8						
BBOO	**Buckleboo**	**34.62**	**226**	P	**P**	**03 04 29.4**	**+0.1**
	baz=35,SNR=42						

BNDI	Bandanaira	35.37	277	P	P	03 04 33.0	-2.9
KNRA	Kununurra	35.68	258	P	P	03 04 37.4	-1.1
	baz=36,SNR=12						
WRKA	Warakurna	37.67	243	P	P	03 04 54.5	-1.1
	baz=38,SNR=7.4						
NLAI	Namlea	38.37	278	P	P	03 04 59.0	-2.5
FITZ	Fitzroy Crossi	38.85	254	P	P	03 05 04.4	-1.1
	baz=39,SNR=10						
FITZ	Fitzroy Crossi	38.85	254	P	P	03 05 04.5	-0.9
	comp=Z,13nm,0.7s,baz=81,slow=7.1,SNR=22						
TNTI	Ternate	39.18	285	*e*P	P	03 05 08.9	+0.6
	comp=Z,34nm,0.3s						
FORT	Forrest	39.73	234	P	P	03 05 13.0	+0.3
	baz=40,SNR=7.4						
BATI	Baumata	40.71	267	P	P	03 05 20.3	-0.8
BATI	Baumata	40.71	267	P	P	03 05 20.2	-0.8
	comp=Z,33nm,0.6s,baz=313,slow=1.4,SNR=7.2						
EDFI	Ende, Flores	42.78	269	P	P	03 05 35.8	-2.3
LUWI	Luwuk	43.09	280	*e*P	P	03 05 40.9	+0.4
	comp=Z,74nm,1.1s						
PPT2	Papeete2	44.43	104	*e*LR	LR	03 19 04.3	
	comp=Z,48μm,23.5s						
MBWA	Marble Bar	44.70	251	*e*P	P	03 05 53.1	-0.2
	comp=Z,7.8nm,0.8s						
BNSI	Bone	44.97	274	P	P	03 05 54.7	-0.9
TTSI	Tana Toraja	45.52	276	P	P	03 05 59.0	-0.9
PCI	Palu	45.97	279	P	P	03 06 02.5	-1.1
MPSI	Mapaga	46.22	281	P	P	03 06 04.4	-1.1
MEEK	Meekatharra	46.53	243	P	P	03 06 07.5	-0.3
	baz=46,SNR=8.2						
KLBR	Kellerberrin	48.36	237	P	P	03 06 21.1	-0.9
	baz=48,SNR=4.7						
NWAO	Narrogin (SRO)	49.14	236	P	P	03 06 28.5	+0.6
	baz=49,SNR=6.6						
NWAO	Narrogin (SRO)	49.14	236	*e*P	P	03 06 27.2	-0.7
	comp=Z,103nm,1.0s						
NWAO	Narrogin (SRO)	49.14	236	*e*P	P	03 06 27.2	-0.7
NWAO				pmax	pmax		
	comp=Z,103nm,1.0s						
NWAO	Narrogin (SRO)	49.14	236	P	P	03 06 27.6	-0.3
	comp=Z,18nm,0.8s,baz=296,slow=7.0,SNR=8.2						
MORW	Morawa	49.24	241	P	P	03 06 29.1	+0.3
	baz=49,SNR=5.5						
RKGY	Rocky Gully	49.81	233	P	P	03 06 33.4	+0.3
	baz=50,SNR=5.5						
JAGI	Jajag, Banyuwa	50.22	268	*e*P	P	03 06 34.5	-2.0
	comp=Z,22nm,0.9s						
KKM	Kota Kinabalu	51.39	287	*e*P	P	03 06 45.0	-0.4
	comp=Z,130nm,1.1s						
MJAR	Matsushiro Arr	53.32	333	P	P	03 07 00.1	+0.9
MJAR	Matsushiro Arr	53.32	333	P	P	03 07 00.1	+0.9
	comp=Z,11nm,1.1s,baz=169,slow=6.3,SNR=9.4						
MAJO	Matsushiro	53.32	333	*e*P	P	03 07 00.1	+0.9
	comp=Z,37nm,1.4s						
MAJO	Matsushiro	53.32	333	*e*P	P	03 07 00.1	+0.9
MAJO				pmax	pmax		
	comp=Z,37nm,1.4s						
MAT	Matsushiro	53.32	333	P	P	03 07 00.0	+0.8
MJB9	Matsu-Tunnel	53.32	333	*e*P	P	03 06 59.5	+0.3
	comp=Z,37nm,1.4s						
JNU	Nakatsue	54.38	325	*e*P	P	03 07 06.9	-0.1
	comp=Z,55nm,1.1s						
JNU	Nakatsue	54.38	325	P	P	03 07 08.0	+1.0
	comp=Z,28nm,0.8s,baz=101,slow=4.2,SNR=14						
YULB	Yu-li	54.57	309	*e*P	P	03 07 09.0	+0.4
	comp=Z,30nm,1.1s						
TPUB	Ta-pu	55.04	308	*e*P	P	03 07 12.5	+0.5
	comp=Z,63nm,1.0s						
KSM	Kuching	55.79	279	*e*P	P	03 07 17.4	-0.2
	comp=Z,55nm,1.1s						
ASAJ	Asahikawa	58.21	341	P	P	03 07 35.7	+1.6
ASAJ				pmax	pmax		
	comp=Z,21nm,0.8s						
ASAJ	Asahikawa	58.21	341	P	P	03 07 35.7	+1.6
	comp=Z,22nm,0.8s,baz=200,slow=9.3,SNR=10						
KSRS	Korea Array	59.18	326	P	P	03 07 41.9	+0.9
KSRS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSRS	Korea Array	59.18	326	P	P	03 07 41.9	+0.9
	comp=Z,3.5nm,0.7s,baz=150,slow=6.5,SNR=12						
KSAR	Wonju Array Be	59.19	326	P	P	03 07 41.9	+0.8
KSAR	Wonju Array Be	59.19	326	P	P	03 07 41.9	+0.8
KS01	Wonju Array Si	59.21	326	*e*P	P	03 07 41.5	+0.2
YSS	Yuzh-Sakhalins	60.71	343	*e*P	P	03 07 51.8	+0.4
	comp=Z,66nm,1.3s						
YSS	Yuzh-Sakhalins	60.71	343⇓	*e*P	P	03 07 52.7	+1.4
YSS				*e*		03 07 58.7	
YSS				pmax	pmax		
	comp=Z,240nm,1.1s						
YSS				pmax	pmax		
	comp=N,110nm,0.7s						
YSS				pmax	pmax		
	comp=E,210nm,1.4s						
NJ2	Nanjing	61.28	316	*e*P	P	03 07 57.6	+2.1
NJ2				pmax	pmax		
	comp=Z,27nm,0.9s						
NJ2				LR	LR		
	comp=N,14μm,15.1s						
NJ2				LR	LR		
	comp=E,16μm,15.7s						
NJ2				LR	LR		
	comp=Z,16μm,18.6s						
SKR	Severo-Kuril’s	61.57	354	*e*P	P	03 08 06.6	+10
SKR				pmax	pmax		
	comp=Z,119nm,1.5s						
QIZ	Qiongzhong	61.91	298	*e*P	P	03 08 00.8	+0.8
	comp=Z,21nm,1.1s						
USA0B	Ussuriysk Arra	62.30	334	*e*P	P	03 08 03.4	+1.3
	comp=Z,54nm,1.4s						
USRK	Ussuriysk Ar.	62.30	334	P	P	03 08 03.7	+1.6
	comp=Z,7.5nm,0.6s,baz=141,slow=6.4,SNR=18						
WHN	Wuhan	63.64	312	⇑P	P	03 08 12.8	+1.5
MDJ	Mudanjiang	63.69	332	P	P	03 08 12.8	+1.4
MDJ				pmax	pmax		
	comp=Z,21nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,12μm,9.0s						
MDJ	Mudanjiang	63.69	332	*e*P	P	03 08 12.4	+1.0
	comp=Z,45nm,1.4s						
PETK	Petropavlovsk-	63.82	355	*e*P	P	03 08 12.6	+0.6
PETK	Petropavlovsk-	63.82	355	*e*P	P	03 08 12.6	+0.6
PETK	Petropavlovsk-	63.82	355	P	P	03 08 13.0	+1.0
	comp=Z,16nm,0.8s,baz=158,slow=10,SNR=13						
TYV	Tymovskoe	64.29	344	*e*P	P	03 08 16.8	+1.7
TYV				pmax	pmax		
	comp=Z,17nm,1.1s						
BKNI	Bangkinang	64.57	275	*e*P	P	03 08 17.5	-0.3
	comp=Z,188nm,1.3s						
CN2	Changchun	65.06	329	*e*P	P	03 08 21.7	+1.3
CN2				*e*sP	pwP	03 08 28.6	+1.2
CN2				*e*S	S	03 17 00.4	-2.5
CN2				pmax	pmax		
	comp=Z,40nm,1.1s						
CN2				LR	LR		
	comp=N,22μm,17.0s						
CN2				LR	LR		
	comp=E,14μm,17.0s						
CN2				LR	LR		
	comp=Z,13μm,18.0s						
IPM	Ipoh	65.50	280	*e*P	P	03 08 23.5	-0.4
	comp=Z,66nm,1.2s						
GRNR	Gornyy	66.05	341	*e*P	P	03 08 29.1	+2.5
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
KULM	Kulim	66.06	281	*e*P	P	03 08 27.3	-0.2
	comp=Z,68nm,1.5s						
SKNT	Sakolnakorn	66.33	294	P	P	03 08 30.4	+1.3
	comp=Z,26nm,1.4s						
CASY	Casey	66.51	201	*e*P	P	03 08 29.2	-0.2
	comp=Z,53nm,1.3s						
VNDA	Vanda	66.88	181	*e*P	P	03 08 31.9	+0.3
	comp=Z,52nm,1.3s						
VNDA	Vanda	66.88	181	*e*P	P	03 08 31.9	+0.3
VNDA				pmax	pmax		
	comp=Z,52nm,1.3s						
VNDA	Vanda	66.88	181	P	P	03 08 33.3	+1.7
	comp=Z,18nm,1.0s,baz=331,slow=5.6,SNR=10						
NKL	Nikolayevsk	66.88	344	*e*P	P	03 08 33.0	+1.2
NKL				pmax	pmax		
	comp=Z,98nm,1.3s						
ENH	Enshi	67.14	309	*e*P	P	03 08 33.8	-0.3
	comp=Z,63nm,1.0s						
NONG	Nongkai	67.45	295	P	P	03 08 37.7	+1.5
	comp=Z,1.2nm,1.0s						
TRTT	Trang	67.61	283	P	P	03 08 41.7	+4.3
GYA	Guiyang	67.65	304⇑	*i*P	P	03 08 38.7	+1.2
GYA				pP	pwP	03 08 52.4	+8.0
GYA				PP	PP	03 11 12.0	+5.1
GYA				S	S	03 17 34.3	-0.9
GYA				SKS	SKiKP	03 18 31.4	-4.5
GYA	Guiyang	67.65	304	SS	SS	03 21 58.9	+2.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.6s						
GYA				LR	LR		
	comp=N,620nm,18.3s						
GYA				LR	LR		
	comp=E,550nm,18.5s						
GYA				LR	LR		
	comp=Z,570nm,19.0s						
BJT	Baijiatuau	67.75	321	*e*P	P	03 08 37.8	+0.1
	comp=Z,21nm,1.0s						
BJT	Baijiatuau	67.75	321	*e*P	P	03 08 37.8	+0.1
BJT				pmax	pmax		
	comp=Z,21nm,1.0s						
BJI	Beijing	67.76	321	P	P	03 08 39.2	+1.5
BJI				pmax	pmax		
	comp=Z,16nm,1.4s						
TIY	Taiyuan	68.82	317	*e*P	P	03 08 46.6	+2.0
TIY				pmax	pmax		
	comp=Z,21nm,0.6s						
TIY				LR	LR		
	comp=N,12μm,13.7s						
TIY				LR	LR		
	comp=E,10μm,16.6s						
TIY				LR	LR		
	comp=Z,14μm,25.8s						
PBKT	Sadao Pong	68.92	292	*e*P	P	03 08 45.5	0.0
	comp=Z,28nm,1.0s						
PBKT	Sadao Pong	68.92	292	P	P	03 08 47.2	+1.7
	comp=Z,36nm,2.8s						
PHET	Kaeng Krachan	69.05	288	P	P	03 08 48.8	+2.5
	comp=Z,7.6nm,1.4s						
XAN	Xi'an	69.37	313	P	P	03 08 48.8	+0.8
XAN				pP	pwP	03 08 57.3	+2.4
XAN				sP	PcP	03 09 01.2	-10
XAN				pmax	pmax		
	comp=Z,26nm,1.0s						
XAN				LR	LR		
	comp=N,13μm,21.7s						
XAN				LR	LR		
	comp=E,10μm,21.7s						
XAN				LR	LR		
	comp=Z,24μm,21.7s						
XAN	Xi'an	69.37	313	*e*P	P	03 08 48.3	+0.3
	comp=Z,24nm,0.9s						
XAN	Xi'an	69.37	313	*e*P	P	03 08 48.3	+0.3
XAN				pmax	pmax		
	comp=Z,24nm,0.9s						
UTTA	Uttaradit	69.67	293	P	P	03 08 51.9	+1.8
	comp=Z,6.7nm,1.0s						
SRDT	SRDT	69.94	290	P	P	03 08 54.0	+2.2
	comp=Z,38nm,1.1s						
UTHA	Uthaitani	70.00	291	P	P	03 08 54.3	+2.1
	comp=Z,7.7nm,1.1s,comp=Z,126nm						
KMI	Kunming	70.35	302	P	P	03 08 57.2	+2.7
KMI				pP	PcP	03 09 09.0	-7.1
KMI				sP	pwP	03 09 13.2	+12
KMI				pmax	pmax		
	comp=Z,58nm,1.2s						
KMI	Kunming	70.35	302	*e*P	P	03 08 54.9	+0.4
	comp=Z,88nm,1.3s						
KMI	Kunming	70.35	302	*e*P	P	03 08 54.9	+0.4
KMI				pmax	pmax		
	comp=Z,88nm,1.3s						
SUKH	Sukhothai	70.42	293	P	P	03 08 57.0	+2.3
	comp=Z,5.8nm,1.0s						
UMPA	Umpang Tak	70.73	291	P	P	03 09 00.1	+3.4
	comp=Z,3.3nm,0.6s,comp=Z,904nm						
HHC	Hu-ho-hao-te	71.10	320	*e*P	P	03 09 05.9	+7.3
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
CM01	Chiang Mai Arr	71.32	294	*e*P	P	03 09 00.9	+0.7
CMAR	Chiang Mai Arr	71.35	294	P	P	03 09 02.2	+1.8
CMAR				pmax	pmax		
	comp=Z,15nm,0.9s						
CMAR	Chiang Mai Arr	71.35	294	P	P	03 09 02.2	+1.8
	comp=Z,16nm,0.9s,baz=120,slow=4.4,SNR=37						
CMMT	Chiang Mai	71.46	294	P	P	03 09 02.7	+1.6
CHTO	Chiang Mai	71.46	294	*e*P	P	03 09 01.0	0.0
	comp=Z,57nm,1.4s						
CHTO	Chiang Mai	71.46	294	*e*P	P	03 09 01.0	0.0
CHTO				pmax	pmax		
	comp=Z,57nm,1.4s						
CHTO	Chiang Mai	71.46	294	P	P	03 09 02.7	+1.6
	comp=Z,120nm,1.8s						
HIA	Hailar	71.70	331	*e*P	P	03 09 02.4	+0.5
	comp=Z,64nm,1.3s						
HIA	Hailar	71.70	331	*e*P	P	03 09 02.4	+0.5
HIA				pmax	pmax		
	comp=Z,64nm,1.3s						
ZEA	Zeya	71.72	337	*e*P	P	03 09 03.2	+1.3
ZEA				pmax	pmax		
	comp=N,83nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,83nm,1.4s						
CD2	Chengdu	71.84	307	*e*P	P	03 09 04.2	+1.0
CD2				pmax	pmax		
	comp=Z,90nm,0.7s						
CD2				pmax	pmax		
	comp=Z,9μm,8.9s						
LZH	Lanzhou	74.00	312	*e*P	P	03 09 18.6	+2.5
LZH				pP	PcP	03 09 29.1	-2.2
LZH				sP	pwP	03 09 33.2	+10
LZH				pmax	pmax		
	comp=Z,72nm,1.4s						
LZH				pmax	pmax		
	comp=Z,510nm,5.4s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
GAMB	Gambell	76.30	10	*e*P	P	03 09 28.7	+0.3
	comp=Z,40nm,1.2s						
KDAK	Kodiak Island	76.46	22	P	P	03 09 30.1	+0.6
KDAK	Kodiak Island	76.46	22	P	P	03 09 30.1	+0.6
	comp=Z,9.4nm,0.8s,baz=270,slow=5.1,SNR=3.0						
CIT	Chita	76.49	330	*e*P	P	03 09 31.5	+1.6
YAK	Yakutsk	77.53	344	*e*P	P	03 09 33.4	-2.0
YAK				pmax	pmax		
	comp=Z,60nm,1.1s						
YAK				pmax	pmax		
	comp=E,11nm,1.5s						
YAK				pmax	pmax		
	comp=N,22nm,1.4s						
ULN	Ulaanbaatar	77.59	324	*e*P	P	03 09 36.2	0.0
	comp=N,46nm,1.1s						
ULN	Ulaanbaatar	77.59	324	*e*P	P	03 09 36.3	0.0
ULN				pmax	pmax		
	comp=Z,46nm,1.1s						
SONM	Songino Array	77.96	324	P	P	03 09 39.6	+1.3
SONM				pmax	pmax		
	comp=Z,19nm,1.1s						
SONM	Songino Array	77.96	324	P	P	03 09 39.6	+1.3
	comp=Z,19nm,1.1s,baz=138,slow=5.4,SNR=44						
SONA1	Songino Array	77.96	324	*e*P	P	03 09 38.6	+0.2
ANM	Nome	78.25	13	*e*P	P	03 09 39.5	+0.1
	comp=Z,38nm,1.5s						
ANM	Nome	78.25	13	*e*P	P	03 09 39.5	+0.1
ANM				pmax	pmax		
	comp=Z,39nm,1.5s						
GTA	Gaotai	78.31	314	⇓P	P	03 09 42.4	+1.9
GTA				pP	PcP	03 09 51.8	+2.0
GTA				sP	pwP	03 09 56.2	+8.8
GTA				pmax	pmax		
	comp=Z,34nm,1.3s						
GTA				LR	LR		
	comp=N,15μm,19.4s						
GTA				LR	LR		
	comp=E,16μm,19.7s						
GTA				LR	LR		
	comp=Z,24μm,22.5s						
RSO	Redoubt South	78.37	20	*e*P	P	03 09 40.2	-0.2
BILL	Bilibino	78.49	0	*e*P	P	03 09 40.6	0.0
	comp=Z,51nm,1.1s						
BILL	Bilibino	78.49	0	*e*P	P	03 09 40.4	-0.2
BILL				*e*		03 09 49.0	
BILL				pmax	pmax		
	comp=Z,46nm,1.1s						
BRLK	Bradley Lake	78.51	21	*e*P	P	03 09 40.9	0.0
	comp=Z,14nm,0.8s						
QSPA	South Pole Qui	79.35	180	*e*P	P	03 09 45.6	-0.2
	comp=Z,103nm,1.4s						
QSPA	South Pole Qui	79.35	180	P	P	03 09 46.7	+0.9
	comp=Z,25nm,0.9s,baz=8.1,slow=2.6,SNR=17						
SHL	Shillong	79.75	299	*e*P	P	03 09 48.2	-0.5
	comp=Z,51nm,1.3s						
SHL	Shillong	79.75	299	*e*P	P	03 09 48.2	-0.5
SHL				pmax	pmax		
	comp=Z,51nm,1.3s						
SUA	Susitna One	79.78	20	*e*P	P	03 09 47.9	-0.1
	comp=Z,37nm,1.5s						
BOD	Bodaibo	79.89	335	*e*P	P	03 09 40.6	-7.9
BOD				pmax	pmax		
	comp=Z,19nm,1.7s						
CAST	Castle Rocks	80.78	18	*e*P	P	03 09 52.7	-0.5
	comp=Z,10nm,0.9s						
ZAK	Zakamensk	81.00	325	*e*P	P	03 09 54.4	-0.4
ZAK				pmax	pmax		
	comp=Z,18nm,1.3s						
DIV	Divide	81.29	22	*e*P	P	03 09 56.2	+0.2
	comp=Z,32nm,1.4s						
TRF	Thorofare Moun	81.36	19	*e*P	P	03 09 56.7	+0.2
	comp=Z,12nm,1.3s						
TLY	Talaya	81.43	326	*e*P	P	03 09 56.7	-0.3
	comp=Z,32nm,0.7s						
TLY	Talaya	81.43	326	*e*P	P	03 09 56.7	-0.3
TLY				pmax	pmax		
	comp=Z,32nm,0.7s						
KLU	Klutina	81.47	21	*e*P	P	03 09 57.7	+0.7
	comp=Z,27nm,1.2s						
LSA	Lhasa	81.58	302	*e*P	P	03 09 58.3	-0.5
	comp=Z,8.4nm,0.8s						
LSA	Lhasa	81.58	302	*e*P	P	03 09 58.3	-0.5
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RDOG	Red Dog Mine	81.77	12	*e*P	P	03 09 59.3	+0.9
	comp=Z,41nm,1.2s						
RND	Reindeer	81.78	19	*e*P	P	03 09 58.4	-0.2
	comp=Z,18nm,1.2s						
RND	Reindeer	81.78	19	*e*P	P	03 09 58.4	-0.2
RND				pmax	pmax		
	comp=Z,18nm,1.2s						
MCK	McKinley	81.98	19	*e*P	P	03 09 59.9	+0.3
	comp=Z,27nm,1.4s						
MCK	McKinley	81.98	19	*e*P	P	03 09 59.9	+0.3
MCK				pmax	pmax		
	comp=Z,27nm,1.4s						
DHY	Denali Highway	82.04	20	*e*P	P	03 10 00.4	+0.4
	comp=Z,20nm,1.4s						
BWN	Browne	82.13	18	*e*P	P	03 10 01.3	+1.0
	comp=Z,30nm,1.1s						
IM3	Indian Mountai	82.22	16	*e*P	P	03 10 01.3	+0.5
HARP	HAARP	82.35	21	*e*P	P	03 10 02.3	+0.7
	comp=Z,18nm,1.1s						
MLY	Manley	82.36	17	*e*P	P	03 10 02.3	+0.7
	comp=Z,12nm,1.4s						
WRH	Wood River Hil	82.77	19	*e*P	P	03 10 04.0	+0.3
	comp=Z,7.0nm,1.0s						
MDM	Murphy Dome	83.06	18	*e*P	P	03 10 05.1	-0.2
	comp=Z,17nm,1.2s						
HDA	Harding Lake	83.08	19	*e*P	P	03 10 05.6	+0.3
	comp=Z,16nm,0.8s						
HDA	Harding Lake	83.08	19	P	P	03 10 06.7	+1.4
	baz=227						
TCOL	CIGO, UAF Yank	83.11	18	P	P	03 10 06.4	+1.0
	baz=226						
COLA	College	83.12	18	*e*P	P	03 10 06.1	+0.7
	comp=Z,9.7nm,0.8s						
COLA	College	83.12	18	*e*P	P	03 10 06.1	+0.7
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RIDG	Independ’e Rid	83.33	20	*e*P	P	03 10 07.6	+0.9
	comp=Z,18nm,1.0s						
IL1	Eielson Array	83.35	19	*e*P	P	03 10 06.5	-0.2
ILAR	Eielson Array	83.35	19	P	P	03 10 07.6	+0.9
ILAR	Eielson Array	83.35	19	P	P	03 10 07.6	+0.9
	comp=Z,4.8nm,0.7s,baz=233,slow=5.7,SNR=22						
ILB	Eielson Array	83.35	19	*e*P	P	03 10 07.3	+0.6
POKR	Poker Plat Res	83.42	18	P	P	03 10 09.4	+2.4
	baz=227						
O02D	Mt. Diablo Mer	83.51	47	P	P	03 10 09.0	+0.8
	baz=250						
K02D	Willamette Mer	83.76	45	P	P	03 10 11.0	+1.7
	baz=249						
SCRK	Sand Creek	83.77	20	*e*P	P	03 10 09.9	+0.8
	comp=Z,6.5nm,0.9s						
WDC	Whiskeytown Da	83.82	47	*e*P	P	03 10 10.2	+0.5
	comp=Z,12nm,1.4s						
WDC	Whiskeytown Da	83.82	47	*e*P	P	03 10 10.2	+0.5
WDC				pmax	pmax		
	comp=Z,12nm,1.4s						
N02D	Trinity Center	83.84	46	P	P	03 10 11.2	+1.4
	baz=250						
M02C	Callahan	83.87	46	P	P	03 10 11.5	+1.5
	baz=250						
ODAN	Odare	83.98	299	*e*P	P	03 10 12.2	+1.1
ORV	Oroville	84.24	48	*e*P	P	03 10 11.6	-0.2
	comp=Z,8.9nm,1.1s						
ORV	Oroville	84.24	48	*e*P	P	03 10 11.6	-0.2
ORV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
O03E	Paynes Creek	84.26	47	P	P	03 10 13.3	+1.3
	baz=251						
HYT	Haines Junctio	84.30	25	*e*P	P	03 10 12.6	+0.8
	comp=Z,11nm,1.2s						
AFDM	Forest Hills D	84.44	49	*e*P	P	03 10 13.0	+0.2
	comp=Z,14nm,1.3s						
L04D	Klamath Falls	84.54	45	P	P	03 10 15.0	+1.5
	baz=250						
CMB	Columbia Colle	84.59	50	*e*P	P	03 10 13.5	-0.2
	comp=Z,3.8nm,0.8s						
CMB	Columbia Colle	84.59	50	*e*P	P	03 10 13.5	-0.2
CMB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RAMN	Ramite	84.69	299	*e*P	P	03 10 15.6	+0.9
M04C	Macdoel	84.72	46	P	P	03 10 15.7	+1.3
	baz=251						
VES	Vestal, Richgr	84.93	52	P	P	03 10 16.0	+0.6
	baz=253						
J04D	Umpqua Nationa	85.02	44	P	P	03 10 17.4	+1.5
	baz=250						
BEKR	Beckworth	85.17	48	*e*P	P	03 10 16.7	0.0
	comp=Z,6.5nm,0.8s						
JIRN	Jiri	85.22	299	*e*P	P	03 10 18.6	+1.1
ISA	Isabella, Lake	85.36	53	P	P	03 10 18.7	+1.0
	baz=253						
DAWY	Dawson	85.43	21	*e*P	P	03 10 17.8	+0.5
	comp=Z,22nm,1.4s						
WAKR	Walker	85.44	50	*e*P	P	03 10 18.2	0.0
	comp=Z,9.2nm,1.1s						
OMMB	Old Mammoth Mi	85.51	51	*e*P	P	03 10 18.4	-0.3
	comp=Z,8.4nm,1.1s						
OMMB				*e*pP	pwP	03 10 28.0	+2.1
EDW2	Edwards Air Fo	85.52	53	P	P	03 10 19.3	+0.9
	baz=254						
GUN	Gumba	85.55	299	*e*P	P	03 10 20.0	+0.9
	comp=Z,72nm,1.0s						
TIXI	Tiksi	85.58	349	*e*P	P	03 10 17.6	-0.2
	comp=Z,36nm,1.4s						
TIXI	Tiksi	85.58	349	*e*P	P	03 10 17.6	-0.2
TIXI				pmax	pmax		
	comp=Z,36nm,1.4s						
BFSC	Mount Baldy Ra	85.60	54	P	P	03 10 19.6	+0.6
	baz=254						
J05D	Fort Rock, OR	85.63	45	P	P	03 10 19.3	+0.3
	baz=251						
PAHR	Pah Rah Range	85.84	49	*e*P	P	03 10 19.8	-0.3
	comp=Z,9.3nm,1.1s						
PKI	Pulchoki	85.87	299	*e*P	P	03 10 21.2	+0.5
	comp=Z,118nm,1.4s						
PKIN	Phulchoki	85.88	299	*e*P	P	03 10 21.2	+0.5
	comp=Z,75nm,1.4s						
CWC	Cottonwood Cre	85.88	52	P	P	03 10 21.2	+0.9
	baz=254						
DMN	Daman	86.14	299	*e*P	P	03 10 22.8	+0.9
	comp=Z,100nm,1.1s						
RYN	Ryan	86.17	50	*e*P	P	03 10 20.8	-0.9
	comp=Z,5.1nm,1.0s						
DAC	Darwin (Calif)	86.21	52	*e*P	P	03 10 21.6	-0.4
	comp=Z,6.5nm,1.4s						
DAC	Darwin (Calif)	86.21	52	*e*P	P	03 10 21.6	-0.4
DAC				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MPMC	Manual Prospec	86.24	52	P	P	03 10 23.2	+1.1
	baz=254						

MONP2	Monument Peak	86.24	56	P	P	03 10 23.2	+1.0
	baz=255						
NV01	Mina Array Sit	86.28	50	eP	P	03 10 21.8	-0.6
NVAR	Mina Array Bea	86.28	50	P	P	03 10 23.4	+1.1
	comp=Z,2.7nm,0.8s,baz=230,slow=7.7,SNR=12						
NV11	Mina Array Sit	86.39	50	eP	P	03 10 22.0	-0.8
	comp=Z,1.0nm,1.3s						
PFO	Pinyon Flats O	86.40	55	P	P	03 10 23.9	+1.0
	baz=255						
TPFO	Pinon Flats	86.40	55	P	P	03 10 23.7	+0.8
	baz=255						
XPFO	Pion Flat	86.40	55	eP	P	03 10 22.8	-0.1
	comp=Z,4.6nm,0.9s						
IKP	In-Ko-Pah, Jac	86.43	56	P	P	03 10 24.0	+1.0
	baz=255						
GSC	Goldstone, Bar	86.57	53	eP	P	03 10 23.5	-0.2
	comp=Z,1.2nm,0.7s						
GSC	Goldstone, Bar	86.57	53	P	P	03 10 24.8	+1.2
	baz=254						
GRAC	Grapevine Rang	86.59	52	P	P	03 10 25.0	+1.3
	baz=254						
KVN	Kaiserville	86.60	49	eP	P	03 10 23.4	-0.5
	comp=Z,6.9nm,1.3s						
KVN	Kaiserville	86.60	49	eP	P	03 10 23.4	-0.5
KVN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SWSC	Sam W. Stewart	86.76	56	P	P	03 10 25.8	+1.3
	baz=255						
BELC	Belle Mtn. Jos	86.87	55	P	P	03 10 25.3	+0.1
	baz=255						
I07A	Izee	87.08	44	eP	P	03 10 26.4	+0.4
	comp=Z,5.8nm,0.8s						
BC3	Big Chuckawall	87.22	55	P	P	03 10 28.0	+1.1
	baz=255						
TUQ	Turquoise Moun	87.30	53	P	P	03 10 28.2	+0.9
	baz=255						
GMRC	Granite Mounta	87.34	54	P	P	03 10 28.4	+1.0
	baz=255						
TPNV	Topopah Spring	87.44	52	P	P	03 10 28.9	+0.9
	baz=255						
DANN	Dangsing	87.47	299	eP	P	03 10 28.0	-0.5
J08A	Circle Bar Ran	87.57	45	eP	P	03 10 28.2	-0.2
	comp=Z,12nm,1.3s						
GLA	Glamis	87.58	56	eP	P	03 10 29.3	+0.7
	comp=Z,9.7nm,0.9s						
GLA	Glamis	87.58	56	eP	P	03 10 29.3	+0.7
GLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
IRM	Iron Mountain	87.59	55	P	P	03 10 29.3	+0.7
	baz=255						
G08A	Pilot Rock	87.81	43	eP	P	03 10 29.8	+0.3
	comp=Z,8.3nm,1.1s						
LDFC	Landfair	87.85	54	eP	P	03 10 30.5	+0.5
	comp=Z,13nm,1.0s						
Y12C	Blythe	87.99	55	eP	P	03 10 31.2	+0.8
	comp=Z,6.9nm,0.8s						
Y12C	Blythe	87.99	55	P	P	03 10 32.0	+1.5
	baz=256						
PYUN	Piuthan	88.08	299	eP	P	03 10 29.9	-1.4
	comp=Z,34nm,1.2s						
SHPR	Sheep Range	88.17	52	eP	P	03 10 31.4	-0.1
R11A	Troy Canyon, C	88.31	51	eP	P	03 10 32.1	0.0
	comp=Z,9.9nm,1.5s						
R11A				epP	pwP	03 10 41.2	+1.8
R11A	Troy Canyon, C	88.31	51	P	P	03 10 33.0	+0.9
	baz=255						
WMQ	Urumqi	88.35	315	P	P	03 10 33.4	+1.4
WMQ				pP	pwP	03 10 46.8	+7.9
WMQ				sP	sP	03 10 51.8	+17
WMQ				PP	PP	03 13 58.1	-1.7
WMQ				pmax	pmax		
	comp=Z,44nm,1.1s						
WMQ	Urumqi	88.35	315	eP	P	03 10 31.8	-0.2
	comp=Z,43nm,1.5s						
WMQ	Urumqi	88.35	315	eP	P	03 10 31.8	-0.2
WMQ				pmax	pmax		
	comp=Z,43nm,1.5s						
PDMCI	Parker Dam,Lak	88.44	55	P	P	03 10 33.4	+0.9
	baz=256						
BMO	Blue Mountains	88.81	44	eP	P	03 10 33.9	-0.3
	comp=Z,7.0nm,1.1s						
BMO	Blue Mountains	88.81	44	eP	P	03 10 33.9	-0.3
BMO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
W13A	Hualapai Mount	88.83	54	eP	P	03 10 35.1	+0.4
	comp=Z,9.9nm,1.4s						
214A	Organ Pipe Nat	88.97	57	P	P	03 10 36.1	+0.9
	baz=257						
F10A	Beach Ranch, E	89.17	43	eP	P	03 10 36.1	+0.2
	comp=Z,6.7nm,1.0s						
ELK	Elko	89.18	48	eP	P	03 10 36.6	+0.4
ELK	Elko	89.18	48	eP	P	03 10 36.6	+0.4
MFID	Camas Ranch	89.44	46	eP	P	03 10 37.9	+0.7
	comp=Z,5.5nm,1.0s						
PSUT	Pine Spring	89.67	51	eP	P	03 10 39.1	+0.6
	comp=Z,7.1nm,1.2s						
LCMT	Little Creek M	89.78	52	eP	P	03 10 39.5	+0.5
	comp=Z,6.5nm,1.0s						
CCUT	Cedar City	89.82	52	eP	P	03 10 40.3	+1.0
	comp=Z,5.8nm,0.9s						
SZCU	Shurtz Canyon	90.04	52	eP	P	03 10 41.0	+0.7
	comp=Z,8.3nm,1.0s						
KNB	Kanab	90.11	52	eP	P	03 10 41.3	+0.7
	comp=Z,20nm,1.5s						
KNB	Kanab	90.11	52	eP	P	03 10 41.3	+0.7
KNB				pmax	pmax		
	comp=Z,20nm,1.5s						
U15A	North Rim	90.40	53	eP	P	03 10 42.6	+0.5
	comp=Z,8.4nm,0.9s						
HLID	Hailey	90.47	46	eP	P	03 10 42.5	+0.4
	comp=Z,6.1nm,0.9s						
HLID	Hailey	90.47	46	P	P	03 10 43.0	+0.9
	baz=256						
PKCU	Pink Cliffs	90.61	52	eP	P	03 10 43.2	+0.1
	comp=Z,17nm,1.1s						
X16A	Lo Mia Camp, P	90.64	55	eP	P	03 10 43.3	+0.2
	comp=Z,4.4nm,0.9s						
TUC	Tucson	90.73	57	eP	P	03 10 43.8	+0.3
	comp=Z,3.4nm,1.1s						
TUC	Tucson	90.73	57	eP	P	03 10 43.8	+0.3
TUC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TUC	Tucson	90.73	57	P	P	03 10 44.7	+1.3
	baz=258						
MTPU	Mount Pierson	90.84	52	eP	P	03 10 44.3	+0.1
	comp=Z,7.1nm,0.9s						
DUG	Dugway, Tooele	90.84	49	eP	P	03 10 44.4	+0.5
	comp=Z,4.6nm,1.0s						
DUG	Dugway, Tooele	90.84	49	eP	P	03 10 44.4	+0.5
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DUG	Dugway, Tooele	90.84	49	P	P	03 10 44.0	+0.1
	baz=257						
BGU	Big Grassy Mou	90.85	49	eP	P	03 10 44.2	+0.3
	comp=Z,4.0nm,0.9s						
WUAZ	Wupatki	90.92	54	eP	P	03 10 44.8	+0.4
	comp=Z,8.3nm,1.0s						
WUAZ	Wupatki	90.92	54	P	P	03 10 45.6	+1.2
	baz=258						
MSU	Marysvale	90.95	51	eP	P	03 10 44.9	+0.4
MSU	Marysvale	90.95	51	eP	P	03 10 44.9	+0.4
HVU	Hansel Valley	91.23	48	eP	P	03 10 46.0	+0.3
	comp=Z,11nm,0.9s						
HVU	Hansel Valley	91.23	48	eP	P	03 10 46.0	+0.3
HVU				pmax	pmax		
	comp=Z,11nm,0.9s						
NLU	North Lily Min	91.34	50	eP	P	03 10 46.5	+0.2
	comp=Z,5.7nm,1.0s						
SPUT	South Promonto	91.36	48	eP	P	03 10 46.9	+0.5
	comp=Z,5.0nm,1.0s						
MSO	Missoula	91.59	43	P	P	03 10 47.6	+0.4
	baz=256						
MPU	Maple Canyon	91.69	50	eP	P	03 10 48.1	+0.2
	comp=Z,11nm,1.3s						
MCMT	McKenzie Canyo	91.87	45	eP	P	03 10 48.8	+0.2
SYO	Syowa Base	91.97	197	⇑eP	P	03 10 47.0	-1.3
SYO	Syowa Base	91.97	197	⇑epP	pP	03 10 50.0	-0.2
SYO	Syowa Base	91.97	197	⇑esP	sP	03 10 54.4	+3.5
TCUT	Toone Canyon	92.09	49	eP	P	03 10 50.1	+0.3
	comp=Z,7.9nm,0.7s						
DLMT	Dillon	92.16	44	eP	P	03 10 49.8	-0.1
	comp=Z,11nm,0.9s						
LRM	Limekiln Ridge	92.36	44	eP	P	03 10 51.6	+0.7
MK01	Makanchi Array	92.77	317	eP	P	03 10 52.6	+0.1
MK31	Makanchi Array	92.78	317	eP	P	03 10 52.7	+0.1
MKAR	Makanchi Array	92.78	317	eP	P	03 10 52.6	0.0
	comp=Z,62nm,0.8s						
MKAR	Makanchi Array	92.78	317	P	P	03 10 53.5	+0.9
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MKAR	Makanchi Array	92.78	317	P	P	03 10 53.5	+0.9
	comp=Z,9.1nm,0.8s,baz=101,slow=6.3,SNR=32						
ZAA0	Zalesovo Array	92.85	324	eP	P	03 10 51.7	-0.9
	comp=Z,22nm,1.3s						
ZALV	Zalesovo Beam	92.85	324	eP	P	03 10 51.6	-1.0
ZALV	Zalesovo Beam	92.85	324	eP	P	03 10 51.6	-1.0
ZALV	Zalesovo Beam	92.85	324	P	P	03 10 52.7	+0.1
	comp=Z,7.8nm,1.0s,baz=104,slow=4.7,SNR=24						
BOZ	Bozeman (W)	92.88	44	eP	P	03 10 51.7	-1.5
	comp=Z,7.7nm,0.8s						
BOZ	Bozeman (W)	92.88	44	eP	P	03 10 51.7	-1.5
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FXWY	Fox Creek	92.89	46	eP	P	03 10 53.1	-0.4
	comp=Z,3.5nm,0.8s						
HRY	Holter Researc	92.97	43	eP	P	03 10 53.3	-0.3
MAKZ	Makanchi	93.00	317	eP	P	03 10 53.2	-0.3
	comp=Z,23nm,1.1s						
MAKZ	Makanchi	93.00	317	eP	P	03 10 53.2	-0.3
MAKZ				pmax	pmax		
	comp=Z,23nm,1.1s						
MOOW	Moose Ponds	93.11	46	eP	P	03 10 54.7	+0.3
	comp=Z,2.2nm,0.9s						
YMR	Madison River	93.14	45	eP	P	03 10 54.3	-0.2
	comp=Z,5.0nm,0.9s						
H17A	Grant Village	93.36	46	eP	P	03 10 55.9	+0.3
	comp=Z,5.5nm,1.3s						
BW06	Boulder Array	93.77	47	P	P	03 10 58.3	+0.8
	baz=259						
PDAR	Pinedale Array	93.77	47	eP	P	03 10 57.4	-0.1
PDAR	Pinedale Array	93.77	47	P	P	03 10 58.1	+0.7
	comp=Z,1.3nm,0.8s,baz=256,slow=3.0,SNR=10						
NVS	Novosibirsk	93.96	325	i P	P	03 10 56.1	-1.6
EGMT	Eagleton	94.62	42	eP	P	03 11 00.8	-0.2
	comp=Z,8.7nm,0.9s						
EGMT	Eagleton	94.62	42	P	P	03 11 01.9	+0.8
	baz=259						
YKA	Yellowknife Ar	94.93	27	P	P	03 11 01.1	-0.9
YKA	Yellowknife Ar	94.93	27	P	P	03 11 01.1	-0.9
	comp=Z,1.5nm,0.8s,baz=255,slow=4.4,SNR=15						
YKB5	Yellowknife Ar	94.93	27	eP	P	03 11 01.4	-0.6
NRIK	Noril'sk	95.52	340	P	P	03 11 04.7	+0.1
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.2s						
NRIK	Noril'sk	95.52	340	P	P	03 11 04.7	+0.1
	comp=Z,1.4nm,0.2s,baz=126,slow=4.8,SNR=7.3						
KURK	Kurchatov	95.92	320	eP	P	03 11 05.9	-0.9
	comp=Z,7.6nm,1.1s						
KURK	Kurchatov	95.92	320	eP	P	03 11 05.9	-0.9
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TXAR	Lajitas Array	96.22	61	P	P	03 11 09.7	+0.9
TXAR	Lajitas Array	96.22	61	P	P	03 11 09.7	+0.9
	comp=Z,0.3nm,0.7s,baz=240,slow=4.4,SNR=4.1						
PMSA	Palmer Station	96.30	161	P	P	03 11 09.1	+0.8
	comp=Z,23nm,0.7s,baz=234,slow=8.7,SNR=6.0						
SNAA	Sanae	97.47	184	P	Pdif	03 11 13.7	+0.1
SNAA	Sanae	97.47	184	eP	P	03 11 12.6	-1.0
	comp=Z,12nm,1.1s						
SNAA	Sanae	97.47	184	P	Pdif	03 11 13.7	0.0
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SNAA	Sanae	97.47	184	P	Pdif	03 11 13.7	+0.1
	comp=Z,6.6nm,1.0s,baz=186,slow=7.9,SNR=8.5						
VNA2	Neumayer--Watz	98.45	182	P	P	03 11 17.3	-0.6
	baz=172,slow=1.4						
BRVK	Borovoye	101.30	322	ePdif	Pdif	03 11 30.3	-0.6
BRVK	Borovoye	101.30	322	eP	Pdif	03 11 30.3	-0.6
ARCES	ARCESS Array B	115.79	345	PKIKP	PKiKP	03 16 21.0	-1.1
ARCES	ARCESS Array B	115.79	345	PKP	PKiKP	03 16 20.9	-1.1
	comp=Z,2.9nm,0.7s,baz=64,slow=2.8,SNR=8.3						
OBN	Obninsk	120.12	329	ePKIKP	PKiKP	03 16 30.9	+0.1
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPAZ	La Paz	120.95	116	PKIKP	PKPdf	03 16 33.4	-0.9
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPAZ	La Paz	120.95	116	PKP	PKPdf	03 16 33.4	-0.9
	comp=Z,1.1nm,0.8s,baz=180,slow=25,SNR=2.8						
FINES	FINESS Array B	121.16	338	PKIKP	PKPdf	03 16 32.3	-0.3
FINES	FINESS Array B	121.16	338	PKP	PKPdf	03 16 32.3	-0.3
	comp=Z,2.2nm,0.8s,baz=11,slow=1.0,SNR=6.9						
CPUP	Villa Florida	124.78	133	PKIKP	PKiKP	03 16 40.8	-0.2
CPUP	Villa Florida	124.78	133	PKP	PKiKP	03 16 40.8	-0.2
	comp=Z,1.6nm,0.9s,baz=200,slow=4.5,SNR=2.9						
BOSA	Boshof	124.95	224	PKIKP	PKiKP	03 16 41.4	0.0
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BOSA	Boshof	124.95	224	PKP	PKiKP	03 16 41.4	0.0
	comp=Z,1.5nm,0.7s,baz=142,slow=3.2,SNR=5.0						
SDV	Santo Domingo	125.13	87	ePKPdf	PKPdf	03 16 40.0	-1.8
NB2	NORSAR Subarra	126.15	345	PKPdf	PKPdf	03 16 39.1	-3.1
	comp=Z,0.4nm,0.7s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.15	345	PKIKP	PKPdf	03 16 41.5	-0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	126.15	345	PKP	PKPdf	03 16 41.5	-0.7
	comp=Z,1.2nm,0.7s,baz=32,slow=2.0,SNR=6.0						
AKASG	Malin Array Be	126.17	327	PKIKP	PKPdf	03 16 41.1	-1.4
AKASG	Malin Array Be	126.17	327	PKP	PKPdf	03 16 41.1	-1.4
	comp=Z,4.2nm,1.1s,baz=58,slow=1.9,SNR=6.8						
AK11	Malin Array Si	126.21	327	ePKPdf	PKPdf	03 16 41.0	-1.6
BRTR	Keskin Array B	128.21	313	PKIKP	PKPdf	03 16 47.1	+0.1
BRTR	Keskin Array B	128.21	313	PKP	PKPdf	03 16 47.0	+0.1
	comp=Z,1.4nm,1.1s,baz=159,slow=3.8,SNR=4.7						
BIZ	Bicaz	129.93	324	⇓iP	PKiKP	03 16 51.8	+1.2
BUR04	Bucovina Ar. S	130.06	325	ePKPdf	PKiKP	03 16 50.9	-0.1
BURAR	Bucovina Array	130.06	325	⇓iP	PKiKP	03 16 51.2	+0.2
BURAR	Bucovina Array	130.06	325	⇓PKIKP	PKiKP	03 16 51.2	+0.2
ARR	Arges	131.64	323	⇑iP	PKiKP	03 16 54.7	+0.5
CLL	Collm	133.48	336	ePKPdf	PKPdf	03 16 56.0	-0.4
CLL				e		03 17 06.0	
CLL	Collm	133.48	336	ePKIKP	PKPdf	03 16 56.0	-0.4
KHC	Kasperske Hory	134.90	334	ePKPDF	PKPdf	03 16 59.0	-0.2
KHC	Kasperske Hory	134.90	334	ePKIKP	PKPdf	03 16 59.0	-0.2
GERES	GERESS Array B	135.06	333	PKIKP	PKPdf	03 16 59.2	-0.4
GERES	GERESS Array B	135.06	333	PKP	PKPdf	03 16 59.2	-0.4
	comp=Z,1.5nm,0.8s,baz=25,slow=4.4,SNR=5.7						
KEST	Kesra	146.70	322	ePKPdf	PKPdf	03 17 21.6	+0.7
KEST	Kesra	146.70	322	PKPbc	PKPab	03 17 23.6	0.0
	comp=Z,18nm,0.8s,baz=305,slow=2.3,SNR=14						
ES19	SONSECA Array	149.45	343	ePKPdf	PKPdf	03 17 25.3	+0.1
ESDC	Sonseca Array	149.49	343	PKPbc	PKiKP	03 17 30.5	-0.3
	comp=Z,2.0nm,0.8s,baz=31,slow=3.1,SNR=6.9						
TOA0	Torodi Ar. Sit	163.55	280	ePKPdf	PKPdf	03 17 43.0	-1.0
TORD	Torodi Ar. Bea	163.55	280	PKP	PKPdf	03 17 42.8	-1.2
	comp=Z,1.2nm,0.9s,baz=352,slow=2.9,SNR=6.0						

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*BJI **06** 02:58:17.6, 10°.56S×165°.73E, h13km, mB5.7/4, mb5.3/47, Ms5.6/4, Ms7 5.4/4*
*ISCJB **06** 02:58:18.7±0.1, 10°.67S±0°.02×165°.03E±0°.03, h10km, mb5.4/226, MS5.4/2, Error ellipse: s-maj=3.9km s-min=3.4km az=172.4*
*IDC **06** 02:58:18.5±0.4, 10°.68S×164°.98E, h0km, mb5.2/29, mb1 5.3/31, mb1mx5.2/40, mbtmp5.2/31, ML5.8/2, MS6.2/4, Ms1 6.2/4, ms1mx5.4/48, Error ellipse: s-maj=14.8km s-min=11.6km az=100.0*
*NEIC **06** 02:58:20.1±0.1, 10°.65S×165°.06E, h10km, mb5.5/177, Error ellipse: s-maj=2.8km s-min=2.3km az=105.0*
*MOS **06** 02:58:22.1±0.8, 10°.65S×165°.00E, h33km, mb5.6/55, Error ellipse: s-maj=9.0km s-min=7.7km az=73.5*
ISC 06 02:58:20.2±0.2**, 10°.67S**±0°.05×**165°.14E**±0°.05**, h10km, n564, σ1ˢ10**/559**, mb5.4**/225**, 12C-13D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.26	283	ePn	Pn	02 59 39.2	+0.3
HNR				Sn	Sn	03 00 39.8	+0.2
HNR	Honiara	5.26	283	Pn	Pn	02 59 37.9	-1.0
	554nm,0.3s,baz=158,slow=9.1,SNR=10						
HNR				Sn	Sn	03 00 39.8	+0.2
	baz=49,slow=19,SNR=1.7						
MARNC	Mare, Loyalty	11.11	166	ePn	Pn	03 01 00.1	+0.9
DZM	Mont Dzumac	11.41	174	ePn	Pn	03 01 03.7	+0.3
	2µm,1.8s						
DZM				eLR	LR	03 03 37.2	
	comp=Z,49µm,23.2s						
DZM	Mont Dzumac	11.41	174	Pn	Pn	03 01 03.8	+0.3
	40nm,0.3s,baz=351,slow=20,SNR=14						
DZM				Sn	Sn	03 03 08.8	-2.3
	3.7nm,0.3s,baz=352,slow=11,SNR=2.7						
PINNC	Pines Island,	12.08	170	ePn	Pn	03 01 13.7	+1.1
FUNA	Funafuti	14.03	82	ePn	Pn	03 01 39.9	+0.7
TARA	Tarawa	14.24	33	ePn	Pn	03 01 41.9	-0.2
TARA				eSn	Sn	03 04 13.7	-6.5
MSVF	Nonsavu	14.35	121	ePn	Pn	03 01 45.0	+1.3
MSVF	Nonsavu	14.35	121	eP	Pn	03 01 45.0	+1.3
PATS	Pohnpei	18.67	338	eP	Pn	03 02 38.2	-0.7
	284nm,1.0s						
KWAJ	Kwajalein Atol	19.50	7	eP	P	03 02 47.3	-0.4
	596nm,1.1s						
KWAJ	Kwajalein Atol	19.50	7	eP	P	03 02 47.3	-0.4
KWAJ				pmax	pmax		
	comp=Z,596nm,1.1s						
CTA	Charters Tower	20.45	241	P	P	03 02 57.7	-0.5
	comp=Z,78nm,0.8s,baz=67,slow=14,SNR=4.2						
CTA				LR	LR	03 10 23.9	
	comp=Z,30µm,19.3s,baz=74,slow=36						
CTAO	Charters Tower	20.45	241	eP	P	03 02 57.3	-0.9
	comp=Z,85nm,0.8s						
CTAO	Charters Tower	20.45	241	eP	P	03 02 57.3	-0.9
CTAO				pmax	pmax		
	comp=Z,85nm,0.8s						
OUZ	Omahuta	25.63	164	eP	P	03 03 50.2	+0.3
	comp=Z,117nm,0.9s						
H11S2	WAKE ISLAND Hy	29.02	3	T	T	03 34 56.6	
	baz=184,slow=76,SNR=92						
H11S3	WAKE ISLAND Hy	29.02	3	T	T	03 34 51.5	
	baz=184,slow=76,SNR=104						
H11S1	WAKE ISLAND Hy	29.03	3	T	T	03 34 52.0	
	baz=184,slow=76,SNR=101						
HIZ	Hauiti	29.06	164	eP	P	03 04 21.9	+1.1
	comp=Z,299nm,1.4s						
MXZ	Matakaoa Point	29.28	158	eP	P	03 04 24.2	+1.5
	comp=Z,166nm,0.9s						
URZ	Urewera	29.50	161	P	P	03 04 25.7	+1.0
	comp=Z,82nm,0.9s,baz=305,slow=9.6,SNR=4.1						
BKZ	Black Stump Fm	30.13	162	eP	P	03 04 30.6	+0.3
	comp=Z,260nm,1.4s						
H11N1	WAKE ISLAND Hy	30.24	3	T	T	03 36 24.6	
	baz=182,slow=76,SNR=78						
H11N3	WAKE ISLAND Hy	30.25	3	T	T	03 36 28.1	
	baz=182,slow=76,SNR=64						
H11N2	WAKE ISLAND Hy	30.26	3	T	T	03 36 27.6	
	baz=182,slow=76,SNR=26						
BHHZ	Black Hill Sta	30.31	163	P	P	03 04 34.3	+2.4
STKA	Stephens Creek	30.31	222	eP	P	03 04 32.1	+0.1
	comp=Z,21nm,1.0s						
STKA	Stephens Creek	30.31	222	eP	P	03 04 32.1	+0.1
STKA				pmax	pmax		
	comp=Z,21nm,1.0s						
STKA	Stephens Creek	30.31	222	P	P	03 04 31.0	-1.0
	comp=Z,61nm,1.1s,baz=26,slow=12,SNR=7.5						
KWHZ	Kaweka Forest	30.35	163	P	P	03 04 32.4	+0.1
MCHZ	McNeill Hill	30.45	162	P	P	03 04 36.4	+3.3
QRZ	Quartz Range	30.74	169	P	P	03 04 40.8	+5.2
TSZ	Takapari Road	30.81	164	P	P	03 04 35.9	-0.4
KAHZ	Kahuranaki	30.83	162	P	P	03 04 39.3	+2.8
PXZ	Pawanui	31.04	162	P	P	03 04 40.9	+2.6
WRAB	Tennant Creek	31.04	249	i P	P	03 04 36.9	-1.7
WRAB				pmax	pmax		
	comp=Z,39nm,1.1s						
WRA	Warramunga Arr	31.05	249	P	P	03 04 36.0	-2.7
WRA	Warramunga Arr	31.05	249	P	P	03 04 36.0	-2.7
	comp=Z,9.9nm,0.5s,baz=80,slow=9.2,SNR=12						
WRA				LR	LR	03 16 44.3	
	comp=Z,37µm,20.3s,baz=75,slow=36						
DVHZ	Dannevirke	31.09	164	P	P	03 04 40.6	+1.8
MRZ	Mangatainoka R	31.27	165	P	P	03 04 41.3	+1.0
OGWZ	Otaki Gorge	31.31	165	P	P	03 04 40.9	+0.3
BFZ	Birch Farm	31.47	164	eP	P	03 04 42.8	+0.7
	comp=Z,136nm,0.9s						
BFZ	Birch Farm	31.47	164	P	P	03 04 41.3	-0.8
HOWZ	Holdsworth Sta	31.47	165	P	P	03 04 42.8	+0.6
MTW	Mount Morrison	31.71	165	P	P	03 04 44.5	+0.2
THZ	Tophouse	31.72	169	eP	P	03 04 46.1	+1.8
	comp=Z,86nm,0.9s						
MSWZ	Moikau Station	31.89	166	P	P	03 04 47.3	+1.4
PAWZ	Paruwai Farm	31.91	165	P	P	03 04 47.7	+1.7
TRWZ	Traveller	31.99	165	P	P	03 04 48.0	+1.4
PLWZ	Palliser	32.04	166	P	P	03 04 48.0	+0.9
ASAR	Alice Springs	32.43	242	P	P	03 04 47.8	-3.1
	comp=Z,15nm,0.7s,baz=63,slow=9.9,SNR=9.9						
KHZ	Kahutara	32.47	168	eP	P	03 04 52.2	+1.4
	comp=Z,114nm,1.3s						
FOZ	Fox Glacier	32.99	174	eP	P	03 04 56.9	+1.5
	comp=Z,60nm,0.8s						
OXZ	Oxford	33.09	171	eP	P	03 04 57.9	+1.7
	comp=Z,85nm,0.8s						
RPZ	Rata Peaks	33.32	172	eP	P	03 04 59.2	+0.9
RPZ	Rata Peaks	33.32	172	P	P	03 04 57.0	-1.3
	comp=Z,41nm,0.8s,baz=9.5,slow=6.1,SNR=3.4						
CRLZ	Canterbury Las	33.42	170	eP	P	03 05 00.3	+1.2
	comp=Z,94nm,1.1s						
MQZ	McQueen’s Vall	33.56	170	eP	P	03 05 01.2	+0.9
	comp=Z,142nm,1.3s						
WKZ	Wanaka	34.20	175	eP	P	03 05 06.5	+0.5
	comp=Z,51nm,1.0s						
FITZ	Fitzroy Crossi	38.90	254	P	P	03 05 44.0	-2.4
	comp=Z,14nm,0.5s,baz=65,slow=7.9,SNR=12						
TNTI	Ternate	39.24	285	P	P	03 05 58.6	+9.3
SANI	Sanana	39.80	280	P	P	03 05 49.0	-4.9
BATI	Baumata	40.77	267	P	P	03 05 59.9	-2.1
	comp=Z,61nm,0.5s,baz=188,slow=1.6,SNR=7.7						
KMSI	Cibinong	42.42	283	P	P	03 06 27.6	+12
LUWI	Luwuk	43.16	280	P	P	03 06 37.7	+16
APSI	Ampana	44.28	280	P	P	03 06 37.9	+7.3
MRSI	Marisa	44.35	282	P	P	03 06 37.1	+5.9
MBWA	Marble Bar	44.75	251	eP	P	03 06 33.3	-1.0
	comp=Z,23nm,0.9s						
TBI	Tubuai	45.03	112	eLR	LR	03 19 19.8	
	comp=Z,60µm,27.0s						
RCP	Roxas	47.56	296	⇑eP	P	03 06 56.4	-0.1
KIP	Kipapa	48.23	49	ceP	P	03 07 03.6	+2.1
KIP				pmax	pmax		
	comp=Z,335nm,2.5s						
OPA	Opana	48.40	48	eP	P	03 07 02.7	-0.1
	comp=Z,426nm,1.0s						
OPA	Opana	48.40	48	eP	P	03 07 02.7	-0.1
OPA				pmax	pmax		
	comp=Z,426nm,1.0s						
KHU	Kahuku	48.78	53	eP	P	03 07 05.4	-0.7
	comp=Z,466nm,1.3s						
KHU	Kahuku	48.78	53	eP	P	03 07 05.4	-0.7
KHU				pmax	pmax		
	comp=Z,466nm,1.3s						
KBKI	Kotabaru	49.10	275	P	P	03 07 24.1	+16
POHA	Pohakuloa	49.13	52	eP	P	03 07 08.5	-0.3
	comp=Z,256nm,1.1s						
NWAO	Narrogin (SRO)	49.18	236	eP	P	03 07 08.9	+0.1
	comp=Z,430nm,1.2s						
NWAO	Narrogin (SRO)	49.18	236	eP	P	03 07 08.9	+0.1
NWAO				pmax	pmax		
	comp=Z,430nm,1.2s						
NWAO	Narrogin (SRO)	49.18	236	P	P	03 07 07.2	-1.5
	comp=Z,14nm,0.9s,baz=311,slow=10.0,SNR=4.9						
NWAO				LR	LR	03 28 21.7	
	comp=Z,50µm,19.2s,baz=318,slow=37						
SRBI	Singaraja	49.28	268	P	P	03 07 18.6	+8.8
JAGI	Jajag, Banyuwa	50.28	268	P	P	03 07 27.1	+10
KKM	Kota Kinabalu	51.46	287	eP	P	03 07 25.7	-0.6
	comp=Z,136nm,1.1s						
MJAR	Matsushiro Arr	53.36	333	P	P	03 07 39.0	-1.0
	comp=Z,6.9nm,0.7s,baz=170,slow=9.6,SNR=6.4						
MAJO	Matsushiro	53.37	333	eP	P	03 07 39.6	-0.4
	comp=Z,32nm,1.1s						
MAJO	Matsushiro	53.37	333	eP	P	03 07 39.6	-0.4
MAJO				pmax	pmax		
	comp=Z,32nm,1.1s						
SBUM	Sibu	54.24	281	eP	P	03 07 46.0	-0.9
	comp=Z,40nm,1.5s						
JNU	Nakatsue	54.43	324	P	P	03 07 47.0	-0.8
	comp=Z,12nm,0.5s,baz=149,slow=13,SNR=7.7						
YHNB	Yeheng	55.28	310	eP	P	03 07 53.3	-1.0
	comp=Z,51nm,0.9s						
KSM	Kuching	55.85	279	eP	P	03 07 57.3	-1.3
	comp=Z,47nm,1.1s						
ASAJ	Asahikawa	58.24	341	P	P	03 08 15.6	+0.7
	comp=Z,37nm,0.7s,baz=228,slow=14,SNR=4.1						
RKT	Rikitea	58.28	111	eLR	LR	03 25 24.2	
	comp=Z,29µm,30.5s						
SSE	Sheshan	59.17	316	P	P	03 08 21.1	-0.5
SSE				pmax	pmax		
	comp=Z,19nm,0.8s						
SSE	Sheshan	59.17	316	eP	P	03 08 21.0	-0.5
	comp=Z,57nm,1.2s						

KSRS	Korea Array	59.23	326	P	P	03 08 21.3	-0.5
	comp=Z,3.9nm,0.8s,baz=132,slow=7.3,SNR=6.1						
KSAR	Wonju Array Be	59.24	326	P	P	03 08 21.3	-0.6
KSAR	Wonju Array Be	59.24	326	P	P	03 08 21.3	-0.6
YSS	Yuzh-Sakhalins	60.75	343	eP	P	03 08 32.9	+0.8
	comp=Z,104nm,1.3s						
YSS	Yuzh-Sakhalins	60.75	343	⇑eP	P	03 08 33.7	+1.6
YSS				e		03 08 38.9	
YSS				e		03 08 48.5	
YSS				pmax	pmax		
	comp=Z,390nm,1.5s						
YSS				pmax	pmax		
	comp=N,180nm,1.3s						
YSS				pmax	pmax		
	comp=E,170nm,1.2s						
TEY	Ternei	61.15	337	⇓eP	P	03 08 36.6	+1.8
TEY				pmax	pmax		
	comp=Z,30nm,1.5s						
TEY				pmax	pmax		
	comp=Z,40nm,1.4s						
NJ2	Nanjing	61.33	316	eP	P	03 08 36.6	+0.2
NJ2				pmax	pmax		
	comp=Z,27nm,0.9s						
MSHR	Mys Shultsa	61.44	332	eP	P	03 08 36.9	0.0
VLA	Vladivostok	61.53	333	i P	P	03 08 38.3	+0.8
VLA				pmax	pmax		
	comp=Z,40nm,0.9s						
QIZ	Qiongzhong	61.98	298	eP	P	03 08 40.8	-0.1
	comp=Z,69nm,1.4s						
USRK	Ussuriysk Ar.	62.34	334	P	P	03 08 42.7	-0.2
	comp=Z,5.5nm,0.6s,baz=131,slow=6.0,SNR=9.4						
PET	Petropavlovsk	63.68	356	⇑iP	P	03 08 52.7	+1.1
PET				pmax	pmax		
	comp=Z,93nm,1.4s						
MDJ	Mudanjiang	63.74	332	P	P	03 08 53.9	+1.7
MDJ				S	S	03 17 27.6	+0.7
MDJ				pmax	pmax		
	comp=Z,63nm,1.9s						
MDJ	Mudanjiang	63.74	332	eP	P	03 08 51.5	-0.7
	comp=Z,18nm,0.9s						
DL2	Dalian	63.82	323	P	P	03 08 54.6	+1.8
DL2				pmax	pmax		
	comp=Z,71nm,1.2s						
PEA0B	Petropavlovsk-	63.84	355	eP	P	03 08 51.2	-1.5
	comp=Z,79nm,1.4s						
PETK	Petropavlovsk-	63.84	355	eP	P	03 08 52.1	-0.6
PETK	Petropavlovsk-	63.84	355	eP	P	03 08 52.1	-0.6
PETK	Petropavlovsk-	63.84	355	P	P	03 08 51.8	-0.9
	comp=Z,14nm,0.8s,baz=154,slow=7.7,SNR=8.9						
KIWB	Kanaga Island	64.12	12	eP	P	03 08 54.9	+0.4
TYV	Tymovskoe	64.32	344	eP	P	03 08 57.4	+1.5
TYV				pmax	pmax		
	comp=Z,29nm,1.7s						
SNY	Shenyang	64.69	327	⇑P	P	03 08 58.9	+0.4
SNY				pmax	pmax		
	comp=Z,43nm,2.5s						
TIA	Tai'an	64.94	318	P	P	03 08 58.6	-1.7
TIA				pmax	pmax		
	comp=Z,11nm,3.3s						
IPM	Ipoh	65.57	280	eP	P	03 09 03.6	-1.2
	comp=Z,100nm,1.3s						
KLR	Kul'dur	66.48	337	P	P	03 09 11.5	+1.6
CASY	Casey	66.51	201	eP	P	03 09 09.1	-0.9
	comp=Z,100nm,1.3s						
VNDA	Vanda	66.86	181	P	P	03 09 12.9	+0.9
	comp=Z,22nm,1.0s,baz=45,slow=5.3,SNR=5.6						
NIKH	Nikolski High	67.18	17	eP	P	03 09 14.7	+0.4
	comp=Z,366nm,1.2s						
GYA	Guiyang	67.71	304	⇑iP	P	03 09 21.7	+3.3
GYA				pP	pwP	03 09 26.4	+0.9
GYA				PP	PP	03 11 52.0	+4.1
GYA				S	S	03 18 17.8	+1.4
GYA				SKS	SKiKP	03 19 14.0	-2.5
GYA				SS	SS	03 22 40.5	+2.6
GYA				pmax	pmax		
	comp=Z,120nm,1.2s						
GYA				pmax	pmax		
	comp=Z,160nm,8.5s						
GYA				LR	LR		
	comp=Z,1µm,18.4s						
GYA				LR	LR		
	comp=Z,2µm,18.3s						
GYA				LR	LR		
	comp=Z,2µm,19.0s						
BJI	Beijing	67.81	321	P	P	03 09 19.1	+0.5
BJI				pmax	pmax		
	comp=Z,25nm,2.8s						
UNV	Unalaska Valle	68.63	18	eP	P	03 09 23.6	+0.2
	comp=Z,112nm,1.2s						
TIY	Taiyuan	68.88	317	eP	P	03 09 27.2	+1.8
TIY				pmax	pmax		
	comp=Z,16nm,0.6s						
PBKT	Sadao Pong	68.98	292	eP	P	03 09 26.6	+0.3
	comp=Z,36nm,1.0s						
XAN	Xi'an	69.43	313	P	P	03 09 28.6	-0.3
XAN				pP	pwP	03 09 35.7	-0.3
XAN				pmax	pmax		
	comp=Z,24nm,1.4s						
XAN	Xi'an	69.43	313	eP	P	03 09 29.1	+0.2
	comp=Z,20nm,0.9s						
XAN	Xi'an	69.43	313	eP	P	03 09 29.1	+0.2
XAN				pmax	pmax		
	comp=Z,20nm,0.9s						
UTTA	Uttaradit	69.74	293	P	P	03 09 34.5	+3.5
	comp=Z,13nm,0.9s,comp=Z,0.0nm						
KMI	Kunming	70.42	302	P	P	03 09 36.0	+0.6
KMI				pP	pwP	03 09 42.2	-0.3
KMI				sP	sP	03 09 44.1	+6.0
KMI				pmax	pmax		
	comp=Z,49nm,1.5s						
KMI	Kunming	70.42	302	eP	P	03 09 35.5	+0.1
	comp=Z,95nm,1.4s						
KMI	Kunming	70.42	302	eP	P	03 09 35.5	+0.1
KMI				pmax	pmax		
	comp=Z,95nm,1.4s						
MA2	Magadan	70.96	352	eP	P	03 09 38.5	+0.9
	comp=Z,53nm,1.3s						
MA2	Magadan	70.96	352	ceP	P	03 09 42.0	+4.4
MA2				pmax	pmax		
	comp=Z,64nm,1.7s						
HHC	Hu-ho-hao-te	71.16	320	eP	P	03 09 42.9	+3.5
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
CM01	Chiang Mai Arr	71.39	294	eP	P	03 09 40.5	-0.6
CMAR	Chiang Mai Arr	71.42	294	P	P	03 09 41.5	+0.2
	comp=Z,20nm,1.0s,baz=115,slow=4.3,SNR=8.5						
CHTO	Chiang Mai	71.53	294	eP	P	03 09 41.6	-0.4
	comp=Z,51nm,1.3s						
CHTO	Chiang Mai	71.53	294	eP	P	03 09 41.6	-0.4
CHTO				pmax	pmax		
	comp=Z,51nm,1.3s						
HIA	Hailar	71.75	331	i P	P	03 09 43.1	+0.4
HIA				pmax	pmax		
	comp=Z,64nm,1.2s						
CD2	Chengdu	71.90	307	P	P	03 09 44.0	0.0
CD2				S	S	03 19 05.9	+0.5
CD2				pmax	pmax		
	comp=Z,90nm,0.9s						
SEY	Seymchan	74.04	354	i P	P	03 09 56.5	+0.6
LZH	Lanzhou	74.06	312	⇑P	P	03 09 58.2	+1.3
LZH				pP	pwP	03 10 03.5	-0.5
LZH				sP	PcP	03 10 06.9	-5.2
LZH				PP	PP	03 12 47.5	+5.1
LZH				pmax	pmax		
	comp=Z,69nm,1.3s						
LZH				pmax	pmax		
	comp=Z,460nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,16.5s						
LZH				LR	LR		
	comp=Z,1µm,16.9s						
LZH				LR	LR		
	comp=Z,2µm,19.3s						
SII	Sitkinak Islan	74.96	22	eP	P	03 10 02.1	+0.7
	comp=Z,160nm,1.2s						
GAMB	Gambell	76.31	10	eP	P	03 10 09.6	+0.6
	comp=Z,146nm,1.2s						
KDAK	Kodiak Island	76.45	22	eP	P	03 10 10.7	+0.8
	comp=Z,77nm,1.3s						
KDAK	Kodiak Island	76.45	22	eP	P	03 10 10.7	+0.8
KDAK				pmax	pmax		
	comp=Z,77nm,1.3s						
KDAK	Kodiak Island	76.45	22	P	P	03 10 10.3	+0.4
	comp=Z,23nm,0.9s,baz=124,slow=3.6,SNR=6.8						
YAK	Yakutsk	77.57	344	eP	P	03 10 16.2	+0.1
YAK				pmax	pmax		
	comp=Z,73nm,0.9s						
YAK				pmax	pmax		
	comp=E,15nm,1.0s						
YAK				pmax	pmax		
	comp=N,27nm,1.0s						
ULN	Ulaanbaatar	77.65	324	i P	P	03 10 18.2	+1.1
ULN				pmax	pmax		
	comp=Z,42nm,0.9s						
SONM	Songino Array	78.01	324	P	P	03 10 18.3	-0.8
	comp=Z,14nm,0.9s,baz=137,slow=4.5,SNR=6.7						
HOM	Homer	78.16	21	eP	P	03 10 19.7	+0.2
	comp=Z,376nm,1.3s						
GTA	Gaotai	78.37	314	P	P	03 10 22.4	+1.1
GTA				pP	pwP	03 10 27.0	-1.4
GTA				sP	PcP	03 10 29.4	-1.2
GTA				pmax	pmax		
	comp=Z,22nm,1.0s						
BRLK	Bradley Lake	78.50	21	eP	P	03 10 22.4	+0.9
	comp=Z,130nm,1.3s						
BILL	Bilibino	78.51	0	eP	P	03 10 23.5	+2.3
BILL				e		03 10 35.0	
BILL				e		03 13 18.3	
BILL				ePPP	PPP	03 15 04.5	
BILL				pmax	pmax		
	comp=Z,279nm,2.5s						
SEW	Seward	79.25	21	eP	P	03 10 25.7	+0.3
	comp=Z,54nm,1.1s						
QSPA	South Pole Qui	79.33	180	P	P	03 10 25.7	-0.4
	comp=Z,49nm,1.1s,baz=320,slow=1.8,SNR=8.5						
SUA	Susitna One	79.78	20	eP	P	03 10 28.6	+0.1
	comp=Z,70nm,1.2s						
RC01	Rabbit Creek A	79.85	20	eP	P	03 10 28.9	+0.2
	comp=Z,92nm,1.4s						
BOD	Bodaibo	79.94	335	eP	P	03 10 27.9	-1.4
BOD				pmax	pmax		
	comp=Z,46nm,1.9s						
PPLA	Purkeypile	80.36	18	eP	P	03 10 31.3	-0.3
	comp=Z,24nm,1.2s						
KNK	Knik Glacier	80.52	21	eP	P	03 10 32.7	+0.4
	comp=Z,120nm,1.4s						
GLI	Glacier Island	80.63	22	eP	P	03 10 33.5	+0.5
	comp=Z,148nm,1.4s						
SML	Sawmill	80.83	20	eP	P	03 10 34.1	0.0
	comp=Z,94nm,1.2s						
SML	Sawmill	80.83	20	eP	P	03 10 34.1	0.0
SML				pmax	pmax		
	comp=Z,94nm,1.2s						
EYAK	Cordova Ski Ar	80.91	22	eP	P	03 10 34.6	+0.3
	comp=Z,150nm,1.4s						
ZAK	Zakamensk	81.05	325	eP	P	03 10 28.3	-7.3
ZAK				pmax	pmax		
	comp=Z,28nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,34nm,1.4s						
RPN	Rapa Nui	81.27	116	eP	P	03 10 37.1	-0.1
	comp=Z,177nm,1.2s						
RPN	Rapa Nui	81.27	116	LR	LR	03 38 46.0	
	comp=Z,11µm,20.3s,baz=319,slow=30						
DIV	Divide	81.28	22	eP	P	03 10 36.8	+0.3
	comp=Z,127nm,1.3s						
HMT	Hamilton	81.33	23	eP	P	03 10 36.8	0.0
	comp=Z,109nm,1.2s						
TRF	Thorofare Moun	81.35	19	eP	P	03 10 36.7	-0.2
	comp=Z,21nm,1.0s						
KLU	Klutina	81.47	21	eP	P	03 10 37.5	0.0
	comp=Z,115nm,1.3s						
TLY	Talaya	81.48	326	eP	P	03 10 36.7	-1.0
	comp=Z,35nm,0.8s						
TLY	Talaya	81.48	326	ceP	P	03 10 39.9	+2.2
BPAW	Bear Paw Mtn.	81.61	18	eP	P	03 10 38.1	0.0
	comp=Z,30nm,1.3s						
LSA	Lhasa	81.65	302	eP	P	03 10 39.0	-0.7
	comp=Z,51nm,1.4s						
LSA	Lhasa	81.65	302	eP	P	03 10 39.0	-0.7
LSA				pmax	pmax		
	comp=Z,51nm,1.4s						
RDOG	Red Dog Mine	81.78	12	eP	P	03 10 40.2	+1.3
	comp=Z,87nm,1.0s						
DHY	Denali Highway	82.03	20	eP	P	03 10 41.5	+0.9
	comp=Z,45nm,1.2s						
KCPM	Cahto Peak	82.74	47	eP	P	03 10 44.9	+0.2
	comp=Z,46nm,1.0s						
KMRM	Mail Ridge	82.83	47	eP	P	03 10 45.3	+0.2
	comp=Z,72nm,1.1s						
HOPS	Hopland Field	82.87	48	eP	P	03 10 46.0	+0.7
	comp=Z,49nm,1.1s						
GDXM	Geysers	83.01	48	eP	P	03 10 46.3	+0.2
	comp=Z,21nm,1.0s						
KHMM	Horse Mountain	83.04	46	eP	P	03 10 46.5	+0.1
	comp=Z,53nm,1.2s						
HDA	Harding Lake	83.08	19	P	P	03 10 46.7	+0.9
	baz=227						
TCOL	CIGO, UAF Yank	83.11	18	P	P	03 10 46.0	+0.1
	baz=226						
COLA	College	83.12	18	eP	P	03 10 46.2	+0.3
	comp=Z,48nm,1.0s						
COLA	College	83.12	18	eP	P	03 10 46.2	+0.3
COLA				pmax	pmax		
	comp=Z,48nm,1.0s						
ILAR	Eielson Array	83.35	19	P	P	03 10 47.5	+0.3
	comp=Z,10nm,0.8s,baz=228,slow=6.5,SNR=9.6						
SAO	San Andreas Ge	83.36	51	eP	P	03 10 47.7	-0.2
	comp=Z,23nm,0.9s						
SAO	San Andreas Ge	83.36	51	eP	P	03 10 47.7	-0.2
SAO				pmax	pmax		
	comp=Z,23nm,0.9s						
POKR	Poker Flat Res	83.41	18	P	P	03 10 47.7	+0.2
	baz=227						
O02D	Mt. Diablo Mer	83.48	47	P	P	03 10 48.4	-0.1
	baz=250						
L02E	Cave Junction	83.58	45	P	P	03 10 48.7	-0.2
	baz=250						
J01E	Myrtle Point	83.71	44	P	P	03 10 49.6	+0.1
	baz=249						
K02D	Willamette Mer	83.72	45	P	P	03 10 49.6	-0.1
	baz=249						
WDC	Whiskeytown Da	83.79	47	eP	P	03 10 50.3	+0.3
	comp=Z,52nm,1.4s						
WDC	Whiskeytown Da	83.79	47	eP	P	03 10 50.3	+0.3
WDC				pmax	pmax		
	comp=Z,52nm,1.4s						
N02D	Trinity Center	83.81	46	P	P	03 10 50.5	+0.3
	baz=250						
M02C	Callahan	83.84	46	P	P	03 10 51.2	+0.9
	baz=250,SNR=6.7						
PAGB	Antelope Grade	83.96	52	eP	P	03 10 51.6	+0.6
	comp=Z,32nm,1.2s						
SMMC	Simmler	84.03	53	P	P	03 10 51.7	+0.3
	baz=253						
PKM	Mcpherson Peak	84.05	53	P	P	03 10 51.7	+0.1
	baz=253						
YBH	Yreka Blue Hor	84.06	46	eP	P	03 10 51.4	-0.1
	comp=Z,52nm,1.3s						
YBH	Yreka Blue Hor	84.06	46	eP	P	03 10 51.4	-0.1
YBH				pmax	pmax		
	comp=Z,52nm,1.3s						
COLD	Coldfoot	84.10	16	eP	P	03 10 51.4	+0.5
	comp=Z,17nm,1.3s						
HUMO	Hull Mountain	84.19	45	eP	P	03 10 52.0	+0.1
	comp=Z,34nm,1.0s						
O03E	Paynes Creek	84.23	47	P	P	03 10 52.5	+0.2
	baz=251,SNR=6.6						
PRP	Porcupine Dome	84.28	19	eP	P	03 10 52.5	+0.4
	comp=Z,11nm,1.1s						
HYT	Haines Junctio	84.29	24	eP	P	03 10 53.0	+0.8
	comp=Z,28nm,1.0s						
I03D	Drain, OR	84.29	44	P	P	03 10 52.7	+0.2
	baz=250						
WRAK	Wrangell Islan	84.31	30	eP	P	03 10 53.1	+0.9
	comp=Z,54nm,1.3s						
AFDM	Forest Hills D	84.40	49	eP	P	03 10 53.4	+0.3
	comp=Z,37nm,1.1s						
L04D	Klamath Falls	84.51	45	P	P	03 10 54.0	+0.3
	baz=250						
M04C	Macdoel	84.69	46	P	P	03 10 55.3	+0.6
	baz=251,SNR=6.9						
CIS	Catalina Islan	84.73	55	P	P	03 10 55.0	+0.1
	baz=254						
G03D	McMinnville, O	84.88	42	P	P	03 10 55.8	+0.5
	baz=250						
ARVC	Arvin	84.89	53	P	P	03 10 55.8	+0.1
	baz=253						
VES	Vestal, Richgr	84.89	52	P	P	03 10 55.7	0.0
	baz=253,SNR=5.2						
I04A	Tendick Farm,	84.96	44	P	P	03 10 56.2	+0.3
	baz=250						
J04D	Umpqua Nationa	84.98	44	P	P	03 10 56.8	+0.5
	baz=250,SNR=5.5						
H04D	Lebanon	84.99	43	P	P	03 10 56.2	+0.2
	baz=250						
FYU	Fort Yukon	85.06	18	eP	P	03 10 56.2	+0.4
	comp=Z,29nm,1.2s						
BEKR	Beckworth	85.14	48	eP	P	03 10 57.1	+0.1
	comp=Z,50nm,1.2s						
MWC	Mount Wilson	85.24	54	eP	P	03 10 57.4	-0.3
	comp=Z,46nm,1.1s						
MWC	Mount Wilson	85.24	54	eP	P	03 10 57.4	-0.3
MWC				pmax	pmax		
	comp=Z,46nm,1.1s						
WHY	Whitehorse	85.29	25	eP	P	03 10 57.9	+0.6
	comp=Z,36nm,1.4s						
ISA	Isabella, Lake	85.32	53	eP	P	03 10 57.8	-0.2
	comp=Z,30nm,1.1s						
ISA	Isabella, Lake	85.32	53	eP	P	03 10 57.8	-0.2
ISA				pmax	pmax		
	comp=Z,30nm,1.1s						
ISA	Isabella, Lake	85.32	53	P	P	03 10 57.5	-0.5
	baz=253,SNR=6.7						
H04A	Detroit Lake	85.42	43	eP	P	03 10 57.8	-0.3
	comp=Z,41nm,1.2s						
MDPB	Devils Postpil	85.42	51	eP	P	03 10 58.5	-0.1
	comp=Z,48nm,1.2s						
PNTR	Pine Nut	85.46	49	eP	P	03 10 58.8	0.0
	comp=Z,69nm,1.4s						
EDW2	Edwards Air Fo	85.48	53	P	P	03 10 58.5	-0.3
	baz=254,SNR=7.3						
OMMB	Old Mammoth Mi	85.48	51	eP	P	03 10 58.5	-0.4
	comp=Z,34nm,1.2s						
BFSC	Mount Baldy Ra	85.56	54	P	P	03 10 59.2	0.0
	baz=254,SNR=5.4						
J05D	Fort Rock, OR	85.60	45	P	P	03 10 59.2	-0.1
	baz=251						
MLAC	Mammoth, Mammo	85.61	51	P	P	03 10 59.0	-0.5
	baz=253						
TIXI	Tiksi	85.61	349	i P	P	03 10 57.0	-1.4
TIXI				pmax	pmax		
	comp=Z,38nm,1.1s						
109C	Camp Elliot, M	85.64	56	P	P	03 10 59.4	-0.1
	baz=254						
YERR	Yerington	85.70	49	eP	P	03 10 59.6	-0.3
	comp=Z,36nm,1.4s						
MURC	Murrieta	85.76	55	P	P	03 10 60.0	-0.2
	baz=254						
E04D	Cinebar	85.80	41	P	P	03 10 60.0	0.0
	baz=250						
PAHR	Pah Rah Range	85.81	48	eP	P	03 11 00.1	-0.3
	comp=Z,37nm,1.1s						
D03D	Eldon	85.81	40	P	P	03 11 00.0	0.0
	baz=249						
MOD	Modoc Plateau	85.81	46	eP	P	03 10 59.8	-0.6
	comp=Z,36nm,1.1s						
CWC	Cottonwood Cre	85.84	52	P	P	03 11 00.1	-0.6
	baz=254						
I05D	Terrebonne, OR	85.87	44	P	P	03 11 00.4	-0.1
	baz=251						
LRMC	Laurel Mtn Rad	85.89	53	P	P	03 11 00.6	-0.2
	baz=254,SNR=5.7						
TIN	Tinemaha, Big	85.90	51	P	P	03 11 00.4	-0.5
	baz=254						
BAR	Barrett	85.94	56	eP	P	03 11 00.6	-0.5
	comp=Z,29nm,1.4s						
PINE	Pine Mountain	85.97	44	eP	P	03 11 01.4	+0.3
	comp=Z,64nm,1.1s						
RYN	Ryan	86.13	50	eP	P	03 11 01.5	-0.5
	comp=Z,24nm,1.1s						
BBRC	Big Bear Solar	86.16	54	P	P	03 11 01.6	-0.8
	baz=254						
DAC	Darwin (Calif)	86.18	52	eP	P	03 11 01.9	-0.5
	comp=Z,33nm,1.3s						
DAC	Darwin (Calif)	86.18	52	eP	P	03 11 01.9	-0.5
DAC				pmax	pmax		
	comp=Z,33nm,1.3s						
G05D	Wamic, OR	86.19	43	P	P	03 11 01.8	-0.1
	baz=251						
MPMC	Manual Prospec	86.20	52	P	P	03 11 02.4	-0.1
	baz=254						
MONP2	Monument Peak	86.20	56	P	P	03 11 02.8	+0.3
	baz=255,SNR=6.3						
NVAR	Mina Array Bea	86.24	50	P	P	03 11 02.2	-0.5
	comp=Z,19nm,1.0s,baz=232,slow=8.0,SNR=16						
F05D	White Salmon	86.30	42	P	P	03 11 02.6	+0.1
	baz=251						
PFO	Pinyon Flats O	86.36	55	eP	P	03 11 02.6	-0.6
	comp=Z,18nm,1.0s						
PFO	Pinyon Flats O	86.36	55	eP	P	03 11 02.6	-0.6
PFO				pmax	pmax		
	comp=Z,18nm,1.0s						
PFO	Pinyon Flats O	86.36	55	P	P	03 11 02.7	-0.6
	baz=255						
XPFO	Pion Flat	86.36	55	eP	P	03 11 02.8	-0.4
	comp=Z,18nm,1.0s						
DLBC	Dease Lake	86.36	28	eP	P	03 11 03.2	+0.6
	comp=Z,18nm,1.3s						
IKP	In-Ko-Pah, Jac	86.39	56	P	P	03 11 03.2	-0.2
	baz=255						
D05A	Enumclaw	86.39	41	eP	P	03 11 03.4	+0.5
	comp=Z,126nm,1.3s						
A04D	Lummi Island	86.47	39	P	P	03 11 03.7	+0.5
	baz=250						
GSC	Goldstone, Bar	86.53	53	eP	P	03 11 03.7	-0.2
	comp=Z,39nm,1.5s						
GSC	Goldstone, Bar	86.53	53	eP	P	03 11 03.7	-0.2
GSC				pmax	pmax		
	comp=Z,39nm,1.5s						
GSC	Goldstone, Bar	86.53	53	P	P	03 11 03.9	-0.1
	baz=254						
GRAC	Grapevine Rang	86.55	52	P	P	03 11 03.6	-0.3
	baz=254						
KVN	Kaiserville	86.57	49	eP	P	03 11 03.9	-0.3
	comp=Z,27nm,1.2s						
KVN	Kaiserville	86.57	49	eP	P	03 11 03.9	-0.3
KVN				pmax	pmax		
	comp=Z,27nm,1.2s						
B05A	Bryant	86.69	40	P	P	03 11 04.3	0.0
	baz=250						
SWSC	Sam W. Stewart	86.72	56	P	P	03 11 05.1	+0.3
	baz=255,SNR=6.7						
HEC	Hector,Ludlow	86.78	54	P	P	03 11 04.7	-0.4
	baz=255						
FURC	Furnace Creek,	86.80	52	P	P	03 11 04.8	-0.2
	baz=254						
BELC	Belle Mtn. Jos	86.83	55	P	P	03 11 05.7	+0.1
	baz=255,SNR=6.4						
I07A	Izee	87.05	44	eP	P	03 11 06.5	+0.2
	comp=Z,40nm,1.1s						
SHOC	Shoshone, Teco	87.10	53	P	P	03 11 06.5	-0.1
	baz=255						
B06A	Marblemount	87.16	40	eP	P	03 11 06.9	+0.3
	comp=Z,46nm,1.4s						
BC3	Big Chuckawall	87.18	55	P	P	03 11 07.8	+0.6
	baz=255,SNR=6.7						
TUQ	Turquoise Moun	87.26	53	P	P	03 11 07.6	+0.1
	baz=255						
LTY	Liberty	87.26	41	eP	P	03 11 07.4	+0.2
	comp=Z,25nm,1.1s						
GMRC	Granite Mounta	87.30	54	P	P	03 11 07.7	-0.1
	baz=255,SNR=6.2						
F07A	Phinny Hill Vi	87.32	42	eP	P	03 11 07.8	+0.4
	comp=Z,53nm,1.3s						
C06D	Leavenworth	87.34	40	P	P	03 11 07.8	+0.3
	baz=251						
TPNV	Topopah Spring	87.40	52	P	P	03 11 07.7	-0.5
	baz=255						
GLA	Glamis	87.53	56	eP	P	03 11 09.3	+0.4
	comp=Z,58nm,1.1s						
GLA	Glamis	87.53	56	eP	P	03 11 09.3	+0.4
GLA				pmax	pmax		
	comp=Z,58nm,1.1s						
GLA	Glamis	87.53	56	P	P	03 11 09.2	+0.3
	baz=256,SNR=7.5						
IRM	Iron Mountain	87.55	55	P	P	03 11 08.8	-0.1
	baz=256,SNR=7.0						
LLLB	Lillooet	87.62	38	eP	P	03 11 09.7	+0.9
	comp=Z,25nm,1.3s						
HAWA	Hanford	87.73	42	eP	P	03 11 09.1	-0.3
	comp=Z,41nm,1.1s						
G08A	Pilot Rock	87.78	43	eP	P	03 11 09.5	-0.4
	comp=Z,49nm,1.3s						
LDFC	Landfair	87.81	54	eP	P	03 11 10.1	-0.1
	comp=Z,65nm,1.1s						
Y12C	Blythe	87.95	55	eP	P	03 11 10.8	+0.1
	comp=Z,30nm,1.0s						
Y12C	Blythe	87.95	55	P	P	03 11 11.1	+0.4
	baz=256,SNR=5.8						
E08A	Dider Farm, El	88.08	42	eP	P	03 11 11.3	+0.2
	comp=Z,48nm,1.2s						

NEE2	Needles Airpor	88.12	54	P	P	03 11 12.0	+0.4
	baz=256						
R11A	Troy Canyon, C	88.27	51	*e*P	P	03 11 12.8	+0.3
	comp=Z,34nm,1.5s						
R11A	Troy Canyon, C	88.27	51	P	P	03 11 12.6	+0.1
	baz=255						
D08A	Wollman Farm,	88.34	42	*e*P	P	03 11 12.4	+0.1
	comp=Z,31nm,1.1s						
PDMCI	Parker Dam,Lak	88.39	55	P	P	03 11 13.5	+0.6
	baz=256,SNR=5.9						
WMQ	Urumqi	88.41	315	P	P	03 11 14.4	+1.6
WMQ				pP	pwP	03 11 19.8	0.0
WMQ				pmax	pmax		
	comp=Z,65nm,1.5s						
B08A	Colville Reser	88.47	40	*e*P	P	03 11 12.9	-0.1
	comp=Z,31nm,1.3s						
E09A	Wood Farm, Sta	88.69	42	*e*P	P	03 11 13.9	0.0
	comp=Z,30nm,1.2s						
BMO	Blue Mountains	88.78	44	*e*P	P	03 11 14.3	-0.2
	comp=Z,51nm,1.4s						
BMO	Blue Mountains	88.78	44	*e*P	P	03 11 14.4	-0.2
BMO				pmax	pmax		
	comp=Z,51nm,1.4s						
214A	Organ Pipe Nat	88.93	57	P	P	03 11 15.4	-0.1
	baz=257,SNR=5.4						
C09A	Chrisman Ranch	88.98	41	*e*P	P	03 11 15.2	-0.1
	comp=Z,16nm,1.2s						
F10A	Beach Ranch, E	89.14	43	*e*P	P	03 11 16.1	-0.1
	comp=Z,30nm,1.0s						
ELK	Elko	89.14	48	*e*P	P	03 11 16.2	-0.3
	comp=Z,11nm,1.0s						
ELK	Elko	89.14	48	*e*P	P	03 11 16.2	-0.3
ELK				pmax	pmax		
	comp=Z,11nm,1.0s						
Y14A	Wickenburg	89.22	55	*e*P	P	03 11 17.3	+0.5
	comp=Z,13nm,1.0s						
MFID	Camas Ranch	89.41	46	*e*P	P	03 11 18.0	+0.4
	comp=Z,33nm,1.2s						
SLBS	Sierra La Lagu	89.64	66	*e*P	P	03 11 19.1	+0.1
	comp=Z,37nm,1.1s						
INK	Inuvik	89.74	19	*e*P	P	03 11 19.3	+1.0
	comp=Z,17nm,1.1s						
NEW	Newport	89.85	41	*e*P	P	03 11 18.8	-0.6
	comp=Z,24nm,1.2s						
NEW	Newport	89.85	41	*e*P	P	03 11 18.8	-0.6
NEW				pmax	pmax		
	comp=Z,24nm,1.2s						
NEW	Newport	89.85	41	P	P	03 11 19.0	-0.4
	baz=254						
HSIG		89.86	61	*e*P	P	03 11 19.8	-0.1
	comp=Z,68nm,1.5s						
HYB	Hyderabad	89.93	288	*i* P	P	03 11 21.0	+0.5
DGZ	Jazzator, Alta	90.23	321	*i* P	P	03 11 20.4	-0.9
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HLID	Hailey	90.44	46	P	P	03 11 22.1	-0.4
	baz=256						
PKCU	Pink Cliffs	90.57	52	*e*P	P	03 11 24.0	+0.6
	comp=Z,84nm,1.3s						
TUC	Tucson	90.69	57	*e*P	P	03 11 24.1	+0.3
	comp=Z,15nm,1.1s						
TUC	Tucson	90.69	57	*e*P	P	03 11 24.1	+0.3
TUC				pmax	pmax		
	comp=Z,15nm,1.1s						
TUC	Tucson	90.69	57	P	P	03 11 23.1	-0.7
	baz=258						
DUG	Dugway, Tooele	90.81	49	*e*P	P	03 11 24.4	+0.1
	comp=Z,14nm,1.0s						
DUG	Dugway, Tooele	90.81	49	*e*P	P	03 11 24.4	+0.1
DUG				pmax	pmax		
	comp=Z,14nm,1.0s						
DUG	Dugway, Tooele	90.81	49	P	P	03 11 24.3	+0.1
	baz=257						
WUAZ	Wupatki	90.89	54	P	P	03 11 24.6	-0.1
	baz=258						
SPUT	South Promonto	91.33	48	*e*P	P	03 11 26.5	-0.1
	comp=Z,20nm,1.1s						
MSO	Missoula	91.56	43	*e*P	P	03 11 27.6	+0.1
	comp=Z,6.6nm,0.9s						
MSO	Missoula	91.56	43	P	P	03 11 27.4	-0.2
	baz=256						
CTU	Camp Tracy	91.71	49	*e*P	P	03 11 28.0	-0.5
	comp=Z,16nm,1.0s						
319A	Douglas	91.75	59	*e*P	P	03 11 29.0	+0.2
	comp=Z,14nm,0.9s						
Q16A	Castle Valley	91.77	51	*e*P	P	03 11 28.8	0.0
	comp=Z,47nm,1.4s						
TMUT	Trail Mountain	91.82	50	*e*P	P	03 11 29.0	-0.1
	comp=Z,18nm,1.1s						
X18A	Snowflake	91.82	55	*e*P	P	03 11 28.4	-0.8
	comp=Z,14nm,1.0s						
MCMT	McKenzie Canyo	91.84	45	*e*P	P	03 11 28.7	-0.3
JLU	Jordanelle	91.91	49	*e*P	P	03 11 29.3	-0.1
	comp=Z,24nm,1.2s						
TCUT	Toone Canyon	92.05	49	*e*P	P	03 11 30.6	+0.4
	comp=Z,36nm,1.0s						
WALA	Waterton Lakes	92.11	41	*e*P	P	03 11 30.0	0.0
	comp=Z,48nm,1.2s						
DLMT	Dillon	92.13	44	*e*P	P	03 11 29.9	-0.3
	comp=Z,50nm,1.0s						
P17A	Butcher Ranch,	92.21	50	*e*P	P	03 11 30.7	-0.1
	comp=Z,19nm,1.5s						
SRU	San Rafael Swe	92.30	51	*e*P	P	03 11 31.6	+0.4
	comp=Z,9.9nm,1.1s						
SRU	San Rafael Swe	92.30	51	*e*P	P	03 11 31.6	+0.4
SRU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LRM	Limekiln Ridge	92.33	44	*e*P	P	03 11 31.9	+0.6
QLMT	Earthquake Lak	92.82	45	*e*P	P	03 11 33.7	+0.2
MKAR	Makanchi Array	92.84	317	P	P	03 11 33.0	-0.3
MKAR				pmax	pmax		
	comp=Z,15nm,0.8s						
MKAR	Makanchi Array	92.84	317	P	P	03 11 33.0	-0.3
	comp=Z,15nm,0.8s,baz=101,slow=6.3,SNR=8.5						
BOZ	Bozeman (W)	92.85	44	*e*P	P	03 11 33.8	+0.3
	comp=Z,27nm,1.0s						
BOZ	Bozeman (W)	92.85	44	*e*P	P	03 11 33.8	+0.3
BOZ				pmax	pmax		
	comp=Z,27nm,1.0s						
BOZ	Bozeman (W)	92.85	44	P	P	03 11 33.5	0.0
	baz=258						
TPAW	Teton Pass	92.88	46	*e*P	P	03 11 34.2	+0.3
	comp=Z,10.0nm,1.0s						
ZAA0	Zalesovo Array	92.90	324	*e*P	P	03 11 33.1	-0.2
	comp=Z,23nm,1.1s						
ZALV	Zalesovo Beam	92.90	324	P	P	03 11 32.5	-0.9
	comp=Z,16nm,1.0s,baz=111,slow=3.4,SNR=9.3						
REDW	Red Top Meadow	92.92	47	*e*P	P	03 11 34.5	+0.4
	comp=Z,12nm,1.0s						
HRY	Holter Researc	92.95	43	*e*P	P	03 11 34.3	+0.3
YHB	Horse Butte	92.97	45	*e*P	P	03 11 34.9	+0.7
	comp=Z,24nm,1.1s						
IMW	Indian Meadow	92.97	46	*e*P	P	03 11 35.0	+0.6
	comp=Z,17nm,1.0s						
SNOW	Snow King Moun	93.02	46	*e*P	P	03 11 34.9	+0.3
	comp=Z,11nm,0.8s						
MOOW	Moose Ponds	93.08	46	*e*P	P	03 11 35.2	+0.4
	comp=Z,12nm,1.1s						
YMR	Madison River	93.11	45	*e*P	P	03 11 35.5	+0.6
	comp=Z,14nm,0.9s						
LOHW	Long Hollow	93.15	46	*e*P	P	03 11 35.2	+0.1
	comp=Z,9.0nm,1.1s						
YFT	Old Faithful	93.16	46	*e*P	P	03 11 35.7	+0.5
	comp=Z,10nm,1.0s						
FLWY	Flagg Ranch	93.18	46	*e*P	P	03 11 35.3	+0.1
	comp=Z,15nm,1.0s						
121A	Cookes Peak, D	93.22	58	P	P	03 11 35.4	-0.2
	baz=260						
PV09	Paradox Valley	93.24	52	*e*P	P	03 11 35.9	+0.2
PV14	Lion Creek, Pa	93.31	52	*e*P	P	03 11 36.3	+0.4
	comp=Z,7.7nm,0.8s						
YNR	Norris Junctio	93.32	45	*e*P	P	03 11 36.3	+0.4
	comp=Z,26nm,1.5s						
PV19	Morning Glory	93.32	52	*e*P	P	03 11 36.4	+0.4
	comp=Z,7.0nm,0.8s						
PV23	Carpenter Ridg	93.33	52	*e*P	P	03 11 36.6	+0.5
	comp=Z,12nm,0.8s						
H17A	Grant Village	93.33	46	*e*P	P	03 11 37.0	+1.1
	comp=Z,15nm,1.1s						
H17A	Grant Village	93.33	46	P	P	03 11 35.7	-0.3
	baz=258						
PV17	East Wray Mesa	93.34	52	*e*P	P	03 11 35.7	-0.4
	comp=Z,14nm,1.1s						
PV16	Nyswonger Mesa	93.38	52	*e*P	P	03 11 36.6	+0.3
	comp=Z,4.3nm,1.0s						
PV21	Cone Mtn., Par	93.38	52	*e*P	P	03 11 36.3	0.0
	comp=Z,6.1nm,0.9s						
PV04	Paradox Valley	93.40	52	*e*P	P	03 11 36.4	+0.1
	comp=Z,10nm,0.9s						
PV03	Paradox Valley	93.42	52	*e*P	P	03 11 36.2	-0.2
	comp=Z,6.3nm,1.1s						
PV12	Saucer Basin,	93.47	52	*e*P	P	03 11 36.6	-0.1
	comp=Z,11nm,1.0s						
MVCO	Mesa Verde	93.50	53	P	P	03 11 36.3	-0.6
	baz=259						
PV01	Paradox Valley	93.61	52	*e*P	P	03 11 37.3	-0.1
	comp=Z,4.6nm,0.8s						
BW06	Boulder Array	93.74	47	*e*P	P	03 11 37.1	-0.7
	comp=Z,8.2nm,1.0s						
BW06	Boulder Array	93.74	47	P	P	03 11 37.5	-0.3
	baz=259						
PD31	Pinedale Array	93.74	47	*e*P	P	03 11 36.7	-1.1
PDAR	Pinedale Array	93.74	47	*e*P	P	03 11 37.0	-0.9
PDAR	Pinedale Array	93.74	47	P	P	03 11 37.6	-0.2
	comp=Z,6.9nm,0.9s,baz=215,slow=1.7,SNR=18						
O20A	White River Ci	94.22	50	P	P	03 11 39.9	-0.2
	baz=260						
RLMT	Red Lodge	94.39	45	*e*P	P	03 11 40.4	-0.4
	comp=Z,14nm,1.3s						
RLMT	Red Lodge	94.39	45	P	P	03 11 41.0	+0.2
	baz=259						
BNM	Barren Site	94.45	56	*e*P	P	03 11 40.6	-0.8
POO	Poona	94.53	288	*e*P	P	03 11 43.0	+1.2
EGMT	Eagleton	94.59	42	*e*P	P	03 11 41.2	-0.3
	comp=Z,27nm,1.0s						
EGMT	Eagleton	94.59	42	P	P	03 11 41.3	-0.1
	baz=259						
ANMO	Albuquerque	94.73	55	*e*P	P	03 11 42.1	-0.4
	comp=Z,5.0nm,1.0s						
ANMO	Albuquerque	94.73	55	*i* P	P	03 11 41.8	-0.7
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANMO	Albuquerque	94.73	55	P	P	03 11 41.8	-0.7
	baz=260						
S22A	4UR Ranch, Cre	94.90	53	*e*P	P	03 11 42.9	-0.5
	comp=Z,5.0nm,1.1s						
YKA	Yellowknife Ar	94.91	27	P	P	03 11 42.0	-0.4
YKA	Yellowknife Ar	94.91	27	P	P	03 11 42.0	-0.4
YKA	Yellowknife Ar	94.91	27	P	P	03 11 42.0	-0.4
	comp=Z,5.0nm,0.8s,baz=256,slow=4.6,SNR=17						
YKW3	Yellowknife Ar	94.92	27	*e*P	P	03 11 41.9	-0.5
	comp=Z,7.7nm,1.0s						
MNTX	Cornudas Mount	95.08	59	*e*P	P	03 11 44.2	+0.3
	comp=Z,3.8nm,1.0s						
MNTX	Cornudas Mount	95.08	59	P	P	03 11 43.7	-0.3
	baz=261						
NRIK	Noril'sk	95.56	340	P	P	03 11 44.5	-0.7
	comp=Z,7.3nm,0.9s,baz=109,slow=3.7,SNR=7.6						
KURK	Kurchatov	95.97	320	*e*P	P	03 11 47.2	-0.3
	comp=Z,22nm,1.4s						
KURK	Kurchatov	95.97	320	*i* P	P	03 11 46.8	-0.7
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
KSH	Kashi	96.05	309	P	P	03 11 52.7	+4.3
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
TX31	Lajitas Ar. Si	96.17	61	*e*P	P	03 11 49.2	+0.1
TXAR	Lajitas Array	96.17	61	P	P	03 11 49.8	+0.6
	comp=Z,1.6nm,0.8s,baz=207,slow=5.2,SNR=12						
TXAR				PP	PP	03 15 40.4	-2.0
	comp=Z,4.7nm,1.2s,baz=239,slow=7.0,SNR=4.8						
LAO	LASA Array	96.74	44	*e*P	P	03 11 52.2	+1.0
	comp=Z,44nm,1.4s						
LAO	LASA Array	96.74	44	P	P	03 11 51.2	0.0
	baz=262						
NVL	N'lazarevskaya	96.75	189	*e*P	P	03 12 03.2	+12
NVL				MLR	MLR		
	comp=Z,25µm,18.0s						
SNAA	Sanae	97.45	184	P	Pdif	03 11 54.2	+0.1
SNAA	Sanae	97.45	184	*i* P	P	03 11 53.7	-0.3
SNAA	Sanae	97.45	184	P	Pdif	03 11 54.3	+0.2
	comp=Z,10nm,0.9s,baz=169,slow=3.9,SNR=7.5						
AAK	Ala-Archa	97.60	312	*i* P	P	03 11 54.1	-1.3
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RSSD	Black Hills	97.92	47	P	P	03 11 56.3	-0.6
	baz=263						
DGMT	Dagmar	98.33	42	*e*P	P	03 11 58.4	0.0
	comp=Z,17nm,1.0s						
DGMT	Dagmar	98.33	42	Pdiff	P	03 11 58.3	0.0
	baz=263						
VNA2	Neumayer--Watz	98.44	182	P	Pdif	03 11 58.9	+0.5
AMTX	Amarillo	98.60	56	*e*P	P	03 11 59.9	0.0
	comp=Z,7.1nm,0.9s						
AMTX	Amarillo	98.60	56	Pdiff	P	03 11 59.5	-0.5
	baz=263						
JCT	Junction City	99.65	61	Pdiff	Pdif	03 12 04.0	-0.7
	baz=263						
FFC	Flin Flon	100.28	36	*e*Pdif	Pdif	03 12 07.2	+0.4
FFC	Flin Flon	100.28	36	*e*P	Pdif	03 12 07.2	+0.4
BRVK	Borovoye	101.35	322	*e*Pdif	Pdif	03 12 11.9	+0.3
BRVK	Borovoye	101.35	322	*e*P	Pdif	03 12 11.9	+0.3
GEYT	Alibeck	109.88	306	PP	PP	03 17 24.5	-0.2
	comp=Z,2.9nm,0.7s,baz=68,slow=3.9,SNR=4.0						
APA	Apatity	114.89	342	⇓*i*PKIKP	PKiKP	03 17 00.6	-0.2
APA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,18µm,21.0s						
TMCR	Tamitsa	115.16	337	*e*PKIKP	PKiKP	03 16 59.4	-2.0
ARCES	ARCESS Array B	115.82	345	PKP	PKPdf	03 17 02.6	0.0
	comp=Z,5.4nm,0.8s,baz=88,slow=2.1,SNR=13						
KLMR	Klimovskoe	116.14	334	*e*PKIKP	PKiKP	03 17 02.8	-0.6
KLMR				*e*		03 27 45.3	
KLMR				pmax	pmax		
	comp=Z,12nm,1.7s						
KLMR	Klimovskoe	116.14	334	*e*PKPdf	PKiKP	03 17 02.8	-0.6
KLMR				AMP		03 17 03.9	
	comp=Z,12nm,1.7s						
KLMR				*e*PKKPab	PKKPab	03 27 45.3	+7.6
GCUF	Volcan Galeras	117.25	94	*e*P	PKiKP	03 17 07.8	+0.1
GCUF	Volcan Galeras	117.25	94	*e*P	PKiKP	03 17 07.8	+0.1
POPC	Popayan, Colom	118.16	93	*e*P	PKPdf	03 17 08.1	-0.9
POPC	Popayan, Colom	118.16	93	*e*P	PKPdf	03 17 08.1	-0.9
GROC	Groznyy	118.53	313	*i* PKIKP	PKPdf	03 17 04.1	-4.5
GROC				*e*		03 18 24.0	
GROC				pmax	pmax		
	comp=Z,7.0nm,0.4s						
YOTC	Yotoco, Valle	118.74	91	*e*P	PKPdf	03 17 09.4	-0.6
YOTC	Yotoco, Valle	118.74	91	*e*P	PKPdf	03 17 09.4	-0.6
VRH	Novokhopyorsk	118.92	323	*e*PKIKP	PKPdf	03 17 08.1	-0.9
VRH				pmax	pmax		
	comp=Z,90nm,1.9s						
PTLC	Puerto Leguiza	119.54	96	*e*P	PKPdf	03 17 11.2	-0.2
PTLC	Puerto Leguiza	119.54	96	*e*P	PKPdf	03 17 11.2	-0.2
HELC	Santa Helena	119.90	89	*e*P	PKiKP	03 17 12.8	+0.2
HELC	Santa Helena	119.90	89	*e*P	PKiKP	03 17 12.8	+0.2
GNI	Garni	119.96	310	*c* *i*PKIKP	PKiKP	03 17 14.1	+2.4
GNI				pmax	pmax		
	comp=Z,36nm,1.0s						
ZEI	Tsey	119.98	313	*i* PKIKP	PKiKP	03 17 11.6	-0.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPSR	Galich'ya Gora	119.99	325	*e*PKIKP	PKiKP	03 17 11.3	+0.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	120.17	329	*i* PKIKP	PKPdf	03 17 10.7	-0.6
OBN				*e*		03 18 36.8	
OBN				*e*PPP	PPP	03 21 12.9	
OBN				pmax	pmax		
	comp=Z,31nm,2.5s						
VSR	Storozhevoye	120.41	324	*e*PKIKP	PKPdf	03 17 09.8	-2.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KBZ	Khabaz	120.45	315	PKP	PKPdf	03 17 11.5	-0.7
	comp=Z,1.7nm,0.8s,baz=88,slow=5.8,SNR=4.0						
KIV	Kislovodsk	120.54	315	*e*PKIKP	PKiKP	03 17 13.4	+0.7
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ZARC	Zaragoza, Cauc	120.75	88	*e*P	PKPdf	03 17 13.5	-0.2
ZARC	Zaragoza, Cauc	120.75	88	*e*P	PKPdf	03 17 13.5	-0.2
ROSC	El Rosal	120.88	91	PKP	PKPdf	03 17 14.4	0.0
	comp=Z,2.9nm,0.3s,baz=186,slow=18,SNR=4.7						
LPAZ	La Paz	120.89	116	*e*PKPdf	PKPdf	03 17 14.4	-0.2
LPAZ	La Paz	120.89	116	PKP	PKPdf	03 17 14.1	-0.6
	comp=Z,4.2nm,1.0s,baz=360,slow=25,SNR=6.4						
FINES	FINESS Array B	121.20	338	PKP	PKPdf	03 17 12.2	-0.9
	comp=Z,7.3nm,1.0s,baz=112,slow=2.1,SNR=7.4						
CHIC	Chingaza	121.42	91	*e*P	PKPdf	03 17 12.3	-3.2
CHIC	Chingaza	121.42	91	*e*P	PKPdf	03 17 12.3	-3.2
RUSC	La Rusia	122.26	90	*e*P	PKPdf	03 17 17.2	0.0
RUSC	La Rusia	122.26	90	*e*P	PKPdf	03 17 17.2	0.0
BARC	Barichara	122.27	89	*e*P	PKPdf	03 17 13.7	-3.2
BARC	Barichara	122.27	89	*e*P	PKPdf	03 17 13.7	-3.2
OCAC	Ocana	122.36	87	*e*P	PKiKP	03 17 17.7	+0.6
OCAC	Ocana	122.36	87	*e*P	PKiKP	03 17 17.7	+0.6
CPUP	Villa Florida	124.72	133	*e*PKPdf	PKPdf	03 17 20.5	-0.5
CPUP	Villa Florida	124.72	133	PKP	PKiKP	03 17 21.4	+0.1
	comp=Z,6.2nm,1.0s,baz=226,slow=2.9,SNR=5.4						
BOSA	Boshof	124.98	224	PKP	PKPdf	03 17 21.2	-0.5
	comp=Z,3.9nm,1.0s,baz=352,slow=0.8,SNR=4.1						
NACGM	Naroch	125.06	332	*e*	PKiKP	03 17 22.0	+0.9
SDV	Santo Domingo	125.07	87	*e*PKPdf	PKPdf	03 17 20.7	-1.5
SDV	Santo Domingo	125.07	87	*e*P	PKiKP	03 17 22.6	0.0
SDV	Santo Domingo	125.07	87	*e*P	PKiKP	03 17 22.6	0.0
NB2	NORSAR Subarra	126.18	345	PKPdf	PKPdf	03 17 22.5	-0.3
	comp=Z,1.1nm,0.7s,baz=31,slow=1.8						
NOA	NORSAR Array B	126.18	345	PKP	PKPdf	03 17 22.3	-0.5
	comp=Z,2.5nm,0.8s,baz=37,slow=1.9,SNR=6.2						
AKASG	Malin Array Be	126.22	327	PKP	PKPdf	03 17 23.1	0.0
	comp=Z,4.7nm,0.9s,baz=64,slow=2.2,SNR=8.7						
KIEV	Kiev	126.23	327	⇑*i*P	PKPdf	03 17 21.5	-1.6
KIEV	Kiev	126.23	327	⇑PKIKP	PKPdf	03 17 21.5	-1.6
AK11	Malin Array Si	126.26	327	*e*PKPdf	PKPdf	03 17 23.1	-0.1
KMBO	Kilima Mbogo	126.86	260	PKP	PKiKP	03 17 26.2	0.0
	comp=Z,0.5nm,0.5s,baz=58,slow=7.8,SNR=2.5						
BR131	Keskin Array S	128.27	313	*e*PKPdf	PKPdf	03 17 26.9	-0.7
BRTR	Keskin Array B	128.27	313	PKP	PKiKP	03 17 27.8	-0.4
	comp=Z,3.4nm,0.9s,baz=118,slow=1.3,SNR=8.9						
ANTO	Ankara	128.83	313	*e*PKPdf	PKPdf	03 17 27.9	-0.6
ANTO	Ankara	128.83	313	*e*PKIKP	PKPdf	03 17 27.9	-0.6
LEOM	Leova	128.97	323	⇓*i*P	PKiKP	03 17 30.1	+1.0
LEOM	Leova	128.97	323	⇓PKIKP	PKiKP	03 17 30.1	+1.0
SJG	San Juan	129.90	75	*e*PKPdf	PKPdf	03 17 30.3	-0.8
SJG	San Juan	129.90	75	*e*PKIKP	PKPdf	03 17 30.3	-0.8
BUR08	Bucovina Ar. S	130.10	325	*e*PKPdf	PKiKP	03 17 31.1	-0.5
BUR04	Bucovina Ar. S	130.11	325	*e*PKPdf	PKiKP	03 17 31.3	-0.3
CVDA	Cernavoda	130.15	320	⇓*i*P	PKPdf	03 17 26.6	-4.2
UZH	Uzhgorod	131.10	328	*e*PKHKP	PKPpre	03 17 14.0	
TRPA	Tarpa	131.27	327	⇓*i*P	PKiKP	03 17 34.1	+0.4
HUMR	Humele	131.94	322	⇓*i*P	PKiKP	03 17 35.0	-0.2
MORC	Moravsky Berou	132.69	332	*e*PKP	PKiKP	03 17 37.5	+0.9
MORC				*e*		03 17 49.0	
GZR	Gura Zlata	132.76	324	⇓*i*P	PKPdf	03 17 33.7	-2.1
GZR	Gura Zlata	132.76	324	⇓PKIKP	PKPdf	03 17 33.7	-2.1
DPC	Dobruska-Polom	132.84	333	*e*PKPDF	PKPdf	03 17 35.6	-0.2
DPC	Dobruska-Polom	132.84	333	*e*PKIKP	PKPdf	03 17 35.6	-0.2
VYHS	Vyhne	132.95	330	*e*PKHKP	PKPpre	03 17 22.2	
VYHS	Vyhne	132.95	330	*e*sPDIF	PKPpre	03 17 22.2	
VYHS				*e*PP	PP	03 19 29.7	-31
BZS	Buzias	133.29	325	⇓*i*P	PKPpre	03 17 07.0	
BZS	Buzias	133.29	325	⇓PKHKP	PKPpre	03 17 07.0	
PVCC	Panska Ves	133.47	334	*e*PKPDF	PKiKP	03 17 38.5	+0.4
PVCC				*e*x	x	03 17 42.4	
PVCC	Panska Ves	133.47	334	*e*PKIKP	PKiKP	03 17 38.5	+0.4
BRG	Berggiesshubel	133.47	335	*e*PKP	PKiKP	03 17 38.2	+0.1
	comp=Z,150nm,2.7s						
BRG				*e*PP	PP	03 20 13.1	+8.9
	comp=Z,24nm,1.8s						
BRG				*e*SKP		03 21 08.9	
	comp=Z,51nm,2.2s						
BRG	Berggiesshubel	133.47	335	*e*PKIKP	PKiKP	03 17 38.2	+0.1
BRG				*e*		03 20 13.1	
BRG				pmax	pmax		
	comp=Z,27nm,2.7s						
BRG				pmax	pmax		
	comp=Z,150nm,1.8s						
BRG				pmax	pmax		
	comp=N,24nm,2.2s						
CLL	Collm	133.52	336	*e*PKPdf	PKiKP	03 17 38.0	-0.2
CLL				*e*		03 17 53.0	
CLL	Collm	133.52	336	*e*PKIKP	PKiKP	03 17 38.0	-0.2
CLL				*e*		03 17 53.0	
KRUC	Moravsky	133.73	332	*e*PKP	PKiKP	03 17 38.8	+0.1
KRUC				*e*		03 17 50.9	
PRU	Pruhonice	133.88	334	*e*PKPDF	PKiKP	03 17 39.0	0.0
PRU	Pruhonice	133.88	334	*e*PKIKP	PKiKP	03 17 39.0	0.0
VTS	Vitosha	134.03	321	*e*PKPdf	PKPdf	03 17 38.0	-0.4
VTS	Vitosha	134.03	321	⇓*i*P	PKiKP	03 17 39.9	+0.2
VTS	Vitosha	134.03	321	⇓PKIKP	PKiKP	03 17 39.9	+0.2
CONA	Conrad Observa	134.78	331	*i* PKPdf	PKPdf	03 17 38.7	-0.9
	comp=N,7.1nm,1.0s						
KHC	Kasperske Hory	134.94	334	*e*PKPdf	PKPdf	03 17 39.4	-0.4
KHC	Kasperske Hory	134.94	334	*e*PKPDF	PKiKP	03 17 41.5	+0.3
KHC	Kasperske Hory	134.94	334	*e*PKIKP	PKPdf	03 17 39.4	-0.4
GEC2	GERESS Array S	135.10	333	*e*PKPdf	PKPdf	03 17 40.1	0.0
GEC2	GERESS Array S	135.10	333	*e*PKIKP	PKPdf	03 17 40.1	0.0
GERES	GERESS Array B	135.10	333	PKP	PKiKP	03 17 41.4	-0.3
	comp=N,3.6nm,0.9s,baz=72,slow=1.7,SNR=7.6						
GEA0	GERESS Array S	135.11	333	*e*PKPdf	PKPdf	03 17 39.6	-0.6
MOA	Molln	135.58	332	*e*pPKPdf	pPKPdf	03 17 43.3	+0.1
	comp=N,5.6nm,1.1s						
MOA				PP	PP	03 20 20.5	+2.8
	comp=N,6.7nm,1.2s						
SOKA	Soboth	136.06	330	*e*pPKPdf	pPKPdf	03 17 44.4	+0.2
	comp=N,5.3nm,0.9s						
SOKA				PP	PP	03 20 21.2	+0.3
	comp=N,10nm,1.7s						
OBKA	Obir	136.42	331	*e*pPKPdf	pPKPdf	03 17 44.5	-0.4
	comp=N,19nm,1.7s						
OBKA				*e*PP	PP	03 20 25.0	+2.0
	comp=N,13nm,1.4s						
KBA	Koelnbreinsper	136.57	332	*e*pPKiKP	PKiKP	03 17 46.6	+1.9
	comp=N,7.7nm,1.0s						
KBA				PP	PP	03 20 22.1	-2.0
	comp=N,3.2nm,0.7s						
MYKA	Terra Mystica	136.76	331	*e*pPKPdf	PKiKP	03 17 45.1	+0.1
	comp=N,5.8nm,1.0s						
WATA	Walderalm	137.18	334	*e*pPKPdf	PKiKP	03 17 45.8	-0.1
	comp=N,2.7nm,0.6s						
WATA				*e*PP	PP	03 20 27.7	-0.1
	comp=N,22nm,1.4s						
ABTA	Abfaltersbach	137.20	332	*e*pPKPdf	pPKPdf	03 17 46.2	-0.1
	comp=N,6.2nm,0.9s						
ABTA				PP	PP	03 20 27.0	-0.9
	comp=N,15nm,1.1s						
WTTA	Wattenberg	137.21	333	*e*pPKiKP	PKiKP	03 17 49.2	+3.1
	comp=N,5.4nm,0.7s						
WTTA				PP	PP	03 20 27.7	-0.3
	comp=N,20nm,1.3s						
MOTA	Moosalm	137.38	334	PKiKP	PKiKP	03 17 46.0	-0.4
	comp=N,10nm,1.1s						
MOTA				*e*PP	PP	03 20 30.7	+1.7
	comp=N,5.6nm,0.8s						
SQTA	Sankt Quirin	137.43	334	*e*PKiKP	PKiKP	03 17 45.4	-1.0
	comp=N,5.5nm,0.9s						
SQTA				PP	PP	03 20 27.9	-1.4
	comp=N,13nm,1.0s						
FETA	Feichten	137.79	334	*e*PKiKP	PKPdf	03 17 45.6	+0.3
	comp=N,14nm,1.0s						
FETA				*e*PP	PP	03 20 28.7	-2.9
	comp=N,10nm,1.3s						
BDFB	Brasilia	138.04	128	PKP	PKPdf	03 17 47.3	+0.7
	comp=N,4.2nm,0.7s,baz=214,slow=9.1,SNR=5.2						
KEST	Kesra	146.75	323	PKPbc	PKPab	03 18 04.0	-0.2
	comp=N,31nm,0.9s,baz=261,slow=1.6,SNR=7.5						
PBRG	Braganca	148.17	348	*e*PKPdf	PKPab	03 18 11.7	+2.1
POLO	Lamas de Olo	148.79	350	*e*PKPdf	PKPdf	03 18 05.3	+0.7
PVIS	Viseu	149.44	350	*e*PKPdf	PKiKP	03 18 11.2	0.0
ES19	SONSECA Array	149.49	343	*e*PKPdf	PKPdf	03 18 05.4	-0.3
ES19				*e*PKPbc	pPKPbc	03 18 11.8	-0.6
ESDC	Sonseca Array	149.53	343	PKPbc	PKPbc	03 18 09.6	-0.8
	comp=N,5.4nm,0.9s,baz=55,slow=2.0,SNR=5.3						
MTE	Manteigas	149.69	349	*e*PKPdf	PKiKP	03 18 11.7	-0.1
PMRV	Marv??o	150.59	348	*e*PKPdf	PKiKP	03 18 14.1	+0.5
PTOM	Tomar	150.60	350	*e*PKPdf	PKiKP	03 18 14.1	+0.5
PMTG	Montargil	151.10	349	*e*PKPdf	PKiKP	03 18 15.0	+0.4
PESTR	Estremoz	151.18	348	*e*PKPdf	PKiKP	03 18 14.9	+0.1
PBEJ	Beja	152.04	348	*e*PKPdf	PKiKP	03 18 18.9	+2.3
TOA0	Torodi Ar. Sit	163.61	280	*e*PKPdf	PKPdf	03 18 24.4	-0.1
TORD	Torodi Ar. Bea	163.61	280	PKP	PKPdf	03 18 24.7	+0.2
	comp=N,4.3nm,1.0s,baz=360,slow=1.8,SNR=8.5						
KIC	Kosan Boka	169.11	248	*e*P	PKPdf	03 18 26.6	-2.3
	comp=N,49nm,1.2s						
LIC	Lamto	169.32	246	*e*P	PKPdf	03 18 27.8	-1.2
	comp=N,81nm,1.6s						
DBIC	Dimbokro	169.34	249	PKP	PKPdf	03 18 27.3	-1.7
	comp=N,6.1nm,1.0s,baz=315,slow=4.9,SNR=4.1						
TIC	Toumodi	169.48	248	*e*P	PKPdf	03 18 28.6	-0.5

IDC ***06*** *03:00:47.7±0.9, 11°.16S×165°.62E, h0^{km}, mb4.8/10,*
mb1 5.0/10, mb1mx4.6/37, mbtmp4.8/10, Error ellipse:
s-maj=52.3km s-min=19.4km az=142.0
ISCJB ***06*** *03:00:49.6±0.9, 11°.3S±0°.2×165°.6E±0°.2, h24^{km}, mb4.8/10,*

MS6.5/1, Error ellipse: s-maj=39.2km s-min=14.3km az=138.6

ISC 06 03:00:51.2±0.9**, 11°.3S**±0°.2×**165°.7E**±0°.2**, h24km, n26, σ1s.06**/23**, mb4.8**/10**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.65**	**242**	P	**P**	**03 05 29.7**	**+0.3**
CTA	**Charters Tower**	**20.65**	**242**	P	**P**	**03 05 29.7**	**+0.3**
CTA	**Charters Tower**	**20.65**	**242**	P	**P**	**03 05 29.7**	**+0.3**
	91nm,1.1s,baz=77,slow=15,SNR=3.1						
STKA	**Stephens Creek**	**30.25**	**224**	P	**P**	**03 07 00.1**	**-0.3**
STKA	**Stephens Creek**	**30.25**	**224**	P	**P**	**03 07 00.1**	**-0.3**
STKA	**Stephens Creek**	**30.25**	**224**	P	**P**	**03 07 00.1**	**-0.3**
	27nm,0.9s,baz=16,slow=9.5,SNR=3.1						
H11N1	**WAKE ISLAND Hy**	**30.80**	**2**	T	T	03 39 11.7	
	baz=181						
H11N3	**WAKE ISLAND Hy**	**30.80**	**2**	T	T	03 39 14.0	
	baz=181,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**30.82**	**2**	T	T	03 39 15.8	
	baz=181						
WRA	**Warramunga Arr**	**31.36**	**250**	P	**P**	**03 07 09.2**	**-1.1**
	52nm,1.0s,baz=80,slow=9.1,SNR=6.7						
ASAR	**Alice Springs**	**32.65**	**244**	P	**P**	**03 07 21.6**	**-0.1**
	10.0nm,0.8s,baz=70,slow=10.0,SNR=3.3						
BTO	**Baotou**	**72.81**	**319**	*e*P	**P**	**03 12 16.6**	**-1.5**
GTA	**Gaotai**	**79.17**	**314**	⇓P	**P**	**03 12 56.8**	**+2.4**
GTA				pP	PcP	03 13 02.9	+0.1
GTA				sP	pwP	03 13 06.2	-0.1
GTA				pmax	pmax		
	comp=Z,17nm,1.4s						
GTA				LR	LR		
	comp=N,15µm,19.4s						
GTA				LR	LR		
	comp=E,16µm,19.4s						
GTA				LR	LR		
	comp=Z,19µm,19.7s						
ILAR	**Eielson Array**	**83.73**	**19**	P	**P**	**03 13 17.5**	**-0.4**
	comp=Z,3.4nm,0.6s,baz=234,slow=4.6,SNR=9.9						
NVAR	**Mina Array Bea**	**86.20**	**50**	P	**P**	**03 13 31.7**	**+0.5**
	comp=Z,5.9nm,1.0s,baz=231,slow=6.9,SNR=4.9						
MKAR	**Makanchi Array**	**93.64**	**317**	P	**P**	**03 14 05.7**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=102,slow=5.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**93.70**	**324**	P	**P**	**03 14 04.2**	**-1.6**
	comp=Z,4.3nm,1.0s,baz=140,slow=4.7,SNR=4.4						
PDAR	**Pinedale Array**	**93.74**	**47**	P	**P**	**03 14 06.7**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=232,slow=4.4,SNR=3.3						
NVS	**Novosibirsk**	**94.80**	**325**	*i* P	**P**	**03 14 13.3**	**+2.5**
YKA	**Yellowknife Ar**	**95.19**	**27**	P	**P**	**03 14 10.9**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=259,slow=5.2,SNR=4.7						
ARCES	**ARCESS Array B**	**116.53**	**345**	PKP	**PKPdf**	**03 19 32.6**	**0.0**
	comp=Z,1.0nm,0.6s,baz=85,slow=1.9,SNR=6.0						
CPUP	**Villa Florida**	**123.92**	**132**	PKP	**PKPdf**	**03 19 48.4**	**+0.2**
	comp=Z,4.0nm,1.1s,baz=253,slow=2.2,SNR=2.7						
AKASG	**Malin Array Be**	**127.01**	**327**	PKP	**PKPdf**	**03 19 53.4**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=47,slow=2.0,SNR=3.4						
GERES	**GERESS Array B**	**135.87**	**334**	PKP	**PKPdf**	**03 20 11.0**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=72,slow=6.3,SNR=4.1						
KEST	**Kesra**	**147.55**	**323**	PKPbc	**PKPbc**	**03 20 35.0**	**+1.0**
	comp=Z,11nm,0.9s,baz=52,slow=4.6,SNR=3.9						
ESDC	**Sonseca Array**	**150.25**	**344**	PKPbc	**PKiKP**	**03 20 41.8**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=345,slow=3.6,SNR=3.0						

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*IDC **06** 03:00:59.6±0.6, 10°.90S×165°.38E, h0km, mb5.1/16, mb1 5.3/17, mb1mx5.1/38, mbtmp5.1/17, ML5.8/1, Error ellipse: s-maj=22.7km s-min=18.2km az=100.0*

*BJI **06** 03:00:59.0, 10°.80S×165°.66E, h11km, mB5.6/5, mb5.2/48, Ms5.7/3, Ms7 5.5/3*

*NEIC **06** 03:01:01.4±2.8, 11°.05S×165°.08E, h12km±17km, mb5.6/156, Error ellipse: s-maj=5.9km s-min=5.0km az=218.0*

*ISCJB **06** 03:01:02.5±0.1, 11°.11S±0°.03×165°.09E±0°.03, h30km, mb5.5/189, MS5.5/2, Error ellipse: s-maj=4.3km s-min=4.0km az=27.6*

*MOS **06** 03:01:02.6±1.3, 11°.11S×165°.09E, h33km, mb5.6/30, Error ellipse: s-maj=10.1km s-min=9.1km az=121.2*

ISC 06 03:01:03.9±0.3**, 11°.12S**±0°.05×**165°.29E**±0°.06**, h30km, n412, σ1s.39**/422**, mb5.5**/189**, 5C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.52**	**287**	*e*Pn	**Pn**	**03 02 20.5**	**-3.6**
HNR	**Honiara**	**5.52**	**287**	*e*P	**Pn**	**03 02 20.5**	**-3.6**
HNR	**Honiara**	**5.52**	**287**	Pn	**Pn**	**03 02 26.2**	**+2.1**
	358nm,0.3s,baz=153,slow=7.1,SNR=5.6						
DZM	**Mont Dzumac**	**10.95**	**174**	*e*Pn	**Pn**	**03 03 38.7**	**0.0**
DZM	**Mont Dzumac**	**10.95**	**174**	Pn	**Pn**	**03 03 40.7**	**+2.1**
	60nm,0.3s,baz=36,slow=6.2,SNR=9.1						
ONTNC	**Ouen Toro**	**11.18**	**174**	*e*Pn	**Pn**	**03 03 41.6**	**-0.1**
PINNC	**Pines Island,**	**11.62**	**170**	*e*Pn	**Pn**	**03 03 48.8**	**+1.1**
MSVF	**Nonsavu**	**13.99**	**119**	*e*Pn	**Pn**	**03 04 20.3**	**0.0**
	5µm,2.3s						
MSVF	**Nonsavu**	**13.99**	**119**	*e*P	**Pn**	**03 04 20.3**	**0.0**
MSVF				pmax	pmax		
	comp=Z,5µm,2.3s						
PATS	**Pohnpei**	**19.14**	**338**	*e*P	**P**	**03 05 23.9**	**-1.0**
	comp=Z,774nm,1.4s						
EIDS	**Eidsvold**	**19.54**	**222**	P	**Pn**	**03 05 31.1**	**+0.5**
	baz=20,SNR=3.3						
KWAJ	**Kwajalein Atol**	**19.92**	**7**	*e*P	**P**	**03 05 33.7**	**+0.3**
	comp=Z,1µm,1.3s						
CTAO	**Charters Tower**	**20.37**	**242**	*e*P	**P**	**03 05 37.0**	**-1.3**
	comp=Z,605nm,1.4s						
CTAO	**Charters Tower**	**20.37**	**242**	*e*P	**P**	**03 05 37.0**	**-1.3**
CTAO				pmax	pmax		
	comp=Z,605nm,1.4s						
MTSU	**Mount Surprise**	**21.45**	**249**	P	**P**	**03 05 52.4**	**+2.5**
	baz=22,SNR=5.4						
ARMA	**Armidale**	**23.02**	**211**	P	**P**	**03 06 07.2**	**+0.5**
	baz=23,SNR=3.5						
OUZ	**Omahuta**	**25.15**	**164**	*e*P	**P**	**03 06 27.4**	**+1.0**
MKAZ	**Moumakai**	**27.36**	**163**	P	**P**	**03 06 43.1**	**-3.3**
TOZ	**Tahuroa Road**	**28.04**	**163**	P	P	03 06 47.8	-4.7
HIZ	**Hauiti**	**28.59**	**164**	*e*P	**P**	**03 06 58.6**	**+1.2**
	comp=Z,97nm,1.0s						
WHRZ	**Whale Island**	**28.61**	**160**	P	**P**	**03 06 58.2**	**+0.5**
HAZ	**Te Kaha**	**28.80**	**159**	P	P	03 06 50.7	-8.5
MXZ	**Matakaoa Point**	**28.81**	**158**	*e*P	**P**	**03 07 00.7**	**+1.3**
	comp=Z,109nm,1.0s						
MXZ	**Matakaoa Point**	**28.81**	**158**	P	**P**	**03 06 58.3**	**-1.1**
RUGZ	**Raukumara Rang**	**28.95**	**159**	P	**P**	**03 06 58.3**	**-2.4**
URZ	**Urewera**	**29.02**	**161**	*e*P	**P**	**03 07 01.7**	**+0.5**
	comp=Z,120nm,1.1s						
URZ	**Urewera**	**29.02**	**161**	P	**P**	**03 07 02.8**	**+1.6**
MWZ	**Matawai**	**29.23**	**160**	P	**P**	**03 07 01.7**	**-1.5**
BKZ	**Black Stump Fm**	**29.66**	**162**	*e*P	**P**	**03 07 07.8**	**+0.9**
	comp=Z,236nm,1.1s						
BKZ	**Black Stump Fm**	**29.66**	**162**	P	**P**	**03 07 07.5**	**+0.6**
NMHZ	**Naumai**	**29.69**	**162**	P	**P**	**03 07 08.5**	**+1.2**
BHHZ	**Black Hill Sta**	**29.84**	**163**	P	**P**	**03 07 09.2**	**+0.7**
TSZ	**Takapari Road**	**30.34**	**164**	P	**P**	**03 07 13.9**	**+1.0**
MRZ	**Mangatainoka R**	**30.80**	**165**	P	**P**	**03 07 19.3**	**+2.4**
BFZ	**Birch Farm**	**31.00**	**164**	*e*P	**P**	**03 07 19.1**	**+0.4**
	comp=Z,94nm,0.9s						
HOWZ	**Holdsworth Sta**	**31.00**	**165**	P	**P**	**03 07 18.0**	**-0.8**
WB2	**Warramunga Arr**	**31.03**	**250**	*e*P	**P**	**03 07 19.1**	**-0.2**
	comp=Z,266nm,1.4s						
WRAB	**Tennant Creek**	**31.03**	**250**	*e*P	**P**	**03 07 17.8**	**-1.4**
	comp=Z,255nm,1.4s						
WRAB	**Tennant Creek**	**31.03**	**250**	*e*P	**P**	**03 07 17.8**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,255nm,1.4s						
WRA	**Warramunga Arr**	**31.04**	**250**	P	**P**	**03 07 22.2**	**+2.8**
	comp=Z,30nm,0.8s,baz=80,slow=9.0,SNR=10.0						
WRA				PcP	**PcP**	**03 10 15.9**	**+1.0**
	comp=Z,4.8nm,0.7s,baz=73,slow=3.2,SNR=4.9						
THZ	**Tophouse**	**31.25**	**169**	*e*P	**P**	**03 07 23.4**	**+2.4**
	comp=Z,139nm,0.9s						
KHZ	**Kahutara**	**32.00**	**168**	*e*P	**P**	**03 07 24.6**	**-2.9**
	comp=Z,50nm,0.8s						
LTZ	**Lake Taylor**	**32.13**	**170**	*e*P	**P**	**03 07 30.9**	**+2.2**
	comp=Z,96nm,0.7s						
KDU	**Kakadu**	**32.14**	**264**	P	**P**	**03 07 27.9**	**-1.2**
	baz=33,SNR=5.0						
AS31	**Alice Springs**	**32.36**	**243**	*e*P	**P**	**03 07 31.6**	**+0.6**
	comp=Z,14nm,0.8s						
ASAR	**Alice Springs**	**32.36**	**243**	P	**P**	**03 07 32.1**	**+1.1**
	comp=Z,43nm,0.9s,baz=62,slow=10,SNR=9.1						
ASAR				PcP	**PcP**	**03 10 19.6**	**+1.1**
	comp=Z,7.5nm,0.8s,baz=76,slow=2.7,SNR=5.5						
AS11	**Alice Springs**	**32.37**	**243**	P	**P**	**03 07 31.6**	**+0.5**
	baz=33						
OXZ	**Oxford**	**32.62**	**171**	*e*P	**P**	**03 07 33.9**	**+1.0**
	comp=Z,89nm,0.8s						
HTT	**Hallett**	**32.82**	**223**	P	**P**	**03 07 34.6**	**-0.2**
	baz=33,SNR=3.2						
RPZ	**Rata Peaks**	**32.86**	**172**	*e*P	**P**	**03 07 36.0**	**+0.9**
	comp=Z,61nm,0.9s						
BBOO	**Buckleboo**	**34.45**	**227**	P	**P**	**03 07 47.9**	**-1.2**
	baz=35,SNR=5.0						
PALU	**Palau**	**35.73**	**300**	P	**P**	**03 08 01.6**	**+1.3**
	baz=36,SNR=3.4						
KNRA	**Kununurra**	**35.79**	**259**	P	**P**	**03 08 01.1**	**+0.4**
	baz=36,SNR=4.3						
WRKA	**Warakurna**	**37.65**	**243**	P	**P**	**03 08 15.7**	**-1.0**
	baz=38,SNR=5.6						
FITZ	**Fitzroy Crossi**	**38.93**	**255**	P	**P**	**03 08 26.8**	**-0.6**
	baz=39,SNR=3.4						
RCP	**Roxas**	**47.90**	**297**	⇑*e*P	**P**	**03 09 36.2**	**-3.6**
OPA	**Opana**	**48.59**	**48**	*e*P	**P**	**03 09 46.8**	**+1.9**
	comp=Z,256nm,0.9s						
OPA	**Opana**	**48.59**	**48**	*e*P	**P**	**03 09 46.8**	**+1.9**
OPA				pmax	pmax		
	comp=Z,256nm,0.9s						
KHU	**Kahuku**	**48.94**	**52**	*e*P	**P**	**03 09 47.7**	**-0.2**
	comp=Z,519nm,1.4s						
KHU	**Kahuku**	**48.94**	**52**	*e*P	**P**	**03 09 47.7**	**-0.2**
KHU				pmax	pmax		
	comp=Z,519nm,1.4s						
NWAO	**Narrogin (SRO)**	**49.05**	**236**	*e*P	**P**	**03 09 48.0**	**-0.5**
	comp=Z,1µm,1.6s						
HMH	**Humu‘ula Sheep**	**49.24**	**52**	*e*P	**P**	**03 09 46.5**	**-3.8**
	comp=Z,208nm,1.0s						
KHLH	**Kahului Airpor**	**49.27**	**50**	*e*P	**P**	**03 09 50.8**	**+0.6**
	comp=Z,120nm,0.9s						
POHA	**Pohakuloa**	**49.29**	**52**	*e*P	**P**	**03 09 52.0**	**+1.3**
	comp=Z,150nm,0.8s						
KKM	**Kota Kinabalu**	**51.73**	**287**	*e*P	**P**	**03 10 06.5**	**-2.6**
	comp=Z,190nm,1.3s						
INU	**Inuyama**	**53.40**	**331**	*e*P	**P**	**03 10 21.8**	**+0.9**
	comp=Z,143nm,1.5s						
MJAR	**Matsushiro Arr**	**53.83**	**333**	P	**P**	**03 10 23.5**	**-0.6**
	comp=Z,19nm,0.9s,baz=169,slow=8.6,SNR=7.5						
MAJO	**Matsushiro**	**53.83**	**333**	*e*P	**P**	**03 10 21.8**	**-2.3**
	comp=Z,103nm,1.3s						
MAJO	**Matsushiro**	**53.83**	**333**	*i* P	**P**	**03 10 22.8**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,17nm,0.8s						
MAT	**Matsushiro**	**53.83**	**333**	P	**P**	**03 10 20.7**	**-3.4**
MJB9	**Matsu-Tunnel**	**53.84**	**333**	*e*P	**P**	**03 10 21.9**	**-2.2**
	comp=Z,105nm,1.3s						
JNU	**Nakatsue**	**54.88**	**325**	*e*P	**P**	**03 10 30.9**	**-0.9**
	comp=Z,109nm,1.0s						
JNU	**Nakatsue**	**54.88**	**325**	P	**P**	**03 10 32.1**	**+0.3**
	comp=Z,48nm,0.9s,baz=103,slow=3.4,SNR=5.2						
YULB	**Yu-li**	**55.03**	**309**	*e*P	**P**	**03 10 33.6**	**+0.5**
	comp=Z,109nm,1.4s						
NACB	**Ninganchiao**	**55.24**	**310**	*e*P	**P**	**03 10 32.8**	**-1.8**
	comp=Z,199nm,1.5s						
TPUB	**Ta-pu**	**55.49**	**308**	*e*P	**P**	**03 10 39.5**	**+3.0**
	comp=Z,102nm,1.1s						
SSLB	**Suanglung**	**55.51**	**309**	*e*P	**P**	**03 10 34.7**	**-1.8**
	comp=Z,42nm,1.1s						
YHNB	**Yeheng**	**55.69**	**310**	*e*P	**P**	**03 10 35.7**	**-2.1**
	comp=Z,172nm,1.4s						
KSM	**Kuching**	**56.07**	**279**	*e*P	**P**	**03 10 37.4**	**-3.3**
	comp=Z,40nm,1.0s						
ASAJ	**Asahikawa**	**58.72**	**341**	P	**P**	**03 10 56.9**	**-1.9**
	comp=Z,39nm,0.9s,baz=222,slow=9.5,SNR=6.5						
SSE	**Sheshan**	**59.59**	**316**	P	**P**	**03 11 05.3**	**+0.2**
SSE	**Sheshan**	**59.59**	**316**	*e*P	**P**	**03 11 03.6**	**-1.5**
	comp=Z,112nm,1.1s						
KSRS	**Korea Array**	**59.69**	**326**	P	**P**	**03 11 04.9**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,14nm,1.1s						
KSRS	**Korea Array**	**59.69**	**326**	P	**P**	**03 11 04.9**	**-0.7**
	comp=Z,13nm,1.1s,baz=139,slow=6.3,SNR=6.0						
KSAR	**Wonju Array Be**	**59.70**	**326**	P	**P**	**03 11 04.9**	**-0.8**
KSAR	**Wonju Array Be**	**59.70**	**326**	P	**P**	**03 11 04.9**	**-0.8**
KS01	**Wonju Array Si**	**59.72**	**326**	*e*P	**P**	**03 11 04.8**	**-1.1**
YSS	**Yuzh-Sakhalins**	**61.22**	**343**	*e*P	**P**	**03 11 16.6**	**+0.7**
	comp=Z,290nm,1.5s						
YSS	**Yuzh-Sakhalins**	**61.22**	**343**	⇑*e*P	**P**	**03 11 15.3**	**-0.6**
YSS				*e*		03 11 22.0	
YSS				pmax	pmax		
	comp=Z,520nm,1.2s						
YSS				pmax	pmax		
	comp=E,170nm,1.0s						
NJ2	**Nanjing**	**61.76**	**316**	*e*P	**P**	**03 11 18.9**	**-0.9**
NJ2				pmax	pmax		
	comp=E,24nm,0.9s						
MSHR	**Mys Shultsa**	**61.91**	**332**	*i* P	**P**	**03 11 20.3**	**-0.3**
QIZ	**Qiongzhong**	**62.32**	**298**	P	**P**	**03 11 23.4**	**-0.5**
QIZ				S	**S**	**03 19 48.4**	**-0.3**
USA0B	**Ussuriysk Arra**	**62.81**	**334**	*e*P	**P**	**03 11 25.0**	**-1.7**
	comp=E,118nm,1.3s						
USRK	**Ussuriysk Ar.**	**62.81**	**334**	P	**P**	**03 11 24.7**	**-1.9**
	comp=E,27nm,1.1s,baz=135,slow=6.5,SNR=5.7						
WHN	**Wuhan**	**64.11**	**312**	⇓P	**P**	**03 11 35.5**	**0.0**
MDJ	**Mudanjiang**	**64.21**	**332**	P	**P**	**03 11 36.4**	**+0.5**
MDJ				pmax	pmax		
	comp=E,36nm,0.9s						
MDJ	**Mudanjiang**	**64.21**	**332**	*e*P	**P**	**03 11 36.8**	**+0.9**
	comp=E,42nm,1.1s						
DL2	**Dalian**	**64.27**	**323**	P	**P**	**03 11 40.3**	**+3.9**
DL2				pmax	pmax		
	comp=E,62nm,1.1s						
PETK	**Petropavlovsk-**	**64.30**	**355**	*e*P	**P**	**03 11 33.9**	**-2.4**
PETK	**Petropavlovsk-**	**64.30**	**355**	*e*P	**P**	**03 11 33.9**	**-2.4**
TYV	**Tymovskoe**	**64.79**	**344**	*e*P	**P**	**03 11 38.8**	**-0.7**
TYV				*e*S	**S**	**03 20 19.4**	**+1.1**
TYV				pmax	pmax		
	comp=Z,41nm,1.5s						
TYV				pmax	pmax		
	comp=Z,4µm,8.1s						
TYV				smax	smax		
	comp=N,2µm,8.8s						
SNY	**Shenyang**	**65.15**	**327**	⇑P	**P**	**03 11 42.8**	**+0.8**
SNY				pmax	pmax		
	comp=N,22nm,1.3s						
CN2	**Changchun**	**65.58**	**329**	*e*P	**P**	**03 11 44.7**	**-0.1**
CN2				*e*sP	pP	03 11 51.6	-1.0
CN2				pmax	pmax		
	comp=N,40nm,1.0s						
KLR	**Kul'dur**	**66.95**	**337**	*i* P	**P**	**03 11 54.5**	**+1.0**
NIKH	**Nikolski High**	**67.57**	**17**	*e*P	**P**	**03 11 59.0**	**+1.7**
ENH	**Enshi**	**67.60**	**309**	*e*P	**P**	**03 11 56.9**	**-1.2**
	comp=N,93nm,1.2s						
ENH				*e*		03 12 02.0	
GYA	**Guiyang**	**68.09**	**304**	⇑*i*P	**P**	**03 12 04.5**	**+3.1**
GYA				pP	pP	03 12 09.4	0.0
GYA				PP	**PP**	**03 14 34.0**	**+2.0**
GYA				S	**S**	**03 20 59.8**	**+0.3**
GYA				SKS	**SKiKP**	**03 21 55.9**	**+0.7**
GYA				SS	**SS**	**03 25 23.2**	**+0.5**
GYA				pmax	pmax		
	comp=N,40nm,1.0s						
GYA				pmax	pmax		
	comp=N,160nm,8.2s						
GYA				LR	LR		
	comp=N,2µm,18.2s						
GYA				LR	LR		
	comp=N,2µm,18.8s						
GYA				LR	LR		
	comp=N,2µm,19.1s						
BJT	**Baijiatuau**	**68.25**	**321**	*e*P	**P**	**03 12 02.3**	**+0.4**
	comp=N,62nm,1.2s						
BJT	**Baijiatuau**	**68.25**	**321**	*e*P	**P**	**03 12 02.3**	**+0.4**
BJT				pmax	pmax		
	comp=Z,62nm,1.2s						
BJI	**Beijing**	**68.26**	**321**	P	**P**	**03 12 01.5**	**-0.4**
BJI				pmax	pmax		
	comp=Z,20nm,1.4s						
TIY	**Taiyuan**	**69.31**	**317**	*e*P	**P**	**03 12 10.0**	**+1.3**
TIY				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN	**Xi'an**	**69.84**	**313**	P	P	03 12 17.7	+5.7
XAN				pmax	pmax		
	comp=Z,49nm,1.3s						
KMI	**Kunming**	**70.78**	**302**	P	**P**	**03 12 19.4**	**+1.3**
KMI				pP	pP	03 12 25.5	-0.8
KMI				sP	sP	03 12 29.3	0.0
KMI				pmax	pmax		
	comp=Z,29nm,1.7s						
SPIA	**Saint Paul Isl**	**70.98**	**14**	*e*P	**P**	**03 12 18.4**	**+0.1**
	comp=Z,194nm,1.2s						
MA2	**Magadan**	**71.42**	**352**	*i* P	**P**	**03 12 22.5**	**+1.5**
HHC	**Hu-ho-hao-te**	**71.60**	**320**	*e*P	**P**	**03 12 25.7**	**+3.1**
HHC				sP	sP	03 12 32.9	-0.7
HHC				S	**S**	**03 21 43.3**	**+3.1**
HHC				pmax	pmax		
	comp=Z,26nm,1.2s						
CM01	**Chiang Mai Arr**	**71.71**	**294**	*e*P	**P**	**03 12 21.5**	**-2.1**
CHTO	**Chiang Mai**	**71.85**	**294**	*e*P	**P**	**03 12 21.6**	**-2.8**
	comp=Z,46nm,1.3s						
CHTO	**Chiang Mai**	**71.85**	**294**	*e*P	**P**	**03 12 21.7**	**-2.8**
CHTO				pmax	pmax		
	comp=Z,46nm,1.3s						
HIA	**Hailar**	**72.21**	**331**	*e*P	**P**	**03 12 24.8**	**-1.2**
HIA	**Hailar**	**72.21**	**331**	*e*P	**P**	**03 12 24.8**	**-1.2**
CD2	**Chengdu**	**72.29**	**308**	P	**P**	**03 12 25.8**	**-1.1**
CD2				S	**S**	**03 21 49.3**	**+0.9**
CD2				pmax	pmax		
	comp=Z,100nm,1.0s						
CD2				pmax	pmax		
	comp=Z,650nm,9.0s						
LZH	**Lanzhou**	**74.48**	**312**	⇑P	**P**	**03 12 39.8**	**-0.1**
LZH				pP	pP	03 12 43.9	-4.0
LZH				PP	**PP**	**03 15 30.6**	**+3.9**
LZH				pmax	pmax		
	comp=Z,44nm,2.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,17.7s						
LZH				LR	LR		
	comp=Z,2µm,17.7s						
LZH				LR	LR		
	comp=Z,2µm,18.6s						
OHAK	**Old Harbor**	**76.14**	**22**	*e*P	**P**	**03 12 48.7**	**+0.1**
	comp=Z,97nm,1.3s						
GAMB	**Gambell**	**76.72**	**10**	*e*P	**P**	**03 12 51.7**	**-0.1**
	comp=Z,141nm,1.5s						
KDAK	**Kodiak Island**	**76.81**	**22**	*i* P	**P**	**03 12 53.4**	**+0.9**
YAK	**Yakutsk**	**78.04**	**344**	*e*P	P	03 13 04.4	+5.1
YAK				pmax	pmax		
	comp=Z,72nm,1.4s						
YAK				pmax	pmax		
	comp=N,27nm,1.4s						
YAK				pmax	pmax		
	comp=E,26nm,1.6s						
ULN	**Ulaanbaatar**	**78.10**	**324**	*e*P	**P**	**03 12 58.8**	**-1.3**
	comp=E,30nm,0.9s						
ULN	**Ulaanbaatar**	**78.10**	**324**	*i* P	**P**	**03 13 01.9**	**+1.7**
ULN				pmax	pmax		
	comp=Z,17nm,1.1s						
SVW2	**Sparrevohn**	**78.32**	**18**	*e*P	**P**	**03 13 01.6**	**+0.7**
	comp=Z,90nm,1.4s						
SONM	**Songino Array**	**78.46**	**324**	P	**P**	**03 13 03.0**	**+0.9**
	comp=Z,6.3nm,0.9s,baz=139,slow=6.8,SNR=5.1						
SONA1	**Songino Array**	**78.46**	**324**	*e*P	**P**	**03 13 01.4**	**-0.7**
RSO	**Redoubt South**	**78.74**	**20**	*e*P	**P**	**03 13 01.4**	**-2.1**
RSO				*e*pwP	**pP**	**03 13 07.6**	**-4.1**
GTA	**Gaotai**	**78.79**	**314**	P	**P**	**03 13 07.4**	**+3.3**
GTA				pP	pP	03 13 11.8	-0.5
GTA				sP	sP	03 13 14.2	-1.0
GTA				pmax	pmax		
	comp=Z,25nm,1.7s						
BRLK	**Bradley Lake**	**78.86**	**21**	*e*P	**P**	**03 13 04.5**	**+0.5**
	comp=Z,58nm,1.0s						
QSPA	**South Pole Qui**	**78.89**	**180**	P	**P**	**03 13 06.2**	**+2.0**
	comp=Z,37nm,1.0s,baz=264,slow=2.7,SNR=5.4						
BILL	**Bilibino**	**78.95**	**0**	*e*P	**P**	**03 13 03.7**	**-0.5**
	comp=Z,64nm,1.2s						
BILL	**Bilibino**	**78.95**	**0**	*i* P	**P**	**03 13 04.1**	**-0.1**
BILL				pmax	pmax		
	comp=Z,20nm,0.9s						
SUA	**Susitna One**	**80.14**	**20**	*e*P	**P**	**03 13 10.4**	**-0.6**
	comp=Z,85nm,1.3s						
SHL	**Shillong**	**80.16**	**299**	*e*P	**P**	**03 13 15.4**	**+3.4**
	comp=Z,114nm,1.4s						
BOD	**Bodaibo**	**80.41**	**335**	*e*P	**P**	**03 13 11.8**	**-0.5**
BOD				pmax	pmax		
	comp=Z,58nm,1.9s						
PMR	**Palmer**	**80.78**	**20**	*e*P	**P**	**03 13 13.2**	**-1.0**
	comp=Z,45nm,0.9s						
PMR	**Palmer**	**80.78**	**20**	*e*P	**P**	**03 13 13.2**	**-1.0**
PMR				pmax	pmax		
	comp=Z,45nm,0.9s						
GLI	**Glacier Island**	**80.99**	**21**	*e*P	**P**	**03 13 15.6**	**+0.2**
	comp=Z,126nm,1.4s						
DIV	**Divide**	**81.64**	**22**	*e*P	**P**	**03 13 19.3**	**+0.4**
	comp=Z,52nm,1.0s						
TLY	**Talaya**	**81.94**	**326**	*i* P	**P**	**03 13 22.4**	**+1.8**
IM3	**Indian Mountai**	**82.61**	**16**	*e*P	**P**	**03 13 22.0**	**-1.8**
HARP	**HAARP**	**82.71**	**21**	*e*P	**P**	**03 13 24.9**	**+0.5**
	comp=Z,60nm,1.1s						
MLY	**Manley**	**82.74**	**17**	*e*P	**P**	**03 13 24.8**	**+0.2**
	comp=Z,36nm,1.5s						
KCPM	**Cahto Peak**	**82.93**	**47**	*e*P	**P**	**03 13 27.2**	**+1.0**
	comp=Z,48nm,0.8s						
KMRM	**Mail Ridge**	**83.03**	**47**	*e*P	**P**	**03 13 27.9**	**+1.3**
	comp=Z,52nm,0.8s						
HOPS	**Hopland Field**	**83.06**	**48**	*e*P	**P**	**03 13 28.8**	**+2.1**
	comp=Z,101nm,1.4s						
GDXM	**Geysers**	**83.20**	**48**	*e*P	**P**	**03 13 28.7**	**+1.1**
	comp=Z,28nm,0.8s						
KHMM	**Horse Mountain**	**83.24**	**46**	*e*P	**P**	**03 13 28.1**	**+0.3**
	comp=Z,45nm,1.0s						
HDA	**Harding Lake**	**83.46**	**19**	P	**P**	**03 13 28.5**	**+0.3**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.49**	**18**	P	**P**	**03 13 28.5**	**+0.1**
	baz=226						
COLA	**College**	**83.49**	**18**	*i* P	**P**	**03 13 29.8**	**+1.4**
COLA				pmax	pmax		
	comp=Z,18nm,0.8s						
SAO	**San Andreas Ge**	**83.52**	**51**	*e*P	**P**	**03 13 29.8**	**+0.6**
	comp=Z,45nm,1.1s						
O02D	**Mt. Diablo Mer**	**83.67**	**47**	P	**P**	**03 13 30.2**	**+0.2**
	baz=250,SNR=8.4						
RIDG	**Independ’e Rid**	**83.69**	**20**	*e*P	**P**	**03 13 30.8**	**+1.2**
	comp=Z,96nm,1.2s						
IL1	**Eielson Array**	**83.72**	**19**	*e*P	**P**	**03 13 27.0**	**-2.6**
ILAR	**Eielson Array**	**83.72**	**19**	P	**P**	**03 13 29.4**	**-0.2**
	comp=Z,9.5nm,0.7s,baz=234,slow=4.8,SNR=12						
L02E	**Cave Junction**	**83.79**	**45**	P	**P**	**03 13 31.2**	**+0.7**
	baz=249						
POKR	**Poker Plat Res**	**83.79**	**18**	P	**P**	**03 13 30.8**	**+0.8**
	baz=227						
J01E	**Myrtle Point**	**83.92**	**44**	P	**P**	**03 13 31.7**	**+0.6**
	baz=249						
K02D	**Willamette Mer**	**83.94**	**45**	P	**P**	**03 13 31.5**	**+0.2**
	baz=249						
WDC	**Whiskeytown Da**	**83.99**	**47**	*e*P	**P**	**03 13 33.2**	**+1.7**
	comp=Z,22nm,1.0s						
N02D	**Trinity Center**	**84.00**	**46**	P	**P**	**03 13 31.7**	**+0.1**
	baz=250						
M02C	**Callahan**	**84.04**	**46**	P	**P**	**03 13 32.2**	**+0.3**
	baz=250,SNR=6.9						
SCZ2	**Santa Cruz Isl**	**84.06**	**54**	P	**P**	**03 13 32.4**	**+0.3**
	baz=253						
PAGB	**Antelope Grade**	**84.11**	**52**	*e*P	**P**	**03 13 34.1**	**+1.8**
	comp=Z,88nm,1.5s						
SCRK	**Sand Creek**	**84.14**	**20**	*e*P	**P**	**03 13 32.6**	**+0.7**
	comp=Z,106nm,1.3s						
SMMC	**Simmler**	**84.18**	**52**	P	**P**	**03 13 33.0**	**+0.3**
	baz=252						
PKM	**Mcpherson Peak**	**84.19**	**53**	P	**P**	**03 13 33.3**	**+0.4**
	baz=252						
YBH	**Yreka Blue Hor**	**84.26**	**46**	*e*P	**P**	**03 13 33.7**	**+0.7**
	comp=Z,38nm,0.9s						
ORV	**Oroville**	**84.39**	**48**	*e*P	**P**	**03 13 33.1**	**-0.5**
	comp=Z,21nm,0.9s						
ORV	**Oroville**	**84.39**	**48**	*e*P	**P**	**03 13 33.1**	**-0.5**
ORV				pmax	pmax		
	comp=Z,21nm,0.9s						
HUMO	**Hull Mountain**	**84.39**	**45**	*e*P	**P**	**03 13 32.3**	**-1.3**
	comp=Z,48nm,1.1s						
O03E	**Paynes Creek**	**84.42**	**47**	P	**P**	**03 13 34.2**	**+0.4**
	baz=251						
BLG	**Laguna Peak, P**	**84.55**	**54**	P	**P**	**03 13 34.7**	**+0.2**
	baz=253						
AFDM	**Forest Hills D**	**84.58**	**49**	*e*P	**P**	**03 13 33.9**	**-0.7**
	comp=Z,58nm,1.1s						
HYT	**Haines Junctio**	**84.64**	**24**	*e*P	**P**	**03 13 35.0**	**+0.6**
	comp=Z,22nm,0.9s						
L04D	**Klamath Falls**	**84.71**	**45**	P	**P**	**03 13 35.4**	**+0.1**
	baz=250,SNR=7.3						
CMB	**Columbia Colle**	**84.73**	**50**	*e*P	**P**	**03 13 35.3**	**-0.1**
	comp=Z,34nm,1.1s						
CMB	**Columbia Colle**	**84.73**	**50**	*e*P	**P**	**03 13 35.3**	**-0.1**
CMB				pmax	pmax		
	comp=Z,34nm,1.1s						
CIS	**Catalina Islan**	**84.86**	**55**	P	**P**	**03 13 36.3**	**+0.2**
	baz=253						
M04C	**Macdoel**	**84.89**	**46**	P	**P**	**03 13 36.5**	**+0.3**
	baz=250,SNR=9.8						

KNGR	Kungurtug, Tuv	84.90	324	*i* P	P	03 13 37.0	+1.0
ARVC	Arvin	85.04	53	P	P	03 13 36.9	0.0
	baz=253						
VES	Vestal, Richgr	85.05	52	P	P	03 13 36.4	-0.5
	baz=253,SNR=6.6						
I04A	Tendick Farm,	85.18	44	P	P	03 13 37.7	+0.2
	baz=250						
J04D	Umpqua Nationa	85.20	44	P	P	03 13 37.8	0.0
	baz=250,SNR=7.5						
BEKR	Beckworth	85.33	48	*e*P	P	03 13 38.2	-0.3
	comp=Z,42nm,1.2s						
MWC	Mount Wilson	85.38	54	*e*P	P	03 13 38.9	0.0
	comp=Z,81nm,1.3s						
MWC	Mount Wilson	85.38	54	*e*P	P	03 13 38.9	0.0
MWC				pmax	pmax		
	comp=Z,81nm,1.3s						
ISA	Isabella, Lake	85.47	53	*e*P	P	03 13 39.7	+0.5
	comp=Z,45nm,1.3s						
ISA	Isabella, Lake	85.47	53	*e*P	P	03 13 39.7	+0.5
ISA				pmax	pmax		
	comp=Z,45nm,1.3s						
ISA	Isabella, Lake	85.47	53	P	P	03 13 38.9	-0.3
	baz=253,SNR=7.2						
WAKR	Walker	85.58	50	*e*P	P	03 13 39.6	-0.3
	comp=Z,52nm,1.0s						
MDPB	Devils Postpil	85.59	50	*e*P	P	03 13 38.6	-1.3
	comp=Z,47nm,1.0s						
EDW2	Edwards Air Fo	85.62	53	P	P	03 13 39.6	-0.3
	baz=253,SNR=9.1						
OMMB	Old Mammoth Mi	85.64	51	*e*P	P	03 13 41.8	+1.4
	comp=Z,32nm,1.0s						
PNTR	Pine Nut	85.64	49	*e*P	P	03 13 39.6	-0.5
	comp=Z,39nm,0.9s						
VCNR	Virginia City	85.67	49	*e*P	P	03 13 41.9	+1.6
	comp=Z,19nm,0.9s						
BFSC	Mount Baldy Ra	85.70	54	P	P	03 13 40.3	-0.2
	baz=254,SNR=11						
109C	Camp Elliot, M	85.77	55	P	P	03 13 40.7	+0.1
	baz=254						
CPE	Camp Elliot	85.77	55	*e*P	P	03 13 42.0	+1.4
	comp=Z,32nm,1.1s						
MLAC	Mammoth, Mammo	85.77	51	P	P	03 13 40.9	+0.1
	baz=253						
J05D	Fort Rock, OR	85.81	45	P	P	03 13 41.0	+0.2
	baz=251						
MURC	Murrieta	85.89	55	P	P	03 13 41.5	+0.3
	baz=254						
PAHR	Pah Rah Range	85.99	48	*e*P	P	03 13 42.4	+0.6
	comp=Z,33nm,0.9s						
CWC	Cottonwood Cre	86.00	52	P	P	03 13 41.7	-0.2
	baz=253						
MOD	Modoc Plateau	86.02	46	*e*P	P	03 13 41.9	0.0
	comp=Z,53nm,1.4s						
LRMC	Laurel Mtn Rad	86.04	53	P	P	03 13 42.9	+0.8
	baz=254						
E04D	Cinebar	86.04	41	P	P	03 13 42.2	+0.6
	baz=250						
D03D	Eldon	86.05	40	P	P	03 13 42.6	+0.9
	baz=249						
BAR	Barrett	86.06	56	*e*P	P	03 13 42.4	+0.3
	comp=Z,18nm,1.0s						
TIN	Tinemaha, Big	86.06	51	P	P	03 13 42.3	+0.1
	baz=253						
TIXI	Tiksi	86.08	349	*i* P	P	03 13 40.5	-0.7
TIXI				pmax	pmax		
	comp=Z,32nm,2.1s						
I05D	Terrebonne, OR	86.09	44	P	P	03 13 42.6	+0.5
	baz=251						
PALK	Pallekele	86.12	278	*i* P	P	03 13 46.0	+3.2
PINE	Pine Mountain	86.18	44	*e*P	P	03 13 43.6	+0.9
	comp=Z,64nm,1.3s						
MONP2	Monument Peak	86.33	56	P	P	03 13 44.1	+0.5
	baz=254,SNR=7.6						
DAC	Darwin (Calif)	86.33	52	*e*P	P	03 13 45.1	+1.6
	comp=Z,32nm,1.1s						
MPMC	Manual Prospec	86.35	52	P	P	03 13 43.5	-0.2
	baz=254						
G05D	Wamic, OR	86.41	43	P	P	03 13 43.9	+0.3
	baz=251						
NVAR	Mina Array Bea	86.41	50	P	P	03 13 44.0	0.0
	comp=Z,18nm,0.8s,baz=234,slow=7.4,SNR=11						
PFO	Pinyon Flats O	86.49	55	*e*P	P	03 13 44.1	-0.2
	comp=Z,23nm,0.9s						
PFO	Pinyon Flats O	86.49	55	*e*P	P	03 13 44.1	-0.2
PFO				pmax	pmax		
	comp=Z,23nm,0.9s						
PFO	Pinyon Flats O	86.49	55	P	P	03 13 44.2	-0.2
	baz=254						
IKP	In-Ko-Pah, Jac	86.51	56	P	P	03 13 44.6	+0.2
	baz=255						
NV11	Mina Array Sit	86.52	50	*e*P	P	03 13 45.0	+0.6
	comp=Z,3.5nm,1.0s						
F05D	White Salmon	86.53	42	P	P	03 13 44.9	+0.8
	baz=250						
D05A	Enumclaw	86.63	41	*e*P	P	03 13 46.8	+2.3
	comp=Z,142nm,1.4s						
GSC	Goldstone, Bar	86.67	53	*e*P	P	03 13 46.6	+1.4
	comp=Z,35nm,1.3s						
GSC	Goldstone, Bar	86.67	53	P	P	03 13 45.7	+0.5
	baz=254						
GRAC	Grapevine Rang	86.71	51	P	P	03 13 45.7	+0.5
	baz=254						
A04D	Lummi Island	86.72	39	P	P	03 13 45.6	+0.7
	baz=249						
KVN	Kaiserville	86.75	49	*e*P	P	03 13 45.6	0.0
	comp=Z,28nm,1.1s						
KVN	Kaiserville	86.75	49	*e*P	P	03 13 45.6	0.0
KVN				pmax	pmax		
	comp=Z,28nm,1.1s						
SWSC	Sam W. Stewart	86.84	56	P	P	03 13 46.2	+0.3
	baz=255,SNR=6.6						
HEC	Hector,Ludlow	86.92	54	P	P	03 13 47.0	+0.6
	baz=254						
B05A	Bryant	86.94	40	P	P	03 13 46.9	+0.9
	baz=250						
FURC	Furnace Creek,	86.95	52	P	P	03 13 46.9	+0.6
	baz=254						
BELC	Belle Mtn. Jos	86.96	55	P	P	03 13 47.3	+0.7
	baz=255,SNR=9.9						
SHOC	Shoshone, Teco	87.25	53	P	P	03 13 48.4	+0.5
	baz=254						
I07A	Izee	87.26	44	*e*P	P	03 13 48.5	+0.7
BC3	Big Chuckawall	87.31	55	P	P	03 13 48.6	+0.3
	baz=255,SNR=6.0						
WVOR	Wild Horse Val	87.36	46	*e*P	P	03 13 50.4	+2.0
	comp=Z,37nm,1.1s						
WVOR	Wild Horse Val	87.36	46	*e*P	P	03 13 50.4	+2.0
WVOR				pmax	pmax		
	comp=Z,37nm,1.1s						
TUQ	Turquoise Moun	87.40	53	P	P	03 13 49.0	+0.2
	baz=255						
GMRC	Granite Mounta	87.44	54	P	P	03 13 49.0	+0.1
	baz=255,SNR=6.6						
F07A	Phinny Hill Vi	87.55	42	*e*P	P	03 13 51.0	+2.0
	comp=Z,33nm,1.0s						
TPNV	Topopah Spring	87.56	52	*e*P	P	03 13 50.8	+1.3
	comp=Z,60nm,1.4s						
TPNV	Topopah Spring	87.56	52	*e*P	P	03 13 50.8	+1.3
TPNV				pmax	pmax		
	comp=Z,60nm,1.4s						
TPNV	Topopah Spring	87.56	52	P	P	03 13 49.7	+0.2
	baz=254						
GLA	Glamis	87.66	56	*e*P	P	03 13 51.2	+1.3
	comp=Z,48nm,0.9s						
GLA	Glamis	87.66	56	*e*P	P	03 13 51.2	+1.3
GLA				pmax	pmax		
	comp=Z,48nm,0.9s						
GLA	Glamis	87.66	56	P	P	03 13 50.2	+0.3
	baz=255,SNR=8.7						
IRM	Iron Mountain	87.69	55	P	P	03 13 50.2	+0.2
	baz=255,SNR=7.2						
J08A	Circle Bar Ran	87.75	45	*e*P	P	03 13 50.8	+0.6
	comp=Z,32nm,0.9s						
LDFC	Landfair	87.95	54	*e*P	P	03 13 53.3	+1.9
	comp=Z,117nm,1.3s						
HAWA	Hanford	87.96	42	*e*P	P	03 13 53.0	+2.0
	comp=Z,27nm,0.9s						
G08A	Pilot Rock	88.00	43	*e*P	P	03 13 53.2	+1.9
	comp=Z,41nm,1.1s						
Y12C	Blythe	88.08	55	*e*P	P	03 13 52.6	+0.7
	comp=Z,76nm,1.4s						
Y12C	Blythe	88.08	55	P	P	03 13 52.1	+0.2
	baz=256,SNR=8.9						
NEE2	Needles Airpor	88.26	54	P	P	03 13 53.4	+0.7
	baz=255						
SHPR	Sheep Range	88.28	52	*e*P	P	03 13 54.1	+1.1
	comp=Z,32nm,1.3s						
E08A	Dider Farm, El	88.31	42	*e*P	P	03 13 54.8	+2.1
	comp=Z,54nm,1.1s						
R11A	Troy Canyon, C	88.44	51	*e*P	P	03 13 55.0	+1.3
	comp=Z,39nm,1.5s						
R11A	Troy Canyon, C	88.44	51	P	P	03 13 54.1	+0.4
	baz=255						
PDMCI	Parker Dam,Lak	88.53	55	P	P	03 13 54.4	+0.5
	baz=256,SNR=9.5						
D08A	Wollman Farm,	88.57	42	*e*P	P	03 13 55.8	+1.9
	comp=Z,48nm,1.5s						
WMQ	Urumqi	88.83	315	P	P	03 13 57.4	+2.1
WMQ				pP	pP	03 14 03.4	-0.1
WMQ				sP	pwP	03 14 09.0	-0.1
WMQ				pmax	pmax		
	comp=Z,100nm,1.3s						
WMQ	Urumqi	88.83	315	*e*P	P	03 13 53.2	-2.1
	comp=Z,21nm,0.9s						
WMQ	Urumqi	88.83	315	*e*P	P	03 13 53.2	-2.1
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
E09A	Wood Farm, Sta	88.92	42	*e*P	P	03 13 56.7	+1.2
	comp=Z,22nm,1.0s						
W13A	Hualapai Mount	88.93	54	*e*P	P	03 13 57.7	+1.5
	comp=Z,29nm,1.1s						
BMO	Blue Mountains	88.99	44	*e*P	P	03 13 56.4	+0.3
	comp=Z,61nm,1.5s						
BMO	Blue Mountains	88.99	44	*e*P	P	03 13 56.4	+0.3
BMO				pmax	pmax		
	comp=Z,61nm,1.5s						
214A	Organ Pipe Nat	89.04	57	P	P	03 13 56.9	+0.4
	baz=256						
C09A	Chrisman Ranch	89.22	41	*e*P	P	03 14 02.4	+5.5
	comp=Z,11nm,0.9s						
ELK	Elko	89.33	48	*e*P	P	03 13 58.5	+0.6
ELK	Elko	89.33	48	*e*P	P	03 13 58.5	+0.6
Y14A	Wickenburg	89.36	55	*e*P	P	03 13 58.8	+0.9
	comp=Z,13nm,0.9s						
F10A	Beach Ranch, E	89.37	43	*e*P	P	03 13 58.0	+0.3
	comp=Z,31nm,1.1s						
MFID	Camas Ranch	89.61	46	*e*P	P	03 14 00.7	+1.6
	comp=Z,14nm,0.9s						
SLBS	Sierra La Lagu	89.68	66	*e*P	P	03 14 00.7	+0.9
	comp=Z,22nm,0.8s						
PSUT	Pine Spring	89.80	51	*e*P	P	03 14 00.1	0.0
	comp=Z,26nm,1.0s						
LCMT	Little Creek M	89.90	52	*e*P	P	03 14 01.5	+1.0
	comp=Z,35nm,1.1s						
CCUT	Cedar City	89.94	52	*e*P	P	03 14 01.7	+0.9
	comp=Z,47nm,1.2s						
HSIG		89.94	61	*e*P	P	03 14 01.8	+1.0
	comp=Z,62nm,1.4s						
NEW	Newport	90.09	41	*e*P	P	03 14 02.6	+1.6
	comp=Z,20nm,1.2s						
NEW	Newport	90.09	41	*e*P	P	03 14 02.6	+1.6
NEW				pmax	pmax		
	comp=Z,20nm,1.2s						
NEW	Newport	90.09	41	P	P	03 14 01.3	+0.2
	baz=254						
SZCU	Shurtz Canyon	90.16	52	*e*P	P	03 14 03.0	+1.1
	comp=Z,46nm,1.2s						
U15A	North Rim	90.50	53	*e*P	P	03 14 04.0	+0.5
	comp=Z,38nm,0.9s						
HLID	Hailey	90.65	46	*e*P	P	03 14 04.1	+0.2
	comp=Z,14nm,0.9s						
HLID	Hailey	90.65	46	P	P	03 14 04.1	+0.2
	baz=256						
DGZ	Jazzator, Alta	90.67	321	*i* P	P	03 14 00.9	-2.9
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
PKCU	Pink Cliffs	90.72	52	*e*P	P	03 14 03.8	-0.8
	comp=Z,58nm,1.1s						
X16A	Lo Mia Camp, P	90.73	55	*e*P	P	03 14 05.8	+1.3
	comp=Z,27nm,0.9s						
TUC	Tucson	90.80	57	*e*P	P	03 14 06.8	+2.0
	comp=Z,21nm,1.0s						
TUC	Tucson	90.80	57	P	P	03 14 05.0	+0.2
	baz=258						
MTPU	Mount Pierson	90.96	52	*e*P	P	03 14 06.6	+0.9
	comp=Z,45nm,1.2s						
DUG	Dugway, Tooele	90.98	49	*e*P	P	03 14 06.5	+1.0
DUG	Dugway, Tooele	90.98	49	P	P	03 14 05.4	-0.2
	baz=256						
BGU	Big Grassy Mou	91.00	49	*e*P	P	03 14 06.3	+0.7
	comp=Z,20nm,1.0s						
WUAZ	Wupatki	91.02	54	*e*P	P	03 14 07.1	+1.2
	comp=Z,35nm,1.0s						
WUAZ	Wupatki	91.02	54	P	P	03 14 05.9	+0.1
	baz=257						
MSU	Marysvale	91.07	51	*e*P	P	03 14 06.4	+0.3
MSU	Marysvale	91.07	51	*e*P	P	03 14 06.4	+0.3
NLU	North Lily Min	91.48	50	*e*P	P	03 14 08.8	+0.9
	comp=Z,45nm,1.3s						
SPUT	South Promonto	91.51	48	*e*P	P	03 14 09.7	+1.7
	comp=Z,21nm,1.1s						
SYO	Syowa Base	91.58	197	⇓*i*X	P	03 14 03.3	-4.2
MPU	Maple Canyon	91.82	50	*e*P	P	03 14 11.4	+1.9
	comp=Z,32nm,1.2s						
319A	Douglas	91.85	59	*e*P	P	03 14 12.4	+2.7
	comp=Z,33nm,1.1s						
CTU	Camp Tracy	91.89	49	*e*P	P	03 14 11.7	+2.0
	comp=Z,22nm,0.9s						
Q16A	Castle Valley	91.93	51	*e*P	P	03 14 12.7	+2.7
	comp=Z,36nm,1.2s						
X18A	Snowflake	91.95	55	*e*P	P	03 14 11.2	+1.0
	comp=Z,19nm,1.0s						
MCMT	McKenzie Canyo	92.05	45	*e*P	P	03 14 12.2	+1.7
JLU	Jordanelle	92.09	49	*e*P	P	03 14 12.9	+2.1
	comp=Z,34nm,1.4s						
TCUT	Toone Canyon	92.23	49	*e*P	P	03 14 13.7	+2.3
	comp=Z,23nm,0.8s						
W18A	Petrified Fore	92.25	55	*e*P	P	03 14 13.3	+1.8
	comp=Z,22nm,1.0s						
W18A	Petrified Fore	92.25	55	P	P	03 14 11.9	+0.3
	baz=258						
DLMT	Dillon	92.34	44	*e*P	P	03 14 13.9	+2.2
	comp=Z,48nm,1.0s						
LRM	Limekiln Ridge	92.55	44	*e*P	P	03 14 13.2	+0.4
FXWY	Fox Creek	93.06	46	*e*P	P	03 14 15.4	+0.3
	comp=Z,10nm,0.8s						
BOZ	Bozeman (W)	93.06	44	*e*P	P	03 14 17.2	+2.2
	comp=Z,22nm,1.0s						
BOZ	Bozeman (W)	93.06	44	P	P	03 14 15.3	+0.2
	baz=258						
HRY	Holter Researc	93.17	43	*e*P	P	03 14 11.9	-3.5
IMW	Indian Meadow	93.17	46	*e*P	P	03 14 16.2	+0.4
	comp=Z,12nm,0.8s						
YHB	Horse Butte	93.18	45	*e*P	P	03 14 17.4	+1.7
	comp=Z,14nm,0.9s						
SNOW	Snow King Moun	93.21	46	*e*P	P	03 14 18.1	+2.2
	comp=Z,14nm,1.0s						
MK31	Makanchi Array	93.27	317	*e*P	P	03 14 10.9	-4.9
MK31	Makanchi Array	93.27	317	*e*P	P	03 14 10.9	-4.9
MKAR	Makanchi Array	93.27	317	P	P	03 14 16.0	+0.2
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	93.27	317	P	P	03 14 16.0	+0.2
	comp=Z,9.4nm,0.8s,baz=117,slow=5.1,SNR=6.5						
MOOW	Moose Ponds	93.28	46	*e*P	P	03 14 17.6	+1.5
	comp=Z,7.6nm,0.8s						
YMR	Madison River	93.32	45	*e*P	P	03 14 18.6	+2.3
	comp=Z,23nm,1.2s						
121A	Cookes Peak, D	93.33	58	P	P	03 14 16.6	+0.1
	baz=259						
LOHW	Long Hollow	93.35	46	*e*P	P	03 14 18.2	+1.7
	comp=Z,10nm,1.0s						
ZAA0	Zalesovo Array	93.35	324	*e*P	P	03 14 15.5	-0.4
	comp=Z,17nm,1.1s						
ZALV	Zalesovo Beam	93.35	324	P	P	03 14 16.4	+0.5
	comp=Z,13nm,1.0s,baz=124,slow=4.1,SNR=4.8						
PV09	Paradox Valley	93.40	52	*e*P	P	03 14 17.0	0.0
PV14	Lion Creek, Pa	93.46	52	*e*P	P	03 14 18.4	+1.2
	comp=Z,21nm,0.8s						
MAKZ	Makanchi	93.48	317	*e*P	P	03 14 15.0	-1.8
	comp=Z,30nm,1.2s						
MAKZ	Makanchi	93.48	317	*e*P	P	03 14 15.0	-1.8
MAKZ				pmax	pmax		
	comp=Z,30nm,1.2s						
PV23	Carpenter Ridg	93.49	52	*e*P	P	03 14 15.3	-2.0
	comp=Z,29nm,0.8s						
PV17	East Wray Mesa	93.49	52	*e*P	P	03 14 17.2	-0.1
	comp=Z,22nm,1.0s						
PV20	West Nyswonger	93.50	52	*e*P	P	03 14 19.5	+2.2
	comp=Z,17nm,0.8s						
H17A	Grant Village	93.53	46	*e*P	P	03 14 19.6	+2.2
	comp=Z,12nm,0.9s						
H17A	Grant Village	93.53	46	P	P	03 14 17.7	+0.4
	baz=258						
PV21	Cone Mtn., Par	93.54	52	*e*P	P	03 14 20.1	+2.6
	comp=Z,19nm,0.9s						
PV12	Saucer Basin,	93.62	52	*e*P	P	03 14 19.3	+1.4
	comp=Z,21nm,0.9s						
PV07	Paradox Valley	93.77	52	*e*P	P	03 14 21.4	+2.9
	comp=Z,13nm,0.9s						
BW06	Boulder Array	93.93	47	*e*P	P	03 14 20.4	+1.2
	comp=Z,9.5nm,0.9s						
BW06	Boulder Array	93.93	47	P	P	03 14 19.1	-0.1
	baz=259						
PD31	Pinedale Array	93.93	47	*e*P	P	03 14 20.9	+1.8
PDAR	Pinedale Array	93.93	47	*e*P	P	03 14 18.7	-0.5
PDAR	Pinedale Array	93.93	47	P	P	03 14 20.6	+1.4
	comp=Z,4.8nm,0.8s,baz=240,slow=3.3,SNR=9.2						
RLMT	Red Lodge	94.59	45	P	P	03 14 22.1	-0.1
	baz=259						
EGMT	Eagleton	94.82	42	*e*P	P	03 14 24.6	+1.7
	comp=Z,25nm,1.0s						
EGMT	Eagleton	94.82	42	P	P	03 14 23.3	+0.4
	baz=259						
ANMO	Albuquerque	94.86	55	*e*P	P	03 14 24.5	+0.9
	comp=Z,6.8nm,0.9s						
ANMO	Albuquerque	94.86	55	P	P	03 14 23.6	0.0
	baz=260						
MNTX	Cornudas Mount	95.18	59	*e*P	P	03 14 26.5	+1.5
	comp=Z,10.0nm,1.2s						
MNTX	Cornudas Mount	95.18	59	P	P	03 14 24.8	-0.2
	baz=260						
YKA	Yellowknife Ar	95.24	27	P	P	03 14 22.6	-1.8
	comp=Z,2.3nm,0.8s,baz=258,slow=4.5,SNR=6.2						
SDCO	Great Sand Dun	96.09	53	P	P	03 14 28.9	-0.3
	baz=261						
TXAR	Lajitas Array	96.25	61	P	P	03 14 30.3	+0.3
	comp=Z,1.5nm,0.8s,baz=221,slow=6.0,SNR=6.7						
KSH	Kashi	96.45	309	P	P	03 14 33.1	+2.4
MSTX	Muleshoe	97.71	57	P	P	03 14 36.3	-0.2
	baz=262						
DGMT	Dagmar	98.56	42	*e*P	P	03 14 39.5	-0.3
ARCES	ARCESS Array B	116.29	345	PKP	PKiKP	03 19 42.6	-1.3
	comp=Z,2.2nm,0.6s,baz=68,slow=1.9,SNR=6.5						
OBN	Obninsk	120.63	329	*e*PKIKP	PKPdf	03 19 51.7	-0.9
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FINES	FINESS Array B	121.67	338	PKP	PKPdf	03 19 53.4	-1.0
	comp=Z,9.1nm,1.1s,baz=40,slow=3.2,SNR=3.5						
CPUP	Villa Florida	124.31	133	PKP	PKPdf	03 19 59.7	-1.0
	comp=Z,1.9nm,0.8s,baz=286,slow=3.1,SNR=3.2						
BOSA	Boshof	124.76	223	*e*PKPdf	PKiKP	03 20 03.5	+1.5
BOSA	Boshof	124.76	223	PKP	PKPdf	03 20 01.4	-0.2
	comp=Z,12nm,1.0s,baz=156,slow=3.2,SNR=8.5						
NB2	NORSAR Subarra	126.65	345	PKPdf	PKPdf	03 20 03.7	-0.4
	comp=Z,4.5nm,1.0s,baz=31,slow=1.7						
NOA	NORSAR Array B	126.65	345	PKP	PKPdf	03 20 03.2	-0.9
	comp=Z,2.7nm,0.9s,baz=34,slow=2.0,SNR=4.6						
AKASG	Malin Array Be	126.68	327	PKP	PKiKP	03 20 04.9	0.0
	comp=Z,9.0nm,1.2s,baz=56,slow=2.0,SNR=4.9						
AK11	Malin Array Si	126.72	327	*e*PKPdf	PKPdf	03 20 02.1	-2.3
AK11				*e*PKPdf	PKiKP	03 20 05.6	+0.7
LBTB	Lobatse	126.76	227	*e*PKPdf	PKPdf	03 20 03.4	-2.1
LBTB				*e*PKPdf	PKiKP	03 20 07.6	+1.6
LBTB	Lobatse	126.76	227	*e*PKIKP	PKPdf	03 20 03.4	-2.1
KIS	Kishinev	128.81	323	*e*PKP	PKPdf	03 20 07.0	-1.5
KIS	Kishinev	128.81	323	*e*PKIKP	PKPdf	03 20 07.0	-1.5
KIS				*e*		03 22 20.0	
SJG	San Juan	129.87	76	*e*PKPdf	PKPdf	03 20 10.7	-0.7
SJG				*e*PKPdf	PKiKP	03 20 13.8	+1.7
SJG	San Juan	129.87	76	*e*PKIKP	PKPdf	03 20 10.7	-0.7
LSZ	Lusaka	130.07	239	*e*PKPdf	PKPdf	03 20 10.3	-1.7
LSZ				*e*PKPdf	PKiKP	03 20 13.8	+0.9
LSZ	Lusaka	130.07	239	*e*PKIKP	PKPdf	03 20 10.3	-1.7
PTGA	Pitinga	133.50	102	*e*PKPdf	PKPdf	03 20 17.2	-1.2
PTGA				*e*PKPdf	PKiKP	03 20 20.5	+0.8
CLL	Collm	133.99	336	*e*PKPpre	PKPpre	03 20 10.0	
CLL				*e*PKPdf	PKiKP	03 20 20.0	+0.5
CLL				*e*		03 20 30.0	
KHC	Kasperske Hory	135.41	334	*e*PKPpre	PKPpre	03 20 16.9	
KHC				*e*PKPDF	PKiKP	03 20 22.8	+0.2
GERES	GERESS Array B	135.57	333	PKP	PKPdf	03 20 22.1	+0.7
	comp=Z,3.4nm,0.9s,baz=62,slow=3.2,SNR=5.2						
KRUS	Krusevo	136.39	320	*i* P	PKiKP	03 20 25.2	+0.4
KEST	Kesra	147.20	322	PKPbc	PKPdf	03 20 43.2	+0.7
	comp=Z,21nm,0.9s,baz=288,slow=2.5,SNR=4.3						
PBRG	Braganca	148.64	349	*e*PKPdf	PKPbc	03 20 47.0	-1.4
PGAV	Gavieira, Arco	148.76	351	*e*PKPdf	PKPdf	03 20 44.2	-0.8
POLO	Lamas de Olo	149.25	350	*e*PKPdf	PKiKP	03 20 51.3	0.0
MVO	Moncorvo	149.32	349	*e*PKPdf	PKPbc	03 20 49.2	-1.0
PVRL	Vila Real	149.34	350	*e*PKPdf	PKPdf	03 20 45.3	-0.6
PVRL	Vila Real	149.34	350	*e*PKPab	PKPab	03 20 53.6	-1.2
ES19	SONSECA Array	149.96	343	*e*PKPdf	PKPdf	03 20 47.7	+0.8
ESDC	Sonseca Array	150.00	343	PKPbc	PKiKP	03 20 53.0	+0.2
	comp=Z,8.3nm,1.0s,baz=24,slow=2.1,SNR=5.3						
PMRV	Marv??o	151.06	348	*e*PKPab	PKiKP	03 20 54.8	-0.2
PTOM	Tomar	151.07	350	*e*PKPdf	PKiKP	03 20 55.6	+0.7
PMTG	Montargil	151.57	349	*e*PKPdf	PKiKP	03 20 55.9	-0.1
MESJ	Messejana	152.76	349	*e*PKPab	PKPab	03 21 11.0	+2.0
TOA0	Torodi Ar. Sit	163.84	279	*e*PKPdf	PKPdf	03 21 06.0	+0.9
TORD	Torodi Ar. Bea	163.84	279	PKP	PKPdf	03 21 05.3	+0.2
	comp=Z,5.6nm,0.9s,baz=42,slow=1.8,SNR=5.2						

IDC ***06*** *03:04:43.6±1.0, 10°83S×165°48E, $h0^{km}$, mb4.6/16, mb1 4.8/17, mb1mx4.6/45, mbtmp4.7/17, ML5.7/1, Error ellipse: s-maj=29.1km s-min=18.4km az=152.0*

NEIC ***06*** *03:04:45.5±0.3, 10°76S×165°41E, $h10^{km}$, mb5.3/17, Error ellipse: s-maj=8.7km s-min=6.9km az=123.0*

ISCJB ***06*** *03:04:46.9±0.3, 10°84S±0°06×165°27E±0°06, $h30^{km}$, mb4.9/28, Error ellipse: s-maj=8.9km s-min=7.1km az=144.0*

ISC 06 03:04:48.5±0.5**, 10°79S**±0°09×**165°44E**±0°08**, $h30^{km}$, n84, $\sigma 0^{s}89$**/79**, mb5.0**/28**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.57	284	Pn	Pn	03 06 09.0	-0.5
	209nm,0.3s,baz=143,slow=6.5,SNR=8.7						
HNR				Sn	Sn	03 07 14.7	+2.2
	50nm,0.3s,baz=155,slow=5.9,SNR=2.9						
DZM	Mont Dzumac	11.26	175	Pn	Pn	03 07 28.8	+1.3
	5.3nm,0.3s,baz=306,slow=17,SNR=8.3						
CTA	Charters Tower	20.66	241	P	P	03 09 26.8	+0.9
	82nm,1.1s,baz=73,slow=12,SNR=5.4						
CTAO	Charters Tower	20.66	241	*e*P	Pn	03 09 27.1	-1.3
	111nm,1.1s						
CTAO	Charters Tower	20.66	241	*e*S	Pn	03 09 27.1	-1.3
CTAO	Charters Tower	20.66	241	*e*S	Pn	03 09 27.1	-1.3
BKZ	Black Stump Fm	29.93	163	*e*P	P	03 10 55.1	+1.2
	173nm,1.8s						
H11N1	WAKE ISLAND Hy	30.34	3	T	T	03 42 55.1	
	baz=188,slow=75						
H11N3	WAKE ISLAND Hy	30.35	3	T	T	03 42 52.3	
	baz=188,slow=75						
H11N2	WAKE ISLAND Hy	30.36	3	T	T	03 42 57.3	
	baz=188,slow=75						
BFZ	Birch Farm	31.27	164	*e*P	P	03 11 05.0	-0.7
	112nm,1.4s						
WRAB	Tennant Creek	31.28	249	*e*P	P	03 11 03.7	-2.3
	101nm,1.8s						
WR1	Warramunga Arr	31.29	249	*e*P	P	03 11 05.3	-0.9
	79nm,1.6s						
WRA	Warramunga Arr	31.29	249	P	P	03 11 05.3	-0.9
	3.8nm,1.0s,baz=80,slow=9.1,SNR=3.9						
TOO	Toolangi	32.13	211	*e*P	P	03 11 12.1	-1.3
	90nm,1.8s						
KHZ	Kahutara	32.29	169	*e*P	P	03 11 14.4	-0.2
	47nm,1.2s						
AS31	Alice Springs	32.64	243	*e*P	P	03 11 17.4	-0.7
	4.4nm,1.0s						
ASAR	Alice Springs	32.64	243	P	P	03 11 17.4	-0.7
	5.6nm,0.8s,baz=63,slow=10,SNR=6.2						
MJAR	Matsushiro Arr	53.61	333	P	P	03 14 05.8	-1.3
	5.3nm,0.8s,baz=170,slow=8.4,SNR=7.0						
MAJO	Matsushiro	53.61	333	*e*P	P	03 14 05.8	-1.3
JNU	Nakatsue	54.70	324	*e*P	P	03 14 14.8	-0.3
	39nm,1.1s						
JNU	Nakatsue	54.70	324	P	P	03 14 14.8	-0.3
	15nm,0.8s,baz=227,slow=6.4,SNR=5.1						
ASAJ	Asahikawa	58.46	341	P	P	03 14 42.2	+0.7
	16nm,0.8s,baz=211,slow=9.0,SNR=7.8						
KS15	Wonju Array Si	59.51	326	*e*P	P	03 14 50.8	+1.7
USRK	Ussuriysk Ar.	62.59	333	P	P	03 15 10.5	+0.7
	8.0nm,0.9s,baz=129,slow=6.7,SNR=5.3						
PETK	Petropavlovsk-	63.99	355	P	P	03 15 19.4	+0.5
	6.8nm,0.8s,baz=159,slow=8.9,SNR=4.4						
PEA1	Petropavlovsk-	63.99	355	*e*P	P	03 15 19.4	+0.5
KLR	Kul'dur	66.70	337	P	P	03 15 37.3	+0.8
	7.6nm,1.0s,baz=118,slow=3.3,SNR=7.6						

HDA	Harding Lake	83.10	19	*e*P	P	03 17 11.3	+0.3
	35nm,0.9s						
HDA	Harding Lake	83.10	19	P	P	03 17 11.4	+0.3
	baz=227						
O02D	Mt. Diablo Mer	83.34	47	P	P	03 17 14.0	+1.1
	baz=250						
ILAR	Eielson Array	83.37	19	P	P	03 17 12.5	+0.1
	4.0nm,0.7s,baz=232,slow=5.2,SNR=8.4						
ILB	Eielson Array	83.37	19	*e*P	P	03 17 12.7	+0.3
	6.0nm,0.8s						
POKR	Poker Plat Res	83.44	18	P	P	03 17 12.5	-0.2
	baz=226						
M02C	Callahan	83.71	46	P	P	03 17 16.0	+1.2
	baz=250						
O03E	Paynes Creek	84.09	47	P	P	03 17 16.9	+0.1
	baz=251						
M04C	Macdoel	84.56	46	P	P	03 17 19.4	+0.2
	baz=250						
ISA	Isabella, Lake	85.16	52	P	P	03 17 22.4	+0.1
	baz=253						
EDW2	Edwards Air Fo	85.31	53	P	P	03 17 23.5	+0.5
	baz=254						
BFSC	Mount Baldy Ra	85.39	54	P	P	03 17 23.3	-0.2
	baz=254						
J05D	Fort Rock, OR	85.48	45	P	P	03 17 24.4	+0.6
	baz=251						
CWC	Cottonwood Cre	85.69	52	P	P	03 17 25.3	+0.3
	baz=253						
LRMC	Laurel Mtn Rad	85.72	53	P	P	03 17 25.8	+0.6
	baz=254						
RYN	Ryan	85.98	50	*e*P	P	03 17 27.3	+0.9
	18nm,1.3s						
MONP2	Monument Peak	86.02	56	P	P	03 17 27.4	+0.6
	baz=254						
NV01	Mina Array Sit	86.09	50	*e*P	P	03 17 27.2	+0.2
NVAR	Mina Array Bea	86.09	50	P	P	03 17 27.2	+0.2
	5.1nm,0.9s,baz=234,slow=6.9,SNR=8.2						
PFO	Pinyon Flats O	86.18	55	P	P	03 17 27.8	+0.3
	baz=254						
TPFO	Pinon Flats	86.19	55	P	P	03 17 27.5	0.0
	baz=254						
SWSC	Sam W. Stewart	86.54	56	P	P	03 17 29.6	+0.5
	baz=255						
B05A	Bryant	86.59	40	P	P	03 17 29.7	+0.7
	baz=250						
HEC	Hector,Ludlow	86.61	54	P	P	03 17 29.8	+0.4
	baz=254						
BELC	Belle Mtn. Jos	86.66	55	P	P	03 17 30.3	+0.6
	baz=255						
SHOC	Shoshone, Teco	86.94	53	P	P	03 17 31.5	+0.6
	baz=254						
BC3	Big Chuckawall	87.00	55	P	P	03 17 32.0	+0.5
	baz=255						
WVOR	Wild Horse Val	87.03	46	*e*P	P	03 17 32.2	+0.8
	20nm,1.3s						
GMRC	Granite Mounta	87.13	54	P	P	03 17 32.0	0.0
	baz=255						
GLA	Glamis	87.36	56	P	P	03 17 34.2	+1.1
	baz=255						
IRM	Iron Mountain	87.38	55	P	P	03 17 33.8	+0.7
	baz=255						
Y12C	Blythe	87.78	55	P	P	03 17 36.1	+1.0
	baz=256						
PDMCI	Parker Dam,Lak	88.22	55	P	P	03 17 37.9	+0.8
	baz=256						
214A	Organ Pipe Nat	88.75	57	P	P	03 17 40.3	+0.6
	baz=256						
LCMT	Little Creek M	89.58	52	*e*P	P	03 17 44.4	+0.7
	13nm,0.9s						
HLID	Hailey	90.32	46	P	P	03 17 47.8	+0.8
	baz=256						
TUC	Tucson	90.50	57	P	P	03 17 49.1	+1.2
	baz=258						
DUG	Dugway, Tooele	90.66	49	P	P	03 17 48.4	-0.3
	baz=256						
WUAZ	Wupatki	90.72	54	P	P	03 17 50.1	+1.1
	baz=257						
MSU	Marysvale	90.75	51	*e*P	P	03 17 48.3	-0.9
DLMT	Dillon	92.01	44	*e*P	P	03 17 55.8	+1.0
	30nm,1.5s						
BOZ	Bozeman (W)	92.73	44	*e*P	P	03 17 59.1	+1.0
	12nm,0.7s						
MK32	Makanchi Array	93.13	317	*e*P	P	03 17 59.5	-0.3
MKAR	Makanchi Array	93.13	317	P	P	03 17 59.5	-0.3
	1.6nm,0.7s,baz=89,slow=6.9,SNR=5.3						
ZALV	Zalesovo Beam	93.17	324	P	P	03 17 59.4	-0.3
	1.6nm,0.7s,baz=146,slow=5.1,SNR=3.6						
ZAA1	Zalesovo Array	93.17	324	*e*P	P	03 17 59.4	-0.3
H17A	Grant Village	93.20	46	P	P	03 18 02.3	+1.8
	baz=258						
PD31	Pinedale Array	93.60	47	*e*P	P	03 18 02.1	-0.2
	5.2nm,1.1s						
PDAR	Pinedale Array	93.60	47	P	P	03 18 02.1	-0.2
	1.7nm,0.9s,baz=252,slow=3.0,SNR=5.2						
YKA	Yellowknife Ar	94.89	27	P	P	03 18 05.5	-1.9
	1.3nm,0.8s,baz=257,slow=4.3,SNR=7.0						
YKB5	Yellowknife Ar	94.89	27	*e*P	P	03 18 05.5	-1.9
LTX	Lajitas	95.97	61	*e*P	P	03 18 14.1	+0.8
TXAR	Lajitas Array	95.97	61	P	P	03 18 14.0	+0.8
	0.7nm,0.8s,baz=226,slow=4.9,SNR=3.8						
ARA0	ARCESS Array S	116.01	345	*e*PKPdf	PKiKP	03 23 27.1	-0.9
ARCES	ARCESS Array B	116.01	345	PKP	PKiKP	03 23 27.1	-0.9
	1.2nm,0.6s,baz=75,slow=2.0,SNR=8.8						
KEST	Kesra	147.03	323	PKPbc	PKPbc	03 24 28.6	-0.3
	7.9nm,0.8s,baz=15,slow=4.7,SNR=5.2						

IDC ***06*** *03:06:32.2±0.6, 11°.58S×165°.45E, h0km, mb4.8/23, mb1 4.9/24, mb1mx4.8/47, mbtmp4.8/24, ML4.8/1, Error ellipse: s-maj=19.2km s-min=14.1km az=116.0*

ISCJB ***06*** *03:06:33.9±0.2, 11°.69S±0°.04×165°.33E±0°.04, h24km, mb5.0/125, Error ellipse: s-maj=5.5km s-min=4.9km az=135.6*

NEIC ***06*** *03:06:33.4±0.1, 11°.59S×165°.42E, h10km, mb5.1/94, Error ellipse: s-maj=3.3km s-min=2.6km az=120.0*

ISC 06 03:06:35.7±0.4**, 11°.62S**±0°.07×**165°.47E**±0°.09**, h24km, n244, σ0ˢ.88**/246**, mb5.1**/125**, 2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	10.11	166	*e*Pn	Pn	03 08 59.0	-0.4
DZM	Mont Dzumac	10.43	175	*e*Pn	Pn	03 09 03.9	-0.1
DZM	Mont Dzumac	10.43	175	Pn	Pn	03 09 04.2	+0.2
	8.4nm,0.3s,baz=22,slow=19,SNR=13						
ONTNC	Ouen Toro	10.67	175	*e*Pn	Pn	03 09 07.7	+0.5
PINNC	Pines Island,	11.09	170	*e*Pn	Pn	03 09 12.6	-0.3
CTA	Charters Tower	20.30	243	P	P	03 11 10.5	+0.5
	30nm,1.1s,baz=72,slow=13,SNR=4.1						
CTAO	Charters Tower	20.30	243	*e*P	P	03 11 09.4	-0.6
	55nm,1.1s						
OUZ	Omahuta	24.62	164	*e*P	P	03 11 54.8	+0.4
	54nm,1.1s						
BKZ	Black Stump Fm	29.13	162	*e*P	P	03 12 34.1	-0.8
	38nm,1.1s						
STKA	Stephens Creek	29.84	224	P	P	03 12 41.1	-0.1
	6.4nm,0.7s,baz=37,slow=10.0,SNR=4.5						
SNZO	South Karori	30.66	166	*e*P	P	03 12 47.8	-0.6
	67nm,1.1s						
WC3	Warramunga Arr	31.01	251	*e*P	P	03 12 49.2	-2.5
	29nm,0.9s						
WRAB	Tennant Creek	31.02	251	*e*P	P	03 12 49.7	-2.2
	43nm,1.0s						
WB2	Warramunga Arr	31.02	251	*e*P	P	03 12 50.4	-1.5
	49nm,1.0s						
WRA	Warramunga Arr	31.04	251	P	P	03 12 50.6	-1.4
	29nm,0.9s,baz=80,slow=9.5,SNR=19						
WRA				PcP	PcP	03 15 49.3	+1.6
	3.7nm,0.9s,baz=74,slow=3.3,SNR=6.0						
KHZ	Kahutara	31.48	169	*e*P	P	03 12 56.1	+0.6
	44nm,1.1s						
LTZ	Lake Taylor	31.60	170	*e*P	P	03 12 57.1	+0.4
	24nm,0.9s						
AS01	Alice Springs	32.25	244	*e*P	P	03 13 01.4	-1.3
AS31	Alice Springs	32.30	244	*e*P	P	03 13 01.4	-1.7
	4.3nm,0.9s						
ASAR	Alice Springs	32.30	244	P	P	03 13 01.7	-1.4
	11nm,0.8s,baz=75,slow=9.5,SNR=12						
ASAR				PcP	PcP	03 15 51.5	+0.4
	2.6nm,0.8s,baz=71,slow=3.4,SNR=4.6						
RPZ	Rata Peaks	32.34	172	*e*P	P	03 13 03.2	+0.1
	24nm,0.8s						
FITZ	Fitzroy Crossi	38.97	256	P	P	03 14 00.0	-0.4
	16nm,0.8s,baz=107,slow=6.2,SNR=9.4						
MJAR	Matsushiro Arr	54.36	333	P	P	03 15 59.5	-1.1
	8.8nm,0.9s,baz=171,slow=8.5,SNR=12						
MAT	Matsushiro	54.36	333	P	P	03 15 59.8	-0.8
JNU	Nakatsue	55.39	325	P	P	03 16 07.0	-1.2
	17nm,1.0s,baz=52,slow=5.9,SNR=4.9						
KSM	Kuching	56.33	280	*e*P	P	03 16 14.3	-1.0
	16nm,0.9s						
ASAJ	Asahikawa	59.25	341	P	P	03 16 35.7	+0.5
	23nm,0.9s,baz=225,slow=12,SNR=11						
KSRS	Korea Array	60.20	326	P	P	03 16 41.8	-0.1
	3.2nm,0.8s,baz=139,slow=7.7,SNR=6.7						
KSAR	Wonju Array Be	60.21	326	P	P	03 16 41.8	-0.2
KS01	Wonju Array Si	60.23	326	*e*P	P	03 16 41.1	-1.0
NJ2	Nanjing	62.24	316	*e*P	P	03 16 55.3	-0.5
NJ2				pmax	pmax		
	comp=Z,22nm,0.8s						
USRK	Ussuriysk Ar.	63.34	334	P	P	03 17 03.6	+0.8
	comp=Z,8.7nm,0.9s,baz=140,slow=6.9,SNR=11						
USA0B	Ussuriysk Arra	63.34	334	*e*P	P	03 17 02.1	-0.7
	comp=Z,8.8nm,0.8s						
WHN	Wuhan	64.57	312	⇑P	P	03 17 11.2	-0.1
MDJ	Mudanjiang	64.73	332	P	P	03 17 12.7	+0.7
MDJ				pmax	pmax		
	comp=Z,21nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,15μm,13.9s						
PETK	Petropavlovsk-	64.81	355	P	P	03 17 12.7	+0.3
	comp=Z,4.7nm,0.8s,baz=128,slow=9.3,SNR=3.2						
CN2	Changchun	66.10	329	*e*P	P	03 17 21.2	+0.3
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
KLR	Kul'dur	67.48	337	P	P	03 17 30.2	+0.6
	comp=Z,7.2nm,0.9s,baz=117,slow=4.3,SNR=8.0						
ENH	Enshi	68.05	309	*e*P	P	03 17 32.8	-0.8
	comp=Z,33nm,1.0s						
GYA	Guiyang	68.52	305	P	P	03 17 37.5	+0.7
GYA				PP	PP	03 20 11.7	+3.3
GYA				S	S	03 26 38.4	+0.5
GYA				SKS	SKSac	03 27 33.0	-1.9
GYA	Guiyang	68.52	305	SS	SS	03 31 03.9	+1.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.8s						
GYA				LR	LR		
	comp=N,520nm,18.3s						
GYA				LR	LR		
	comp=E,550nm,18.5s						
GYA				LR	LR		
	comp=Z,470nm,19.0s						
XAN	Xi'an	70.31	313	P	P	03 17 47.5	-0.1
XAN				pP	PcP	03 18 27.7	+19
XAN				pmax	pmax		
	comp=Z,22nm,1.0s						
XAN	Xi'an	70.31	313	*e*P	P	03 17 47.2	-0.4
	comp=Z,20nm,0.9s						
UTTA	Uttaradit	70.42	294	P	P	03 17 51.2	+2.7
	comp=Z,3.9nm,0.9s						
UTHA	Uthaitani	70.71	291	P	P	03 17 53.2	+2.9
SUKH	Sukhothai	71.16	293	P	P	03 17 55.9	+2.9
	comp=Z,4.8nm,0.9s						
KMI	Kunming	71.19	302	P	P	03 17 54.7	+1.3
KMI				sP	pP	03 17 59.5	+0.1
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI	Kunming	71.19	302	*e*P	P	03 17 53.6	+0.2
	comp=Z,17nm,0.9s						
CM01	Chiang Mai Arr	72.07	294	*e*P	P	03 17 58.4	-0.2
CMAR	Chiang Mai Arr	72.10	294	P	P	03 17 59.3	+0.7
	comp=Z,9.2nm,0.9s,baz=119,slow=4.3,SNR=14						
HHC	Hu-ho-hao-te	72.10	320	*e*P	P	03 17 59.7	+1.3
HHC				pmax	pmax		
	comp=Z,16nm,1.2s						
CHTO	Chiang Mai	72.21	294	*e*P	P	03 17 58.8	-0.6
	comp=Z,10nm,1.0s						
HIA	Hailar	72.74	331	*e*P	P	03 18 01.7	-0.2
	comp=Z,17nm,1.1s						
CD2	Chengdu	72.74	308	P	P	03 18 02.8	+0.5
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
LZH	Lanzhou	74.94	312	*e*P	P	03 18 15.7	+0.4
LZH				pP	pP	03 18 19.6	-1.5
LZH				sP	sP	03 18 23.8	+0.8
LZH				PP	PP	03 21 17.2	+14
LZH				pmax	pmax		
	comp=Z,25nm,1.4s						
LZH				pmax	pmax		
	comp=Z,98nm,4.9s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
QSPA	South Pole Qui	78.39	180	*e*P	P	03 18 34.7	+0.5
	comp=Z,21nm,0.9s						
QSPA	South Pole Qui	78.39	180	P	P	03 18 35.4	+1.2
	comp=Z,18nm,0.9s,baz=30,slow=3.2,SNR=8.9						
ULN	Ulaanbaatar	78.61	324	*e*P	P	03 18 35.1	-0.7
	comp=Z,9.5nm,1.0s						
SONM	Songino Array	78.97	324	P	P	03 18 37.9	+0.3
	comp=Z,2.1nm,0.8s,baz=135,slow=7.1,SNR=4.5						
SONA1	Songino Array	78.97	324	*e*P	P	03 18 36.8	-0.9
RSO	Redoubt South	79.15	20	*e*P	P	03 18 37.7	-0.7
GTA	Gaotai	79.26	314	⇓P	P	03 18 40.1	+0.6
GTA				pP	pP	03 18 44.9	-0.4
GTA				sP	sP	03 18 47.2	-0.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA				LR	LR		
	comp=N,10μm,18.1s						
GTA				LR	LR		
	comp=E,12μm,18.4s						
GTA				LR	LR		
	comp=Z,15μm,20.0s						
BRLK	Bradley Lake	79.27	21	*e*P	P	03 18 38.3	-0.6
	comp=Z,20nm,0.9s						
BILL	Bilibino	79.45	0	*e*P	P	03 18 39.5	-0.2
	comp=Z,17nm,1.0s						
CAST	Castle Rocks	81.58	18	*e*P	P	03 18 50.8	-0.4
	comp=Z,12nm,1.1s						
SML	Sawmill	81.61	20	*e*P	P	03 18 51.4	-0.1
	comp=Z,9.9nm,1.1s						
DIV	Divide	82.04	22	*e*P	P	03 18 53.5	-0.3
	comp=Z,29nm,1.0s						
RND	Reindeer	82.57	19	*e*P	P	03 18 56.3	-0.2
	comp=Z,22nm,1.1s						
MCK	McKinley	82.77	19	*e*P	P	03 18 57.1	-0.4
	comp=Z,12nm,1.1s						
IM3	Indian Mountai	83.05	16	*e*P	P	03 18 58.6	-0.2
HARP	HAARP	83.11	21	*e*P	P	03 18 59.1	-0.2
	comp=Z,18nm,0.8s						
KCPM	Cahto Peak	83.14	47	*e*P	P	03 18 59.2	-0.8
	comp=Z,18nm,1.0s						
KMRM	Mail Ridge	83.24	47	*e*P	P	03 19 00.7	+0.2
	comp=Z,20nm,1.0s						
MDM	Murphy Dome	83.86	18	*e*P	P	03 19 02.7	-0.4
	comp=Z,16nm,1.0s						
HDA	Harding Lake	83.87	19	*e*P	P	03 19 02.7	-0.4
	comp=Z,35nm,0.9s						
HDA	Harding Lake	83.87	19	P	P	03 19 03.3	+0.1
	baz=227						
O02D	Mt. Diablo Mer	83.88	47	P	P	03 19 04.5	+0.7
	baz=249,SNR=7.9						
TCOL	CIGO, UAF Yank	83.91	18	P	P	03 19 03.0	-0.3
	baz=226						
L02E	Cave Junction	84.02	45	P	P	03 19 04.9	+0.6
	baz=249						
SNCC	San Nicolas Is	84.08	54	P	P	03 19 05.3	+0.4
	baz=252						
RIDG	Independ'e Rid	84.11	20	*e*P	P	03 19 04.2	-0.2
	comp=Z,39nm,1.2s						
IL1	Eielson Array	84.14	19	*e*P	P	03 19 04.0	-0.5
ILAR	Eielson Array	84.14	19	P	P	03 19 04.0	-0.4
	comp=Z,4.7nm,0.6s,baz=237,slow=5.2,SNR=21						
ILB	Eielson Array	84.14	19	*e*P	P	03 19 04.0	-0.4
J01E	Myrtle Point	84.16	44	P	P	03 19 05.8	+0.7
	baz=248						
K02D	Willamette Mer	84.17	44	P	P	03 19 05.6	+0.4
	baz=248						
WDC	Whiskeytown Da	84.20	47	*e*P	P	03 19 04.8	-0.5
	comp=Z,6.1nm,1.0s						
POKR	Poker Plat Res	84.21	18	P	P	03 19 04.3	-0.6
	baz=226						
N02D	Trinity Center	84.22	46	P	P	03 19 06.2	+0.7
	baz=249						
M02C	Callahan	84.27	46	P	P	03 19 06.5	+0.8
	baz=249						
PKM	Mcpherson Peak	84.36	53	P	P	03 19 07.0	+0.5
	baz=252						
YBH	Yreka Blue Hor	84.49	46	*e*P	P	03 19 06.1	-0.8
	comp=Z,17nm,1.0s						
SCRK	Sand Creek	84.55	20	*e*P	P	03 19 07.0	+0.2
	comp=Z,42nm,1.1s						
ORV	Oroville	84.60	48	*e*P	P	03 19 07.1	-0.3
	comp=Z,14nm,1.1s						
HUMO	Hull Mountain	84.63	45	*e*P	P	03 19 07.7	+0.2
	comp=Z,15nm,0.9s						
O03E	Paynes Creek	84.63	47	P	P	03 19 07.6	0.0
	baz=250,SNR=7.5						
AFDM	Forest Hills D	84.78	49	*e*P	P	03 19 08.2	-0.1
	comp=Z,18nm,1.0s						
CMB	Columbia Colle	84.92	50	*e*P	P	03 19 08.8	-0.3
	comp=Z,12nm,1.0s						
L04D	Klamath Falls	84.94	45	P	P	03 19 09.4	+0.1
	baz=250						
HYT	Haines Junctio	85.02	24	*e*P	P	03 19 09.4	+0.2
	comp=Z,14nm,1.1s						
PRP	Porcupine Dome	85.07	18	*e*P	P	03 19 10.2	+0.8
	comp=Z,3.8nm,1.0s						
M04C	Macdoel	85.11	46	P	P	03 19 10.3	+0.2
	baz=250						
ARVC	Arvin	85.20	53	P	P	03 19 09.7	-0.7
	baz=252						
VES	Vestal, Richgr	85.22	52	P	P	03 19 10.0	-0.6
	baz=252						
I04A	Tendick Farm,	85.42	44	P	P	03 19 11.5	0.0
	baz=249						
J04D	Umpqua Nationa	85.43	44	P	P	03 19 12.0	+0.3
	baz=250						
H04D	Lebanon	85.46	43	P	P	03 19 12.3	+0.7
	baz=249						
BEKR	Beckworth	85.53	48	*e*P	P	03 19 12.1	-0.2
	comp=Z,17nm,1.0s						
ISA	Isabella, Lake	85.64	52	*e*P	P	03 19 12.7	-0.1
	comp=Z,12nm,1.1s						
MDPB	Devils Postpil	85.77	50	*e*P	P	03 19 13.5	-0.1
	comp=Z,19nm,0.9s						
WAKR	Walker	85.78	49	*e*P	P	03 19 13.6	+0.1
	comp=Z,22nm,1.2s						
EDW2	Edwards Air Fo	85.78	53	P	P	03 19 13.1	-0.4
	baz=253,SNR=5.2						
OMMB	Old Mammoth Mi	85.83	50	*e*P	P	03 19 14.1	+0.1
	comp=Z,9.9nm,1.2s						
BFSC	Mount Baldy Ra	85.86	54	P	P	03 19 13.9	0.0
	baz=253						
109C	Camp Elliot, M	85.91	55	P	P	03 19 14.7	+0.6
	baz=253						
MURC	Murrieta	86.04	55	P	P	03 19 15.1	+0.3
	baz=253						
J05D	Fort Rock, OR	86.05	45	P	P	03 19 15.2	+0.5
	baz=250						
YERR	Yerington	86.07	49	*e*P	P	03 19 14.8	-0.2
	comp=Z,10nm,1.2s						
CWC	Cottonwood Cre	86.17	52	P	P	03 19 15.5	0.0
	baz=253						
PAHR	Pah Rah Range	86.19	48	*e*P	P	03 19 15.6	0.0
	comp=Z,14nm,1.1s						
LRMC	Laurel Mtn Rad	86.20	53	P	P	03 19 16.1	+0.4
	baz=253						
MOD	Modoc Plateau	86.24	46	*e*P	P	03 19 15.7	0.0
	comp=Z,14nm,1.0s						
TIN	Tinemaha, Big	86.24	51	P	P	03 19 16.4	+0.6
	baz=252						
E04D	Cinebar	86.30	41	P	P	03 19 16.5	+0.8
	baz=249						
D03D	Eldon	86.32	40	P	P	03 19 16.2	+0.4
	baz=249						
I05D	Terrebonne, OR	86.34	43	P	P	03 19 16.5	+0.5
	baz=250						
PINE	Pine Mountain	86.42	44	*e*P	P	03 19 17.3	+0.7
	comp=Z,20nm,0.9s						
MONP2	Monument Peak	86.46	56	P	P	03 19 16.7	-0.4
	baz=254,SNR=5.7						
RYN	Ryan	86.50	50	*e*P	P	03 19 17.3	+0.3
	comp=Z,3.6nm,0.8s						
DAC	Darwin (Calif)	86.50	52	*e*P	P	03 19 17.1	-0.1
	comp=Z,7.4nm,1.0s						
MPMC	Manual Prospec	86.52	52	P	P	03 19 16.9	-0.3
	baz=253,SNR=5.4						
NV01	Mina Array Sit	86.60	50	*e*P	P	03 19 17.3	-0.4
NVAR	Mina Array Bea	86.60	50	P	P	03 19 18.2	+0.5
	comp=Z,7.8nm,1.0s,baz=232,slow=8.4,SNR=12						
TIXI	Tiksi	86.60	349	*e*P	P	03 19 16.4	-0.2
	comp=Z,14nm,1.1s						
TIXI	Tiksi	86.60	349	P	P	03 19 16.4	-0.2
	comp=Z,2.4nm,0.3s,baz=293,slow=2.5,SNR=6.6						
PFO	Pinyon Flats O	86.63	55	P	P	03 19 17.8	0.0
	baz=254						
IKP	In-Ko-Pah, Jac	86.65	56	P	P	03 19 18.0	+0.2
	baz=254						
F05D	White Salmon	86.79	42	P	P	03 19 18.7	+0.5
	baz=250						
GSC	Goldstone, Bar	86.83	53	*e*P	P	03 19 19.0	+0.3
	comp=Z,4.9nm,1.1s						
GSC	Goldstone, Bar	86.83	53	P	P	03 19 19.0	+0.3
	baz=254						
GRAC	Grapevine Rang	86.89	51	P	P	03 19 19.1	+0.2
	baz=253						
KVN	Kaiserville	86.94	49	*e*P	P	03 19 19.1	-0.2
	comp=Z,13nm,1.1s						
SWSC	Sam W. Stewart	86.98	56	P	P	03 19 19.5	+0.2
	baz=254						
A04D	Lummi Island	87.00	39	P	P	03 19 20.1	+1.1
	baz=249						
HEC	Hector,Ludlow	87.07	54	P	P	03 19 20.3	+0.5
	baz=254						
BELC	Belle Mtn. Jos	87.11	55	P	P	03 19 20.4	+0.2
	baz=254,SNR=8.6						
FURC	Furnace Creek,	87.12	52	P	P	03 19 20.4	+0.5
	baz=253,SNR=6.3						
B05A	Bryant	87.21	40	P	P	03 19 20.1	+0.1
	baz=249						
SHOC	Shoshone, Teco	87.42	53	P	P	03 19 21.5	+0.1
	baz=254						
BC3	Big Chuckawall	87.45	55	P	P	03 19 21.8	0.0
	baz=254,SNR=6.3						
I07A	Izee	87.50	44	*e*P	P	03 19 21.4	-0.3
	comp=Z,14nm,1.1s						
TUQ	Turquoise Moun	87.56	53	P	P	03 19 22.2	-0.1
	baz=254						
WVOR	Wild Horse Val	87.58	46	*e*P	P	03 19 22.0	-0.2
	comp=Z,9.1nm,1.0s						
GMRC	Granite Mounta	87.59	54	P	P	03 19 22.4	-0.1
	baz=254,SNR=6.3						
TPNV	Topopah Spring	87.73	52	P	P	03 19 23.2	+0.1
	baz=254						
GLA	Glamis	87.80	56	*e*P	P	03 19 23.4	+0.1
	comp=Z,16nm,1.0s						
GLA	Glamis	87.80	56	P	P	03 19 23.9	+0.5
	baz=255						
IRM	Iron Mountain	87.83	55	P	P	03 19 23.9	+0.5
	baz=254,SNR=8.1						
C06D	Leavenworth	87.85	40	P	P	03 19 23.5	+0.3
	baz=250						
J08A	Circle Bar Ran	87.98	45	*e*P	P	03 19 24.0	0.0
	comp=Z,15nm,1.0s						
LDFC	Landfair	88.11	54	*e*P	P	03 19 24.4	-0.5
	comp=Z,34nm,1.0s						
HAWA	Hanford	88.22	42	*e*P	P	03 19 24.9	-0.1
	comp=Z,13nm,1.1s						
Y12C	Blythe	88.22	55	P	P	03 19 25.9	+0.6
	baz=255,SNR=6.7						
G08A	Pilot Rock	88.25	43	*e*P	P	03 19 25.3	0.0
	comp=Z,11nm,1.0s						
NEE2	Needles Airpor	88.41	54	P	P	03 19 26.6	+0.4
	baz=255						
SHPR	Sheep Range	88.45	52	*e*P	P	03 19 26.5	0.0
	comp=Z,0.3nm,0.8s						
E08A	Dider Farm, El	88.56	42	*e*P	P	03 19 26.6	0.0
	comp=Z,16nm,1.0s						
R11A	Troy Canyon, C	88.62	51	P	P	03 19 27.5	+0.2
	baz=254,SNR=6.6						
PDMCI	Parker Dam,Lak	88.67	55	P	P	03 19 27.9	+0.5
	baz=255,SNR=9.7						
W13A	Hualapai Mount	89.08	54	*e*P	P	03 19 29.4	-0.3
	comp=Z,10nm,1.0s						
214A	Organ Pipe Nat	89.17	57	P	P	03 19 30.3	+0.5
	baz=256,SNR=9.3						
BMO	Blue Mountains	89.23	44	*e*P	P	03 19 29.9	0.0
	comp=Z,4.8nm,1.0s						
WMQ	Urumqi	89.31	315	*e*P	P	03 19 30.8	+0.5
WMQ				pP	pP	03 19 35.6	-0.5
WMQ				pmax	pmax		
	comp=Z,84nm,1.9s						
ELK	Elko	89.53	48	*e*P	P	03 19 31.5	-0.1
	comp=Z,9.1nm,1.1s						
F10A	Beach Ranch, E	89.61	43	*e*P	P	03 19 31.5	-0.2

MFID	Camas Ranch	89.84	46	*e*P	P	03 19 32.1	-0.7
	comp=Z,17nm,1.1s						
PSUT	Pine Spring	89.98	51	*e*P	P	03 19 33.7	-0.1
	comp=Z,12nm,0.9s						
HSIG		90.04	60	*e*P	P	03 19 34.0	+0.1
	comp=Z,15nm,1.0s						
LCMT	Little Creek M	90.07	52	*e*P	P	03 19 34.1	0.0
	comp=Z,13nm,0.9s						
CCUT	Cedar City	90.11	52	*e*P	P	03 19 34.1	-0.2
	comp=Z,13nm,1.0s						
SZCU	Shurtz Canyon	90.33	52	*e*P	P	03 19 34.9	-0.5
	comp=Z,16nm,1.1s						
NEW	Newport	90.35	41	P	P	03 19 35.2	+0.2
	baz=253						
KNB	Kanab	90.39	52	*e*P	P	03 19 35.8	+0.1
	comp=Z,20nm,1.2s						
U15A	North Rim	90.67	53	*e*P	P	03 19 37.2	+0.1
	comp=Z,18nm,0.9s						
X16A	Lo Mia Camp, P	90.87	55	*e*P	P	03 19 38.0	+0.1
	comp=Z,8.8nm,0.9s						
HLID	Hailey	90.87	46	*e*P	P	03 19 37.2	-0.5
	comp=Z,9.0nm,0.9s						
HLID	Hailey	90.87	46	P	P	03 19 38.5	+0.8
	baz=255						
TUC	Tucson	90.92	57	*e*P	P	03 19 38.2	+0.2
	comp=Z,6.6nm,1.0s						
TUC	Tucson	90.92	57	P	P	03 19 38.8	+0.8
	baz=257						
MTPU	Mount Pierson	91.13	52	*e*P	P	03 19 39.6	+0.3
	comp=Z,14nm,1.0s						
SYO	Syowa Base	91.16	197⇑	*e*X	P	03 19 45.9	+7.6
WUAZ	Wupatki	91.17	54	*e*P	P	03 19 39.3	0.0
	comp=Z,11nm,0.9s						
WUAZ	Wupatki	91.17	54	P	P	03 19 40.1	+0.8
	baz=257						
DUG	Dugway, Tooele	91.18	49	*e*P	P	03 19 38.8	-0.4
	comp=Z,9.3nm,1.1s						
DUG	Dugway, Tooele	91.18	49	P	P	03 19 39.8	+0.6
	baz=256						
BGU	Big Grassy Mou	91.20	49	*e*P	P	03 19 39.4	+0.2
	comp=Z,10nm,1.0s						
MSU	Marysvale	91.25	51	*e*P	P	03 19 40.3	+0.6
HVU	Hansel Valley	91.59	48	*e*P	P	03 19 41.1	0.0
	comp=Z,22nm,1.1s						
NLU	North Lily Min	91.67	50	*e*P	P	03 19 41.4	-0.2
	comp=Z,11nm,1.0s						
SPUT	South Promonto	91.72	48	*e*P	P	03 19 42.0	+0.3
	comp=Z,6.3nm,0.9s						
319A	Douglas	91.97	59	*e*P	P	03 19 42.8	-0.2
	comp=Z,11nm,0.9s						
MPU	Maple Canyon	92.01	50	*e*P	P	03 19 43.0	-0.2
	comp=Z,6.0nm,1.2s						
MSO	Missoula	92.03	43	P	P	03 19 43.2	+0.3
	baz=255						
CTU	Camp Tracy	92.08	49	*e*P	P	03 19 43.4	0.0
	comp=Z,7.8nm,0.9s						
Q16A	Castle Valley	92.11	51	*e*P	P	03 19 43.5	-0.1
	comp=Z,5.3nm,1.2s						
MCMT	McKenzie Canyo	92.28	45	*e*P	P	03 19 44.0	-0.3
JLU	Jordanelle	92.28	49	*e*P	P	03 19 43.5	-0.9
	comp=Z,9.4nm,1.1s						
W18A	Petrified Fore	92.39	55	P	P	03 19 45.4	+0.4
	baz=258						
LRM	Limekiln Ridge	92.79	44	*e*P	P	03 19 46.9	+0.3
BOZ	Bozeman (W)	93.30	44	P	P	03 19 49.5	+0.7
	baz=257						
YHB	Horse Butte	93.41	45	*e*P	P	03 19 49.3	-0.2
	comp=Z,8.5nm,0.9s						
HRY	Holter Researc	93.41	43	*e*P	P	03 19 48.9	-0.4
121A	Cookes Peak, D	93.45	58	P	P	03 19 50.5	+0.6
	baz=258						
PV23	Carpenter Ridg	93.66	52	*e*P	P	03 19 51.6	+0.7
	comp=Z,5.8nm,0.8s						
MK01	Makanchi Array	93.74	317	*e*P	P	03 19 49.9	-0.9
MK31	Makanchi Array	93.76	317	*e*P	P	03 19 50.3	-0.4
MKAR	Makanchi Array	93.76	317	P	P	03 19 50.8	0.0
	comp=Z,5.9nm,0.9s,baz=94,slow=5.3,SNR=8.7						
H17A	Grant Village	93.76	46	*e*P	P	03 19 51.7	+0.6
	comp=Z,5.0nm,0.9s						
ZAA0	Zalesovo Array	93.86	324	*e*P	P	03 19 49.9	-1.1
	comp=Z,4.6nm,0.9s						
ZALV	Zalesovo Beam	93.86	324	*e*P	P	03 19 50.3	-0.7
ZALV	Zalesovo Beam	93.86	324	P	P	03 19 49.9	-1.2
	comp=Z,4.2nm,0.8s,baz=134,slow=3.2,SNR=7.6						
BW06	Boulder Array	94.14	47	P	P	03 19 53.1	+0.2
	baz=258						
PDAR	Pinedale Array	94.14	47	*e*P	P	03 19 52.7	-0.2
PDAR	Pinedale Array	94.14	47	P	P	03 19 53.1	+0.2
	comp=Z,2.4nm,0.9s,baz=245,slow=2.9,SNR=6.8						
ANMO	Albuquerque	94.99	56	P	P	03 19 57.0	+0.1
	baz=259						
EGMT	Eagleton	95.08	42	P	P	03 19 57.3	+0.4
	baz=258						
S22A	4UR Ranch, Cre	95.21	53	P	P	03 19 57.8	-0.2
	baz=259						
MNTX	Cornudas Mount	95.29	59	P	P	03 19 58.4	+0.2
	baz=260						
YKA	Yellowknife Ar	95.61	27	P	P	03 19 57.7	-1.1
	comp=Z,1.3nm,0.7s,baz=258,slow=4.6,SNR=11						
TXAR	Lajitas Array	96.34	61	P	P	03 20 01.6	-1.5
	comp=Z,0.7nm,0.7s,baz=218,slow=5.7,SNR=3.7						
KSH	Kashi	96.91	309	P	P	03 20 06.2	+0.7
VNA3	Neumayer Olymp	97.26	182	P	Pdif	03 20 08.6	+2.2
VNA2	Neumayer--Watz	97.50	182	P	Pdif	03 20 09.0	+1.5
ARCES	ARCESS Array B	116.82	345	PKP	PKPdf	03 25 17.6	-0.1
	comp=Z,4.6nm,1.0s,baz=47,slow=1.8,SNR=5.8						
LPAZ	La Paz	120.17	117	PKP	PKiKP	03 25 26.7	+0.2
	comp=Z,2.8nm,0.7s,baz=0.0,slow=25,SNR=10.0						
CPUP	Villa Florida	123.84	133	PKP	PKiKP	03 25 32.6	-0.1
	comp=Z,1.3nm,0.8s,baz=347,slow=4.7,SNR=3.4						
NOA	NORSAR Array B	127.18	345	PKP	PKPdf	03 25 38.1	+0.2
	comp=Z,1.0nm,0.8s,baz=30,slow=1.9,SNR=3.4						
VYHS	Vyhne	133.93	329	*e*PDIF	Pdif	03 22 41.8	-8.1
CLL	Collm	134.52	336	*e*PKPdf	PKiKP	03 25 53.0	-0.4
KEST	Kesra	147.71	322	*e*PKPdf	PKPdf	03 26 16.1	-0.1
ES19	SONSECA Array	150.49	343	*e*PKPdf	PKPdf	03 26 21.6	+1.0
ESDC	Sonseca Array	150.53	343	PKPbc	PKiKP	03 26 27.7	+1.0
	comp=Z,1.9nm,0.8s,baz=29,slow=2.9,SNR=5.4						
TORD	Torodi Ar. Bea	164.08	277	PKP	PKPdf	03 26 38.5	+0.4
	comp=Z,3.3nm,1.0s,baz=351,slow=0.4,SNR=3.5						
TORD				PKPab	PKPab	03 27 31.8	+0.3
	comp=Z,2.4nm,0.9s,baz=53,slow=6.2,SNR=3.9						
DBIC	Dimbokro	169.26	244	PKPab	PKPab	03 27 55.3	+1.0
	comp=Z,2.2nm,0.8s,baz=161,slow=3.3,SNR=3.7						

IDC 06 03:07:47.5±1.5**, 11.°05S×165.°44E, h0km, mb4.3**/3**, mb1 4.6**/4**, mb1mx4.0**/46**, mbtmp4.4**/4**, ML4.5**/1**, Error ellipse: s-maj=52.1km s-min=29.2km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.00	175	Pn	Pn	03 10 26.7	+0.3
	3.4nm,0.3s,baz=344,slow=18,SNR=2.4						
WRA	Warramunga Arr	31.20	250	P	P	03 14 08.5	-0.3
	11nm,1.0s,baz=82,slow=8.9,SNR=6.1						
ASAR	Alice Springs	32.52	243	P	P	03 14 20.5	+0.1
	1.9nm,0.4s,baz=64,slow=10,SNR=8.6						
ILAR	Eielson Array	83.61	19	P	P	03 20 17.3	-0.2
	1.0nm,1.0s,baz=232,slow=5.5,SNR=1.8						
ARCES	ARCESS Array B	116.27	345	PKP	PKPdf	03 26 32.6	+0.1
	1.6nm,0.7s,baz=56,slow=3.0,SNR=5.5						

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*IDC **06** 03:08:16.5±1.0, 10.°75S×165.°30E, h0km, mb4.2/7, mb1 4.5/8, mb1mx4.1/46, mbtmp4.3/8, ML4.7/1, Error ellipse: s-maj=50.3km s-min=20.4km az=140.0*

*ISCJB **06** 03:08:19.4±0.8, 11.°0S±0.°1×165.°3E±0.°2, h30km, mb4.2/6, Error ellipse: s-maj=24.4km s-min=15.4km az=37.3*

ISC 06 03:08:20.9±0.9**, 10.°8S**±0.°1×**165.°3E**±0.°2**, h30km, n10, σ0.s58**/9**, mb4.2**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.23	174	Pn	Pn	03 10 59.3	-0.3
	4.7nm,0.3s,baz=330,slow=20,SNR=6.7						
DZM	Mont Dzumac	11.23	174	*e*Sn	Pn	03 10 58.9	-0.7
ONTNC	Ouen Toro	11.47	174	*e*Sn	Pn	03 11 03.6	+0.8
CTA	Charters Tower	20.49	241	P	Pn	03 12 58.6	-0.3
	10nm,0.6s,baz=72,slow=11,SNR=5.4						
WRA	Warramunga Arr	31.12	249	P	P	03 14 37.5	+0.4
	1.8nm,0.5s,baz=81,slow=8.9,SNR=4.0						
ASAR	Alice Springs	32.47	243	P	P	03 14 48.6	-0.4
	3.8nm,0.5s,baz=67,slow=10,SNR=7.6						
ILAR	Eielson Array	83.46	19	P	P	03 20 44.9	-0.5
	1.1nm,0.6s,baz=236,slow=5.4,SNR=3.4						
NVAR	Mina Array Bea	86.25	50	P	P	03 21 00.5	+0.3
	2.5nm,1.0s,baz=232,slow=8.8,SNR=3.9						
PDAR	Pinedale Array	93.75	47	P	P	03 21 35.4	-0.1
	0.7nm,0.9s,baz=221,slow=1.0,SNR=3.0						
YKA	Yellowknife Ar	95.00	27	P	P	03 21 40.7	+0.3
	0.2nm,0.7s,baz=258,slow=4.5,SNR=2.5						

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*ISCJB **06** 03:08:26.5±1.7, 10.°5S±0.°5×165.°1E±0.°4, h10km, mb4.4/6, Error ellipse: s-maj=93.6km s-min=21.4km az=144.0*

*IDC **06** 03:08:26.5±1.9, 10.°39S×165.°14E, h0km, mb4.4/6, mb1 4.7/6, mb1mx4.1/45, mbtmp4.4/6, Error ellipse: s-maj=109.2km s-min=25.2km az=144.0*

ISC 06 03:08:27.9±1.8**, 10.°5S**±0.°6×**165.°2E**±0.°4**, h10km, n7, σ0.s99**/7**, mb4.5**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.16	249	P	P	03 14 48.0	+0.7
	7.4nm,0.9s,baz=82,slow=9.3,SNR=5.1						
ASAR	Alice Springs	32.56	242	P	P	03 14 59.4	-0.3
	11nm,0.9s,baz=64,slow=9.9,SNR=6.8						
ILAR	Eielson Array	83.13	19	P	P	03 20 55.0	+1.3
	1.8nm,0.7s,baz=238,slow=5.1,SNR=4.8						
NVAR	Mina Array Bea	86.08	50	P	P	03 21 09.2	-0.3
	3.6nm,1.0s,baz=236,slow=9.2,SNR=4.1						
MKAR	Makanchi Array	92.70	317	P	P	03 21 39.3	-1.0
	1.0nm,0.7s,baz=107,slow=4.8,SNR=2.9						
YKA	Yellowknife Ar	94.71	27	P	P	03 21 48.6	-0.5
	0.4nm,0.7s,baz=256,slow=4.6,SNR=3.9						
ARCES	ARCESS Array B	115.61	345	PKP	PKPdf	03 27 10.4	+0.5
	1.9nm,0.9s,baz=106,slow=2.0,SNR=2.5						

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*ISCJB **06** 03:10:17.8±0.4, 11.°60S±0.°07×165.°64E±0.°08, h10km, mb4.8/28, Error ellipse: s-maj=12.8km s-min=9.4km az=33.4*

*IDC **06** 03:10:17.0±1.2, 11.°62S×165.°77E, h0km, mb4.5/11, mb1 4.7/11, mb1mx4.3/46, mbtmp4.5/11, Error ellipse: s-maj=49.2km s-min=21.7km az=146.0*

*NEIC **06** 03:10:18.9±0.3, 11.°53S×165.°78E, h10km, mb5.0/19, Error ellipse: s-maj=10.5km s-min=7.3km az=127.0*

ISC 06 03:10:18.8±0.6**, 11.°6S**±0.°1×**165.°8E**±0.°1**, h10km, n52, σ0.s91**/47**, mb4.9**/28**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.58	243	P	Pn	03 15 00.7	+0.3
	24nm,0.8s,baz=76,slow=12,SNR=5.0						
CTAO	Charters Tower	20.58	243	*e*P	Pn	03 14 59.5	-0.8
	43nm,0.9s						
BKZ	Black Stump Fm	29.12	163	*e*P	P	03 16 20.6	+0.7
	29nm,1.3s						
WRAB	Tennant Creek	31.31	251	*e*P	P	03 16 39.7	+0.1
	32nm,1.4s						
WR1	Warramunga Arr	31.32	251	*e*P	P	03 16 40.0	+0.3
	19nm,1.0s						
WRA	Warramunga Arr	31.33	251	P	P	03 16 40.0	+0.3
WRA	Warramunga Arr	31.33	251	P	P	03 16 40.0	+0.3
	7.8nm,0.9s,baz=83,slow=9.0,SNR=6.6						
RPZ	Rata Peaks	32.38	173	*e*P	P	03 16 49.5	+0.8
	41nm,1.2s						
AS01	Alice Springs	32.54	244	*e*P	P	03 16 51.4	+1.1
AS31	Alice Springs	32.58	244	*e*P	P	03 16 49.5	-1.2
	3.0nm,0.7s						
ASAR	Alice Springs	32.58	244	P	P	03 16 49.6	-1.2
	9.4nm,0.7s,baz=72,slow=9.4,SNR=7.9						
LBZ	Lake Benmore	32.94	174	*e*P	P	03 16 53.3	-0.3
	18nm,1.2s						
FITZ	Fitzroy Crossi	39.26	256	P	P	03 17 47.5	-0.5
	11nm,0.8s,baz=119,slow=8.5,SNR=6.7						
MJAR	Matsushiro Arr	54.42	333	P	P	03 19 45.4	-0.9
	1.4nm,0.6s,baz=175,slow=8.8,SNR=4.0						
MAJO	Matsushiro	54.42	333	*e*P	P	03 19 45.4	-0.9
CASY	Casey	65.92	201	*e*P	P	03 21 04.6	-0.1
	16nm,1.2s						
IPM	Ipoh	66.32	280	*e*P	P	03 21 09.2	+0.9
	52nm,1.3s						
ENH	Enshi	68.22	309	*e*P	P	03 21 20.7	+0.7
	24nm,1.1s						
CM31	Chiang Mai Arr	72.32	294	*e*P	P	03 21 46.4	+1.1
	6.9nm,0.6s						
CMAR	Chiang Mai Arr	72.32	294	P	P	03 21 46.4	+1.1
	4.3nm,0.8s,baz=126,slow=5.3,SNR=6.6						
SONA0	Songino Array	79.08	324	*e*P	P	03 22 24.5	+0.9
SONM	Songino Array	79.08	324	P	P	03 22 24.5	+0.9
	2.7nm,0.8s,baz=152,slow=5.4,SNR=5.5						
SONA1	Songino Array	79.08	324	*e*P	P	03 22 24.4	+0.8
CAST	Castle Rocks	81.42	18	*e*P	P	03 22 37.4	+1.7
	5.2nm,0.7s						
HDA	Harding Lake	83.71	19	*e*P	P	03 22 51.1	+3.5
	9.9nm,0.8s						
RIDG	Independ'e Rid	83.94	20	*e*P	P	03 22 49.9	+1.0
	21nm,1.2s						
ILAR	Eielson Array	83.98	18	P	P	03 22 49.3	+0.2
	1.3nm,0.6s,baz=238,slow=5.8,SNR=4.7						
ILB	Eielson Array	83.98	18	*e*P	P	03 22 49.2	+0.2
	9.3nm,1.4s						
IL1	Eielson Array	83.98	18	*e*P	P	03 22 48.3	-0.7
SCRK	Sand Creek	84.38	20	*e*P	P	03 22 54.8	+3.6
	10nm,1.1s						
NV01	Mina Array Sit	86.34	50	*e*P	P	03 23 02.9	+1.2
NVAR	Mina Array Bea	86.34	50	P	P	03 23 02.9	+1.2
	2.7nm,0.9s,baz=230,slow=7.2,SNR=3.7						
BOZ	Bozeman (W)	93.05	44	*e*P	P	03 23 36.4	+3.4
	7.5nm,0.8s						
MK01	Makanchi Array	93.88	317	*e*P	P	03 23 36.7	-0.1
MK31	Makanchi Array	93.89	317	*e*P	P	03 23 36.7	-0.1
	6.5nm,1.0s						
MK32	Makanchi Array	93.89	317	*e*P	P	03 23 36.4	-0.4
MKAR	Makanchi Array	93.89	317	P	P	03 23 36.4	-0.4
	5.0nm,0.7s,baz=103,slow=5.5,SNR=9.9						
ZAA0	Zalesovo Array	93.97	324	*e*P	P	03 23 36.6	-0.3
	5.3nm,1.2s						
ZALV	Zalesovo Beam	93.97	324	P	P	03 23 36.1	-0.8
	1.7nm,0.9s,baz=113,slow=3.9,SNR=4.1						
ZAA1	Zalesovo Array	93.97	324	*e*P	P	03 23 36.1	-0.8
YKA	Yellowknife Ar	95.41	27	P	P	03 23 43.3	0.0
	1.0nm,0.7s,baz=256,slow=4.8,SNR=7.8						
YKB5	Yellowknife Ar	95.41	27	*e*P	P	03 23 43.3	0.0
ARA0	ARCESS Array S	116.82	345	*e*PKPdf	PKPdf	03 29 01.4	-1.8
ARCES	ARCESS Array B	116.82	345	PKP	PKPdf	03 29 01.3	-1.8
	1.2nm,0.3s,baz=84,slow=2.1,SNR=23						
FIA0	FINESS Array S	122.24	338	*e*PKPdf	PKiKP	03 29 13.0	-0.9
FINES	FINESS Array B	122.24	338	PKP	PKiKP	03 29 13.0	-0.9
	2.0nm,0.9s,baz=48,slow=2.8,SNR=4.6						
NB200	NORSAR Array S	127.19	345	*e*PKPdf	PKiKP	03 29 22.9	-0.9
NOA	NORSAR Array B	127.19	345	PKP	PKiKP	03 29 22.9	-0.9
	0.6nm,0.7s,baz=34,slow=2.1,SNR=3.7						
KEST	Kesra	147.82	322	PKPbc	PKiKP	03 30 04.7	-1.9
	10nm,0.8s,baz=263,slow=2.6,SNR=7.6						
ESDC	Sonseca Array	150.54	344	PKPbc	PKiKP	03 30 11.3	-0.8
	3.5nm,0.9s,baz=5.8,slow=2.5,SNR=6.0						
TORD	Torodi Ar. Bea	164.35	277	PKP	PKPdf	03 30 23.2	-0.6
	2.2nm,0.9s,baz=351,slow=4.5,SNR=4.9						
TOA1	Torodi Ar. Sit	164.35	278	*e*PKPdf	PKPdf	03 30 23.2	-0.6

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*IDC **06** 03:10:54.9±1.1, 10.°90S×165.°58E, h0km, mb4.7/14, mb1 4.8/15, mb1mx4.5/47, mbtmp4.7/15, ML5.4/1, MS5.7/1, Ms1 5.7/1, ms1mx4.9/44, Error ellipse: s-maj=36.2km s-min=17.3km az=110.0*

*NEIC **06** 03:10:57.1±0.4, 10.°85S×165.°45E, h10km, mb5.1/15, Error ellipse: s-maj=12.0km s-min=7.3km az=92.0*

*ISCJB **06** 03:10:58.0±0.4, 10.°89S±0.°05×165.°40E±0.°10, h30km, mb4.8/25, MS5.7/1, Error ellipse: s-maj=13.8km s-min=7.6km az=176.9*

ISC 06 03:11:00.5±0.6**, 10.°91S**±0.°08×**165.°4E**±0.°1**, h30km, n53, σ1.s32**/44**, mb4.9**/25**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.14	175	*e*Pn	Pn	03 13 38.4	+0.4
DZM	Mont Dzumac	11.14	175	Pn	Pn	03 13 37.8	-0.2
	27nm,0.3s,baz=308,slow=16,SNR=10						
CTA	Charters Tower	20.56	241	P	P	03 15 37.8	+0.9
	69nm,1.0s,baz=70,slow=12,SNR=7.6						
CTAO	Charters Tower	20.56	241	*e*P	P	03 15 36.9	-0.1
	161nm,1.3s						
OUZ	Omahuta	25.32	164	*e*P	P	03 16 25.7	+1.0
	109nm,1.4s						
MXZ	Matakaoa Point	28.96	158	*e*P	P	03 16 57.8	+0.4
	122nm,1.2s						
H11S2	WAKE ISLAND Hy	29.24	3	T	T	03 47 28.2	
	baz=181,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	29.25	3	T	T	03 47 28.3	
	baz=181,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	29.26	3	T	T	03 47 29.8	
	baz=181,slow=75,SNR=12						
BKZ	Black Stump Fm	29.83	162	*e*P	P	03 17 05.1	0.0
	57nm,1.2s						
STKA	Stephens Creek	30.31	223	*e*P	P	03 17 09.6	+0.3
	3.2nm,1.3s						
STKA	Stephens Creek	30.31	223	P	P	03 17 09.6	+0.3
	6.2nm,0.9s,baz=68,slow=9.4,SNR=2.9						
H11N1	WAKE ISLAND Hy	30.46	3	T	T	03 48 58.5	
	baz=182,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.47	3	T	T	03 49 01.8	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.48	3	T	T	03 49 02.5	
	baz=182,slow=76,SNR=10						
BFZ	Birch Farm	31.16	164	*e*P	P	03 17 16.7	-0.1
	53nm,1.2s						
AS01	Alice Springs	32.51	243	*e*P	P	03 17 29.7	+0.8
AS31	Alice Springs	32.55	243	*e*P	P	03 17 27.6	-1.7
	6.0nm,1.3s						
ASAR	Alice Springs	32.55	243	P	P	03 17 27.6	-1.7
	12nm,1.1s,baz=72,slow=9.7,SNR=4.1						
BBOO	Buckleboo	34.67	226	*e*P	P	03 17 46.4	-1.2
	34nm,1.2s						
PPT	Papeete	44.06	104	LR	LR	03 34 49.9	
	comp=Z,8μm,18.5s,baz=312,slow=33						
MBWA	Marble Bar	44.92	251	*e*P	P	03 19 11.7	-1.3
	26nm,1.2s						
NWAO	Narrogin (SRO)	49.26	236	P	P	03 19 46.6	-0.1
	33nm,1.0s,baz=294,slow=8.8,SNR=4.7						
MJAR	Matsushiro Arr	53.69	333	P	P	03 20 18.7	-1.0
	3.9nm,0.7s,baz=50,slow=2.0,SNR=6.4						
MAJO	Matsushiro	53.70	333	*e*P	P	03 20 18.7	-1.0
MAT	Matsushiro	53.70	333	P	P	03 20 18.6	-1.1
JNU	Nakatsue	54.77	324	*e*P	P	03 20 27.1	-0.5
	41nm,1.1s						
JNU	Nakatsue	54.77	324	P	P	03 20 27.1	-0.5
	16nm,0.8s,baz=53,slow=7.8,SNR=6.7						
ASAJ	Asahikawa	58.55	341	P	P	03 20 53.9	-0.4
	14nm,0.7s,baz=210,slow=7.9,SNR=8.4						
KSRS	Korea Array	59.57	326	P	P	03 21 01.3	-0.1
	3.9nm,0.7s,baz=138,slow=6.6,SNR=8.4						
KS15	Wonju Array Si	59.59	326	*e*P	P	03 21 01.4	-0.2
	11nm,1.0s						
KSAR	Wonju Array Be	59.59	326	P	P	03 21 01.4	-0.2
KS01	Wonju Array Si	59.61	326	*e*P	P	03 21 02.2	+0.5
USRK	Ussuriysk Ar.	62.67	334	P	P	03 21 21.9	-0.4
	3.2nm,0.6s,baz=132,slow=5.6,SNR=6.4						
MDJ	Mudanjiang	64.07	332	P	P	03 21 33.9	+2.3
MDJ	Mudanjiang	64.07	332	*e*P	P	03 21 32.0	+0.4
	8.3nm,0.8s						
PETK	Petropavlovsk-	64.10	355	P	P	03 21 32.0	+0.3
	2.7nm,0.5s,baz=184,slow=19,SNR=5.3						
PEA1	Petropavlovsk-	64.11	355	*e*P	P	03 21 32.0	+0.3
CN2	Changchun	65.45	329	*e*P	P	03 21 40.3	-0.3
KLR	Kul'dur	66.80	337	P	P	03 21 49.2	+0.1
	8.4nm,0.8s,baz=143,slow=6.0,SNR=7.3						
XAN	Xi'an	69.78	312	*e*P	P	03 22 10.0	+1.7
	10nm,0.8s						
KMI	Kunming	70.76	301	P	P	03 22 18.1	+3.4
ULN	Ulaanbaatar	77.99	324	*e*P	P	03 22 56.1	0.0
	17nm,1.1s						
ILAR	Eielson Array	83.49	19	P	P	03 23 22.8	-2.2
	1.8nm,0.7s,baz=235,slow=5.8,SNR=3.3						
ILB	Eielson Array	83.49	19	*e*P	P	03 23 22.8	-2.2
	8.8nm,1.2s						
SHPR	Sheep Range	88.07	52	*e*P	P	03 23 52.0	+3.4
	3.9nm,1.3s						
MK32	Makanchi Array	93.19	317	*e*P	P	03 24 12.0	-0.1
MKAR	Makanchi Array	93.19	317	P	P	03 24 12.0	-0.1
	2.4nm,0.6s,baz=93,slow=6.8,SNR=3.8						
YKA	Yellowknife Ar	95.01	27	P	P	03 24 17.4	-2.6
	0.4nm,0.6s,baz=259,slow=4.7,SNR=4.8						
YKB5	Yellowknife Ar	95.01	27	*e*P	P	03 24 17.4	-2.6
BOSA	Boshof	124.98	223	PKP	PKPdf	03 29 58.5	-0.1
	2.2nm,0.6s,baz=157,slow=2.9,SNR=4.7						
NACGM	Naroch	125.39	332	*e*		03 38 48.0	
SPB	Sao Paulo	133.02	137	*e*PKPpre	PKPpre	03 30 03.0	

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*IDC **06** 03:11:46.9±0.6, 10.°87S×165.°41E, h0km, mb4.7/20, mb1 4.9/22, mb1mx4.7/48, mbtmp4.8/22, ML5.3/2, Error ellipse: s-maj=22.4km s-min=14.3km az=133.0*

*NEIC **06** 03:11:48.2±0.1, 10.°85S×165.°33E, h10km, mb5.2/89, Error ellipse: s-maj=4.5km s-min=3.3km az=126.0*

*ISCJB **06** 03:11:49.6±0.2, 10.°95S±0.°04×165.°25E±0.°04, h30km, mb5.1/123, Error ellipse: s-maj=6.1km s-min=5.2km az=42.8*

*MOS **06** 03:11:49.2±1.0, 10.°69S×165.°18E, h22km, mb5.3/32, Error ellipse: s-maj=10.7km s-min=8.6km az=150.8*

ISC 06 03:11:51.4±0.4**, 10.°90S**±0.°07×**165.°33E**±0.°08**, h30km, n258, σ0.s84**/255**, mb5.2**/123**, 1C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.50	285	*e*Pn	Pn	03 13 09.7	-1.6
HNR	Honiara	5.50	285	*e*P	Pn	03 13 09.7	-1.6
HNR	Honiara	5.50	285	Pn	Pn	03 13 12.1	+0.8
	120nm,0.3s,baz=104,slow=5.3,SNR=7.3						
DZM	Mont Dzumac	11.16	175	*e*Pn	Pn	03 14 28.7	-0.4
DZM	Mont Dzumac	11.16	175	Pn	Pn	03 14 28.8	-0.3
	17nm,0.3s,baz=312,slow=17,SNR=12						
ONTNC	Ouen Toro	11.39	175	*e*Pn	Pn	03 14 32.3	+0.1
PINNC	Pines Island,	11.82	170	*e*Pn	Pn	03 14 38.0	-0.1
MSVF	Nonsavu	14.07	120	*i* P	P	03 15 14.9	-1.4
CTA	Charters Tower	20.51	241	P	Pn	03 16 29.0	-0.6
	190nm,1.1s,baz=69,slow=13,SNR=7.7						
CTAO	Charters Tower	20.51	241	*e*P	P	03 16 26.8	-0.5
	220nm,1.0s						
CTAO	Charters Tower	20.51	241	*e*P	P	03 16 26.8	-0.5
CTAO				pmax	pmax		
	comp=Z,220nm,1.0s						
HIZ	Hauiti	28.78	164	*e*P	P	03 17 47.3	+0.6
	comp=Z,92nm,1.2s						
BKZ	Black Stump Fm	29.85	162	*e*P	P	03 17 55.8	-0.4
	comp=Z,74nm,0.8s						
STKA	Stephens Creek	30.27	223	*e*P	P	03 17 59.2	-0.8
	comp=Z,8.1nm,1.4s						
STKA	Stephens Creek	30.27	223	P	P	03 18 01.0	+1.1
STKA				pmax	pmax		
	comp=Z,11nm,0.6s						
STKA	Stephens Creek	30.27	223	P	P	03 18 01.0	+1.1
	comp=Z,11nm,0.6s,baz=62,slow=9.4,SNR=7.6						
WRAB	Tennant Creek	31.14	249	*i* P	P	03 18 02.8	-5.0
WRAB				pmax	pmax		
	comp=Z,22nm,1.1s						
WRA	Warramunga Arr	31.15	249	P	P	03 18 07.4	-0.5
	comp=Z,12nm,0.8s,baz=80,slow=8.0,SNR=10						
WRA				PcP	PcP	03 21 03.9	+1.1
	comp=Z,2.4nm,0.6s,baz=75,slow=3.5,SNR=5.1						
BFZ	Birch Farm	31.19	164	*e*P	P	03 18 07.7	-0.3
	comp=Z,136nm,1.0s						
LTZ	Lake Taylor	32.33	170	*e*P	P	03 18 18.4	+0.4
	comp=Z,35nm,0.9s						
AS01	Alice Springs	32.45	243	*e*P	P	03 18 17.4	-1.9
AS31	Alice Springs	32.49	243	*e*P	P	03 18 18.1	-1.6
	comp=Z,15nm,0.6s						
ASAR	Alice Springs	32.49	243	P	P	03 18 18.4	-1.4
	comp=Z,50nm,0.6s,baz=64,slow=10,SNR=44						
ASAR				PcP	PcP	03 21 06.8	+0.4
	comp=Z,4.2nm,0.8s,baz=73,slow=3.2,SNR=4.7						
OXZ	Oxford	32.82	171	*e*P	P	03 18 23.4	+1.1
	comp=Z,95nm,1.4s						
FITZ	Fitzroy Crossi	39.02	255	P	P	03 19 15.3	-0.4
	comp=Z,9.4nm,0.7s,baz=105,slow=7.6,SNR=4.0						
NWAO	Narrogin (SRO)	49.20	236	P	P	03 20 38.5	+1.4
	comp=Z,26nm,1.0s,baz=324,slow=8.7,SNR=4.2						
MJAR	Matsushiro Arr	53.66	333	P	P	03 21 09.7	-0.7
	comp=Z,3.7nm,0.7s,baz=171,slow=8.9,SNR=6.8						
MAJO	Matsushiro	53.66	333	*i* P	P	03 21 09.3	-1.1
MAJO				pmax	pmax		
	comp=Z,19nm,1.0s						
MAT	Matsushiro	53.66	333	P	P	03 21 09.6	-0.8
JNU	Nakatsue	54.73	324	P	P	03 21 18.3	0.0
	comp=Z,18nm,0.8s,baz=126,slow=3.6,SNR=5.9						
KS01	Wonju Array Si	59.56	326	*e*P	P	03 21 51.9	-0.5
YSS	Yuzh-Sakhalins	61.03	343⇓	*e*P	P	03 22 03.3	+1.1
YSS				*e*		03 22 09.4	
YSS				*e*		03 22 16.0	
YSS				pmax	pmax		
	comp=Z,140nm,0.9s						
NJ2	Nanjing	61.63	316	*e*P	P	03 22 08.2	+1.6
NJ2				pmax	pmax		

	comp=Z,11nm,0.5s						
VLA	**Vladivostok**	**61.83**	**333**	*i* P	**P**	**03 22 07.0**	**-0.7**
VLA				pmax	pmax		
	comp=Z,16nm,0.7s						
USRK	**Ussuriysk Ar.**	**62.64**	**334**	P	**P**	**03 22 13.6**	**+0.5**
	comp=Z,4.6nm,0.9s,baz=160,slow=6.0,SNR=3.5						
WHN	**Wuhan**	**63.99**	**312**	⇓P	P	03 22 15.9	-6.4
MDJ	**Mudanjiang**	**64.03**	**332**	P	**P**	**03 22 26.0**	**+3.7**
MDJ				pmax	pmax		
	comp=Z,35nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,11µm,13.5s						
MDJ				pmax	pmax		
	comp=Z,23nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,8µm,19.6s						
PETK	**Petropavlovsk-**	**64.09**	**355**	P	**P**	**03 22 24.0**	**+1.5**
	comp=Z,3.6nm,0.4s,baz=299,slow=20,SNR=7.2						
CN2	**Changchun**	**65.41**	**329**	*e*P	**P**	**03 22 30.6**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CASY	**Casey**	**66.36**	**201**	*e*P	**P**	**03 22 37.4**	**+0.2**
	comp=Z,40nm,1.4s						
KLR	**Kul'dur**	**66.77**	**337**	*i* P	**P**	**03 22 40.7**	**+0.8**
ENH	**Enshi**	**67.49**	**309**	*e*P	**P**	**03 22 43.1**	**-1.9**
	comp=Z,43nm,1.2s						
GYA	**Guiyang**	**68.00**	**304**	P	**P**	**03 22 51.3**	**+2.9**
GYA				pP	pwP	03 23 03.0	+2.1
GYA				PP	**PP**	**03 25 16.2**	**-2.6**
GYA				S	**S**	**03 31 46.9**	**+0.8**
GYA				SKS	**SKiKP**	**03 32 42.8**	**+0.1**
GYA	**Guiyang**	**68.00**	**304**	SS	SS	03 36 11.4	+2.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.8s						
GYA				LR	LR		
	comp=N,620nm,18.3s						
GYA				LR	LR		
	comp=E,550nm,18.5s						
GYA				LR	LR		
	comp=Z,570nm,19.0s						
GSI	**Gunungsitoli**	**68.44**	**276**	*e*P	**P**	**03 22 50.3**	**-1.0**
	comp=Z,41nm,0.9s						
XAN	**Xi'an**	**69.72**	**312**	P	P	03 23 05.3	+6.4
XAN				pP	sP	03 23 14.1	+3.4
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
KMI	**Kunming**	**70.70**	**302**	P	**P**	**03 23 05.5**	**+0.3**
KMI				pP	pP	03 23 11.1	-2.6
KMI				sP	sP	03 23 13.9	-2.9
KMI				pmax	pmax		
	comp=Z,14nm,2.0s						
KMI				pmax	pmax		
	comp=Z,12nm,1.4s						
HHC	**Hu-ho-hao-te**	**71.46**	**320**	*e*P	P	03 23 15.7	+6.3
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
CMAR	**Chiang Mai Arr**	**71.68**	**294**	P	**P**	**03 23 12.2**	**+1.1**
	comp=Z,1.7nm,0.4s,baz=126,slow=3.9,SNR=3.4						
HIA	**Hailar**	**72.05**	**331**	*i* P	**P**	**03 23 11.8**	**-0.8**
HIA				pmax	pmax		
	comp=Z,25nm,1.1s						
CD2	**Chengdu**	**72.19**	**307**	*e*P	**P**	**03 23 14.0**	**+0.1**
SEY	**Seymchan**	**74.29**	**354**	*i* P	**P**	**03 23 27.9**	**+2.4**
LZH	**Lanzhou**	**74.36**	**312**	*e*P	**P**	**03 23 28.6**	**+1.8**
LZH				pP	PcP	03 23 40.1	-1.3
LZH				sP	sP	03 23 43.6	+4.9
LZH				PP	**PP**	**03 26 12.3**	**-1.0**
LZH				pmax	pmax		
	comp=Z,28nm,1.4s						
LZH				pmax	pmax		
	comp=Z,96nm,4.9s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
ULN	**Ulaanbaatar**	**77.95**	**324**	*e*P	**P**	**03 23 46.7**	**-0.2**
	comp=Z,14nm,0.9s						
ULN	**Ulaanbaatar**	**77.95**	**324**	*i* P	**P**	**03 23 46.2**	**-0.7**
ULN				pmax	pmax		
	comp=Z,18nm,1.0s						
SONM	**Songino Array**	**78.31**	**324**	P	**P**	**03 23 49.0**	**+0.1**
SONM	**Songino Array**	**78.31**	**324**	P	**P**	**03 23 49.0**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=138,slow=6.0,SNR=4.2						
GTA	**Gaotai**	**78.67**	**314**	P	P	03 23 56.4	+5.4
GTA				pP	sP	03 24 05.9	+2.9
GTA				sP	pwP	03 24 10.0	+7.2
GTA				pmax	pmax		
	comp=Z,11nm,1.7s						
GTA				LR	LR		
	comp=N,8µm,18.1s						
GTA				LR	LR		
	comp=E,11µm,17.5s						
GTA				LR	LR		
	comp=Z,13µm,17.8s						
BILL	**Bilibino**	**78.74**	**0**	*e*P	**P**	**03 23 50.8**	**+0.2**
	comp=Z,15nm,0.9s						
BILL	**Bilibino**	**78.74**	**0**	*e*P	**P**	**03 23 51.0**	**+0.4**
BILL				*e*		03 23 57.7	
BILL				*e*		03 26 49.1	
BILL				pmax	pmax		
	comp=Z,14nm,0.9s						
QSPA	**South Pole Qui**	**79.10**	**180**	*e*P	**P**	**03 23 53.1**	**+0.2**
	comp=Z,58nm,1.4s						
SUA	**Susitna One**	**79.93**	**20**	*e*P	**P**	**03 23 57.6**	**+0.2**
	comp=Z,17nm,1.0s						
KNK	**Knik Glacier**	**80.67**	**21**	*e*P	**P**	**03 24 00.6**	**-0.7**
	comp=Z,25nm,1.2s						
GLI	**Glacier Island**	**80.78**	**21**	*e*P	**P**	**03 24 02.2**	**+0.3**
	comp=Z,32nm,1.0s						
ZAK	**Zakamensk**	**81.35**	**325**	*e*P	**P**	**03 24 03.5**	**-1.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TLY	**Talaya**	**81.78**	**326**	*i* P	**P**	**03 24 06.2**	**-1.2**
RND	**Reindeer**	**81.94**	**19**	*e*P	**P**	**03 24 08.7**	**+0.7**
	comp=Z,19nm,1.1s						
MCK	**McKinley**	**82.14**	**19**	*e*P	**P**	**03 24 08.7**	**-0.3**
	comp=Z,32nm,1.4s						
MCK	**McKinley**	**82.14**	**19**	*e*P	**P**	**03 24 08.7**	**-0.3**
MCK				pmax	pmax		
	comp=Z,32nm,1.4s						
IM3	**Indian Mountai**	**82.40**	**16**	*e*P	**P**	**03 24 10.8**	**+0.6**
MLY	**Manley**	**82.53**	**17**	*e*P	**P**	**03 24 11.2**	**+0.2**
	comp=Z,15nm,1.3s						
KMRM	**Mail Ridge**	**82.85**	**47**	*e*P	**P**	**03 24 12.4**	**-1.0**
	comp=Z,28nm,1.1s						
GDXM	**Geysers**	**83.03**	**48**	*e*P	**P**	**03 24 14.4**	**+0.2**
	comp=Z,24nm,1.3s						
MDM	**Murphy Dome**	**83.22**	**18**	*e*P	**P**	**03 24 14.0**	**-0.6**
	comp=Z,14nm,1.0s						
HDA	**Harding Lake**	**83.24**	**19**	P	**P**	**03 24 14.5**	**-0.2**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.28**	**18**	P	**P**	**03 24 14.8**	**0.0**
	baz=226						
COLA	**College**	**83.28**	**18**	*e*P	**P**	**03 24 13.7**	**-1.1**
	comp=Z,20nm,1.1s						
COLA	**College**	**83.28**	**18**	*i* P	**P**	**03 24 14.5**	**-0.3**
COLA				pmax	pmax		
	comp=Z,11nm,0.8s						
SAO	**San Andreas Ge**	**83.36**	**51**	*e*P	**P**	**03 24 16.0**	**+0.1**
	comp=Z,32nm,1.3s						
O02D	**Mt. Diablo Mer**	**83.50**	**47**	P	**P**	**03 24 17.0**	**+0.3**
	baz=250,SNR=7.2						
ILAR	**Eielson Array**	**83.51**	**19**	P	**P**	**03 24 15.3**	**-0.7**
	comp=Z,3.8nm,0.8s,baz=242,slow=5.1,SNR=8.1						
ILB	**Eielson Array**	**83.51**	**19**	*e*P	**P**	**03 24 15.5**	**-0.6**
IL1	**Eielson Array**	**83.51**	**19**	*e*P	**P**	**03 24 15.7**	**-0.4**
POKR	**Poker Plat Res**	**83.58**	**18**	P	**P**	**03 24 16.8**	**+0.4**
	baz=226						
K02D	**Willamette Mer**	**83.76**	**45**	P	**P**	**03 24 17.9**	**-0.1**
	baz=249						
WDC	**Whiskeytown Da**	**83.81**	**47**	*e*P	**P**	**03 24 18.1**	**-0.1**
	comp=Z,19nm,1.4s						
WDC	**Whiskeytown Da**	**83.81**	**47**	*e*P	**P**	**03 24 18.1**	**-0.1**
WDC				pmax	pmax		
	comp=Z,19nm,1.4s						
N02D	**Trinity Center**	**83.83**	**46**	P	**P**	**03 24 18.2**	**-0.2**
	baz=250						
M02C	**Callahan**	**83.87**	**46**	P	**P**	**03 24 18.7**	**+0.2**
	baz=250						
PKM	**Mcpherson Peak**	**84.04**	**53**	P	**P**	**03 24 19.6**	**-0.1**
	baz=252						
YBH	**Yreka Blue Hor**	**84.09**	**46**	*e*P	**P**	**03 24 19.6**	**-0.1**
	comp=Z,18nm,1.1s						
YBH	**Yreka Blue Hor**	**84.09**	**46**	*e*P	**P**	**03 24 19.6**	**-0.1**
YBH				pmax	pmax		
	comp=Z,18nm,1.1s						
HUMO	**Hull Mountain**	**84.22**	**45**	*e*P	**P**	**03 24 20.2**	**0.0**
	comp=Z,22nm,1.1s						
ORV	**Oroville**	**84.22**	**48**	*e*P	**P**	**03 24 19.7**	**-0.6**
	comp=Z,14nm,1.2s						
ORV	**Oroville**	**84.22**	**48**	*e*P	**P**	**03 24 19.7**	**-0.6**
ORV				pmax	pmax		
	comp=Z,14nm,1.2s						
O03E	**Paynes Creek**	**84.25**	**47**	P	**P**	**03 24 20.5**	**0.0**
	baz=251,SNR=10						
AFDM	**Forest Hills D**	**84.42**	**49**	*e*P	**P**	**03 24 20.7**	**-0.6**
	comp=Z,18nm,1.0s						
L04D	**Klamath Falls**	**84.54**	**45**	P	**P**	**03 24 21.9**	**-0.1**
	baz=250						
CMB	**Columbia Colle**	**84.56**	**50**	*e*P	**P**	**03 24 21.0**	**-1.1**
	comp=Z,16nm,1.1s						
CMB	**Columbia Colle**	**84.56**	**50**	*e*P	**P**	**03 24 21.0**	**-1.1**
CMB				pmax	pmax		
	comp=Z,16nm,1.1s						
SKAG	**Skagway**	**84.60**	**26**	*e*P	**P**	**03 24 21.9**	**+0.2**
	comp=Z,35nm,1.3s						
M04C	**Macdoel**	**84.72**	**46**	P	**P**	**03 24 23.1**	**+0.2**
	baz=250						
VES	**Vestal, Richgr**	**84.89**	**52**	P	**P**	**03 24 23.2**	**-0.5**
	baz=253						
I04A	**Tendick Farm,**	**85.00**	**44**	P	**P**	**03 24 23.8**	**-0.4**
	baz=250						
J04D	**Umpqua Nationa**	**85.02**	**44**	P	**P**	**03 24 24.1**	**-0.4**
	baz=250						
H04D	**Lebanon**	**85.03**	**43**	P	**P**	**03 24 24.1**	**-0.2**
	baz=250						
MWC	**Mount Wilson**	**85.23**	**54**	*e*P	**P**	**03 24 24.9**	**-0.8**
	comp=Z,29nm,1.2s						
MWC	**Mount Wilson**	**85.23**	**54**	*e*P	**P**	**03 24 24.9**	**-0.8**
MWC				pmax	pmax		
	comp=Z,29nm,1.2s						
ISA	**Isabella, Lake**	**85.31**	**53**	*e*P	**P**	**03 24 25.4**	**-0.6**
	comp=Z,16nm,1.3s						
ISA	**Isabella, Lake**	**85.31**	**53**	*e*P	**P**	**03 24 25.4**	**-0.6**
ISA				pmax	pmax		
	comp=Z,16nm,1.3s						
ISA	**Isabella, Lake**	**85.31**	**53**	P	**P**	**03 24 25.7**	**-0.3**
	baz=253						
WAKR	**Walker**	**85.42**	**50**	*e*P	**P**	**03 24 26.3**	**-0.3**
	comp=Z,34nm,1.4s						
EDW2	**Edwards Air Fo**	**85.46**	**53**	P	**P**	**03 24 26.2**	**-0.5**
	baz=254,SNR=6.2						
OMMB	**Old Mammoth Mi**	**85.48**	**51**	*e*P	**P**	**03 24 26.9**	**-0.2**
	comp=Z,22nm,1.4s						
BFSC	**Mount Baldy Ra**	**85.55**	**54**	P	**P**	**03 24 26.6**	**-0.7**
	baz=254,SNR=5.2						
DAWY	**Dawson**	**85.57**	**21**	*e*P	**P**	**03 24 26.6**	**0.0**
	comp=Z,12nm,1.1s						
MLAC	**Mammoth, Mammo**	**85.61**	**51**	P	**P**	**03 24 27.2**	**-0.4**
	baz=253						
109C	**Camp Elliot, M**	**85.62**	**55**	P	**P**	**03 24 27.2**	**-0.3**
	baz=254						
J05D	**Fort Rock, OR**	**85.64**	**45**	P	**P**	**03 24 27.4**	**-0.1**
	baz=251						
MURC	**Murrieta**	**85.74**	**55**	P	**P**	**03 24 27.7**	**-0.4**
	baz=254						
PAHR	**Pah Rah Range**	**85.82**	**48**	*e*P	**P**	**03 24 27.9**	**-0.6**
	comp=Z,32nm,1.4s						
CWC	**Cottonwood Cre**	**85.84**	**52**	P	**P**	**03 24 28.2**	**-0.5**
	baz=253						
E04D	**Cinebar**	**85.86**	**41**	P	**P**	**03 24 28.9**	**+0.7**
	baz=250						
LRMC	**Laurel Mtn Rad**	**85.88**	**53**	P	**P**	**03 24 28.4**	**-0.5**
	baz=254						
RYN	**Ryan**	**86.14**	**50**	*e*P	**P**	**03 24 29.6**	**-0.5**
	comp=Z,9.7nm,1.0s						
DAC	**Darwin (Calif)**	**86.17**	**52**	*e*P	**P**	**03 24 30.0**	**-0.4**
	comp=Z,20nm,1.4s						
DAC	**Darwin (Calif)**	**86.17**	**52**	*e*P	**P**	**03 24 30.0**	**-0.4**
DAC				pmax	pmax		
	comp=Z,20nm,1.4s						
MONP2	**Monument Peak**	**86.17**	**56**	P	**P**	**03 24 30.2**	**-0.3**
	baz=254,SNR=8.0						
MPMC	**Manual Prospec**	**86.19**	**52**	P	**P**	**03 24 30.1**	**-0.4**
	baz=254,SNR=6.4						
NV01	**Mina Array Sit**	**86.25**	**50**	*e*P	**P**	**03 24 30.0**	**-0.8**
NVAR	**Mina Array Bea**	**86.25**	**50**	P	**P**	**03 24 30.1**	**-0.6**
	comp=Z,12nm,1.0s,baz=235,slow=7.0,SNR=9.5						
PFO	**Pinyon Flats O**	**86.34**	**55**	*e*P	**P**	**03 24 30.4**	**-0.7**
	comp=Z,20nm,1.5s						
PFO	**Pinyon Flats O**	**86.34**	**55**	*e*P	**P**	**03 24 30.4**	**-0.7**
PFO				pmax	pmax		
	comp=Z,20nm,1.5s						
PFO	**Pinyon Flats O**	**86.34**	**55**	P	**P**	**03 24 31.0**	**-0.1**
	baz=254,SNR=5.3						
XPFO	**Pion Flat**	**86.34**	**55**	*e*P	**P**	**03 24 30.3**	**-0.9**
	comp=Z,21nm,1.5s						
F05D	**White Salmon**	**86.35**	**42**	P	**P**	**03 24 31.1**	**+0.3**
	baz=250						
NV11	**Mina Array Sit**	**86.36**	**50**	*e*P	**P**	**03 24 30.4**	**-0.8**
	comp=Z,1.9nm,1.3s						
IKP	**In-Ko-Pah, Jac**	**86.36**	**56**	P	**P**	**03 24 30.9**	**-0.3**
	baz=255						
D05A	**Enumclaw**	**86.45**	**41**	*e*P	**P**	**03 24 30.4**	**-0.8**
	comp=Z,82nm,1.4s						
DLBC	**Dease Lake**	**86.48**	**28**	P	**P**	**03 24 31.7**	**+0.5**
	comp=Z,7.3nm,1.2s,baz=225,slow=8.6,SNR=2.4						
GSC	**Goldstone, Bar**	**86.52**	**53**	*e*P	**P**	**03 24 31.4**	**-0.6**
	comp=Z,25nm,1.5s						
GSC	**Goldstone, Bar**	**86.52**	**53**	*e*P	**P**	**03 24 31.4**	**-0.6**
GSC				pmax	pmax		
	comp=Z,25nm,1.5s						
GSC	**Goldstone, Bar**	**86.52**	**53**	P	**P**	**03 24 31.4**	**-0.6**
	baz=254						
GRAC	**Grapevine Rang**	**86.55**	**51**	P	**P**	**03 24 32.2**	**+0.2**
	baz=254,SNR=5.2						
KVN	**Kaiserville**	**86.58**	**49**	*e*P	**P**	**03 24 31.7**	**-0.6**
	comp=Z,16nm,1.2s						
KVN	**Kaiserville**	**86.58**	**49**	*e*P	**P**	**03 24 31.7**	**-0.6**
KVN				pmax	pmax		
	comp=Z,16nm,1.2s						
SWSC	**Sam W. Stewart**	**86.69**	**56**	P	**P**	**03 24 32.8**	**0.0**
	baz=255						
B05A	**Bryant**	**86.75**	**40**	P	**P**	**03 24 32.9**	**+0.2**
	baz=250						
HEC	**Hector,Ludlow**	**86.76**	**54**	P	**P**	**03 24 32.9**	**-0.3**
	baz=254						
FURC	**Furnace Creek,**	**86.79**	**52**	P	**P**	**03 24 32.9**	**-0.2**
	baz=254,SNR=5.2						
BELC	**Belle Mtn. Jos**	**86.81**	**55**	P	**P**	**03 24 33.0**	**-0.5**
	baz=255,SNR=7.2						
I07A	**Izee**	**87.08**	**44**	*e*P	**P**	**03 24 34.1**	**-0.4**
	comp=Z,14nm,1.0s						
SHOC	**Shoshone, Teco**	**87.09**	**53**	P	**P**	**03 24 34.5**	**-0.2**
	baz=254						
BC3	**Big Chuckawall**	**87.16**	**55**	P	**P**	**03 24 34.9**	**-0.3**
	baz=255,SNR=5.9						
WVOR	**Wild Horse Val**	**87.18**	**46**	*e*P	**P**	**03 24 35.2**	**+0.1**
	comp=Z,26nm,1.3s						
WVOR	**Wild Horse Val**	**87.18**	**46**	*e*P	**P**	**03 24 35.2**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,26nm,1.3s						
TUQ	**Turquoise Moun**	**87.25**	**53**	P	**P**	**03 24 35.1**	**-0.5**
	baz=255						
GMRC	**Granite Mounta**	**87.28**	**54**	P	**P**	**03 24 35.1**	**-0.7**
	baz=255,SNR=5.4						
F07A	**Phinny Hill Vi**	**87.36**	**42**	*e*P	**P**	**03 24 36.1**	**+0.4**
	comp=Z,40nm,1.4s						
TPNV	**Topopah Spring**	**87.39**	**52**	P	**P**	**03 24 36.1**	**-0.2**
	baz=254						
GLA	**Glamis**	**87.51**	**56**	*e*P	**P**	**03 24 36.1**	**-0.7**
	comp=Z,24nm,1.0s						
GLA	**Glamis**	**87.51**	**56**	*e*P	**P**	**03 24 36.1**	**-0.7**
GLA				pmax	pmax		
	comp=Z,24nm,1.0s						
GLA	**Glamis**	**87.51**	**56**	P	**P**	**03 24 36.7**	**-0.1**
	baz=255						
IRM	**Iron Mountain**	**87.53**	**55**	P	**P**	**03 24 36.6**	**-0.3**
	baz=255,SNR=7.2						
J08A	**Circle Bar Ran**	**87.57**	**45**	*e*P	**P**	**03 24 36.8**	**-0.1**
	comp=Z,18nm,1.1s						
LDFC	**Landfair**	**87.80**	**54**	*e*P	**P**	**03 24 38.0**	**-0.2**
	comp=Z,59nm,1.4s						
G08A	**Pilot Rock**	**87.82**	**43**	*e*P	**P**	**03 24 37.6**	**-0.5**
	comp=Z,26nm,1.4s						
Y12C	**Blythe**	**87.93**	**55**	*e*P	**P**	**03 24 38.6**	**-0.1**
	comp=Z,36nm,1.4s						
Y12C	**Blythe**	**87.93**	**55**	P	**P**	**03 24 38.7**	**-0.1**
	baz=256,SNR=5.6						
NEE2	**Needles Airpor**	**88.11**	**54**	P	**P**	**03 24 39.3**	**-0.2**
	baz=255						
SHPR	**Sheep Range**	**88.12**	**52**	*e*P	**P**	**03 24 39.5**	**-0.2**
	comp=Z,21nm,1.4s						
R11A	**Troy Canyon, C**	**88.28**	**51**	*e*P	**P**	**03 24 39.8**	**-0.7**
	comp=Z,6.5nm,1.1s						
R11A	**Troy Canyon, C**	**88.28**	**51**	P	**P**	**03 24 40.3**	**-0.2**
	baz=255						
PDMCI	**Parker Dam,Lak**	**88.38**	**55**	P	**P**	**03 24 40.7**	**-0.1**
	baz=256,SNR=7.3						
B08A	**Colville Reser**	**88.52**	**40**	*e*P	**P**	**03 24 41.0**	**-0.2**
	comp=Z,8.7nm,1.1s						
WMQ	**Urumqi**	**88.71**	**315**	*e*P	**P**	**03 24 43.8**	**+1.5**
WMQ				pP	sP	03 24 55.3	+0.9
WMQ				pmax	pmax		
	comp=Z,34nm,1.5s						
WMQ				LR	LR		
	comp=N,17µm,13.1s						
WMQ				LR	LR		
	comp=E,17µm,16.3s						
WMQ				LR	LR		
	comp=Z,12µm,18.1s						
W13A	**Hualapai Mount**	**88.77**	**54**	*e*P	**P**	**03 24 42.6**	**-0.4**
	comp=Z,33nm,1.5s						
BMO	**Blue Mountains**	**88.81**	**44**	*e*P	**P**	**03 24 42.3**	**-0.5**
	comp=Z,13nm,1.4s						
BMO	**Blue Mountains**	**88.81**	**44**	*e*P	**P**	**03 24 42.3**	**-0.5**
BMO				pmax	pmax		
	comp=Z,13nm,1.4s						
214A	**Organ Pipe Nat**	**88.90**	**57**	P	**P**	**03 24 43.8**	**+0.4**
	baz=256,SNR=9.1						
ELK	**Elko**	**89.16**	**48**	*e*P	**P**	**03 24 44.7**	**0.0**
	comp=Z,12nm,1.4s						
ELK	**Elko**	**89.16**	**48**	*e*P	**P**	**03 24 44.7**	**0.0**
ELK				pmax	pmax		
	comp=Z,12nm,1.4s						
Y14A	**Wickenburg**	**89.20**	**55**	*e*P	**P**	**03 24 44.4**	**-0.4**
	comp=Z,7.7nm,1.1s						
MFID	**Camas Ranch**	**89.44**	**46**	*e*P	**P**	**03 24 45.4**	**-0.4**
	comp=Z,11nm,1.3s						
LCMT	**Little Creek M**	**89.74**	**52**	*e*P	**P**	**03 24 46.7**	**-0.7**
	comp=Z,31nm,1.5s						
CCUT	**Cedar City**	**89.78**	**52**	*e*P	**P**	**03 24 47.3**	**-0.3**
	comp=Z,30nm,1.4s						
HSIG		**89.81**	**61**	*e*P	**P**	**03 24 47.8**	**+0.1**
	comp=Z,17nm,1.1s						
NEW	**Newport**	**89.90**	**41**	P	**P**	**03 24 47.5**	**-0.2**
	baz=254						
SZCU	**Shurtz Canyon**	**90.00**	**52**	*e*P	**P**	**03 24 48.3**	**-0.3**
	comp=Z,14nm,1.2s						
KNB	**Kanab**	**90.07**	**52**	*e*P	**P**	**03 24 49.4**	**+0.4**
	comp=Z,43nm,1.4s						
KNB	**Kanab**	**90.07**	**52**	*e*P	**P**	**03 24 49.4**	**+0.4**
KNB				pmax	pmax		
	comp=Z,43nm,1.4s						
U15A	**North Rim**	**90.35**	**53**	*e*P	**P**	**03 24 50.1**	**-0.3**
	comp=Z,29nm,1.3s						
HLID	**Hailey**	**90.47**	**46**	*e*P	**P**	**03 24 50.6**	**0.0**
	comp=Z,12nm,1.3s						
HLID	**Hailey**	**90.47**	**46**	P	**P**	**03 24 50.5**	**-0.1**
	baz=256						
DGZ	**Jazzator, Alta**	**90.53**	**321**	*i* P	**P**	**03 24 49.9**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PKCU	**Pink Cliffs**	**90.56**	**52**	*e*P	**P**	**03 24 52.0**	**+0.5**
	comp=Z,44nm,1.3s						
X16A	**Lo Mia Camp, P**	**90.57**	**55**	*e*P	**P**	**03 24 51.6**	**+0.2**
	comp=Z,7.7nm,0.9s						
TUC	**Tucson**	**90.65**	**57**	*e*P	**P**	**03 24 51.8**	**+0.1**
	comp=Z,11nm,1.3s						
TUC	**Tucson**	**90.65**	**57**	*e*P	**P**	**03 24 51.8**	**+0.1**
TUC				pmax	pmax		
	comp=Z,11nm,1.3s						
TUC	**Tucson**	**90.65**	**57**	P	**P**	**03 24 51.7**	**+0.1**
	baz=258						
MTPU	**Mount Pierson**	**90.80**	**52**	*e*P	**P**	**03 24 53.1**	**+0.5**
	comp=Z,16nm,1.1s						
DUG	**Dugway, Tooele**	**90.82**	**49**	*e*P	**P**	**03 24 52.1**	**-0.2**
	comp=Z,8.1nm,1.1s						
DUG	**Dugway, Tooele**	**90.82**	**49**	*e*P	**P**	**03 24 52.1**	**-0.2**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DUG	**Dugway, Tooele**	**90.82**	**49**	P	**P**	**03 24 52.1**	**-0.2**
	baz=256						
BGU	**Big Grassy Mou**	**90.83**	**49**	*e*P	**P**	**03 24 52.2**	**-0.2**
	comp=Z,15nm,1.4s						
WUAZ	**Wupatki**	**90.87**	**54**	*e*P	**P**	**03 24 52.7**	**0.0**
	comp=Z,17nm,1.1s						
WUAZ	**Wupatki**	**90.87**	**54**	P	**P**	**03 24 52.6**	**0.0**
	baz=257						
MSU	**Marysvale**	**90.91**	**51**	*e*P	**P**	**03 24 53.4**	**+0.5**
MSU	**Marysvale**	**90.91**	**51**	*e*P	**P**	**03 24 53.4**	**+0.5**
HVU	**Hansel Valley**	**91.21**	**48**	*e*P	**P**	**03 24 54.1**	**0.0**
	comp=Z,36nm,1.4s						
HVU	**Hansel Valley**	**91.21**	**48**	*e*P	**P**	**03 24 54.1**	**0.0**
HVU				pmax	pmax		
	comp=Z,36nm,1.4s						
NLU	**North Lily Min**	**91.31**	**50**	*e*P	**P**	**03 24 54.4**	**-0.3**
	comp=Z,14nm,1.1s						
SPUT	**South Promonto**	**91.34**	**48**	*e*P	**P**	**03 24 54.3**	**-0.5**
	comp=Z,16nm,1.4s						
MPU	**Maple Canyon**	**91.66**	**50**	*e*P	**P**	**03 24 56.2**	**-0.1**
	comp=Z,17nm,1.3s						
CTU	**Camp Tracy**	**91.72**	**49**	*e*P	**P**	**03 24 56.6**	**+0.1**
	comp=Z,16nm,1.3s						
Q16A	**Castle Valley**	**91.77**	**51**	*e*P	**P**	**03 24 57.3**	**+0.4**
	comp=Z,26nm,1.4s						
SYO	**Syowa Base**	**91.80**	**197**	⇑*e*P	**P**	**03 24 57.2**	**+1.1**
SYO	**Syowa Base**	**91.80**	**197**	⇓*i*sP	sP	03 25 03.3	-4.8
MCMT	**McKenzie Canyo**	**91.87**	**45**	*e*P	**P**	**03 24 57.1**	**-0.1**
JLU	**Jordanelle**	**91.92**	**49**	*e*P	**P**	**03 24 57.3**	**-0.3**
	comp=Z,20nm,1.5s						
TCUT	**Toone Canyon**	**92.07**	**49**	*e*P	**P**	**03 24 58.4**	**+0.1**
	comp=Z,15nm,1.0s						
W18A	**Petrified Fore**	**92.09**	**55**	P	**P**	**03 24 57.9**	**-0.5**
	baz=258						
P17A	**Butcher Ranch,**	**92.21**	**50**	*e*P	**P**	**03 24 58.8**	**-0.1**
	comp=Z,13nm,1.4s						
LRM	**Limekiln Ridge**	**92.37**	**44**	*e*P	**P**	**03 24 59.5**	**0.0**
BOZ	**Bozeman (W)**	**92.88**	**44**	*e*P	**P**	**03 25 01.7**	**-0.1**
	comp=Z,19nm,1.4s						
BOZ	**Bozeman (W)**	**92.88**	**44**	*e*P	**P**	**03 25 01.7**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,19nm,1.4s						
BOZ	**Bozeman (W)**	**92.88**	**44**	P	**P**	**03 25 01.7**	**-0.1**
	baz=258						
FXWY	**Fox Creek**	**92.88**	**46**	*e*P	**P**	**03 25 01.7**	**-0.3**
	comp=Z,4.9nm,0.9s						
MKAR	**Makanchi Array**	**93.14**	**317**	P	**P**	**03 25 02.5**	**-0.2**
	comp=Z,3.8nm,0.9s,baz=102,slow=5.8,SNR=3.3						
YMR	**Madison River**	**93.14**	**45**	*e*P	**P**	**03 25 02.6**	**-0.5**
	comp=Z,8.2nm,0.9s						
121A	**Cookes Peak, D**	**93.18**	**58**	P	**P**	**03 25 02.6**	**-0.9**
	baz=259						
ZALV	**Zalesovo Beam**	**93.20**	**324**	P	**P**	**03 25 01.7**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=131,slow=7.9,SNR=3.1						
H17A	**Grant Village**	**93.36**	**46**	P	**P**	**03 25 04.0**	**-0.1**
	baz=258						
BW06	**Boulder Array**	**93.76**	**47**	*e*P	**P**	**03 25 05.1**	**-0.8**
	comp=Z,9.9nm,1.4s						
BW06	**Boulder Array**	**93.76**	**47**	P	**P**	**03 25 05.4**	**-0.6**
	baz=259						
PD31	**Pinedale Array**	**93.76**	**47**	*e*P	**P**	**03 25 05.0**	**-1.0**
PDAR	**Pinedale Array**	**93.76**	**47**	*e*P	**P**	**03 25 04.2**	**-1.8**
PDAR	**Pinedale Array**	**93.76**	**47**	P	**P**	**03 25 04.8**	**-1.2**
	comp=Z,2.3nm,0.9s,baz=251,slow=2.7,SNR=7.0						
ANMO	**Albuquerque**	**94.70**	**55**	*e*P	**P**	**03 25 09.5**	**-0.9**
	comp=Z,4.4nm,1.1s						
ANMO	**Albuquerque**	**94.70**	**55**	P	**P**	**03 25 10.6**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANMO	**Albuquerque**	**94.70**	**55**	P	**P**	**03 25 10.0**	**-0.5**
	baz=260						
YKA	**Yellowknife Ar**	**95.04**	**27**	P	**P**	**03 25 09.1**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=254,slow=4.9,SNR=5.9						
YKB5	**Yellowknife Ar**	**95.04**	**27**	*e*P	**P**	**03 25 09.0**	**-2.0**
MNTX	**Cornudas Mount**	**95.04**	**59**	P	**P**	**03 25 11.5**	**-0.3**
	baz=260						
TXAR	**Lajitas Array**	**96.12**	**61**	P	**P**	**03 25 16.8**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=217,slow=5.2,SNR=3.8						
KSH	**Kashi**	**96.35**	**309**	P	**P**	**03 25 21.0**	**+3.2**
ARCES	**ARCESS Array B**	**116.09**	**345**	PKP	**PKiKP**	**03 30 30.9**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=126,slow=2.3,SNR=4.0						
KLMR	**Klimovskoe**	**116.44**	**334**	*e*PKPdf	PKPpre	03 30 19.6	
KLMR				AMP		03 30 22.7	
	comp=Z,13nm,1.3s						

OBN	Obninsk	120.47	329	*e*PKIKP	PKPdf	03 30 39.8	0.0
OBN				*e*		03 32 05.5	
OBN				*e*PPP	PPP	03 34 40.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV	Kislovodsk	120.84	315	*e*PKIKP	PKPdf	03 30 37.8	-3.3
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CPUP	Villa Florida	124.42	133	PKIKP	PKiKP	03 30 49.0	+0.3
CPUP	Villa Florida	124.42	133	PKP	PKiKP	03 30 49.0	+0.3
	comp=Z,3.9nm,1.0s,baz=142,slow=3.3,SNR=3.9						
BOSA	Boshof	124.94	223	PKP	PKiKP	03 30 50.4	+0.5
	comp=Z,3.5nm,0.8s,baz=104,slow=0.7,SNR=5.1						
NOA	NORSAR Array B	126.46	345	PKP	PKiKP	03 30 52.2	+0.5
	comp=Z,0.9nm,0.8s,baz=31,slow=2.0,SNR=3.6						
AKASG	Malin Array Be	126.52	327	PKP	PKiKP	03 30 52.5	+0.4
	comp=Z,0.6nm,0.5s,baz=100,slow=0.2,SNR=5.0						
CLL	Collm	133.81	336	*e*PKPdf	PKPdf	03 31 05.0	-0.5
CLL				*e*		03 31 13.0	
KHC	Kasperske Hory	135.24	334	*e*PKPDF	PKiKP	03 31 12.4	+2.6
KHC	Kasperske Hory	135.24	334	*e*PKIKP	PKiKP	03 31 12.4	+2.6

*IDC **06** 03:13:12.6±1.5, 11°.71S×165°.29E, h0^{km}, mb4.7/8, mb1 4.9/8, mb1mx4.4/45, mbtmp4.6/8, Error ellipse: s-maj=73.7km s-min=23.5km az=151.0*

*ISCJB **06** 03:13:14.8±1.2, 11°.8S±0°.4×165°.2E±0°.2, h24^{km}, mb4.6/8, Error ellipse: s-maj=62.0km s-min=19.7km az=151.2*

ISC 06 03:13:16.4±1.4, 11°.7S±0°.4×165°.3E±0°.3, h24^{km}, n8, σ0^{s}.92/8, mb4.7/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.83	251	P	P	03 19 29.9	-0.9
	22nm,1.1s,baz=82,slow=8.9,SNR=3.7						
ASAR	Alice Springs	32.09	244	P	P	03 19 42.3	+0.4
	7.5nm,0.8s,baz=76,slow=9.9,SNR=2.4						
CMAR	Chiang Mai Arr	71.95	294	P	P	03 24 39.4	+0.9
	1.6nm,0.3s,baz=111,slow=4.9,SNR=4.5						
ILAR	Eielson Array	84.28	19	P	P	03 25 46.2	+0.4
	3.1nm,0.6s,baz=237,slow=5.3,SNR=6.8						
NVAR	Mina Array Bea	86.80	50	P	P	03 25 59.9	+0.6
	6.0nm,0.9s,baz=232,slow=6.9,SNR=5.0						
MKAR	Makanchi Array	93.68	317	P	P	03 26 31.0	-0.2
	2.5nm,0.8s,baz=95,slow=6.2,SNR=2.4						
YKA	Yellowknife Ar	95.77	27	P	P	03 26 38.9	-1.4
	1.0nm,0.6s,baz=258,slow=4.6,SNR=5.8						
TXAR	Lajitas Array	96.55	61	P	P	03 26 44.9	+0.1
	0.6nm,0.8s,baz=224,slow=5.4,SNR=4.0						

IDC 06 03:13:58.3±6.4, 11°.01S×163°.85E, h0^{km}, mb4.6/3, mb1 4.7/3, mb1mx4.0/44, mbtmp4.5/3, Error ellipse: s-maj=184.9km s-min=51.0km az=122.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	29.75	249	P	P	03 20 07.2	+0.5
	3.9nm,0.7s,baz=79,slow=8.9,SNR=5.6						
H11N1	WAKE ISLAND Hy	30.68	6	T	T	03 53 25.7	
	baz=182,slow=76,SNR=8.5						
H11N3	WAKE ISLAND Hy	30.68	6	T	T	03 53 26.5	
	baz=182,slow=76,SNR=6.9						
H11N2	WAKE ISLAND Hy	30.70	6	T	T	03 53 28.0	
	baz=182,slow=76,SNR=8.5						
ASAR	Alice Springs	31.15	242	P	P	03 20 18.6	-0.6
	5.9nm,0.7s,baz=68,slow=9.9,SNR=4.3						
MKAR	Makanchi Array	92.23	317	P	P	03 27 10.2	0.0
	1.3nm,0.7s,baz=99,slow=6.3,SNR=2.1						

DDA 06 03:14:01.5, 39°.25N×28°.67E, h7^{km}±4^{km}, ML2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.21	169	*i* P	Pg	03 14 06.8	+1.1
DEMI				*i* S	Sg	03 14 09.7	+1.0
DEMI				IAML_P			
	comp=Z,3μm,0.1s						
DURS	Dursunbey	0.38	337	*i* P	Pb	03 14 09.9	-0.7
DURS				*i* S	Sg	03 14 14.7	+0.7
AKHS	Akhisar	0.76	241	*i* P	Pb	03 14 17.3	+0.3
MANT	Manisa	0.77	186	*i* P	Pb	03 14 17.4	+0.1
MANT				*i* S	Sb	03 14 27.2	-0.7

*IDC **06** 03:17:40.1±0.7, 10°.64S×165°.10E, h0^{km}, mb4.4/14, mb1 4.6/15, mb1mx4.3/49, mbtmp4.4/15, ML4.7/1, Error ellipse: s-maj=27.0km s-min=16.8km az=130.0*

*NEIC **06** 03:17:42.0±0.3, 10°.71S×165°.07E, h10^{km}, mb4.7/18, Error ellipse: s-maj=8.5km s-min=7.9km az=90.0*

*ISCJB **06** 03:17:43.5±0.3, 10°.86S±0°.05×165°.05E±0°.05, h31^{km}, mb4.5/26, Error ellipse: s-maj=8.2km s-min=7.4km az=42.3*

ISC 06 03:17:45.2±0.5, 10°.74S±0°.09×165°.14E±0°.08, h31^{km}, n56, σ1^{s}.34/50, mb4.5/26, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.28	284	Pn	Pn	03 19 02.5	+0.5
	161nm,0.3s,baz=113,slow=6.4,SNR=9.5						
HNR				Sn	Sn	03 20 04.8	+2.9
	100nm,0.3s,baz=30,slow=21,SNR=6.2						
DZM	Mont Dzumac	11.33	174	Pn	Pn	03 20 25.7	+0.5
	5.4nm,0.3s,baz=355,slow=7.2,SNR=7.7						
ONTNC	Ouen Toro	11.57	174	*e*Pn	Pn	03 20 29.2	+0.9
MSVF	Nonsavu	14.30	121	*e*Pn	Pn	03 21 05.8	0.0
EIDS	Eidsvold	19.73	221	*e*P	P	03 22 10.1	-2.4
	109nm,1.3s						
CTA	Charters Tower	20.42	241	P	P	03 22 20.4	+0.3
	16nm,0.8s,baz=81,slow=13,SNR=8.3						
COEN	Coen	21.69	259	*e*P	P	03 22 32.2	-1.6
	32nm,1.4s						
OUZ	Omahuta	25.55	164	*e*P	P	03 23 10.0	-1.3
	53nm,1.4s						
H11S2	WAKE ISLAND Hy	29.09	3	T	T	03 54 13.5	
	baz=184,slow=76,SNR=5.0						
H11S3	WAKE ISLAND Hy	29.09	3	T	T	03 54 17.1	
	baz=184,slow=76,SNR=4.9						
H11S1	WAKE ISLAND Hy	29.11	3	T	T	03 54 14.8	
	baz=184,slow=76,SNR=4.8						
MXZ	Matakaoa Point	29.21	158	*e*P	P	03 23 44.8	+0.7
	135nm,1.1s						
URZ	Urewera	29.42	161	*e*P	P	03 23 46.5	+0.5
	28nm,1.1s						
BKZ	Black Stump Fm	30.06	162	*e*P	P	03 23 53.0	+1.3
	29nm,1.2s						
STKA	Stephens Creek	30.26	222	*e*P	P	03 23 54.1	+0.6
	8.7nm,1.1s						
STKA	Stephens Creek	30.26	222	P	P	03 23 54.2	+0.7
	25nm,0.8s,baz=36,slow=10.0,SNR=22						
H11N1	WAKE ISLAND Hy	30.32	3	T	T	03 55 46.5	
	baz=182,slow=76,SNR=6.2						
H11N3	WAKE ISLAND Hy	30.32	3	T	T	03 55 47.4	
	baz=182,slow=76,SNR=7.3						
H11N2	WAKE ISLAND Hy	30.33	3	T	T	03 55 46.4	
	baz=182,slow=76,SNR=7.1						
WB2	Warramunga Arr	31.02	249	*e*P	P	03 23 57.8	-2.6
	5.5nm,1.0s						
WR1	Warramunga Arr	31.03	249	*e*P	P	03 23 58.4	-2.1
WRA	Warramunga Arr	31.04	249	P	P	03 23 58.4	-2.2
	3.8nm,0.8s,baz=76,slow=8.8,SNR=12						
AS31	Alice Springs	32.40	243	*e*P	P	03 24 10.2	-2.4
	1.7nm,0.6s						
ASAR	Alice Springs	32.40	243	P	P	03 24 10.2	-2.4
	7.3nm,1.0s,baz=64,slow=9.9,SNR=11						
FITZ	Fitzroy Crossi	38.89	255	*e*P	P	03 25 06.5	-1.7
	6.2nm,0.9s						
FITZ	Fitzroy Crossi	38.89	255	P	P	03 25 06.5	-1.7
	4.9nm,0.7s,baz=64,slow=8.9,SNR=11						
VNDA	Vanda	66.78	181	P	P	03 28 34.3	+1.0
	3.0nm,0.9s,baz=8.1,slow=7.1,SNR=3.7						
CM01	Chiang Mai Arr	71.42	294	*e*P	P	03 29 03.1	0.0
CM31	Chiang Mai Arr	71.45	294	*e*P	P	03 29 04.0	+0.7
	5.7nm,0.7s						
CMAR	Chiang Mai Arr	71.45	294	P	P	03 29 04.0	+0.7
	2.8nm,0.6s,baz=115,slow=4.3,SNR=9.2						
SONA0	Songino Array	78.08	324	*e*P	P	03 29 40.8	-0.4
SONM	Songino Array	78.08	324	P	P	03 29 40.8	-0.4
	0.9nm,0.7s,baz=141,slow=6.9,SNR=4.6						
SONA1	Songino Array	78.08	324	*e*P	P	03 29 42.9	+1.6
QSPA	South Pole Qui	79.26	180	*e*P	P	03 29 49.0	+1.6
	17nm,1.0s						
CAST	Castle Rocks	80.84	18	*e*P	P	03 29 58.3	+2.5
	6.3nm,1.1s						
HDA	Harding Lake	83.15	19	*e*P	P	03 30 09.5	+1.6
	9.5nm,1.1s						
ILAR	Eielson Array	83.42	19	P	P	03 30 08.3	-1.0
	1.7nm,0.8s,baz=242,slow=4.9,SNR=7.4						
ILB	Eielson Array	83.42	19	*e*P	P	03 30 08.3	-1.0
	2.9nm,0.9s						
VCNR	Virginia City	85.53	49	*e*P	P	03 30 20.3	-0.5
	7.8nm,0.7s						
NV01	Mina Array Sit	86.28	50	*e*P	P	03 30 24.2	-0.3
NVAR	Mina Array Bea	86.28	50	P	P	03 30 23.1	-1.5
	2.2nm,0.9s,baz=241,slow=8.2,SNR=5.7						
CCUT	Cedar City	89.82	52	*e*P	P	03 30 42.7	+1.3
	3.7nm,1.3s						
MK01	Makanchi Array	92.89	317	*e*S	P	03 30 55.6	+0.4
MK31	Makanchi Array	92.90	317	*e*S	P	03 31 01.6	+6.3
MK32	Makanchi Array	92.90	317	*e*P	P	03 30 55.2	0.0
MKAR	Makanchi Array	92.90	317	P	P	03 30 55.2	0.0
	1.3nm,0.8s,baz=94,slow=6.4,SNR=3.6						
ZALV	Zalesovo Beam	92.97	324	P	P	03 30 55.4	+0.1
	0.5nm,0.3s,baz=143,slow=0.7,SNR=2.3						
ZAA1	Zalesovo Array	92.97	324	*e*P	P	03 30 55.4	+0.1
PD31	Pinedale Array	93.78	47	*e*P	P	03 30 59.2	-0.5
	1.5nm,1.0s						
PDAR	Pinedale Array	93.78	47	P	P	03 30 59.2	-0.5
	0.9nm,0.9s,baz=268,slow=2.4,SNR=4.2						
YKA	Yellowknife Ar	94.98	27	P	P	03 31 03.2	-1.2
	0.3nm,0.8s,baz=256,slow=4.4,SNR=4.0						
YKB5	Yellowknife Ar	94.98	27	*e*P	P	03 31 03.2	-1.2
ARA0	ARCESS Array S	115.90	345	*e*PKPdf	PKiKP	03 36 23.6	-0.7
ARCES	ARCESS Array B	115.90	345	PKP	PKiKP	03 36 23.6	-0.7
	2.4nm,0.8s,baz=345,slow=4.3,SNR=3.6						
FIA0	FINESS Array S	121.28	338	*e*PKPdf	PKPdf	03 36 34.5	-0.4
FINES	FINESS Array B	121.28	338	PKP	PKPdf	03 36 34.4	-0.4
	7.8nm,1.2s,baz=343,slow=2.9,SNR=4.0						

*IDC **06** 03:19:03.0±0.4, 10°.95S×165°.35E, h0^{km}, mb4.9/27, mb1 5.0/28, mb1mx4.8/49, mbtmp4.9/28, ML5.3/1, Error ellipse: s-maj=17.2km s-min=11.9km az=100.0*

*NEIC **06** 03:19:04.3±0.1, 10°.96S×165°.25E, h10^{km}, mb5.2/121, Error ellipse: s-maj=2.7km s-min=2.1km az=115.0*

*ISCJB **06** 03:19:05.9±0.1, 11°.00S±0°.03×165°.21E±0°.03, h30^{km}, mb5.1/155, Error ellipse: s-maj=4.6km s-min=3.6km az=23.6*

*MOS **06** 03:19:06.9±0.9, 10°.89S×165°.14E, h34^{km}, mb5.3/38, Error ellipse: s-maj=9.2km s-min=8.0km az=56.8*

ISC 06 03:19:07.6±0.3, 11°.02S±0°.05×165°.28E±0°.06, h30^{km}, n440, σ1^{s}.09/451, mb5.2/155, 10C-10D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.48	286	*e*Pn	Pn	03 20 25.1	-2.2
HNR				*e*Sn	Sn	03 21 24.5	-4.8
HNR	Honiara	5.48	286	*e*P	Pn	03 20 25.1	-2.2
HNR				*e*		03 21 24.5	
MARNC	Mare, Loyalty	10.73	166	*e*Pn	Pn	03 21 39.2	-0.1
DZM	Mont Dzumac	11.05	174	*e*Pn	Pn	03 21 43.0	-0.8
DZM				*e*Sn	Sn	03 23 45.3	-1.1
DZM	Mont Dzumac	11.05	174	Pn	Pn	03 21 43.1	-0.7
	21nm,0.3s,baz=322,slow=8.1,SNR=14						
ONTNC	Ouen Toro	11.28	174	*e*Pn	Pn	03 21 46.8	0.0
ONTNC				*e*Sn	Sn	03 23 50.6	-1.4
PINNC	Pines Island,	11.72	170	*e*Pn	Pn	03 21 52.1	-0.7
CTA	Charters Tower	20.41	241	P	P	03 23 43.6	+1.2
CTA	Charters Tower	20.41	241	P	P	03 23 43.7	+1.2
CTA	Charters Tower	20.41	241	P	P	03 23 43.7	+1.2
	175nm,1.2s,baz=64,slow=13,SNR=8.0						
CTAO	Charters Tower	20.41	241	*e*P	P	03 23 42.1	-0.3
	297nm,1.4s						
CTAO	Charters Tower	20.41	241	*e*P	P	03 23 42.1	-0.3
CTAO				pmax	pmax		
	comp=Z,297nm,1.4s						
MTSU	Mount Surprise	21.48	248	P	P	03 23 54.8	+0.9
	baz=22,SNR=9.4						
COEN	Coen	21.78	260	P	P	03 23 59.3	+2.1
	baz=22,SNR=8.2						
RMQ	Roma	21.90	223	P	P	03 24 00.4	+2.0
	baz=22,SNR=5.5						
ARMA	Armidale	23.10	211	P	P	03 24 13.5	+2.3
	baz=23,SNR=5.1						
OUZ	Omahuta	25.25	164	*e*P	P	03 24 31.6	+0.5
	comp=Z,233nm,1.3s						
QIS	Mount Isa	26.43	246	P	P	03 24 43.1	+1.1
	baz=26,SNR=6.5						
CMSA	Cobar Meteorol	27.30	219	P	P	03 24 53.7	+4.0
	baz=28,SNR=7.1						
HIZ	Hauiti	28.69	164	*e*P	P	03 25 02.1	+0.1
	comp=Z,177nm,1.4s						
URZ	Urewera	29.12	161	*e*P	P	03 25 05.8	0.0
	comp=Z,184nm,1.3s						
URZ	Urewera	29.12	161	P	P	03 25 06.3	+0.5
	comp=Z,48nm,1.0s,baz=357,slow=3.4,SNR=11						
H11S2	WAKE ISLAND Hy	29.35	3	T	T	03 55 20.0	
	baz=184,slow=76,SNR=5.7						
H11S3	WAKE ISLAND Hy	29.36	3	T	T	03 55 19.3	
	baz=184,slow=76,SNR=5.8						
H11S1	WAKE ISLAND Hy	29.37	3	T	T	03 55 21.7	
	baz=184,slow=76,SNR=5.7						
BKZ	Black Stump Fm	29.76	162	*e*P	P	03 25 11.4	-0.1
	comp=Z,77nm,1.1s						
BHHZ	Black Hill Sta	29.93	163	P	P	03 25 15.4	+2.3
STKA	Stephens Creek	30.15	223	*e*P	P	03 25 15.4	+0.3
	comp=Z,8.2nm,1.1s						
STKA	Stephens Creek	30.15	223	*e*P	P	03 25 15.4	+0.3
STKA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
STKA	Stephens Creek	30.15	223	P	P	03 25 16.1	+1.0
	comp=Z,12nm,0.8s,baz=28,slow=7.4,SNR=4.3						
TSZ	Takapari Road	30.43	164	P	P	03 25 18.7	+1.2
DVHZ	Dannevirke	30.72	164	P	P	03 25 22.6	+2.7
MRZ	Mangatainoka R	30.90	165	P	P	03 25 22.5	+1.0
NNZ	Nelson	30.92	168	P	P	03 25 24.8	+3.1
WRAB	Tennant Creek	31.05	250	*e*P	P	03 25 22.8	-0.4
	comp=Z,96nm,1.4s						
WRAB	Tennant Creek	31.05	250	*ce*P	P	03 25 22.7	-0.5
WRAB				pmax	pmax		
	comp=Z,86nm,1.7s						
WB2	Warramunga Arr	31.05	250	*e*P	P	03 25 22.8	-0.4
WRA	Warramunga Arr	31.07	250	P	P	03 25 23.1	-0.2
WRA				PcP	PcP	03 28 19.6	+0.9
WRA	Warramunga Arr	31.07	250	P	P	03 25 23.1	-0.2
WRA						03 28 19.6	
WRA	Warramunga Arr	31.07	250	P	P	03 25 23.1	-0.2
	comp=Z,18nm,0.9s,baz=79,slow=8.9,SNR=12						
WRA				PcP	PcP	03 28 19.6	+0.9
	comp=Z,3.3nm,0.8s,baz=79,slow=2.9,SNR=5.1						
BFZ	Birch Farm	31.09	164	P	P	03 25 24.6	+1.3
HOWZ	Holdsworth Sta	31.10	165	P	P	03 25 24.1	+0.8
CAW	Cannon Point	31.19	166	P	P	03 25 26.5	+2.4
MTW	Mount Morrison	31.34	165	P	P	03 25 26.4	+0.9
THZ	Tophouse	31.35	169	*e*P	P	03 25 26.1	+0.5
	comp=Z,91nm,1.1s						
MSWZ	Moikau Station	31.52	166	P	P	03 25 26.7	-0.4
PAWZ	Paruwai Farm	31.54	165	P	P	03 25 29.0	+1.8
TRWZ	Traveller	31.62	165	P	P	03 25 29.4	+1.6
TOO	Toolangi	31.86	211	P	P	03 25 32.3	+2.1
	baz=32,SNR=4.1						
LTZ	Lake Taylor	32.23	170	*e*P	P	03 25 34.0	+0.8
	comp=Z,54nm,0.9s						
AS01	Alice Springs	32.36	243	*e*P	P	03 25 33.8	-0.9
AS31	Alice Springs	32.40	243	*e*P	P	03 25 34.0	-1.0
	comp=Z,17nm,1.1s						
ASAR	Alice Springs	32.40	243	P	P	03 25 33.9	-1.1
ASAR				PcP	PcP	03 28 22.6	+0.4
ASAR	Alice Springs	32.40	243	P	P	03 25 33.9	-1.1
ASAR						03 28 22.7	
ASAR	Alice Springs	32.40	243	P	P	03 25 33.9	-1.1
	comp=Z,26nm,0.9s,baz=65,slow=10,SNR=33						
ASAR				PcP	PcP	03 28 22.6	+0.4
	comp=Z,5.7nm,0.7s,baz=67,slow=2.6,SNR=7.6						
OXZ	Oxford	32.72	171	*e*P	P	03 25 38.1	+0.5
	comp=Z,54nm,1.0s						
HTT	Hallett	32.88	223	P	P	03 25 40.6	+1.4
	baz=33,SNR=5.7						
RPZ	Rata Peaks	32.96	172	*e*P	P	03 25 39.8	+0.1
	comp=Z,40nm,0.9s						
RPZ	Rata Peaks	32.96	172	P	P	03 25 40.2	+0.6
	comp=Z,29nm,0.8s,baz=134,slow=0.9,SNR=7.4						
CRLZ	Canterbury Las	33.06	170	*e*P	P	03 25 41.3	+0.9
	comp=Z,135nm,1.2s						
WRKA	Warakurna	37.69	243	P	P	03 26 20.1	-0.6
	baz=38,SNR=14						
FITZ	Fitzroy Crossi	38.95	255	P	P	03 26 30.9	-0.3
FITZ	Fitzroy Crossi	38.95	255	P	P	03 26 30.9	-0.3
	comp=Z,9.2nm,0.8s,baz=98,slow=7.7,SNR=4.5						
MBWA	Marble Bar	44.77	251	*e*P	P	03 27 18.6	-0.3
	comp=Z,65nm,1.5s						
MEEK	Meekatharra	46.55	244	P	P	03 27 33.3	+0.4
	baz=47,SNR=15						
KLBR	Kellerberrin	48.34	237	P	P	03 27 47.9	+1.2
	baz=48,SNR=4.3						
OPA	Opana	48.52	48	*e*P	P	03 27 47.4	-0.8
	comp=Z,152nm,0.9s						
OPA	Opana	48.52	48	*e*P	P	03 27 47.4	-0.8
OPA				pmax	pmax		
	comp=Z,152nm,0.9s						
NWAO	Narrogin (SRO)	49.10	236	*e*P	P	03 27 52.5	-0.1
	comp=Z,118nm,1.3s						
NWAO	Narrogin (SRO)	49.10	236	*e*P	P	03 27 52.5	-0.1
NWAO				pmax	pmax		
	comp=Z,118nm,1.3s						
NWAO	Narrogin (SRO)	49.10	236	P	P	03 27 54.5	+2.0
	comp=Z,28nm,1.1s,baz=252,slow=8.8,SNR=7.3						
HMH	Humu'ula Sheep	49.19	52	*e*P	P	03 27 52.6	-1.0
	comp=Z,179nm,1.1s						
POHA	Pohakuloa	49.24	52	*e*P	P	03 27 53.0	-0.9
	comp=Z,201nm,1.2s						
MORW	Morawa	49.24	241	P	P	03 27 54.0	+0.3
	baz=49,SNR=4.8						
INU	Inuyama	53.30	331	*e*P	P	03 28 23.3	-0.6
	comp=Z,44nm,1.1s						
MJAR	Matsushiro Arr	53.74	333	P	P	03 28 26.5	-0.6
MJAR				pmax	pmax		
	comp=Z,18nm,0.8s						
MJAR	Matsushiro Arr	53.74	333	P	P	03 28 26.5	-0.6
	comp=Z,16nm,0.9s,baz=170,slow=8.7,SNR=18						
MAJO	Matsushiro	53.74	333	*e*P	P	03 28 25.8	-1.3
	comp=Z,97nm,1.5s						
MAJO	Matsushiro	53.74	333	*e*P	P	03 28 25.8	-1.3
MAJO				pmax	pmax		
	comp=Z,97nm,1.5s						
MAT	Matsushiro	53.74	333	P	P	03 28 26.1	-1.0
JNU	Nakatsue	54.79	325	*e*P	P	03 28 33.7	-1.2
	comp=Z,78nm,1.3s						
JNU	Nakatsue	54.79	325	P	P	03 28 34.8	-0.1
	comp=Z,24nm,0.7s,baz=112,slow=1.1,SNR=10.0						
ASAJ	Asahikawa	58.62	341	P	P	03 29 02.4	+0.6
ASAJ	Asahikawa	58.62	341	P	P	03 29 02.4	+0.6
ASAJ				pmax	pmax		
	comp=Z,27nm,0.9s						
ASAJ	Asahikawa	58.62	341	P	P	03 29 02.4	+0.6
	comp=Z,27nm,0.8s,baz=209,slow=11,SNR=9.9						
KSRS	Korea Array	59.60	326	P	P	03 29 08.9	+0.2
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSRS	Korea Array	59.60	326	P	P	03 29 08.9	+0.2
	comp=Z,7.2nm,0.9s,baz=144,slow=7.2,SNR=7.6						
KSAR	Wonju Array Be	59.61	326	P	P	03 29 08.9	+0.1
KSAR	Wonju Array Be	59.61	326	P	P	03 29 08.9	+0.1
KS01	Wonju Array Si	59.63	326	*e*P	P	03 29 08.4	-0.5
KS01				*e*PcP	PcP	03 29 58.3	+2.4
YSS	Yuzh-Sakhalins	61.12	343	*e*P	P	03 29 18.6	-0.3
	comp=Z,88nm,1.1s						
YSS	Yuzh-Sakhalins	61.12	343⇓	*e*P	P	03 29 18.3	-0.6
YSS				*e*		03 29 24.5	
YSS				*e*		03 29 31.2	
YSS				pmax	pmax		
	comp=Z,250nm,1.0s						
TEY	Ternei	61.52	337	*e*P	P	03 29 16.5	-5.1
TEY				*e*		03 29 26.5	
TEY				MLR	MLR		
	comp=N,300nm,20.0s						
TEY				MLR	MLR		
	comp=Z,600nm,20.0s						
NJ2	Nanjing	61.68	316	*e*P	P	03 29 23.2	+0.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
USA0B	Ussuriysk Arra	62.72	334	*e*P	P	03 29 29.1	-0.7
	comp=Z,61nm,1.3s						
USRK	Ussuriysk Ar.	62.72	334	P	P	03 29 30.3	+0.5
	comp=Z,12nm,0.9s,baz=141,slow=6.4,SNR=9.3						
MDJ	Mudanjiang	64.11	332	P	P	03 29 39.7	+0.7
MDJ				pmax	pmax		
	comp=Z,19nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,5μm,15.2s						
PETK	Petropavlovsk-	64.20	355	P	P	03 29 39.9	+0.6
PETK	Petropavlovsk-	64.20	355	P	P	03 29 39.9	+0.6
PETK	Petropavlovsk-	64.20	355	P	P	03 29 39.9	+0.6
	comp=Z,4.6nm,0.8s,baz=177,slow=6.0,SNR=5.2						
CN2	Changchun	65.48	329	*e*P	P	03 29 47.5	-0.4
CASY	Casey	66.24	201	*e*P	P	03 29 52.4	-0.1
	comp=Z,35nm,1.2s						
VNDA	Vanda	66.52	181	*e*P	P	03 29 54.2	+0.1
	comp=Z,74nm,1.4s						
VNDA	Vanda	66.52	181	*e*P	P	03 29 54.2	+0.1
VNDA				pmax	pmax		
	comp=Z,74nm,1.4s						
VNDA	Vanda	66.52	181	P	P	03 29 54.9	+0.8
	comp=Z,29nm,1.3s,baz=69,slow=10,SNR=6.5						
KLR	Kul'dur	66.85	337	P	P	03 29 57.4	+0.8
KLR	Kul'dur	66.85	337	*i* P	P	03 29 57.0	+0.4
KLR	Kul'dur	66.85	337	P	P	03 29 57.4	+0.8
	comp=Z,26nm,1.1s,baz=126,slow=4.1,SNR=9.0						
NKL	Nikolayevsk	67.29	344	*e*P	P	03 30 01.0	+1.8
ENH	Enshi	67.53	309	*e*P	P	03 30 01.0	-0.4
	comp=Z,22nm,1.1s						
GYA	Guiyang	68.03	304	P	P	03 30 04.7	0.0
GYA				PP	PP	03 32 38.4	+3.3
GYA				S	S	03 39 04.3	+1.8
GYA				SKS	SKiKP	03 40 00.2	+1.4
GYA	Guiyang	68.03	304	SS	SS	03 43 28.6	+3.2
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.8s						
GYA				LR	LR		
	comp=N,620nm,18.3s						
GYA				LR	LR		
	comp=E,550nm,18.5s						
GYA				LR	LR		
	comp=Z,570nm,19.0s						
BJI	Beijing	68.17	321	P	P	03 30 06.3	+1.2
XAN	Xi'an	69.77	313	P	P	03 30 14.7	-0.5
XAN				pP	pP	03 30 23.2	-0.4
XAN	Xi'an	69.77	313	*e*P	P	03 30 14.1	-1.2
	comp=Z,8.9nm,1.1s						
XAN	Xi'an	69.77	313	*e*P	P	03 30 14.1	-1.2
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KMI	Kunming	70.72	302	P	P	03 30 22.9	+1.4
KMI				pP	pP	03 30 28.3	-1.6
KMI				sP	sP	03 30 31.2	-1.9
HHC	Hu-ho-hao-te	71.52	320	*e*P	P	03 30 28.1	+2.3
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CM01	Chiang Mai Arr	71.66	294	*e*P	P	03 30 25.6	-1.4
CHTO	Chiang Mai	71.80	294	*e*P	P	03 30 26.7	-1.1
	comp=Z,8.8nm,1.1s						
CHTO	Chiang Mai	71.80	294	*e*P	P	03 30 26.7	-1.1
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HIA	Hailar	72.12	331	*e*P	P	03 30 28.4	-0.8
	comp=Z,28nm,1.1s						
HIA	Hailar	72.12	331	*i* P	P	03 30 28.4	-0.8
ZEA	Zeya	72.14	337	*e*P	P	03 30 29.7	+0.6
ZEA				pmax	pmax		
	comp=N,98nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.4s						
CD2	Chengdu	72.22	307	P	P	03 30 30.0	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
SEY	Seymchan	74.40	354	P	P	03 30 42.1	-0.1
SEY	Seymchan	74.40	354	P	P	03 30 42.1	-0.1
SEY	Seymchan	74.40	354	P	P	03 30 42.1	-0.1
	comp=Z,2.9nm,0.7s,baz=156,slow=6.3,SNR=3.6						
LZH	Lanzhou	74.40	312	*e*P	P	03 30 44.2	+1.1
LZH				pP	pP	03 30 49.6	-1.9
LZH				sP	sP	03 30 52.0	-2.6
LZH				PP	PP	03 33 35.4	+5.6
LZH				pmax	pmax		
	comp=Z,27nm,1.4s						
LZH				pmax	pmax		
	comp=Z,95nm,4.8s						
LZH				LR	LR		
	comp=N,770nm,17.3s						
LZH				LR	LR		
	comp=E,720nm,17.4s						

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LZH                                    LR       LR
       comp=Z,880nm,18.5s
GAMB   Gambell           76.62   10  eP       P        03 30 54.7 -0.3
       comp=Z,23nm,1.0s
ULN    Ulaanbaatar       78.01  324  eP       P        03 31 02.7 -0.7
       comp=Z,13nm,1.1s
ULN    Ulaanbaatar       78.01  324ceP        P        03 31 03.5 +0.1
ULN                                   pmax     pmax
       comp=Z,17nm,1.3s
SVW2   Sparrevohn        78.23   18  eP       P        03 31 03.8 -0.3
       comp=Z,27nm,1.2s
SONM   Songino Array     78.37  324   P       P        03 31 05.6 +0.2
SONM   Songino Array     78.37  324   P       P        03 31 05.6 +0.2
SONM                                  pmax     pmax
       comp=Z,2.0nm,0.8s
SONM   Songino Array     78.37  324   P       P        03 31 05.6 +0.2
       comp=Z,2.1nm,0.8s,baz=142,slow=6.5,SNR=4.8
SONA1  Songino Array     78.38  324  eP       P        03 31 04.6 -0.8
ANM    Nome              78.56   12  eP       P        03 31 05.0 -0.9
       comp=Z,15nm,1.3s
ANM    Nome              78.56   12  eP       P        03 31 05.0 -0.9
ANM                                   pmax     pmax
       comp=Z,15nm,1.3s
RSO    Redoubt South     78.65   20  eP       P        03 31 07.4 +0.8
GTA    Gaotai            78.71  314  eP       P        03 31 08.2 +0.8
GTA                                   pP       pP      03 31 13.7 -2.1
GTA                                   sP       PcP     03 31 16.5 +0.3
GTA                                   pmax     pmax
       comp=Z,7.0nm,1.1s
BILL   Bilibino          78.85    0  eP       P        03 31 06.4 -1.0
       comp=Z,29nm,1.0s
BILL   Bilibino          78.85    0ceP        P        03 31 06.2 -1.2
BILL                                  pmax     pmax
       comp=Z,25nm,1.0s
QSPA   South Pole Qui    78.99  180  eP       P        03 31 07.9 -0.6
       comp=Z,50nm,1.1s
BOD    Bodaibo           80.31  335  eP       P        03 31 13.7 -1.8
BOD                                   pmax     pmax
       comp=Z,16nm,1.7s
CAST   Castle Rocks      81.06   18  eP       P        03 31 18.7 -0.8
       comp=Z,19nm,1.1s
ZAK    Zakamensk         81.42  325  eP       P        03 31 21.0 -0.7
ZAK                                   pmax     pmax
       comp=Z,5.0nm,1.6s
DIV    Divide            81.55   22  eP       P        03 31 21.4 -0.7
       comp=Z,22nm,0.9s
TLY    Talaya            81.85  326  i P      P        03 31 24.0 +0.1
RND    Reindeer          82.06   19  eP       P        03 31 24.1 -0.7
       comp=Z,13nm,1.0s
RND    Reindeer          82.06   19  eP       P        03 31 24.1 -0.7
RND                                   pmax     pmax
       comp=Z,13nm,1.0s
MCK    McKinley          82.26   19  eP       P        03 31 25.0 -0.8
       comp=Z,24nm,1.4s
MCK    McKinley          82.26   19  eP       P        03 31 25.0 -0.8
MCK                                   pmax     pmax
       comp=Z,24nm,1.4s
DHY    Denali Highway    82.31   20  eP       P        03 31 26.1 -0.1
       comp=Z,18nm,1.5s
IM3    Indian Mountai    82.52   16  eP       P        03 31 26.5 -0.5
HARP   HAARP             82.62   21  eP       P        03 31 27.2 -0.5
       comp=Z,32nm,1.0s
MLY    Manley            82.65   17  eP       P        03 31 26.9 -0.9
       comp=Z,10.0nm,1.2s
KMRM   Mail Ridge        82.96   47  eP       P        03 31 31.0 +1.0
       comp=Z,29nm,1.1s
KHMM   Horse Mountain    83.18   46  eP       P        03 31 31.6 +0.4
       comp=Z,75nm,1.5s
MDM    Murphy Dome       83.34   18  eP       P        03 31 31.0 -0.4
       comp=Z,12nm,1.0s
HDA    Harding Lake      83.36   19  eP       P        03 31 31.2 -0.3
       comp=Z,20nm,1.0s
HDA    Harding Lake      83.36   19   P       P        03 31 30.8 -0.6
       baz=227
TCOL   CIGO, UAF Yank    83.40   18   P       P        03 31 31.0 -0.6
       baz=226
COLA   College           83.40   18  eP       P        03 31 31.7 +0.1
       comp=Z,17nm,0.9s
COLA   College           83.40   18  i P      P        03 31 30.1 -1.5
COLA                                  pmax     pmax
       comp=Z,11nm,1.0s
RIDG   Independ'e Rid    83.60   20  eP       P        03 31 32.8  0.0
       comp=Z,25nm,1.2s
O02D   Mt. Diablo Mer    83.61   47   P       P        03 31 33.0 -0.4
       baz=250
IL1    Eielson Array     83.63   19  eP       P        03 31 32.3 -0.5
ILAR   Eielson Array     83.63   19   P       P        03 31 32.1 -0.7
ILAR   Eielson Array     83.63   19   P       P        03 31 32.1 -0.7
ILAR   Eielson Array     83.63   19   P       P        03 31 32.1 -0.7
       comp=Z,6.3nm,0.9s,baz=238,slow=4.9,SNR=17
ILB    Eielson Array     83.63   19  eP       P        03 31 32.4 -0.4
POKR   Poker Plat Res    83.70   18   P       P        03 31 32.3 -0.9
       baz=226
K02D   Willamette Mer    83.87   45   P       P        03 31 34.5 -0.2
       baz=249
WDC    Whiskeytown Da    83.92   47  eP       P        03 31 34.7 -0.2
       comp=Z,19nm,1.3s
WDC    Whiskeytown Da    83.92   47  eP       P        03 31 34.7 -0.2
WDC                                   pmax     pmax
       comp=Z,19nm,1.3s
N02D   Trinity Center    83.94   46   P       P        03 31 35.2 +0.1
       baz=250,SNR=6.0
M02C   Callahan          83.98   46   P       P        03 31 35.1 -0.1
       baz=250
SCRK   Sand Creek        84.05   20  eP       P        03 31 35.3 +0.1
       comp=Z,15nm,1.0s
PKM    Mcpherson Peak    84.14   53   P       P        03 31 36.5 +0.1
       baz=252
HUMO   Hull Mountain     84.33   45  eP       P        03 31 37.5 +0.6
       comp=Z,26nm,1.3s
ORV    Oroville          84.33   48  eP       P        03 31 36.9 -0.1
       comp=Z,22nm,1.4s
ORV    Oroville          84.33   48  eP       P        03 31 36.9 -0.1
ORV                                   pmax     pmax
       comp=Z,23nm,1.4s
O03E   Paynes Creek      84.36   47   P       P        03 31 36.8 -0.4
       baz=251,SNR=8.2
I03D   Drain, OR         84.45   44   P       P        03 31 37.6 +0.2
       baz=249
AFDM   Forest Hills D    84.53   49  eP       P        03 31 38.0  0.0
       comp=Z,26nm,1.3s
L04D   Klamath Falls     84.65   45   P       P        03 31 38.4 -0.3
       baz=250
CMB    Columbia Colle    84.67   50  eP       P        03 31 38.7 -0.1
       comp=Z,18nm,1.3s
CMB    Columbia Colle    84.67   50  eP       P        03 31 38.7 -0.1
CMB                                   pmax     pmax
       comp=Z,18nm,1.3s
KNGR   Kungurtug, Tuv    84.81  324  i P      P        03 31 39.2 -0.1
M04C   Macdoel           84.83   46   P       P        03 31 39.1 -0.6
       baz=250,SNR=6.9
ARVC   Arvin             84.98   53   P       P        03 31 40.2 -0.2
       baz=253
VES    Vestal, Richgr    85.00   52   P       P        03 31 40.2 -0.2
       baz=253
I04A   Tendick Farm,     85.12   44   P       P        03 31 40.8 -0.1
       baz=250
J04D   Umpqua Nationa    85.13   44   P       P        03 31 41.3 +0.1
       baz=250
H04D   Lebanon           85.15   43   P       P        03 31 41.5 +0.5
       baz=250
K04D   Chiloquin, OR     85.17   45   P       P        03 31 41.3  0.0
       baz=250
BEKR   Beckworth         85.27   48  eP       P        03 31 41.7 -0.2
       comp=Z,12nm,1.1s
MWC    Mount Wilson      85.33   54  eP       P        03 31 42.1 -0.3
       comp=Z,45nm,1.5s
MWC    Mount Wilson      85.33   54  eP       P        03 31 42.1 -0.3
MWC                                   pmax     pmax
       comp=Z,45nm,1.5s
ISA    Isabella, Lake    85.42   53  eP       P        03 31 42.5 -0.1
       comp=Z,16nm,1.3s
ISA    Isabella, Lake    85.42   53  eP       P        03 31 42.5 -0.1
ISA                                   pmax     pmax
       comp=Z,16nm,1.3s
ISA    Isabella, Lake    85.42   53   P       P        03 31 42.8 +0.2
       baz=253
WAKR   Walker            85.53   50  eP       P        03 31 43.0 -0.3
       comp=Z,31nm,1.4s
MDPB   Devils Postpil    85.53   50  eP       P        03 31 43.1 -0.3
       comp=Z,19nm,1.1s
EDW2   Edwards Air Fo    85.57   53   P       P        03 31 43.0 -0.4
       baz=253
PNTR   Pine Nut          85.58   49  eP       P        03 31 43.3 -0.3
       comp=Z,17nm,1.1s
OMMB   Old Mammoth Mi    85.59   51  eP       P        03 31 43.3 -0.4
       comp=Z,12nm,1.0s
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BFSC   Mount Baldy Ra    85.65   54   P       P        03 31 43.2 -0.8
       baz=254,SNR=6.5
DAWY   Dawson            85.69   21  eP       P        03 31 43.1 -0.2
       comp=Z,9.6nm,0.9s
MLAC   Mammoth, Mammo85.72       51   P       P        03 31 43.8 -0.5
       baz=253
CPE    Camp Elliot       85.72   55  eP       P        03 31 44.1  0.0
       comp=Z,35nm,1.4s
J05D   Fort Rock, OR     85.75   45   P       P        03 31 44.0 -0.2
       baz=251
YERR   Yerington         85.82   49  eP       P        03 31 44.3 -0.4
       comp=Z,12nm,1.2s
MURC   Murrieta          85.84   55   P       P        03 31 44.6 -0.2
       baz=254
PAHR   Pah Rah Range     85.93   48  eP       P        03 31 45.0 -0.2
       comp=Z,19nm,1.2s
CWC    Cottonwood Cre    85.95   52   P       P        03 31 45.1 -0.3
       baz=253
MOD    Modoc Plateau     85.95   46  eP       P        03 31 45.1 -0.1
       comp=Z,19nm,1.4s
TIXI   Tiksi             85.98  349  eP       P        03 31 43.8 -0.6
TIXI   Tiksi             85.98  349ceP        P        03 31 43.2 -1.3
TIXI                                  pmax     pmax
       comp=Z,14nm,1.3s
TIXI   Tiksi             85.98  349   P       P        03 31 43.6 -0.8
       comp=Z,2.2nm,0.3s,baz=130,slow=6.3,SNR=5.6
LRMC   Laurel Mtn Rad    85.98   53   P       P        03 31 45.5 -0.1
       baz=254
I05D   Terrebonne, OR    86.03   44   P       P        03 31 45.5  0.0
       baz=251
PINE   Pine Mountain     86.12   44  eP       P        03 31 46.1  0.0
       comp=Z,22nm,1.3s
RYN    Ryan              86.25   50  eP       P        03 31 46.7 -0.1
       comp=Z,17nm,1.2s
MONP2  Monument Peak     86.28   56   P       P        03 31 47.5 +0.4
       baz=254,SNR=9.7
DAC    Darwin (Calif)    86.28   52  eP       P        03 31 46.7 -0.3
       comp=Z,22nm,1.4s
DAC    Darwin (Calif)    86.28   52  eP       P        03 31 46.7 -0.3
DAC                                   pmax     pmax
       comp=Z,22nm,1.4s
MPMC   Manual Prospec    86.30   52   P       P        03 31 46.7 -0.5
       baz=254,SNR=6.7
NV01   Mina Array Sit    86.35   50  eP       P        03 31 47.0 -0.4
NVAR   Mina Array Bea    86.35   50   P       P        03 31 47.5 +0.1
NVAR   Mina Array Bea    86.35   50   P       P        03 31 47.5 +0.1
       comp=Z,13nm,1.1s,baz=235,slow=6.9,SNR=14
PFO    Pinyon Flats O    86.44   55   P       P        03 31 47.6 -0.2
       baz=254
XPFO   Pion Flat         86.44   55  eP       P        03 31 47.7 -0.1
       comp=Z,26nm,1.4s
F05D   White Salmon      86.46   42   P       P        03 31 47.3 -0.2
       baz=250
IKP    In-Ko-Pah, Jac    86.47   56   P       P        03 31 47.3 -0.6
       baz=255
NV11   Mina Array Sit    86.47   50  eP       P        03 31 47.6 -0.3
       comp=Z,2.4nm,1.3s
D05A   Enumclaw          86.56   41  eP       P        03 31 48.0  0.0
       comp=Z,66nm,1.4s
DLBC   Dease Lake        86.60   28   P       P        03 31 48.0  0.0
DLBC   Dease Lake        86.60   28   P       P        03 31 48.0  0.0
       comp=Z,3.8nm,1.0s,baz=205,slow=4.2,SNR=4.1
GSC    Goldstone, Bar    86.62   53  eP       P        03 31 48.7 +0.1
       comp=Z,22nm,1.4s
GSC    Goldstone, Bar    86.62   53  eP       P        03 31 48.7 +0.1
GSC                                   pmax     pmax
       comp=Z,22nm,1.4s
GSC    Goldstone, Bar    86.62   53   P       P        03 31 48.2 -0.5
       baz=254
GRAC   Grapevine Rang    86.66   51   P       P        03 31 48.9 +0.2
       baz=254,SNR=6.1
KVN    Kaiserville       86.69   49  eP       P        03 31 48.8 -0.2
       comp=Z,14nm,1.2s
KVN    Kaiserville       86.69   49  eP       P        03 31 48.8 -0.2
KVN                                   pmax     pmax
       comp=Z,14nm,1.2s
SWSC   Sam W. Stewart    86.80   56   P       P        03 31 49.3  0.0
       baz=255
HEC    Hector,Ludlow     86.86   54   P       P        03 31 49.6 -0.2
       baz=254
B05A   Bryant            86.87   40   P       P        03 31 49.7 +0.3
       baz=250
FURC   Furnace Creek,    86.90   52   P       P        03 31 49.9 +0.2
       baz=254,SNR=5.6
BELC   Belle Mtn. Jos    86.91   55   P       P        03 31 50.1  0.0
       baz=255,SNR=11
I07A   Izee              87.19   44  eP       P        03 31 51.1 -0.1
       comp=Z,12nm,1.0s
SHOC   Shoshone, Teco    87.20   53   P       P        03 31 51.3  0.0
       baz=254
BC3    Big Chuckawall    87.26   55   P       P        03 31 52.2 +0.4
       baz=255,SNR=7.2
WVOR   Wild Horse Val    87.30   46  eP       P        03 31 51.7 -0.1
       comp=Z,25nm,1.3s
WVOR   Wild Horse Val    87.30   46  eP       P        03 31 51.7 -0.1
WVOR                                  pmax     pmax
       comp=Z,25nm,1.3s
TUQ    Turquoise Moun    87.35   53   P       P        03 31 52.3  0.0
       baz=255
GMRC   Granite Mounta    87.39   54   P       P        03 31 52.2 -0.2
       baz=255
F07A   Phinny Hill Vi    87.48   42  eP       P        03 31 52.7 +0.3
       comp=Z,18nm,1.2s
TPNV   Topopah Spring    87.50   52   P       P        03 31 52.2 -0.8
       baz=254
GLA    Glamis            87.61   56  eP       P        03 31 53.5 +0.1
       comp=Z,24nm,1.1s
GLA    Glamis            87.61   56  eP       P        03 31 53.5 +0.1
GLA                                   pmax     pmax
       comp=Z,24nm,1.1s
GLA    Glamis            87.61   56   P       P        03 31 53.6 +0.2
       baz=255
IRM    Iron Mountain     87.64   55   P       P        03 31 53.7 +0.2
       baz=255,SNR=10
J08A   Circle Bar Ran    87.69   45  eP       P        03 31 53.5 -0.1
       comp=Z,22nm,1.2s
HAWA   Hanford           87.90   42  eP       P        03 31 54.5 +0.1
       comp=Z,11nm,1.1s
LDFC   Landfair          87.90   54  eP       P        03 31 54.6 -0.2
       comp=Z,54nm,1.4s
G08A   Pilot Rock        87.94   43  eP       P        03 31 54.7 -0.1
       comp=Z,11nm,1.0s
Y12C   Blythe            88.03   55  eP       P        03 31 55.4  0.0
       comp=Z,21nm,1.1s
Y12C   Blythe            88.03   55   P       P        03 31 55.5 +0.1
       baz=256
NEE2   Needles Airpor    88.21   54   P       P        03 31 56.2  0.0
       baz=255
SHPR   Sheep Range       88.23   52  eP       P        03 31 56.2 -0.2
       comp=Z,30nm,1.7s
E08A   Dider Farm, El    88.24   42  eP       P        03 31 56.2 +0.2
       comp=Z,29nm,1.4s
R11A   Troy Canyon, C    88.38   51  eP       P        03 31 56.9 -0.3
       comp=Z,17nm,1.4s
R11A   Troy Canyon, C    88.38   51   P       P        03 31 57.1  0.0
       baz=255
PDMCI  Parker Dam,Lak    88.48   55   P       P        03 31 57.6 +0.2
       baz=256,SNR=6.8
B08A   Colville Reser    88.64   40  eP       P        03 31 57.9 -0.1
       comp=Z,25nm,1.5s
WMQ    Urumqi            88.75  315  eP       P        03 31 59.6 +1.0
WMQ                                   pP       pP      03 32 04.4 -2.7
WMQ                                   pmax     pmax
       comp=Z,64nm,1.1s
WMQ                                   pmax     pmax
       comp=Z,29µm,11.8s
WMQ                                   LR       LR
       comp=N,18µm,15.9s
WMQ                                   LR       LR
       comp=E,8µm,14.9s
WMQ                                   LR       LR
       comp=Z,12µm,21.9s
W13A   Hualapai Mount    88.88   54  eP       P        03 31 59.3 -0.3
       comp=Z,19nm,1.3s
BMO    Blue Mountains    88.93   44  eP       P        03 31 58.8 -0.7
       comp=Z,11nm,1.3s
BMO    Blue Mountains    88.93   44  eP       P        03 31 58.8 -0.7
BMO                                   pmax     pmax
       comp=Z,11nm,1.3s
214A   Organ Pipe Nat    89.00   57   P       P        03 32 00.5 +0.5
       baz=256
ELK    Elko              89.27   48  eP       P        03 32 01.2 -0.2
       comp=Z,11nm,1.4s
ELK    Elko              89.27   48  eP       P        03 32 01.2 -0.2
ELK                                   pmax     pmax
       comp=Z,11nm,1.4s
F10A   Beach Ranch, E    89.30   43  eP       P        03 32 00.9 -0.2
       comp=Z,14nm,1.2s
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MFID   Camas Ranch       89.55   46  eP       P        03 32 02.4 -0.1
       comp=Z,23nm,1.5s
SLBS   Sierra La Lagu    89.65   66  eP       P        03 32 03.0 -0.3
       comp=Z,31nm,1.4s
PSUT   Pine Spring       89.74   51  eP       P        03 32 03.2 -0.3
       comp=Z,6.4nm,1.0s
LCMT   Little Creek M    89.84   52  eP       P        03 32 03.8 -0.2
       comp=Z,13nm,1.1s
CCUT   Cedar City        89.88   52  eP       P        03 32 04.0 -0.3
       comp=Z,12nm,1.1s
HSIG                     89.90   61  eP       P        03 32 04.1 -0.2
       comp=Z,30nm,1.4s
SZCU   Shurtz Canyon     90.11   52  eP       P        03 32 05.0 -0.3
       comp=Z,14nm,1.2s
KNB    Kanab             90.17   52  eP       P        03 32 05.6  0.0
       comp=Z,32nm,1.5s
KNB    Kanab             90.17   52  eP       P        03 32 05.6  0.0
KNB                                   pmax     pmax
       comp=Z,32nm,1.5s
U15A   North Rim         90.45   53  eP       P        03 32 06.8 -0.2
       comp=Z,15nm,1.0s
HLID   Hailey            90.58   46  eP       P        03 32 07.3  0.0
       comp=Z,12nm,1.3s
HLID   Hailey            90.58   46   P       P        03 32 07.5 +0.2
       baz=255
PKCU   Pink Cliffs       90.67   52  eP       P        03 32 08.3 +0.2
       comp=Z,53nm,1.4s
X16A   Lo Mia Camp, P    90.68   55  eP       P        03 32 07.8 -0.2
       comp=Z,9.2nm,1.0s
TUC    Tucson            90.75   57  eP       P        03 32 08.3  0.0
       comp=Z,13nm,1.3s
TUC    Tucson            90.75   57  eP       P        03 32 08.3  0.0
TUC                                   pmax     pmax
       comp=Z,13nm,1.3s
TUC    Tucson            90.75   57   P       P        03 32 08.5 +0.3
       baz=258
MTPU   Mount Pierson     90.91   52  eP       P        03 32 08.9 -0.3
       comp=Z,22nm,1.3s
DUG    Dugway, Tooele    90.93   49  eP       P        03 32 08.8 -0.1
       comp=Z,11nm,1.3s
DUG    Dugway, Tooele    90.93   49  eP       P        03 32 08.9 -0.1
DUG                                   pmax     pmax
       comp=Z,11nm,1.3s
DUG    Dugway, Tooele    90.93   49   P       P        03 32 08.8 -0.2
       baz=256
BGU    Big Grassy Mou    90.94   49  eP       P        03 32 09.0  0.0
       comp=Z,22nm,1.5s
WUAZ   Wupatki           90.97   54  eP       P        03 32 09.2 -0.1
       comp=Z,12nm,1.1s
WUAZ   Wupatki           90.97   54   P       P        03 32 09.1 -0.2
       baz=257
MSU    Marysvale         91.02   51  eP       P        03 32 09.5  0.0
MSU    Marysvale         91.02   51  eP       P        03 32 09.5  0.0
HVU    Hansel Valley     91.32   48  eP       P        03 32 10.8  0.0
       comp=Z,28nm,1.4s
HVU    Hansel Valley     91.32   48  eP       P        03 32 10.8  0.0
HVU                                   pmax     pmax
       comp=Z,28nm,1.4s
NLU    North Lily Min    91.42   50  eP       P        03 32 11.3  0.0
       comp=Z,20nm,1.4s
SPUT   South Promonto    91.45   48  eP       P        03 32 11.4  0.0
       comp=Z,14nm,1.5s
SYO    Syowa Base        91.68  197⇓iP        P        03 32 10.4 -1.3
SYO    Syowa Base        91.68  197⇑epP       P        03 32 13.4 +1.7
MSO    Missoula          91.72   43   P       P        03 32 12.3 -0.2
       baz=256
MPU    Maple Canyon      91.77   50  eP       P        03 32 12.8 -0.2
       comp=Z,15nm,1.3s
Q16A   Castle Valley     91.87   51  eP       P        03 32 13.3 -0.2
       comp=Z,29nm,1.5s
X18A   Snowflake         91.90   55  eP       P        03 32 13.5 -0.2
       comp=Z,13nm,1.4s
TMUT   Trail Mountain    91.93   50  eP       P        03 32 13.7 -0.1
       comp=Z,19nm,1.5s
JLU    Jordanelle        92.03   49  eP       P        03 32 14.1 -0.1
       comp=Z,18nm,1.7s
DLMT   Dillon            92.28   44  eP       P        03 32 15.0 -0.2
       comp=Z,18nm,1.1s
WALA   Waterton Lakes    92.28   41  eP       P        03 32 15.1 +0.1
       comp=Z,26nm,1.4s
P17A   Butcher Ranch,    92.32   50  eP       P        03 32 15.1 -0.4
       comp=Z,12nm,1.3s
LRM    Limekiln Ridge    92.48   44  eP       P        03 32 16.7 +0.5
BOZ    Bozeman (W)       93.00   44  eP       P        03 32 17.8 -0.7
       comp=Z,12nm,1.1s
BOZ    Bozeman (W)       93.00   44  eP       P        03 32 17.8 -0.7
BOZ                                   pmax     pmax
       comp=Z,12nm,1.1s
BOZ    Bozeman (W)       93.00   44   P       P        03 32 18.3 -0.1
       baz=257
IMW    Indian Meadow     93.11   46  eP       P        03 32 19.4 +0.2
       comp=Z,6.9nm,1.1s
MKAR   Makanchi Array    93.19  317   P       P        03 32 19.0 -0.1
MKAR                                  PKKP     PKKPdf  03 49 26.8 -1.0
MKAR   Makanchi Array    93.19  317   P       P        03 32 19.0 -0.1
MKAR                                  pmax     pmax
       comp=Z,4.0nm,0.8s
MKAR                                  pmax     pmax
       comp=Z,4.0nm,1.0s
MKAR   Makanchi Array    93.19  317   P       P        03 32 19.0 -0.1
       comp=Z,4.2nm,0.8s,baz=99,slow=6.3,SNR=6.9
MKAR                                  PKKP     PKKPdf  03 49 26.8 -1.0
       comp=Z,3.6nm,1.0s,baz=298,slow=2.6,SNR=12
YMR    Madison River     93.26   45  eP       P        03 32 19.9 +0.1
       comp=Z,17nm,1.4s
ZALV   Zalesovo Beam     93.27  324   P       P        03 32 18.0 -1.2
ZALV   Zalesovo Beam     93.27  324   P       P        03 32 18.0 -1.2
ZALV   Zalesovo Beam     93.27  324   P       P        03 32 18.0 -1.2
       comp=Z,2.7nm,0.8s,baz=107,slow=5.1,SNR=6.0
121A   Cookes Peak, D    93.28   58   P       P        03 32 19.8 -0.2
       baz=259
BW06   Boulder Array     93.87   47  eP       P        03 32 22.4 -0.2
       comp=Z,11nm,1.5s
PD31   Pinedale Array    93.87   47  eP       P        03 32 21.5 -1.1
PDAR   Pinedale Array    93.87   47  eP       P        03 32 21.8 -0.8
PDAR   Pinedale Array    93.87   47   P       P        03 32 21.6 -1.0
       comp=Z,2.1nm,1.0s,baz=292,slow=0.8,SNR=5.9
ANMO   Albuquerque       94.81   55  i P      P        03 32 26.3 -0.8
ANMO                                  pmax     pmax
       comp=Z,4.0nm,1.0s
MNTX   Cornudas Mount    95.14   59   P       P        03 32 28.1 -0.3
       baz=260
YKA    Yellowknife Ar    95.16   27   P       P        03 32 25.9 -1.8
YKA    Yellowknife Ar    95.16   27   P       P        03 32 25.9 -1.8
YKA    Yellowknife Ar    95.16   27   P       P        03 32 25.9 -1.8
       comp=Z,1.3nm,0.7s,baz=254,slow=4.6,SNR=11
YKB5   Yellowknife Ar    95.16   27  eP       P        03 32 26.1 -1.6
SDCO   Great Sand Dun    96.03   53   P       P        03 32 32.3 -0.4
       baz=261
TXAR   Lajitas Array     96.22   61   P       P        03 32 34.4 +0.9
TXAR                                  PKKPbc   PKKPbc  03 49 20.8 +0.3
TXAR   Lajitas Array     96.22   61   P       P        03 32 34.4 +0.9
TXAR   Lajitas Array     96.22   61   P       P        03 32 34.4 +0.9
       comp=Z,0.8nm,0.9s,baz=235,slow=4.4,SNR=4.2
TXAR                                  PKKPbc   PKKPbc  03 49 20.8 +0.3
       comp=Z,0.2nm,0.6s,baz=92,slow=4.0,SNR=3.8
KURK   Kurchatov         96.33  320  i P      P        03 32 33.7 +0.4
KURK                                  pmax     pmax
       comp=Z,2.0nm,1.1s
KURBB  Kurchatov Arra    96.37  320   PKKPbc   PKKPbc  03 49 19.2 -1.6
       comp=Z,1.1nm,0.3s,baz=272,slow=2.8,SNR=12
KSH    Kashi             96.38  309   P       P        03 32 37.1 +3.0
KSH                                   pmax     pmax
       comp=Z,5µm,11.4s
SNAA   Sanae             97.11  184   P       P        03 32 35.3 -1.4
SNAA   Sanae             97.11  184  eP       P        03 32 36.2 -0.5
       comp=Z,13nm,1.2s
SNAA   Sanae             97.11  184  eP       P        03 32 36.2 -0.5
SNAA                                  pmax     pmax
       comp=Z,13nm,1.2s
VNA3   Neumayer Olymp    97.86  182   P       P        03 32 28.8  -11
VNA2   Neumayer--Watz    98.10  182   P       P        03 32 38.5 -2.5
ARCES  ARCESS Array B   116.19  345   PKP      PKiKP   03 37 46.6 -0.8
ARCES  ARCESS Array B   116.19  345   PKIKP    PKiKP   03 37 46.6 -0.8
ARCES  ARCESS Array B   116.19  345   PKP      PKiKP   03 37 46.6 -0.8
       comp=Z,1.2nm,0.5s,baz=82,slow=1.7,SNR=11
OBN    Obninsk          120.54  329  ePKIKP    PKPdf   03 37 55.5 -0.6
OBN                                  e                 03 39 24.5
OBN                                   pmax     pmax
       comp=Z,6.0nm,0.9s
LPAZ   La Paz           120.60  116  ePKPdf    PKPdf   03 37 57.9 -0.3
FINES  FINESS Array B   121.58  338   PKP      PKPdf   03 37 57.3 -0.7
FINES  FINESS Array B   121.58  338   PKIKP    PKPdf   03 37 57.3 -0.7
FINES  FINESS Array B   121.58  338   PKP      PKPdf   03 37 57.3 -0.7
       comp=Z,3.8nm,1.0s,baz=114,slow=2.3,SNR=6.4
CPUP   Villa Florida    124.38  133  ePKPdf    PKPdf   03 38 04.4 -0.1
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CPUP	Villa Florida	124.38	133	*e*PKIKP	PKPdf	03 38 04.4	-0.1
CPUP	Villa Florida	124.38	133	PKP	PKPdf	03 38 04.3	-0.1
	comp=Z,14nm,1.0s,baz=293,slow=1.9,SNR=15						
BOSA	Boshof	124.82	223	PKIKP	PKiKP	03 38 06.2	+0.4
BOSA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOSA	Boshof	124.82	223	PKP	PKiKP	03 38 06.2	+0.4
	comp=Z,5.4nm,1.0s,baz=201,slow=3.5,SNR=4.3						
SDV	Santo Domingo	124.95	87	*e*PKPdf	PKPdf	03 38 04.9	-1.2
IZAR	Zarasai	125.15	333	*e*P	PKiKP	03 38 08.7	+3.3
IZAR				IAmb	IAmb	03 38 10.1	
	comp=Z,4.6nm,0.7s						
IDID	Didziasalis	125.20	332	*e*P	PKiKP	03 38 09.4	+3.9
IDID				IAmb	IAmb	03 38 10.9	
	comp=Z,7.7nm,1.1s						
ISAL	Salakas	125.32	333	*e*P	PKiKP	03 38 09.3	+3.7
ISAL				IAmb	IAmb	03 38 11.4	
	comp=Z,6.2nm,0.8s						
IIGN	Ignalina	125.41	333	*e*P	PKiKP	03 38 09.7	+3.8
IIGN				IAmb	IAmb	03 38 11.7	
	comp=Z,4.3nm,0.8s						
NB2	NORSAR Subarra	126.55	345	PKPdf	PKPdf	03 38 06.9	-0.7
	comp=Z,0.7nm,0.8s,baz=36,slow=2.0						
NOA	NORSAR Array B	126.55	345	PKIKP	PKPdf	03 38 06.9	-0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	126.55	345	PKP	PKPdf	03 38 06.9	-0.7
	comp=Z,0.6nm,0.7s,baz=268,slow=19,SNR=3.1						
AKASG	Malin Array Be	126.59	327	PKP	PKPdf	03 38 07.1	-0.8
AKASG	Malin Array Be	126.59	327	PKIKP	PKPdf	03 38 07.1	-0.8
AKASG	Malin Array Be	126.59	327	PKP	PKPdf	03 38 07.1	-0.8
	comp=Z,2.0nm,0.8s,baz=57,slow=2.5,SNR=7.7						
AK11	Malin Array Si	126.63	327	*e*PKPdf	PKPdf	03 38 07.1	-0.9
BRTR	Keskin Array B	128.61	312	PKP	PKPdf	03 38 12.3	0.0
BRTR	Keskin Array B	128.61	312	PKIKP	PKPdf	03 38 12.3	0.0
BRTR	Keskin Array B	128.61	312	PKP	PKPdf	03 38 12.3	0.0
	comp=Z,1.7nm,1.1s,baz=76,slow=5.2,SNR=5.1						
LSZ	Lusaka	130.12	239	*e*PKPdf	PKPdf	03 38 16.0	+0.2
LSZ	Lusaka	130.12	239	*e*PKIKP	PKPdf	03 38 16.0	+0.2
BIZ	Bicaz	130.34	324	⇑*i*P	PKiKP	03 38 17.1	+1.1
BURAR	Bucovina Array	130.48	325	⇓*i*P	PKiKP	03 38 22.1	+5.7
TRPA	Tarpa	131.64	327	⇑*i*P	PKPdf	03 38 18.0	+0.4
ARR	Arges	132.06	323	⇑*i*P	PKiKP	03 38 19.4	-0.2
HUMR	Humele	132.30	322	⇓*i*P	PKiKP	03 38 24.9	+4.9
DRGR		132.35	326	⇑*i*P	PKiKP	03 38 20.8	+0.6
DRGR		132.35	326	⇑PKIKP	PKiKP	03 38 20.8	+0.6
MORC	Moravsky Berou	133.06	332	⇓*i*P	PKiKP	03 38 22.1	+0.6
MORC	Moravsky Berou	133.06	332	⇓PKIKP	PKiKP	03 38 22.1	+0.6
VYHS	Vyhne	133.32	330	*e*PKIKP	PKPdf	03 38 20.3	-0.5
VYHS	Vyhne	133.32	330	*e*PKP	PKPdf	03 38 20.3	-0.5
PTGA	Pitinga	133.53	102	*e*PKPdf	PKPdf	03 38 21.8	-0.4
BZS	Buzias	133.66	325	⇓*i*P	PKiKP	03 38 26.3	+3.5
BZS	Buzias	133.66	325	⇓PKIKP	PKiKP	03 38 26.3	+3.5
CLL	Collm	133.90	336	*e*PKPdf	PKPdf	03 38 22.0	+0.3
CLL				*e*		03 39 06.0	
CLL	Collm	133.90	336	*e*PKIKP	PKPdf	03 38 22.0	+0.3
KRUC	Moravsky	134.10	332	*e*PKP	PKiKP	03 38 23.2	-0.4
KRUC				*e*		03 39 06.4	
VTS	Vitosha	134.39	321	⇓*i*P	PKPdf	03 38 23.6	+0.4
VTS	Vitosha	134.39	321	⇓PKIKP	PKPdf	03 38 23.6	+0.4
CONA	Conrad Observa	135.15	331	pPKPdf	PKiKP	03 38 26.1	+0.3
	comp=Z,3.4nm,0.8s						
KHC	Kasperske Hory	135.32	334	*e*PKPDF	PKiKP	03 38 29.4	+3.3
KHC	Kasperske Hory	135.32	334	*e*PKIKP	PKiKP	03 38 29.4	+3.3
GERES	GERESS Array B	135.48	333	PKP	PKPdf	03 38 25.4	+0.5
GERES	GERESS Array B	135.48	333	PKIKP	PKPdf	03 38 25.4	+0.5
GERES	GERESS Array B	135.48	333	PKP	PKPdf	03 38 25.4	+0.5
	comp=Z,1.6nm,0.9s,baz=90,slow=4.0,SNR=4.8						
GEA0	GERESS Array S	135.48	333	*e*PKPdf	PKPdf	03 38 24.6	-0.4
MOA	Molln	135.96	332	PKiKP	PKiKP	03 38 26.9	-0.5
	comp=Z,8.1nm,1.5s						
SOKA	Soboth	136.44	330	*e*PKiKP	PKPdf	03 38 27.8	+1.1
	comp=Z,8.2nm,1.1s						
KBA	Koelnbreinsper	136.95	332	PKPdf	PKPdf	03 38 27.0	-0.8
	comp=Z,10.0nm,1.4s						
ABTA	Abfaltersbach	137.57	332	*e*PKiKP	PKiKP	03 38 30.2	-0.6
	comp=Z,8.8nm,1.3s						
WTTA	Wattenberg	137.58	333	pPKiKP	PKiKP	03 38 33.7	+2.7
	comp=Z,6.5nm,1.0s						
BDFB	Brasilia	137.71	128	*e*PKPdf	PKPdf	03 38 29.2	-0.9
BDFB	Brasilia	137.71	128	*e*PKIKP	PKPdf	03 38 29.2	-0.9
BDFB	Brasilia	137.71	128	PKP	PKPdf	03 38 29.5	-0.5
	comp=Z,11nm,0.9s,baz=168,slow=4.2,SNR=11						
MOTA	Moosalm	137.75	334	PKiKP	PKPdf	03 38 30.3	+1.1
	comp=Z,6.7nm,1.1s						
SQTA	Sankt Quirin	137.80	334	*e*P	PKiKP	03 38 36.2	+4.9
	comp=Z,8.7nm,1.1s						
FETA	Feichten	138.16	334	PKiKP	PKPdf	03 38 30.6	+0.5
	comp=Z,9.7nm,1.3s						
KEST	Kesra	147.12	322	PKPbc	PKPbc	03 38 48.6	+0.3
	comp=Z,9.7nm,0.9s,baz=15,slow=4.8,SNR=4.4						
ES19	SONSECA Array	149.86	343	*e*PKPdf	PKPdf	03 38 50.8	+0.4
ESDC	Sonseca Array	149.90	343	PKPbc	PKPbc	03 38 54.8	-0.5
ESDC	Sonseca Array	149.90	343	PKPbc	PKPbc	03 38 54.8	-0.5
	comp=Z,3.0nm,0.9s,baz=352,slow=2.4,SNR=7.2						
RCBR	Riachuelo	153.08	127	*e*PKPdf	PKPdf	03 38 55.3	-0.8
RCBR	Riachuelo	153.08	127	*e*PKIKP	PKPdf	03 38 55.3	-0.8
TOA0	Torodi Ar. Sit	163.81	279	*e*PKPdf	PKPdf	03 39 08.4	-0.4
TORD	Torodi Ar. Bea	163.81	279	PKP	PKPdf	03 39 08.5	-0.3
TORD	Torodi Ar. Bea	163.81	279	PKP	PKPdf	03 39 08.5	-0.3
	comp=Z,5.1nm,1.1s,baz=101,slow=1.5,SNR=9.4						
DBIC	Dimbokro	169.34	247	PKP	PKPdf	03 39 13.0	-0.1
DBIC				PKPab	PKPab	03 40 26.6	+0.9
DBIC	Dimbokro	169.34	247	PKIKP	PKPdf	03 39 13.0	-0.1
DBIC	Dimbokro	169.34	247	PKP	PKPdf	03 39 13.0	-0.1
	comp=Z,8.2nm,1.0s,baz=264,slow=1.8,SNR=5.4						
DBIC				PKPab	PKPab	03 40 26.6	+0.9
	comp=Z,2.5nm,0.7s,baz=112,slow=11,SNR=3.3						

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*IDC **06** 03:19:44.9±0.8, 11°.87S×166°.02E, h0^{km}, mb5.0/18, mb1 5.0/18, mb1mx4.8/49, mbtmp4.9/18, Error ellipse: s-maj=29.3km s-min=18.8km az=125.0*

*ISCJB **06** 03:19:46.9±1.3, 12°.0S±0°.2×166°.2E±0°.2, h30^{km}, mb4.8/30, MS6.2/1, Error ellipse: s-maj=35.6km s-min=14.9km az=39.2*

ISC 06 03:19:49.4±0.8**, 11°.9S**±0°.2×**166°.1E**±0°.2**, h30^{km}, n59, σ0ˢ.96**/63**, mb5.0**/30**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.49	251	P	P	03 26 07.5	-1.4
	14nm,0.8s,baz=83,slow=9.4,SNR=5.3						
WRA				PcP	PcP	03 29 02.1	+0.5
	7.9nm,1.0s,baz=84,slow=2.4,SNR=5.4						
ASAR	Alice Springs	32.70	245	P	P	03 26 17.6	-1.9
	19nm,0.8s,baz=74,slow=9.4,SNR=5.7						
ASAR				PcP	PcP	03 29 05.0	+0.2
	8.5nm,0.9s,baz=76,slow=3.2,SNR=5.9						
FITZ	Fitzroy Crossi	39.47	256	P	P	03 27 16.8	-0.5
	18nm,0.9s,baz=88,slow=4.2,SNR=4.4						
BATI	Baumata	41.62	268	P	P	03 27 35.5	+0.2
BATI	Baumata	41.62	268	P	P	03 27 35.5	+0.2
	56nm,0.7s,baz=171,slow=3.8,SNR=4.6						
NWAO	Narrogin (SRO)	49.25	237	P	P	03 28 35.0	-0.5
	37nm,0.9s,baz=299,slow=6.6,SNR=7.2						
MJAR	Matsushiro Arr	54.88	333	P	P	03 29 15.5	-1.7
MJAR	Matsushiro Arr	54.88	333	P	P	03 29 15.5	-1.7
	7.5nm,0.9s,baz=168,slow=8.1,SNR=5.0						
JNU	Nakatsue	55.96	324	P	P	03 29 24.0	-1.1
	27nm,0.9s,baz=43,slow=3.3,SNR=4.2						
KSRS	Korea Array	60.76	326	P	P	03 29 58.2	-0.2
	4.9nm,0.7s,baz=148,slow=6.2,SNR=6.6						
USRK	Ussuriysk Ar.	63.85	333	P	P	03 30 19.2	+0.2
USRK	Ussuriysk Ar.	63.85	333	P	P	03 30 19.2	+0.2
	29nm,1.1s,baz=133,slow=6.1,SNR=5.5						
WHN	Wuhan	65.20	312	⇓P	P	03 30 28.3	+0.2
DL2	Dalian	65.35	323	*e*P	P	03 30 26.6	-2.3
DL2				pmax	pmax		
	comp=Z,39nm,0.9s						
CN2	Changchun	66.64	329	*e*P	P	03 30 37.0	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
SKNT	Sakolnakorn	67.73	294	P	P	03 30 45.5	+0.9
	comp=Z,18nm,1.0s						
KLR	Kul'dur	67.97	337	P	P	03 30 45.8	+0.4
	comp=Z,13nm,1.0s,baz=144,slow=5.0,SNR=5.1						
NONG	Nongkai	68.86	295	P	P	03 30 52.8	+1.2
	comp=Z,0.6nm,0.9s						
CHAI	Chaiyaphum	69.15	292	P	P	03 30 55.0	+1.5
	comp=Z,4.8nm,0.9s,comp=Z,284nm						
GYA	Guiyang	69.16	304	⇑*i*P	P	03 30 53.4	-0.1
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
PBKT	Sadao Pong	70.30	292	P	P	03 31 01.8	+1.3
	comp=Z,14nm,0.9s						
XAN	Xi'an	70.93	312	P	P	03 31 04.0	-0.1
XAN				pP	sP	03 31 15.4	+1.1
XAN				PcP	PcP	03 31 27.1	+2.6
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,18nm,1.0s						
XAN				LR	LR		
	comp=N,11μm,20.6s						
XAN				LR	LR		
	comp=Z,16μm,21.7s						
UTTA	Uttaradit	71.06	294	P	P	03 31 06.9	+1.7
	comp=Z,4.3nm,1.0s						
UTHA	Uthaitani	71.36	291	P	P	03 31 08.8	+1.8
	comp=Z,4.3nm,1.0s						
SUKH	Sukhothai	71.81	293	P	P	03 31 11.5	+1.9
	comp=Z,5.1nm,1.0s						
KMI	Kunming	71.84	302	P	P	03 31 11.2	+1.2
KMI				pP	pwP	03 31 23.7	-1.9
KMI				pmax	pmax		
	comp=Z,14nm,1.6s						
KMI				pmax	pmax		
	comp=Z,21nm,1.0s						
CMAR	Chiang Mai Arr	72.74	294	P	P	03 31 15.9	+0.7
	comp=Z,12nm,0.9s,baz=116,slow=4.3,SNR=12						
SONM	Songino Array	79.54	324	P	P	03 31 54.4	+0.9
	comp=Z,16nm,1.1s,baz=127,slow=4.8,SNR=10.0						
TLY	Talaya	83.01	326	P	P	03 32 11.7	0.0
	comp=Z,3.4nm,0.7s,baz=180,slow=3.0,SNR=7.8						
ILAR	Eielson Array	84.23	18	P	P	03 32 17.4	-0.2
	comp=Z,4.5nm,0.9s,baz=223,slow=6.0,SNR=4.6						
MKAR	Makanchi Array	94.36	317	P	P	03 33 06.4	+0.1
	comp=Z,10nm,0.8s,baz=102,slow=2.3,SNR=13						
ZALV	Zalesovo Beam	94.44	324	P	P	03 33 05.8	-0.5
	comp=Z,24nm,1.0s,baz=108,slow=4.8,SNR=19						
YKA	Yellowknife Ar	95.59	27	P	P	03 33 09.8	-1.7
	comp=Z,0.4nm,0.6s,baz=256,slow=4.6,SNR=2.8						
KURBB	Kurchatov Arra	97.54	320	P	P	03 33 19.6	-1.0
	comp=Z,1.9nm,0.9s,baz=98,slow=4.1,SNR=6.5						
ARCES	ARCESS Array B	117.24	345	PKP	PKPdf	03 38 30.9	-0.3
	comp=Z,2.0nm,0.5s,baz=97,slow=1.2,SNR=8.4						
ARCES	ARCESS Array B	117.24	345	PKP	PKPdf	03 38 30.9	-0.3
GNI	Garni	121.45	310	PKP	PKiKP	03 38 41.5	+1.0
	comp=Z,11nm,0.9s,baz=308,slow=3.1,SNR=6.4						
KBZ	Khabaz	121.97	314	PKP	PKiKP	03 38 42.4	+1.2
	comp=Z,4.0nm,0.9s,baz=136,slow=4.7,SNR=5.5						
FINES	FINESS Array B	122.68	338	PKP	PKPdf	03 38 41.7	-0.1
	comp=Z,8.4nm,1.0s,baz=74,slow=6.8,SNR=7.5						
BOSA	Boshof	124.70	223	PKP	PKiKP	03 38 47.5	+0.2
BOSA	Boshof	124.70	223	PKP	PKiKP	03 38 47.5	+0.2
	comp=Z,5.7nm,0.8s,baz=166,slow=2.0,SNR=7.7						
NB2	NORSAR Subarra	127.61	345	PKPdf	PKPdf	03 38 51.2	-0.2
	comp=Z,0.9nm,0.7s,baz=33,slow=1.9						
NOA	NORSAR Array B	127.61	345	PKP	PKPdf	03 38 51.1	-0.3
NOA	NORSAR Array B	127.61	345	PKP	PKPdf	03 38 51.1	-0.3
	comp=Z,3.9nm,1.0s,baz=39,slow=2.0,SNR=4.3						
AKASG	Malin Array Be	127.75	327	PKP	PKPdf	03 38 51.7	-0.1
	comp=Z,4.1nm,0.9s,baz=59,slow=2.3,SNR=7.2						
BRTR	Keskin Array B	129.77	312	PKP	PKPdf	03 38 56.5	+0.2
	comp=Z,5.4nm,1.0s,baz=143,slow=2.9,SNR=10						
KHC	Kasperske Hory	136.45	334	*e*PKP	PKiKP	03 39 10.7	+0.6
GERES	GERESS Array B	136.61	334	PKP	PKiKP	03 39 09.8	-0.7
	comp=Z,4.6nm,1.0s,baz=336,slow=2.9,SNR=7.2						
KEST	Kesra	148.29	322	PKPbc	PKPbc	03 39 34.0	+0.8
KEST	Kesra	148.29	322	PKPbc	PKPbc	03 39 34.0	+0.8
	comp=Z,62nm,1.0s,baz=329,slow=1.2,SNR=18						
CMAH	Djebel Manchou	148.77	326	P	PKPbc	03 39 34.6	+0.2
CAEH	'Ain El Ouahch	148.97	326	P	PKiKP	03 39 36.6	+0.4
ABSA	Djebel Ababsia	148.99	325	P	PKPbc	03 39 35.4	+0.4
DFRA	Djebel Bou Aff	149.66	327	P	PKiKP	03 39 37.8	0.0
CKHR	Kef el Ahmar	150.26	327	P	PKiKP	03 39 40.0	+1.0
ESDC	Sonseca Array	150.97	344	PKPbc	PKPbc	03 39 39.8	+0.1
	comp=Z,6.9nm,1.0s,baz=8.0,slow=2.0,SNR=6.3						
TORD	Torodi Ar. Bea	164.69	276	PKP	PKPdf	03 39 51.5	+0.1
	comp=Z,6.1nm,1.0s,baz=352,slow=1.3,SNR=6.9						
TORD	Torodi Ar. Bea	164.69	276	PKP	PKPdf	03 39 51.5	+0.1
DBIC	Dimbokro	169.64	241	PKP	PKPdf	03 39 55.3	+0.3
	comp=Z,10nm,1.1s,baz=188,slow=4.2,SNR=4.2						
DBIC				PKPab	PKPab	03 41 09.1	+0.3
	comp=Z,8.6nm,0.9s,baz=84,slow=4.9,SNR=6.0						

IDC 06 03:20:18.1±3.2**, 11°.08S**×**165°.61E, h0^{km}, mb4.6**/3**, mb1 5.0**/3**, mb1mx4.2**/49**, mbtmp4.6**/3**, Error ellipse: s-maj=184.3km s-min=34.3km az=143.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.34	250	P	P	03 26 40.6	-0.1
	10nm,0.9s,baz=80,slow=9.1,SNR=2.7						
ILAR	Eielson Array	83.59	19	P	P	03 32 48.5	+0.6
	3.9nm,0.6s,baz=246,slow=5.1,SNR=7.8						
YKA	Yellowknife Ar	95.07	27	P	P	03 33 41.4	-1.2
	0.8nm,0.6s,baz=257,slow=4.5,SNR=5.3						
ARCES	ARCESS Array B	116.33	345	PKP	PKPdf	03 39 03.3	+0.1
	2.7nm,0.8s,baz=85,slow=2.0,SNR=2.7						

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*IDC **06** 03:23:50.5±1.5, 10°.90S×165°.49E, h0^{km}, mb4.2/9, mb1 4.4/10, mb1mx4.1/48, mbtmp4.3/10, ML5.4/1, Error ellipse: s-maj=46.0km s-min=26.8km az=153.0*

*ISCJB **06** 03:23:54.3±0.7, 10°.7S±0°.1×165°.3E±0°.1, h30^{km}, mb4.2/9, Error ellipse: s-maj=18.3km s-min=15.4km az=175.2*

ISC 06 03:23:55.1±1.4**, 10°.9S**±0°.3×**165°.4E**±0°.2**, h30^{km}, n12, σ0ˢ.58**/11**, mb4.2**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.60	285	Pn	Pn	03 25 16.1	-0.2
	109nm,0.3s,baz=135,slow=7.2,SNR=5.7						
DZM	Mont Dzumac	11.14	175	Pn	Pn	03 26 38.1	+5.5
	2.2nm,0.3s,baz=296,slow=18,SNR=7.0						
ASAR	Alice Springs	32.58	243	P	P	03 30 24.3	+0.2
	1.1nm,0.6s,baz=69,slow=10,SNR=3.4						
USRK	Ussuriysk Ar.	62.69	334	P	P	03 34 17.4	+0.3
	1.1nm,0.6s,baz=105,slow=9.1,SNR=3.3						
PETK	Petropavlovsk-	64.10	355	P	P	03 34 26.2	0.0
	2.6nm,0.8s,baz=165,slow=6.7,SNR=3.7						
KLR	Kul'dur	66.81	337	P	P	03 34 43.7	-0.1
	3.0nm,1.1s,baz=68,slow=1.1,SNR=4.0						
SONM	Songino Array	78.37	324	P	P	03 35 53.4	+0.5
	1.9nm,0.7s,baz=142,slow=6.7,SNR=4.7						
ILAR	Eielson Array	83.48	19	P	P	03 36 20.4	+0.9
	1.5nm,0.5s,baz=245,slow=4.8,SNR=18						
NVAR	Mina Array Bea	86.17	50	P	P	03 36 33.8	-0.2
	1.1nm,0.9s,baz=224,slow=6.1,SNR=4.1						
MKAR	Makanchi Array	93.21	317	P	P	03 37 06.0	-0.7
	1.2nm,0.8s,baz=106,slow=6.1,SNR=3.3						
YKA	Yellowknife Ar	94.99	27	P	P	03 37 13.6	-0.8
	0.3nm,0.6s,baz=260,slow=4.7,SNR=4.4						
KEST	Kesra	147.12	323	PKPbc	PKPbc	03 43 36.2	+0.4
	6.1nm,0.9s,baz=350,slow=2.8,SNR=4.1						

IDC 06 03:25:02.6±2.1**, 11°.30S**×**165°.76E, h0^{km}, mb4.3**/7**, mb1 4.4**/7**, mb1mx4.0**/47**, mbtmp4.2**/7**, Error ellipse: s-maj=100.1km s-min=23.7km az=135.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.70	243	P	Pn	03 29 45.9	-1.0
	19nm,1.0s,baz=57,slow=11,SNR=4.1						
STKA	Stephens Creek	30.27	224	P	P	03 31 16.2	+0.7
	3.0nm,0.7s,baz=51,slow=9.1,SNR=3.4						
WRA	Warramunga Arr	31.41	250	P	P	03 31 25.2	-0.6
	5.3nm,0.7s,baz=80,slow=9.1,SNR=7.6						
ASAR	Alice Springs	32.69	244	P	P	03 31 35.9	-1.1
	2.6nm,0.8s,baz=73,slow=9.5,SNR=4.7						
ILAR	Eielson Array	83.75	18	P	P	03 37 33.5	+0.2
	0.8nm,0.7s,baz=236,slow=5.7,SNR=4.1						
MKAR	Makanchi Array	93.71	317	P	P	03 38 21.9	+0.5
	1.0nm,0.8s,baz=98,slow=6.2,SNR=2.8						
YKA	Yellowknife Ar	95.19	27	P	P	03 38 26.9	-0.8
	0.3nm,0.7s,baz=267,slow=2.1,SNR=4.4						

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*IDC **06** 03:25:15.8±1.1, 11°.31S×165°.88E, h0^{km}, mb4.5/16, mb1 4.7/16, mb1mx4.5/47, mbtmp4.5/16, Error ellipse: s-maj=36.0km s-min=17.1km az=138.0*

*ISCJB **06** 03:25:16.4±0.2, 11°.24S±0°.03×165°.78E±0°.04, h10^{km}, mb5.0/102, Error ellipse: s-maj=5.8km s-min=4.7km az=27.1*

*NEIC **06** 03:25:17.7±0.1, 11°.15S×165°.82E, h10^{km}, mb5.1/78, Error ellipse: s-maj=3.4km s-min=2.6km az=115.0*

ISC 06 03:25:18.0±0.5**, 11°.31S**±0°.07×**165°.71E**±0°.08**, h10^{km}, n167, σ1ˢ.73**/169**, mb5.0**/102**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.96	288	*e*Pn	Pn	03 26 46.2	-0.2
MARNC	Mare, Loyalty	10.36	168	*e*Pn	Pn	03 27 47.7	+1.0
DZM	Mont Dzumac	10.73	176	*e*Pn	Pn	03 27 53.5	+1.6
DZM	Mont Dzumac	10.73	176	Pn	Pn	03 27 54.2	+2.4
	10nm,0.3s,baz=358,slow=17,SNR=6.7						
ONTNC	Ouen Toro	10.96	176	*e*Pn	Pn	03 27 56.5	+1.6
PINNC	Pines Island,	11.37	172	*e*Pn	Pn	03 28 02.5	+2.0
CTA	Charters Tower	20.64	243	P	Pn	03 29 59.7	-0.5
	73nm,0.9s,baz=64,slow=13,SNR=9.1						
CTAO	Charters Tower	20.64	243	*e*P	P	03 29 59.1	+1.2
	148nm,1.1s						
MTSU	Mount Surprise	21.76	249	P	P	03 30 03.7	-6.3
	baz=21						
COEN	Coen	22.14	261	P	P	03 30 08.0	-6.1
	baz=22						
ARMA	Armidale	23.08	212	P	P	03 30 19.4	-4.6
	baz=23						
CMSA	Cobar Meteorol	27.34	220	P	P	03 30 58.4	-4.8
	baz=27						
URZ	Urewera	28.71	161	*e*P	P	03 31 16.3	+0.9
	29nm,1.1s						
STKA	Stephens Creek	30.23	224	*e*P	P	03 31 31.1	+2.2
	5.9nm,1.5s						
STKA	Stephens Creek	30.23	224	P	P	03 31 30.0	+1.0
	6.1nm,0.8s,baz=44,slow=11,SNR=3.8						
BFZ	Birch Farm	30.70	164	*e*P	P	03 31 33.5	+0.4
	64nm,0.8s						
THZ	Tophouse	30.99	170	*e*P	P	03 31 37.0	+1.4
	47nm,0.8s						
WRAB	Tennant Creek	31.34	250	*e*P	P	03 31 39.5	+0.5
	36nm,0.9s						
WB2	Warramunga Arr	31.34	250	*e*P	P	03 31 40.2	+1.2
	40nm,0.9s						
WRA	Warramunga Arr	31.36	250	P	P	03 31 39.5	+0.4
	22nm,1.0s,baz=80,slow=8.8,SNR=11						
TOO	Toolangi	31.83	211	P	P	03 31 40.0	-3.0
	baz=31						
LTZ	Lake Taylor	31.87	171	*e*P	P	03 31 44.8	+1.4
	36nm,0.9s						
OXZ	Oxford	32.37	171	*e*P	P	03 31 49.1	+1.4
	36nm,0.8s						
AS01	Alice Springs	32.60	244	*e*P	P	03 31 51.9	+1.9
RPZ	Rata Peaks	32.62	173	*e*P	P	03 31 51.3	+1.4
	40nm,0.9s						
AS31	Alice Springs	32.64	244	*e*P	P	03 31 51.3	+0.9
	2.5nm,0.8s						
ASAR	Alice Springs	32.64	244	P	P	03 31 50.8	+0.4
	4.1nm,0.8s,baz=72,slow=10,SNR=5.0						
ASAR				PcP	PcP	03 34 38.2	+1.7
	2.4nm,0.9s,baz=66,slow=2.0,SNR=4.1						
MQZ	McQueen's Vall	32.84	171	*e*P	P	03 31 52.4	+0.7
	54nm,0.9s						
HTT	Hallett	32.96	224	P	P	03 31 49.4	-3.6
	baz=32						
WKZ	Wanaka	33.52	176	*e*P	P	03 31 59.4	+1.6
	58nm,1.4s						
MLZ	Mavora Lakes	34.00	177	*e*P	P	03 32 03.8	+1.8
	17nm,1.2s						
DCZ	Deep Cove	34.06	178	*e*P	P	03 32 04.4	+2.0
	25nm,0.9s						
WHZ	Wether Hill Ro	34.52	177	*e*P	P	03 32 08.1	+1.7
	20nm,1.2s						
FITZ	Fitzroy Crossi	39.27	255	P	P	03 32 43.0	-4.3
	baz=39						
FITZ	Fitzroy Crossi	39.27	255	P	P	03 32 47.3	+0.1
	13nm,1.0s,baz=76,slow=7.5,SNR=5.1						
LUWI	Luwuk	43.82	280	*e*P	P	03 33 25.1	+0.5
	121nm,1.4s						
MBWA	Marble Bar	45.08	251	*e*P	P	03 33 35.3	+0.7
	28nm,0.8s						
KLBR	Kellerberrin	48.53	238	P	P	03 33 57.5	-4.1
	baz=48						
NWAO	Narrogin (SRO)	49.28	236	P	P	03 34 04.8	-2.5
	baz=49						
NWAO	Narrogin (SRO)	49.28	236	*e*P	P	03 34 08.1	+0.9
MORW	Morawa	49.46	241	P	P	03 34 04.6	-4.1
	baz=49						
MUN	Mundaring	49.91	238	P	P	03 34 07.7	-4.3
	baz=49						
MJAR	Matsushiro Arr	54.18	333	P	P	03 34 43.0	-0.8
	2.3nm,0.8s,baz=169,slow=8.2,SNR=4.3						
NJ2	Nanjing	62.18	316	*e*P	P	03 35 42.2	+2.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
QIZ	Qiongzhong	62.77	298	*e*P	P	03 35 43.9	-0.1
	comp=Z,40nm,1.6s						
USRK	Ussuriysk Ar.	63.16	333	P	P	03 35 46.7	+0.6
	comp=Z,3.6nm,0.9s,baz=99,slow=9.6,SNR=5.1						
CN2	Changchun	65.94	329	*e*P	P	03 36 06.6	+2.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CASY	Casey	66.12	201	*e*P	P	03 36 06.4	+1.3
	comp=Z,37nm,1.4s						
IPM	Ipoh	66.23	280	*e*P	P	03 36 06.8	0.0
	comp=Z,48nm,0.9s						
KLR	Kul'dur	67.28	337	P	P	03 36 13.4	+0.6
	comp=Z,3.4nm,0.9s,baz=85,slow=4.1,SNR=4.8						
PSI	Prapat	67.86	278	P	P	03 36 16.6	-0.8
	comp=Z,9.1nm,0.8s,baz=179,slow=5.0,SNR=7.3						
ENH	Enshi	68.03	309	*e*P	P	03 36 17.8	-0.1
	comp=Z,36nm,1.5s						
GYA	Guiyang	68.53	304	P	P	03 36 22.9	+1.6
GYA				PP	PP	03 38 57.5	+4.8
GYA				S	S	03 45 25.0	+1.1
GYA				SKS	SKSac	03 46 19.8	-1.2
GYA	Guiyang	68.53	304	SS	SS	03 49 51.5	+3.2
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.8s						
GYA				LR	LR		
	comp=N,620nm,18.3s						
GYA				LR	LR		
	comp=E,550nm,18.5s						
GYA				LR	LR		
	comp=Z,570nm,19.0s						
XAN	Xi'an	70.27	312	P	P	03 36 31.4	-0.4
XAN				pP	pwP	03 36 38.2	-1.3
XAN				sP	sP	03 36 41.6	+7.3
XAN				pmax	pmax		
	comp=Z,10.0nm,1.7s						
XAN				LR	LR		
	comp=N,8μm,19.5s						
XAN				LR	LR		
	comp=E,7μm,17.4s						
XAN				LR	LR		
	comp=Z,9μm,19.5s						
UTHA	Uthaitani	70.81	291	P	P	03 36 38.5	+3.1
KMI	Kunming	71.22	301	P	P	03 36 39.8	+1.8
KMI				pP	pwP	03 36 48.8	+3.1
KMI				pmax	pmax		
	comp=Z,21nm,1.5s						
HHC	Hu-ho-hao-te	72.00	320	*e*P	P	03 36 44.7	+2.5
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMAR	Chiang Mai Arr	72.18	294	P	P	03 36 43.8	+0.2
	comp=Z,7.2nm,1.0s,baz=117,slow=4.5,SNR=12						
CMMT	Chiang Mai	72.29	294	P	P	03 36 46.8	+2.5
	comp=Z,12nm,1.7s						
CHTO	Chiang Mai	72.29	294	*e*P	P	03 36 44.2	-0.1
	comp=Z,32nm,1.5s						
CHTO	Chiang Mai	72.29	294	P	P	03 36 46.9	+2.6
	comp=Z,55nm,2.1s						
CD2	Chengdu	72.73	307	P	P	03 36 46.7	0.0
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
LZH	Lanzhou	74.90	312	*e*P	P	03 37 00.2	+0.7
LZH				pP	pwP	03 37 06.5	-0.8
LZH				sP	PcP	03 37 08.3	-5.1
LZH				PP	PP	03 39 59.4	+12
LZH				pmax	pmax		
	comp=Z,27nm,1.4s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		

	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
QSPA	South Pole Qui	78.70	180	eP	P	03 37 21.0	+0.6
	comp=Z,22nm,1.0s						
ANM	Nome	78.75	12	eP	P	03 37 19.2	-1.2
	comp=Z,21nm,1.3s						
SONM	Songino Array	78.85	324	P	P	03 37 23.0	+1.6
	comp=Z,1.4nm,0.8s,baz=140,slow=7.0,SNR=4.1						
SONA1	Songino Array	78.85	324	eP	P	03 37 21.1	-0.4
BILL	Bilibino	79.14	0	eP	P	03 37 21.6	-0.8
	comp=Z,38nm,1.3s						
GTA	Gaotai	79.21	314	⇓P	P	03 37 26.4	+2.8
GTA				pP	pwP	03 37 31.8	+0.4
GTA				sP	PcP	03 37 34.6	+2.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GTA				LR	LR		
	comp=N,6µm,17.5s						
GTA				LR	LR		
	comp=E,6µm,19.7s						
GTA				LR	LR		
	comp=Z,10µm,17.5s						
SHL	Shillong	80.61	298	eP	P	03 37 31.5	-0.1
	comp=Z,58nm,1.6s						
SML	Sawmill	81.24	20	eP	P	03 37 33.2	-0.8
	comp=Z,20nm,1.0s						
DIV	Divide	81.67	22	eP	P	03 37 34.7	-1.6
	comp=Z,16nm,0.8s						
RND	Reindeer	82.20	19	eP	P	03 37 37.3	-1.8
	comp=Z,24nm,1.2s						
RDOG	Red Dog Mine	82.29	11	eP	P	03 37 38.4	-0.9
	comp=Z,17nm,0.9s						
MCK	McKinley	82.40	19	eP	P	03 37 38.2	-1.8
	comp=Z,44nm,1.5s						
DHY	Denali Highway	82.44	20	eP	P	03 37 39.0	-1.4
	comp=Z,8.9nm,1.0s						
HARP	HAARP	82.74	21	eP	P	03 37 40.4	-1.5
	comp=Z,24nm,0.9s						
HDA	Harding Lake	83.50	19	P	P	03 37 45.0	-0.7
	baz=226						
TCOL	CIGO, UAF Yank	83.54	18	P	P	03 37 44.4	-1.4
	baz=226						
RIDG	Independ'e Rid	83.73	20	eP	P	03 37 45.8	-1.2
	comp=Z,43nm,1.2s						
ILAR	Eielson Array	83.77	19	P	P	03 37 45.9	-1.2
	comp=Z,4.0nm,0.7s,baz=234,slow=5.2,SNR=12						
K02D	Willamette Mer	83.79	44	P	P	03 37 47.4	-0.4
	baz=248						
WDC	Whiskeytown Da	83.82	47	eP	P	03 37 46.7	-1.2
	comp=Z,12nm,1.2s						
N02D	Trinity Center	83.84	46	P	P	03 37 48.0	-0.1
	baz=249						
POKR	Poker Plat Res	83.84	18	P	P	03 37 45.1	-2.3
	baz=226						
M02C	Callahan	83.88	46	P	P	03 37 47.7	-0.6
	baz=249						
YBH	Yreka Blue Hor	84.10	46	eP	P	03 37 48.4	-1.0
	comp=Z,36nm,1.6s						
AFDM	Forest Hills D	84.40	49	eP	P	03 37 49.4	-1.5
	comp=Z,9.5nm,0.9s						
CMB	Columbia Colle	84.54	50	eP	P	03 37 50.4	-1.3
	comp=Z,7.1nm,1.0s						
L04D	Klamath Falls	84.56	45	P	P	03 37 51.2	-0.6
	baz=250						
HYT	Haines Junctio	84.64	24	eP	P	03 37 50.7	-1.0
	comp=Z,10nm,0.9s						
ISA	Isabella, Lake	85.26	52	P	P	03 37 54.8	-0.6
	baz=253						
MDPB	Devils Postpil	85.40	50	eP	P	03 37 54.2	-2.0
	comp=Z,11nm,0.9s						
WAKR	Walker	85.40	49	eP	P	03 37 54.7	-1.5
	comp=Z,28nm,1.4s						
EDW2	Edwards Air Fo	85.41	53	P	P	03 37 55.6	-0.5
	baz=253						
J05D	Fort Rock, OR	85.66	44	P	P	03 37 57.1	-0.2
	baz=250						
CWC	Cottonwood Cre	85.80	52	P	P	03 37 57.3	-0.8
	baz=253						
DAWY	Dawson	85.81	21	eP	P	03 37 56.0	-1.4
	comp=Z,13nm,1.1s						
PAHR	Pah Rah Range	85.81	48	eP	P	03 37 56.2	-1.9
	comp=Z,20nm,1.4s						
LRMC	Laurel Mtn Rad	85.83	53	P	P	03 37 57.9	-0.4
	baz=253						
E04D	Cinebar	85.92	41	P	P	03 37 58.7	+0.4
	baz=249						
MONP2	Monument Peak	86.10	56	P	P	03 37 59.4	-0.3
	baz=254						
RYN	Ryan	86.12	50	eP	P	03 37 58.3	-1.4
	comp=Z,5.8nm,1.0s						
DAC	Darwin (Calif)	86.13	52	eP	P	03 37 58.2	-1.6
	comp=Z,5.6nm,1.0s						
MPMC	Manual Prospec	86.14	52	P	P	03 37 59.3	-0.6
	baz=253						
NV01	Mina Array Sit	86.22	50	eP	P	03 37 58.7	-1.6
NVAR	Mina Array Bea	86.22	50	P	P	03 37 59.3	-1.0
	comp=Z,4.8nm,1.0s,baz=232,slow=9.0,SNR=10						
NV11	Mina Array Sit	86.33	50	eP	P	03 37 58.1	-2.7
	comp=Z,1.2nm,1.3s						
F05D	White Salmon	86.40	42	P	P	03 38 00.8	+0.1
	baz=250						
GRAC	Grapevine Rang	86.51	51	P	P	03 38 01.2	-0.3
	baz=253						
KVN	Kaiserville	86.56	49	eP	P	03 38 01.1	-0.8
	comp=Z,5.8nm,1.0s						
A04D	Lummi Island	86.61	39	P	P	03 38 02.6	+1.1
	baz=249						
HEC	Hector,Ludlow	86.70	54	P	P	03 38 01.8	-0.7
	baz=254						
BELC	Belle Mtn. Jos	86.74	55	P	P	03 38 02.2	-0.6
	baz=254						
FURC	Furnace Creek,	86.75	52	P	P	03 38 02.2	-0.3
	baz=254						
SHOC	Shoshone, Teco	87.04	53	P	P	03 38 04.1	0.0
	baz=254						
BC3	Big Chuckawall	87.08	55	P	P	03 38 04.1	-0.4
	baz=254						
I07A	Izee	87.11	44	eP	P	03 38 03.2	-1.2
	comp=Z,10nm,1.1s						
WVOR	Wild Horse Val	87.20	46	eP	P	03 38 03.5	-1.4
	comp=Z,20nm,1.4s						
GMRC	Granite Mounta	87.22	54	P	P	03 38 04.3	-0.9
	baz=254						
IRM	Iron Mountain	87.47	55	P	P	03 38 05.7	-0.5
	baz=255						
J08A	Circle Bar Ran	87.59	45	eP	P	03 38 05.7	-1.0
	comp=Z,25nm,1.5s						
LDFC	Landfair	87.74	54	eP	P	03 38 06.3	-1.3
	comp=Z,30nm,1.3s						
Y12C	Blythe	87.86	55	eP	P	03 38 07.1	-0.9
	comp=Z,15nm,1.3s						
G08A	Pilot Rock	87.86	43	eP	P	03 38 06.8	-1.2
	comp=Z,10nm,1.1s						
SHPR	Sheep Range	88.08	52	eP	P	03 38 08.2	-1.1
	comp=Z,18nm,1.6s						
R11A	Troy Canyon, C	88.25	50	eP	P	03 38 08.5	-1.5
	comp=Z,6.3nm,1.3s						
R11A	Troy Canyon, C	88.25	50	P	P	03 38 09.3	-0.7
	baz=254						
PDMCI	Parker Dam,Lak	88.31	55	P	P	03 38 09.8	-0.3
	baz=255						
W13A	Hualapai Mount	88.71	54	eP	P	03 38 11.2	-1.2
	comp=Z,13nm,1.3s						
ELK	Elko	89.15	48	eP	P	03 38 12.9	-1.4
	comp=Z,11nm,1.5s						
WMQ	Urumqi	89.25	315	P	P	03 38 16.3	+1.8
WMQ				pP	pwP	03 38 21.3	-1.0
WMQ				sP	sP	03 38 23.6	+6.6
WMQ				pmax	pmax		
	comp=Z,21nm,1.5s						
WMQ				LR	LR		
	comp=N,18µm,14.3s						
WMQ				LR	LR		
	comp=E,13µm,14.9s						
WMQ				LR	LR		
	comp=Z,11µm,20.9s						
WMQ	Urumqi	89.25	315	eP	P	03 38 14.6	+0.1
	comp=Z,8.7nm,0.9s						
MFID	Camas Ranch	89.46	46	eP	P	03 38 14.5	-1.0
	comp=Z,9.8nm,1.3s						
PSUT	Pine Spring	89.61	51	eP	P	03 38 15.8	-0.7
	comp=Z,16nm,1.4s						
LCMT	Little Creek M	89.69	52	eP	P	03 38 16.1	-0.7
	comp=Z,8.9nm,1.1s						
CCUT	Cedar City	89.73	52	eP	P	03 38 15.6	-1.6
	comp=Z,9.9nm,1.1s						
SZCU	Shurtz Canyon	89.96	52	eP	P	03 38 17.3	-0.8
	comp=Z,9.9nm,1.1s						
KNB	Kanab	90.02	52	eP	P	03 38 16.6	-1.8
	comp=Z,24nm,1.2s						
HLID	Hailey	90.49	46	eP	P	03 38 19.5	-1.0
	comp=Z,4.7nm,1.0s						
HLID	Hailey	90.49	46	P	P	03 38 20.0	-0.4
	baz=255						
X16A	Lo Mia Camp, P	90.50	55	eP	P	03 38 19.4	-1.3
	comp=Z,6.3nm,0.9s						
PKCU	Pink Cliffs	90.52	52	eP	P	03 38 19.9	-1.0
	comp=Z,20nm,1.3s						
MTPU	Mount Pierson	90.76	51	eP	P	03 38 20.9	-1.2
	comp=Z,7.6nm,0.9s						
DUG	Dugway, Tooele	90.80	49	eP	P	03 38 20.8	-1.1
	comp=Z,9.4nm,1.2s						
DUG	Dugway, Tooele	90.80	49	P	P	03 38 21.3	-0.6
	baz=256						
WUAZ	Wupatki	90.81	54	eP	P	03 38 21.0	-1.1
	comp=Z,8.3nm,1.1s						
WUAZ	Wupatki	90.81	54	P	P	03 38 21.4	-0.7
	baz=257						
BGU	Big Grassy Mou	90.82	49	eP	P	03 38 20.9	-1.1
	comp=Z,7.7nm,1.1s						
MSU	Marysvale	90.88	51	eP	P	03 38 21.3	-1.1
HVU	Hansel Valley	91.21	48	eP	P	03 38 22.6	-1.3
	comp=Z,13nm,1.0s						
NLU	North Lily Min	91.29	50	eP	P	03 38 22.1	-2.2
	comp=Z,9.5nm,1.1s						
MPU	Maple Canyon	91.64	50	eP	P	03 38 24.7	-1.2
	comp=Z,7.4nm,1.2s						
Q16A	Castle Valley	91.73	51	eP	P	03 38 25.6	-0.8
	comp=Z,13nm,1.4s						
DLMT	Dillon	92.20	44	eP	P	03 38 27.7	-0.6
	comp=Z,7.4nm,1.0s						
WALA	Waterton Lakes	92.23	40	eP	P	03 38 27.4	-0.9
	comp=Z,30nm,1.5s						
FXWY	Fox Creek	92.89	46	eP	P	03 38 30.9	-0.8
	comp=Z,5.3nm,1.1s						
MK01	Makanchi Array	93.67	317	eP	P	03 38 34.6	-0.3
MK31	Makanchi Array	93.68	317	eP	P	03 38 34.8	-0.2
MKAR	Makanchi Array	93.68	317	P	P	03 38 35.6	+0.7
	comp=Z,2.9nm,0.9s,baz=98,slow=6.2,SNR=6.2						
ZALV	Zalesovo Beam	93.74	324	eP	P	03 38 34.4	-0.6
PDAR	Pinedale Array	93.76	47	eP	P	03 38 34.0	-1.6
PDAR	Pinedale Array	93.76	47	P	P	03 38 34.3	-1.4
	comp=Z,0.8nm,0.8s,baz=202,slow=1.6,SNR=5.5						
YKA	Yellowknife Ar	95.22	27	P	P	03 38 39.0	-2.6
YKA	Yellowknife Ar	95.22	27	P	P	03 38 39.0	-2.6
	comp=Z,0.8nm,0.7s,baz=253,slow=4.5,SNR=7.7						
SDV	Santo Domingo	124.55	87	ePKPdf	PKPdf	03 44 17.6	-1.4

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*IDC **06** 03:28:50.8±0.5, 11°.03S×165°.52E, h0^{km}, mb4.8/27, mb1 5.0/29, mb1mx4.9/46, mbtmp4.9/29, ML5.3/2, MS5.4/1, Ms1 5.4/1, ms1mx4.3/42, Error ellipse: s-maj=15.3km s-min=12.8km az=112.0*

*NEIC **06** 03:28:52.0±0.1, 11°.04S×165°.45E, h10^{km}, mb5.3/155, Error ellipse: s-maj=2.6km s-min=2.3km az=128.0*

*BJI **06** 03:28:51.3, 10°.64S×165°.66E, h7^{km}, mB5.4/4, mb5.0/54, Ms5.2/3, Ms7 4.9/2*

*ISCJB **06** 03:28:53.8±0.1, 11°.02S±0°.03×165°.37E±0°.03, h30^{km}, mb5.1/193, MS4.9/2, Error ellipse: s-maj=4.4km s-min=3.4km az=149.6*

*MOS **06** 03:28:54.8±0.9, 10°.93S×165°.33E, h34^{km}, mb5.3/42, Error ellipse: s-maj=8.4km s-min=7.7km az=81.2*

ISC 06 03:28:55.3±0.3**, 11°.05S**±0°.05×**165°.46E**±0°.05**, h30^{km}, n401,** σ**0^{s}.94**/406**, mb5.2**/193**, 14C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	Honiara	5.66	286	ePn	Pn	03 30 15.7	-1.8
HNR				eSn	Sn	03 31 18.6	-3.0
HNR	Honiara	5.66	286	eP	Pn	03 30 15.7	-1.8
HNR				e		03 31 18.6	
HNR	Honiara	5.66	286	Pn	Pn	03 30 18.4	+0.9
	145nm,0.3s,baz=144,slow=9.3,SNR=9.4						
HNR				LR	LR	03 32 35.5	
	comp=Z,31µm,19.7s,baz=110,slow=39						
MARNC	Mare, Loyalty	10.66	167	ePn	Pn	03 31 24.8	-1.2
DZM	Mont Dzumac	11.00	175	ePn	Pn	03 31 29.5	-1.2
DZM	Mont Dzumac	11.00	175	Pn	Pn	03 31 30.7	-0.1
	12nm,0.3s,baz=328,slow=9.1,SNR=19						
ONTNC	Ouen Toro	11.23	175	ePn	Pn	03 31 32.9	-1.0
PINNC	Pines Island,	11.65	171	ePn	Pn	03 31 38.4	-1.2
MSVF	Nonsavu	13.88	120	ePn	Pn	03 32 10.1	-0.1
MSVF	Nonsavu	13.88	120	eP	Pn	03 32 10.1	-0.1
TARA	Tarawa	14.39	31	ePn	Pn	03 32 16.5	-0.6
PATS	Pohnpei	19.14	338	P	P	03 33 15.6	-0.7
	baz=19,SNR=3.3						
EIDS	Eidsvold	19.70	222	P	Pn	03 33 25.2	+1.2
	baz=20,SNR=6.7						
KWAJ	Kwajalein Atol	19.84	6	eP	P	03 33 24.1	+0.2
	470nm,1.2s						
KWAJ	Kwajalein Atol	19.84	6	eP	P	03 33 24.1	+0.2
KWAJ				pmax	pmax		
	comp=Z,470nm,1.2s						
CTA	Charters Tower	20.55	242	P	Pn	03 33 33.4	-0.6
	comp=Z,46nm,0.8s,baz=70,slow=13,SNR=15						
CTAO	Charters Tower	20.55	242	eP	P	03 33 31.3	-0.4
	comp=Z,320nm,1.4s						
CTAO	Charters Tower	20.55	242	eP	P	03 33 31.3	-0.4
CTAO				pmax	pmax		
	comp=Z,320nm,1.4s						
MTSU	Mount Surprise	21.63	249	P	P	03 33 45.7	+2.4
	baz=22,SNR=20						
COEN	Coen	21.95	260	P	P	03 33 47.6	+0.9
	baz=22,SNR=33						
RMQ	Roma	22.00	223	P	P	03 33 49.2	+1.9
	baz=22,SNR=23						
ARMA	Armidale	23.16	212	P	P	03 34 01.1	+1.6
	baz=23,SNR=6.8						
OUZ	Omahuta	25.17	164	eP	P	03 34 18.0	-0.1
	comp=Z,111nm,1.5s						
QLP	Quilpie	25.28	229	P	P	03 34 20.6	+1.3
	baz=26,SNR=3.9						
MGCD	Mangrove Creek	25.69	209	P	P	03 34 25.1	+2.2
	baz=26,SNR=4.7						
QIS	Mount Isa	26.58	246	P	P	03 34 31.9	+0.8
	baz=27,SNR=3.4						
CMSA	Cobar Meteorol	27.38	219	P	P	03 34 39.5	+1.3
	baz=28,SNR=8.6						
HIZ	Hauiti	28.61	164	eP	P	03 34 48.7	-0.3
	comp=Z,318nm,1.7s						
URZ	Urewera	29.03	161	eP	P	03 34 52.3	-0.4
	comp=Z,109nm,1.6s						
URZ	Urewera	29.03	161	P	P	03 34 52.9	+0.1
	comp=Z,16nm,0.5s,baz=305,slow=2.2,SNR=12						
H11S2	WAKE ISLAND Hy	29.38	2	T	T	04 05 38.3	
	baz=181,slow=76,SNR=6.1						
H11S3	WAKE ISLAND Hy	29.39	2	T	T	04 05 36.2	
	baz=181,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	29.40	2	T	T	04 05 37.3	
	baz=181,slow=76,SNR=5.7						
BKZ	Black Stump Fm	29.67	163	eP	P	03 34 58.9	+0.4
	comp=Z,168nm,1.5s						
STKA	Stephens Creek	30.25	223	P	P	03 35 04.9	+1.3
	baz=30,SNR=9.4						
STKA	Stephens Creek	30.25	223	eP	P	03 35 03.0	-0.6
	comp=Z,9.7nm,1.1s						
STKA				PcP	PcP	03 38 05.3	+1.3
STKA	Stephens Creek	30.25	223	eP	P	03 35 03.0	-0.6
STKA						03 38 05.3	
STKA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
STKA	Stephens Creek	30.25	223	P	P	03 35 04.0	+0.4
	comp=Z,16nm,0.9s,baz=31,slow=9.1,SNR=11						
STKA				PcP	PcP	03 38 05.3	+1.3
	comp=Z,2.7nm,0.7s,baz=73,slow=3.1,SNR=3.0						
H11N1	WAKE ISLAND Hy	30.61	3	T	T	04 07 09.1	
	baz=182,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	30.61	3	T	T	04 07 08.9	
	baz=182,slow=76,SNR=8.5						
H11N2	WAKE ISLAND Hy	30.62	3	T	T	04 07 09.6	
	baz=182,slow=76,SNR=4.7						
BFZ	Birch Farm	31.01	164	eP	P	03 35 10.6	+0.3
	comp=Z,95nm,0.9s						
WRAB	Tennant Creek	31.21	250	eP	P	03 35 11.6	-0.7
	comp=Z,201nm,1.4s						
WRAB	Tennant Creek	31.21	250	c iP	P	03 35 12.9	+0.6
WRAB				pmax	pmax		
	comp=Z,202nm,1.5s						
WB2	Warramunga Arr	31.21	250	eP	P	03 35 11.6	-0.7
	comp=Z,218nm,1.4s						
WRA	Warramunga Arr	31.22	250	P	P	03 35 11.8	-0.6
	comp=Z,79nm,1.2s,baz=79,slow=8.9,SNR=28						
WRA				PcP	PcP	03 38 08.2	+1.4
	comp=Z,4.5nm,0.9s,baz=73,slow=2.8,SNR=6.5						
THZ	Tophouse	31.28	169	eP	P	03 35 12.7	0.0
	comp=Z,140nm,1.7s						
TOO	Toolangi	31.92	211	P	P	03 35 20.2	+1.8
	baz=32,SNR=3.6						
KHZ	Kahutara	32.03	169	eP	P	03 35 19.1	-0.1
	comp=Z,25nm,0.9s						
LTZ	Lake Taylor	32.16	171	eP	P	03 35 19.8	-0.6
	comp=Z,36nm,0.8s						
KDU	Kakadu	32.31	264	P	P	03 35 21.6	-0.5
	baz=32,SNR=7.4						
AS01	Alice Springs	32.50	243	eP	P	03 35 23.5	-0.2
AS31	Alice Springs	32.54	243	eP	P	03 35 23.3	-0.7
	comp=Z,19nm,1.3s						
ASAR	Alice Springs	32.54	243	P	P	03 35 22.8	-1.2
	comp=Z,38nm,1.1s,baz=72,slow=9.3,SNR=29						
ASAR				PcP	PcP	03 38 11.2	+0.8
	comp=Z,4.1nm,0.8s,baz=84,slow=2.1,SNR=7.0						
OXZ	Oxford	32.66	171	eP	P	03 35 25.4	+0.7
	comp=Z,30nm,0.8s						
RPZ	Rata Peaks	32.90	173	eP	P	03 35 26.6	-0.2
	comp=Z,45nm,1.0s						
RPZ	Rata Peaks	32.90	173	P	P	03 35 26.9	0.0
	comp=Z,12nm,0.8s,baz=12,slow=17,SNR=2.9						
HTT	Hallett	32.98	223	P	P	03 35 28.8	+1.1
	baz=33,SNR=6.9						
MQZ	McQueen's Vall	33.12	170	eP	P	03 35 28.8	+0.1
	comp=Z,69nm,1.2s						
BBOO	Buckleboo	34.62	227	P	P	03 35 42.9	+0.9
	baz=35,SNR=12						
WRKA	Warakurna	37.83	243	P	P	03 36 10.6	+1.0
	baz=38,SNR=12						
FITZ	Fitzroy Crossi	39.11	255	P	P	03 36 20.2	-0.2
	baz=39,SNR=15						
FITZ	Fitzroy Crossi	39.11	255	P	P	03 36 19.7	-0.7
	comp=Z,28nm,1.1s,baz=80,slow=12,SNR=12						
BATI	Baumata	41.07	267	P	P	03 36 38.0	+1.3
	comp=Z,13nm,0.3s,baz=309,slow=23,SNR=5.3						
MMRI	Maumere	42.63	269	eP	P	03 36 48.9	-0.6
	comp=Z,161nm,1.5s						
LUWI	Luwuk	43.54	280	eP	P	03 36 56.8	0.0
	comp=Z,175nm,1.3s						
MBWA	Marble Bar	44.93	251	eP	P	03 37 07.8	0.0
	comp=Z,92nm,1.2s						
MEEK	Meekatharra	46.70	244	P	P	03 37 23.4	+1.7
	baz=47,SNR=8.0						
KLBR	Kellerberrin	48.47	237	P	P	03 37 36.1	+0.6
	baz=49,SNR=5.3						
MORW	Morawa	49.38	241	P	P	03 37 43.8	+1.4
	baz=50,SNR=3.5						
JAGI	Jajag, Banyuwa	50.59	268	eP	P	03 37 50.7	-1.2
	comp=Z,80nm,1.1s						
KKM	Kota Kinabalu	51.88	287	eP	P	03 38 01.1	-0.6
	comp=Z,111nm,1.3s						
MJAR	Matsushiro Arr	53.85	333	P	P	03 38 15.3	-0.4
	comp=Z,13nm,1.0s,baz=169,slow=6.8,SNR=9.2						
MAJO	Matsushiro	53.85	333	eP	P	03 38 15.2	-0.5
	comp=Z,77nm,1.6s						
MAJO	Matsushiro	53.85	333	⇑iP	P	03 38 15.5	-0.2
MAJO				pmax	pmax		
	comp=Z,51nm,1.7s						
MAT	Matsushiro	53.85	333	P	P	03 38 15.3	-0.4
MJB9	Matsu-Tunnel	53.86	333	eP	P	03 38 15.4	-0.4
	comp=Z,42nm,1.4s						
UGM	Wanagama	54.22	268	eP	P	03 38 18.4	-0.5
	comp=Z,172nm,1.3s						
SBUM	Sibu	54.63	281	eP	P	03 38 21.4	-0.3
	comp=Z,11nm,1.4s						
NACB	Ninganchiao	55.33	310	eP	P	03 38 25.4	-1.2
	comp=Z,81nm,1.4s						
TPUB	Ta-pu	55.59	308	eP	P	03 38 27.2	-1.3
	comp=Z,46nm,1.1s						
YHNB	Yeheng	55.77	310	eP	P	03 38 28.9	-1.0
	comp=Z,89nm,1.4s						
KSM	Kuching	56.23	279	eP	P	03 38 32.5	-0.8
	comp=Z,64nm,1.4s						
CISI	Cisompet, Garu	56.93	268	eP	P	03 38 37.2	-1.2
	comp=Z,176nm,1.5s						
ASAJ	Asahikawa	58.71	341	P	P	03 38 51.1	+0.9
ASAJ				pmax	pmax		
	comp=Z,40nm,1.1s						
ASAJ	Asahikawa	58.71	341	P	P	03 38 51.1	+0.9
	comp=Z,32nm,1.1s,baz=242,slow=11,SNR=5.9						
KSRS	Korea Array	59.73	326	P	P	03 38 56.5	-0.8
	comp=Z,1.4nm,0.5s,baz=160,slow=4.8,SNR=5.6						
KSAR	Wonju Array Be	59.74	326	P	P	03 38 56.5	-0.9
KSAR	Wonju Array Be	59.74	326	P	P	03 38 56.5	-0.9
KS01	Wonju Array Si	59.76	326	eP	P	03 38 56.7	-0.9
YSS	Yuzh-Sakhalins	61.21	342	eP	P	03 39 07.2	0.0
	comp=Z,118nm,1.3s						
YSS	Yuzh-Sakhalins	61.21	342	⇓eP	P	03 39 08.6	+1.3
YSS				e		03 39 20.2	
YSS				pmax	pmax		
	comp=Z,170nm,1.2s						
TEY	Ternei	61.62	337	⇓eP	P	03 39 08.9	-1.2
TEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NJ2	Nanjing	61.83	316	eP	P	03 39 12.4	+0.6
NJ2				pmax	pmax		
	comp=Z,18nm,1.0s						
USRK	Ussuriysk Ar.	62.83	334	P	P	03 39 18.7	+0.5
	comp=Z,17nm,1.1s,baz=141,slow=6.4,SNR=6.7						
USA0B	Ussuriysk Arra	62.83	334	eP	P	03 39 18.2	0.0
	comp=Z,55nm,1.4s						
PET	Petropavlovsk	64.09	355	i P	P	03 39 26.2	-0.1
PET				pmax	pmax		
	comp=Z,76nm,1.7s						
MDJ	Mudanjiang	64.23	332	P	P	03 39 28.7	+1.2
MDJ				pmax	pmax		
	comp=Z,25nm,1.7s						
MDJ	Mudanjiang	64.23	332	eP	P	03 39 27.6	+0.1
	comp=Z,49nm,1.4s						
PEA0B	Petropavlovsk-	64.25	355	eP	P	03 39 27.1	-0.3
PETK	Petropavlovsk-	64.25	355	P	P	03 39 27.7	+0.2
	comp=Z,5.6nm,0.9s,baz=157,slow=7.6,SNR=4.6						
CN2	Changchun	65.61	329	eP	P	03 39 37.5	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
IPM	Ipoh	65.95	280	eP	P	03 39 37.8	-1.6
	comp=Z,128nm,1.4s						
CASY	Casey	66.27	201	eP	P	03 39 39.5	-0.9
	comp=Z,48nm,1.4s						
KLR	Kul'dur	66.95	337	⇑iP	P	03 39 45.7	+0.7
KLR	Kul'dur	66.95	337	P	P	03 39 45.6	+0.6
	comp=Z,9.3nm,0.8s,baz=143,slow=4.8,SNR=5.9						
PSI	Prapat	67.60	278	P	P	03 39 49.2	-0.7
	comp=Z,21nm,1.0s,baz=178,slow=1.9,SNR=11						
ENH	Enshi	67.69	309	eP	P	03 39 48.9	-1.2
	comp=Z,53nm,1.4s						
GYA	Guiyang	68.19	304	P	P	03 39 54.3	+0.8
GYA				pP	pP	03 40 03.2	+1.1
GYA				PP	PP	03 42 29.4	+5.1
GYA				S	S	03 48 54.3	+2.1
GYA				SKS	SKSac	03 49 49.0	-1.5
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.8s						
GYA				LR	LR		
	comp=Z,620nm,18.3s						
GYA				LR	LR		
	comp=Z,550nm,18.5s						
GYA				LR	LR		
	comp=Z,590nm,19.0s						
BJT	Baijiatuau	68.31	321	eP	P	03 39 53.3	-0.4
	comp=Z,46nm,1.4s						
BJT	Baijiatuau	68.31	321	eP	P	03 39 53.3	-0.4
BJT				pmax	pmax		
	comp=Z,46nm,1.4s						
BJI	Beijing	68.31	321	P	P	03 39 54.4	+0.6
BJI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
GSI	Gunungsitoli	68.58	276	eP	P	03 39 55.6	-0.4
	comp=Z,138nm,1.3s						
PBKT	Sadao Pong	69.43	292	eP	P	03 40 00.3	-0.8
	comp=Z,9.4nm,0.8s						
XAN	Xi'an	69.92	312	P	P	03 40 04.1	+0.1
XAN				pP	pP	03 40 12.8	+0.2
XAN				sP	pwP	03 40 17.3	+1.4
XAN				PcP	PcP	03 40 27.7	+1.5
XAN				pmax	pmax		
	comp=Z,18nm,1.9s						
XAN	Xi'an	69.92	312	eP	P	03 40 03.1	-0.9
	comp=Z,22nm,1.3s						
XAN	Xi'an	69.92	312	eP	P	03 40 03.1	-0.9
XAN				pmax	pmax		

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       comp=Z,21nm,1.3s
KMI    Kunming            70.89 301   P      P       03 40 12.2 +1.9
KMI                                   pP     pwP     03 40 23.0 -0.4
KMI                                   pmax   pmax
       comp=Z,32nm,1.9s
KMI    Kunming            70.89 301  eP      P       03 40 09.4 -0.8
       comp=Z,68nm,1.5s
KMI    Kunming            70.89 301  eP      P       03 40 09.5 -0.8
KMI                                   pmax   pmax
       comp=Z,68nm,1.5s
MA2    Magadan            71.38 352  eP      P       03 40 13.0 +0.8
MA2                                   pmax   pmax
       comp=Z,27nm,1.4s
HHC    Hu-ho-hao-te       71.66 320  eP      P       03 40 18.9 +4.4
HHC                                   pmax   pmax
       comp=Z,10.0nm,1.1s
CM01   Chiang Mai Arr     71.84 294  eP      P       03 40 15.0 -0.8
CMAR   Chiang Mai Arr     71.86 294   P      P       03 40 16.8 +0.8
       comp=Z,3.9nm,0.8s,baz=126,slow=4.8,SNR=9.4
CHTO   Chiang Mai         71.97 294  eP      P       03 40 16.0 -0.7
       comp=Z,17nm,1.4s
CHTO   Chiang Mai         71.97 294  eP      P       03 40 16.0 -0.7
CHTO                                  pmax   pmax
       comp=Z,17nm,1.4s
HIA    Hailar             72.24 330  eP      P       03 40 17.6 -0.1
       comp=Z,49nm,1.5s
HIA    Hailar             72.24 330  eP      P       03 40 17.6 -0.1
HIA                                   pmax   pmax
       comp=Z,49nm,1.5s
ZEA    Zeya               72.24 337  eP      P       03 40 18.2 +0.7
ZEA                                   pmax   pmax
       comp=Z,160nm,1.8s
CD2    Chengdu            72.39 307   P      P       03 40 18.7 -0.3
CD2                                   pmax   pmax
       comp=Z,40nm,0.9s
SEY    Seymchan           74.45 354⇑iP      P       03 40 30.4 +0.1
LZH    Lanzhou            74.56 312 ⇑P      P       03 40 33.3 +1.5
LZH                                   pP     pP      03 40 39.7 -0.8
LZH                                   sP     sP      03 40 43.2 -0.5
LZH                                   PP     PP      03 43 23.2 +4.3
LZH                                   pmax   pmax
       comp=Z,26nm,1.8s
LZH                                   pmax   pmax
       comp=Z,160nm,6.0s
LZH                                   LR     LR
       comp=Z,520nm,16.4s
LZH                                   LR     LR
       comp=Z,580nm,17.5s
GAMB   Gambell            76.63  10  eP      P       03 40 42.8  0.0
       comp=Z,48nm,1.2s
KDAK   Kodiak Island      76.69  22ceP      P       03 40 44.4 +1.2
KDAK   Kodiak Island      76.69  22   P      P       03 40 43.8 +0.6
       comp=Z,13nm,0.8s,baz=109,slow=10.0,SNR=6.3
YAK    Yakutsk            78.03 344  eP      P       03 40 49.7 -0.9
YAK                                   pmax   pmax
       comp=Z,30nm,1.5s
YAK                                   pmax   pmax
       comp=N,7.0nm,1.4s
YAK                                   pmax   pmax
       comp=E,5.0nm,1.2s
ULN    Ulaanbaatar        78.15 324  eP      P       03 40 51.3 -0.6
       comp=E,17nm,0.8s
ULN    Ulaanbaatar        78.15 324ceP      P       03 40 52.9 +1.0
ULN                                   pmax   pmax
       comp=Z,41nm,2.5s
SONM   Songino Array      78.51 324   P      P       03 40 54.7 +0.8
       comp=Z,6.4nm,1.1s,baz=139,slow=6.0,SNR=7.8
SONA1  Songino Array      78.51 324  eP      P       03 40 53.3 -0.6
RSO    Redoubt South      78.62  20  eP      P       03 40 53.4 -0.9
BRLK   Bradley Lake       78.75  21  eP      P       03 40 54.1 -0.6
       comp=Z,30nm,0.8s
BRLK                                 ePcP    sP      03 41 07.6 +1.0
GTA    Gaotai             78.86 314 ⇑P      P       03 40 57.7 +1.7
GTA                                   pP     PcP     03 41 02.8 -1.8
GTA                                   sP     pP      03 41 06.1 +1.4
GTA                                   pmax   pmax
       comp=Z,17nm,1.2s
BILL   Bilibino           78.89   0  eP      P       03 40 55.1 -0.2
       comp=Z,64nm,1.4s
BILL   Bilibino           78.89   0ceP      P       03 40 55.6 +0.3
BILL                                  pmax   pmax
       comp=Z,48nm,1.4s
QSPA   South Pole Qui     78.95 180  eP      P       03 40 55.9 -0.1
       comp=Z,29nm,1.1s
SEW    Seward             79.49  21  eP      P       03 40 58.2 -0.6
       comp=Z,39nm,1.1s
BRDH   Bariadhala         79.65 296   P      P       03 41 02.6 +2.1
       comp=Z,23nm,0.3s,baz=94,slow=7.0,SNR=5.6
SHL    Shillong           80.28 298  eP      P       03 41 03.8 -0.2
       comp=Z,42nm,1.4s
SHL    Shillong           80.28 298  eP      P       03 41 03.8 -0.2
SHL                                   pmax   pmax
       comp=Z,42nm,1.4s
SHL    Shillong           80.28 298  eP      P       03 41 04.0 -0.1
BOD    Bodaibo            80.42 335  eP      P       03 40 56.6 -7.2
BOD                                   pmax   pmax
       comp=Z,25nm,2.0s
KNK    Knik Glacier       80.76  21  eP      P       03 41 05.9 +0.2
       comp=Z,14nm,0.9s
CAST   Castle Rocks       81.04  18  eP      P       03 41 06.6 -0.5
       comp=Z,18nm,0.8s
SML    Sawmill            81.08  20  eP      P       03 41 07.3 -0.1
       comp=Z,21nm,1.0s
SML    Sawmill            81.08  20  eP      P       03 41 07.3 -0.1
SML                                   pmax   pmax
       comp=Z,21nm,1.0s
DIV    Divide             81.52  22  eP      P       03 41 09.6 -0.1
       comp=Z,36nm,0.8s
ZAK    Zakamensk          81.55 325  eP      P       03 41 09.4 -0.8
ZAK                                   pmax   pmax
       comp=Z,11nm,1.3s
HMT    Hamilton           81.56  23  eP      P       03 41 10.0 +0.1
       comp=Z,38nm,1.1s
TRF    Thorofare Moun     81.61  18  eP      P       03 41 09.8 -0.5
       comp=Z,10nm,0.8s
KLU    Klutina            81.71  21  eP      P       03 41 10.2 -0.6
       comp=Z,20nm,0.9s
TLY    Talaya             81.98 326  eP      P       03 41 11.9 -0.4
       comp=Z,27nm,0.9s
TLY    Talaya             81.98 326⇑iP      P       03 41 12.7 +0.4
TLY    Talaya             81.98 326   P      P       03 41 12.5 +0.2
       comp=Z,5.0nm,1.0s,baz=182,slow=3.7,SNR=4.1
RND    Reindeer           82.04  19  eP      P       03 41 11.9 -0.5
       comp=Z,24nm,1.0s
RND    Reindeer           82.04  19  eP      P       03 41 11.9 -0.5
RND                                   pmax   pmax
       comp=Z,24nm,1.0s
RDOG   Red Dog Mine       82.09  11  eP      P       03 41 12.2 -0.3
       comp=Z,42nm,1.4s
MCK    McKinley           82.24  19  eP      P       03 41 13.4  0.0
       comp=Z,29nm,1.1s
MCK    McKinley           82.24  19  eP      P       03 41 13.4  0.0
MCK                                   pmax   pmax
       comp=Z,29nm,1.1s
DHY    Denali Highway     82.29  20  eP      P       03 41 13.5 -0.4
       comp=Z,7.2nm,0.8s
IM3    Indian Mountai     82.51  16  eP      P       03 41 14.6 -0.1
HARP   HAARP              82.59  21  eP      P       03 41 15.2 -0.1
       comp=Z,57nm,1.0s
MLY    Manley             82.63  17  eP      P       03 41 15.7 +0.2
       comp=Z,8.1nm,1.0s
KCPM   Cahto Peak         82.76  47  eP      P       03 41 16.3 -0.5
       comp=Z,21nm,0.8s
KMRM   Mail Ridge         82.86  47  eP      P       03 41 17.1 -0.2
       comp=Z,30nm,0.9s
WRH    Wood River Hil     83.03  18  eP      P       03 41 16.8 -0.7
       comp=Z,22nm,0.8s
GDXM   Geysers            83.03  48  eP      P       03 41 18.1  0.0
       comp=Z,14nm,1.0s
MDM    Murphy Dome        83.33  18  eP      P       03 41 18.9 -0.1
       comp=Z,25nm,1.0s
HDA    Harding Lake       83.34  19  eP      P       03 41 18.8 -0.3
       comp=Z,62nm,0.9s
HDA    Harding Lake       83.34  19   P      P       03 41 19.1  0.0
       baz=227
TCOL   CIGO, UAF Yank     83.38  18   P      P       03 41 19.4 +0.2
       baz=226
COLA   College            83.38  18  eP      P       03 41 19.1 -0.2
       comp=Z,41nm,0.9s
COLA   College            83.38  18  eP      P       03 41 19.1 -0.2
COLA                                  pmax   pmax
       comp=Z,24nm,0.9s
O02D   Mt. Diablo Mer     83.50  47   P      P       03 41 21.1 +0.5
       baz=250
RIDG   Independ'e Rid     83.58  20  eP      P       03 41 20.2 -0.2
       comp=Z,35nm,1.0s
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IL1    Eielson Array      83.61  19  eP      P       03 41 19.7 -0.7
ILAR   Eielson Array      83.61  19   P      P       03 41 19.6 -0.8
       comp=Z,9.5nm,0.6s,baz=235,slow=4.9,SNR=65
ILB    Eielson Array      83.61  19  eP      P       03 41 19.7 -0.8
POKR   Poker Plat Res     83.68  18   P      P       03 41 19.9 -0.9
       baz=226
J01E   Myrtle Point       83.76  44   P      P       03 41 23.2 +1.5
       baz=249
K02D   Willamette Mer     83.77  44   P      P       03 41 23.0 +1.0
       baz=249
WDC    Whiskeytown Da     83.82  47  eP      P       03 41 22.1  0.0
       comp=Z,27nm,1.5s
WDC    Whiskeytown Da     83.82  47  eP      P       03 41 22.1  0.0
WDC                                   pmax   pmax
       comp=Z,27nm,1.5s
N02D   Trinity Center     83.84  46   P      P       03 41 22.9 +0.6
       baz=250
M02C   Callahan           83.88  46   P      P       03 41 23.0 +0.6
       baz=250
SCRK   Sand Creek         84.02  20  eP      P       03 41 22.7  0.0
       comp=Z,62nm,1.2s
YBH    Yreka Blue Hor     84.10  46  eP      P       03 41 23.8 +0.2
       comp=Z,15nm,1.0s
YBH    Yreka Blue Hor     84.10  46  eP      P       03 41 23.8 +0.2
YBH                                   pmax   pmax
       comp=Z,15nm,1.0s
ORV    Oroville           84.22  48  eP      P       03 41 24.1 -0.1
       comp=Z,13nm,1.2s
ORV    Oroville           84.22  48  eP      P       03 41 24.1 -0.1
ORV                                   pmax   pmax
       comp=Z,13nm,1.2s
HUMO   Hull Mountain      84.23  45  eP      P       03 41 24.4 +0.2
       comp=Z,18nm,0.9s
O03E   Paynes Creek       84.25  47   P      P       03 41 24.3 -0.2
       baz=250
AFDM   Forest Hills D     84.42  49  eP      P       03 41 25.2  0.0
       comp=Z,20nm,1.1s
HYT    Haines Junctio     84.51  24  eP      P       03 41 25.1 -0.2
       comp=Z,15nm,0.8s
L04D   Klamath Falls      84.55  45   P      P       03 41 27.1 +1.2
       baz=250
CMB    Columbia Colle     84.56  50  eP      P       03 41 25.6 -0.4
       comp=Z,8.9nm,0.9s
CMB    Columbia Colle     84.56  50  eP      P       03 41 25.6 -0.4
CMB                                   pmax   pmax
       comp=Z,9.0nm,0.9s
M04C   Macdoel            84.73  46   P      P       03 41 27.5 +0.7
       baz=250
VES    Vestal, Richgr     84.88  52   P      P       03 41 27.1 -0.5
       baz=252
KNGR   Kungurtug, Tuv     84.95 324⇑iP      P       03 41 27.3 -0.4
I04A   Tendick Farm,      85.02  44   P      P       03 41 28.9 +0.7
       baz=250
BEKR   Beckworth          85.16  48  eP      P       03 41 28.8 -0.3
       comp=Z,10nm,0.8s
MWC    Mount Wilson       85.21  54  eP      P       03 41 29.7 +0.2
       comp=Z,32nm,1.4s
ISA    Isabella, Lake     85.30  52  eP      P       03 41 29.1 -0.7
       comp=Z,23nm,1.5s
ISA    Isabella, Lake     85.30  52  eP      P       03 41 29.1 -0.7
ISA                                   pmax   pmax
       comp=Z,23nm,1.5s
ISA    Isabella, Lake     85.30  52   P      P       03 41 29.7 -0.1
       baz=253
WAKR   Walker             85.41  50  eP      P       03 41 30.7 +0.2
       comp=Z,35nm,1.5s
MDPB   Devils Postpil     85.42  50  eP      P       03 41 30.4 -0.2
       comp=Z,15nm,1.1s
EDW2   Edwards Air Fo     85.45  53   P      P       03 41 31.4 +0.8
       baz=253
OMMB   Old Mammoth Mi     85.47  50  eP      P       03 41 30.4 -0.5
       comp=Z,24nm,1.6s
BFSC   Mount Baldy Ra     85.53  54   P      P       03 41 31.8 +0.7
       baz=254
J05D   Fort Rock, OR      85.65  45   P      P       03 41 31.9 +0.4
       baz=250
DAWY   Dawson             85.66  21  eP      P       03 41 31.0 +0.1
       comp=Z,13nm,0.8s
YERR   Yerington          85.71  49  eP      P       03 41 32.1 +0.2
       comp=Z,8.8nm,1.1s
PAHR   Pah Rah Range      85.82  48  eP      P       03 41 31.7 -0.7
       comp=Z,9.8nm,1.0s
CWC    Cottonwood Cre     85.83  52   P      P       03 41 33.0 +0.5
       baz=253
MOD    Modoc Plateau      85.85  46  eP      P       03 41 32.0 -0.5
       comp=Z,8.8nm,0.9s
LRMC   Laurel Mtn Rad     85.86  53   P      P       03 41 33.5 +0.8
       baz=253
PINE   Pine Mountain      86.02  44  eP      P       03 41 33.1 -0.3
       comp=Z,25nm,1.0s
TIXI   Tiksi              86.05 349  eP      P       03 41 32.4 -0.1
       comp=Z,12nm,1.1s
TIXI   Tiksi              86.05 349ceP      P       03 41 32.7 +0.1
TIXI                                  pmax   pmax
       comp=Z,30nm,2.5s
RYN    Ryan               86.14  50  eP      P       03 41 34.0  0.0
       comp=Z,22nm,1.4s
MONP2  Monument Peak      86.15  56   P      P       03 41 35.0 +0.7
       baz=254
DAC    Darwin (Calif)     86.16  52  eP      P       03 41 34.5 +0.3
       comp=Z,16nm,1.4s
DAC    Darwin (Calif)     86.16  52  eP      P       03 41 34.5 +0.3
DAC                                   pmax   pmax
       comp=Z,16nm,1.4s
MPMC   Manual Prospec     86.18  52   P      P       03 41 34.9 +0.6
       baz=254
NV01   Mina Array Sit     86.24  50  eP      P       03 41 33.8 -0.8
NVAR   Mina Array Bea     86.24  50   P      P       03 41 34.5 -0.1
       comp=Z,6.6nm,0.9s,baz=233,slow=7.6,SNR=17
G05D   Wamic, OR          86.25  43   P      P       03 41 35.3 +1.1
       baz=250
PALK   Pallekele          86.28 278   P      P       03 41 36.4 +1.3
       comp=Z,14nm,1.0s,baz=116,slow=5.4,SNR=4.9
PFO    Pinyon Flats O     86.31  55  eP      P       03 41 34.8 -0.2
       comp=Z,3.4nm,0.9s
PFO    Pinyon Flats O     86.31  55  eP      P       03 41 34.8 -0.2
PFO                                   pmax   pmax
       comp=Z,3.0nm,0.9s
PFO    Pinyon Flats O     86.31  55   P      P       03 41 35.3 +0.4
       baz=254
TPFO   Pinon Flats        86.32  55   P      P       03 41 35.0 +0.1
       baz=254
NV11   Mina Array Sit     86.35  50  eP      P       03 41 34.5 -0.6
       comp=Z,1.8nm,1.4s
D05A   Enumclaw           86.47  41  eP      P       03 41 39.0 +3.7
       comp=Z,112nm,1.6s
GRAC   Grapevine Rang     86.54  51   P      P       03 41 36.8 +0.9
       baz=254
KVN    Kaiserville        86.58  49  eP      P       03 41 35.3 -0.9
       comp=Z,23nm,1.6s
KVN    Kaiserville        86.58  49  eP      P       03 41 35.3 -0.9
KVN                                   pmax   pmax
       comp=Z,23nm,1.6s
SWSC   Sam W. Stewart     86.67  56   P      P       03 41 37.2 +0.7
       baz=255
HEC    Hector,Ludlow      86.74  54   P      P       03 41 36.3 -0.7
       baz=254
FURC   Furnace Creek,     86.78  52   P      P       03 41 37.9 +1.0
       baz=254
B05A   Bryant             86.78  40   P      P       03 41 38.0 +1.3
       baz=250
BELC   Belle Mtn. Jos     86.79  55   P      P       03 41 38.0 +0.7
       baz=254
I07A   Izee               87.10  44  eP      P       03 41 38.2 -0.3
       comp=Z,18nm,1.3s
BC3    Big Chuckawall     87.13  55   P      P       03 41 40.0 +1.0
       baz=255
WVOR   Wild Horse Val     87.19  46  eP      P       03 41 38.4 -0.6
       comp=Z,25nm,1.4s
WVOR   Wild Horse Val     87.19  46  eP      P       03 41 38.4 -0.6
WVOR                                  pmax   pmax
       comp=Z,25nm,1.4s
GMRC   Granite Mounta     87.27  54   P      P       03 41 40.3 +0.7
       baz=255
TPNV   Topopah Spring     87.38  52  eP      P       03 41 40.0 -0.2
       comp=Z,6.9nm,0.9s
TPNV   Topopah Spring     87.38  52  eP      P       03 41 40.0 -0.2
TPNV                                  pmax   pmax
       comp=Z,7.0nm,0.9s
IRM    Iron Mountain      87.51  55   P      P       03 41 40.7 +0.1
       baz=255
J08A   Circle Bar Ran     87.58  45  eP      P       03 41 40.9  0.0
       comp=Z,13nm,0.9s
LDFC   Landfair           87.78  54  eP      P       03 41 42.4 +0.3
       comp=Z,80nm,1.6s
HAWA   Hanford            87.80  42  eP      P       03 41 42.0 +0.3
       comp=Z,11nm,1.0s
G08A   Pilot Rock         87.84  43  eP      P       03 41 41.8 -0.3
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       comp=Z,13nm,1.0s
Y12C   Blythe             87.91  55  eP      P       03 41 42.5  0.0
       comp=Z,27nm,1.4s
Y12C   Blythe             87.91  55   P      P       03 41 43.6 +1.2
       baz=255
SHPR   Sheep Range        88.11  52  eP      P       03 41 43.7 +0.1
       comp=Z,48nm,1.7s
E08A   Dider Farm, El     88.14  42  eP      P       03 41 43.1 -0.2
       comp=Z,34nm,1.4s
R11A   Troy Canyon, C     88.27  51  eP      P       03 41 44.3 -0.1
       comp=Z,16nm,1.5s
R11A   Troy Canyon, C     88.27  51   P      P       03 41 45.3 +1.0
       baz=254
PDMCI  Parker Dam,Lak     88.35  55   P      P       03 41 45.3 +0.7
       baz=256
D08A   Wollman Farm,      88.41  41  eP      P       03 41 44.6 +0.1
       comp=Z,5.5nm,1.0s
B08A   Colville Reser     88.55  40  eP      P       03 41 45.0 -0.3
       comp=Z,12nm,1.2s
W13A   Hualapai Mount     88.75  54  eP      P       03 41 46.3 -0.4
       comp=Z,22nm,1.4s
BMO    Blue Mountains     88.83  44  eP      P       03 41 46.5 -0.2
       comp=Z,6.7nm,1.0s
BMO    Blue Mountains     88.83  44  eP      P       03 41 46.5 -0.2
BMO                                   pmax   pmax
       comp=Z,7.0nm,1.0s
214A   Organ Pipe Nat     88.87  57   P      P       03 41 47.8 +0.7
       baz=256
WMQ    Urumqi             88.91 315  eP      P       03 41 48.0 +0.9
WMQ                                   pP     pP      03 41 55.1 -0.4
WMQ                                   sP     pwP     03 41 58.0 -2.5
WMQ                                   pmax   pmax
       comp=Z,41nm,1.5s
ELK    Elko               89.16  48  eP      P       03 41 48.3 -0.2
       comp=Z,13nm,1.6s
ELK    Elko               89.16  48  eP      P       03 41 48.3 -0.2
ELK                                   pmax   pmax
       comp=Z,13nm,1.6s
Y14A   Wickenburg         89.18  55  eP      P       03 41 48.2 -0.4
       comp=Z,9.2nm,1.3s
F10A   Beach Ranch, E     89.20  43  eP      P       03 41 48.1 -0.4
       comp=Z,11nm,0.8s
MFID   Camas Ranch        89.45  46  eP      P       03 41 49.4 -0.3
       comp=Z,15nm,1.3s
PSUT   Pine Spring        89.63  51  eP      P       03 41 50.7 -0.1
       comp=Z,5.5nm,0.9s
LCMT   Little Creek M     89.73  52  eP      P       03 41 51.4 +0.3
       comp=Z,18nm,1.2s
CCUT   Cedar City         89.77  52  eP      P       03 41 51.0 -0.4
       comp=Z,9.7nm,1.0s
NEW    Newport            89.93  41   P      P       03 41 52.0 +0.3
       baz=253
SZCU   Shurtz Canyon      89.99  52  eP      P       03 41 52.9 +0.4
       comp=Z,20nm,1.3s
INK    Inuvik             90.00  19  eP      P       03 41 52.0 +0.5
       comp=Z,5.7nm,1.0s
INK    Inuvik             90.00  19  eP      P       03 41 52.0 +0.5
INK                                   pmax   pmax
       comp=Z,6.0nm,1.0s
KNB    Kanab              90.06  52  eP      P       03 41 52.8  0.0
       comp=Z,45nm,1.5s
KNB    Kanab              90.06  52  eP      P       03 41 52.8  0.0
KNB                                   pmax   pmax
       comp=Z,45nm,1.5s
U15A   North Rim          90.33  53  eP      P       03 41 54.4 +0.1
       comp=Z,13nm,0.9s
HLID   Hailey             90.48  46  eP      P       03 41 54.4 -0.2
       comp=Z,18nm,1.4s
HLID   Hailey             90.48  46   P      P       03 41 55.0 +0.4
       baz=255
X16A   Lo Mia Camp, P     90.55  55  eP      P       03 41 55.2 +0.1
       comp=Z,7.4nm,0.9s
PKCU   Pink Cliffs        90.55  52  eP      P       03 41 55.5 +0.2
       comp=Z,24nm,1.1s
TUC    Tucson             90.62  57  eP      P       03 41 55.5 +0.1
       comp=Z,5.7nm,1.1s
TUC    Tucson             90.62  57  eP      P       03 41 55.5 +0.1
TUC                                   pmax   pmax
       comp=Z,6.0nm,1.1s
TUC    Tucson             90.62  57   P      P       03 41 56.3 +0.9
       baz=257
DGZ    Jazzator, Alta     90.73 321⇑iP      P       03 41 55.4 -0.2
DGZ                                   pmax   pmax
       comp=Z,4.0nm,1.0s
MTPU   Mount Pierson      90.79  52  eP      P       03 41 56.0 -0.4
       comp=Z,9.8nm,0.9s
DUG    Dugway, Tooele     90.81  49  eP      P       03 41 55.6 -0.6
       comp=Z,5.2nm,0.9s
DUG    Dugway, Tooele     90.81  49  eP      P       03 41 55.6 -0.6
DUG                                   pmax   pmax
       comp=Z,5.0nm,0.9s
DUG    Dugway, Tooele     90.81  49   P      P       03 41 56.4 +0.2
       baz=256
BGU    Big Grassy Mou     90.83  49  eP      P       03 41 56.2 -0.1
       comp=Z,16nm,1.4s
WUAZ   Wupatki            90.85  54  eP      P       03 41 56.2 -0.3
       comp=Z,10nm,1.0s
WUAZ   Wupatki            90.85  54   P      P       03 41 57.3 +0.8
       baz=257
MSU    Marysvale          90.90  51  eP      P       03 41 56.4 -0.3
MSU    Marysvale          90.90  51  eP      P       03 41 56.4 -0.3
HVU    Hansel Valley      91.22  48  eP      P       03 41 57.9 -0.2
       comp=Z,48nm,1.5s
HVU    Hansel Valley      91.22  48  eP      P       03 41 57.9 -0.2
HVU                                   pmax   pmax
       comp=Z,48nm,1.5s
NLU    North Lily Min     91.31  50  eP      P       03 41 58.5 -0.1
       comp=Z,8.8nm,1.0s
SPUT   South Promonto     91.34  48  eP      P       03 41 58.5 -0.2
       comp=Z,4.9nm,0.9s
MPU    Maple Canyon       91.65  50  eP      P       03 42 00.2  0.0
       comp=Z,28nm,1.6s
319A   Douglas            91.68  59  eP      P       03 42 00.3  0.0
       comp=Z,18nm,1.3s
SYO    Syowa Base         91.69 197⇓iPcP    PcP     03 42 00.2 -0.2
SYO    Syowa Base         91.69 197⇑eX      P       03 42 11.8 +12
CTU    Camp Tracy         91.72  49  eP      P       03 42 00.2 -0.2
       comp=Z,14nm,1.3s
Q16A   Castle Valley      91.76  51  eP      P       03 42 00.5 -0.1
       comp=Z,9.8nm,1.4s
TMUT   Trail Mountain     91.81  50  eP      P       03 42 00.7 -0.4
       comp=Z,7.4nm,1.0s
MCMT   McKenzie Canyo     91.88  45  eP      P       03 42 00.9 -0.2
JLU    Jordanelle         91.92  49  eP      P       03 42 01.1 -0.3
       comp=Z,6.8nm,0.9s
TCUT   Toone Canyon       92.07  49  eP      P       03 42 01.5 -0.6
       comp=Z,9.9nm,0.8s
W18A   Petrified Fore     92.07  55   P      P       03 42 03.9 +1.7
       baz=258
DLMT   Dillon             92.18  44  eP      P       03 42 02.3 -0.1
       comp=Z,20nm,1.1s
WALA   Waterton Lakes     92.19  41  eP      P       03 42 02.1 -0.3
       comp=Z,13nm,1.1s
LRM    Limekiln Ridge     92.39  44  eP      P       03 42 04.0 +0.5
FXWY   Fox Creek          92.89  46  eP      P       03 42 04.9 -1.0
       comp=Z,4.1nm,0.9s
BOZ    Bozeman (W)        92.90  44  eP      P       03 42 05.7  0.0
       comp=Z,9.3nm,1.0s
BOZ    Bozeman (W)        92.90  44  eP      P       03 42 05.7  0.0
BOZ                                   pmax   pmax
       comp=Z,9.0nm,1.0s
BOZ    Bozeman (W)        92.90  44   P      P       03 42 06.9 +1.2
       baz=257
TPAW   Teton Pass         92.91  46  eP      P       03 42 05.6 -0.4
       comp=Z,5.2nm,0.9s
HRY    Holter Researc     93.01  43  eP      P       03 42 05.8 -0.3
121A   Cookes Peak, D     93.15  58   P      P       03 42 08.7 +1.5
       baz=259
YMR    Madison River      93.16  45  eP      P       03 42 06.5 -0.5
       comp=Z,4.8nm,0.7s
MK01   Makanchi Array     93.33 317  eP      P       03 42 07.2 -0.3
MK31   Makanchi Array     93.34 317  eP      P       03 42 06.9 -0.6
MKAR   Makanchi Array     93.34 317  eP      P       03 42 06.9 -0.7
       comp=Z,47nm,1.0s
MKAR   Makanchi Array     93.34 317   P      P       03 42 06.8 -0.7
       comp=Z,4.3nm,0.9s,baz=93,slow=6.4,SNR=9.5
H17A   Grant Village      93.37  46  eP      P       03 42 07.8 -0.3
       comp=Z,4.2nm,0.8s
H17A   Grant Village      93.37  46   P      P       03 42 08.6 +0.6
       baz=258
ZAA0   Zalesovo Array     93.40 324  eP      P       03 42 06.4 -1.2
       comp=Z,12nm,1.1s
ZALV   Zalesovo Beam      93.40 324  eP      P       03 42 06.5 -1.1
ZALV   Zalesovo Beam      93.40 324  eP      P       03 42 06.5 -1.1
ZALV   Zalesovo Beam      93.40 324   P      P       03 42 06.7 -0.9
       comp=Z,8.2nm,0.9s,baz=116,slow=5.1,SNR=10
MAKZ   Makanchi           93.55 317  eP      P       03 42 08.3 -0.2
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	comp=Z,18nm,1.2s						
MAKZ	Makanchi	93.55	317	*e*P	P	03 42 08.3	-0.2
MAKZ				pmax	pmax		
	comp=Z,18nm,1.2s						
PD31	Pinedale Array	93.76	47	*e*P	P	03 42 09.8	-0.1
PDAR	Pinedale Array	93.76	47	*e*P	P	03 42 08.9	-1.0
PDAR	Pinedale Array	93.76	47	P	P	03 42 09.5	-0.4
	comp=Z,1.7nm,0.9s,baz=119,slow=1.9,SNR=9.2						
NVS	Novosibirsk	94.51	325	*e*P	P	03 42 12.7	0.0
EGMT	Eagleton	94.66	42	*e*P	P	03 42 13.7	0.0
	comp=Z,12nm,0.8s						
EGMT	Eagleton	94.66	42	P	P	03 42 14.3	+0.6
	baz=259						
ANMO	Albuquerque	94.68	55	*e*P	P	03 42 14.0	-0.3
	comp=Z,3.3nm,1.1s						
ANMO	Albuquerque	94.68	55	*e*P	P	03 42 14.4	+0.1
ANMO				pmax	pmax		
	comp=Z,16nm,3.5s						
ANMO	Albuquerque	94.68	55	P	P	03 42 14.3	+0.1
	baz=260						
MNTX	Cornudas Mount	95.01	59	*e*P	P	03 42 16.6	+1.0
	comp=Z,1.9nm,0.8s						
YKA	Yellowknife Ar	95.11	27	P	P	03 42 13.0	-2.2
YKA	Yellowknife Ar	95.11	27	P	P	03 42 13.0	-2.2
YKA	Yellowknife Ar	95.11	27	P	P	03 42 13.0	-2.2
	comp=Z,2.3nm,0.7s,baz=257,slow=4.7,SNR=26						
YKB5	Yellowknife Ar	95.11	27	*e*P	P	03 42 13.4	-1.9
TXAR	Lajitas Array	96.08	61	P	P	03 42 21.0	+0.4
	comp=Z,0.4nm,0.7s,baz=223,slow=5.9,SNR=5.1						
TXAR				PP	PP	03 46 15.9	+2.2
	comp=Z,0.9nm,1.0s,baz=268,slow=4.8,SNR=4.8						
KSH	Kashi	96.55	309	P	P	03 42 25.3	+2.8
ARCES	ARCESS Array B	116.27	345	PKP	PKiKP	03 47 34.3	-1.0
	comp=Z,3.7nm,0.9s,baz=5.2,slow=1.3,SNR=8.5						
PB11	IPOC Station P	117.69	119	*e*PKPdf	PKPdf	03 47 37.8	-1.9
LPAZ	La Paz	120.43	116	PKP	PKPdf	03 47 45.5	-0.1
	comp=Z,1.0nm,0.6s,baz=90,slow=25,SNR=6.5						
OBN	Obninsk	120.67	329	*e*PKIKP	PKiKP	03 47 47.2	+3.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	121.68	338	PKP	PKiKP	03 47 45.9	-0.2
	comp=Z,1.9nm,0.9s,baz=19,slow=8.8,SNR=3.2						
CPUP	Villa Florida	124.22	132	PKP	PKPdf	03 47 51.8	-0.1
	comp=Z,2.1nm,0.8s,baz=220,slow=3.7,SNR=4.4						
SDV	Santo Domingo	124.77	87	*e*PKPdf	PKPdf	03 47 52.9	-0.6
BOSA	Boshof	124.92	223	*e*PKPdf	PKPdf	03 47 52.0	-1.4
BOSA	Boshof	124.92	223	*e*PKIKP	PKPdf	03 47 52.0	-1.4
BOSA	Boshof	124.92	223	PKP	PKiKP	03 47 53.6	-0.1
	comp=Z,7.0nm,0.7s,baz=138,slow=2.0,SNR=18						
NOA	NORSAR Array B	126.64	345	PKIKP	PKPdf	03 47 55.0	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	126.64	345	PKP	PKPdf	03 47 55.0	-0.5
	comp=Z,1.7nm,1.0s,baz=35,slow=2.1,SNR=3.6						
AKASG	Malin Array Be	126.72	327	PKP	PKPdf	03 47 54.5	-1.3
	comp=Z,0.5nm,0.5s,baz=62,slow=2.7,SNR=5.3						
LBTB	Lobatse	126.93	227	*e*PKPdf	PKPdf	03 47 55.7	-1.6
LBTB	Lobatse	126.93	227	*e*PKIKP	PKPdf	03 47 55.7	-1.6
KMBO	Kilima Mbogo	127.11	260	PKP	PKiKP	03 47 59.3	+0.7
	comp=Z,1.7nm,0.8s,baz=8.3,slow=22,SNR=5.5						
BRTR	Keskin Array B	128.77	313	PKP	PKPdf	03 48 00.3	0.0
	comp=Z,1.2nm,1.1s,baz=0.0,slow=6.7,SNR=3.7						
BRTR				PP	PP	03 50 03.5	-3.4
	comp=Z,0.9nm,1.1s,baz=69,slow=7.9,SNR=3.2						
LSZ	Lusaka	130.25	239	*e*PKPdf	PKPdf	03 48 03.0	-0.8
LSZ	Lusaka	130.25	239	*e*PKIKP	PKPdf	03 48 03.0	-0.8
BUR04	Bucovina Ar. S	130.61	325	*e*PKPdf	PKPdf	03 48 02.5	-1.1
MLR	Muntele Rosu	131.35	323	*e*PKPdf	PKPdf	03 48 03.5	-1.6
MLR	Muntele Rosu	131.35	323	*e*PKIKP	PKPdf	03 48 03.5	-1.6
UZH	Uzhgorod	131.59	328	*e*PKHKP	PKPpre	03 47 51.0	
UZH				*i*		03 48 04.4	
VYHS	Vyhne	133.44	330	*e*PKIKP	PKiKP	03 48 09.8	-0.2
VYHS	Vyhne	133.44	330	*e*PKP	PKiKP	03 48 09.8	-0.2
CLL	Collm	134.00	336	*e*PKPdf	PKPdf	03 48 09.0	-0.7
CLL	Collm	134.00	336	*e*PKIKP	PKPdf	03 48 09.0	-0.7
BDFB	Brasilia	137.55	128	PKP	PKPdf	03 48 17.9	+0.4
	comp=Z,3.8nm,0.9s,baz=359,slow=2.5,SNR=4.1						
KEST	Kesra	147.25	322	*e*PKPdf	PKPdf	03 48 34.4	+0.3
KEST	Kesra	147.25	322	PKPbc	PKPab	03 48 37.2	-1.0
	comp=Z,17nm,1.1s,baz=316,slow=5.2,SNR=5.0						
ES19	SONSECA Array	149.95	343	*e*PKPdf	PKPdf	03 48 38.7	+0.3
ESDC	Sonseca Array	149.99	344	PKPbc	PKiKP	03 48 43.7	-0.6
	comp=Z,3.8nm,0.9s,baz=348,slow=1.8,SNR=4.4						
TOA0	Torodi Ar. Sit	163.99	279	*e*PKPdf	PKPdf	03 48 56.3	-0.4
TORD	Torodi Ar. Bea	163.99	279	PKP	PKPdf	03 48 57.2	+0.5
	comp=Z,3.1nm,1.0s,baz=4.9,slow=1.8,SNR=7.9						
TORD				PKPab	PKPab	03 49 49.9	+0.1
	comp=Z,4.4nm,1.1s,baz=23,slow=4.3,SNR=6.2						
DBIC	Dimbokro	169.49	246	PKP	PKPdf	03 49 01.1	+0.2
	comp=Z,3.9nm,1.0s,baz=314,slow=2.9,SNR=4.3						
DBIC				PKPab	PKPab	03 50 15.4	+1.3
	comp=Z,9.4nm,1.2s,baz=12,slow=4.3,SNR=3.6						

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*IDC **06** 03:30:15.2±1.0, 10°.89S×165°.25E, h0^{km}, mb4.4/7, mb1 4.7/8, mb1mx4.2/44, mbtmp4.5/8, ML4.8/1, Error ellipse: s-maj=34.4km s-min=22.5km az=131.0*

*ISCJB **06** 03:30:17.8±0.8, 11°.0S±0°.1×165°.2E±0°.2, h31^{km}, mb4.4/7, Error ellipse: s-maj=23.0km s-min=16.0km az=8.3*

ISC 06 03:30:19.7±0.9**, 11°.0S**±0°.1×**165°.3E**±0°.2**, h31^{km}, n8, σ0^{s}.48**/10**, mb4.3**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.12	174	Pn	Pn	03 32 56.6	-0.2
	6.5nm,0.3s,baz=301,slow=18,SNR=3.8						
WRA	Warramunga Arr	31.06	249	P	P	03 36 35.4	+0.2
	2.0nm,0.6s,baz=80,slow=9.1,SNR=2.7						
WRA				PcP	PcP	03 39 31.4	+0.7
	1.9nm,0.7s,baz=84,slow=3.3,SNR=5.2						
ASAR	Alice Springs	32.40	243	P	P	03 36 46.8	-0.3
	18nm,0.8s,baz=67,slow=10.0,SNR=13						
ASAR				PcP	PcP	03 39 34.6	+0.4
	2.3nm,0.7s,baz=65,slow=2.9,SNR=5.4						
MJAR	Matsushiro Arr	53.66	333	P	P	03 39 37.8	-0.8
	2.0nm,0.6s,baz=170,slow=8.7,SNR=4.0						
JNU	Nakatsue	54.72	325	P	P	03 39 46.6	+0.3
	11nm,0.9s,baz=135,slow=7.1,SNR=4.3						
ILAR	Eielson Array	83.57	19	P	P	03 42 44.4	-0.2
	1.4nm,0.6s,baz=238,slow=5.1,SNR=3.4						
NVAR	Mina Array Bea	86.33	50	P	P	03 42 59.4	+0.1
	1.4nm,0.8s,baz=235,slow=7.6,SNR=2.6						
PDAR	Pinedale Array	93.84	47	P	P	03 43 34.8	+0.3
	0.8nm,0.8s,baz=254,slow=2.3,SNR=2.9						

IDC 06 03:34:16.8±1.2**, 10°.70S**×**165°.19E, h0^{km}, mb3.8**/4**, mb1 4.2**/5**, mb1mx3.8**/46**, mbtmp4.0**/5**, ML4.3**/1**, Error ellipse: s-maj=51.0km s-min=26.0km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.38	174	Pn	Pn	03 37 00.2	-0.5
	2.0nm,0.3s,baz=72,slow=20,SNR=5.8						
WRA	Warramunga Arr	31.09	249	P	P	03 40 37.6	+0.5
	1.5nm,0.8s,baz=79,slow=9.0,SNR=4.6						
ASAR	Alice Springs	32.46	243	P	P	03 40 48.7	-0.5
	1.0nm,0.7s,baz=68,slow=9.9,SNR=4.1						
ILAR	Eielson Array	83.36	19	P	P	03 46 44.9	-0.6
	0.5nm,0.5s,baz=235,slow=4.9,SNR=6.5						
NVAR	Mina Array Bea	86.22	50	P	P	03 47 01.3	+0.5
	0.2nm,0.4s,baz=243,slow=6.0,SNR=2.6						

MEX 06 03:34:54.4±0.4**, 27°.37N**×**111°.22W, h10^{km}, MD3.5, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUYB	Guaymas	0.61	30	*e*P	Pg	03 35 05.0	-1.2
GUYB				*i* S	Sg	03 35 13.1	-1.1
SRIG	Santa Rosalia	0.91	267	*e*P	Pg	03 35 09.2	-2.8
HSIG		1.66	8	*e*P	Pn	03 35 21.5	-2.0

IDC 06 03:37:19.4±4.2**, 11°.15S**×**165°.64E, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/45**, mbtmp3.6**/3**, Error ellipse: s-maj=211.2km s-min=32.3km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.35	250	P	P	03 43 42.0	0.0
	0.5nm,0.6s,baz=81,slow=8.9,SNR=4.0						
ASAR	Alice Springs	32.65	243	P	P	03 43 53.3	-0.1
	0.6nm,0.6s,baz=66,slow=10.0,SNR=4.5						
ILAR	Eielson Array	83.65	19	P	P	03 49 49.6	0.0
	0.3nm,0.8s,baz=231,slow=5.7,SNR=3.6						

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*IDC **06** 03:38:17.9±0.9, 10°.87S×165°.33E, h0^{km}, mb4.2/12, mb1 4.4/13, mb1mx4.2/44, mbtmp4.2/13, ML4.7/1, Error ellipse: s-maj=30.3km s-min=18.8km az=127.0*

*ISCJB **06** 03:38:20.8±0.7, 11°.00S±0°.10×165°.3E±0°.1, h30^{km}, mb4.1/11, Error ellipse: s-maj=19.5km s-min=13.7km az=18.1*

ISC 06 03:38:22.5±0.7**, 10°.9S**±0°.1×**165°.4E**±0°.2**, h30^{km}, n14, σ0^{s}.88**/14**, mb4.2**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.13	175	Pn	Pn	03 40 59.7	-0.2
	5.3nm,0.3s,baz=339,slow=17,SNR=19						
CTA	Charters Tower	20.52	241	P	P	03 42 59.8	+1.2
	34nm,1.0s,baz=63,slow=13,SNR=12						
WRA	Warramunga Arr	31.17	250	P	P	03 44 38.3	-0.9
	3.2nm,0.8s,baz=80,slow=8.8,SNR=9.2						
ASAR	Alice Springs	32.51	243	P	P	03 44 49.6	-1.3
	7.1nm,0.9s,baz=71,slow=9.7,SNR=20						
FITZ	Fitzroy Crossi	39.05	255	P	P	03 45 46.3	-0.7
	2.6nm,1.0s,baz=90,slow=5.7,SNR=4.0						
KLR	Kul'dur	66.80	337	P	P	03 49 12.0	+0.8
	4.0nm,1.1s,baz=295,slow=11,SNR=5.0						
SONM	Songino Array	78.34	324	P	P	03 50 19.9	-0.2
	0.4nm,0.5s,baz=130,slow=7.8,SNR=3.1						
GTA	Gaotai	78.70	314	*e*P	P	03 50 23.0	+0.7
GTA				pP	sP	03 50 34.0	-0.3
GTA				sP	pwP	03 50 37.3	+3.4
QSPA	South Pole Qui	79.08	180	P	P	03 50 24.8	+0.9
	2.6nm,1.0s,baz=8.8,slow=4.1,SNR=4.5						
ILAR	Eielson Array	83.52	19	P	P	03 50 46.8	-0.3
	1.0nm,0.7s,baz=236,slow=5.1,SNR=13						
NVAR	Mina Array Bea	86.23	50	P	P	03 51 02.2	+0.5
	1.5nm,0.9s,baz=229,slow=8.0,SNR=5.4						
MKAR	Makanchi Array	93.17	317	P	P	03 51 33.9	0.0
	0.8nm,0.8s,baz=91,slow=5.7,SNR=4.5						
ZALV	Zalesovo Beam	93.24	324	P	P	03 51 33.9	-0.1
	0.3nm,0.3s,baz=106,slow=5.1,SNR=3.0						
YKA	Yellowknife Ar	95.04	27	P	P	03 51 40.8	-1.3
	0.4nm,0.7s,baz=254,slow=4.3,SNR=5.9						

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*IDC **06** 03:38:52.9±0.5, 10°.89S×165°.42E, h0^{km}, mb4.9/26, mb1 5.0/28, mb1mx4.9/44, mbtmp4.9/28, ML5.1/2, Error ellipse: s-maj=17.0km s-min=12.9km az=93.0*

*NEIC **06** 03:38:53.9±0.1, 10°.87S×165°.34E, h10^{km}, mb5.2/139, Error ellipse: s-maj=2.7km s-min=2.3km az=119.0*

*ISCJB **06** 03:38:55.6±0.1, 10°.93S±0°.03×165°.26E±0°.03, h30^{km}, mb5.1/177, MS6.3/1, Error ellipse: s-maj=4.3km s-min=3.5km az=148.8*

*MOS **06** 03:38:56.4±0.8, 10°.99S×165°.27E, h40^{km}, mb5.3/47, Error ellipse: s-maj=8.1km s-min=7.9km az=111.6*

ISC 06 03:38:57.1±0.3**, 10°.96S**±0°.05×**165°.32E**±0°.06**, h30^{km}, n406, σ0^{s}.88**/409**, mb5.2**/177**, 10C-5D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.50	285	*e*Pn	Pn	03 40 15.3	-1.8
HNR				*e*Sn	Sn	03 41 18.0	-1.4
HNR	Honiara	5.50	285	*e*P	Pn	03 40 15.3	-1.8
HNR				*e*		03 41 18.0	
HNR	Honiara	5.50	285	Pn	Pn	03 40 18.6	+1.5
	78nm,0.3s,baz=198,slow=6.2,SNR=9.6						
MARNC	Mare, Loyalty	10.79	166	*e*Pn	Pn	03 41 30.0	+0.5
DZM	Mont Dzumac	11.11	175	*e*Pn	Pn	03 41 34.4	+0.3
DZM				Sn	Sn	03 43 33.8	-3.6
DZM	Mont Dzumac	11.11	175	Pn	Pn	03 41 35.0	+0.9
	11nm,0.3s,baz=306,slow=17,SNR=12						
DZM				Sn	Sn	03 43 33.8	-3.6
	0.5nm,0.3s,baz=302,slow=23,SNR=2.8						
OUENC	Ouen Island, N	11.49	173	*e*Pn	Pn	03 41 39.9	+0.6
PINNC	Pines Island,	11.77	170	*e*Pn	Pn	03 41 42.7	-0.3
MSVF	Nonsavu	14.05	120	*i* P	Pn	03 42 16.0	+1.7
CTA	Charters Tower	20.48	241	P	Pn	03 43 34.6	-0.3
	129nm,1.0s,baz=68,slow=12,SNR=20						
CTAO	Charters Tower	20.48	241	*e*P	P	03 43 32.5	-0.2
	120nm,0.8s						
CTAO	Charters Tower	20.48	241	*e*P	P	03 43 32.5	-0.2
CTAO				pmax	pmax		
	comp=Z,120nm,0.8s						
MTSU	Mount Surprise	21.54	248	P	P	03 43 45.6	+1.5
	baz=22,SNR=13						
COEN	Coen	21.83	260	P	P	03 43 49.9	+2.6
	baz=22,SNR=6.5						
RMQ	Roma	21.98	223	P	P	03 43 51.2	+2.4
	baz=22,SNR=6.0						
ARMA	Armidale	23.18	211	P	P	03 44 02.7	+1.2
	baz=23,SNR=5.1						
QLP	Quilpie	25.24	229	P	P	03 44 22.3	+1.6
	baz=26,SNR=6.2						
OUZ	Omahuta	25.30	164	*e*P	P	03 44 22.1	+1.0
	comp=Z,89nm,1.3s						
JAY	Jayapura	25.82	287	P	P	03 44 24.8	-1.3
QIS	Mount Isa	26.49	246	P	P	03 44 32.7	+0.6
	baz=27,SNR=8.3						
CMSA	Cobar Meteorol	27.37	219	P	P	03 44 40.9	+1.0
	baz=28,SNR=6.7						
URZ	Urewera	29.17	161	*e*P	P	03 44 56.3	+0.6
	comp=Z,91nm,1.2s						
URZ	Urewera	29.17	161	P	P	03 44 57.1	+1.4
	comp=Z,28nm,0.9s,baz=58,slow=6.1,SNR=7.5						
H11S2	WAKE ISLAND Hy	29.29	3	T	T	04 15 33.0	
	baz=183,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.29	3	T	T	04 15 31.9	
	baz=183,slow=76,SNR=5.2						
H11S1	WAKE ISLAND Hy	29.31	3	T	T	04 15 30.1	
	baz=183,slow=76,SNR=5.3						
BKZ	Black Stump Fm	29.81	162	*e*P	P	03 45 01.7	+0.2
	comp=Z,66nm,1.3s						
STKA	Stephens Creek	30.22	223	P	P	03 45 06.8	+1.5
	baz=30,SNR=4.3						
STKA	Stephens Creek	30.22	223	*e*P	P	03 45 04.6	-0.6
	comp=Z,3.2nm,0.9s						
STKA				PcP	PcP	03 48 07.0	+1.3
STKA	Stephens Creek	30.22	223	*e*P	P	03 45 04.6	-0.6
STKA						03 48 07.0	
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	Stephens Creek	30.22	223	P	P	03 45 06.3	+1.1
	comp=Z,6.2nm,0.7s,baz=16,slow=11,SNR=7.7						
STKA				PcP	PcP	03 48 07.0	+1.3
	comp=Z,4.1nm,0.8s,baz=55,slow=5.3,SNR=3.4						
H11N1	WAKE ISLAND Hy	30.51	3	T	T	04 16 59.0	
	baz=182,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	30.52	3	T	T	04 17 02.3	
	baz=182,slow=76,SNR=7.4						
H11N2	WAKE ISLAND Hy	30.53	3	T	T	04 17 03.7	
	baz=182,slow=76,SNR=3.9						
WRAB	Tennant Creek	31.11	250	*e*P	P	03 45 13.3	0.0
	comp=Z,38nm,1.1s						
WRAB	Tennant Creek	31.11	250	⇑*i*P	P	03 45 12.9	-0.3
WRAB				pmax	pmax		
	comp=Z,44nm,1.3s						
WB2	Warramunga Arr	31.11	250	*e*P	P	03 45 12.3	-0.9
WRA	Warramunga Arr	31.12	250	P	P	03 45 12.9	-0.4
	comp=Z,9.6nm,0.8s,baz=80,slow=9.0,SNR=18						
WRA				PcP	PcP	03 48 09.6	+1.2
	comp=Z,6.4nm,0.9s,baz=77,slow=3.1,SNR=11						
BFZ	Birch Farm	31.14	164	*e*P	P	03 45 13.6	+0.4
	comp=Z,40nm,0.9s						
THZ	Tophouse	31.40	169	*e*P	P	03 45 16.4	+0.9
	comp=Z,37nm,1.1s						
TOO	Toolangi	31.94	211	P	P	03 45 21.8	+1.5
	baz=32,SNR=6.5						
KHZ	Kahutara	32.15	169	*e*P	P	03 45 22.8	+0.8
	comp=Z,38nm,1.1s						
KDU	Kakadu	32.19	264	P	P	03 45 23.3	+0.6
	baz=32,SNR=4.6						
LTZ	Lake Taylor	32.28	170	*e*P	P	03 45 24.4	+1.1
	comp=Z,30nm,0.9s						
AS01	Alice Springs	32.42	243	*e*P	P	03 45 23.6	-1.2
AS31	Alice Springs	32.46	243	*e*P	P	03 45 24.1	-1.0
	comp=Z,10nm,0.8s						
ASAR	Alice Springs	32.46	243	P	P	03 45 24.8	-0.3
	comp=Z,36nm,0.8s,baz=68,slow=10.0,SNR=48						
ASAR				PcP	PcP	03 48 12.7	+0.7
	comp=Z,6.9nm,0.8s,baz=72,slow=2.8,SNR=13						
OXZ	Oxford	32.77	171	*e*P	P	03 45 28.2	+0.7
	comp=Z,36nm,0.9s						
HTT	Hallett	32.95	223	P	P	03 45 30.4	+1.0
	baz=33,SNR=4.7						
ARPS	Mount Arapiles	33.31	216	P	P	03 45 33.8	+1.5
	baz=34,SNR=5.8						
BBOO	Buckleboo	34.59	226	P	P	03 45 44.1	+0.6
	baz=35,SNR=6.5						
WRKA	Warakurna	37.75	243	P	P	03 46 10.6	-0.1
	baz=38,SNR=14						
FITZ	Fitzroy Crossi	39.00	255	P	P	03 46 20.6	-0.7
	baz=39,SNR=6.7						
MBWA	Marble Bar	44.83	251	*e*P	P	03 47 08.8	-0.1
	comp=Z,17nm,0.9s						
MEEK	Meekatharra	46.61	244	P	P	03 47 23.5	+0.6
	baz=47,SNR=8.1						
KLBR	Kellerberrin	48.41	237	P	P	03 47 37.1	+0.4
	baz=49,SNR=5.7						
BLDU	Ballidu	49.05	239	P	P	03 47 42.4	+0.7
	baz=49,SNR=5.3						
NWAO	Narrogin (SRO)	49.17	236	P	P	03 47 43.8	+1.2
	baz=49,SNR=6.9						
NWAO	Narrogin (SRO)	49.17	236	*e*P	P	03 47 41.8	-0.8
	comp=Z,68nm,1.1s						
NWAO	Narrogin (SRO)	49.17	236	*e*P	P	03 47 41.8	-0.8
NWAO				pmax	pmax		
	comp=Z,68nm,1.1s						
MORW	Morawa	49.30	241	P	P	03 47 44.7	+1.0
	baz=50,SNR=4.8						
MUN	Mundaring	49.78	237	P	P	03 47 47.9	+0.7
	baz=50,SNR=5.8						
KKM	Kota Kinabalu	51.71	287	*e*P	P	03 48 01.0	-1.2
	comp=Z,64nm,1.3s						
MJAR	Matsushiro Arr	53.70	333	P	P	03 48 16.2	-0.1
	comp=Z,12nm,0.8s,baz=170,slow=8.8,SNR=27						
MAJO	Matsushiro	53.70	333	*e*P	P	03 48 15.5	-0.8
	comp=Z,26nm,0.9s						
MAJO	Matsushiro	53.70	333	⇑*i*P	P	03 48 16.5	+0.1
MAJO				pmax	pmax		
	comp=Z,28nm,0.9s						
MAT	Matsushiro	53.70	333	P	P	03 48 15.8	-0.6
MJB9	Matsu-Tunnel	53.71	333	*e*P	P	03 48 15.7	-0.7
	comp=Z,28nm,0.9s						
JNU	Nakatsue	54.77	324	*e*P	P	03 48 23.6	-0.7
	comp=Z,51nm,0.8s						
JNU	Nakatsue	54.77	324	P	P	03 48 24.7	+0.5
	comp=Z,47nm,0.8s,baz=76,slow=3.7,SNR=20						
YULB	Yu-li	54.95	309	*e*P	P	03 48 25.0	-0.7
	comp=Z,22nm,1.0s						
TPUB	Ta-pu	55.42	308	*e*P	P	03 48 28.1	-1.0
	comp=Z,32nm,0.8s						
KSM	Kuching	56.08	279	*e*P	P	03 48 33.1	-0.9
	comp=Z,23nm,1.2s						
ASAJ	Asahikawa	58.57	341	P	P	03 48 52.2	+1.2
	comp=Z,39nm,0.8s,baz=211,slow=9.5,SNR=18						
SSE	Sheshan	59.50	316	P	P	03 48 58.2	+0.5
SSE				pmax	pmax		
	comp=Z,15nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1μm,12.3s						
SSE	Sheshan	59.50	316	*e*P	P	03 48 57.0	-0.6
	comp=Z,46nm,0.8s						
KSRS	Korea Array	59.57	326	P	P	03 48 59.0	+1.0
	comp=Z,7.9nm,0.9s,baz=144,slow=6.9,SNR=17						
KSAR	Wonju Array Be	59.58	326	P	P	03 48 59.0	+0.9
KSAR	Wonju Array Be	59.58	326	P	P	03 48 59.0	+0.9
KS01	Wonju Array Si	59.60	326	*e*P	P	03 48 57.9	-0.4
YSS	Yuzh-Sakhalins	61.08	343	*e*P	P	03 49 08.1	-0.1
	comp=Z,99nm,1.3s						
YSS	Yuzh-Sakhalins	61.08	343	⇓*e*P	P	03 49 09.1	+1.0
YSS				*e*		03 49 19.0	
YSS				pmax	pmax		
	comp=Z,380nm,1.4s						
NJ2	Nanjing	61.66	316	*e*P	P	03 49 13.5	+1.1
NJ2				pmax	pmax		
	comp=Z,27nm,0.8s						
MSHR	Mys Shultsa	61.78	332	*e*P	P	03 49 13.8	+0.8
USA0B	Ussuriysk Arra	62.68	334	*e*P	P	03 49 18.8	-0.2
	comp=Z,79nm,1.4s						
USRK	Ussuriysk Ar.	62.68	334	P	P	03 49 20.3	+1.2
	comp=Z,13nm,0.8s,baz=142,slow=6.1,SNR=19						
MDJ	Mudanjiang	64.08	332	P	P	03 49 29.7	+1.4
MDJ				pmax	pmax		
	comp=Z,37nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,7μm,24.5s						
PETK	Petropavlovsk-	64.14	355	*e*P	P	03 49 28.2	-0.3
PETK	Petropavlovsk-	64.14	355	*e*P	P	03 49 28.2	-0.3
PETK	Petropavlovsk-	64.14	355	P	P	03 49 29.3	+0.8
	comp=Z,7.0nm,0.8s,baz=149,slow=12,SNR=5.8						
DL2	Dalian	64.16	323	P	P	03 49 28.9	0.0
DL2				pmax	pmax		
	comp=Z,45nm,1.2s						
CN2	Changchun	65.45	329	*e*P	P	03 49 37.5	+0.3
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CASY	Casey	66.31	201	*e*P	P	03 49 42.9	+0.4
	comp=Z,38nm,1.3s						
GRNR	Gornyy	66.42	340	*e*P	P	03 49 45.1	+1.8
GRNR				pmax	pmax		
	comp=Z,38nm,1.0s						
KLR	Kul'dur	66.81	337	⇑*i*P	P	03 49 47.1	+1.3
KLR	Kul'dur	66.81	337	P	P	03 49 46.8	+1.0
	comp=Z,19nm,1.0s,baz=139,slow=5.0,SNR=23						
CHBT	CHBT	66.82	289	P	P	03 49 45.6	-1.0
	comp=Z,58nm,1.8s						
NKL	Nikolayevsk	67.24	344	*e*P	P	03 49 48.7	+0.3
NKL				pmax	pmax		
	comp=Z,36nm,0.9s						
ENH	Enshi	67.52	309	*e*P	P	03 49 50.1	-0.7
	comp=Z,37nm,1.0s						
NONG	Nongkai	67.80	295	P	P	03 49 59.0	+6.3
GYA	Guiyang	68.02	304	P	P	03 49 54.6	+0.4
GYA				pP	pP	03 50 00.8	-1.9
GYA				PP	PP	03 52 28.4	+3.8
GYA				S	S	03 58 54.2	+2.2
GYA				SKS	SKSac	03 59 50.6	-0.4
GYA	Guiyang	68.02	304	SS	SS	04 03 18.7	+3.8
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.9s						
GYA				LR	LR		
	comp=N,650nm,18.3s						
GYA				LR	LR		
	comp=E,580nm,18.5s						
GYA				LR	LR		
	comp=Z,610nm,19.0s						
BJT	Baijiatuau	68.14	321	*e*P	P	03 49 53.5	-1.0
	comp=Z,38nm,1.4s						
BJT	Baijiatuau	68.14	321	*e*P	P	03 49 53.5	-1.0
BJT				pmax	pmax		
	comp=Z,38nm,1.4s						
XAN	Xi'an	69.75	313	P	P	03 50 04.8	+0.1
XAN				pP	pP	03 50 13.7	+0.6
XAN				sP	sP	03 50 18.3	+2.0
XAN				PcP	PcP	03 50 29.0	+1.7
XAN				pmax	pmax		
	comp=Z,14nm,1.2s						
XAN				LR	LR		
	comp=E,7μm,16.3s						
XAN				LR	LR		
	comp=Z,7μm,19.5s						
XAN	Xi'an	69.75	313	*e*P	P	03 50 04.3	-0.4
	comp=Z,14nm,0.8s						
XAN	Xi'an	69.75	313	*e*P	P	03 50 04.3	-0.4
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
KMI	Kunming	70.72	302	P	P	03 50 12.8	+1.8
KMI				pmax	pmax		
	comp=Z,23nm,1.6s						
KMI	Kunming	70.72	302	*e*P	P	03 50 10.6	-0.4
	comp=Z,35nm,1.3s						
KMI	Kunming	70.72	302	*e*P	P	03 50 10.6	-0.4
KMI				pmax	pmax		
	comp=Z,35nm,1.3s						
HHC	Hu-ho-hao-te	71.49	320	*e*P	P	03 50 17.7	+2.5
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	71.69	294	P	P	03 50 17.9	+1.2
	comp=Z,2.4nm,0.5s,baz=108,slow=5.0,SNR=7.3						
CHTO	Chiang Mai	71.81	294	*e*P	P	03 50 16.9	-0.5
	comp=Z,13nm,1.3s						
CHTO	Chiang Mai	71.81	294	*e*P	P	03 50 16.9	-0.5
CHTO				pmax	pmax		
	comp=Z,13nm,1.3s						
CHTO	Chiang Mai	71.81	294	P	P	03 50 19.4	+1.9
	comp=Z,41nm,1.3s						
HIA	Hailar	72.09	331	*e*P	P	03 50 18.6	+0.1

	comp=Z,20nm,1.0s						
HIA	Hailar	72.09	331	⇑iP	P	03 50 19.3	+0.8
HIA				pmax	pmax		
	comp=Z,28nm,1.2s						
ZEA	Zeya	72.10	337	eP	P	03 50 19.2	+0.8
ZEA				pmax	pmax		
	comp=N,65nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,87nm,1.4s						
CD2	Chengdu	72.22	307	P	P	03 50 20.7	+1.0
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
SEY	Seymchan	74.34	354	P	P	03 50 31.9	+0.4
	comp=Z,1.9nm,0.7s,baz=204,slow=15,SNR=5.3						
LZH	Lanzhou	74.39	312	⇓P	P	03 50 34.2	+1.6
LZH				pP	pP	03 50 37.8	-3.6
LZH				sP	pwP	03 50 40.3	-3.7
LZH				PP	PP	03 53 18.2	-1.0
LZH				pmax	pmax		
	comp=Z,35nm,1.3s						
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
LZH				LR	LR		
	comp=N,770nm,17.3s						
LZH				LR	LR		
	comp=E,720nm,17.4s						
LZH				LR	LR		
	comp=Z,880nm,18.5s						
GAMB	Gambell	76.55	10	eP	P	03 50 43.8	-0.3
	comp=Z,16nm,0.8s						
CIT	Chita	76.88	330	eP	P	03 50 47.6	+1.3
ULN	Ulaanbaatar	77.98	324	eP	P	03 50 52.1	-0.7
	comp=Z,30nm,1.4s						
ULN				esP	pP	03 50 57.7	-4.0
ULN	Ulaanbaatar	77.98	324	⇑iP	P	03 50 54.0	+1.2
ULN				pmax	pmax		
	comp=Z,27nm,1.5s						
SVW2	Sparrevohn	78.16	18	eP	P	03 50 52.5	-0.7
	comp=Z,17nm,1.0s						
SONM	Songino Array	78.35	324	P	P	03 50 54.6	-0.1
	comp=Z,3.5nm,0.8s,baz=146,slow=7.3,SNR=11						
SONA1	Songino Array	78.35	324	eP	P	03 50 54.1	-0.7
ANM	Nome	78.49	12	eP	P	03 50 55.0	0.0
	comp=Z,18nm,1.4s						
ANM	Nome	78.49	12	eP	P	03 50 55.0	0.0
ANM				pmax	pmax		
	comp=Z,18nm,1.4s						
RSO	Redoubt South	78.58	20	eP	P	03 50 55.0	-0.8
GTA	Gaotai	78.70	314	⇓P	P	03 50 58.2	+1.3
GTA				pP	PcP	03 51 02.6	-3.1
GTA				sP	pP	03 51 05.3	-0.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,14nm,1.4s						
GTA				LR	LR		
	comp=N,4µm,17.5s						
GTA				LR	LR		
	comp=E,5µm,17.5s						
GTA				LR	LR		
	comp=Z,11µm,18.7s						
BILL	Bilibino	78.79	0	eP	P	03 50 56.2	-0.3
	comp=Z,26nm,0.9s						
BILL	Bilibino	78.79	0	⇓iP	P	03 50 56.8	+0.2
BILL				pmax	pmax		
	comp=Z,33nm,1.0s						
QSPA	South Pole Qui	79.05	180	eP	P	03 50 58.8	+0.5
	comp=Z,29nm,1.1s						
QSPA	South Pole Qui	79.05	180	P	P	03 50 59.5	+1.2
	comp=Z,16nm,1.0s,baz=27,slow=2.3,SNR=11						
SEW	Seward	79.45	21	eP	P	03 51 00.1	-0.2
	comp=Z,19nm,0.9s						
SUA	Susitna One	79.98	20	eP	P	03 51 02.7	-0.7
	comp=Z,13nm,1.0s						
BOD	Bodaibo	80.27	335	eP	P	03 51 03.8	-1.0
BOD				pmax	pmax		
	comp=Z,5.0nm,1.7s						
PMR	Palmer	80.61	20	eP	P	03 51 06.5	-0.1
	comp=Z,13nm,1.0s						
PMR	Palmer	80.61	20	eP	P	03 51 06.5	-0.1
PMR				pmax	pmax		
	comp=Z,13nm,1.0s						
GLI	Glacier Island	80.83	21	eP	P	03 51 07.3	-0.5
	comp=Z,22nm,1.0s						
CAST	Castle Rocks	80.99	18	eP	P	03 51 08.2	-0.4
	comp=Z,12nm,0.8s						
ZAK	Zakamensk	81.39	325	eP	P	03 51 08.5	-2.6
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
DIV	Divide	81.48	22	eP	P	03 51 11.0	-0.3
	comp=Z,21nm,0.8s						
KLU	Klutina	81.67	21	eP	P	03 51 11.8	-0.5
	comp=Z,12nm,0.8s						
TLY	Talaya	81.82	326	eP	P	03 51 12.7	-0.6
	comp=Z,18nm,0.9s						
TLY	Talaya	81.82	326	P	P	03 51 13.7	+0.4
	comp=Z,1.3nm,0.6s,baz=165,slow=3.8,SNR=4.3						
RDOG	Red Dog Mine	82.02	12	eP	P	03 51 13.7	-0.2
	comp=Z,20nm,0.9s						
MCK	McKinley	82.19	19	eP	P	03 51 14.7	-0.2
	comp=Z,20nm,1.3s						
MCK	McKinley	82.19	19	eP	P	03 51 14.7	-0.2
DHY	Denali Highway	82.24	20	eP	P	03 51 15.1	-0.3
	comp=Z,14nm,1.5s						
IM3	Indian Mountai	82.45	16	eP	P	03 51 15.2	-1.1
HARP	HAARP	82.55	21	eP	P	03 51 16.0	-0.8
	comp=Z,29nm,0.9s						
KCPM	Cahto Peak	82.80	47	eP	P	03 51 18.3	-0.4
	comp=Z,32nm,0.9s						
KMRM	Mail Ridge	82.89	47	eP	P	03 51 18.5	-0.7
	comp=Z,32nm,1.0s						
WRH	Wood River Hil	82.98	18	eP	P	03 51 18.5	-0.5
	comp=Z,8.4nm,0.8s						
GDXM	Geysers	83.07	48	eP	P	03 51 19.6	-0.5
	comp=Z,14nm,0.9s						
MDM	Murphy Dome	83.27	18	eP	P	03 51 20.1	-0.4
	comp=Z,12nm,0.8s						
HDA	Harding Lake	83.29	19	eP	P	03 51 19.9	-0.8
	comp=Z,25nm,0.9s						
HDA	Harding Lake	83.29	19	P	P	03 51 20.5	-0.2
	baz=227						
TCOL	CIGO, UAF Yank	83.33	18	P	P	03 51 20.4	-0.3
	baz=226						
COLA	College	83.33	18	eP	P	03 51 20.2	-0.6
	comp=Z,18nm,0.8s						
COLA	College	83.33	18	⇑iP	P	03 51 20.5	-0.3
COLA				pmax	pmax		
	comp=Z,18nm,0.9s						
RIDG	Independ'e Rid	83.53	20	eP	P	03 51 22.0	0.0
	comp=Z,17nm,1.1s						
O02D	Mt. Diablo Mer	83.54	47	P	P	03 51 23.1	+0.6
	baz=250,SNR=9.4						
IL1	Eielson Array	83.56	19	eP	P	03 51 21.1	-0.9
ILAR	Eielson Array	83.56	19	P	P	03 51 21.4	-0.6
	comp=Z,6.3nm,0.7s,baz=234,slow=5.1,SNR=34						
ILB	Eielson Array	83.56	19	eP	P	03 51 21.8	-0.2
POKR	Poker Plat Res	83.63	18	P	P	03 51 21.7	-0.6
	baz=226						
K02D	Willamette Mer	83.80	45	P	P	03 51 24.2	+0.4
	baz=249						
N02D	Trinity Center	83.87	46	P	P	03 51 25.1	+0.9
	baz=250,SNR=6.8						
M02C	Callahan	83.91	46	P	P	03 51 25.3	+0.9
	baz=250,SNR=7.1						
SCRK	Sand Creek	83.97	20	eP	P	03 51 23.7	-0.6
	comp=Z,14nm,1.0s						
YBH	Yreka Blue Hor	84.13	46	eP	P	03 51 24.9	-0.7
	comp=Z,17nm,0.9s						
YBH	Yreka Blue Hor	84.13	46	eP	P	03 51 24.9	-0.7
YBH				pmax	pmax		
	comp=Z,17nm,0.9s						
HUMO	Hull Mountain	84.26	45	eP	P	03 51 26.0	-0.1
	comp=Z,13nm,0.9s						
ORV	Oroville	84.26	48	eP	P	03 51 25.6	-0.6
	comp=Z,14nm,1.0s						
ORV	Oroville	84.26	48	eP	P	03 51 25.6	-0.6
ORV				pmax	pmax		
	comp=Z,14nm,1.0s						
O03E	Paynes Creek	84.29	47	P	P	03 51 26.7	+0.3
	baz=251,SNR=7.8						
I03D	Drain, OR	84.37	44	P	P	03 51 26.8	+0.2
	baz=249						
AFDM	Forest Hills D	84.45	49	eP	P	03 51 27.0	-0.2
	comp=Z,24nm,1.0s						
HYT	Haines Junctio	84.48	24	eP	P	03 51 26.6	-0.4
	comp=Z,11nm,0.7s						
PRP	Porcupine Dome	84.49	18	eP	P	03 51 25.9	-1.0
	comp=Z,3.0nm,0.8s						
L04D	Klamath Falls	84.58	45	P	P	03 51 27.9	0.0
	baz=250						
CMB	Columbia Colle	84.60	50	eP	P	03 51 27.3	-0.7
	comp=Z,15nm,0.9s						
CMB	Columbia Colle	84.60	50	eP	P	03 51 27.3	-0.7
CMB				pmax	pmax		
	comp=Z,15nm,0.9s						
M04C	Macdoel	84.76	46	P	P	03 51 29.3	+0.5
	baz=250,SNR=6.5						
KNGR	Kungurtug, Tuv	84.79	324	⇑iP	P	03 51 29.0	+0.3
VES	Vestal, Richgr	84.92	52	P	P	03 51 29.6	+0.1
	baz=253,SNR=5.4						
J04D	Umpqua Nationa	85.06	44	P	P	03 51 30.8	+0.4
	baz=250						
K04D	Chiloquin, OR	85.10	45	P	P	03 51 30.5	+0.1
	baz=250						
BEKR	Beckworth	85.20	48	eP	P	03 51 30.0	-1.1
	comp=Z,14nm,0.9s						
MWC	Mount Wilson	85.26	54	eP	P	03 51 29.6	-2.0
	comp=Z,14nm,0.8s						
MWC	Mount Wilson	85.26	54	eP	P	03 51 29.6	-2.0
MWC				pmax	pmax		
	comp=Z,14nm,0.8s						
ISA	Isabella, Lake	85.35	53	eP	P	03 51 30.8	-1.0
	comp=Z,16nm,1.0s						
ISA	Isabella, Lake	85.35	53	eP	P	03 51 30.8	-1.0
ISA				pmax	pmax		
	comp=Z,16nm,1.0s						
ISA	Isabella, Lake	85.35	53	P	P	03 51 31.7	-0.1
	baz=253,SNR=8.2						
WAKR	Walker	85.46	50	eP	P	03 51 31.8	-0.7
	comp=Z,39nm,1.4s						
MDPB	Devils Postpil	85.46	50	eP	P	03 51 31.8	-0.8
	comp=Z,22nm,1.0s						
EDW2	Edwards Air Fo	85.50	53	P	P	03 51 33.1	+0.5
	baz=253,SNR=11						
BFSC	Mount Baldy Ra	85.58	54	P	P	03 51 33.1	0.0
	baz=254,SNR=7.9						
DAWY	Dawson	85.62	21	eP	P	03 51 31.8	-0.7
	comp=Z,11nm,0.8s						
MLAC	Mammoth, Mammo	85.65	51	P	P	03 51 33.8	+0.3
	baz=253						
109C	Camp Elliot, M	85.66	55	P	P	03 51 33.6	+0.3
	baz=254						
J05D	Fort Rock, OR	85.68	45	P	P	03 51 34.1	+0.7
	baz=251						
YERR	Yerington	85.75	49	eP	P	03 51 33.2	-0.7
	comp=Z,7.7nm,1.0s						
MURC	Murrieta	85.78	55	P	P	03 51 34.2	+0.2
	baz=254						
PAHR	Pah Rah Range	85.86	48	eP	P	03 51 33.2	-1.2
	comp=Z,15nm,1.0s						
CWC	Cottonwood Cre	85.88	52	P	P	03 51 34.6	0.0
	baz=253						
E04D	Cinebar	85.90	41	P	P	03 51 35.1	+0.9
	baz=250						
D03D	Eldon	85.91	40	P	P	03 51 34.9	+0.7
	baz=249						
LRMC	Laurel Mtn Rad	85.91	53	P	P	03 51 34.9	+0.2
	baz=254						
TIXI	Tiksi	85.92	349	ceP	P	03 51 33.7	0.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIN	Tinemaha, Big	85.94	51	P	P	03 51 35.4	+0.6
	baz=253						
I05D	Terrebonne, OR	85.95	44	P	P	03 51 35.0	+0.4
	baz=251						
PINE	Pine Mountain	86.05	44	eP	P	03 51 34.8	-0.5
	comp=Z,21nm,1.0s						
RYN	Ryan	86.18	50	eP	P	03 51 35.5	-0.5
	comp=Z,12nm,1.0s						
DAC	Darwin (Calif)	86.21	52	eP	P	03 51 35.6	-0.6
	comp=Z,14nm,1.1s						
DAC	Darwin (Calif)	86.21	52	eP	P	03 51 35.6	-0.6
DAC				pmax	pmax		
	comp=Z,14nm,1.1s						
MONP2	Monument Peak	86.21	56	P	P	03 51 36.9	+0.6
	baz=254,SNR=11						
MPMC	Manual Prospec	86.23	52	P	P	03 51 36.4	+0.1
	baz=254,SNR=8.5						
G05D	Wamic, OR	86.27	43	P	P	03 51 36.5	+0.3
	baz=250						
NV01	Mina Array Sit	86.28	50	eP	P	03 51 35.9	-0.7
NVAR	Mina Array Bea	86.28	50	P	P	03 51 36.7	+0.1
	comp=Z,12nm,0.9s,baz=231,slow=8.2,SNR=28						
RRX	Edison Barstow	86.28	54	P	P	03 51 36.7	+0.3
	baz=254						
PFO	Pinyon Flats O	86.37	55	P	P	03 51 37.3	+0.3
	baz=254,SNR=6.2						
F05D	White Salmon	86.39	42	P	P	03 51 36.9	+0.3
	baz=250						
NV11	Mina Array Sit	86.39	50	eP	P	03 51 36.1	-0.9
	comp=Z,1.6nm,1.0s						
IKP	In-Ko-Pah, Jac	86.40	56	P	P	03 51 37.8	+0.7
	baz=255						
D05A	Enumclaw	86.49	41	eP	P	03 51 36.5	-0.6
	comp=Z,85nm,1.5s						
GSC	Goldstone, Bar	86.55	53	eP	P	03 51 37.2	-0.6
	comp=Z,20nm,1.4s						
GSC	Goldstone, Bar	86.55	53	eP	P	03 51 37.2	-0.6
GSC				pmax	pmax		
	comp=Z,20nm,1.4s						
GSC	Goldstone, Bar	86.55	53	P	P	03 51 37.9	+0.1
	baz=254,SNR=6.1						
GRAC	Grapevine Rang	86.59	51	P	P	03 51 38.6	+0.8
	baz=254,SNR=9.9						
KVN	Kaiserville	86.62	49	eP	P	03 51 37.9	-0.3
	comp=Z,10nm,0.9s						
KVN	Kaiserville	86.62	49	eP	P	03 51 37.9	-0.3
KVN				pmax	pmax		
	comp=Z,11nm,0.9s						
SWSC	Sam W. Stewart	86.73	56	P	P	03 51 39.0	+0.4
	baz=255,SNR=6.5						
B05A	Bryant	86.79	40	P	P	03 51 39.2	+0.7
	baz=250						
HEC	Hector,Ludlow	86.80	54	P	P	03 51 39.2	+0.2
	baz=254						
FURC	Furnace Creek,	86.83	52	P	P	03 51 39.5	+0.5
	baz=254,SNR=7.7						
BELC	Belle Mtn. Jos	86.84	55	P	P	03 51 39.7	+0.3
	baz=255,SNR=16						
I07A	Izee	87.12	44	eP	P	03 51 39.9	-0.5
	comp=Z,16nm,1.0s						
SHOC	Shoshone, Teco	87.13	53	P	P	03 51 40.9	+0.4
	baz=254						
BC3	Big Chuckawall	87.19	55	P	P	03 51 41.4	+0.5
	baz=255,SNR=7.8						
WVOR	Wild Horse Val	87.22	46	eP	P	03 51 40.5	-0.4
	comp=Z,25nm,1.3s						
WVOR	Wild Horse Val	87.22	46	eP	P	03 51 40.5	-0.4
WVOR				pmax	pmax		
	comp=Z,25nm,1.3s						
TUQ	Turquoise Moun	87.28	53	P	P	03 51 41.7	+0.2
	baz=255						
GMRC	Granite Mounta	87.32	54	P	P	03 51 41.7	+0.1
	baz=255,SNR=8.4						
F07A	Phinny Hill Vi	87.41	42	eP	P	03 51 40.8	-0.7
	comp=Z,13nm,1.1s						
TPNV	Topopah Spring	87.43	52	eP	P	03 51 41.3	-0.8
	comp=Z,14nm,1.3s						
TPNV	Topopah Spring	87.43	52	eP	P	03 51 41.3	-0.8
TPNV				pmax	pmax		
	comp=Z,14nm,1.3s						
TPNV	Topopah Spring	87.43	52	P	P	03 51 42.7	+0.6
	baz=254						
C06D	Leavenworth	87.44	40	P	P	03 51 42.2	+0.5
	baz=251						
GLA	Glamis	87.55	56	eP	P	03 51 41.9	-0.7
	comp=Z,25nm,0.9s						
GLA	Glamis	87.55	56	eP	P	03 51 41.9	-0.7
GLA				pmax	pmax		
	comp=Z,25nm,0.9s						
GLA	Glamis	87.55	56	P	P	03 51 43.7	+1.1
	baz=255,SNR=8.2						
IRM	Iron Mountain	87.57	55	P	P	03 51 43.3	+0.5
	baz=255,SNR=12						
J08A	Circle Bar Ran	87.61	45	eP	P	03 51 42.2	-0.6
	comp=Z,16nm,1.0s						
HAWA	Hanford	87.82	42	eP	P	03 51 43.1	-0.5
	comp=Z,22nm,1.3s						
LDFC	Landfair	87.83	54	eP	P	03 51 43.8	-0.3
	comp=Z,56nm,1.3s						
G08A	Pilot Rock	87.86	43	eP	P	03 51 43.5	-0.5
	comp=Z,21nm,1.1s						
Y12C	Blythe	87.97	55	eP	P	03 51 44.6	+0.1
	comp=Z,22nm,1.0s						
Y12C	Blythe	87.97	55	P	P	03 51 45.2	+0.7
	baz=256,SNR=10						
SHPR	Sheep Range	88.16	52	eP	P	03 51 45.6	-0.1
	comp=Z,11nm,1.2s						
R11A	Troy Canyon, C	88.31	51	eP	P	03 51 45.5	-0.8
	comp=Z,15nm,1.4s						
R11A	Troy Canyon, C	88.31	51	P	P	03 51 46.6	+0.2
	baz=255,SNR=11						
PDMCI	Parker Dam,Lak	88.41	55	P	P	03 51 47.3	+0.7
	baz=256,SNR=11						
B08A	Colville Reser	88.57	40	eP	P	03 51 46.6	-0.5
	comp=Z,11nm,1.3s						
WMQ	Urumqi	88.74	315	eP	P	03 51 48.6	+0.5
WMQ				pP	pP	03 51 54.2	-2.9
WMQ				sP	pwP	03 51 57.2	-2.4
WMQ				pmax	pmax		
	comp=Z,31nm,1.1s						
WMQ				LR	LR		
	comp=N,10µm,17.9s						
WMQ				LR	LR		
	comp=E,12µm,17.9s						
WMQ				LR	LR		
	comp=Z,8µm,21.9s						
BMO	Blue Mountains	88.85	44	eP	P	03 51 47.7	-0.9
	comp=Z,6.6nm,1.0s						
BMO	Blue Mountains	88.85	44	eP	P	03 51 47.7	-0.9
BMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
214A	Organ Pipe Nat	88.93	57	P	P	03 51 50.3	+1.1
	baz=256,SNR=15						
ELK	Elko	89.20	48	eP	P	03 51 50.1	-0.4
	comp=Z,10.0nm,1.4s						
ELK	Elko	89.20	48	eP	P	03 51 50.1	-0.4
ELK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
F10A	Beach Ranch, E	89.23	43	eP	P	03 51 49.9	-0.4
	comp=Z,14nm,1.1s						
Y14A	Wickenburg	89.24	55	eP	P	03 51 50.4	-0.3
	comp=Z,12nm,1.1s						
MFID	Camas Ranch	89.48	46	eP	P	03 51 51.4	-0.2
	comp=Z,11nm,1.1s						
SLBS	Sierra La Lagu	89.59	66	eP	P	03 51 52.1	-0.4
	comp=Z,23nm,1.1s						
PSUT	Pine Spring	89.67	51	eP	P	03 51 52.6	-0.1
	comp=Z,9.6nm,1.1s						
LCMT	Little Creek M	89.78	52	eP	P	03 51 52.9	-0.3
	comp=Z,16nm,1.1s						
CCUT	Cedar City	89.81	52	eP	P	03 51 53.0	-0.5
	comp=Z,14nm,1.1s						
HSIG		89.84	61	eP	P	03 51 52.8	-0.7
	comp=Z,45nm,1.5s						
NEW	Newport	89.95	41	eP	P	03 51 52.5	-1.1
	comp=Z,6.4nm,1.0s						
NEW	Newport	89.95	41	eP	P	03 51 52.5	-1.1
NEW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NEW	Newport	89.95	41	P	P	03 51 54.0	+0.4
	baz=254						
SZCU	Shurtz Canyon	90.04	52	eP	P	03 51 54.4	-0.2
	comp=Z,18nm,1.2s						
KNB	Kanab	90.11	52	eP	P	03 51 54.0	-0.8
	comp=Z,31nm,1.3s						
KNB	Kanab	90.11	52	eP	P	03 51 54.0	-0.8
KNB				pmax	pmax		
	comp=Z,31nm,1.3s						
U15A	North Rim	90.38	53	eP	P	03 51 55.7	-0.5
	comp=Z,24nm,1.0s						
HLID	Hailey	90.51	46	eP	P	03 51 56.2	-0.3
	comp=Z,9.9nm,1.0s						
HLID	Hailey	90.51	46	P	P	03 51 57.3	+0.8
	baz=255						
DGZ	Jazzator, Alta	90.56	321	d iP	P	03 51 56.2	-0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PKCU	Pink Cliffs	90.60	52	eP	P	03 51 56.6	-0.7
	comp=Z,34nm,1.2s						
X16A	Lo Mia Camp, P	90.61	55	eP	P	03 51 56.3	-0.9
	comp=Z,13nm,1.0s						
TUC	Tucson	90.69	57	eP	P	03 51 56.9	-0.6
	comp=Z,16nm,1.3s						
TUC	Tucson	90.69	57	eP	P	03 51 56.9	-0.6
TUC				pmax	pmax		
	comp=Z,16nm,1.3s						
TUC	Tucson	90.69	57	P	P	03 51 58.5	+1.0
	baz=258						
MTPU	Mount Pierson	90.83	52	eP	P	03 51 57.5	-0.9
	comp=Z,16nm,1.0s						
DUG	Dugway, Tooele	90.86	49	eP	P	03 51 57.3	-0.9
	comp=Z,3.6nm,0.9s						
DUG	Dugway, Tooele	90.86	49	eP	P	03 51 57.3	-0.9
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DUG	Dugway, Tooele	90.86	49	P	P	03 51 58.4	+0.2
	baz=256						
BGU	Big Grassy Mou	90.87	49	eP	P	03 51 57.5	-0.8
	comp=Z,8.7nm,1.1s						
WUAZ	Wupatki	90.91	54	eP	P	03 51 57.7	-0.8
	comp=Z,17nm,1.0s						
WUAZ	Wupatki	90.91	54	P	P	03 51 59.5	+1.0
	baz=257						
MSU	Marysvale	90.95	51	eP	P	03 51 58.7	0.0
MSU	Marysvale	90.95	51	eP	P	03 51 58.7	0.0
HVU	Hansel Valley	91.25	48	eP	P	03 51 59.5	-0.4
	comp=Z,18nm,1.0s						
HVU	Hansel Valley	91.25	48	eP	P	03 51 59.6	-0.4
HVU				pmax	pmax		
	comp=Z,18nm,1.0s						
NLU	North Lily Min	91.35	50	eP	P	03 52 00.5	-0.1
	comp=Z,12nm,1.0s						
MSO	Missoula	91.65	43	P	P	03 52 01.4	-0.2
	baz=256						
MPU	Maple Canyon	91.70	50	eP	P	03 52 02.0	-0.1
	comp=Z,7.4nm,1.2s						
SYO	Syowa Base	91.75	197	⇑eX	P	03 52 13.6	+12
Q16A	Castle Valley	91.81	51	eP	P	03 52 02.6	-0.1
	comp=Z,17nm,1.2s						
MCMT	McKenzie Canyo	91.91	45	eP	P	03 52 02.6	-0.5
JLU	Jordanelle	91.96	49	eP	P	03 52 02.8	-0.6
	comp=Z,10.0nm,1.1s						
TCUT	Toone Canyon	92.11	49	eP	P	03 52 04.3	+0.3
	comp=Z,19nm,1.1s						
W18A	Petrified Fore	92.13	55	P	P	03 52 04.7	+0.5
	baz=258						
DLMT	Dillon	92.21	44	eP	P	03 52 03.8	-0.5
	comp=Z,24nm,1.0s						
WALA	Waterton Lakes	92.21	41	eP	P	03 52 03.8	-0.4
	comp=Z,25nm,1.4s						
P17A	Butcher Ranch,	92.25	50	eP	P	03 52 04.0	-0.6
	comp=Z,10nm,1.4s						
LRM	Limekiln Ridge	92.41	44	eP	P	03 52 06.0	+0.6
BOZ	Bozeman (W)	92.92	44	eP	P	03 52 07.0	-0.6
	comp=Z,14nm,1.1s						
BOZ	Bozeman (W)	92.92	44	eP	P	03 52 07.0	-0.6
BOZ				pmax	pmax		
	comp=Z,14nm,1.1s						
BOZ	Bozeman (W)	92.92	44	P	P	03 52 08.2	+0.6
	baz=257						
FXWY	Fox Creek	92.92	46	eP	P	03 52 07.4	-0.4
	comp=Z,6.3nm,0.9s						
TPAW	Teton Pass	92.95	46	eP	P	03 52 07.4	-0.6
	comp=Z,5.7nm,1.4s						
HRY	Holter Researc	93.03	43	eP	P	03 52 07.7	-0.3
IMW	Indian Meadow	93.04	46	eP	P	03 52 08.4	0.0
	comp=Z,6.3nm,1.0s						
MOOW	Moose Ponds	93.15	46	eP	P	03 52 08.7	-0.1
	comp=Z,3.7nm,1.1s						
MK01	Makanchi Array	93.16	317	eP	P	03 52 07.5	-1.1
MK31	Makanchi Array	93.17	317	eP	P	03 52 08.2	-0.4
MKAR	Makanchi Array	93.17	317	eP	P	03 52 07.9	-0.6
	comp=Z,39nm,0.8s						
MKAR	Makanchi Array	93.17	317	P	P	03 52 08.6	+0.1
	comp=Z,6.0nm,0.8s,baz=101,slow=6.0,SNR=24						
YMR	Madison River	93.18	45	eP	P	03 52 08.2	-0.8
	comp=Z,6.5nm,1.0s						
121A	Cookes Peak, D	93.22	58	P	P	03 52 10.2	+0.9
	baz=259						
LOHW	Long Hollow	93.22	46	eP	P	03 52 08.2	-0.9
	comp=Z,4.9nm,1.3s						
ZAA0	Zalesovo Array	93.24	324	eP	P	03 52 07.5	-1.1
	comp=Z,8.7nm,1.1s						
ZALV	Zalesovo Beam	93.24	324	eP	P	03 52 07.5	-1.1
ZALV	Zalesovo Beam	93.24	324	eP	P	03 52 07.6	-1.1
ZALV	Zalesovo Beam	93.24	324	P	P	03 52 07.7	-0.9
	comp=Z,5.9nm,0.9s,baz=108,slow=4.8,SNR=15						
PV09	Paradox Valley	93.28	52	eP	P	03 52 09.5	-0.1
PV14	Lion Creek, Pa	93.34	52	eP	P	03 52 09.7	-0.2
	comp=Z,3.5nm,0.8s						
PV23	Carpenter Ridg	93.36	52	eP	P	03 52 09.3	-0.6

	comp=Z,6.6nm,0.7s						
MAKZ	Makanchi	93.39	317	*e*P	P	03 52 09.2	-0.3
	comp=Z,11nm,1.0s						
MAKZ	Makanchi	93.39	317	*e*P	P	03 52 09.2	-0.3
MAKZ				pmax	pmax		
	comp=Z,11nm,1.0s						
H17A	Grant Village	93.40	46	*e*P	P	03 52 09.3	-0.7
	comp=Z,4.8nm,0.9s						
H17A	Grant Village	93.40	46	P	P	03 52 11.5	+1.5
	baz=258						
PV12	Saucer Basin,	93.50	52	*e*P	P	03 52 09.4	-1.2
	comp=Z,6.0nm,1.0s						
BW06	Boulder Array	93.80	47	*e*P	P	03 52 10.7	-1.1
BW06	Boulder Array	93.80	47	P	P	03 52 11.8	0.0
	baz=259						
PD31	Pinedale Array	93.80	47	*e*P	P	03 52 11.8	0.0
PDAR	Pinedale Array	93.80	47	P	P	03 52 11.2	-0.7
	comp=Z,2.5nm,0.9s,baz=258,slow=2.9,SNR=13						
NVS	Novosibirsk	94.35	325	*i* P	P	03 52 14.0	+0.3
EGMT	Eagleton	94.68	42	*e*P	P	03 52 15.6	0.0
	comp=Z,15nm,1.2s						
EGMT	Eagleton	94.68	42	P	P	03 52 15.7	+0.2
	baz=259						
ANMO	Albuquerque	94.74	55	*e*P	P	03 52 16.2	-0.1
	comp=Z,4.7nm,1.1s						
ANMO	Albuquerque	94.74	55	*ce*P	P	03 52 16.8	+0.5
ANMO				pmax	pmax		
	comp=Z,16nm,3.2s						
ANMO	Albuquerque	94.74	55	P	P	03 52 16.7	+0.4
	baz=260						
MNTX	Cornudas Mount	95.07	59	*e*P	P	03 52 17.6	0.0
	comp=Z,3.0nm,1.0s						
MNTX	Cornudas Mount	95.07	59	P	P	03 52 18.0	+0.3
	baz=260						
YKA	Yellowknife Ar	95.08	27	P	P	03 52 15.4	-1.5
	comp=Z,2.1nm,0.7s,baz=256,slow=4.6,SNR=22						
YKB5	Yellowknife Ar	95.08	27	*e*P	P	03 52 15.7	-1.2
NRIK	Noril'sk	95.89	340	P	P	03 52 19.8	-0.7
	comp=Z,1.9nm,0.3s,baz=224,slow=10.0,SNR=4.4						
TX31	Lajitas Ar. Si	96.15	61	*e*P	P	03 52 22.6	-0.1
TXAR	Lajitas Array	96.15	61	P	P	03 52 22.0	-0.7
	comp=Z,0.6nm,0.7s,baz=227,slow=6.2,SNR=7.9						
TXAR				PP	PP	03 56 15.0	-1.1
	comp=Z,2.9nm,1.2s,baz=246,slow=5.3,SNR=10						
ISCO	Idaho Springs	96.20	51	P	P	03 52 23.1	+0.1
	baz=261						
KURK	Kurchatov	96.31	320	P	P	03 52 22.2	-0.5
KURK	Kurchatov	96.31	320	P	P	03 52 22.2	-0.5
KURBB	Kurchatov Arra	96.35	320	P	P	03 52 22.2	-0.7
	comp=Z,0.3nm,0.3s,baz=95,slow=3.4,SNR=4.3						
KSH	Kashi	96.37	309	P	P	03 52 27.0	+3.5
KSH				pmax	pmax		
	comp=Z,4μm,12.0s						
LAO	LASA Array	96.82	44	P	P	03 52 26.0	+0.7
	baz=261						
SNAA	Sanae	97.18	184	P	Pdif	03 52 27.0	+0.4
VNA2	Neumayer--Watz	98.16	182	P	P	03 52 30.6	-0.3
AMTX	Amarillo	98.61	56	Pdiff	P	03 52 33.4	-0.3
	baz=263						
ABTX	Abilene, Hawle	100.02	59	Pdiff	Pdif	03 52 39.7	-0.2
	baz=263						
FFC	Flin Flon	100.41	36	*i* P	Pdif	03 52 41.7	+0.6
OBN	Obninsk	120.51	329	*e*PKIKP	PKPdf	03 57 44.7	-0.9
OBN				*e*		03 59 10.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LPAZ	La Paz	120.60	116	*e*PKPdf	PKPdf	03 57 46.8	-0.9
LPAZ	La Paz	120.60	116	*e*PKIKP	PKPdf	03 57 46.8	-0.9
LPAZ	La Paz	120.60	116	PKP	PKiKP	03 57 48.3	+0.5
	comp=Z,2.2nm,0.7s,baz=90,slow=25,SNR=9.9						
KIV	Kislovodsk	120.87	315	*e*PKIKP	PKPdf	03 57 44.2	-2.6
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CPUP	Villa Florida	124.39	133	*e*PKPdf	PKPdf	03 57 53.9	-0.1
CPUP	Villa Florida	124.39	133	*e*PKIKP	PKPdf	03 57 53.9	-0.1
CPUP	Villa Florida	124.39	133	PKP	PKiKP	03 57 54.5	+0.2
	comp=Z,7.8nm,1.1s,baz=346,slow=2.1,SNR=8.7						
BOSA	Boshof	124.90	223	*e*PKPdf	PKiKP	03 57 55.3	-0.2
BOSA	Boshof	124.90	223	*e*PKIKP	PKiKP	03 57 55.3	-0.2
BOSA	Boshof	124.90	223	PKP	PKiKP	03 57 56.3	+0.9
	comp=Z,8.6nm,0.7s,baz=151,slow=1.5,SNR=19						
SDV	Santo Domingo	124.91	87	*e*PKPdf	PKPdf	03 57 55.5	0.0
AKASG	Malin Array Be	126.56	327	PKP	PKPdf	03 57 57.4	0.0
	comp=Z,0.4nm,0.4s,baz=54,slow=2.2,SNR=7.3						
AK11	Malin Array Si	126.60	327	*e*PKPdf	PKPdf	03 57 57.5	+0.1
LBTB	Lobatse	126.90	227	*e*PKPdf	PKPdf	03 57 58.9	-0.1
LBTB	Lobatse	126.90	227	*e*PKIKP	PKPdf	03 57 58.9	-0.1
BRTR	Keskin Array B	128.60	313	PKP	PKPdf	03 58 01.8	-0.1
	comp=Z,1.7nm,1.1s,baz=94,slow=5.0,SNR=5.2						
BRTR				PP	PP	04 00 08.0	+0.5
	comp=Z,2.1nm,1.1s,baz=48,slow=2.1,SNR=3.9						
HUMP	Col San Antoni	130.09	76	*e*PKPdf	PKPdf	03 58 05.0	0.0
VYHS	Vyhne	133.28	330	*e*PP	PP	04 00 37.4	+0.4
CLL	Collm	133.85	336	*e*PKPdf	PKiKP	03 58 13.0	+0.5
CLL	Collm	133.85	336	*e*PKIKP	PKiKP	03 58 13.0	+0.5
GERES	GERESS Array B	135.44	333	PKIKP	PKPdf	03 58 15.0	+0.6
GERES	GERESS Array B	135.44	333	PKP	PKPdf	03 58 15.0	+0.6
	comp=Z,1.3nm,0.8s,baz=329,slow=4.7,SNR=5.9						
KEST	Kesra	147.09	322	PKPbc	PKPab	03 58 38.6	-0.7
	comp=Z,12nm,0.7s,baz=60,slow=1.7,SNR=11						
ES19	SONSECA Array	149.81	343	*e*PKPdf	PKPdf	03 58 40.2	+0.3
ESDC	Sonseca Array	149.85	343	PKPbc	PKPbc	03 58 45.0	+0.2
	comp=Z,4.6nm,1.1s,baz=63,slow=1.8,SNR=8.3						
TOA0	Torodi Ar. Sit	163.84	279	*e*PKPdf	PKPdf	03 58 58.5	+0.1
TORD	Torodi Ar. Bea	163.84	279	PKP	PKPdf	03 58 58.5	+0.1
	comp=Z,3.7nm,1.0s,baz=356,slow=4.4,SNR=13						
DBIC	Dimbokro	169.40	247	PKP	PKPdf	03 59 02.9	+0.3
	comp=Z,4.9nm,0.9s,baz=104,slow=3.5,SNR=4.1						

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*ISK **06** 03:39:45.3, 37°.85N×29°.32E, h5^{km}, ML3.6/46*
*ISCJB **06** 03:39:46.9±0.5, 37°.87N±0°.02×29°.32E±0°.02, h10^{km}±3^{km}, mb3.7/2, Error ellipse: s-maj=3.0km s-min=2.5km az=169.6*
*IDC **06** 03:39:46.2±1.7, 37°.78N×29°.39E, h0^{km}, mb3.7/2, mb1 3.6/3, mb1mx3.3/39, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=147.5km s-min=23.2km az=146.0*
*DDA **06** 03:39:46.2, 37°.89N×29°.34E, h23^{km}±1^{km}, ML3.6*
*THE **06** 03:39:46.5, 37°.90N×29°.37E, h3^{km}±2^{km}, ML3.1/4, Error ellipse: s-maj=2.1km s-min=0.6km az=13.0*
ISC 06 03:39:46.7±1.1**, 37°.88N**±0°.02×**29°.38E**±0°.02**, h9**^{km}±8^{km}**, n112,** σ**1^s.30**/127**, 9C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.30	246	PG	Pg	03 39 52.3	-0.4
DENT				SG	Sg	03 39 55.8	-0.9
KHL	Karahalli	0.46	15	PG	Pg	03 39 55.7	0.0
TAVA	DENIZLI_Tavas	0.55	222	*i* P	Pg	03 39 57.2	-0.2
TAVA				*i* S	Sb	03 40 06.0	-0.6
TAVA				IAML_P			
	comp=Z,13μm,0.1s						
BRDR	BURDUR-Merkez	0.57	108	*i* P	Pb	03 39 58.0	-0.9
BRDR				*i* S	Sn	03 40 08.4	-2.3
KZIL	AFYON_Kizioren	0.71	58	*i* P	Pg	03 40 00.6	+0.1
KZIL				*i* S	Sn	03 40 13.4	-0.8
KULA	Kula-Manisa	0.85	319	PG	Pg	03 40 02.9	-0.2
KULA	Kula-Manisa	0.85	319	P	Pg	03 40 02.5	-0.6
KULA				S	Sg	03 40 15.4	+1.2
MANT	Manisa	0.89	314	*i* P	Pg	03 40 03.4	-0.4
MANT				*i* S	Sg	03 40 16.5	+1.0
ISP	Isparta	0.91	93	PG	Pb	03 40 04.5	-0.2
ISP	Isparta	0.91	93	⇓*i*P	Pb	03 40 04.0	-0.7
ISP				S	Sn	03 40 18.4	-0.6
ISP	Isparta	0.91	93	P	Pg	03 40 03.7	-0.5
ISP				S	Sn	03 40 17.8	-1.2
BCK	Bucak	1.05	113	PN	Pn	03 40 07.2	-0.4
BAGO	Egridir - ISPA	1.12	84	*i* P	Pn	03 40 08.6	-0.1
SHUT	Suhut-Afyon	1.15	54	PN	Pn	03 40 09.2	+0.2
SHAP	Saphane-Kutahy	1.15	354	PN	Pb	03 40 08.5	-0.3
GEDZ	Gediz	1.17	1	PN	Pb	03 40 08.6	-0.5
KORT	Korkueli	1.17	138	PN	Pn	03 40 09.1	-0.2
KORT	Korkueli	1.17	138	*i* P	Pn	03 40 10.3	+0.9
KORT				IAML_P			
	comp=Z,2μm,0.2s						
AYDB	Zeytinkoy-Aydi	1.18	274	PN	Pb	03 40 08.5	-0.8
TURN	Turunc	1.18	212	PN	Pg	03 40 12.9	+3.6
TURN	Turunc	1.18	212	*i* P	Pg	03 40 13.9	+4.6
TURN				IAML_P			
	comp=Z,7μm,0.5s						
DALY	Dalyan (Mula)	1.20	209	PN	Pb	03 40 08.7	-0.9
DALY	Dalyan (Mula)	1.20	209	*i* P	Pb	03 40 09.5	-0.2
DALY				IAML_P			
	comp=Z,7μm,0.3s						
AYDN	Tasoluk	1.21	260	*i* P	Pn	03 40 09.3	-0.5
AYDN				IAML_P			
	comp=Z,11μm,0.2s						
ELL	Elmali	1.21	159	PN	Pg	03 40 09.2	-0.7
FETY	Fethiye	1.26	191	PN	Pn	03 40 09.9	-0.6
FETY	Fethiye	1.26	191	P	Pn	03 40 09.4	-1.1
FETY	Fethiye	1.26	191	*i* P	Pg	03 40 10.7	-0.3
DEMI	Demirci	1.27	336	*i* P	Pn	03 40 11.1	+0.4
DEMI				*i* S	Sb	03 40 25.5	-1.9
SUTC	Sutluce-Ispart	1.35	107	PN	Pg	03 40 12.9	+0.3
MLSB	Milas	1.40	246	PN	Pn	03 40 11.8	-0.6
ANTB	Antalya	1.41	133	PN	Pg	03 40 13.3	-0.5
GOMA	Golmarmara-Man	1.42	306	PN	Pn	03 40 13.1	+0.5
BOLV	Bolvadin	1.50	55	*i* P	Pb	03 40 14.7	0.0
BOLV				IAML_P			
	comp=Z,16μm,0.3s						
KEMT	Kemer-ANTALYA	1.58	143	PN	Pb	03 40 15.6	-0.5
AKHS	Akhisar	1.58	310	*i* P	Pn	03 40 14.6	-0.3
AKHS				IAML_P			
	comp=Z,3μm,0.2s						
BBRN	Bozburun-Marma	1.59	222	PN	Pn	03 40 14.8	-0.2
AKAS	Kas	1.65	174	PN	Pb	03 40 16.3	-1.1
AKAS	Kas	1.65	174	*i* P	Pg	03 40 19.5	+1.1
GCAM	G?zelcaml?	1.71	265	PN	Pn	03 40 15.9	-0.7
BDRM	Kayabasi	1.74	243	*i* P	Pn	03 40 17.1	+0.1
BDRM				IAML_P			
	comp=Z,2μm,0.3s						
DATC	Datca-Mugla	1.77	231	PN	Pn	03 40 17.3	-0.1
DST	Dursunbey	1.82	341	PN	Pn	03 40 19.4	+1.1
DOGA	KONYA_Doganhis	1.83	82	*i* P	Pb	03 40 19.8	-0.5
YKAV	Yalikavak-Bodr	1.83	246	PN	Pn	03 40 18.3	0.0
BODT	Bodrum	1.83	244	PN	Pn	03 40 18.3	-0.1
BODT	Bodrum	1.83	244	P	Pn	03 40 18.0	-0.4
BODT				S	Sn	03 40 41.5	-0.2
DAT	Datca	1.83	232	PN	Pn	03 40 18.6	+0.1
DAT	Datca	1.83	232	*i* P	Pn	03 40 19.3	+0.9
DURS	Dursunbey	1.86	338	*i* P	Pn	03 40 19.4	+0.6
DURS				IAML_P			
	comp=Z,3μm,0.1s						
BLCB	Balcova	1.91	286	PN	Pn	03 40 18.9	-0.5
ARG	Arkhangelos	1.94	211	PN	Pn	03 40 19.9	+0.1
ARG	Arkhangelos	1.94	211	P	Pn	03 40 19.7	-0.1
STEP	BALIKESIR_Sava	1.98	320	*i* P	Pn	03 40 20.6	+0.2
STEP				IAML_P			
	comp=Z,1μm,0.3s						
SMG	Samos	2.02	266	P	Pn	03 40 20.1	-0.8
SMG				S	Sn	03 40 44.8	-1.4
BALB	Balikesir	2.11	327	PN	Pn	03 40 23.5	+1.3
BORA	Eskisehir	2.17	22	PN	Pb	03 40 24.8	-1.4
BORA	Eskisehir	2.17	22	*i* P	Pn	03 40 23.3	+0.3
ORLT	Orhaneli	2.20	350	PN	Pn	03 40 24.6	+1.2
FOCM	Foa	2.24	293	PN	Pn	03 40 24.6	+0.7
URLA	Izmir	2.25	283	PN	Pn	03 40 24.4	+0.4
KDHN	Kadinhani	2.25	73	*i* P	Pb	03 40 25.9	-1.7
ZEY	zmir	2.30	280	*i* P	Pn	03 40 24.6	-0.1
SVRH	Sivrihisar-ESK	2.30	46	PN	Pb	03 40 26.6	-1.8
AUSIV	SIVRIHISAR	2.30	47	PN	Pb	03 40 26.9	-1.6
BALY	Balya	2.31	324	*i* P	Pn	03 40 25.5	+0.5
CAVI	Cavuskoy	2.35	9	PN	Pn	03 40 27.2	+1.7
IZI	Iznik	2.46	2	PN	Pn	03 40 28.6	+1.6
KCTX	Karacabey (Bur	2.51	342	PN	Pn	03 40 29.3	+1.6
MDNY	Mudanya-Bursa	2.52	351	PN	Pn	03 40 29.5	+1.8
GONE	Gonen-Balikesi	2.54	329	PN	Pn	03 40 28.3	+0.3
GEMT	Gemlik	2.56	357	PN	Pn	03 40 30.1	+1.8
AUMIH	MIHALICIK	2.58	39	PN	Pn	03 40 30.6	+1.8
CHOS	Chios island	2.67	282	PN	Pn	03 40 30.3	+0.4
CHOS	Chios island	2.67	282	P	Pn	03 40 30.1	+0.2
CHOS				S	Sn	03 41 02.3	0.0
YLV	Yalova	2.69	360	PN	Pn	03 40 31.8	+1.7
GULT	Gulveren	2.70	19	PN	Pn	03 40 32.1	+1.7
EDC	Edincik	2.73	335	PN	Pn	03 40 32.1	+1.4
SBT5	Esenkoy-Cinarc	2.78	352	PN	Pn	03 40 32.9	+1.6
PRK	Paraskevi	2.79	300	P	Pn	03 40 30.4	-1.1
PRK				S	Sn	03 41 05.7	+0.4
SPNC	Sapanca-Adapaz	2.90	14	PN	Pn	03 40 35.0	+2.0
SAUV	Serdivan-Sakar	2.95	14	PN	Pn	03 40 35.8	+2.1
KRBG	Karabiga-Canak	2.99	328	PN	Pn	03 40 34.7	+0.5
SIGR	SIGRI	3.06	297	PN	Pn	03 40 35.5	+0.2
SIGR	SIGRI	3.06	297	P	Pn	03 40 35.2	-0.1
SIGR				S	Sn	03 41 12.6	+0.6
EZN	Ezine	3.08	310	PN	Pn	03 40 35.6	+0.2
APE	Apeiranthos	3.16	256	⇑*i*P	Pn	03 40 35.0	-1.7
APE	Apeiranthos	3.16	256	S	Sn	03 41 14.6	+0.1
KAVV	Kandilli-Istan	3.19	356	PN	Pn	03 40 38.8	+1.8
LPK	Lapseki	3.22	322	PN	Pn	03 40 38.0	+0.6
BOZC	Bozcaada	3.25	308	PN	Pn	03 40 38.9	+1.0
RKY	Sarkoy-Tekirda	3.28	329	PN	Pn	03 40 39.7	+1.4
ANTO	Ankara	3.33	52	⇑*i*P	Pn	03 40 40.8	+1.8
BGKT	Bogazkoy	3.33	352	PN	Pn	03 40 40.9	+2.0
GELI	Tayfur-Gelibol	3.38	319	PN	Pn	03 40 40.3	+0.7
BRTR	Keskin Array B	3.81	60	Pn	Pn	03 40 46.8	+1.1
	comp=Z,1.3nm,0.3s,baz=241,slow=16,SNR=41						
BRTR				Sn	Sn	03 41 31.4	+0.8
	comp=Z,1.6nm,0.3s,baz=232,slow=26,SNR=7.7						
TIRR	Tirgusor	6.62	354	⇑*i*P	Pn	03 41 24.4	+0.4
TIRR	Tirgusor	6.62	354	S	Sn	03 42 36.6	-2.9
VTS	Vitosha	6.66	317	⇓*i*P	Pn	03 41 25.3	+0.4
VTS	Vitosha	6.66	317	S	Sn	03 42 35.7	-5.3
TLB	Topalu	6.78	352	⇑*i*P	Pn	03 41 26.9	+0.7
TLCR		7.32	357	⇑*i*P	Pn	03 41 34.2	+0.6
CFR	Carcaliu	7.35	353	⇑*i*P	Pn	03 41 35.1	+0.9
MLR	Muntele Rosu	8.03	342	⇑*i*P	Pn	03 41 45.1	+1.5
VOIR		8.22	338	⇓*i*P	Pn	03 41 47.2	+1.1
PLOR	Plostina	8.22	347	⇑*i*P	Pn	03 41 48.0	+1.9
VRI	Vrincioaia	8.22	347	⇓*i*P	Pn	03 41 47.9	+1.8
DOPR	Dopca	8.61	341	⇓*i*P	Pn	03 41 53.0	+1.5
GZR	Gura Zlata	8.98	329	⇑*i*P	Pn	03 41 57.9	+1.3
GZR	Gura Zlata	8.98	329	S	Sn	03 43 35.1	-2.8
TORD	Torodi Ar. Bea	34.83	232	P	P	03 46 38.1	0.0
	comp=Z,2.3nm,1.2s,baz=29,slow=9.9,SNR=8.2						
MKAR	Makanchi Array	39.46	60	P	P	03 47 20.0	+2.8
	comp=Z,0.4nm,0.6s,baz=270,slow=7.7,SNR=4.1						

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*DDA **06** 03:42:33.9, 37°.87N×29°.33E, h7^{km}±2^{km}, ML2.6*
*ISK **06** 03:42:33.6, 37°.91N×29°.34E, h5^{km}, ML2.5/11*
*ISCJB **06** 03:42:34.2±0.5, 37°.90N±0°.03×29°.36E±0°.04, h11^{km}, Error ellipse: s-maj=5.1km s-min=4.1km az=159.0*
ISC 06 03:42:34.4±0.9**, 37°.93N**±0°.03×**29°.36E**±0°.03**, h11**^{km}**, n18,** σ**0^s.91**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.31	237	PG	Pg	03 42 39.9	-0.8
DENT				SG	Sg	03 42 43.9	-1.0
KHL	Karahalli	0.42	18	PG	Pg	03 42 42.6	-0.1
TAVA	DENIZLI_Tavas	0.58	218	*i* P	Pg	03 42 44.8	-0.9
TAVA				*i* S	Sg	03 42 52.5	-0.9
TAVA				IAML_P			
	comp=Z,845nm,0.1s						
BRDR	BURDUR-Merkez	0.60	112	*i* P	Pg	03 42 45.8	-0.2
BRDR				*i* S	Sb	03 42 55.6	+0.1
BRDR				IAML_P			
	comp=Z,494nm,0.2s						
KZIL	AFYON_Kizioren	0.70	61	*i* P	Pg	03 42 48.0	0.0
KZIL				IAML_P			
	comp=Z,353nm,0.2s						
KULA	Kula-Manisa	0.81	317	PG	Pg	03 42 49.4	-0.6
MANT	Manisa	0.85	312	*i* P	Pb	03 42 51.6	+0.3
MANT				*i* S	Sb	03 43 02.6	-0.2
MANT				IAML_P			
	comp=Z,981nm,0.1s						
ISP	Isparta	0.92	96	PG	Pg	03 42 51.9	-0.3
SHAP	Saphane-Kutahy	1.10	354	PN	Pb	03 42 55.3	-0.2
GEDZ	Gediz	1.12	2	PN	Pb	03 42 55.7	-0.1
SHUT	Suhut-Afyon	1.13	56	PN	Pb	03 42 55.7	-0.3
AYDB	Zeytinkoy-Aydi	1.16	272	PN	Pb	03 42 56.3	-0.3
AYDN	Tasoluk	1.20	258	*i* P	Pg	03 42 57.5	-0.1
AYDN				IAML_P			
	comp=Z,390nm,0.2s						
TURN	Turunc	1.21	210	PN	Pg	03 43 00.8	+3.1
DEMI	Demirci	1.23	336	*i* P	Pg	03 42 58.8	+0.9
DEMI				IAML_P			
	comp=Z,486nm,0.1s						
DALY	Dalyan (Mula)	1.24	207	PN	Pg	03 42 57.8	-0.4
GCAM	G?zelcaml?	1.70	263	PN	Pn	03 43 04.6	+0.6
BLCB	Balcova	1.89	285	PN	Pn	03 43 07.2	+0.7

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*IDC **06** 03:43:52.0±1.6, 11°.26S×165°.12E, h0^{km}, mb4.3/5, mb1 4.4/6, mb1mx3.9/39, mbtmp4.2/6, ML4.2/1, Error ellipse: s-maj=47.3km s-min=29.1km az=122.0*
*ISCJB **06** 03:43:55.4±1.3, 11°.4S±0°.1×165°.1E±0°.2, h34^{km}, mb4.2/5, Error ellipse: s-maj=30.1km s-min=21.2km az=0.2*
ISC 06 03:43:57.0±1.3**, 11°.3S**±0°.2×**165°.2E**±0°.2**, h34**^{km}**, n6,** σ**0^s.49**/6**, mb4.2**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.75	174	Pn	Pn	03 46 28.7	0.0
	1.9nm,0.3s,baz=20,slow=15,SNR=4.9						
STKA	Stephens Creek	29.83	223	P	P	03 50 01.5	+0.4
	3.0nm,0.7s,baz=50,slow=8.3,SNR=4.3						
WRA	Warramunga Arr	30.83	250	P	P	03 50 10.0	-0.2
	4.2nm,0.7s,baz=81,slow=8.7,SNR=12						
ASAR	Alice Springs	32.14	243	P	P	03 50 21.0	-0.6
	3.1nm,0.8s,baz=71,slow=10,SNR=7.3						
MKAR	Makanchi Array	93.33	317	P	P	03 57 08.9	+0.3
	0.8nm,0.8s,baz=99,slow=5.7,SNR=2.9						
YKA	Yellowknife Ar	95.50	27	P	P	03 57 17.9	-0.2
	0.3nm,0.7s,baz=258,slow=4.6,SNR=3.6						

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*IDC **06** 03:44:56.3±1.1, 11°.18S×165°.00E, h0^{km}, mb4.3/5, mb1 4.5/6, mb1mx4.2/38, mbtmp4.2/6, ML4.2/1, Error ellipse: s-maj=48.4km s-min=24.2km az=139.0*
*ISCJB **06** 03:44:59.7±1.1, 11°.4S±0°.2×165°.1E±0°.2, h34^{km}, mb4.1/5, Error ellipse: s-maj=26.5km s-min=21.1km az=27.5*
ISC 06 03:45:01.3±1.0**, 11°.3S**±0°.2×**165°.1E**±0°.2**, h34**^{km}**, n7,** σ**1^s.31**/7**, mb4.2**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.75	173	Pn	Pn	03 47 32.5	-0.5
	1.7nm,0.3s,baz=354,slow=19,SNR=4.0						
STKA	Stephens Creek	29.78	223	P	P	03 51 05.8	+0.9
	3.8nm,0.6s,baz=40,slow=9.6,SNR=6.4						
WRA	Warramunga Arr	30.77	250	P	P	03 51 13.9	0.0
	6.5nm,0.9s,baz=82,slow=8.8,SNR=12						
ASAR	Alice Springs	32.07	243	P	P	03 51 24.8	-0.6
	3.1nm,0.8s,baz=75,slow=9.2,SNR=8.0						
YKA	Yellowknife Ar	95.54	27	P	P	03 58 21.0	-1.6
	0.3nm,0.7s,baz=254,slow=4.7,SNR=3.9						
TXAR	Lajitas Array	96.55	61	P	P	03 58 29.8	+1.7
	0.2nm,0.6s,baz=230,slow=5.6,SNR=2.8						
ARCES	ARCESS Array B	116.45	345	PKP	PKPdf	04 03 41.0	0.0
	1.8nm,0.8s,baz=49,slow=4.1,SNR=2.7						

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*IDC **06** 03:45:04.7±0.4, 10°.67S×165°.32E, h0^{km}, mb5.0/28, mb1 5.1/29, mb1mx5.0/38, mbtmp5.0/29, ML5.2/1, Error ellipse: s-maj=17.1km s-min=11.8km az=95.0*
*NEIC **06** 03:45:05.9±0.1, 10°.62S×165°.35E, h10^{km}, mb5.3/192, Error ellipse: s-maj=2.7km s-min=2.3km az=121.0*
*MOS **06** 03:45:06.8±0.7, 10°.70S×165°.30E, h27^{km}, mb5.5/60, Error ellipse: s-maj=8.7km s-min=7.4km az=85.5*
*ISCJB **06** 03:45:07.6±0.1, 10°.68S±0°.02×165°.33E±0°.02, h31^{km}, mb5.2/231, MS6.2/1, Error ellipse: s-maj=3.4km s-min=3.1km az=137.6*
*BJI **06** 03:45:07.9, 10°.29S×165°.29E, h21^{km}, mB5.5/3, mb5.2/61, Ms5.3/4, Ms7 5.2/4*
ISC 06 03:45:09.0±0.2**, 10°.68S**±0°.04×**165°.43E**±0°.05**, h31**^{km}**, n548,** σ**0^s.83**/554**, mb5.2**/231**, 39C-9D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.54	282	*e*Pn	Pn	03 46 28.7	-0.8
HNR				*e*Sn	Sn	03 47 32.6	+0.4
HNR	Honiara	5.54	282	*e*P	Pn	03 46 28.7	-0.8
HNR				*e*		03 47 32.6	
HNR	Honiara	5.54	282	Pn	Pn	03 46 30.3	+0.8
	612nm,0.3s,baz=145,slow=7.6,SNR=51						
MARNC	Mare, Loyalty	11.03	167	*e*Pn	Pn	03 47 46.3	+1.6
MARNC				*e*Sn	Sn	03 49 46.2	-0.9
DZM	Mont Dzumac	11.37	175	*e*Pn	Pn	03 47 50.2	+0.6
DZM				*e*Sn	Sn	03 49 56.7	+1.0
DZM	Mont Dzumac	11.37	175	Pn	Pn	03 47 50.1	+0.6
	18nm,0.3s,baz=308,slow=23,SNR=31						
OUENC	Ouen Island, N	11.75	174	*e*Pn	Pn	03 47 55.4	+0.7
OUENC				*e*Sn	Sn	03 50 06.2	+1.3
PINNC	Pines Island,	12.03	171	*e*Pn	Pn	03 47 59.9	+1.5
FUNA	Funafuti	13.74	82	*e*Pn	Pn	03 48 22.3	+0.5
TARA	Tarawa	14.08	32	*e*Pn	Pn	03 48 26.6	+0.1
TARA				*e*Sn	Sn	03 51 00.7	-1.2
MSVF	Nonsavu	14.10	121	*i* P	P	03 48 32.5	-1.6
PATS	Pohnpei	18.79	338	*e*P	P	03 49 24.0	-2.0
	130nm,1.0s						
KWAJ	Kwajalein Atol	19.47	6	*e*P	P	03 49 32.0	-1.4
	686nm,1.4s						
KWAJ	Kwajalein Atol	19.47	6	*e*P	P	03 49 32.0	-1.4
KWAJ				pmax	pmax		
	comp=Z,686nm,1.4s						
EIDS	Eidsvold	19.97	221	P	Pn	03 49 40.5	-0.2
	baz=20						
CTA	Charters Tower	20.71	241	P	P	03 49 47.2	+0.2
	baz=21						
CTA	Charters Tower	20.71	241	P	P	03 49 47.4	+0.4
	comp=Z,74nm,1.0s,baz=64,slow=12,SNR=12						
CTAO	Charters Tower	20.71	241	*e*P	P	03 49 45.2	-1.8
	comp=Z,104nm,0.9s						
CTAO	Charters Tower	20.71	241	*e*P	P	03 49 45.2	-1.8
CTAO				pmax	pmax		
	comp=Z,104nm,0.9s						
LHI	Lord Howe Isla	21.57	195	P	P	03 49 57.5	+1.4
	baz=22						
MTSU	Mount Surprise	21.74	248	P	P	03 49 57.9	-0.2
	baz=22						
COEN	Coen	21.99	259	P	P	03 50 00.4	-0.4
	baz=22						
RMQ	Roma	22.25	223	P	P	03 50 05.1	+1.5
	baz=22						
ARMA	Armidale	23.47	211	P	P	03 50 16.4	+0.2
	baz=24						
KNTN	Kanton	23.99	73	*e*P	P	03 50 20.2	-0.9
	comp=Z,171nm,1.3s						
QLP	Quilpie	25.51	229	P	P	03 50 35.3	+0.5
	baz=26						
OUZ	Omahuta	25.54	164	*e*P	P	03 50 36.0	+1.0
	comp=Z,128nm,1.1s						
JAY	Jayapura	25.85	287	P	P	03 50 35.9	-2.2
MGCD	Mangrove Creek	26.01	208	P	P	03 50 41.9	+2.6
	baz=26						
GENI	Genyem	26.33	286	P	P	03 50 43.0	+0.6
RIV	Riverview	26.50	207	P	P	03 50 46.2	+2.5
	baz=27						
CAN	Canberra	28.73	209	*e*P	P	03 51 04.9	+1.1
	comp=Z,30nm,1.4s						
CAN	Canberra	28.73	209	*e*P	P	03 51 04.9	+1.1
CAN				pmax	pmax		
	comp=Z,30nm,1.4s						
HIZ	Hauiti	28.98	165	*e*P	P	03 51 07.0	+1.2
	comp=Z,130nm,1.3s						
H11S2	WAKE ISLAND Hy	29.01	2	T	T	04 21 34.3	
	baz=183,slow=76,SNR=167						
H11S3	WAKE ISLAND Hy	29.01	2	T	T	04 21 49.2	
	baz=183,slow=76,SNR=107						
H11S1	WAKE ISLAND Hy	29.03	2	T	T	04 21 41.3	
	baz=183,slow=76,SNR=198						
URZ	Urewera	29.39	161	*e*P	P	03 51 10.2	+0.7
	comp=Z,115nm,1.2s						
URZ	Urewera	29.39	161	P	P	03 51 10.6	+1.1
	comp=Z,20nm,0.6s,baz=276,slow=1.9,SNR=10						
BKZ	Black Stump Fm	30.04	163	*e*P	P	03 51 16.4	+1.0
	comp=Z,132nm,0.6s						
H11N1	WAKE ISLAND Hy	30.23	3	T	T	04 23 05.9	
	baz=187						
H11N3	WAKE ISLAND Hy	30.24	3	T	T	04 23 05.4	
	baz=187						
H11N2	WAKE ISLAND Hy	30.25	3	T	T	04 23 06.1	
	baz=187						
STKA	Stephens Creek	30.50	223	*e*P	P	03 51 18.4	-1.1
	comp=Z,6.0nm,0.9s						
STKA	Stephens Creek	30.50	223	*e*P	P	03 51 18.4	-1.1
STKA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STKA	Stephens Creek	30.50	223	P	P	03 51 18.8	-0.7
	comp=Z,20nm,0.8s,baz=28,slow=11,SNR=9.6						
WRAB	Tennant Creek	31.31	249	*e*P	P	03 51 25.4	-1.4
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	31.31	249	*i* P	P	03 51 33.0	+6.2
WRAB				pmax	pmax		
	comp=Z,30nm,1.1s						
WB2	Warramunga Arr	31.31	249	*e*P	P	03 51 25.0	-1.8
	comp=Z,17nm,1.0s						

WRA	**Warramunga Arr**	**31.32**	**249**	P	**P**	**03 51 25.3**	**-1.6**
	comp=Z,10nm,0.7s,baz=81,slow=9.2,SNR=16						
WRA				PcP	**PcP**	**03 54 21.2**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=74,slow=3.4,SNR=4.6						
BFZ	**Birch Farm**	**31.38**	**164**	eP	**P**	**03 51 27.6**	**+0.5**
	comp=Z,84nm,0.7s						
THZ	**Tophouse**	**31.65**	**169**	eP	**P**	**03 51 30.6**	**+1.0**
	comp=Z,87nm,1.1s						
LTZ	**Lake Taylor**	**32.54**	**171**	eP	**P**	**03 51 38.3**	**+1.0**
	comp=Z,53nm,1.1s						
AS01	**Alice Springs**	**32.65**	**243**	eP	**P**	**03 51 38.3**	**-0.2**
AS31	**Alice Springs**	**32.69**	**243**	eP	**P**	**03 51 37.4**	**-1.5**
	comp=Z,3.8nm,0.8s						
ASAR	**Alice Springs**	**32.69**	**243**	P	**P**	**03 51 36.8**	**-2.1**
	comp=Z,16nm,0.8s,baz=73,slow=9.4,SNR=22						
ASAR				PcP	**PcP**	**03 54 24.8**	**+0.5**
	comp=Z,4.1nm,0.9s,baz=82,slow=4.0,SNR=4.3						
OXZ	**Oxford**	**33.03**	**171**	eP	**P**	**03 51 42.6**	**+1.0**
	comp=Z,33nm,0.7s						
RPZ	**Rata Peaks**	**33.28**	**173**	eP	**P**	**03 51 43.3**	**-0.4**
	comp=Z,39nm,1.0s						
WKZ	**Wanaka**	**34.17**	**175**	eP	**P**	**03 51 51.6**	**+0.1**
	comp=Z,7.7nm,0.7s						
MLZ	**Mavora Lakes**	**34.65**	**177**	eP	**P**	**03 51 55.3**	**-0.3**
	comp=Z,43nm,1.4s						
DCZ	**Deep Cove**	**34.70**	**178**	eP	**P**	**03 51 56.8**	**+0.8**
	comp=Z,56nm,1.4s						
DCZ				epP	**pP**	**03 52 02.6**	**-2.0**
NLAI	**Namlea**	**38.73**	**278**	P	**P**	**03 52 31.4**	**+0.6**
TNTI	**Ternate**	**39.53**	**284**	eP	**P**	**03 52 35.6**	**-1.9**
	comp=Z,27nm,0.7s						
SANI	**Sanana**	**40.09**	**280**	P	**P**	**03 52 42.7**	**+0.6**
SOEI	**Soe**	**40.50**	**267**	P	**P**	**03 52 46.6**	**+0.9**
KMSI	**Cibinong**	**42.71**	**283**	P	**P**	**03 53 04.0**	**+0.4**
EDFI	**Ende, Flores**	**43.13**	**269**	P	**P**	**03 53 05.5**	**-1.7**
APSI	**Ampana**	**44.57**	**280**	P	**P**	**03 53 17.7**	**-0.9**
MRSI	**Marisa**	**44.64**	**282**	P	**P**	**03 53 19.6**	**+0.4**
MBWA	**Marble Bar**	**45.03**	**251**	eP	**P**	**03 53 22.3**	**+0.1**
	comp=Z,14nm,0.9s						
BKSI	**Bulukumba**	**45.15**	**273**	P	**P**	**03 53 24.0**	**+0.7**
BNSI	**Bone**	**45.33**	**274**	P	**P**	**03 53 25.4**	**+0.7**
SPSI	**Sidrap Palu**	**45.74**	**275**	P	**P**	**03 53 28.6**	**+0.7**
TTSI	**Tana Toraja**	**45.87**	**276**	P	**P**	**03 53 29.6**	**+0.6**
PCI	**Palu**	**46.33**	**279**	P	**P**	**03 53 33.0**	**+0.4**
PLAI	**Plampang**	**46.97**	**268**	P	**P**	**03 53 38.5**	**+0.9**
NWAO	**Narrogin (SRO)**	**49.42**	**236**	eP	**P**	**03 53 56.0**	**-0.3**
	comp=Z,61nm,1.1s						
NWAO	**Narrogin (SRO)**	**49.42**	**236**	eP	**P**	**03 53 56.0**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,61nm,1.1s						
SRBI	**Singaraja**	**49.58**	**268**	P	**P**	**03 53 58.5**	**+0.8**
JAGI	**Jajag, Banyuwa**	**50.57**	**268**	eP	**P**	**03 54 04.4**	**-0.9**
	comp=Z,39nm,0.6s						
JAGI	**Jajag, Banyuwa**	**50.57**	**268**	P	P	03 54 13.1	+7.8
KKM	**Kota Kinabalu**	**51.74**	**286**	eP	**P**	**03 54 13.5**	**-0.7**
	comp=Z,54nm,0.9s						
MJAR	**Matsushiro Arr**	**53.50**	**333**	P	**P**	**03 54 26.3**	**-0.4**
	comp=Z,12nm,0.9s,baz=169,slow=8.4,SNR=14						
MAJO	**Matsushiro**	**53.51**	**333**	eP	**P**	**03 54 26.4**	**-0.3**
	comp=Z,19nm,0.9s						
MAJO	**Matsushiro**	**53.51**	**333**	eP	**P**	**03 54 26.4**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,19nm,0.9s						
MAT	**Matsushiro**	**53.51**	**333**	P	**P**	**03 54 26.1**	**-0.6**
MJB9	**Matsu-Tunnel**	**53.51**	**333**	eP	**P**	**03 54 26.3**	**-0.5**
	comp=Z,18nm,0.9s						
JNU	**Nakatsue**	**54.60**	**324**	eP	**P**	**03 54 34.6**	**-0.3**
	comp=Z,60nm,1.1s						
YULB	**Yu-li**	**54.87**	**309**	eP	**P**	**03 54 35.7**	**-1.2**
	comp=Z,31nm,1.0s						
TPUB	**Ta-pu**	**55.33**	**308**	eP	**P**	**03 54 39.2**	**-1.0**
	comp=Z,65nm,1.0s						
YHNB	**Yeheng**	**55.51**	**310**	eP	**P**	**03 54 40.8**	**-0.8**
	comp=Z,56nm,1.1s						
KSM	**Kuching**	**56.14**	**279**	eP	**P**	**03 54 46.2**	**-0.1**
	comp=Z,16nm,0.9s						
SSE	**Sheshan**	**59.38**	**316**	P	**P**	**03 55 08.9**	**+0.3**
SSE				pmax	pmax		
	comp=Z,18nm,0.7s						
SSE	**Sheshan**	**59.38**	**316**	eP	**P**	**03 55 08.2**	**-0.4**
	comp=Z,73nm,0.8s						
KSRS	**Korea Array**	**59.40**	**326**	P	**P**	**03 55 09.1**	**+0.5**
	comp=Z,6.0nm,0.7s,baz=141,slow=6.8,SNR=19						
KSAR	**Wonju Array Be**	**59.41**	**326**	P	**P**	**03 55 09.1**	**+0.3**
KSAR	**Wonju Array Be**	**59.41**	**326**	P	**P**	**03 55 09.1**	**+0.3**
KS01	**Wonju Array Si**	**59.43**	**326**	eP	**P**	**03 55 08.7**	**-0.2**
YSS	**Yuzh-Sakhalins**	**60.84**	**342**	eP	**P**	**03 55 18.4**	**+0.1**
	comp=Z,80nm,1.2s						
YSS	**Yuzh-Sakhalins**	**60.84**	**342**⇑	eP	**P**	**03 55 19.3**	**+0.9**
YSS				e		03 55 27.2	
YSS				pmax	pmax		
	comp=Z,360nm,1.4s						
TEY	**Ternei**	**61.27**	**337**⇓	eP	**P**	**03 55 21.1**	**-0.2**
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
NJ2	**Nanjing**	**61.54**	**315**	eP	**P**	**03 55 24.0**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,50nm,1.0s						
MSHR	**Mys Shultsa**	**61.59**	**332**⇑	iP	**P**	**03 55 24.4**	**+0.9**
VLA	**Vladivostok**	**61.68**	**333**	i P	**P**	**03 55 25.4**	**+1.3**
VLA				pmax	pmax		
	comp=Z,20nm,0.8s						
QIZ	**Qiongzhong**	**62.24**	**298**	P	**P**	**03 55 29.5**	**+1.1**
QIZ				S	**S**	**04 03 53.4**	**+0.8**
QIZ	**Qiongzhong**	**62.24**	**298**	eP	**P**	**03 55 28.3**	**0.0**
	comp=Z,41nm,1.4s						
USA0B	**Ussuriysk Arra**	**62.48**	**333**	eP	**P**	**03 55 29.3**	**-0.2**
	comp=Z,96nm,1.4s						
USRK	**Ussuriysk Ar.**	**62.48**	**333**	P	**P**	**03 55 30.5**	**+1.0**
	comp=Z,9.2nm,0.6s,baz=122,slow=6.2,SNR=33						
PETK	**Petropavlovsk-**	**63.87**	**355**	eP	**P**	**03 55 38.4**	**-0.2**
PETK	**Petropavlovsk-**	**63.87**	**355**	eP	**P**	**03 55 38.4**	**-0.2**
PETK	**Petropavlovsk-**	**63.87**	**355**	P	**P**	**03 55 39.4**	**+0.9**
	comp=Z,7.6nm,0.5s,baz=171,slow=6.0,SNR=23						
MDJ	**Mudanjiang**	**63.88**	**332**	P	**P**	**03 55 39.5**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,9µm,17.7s						
MDJ	**Mudanjiang**	**63.88**	**332**	P	**P**	**03 55 39.0**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,24nm,1.2s						
MDJ	**Mudanjiang**	**63.88**	**332**	eP	**P**	**03 55 38.3**	**-0.5**
	comp=Z,32nm,1.1s						
WHN	**Wuhan**	**63.92**	**312**	⇑P	**P**	**03 55 39.2**	**-0.1**
DL2	**Dalian**	**64.00**	**323**	P	**P**	**03 55 39.5**	**-0.2**
DL2				pmax	pmax		
	comp=Z,37nm,0.9s						
TYV	**Tymovskoe**	**64.41**	**344**	eP	**P**	**03 55 42.8**	**+0.7**
TYV				eS	**S**	**04 04 22.2**	**+3.7**
TYV				pmax	pmax		
	comp=Z,26nm,1.7s						
TYV				pmax	pmax		
	comp=Z,3µm,7.3s						
TYV				smax	smax		
	comp=N,2µm,9.7s						
CN2	**Changchun**	**65.27**	**329**	eP	**P**	**03 55 48.3**	**+0.5**
CN2				esP	pP	03 55 55.3	-1.5
CN2				pmax	pmax		
	comp=N,30nm,0.6s						
IPM	**Ipoh**	**65.86**	**280**	eP	**P**	**03 55 51.4**	**-1.0**
	comp=N,72nm,1.2s						
GRNR	**Gornyy**	**66.19**	**340**	eP	**P**	**03 55 56.4**	**+2.7**
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
KLR	**Kul'dur**	**66.60**	**337**	P	**P**	**03 55 57.2**	**+0.9**
	comp=Z,22nm,1.0s,baz=131,slow=3.7,SNR=30						
CASY	**Casey**	**66.61**	**201**	eP	**P**	**03 55 55.9**	**-0.2**
	comp=Z,42nm,1.5s						
VNDA	**Vanda**	**66.86**	**181**	P	**P**	**03 55 58.4**	**+0.8**
	comp=Z,9.8nm,1.1s,baz=358,slow=7.5,SNR=4.5						
NKL	**Nikolayevsk**	**67.00**	**344**	eP	**P**	**03 55 58.0**	**-0.7**
NIKH	**Nikolski High**	**67.11**	**17**	eP	**P**	**03 56 00.0**	**+0.6**
	comp=Z,173nm,1.2s						
ENH	**Enshi**	**67.43**	**309**	eP	**P**	**03 56 01.3**	**-0.7**
	comp=Z,91nm,1.1s						
GYA	**Guiyang**	**67.96**	**304**⇑	iP	**P**	**03 56 05.1**	**-0.5**
GYA				pP	sP	03 56 18.2	+0.5
GYA				PP	**PP**	**03 58 39.0**	**+3.2**
GYA				S	**S**	**04 05 02.4**	**-0.5**
GYA				SKS	**SKiKP**	**04 05 59.5**	**-0.4**
GYA				SS	**SS**	**04 09 26.3**	**+0.7**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.9s						
GYA				LR	LR		
	comp=Z,650nm,18.2s						
GYA				LR	LR		
	comp=Z,580nm,18.6s						
GYA				LR	LR		
	comp=Z,610nm,19.0s						
BJT	**Baijiatuau**	**68.00**	**321**	eP	**P**	**03 56 05.3**	**0.0**
	comp=Z,89nm,1.5s						
BJT	**Baijiatuau**	**68.00**	**321**	eP	**P**	**03 56 05.3**	**0.0**
BJT				pmax	pmax		
	comp=Z,89nm,1.5s						
BJI	**Beijing**	**68.00**	**321**	P	**P**	**03 56 05.6**	**+0.2**
BJI				pmax	pmax		
	comp=Z,26nm,1.2s						
UNV	**Unalaska Valle**	**68.55**	**17**	eP	**P**	**03 56 08.6**	**+0.1**
	comp=Z,65nm,1.2s						
TIY	**Taiyuan**	**69.08**	**317**	eP	**P**	**03 56 13.3**	**+1.0**
TIY				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN	**Xi'an**	**69.65**	**312**	P	**P**	**03 56 15.6**	**-0.2**
XAN				pP	pP	03 56 25.8	+1.0
XAN				sP	sP	03 56 30.4	+2.4
XAN				pmax	pmax		
	comp=Z,41nm,1.1s						
XAN	**Xi'an**	**69.65**	**312**	eP	**P**	**03 56 15.1**	**-0.8**
	comp=Z,37nm,0.9s						
XAN	**Xi'an**	**69.65**	**312**	eP	**P**	**03 56 15.1**	**-0.8**
XAN				pmax	pmax		
	comp=Z,37nm,0.9s						
KMI	**Kunming**	**70.67**	**301**	P	**P**	**03 56 23.5**	**+1.0**
KMI				sP	sP	03 56 38.3	+3.6
KMI				pmax	pmax		
	comp=Z,28nm,1.5s						
KMI	**Kunming**	**70.67**	**301**	eP	**P**	**03 56 21.9**	**-0.6**
	comp=Z,83nm,1.1s						
KMI	**Kunming**	**70.67**	**301**	eP	**P**	**03 56 21.9**	**-0.6**
KMI				pmax	pmax		
	comp=Z,83nm,1.1s						
MA2	**Magadan**	**71.00**	**352**⇑	iP	**P**	**03 56 23.4**	**-0.1**
MA2				pmax	pmax		
	comp=Z,44nm,1.8s						
MA2	**Magadan**	**71.00**	**352**	P	**P**	**03 56 23.9**	**+0.4**
	comp=Z,7.5nm,0.5s,baz=93,slow=4.9,SNR=5.0						
HHC	**Hu-ho-hao-te**	**71.35**	**320**	eP	P	03 56 31.5	+5.3
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
CM01	**Chiang Mai Arr**	**71.66**	**293**	eP	**P**	**03 56 27.9**	**-0.5**
CMAR	**Chiang Mai Arr**	**71.69**	**294**	P	**P**	**03 56 29.0**	**+0.5**
	comp=Z,15nm,0.9s,baz=119,slow=4.4,SNR=32						
CHTO	**Chiang Mai**	**71.80**	**294**	eP	**P**	**03 56 28.5**	**-0.7**
	comp=Z,41nm,1.3s						
CHTO	**Chiang Mai**	**71.80**	**294**	eP	**P**	**03 56 28.5**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,41nm,1.3s						
CHTO	**Chiang Mai**	**71.80**	**294**	P	**P**	**03 56 30.7**	**+1.5**
	comp=Z,117nm,1.4s						
CHTO	**Chiang Mai**	**71.80**	**294**	P	**P**	**03 56 30.7**	**+1.5**
	comp=Z,117nm,1.4s						
ZEA	**Zeya**	**71.89**	**337**	eP	**P**	**03 56 29.8**	**+0.9**
ZEA				pmax	pmax		
	comp=N,230nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,230nm,2.0s						
HIA	**Hailar**	**71.90**	**330**	eP	**P**	**03 56 29.0**	**-0.1**
	comp=Z,59nm,1.2s						
HIA	**Hailar**	**71.90**	**330**c	iP	**P**	**03 56 29.8**	**+0.6**
HIA				pmax	pmax		
	comp=Z,49nm,1.1s						
CD2	**Chengdu**	**72.14**	**307**	P	**P**	**03 56 30.7**	**-0.3**
CD2				S	**S**	**04 05 53.6**	**+2.0**
SEY	**Seymchan**	**74.08**	**354**⇑	iP	**P**	**03 56 42.3**	**+0.6**
SEY	**Seymchan**	**74.08**	**354**	P	**P**	**03 56 42.2**	**+0.5**
	comp=Z,12nm,0.9s,baz=154,slow=5.2,SNR=12						
LZH	**Lanzhou**	**74.28**	**312**	⇑P	**P**	**03 56 45.0**	**+1.2**
LZH				pP	pwP	03 56 55.8	-0.1
LZH				sP	PcP	03 56 59.1	+0.6
LZH				PP	**PP**	**03 59 30.3**	**+0.2**
LZH				pmax	pmax		
	comp=Z,53nm,1.3s						
LZH				pmax	pmax		
	comp=Z,230nm,4.3s						
LZH				LR	LR		
	comp=Z,570nm,16.3s						
LZH				LR	LR		
	comp=Z,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
OHAK	**Old Harbor**	**75.68**	**22**	eP	**P**	**03 56 52.0**	**+0.9**
	comp=Z,141nm,1.4s						
GAMB	**Gambell**	**76.26**	**10**	eP	**P**	**03 56 55.2**	**+0.9**
	comp=Z,86nm,1.0s						
KDAK	**Kodiak Island**	**76.35**	**22**c	eP	**P**	**03 56 56.2**	**+1.3**
KDAK	**Kodiak Island**	**76.35**	**22**	P	**P**	**03 56 56.0**	**+1.1**
	comp=Z,15nm,0.8s,baz=200,slow=7.5,SNR=7.1						
CIT	**Chita**	**76.69**	**330**	eP	**P**	**03 56 57.7**	**+0.6**
CIT				e		03 57 05.3	
CIT				e		03 57 13.9	
CIT				pmax	pmax		
	comp=Z,141nm,2.0s						
YAK	**Yakutsk**	**77.66**	**344**	eP	**P**	**03 57 01.2**	**-1.0**
YAK				pmax	pmax		
	comp=Z,70nm,1.9s						
YAK				pmax	pmax		
	comp=N,19nm,1.4s						
YAK				pmax	pmax		
	comp=E,15nm,1.5s						
ULN	**Ulaanbaatar**	**77.82**	**324**	eP	**P**	**03 57 03.3**	**-0.4**
	comp=E,51nm,1.0s						
ULN	**Ulaanbaatar**	**77.82**	**324**⇑	iP	**P**	**03 57 04.5**	**+0.8**
ULN				pmax	pmax		
	comp=Z,58nm,1.1s						
SVW2	**Sparrevohn**	**77.86**	**18**	eP	**P**	**03 57 04.5**	**+1.2**
	comp=Z,65nm,1.1s						
HOM	**Homer**	**78.06**	**21**	eP	**P**	**03 57 05.5**	**+1.0**
	comp=Z,144nm,0.9s						
SONM	**Songino Array**	**78.19**	**324**	P	**P**	**03 57 06.1**	**+0.5**
	comp=Z,18nm,0.8s,baz=144,slow=6.1,SNR=49						
SONA1	**Songino Array**	**78.19**	**324**	eP	**P**	**03 57 05.0**	**-0.6**
ANM	**Nome**	**78.20**	**12**	eP	**P**	**03 57 05.9**	**+0.8**
	comp=Z,57nm,1.2s						
ANM	**Nome**	**78.20**	**12**	eP	**P**	**03 57 05.9**	**+0.8**
ANM				pmax	pmax		
	comp=Z,57nm,1.2s						
RSO	**Redoubt South**	**78.28**	**20**	eP	**P**	**03 57 05.8**	**-0.2**
BRLK	**Bradley Lake**	**78.40**	**21**	eP	**P**	**03 57 06.2**	**-0.2**
	comp=Z,39nm,0.9s						
BILL	**Bilibino**	**78.51**	**0**	eP	**P**	**03 57 07.2**	**+0.4**
	comp=Z,86nm,1.2s						
BILL	**Bilibino**	**78.51**	**0**c	eP	**P**	**03 57 07.8**	**+1.0**
BILL				pmax	pmax		
	comp=Z,74nm,1.3s						
GTA	**Gaotai**	**78.58**	**314**	⇑P	**P**	**03 57 08.9**	**+0.9**
GTA				pP	pP	03 57 17.6	+0.6
GTA				sP	pwP	03 57 21.5	+1.2
GTA				pmax	pmax		
	comp=Z,18nm,1.3s						
SEW	**Seward**	**79.15**	**21**	eP	**P**	**03 57 11.4**	**+1.0**
	comp=Z,42nm,1.0s						
QSPA	**South Pole Qui**	**79.33**	**180**	P	**P**	**03 57 12.9**	**+1.3**
	comp=Z,25nm,1.0s,baz=328,slow=1.3,SNR=23						
SUA	**Susitna One**	**79.68**	**20**	eP	**P**	**03 57 13.0**	**-0.5**
	comp=Z,52nm,1.2s						
RC01	**Rabbit Creek A**	**79.75**	**20**	eP	**P**	**03 57 14.0**	**+0.2**
	comp=Z,63nm,1.5s						
BOD	**Bodaibo**	**80.07**	**335**	eP	**P**	**03 57 13.3**	**-2.2**
BOD				pmax	pmax		
	comp=Z,29nm,1.5s						
SHL	**Shillong**	**80.07**	**298**	eP	**P**	**03 57 15.1**	**-1.4**
	comp=Z,39nm,1.1s						
SHL	**Shillong**	**80.07**	**298**	eP	**P**	**03 57 15.1**	**-1.4**
SHL				pmax	pmax		
	comp=Z,39nm,1.1s						
SHL	**Shillong**	**80.07**	**298**	eP	**P**	**03 57 15.5**	**-1.0**
PPLA	**Purkeypile**	**80.27**	**18**	eP	**P**	**03 57 17.3**	**+0.6**
	comp=Z,28nm,1.3s						
PMR	**Palmer**	**80.32**	**20**	eP	**P**	**03 57 17.1**	**+0.4**
	comp=Z,23nm,1.0s						
PMR	**Palmer**	**80.32**	**20**	eP	**P**	**03 57 17.1**	**+0.4**
PMR				pmax	pmax		
	comp=Z,23nm,1.0s						
KNK	**Knik Glacier**	**80.42**	**21**	eP	**P**	**03 57 18.0**	**+0.6**
	comp=Z,69nm,1.5s						
GLI	**Glacier Island**	**80.53**	**21**	eP	**P**	**03 57 18.1**	**+0.2**
	comp=Z,71nm,1.2s						
CAST	**Castle Rocks**	**80.69**	**18**	eP	**P**	**03 57 18.8**	**0.0**
	comp=Z,55nm,1.4s						
SML	**Sawmill**	**80.74**	**20**	eP	**P**	**03 57 19.2**	**+0.1**
	comp=Z,52nm,1.2s						
SML	**Sawmill**	**80.74**	**20**	eP	**P**	**03 57 19.2**	**+0.1**
SML				pmax	pmax		
	comp=Z,52nm,1.2s						
DIV	**Divide**	**81.18**	**22**	eP	**P**	**03 57 20.9**	**-0.6**
	comp=Z,33nm,0.9s						
ZAK	**Zakamensk**	**81.23**	**325**	eP	**P**	**03 57 21.6**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,20nm,1.2s						
TRF	**Thorofare Moun**	**81.27**	**19**	eP	**P**	**03 57 21.7**	**-0.3**
	comp=Z,8.4nm,0.7s						
KLU	**Klutina**	**81.37**	**21**	eP	**P**	**03 57 22.6**	**+0.1**
	comp=Z,34nm,1.0s						
BPAW	**Bear Paw Mtn.**	**81.53**	**18**	eP	**P**	**03 57 23.7**	**+0.4**
	comp=Z,15nm,1.2s						
TLY	**Talaya**	**81.65**	**326**	eP	**P**	**03 57 23.5**	**-0.6**
	comp=Z,51nm,0.9s						
TLY	**Talaya**	**81.65**	**326**α	iP	**P**	**03 57 24.1**	**0.0**
TLY	**Talaya**	**81.65**	**326**	P	**P**	**03 57 24.4**	**+0.2**
	comp=Z,6.5nm,0.8s,baz=140,slow=2.8,SNR=21						
RND	**Reindeer**	**81.69**	**19**	eP	**P**	**03 57 24.2**	**+0.1**
	comp=Z,54nm,1.4s						
RND	**Reindeer**	**81.69**	**19**	eP	**P**	**03 57 24.2**	**+0.1**
RND				pmax	pmax		
	comp=Z,54nm,1.4s						
RDOG	**Red Dog Mine**	**81.72**	**12**	eP	**P**	**03 57 25.0**	**+0.9**
	comp=Z,60nm,1.0s						
MCK	**McKinley**	**81.89**	**19**	eP	**P**	**03 57 25.0**	**-0.2**
	comp=Z,63nm,1.3s						
MCK	**McKinley**	**81.89**	**19**	eP	**P**	**03 57 25.0**	**-0.2**
MCK				pmax	pmax		
	comp=Z,63nm,1.3s						
LSA	**Lhasa**	**81.90**	**302**	eP	**P**	**03 57 25.2**	**-1.4**
	comp=Z,16nm,1.1s						
DHY	**Denali Highway**	**81.94**	**20**	eP	**P**	**03 57 25.9**	**+0.3**
	comp=Z,29nm,1.1s						
IM3	**Indian Mountai**	**82.15**	**16**	eP	**P**	**03 57 26.5**	**0.0**
HARP	**HAARP**	**82.25**	**21**	eP	**P**	**03 57 27.0**	**0.0**
	comp=Z,64nm,1.1s						
MLY	**Manley**	**82.28**	**17**	eP	**P**	**03 57 27.3**	**+0.1**
	comp=Z,19nm,1.0s						
KMRM	**Mail Ridge**	**82.62**	**47**	eP	**P**	**03 57 29.9**	**+0.3**
	comp=Z,37nm,1.3s						
WRH	**Wood River Hil**	**82.68**	**18**	eP	**P**	**03 57 29.0**	**-0.2**
	comp=Z,41nm,1.4s						
GDXM	**Geysers**	**82.80**	**48**	eP	**P**	**03 57 30.8**	**+0.2**
	comp=Z,14nm,1.0s						
KHMM	**Horse Mountain**	**82.84**	**46**	eP	**P**	**03 57 31.2**	**+0.4**
	comp=Z,56nm,1.4s						
MDM	**Murphy Dome**	**82.98**	**18**	eP	**P**	**03 57 30.7**	**-0.1**
	comp=Z,34nm,1.0s						
HDA	**Harding Lake**	**82.99**	**19**	eP	**P**	**03 57 30.8**	**-0.1**
	comp=Z,58nm,1.0s						
HDA	**Harding Lake**	**82.99**	**19**	P	**P**	**03 57 31.7**	**+0.9**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.03**	**18**	P	**P**	**03 57 31.7**	**+0.7**
	baz=226						
COLA	**College**	**83.03**	**18**	eP	**P**	**03 57 31.5**	**+0.5**
	comp=Z,27nm,0.8s						
COLA	**College**	**83.03**	**18**c	iP	**P**	**03 57 32.0**	**+1.0**
COLA				pmax	pmax		
	comp=Z,21nm,0.9s						
MOY	**Mondy**	**83.10**	**326**	eP	**P**	**03 57 32.4**	**+0.5**
MOY				pmax	pmax		
	comp=Z,80nm,3.2s						
RIDG	**Independ'e Rid**	**83.23**	**20**	eP	**P**	**03 57 33.0**	**+0.8**
	comp=Z,71nm,1.2s						
IL1	**Eielson Array**	**83.26**	**19**	eP	**P**	**03 57 31.9**	**-0.4**
ILAR	**Eielson Array**	**83.26**	**19**	P	**P**	**03 57 33.5**	**+1.3**
	comp=Z,11nm,0.8s,baz=232,slow=6.1,SNR=9.7						
ILB	**Eielson Array**	**83.26**	**19**	eP	**P**	**03 57 32.0**	**-0.2**
O02D	**Mt. Diablo Mer**	**83.27**	**47**	P	**P**	**03 57 33.0**	**0.0**
	baz=250						
POKR	**Poker Plat Res**	**83.33**	**18**	P	**P**	**03 57 33.1**	**+0.5**
	baz=227						
L02E	**Cave Junction**	**83.38**	**45**	P	**P**	**03 57 34.0**	**+0.6**
	baz=249						
K02D	**Willamette Mer**	**83.53**	**45**	P	**P**	**03 57 34.8**	**+0.6**
	baz=249						
WDC	**Whiskeytown Da**	**83.58**	**47**	eP	**P**	**03 57 34.6**	**+0.1**
	comp=Z,29nm,1.5s						
WDC	**Whiskeytown Da**	**83.58**	**47**	eP	**P**	**03 57 34.6**	**+0.1**
WDC				pmax	pmax		
	comp=Z,29nm,1.5s						
N02D	**Trinity Center**	**83.60**	**46**	P	**P**	**03 57 35.0**	**+0.4**
	baz=250						
M02C	**Callahan**	**83.64**	**46**	P	**P**	**03 57 35.6**	**+0.7**
	baz=250						
SCRK	**Sand Creek**	**83.68**	**20**	eP	**P**	**03 57 34.4**	**-0.1**
	comp=Z,60nm,1.3s						
PKM	**Mcpherson Peak**	**83.82**	**53**	P	**P**	**03 57 36.3**	**+0.3**
	baz=253						
YBH	**Yreka Blue Hor**	**83.86**	**46**	eP	**P**	**03 57 36.0**	**+0.1**
	comp=Z,24nm,1.3s						
YBH	**Yreka Blue Hor**	**83.86**	**46**	eP	**P**	**03 57 36.0**	**+0.1**
YBH				pmax	pmax		
	comp=Z,24nm,1.3s						
I02D	**Swisshome**	**83.91**	**43**	P	**P**	**03 57 36.9**	**+1.0**
	baz=249						
HUMO	**Hull Mountain**	**83.98**	**45**	eP	**P**	**03 57 36.8**	**+0.3**
	comp=Z,24nm,1.2s						
ORV	**Oroville**	**84.00**	**48**	eP	**P**	**03 57 36.3**	**-0.3**
	comp=Z,24nm,1.5s						
ORV	**Oroville**	**84.00**	**48**	eP	**P**	**03 57 36.3**	**-0.3**
ORV				pmax	pmax		
	comp=Z,24nm,1.5s						
O03E	**Paynes Creek**	**84.02**	**47**	P	**P**	**03 57 37.0**	**+0.2**
	baz=251,SNR=16						
COLD	**Coldfoot**	**84.03**	**16**	eP	**P**	**03 57 37.0**	**+0.9**
	comp=Z,5.1nm,1.1s						
HYT	**Haines Junctio**	**84.18**	**24**	eP	**P**	**03 57 37.2**	**0.0**
	comp=Z,13nm,1.0s						
AFDM	**Forest Hills D**	**84.19**	**49**	eP	**P**	**03 57 37.2**	**-0.4**
	comp=Z,16nm,1.0s						
PRP	**Porcupine Dome**	**84.19**	**18**	eP	**P**	**03 57 37.2**	**0.0**
	comp=Z,21nm,1.5s						
L04D	**Klamath Falls**	**84.30**	**45**	P	**P**	**03 57 38.8**	**+0.5**
	baz=250						
ODAN	**Odare**	**84.31**	**299**	eP	**P**	**03 57 38.9**	**+0.1**
	comp=Z,54nm,0.6s						
CMB	**Columbia Colle**	**84.34**	**50**	eP	**P**	**03 57 37.8**	**-0.6**
	comp=Z,15nm,1.0s						
CMB	**Columbia Colle**	**84.34**	**50**	eP	**P**	**03 57 37.8**	**-0.6**
CMB				pmax	pmax		
	comp=Z,15nm,1.0s						
SKAG	**Skagway**	**84.35**	**26**	ePcP	**PcP**	**03 57 43.8**	**+2.2**
M04C	**Macdoel**	**84.48**	**46**	P	**P**	**03 57 40.1**	**+0.9**
	baz=251,SNR=6.4						
KNGR	**Kungurtug, Tuv**	**84.63**	**324**⇑	iP	**P**	**03 57 39.3**	**-0.4**
ARVC	**Arvin**	**84.66**	**53**	P	**P**	**03 57 40.3**	**+0.3**
	baz=253						
VES	**Vestal, Richgr**	**84.67**	**52**	P	**P**	**03 57 40.3**	**+0.2**
	baz=253						
I04A	**Tendick Farm,**	**84.77**	**44**	P	**P**	**03 57 41.3**	**+0.8**
	baz=250						
BEKR	**Beckworth**	**84.93**	**48**	eP	**P**	**03 57 41.6**	**+0.1**
	comp=Z,8.6nm,0.7s						
RAMN	**Ramite**	**85.01**	**298**	eP	**P**	**03 57 42.2**	**-0.1**
	comp=Z,22nm,0.7s						
ISA	**Isabella, Lake**	**85.09**	**52**	eP	**P**	**03 57 42.6**	**+0.3**
	comp=Z,30nm,1.5s						
ISA	**Isabella, Lake**	**85.09**	**52**	eP	**P**	**03 57 42.6**	**+0.3**
ISA				pmax	pmax		
	comp=Z,30nm,1.5s						
ISA	**Isabella, Lake**	**85.09**	**52**	P	**P**	**03 57 42.7**	**+0.4**
	baz=253,SNR=5.8						
WHY	**Whitehorse**	**85.17**	**25**	eP	**P**	**03 57 42.4**	**+0.2**
	comp=Z,4.4nm,0.7s						
WAKR	**Walker**	**85.19**	**50**	eP	**P**	**03 57 43.1**	**+0.2**
	comp=Z,16nm,1.0s						
MDPB	**Devils Postpil**	**85.20**	**50**	eP	**P**	**03 57 42.9**	**-0.2**
	comp=Z,16nm,1.0s						
EDW2	**Edwards Air Fo**	**85.25**	**53**	P	**P**	**03 57 43.7**	**+0.6**
	baz=254,SNR=9.1						
OMMB	**Old Mammoth Mi**	**85.25**	**51**	eP	**P**	**03 57 43.7**	**+0.3**
	comp=Z,15nm,1.2s						
VCNR	**Virginia City**	**85.27**	**49**	eP	**P**	**03 57 43.5**	**+0.2**
	comp=Z,9.9nm,0.9s						
DAWY	**Dawson**	**85.32**	**21**	eP	**P**	**03 57 43.4**	**+0.6**
	comp=Z,28nm,1.3s						
BFSC	**Mount Baldy Ra**	**85.33**	**54**	P	**P**	**03 57 43.9**	**+0.3**
	baz=254,SNR=7.1						
J05D	**Fort Rock, OR**	**85.40**	**45**	P	**P**	**03 57 44.9**	**+1.1**
	baz=251,SNR=7.0						
109C	**Camp Elliot, M**	**85.41**	**55**	P	**P**	**03 57 44.6**	**+0.8**
	baz=254						

MURC	Murrieta	85.53	55	P	P	03 57 45.1	+0.6
	baz=254						
JIRN	Jiri	85.54	299	*e*P	P	03 57 45.0	-0.1
PAHR	Pah Rah Range	85.59	48	*e*P	P	03 57 44.8	0.0
	comp=Z,31nm,1.5s						
MOD	Modoc Plateau	85.61	46	*e*P	P	03 57 45.0	+0.2
	comp=Z,18nm,1.4s						
E04D	Cinebar	85.62	41	P	P	03 57 45.7	+1.2
	baz=250						
CWC	Cottonwood Cre	85.62	52	P	P	03 57 45.5	+0.4
	baz=254						
LRMC	Laurel Mtn Rad	85.66	53	P	P	03 57 46.0	+0.8
	baz=254						
TIXI	Tiksi	85.67	349⇑	*i*P	P	03 57 43.9	-0.4
TIXI				pmax	pmax		
	comp=Z,52nm,2.4s						
I05D	Terrebonne, OR	85.68	44	P	P	03 57 46.2	+1.2
	baz=251						
TIN	Tinemaha, Big	85.68	51	P	P	03 57 45.9	+0.6
	baz=253						
PINE	Pine Mountain	85.77	44	*e*P	P	03 57 46.2	+0.6
	comp=Z,21nm,1.3s						
GUN	Gumba	85.87	299	*e*P	P	03 57 46.1	-0.6
	comp=Z,69nm,1.1s						
RYN	Ryan	85.91	50	*e*P	P	03 57 46.6	+0.1
	comp=Z,24nm,1.4s						
DAC	Darwin (Calif)	85.95	52	*e*P	P	03 57 46.9	+0.2
	comp=Z,22nm,1.5s						
DAC	Darwin (Calif)	85.95	52	*e*P	P	03 57 46.9	+0.2
DAC				pmax	pmax		
	comp=Z,22nm,1.5s						
MONP2	Monument Peak	85.96	56	P	P	03 57 47.7	+0.8
	baz=255,SNR=8.3						
MPMC	Manual Prospec	85.97	52	P	P	03 57 47.7	+0.8
	baz=254,SNR=8.7						
NV01	Mina Array Sit	86.02	50	*e*P	P	03 57 47.3	+0.2
NVAR	Mina Array Bea	86.02	50	P	P	03 57 47.5	+0.4
	comp=Z,13nm,1.0s,baz=237,slow=7.5,SNR=23						
F05D	White Salmon	86.11	42	P	P	03 57 47.9	+0.8
	baz=251						
PFO	Pinyon Flats O	86.12	55	*e*P	P	03 57 48.1	+0.6
	comp=Z,8.1nm,0.9s						
PFO	Pinyon Flats O	86.12	55	*e*P	P	03 57 48.1	+0.6
PFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PFO	Pinyon Flats O	86.12	55	P	P	03 57 48.2	+0.6
	baz=255,SNR=7.7						
XPFO	Pion Flat	86.12	55	*e*P	P	03 57 48.1	+0.5
	comp=Z,8.6nm,0.9s						
NV11	Mina Array Sit	86.13	50	*e*P	P	03 57 47.8	+0.2
	comp=Z,1.2nm,0.9s						
IKP	In-Ko-Pah, Jac	86.15	56	P	P	03 57 48.3	+0.6
	baz=255						
PKI	Pulchoki	86.19	299	*e*P	P	03 57 48.3	0.0
	comp=Z,23nm,0.6s						
PALK	Pallekele	86.19	278*c*	*e*P	P	03 57 51.5	+3.3
PKIN	Phulchoki	86.20	299	*e*P	P	03 57 47.9	-0.4
	comp=Z,51nm,1.0s						
D05A	Enumclaw	86.21	41	*e*P	P	03 57 48.1	+0.6
	comp=Z,76nm,1.3s						
A04D	Lummi Island	86.29	39	P	P	03 57 49.4	+1.6
	baz=249						
GSC	Goldstone, Bar	86.30	53	*e*P	P	03 57 48.6	+0.3
	comp=Z,22nm,1.4s						
GSC	Goldstone, Bar	86.30	53	*e*P	P	03 57 48.6	+0.3
GSC				pmax	pmax		
	comp=Z,22nm,1.4s						
GSC	Goldstone, Bar	86.30	53	P	P	03 57 49.3	+0.9
	baz=254						
GRAC	Grapevine Rang	86.33	51	P	P	03 57 49.1	+0.7
	baz=254,SNR=9.5						
KVN	Kaiserville	86.35	49	*e*P	P	03 57 48.7	0.0
	comp=Z,25nm,1.3s						
KVN	Kaiserville	86.35	49	*e*P	P	03 57 48.7	0.0
KVN				pmax	pmax		
	comp=Z,25nm,1.3s						
DMN	Daman	86.46	299	*e*P	P	03 57 49.9	+0.4
	comp=Z,100nm,1.1s						
SWSC	Sam W. Stewart	86.48	56	P	P	03 57 49.9	+0.7
	baz=255,SNR=9.0						
B05A	Bryant	86.51	40	P	P	03 57 50.0	+1.1
	baz=250						
HEC	Hector,Ludlow	86.54	54	P	P	03 57 49.5	0.0
	baz=255,SNR=7.9						
FURC	Furnace Creek,	86.57	52	P	P	03 57 50.2	+0.8
	baz=254,SNR=7.2						
BELC	Belle Mtn. Jos	86.59	55	P	P	03 57 50.2	+0.3
	baz=255,SNR=12						
I07A	Izee	86.85	44	*e*P	P	03 57 51.1	+0.2
	comp=Z,26nm,1.3s						
SHOC	Shoshone, Teco	86.88	53	P	P	03 57 51.8	+0.8
	baz=255						
BC3	Big Chuckawall	86.94	55	P	P	03 57 52.0	+0.5
	baz=255,SNR=7.0						
WVOR	Wild Horse Val	86.95	46	*e*P	P	03 57 51.2	-0.2
	comp=Z,20nm,1.2s						
WVOR	Wild Horse Val	86.95	46	*e*P	P	03 57 51.2	-0.2
WVOR				pmax	pmax		
	comp=Z,20nm,1.2s						
TUQ	Turquoise Moun	87.03	53	P	P	03 57 52.6	+0.6
	baz=255						
GMRC	Granite Mounta	87.07	54	P	P	03 57 52.4	+0.2
	baz=255,SNR=6.3						
F07A	Phinny Hill Vi	87.13	42	*e*P	P	03 57 52.6	+0.6
	comp=Z,20nm,1.3s						
TPNV	Topopah Spring	87.17	52	*e*P	P	03 57 52.5	-0.2
	comp=Z,14nm,1.4s						
TPNV	Topopah Spring	87.17	52	*e*P	P	03 57 52.5	-0.2
TPNV				pmax	pmax		
	comp=Z,15nm,1.4s						
TPNV	Topopah Spring	87.17	52	P	P	03 57 53.4	+0.7
	baz=255						
GLA	Glamis	87.30	56	*e*P	P	03 57 53.1	-0.1
	comp=Z,16nm,0.8s						
GLA	Glamis	87.30	56	*e*P	P	03 57 53.1	-0.1
GLA				pmax	pmax		
	comp=Z,16nm,0.8s						
GLA	Glamis	87.30	56	P	P	03 57 54.1	+0.9
	baz=256						
IRM	Iron Mountain	87.32	55	P	P	03 57 53.8	+0.6
	baz=255,SNR=11						
J08A	Circle Bar Ran	87.34	45	*e*P	P	03 57 53.2	0.0
	comp=Z,11nm,0.8s						
HAWA	Hanford	87.54	42	*e*P	P	03 57 54.5	+0.4
	comp=Z,26nm,1.4s						
LDFC	Landfair	87.58	54	*e*P	P	03 57 54.2	-0.4
	comp=Z,31nm,1.0s						
G08A	Pilot Rock	87.59	43	*e*P	P	03 57 54.0	-0.5
	comp=Z,24nm,1.3s						
Y12C	Blythe	87.72	55	*e*P	P	03 57 55.5	+0.4
	comp=Z,22nm,1.2s						
Y12C	Blythe	87.72	55	P	P	03 57 56.1	+0.9
	baz=256,SNR=5.6						
DANN	Dangsing	87.79	299	*e*P	P	03 57 55.0	-1.0
E08A	Dider Farm, El	87.89	42	*e*P	P	03 57 56.0	+0.3
	comp=Z,43nm,1.4s						
SHPR	Sheep Range	87.90	52	*e*P	P	03 57 55.6	-0.6
	comp=Z,19nm,1.4s						
R11A	Troy Canyon, C	88.05	51	*e*P	P	03 57 56.4	-0.5
	comp=Z,10.0nm,1.1s						
R11A	Troy Canyon, C	88.05	51	P	P	03 57 57.3	+0.4
	baz=255,SNR=11						
113A	Mohawk Valley,	88.09	56	*e*P	P	03 57 57.6	+0.7
	comp=Z,8.5nm,1.0s						
D08A	Wollman Farm,	88.15	42	*e*P	P	03 57 56.8	-0.1
	comp=Z,6.0nm,1.0s						
PDMCI	Parker Dam,Lak	88.16	55	P	P	03 57 57.7	+0.5
	baz=256,SNR=7.2						
B08A	Colville Reser	88.28	40	*e*P	P	03 57 57.5	0.0
	comp=Z,12nm,1.3s						
PYUN	Piuthan	88.40	299	*e*P	P	03 57 57.4	-1.4
	comp=Z,36nm,0.9s						
W13A	Hualapai Mount	88.56	54	*e*P	P	03 57 59.5	+0.1
	comp=Z,13nm,1.2s						
BMO	Blue Mountains	88.58	44	*e*P	P	03 57 59.2	+0.1
	comp=Z,20nm,1.5s						
BMO	Blue Mountains	88.58	44	*e*P	P	03 57 59.2	+0.1
BMO				pmax	pmax		
	comp=Z,20nm,1.5s						
WMQ	Urumqi	88.62	315	P	P	03 58 00.3	+1.0
WMQ				pP	pP	03 58 08.1	-0.2
WMQ				pmax	pmax		
	comp=Z,53nm,1.3s						
WMQ	Urumqi	88.62	315	*e*P	P	03 57 58.9	-0.4
	comp=Z,54nm,1.4s						
WMQ	Urumqi	88.62	315	*e*P	P	03 57 58.9	-0.4
WMQ				pmax	pmax		
	comp=Z,54nm,1.4s						
214A	Organ Pipe Nat	88.69	57	P	P	03 58 00.8	+0.9
	baz=257						
ELK	Elko	88.93	48	*e*P	P	03 58 01.1	0.0
	comp=Z,4.0nm,1.0s						
ELK	Elko	88.93	48	*e*P	P	03 58 01.1	0.0
ELK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
F10A	Beach Ranch, E	88.95	43	*e*P	P	03 58 00.4	-0.4
	comp=Z,9.3nm,0.9s						
Y14A	Wickenburg	88.99	55	*e*P	P	03 58 01.1	-0.1
	comp=Z,4.9nm,0.9s						
MFID	Camas Ranch	89.21	46	*e*P	P	03 58 02.2	+0.1
	comp=Z,16nm,1.3s						
PSUT	Pine Spring	89.41	51	*e*P	P	03 58 03.8	+0.4
	comp=Z,10nm,0.9s						
LCMT	Little Creek M	89.52	52	*e*P	P	03 58 04.6	+0.8
	comp=Z,16nm,1.0s						
CCUT	Cedar City	89.56	52	*e*P	P	03 58 04.6	+0.5
	comp=Z,14nm,1.1s						
INK	Inuvik	89.65	19	*e*P	P	03 58 04.6	+1.2
	comp=Z,14nm,1.4s						
INK	Inuvik	89.65	19	P	P	03 58 04.6	+1.2
	comp=Z,11nm,1.3s,baz=200,slow=2.5,SNR=5.3						
NEW	Newport	89.67	41	*e*P	P	03 58 04.3	+0.2
	comp=Z,9.2nm,1.3s						
NEW	Newport	89.67	41	*e*P	P	03 58 04.3	+0.2
NEW				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NEW	Newport	89.67	41	P	P	03 58 04.4	+0.4
	baz=254						
SZCU	Shurtz Canyon	89.78	52	*e*P	P	03 58 05.5	+0.4
	comp=Z,7.6nm,0.8s						
KNB	Kanab	89.85	52	*e*P	P	03 58 06.0	+0.6
	comp=Z,40nm,1.5s						
KNB	Kanab	89.85	52	*e*P	P	03 58 06.0	+0.6
KNB				pmax	pmax		
	comp=Z,40nm,1.5s						
U15A	North Rim	90.13	53	*e*P	P	03 58 06.6	-0.2
	comp=Z,14nm,0.8s						
HLID	Hailey	90.24	46	*e*P	P	03 58 07.6	+0.6
	comp=Z,25nm,1.4s						
HLID	Hailey	90.24	46	P	P	03 58 07.8	+0.7
	baz=256						
PKCU	Pink Cliffs	90.34	52	*e*P	P	03 58 09.0	+1.1
	comp=Z,62nm,1.3s						
X16A	Lo Mia Camp, P	90.36	55	*e*P	P	03 58 08.5	+0.7
	comp=Z,8.9nm,0.9s						
DGZ	Jazzator, Alta	90.42	321*c*	*i*P	P	03 58 07.1	-0.6
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TUC	Tucson	90.44	57	*e*P	P	03 58 08.7	+0.5
	comp=Z,12nm,1.4s						
TUC	Tucson	90.44	57	P	P	03 58 08.6	+0.5
	baz=258						
MTPU	Mount Pierson	90.58	52	*e*P	P	03 58 08.5	-0.5
	comp=Z,12nm,0.8s						
DUG	Dugway, Tooele	90.59	49	*e*P	P	03 58 08.6	-0.1
	comp=Z,10nm,1.1s						
DUG	Dugway, Tooele	90.59	49	*e*P	P	03 58 08.6	-0.1
DUG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DUG	Dugway, Tooele	90.59	49	P	P	03 58 09.3	+0.6
	baz=257						
BGU	Big Grassy Mou	90.60	49	*e*P	P	03 58 08.6	-0.1
	comp=Z,11nm,1.1s						
WUAZ	Wupatki	90.65	54	*e*P	P	03 58 09.2	+0.1
	comp=Z,12nm,1.0s						
WUAZ	Wupatki	90.65	54	P	P	03 58 09.8	+0.7
	baz=258						
MSU	Marysvale	90.69	51	*e*P	P	03 58 09.3	0.0
MSU	Marysvale	90.69	51	*e*P	P	03 58 09.3	0.0
HVU	Hansel Valley	90.98	48	*e*P	P	03 58 10.8	+0.3
	comp=Z,21nm,1.1s						
HVU	Hansel Valley	90.98	48	*e*P	P	03 58 10.8	+0.3
HVU				pmax	pmax		
	comp=Z,21nm,1.1s						
NLU	North Lily Min	91.09	50	*e*P	P	03 58 11.6	+0.5
	comp=Z,16nm,1.2s						
SPUT	South Promonto	91.12	48	*e*P	P	03 58 11.3	+0.1
	comp=Z,6.0nm,0.9s						
MSO	Missoula	91.37	43	P	P	03 58 12.7	+0.5
	baz=256						
MPU	Maple Canyon	91.43	50	*e*P	P	03 58 12.9	+0.2
	comp=Z,18nm,1.3s						
CTU	Camp Tracy	91.49	49	*e*P	P	03 58 13.1	+0.1
	comp=Z,8.4nm,1.0s						
319A	Douglas	91.50	59	*e*P	P	03 58 13.3	+0.2
	comp=Z,6.9nm,0.8s						
Q16A	Castle Valley	91.54	51	*e*P	P	03 58 13.7	+0.5
	comp=Z,15nm,1.3s						
X18A	Snowflake	91.59	55	*e*P	P	03 58 13.8	+0.3
	comp=Z,5.7nm,1.0s						
TMUT	Trail Mountain	91.60	50	*e*P	P	03 58 14.0	+0.3
	comp=Z,6.8nm,0.9s						
MCMT	McKenzie Canyo	91.64	45	*e*P	P	03 58 13.8	+0.2
JLU	Jordanelle	91.70	49	*e*P	P	03 58 13.7	-0.3
	comp=Z,25nm,1.4s						
TCUT	Toone Canyon	91.84	49	*e*P	P	03 58 14.4	-0.3
	comp=Z,20nm,0.8s						
W18A	Petrified Fore	91.88	55	P	P	03 58 15.6	+0.7
	baz=258						
WALA	Waterton Lakes	91.93	40	*e*P	P	03 58 15.0	+0.3
	comp=Z,40nm,1.4s						
DLMT	Dillon	91.93	44	*e*P	P	03 58 14.8	-0.1
	comp=Z,22nm,1.0s						
P17A	Butcher Ranch,	91.99	50	*e*P	P	03 58 15.4	+0.1
	comp=Z,6.5nm,1.0s						
SYO	Syowa Base	92.05	197⇑	*e*P	P	03 58 12.2	-2.5
SYO	Syowa Base	92.05	197⇑	*e*X	P	03 58 23.0	+8.3
LRM	Limekiln Ridge	92.14	44	*e*P	P	03 58 16.9	+1.0
QLMT	Earthquake Lak	92.62	45	*e*P	P	03 58 18.5	+0.4
BOZ	Bozeman (W)	92.65	44	*e*P	P	03 58 18.1	0.0
	comp=Z,13nm,1.0s						
BOZ	Bozeman (W)	92.65	44	*e*P	P	03 58 18.1	0.0
BOZ				pmax	pmax		
	comp=Z,13nm,1.0s						
BOZ	Bozeman (W)	92.65	44	P	P	03 58 18.8	+0.7
	baz=258						
FXWY	Fox Creek	92.65	46	*e*P	P	03 58 18.4	+0.1
	comp=Z,5.5nm,0.8s						
TPAW	Teton Pass	92.67	46	*e*P	P	03 58 17.9	-0.5
	comp=Z,5.8nm,1.0s						
REDW	Red Top Meadow	92.72	47	*e*P	P	03 58 18.7	+0.1
	comp=Z,15nm,1.3s						
HRY	Holter Researc	92.75	43	*e*P	P	03 58 18.5	0.0
IMW	Indian Meadow	92.77	46	*e*P	P	03 58 18.9	0.0
	comp=Z,4.6nm,0.8s						
YHB	Horse Butte	92.77	45	*e*P	P	03 58 19.1	+0.2
	comp=Z,13nm,1.1s						
SNOW	Snow King Moun	92.81	46	*e*P	P	03 58 19.1	0.0
	comp=Z,11nm,1.0s						
MOOW	Moose Ponds	92.88	46	*e*P	P	03 58 19.7	+0.4
	comp=Z,4.9nm,1.4s						
YMR	Madison River	92.91	45	*e*P	P	03 58 19.6	+0.1
	comp=Z,9.1nm,1.0s						
LOHW	Long Hollow	92.95	46	*e*P	P	03 58 19.5	-0.2
	comp=Z,12nm,1.4s						
121A	Cookes Peak, D	92.97	58	P	P	03 58 20.5	+0.5
	baz=259						
PV09	Paradox Valley	93.02	52	*e*P	P	03 58 20.4	+0.2
MK01	Makanchi Array	93.03	317	*e*P	P	03 58 18.7	-1.0
MK31	Makanchi Array	93.05	317	*e*P	P	03 58 19.2	-0.6
MKAR	Makanchi Array	93.05	317	*e*P	P	03 58 19.2	-0.6
	comp=Z,66nm,0.9s						
MKAR				PKKP	PKKPdf	04 15 28.4	-0.9
MKAR	Makanchi Array	93.05	317	P	P	03 58 19.5	-0.2
	comp=Z,7.9nm,0.6s,baz=89,slow=5.7,SNR=37						
MKAR				PKKP	PKKPdf	04 15 28.4	-0.9
	comp=Z,1.1nm,0.8s,baz=270,slow=2.9,SNR=6.7						
ZAA0	Zalesovo Array	93.08	324	*e*P	P	03 58 18.4	-1.3
	comp=Z,29nm,1.3s						
ZALV	Zalesovo Beam	93.08	324	*e*P	P	03 58 18.4	-1.3
ZALV	Zalesovo Beam	93.08	324	*e*P	P	03 58 18.4	-1.3
ZALV	Zalesovo Beam	93.08	324	P	P	03 58 18.7	-1.0
	comp=Z,7.7nm,0.6s,baz=120,slow=4.2,SNR=27						
PV14	Lion Creek, Pa	93.08	52	*e*P	P	03 58 20.4	0.0
	comp=Z,5.4nm,0.7s						
PV23	Carpenter Ridg	93.11	52	*e*P	P	03 58 20.7	+0.1
	comp=Z,11nm,0.7s						
H17A	Grant Village	93.13	46	*e*P	P	03 58 21.1	+0.6
	comp=Z,4.9nm,0.8s						
H17A	Grant Village	93.13	46	P	P	03 58 20.8	+0.3
	baz=258						
PV21	Cone Mtn., Par	93.15	52	*e*P	P	03 58 20.9	+0.1
	comp=Z,5.8nm,0.9s						
PV04	Paradox Valley	93.18	52	*e*P	P	03 58 21.4	+0.6
	comp=Z,5.4nm,0.8s						
PV12	Saucer Basin,	93.24	52	*e*P	P	03 58 21.4	+0.3
	comp=Z,6.0nm,0.9s						
MAKZ	Makanchi	93.26	317	*e*P	P	03 58 20.1	-0.7
	comp=Z,45nm,1.4s						
MAKZ	Makanchi	93.26	317	*e*P	P	03 58 20.1	-0.7
MAKZ				pmax	pmax		
	comp=Z,45nm,1.4s						
MVCO	Mesa Verde	93.27	53	P	P	03 58 21.5	+0.2
	baz=259						
BW06	Boulder Array	93.53	47	*e*P	P	03 58 22.4	+0.1
	comp=Z,5.2nm,1.0s						
BW06	Boulder Array	93.53	47	P	P	03 58 22.9	+0.5
	baz=259						
PD31	Pinedale Array	93.53	47	*e*P	P	03 58 22.1	-0.2
PDAR	Pinedale Array	93.53	47	P	P	03 58 22.4	0.0
	comp=Z,2.7nm,0.8s,baz=242,slow=2.1,SNR=15						
O20A	White River Ci	94.01	50	P	P	03 58 25.3	+0.7
	baz=260						
NVS	Novosibirsk	94.19	325	*i* P	P	03 58 25.0	+0.3
EGMT	Eagleton	94.40	42	*e*P	P	03 58 26.1	+0.1
	comp=Z,14nm,1.1s						
EGMT	Eagleton	94.40	42	P	P	03 58 27.2	+1.2
	baz=259						
ANMO	Albuquerque	94.49	55	*e*P	P	03 58 26.5	-0.4
	comp=Z,5.2nm,1.1s						
ANMO	Albuquerque	94.49	55⇑	*i*P	P	03 58 27.1	+0.2
ANMO				pmax	pmax		
	comp=Z,24nm,3.8s						
ANMO	Albuquerque	94.49	55	P	P	03 58 27.4	+0.5
	baz=260						
YKA	Yellowknife Ar	94.79	27	P	P	03 58 26.3	-1.0
	comp=Z,2.6nm,0.8s,baz=253,slow=4.4,SNR=4.0						
YKB5	Yellowknife Ar	94.79	27	*e*P	P	03 58 26.3	-1.0
MNTX	Cornudas Mount	94.84	59	*e*P	P	03 58 28.1	-0.2
	comp=Z,3.8nm,1.2s						
MNTX	Cornudas Mount	94.84	59	P	P	03 58 29.4	+1.1
	baz=261						
NRIK	Noril'sk	95.67	340	P	P	03 58 30.6	-0.7
	comp=Z,2.0nm,0.3s,baz=106,slow=5.2,SNR=6.1						
TX31	Lajitas Ar. Si	95.92	61	*e*P	P	03 58 33.6	+0.2
TXAR	Lajitas Array	95.92	61	P	P	03 58 36.1	+2.7
	comp=Z,1.0nm,0.7s,baz=227,slow=5.6,SNR=12						
KURK	Kurchatov	96.16	320	*e*P	P	03 58 32.7	-1.2
	comp=Z,18nm,1.4s						
KURK	Kurchatov	96.16	320*c*	*e*P	P	03 58 32.5	-1.4
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KSH	Kashi	96.29	309	P	P	03 58 37.8	+2.9
SNAA	Sanae	97.46	184	P	Pdif	03 58 40.0	+0.3
SNAA	Sanae	97.46	184	P	P	03 58 39.5	-0.1
	comp=Z,12nm,1.0s,baz=160,slow=2.3,SNR=13						
DGMT	Dagmar	98.14	42	P	Pdif	03 58 43.2	+0.2
	baz=263						
VNA3	Neumayer Olymp	98.20	182	P	Pdif	03 58 43.7	+0.8
VNA2	Neumayer--Watz	98.44	182	P	P	03 58 43.5	-0.4
ARCES	ARCESS Array B	115.90	345	PKP	PKiKP	04 03 47.6	-0.6
	comp=Z,3.8nm,0.5s,baz=75,slow=1.1,SNR=36						
GNI	Garni	120.18	310*c*	*i*PKIKP	PKiKP	04 04 01.9	+4.3
GNI				pmax	pmax		
	comp=Z,53nm,1.7s						
OBN	Obninsk	120.33	329	*i* PKIKP	PKiKP	04 03 57.2	+0.1
OBN				*e*		04 05 18.7	
OBN				*e*PPP	PPP	04 07 54.7	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LPAZ	La Paz	120.62	116	*e*PKPdf	PKPdf	04 03 57.7	-1.9
LPAZ	La Paz	120.62	116	*e*PKIKP	PKPdf	04 03 57.7	-1.9
LPAZ	La Paz	120.62	116	PKP	PKiKP	04 03 59.7	0.0
	comp=Z,1.9nm,0.6s,baz=270,slow=25,SNR=10						
FINES	FINESS Array B	121.32	339	PKP	PKPdf	04 03 58.1	-0.7
	comp=Z,2.6nm,0.5s,baz=44,slow=1.3,SNR=19						
CPUP	Villa Florida	124.50	132	*e*PKPdf	PKPdf	04 04 04.8	-1.2
CPUP	Villa Florida	124.50	132	*e*PKIKP	PKPdf	04 04 04.8	-1.2
CPUP	Villa Florida	124.50	132	PKP	PKPdf	04 04 06.1	+0.1
	comp=Z,4.0nm,0.8s,baz=317,slow=0.8,SNR=5.1						
SDV	Santo Domingo	124.78	87	*e*PKPdf	PKPdf	04 04 06.1	-1.0
BOSA	Boshof	125.17	224	PKP	PKiKP	04 04 08.8	+1.0
	comp=Z,3.6nm,0.7s,baz=128,slow=2.1,SNR=8.5						
NB2	NORSAR Subarra	126.27	345	PKPdf	PKPdf	04 04 07.7	-0.7
	comp=Z,13nm,1.2s,baz=31,slow=1.9						
NB2	NORSAR Subarra	126.27	345	PKPdf	PKPdf	04 04 07.7	-0.7
	baz=31,slow=1.9						
NOA	NORSAR Array B	126.27	345	PKP	PKPdf	04 04 08.1	-0.3
	comp=Z,2.1nm,0.7s,baz=32,slow=2.0,SNR=12						
AKASG	Malin Array Be	126.39	327	PKP	PKPdf	04 04 08.4	-0.4
	comp=Z,1.8nm,0.6s,baz=56,slow=2.1,SNR=9.6						
BRTR	Keskin Array B	128.49	313	PKP	PKPdf	04 04 13.4	0.0
	comp=Z,2.0nm,0.9s,baz=357,slow=2.7,SNR=7.5						
BRTR				PP	PP	04 06 17.1	-1.5
	comp=Z,1.8nm,1.0s,baz=79,slow=6.4,SNR=4.3						
ANTO	Ankara	129.05	313	*e*PKPdf	PKPdf	04 04 14.5	+0.2
ANTO	Ankara	129.05	313⇑	*i*P	PKPdf	04 04 12.1	-2.3
ANTO	Ankara	129.05	313	⇑PKIKP	PKPdf	04 04 12.1	-2.3
HUMP	Col San Antoni	129.91	75	*e*PKPdf	PKPdf	04 04 15.7	-0.8
BIZ	Bicaz	130.16	324⇓	*i*P	PKiKP	04 04 16.6	-0.4
BUR04	Bucovina Ar. S	130.28	325	*e*PKPdf	PKPdf	04 04 16.0	-0.5
BURAR	Bucovina Array	130.28	325⇑	*i*P	PKiKP	04 04 18.5	+1.2
BURAR	Bucovina Array	130.28	325	⇑PKIKP	PKiKP	04 04 18.5	+1.2
VRI	Vrincioaia	130.37	323⇑	*i*P	PKiKP	04 04 28.8	+11
LSZ	Lusaka	130.42	239	*e*PKPdf	PKPdf	04 04 17.6	-0.1
LSZ	Lusaka	130.42	239	*e*PKIKP	PKPdf	04 04 17.6	-0.1
MLR	Muntele Rosu	131.03	323⇓	*i*P	PKiKP	04 04 19.5	+0.5
MLR	Muntele Rosu	131.03	323	⇓PKIKP	PKiKP	04 04 19.5	+0.5
DOPR	Dopca	131.10	324⇑	*i*P	PKPdf	04 04 17.9	-0.1
TRPA	Tarpa	131.44	327⇑	*i*P	PKiKP	04 04 19.4	-0.1
VOIR		131.59	323⇓	*i*P	PKPdf	04 04 19.2	+0.2
VOIR		131.59	323	⇓PKIKP	PKPdf	04 04 19.2	+0.2
ARR	Arges	131.88	323⇓	*i*P	PKPdf	04 04 18.4	-1.2
DRGR		132.15	326⇑	*i*P	PKPdf	04 04 19.5	-0.5
DRGR		132.15	326	⇑PKIKP	PKPdf	04 04 19.5	-0.5
GZR	Gura Zlata	132.94	324⇑	*i*P	PKiKP	04 04 22.5	-0.2
GZR	Gura Zlata	132.94	324	⇑PKIKP	PKiKP	04 04 22.5	-0.2
SIRR	Siria	133.05	326⇑	*i*P	PKiKP	04 04 33.3	+10
VYHS	Vyhne	133.10	330	*e*PKIKP	PKiKP	04 04 23.5	+0.6
VYHS				*e*		04 06 48.5	
VYHS	Vyhne	133.10	330	*e*PKP	PKiKP	04 04 23.5	+0.6
VYHS				*e*PP	PP	04 06 48.5	+0.9
BZS	Buzias	133.47	325⇑	*i*P	PKPdf	04 04 22.0	-0.4
BZS	Buzias	133.47	325	⇑PKIKP	PKPdf	04 04 22.0	-0.4
BRG	Berggiesshubel	133.60	335	*e*PKP	PKPdf	04 04 22.5	0.0
	comp=Z,7.8nm,1.2s						
BRG				*e*		04 04 27.7	
	comp=Z,69nm,2.4s						
BRG				*e*SKP		04 07 54.2	
	comp=Z,76nm,2.8s						
BRG	Berggiesshubel	133.60	335	*e*PKIKP	PKPdf	04 04 22.5	0.0
BRG				*e*		04 04 27.7	
BRG				pmax	pmax		
	comp=Z,14nm,1.2s						
BRG				pmax	pmax		
	comp=Z,8.0nm,2.4s						
BRG				pmax	pmax		
	comp=N,69nm,2.8s						
CLL	Collm	133.65	336	*e*PKPdf	PKiKP	04 04 25.0	+1.1
CLL				*e*		04 07 02.0	
CLL	Collm	133.65	336	*e*PKIKP	PKiKP	04 04 25.0	+1.1
CLL				MLR	MLR		
	comp=Z,5µm,20.4s						
KRUC	Moravsky	133.87	332	*e*PKP	PKiKP	04 04 24.6	+0.2
MDVR	Moldovita	133.91	324⇑	*i*P	PKPdf	04 04 23.5	+0.1
PRU	Pruhonice	134.02	334	*e*PKPDF	PKiKP	04 04 24.6	-0.1
PRU	Pruhonice	134.02	334	*e*PKIKP	PKiKP	04 04 24.6	-0.1
VTS	Vitosha	134.22	321⇓	*i*P	PKPdf	04 04 24.8	+0.6
VTS	Vitosha	134.22	321	⇓PKIKP	PKPdf	04 04 24.8	+0.6
CONA	Conrad Observa	134.93	331	PKiKP	PKPdf	04 04 25.8	+0.6
	comp=Z,1.8nm,0.5s						
KHC	Kasperske Hory	135.08	334	*e*PKPDF	PKPdf	04 04 25.7	+0.3
KHC				*e*x	x	04 04 30.8	
KHC	Kasperske Hory	135.08	334	*e*PKIKP	PKPdf	04 04 25.7	+0.3
KHC				*e*		04 04 30.8	
GERES	GERESS Array B	135.24	334	PKP	PKiKP	04 04 26.6	-0.7
	comp=Z,2.2nm,0.7s,baz=29,slow=3.0,SNR=8.5						
GEA0	GERESS Array S	135.25	334	*e*PKPdf	PKPdf	04 04 25.0	-0.8
MOA	Molln	135.73	332	PKiKP	PKPdf	04 04 27.3	+0.6
	comp=Z,4.1nm,0.7s						
KBA	Koelnbreinsper	136.72	332	PKiKP	PKPdf	04 04 28.9	+0.2
	comp=Z,6.6nm,0.9s						
WATA	Walderalm	137.31	334	PKiKP	PKiKP	04 04 31.2	-0.4
	comp=Z,1.5nm,0.4s						
WTTA	Wattenberg	137.34	334	PKiKP	PKPdf	04 04 30.7	+0.9
	comp=Z,19nm,1.3s						
ABTA	Abfaltersbach	137.34	332	PKPdf	PKPdf	04 04 29.7	-0.1
	comp=Z,4.4nm,0.7s						
MOTA	Moosalm	137.51	334	PKiKP	PKiKP	04 04 31.6	-0.5
	comp=Z,2.9nm,0.8s						

SQTA	Sankt Quirin	137.56	334	ePKiKP	PKiKP	04 04 31.9	-0.2
	comp=Z,11nm,1.4s						
BDFB	Brasilia	137.80	128	PKP	PKPdf	04 04 32.5	+1.0
	comp=Z,3.5nm,0.8s,baz=333,slow=5.9,SNR=4.9						
KEST	Kesra	146.94	323	ePKPdf	PKPdf	04 04 46.5	-0.7
KEST	Kesra	146.94	323	PKPbc	PKPbc	04 04 49.4	+0.3
	comp=Z,30nm,0.8s,baz=208,slow=0.7,SNR=29						
POLO	Lamas de Olo	148.85	350	ePKPdf	PKPbc	04 04 54.4	+0.4
MVO	Moncorvo	148.91	349	ePKPdf	PKPbc	04 04 54.8	+0.6
PTO	Porto	149.21	351	ePKPdf	PKPbc	04 04 54.4	-0.4
ES19	SONSECA Array	149.58	344	ePKPdf	PKPdf	04 04 51.4	+0.1
ESDC	Sonseca Array	149.62	344	PKPbc	PKPbc	04 04 56.1	+0.1
	comp=Z,3.7nm,0.8s,baz=13,slow=1.9,SNR=12						
MTE	Manteigas	149.75	349	ePKPdf	PKiKP	04 04 57.5	+0.2
PCAS	Casmilo, Conde	150.25	351	ePKPdf	PKPbc	04 04 57.6	+0.2
PCBR	Castelo Branco	150.28	349	ePKPdf	PKiKP	04 04 57.9	-0.4
PTOM	Tomar	150.66	350	ePKPdf	PKiKP	04 04 58.8	-0.3
PMRV	Marv??o	150.66	349	ePKPdf	PKPbc	04 04 58.7	+0.2
PMTG	Montargil	151.16	350	ePKPdf	PKPbc	04 04 59.4	-0.2
PESTR	Estremoz	151.24	349	ePKPdf	PKPbc	04 04 59.3	-0.5
MESJ	Messejana	152.36	349	ePKPdf	PKPbc	04 05 01.7	-0.7
TOA0	Torodi Ar. Sit	163.90	280	ePKPdf	PKPdf	04 05 09.0	-1.2
TORD	Torodi Ar. Bea	163.90	280	PKP	PKPdf	04 05 10.0	-0.2
	comp=Z,2.9nm,0.9s,baz=344,slow=3.0,SNR=9.8						
TORD				PKPab	PKPab	04 06 02.6	-0.4
	comp=Z,3.0nm,0.9s,baz=70,slow=3.6,SNR=6.7						
DBIC	Dimbokro	169.61	248	PKP	PKPdf	04 05 15.6	+1.0
	comp=Z,11nm,1.1s,baz=336,slow=1.1,SNR=4.2						

IDC ***06*** *03:49:43.4±0.4, 10°.86S×165°.61E, h0^{km}, mb5.3/27, mb1 5.5/29, mb1mx5.3/43, mbtmp5.3/29, ML5.9/2, MS6.0/14, Ms1 6.0/14, ms1mx5.6/50, Error ellipse: s-maj=15.3km s-min=11.3km az=96.0*

NEIC ***06*** *03:49:44.9±0.1, 10°.90S×165°.50E, h10^{km}, mb5.5/275, Error ellipse: s-maj=2.0km s-min=1.7km az=125.0*

ISCJB ***06*** *03:49:45.7±0.1, 10°.91S±0°.02×165°.46E±0°.02, h24^{km}, mb5.5/323, MS6.0/26, Error ellipse: s-maj=2.7km s-min=2.4km az=17.2*

BJI ***06*** *03:49:45.1, 10°.51S×165°.63E, h13^{km}, mB5.8/8, mb5.3/63, Ms5.8/18, Ms7 5.8/16*

MOS ***06*** *03:49:49.5±1.0, 10°.92S×165°.42E, h53^{km}, mb5.6/65, Error ellipse: s-maj=7.4km s-min=6.3km az=95.9*

ISC 06 03:49:46.2±0.7**, 10°.92S**±0°.04×**165°.59E**±0°.04**, h18**^{km}±3^{km}**, n853, σ1°.09**/869**, mb5.5**/322**, MS6.0**/28**, 33C-25D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.75	284	ePn	Pn	03 51 09.8	-0.8
HNR				eSn	Sn	03 52 13.9	-2.3
HNR	Honiara	5.75	284	eP	Pn	03 51 09.8	-0.8
HNR				e		03 52 13.9	
HNR	Honiara	5.75	284	Pn	Pn	03 51 11.5	+0.8
	437nm,0.3s,baz=142,slow=7.0,SNR=19						
HNR				Sn	Sn	03 52 18.4	+2.3
	118nm,0.3s,baz=251,slow=22,SNR=3.8						
HNR				LR	LR	03 53 32.6	
	comp=Z,238µm,19.4s,baz=124,slow=40						
MARNC	Mare, Loyalty	10.76	168	ePn	Pn	03 52 19.4	0.0
DZM	Mont Dzumac	11.12	176	ePn	Pn	03 52 26.8	+2.4
	1µm,1.6s						
DZM				eSn	Sn	03 54 24.1	-4.3
	682nm,1.6s						
DZM				eLR	LR	03 55 01.9	
	comp=Z,57µm,25.7s						
DZM	Mont Dzumac	11.12	176	ePn	Pn	03 52 25.5	+1.1
DZM				eSn	Sn	03 54 28.2	-0.2
DZM	Mont Dzumac	11.12	176	Pn	Pn	03 52 26.5	+2.1
	52nm,0.3s,baz=354,slow=1.2,SNR=51						
DZM				Sn	Sn	03 54 28.9	+0.6
	5.2nm,0.3s,baz=326,slow=21,SNR=3.5						
OUENC	Ouen Island, N	11.49	174	ePn	Pn	03 52 30.5	+1.0
OUENC				eSn	Sn	03 54 36.4	-1.1
PINNC	Pines Island,	11.76	172	ePn	Pn	03 52 33.4	+0.2
MSVF	Nonsavu	13.84	121	ePn	Pn	03 53 04.2	+2.5
MSVF	Nonsavu	13.84	121	eP	Pn	03 53 04.2	+2.5
TARA	Tarawa	14.21	31	ePn	Pn	03 53 06.7	0.0
TARA				eSn	Sn	03 55 42.6	-1.5
NFK	Norfolk Island	18.16	173	P	P	03 54 01.9	+4.2
	baz=19						
PATS	Pohnpei	19.07	337	P	P	03 54 04.6	-3.3
	baz=19,SNR=4.1						
EIDS	Eidsvold	19.88	222	P	Pn	03 54 18.7	+0.4
	baz=20,SNR=16						
CTA	Charters Tower	20.72	242	P	Pn	03 54 27.3	-0.9
	baz=21						
CTA	Charters Tower	20.72	242	P	P	03 54 26.8	+1.0
	408nm,1.0s,baz=68,slow=13,SNR=89						
CTA				LR	LR	04 01 48.8	
	comp=Z,43µm,18.1s,baz=89,slow=35						
CTAO	Charters Tower	20.72	242	eP	P	03 54 25.7	-0.1
	2µm,1.4s						
CTAO	Charters Tower	20.72	242	eP	P	03 54 25.7	-0.1
CTAO				pmax	pmax		
	comp=Z,2µm,1.4s						
LHI	Lord Howe Isla	21.37	195	P	P	03 54 34.4	+1.7
	baz=22,SNR=7.0						
MTSU	Mount Surprise	21.79	248	P	P	03 54 37.9	+0.5
	baz=22,SNR=117						
COEN	Coen	22.09	260	P	P	03 54 40.4	-0.3
	baz=22,SNR=44						
RMQ	Roma	22.18	223	P	P	03 54 42.7	+1.2
	baz=22,SNR=104						
ARMA	Armidale	23.34	212	P	P	03 54 54.5	+0.8
	baz=24,SNR=36						
KNTN	Kanton	23.93	72	eP	P	03 54 59.1	-0.3
	comp=Z,400nm,1.5s						
OUZ	Omahuta	25.26	164	eP	P	03 55 11.8	+0.4
	comp=Z,166nm,1.0s						
QLP	Quilpie	25.46	229	P	P	03 55 13.8	+0.5
	baz=26,SNR=25						
MGCD	Mangrove Creek	25.86	209	P	P	03 55 19.6	+2.7
	baz=26,SNR=45						
JAY	Jayapura	26.06	287	P	P	03 55 18.1	-0.9
RIV	Riverview	26.35	208	P	P	03 55 24.0	+2.7
	baz=27,SNR=23						
GENI	Genyem	26.54	286	P	P	03 55 22.4	-0.9
QIS	Mount Isa	26.74	246	P	P	03 55 25.0	0.0
	baz=27,SNR=37						
KUZ	Kuaotunu	27.29	162	P	P	03 55 31.7	+2.0
CMSA	Cobar Meteorol	27.56	219	P	P	03 55 32.1	-0.2
	baz=28,SNR=65						
YNG	Young	28.07	211	P	P	03 55 38.0	+1.2
	baz=28,SNR=25						
CNB	Canberra Magne	28.41	209	P	P	03 55 41.1	+1.2
	baz=29,SNR=30						
OPRZ	Ohinepanea	28.56	162	P	P	03 55 42.3	+1.3
CAN	Canberra	28.59	209	P	P	03 55 42.2	+0.8
	baz=29						
CAN	Canberra	28.59	209	eP	P	03 55 41.2	-0.3
	comp=Z,135nm,1.1s						
CAN	Canberra	28.59	209	eP	P	03 55 41.2	-0.3
CAN				pmax	pmax		
	comp=Z,135nm,1.1s						
HIZ	Hauiti	28.70	165	eP	P	03 55 43.1	+0.8
	comp=Z,272nm,1.2s						
WHRZ	Whale Island	28.70	161	P	P	03 55 44.6	+2.3
OMRZ	Omania	28.74	162	P	P	03 55 46.3	+3.5
HAZ	Te Kaha	28.88	160	P	P	03 55 45.2	+1.4
MXZ	Matakaoa Point	28.89	159	P	P	03 55 44.1	+0.1
RUGZ	Raukumara Rang	29.03	160	P	P	03 55 48.1	+2.7
URZ	Urewera	29.11	161	eP	P	03 55 46.0	0.0
	comp=Z,182nm,1.0s						
URZ	Urewera	29.11	161	P	P	03 55 46.4	+0.5
	comp=Z,116nm,0.9s,baz=359,slow=6.7,SNR=20						
URZ	Urewera	29.11	161	P	P	03 55 46.8	+0.9
WMGZ	Waiomatatini S	29.15	159	P	P	03 55 48.4	+2.0
H11S2	WAKE ISLAND Hy	29.25	2	T	T	04 26 19.5	
	baz=173						
VRZ	Vera Road	29.25	165	P	P	03 55 55.1	+7.9
H11S3	WAKE ISLAND Hy	29.25	2	T	T	04 26 18.5	
	baz=173						
H11S1	WAKE ISLAND Hy	29.27	2	T	T	04 26 19.5	
	baz=173						
RATZ	Rangitukua	29.27	164	P	P	03 55 50.3	+2.8
MWZ	Matawai	29.31	161	P	P	03 55 48.2	+0.4
PUZ	Puketiti	29.32	159	P	P	03 55 50.7	+2.8
TWGZ	Tauwhareparae	29.32	160	P	P	03 55 48.7	+0.8
KATZ	Kakaramea	29.36	164	P	P	03 55 50.5	+2.2
TWVZ	Taurewa	29.38	164	P	P	03 55 51.4	+3.0
RTZ	Ruatahuna	29.40	162	P	P	03 55 49.7	+1.1
MRHZ	Matea Rd	29.43	163	P	P	03 55 50.9	+2.1
KRVZ	Karewarewa	29.45	164	P	P	03 55 52.8	+3.7
WTVZ	West Tongariro	29.46	164	P	P	03 55 52.9	+3.8
TKGZ	Te Karaka	29.52	160	P	P	03 55 52.4	+2.9
NGZ	Ngauruhoe	29.52	164	P	P	03 55 53.3	+3.6
MTHZ	Maungataniwha	29.57	162	P	P	03 55 51.2	+1.1
FWVZ	Far West T-bar	29.58	164	P	P	03 55 53.3	+2.9
TRVZ	Turoa	29.62	164	P	P	03 55 53.5	+2.7
SNGZ	Shannon Statio	29.66	161	P	P	03 55 51.5	+0.6
CNGZ	Carnagh Statio	29.68	160	P	P	03 55 50.7	-0.2
RAHZ	Arahi	29.71	162	P	P	03 55 52.2	+1.0
RIGZ	Rimuhau	29.73	161	P	P	03 55 51.7	+0.2
RIGZ				P	P	03 55 51.5	0.0
BKZ	Black Stump Fm	29.76	163	eP	P	03 55 51.4	-0.4
	comp=Z,230nm,1.2s						
BKZ	Black Stump Fm	29.76	163	P	P	03 55 52.7	+0.9
MOVZ	Moawhango	29.77	164	P	P	03 55 54.5	+2.5
NMHZ	Naumai	29.79	162	P	P	03 55 53.4	+1.4
NMHZ				P	P	03 55 53.4	+1.4
WHHZ	Waihua	29.90	162	P	P	03 55 53.5	+0.5
WAZ	Wanganui	29.90	165	P	P	03 55 58.3	+5.3
BHHZ	Black Hill Sta	29.94	164	P	P	03 55 54.3	+1.0
MILA	Mila	29.94	207	P	P	03 55 54.9	+1.5
	baz=30,SNR=7.8						
KWHZ	Kaweka Forest	29.98	163	P	P	03 55 54.8	+1.1
ARHZ	Aropaoanui	30.00	162	P	P	03 55 54.6	+0.8
MCHZ	McNeill Hill	30.07	163	P	P	03 55 55.8	+1.3
MHGZ	Mahia Peninsul	30.18	161	P	P	03 55 56.1	+0.6
CKHZ	Cape Kidnapper	30.39	162	P	P	03 55 57.2	0.0
STKA	Stephens Creek	30.42	223	P	P	03 55 58.4	+0.7
	baz=31,SNR=31						
STKA	Stephens Creek	30.42	223	eP	P	03 55 57.5	-0.2
	comp=Z,21nm,1.0s						
STKA				PcP	PcP	03 58 58.3	+1.1
STKA	Stephens Creek	30.42	223	eP	P	03 55 57.5	-0.2
STKA						03 58 58.3	
STKA				pmax	pmax		
	comp=Z,21nm,1.0s						
STKA	Stephens Creek	30.42	223	P	P	03 55 58.1	+0.4
	comp=Z,54nm,1.0s,baz=27,slow=8.2,SNR=26						
STKA				PcP	PcP	03 58 58.3	+1.1
	comp=Z,15nm,0.9s,baz=15,slow=6.8,SNR=3.5						
STKA				LR	LR	04 07 36.6	
	comp=Z,50µm,18.4s,baz=14,slow=35						
TSZ	Takapari Road	30.44	164	P	P	03 55 58.3	+0.5
KAHZ	Kahuranaki	30.45	163	P	P	03 55 58.7	+0.9
KAHZ				P	P	03 55 58.7	+0.9
H11N1	WAKE ISLAND Hy	30.47	2	T	T	04 27 52.2	
	baz=186						
H11N3	WAKE ISLAND Hy	30.48	2	T	T	04 27 57.2	
	baz=186						
H11N2	WAKE ISLAND Hy	30.49	2	T	T	04 27 55.8	
	baz=186						
WPHZ	Waipukurau	30.58	163	P	P	03 56 00.1	+1.2
PXZ	Pawanui	30.67	163	P	P	03 56 00.6	+0.9
POWZ	Post Office Ro	30.70	165	P	P	03 56 05.8	+5.8
DVHZ	Dannevirke	30.72	164	P	P	03 56 00.9	+0.7
PRWZ	Pori Road	30.91	164	P	P	03 56 05.5	+3.6
ANWZ	Angora Road	30.95	164	P	P	03 56 04.0	+1.7
TIWZ	Tintock	31.09	165	P	P	03 56 06.0	+2.5
BFZ	Birch Farm	31.10	164	eP	P	03 56 03.4	-0.2
	comp=Z,217nm,0.9s						
SNZO	South Karori	31.31	167	eP	P	03 56 06.0	+0.6
	comp=Z,75nm,1.0s						
WRAB	Tennant Creek	31.37	250	eP	P	03 56 05.2	-1.0
	comp=Z,200nm,1.0s						
WRAB	Tennant Creek	31.37	250	⇑iP	P	03 56 06.1	-0.1
WRAB				pmax	pmax		
	comp=Z,226nm,1.1s						
WB2	Warramunga Arr	31.37	250	eP	P	03 56 05.2	-1.0
	comp=Z,232nm,1.0s						
WRA	Warramunga Arr	31.38	250	P	P	03 56 04.7	-1.6
	comp=Z,122nm,0.9s,baz=79,slow=9.3,SNR=80						
WRA				PcP	PcP	03 59 00.7	+0.7
	comp=Z,20nm,0.9s,baz=74,slow=3.0,SNR=8.4						
WRA				LR	LR	04 08 51.6	
	comp=Z,50µm,18.1s,baz=75,slow=36						
THZ	Tophouse	31.38	169	eP	P	03 56 06.8	+0.7
	comp=Z,85nm,0.9s						
TMWZ	Te Maipa	31.41	165	P	P	03 56 05.9	-0.3
TOO	Toolangi	32.09	211	P	P	03 56 13.0	+0.6
	baz=32,SNR=30						
KHZ	Kahutara	32.13	169	eP	P	03 56 13.0	+0.4
	comp=Z,144nm,1.2s						
LTZ	Lake Taylor	32.27	171	eP	P	03 56 14.1	+0.3
	comp=Z,112nm,1.0s						
KDU	Kakadu	32.45	264	P	P	03 56 14.3	-1.4
	baz=32,SNR=15						
AS01	Alice Springs	32.67	243	eP	P	03 56 16.1	-1.5
FOZ	Fox Glacier	32.70	174	eP	P	03 56 18.1	+0.7
	comp=Z,61nm,1.1s						
AS31	Alice Springs	32.71	243	eP	P	03 56 16.6	-1.4
	comp=Z,64nm,0.9s						
ASAR	Alice Springs	32.71	243	P	P	03 56 16.4	-1.6
	comp=Z,190nm,0.9s,baz=72,slow=9.5,SNR=138						
ASAR				PcP	PcP	03 59 04.0	+0.4
	comp=Z,20nm,0.8s,baz=75,slow=2.5,SNR=9.6						
ASAR				LR	LR	04 08 36.2	
	comp=Z,29µm,20.0s,baz=36,slow=35						
OXZ	Oxford	32.77	171	eP	P	03 56 18.5	+0.3
	comp=Z,169nm,1.3s						
RPZ	Rata Peaks	33.01	173	eP	P	03 56 21.2	+0.9
	comp=Z,70nm,0.9s						
RPZ	Rata Peaks	33.01	173	P	P	03 56 20.9	+0.6
	comp=Z,20nm,0.6s,baz=343,slow=4.6,SNR=10						
RPZ				LR	LR	04 07 54.3	
	comp=Z,17µm,20.8s,baz=207,slow=33						
CRLZ	Canterbury Las	33.10	171	eP	P	03 56 21.2	+0.2
	comp=Z,208nm,1.3s						
HTT	Hallett	33.16	223	P	P	03 56 22.1	+0.3
	baz=33,SNR=30						
MQZ	McQueen's Vall	33.23	171	eP	P	03 56 22.5	+0.3
	comp=Z,138nm,1.1s						
ARPS	Mount Arapiles	33.48	216	P	P	03 56 25.6	+1.1
	baz=34,SNR=17						
LBZ	Lake Benmore	33.58	174	eP	P	03 56 25.7	+0.5
	comp=Z,38nm,1.2s						
WKZ	Wanaka	33.91	176	eP	P	03 56 29.0	+0.9
	comp=Z,91nm,1.2s						
ODZ	Otahua Downs	34.28	174	eP	P	03 56 31.6	+0.3
	comp=Z,29nm,1.3s						
DCZ	Deep Cove	34.45	178	eP	P	03 56 33.0	+0.3
	comp=Z,44nm,1.0s						
RAR	Rarotonga	34.75	111	LR	LR	04 07 59.4	
	comp=Z,18µm,21.6s,baz=312,slow=32						
BBOO	Buckleboo	34.80	227	P	P	03 56 35.7	-0.3
	baz=35,SNR=44						
MOO	Moorlands	35.27	204	P	P	03 56 41.0	+1.1
	baz=36,SNR=7.4						
TAU	Tasmania Unive	35.62	203	eP	P	03 56 43.2	+0.3
	comp=Z,203nm,1.5s						
TAU	Tasmania Unive	35.62	203	eP	P	03 56 43.2	+0.3
TAU				pmax	pmax		
	comp=Z,203nm,1.5s						
BNDI	Bandanaira	35.90	277	P	P	03 56 44.1	-1.6
	comp=Z,340nm,0.9s,comp=Z,15µm						
KNRA	Kununurra	36.11	258	P	P	03 56 46.1	-1.4
	baz=36,SNR=11						
WRKA	Warakurna	38.00	243	P	P	03 57 02.4	-1.1
	baz=38,SNR=92						
NLAI	Namlea	38.91	278	P	P	03 57 10.4	-0.8
FITZ	Fitzroy Crossi	39.26	255	P	P	03 57 13.4	-0.7
	baz=39,SNR=71						
TNTI	Ternate	39.73	285	eP	P	03 57 17.5	-0.6
	comp=Z,65nm,1.1s						
TNTI	Ternate	39.73	285	P	P	03 57 17.5	-0.6
FORT	Forrest	39.98	235	P	P	03 57 20.7	+0.7
	baz=40,SNR=19						
SANI	Sanana	40.27	280	P	P	03 57 21.8	-0.8
SOEI	Soe	40.64	268	eP	P	03 57 25.4	-0.4
	comp=Z,36nm,0.9s						
SOEI	Soe	40.64	268	P	P	03 57 23.4	-2.4
	comp=Z,71nm,1.1s						
BATI	Baumata	41.20	267	P	P	03 57 28.5	-1.8
	comp=Z,55nm,0.8s,comp=Z,4µm						
MMRI	Maumere	42.75	269	eP	P	03 57 41.9	-1.1
	comp=Z,163nm,1.1s						
MMRI	Maumere	42.75	269	P	P	03 57 41.9	-1.1
	comp=Z,123nm,1.0s,comp=Z,7µm						
KMSI	Cibinong	42.91	283	P	P	03 57 43.6	-0.6
EDFI	Ende, Flores	43.28	269	P	P	03 57 46.0	-1.3
	comp=Z,41nm,1.1s						
LUWI	Luwuk	43.64	280	eP	P	03 57 49.5	-0.6
	comp=Z,273nm,1.4s						
PPT2	Papeete2	43.88	104	eLR	LR	04 10 24.0	
	comp=Z,24µm,22.5s						
TBI	Tubuai	44.52	112	eLR	LR	04 10 43.8	
	comp=Z,35µm,25.2s						
APSI	Ampana	44.76	280	P	P	03 57 58.5	-0.6
MRSI	Marisa	44.84	282	P	P	03 57 59.2	-0.5
MBWA	Marble Bar	45.09	251	eP	P	03 58 01.0	-0.7
	comp=Z,86nm,0.9s						
MBWA	Marble Bar	45.09	251	P	P	03 58 02.2	+0.6
	SNR=7.9						
MBWA				P	P	03 58 02.2	+0.6
	SNR=7.9						
BKSI	Bulukumba	45.31	273	P	P	03 58 02.8	-0.7
BNSI	Bone	45.49	275	P	P	03 58 04.3	-0.7
SPSI	Sidrap Palu	45.91	275	P	P	03 58 07.6	-0.6
TTSI	Tana Toraja	46.05	276	P	P	03 58 08.7	-0.6
PCI	Palu	46.51	279	P	P	03 58 12.5	-0.5
MPSI	Mapaga	46.77	281	P	P	03 58 14.5	-0.5
MEEK	Meekatharra	46.86	244	P	P	03 58 15.7	+0.1
	baz=47,SNR=128						
PLAI	Plampang	47.11	268	P	P	03 58 16.2	-1.5
	comp=Z,110nm,0.9s,comp=Z,6µm						
RCP	Roxas	48.07	296	⇑eP	P	03 58 25.7	+0.6
OPA	Opana	48.24	48	eP	P	03 58 27.3	+1.0
	comp=Z,217nm,0.9s						
OPA	Opana	48.24	48	eP	P	03 58 27.3	+1.0
OPA				pmax	pmax		
	comp=Z,217nm,0.9s						
KLBR	Kellerberrin	48.64	237	P	P	03 58 29.2	-0.1
	baz=49,SNR=9.6						
HMH	Humu'ula Sheep	48.89	52	eP	P	03 58 32.5	+0.8
	comp=Z,281nm,1.2s						
SMKI	Samarinda	49.17	279	P	P	03 58 33.2	-0.5
BLDU	Ballidu	49.29	239	P	P	03 58 34.2	-0.1
	baz=49,SNR=23						
NWAO	Narrogin (SRO)	49.40	236	P	P	03 58 36.0	+0.9
	baz=50,SNR=7.9						
NWAO	Narrogin (SRO)	49.40	236	eP	P	03 58 34.9	-0.2
	comp=Z,365nm,1.4s						
NWAO	Narrogin (SRO)	49.40	236	eP	P	03 58 34.9	-0.2
NWAO				pmax	pmax		
	comp=Z,365nm,1.4s						
NWAO	Narrogin (SRO)	49.40	236	P	P	03 58 36.4	+1.2
	SNR=15						
NWAO				P	P	03 58 36.4	+1.2
	SNR=15						
NWAO	Narrogin (SRO)	49.40	236	LR	LR	04 19 46.8	
	comp=Z,51µm,18.3s,baz=312,slow=36						
MORW	Morawa	49.55	241	P	P	03 58 36.1	-0.2
	baz=50,SNR=82						
KBKI	Kotabaru	49.56	275	P	P	03 58 36.2	-0.4
SRBI	Singaraja	49.72	269	P	P	03 58 37.2	-0.6
	comp=Z,56nm,1.0s						
MUN	Mundaring	50.01	237	P	P	03 58 39.4	-0.5
	baz=50,SNR=20						
JAGI	Jajag, Banyuwa	50.71	268	eP	P	03 58 43.2	-2.1
	comp=Z,125nm,1.0s						
JAGI	Jajag, Banyuwa	50.71	268	P	P	03 58 38.8	-6.6
KKM	Kota Kinabalu	51.95	287	eP	P	03 58 53.4	-1.4
	comp=Z,80nm,0.9s						
JOW	Kunigami	52.16	317	eP	P	03 58 55.6	-0.3
	comp=Z,63nm,1.1s						
INU	Inuyama	53.37	331	eP	P	03 59 04.4	-0.3
	comp=Z,76nm,1.1s						
TAOE	Nuku Hiva Isla	53.44	93	eLR	LR	04 14 48.6	
	comp=Z,15µm,25.3s						
MJAR	Matsushiro Arr	53.79	333	P	P	03 59 06.8	-1.1
	comp=Z,57nm,1.1s,baz=171,slow=8.3,SNR=40						
MAJO	Matsushiro	53.79	333	eP	P	03 59 07.6	-0.2
	comp=Z,102nm,1.3s						
MAJO	Matsushiro	53.79	333	⇑eP	P	03 59 07.8	0.0
MAJO				pmax	pmax		
	comp=Z,72nm,1.2s						
MAT	Matsushiro	53.79	333	P	P	03 59 06.5	-1.3
MJB9	Matsu-Tunnel	53.80	333	eP	P	03 59 07.9	0.0
	comp=Z,95nm,1.3s						
UGM	Wanagama	54.35	268	eP	P	03 59 12.2	-0.2
	comp=Z,157nm,1.0s						
SBUM	Sibu	54.73	281	eP	P	03 59 14.9	-0.2
	comp=Z,17nm,1.3s						
JNU	Nakatsue	54.89	324	eP	P	03 59 15.5	-0.4
	comp=Z,120nm,1.0s						
TWG	Pinlang	55.00	308	eP	P	03 59 16.6	-0.3
	comp=Z,190nm,1.1s						
YULB	Yu-li	55.14	309	eP	P	03 59 17.6	-0.2
	comp=Z,66nm,1.0s						
TPUB	Ta-pu	55.60	308	eP	P	03 59 21.1	-0.1
	comp=Z,78nm,0.9s						
SSLB	Suanglung	55.62	309	eP	P	03 59 21.1	-0.3
	comp=Z,39nm,1.0s						
YHNB	Yeheng	55.78	310	eP	P	03 59 22.7	+0.1
	comp=Z,108nm,1.1s						
KSM	Kuching	56.33	279	eP	P	03 59 26.1	-0.5
	comp=Z,46nm,1.2s						
ERM	Erimo	56.57	340	⇑eP	P	03 59 29.8	+2.1
ERM				pmax	pmax		
	comp=Z,60nm,1.1s						
CISI	Cisompet, Garu	57.05	268	eP	P	03 59 30.7	-1.1
	comp=Z,171nm,1.2s						
RKT	Rikitea	57.78	110	eLR	LR	04 16 53.1	
	comp=Z,23µm,28.5s						
ASAJ	Asahikawa	58.63	341	P	P	03 59 42.6	+0.4
	comp=Z,107nm,0.9s,baz=230,slow=11						
SSE	Sheshan	59.66	316	P	P	03 59 49.3	-0.3
SSE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,390nm,6.9s						
SSE	Sheshan	59.66	316	eP	P	03 59 49.0	-0.6
	comp=Z,127nm,1.1s						
KSRS	Korea Array	59.69	326	P	P	03 59 49.4	-0.2
	comp=Z,14nm,0.9s,baz=142,slow=6.9,SNR=14						
KS15	Wonju Array Si	59.70	326	eP	P	03 59 50.0	+0.3
KSAR	Wonju Array Be	59.70	326	P	P	03 59 49.4	-0.3
KSAR	Wonju Array Be	59.70	326	P	P	03 59 49.4	-0.3
KS01	Wonju Array Si	59.72	326	eP	P	03 59 49.8	-0.1
YSS	Yuzh-Sakhalins	61.12	342	eP	P	03 59 59.8	+0.5
	comp=Z,230nm,1.4s						
YSS	Yuzh-Sakhalins	61.12	342	⇓eP	P	04 00 01.3	+2.0
YSS				e		04 00 11.8	
YSS				pmax	pmax		
	comp=Z,570nm,1.0s						
TEY	Ternei	61.55	337	⇓eP	P	04 00 02.6	+0.4
TEY				pmax	pmax		
	comp=N,30nm,1.2s						
TEY				pmax	pmax		
	comp=Z,50nm,1.0s						
NJ2	Nanjing	61.82	315	eP	P	04 00 05.6	+1.3
NJ2				sP	pwP	04 00 14.0	+2.3
NJ2				S	S	04 08 31.1	+4.0
NJ2				pmax	pmax		
	comp=Z,46nm,1.1s						
MSHR	Mys Shultsa	61.88	332	⇑iP	P	04 00 05.5	+1.0
SKR	Severo-Kuril's	61.90	353	⇓eP	P	04 00 06.5	+2.1
VLA	Vladivostok	61.96	333	⇑eP	P	04 00 06.9	+1.9
VLA				pmax	pmax		
	comp=Z,86nm,1.1s						
QIZ	Qiongzhong	62.49	298	P	P	04 00 10.5	+1.5
QIZ				S	S	04 08 37.0	+1.1
QIZ				pmax	pmax		
	comp=Z,18nm,1.1s						
QIZ				LR	LR		
	comp=Z,5µm,17.7s						
QIZ				LR	LR		
	comp=Z,9µm,20.6s						
QIZ	Qiongzhong	62.49	298	eP	P	04 00 08.8	-0.2
	comp=Z,30nm,1.2s						
USA0B	Ussuriysk Arra	62.77	333	eP	P	04 00 10.5	+0.1
	comp=Z,148nm,1.4s						
USRK	Ussuriysk Ar.	62.77	333	P	P	04 00 10.5	+0.1
	comp=Z,104nm,1.2s,baz=137,slow=6.1,SNR=27						
PET	Petropavlovsk	63.97	355	eP	P	04 00 18.7	+0.6
PET				pmax	pmax		
	comp=Z,65nm,1.5s						
PETK	Petropavlovsk-	64.13	355	eP	P	04 00 19.9	+0.6
PETK	Petropavlovsk-	64.13	355	eP	P	04 00 19.9	+0.6
PETK	Petropavlovsk-	64.13	355	P	P	04 00 19.7	+0.4
	comp=Z,25nm,0.9s,baz=158,slow=6.8,SNR=8.9						
MDJ	Mudanjiang	64.17	332	P	P	04 00 21.2	+1.5
MDJ				pmax	pmax		
	comp=Z,40nm,0.9s						
MDJ	Mudanjiang	64.17	332	eP	P	04 00 20.2	+0.5
	comp=Z,64nm,1.2s						
WHN	Wuhan	64.20	312	⇓P	P	04 00 21.0	+0.9
DL2	Dalian	64.29	323	P	P	04 00 21.3	+0.7
DL2				S	S	04 09 01.7	+4.0
DL2				pmax	pmax		
	comp=Z,50nm,1.2s						
DL2				LR	LR		

	comp=Z,4µm,18.6s						
DL2				LR	LR		
	comp=Z,3µm,20.4s						
DL2				LR	LR		
	comp=Z,7µm,20.4s						
TYV	**Tymovskoe**	**64.69**	**344**	*e*P	**P**	**04 00 21.8**	**-1.1**
TYV				*e*S	**S**	**04 09 01.9**	**-0.3**
TYV				pmax	pmax		
	comp=Z,54nm,1.1s						
TYV				smax	smax		
	comp=E,800nm,7.7s						
BKNI	**Bangkinang**	**65.10**	**275**	*e*P	**P**	**04 00 26.2**	**-0.2**
	comp=E,324nm,1.0s						
SNY	**Shenyang**	**65.15**	**327**	⇑P	**P**	**04 00 29.2**	**+3.1**
SNY				pmax	pmax		
	comp=E,13nm,0.5s						
TIA	**Tai'an**	**65.42**	**318**	P	**P**	**04 00 27.7**	**-0.4**
CN2	**Changchun**	**65.56**	**329**	*e*P	**P**	**04 00 28.6**	**-0.2**
CN2				*e*sP	sP	04 00 35.7	-0.5
CN2				pmax	pmax		
	comp=E,30nm,1.1s						
CN2				LR	LR		
	comp=E,6µm,17.0s						
IPM	**Ipoh**	**66.05**	**280**	*e*P	**P**	**04 00 31.6**	**-1.0**
	comp=E,76nm,1.0s						
CASY	**Casey**	**66.44**	**201**	*e*P	**P**	**04 00 34.3**	**+0.2**
	comp=E,134nm,1.3s						
GRNR	**Gornyy**	**66.48**	**340**	*e*P	**P**	**04 00 36.0**	**+1.5**
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
KULM	**Kulim**	**66.61**	**281**	*e*P	**P**	**04 00 36.2**	**+0.1**
	comp=Z,54nm,1.5s						
VNDA	**Vanda**	**66.61**	**181**	*e*P	**P**	**04 00 36.3**	**+1.2**
	comp=Z,41nm,1.1s						
VNDA	**Vanda**	**66.61**	**181**	P	**P**	**04 00 36.0**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,14nm,0.9s						
VNDA	**Vanda**	**66.61**	**181**	P	**P**	**04 00 36.0**	**+0.9**
	comp=Z,14nm,0.9s,baz=341,slow=7.5,SNR=10						
KLR	**Kul'dur**	**66.88**	**337**	⇓*e*P	**P**	**04 00 38.0**	**+0.8**
SBA	**Scott Base**	**66.92**	**180**	*e*P	**P**	**04 00 38.0**	**+1.0**
	comp=Z,87nm,1.1s						
NKL	**Nikolayevsk**	**67.28**	**344**	*e*P	**P**	**04 00 39.6**	**+0.1**
NKL				pmax	pmax		
	comp=Z,69nm,1.2s						
NIKH	**Nikolski High**	**67.30**	**16**	*e*P	**P**	**04 00 40.1**	**+0.4**
	comp=Z,144nm,0.9s						
ENH	**Enshi**	**67.70**	**309**	*e*P	**P**	**04 00 41.9**	**-0.9**
	comp=Z,53nm,1.2s						
GYA	**Guiyang**	**68.22**	**304**	⇑*i*P	**P**	**04 00 47.2**	**+0.9**
GYA				pP	sP	04 00 54.8	+1.1
GYA				PP	**PP**	**04 03 21.4**	**+4.4**
GYA				S	**S**	**04 09 46.7**	**+0.4**
GYA				SKS	**SKiKP**	**04 10 41.8**	**+0.9**
GYA				SS	**SS**	**04 14 11.5**	**+1.8**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,8.2s						
GYA				LR	LR		
	comp=Z,2µm,18.2s						
GYA				LR	LR		
	comp=Z,2µm,18.8s						
GYA				LR	LR		
	comp=Z,2µm,19.1s						
BJT	**Baijiatuau**	**68.28**	**321**	*e*P	**P**	**04 00 46.1**	**-0.1**
	comp=Z,24nm,0.9s						
BJT	**Baijiatuau**	**68.28**	**321**	*e*P	**P**	**04 00 46.1**	**-0.1**
BJT				pmax	pmax		
	comp=Z,24nm,0.9s						
BJI	**Beijing**	**68.29**	**321**	P	**P**	**04 00 47.0**	**+0.8**
BJI				pmax	pmax		
	comp=Z,15nm,1.1s						
UNV	**Unalaska Valle**	**68.74**	**17**	*e*P	**P**	**04 00 49.4**	**+0.6**
	comp=Z,48nm,1.0s						
AKUT	**Akutan**	**69.21**	**18**	*e*P	**P**	**04 00 50.3**	**-1.3**
	comp=Z,259nm,0.8s						
TIY	**Taiyuan**	**69.37**	**317**	*e*P	**P**	**04 00 54.2**	**+1.1**
TIY				pP	**pwP**	**04 01 00.6**	**0.0**
TIY				pmax	pmax		
	comp=Z,18nm,0.9s						
TIY				LR	LR		
	comp=Z,2µm,17.1s						
TIY				LR	LR		
	comp=Z,6µm,16.5s						
XAN	**Xi'an**	**69.92**	**312**	P	**P**	**04 00 56.4**	**-0.2**
XAN				pP	pwP	04 01 08.3	+6.3
XAN				pmax	pmax		
	comp=Z,21nm,1.2s						
XAN				LR	LR		
	comp=Z,4µm,17.3s						
XAN	**Xi'an**	**69.92**	**312**	*e*P	**P**	**04 00 56.1**	**-0.5**
	comp=Z,28nm,1.0s						
XAN	**Xi'an**	**69.92**	**312**	*e*P	**P**	**04 00 56.1**	**-0.5**
XAN				pmax	pmax		
	comp=Z,28nm,1.0s						
SPIA	**Saint Paul Isl**	**70.72**	**14**	*e*P	**P**	**04 01 01.5**	**+0.6**
	comp=Z,100nm,0.9s						
KMI	**Kunming**	**70.92**	**301**	P	**P**	**04 01 04.9**	**+1.8**
KMI				pP	sP	04 01 10.8	+0.2
KMI				sP	pP	04 01 12.6	+4.0
KMI				S	**S**	**04 10 18.4**	**0.0**
KMI				pmax	pmax		
	comp=Z,33nm,1.5s						
KMI	**Kunming**	**70.92**	**301**	*e*P	**P**	**04 01 03.2**	**+0.1**
	comp=Z,90nm,1.5s						
KMI	**Kunming**	**70.92**	**301**	*e*P	**P**	**04 01 03.2**	**+0.1**
KMI				pmax	pmax		
	comp=Z,90nm,1.5s						
MA2	**Magadan**	**71.27**	**352**	*e*P	**P**	**04 01 05.3**	**+1.2**
	comp=Z,49nm,1.5s						
MA2	**Magadan**	**71.27**	**352**	⇓*e*P	**P**	**04 01 07.7**	**+3.5**
MA2				pmax	pmax		
	comp=Z,79nm,2.2s						
MA2	**Magadan**	**71.27**	**352**	P	**P**	**04 01 03.9**	**-0.2**
	comp=Z,11nm,0.7s,baz=190,slow=5.8,SNR=7.2						
HHC	**Hu-ho-hao-te**	**71.64**	**320**	*e*P	**P**	**04 01 10.3**	**+3.3**
HHC				sP	pwP	04 01 17.4	+2.9
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
CM01	**Chiang Mai Arr**	**71.89**	**294**	*e*P	**P**	**04 01 08.7**	**-0.1**
CM31	**Chiang Mai Arr**	**71.92**	**294**	*e*P	**P**	**04 01 09.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**71.92**	**294**	P	**P**	**04 01 09.6**	**+0.6**
	comp=Z,22nm,0.9s,baz=117,slow=4.4,SNR=36						
CMMT	**Chiang Mai**	**72.03**	**294**	P	**P**	**04 01 10.7**	**+1.1**
CHTO	**Chiang Mai**	**72.03**	**294**	*e*P	**P**	**04 01 09.3**	**-0.4**
	comp=Z,22nm,1.0s						
CHTO	**Chiang Mai**	**72.03**	**294**	*e*P	**P**	**04 01 09.3**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,22nm,1.0s						
CHTO	**Chiang Mai**	**72.03**	**294**	P	**P**	**04 01 10.5**	**+0.9**
	SNR=11						
CHTO	**Chiang Mai**	**72.03**	**294**	P	**P**	**04 01 10.8**	**+1.1**
	comp=Z,106nm,1.0s						
ZEA	**Zeya**	**72.17**	**337**	*e*P	**P**	**04 01 10.0**	**+0.3**
ZEA				pmax	pmax		
	comp=E,59nm,1.0s						
ZEA				pmax	pmax		
	comp=N,130nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,180nm,1.2s						
HIA	**Hailar**	**72.19**	**330**	*e*P	**P**	**04 01 10.0**	**0.0**
	comp=Z,32nm,1.0s						
HIA	**Hailar**	**72.19**	**330**	⇓*e*P	**P**	**04 01 09.9**	**0.0**
HIA				pmax	pmax		
	comp=Z,37nm,1.1s						
CD2	**Chengdu**	**72.41**	**307**	P	**P**	**04 01 12.4**	**+0.7**
CD2				S	**S**	**04 10 37.1**	**+2.1**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
SEY	**Seymchan**	**74.34**	**354**	⇑*e*P	**P**	**04 01 22.8**	**+0.5**
SEY	**Seymchan**	**74.34**	**354**	P	**P**	**04 01 22.4**	**+0.1**
	comp=Z,6.7nm,1.0s,baz=164,slow=8.6,SNR=12						
LZH	**Lanzhou**	**74.56**	**312**	⇑P	**P**	**04 01 25.9**	**+1.5**
LZH				pP	pP	04 01 30.4	+0.5
LZH				sP	pwP	04 01 32.3	+0.4
LZH				pmax	pmax		
	comp=Z,46nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=Z,2µm,17.7s						
LZH				LR	LR		
	comp=Z,2µm,17.7s						
LZH				LR	LR		
	comp=Z,2µm,18.6s						
OHAK	**Old Harbor**	**75.85**	**22**	*e*P	**P**	**04 01 31.3**	**+0.1**
	comp=Z,68nm,1.0s						
GAMB	**Gambell**	**76.48**	**10**	*e*P	**P**	**04 01 34.9**	**+0.3**
	comp=Z,45nm,0.8s						
KDAK	**Kodiak Island**	**76.52**	**22**	*i* P	**P**	**04 01 36.5**	**+1.5**
KDAK	**Kodiak Island**	**76.52**	**22**	P	**P**	**04 01 35.6**	**+0.7**
	comp=Z,42nm,0.9s,baz=77,slow=1.6,SNR=13						
CIT	**Chita**	**76.98**	**330**	*e*P	**P**	**04 01 39.1**	**+1.3**
CIT				*e*		04 01 54.7	
YAK	**Yakutsk**	**77.94**	**344**	*e*P	**P**	**04 01 42.1**	**-0.7**
YAK				*e**PP	**PcP**	**04 01 53.7**	**+1.2**
YAK				*e*		04 04 34.6	
YAK				*e*S	**S**	**04 11 28.8**	**-6.2**
YAK				*e*		04 11 53.7	
YAK				*e**SS	**ScS**	**04 12 07.2**	**+6.2**
YAK				pmax	pmax		
	comp=Z,52nm,1.6s						
YAK				pmax	pmax		
	comp=N,20nm,1.4s						
YAK				pmax	pmax		
	comp=E,12nm,1.5s						
YAK				pmax	pmax		
	comp=Z,808nm,4.8s						
YAK				pmax	pmax		
	comp=N,246nm,5.0s						
YAK				pmax	pmax		
	comp=E,574nm,5.5s						
YAK				smax	smax		
	comp=N,1µm,9.3s						
YAK				smax	smax		
	comp=E,2µm,9.5s						
YAK				MLR	MLR		
	comp=Z,11µm,19.0s						
YAK				MLR	MLR		
	comp=E,5µm,19.0s						
YAK				MLR	MLR		
	comp=N,5µm,23.0s						
SVW2	**Sparrevohn**	**78.05**	**18**	*e*P	**P**	**04 01 43.9**	**+0.4**
	comp=N,46nm,1.0s						
ULN	**Ulaanbaatar**	**78.11**	**324**	*e*P	**P**	**04 01 44.0**	**-0.4**
	comp=N,45nm,1.0s						
ULN	**Ulaanbaatar**	**78.11**	**324**	⇑*e*P	**P**	**04 01 44.9**	**+0.6**
ULN				pmax	pmax		
	comp=Z,46nm,1.0s						
ULN	**Ulaanbaatar**	**78.11**	**324**	P	**P**	**04 01 45.2**	**+0.9**
	SNR=13						
HOM	**Homer**	**78.24**	**21**	*e*P	**P**	**04 01 44.9**	**+0.4**
	comp=Z,181nm,0.9s						
ANM	**Nome**	**78.41**	**12**	*e*P	**P**	**04 01 46.5**	**+1.1**
	comp=Z,45nm,1.2s						
RSO	**Redoubt South**	**78.46**	**20**	*e*P	**P**	**04 01 45.2**	**-0.8**
SONM	**Songino Array**	**78.48**	**324**	P	**P**	**04 01 46.3**	**0.0**
	comp=Z,22nm,1.0s,baz=128,slow=4.4,SNR=36						
SONA1	**Songino Array**	**78.48**	**324**	*e*P	**P**	**04 01 45.5**	**-0.8**
BRLK	**Bradley Lake**	**78.58**	**21**	*e*P	**P**	**04 01 46.2**	**-0.3**
	comp=Z,56nm,0.8s						
BILL	**Bilibino**	**78.76**	**0**	*e*P	**P**	**04 01 47.1**	**-0.2**
	comp=Z,66nm,1.0s						
BILL	**Bilibino**	**78.76**	**0**	⇑*e*P	**P**	**04 01 47.2**	**-0.1**
BILL				pmax	pmax		
	comp=Z,85nm,1.3s						
GTA	**Gaotai**	**78.86**	**314**	P	**P**	**04 01 49.2**	**+0.6**
GTA				pP	pwP	04 01 56.1	-0.1
GTA				sP	PcP	04 01 58.8	+1.5
GTA				pmax	pmax		
	comp=Z,33nm,1.1s						
QSPA	**South Pole Qui**	**79.08**	**180**	*e*P	**P**	**04 01 49.4**	**+0.1**
	comp=Z,107nm,0.9s						
SEW	**Seward**	**79.33**	**21**	*e*P	**P**	**04 01 50.1**	**-0.4**
	comp=Z,51nm,0.9s						
SUA	**Susitna One**	**79.86**	**20**	*e*P	**P**	**04 01 53.0**	**-0.6**
	comp=Z,58nm,1.2s						
RC01	**Rabbit Creek A**	**79.93**	**20**	*e*P	**P**	**04 01 53.8**	**0.0**
	comp=Z,36nm,1.0s						
SHL	**Shillong**	**80.32**	**298**	*e*P	**P**	**04 01 56.1**	**-0.9**
	comp=Z,35nm,1.0s						
SHL	**Shillong**	**80.32**	**298**	*e*P	**P**	**04 01 56.1**	**-0.9**
SHL				pmax	pmax		
	comp=Z,35nm,1.0s						
SHL	**Shillong**	**80.32**	**298**	*e*P	**P**	**04 01 56.5**	**-0.4**
BOD	**Bodaibo**	**80.36**	**335**	*e*P	**P**	**04 01 54.7**	**-1.4**
BOD				pmax	pmax		
	comp=Z,72nm,1.4s						
PPLA	**Purkeypile**	**80.46**	**18**	*e*P	**P**	**04 01 56.9**	**+0.1**
	comp=Z,36nm,1.4s						
PMR	**Palmer**	**80.50**	**20**	*e*P	**P**	**04 01 57.3**	**+0.5**
	comp=Z,41nm,1.0s						
PMR	**Palmer**	**80.50**	**20**	*e*P	**P**	**04 01 57.3**	**+0.5**
PMR				pmax	pmax		
	comp=Z,41nm,1.0s						
KNK	**Knik Glacier**	**80.60**	**21**	*e*P	**P**	**04 01 57.5**	**+0.1**
	comp=Z,20nm,0.8s						
GLI	**Glacier Island**	**80.71**	**21**	*e*P	**P**	**04 01 58.3**	**+0.3**
	comp=Z,158nm,1.5s						
CAST	**Castle Rocks**	**80.88**	**18**	*e*P	**P**	**04 01 58.7**	**-0.2**
	comp=Z,38nm,0.8s						
SML	**Sawmill**	**80.92**	**20**	*e*P	**P**	**04 01 59.7**	**+0.5**
	comp=Z,55nm,1.1s						
SML	**Sawmill**	**80.92**	**20**	*e*P	**P**	**04 01 59.7**	**+0.5**
SML				pmax	pmax		
	comp=Z,55nm,1.1s						
EYAK	**Cordova Ski Ar**	**80.97**	**22**	*e*P	**P**	**04 01 59.7**	**+0.3**
	comp=Z,68nm,1.2s						
DIV	**Divide**	**81.35**	**22**	*e*P	**P**	**04 02 01.6**	**+0.1**
	comp=Z,81nm,0.8s						
HMT	**Hamilton**	**81.39**	**23**	*e*P	**P**	**04 02 02.0**	**+0.4**
	comp=Z,71nm,0.8s						
TRF	**Thorofare Moun**	**81.45**	**18**	*e*P	**P**	**04 02 01.8**	**-0.3**
	comp=Z,27nm,1.0s						
ZAK	**Zakamensk**	**81.51**	**325**	*e*P	**P**	**04 02 01.8**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,22nm,1.1s						
KLU	**Klutina**	**81.54**	**21**	*e*P	**P**	**04 02 02.6**	**0.0**
	comp=Z,56nm,0.9s						
BPAW	**Bear Paw Mtn.**	**81.71**	**18**	*e*P	**P**	**04 02 03.5**	**+0.1**
	comp=Z,16nm,1.1s						
IRK	**Irkutsk**	**81.87**	**327**	*e*P	**P**	**04 02 03.9**	**-0.5**
IRK				pmax	pmax		
	comp=Z,57nm,2.2s						
RND	**Reindeer**	**81.87**	**19**	*e*P	**P**	**04 02 04.4**	**+0.2**
	comp=Z,63nm,1.0s						
RND	**Reindeer**	**81.87**	**19**	*e*P	**P**	**04 02 04.4**	**+0.2**
RND				pmax	pmax		
	comp=Z,63nm,1.0s						
RDOG	**Red Dog Mine**	**81.94**	**11**	*e*P	**P**	**04 02 04.8**	**+0.5**
	comp=Z,38nm,0.9s						
TLY	**Talaya**	**81.94**	**326**	*e*P	**P**	**04 02 04.1**	**-0.7**
	comp=Z,63nm,1.1s						
TLY	**Talaya**	**81.94**	**326**	⇑*e*P	**P**	**04 02 04.5**	**-0.2**
TLY	**Talaya**	**81.94**	**326**	P	**P**	**04 02 04.7**	**-0.1**
	SNR=7.5						
TLY	**Talaya**	**81.94**	**326**	P	**P**	**04 02 04.0**	**-0.8**
	comp=Z,4.6nm,0.6s,baz=214,slow=4.1,SNR=7.2						
MCK	**McKinley**	**82.08**	**19**	*e*P	**P**	**04 02 05.1**	**-0.1**
	comp=Z,99nm,1.3s						
MCK	**McKinley**	**82.08**	**19**	*e*P	**P**	**04 02 05.1**	**-0.1**
MCK				pmax	pmax		
	comp=Z,99nm,1.3s						
DHY	**Denali Highway**	**82.12**	**20**	*e*P	**P**	**04 02 05.3**	**-0.3**
	comp=Z,50nm,1.3s						
LSA	**Lhasa**	**82.16**	**302**	*e*P	**P**	**04 02 05.4**	**-1.6**
	comp=Z,26nm,1.4s						
IM3	**Indian Mountai**	**82.35**	**16**	*e*P	**P**	**04 02 06.3**	**-0.2**
HARP	**HAARP**	**82.42**	**21**	*e*P	**P**	**04 02 07.3**	**+0.2**
	comp=Z,98nm,0.9s						
MLY	**Manley**	**82.47**	**17**	*e*P	**P**	**04 02 07.1**	**-0.2**
	comp=Z,27nm,1.0s						
KCPM	**Cahto Peak**	**82.58**	**47**	*e*P	**P**	**04 02 08.7**	**+0.2**
	comp=Z,64nm,0.8s						
KMRM	**Mail Ridge**	**82.68**	**47**	*e*P	**P**	**04 02 09.3**	**+0.4**
	comp=Z,62nm,0.8s						
HOPS	**Hopland Field**	**82.71**	**48**	*e*P	**P**	**04 02 09.0**	**-0.1**
	comp=Z,56nm,0.9s						
GDXM	**Geysers**	**82.85**	**48**	*e*P	**P**	**04 02 09.7**	**-0.2**
	comp=Z,34nm,0.9s						
WRH	**Wood River Hil**	**82.86**	**18**	*e*P	**P**	**04 02 08.6**	**-0.6**
	comp=Z,38nm,0.8s						
KHMM	**Horse Mountain**	**82.90**	**46**	*e*P	**P**	**04 02 10.1**	**-0.1**
	comp=Z,45nm,0.8s						
MDM	**Murphy Dome**	**83.16**	**18**	*e*P	**P**	**04 02 10.6**	**-0.3**
	comp=Z,49nm,0.9s						
SAO	**San Andreas Ge**	**83.18**	**51**	*e*P	**P**	**04 02 11.6**	**0.0**
	comp=Z,30nm,0.9s						
HDA	**Harding Lake**	**83.18**	**19**	*e*P	**P**	**04 02 10.6**	**-0.4**
	comp=Z,102nm,0.9s						
HDA	**Harding Lake**	**83.18**	**19**	P	**P**	**04 02 11.0**	**+0.1**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.22**	**18**	P	**P**	**04 02 10.9**	**-0.2**
	baz=226						
COLA	**College**	**83.22**	**18**	*e*P	**P**	**04 02 10.8**	**-0.3**
	comp=Z,72nm,0.9s						
COLA	**College**	**83.22**	**18**	⇓*i*P	**P**	**04 02 11.5**	**+0.4**
COLA				pmax	pmax		
	comp=Z,69nm,0.9s						
O02D	**Mt. Diablo Mer**	**83.33**	**47**	P	**P**	**04 02 13.1**	**+0.8**
	baz=250,SNR=36						
MOY	**Mondy**	**83.39**	**326**	*e*P	**P**	**04 02 12.4**	**0.0**
MOY				pmax	pmax		
	comp=Z,40nm,2.6s						
RIDG	**Independ'e Rid**	**83.42**	**20**	*e*P	**P**	**04 02 12.2**	**0.0**
	comp=Z,68nm,0.9s						
L02E	**Cave Junction**	**83.45**	**45**	P	**P**	**04 02 12.4**	**-0.5**
	baz=249						
IL1	**Eielson Array**	**83.45**	**19**	*e*P	**P**	**04 02 12.3**	**0.0**
ILAR	**Eielson Array**	**83.45**	**19**	P	**P**	**04 02 11.2**	**-1.1**
	comp=Z,19nm,0.7s,baz=235,slow=4.9,SNR=89						
ILAR				PKKPbc	**PKKPbc**	**04 20 31.7**	**-2.8**
	comp=Z,1.0nm,0.8s,baz=351,slow=2.4,SNR=11						
ILB	**Eielson Array**	**83.45**	**19**	*e*P	**P**	**04 02 12.0**	**-0.3**
POKR	**Poker Plat Res**	**83.52**	**18**	P	**P**	**04 02 12.1**	**-0.6**
	baz=226						
J01E	**Myrtle Point**	**83.58**	**44**	P	**P**	**04 02 13.6**	**+0.2**
	baz=249						
K02D	**Willamette Mer**	**83.60**	**44**	P	**P**	**04 02 14.2**	**+0.5**
	baz=249,SNR=11						
WDC	**Whiskeytown Da**	**83.64**	**47**	*e*P	**P**	**04 02 14.6**	**+0.8**
	comp=Z,53nm,1.3s						
WDC	**Whiskeytown Da**	**83.64**	**47**	*e*P	**P**	**04 02 14.6**	**+0.8**
WDC				pmax	pmax		
	comp=Z,53nm,1.3s						
N02D	**Trinity Center**	**83.66**	**46**	P	**P**	**04 02 14.6**	**+0.6**
	baz=250,SNR=20						
M02C	**Callahan**	**83.70**	**46**	P	**P**	**04 02 14.8**	**+0.6**
	baz=250,SNR=14						
PAGB	**Antelope Grade**	**83.77**	**52**	*e*P	**P**	**04 02 14.4**	**-0.2**
	comp=Z,21nm,1.1s						
SMMC	**Simmler**	**83.83**	**52**	P	**P**	**04 02 15.1**	**+0.1**
	baz=252						
PKM	**Mcpherson Peak**	**83.85**	**53**	P	**P**	**04 02 15.4**	**+0.1**
	baz=252						
SCRK	**Sand Creek**	**83.86**	**20**	*e*P	**P**	**04 02 14.3**	**-0.2**
	comp=Z,98nm,1.3s						
YBH	**Yreka Blue Hor**	**83.92**	**46**	*e*P	**P**	**04 02 15.9**	**+0.5**
	comp=Z,41nm,0.9s						
YBH	**Yreka Blue Hor**	**83.92**	**46**	*e*P	**P**	**04 02 15.9**	**+0.5**
YBH				pmax	pmax		
	comp=Z,41nm,0.9s						
I02D	**Swisshome**	**83.98**	**43**	P	**P**	**04 02 16.1**	**+0.7**
	baz=249						
ORV	**Oroville**	**84.05**	**48**	*e*P	**P**	**04 02 16.2**	**+0.2**
	comp=Z,33nm,1.0s						
ORV	**Oroville**	**84.05**	**48**	*e*P	**P**	**04 02 16.2**	**+0.2**
ORV				pmax	pmax		
	comp=Z,33nm,1.0s						
HUMO	**Hull Mountain**	**84.05**	**45**	*e*P	**P**	**04 02 16.7**	**+0.7**
	comp=Z,45nm,0.8s						
O03E	**Paynes Creek**	**84.08**	**47**	P	**P**	**04 02 16.9**	**+0.7**
	baz=250,SNR=25						
I03D	**Drain, OR**	**84.17**	**44**	P	**P**	**04 02 16.3**	**-0.2**
	baz=249						
BLG	**Laguna Peak, P**	**84.20**	**54**	P	**P**	**04 02 17.0**	**+0.1**
	baz=253						
COLD	**Coldfoot**	**84.23**	**16**	*e*P	**P**	**04 02 17.2**	**+1.0**
	comp=Z,16nm,1.2s						
AFDM	**Forest Hills D**	**84.24**	**49**	*e*P	**P**	**04 02 17.1**	**+0.2**
	comp=Z,53nm,0.9s						
SCI2	**San Clemente I**	**84.29**	**55**	P	**P**	**04 02 17.5**	**+0.2**
	baz=253						
JIS	**Juneau Island**	**84.30**	**27**	*e*P	**P**	**04 02 17.2**	**+0.5**
	comp=Z,27nm,1.2s						
WRAK	**Wrangell Islan**	**84.31**	**30**	*e*P	**P**	**04 02 17.3**	**+0.4**
	comp=Z,40nm,0.8s						
HYT	**Haines Junctio**	**84.34**	**24**	*e*P	**P**	**04 02 17.0**	**-0.1**
	comp=Z,42nm,0.9s						
L04D	**Klamath Falls**	**84.37**	**45**	P	**P**	**04 02 18.0**	**+0.3**
	baz=250,SNR=8.5						
PRP	**Porcupine Dome**	**84.38**	**18**	*e*P	**P**	**04 02 17.1**	**-0.1**
	comp=Z,10nm,0.9s						
CMB	**Columbia Colle**	**84.38**	**50**	*e*P	**P**	**04 02 17.9**	**+0.1**
	comp=Z,32nm,0.9s						
CMB	**Columbia Colle**	**84.38**	**50**	*e*P	**P**	**04 02 17.9**	**+0.1**
CMB				pmax	pmax		
	comp=Z,32nm,0.9s						
SKAG	**Skagway**	**84.50**	**26**	*e*P	**P**	**04 02 18.1**	**+0.4**
	comp=Z,45nm,1.0s						
M04C	**Macdoel**	**84.55**	**46**	P	**P**	**04 02 19.1**	**+0.5**
	baz=250,SNR=27						
ODAN	**Odare**	**84.56**	**299**	*e*P	**P**	**04 02 19.8**	**+0.7**
VOG	**Valley Oaks Go**	**84.62**	**52**	P	**P**	**04 02 19.3**	**+0.4**
	baz=252						
ARVC	**Arvin**	**84.69**	**53**	P	**P**	**04 02 19.5**	**+0.2**
	baz=253						
VES	**Vestal, Richgr**	**84.70**	**52**	P	**P**	**04 02 19.5**	**+0.2**
	baz=253,SNR=10						
I04A	**Tendick Farm,**	**84.84**	**44**	P	**P**	**04 02 20.0**	**+0.1**
	baz=250						
J04D	**Umpqua Nationa**	**84.86**	**44**	P	**P**	**04 02 20.5**	**+0.3**
	baz=250,SNR=8.0						
H04D	**Lebanon**	**84.88**	**43**	P	**P**	**04 02 20.3**	**+0.3**
	baz=249						
K04D	**Chiloquin, OR**	**84.89**	**45**	P	**P**	**04 02 21.0**	**+0.7**
	baz=250,SNR=7.5						
KNGR	**Kungurtug, Tuv**	**84.92**	**324**	⇓*i*P	**P**	**04 02 20.7**	**+0.5**
PASC	**Pasadena Art C**	**84.92**	**54**	*e*P	**P**	**04 02 21.0**	**+0.5**
	comp=Z,14nm,0.8s						
BEKR	**Beckworth**	**84.98**	**48**	*e*P	**P**	**04 02 21.1**	**+0.2**
	comp=Z,38nm,0.8s						
MWC	**Mount Wilson**	**85.03**	**54**	*e*P	**P**	**04 02 21.9**	**+0.6**
	comp=Z,103nm,1.4s						
ISA	**Isabella, Lake**	**85.12**	**52**	*e*P	**P**	**04 02 21.6**	**0.0**
	comp=Z,23nm,0.9s						
ISA	**Isabella, Lake**	**85.12**	**52**	*e*P	**P**	**04 02 21.6**	**0.0**
ISA				pmax	pmax		
	comp=Z,23nm,0.9s						
ISA	**Isabella, Lake**	**85.12**	**52**	P	**P**	**04 02 21.9**	**+0.4**
	baz=253,SNR=18						
FYU	**Fort Yukon**	**85.17**	**18**	*e*P	**P**	**04 02 21.6**	**+0.7**
	comp=Z,26nm,1.1s						
WAKR	**Walker**	**85.24**	**49**	*e*P	**P**	**04 02 22.6**	**+0.4**
	comp=Z,81nm,1.2s						
MDPB	**Devils Postpil**	**85.24**	**50**	*e*P	**P**	**04 02 22.2**	**-0.2**
	comp=Z,87nm,1.2s						
RAMN	**Ramite**	**85.26**	**298**	*e*P	**P**	**04 02 23.1**	**+0.4**
EDW2	**Edwards Air Fo**	**85.27**	**53**	P	**P**	**04 02 22.3**	**0.0**
	baz=253,SNR=22						
OMMB	**Old Mammoth Mi**	**85.30**	**50**	*e*P	**P**	**04 02 22.8**	**+0.1**
	comp=Z,48nm,1.3s						
PNTR	**Pine Nut**	**85.30**	**49**	*e*P	**P**	**04 02 22.8**	**+0.2**
	comp=Z,64nm,1.2s						
H04A	**Detroit Lake**	**85.30**	**43**	*e*P	**P**	**04 02 22.6**	**+0.4**
	comp=Z,27nm,1.0s						
VCNR	**Virginia City**	**85.32**	**49**	*e*P	**P**	**04 02 22.6**	**-0.1**
	comp=Z,17nm,0.9s						
WHY	**Whitehorse**	**85.33**	**25**	*e*P	**P**	**04 02 21.9**	**-0.1**
	comp=Z,12nm,0.8s						
BFSC	**Mount Baldy Ra**	**85.36**	**54**	P	**P**	**04 02 23.0**	**+0.1**
	baz=254,SNR=16						
109C	**Camp Elliot, M**	**85.42**	**55**	P	**P**	**04 02 23.4**	**+0.4**
	baz=254						
CPE	**Camp Elliot**	**85.42**	**55**	*e*P	**P**	**04 02 23.1**	**+0.1**
	comp=Z,32nm,1.1s						
J05D	**Fort Rock, OR**	**85.47**	**45**	P	**P**	**04 02 23.2**	**0.0**
	baz=251,SNR=45						
DAWY	**Dawson**	**85.50**	**21**	*e*P	**P**	**04 02 23.0**	**+0.3**
	comp=Z,38nm,0.9s						
YERR	**Yerington**	**85.53**	**49**	*e*P	**P**	**04 02 23.6**	**-0.1**
	comp=Z,15nm,0.8s						
MURC	**Murrieta**	**85.55**	**55**	P	**P**	**04 02 23.6**	**-0.1**
	baz=254						
PAHR	**Pah Rah Range**	**85.65**	**48**	*e*P	**P**	**04 02 24.2**	**0.0**
	comp=Z,62nm,1.3s						
CWC	**Cottonwood Cre**	**85.66**	**52**	P	**P**	**04 02 24.2**	**-0.1**
	baz=253						
MOD	**Modoc Plateau**	**85.67**	**46**	*e*P	**P**	**04 02 24.3**	**0.0**
	comp=Z,24nm,0.8s						
LRMC	**Laurel Mtn Rad**	**85.69**	**53**	P	**P**	**04 02 25.0**	**+0.5**
	baz=254,SNR=6.3						
E04D	**Cinebar**	**85.70**	**41**	P	**P**	**04 02 24.7**	**+0.6**
	baz=249						
BAR	**Barrett**	**85.72**	**56**	*e*P	**P**	**04 02 24.8**	**+0.3**
	comp=Z,29nm,1.1s						
TIN	**Tinemaha, Big**	**85.72**	**51**	P	**P**	**04 02 24.8**	**+0.2**
	baz=253,SNR=12						
D03D	**Eldon**	**85.72**	**40**	P	**P**	**04 02 24.6**	**+0.4**
	baz=249						

I05D	Terrebonne, OR	85.75	44	P	P	04 02 24.6	+0.1
	baz=250						
JIRN	Jiri	85.79	299	*e*P	P	04 02 26.0	+0.5
	comp=Z,88nm,1.1s						
PINE	Pine Mountain	85.84	44	*e*P	P	04 02 25.1	-0.1
	comp=Z,50nm,0.8s						
PGC	Sidney	85.90	39	*e*P	P	04 02 24.8	-0.2
	comp=Z,55nm,1.0s						
TIXI	Tiksi	85.94	349	*e*P	P	04 02 24.9	+0.2
	comp=Z,21nm,1.0s						
TIXI	Tiksi	85.94	349	⇓*i*P	P	04 02 25.2	+0.5
TIXI				pmax	pmax		
	comp=Z,28nm,1.3s						
BBRC	Big Bear Solar	85.95	54	P	P	04 02 26.0	+0.1
	baz=254						
RYN	Ryan	85.96	50	*e*P	P	04 02 25.8	0.0
	comp=Z,28nm,0.9s						
MONP2	Monument Peak	85.98	56	P	P	04 02 26.3	+0.2
	baz=254,SNR=23						
DAC	Darwin (Calif)	85.98	52	*e*P	P	04 02 25.9	-0.1
	comp=Z,24nm,1.0s						
DAC	Darwin (Calif)	85.98	52	*e*P	P	04 02 25.9	-0.1
DAC				pmax	pmax		
	comp=Z,24nm,1.0s						
MPMC	Manual Prospec	86.00	52	P	P	04 02 26.3	+0.2
	baz=254,SNR=24						
NV01	Mina Array Sit	86.06	50	*e*P	P	04 02 26.5	+0.1
NVAR	Mina Array Bea	86.06	50	P	P	04 02 26.2	-0.2
	comp=Z,33nm,0.9s,baz=236,slow=7.5,SNR=48						
NVAR				LR	LR	04 34 53.6	
	comp=Z,16µm,19.2s,baz=338,slow=32						
G05D	Wamic, OR	86.07	43	P	P	04 02 26.4	+0.4
	baz=250						
GUN	Gumba	86.12	299	*e*P	P	04 02 27.6	+0.5
	comp=Z,78nm,1.1s						
PFO	Pinyon Flats O	86.14	55	*e*P	P	04 02 26.8	+0.1
	comp=Z,33nm,1.2s						
PFO	Pinyon Flats O	86.14	55	*e*P	P	04 02 26.8	+0.1
PFO				pmax	pmax		
	comp=Z,33nm,1.2s						
PFO	Pinyon Flats O	86.14	55	P	P	04 02 27.1	+0.3
	baz=254,SNR=15						
XPFO	Pion Flat	86.14	55	*e*P	P	04 02 26.8	+0.1
	comp=Z,36nm,1.2s						
IKP	In-Ko-Pah, Jac	86.17	56	P	P	04 02 27.4	+0.6
	baz=255,SNR=10						
NV11	Mina Array Sit	86.18	50	*e*P	P	04 02 27.0	+0.1
	comp=Z,3.7nm,1.0s						
F05D	White Salmon	86.19	42	P	P	04 02 27.1	+0.6
	baz=250						
LON	Longmire	86.26	41	*e*P	P	04 02 26.9	0.0
	comp=Z,29nm,1.3s						
LON	Longmire	86.26	41	*e*P	P	04 02 26.9	0.0
LON				pmax	pmax		
	comp=Z,29nm,1.3s						
D05A	Enumclaw	86.30	41	*e*P	P	04 02 27.6	+0.6
	comp=Z,63nm,1.1s						
GSC	Goldstone, Bar	86.33	53	*e*P	P	04 02 27.9	+0.3
	comp=Z,37nm,1.3s						
GSC	Goldstone, Bar	86.33	53	*e*P	P	04 02 27.9	+0.3
GSC				pmax	pmax		
	comp=Z,37nm,1.3s						
GSC	Goldstone, Bar	86.33	53	P	P	04 02 28.1	+0.5
	baz=254,SNR=12						
GRAC	Grapevine Rang	86.36	51	P	P	04 02 28.2	+0.5
	baz=254,SNR=20						
PALK	Pallekele	86.38	278	*e*P	P	04 02 27.2	-0.9
	comp=Z,48nm,1.4s						
PALK	Pallekele	86.38	278	*e*P	P	04 02 27.3	-0.9
PALK				pmax	pmax		
	comp=Z,47nm,1.4s						
PALK	Pallekele	86.38	278	LR	LR	04 43 01.5	
	comp=Z,2µm,20.1s,baz=116,slow=37						
DLBC	Dease Lake	86.38	28	*e*P	P	04 02 28.0	+0.7
	comp=Z,19nm,1.1s						
DLBC	Dease Lake	86.38	28	LR	LR	04 36 19.6	
	comp=Z,12µm,18.2s,baz=231,slow=32						
A04D	Lummi Island	86.38	39	P	P	04 02 27.8	+0.5
	baz=249						
KVN	Kaiserville	86.40	49	*e*P	P	04 02 28.0	0.0
	comp=Z,36nm,1.1s						
KVN	Kaiserville	86.40	49	*e*P	P	04 02 28.0	0.0
KVN				pmax	pmax		
	comp=Z,36nm,1.1s						
PKI	Pulchoki	86.44	299	*e*P	P	04 02 28.9	+0.3
	comp=Z,58nm,1.1s						
PKIN	Phulchoki	86.45	299	*e*P	P	04 02 28.8	+0.2
	comp=Z,58nm,1.2s						
SWSC	Sam W. Stewart	86.50	56	P	P	04 02 28.7	+0.4
	baz=255,SNR=12						
HEC	Hector,Ludlow	86.57	54	P	P	04 02 28.9	+0.2
	baz=254,SNR=16						
B05A	Bryant	86.60	40	P	P	04 02 28.8	+0.3
	baz=250						
FURC	Furnace Creek,	86.60	52	P	P	04 02 29.3	+0.6
	baz=254,SNR=18						
BELC	Belle Mtn. Jos	86.61	55	P	P	04 02 29.3	+0.2
	baz=254,SNR=33						
DMN	Daman	86.71	299	*e*P	P	04 02 30.5	+0.6
	comp=Z,75nm,1.1s						
SHOC	Shoshone, Teco	86.91	53	P	P	04 02 30.8	+0.5
	baz=254,SNR=15						
I07A	Izee	86.92	44	*e*P	P	04 02 30.2	-0.1
	comp=Z,25nm,0.8s						
BC3	Big Chuckawall	86.96	55	P	P	04 02 31.1	+0.3
	baz=255,SNR=13						
WVOR	Wild Horse Val	87.02	46	*e*P	P	04 02 31.2	+0.4
	comp=Z,79nm,1.4s						
WVOR	Wild Horse Val	87.02	46	*e*P	P	04 02 31.2	+0.4
WVOR				pmax	pmax		
	comp=Z,79nm,1.4s						
TUQ	Turquoise Moun	87.06	53	P	P	04 02 31.4	+0.2
	baz=254						
B06A	Marblemount	87.07	40	*e*P	P	04 02 31.4	+0.6
	comp=Z,19nm,0.9s						
GMRC	Granite Mounta	87.09	54	P	P	04 02 31.7	+0.3
	baz=255,SNR=18						
F07A	Phinny Hill Vi	87.21	42	*e*P	P	04 02 32.0	+0.5
	comp=Z,60nm,1.3s						
TPNV	Topopah Spring	87.21	52	*e*P	P	04 02 31.6	-0.4
	comp=Z,26nm,1.0s						
TPNV	Topopah Spring	87.21	52	*e*P	P	04 02 31.6	-0.4
TPNV				pmax	pmax		
	comp=Z,26nm,1.0s						
TPNV	Topopah Spring	87.21	52	P	P	04 02 32.0	+0.1
	baz=254						
C06D	Leavenworth	87.24	40	P	P	04 02 32.1	+0.4
	baz=251						
GLA	Glamis	87.31	56	*e*P	P	04 02 32.6	+0.3
	comp=Z,47nm,0.9s						
GLA	Glamis	87.31	56	*e*P	P	04 02 32.7	+0.3
GLA				pmax	pmax		
	comp=Z,47nm,0.9s						
GLA	Glamis	87.31	56	P	P	04 02 32.6	+0.3
	baz=255,SNR=12						
IRM	Iron Mountain	87.34	55	P	P	04 02 33.2	+0.7
	baz=255,SNR=38						
J08A	Circle Bar Ran	87.41	45	*e*P	P	04 02 32.7	0.0
	comp=Z,43nm,0.8s						
LLLB	Lillooet	87.55	37	*e*P	P	04 02 33.5	+0.4
	comp=Z,19nm,1.1s						
LDFC	Landfair	87.61	54	*e*P	P	04 02 33.5	-0.3
	comp=Z,59nm,0.9s						
HAWA	Hanford	87.63	42	*e*P	P	04 02 33.7	+0.2
	comp=Z,28nm,0.9s						
G08A	Pilot Rock	87.66	43	*e*P	P	04 02 34.2	+0.3
	comp=Z,44nm,1.0s						
Y12C	Blythe	87.73	55	*e*P	P	04 02 34.7	+0.4
	comp=Z,33nm,0.9s						
Y12C	Blythe	87.73	55	P	P	04 02 35.2	+0.9
	baz=255,SNR=25						
SHPR	Sheep Range	87.94	52	*e*P	P	04 02 35.6	+0.2
	comp=Z,42nm,1.4s						
E08A	Dider Farm, El	87.97	42	*e*P	P	04 02 35.6	+0.5
	comp=Z,52nm,1.0s						
DANN	Dangsing	88.04	299	*e*P	P	04 02 35.7	-0.6
R11A	Troy Canyon, C	88.09	51	*e*P	P	04 02 36.6	+0.5
	comp=Z,19nm,1.1s						
R11A	Troy Canyon, C	88.09	51	P	P	04 02 36.7	+0.5
	baz=255,SNR=14						
113A	Mohawk Valley,	88.11	56	*e*P	P	04 02 36.8	+0.6
	comp=Z,40nm,1.1s						
SRIG	Santa Rosalia	88.11	62	*e*P	P	04 02 36.5	+0.3
PDMCI	Parker Dam,Lak	88.18	55	P	P	04 02 36.9	+0.4
	baz=256,SNR=45						
D08A	Wollman Farm,	88.23	41	*e*P	P	04 02 37.1	+0.7
	comp=Z,23nm,0.9s						
B08A	Colville Reser	88.38	40	*e*P	P	04 02 37.3	+0.2
	comp=Z,18nm,1.0s						
E09A	Wood Farm, Sta	88.58	42	*e*P	P	04 02 38.4	+0.4
	comp=Z,24nm,0.9s						
W13A	Hualapai Mount	88.58	54	*e*P	P	04 02 38.8	+0.2
	comp=Z,60nm,1.3s						
PYUN	Piuthan	88.65	299	*e*P	P	04 02 38.4	-0.7
	comp=Z,32nm,1.0s						
BMO	Blue Mountains	88.65	44	*e*P	P	04 02 38.8	+0.2
	comp=Z,28nm,1.1s						
BMO	Blue Mountains	88.65	44	*e*P	P	04 02 38.8	+0.2
BMO				pmax	pmax		
	comp=Z,28nm,1.1s						
214A	Organ Pipe Nat	88.70	57	P	P	04 02 39.4	+0.4
	baz=256						
C09A	Chrisman Ranch	88.88	41	*e*P	P	04 02 40.1	+0.7
	comp=Z,15nm,1.0s						
WMQ	Urumqi	88.90	315	P	P	04 02 40.1	+0.4
WMQ				sP	pwP	04 02 48.7	+1.4
WMQ				pmax	pmax		
	comp=Z,59nm,1.5s						
WMQ	Urumqi	88.90	315	*e*P	P	04 02 39.5	-0.2
	comp=Z,27nm,1.0s						
WMQ	Urumqi	88.90	315	*e*P	P	04 02 39.5	-0.2
WMQ				pmax	pmax		
	comp=Z,27nm,1.0s						
ELK	Elko	88.98	48	*e*P	P	04 02 40.5	+0.1
	comp=Z,14nm,1.1s						
ELK	Elko	88.98	48	*e*P	P	04 02 40.5	+0.1
ELK				pmax	pmax		
	comp=Z,14nm,1.1s						
Y14A	Wickenburg	89.01	55	*e*P	P	04 02 40.7	+0.3
	comp=Z,22nm,1.0s						
F10A	Beach Ranch, E	89.03	43	*e*P	P	04 02 40.2	-0.1
	comp=Z,28nm,0.8s						
MFID	Camas Ranch	89.27	46	*e*P	P	04 02 42.0	+0.4
	comp=Z,20nm,0.8s						
SLBS	Sierra La Lagu	89.34	66	*e*P	P	04 02 42.9	+0.7
	comp=Z,42nm,1.1s						
PSUT	Pine Spring	89.45	51	*e*P	P	04 02 43.1	+0.5
	comp=Z,26nm,0.9s						
LCMT	Little Creek M	89.55	52	*e*P	P	04 02 43.5	+0.4
	comp=Z,47nm,1.1s						
CCUT	Cedar City	89.59	52	*e*P	P	04 02 43.6	+0.3
	comp=Z,34nm,1.0s						
HSIG		89.60	60	*e*P	P	04 02 43.6	+0.4
	comp=Z,65nm,1.3s						
NEW	Newport	89.75	41	*e*P	P	04 02 43.8	+0.2
	comp=Z,15nm,0.9s						
NEW	Newport	89.75	41	*e*P	P	04 02 43.8	+0.2
NEW				pmax	pmax		
	comp=Z,15nm,0.9s						
NEW	Newport	89.75	41	P	P	04 02 44.2	+0.7
	baz=253						
SZCU	Shurtz Canyon	89.81	52	*e*P	P	04 02 44.5	+0.1
	comp=Z,29nm,0.9s						
INK	Inuvik	89.84	19	*e*P	P	04 02 44.1	+0.7
	comp=Z,10nm,1.0s						
INK	Inuvik	89.84	19	P	P	04 02 42.9	-0.6
	comp=Z,10nm,1.1s,baz=189,slow=5.0,SNR=9.4						
INK				LR	LR	04 36 40.3	
	comp=Z,6µm,22.0s,baz=183,slow=31						
KNB	Kanab	89.88	52	*e*P	P	04 02 45.1	+0.5
	comp=Z,75nm,1.3s						
KNB	Kanab	89.88	52	*e*P	P	04 02 45.2	+0.5
KNB				pmax	pmax		
	comp=Z,75nm,1.3s						
U15A	North Rim	90.16	53	*e*P	P	04 02 46.5	+0.4
	comp=Z,48nm,0.9s						
HLID	Hailey	90.31	46	*e*P	P	04 02 46.8	+0.4
	comp=Z,20nm,0.8s						
HLID	Hailey	90.31	46	P	P	04 02 46.8	+0.4
	baz=255						
PKCU	Pink Cliffs	90.38	52	*e*P	P	04 02 47.6	+0.5
	comp=Z,61nm,1.0s						
X16A	Lo Mia Camp, P	90.38	55	*e*P	P	04 02 47.5	+0.5
	comp=Z,26nm,0.8s						
HYB	Hyderabad	90.43	288	*i* P	P	04 02 48.0	+0.6
TUC	Tucson	90.45	57	*e*P	P	04 02 48.2	+0.9
	comp=Z,28nm,1.1s						
TUC	Tucson	90.45	57	*e*P	P	04 02 48.2	+0.9
TUC				pmax	pmax		
	comp=Z,28nm,1.1s						
TUC	Tucson	90.45	57	P	P	04 02 48.4	+1.1
	baz=257						
MTPU	Mount Pierson	90.61	51	*e*P	P	04 02 48.8	+0.5
	comp=Z,31nm,0.8s						
DUG	Dugway, Tooele	90.64	49	*e*P	P	04 02 48.5	+0.4
	comp=Z,20nm,0.9s						
DUG	Dugway, Tooele	90.64	49	*e*P	P	04 02 48.5	+0.4
DUG				pmax	pmax		
	comp=Z,20nm,0.9s						
DUG	Dugway, Tooele	90.64	49	P	P	04 02 48.7	+0.6
	baz=256						
BGU	Big Grassy Mou	90.65	49	*e*P	P	04 02 48.7	+0.6
	comp=Z,19nm,0.9s						
WUAZ	Wupatki	90.68	54	*e*P	P	04 02 48.8	+0.4
	comp=Z,29nm,0.9s						
WUAZ	Wupatki	90.68	54	P	P	04 02 48.7	+0.4
	baz=257						
DGZ	Jazzator, Alta	90.70	321	*d* *i*P	P	04 02 47.0	-1.1
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MSU	Marysvale	90.73	51	*e*P	P	04 02 49.1	+0.5
MSU	Marysvale	90.73	51	*e*P	P	04 02 49.1	+0.5
HVU	Hansel Valley	91.04	48	*e*P	P	04 02 50.2	+0.3
	comp=Z,37nm,0.8s						
HVU	Hansel Valley	91.04	48	*e*P	P	04 02 50.2	+0.3
HVU				pmax	pmax		
	comp=Z,37nm,0.8s						
NLU	North Lily Min	91.13	50	*e*P	P	04 02 51.0	+0.5
	comp=Z,29nm,0.9s						
SPUT	South Promonto	91.17	48	*e*P	P	04 02 50.8	+0.3
	comp=Z,15nm,0.8s						
MSO	Missoula	91.45	43	*e*P	P	04 02 52.0	+0.4
	comp=Z,8.8nm,0.9s						
MSO	Missoula	91.45	43	P	P	04 02 52.2	+0.6
	baz=256						
MPU	Maple Canyon	91.48	50	*e*P	P	04 02 52.8	+0.7
	comp=Z,50nm,1.3s						
319A	Douglas	91.51	58	*e*P	P	04 02 52.9	+0.6
	comp=Z,44nm,1.3s						
CTU	Camp Tracy	91.54	49	*e*P	P	04 02 53.0	+0.7
	comp=Z,28nm,1.0s						
Q16A	Castle Valley	91.58	51	*e*P	P	04 02 53.2	+0.7
	comp=Z,37nm,1.3s						
X18A	Snowflake	91.61	55	*e*P	P	04 02 53.3	+0.6
	comp=Z,25nm,1.0s						
TMUT	Trail Mountain	91.64	50	*e*P	P	04 02 53.5	+0.6
	comp=Z,20nm,0.8s						
MCMT	McKenzie Canyo	91.71	45	*e*P	P	04 02 53.4	+0.4
JLU	Jordanelle	91.75	49	*e*P	P	04 02 53.9	+0.6
	comp=Z,18nm,0.9s						
SYO	Syowa Base	91.85	197	⇑*e*P	P	04 02 51.8	-1.1
TCUT	Toone Canyon	91.89	49	*e*P	P	04 02 54.9	+1.0
	comp=Z,50nm,0.8s						
W18A	Petrified Fore	91.90	55	*e*P	P	04 02 54.7	+0.6
	comp=Z,24nm,0.9s						
W18A	Petrified Fore	91.90	55	P	P	04 02 55.0	+0.9
	baz=258						
DLMT	Dillon	92.00	44	*e*P	P	04 02 54.6	+0.3
	comp=Z,49nm,0.8s						
WALA	Waterton Lakes	92.02	40	*e*P	P	04 02 54.6	+0.4
	comp=Z,24nm,0.9s						
P17A	Butcher Ranch,	92.03	50	*e*P	P	04 02 54.9	+0.4
	comp=Z,19nm,1.3s						
SRU	San Rafael Swe	92.12	51	*e*P	P	04 02 55.7	+0.7
	comp=Z,9.3nm,0.9s						
SRU	San Rafael Swe	92.12	51	*e*P	P	04 02 55.7	+0.7
SRU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LRM	Limekiln Ridge	92.21	44	*e*P	P	04 02 55.6	+0.2
AHID	Auburn Hatcher	92.47	47	*e*P	P	04 02 57.1	+0.6
	comp=Z,9.4nm,0.8s						
QLMT	Earthquake Lak	92.69	45	*e*P	P	04 02 57.8	+0.3
FXWY	Fox Creek	92.71	46	*e*P	P	04 02 57.9	+0.2
	comp=Z,15nm,0.8s						
BOZ	Bozeman (W)	92.72	44	*e*P	P	04 02 57.9	+0.3
	comp=Z,31nm,1.1s						
BOZ	Bozeman (W)	92.72	44	*e*P	P	04 02 57.9	+0.3
BOZ				pmax	pmax		
	comp=Z,31nm,1.1s						
BOZ	Bozeman (W)	92.72	44	P	P	04 02 58.4	+0.9
	baz=257						
TPAW	Teton Pass	92.74	46	*e*P	P	04 02 57.5	-0.3
	comp=Z,9.8nm,0.7s						
REDW	Red Top Meadow	92.78	47	*e*P	P	04 02 58.0	0.0
	comp=Z,8.8nm,0.9s						
HRY	Holter Researc	92.83	43	*e*P	P	04 02 58.0	-0.1
IMW	Indian Meadow	92.83	46	*e*P	P	04 02 58.7	+0.4
	comp=Z,28nm,1.3s						
YHB	Horse Butte	92.84	45	*e*P	P	04 02 59.0	+0.8
	comp=Z,19nm,0.9s						
SNOW	Snow King Moun	92.87	46	*e*P	P	04 02 59.2	+0.7
	comp=Z,14nm,0.8s						
MOOW	Moose Ponds	92.94	46	*e*P	P	04 02 58.8	0.0
	comp=Z,7.4nm,0.9s						
YMR	Madison River	92.98	45	*e*P	P	04 02 59.5	+0.6
	comp=Z,22nm,0.8s						
121A	Cookes Peak, D	92.98	58	P	P	04 02 59.7	+0.6
	baz=259						
PV05	Paradox Valley	93.00	52	*e*P	P	04 03 00.6	+1.5
	comp=Z,15nm,0.8s						
YPP	Pitchstone Pla	93.01	46	*e*P	P	04 02 59.4	+0.3
	comp=Z,3.3nm,0.8s						
LOHW	Long Hollow	93.01	46	*e*P	P	04 02 58.9	-0.2
	comp=Z,9.7nm,0.8s						
YFT	Old Faithful	93.02	45	*e*P	P	04 02 59.9	+0.8
	comp=Z,13nm,0.7s						
FLWY	Flagg Ranch	93.04	46	*e*P	P	04 03 00.2	+1.0
	comp=Z,11nm,0.8s						
PV09	Paradox Valley	93.06	52	*e*P	P	04 03 00.3	+0.8
PV10	Paradox Valley	93.10	52	*e*P	P	04 03 00.3	+0.7
	comp=Z,22nm,0.9s						
PV14	Lion Creek, Pa	93.12	52	*e*P	P	04 03 00.1	+0.4
	comp=Z,17nm,0.8s						
PV19	Morning Glory	93.14	52	*e*P	P	04 03 00.2	+0.5
	comp=Z,14nm,0.8s						
PV23	Carpenter Ridg	93.14	52	*e*P	P	04 03 00.3	+0.5
	comp=Z,31nm,0.7s						
PV17	East Wray Mesa	93.15	52	*e*P	P	04 03 00.3	+0.5
	comp=Z,14nm,0.8s						
PV20	West Nyswonger	93.15	52	*e*P	P	04 03 00.1	+0.3
	comp=Z,17nm,0.8s						
PV16	Nyswonger Mesa	93.19	52	*e*P	P	04 03 00.6	+0.6
	comp=Z,10.0nm,0.9s						
YNR	Norris Junctio	93.19	45	*e*P	P	04 03 00.3	+0.4
	comp=Z,10.0nm,0.9s						
PV21	Cone Mtn., Par	93.19	52	*e*P	P	04 03 00.4	+0.3
	comp=Z,15nm,0.9s						
H17A	Grant Village	93.19	46	*e*P	P	04 03 00.3	+0.4
	comp=Z,16nm,0.8s						
H17A	Grant Village	93.19	46	P	P	04 03 01.2	+1.3
	baz=258						
PV04	Paradox Valley	93.21	52	*e*P	P	04 03 00.5	+0.4
	comp=Z,16nm,0.9s						
PV11	David Mesa, Pa	93.22	52	*e*P	P	04 03 00.6	+0.5
	comp=Z,14nm,0.9s						
PV03	Paradox Valley	93.23	52	*e*P	P	04 03 00.0	-0.1
	comp=Z,6.8nm,0.8s						
PV13	Radium Mtn., P	93.23	52	*e*P	P	04 03 00.2	0.0
	comp=Z,5.3nm,0.8s						
PV12	Saucer Basin,	93.28	52	*e*P	P	04 03 00.1	-0.3
	comp=Z,15nm,0.9s						
MVCO	Mesa Verde	93.30	53	*e*P	P	04 03 00.6	0.0
	comp=Z,5.9nm,0.8s						
MVCO	Mesa Verde	93.30	53	P	P	04 03 00.2	-0.3
	baz=259						
PV02	Paradox Valley	93.31	52	*e*P	P	04 03 01.0	+0.4
	comp=Z,8.6nm,1.0s						
MK01	Makanchi Array	93.31	317	*e*P	P	04 02 59.4	-0.7
MK31	Makanchi Array	93.33	317	*e*P	P	04 02 59.8	-0.4
MKAR	Makanchi Array	93.33	317	*e*P	P	04 02 59.8	-0.5
	comp=Z,67nm,0.8s						
MKAR				PKKPbc	PKKPdf	04 20 06.7	-1.4
MKAR	Makanchi Array	93.33	317	P	P	04 02 59.7	-0.5
MKAR				pmax	pmax		
	comp=Z,32nm,1.1s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	93.33	317	P	P	04 02 59.7	-0.5
	comp=Z,31nm,1.1s,baz=93,slow=4.6,SNR=25						
MKAR				PKKPbc	PKKPdf	04 20 06.7	-1.4
	comp=Z,1.9nm,0.7s,baz=285,slow=2.7,SNR=10						
ZAA0	Zalesovo Array	93.37	324	*e*P	P	04 02 59.3	-0.8
	comp=Z,25nm,1.1s						
ZALV	Zalesovo Beam	93.37	324	*e*P	P	04 02 59.3	-0.8
ZALV	Zalesovo Beam	93.37	324	*e*P	P	04 02 59.3	-0.8
ZALV	Zalesovo Beam	93.37	324	P	P	04 02 59.5	-0.6
	comp=Z,22nm,1.0s,baz=113,slow=4.3,SNR=32						
PV07	Paradox Valley	93.42	52	*e*P	P	04 03 01.3	+0.2
	comp=Z,12nm,0.8s						
PV01	Paradox Valley	93.42	52	*e*P	P	04 03 01.4	+0.3
	comp=Z,8.0nm,0.9s						
PV15	Paradox Valley	93.53	52	*e*P	P	04 03 01.9	+0.3
	comp=Z,13nm,1.2s						
MAKZ	Makanchi	93.54	317	*e*P	P	04 03 00.9	-0.2
	comp=Z,24nm,1.1s						
MAKZ	Makanchi	93.54	317	*e*P	P	04 03 00.9	-0.2
MAKZ				pmax	pmax		
	comp=Z,24nm,1.1s						
BW06	Boulder Array	93.58	47	*e*P	P	04 03 02.1	+0.4
	comp=Z,13nm,1.0s						
BW06	Boulder Array	93.58	47	P	P	04 03 01.8	0.0
	baz=259						
PD31	Pinedale Array	93.58	47	*e*P	P	04 03 01.8	0.0
PDAR	Pinedale Array	93.58	47	P	P	04 03 01.5	-0.3
	comp=Z,8.6nm,0.9s,baz=261,slow=2.5,SNR=31						
PDAR				PKKP	PKKPdf	04 20 07.7	-0.1
	comp=Z,0.9nm,0.7s,baz=108,slow=3.8,SNR=8.0						
O20A	White River Ci	94.05	50	*e*P	P	04 03 04.0	+0.1
	comp=Z,11nm,0.9s						
O20A	White River Ci	94.05	50	P	P	04 03 04.2	+0.3
	baz=259						
GCMT	Greycliff	94.11	44	*e*P	P	04 03 04.2	+0.3
NVS	Novosibirsk	94.47	325	*i* P	P	04 03 04.6	-0.6
EGMT	Eagleton	94.48	42	*e*P	P	04 03 05.4	-0.2
	comp=Z,23nm,0.6s						
EGMT	Eagleton	94.48	42	P	P	04 03 05.9	+0.3
	baz=259						
ANMO	Albuquerque	94.51	55	*e*P	P	04 03 06.6	+0.5
	comp=Z,7.2nm,0.9s						
ANMO	Albuquerque	94.51	55	⇑*i*P	P	04 03 07.5	+1.4
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ANMO	Albuquerque	94.51	55	P	P	04 03 06.0	-0.1
	baz=260						
S22A	4UR Ranch, Cre	94.70	53	*e*P	P	04 03 08.0	+0.9
	comp=Z,9.9nm,1.1s						
S22A	4UR Ranch, Cre	94.70	53	P	P	04 03 06.9	-0.2
	baz=260						
MNTX	Cornudas Mount	94.84	59	*e*P	P	04 03 07.5	0.0
	comp=Z,11nm,1.0s						
MNTX	Cornudas Mount	94.84	59	P	P	04 03 07.8	+0.4
	baz=260						
SMCO	Snowmass	94.84	51	*e*P	P	04 03 08.2	+0.4
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	94.94	27	P	P	04 03 05.3	-1.8
	comp=Z,5.7nm,0.7s,baz=257,slow=4.7,SNR=32						
YKA				PP	PP	04 06 56.7	+0.3
	comp=Z,1.8nm,1.1s,baz=253,slow=7.4,SNR=4.0						
YKA				LR	LR	04 43 30.0	
	comp=Z,921nm,18.1s,baz=223,slow=34						
YKB5	Yellowknife Ar	94.94	27	*e*P	P	04 03 05.4	-1.7
YKW3	Yellowknife Ar	94.95	27	*e*P	P	04 03 06.0	-1.2
	comp=Z,12nm,1.1s						
SDCO	Great Sand Dun	95.74	53	P	P	04 03 11.9	+0.1
	baz=261						
K22A	Casper	95.76	48	P	P	04 03 12.2	+0.6
	baz=261						
N23A	Red Feather La	95.91	50	P	P	04 03 12.8	+0.3
	baz=261						
TX31	Lajitas Ar. Si	95.91	61	*e*P	P	04 03 12.9	+0.4
TXAR	Lajitas Array	95.91	61	P	P	04 03 12.6	+0.1
	comp=Z,2.1nm,0.8s,baz=236,slow=2.1,SNR=9.9						
TXAR				PP	PP	04 07 06.2	+1.2
	comp=Z,2.7nm,1.1s,baz=247,slow=4.7,SNR=6.4						
TXAR				LR	LR	04 37 25.6	
	comp=Z,11µm,21.8s,baz=0.0,slow=30						
NRIK	Noril'sk	95.95	340	P	P	04 03 10.8	-0.8
	comp=Z,13nm,1.0s,baz=105,slow=6.5,SNR=5.6						
NRIK				PP	PP	04 07 04.3	+0.2
	comp=Z,2.7nm,0.6s,baz=103,slow=7.2,SNR=5.0						
ISCO	Idaho Springs	95.98	51	*e*P	P	04 03 13.3	+0.4
	comp=Z,4.1nm,1.0s						
ISCO	Idaho Springs	95.98	51	P	P	04 03 12.8	-0.1
	baz=261						
KURK	Kurchatov	96.45	320	*e*P	P	04 03 12.9	-1.4
	comp=Z,12nm,1.1s						
KURK	Kurchatov	96.45	320	⇑*e*P	P	04 03 17.2	+2.9
KURK				pmax	pmax		
	comp=Z,14nm,1.2s						
T25A	Trinidad	96.50	54	P	P	04 03 15.3	+0.1
	baz=261						
KSH	Kashi	96.56	309	P	P	04 03 18.0	+2.7

KSH				pP	pwP	04 03 26.4	+3.5
KSH				PP	PP	04 07 11.1	+1.3
KSH				sS	sS	04 14 43.2	-1.8
KSH				SS	SS	04 21 13.0	+3.0
NVL	N'lazarevskaya	96.56	188	*e*P	P	04 03 14.1	-0.4
NVL				MLR	MLR		
	comp=Z,9µm,18.0s						
LAO	LASA Array	96.62	44	*e*P	P	04 03 15.4	+0.1
	comp=Z,14nm,1.0s						
LAO	LASA Array	96.62	44	P	P	04 03 15.9	+0.7
	baz=261						
MSTX	Muleshoe	97.36	57	P	Pdif	04 03 19.3	+0.2
	baz=262						
RSSD	Black Hills	97.78	47	P	Pdif	04 03 20.9	0.0
	baz=262						
VNA3	Neumayer Olymp	97.96	182	P	P	04 03 20.2	-0.7
VNA2	Neumayer--Watz	98.20	182	P	P	04 03 17.2	-4.8
DGMT	Dagmar	98.22	42	*e*P	Pdif	04 03 22.7	+0.2
	comp=Z,24nm,1.0s						
DGMT	Dagmar	98.22	42	P	Pdif	04 03 22.7	+0.3
	baz=263						
AMTX	Amarillo	98.38	56	*e*P	P	04 03 23.1	-0.5
	comp=Z,12nm,1.0s						
AMTX	Amarillo	98.38	56	Pdiff	Pdif	04 03 23.6	0.0
	baz=263						
JCT	Junction City	99.39	61	*e*P	Pdif	04 03 27.7	-0.4
	comp=Z,7.1nm,0.9s						
JCT	Junction City	99.39	61	*e*P	Pdif	04 03 27.7	-0.4
JCT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FFC	Flin Flon	100.23	36	*e*Pdif	Pdif	04 03 31.6	+0.4
FFC	Flin Flon	100.23	36	*i* P	Pdif	04 03 32.5	+1.3
BRVK	Borovoye	101.82	322	⇑*e*P	Pdif	04 03 38.2	-0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES	ARCESS Array B	116.18	345	PKP	PKiKP	04 08 26.8	-1.1
	comp=Z,1.1nm,0.3s,baz=90,slow=1.8,SNR=23						
ARCES				PKKPbc	PKKPbc	04 18 59.9	-0.3
	comp=Z,5.3nm,1.1s,baz=250,slow=1.8,SNR=7.7						
KLMR	Klimovskoe	116.57	334	*e*PKIKP	PKPdf	04 08 26.3	-2.5
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
KLMR	Klimovskoe	116.57	334	*e*PKPdf	PKPdf	04 08 26.3	-2.5
KLMR				AMP		04 08 33.6	
	comp=Z,19nm,1.6s						
KLMR				*e*PKKPbc	PKKPbc	04 18 55.7	-3.0
MAK	Makhachkala	117.85	313	*i* PKIKP	PKPdf	04 08 28.1	-3.7
MAK				pmax	pmax		
	comp=Z,52nm,0.6s						
VRH	Novokhopyorsk	119.38	323	*e*PKIKP	PKiKP	04 08 35.4	+0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPAZ	La Paz	120.38	116	PKP	PKPdf	04 08 37.5	-0.7
	comp=Z,3.3nm,0.6s,baz=206,slow=0.9,SNR=12						
LPSR	Galich'ya Gora	120.45	325	*e*PKIKP	PKiKP	04 08 36.9	+0.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEI	Tsey	120.48	313	*i* PKIKP	PKPdf	04 08 34.5	-2.7
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	Obninsk	120.62	329	⇓*i*PKIKP	PKiKP	04 08 39.5	+2.6
OBN				*e*		04 10 06.1	
OBN				*e*PPP	PPP	04 12 42.2	
OBN				pmax	pmax		
	comp=Z,11nm,0.7s						
VSR	Storozhevoye	120.87	324	*e*PKIKP	PKPdf	04 08 35.8	-1.6
VSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KIV	Kislovodsk	121.03	315	*e*PKIKP	PKiKP	04 08 38.6	+0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FIA1	FINESS Array S	121.60	339	*e*PKPdf	PKiKP	04 08 38.7	+0.1
FINES	FINESS Array B	121.60	339	PKP	PKPdf	04 08 38.3	-0.2
	comp=Z,5.0nm,0.8s,baz=58,slow=2.1,SNR=8.8						
SOC	Sochi	123.20	315	*e*PKIKP	PKPdf	04 08 38.5	-3.6
SOC				pmax	pmax		
	comp=Z,28nm,1.1s						
CPUP	Villa Florida	124.22	132	*e*PKPdf	PKPdf	04 08 43.5	-1.1
CPUP	Villa Florida	124.22	132	*e*PKIKP	PKPdf	04 08 43.5	-1.1
CPUP	Villa Florida	124.22	132	PKP	PKPdf	04 08 44.4	-0.2
	comp=Z,6.8nm,0.9s,baz=232,slow=1.5,SNR=11						
SDV	Santo Domingo	124.64	87	*e*PKPdf	PKPdf	04 08 44.6	-1.4
BOSA	Boshof	125.10	223	*e*PKPdf	PKPdf	04 08 46.0	-0.4
BOSA	Boshof	125.10	223	*e*PKIKP	PKPdf	04 08 46.0	-0.4
BOSA	Boshof	125.10	223	PKP	PKiKP	04 08 46.7	-0.1
	comp=Z,20nm,0.9s,baz=133,slow=1.8,SNR=20						
IDID	Didziasalis	125.25	333	*e*P	PKiKP	04 08 46.2	+0.2
IDID				IAmb	IAmb	04 08 57.2	
	comp=Z,8.9nm,1.0s						
SUR	Sutherland	125.34	217	*e*PKPdf	PKPdf	04 08 46.6	-0.3
ISAL	Salakas	125.37	333	*e*P	PKPdf	04 08 46.0	+0.1
ISAL				IAmb	IAmb	04 08 57.4	
	comp=Z,10nm,1.2s						
IIGN	Ignalina	125.47	333	*e*P	PKiKP	04 08 46.4	-0.1
IIGN				IAmb	IAmb	04 08 57.6	
	comp=Z,14nm,1.2s						
NACGM	Naroch	125.49	332	*e*	PKPdf	04 08 46.0	-0.1
NB2	NORSAR Subarra	126.54	345	PKPdf	PKPdf	04 08 47.6	-0.5
	comp=Z,10nm,1.0s,baz=34,slow=2.1						
NB2	NORSAR Subarra	126.54	345	PKPdf	PKPdf	04 08 47.6	-0.5
	baz=34,slow=2.1						
NOA	NORSAR Array B	126.54	345	PKP	PKPdf	04 08 47.6	-0.5
	comp=Z,3.0nm,0.8s,baz=36,slow=2.0,SNR=6.9						
AKASG	Malin Array Be	126.68	327	PKP	PKPdf	04 08 48.1	-0.4
	comp=Z,6.7nm,1.0s,baz=62,slow=2.2,SNR=13						
AKBB	Malin Array Si	126.68	327	*e*PKPdf	PKPdf	04 08 48.3	-0.2
AKBB	Malin Array Si	126.68	327	*e*PKIKP	PKPdf	04 08 48.3	-0.2
KIEV	Kiev	126.69	327	⇓*i*P	PKPdf	04 08 48.7	+0.1
KIEV	Kiev	126.69	327	⇓PKIKP	PKPdf	04 08 48.7	+0.1
AK11	Malin Array Si	126.72	327	*e*PKPdf	PKPdf	04 08 48.1	-0.5
LBTB	Lobatse	127.11	227	*e*PKPdf	PKPdf	04 08 49.8	-0.5
LBTB	Lobatse	127.11	227	*e*PKIKP	PKPdf	04 08 49.8	-0.5
SUW	Suwalki	127.68	333	*e*PKP	PKiKP	04 08 50.7	-0.2
SUW	Suwalki	127.68	333	*e*PKIKP	PKiKP	04 08 50.7	-0.2
BR131	Keskin Array S	128.77	313	*e*PKPdf	PKPdf	04 08 52.7	-0.4
BRTR	Keskin Array B	128.77	313	PKIKP	PKPdf	04 08 52.0	-1.1
BRTR	Keskin Array B	128.77	313	PKP	PKPdf	04 08 51.9	-1.1
	comp=Z,4.4nm,1.0s,baz=117,slow=1.6,SNR=10.0						
ANTO	Ankara	129.32	313	*e*PKPdf	PKPdf	04 08 54.1	0.0
ANTO	Ankara	129.32	313	⇓*i*P	PKiKP	04 08 55.0	+0.2
ANTO	Ankara	129.32	313	⇓PKIKP	PKiKP	04 08 55.0	+0.2
SJG	San Juan	129.54	76	*e*PKPdf	PKPdf	04 08 54.3	-0.6
SJG	San Juan	129.54	76	*e*PKIKP	PKPdf	04 08 54.3	-0.6
HUMP	Col San Antoni	129.82	75	*e*PKPdf	PKPdf	04 08 54.9	-0.6
CFR	Carcaliu	130.15	321	⇑*i*P	PKPpre	04 08 50.0	
CFR	Carcaliu	130.15	321	⇑PKIKP	PKPpre	04 08 50.0	
LSZ	Lusaka	130.42	239	*e*PKPdf	PKPdf	04 08 56.3	-0.6
LSZ	Lusaka	130.42	239	*e*PKIKP	PKPdf	04 08 56.3	-0.6
BIZ	Bicaz	130.44	324	⇓*i*P	PKiKP	04 08 56.9	+0.2
BURAR	Bucovina Array	130.57	325	⇑*i*P	PKiKP	04 08 58.3	+1.2
BURAR	Bucovina Array	130.57	325	⇑PKIKP	PKiKP	04 08 58.3	+1.2
BUR04	Bucovina Ar. S	130.57	325	*e*PKPdf	PKPdf	04 08 56.4	+0.2
KWP	Kalwaria Pacla	130.71	329	*e*PKP	PKiKP	04 08 58.4	+1.2
KWP	Kalwaria Pacla	130.71	329	*e*PKIKP	PKiKP	04 08 58.4	+1.2
CDVI	St. Croix	130.86	76	*e*PKPdf	PKPdf	04 08 56.7	-0.7
MLR	Muntele Rosu	131.32	323	⇑*i*P	PKiKP	04 08 58.9	+0.2
MLR	Muntele Rosu	131.32	323	⇑PKIKP	PKiKP	04 08 58.9	+0.2
DOPR	Dopca	131.39	323	⇑*i*P	PKPdf	04 08 54.2	-3.5
TRPA	Tarpa	131.73	327	⇓*i*P	PKiKP	04 09 00.6	+1.4
OJC	Ojcow	131.76	331	*e*PKP	PKPpre	04 08 53.2	
OJC	Ojcow	131.76	331	*e*PKIKP	PKPpre	04 08 53.2	
VOIR		131.88	323	⇑*i*P	PKiKP	04 09 03.5	+3.7
VOIR		131.88	323	⇑PKIKP	PKiKP	04 09 03.5	+3.7
NIE	Niedzica	132.05	330	*e*PKP	PKiKP	04 09 00.9	+0.9
ARR	Arges	132.16	323	⇑*i*P	PKiKP	04 09 00.5	+0.2
HUMR	Humele	132.41	322	⇑*i*P	PKiKP	04 09 01.3	+0.6
DRGR		132.44	326	⇓*i*P	PKPdf	04 08 59.6	-0.2
DRGR		132.44	326	⇓PKIKP	PKPdf	04 08 59.6	-0.2
OKC	Ostrava-Krasne	132.80	332	AMS	AMS	05 13 10.0	
	comp=Z,3µm,18.1s						
KSP	Ksiaz	132.92	334	*e*PKP	PKPpre	04 08 54.7	
KSP	Ksiaz	132.92	334	*e*PKIKP	PKPpre	04 08 54.7	
MORC	Moravsky Berou	133.12	332	*e*PKPdf	PKPdf	04 09 00.4	-0.5
MORC	Moravsky Berou	133.12	332	⇑*i*P	PKPdf	04 09 00.1	-0.8
MORC	Moravsky Berou	133.12	332	⇑PKIKP	PKPdf	04 09 00.1	-0.8
MORC	Moravsky Berou	133.12	332	*e*PKP	PKiKP	04 09 02.2	+0.1
GZR	Gura Zlata	133.23	324	⇑*i*P	PKPdf	04 09 01.2	-0.1
GZR	Gura Zlata	133.23	324	⇑PKIKP	PKPdf	04 09 01.2	-0.1
PTGA	Pitinga	133.26	101	*e*PKPdf	PKPdf	04 09 01.3	-0.9
DPC	Dobruska-Polom	133.26	333	*e*PKPDF	PKiKP	04 09 04.7	+2.3
DPC	Dobruska-Polom	133.26	333	*e*PKIKP	PKiKP	04 09 04.7	+2.3
UPC	Upice	133.29	334	*e*pPKP	pPKPdf	04 09 06.5	-0.3
UPC				AMS	AMS	05 14 00.0	
	comp=Z,5µm,19.7s						
UPC	Upice	133.29	334	*e*PKIKP	pPKPdf	04 09 06.5	-0.3
UPC				MLR	MLR		
	comp=Z,5µm,19.7s						
VYHS	Vyhne	133.39	330	*e*PKIKP	PKPdf	04 09 02.0	+0.6
VYHS				*e*		04 11 29.9	
VYHS	Vyhne	133.39	330	*e*PKP	PKPdf	04 09 02.0	+0.6
VYHS				*e*PP	PP	04 11 29.9	+1.4
BZS	Buzias	133.75	325	⇓*i*P	PKPdf	04 09 02.1	-0.1
BZS	Buzias	133.75	325	⇓PKIKP	PKPdf	04 09 02.1	-0.1
BRG	Berggiesshubel	133.89	335	*e*PKP	PKPdf	04 09 02.7	+0.5
	comp=Z,11nm,1.2s						
BRG				*e*SKP		04 12 38.4	
	comp=Z,79nm,2.5s						
BRG	Berggiesshubel	133.89	335	*e*PKP	PKiKP	04 09 04.5	+0.9
	comp=Z,11nm,1.2s						
BRG	Berggiesshubel	133.89	335	*e*PKIKP	PKiKP	04 09 04.5	+0.9
BRG				pmax	pmax		
	comp=Z,11nm,1.2s						
PVCC	Panska Ves	133.89	335	AMS	AMS	05 15 00.0	
	comp=Z,5µm,22.2s						
VRAC	Vranov	133.89	332	*e*PKP	PKiKP	04 09 04.5	+0.9
CLL	Collm	133.93	336	*e*PKPdf	PKiKP	04 09 03.0	-0.6
CLL	Collm	133.93	336	*e*PKPdf	PKiKP	04 09 04.0	+0.4
	comp=Z,12nm,1.2s						
CLL				*e*		04 09 12.0	
CLL				*e*		04 09 18.0	
CLL				*e*PP	PP	04 11 32.0	+0.3
CLL				Lm	MLR	05 12 00.0	
	comp=Z,5µm,20.4s						
CLL	Collm	133.93	336	*e*PKIKP	PKiKP	04 09 03.0	-0.6
KRUC	Moravsky	134.16	332	*e*PKP	PKiKP	04 09 03.9	-0.3
MDVR	Moldovita	134.20	324	⇑*i*P	PKiKP	04 09 04.0	-0.4
MODS	Modra-Piesok	134.23	331	*e*PKIKP	PKiKP	04 09 03.8	-0.5
MODS	Modra-Piesok	134.23	331	*e*PKP	PKiKP	04 09 03.8	-0.5
PRU	Pruhonice	134.31	334	AMS	AMS	05 09 30.0	
	comp=Z,4µm,21.5s						
TREC	Trest	134.40	333	*e*PKPDF	PKiKP	04 09 05.9	+1.2
TREC	Trest	134.40	333	*e*PKIKP	PKiKP	04 09 05.9	+1.2
VTS	Vitosha	134.51	321	*e*PKPdf	PKPdf	04 09 03.4	-0.5
VTS	Vitosha	134.51	321	⇓*i*P	PKPdf	04 09 03.7	-0.2
VTS	Vitosha	134.51	321	⇓PKIKP	PKPdf	04 09 03.7	-0.2
CONA	Conrad Observa	135.22	331	*e*pPKPdf	PKiKP	04 09 07.6	+1.1
	comp=Z,15nm,1.4s						
KHC	Kasperske Hory	135.37	334	*e*PKPdf	PKPdf	04 09 04.6	-0.5
KHC	Kasperske Hory	135.37	334	*e*PKPDF	PKPdf	04 09 05.7	+0.6
KHC				*e*pPKP	pPKPdf	04 09 10.9	+0.1
KHC				AMS	AMS	05 06 20.0	
	comp=Z,4µm,22.2s						
KHC	Kasperske Hory	135.37	334	*e*PKIKP	PKPdf	04 09 04.6	-0.5
GEC2	GERESS Array S	135.53	334	*e*PKPdf	PKPdf	04 09 05.6	+0.1
GEC2	GERESS Array S	135.53	334	*e*PKIKP	PKPdf	04 09 05.6	+0.1
GERES	GERESS Array B	135.53	334	PKP	PKiKP	04 09 06.5	-0.6
	comp=Z,5.5nm,1.0s,baz=46,slow=3.9,SNR=9.5						
GEA0	GERESS Array S	135.53	334	*e*PKPdf	PKPdf	04 09 05.2	-0.3
DIVS	Divibare	135.59	324	*e*PKPdf	PKPdf	04 09 05.3	-0.5
ARSA	Arzberg	135.86	331	*e*P	PKiKP	04 09 10.0	+2.3
	comp=Z,3.9nm,0.8s						
MOA	Molln	136.01	332	P	PKiKP	04 09 12.0	+4.0
	comp=Z,10nm,1.9s						
KRUS	Krusevo	136.43	320	*i* P	PKPdf	04 09 07.2	-0.2
PERS	Pernice	136.49	330	*e*PKPdf	PKiKP	04 09 11.1	+2.1
SOKA	Soboth	136.50	331	*e*pPKPdf	PKiKP	04 09 09.8	+0.7
	comp=Z,10nm,1.1s						
TSUM	Tsumeb	136.52	227	*e*PKPdf	PKPdf	04 09 04.8	-3.5
KBA	Koelnbreinsper	137.01	332	pPKPdf	PKiKP	04 09 11.1	+0.8
	comp=Z,6.2nm,0.8s						
MEM	Membach	137.02	341	⇓PKiKP	PKiKP	04 09 11.2	+1.3
MYKA	Terra Mystica	137.20	332	pPKPdf	PKiKP	04 09 10.8	+0.3
	comp=Z,0.1nm,0.2s						
VISS	Visnje	137.22	330	*e*PKPdf	PKiKP	04 09 11.9	+1.4
BOJS	Bojanci	137.22	329	*e*PKPdf	PKiKP	04 09 12.1	+1.6
BDFB	Brasilia	137.53	128	*e*PKPdf	PKPdf	04 09 08.4	-1.8
BDFB	Brasilia	137.53	128	*e*PKIKP	PKPdf	04 09 08.4	-1.8
WATA	Walderalm	137.60	334	*e*PKPdf	PKPdf	04 09 08.5	-1.0
	comp=Z,8.8nm,0.9s						
ABTA	Abfaltersbach	137.63	332	PKPdf	PKPdf	04 09 07.6	-1.9
	comp=Z,12nm,1.3s						
MOTA	Moosalm	137.80	334	*i* PKPdf	PKPdf	04 09 08.4	-1.4
MOTA				*e*PKPdf	PKPdf	04 09 08.5	-1.4
	comp=Z,8.1nm,0.9s						
RETA	Reutte	137.83	335	P	PKiKP	04 09 13.3	+1.6
	comp=Z,8.2nm,1.4s						
SQTA	Sankt Quirin	137.85	334	PKiKP	PKiKP	04 09 11.0	-0.9
	comp=Z,7.9nm,1.0s						
FETA	Feichten	138.21	334	PKiKP	PKPdf	04 09 11.3	+0.6
	comp=Z,10nm,1.2s						
DAVA	Damuels	138.36	335	*e*pPKPdf	PKiKP	04 09 13.7	+0.7
	comp=Z,6.3nm,0.9s						
TIP	Timpagrande	140.50	321	*e*PKPdf	PKPdf	04 09 14.3	-0.6
KEST	Kesra	147.22	323	*e*PKPdf	PKPdf	04 09 26.3	-0.5
KEST	Kesra	147.22	323	PKPbc	PKPbc	04 09 29.7	+0.6
	comp=Z,34nm,0.9s,baz=320,slow=4.1,SNR=18						
ABSA	Djebel Ababsia	147.92	325	P	PKPab	04 09 33.4	-0.1
CASM	Ain Smara	148.47	327	P	PKPab	04 09 34.8	-0.8
DFRA	Djebel Bou Aff	148.59	328	P	PKiKP	04 09 34.8	+0.5
PGAV	Gavieira, Arco	148.61	351	*e*PKPdf	PKPbc	04 09 31.7	-0.9
POLO	Lamas de Olo	149.12	350	*e*PKPdf	PKPbc	04 09 34.0	+0.1
MVO	Moncorvo	149.18	349	*e*PKPdf	PKiKP	04 09 35.2	-0.1
PVRL	Vila Real	149.20	350	*e*PKPdf	PKPbc	04 09 34.1	+0.1
PTO	Porto	149.47	351	*e*PKPdf	PKPbc	04 09 35.0	+0.4
PVIS	Viseu	149.77	350	*e*PKPdf	PKiKP	04 09 36.5	0.0
ES19	SONSECA Array	149.86	344	*e*PKPdf	PKPdf	04 09 31.4	+0.4
ESDC	Sonseca Array	149.90	344	PKPbc	PKiKP	04 09 36.5	-0.3
	comp=Z,9.1nm,1.0s,baz=26,slow=2.0,SNR=16						
MTE	Manteigas	150.02	349	*e*PKPdf	PKiKP	04 09 37.4	+0.4
MTE	Manteigas	150.02	349	*e*PKPdf	PKPdf	04 09 31.4	+0.2
PCBR	Castelo Branco	150.55	349	*e*PKPdf	PKiKP	04 09 38.5	+0.5
PTOM	Tomar	150.93	350	*e*PKPdf	PKiKP	04 09 38.9	+0.1
PMRV	Marv??o	150.93	349	*e*PKPdf	PKPbc	04 09 37.3	-1.0
PMTG	Montargil	151.43	350	*e*PKPdf	PKiKP	04 09 40.5	+0.6
PESTR	Estremoz	151.51	349	*e*PKPdf	PKPbc	04 09 38.1	-1.5
PBEJ	Beja	152.38	349	*e*PKPdf	PKiKP	04 09 44.1	+2.2
PNCL	Nicolau / Gran	152.42	350	*e*PKPdf	PKiKP	04 09 43.5	+1.6
MESJ	Messejana	152.63	349	*e*PKPdf	PKPbc	04 09 40.4	-1.7
RCBR	Riachuelo	152.90	127	*e*PKPdf	PKPdf	04 09 36.2	-0.1
RCBR	Riachuelo	152.90	127	*e*PKIKP	PKPdf	04 09 36.2	-0.1
TOA0	Torodi Ar. Sit	164.09	280	*e*PKPdf	PKPdf	04 09 49.0	-0.6
TOA0				*e*PKPab	PKPab	04 10 43.0	+0.1
TORD	Torodi Ar. Bea	164.09	280	PKP	PKPdf	04 09 49.5	-0.1
	comp=Z,5.9nm,1.1s,baz=94,slow=1.5,SNR=13						
TORD				PKPab	PKPab	04 10 43.7	+0.7
	comp=Z,11nm,1.0s,baz=66,slow=3.2,SNR=7.7						
KIC	Kosan Boka	169.42	245	*e*P	PKPdf	04 09 52.8	-0.9
	comp=Z,115nm,1.5s						
LIC	Lamto	169.61	244	*e*P	PKPdf	04 09 54.7	+0.9
	comp=Z,90nm,1.7s						
DBIC	Dimbokro	169.65	247	PKP	PKPdf	04 09 54.5	+0.7
	comp=Z,9.0nm,1.0s,baz=187,slow=0.7,SNR=6.5						
DBIC				PKPab	PKPab	04 11 09.3	+1.8
	comp=Z,7.4nm,0.7s,baz=33,slow=1.1,SNR=6.8						
TIC	Toumodi	169.79	246	*e*P	PKPdf	04 09 54.2	+0.3

ISCJB ***06*** *03:54:54.4±1.0, 80°.21N±0°.08×32°.0E±0°.3, h10^{km}, Error ellipse: s-maj=11.1km s-min=5.8km az=166.9*

IEPN ***06*** *03:54:59.0, 80°.33N×32°.28E, h5^{km}, station ZFI2 has station magnitude of 2.75*

ISC 06 03:54:55.2±1.1**, 80°.19N**±0°.09×**33°.00E**±0°.05**, h10^{km}, n17, σ2^{s}.36**/31**, 1C-1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	2.50	69	⇓*i*P	Pn	03 55 36.4	+0.5
	13µm,1.0s						
ZFI2				*i* S	Sn	03 56 05.9	-0.6
SPA0	Spitsbergen Ar	3.72	246	Pn	Pn	03 55 53.1	+0.5
	baz=45,slow=11						
SPA0				Sn	Sn	03 56 33.8	-2.6
	baz=49,slow=12						
SPA0				Lg	Lg	03 56 51.7	
	baz=51,slow=28						
SPA0	Spitsbergen Ar	3.72	246	⇑*i*P	Pn	03 55 53.1	+0.5
SPA0				*i* S	Sn	03 56 34.3	-2.1
SPA0	Spitsbergen Ar	3.72	246	*e*P	Pn	03 55 53.0	+0.4
SPA0				*e*S	Sn	03 56 35.4	-1.0
SPA0				Sg	Sb	03 56 51.7	+5.8
	baz=51,slow=28						
KBS	Kingsbay	4.02	262	Pn	Pn	03 55 56.7	0.0
KBS				Pg	Pg	03 56 10.8	-1.4
KBS				Lg	Lg	03 57 01.1	
KBS	Kingsbay	4.02	262	*i* P	Pn	03 55 57.1	+0.4
KBS				*i* S	Sn	03 56 40.8	-3.0
KBS	Kingsbay	4.02	262	*e*P	Pn	03 55 56.7	-0.1
KBS				*e*Pg	Pg	03 56 10.6	-1.6
KBS				*e*Sg	Sb	03 57 00.1	+5.5
KBS				IAML		03 57 08.1	
	comp=Z,13nm,0.3s						
HOPEN	Hopen	4.04	208	Sn	Sn	03 56 43.2	-0.9
HOPEN				Lg	Lg	03 57 05.4	
HOPEN	Hopen	4.04	208	*e*S	Sn	03 56 43.1	-1.1
HOPEN				*e*		03 57 04.3	
HOPEN				IAML		03 57 12.4	
	comp=Z,26nm,0.7s						
BRBA	Barentsburg A	4.13	248	Pn	Pn	03 56 01.1	+2.8
BRBA				Lg	Lg	03 57 05.2	
BRBA	Barentsburg A	4.13	248	*e*P	Pn	03 56 01.1	+2.8
BRBA				Sg	Sg	03 57 05.2	-2.5
HSP	Hornsund	4.69	236	Pn	Pn	03 56 07.6	+1.7
HSP				Sn	Sn	03 56 59.9	-0.3
HSP				Lg	Lg	03 57 23.0	
HSPB	Hornsund (broa	4.70	236	*e*P	Pn	03 56 08.6	+2.6
HSPB				Sn	Sn	03 56 59.9	-0.5
HSPB				Sg	Sg	03 57 23.0	-2.8
ARA0	ARCESS Array S	10.88	194	Pn	Pn	03 57 31.9	+1.2
	baz=8.2,slow=9.3						
ARA0				Sn	Sn	03 59 25.4	-6.7
	baz=13,slow=22						
ARA0	ARCESS Array S	10.88	194	Pn	Pn	03 57 31.9	+1.2
	baz=8.2,slow=9.3						
ARA0				Sn	Sn	03 59 25.4	-6.7
	baz=13,slow=22						
ARE0	ARCESS Array S	10.88	194	*e*P	Pn	03 57 33.5	+2.8
ARE0				*e*S	Sn	03 59 25.5	-6.7
HEF	Hetta	12.08	197	*e*P	Pn	03 57 47.7	+0.6
HEF				*e*S	Sn	03 59 58.1	-3.6

IDC 06 03:55:17.7±4.3**, 10°.90S×165°.49E, h0^{km}, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.7**/44**, mbtmp4.0**/3**, Error ellipse: s-maj=220.7km s-min=31.7km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.30	250	P	P	04 01 40.4	+0.5
	0.8nm,0.5s,baz=81,slow=9.1,SNR=3.4						
ASAR	Alice Springs	32.64	243	P	P	04 01 51.0	-0.6
	2.3nm,0.6s,baz=64,slow=10,SNR=7.2						
ILAR	Eielson Array	83.45	19	P	P	04 07 46.8	0.0
	0.7nm,0.8s,baz=235,slow=5.2,SNR=3.6						

IDC ***06*** *03:55:26.4±0.9, 11°.09S×165°.80E, h0^{km}, mb4.6/12, mb1 4.8/13, mb1mx4.4/44, mbtmp4.6/13, ML5.7/1, Error ellipse: s-maj=30.4km s-min=21.8km az=147.0*

NEIC ***06*** *03:55:29.0±0.3, 10°.96S×165°.64E, h10^{km}, mb4.9/34, Error ellipse: s-maj=13.1km s-min=7.3km az=158.0*

ISCJB ***06*** *03:55:30.9±0.4, 10°.9S±0°.1×165°.48E±0°.07, h30^{km}, mb4.8/44, Error ellipse: s-maj=15.9km s-min=8.7km az=158.1*

ISC 06 03:55:32.1±0.5**, 10°.9S**±0°.1×**165°.6E**±0°.1**, h30^{km}, n84, σ1^{s}.00**/85**, mb4.9**/44**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.74	284	*e*Pn	Pn	03 56 57.3	+2.0
HNR	Honiara	5.74	284	Pn	Pn	03 56 57.3	+2.0
	175nm,0.3s,baz=146,slow=5.9,SNR=10						
MSVF	Nonsavu	13.86	121	*e*P	P	03 58 57.5	+2.7
CTA	Charters Tower	20.75	241	*e*P	Pn	04 00 12.9	-0.3
CTA	Charters Tower	20.75	241	P	Pn	04 00 12.9	-0.3
	41nm,0.9s,baz=72,slow=12,SNR=9.7						
CTAO	Charters Tower	20.75	241	*e*P	Pn	04 00 13.9	+0.7
	42nm,0.8s						
WR1	Warramunga Arr	31.40	250	*e*P	P	04 01 50.2	-0.6
	28nm,1.1s						
WRA	Warramunga Arr	31.40	250	P	P	04 01 50.2	-0.6
WRA	Warramunga Arr	31.40	250	P	P	04 01 50.2	-0.6
	4.2nm,0.7s,baz=78,slow=9.2,SNR=4.8						
AS31	Alice Springs	32.74	243	*e*P	P	04 02 01.3	-1.2
	6.5nm,1.1s						
AS31				*e*PcP	PcP	04 04 47.8	0.0
ASAR	Alice Springs	32.74	243	P	P	04 02 01.3	-1.2
ASAR				PcP	PcP	04 04 47.8	0.0
ASAR	Alice Springs	32.74	243	P	P	04 02 01.3	-1.2
	7.5nm,0.8s,baz=74,slow=9.4,SNR=9.3						
ASAR				PcP	PcP	04 04 47.8	0.0
	2.0nm,0.7s,baz=101,slow=2.0,SNR=4.4						
MJAR	Matsushiro Arr	53.74	333	P	P	04 04 51.8	0.0
MJAR	Matsushiro Arr	53.74	333	P	P	04 04 51.7	0.0
	2.9nm,0.8s,baz=173,slow=8.8,SNR=5.9						
MAJO	Matsushiro	53.74	333	*e*P	P	04 04 51.7	0.0
ASAJ	Asahikawa	58.58	341	*e*P	P	04 05 27.9	+1.8
ASAJ	Asahikawa	58.58	341	P	P	04 05 27.8	+1.8
	5.4nm,0.6s,baz=203,slow=22,SNR=5.2						
USRK	Ussuriysk Ar.	62.72	333	P	P	04 05 55.7	+1.4
USRK	Ussuriysk Ar.	62.72	333	P	P	04 05 55.7	+1.4
	2.0nm,0.7s,baz=134,slow=8.4,SNR=4.4						
GAMB	Gambell	76.42	10	*e*P	P	04 07 19.0	+0.6
	14nm,0.9s						
GAMB				*e*pP	pP	04 07 28.3	+0.6
RSO	Redoubt South	78.40	20	*e*P	P	04 07 29.8	-0.1
SONA0	Songino Array	78.43	324	*e*P	P	04 07 30.9	+0.7
SONM	Songino Array	78.43	324	P	P	04 07 30.9	+0.7
SONM	Songino Array	78.43	324	P	P	04 07 30.9	+0.7
	2.0nm,0.9s,baz=146,slow=8.1,SNR=5.4						
BRLK	Bradley Lake	78.53	21	*e*P	P	04 07 30.5	+0.2
	18nm,0.9s						
BILL	Bilibino	78.70	0	*e*P	P	04 07 31.3	+0.2
	10.0nm,0.8s						
QSPA	South Pole Qui	79.14	180	*e*P	P	04 07 33.9	+0.1
	20nm,1.1s						
SUA	Susitna One	79.81	20	*e*P	P	04 07 37.1	-0.3
	10nm,1.0s						
CAST	Castle Rocks	80.82	18	*e*P	P	04 07 41.5	-1.2
	7.5nm,0.8s						
RND	Reindeer	81.82	19	*e*P	P	04 07 49.5	+1.4
	21nm,1.3s						
MLY	Manley	82.41	17	*e*P	P	04 07 52.9	+1.8
	8.9nm,1.4s						
ILAR	Eielson Array	83.39	19	P	P	04 07 55.6	-0.6
ILAR	Eielson Array	83.39	19	P	P	04 07 55.6	-0.6
	6.0nm,0.8s,baz=231,slow=6.1,SNR=24						
PINE	Pine Mountain	85.80	44	*e*P	P	04 08 09.3	+0.2
	15nm,1.0s						
NV01	Mina Array Sit	86.02	50	*e*P	P	04 08 10.0	-0.3
NVAR	Mina Array Bea	86.02	50	P	P	04 08 10.0	-0.3
NVAR	Mina Array Bea	86.02	50	P	P	04 08 10.0	-0.3
	6.3nm,0.9s,baz=232,slow=8.3,SNR=6.5						
J08A	Circle Bar Ran	87.36	45	*e*P	P	04 08 16.6	0.0
	16nm,1.3s						
HAWA	Hanford	87.58	42	*e*P	P	04 08 17.9	+0.5
	6.5nm,0.9s						
SHPR	Sheep Range	87.89	52	*e*P	P	04 08 21.3	+1.9
	3.2nm,1.3s						
E08A	Dider Farm, El	87.92	42	*e*P	P	04 08 19.8	+0.8
	12nm,1.0s						
W13A	Hualapai Mount	88.54	54	*e*P	P	04 08 23.1	+0.6
	4.9nm,1.1s						
F10A	Beach Ranch, E	88.98	43	*e*P	P	04 08 23.3	-1.0
	9.0nm,1.3s						
PSUT	Pine Spring	89.41	51	*e*P	P	04 08 27.1	+0.5
	7.0nm,1.2s						
LCMT	Little Creek M	89.51	52	*e*P	P	04 08 27.4	+0.5
	7.2nm,1.0s						
CCUT	Cedar City	89.55	52	*e*P	P	04 08 27.9	+0.6
	9.2nm,1.0s						
SZCU	Shurtz Canyon	89.77	52	*e*P	P	04 08 29.1	+0.8
	7.3nm,0.9s						
U15A	North Rim	90.12	53	*e*P	P	04 08 30.6	+0.6
	10.0nm,0.9s						
PKCU	Pink Cliffs	90.34	52	*e*P	P	04 08 32.6	+1.6
	8.6nm,1.0s						
X16A	Lo Mia Camp, P	90.34	55	*e*P	P	04 08 31.6	+0.6
	6.1nm,0.9s						
MTPU	Mount Pierson	90.57	51	*e*P	P	04 08 33.3	+1.1
	5.6nm,0.9s						
BGU	Big Grassy Mou	90.61	49	*e*P	P	04 08 32.5	+0.4
	5.5nm,1.1s						
WUAZ	Wupatki	90.64	54	*e*P	P	04 08 32.7	+0.4
	7.3nm,1.0s						
MSU	Marysvale	90.69	51	*e*P	P	04 08 33.5	+0.9
HVU	Hansel Valley	91.00	48	*e*P	P	04 08 34.1	+0.2
	8.8nm,0.9s						
NLU	North Lily Min	91.09	50	*e*P	P	04 08 35.0	+0.6
	6.6nm,1.0s						
TMUT	Trail Mountain	91.60	50	*e*P	P	04 08 38.8	+1.9

	6.6nm,1.1s						
BOZ	**Bozeman (W)**	**92.67**	**44**	*e*P	**P**	**04 08 42.1**	**+0.6**
	5.2nm,0.9s						
MK32	**Makanchi Array**	**93.29**	**317**	*e*P	**P**	**04 08 44.2**	**0.0**
MKAR	**Makanchi Array**	**93.29**	**317**	P	**P**	**04 08 44.2**	**0.0**
MKAR	**Makanchi Array**	**93.29**	**317**	P	**P**	**04 08 44.2**	**0.0**
	2.3nm,0.8s,baz=97,slow=5.7,SNR=5.7						
ZALV	**Zalesovo Beam**	**93.32**	**324**	*e*P	**P**	**04 08 43.0**	**-1.1**
ZALV	**Zalesovo Beam**	**93.32**	**324**	P	**P**	**04 08 43.3**	**-0.8**
	1.9nm,0.7s,baz=112,slow=3.5,SNR=5.1						
ZAA1	**Zalesovo Array**	**93.32**	**324**	*e*P	**P**	**04 08 43.3**	**-0.8**
PD31	**Pinedale Array**	**93.54**	**47**	*e*P	**P**	**04 08 44.4**	**-1.3**
	3.7nm,1.1s						
PDAR	**Pinedale Array**	**93.54**	**47**	*e*P	**P**	**04 08 45.2**	**-0.4**
PDAR	**Pinedale Array**	**93.54**	**47**	P	**P**	**04 08 44.4**	**-1.3**
	1.6nm,0.9s,baz=256,slow=3.1,SNR=6.0						
EGMT	**Eagleton**	**94.44**	**42**	*e*P	**P**	**04 08 49.5**	**0.0**
	8.3nm,0.9s						
YKA	**Yellowknife Ar**	**94.88**	**27**	P	**P**	**04 08 48.8**	**-2.2**
YKA	**Yellowknife Ar**	**94.88**	**27**	P	**P**	**04 08 48.8**	**-2.2**
	1.6nm,0.8s,baz=256,slow=4.9,SNR=9.7						
ARA0	**ARCESS Array S**	**116.12**	**345**	*e*PKPdf	**PKiKP**	**04 14 10.9**	**-1.0**
ARCES	**ARCESS Array B**	**116.12**	**345**	PKP	**PKiKP**	**04 14 10.9**	**-1.0**
ARCES	**ARCESS Array B**	**116.12**	**345**	PKP	**PKiKP**	**04 14 10.9**	**-1.0**
	4.0nm,1.0s,baz=91,slow=2.0,SNR=13						
CPUP	**Villa Florida**	**124.26**	**132**	*e*PKPdf	**PKPdf**	**04 14 28.1**	**-0.7**
CPUP	**Villa Florida**	**124.26**	**132**	PKP	**PKPdf**	**04 14 28.1**	**-0.7**
	2.7nm,1.0s,baz=358,slow=4.0,SNR=2.8						
SDV	**Santo Domingo**	**124.64**	**87**	*e*PKPdf	**PKPdf**	**04 14 28.9**	**-1.2**
BOSA	**Boshof**	**125.14**	**223**	*e*PKPdf	**PKPdf**	**04 14 29.7**	**-0.9**
BOSA	**Boshof**	**125.14**	**223**	PKP	**PKPdf**	**04 14 29.7**	**-0.9**
	1.9nm,0.8s,baz=180,slow=4.0,SNR=3.5						
NB2	**NORSAR Subarra**	**126.49**	**345**	PKPdf	**PKPdf**	**04 14 31.3**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=31,slow=1.9						
NB200	**NORSAR Array S**	**126.49**	**345**	*e*PKPdf	**PKPdf**	**04 14 31.8**	**-0.2**
NOA	**NORSAR Array B**	**126.49**	**345**	PKP	**PKPdf**	**04 14 31.8**	**-0.2**
NOA	**NORSAR Array B**	**126.49**	**345**	PKP	**PKPdf**	**04 14 31.8**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=34,slow=1.7,SNR=3.8						
ESDC	**Sonseca Array**	**149.84**	**344**	*e*PKPbc	**PKPbc**	**04 15 19.6**	**-0.1**
ESDC	**Sonseca Array**	**149.84**	**344**	PKPbc	**PKPbc**	**04 15 19.6**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=59,slow=0.8,SNR=4.0						

*IDC **06** 03:57:03.4±1.7, 11°.09S×165°.72E, h0^{km}, mb4.4/7, mb1 4.7/7, mb1mx4.2/40, mbtmp4.4/7, Error ellipse: s-maj=72.9km s-min=23.8km az=146.0*

*ISCJB **06** 03:57:06.8±1.4, 11°.0S±0°.4×165°.7E±0°.3, h30^{km}, mb4.4/7, Error ellipse: s-maj=63.0km s-min=18.2km az=142.8*

ISC 06 03:57:08.4±1.6**, 11°.0S**±0°.4×**165°.7E**±0°.3**, h30^{km}, n8, σ1ˢ.47**/8**, mb4.4**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**20.82**	**242**	P	**P**	**04 01 49.5**	**+1.9**
	18nm,0.7s,baz=66,slow=11,SNR=6.3						
WRA	**Warramunga Arr**	**31.50**	**250**	P	**P**	**04 03 26.8**	**-1.1**
	6.1nm,0.7s,baz=81,slow=9.2,SNR=7.8						
ASAR	**Alice Springs**	**32.81**	**243**	P	**P**	**04 03 38.0**	**-1.4**
	10nm,0.8s,baz=64,slow=10,SNR=14						
CMAR	**Chiang Mai Arr**	**72.09**	**294**	P	**P**	**04 08 30.6**	**+0.2**
	1.2nm,0.3s,baz=126,slow=4.6,SNR=4.8						
SONM	**Songino Array**	**78.62**	**324**	P	**P**	**04 09 08.1**	**+0.6**
	1.1nm,0.7s,baz=140,slow=7.4,SNR=3.6						
ILAR	**Eielson Array**	**83.46**	**19**	P	**P**	**04 09 32.5**	**-0.3**
	2.1nm,0.7s,baz=244,slow=4.8,SNR=7.7						
NVAR	**Mina Array Bea**	**85.99**	**50**	P	**P**	**04 09 47.7**	**+1.3**
	2.2nm,0.9s,baz=228,slow=6.7,SNR=5.0						
YKA	**Yellowknife Ar**	**94.93**	**27**	P	**P**	**04 10 26.1**	**-1.4**
	0.6nm,0.7s,baz=259,slow=4.4,SNR=4.8						

*IDC **06** 03:58:29.9±0.6, 11°.15S×165°.15E, h0^{km}, mb4.6/14, mb1 4.7/15, mb1mx4.4/42, mbtmp4.6/15, ML4.7/1, Error ellipse: s-maj=23.0km s-min=16.5km az=134.0*

*NEIC **06** 03:58:31.3±0.2, 11°.22S×165°.15E, h10^{km}, mb4.8/21, Error ellipse: s-maj=6.7km s-min=5.4km az=108.0*

*ISCJB **06** 03:58:32.9±0.3, 11°.32S±0°.05×165°.10E±0°.07, h31^{km}, mb4.8/29, Error ellipse: s-maj=9.4km s-min=7.8km az=8.0*

ISC 06 03:58:34.5±0.5**, 11°.22S**±0°.09×**165°.2E**±0°.1**, h31^{km}, n66, σ0ˢ.94**/67**, mb4.8**/29**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.85**	**174**	Pn	**Pn**	**04 01 07.7**	**-0.2**
	5.3nm,0.3s,baz=308,slow=12,SNR=6.2						
EIDS	**Eidsvold**	**19.39**	**222**	*e*P	**P**	**04 02 56.7**	**-1.3**
	30nm,1.0s						
CTAO	**Charters Tower**	**20.22**	**242**	*e*P	**P**	**04 03 07.9**	**+0.7**
	48nm,1.1s						
ARMA	**Armidale**	**22.87**	**211**	*e*P	**P**	**04 03 33.9**	**-1.8**
	31nm,1.1s						
RAO	**Raoul Island**	**23.89**	**141**	*e*P	**P**	**04 03 45.4**	**-0.1**
	2µm,0.6s						
RAO				*e*Sn	Sn	04 08 35.9	+12
OUZ	**Omahuta**	**25.08**	**164**	*e*P	**P**	**04 03 55.3**	**-1.1**
	56nm,1.2s						
URZ	**Urewera**	**28.96**	**160**	*e*P	**P**	**04 04 32.4**	**+1.2**
	20nm,0.9s						
URZ	**Urewera**	**28.96**	**160**	P	**P**	**04 04 32.7**	**+1.5**
	7.9nm,0.6s,baz=31,slow=1.8,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**29.56**	**3**	T	T	04 35 44.6	
	baz=184,slow=76,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	**29.57**	**3**	T	T	04 35 41.5	
	baz=184,slow=76,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**29.58**	**3**	T	T	04 35 42.6	
	baz=184,slow=76,SNR=4.8						
BKZ	**Black Stump Fm**	**29.59**	**162**	*e*P	**P**	**04 04 37.1**	**+0.2**
	16nm,0.7s						
STKA	**Stephens Creek**	**29.93**	**223**	*e*P	**P**	**04 04 40.2**	**+0.3**
	3.3nm,0.8s						
STKA	**Stephens Creek**	**29.93**	**223**	P	**P**	**04 04 40.2**	**+0.3**
	13nm,0.7s,baz=29,slow=8.9,SNR=13						
WRAB	**Tennant Creek**	**30.89**	**250**	*e*P	**P**	**04 04 48.0**	**-0.5**
	27nm,0.8s						
WB2	**Warramunga Arr**	**30.89**	**250**	*e*P	**P**	**04 04 48.1**	**-0.5**
WR1	**Warramunga Arr**	**30.90**	**250**	*e*P	**P**	**04 04 48.2**	**-0.4**
	32nm,0.8s						
WR1				*e*PcP	**PcP**	**04 07 45.8**	**+0.8**
WRA	**Warramunga Arr**	**30.90**	**250**	P	**P**	**04 04 48.2**	**-0.4**
	21nm,0.9s,baz=82,slow=9.0,SNR=23						
WRA				PcP	**PcP**	**04 07 45.8**	**+0.8**
	2.3nm,0.7s,baz=77,slow=3.1,SNR=7.7						
BFZ	**Birch Farm**	**30.93**	**163**	*e*P	**P**	**04 04 48.0**	**-0.6**
	40nm,1.0s						
THZ	**Tophouse**	**31.17**	**169**	*e*P	**P**	**04 04 49.9**	**-0.9**
	24nm,0.9s						
KHZ	**Kahutara**	**31.92**	**168**	*e*P	**P**	**04 04 59.4**	**+2.2**
	27nm,0.9s						
LTZ	**Lake Taylor**	**32.04**	**170**	*e*P	**P**	**04 05 02.3**	**+3.9**
	19nm,0.8s						
AS01	**Alice Springs**	**32.17**	**243**	*e*P	**P**	**04 04 57.8**	**-2.0**
AS31	**Alice Springs**	**32.21**	**243**	*e*P	**P**	**04 04 59.5**	**-0.7**
	3.2nm,0.7s						
AS31				*e*PcP	**PcP**	**04 07 48.8**	**+0.2**
ASAR	**Alice Springs**	**32.22**	**243**	P	**P**	**04 04 59.5**	**-0.8**
	13nm,0.8s,baz=73,slow=9.6,SNR=18						
ASAR				PcP	**PcP**	**04 07 48.8**	**+0.2**
	3.6nm,0.7s,baz=72,slow=2.5,SNR=10.0						
FITZ	**Fitzroy Crossi**	**38.80**	**255**	*e*P	**P**	**04 05 56.0**	**-0.8**
	7.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**38.80**	**255**	P	**P**	**04 05 56.0**	**-0.8**
	6.9nm,0.7s,baz=107,slow=5.6,SNR=11						
NWAO	**Narrogin (SRO)**	**48.90**	**236**	P	**P**	**04 07 18.0**	**+0.2**
	11nm,0.8s,baz=308,slow=6.3,SNR=4.1						
CM01	**Chiang Mai Arr**	**71.65**	**294**	*e*P	**P**	**04 09 54.6**	**+0.9**
CM31	**Chiang Mai Arr**	**71.67**	**294**	*e*P	**P**	**04 09 54.7**	**+0.8**
	8.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**71.67**	**294**	P	**P**	**04 09 54.7**	**+0.8**
	4.7nm,0.8s,baz=127,slow=4.6,SNR=12						
SONA0	**Songino Array**	**78.48**	**324**	*e*P	**P**	**04 10 33.4**	**+0.6**
SONM	**Songino Array**	**78.48**	**324**	P	**P**	**04 10 33.4**	**+0.6**
	1.4nm,0.7s,baz=137,slow=6.1,SNR=5.9						
PMR	**Palmer**	**80.92**	**20**	*e*P	**P**	**04 10 47.4**	**+2.0**
MDM	**Murphy Dome**	**83.57**	**18**	*e*P	**P**	**04 10 59.9**	**+0.5**
	4.3nm,0.8s						
HDA	**Harding Lake**	**83.59**	**19**	*e*P	**P**	**04 10 59.5**	**+0.1**
	8.7nm,1.0s						
ILAR	**Eielson Array**	**83.86**	**19**	P	**P**	**04 11 00.4**	**-0.4**
	2.0nm,0.6s,baz=244,slow=4.7,SNR=13						
ILB	**Eielson Array**	**83.86**	**19**	*e*P	**P**	**04 11 00.4**	**-0.4**
	2.6nm,0.9s						
NVAR	**Mina Array Bea**	**86.56**	**50**	P	**P**	**04 11 15.2**	**0.0**
	0.8nm,0.6s,baz=252,slow=5.9,SNR=4.3						
NV01	**Mina Array Sit**	**86.56**	**50**	*e*P	**P**	**04 11 15.2**	**0.0**
MK01	**Makanchi Array**	**93.26**	**317**	*e*P	**P**	**04 11 46.1**	**-0.2**
MK31	**Makanchi Array**	**93.27**	**317**	*e*P	**P**	**04 11 46.6**	**+0.3**
	3.6nm,1.0s						
MK32	**Makanchi Array**	**93.27**	**317**	*e*P	**P**	**04 11 46.4**	**+0.1**
MKAR	**Makanchi Array**	**93.27**	**317**	P	**P**	**04 11 46.4**	**+0.1**
	3.9nm,0.8s,baz=98,slow=5.9,SNR=14						
ZALV	**Zalesovo Beam**	**93.38**	**324**	P	**P**	**04 11 46.2**	**-0.3**
	0.5nm,0.4s,baz=106,slow=4.8,SNR=4.7						
ZAA1	**Zalesovo Array**	**93.38**	**324**	*e*P	**P**	**04 11 46.2**	**-0.3**
PD31	**Pinedale Array**	**94.08**	**47**	*e*P	**P**	**04 11 50.5**	**+0.1**
	3.3nm,1.4s						
PDAR	**Pinedale Array**	**94.08**	**47**	P	**P**	**04 11 50.5**	**+0.1**
	0.5nm,0.7s,baz=264,slow=1.8,SNR=3.5						
YKA	**Yellowknife Ar**	**95.39**	**27**	P	**P**	**04 11 53.8**	**-1.7**
	0.6nm,0.6s,baz=260,slow=4.6,SNR=7.7						
YKB5	**Yellowknife Ar**	**95.39**	**27**	*e*P	**P**	**04 11 53.8**	**-1.7**
TXAR	**Lajitas Array**	**96.40**	**61**	PKKP	**PKKPdf**	**04 28 47.8**	**-0.6**
	0.2nm,0.5s,baz=116,slow=4.2,SNR=3.4						
ARA0	**ARCESS Array S**	**116.36**	**345**	*e*PKPdf	**PKPdf**	**04 17 14.2**	**-0.4**
ARCES	**ARCESS Array B**	**116.37**	**345**	PKP	**PKPdf**	**04 17 14.2**	**-0.4**
	1.5nm,0.6s,baz=87,slow=1.6,SNR=9.1						
LPAZ	**La Paz**	**120.60**	**117**	PKP	**PKiKP**	**04 17 25.7**	**+0.6**
	1.3nm,1.0s,baz=180,slow=0.1,SNR=4.2						
FIA0	**FINESS Array S**	**121.73**	**338**	*e*PKPdf	**PKiKP**	**04 17 25.3**	**+0.1**
FINES	**FINESS Array B**	**121.73**	**338**	PKP	**PKiKP**	**04 17 25.3**	**+0.1**
	1.1nm,0.7s,baz=48,slow=2.8,SNR=5.7						
BOSA	**Boshof**	**124.61**	**223**	PKP	**PKiKP**	**04 17 32.3**	**+0.2**
	3.2nm,0.7s,baz=149,slow=2.6,SNR=7.5						
SDV	**Santo Domingo**	**125.06**	**87**	PKP	**PKPdf**	**04 17 33.0**	**0.0**
	6.2nm,0.7s,baz=272,slow=0.6,SNR=9.4						
AKASG	**Malin Array Be**	**126.71**	**327**	PKP	**PKPdf**	**04 17 35.1**	**+0.2**
	0.3nm,0.4s,baz=65,slow=2.9,SNR=4.2						
AKBB	**Malin Array Si**	**126.71**	**327**	*e*PKPdf	**PKPdf**	**04 17 35.1**	**+0.2**
NB200	**NORSAR Array S**	**126.73**	**345**	*e*PKPdf	**PKiKP**	**04 17 35.1**	**-0.1**
NOA	**NORSAR Array B**	**126.73**	**345**	PKP	**PKiKP**	**04 17 35.1**	**-0.1**
	1.1nm,0.9s,baz=34,slow=1.9,SNR=3.1						
KEST	**Kesra**	**147.22**	**322**	PKPbc	**PKPab**	**04 18 16.3**	**-0.7**
	14nm,0.8s,baz=2.7,slow=2.3,SNR=11						
ES19	**SONSECA Array**	**150.03**	**343**	*e*PKPbc	**PKiKP**	**04 18 23.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**163.74**	**278**	PKPab	**PKPab**	**04 19 27.2**	**-0.6**
	2.3nm,1.1s,baz=76,slow=2.4,SNR=5.7						
TOA1	**Torodi Ar. Sit**	**163.74**	**278**	*e*PKPab	**PKPab**	**04 19 27.2**	**-0.6**

IDC 06 03:59:39.2±2.8**, 11°.08S**×**165°.28E, h0^{km}, mb4.5**/4**, mb1 4.8**/4**, mb1mx4.1**/39**, mbtmp4.5**/4**, Error ellipse: s-maj=154.9km s-min=29.0km az=141.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.04**	**250**	P	P	04 05 59.2	+0.1
	7.9nm,1.0s,baz=81,slow=9.1,SNR=3.8						
ASAR	**Alice Springs**	**32.37**	**243**	P	P	04 06 10.7	-0.1
	5.9nm,0.8s,baz=69,slow=9.6,SNR=4.1						
ILAR	**Eielson Array**	**83.69**	**19**	P	P	04 12 08.2	-1.4
	3.4nm,0.6s,baz=238,slow=5.0,SNR=4.2						
YKA	**Yellowknife Ar**	**95.22**	**27**	P	P	04 13 05.8	+1.3
	0.7nm,0.6s,baz=258,slow=4.6,SNR=7.1						

IDC 06 04:02:58.8±2.2**, 10°.73S**×**164°.53E, h0^{km}, mb4.2**/4**, mb1 4.4**/5**, mb1mx3.9**/36**, mbtmp4.2**/5**, ML3.9**/1**, Error ellipse: s-maj=92.3km s-min=27.3km az=130.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**19.91**	**240**	P	Pn	04 07 33.0	-0.7
	0.2nm,0.3s,baz=73,slow=16,SNR=4.3						
STKA	**Stephens Creek**	**29.86**	**222**	P	P	04 09 08.1	0.0
	4.7nm,0.8s,baz=32,slow=9.8,SNR=7.5						
WRA	**Warramunga Arr**	**30.48**	**249**	P	P	04 09 12.5	-1.1
	0.9nm,0.6s,baz=78,slow=9.2,SNR=4.0						
ILAR	**Eielson Array**	**83.60**	**19**	P	P	04 15 28.0	-0.6
	1.0nm,0.8s,baz=240,slow=6.0,SNR=4.1						
MKAR	**Makanchi Array**	**92.47**	**317**	P	P	04 16 13.4	+1.6
	0.6nm,0.7s,baz=96,slow=4.2,SNR=4.4						

IDC 06 04:03:20.0±3.7**, 11°.08S**×**165°.39E, h0^{km}, mb4.1**/3**, mb1 4.4**/3**, mb1mx3.8**/37**, mbtmp4.1**/3**, Error ellipse: s-maj=181.6km s-min=34.4km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.14**	**250**	P	P	04 09 42.0	+1.2
	3.0nm,0.8s,baz=81,slow=9.2,SNR=4.9						
ASAR	**Alice Springs**	**32.46**	**243**	P	P	04 09 51.4	-1.1
	2.0nm,0.9s,baz=62,slow=10,SNR=3.8						
ILAR	**Eielson Array**	**83.66**	**19**	P	P	04 15 50.2	0.0
	0.7nm,0.6s,baz=241,slow=5.2,SNR=4.4						

IDC 06 04:03:48.8±1.6**, 11°.67S**×**164°.46E, h0^{km}, mb4.4**/4**, mb1 4.6**/5**, mb1mx3.9**/37**, mbtmp4.4**/5**, ML4.2**/1**, Error ellipse: s-maj=47.4km s-min=28.6km az=126.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.52**	**170**	Pn	Pn	04 06 20.6	-0.4
	1.9nm,0.3s,baz=41,slow=20,SNR=2.3						
STKA	**Stephens Creek**	**29.12**	**223**	P	P	04 09 52.4	+0.9
	5.3nm,0.7s,baz=30,slow=11,SNR=7.5						
WRA	**Warramunga Arr**	**30.08**	**250**	P	P	04 09 59.9	-0.3
	4.5nm,0.8s,baz=82,slow=9.2,SNR=9.9						
ASAR	**Alice Springs**	**31.38**	**244**	P	P	04 10 11.3	-0.4
	5.3nm,0.8s,baz=70,slow=9.8,SNR=13						
ILAR	**Eielson Array**	**84.51**	**19**	P	P	04 16 23.3	0.0
	0.5nm,0.6s,baz=238,slow=5.2,SNR=3.1						

*ISCJB **06** 04:05:52.4±1.1, 11°.3S±0°.1×165°.0E±0°.2, h10^{km}, mb3.9/6, Error ellipse: s-maj=29.2km s-min=17.7km az=0.6*

*IDC **06** 04:05:52.4±1.5, 11°.25S×165°.04E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.8/37, mbtmp4.0/7, ML4.0/1, Error ellipse: s-maj=47.7km s-min=25.0km az=116.0*

ISC 06 04:05:54.1±1.2**, 11°.2S**±0°.1×**165°.0E**±0°.2**, h10^{km}, n10, σ0ˢ.92**/7**, mb4.1**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.86**	**173**	Pn	**Pn**	**04 08 30.0**	**+0.3**
	1.2nm,0.3s,baz=112,slow=22,SNR=6.0						
STKA	**Stephens Creek**	**29.81**	**223**	P	**P**	**04 12 01.6**	**+0.2**
	2.7nm,0.8s,baz=343,slow=8.4,SNR=3.3						
WRA	**Warramunga Arr**	**30.74**	**250**	P	**P**	**04 12 09.7**	**-0.1**
	3.6nm,0.9s,baz=80,slow=9.5,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**30.81**	**3**	T	T	04 45 07.6	
	baz=182,slow=76,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**30.82**	**3**	T	T	04 45 07.9	
	baz=182,slow=76,SNR=10						
H11N2	**WAKE ISLAND Hy**	**30.83**	**3**	T	T	04 45 09.0	
	baz=182,slow=76,SNR=8.5						
ASAR	**Alice Springs**	**32.06**	**243**	P	**P**	**04 12 20.3**	**-1.2**
	2.3nm,0.8s,baz=74,slow=9.4,SNR=8.1						
SONM	**Songino Array**	**78.40**	**324**	P	**P**	**04 17 55.9**	**+0.8**
	0.4nm,0.7s,baz=126,slow=7.3,SNR=2.8						
ILAR	**Eielson Array**	**83.92**	**19**	P	**P**	**04 18 23.0**	**-1.0**
	0.3nm,0.7s,baz=238,slow=5.4,SNR=3.1						
MKAR	**Makanchi Array**	**93.17**	**317**	P	**P**	**04 19 09.4**	**+0.6**
	0.6nm,0.9s,baz=115,slow=4.9,SNR=3.7						

*IDC **06** 04:08:20.8±1.6, 11°.47S×165°.42E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/39, mbtmp3.9/7, ML4.3/1, Error ellipse: s-maj=49.1km s-min=25.0km az=114.0*

*ISCJB **06** 04:08:22.6±1.1, 11°.6S±0°.1×165°.5E±0°.2, h24^{km}, mb3.8/6, Error ellipse: s-maj=30.8km s-min=18.3km az=2.2*

ISC 06 04:08:24.4±1.2**, 11°.5S**±0°.1×**165°.5E**±0°.2**, h24^{km}, n7, σ0ˢ.83**/7**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.52**	**175**	Pn	**Pn**	**04 10 53.7**	**-0.1**
	2.3nm,0.3s,baz=356,slow=16,SNR=4.8						
STKA	**Stephens Creek**	**29.91**	**224**	P	**P**	**04 14 31.4**	**+0.9**
	1.6nm,0.7s,baz=31,slow=5.9,SNR=2.3						
WRA	**Warramunga Arr**	**31.07**	**250**	P	**P**	**04 14 40.6**	**-0.3**
	1.6nm,0.9s,baz=82,slow=8.7,SNR=5.1						
ASAR	**Alice Springs**	**32.34**	**244**	P	**P**	**04 14 50.9**	**-1.2**
	0.6nm,0.7s,baz=72,slow=9.8,SNR=3.1						
SONM	**Songino Array**	**78.90**	**324**	P	**P**	**04 20 25.7**	**-0.2**
	0.4nm,0.7s,baz=139,slow=5.4,SNR=2.5						
ILAR	**Eielson Array**	**84.06**	**19**	P	**P**	**04 20 52.4**	**-0.3**
	0.6nm,0.7s,baz=227,slow=4.8,SNR=4.6						
MKAR	**Makanchi Array**	**93.69**	**317**	P	**P**	**04 21 39.8**	**+0.6**
	0.6nm,0.8s,baz=116,slow=3.4,SNR=2.0						

*ISCJB **06** 04:09:08.7±0.4, 11°.5S±0°.1×164°.93E±0°.08, h10^{km}, mb4.5/34, Error ellipse: s-maj=16.5km s-min=7.8km az=149.1*

*IDC **06** 04:09:08.2±1.1, 11°.59S×165°.16E, h0^{km}, mb4.3/15, mb1 4.4/15, mb1mx4.3/39, mbtmp4.2/15, Error ellipse: s-maj=38.1km s-min=17.0km az=136.0*

*NEIC **06** 04:09:10.1±0.3, 11°.53S×165°.04E, h10^{km}, mb4.8/23, Error ellipse: s-maj=12.4km s-min=5.5km az=149.0*

ISC 06 04:09:09.8±0.7**, 11°.6S**±0°.1×**165°.1E**±0°.2**, h10^{km}, n49, σ0ˢ.79**/47**, mb4.7**/34**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**19.95**	**243**	P	Pn	04 13 44.5	+0.5
	8.3nm,0.8s,baz=70,slow=12,SNR=4.8						
CTAO	**Charters Tower**	**19.95**	**243**	*e*P	Pn	04 13 43.5	-0.5
	85nm,1.0s						
STKA	**Stephens Creek**	**29.59**	**223**	P	**P**	**04 15 16.2**	**+0.9**
	2.0nm,0.8s,baz=34,slow=8.1,SNR=3.7						
WRAB	**Tennant Creek**	**30.66**	**250**	*e*P	**P**	**04 15 25.0**	**+0.2**
	15nm,1.2s						
WB2	**Warramunga Arr**	**30.66**	**250**	*e*P	**P**	**04 15 25.2**	**+0.4**
	21nm,1.3s						
WR1	**Warramunga Arr**	**30.67**	**250**	*e*P	**P**	**04 15 24.5**	**-0.4**
	27nm,1.3s						
WRA	**Warramunga Arr**	**30.67**	**250**	P	**P**	**04 15 24.5**	**-0.4**
	7.9nm,1.0s,baz=82,slow=9.2,SNR=13						
AS31	**Alice Springs**	**31.95**	**244**	*e*P	**P**	**04 15 36.1**	**-0.1**
	1.1nm,0.6s						
ASAR	**Alice Springs**	**31.95**	**244**	P	**P**	**04 15 36.1**	**-0.1**
	3.2nm,0.8s,baz=73,slow=9.5,SNR=11						
FITZ	**Fitzroy Crossi**	**38.59**	**256**	P	**P**	**04 16 34.5**	**+1.1**
	2.8nm,0.8s,baz=100,slow=8.3,SNR=4.1						
SOEI	**Soe**	**40.10**	**269**	*e*P	**P**	**04 16 43.9**	**-2.3**
	24nm,0.6s						
MJAR	**Matsushiro Arr**	**54.13**	**333**	P	**P**	**04 18 35.1**	**-0.2**
	0.9nm,0.3s,baz=160,slow=7.7,SNR=4.6						
MAJO	**Matsushiro**	**54.13**	**333**	*e*P	**P**	**04 18 35.1**	**-0.2**
PETK	**Petropavlovsk-**	**64.73**	**355**	P	**P**	**04 19 48.7**	**+0.6**
	3.2nm,0.8s,baz=172,slow=11,SNR=3.1						
PEA1	**Petropavlovsk-**	**64.74**	**355**	*e*P	**P**	**04 19 48.7**	**+0.5**
KLR	**Kul'dur**	**67.28**	**337**	P	**P**	**04 20 05.4**	**+0.8**
	1.2nm,0.6s,baz=130,slow=4.9,SNR=6.5						
QSPA	**South Pole Qui**	**78.43**	**180**	*e*P	**P**	**04 21 10.6**	**-0.2**
	7.5nm,1.0s						
SONA0	**Songino Array**	**78.69**	**324**	*e*P	**P**	**04 21 13.3**	**+0.8**
SONM	**Songino Array**	**78.69**	**324**	P	**P**	**04 21 13.3**	**+0.8**
	1.2nm,0.8s,baz=132,slow=8.0,SNR=5.1						
ILAR	**Eielson Array**	**84.23**	**19**	P	**P**	**04 21 40.8**	**-0.5**
	1.2nm,0.6s,baz=235,slow=5.0,SNR=8.8						
ILB	**Eielson Array**	**84.23**	**19**	*e*P	**P**	**04 21 40.8**	**-0.5**
	7.5nm,1.5s						
SCRK	**Sand Creek**	**84.64**	**20**	*e*P	**P**	**04 21 44.5**	**+0.9**
	6.6nm,1.0s						
AFDM	**Forest Hills D**	**85.06**	**49**	*e*P	**P**	**04 21 45.9**	**-0.2**
	6.9nm,1.1s						
MDPB	**Devils Postpil**	**86.06**	**51**	*e*P	**P**	**04 21 51.7**	**+0.3**
	6.5nm,0.9s						
DAC	**Darwin (Calif)**	**86.79**	**52**	*e*P	**P**	**04 21 54.9**	**-0.1**
	5.7nm,1.3s						
NV01	**Mina Array Sit**	**86.88**	**50**	*e*P	**P**	**04 21 55.2**	**-0.1**
NVAR	**Mina Array Bea**	**86.88**	**50**	P	**P**	**04 21 55.2**	**-0.2**
	3.1nm,0.8s,baz=234,slow=7.8,SNR=13						
KVN	**Kaiserville**	**87.22**	**49**	*e*P	**P**	**04 21 57.1**	**+0.2**
	4.3nm,1.0s						
Y12C	**Blythe**	**88.53**	**55**	*e*P	**P**	**04 22 03.5**	**+0.4**
	6.2nm,1.0s						
SHPR	**Sheep Range**	**88.74**	**52**	*e*P	**P**	**04 22 05.0**	**+0.8**
	4.2nm,1.2s						
W13A	**Hualapai Mount**	**89.38**	**54**	*e*P	**P**	**04 22 07.6**	**+0.2**
	7.6nm,1.4s						
LCMT	**Little Creek M**	**90.36**	**52**	*e*P	**P**	**04 22 12.1**	**+0.3**
	4.6nm,0.9s						
CCUT	**Cedar City**	**90.40**	**52**	*e*P	**P**	**04 22 12.7**	**+0.6**
	4.1nm,1.0s						
U15A	**North Rim**	**90.96**	**53**	*e*P	**P**	**04 22 15.4**	**+0.6**
	4.9nm,0.8s						
X16A	**Lo Mia Camp, P**	**91.17**	**55**	*e*P	**P**	**04 22 16.8**	**+1.0**
	3.9nm,1.0s						
MTPU	**Mount Pierson**	**91.42**	**52**	*e*P	**P**	**04 22 18.6**	**+1.6**
	5.4nm,1.0s						
MSU	**Marysvale**	**91.54**	**51**	*e*P	**P**	**04 22 18.2**	**+0.9**
HVU	**Hansel Valley**	**91.86**	**48**	*e*P	**P**	**04 22 19.1**	**+0.4**
	3.7nm,1.0s						
MK32	**Makanchi Array**	**93.44**	**317**	*e*P	**P**	**04 22 25.9**	**+0.2**
MKAR	**Makanchi Array**	**93.44**	**317**	P	**P**	**04 22 25.9**	**+0.2**
	1.1nm,0.7s,baz=99,slow=5.6,SNR=4.8						
ZALV	**Zalesovo Beam**	**93.59**	**324**	P	**P**	**04 22 25.3**	**-0.8**
	3.3nm,1.1s,baz=129,slow=4.2,SNR=4.3						
ZAA1	**Zalesovo Array**	**93.59**	**324**	*e*P	**P**	**04 22 25.3**	**-0.8**
YKA	**Yellowknife Ar**	**95.75**	**27**	P	**P**	**04 22 34.0**	**-1.8**
	0.4nm,0.6s,baz=253,slow=4.5,SNR=5.5						
YKB5	**Yellowknife Ar**	**95.75**	**27**	*e*P	**P**	**04 22 34.0**	**-1.8**
LTX	**Lajitas**	**96.67**	**62**	*e*P	**P**	**04 22 41.0**	**0.0**
TXAR	**Lajitas Array**	**96.67**	**62**	P	**P**	**04 22 40.9**	**0.0**
	0.4nm,0.7s,baz=205,slow=3.0,SNR=3.7						
ESDC	**Sonseca Array**	**150.37**	**343**	PKPbc	**PKiKP**	**04 29 02.6**	**-0.1**
	0.9nm,0.8s,baz=11,slow=1.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**163.67**	**277**	PKPab	**PKPab**	**04 30 06.8**	**+0.7**
	0.6nm,1.0s,baz=48,slow=2.1,SNR=2.9						
TOA1	**Torodi Ar. Sit**	**163.67**	**277**	*e*PKPab	**PKPab**	**04 30 06.8**	**+0.7**

*IDC **06** 04:11:33.4±1.6, 10°.77S×165°.38E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/44, mbtmp3.9/7, ML4.2/1, Error ellipse: s-maj=47.9km s-min=25.2km az=122.0*

*ISCJB **06** 04:11:36.3±1.1, 10°.9S±0°.1×165°.3E±0°.2, h30^{km}, mb3.7/5, Error ellipse: s-maj=27.0km s-min=17.9km az=5.3*

ISC 06 04:11:38.2±1.2**, 10°.8S**±0°.1×**165°.4E**±0°.2**, h30^{km}, n10, σ0ˢ.79**/7**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.27**	**175**	Pn	**Pn**	**04 14 17.5**	**+0.1**
	1.8nm,0.3s,baz=319,slow=21,SNR=6.2						
CTA	**Charters Tower**	**20.58**	**241**	P	**P**	**04 16 15.7**	**+0.9**
	14nm,0.9s,baz=65,slow=15,SNR=4.3						
H11S2	**WAKE ISLAND Hy**	**29.12**	**3**	T	T	04 48 17.8	
	baz=195						
H11S3	**WAKE ISLAND Hy**	**29.13**	**3**	T	T	04 48 07.5	
	baz=195						
H11S1	**WAKE ISLAND Hy**	**29.14**	**3**	T	T	04 48 15.3	
	baz=195						
WRA	**Warramunga Arr**	**31.21**	**249**	P	**P**	**04 17 54.5**	**-0.7**
	1.5nm,0.8s,baz=82,slow=9.2,SNR=4.4						
ASAR	**Alice Springs**	**32.56**	**243**	P	**P**	**04 18 06.1**	**-0.9**
	1.2nm,0.8s,baz=71,slow=9.7,SNR=4.9						
SONM	**Songino Array**	**78.23**	**324**	P	**P**	**04 23 35.5**	**+0.3**
	0.3nm,0.5s,baz=142,slow=7.3,SNR=2.5						
ILAR	**Eielson Array**	**83.39**	**19**	P	**P**	**04 24 01.8**	**-0.4**
	0.5nm,0.8s,baz=227,slow=6.3,SNR=3.4						
MKAR	**Makanchi Array**	**93.07**	**317**	P	**P**	**04 24 49.6**	**+0.4**
	0.3nm,0.7s,baz=93,slow=7.2,SNR=2.4						

IDC 06 04:13:12.9±1.4**, 11°.76S**×**165°.47E, h0^{km}, mb4.1**/5**, mb1 4.2**/6**, mb1mx3.8**/47**, mbtmp4.0**/6**, ML4.0**/1**, Error ellipse: s-maj=48.9km s-min=27.1km az=130.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.30**	**175**	Pn	Pn	04 15 42.5	+0.4
	1.3nm,0.3s,baz=350,slow=19,SNR=2.9						
WRA	**Warramunga Arr**	**30.99**	**251**	P	P	04 19 32.4	+0.1
	3.3nm,0.9s,baz=83,slow=8.7,SNR=7.6						
ASAR	**Alice Springs**	**32.23**	**244**	P	P	04 19 43.1	-0.1
	1.8nm,0.9s,baz=72,slow=9.7,SNR=5.0						
ILAR	**Eielson Array**	**84.27**	**19**	P	P	04 25 46.2	0.0
	0.6nm,0.8s,baz=241,slow=4.7,SNR=6.2						
MKAR	**Makanchi Array**	**93.85**	**317**	P	P	04 26 31.9	-0.4
	1.0nm,0.9s,baz=101,slow=6.4,SNR=4.4						
YKA	**Yellowknife Ar**	**95.72**	**27**	P	P	04 26 40.4	-0.1
	0.2nm,0.6s,baz=252,slow=5.1,SNR=3.7						

*IDC **06** 04:13:49.6±1.0, 10°.76S×165°.47E, h0^{km}, mb4.2/10, mb1 4.5/12, mb1mx4.1/48, mbtmp4.3/12, ML5.1/2, Error ellipse: s-maj=34.4km s-min=18.6km az=136.0*

*ISCJB **06** 04:13:52.5±0.7, 10°.9S±0°.1×165°.4E±0°.1, h30^{km}, mb4.1/9,*

Error ellipse: s-maj=16.5km s-min=14.1km az=34.7

ISC 06 04:13:54.2±0.8**, 10°.8S**±0°.1×**165°.4E**±0°.1**, h30km, n18, σ0ˢ.66**/12**, mb4.2**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.57	283	Pn	Pn	04 15 15.3	+0.1
	118nm,0.3s,baz=138,slow=6.3,SNR=7.6						
DZM	Mont Dzumac	11.28	175	Pn	Pn	04 16 33.7	+0.3
	5.7nm,0.3s,baz=310,slow=18,SNR=23						
CTA	Charters Tower	20.67	241	P	P	04 18 31.9	0.0
	16nm,0.8s,baz=63,slow=11,SNR=6.2						
H11S2	WAKE ISLAND Hy	29.11	2	T	T	04 50 39.1	
	baz=181,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.11	2	T	T	04 50 39.1	
	baz=181,slow=76,SNR=8.7						
H11S1	WAKE ISLAND Hy	29.12	2	T	T	04 50 40.3	
	baz=181,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	30.33	3	T	T	04 52 10.3	
	baz=182,slow=76,SNR=9.8						
H11N3	WAKE ISLAND Hy	30.33	3	T	T	04 52 12.7	
	baz=182,slow=76,SNR=5.3						
H11N2	WAKE ISLAND Hy	30.35	3	T	T	04 52 11.7	
	baz=182,slow=76,SNR=9.2						
STKA	Stephens Creek	30.44	223	P	P	04 20 04.2	0.0
	3.3nm,0.7s,baz=34,slow=9.6,SNR=6.3						
WRA	Warramunga Arr	31.30	249	P	P	04 20 11.8	-0.2
	4.0nm,0.8s,baz=80,slow=9.0,SNR=9.6						
ASAR	Alice Springs	32.65	243	P	P	04 20 22.6	-1.2
	4.8nm,0.8s,baz=65,slow=10,SNR=12						
FITZ	Fitzroy Crossi	39.16	255	P	P	04 21 20.3	+0.6
	4.1nm,0.8s,baz=90,slow=19,SNR=6.6						
SONM	Songino Array	78.27	324	P	P	04 25 52.0	+0.6
	1.3nm,1.0s,baz=123,slow=5.1,SNR=4.8						
ILAR	Eielson Array	83.35	19	P	P	04 26 18.5	+0.5
	1.3nm,0.9s,baz=234,slow=4.9,SNR=8.6						
NVAR	Mina Array Bea	86.08	50	P	P	04 26 32.9	+0.3
	1.6nm,1.1s,baz=231,slow=8.2,SNR=4.6						
MKAR	Makanchi Array	93.12	317	P	P	04 27 05.2	-0.3
	0.7nm,0.7s,baz=96,slow=6.6,SNR=3.6						
YKA	Yellowknife Ar	94.87	27	P	P	04 27 11.9	-1.1
	0.1nm,0.6s,baz=254,slow=4.4,SNR=2.9						

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*IDC **06** 04:14:14.4±1.0, 11°.09S×165°.54E, h0km, mb4.5/15, mb1 4.7/15, mb1mx4.4/46, mbtmp4.5/15, Error ellipse: s-maj=33.6km s-min=17.8km az=139.0*

*NEIC **06** 04:14:18.3±0.3, 10°.95S×164°.95E, h10km, mb4.8/37, Error ellipse: s-maj=10.2km s-min=8.0km az=134.0*

*ISCJB **06** 04:14:20.1±0.3, 11°.00S±0°.06×164°.87E±0°.06, h31km, mb4.7/48, Error ellipse: s-maj=9.8km s-min=7.8km az=135.2*

ISC 06 04:14:20.4±0.5**, 11°.12S**±0°.09×**165°.2E**±0°.1**, h31km, n72, σ1ˢ.98**/71**, mb4.7**/48**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUENC	Ouen Island, N	11.35	172	*e*Pn	Pn	04 16 58.8	-1.7
CTA	Charters Tower	20.28	242	P	Pn	04 18 57.3	+1.4
	25nm,0.8s,baz=80,slow=13,SNR=8.1						
CTAO	Charters Tower	20.28	242	*e*P	Pn	04 18 57.6	+1.7
	58nm,1.1s						
OUZ	Omahuta	25.18	164	*e*P	P	04 19 46.2	+3.1
	106nm,1.5s						
MXZ	Matakaoa Point	28.85	158	*e*P	P	04 20 15.5	-0.6
	149nm,1.4s						
WRAB	Tennant Creek	30.93	250	*e*P	P	04 20 35.1	+0.3
	10nm,0.9s						
WB2	Warramunga Arr	30.93	250	*e*P	P	04 20 32.8	-2.0
WR1	Warramunga Arr	30.94	250	*e*P	P	04 20 35.7	+0.8
	11nm,0.8s						
WRA	Warramunga Arr	30.94	250	P	P	04 20 35.7	+0.8
	5.7nm,0.5s,baz=79,slow=8.8,SNR=18						
THZ	Tophouse	31.27	169	*e*P	P	04 20 38.7	+1.2
	22nm,0.8s						
KHZ	Kahutara	32.02	168	*e*P	P	04 20 45.8	+1.7
	31nm,1.0s						
LTZ	Lake Taylor	32.14	170	*e*P	P	04 20 49.5	+4.3
	18nm,0.7s						
AS01	Alice Springs	32.23	243	*e*P	P	04 20 46.2	0.0
AS31	Alice Springs	32.27	243	*e*P	P	04 20 46.9	+0.3
	4.3nm,0.7s						
ASAR	Alice Springs	32.27	243	P	P	04 20 47.2	+0.6
	14nm,0.7s,baz=68,slow=10.0,SNR=26						
OXZ	Oxford	32.63	171	*e*P	P	04 20 52.7	+3.2
	60nm,1.3s						
FITZ	Fitzroy Crossi	38.83	255	P	P	04 21 43.8	+0.8
	8.1nm,0.7s,baz=92,slow=8.2,SNR=15						
MBWA	Marble Bar	44.66	251	*e*P	P	04 22 29.2	-1.4
	17nm,1.1s						
JAGI	Jajag, Banyuwa	50.31	268	*e*P	P	04 23 12.1	-2.6
	23nm,0.7s						
MJAR	Matsushiro Arr	53.79	333	P	P	04 23 38.2	-2.0
	2.1nm,0.5s,baz=175,slow=8.1,SNR=6.4						
MAJO	Matsushiro	53.79	333	*e*P	P	04 23 38.2	-2.0
JNU	Nakatsue	54.82	325	*e*P	P	04 23 47.0	-0.8
	21nm,1.1s						
JNU	Nakatsue	54.82	325	P	P	04 23 46.9	-0.8
	11nm,0.8s,baz=289,slow=0.6,SNR=4.6						
KSRS	Korea Array	59.63	326	P	P	04 24 21.1	-0.5
	1.5nm,0.8s,baz=136,slow=6.7,SNR=4.4						
KS15	Wonju Array Si	59.64	326	*e*P	P	04 24 21.1	-0.6
	14nm,1.2s						
KSAR	Wonju Array Be	59.64	326	P	P	04 24 21.1	-0.6
USRK	Ussuriysk Ar.	62.77	334	P	P	04 24 42.7	-0.1
	2.5nm,0.8s,baz=141,slow=5.5,SNR=5.5						
KLR	Kul'dur	66.91	337	P	P	04 25 10.6	+1.0
	4.4nm,0.9s,baz=150,slow=2.3,SNR=8.0						
CM31	Chiang Mai Arr	71.64	294	*e*P	P	04 25 43.7	+4.1
	6.4nm,0.9s						
CMAR	Chiang Mai Arr	71.64	294	P	P	04 25 43.7	+4.1
	1.7nm,0.6s,baz=116,slow=4.4,SNR=5.7						
SONA0	Songino Array	78.40	324	*e*P	P	04 26 18.9	+0.7
SONM	Songino Array	78.40	324	P	P	04 26 18.9	+0.7
	2.2nm,0.7s,baz=141,slow=5.1,SNR=6.1						
WRH	Wood River Hil	83.17	19	*e*P	P	04 26 46.5	+3.3
	7.8nm,1.0s						
HDA	Harding Lake	83.49	19	*e*P	P	04 26 46.0	+1.2
	12nm,0.8s						
RIDG	Independ'e Rid	83.73	20	*e*P	P	04 26 45.1	-1.0
	18nm,1.2s						
IL1	Eielson Array	83.76	19	*e*P	P	04 26 48.3	+2.2
ILAR	Eielson Array	83.76	19	P	P	04 26 45.0	-1.1
	2.5nm,0.6s,baz=249,slow=5.2,SNR=11						
ILB	Eielson Array	83.76	19	*e*P	P	04 26 45.4	-0.8
	5.0nm,0.9s						
ORV	Oroville	84.47	48	*e*P	P	04 26 52.0	+1.6
	3.8nm,1.0s						
CMB	Columbia Colle	84.81	50	*e*P	P	04 26 53.3	+1.1
	4.8nm,1.0s						
WAKR	Walker	85.66	50	*e*P	P	04 26 58.4	+1.7
	5.4nm,0.9s						
MDPB	Devils Postpil	85.67	51	*e*P	P	04 26 58.5	+1.8
	7.7nm,0.9s						
DAWY	Dawson	85.82	21	*e*P	P	04 27 01.3	+4.7
	6.3nm,1.0s						
PAHR	Pah Rah Range	86.07	48	*e*P	P	04 27 00.4	+1.9
	8.2nm,1.2s						
RYN	Ryan	86.38	50	*e*P	P	04 27 02.4	+2.2
	3.9nm,1.0s						
NV01	Mina Array Sit	86.49	50	*e*P	P	04 27 01.7	+0.9
NVAR	Mina Array Bea	86.49	50	P	P	04 26 57.5	-3.2
	4.8nm,0.9s,baz=229,slow=8.2,SNR=3.6						
NV11	Mina Array Sit	86.60	50	*e*P	P	04 27 02.5	+1.3
	0.4nm,0.9s						
KVN	Kaiserville	86.82	49	*e*P	P	04 27 03.5	+1.2
	4.3nm,1.0s						
J08A	Circle Bar Ran	87.82	45	*e*P	P	04 27 09.1	+2.2
	6.8nm,1.1s						
PSUT	Pine Spring	89.88	51	*e*P	P	04 27 18.8	+1.9
	2.8nm,0.8s						
LCMT	Little Creek M	89.98	52	*e*P	P	04 27 19.5	+2.2
	3.7nm,1.0s						
CCUT	Cedar City	90.02	52	*e*P	P	04 27 20.1	+2.5
	4.8nm,1.0s						
PKCU	Pink Cliffs	90.81	52	*e*P	P	04 27 23.9	+2.6
	13nm,1.1s						
MTPU	Mount Pierson	91.04	52	*e*P	P	04 27 25.3	+2.8
	4.7nm,1.0s						
BGU	Big Grassy Mou	91.07	49	*e*P	P	04 27 24.4	+2.1
	2.6nm,0.8s						
MK01	Makanchi Array	93.19	317	*e*P	P	04 27 31.6	-0.3
MK31	Makanchi Array	93.20	317	*e*P	P	04 27 31.7	-0.2
	3.3nm,1.0s						
MK32	Makanchi Array	93.20	317	*e*P	P	04 27 31.6	-0.3
MKAR	Makanchi Array	93.20	317	P	P	04 27 31.6	-0.3
	2.2nm,0.7s,baz=97,slow=6.1,SNR=9.0						
MKAR				PKKP	PKKPdf	04 44 38.8	-1.7
	0.5nm,0.8s,baz=280,slow=2.7,SNR=3.5						
PD31	Pinedale Array	94.00	47	*e*P	P	04 27 34.0	-2.0
	1.6nm,1.2s						
PDAR	Pinedale Array	94.00	47	P	P	04 27 34.0	-2.0
	0.4nm,0.7s,baz=251,slow=5.6,SNR=3.8						
YKA	Yellowknife Ar	95.29	27	P	P	04 27 37.1	-3.9
	0.2nm,0.6s,baz=255,slow=4.7,SNR=3.5						
YKB5	Yellowknife Ar	95.29	27	*e*P	P	04 27 37.1	-3.9
ARA0	ARCESS Array S	116.27	345	*e*PKPdf	PKiKP	04 32 59.1	-1.2
ARCES	ARCESS Array B	116.27	345	PKP	PKiKP	04 32 59.1	-1.2
	1.8nm,0.7s,baz=333,slow=1.4,SNR=8.4						
NB200	NORSAR Array S	126.63	345	*e*PKPdf	PKPdf	04 33 19.8	-0.6
NOA	NORSAR Array B	126.63	345	PKP	PKPdf	04 33 19.8	-0.6
	0.7nm,0.7s,baz=342,slow=1.9,SNR=3.4						
KEST	Kesra	147.14	322	PKPbc	PKPbc	04 34 01.5	+0.5
	6.5nm,0.7s,baz=12,slow=6.5,SNR=5.3						
ESDC	Sonseca Array	149.97	343	PKPbc	PKPbc	04 34 08.0	-0.2
	1.6nm,0.9s,baz=14,slow=2.1,SNR=5.1						
TORD	Torodi Ar. Bea	163.74	279	PKP	PKPdf	04 34 20.6	-0.8
	1.3nm,1.0s,baz=54,slow=1.0,SNR=4.2						
TOA1	Torodi Ar. Sit	163.74	279	*e*PKPdf	PKPdf	04 34 20.6	-0.8

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*IDC **06** 04:16:26.0±0.7, 10°.84S×165°.33E, h0km, mb4.7/22, mb1 4.8/23, mb1mx4.6/51, mbtmp4.7/23, ML4.8/1, Error ellipse: s-maj=22.0km s-min=14.1km az=109.0*

*NEIC **06** 04:16:27.4±0.1, 10°.95S×165°.09E, h10km, mb4.9/69, Error ellipse: s-maj=4.8km s-min=4.1km az=95.0*

*ISCJB **06** 04:16:29.3±0.2, 10°.94S±0°.03×165°.17E±0°.04, h31km, mb4.8/95, Error ellipse: s-maj=5.3km s-min=4.2km az=22.4*

ISC 06 04:16:31.1±0.4**, 10°.92S**±0°.05×**165°.18E**±0°.06**, h31km, n165, σ1ˢ.65**/164**, mb4.9**/95**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.36	286	*e*Pn	Pn	04 17 47.1	-1.9
HNR				*e*Sn	Sn	04 18 41.5	-8.2
HNR	Honiara	5.36	286	Pn	Pn	04 17 52.0	+3.0
	179nm,0.3s,baz=125,slow=10,SNR=8.4						
HNR				Sn	Sn	04 18 53.8	+4.1
	65nm,0.3s,baz=221,slow=23,SNR=4.7						
MARNC	Mare, Loyalty	10.85	166	*e*Pn	Pn	04 19 01.4	-2.9
DZM	Mont Dzumac	11.15	174	*e*Pn	Pn	04 19 06.5	-2.0
DZM				Sn	Sn	04 21 12.4	+0.1
DZM	Mont Dzumac	11.15	174	Pn	Pn	04 19 09.5	+1.0
	7.1nm,0.3s,baz=312,slow=16,SNR=11						
DZM				Sn	Sn	04 21 12.4	+0.1
	1.0nm,0.3s,baz=150,slow=23,SNR=2.7						
ONTNC	Ouen Toro	11.39	174	*e*Pn	Pn	04 19 09.2	-2.5
OUENC	Ouen Island, N	11.54	172	*e*Pn	Pn	04 19 12.3	-1.5
PINNC	Pines Island,	11.82	170	*e*Pn	Pn	04 19 17.0	-0.7
MSVF	Nonsavu	14.19	120	*e*Pn	Pn	04 19 51.8	+1.7
EIDS	Eidsvold	19.62	221	P	Pn	04 21 00.5	+1.9
	baz=20,SNR=3.4						
CTA	Charters Tower	20.37	241	P	Pn	04 21 07.6	+0.1
	65nm,0.8s,baz=67,slow=13,SNR=19						
CTAO	Charters Tower	20.37	241	*e*P	P	04 21 03.3	-2.1
	147nm,1.0s						
LHI	Lord Howe Isla	21.26	195	P	P	04 21 17.0	+2.1
	baz=22,SNR=3.9						
MTSU	Mount Surprise	21.41	248	P	P	04 21 18.6	+2.0
	baz=22,SNR=15						
COEN	Coen	21.70	260	P	P	04 21 21.3	+1.6
	baz=22,SNR=5.7						
RMQ	Roma	21.90	223	P	P	04 21 24.5	+2.7
	baz=22,SNR=20						
ARMA	Armidale	23.13	211	P	P	04 21 36.8	+2.0
	baz=24,SNR=8.5						
QLP	Quilpie	25.15	229	P	P	04 21 55.3	+1.6
	baz=26,SNR=5.4						
OUZ	Omahuta	25.37	164	*e*P	P	04 21 55.5	0.0
	54nm,1.2s						
MGCD	Mangrove Creek	25.67	208	P	P	04 22 01.3	+2.9
	baz=26,SNR=4.8						
RIV	Riverview	26.17	207	P	P	04 22 05.3	+2.5
	baz=27,SNR=5.9						
QIS	Mount Isa	26.38	246	P	P	04 22 06.5	+1.6
	baz=27,SNR=6.1						
CMSA	Cobar Meteorol	27.31	218	P	P	04 22 14.4	+1.3
	baz=28,SNR=15						
URZ	Urewera	29.24	161	*e*P	P	04 22 30.6	+0.3
	23nm,1.0s						
URZ	Urewera	29.24	161	P	P	04 22 30.2	0.0
	8.4nm,0.8s,baz=344,slow=9.2,SNR=3.6						
H11S2	WAKE ISLAND Hy	29.27	3	T	T	04 53 05.4	
	baz=184,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.27	3	T	T	04 53 01.2	
	baz=184,slow=76,SNR=7.3						
H11S1	WAKE ISLAND Hy	29.28	3	T	T	04 53 05.9	
	baz=184,slow=76,SNR=18						
BKZ	Black Stump Fm	29.88	162	*e*P	P	04 22 35.7	-0.3
	66nm,1.5s						
STKA	Stephens Creek	30.15	223	P	P	04 22 40.1	+1.7
	baz=31,SNR=3.6						
STKA	Stephens Creek	30.15	223	*e*P	P	04 22 36.5	-1.9
	6.6nm,1.3s						
STKA	Stephens Creek	30.15	223	P	P	04 22 40.3	+1.9
	9.0nm,0.8s,baz=34,slow=10.0,SNR=8.2						
H11N1	WAKE ISLAND Hy	30.49	3	T	T	04 54 33.6	
	baz=182,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	30.50	3	T	T	04 54 33.4	
	baz=182,slow=76,SNR=9.9						
H11N2	WAKE ISLAND Hy	30.51	3	T	T	04 54 36.0	
	baz=182,slow=76,SNR=6.4						
WC3	Warramunga Arr	30.98	249	*e*P	P	04 22 44.3	-1.6
	26nm,1.0s						
WRAB	Tennant Creek	30.99	249	*e*P	P	04 22 43.8	-2.2
	20nm,1.0s						
WB2	Warramunga Arr	30.99	249	*e*P	P	04 22 43.9	-2.1
WRA	Warramunga Arr	31.00	249	P	P	04 22 46.1	-0.1
	18nm,0.9s,baz=80,slow=9.1,SNR=16						
BFZ	Birch Farm	31.21	164	*e*P	P	04 22 47.2	-0.5
	78nm,1.3s						
THZ	Tophouse	31.46	169	*e*P	P	04 22 49.5	-0.4
	23nm,0.9s						
TOO	Toolangi	31.89	210	P	P	04 22 55.6	+1.9
	baz=32,SNR=7.1						
KDU	Kakadu	32.05	264	P	P	04 22 54.6	-0.8
	baz=32,SNR=5.0						
AS01	Alice Springs	32.31	243	*e*P	P	04 22 55.6	-2.0
LTZ	Lake Taylor	32.34	170	*e*P	P	04 22 56.2	-1.3
	15nm,0.8s						
AS31	Alice Springs	32.35	243	*e*P	P	04 22 56.0	-2.0
	5.5nm,0.9s						
ASAR	Alice Springs	32.35	243	P	P	04 22 58.0	0.0
	15nm,0.9s,baz=76,slow=9.4,SNR=18						
HTT	Hallett	32.88	223	P	P	04 23 04.2	+1.6
	baz=33,SNR=16						
ARPS	Mount Arapiles	33.25	215	P	P	04 23 07.8	+2.2
	baz=34,SNR=6.5						
MQZ	McQueen's Vall	33.30	170	*e*P	P	04 23 04.7	-1.2
	24nm,1.0s						
BBOO	Buckleboo	34.51	226	P	P	04 23 17.6	+1.0
	baz=35,SNR=7.6						
WRKA	Warakurna	37.64	243	P	P	04 23 44.1	+0.5
	baz=38,SNR=9.6						
FITZ	Fitzroy Crossi	38.87	255	P	P	04 23 54.3	+0.2
	baz=39,SNR=8.5						
FITZ	Fitzroy Crossi	38.87	255	P	P	04 23 54.2	+0.2
	9.6nm,0.7s,baz=102,slow=5.6,SNR=11						
FORT	Forrest	39.66	234	P	P	04 24 01.8	+1.4
	baz=40,SNR=11						
MEEK	Meekatharra	46.50	244	P	P	04 24 56.9	+1.1
	baz=47,SNR=16						
KLBR	Kellerberrin	48.30	237	P	P	04 25 10.6	+0.8
	baz=49,SNR=8.5						
NWAO	Narrogin (SRO)	49.07	236	P	P	04 25 16.9	+1.2
	baz=50,SNR=9.8						
NWAO	Narrogin (SRO)	49.07	236	*e*P	P	04 25 12.6	-3.1
	117nm,1.1s						
NWAO	Narrogin (SRO)	49.07	236	P	P	04 25 16.5	+0.9
	54nm,1.0s,baz=306,slow=8.4,SNR=13						
MORW	Morawa	49.19	241	P	P	04 25 17.4	+0.7
	baz=50,SNR=4.9						
MUN	Mundaring	49.67	237	P	P	04 25 21.6	+1.3
	baz=50,SNR=4.9						
KKM	Kota Kinabalu	51.57	287	*e*P	P	04 25 33.1	-1.8
	55nm,1.2s						
MJAR	Matsushiro Arr	53.61	333	P	P	04 25 48.9	-0.6
	2.6nm,0.8s,baz=166,slow=8.5,SNR=4.8						
SMRI	Semarang	54.15	269	*e*P	P	04 25 52.0	-1.9
	59nm,1.1s						
SBUM	Sibu	54.33	281	*e*P	P	04 25 53.5	-1.7
	12nm,1.4s						
JNU	Nakatsue	54.66	325	*e*P	P	04 25 56.6	-0.7
	17nm,0.9s						
JNU	Nakatsue	54.66	325	P	P	04 25 57.1	-0.2
	17nm,0.9s,baz=237,slow=4.2,SNR=4.2						
KSM	Kuching	55.93	279	*e*P	P	04 26 04.7	-2.1
	14nm,1.0s						
ASAJ	Asahikawa	58.50	341	P	P	04 26 25.2	+0.8
	10nm,0.8s,baz=221,slow=8.9,SNR=5.2						
KSRS	Korea Array	59.46	326	P	P	04 26 31.3	+0.1
	2.2nm,0.6s,baz=142,slow=7.3,SNR=6.1						
KSAR	Wonju Array Be	59.48	326	P	P	04 26 31.3	0.0
KS01	Wonju Array Si	59.50	326	*e*P	P	04 26 31.2	-0.2
NJ2	Nanjing	61.54	316	*e*P	P	04 26 47.3	+1.8
NJ2				pmax	pmax		
	comp=Z,19nm,0.9s						
QIZ	Qiongzhong	62.13	298	*e*P	P	04 26 48.6	-1.1
	comp=Z,24nm,1.4s						
USRK	Ussuriysk Ar.	62.59	334	P	P	04 26 52.8	+0.6
	comp=Z,3.0nm,0.5s,baz=125,slow=6.0,SNR=8.4						
MDJ	Mudanjiang	63.98	332	P	P	04 27 05.2	+3.7
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,7µm,15.9s						
CN2	Changchun	65.35	329	*e*P	P	04 27 10.6	+0.2
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CASY	Casey	66.29	201	*e*P	P	04 27 15.4	-0.7
	comp=Z,35nm,1.3s						
KLR	Kul'dur	66.73	337	P	P	04 27 19.1	0.0
	comp=Z,4.5nm,0.9s,baz=129,slow=6.7,SNR=7.9						
PSI	Prapat	67.30	278	P	P	04 27 23.1	-0.7
	comp=Z,3.6nm,0.8s,baz=180,slow=2.7,SNR=4.6						
ENH	Enshi	67.39	309	*e*P	P	04 27 22.9	-0.9
	comp=Z,16nm,1.0s						
GYA	Guiyang	67.89	304	P	P	04 27 27.8	+0.6
GYA				PP	PP	04 30 02.0	+4.7
GYA				S	S	04 36 27.2	+3.1
GYA				SKS	ScS	04 37 24.5	+0.2
GYA	Guiyang	67.89	304	SS	SS	04 40 50.0	+3.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.8s						
GYA				LR	LR		
	comp=N,550nm,18.0s						
GYA				LR	LR		
	comp=E,480nm,18.2s						
GYA				LR	LR		
	comp=Z,510nm,18.0s						
XAN	Xi'an	69.63	313	P	P	04 27 37.4	-0.4
XAN				pP	pP	04 27 47.0	+0.6
XAN				sP	pwP	04 27 51.8	+0.9
XAN				PcP	PcP	04 28 00.7	+0.1
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				LR	LR		
	comp=N,4µm,18.4s						
XAN				LR	LR		
	comp=E,3µm,17.4s						
XAN				LR	LR		
	comp=Z,5µm,18.4s						
XAN	Xi'an	69.63	313	*e*P	P	04 27 37.2	-0.6
	comp=Z,9.7nm,1.0s						
KMI	Kunming	70.58	302	P	P	04 27 45.2	+1.2
KMI				pP	pP	04 27 51.0	-1.7
HHC	Hu-ho-hao-te	71.38	320	*e*P	P	04 27 52.1	+3.7
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
CM01	Chiang Mai Arr	71.53	294	*e*P	P	04 27 49.1	-0.5
CMAR	Chiang Mai Arr	71.55	294	P	P	04 27 51.0	+1.2
	comp=Z,0.8nm,0.3s,baz=109,slow=4.4,SNR=4.3						
CHTO	Chiang Mai	71.67	294	*e*P	P	04 27 49.0	-1.4
	comp=Z,3.3nm,0.5s						
HIA	Hailar	71.99	331	*e*P	P	04 27 51.5	-0.3
	comp=Z,20nm,1.3s						
CD2	Chengdu	72.09	308	P	P	04 27 53.3	+0.5
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
LZH	Lanzhou	74.27	312	⇑P	P	04 28 07.0	+1.3
LZH				pP	pP	04 28 14.0	-0.3
LZH				sP	sP	04 28 15.9	-1.6
LZH				PP	PP	04 30 51.3	-0.7
LZH				pmax	pmax		
	comp=Z,21nm,1.6s						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
GAMB	Gambell	76.55	10	*e*P	P	04 28 19.4	+1.5
	comp=Z,26nm,1.1s						
ULN	Ulaanbaatar	77.88	324	*e*P	P	04 28 25.3	-0.7
	comp=Z,6.0nm,0.8s						
SVW2	Sparrevohn	78.17	18	*e*P	P	04 28 28.7	+1.5
	comp=Z,35nm,1.3s						
SONM	Songino Array	78.24	324	P	P	04 28 28.3	+0.3
	comp=Z,1.5nm,0.9s,baz=130,slow=6.3,SNR=4.9						
SONA1	Songino Array	78.24	324	*e*P	P	04 28 27.4	-0.6
GTA	Gaotai	78.57	314	⇓P	P	04 28 30.5	+0.5
GTA				pP	pP	04 28 35.0	-3.7
GTA				sP	PcP	04 28 37.9	-1.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				LR	LR		
	comp=N,2µm,18.1s						
GTA				LR	LR		
	comp=E,2µm,19.4s						
GTA				LR	LR		
	comp=Z,3µm,20.0s						
RSO	Redoubt South	78.60	20	*e*P	P	04 28 31.1	+1.3
BILL	Bilibino	78.76	0	*e*P	P	04 28 31.2	+1.0
	comp=Z,14nm,1.0s						
QSPA	South Pole Qui	79.08	180	*e*P	P	04 28 31.9	-0.4
	comp=Z,15nm,1.0s						
SHL	Shillong	79.97	299	*e*P	P	04 28 36.4	-1.6
	comp=Z,17nm,1.3s						
SUA	Susitna One	80.00	20	*e*P	P	04 28 38.7	+1.4
	comp=Z,12nm,1.0s						
CAST	Castle Rocks	81.00	18	*e*P	P	04 28 43.2	+0.7
	comp=Z,13nm,1.1s						
TLY	Talaya	81.71	326	*e*P	P	04 28 46.0	-0.5
	comp=Z,12nm,1.1s						
LSA	Lhasa	81.82	302	*e*P	P	04 28 45.7	-2.4
	comp=Z,5.5nm,1.0s						
RND	Reindeer	82.00	19	*e*P	P	04 28 48.2	+0.4
	comp=Z,14nm,1.2s						
RDOG	Red Dog Mine	82.02	12	*e*P	P	04 28 48.1	+0.4
	comp=Z,33nm,1.5s						
MCK	McKinley	82.21	19	*e*P	P	04 28 48.5	-0.4
	comp=Z,27nm,1.4s						
DHY	Denali Highway	82.26	20	*e*P	P	04 28 50.0	+0.6
	comp=Z,7.1nm,1.1s						
IM3	Indian Mountai	82.46	16	*e*P	P	04 28 50.4	+0.3
MDM	Murphy Dome	83.29	18	*e*P	P	04 28 54.0	-0.5
	comp=Z,16nm,1.4s						
HDA	Harding Lake	83.31	19	*e*P	P	04 28 53.8	-0.7
	comp=Z,14nm,1.2s						
RIDG	Independ'e Rid	83.55	20	*e*P	P	04 28 55.0	-0.9
	comp=Z,13nm,1.4s						
IL1	Eielson Array	83.58	19	*e*P	P	04 28 55.3	-0.7
ILAR	Eielson Array	83.58	19	P	P	04 28 54.7	-1.2
	comp=Z,1.9nm,0.6s,baz=245,slow=4.6,SNR=11						
ILB	Eielson Array	83.58	19	*e*P	P	04 28 55.5	-0.4
SCRK	Sand Creek	83.99	20	*e*P	P	04 28 57.1	-1.1
	comp=Z,5.1nm,1.0s						
YBH	Yreka Blue Hor	84.21	46	*e*P	P	04 28 58.9	-0.9
	comp=Z,12nm,1.3s						
AFDM	Forest Hills D	84.54	49	*e*P	P	04 29 00.8	-0.6
	comp=Z,9.5nm,1.1s						
MAW	Mawson	84.62	202	P	P	04 29 01.7	+0.4
	comp=Z,30nm,0.6s,baz=73,slow=9.9,SNR=12						
CMB	Columbia Colle	84.69	50	*e*P	P	04 29 02.0	-0.3
	comp=Z,4.6nm,1.0s						
WAKR	Walker	85.54	50	*e*P	P	04 29 05.5	-1.2
	comp=Z,15nm,1.3s						
OMMB	Old Mammoth Mi	85.61	51	*e*P	P	04 29 06.5	-0.7
	comp=Z,7.2nm,1.2s						
DAWY	Dawson	85.64	21	*e*P	P	04 29 05.3	-1.2
	comp=Z,9.9nm,1.2s						
PAHR	Pah Rah Range	85.95	48	*e*P	P	04 29 07.8	-0.8
	comp=Z,8.8nm,1.2s						
DAC	Darwin (Calif)	86.30	52	*e*P	P	04 29 09.8	-0.7
	comp=Z,6.4nm,1.2s						

NVAR	Mina Array Bea	86.37	50	P	P	04 29 09.7	-1.2
	comp=Z,0.9nm,0.6s,baz=240,slow=4.8,SNR=3.7						
NV01	Mina Array Sit	86.37	50	eP	P	04 29 10.7	-0.2
NV11	Mina Array Sit	86.48	50	eP	P	04 29 10.4	-0.9
	comp=Z,0.8nm,1.1s						
KVN	Kaiserville	86.70	49	eP	P	04 29 11.1	-1.4
	comp=Z,7.7nm,1.3s						
WVOR	Wild Horse Val	87.30	46	eP	P	04 29 14.5	-0.7
	comp=Z,9.3nm,1.1s						
G08A	Pilot Rock	87.94	43	eP	P	04 29 17.8	-0.4
	comp=Z,8.0nm,1.1s						
Y12C	Blythe	88.06	55	eP	P	04 29 18.2	-0.6
	comp=Z,12nm,1.3s						
R11A	Troy Canyon, C	88.40	51	eP	P	04 29 19.8	-0.8
WMQ	Urumqi	88.62	315	eP	P	04 29 22.9	+1.6
WMQ				pP	pP	04 29 27.8	-2.3
WMQ				pmax	pmax		
	comp=Z,17nm,1.1s						
W13A	Hualapai Mount	88.91	54	eP	P	04 29 22.4	-0.7
	comp=Z,9.3nm,1.4s						
MFID	Camas Ranch	89.56	46	eP	P	04 29 26.2	+0.3
	comp=Z,4.4nm,1.1s						
LCMT	Little Creek M	89.87	52	eP	P	04 29 28.1	+0.6
	comp=Z,6.1nm,1.0s						
CCUT	Cedar City	89.91	52	eP	P	04 29 28.3	+0.5
	comp=Z,4.1nm,0.9s						
KNB	Kanab	90.20	52	eP	P	04 29 35.4	+6.3
	comp=Z,20nm,1.4s						
U15A	North Rim	90.48	53	eP	P	04 29 30.9	+0.4
	comp=Z,5.5nm,0.8s						
HLID	Hailey	90.59	46	eP	P	04 29 31.1	+0.4
	comp=Z,4.3nm,1.0s						
PKCU	Pink Cliffs	90.69	52	eP	P	04 29 38.2	+6.7
	comp=Z,21nm,1.4s						
X16A	Lo Mia Camp, P	90.71	55	eP	P	04 29 31.0	-0.5
	comp=Z,4.1nm,0.9s						
TUC	Tucson	90.79	57	eP	P	04 29 32.4	+0.6
	comp=Z,2.5nm,0.9s						
MTPU	Mount Pierson	90.93	52	eP	P	04 29 32.4	-0.2
	comp=Z,4.9nm,1.0s						
MSU	Marysvale	91.04	51	eP	P	04 29 33.4	+0.4
HVU	Hansel Valley	91.34	48	eP	P	04 29 33.6	-0.6
	comp=Z,14nm,1.5s						
NLU	North Lily Min	91.44	50	eP	P	04 29 34.8	0.0
	comp=Z,3.4nm,0.9s						
WALA	Waterton Lakes	92.28	41	eP	P	04 29 38.9	+0.5
	comp=Z,16nm,1.4s						
BOZ	Bozeman (W)	93.00	44	eP	P	04 29 41.5	-0.4
	comp=Z,6.6nm,1.1s						
MK01	Makanchi Array	93.04	317	eP	P	04 29 40.0	-1.8
MK31	Makanchi Array	93.05	317	eP	P	04 29 40.3	-1.6
MKAR	Makanchi Array	93.05	317	eP	P	04 29 40.6	-1.3
	comp=Z,18nm,0.9s						
MKAR	Makanchi Array	93.05	317	P	P	04 29 41.1	-0.7
	comp=Z,1.9nm,0.8s,baz=96,slow=6.4,SNR=5.5						
ZALV	Zalesovo Beam	93.13	324	eP	P	04 29 40.2	-1.8
ZALV	Zalesovo Beam	93.13	324	P	P	04 29 40.9	-1.1
	comp=Z,1.2nm,0.7s,baz=108,slow=4.9,SNR=5.1						
PDAR	Pinedale Array	93.88	47	eP	P	04 29 50.7	+4.7
YKA	Yellowknife Ar	95.12	27	P	P	04 29 48.2	-2.7
	comp=Z,0.4nm,0.5s,baz=256,slow=4.4,SNR=5.3						
KSH	Kashi	96.25	309	P	P	04 30 02.7	+5.9
KSH				sP	pwP	04 30 10.8	+0.5
KSH				PP	PP	04 33 55.0	+4.6
KSH				pmax	pmax		
	comp=Z,1μm,7.4s						
BOSA	Boshof	124.82	224	PKP	PKiKP	04 35 29.1	0.0
	comp=Z,2.6nm,0.6s,baz=133,slow=5.3,SNR=7.8						
VYHS	Vyhne	133.19	330	ePDIF	Pdif	04 32 42.7	+1.8

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*TIF **06** 04:17:42.6, 42°.43N×41°.35E, h24^{km}±1^{km}*
*MOS **06** 04:17:43.9±0.0, 42°.52N×41°.16E, h20^{km}, MPVA3.1*
*NORS **06** 04:17:44.9±0.0, 42°.46N×41°.21E, h25^{km}, MPVA3.0*
*DDA **06** 04:17:44.7, 41°.87N×40°.58E, h7^{km}±5^{km}, ML2.9*
ISC 06 04:17:42.3±1.2**, 42°.39N**±0°.03×**41°.07E**±0°.04**, h12**^{km}±12^{km}**,**
n18, σ0^{s}.53/35**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.91	149	P	Pb	04 18 00.7	+0.6
BATM				S	Sn	04 18 14.1	+0.1
DOMR	Dombai	0.99	24	i Pg	Pg	04 18 01.3	-0.1
DOMR				i Sg	Sg	04 18 13.8	-0.6
DBOC	Borcka	1.14	157	i P	Pb	04 18 04.0	+0.2
DBOC				i S	Sb	04 18 18.8	+0.2
DBOC				IAML_P			
	comp=Z,1μm,0.1s						
ARXR	Arkhyz	1.18	7	ePg	Pg	04 18 06.1	+1.1
ARXR				eSg	Sn	04 18 20.7	-0.3
ARTV	Artvin	1.36	152	i P	Pn	04 18 07.3	-0.1
ARTV				IAML_P			
	comp=Z,1μm,0.1s						
RPOR	Krasnaya Polya	1.44	336	i Pg	Pg	04 18 09.4	-0.4
RPOR				i Sg	Sg	04 18 29.2	+0.6
DBAD	Bademkaya	1.45	161	i P	Pn	04 18 08.5	+0.1
DBAD				IAML_P			
	comp=Z,624nm,0.1s						
DAGI	Agillar	1.46	154	i P	Pn	04 18 08.6	+0.1
DAGI				i S	Sn	04 18 26.3	-1.2
DAGI				IAML_P			
	comp=Z,220nm,0.1s						
NEY	Neytrino	1.49	54	ePg	Pb	04 18 10.0	0.0
NEY				eSg	Sn	04 18 29.1	+0.5
SOC	Sochi	1.55	321	ePg	Pg	04 18 12.6	+0.5
SOC				eSg	Sg	04 18 32.0	-0.2
DDEM	Demirkent	1.58	161	i P	Pn	04 18 10.8	+0.6
DDEM				IAML_P			
	comp=Z,1μm,0.1s						
SHA1	Shidzhatmaz	1.78	40	i Pg	Pb	04 18 15.4	+0.3
SHA1				ePg	Pg	04 18 16.6	+0.1
SHA1				i Sg	Sb	04 18 38.0	+0.6
SHA1				eSg	Sg	04 18 38.7	-1.0
DIGR	Digorskoe uzhe	1.92	74	ePg	Pb	04 18 17.2	-0.2
DIGR				eSg	Sb	04 18 41.7	+0.3
KIV	Kislovodsk	1.96	37	ePg	Pg	04 18 20.6	+0.7
KIV				eSg	Sb	04 18 42.7	+0.2
KIV0	Kislovodsk Arr	1.97	37	ePg	Pg	04 18 20.4	+0.3
KIV0				eSg	Sb	04 18 42.5	-0.1
LZRR	Lazarevskoye	1.98	322	ePg	Pg	04 18 19.7	-0.5
LZRR				i Sg	Sg	04 18 45.1	-0.8
ZEI	Tsey	2.13	78	ePg	Pb	04 18 20.6	-0.4
ZEI				eSg	Sb	04 18 47.6	+0.1
LACR	Lac	2.42	78	ePn	Pb	04 18 25.6	-0.3
LACR				eSn	Sb	04 18 55.3	-0.5

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*IDC **06** 04:18:47.5±1.5, 10°.98S×165°.84E, h0^{km}, mb4.5/14, mb1 4.6/15, mb1mx4.3/52, mbtmp4.5/15, ML5.1/1, MS5.4/2, Ms1 5.4/2, ms1mx4.5/42, Error ellipse: s-maj=44.0km s-min=26.2km az=145.0*
*NEIC **06** 04:18:50.6±0.3, 10°.69S×165°.61E, h10^{km}, mb4.9/20, Error ellipse: s-maj=9.1km s-min=7.7km az=92.0*
*ISCJB **06** 04:18:52.0±0.3, 10°.74S±0°.06×165°.54E±0°.07, h30^{km}, mb4.7/31, MS5.4/2, Error ellipse: s-maj=10.4km s-min=8.7km az=175.2*
ISC 06 04:18:53.4±0.6**, 10°.8S**±0°.1×**165°.6E**±0°.1**, h30**^{km}**, n64,**
σ1^{s}.03/62**, mb4.8**/31**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.73	283	Pn	Pn	04 20 17.5	+1.0
	48nm,0.3s,baz=163,slow=14,SNR=2.4						
CTAO	Charters Tower	20.80	241	eP	P	04 23 30.7	-1.7
	25nm,1.0s						
CTAO				ePcP	PcP	04 27 40.4	-0.5
OUZ	Omahuta	25.39	165	eP	P	04 24 19.7	+1.6
	37nm,1.3s						
MXZ	Matakaoa Point	29.01	159	eP	P	04 24 52.5	+1.9
	95nm,1.0s						
URZ	Urewera	29.24	161	eP	P	04 24 54.7	+2.1
	35nm,1.2s						
BKZ	Black Stump Fm	29.89	163	eP	P	04 25 01.8	+3.3
	23nm,0.8s						
H11N1	WAKE ISLAND Hy	30.33	2	T	T	04 56 32.4	
	baz=182,slow=76,SNR=5.9						
H11N3	WAKE ISLAND Hy	30.34	2	T	T	04 56 28.0	
	baz=182,slow=76,SNR=6.6						
H11N2	WAKE ISLAND Hy	30.35	2	T	T	04 56 28.1	
	baz=182,slow=76,SNR=5.4						
WRAB	Tennant Creek	31.43	249	eP	P	04 25 08.8	-3.6
	17nm,1.4s						
WB2	Warramunga Arr	31.43	249	eP	P	04 25 12.2	-0.1
WR1	Warramunga Arr	31.44	249	eP	P	04 25 12.4	0.0
	20nm,1.4s						
WRA	Warramunga Arr	31.44	249	P	P	04 25 12.4	-0.1
	2.2nm,0.8s,baz=81,slow=9.3,SNR=3.6						
THZ	Tophouse	31.52	170	eP	P	04 25 13.2	+0.4
	64nm,1.4s						
AS01	Alice Springs	32.74	243	eP	P	04 25 24.4	+0.6
BATI	Baumata	41.22	267	LR	LR	04 43 10.3	
	comp=Z,6μm,21.5s,baz=159,slow=35						
KSRS	Korea Array	59.58	326	P	P	04 28 55.1	+0.7
	1.9nm,0.8s,baz=139,slow=6.5,SNR=4.6						
KS15	Wonju Array Si	59.59	326	eP	P	04 28 55.1	+0.6
	19nm,1.3s						
KSAR	Wonju Array Be	59.59	326	P	P	04 28 55.1	+0.6
KS01	Wonju Array Si	59.61	326	eP	P	04 28 54.8	+0.2
USRK	Ussuriysk Ar.	62.65	333	P	P	04 29 16.3	+1.2
	7.6nm,0.9s,baz=133,slow=5.5,SNR=7.3						
PETK	Petropavlovsk-	63.99	355	P	P	04 29 25.0	+1.2
	5.8nm,0.9s,baz=148,slow=8.5,SNR=3.6						
PEA1	Petropavlovsk-	64.00	355	eP	P	04 29 25.0	+1.2
KLR	Kul'dur	66.76	337	P	P	04 29 42.5	+0.7
	8.5nm,0.9s,baz=117,slow=7.5,SNR=7.0						
MA2	Magadan	71.13	352	LR	LR	04 57 22.8	
	comp=Z,2μm,20.2s,baz=102,slow=32						
CM01	Chiang Mai Arr	71.85	293	eP	P	04 30 14.8	+0.8
CM31	Chiang Mai Arr	71.88	294	eP	P	04 30 13.3	-0.8
	7.2nm,0.8s						
CMAR	Chiang Mai Arr	71.88	294	P	P	04 30 15.1	+1.0
	3.1nm,0.9s,baz=115,slow=4.3,SNR=7.5						
SEY	Seymchan	74.20	354	P	P	04 30 26.4	-0.5
	1.6nm,0.3s,baz=132,slow=5.5,SNR=4.7						
ULN	Ulaanbaatar	78.01	324	eP	P	04 30 50.1	+0.9
	14nm,0.9s						
SONA0	Songino Array	78.37	324	eP	P	04 30 51.6	+0.5
SONM	Songino Array	78.37	324	P	P	04 30 51.6	+0.5
	6.4nm,1.0s,baz=140,slow=7.1,SNR=10						
SONA1	Songino Array	78.37	324	eP	P	04 30 51.2	+0.1
BILL	Bilibino	78.62	0	eP	P	04 30 52.3	+0.4
	19nm,1.1s						
CAST	Castle Rocks	80.74	18	eP	P	04 31 03.4	-0.1
	5.8nm,1.0s						
RDOG	Red Dog Mine	81.80	11	eP	P	04 31 10.2	+1.1
	11nm,1.0s						
TLY	Talaya	81.83	326	eP	P	04 31 09.5	-0.1
	8.4nm,0.9s						
TLY	Talaya	81.83	326	P	P	04 31 09.7	+0.1
	1.1nm,0.4s,baz=169,slow=4.5,SNR=6.6						
IM3	Indian Mountai	82.21	16	eP	P	04 31 10.9	-0.3
ILAR	Eielson Array	83.31	19	P	P	04 31 16.3	-0.7
	2.4nm,0.8s,baz=225,slow=5.9,SNR=5.4						
ILB	Eielson Array	83.31	19	eP	P	04 31 16.3	-0.7
	7.7nm,1.2s						
IL1	Eielson Array	83.31	19	eP	P	04 31 16.0	-0.9
SCRK	Sand Creek	83.72	20	eP	P	04 31 20.4	+1.1
	18nm,1.4s						
TIXI	Tiksi	85.81	349	P	P	04 31 29.5	0.0
	6.1nm,1.0s,baz=122,slow=3.9,SNR=5.8						
NV01	Mina Array Sit	85.96	50	eP	P	04 31 30.1	-1.1
WVOR	Wild Horse Val	86.91	46	eP	P	04 31 35.4	-0.3
	5.1nm,1.3s						
MK01	Makanchi Array	93.22	317	eP	P	04 32 04.8	-0.3
MK31	Makanchi Array	93.23	317	eP	P	04 32 05.2	0.0
	7.6nm,1.1s						
MK32	Makanchi Array	93.23	317	eP	P	04 32 05.1	0.0
MKAR	Makanchi Array	93.23	317	P	P	04 32 05.1	0.0
	4.3nm,0.9s,baz=101,slow=6.3,SNR=9.3						
ZAA0	Zalesovo Array	93.26	324	eP	P	04 32 04.0	-1.0
	6.8nm,1.0s						
ZAA1	Zalesovo Array	93.26	324	eP	P	04 32 04.0	-1.0
ZALV	Zalesovo Beam	93.26	324	eP	P	04 32 03.5	-1.5
ZALV	Zalesovo Beam	93.26	324	P	P	04 32 04.0	-1.0
	5.0nm,1.0s,baz=108,slow=4.8,SNR=9.9						
YKA	Yellowknife Ar	94.81	27	P	P	04 32 10.6	-1.3
	0.9nm,1.0s,baz=253,slow=5.1,SNR=5.7						
YKB5	Yellowknife Ar	94.81	27	eP	P	04 32 10.6	-1.3
BVAR	Borovoye Array	101.66	322	P	Pdif	04 32 42.0	-1.0
	1.2nm,0.9s,baz=94,slow=4.8,SNR=3.8						
ARA0	ARCESS Array S	116.05	345	ePKPdf	PKiKP	04 37 32.6	-0.4
ARCES	ARCESS Array B	116.05	345	PKP	PKiKP	04 37 32.6	-0.4
	2.7nm,0.9s,baz=64,slow=2.0,SNR=7.8						
GEC2	GERESS Array S	135.41	334	ePKPdf	PKPdf	04 38 11.1	+0.5
GERES	GERESS Array B	135.41	334	PKP	PKPdf	04 38 11.1	+0.5
	0.9nm,0.8s,baz=343,slow=3.1,SNR=3.6						
TOA0	Torodi Ar. Sit	164.08	280	ePKPdf	PKPdf	04 38 52.2	-2.7
TOA0				ePKPab	PKPab	04 39 48.6	+0.3
TORD	Torodi Ar. Bea	164.08	280	PKP	PKPdf	04 38 54.2	-0.6
	1.1nm,0.9s,baz=341,slow=2.0,SNR=3.5						
TORD				PKPab	PKPab	04 39 47.8	-0.5
	1.8nm,1.1s,baz=18,slow=3.7,SNR=4.1						
TOA1	Torodi Ar. Sit	164.08	280	ePKPdf	PKPdf	04 38 54.2	-0.6
TOA1				ePKPab	PKPab	04 39 47.8	-0.5

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*IDC **06** 04:20:02.5±0.7, 10°.91S×165°.61E, h0^{km}, mb4.7/15, mb1 4.9/17, mb1mx4.5/53, mbtmp4.7/17, ML5.0/2, Error ellipse: s-maj=19.8km s-min=16.7km az=127.0*
*NEIC **06** 04:20:03.7±0.1, 10°.85S×165°.49E, h10^{km}, mb4.9/63, Error ellipse: s-maj=4.6km s-min=3.0km az=108.0*
*ISCJB **06** 04:20:05.2±0.2, 10°.97S±0°.03×165°.50E±0°.04, h30^{km}, mb4.9/78, MS5.0/1, Error ellipse: s-maj=6.0km s-min=4.1km az=21.9*
ISC 06 04:20:07.0±0.5**, 10°.93S**±0°.07×**165°.52E**±0°.09**, h30**^{km}**, n133,**
σ0^{s}.90/131**, mb4.9**/78**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.69	285	ePn	Pn	04 21 26.7	-2.8
HNR	Honiara	5.69	285	Pn	Pn	04 21 31.1	+1.6
	92nm,0.3s,baz=144,slow=11,SNR=6.5						
MARNC	Mare, Loyalty	10.76	167	ePn	Pn	04 22 39.5	+0.3
DZM	Mont Dzumac	11.11	176	Pn	Pn	04 22 44.1	+0.1
	4.8nm,0.3s,baz=320,slow=10.0,SNR=9.4						
ONTNC	Ouen Toro	11.35	176	ePn	Pn	04 22 47.8	+0.7
OUENC	Ouen Island, N	11.49	174	ePn	Pn	04 22 49.6	+0.4
PINNC	Pines Island,	11.76	171	ePn	Pn	04 22 52.5	-0.3
EIDS	Eidsvold	19.83	222	P	P	04 24 35.4	-0.1
	baz=20						
CTA	Charters Tower	20.66	242	P	Pn	04 24 45.8	-1.1
	31nm,0.9s,baz=72,slow=11,SNR=6.7						
CTAO	Charters Tower	20.66	242	eP	P	04 24 43.5	-1.0
	70nm,1.1s						
MTSU	Mount Surprise	21.73	248	P	P	04 24 57.6	+1.6
	baz=22,SNR=19						
COEN	Coen	22.02	260	P	P	04 25 00.6	+1.4
	baz=22,SNR=5.8						
RMQ	Roma	22.13	223	P	P	04 25 02.6	+2.3
	baz=22,SNR=4.8						
ARMA	Armidale	23.30	212	P	P	04 25 13.6	+1.1
	baz=24						
OUZ	Omahuta	25.27	164	eP	P	04 25 31.1	+0.5
	37nm,1.0s						
QLP	Quilpie	25.40	229	P	P	04 25 32.5	+0.5
	baz=26						
QIS	Mount Isa	26.68	246	P	P	04 25 43.8	+0.2
	baz=27						
CNB	Canberra Magne	28.38	209	P	P	04 25 58.3	-0.4
	baz=29						
OMRZ	Omania	28.76	162	P	P	04 26 04.9	+2.8
HAZ	Te Kaha	28.89	160	P	P	04 26 04.2	+1.0
RUGZ	Raukumara Rang	29.05	160	P	P	04 26 05.5	+0.8
URZ	Urewera	29.13	161	eP	P	04 26 05.7	+0.4
	56nm,1.2s						
URZ	Urewera	29.13	161	P	P	04 26 05.5	+0.2
	14nm,0.4s,baz=264,slow=2.8,SNR=14						
URZ	Urewera	29.13	161	P	P	04 26 05.5	+0.2
MWZ	Matawai	29.33	160	P	P	04 26 07.2	+0.1
TWGZ	Tauwhareparae	29.34	160	P	P	04 26 07.6	+0.3
RTZ	Ruatahuna	29.41	162	P	P	04 26 08.3	+0.4
SNGZ	Shannon Statio	29.68	161	P	P	04 26 10.3	+0.1
CNGZ	Carnagh Statio	29.69	160	P	P	04 26 11.4	+1.1
BKZ	Black Stump Fm	29.77	163	eP	P	04 26 11.3	+0.2
	65nm,0.5s						
STKA	Stephens Creek	30.37	223	P	P	04 26 16.4	-0.1
	baz=31						
STKA	Stephens Creek	30.37	223	P	P	04 26 17.1	+0.7
	9.4nm,0.9s,baz=11,slow=9.5,SNR=4.6						
BFZ	Birch Farm	31.11	164	eP	P	04 26 22.2	-0.6
	113nm,1.2s						
WRAB	Tennant Creek	31.30	250	eP	P	04 26 23.7	-1.1
	24nm,1.1s						
WB2	Warramunga Arr	31.30	250	eP	P	04 26 23.3	-1.5
WRA	Warramunga Arr	31.32	250	P	P	04 26 24.7	-0.2
	13nm,0.8s,baz=81,slow=9.2,SNR=14						
SNZO	South Karori	31.32	167	eP	P	04 26 25.3	+0.7
	161nm,1.5s						
TOO	Toolangi	32.06	211	P	P	04 26 30.6	-0.6
	baz=32						
KHZ	Kahutara	32.14	169	eP	P	04 26 32.0	+0.2
	59nm,1.4s						
LTZ	Lake Taylor	32.27	171	eP	P	04 26 32.8	-0.2
	28nm,0.7s						
KDU	Kakadu	32.38	264	P	P	04 26 33.4	-0.9
	baz=33,SNR=3.3						
AS01	Alice Springs	32.61	243	eP	P	04 26 34.8	-1.5
AS31	Alice Springs	32.65	243	eP	P	04 26 35.4	-1.2
	7.7nm,0.9s						
ASAR	Alice Springs	32.65	243	P	P	04 26 36.1	-0.5
	24nm,0.8s,baz=73,slow=9.6,SNR=27						
OXZ	Oxford	32.77	171	eP	P	04 26 38.1	+0.7
	18nm,0.7s						
RPZ	Rata Peaks	33.02	173	eP	P	04 26 39.8	+0.3
	19nm,0.9s						
RPZ	Rata Peaks	33.02	173	P	P	04 26 39.7	+0.1
	9.6nm,0.5s,baz=344,slow=3.3,SNR=5.1						
HTT	Hallett	33.11	223	P	P	04 26 41.1	+0.6
	baz=33,SNR=5.2						
MQZ	McQueen's Vall	33.24	171	eP	P	04 26 41.2	-0.2
	59nm,1.2s						
ARPS	Mount Arapiles	33.44	216	P	P	04 26 41.4	-1.9
	baz=34						
LBZ	Lake Benmore	33.58	174	eP	P	04 26 45.0	+0.6
	14nm,1.1s						
BBOO	Buckleboo	34.75	227	P	P	04 26 54.3	-0.4
	baz=35						
WRKA	Warakurna	37.94	243	P	P	04 27 22.4	+0.2
	baz=38,SNR=12						
FITZ	Fitzroy Crossi	39.20	255	P	P	04 27 32.3	-0.5
	baz=40,SNR=5.8						
FITZ	Fitzroy Crossi	39.20	255	P	P	04 27 32.1	-0.7
	12nm,0.9s,baz=82,slow=7.5,SNR=6.1						
MEEK	Meekatharra	46.80	244	P	P	04 28 35.3	+1.1
	baz=47,SNR=12						
KLBR	Kellerberrin	48.58	237	P	P	04 28 47.6	-0.4
	baz=49						
MORW	Morawa	49.49	241	P	P	04 28 54.2	-0.7
	baz=50						
JAGI	Jajag, Banyuwa	50.65	268	eP	P	04 29 01.6	-2.3
	62nm,0.8s						
NJ2	Nanjing	61.78	315	eP	P	04 30 22.2	-0.9
KMI	Kunming	70.87	301	P	P	04 31 25.1	+3.3
KMI				pP	pP	04 31 28.4	-2.2
KMI				sP	pwP	04 31 31.2	-2.0
HHC	Hu-ho-hao-te	71.60	320	eP	P	04 31 26.7	+0.9
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	Chiang Mai Arr	71.86	294	P	P	04 31 29.5	+1.9
	comp=Z,0.7nm,0.5s,baz=139,slow=4.3,SNR=2.7						
LZH	Lanzhou	74.52	312	eP	P	04 31 43.6	+0.4
LZH				pP	pP	04 31 48.7	-3.3
LZH				sP	pwP	04 31 51.2	-3.5
LZH				PP	PP	04 34 40.2	+10
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,5.8s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
GAMB	Gambell	76.50	10	eP	P	04 31 54.0	+0.4
	comp=Z,14nm,1.1s						
SVW2	Sparrevohn	78.07	18	eP	P	04 32 02.4	-0.2
	comp=Z,20nm,1.3s						
RSO	Redoubt South	78.49	20	eP	P	04 32 04.7	-0.5
BILL	Bilibino	78.77	0	eP	P	04 32 06.6	+0.3
	comp=Z,11nm,1.0s						
GTA	Gaotai	78.82	314	eP	P	04 32 12.5	+5.1
GTA				pP	pP	04 32 16.6	+0.3
GTA				sP	sP	04 32 19.5	0.0
QSPA	South Pole Qui	79.07	180	eP	P	04 32 08.0	-0.3
	comp=Z,14nm,1.2s						
QSPA	South Pole Qui	79.07	180	P	P	04 32 08.6	+0.3
	comp=Z,9.7nm,1.0s,baz=21,slow=2.8,SNR=3.8						
SUA	Susitna One	79.89	20	eP	P	04 32 12.0	-0.7
	comp=Z,12nm,1.2s						
CAST	Castle Rocks	80.91	18	eP	P	04 32 17.4	-0.6
	comp=Z,6.4nm,0.8s						
DIV	Divide	81.38	22	eP	P	04 32 20.3	-0.4
	comp=Z,27nm,1.1s						
RND	Reindeer	81.90	19	eP	P	04 32 23.0	-0.3
	comp=Z,10.0nm,1.0s						
MCK	McKinley	82.11	19	eP	P	04 32 23.2	-1.2
	comp=Z,12nm,1.1s						
IM3	Indian Mountai	82.37	16	eP	P	04 32 25.7	0.0
HARP	HAARP	82.45	21	eP	P	04 32 26.2	0.0
	comp=Z,34nm,1.0s						
MLY	Manley	82.50	17	eP	P	04 32 26.1	-0.3
	comp=Z,6.1nm,1.4s						
KMRM	Mail Ridge	82.73	47	eP	P	04 32 28.1	-0.2
	comp=Z,14nm,1.0s						
WRH	Wood River Hil	82.89	18	eP	P	04 32 28.0	-0.4
	comp=Z,7.1nm,0.9s						
MDM	Murphy Dome	83.19	18	eP	P	04 32 29.1	-0.9
	comp=Z,9.9nm,1.0s						
HDA	Harding Lake	83.21	19	eP	P	04 32 29.7	-0.4
	comp=Z,20nm,0.9s						
COLA	College	83.25	18	eP	P	04 32 29.5	-0.7
	comp=Z,13nm,0.8s						
RIDG	Independ'e Rid	83.44	20	eP	P	04 32 31.3	0.0
	comp=Z,22nm,1.2s						
ILAR	Eielson Array	83.47	19	P	P	04 32 31.4	0.0
	comp=Z,4.2nm,0.7s,baz=241,slow=4.8,SNR=15						
ILB	Eielson Array	83.47	19	eP	P	04 32 30.8	-0.7
SCRK	Sand Creek	83.88	20	eP	P	04 32 33.1	-0.6
	comp=Z,18nm,1.2s						
ORV	Oroville	84.10	48	eP	P	04 32 34.5	-0.8
	comp=Z,6.6nm,1.0s						
HUMO	Hull Mountain	84.10	45	eP	P	04 32 35.1	0.0
	comp=Z,12nm,0.9s						
AFDM	Forest Hills D	84.29	49	eP	P	04 32 35.6	-0.6
	comp=Z,10.0nm,1.0s						
HYT	Haines Junctio	84.37	24	eP	P	04 32 35.9	-0.4
	comp=Z,8.6nm,1.0s						
CMB	Columbia Colle	84.44	50	eP	P	04 32 36.3	-0.7
	comp=Z,6.3nm,1.0s						
BEKR	Beckworth	85.03	48	eP	P	04 32 39.5	-0.7
	comp=Z,9.1nm,1.1s						
WAKR	Walker	85.29	50	eP	P	04 32 40.9	-0.6
	comp=Z,19nm,1.3s						
PAHR	Pah Rah Range	85.70	48	eP	P	04 32 43.2	-0.2
	comp=Z,11nm,1.1s						
MOD	Modoc Plateau	85.72	46	eP	P	04 32 43.2	-0.4
	comp=Z,5.1nm,1.0s						
PINE	Pine Mountain	85.89	44	eP	P	04 32 44.0	-0.4
	comp=Z,15nm,1.0s						
DAC	Darwin (Calif)	86.04	52	eP	P	04 32 44.6	-0.6
	comp=Z,6.7nm,1.2s						
NV01	Mina Array Sit	86.12	50	eP	P	04 32 44.7	-0.9
NVAR	Mina Array Bea	86.12	50	P	P	04 32 45.8	+0.1
	comp=Z,6.2nm,0.9s,baz=229,slow=8.0,SNR=11						
I07A	Izee	86.97	44	eP	P	04 32 49.1	-0.4
	comp=Z,7.8nm,1.1s						
WVOR	Wild Horse Val	87.06	46	eP	P	04 32 49.6	-0.5
	comp=Z,8.9nm,1.1s						
J08A	Circle Bar Ran	87.46	45	eP	P	04 32 51.5	-0.4
	comp=Z,8.0nm,1.0s						
G08A	Pilot Rock	87.71	43	eP	P	04 32 52.5	-0.6
	comp=Z,11nm,1.1s						
SHPR	Sheep Range	87.99	52	eP	P	04 32 54.3	-0.4
	comp=Z,9.3nm,1.4s						
E08A	Dider Farm, El	88.02	42	eP	P	04 32 54.5	+0.2
	comp=Z,10nm,1.1s						
R11A	Troy Canyon, C	88.15	51	eP	P	04 32 54.8	-0.6
	comp=Z,6.6nm,1.3s						
W13A	Hualapai Mount	88.64	54	eP	P	04 32 57.0	-0.8
	comp=Z,6.3nm,1.2s						
WMQ	Urumqi	88.86	315	eP	P	04 32 58.9	+0.4
LCMT	Little Creek M	89.61	52	eP	P	04 33 01.3	-1.0
	comp=Z,8.0nm,1.1s						
CCUT	Cedar City	89.64	52	eP	P	04 33 02.2	-0.4
	comp=Z,6.2nm,1.0s						
KNB	Kanab	89.94	52	eP	P	04 33 03.7	-0.2
	comp=Z,14nm,1.3s						
HLID	Hailey	90.36	46	eP	P	04 33 05.3	-0.4
	comp=Z,5.6nm,1.0s						
PKCU	Pink Cliffs	90.43	52	eP	P	04 33 05.7	-0.7
	comp=Z,13nm,1.1s						
X16A	Lo Mia Camp, P	90.43	55	eP	P	04 33 05.6	-0.7
	comp=Z,5.0nm,0.9s						
TUC	Tucson	90.51	57	eP	P	04 33 05.4	-1.1
	comp=Z,4.7nm,1.2s						

MSU	Marysvale	90.78	51	*e*P	P	04 33 08.0	+0.2
HVU	Hansel Valley	91.09	48	*e*P	P	04 33 08.9	-0.2
	comp=Z,6.9nm,0.9s						
NLU	North Lily Min	91.19	50	*e*P	P	04 33 09.9	+0.2
	comp=Z,5.6nm,1.0s						
319A	Douglas	91.56	58	*e*P	P	04 33 11.4	-0.1
	comp=Z,6.5nm,1.0s						
TMUT	Trail Mountain	91.69	50	*e*P	P	04 33 12.2	+0.1
	comp=Z,5.0nm,1.1s						
FXWY	Fox Creek	92.77	46	*e*P	P	04 33 16.6	-0.3
	comp=Z,1.9nm,0.8s						
BOZ	Bozeman (W)	92.77	44	*e*P	P	04 33 16.9	+0.1
	comp=Z,4.2nm,0.9s						
HRY	Holter Researc	92.88	43	*e*P	P	04 33 16.9	-0.3
MKAR	Makanchi Array	93.29	317	P	P	04 33 20.4	+1.4
	comp=Z,1.2nm,0.9s,baz=104,slow=6.1,SNR=2.4						
ZALV	Zalesovo Beam	93.33	324	P	P	04 33 19.5	+0.6
	comp=Z,0.3nm,0.4s,baz=90,slow=2.9,SNR=2.4						
PDAR	Pinedale Array	93.64	47	*e*P	P	04 33 20.2	-0.8
PDAR	Pinedale Array	93.64	47	P	P	04 33 20.7	-0.2
	comp=Z,1.6nm,0.9s,baz=242,slow=3.2,SNR=7.5						
EGMT	Eagleton	94.53	42	*e*P	P	04 33 24.4	-0.4
	comp=Z,8.2nm,1.0s						
YKA	Yellowknife Ar	94.97	27	P	P	04 33 24.7	-1.5
	comp=Z,1.0nm,0.6s,baz=257,slow=4.5,SNR=10						
YKB5	Yellowknife Ar	94.97	27	*e*P	P	04 33 24.6	-1.7
KSH	Kashi	96.51	309	P	P	04 33 36.3	+2.3
KSH				pP	pP	04 33 40.0	-3.1

*IDC **06** 04:20:48.5±0.5, 10°.90S×165°.66E, h0^{km}, mb4.8/26,*
mb1 5.0/28, mb1mx4.8/53, mbtmp4.9/28, ML5.4/2, Error
ellipse: s-maj=17.2km s-min=13.3km az=119.0
*NEIC **06** 04:20:50.0±0.1, 10°.83S×165°.58E, h10^{km}, mb5.2/138,*
Error ellipse: s-maj=3.0km s-min=2.1km az=112.0
*ISCJB **06** 04:20:51.7±0.1, 10°.92S±0°.02×165°.57E±0°.03, h30^{km},*
mb5.1/172, MS6.0/1, Error ellipse: s-maj=4.4km
s-min=3.2km az=22.5
*MOS **06** 04:20:52.1±0.9, 10°.93S×165°.54E, h33^{km}, mb5.2/41, Error*
ellipse: s-maj=9.2km s-min=8.0km az=50.0
ISC 06 04:20:53.5±0.3**, 10°.90S**±0°.05×**165°.61E**±0°.06**, h30^{km}, n367,**
σ**1^{s}00**/365**, mb5.2**/172**, 13C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.77	284	*e*Pn	Pn	04 22 15.0	-2.1
HNR	Honiara	5.77	284	*e*P	Pn	04 22 15.0	-2.1
HNR	Honiara	5.77	284	Pn	Pn	04 22 17.8	+0.7
	119nm,0.3s,baz=14,slow=7.1,SNR=5.9						
MARNC	Mare, Loyalty	10.78	168	*e*Pn	Pn	04 23 25.5	-0.3
MARNC				*e*Sn	Sn	04 25 25.2	-0.2
DZM	Mont Dzumac	11.14	176	*e*Pn	Pn	04 23 30.6	-0.3
DZM	Mont Dzumac	11.14	176	Pn	Pn	04 23 31.1	+0.2
	20nm,0.3s,baz=326,slow=13,SNR=13						
ONTNC	Ouen Toro	11.37	176	*e*Pn	Pn	04 23 34.0	0.0
OUENC	Ouen Island, N	11.52	174	*e*Pn	Pn	04 23 36.4	+0.4
PINNC	Pines Island,	11.78	172	*e*Pn	Pn	04 23 39.3	-0.3
FUNA	Funafuti	13.60	81	*e*Pn	Pn	04 24 05.0	+0.6
MSVF	Nonsavu	13.83	121	*i* P	Pn	04 24 08.4	+0.7
TARA	Tarawa	14.18	31	*e*Pn	Pn	04 24 10.7	-1.7
EIDS	Eidsvold	19.92	222	P	Pn	04 25 24.4	-0.3
	baz=20,SNR=5.5						
CTA	Charters Tower	20.75	242	P	P	04 25 33.0	+1.0
	59nm,0.8s,baz=73,slow=14,SNR=10						
CTAO	Charters Tower	20.75	242	*e*P	P	04 25 30.8	-1.3
	272nm,1.4s						
CTAO	Charters Tower	20.75	242	*e*P	P	04 25 30.8	-1.3
MTSU	Mount Surprise	21.82	248	P	P	04 25 44.3	+0.8
	baz=22,SNR=24						
COEN	Coen	22.12	260	P	P	04 25 47.6	+0.8
	baz=22,SNR=6.0						
RMQ	Roma	22.21	223	P	P	04 25 49.1	+1.4
	baz=22,SNR=6.3						
ARMA	Armidale	23.37	212	P	P	04 25 60.0	+0.1
	baz=24,SNR=6.3						
OUZ	Omahuta	25.28	165	*e*P	P	04 26 18.2	+1.0
	44nm,1.0s						
QLP	Quilpie	25.49	229	P	P	04 26 20.2	+0.9
	baz=26,SNR=3.6						
MGCD	Mangrove Creek	25.90	209	P	P	04 26 24.0	+1.1
	baz=26,SNR=5.8						
QIS	Mount Isa	26.78	246	P	P	04 26 31.6	+0.5
	baz=27,SNR=3.8						
CNB	Canberra Magne	28.45	209	P	P	04 26 47.1	+1.2
	baz=29,SNR=5.0						
CAN	Canberra	28.62	209	*e*P	P	04 26 46.7	-0.7
	11nm,0.8s						
CAN	Canberra	28.62	209	*e*P	P	04 26 46.7	-0.7
CAN				pmax	pmax		
	comp=Z,11nm,0.8s						
OMRZ	Omania	28.76	162	P	P	04 26 51.9	+3.3
URZ	Urewera	29.13	161	*e*P	P	04 26 52.0	+0.2
	comp=Z,53nm,1.2s						
URZ	Urewera	29.13	161	P	P	04 26 52.0	+0.2
	comp=Z,19nm,0.6s,baz=316,slow=6.1,SNR=4.7						
RTZ	Ruatahuna	29.41	162	P	P	04 26 55.4	+1.0
WTVZ	West Tongariro	29.48	164	P	P	04 26 58.8	+3.8
MTHZ	Maungataniwha	29.59	162	P	P	04 26 56.4	+0.5
RAHZ	Arahi	29.72	162	P	P	04 26 58.2	+1.1
BKZ	Black Stump Fm	29.77	163	*e*P	P	04 26 58.1	+0.6
	comp=Z,52nm,0.5s						
BKZ	Black Stump Fm	29.77	163	P	P	04 26 57.3	-0.3
MOVZ	Moawhango	29.79	164	P	P	04 26 58.8	+1.1
NMHZ	Naumai	29.80	162	P	P	04 26 58.7	+0.8
BHHZ	Black Hill Sta	29.95	164	P	P	04 26 59.3	+0.2
KWHZ	Kaweka Forest	29.99	163	P	P	04 27 00.7	+1.1
H11N1	WAKE ISLAND Hy	30.45	2	T	T	04 59 00.2	
	baz=180						
H11N3	WAKE ISLAND Hy	30.45	2	T	T	04 59 02.1	
	baz=180,SNR=3.5						
STKA	Stephens Creek	30.46	223	P	P	04 27 04.9	+1.2
	baz=31,SNR=8.0						
STKA	Stephens Creek	30.46	223	*e*P	P	04 27 02.8	-0.9
	comp=Z,6.6nm,0.8s						
STKA	Stephens Creek	30.46	223	*e*P	P	04 27 02.8	-0.9
STKA	Stephens Creek	30.46	223	P	P	04 27 03.7	0.0
	comp=Z,26nm,0.8s,baz=19,slow=8.9,SNR=12						
H11N2	WAKE ISLAND Hy	30.46	2	T	T	04 58 59.5	
	baz=180						
KAHZ	Kahuranaki	30.47	163	P	P	04 27 04.1	+0.4
BFZ	Birch Farm	31.12	164	*e*P	P	04 27 08.9	-0.4
	comp=Z,76nm,0.9s						
SNZO	South Karori	31.33	167	*e*P	P	04 27 11.2	-0.1
	comp=Z,131nm,1.4s						
WRAB	Tennant Creek	31.40	250	*e*P	P	04 27 10.6	-1.6
	comp=Z,115nm,1.4s						
WRAB	Tennant Creek	31.40	250	⇑*e*P	P	04 27 11.9	-0.3
WRAB				pmax	pmax		
	comp=Z,96nm,1.6s						
WB2	Warramunga Arr	31.40	250	*e*P	P	04 27 11.2	-0.9
THZ	Tophouse	31.40	170	*e*P	P	04 27 12.0	+0.1
	comp=Z,51nm,0.8s						
WRA	Warramunga Arr	31.41	250	P	P	04 27 11.1	-1.1
	comp=Z,32nm,0.7s,baz=82,slow=9.1,SNR=26						
TOO	Toolangi	32.13	211	P	P	04 27 18.9	+0.5
	baz=32,SNR=8.8						
KHZ	Kahutara	32.15	169	*e*P	P	04 27 18.9	+0.5
	comp=Z,25nm,0.9s						
LTZ	Lake Taylor	32.29	171	*e*P	P	04 27 19.9	+0.2
	comp=Z,39nm,0.9s						
KDU	Kakadu	32.48	263	P	P	04 27 20.6	-1.0
	baz=33,SNR=4.0						
AS01	Alice Springs	32.70	243	*e*P	P	04 27 22.5	-1.1
FOZ	Fox Glacier	32.72	174	*e*P	P	04 27 24.0	+0.6
	comp=Z,50nm,1.1s						
AS31	Alice Springs	32.74	243	*e*P	P	04 27 22.7	-1.2
	comp=Z,15nm,0.9s						
ASAR	Alice Springs	32.74	243	P	P	04 27 22.5	-1.5
	comp=Z,50nm,0.8s,baz=72,slow=9.7,SNR=22						
OXZ	Oxford	32.79	171	*e*P	P	04 27 24.6	+0.5
	comp=Z,37nm,0.8s						
RPZ	Rata Peaks	33.03	173	*e*P	P	04 27 26.1	-0.1
	comp=Z,68nm,1.4s						
HTT	Hallett	33.19	223	P	P	04 27 28.2	+0.5
	baz=33,SNR=7.3						
MQZ	McQueen’s Vall	33.25	171	*e*P	P	04 27 28.5	+0.4
	comp=Z,47nm,1.0s						
ARPS	Mount Arapiles	33.52	216	P	P	04 27 31.2	+0.7
	baz=34,SNR=6.1						
BBOO	Buckleboo	34.83	227	P	P	04 27 41.8	-0.2
	baz=35,SNR=6.4						
WRKA	Warakurna	38.03	243	P	P	04 28 09.3	-0.2
	baz=38,SNR=13						
FITZ	Fitzroy Crossi	39.29	255	P	P	04 28 20.0	0.0
	baz=39,SNR=8.1						
FITZ	Fitzroy Crossi	39.29	255	P	P	04 28 19.1	-0.9
	comp=Z,25nm,0.9s,baz=77,slow=5.5,SNR=9.1						
MMRI	Maumere	42.78	269	*e*P	P	04 28 47.0	-1.8
	comp=Z,38nm,0.9s						
MBWA	Marble Bar	45.12	251	*e*P	P	04 29 06.7	-0.9
	comp=Z,83nm,1.5s						
MEEK	Meekatharra	46.90	244	P	P	04 29 22.4	+0.9
	baz=47,SNR=18						
KLBR	Kellerberrin	48.68	237	P	P	04 29 35.1	-0.2
	baz=49,SNR=4.7						
MORW	Morawa	49.58	241	P	P	04 29 43.1	+0.9
	baz=50,SNR=6.3						
MJAR	Matsushiro Arr	53.78	333	P	P	04 30 12.3	-1.0
	comp=Z,6.2nm,0.9s,baz=166,slow=7.8,SNR=5.3						
MAJO	Matsushiro	53.78	333	*e*P	P	04 30 12.2	-1.1
	comp=Z,15nm,1.0s						
MAJO	Matsushiro	53.78	333	⇑*i*P	P	04 30 15.3	+1.9
MAJO				pmax	pmax		
	comp=Z,42nm,1.8s						
MAT	Matsushiro	53.78	333	P	P	04 30 12.7	-0.7
JNU	Nakatsue	54.89	324	P	P	04 30 21.5	0.0
	comp=Z,22nm,1.0s,baz=43,slow=5.1,SNR=4.1						
ASAJ	Asahikawa	58.61	341	P	P	04 30 48.5	+0.8
	comp=Z,9.7nm,0.7s,baz=194,slow=14,SNR=4.7						
YSS	Yuzh-Sakhalins	61.11	342	*e*P	P	04 31 04.2	-0.5
	comp=Z,34nm,1.2s						
YSS	Yuzh-Sakhalins	61.11	342	⇓*e*P	P	04 31 04.7	0.0
YSS				pmax	pmax		
	comp=Z,120nm,0.7s						
NJ2	Nanjing	61.83	315	*e*P	P	04 31 11.4	+1.5
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
MSHR	Mys Shultsa	61.87	332	⇑*i*P	P	04 31 11.6	+1.6
VLA	Vladivostok	61.95	333	*i* P	P	04 31 12.2	+1.7
VLA				pmax	pmax		
	comp=Z,25nm,0.8s						
USRK	Ussuriysk Ar.	62.76	333	P	P	04 31 16.6	+0.7
	comp=Z,3.2nm,0.7s,baz=131,slow=6.5,SNR=4.2						
PET	Petropavlovsk	63.95	355	*e*P	P	04 31 23.6	+0.1
PET				pmax	pmax		
	comp=Z,33nm,1.2s						
MDJ	Mudanjiang	64.16	332	P	P	04 31 27.2	+2.0
MDJ				pmax	pmax		
	comp=Z,21nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,3µm,17.2s						
IPM	Ipoh	66.07	280	*e*P	P	04 31 36.8	-1.4
	comp=Z,38nm,1.4s						
CASY	Casey	66.47	201	*e*P	P	04 31 40.5	+0.6
KLR	Kul'dur	66.87	337	⇑*i*P	P	04 31 42.6	0.0
KLR	Kul'dur	66.87	337	P	P	04 31 43.0	+0.4
	comp=Z,3.5nm,0.8s,baz=121,slow=5.4,SNR=3.6						
NIKH	Nikolski High	67.27	16	*e*P	P	04 31 44.7	-0.3
	comp=Z,60nm,0.8s						
GYA	Guiyang	68.23	304	⇑*i*P	P	04 31 52.9	+1.1
GYA				pP	sP	04 32 05.4	+1.4
GYA				PP	PP	04 34 27.3	+4.5
GYA				S	S	04 40 51.0	+0.2
GYA				SKS	SKSac	04 41 47.9	-1.1
GYA	Guiyang	68.23	304	SS	SS	04 45 16.0	+1.6
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.9s						
GYA				LR	LR		
	comp=N,650nm,18.2s						
GYA				LR	LR		
	comp=E,580nm,18.6s						
GYA				LR	LR		
	comp=Z,610nm,19.0s						
GYA	Guiyang	68.23	304	⇑*i*P	P	04 31 55.8	+4.0
GYA				pP	sP	04 32 06.0	+1.9
GYA				PP	PP	04 34 27.9	+5.1
GYA				S	S	04 40 51.2	+0.4
GYA				SKS	SKSac	04 41 47.5	-1.5
GYA	Guiyang	68.23	304	SS	SS	04 45 16.8	+2.4
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.9s						
GYA				LR	LR		
	comp=N,650nm,18.2s						
GYA				LR	LR		
	comp=E,580nm,18.6s						
GYA				LR	LR		
	comp=Z,610nm,19.0s						
UNV	Unalaska Valle	68.71	17	*e*P	P	04 31 53.9	-0.2
	comp=Z,24nm,1.1s						
XAN	Xi'an	69.93	312	P	P	04 32 06.6	+4.4
XAN				pP	sP	04 32 17.8	+3.3
XAN				sP	PcP	04 32 23.3	-1.1
XAN				PcP	pP	04 32 28.9	+18
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				LR	LR		
	comp=E,3µm,18.4s						
XAN				LR	LR		
	comp=Z,3µm,19.5s						
XAN	Xi'an	69.93	312	*e*P	P	04 32 01.5	-0.7
	comp=Z,5.4nm,0.8s						
XAN	Xi'an	69.93	312	*e*P	P	04 32 01.5	-0.7
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMI	Kunming	70.94	301	P	P	04 32 10.6	+1.9
KMI				pP	pwP	04 32 19.4	-0.3
KMI				sP	sP	04 32 23.0	+2.0
KMI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,13nm,1.4s						
MA2	Magadan	71.25	352	*e*P	P	04 32 11.1	+1.5
MA2				pmax	pmax		
	comp=Z,30nm,2.7s						
HHC	Hu-ho-hao-te	71.64	320	*e*P	P	04 32 26.7	+14
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZEA	Zeya	72.16	337	*e*P	P	04 32 15.8	+0.6
ZEA				pmax	pmax		
	comp=N,26nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,39nm,1.2s						
HIA	Hailar	72.18	330	*e*P	P	04 32 14.8	-0.7
	comp=Z,6.2nm,0.9s						
HIA	Hailar	72.18	330	⇑*i*P	P	04 32 15.2	-0.3
HIA				pmax	pmax		
	comp=Z,11nm,1.5s						
CD2	Chengdu	72.41	307	P	P	04 32 16.0	-1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	Seymchan	74.31	354	*e*P	P	04 32 28.7	+1.0
SEY	Seymchan	74.31	354	P	P	04 32 28.1	+0.4
	comp=Z,2.9nm,0.7s,baz=140,slow=8.3,SNR=4.6						
LZH	Lanzhou	74.56	312	*e*P	P	04 32 32.2	+2.2
LZH				pP	sP	04 32 41.8	-0.4
LZH				sP	PcP	04 32 45.5	+1.2
LZH				PP	PP	04 35 26.5	+9.4
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,98nm,4.9s						
LZH				LR	LR		
	comp=N,590nm,16.3s						
LZH				LR	LR		
	comp=E,540nm,16.4s						
LZH				LR	LR		
	comp=Z,650nm,17.5s						
GAMB	Gambell	76.45	10	*e*P	P	04 32 40.0	+0.1
	comp=Z,21nm,0.9s						
KDAK	Kodiak Island	76.49	22	*ce*P	P	04 32 41.6	+1.3
KDAK	Kodiak Island	76.49	22	P	P	04 32 41.2	+1.0
	comp=Z,29nm,1.1s,baz=113,slow=5.6,SNR=5.7						
SVW2	Sparrevohn	78.02	18	*e*P	P	04 32 48.8	-0.1
	comp=Z,45nm,1.3s						
ULN	Ulaanbaatar	78.11	324	*e*P	P	04 32 50.1	+0.3
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
RSO	Redoubt South	78.43	20	*e*P	P	04 32 50.8	-0.6
SONM	Songino Array	78.47	324	P	P	04 32 52.6	+0.7
	comp=Z,3.2nm,0.9s,baz=136,slow=6.2,SNR=5.9						
BRLK	Bradley Lake	78.55	21	*e*P	P	04 32 51.6	-0.2
	comp=Z,37nm,0.9s						
BILL	Bilibino	78.73	0	*e*P	P	04 32 52.5	-0.2
	comp=Z,28nm,1.0s						
BILL	Bilibino	78.73	0	*e*P	P	04 32 53.9	+1.3
BILL				*e*		04 32 59.1	
BILL				*e*		04 35 49.9	
BILL				pmax	pmax		
	comp=Z,23nm,1.3s						
GTA	Gaotai	78.86	314	⇑P	P	04 33 00.5	+6.3
GTA				pP	sP	04 33 09.4	+3.0
GTA				sP	pwP	04 33 13.7	+8.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
QSPA	South Pole Qui	79.11	180	*e*P	P	04 32 54.9	-0.1
	comp=Z,18nm,1.0s						
QSPA	South Pole Qui	79.11	180	P	P	04 32 54.8	-0.2
	comp=Z,12nm,1.0s,baz=352,slow=5.3,SNR=4.2						
SUA	Susitna One	79.83	20	*e*P	P	04 32 58.2	-0.7
	comp=Z,15nm,0.9s						
PMR	Palmer	80.46	20	*e*P	P	04 33 01.2	-0.9
	comp=Z,12nm,0.9s						
PMR	Palmer	80.46	20	*e*P	P	04 33 01.2	-0.9
PMR				pmax	pmax		
	comp=Z,12nm,0.9s						
KNK	Knik Glacier	80.57	21	*e*P	P	04 33 02.0	-0.8
	comp=Z,26nm,1.1s						
CAST	Castle Rocks	80.85	18	*e*P	P	04 33 03.8	-0.5
	comp=Z,17nm,0.8s						
DIV	Divide	81.32	22	*e*P	P	04 33 06.5	-0.4
	comp=Z,53nm,1.1s						
TRF	Thorofare Moun	81.42	18	*e*P	P	04 33 07.1	-0.4
	comp=Z,14nm,1.0s						
KLU	Klutina	81.51	21	*e*P	P	04 33 07.5	-0.4
	comp=Z,28nm,1.1s						
RND	Reindeer	81.84	19	*e*P	P	04 33 09.3	-0.2
	comp=Z,50nm,1.2s						
RDOG	Red Dog Mine	81.91	11	*e*P	P	04 33 09.7	0.0
	comp=Z,21nm,1.0s						
TLY	Talaya	81.93	326	*e*P	P	04 33 09.3	-1.0
	comp=Z,17nm,1.1s						
TLY	Talaya	81.93	326	⇑*i*P	P	04 33 10.4	+0.2
MCK	McKinley	82.05	19	*e*P	P	04 33 10.2	-0.4
	comp=Z,35nm,1.1s						
MCK	McKinley	82.05	19	*e*P	P	04 33 10.2	-0.4
MCK				pmax	pmax		
	comp=Z,35nm,1.1s						
DHY	Denali Highway	82.09	20	*e*P	P	04 33 11.0	+0.1
	comp=Z,14nm,1.0s						
IM3	Indian Mountai	82.32	16	*e*P	P	04 33 11.5	-0.4
HARP	HAARP	82.39	21	*e*P	P	04 33 12.1	-0.3
	comp=Z,57nm,0.9s						
MLY	Manley	82.44	17	*e*P	P	04 33 12.3	-0.3
	comp=Z,13nm,1.1s						
KCPM	Cahto Peak	82.55	47	*e*P	P	04 33 13.4	-0.4
	comp=Z,30nm,0.9s						
KMRM	Mail Ridge	82.64	47	*e*P	P	04 33 13.9	-0.4
	comp=Z,32nm,0.9s						
GDXM	Geysers	82.81	48	*e*P	P	04 33 15.2	0.0
	comp=Z,15nm,0.9s						
WRH	Wood River Hil	82.83	18	*e*P	P	04 33 14.2	-0.4
	comp=Z,24nm,0.9s						
KHMM	Horse Mountain	82.86	46	*e*P	P	04 33 15.5	0.0
	comp=Z,40nm,1.3s						
MDM	Murphy Dome	83.13	18	*e*P	P	04 33 15.5	-0.7
	comp=Z,33nm,1.0s						
HDA	Harding Lake	83.15	19	*e*P	P	04 33 15.6	-0.7
	comp=Z,72nm,1.0s						
HDA	Harding Lake	83.15	19	P	P	04 33 16.2	0.0
	baz=227						
TCOL	CIGO, UAF Yank	83.18	18	P	P	04 33 16.5	+0.1
	baz=226						
COLA	College	83.19	18	*e*P	P	04 33 15.9	-0.5
	comp=Z,44nm,0.9s						
COLA	College	83.19	18	⇑*i*P	P	04 33 15.9	-0.5
COLA				pmax	pmax		
	comp=Z,40nm,0.9s						
O02D	Mt. Diablo Mer	83.29	47	P	P	04 33 18.4	+0.8
	baz=250						
ILAR	Eielson Array	83.42	19	P	P	04 33 16.6	-1.1
	comp=Z,8.6nm,0.8s,baz=231,slow=3.2,SNR=22						
ILB	Eielson Array	83.42	19	*e*P	P	04 33 16.3	-1.4
IL1	Eielson Array	83.42	19	*e*P	P	04 33 16.8	-0.8
POKR	Poker Plat Res	83.48	18	P	P	04 33 17.3	-0.7
	baz=226						
K02D	Willamette Mer	83.56	44	P	P	04 33 20.1	+1.1
	baz=249						
DOT	Dot Lake	83.58	20	*e*P	P	04 33 18.0	-0.6
	comp=Z,40nm,1.2s						
WDC	Whiskeytown Da	83.61	47	*e*P	P	04 33 18.3	-0.8
	comp=Z,13nm,1.1s						
WDC	Whiskeytown Da	83.61	47	*e*P	P	04 33 18.3	-0.8
WDC				pmax	pmax		
	comp=Z,13nm,1.1s						
N02D	Trinity Center	83.62	46	P	P	04 33 20.4	+1.0
	baz=250						
M02C	Callahan	83.66	46	P	P	04 33 20.1	+0.6
	baz=250						
SCRK	Sand Creek	83.82	20	*e*P	P	04 33 19.5	-0.4
	comp=Z,48nm,1.2s						
YBH	Yreka Blue Hor	83.88	46	*e*P	P	04 33 19.9	-0.8
	comp=Z,23nm,1.0s						
YBH	Yreka Blue Hor	83.88	46	*e*P	P	04 33 19.9	-0.8
YBH				pmax	pmax		
	comp=Z,23nm,1.0s						
ORV	Oroville	84.01	48	*e*P	P	04 33 20.4	-0.9
	comp=Z,14nm,1.1s						
ORV	Oroville	84.01	48	*e*P	P	04 33 20.4	-0.9
ORV				pmax	pmax		
	comp=Z,14nm,1.1s						
O03E	Paynes Creek	84.04	47	P	P	04 33 21.6	+0.1
	baz=250						
AFDM	Forest Hills D	84.20	49	*e*P	P	04 33 22.0	-0.3
	comp=Z,24nm,1.0s						
WRAK	Wrangell Islan	84.28	30	*e*P	P	04 33 21.8	-0.3
	comp=Z,52nm,1.3s						
HYT	Haines Junctio	84.31	24	*e*P	P	04 33 21.8	-0.7
	comp=Z,24nm,1.0s						
L04D	Klamath Falls	84.33	45	P	P	04 33 23.2	+0.1
	baz=250						
CMB	Columbia Colle	84.35	50	*e*P	P	04 33 22.1	-1.0
	comp=Z,13nm,0.9s						
CMB	Columbia Colle	84.35	50	*e*P	P	04 33 22.1	-1.0
CMB				pmax	pmax		
	comp=Z,13nm,0.9s						
M04C	Macdoel	84.51	46	P	P	04 33 24.4	+0.5
	baz=250						
BEKR	Beckworth	84.95	48	*e*P	P	04 33 25.1	-1.1
	comp=Z,12nm,0.9s						
MWC	Mount Wilson	85.00	54	*e*P	P	04 33 25.7	-0.9
	comp=Z,16nm,1.0s						
MWC	Mount Wilson	85.00	54	*e*P	P	04 33 25.7	-0.9
MWC				pmax	pmax		
	comp=Z,16nm,1.0s						
ISA	Isabella, Lake	85.09	52	*e*P	P	04 33 25.9	-1.0
	comp=Z,14nm,1.1s						
ISA	Isabella, Lake	85.09	52	*e*P	P	04 33 25.9	-1.0
ISA				pmax	pmax		
	comp=Z,14nm,1.1s						
ISA	Isabella, Lake	85.09	52	P	P	04 33 27.1	+0.2
	baz=253						
WAKR	Walker	85.20	49	*e*P	P	04 33 26.9	-0.7
	comp=Z,20nm,1.1s						
MDPB	Devils Postpil	85.21	50	*e*P	P	04 33 27.2	-0.5
	comp=Z,45nm,1.5s						
EDW2	Edwards Air Fo	85.24	53	P	P	04 33 28.3	+0.6
	baz=253						
OMMB	Old Mammoth Mi	85.26	50	*e*P	P	04 33 27.6	-0.4
	comp=Z,20nm,1.2s						
BFSC	Mount Baldy Ra	85.32	54	P	P	04 33 28.6	+0.5
	baz=254						
J05D	Fort Rock, OR	85.44	45	P	P	04 33 29.1	+0.5
	baz=251						
DAWY	Dawson	85.47	21	*e*P	P	04 33 27.4	-0.7
	comp=Z,14nm,0.8s						
MURC	Murrieta	85.51	55	P	P	04 33 29.6	+0.6
	baz=254						
PAHR	Pah Rah Range	85.61	48	*e*P	P	04 33 28.3	-1.2
	comp=Z,17nm,1.2s						
CWC	Cottonwood Cre	85.62	52	P	P	04 33 29.7	0.0
	baz=253						
MOD	Modoc Plateau	85.64	46	*e*P	P	04 33 28.4	-1.2
	comp=Z,18nm,1.1s						
LRMC	Laurel Mtn Rad	85.65	53	P	P	04 33 30.1	+0.3
	baz=254						
E04D	Cinebar	85.67	41	P	P	04 33 30.3	+0.9
	baz=249						
TIN	Tinemaha, Big	85.68	51	P	P	04 33 30.6	+0.7

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      baz=253
D03D  Eldon            85.68  40  P       P        04 33 30.1 +0.6
      baz=249
I05D  Terrebonne, OR   85.72  43  P       P        04 33 30.2 +0.4
      baz=250
PINE  Pine Mountain    85.81  44 eP       P        04 33 29.9 -0.5
      comp=Z,28nm,1.0s
RYN   Ryan             85.92  50 eP       P        04 33 30.4 -0.7
      comp=Z,25nm,1.4s
TIXI  Tiksi            85.92 349⇑iP       P        04 33 30.7 +0.6
TIXI                              pmax    pmax
      comp=Z,11nm,1.5s
TIXI  Tiksi            85.92 349  P       P        04 33 30.0 -0.1
      comp=Z,2.5nm,0.3s,baz=118,slow=5.1,SNR=4.0
MONP2 Monument Peak    85.94  56  P       P        04 33 32.2 +0.8
      baz=254
DAC   Darwin (Calif)   85.95  52 eP       P        04 33 30.7 -0.6
      comp=Z,25nm,1.4s
DAC   Darwin (Calif)   85.95  52 eP       P        04 33 30.7 -0.6
DAC                               pmax    pmax
      comp=Z,25nm,1.4s
MPMC  Manual Prospec   85.97  52  P       P        04 33 32.0 +0.5
      baz=254
NV01  Mina Array Sit   86.03  50 eP       P        04 33 30.8 -0.9
NVAR  Mina Array Bea   86.03  50  P       P        04 33 31.3 -0.4
      comp=Z,12nm,0.9s,baz=231,slow=7.2,SNR=14
PFO   Pinyon Flats O   86.10  55 eP       P        04 33 30.9 -1.2
      comp=Z,14nm,1.2s
PFO   Pinyon Flats O   86.10  55 eP       P        04 33 30.9 -1.2
PFO                               pmax    pmax
      comp=Z,13nm,1.2s
PFO   Pinyon Flats O   86.10  55  P       P        04 33 32.9 +0.8
      baz=254
TPFO  Pinon Flats      86.11  55  P       P        04 33 32.5 +0.4
      baz=254
XPFO  Pion Flat        86.11  55 eP       P        04 33 31.8 -0.2
      comp=Z,12nm,1.1s
IKP   In-Ko-Pah, Jac   86.13  56  P       P        04 33 32.8 +0.6
      baz=255
GSC   Goldstone, Bar   86.29  53 eP       P        04 33 31.9 -1.0
      comp=Z,18nm,1.4s
GSC   Goldstone, Bar   86.29  53 eP       P        04 33 31.9 -1.0
GSC                               pmax    pmax
      comp=Z,18nm,1.4s
GSC   Goldstone, Bar   86.29  53  P       P        04 33 33.8 +0.9
      baz=254
GRAC  Grapevine Rang   86.33  51  P       P        04 33 33.6 +0.6
      baz=254
DLBC  Dease Lake       86.34  28  P       P        04 33 32.7 +0.1
      comp=Z,7.2nm,1.0s,baz=224,slow=8.0,SNR=7.7
A04D  Lummi Island     86.35  39  P       P        04 33 32.2 -0.5
      baz=249
KVN   Kaiserville      86.36  49 eP       P        04 33 32.5 -0.8
      comp=Z,11nm,1.0s
KVN   Kaiserville      86.36  49 eP       P        04 33 32.5 -0.8
KVN                               pmax    pmax
      comp=Z,11nm,1.0s
SWSC  Sam W. Stewart   86.46  56  P       P        04 33 34.1 +0.4
      baz=255
FURC  Furnace Creek,   86.57  52  P       P        04 33 34.4 +0.4
      baz=254
B05A  Bryant           86.57  40  P       P        04 33 34.3 +0.5
      baz=250
BELC  Belle Mtn. Jos   86.58  55  P       P        04 33 34.5 +0.1
      baz=254
I07A  Izee             86.88  44 eP       P        04 33 34.6 -1.1
      comp=Z,17nm,1.1s
BC3   Big Chuckawall   86.92  55  P       P        04 33 36.5 +0.4
      baz=255
WVOR  Wild Horse Val   86.98  46 eP       P        04 33 35.1 -1.1
      comp=Z,17nm,1.0s
WVOR  Wild Horse Val   86.98  46 eP       P        04 33 35.1 -1.1
WVOR                              pmax    pmax
      comp=Z,17nm,1.0s
GMRC  Granite Mounta   87.06  54  P       P        04 33 37.2 +0.4
      baz=255
F07A  Phinny Hill Vi   87.17  42 eP       P        04 33 36.2 -0.6
      comp=Z,28nm,1.4s
TPNV  Topopah Spring   87.17  52 eP       P        04 33 36.8 -0.5
      comp=Z,11nm,1.3s
TPNV  Topopah Spring   87.17  52 eP       P        04 33 36.8 -0.5
TPNV                              pmax    pmax
      comp=Z,11nm,1.3s
IRM   Iron Mountain    87.30  55  P       P        04 33 38.4 +0.6
      baz=255
J08A  Circle Bar Ran   87.37  45 eP       P        04 33 36.7 -1.3
      comp=Z,22nm,1.1s
LDFC  Landfair         87.57  54 eP       P        04 33 38.5 -0.7
      comp=Z,29nm,1.0s
HAWA  Hanford          87.59  42 eP       P        04 33 38.4 -0.4
      comp=Z,8.6nm,0.8s
G08A  Pilot Rock       87.63  43 eP       P        04 33 38.6 -0.6
      comp=Z,19nm,1.0s
Y12C  Blythe           87.70  55 eP       P        04 33 38.9 -0.7
      comp=Z,17nm,1.1s
Y12C  Blythe           87.70  55  P       P        04 33 40.4 +0.7
      baz=255
SHPR  Sheep Range      87.90  52 eP       P        04 33 40.3 -0.5
      comp=Z,12nm,1.3s
E08A  Dider Farm, El   87.93  42 eP       P        04 33 40.0 -0.4
      comp=Z,29nm,1.2s
R11A  Troy Canyon, C   88.06  51 eP       P        04 33 41.0 -0.5
      comp=Z,12nm,1.3s
R11A  Troy Canyon, C   88.06  51  P       P        04 33 42.1 +0.6
      baz=255
PDMCI Parker Dam,Lak   88.14  55  P       P        04 33 42.3 +0.5
      baz=256
D08A  Wollman Farm,    88.20  41 eP       P        04 33 41.6 -0.1
      comp=Z,9.3nm,0.9s
B08A  Colville Reser   88.34  40 eP       P        04 33 41.8 -0.6
      comp=Z,8.1nm,1.0s
W13A  Hualapai Mount   88.55  54 eP       P        04 33 42.5 -1.4
      comp=Z,15nm,1.2s
BMO   Blue Mountains   88.61  44 eP       P        04 33 43.0 -0.9
      comp=Z,5.7nm,1.0s
BMO   Blue Mountains   88.61  44 eP       P        04 33 43.0 -0.9
BMO                               pmax    pmax
      comp=Z,6.0nm,1.0s
214A  Organ Pipe Nat   88.66  57  P       P        04 33 45.2 +0.9
      baz=256
WMQ   Urumqi           88.90 315 eP       P        04 33 47.0 +1.8
WMQ                               pmax    pmax
      comp=Z,11nm,0.9s
WMQ                               pmax    pmax
      comp=Z,15nm,1.1s
WMQ                               LR      LR
      comp=N,6µm,17.7s
WMQ                               LR      LR
      comp=E,3µm,17.7s
WMQ                               LR      LR
      comp=Z,5µm,21.3s
ELK   Elko             88.95  48 eP       P        04 33 45.2 -0.5
      comp=Z,11nm,1.4s
ELK   Elko             88.95  48 eP       P        04 33 45.2 -0.5
ELK                               pmax    pmax
      comp=Z,11nm,1.4s
F10A  Beach Ranch, E   88.99  43 eP       P        04 33 44.5 -1.2
      comp=Z,16nm,1.1s
MFID  Camas Ranch      89.24  46 eP       P        04 33 45.9 -0.9
      comp=Z,8.6nm,1.0s
PSUT  Pine Spring      89.42  51 eP       P        04 33 47.0 -1.0
      comp=Z,10nm,1.0s
LCMT  Little Creek M   89.52  52 eP       P        04 33 47.5 -0.9
      comp=Z,13nm,1.0s
CCUT  Cedar City       89.55  52 eP       P        04 33 48.1 -0.6
      comp=Z,16nm,1.1s
HSIG                   89.56  60 eP       P        04 33 48.2 -0.4
      comp=Z,10nm,1.1s
NEW   Newport          89.72  41 eP       P        04 33 48.1 -0.8
      comp=Z,4.3nm,0.8s
NEW   Newport          89.72  41 eP       P        04 33 48.1 -0.8
NEW                               pmax    pmax
      comp=Z,4.0nm,0.8s
NEW   Newport          89.72  41  P       P        04 33 48.7 -0.2
      baz=253
SZCU  Shurtz Canyon    89.78  52 eP       P        04 33 49.5 -0.1
      comp=Z,16nm,1.2s
INK   Inuvik           89.81  19 eP       P        04 33 48.3 -0.5
      comp=Z,10nm,1.4s
INK   Inuvik           89.81  19  P       P        04 33 48.0 -0.7
      comp=Z,4.4nm,1.1s,baz=260,slow=2.0,SNR=6.1
KNB   Kanab            89.84  52 eP       P        04 33 49.3 -0.6
      comp=Z,18nm,1.1s
KNB   Kanab            89.84  52 eP       P        04 33 49.3 -0.6
KNB                               pmax    pmax
      comp=Z,18nm,1.1s
U15A  North Rim        90.12  53 eP       P        04 33 50.6 -0.8
      comp=Z,17nm,1.0s
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HLID  Hailey           90.27  46 eP       P        04 33 50.6 -1.1
      comp=Z,7.5nm,0.9s
HLID  Hailey           90.27  46  P       P        04 33 52.1 +0.4
      baz=255
PKCU  Pink Cliffs      90.34  52 eP       P        04 33 51.0 -1.4
      comp=Z,26nm,1.1s
X16A  Lo Mia Camp, P   90.34  55 eP       P        04 33 52.2 -0.1
      comp=Z,9.9nm,1.0s
TUC   Tucson           90.41  57 eP       P        04 33 52.7 +0.1
      comp=Z,10nm,1.3s
TUC   Tucson           90.41  57 eP       P        04 33 52.7 +0.1
TUC                               pmax    pmax
      comp=Z,10.0nm,1.3s
TUC   Tucson           90.41  57  P       P        04 33 52.8 +0.2
      baz=258
MTPU  Mount Pierson    90.58  51 eP       P        04 33 53.4 -0.2
      comp=Z,19nm,1.2s
DUG   Dugway, Tooele   90.60  49 eP       P        04 33 52.8 -0.6
      comp=Z,11nm,1.3s
DUG   Dugway, Tooele   90.60  49 eP       P        04 33 52.8 -0.6
DUG                               pmax    pmax
      comp=Z,11nm,1.3s
DUG   Dugway, Tooele   90.60  49  P       P        04 33 53.4 +0.1
      baz=256
BGU   Big Grassy Mou   90.61  49 eP       P        04 33 52.8 -0.6
      comp=Z,12nm,1.2s
WUAZ  Wupatki          90.64  54 eP       P        04 33 53.6 -0.1
      comp=Z,13nm,1.0s
WUAZ  Wupatki          90.64  54  P       P        04 33 54.3 +0.6
      baz=257
MSU   Marysvale        90.69  51 eP       P        04 33 53.9  0.0
MSU   Marysvale        90.69  51 eP       P        04 33 53.9  0.0
HVU   Hansel Valley    91.00  48 eP       P        04 33 54.9 -0.3
      comp=Z,22nm,1.2s
HVU   Hansel Valley    91.00  48 eP       P        04 33 54.9 -0.3
HVU                               pmax    pmax
      comp=Z,22nm,1.2s
NLU   North Lily Min   91.10  50 eP       P        04 33 55.2 -0.5
      comp=Z,12nm,1.0s
SPUT  South Promonto   91.13  48 eP       P        04 33 54.8 -1.0
      comp=Z,4.9nm,0.8s
MPU   Maple Canyon     91.44  50 eP       P        04 33 57.3  0.0
      comp=Z,28nm,1.4s
319A  Douglas          91.47  58 eP       P        04 33 57.5 -0.1
      comp=Z,11nm,1.0s
CTU   Camp Tracy       91.51  49 eP       P        04 33 57.5  0.0
      comp=Z,9.1nm,0.9s
Q16A  Castle Valley    91.55  51 eP       P        04 33 57.9 +0.1
      comp=Z,8.5nm,1.1s
TMUT  Trail Mountain   91.60  50 eP       P        04 33 58.0 -0.2
      comp=Z,11nm,1.1s
MCMT  McKenzie Canyo   91.67  45 eP       P        04 33 58.3 -0.1
TCUT  Toone Canyon     91.85  49 eP       P        04 33 59.2 -0.1
      comp=Z,11nm,0.9s
W18A  Petrified Fore   91.86  55 eP       P        04 33 58.7 -0.7
      comp=Z,11nm,1.0s
W18A  Petrified Fore   91.86  55  P       P        04 33 59.9 +0.5
      baz=258
SYO   Syowa Base       91.89 197⇓eX       P        04 33 50.2 -8.4
DLMT  Dillon           91.97  44 eP       P        04 33 58.6 -0.9
      comp=Z,25nm,1.1s
LRM   Limekiln Ridge   92.17  44 eP       P        04 34 01.0 +0.3
FXWY  Fox Creek        92.68  46 eP       P        04 34 02.9 -0.1
      comp=Z,5.8nm,0.8s
BOZ   Bozeman (W)      92.68  44 eP       P        04 34 02.6 -0.3
      comp=Z,7.7nm,0.9s
BOZ   Bozeman (W)      92.68  44 eP       P        04 34 02.6 -0.3
BOZ                               pmax    pmax
      comp=Z,8.0nm,0.9s
BOZ   Bozeman (W)      92.68  44  P       P        04 34 03.4 +0.5
      baz=257
HRY   Holter Researc   92.79  43 eP       P        04 34 02.9 -0.5
IMW   Indian Meadow    92.80  46 eP       P        04 34 03.0 -0.6
      comp=Z,5.0nm,0.8s
SNOW  Snow King Moun   92.83  46 eP       P        04 34 03.2 -0.5
      comp=Z,9.3nm,1.2s
YMR   Madison River    92.94  45 eP       P        04 34 03.5 -0.7
      comp=Z,4.6nm,0.7s
121A  Cookes Peak, D   92.94  58  P       P        04 34 05.8 +1.3
      baz=259
PV09  Paradox Valley   93.02  52 eP       P        04 34 04.2 -0.6
PV19  Morning Glory    93.10  52 eP       P        04 34 04.7 -0.3
      comp=Z,4.8nm,0.9s
H17A  Grant Village    93.16  46  P       P        04 34 07.2 +2.0
      baz=258
PV04  Paradox Valley   93.17  52 eP       P        04 34 04.7 -0.7
      comp=Z,9.3nm,1.0s
PV12  Saucer Basin,    93.24  52 eP       P        04 34 05.5 -0.2
      comp=Z,8.6nm,0.9s
MK01  Makanchi Array   93.31 317 eP       P        04 34 04.8 -0.8
MK31  Makanchi Array   93.33 317 eP       P        04 34 05.2 -0.4
MKAR  Makanchi Array   93.33 317  P       P        04 34 04.9 -0.8
      comp=Z,2.0nm,0.9s,baz=112,slow=5.1,SNR=3.6
MKAR                              PKKP    PKKPdf   04 51 13.3 -0.2
      comp=Z,1.5nm,0.7s,baz=299,slow=2.5,SNR=6.9
ZAA0  Zalesovo Array   93.36 324 eP       P        04 34 04.3 -1.3
      comp=Z,6.8nm,1.1s
ZALV  Zalesovo Beam    93.36 324 eP       P        04 34 04.4 -1.2
ZALV  Zalesovo Beam    93.36 324  P       P        04 34 04.1 -1.5
      comp=Z,2.6nm,0.8s,baz=107,slow=5.0,SNR=6.6
BW06  Boulder Array    93.55  47 eP       P        04 34 06.0 -1.0
      comp=Z,7.1nm,1.1s
BW06  Boulder Array    93.55  47  P       P        04 34 07.2 +0.1
      baz=259
PD31  Pinedale Array   93.55  47 eP       P        04 34 06.3 -0.7
PDAR  Pinedale Array   93.55  47 eP       P        04 34 05.8 -1.3
PDAR  Pinedale Array   93.55  47  P       P        04 34 06.1 -1.0
      comp=Z,3.2nm,0.9s,baz=252,slow=2.4,SNR=11
EGMT  Eagleton         94.45  42 eP       P        04 34 10.1 -0.7
      comp=Z,19nm,1.1s
EGMT  Eagleton         94.45  42  P       P        04 34 10.9  0.0
      baz=259
ANMO  Albuquerque      94.47  55 eP       P        04 34 10.6 -0.8
      comp=Z,3.8nm,1.1s
ANMO  Albuquerque      94.47  55⇑iP       P        04 34 12.3 +0.9
ANMO                              pmax    pmax
      comp=Z,15nm,3.4s
ANMO  Albuquerque      94.47  55  P       P        04 34 12.3 +0.9
      baz=260
S22A  4UR Ranch, Cre   94.66  53  P       P        04 34 12.9 +0.5
      baz=260
MNTX  Cornudas Mount   94.80  59 eP       P        04 34 11.6 -1.2
      comp=Z,2.5nm,0.9s
YKA   Yellowknife Ar   94.90  27  P       P        04 34 10.3 -2.1
      comp=Z,3.4nm,0.7s,baz=255,slow=4.7,SNR=17
YKB5  Yellowknife Ar   94.90  27 eP       P        04 34 10.6 -1.9
K22A  Casper           95.73  48  P       P        04 34 18.0 +1.1
      baz=261
TXAR  Lajitas Array    95.87  61  P       P        04 34 18.1 +0.2
      comp=Z,1.1nm,1.0s,baz=228,slow=4.9,SNR=5.1
KURK  Kurchatov        96.44 320  P       P        04 34 19.2 -0.6
KURK  Kurchatov        96.44 320  P       P        04 34 19.2 -0.6
KURBB Kurchatov Arra   96.49 320  P       P        04 34 19.2 -0.8
      comp=Z,0.2nm,0.3s,baz=88,slow=3.0,SNR=4.4
KSH   Kashi            96.56 309  P       P        04 34 24.1 +3.3
KSH                               pmax    pmax
      comp=Z,4µm,9.7s
DGMT  Dagmar           98.19  42  P       Pdif     04 34 27.6 -0.2
      baz=263
ARCES ARCESS Array B  116.16 345  PKP     PKiKP    04 39 32.5 -0.8
      comp=Z,5.0nm,1.1s,baz=15,slow=1.9,SNR=8.6
LPAZ  La Paz          120.36 116  PKP     PKPdf    04 39 43.5 -0.1
      comp=Z,1.5nm,0.6s,baz=144,slow=1.3,SNR=5.7
OBN   Obninsk         120.61 329 ePKIKP   PKiKP    04 39 43.5 +1.2
OBN                              e                 04 41 08.5
OBN                               pmax    pmax
      comp=Z,3.0nm,0.9s
KIV   Kislovodsk      121.03 315 ePKIKP   PKPdf    04 39 42.4 -1.1
KIV                               pmax    pmax
      comp=Z,5.0nm,1.0s
CPUP  Villa Florida   124.22 132  PKP     PKPdf    04 39 49.3 -0.8
      comp=Z,1.9nm,0.7s,baz=222,slow=1.0,SNR=4.0
SDV   Santo Domingo   124.62  87 ePKPdf   PKPdf    04 39 50.4 -0.9
BOSA  Boshof          125.13 223  PKP     PKPdf    04 39 51.8 -0.1
      comp=Z,5.9nm,1.0s,baz=45,slow=4.1,SNR=3.8
NB2   NORSAR Subarra  126.53 345  PKPdf   PKiKP    04 39 57.5 +3.6
      comp=Z,0.8nm,0.8s,baz=26,slow=2.0
SIV   San Ignacio     126.63 119  PKP     PKPdf    04 39 54.2 -0.8
      comp=Z,3.4nm,1.0s,baz=284,slow=1.3,SNR=7.7
HUMP  Col San Antoni  129.79  75 ePKPdf   PKPdf    04 40 00.3 -0.5
VYHS  Vyhne           133.38 330 eP       Pdif     04 37 04.6 +0.3
VYHS  Vyhne           133.38 330 ePKP     PKiKP    04 40 10.0 +2.0
VYHS  Vyhne           133.38 330 ePDIFF   Pdif     04 37 04.6 +0.3
KHC   Kasperske Hory  135.35 334 epPKP    pPKPdf   04 40 17.5 -2.7
KHC   Kasperske Hory  135.35 334 ePKIKP   pPKPdf   04 40 17.5 -2.7
BDFB  Brasilia        137.53 128  PKP     PKPdf    04 40 16.1 +0.5
      comp=Z,5.2nm,0.9s,baz=94,slow=8.3,SNR=4.3
```

```
KEST  Kesra           147.22 323  PKPbc   PKPbc    04 40 35.0 +0.5
      comp=Z,12nm,1.0s,baz=270,slow=3.1,SNR=4.7
MDT   Midelt          156.40 339  PKPab   PKPab    04 41 13.6 -0.7
      comp=Z,1.5nm,0.8s,baz=328,slow=5.1,SNR=3.8
TOA0  Torodi Ar. Sit  164.11 280 ePKPdf   PKPdf    04 40 54.5 -0.4
TORD  Torodi Ar. Bea  164.11 280  PKP     PKPdf    04 40 54.6 -0.4
      comp=Z,1.8nm,1.0s,baz=349,slow=3.4,SNR=4.2
TORD                              PKPab   PKPab    04 41 48.7 +0.2
      comp=Z,2.6nm,1.0s,baz=97,slow=3.7,SNR=4.0
```

IDC ***06*** *04:22:59.4±0.7, 10°.84S×165°.16E, h0^{km}, mb4.6/22, mb1 4.7/23, mb1mx4.6/51, mbtmp4.6/23, ML5.2/1, Error ellipse: s-maj=21.4km s-min=14.4km az=104.0*

NEIC ***06*** *04:23:01.4±0.3, 10°.77S×165°.14E, h10^{km}, mb5.2/16, Error ellipse: s-maj=9.3km s-min=6.8km az=86.0*

ISCJB ***06*** *04:23:02.1±0.3, 10°.84S±0°.05×165°.14E±0°.06, h30^{km}, mb4.8/34, Error ellipse: s-maj=9.0km s-min=5.8km az=152.5*

ISC 06 04:23:03.8±0.5**, 10°.87S**±0°.07×**165°.25E**±0°.08**, h30^{km}, n77, σ1^{s}25**/73**, mb4.8**/34**, Santa Cruz Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID         Time      Res
                                  Op      ISC      h  m  s    ISC
HNR   Honiara           5.41 285 ePn      Pn       04 24 21.2 -1.3
HNR                              eSn      Sn       04 25 23.0 -0.9
HNR   Honiara           5.41 285  Pn      Pn       04 24 23.8 +1.3
      146nm,0.3s,baz=158,slow=4.7,SNR=6.6
HNR                               Sn      Sn       04 25 27.7 +3.8
      164nm,0.3s,baz=150,slow=9.3,SNR=5.5
DZM   Mont Dzumac      11.20 174 ePn      Pn       04 25 43.1 +1.1
DZM                              eSn      Sn       04 27 42.9 -3.4
DZM   Mont Dzumac      11.20 174  Pn      Pn       04 25 43.1 +1.1
      16nm,0.3s,baz=71,slow=5.5,SNR=9.2
CTA   Charters Tower   20.46 241  P       Pn       04 27 40.6 -0.8
      56nm,0.7s,baz=66,slow=12,SNR=11
HAZ   Te Kaha          29.05 159  P       P        04 29 01.9 +0.5
H11S2 WAKE ISLAND Hy   29.20   3  T       T        04 59 32.2
      baz=184,slow=76,SNR=25
H11S3 WAKE ISLAND Hy   29.21   3  T       T        04 59 34.1
      baz=184,slow=76,SNR=26
H11S1 WAKE ISLAND Hy   29.22   3  T       T        04 59 33.3
      baz=184,slow=76,SNR=24
PKGZ  Pakihiroa        29.27 159  P       P        04 29 03.2 -0.2
URZ   Urewera          29.27 161  P       P        04 29 04.1 +0.7
      11nm,0.7s,baz=51,slow=9.7,SNR=3.6
URZ   Urewera          29.27 161  P       P        04 29 03.9 +0.5
WMGZ  Waiomatatini S   29.33 158  P       P        04 29 04.8 +1.0
MWZ   Matawai          29.48 160  P       P        04 29 05.4 +0.1
RIGZ  Rimuhau          29.89 160  P       P        04 29 09.3 +0.4
BKZ   Black Stump Fm   29.91 162 eP       P        04 29 10.7 +1.5
      36nm,0.5s
BKZ   Black Stump Fm   29.91 162  P       P        04 29 10.6 +1.5
NMHZ  Naumai           29.94 162  P       P        04 29 10.9 +1.5
KWHZ  Kaweka Forest    30.13 163  P       P        04 29 13.3 +2.2
STKA  Stephens Creek   30.24 223 eP       P        04 29 12.6 +0.5
      4.6nm,0.9s
STKA  Stephens Creek   30.24 223  P       P        04 29 12.6 +0.5
      7.2nm,0.6s,baz=49,slow=10,SNR=5.2
H11N1 WAKE ISLAND Hy   30.43   3  T       T        05 01 08.0
      baz=182,slow=76,SNR=13
H11N3 WAKE ISLAND Hy   30.43   3  T       T        05 01 04.6
      baz=182,slow=76,SNR=12
H11N2 WAKE ISLAND Hy   30.45   3  T       T        05 01 07.1
      baz=182,slow=76,SNR=11
KAHZ  Kahuranaki       30.61 162  P       P        04 29 16.4 +1.2
WR1   Warramunga Arr   31.09 249 eP       P        04 29 18.7 -1.1
      24nm,0.8s
WRA   Warramunga Arr   31.09 249  P       P        04 29 18.7 -1.1
      12nm,0.7s,baz=82,slow=8.8,SNR=10.0
LTZ   Lake Taylor      32.38 170 eP       P        04 29 34.1 +3.3
      28nm,0.7s
AS01  Alice Springs    32.40 243 eP       P        04 29 29.7 -1.5
AS31  Alice Springs    32.44 243 eP       P        04 29 31.0 -0.6
      6.1nm,0.8s
ASAR  Alice Springs    32.44 243  P       P        04 29 30.2 -1.4
      18nm,0.7s,baz=64,slow=9.9,SNR=14
OXZ   Oxford           32.87 171 eP       P        04 29 38.8 +3.7
      67nm,1.5s
FITZ  Fitzroy Crossi   38.96 255  P       P        04 30 26.5 -1.1
      13nm,0.7s,baz=112,slow=5.8,SNR=11
NWAO  Narrogin (SRO)   49.16 236  P       P        04 31 49.0 -0.2
      40nm,0.8s,baz=292,slow=7.2,SNR=11
MJAR  Matsushiro Arr   53.59 333  P       P        04 32 21.8 -0.4
      15nm,1.2s,baz=170,slow=6.7,SNR=4.1
MAJO  Matsushiro       53.59 333 eP       P        04 32 21.8 -0.4
JNU   Nakatsue         54.65 324 eP       P        04 32 29.9 -0.2
      50nm,1.1s
JNU   Nakatsue         54.65 324  P       P        04 32 29.9 -0.2
      24nm,0.9s,baz=92,slow=5.3,SNR=5.9
TPUB  Ta-pu            55.31 308 eP       P        04 32 33.7 -1.3
      74nm,1.2s
SSLB  Suanglung        55.33 309 eP       P        04 32 34.6 -0.5
      22nm,1.0s
ASAJ  Asahikawa        58.47 341  P       P        04 32 57.3 +0.4
      6.3nm,0.4s,baz=243,slow=8.2,SNR=3.5
KSRS  Korea Array      59.46 326  P       P        04 33 04.0  0.0
      3.5nm,0.8s,baz=138,slow=7.2,SNR=6.4
KS15  Wonju Array Si   59.47 326 eP       P        04 33 04.0 -0.1
      20nm,1.3s
KSAR  Wonju Array Be   59.47 326  P       P        04 33 04.0 -0.1
KS01  Wonju Array Si   59.49 326 eP       P        04 33 03.9 -0.2
USRK  Ussuriysk Ar.    62.57 334  P       P        04 33 25.6 +0.7
      3.0nm,0.6s,baz=124,slow=5.1,SNR=8.0
PETK  Petropavlovsk-   64.05 355  P       P        04 33 34.9 +0.4
      3.4nm,0.8s,baz=141,slow=9.3,SNR=3.0
PEA1  Petropavlovsk-   64.05 355 eP       P        04 33 34.9 +0.4
KLR   Kul'dur          66.70 337  P       P        04 33 52.2 +0.4
      7.1nm,0.9s,baz=81,slow=5.3,SNR=6.2
PSI   Prapat           67.37 278  P       P        04 33 55.3 -1.6
      6.7nm,0.8s,baz=359,slow=3.5,SNR=4.7
ENH   Enshi            67.41 309 eP       P        04 33 56.3 -0.5
      28nm,0.9s
XAN   Xi'an            69.64 313 eP       P        04 34 10.7  0.0
      20nm,1.1s
KMI   Kunming          70.61 302 eP       P        04 34 19.4 +2.3
      28nm,1.0s
CM01  Chiang Mai Arr   71.57 294 eP       P        04 34 24.1 +1.4
CM31  Chiang Mai Arr   71.60 294 eP       P        04 34 23.2 +0.4
      7.8nm,0.6s
CMAR  Chiang Mai Arr   71.60 294  P       P        04 34 23.2 +0.4
      1.5nm,0.6s,baz=119,slow=4.6,SNR=4.1
SONA0 Songino Array    78.23 324 eP       P        04 35 01.1 +0.3
SONM  Songino Array    78.23 324  P       P        04 35 01.1 +0.3
      3.2nm,1.0s,baz=122,slow=5.6,SNR=5.0
QSPA  South Pole Qui   79.14 180 eP       P        04 35 06.5 +1.0
      28nm,1.1s
QSPA  South Pole Qui   79.14 180  P       P        04 35 05.9 +0.4
      11nm,1.0s,baz=62,slow=3.2,SNR=3.9
SHL   Shillong         80.01 299 eP       P        04 35 10.0 -1.0
ILAR  Eielson Array    83.50  19  P       P        04 35 27.9 -0.4
      1.5nm,0.6s,baz=238,slow=5.0,SNR=6.6
ILB   Eielson Array    83.50  19 eP       P        04 35 29.1 +0.8
      4.7nm,0.6s
MK32  Makanchi Array   93.06 317 eP       P        04 36 14.2 -0.6
MKAR  Makanchi Array   93.06 317  P       P        04 36 14.2 -0.6
      2.0nm,0.7s,baz=94,slow=5.6,SNR=5.5
ZALV  Zalesovo Beam    93.13 324  P       P        04 36 13.4 -1.4
      1.4nm,0.7s,baz=112,slow=4.9,SNR=3.8
ZAA1  Zalesovo Array   93.13 324 eP       P        04 36 13.4 -1.4
YKA   Yellowknife Ar   95.04  27  P       P        04 36 22.3 -1.1
      0.3nm,0.6s,baz=256,slow=4.8,SNR=5.0
YKB5  Yellowknife Ar   95.04  27 eP       P        04 36 22.3 -1.1
LTX   Lajitas          96.17  61 eP       P        04 36 30.7 +1.2
TXAR  Lajitas Array    96.17  61  P       P        04 36 30.7 +1.2
      0.2nm,0.7s,baz=231,slow=5.7,SNR=2.6
ARA0  ARCESS Array S  116.04 345 ePKPdf   PKiKP    04 41 42.7 -0.7
ARCES ARCESS Array B  116.04 345  PKP     PKiKP    04 41 42.7 -0.7
      3.1nm,0.9s,baz=92,slow=2.7,SNR=6.5
FIA0  FINESS Array S  121.43 338 ePKPdf   PKPdf    04 41 54.0 +0.1
FINES FINESS Array B  121.43 338  PKP     PKPdf    04 41 54.0 +0.1
      1.0nm,0.7s,baz=289,slow=4.3,SNR=3.0
BOSA  Boshof          124.91 224  PKP     PKiKP    04 42 02.3 +0.1
      2.9nm,0.6s,baz=142,slow=0.7,SNR=6.1
KEST  Kesra           146.98 322  PKPbc   PKPbc    04 42 44.5 +0.4
      6.0nm,0.8s,baz=289,slow=4.0,SNR=4.2
```

IDC ***06*** *04:27:38.1±1.2, 12°.13S×165°.99E, h0^{km}, mb4.5/16, mb1 4.6/17, mb1mx4.4/50, mbtmp4.5/17, ML4.9/1, Error ellipse: s-maj=36.9km s-min=18.7km az=128.0*

NEIC ***06*** *04:27:40.1±0.3, 12°.02S×165°.90E, h10^{km}, mb5.1/19, Error ellipse: s-maj=9.6km s-min=8.2km az=113.0*

ISCJB ***06*** *04:27:41.6±0.4, 12°.08S±0°.06×165°.81E±0°.08, h30^{km},*

mb4.8/34, Error ellipse: s-maj=11.3km s-min=9.2km az=7.6

ISC 06 04:27:43.3±0.6, **12°.0S**±0°.1×**165°.9E**±0°.1, **h30**^{km}, **n62**, σ**1**^{s}**.17**/65, **mb4.8**/34, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.40**	**293**	Pn	**Pn**	**04 29 16.8**	**+1.2**
	28nm,0.3s,baz=112,slow=9.1,SNR=4.1						
CTA	**Charters Tower**	**20.49**	**245**	P	**P**	**04 32 20.0**	**+1.1**
	23nm,1.0s,baz=75,slow=14,SNR=4.5						
CTAO	**Charters Tower**	**20.49**	**245**	*e*P	**P**	**04 32 14.3**	**-4.6**
	30nm,0.9s						
URZ	**Urewera**	**27.96**	**161**	*e*P	**P**	**04 33 31.5**	**+0.3**
	38nm,1.4s						
STKA	**Stephens Creek**	**29.84**	**225**	*e*P	**P**	**04 33 48.6**	**+0.7**
	2.2nm,0.8s						
STKA	**Stephens Creek**	**29.84**	**225**	P	**P**	**04 33 48.2**	**+0.3**
	5.2nm,0.8s,baz=67,slow=5.2,SNR=3.9						
SNZO	**South Karori**	**30.16**	**167**	*e*P	**P**	**04 33 51.7**	**+1.1**
	125nm,1.2s						
WRAB	**Tennant Creek**	**31.29**	**251**	*e*P	**P**	**04 33 58.4**	**-2.6**
	22nm,1.3s						
WB2	**Warramunga Arr**	**31.29**	**251**	*e*P	**P**	**04 33 59.9**	**-1.1**
WB2				*e*PcP	**PcP**	**04 36 56.6**	**+1.7**
WR1	**Warramunga Arr**	**31.30**	**251**	*e*P	**P**	**04 33 59.7**	**-1.4**
	37nm,1.4s						
WRA	**Warramunga Arr**	**31.30**	**251**	P	**P**	**04 33 59.7**	**-1.4**
	26nm,1.3s,baz=80,slow=8.7,SNR=7.8						
FOZ	**Fox Glacier**	**31.56**	**175**	*e*P	**P**	**04 34 03.6**	**+0.7**
	62nm,1.1s						
AS31	**Alice Springs**	**32.49**	**245**	*e*P	**P**	**04 34 10.2**	**-1.4**
	3.0nm,1.0s						
AS31				*e*PcP	**PcP**	**04 36 58.9**	**+0.7**
ASAR	**Alice Springs**	**32.49**	**245**	P	**P**	**04 34 10.2**	**-1.4**
	9.0nm,1.0s,baz=78,slow=9.3,SNR=13						
ASAR				PcP	**PcP**	**04 36 58.9**	**+0.7**
	2.3nm,1.0s,baz=120,slow=3.3,SNR=4.7						
FITZ	**Fitzroy Crossi**	**39.28**	**256**	P	**P**	**04 35 08.0**	**-1.6**
	5.0nm,0.9s,baz=75,slow=10,SNR=3.9						
MBWA	**Marble Bar**	**45.03**	**252**	*e*P	**P**	**04 35 56.1**	**-0.5**
	90nm,1.1s						
MJAR	**Matsushiro Arr**	**54.92**	**333**	P	**P**	**04 37 10.1**	**-1.3**
	3.0nm,0.8s,baz=161,slow=9.3,SNR=4.7						
MAJO	**Matsushiro**	**54.92**	**333**	*e*P	**P**	**04 37 10.1**	**-1.3**
KSM	**Kuching**	**56.82**	**280**	*e*P	**P**	**04 37 26.1**	**+0.6**
	24nm,1.2s						
KSRS	**Korea Array**	**60.78**	**326**	P	**P**	**04 37 52.8**	**+0.3**
	2.4nm,1.0s,baz=154,slow=6.9,SNR=5.5						
KS15	**Wonju Array Si**	**60.79**	**326**	*e*P	**P**	**04 37 52.8**	**+0.2**
	28nm,1.4s						
KSAR	**Wonju Array Be**	**60.79**	**326**	P	**P**	**04 37 52.8**	**+0.2**
KS01	**Wonju Array Si**	**60.81**	**326**	*e*P	**P**	**04 37 52.4**	**-0.3**
USRK	**Ussuriysk Ar.**	**63.90**	**333**	P	**P**	**04 38 14.5**	**+1.2**
	3.9nm,0.9s,baz=125,slow=5.3,SNR=6.1						
IPM	**Ipoh**	**66.55**	**280**	*e*P	**P**	**04 38 31.9**	**+0.8**
	45nm,1.2s						
KLR	**Kul'dur**	**68.03**	**337**	P	**P**	**04 38 40.8**	**+1.1**
	5.6nm,1.2s,baz=149,slow=6.6,SNR=3.8						
PSI	**Prapat**	**68.16**	**278**	P	**P**	**04 38 42.0**	**+0.5**
	8.0nm,0.9s,baz=32,slow=0.4,SNR=5.6						
ENH	**Enshi**	**68.64**	**309**	*e*P	**P**	**04 38 42.7**	**-1.3**
	28nm,1.4s						
XAN	**Xi'an**	**70.90**	**313**	*e*P	**P**	**04 38 57.6**	**-0.3**
	30nm,0.9s						
CM01	**Chiang Mai Arr**	**72.62**	**294**	*e*P	**P**	**04 39 10.2**	**+1.8**
CM31	**Chiang Mai Arr**	**72.65**	**294**	*e*P	**P**	**04 39 08.7**	**+0.1**
	17nm,1.4s						
CMAR	**Chiang Mai Arr**	**72.65**	**294**	P	**P**	**04 39 08.7**	**+0.1**
	2.8nm,0.3s,baz=119,slow=4.5,SNR=14						
CMMT	**Chiang Mai**	**72.76**	**294**	P	**P**	**04 39 11.7**	**+2.4**
	5.5nm,1.2s						
CHTO	**Chiang Mai**	**72.77**	**294**	P	**P**	**04 39 11.8**	**+2.5**
	30nm,1.2s						
QSPA	**South Pole Qui**	**77.97**	**180**	*e*P	**P**	**04 39 39.5**	**+1.0**
	16nm,1.0s						
SONA0	**Songino Array**	**79.56**	**324**	*e*P	**P**	**04 39 48.3**	**+0.8**
SONM	**Songino Array**	**79.56**	**324**	P	**P**	**04 39 48.3**	**+0.8**
	2.7nm,1.0s,baz=141,slow=5.3,SNR=9.5						
SONA1	**Songino Array**	**79.56**	**324**	*e*P	**P**	**04 39 47.9**	**+0.3**
ILAR	**Eielson Array**	**84.40**	**18**	P	**P**	**04 40 11.6**	**-0.8**
	1.6nm,1.1s,baz=239,slow=5.1,SNR=5.8						
ILB	**Eielson Array**	**84.40**	**18**	*e*P	**P**	**04 40 11.6**	**-0.8**
	3.7nm,1.1s						
IL1	**Eielson Array**	**84.41**	**18**	*e*P	**P**	**04 40 11.5**	**-0.9**
AFDM	**Forest Hills D**	**84.74**	**49**	*e*P	**P**	**04 40 14.3**	**-0.5**
	1.8nm,0.8s						
NV01	**Mina Array Sit**	**86.55**	**50**	*e*P	**P**	**04 40 23.5**	**-0.5**
TIXI	**Tiksi**	**87.09**	**349**	*e*P	**P**	**04 40 26.0**	**+0.4**
TIXI	**Tiksi**	**87.09**	**349**	P	**P**	**04 40 26.0**	**+0.4**
	2.1nm,0.3s,baz=122,slow=5.0,SNR=4.8						
MK01	**Makanchi Array**	**94.34**	**317**	*e*P	**P**	**04 40 59.5**	**-0.6**
MK31	**Makanchi Array**	**94.35**	**317**	*e*P	**P**	**04 40 60.0**	**-0.2**
	5.6nm,1.0s						
MK32	**Makanchi Array**	**94.35**	**317**	*e*P	**P**	**04 40 59.5**	**-0.6**
MKAR	**Makanchi Array**	**94.35**	**317**	P	**P**	**04 40 59.5**	**-0.6**
	2.7nm,0.7s,baz=96,slow=5.6,SNR=12						
ZAA0	**Zalesovo Array**	**94.45**	**324**	*e*P	**P**	**04 41 01.2**	**+0.9**
	5.2nm,1.1s						
ZALV	**Zalesovo Beam**	**94.45**	**324**	*e*P	**P**	**04 40 59.3**	**-1.0**
ZALV	**Zalesovo Beam**	**94.45**	**324**	P	**P**	**04 41 00.3**	**0.0**
	1.3nm,0.8s,baz=104,slow=6.3,SNR=5.8						
ZAA1	**Zalesovo Array**	**94.45**	**324**	*e*P	**P**	**04 41 00.3**	**0.0**
ARA0	**ARCESS Array S**	**117.33**	**345**	*e*PKPdf	**PKPdf**	**04 46 24.2**	**-1.1**
ARCES	**ARCESS Array B**	**117.33**	**345**	PKP	**PKPdf**	**04 46 24.2**	**-1.1**
	2.4nm,0.7s,baz=85,slow=1.5,SNR=6.4						
FIA0	**FINESS Array S**	**122.75**	**338**	*e*PKPdf	**PKiKP**	**04 46 36.0**	**0.0**
FINES	**FINESS Array B**	**122.75**	**338**	PKP	**PKiKP**	**04 46 36.0**	**0.0**
	1.6nm,0.9s,baz=0.0,slow=13,SNR=3.7						
GEC2	**GERESS Array S**	**136.66**	**333**	*e*PKPdf	**PKiKP**	**04 47 04.0**	**-0.6**
GERES	**GERESS Array B**	**136.66**	**333**	PKP	**PKiKP**	**04 47 04.0**	**-0.6**
GERES	**GERESS Array B**	**136.66**	**333**	PKP	**PKiKP**	**04 47 04.0**	**-0.6**
	0.6nm,0.7s,baz=134,slow=5.6,SNR=3.0						
ES19	**SONSECA Array**	**151.01**	**344**	*e*PKPdf	**PKPdf**	**04 47 27.1**	**-0.8**
ESDC	**Sonseca Array**	**151.05**	**344**	PKPbc	**PKPbc**	**04 47 33.6**	**-0.2**
	0.2nm,0.4s,baz=48,slow=2.2,SNR=4.2						

IDC ***06*** *04:31:19.7±1.3, 10°.81S×165°.49E, h0*^{km}*, mb3.9/4, mb1 4.3/6, mb1mx3.8/46, mbtmp4.1/6, ML4.7/2, Error ellipse: s-maj=41.2km s-min=25.7km az=143.0*

ISCJB ***06*** *04:31:22.7±1.1, 10°.9S±0°.1×165°.4E±0°.1, h30*^{km}*, mb3.9/4, Error ellipse: s-maj=20.9km s-min=19.0km az=44.6*

ISC 06 04:31:24.5±1.1, **10°.8S**±0°.1×**165°.5E**±0°.1, **h30**^{km}, **n6**, σ**0**^{s}**.88**/6, **mb3.9**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.61**	**284**	Pn	**Pn**	**04 32 46.5**	**+0.7**
	66nm,0.3s,baz=150,slow=7.3,SNR=3.2						
DZM	**Mont Dzumac**	**11.25**	**175**	Pn	**Pn**	**04 34 03.8**	**+0.5**
	2.1nm,0.3s,baz=108,slow=19,SNR=4.7						
WRA	**Warramunga Arr**	**31.32**	**249**	P	**P**	**04 37 42.0**	**-0.4**
	1.4nm,0.8s,baz=82,slow=8.8,SNR=4.7						
ASAR	**Alice Springs**	**32.66**	**243**	P	**P**	**04 37 53.0**	**-1.2**
	1.0nm,0.8s,baz=69,slow=9.4,SNR=4.1						
ILAR	**Eielson Array**	**83.37**	**19**	P	**P**	**04 43 48.3**	**0.0**
	0.6nm,0.6s,baz=240,slow=4.8,SNR=8.1						
NVAR	**Mina Array Bea**	**86.07**	**50**	P	**P**	**04 44 02.9**	**0.0**
	0.5nm,0.6s,baz=247,slow=6.7,SNR=3.6						

IDC ***06*** *04:32:36.2±0.6, 11°.02S×165°.35E, h0*^{km}*, mb4.3/18, mb1 4.5/20, mb1mx4.4/47, mbtmp4.3/20, ML4.6/2, Error ellipse: s-maj=18.8km s-min=15.4km az=134.0*

NEIC ***06*** *04:32:38.0±0.2, 11°.00S×165°.25E, h10*^{km}*, mb4.9/47, Error ellipse: s-maj=6.1km s-min=4.8km az=134.0*

ISCJB ***06*** *04:32:39.3±0.2, 11°.09S±0°.05×165°.18E±0°.04, h30*^{km}*, mb4.7/62, Error ellipse: s-maj=6.7km s-min=5.8km az=160.0*

ISC 06 04:32:40.9±0.4, **11°.02S**±0°.08×**165°.31E**±0°.08, **h30**^{km}, **n99**, σ**0**^{s}**.90**/103, **mb4.8**/62, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.51**	**286**	Pn	**Pn**	**04 34 01.9**	**+0.9**
	17nm,0.3s,baz=308,slow=2.6,SNR=4.9						
HNR				Sn	**Sn**	**04 35 03.5**	**+0.1**
	4.7nm,0.3s,baz=154,slow=22,SNR=3.0						
DZM	**Mont Dzumac**	**11.04**	**175**	Pn	**Pn**	**04 35 16.6**	**-0.3**
	4.4nm,0.3s,baz=32,slow=14,SNR=6.3						
CTA	**Charters Tower**	**20.43**	**242**	P	**P**	**04 37 16.9**	**+0.9**
	14nm,0.9s,baz=61,slow=12,SNR=5.9						
CTAO	**Charters Tower**	**20.43**	**242**	*e*P	**P**	**04 37 17.1**	**+1.1**
	38nm,1.1s						
URZ	**Urewera**	**29.11**	**161**	*e*P	**P**	**04 38 39.5**	**+0.5**
	43nm,1.2s						
URZ	**Urewera**	**29.11**	**161**	P	**P**	**04 38 38.8**	**-0.2**
	17nm,0.9s,baz=352,slow=3.0,SNR=5.5						
BKZ	**Black Stump Fm**	**29.75**	**162**	*e*P	**P**	**04 38 45.1**	**+0.4**
	43nm,1.3s						
STKA	**Stephens Creek**	**30.17**	**223**	*e*P	**P**	**04 38 49.0**	**+0.5**
	1.0nm,0.9s						
STKA	**Stephens Creek**	**30.17**	**223**	P	**P**	**04 38 49.0**	**+0.5**
	2.8nm,0.7s,baz=47,slow=6.7,SNR=4.9						
WC3	**Warramunga Arr**	**31.07**	**250**	*e*P	**P**	**04 38 54.7**	**-1.9**
	13nm,1.0s						
WRAB	**Tennant Creek**	**31.08**	**250**	*e*P	**P**	**04 38 54.1**	**-2.6**
	14nm,1.2s						
WB2	**Warramunga Arr**	**31.08**	**250**	*e*P	**P**	**04 38 54.2**	**-2.5**
	14nm,1.0s						
WR1	**Warramunga Arr**	**31.09**	**250**	*e*P	**P**	**04 38 55.2**	**-1.6**
	20nm,1.1s						
WRA	**Warramunga Arr**	**31.09**	**250**	P	**P**	**04 38 55.2**	**-1.6**
	9.3nm,1.1s,baz=80,slow=9.1,SNR=15						
THZ	**Tophouse**	**31.34**	**169**	*e*P	**P**	**04 38 59.4**	**+0.6**
	18nm,0.8s						
LTZ	**Lake Taylor**	**32.22**	**170**	*e*P	**P**	**04 39 07.3**	**+0.8**
	27nm,1.0s						
AS01	**Alice Springs**	**32.38**	**243**	*e*P	**P**	**04 39 10.0**	**+1.8**
AS31	**Alice Springs**	**32.42**	**243**	*e*P	**P**	**04 39 07.7**	**-0.9**
	6.2nm,1.4s						
ASAR	**Alice Springs**	**32.42**	**243**	P	**P**	**04 39 07.6**	**-0.9**
	4.5nm,0.9s,baz=72,slow=9.6,SNR=12						
OXZ	**Oxford**	**32.71**	**171**	*e*P	**P**	**04 39 11.6**	**+0.8**
	18nm,0.8s						
RPZ	**Rata Peaks**	**32.95**	**172**	*e*P	**P**	**04 39 11.5**	**-1.3**
	34nm,1.1s						
ODZ	**Otahua Downs**	**34.21**	**173**	*e*P	**P**	**04 39 24.7**	**+1.0**
	15nm,1.1s						
FITZ	**Fitzroy Crossi**	**38.97**	**255**	P	**P**	**04 40 04.8**	**0.0**
	3.5nm,0.7s,baz=90,slow=7.7,SNR=9.2						
LUWI	**Luwuk**	**43.39**	**280**	*e*P	**P**	**04 40 40.4**	**-0.7**
	43nm,0.9s						
OPA	**Opana**	**48.51**	**48**	*e*P	**P**	**04 41 21.7**	**+0.4**
	139nm,0.9s						
MJAR	**Matsushiro Arr**	**53.75**	**333**	P	**P**	**04 42 00.1**	**-0.4**
	3.6nm,0.8s,baz=163,slow=10,SNR=5.2						
MAJO	**Matsushiro**	**53.76**	**333**	*e*P	**P**	**04 42 00.1**	**-0.4**
KSRS	**Korea Array**	**59.62**	**326**	P	**P**	**04 42 42.6**	**+0.5**
	1.1nm,0.7s,baz=138,slow=8.0,SNR=4.1						
KS15	**Wonju Array Si**	**59.63**	**326**	*e*P	**P**	**04 42 42.6**	**+0.3**
	26nm,1.4s						
KSAR	**Wonju Array Be**	**59.63**	**326**	P	**P**	**04 42 42.6**	**+0.3**
USRK	**Ussuriysk Ar.**	**62.73**	**334**	P	**P**	**04 43 04.4**	**+1.3**
	5.6nm,1.1s,baz=151,slow=4.4,SNR=4.8						
KLR	**Kul'dur**	**66.86**	**337**	P	**P**	**04 43 30.6**	**+0.7**
	4.2nm,1.1s,baz=131,slow=13,SNR=4.7						
SONA0	**Songino Array**	**78.39**	**324**	*e*P	**P**	**04 44 39.2**	**+0.4**
SONM	**Songino Array**	**78.39**	**324**	P	**P**	**04 44 39.2**	**+0.4**
	1.2nm,0.9s,baz=144,slow=9.7,SNR=6.8						
BILL	**Bilibino**	**78.86**	**0**	*e*P	**P**	**04 44 40.7**	**0.0**
	10.0nm,0.9s						
QSPA	**South Pole Qui**	**78.98**	**180**	*e*P	**P**	**04 44 41.9**	**+0.1**
	19nm,1.2s						
CAST	**Castle Rocks**	**81.06**	**18**	*e*P	**P**	**04 44 52.4**	**-0.3**
	4.4nm,0.8s						
IM3	**Indian Mountai**	**82.52**	**16**	*e*P	**P**	**04 45 00.4**	**+0.1**
GDXM	**Geysers**	**83.12**	**48**	*e*P	**P**	**04 45 06.6**	**+2.4**
	12nm,1.1s						
HDA	**Harding Lake**	**83.36**	**19**	*e*P	**P**	**04 45 04.6**	**-0.2**
	8.2nm,1.0s						
IL1	**Eielson Array**	**83.62**	**19**	*e*P	**P**	**04 45 05.0**	**-1.1**
ILAR	**Eielson Array**	**83.62**	**19**	P	**P**	**04 45 05.7**	**-0.4**
	1.9nm,0.7s,baz=238,slow=4.9,SNR=15						
ILB	**Eielson Array**	**83.62**	**19**	*e*P	**P**	**04 45 05.9**	**-0.2**
	3.5nm,0.9s						
AFDM	**Forest Hills D**	**84.50**	**49**	*e*P	**P**	**04 45 11.5**	**+0.3**
	10nm,1.1s						
CMB	**Columbia Colle**	**84.65**	**50**	*e*P	**P**	**04 45 12.2**	**+0.2**
	7.5nm,1.1s						
WAKR	**Walker**	**85.51**	**50**	*e*P	**P**	**04 45 17.2**	**+0.7**
	13nm,1.3s						
MDPB	**Devils Postpil**	**85.51**	**50**	*e*P	**P**	**04 45 17.1**	**+0.5**
	12nm,1.2s						
PAHR	**Pah Rah Range**	**85.91**	**48**	*e*P	**P**	**04 45 18.9**	**+0.5**
	10nm,1.4s						
MOD	**Modoc Plateau**	**85.93**	**46**	*e*P	**P**	**04 45 18.7**	**+0.3**
	6.6nm,1.1s						
NV01	**Mina Array Sit**	**86.33**	**50**	*e*P	**P**	**04 45 20.4**	**-0.2**
NVAR	**Mina Array Bea**	**86.33**	**50**	P	**P**	**04 45 20.6**	**0.0**
	4.6nm,0.9s,baz=233,slow=7.3,SNR=15						
NV11	**Mina Array Sit**	**86.44**	**50**	*e*P	**P**	**04 45 21.6**	**+0.5**
	0.8nm,1.2s						
KVN	**Kaiserville**	**86.67**	**49**	*e*P	**P**	**04 45 22.4**	**+0.3**
	4.6nm,1.0s						
J08A	**Circle Bar Ran**	**87.67**	**45**	*e*P	**P**	**04 45 27.2**	**+0.4**
	9.0nm,1.1s						
LDFC	**Landfair**	**87.88**	**54**	*e*P	**P**	**04 45 28.9**	**+0.8**
	25nm,1.3s						
G08A	**Pilot Rock**	**87.92**	**43**	*e*P	**P**	**04 45 28.7**	**+0.7**
	8.2nm,1.1s						
SHPR	**Sheep Range**	**88.21**	**52**	*e*P	**P**	**04 45 30.9**	**+1.3**
	12nm,1.5s						
W13A	**Hualapai Mount**	**88.86**	**54**	*e*P	**P**	**04 45 33.6**	**+0.8**
	14nm,1.4s						
LCMT	**Little Creek M**	**89.82**	**52**	*e*P	**P**	**04 45 38.0**	**+0.9**
	11nm,1.3s						
CCUT	**Cedar City**	**89.86**	**52**	*e*P	**P**	**04 45 37.0**	**-0.5**
	7.7nm,1.2s						
U15A	**North Rim**	**90.43**	**53**	*e*P	**P**	**04 45 41.2**	**+1.0**
	11nm,1.2s						
HLID	**Hailey**	**90.56**	**46**	*e*P	**P**	**04 45 41.3**	**+0.7**
	6.3nm,1.4s						
PKCU	**Pink Cliffs**	**90.65**	**52**	*e*P	**P**	**04 45 43.4**	**+2.1**
	21nm,1.3s						
X16A	**Lo Mia Camp, P**	**90.66**	**55**	*e*P	**P**	**04 45 42.2**	**+1.1**
	6.1nm,1.0s						
TUC	**Tucson**	**90.73**	**57**	*e*P	**P**	**04 45 42.7**	**+1.2**
	4.8nm,1.0s						
MTPU	**Mount Pierson**	**90.88**	**52**	*e*P	**P**	**04 45 43.9**	**+1.6**
	6.0nm,1.1s						
BGU	**Big Grassy Mou**	**90.92**	**49**	*e*P	**P**	**04 45 42.7**	**+0.5**
	3.7nm,1.1s						
WUAZ	**Wupatki**	**90.95**	**54**	*e*P	**P**	**04 45 43.5**	**+1.0**
	8.5nm,1.1s						
MSU	**Marysvale**	**91.00**	**51**	*e*P	**P**	**04 45 43.6**	**+0.9**
HVU	**Hansel Valley**	**91.31**	**48**	*e*P	**P**	**04 45 44.7**	**+0.7**
	5.6nm,1.0s						
X18A	**Snowflake**	**91.88**	**55**	*e*P	**P**	**04 45 48.3**	**+1.4**
	4.4nm,1.1s						
DLMT	**Dillon**	**92.26**	**44**	*e*P	**P**	**04 45 49.0**	**+0.7**
	14nm,1.3s						
MK32	**Makanchi Array**	**93.21**	**317**	*e*P	**P**	**04 45 52.4**	**-0.1**
MKAR	**Makanchi Array**	**93.21**	**317**	P	**P**	**04 45 52.4**	**-0.1**
	0.6nm,0.7s,baz=98,slow=5.3,SNR=3.8						
MKAR				PKKP	**PKKPdf**	**05 02 59.8**	**-1.3**
	1.8nm,0.8s,baz=318,slow=1.6,SNR=9.0						
ZALV	**Zalesovo Beam**	**93.29**	**324**	P	**P**	**04 45 51.9**	**-0.7**
	0.4nm,0.4s,baz=190,slow=7.5,SNR=3.7						
ZAA1	**Zalesovo Array**	**93.29**	**324**	*e*P	**P**	**04 45 51.9**	**-0.7**
PD31	**Pinedale Array**	**93.85**	**47**	*e*P	**P**	**04 45 55.0**	**-0.8**
	5.2nm,1.5s						
PDAR	**Pinedale Array**	**93.85**	**47**	P	**P**	**04 45 55.0**	**-0.8**
	0.6nm,0.8s,baz=264,slow=1.5,SNR=4.3						
YKA	**Yellowknife Ar**	**95.15**	**27**	P	**P**	**04 45 59.5**	**-1.5**
	0.9nm,0.9s,baz=255,slow=4.7,SNR=9.2						
YKB5	**Yellowknife Ar**	**95.15**	**27**	*e*P	**P**	**04 45 59.5**	**-1.5**
LTX	**Lajitas**	**96.19**	**61**	*e*P	**P**	**04 46 06.2**	**-0.5**
TXAR	**Lajitas Array**	**96.19**	**61**	P	**P**	**04 46 06.2**	**-0.5**
	0.6nm,0.9s,baz=235,slow=4.4,SNR=4.4						
ARA0	**ARCESS Array S**	**116.20**	**345**	*e*PKPdf	**PKiKP**	**04 51 20.7**	**-0.1**
ARCES	**ARCESS Array B**	**116.20**	**345**	PKP	**PKiKP**	**04 51 20.7**	**-0.1**
	2.4nm,0.7s,baz=64,slow=2.8,SNR=6.6						
LPAZ	**La Paz**	**120.58**	**116**	*e*PKPdf	**PKiKP**	**04 51 31.9**	**+0.4**
LPAZ	**La Paz**	**120.58**	**116**	PKP	**PKPdf**	**04 51 31.7**	**+0.3**
	2.3nm,1.0s,baz=31,slow=6.2,SNR=5.9						
AKASG	**Malin Array Be**	**126.61**	**327**	PKP	**PKPdf**	**04 51 41.1**	**-0.2**
	0.6nm,0.5s,baz=41,slow=1.1,SNR=5.8						
AKBB	**Malin Array Si**	**126.61**	**327**	*e*PKPdf	**PKPdf**	**04 51 41.0**	**-0.2**
BR101	**Keskin Array S**	**128.63**	**312**	*e*PKPdf	**PKPdf**	**04 51 45.6**	**-0.1**
BRTR	**Keskin Array B**	**128.63**	**312**	PKP	**PKPdf**	**04 51 45.6**	**-0.1**
	1.2nm,1.0s,baz=132,slow=1.8,SNR=4.2						
GEC2	**GERESS Array S**	**135.49**	**333**	*e*PKPdf	**PKiKP**	**04 51 59.4**	**-0.4**
GERES	**GERESS Array B**	**135.49**	**333**	PKP	**PKiKP**	**04 51 59.4**	**-0.4**
	0.7nm,0.7s,baz=180,slow=6.5,SNR=5.3						
BDFB	**Brasilia**	**137.69**	**128**	PKP	**PKPdf**	**04 52 04.5**	**+1.1**
	5.1nm,1.2s,baz=70,slow=6.9,SNR=5.3						
KEST	**Kesra**	**147.14**	**322**	PKPbc	**PKPbc**	**04 52 22.2**	**+0.6**
	11nm,0.9s,baz=282,slow=2.7,SNR=6.6						
ES19	**SONSECA Array**	**149.87**	**343**	*e*PKPbc	**PKPbc**	**04 52 29.2**	**+0.6**
ESDC	**Sonseca Array**	**149.91**	**343**	PKPbc	**PKPbc**	**04 52 29.2**	**+0.5**
	0.7nm,0.7s,baz=19,slow=1.5,SNR=5.4						
TOA0	**Torodi Ar. Sit**	**163.84**	**279**	*e*PKPdf	**PKPdf**	**04 52 41.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**163.84**	**279**	PKP	**PKPdf**	**04 52 41.7**	**-0.5**
	2.7nm,1.0s,baz=332,slow=1.6,SNR=8.4						
TORD				PKPab	**PKPab**	**04 53 34.7**	**0.0**
	2.3nm,1.1s,baz=77,slow=3.1,SNR=2.5						
TOA1	**Torodi Ar. Sit**	**163.84**	**279**	*e*PKPdf	**PKPdf**	**04 52 41.7**	**-0.5**
TOA1				*e*PKPab	**PKPab**	**04 53 34.7**	**0.0**

IDC ***06*** *04:33:44.3±1.1, 10°.95S×165°.37E, h0*^{km}*, mb4.3/8, mb1 4.5/9, mb1mx4.1/46, mbtmp4.3/9, ML4.5/1, Error ellipse: s-maj=41.9km s-min=20.0km az=132.0*

ISCJB ***06*** *04:33:47.2±0.8, 11°.1S±0°.1×165°.3E±0°.2, h30*^{km}*, mb4.2/7, Error ellipse: s-maj=23.6km s-min=15.4km az=29.3*

ISC 06 04:33:48.9±0.9, **11°.0S**±0°.1×**165°.4E**±0°.2, **h30**^{km}, **n9**, σ**0**^{s}**.98**/9, **mb4.2**/7, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.08**	**175**	Pn	**Pn**	**04 36 25.6**	**+0.1**
	3.2nm,0.3s,baz=311,slow=20,SNR=3.5						
CTA	**Charters Tower**	**20.51**	**241**	P	**P**	**04 38 25.9**	**+1.1**
	16nm,0.9s,baz=70,slow=12,SNR=4.4						
STKA	**Stephens Creek**	**30.24**	**223**	P	**P**	**04 39 57.2**	**0.0**
	2.4nm,0.5s,baz=58,slow=8.3,SNR=4.7						
WRA	**Warramunga Arr**	**31.17**	**250**	P	**P**	**04 40 04.5**	**-1.1**
	10nm,1.2s,baz=78,slow=9.0,SNR=6.1						
ASAR	**Alice Springs**	**32.50**	**243**	P	**P**	**04 40 16.4**	**-0.9**
	15nm,0.9s,baz=72,slow=9.5,SNR=17						
SONM	**Songino Array**	**78.40**	**324**	P	**P**	**04 45 47.8**	**+1.0**
	0.7nm,0.8s,baz=130,slow=6.9,SNR=2.5						
ILAR	**Eielson Array**	**83.56**	**19**	P	**P**	**04 46 13.8**	**0.0**
	0.7nm,0.8s,baz=232,slow=5.2,SNR=3.1						
NVAR	**Mina Array Bea**	**86.26**	**50**	P	**P**	**04 46 28.8**	**+0.6**
	1.5nm,0.8s,baz=229,slow=8.8,SNR=4.2						
YKA	**Yellowknife Ar**	**95.08**	**27**	P	**P**	**04 47 07.5**	**-1.2**
	0.3nm,0.8s,baz=252,slow=4.5,SNR=3.1						

NEIC ***06*** *04:34:45.6±0.1, 11°.25S×164°.86E, h10*^{km}*, mb5.0/91, Error ellipse: s-maj=3.5km s-min=2.6km az=96.0*

ISCJB ***06*** *04:34:48.2±0.1, 11°.36S±0°.02×164°.79E±0°.03, h34*^{km}*, mb4.9/121, Error ellipse: s-maj=4.1km s-min=3.4km az=7.4*

IDC ***06*** *04:34:49.5±5.5, 11°.26S×164°.89E, h32*^{km}*±39*^{km}*, mb4.5/20, mb1 4.7/23, mb1mx4.5/47, mbtmp4.7/23, ML5.0/3, Error ellipse: s-maj=17.0km s-min=13.7km az=63.0*

ISC 06 04:34:49.2±0.3, **11°.34S**±0°.05×**164°.91E**±0°.06, **h34**^{km}, **n273**, σ**1**^{s}**.40**/274, **mb4.9**/121, **2C-2D**, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.23**	**291**	*e*Pn	**Pn**	**04 36 03.6**	**-1.5**
HNR				*e*Sn	**Sn**	**04 37 02.7**	**-1.7**
HNR	**Honiara**	**5.23**	**291**	Pn	**Pn**	**04 36 05.6**	**+0.5**
	163nm,0.3s,baz=150,slow=6.1,SNR=10.0						
HNR				Sn	**Sn**	**04 37 04.8**	**+0.4**
	202nm,0.3s,baz=77,slow=6.0,SNR=5.6						
MARNC	**Mare, Loyalty**	**10.52**	**164**	*e*Pn	**Pn**	**04 37 18.2**	**+0.5**
MARNC				*e*Sn	**Sn**	**04 39 11.3**	**-3.1**
DZM	**Mont Dzumac**	**10.77**	**172**	*e*Pn	**Pn**	**04 37 21.4**	**+0.1**
DZM				*e*Sn	**Sn**	**04 39 20.2**	**-0.5**
DZM	**Mont Dzumac**	**10.77**	**172**	Pn	**Pn**	**04 37 22.4**	**+1.2**
	19nm,0.3s,baz=47,slow=15,SNR=16						
DZM				Sn	**Sn**	**04 39 19.5**	**-1.3**
	3.0nm,0.3s,baz=320,slow=22,SNR=3.5						
ONTNC	**Ouen Toro**	**11.01**	**172**	*e*Pn	**Pn**	**04 37 24.9**	**+0.6**
ONTNC				*e*Sn	**Sn**	**04 39 25.2**	**-1.1**
OUENC	**Ouen Island, N**	**11.17**	**171**	*e*Pn	**Pn**	**04 37 26.7**	**+0.1**
OUENC				*e*Sn	**Sn**	**04 39 26.4**	**-3.9**
PINNC	**Pines Island,**	**11.47**	**168**	*e*Pn	**Pn**	**04 37 31.1**	**+0.4**
CTA	**Charters Tower**	**19.93**	**242**	P	**Pn**	**04 39 20.5**	**+0.3**
	0.9nm,0.3s,baz=68,slow=12,SNR=6.7						
CTAO	**Charters Tower**	**19.93**	**242**	*e*P	**P**	**04 39 17.9**	**-0.6**
	136nm,1.2s						
MTSU	**Mount Surprise**	**21.01**	**249**	P	**P**	**04 39 31.6**	**+1.5**
	baz=21,SNR=15						
COEN	**Coen**	**21.36**	**261**	P	**P**	**04 39 35.2**	**+1.3**
	baz=21,SNR=26						
RMQ	**Roma**	**21.42**	**223**	P	**P**	**04 39 37.0**	**+2.6**
	baz=22,SNR=5.2						
ARMA	**Armidale**	**22.64**	**211**	P	**P**	**04 39 48.5**	**+1.0**
	baz=23,SNR=14						
QLP	**Quilpie**	**24.68**	**229**	P	**P**	**04 40 08.6**	**+1.4**
	baz=25,SNR=6.7						
OUZ	**Omahuta**	**25.05**	**163**	*e*P	**P**	**04 40 11.3**	**+0.9**
	81nm,1.1s						
QIS	**Mount Isa**	**25.96**	**246**	P	**P**	**04 40 20.5**	**+1.6**
	baz=26,SNR=5.6						
CMSA	**Cobar Meteorol**	**26.82**	**219**	P	**P**	**04 40 27.6**	**+1.1**
	baz=27,SNR=7.1						
CNB	**Canberra Magne**	**27.73**	**208**	P	**P**	**04 40 36.9**	**+2.2**
	baz=28,SNR=5.5						
HIZ	**Hauiti**	**28.48**	**163**	*e*P	**P**	**04 40 41.7**	**+0.4**
	12nm,0.7s						
OMRZ	**Omania**	**28.56**	**161**	P	P	04 40 47.2	+5.1
HAZ	**Te Kaha**	**28.73**	**158**	P	**P**	**04 40 45.2**	**+1.8**
MXZ	**Matakaoa Point**	**28.75**	**157**	*e*P	**P**	**04 40 43.8**	**+0.2**
	90nm,0.7s						
MXZ	**Matakaoa Point**	**28.75**	**157**	P	**P**	**04 40 45.2**	**+1.5**
RUGZ	**Raukumara Rang**	**28.88**	**159**	P	**P**	**04 40 46.1**	**+1.1**
URZ	**Urewera**	**28.95**	**160**	*e*P	**P**	**04 40 46.2**	**+0.9**
	25nm,0.7s						
URZ	**Urewera**	**28.95**	**160**	P	**P**	**04 40 46.6**	**+1.2**
	23nm,0.6s,baz=112,slow=3.5,SNR=15						
URZ	**Urewera**	**28.95**	**160**	P	**P**	**04 40 47.4**	**+2.0**
MWZ	**Matawai**	**29.15**	**159**	P	**P**	**04 40 49.3**	**+2.0**
TWGZ	**Tauwhareparae**	**29.17**	**159**	P	**P**	**04 40 49.4**	**+1.9**
RTZ	**Ruatahuna**	**29.22**	**160**	P	**P**	**04 40 50.1**	**+2.1**
TKGZ	**Te Karaka**	**29.36**	**159**	P	**P**	**04 40 49.0**	**-0.1**
SNGZ	**Shannon Statio**	**29.49**	**160**	P	**P**	**04 40 51.9**	**+1.6**
CNGZ	**Carnagh Statio**	**29.53**	**159**	P	**P**	**04 40 51.8**	**+1.2**
RAHZ	**Arahi**	**29.53**	**160**	P	**P**	**04 40 52.9**	**+2.3**
BKZ	**Black Stump Fm**	**29.57**	**162**	*e*P	**P**	**04 40 51.1**	**+0.1**
	34nm,0.6s						
MOVZ	**Moawhango**	**29.57**	**163**	P	**P**	**04 40 54.7**	**+3.7**
RIGZ	**Rimuhau**	**29.57**	**159**	P	**P**	**04 40 52.3**	**+1.3**
NMHZ	**Naumai**	**29.61**	**161**	P	**P**	**04 40 53.3**	**+2.0**
STKA	**Stephens Creek**	**29.66**	**223**	P	**P**	**04 40 53.5**	**+1.7**
	baz=30,SNR=24						
STKA	**Stephens Creek**	**29.66**	**223**	*e*P	**P**	**04 40 51.2**	**-0.7**
	4.7nm,0.7s						
STKA				PcP	**PcP**	**04 43 57.2**	**+1.3**
STKA	**Stephens Creek**	**29.66**	**223**	P	**P**	**04 40 53.0**	**+1.1**
	19nm,0.7s,baz=44,slow=9.4,SNR=33						
STKA				PcP	**PcP**	**04 43 57.2**	**+1.3**
	3.5nm,0.7s,baz=37,slow=5.1,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**29.70**	**3**	T	T	05 12 04.1	
	baz=184,slow=76,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	**29.70**	**3**	T	T	05 11 55.3	
	baz=184,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**29.71**	**3**	T	T	05 11 58.6	
	baz=184,slow=76,SNR=12						
BHHZ	**Black Hill Sta**	**29.74**	**162**	P	**P**	**04 40 55.6**	**+3.2**
KWHZ	**Kaweka Forest**	**29.78**	**162**	P	**P**	**04 40 54.6**	**+1.7**
MHGZ	**Mahia Peninsul**	**30.02**	**160**	P	**P**	**04 40 56.1**	**+1.2**
KAHZ	**Kahuranaki**	**30.26**	**162**	P	**P**	**04 40 59.2**	**+2.0**
PXZ	**Pawanui**	**30.47**	**162**	P	**P**	**04 40 59.0**	**+0.1**
WAKE	**Wake Island**	**30.48**	**3**	*e*P	**P**	**04 40 58.1**	**-1.0**
	169nm,1.3s						
WRAB	**Tennant Creek**	**30.60**	**250**	*e*P	**P**	**04 41 00.2**	**0.0**
	17nm,0.8s						
WB2	**Warramunga Arr**	**30.60**	**250**	*e*P	**P**	**04 41 00.2**	**-0.1**
	17nm,0.9s						
WRA	**Warramunga Arr**	**30.61**	**250**	P	**P**	**04 41 00.3**	**-0.1**
	11nm,0.7s,baz=80,slow=9.2,SNR=17						
WRA				PcP	**PcP**	**04 43 59.6**	**+1.1**
	3.9nm,0.7s,baz=77,slow=3.0,SNR=9.8						
BFZ	**Birch Farm**	**30.89**	**163**	*e*P	**P**	**04 41 03.7**	**+1.1**
	47nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**30.92**	**4**	T	T	05 13 33.2	
	baz=183,slow=76,SNR=8.0						
H11N3	**WAKE ISLAND Hy**	**30.93**	**4**	T	T	05 13 36.0	
	baz=183,slow=76,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**30.94**	**4**	T	T	05 13 29.7	
	baz=183,slow=76,SNR=6.0						
SNZO	**South Karori**	**31.07**	**166**	*e*P	**P**	**04 41 05.2**	**+1.1**
	56nm,0.9s						
THZ	**Tophouse**	**31.11**	**168**	*e*P	**P**	**04 41 05.6**	**+1.1**
	25nm,0.8s						
TOO	**Toolangi**	**31.40**	**210**	P	**P**	**04 41 08.7**	**+1.5**
	baz=32,SNR=9.1						
KDU	**Kakadu**	**31.74**	**264**	P	**P**	**04 41 09.3**	**-1.1**
	baz=32,SNR=16						

KHZ	Kahutara	31.86	168	eP	P	04 41 12.3	+1.2
AS01	Alice Springs	31.88	243	eP	P	04 41 11.4	-0.2
AS31	Alice Springs	31.92	243	eP	P	04 41 11.8	-0.2
	2.9nm,0.6s						
ASAR	Alice Springs	31.92	243	P	P	04 41 12.2	+0.2
	6.5nm,0.6s,baz=65,slow=10,SNR=15						
ASAR				PcP	PcP	04 44 02.3	+0.3
	5.1nm,0.7s,baz=69,slow=2.3,SNR=11						
LTZ	Lake Taylor	31.97	170	eP	P	04 41 13.1	+0.9
	31nm,0.7s						
FOZ	Fox Glacier	32.35	173	eP	P	04 41 16.0	+0.6
	38nm,1.0s						
HTT	Hallett	32.40	223	P	P	04 41 17.0	+1.0
	baz=33,SNR=13						
OXZ	Oxford	32.46	170	eP	P	04 41 16.6	+0.2
	25nm,0.7s						
RPZ	Rata Peaks	32.69	172	eP	P	04 41 19.1	+0.7
	50nm,1.5s						
RPZ	Rata Peaks	32.69	172	P	P	04 41 19.2	+0.7
	10nm,0.5s,baz=310,slow=4.4,SNR=11						
ARPS	Mount Arapiles	32.76	216	P	P	04 41 20.6	+1.5
	baz=33,SNR=9.0						
MQZ	McQueen's Vall	32.94	170	eP	P	04 41 20.8	+0.3
	36nm,0.9s						
LBZ	Lake Benmore	33.24	173	eP	P	04 41 23.5	+0.3
	12nm,0.9s						
WKZ	Wanaka	33.55	175	eP	P	04 41 26.4	+0.5
	31nm,1.1s						
MLZ	Mavora Lakes	34.02	176	eP	P	04 41 30.0	0.0
	15nm,1.1s						
BBOO	Buckleboo	34.03	227	P	P	04 41 30.8	+0.6
	baz=34,SNR=18						
DCZ	Deep Cove	34.06	177	eP	P	04 41 31.2	+0.9
	61nm,1.5s						
WHZ	Wether Hill Ro	34.53	176	eP	P	04 41 34.4	0.0
	37nm,1.3s						
KNRA	Kununurra	35.38	259	P	P	04 41 41.8	-0.3
	baz=35,SNR=23						
WRKA	Warakurna	37.22	243	P	P	04 41 58.1	+0.3
	baz=37,SNR=7.9						
FITZ	Fitzroy Crossi	38.51	255	P	P	04 42 08.3	-0.4
	baz=38,SNR=14						
FITZ	Fitzroy Crossi	38.51	255	P	P	04 42 08.0	-0.6
	15nm,0.7s,baz=93,slow=6.6,SNR=25						
FORT	Forrest	39.20	235	P	P	04 42 15.1	+0.8
	baz=39,SNR=12						
BATI	Baumata	40.51	268	P	P	04 42 25.6	+0.2
	65nm,0.6s,baz=170,slow=1.2,SNR=9.4						
MBWA	Marble Bar	44.32	251	eP	P	04 42 55.7	-0.7
	28nm,0.9s						
MEEK	Meekatharra	46.08	244	P	P	04 43 11.3	+1.0
	baz=46,SNR=12						
KLBR	Kellerberrin	47.85	238	P	P	04 43 24.4	+0.3
	baz=48,SNR=5.9						
NWAO	Narrogin (SRO)	48.62	236	P	P	04 43 31.1	+1.1
	baz=49,SNR=6.9						
NWAO	Narrogin (SRO)	48.62	236	eP	P	04 43 29.6	-0.3
NWAO	Narrogin (SRO)	48.62	236	P	P	04 43 30.8	+0.9
	23nm,0.8s,baz=316,slow=8.2,SNR=8.6						
MORW	Morawa	48.76	241	P	P	04 43 31.9	+0.8
	baz=49,SNR=7.5						
MUN	Mundaring	49.23	237	P	P	04 43 35.7	+1.1
	baz=49,SNR=4.0						
JAGI	Jajag, Banyuwa	50.03	268	eP	P	04 43 38.3	-2.7
	33nm,0.9s						
UGM	Wanagama	53.66	268	eP	P	04 44 05.7	-2.4
	123nm,1.5s						
YULB	Yu-li	54.88	309	eP	P	04 44 15.1	-1.6
	6.9nm,0.9s						
KSRS	Korea Array	59.66	326	P	P	04 44 50.0	-0.2
	2.9nm,0.9s,baz=130,slow=6.4,SNR=4.8						
KSAR	Wonju Array Be	59.67	326	P	P	04 44 50.0	-0.3
KS01	Wonju Array Si	59.69	326	eP	P	04 44 50.2	-0.2
NJ2	Nanjing	61.65	316	eP	P	04 45 06.4	+2.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
USA0B	Ussuriysk Arra	62.84	334	eP	P	04 45 11.6	-0.1
	comp=Z,33nm,1.4s						
USRK	Ussuriysk Ar.	62.84	334	P	P	04 45 11.7	+0.1
	comp=Z,3.6nm,0.9s,baz=138,slow=6.9,SNR=7.6						
MDJ	Mudanjiang	64.23	333	P	P	04 45 22.7	+1.9
MDJ				pmax	pmax		
	comp=Z,20nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,4µm,16.9s						
IPM	Ipoh	65.46	280	eP	P	04 45 28.5	-1.0
	comp=Z,14nm,1.1s						
CN2	Changchun	65.57	330	eP	P	04 45 26.8	-2.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CASY	Casey	65.81	201	eP	P	04 45 30.3	-0.5
	comp=Z,29nm,1.3s						
VNDA	Vanda	66.19	181	eP	P	04 45 33.7	+0.6
	comp=Z,24nm,1.1s						
VNDA	Vanda	66.19	181	P	P	04 45 34.0	+1.0
	comp=Z,7.3nm,0.8s,baz=23,slow=6.1,SNR=12						
SKNT	Sakolnakorn	66.46	294	P	P	04 45 36.2	+0.4
	comp=Z,9.9nm,1.0s						
SBA	Scott Base	66.51	180	eP	P	04 45 35.6	+0.5
	comp=Z,84nm,1.3s						
KLR	Kul'dur	67.00	337	P	P	04 45 38.9	+0.3
	comp=Z,4.2nm,1.0s,baz=149,slow=9.5,SNR=5.1						
ENH	Enshi	67.44	310	eP	P	04 45 40.8	-1.1
	comp=Z,19nm,1.2s						
NONG	Nongkai	67.59	295	P	P	04 45 54.2	+11
GYA	Guiyang	67.90	305	⇑iP	P	04 45 48.2	+3.2
GYA				pP	pwP	04 45 59.2	-0.7
GYA				PP	PP	04 48 20.7	+5.5
GYA				S	S	04 54 43.0	+1.3
GYA				SKS	SKKSac	04 55 40.6	-0.7
GYA	Guiyang	67.90	305	SS	SS	04 59 07.4	+3.1
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.6s						
GYA				LR	LR		
	comp=N,550nm,18.2s						
GYA				LR	LR		
	comp=E,580nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,19.0s						
PBKT	Sadao Pong	69.03	293	P	P	04 45 53.8	+1.8
	comp=Z,11nm,0.8s						
XAN	Xi'an	69.71	313	P	P	04 45 55.3	-0.7
XAN				pP	pP	04 46 02.4	-2.8
XAN				sP	sP	04 46 05.3	-3.1
XAN				PcP	PcP	04 46 18.0	-0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				LR	LR		
	comp=N,3µm,18.4s						
XAN				LR	LR		
	comp=Z,3µm,19.5s						
XAN	Xi'an	69.71	313	eP	P	04 45 55.4	-0.6
	comp=Z,14nm,1.3s						
UTTA	Uttaradit	69.80	294	P	P	04 46 11.5	+15
UTHA	Uthaitani	70.09	291	P	P	04 46 10.6	+12
	comp=Z,3.1nm,1.0s						
SUKH	Sukhothai	70.54	293	P	P	04 46 14.0	+13
	comp=Z,2.8nm,0.8s						
KMI	Kunming	70.57	302	P	P	04 46 04.8	+3.1
KMI				pP	sP	04 46 12.4	-1.4
KMI				pmax	pmax		
	comp=Z,11nm,1.8s						
UMPA	Umpang Tak	70.83	292	P	P	04 46 16.1	+13
	comp=Z,4.0nm,1.0s,comp=Z,1µm						
CM01	Chiang Mai Arr	71.45	294	eP	P	04 46 06.1	-0.8
CM01				epP	sP	04 46 17.1	-2.0
CMAR	Chiang Mai Arr	71.48	294	P	P	04 46 07.8	+0.7
	comp=Z,1.5nm,0.3s,baz=129,slow=4.9,SNR=8.1						
HHC	Hu-ho-hao-te	71.53	320	eP	P	04 46 14.3	+7.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CMMT	Chiang Mai	71.59	294	P	P	04 46 19.3	+12
CHTO	Chiang Mai	71.59	294	eP	P	04 46 06.5	-1.2
	comp=Z,3.7nm,0.9s						
CHTO	Chiang Mai	71.59	294	P	P	04 46 19.4	+12
	comp=Z,34nm,1.4s						
CD2	Chengdu	72.13	308	P	P	04 46 10.4	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA	Hailar	72.22	331	eP	P	04 46 10.9	0.0
	comp=Z,16nm,1.2s						
LZH	Lanzhou	74.35	313	⇓P	P	04 46 27.4	+3.5
LZH				pP	PcP	04 46 37.1	-1.4
LZH				sP	pwP	04 46 41.5	+2.7
LZH				PP	PP	04 49 19.6	+9.2
LZH				pmax	pmax		
	comp=Z,32nm,1.7s						
LZH				pmax	pmax		
	comp=Z,160nm,5.8s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
ULN	Ulaanbaatar	78.06	324	eP	P	04 46 44.3	-0.4
	comp=Z,9.4nm,1.0s						
SONM	Songino Array	78.42	324	P	P	04 46 46.7	0.0
	comp=Z,2.2nm,0.8s,baz=150,slow=6.0,SNR=5.4						
SONA1	Songino Array	78.42	324	eP	P	04 46 46.5	-0.2
SVW2	Sparrevohn	78.65	18	eP	P	04 46 48.5	+1.0
	comp=Z,7.6nm,1.2s						
QSPA	South Pole Qui	78.67	180	eP	P	04 46 48.0	+0.2
	comp=Z,40nm,0.8s						
GTA	Gaotai	78.67	314	⇓P	P	04 46 48.3	0.0
GTA				pP	PcP	04 46 55.0	-2.1
GTA				sP	sP	04 46 58.4	-2.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				LR	LR		
	comp=N,1µm,17.1s						
GTA				LR	LR		
	comp=E,1µm,17.8s						
GTA				LR	LR		
	comp=Z,3µm,19.0s						
GTA	Gaotai	78.67	314	eP	P	04 46 58.5	+10
GTA				pP	pwP	04 47 02.8	-0.4
GTA				sP	sP	04 47 05.6	+4.7
GTA				pmax	pmax		
	comp=Z,11nm,1.5s						
BILL	Bilibino	79.18	1	eP	P	04 46 50.6	+0.4
	comp=Z,12nm,1.2s						
BRLK	Bradley Lake	79.21	21	eP	P	04 46 50.2	-0.4
	comp=Z,9.7nm,1.0s						
CAST	Castle Rocks	81.48	18	eP	P	04 47 02.0	-0.7
	comp=Z,3.7nm,0.7s						
SCM	Sheep Creek Mo	81.91	21	eP	P	04 47 05.2	+0.1
	comp=Z,18nm,1.4s						
RDOG	Red Dog Mine	82.47	12	eP	P	04 47 08.4	+0.6
	comp=Z,6.9nm,0.8s						
MCK	McKinley	82.69	19	eP	P	04 47 09.1	0.0
	comp=Z,8.4nm,1.2s						
IM3	Indian Mountai	82.93	16	eP	P	04 47 09.9	-0.4
HDA	Harding Lake	83.79	19	eP	P	04 47 15.1	+0.4
	comp=Z,4.3nm,0.8s						
HDA	Harding Lake	83.79	19	P	P	04 47 15.3	+0.6
	baz=227						
RIDG	Independ'e Rid	84.03	20	eP	P	04 47 15.9	-0.1
	comp=Z,4.7nm,0.8s						
IL1	Eielson Array	84.05	19	eP	P	04 47 15.7	-0.4
ILAR	Eielson Array	84.05	19	P	P	04 47 15.4	-0.6
	comp=Z,1.4nm,0.6s,baz=238,slow=4.2,SNR=8.6						
ILB	Eielson Array	84.05	19	eP	P	04 47 15.8	-0.3
O02D	Mt. Diablo Mer	84.10	47	P	P	04 47 19.1	+2.1
	baz=250						
DOT	Dot Lake	84.24	20	eP	P	04 47 17.2	+0.2
	comp=Z,13nm,1.2s						
N02D	Trinity Center	84.43	46	P	P	04 47 20.8	+2.1
	baz=250						
M02C	Callahan	84.47	46	P	P	04 47 21.1	+2.2
	baz=250						
SCRK	Sand Creek	84.47	20	eP	P	04 47 17.7	-0.6
	comp=Z,2.0nm,0.6s						
ORV	Oroville	84.82	48	eP	P	04 47 19.8	-0.7
	comp=Z,8.6nm,1.1s						
O03E	Paynes Creek	84.85	47	P	P	04 47 23.2	+2.4
	baz=251						
AFDM	Forest Hills D	85.01	49	eP	P	04 47 21.2	-0.4
	comp=Z,11nm,1.1s						
L04D	Klamath Falls	85.14	45	P	P	04 47 24.7	+2.5
	baz=250						
CMB	Columbia Colle	85.16	50	eP	P	04 47 22.3	-0.1
	comp=Z,5.8nm,1.0s						
M04C	Macdoel	85.32	46	P	P	04 47 25.7	+2.6
	baz=250						
BEKR	Beckworth	85.76	48	eP	P	04 47 25.2	-0.3
	comp=Z,9.3nm,1.1s						
ISA	Isabella, Lake	85.91	53	eP	P	04 47 25.2	-0.9
	comp=Z,6.3nm,1.1s						
ISA	Isabella, Lake	85.91	53	P	P	04 47 28.3	+2.2
	baz=253						
WAKR	Walker	86.02	50	eP	P	04 47 26.7	0.0
	comp=Z,7.4nm,1.1s						
MDPB	Devils Postpil	86.02	51	eP	P	04 47 26.2	-0.7
	comp=Z,11nm,1.0s						
EDW2	Edwards Air Fo	86.06	53	P	P	04 47 28.0	+1.1
	baz=253						
PNTR	Pine Nut	86.07	49	eP	P	04 47 26.4	-0.7
	comp=Z,11nm,1.1s						
DAWY	Dawson	86.13	21	eP	P	04 47 26.3	-0.2
	comp=Z,13nm,1.5s						
BFSC	Mount Baldy Ra	86.14	54	P	P	04 47 29.4	+2.0
	baz=254						
J05D	Fort Rock, OR	86.24	45	P	P	04 47 30.1	+2.4
	baz=251						
MURC	Murrieta	86.33	55	P	P	04 47 30.1	+1.9
	baz=254						
PAHR	Pah Rah Range	86.42	49	eP	P	04 47 28.9	+0.2
	comp=Z,13nm,1.2s						
PAHR				epP	pP	04 47 38.2	+0.4
CWC	Cottonwood Cre	86.44	52	P	P	04 47 31.0	+2.2
	baz=253						
MOD	Modoc Plateau	86.44	46	eP	P	04 47 28.1	-0.6
	comp=Z,4.9nm,1.0s						
D03D	Eldon	86.47	40	P	P	04 47 31.5	+3.0
	baz=249						
LRMC	Laurel Mtn Rad	86.47	53	P	P	04 47 31.5	+2.5
	baz=254						
PINE	Pine Mountain	86.61	44	eP	P	04 47 29.3	-0.3
	comp=Z,7.9nm,0.9s						
MONP2	Monument Peak	86.76	56	P	P	04 47 32.9	+2.3
	baz=254						
NV01	Mina Array Sit	86.84	50	eP	P	04 47 30.5	-0.3
NVAR	Mina Array Bea	86.84	50	P	P	04 47 32.1	+1.2
	comp=Z,5.6nm,1.0s,baz=232,slow=7.7,SNR=10						
XPFO	Pion Flat	86.93	55	eP	P	04 47 30.7	-0.6
	comp=Z,6.0nm,1.2s						
NV11	Mina Array Sit	86.95	50	eP	P	04 47 31.0	-0.3
	comp=Z,0.9nm,1.3s						
GRAC	Grapevine Rang	87.14	52	P	P	04 47 34.8	+2.7
	baz=254						
KVN	Kaiserville	87.18	49	eP	P	04 47 32.7	+0.3
	comp=Z,6.3nm,1.1s						
SWSC	Sam W. Stewart	87.28	56	P	P	04 47 35.7	+2.9
	baz=255						
FURC	Furnace Creek,	87.39	52	P	P	04 47 35.8	+2.6
	baz=254						
BELC	Belle Mtn. Jos	87.40	55	P	P	04 47 36.1	+2.5
	baz=255						
BC3	Big Chuckawall	87.75	55	P	P	04 47 37.9	+2.7
	baz=255						
WVOR	Wild Horse Val	87.78	46	eP	P	04 47 35.3	+0.1
	comp=Z,12nm,1.3s						
GMRC	Granite Mounta	87.88	54	P	P	04 47 37.9	+2.1
	baz=255						
TPNV	Topopah Spring	87.99	52	eP	P	04 47 36.3	0.0
	comp=Z,8.0nm,1.4s						
IRM	Iron Mountain	88.12	55	P	P	04 47 39.5	+2.6
	baz=255						
J08A	Circle Bar Ran	88.17	45	eP	P	04 47 37.0	0.0
	comp=Z,11nm,1.1s						
LDFC	Landfair	88.39	54	eP	P	04 47 37.6	-0.6
	comp=Z,26nm,1.3s						
G08A	Pilot Rock	88.42	43	eP	P	04 47 38.3	+0.1
	comp=Z,9.2nm,1.0s						
Y12C	Blythe	88.52	55	eP	P	04 47 38.7	0.0
	comp=Z,8.2nm,1.0s						
Y12C	Blythe	88.52	55	P	P	04 47 41.3	+2.6
	baz=255						
SHPR	Sheep Range	88.72	53	eP	P	04 47 39.8	0.0
	comp=Z,6.1nm,1.3s						
WMQ	Urumqi	88.72	315	eP	P	04 47 41.0	+1.5
WMQ				pP	pwP	04 47 53.1	-2.4
WMQ				pmax	pmax		
	comp=Z,26nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,2µm,11.9s						
WMQ	Urumqi	88.72	315	eP	P	04 47 38.4	-1.2
	comp=Z,5.7nm,0.8s						
R11A	Troy Canyon, C	88.87	51	P	P	04 47 41.2	+0.7
	baz=255						
PDMCI	Parker Dam,Lak	88.97	55	P	P	04 47 43.1	+2.3
	baz=256						
BMO	Blue Mountains	89.41	44	eP	P	04 47 43.1	+0.3
	comp=Z,8.3nm,1.2s						
214A	Organ Pipe Nat	89.48	57	P	P	04 47 46.4	+3.0
	baz=256						
ELK	Elko	89.76	48	eP	P	04 47 44.7	0.0
	comp=Z,8.4nm,1.4s						
ELK				epP	sP	04 47 55.2	-2.3
F10A	Beach Ranch, E	89.79	43	eP	P	04 47 44.8	+0.3
	comp=Z,9.6nm,1.3s						
MFID	Camas Ranch	90.04	46	eP	P	04 47 45.7	-0.1
	comp=Z,9.7nm,1.3s						
LCMT	Little Creek M	90.33	52	eP	P	04 47 47.0	-0.3
	comp=Z,7.0nm,1.2s						
CCUT	Cedar City	90.37	52	eP	P	04 47 48.2	+0.6
	comp=Z,4.8nm,1.0s						
KNB	Kanab	90.66	52	eP	P	04 47 49.6	+0.6
	comp=Z,18nm,1.4s						
U15A	North Rim	90.94	53	eP	P	04 47 50.6	+0.2
	comp=Z,8.0nm,1.0s						
HLID	Hailey	91.07	46	eP	P	04 47 51.1	+0.4
	comp=Z,11nm,1.3s						
PKCU	Pink Cliffs	91.16	52	eP	P	04 47 51.0	-0.4
	comp=Z,18nm,1.5s						
TUC	Tucson	91.24	57	P	P	04 47 54.5	+2.9
	baz=258						
SYO	Syowa Base	91.26	197	⇑eP	P	04 48 04.9	+14
MTPU	Mount Pierson	91.39	52	eP	P	04 47 53.1	+0.6
	comp=Z,12nm,1.3s						
DUG	Dugway, Tooele	91.42	49	eP	P	04 47 53.2	+0.9
	comp=Z,16nm,1.5s						
DUG	Dugway, Tooele	91.42	49	P	P	04 47 54.1	+1.8
	baz=256						
BGU	Big Grassy Mou	91.43	49	eP	P	04 47 53.1	+0.7
	comp=Z,8.4nm,1.4s						
WUAZ	Wupatki	91.46	54	P	P	04 47 56.1	+3.5
	baz=257						
MSU	Marysvale	91.51	51	eP	P	04 47 53.2	+0.3
HVU	Hansel Valley	91.81	48	eP	P	04 47 53.7	-0.4
	comp=Z,19nm,1.3s						
SPUT	South Promonto	91.94	48	eP	P	04 47 54.9	+0.1
	comp=Z,7.1nm,1.3s						
LRM	Limekiln Ridge	92.97	44	eP	P	04 48 01.0	+1.5
MK01	Makanchi Array	93.16	317	eP	P	04 47 59.1	-1.0
MK31	Makanchi Array	93.17	317	eP	P	04 47 59.1	-1.0
MKAR	Makanchi Array	93.17	317	eP	P	04 47 59.3	-0.8
	comp=Z,21nm,0.8s						
MKAR	Makanchi Array	93.17	317	P	P	04 47 59.7	-0.4
	comp=Z,3.5nm,0.8s,baz=100,slow=6.0,SNR=14						
ZALV	Zalesovo Beam	93.31	324	eP	P	04 47 58.6	-1.9
ZALV	Zalesovo Beam	93.31	324	P	P	04 47 58.0	-2.5
	comp=Z,1.7nm,0.8s,baz=116,slow=6.6,SNR=5.1						
BOZ	Bozeman (W)	93.48	44	eP	P	04 48 01.6	-0.2
	comp=Z,14nm,1.4s						
BOZ	Bozeman (W)	93.48	44	P	P	04 48 03.9	+2.2
	baz=258						
FXWY	Fox Creek	93.48	46	eP	P	04 48 01.2	-0.7
	comp=Z,1.7nm,0.8s						
FXWY				epP	sP	04 48 12.8	-1.9
HRY	Holter Researc	93.59	43	eP	P	04 48 01.4	-0.7
BW06	Boulder Array	94.36	47	P	P	04 48 08.0	+2.1
	baz=259						
PD31	Pinedale Array	94.36	47	eP	P	04 48 06.1	+0.1
PDAR	Pinedale Array	94.36	47	eP	P	04 48 05.1	-0.8
PDAR	Pinedale Array	94.36	47	P	P	04 48 06.5	+0.6
	comp=Z,1.5nm,0.8s,baz=264,slow=3.0,SNR=7.4						
ANMO	Albuquerque	95.29	56	P	P	04 48 13.0	+2.7
	baz=260						
YKA	Yellowknife Ar	95.61	27	P	P	04 48 09.5	-1.4
	comp=Z,0.5nm,0.7s,baz=256,slow=4.4,SNR=6.6						
MNTX	Cornudas Mount	95.62	59	P	P	04 48 13.9	+2.2
	baz=260						
TXAR	Lajitas Array	96.69	62	P	P	04 48 17.9	+1.1
	comp=Z,0.5nm,0.8s,baz=230,slow=7.8,SNR=5.2						
TXAR				PKKPbc	PKKPdf	05 05 01.5	-0.6
	comp=Z,0.4nm,0.8s,baz=111,slow=4.3,SNR=4.2						
SNAA	Sanae	96.77	184	P	P	04 48 16.5	+0.3
SNAA	Sanae	96.77	184	eP	P	04 48 14.9	-1.3
	comp=Z,8.3nm,0.8s						
VNA3	Neumayer Olymp	97.53	182	P	Pdif	04 48 19.1	-0.5
VNA2	Neumayer--Watz	97.76	183	P	Pdif	04 48 20.8	+0.2
ARCES	ARCESS Array B	116.41	345	PKP	PKiKP	04 53 28.4	-0.5
	comp=Z,3.7nm,0.8s,baz=81,slow=2.2,SNR=17						
LPAZ	La Paz	120.79	117	ePKPdf	PKiKP	04 53 39.5	-0.2
LPAZ	La Paz	120.79	117	PKP	PKiKP	04 53 39.9	+0.2
	comp=Z,1.9nm,0.7s,baz=216,slow=8.8,SNR=7.1						
FINES	FINESS Array B	121.74	338	PKP	PKiKP	04 53 39.6	+0.2
	comp=Z,0.7nm,0.6s,baz=117,slow=3.0,SNR=5.9						
BOSA	Boshof	124.34	224	PKP	PKiKP	04 53 46.0	+0.1
	comp=Z,1.9nm,0.9s,baz=115,slow=5.2,SNR=4.7						
CPUP	Villa Florida	124.43	133	PKP	PKiKP	04 53 45.6	-0.3
	comp=Z,2.6nm,0.8s,baz=188,slow=3.8,SNR=5.3						
SDV	Santo Domingo	125.33	87	ePKPdf	PKPdf	04 53 47.2	-0.7
SDV	Santo Domingo	125.33	87	PKP	PKiKP	04 53 47.5	-0.7
	comp=Z,7.4nm,0.7s,baz=265,slow=4.1,SNR=9.9						
AKASG	Malin Array Be	126.65	326	PKP	PKPdf	04 53 47.5	-1.5
	comp=Z,0.5nm,0.4s,baz=48,slow=2.4,SNR=4.9						
AK11	Malin Array Si	126.70	326	ePKPdf	PKiKP	04 53 48.8	-0.9
NB2	NORSAR Subarra	126.77	344	PKPdf	PKPdf	04 53 48.4	-0.7
	comp=Z,0.9nm,0.6s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.77	344	PKP	PKiKP	04 53 48.8	-0.7
	comp=Z,1.1nm,0.7s,baz=39,slow=1.9,SNR=6.7						
HFS	Hagfors	126.82	342	PKP	PKiKP	04 53 49.4	-0.2
	comp=Z,2.9nm,0.7s,baz=191,slow=4.5,SNR=3.6						
VYHS	Vyhne	133.41	329	ePKP	PKiKP	04 54 04.3	+1.1
PTGA	Pitinga	133.83	102	PKP	PKPdf	04 54 03.5	-0.3
	comp=Z,2.5nm,0.5s,baz=330,slow=22,SNR=6.5						
CLL	Collm	134.04	336	ePKPdf	PKiKP	04 54 05.0	+0.6
CLL				e		04 54 14.0	
GERES	GERESS Array B	135.60	333	PKP	PKiKP	04 54 06.4	-1.4
	comp=Z,0.8nm,0.7s,baz=48,slow=2.0,SNR=5.2						
KEST	Kesra	147.14	322	PKPbc	PKPab	04 54 29.8	-1.3
	comp=Z,8.4nm,0.7s,baz=305,slow=4.6,SNR=6.7						
ES19	SONSECA Array	150.06	343	ePKPdf	PKPdf	04 54 32.6	+0.8
ESDC	Sonseca Array	150.10	343	PKPbc	PKiKP	04 54 37.0	-0.8
	comp=Z,2.4nm,0.9s,baz=27,slow=2.0,SNR=6.9						
TOA0	Torodi Ar. Sit	163.49	278	ePKPdf	PKPdf	04 54 48.4	-1.2
TORD	Torodi Ar. Bea	163.49	278	PKP	PKPdf	04 54 49.3	-0.2
	comp=Z,3.4nm,1.1s,baz=23,slow=0.9,SNR=5.9						
TORD				PKPab	PKPab	04 55 41.7	+0.7
	comp=Z,0.9nm,0.8s,baz=95,slow=3.7,SNR=3.0						
DBIC	Dimbokro	168.88	246	PKPab	PKPab	04 56 05.4	+0.7
	comp=Z,2.9nm,0.7s,baz=129,slow=4.0,SNR=4.5						

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*ISCJB **06** 04:38:06.0±0.3, 11°.70S±0°.05×165°.71E±0°.06, h10^{km}, mb4.8/36, Error ellipse: s-maj=9.6km s-min=6.3km az=153.4*

*IDC **06** 04:38:06.0±0.8, 11°.68S×165°.89E, h0^{km}, mb4.4/13, mb1 4.6/14, mb1mx4.3/45, mbtmp4.4/14, ML4.4/1, Error ellipse: s-maj=30.3km s-min=19.3km az=110.0*

*NEIC **06** 04:38:08.8±4.9, 11°.66S×165°.88E, h17^{km}±29^{km}, mb5.1/25, Error ellipse: s-maj=12.7km s-min=6.8km az=60.0*

ISC 06 04:38:07.4±0.5**, 11°.65S**±0°.08×**165°.86E**±0°.09**, h10^{km}, n76, σ1^{s}13**/78**, mb4.9**/36**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.21	290	Pn	Pn	04 39 42.6	+3.3
	20nm,0.3s,baz=159,slow=8.1,SNR=3.1						
HNR				Sn	Sn	04 40 48.1	-2.3
	30nm,0.3s,baz=3.5,slow=23,SNR=4.1						
DZM	Mont Dzumac	10.38	177	ePn	Pn	04 40 35.8	-0.7
DZM	Mont Dzumac	10.38	177	Pn	Pn	04 40 37.3	+0.8
	3.1nm,0.3s,baz=335,slow=15,SNR=2.8						
CTAO	Charters Tower	20.62	244	eP	Pn	04 42 49.0	-0.4
	30nm,1.1s						
COEN	Coen	22.23	262	eP	P	04 43 01.5	-3.0
	40nm,1.4s						
OUZ	Omahuta	24.49	165	eP	P	04 43 26.7	-0.2
	60nm,1.2s						
BKZ	Black Stump Fm	28.99	163	eP	P	04 44 07.0	-0.4
	44nm,1.4s						
STKA	Stephens Creek	30.08	224	eP	P	04 44 17.4	+0.2
	2.6nm,0.9s						
STKA	Stephens Creek	30.08	224	P	P	04 44 17.4	+0.2
	6.1nm,0.7s,baz=28,slow=11,SNR=4.4						
BFZ	Birch Farm	30.33	164	eP	P	04 44 19.1	-0.2
	89nm,1.5s						
WRAB	Tennant Creek	31.37	251	eP	P	04 44 25.4	-3.3
	13nm,0.8s						
WB2	Warramunga Arr	31.37	251	eP	P	04 44 27.5	-1.2
WR1	Warramunga Arr	31.38	251	eP	P	04 44 28.4	-0.4
	36nm,1.4s						
WRA	Warramunga Arr	31.38	251	P	P	04 44 28.4	-0.5

	4.2nm,0.6s,baz=81,slow=8.9,SNR=6.3						
LTZ	Lake Taylor	31.51	171	*e*P	P	04 44 29.8	+0.1
	56nm,1.2s						
OXZ	Oxford	32.01	171	*e*P	P	04 44 35.1	+1.1
	74nm,1.2s						
RPZ	Rata Peaks	32.26	173	*e*P	P	04 44 37.6	+1.4
	42nm,0.9s						
MQZ	McQueen's Vall	32.47	171	*e*P	P	04 44 38.6	+0.6
	50nm,1.0s						
AS31	Alice Springs	32.62	244	*e*P	P	04 44 38.2	-1.5
	1.9nm,0.6s						
AS31				*e*PcP	PcP	04 47 26.5	+0.5
ASAR	Alice Springs	32.62	244	P	P	04 44 38.2	-1.5
	6.0nm,0.8s,baz=76,slow=9.5,SNR=7.9						
ASAR				PcP	PcP	04 47 26.5	+0.5
	1.6nm,0.8s,baz=64,slow=4.2,SNR=4.4						
LBZ	Lake Benmore	32.83	174	*e*P	P	04 44 41.5	+0.4
	29nm,1.0s						
ODZ	Otahua Downs	33.53	174	*e*P	P	04 44 50.2	+3.0
	55nm,1.4s						
MTN	Manton Dam	33.94	264	*e*P	P	04 44 49.1	-2.2
	12nm,1.3s						
MJAR	Matsushiro Arr	54.56	333	P	P	04 47 35.6	-0.3
	2.8nm,0.7s,baz=172,slow=8.7,SNR=6.0						
MAJO	Matsushiro	54.56	333	*e*P	P	04 47 35.6	-0.3
KSRS	Korea Array	60.44	326	P	P	04 48 18.1	+0.8
	2.6nm,1.0s,baz=127,slow=8.0,SNR=6.1						
KS15	Wonju Array Si	60.45	326	*e*P	P	04 48 18.1	+0.7
	26nm,1.3s						
KSAR	Wonju Array Be	60.45	326	P	P	04 48 18.1	+0.7
KS01	Wonju Array Si	60.47	326	*e*P	P	04 48 17.9	+0.3
USRK	Ussuriysk Ar.	63.54	333	P	P	04 48 39.2	+1.2
	2.1nm,0.7s,baz=134,slow=5.5,SNR=8.0						
IPM	Ipoh	66.43	280	*e*P	P	04 48 58.1	+0.5
	44nm,1.2s						
KLR	Kul'dur	67.66	337	P	P	04 49 05.4	+0.8
	2.5nm,0.7s,baz=153,slow=2.4,SNR=6.5						
ENH	Enshi	68.36	309	*e*P	P	04 49 09.9	+0.4
	14nm,1.0s						
XAN	Xi'an	70.61	312	*e*P	P	04 49 23.0	-0.3
	185nm,1.8s						
CM01	Chiang Mai Arr	72.43	294	*e*P	P	04 49 35.8	+1.2
CM31	Chiang Mai Arr	72.45	294	*e*P	P	04 49 36.0	+1.3
	8.9nm,1.0s						
CMAR	Chiang Mai Arr	72.45	294	P	P	04 49 36.0	+1.3
	1.6nm,0.5s,baz=120,slow=4.0,SNR=7.2						
QSPA	South Pole Qui	78.36	180	*e*P	P	04 50 08.1	+0.2
	16nm,1.1s						
ULN	Ulaanbaatar	78.85	324	*e*P	P	04 50 12.5	+1.5
	15nm,1.1s						
SONA0	Songino Array	79.22	324	*e*P	P	04 50 14.0	+1.1
SONM	Songino Array	79.22	324	P	P	04 50 14.0	+1.1
	2.7nm,0.7s,baz=139,slow=5.8,SNR=13						
SONA1	Songino Array	79.22	324	*e*P	P	04 50 13.8	+0.8
IL1	Eielson Array	84.05	18	*e*P	P	04 50 36.6	-1.4
ILAR	Eielson Array	84.05	18	P	P	04 50 37.4	-0.5
	1.7nm,0.5s,baz=240,slow=4.9,SNR=20						
ILB	Eielson Array	84.05	18	*e*P	P	04 50 37.8	-0.2
	8.0nm,1.4s						
TIXI	Tiksi	86.70	349	*e*P	P	04 50 51.2	+0.1
	10nm,1.2s						
MK32	Makanchi Array	94.04	317	*e*P	P	04 51 26.3	+0.3
MKAR	Makanchi Array	94.04	317	P	P	04 51 26.3	+0.3
	3.7nm,0.9s,baz=101,slow=6.3,SNR=10						
ZAA0	Zalesovo Array	94.11	324	*e*P	P	04 51 26.0	-0.2
	8.5nm,1.1s						
ZALV	Zalesovo Beam	94.11	324	*e*P	P	04 51 25.4	-0.8
ZALV	Zalesovo Beam	94.11	324	P	P	04 51 25.7	-0.4
	4.7nm,1.1s,baz=116,slow=6.8,SNR=10.0						
ZAA1	Zalesovo Array	94.11	324	*e*P	P	04 51 25.7	-0.5
YKA	Yellowknife Ar	95.46	27	P	P	04 51 30.4	-1.7
	0.2nm,0.5s,baz=260,slow=4.5,SNR=5.6						
YKB5	Yellowknife Ar	95.46	27	*e*P	P	04 51 30.4	-1.7
ARA0	ARCESS Array S	116.95	345	*e*PKPdf	PKiKP	04 56 51.9	-0.1
ARCES	ARCESS Array B	116.95	345	PKP	PKiKP	04 56 51.9	-0.1
	2.6nm,0.5s,baz=71,slow=2.0,SNR=36						
FIA0	FINESS Array S	122.37	338	*e*PKPdf	PKiKP	04 57 02.1	-0.6
FINES	FINESS Array B	122.37	338	PKP	PKiKP	04 57 02.1	-0.6
	1.6nm,0.7s,baz=219,slow=1.2,SNR=6.1						
BOSA	Boshof	124.75	223	PKP	PKiKP	04 57 08.7	0.0
	3.1nm,0.7s,baz=179,slow=1.8,SNR=6.7						
NB2	NORSAR Subarra	127.31	345	PKPdf	PKiKP	04 57 12.0	-0.7
	comp=Z,1.7nm,0.7s,baz=34,slow=2.0						
NB200	NORSAR Array S	127.31	345	*e*PKPdf	PKiKP	04 57 11.9	-0.7
NOA	NORSAR Array B	127.31	345	PKP	PKiKP	04 57 11.9	-0.7
	comp=Z,1.7nm,0.8s,baz=37,slow=2.1,SNR=6.1						
HFS	Hagfors	127.40	343	PKP	PKiKP	04 57 12.4	-0.4
	comp=Z,2.8nm,0.8s,baz=328,slow=1.9,SNR=5.7						
AKASG	Malin Array Be	127.43	327	PKP	PKiKP	04 57 12.6	-0.6
	comp=Z,1.4nm,0.8s,baz=54,slow=1.8,SNR=10						
AKBB	Malin Array Si	127.43	327	*e*PKPdf	PKiKP	04 57 12.6	-0.6
AK11	Malin Array Si	127.47	327	*e*PKPdf	PKiKP	04 57 13.3	+0.1
BR101	Keskin Array S	129.45	312	*e*PKPdf	PKiKP	04 57 17.6	-0.2
BRTR	Keskin Array B	129.45	312	PKP	PKiKP	04 57 17.6	-0.2
	comp=Z,1.6nm,1.1s,baz=205,slow=5.5,SNR=4.7						
KHC	Kasperske Hory	136.13	334	*e*PKPdf	PKiKP	04 57 31.3	+0.5
GEC2	GERESS Array S	136.29	333	*e*PKPdf	PKiKP	04 57 31.2	0.0
GERES	GERESS Array B	136.29	333	PKP	PKiKP	04 57 31.2	0.0
	comp=Z,1.5nm,0.9s,baz=208,slow=2.6,SNR=5.7						
KEST	Kesra	147.96	322	PKPbc	PKPab	04 57 54.7	-1.5
	comp=Z,14nm,0.9s,baz=152,slow=1.7,SNR=12						
ESDC	Sonseca Array	150.67	344	PKPbc	PKiKP	04 58 00.7	-0.3
	comp=Z,1.3nm,0.5s,baz=11,slow=3.2,SNR=8.6						
TOA0	Torodi Ar. Sit	164.46	277	*e*PKPdf	PKPdf	04 58 13.6	+1.1
TORD	Torodi Ar. Bea	164.46	277	PKP	PKPdf	04 58 13.7	+1.2
	comp=Z,1.5nm,0.9s,baz=8.2,slow=3.8,SNR=5.6						
TOA1	Torodi Ar. Sit	164.46	277	*e*PKPdf	PKPdf	04 58 13.7	+1.2

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*IDC **06** 04:40:19.1±0.9, 10°.83S×165°.48E, h0^{km}, mb4.4/7, mb1 4.7/8, mb1mx4.1/43, mbtmp4.5/8, ML4.8/1, Error ellipse: s-maj=48.1km s-min=19.9km az=136.0*

*ISCJB **06** 04:40:21.7±0.8, 11°.1S±0°.1×165°.5E±0°.2, h30^{km}, mb4.3/6, Error ellipse: s-maj=24.5km s-min=15.6km az=34.9*

ISC 06 04:40:23.6±0.8**, 11°.0S**±0°.1×**165°.6E**±0°.2**, h30^{km}, n10, σ0^s.84**/12**, mb4.3**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.09	176	Pn	Pn	04 42 60.0	-0.3
	6.4nm,0.3s,baz=290,slow=11,SNR=7.2						
CTA	Charters Tower	20.69	242	P	P	04 45 02.3	+1.0
	14nm,0.8s,baz=75,slow=13,SNR=6.6						
STKA	Stephens Creek	30.39	223	P	P	04 46 33.2	+0.1
	6.9nm,0.7s,baz=32,slow=9.7,SNR=6.4						
STKA				PcP	PcP	04 49 33.7	+1.0
	2.5nm,0.8s,baz=24,slow=2.5,SNR=2.9						
WRA	Warramunga Arr	31.35	250	P	P	04 46 41.0	-0.8
	10nm,0.8s,baz=81,slow=9.0,SNR=12						
ASAR	Alice Springs	32.67	243	P	P	04 46 52.4	-1.0
	4.0nm,0.8s,baz=70,slow=9.8,SNR=5.6						
ASAR				PcP	PcP	04 49 39.5	+0.4
	1.3nm,0.6s,baz=78,slow=2.6,SNR=6.7						
ILAR	Eielson Array	83.48	19	P	P	04 52 48.3	+0.3
	1.4nm,0.6s,baz=238,slow=4.4,SNR=6.5						
NVAR	Mina Array Bea	86.10	50	P	P	04 53 02.7	+0.6
	1.2nm,0.7s,baz=227,slow=7.1,SNR=6.8						
YKA	Yellowknife Ar	94.97	27	P	P	04 53 41.6	-1.3
	0.3nm,0.6s,baz=259,slow=4.4,SNR=5.0						
ARCES	ARCESS Array B	116.20	345	PKP	PKiKP	04 59 03.2	-0.3
	1.2nm,0.8s,baz=67,slow=2.3,SNR=2.7						
BOSA	Boshof	125.06	223	PKP	PKiKP	04 59 22.8	+0.6
	2.4nm,0.6s,baz=94,slow=1.9,SNR=7.7						

JMA 06 04:42:06.8, 35°.23N×137°.35E, h48^{km}, M4.1, 2C-2D Broadband fault plane solution: P waves. NP1: φs345.00000°, δ83.00000°, λ-141.00000°. **NP2:** φs249.00000°, δ51.00000°, λ-9.00000°. **Principal axes:** T Plg21.0000°, Azm111.0000°; N Plg50.0000°, Azm354.0000°; P Plg32.0000°, Azm215.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAO	Obara	0.08	296	⇓P	Pn	04 42 14.3	-0.1
JAO				S	Sn	04 42 19.9	+0.1
JYTA	Yamagatataniai	0.62	306	P	Pn	04 42 19.5	+0.1
JYTA				*e*S	Sn	04 42 28.8	+0.3
SHZ3	Shizuoka 3	0.72	103	P	Pn	04 42 20.7	-0.1
TSUJ	Tsu 2	0.92	236	P	Pn	04 42 23.2	-0.2
TSUJ				S	Sn	04 42 35.6	0.0
TK04	Tokai 4	0.95	153	⇑P	Pn	04 42 24.1	+0.4
TK04				X		04 42 37.3	
JIE	Ise	0.99	213	⇓P	Pn	04 42 24.1	-0.2
JIE				*e*S	Sn	04 42 36.6	-0.6
JYN	Shimob	1.01	74	P	Pn	04 42 25.1	+0.4
JFNN	Fujinakano	1.09	91	P	Pn	04 42 26.6	+0.9
TK02	Tokai 2	1.32	165	P	Pn	04 42 28.1	-0.6
JKG	Kaga	1.33	322	⇑P	Pn	04 42 30.0	+1.0
JKG				S	Sn	04 42 47.8	+2.2
MAT	Matsushiro	1.48	28	P	Pn	04 42 32.2	+1.1
MAT				S	Sn	04 42 52.4	+3.1

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*IDC **06** 04:44:15.3±1.4, 10°.94S×165°.36E, h0^{km}, mb4.1/9, mb1 4.2/10, mb1mx4.0/41, mbtmp4.1/10, ML4.4/1 Error ellipse: s-maj=40.8km s-min=23.2km az=117.0*

*ISCJB **06** 04:44:17.9±0.8, 11°.0S±0°.1×165°.3E±0°.2, h30^{km}, mb4.0/9, Error ellipse: s-maj=26.3km s-min=14.8km az=2.7*

ISC 06 04:44:19.9±0.9**, 10°.9S**±0°.1×**165°.4E**±0°.2**, h30^{km}, n16, σ0^s.82**/10**, mb4.2**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.12	175	Pn	Pn	04 46 57.4	+0.4
	2.5nm,0.3s,baz=33,slow=19,SNR=6.6						
H11S2	WAKE ISLAND Hy	29.27	3	T	T	05 20 41.3	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.28	3	T	T	05 20 41.7	
	baz=184,slow=76,SNR=9.1						
H11S1	WAKE ISLAND Hy	29.29	3	T	T	05 20 42.7	
	baz=184,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	30.50	3	T	T	05 22 14.1	
	baz=181						
H11N3	WAKE ISLAND Hy	30.50	3	T	T	05 22 15.7	
	baz=181						
H11N2	WAKE ISLAND Hy	30.52	3	T	T	05 22 17.0	
	baz=181,SNR=6.5						
WRA	Warramunga Arr	31.15	250	P	P	04 50 36.0	-0.5
	0.8nm,0.6s,baz=82,slow=9.1,SNR=4.7						
ASAR	Alice Springs	32.49	243	P	P	04 50 47.7	-0.5
	5.2nm,1.0s,baz=73,slow=9.5,SNR=15						
KSRS	Korea Array	59.57	326	P	P	04 54 20.2	-0.7
	1.8nm,0.8s,baz=132,slow=8.6,SNR=5.7						
USRK	Ussuriysk Ar.	62.68	334	P	P	04 54 42.6	+0.8
	2.6nm,0.8s,baz=106,slow=7.9,SNR=5.0						
KLR	Kul'dur	66.81	337	P	P	04 55 09.4	+0.8
	2.5nm,0.7s,baz=128,slow=6.7,SNR=8.2						
SONM	Songino Array	78.35	324	P	P	04 56 18.5	+0.9
	0.6nm,0.8s,baz=134,slow=4.2,SNR=3.2						
ILAR	Eielson Array	83.54	19	P	P	04 56 44.9	+0.2
	0.6nm,0.8s,baz=238,slow=4.9,SNR=5.3						
MKAR	Makanchi Array	93.18	317	P	P	04 57 31.3	-0.1
	0.7nm,0.7s,baz=102,slow=5.3,SNR=7.2						
YKA	Yellowknife Ar	95.06	27	P	P	04 57 38.4	-1.3
	0.2nm,0.7s,baz=250,slow=4.4,SNR=3.5						

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*IDC **06** 04:44:59.8±1.5, 11°.84S×166°.00E, h0^{km}, mb4.4/10, mb1 4.6/10, mb1mx4.2/37, mbtmp4.4/10, Error ellipse: s-maj=50.6km s-min=22.1km az=127.0*

*NEIC **06** 04:45:02.2±0.4, 11°.79S×165°.81E, h10^{km}, mb5.0/17, Error ellipse: s-maj=10.9km s-min=10.0km az=127.0*

*ISCJB **06** 04:45:03.8±0.5, 11°.88S±0°.07×165°.71E±0°.08, h30^{km}, mb4.7/23, Error ellipse: s-maj=11.0km s-min=9.9km az=9.8*

ISC 06 04:45:05.4±0.6**, 11°.8S**±0°.1×**165°.8E**±0°.1**, h30^{km}, n44, σ1^s.17**/44**, mb4.7**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.20	292	*e*Pn	Pn	04 46 34.7	-0.2
	783nm,1.0s						
EIDS	Eidsvold	19.36	224	*e*P	P	04 49 27.7	-1.0
	33nm,1.1s						
CTA	Charters Tower	20.48	244	P	Pn	04 49 42.8	-0.4
	10nm,0.7s,baz=80,slow=9.5,SNR=5.1						
MANU	Manus Island	20.67	297	*e*P	P	04 49 40.5	-2.5
	197nm,1.4s						
COEN	Coen	22.13	262	*e*P	P	04 49 59.9	+1.1
	21nm,1.0s						
KNTN	Kanton	24.04	70	*e*P	P	04 50 18.2	+0.1
	178nm,1.4s						
HIZ	Hauiti	27.80	165	*e*P	P	04 50 52.4	+0.5
	101nm,1.5s						
BKZ	Black Stump Fm	28.86	163	*e*P	P	04 51 00.2	-1.2
	34nm,1.4s						
STKA	Stephens Creek	29.91	224	*e*P	P	04 51 11.5	+0.8
	1.4nm,0.8s						
STKA	Stephens Creek	29.91	224	P	P	04 51 11.5	+0.8
	6.7nm,0.8s,baz=7.5,slow=7.2,SNR=4.0						
WRAB	Tennant Creek	31.24	251	*e*P	P	04 51 20.9	-1.8
	13nm,1.1s						
WB2	Warramunga Arr	31.25	251	*e*P	P	04 51 22.3	-0.3
WR1	Warramunga Arr	31.25	251	*e*P	P	04 51 22.3	-0.5
	14nm,1.1s						
WRA	Warramunga Arr	31.26	251	P	P	04 51 22.3	-0.5
	5.9nm,0.8s,baz=82,slow=8.8,SNR=15						
RPZ	Rata Peaks	32.12	173	*e*P	P	04 51 31.2	+1.2
	37nm,0.9s						
AS31	Alice Springs	32.48	244	*e*P	P	04 51 32.8	-0.8
	2.7nm,0.8s						
AS31				*e*PcP	PcP	04 54 20.2	-0.1
ASAR	Alice Springs	32.48	244	P	P	04 51 32.8	-0.8
	8.8nm,0.8s,baz=72,slow=9.7,SNR=14						
ASAR				PcP	PcP	04 54 20.2	-0.1
	1.8nm,1.0s,baz=71,slow=2.9,SNR=4.5						
DCZ	Deep Cove	33.56	178	*e*P	P	04 51 46.6	+4.0
	65nm,1.4s						
KSRS	Korea Array	60.52	326	P	P	04 55 13.2	+0.4
	1.7nm,0.7s,baz=134,slow=8.6,SNR=3.9						
KSAR	Wonju Array Be	60.53	326	P	P	04 55 13.2	+0.3
CM01	Chiang Mai Arr	72.42	294	*e*P	P	04 56 30.5	+1.1
CM31	Chiang Mai Arr	72.44	294	*e*P	P	04 56 30.6	+1.1
	7.1nm,0.9s						
CMAR	Chiang Mai Arr	72.44	294	P	P	04 56 30.6	+1.1
	1.1nm,0.3s,baz=111,slow=3.7,SNR=6.4						
QSPA	South Pole Qui	78.20	180	*e*P	P	04 57 01.1	-0.9
	30nm,1.4s						
ULN	Ulaanbaatar	78.93	324	*e*P	P	04 57 07.3	+1.1
	9.9nm,1.0s						
SONA0	Songino Array	79.30	324	*e*P	P	04 57 08.9	+0.7
SONM	Songino Array	79.30	324	P	P	04 57 08.9	+0.7
	1.4nm,0.6s,baz=140,slow=6.3,SNR=7.5						
SONA1	Songino Array	79.30	324	*e*P	P	04 57 08.4	+0.2
ILAR	Eielson Array	84.22	18	P	P	04 57 31.4	-2.2
	1.3nm,1.1s,baz=251,slow=5.2,SNR=5.4						
ILB	Eielson Array	84.22	18	*e*P	P	04 57 31.4	-2.2
	8.5nm,1.5s						
TIXI	Tiksi	86.84	349	*e*P	P	04 57 48.3	+1.8
	8.3nm,0.5s						
MK32	Makanchi Array	94.09	317	*e*P	P	04 58 20.8	-0.3
MKAR	Makanchi Array	94.09	317	P	P	04 58 20.8	-0.3
	1.5nm,0.6s,baz=99,slow=6.7,SNR=9.3						
ZALV	Zalesovo Beam	94.19	324	*e*P	P	04 58 19.9	-1.4
ZALV	Zalesovo Beam	94.19	324	P	P	04 58 20.1	-1.2
	1.5nm,0.6s,baz=107,slow=5.1,SNR=6.8						
ZAA1	Zalesovo Array	94.19	324	*e*P	P	04 58 20.1	-1.2
MAKZ	Makanchi	94.31	317	*e*P	P	04 58 22.3	+0.3
	6.5nm,0.9s						
ARA0	ARCESS Array S	117.08	345	*e*PKPdf	PKPdf	05 03 46.7	-0.2
ARCES	ARCESS Array B	117.08	345	PKP	PKPdf	05 03 46.7	-0.2
	2.0nm,0.8s,baz=70,slow=1.8,SNR=8.0						
AK11	Malin Array Si	127.56	327	*e*PKPdf	PKiKP	05 04 10.4	+2.3
KEST	Kesra	148.03	322	PKPbc	PKPbc	05 04 48.4	-0.2
	14nm,0.8s,baz=93,slow=1.9,SNR=14						
TOA0	Torodi Ar. Sit	164.40	277	*e*PKPdf	PKPdf	05 05 09.9	+2.8
TORD	Torodi Ar. Bea	164.40	277	PKP	PKPdf	05 05 06.7	-0.4
	1.4nm,1.1s,baz=303,slow=1.1,SNR=4.2						
TOA1	Torodi Ar. Sit	164.40	277	*e*PKPdf	PKPdf	05 05 06.7	-0.4

IDC 06 04:49:33.8±43.0**, 12°.20S**×**163°.13E, h0^{km}, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.7**/35**, mbtmp4.2**/3**, Error ellipse: s-maj=731.6km s-min=99.9km az=61.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	27.86	222	P	P	04 55 25.5	+0.3
	1.8nm,0.7s,baz=36,slow=8.7,SNR=2.8						
WRA	Warramunga Arr	28.68	251	P	P	04 55 32.7	-0.1
	2.7nm,0.8s,baz=81,slow=9.2,SNR=5.0						
ASAR	Alice Springs	29.98	244	P	P	04 55 44.1	-0.2
	2.2nm,0.8s,baz=74,slow=9.8,SNR=5.4						

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*IDC **06** 04:50:20.3±1.1, 11°.46S×165°.05E, h0^{km}, mb4.1/8, mb1 4.4/9, mb1mx4.1/37, mbtmp4.1/9, ML4.2/1, Error ellipse: s-maj=40.4km s-min=21.5km az=131.0*

*ISCJB **06** 04:50:23.8±0.8, 11°.6S±0°.1×165°.0E±0°.2, h34^{km}, mb4.0/8, Error ellipse: s-maj=24.1km s-min=16.0km az=18.3*

ISC 06 04:50:25.4±0.8**, 11°.5S**±0°.1×**165°.1E**±0°.2**, h34^{km}, n9, σ1^s.00/9, mb4.1**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.57	173	Pn	Pn	04 52 54.7	+0.1
	1.8nm,0.3s,baz=356,slow=19,SNR=3.2						
STKA	Stephens Creek	29.65	223	P	P	04 56 28.5	+0.6
	2.7nm,0.8s,baz=330,slow=6.9,SNR=3.5						
WRA	Warramunga Arr	30.71	250	P	P	04 56 36.8	-0.7
	6.8nm,1.0s,baz=78,slow=9.3,SNR=10.0						
ASAR	Alice Springs	32.00	244	P	P	04 56 47.9	-0.9
	3.2nm,0.9s,baz=71,slow=9.4,SNR=7.9						
SONM	Songino Array	78.67	324	P	P	05 02 25.6	+1.3
	0.6nm,0.7s,baz=134,slow=6.4,SNR=4.0						
ILAR	Eielson Array	84.17	19	P	P	05 02 52.5	-0.3
	1.0nm,1.0s,baz=227,slow=5.8,SNR=3.7						
NVAR	Mina Array Bea	86.82	50	P	P	05 03 07.7	+0.7
	1.8nm,0.8s,baz=236,slow=7.6,SNR=7.8						
MKAR	Makanchi Array	93.43	317	P	P	05 03 37.5	0.0
	0.6nm,0.8s,baz=74,slow=7.7,SNR=2.5						
YKA	Yellowknife Ar	95.69	27	P	P	05 03 46.0	-1.4
	0.1nm,0.3s,baz=253,slow=3.8,SNR=4.3						

IDC 06 04:51:23.7±2.6**, 10°.76S**×**165°.19E, h0^{km}, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.8**/38**, mbtmp3.9**/5**, ML4.0**/1**, Error ellipse: s-maj=58.0km s-min=33.4km az=101.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.31	174	Pn	Pn	04 54 07.1	+0.3
	1.0nm,0.3s,baz=113,slow=20,SNR=8.8						
CTA	Charters Tower	20.45	241	P	Pn	04 56 04.9	-0.2
	7.5nm,0.8s,baz=88,slow=11,SNR=4.8						
WRA	Warramunga Arr	31.07	249	P	P	04 57 43.6	-0.3
	0.6nm,0.5s,baz=82,slow=9.1,SNR=4.5						
ASAR	Alice Springs	32.43	243	P	P	04 57 54.9	-0.9
	0.9nm,0.5s,baz=66,slow=9.9,SNR=8.9						
SONM	Songino Array	78.11	324	P	P	05 03 24.9	+0.1
	0.1nm,0.3s,baz=134,slow=4.2,SNR=2.3						

IDC 06 04:52:31.4±1.8**, 10°.65S**×**164°.51E, h0^{km}, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.7**/37**, mbtmp3.8**/4**, ML3.8**/1**, Error ellipse: s-maj=51.6km s-min=33.2km az=128.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.51	171	Pn	Pn	04 55 17.6	+0.4
	0.6nm,0.3s,baz=36,slow=19,SNR=2.9						
WRA	Warramunga Arr	30.49	249	P	P	04 58 46.6	+0.2
	0.5nm,0.9s,baz=81,slow=9.2,SNR=2.4						
ASAR	Alice Springs	31.90	242	P	P	04 58 58.5	-0.4
	0.2nm,0.3s,baz=65,slow=10.0,SNR=3.0						
ILAR	Eielson Array	83.53	19	P	P	05 05 00.9	0.0
	0.6nm,0.9s,baz=224,slow=5.8,SNR=4.3						

IDC 06 04:54:50.0±1.7**, 11°.54S**×**165°.06E, h0^{km}, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.7**/39**, mbtmp3.8**/4**, ML3.6**/1**, Error ellipse: s-maj=51.5km s-min=34.8km az=114.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.56	173	Pn	Pn	04 57 23.0	+0.1
	0.4nm,0.3s,baz=322,slow=18,SNR=4.8						
WRA	Warramunga Arr	30.68	250	P	P	05 01 06.5	-0.2
	1.0nm,1.0s,baz=81,slow=8.9,SNR=3.3						
ILAR	Eielson Array	84.19	19	P	P	05 07 22.7	-0.3
	0.6nm,1.0s,baz=245,slow=4.7,SNR=5.4						
MKAR	Makanchi Array	93.42	317	P	P	05 08 07.8	+0.4
	0.2nm,0.6s,baz=103,slow=4.6,SNR=2.3						

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*IDC **06** 04:55:01.6±1.1, 10°.95S×165°.47E, h0^{km}, mb4.1/8, mb1 4.3/9, mb1mx4.1/40, mbtmp4.1/9, ML4.4/1, Error ellipse: s-maj=40.3km s-min=21.0km az=130.0*

*ISCJB **06** 04:55:04.2±0.8, 11°.2S±0°.1×165°.5E±0°.2, h30^{km}, mb4.0/8, Error ellipse: s-maj=25.0km s-min=15.9km az=19.4*

ISC 06 04:55:05.9±0.8**, 11°.1S**±0°.1×**165°.6E**±0°.2**, h30^{km}, n9, σ0^s.98**/9**, mb4.1**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.97	176	Pn	Pn	04 57 40.3	-0.7
	2.6nm,0.3s,baz=336,slow=15,SNR=10						
STKA	Stephens Creek	30.29	223	P	P	05 01 16.3	+1.7
	2.3nm,0.7s,baz=17,slow=12,SNR=4.8						
WRA	Warramunga Arr	31.30	250	P	P	05 01 22.8	-1.0
	2.4nm,0.7s,baz=80,slow=8.8,SNR=19						
ASAR	Alice Springs	32.62	243	P	P	05 01 35.0	-0.3
	2.6nm,0.9s,baz=69,slow=9.5,SNR=11						
SONM	Songino Array	78.58	324	P	P	05 07 04.3	-0.6
	0.8nm,0.8s,baz=106,slow=4.7,SNR=3.9						
ILAR	Eielson Array	83.60	19	P	P	05 07 31.1	+0.1
	0.7nm,0.8s,baz=235,slow=4.4,SNR=7.2						
NVAR	Mina Array Bea	86.18	50	P	P	05 07 45.8	+0.8
	1.9nm,1.0s,baz=222,slow=7.6,SNR=5.4						
MKAR	Makanchi Array	93.42	317	P	P	05 08 18.7	+0.2
	0.7nm,0.9s,baz=90,slow=5.8,SNR=3.4						
YKA	Yellowknife Ar	95.08	27	P	P	05 08 25.1	-0.6
	0.4nm,0.9s,baz=256,slow=4.1,SNR=5.2						

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*IDC **06** 04:56:16.0±0.6, 11°.23S×165°.21E, h0^{km}, mb4.7/17, mb1 4.8/19, mb1mx4.6/41, mbtmp4.7/19, ML4.8/2, Error ellipse: s-maj=20.3km s-min=15.3km az=139.0*

*NEIC **06** 04:56:17.1±0.1, 11°.28S×165°.17E, h10^{km}, mb5.0/80, Error ellipse: s-maj=3.6km s-min=3.1km az=128.0*

*MOS **06** 04:56:18.8±1.1, 11°.20S×165°.06E, h30^{km}, mb5.1/26, Error ellipse: s-maj=10.4km s-min=9.7km az=5.4*

*ISCJB **06** 04:56:19.3±0.1, 11°.34S±0°.03×165°.12E±0°.03, h34^{km}, mb4.9/108, Error ellipse: s-maj=4.3km s-min=3.9km az=142.0*

ISC 06 04:56:20.8±0.3**, 11°.35S**±0°.06×**165°.23E**±0°.06**, h34^{km}, n262, σ1^s.13**/269**, mb5.0**/108**, 11C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.53	290	*e*Pn	Pn	04 57 38.9	-1.9
HNR				*e*Sn	Sn	04 58 43.6	+0.3
HNR	Honiara	5.53	290	*e*P	Pn	04 57 38.9	-1.9
HNR				*e*		04 58 43.6	
HNR	Honiara	5.53	290	Pn	Pn	04 57 39.5	-1.3
	40nm,0.3s,baz=132,slow=5.5,SNR=4.6						
HNR				Sn	Sn	04 58 43.1	-0.1
	36nm,0.3s,baz=270,slow=14,SNR=5.6						
DZM	Mont Dzumac	10.73	174	*e*Pn	Pn	04 58 51.5	-0.7
DZM	Mont Dzumac	10.73	174	Pn	Pn	04 58 52.3	+0.1
	4.4nm,0.3s,baz=311,slow=19,SNR=8.5						
OUENC	Ouen Island, N	11.12	172	*e*Pn	Pn	04 58 57.6	+0.1
PINNC	Pines Island,	11.40	170	*e*Pn	Pn	04 59 00.4	-0.9
EIDS	Eidsvold	19.33	222	P	Pn	05 00 45.5	+0.9
	baz=20,SNR=4.9						
CTA	Charters Tower	20.21	242	P	Pn	05 00 54.4	-0.7
	35nm,0.9s,baz=59,slow=13,SNR=8.7						
CTAO	Charters Tower	20.21	242	*e*P	P	05 00 52.6	-0.4
	126nm,1.5s						
CTAO	Charters Tower	20.21	242	*e*P	P	05 00 52.6	-0.4
CTAO				pmax	pmax		
	comp=Z,126nm,1.5s						
MTSU	Mount Surprise	21.30	249	P	P	05 01 05.8	+1.0
	baz=22,SNR=13						
RMQ	Roma	21.62	224	P	P	05 01 09.7	+1.5
	baz=22,SNR=17						
COEN	Coen	21.67	261	P	P	05 01 09.6	+0.8
	baz=22,SNR=12						
ARMA	Armidale	22.79	212	P	P	05 01 21.6	+0.8
	baz=23,SNR=6.5						
QLP	Quilpie	24.91	230	P	P	05 01 41.4	+0.6
	baz=25,SNR=7.1						
OUZ	Omahuta	24.95	164	*e*P	P	05 01 42.7	+1.6
	comp=Z,46nm,1.2s						
QIS	Mount Isa	26.25	246	P	P	05 01 53.4	+0.4
	baz=26,SNR=9.6						
CMSA	Cobar Meteorol	27.01	219	P	P	05 02 00.3	+0.5
	baz=27,SNR=15						

MXZ	Matakaoa Point	28.62	158	*e*P	P	05 02 14.8	+0.6
	comp=Z,184nm,1.5s						
URZ	Urewera	28.83	160	*e*P	P	05 02 16.4	+0.4
	comp=Z,19nm,0.9s						
URZ	Urewera	28.83	160	P	P	05 02 18.5	+2.5
	comp=Z,13nm,0.7s,baz=57,slow=5.6,SNR=4.5						
BKZ	Black Stump Fm	29.46	162	*e*P	P	05 02 22.9	+1.3
	comp=Z,30nm,1.1s						
BHHZ	Black Hill Sta	29.64	163	P	P	05 02 25.5	+2.4
H11S2	WAKE ISLAND Hy	29.68	3	T	T	05 34 09.2	
	baz=181,slow=76,SNR=8.8						
H11S3	WAKE ISLAND Hy	29.69	3	T	T	05 34 09.9	
	baz=181,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	29.70	3	T	T	05 34 11.2	
	baz=181,slow=76,SNR=7.4						
STKA	Stephens Creek	29.87	223	P	P	05 02 26.0	+0.7
	baz=30,SNR=12						
STKA	Stephens Creek	29.87	223	*e*P	P	05 02 25.5	+0.2
	comp=Z,4.6nm,1.0s						
STKA				PcP	PcP	05 05 28.6	+0.7
STKA	Stephens Creek	29.87	223	*e*P	P	05 02 25.5	+0.2
STKA						05 05 28.6	
STKA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
STKA	Stephens Creek	29.87	223	P	P	05 02 25.7	+0.4
	comp=Z,14nm,0.9s,baz=26,slow=9.0,SNR=18						
STKA				PcP	PcP	05 05 28.6	+0.7
	comp=Z,0.9nm,0.4s,baz=164,slow=2.2,SNR=2.8						
QRZ	Quartz Range	30.06	169	P	P	05 02 31.4	+4.6
TSZ	Takapari Road	30.14	163	P	P	05 02 29.7	+2.2
MRZ	Mangatainoka R	30.59	164	P	P	05 02 33.3	+1.7
BFZ	Birch Farm	30.79	164	*e*P	P	05 02 34.1	+0.8
	comp=Z,49nm,1.1s						
BFZ	Birch Farm	30.79	164	P	P	05 02 33.7	+0.4
HOWZ	Holdsworth Sta	30.80	165	P	P	05 02 34.8	+1.4
CAW	Cannon Point	30.88	165	P	P	05 02 36.0	+1.9
WRAB	Tennant Creek	30.89	250	*e*P	P	05 02 33.6	-0.8
	comp=Z,70nm,1.2s						
WRAB	Tennant Creek	30.89	250	⇑*i*P	P	05 02 32.4	-2.0
WB2	Warramunga Arr	30.89	250	*e*P	P	05 02 33.7	-0.7
WRA	Warramunga Arr	30.90	250	P	P	05 02 33.9	-0.6
	comp=Z,33nm,1.0s,baz=79,slow=9.0,SNR=42						
WRA				PcP	PcP	05 05 31.8	+0.9
	comp=Z,2.7nm,0.8s,baz=74,slow=2.8,SNR=6.8						
H11N1	WAKE ISLAND Hy	30.91	3	T	T	05 35 38.1	
	baz=180,slow=74						
H11N3	WAKE ISLAND Hy	30.91	3	T	T	05 35 13.6	
	baz=180,slow=74						
H11N2	WAKE ISLAND Hy	30.93	3	T	T	05 35 21.2	
	baz=180						
TUWZ	Tuamarina	30.93	167	P	P	05 02 37.3	+2.8
SNZO	South Karori	30.99	166	*e*P	P	05 02 36.4	+1.4
	comp=Z,57nm,1.1s						
THZ	Tophouse	31.04	169	*e*P	P	05 02 35.0	-0.6
	comp=Z,44nm,1.3s						
MSWZ	Moikau Station	31.22	165	P	P	05 02 37.9	+0.8
PAWZ	Paruwai Farm	31.23	165	P	P	05 02 35.9	-1.3
TRWZ	Traveller	31.31	165	P	P	05 02 40.5	+2.6
KHZ	Kahutara	31.79	168	*e*P	P	05 02 42.3	+0.2
	comp=Z,51nm,1.3s						
KDU	Kakadu	32.05	264	P	P	05 02 43.5	-1.1
	baz=32,SNR=6.3						
AS01	Alice Springs	32.16	243	*e*P	P	05 02 44.3	-1.4
AS31	Alice Springs	32.20	243	*e*P	P	05 02 44.8	-1.2
	comp=Z,5.8nm,0.9s						
ASAR	Alice Springs	32.20	243	P	P	05 02 44.8	-1.2
	comp=Z,20nm,1.0s,baz=74,slow=9.4,SNR=35						
ASAR				PcP	PcP	05 05 34.6	+0.3
	comp=Z,3.8nm,0.8s,baz=79,slow=2.6,SNR=12						
HTT	Hallett	32.60	223	P	P	05 02 49.7	+0.3
	baz=33,SNR=5.9						
RPZ	Rata Peaks	32.64	172	*e*P	P	05 02 49.2	-0.4
	comp=Z,14nm,0.9s						
BBOO	Buckleboo	34.25	227	P	P	05 03 03.6	-0.1
	baz=34,SNR=7.8						
KNRA	Kununurra	35.68	259	P	P	05 03 17.2	+0.9
	baz=36,SNR=4.8						
WRKA	Warakurna	37.49	244	P	P	05 03 31.4	-0.3
	baz=38,SNR=9.2						
FITZ	Fitzroy Crossi	38.81	255	P	P	05 03 42.3	-0.5
	baz=39,SNR=5.0						
SOEI	Soe	40.27	268	*e*P	P	05 03 54.0	-1.2
	comp=Z,14nm,0.9s						
SOEI	Soe	40.27	268	P	P	05 03 54.4	-0.8
BATI	Baumata	40.82	267	P	P	05 04 00.2	+0.6
	comp=Z,14nm,0.5s,baz=135,slow=4.3,SNR=5.8						
MMRI	Maumere	42.39	270	*e*P	P	05 04 10.6	-1.9
	comp=Z,60nm,1.4s						
MBWA	Marble Bar	44.62	251	*e*P	P	05 04 29.6	-0.7
	comp=Z,40nm,1.0s						
MEEK	Meekatharra	46.36	244	P	P	05 04 42.9	-1.2
	baz=46,SNR=6.6						
KLBR	Kellerberrin	48.12	238	P	P	05 04 56.1	-1.6
	baz=48,SNR=4.0						
NWAO	Narrogin (SRO)	48.87	236	P	P	05 05 01.5	-1.9
	baz=49,SNR=3.5						
JAGI	Jajag, Banyuwa	50.34	268	*e*P	P	05 05 13.0	-1.9
	comp=Z,42nm,1.2s						
PWJI	Pagerwojo	52.71	269	P	P	05 05 32.0	-0.6
PCJI	Pacitan	53.30	268	P	P	05 05 36.5	-0.5
TAOE	Nuku Hiva Isla	53.78	93	*e*P	P	05 05 40.5	-0.1
	comp=Z,219nm,1.4s						
UGM	Wanagama	53.98	268	*e*P	P	05 05 41.0	-1.0
	comp=Z,78nm,1.0s						
UGM	Wanagama	53.98	268	P	P	05 05 41.6	-0.4
SBUM	Sibu	54.46	281	*e*P	P	05 05 44.8	-0.7
	comp=Z,3.4nm,0.8s						
KPJI	Karang Pucung	55.62	269	P	P	05 05 53.5	-0.4
KSM	Kuching	56.05	280	*e*P	P	05 05 56.4	-0.6
	comp=Z,18nm,1.1s						
CISI	Cisompet, Garu	56.68	268	*e*P	P	05 06 00.6	-1.0
	comp=Z,57nm,0.9s						
YSS	Yuzh-Sakhalins	61.42	343	⇑*i*P	P	05 06 31.3	-2.3
NJ2	Nanjing	61.88	316	*e*P	P	05 06 38.4	+1.4
NJ2				pmax	pmax		
	comp=Z,180nm,0.5s						
MSHR	Mys Shultsa	62.08	332	⇓*i*P	P	05 06 33.6	-4.6
VLA	Vladivostok	62.18	333	⇓*i*P	P	05 06 37.4	-1.4
VLA				pmax	pmax		
	comp=Z,19nm,0.6s						
IPM	Ipoh	65.77	280	*e*P	P	05 07 02.4	-0.7
	comp=Z,40nm,1.4s						
CASY	Casey	65.91	201	*e*P	P	05 07 03.3	+0.2
	comp=Z,31nm,1.4s						
SKNT	Sakolnakorn	66.75	294	P	P	05 07 09.6	+0.4
KLR	Kul'dur	67.13	337	⇑*i*P	P	05 07 09.4	-1.6
ENH	Enshi	67.69	309	*e*P	P	05 07 14.1	-0.9
	comp=Z,16nm,0.9s						
NONG	Nongkai	67.88	295	P	P	05 07 17.1	+0.7
GYA	Guiyang	68.17	305	⇑*i*P	P	05 07 17.9	-0.3
GYA				PP	PP	05 09 53.4	+4.4
GYA				S	S	05 16 18.0	+1.6
GYA				SKS	SKKSac	05 17 14.8	0.0
GYA	Guiyang	68.17	305	SS	SS	05 20 42.7	+2.8
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.4s						
GYA				LR	LR		
	comp=N,550nm,18.2s						
GYA				LR	LR		
	comp=E,580nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.0s						
BJI	Beijing	68.40	321	P	P	05 07 20.5	+1.3
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PBKT	Sadao Pong	69.32	293	*e*P	P	05 07 25.2	-0.2
	comp=Z,9.3nm,0.9s						
PBKT	Sadao Pong	69.32	293	P	P	05 07 26.7	+1.3
XAN	Xi'an	69.95	313	P	P	05 07 27.9	-1.1
XAN				pP	pP	05 07 39.1	+1.4
XAN				sP	pwP	05 07 44.1	-1.2
XAN				pmax	pmax		
	comp=Z,12nm,1.8s						
XAN				LR	LR		
	comp=N,920nm,17.4s						
XAN				LR	LR		
	comp=E,680nm,15.2s						
XAN				LR	LR		
	comp=Z,1µm,23.9s						
XAN	Xi'an	69.95	313	*e*P	P	05 07 28.6	-0.5
	comp=Z,8.9nm,1.1s						
XAN	Xi'an	69.95	313	*e*P	P	05 07 28.6	-0.5
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SRDT	SRDT	70.31	290	P	P	05 07 33.6	+2.1
UTHA	Uthaitani	70.39	291	P	P	05 07 33.7	+1.7
KMI	Kunming	70.84	302	P	P	05 07 36.3	+1.4
KMI				pP	sP	05 07 46.6	-0.2
KMI				sP	pwP	05 07 50.5	-0.8
KMI				pmax	pmax		
	comp=Z,22nm,1.6s						
KMI	Kunming	70.84	302	*e*P	P	05 07 35.0	+0.1
	comp=Z,29nm,1.2s						
KMI	Kunming	70.84	302	*e*P	P	05 07 35.0	+0.1
KMI				pmax	pmax		
	comp=Z,29nm,1.2s						
MA2	Magadan	71.64	352	⇓*i*P	P	05 07 37.4	-1.3
MA2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	Hu-ho-hao-te	71.73	320	*e*P	P	05 07 42.9	+3.1
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CM01	Chiang Mai Arr	71.74	294	*e*P	P	05 07 40.2	+0.1
CMAR	Chiang Mai Arr	71.77	294	P	P	05 07 41.3	+1.0
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	71.77	294	P	P	05 07 41.2	+1.0
	comp=Z,7.4nm,1.0s,baz=119,slow=4.5,SNR=20						
CMMT	Chiang Mai	71.88	294	P	P	05 07 42.2	+1.2
	comp=Z,13nm,1.6s,comp=Z,0.1nm						
CHTO	Chiang Mai	71.88	294	*e*P	P	05 07 41.2	+0.2
	comp=Z,17nm,1.4s						
CHTO	Chiang Mai	71.88	294	*e*P	P	05 07 41.2	+0.2
CHTO				pmax	pmax		
	comp=Z,17nm,1.4s						
CHTO	Chiang Mai	71.88	294	P	P	05 07 42.3	+1.3
	comp=Z,58nm,1.6s,comp=Z,0.2nm						
CD2	Chengdu	72.38	308	P	P	05 07 44.5	+0.7
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
HIA	Hailar	72.38	331	⇑*i*P	P	05 07 41.5	-1.9
HIA				pmax	pmax		
	comp=Z,12nm,1.7s						
ZEA	Zeya	72.42	337	*e*P	P	05 07 43.9	+0.4
ZEA				pmax	pmax		
	comp=N,46nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,56nm,1.8s						
LZH	Lanzhou	74.58	312	⇑P	P	05 07 58.6	+1.8
LZH				pP	pP	05 08 04.6	-1.0
LZH				sP	sP	05 08 07.7	-1.3
LZH				PP	PP	05 10 52.0	+8.0
LZH				pmax	pmax		
	comp=Z,33nm,1.2s						
LZH				pmax	pmax		
	comp=Z,150nm,4.3s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
SEY	Seymchan	74.72	354	P	P	05 07 57.6	+0.8
	comp=Z,0.8nm,0.3s,baz=132,slow=9.1,SNR=3.6						
ULN	Ulaanbaatar	78.25	324	*e*P	P	05 08 17.3	-0.1
	comp=Z,9.8nm,1.2s						
ULN	Ulaanbaatar	78.25	324	⇓*i*P	P	05 08 17.0	-0.3
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SONM	Songino Array	78.61	324	P	P	05 08 19.9	+0.6
	comp=Z,1.5nm,0.9s,baz=138,slow=6.6,SNR=8.2						
SONA1	Songino Array	78.61	324	*e*P	P	05 08 18.3	-1.0
QSPA	South Pole Qui	78.66	180	*e*P	P	05 08 19.2	-0.1
	comp=Z,49nm,1.4s						
GTA	Gaotai	78.90	314	⇓P	P	05 08 22.1	+1.0
GTA				pP	sP	05 08 32.3	-1.0
GTA				sP	pwP	05 08 36.4	-1.1
GTA				pmax	pmax		
	comp=Z,11nm,1.9s						
GTA				LR	LR		
	comp=N,990nm,17.5s						
GTA				LR	LR		
	comp=E,700nm,18.4s						
GTA				LR	LR		
	comp=Z,2µm,17.5s						
RSO	Redoubt South	78.98	20	*e*P	P	05 08 20.8	-0.3
BILL	Bilibino	79.18	0	*e*P	P	05 08 21.6	-0.2
	comp=Z,10nm,1.0s						
BILL	Bilibino	79.18	0	⇓*i*P	P	05 08 20.0	-1.8
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SHL	Shillong	80.21	299	*e*P	P	05 08 28.2	-0.4
	comp=Z,37nm,1.4s						
SHL	Shillong	80.21	299	*e*P	P	05 08 28.2	-0.4
SHL				pmax	pmax		
	comp=Z,37nm,1.4s						
SHL	Shillong	80.21	299	*e*P	P	05 08 28.0	-0.6
SUA	Susitna One	80.38	20	*e*P	P	05 08 28.7	+0.1
	comp=Z,7.1nm,1.0s						
BOD	Bodaibo	80.59	335	*e*P	P	05 08 28.2	-1.4
BOD				pmax	pmax		
	comp=Z,8.0nm,1.9s						
CAST	Castle Rocks	81.39	18	*e*P	P	05 08 33.4	-0.4
	comp=Z,6.6nm,1.0s						
ZAK	Zakamensk	81.66	325	*e*P	P	05 08 33.0	-2.6
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
DIV	Divide	81.88	22	*e*P	P	05 08 36.3	-0.2
	comp=Z,20nm,1.0s						
KLU	Klutina	82.06	21	*e*P	P	05 08 37.1	-0.4
	comp=Z,8.8nm,1.0s						
LSA	Lhasa	82.08	302	*e*P	P	05 08 38.3	-0.6
	comp=Z,13nm,1.3s						
TLY	Talaya	82.09	326	*e*P	P	05 08 37.0	-0.9
	comp=Z,17nm,1.5s						
TLY	Talaya	82.09	326	α*i*P	P	05 08 38.0	+0.2
RND	Reindeer	82.39	19	*e*P	P	05 08 39.5	+0.3
	comp=Z,9.7nm,1.1s						
RND	Reindeer	82.39	19	*e*P	P	05 08 39.5	+0.3
RND				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RDOG	Red Dog Mine	82.42	12	*e*P	P	05 08 39.1	-0.1
	comp=Z,19nm,1.4s						
MCK	McKinley	82.59	19	*e*P	P	05 08 40.6	+0.4
	comp=Z,15nm,1.2s						
MCK	McKinley	82.59	19	*e*P	P	05 08 40.6	+0.4
MCK				pmax	pmax		
	comp=Z,15nm,1.2s						
DHY	Denali Highway	82.64	20	*e*P	P	05 08 40.7	+0.1
	comp=Z,7.1nm,1.2s						
BWN	Browne	82.74	18	*e*P	P	05 08 41.3	+0.5
	comp=Z,10nm,0.8s						
IM3	Indian Mountai	82.85	16	*e*P	P	05 08 41.4	-0.1
WRH	Wood River Hil	83.38	19	*e*P	P	05 08 44.1	-0.1
	comp=Z,10nm,1.0s						
MDM	Murphy Dome	83.67	18	*e*P	P	05 08 45.2	-0.5
	comp=Z,9.7nm,1.0s						
HDA	Harding Lake	83.69	19	*e*P	P	05 08 45.3	-0.5
	comp=Z,18nm,0.9s						
HDA	Harding Lake	83.69	19	P	P	05 08 45.6	-0.2
	baz=227						
O02D	Mt. Diablo Mer	83.87	47	P	P	05 08 48.3	+0.9
	baz=250						
RIDG	Independ'e Rid	83.93	20	*e*P	P	05 08 46.7	-0.4
	comp=Z,18nm,1.2s						
IL1	Eielson Array	83.96	19	*e*P	P	05 08 46.5	-0.6
ILAR	Eielson Array	83.96	19	P	P	05 08 46.7	-0.5
	comp=Z,3.1nm,0.8s,baz=231,slow=6.2,SNR=18						
ILB	Eielson Array	83.96	19	*e*P	P	05 08 46.4	-0.8
POKR	Poker Plat Res	84.03	18	P	P	05 08 46.9	-0.6
	baz=226						
DOT	Dot Lake	84.14	20	*e*P	P	05 08 48.1	0.0
	comp=Z,12nm,1.1s						
SCRK	Sand Creek	84.37	20	*e*P	P	05 08 49.5	0.0
	comp=Z,16nm,1.1s						
ORV	Oroville	84.59	48	*e*P	P	05 08 50.2	-0.7
	comp=Z,4.2nm,1.1s						
ORV	Oroville	84.59	48	*e*P	P	05 08 50.2	-0.7
ORV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HYT	Haines Junctio	84.87	24	*e*P	P	05 08 52.2	+0.1
	comp=Z,17nm,1.2s						
KNGR	Kungurtug, Tuv	85.05	324	⇑*i*P	P	05 08 53.5	+0.4
BEKR	Beckworth	85.53	48	*e*P	P	05 08 55.0	-0.8
	comp=Z,6.9nm,1.1s						
ISA	Isabella, Lake	85.66	53	P	P	05 08 57.2	+0.7
	baz=253						
WAKR	Walker	85.78	50	*e*P	P	05 08 55.8	-1.4
	comp=Z,14nm,1.3s						
MDPB	Devils Postpil	85.78	50	*e*P	P	05 08 57.0	-0.3
	comp=Z,11nm,1.1s						
EDW2	Edwards Air Fo	85.81	53	P	P	05 08 57.5	+0.3
	baz=253						
BFSC	Mount Baldy Ra	85.89	54	P	P	05 08 57.9	+0.2
	baz=253						
DAWY	Dawson	86.02	21	*e*P	P	05 08 58.0	+0.5
	comp=Z,5.5nm,1.0s						
PALK	Pallekele	86.08	278	*ce*P	P	05 09 01.9	+2.9
PAHR	Pah Rah Range	86.19	48	*e*P	P	05 08 58.9	-0.2
	comp=Z,7.7nm,1.5s						
CWC	Cottonwood Cre	86.19	52	P	P	05 08 59.3	+0.1
	baz=253						
TIXI	Tiksi	86.29	349	*e*P	P	05 08 58.1	-0.6
	comp=Z,7.2nm,1.1s						
TIXI	Tiksi	86.29	349	⇑*i*P	P	05 08 57.7	-0.9
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TIXI	Tiksi	86.29	349	P	P	05 08 58.3	-0.3
	comp=Z,2.3nm,0.3s,baz=129,slow=6.7,SNR=5.0						
MONP2	Monument Peak	86.51	56	P	P	05 09 01.5	+0.5
	baz=254						
DAC	Darwin (Calif)	86.52	52	*e*P	P	05 09 00.4	-0.5
	comp=Z,14nm,1.4s						
DAC	Darwin (Calif)	86.52	52	*e*P	P	05 09 00.4	-0.5
DAC				pmax	pmax		
	comp=Z,14nm,1.4s						
MPMC	Manual Prospec	86.54	52	P	P	05 09 01.4	+0.4
	baz=253						
NV01	Mina Array Sit	86.61	50	*e*P	P	05 09 01.0	-0.3
NVAR	Mina Array Bea	86.61	50	P	P	05 09 01.2	-0.1
	comp=Z,3.7nm,0.9s,baz=238,slow=8.0,SNR=8.8						
NV11	Mina Array Sit	86.72	50	*e*P	P	05 09 01.2	-0.5
	comp=Z,0.7nm,1.3s						
GSC	Goldstone, Bar	86.86	53	*e*P	P	05 09 02.4	-0.1
GSC	Goldstone, Bar	86.86	53	*e*P	P	05 09 02.4	-0.1
GRAC	Grapevine Rang	86.90	51	P	P	05 09 03.2	+0.7
	baz=254						
SWSC	Sam W. Stewart	87.03	56	P	P	05 09 03.9	+0.8
	baz=255						
HEC	Hector,Ludlow	87.10	54	P	P	05 09 03.2	-0.4
	baz=254						
BELC	Belle Mtn. Jos	87.15	55	P	P	05 09 04.4	+0.4
	baz=254						
GMRC	Granite Mounta	87.63	54	P	P	05 09 06.3	+0.1
	baz=255						
GLA	Glamis	87.84	56	*e*P	P	05 09 07.4	+0.2
	comp=Z,18nm,1.0s						
GLA	Glamis	87.84	56	*e*P	P	05 09 07.4	+0.2
GLA				pmax	pmax		
	comp=Z,19nm,1.0s						
GLA	Glamis	87.84	56	P	P	05 09 08.5	+1.4
	baz=255						
IRM	Iron Mountain	87.87	55	P	P	05 09 08.0	+0.7
	baz=255						
LDFC	Landfair	88.14	54	*e*P	P	05 09 08.6	-0.1
	comp=Z,23nm,1.1s						
Y12C	Blythe	88.27	55	*e*P	P	05 09 09.3	+0.2
	comp=Z,16nm,1.1s						
Y12C	Blythe	88.27	55	P	P	05 09 09.7	+0.6
	baz=255						
SHPR	Sheep Range	88.47	52	*e*P	P	05 09 09.4	-0.8
	comp=Z,14nm,1.4s						
R11A	Troy Canyon, C	88.64	51	*e*P	P	05 09 10.8	-0.1
	comp=Z,0.8nm,1.0s						
R11A	Troy Canyon, C	88.64	51	P	P	05 09 11.1	+0.2
	baz=254						
PDMCI	Parker Dam,Lak	88.71	55	P	P	05 09 12.1	+0.9
	baz=256						
WMQ	Urumqi	88.95	315	P	P	05 09 12.2	+0.1
WMQ				sP	pP	05 09 21.6	+0.5
WMQ				pmax	pmax		
	comp=Z,19nm,1.5s						
WMQ				LR	LR		
	comp=N,2µm,18.1s						
WMQ				LR	LR		
	comp=E,2µm,20.1s						
WMQ				LR	LR		
	comp=Z,3µm,23.7s						
WMQ	Urumqi	88.95	315	*e*P	P	05 09 12.2	+0.1
	comp=Z,7.0nm,0.9s						
WMQ	Urumqi	88.95	315	*e*P	P	05 09 12.2	+0.1
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
214A	Organ Pipe Nat	89.22	57	P	P	05 09 14.7	+1.0
	baz=256						
Y14A	Wickenburg	89.54	55	*e*P	P	05 09 15.4	+0.2
	comp=Z,6.4nm,1.1s						
LCMT	Little Creek M	90.09	52	*e*P	P	05 09 17.8	0.0
	comp=Z,5.2nm,1.0s						
CCUT	Cedar City	90.13	52	*e*P	P	05 09 18.7	+0.6
	comp=Z,15nm,1.3s						
KNB	Kanab	90.42	52	*e*P	P	05 09 18.9	-0.4
	comp=Z,13nm,1.2s						
KNB	Kanab	90.42	52	*e*P	P	05 09 18.9	-0.4
KNB				pmax	pmax		
	comp=Z,13nm,1.2s						
U15A	North Rim	90.69	53	*e*P	P	05 09 20.9	+0.1
	comp=Z,14nm,1.1s						
HLID	Hailey	90.85	46	P	P	05 09 22.0	+0.8
	baz=255						
X16A	Lo Mia Camp, P	90.91	55	*e*P	P	05 09 21.9	+0.2
	comp=Z,8.2nm,1.0s						
PKCU	Pink Cliffs	90.92	52	*e*P	P	05 09 22.5	+0.7
	comp=Z,14nm,1.1s						
TUC	Tucson	90.98	57	P	P	05 09 23.4	+1.5
	baz=257						
MTPU	Mount Pierson	91.15	52	*e*P	P	05 09 23.8	+0.8
	comp=Z,10nm,1.2s						
BGU	Big Grassy Mou	91.20	49	*e*P	P	05 09 23.8	+0.9
	comp=Z,8.1nm,1.4s						
WUAZ	Wupatki	91.21	54	*e*P	P	05 09 23.5	+0.4
	comp=Z,6.6nm,0.9s						
WUAZ	Wupatki	91.21	54	P	P	05 09 23.9	+0.9
	baz=257						
MSU	Marysvale	91.27	51	*e*P	P	05 09 23.7	+0.4
MSU	Marysvale	91.27	51	*e*P	P	05 09 23.7	+0.4
HVU	Hansel Valley	91.59	48	*e*P	P	05 09 24.3	-0.3
	comp=Z,12nm,1.3s						
HVU	Hansel Valley	91.59	48	*e*P	P	05 09 24.3	-0.3
HVU				pmax	pmax		
	comp=Z,13nm,1.3s						
NLU	North Lily Min	91.68	50	*e*P	P	05 09 25.5	+0.3
	comp=Z,4.8nm,1.0s						
319A	Douglas	92.03	59	*e*P	P	05 09 27.6	+0.7
	comp=Z,8.9nm,1.0s						
DLMT	Dillon	92.55	44	*e*P	P	05 09 28.8	-0.3
	comp=Z,6.4nm,1.1s						
MK01	Makanchi Array	93.38	317	*e*P	P	05 09 31.9	-0.8
MK31	Makanchi Array	93.39	317	*e*P	P	05 09 32.5	-0.2
MKAR	Makanchi Array	93.39	317	*e*P	P	05 09 32.5	-0.2
	comp=Z,39nm,0.9s						
MKAR				PKKP	PKKPdf	05 26 39.3	-0.8
MKAR	Makanchi Array	93.39	317	P	P	05 09 32.6	-0.2
	comp=Z,6.0nm,0.8s,baz=103,slow=5.5,SNR=28						
MKAR				PKKP	PKKPdf	05 26 39.3	-0.8
	comp=Z,1.1nm,0.9s,baz=299,slow=1.5,SNR=6.6						
ZAA0	Zalesovo Array	93.50	324	*e*P	P	05 09 31.6	-1.3
	comp=Z,7.1nm,1.0s						
ZALV	Zalesovo Beam	93.50	324	*e*P	P	05 09 31.4	-1.6
ZALV	Zalesovo Beam	93.50	324	*e*P	P	05 09 31.4	-1.6
ZALV	Zalesovo Beam	93.50	324	P	P	05 09 32.1	-0.8
	comp=Z,3.8nm,0.9s,baz=108,slow=4.8,SNR=11						
MAKZ	Makanchi	93.61	317	*e*P	P	05 09 33.0	-0.7
	comp=Z,13nm,1.1s						
MAKZ	Makanchi	93.61	317	*e*P	P	05 09 33.0	-0.7
MAKZ				pmax	pmax		
	comp=Z,13nm,1.1s						
PDAR	Pinedale Array	94.13	47	P	P	05 09 36.5	0.0
	comp=Z,0.2nm,0.7s,baz=246,slow=2.9,SNR=4.4						
NVS	Novosibirsk	94.61	325	*e*P	P	05 09 35.2	-2.8
ANMO	Albuquerque	95.04	56	⇓*i*P	P	05 09 40.5	-0.3
ANMO				pmax	pmax		
	comp=Z,19nm,4.9s						
ANMO	Albuquerque	95.04	56	P	P	05 09 41.2	+0.5
	baz=260						
MNTX	Cornudas Mount	95.36	59	*e*P	P	05 09 42.2	+0.1
	comp=Z,2.3nm,1.0s						
MNTX	Cornudas Mount	95.36	59	P	P	05 09 42.3	+0.2
	baz=260						
YKA	Yellowknife Ar	95.47	27	P	P	05 09 40.1	-1.7
	comp=Z,1.3nm,0.9s,baz=254,slow=4.5,SNR=14						
YKB5	Yellowknife Ar	95.47	27	*e*P	P	05 09 40.3	-1.5
TXAR	Lajitas Array	96.42	61	P	P	05 09 47.6	+0.5
	comp=Z,0.6nm,0.9s,baz=226,slow=5.4,SNR=6.2						
KSH	Kashi	96.55	309	P	P	05 09 48.9	+1.5
KSH				pP	pP	05 09 55.5	-0.9
KSH				PP	PP	05 13 46.3	+4.2

KSH	Kashi	96.55	309	S	S	05 21 09.0	+2.8
KSH	Kashi	96.55	309	sS	sS	05 21 15.7	-5.2
SNAA	Sanae	96.78	184	P	P	05 09 47.7	-0.2
VNA3	Neumayer Olymp	97.53	182	P	P	05 09 50.6	-0.5
VNA2	Neumayer--Watz	97.77	182	P	P	05 09 51.2	-0.9
ARCES	ARCESS Array B	116.50	345	PKP	PKiKP	05 15 01.3	+0.7
	comp=Z,2.7nm,0.9s,baz=82,slow=1.4,SNR=3.5						
OBN	Obninsk	120.80	329	*e*PKIKP	PKPdf	05 15 07.1	-2.1
OBN				*e*		05 16 33.9	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKASG	Malin Array Be	126.83	327	PKP	PKPdf	05 15 21.1	+0.1
	comp=Z,0.1nm,0.3s,baz=49,slow=1.5,SNR=6.4						
CLL	Collm	134.17	336	*e*PKPdf	PKiKP	05 15 38.0	+1.8
CLL	Collm	134.17	336	*e*PKIKP	PKiKP	05 15 38.0	+1.8
KEST	Kesra	147.34	322	*e*PKPdf	PKPdf	05 15 58.6	-0.5
KEST				*e*PKPbc	PKPab	05 16 02.6	-0.7
KEST	Kesra	147.34	322	PKPbc	PKPbc	05 16 02.4	+0.9
	comp=Z,13nm,0.8s,baz=316,slow=5.6,SNR=9.5						
ES19	SONSECA Array	150.16	343	*e*PKPdf	PKPdf	05 16 05.2	+1.7
ES19				*e*PKPbc	PKiKP	05 16 09.3	-0.1
ESDC	Sonseca Array	150.20	343	PKPbc	PKiKP	05 16 09.2	-0.4
	comp=Z,2.8nm,0.9s,baz=26,slow=2.5,SNR=7.5						
TOA0	Torodi Ar. Sit	163.80	278	*e*PKPdf	PKPdf	05 16 20.8	-0.6
TOA0				*e*PKPab	PKPab	05 17 13.8	-0.1
TORD	Torodi Ar. Bea	163.80	278	PKP	PKPdf	05 16 21.3	-0.1
	comp=Z,1.9nm,0.9s,baz=343,slow=4.5,SNR=8.5						
TORD				PKPab	PKPab	05 17 14.2	+0.3
	comp=Z,2.3nm,1.0s,baz=55,slow=4.4,SNR=6.3						
DBIC	Dimbokro	169.16	245	PKP	PKPdf	05 16 26.1	+0.5
	comp=Z,2.0nm,0.9s,baz=85,slow=4.4,SNR=3.5						

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*IDC **06** 04:58:17.5±1.3, 11°.05S×165°.47E, h0km, mb4.2/5, mb1 4.4/6, mb1mx4.0/41, mbtmp4.3/6, ML4.5/1, Error ellipse: s-maj=50.9km s-min=26.0km az=123.0*

*ISCJB **06** 04:58:20.3±1.2, 11°.2S±0°.1×165°.5E±0°.2, h30km, mb4.2/5, Error ellipse: s-maj=30.7km s-min=19.8km az=2.3*

ISC 06 04:58:22.0±1.1, **11°.1S**±0°.1×**165°.5E**±0°.2, **h30km, n8, σ0ˢ.75**/8, **mb4.2**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.91	176	Pn	Pn	05 00 56.0	-0.2
	3.8nm,0.3s,baz=342,slow=19,SNR=7.2						
STKA	Stephens Creek	30.23	223	P	P	05 04 31.3	+1.1
	3.2nm,0.8s,baz=26,slow=9.7,SNR=3.6						
WRA	Warramunga Arr	31.25	250	P	P	05 04 39.0	-0.4
	4.3nm,0.8s,baz=82,slow=9.1,SNR=4.6						
ASAR	Alice Springs	32.56	243	P	P	05 04 49.9	-1.0
	0.9nm,0.6s,baz=64,slow=10,SNR=4.7						
ILAR	Eielson Array	83.67	19	P	P	05 10 47.5	0.0
	1.4nm,0.7s,baz=236,slow=5.1,SNR=5.2						
MKAR	Makanchi Array	93.44	317	P	P	05 11 35.0	+0.3
	0.9nm,0.8s,baz=104,slow=6.1,SNR=4.6						
ARCES	ARCESS Array B	116.37	345	PKP	PKiKP	05 17 02.3	+0.2
	3.1nm,1.1s,baz=65,slow=4.3,SNR=3.2						
AKASG	Malin Array Be	126.82	327	PKP	PKPdf	05 17 22.1	-0.6
	0.8nm,0.4s,baz=64,slow=4.6,SNR=7.1						

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*IDC **06** 05:00:13.4±1.5, 11°.87S×165°.29E, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.2/39, mbtmp4.2/10, Error ellipse: s-maj=50.9km s-min=26.1km az=146.0*

*ISCJB **06** 05:00:14.7±0.5, 11°.63S±0°.08×165°.1E±0°.1, h10km, mb4.2/17, Error ellipse: s-maj=14.2km s-min=11.1km az=11.3*

*NEIC **06** 05:00:16.2±0.4, 11°.57S×165°.14E, h10km, mb4.3/4, Error ellipse: s-maj=14.2km s-min=10.3km az=110.0*

ISC 06 05:00:15.9±0.7, **11°.6S**±0°.1×**165°.2E**±0°.2, **h10km, n27, σ1ˢ.18**/25, **mb4.2**/17, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	10.15	165	*e*Pn	Pn	05 02 44.5	+2.8
ARMA	Armidale	22.53	212	*e*P	P	05 05 18.9	+2.7
	12nm,1.1s						
OUZ	Omahuta	24.68	163	*e*P	P	05 05 36.5	-0.6
	19nm,1.2s						
STKA	Stephens Creek	29.65	224	*e*P	P	05 06 23.3	+1.6
	1.0nm,1.1s						
WB2	Warramunga Arr	30.77	251	*e*P	P	05 06 31.7	-0.2
	14nm,1.1s						
WR1	Warramunga Arr	30.79	251	*e*P	P	05 06 31.4	-0.6
	12nm,1.0s						
WRA	Warramunga Arr	30.79	251	P	P	05 06 31.4	-0.7
	6.1nm,1.1s,baz=79,slow=9.8,SNR=4.6						
ASAR	Alice Springs	32.06	244	P	P	05 06 40.9	-2.3
	2.9nm,1.0s,baz=72,slow=9.8,SNR=3.8						
KSRS	Korea Array	60.08	326	P	P	05 10 23.2	-0.1
	0.8nm,0.6s,baz=128,slow=7.9,SNR=2.9						
KSAR	Wonju Array Be	60.09	326	P	P	05 10 23.2	-0.2
USRK	Ussuriysk Ar.	63.25	334	P	P	05 10 45.6	+1.0
	1.2nm,0.7s,baz=136,slow=5.0,SNR=3.5						
CMAR	Chiang Mai Arr	71.87	294	P	P	05 11 40.7	+1.0
	0.6nm,0.3s,baz=97,slow=3.7,SNR=4.4						
SONA0	Songino Array	78.84	324	*e*P	P	05 12 19.8	+0.5
SONM	Songino Array	78.84	324	P	P	05 12 19.8	+0.5
	2.4nm,0.3s,baz=137,slow=6.2,SNR=7.6						
BILL	Bilibino	79.48	0	*e*P	P	05 12 22.7	+0.5
	6.9nm,0.9s						
ILAR	Eielson Array	84.25	19	P	P	05 12 47.5	+0.1
	0.8nm,0.6s,baz=239,slow=5.0,SNR=7.2						
ILB	Eielson Array	84.25	19	*e*P	P	05 12 47.5	+0.1
NV01	Mina Array Sit	86.81	50	*e*P	P	05 13 02.1	+1.0
NVAR	Mina Array Bea	86.81	50	P	P	05 13 01.1	0.0
	1.5nm,0.8s,baz=230,slow=6.3,SNR=5.0						
CCUT	Cedar City	90.32	52	*e*P	P	05 13 19.7	+1.9
	1.0nm,0.6s						
MK32	Makanchi Array	93.60	317	*e*P	P	05 13 32.1	-0.4
MKAR	Makanchi Array	93.60	317	P	P	05 13 32.1	-0.4
	1.4nm,0.8s,baz=90,slow=7.1,SNR=4.8						
YKA	Yellowknife Ar	95.74	27	P	P	05 13 40.7	-1.1
	0.2nm,0.6s,baz=259,slow=4.4,SNR=4.1						
YKB5	Yellowknife Ar	95.74	27	*e*P	P	05 13 40.7	-1.1
KEST	Kesra	147.56	322	PKPbc	PKiKP	05 20 01.1	-2.1
	7.2nm,1.1s,baz=27,slow=4.5,SNR=2.4						
TORD	Torodi Ar. Bea	163.83	277	PKP	PKPdf	05 20 19.4	-0.9
	0.9nm,1.0s,baz=106,slow=3.6,SNR=3.1						
TOA1	Torodi Ar. Sit	163.83	277	*e*PKPdf	PKPdf	05 20 19.4	-0.9

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*IDC **06** 05:00:44.1±0.7, 11°.25S×165°.56E, h0km, mb4.2/9, mb1 4.4/10, mb1mx4.1/40, mbtmp4.2/10, ML4.7/1, Error ellipse: s-maj=30.0km s-min=21.8km az=111.0*

*ISCJB **06** 05:00:46.1±0.6, 11°.4S±0°.1×165°.6E±0°.2, h24km, mb4.1/9, Error ellipse: s-maj=22.4km s-min=14.6km az=8.8*

ISC 06 05:00:47.7±0.6, **11°.3S**±0°.1×**165°.6E**±0°.2, **h24km, n16, σ0ˢ.68**/16, **mb4.2**/9, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.74	176	Pn	Pn	05 03 19.6	-0.6
	5.0nm,0.3s,baz=177,slow=21,SNR=9.4						
URZ	Urewera	28.76	161	P	P	05 06 43.8	+0.2
	4.5nm,0.5s,baz=252,slow=5.2,SNR=7.7						
STKA	Stephens Creek	30.14	224	P	P	05 06 56.7	+0.8
	1.1nm,0.4s,baz=40,slow=6.9,SNR=2.8						
WRA	Warramunga Arr	31.23	250	P	P	05 07 05.1	-0.6
	4.0nm,1.0s,baz=80,slow=8.9,SNR=6.7						
ILAR	Eielson Array	83.81	19	P	P	05 13 14.8	0.0
	1.0nm,0.5s,baz=233,slow=5.1,SNR=10						
NVAR	Mina Array Bea	86.32	50	P	P	05 13 29.0	+0.8
	0.5nm,0.6s,baz=242,slow=6.9,SNR=3.4						
MKAR	Makanchi Array	93.59	317	P	P	05 14 02.5	+0.5
	0.7nm,0.6s,baz=90,slow=5.6,SNR=3.9						
ZALV	Zalesovo Beam	93.66	324	P	P	05 14 02.2	+0.1
	0.4nm,0.3s,baz=104,slow=5.8,SNR=3.0						
YKA	Yellowknife Ar	95.28	27	P	P	05 14 07.6	-1.7
	0.3nm,0.5s,baz=258,slow=4.5,SNR=6.5						
TXAR	Lajitas Array	96.10	61	P	P	05 14 14.4	+0.4
	0.2nm,0.7s,baz=212,slow=3.2,SNR=2.7						
ARCES	ARCESS Array B	116.54	345	PKP	PKPdf	05 19 28.9	-0.2
	1.6nm,0.8s,baz=66,slow=3.1,SNR=3.6						
LPAZ	La Paz	120.22	116	PKP	PKiKP	05 19 39.1	+0.5
	0.4nm,0.5s,baz=249,slow=2.8,SNR=2.6						
FINES	FINESS Array B	121.95	338	PKP	PKiKP	05 19 39.8	-0.1
	2.1nm,1.0s,baz=10,slow=1.6,SNR=3.8						
CPUP	Villa Florida	123.98	133	PKP	PKPdf	05 19 44.6	-0.1
	0.9nm,0.7s,baz=169,slow=2.2,SNR=2.4						
BOSA	Boshof	124.81	223	PKP	PKiKP	05 19 47.3	+0.5
	2.0nm,0.9s,baz=90,slow=2.0,SNR=2.7						
KEST	Kesra	147.51	322	PKPbc	PKPbc	05 20 30.2	-0.2
	2.0nm,0.5s,baz=237,slow=1.5,SNR=5.0						

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*CNRM **06** 05:01:23.7, 37°.74N×3°.00W, h30km, ml3.1*

*MDD **06** 05:01:24.6±0.1, 38°.04N×3°.28W, h1km±1km, mbLg2.4/20, Error ellipse: s-maj=1.6km s-min=1.1km az=50.0, PRXIMO*

*SFS **06** 05:01:24.0, 38°.04N×3°.28W, ML2.5, TORREPEROGIL (JAEN)*

ISC 06 05:01:23.3±1.1, **38°.07N**±0°.03×**3°.35W**±0°.02, **h6km**±11km, **n51, σ0ˢ.90**/50, **1D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	Quesada	0.34	140	⇓Pg	Pg	05 01 29.8	-0.2
	18nm,0.1s,SNR=18						
EQES				Lg	Lg	05 01 34.1	
	7.7nm,0.1s,SNR=5.0						
GORA	Gorafe	0.63	158	Pg	Pg	05 01 35.6	+0.1
	SNR=7.9						
GORA				Lg	Lg	05 01 44.7	
	70nm,0.2s,SNR=7.9						
SESP	Santiago Espad	0.63	85	Pg	Pg	05 01 35.5	0.0
	17nm,0.2s,SNR=7.9						
SESP				Lg	Lg	05 01 43.7	
	248nm,0.2s,SNR=7.9						
SESP	Santiago Espad	0.63	85	P	Pg	05 01 34.7	-0.8
SESP				S	Sg	05 01 42.8	-1.0
EQUE	Quentar	0.86	185	Pg	Pb	05 01 40.8	+0.1
	2.0nm,0.2s,SNR=17						
EQUE				Lg	Lg	05 01 51.4	
	50nm,0.3s,SNR=21						
EADA	Adamuz	0.98	276	Pg	Pn	05 01 43.0	-0.5
	6.0nm,0.1s,SNR=78						
EADA				Lg	Lg	05 01 56.7	
	52nm,0.3s,SNR=14						
EGOR	Sierra Gorda,	1.13	213	Pg	Pg	05 01 45.8	+0.8
	12nm,0.3s,SNR=7.9						
EGOR				Lg	Lg	05 02 02.7	
	30nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	1.22	191	Pg	Pg	05 01 47.3	+0.6
	0.2nm,0.4s,SNR=7.9						
ELGU				Lg	Lg	05 02 03.9	
	47nm,0.2s,SNR=7.9						
EBER	Berja	1.22	163	Pg	Pg	05 01 47.7	+0.9
	10nm,0.2s,SNR=16						
EBER				Lg	Lg	05 02 03.2	
	28nm,0.3s,SNR=13						
ETOB	Tobarra	1.53	67	Pg	Pb	05 01 51.8	-0.2
	5.6nm,0.3s,SNR=26						
ETOB				Lg	Lg	05 02 11.7	
	16nm,0.2s,SNR=11						
HORN	Hornachuelos	1.53	262	P	Pg	05 01 52.5	-0.1
EMAL	Malaga-Limoner	1.56	214	*e*P	Pg	05 01 53.9	+0.6
EMAL				*e*S	Sg	05 02 15.2	+1.7
ECAB	El Cabril	1.64	271	Pn	Pn	05 01 52.5	-0.1
	4.2nm,0.4s,SNR=55						
ECAB				Lg	Lg	05 02 16.1	
	26nm,0.3s,SNR=5.0						
PAB	San Pablo	1.67	332	Pg	Pg	05 01 56.1	+0.7
	SNR=7.9						
PAB				Lg	Lg	05 02 18.3	
	15nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	1.68	343	Pg	Pg	05 01 55.8	+0.4
	1.1nm,0.1s,baz=163,slow=17,SNR=30						
ESDC				Lg	Lg	05 02 18.0	
	8.7nm,0.5s,baz=161,slow=29,SNR=23						
EMUR	La Murta	1.68	97	Pg	Pn	05 01 53.1	-0.1
	4.6nm,0.4s,SNR=9.1						
EMUR				Lg	Lg	05 02 17.0	
	50nm,0.3s,SNR=5.0						
EMIJ	Mijas	1.88	218	Pg	Pg	05 01 59.9	+0.5
	1.2nm,0.2s,SNR=6.2						
EMIJ				Lg	Lg	05 02 22.8	
	36nm,0.8s,SNR=5.0						
CART	Cartagena	1.92	104	Pn	Pg	05 02 00.2	+0.2
CART				Sn	Sg	05 02 24.1	-0.8
CART	Cartagena	1.92	104	*e*P	Pg	05 02 00.2	+0.2
CART				*e*S	Sg	05 02 24.1	-0.8
ETRV	Los Montesinos	2.04	91	Lg	Lg	05 02 28.5	
	145nm,0.6s,SNR=7.9						
UCM	Universidad Co	2.24	2	*i* P	Pg	05 02 06.7	+0.4
UCM				*e*S	Sg	05 02 36.1	+0.9
ESPR	Espera	2.33	240	Pn	Pb	05 02 04.7	-0.9
	0.6nm,0.3s,SNR=7.9						
ESPR				Lg	Lg	05 02 40.3	
	3.9nm,0.7s,SNR=4.6						
ECHE	Chera	2.40	50	Pn	Pn	05 02 04.5	+1.4
	0.4nm,0.1s,SNR=7.9						
ECHE				Pg	Pg	05 02 09.8	+0.5
	2.9nm,0.2s,SNR=7.9						
ECHE				Lg	Lg	05 02 40.8	
	0.3nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	2.65	265	Pn	Pn	05 02 06.4	-0.1
	0.5nm,0.1s,SNR=7.9						
EMIN				Pg	Pg	05 02 13.6	-0.5
	2.9nm,0.3s,SNR=7.6						
EMIN				Lg	Lg	05 02 46.8	
	9.7nm,0.3s,SNR=9.8						
GUD	Guadarrama	2.65	347	Lg	Lg	05 02 48.2	
	0.9nm,0.4s,SNR=8.2						
EPLA	Plasencia	2.92	314	Pn	Pn	05 02 11.6	+1.3
	0.5nm,0.1s,SNR=7.9						
EPLA				Pg	Pg	05 02 19.3	+0.1
	0.5nm,0.3s,SNR=7.0						
EPLA				Lg	Lg	05 02 56.3	
	3.8nm,0.2s,SNR=8.7						
EBAD	Badajoz	2.96	285	Pn	Pn	05 02 10.4	-0.4
	0.3nm,0.1s,SNR=7.9						
EBAD				Pg	Pg	05 02 18.9	-1.1
	0.4nm,0.1s,SNR=9.2						
EBAD				Sn	Sn	05 02 46.1	-0.6
	3.1nm,0.4s,SNR=5.0						
EBAD				Lg	Lg	05 03 00.1	
	12nm,0.2s,SNR=9.5						
EMOS	Mosqueruela	3.20	43	Pn	Pn	05 02 16.3	+2.0
	0.1nm,0.1s,SNR=7.9						
EMOS				Pg	Pg	05 02 24.0	-0.6
	0.8nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	05 02 52.1	-0.7
	SNR=7.9						
EMOS				Lg	Lg	05 03 05.1	
	2.2nm,0.3s,SNR=7.9						
PESTR	Estremoz	3.43	285	*e*Pg	Pg	05 02 27.8	-1.1
PESTR				*e*Sg	Sg	05 03 13.6	+0.3
PESTR				A	A	05 03 20.7	
	8.2nm,0.6s						
PMRV	Marv??o	3.44	295	*e*Sg	Sg	05 03 13.2	-0.7
PMRV				A	A	05 03 17.6	
	9.7nm,0.5s						
PMRV	Marv??o	3.44	295	Lg	Lg	05 03 13.2	
	9.7nm,0.5s						
PVAQ	Vaqueiros	3.53	261	*e*Sg	Sg	05 03 15.7	-0.9
PVAQ	Vaqueiros	3.53	261	Lg	Lg	05 03 15.7	
PBEJ	Beja	3.57	271	*e*Sg	Sg	05 03 20.6	+2.7
PBEJ	Beja	3.57	271	Lg	Lg	05 03 20.6	
PCBR	Castelo Branco	3.68	300	*e*Sg	Sg	05 03 20.7	-0.6
PCBR	Castelo Branco	3.68	300	Lg	Lg	05 03 20.7	
PBDV	Barranco-do-Ve	3.73	259	*e*Sg	Sg	05 03 21.9	-1.2
PBDV	Barranco-do-Ve	3.73	259	Lg	Lg	05 03 21.9	
EIBI	Ibiza	3.80	74	Lg	Lg	05 03 25.2	
	9.7nm,0.2s,SNR=7.9						
MESJ	Messejana	3.86	268	*e*Sg	Sg	05 03 26.8	-0.4
MESJ				A	A	05 03 31.1	
	4.5nm,0.4s						
MESJ	Messejana	3.86	268	Lg	Lg	05 03 26.8	
	4.5nm,0.4s						
PMTG	Montargil	3.95	286	*e*Sg	Sg	05 03 30.9	+0.6
PMTG				A	A	05 03 33.6	
	5.9nm,0.5s						
PMTG	Montargil	3.95	286	Lg	Lg	05 03 30.9	
	5.9nm,0.5s						
PNCL	Nicolau / Gran	4.09	272	*e*Sg	Sg	05 03 36.0	+1.4
PNCL				A	A	05 03 41.8	
	5.9nm,1.0s						
PNCL	Nicolau / Gran	4.09	272	Lg	Lg	05 03 36.0	
	5.9nm,1.0s						
MVO	Moncorvo	4.20	319	Lg	Lg	05 03 39.6	
	0.5nm,0.0s,SNR=7.9						
PTOM	Tomar	4.25	293	*e*Sg	Sg	05 03 39.8	+0.1
PTOM	Tomar	4.25	293	Lg	Lg	05 03 39.8	
PCAS	Casmilo, Conde	4.47	298	*e*Sg	Sg	05 03 47.7	+0.7
PCAS	Casmilo, Conde	4.47	298	Lg	Lg	05 03 47.7	

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*IDC **06** 05:01:48.6±0.5, 11°.49S×165°.27E, h0km, mb4.8/29, mb1 4.9/31, mb1mx4.9/42, mbtmp4.8/31, ML5.2/2, Error ellipse: s-maj=16.4km s-min=13.5km az=114.0*

*NEIC **06** 05:01:50.7±0.1, 11°.42S×165°.13E, h10km, mb5.2/131, Error ellipse: s-maj=4.3km s-min=3.5km az=149.0*

*MOS **06** 05:01:52.6±1.0, 11°.48S×165°.08E, h33km, mb5.2/38, Error ellipse: s-maj=8.8km s-min=7.8km az=134.9*

*ISCJB **06** 05:01:53.1±0.1, 11°.44S±0°.03×165°.07E±0°.02, h34km, mb5.1/175, MS5.2/1, Error ellipse: s-maj=3.8km s-min=3.4km az=147.3*

ISC 06 05:01:54.3±0.3, **11°.46S**±0°.06×**165°.19E**±0°.06, **h34km, n421, σ1ˢ.16**/424, **mb5.2**/175, **12C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.53	291	*e*Pn	Pn	05 03 13.6	-0.7
HNR				*e*Pn	Pn	05 03 13.9	-0.4
HNR				*e*Sn	Sn	05 04 15.8	-1.0
HNR	Honiara	5.53	291	Pn	Pn	05 03 13.6	-0.7
	152nm,0.3s,baz=131,slow=2.2,SNR=9.4						
HNR				Sn	Sn	05 04 15.8	-1.0
	baz=179,slow=18,SNR=1.1						
MARNC	Mare, Loyalty	10.33	165	*e*Pn	Pn	05 04 21.1	+0.9
DZM	Mont Dzumac	10.62	174	*e*Pn	Pn	05 04 24.2	-0.1
DZM	Mont Dzumac	10.62	174	Pn	Pn	05 04 23.1	-1.2
	7.5nm,0.3s,baz=212,slow=10.0,SNR=7.8						
OUENC	Ouen Island, N	11.01	172	*e*Pn	Pn	05 04 30.2	+0.7
PINNC	Pines Island,	11.30	169	*e*Pn	Pn	05 04 32.2	-1.3
MSVF	Nonsavu	13.92	118	*e*Pn	Pn	05 05 08.7	-0.8
MSVF	Nonsavu	13.92	118	*e*P	Pn	05 05 08.7	-0.8
EIDS	Eidsvold	19.22	222	P	Pn	05 06 16.4	-0.4
	baz=19,SNR=6.8						
EIDS	Eidsvold	19.22	222	*e*P	P	05 06 15.4	-0.3
	119nm,1.5s						
MANU	Manus Island	20.00	297	*e*P	P	05 06 22.9	-1.4
	602nm,1.5s						
CTA	Charters Tower	20.12	242	P	P	05 06 25.1	-0.5
	60nm,1.1s,baz=70,slow=13,SNR=18						
CTAO	Charters Tower	20.12	242	*e*P	P	05 06 25.6	+0.1
	88nm,1.1s						
CTAO	Charters Tower	20.12	242	*e*P	P	05 06 25.6	+0.1
CTAO				pmax	pmax		
	comp=Z,88nm,1.1s						
MTSU	Mount Surprise	21.23	249	P	P	05 06 37.5	-0.1
	baz=21,SNR=13						
RMQ	Roma	21.52	224	P	P	05 06 41.9	+1.3
	baz=22,SNR=18						
COEN	Coen	21.61	261	P	P	05 06 41.8	+0.1
	baz=21,SNR=12						
COEN	Coen	21.61	261	*e*P	P	05 06 40.5	-1.2
	comp=Z,68nm,0.9s						
ARMA	Armidale	22.68	212	P	P	05 06 54.7	+1.6
	baz=23,SNR=9.9						
ARMA	Armidale	22.68	212	*e*P	P	05 06 52.8	-0.3
	comp=Z,55nm,1.0s						
QLP	Quilpie	24.81	230	P	P	05 07 13.4	0.0
	baz=25,SNR=5.7						
MGCD	Mangrove Creek	25.21	209	P	P	05 07 19.2	+2.2
	baz=25,SNR=4.4						
QIS	Mount Isa	26.17	247	P	P	05 07 25.3	-0.5
	baz=26,SNR=5.3						
CMSA	Cobar Meteorol	26.90	219	P	P	05 07 32.1	-0.2
	baz=27,SNR=14						
URZ	Urewera	28.74	160	*e*P	P	05 07 46.7	-2.0
URZ				*e*P	P	05 07 49.7	+1.0
URZ	Urewera	28.74	160	P	P	05 07 46.7	-2.0
	comp=Z,2.8nm,0.8s,baz=299,slow=10,SNR=1.7						
WTVZ	West Tongariro	29.06	163	P	P	05 07 54.9	+3.2
MTHZ	Maungataniwha	29.19	161	P	P	05 07 54.9	+2.1
RAHZ	Arahi	29.33	161	P	P	05 07 56.1	+2.2
BKZ	Black Stump Fm	29.37	162	*e*P	P	05 07 54.3	0.0
	comp=Z,157nm,2.0s						
BKZ	Black Stump Fm	29.37	162	P	P	05 07 55.7	+1.3
NMHZ	Naumai	29.41	161	P	P	05 07 57.6	+2.9
BHHZ	Black Hill Sta	29.54	163	P	P	05 07 58.4	+2.5
KWHZ	Kaweka Forest	29.59	162	P	P	05 07 58.2	+2.0
STKA	Stephens Creek	29.77	223	P	P	05 07 58.0	+0.1
	baz=30,SNR=12						
STKA	Stephens Creek	29.77	223	*e*P	P	05 07 57.5	-0.3
	comp=Z,3.6nm,0.9s						
STKA	Stephens Creek	29.77	223	P	P	05 07 57.0	-0.9
STKA				pmax	pmax		
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	29.77	223	P	P	05 07 57.0	-0.9
	comp=Z,14nm,0.9s,baz=16,slow=8.7,SNR=16						
H11S2	WAKE ISLAND Hy	29.80	3	T	T	05 38 24.6	
	baz=184,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	29.80	3	T	T	05 38 28.9	
	baz=184,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	29.81	3	T	T	05 38 25.9	
	baz=184,slow=76,SNR=51						
QRZ	Quartz Range	29.96	169	P	P	05 07 59.3	-0.2
TSZ	Takapari Road	30.04	163	P	P	05 08 01.5	+1.3
KAHZ	Kahuranaki	30.07	162	P	P	05 08 02.8	+2.3
PXZ	Pawanui	30.28	162	P	P	05 08 01.4	-0.9
DVHZ	Dannevirke	30.32	163	P	P	05 08 07.2	+4.5
MRZ	Mangatainoka R	30.50	164	P	P	05 08 06.3	+2.1
NNZ	Nelson	30.51	168	P	P	05 08 04.6	+0.3
KIW	Kapiti Island	30.52	165	P	P	05 08 07.0	+2.6
BFZ	Birch Farm	30.70	163	P	P	05 08 07.1	+1.1
HOWZ	Holdsworth Sta	30.70	165	P	P	05 08 07.7	+1.6
CAW	Cannon Point	30.79	165	P	P	05 08 08.9	+2.1
WRAB	Tennant Creek	30.81	250	*e*P	P	05 08 05.7	-1.7
	comp=Z,119nm,1.4s						
WRAB	Tennant Creek	30.81	250	*ce*P	P	05 08 05.5	-1.8
WRAB				pmax	pmax		
	comp=Z,48nm,1.1s						
WB2	Warramunga Arr	30.82	250	*e*P	P	05 08 05.5	-1.8
WB2				*e*P	P	05 08 06.0	-1.3
WR1	Warramunga Arr	30.83	250	*e*P	P	05 08 05.9	-1.5
	comp=Z,93nm,1.1s						
WRA	Warramunga Arr	30.83	250	P	P	05 08 05.9	-1.5
	comp=Z,54nm,1.0s,baz=80,slow=9.2,SNR=39						
THZ	Tophouse	30.94	169	*e*P	P	05 08 11.0	+2.8
	comp=Z,27nm,0.9s						
THZ	Tophouse	30.94	169	P	P	05 08 13.0	+4.9
MTW	Mount Morrison	30.95	165	P	P	05 08 10.1	+1.9
H11N1	WAKE ISLAND Hy	31.02	3	T	T	05 39 58.5	
	baz=182,slow=76,SNR=61						
H11N3	WAKE ISLAND Hy	31.03	3	T	T	05 39 55.4	
	baz=182,slow=76,SNR=59						
H11N2	WAKE ISLAND Hy	31.04	3	T	T	05 39 57.8	
	baz=182,slow=76,SNR=53						
PAWZ	Paruwai Farm	31.14	165	P	P	05 08 11.6	+1.7
TRWZ	Traveller	31.22	165	P	P	05 08 12.4	+1.8
AS01	Alice Springs	32.08	244	*e*P	P	05 08 16.0	-2.4
AS31	Alice Springs	32.12	244	*e*P	P	05 08 16.8	-2.0
	comp=Z,6.9nm,0.9s						
ASAR	Alice Springs	32.12	244	P	P	05 08 17.1	-1.7
	comp=Z,40nm,1.1s,baz=74,slow=9.3,SNR=40						
HTT	Hallett	32.50	224	P	P	05 08 21.7	-0.3
	baz=32,SNR=8.6						
RPZ	Rata Peaks	32.54	172	P	P	05 08 21.7	-0.5
	comp=Z,9.7nm,0.8s,baz=0.0,slow=19,SNR=3.4						
BBOO	Buckleboo	34.15	227	P	P	05 08 35.7	-0.6
	baz=34,SNR=11						
KNRA	Kununurra	35.62	259	P	P	05 08 48.5	-0.8
	baz=35,SNR=6.0						
WRKA	Warakurna	37.41	244	P	P	05 09 03.5	-1.0
	baz=37,SNR=5.2						
FITZ	Fitzroy Crossi	38.74	255	P	P	05 09 14.8	-0.9
	baz=39,SNR=9.7						
SOEI	Soe	40.23	268	*e*P	P	05 09 27.8	-0.6
	comp=Z,33nm,1.0s						
SOEI	Soe	40.23	268	P	P	05 09 27.3	-1.1
BATI	Baumata	40.78	268	P	P	05 09 32.7	-0.1
MMRI	Maumere	42.35	270	*e*P	P	05 09 44.7	-1.0
	comp=Z,92nm,0.4s						
MBWA	Marble Bar	44.54	252	*e*P	P	05 10 03.5	+0.2
	comp=Z,33nm,1.0s						
MEEK	Meekatharra	46.27	244	P	P	05 10 17.1	+0.2
	baz=46,SNR=6.6						
KLBR	Kellerberrin	48.02	238	P	P	05 10 31.0	+0.5
	baz=48,SNR=5.2						
MORW	Morawa	48.94	241	P	P	05 10 37.6	0.0
	baz=49,SNR=4.9						
KKM	Kota Kinabalu	51.73	287	*e*P	P	05 10 56.0	-3.0
	comp=Z,93nm,1.2s						
KKM	Kota Kinabalu	51.73	287	P	P	05 11 00.1	+1.2
BTM	Bintulu	53.82	283	P	P	05 11 15.5	+1.1
MJAR	Matsushiro Arr	54.09	333	P	P	05 11 15.2	-0.7
	comp=Z,4.7nm,0.8s,baz=171,slow=8.9,SNR=8.2						
MAJO	Matsushiro	54.09	333	*e*P	P	05 11 15.8	-0.1
	comp=Z,77nm,1.8s						
MAJO	Matsushiro	54.09	333	⇑*i*P	P	05 11 14.7	-1.2
MAJO				pmax	pmax		
	comp=Z,27nm,1.2s						
MAT	Matsushiro	54.09	333	P	P	05 11 14.9	-1.0

SBUM	Sibu	54.44	281	P	P	05 11 20.9	+2.1
JNU	Nakatsue	55.09	325	eP	P	05 11 21.5	-1.8
	comp=Z,79nm,1.4s						
JNU	Nakatsue	55.09	325	P	P	05 11 23.0	-0.3
	comp=Z,26nm,1.0s,baz=119,slow=4.3,SNR=7.3						
KSM	Kuching	56.03	280	eP	P	05 11 30.4	+0.1
	comp=Z,53nm,1.4s						
KSM	Kuching	56.03	280	P	P	05 11 30.7	+0.3
ASAJ	Asahikawa	59.00	341	P	P	05 11 50.7	0.0
	comp=Z,14nm,0.7s,baz=209,slow=10,SNR=9.5						
SSE	Sheshan	59.77	316	P	P	05 11 57.1	+0.9
SSE				pmax	pmax		
	comp=Z,16nm,1.0s						
SSE				pmax	pmax		
	comp=Z,190nm,3.9s						
KSRS	Korea Array	59.91	326	P	P	05 11 57.0	0.0
	comp=Z,4.8nm,0.8s,baz=148,slow=6.9,SNR=13						
KSAR	Wonju Array Be	59.92	326	P	P	05 11 57.0	-0.1
KSAR	Wonju Array Be	59.92	326	P	P	05 11 57.0	-0.1
KS01	Wonju Array Si	59.94	326	eP	P	05 11 56.9	-0.3
YSS	Yuzh-Sakhalins	61.51	343	⇓eP	P	05 12 07.5	-0.3
YSS				e		05 12 12.8	
YSS				e		05 12 22.2	
YSS				pmax	pmax		
	comp=Z,190nm,1.3s						
NJ2	Nanjing	61.93	316	eP	P	05 12 12.5	+1.6
NJ2				pmax	pmax		
	comp=Z,730nm,0.7s						
MYKOM	Kota Tinggi	62.36	278	eP	P	05 12 14.8	+0.6
	comp=Z,35nm,1.2s						
MYKOM	Kota Tinggi	62.36	278	P	P	05 12 15.8	+1.6
QIZ	Qiongzhong	62.39	299	eP	P	05 12 15.3	+1.0
	comp=Z,25nm,1.2s						
KGM	Kluang	62.93	278	P	P	05 12 19.5	+1.6
USA0B	Ussuriysk Arra	63.07	334	eP	P	05 12 16.8	-1.4
	comp=Z,67nm,1.6s						
USRK	Ussuriysk Ar.	63.07	334	P	P	05 12 18.6	+0.3
	comp=Z,2.9nm,0.6s,baz=152,slow=8.4,SNR=9.0						
KTGM	Kuala Trenggan	63.94	282	P	P	05 12 25.8	+1.1
MDJ	Mudanjiang	64.46	333	P	P	05 12 28.6	+1.2
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,2µm,13.0s						
DL2	Dalian	64.48	323	P	P	05 12 28.5	+0.9
DL2				pmax	pmax		
	comp=Z,34nm,1.3s						
PETK	Petropavlovsk-	64.63	355	eP	P	05 12 28.4	+0.1
PETK	Petropavlovsk-	64.63	355	eP	P	05 12 28.4	+0.1
PETK	Petropavlovsk-	64.63	355	P	P	05 12 27.9	-0.4
	comp=Z,7.3nm,0.9s,baz=157,slow=7.9,SNR=5.2						
PEA1	Petropavlovsk-	64.63	355	eP	P	05 12 27.9	-0.5
FRIM	Kepong	64.86	279	P	P	05 12 32.0	+1.3
TYV	Tymovskoe	65.09	344	eP	P	05 12 27.3	-4.1
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
CN2	Changchun	65.81	330	eP	P	05 12 36.2	0.0
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
SKNT	Sakolnakorn	66.76	294	P	P	05 12 44.5	+1.7
KLR	Kul'dur	67.22	337	⇑iP	P	05 12 45.8	+0.7
PSI	Prapat	67.38	278	P	P	05 12 47.9	+0.8
	comp=Z,9.4nm,0.8s,baz=180,slow=2.4,SNR=9.8						
NKL	Nikolayevsk	67.68	344	eP	P	05 12 47.8	-0.1
NKL				pmax	pmax		
	comp=Z,93nm,1.6s						
ENH	Enshi	67.73	309	eP	P	05 12 48.8	0.0
	comp=Z,50nm,1.2s						
NONG	Nongkai	67.89	295	P	P	05 12 52.7	+2.7
GYA	Guiyang	68.20	305	⇑iP	P	05 12 53.5	+1.6
GYA				PP	PP	05 15 26.4	+3.6
GYA				S	S	05 21 52.5	+2.2
GYA				SKS	SKSac	05 22 48.3	-0.3
BJT	Baijiatuau	68.45	321	eP	P	05 12 53.2	+0.2
	comp=Z,32nm,1.3s						
BJT	Baijiatuau	68.45	321	eP	P	05 12 53.2	+0.2
BJT				pmax	pmax		
	comp=Z,32nm,1.3s						
BJI	Beijing	68.46	321	P	P	05 12 53.9	+0.8
BJI				pmax	pmax		
	comp=Z,13nm,1.0s						
PBKT	Sadao Pong	69.33	293	P	P	05 12 50.8	-8.2
TIY	Taiyuan	69.49	318	eP	P	05 13 02.0	+2.3
TIY				pmax	pmax		
	comp=Z,11nm,0.9s						
TIY				LR	LR		
	comp=N,930nm,13.4s						
TIY				LR	LR		
	comp=E,320nm,7.0s						
TIY				LR	LR		
	comp=Z,1µm,19.3s						
XAN	Xi'an	69.99	313	P	P	05 13 03.9	+1.1
XAN				pP	PcP	05 13 31.9	+7.0
XAN				sP	pwP	05 13 45.0	+26
XAN				pmax	pmax		
	comp=Z,21nm,1.3s						
XAN				LR	LR		
	comp=N,800nm,17.4s						
XAN				LR	LR		
	comp=E,980nm,19.5s						
XAN				LR	LR		
	comp=Z,1µm,18.4s						
XAN	Xi'an	69.99	313	eP	P	05 13 02.8	0.0
	comp=Z,19nm,0.9s						
XAN	Xi'an	69.99	313	eP	P	05 13 02.8	0.0
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
UTTA	Uttaradit	70.09	294	P	P	05 13 07.4	+3.7
SRDT	SRDT	70.31	290	P	P	05 13 09.4	+4.3
UTHA	Uthaitani	70.39	291	P	P	05 13 09.3	+3.8
SUKH	Sukhothai	70.84	293	P	P	05 13 12.5	+4.3
KMI	Kunming	70.87	302	P	P	05 13 11.2	+2.6
KMI				pP	pP	05 13 18.4	+1.1
KMI				sP	sP	05 13 22.5	+1.7
KMI				pmax	pmax		
	comp=Z,25nm,1.5s						
KMI	Kunming	70.87	302	eP	P	05 13 08.4	-0.2
	comp=Z,35nm,1.2s						
KMI	Kunming	70.87	302	eP	P	05 13 08.4	-0.2
KMI				pmax	pmax		
	comp=Z,35nm,1.2s						
CM01	Chiang Mai Arr	71.75	294	eP	P	05 13 13.0	-0.8
CM31	Chiang Mai Arr	71.77	294	eP	P	05 13 13.3	-0.6
CMAR	Chiang Mai Arr	71.77	294	P	P	05 13 15.7	+1.8
	comp=Z,5.5nm,0.9s,baz=124,slow=4.4,SNR=21						
HHC	Hu-ho-hao-te	71.79	320	eP	P	05 13 14.9	+1.2
HHC				pmax	pmax		
	comp=Z,19nm,1.2s						
CMMT	Chiang Mai	71.89	294	P	P	05 13 17.8	+3.2
	comp=Z,16nm,1.4s,comp=Z,0.1nm						
CHTO	Chiang Mai	71.89	294	eP	P	05 13 15.5	+0.9
	comp=Z,19nm,1.1s						
CHTO	Chiang Mai	71.89	294	eP	P	05 13 15.5	+0.9
CHTO				pmax	pmax		
	comp=Z,19nm,1.1s						
CHTO	Chiang Mai	71.89	294	P	P	05 13 17.9	+3.3
	comp=Z,70nm,1.4s,comp=Z,0.3nm						
CD2	Chengdu	72.42	308	P	P	05 13 18.8	+1.2
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
HIA	Hailar	72.46	331	eP	P	05 13 16.9	-0.5
	comp=Z,28nm,1.0s						
HIA	Hailar	72.46	331	⇑iP	P	05 13 17.5	+0.1
HIA				pmax	pmax		
	comp=Z,35nm,1.1s						
ZEA	Zeya	72.51	337	eP	P	05 13 18.0	+0.5
ZEA				pmax	pmax		
	comp=N,43nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
LZH	Lanzhou	74.63	313	eP	P	05 13 27.4	-3.2
LZH				pP	pP	05 13 34.8	-4.7
LZH				sP	sP	05 13 37.9	-4.9
LZH				PP	PP	05 16 15.8	-2.1
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,98nm,4.3s						
LZH				LR	LR		
	comp=N,590nm,16.3s						
LZH				LR	LR		
	comp=E,540nm,16.4s						
LZH				LR	LR		
	comp=Z,650nm,17.5s						
SEY	Seymchan	74.82	354	P	P	05 13 30.4	-0.5
	comp=Z,2.3nm,0.7s,baz=190,slow=11,SNR=4.0						
GAMB	Gambell	77.07	10	eP	P	05 13 43.5	-0.2
	comp=Z,16nm,1.1s						
KDAK	Kodiak Island	77.16	22	eP	P	05 13 43.9	-0.4
	comp=Z,37nm,1.1s						
KDAK	Kodiak Island	77.16	22	ceP	P	05 13 45.1	+0.8
KDAK	Kodiak Island	77.16	22	P	P	05 13 43.9	-0.4
	comp=Z,18nm,0.9s,baz=127,slow=3.5,SNR=6.6						
CIT	Chita	77.24	330	eP	P	05 13 45.3	+0.3
CIT				e		05 13 51.5	
ULN	Ulaanbaatar	78.31	324	eP	P	05 13 50.0	-1.2
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	78.31	324	⇓iP	P	05 13 52.7	+1.5
ULN				pmax	pmax		
	comp=Z,45nm,2.5s						
YAK	Yakutsk	78.33	344	eP	P	05 13 50.1	-0.7
YAK				pmax	pmax		
	comp=Z,15nm,1.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.5s						
QSPA	South Pole Qui	78.55	180	eP	P	05 13 53.0	+0.7
	comp=E,46nm,1.2s						
SONA0	Songino Array	78.67	324	eP	P	05 13 53.1	-0.1
SONM	Songino Array	78.67	324	P	P	05 13 53.1	-0.1
	comp=E,4.9nm,0.9s,baz=141,slow=6.1,SNR=14						
SONA1	Songino Array	78.67	324	eP	P	05 13 52.4	-0.9
SVW2	Sparrevohn	78.67	18	eP	P	05 13 53.2	+0.4
	comp=E,8.4nm,1.0s						
GTA	Gaotai	78.95	314	P	P	05 13 55.6	+0.7
GTA				pP	PcP	05 14 01.3	-2.1
GTA				sP	pP	05 14 04.2	+0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA				LR	LR		
	comp=N,740nm,17.8s						
GTA				LR	LR		
	comp=E,570nm,19.4s						
GTA				LR	LR		
	comp=Z,950nm,19.4s						
ANM	Nome	79.01	12	eP	P	05 13 55.0	+0.6
	comp=Z,9.1nm,1.2s						
ANM	Nome	79.01	12	eP	P	05 13 55.1	+0.6
ANM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RSO	Redoubt South	79.09	20	eP	P	05 13 54.6	-0.7
BRLK	Bradley Lake	79.22	21	eP	P	05 13 56.2	+0.5
	comp=Z,21nm,0.8s						
BILL	Bilibino	79.29	0	eP	P	05 13 55.9	-0.1
	comp=Z,32nm,1.3s						
BILL	Bilibino	79.29	0	c iP	P	05 13 56.5	+0.6
BILL				pmax	pmax		
	comp=Z,18nm,0.9s						
SHL	Shillong	80.23	299	eP	P	05 14 04.0	+1.8
	comp=Z,69nm,1.7s						
SHL	Shillong	80.23	299	eP	P	05 14 04.0	+1.8
SHL				pmax	pmax		
	comp=Z,69nm,1.7s						
BOD	Bodaibo	80.67	335	eP	P	05 14 01.1	-2.5
BOD				pmax	pmax		
	comp=Z,14nm,1.3s						
CAST	Castle Rocks	81.51	18	eP	P	05 14 07.5	-0.5
	comp=Z,25nm,1.5s						
ZAK	Zakamensk	81.72	325	eP	P	05 14 08.7	-0.8
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DIV	Divide	81.99	22	eP	P	05 14 11.3	+0.7
	comp=Z,28nm,1.0s						
HMT	Hamilton	82.03	23	eP	P	05 14 12.1	+1.3
	comp=Z,32nm,1.2s						
TLY	Talaya	82.16	326	ceP	P	05 14 12.6	+0.9
KLU	Klutina	82.18	21	eP	P	05 14 11.5	-0.1
	comp=Z,13nm,0.9s						
RND	Reindeer	82.50	19	eP	P	05 14 13.4	+0.1
	comp=Z,8.9nm,0.9s						
RND	Reindeer	82.50	19	eP	P	05 14 13.4	+0.1
RND				pmax	pmax		
	comp=Z,9.0nm,0.9s						
IM3	Indian Mountai	82.97	16	eP	P	05 14 16.0	+0.4
HARP	HAARP	83.06	21	eP	P	05 14 16.8	+0.7
	comp=Z,21nm,0.8s						
MLY	Manley	83.09	17	eP	P	05 14 16.1	-0.2
KMRM	Mail Ridge	83.33	47	eP	P	05 14 17.8	-0.3
	comp=Z,26nm,1.1s						
WRH	Wood River Hil	83.49	19	eP	P	05 14 18.5	+0.2
	comp=Z,10nm,0.8s						
MDM	Murphy Dome	83.79	18	eP	P	05 14 19.7	-0.1
	comp=Z,22nm,1.3s						
HDA	Harding Lake	83.81	19	eP	P	05 14 18.9	-1.0
	comp=Z,25nm,1.1s						
HDA	Harding Lake	83.81	19	P	P	05 14 20.3	+0.4
	baz=227						
TCOL	CIGO, UAF Yank	83.84	18	P	P	05 14 20.4	+0.3
	baz=226						
COLA	College	83.85	18	⇑iP	P	05 14 20.4	+0.4
COLA				pmax	pmax		
	comp=Z,20nm,1.0s						
O02D	Mt. Diablo Mer	83.98	47	P	P	05 14 21.1	-0.4
	baz=250,SNR=7.5						
RIDG	Independ'e Rid	84.05	20	eP	P	05 14 21.7	+0.5
	comp=Z,23nm,1.2s						
IL1	Eielson Array	84.08	19	eP	P	05 14 19.3	-1.9
ILAR	Eielson Array	84.08	19	P	P	05 14 20.9	-0.4
	comp=Z,6.1nm,0.8s,baz=227,slow=6.0,SNR=26						
ILB	Eielson Array	84.08	19	eP	P	05 14 20.9	-0.4
	comp=Z,9.7nm,0.8s						
POKR	Poker Plat Res	84.14	18	P	P	05 14 21.7	0.0
	baz=226						
WDC	Whiskeytown Da	84.29	47	eP	P	05 14 23.5	+0.6
	comp=Z,25nm,1.4s						
WDC	Whiskeytown Da	84.29	47	eP	P	05 14 23.5	+0.6
WDC				pmax	pmax		
	comp=Z,25nm,1.4s						
N02D	Trinity Center	84.31	46	P	P	05 14 23.1	0.0
	baz=250,SNR=7.4						
SCZ2	Santa Cruz Isl	84.35	54	P	P	05 14 23.7	+0.3
	baz=252						
M02C	Callahan	84.35	46	P	P	05 14 24.1	+0.8
	baz=250						
PKM	Mcpherson Peak	84.48	53	P	P	05 14 23.6	-0.6
	baz=252						
SCRK	Sand Creek	84.49	20	eP	P	05 14 23.6	+0.1
	comp=Z,23nm,1.2s						
YBH	Yreka Blue Hor	84.57	46	eP	P	05 14 25.3	+0.9
	comp=Z,13nm,1.1s						
ORV	Oroville	84.70	48	eP	P	05 14 25.2	+0.2
	comp=Z,12nm,1.1s						
ORV	Oroville	84.70	48	eP	P	05 14 25.2	+0.2
ORV				pmax	pmax		
	comp=Z,12nm,1.1s						
HUMO	Hull Mountain	84.71	45	eP	P	05 14 27.1	+2.0
	comp=Z,64nm,1.8s						
O03E	Paynes Creek	84.73	47	P	P	05 14 25.0	-0.3
	baz=250,SNR=12						
AFDM	Forest Hills D	84.89	49	eP	P	05 14 26.3	+0.3
	comp=Z,24nm,1.2s						
HYT	Haines Junctio	84.99	24	eP	P	05 14 26.0	-0.1
	comp=Z,9.4nm,0.8s						
L04D	Klamath Falls	85.03	45	P	P	05 14 26.7	-0.1
	baz=250						
CMB	Columbia Colle	85.03	50	eP	P	05 14 27.0	+0.3
	comp=Z,12nm,1.0s						
CMB	Columbia Colle	85.03	50	eP	P	05 14 27.0	+0.3
CMB				pmax	pmax		
	comp=Z,12nm,1.0s						
M04C	Macdoel	85.20	46	P	P	05 14 27.7	0.0
	baz=250						
ARVC	Arvin	85.32	53	P	P	05 14 28.4	+0.1
	baz=253						
VES	Vestal, Richgr	85.34	52	P	P	05 14 28.1	-0.2
	baz=252						
I04A	Tendick Farm,	85.50	44	P	P	05 14 28.9	0.0
	baz=250						
BEKR	Beckworth	85.63	48	eP	P	05 14 30.9	+1.0
	comp=Z,13nm,1.2s						
ISA	Isabella, Lake	85.76	53	P	P	05 14 30.4	-0.1
	baz=253,SNR=9.4						
WAKR	Walker	85.88	50	eP	P	05 14 32.6	+1.4
	comp=Z,32nm,1.3s						
MDPB	Devils Postpil	85.89	50	eP	P	05 14 30.5	-0.9
	comp=Z,22nm,1.0s						
EDW2	Edwards Air Fo	85.91	53	P	P	05 14 31.6	+0.4
	baz=253,SNR=18						
OMMB	Old Mammoth Mi	85.94	51	eP	P	05 14 32.0	+0.3
	comp=Z,29nm,1.5s						
VCNR	Virginia City	85.97	49	eP	P	05 14 31.6	0.0
	comp=Z,9.4nm,1.1s						
BFSC	Mount Baldy Ra	85.99	54	P	P	05 14 31.5	-0.2
	baz=253,SNR=12						
109C	Camp Elliot, M	86.05	55	P	P	05 14 32.2	+0.3
	baz=254						
CPE	Camp Elliot	86.05	55	eP	P	05 14 31.7	-0.1
	comp=Z,18nm,1.0s						
PALK	Pallekele	86.06	278	P	P	05 14 32.8	+0.4
	comp=Z,9.1nm,0.9s,baz=113,slow=4.3						
MLAC	Mammoth, Mammo	86.07	51	P	P	05 14 32.6	+0.4
	baz=252						
J05D	Fort Rock, OR	86.13	45	P	P	05 14 32.5	+0.2
	baz=250						
DAWY	Dawson	86.14	21	eP	P	05 14 32.4	+0.7
	comp=Z,8.3nm,0.8s						
MURC	Murrieta	86.17	55	P	P	05 14 32.8	+0.3
	baz=254						
YERR	Yerington	86.18	49	eP	P	05 14 31.3	-1.4
	comp=Z,20nm,1.5s						
CWC	Cottonwood Cre	86.29	52	P	P	05 14 33.2	-0.1
	baz=253						
PAHR	Pah Rah Range	86.29	48	eP	P	05 14 32.0	-1.2
	comp=Z,18nm,1.2s						
LRMC	Laurel Mtn Rad	86.32	53	P	P	05 14 33.7	+0.3
	baz=253						
MOD	Modoc Plateau	86.33	46	eP	P	05 14 31.9	-1.4
	comp=Z,6.9nm,1.0s						
TIN	Tinemaha, Big	86.36	51	P	P	05 14 33.7	+0.2
	baz=253						
TIXI	Tiksi	86.39	349	⇓eP	P	05 14 32.4	-0.3
TIXI				pmax	pmax		
	comp=Z,11nm,1.2s						
TIXI	Tiksi	86.39	349	P	P	05 14 32.0	-0.7
	comp=Z,2.8nm,0.9s,baz=119,slow=6.6,SNR=6.7						
I05D	Terrebonne, OR	86.41	44	P	P	05 14 33.6	+0.1
	baz=250						
BBRC	Big Bear Solar	86.58	54	P	P	05 14 34.5	-0.3
	baz=254						
MONP2	Monument Peak	86.60	56	P	P	05 14 35.1	+0.2
	baz=254,SNR=18						
RYN	Ryan	86.60	50	eP	P	05 14 34.7	0.0
	comp=Z,12nm,1.0s						
DAC	Darwin (Calif)	86.62	52	eP	P	05 14 33.6	-1.3
	comp=Z,21nm,1.1s						
DAC	Darwin (Calif)	86.62	52	eP	P	05 14 33.6	-1.3
DAC				pmax	pmax		
	comp=Z,21nm,1.1s						
MPMC	Manual Prospec	86.64	52	P	P	05 14 35.2	+0.2
	baz=253,SNR=15						
NV01	Mina Array Sit	86.71	50	eP	P	05 14 34.6	-0.7
NVAR	Mina Array Bea	86.71	50	P	P	05 14 34.7	-0.6
	comp=Z,13nm,1.0s,baz=234,slow=7.0,SNR=34						
PFO	Pinyon Flats O	86.77	55	eP	P	05 14 36.0	+0.4
	comp=Z,14nm,1.0s						
PFO	Pinyon Flats O	86.77	55	eP	P	05 14 36.0	+0.4
PFO				pmax	pmax		
	comp=Z,14nm,1.0s						
PFO	Pinyon Flats O	86.77	55	P	P	05 14 35.7	+0.1
	baz=254,SNR=10						
XPFO	Pion Flat	86.77	55	eP	P	05 14 36.0	+0.4
	comp=Z,15nm,1.0s						
IKP	In-Ko-Pah, Jac	86.79	56	P	P	05 14 36.3	+0.6
	baz=254,SNR=5.6						
NV11	Mina Array Sit	86.82	50	eP	P	05 14 36.2	+0.4
	comp=Z,1.7nm,1.1s						
F05D	White Salmon	86.85	42	P	P	05 14 35.8	+0.2
	baz=250						
GSC	Goldstone, Bar	86.96	53	eP	P	05 14 37.6	+1.2
	comp=Z,14nm,1.1s						
GSC	Goldstone, Bar	86.96	53	P	P	05 14 36.9	+0.4
	baz=254,SNR=6.8						
GRAC	Grapevine Rang	87.00	51	P	P	05 14 37.0	+0.4
	baz=253,SNR=14						
KVN	Kaiserville	87.04	49	eP	P	05 14 37.5	+0.7
	comp=Z,13nm,1.0s						
KVN	Kaiserville	87.04	49	eP	P	05 14 37.6	+0.7
KVN				pmax	pmax		
	comp=Z,13nm,1.0s						
SWSC	Sam W. Stewart	87.12	56	P	P	05 14 37.3	+0.2
	baz=254,SNR=13						
HEC	Hector,Ludlow	87.20	54	P	P	05 14 37.7	+0.1
	baz=254,SNR=8.2						
FURC	Furnace Creek,	87.24	52	P	P	05 14 37.8	+0.2
	baz=254,SNR=9.4						
BELC	Belle Mtn. Jos	87.24	55	P	P	05 14 37.9	0.0
	baz=254,SNR=26						
B05A	Bryant	87.26	40	P	P	05 14 37.9	+0.4
	baz=250						
SHOC	Shoshone, Teco	87.54	53	P	P	05 14 39.4	+0.3
	baz=254,SNR=9.3						
I07A	Izee	87.58	44	eP	P	05 14 39.8	+0.5
	comp=Z,17nm,1.3s						
BC3	Big Chuckawall	87.59	55	P	P	05 14 40.1	+0.6
	baz=255,SNR=13						
WVOR	Wild Horse Val	87.67	46	eP	P	05 14 40.9	+1.1
	comp=Z,17nm,1.3s						
TUQ	Turquoise Moun	87.69	53	P	P	05 14 40.1	+0.1
	baz=254						
GMRC	Granite Mounta	87.72	54	P	P	05 14 40.5	+0.3
	baz=254,SNR=14						
TPNV	Topopah Spring	87.85	52	eP	P	05 14 41.2	+0.5
	comp=Z,12nm,1.3s						
TPNV	Topopah Spring	87.85	52	P	P	05 14 40.8	0.0
	baz=254						
GLA	Glamis	87.94	56	eP	P	05 14 40.8	-0.3
	comp=Z,36nm,0.9s						
GLA	Glamis	87.94	56	eP	P	05 14 40.8	-0.3
GLA				pmax	pmax		
	comp=Z,36nm,0.9s						
GLA	Glamis	87.94	56	P	P	05 14 41.9	+0.7
	baz=255,SNR=8.6						
IRM	Iron Mountain	87.97	55	P	P	05 14 42.2	+1.0
	baz=255,SNR=17						
J08A	Circle Bar Ran	88.06	45	eP	P	05 14 41.4	-0.1
	comp=Z,14nm,1.0s						
LDFC	Landfair	88.24	54	eP	P	05 14 42.8	+0.2
	comp=Z,56nm,1.1s						
G08A	Pilot Rock	88.32	43	eP	P	05 14 41.3	-1.5
	comp=Z,15nm,1.1s						
Y12C	Blythe	88.36	55	eP	P	05 14 42.0	-1.0
	comp=Z,30nm,1.0s						
Y12C	Blythe	88.36	55	P	P	05 14 43.6	+0.6
	baz=255,SNR=19						
NEE2	Needles Airpor	88.55	54	P	P	05 14 44.5	+0.6
	baz=255						
SHPR	Sheep Range	88.57	52	eP	P	05 14 44.1	-0.1
	comp=Z,22nm,1.3s						
E08A	Dider Farm, El	88.63	42	eP	P	05 14 43.6	-0.4
	comp=Z,53nm,1.8s						
113A	Mohawk Valley,	88.73	56	eP	P	05 14 45.8	+1.0
	comp=Z,15nm,1.0s						
R11A	Troy Canyon, C	88.73	51	eP	P	05 14 44.9	-0.1
	comp=Z,12nm,1.2s						
R11A	Troy Canyon, C	88.73	51	P	P	05 14 44.9	-0.1
	baz=254						
PDMCI	Parker Dam,Lak	88.81	55	P	P	05 14 45.7	+0.6
	baz=255,SNR=16						
WMQ	Urumqi	89.00	315	P	P	05 14 46.9	+1.0
WMQ				pP	pP	05 14 52.1	-2.8
WMQ				pmax	pmax		
	comp=Z,29nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1µm,7.9s						
W13A	Hualapai Mount	89.21	54	eP	P	05 14 47.7	+0.3
	comp=Z,20nm,1.1s						
214A	Organ Pipe Nat	89.31	57	P	P	05 14 48.0	+0.3
	baz=256						
ELK	Elko	89.63	48	eP	P	05 14 48.6	-0.6
	comp=Z,11nm,1.3s						
ELK	Elko	89.63	48	eP	P	05 14 48.6	-0.6
ELK				pmax	pmax		
	comp=Z,11nm,1.3s						
Y14A	Wickenburg	89.63	55	eP	P	05 14 50.0	+0.8
	comp=Z,13nm,1.1s						
F10A	Beach Ranch, E	89.69	43	eP	P	05 14 50.0	+0.8
	comp=Z,23nm,1.8s						
MFID	Camas Ranch	89.93	46	eP	P	05 14 50.4	0.0
	comp=Z,10nm,1.1s						
PSUT	Pine Spring	90.09	51	eP	P	05 14 51.0	-0.4
	comp=Z,12nm,1.1s						
LCMT	Little Creek M	90.19	52	eP	P	05 14 51.6	-0.2
	comp=Z,20nm,1.0s						
CCUT	Cedar City	90.23	52	eP	P	05 14 53.2	+1.2
	comp=Z,19nm,1.1s						
NEW	Newport	90.41	41	P	P	05 14 52.5	+0.1
	baz=253						

SZCU	Shurtz Canyon	90.45	52	*e*P	P	05 14 53.5	+0.4
	comp=Z,22nm,1.2s						
INK	Inuvik	90.47	19	*e*P	P	05 14 51.4	-0.7
	comp=Z,10.0nm,1.4s						
INK	Inuvik	90.47	19	*e*P	P	05 14 51.4	-0.7
INK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
INK	Inuvik	90.47	19	P	P	05 14 51.4	-0.7
	comp=Z,2.9nm,1.1s,baz=166,slow=2.0,SNR=4.0						
KNB	Kanab	90.52	52	*e*P	P	05 14 54.5	+1.2
	comp=Z,36nm,1.3s						
KNB	Kanab	90.52	52	*e*P	P	05 14 54.5	+1.2
KNB				pmax	pmax		
	comp=Z,36nm,1.3s						
U15A	North Rim	90.79	53	*e*P	P	05 14 54.8	0.0
	comp=Z,28nm,1.0s						
DGZ	Jazzator, Alta	90.86	321	⇑*i*P	P	05 14 54.9	+0.3
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HLID	Hailey	90.96	46	*e*P	P	05 14 54.4	-0.8
	comp=Z,11nm,1.2s						
HLID	Hailey	90.96	46	P	P	05 14 55.7	+0.5
	baz=255						
X16A	Lo Mia Camp, P	91.00	55	*e*P	P	05 14 56.5	+0.8
	comp=Z,15nm,1.0s						
PKCU	Pink Cliffs	91.01	52	*e*P	P	05 14 56.9	+1.1
	comp=Z,32nm,1.1s						
TUC	Tucson	91.07	57	*e*P	P	05 14 56.5	+0.6
	comp=Z,13nm,1.1s						
TUC	Tucson	91.07	57	P	P	05 14 56.5	+0.6
	baz=257						
TCRU	Three Creeks R	91.18	51	*e*P	P	05 14 56.5	0.0
	comp=Z,19nm,1.0s						
SYO	Syowa Base	91.23	197	⇑*e*P	P	05 14 54.0	-1.8
MTPU	Mount Pierson	91.25	52	*e*P	P	05 14 55.6	-1.4
	comp=Z,24nm,1.1s						
DUG	Dugway, Tooele	91.28	49	*e*P	P	05 14 56.0	-0.8
	comp=Z,15nm,1.3s						
DUG	Dugway, Tooele	91.28	49	*e*P	P	05 14 56.0	-0.8
DUG				pmax	pmax		
	comp=Z,15nm,1.3s						
DUG	Dugway, Tooele	91.28	49	P	P	05 14 57.1	+0.3
	baz=256						
BGU	Big Grassy Mou	91.30	49	*e*P	P	05 14 56.3	-0.6
	comp=Z,12nm,1.2s						
WUAZ	Wupatki	91.31	54	*e*P	P	05 14 57.2	+0.2
	comp=Z,19nm,1.0s						
WUAZ	Wupatki	91.31	54	P	P	05 14 57.6	+0.6
	baz=257						
MSU	Marysvale	91.37	51	*e*P	P	05 14 58.8	+1.5
MSU	Marysvale	91.37	51	*e*P	P	05 14 58.8	+1.5
HVU	Hansel Valley	91.69	48	*e*P	P	05 14 59.4	+0.7
	comp=Z,29nm,1.3s						
HVU	Hansel Valley	91.69	48	*e*P	P	05 14 59.4	+0.7
HVU				pmax	pmax		
	comp=Z,29nm,1.3s						
NLU	North Lily Min	91.78	50	*e*P	P	05 14 59.5	+0.3
	comp=Z,17nm,1.2s						
319A	Douglas	92.12	59	*e*P	P	05 15 02.9	+2.0
	comp=Z,16nm,1.1s						
MPU	Maple Canyon	92.12	50	*e*P	P	05 15 01.8	+1.0
	comp=Z,20nm,1.4s						
CTU	Camp Tracy	92.19	49	*e*P	P	05 15 01.4	+0.4
	comp=Z,11nm,1.1s						
Q16A	Castle Valley	92.22	51	*e*P	P	05 15 01.6	+0.3
	comp=Z,22nm,1.4s						
X18A	Snowflake	92.23	55	*e*P	P	05 15 01.6	+0.3
	comp=Z,14nm,1.1s						
TMUT	Trail Mountain	92.28	51	*e*P	P	05 15 02.9	+1.2
	comp=Z,6.4nm,1.1s						
MCMT	McKenzie Canyo	92.36	45	*e*P	P	05 15 02.9	+1.1
JLU	Jordanelle	92.39	49	*e*P	P	05 15 02.6	+0.6
	comp=Z,15nm,1.3s						
TCUT	Toone Canyon	92.54	49	*e*P	P	05 15 04.4	+1.7
	comp=Z,11nm,1.0s						
DLMT	Dillon	92.66	44	*e*P	P	05 15 04.5	+1.4
	comp=Z,15nm,1.0s						
P17A	Butcher Ranch,	92.67	50	*e*P	P	05 15 03.4	+0.2
	comp=Z,24nm,1.9s						
LRM	Limekiln Ridge	92.87	44	*e*P	P	05 15 05.2	+1.1
FXWY	Fox Creek	93.37	46	*e*P	P	05 15 06.8	+0.3
	comp=Z,4.4nm,0.9s						
BOZ	Bozeman (W)	93.38	44	*e*P	P	05 15 06.2	-0.1
	comp=Z,9.3nm,0.9s						
BOZ	Bozeman (W)	93.38	44	P	P	05 15 06.3	0.0
	baz=257						
MK01	Makanchi Array	93.43	317	*e*P	P	05 15 06.1	-0.3
MK31	Makanchi Array	93.44	317	*e*P	P	05 15 06.8	+0.4
MK32	Makanchi Array	93.44	317	*e*P	P	05 15 06.3	-0.2
MKAR	Makanchi Array	93.44	317	*e*P	P	05 15 06.1	-0.4
	comp=Z,121nm,1.6s						
MKAR	Makanchi Array	93.44	317	P	P	05 15 06.3	-0.2
	comp=Z,3.9nm,0.8s,baz=98,slow=6.2,SNR=16						
HRY	Holter Researc	93.49	43	*e*P	P	05 15 08.1	+1.3
ZAA0	Zalesovo Array	93.57	324	*e*P	P	05 15 04.2	-2.6
	comp=Z,26nm,1.9s						
ZALV	Zalesovo Beam	93.57	324	*e*P	P	05 15 05.4	-1.4
ZALV	Zalesovo Beam	93.57	324	*e*P	P	05 15 05.4	-1.4
ZALV	Zalesovo Beam	93.57	324	P	P	05 15 06.1	-0.6
	comp=Z,1.8nm,0.7s,baz=120,slow=3.9,SNR=7.5						
ZAA1	Zalesovo Array	93.57	324	*e*P	P	05 15 06.1	-0.7
121A	Cookes Peak, D	93.60	58	P	P	05 15 07.6	-0.1
	baz=259						
MAKZ	Makanchi	93.66	317	*e*P	P	05 15 07.0	-0.4
	comp=Z,26nm,1.5s						
MAKZ	Makanchi	93.66	317	*e*P	P	05 15 07.1	-0.4
MAKZ				pmax	pmax		
	comp=Z,26nm,1.5s						
LOHW	Long Hollow	93.66	46	*e*P	P	05 15 08.4	+0.6
	comp=Z,3.7nm,1.2s						
PV09	Paradox Valley	93.69	52	*e*P	P	05 15 09.0	+0.9
PV23	Carpenter Ridg	93.78	52	*e*P	P	05 15 09.2	+0.7
	comp=Z,9.7nm,0.8s						
PV21	Cone Mtn., Par	93.83	52	*e*P	P	05 15 06.2	-2.5
	comp=Z,9.4nm,1.2s						
H17A	Grant Village	93.84	46	*e*P	P	05 15 09.6	+0.9
	comp=Z,6.3nm,1.2s						
PV04	Paradox Valley	93.85	52	*e*P	P	05 15 10.2	+1.5
	comp=Z,8.0nm,1.0s						
PV12	Saucer Basin,	93.91	52	*e*P	P	05 15 09.4	+0.3
	comp=Z,12nm,1.2s						
MVCO	Mesa Verde	93.93	53	P	P	05 15 09.1	-0.2
	baz=259						
PV01	Paradox Valley	94.06	52	*e*P	P	05 15 10.1	+0.4
	comp=Z,8.4nm,1.3s						
BW06	Boulder Array	94.23	47	*e*P	P	05 15 11.0	+0.6
	comp=Z,4.5nm,1.1s						
BW06	Boulder Array	94.23	47	P	P	05 15 10.3	-0.2
	baz=258						
PD31	Pinedale Array	94.23	47	*e*P	P	05 15 10.8	+0.3
PDAR	Pinedale Array	94.23	47	*e*P	P	05 15 09.7	-0.7
PDAR	Pinedale Array	94.23	47	P	P	05 15 10.1	-0.4
	comp=Z,2.5nm,1.0s,baz=245,slow=2.5,SNR=8.7						
NVS	Novosibirsk	94.68	325	*e*P	P	05 15 08.8	-3.1
ANMO	Albuquerque	95.13	56	*e*P	P	05 15 15.1	+0.4
	comp=Z,7.5nm,1.3s						
ANMO	Albuquerque	95.13	56	⇑*i*P	P	05 15 15.8	+1.1
ANMO	Albuquerque	95.13	56	P	P	05 15 14.9	+0.1
	baz=260						
EGMT	Eagleton	95.14	42	P	P	05 15 14.6	+0.3
	baz=259						
S22A	4UR Ranch, Cre	95.34	53	P	P	05 15 15.8	+0.1
	baz=260						
MNTX	Cornudas Mount	95.45	59	*e*P	P	05 15 17.1	+1.1
	comp=Z,3.3nm,0.9s						
MNTX	Cornudas Mount	95.45	59	P	P	05 15 16.3	+0.3
	baz=260						
PMSA	Palmer Station	95.51	161	*e*P	P	05 15 15.6	+0.1
	comp=Z,150nm,1.1s						
YKA	Yellowknife Ar	95.59	27	P	P	05 15 13.7	-2.1
	comp=Z,1.5nm,0.7s,baz=255,slow=4.6,SNR=19						
YKB5	Yellowknife Ar	95.59	27	*e*P	P	05 15 13.9	-1.9
NRIK	Noril'sk	96.31	340	P	P	05 15 18.0	-1.0
	comp=Z,1.5nm,0.3s,baz=182,slow=1.2,SNR=4.0						
LTX	Lajitas	96.51	61	*e*P	P	05 15 20.9	-0.1
LTX	Lajitas	96.51	61	*e*P	P	05 15 20.9	-0.1
TXAR	Lajitas Array	96.51	61	P	P	05 15 20.9	-0.1
	comp=Z,1.1nm,0.9s,baz=228,slow=3.1,SNR=9.0						
KURK	Kurchatov	96.60	320	*e*P	P	05 15 21.5	+0.8
KURK	Kurchatov	96.60	320	*e*P	P	05 15 21.5	+0.8
KURBB	Kurchatov Arra	96.64	320	P	P	05 15 21.5	+0.6
	comp=Z,0.4nm,0.3s,baz=96,slow=3.6,SNR=4.8						
ARA0	ARCESS Array S	116.59	345	*e*PKPdf	PKPdf	05 20 33.3	-1.0
ARCES	ARCESS Array B	116.59	345	PKP	PKPdf	05 20 33.3	-1.0
	comp=Z,2.0nm,0.7s,baz=62,slow=2.9,SNR=4.8						
LPAZ	La Paz	120.49	117	*e*PKPdf	PKPdf	05 20 43.0	-1.1
LPAZ	La Paz	120.49	117	*e*PKIKP	PKPdf	05 20 43.0	-1.1
LPAZ	La Paz	120.49	117	PKP	PKPdf	05 20 43.5	-0.6
	comp=Z,1.1nm,0.6s,baz=274,slow=13,SNR=4.0						
OBN	Obninsk	120.87	328	*e*PKIKP	PKiKP	05 20 46.0	+3.0
OBN				*e*		05 22 12.7	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CPUP	Villa Florida	124.15	133	PKP	PKPdf	05 20 49.9	-0.2
	comp=Z,1.3nm,0.7s,baz=16,slow=5.7,SNR=3.5						
SDV	Santo Domingo	125.07	87	*e*PKPdf	PKPdf	05 20 52.5	+0.1
AKASG	Malin Array Be	126.90	326	PKP	PKPdf	05 20 54.3	-0.4
	comp=Z,0.3nm,0.4s,baz=70,slow=1.4,SNR=4.2						
AKBB	Malin Array Si	126.90	326	*e*PKPdf	PKPdf	05 20 54.3	-0.3
AKBB	Malin Array Si	126.90	326	*e*PKIKP	PKPdf	05 20 54.3	-0.3
NB200	NORSAR Array S	126.95	344	*e*PKPdf	PKPdf	05 20 54.7	+0.2
NOA	NORSAR Array B	126.95	344	PKP	PKPdf	05 20 54.7	+0.2
	comp=Z,0.7nm,0.8s,baz=36,slow=4.4,SNR=3.5						
CLL	Collm	134.26	336	*e*PKPdf	PKiKP	05 21 11.0	+1.1
CLL	Collm	134.26	336	*e*PKIKP	PKiKP	05 21 11.0	+1.1
GERES	GERESS Array B	135.82	333	PKP	PKPdf	05 21 11.9	+0.1
	comp=Z,1.1nm,0.8s,baz=48,slow=1.5,SNR=5.4						
BDFB	Brasilia	137.51	129	*e*PKIKP	PKPdf	05 21 15.0	-0.8
BDFB	Brasilia	137.51	129	PKP	PKPdf	05 21 15.0	-0.8
	comp=Z,1.1nm,0.7s,baz=217,slow=8.0,SNR=1.8						
KEST	Kesra	147.40	322	PKPbc	PKPbc	05 21 35.5	+0.2
	comp=Z,11nm,0.8s,baz=262,slow=5.8,SNR=7.1						
ES19	SONSECA Array	150.25	343	*e*PKPdf	PKPdf	05 21 39.5	+2.3
ESDC	Sonseca Array	150.29	343	PKPbc	PKPbc	05 21 41.9	-0.5
	comp=Z,2.4nm,0.9s,baz=11,slow=2.4,SNR=6.8						
TOA0	Torodi Ar. Sit	163.78	278	*e*PKPdf	PKPdf	05 21 55.6	+0.7
TORD	Torodi Ar. Bea	163.78	278	PKP	PKPdf	05 21 55.3	+0.4
	comp=Z,1.4nm,1.0s,baz=119,slow=5.0,SNR=5.1						
TORD				PKPab	PKPab	05 22 46.9	-0.4
	comp=Z,1.1nm,1.1s,baz=91,slow=3.1,SNR=2.4						
TOA1	Torodi Ar. Sit	163.78	278	*e*PKPdf	PKPdf	05 21 55.3	+0.4
TOA1				*e*PKPab	PKPab	05 22 46.9	-0.4

ISCJB ***06*** *05:02:08.6±0.5, 38.̊11N±0.̊03×3.̊44W±0.̊03, h11^{km}, Error ellipse: s-maj=4.9km s-min=2.7km az=23.2*

SFS ***06*** *05:02:10.0, 38.̊04N×3.̊28W, ML2.6, TORREPEROGIL (JAEN)*

MDD ***06*** *05:02:10.7±0.2, 38.̊05N×3.̊28W, h1^{km}±2^{km}, mbLg2.5/20, Error ellipse: s-maj=1.6km s-min=1.1km az=47.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA.

ISC 06 05:02:10.4±0.8, **38.̊04N**±0.̊03×**3.̊36W**±0.̊03, **h11**^{km}, **n53**, σ**1^{s}00**/45, **1C-1D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQES	Quesada	0.33	137	⇓Pg	Pg	05 02 15.9	-1.2
	29nm,0.1s,SNR=18						
EQES				Lg	Lg	05 02 20.2	
	28nm,0.2s,SNR=7.9						
GORA	Gorafe	0.62	156	Pg	Pg	05 02 22.0	-0.4
	13nm,0.1s,SNR=7.9						
GORA				Lg	Lg	05 02 31.0	
	118nm,0.2s,SNR=7.9						
SESP	Santiago Espad	0.65	83	⇑Pg	Pg	05 02 21.6	-1.3
	22nm,0.2s,SNR=18						
SESP				Lg	Lg	05 02 29.6	
	389nm,0.2s,SNR=7.9						
EQUE	Quentar	0.84	184	Pg	Pb	05 02 27.6	+0.5
	5.1nm,0.2s,SNR=7.2						
EQUE				Lg	Lg	05 02 37.4	
	76nm,0.3s,SNR=6.3						
EADA	Adamuz	0.97	278	Pg	Pg	05 02 29.0	0.0
	4.8nm,0.2s,SNR=7.5						
EADA				Lg	Lg	05 02 42.7	
	115nm,0.1s,SNR=7.9						
EGOR	Sierra Gorda,	1.11	213	Pg	Pb	05 02 31.7	+0.1
	1.7nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	05 02 49.1	
	57nm,0.3s,SNR=7.9						
ELGU	Los Guajares,	1.19	190	Pg	Pg	05 02 34.0	+0.7
	4.1nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	05 02 50.1	
	34nm,0.3s,SNR=7.9						
EBER	Berja	1.20	162	Pg	Pg	05 02 33.6	+0.1
	17nm,0.2s,SNR=4.8						
EBER				Lg	Lg	05 02 51.6	
	54nm,0.3s,SNR=8.4						
EMAL	Malaga-Limoner	1.54	214	*e*P	Pg	05 02 40.0	+0.1
EMAL				*e*S	Sg	05 03 00.9	+1.1
ETOB	Tobarra	1.54	67	Pg	Pn	05 02 38.3	+0.4
	5.9nm,0.2s,SNR=8.0						
ETOB				Lg	Lg	05 02 57.0	
	30nm,0.1s,SNR=5.0						
ECAB	El Cabril	1.63	272	Pn	Pn	05 02 38.7	-0.3
	13nm,0.3s						
ECAB				Lg	Lg	05 03 02.7	
	27nm,0.2s,SNR=13						
EMUR	La Murta	1.69	96	Pg	Pb	05 02 41.7	+0.2
	9.7nm,0.3s,SNR=11						
EMUR				Lg	Lg	05 03 02.2	
	35nm,0.8s,SNR=5.0						
PAB	San Pablo	1.69	333	Pg	Pb	05 02 42.0	+0.5
	3.2nm,0.2s,SNR=7.9						
PAB				Lg	Lg	05 03 04.4	
	22nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	1.69	344	Pg	Pb	05 02 42.1	+0.5
	4.2nm,0.2s,baz=164,slow=18,SNR=3.8						
ESDC				Lg	Lg	05 03 03.3	
	13nm,0.2s,baz=162,slow=29,SNR=7.5						
EMIJ	Mijas	1.86	218	Pg	Pg	05 02 46.2	+0.2
	4.7nm,0.2s,SNR=7.9						
EMIJ				Lg	Lg	05 03 11.0	
	11nm,0.3s,SNR=4.0						
CART	Cartagena	1.92	103	Pn	Pb	05 02 45.9	+0.5
CART	Cartagena	1.92	103	*e*P	Pb	05 02 45.9	+0.5
ETRV	Los Montesinos	2.05	90	Lg	Lg	05 03 14.9	
	110nm,0.4s,SNR=7.9						
UCM	Universidad Co	2.26	2	*e*P	Pg	05 02 55.3	+1.5
UCM				*e*S	Sb	05 03 21.3	+2.1
ESPR	Espera	2.31	240	Lg	Lg	05 03 26.2	
	9.7nm,0.2s,SNR=7.9						
ECHE	Chera	2.42	50	Lg	Lg	05 03 26.3	
	7.9nm,0.2s,SNR=7.9						
EBEN2	Beniarda presa	2.57	75	Lg	Lg	05 03 31.4	
	0.4nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	2.64	265	Lg	Lg	05 03 33.0	
	23nm,0.3s,SNR=5.8						
GUD	Guadarrama	2.67	347	Lg	Lg	05 03 34.4	
	7.6nm,0.4s,SNR=6.9						
PBAR	Barrancos	2.91	274	*e*Sg	Sg	05 03 43.5	-0.2
PBAR				A	A	05 03 48.7	
	21nm,0.7s						
PBAR	Barrancos	2.91	274	Lg	Lg	05 03 43.5	
	21nm,0.7s						
EPLA	Plasencia	2.93	314	Lg	Lg	05 03 41.1	
	5.7nm,0.2s,SNR=5.0						
EBAD	Badajoz	2.96	285	Lg	Lg	05 03 43.7	
	26nm,0.2s,SNR=5.2						
EMOS	Mosqueruela	3.22	43	Lg	Lg	05 03 51.6	
	1.8nm,0.3s,SNR=7.9						
EGRO	El Granado	3.31	262	Lg	Lg	05 03 55.0	
	4.6nm,0.4s,SNR=7.9						
PESTR	Estremoz	3.42	285	*e*Pn	Pn	05 03 05.0	+1.3
PESTR				*e*Sn	Sn	05 03 44.0	-0.2
PESTR				*e*Sg	Sg	05 03 59.5	-0.8
PESTR				A	A	05 04 06.7	
	14nm,0.7s						
PMRV	Marv??o	3.44	295	*e*Sn	Sn	05 03 44.3	-0.5
PMRV				*e*Sg	Sg	05 03 59.3	-1.6
PMRV				A	A	05 04 02.0	
	16nm,0.3s						
PMRV	Marv??o	3.44	295	Sn	Sn	05 03 44.3	-0.5
PMRV				Lg	Lg	05 03 59.3	
	16nm,0.3s						
PVAQ	Vaqueiros	3.52	261	*e*Sn	Sn	05 03 46.4	-0.1
PVAQ				*e*Sg	Sg	05 04 03.1	-0.1
PVAQ				A	A	05 04 07.1	
	6.5nm,0.5s						
PVAQ	Vaqueiros	3.52	261	Sn	Sn	05 03 46.4	-0.1
PVAQ				Lg	Lg	05 04 03.1	
	6.5nm,0.5s						
PBEJ	Beja	3.56	271	*e*Sg	Sg	05 04 03.6	-1.1
PBEJ				A	A	05 04 11.5	
	7.8nm,0.7s						
PBEJ	Beja	3.56	271	Lg	Lg	05 04 03.6	
	3.9nm,0.7s						
PCBR	Castelo Branco	3.68	300	*e*Sn	Sn	05 03 50.4	-0.1
PCBR				*e*Sg	Sg	05 04 07.8	-0.7
PCBR				A	A	05 04 17.1	
	9.2nm,0.6s						
PCBR	Castelo Branco	3.68	300	Sn	Sn	05 03 50.4	-0.1
PCBR				Lg	Lg	05 04 07.8	
	4.6nm,0.6s						
PBDV	Barranco-do-Ve	3.72	259	*e*Sg	Sg	05 04 10.8	+1.1
PBDV				A	A	05 04 21.2	
	11nm,0.6s						
PBDV	Barranco-do-Ve	3.72	259	Lg	Lg	05 04 10.8	
	11nm,0.6s						
MESJ	Messejana	3.85	268	*e*Sg	Sg	05 04 12.8	-1.1
MESJ				A	A	05 04 21.2	
	6.5nm,0.6s						
MESJ	Messejana	3.85	268	Lg	Lg	05 04 12.8	
	6.5nm,0.6s						
PMTG	Montargil	3.95	287	*e*Pn	Pn	05 03 09.7	-1.2
PMTG				*e*Sn	Sn	05 03 56.0	-1.2
PMTG				*e*Sg	Sg	05 04 16.6	-0.6
PMTG				A	A	05 04 19.6	
	9.1nm,0.5s						
PMTG	Montargil	3.95	287	Pn	Pn	05 03 09.7	-1.2
PMTG				Sn	Sn	05 03 56.0	-1.2
PMTG				Lg	Lg	05 04 16.6	
	9.1nm,0.5s						
MTE	Manteigas	4.01	307	*e*Sg	Sg	05 04 18.2	-1.0
MTE				A	A	05 04 25.6	
	9.4nm,0.6s						
MTE	Manteigas	4.01	307	Lg	Lg	05 04 18.2	
	4.7nm,0.6s						
PNCL	Nicolau / Gran	4.08	273	*e*Sg	Sg	05 04 20.3	-1.1
PNCL				A	A	05 04 27.3	
	5.6nm,1.0s						
PNCL	Nicolau / Gran	4.08	273	Lg	Lg	05 04 20.3	
	5.6nm,1.0s						
PTOM	Tomar	4.25	293	*e*Sg	Sg	05 04 23.7	-3.0
PTOM				A	A	05 04 33.1	
	9.9nm,0.6s						
PTOM	Tomar	4.25	293	Lg	Lg	05 04 23.7	
	4.9nm,0.6s						
PCAS	Casmilo, Conde	4.48	298	*e*Sg	Sg	05 04 32.7	-1.4
PCAS				A	A	05 04 42.5	
	7.8nm,0.5s						
PCAS	Casmilo, Conde	4.48	298	Lg	Lg	05 04 32.7	
	7.8nm,0.5s						

IDC ***06*** *05:03:04.2±1.2, 36.̊42N×21.̊57E, h0^{km}, mb3.6/7, mb1 3.6/8, mb1mx3.4/53, mbtmp3.5/8, ML2.7/1, Error ellipse: s-maj=24.6km s-min=23.9km az=38.0*

ATH ***06*** *05:03:08.4, 36.̊25N×21.̊58E, h34^{km}±3^{km}, ML3.2/15, Error ellipse: s-maj=4.8km s-min=1.4km az=47.0*

THE ***06*** *05:03:11.6, 36.̊38N×21.̊71E, h18^{km}±2^{km}, ML3.2/18, Error ellipse: s-maj=3.2km s-min=0.7km az=240.0*

ISC 06 05:03:07.2±1.2, **36.̊30N**±0.̊03×**21.̊52E**±0.̊04, **h19**^{km}±3^{km}, **n95**, σ**1^{s}19**/118, **mb3.6**/7, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MES2	Methoni	0.55	16	P	Pn	05 03 20.5	+0.5
MES2				S	Sn	05 03 29.9	+1.2
MES2				AML	AML	05 03 30.9	
	comp=N,14775µm,0.8s						
MES2				AML	AML	05 03 31.6	
	comp=E,16201µm,0.5s						
PYL	PYLOS	0.63	17	P	Pn	05 03 21.8	+0.6
PYL				S	Sn	05 03 32.3	+1.7
PYL				AML	AML	05 03 32.6	
	comp=N,9343µm,0.6s						
PYL				AML	AML	05 03 33.2	
	comp=E,11318µm,0.5s						
PYL	PYLOS	0.63	17	P	Pn	05 03 21.5	+0.4
PYL				S	Sn	05 03 30.1	-0.5
ITM	Ithomi	0.94	20	P	Pg	05 03 26.6	+1.0
ITM				S	Sn	05 03 40.5	+2.1
ITM				AML	AML	05 03 45.6	
	comp=E,4076µm,0.8s						
ITM				AML	AML	05 03 46.0	
	comp=N,2090µm,0.3s						
ITM	Ithomi	0.94	20	P	Pg	05 03 26.6	+1.0
ITM				S	Sg	05 03 38.0	-0.1
MES3	Kyparissia	0.96	7	P	Pg	05 03 26.9	+0.9
MES3				S	Sn	05 03 41.5	+2.7
KTHR	Kythira	1.20	91	P	Pg	05 03 30.9	+0.4
VLI	Veliai	1.22	69	P	Pg	05 03 31.3	+0.5
VLI	Veliai	1.22	69	P	Pg	05 03 31.4	+0.5
VLI				S	Sg	05 03 46.2	-0.6
KYTH	Kithira	1.23	91	P	Pg	05 03 31.5	+0.3
KYTH				AML	AML	05 04 01.2	
	comp=N,2528µm,0.7s						
KYTH				AML	AML	05 04 02.8	
	comp=E,1936µm,0.9s						
KYTH	Kithira	1.23	91	P	Pg	05 03 31.5	+0.3
KYTH				S	Sn	05 03 46.1	+0.5
AMT	Artemida-Makis	1.25	7	P	Pg	05 03 31.3	-0.1
AMT				AML	AML	05 03 59.0	
	comp=E,2255µm,0.4s						
AMT				AML	AML	05 03 59.9	
	comp=N,3057µm,1.0s						
AMT	Artemida-Makis	1.25	7	P	Pg	05 03 31.6	+0.2
AMT				S	Sg	05 03 48.5	+0.8
VLX	Vlachokerasia	1.28	32	P	Pg	05 03 32.3	+0.3
VLX				AML	AML	05 03 55.5	
	comp=N,2490µm,0.5s						
VLX				AML	AML	05 04 02.2	
	comp=E,3016µm,0.8s						
VLX	Vlachokerasia	1.28	32	P	Pg	05 03 32.0	0.0
VLX				S	Sn	05 03 46.4	-0.4
TRIP	Tripoli	1.37	26	P	Pg	05 03 33.1	-0.6
TRIP				AML	AML	05 04 07.1	
	comp=E,1429µm,0.9s						
TRIP				AML	AML	05 04 08.6	
	comp=N,1177µm,0.7s						
TRIP	Tripoli	1.37	26	P	Pg	05 03 33.6	-0.2
TRIP				S	Sb	05 03 50.1	+0.6
ANKY	Antikythira Is	1.51	106	P	Pb	05 03 34.9	+0.4
ANKY				AML	AML	05 04 07.0	
	comp=E,1655µm,0.9s						
ANKY				AML	AML	05 04 10.9	
	comp=N,773µm,0.8s						
ANKY	Antikythira Is	1.51	106	P	Pb	05 03 35.1	+0.5
ANKY				S	Sb	05 03 54.1	+0.8
DRO	Drossia	1.66	5	P	Pb	05 03 37.6	+0.3
DRO	Drossia	1.66	5	P	Pb	05 03 37.1	-0.1
DRO				S	Sb	05 03 59.0	+1.2
KRND	KRANIDI	1.70	50	P	Pb	05 03 37.1	-0.8
KRND	KRANIDI	1.70	50	P	Pb	05 03 36.9	-1.0
KRND				S	Sn	05 03 57.0	-0.1
RLS	Riolos of Patr	1.76	359	P	Pb	05 03 38.9	0.0
GUR	Goura	1.77	22	P	Pb	05 03 39.8	+0.7
GUR	Goura	1.77	22	P	Pb	05 03 39.3	+0.2
GUR				S	Sb	05 04 00.6	-0.3
KLV	Kalavryta, Ach	1.82	16	P	Pb	05 03 39.9	0.0
KLV				AML	AML	05 04 20.1	
	comp=N,536µm,1.0s						
KLV				AML	AML	05 04 20.8	
	comp=E,698µm,0.8s						
KLV	Kalavryta, Ach	1.82	16	P	Pb	05 03 39.6	-0.3
KLV				S	Sb	05 04 01.0	-1.3
DID	Didima	1.83	48	P	Pb	05 03 39.1	-1.1
DID				AML	AML	05 04 14.9	
	comp=E,852µm,1.0s						
DID				AML	AML	05 04 17.9	
	comp=N,854µm,0.7s						
DID	Didima	1.83	48	P	Pn	05 03 38.9	+1.2
DID				S	Sn	05 04 00.1	-0.3
KERA	Keramoti	1.90	119	P	Pn	05 03 38.9	+0.4
AXS	Araxos	1.90	357	P	Pb	05 03 41.6	+0.3
LAKA	Lakka	1.98	11	P	Pb	05 03 42.4	-0.1
LAKA				AML	AML	05 04 25.5	
	comp=N,758µm,0.8s						
LAKA				AML	AML	05 04 28.6	
	comp=E,562µm,1.3s						
LAKA	Lakka	1.98	11	P	Pb	05 03 42.5	-0.1
ALIK	Aliki, Aigiali	2.02	13	P	Pb	05 03 42.9	-0.4
ALIK				S	Sn	05 04 05.8	+0.9
VLS	Valsamata	2.02	339	P	Pb	05 03 41.8	-1.6
LOUT	Loutraki	2.05	34	P	Pb	05 03 42.4	-1.5
TRIZ	Trizonia	2.11	12	P	Pb	05 03 44.3	-0.6
TRIZ	Trizonia	2.11	12	P	Pb	05 03 44.2	-0.7
EFP	Efpalio	2.15	8	P	Pb	05 03 45.2	-0.4
EFP	Efpalio	2.15	8	P	Pb	05 03 45.1	-0.4
SERG	Sergoula	2.16	11	P	Pb	05 03 45.9	+0.2
SERG	Sergoula	2.16	11	P	Pb	05 03 45.4	-0.3
IMMV	Iera Moni Meta	2.17	112	P	Pn	05 03 43.4	+1.1
IMMV	Iera Moni Meta	2.17	112	P	Pn	05 03 43.7	+1.4
IMMV				S	Sn	05 04 09.9	+1.3

CHAN	Chania	2.19	110	P	Pn	05 03 44.1	+1.5
PROD	Prodromos	2.25	29	P	Pn	05 03 44.8	+1.4
PROD				AML	AML	05 04 29.1	
	comp=E,537µm,0.8s						
PROD				AML	AML	05 04 35.7	
	comp=N,367µm,0.9s						
PROD	Prodromos	2.25	29	P	Pn	05 03 44.8	+1.4
DSF	Desfina	2.26	21	P	Pn	05 03 45.1	+1.4
DSF	Desfina	2.26	21	P	Pn	05 03 45.0	+1.4
DSF				S	Sn	05 04 12.7	+1.7
ANX	Ano Chora	2.32	8	P	Pb	05 03 48.2	-0.3
ANX	Ano Chora	2.32	8	P	Pb	05 03 47.5	-1.0
ANX				S	Sn	05 04 13.9	+1.5
VAM	Vamos	2.35	111	P	Pn	05 03 45.9	+1.0
VAM	Vamos	2.35	111	P	Pn	05 03 46.4	+1.6
VILL	Villia	2.35	37	P	Pn	05 03 45.8	+0.9
MHLO	Agia Marina, M	2.36	80	P	Pn	05 03 45.5	+0.7
MHLO	Agia Marina, M	2.36	80	P	Pn	05 03 45.6	+0.7
VIL2	Platees	2.37	36	P	Pn	05 03 45.8	+0.7
VIL2				AML	AML	05 04 36.9	
	comp=E,914µm,1.1s						
VIL2				AML	AML	05 04 37.2	
	comp=N,506µm,1.2s						
VLY	Voula,Athens	2.39	49	P	Pn	05 03 46.2	+0.8
ATHU	Athens Univers	2.46	47	P	Pn	05 03 47.5	+1.1
SERI	Serifos	2.54	69	P	Pn	05 03 47.6	+0.3
SERI	Serifos	2.54	69	P	Pn	05 03 47.7	+0.3
PTL	Penteli	2.56	46	P	Pn	05 03 48.7	+0.9
LKD2	Lefkada island	2.58	345	P	Pb	05 03 50.9	-2.1
LKD2	Lefkada island	2.58	345	P	Pb	05 03 51.0	-1.9
TSLK	Tsoukalades, L	2.62	345	P	Pb	05 03 51.3	-2.2
DION	Dionisos Attik	2.62	47	P	Pn	05 03 49.5	+0.9
EVR	Evrytania	2.63	5	P	Pb	05 03 52.5	-1.3
EVR				AML	AML	05 04 51.4	
	comp=N,356µm,1.1s						
EVR				AML	AML	05 04 56.2	
	comp=E,284µm,0.8s						
ATAL	Atalanti	2.67	26	P	Pn	05 03 50.7	+1.4
ATAL				AML	AML	05 04 48.4	
	comp=E,276µm,0.9s						
ATAL				AML	AML	05 04 52.3	
	comp=N,207µm,1.4s						
ATAL	Atalanti	2.67	26	P	Pn	05 03 50.7	+1.4
ATAL				S	Sn	05 04 22.0	+0.8
AGG	Agios Georgios	2.80	13	P	Pn	05 03 53.3	+2.2
AGG	Agios Georgios	2.80	13	P	Pn	05 03 53.2	+2.2
AGG				S	Sn	05 04 25.9	+1.7
EREA	Eretria	2.86	41	P	Pn	05 03 52.6	+0.7
EREA	Eretria	2.86	41	P	Pn	05 03 52.5	+0.7
IDI	Anoyia	2.92	109	Pn	Pn	05 03 53.6	+0.9
	comp=N,1.1nm,0.3s,baz=301,slow=19,SNR=7.3						
IDI				Sn	Sn	05 04 28.8	+1.6
	comp=N,12nm,0.3s,baz=28,slow=7.3,SNR=14						
SKIA	Skiathos	3.26	28	P	Pn	05 03 58.4	+1.1
THL	Klokotos Trika	3.29	7	P	Pn	05 03 59.7	+2.0
THL	Klokotos Trika	3.29	7	P	Pn	05 03 59.7	+2.0
NEO	Neokhori	3.30	24	P	Pn	05 04 00.9	+3.1
APE	Apeiranthos	3.32	75	P	Pn	05 03 58.5	+0.4
XOR	Xorichti	3.34	23	P	Pn	05 04 00.4	+2.0
AMGA	Amorgos Island	3.56	80	P	Pn	05 04 01.8	+0.3
KPRO	Kipourio	3.66	358	P	Pn	05 04 05.7	+2.9
KRUS	Krusevo	5.07	358	*i* Pn	Pn	05 04 23.3	+1.0
VAY	Valandovo	5.09	9	*i* Pn	Pn	05 04 24.2	+1.8
STIP	Stip	5.42	5	*i* Pn	Pn	05 04 29.4	+2.4
STON	Ston	7.20	337	*i* Pn	Pn	05 04 49.8	-1.6
STON				Sn	Sn	05 06 04.8	-7.7
NVLJ	Novalja	9.69	331	Sn	Sn	05 07 04.9	-8.8
HFS	Hagfors	24.38	351	P	P	05 08 23.0	-0.9
	comp=N,1.2nm,0.8s,baz=156,slow=11,SNR=3.2						
FINES	FINESS Array B	25.34	5	P	P	05 08 31.3	-1.3
	comp=N,1.3nm,0.9s,baz=172,slow=11,SNR=2.6						
TORD	Torodi Ar. Bea	29.13	223	P	P	05 09 07.7	+0.6
	comp=N,0.5nm,0.9s,baz=29,slow=8.4,SNR=3.2						
ARCES	ARCESS Array B	33.37	3	P	P	05 09 42.9	-0.9
	comp=N,0.8nm,0.6s,baz=182,slow=8.1,SNR=3.3						
MKAR	Makanchi Array	45.63	57	P	P	05 11 24.9	-1.4
	comp=N,0.4nm,0.3s,baz=269,slow=7.9,SNR=7.9						
ZALV	Zalesovo Beam	46.38	47	P	P	05 11 30.0	-2.0
	comp=N,0.7nm,0.5s,baz=265,slow=9.0,SNR=2.8						
YKA	Yellowknife Ar	75.43	341	P	P	05 14 49.4	0.0
	comp=N,0.1nm,0.6s,baz=42,slow=4.9,SNR=3.6						

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*ISCJB **06** 05:03:38.8±1.2, 36°.99N±0°.07×71°.7E±0°.2, h33^{km}, Error ellipse: s-maj=19.1km s-min=7.7km az=162.5*

*NNC **06** 05:03:51.7±9.4, 37°.92N×71°.68E, h0^{km}, mb3.7, mpv3.2, Error ellipse: s-maj=81.3km s-min=53.9km az=164.0*

ISC 06 05:03:41.2±1.5**, 37°.07N**±0°.09×**71°.6E**±0°.1**, h35^{km}, n10, σ2^{s}.84**/13**, 5C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.28	26	⇑P	Pn	05 04 34.9	+4.6
	2.2nm,0.2s						
SFK				⇑S	Sn	05 05 08.5	+0.2
	16nm,0.2s						
AAK	Ala-Archa	5.98	21	⇑P	Pn	05 05 09.4	+2.1
	1.0nm,0.4s						
AAK				⇑S	Sn	05 06 09.8	-4.8
	7.9nm,0.7s						
KK31	Karatay Array	6.09	352	P	Pn	05 05 12.2	+3.5
	1.1nm,0.2s,baz=158,slow=11,SNR=57						
KK31				⇑S	Sn	05 06 14.2	-3.0
	4.1nm,0.3s,baz=163,slow=21,SNR=16						
PYUN	Piuthan	13.08	130	*e*P	Pn	05 06 44.5	-0.2
	6.1nm,0.2s						
DANN	Dangsing	13.39	127	*e*P	Pn	05 06 48.5	-0.5
	8.9nm,0.3s						
AB31	Akbulak array	14.85	329	⇓P	Pn	05 07 07.5	-1.0
	0.8nm,0.5s,baz=135,slow=13,SNR=33						
PKIN	Phulchoki	14.97	125	*e*P	Pn	05 07 09.0	-1.5
	4.0nm,0.3s						
PKI	Pulchoki	14.99	125	*e*P	Pn	05 07 09.0	-1.7
	3.5nm,0.2s						
GUN	Gumba	15.07	123	*e*P	Pn	05 07 10.5	-1.4
RAMN	Ramite	16.19	124	*e*P	Pn	05 07 24.5	-1.7

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*IDC **06** 05:04:02.0±0.5, 11°.02S×165°.62E, h0^{km}, mb4.5/21, mb1 4.7/23, mb1mx4.6/40, mbtmp4.6/23, ML5.4/2, Error ellipse: s-maj=18.5km s-min=14.3km az=111.0*

*NEIC **06** 05:04:04.4±0.7, 10°.97S×165°.55E, h14^{km}±4^{km}, mb4.9/61, Error ellipse: s-maj=5.1km s-min=3.9km az=120.0*

*ISCJB **06** 05:04:05.2±0.2, 11°.07S±0°.03×165°.50E±0°.04, h30^{km}, mb4.8/89, Error ellipse: s-maj=5.6km s-min=4.8km az=25.7*

ISC 06 05:04:06.6±0.3**, 11°.06S**±0°.05×**165°.63E**±0°.06**, h30^{km}, n143, σ1^{s}.24**/157**, mb4.9**/89**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.82	286	*e*Pn	Pn	05 05 30.4	-0.5
HNR				*e*Pn	Pn	05 05 31.1	+0.1
HNR				*e*Sn	Sn	05 06 21.2	-16
HNR				*e*Sn	Sn	05 06 34.5	-2.2
HNR	Honiara	5.82	286	Pn	Pn	05 05 31.1	+0.1
	192nm,0.3s,baz=132,slow=8.9,SNR=7.8						
HNR				Sn	Sn	05 06 34.5	-2.2
	26nm,0.3s,baz=160,slow=20,SNR=1.5						
MARNC	Mare, Loyalty	10.61	168	*e*Pn	Pn	05 06 37.9	+1.2
DZM	Mont Dzumac	10.97	176	*e*Pn	Pn	05 06 42.5	+0.7
DZM				*e*Sn	Sn	05 08 43.5	-0.1
DZM	Mont Dzumac	10.97	176	Pn	Pn	05 06 41.2	-0.6
	16nm,0.3s,baz=321,slow=12,SNR=19						
DZM				Sn	Sn	05 08 40.6	-3.0
	0.8nm,0.3s,baz=360,slow=17,SNR=1.7						
OUENC	Ouen Island, N	11.35	174	*e*Pn	Pn	05 06 48.5	+1.7
PINNC	Pines Island,	11.62	172	*e*Pn	Pn	05 06 52.9	+2.4
MSVF	Nonsavu	13.73	120	*e*Pn	Pn	05 07 15.9	-3.6
TARA	Tarawa	14.31	31	*e*Pn	Pn	05 07 26.8	-0.5
EIDS	Eidsvold	19.81	222	*e*P	P	05 08 35.4	+0.6
	74nm,1.1s						
CTA	Charters Tower	20.69	242	P	P	05 08 45.3	+0.8
	78nm,0.9s,baz=71,slow=12,SNR=10.0						
CTAO	Charters Tower	20.69	242	*e*P	P	05 08 44.9	+0.4
	192nm,1.1s						
COEN	Coen	22.11	260	*e*P	P	05 08 59.1	-0.7
	156nm,1.1s						
ARMA	Armidale	23.24	212	*e*P	P	05 09 12.1	+0.5
	48nm,1.0s						
OUZ	Omahuta	25.12	164	*e*P	P	05 09 30.3	+1.4
	23nm,1.0s						
HIZ	Hauiti	28.55	165	*e*P	P	05 10 02.3	+2.5
	70nm,1.1s						
URZ	Urewera	28.97	161	P	P	05 10 04.5	+1.0
	6.2nm,0.5s,baz=354,slow=17,SNR=3.2						
BKZ	Black Stump Fm	29.61	163	*e*P	P	05 10 11.1	+1.8
	20nm,0.7s						
STKA	Stephens Creek	30.35	223	*e*P	P	05 10 16.4	+0.5
	5.8nm,0.9s						
STKA	Stephens Creek	30.35	223	P	P	05 10 16.2	+0.4
	18nm,0.7s,baz=53,slow=9.7,SNR=12						
WRAB	Tennant Creek	31.36	250	*e*P	P	05 10 24.3	-0.6
	67nm,1.0s						
WB2	Warramunga Arr	31.36	250	*e*P	P	05 10 23.7	-1.2
WB2				*e*P	P	05 10 24.4	-0.5
WR1	Warramunga Arr	31.37	250	*e*P	P	05 10 24.1	-0.9
	81nm,1.0s						
WRA	Warramunga Arr	31.37	250	P	P	05 10 24.1	-0.9
	57nm,1.1s,baz=79,slow=9.0,SNR=13						
WRA				PcP	PcP	05 13 19.1	+0.6
	2.2nm,1.1s,baz=68,slow=3.3,SNR=2.7						
LTZ	Lake Taylor	32.13	171	*e*P	P	05 10 33.2	+1.8
	31nm,0.8s						
AS01	Alice Springs	32.64	243	*e*P	P	05 10 34.0	-2.1
AS31	Alice Springs	32.68	243	*e*P	P	05 10 35.6	-0.9
	9.8nm,0.9s						
ASAR	Alice Springs	32.68	243	P	P	05 10 35.4	-1.2
	20nm,0.7s,baz=64,slow=10,SNR=19						
ASAR				PcP	PcP	05 13 22.6	+0.5
	1.5nm,0.7s,baz=72,slow=3.0,SNR=4.1						
RPZ	Rata Peaks	32.87	173	P	P	05 10 38.1	+0.3
	13nm,1.0s,baz=295,slow=19,SNR=1.9						
MJAR	Matsushiro Arr	53.93	333	P	P	05 13 27.6	+0.1
	2.4nm,0.7s,baz=175,slow=7.7,SNR=5.0						
MAJO	Matsushiro	53.94	333	*e*P	P	05 13 27.6	+0.1
UGM	Wanagama	54.38	268	*e*P	P	05 13 30.4	-0.9
	92nm,1.1s						
JNU	Nakatsue	55.03	324	P	P	05 13 35.5	-0.1
	7.8nm,1.0s,baz=104,slow=4.2,SNR=2.3						
ASAJ	Asahikawa	58.77	341	P	P	05 14 01.8	-0.1
	3.6nm,0.4s,baz=166,slow=12,SNR=4.0						
KSRS	Korea Array	59.83	326	P	P	05 14 09.4	+0.1
	1.1nm,0.6s,baz=127,slow=7.8,SNR=3.7						
KSAR	Wonju Array Be	59.84	326	P	P	05 14 09.4	0.0
NJ2	Nanjing	61.95	315	*e*P	P	05 14 24.3	+0.4
NJ2				pmax	pmax		
	comp=Z,110nm,0.5s						
USRK	Ussuriysk Ar.	62.91	333	P	P	05 14 30.2	+0.2
	comp=Z,2.8nm,0.8s,baz=134,slow=4.2,SNR=3.5						
PETK	Petropavlovsk-	64.27	355	P	P	05 14 39.0	+0.1
	comp=Z,4.4nm,0.8s,baz=168,slow=9.6,SNR=3.6						
PEA1	Petropavlovsk-	64.28	355	*e*P	P	05 14 39.0	+0.1
CN2	Changchun	65.70	329	*e*P	P	05 14 43.9	-4.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IPM	Ipoh	66.11	280	*e*P	P	05 14 50.7	-1.0
	comp=Z,31nm,1.1s						
PSI	Prapat	67.76	278	P	P	05 15 00.8	-1.4
	comp=Z,11nm,0.9s,baz=171,slow=0.4,SNR=7.3						
GYA	Guiyang	68.33	304	⇑*i*P	P	05 15 08.2	+2.6
GYA				PP	PP	05 17 41.2	+4.4
GYA				S	S	05 24 07.6	+2.4
GYA				SKS	SKKSac	05 25 02.8	-0.1
GYA	Guiyang	68.33	304	SS	SS	05 28 32.4	+3.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.4s						
GYA				LR	LR		
	comp=N,550nm,18.2s						
GYA				LR	LR		
	comp=E,580nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.0s						
XAN	Xi'an	70.05	312	P	P	05 15 16.0	0.0
XAN				pP	pwP	05 15 27.6	+0.3
XAN				sP	sP	05 15 33.1	+5.0
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
XAN				LR	LR		
	comp=N,1µm,17.4s						
XAN				LR	LR		
	comp=Z,1µm,22.8s						
KMI	Kunming	71.03	301	P	P	05 15 23.6	+1.2
KMI				pP	sP	05 15 32.8	-1.2
KMI				sP	pwP	05 15 36.9	+2.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
HHC	Hu-ho-hao-te	71.77	320	*e*P	P	05 15 14.1	-12
HHC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CM31	Chiang Mai Arr	72.01	294	*e*P	P	05 15 26.8	-1.4
	comp=Z,10nm,0.3s						
CMAR	Chiang Mai Arr	72.01	294	P	P	05 15 28.1	-0.1
	comp=Z,1.3nm,0.3s,baz=124,slow=7.6,SNR=4.0						
CD2	Chengdu	72.52	307	*e*P	P	05 15 32.0	+0.9
SEY	Seymchan	74.48	354	P	P	05 15 41.7	0.0
	comp=Z,1.8nm,0.7s,baz=0.0,slow=20,SNR=3.4						
LZH	Lanzhou	74.69	312	P	P	05 15 45.4	+1.6
LZH				pP	pP	05 15 51.0	-1.2
LZH				sP	pwP	05 15 54.0	-2.4
LZH				PP	PP	05 18 32.3	+1.1
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,96nm,4.3s						
LZH				LR	LR		
	comp=N,260nm,16.5s						
LZH				LR	LR		
	comp=E,280nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
ANM	Nome	78.53	12	*e*P	P	05 16 05.5	+0.8
	comp=Z,8.2nm,1.1s						
RSO	Redoubt South	78.58	20	*e*P	P	05 16 06.5	+1.2
SONA0	Songino Array	78.61	324	*e*P	P	05 16 06.5	+0.8
SONM	Songino Array	78.61	324	P	P	05 16 06.5	+0.8
	comp=Z,2.0nm,1.0s,baz=135,slow=6.1,SNR=3.7						
SONA1	Songino Array	78.61	324	*e*P	P	05 16 05.7	0.0
BILL	Bilibino	78.90	0	*e*P	P	05 16 07.4	+0.8
	comp=Z,8.9nm,0.9s						
QSPA	South Pole Qui	78.94	180	*e*P	P	05 16 10.2	+2.9
	comp=Z,16nm,0.9s						
GTA	Gaotai	78.99	314	*e*P	P	05 16 09.8	+1.8
GTA				pP	PcP	05 16 16.2	-0.3
GTA				sP	sP	05 16 19.8	+0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
CAST	Castle Rocks	81.00	18	*e*P	P	05 16 17.9	-0.2
	comp=Z,6.5nm,0.8s						
DIV	Divide	81.47	22	*e*P	P	05 16 21.7	+1.0
	comp=Z,15nm,0.8s						
KLU	Klutina	81.66	21	*e*P	P	05 16 22.3	+0.6
	comp=Z,12nm,1.0s						
RND	Reindeer	81.99	19	*e*P	P	05 16 23.7	+0.3
	comp=Z,12nm,1.1s						
MCK	McKinley	82.20	19	*e*P	P	05 16 24.0	-0.5
	comp=Z,15nm,1.1s						
IM3	Indian Mountai	82.47	16	*e*P	P	05 16 25.5	-0.3
HARP	HAARP	82.54	21	*e*P	P	05 16 28.3	+2.0
	comp=Z,22nm,0.9s						
WRH	Wood River Hil	82.98	18	*e*P	P	05 16 28.6	+0.1
	comp=Z,12nm,1.0s						
MDM	Murphy Dome	83.28	18	*e*P	P	05 16 29.8	-0.3
	comp=Z,9.5nm,1.0s						
HDA	Harding Lake	83.30	19	*e*P	P	05 16 30.1	-0.1
	comp=Z,20nm,0.8s						
COLA	College	83.34	18	*e*P	P	05 16 31.5	+1.2
ILAR	Eielson Array	83.56	19	P	P	05 16 31.8	+0.2
	comp=Z,4.8nm,0.6s,baz=235,slow=5.2,SNR=14						
ILB	Eielson Array	83.56	19	*e*P	P	05 16 32.0	+0.5
IL1	Eielson Array	83.57	19	*e*P	P	05 16 31.6	+0.1
WDC	Whiskeytown Da	83.71	47	*e*P	P	05 16 34.0	+1.2
	comp=Z,6.4nm,1.0s						
SCRK	Sand Creek	83.97	20	*e*P	P	05 16 34.5	+0.7
	comp=Z,20nm,1.1s						
YBH	Yreka Blue Hor	83.99	46	*e*P	P	05 16 35.2	+0.9
	comp=Z,8.1nm,1.0s						
ORV	Oroville	84.11	48	*e*P	P	05 16 35.2	+0.3
	comp=Z,7.2nm,1.0s						
AFDM	Forest Hills D	84.30	49	*e*P	P	05 16 36.5	+0.6
	comp=Z,12nm,0.9s						
WAKR	Walker	85.30	49	*e*P	P	05 16 41.2	+0.1
	comp=Z,5.2nm,0.8s						
MDPB	Devils Postpil	85.30	50	*e*P	P	05 16 40.3	-1.0
	comp=Z,12nm,1.0s						
DAWY	Dawson	85.61	21	*e*P	P	05 16 42.5	+0.5
	comp=Z,7.7nm,0.9s						
PAHR	Pah Rah Range	85.71	48	*e*P	P	05 16 42.0	-1.1
	comp=Z,7.4nm,1.0s						
NV01	Mina Array Sit	86.12	50	*e*P	P	05 16 43.4	-1.9
NVAR	Mina Array Bea	86.12	50	P	P	05 16 45.5	+0.2
	comp=Z,4.0nm,0.9s,baz=231,slow=5.7,SNR=6.9						
NV11	Mina Array Sit	86.23	50	*e*P	P	05 16 46.1	+0.4
	comp=Z,0.9nm,1.1s						
KVN	Kaiserville	86.46	49	*e*P	P	05 16 47.6	+0.8
	comp=Z,5.0nm,1.0s						
WVOR	Wild Horse Val	87.08	46	*e*P	P	05 16 49.8	+0.1
	comp=Z,3.3nm,0.9s						
J08A	Circle Bar Ran	87.48	45	*e*P	P	05 16 51.2	-0.5
	comp=Z,9.3nm,1.0s						
LDFC	Landfair	87.65	54	*e*P	P	05 16 52.9	+0.2
	comp=Z,13nm,0.9s						
G08A	Pilot Rock	87.74	43	*e*P	P	05 16 54.7	+1.9
	comp=Z,12nm,1.1s						
Y12C	Blythe	87.78	55	*e*P	P	05 16 53.3	+0.2
	comp=Z,7.1nm,1.0s						
WMQ	Urumqi	89.03	315	*e*P	P	05 17 00.9	+2.0
WMQ				pP	pP	05 17 05.7	-1.8
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
ELK	Elko	89.04	48	*e*P	P	05 17 00.1	+0.8
	comp=Z,1.6nm,0.9s						
F10A	Beach Ranch, E	89.10	43	*e*P	P	05 16 58.4	-0.8
	comp=Z,6.1nm,1.0s						
LCMT	Little Creek M	89.60	52	*e*P	P	05 17 01.6	-0.3
	comp=Z,7.6nm,1.0s						
CCUT	Cedar City	89.64	52	*e*P	P	05 17 02.5	+0.3
	comp=Z,6.6nm,1.0s						
SZCU	Shurtz Canyon	89.86	52	*e*P	P	05 17 03.5	+0.3
	comp=Z,10nm,1.2s						
KNB	Kanab	89.93	52	*e*P	P	05 17 04.1	+0.6
	comp=Z,7.1nm,1.0s						
U15A	North Rim	90.21	53	*e*P	P	05 17 05.7	+0.8
	comp=Z,13nm,0.9s						
HLID	Hailey	90.37	46	*e*P	P	05 17 04.0	-1.4
	comp=Z,4.1nm,1.0s						
X16A	Lo Mia Camp, P	90.42	55	*e*P	P	05 17 06.7	+0.9
	comp=Z,7.4nm,1.0s						
PKCU	Pink Cliffs	90.43	52	*e*P	P	05 17 07.0	+1.0
	comp=Z,14nm,1.0s						
MTPU	Mount Pierson	90.67	51	*e*P	P	05 17 07.8	+0.7
	comp=Z,8.5nm,0.9s						
BGU	Big Grassy Mou	90.71	49	*e*P	P	05 17 07.0	0.0
	comp=Z,4.9nm,1.0s						
WUAZ	Wupatki	90.72	54	*e*P	P	05 17 06.7	-0.5
	comp=Z,7.1nm,0.9s						
MSU	Marysvale	90.78	51	*e*P	P	05 17 08.2	+0.7
HVU	Hansel Valley	91.10	48	*e*P	P	05 17 08.2	-0.5
	comp=Z,7.9nm,1.0s						
NLU	North Lily Min	91.19	50	*e*P	P	05 17 09.4	+0.1
	comp=Z,6.8nm,1.0s						
MPU	Maple Canyon	91.54	50	*e*P	P	05 17 11.4	+0.5
	comp=Z,4.3nm,1.1s						
Q16A	Castle Valley	91.64	51	*e*P	P	05 17 12.7	+1.3
	comp=Z,5.3nm,1.1s						
SYO	Syowa Base	91.73	197	⇑*e*P	P	05 17 10.2	-0.8
JLU	Jordanelle	91.80	49	*e*P	P	05 17 12.2	0.0
	comp=Z,4.7nm,0.9s						
BOZ	Bozeman (W)	92.79	44	*e*P	P	05 17 18.1	+1.6
	comp=Z,2.6nm,0.9s						
MK01	Makanchi Array	93.44	317	*e*P	P	05 17 19.3	-0.1
MK32	Makanchi Array	93.46	317	*e*P	P	05 17 19.9	+0.5
MKAR	Makanchi Array	93.46	317	P	P	05 17 19.9	+0.5
	comp=Z,0.9nm,0.7s,baz=93,slow=5.6,SNR=4.9						
MKAR				PKKPbc	PKKPdf	05 34 26.9	+0.5
	comp=Z,0.9nm,0.7s,baz=316,slow=1.5,SNR=5.0						
PD31	Pinedale Array	93.65	47	*e*P	P	05 17 20.1	-0.5
PDAR	Pinedale Array	93.65	47	*e*P	P	05 17 19.0	-1.6
PDAR	Pinedale Array	93.65	47	P	P	05 17 20.1	-0.5
	comp=Z,0.2nm,0.5s,baz=233,slow=4.2,SNR=3.0						
PDAR				PKKPbc	PKKPdf	05 34 22.3	-3.9
	comp=Z,0.2nm,0.6s,baz=149,slow=1.9,SNR=2.4						
YKA	Yellowknife Ar	95.04	27	P	P	05 17 24.4	-1.8
	comp=Z,0.9nm,0.7s,baz=257,slow=4.6,SNR=8.8						
YKB5	Yellowknife Ar	95.04	27	*e*P	P	05 17 24.3	-1.9
LTX	Lajitas	95.94	61	*e*P	P	05 17 32.3	+1.0
TXAR	Lajitas Array	95.94	61	P	P	05 17 32.3	+1.0
	comp=Z,0.7nm,1.1s,baz=224,slow=5.0,SNR=2.6						
ARA0	ARCESS Array S	116.32	345	*e*PKPdf	PKiKP	05 22 46.0	-0.7
ARCES	ARCESS Array B	116.32	345	PKP	PKiKP	05 22 46.0	-0.7
	comp=Z,1.1nm,0.5s,baz=48,slow=1.8,SNR=9.0						
LPAZ	La Paz	120.28	116	PKP	PKiKP	05 22 57.2	+0.5
	comp=Z,1.3nm,0.8s,baz=243,slow=2.3,SNR=2.6						
FIA0	FINESS Array S	121.75	338	*e*PKPdf	PKPdf	05 22 56.6	-0.7
FINES	FINESS Array B	121.75	338	PKP	PKPdf	05 22 56.6	-0.7
	comp=Z,1.9nm,0.9s,baz=29,slow=4.4,SNR=3.6						
BOSA	Boshof	125.03	223	PKP	PKiKP	05 23 05.5	+0.3
	comp=Z,2.2nm,0.7s,baz=143,slow=3.1,SNR=5.6						
NB200	NORSAR Array S	126.69	345	*e*PKPdf	PKPdf	05 23 06.3	-0.6
NOA	NORSAR Array B	126.69	345	PKP	PKPdf	05 23 06.3	-0.6
	comp=Z,1.0nm,0.9s,baz=31,slow=2.0,SNR=3.2						
HFS	Hagfors	126.77	343	PKP	PKPdf	05 23 06.1	-0.9
	comp=Z,2.5nm,0.9s,baz=31,slow=3.4,SNR=2.5						
AKASG	Malin Array Be	126.81	327	PKP	PKPdf	05 23 06.9	-0.4
	comp=Z,0.3nm,0.4s,baz=44,slow=2.5,SNR=3.3						
BR101	Keskin Array S	128.89	313	*e*PKPdf	PKPdf	05 23 10.9	-1.0
BRTR	Keskin Array B	128.89	313	PKP	PKPdf	05 23 10.9	-1.0
	comp=Z,0.4nm,0.6s,baz=124,slow=3.9,SNR=3.7						
CLL	Collm	134.07	336	*e*PKPdf	PKiKP	05 23 26.0	+3.6
GERES	GERESS Array B	135.67	334	PKP	PKPdf	05 23 24.7	+0.4
	comp=Z,0.3nm,0.5s,baz=79,slow=5.3,SNR=4.6						
KEST	Kesra	147.36	323	PKPbc	PKPab	05 23 49.1	-0.7
	comp=Z,7.4nm,0.9s,baz=178,slow=2.2,SNR=3.5						
ESDC	Sonseca Array	150.04	344	PKPbc	PKPbc	05 23 54.0	-0.8
	comp=Z,0.2nm,0.4s,baz=14,slow=3.9,SNR=2.7						
TORD	Torodi Ar. Bea	164.15	279	PKP	PKPdf	05 24 08.6	+0.4
	comp=Z,1.4nm,1.0s,baz=37,slow=1.2,SNR=3.7						
TORD				PKPab	PKPab	05 25 01.3	-0.6
	comp=Z,2.3nm,1.1s,baz=62,slow=5.9,SNR=3.8						
TOA1	Torodi Ar. Sit	164.16	279	*e*PKPdf	PKPdf	05 24 08.6	+0.4
TOA1				*e*PKPab	PKPab	05 25 01.3	-0.6

JMA 06 05:04:15.6±0.1**, 35°.75N**×**140°.74E, h12^{km}**±2^{km}**, M4.0, 3C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.11	116	⇑P	Pg	05 04 18.4	-0.1
CHOJ				S	Sg	05 04 20.6	0.0
JSMT	Sammumatsuo	0.26	246	P	Pg	05 04 21.5	+0.5
JIHU	Itakohorinouch	0.28	321	P	Pb	05 04 22.0	-0.5
JIHU				S	Sb	05 04 26.4	-0.8
JCN	Nagara	0.55	233	⇑P	Pb	05 04 27.3	+0.1
JYT	Yasato	0.65	317	⇑P	Pg	05 04 27.9	-0.4
JYT				S	Sg	05 04 36.5	-0.3
BSO4	Boso 4	0.83	204	P	Pb	05 04 31.8	0.0
JHO	Hitachi	0.87	351	P	Pg	05 04 31.0	-1.4
JHO				S	Sg	05 04 43.1	-0.7
BSO3	Boso 3	0.96	191	P	Pb	05 04 34.1	0.0
MAT	Matsushiro	2.20	292	P	Pn	05 04 51.1	-0.8
MAT				*e*S	Sn	05 05 20.1	+1.0

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*IDC **06** 05:05:03.6±1.0, 11°.52S×165°.04E, h0^{km}, mb4.2/7, mb1 4.5/8, mb1mx4.1/42, mbtmp4.1/8, Error ellipse: s-maj=43.4km s-min=27.9km az=139.0*

*ISCJB **06** 05:05:07.1±0.8, 11°.8S±0°.1×165°.0E±0°.2, h34^{km}, mb4.0/7, Error ellipse: s-maj=27.2km s-min=18.1km az=13.4*

ISC 06 05:05:08.6±0.8**, 11°.6S**±0°.1×**165°.1E**±0°.2**, h34^{km}, n8, σ0^{s}.89**/8**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.46	173	Pn	Pn	05 07 36.2	-0.2
	baz=225,slow=20,SNR=1.2						
WRA	Warramunga Arr	30.65	251	P	P	05 11 20.2	0.0
	2.0nm,0.8s,baz=86,slow=12,SNR=2.9						
ILAR	Eielson Array	84.28	19	P	P	05 17 36.4	-0.1
	0.8nm,0.7s,baz=238,slow=5.4,SNR=2.4						
NVAR	Mina Array Bea	86.91	50	P	P	05 17 51.3	+0.7
	2.0nm,0.9s,baz=235,slow=6.4,SNR=2.7						
MKAR	Makanchi Array	93.49	317	P	P	05 18 21.4	+0.4
	0.6nm,0.6s,baz=117,slow=5.3,SNR=2.2						
PDAR	Pinedale Array	94.44	47	P	P	05 18 26.0	+0.3
	0.9nm,1.0s,baz=268,slow=2.6,SNR=2.5						
YKA	Yellowknife Ar	95.80	27	P	P	05 18 29.4	-1.6
	0.4nm,0.9s,baz=256,slow=4.7,SNR=2.3						
TXAR	Lajitas Array	96.70	62	P	P	05 18 36.8	+0.7
	0.2nm,0.7s,baz=243,slow=4.0,SNR=2.8						

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*IDC **06** 05:05:38.1±1.1, 11°.50S×165°.05E, h0^{km}, mb4.2/7,*

mb1 4.4/8, mb1mx4.1/43, mbtmp4.1/8, Error ellipse: s-maj=43.2km s-min=26.7km az=144.0
*ISCJB **06** 05:05:41.5±0.8, 11°.7S±0°.1×165°.1E±0°.2, h34km, mb4.1/7, Error ellipse: s-maj=23.8km s-min=17.9km az=21.6*
ISC 06 05:05:43.0±0.8, **11°.6S**±0°.1×**165°.1E**±0°.2, **h34**km, **n8**, σ**1s.11**/8, **mb4.1**/7, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.46	173	Pn	Pn	05 08 10.5	-0.3
	baz=186,slow=19,SNR=0.9						
WRA	Warramunga Arr	30.66	251	P	P	05 11 54.1	-0.5
	4.0nm,0.9s,baz=81,slow=9.2,SNR=1.5						
FITZ	Fitzroy Crossi	38.59	256	P	P	05 13 04.5	+1.4
	2.6nm,0.7s,baz=102,slow=9.3,SNR=1.5						
ILAR	Eielson Array	84.28	19	P	P	05 18 10.9	0.0
	1.0nm,0.6s,baz=241,slow=5.3,SNR=2.7						
NVAR	Mina Array Bea	86.91	50	P	P	05 18 25.5	+0.5
	1.3nm,0.9s,baz=224,slow=7.6,SNR=2.6						
MKAR	Makanchi Array	93.50	317	P	P	05 18 54.7	-0.6
	0.4nm,0.7s,baz=98,slow=6.0,SNR=1.9						
YKA	Yellowknife Ar	95.80	27	P	P	05 19 04.1	-1.4
	0.5nm,0.8s,baz=254,slow=4.2,SNR=4.1						
TXAR	Lajitas Array	96.69	62	P	P	05 19 11.6	+1.1
	0.4nm,0.9s,baz=216,slow=4.0,SNR=2.8						

IDC 06 05:07:27.5±28.0, **23°.53S**×**179°.55W**, **h501**km±272km, **mb3.4**/4, **mb1 3.6**/4, **mb1mx3.1**/37, **mbtmp4.3**/4, **Error ellipse: s-maj=246.5km s-min=107.9km az=39.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	31.89	269	P	P	05 13 11.9	+0.6
	4.9nm,0.5s,baz=88,slow=11,SNR=6.7						
ASAR	Alice Springs	42.50	260	P	P	05 14 38.1	-0.4
	1.9nm,0.6s,baz=93,slow=7.7,SNR=9.8						
WRA	Warramunga Arr	42.84	266	P	P	05 14 40.5	-0.7
	3.1nm,0.6s,baz=102,slow=8.3,SNR=59						
FITZ	Fitzroy Crossi	51.27	265	P	P	05 15 45.3	+0.5
	3.1nm,1.0s,baz=100,slow=7.4,SNR=5.8						
TORD	Torodi Ar. Bea	169.61	187	PKPab	PKPab	05 27 54.3	-0.4
	0.2nm,0.6s,baz=175,slow=6.2,SNR=2.2						

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*IDC **06** 05:08:57.0±1.0, 10°.99S×164°.57E, h0km, mb4.0/13, mb1 4.2/16, mb1mx4.0/48, mbtmp4.1/16, ML4.4/3, Error ellipse: s-maj=28.3km s-min=18.5km az=126.0*
*NEIC **06** 05:08:59.4±0.4, 10°.77S×164°.50E, h10km, mb4.3/7, Error ellipse: s-maj=11.7km s-min=8.0km az=87.0*
*ISCJB **06** 05:09:00.3±0.4, 10°.92S±0°.06×164°.52E±0°.06, h29km, mb4.1/17, Error ellipse: s-maj=9.6km s-min=7.5km az=146.9*
ISC 06 05:09:01.9±0.6, **10°.88S**±0°.09×**164°.57E**±0°.08, **h29**km, **n36**, σ**1s.44**/39, **mb4.1**/17, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.77	287	ePn	Pn	05 10 09.9	-2.0
HNR				ePn	Pn	05 10 13.4	+1.5
HNR				eSn	Sn	05 11 07.3	+1.1
HNR	Honiara	4.77	287	Pn	Pn	05 10 09.9	-2.0
	32nm,0.3s,baz=157,slow=12,SNR=3.4						
HNR				Sn	Sn	05 11 07.3	+1.1
	baz=178,slow=17,SNR=1.3						
DZM	Mont Dzumac	11.27	171	ePn	Pn	05 11 42.4	+1.2
DZM	Mont Dzumac	11.27	171	Pn	Pn	05 11 40.0	-1.2
	5.2nm,0.3s,baz=124,slow=22,SNR=14						
ONTNC	Ouen Toro	11.51	171	ePn	Pn	05 11 46.5	+2.2
OUENC	Ouen Island, N	11.68	170	ePn	Pn	05 11 48.8	+2.1
PINNC	Pines Island,	11.99	167	ePn	Pn	05 11 52.6	+1.7
CTA	Charters Tower	19.86	240	P	P	05 13 30.6	-0.3
	0.3nm,0.3s,baz=79,slow=15,SNR=2.0						
CTAO	Charters Tower	19.86	240	eP	Pn	05 13 32.5	-0.2
	13nm,0.9s						
COEN	Coen	21.11	259	eP	P	05 13 47.5	+3.0
	9.0nm,0.9s						
STKA	Stephens Creek	29.78	222	eP	P	05 15 05.5	-0.7
	1.0nm,1.0s						
STKA	Stephens Creek	29.78	222	P	P	05 15 05.5	-0.7
	2.6nm,0.9s,baz=62,slow=10,SNR=3.0						
WR1	Warramunga Arr	30.45	249	eP	P	05 15 12.0	-0.3
	9.6nm,1.1s						
WRA	Warramunga Arr	30.45	249	P	P	05 15 12.0	-0.4
	0.8nm,0.6s,baz=79,slow=8.6,SNR=3.4						
ASAR	Alice Springs	31.84	242	P	P	05 15 21.7	-2.9
	1.1nm,0.9s,baz=66,slow=9.6,SNR=2.3						
FITZ	Fitzroy Crossi	38.30	255	eP	P	05 16 17.9	-2.3
	3.7nm,0.8s						
FITZ	Fitzroy Crossi	38.30	255	P	P	05 16 17.9	-2.3
	2.1nm,0.6s,baz=102,slow=2.1,SNR=5.4						
ASAJ	Asahikawa	58.26	342	P	P	05 18 55.5	+1.7
	6.6nm,0.9s,baz=111,slow=8.6,SNR=2.8						
USRK	Ussuriysk Ar.	62.29	334	P	P	05 19 22.5	+1.2
	1.0nm,0.6s,baz=145,slow=5.3,SNR=2.4						
KLR	Kul'dur	66.45	337	P	P	05 19 49.4	+0.9
	1.7nm,1.0s,baz=102,slow=7.3,SNR=4.7						
SEY	Seymchan	74.19	354	P	P	05 20 34.9	-0.6
	0.9nm,0.6s,baz=114,slow=18,SNR=1.7						
SONA0	Songino Array	77.85	324	eP	P	05 20 57.6	+0.7
SONM	Songino Array	77.85	324	P	P	05 20 57.6	+0.7
	0.4nm,0.6s,baz=121,slow=5.6,SNR=2.7						
HDA	Harding Lake	83.46	19	eP	P	05 21 28.8	+2.3
	4.7nm,0.8s						
IL1	Eielson Array	83.73	19	eP	P	05 21 26.7	-1.1
ILAR	Eielson Array	83.73	19	P	P	05 21 27.3	-0.5
	1.3nm,0.8s,baz=234,slow=5.2,SNR=7.5						
ILB	Eielson Array	83.73	19	eP	P	05 21 27.3	-0.5
	4.6nm,1.1s						
NVAR	Mina Array Bea	86.81	50	P	P	05 21 43.1	-1.0
	0.5nm,0.7s,baz=248,slow=4.5,SNR=2.9						
TCRU	Three Creeks R	91.29	51	eP	P	05 22 04.2	-1.1
	7.2nm,0.4s						
MK32	Makanchi Array	92.61	317	eP	P	05 22 11.1	+0.2
MKAR	Makanchi Array	92.61	317	P	P	05 22 11.1	+0.1
	1.0nm,0.8s,baz=112,slow=5.4,SNR=6.0						
ZALV	Zalesovo Beam	92.75	324	P	P	05 22 11.1	-0.3
	0.2nm,0.4s,baz=114,slow=6.5,SNR=2.5						
ZAA1	Zalesovo Array	92.75	324	eP	P	05 22 11.1	-0.3
ARA0	ARCESS Array S	115.88	345	ePKPdf	PKiKP	05 27 40.5	-0.8
ARCES	ARCESS Array B	115.88	345	PKP	PKiKP	05 27 40.5	-0.8
	1.9nm,0.9s,baz=62,slow=4.2,SNR=2.7						
KEST	Kesra	146.58	322	PKPbc	PKPbc	05 28 41.3	+0.1
	4.7nm,0.9s,baz=67,slow=15,SNR=1.7						

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*IDC **06** 05:10:20.2±0.8, 11°.15S×165°.61E, h0km, mb4.2/13, mb1 4.4/14, mb1mx4.1/48, mbtmp4.2/14, ML4.5/1, Error ellipse: s-maj=28.1km s-min=19.8km az=127.0*
*NEIC **06** 05:10:22.1±0.4, 11°.20S×165°.55E, h10km, mb4.4/10, Error ellipse: s-maj=10.6km s-min=7.5km az=85.0*
*ISCJB **06** 05:10:23.5±0.4, 11°.34S±0°.06×165°.53E±0°.08, h30km, mb4.2/18, Error ellipse: s-maj=12.2km s-min=7.2km az=157.5*
ISC 06 05:10:25.0±0.6, **11°.23S**±0°.09×**165°.6E**±0°.1, **h30**km, **n45**, σ**1s.04**/45, **mb4.3**/18, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	10.46	167	ePn	Pn	05 12 53.1	+0.2
DZM	Mont Dzumac	10.81	176	Pn	Pn	05 12 57.6	-0.2
	3.8nm,0.3s,baz=37,slow=15,SNR=3.9						
ONTNC	Ouen Toro	11.04	176	ePn	Pn	05 13 01.4	+0.5
OUENC	Ouen Island, N	11.19	174	ePn	Pn	05 13 02.7	-0.2
CTA	Charters Tower	20.57	242	P	P	05 15 01.4	-0.2
	7.5nm,0.6s,baz=253,slow=11,SNR=3.1						
CTAO	Charters Tower	20.57	242	eP	P	05 14 58.9	-2.7
	14nm,0.9s						
COEN	Coen	22.03	261	eP	P	05 15 18.0	+0.7
	14nm,1.1s						
URZ	Urewera	28.82	161	P	P	05 16 21.3	+0.7
	12nm,1.0s,baz=344,slow=7.4,SNR=3.1						
BKZ	Black Stump Fm	29.46	163	eP	P	05 16 26.6	+0.3
	11nm,1.1s						
BKZ	Black Stump Fm	29.46	163	P	P	05 16 26.4	+0.1
NMHZ	Naumai	29.50	162	P	P	05 16 27.3	+0.7
BHHZ	Black Hill Sta	29.64	163	P	P	05 16 28.5	+0.6
TSZ	Takapari Road	30.15	164	P	P	05 16 31.7	-0.7
KAHZ	Kahuranaki	30.16	163	P	P	05 16 33.0	+0.5
STKA	Stephens Creek	30.19	223	eP	P	05 16 33.0	+0.2
	1.0nm,1.0s						
STKA	Stephens Creek	30.19	223	P	P	05 16 33.0	+0.2
	2.2nm,0.7s,baz=45,slow=8.0,SNR=3.6						
PRHZ	Porangahau	30.53	163	P	P	05 16 38.4	+2.7
MRZ	Mangatainoka R	30.61	165	P	P	05 16 36.8	+0.4
BFZ	Birch Farm	30.80	164	P	P	05 16 37.0	-1.1
HOWZ	Holdsworth Sta	30.82	165	P	P	05 16 38.0	-0.2
WR1	Warramunga Arr	31.27	250	eP	P	05 16 42.2	-0.3
	11nm,1.0s						
WRA	Warramunga Arr	31.27	250	P	P	05 16 42.2	-0.3
	4.9nm,0.9s,baz=82,slow=9.0,SNR=8.0						
AS31	Alice Springs	32.56	243	eP	P	05 16 53.1	-0.7
	1.2nm,0.8s						
ASAR	Alice Springs	32.56	243	P	P	05 16 53.1	-0.7
	1.5nm,0.8s,baz=72,slow=8.8,SNR=4.0						
FITZ	Fitzroy Crossi	39.17	255	eP	P	05 17 49.6	-0.9
	3.8nm,1.1s						
FITZ	Fitzroy Crossi	39.17	255	P	P	05 17 49.6	-0.9
	3.1nm,1.0s,baz=76,slow=8.3,SNR=2.3						
CMAR	Chiang Mai Arr	72.04	294	P	P	05 21 48.5	+1.8
	1.5nm,0.5s,baz=120,slow=5.3,SNR=2.5						
SONA0	Songino Array	78.72	324	eP	P	05 22 25.0	+0.3
SONM	Songino Array	78.72	324	P	P	05 22 25.0	+0.3
	1.3nm,1.0s,baz=141,slow=5.5,SNR=3.8						
HDA	Harding Lake	83.47	19	eP	P	05 22 51.3	+1.9
	4.9nm,0.8s						
ILAR	Eielson Array	83.74	19	P	P	05 22 50.1	-0.7
	1.0nm,0.7s,baz=235,slow=5.3,SNR=7.5						
ILB	Eielson Array	83.74	19	eP	P	05 22 50.1	-0.7
	2.1nm,0.8s						
NVAR	Mina Array Bea	86.27	50	P	P	05 23 04.1	-0.2
	0.6nm,0.7s,baz=240,slow=4.8,SNR=3.6						
MK01	Makanchi Array	93.54	317	eP	P	05 23 37.5	-0.6
MK31	Makanchi Array	93.55	317	eP	P	05 23 40.3	+2.2
	2.6nm,0.9s						
MK32	Makanchi Array	93.55	317	eP	P	05 23 37.6	-0.6
MKAR	Makanchi Array	93.55	317	eP	P	05 23 39.5	+1.3
	15nm,0.9s						
MKAR	Makanchi Array	93.55	317	P	P	05 23 37.6	-0.6
	1.6nm,0.9s,baz=113,slow=5.0,SNR=4.8						
ZALV	Zalesovo Beam	93.61	324	P	P	05 23 37.8	-0.5
	0.6nm,0.7s,baz=90,slow=3.1,SNR=3.8						
ZAA1	Zalesovo Array	93.61	324	eP	P	05 23 37.8	-0.5
YKA	Yellowknife Ar	95.21	27	P	P	05 23 43.0	-2.3
	0.1nm,0.6s,baz=256,slow=4.3,SNR=2.4						
AKASG	Malin Array Be	126.93	327	PKP	PKPdf	05 29 26.0	+0.1
AKASG	Malin Array Be	126.93	327	PKP	PKPdf	05 29 26.0	+0.1
	0.2nm,0.4s,baz=45,slow=3.2,SNR=2.8						
TORD	Torodi Ar. Bea	164.13	279	PKP	PKPdf	05 30 27.5	+1.1
	0.5nm,0.8s,baz=5.3,slow=0.1,SNR=2.4						
TOA1	Torodi Ar. Sit	164.14	279	ePKPdf	PKPdf	05 30 27.6	+1.1

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*ISCJB **06** 05:10:38.3±0.7, 10°.98S±0°.09×165°.81E±0°.07, h10km, mb4.4/10, Error ellipse: s-maj=13.6km s-min=9.2km az=21.2*
*IDC **06** 05:10:38.5±0.7, 10°.91S×165°.84E, h0km, mb4.5/11, mb1 4.7/13, mb1mx4.3/49, mbtmp4.6/13, ML5.0/2, Error ellipse: s-maj=22.3km s-min=16.9km az=142.0*
ISC 06 05:10:39.8±0.7, **11°.02S**±0°.09×**165°.88E**±0°.09, **h10**km, **n20**, σ**1s.46**/21, **mb4.5**/10, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.05	285	Pn	Pn	05 12 09.8	+0.4
	52nm,0.3s,baz=156,slow=7.1,SNR=4.0						
HNR				Sn	Sn	05 13 17.8	-1.0
	16nm,0.3s,baz=82,slow=22,SNR=1.6						
DZM	Mont Dzumac	11.00	177	Pn	Pn	05 13 19.1	+1.6
	6.3nm,0.3s,baz=311,slow=12,SNR=10.0						
DZM				Sn	Sn	05 15 16.7	-4.1
	baz=320,slow=19,SNR=0.9						
CTA	Charters Tower	20.93	242	P	P	05 15 22.9	0.0
	24nm,1.0s,baz=70,slow=14,SNR=5.1						
URZ	Urewera	28.93	162	P	P	05 16 40.4	+1.2
	3.2nm,0.4s,baz=344,slow=20,SNR=3.9						
H11S2	WAKE ISLAND Hy	29.33	2	T	T	05 47 08.4	
	baz=179						
H11S3	WAKE ISLAND Hy	29.34	2	T	T	05 47 08.8	
	baz=179						
H11S1	WAKE ISLAND Hy	29.35	2	T	T	05 47 09.6	
	baz=179						
STKA	Stephens Creek	30.55	224	P	P	05 16 54.9	+1.2
	6.6nm,0.7s,baz=32,slow=9.5,SNR=7.6						
WRA	Warramunga Arr	31.62	250	P	P	05 17 03.3	0.0
	19nm,0.8s,baz=80,slow=9.2,SNR=19						
WRA				PcP	PcP	05 19 56.3	+0.6
	0.5nm,0.6s,baz=76,slow=3.3,SNR=3.0						
RPZ	Rata Peaks	32.88	173	P	P	05 17 15.4	+1.4
	17nm,0.7s,baz=325,slow=2.6,SNR=7.4						
ASAR	Alice Springs	32.92	243	P	P	05 17 14.2	-0.5
	3.9nm,0.9s,baz=73,slow=9.6,SNR=8.0						
ASAR				PcP	PcP	05 20 00.4	+1.2
	0.6nm,0.7s,baz=61,slow=3.6,SNR=3.3						
FITZ	Fitzroy Crossi	39.51	255	P	P	05 18 10.9	-0.2
	12nm,1.0s,baz=104,slow=7.4,SNR=7.9						
ILAR	Eielson Array	83.45	18	P	P	05 23 07.6	+0.3
	3.0nm,0.7s,baz=233,slow=5.5,SNR=13						
NVAR	Mina Array Bea	85.91	50	P	P	05 23 21.5	+0.9
	0.2nm,0.4s,baz=237,slow=4.5,SNR=4.7						
PDAR	Pinedale Array	93.44	47	P	P	05 23 54.5	-1.6
	0.5nm,0.8s,baz=238,slow=5.1,SNR=3.1						
YKA	Yellowknife Ar	94.89	27	P	P	05 24 00.1	-1.8
	0.5nm,0.8s,baz=253,slow=4.8,SNR=7.3						
ARCES	ARCESS Array B	116.34	346	PKP	PKPdf	05 29 23.2	0.0
	2.0nm,0.9s,baz=33,slow=2.9,SNR=7.3						
CPUP	Villa Florida	123.95	132	PKP	PKiKP	05 29 39.4	0.0
	1.0nm,0.7s,baz=336,slow=2.6,SNR=3.1						
ESDC	Sonseca Array	150.07	344	PKPbc	PKiKP	05 30 32.8	+0.6
	0.2nm,0.3s,baz=22,slow=2.5,SNR=3.7						
TORD	Torodi Ar. Bea	164.39	279	PKP	PKPdf	05 30 42.9	-2.0
	0.7nm,1.0s,baz=119,slow=1.8,SNR=2.8						

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*NEIC **06** 05:13:46.8±0.1, 10°.68S×166°.35E, h10km, mb5.2/106, Error ellipse: s-maj=5.0km s-min=3.8km az=140.0*
*MOS **06** 05:13:48.9±0.9, 10°.72S×166°.26E, h35km, mb5.3/29, Error ellipse: s-maj=9.2km s-min=8.9km az=112.4*
*ISCJB **06** 05:13:49.4±0.2, 10°.72S±0°.04×166°.28E±0°.03, h36km, mb5.0/150, MS5.4/1, Error ellipse: s-maj=5.9km s-min=4.3km az=156.6*
*IDC **06** 05:13:53.3±3.2, 10°.81S×166°.48E, h66km±28km, mb4.4/32, mb1 4.4/34, mb1mx4.4/50, mbtmp4.6/34, ML4.3/2, MS5.2/7, Ms1 5.2/7, ms1mx4.5/42, Error ellipse: s-maj=16.4km s-min=13.1km az=91.0*
ISC 06 05:13:50.6±0.3, **10°.72S**±0°.06×**166°.45E**±0°.06, **h36**km, **n316**, σ**1s.23**/311, **mb5.1**/150, **8C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.53	281	ePn	Pn	05 15 21.7	-2.5
HNR				ePn	Pn	05 15 28.2	+4.0
HNR	Honiara	6.53	281	eP	Pn	05 15 21.7	-2.5
HNR	Honiara	6.53	281	P	Pn	05 15 28.2	+4.0
	11nm,0.3s,baz=79,slow=7.1,SNR=1.6						
DZM	Mont Dzumac	11.29	180	ePn	Pn	05 16 27.2	-2.3
DZM	Mont Dzumac	11.29	180	P	Pn	05 16 31.4	+1.8
	1.4nm,0.3s,baz=114,slow=20,SNR=3.3						
ONTNC	Ouen Toro	11.52	180	ePn	Pn	05 16 31.4	-1.3
OUENC	Ouen Island, N	11.64	178	ePn	Pn	05 16 33.6	-0.6
PINNC	Pines Island,	11.86	176	ePn	Pn	05 16 38.8	+1.5
MSVF	Nonsavu	13.23	123	ePn	Pn	05 16 59.1	+3.0
MSVF	Nonsavu	13.23	123	eP	Pn	05 16 59.1	+3.0
TARA	Tarawa	13.62	29	ePn	Pn	05 16 59.1	-2.3
RABL	Rabaul	15.57	294	ePn	Pn	05 17 24.0	-3.7
	191nm,0.4s						
EIDS	Eidsvold	20.60	223	P	Pn	05 18 28.8	-0.3
	baz=21,SNR=5.9						
EIDS	Eidsvold	20.60	223	eP	P	05 18 27.6	+0.8
	61nm,0.9s						
CTA	Charters Tower	21.56	242	P	P	05 18 37.8	+0.6
	5.2nm,0.7s,baz=63,slow=11,SNR=5.0						
CTAO	Charters Tower	21.56	242	eP	P	05 18 35.3	-1.9
	34nm,0.9s						
CTAO	Charters Tower	21.56	242	eP	P	05 18 35.3	-1.9
CTAO				pmax	pmax		
	comp=Z,34nm,0.9s						
MTSU	Mount Surprise	22.65	248	P	P	05 18 51.4	+2.5
	baz=23,SNR=14						
RMQ	Roma	22.91	224	P	P	05 18 54.2	+2.7
	baz=24,SNR=15						
COEN	Coen	22.96	260	P	P	05 18 54.8	+2.7
	baz=24						
COEN	Coen	22.96	260	eP	P	05 18 51.4	-0.8
	comp=Z,18nm,0.9s						
ARMA	Armidale	23.96	213	P	P	05 19 02.9	+1.1
	baz=25,SNR=9.0						
ARMA	Armidale	23.96	213	eP	P	05 19 02.5	+0.6
	comp=Z,41nm,1.1s						
H11S2	WAKE ISLAND Hy	29.03	0	T	T	05 50 05.0	
	baz=181,slow=76,SNR=47						
H11S3	WAKE ISLAND Hy	29.03	0	T	T	05 50 05.8	
	baz=181,slow=76,SNR=62						
URZ	Urewera	29.04	163	P	P	05 19 46.3	-1.0
	comp=Z,7.6nm,0.8s,baz=221,slow=4.3,SNR=3.2						
H11S1	WAKE ISLAND Hy	29.05	0	T	T	05 50 06.4	
	baz=181,slow=76,SNR=80						
H11N1	WAKE ISLAND Hy	30.25	1	T	T	05 51 36.7	
	baz=182,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	30.25	1	T	T	05 51 37.4	
	baz=182,slow=76,SNR=24						
H11N2	WAKE ISLAND Hy	30.26	1	T	T	05 51 38.0	
	baz=182,slow=76,SNR=27						
STKA	Stephens Creek	31.15	224	P	P	05 20 07.1	+1.0
	baz=32,SNR=7.3						
STKA	Stephens Creek	31.15	224	eP	P	05 20 06.4	+0.2
	comp=Z,4.7nm,1.3s						
STKA	Stephens Creek	31.15	224	eP	P	05 20 06.4	+0.2
STKA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
STKA	Stephens Creek	31.15	224	P	P	05 20 05.4	-0.8
	comp=Z,8.5nm,0.9s,baz=15,slow=9.4,SNR=6.3						
WRAB	Tennant Creek	32.23	250	eP	P	05 20 15.8	0.0
	comp=Z,25nm,0.9s						
WRAB	Tennant Creek	32.23	250	⇑iP	P	05 20 02.0	-14
WB2	Warramunga Arr	32.23	250	eP	P	05 20 16.1	+0.2
	comp=Z,33nm,1.0s						
WR1	Warramunga Arr	32.24	250	eP	P	05 20 15.5	-0.5
	comp=Z,38nm,0.9s						
WRA	Warramunga Arr	32.24	250	P	P	05 20 15.5	-0.5
	comp=Z,26nm,1.0s,baz=81,slow=9.0,SNR=24						
WRA				LR	LR	05 33 39.4	
	comp=Z,4μm,18.8s,baz=65,slow=37						
RPZ	Rata Peaks	33.11	174	P	P	05 20 21.2	-2.0
	comp=Z,11nm,0.7s,baz=347,slow=7.6,SNR=2.9						
KDU	Kakadu	33.31	263	P	P	05 20 24.9	-0.4
	baz=34,SNR=4.0						
AS01	Alice Springs	33.51	243	eP	P	05 20 25.4	-1.7
AS31	Alice Springs	33.55	243	eP	P	05 20 25.9	-1.5
	comp=Z,5.7nm,0.9s						
ASAR	Alice Springs	33.55	243	P	P	05 20 26.5	-0.9
	comp=Z,23nm,0.9s,baz=73,slow=9.2,SNR=36						
BBOO	Buckleboo	35.55	227	P	P	05 20 44.8	+0.2
	baz=36,SNR=10						
WRKA	Warakurna	38.85	243	P	P	05 21 12.5	-0.1
	baz=40,SNR=5.1						
FITZ	Fitzroy Crossi	40.13	255	P	P	05 21 23.2	-0.2
	baz=41,SNR=10						
FITZ	Fitzroy Crossi	40.13	255	eP	P	05 21 23.1	-0.2
	comp=Z,28nm,1.1s						
FITZ	Fitzroy Crossi	40.13	255	P	P	05 21 23.1	-0.2
	comp=Z,29nm,1.2s,baz=86,slow=7.2,SNR=9.9						
PPT	Papeete	43.10	104	LR	LR	05 35 51.6	
	comp=Z,2μm,20.3s,baz=280,slow=31						
MBWA	Marble Bar	45.95	251	eP	P	05 22 11.3	+0.8
	comp=Z,20nm,0.8s						
MEEK	Meekatharra	47.71	244	P	P	05 22 25.0	+0.8
	baz=48,SNR=7.3						
NWAO	Narrogin (SRO)	50.22	236	P	P	05 22 42.6	-0.7
	comp=Z,13nm,0.9s,baz=294,slow=13,SNR=4.2						
NWAO				LR	LR	05 44 14.2	
	comp=Z,6μm,18.9s,baz=276,slow=36						
MJAR	Matsushiro Arr	54.01	332	P	P	05 23 10.9	-0.4
	comp=Z,2.4nm,0.8s,baz=168,slow=7.9,SNR=6.0						
MAJO	Matsushiro	54.01	332	eP	P	05 23 10.9	-0.4
MAJO	Matsushiro	54.01	332	eP	P	05 23 10.9	-0.4
JNU	Nakatsue	55.23	324	P	P	05 23 20.2	0.0
	comp=Z,18nm,0.9s,baz=44,slow=1.3,SNR=4.0						
LEM	Lembang	58.20	269	P	P	05 23 41.2	-0.7
	comp=Z,10.0nm,0.3s,baz=162,slow=20,SNR=2.4						
ASAJ	Asahikawa	58.72	340	P	P	05 23 44.9	+0.1
	comp=Z,5.1nm,0.8s,baz=174,slow=18,SNR=3.2						
KSRS	Korea Array	60.01	325	P	P	05 23 54.1	+0.4
	comp=Z,4.3nm,1.0s,baz=141,slow=6.7,SNR=7.7						
KS15	Wonju Array Si	60.02	325	eP	P	05 23 54.4	+0.6
KSAR	Wonju Array Be	60.02	325	P	P	05 23 54.1	+0.3
KSAR	Wonju Array Be	60.02	325	P	P	05 23 54.1	+0.3
KS01	Wonju Array Si	60.04	325	eP	P	05 23 52.6	-1.3
YSS	Yuzh-Sakhalins	61.20	342	eP	P	05 24 03.2	+1.6
YSS				e		05 24 15.3	
YSS				pmax	pmax		
	comp=Z,120nm,0.8s						
NJ2	Nanjing	62.28	315	eP	P	05 24 10.0	+0.7
NJ2				pmax	pmax		
	comp=Z,150nm,0.7s						
USA0B	Ussuriysk Arra	62.97	333	eP	P	05 24 11.2	-2.4
	comp=Z,45nm,1.4s						
USRK	Ussuriysk Ar.	62.97	333	P	P	05 24 13.8	+0.1
	comp=Z,18nm,1.1s,baz=143,slow=6.7,SNR=12						
PETK	Petropavlovsk-	64.02	354	P	P	05 24 20.1	-0.3
	comp=Z,7.6nm,0.9s,baz=162,slow=10,SNR=4.5						
PEA1	Petropavlovsk-	64.02	354	eP	P	05 24 20.1	-0.3
MDJ	Mudanjiang	64.39	332	P	P	05 24 23.8	+0.8
MDJ				pmax	pmax		
	comp=Z,26nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,2μm,10.0s						
TYV	Tymovskoe	64.73	344	eP	P	05 24 28.8	+3.7
TYV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2	Changchun	65.82	329	eP	P	05 24 32.2	-0.1
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
GRNR	Gornyy	66.58	340	eP	P	05 24 37.4	+0.4
VNDA	Vanda	66.83	181	P	P	05 24 37.2	-1.0
	comp=Z,6.0nm,1.1s,baz=51,slow=6.5,SNR=3.2						
KLR	Kul'dur	67.04	336	⇓iP	P	05 24 39.7	-0.3
KLR	Kul'dur	67.04	336	P	P	05 24 40.3	+0.3
	comp=Z,7.4nm,0.9s,baz=123,slow=6.3,SNR=12						
NKL	Nikolayevsk	67.32	344	eP	P	05 24 39.8	-1.9
BJI	Beijing	68.67	321	P	P	05 24 51.2	+0.8
BJI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GYA	Guiyang	68.81	304	⇑iP	P	05 24 54.2	+2.4
GYA				PP	PP	05 27 28.4	+4.2
GYA				S	S	05 33 55.2	+1.7
GYA				SKS	SKSac	05 34 48.5	-0.5
GYA	Guiyang	68.81	304	SS	SS	05 38 22.8	+3.5
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.5s						
GYA				LR	LR		
	comp=N,550nm,18.2s						
GYA				LR	LR		
	comp=E,580nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
XAN	Xi'an	70.42	312	P	P	05 25 02.0	+0.5
XAN				sP	pwP	05 25 14.9	+0.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KMI	Kunming	71.55	301	P	P	05 25 10.1	+1.4
KMI				pP	pP	05 25 15.3	-3.7
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
HHC	Hu-ho-hao-te	72.04	319	eP	P	05 25 14.1	+2.9
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZEA	Zeya	72.32	337	eP	P	05 25 13.2	+0.8
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,39nm,1.2s						
HIA	Hailar	72.44	330	⇓iP	P	05 25 13.7	+0.4
HIA				pmax	pmax		
	comp=Z,14nm,1.1s						
CM01	Chiang Mai Arr	72.59	293	eP	P	05 25 15.4	+0.6
CM31	Chiang Mai Arr	72.62	293	eP	P	05 25 14.3	-0.7
CMAR	Chiang Mai Arr	72.62	293	P	P	05 25 15.0	+0.1
	comp=Z,1.1nm,0.3s,baz=114,slow=4.1,SNR=9.2						
CHTO	Chiang Mai	72.73	294	eP	P	05 25 13.3	-2.3
	comp=Z,6.8nm,1.2s						
CHTO	Chiang Mai	72.73	294	eP	P	05 25 13.3	-2.3
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CHTO	Chiang Mai	72.73	294	P	P	05 25 18.2	+2.6
	comp=Z,20nm,1.5s						
CD2	Chengdu	72.96	307	P	P	05 25 17.4	+0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
SEY	Seymchan	74.23	353	⇓iP	P	05 25 14.6	-8.9
SEY	Seymchan	74.23	353	P	P	05 25 22.9	-0.6
	comp=Z,4.0nm,0.8s,baz=117,slow=6.2,SNR=6.4						

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LZH   Lanzhou           75.06 312 ⇑P      P       05 25 31.7 +2.6
LZH                               pP      pP      05 25 37.2 -2.4
LZH                               sP      pwP     05 25 40.0 -2.4
LZH                               PP      PP      05 28 25.4 +7.8
LZH                               pmax    pmax
      comp=Z,22nm,1.3s
LZH                               pmax    pmax
      comp=Z,98nm,4.3s
LZH                               LR      LR
      comp=N,590nm,16.3s
LZH                               LR      LR
      comp=E,540nm,16.4s
LZH                               LR      LR
      comp=Z,650nm,17.5s
SVW2  Sparrevohn        77.59  18 eP      P       05 25 43.4 +0.7
      comp=Z,15nm,1.2s
YAK   Yakutsk           77.98 343 eP      P       05 25 44.2 -0.7
YAK                               pmax    pmax
      comp=Z,30nm,1.6s
YAK                               pmax    pmax
      comp=N,14nm,1.6s
YAK                               pmax    pmax
      comp=E,6.0nm,1.5s
RSO   Redoubt South     77.99  19 eP      P       05 25 45.8 +0.6
ULN   Ulaanbaatar       78.45 324 eP      P       05 25 48.0  0.0
      comp=E,13nm,1.0s
ULN   Ulaanbaatar       78.45 324⇓iP      P       05 25 48.5 +0.5
ULN                               pmax    pmax
      comp=Z,14nm,1.0s
BILL  Bilibino          78.56 360 eP      P       05 25 48.1 +0.2
      comp=Z,25nm,1.1s
BILL  Bilibino          78.56 360ceP      P       05 25 48.7 +0.8
BILL                              e               05 25 57.7
BILL                              e               05 28 41.1
BILL                              pmax    pmax
      comp=Z,22nm,1.3s
SONA0 Songino Array     78.82 323 eP      P       05 25 50.1 +0.1
SONM  Songino Array     78.82 323  P      P       05 25 50.1 +0.1
      comp=Z,7.0nm,1.2s,baz=136,slow=4.9,SNR=13
SONA1 Songino Array     78.82 323 eP      P       05 25 50.2 +0.2
QSPA  South Pole Qui    79.28 180 eP      P       05 25 52.9 +0.6
      comp=Z,14nm,1.1s
GTA   Gaotai            79.33 314 ⇑P      P       05 25 54.2 +1.2
GTA                               pP      PcP     05 26 00.7 -0.4
GTA                               sP      pP      05 26 03.4 -0.2
GTA                               pmax    pmax
      comp=Z,7.0nm,1.2s
GTA                               LR      LR
      comp=N,620nm,17.8s
GTA                               LR      LR
      comp=E,590nm,17.1s
GTA                               LR      LR
      comp=Z,800nm,17.1s
RC01  Rabbit Creek A    79.45  20 eP      P       05 25 52.6 -0.4
      comp=Z,25nm,1.4s
CAST  Castle Rocks      80.43  18 eP      P       05 25 58.8 +0.5
      comp=Z,19nm,1.4s
SML   Sawmill           80.44  20 eP      P       05 25 59.2 +0.8
      comp=Z,32nm,1.4s
SML   Sawmill           80.44  20 eP      P       05 25 59.2 +0.8
SML                               pmax    pmax
      comp=Z,32nm,1.4s
BOD   Bodaibo           80.53 335 eP      P       05 25 57.3 -1.6
BOD                               pmax    pmax
      comp=Z,15nm,1.5s
MCK   McKinley          81.62  18 eP      P       05 26 04.4 -0.2
      comp=Z,34nm,1.6s
MCK   McKinley          81.62  18 eP      P       05 26 04.4 -0.2
MCK                               pmax    pmax
      comp=Z,34nm,1.6s
ZAK   Zakamensk         81.84 325 eP      P       05 26 05.7 -0.4
ZAK                               pmax    pmax
      comp=Z,7.0nm,1.1s
ZAK                               pmax    pmax
      comp=Z,6.0nm,1.5s
IM3   Indian Mountai    81.93  15 eP      P       05 26 05.7 -0.4
MLY   Manley            82.03  17 eP      P       05 26 08.9 +2.1
      comp=Z,15nm,1.5s
TLY   Talaya            82.24 326 eP      P       05 26 08.0 -0.1
TLY                               eP      P       05 26 08.6 +0.4
TLY   Talaya            82.24 326ceP      P       05 26 08.9 +0.8
TLY   Talaya            82.24 326  P      P       05 26 08.0 -0.1
      comp=Z,2.4nm,0.8s,baz=158,slow=4.9,SNR=5.6
O02D  Mt. Diablo Mer    82.57  47  P      P       05 26 12.9 +2.7
      baz=249
MDM   Murphy Dome       82.71  18 eP      P       05 26 10.4 +0.1
      comp=Z,27nm,1.4s
HDA   Harding Lake      82.72  19 eP      P       05 26 09.7 -0.6
      comp=Z,41nm,1.2s
HDA   Harding Lake      82.72  19  P      P       05 26 09.9 -0.4
      baz=226
COLA  College           82.77  18 eP      P       05 26 10.4 -0.1
      comp=Z,16nm,1.1s
COLA  College           82.77  18 eP      P       05 26 10.4 -0.1
COLA                              pmax    pmax
      comp=Z,16nm,1.1s
RIDG  Independ'e Rid    82.94  20 eP      P       05 26 11.9 +0.3
      comp=Z,35nm,1.4s
ILAR  Eielson Array     82.99  18  P      P       05 26 11.0 -0.7
ILAR  Eielson Array     82.99  18  P      P       05 26 10.9 -0.7
      comp=Z,6.8nm,0.9s,baz=226,slow=5.8,SNR=21
ILB   Eielson Array     82.99  18 eP      P       05 26 11.2 -0.5
      comp=Z,14nm,1.0s
IL1   Eielson Array     82.99  18 eP      P       05 26 10.3 -1.4
POKR  Poker Plat Res    83.06  18  P      P       05 26 11.8 -0.3
      baz=226
ORV   Oroville          83.28  48 eP      P       05 26 12.9 -0.9
      comp=Z,13nm,1.4s
ORV   Oroville          83.28  48 eP      P       05 26 12.9 -0.9
ORV                               pmax    pmax
      comp=Z,13nm,1.4s
O03E  Paynes Creek      83.32  47  P      P       05 26 13.9 -0.1
      baz=250
SCRK  Sand Creek        83.38  20 eP      P       05 26 14.0 +0.1
      comp=Z,9.4nm,0.8s
AFDM  Forest Hills D    83.47  48 eP      P       05 26 15.4 +0.6
      comp=Z,36nm,1.7s
CMB   Columbia Colle    83.61  50 eP      P       05 26 16.9 +1.3
      comp=Z,8.6nm,1.1s
CMB   Columbia Colle    83.61  50 eP      P       05 26 16.9 +1.3
CMB                               pmax    pmax
      comp=Z,9.0nm,1.1s
COLD  Coldfoot          83.80  16 eP      P       05 26 16.9 +1.1
      comp=Z,8.8nm,1.3s
M04C  Macdoel           83.80  46  P      P       05 26 18.3 +1.7
      baz=250
VES   Vestal, Richgr    83.91  52  P      P       05 26 18.5 +1.4
      baz=252
SKAG  Skagway           83.95  26 eP      P       05 26 17.7 +1.0
      comp=Z,38nm,1.5s
BEKR  Beckworth         84.22  48 eP      P       05 26 18.9 +0.1
      comp=Z,54nm,1.8s
MWC   Mount Wilson      84.23  54 eP      P       05 26 21.0 +2.0
      comp=Z,28nm,1.4s
MWC   Mount Wilson      84.23  54 eP      P       05 26 21.0 +2.0
MWC                               pmax    pmax
      comp=Z,28nm,1.4s
ISA   Isabella, Lake    84.33  52  P      P       05 26 20.2 +0.9
      baz=253
MDPB  Devils Postpil    84.46  50 eP      P       05 26 21.1 +0.8
      comp=Z,18nm,1.1s
WAKR  Walker            84.46  49 eP      P       05 26 20.7 +0.6
      comp=Z,52nm,1.7s
EDW2  Edwards Air Fo    84.47  53  P      P       05 26 22.1 +2.0
      baz=253
OMMB  Old Mammoth Mi    84.52  50 eP      P       05 26 20.8 +0.3
      comp=Z,21nm,1.4s
MLAC  Mammoth, Mammo84.64  50  P      P       05 26 24.0 +2.9
      baz=252
J05D  Fort Rock, OR     84.74  44  P      P       05 26 23.3 +2.0
      baz=250
YERR  Yerington         84.76  49 eP      P       05 26 22.6 +1.0
      comp=Z,27nm,1.5s
CWC   Cottonwood Cre    84.86  52  P      P       05 26 22.4 +0.2
      baz=253
PAHR  Pah Rah Range     84.88  48 eP      P       05 26 22.9 +0.7
      comp=Z,48nm,1.8s
LRMC  Laurel Mtn Rad    84.89  53  P      P       05 26 22.3 +0.1
      baz=253
DAWY  Dawson            85.01  21 eP      P       05 26 23.5 +1.4
      comp=Z,13nm,1.1s
MONP2 Monument Peak     85.16  55  P      P       05 26 25.2 +1.4
      baz=254
RYN   Ryan              85.18  49 eP      P       05 26 23.1 -0.6
      comp=Z,62nm,2.0s
DAC   Darwin (Calif)    85.19  52 eP      P       05 26 24.2 +0.4
      comp=Z,31nm,1.7s
DAC   Darwin (Calif)    85.19  52 eP      P       05 26 24.3 +0.4
DAC                               pmax    pmax
      comp=Z,31nm,1.7s
MPMC  Manual Prospec    85.21  52  P      P       05 26 25.6 +1.7
      baz=253
KNGR  Kungurtug, Tuv    85.26 323⇓iP      P       05 26 23.0 -0.7
NV01  Mina Array Sit    85.29  50 eP      P       05 26 24.1 -0.2
NVAR  Mina Array Bea    85.29  50  P      P       05 26 24.1 -0.1
      comp=Z,3.6nm,0.8s,baz=234,slow=7.7,SNR=14
NVAR                              LR      LR      05 56 58.5
      comp=Z,2µm,21.7s,baz=308,slow=30
PFO   Pinyon Flats O    85.33  55  P      P       05 26 25.9 +1.4
      baz=254
TPFO  Pinon Flats       85.33  55  P      P       05 26 25.1 +0.6
      baz=254
NV11  Mina Array Sit    85.40  50 eP      P       05 26 24.9 +0.1
      comp=Z,3.8nm,1.8s
GSC   Goldstone, Bar    85.53  53 eP      P       05 26 25.5 +0.1
      comp=Z,36nm,1.8s
GRAC  Grapevine Rang    85.58  51  P      P       05 26 26.1 +0.5
      baz=253
KVN   Kaiserville       85.63  49 eP      P       05 26 25.4 -0.5
      comp=Z,10nm,1.0s
KVN   Kaiserville       85.63  49 eP      P       05 26 25.4 -0.5
KVN                               pmax    pmax
      comp=Z,10.0nm,1.0s
BELC  Belle Mtn. Jos    85.81  54  P      P       05 26 27.3 +0.4
      baz=254
FURC  Furnace Creek,    85.81  52  P      P       05 26 27.2 +0.6
      baz=254
TIXI  Tiksi             85.91 349 eP      P       05 26 25.5 -0.8
TIXI                              eP      P       05 26 26.3  0.0
TIXI  Tiksi             85.91 349⇓iP      P       05 26 25.7 -0.6
TIXI                              pmax    pmax
      comp=Z,18nm,1.2s
TIXI  Tiksi             85.91 349  P      P       05 26 25.5 -0.8
      comp=Z,10nm,1.1s,baz=121,slow=7.5,SNR=7.4
SHOC  Shoshone, Teco    86.11  53  P      P       05 26 30.0 +1.8
      baz=254
BC3   Big Chuckawall    86.15  55  P      P       05 26 29.2 +0.7
      baz=255
WVOR  Wild Horse Val    86.27  46 eP      P       05 26 29.5 +0.6
      comp=Z,60nm,1.9s
WVOR  Wild Horse Val    86.27  46 eP      P       05 26 29.5 +0.6
WVOR                              pmax    pmax
      comp=Z,60nm,1.9s
GMRC  Granite Mounta    86.29  54  P      P       05 26 29.3 +0.1
      baz=254
TPNV  Topopah Spring    86.42  52 eP      P       05 26 32.2 +2.3
      comp=Z,10nm,1.1s
TPNV  Topopah Spring    86.42  52 eP      P       05 26 32.2 +2.3
TPNV                              pmax    pmax
      comp=Z,10.0nm,1.1s
TPNV  Topopah Spring    86.42  52  P      P       05 26 29.8  0.0
      baz=254
GLA   Glamis            86.50  56  P      P       05 26 30.4 +0.2
      baz=255
J08A  Circle Bar Ran    86.67  45 eP      P       05 26 31.7 +0.9
      comp=Z,13nm,1.1s
LDFC  Landfair          86.80  54 eP      P       05 26 32.8 +1.0
      comp=Z,37nm,1.2s
Y12C  Blythe            86.92  55 eP      P       05 26 32.3 +0.1
      comp=Z,49nm,1.9s
Y12C  Blythe            86.92  55  P      P       05 26 33.3 +1.1
      baz=255
SHPR  Sheep Range       87.14  52 eP      P       05 26 35.3 +1.9
      comp=Z,14nm,1.4s
E08A  Dider Farm, El    87.25  42 eP      P       05 26 33.8 +0.4
      comp=Z,27nm,1.4s
R11A  Troy Canyon, C    87.31  50 eP      P       05 26 34.8 +0.6
      comp=Z,15nm,1.6s
R11A  Troy Canyon, C    87.31  50  P      P       05 26 34.4 +0.2
      baz=254
PDMC  Parker Dam,Lak    87.37  55  P      P       05 26 34.9 +0.6
      baz=255
W13A  Hualapai Mount    87.78  54 eP      P       05 26 37.1 +0.5
      comp=Z,40nm,1.9s
214A  Organ Pipe Nat    87.87  57  P      P       05 26 37.4 +0.6
      baz=256
Y14A  Wickenburg        88.19  55 eP      P       05 26 37.8 -0.5
      comp=Z,24nm,1.8s
ELK   Elko              88.22  48 eP      P       05 26 39.1 +0.6
      comp=Z,18nm,1.7s
ELK   Elko              88.22  48 eP      P       05 26 39.1 +0.6
ELK                               pmax    pmax
      comp=Z,18nm,1.7s
F10A  Beach Ranch, E    88.30  43 eP      P       05 26 39.6 +0.9
      comp=Z,24nm,1.5s
MFID  Camas Ranch       88.53  45 eP      P       05 26 39.4 -0.4
      comp=Z,12nm,1.3s
PSUT  Pine Spring       88.67  51 eP      P       05 26 40.1 -0.6
      comp=Z,16nm,1.3s
LCMT  Little Creek M    88.76  52 eP      P       05 26 41.9 +0.8
      comp=Z,44nm,1.7s
CCUT  Cedar City        88.80  52 eP      P       05 26 42.8 +1.4
      comp=Z,20nm,1.3s
SZCU  Shurtz Canyon     89.02  52 eP      P       05 26 43.8 +1.4
      comp=Z,37nm,1.5s
NEW   Newport           89.05  41  P      P       05 26 41.6 -0.5
      comp=Z,0.9nm,0.7s,baz=144,slow=3.2,SNR=2.3
KNB   Kanab             89.09  52 eP      P       05 26 43.1 +0.4
      comp=Z,62nm,1.5s
KNB   Kanab             89.09  52 eP      P       05 26 43.1 +0.4
KNB                               pmax    pmax
      comp=Z,62nm,1.5s
U15A  North Rim         89.36  53 eP      P       05 26 44.0 -0.1
      comp=Z,18nm,1.0s
WMQ   Urumqi            89.36 315 eP      P       05 26 44.8 +1.2
WMQ                               pP      PcP     05 26 49.0 +4.0
WMQ                               pmax    pmax
      comp=Z,35nm,1.3s
WMQ                               pmax    pmax
      comp=Z,580nm,5.9s
HLID  Hailey            89.56  46 eP      P       05 26 44.7 -0.1
      comp=Z,12nm,1.3s
HLID  Hailey            89.56  46  P      P       05 26 45.2 +0.5
      baz=255
X16A  Lo Mia Camp, P    89.57  55 eP      P       05 26 44.8 -0.2
      comp=Z,14nm,1.2s
PKCU  Pink Cliffs       89.58  52 eP      P       05 26 44.9 -0.3
      comp=Z,92nm,1.7s
TUC   Tucson            89.63  57 eP      P       05 26 46.7 +1.5
      comp=Z,26nm,1.6s
TUC   Tucson            89.63  57  P      P       05 26 46.4 +1.2
      baz=257
MTPU  Mount Pierson     89.82  51 eP      P       05 26 47.0 +0.6
      comp=Z,21nm,1.2s
DUG   Dugway, Tooele    89.86  49 eP      P       05 26 45.9 -0.3
      comp=Z,36nm,1.7s
DUG   Dugway, Tooele    89.86  49 eP      P       05 26 45.9 -0.3
DUG                               pmax    pmax
      comp=Z,36nm,1.7s
DUG   Dugway, Tooele    89.86  49  P      P       05 26 46.5 +0.3
      baz=256
WUAZ  Wupatki           89.87  54 eP      P       05 26 46.5 +0.2
      comp=Z,24nm,1.3s
WUAZ  Wupatki           89.87  54  P      P       05 26 47.2 +0.8
      baz=257
BGU   Big Grassy Mou    89.88  48 eP      P       05 26 45.7 -0.6
      comp=Z,50nm,1.9s
MSU   Marysvale         89.94  51 eP      P       05 26 47.6 +0.9
MSU   Marysvale         89.94  51 eP      P       05 26 47.6 +0.9
HVU   Hansel Valley     90.28  48 eP      P       05 26 48.8 +0.7
      comp=Z,33nm,1.3s
HVU   Hansel Valley     90.28  48 eP      P       05 26 48.8 +0.7
HVU                               pmax    pmax
      comp=Z,33nm,1.3s
NLU   North Lily Min    90.36  49 eP      P       05 26 47.9 -0.7
      comp=Z,17nm,1.2s
SPUT  South Promonto    90.40  48 eP      P       05 26 49.6 +0.9
      comp=Z,31nm,1.7s
319A  Douglas           90.68  58 eP      P       05 26 51.0 +0.9
      comp=Z,26nm,1.3s
MPU   Maple Canyon      90.70  50 eP      P       05 26 50.0 -0.1
      comp=Z,58nm,1.8s
CTU   Camp Tracy        90.77  49 eP      P       05 26 50.8 +0.3
      comp=Z,17nm,1.3s
X18A  Snowflake         90.79  55 eP      P       05 26 51.5 +0.8
      comp=Z,19nm,1.3s
Q16A  Castle Valley     90.80  51 eP      P       05 26 52.3 +1.6
      comp=Z,65nm,1.8s
TMUT  Trail Mountain    90.86  50 eP      P       05 26 51.8 +0.7
      comp=Z,9.4nm,1.0s
MCMT  McKenzie Canyo    90.97  45 eP      P       05 26 52.6 +1.2
JLU   Jordanelle        90.97  49 eP      P       05 26 52.5 +1.0
      comp=Z,46nm,1.8s
DGZ   Jazzator, Alta    91.09 320⇑iP      P       05 26 51.2 -0.5
DGZ                               pmax    pmax
      comp=Z,4.0nm,0.9s
TCUT  Toone Canyon      91.12  48 eP      P       05 26 54.6 +2.4
      comp=Z,25nm,1.1s
P17A  Butcher Ranch,    91.25  50 eP      P       05 26 55.2 +2.5
      comp=Z,26nm,1.7s
DLMT  Dillon            91.27  44 eP      P       05 26 52.6  0.0
      comp=Z,15nm,1.2s
SRU   San Rafael Swe    91.33  51 eP      P       05 26 53.5 +0.5
      comp=Z,29nm,1.9s
SRU   San Rafael Swe    91.33  51 eP      P       05 26 53.6 +0.5
SRU                               pmax    pmax
      comp=Z,29nm,1.9s
LRM   Limekiln Ridge    91.48  44 eP      P       05 26 56.0 +2.4
AHID  Auburn Hatcher    91.72  47 eP      P       05 26 56.1 +1.3
      comp=Z,6.9nm,0.8s
FXWY  Fox Creek         91.96  46 eP      P       05 26 56.5 +0.5
      comp=Z,9.2nm,1.3s
TPAW  Teton Pass        91.98  46 eP      P       05 26 57.3 +1.2
      comp=Z,20nm,1.6s
BOZ   Bozeman (W)       91.98  44 eP      P       05 26 57.0 +1.0
      comp=Z,22nm,1.5s
BOZ   Bozeman (W)       91.98  44 eP      P       05 26 57.0 +1.0
BOZ                               pmax    pmax
      comp=Z,22nm,1.5s
BOZ   Bozeman (W)       91.98  44  P      P       05 26 56.9 +1.0
      baz=257
REDW  Red Top Meadow    92.03  46 eP      P       05 26 57.4 +1.1
      comp=Z,26nm,1.5s
IMW   Indian Meadow     92.08  46 eP      P       05 26 56.4 -0.2
      comp=Z,31nm,1.8s
YHB   Horse Butte       92.09  45 eP      P       05 26 57.3 +0.7
      comp=Z,16nm,1.5s
HRY   Holter Researc    92.10  43 eP      P       05 26 56.9 +0.5
MOOW  Moose Ponds       92.19  46 eP      P       05 26 57.7 +0.7
      comp=Z,11nm,1.6s
YMR   Madison River     92.23  45 eP      P       05 26 58.2 +1.0
      comp=Z,16nm,1.2s
LOHW  Long Hollow       92.26  46 eP      P       05 26 58.8 +1.5
      comp=Z,18nm,1.8s
PV09  Paradox Valley    92.27  51 eP      P       05 26 58.6 +1.0
PV14  Lion Creek, Pa    92.33  52 eP      P       05 26 57.6 -0.2
      comp=Z,22nm,1.6s
PV04  Paradox Valley    92.42  52 eP      P       05 26 58.0 -0.1
      comp=Z,40nm,1.8s
PV03  Paradox Valley    92.44  52 eP      P       05 26 58.7 +0.4
BW06  Boulder Array     92.83  47 eP      P       05 26 59.9 -0.1
      comp=Z,22nm,1.8s
BW06  Boulder Array     92.83  47  P      P       05 27 00.1 +0.1
      baz=258
PD31  Pinedale Array    92.83  47 eP      P       05 26 59.9 -0.1
      comp=Z,20nm,1.8s
PDAR  Pinedale Array    92.83  47  P      P       05 26 59.6 -0.4
      comp=Z,3.6nm,1.1s,baz=238,slow=2.8,SNR=11
O20A  White River Ci    93.27  50  P      P       05 27 01.7 -0.4
      baz=259
ANMO  Albuquerque       93.69  55⇑iP      P       05 27 03.2 -0.9
ANMO                              pmax    pmax
      comp=Z,8.0nm,2.0s
ZAA0  Zalesovo Array    93.70 324 eP      P       05 27 02.0 -1.4
      comp=Z,17nm,1.6s
ZALV  Zalesovo Beam     93.70 324 eP      P       05 27 02.5 -0.9
ZALV  Zalesovo Beam     93.70 324 eP      P       05 27 02.5 -0.9
ZALV  Zalesovo Beam     93.70 324  P      P       05 27 02.7 -0.7
      comp=Z,5.3nm,1.1s,baz=101,slow=3.0,SNR=13
ZAA1  Zalesovo Array    93.70 324 eP      P       05 27 02.7 -0.7
MK01  Makanchi Array    93.75 317 eP      P       05 27 03.5 -0.4
MK31  Makanchi Array    93.76 317 eP      P       05 27 04.0  0.0
MK31  Makanchi Array    93.76 317 eP      P       05 27 04.0  0.0
MK32  Makanchi Array    93.76 317 eP      P       05 27 03.8 -0.2
MKAR  Makanchi Array    93.76 317 eP      P       05 27 04.0  0.0
      comp=Z,30nm,1.0s
MKAR  Makanchi Array    93.76 317 eP      P       05 27 04.0  0.0
MKAR                              pmax    pmax
      comp=Z,30nm,1.0s
MKAR  Makanchi Array    93.76 317  P      P       05 27 03.8 -0.2
      comp=Z,4.2nm,0.9s,baz=95,slow=6.1,SNR=15
EGMT  Eagleton          93.77  42 eP      P       05 27 05.0 +1.0
      comp=Z,32nm,1.5s
EGMT  Eagleton          93.77  42  P      P       05 27 04.9 +0.9
      baz=258
MAKZ  Makanchi          93.97 317 eP      P       05 27 04.8 -0.1
      comp=Z,26nm,1.6s
MAKZ  Makanchi          93.97 317 eP      P       05 27 04.8 -0.1
MAKZ                              pmax    pmax
      comp=Z,26nm,1.6s
MNTX  Cornudas Mount    94.01  59  P      P       05 27 05.8 +0.4
      baz=260
YKA   Yellowknife Ar    94.37  27  P      P       05 27 04.9 -1.4
      comp=Z,0.6nm,0.7s,baz=258,slow=4.6,SNR=7.6
YKB5  Yellowknife Ar    94.37  27 eP      P       05 27 04.9 -1.4
LTX   Lajitas           95.07  61 eP      P       05 27 10.0 -0.4
LTX   Lajitas           95.07  61 eP      P       05 27 10.0 -0.4
TXAR  Lajitas Array     95.07  61  P      P       05 27 10.0 -0.4
      comp=Z,0.5nm,1.0s,baz=318,slow=1.2,SNR=3.5
TXAR                              LR      LR      06 04 23.9
      comp=Z,1µm,19.6s,baz=0.0,slow=32
NRIK  Noril'sk          96.06 339  P      P       05 27 12.5 -1.4
      comp=Z,1.4nm,0.3s,baz=5.1,slow=18,SNR=3.2
KURK  Kurchatov         96.83 320 eP      P       05 27 16.1 -1.7
KURK                              eP      P       05 27 16.8 -1.0
KURK  Kurchatov         96.83 320⇓iP      P       05 27 14.4 -3.4
KURK                              pmax    pmax
      comp=Z,7.0nm,1.4s
KURBB Kurchatov Arra    96.88 320  P      P       05 27 16.1 -1.9
      comp=Z,0.4nm,0.6s,baz=96,slow=2.8,SNR=3.0
KSH   Kashi             97.09 309  P      Pdif    05 27 21.7 +2.2
KSH                               sP      pP      05 27 28.9 -1.8
KSH                               PP      PP      05 31 21.2 +5.4
KSH   Kashi             97.09 309  S      S       05 38 41.9 +1.6
KSH   Kashi             97.09 309  sS     sS      05 38 49.6 -9.1
KSH   Kashi             97.09 309  SS     SS      05 45 26.2 +8.3
KSH                               pmax    pmax
      comp=Z,830nm,8.0s
KSH                               LR      LR
      comp=N,310nm,5.6s
KSH                               LR      LR
      comp=E,370nm,5.2s
KSH                               LR      LR
      comp=Z,670nm,9.2s
OBN   Obninsk          120.89 329 ePKIKP  PKPdf   05 32 38.0 -0.9
OBN                               e               05 34 15.5
OBN                               pmax    pmax
      comp=Z,4.0nm,0.9s
CPUP  Villa Florida    123.73 132  PKP    PKPdf   05 32 43.0 -2.3
      comp=Z,2.3nm,1.0s,baz=22,slow=5.4,SNR=3.5
BOSA  Boshof           125.82 223  PKP    PKPdf   05 32 49.5  0.0
      comp=Z,1.5nm,0.8s,baz=169,slow=5.2,SNR=2.4
NB200 NORSAR Array S   126.57 345 ePKPdf  PKPdf   05 32 49.4 -0.4
NOA   NORSAR Array B   126.57 345  PKP    PKPdf   05 32 49.4 -0.4
      comp=Z,0.5nm,0.8s,baz=34,slow=2.1,SNR=2.6
AKASG Malin Array Be   126.97 327  PKIKP  PKPdf   05 32 50.0 -0.8
AKASG Malin Array Be   126.97 327  PKP    PKPdf   05 32 50.0 -0.8
      comp=Z,0.3nm,0.6s,baz=29,slow=1.6,SNR=2.8
CLL   Collm            134.08 337 ePKPdf  PKiKP   05 33 05.0 -0.6
CLL   Collm            134.08 337 ePKIKP  PKiKP   05 33 05.0 -0.6
GERES GERESS Array B   135.72 334  PKP    PKiKP   05 33 08.4 -0.7
      comp=Z,1.3nm,1.0s,baz=56,slow=3.4,SNR=4.4
KEST  Kesra            147.57 324  PKPbc  PKPdf   05 33 28.8 -0.3
      comp=Z,11nm,1.0s,baz=0.0,slow=5.1,SNR=3.3
ES19  SONSECA Array    149.89 345 ePKPdf  PKPdf   05 33 33.8 +1.1
ESDC  Sonseca Array    149.93 345  PKPbc  PKiKP   05 33 38.3 -0.2
      comp=Z,2.4nm,0.9s,baz=3.8,slow=2.7,SNR=6.7
TOA0  Torodi Ar. Sit   164.89 281 ePKPdf  PKPdf   05 33 50.4 -1.6
TORD  Torodi Ar. Bea   164.89 281  PKP    PKPdf   05 33 50.4 -1.6
      comp=Z,1.2nm,1.1s,baz=173,slow=3.9,SNR=3.6
TORD                               PKPab  PKPab   05 34 47.1 -1.1
      comp=Z,1.7nm,1.1s,baz=20,slow=2.0,SNR=4.3
TOA1  Torodi Ar. Sit   164.89 281 ePKPdf  PKPdf   05 33 50.4 -1.6
TOA1                              ePKPab  PKPab   05 34 47.1 -1.1
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ISCJB ***06*** *05:16:24.0±0.2, 10.°69S±0.°04×166.°47E±0.°03, h10^{km}, mb5.0/141, Error ellipse: s-maj=6.6km s-min=4.3km az=158.8*

BJI ***06*** *05:16:24.9, 10.°14S×166.°84E, h6^{km}, mB5.6/16, mb4.9/33, Ms5.3/8, Ms7 5.1/8*

NEIC ***06*** *05:16:25.4±0.7, 10.°69S×166.°52E, h11^{km}±4^{km}, mb5.3/106, Error ellipse: s-maj=6.3km s-min=3.8km az=157.0*

MOS ***06*** *05:16:26.4±1.1, 10.°80S×166.°48E, h31^{km}, mb5.3/24, Error ellipse: s-maj=9.8km s-min=9.4km az=146.5*

IDC ***06*** *05:16:30.7±3.5, 10.°94S×166.°69E, h62^{km}±32^{km}, mb4.2/29, mb1 4.3/31, mb1mx4.3/50, mbtmp4.5/31, ML3.3/2, Error ellipse: s-maj=19.1km s-min=16.1km az=127.0*

ISC 06 05:16:24.8±0.5, 10°.75S±0°.07×166°.67E±0°.08, h10^{km}, n288, σ1^{s}.32/286, mb5.2/142, 5C-9D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.75	281	ePn	Pn	05 18 04.6	+0.7
HNR				ePn	Pn	05 18 07.4	+3.5
HNR				ePg	Pn	05 18 10.0	+6.1
HNR	Honiara	6.75	281	eP	Pn	05 18 04.6	+0.7
HNR	Honiara	6.75	281	P	Pn	05 18 07.4	+3.5
	0.7nm,0.3s,baz=105,slow=15,SNR=1.9						
DZM	Mont Dzumac	11.26	181	P	Pn	05 19 07.9	+1.9
	0.2nm,0.3s,baz=343,slow=19,SNR=2.0						
ONTNC	Ouen Toro	11.50	181	ePn	Pn	05 19 13.3	+4.2
PINNC	Pines Island,	11.82	176	ePn	Pn	05 19 16.7	+3.1
RABL	Rabaul	15.78	293	ePn	Pn	05 20 06.0	-1.3
	83nm,0.4s						
EIDS	Eidsvold	20.73	223	P	Pn	05 21 07.2	-0.7
	baz=21,SNR=4.0						
EIDS	Eidsvold	20.73	223	eP	P	05 21 06.1	+0.5
	40nm,1.1s						
MANU	Manus Island	21.02	293	eP	P	05 21 07.3	-1.6
	236nm,1.5s						
CTA	Charters Tower	21.74	242	eP	P	05 21 16.1	-0.4
CTA				eS	Sn	05 25 27.0	+0.6
CTA	Charters Tower	21.74	242	P	P	05 21 16.1	-0.4
	5.1nm,0.5s,baz=48,slow=12,SNR=4.5						
CTAO	Charters Tower	21.74	242	eP	P	05 21 15.4	-1.1
	174nm,1.9s						
MTSU	Mount Surprise	22.84	249	P	P	05 21 28.4	0.0
	baz=24,SNR=7.7						
COEN	Coen	23.16	260	P	P	05 21 32.4	+0.6
	baz=24,SNR=6.1						
COEN	Coen	23.16	260	eP	P	05 21 30.6	-1.1
	6.9nm,1.0s						
ARMA	Armidale	24.06	213	P	P	05 21 39.5	-0.9
	baz=25,SNR=5.8						
ARMA	Armidale	24.06	213	eP	P	05 21 41.8	+1.4
	44nm,1.2s						
H11S2	WAKE ISLAND Hy	29.05	0	T	T	05 52 46.6	
	baz=181,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	29.06	0	T	T	05 52 43.9	
	baz=181,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	29.07	0	T	T	05 52 44.0	
	baz=181,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	30.27	0	T	T	05 54 15.7	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	30.27	0	T	T	05 54 15.0	
	baz=182,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	30.29	0	T	T	05 54 14.8	
	baz=182,slow=76,SNR=11						
STKA	Stephens Creek	31.28	224	P	P	05 22 46.0	+0.9
	baz=32,SNR=3.8						
STKA	Stephens Creek	31.28	224	eP	P	05 22 42.8	-2.3
	5.6nm,1.5s						
STKA	Stephens Creek	31.28	224	eP	P	05 22 42.8	-2.3
STKA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
STKA	Stephens Creek	31.28	224	P	P	05 22 45.1	0.0
	comp=Z,2.8nm,0.9s,baz=74,slow=14,SNR=3.7						
WRAB	Tennant Creek	32.42	250	eP	P	05 22 55.2	-0.1
	comp=Z,38nm,1.2s						
WRAB	Tennant Creek	32.42	250	⇓iP	P	05 22 53.4	-1.9
WB2	Warramunga Arr	32.42	250	eP	P	05 22 53.7	-1.6
WB2				eP	P	05 22 54.5	-0.8
WR1	Warramunga Arr	32.43	250	eP	P	05 22 54.2	-1.2
	comp=Z,45nm,1.3s						
WRA	Warramunga Arr	32.44	250	P	P	05 22 54.2	-1.2
	comp=Z,6.9nm,0.7s,baz=82,slow=8.8,SNR=13						
RPZ	Rata Peaks	33.06	174	P	P	05 22 57.5	-3.0
	comp=Z,11nm,0.9s,baz=14,slow=14,SNR=2.1						
KDU	Kakadu	33.52	263	P	P	05 23 03.4	-1.5
	baz=34,SNR=5.3						
AS01	Alice Springs	33.69	243	eP	P	05 23 06.1	-0.3
AS31	Alice Springs	33.73	243	eP	P	05 23 05.1	-1.6
	comp=Z,2.2nm,0.8s						
ASAR	Alice Springs	33.73	243	P	P	05 23 04.8	-1.9
	comp=Z,6.6nm,0.9s,baz=74,slow=9.0,SNR=8.0						
FITZ	Fitzroy Crossi	40.33	255	P	P	05 24 03.3	+0.5
	baz=41,SNR=10						
FITZ	Fitzroy Crossi	40.33	255	eP	P	05 24 02.0	-0.8
	comp=Z,82nm,1.8s						
FITZ	Fitzroy Crossi	40.33	255	P	P	05 24 02.0	-0.8
	comp=Z,12nm,0.9s,baz=85,slow=8.4,SNR=9.5						
BATI	Baumata	42.27	267	P	P	05 24 18.5	-0.4
	comp=Z,13nm,0.4s,baz=100,slow=11,SNR=2.3						
MMRI	Maumere	43.82	269	eP	P	05 24 30.3	-1.1
	comp=Z,120nm,1.6s						
MBWA	Marble Bar	46.15	251	eP	P	05 24 50.5	+0.6
	comp=Z,31nm,1.1s						
MEEK	Meekatharra	47.89	244	P	P	05 25 03.9	+0.4
	baz=48,SNR=4.0						
MJAR	Matsushiro Arr	54.13	332	P	P	05 25 50.2	0.0
	comp=Z,0.7nm,0.3s,baz=132,slow=7.6,SNR=3.8						
MAJO	Matsushiro	54.13	332	eP	P	05 25 50.2	0.0
MAJO	Matsushiro	54.13	332	eP	P	05 25 50.2	0.0
JNU	Nakatsue	55.38	323	eP	P	05 25 59.6	+0.3
	comp=Z,181nm,1.9s						
JNU	Nakatsue	55.38	323	P	P	05 25 59.8	+0.5
	comp=Z,11nm,0.8s,baz=180,slow=11,SNR=3.1						
LEM	Lembang	58.42	269	P	P	05 26 21.6	+0.2
	comp=Z,14nm,0.5s,baz=116,slow=13,SNR=4.5						
ASAJ	Asahikawa	58.82	340	P	P	05 26 24.9	+1.5
	comp=Z,9.6nm,0.9s,baz=259,slow=8.8,SNR=4.0						
KSRS	Korea Array	60.15	325	P	P	05 26 33.7	+1.0
	comp=Z,2.5nm,0.8s,baz=147,slow=8.2,SNR=7.5						
KSAR	Wonju Array Be	60.16	325	P	P	05 26 33.7	+0.9
KSAR	Wonju Array Be	60.16	325	P	P	05 26 33.7	+0.9
KS01	Wonju Array Si	60.18	325	eP	P	05 26 32.3	-0.6
YSS	Yuzh-Sakhalins	61.29	342	⇓eP	P	05 26 40.6	+0.3
YSS				e		05 26 54.6	
NJ2	Nanjing	62.45	315	eP	P	05 26 48.3	-0.1
USA0B	Ussuriysk Arra	63.09	333	eP	P	05 26 51.7	-0.8
	comp=Z,75nm,1.7s						
USRK	Ussuriysk Ar.	63.09	333	P	P	05 26 52.0	-0.5
	comp=Z,16nm,1.2s,baz=134,slow=5.5,SNR=9.7						
PETK	Petropavlovsk-	64.06	354	P	P	05 26 59.0	+0.3
PETK	Petropavlovsk-	64.06	354	P	P	05 26 59.0	+0.3
	comp=Z,5.7nm,0.9s,baz=145,slow=5.3,SNR=3.5						
PEA1	Petropavlovsk-	64.07	354	eP	P	05 26 59.0	+0.2
MDJ	Mudanjiang	64.52	332	P	P	05 27 02.8	+1.0
MDJ				pmax	pmax		
	comp=Z,18nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,440nm,7.9s						
DL2	Dalian	64.79	322	P	P	05 27 06.1	+2.3
DL2				pmax	pmax		
	comp=Z,36nm,1.3s						
CN2	Changchun	65.96	329	eP	P	05 27 11.9	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLR	Kul'dur	67.15	336	⇓iP	P	05 27 16.8	-1.9
KLR	Kul'dur	67.15	336	P	P	05 27 19.1	+0.4
	comp=Z,3.7nm,0.8s,baz=131,slow=4.8,SNR=7.5						
GYA	Guiyang	69.00	304	⇑iP	P	05 27 33.0	+2.0
GYA				PP	PP	05 30 07.6	+4.0
GYA				S	S	05 36 35.2	-1.2
GYA				SKS	SKSac	05 37 28.3	-3.1
GYA				SS	SS	05 41 01.0	-1.4
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.8s						
GYA				LR	LR		
	comp=Z,650nm,18.2s						
GYA				LR	LR		
	comp=Z,680nm,18.6s						
GYA				LR	LR		
	comp=Z,660nm,18.0s						
XAN	Xi'an	70.59	312	P	P	05 27 40.2	-0.4
XAN				pP	sP	05 27 48.6	+4.6
XAN				sP	PcP	05 27 52.6	-9.1
XAN				PcP	pP	05 28 04.6	+22
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				LR	LR		
	comp=Z,580nm,18.4s						
XAN				LR	LR		
	comp=Z,780nm,18.4s						
XAN	Xi'an	70.59	312	eP	P	05 27 40.1	-0.4
	comp=Z,40nm,1.7s						
XAN	Xi'an	70.59	312	eP	P	05 27 40.2	-0.4
XAN				pmax	pmax		
	comp=Z,40nm,1.7s						
KMI	Kunming	71.74	301	P	P	05 27 50.9	+2.9
KMI				pP	PcP	05 27 59.3	-7.7
HHC	Hu-ho-hao-te	72.20	319	eP	P	05 27 52.1	+1.9
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
ZEA	Zeya	72.42	337	eP	P	05 27 51.9	+0.8
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,36nm,1.2s						
HIA	Hailar	72.56	330	⇓iP	P	05 27 51.3	-0.8
HIA				pmax	pmax		
	comp=Z,29nm,1.8s						
CMAR	Chiang Mai Arr	72.83	293	P	P	05 27 55.1	+0.8
	comp=Z,2.6nm,0.3s,baz=112,slow=4.1,SNR=5.3						
CD2	Chengdu	73.15	307	eP	P	05 27 57.0	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	Seymchan	74.28	353	⇓iP	P	05 28 00.5	-1.4
SEY	Seymchan	74.28	353	P	P	05 28 02.6	+0.8
	comp=Z,1.8nm,0.6s,baz=170,slow=6.3,SNR=4.4						
LZH	Lanzhou	75.23	312	eP	P	05 28 09.4	+1.2
LZH				pP	sP	05 28 13.6	+2.0
LZH				sP	pP	05 28 15.8	+5.1
LZH				PP	PP	05 31 03.8	+6.9
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
LZH				LR	LR		
	comp=Z,690nm,16.3s						
LZH				LR	LR		
	comp=Z,640nm,16.4s						
LZH				LR	LR		
	comp=Z,750nm,17.5s						
CIT	Chita	77.36	330	eP	P	05 28 21.3	+1.5
CIT				e		05 28 29.3	
RSO	Redoubt South	77.94	19	eP	P	05 28 23.4	+0.3
BILL	Bilibino	78.58	360	eP	P	05 28 25.7	-0.5
	comp=Z,27nm,1.4s						
BILL	Bilibino	78.58	360	ceP	P	05 28 26.6	+0.4
BILL				pmax	pmax		
	comp=Z,28nm,1.7s						
ULN	Ulaanbaatar	78.60	324	eP	P	05 28 27.4	+0.4
	comp=Z,29nm,1.7s						
ULN	Ulaanbaatar	78.60	324	⇓iP	P	05 28 25.1	-1.8
ULN				pmax	pmax		
	comp=Z,13nm,1.3s						
SONA0	Songino Array	78.97	323	eP	P	05 28 29.3	+0.4
SONM	Songino Array	78.97	323	P	P	05 28 29.3	+0.4
	comp=Z,0.9nm,0.6s,baz=131,slow=4.0,SNR=6.0						
SONA1	Songino Array	78.97	323	eP	P	05 28 29.6	+0.6
GTA	Gaotai	79.51	314	⇑P	P	05 28 33.0	+0.9
GTA				pP	PcP	05 28 41.4	+1.3
GTA				sP	pwP	05 28 45.3	+7.5
GTA				LR	LR		
	comp=Z,630nm,18.4s						
GTA				LR	LR		
	comp=Z,510nm,17.8s						
GTA				LR	LR		
	comp=Z,1μm,18.7s						
CAST	Castle Rocks	80.39	18	eP	P	05 28 39.0	+2.8
	comp=Z,4.9nm,0.8s						
BOD	Bodaibo	80.65	334	eP	P	05 28 36.0	-1.6
BOD				pmax	pmax		
	comp=Z,18nm,1.9s						
RND	Reindeer	81.37	19	eP	P	05 28 42.0	+0.5
	comp=Z,47nm,1.8s						
MCK	McKinley	81.58	18	eP	P	05 28 41.2	-1.3
	comp=Z,34nm,1.6s						
MCK	McKinley	81.58	18	eP	P	05 28 41.2	-1.3
MCK				pmax	pmax		
	comp=Z,34nm,1.6s						
IM3	Indian Mountai	81.90	15	eP	P	05 28 44.3	+0.2
MLY	Manley	81.99	17	eP	P	05 28 45.4	+0.7
	comp=Z,13nm,1.5s						
TLY	Talaya	82.38	326	eP	P	05 28 47.7	+0.7
	comp=Z,8.0nm,0.6s						
TLY	Talaya	82.38	326	⇑iP	P	05 28 47.8	+0.7
O02D	Mt. Diablo Mer	82.43	47	P	P	05 28 48.6	+1.0
	baz=249						
MDM	Murphy Dome	82.67	18	eP	P	05 28 48.3	0.0
	comp=Z,14nm,1.2s						
HDA	Harding Lake	82.67	18	eP	P	05 28 48.0	-0.2
	comp=Z,40nm,1.6s						
HDA	Harding Lake	82.67	18	P	P	05 28 48.2	0.0
	baz=226						
WDC	Whiskeytown Da	82.75	46	eP	P	05 28 50.4	+1.3
	comp=Z,12nm,1.3s						
N02D	Trinity Center	82.77	46	P	P	05 28 51.8	+2.4
	baz=249						
M02C	Callahan	82.82	46	P	P	05 28 52.6	+3.0
	baz=249						
IL1	Eielson Array	82.95	18	eP	P	05 28 48.7	-0.9
ILAR	Eielson Array	82.95	18	P	P	05 28 48.7	-0.9
	comp=Z,4.8nm,0.8s,baz=227,slow=6.3,SNR=13						
ILB	Eielson Array	82.95	18	eP	P	05 28 49.1	-0.6
ORV	Oroville	83.14	48	eP	P	05 28 52.2	+1.0
	comp=Z,13nm,1.4s						
ORV	Oroville	83.14	48	eP	P	05 28 52.2	+1.0
ORV				pmax	pmax		
	comp=Z,13nm,1.4s						
O03E	Paynes Creek	83.18	47	P	P	05 28 51.9	+0.4
	baz=250						
AFDM	Forest Hills D	83.33	48	eP	P	05 28 53.2	+1.0
	comp=Z,36nm,1.7s						
SCRK	Sand Creek	83.33	20	eP	P	05 28 52.4	+0.7
	comp=Z,58nm,2.0s						
CMB	Columbia Colle	83.46	49	eP	P	05 28 53.9	+1.0
	comp=Z,7.2nm,1.1s						
CMB	Columbia Colle	83.46	49	eP	P	05 28 53.9	+1.0
CMB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
M04C	Macdoel	83.67	46	P	P	05 28 55.5	+1.4
	baz=250						
HYT	Haines Junctio	83.75	24	eP	P	05 28 55.3	+1.3
	comp=Z,5.5nm,1.1s						
MWC	Mount Wilson	84.07	54	eP	P	05 28 56.5	+0.1
	comp=Z,28nm,1.4s						
MWC	Mount Wilson	84.07	54	eP	P	05 28 56.5	+0.1
MWC				pmax	pmax		
	comp=Z,28nm,1.4s						
BEKR	Beckworth	84.08	48	eP	P	05 28 57.3	+1.0
	comp=Z,54nm,1.8s						
ISA	Isabella, Lake	84.18	52	eP	P	05 28 57.9	+1.2
	comp=Z,33nm,1.8s						
ISA	Isabella, Lake	84.18	52	eP	P	05 28 57.9	+1.2
ISA				pmax	pmax		
	comp=Z,33nm,1.8s						
ISA	Isabella, Lake	84.18	52	P	P	05 28 57.5	+0.8
	baz=252						
MDPB	Devils Postpil	84.31	50	eP	P	05 28 58.8	+1.1
	comp=Z,18nm,1.1s						
WAKR	Walker	84.32	49	eP	P	05 28 59.0	+1.5
	comp=Z,52nm,1.7s						
OMMB	Old Mammoth Mi	84.37	50	eP	P	05 28 58.1	+0.1
	comp=Z,17nm,1.3s						
PNTR	Pine Nut	84.38	49	eP	P	05 28 58.5	+0.7
	comp=Z,58nm,1.8s						
BFSC	Mount Baldy Ra	84.39	54	P	P	05 28 58.4	+0.5
	baz=253						
J05D	Fort Rock, OR	84.61	44	P	P	05 28 59.9	+1.1
	baz=250						
YERR	Yerington	84.62	49	eP	P	05 28 59.4	+0.4
	comp=Z,27nm,1.5s						
CWC	Cottonwood Cre	84.71	52	P	P	05 29 00.2	+0.7
	baz=253						
LRMC	Laurel Mtn Rad	84.74	53	P	P	05 29 01.3	+1.6
	baz=253						
PAHR	Pah Rah Range	84.74	48	eP	P	05 29 00.7	+1.1
	comp=Z,48nm,1.8s						
MOD	Modoc Plateau	84.79	46	eP	P	05 29 00.7	+0.9
	comp=Z,30nm,1.8s						
MONP2	Monument Peak	85.00	55	P	P	05 29 02.3	+1.2
	baz=254						
RYN	Ryan	85.04	49	eP	P	05 29 02.2	+1.1
	comp=Z,62nm,2.0s						
DAC	Darwin (Calif)	85.04	52	eP	P	05 29 02.2	+1.0
	comp=Z,31nm,1.7s						
DAC	Darwin (Calif)	85.04	52	eP	P	05 29 02.2	+1.0
DAC				pmax	pmax		
	comp=Z,31nm,1.7s						
MPMC	Manual Prospec	85.06	52	P	P	05 29 02.4	+1.1
	baz=253						
NV01	Mina Array Sit	85.14	50	eP	P	05 29 02.2	+0.5
NVAR	Mina Array Bea	85.14	50	P	P	05 29 02.4	+0.7
	comp=Z,5.0nm,0.8s,baz=231,slow=8.1,SNR=14						
PFO	Pinyon Flats O	85.17	55	P	P	05 29 03.7	+1.9
	baz=254						
XPFO	Pion Flat	85.18	55	eP	P	05 29 02.5	+0.6
	comp=Z,14nm,1.4s						
IKP	In-Ko-Pah, Jac	85.19	56	P	P	05 29 03.1	+1.2
	baz=254						
NV11	Mina Array Sit	85.25	50	eP	P	05 29 02.6	+0.4
	comp=Z,3.8nm,1.8s						
GSC	Goldstone, Bar	85.37	53	eP	P	05 29 03.9	+1.2
	comp=Z,21nm,1.8s						
GSC	Goldstone, Bar	85.37	53	P	P	05 29 03.8	+1.1
	baz=254						
KNGR	Kungurtug, Tuv	85.41	323	⇓iP	P	05 29 03.3	+0.7
GRAC	Grapevine Rang	85.42	51	P	P	05 29 04.4	+1.5
	baz=253						
KVN	Kaiserville	85.48	49	eP	P	05 29 04.3	+0.9
	comp=Z,10nm,1.0s						
SWSC	Sam W. Stewart	85.52	55	P	P	05 29 04.5	+1.0
	baz=254						
HEC	Hector,Ludlow	85.61	54	P	P	05 29 04.5	+0.6
	baz=254						
BELC	Belle Mtn. Jos	85.65	54	P	P	05 29 04.1	-0.1
	baz=254						
FURC	Furnace Creek,	85.66	52	P	P	05 29 05.4	+1.4
	baz=253						
SHOC	Shoshone, Teco	85.95	52	P	P	05 29 06.1	+0.5
	baz=254						
TIXI	Tiksi	85.97	349	eP	P	05 29 03.1	-1.7
TIXI				eP	P	05 29 04.2	-0.6
TIXI	Tiksi	85.97	349	⇓iP	P	05 29 04.1	-0.7
TIXI				pmax	pmax		
	comp=Z,19nm,1.4s						
TIXI	Tiksi	85.97	349	P	P	05 29 03.1	-1.7
	comp=Z,5.5nm,1.0s,baz=114,slow=8.0,SNR=9.2						
BC3	Big Chuckawall	85.99	55	P	P	05 29 07.1	+1.2
	baz=254						
I07A	Izee	86.06	44	eP	P	05 29 06.5	+0.6
	comp=Z,51nm,2.0s						
TUQ	Turquoise Moun	86.10	53	P	P	05 29 07.3	+0.9
	baz=254						
GMRC	Granite Mounta	86.13	54	P	P	05 29 07.2	+0.6
	baz=254						
WVOR	Wild Horse Val	86.13	46	eP	P	05 29 06.3	-0.1
	comp=Z,60nm,1.9s						
WVOR	Wild Horse Val	86.13	46	eP	P	05 29 06.3	-0.1
WVOR				pmax	pmax		
	comp=Z,60nm,1.9s						
TPNV	Topopah Spring	86.27	51	eP	P	05 29 07.9	+0.6
	comp=Z,36nm,1.9s						
TPNV	Topopah Spring	86.27	51	eP	P	05 29 07.9	+0.6
TPNV				pmax	pmax		
	comp=Z,36nm,1.9s						
TPNV	Topopah Spring	86.27	51	P	P	05 29 07.7	+0.4
	baz=254						
GLA	Glamis	86.34	56	eP	P	05 29 08.1	+0.6
	comp=Z,42nm,1.7s						
GLA	Glamis	86.34	56	eP	P	05 29 08.1	+0.6
GLA				pmax	pmax		
	comp=Z,42nm,1.7s						
GLA	Glamis	86.34	56	P	P	05 29 09.9	+2.3
	baz=255						
IRM	Iron Mountain	86.37	54	P	P	05 29 09.0	+1.3
	baz=255						
J08A	Circle Bar Ran	86.53	45	eP	P	05 29 08.8	+0.4
	comp=Z,27nm,1.6s						
LDFC	Landfair	86.65	54	eP	P	05 29 09.7	+0.5
	comp=Z,67nm,1.7s						
Y12C	Blythe	86.76	55	eP	P	05 29 09.8	+0.2
	comp=Z,49nm,1.9s						
Y12C	Blythe	86.76	55	P	P	05 29 10.2	+0.6
	baz=255						
SHPR	Sheep Range	86.99	52	eP	P	05 29 12.3	+1.5
	comp=Z,14nm,1.4s						
E08A	Dider Farm, El	87.13	42	eP	P	05 29 10.6	-0.5
	comp=Z,40nm,1.7s						
R11A	Troy Canyon, C	87.16	50	eP	P	05 29 12.8	+1.1
	comp=Z,18nm,1.8s						
R11A	Troy Canyon, C	87.16	50	P	P	05 29 11.6	-0.1
	baz=254						
PDMCI	Parker Dam,Lak	87.21	54	P	P	05 29 12.8	+1.1
	baz=255						
W13A	Hualapai Mount	87.62	54	eP	P	05 29 15.3	+1.3
	comp=Z,19nm,1.5s						
214A	Organ Pipe Nat	87.71	57	P	P	05 29 15.5	+1.3
	baz=256						
BMO	Blue Mountains	87.79	44	eP	P	05 29 15.1	+0.7
	comp=Z,18nm,1.7s						
BMO	Blue Mountains	87.79	44	eP	P	05 29 15.1	+0.7
BMO				pmax	pmax		
	comp=Z,18nm,1.7s						
Y14A	Wickenburg	88.03	55	eP	P	05 29 16.6	+0.8
	comp=Z,24nm,1.8s						
ELK	Elko	88.08	48	eP	P	05 29 16.7	+0.6
	comp=Z,18nm,1.7s						
ELK	Elko	88.08	48	eP	P	05 29 16.7	+0.6
ELK				pmax	pmax		
	comp=Z,18nm,1.7s						
MFID	Camas Ranch	88.39	45	eP	P	05 29 18.4	+1.1
	comp=Z,21nm,1.6s						
PSUT	Pine Spring	88.52	50	eP	P	05 29 19.0	+0.8
	comp=Z,26nm,1.6s						
LCMT	Little Creek M	88.61	52	eP	P	05 29 20.0	+1.5
	comp=Z,44nm,1.7s						
CCUT	Cedar City	88.65	52	eP	P	05 29 20.6	+1.7
	comp=Z,49nm,1.8s						
SZCU	Shurtz Canyon	88.87	52	eP	P	05 29 21.6	+1.7
	comp=Z,37nm,1.5s						
NEW	Newport	88.93	40	P	P	05 29 19.9	+0.2
	comp=Z,1.6nm,0.9s,baz=171,slow=6.0,SNR=3.1						
KNB	Kanab	88.93	52	eP	P	05 29 21.8	+1.7
	comp=Z,96nm,1.8s						
U15A	North Rim	89.20	53	eP	P	05 29 23.2	+1.7
	comp=Z,72nm,1.8s						
INK	Inuvik	89.33	19	P	P	05 29 20.3	-0.7
	comp=Z,1.9nm,1.1s,baz=221,slow=7.7,SNR=2.9						
X16A	Lo Mia Camp, P	89.41	55	eP	P	05 29 24.2	+1.8
	comp=Z,39nm,1.8s						
HLID	Hailey	89.42	46	eP	P	05 29 23.6	+1.3
	comp=Z,32nm,1.9s						
HLID	Hailey	89.42	46	P	P	05 29 23.6	+1.3
	baz=255						
PKCU	Pink Cliffs	89.43	52	eP	P	05 29 25.1	+2.4
	comp=Z,92nm,1.7s						
TUC	Tucson	89.46	57	eP	P	05 29 24.4	+1.8
	comp=Z,26nm,1.6s						
TUC	Tucson	89.46	57	eP	P	05 29 24.4	+1.8
TUC				pmax	pmax		
	comp=Z,26nm,1.6s						
TUC	Tucson	89.46	57	P	P	05 29 24.2	+1.7
	baz=257						
WMQ	Urumqi	89.53	315	eP	P	05 29 24.5	+1.9
WMQ				sP	pwP	05 29 35.1	+6.8
WMQ				pmax	pmax		
	comp=Z,31nm,1.7s						
TCRU	Three Creeks R	89.61	51	eP	P	05 29 26.0	+2.6
	comp=Z,46nm,1.7s						
MTPU	Mount Pierson	89.67	51	eP	P	05 29 25.9	+2.1
	comp=Z,21nm,1.2s						
WUAZ	Wupatki	89.72	54	eP	P	05 29 24.2	+0.4
	comp=Z,24nm,1.3s						
WUAZ	Wupatki	89.72	54	P	P	05 29 25.2	+1.4
	baz=257						
DUG	Dugway, Tooele	89.72	49	eP	P	05 29 24.5	+0.8
DUG	Dugway, Tooele	89.72	49	eP	P	05 29 24.5	+0.8
DUG	Dugway, Tooele	89.72	49	P	P	05 29 23.2	-0.5
	baz=256						
BGU	Big Grassy Mou	89.74	48	eP	P	05 29 24.2	+0.5
	comp=Z,50nm,1.9s						
MSU	Marysvale	89.79	51	eP	P	05 29 25.8	+1.6
MSU	Marysvale	89.79	51	eP	P	05 29 25.8	+1.6
HVU	Hansel Valley	90.14	48	eP	P	05 29 26.8	+1.2
	comp=Z,33nm,1.3s						
HVU	Hansel Valley	90.14	48	eP	P	05 29 26.8	+1.2
HVU				pmax	pmax		
	comp=Z,33nm,1.3s						
NLU	North Lily Min	90.21	49	eP	P	05 29 26.0	0.0
	comp=Z,17nm,1.2s						
SPUT	South Promonto	90.26	48	eP	P	05 29 27.4	+1.2
	comp=Z,31nm,1.7s						
319A	Douglas	90.51	58	eP	P	05 29 28.5	+1.0
	comp=Z,18nm,1.3s						
MPU	Maple Canyon	90.56	49	eP	P	05 29 29.2	+1.6
	comp=Z,58nm,1.8s						
CTU	Camp Tracy	90.63	49	eP	P	05 29 29.2	+1.3
	comp=Z,45nm,2.0s						
X18A	Snowflake	90.63	55	eP	P	05 29 28.8	+0.6
	comp=Z,19nm,1.3s						
Q16A	Castle Valley	90.65	51	eP	P	05 29 29.9	+1.8
	comp=Z,65nm,1.8s						
TMUT	Trail Mountain	90.71	50	eP	P	05 29 30.2	+1.6
	comp=Z,13nm,1.2s						

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JLU   Jordanelle         90.83  49 eP      P       05 29 30.2 +1.2
      comp=Z,46nm,1.8s
MCMT  McKenzie Canyo     90.83  45 eP      P       05 29 30.0 +1.1
TCUT  Toone Canyon       90.98  48 eP      P       05 29 31.6 +1.9
      comp=Z,25nm,1.1s
P17A  Butcher Ranch,     91.10  50 eP      P       05 29 31.3 +1.1
      comp=Z,26nm,1.7s
DLMT  Dillon             91.14  44 eP      P       05 29 30.0 -0.2
      comp=Z,43nm,1.8s
WALA  Waterton Lakes     91.20  40 eP      P       05 29 32.0 +1.7
      comp=Z,71nm,1.9s
DGZ   Jazzator, Alta     91.25 320⇓iP      P       05 29 32.2 +1.6
DGZ                                 pmax   pmax
      comp=Z,7.0nm,1.6s
FXWY  Fox Creek          91.83  46 eP      P       05 29 33.4 -0.1
      comp=Z,5.8nm,1.6s
BOZ   Bozeman (W)        91.86  44 eP      P       05 29 33.9 +0.4
      comp=Z,26nm,1.6s
BOZ   Bozeman (W)        91.86  44 eP      P       05 29 33.9 +0.4
BOZ                                 pmax   pmax
      comp=Z,26nm,1.6s
BOZ   Bozeman (W)        91.86  44  P      P       05 29 33.6 +0.1
      baz=257
REDW  Red Top Meadow     91.89  46 eP      P       05 29 35.3 +1.4
      comp=Z,26nm,1.5s
IMW   Indian Meadow      91.95  46 eP      P       05 29 34.1  0.0
      comp=Z,31nm,1.8s
YHB   Horse Butte        91.96  45 eP      P       05 29 35.8 +1.7
      comp=Z,16nm,1.5s
HRY   Holter Researc     91.98  43 eP      P       05 29 34.1 +0.1
MOOW  Moose Ponds        92.05  46 eP      P       05 29 36.3 +1.8
      comp=Z,9.8nm,1.5s
YMR   Madison River      92.10  45 eP      P       05 29 34.4 -0.3
      comp=Z,31nm,1.8s
LOHW  Long Hollow        92.12  46 eP      P       05 29 36.6 +1.7
      comp=Z,24nm,1.9s
PV14  Lion Creek, Pa     92.18  52 eP      P       05 29 36.5 +1.2
      comp=Z,22nm,1.6s
PV17  East Wray Mesa     92.20  52 eP      P       05 29 35.0 -0.4
      comp=Z,26nm,1.6s
PV21  Cone Mtn., Par     92.25  51 eP      P       05 29 35.9 +0.3
      comp=Z,35nm,1.7s
PV04  Paradox Valley     92.27  52 eP      P       05 29 35.8 +0.2
      comp=Z,40nm,1.8s
PV11  David Mesa, Pa     92.28  52 eP      P       05 29 36.8 +1.1
      comp=Z,56nm,2.0s
BW06  Boulder Array      92.69  47 eP      P       05 29 37.7 +0.2
      comp=Z,22nm,1.8s
BW06  Boulder Array      92.69  47  P      P       05 29 38.5 +1.0
      baz=258
PD31  Pinedale Array     92.69  47 eP      P       05 29 36.2 -1.3
      comp=Z,20nm,1.8s
PDAR  Pinedale Array     92.69  47 eP      P       05 29 37.1 -0.4
PDAR  Pinedale Array     92.69  47  P      P       05 29 36.5 -1.0
      comp=Z,1.1nm,0.8s,baz=231,slow=2.9,SNR=7.2
O20A  White River Ci     93.12  50  P      P       05 29 41.3 +1.8
      baz=259
EGMT  Eagleton           93.64  42 eP      P       05 29 41.5 -0.1
      comp=Z,32nm,1.5s
EGMT  Eagleton           93.64  42  P      P       05 29 43.2 +1.5
      baz=258
ZAA1  Zalesovo Array     93.85 324 eP      P       05 29 41.0 -1.3
ZALV  Zalesovo Beam      93.85 324 eP      P       05 29 41.1 -1.1
ZALV  Zalesovo Beam      93.85 324 eP      P       05 29 41.2 -1.1
ZALV  Zalesovo Beam      93.85 324  P      P       05 29 41.0 -1.3
      comp=Z,0.6nm,0.5s,baz=104,slow=4.9,SNR=6.5
MK01  Makanchi Array     93.92 317 eP      P       05 29 42.8 -0.1
MK31  Makanchi Array     93.93 317 eP      P       05 29 42.0 -0.9
      comp=Z,14nm,1.5s
MK31  Makanchi Array     93.93 317 eP      P       05 29 42.0 -0.9
MK31                                pmax   pmax
      comp=Z,14nm,1.5s
MK32  Makanchi Array     93.93 317 eP      P       05 29 42.5 -0.3
MKAR  Makanchi Array     93.93 317 eP      P       05 29 42.0 -0.9
      comp=Z,80nm,1.7s
MKAR  Makanchi Array     93.93 317 eP      P       05 29 42.0 -0.9
MKAR                                pmax   pmax
      comp=Z,80nm,1.7s
MKAR  Makanchi Array     93.93 317  P      P       05 29 42.5 -0.3
      comp=Z,1.6nm,0.6s,baz=88,slow=6.4,SNR=7.7
MAKZ  Makanchi           94.14 317 eP      P       05 29 42.9 -0.9
      comp=Z,26nm,1.6s
YKA   Yellowknife Ar     94.30  27  P      P       05 29 42.6 -1.5
      comp=Z,0.4nm,0.7s,baz=257,slow=4.4,SNR=4.5
YKB5  Yellowknife Ar     94.30  27 eP      P       05 29 42.6 -1.5
LTX   Lajitas            94.89  61 eP      P       05 29 47.7 -0.1
LTX   Lajitas            94.89  61 eP      P       05 29 47.7 -0.1
TXAR  Lajitas Array      94.89  61  P      P       05 29 47.7 -0.1
      comp=Z,0.1nm,0.4s,baz=247,slow=4.6,SNR=2.9
NVS   Novosibirsk        94.94 325 eP      P       05 29 49.0 +1.8
KURK  Kurchatov          96.99 320 eP      P       05 29 57.2 +0.5
KURK  Kurchatov          96.99 320⇑iP      P       05 29 54.4 -2.3
KURK                                pmax   pmax
      comp=Z,8.0nm,1.7s
KURBB Kurchatov Arra     97.03 320  P      P       05 29 57.2 +0.3
      comp=Z,0.3nm,0.6s,baz=101,slow=3.9,SNR=4.2
KSH   Kashi              97.28 309  P      Pdif    05 30 02.4 +3.9
KSH                                 pP     pwP     05 30 05.7 +1.5
PRGR  Permogore         113.88 333 eP      Pdif    05 31 12.1 +0.5
PRGR                                pmax   pmax
      comp=Z,6.0nm,0.6s
ARA0  ARCESS Array S    116.27 346 ePKPdf  PKiKP   05 35 06.0 -2.0
ARCES ARCESS Array B    116.27 346  PKP    PKiKP   05 35 06.0 -2.0
      comp=Z,2.0nm,0.9s,baz=42,slow=1.5,SNR=2.8
NB200 NORSAR Array S    126.65 345 ePKPdf  PKPdf   05 35 25.1 -3.1
NOA   NORSAR Array B    126.65 345  PKP    PKPdf   05 35 25.1 -3.1
      comp=Z,0.7nm,0.8s,baz=30,slow=1.9,SNR=2.7
KEST  Kesra             147.72 324  PKPbc  PKPbc   05 36 10.8 +0.4
      comp=Z,4.3nm,0.8s,baz=32,slow=19,SNR=2.1
ESDC  Sonseca Array     150.01 345  PKPbc  PKPbc   05 36 14.5 -1.6
      comp=Z,0.2nm,0.3s,baz=354,slow=5.3,SNR=2.8
TORD  Torodi Ar. Bea    165.10 281  PKPab  PKPab   05 37 26.0 -1.3
      comp=Z,1.0nm,1.1s,baz=100,slow=4.5,SNR=2.5
TOA1  Torodi Ar. Sit    165.11 281 ePKPab  PKPab   05 37 26.0 -1.4
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*IDC **06** 05:17:44.6±0.9, 11°.41S×165°.23E, h0km, mb4.3/10, mb1 4.5/12, mb1mx4.1/49, mbtmp4.3/12, ML4.2/2, Error ellipse: s-maj=34.8km s-min=20.8km az=142.0*

*ISCJB **06** 05:17:47.9±0.7, 11°.6S±0°.1×165°.2E±0°.1, h34km, mb4.2/10, Error ellipse: s-maj=15.9km s-min=14.6km az=42.4*

ISC 06 05:17:49.6±0.7**, 11°.5S**±0°.1×**165°.2E**±0°.1**, h34km, n14, σ0ˢ.81**/14**, mb4.3**/10**, Santa Cruz Islands**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC      h  m  s    ISC
HNR   Honiara             5.55 291  Pn     Pn      05 19 09.3 -0.6
      18nm,0.3s,baz=104,slow=12,SNR=1.6
DZM   Mont Dzumac        10.62 174  Pn     Pn      05 20 19.0 -0.6
      0.6nm,0.3s,baz=18,slow=20,SNR=3.0
STKA  Stephens Creek     29.78 223  P      P       05 23 54.8 +1.4
      3.0nm,0.7s,baz=50,slow=9.7,SNR=3.0
WRA   Warramunga Arr     30.85 250  P      P       05 24 02.2 -0.7
      8.6nm,1.0s,baz=84,slow=9.1,SNR=3.5
ASAR  Alice Springs      32.14 244  P      P       05 24 13.2 -1.0
      2.9nm,0.7s,baz=70,slow=9.6,SNR=4.2
FITZ  Fitzroy Crossi     38.76 255  P      P       05 25 11.1 -0.1
      2.5nm,0.7s,baz=82,slow=7.1,SNR=1.7
ILAR  Eielson Array      84.07  19  P      P       05 30 16.9 +0.4
      1.4nm,0.8s,baz=233,slow=5.3,SNR=4.5
NVAR  Mina Array Bea     86.69  50  P      P       05 30 30.1 -0.4
      2.1nm,1.0s,baz=236,slow=6.4,SNR=3.1
MKAR  Makanchi Array     93.46 317  P      P       05 31 02.3 +0.4
      1.2nm,0.7s,baz=100,slow=6.4,SNR=3.6
ZALV  Zalesovo Beam      93.58 324  P      P       05 31 02.5 +0.4
      1.1nm,0.7s,baz=93,slow=2.9,SNR=3.4
YKA   Yellowknife Ar     95.58  27  P      P       05 31 10.4 -0.7
      0.9nm,0.9s,baz=255,slow=4.5,SNR=6.1
TXAR  Lajitas Array      96.49  61  P      P       05 31 15.9 -0.3
      0.2nm,0.9s,baz=234,slow=6.2,SNR=2.7
ARCES ARCESS Array B    116.60 345  PKP    PKiKP   05 36 30.5 +0.8
      2.2nm,1.0s,baz=45,slow=0.1,SNR=3.1
TORD  Torodi Ar. Bea    163.80 278  PKP    PKPdf   05 37 51.3 +1.0
      0.8nm,1.0s,baz=42,slow=1.1,SNR=3.7
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*IDC **06** 05:18:16.4±0.5, 11°.18S×165°.73E, h0km, mb4.4/21, mb1 4.5/23, mb1mx4.4/47, mbtmp4.4/23, ML4.8/2, Error ellipse: s-maj=16.8km s-min=14.3km az=96.0*

*NEIC **06** 05:18:17.9±0.2, 11°.18S×165°.72E, h10km, mb4.8/13, Error ellipse: s-maj=6.3km s-min=5.1km az=103.0*

*ISCJB **06** 05:18:19.1±0.3, 11°.24S±0°.04×165°.65E±0°.05, h30km, mb4.5/30, Error ellipse: s-maj=7.7km s-min=6.0km az=163.0*

ISC 06 05:18:21.0±0.4**, 11°.16S**±0°.06×**165°.69E**±0°.07**, h30km, n70, σ0ˢ.85**/76**, mb4.6**/30**, Santa Cruz Islands**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC      h  m  s    ISC
HNR   Honiara             5.91 286 ePn     Pn      05 19 45.6 -0.9
HNR                                ePn     Pn      05 19 46.3 -0.2
HNR                                eSn     Sn      05 20 53.5 +0.3
HNR   Honiara             5.91 286  Pn     Pn      05 19 45.6 -0.9
      34nm,0.3s,baz=140,slow=7.9,SNR=2.8
HNR                                 Sn     Sn      05 20 53.5 +0.3
      13nm,0.3s,baz=23,slow=16,SNR=1.5
MARNC Mare, Loyalty      10.51 168 ePn     Pn      05 20 48.5 -1.2
DZM   Mont Dzumac        10.88 176 ePn     Pn      05 20 54.6 -0.2
DZM                                 Sn     Sn      05 22 56.5 +0.9
DZM   Mont Dzumac        10.88 176  Pn     Pn      05 20 53.7 -1.1
      6.1nm,0.3s,baz=313,slow=10,SNR=10
DZM                                 Sn     Sn      05 22 56.5 +0.9
      0.3nm,0.3s,baz=161,slow=23,SNR=1.3
ONTNC Ouen Toro          11.11 176 eSn     Pn      05 20 58.2 +0.3
PINNC Pines Island,      11.52 172 eSn     Pn      05 21 05.8 +2.4
CTA   Charters Tower     20.70 242  P      P       05 22 58.9 -0.1
      20nm,1.0s,baz=70,slow=16,SNR=3.3
CTAO  Charters Tower     20.70 242 eP      P       05 22 58.1 -0.9
      24nm,0.9s
COEN  Coen               22.15 260 eP      P       05 23 15.4 +0.8
      36nm,1.1s
ARMA  Armidale           23.20 212 eP      P       05 23 24.8 -0.8
      14nm,0.9s
URZ   Urewera            28.86 161 eP      P       05 24 16.4 -0.5
URZ                                eP      P       05 24 17.3 +0.4
URZ   Urewera            28.86 161  P      P       05 24 16.4 -0.5
      9.2nm,0.8s,baz=329,slow=15,SNR=2.6
H11S2 WAKE ISLAND Hy     29.48   2  T      T       05 55 41.0
      baz=181,slow=74
H11S3 WAKE ISLAND Hy     29.48   2  T      T       05 55 41.4
      baz=181,slow=74
H11S1 WAKE ISLAND Hy     29.49   2  T      T       05 55 42.8
      baz=181
BKZ   Black Stump Fm     29.51 163 eP      P       05 24 22.6 -0.2
      25nm,1.1s
STKA  Stephens Creek     30.32 223 eP      P       05 24 30.1 +0.1
      1.7nm,0.9s
STKA  Stephens Creek     30.32 223  P      P       05 24 30.1 +0.1
      4.2nm,0.6s,baz=44,slow=9.9,SNR=7.7
H11N1 WAKE ISLAND Hy     30.70   2  T      T       05 57 14.3
      baz=182
H11N3 WAKE ISLAND Hy     30.70   2  T      T       05 56 56.6
      baz=182
H11N2 WAKE ISLAND Hy     30.72   2  T      T       05 57 03.1
      baz=182
WR1   Warramunga Arr     31.39 250 eP      P       05 24 38.2 -1.4
      31nm,1.0s
WRA   Warramunga Arr     31.39 250  P      P       05 24 38.2 -1.4
      6.1nm,0.7s,baz=83,slow=9.3,SNR=11
WRA                                 PcP    PcP     05 27 34.4 +1.4
      1.0nm,0.8s,baz=76,slow=2.5,SNR=4.0
ASAR  Alice Springs      32.70 243  P      P       05 24 49.5 -1.6
      2.0nm,0.7s,baz=66,slow=10,SNR=4.2
ASAR                                PcP    PcP     05 27 37.8 +1.3
      0.6nm,0.7s,baz=63,slow=2.6,SNR=3.0
RPZ   Rata Peaks         32.77 173  P      P       05 24 50.3 -1.1
      10nm,1.0s,baz=30,slow=8.1,SNR=2.7
RPZ                                 PcP    PcP     05 27 37.0 +0.7
      7.4nm,0.8s,baz=44,slow=12,SNR=3.4
FITZ  Fitzroy Crossi     39.30 255 eP      P       05 25 47.4 -0.2
      9.4nm,1.0s
FITZ  Fitzroy Crossi     39.30 255  P      P       05 25 47.4 -0.2
      3.5nm,0.6s,baz=86,slow=6.3,SNR=6.7
JHJ   Hachijo jima 2     50.49 332  P      P       05 27 15.5 -0.9
      68nm,0.5s,baz=280,slow=17,SNR=1.2
MJAR  Matsushiro Arr     54.05 333  P      P       05 27 42.9 +0.1
      1.8nm,0.7s,baz=172,slow=8.9,SNR=3.6
MAJO  Matsushiro         54.05 333 eP      P       05 27 42.9 +0.1
ASAJ  Asahikawa          58.88 341  P      P       05 28 16.9 -0.1
      3.6nm,0.7s,baz=163,slow=19,SNR=1.7
USRK  Ussuriysk Ar.      63.02 333  P      P       05 28 45.8 +0.6
      3.3nm,1.1s,baz=145,slow=5.3,SNR=2.5
IPM   Ipoh               66.19 280 eP      P       05 29 06.8 +0.3
      13nm,0.9s
VNDA  Vanda              66.38 181  P      P       05 29 07.0 +0.4
      2.1nm,0.9s,baz=354,slow=7.7,SNR=2.7
CMAR  Chiang Mai Arr     72.11 294  P      P       05 29 44.0 +0.8
      2.7nm,0.6s,baz=120,slow=4.6,SNR=6.8
SONA0 Songino Array      78.72 324 eP      P       05 30 21.6 +0.8
SONM  Songino Array      78.72 324  P      P       05 30 21.6 +0.8
      2.0nm,1.0s,baz=125,slow=7.6,SNR=4.1
BRLK  Bradley Lake       78.76  21 eP      P       05 30 21.0 +0.5
      10nm,0.9s
QSPA  South Pole Qui     78.85 180 ePcP    PcP     05 30 30.0 +0.2
BRDH  Bariadhala         79.90 296  P      P       05 30 28.3 +0.9
      9.9nm,0.5s,baz=108,slow=20,SNR=2.3
CAST  Castle Rocks       81.07  18 eP      P       05 30 33.5 +0.6
      6.0nm,0.8s
MDM   Murphy Dome        83.35  18 eP      P       05 30 45.5 +0.6
      5.2nm,0.8s
HDA   Harding Lake       83.37  19 eP      P       05 30 45.4 +0.5
      12nm,0.8s
IL1   Eielson Array      83.64  19 eP      P       05 30 46.1 -0.2
ILAR  Eielson Array      83.64  19  P      P       05 30 46.1 -0.2
      3.7nm,0.6s,baz=226,slow=5.0,SNR=23
ILB   Eielson Array      83.64  19 eP      P       05 30 45.6 -0.6
      4.6nm,0.6s
NVAR  Mina Array Bea     86.14  50  P      P       05 31 00.1 +0.4
      1.3nm,0.9s,baz=245,slow=6.5,SNR=3.1
MK32  Makanchi Array     93.57 317 eP      P       05 31 34.7 +0.4
MKAR  Makanchi Array     93.57 317  P      P       05 31 34.7 +0.4
      2.4nm,0.8s,baz=110,slow=6.6,SNR=5.5
MKAR                                PKKP   PKKPdf  05 48 39.6 -1.0
      0.6nm,0.5s,baz=273,slow=3.2,SNR=8.0
ZALV  Zalesovo Beam      93.61 324  P      P       05 31 34.4 +0.1
      1.0nm,0.7s,baz=151,slow=4.0,SNR=3.7
ZAA1  Zalesovo Array     93.62 324 eP      P       05 31 34.4 +0.1
PDAR  Pinedale Array     93.67  47  P      P       05 31 34.6 -0.5
      0.1nm,0.4s,baz=216,slow=4.5,SNR=2.3
YKA   Yellowknife Ar     95.10  27  P      P       05 31 39.6 -1.3
      0.5nm,0.6s,baz=258,slow=4.6,SNR=7.4
YKB5  Yellowknife Ar     95.10  27 eP      P       05 31 39.6 -1.3
LTX   Lajitas            95.93  61 eP      P       05 31 45.0 -0.6
TXAR  Lajitas Array      95.93  61  P      P       05 31 45.0 -0.6
      0.1nm,0.5s,baz=242,slow=5.2,SNR=4.8
ARA0  ARCESS Array S    116.43 345 ePKPdf  PKiKP   05 37 03.0 +1.6
ARCES ARCESS Array B    116.43 345  PKP    PKiKP   05 37 03.0 +1.6
      1.6nm,0.8s,baz=76,slow=5.1,SNR=5.9
LPAZ  La Paz            120.18 116  PKP    PKiKP   05 37 10.9  0.0
      1.0nm,0.7s,baz=283,slow=3.3,SNR=2.6
KVAR  Kislovodsk Arr    121.26 315  PKP    PKiKP   05 37 11.8 +0.2
      2.3nm,0.4s,baz=146,slow=18,SNR=2.3
CPUP  Villa Florida     123.99 132  PKP    PKPdf   05 37 14.8 -2.3
      0.8nm,0.6s,baz=217,slow=5.1,SNR=2.3
SDV   Santo Domingo     124.56  87  PKP    PKPdf   05 37 18.1 -0.6
      2.2nm,0.6s,baz=243,slow=4.5
BOSA  Boshof            125.00 223  PKP    PKiKP   05 37 20.2 +0.7
      1.9nm,0.7s,baz=148,slow=3.3,SNR=3.9
NB200 NORSAR Array S    126.80 345 ePKPdf  PKiKP   05 37 22.1 +0.1
NOA   NORSAR Array B    126.80 345  PKP    PKiKP   05 37 22.0 +0.1
      0.3nm,0.6s,baz=5.9,slow=4.3,SNR=2.5
KEST  Kesra             147.47 323  PKPbc  PKPbc   05 38 03.2 +0.5
      5.0nm,0.8s,baz=18,slow=3.2,SNR=4.0
ESDC  Sonseca Array     150.15 344  PKPbc  PKPbc   05 38 09.5 +0.1
      0.5nm,0.5s,baz=343,slow=4.0,SNR=3.2
TORD  Torodi Ar. Bea    164.23 279  PKP    PKPdf   05 38 22.7 +0.1
      1.0nm,0.9s,baz=63,slow=1.4,SNR=3.5
TORD                                PKPab  PKPab   05 39 15.7 -0.8
      1.7nm,1.2s,baz=92,slow=5.3,SNR=2.2
TOA1  Torodi Ar. Sit    164.23 279 ePKPdf  PKPdf   05 38 22.7 +0.1
TOA1                               ePKPab  PKPab   05 39 15.7 -0.8
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*IDC **06** 05:23:17.7±1.0, 10°.96S×165°.22E, h0km, mb4.0/14, mb1 4.2/16, mb1mx4.1/40, mbtmp4.1/16, ML4.3/2, Error ellipse: s-maj=28.2km s-min=18.0km az=126.0*

*NEIC **06** 05:23:19.5±0.4, 10°.95S×165°.20E, h10km, mb4.3/5, Error ellipse: s-maj=9.2km s-min=7.1km az=93.0*

*ISCJB **06** 05:23:20.5±0.5, 11°.05S±0°.06×165°.17E±0°.07, h31km, mb4.0/17, Error ellipse: s-maj=9.9km s-min=8.3km az=138.6*

ISC 06 05:23:22.5±0.7**, 10°.98S**±0°.09×**165°.22E**±0°.09**, h31km, n33, σ0ˢ.83**/28**, mb4.0**/17**, Santa Cruz Islands**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC      h  m  s    ISC
HNR   Honiara             5.42 286  Pn     Pn      05 24 40.7 -0.4
      15nm,0.3s,baz=143,slow=10,SNR=3.1
HNR                                 Sn     Sn      05 25 43.4 +0.9
      8.7nm,0.3s,baz=210,slow=11,SNR=2.1
DZM   Mont Dzumac        11.09 174  Pn     Pn      05 25 59.4 +0.4
      1.6nm,0.3s,baz=98,slow=15,SNR=2.4
ONTNC Ouen Toro          11.32 174 ePn     Pn      05 26 02.4 +0.2
MANU  Manus Island       19.82 295 eP      P       05 27 50.8  0.0
      67nm,0.9s
CTA   Charters Tower     20.38 241  P      P       05 27 57.9 +1.1
      18nm,0.8s,baz=63,slow=14,SNR=7.2
CTAO  Charters Tower     20.38 241 eP      P       05 27 56.4 -0.4
      30nm,0.9s
COEN  Coen               21.73 260 eP      P       05 28 11.7 +0.3
      8.9nm,1.1s
H11S2 WAKE ISLAND Hy     29.32   3  T      T       05 59 55.5
      baz=183
H11S3 WAKE ISLAND Hy     29.33   3  T      T       05 59 57.6
      baz=183,slow=74
H11S1 WAKE ISLAND Hy     29.34   3  T      T       05 59 57.5
      baz=183,slow=74
BKZ   Black Stump Fm     29.81 162 eP      P       05 29 26.5 -0.3
      19nm,1.2s
STKA  Stephens Creek     30.14 223  P      P       05 29 30.1 +0.4
      1.5nm,0.7s,baz=18,slow=11,SNR=3.2
H11N1 WAKE ISLAND Hy     30.55   3  T      T       06 01 24.6
      baz=182,slow=74
H11N3 WAKE ISLAND Hy     30.55   3  T      T       06 01 26.7
      baz=182,slow=74
H11N2 WAKE ISLAND Hy     30.57   3  T      T       06 01 25.4
      baz=182
WR1   Warramunga Arr     31.02 250 eP      P       05 29 36.6 -1.1
      2.9nm,0.8s
WRA   Warramunga Arr     31.02 250  P      P       05 29 36.6 -1.1
      1.0nm,0.6s,baz=79,slow=8.9,SNR=7.5
AS31  Alice Springs      32.36 243 eP      P       05 29 49.0 -0.4
      2.2nm,1.1s
ASAR  Alice Springs      32.36 243  P      P       05 29 47.9 -1.6
      5.2nm,0.9s,baz=73,slow=9.6,SNR=14
MJAR  Matsushiro Arr     53.68 333  P      P       05 32 40.3 -1.2
      0.6nm,0.3s,baz=163,slow=6.7,SNR=3.0
MAJO  Matsushiro         53.68 333 eP      P       05 32 40.3 -1.2
ASAJ  Asahikawa          58.57 341  P      P       05 33 16.2  0.0
      3.6nm,0.7s,baz=156,slow=20,SNR=3.5
USRK  Ussuriysk Ar.      62.66 334  P      P       05 33 44.6 +0.5
      2.4nm,0.8s,baz=186,slow=6.8,SNR=5.2
KLR   Kul'dur            66.80 337  P      P       05 34 11.1 +0.1
      1.9nm,0.9s,baz=96,slow=4.0,SNR=4.9
CMAR  Chiang Mai Arr     71.62 294  P      P       05 34 42.1 +0.5
      0.4nm,0.3s,baz=120,slow=3.6,SNR=2.3
SONA0 Songino Array      78.31 324 eP      P       05 35 20.1 +0.3
SONM  Songino Array      78.31 324  P      P       05 35 20.1 +0.3
      0.5nm,0.8s,baz=116,slow=3.4,SNR=3.1
ILAR  Eielson Array      83.62  19  P      P       05 35 47.1 -0.4
      0.7nm,0.7s,baz=231,slow=5.0,SNR=9.3
NVAR  Mina Array Bea     86.38  50  P      P       05 36 01.4 -0.9
      0.1nm,0.3s,baz=248,slow=4.8,SNR=2.3
MK32  Makanchi Array     93.13 317 eP      P       05 36 33.6 +0.1
MKAR  Makanchi Array     93.13 317  P      P       05 36 33.6 +0.1
      0.7nm,0.8s,baz=89,slow=6.4,SNR=4.6
YKA   Yellowknife Ar     95.16  27  P      P       05 36 44.1 +1.6
      0.2nm,0.6s,baz=255,slow=4.9,SNR=3.6
YKB5  Yellowknife Ar     95.16  27 eP      P       05 36 44.0 +1.6
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*IDC **06** 05:24:27.9±0.4, 11°.50S×165°.46E, h0km, mb4.7/27, mb1 4.8/29, mb1mx4.8/40, mbtmp4.7/29, ML4.7/2, Error ellipse: s-maj=15.4km s-min=13.1km az=96.0*

*NEIC **06** 05:24:29.6±0.1, 11°.47S×165°.35E, h10km, mb5.1/102, Error ellipse: s-maj=4.4km s-min=3.5km az=144.0*

*ISCJB **06** 05:24:30.2±0.2, 11°.56S±0°.03×165°.30E±0°.03, h24km, mb5.0/136, Error ellipse: s-maj=5.0km s-min=4.3km az=169.7*

ISC 06 05:24:31.8±0.3**, 11°.56S**±0°.05×**165°.41E**±0°.06**, h24km, n284, σ1ˢ.07**/287**, mb5.1**/136**, 2C, Santa Cruz Islands**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC      h  m  s    ISC
HNR   Honiara             5.77 291 ePn     Pn      05 25 53.9 -2.1
HNR                                ePn     Pn      05 25 56.9 +0.8
HNR                                eSn     Sn      05 26 58.8 -2.8
HNR   Honiara             5.77 291  Pn     Pn      05 25 56.8 +0.8
      27nm,0.3s,baz=350,slow=10,SNR=3.7
HNR                                 Sn     Sn      05 26 58.8 -2.8
      15nm,0.3s,baz=218,slow=23,SNR=1.7
DZM   Mont Dzumac        10.50 175 ePn     Pn      05 27 01.4 +0.4
DZM                                eSn     Sn      05 28 55.8 -2.1
DZM   Mont Dzumac        10.50 175  Pn     Pn      05 27 00.4 -0.6
      5.4nm,0.3s,baz=334,slow=5.1,SNR=13
DZM                                 Sn     Sn      05 28 55.8 -2.1
      1.9nm,0.3s,baz=158,slow=20,SNR=2.1
ONTNC Ouen Toro          10.73 175 ePn     Pn      05 27 05.9 +1.8
ONTNC                              eSn     Sn      05 29 04.2 +0.7
PINNC Pines Island,      11.16 170 ePn     Pn      05 27 10.7 +0.7
MSVF  Nonsavu            13.68 118 ePn     Pn      05 27 46.8 +2.3
MANU  Manus Island       20.24 297 eP      P       05 29 05.6 +0.1
      78nm,0.9s
CTA   Charters Tower     20.27 243  P      P       05 29 05.7 -0.1
      18nm,1.0s,baz=72,slow=14,SNR=6.8
CTAO  Charters Tower     20.27 243 eP      Pn      05 29 06.5 -1.4
      56nm,1.0s
COEN  Coen               21.81 261 eP      P       05 29 22.3 -0.2
      24nm,1.0s
ARMA  Armidale           22.71 212 eP      P       05 29 32.7 +0.6
      35nm,1.0s
URZ   Urewera            28.57 160  P      P       05 30 26.5 +0.5
      11nm,0.8s,baz=262,slow=5.3,SNR=6.8
BKZ   Black Stump Fm     29.21 162 eP      P       05 30 33.7 +2.0
      37nm,1.1s
STKA  Stephens Creek     29.84 224 eP      P       05 30 37.8 +0.4
      1.8nm,0.9s
STKA  Stephens Creek     29.84 224  P      P       05 30 38.0 +0.6
      6.4nm,0.8s,baz=40,slow=8.6,SNR=9.5
H11S2 WAKE ISLAND Hy     29.89   2  T      T       06 02 43.9
      baz=183
H11S3 WAKE ISLAND Hy     29.89   2  T      T       06 02 36.1
      baz=183
H11S1 WAKE ISLAND Hy     29.91   2  T      T       06 02 38.1
      baz=183
WRAB  Tennant Creek      30.99 251 eP      P       05 30 47.4 -0.3
      29nm,0.9s
WB2   Warramunga Arr     30.99 251 eP      P       05 30 47.2 -0.5
WR1   Warramunga Arr     31.00 251 eP      P       05 30 47.2 -0.5
      42nm,0.9s
WRA   Warramunga Arr     31.00 251  P      P       05 30 47.2 -0.5
      25nm,0.8s,baz=81,slow=9.1,SNR=33
H11N1 WAKE ISLAND Hy     31.11   3  T      T       06 04 09.6
      baz=182
H11N3 WAKE ISLAND Hy     31.12   3  T      T       06 04 22.0
      baz=182
H11N2 WAKE ISLAND Hy     31.13   3  T      T       06 04 17.8
      baz=182
AS01  Alice Springs      32.23 244 eP      P       05 30 57.0 -1.5
AS31  Alice Springs      32.27 244 eP      P       05 30 57.3 -1.6
      2.6nm,1.0s
ASAR  Alice Springs      32.27 244  P      P       05 30 58.0 -1.0
      6.0nm,0.8s,baz=74,slow=9.5,SNR=14
ASAR                                PcP    PcP     05 33 47.2 +0.1
      1.1nm,0.7s,baz=77,slow=3.0,SNR=6.0
RPZ   Rata Peaks         32.41 172  P      P       05 31 01.1 +1.3
      12nm,0.7s,baz=158,slow=1.2,SNR=4.9
MBWA  Marble Bar         44.72 252 eP      P       05 32 43.2 -0.3
      15nm,0.8s
MJAR  Matsushiro Arr     54.28 333  P      P       05 33 54.8 -1.3
      1.0nm,0.3s,baz=172,slow=8.5,SNR=4.5
MAJO  Matsushiro         54.28 333 eP      P       05 33 54.8 -1.3
JNU   Nakatsue           55.30 325 eP      P       05 34 03.3 -0.4
      115nm,1.8s
JNU   Nakatsue           55.30 325  P      P       05 34 03.3 -0.4
      11nm,0.6s,baz=196,slow=20,SNR=6.1
ASAJ  Asahikawa          59.17 341  P      P       05 34 30.5 -0.2
      17nm,0.7s,baz=223,slow=10,SNR=11
KSRS  Korea Array        60.12 326  P      P       05 34 37.0 -0.3
      2.5nm,0.7s,baz=139,slow=6.7,SNR=7.5
KSAR  Wonju Array Be     60.13 326  P      P       05 34 37.0 -0.4
NJ2   Nanjing            62.16 316 eP      P       05 34 50.8 -0.5
NJ2                                 pmax   pmax
      comp=Z,150nm,0.6s
USRK  Ussuriysk Ar.      63.26 334  P      P       05 34 58.8 +0.4
      comp=Z,6.4nm,0.7s,baz=129,slow=6.8,SNR=12
MDJ   Mudanjiang         64.65 332  P      P       05 35 07.2 -0.4
MDJ                                 pmax   pmax
      comp=Z,23nm,1.2s
MDJ                                 pmax   pmax
      comp=Z,820nm,14.7s
PETK  Petropavlovsk-     64.75 355  P      P       05 35 07.6 -0.4
      comp=Z,7.7nm,0.8s,baz=140,slow=9.4,SNR=6.8
PEA1  Petropavlovsk-     64.75 355 eP      P       05 35 07.6 -0.5
CN2   Changchun          66.01 329 eP      P       05 35 16.5 +0.1
CN2                                 pmax   pmax
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       comp=Z,20nm,0.6s
SKNT   Sakolnakorn        67.00 294  P      P       05 35 23.9 +0.6
       comp=Z,6.2nm,0.7s
KLR    Kul'dur            67.40 337  P      P       05 35 25.2 +0.1
       comp=Z,9.7nm,1.1s,baz=113,slow=4.1,SNR=12
NONG   Nongkai            68.13 295  P      P       05 35 32.6 +2.2
       comp=Z,0.2nm,0.9s,comp=Z,211nmcomp=Z,21µm
GYA    Guiyang            68.43 305⇑iP      P       05 35 32.7 +0.4
GYA                                  PP     PP      05 38 07.2 +3.5
GYA                                  S      S       05 44 41.0 +8.0
GYA                                  SKS    SKSac   05 45 28.4 -1.9
GYA    Guiyang            68.43 305  SS     SS      05 48 59.5 +2.2
GYA                                  pmax   pmax
       comp=Z,20nm,0.9s
GYA                                  pmax   pmax
       comp=Z,120nm,6.8s
GYA                                  LR     LR
       comp=N,550nm,18.2s
GYA                                  LR     LR
       comp=E,580nm,18.6s
GYA                                  LR     LR
       comp=Z,560nm,18.0s
PBKT   Sadao Pong         69.57 293 eP      P       05 35 36.0 -3.3
       comp=Z,8.4nm,1.1s
XAN    Xi'an              70.22 313  P      P       05 35 43.4 +0.2
XAN                                  pP     pwP     05 35 53.8 -2.6
XAN                                  sP     PcP     05 35 59.1 -5.8
XAN                                  pmax   pmax
       comp=Z,15nm,0.9s
XAN    Xi'an              70.22 313 eP      P       05 35 42.4 -0.8
       comp=Z,12nm,0.8s
KMI    Kunming            71.11 302  P      P       05 35 50.2 +1.3
KMI                                  pP     pP      05 35 55.6 +0.8
KMI                                  sP     pwP     05 35 59.5 -2.8
KMI                                  pmax   pmax
       comp=Z,16nm,1.3s
CM01   Chiang Mai Arr     71.99 294 eP      P       05 35 54.8 +0.7
HHC    Hu-ho-hao-te       72.01 320 eP      P       05 35 56.1 +2.2
HHC                                  pmax   pmax
       comp=Z,8.0nm,1.1s
CM31   Chiang Mai Arr     72.02 294 eP      P       05 35 52.9 -1.3
       comp=Z,8.8nm,0.4s
CMAR   Chiang Mai Arr     72.02 294  P      P       05 35 54.9 +0.6
       comp=Z,4.7nm,0.6s,baz=127,slow=5.1,SNR=23
CMMT   Chiang Mai         72.13 294  P      P       05 35 56.5 +1.6
CHTO   Chiang Mai         72.13 294  P      P       05 35 56.6 +1.6
       comp=Z,30nm,1.2s
CD2    Chengdu            72.65 308  P      P       05 35 58.2 +0.3
CD2                                  pmax   pmax
       comp=Z,20nm,0.6s
HIA    Hailar             72.65 331 eP      P       05 35 56.9 -0.5
       comp=Z,20nm,0.4s
LZH    Lanzhou            74.86 312 eP      P       05 36 12.2 +1.3
LZH                                  pP     pP      05 36 16.3 -0.5
LZH                                  sP     sP      05 36 19.6 +0.6
LZH                                  PP     PP      05 39 08.8  +10
LZH                                  pmax   pmax
       comp=Z,25nm,1.0s
LZH                                  pmax   pmax
       comp=Z,93nm,4.8s
LZH                                  LR     LR
       comp=N,570nm,16.3s
LZH                                  LR     LR
       comp=E,520nm,16.4s
LZH                                  LR     LR
       comp=Z,580nm,17.5s
SEY    Seymchan           74.95 354  P      P       05 36 09.8 -0.7
       comp=Z,2.3nm,0.6s,baz=164,slow=9.9,SNR=4.6
GAMB   Gambell            77.13  10 eP      P       05 36 23.4 +0.4
       comp=Z,15nm,1.0s
KDAK   Kodiak Island      77.18  22  P      P       05 36 22.7 -0.7
       comp=Z,10.0nm,1.0s,baz=273,slow=6.3,SNR=3.6
QSPA   South Pole Qui     78.45 180 eP      P       05 36 30.8 +0.2
       comp=Z,30nm,1.7s
SVW2   Sparrevohn         78.70  18 eP      P       05 36 32.0 +0.2
       comp=Z,12nm,1.0s
SONA0  Songino Array      78.89 324 eP      P       05 36 34.2 +1.0
SONM   Songino Array      78.89 324  P      P       05 36 34.2 +1.0
       comp=Z,3.8nm,0.8s,baz=144,slow=6.5,SNR=14
SONA1  Songino Array      78.89 324 eP      P       05 36 33.3  0.0
GTA    Gaotai             79.18 314 ⇑P      P       05 36 36.3 +1.2
GTA                                  pP     pP      05 36 41.5 +0.5
GTA                                  sP     PcP     05 36 43.7 +0.3
GTA                                  pmax   pmax
       comp=Z,10.0nm,1.3s
GTA                                  LR     LR
       comp=N,430nm,17.5s
GTA                                  LR     LR
       comp=E,440nm,17.5s
GTA                                  LR     LR
       comp=Z,860nm,19.7s
BILL   Bilibino           79.39   0 eP      P       05 36 35.1 -0.3
       comp=Z,21nm,0.9s
BRDH   Bariadhala         79.82 296  P      P       05 36 39.0 +0.3
       comp=Z,23nm,0.7s,baz=82,slow=8.5,SNR=4.1
SUA    Susitna One        80.52  20 eP      P       05 36 41.0 -0.8
       comp=Z,8.2nm,1.0s
CAST   Castle Rocks       81.54  18 eP      P       05 36 46.1 -1.0
       comp=Z,8.2nm,0.7s
DIV    Divide             82.01  22 eP      P       05 36 48.6 -1.1
       comp=Z,19nm,0.9s
KLU    Klutina            82.20  21 eP      P       05 36 49.9 -0.8
       comp=Z,10nm,1.0s
RND    Reindeer           82.53  19 eP      P       05 36 51.7 -0.7
       comp=Z,7.1nm,0.8s
MCK    McKinley           82.74  19 eP      P       05 36 52.1 -1.2
       comp=Z,26nm,1.6s
BWN    Browne             82.89  18 eP      P       05 36 53.8 -0.3
       comp=Z,19nm,0.9s
IM3    Indian Mountai     83.01  16 eP      P       05 36 53.5 -1.2
HARP   HAARP              83.08  21 eP      P       05 36 55.7 +0.6
       comp=Z,19nm,0.9s
MLY    Manley             83.13  17 eP      P       05 36 54.1 -1.3
       comp=Z,17nm,1.6s
KMRM   Mail Ridge         83.24  47 eP      P       05 36 57.8 +1.2
       comp=Z,27nm,1.0s
H02S1  DAWSON INLET T     83.30  32  T      T       07 07 12.1
       SNR=1608
WRH    Wood River Hil     83.52  18 eP      P       05 36 56.4 -0.9
       comp=Z,9.5nm,0.8s
MDM    Murphy Dome        83.82  18 eP      P       05 36 58.4 -0.5
       comp=Z,10nm,0.8s
HDA    Harding Lake       83.84  19 eP      P       05 36 58.7 -0.3
       comp=Z,26nm,0.8s
HDA    Harding Lake       83.84  19  P      P       05 36 58.8 -0.2
       baz=227
TCOL   CIGO, UAF Yank     83.87  18  P      P       05 36 58.7 -0.5
       baz=226
COLA   College            83.88  18 eP      P       05 36 58.8 -0.3
       comp=Z,19nm,0.8s
O02D   Mt. Diablo Mer     83.89  47  P      P       05 37 00.1 +0.2
       baz=250,SNR=8.6
RIDG   Independ'e Rid     84.07  20 eP      P       05 37 00.4 +0.1
       comp=Z,19nm,1.0s
ILAR   Eielson Array      84.10  19  P      P       05 36 59.7 -0.7
       comp=Z,6.8nm,0.6s,baz=237,slow=5.1,SNR=62
ILB    Eielson Array      84.10  19 eP      P       05 36 59.7 -0.7
       comp=Z,7.2nm,0.6s
IL1    Eielson Array      84.11  19 eP      P       05 36 59.3 -1.0
K02D   Willamette Mer     84.17  44  P      P       05 37 01.3  0.0
       baz=249
POKR   Poker Plat Res     84.17  18  P      P       05 36 60.0 -0.7
       baz=226
WDC    Whiskeytown Da     84.20  47 eP      P       05 37 01.7 +0.3
       comp=Z,19nm,1.5s
N02D   Trinity Center     84.22  46  P      P       05 37 01.8 +0.2
       baz=249
M02C   Callahan           84.27  46  P      P       05 37 01.9 +0.1
       baz=249,SNR=5.8
SCRK   Sand Creek         84.51  20 eP      P       05 37 02.9 +0.3
       comp=Z,24nm,1.1s
ORV    Oroville           84.60  48 eP      P       05 37 03.3 -0.1
       comp=Z,12nm,1.1s
HUMO   Hull Mountain      84.63  45 eP      P       05 37 04.1 +0.6
       comp=Z,14nm,1.0s
O03E   Paynes Creek       84.64  47  P      P       05 37 03.4 -0.3
       baz=250,SNR=13
AFDM   Forest Hills D     84.79  49 eP      P       05 37 04.5  0.0
       comp=Z,18nm,1.1s
CMB    Columbia Colle     84.93  50 eP      P       05 37 05.2  0.0
       comp=Z,9.4nm,1.0s
L04D   Klamath Falls      84.94  45  P      P       05 37 05.3  0.0
       baz=250
M04C   Macdoel            85.12  46  P      P       05 37 06.2  0.0
       baz=250,SNR=5.8
VES    Vestal, Richgr     85.23  52  P      P       05 37 06.3 -0.4
       baz=252
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I04A   Tendick Farm,      85.42  44  P      P       05 37 07.3 -0.2
       baz=249
J04D   Umpqua Nationa     85.43  44  P      P       05 37 07.7 -0.1
       baz=250
BEKR   Beckworth          85.54  48 eP      P       05 37 08.5 +0.1
       comp=Z,13nm,1.0s
ISA    Isabella, Lake     85.65  52 eP      P       05 37 09.5 +0.6
       comp=Z,10nm,1.0s
ISA    Isabella, Lake     85.65  52  P      P       05 37 07.9 -1.0
       baz=253,SNR=5.2
MDPB   Devils Postpil     85.78  50 eP      P       05 37 09.8  0.0
       comp=Z,17nm,1.0s
WAKR   Walker             85.78  50 eP      P       05 37 10.1 +0.5
       comp=Z,19nm,1.2s
EDW2   Edwards Air Fo     85.79  53  P      P       05 37 09.4 -0.2
       baz=253,SNR=6.6
OMMB   Old Mammoth Mi     85.83  50 eP      P       05 37 09.5 -0.6
       comp=Z,15nm,1.3s
PNTR   Pine Nut           85.85  49 eP      P       05 37 09.7 -0.3
       comp=Z,14nm,1.0s
BFSC   Mount Baldy Ra     85.87  54  P      P       05 37 09.4 -0.7
       baz=253,SNR=5.0
J05D   Fort Rock, OR      86.05  45  P      P       05 37 11.0 +0.2
       baz=250
MURC   Murrieta           86.06  55  P      P       05 37 10.7 -0.2
       baz=254
YERR   Yerington          86.08  49 eP      P       05 37 10.7 -0.4
       comp=Z,11nm,1.2s
DAWY   Dawson             86.15  21 eP      P       05 37 10.7  0.0
       comp=Z,6.8nm,0.8s
CWC    Cottonwood Cre     86.18  52  P      P       05 37 11.2 -0.4
       baz=253
PAHR   Pah Rah Range      86.20  48 eP      P       05 37 10.7 -0.9
       comp=Z,15nm,1.1s
LRMC   Laurel Mtn Rad     86.21  53  P      P       05 37 11.8  0.0
       baz=253
MOD    Modoc Plateau      86.24  46 eP      P       05 37 10.9 -0.9
       comp=Z,12nm,1.0s
TIN    Tinemaha, Big      86.25  51  P      P       05 37 12.0 +0.1
       baz=253
E04D   Cinebar            86.30  41  P      P       05 37 12.0 +0.3
       baz=249
D03D   Eldon              86.32  40  P      P       05 37 12.1 +0.3
       baz=249
I05D   Terrebonne, OR     86.33  44  P      P       05 37 12.2 +0.1
       baz=250
PINE   Pine Mountain      86.42  44 eP      P       05 37 13.3 +0.6
       comp=Z,18nm,1.1s
MONP2  Monument Peak      86.48  56  P      P       05 37 12.4 -0.8
       baz=254,SNR=7.4
DAC    Darwin (Calif)     86.51  52 eP      P       05 37 13.3  0.0
       comp=Z,8.8nm,1.1s
MPMC   Manual Prospec     86.53  52  P      P       05 37 12.7 -0.7
       baz=253,SNR=6.9
NV01   Mina Array Sit     86.61  50 eP      P       05 37 13.2 -0.6
NVAR   Mina Array Bea     86.61  50  P      P       05 37 13.6 -0.1
       comp=Z,8.7nm,0.9s,baz=234,slow=7.7,SNR=28
PFO    Pinyon Flats O     86.65  55 eP      P       05 37 13.0 -1.0
       comp=Z,6.8nm,1.1s
PFO    Pinyon Flats O     86.65  55  P      P       05 37 13.7 -0.2
       baz=254
XPFO   Pion Flat          86.65  55 eP      P       05 37 13.6 -0.4
       comp=Z,7.4nm,1.1s
IKP    In-Ko-Pah, Jac     86.67  56  P      P       05 37 14.1 +0.1
       baz=254
NV11   Mina Array Sit     86.72  50 eP      P       05 37 14.2 -0.1
       comp=Z,1.2nm,1.1s
F05D   White Salmon       86.78  42  P      P       05 37 14.3 +0.1
       baz=250
GSC    Goldstone, Bar     86.85  53  P      P       05 37 14.6 -0.3
       baz=254
GRAC   Grapevine Rang     86.89  51  P      P       05 37 14.9 -0.1
       baz=253
KVN    Kaiserville        86.94  49 eP      P       05 37 14.7 -0.7
       comp=Z,12nm,1.0s
A04D   Lummi Island       86.99  39  P      P       05 37 15.6 +0.6
       baz=249
SWSC   Sam W. Stewart     87.00  56  P      P       05 37 16.0 +0.5
       baz=254
HEC    Hector,Ludlow      87.08  54  P      P       05 37 15.9 -0.1
       baz=254
BELC   Belle Mtn. Jos     87.12  55  P      P       05 37 15.6 -0.7
       baz=254,SNR=8.6
FURC   Furnace Creek,     87.13  52  P      P       05 37 15.7 -0.3
       baz=254,SNR=5.3
B05A   Bryant             87.20  40  P      P       05 37 16.4 +0.3
       baz=249
SHOC   Shoshone, Teco     87.43  53  P      P       05 37 17.7 +0.2
       baz=254
BC3    Big Chuckawall     87.47  55  P      P       05 37 17.9  0.0
       baz=254
WVOR   Wild Horse Val     87.58  46 eP      P       05 37 18.6 +0.3
       comp=Z,24nm,1.4s
GMRC   Granite Mounta     87.61  54  P      P       05 37 18.0 -0.6
       baz=254,SNR=7.6
TPNV   Topopah Spring     87.74  52  P      P       05 37 19.2  0.0
       baz=254
GLA    Glamis             87.81  56  P      P       05 37 19.9 +0.4
       baz=255
IRM    Iron Mountain      87.85  55  P      P       05 37 19.2 -0.4
       baz=255,SNR=6.8
J08A   Circle Bar Ran     87.98  45 eP      P       05 37 20.4 +0.2
       comp=Z,9.9nm,0.9s
BMN    Battle Mountai     88.00  48 eP      P       05 37 20.6 +0.2
LDFC   Landfair           88.12  54 eP      P       05 37 21.7 +0.7
       comp=Z,30nm,1.0s
HAWA   Hanford            88.22  42 eP      P       05 37 21.5 +0.4
       comp=Z,11nm,1.0s
Y12C   Blythe             88.24  55 eP      P       05 37 20.8 -0.7
       comp=Z,15nm,1.0s
Y12C   Blythe             88.24  55  P      P       05 37 21.2 -0.2
       baz=255,SNR=6.7
G08A   Pilot Rock         88.25  43 eP      P       05 37 21.6 +0.2
       comp=Z,12nm,1.0s
NEE2   Needles Airpor     88.43  54  P      P       05 37 22.7 +0.3
       baz=255
SHPR   Sheep Range        88.46  52 eP      P       05 37 22.4 -0.3
       comp=Z,18nm,1.4s
E08A   Dider Farm, El     88.56  42 eP      P       05 37 23.5 +0.9
       comp=Z,16nm,1.0s
113A   Mohawk Valley,     88.60  56 eP      P       05 37 23.3 +0.2
       comp=Z,7.8nm,1.0s
R11A   Troy Canyon, C     88.63  51 eP      P       05 37 23.4 -0.1
       comp=Z,11nm,1.2s
R11A   Troy Canyon, C     88.63  51  P      P       05 37 22.8 -0.6
       baz=254,SNR=12
PDMCI  Parker Dam,Lak     88.69  55  P      P       05 37 23.2 -0.3
       baz=255,SNR=6.8
D08A   Wollman Farm,      88.83  41 eP      P       05 37 24.2 +0.3
       comp=Z,36nm,2.0s
W13A   Hualapai Mount     89.10  54 eP      P       05 37 24.8 -0.9
       comp=Z,14nm,1.2s
214A   Organ Pipe Nat     89.19  57  P      P       05 37 26.6 +0.6
       baz=256
WMQ    Urumqi             89.22 315 eP      P       05 37 27.0 +1.1
BMO    Blue Mountains     89.23  44 eP      P       05 37 25.9  0.0
       comp=Z,38nm,2.0s
Y14A   Wickenburg         89.51  55 eP      P       05 37 27.9 +0.4
       comp=Z,16nm,1.5s
ELK    Elko               89.54  48 eP      P       05 37 27.9 +0.2
       comp=Z,11nm,1.3s
MFID   Camas Ranch        89.84  46 eP      P       05 37 29.1 +0.2
       comp=Z,7.2nm,1.1s
PSUT   Pine Spring        89.99  51 eP      P       05 37 29.1 -0.7
       comp=Z,9.3nm,1.0s
LCMT   Little Creek M     90.08  52 eP      P       05 37 30.1 -0.1
       comp=Z,14nm,1.0s
CCUT   Cedar City         90.12  52 eP      P       05 37 31.0 +0.5
       comp=Z,13nm,1.0s
SZCU   Shurtz Canyon      90.34  52 eP      P       05 37 32.3 +0.7
       comp=Z,17nm,1.1s
NEW    Newport            90.35  41  P      P       05 37 30.6 -0.5
       baz=253
KNB    Kanab              90.41  52 eP      P       05 37 32.6 +0.9
       comp=Z,21nm,1.2s
INK    Inuvik             90.49  19  P      P       05 37 30.1 -1.0
       comp=Z,0.5nm,0.5s,baz=225,slow=4.9,SNR=2.6
U15A   North Rim          90.68  53 eP      P       05 37 33.8 +0.6
       comp=Z,18nm,0.9s
HLID   Hailey             90.87  46 eP      P       05 37 34.4 +0.6
       comp=Z,8.1nm,0.9s
HLID   Hailey             90.87  46  P      P       05 37 34.4 +0.6
       baz=255
X16A   Lo Mia Camp, P     90.88  55 eP      P       05 37 35.0 +0.9
       comp=Z,8.2nm,0.9s
PKCU   Pink Cliffs        90.91  52 eP      P       05 37 35.7 +1.4
       comp=Z,21nm,1.0s
TUC    Tucson             90.94  57 eP      P       05 37 35.2 +0.9
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       comp=Z,7.0nm,1.0s
TUC    Tucson             90.94  57  P      P       05 37 34.9 +0.7
       baz=257
MTPU   Mount Pierson      91.14  52 eP      P       05 37 35.6 +0.2
       comp=Z,14nm,0.9s
DUG    Dugway, Tooele     91.19  49 eP      P       05 37 35.6 +0.3
       comp=Z,6.9nm,1.0s
DUG    Dugway, Tooele     91.19  49  P      P       05 37 35.3  0.0
       baz=256
WUAZ   Wupatki            91.19  54 eP      P       05 37 35.0 -0.4
       comp=Z,12nm,0.9s
WUAZ   Wupatki            91.19  54  P      P       05 37 36.0 +0.5
       baz=257
BGU    Big Grassy Mou     91.20  49 eP      P       05 37 34.6 -0.8
       comp=Z,8.4nm,0.9s
MSU    Marysvale          91.26  51 eP      P       05 37 36.8 +1.0
HVU    Hansel Valley      91.60  48 eP      P       05 37 37.7 +0.5
       comp=Z,18nm,1.0s
NLU    North Lily Min     91.68  50 eP      P       05 37 38.2 +0.5
       comp=Z,11nm,0.9s
SPUT   South Promonto     91.72  48 eP      P       05 37 38.2 +0.5
       comp=Z,6.3nm,0.9s
319A   Douglas            91.99  59 eP      P       05 37 40.5 +1.4
       comp=Z,9.5nm,0.9s
MPU    Maple Canyon       92.02  50 eP      P       05 37 40.3 +1.0
       comp=Z,9.3nm,1.2s
MSO    Missoula           92.03  43  P      P       05 37 38.4 -0.6
       baz=255
CTU    Camp Tracy         92.09  49 eP      P       05 37 39.1 -0.4
       comp=Z,8.3nm,1.0s
X18A   Snowflake          92.11  55 eP      P       05 37 40.5 +0.7
       comp=Z,8.2nm,1.0s
Q16A   Castle Valley      92.12  51 eP      P       05 37 40.1 +0.4
       comp=Z,20nm,1.5s
MCMT   McKenzie Canyo     92.28  45 eP      P       05 37 40.2 -0.1
JLU    Jordanelle         92.29  49 eP      P       05 37 41.4 +0.8
       comp=Z,7.8nm,1.0s
W18A   Petrified Fore     92.41  55  P      P       05 37 41.5 +0.4
       baz=258
TCUT   Toone Canyon       92.44  49 eP      P       05 37 40.9 -0.3
       comp=Z,9.4nm,0.9s
DLMT   Dillon             92.58  44 eP      P       05 37 41.4 -0.3
       comp=Z,13nm,0.9s
WALA   Waterton Lakes     92.61  41 eP      P       05 37 41.0 -0.6
       comp=Z,14nm,1.3s
LRM    Limekiln Ridge     92.79  44 eP      P       05 37 43.2 +0.5
FXWY   Fox Creek          93.28  46 eP      P       05 37 45.0  0.0
       comp=Z,3.6nm,0.8s
BOZ    Bozeman (W)        93.30  44  P      P       05 37 45.2 +0.3
       baz=257
121A   Cookes Peak, D     93.47  58  P      P       05 37 46.5 +0.4
       baz=259
MK01   Makanchi Array     93.66 317 eP      P       05 37 45.6 -0.8
MK31   Makanchi Array     93.67 317 eP      P       05 37 46.5 +0.1
MK32   Makanchi Array     93.67 317 eP      P       05 37 46.6 +0.1
MKAR   Makanchi Array     93.67 317 eP      P       05 37 46.5 +0.1
       comp=Z,21nm,0.8s
MKAR   Makanchi Array     93.67 317  P      P       05 37 46.6 +0.1
       comp=Z,2.7nm,0.7s,baz=91,slow=6.5,SNR=17
H17A   Grant Village      93.76  46  P      P       05 37 48.6 +1.3
       baz=258
ZAA0   Zalesovo Array     93.78 324 eP      P       05 37 45.1 -1.6
       comp=Z,10nm,1.4s
ZALV   Zalesovo Beam      93.78 324 eP      P       05 37 45.7 -1.0
ZALV   Zalesovo Beam      93.78 324  P      P       05 37 46.1 -0.6
       comp=Z,1.7nm,0.6s,baz=119,slow=3.7,SNR=10.0
ZAA1   Zalesovo Array     93.78 324 eP      P       05 37 46.1 -0.6
MVCO   Mesa Verde         93.82  53  P      P       05 37 46.8 -0.8
       baz=259
MAKZ   Makanchi           93.88 317 eP      P       05 37 45.4 -2.1
       comp=Z,6.5nm,1.1s
BW06   Boulder Array      94.14  47  P      P       05 37 48.7 -0.3
       baz=258
PDAR   Pinedale Array     94.14  47  P      P       05 37 48.7 -0.3
       comp=Z,2.6nm,0.9s,baz=240,slow=2.1,SNR=13
ANMO   Albuquerque        95.01  56 eP      P       05 37 50.1 -3.0
       comp=Z,3.0nm,1.1s
ANMO   Albuquerque        95.01  56  P      P       05 37 52.2 -0.9
       baz=260
ANMO   Albuquerque        95.01  56  P      P       05 37 52.9 -0.2
       baz=268,slow=5.9
EGMT   Eagleton           95.07  42  P      P       05 37 52.9  0.0
       baz=259
S22A   4UR Ranch, Cre     95.22  53  P      P       05 37 54.1  0.0
       baz=260
MNTX   Cornudas Mount     95.31  59  P      P       05 37 53.7 -0.6
       baz=260
YKA    Yellowknife Ar     95.58  27  P      P       05 37 52.7 -2.1
       comp=Z,1.5nm,0.8s,baz=256,slow=4.7,SNR=23
YKB5   Yellowknife Ar     95.58  27 eP      P       05 37 52.9 -1.9
LTX    Lajitas            96.36  61 eP      P       05 37 59.0 -0.3
TXAR   Lajitas Array      96.36  61  P      P       05 37 59.0 -0.3
       comp=Z,0.8nm,0.9s,baz=224,slow=5.2,SNR=6.8
NRIK   Noril'sk           96.49 340  P      P       05 37 57.5 -1.3
       comp=Z,2.0nm,0.3s,baz=107,slow=5.0,SNR=4.3
ISCO   Idaho Springs      96.52  51  P      P       05 37 59.5 -0.5
       baz=260
KSH    Kashi              96.82 309 eP      P       05 38 04.8 +3.6
KSH                                 esP     sP      05 38 09.4  0.0
KSH                                 ePP     PP      05 42 02.4 +5.8
KSH    Kashi              96.82 309 eS      S       05 49 23.1 +1.1
KSH    Kashi              96.82 309 esS     sS      05 49 30.7 -1.4
KSH    Kashi              96.82 309 eSS     SS      05 56 00.6 +2.7
KSH                                  pmax   pmax
       comp=Z,1µm,12.0s
T25A   Trinidad           97.02  54  P      P       05 38 01.4 -0.8
       baz=261
ARA0   ARCESS Array S    116.75 345 ePKPdf  PKPdf   05 43 13.3 -0.3
ARCES  ARCESS Array B    116.75 345  PKP    PKPdf   05 43 13.3 -0.3
       comp=Z,1.2nm,0.7s,baz=99,slow=2.9,SNR=5.1
LPAZ   La Paz            120.25 117 ePKPdf  PKPdf   05 43 20.6 -2.1
LPAZ   La Paz            120.25 117  PKP    PKiKP   05 43 23.1 +0.3
       comp=Z,1.3nm,0.8s,baz=71,slow=2.1,SNR=6.0
ROSC   El Rosal          120.59  91 ePKPdf  PKPdf   05 43 21.6 -1.6
ROSC   El Rosal          120.59  91  PKP    PKPdf   05 43 22.9 -0.2
       comp=Z,1.7nm,0.5s,baz=217,slow=18,SNR=4.0
FIA0   FINESS Array S    122.13 338 ePKPdf  PKPdf   05 43 23.7 -0.5
FINES  FINESS Array B    122.13 338  PKP    PKPdf   05 43 23.7 -0.5
       comp=Z,2.7nm,1.0s,baz=114,slow=1.7,SNR=3.5
CPUP   Villa Florida     123.92 133  PKP    PKPdf   05 43 28.6 -0.1
       comp=Z,2.5nm,0.8s,baz=214,slow=3.1,SNR=5.9
BOSA   Boshof            124.52 223  PKP    PKiKP   05 43 30.2 -0.1
       comp=Z,1.6nm,0.6s,baz=23,slow=0.9,SNR=5.6
SDV    Santo Domingo     124.85  87 ePKPdf  PKPdf   05 43 31.0  0.0
SDV    Santo Domingo     124.85  87  PKP    PKPdf   05 43 30.7 -0.3
       comp=Z,8.6nm,0.8s,baz=266,slow=3.6,SNR=14
BORG   Borgarnes         126.68   4  PKP    PKPdf   05 43 32.8  0.0
       comp=Z,8.8nm,0.9s,baz=344,slow=15,SNR=2.4
NB2    NORSAR Subarra127.11 345  PKPdf  PKPdf   05 43 33.7 -0.1
       comp=Z,0.7nm,0.8s,baz=36,slow=1.9
NB200  NORSAR Array S127.11 345 ePKPdf  PKiKP   05 43 34.1 -0.2
NOA    NORSAR Array B127.11 345  PKP    PKiKP   05 43 34.1 -0.2
       comp=Z,1.0nm,0.8s,baz=65,slow=5.2,SNR=4.1
AKASG  Malin Array Be    127.11 326  PKP    PKPdf   05 43 33.8 -0.2
       comp=Z,0.6nm,0.6s,baz=59,slow=2.4,SNR=3.5
BR101  Keskin Array S    129.06 312 ePKPdf  PKPdf   05 43 38.5 +0.1
BRTR   Keskin Array B    129.07 312  PKP    PKiKP   05 43 38.5 -0.6
       comp=Z,0.3nm,0.6s,baz=114,slow=2.2,SNR=2.6
SJG    San Juan          129.87  76  PKP    PKPdf   05 43 39.1 -1.1
       comp=Z,6.6nm,0.3s,baz=319,slow=18,SNR=7.6
TRIS   Tristan da Cun    131.58 182 ePKPdf  PKPdf   05 43 40.4 -2.6
CLL    Collm             134.44 336 ePKPdf  PKPdf   05 43 48.0 +0.1
GERES  GERESS Array B    136.01 333  PKP    PKPdf   05 43 51.1  0.0
       comp=Z,1.0nm,0.8s,baz=57,slow=3.6,SNR=4.7
BDFB   Brasilia          137.28 129  PKP    PKPdf   05 43 54.4  0.0
       comp=Z,4.2nm,0.9s,baz=206,slow=5.5,SNR=5.7
MDP    Montagnes des     141.84  96  PKP    PKPdf   05 44 01.3 -1.3
       comp=Z,14nm,0.9s,baz=160,slow=12,SNR=2.6
KEST   Kesra             147.62 322  PKPbc  PKPbc   05 44 14.3 -0.5
       comp=Z,11nm,0.8s,baz=221,slow=1.7,SNR=9.6
ES19   SONSECA Array     150.41 343 ePKPbc  PKiKP   05 44 22.5  0.0
ESDC   Sonseca Array     150.46 343  PKPbc  PKPbc   05 44 21.7 -0.2
       comp=Z,2.9nm,0.8s,baz=18,slow=2.4,SNR=12
ESDC                                 PKPab  PKPab   05 44 28.1 -0.2
       comp=Z,2.8nm,0.7s,baz=19,slow=3.4,SNR=8.7
TORD   Torodi Ar. Bea    164.01 277  PKP    PKPdf   05 44 34.2  0.0
       comp=Z,0.7nm,0.8s,baz=359,slow=3.7,SNR=4.2
TORD                                 PKPab  PKPab   05 45 26.5 -0.8
       comp=Z,0.9nm,1.0s,baz=90,slow=3.8,SNR=3.2
TOA1   Torodi Ar. Sit    164.01 277 ePKPdf  PKPdf   05 44 34.2  0.0
TOA1                                ePKPab  PKPab   05 45 26.4 -0.9
```

IDC ***06*** *05:27:20.7±1.1, 11.°61S×166.°08E, h0km, mb4.0/9, mb1 4.3/11, mb1mx4.0/39, mbtmp4.1/11, ML4.3/2, Error ellipse: s-maj=36.9km s-min=21.7km az=142.0*

*ISCJB **06** 05:27:21.2±0.6, 11°.61S±0°.08×165°.96E±0°.10, h10km, mb4.0/10, Error ellipse: s-maj=13.5km s-min=11.8km az=12.7*

*NEIC **06** 05:27:22.6±0.5, 11°.50S×166°.01E, h10km, mb4.3/3, Error ellipse: s-maj=12.5km s-min=10.5km az=118.0*

ISC 06 05:27:21.8±0.7**, 11°.7S**±0°.1×**166°.0E**±0°.1**, h10**km**, n26, σ1ˢ.89**/22**, mb4.1**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.36**	**290**	Pn	**Pn**	**05 28 55.6**	**-0.1**
	17nm,0.3s,baz=49,slow=13,SNR=2.8						
DZM	**Mont Dzumac**	**10.31**	**178**	Pn	**Pn**	**05 29 52.8**	**+2.7**
	0.7nm,0.3s,baz=314,slow=21,SNR=1.3						
ONTNC	**Ouen Toro**	**10.55**	**178**	*e*Pn	Pn	05 29 58.8	+5.6
CTA	**Charters Tower**	**20.71**	**244**	P	Pn	05 32 05.0	0.0
	13nm,1.0s,baz=65,slow=11,SNR=5.1						
CTAO	**Charters Tower**	**20.71**	**244**	*e*P	**P**	**05 32 03.3**	**+0.7**
	11nm,0.8s						
COEN	**Coen**	**22.36**	**262**	*e*P	**P**	**05 32 21.7**	**+1.4**
	4.9nm,0.7s						
CAN	**Canberra**	**28.11**	**210**	*e*P	**P**	**05 33 09.6**	**-4.4**
	8.4nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**30.02**	**1**	T	T	06 04 23.9	
	baz=180						
H11S3	**WAKE ISLAND Hy**	**30.02**	**1**	T	T	06 04 24.2	
	baz=180						
H11S1	**WAKE ISLAND Hy**	**30.03**	**1**	T	T	06 04 23.1	
	baz=180						
WR1	**Warramunga Arr**	**31.49**	**251**	*e*P	**P**	**05 33 39.4**	**-4.7**
WR1				*e*pP	**P**	**05 33 44.7**	**+0.5**
WRA	**Warramunga Arr**	**31.49**	**251**	P	**P**	**05 33 44.7**	**+0.5**
	1.4nm,0.5s,baz=78,slow=8.8,SNR=8.6						
ASAR	**Alice Springs**	**32.72**	**244**	P	**P**	**05 33 55.8**	**+0.8**
	3.1nm,0.7s,baz=74,slow=9.5,SNR=10						
CMAR	**Chiang Mai Arr**	**72.60**	**294**	P	**P**	**05 38 51.7**	**+1.7**
	1.5nm,0.3s,baz=111,slow=4.9,SNR=4.4						
SONA0	**Songino Array**	**79.34**	**324**	*e*P	**P**	**05 39 29.2**	**+1.2**
SONM	**Songino Array**	**79.34**	**324**	P	**P**	**05 39 29.2**	**+1.2**
	0.4nm,0.5s,baz=139,slow=5.3,SNR=3.8						
ILAR	**Eielson Array**	**84.06**	**18**	P	**P**	**05 39 52.2**	**-0.2**
	0.6nm,0.7s,baz=252,slow=5.4,SNR=4.8						
NV01	**Mina Array Sit**	**86.26**	**50**	*e*P	**P**	**05 40 04.8**	**+0.5**
NVAR	**Mina Array Bea**	**86.26**	**50**	P	**P**	**05 40 04.8**	**+0.5**
	0.1nm,0.3s,baz=230,slow=6.9,SNR=2.3						
MK32	**Makanchi Array**	**94.17**	**317**	*e*P	**P**	**05 40 42.1**	**+1.0**
MKAR	**Makanchi Array**	**94.17**	**317**	P	**P**	**05 40 42.1**	**+1.0**
	1.0nm,0.7s,baz=91,slow=5.4,SNR=7.4						
YKA	**Yellowknife Ar**	**95.45**	**27**	P	**P**	**05 40 45.0**	**-1.5**
	0.1nm,0.6s,baz=260,slow=4.5,SNR=2.8						
YKB5	**Yellowknife Ar**	**95.45**	**27**	*e*P	**P**	**05 40 45.0**	**-1.5**
ARA0	**ARCESS Array S**	**117.03**	**345**	*e*PKPdf	**PKiKP**	**05 46 05.7**	**-0.9**
ARCES	**ARCESS Array B**	**117.03**	**345**	PKP	**PKiKP**	**05 46 05.7**	**-0.9**
	2.8nm,0.9s,baz=11,slow=1.8,SNR=4.0						
ESDC	**Sonseca Array**	**150.76**	**344**	PKPbc	**PKiKP**	**05 47 14.6**	**-1.0**
	0.7nm,0.6s,baz=46,slow=3.7,SNR=3.7						

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*IDC **06** 05:28:57.4±0.6, 10°.81S×165°.11E, h0km, mb4.3/17, mb1 4.5/19, mb1mx4.3/38, mbtmp4.3/19, ML4.8/2, Error ellipse: s-maj=20.3km s-min=15.5km az=125.0*

*NEIC **06** 05:28:59.3±0.3, 10°.72S×165°.09E, h10km, mb4.6/9, Error ellipse: s-maj=8.7km s-min=7.6km az=113.0*

*ISCJB **06** 05:29:00.8±0.4, 10°.84S±0°.06×165°.04E±0°.06, h31km, mb4.3/22, Error ellipse: s-maj=8.8km s-min=7.7km az=18.8*

ISC 06 05:29:02.4±0.5**, 10°.76S**±0°.08×**165°.11E**±0°.07**, h31**km**, n50, σ1ˢ.00**/47**, mb4.4**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.25**	**284**	*e*Pn	**Pn**	**05 30 17.3**	**-1.5**
HNR				*e*Pn	**Pn**	**05 30 19.9**	**+1.1**
HNR				*e*Sn	**Sn**	**05 31 19.6**	**+1.3**
HNR	**Honiara**	**5.25**	**284**	Pn	**Pn**	**05 30 17.3**	**-1.5**
	50nm,0.3s,baz=115,slow=3.5,SNR=4.8						
HNR				Sn	**Sn**	**05 31 19.6**	**+1.3**
	28nm,0.3s,baz=202,slow=13,SNR=1.7						
DZM	**Mont Dzumac**	**11.32**	**174**	Pn	**Pn**	**05 31 41.3**	**-0.9**
	4.6nm,0.3s,baz=299,slow=22,SNR=23						
ONTNC	**Ouen Toro**	**11.55**	**174**	*e*Pn	**Pn**	**05 31 47.5**	**+2.2**
MANU	**Manus Island**	**19.63**	**295**	*e*P	**Pn**	**05 33 29.7**	**-0.5**
	62nm,1.1s						
CTA	**Charters Tower**	**20.38**	**241**	*e*P	**P**	**05 33 36.1**	**-0.8**
CTA	**Charters Tower**	**20.38**	**241**	P	**P**	**05 33 36.1**	**-0.8**
	5.6nm,0.8s,baz=58,slow=9.0,SNR=3.7						
CTAO	**Charters Tower**	**20.38**	**241**	*e*P	**P**	**05 33 37.0**	**+0.2**
	22nm,1.0s						
COEN	**Coen**	**21.66**	**259**	*e*P	**P**	**05 33 52.2**	**+1.6**
	5.1nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**29.11**	**3**	T	T	06 05 15.2	
	baz=183,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.11**	**3**	T	T	06 05 34.7	
	baz=183,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.12**	**3**	T	T	06 05 05.4	
	baz=183						
URZ	**Urewera**	**29.42**	**161**	*e*P	**P**	**05 35 02.8**	**-0.4**
	9.3nm,1.0s						
STKA	**Stephens Creek**	**30.22**	**222**	*e*P	**P**	**05 35 11.4**	**+1.0**
	2.3nm,0.9s						
STKA	**Stephens Creek**	**30.22**	**222**	P	**P**	**05 35 10.3**	**-0.1**
	7.7nm,0.8s,baz=30,slow=9.8,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**30.33**	**3**	T	T	06 07 02.6	
	baz=182,slow=76						
H11N3	**WAKE ISLAND Hy**	**30.34**	**3**	T	T	06 07 00.8	
	baz=182,slow=76						
H11N2	**WAKE ISLAND Hy**	**30.35**	**3**	T	T	06 07 05.4	
	baz=182,slow=76						
WR1	**Warramunga Arr**	**30.99**	**249**	*e*P	**P**	**05 35 15.2**	**-2.1**
	6.8nm,1.1s						
WRA	**Warramunga Arr**	**31.00**	**249**	P	**P**	**05 35 15.2**	**-2.2**
	2.6nm,0.6s,baz=80,slow=9.0,SNR=7.8						
ASAR	**Alice Springs**	**32.36**	**243**	P	**P**	**05 35 29.5**	**0.0**
	1.3nm,0.5s,baz=64,slow=9.9,SNR=6.2						
ASAJ	**Asahikawa**	**58.32**	**341**	P	**P**	**05 38 53.9**	**-0.5**
	2.4nm,0.4s,baz=84,slow=9.3,SNR=2.7						
PETK	**Petropavlovsk-**	**63.93**	**355**	P	**P**	**05 39 31.9**	**-0.5**
	6.0nm,1.0s,baz=180,slow=7.2,SNR=4.0						
PEA1	**Petropavlovsk-**	**63.93**	**355**	*e*P	**P**	**05 39 31.9**	**-0.5**
VNDA	**Vanda**	**66.77**	**181**	P	**P**	**05 39 49.0**	**-1.4**
	4.0nm,1.0s,baz=357,slow=8.8,SNR=2.3						
MA2	**Magadan**	**71.04**	**352**	P	**P**	**05 40 18.1**	**+1.0**
	4.0nm,0.5s,baz=142,slow=19,SNR=3.1						
CMAR	**Chiang Mai Arr**	**71.42**	**294**	P	**P**	**05 40 20.9**	**+0.6**
	1.4nm,0.3s,baz=118,slow=4.6,SNR=6.0						
SONA0	**Songino Array**	**78.07**	**324**	*e*P	**P**	**05 40 59.0**	**+0.6**
SONM	**Songino Array**	**78.07**	**324**	P	**P**	**05 40 59.0**	**+0.6**
	2.2nm,1.0s,baz=135,slow=5.6,SNR=8.4						
QSPA	**South Pole Qui**	**79.24**	**180**	*e*P	**P**	**05 41 06.3**	**+1.8**
	10nm,1.0s						
ILAR	**Eielson Array**	**83.44**	**19**	P	**P**	**05 41 27.5**	**+1.0**
	0.5nm,0.7s,baz=264,slow=4.8,SNR=5.3						
NV01	**Mina Array Sit**	**86.32**	**50**	*e*P	**P**	**05 41 42.9**	**+0.9**
NVAR	**Mina Array Bea**	**86.32**	**50**	P	**P**	**05 41 42.2**	**+0.3**
	2.5nm,0.9s,baz=242,slow=7.5,SNR=9.7						
HVU	**Hansel Valley**	**91.28**	**48**	*e*P	**P**	**05 42 06.5**	**+1.2**
	6.3nm,1.2s						
DLMT	**Dillon**	**92.22**	**44**	*e*P	**P**	**05 42 10.0**	**+0.4**
	6.6nm,1.0s						
MK32	**Makanchi Array**	**92.89**	**317**	*e*P	**P**	**05 42 12.5**	**+0.1**
MKAR	**Makanchi Array**	**92.89**	**317**	P	**P**	**05 42 12.5**	**+0.1**
	2.4nm,0.8s,baz=98,slow=6.2,SNR=12						
ZALV	**Zalesovo Beam**	**92.96**	**324**	P	**P**	**05 42 11.7**	**-0.8**
	2.0nm,0.9s,baz=116,slow=3.4,SNR=6.4						
ZAA1	**Zalesovo Array**	**92.96**	**324**	*e*P	**P**	**05 42 11.7**	**-0.8**
PDAR	**Pinedale Array**	**93.82**	**47**	P	**P**	**05 42 17.3**	**+0.2**
	0.9nm,0.9s,baz=241,slow=2.7,SNR=5.9						
YKA	**Yellowknife Ar**	**95.01**	**27**	P	**P**	**05 42 21.0**	**-0.8**
	0.4nm,0.9s,baz=257,slow=4.1,SNR=4.8						
LTX	**Lajitas**	**96.25**	**61**	*e*P	**P**	**05 42 28.6**	**+0.2**
TXAR	**Lajitas Array**	**96.25**	**61**	P	**P**	**05 42 28.6**	**+0.2**
	0.2nm,0.8s,baz=248,slow=4.8,SNR=3.0						
ARA0	**ARCESS Array S**	**115.90**	**345**	*e*PKPdf	**PKiKP**	**05 47 40.9**	**-0.7**
ARCES	**ARCESS Array B**	**115.90**	**345**	PKP	**PKiKP**	**05 47 40.9**	**-0.7**
	2.0nm,0.8s,baz=135,slow=20,SNR=3.3						
CPUP	**Villa Florida**	**124.68**	**133**	PKP	**PKPdf**	**05 47 59.6**	**-0.1**
	2.0nm,1.0s,baz=184,slow=16,SNR=2.8						
SDV	**Santo Domingo**	**125.11**	**87**	PKP	**PKPdf**	**05 48 00.9**	**-0.2**
	3.2nm,0.8s,baz=9.8,slow=6.3,SNR=4.2						
GEC2	**GERESS Array S**	**135.17**	**333**	*e*PKPdf	**PKPdf**	**05 48 18.7**	**-0.4**
GERES	**GERESS Array B**	**135.17**	**333**	PKP	**PKPdf**	**05 48 18.7**	**-0.4**
	0.3nm,0.6s,baz=39,slow=3.8,SNR=2.6						
ESDC	**Sonseca Array**	**149.61**	**343**	PKPbc	**PKPbc**	**05 48 48.8**	**-0.6**
	0.4nm,0.4s,baz=15,slow=5.3,SNR=4.2						

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*IDC **06** 05:29:11.2±1.9, 11°.97S×165°.78E, h0km, mb4.4/8, mb1 4.7/8, mb1mx4.2/36, mbtmp4.4/8, Error ellipse: s-maj=74.2km s-min=27.1km az=148.0*

*ISCJB **06** 05:29:14.0±1.7, 12°.1S±0°.4×165°.7E±0°.3, h30km, mb4.3/7, Error ellipse: s-maj=62.6km s-min=20.5km az=144.2*

ISC 06 05:29:15.7±1.7**, 12°.1S**±0°.4×**165°.8E**±0°.3**, h30**km**, n10, σ0ˢ.82**/10**, mb4.4**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**20.37**	**244**	P	**P**	**05 33 49.6**	**-0.5**
	23nm,0.8s,baz=54,slow=13,SNR=6.7						
CTA	**Charters Tower**	**20.37**	**244**	P	**P**	**05 33 49.6**	**-0.5**
WRA	**Warramunga Arr**	**31.17**	**251**	P	**P**	**05 35 32.6**	**+0.2**
	14nm,1.0s,baz=79,slow=9.4,SNR=5.5						
CMAR	**Chiang Mai Arr**	**72.54**	**294**	P	**P**	**05 40 41.1**	**+0.7**
	1.3nm,0.3s,baz=116,slow=4.6,SNR=4.9						
SONM	**Songino Array**	**79.49**	**324**	P	**P**	**05 41 20.2**	**+0.6**
	1.3nm,0.8s,baz=138,slow=4.5,SNR=4.6						
ILAR	**Eielson Array**	**84.46**	**18**	P	**P**	**05 41 44.5**	**-0.6**
	1.2nm,0.6s,baz=238,slow=5.3,SNR=6.2						
NVAR	**Mina Array Bea**	**86.66**	**50**	P	**P**	**05 41 57.4**	**+0.4**
	2.5nm,1.0s,baz=228,slow=7.2,SNR=4.6						
MKAR	**Makanchi Array**	**94.27**	**317**	P	**P**	**05 42 32.0**	**-0.2**
	1.7nm,0.9s,baz=109,slow=6.6,SNR=4.9						
ZALV	**Zalesovo Beam**	**94.38**	**324**	P	**P**	**05 42 30.9**	**-1.5**
	1.4nm,0.8s,baz=106,slow=4.8,SNR=5.1						
ARCES	**ARCESS Array B**	**117.31**	**345**	PKP	**PKiKP**	**05 47 58.2**	**+0.5**
	2.9nm,1.0s,baz=20,slow=1.1,SNR=2.7						

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*NEIC **06** 05:30:18.7±0.2, 10°.75S×164°.40E, h10km, mb5.1/59, Error ellipse: s-maj=6.0km s-min=5.0km az=111.0*

*MOS **06** 05:30:18.7±2.2, 10°.70S×164°.40E, h33km, mb5.2/25, Error ellipse: s-maj=9.6km s-min=8.5km az=118.2*

*ISCJB **06** 05:30:20.5±0.2, 10°.75S±0°.04×164°.33E±0°.04, h29km, mb4.9/91, MS4.8/2, Error ellipse: s-maj=6.0km s-min=4.4km az=37.4*

*IDC **06** 05:30:23.8±2.9, 10°.80S×164°.41E, h45km±26km, mb4.4/25, mb1 4.6/28, mb1mx4.5/40, mbtmp4.7/28, ML4.9/3, MS4.9/1, Ms1 4.9/1, ms1mx3.8/44, Error ellipse: s-maj=17.5km s-min=13.0km az=85.0*

ISC 06 05:30:21.5±0.3**, 10°.77S**±0°.06×**164°.53E**±0°.06**, h29**km**, n227, σ1ˢ.26**/230**, mb5.0**/92**, 6C-8D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.70**	**286**	*e*Pn	**Pn**	**05 31 28.7**	**-1.9**
HNR				*e*Pn	**Pn**	**05 31 31.6**	**+1.1**
HNR				*e*Sn	**Sn**	**05 32 26.4**	**+2.2**
HNR	**Honiara**	**4.70**	**286**	*e*P	**Pn**	**05 31 28.7**	**-1.9**
HNR				*e*		05 32 26.4	
HNR	**Honiara**	**4.70**	**286**	P	**Pn**	**05 31 31.6**	**+1.1**
	186nm,0.3s,baz=148,slow=8.6,SNR=11						
HNR				S	**Sn**	**05 32 26.4**	**+2.2**
	76nm,0.3s,baz=173,slow=19,SNR=2.6						
MARNC	**Mare, Loyalty**	**11.17**	**163**	*e*Pn	**Pn**	**05 32 58.4**	**-0.9**
DZM	**Mont Dzumac**	**11.39**	**171**	*e*Pn	**Pn**	**05 33 01.9**	**-0.6**
DZM	**Mont Dzumac**	**11.39**	**171**	P	**Pn**	**05 33 01.7**	**-0.7**
	6.4nm,0.3s,baz=9.5,slow=17,SNR=8.9						
ONTNC	**Ouen Toro**	**11.62**	**171**	*e*Pn	**Pn**	**05 33 06.2**	**+0.7**
PINNC	**Pines Island,**	**12.10**	**167**	*e*Pn	**Pn**	**05 33 11.1**	**-1.0**
MSVF	**Nonsavu**	**14.82**	**119**	*e*Pn	**Pn**	**05 33 48.2**	**-1.1**
	83nm,1.0s						
MSVF	**Nonsavu**	**14.82**	**119**	*e*P	**Pn**	**05 33 48.2**	**-1.1**
MSVF				pmax	pmax		
	comp=Z,83nm,1.0s						
MANU	**Manus Island**	**19.12**	**296**	*e*P	**Pn**	**05 34 43.6**	**+0.2**
	comp=Z,445nm,1.1s						
EIDS	**Eidsvold**	**19.32**	**219**	P	**Pn**	**05 34 46.0**	**+0.3**
	baz=19,SNR=8.4						
EIDS	**Eidsvold**	**19.32**	**219**	*e*P	**Pn**	**05 34 46.4**	**+0.6**
	comp=Z,123nm,1.0s						
CTA	**Charters Tower**	**19.89**	**240**	P	**P**	**05 34 51.2**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=72,slow=14,SNR=10						
CTAO	**Charters Tower**	**19.89**	**240**	*e*P	**Pn**	**05 34 52.0**	**-0.5**
	comp=Z,67nm,0.9s						
CTAO	**Charters Tower**	**19.89**	**240**	*e*P	**Pn**	**05 34 52.0**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,67nm,0.9s						
MTSU	**Mount Surprise**	**20.88**	**247**	P	**P**	**05 35 01.4**	**-0.3**
	baz=21,SNR=9.0						
COEN	**Coen**	**21.09**	**259**	P	**P**	**05 35 03.2**	**-0.7**
	baz=21,SNR=6.1						
COEN	**Coen**	**21.09**	**259**	*e*P	**P**	**05 35 03.4**	**-0.6**
	comp=Z,32nm,0.9s						
RMQ	**Roma**	**21.59**	**221**	P	**P**	**05 35 10.6**	**+1.4**
	baz=22,SNR=11						
ARMA	**Armidale**	**22.94**	**210**	P	**P**	**05 35 25.0**	**+1.4**
	baz=23,SNR=9.5						
ARMA	**Armidale**	**22.94**	**210**	*e*P	**P**	**05 35 24.5**	**+0.9**
	comp=Z,36nm,0.9s						
QLP	**Quilpie**	**24.78**	**228**	P	**P**	**05 35 41.8**	**+0.8**
	baz=25,SNR=4.3						
MGCD	**Mangrove Creek**	**25.51**	**207**	P	**P**	**05 35 49.1**	**+1.5**
	baz=26,SNR=6.4						
RIV	**Riverview**	**26.02**	**206**	P	**P**	**05 35 53.8**	**+1.7**
	baz=26,SNR=3.8						
CMSA	**Cobar Meteorol**	**27.04**	**217**	P	**P**	**05 36 02.3**	**+0.9**
	baz=27,SNR=7.3						
H11S2	**WAKE ISLAND Hy**	**29.15**	**4**	T	T	06 06 40.2	
	baz=184,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.16**	**4**	T	T	06 07 00.8	
	baz=184						
H11S1	**WAKE ISLAND Hy**	**29.17**	**4**	T	T	06 07 12.1	
	baz=184,slow=74						
URZ	**Urewera**	**29.61**	**160**	*e*P	**P**	**05 36 25.4**	**+1.2**
URZ				*e*P	**P**	**05 36 26.9**	**+2.7**
URZ	**Urewera**	**29.61**	**160**	P	**P**	**05 36 25.4**	**+1.2**
	comp=Z,6.3nm,0.7s,baz=352,slow=7.8,SNR=3.4						
STKA	**Stephens Creek**	**29.83**	**222**	P	**P**	**05 36 27.1**	**+0.8**
	baz=30,SNR=9.8						
STKA	**Stephens Creek**	**29.83**	**222**	*e*P	**P**	**05 36 27.0**	**+0.6**
	comp=Z,8.1nm,1.1s						
STKA	**Stephens Creek**	**29.83**	**222**	P	**P**	**05 36 26.4**	**+0.1**
	comp=Z,21nm,0.9s,baz=15,slow=7.8,SNR=13						
BKZ	**Black Stump Fm**	**30.22**	**161**	*e*P	**P**	**05 36 31.3**	**+1.6**
	comp=Z,45nm,1.3s						
H11N1	**WAKE ISLAND Hy**	**30.38**	**4**	T	T	06 08 13.0	
	baz=184,slow=76,SNR=8.3						
H11N3	**WAKE ISLAND Hy**	**30.39**	**4**	T	T	06 08 17.6	
	baz=184,slow=76,SNR=9.4						
H11N2	**WAKE ISLAND Hy**	**30.40**	**4**	T	T	06 08 25.8	
	baz=184,slow=76,SNR=11						
WRAB	**Tennant Creek**	**30.45**	**249**	*e*P	**P**	**05 36 30.0**	**-1.9**
	comp=Z,30nm,1.2s						
WRAB	**Tennant Creek**	**30.45**	**249**	⇑*i*P	**P**	**05 36 30.6**	**-1.3**
WB2	**Warramunga Arr**	**30.45**	**249**	*e*P	**P**	**05 36 29.7**	**-2.2**
WR1	**Warramunga Arr**	**30.46**	**249**	*e*P	**P**	**05 36 30.4**	**-1.6**
	comp=Z,44nm,1.4s						
WRA	**Warramunga Arr**	**30.46**	**249**	P	**P**	**05 36 30.4**	**-1.6**
	comp=Z,8.8nm,0.9s,baz=79,slow=9.1,SNR=12						
WRA				LR	LR	05 49 00.5	
	comp=Z,2μm,18.2s,baz=105,slow=37						
KDU	**Kakadu**	**31.43**	**263**	P	**P**	**05 36 38.8**	**-1.8**
	baz=31,SNR=4.4						
TOO	**Toolangi**	**31.70**	**210**	P	**P**	**05 36 43.9**	**+1.1**
	baz=32,SNR=7.4						
AS01	**Alice Springs**	**31.81**	**242**	*e*P	**P**	**05 36 40.5**	**-3.5**
AS31	**Alice Springs**	**31.85**	**242**	*e*P	**P**	**05 36 40.6**	**-3.7**
	comp=Z,3.0nm,1.0s						
ASAR	**Alice Springs**	**31.85**	**242**	P	**P**	**05 36 42.6**	**-1.7**
	comp=Z,4.5nm,0.9s,baz=64,slow=10,SNR=5.5						
HTT	**Hallett**	**32.56**	**222**	P	**P**	**05 36 51.3**	**+0.9**
	baz=33,SNR=5.2						
ARPS	**Mount Arapiles**	**33.01**	**215**	P	**P**	**05 36 55.2**	**+1.0**
	baz=33,SNR=5.0						
RPZ	**Rata Peaks**	**33.31**	**171**	P	**P**	**05 36 57.0**	**+0.2**
	comp=Z,8.2nm,0.7s,baz=0.0,slow=13,SNR=2.3						
BBOO	**Buckleboo**	**34.15**	**226**	P	**P**	**05 37 04.4**	**+0.2**
	baz=34,SNR=8.9						
KNRA	**Kununurra**	**35.13**	**258**	P	**P**	**05 37 11.6**	**-1.2**
	baz=35,SNR=9.2						
WRKA	**Warakurna**	**37.14**	**243**	P	**P**	**05 37 28.9**	**-1.3**
	baz=37,SNR=3.6						
FITZ	**Fitzroy Crossi**	**38.30**	**254**	P	**P**	**05 37 38.3**	**-1.6**
	baz=38,SNR=12						
FITZ	**Fitzroy Crossi**	**38.30**	**254**	P	**P**	**05 37 38.2**	**-1.6**
	comp=Z,16nm,0.7s,baz=99,slow=6.3						
NWAO	**Narrogin (SRO)**	**48.63**	**235**	P	**P**	**05 39 02.1**	**-0.9**
	comp=Z,8.0nm,1.0s,baz=78,slow=19						
MJAR	**Matsushiro Arr**	**53.18**	**334**	P	**P**	**05 39 36.3**	**-0.9**
	comp=Z,8.1nm,0.9s,baz=173,slow=9.1,SNR=11						
MAJO	**Matsushiro**	**53.19**	**334**	*e*P	**P**	**05 39 36.3**	**-0.9**
MAJO	**Matsushiro**	**53.19**	**334**	⇑*e*P	**P**	**05 39 36.7**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s						
MAT	**Matsushiro**	**53.19**	**334**	P	**P**	**05 39 36.5**	**-0.7**
JNU	**Nakatsue**	**54.16**	**325**	*e*P	**P**	**05 39 43.1**	**-1.3**
	comp=Z,24nm,1.0s						
JNU	**Nakatsue**	**54.16**	**325**	P	**P**	**05 39 44.4**	**0.0**
	comp=Z,17nm,0.8s,baz=96,slow=3.1,SNR=7.4						
ASAJ	**Asahikawa**	**58.15**	**342**	P	**P**	**05 40 13.3**	**+0.7**
	comp=Z,28nm,0.9s,baz=230,slow=11,SNR=14						
KSRS	**Korea Array**	**58.98**	**326**	P	**P**	**05 40 19.0**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSRS	**Korea Array**	**58.98**	**326**	P	**P**	**05 40 19.0**	**+0.5**
	comp=Z,4.8nm,0.9s,baz=139,slow=7.7,SNR=12						
KSAR	**Wonju Array Be**	**58.99**	**326**	P	**P**	**05 40 19.0**	**+0.4**
KSAR	**Wonju Array Be**	**58.99**	**326**	P	**P**	**05 40 19.0**	**+0.4**
KS01	**Wonju Array Si**	**59.01**	**326**	*e*P	**P**	**05 40 16.7**	**-2.1**
YSS	**Yuzh-Sakhalins**	**60.67**	**343**	⇓*e*P	P	05 40 37.1	+7.2
YSS				*e*		05 40 47.4	
YSS				pmax	pmax		
	comp=Z,150nm,1.3s						
NJ2	**Nanjing**	**60.99**	**316**	*e*P	**P**	**05 40 32.8**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,160nm,0.5s						
TEY	**Ternei**	**61.01**	**338**	*e*P	**P**	**05 40 32.0**	**-0.3**
QIZ	**Qiongzhong**	**61.50**	**299**	*e*P	**P**	**05 40 32.8**	**-3.4**
	comp=Z,37nm,1.3s						
USA0B	**Ussuriysk Arra**	**62.17**	**334**	*e*P	**P**	**05 40 41.0**	**+0.8**
	comp=Z,82nm,1.6s						
USRK	**Ussuriysk Ar.**	**62.17**	**334**	P	**P**	**05 40 40.7**	**+0.5**
	comp=Z,6.9nm,0.9s,baz=135,slow=6.9,SNR=12						
MDJ	**Mudanjiang**	**63.55**	**333**	P	**P**	**05 40 52.0**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,17nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,330nm,4.6s						
PETK	**Petropavlovsk-**	**63.89**	**355**	P	**P**	**05 40 51.7**	**+0.3**
	comp=Z,4.6nm,0.8s,baz=166,slow=6.9,SNR=4.8						
PEA1	**Petropavlovsk-**	**63.90**	**355**	*e*P	**P**	**05 40 51.7**	**+0.3**
TYV	**Tymovskoe**	**64.26**	**345**	*e*P	**P**	**05 40 55.4**	**+1.5**
TYV				pmax	pmax		
	comp=Z,600nm,6.6s						
TYV				pmax	pmax		
	comp=Z,15nm,1.7s						
CN2	**Changchun**	**64.90**	**330**	*e*P	**P**	**05 40 58.3**	**+0.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
IPM	**Ipoh**	**65.00**	**280**	*e*P	**P**	**05 40 57.9**	**-1.6**
	comp=Z,16nm,0.7s						
SKNT	**Sakolnakorn**	**65.89**	**294**	P	**P**	**05 41 05.6**	**+0.4**
CASY	**Casey**	**66.20**	**201**	*e*P	**P**	**05 41 06.3**	**0.0**
	comp=Z,26nm,1.5s						
KLR	**Kul'dur**	**66.33**	**337**	⇓*i*P	**P**	**05 41 07.3**	**-0.1**
VNDA	**Vanda**	**66.75**	**181**	P	**P**	**05 41 10.6**	**+0.9**
	comp=Z,7.1nm,0.9s,baz=356,slow=7.9,SNR=5.0						
ENH	**Enshi**	**66.80**	**310**	*e*P	**P**	**05 41 10.7**	**-0.1**
	comp=Z,50nm,1.4s						
NONG	**Nongkai**	**67.01**	**295**	P	**P**	**05 41 13.0**	**+0.7**
GYA	**Guiyang**	**67.28**	**305**	⇑*i*P	**P**	**05 41 15.0**	**+1.0**
GYA				PP	**PP**	**05 43 44.8**	**+2.1**
GYA				S	**S**	**05 50 07.2**	**-0.5**
GYA				SKS	**SKSac**	**05 51 08.0**	**-2.0**
GYA	**Guiyang**	**67.28**	**305**	SS	SS	05 54 28.6	+0.6
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,6.8s						
GYA				LR	LR		
	comp=N,550nm,18.2s						
GYA				LR	LR		
	comp=E,580nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
CHAI	**Chaiyaphum**	**67.33**	**292**	P	**P**	**05 41 14.7**	**+0.3**
PBKT	**Sadao Pong**	**68.47**	**293**	*e*P	**P**	**05 41 20.8**	**-0.7**
	comp=Z,13nm,0.8s						
PBKT	**Sadao Pong**	**68.47**	**293**	P	**P**	**05 41 22.4**	**+0.9**
XAN	**Xi'an**	**69.06**	**313**	P	**P**	**05 41 24.9**	**-0.1**
XAN				pP	sP	05 41 35.7	+0.5
XAN				sP	pwP	05 41 40.7	+1.3
XAN				PcP	**PcP**	**05 41 47.5**	**-1.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
XAN				pmax	pmax		
	comp=Z,430nm,9.8s						
XAN				LR	LR		
	comp=N,560nm,19.5s						
XAN				LR	LR		
	comp=Z,850nm,21.7s						
UTTA	**Uttaradit**	**69.23**	**294**	P	**P**	**05 41 27.8**	**+1.6**
KMI	**Kunming**	**69.96**	**302**	P	**P**	**05 41 32.4**	**+1.5**
KMI				pP	pP	05 41 37.6	-0.8
KMI				sP	sP	05 41 40.2	-1.0
KMI				pmax	pmax		
	comp=Z,16nm,1.3s						
SUKH	**Sukhothai**	**69.97**	**293**	P	**P**	**05 41 33.2**	**+2.3**
HHC	**Hu-ho-hao-te**	**70.85**	**320**	*e*P	**P**	**05 41 36.9**	**+1.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**70.91**	**294**	P	**P**	**05 41 37.4**	**+0.8**
	comp=Z,9.7nm,1.0s,baz=117,slow=4.4,SNR=13						
CMMT	**Chiang Mai**	**71.02**	**294**	P	**P**	**05 41 38.4**	**+1.1**
CHTO	**Chiang Mai**	**71.02**	**294**	*e*P	**P**	**05 41 34.2**	**-3.0**
	comp=Z,22nm,1.4s						
CHTO	**Chiang Mai**	**71.02**	**294**	*e*P	**P**	**05 41 34.3**	**-3.0**
CHTO				pmax	pmax		
	comp=Z,22nm,1.4s						
CHTO	**Chiang Mai**	**71.02**	**294**	P	**P**	**05 41 38.5**	**+1.2**
CD2	**Chengdu**	**71.49**	**308**	P	**P**	**05 41 40.2**	**+0.3**
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,180nm,5.2s						
HIA	**Hailar**	**71.55**	**331**	⇓*i*P	**P**	**05 41 39.5**	**-0.3**
HIA				pmax	pmax		
	comp=Z,29nm,1.5s						
ZEA	**Zeya**	**71.63**	**338**	*e*P	**P**	**05 41 40.7**	**+0.5**
ZEA				pmax	pmax		
	comp=N,96nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,130nm,1.8s						
LZH	**Lanzhou**	**73.69**	**313**	*e*P	**P**	**05 41 52.9**	**-0.2**
LZH				pP	pP	05 41 58.8	-1.7
LZH				sP	sP	05 42 01.2	-2.2
LZH				PP	**PP**	**05 44 41.6**	**+3.8**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,89nm,4.9s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,520nm,16.4s						
LZH				LR	LR		
	comp=Z,580nm,17.5s						
CIT	**Chita**	**76.33**	**330**	*e*P	**P**	**05 42 08.3**	**+0.5**
CIT				*e*		05 42 15.2	
CIT				*e*		05 42 24.2	
GAMB	**Gambell**	**76.51**	**11**	*e*P	**P**	**05 42 08.8**	**+0.3**
	comp=Z,56nm,1.4s						
ULN	**Ulaanbaatar**	**77.38**	**324**	*e*P	**P**	**05 42 14.0**	**+0.1**
	comp=Z,22nm,1.2s						
ULN	**Ulaanbaatar**	**77.38**	**324**	⇓*i*P	**P**	**05 42 14.4**	**+0.4**
ULN				pmax	pmax		
	comp=Z,24nm,1.3s						
YAK	**Yakutsk**	**77.50**	**344**	*e*P	**P**	**05 42 12.9**	**-1.2**
YAK				pmax	pmax		
	comp=Z,21nm,1.8s						
YAK				pmax	pmax		
	comp=N,12nm,1.6s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.4s						
SONA0	**Songino Array**	**77.74**	**324**	*e*P	**P**	**05 42 15.9**	**0.0**
SONM	**Songino Array**	**77.74**	**324**	P	**P**	**05 42 15.9**	**0.0**
	comp=E,4.9nm,0.9s,baz=146,slow=6.4,SNR=11						
SONA1	**Songino Array**	**77.74**	**324**	*e*P	**P**	**05 42 15.5**	**-0.5**
GTA	**Gaotai**	**78.01**	**314**	⇓P	**P**	**05 42 18.5**	**+0.9**
GTA				pP	pP	05 42 22.7	-2.5
GTA				sP	PcP	05 42 25.7	-1.6
GTA				pmax	pmax		
	comp=Z,11nm,1.3s						
GTA				LR	LR		
	comp=N,420nm,18.4s						
GTA				LR	LR		

	comp=E,500nm,17.1s						
GTA				LR	LR		
	comp=Z,720nm,18.7s						
SVW2	**Sparrevohn**	**78.23**	**19**	*e*P	**P**	**05 42 18.7**	**+0.5**
	comp=Z,38nm,1.2s						
ANM	**Nome**	**78.48**	**13**	*e*P	**P**	**05 42 19.1**	**-0.3**
	comp=Z,20nm,1.2s						
ANM	**Nome**	**78.48**	**13**	*e*P	**P**	**05 42 19.2**	**-0.3**
ANM				pmax	pmax		
	comp=Z,20nm,1.2s						
BILL	**Bilibino**	**78.61**	**1**	*e*P	**P**	**05 42 19.8**	**-0.4**
	comp=Z,43nm,1.4s						
BILL	**Bilibino**	**78.61**	**1**	⇑*e*P	**P**	**05 42 20.0**	**-0.2**
BILL				pmax	pmax		
	comp=Z,12nm,1.1s						
RSO	**Redoubt South**	**78.67**	**20**	*e*P	**P**	**05 42 20.7**	**-0.2**
BRLK	**Bradley Lake**	**78.81**	**21**	*e*P	**P**	**05 42 21.3**	**-0.2**
	comp=Z,23nm,1.1s						
QSPA	**South Pole Qui**	**79.23**	**180**	*e*P	**P**	**05 42 24.5**	**+0.5**
	comp=Z,23nm,1.1s						
BOD	**Bodaibo**	**79.78**	**335**	*e*P	**P**	**05 42 24.9**	**-1.8**
BOD				pmax	pmax		
	comp=Z,18nm,1.9s						
PMR	**Palmer**	**80.71**	**21**	*e*P	**P**	**05 42 32.6**	**+0.9**
	comp=Z,37nm,1.5s						
PMR	**Palmer**	**80.71**	**21**	*e*P	**P**	**05 42 32.6**	**+0.9**
PMR				pmax	pmax		
	comp=Z,37nm,1.5s						
ZAK	**Zakamensk**	**80.79**	**325**	*e*P	**P**	**05 42 31.3**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CAST	**Castle Rocks**	**81.06**	**18**	*e*P	**P**	**05 42 34.7**	**+1.1**
	comp=Z,13nm,0.9s						
TLY	**Talaya**	**81.23**	**327**	*ce*P	**P**	**05 42 35.3**	**+0.6**
RDOG	**Red Dog Mine**	**82.00**	**12**	*e*P	**P**	**05 42 39.0**	**+0.6**
	comp=Z,47nm,1.3s						
RND	**Reindeer**	**82.07**	**19**	*e*P	**P**	**05 42 38.3**	**-0.7**
	comp=Z,22nm,1.3s						
RND	**Reindeer**	**82.07**	**19**	*e*P	**P**	**05 42 38.3**	**-0.7**
RND				pmax	pmax		
	comp=Z,22nm,1.3s						
MCK	**McKinley**	**82.27**	**19**	*e*P	**P**	**05 42 41.2**	**+1.3**
	comp=Z,29nm,1.2s						
MCK	**McKinley**	**82.27**	**19**	*e*P	**P**	**05 42 41.2**	**+1.3**
MCK				pmax	pmax		
	comp=Z,29nm,1.2s						
IM3	**Indian Mountai**	**82.48**	**16**	*e*P	**P**	**05 42 41.4**	**+0.5**
MLY	**Manley**	**82.64**	**18**	*e*P	**P**	**05 42 42.0**	**+0.1**
	comp=Z,22nm,1.4s						
WRH	**Wood River Hil**	**83.05**	**19**	*e*P	**P**	**05 42 44.2**	**+0.3**
	comp=Z,19nm,1.2s						
MDM	**Murphy Dome**	**83.34**	**18**	*e*P	**P**	**05 42 45.3**	**-0.2**
	comp=Z,30nm,1.3s						
HDA	**Harding Lake**	**83.37**	**19**	*e*P	**P**	**05 42 45.9**	**+0.2**
	comp=Z,26nm,1.0s						
HDA	**Harding Lake**	**83.37**	**19**	P	**P**	**05 42 46.1**	**+0.5**
	baz=228						
TCOL	**CIGO, UAF Yank**	**83.40**	**19**	P	**P**	**05 42 48.0**	**+2.3**
	baz=227						
COLA	**College**	**83.40**	**19**	*e*P	**P**	**05 42 46.8**	**+1.1**
	comp=Z,18nm,1.0s						
COLA	**College**	**83.40**	**19**	⇓*i*P	**P**	**05 42 47.9**	**+2.2**
COLA				pmax	pmax		
	comp=Z,18nm,1.1s						
ILAR	**Eielson Array**	**83.64**	**19**	P	**P**	**05 42 47.1**	**+0.2**
	comp=Z,9.7nm,1.0s,baz=229,slow=5.4,SNR=18						
ILB	**Eielson Array**	**83.64**	**19**	*e*P	**P**	**05 42 47.3**	**+0.4**
	comp=Z,14nm,1.1s						
IL1	**Eielson Array**	**83.64**	**19**	*e*P	**P**	**05 42 46.0**	**-1.0**
POKR	**Poker Plat Res**	**83.70**	**18**	P	**P**	**05 42 49.3**	**+2.0**
	baz=227						
SCRK	**Sand Creek**	**84.07**	**20**	*e*P	**P**	**05 42 51.1**	**+1.7**
	comp=Z,16nm,1.1s						
ORV	**Oroville**	**84.72**	**48**	*e*P	**P**	**05 42 52.8**	**-0.3**
	comp=Z,6.0nm,1.2s						
ORV	**Oroville**	**84.72**	**48**	*e*P	**P**	**05 42 52.8**	**-0.3**
ORV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
AFDM	**Forest Hills D**	**84.92**	**49**	*e*P	**P**	**05 42 55.3**	**+1.2**
	comp=Z,24nm,1.6s						
TIXI	**Tiksi**	**85.60**	**349**	*e*P	**P**	**05 42 56.1**	**-0.5**
	comp=Z,27nm,1.4s						
TIXI	**Tiksi**	**85.60**	**349**	⇓*i*P	**P**	**05 42 56.7**	**0.0**
TIXI				pmax	pmax		
	comp=Z,24nm,1.5s						
DAWY	**Dawson**	**85.73**	**21**	*e*P	**P**	**05 43 00.6**	**+3.0**
	comp=Z,16nm,1.3s						
MDPB	**Devils Postpil**	**85.95**	**51**	*e*P	**P**	**05 43 00.6**	**+1.0**
	comp=Z,12nm,1.1s						
EDW2	**Edwards Air Fo**	**86.02**	**54**	P	**P**	**05 43 01.1**	**+1.3**
	baz=254						
MPMC	**Manual Prospec**	**86.73**	**53**	P	**P**	**05 43 04.4**	**+1.0**
	baz=254						
NV01	**Mina Array Sit**	**86.76**	**50**	*e*P	**P**	**05 43 03.4**	**-0.1**
NVAR	**Mina Array Bea**	**86.76**	**50**	P	**P**	**05 43 04.3**	**+0.8**
	comp=Z,3.8nm,0.9s,baz=229,slow=7.7,SNR=7.9						
PFO	**Pinyon Flats O**	**86.91**	**55**	P	**P**	**05 43 05.8**	**+1.6**
	baz=255						
KVN	**Kaiserville**	**87.09**	**50**	*e*P	**P**	**05 43 06.0**	**+0.9**
	comp=Z,6.3nm,1.1s						
KVN	**Kaiserville**	**87.09**	**50**	*e*P	**P**	**05 43 06.0**	**+0.9**
KVN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BELC	**Belle Mtn. Jos**	**87.38**	**55**	P	**P**	**05 43 07.8**	**+1.3**
	baz=255						
BC3	**Big Chuckawall**	**87.73**	**55**	P	**P**	**05 43 10.0**	**+1.8**
	baz=256						
J08A	**Circle Bar Ran**	**88.04**	**45**	*e*P	**P**	**05 43 11.3**	**+1.9**
	comp=Z,17nm,1.5s						
WMQ	**Urumqi**	**88.06**	**315**	P	**P**	**05 43 09.6**	**+0.2**
WMQ				pP	PcP	05 43 12.6	+1.4
WMQ				sP	pwP	05 43 22.3	-1.5
WMQ				pmax	pmax		
	comp=Z,30nm,1.1s						
IRM	**Iron Mountain**	**88.10**	**55**	P	**P**	**05 43 11.4**	**+1.6**
	baz=256						
Y12C	**Blythe**	**88.50**	**55**	P	**P**	**05 43 13.5**	**+1.8**
	baz=256						
R11A	**Troy Canyon, C**	**88.80**	**51**	P	**P**	**05 43 14.7**	**+1.5**
	baz=255						
PDMCI	**Parker Dam,Lak**	**88.94**	**55**	P	**P**	**05 43 14.6**	**+0.8**
	baz=256						
214A	**Organ Pipe Nat**	**89.49**	**57**	P	**P**	**05 43 18.3**	**+1.9**
	baz=257						
INK	**Inuvik**	**90.03**	**19**	*e*P	**P**	**05 43 19.0**	**+1.0**
	comp=Z,19nm,1.5s						
INK	**Inuvik**	**90.03**	**19**	*e*P	**P**	**05 43 19.0**	**+1.0**
INK				pmax	pmax		
	comp=Z,19nm,1.5s						
INK	**Inuvik**	**90.03**	**19**	P	**P**	**05 43 19.0**	**+1.0**
	comp=Z,2.2nm,1.1s,baz=234,slow=7.9,SNR=3.1						
LCMT	**Little Creek M**	**90.28**	**52**	*e*P	**P**	**05 43 20.6**	**+0.5**
	comp=Z,9.3nm,1.2s						
CCUT	**Cedar City**	**90.31**	**52**	*e*P	**P**	**05 43 20.2**	**-0.2**
	comp=Z,6.8nm,1.0s						
U15A	**North Rim**	**90.90**	**53**	*e*P	**P**	**05 43 25.2**	**+2.0**
	comp=Z,8.2nm,1.1s						
PKCU	**Pink Cliffs**	**91.10**	**52**	*e*P	**P**	**05 43 26.0**	**+1.8**
	comp=Z,10nm,1.1s						
X16A	**Lo Mia Camp, P**	**91.14**	**55**	*e*P	**P**	**05 43 25.7**	**+1.4**
	comp=Z,2.6nm,0.8s						
TUC	**Tucson**	**91.24**	**57**	P	**P**	**05 43 26.8**	**+2.1**
	baz=258						
MSU	**Marysvale**	**91.44**	**51**	*e*P	**P**	**05 43 28.1**	**+2.5**
SYO	**Syowa Base**	**91.69**	**197**	⇑*e*pP	**P**	**05 43 28.2**	**+2.3**
HVU	**Hansel Valley**	**91.71**	**48**	*e*P	**P**	**05 43 26.9**	**+0.2**
	comp=Z,8.2nm,1.0s						
HVU	**Hansel Valley**	**91.71**	**48**	*e*P	**P**	**05 43 26.9**	**+0.2**
HVU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NLU	**North Lily Min**	**91.83**	**50**	*e*P	**P**	**05 43 28.9**	**+1.5**
	comp=Z,9.4nm,1.2s						
MK32	**Makanchi Array**	**92.50**	**317**	*e*P	**P**	**05 43 29.9**	**-0.1**
MKAR	**Makanchi Array**	**92.50**	**317**	*e*P	**P**	**05 43 29.9**	**-0.1**
	comp=Z,38nm,0.8s						
MKAR	**Makanchi Array**	**92.50**	**317**	P	**P**	**05 43 30.0**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MKAR	**Makanchi Array**	**92.50**	**317**	P	**P**	**05 43 29.9**	**-0.1**
	comp=Z,6.4nm,0.8s,baz=101,slow=5.8,SNR=19						
DLMT	**Dillon**	**92.62**	**44**	*e*P	**P**	**05 43 32.9**	**+2.1**
	comp=Z,12nm,1.1s						
ZAA0	**Zalesovo Array**	**92.64**	**324**	*e*P	**P**	**05 43 29.7**	**-0.7**
	comp=Z,12nm,1.4s						
ZALV	**Zalesovo Beam**	**92.64**	**324**	*e*P	**P**	**05 43 29.1**	**-1.3**
ZALV	**Zalesovo Beam**	**92.64**	**324**	*e*P	**P**	**05 43 29.2**	**-1.3**
ZALV	**Zalesovo Beam**	**92.64**	**324**	P	**P**	**05 43 29.6**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=108,slow=4.8,SNR=9.9						
ZAA1	**Zalesovo Array**	**92.64**	**324**	*e*P	**P**	**05 43 29.6**	**-0.8**
MAKZ	**Makanchi**	**92.72**	**317**	*e*P	**P**	**05 43 30.9**	**-0.2**
	comp=Z,12nm,1.0s						
MAKZ	**Makanchi**	**92.72**	**317**	*e*P	**P**	**05 43 30.9**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.0s						
BOZ	**Bozeman (W)**	**93.34**	**44**	*e*P	**P**	**05 43 35.1**	**+1.0**
	comp=Z,3.9nm,0.8s						
BOZ	**Bozeman (W)**	**93.34**	**44**	*e*P	**P**	**05 43 35.1**	**+1.0**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	**Bozeman (W)**	**93.34**	**44**	P	**P**	**05 43 36.0**	**+1.9**
	baz=258						
NVS	**Novosibirsk**	**93.75**	**325**	*e*P	**P**	**05 43 36.2**	**+0.7**
PD31	**Pinedale Array**	**94.25**	**47**	*e*P	**P**	**05 43 37.9**	**-0.5**
	comp=Z,2.4nm,1.1s						
PDAR	**Pinedale Array**	**94.25**	**47**	*e*P	**P**	**05 43 38.2**	**-0.3**
PDAR	**Pinedale Array**	**94.25**	**47**	P	**P**	**05 43 38.9**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=232,slow=1.7,SNR=5.5						
ANMO	**Albuquerque**	**95.28**	**56**	⇓*e*P	**P**	**05 43 43.3**	**0.0**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**95.28**	**27**	P	**P**	**05 43 40.9**	**-1.5**
	comp=Z,0.6nm,0.9s,baz=260,slow=4.5,SNR=4.0						
NRIK	**Noril'sk**	**95.45**	**340**	P	**P**	**05 43 41.9**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=146,slow=7.3,SNR=2.5						
KSH	**Kashi**	**95.65**	**309**	P	**P**	**05 43 46.6**	**+1.8**
KSH				pP	pP	05 43 51.2	-1.4
KSH				pmax	pmax		
	comp=Z,360nm,5.2s						
LTX	**Lajitas**	**96.75**	**62**	*e*P	**P**	**05 43 51.4**	**+1.4**
LTX	**Lajitas**	**96.75**	**62**	*e*P	**P**	**05 43 51.4**	**+1.4**
TXAR	**Lajitas Array**	**96.75**	**62**	P	**P**	**05 43 51.4**	**+1.4**
	comp=Z,0.4nm,1.0s,baz=207,slow=5.8,SNR=2.8						
ARA0	**ARCESS Array S**	**115.77**	**345**	*e*PKPdf	**PKiKP**	**05 48 59.4**	**-1.3**
ARCES	**ARCESS Array B**	**115.77**	**345**	PKP	**PKiKP**	**05 48 59.4**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=356,slow=3.6,SNR=5.3						
OBN	**Obninsk**	**119.95**	**328**	*e*PKIKP	**PKiKP**	**05 49 10.9**	**+1.7**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LPAZ	**La Paz**	**121.38**	**117**	PKP	**PKiKP**	**05 49 15.0**	**+1.1**
	comp=Z,0.9nm,0.4s,baz=201,slow=5.0,SNR=4.2						
BOSA	**Boshof**	**124.49**	**224**	PKP	**PKPdf**	**05 49 18.0**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=36,slow=1.5,SNR=3.2						
SDV	**Santo Domingo**	**125.67**	**87**	PKP	**PKPdf**	**05 49 20.7**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=310,slow=5.7,SNR=3.2						
AKASG	**Malin Array Be**	**125.98**	**326**	PKP	**PKPdf**	**05 49 20.0**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=51,slow=2.3,SNR=3.6						
BR101	**Keskin Array S**	**127.90**	**312**	*e*PKPdf	**PKPdf**	**05 49 24.9**	**-0.1**
BRTR	**Keskin Array B**	**127.90**	**312**	PKP	**PKPdf**	**05 49 24.9**	**-0.1**
	comp=Z,1.0nm,1.1s,baz=29,slow=3.3,SNR=3.2						
GEC2	**GERESS Array S**	**134.92**	**333**	*e*PKPdf	**PKPdf**	**05 49 37.4**	**-0.6**
GEC2	**GERESS Array S**	**134.92**	**333**	*e*PKIKP	**PKPdf**	**05 49 37.4**	**-0.6**
GERES	**GERESS Array B**	**134.92**	**333**	PKP	**PKPdf**	**05 49 37.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=17,slow=5.1,SNR=2.6						
KEST	**Kesra**	**146.47**	**322**	PKPbc	**PKPdf**	**05 49 59.0**	**-0.1**
	comp=Z,12nm,0.9s,baz=299,slow=2.7,SNR=4.7						
ESDC	**Sonseca Array**	**149.45**	**342**	PKPbc	**PKiKP**	**05 50 09.1**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=9.0,slow=4.3,SNR=3.3						
TORD	**Torodi Ar. Bea**	**163.04**	**280**	PKP	**PKPdf**	**05 50 21.6**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=42,slow=1.4,SNR=3.5						
TORD				PKPab	**PKPab**	**05 51 11.0**	**-1.0**
	comp=Z,1.4nm,1.0s,baz=84,slow=4.3,SNR=3.1						
TOA1	**Torodi Ar. Sit**	**163.04**	**280**	*e*PKPdf	**PKPdf**	**05 50 21.6**	**-0.6**
TOA1				*e*PKPab	**PKPab**	**05 51 11.0**	**-1.0**

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*ISCJB **06** 05:32:53.3±0.5, 11°.37S±0°.09×165°.11E±0°.09, h10^{km}, mb4.0/14, Error ellipse: s-maj=14.7km s-min=11.3km az=140.1*

*IDC **06** 05:32:53.1±0.8, 11°.30S×165°.21E, h0^{km}, mb4.0/13, mb1 4.2/15, mb1mx4.1/39, mbtmp4.1/15, ML4.1/2, Error ellipse: s-maj=31.4km s-min=17.7km az=141.0*

*NEIC **06** 05:32:56.8±1.0, 11°.29S×165°.00E, h16^{km}±7^{km}, mb4.1/3, Error ellipse: s-maj=24.6km s-min=20.9km az=148.0*

ISC 06 05:32:54.9±0.7**, 11°.3S**±0°.1×**165°.2E**±0°.1**, h10**^{km}**, n24, σ1ˢ.35**/23**, mb4.0**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.46**	**289**	Pn	**Pn**	**05 34 14.6**	**-1.7**
	14nm,0.3s,baz=190,slow=17,SNR=2.2						
DZM	**Mont Dzumac**	**10.82**	**174**	Pn	**Pn**	**05 35 30.8**	**+0.7**
	0.7nm,0.3s,baz=323,slow=20,SNR=1.7						
CTA	**Charters Tower**	**20.21**	**242**	P	Pn	05 37 29.7	-2.3
	6.2nm,0.8s,baz=72,slow=7.8,SNR=2.3						
STKA	**Stephens Creek**	**29.91**	**223**	P	**P**	**05 39 02.6**	**-0.4**
	1.4nm,0.7s,baz=54,slow=14,SNR=1.3						
WR1	**Warramunga Arr**	**30.89**	**250**	*e*P	**P**	**05 39 11.0**	**-0.9**
	21nm,1.0s						
WRA	**Warramunga Arr**	**30.89**	**250**	P	**P**	**05 39 11.0**	**-0.9**
	1.1nm,1.0s,baz=81,slow=9.0,SNR=2.5						
ASAR	**Alice Springs**	**32.20**	**243**	P	**P**	**05 39 22.7**	**-0.7**
	1.8nm,0.9s,baz=71,slow=8.9,SNR=2.5						
FITZ	**Fitzroy Crossi**	**38.79**	**255**	P	**P**	**05 40 20.6**	**+0.5**
	4.7nm,0.8s,baz=73,slow=11,SNR=3.2						
SBUM	**Sibu**	**54.39**	**281**	*e*S	**S**	**05 50 03.6**	**+2.2**
SONA0	**Songino Array**	**78.51**	**324**	*e*P	**P**	**05 44 58.1**	**+1.7**
SONM	**Songino Array**	**78.51**	**324**	P	**P**	**05 44 58.1**	**+1.7**
	1.1nm,0.8s,baz=154,slow=7.8,SNR=4.2						
ILAR	**Eielson Array**	**83.89**	**19**	P	**P**	**05 45 25.2**	**+0.6**
	1.0nm,0.7s,baz=237,slow=5.7,SNR=6.7						
BEKR	**Beckworth**	**85.50**	**48**	*e*P	**P**	**05 45 36.0**	**+2.5**
	3.8nm,1.1s						
NVAR	**Mina Array Bea**	**86.58**	**50**	P	**P**	**05 45 39.1**	**+0.2**
	0.7nm,0.9s,baz=236,slow=6.4,SNR=3.3						
MK32	**Makanchi Array**	**93.29**	**317**	*e*P	**P**	**05 46 10.4**	**+0.4**
MKAR	**Makanchi Array**	**93.29**	**317**	P	**P**	**05 46 10.4**	**+0.4**
	0.4nm,0.8s,baz=85,slow=7.1,SNR=4.6						
ZALV	**Zalesovo Beam**	**93.40**	**324**	P	**P**	**05 46 10.9**	**+0.6**
	0.9nm,0.7s,baz=126,slow=3.7,SNR=3.9						
ZAA1	**Zalesovo Array**	**93.40**	**324**	*e*P	**P**	**05 46 10.9**	**+0.6**
PDAR	**Pinedale Array**	**94.10**	**47**	P	**P**	**05 46 13.2**	**-0.9**
	0.5nm,0.8s,baz=270,slow=4.3,SNR=3.3						
YKA	**Yellowknife Ar**	**95.42**	**27**	P	**P**	**05 46 18.1**	**-1.3**
	0.3nm,0.7s,baz=255,slow=4.5,SNR=3.2						
LTX	**Lajitas**	**96.42**	**61**	*e*P	**P**	**05 46 22.7**	**-2.1**
TXAR	**Lajitas Array**	**96.42**	**61**	P	**P**	**05 46 22.7**	**-2.1**
	0.3nm,0.8s,baz=270,slow=2.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**163.75**	**278**	PKP	**PKPdf**	**05 53 00.0**	**+0.7**
	0.7nm,1.0s,baz=50,slow=2.1,SNR=2.8						
TOA1	**Torodi Ar. Sit**	**163.75**	**278**	*e*PKPdf	**PKPdf**	**05 53 00.0**	**+0.7**

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*IDC **06** 05:33:39.4±1.3, 10°.83S×165°.43E, h0^{km}, mb4.0/6, mb1 4.4/8, mb1mx4.0/40, mbtmp4.2/8, ML4.7/2, MS4.9/1, Ms1 4.9/1, ms1mx3.6/47, Error ellipse: s-maj=34.4km s-min=26.4km az=137.0*

*ISCJB **06** 05:33:41.7±0.9, 10°.9S±0°.1×165°.4E±0°.1, h30^{km}, mb4.1/6, MS4.9/1, Error ellipse: s-maj=19.3km s-min=16.3km az=165.0*

ISC 06 05:33:43.8±1.0**, 10°.9S**±0°.1×**165°.4E**±0°.1**, h30**^{km}**, n9, σ1ˢ.09**/8**, mb4.1**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.56**	**285**	Pn	**Pn**	**05 35 04.6**	**0.0**
	24nm,0.3s,baz=4.1,slow=14,SNR=2.0						
DZM	**Mont Dzumac**	**11.17**	**175**	Pn	**Pn**	**05 36 21.6**	**0.0**
	5.4nm,0.3s,baz=155,slow=23,SNR=5.4						
WRA	**Warramunga Arr**	**31.23**	**249**	P	**P**	**05 40 02.5**	**+1.5**
	0.9nm,0.6s,baz=82,slow=9.6,SNR=0.8						
ASAR	**Alice Springs**	**32.57**	**243**	P	**P**	**05 40 11.4**	**-1.3**
	1.2nm,0.6s,baz=69,slow=10,SNR=1.8						
FITZ	**Fitzroy Crossi**	**39.10**	**255**	LR	LR	05 57 12.7	
	comp=Z,2µm,19.1s,baz=107,slow=36						
KSRS	**Korea Array**	**59.56**	**326**	P	**P**	**05 43 44.1**	**-0.5**
	1.9nm,0.9s,baz=144,slow=6.7,SNR=2.6						
USRK	**Ussuriysk Ar.**	**62.66**	**334**	P	**P**	**05 44 06.0**	**+0.4**
	1.8nm,0.7s,baz=152,slow=9.4,SNR=2.9						
ILAR	**Eielson Array**	**83.47**	**19**	P	**P**	**05 46 07.3**	**-0.9**
	0.8nm,0.8s,baz=238,slow=4.9,SNR=1.6						
NVAR	**Mina Array Bea**	**86.18**	**50**	P	**P**	**05 46 23.6**	**+0.8**
	2.8nm,1.2s,baz=238,slow=5.2,SNR=2.1						

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*IDC **06** 05:34:09.9±0.8, 10°.58S×166°.50E, h0^{km}, mb4.3/19, mb1 4.5/20, mb1mx4.4/39, mbtmp4.3/20, ML5.0/1, Error ellipse: s-maj=25.2km s-min=16.9km az=132.0*

*ISCJB **06** 05:34:11.1±0.3, 10°.39S±0°.07×166°.31E±0°.06, h10^{km}, mb4.5/47, Error ellipse: s-maj=11.2km s-min=6.1km az=143.7*

*NEIC **06** 05:34:12.2±0.2, 10°.45S×166°.42E, h10^{km}, mb4.7/32, Error ellipse: s-maj=9.4km s-min=5.7km az=145.0*

ISC 06 05:34:11.5±0.6**, 10°.5S**±0°.1×**166°.5E**±0°.1**, h10**^{km}**, n93, σ1ˢ.09**/86**, mb4.6**/47**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.57**	**279**	Pn	**Pn**	**05 35 46.5**	**-1.8**
	30nm,0.3s,baz=107,slow=19,SNR=2.0						
EIDS	**Eidsvold**	**20.80**	**223**	P	Pn	05 38 54.7	-0.8
	baz=21,SNR=5.6						
EIDS	**Eidsvold**	**20.80**	**223**	*e*P	Pn	05 38 54.0	-1.5
	73nm,1.1s						
CTA	**Charters Tower**	**21.72**	**242**	P	**P**	**05 39 04.3**	**+1.1**
	10nm,0.8s,baz=74,slow=12,SNR=2.9						
CTAO	**Charters Tower**	**21.72**	**242**	*e*P	**P**	**05 39 05.7**	**+2.5**
	31nm,1.1s						
MTSU	**Mount Surprise**	**22.80**	**248**	P	**P**	**05 39 15.6**	**+1.0**
	baz=23,SNR=5.9						
RMQ	**Roma**	**23.11**	**224**	P	**P**	**05 39 21.6**	**+3.8**
	baz=23,SNR=4.4						
ARMA	**Armidale**	**24.17**	**213**	P	**P**	**05 39 28.1**	**-0.2**
	baz=24,SNR=4.5						
ARMA	**Armidale**	**24.17**	**213**	*e*P	**P**	**05 39 29.3**	**+1.1**
	18nm,1.0s						
QIS	**Mount Isa**	**27.75**	**246**	P	**P**	**05 40 01.1**	**+0.4**
	baz=28,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**28.82**	**0**	T	T	06 10 28.0	
	baz=181,slow=76						
H11S3	**WAKE ISLAND Hy**	**28.83**	**0**	T	T	06 10 26.3	
	baz=181,slow=76						
H11S1	**WAKE ISLAND Hy**	**28.84**	**0**	T	T	06 10 27.6	
	baz=181,slow=76						
URZ	**Urewera**	**29.21**	**163**	P	**P**	**05 40 12.4**	**-1.0**
	10nm,1.0s,baz=322,slow=19,SNR=2.3						
BKZ	**Black Stump Fm**	**29.88**	**164**	*e*P	P	05 40 23.6	+4.2
	10nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**30.04**	**1**	T	T	06 11 45.8	
	baz=182,slow=74						
H11N3	**WAKE ISLAND Hy**	**30.05**	**1**	T	T	06 11 45.6	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.06**	**1**	T	T	06 11 47.2	
	baz=182,slow=74						
STKA	**Stephens Creek**	**31.35**	**224**	*e*P	**P**	**05 40 32.2**	**-0.2**
	1.1nm,1.1s						
STKA	**Stephens Creek**	**31.35**	**224**	P	**P**	**05 40 32.2**	**-0.2**
	2.2nm,0.7s,baz=47,slow=19,SNR=2.7						
WRAB	**Tennant Creek**	**32.37**	**249**	*e*P	**P**	**05 40 41.8**	**+0.2**
	23nm,1.0s						
WB2	**Warramunga Arr**	**32.38**	**249**	*e*P	**P**	**05 40 41.3**	**-0.3**
WB2				*e*P	**P**	**05 40 42.2**	**+0.6**
WR1	**Warramunga Arr**	**32.39**	**249**	*e*P	**P**	**05 40 41.6**	**-0.1**
	35nm,1.1s						
WRA	**Warramunga Arr**	**32.39**	**249**	P	**P**	**05 40 41.6**	**-0.1**
	11nm,1.0s,baz=78,slow=8.9,SNR=7.9						
AS01	**Alice Springs**	**33.67**	**243**	*e*P	**P**	**05 40 52.4**	**-0.6**
AS31	**Alice Springs**	**33.71**	**243**	*e*P	**P**	**05 40 52.9**	**-0.4**
	5.4nm,1.1s						
ASAR	**Alice Springs**	**33.72**	**243**	P	**P**	**05 40 52.0**	**-1.4**
	6.6nm,0.9s,baz=76,slow=9.5,SNR=8.9						
HTT	**Hallett**	**34.08**	**224**	P	**P**	**05 40 57.4**	**+1.0**
	baz=34,SNR=3.6						
WRKA	**Warakurna**	**39.01**	**243**	P	**P**	**05 41 38.3**	**-0.2**
	baz=39,SNR=5.3						
FITZ	**Fitzroy Crossi**	**40.26**	**254**	P	**P**	**05 41 48.7**	**-0.3**
	baz=40,SNR=6.9						
FITZ	**Fitzroy Crossi**	**40.26**	**254**	*e*P	**P**	**05 41 48.8**	**-0.2**
	20nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.26**	**254**	P	**P**	**05 41 48.8**	**-0.2**
	7.5nm,0.7s,baz=129,slow=6.0,SNR=7.4						
MBWA	**Marble Bar**	**46.09**	**251**	*e*P	**P**	**05 42 35.9**	**-0.3**
	16nm,1.0s						
MEEK	**Meekatharra**	**47.87**	**244**	P	**P**	**05 42 51.7**	**+1.6**
	baz=48,SNR=7.8						
MJAR	**Matsushiro Arr**	**53.87**	**332**	P	**P**	**05 43 35.3**	**+0.3**
	2.1nm,0.9s,baz=147,slow=6.8,SNR=3.3						
MAJO	**Matsushiro**	**53.87**	**332**	*e*P	**P**	**05 43 35.3**	**+0.3**
KSRS	**Korea Array**	**59.88**	**325**	P	**P**	**05 44 18.0**	**+0.4**
	0.8nm,0.7s,baz=141,slow=6.4,SNR=3.0						
KSAR	**Wonju Array Be**	**59.90**	**325**	P	**P**	**05 44 18.0**	**+0.2**
KS01	**Wonju Array Si**	**59.92**	**325**	*e*P	**P**	**05 44 17.8**	**0.0**
USRK	**Ussuriysk Ar.**	**62.83**	**333**	P	**P**	**05 44 38.5**	**+1.1**
	1.1nm,0.7s,baz=134,slow=4.2,SNR=4.1						
PETK	**Petropavlovsk-**	**63.82**	**354**	P	**P**	**05 44 43.0**	**-0.9**
	1.8nm,0.7s,baz=127,slow=3.8,SNR=2.3						
PEA1	**Petropavlovsk-**	**63.83**	**354**	*e*P	**P**	**05 44 43.0**	**-0.9**
CM01	**Chiang Mai Arr**	**72.58**	**293**	*e*P	**P**	**05 45 40.8**	**+1.2**
CMAR	**Chiang Mai Arr**	**72.61**	**293**	P	**P**	**05 45 38.6**	**-1.2**
	0.7nm,0.3s,baz=108,slow=4.8,SNR=3.5						
SONA0	**Songino Array**	**78.70**	**323**	*e*P	**P**	**05 46 15.2**	**+1.0**
SONM	**Songino Array**	**78.70**	**323**	P	**P**	**05 46 15.2**	**+1.0**
	0.5nm,0.4s,baz=94,slow=23,SNR=5.6						
HDA	**Harding Lake**	**82.50**	**19**	*e*P	**P**	**05 46 34.5**	**+0.5**
	8.4nm,1.0s						
IL1	**Eielson Array**	**82.77**	**18**	*e*P	**P**	**05 46 35.2**	**-0.3**
ILAR	**Eielson Array**	**82.77**	**18**	P	**P**	**05 46 36.6**	**+1.1**
	2.2nm,0.8s,baz=239,slow=5.2,SNR=7.7						
ILB	**Eielson Array**	**82.77**	**18**	*e*P	**P**	**05 46 35.7**	**+0.2**
	3.4nm,0.8s						
NV01	**Mina Array Sit**	**85.10**	**50**	*e*P	**P**	**05 46 49.6**	**+1.4**
NVAR	**Mina Array Bea**	**85.10**	**50**	P	**P**	**05 46 49.4**	**+1.2**
	1.7nm,0.9s,baz=228,slow=6.8,SNR=3.7						
LCMT	**Little Creek M**	**88.57**	**52**	*e*P	**P**	**05 47 06.2**	**+1.1**
	3.6nm,1.1s						
CCUT	**Cedar City**	**88.61**	**52**	*e*P	**P**	**05 47 06.7**	**+1.3**
	2.3nm,1.0s						
SZCU	**Shurtz Canyon**	**88.84**	**52**	*e*P	**P**	**05 47 07.3**	**+0.9**
	5.4nm,1.1s						
KNB	**Kanab**	**88.90**	**52**	*e*P	**P**	**05 47 06.5**	**-0.2**
	4.9nm,1.2s						
U15A	**North Rim**	**89.18**	**53**	*e*P	**P**	**05 47 09.8**	**+1.6**
	1.8nm,0.8s						
X16A	**Lo Mia Camp, P**	**89.39**	**55**	*e*P	**P**	**05 47 09.8**	**+0.8**
	4.4nm,1.0s						
PKCU	**Pink Cliffs**	**89.40**	**52**	*e*P	**P**	**05 47 10.9**	**+1.7**
	1.9nm,0.7s						
TUC	**Tucson**	**89.45**	**57**	*e*P	**P**	**05 47 09.5**	**+0.2**
	3.4nm,1.1s						
DUG	**Dugway, Tooele**	**89.67**	**49**	*e*P	**P**	**05 47 09.4**	**-0.8**
	5.1nm,1.1s						
WUAZ	**Wupatki**	**89.69**	**54**	*e*P	**P**	**05 47 12.2**	**+1.8**
	8.0nm,1.1s						
MSU	**Marysvale**	**89.75**	**51**	*e*P	**P**	**05 47 13.2**	**+2.4**
HVU	**Hansel Valley**	**90.08**	**48**	*e*P	**P**	**05 47 13.8**	**+1.7**
	8.2nm,1.2s						
NLU	**North Lily Min**	**90.17**	**49**	*e*P	**P**	**05 47 14.1**	**+1.4**
	3.9nm,1.2s						
MPU	**Maple Canyon**	**90.51**	**49**	*e*P	**P**	**05 47 15.7**	**+1.5**
	6.9nm,1.2s						
Q16A	**Castle Valley**	**90.61**	**51**	*e*P	**P**	**05 47 15.8**	**+1.0**
	7.0nm,1.2s						
TMUT	**Trail Mountain**	**90.67**	**50**	*e*P	**P**	**05 47 17.0**	**+1.9**
	3.1nm,0.9s						
REDW	**Red Top Meadow**	**91.83**	**46**	*e*P	**P**	**05 47 22.0**	**+1.7**
	2.1nm,1.0s						
LOHW	**Long Hollow**	**92.06**	**46**	*e*P	P	05 47 26.9	+5.6
	1.2nm,1.1s						
PD31	**Pinedale Array**	**92.63**	**47**	*e*P	**P**	**05 47 24.8**	**+0.7**
PDAR	**Pinedale Array**	**92.63**	**47**	*e*P	**P**	**05 47 23.8**	**-0.2**
PDAR	**Pinedale Array**	**92.63**	**47**	P	**P**	**05 47 24.7**	**+0.7**
	0.4nm,0.7s,baz=276,slow=2.5,SNR=3.2						
ZAA0	**Zalesovo Array**	**93.58**	**324**	*e*P	**P**	**05 47 26.6**	**-1.2**
	4.7nm,1.1s						
ZALV	**Zalesovo Beam**	**93.58**	**324**	*e*P	**P**	**05 47 27.9**	**+0.1**
ZALV	**Zalesovo Beam**	**93.58**	**324**	P	**P**	**05 47 27.7**	**-0.1**
	1.4nm,0.8s,baz=126,slow=2.6,SNR=4.7						
ZAA1	**Zalesovo Array**	**93.58**	**324**	*e*P	**P**	**05 47 27.7**	**-0.1**
MK01	**Makanchi Array**	**93.66**	**317**	*e*P	**P**	**05 47 29.0**	**+0.7**
MK31	**Makanchi Array**	**93.67**	**317**	*e*P	**P**	**05 47 29.4**	**+1.0**
	4.9nm,1.0s						
MK32	**Makanchi Array**	**93.67**	**317**	*e*P	**P**	**05 47 29.0**	**+0.6**
MKAR	**Makanchi Array**	**93.67**	**317**	P	**P**	**05 47 29.0**	**+0.6**
	1.2nm,0.6s,baz=94,slow=4.6,SNR=4.9						
MAKZ	**Makanchi**	**93.88**	**317**	*e*P	**P**	**05 47 29.9**	**+0.5**
	7.0nm,1.1s						
YKA	**Yellowknife Ar**	**94.16**	**27**	P	**P**	**05 47 28.9**	**-1.3**
	0.2nm,0.6s,baz=257,slow=4.2,SNR=3.8						
YKB5	**Yellowknife Ar**	**94.16**	**27**	*e*P	**P**	**05 47 28.9**	**-1.3**
NRIK	**Noril'sk**	**95.90**	**340**	P	**P**	**05 47 38.4**	**+0.3**
	2.0nm,0.4s,baz=156,slow=12,SNR=2.2						
KURK	**Kurchatov**	**96.73**	**320**	*e*P	**P**	**05 47 43.5**	**+1.2**
	3.2nm,1.0s						
ARA0	**ARCESS Array S**	**116.02**	**346**	*e*PKPdf	**PKPdf**	**05 52 54.1**	**-0.1**
ARCES	**ARCESS Array B**	**116.02**	**346**	PKP	**PKPdf**	**05 52 54.2**	**-0.1**
	1.8nm,0.7s,baz=354,slow=7.4,SNR=3.7						
AKASG	**Malin Array Be**	**126.84**	**327**	PKP	**PKiKP**	**05 53 16.1**	**+0.1**

	0.2nm,0.3s,baz=48,slow=2.8,SNR=2.7						
KEST	**Kesra**	147.45	324	PKPbc	PKPbc	05 53 54.6	-1.8
	2.5nm,0.7s,baz=65,slow=8.6,SNR=2.6						
ESDC	**Sonseca Array**	149.76	345	PKPbc	PKiKP	05 54 02.3	-0.9
	0.5nm,0.5s,baz=48,slow=1.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	164.93	281	PKP	PKPdf	05 54 15.9	-1.1
	1.8nm,1.1s,baz=178,slow=1.4,SNR=4.1						
TORD				PKPab	PKPab	05 55 12.9	-0.4
	1.2nm,1.1s,baz=66,slow=3.5,SNR=2.5						
TOA1	**Torodi Ar. Sit**	164.93	281	*e*PKPdf	PKPdf	05 54 15.9	-1.1
TOA1				*e*PKPab	PKPab	05 55 12.9	-0.4

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*IDC **06** 05:35:30.4±0.5, 10.°72S×165.°33E, h0^{km}, mb4.6/27, mb1 4.7/29, mb1mx4.7/40, mbtmp4.6/29, ML5.2/2, Error ellipse: s-maj=16.8km s-min=13.0km az=113.0*

*NEIC **06** 05:35:32.2±0.1, 10.°74S×165.°27E, h10^{km}, mb5.0/83, Error ellipse: s-maj=4.0km s-min=3.4km az=123.0*

*MOS **06** 05:35:32.2±2.3, 10.°70S×165.°30E, h33^{km}, mb5.2/29, Error ellipse: s-maj=8.8km s-min=8.4km az=91.6*

*ISCJB **06** 05:35:33.6±0.1, 10.°83S±0.°03×165.°22E±0.°03, h30^{km}, mb4.9/121, Error ellipse: s-maj=4.7km s-min=4.2km az=175.0*

ISC 06 05:35:35.3±0.3**, 10.°79S**±0.°05×**165.°36E**±0.°06**, h30^{km}, n295, σ0.^{s}90**/298**, mb5.0**/121**, 6C-9D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.49	284	*e*Pn	Pn	05 36 54.2	-0.9
HNR				*e*Pn	Pn	05 36 54.9	-0.2
HNR	**Honiara**	5.49	284	*e*P	Pn	05 36 54.2	-0.9
HNR	**Honiara**	5.49	284	Pn	Pn	05 36 54.9	-0.2
	191nm,0.3s,baz=133,slow=8.8,SNR=12						
MARNC	**Mare, Loyalty**	10.93	167	*e*Pn	Pn	05 38 10.2	+0.4
DZM	**Mont Dzumac**	11.26	175	Pn	Pn	05 38 14.3	-0.1
	7.8nm,0.3s,baz=57,slow=7.6,SNR=17						
DZM				Sn	Sn	05 40 17.4	-2.0
	1.2nm,0.3s,baz=1.5,slow=12,SNR=1.7						
ONTNC	**Ouen Toro**	11.50	175	*e*Pn	Pn	05 38 18.3	+0.8
PINNC	**Pines Island,**	11.92	171	*e*Pn	Pn	05 38 24.1	+0.8
MSVF	**Nonsavu**	14.10	121	*e*Pn	Pn	05 38 53.5	+0.3
MSVF	**Nonsavu**	14.10	121	*e*P	Pn	05 38 53.5	+0.3
TARA	**Tarawa**	14.22	32	*e*Pn	Pn	05 38 54.6	-0.2
PATS	**Pohnpei**	18.86	338	*e*P	P	05 39 52.0	-1.2
	597nm,1.7s						
MANU	**Manus Island**	19.86	295	*e*P	P	05 40 04.1	0.0
	710nm,1.7s						
CTA	**Charters Tower**	20.58	241	P	P	05 40 11.6	-0.4
	13nm,0.5s,baz=68,slow=11,SNR=11						
CTAO	**Charters Tower**	20.58	241	*e*P	P	05 40 10.9	-1.1
	60nm,1.0s						
CTAO	**Charters Tower**	20.58	241	*e*P	P	05 40 10.9	-1.1
CTAO				pmax	pmax		
	comp=Z,60nm,1.0s						
COEN	**Coen**	21.89	259	*e*P	P	05 40 25.1	-1.0
	comp=Z,17nm,1.1s						
ARMA	**Armidale**	23.33	211	*e*P	P	05 40 41.0	-0.2
	comp=Z,25nm,1.1s						
RAO	**Raoul Island**	24.11	142	*e*S	S	05 45 07.0	+2.5
OUZ	**Omahuta**	25.45	164	*e*P	P	05 41 00.4	-0.1
	comp=Z,244nm,1.8s						
HAZ	**Te Kaha**	29.08	159	P	P	05 41 34.6	+1.5
MXZ	**Matakaoa Point**	29.09	159	P	P	05 41 34.0	+0.8
H11S2	**WAKE ISLAND Hy**	29.13	3	T	T	06 12 05.0	
	baz=184,slow=76						
H11S3	**WAKE ISLAND Hy**	29.13	3	T	T	06 12 04.8	
	baz=184,slow=76						
H11S1	**WAKE ISLAND Hy**	29.14	3	T	T	06 12 08.9	
	baz=184,slow=76						
RUGZ	**Raukumara Rang**	29.23	160	P	P	05 41 35.9	+1.3
URZ	**Urewera**	29.31	161	*e*P	P	05 41 35.4	+0.2
	comp=Z,233nm,2.0s						
URZ				*e*P	P	05 41 36.5	+1.3
URZ	**Urewera**	29.31	161	P	P	05 41 36.5	+1.3
	comp=Z,11nm,0.7s,baz=24,slow=7.4,SNR=4.8						
WMGZ	**Waiomatatini S**	29.36	159	P	P	05 41 35.7	+0.1
MWZ	**Matawai**	29.51	160	P	P	05 41 37.4	+0.4
TWGZ	**Tauwhareparae**	29.52	160	P	P	05 41 37.8	+0.6
PUZ	**Puketiti**	29.53	159	P	P	05 41 36.9	-0.3
CNGZ	**Carnagh Statio**	29.88	159	P	P	05 41 39.6	-0.6
BKZ	**Black Stump Fm**	29.95	162	P	P	05 41 42.5	+1.6
H11N1	**WAKE ISLAND Hy**	30.35	3	T	T	06 13 30.0	
	baz=182,slow=76						
H11N3	**WAKE ISLAND Hy**	30.36	3	T	T	06 13 37.2	
	baz=182,slow=76						
STKA	**Stephens Creek**	30.36	223	*e*P	P	05 41 44.8	+0.2
	comp=Z,4.6nm,1.1s						
STKA	**Stephens Creek**	30.36	223	*e*P	P	05 41 44.8	+0.2
STKA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
STKA	**Stephens Creek**	30.36	223	P	P	05 41 45.4	+0.8
	comp=Z,9.6nm,0.9s,baz=0.6,slow=7.9,SNR=7.2						
H11N2	**WAKE ISLAND Hy**	30.37	3	T	T	06 13 36.3	
	baz=182,slow=76						
WRAB	**Tennant Creek**	31.20	249	⇓*i*P	P	05 41 52.7	+0.5
WRAB				pmax	pmax		
	comp=Z,20nm,1.2s						
WR1	**Warramunga Arr**	31.21	249	*e*P	P	05 41 49.9	-2.4
	comp=Z,54nm,1.3s						
WRA	**Warramunga Arr**	31.21	249	P	P	05 41 49.9	-2.4
	comp=Z,4.8nm,1.0s,baz=81,slow=8.9,SNR=8.0						
AS31	**Alice Springs**	32.56	243	*e*P	P	05 42 03.9	-0.3
	comp=Z,1.8nm,0.6s						
ASAR	**Alice Springs**	32.56	243	P	P	05 42 01.9	-2.3
	comp=Z,3.6nm,0.5s,baz=65,slow=10,SNR=16						
RPZ	**Rata Peaks**	33.17	172	P	P	05 42 09.0	-0.1
	comp=Z,8.9nm,0.6s,baz=349,slow=5.2,SNR=2.8						
FITZ	**Fitzroy Crossi**	39.08	255	*e*P	P	05 42 58.6	-1.4
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	39.08	255	P	P	05 42 58.6	-1.4
	comp=Z,3.6nm,0.7s,baz=72,slow=9.2,SNR=5.0						
NWAO	**Narrogin (SRO)**	49.29	236	*e*P	P	05 44 22.0	+0.3
NWAO	**Narrogin (SRO)**	49.29	236	*e*P	P	05 44 22.0	+0.3
NWAO	**Narrogin (SRO)**	49.29	236	P	P	05 44 22.8	+1.1
	comp=Z,10nm,1.1s,baz=237,slow=4.6,SNR=2.7						
MJAR	**Matsushiro Arr**	53.57	333	P	P	05 44 52.8	-0.8
	comp=Z,5.2nm,0.9s,baz=171,slow=8.4,SNR=6.1						
MAJO	**Matsushiro**	53.57	333	*e*P	P	05 44 52.8	-0.8
MAJO	**Matsushiro**	53.57	333	*e*P	P	05 44 52.8	-0.8
MAT	**Matsushiro**	53.57	333	P	P	05 44 52.9	-0.7
JNU	**Nakatsue**	54.65	324	*e*P	P	05 44 59.7	-1.8
	comp=Z,52nm,1.3s						
JNU	**Nakatsue**	54.65	324	P	P	05 45 00.6	-1.0
	comp=Z,16nm,0.9s,baz=92,slow=6.9,SNR=4.2						
ASAJ	**Asahikawa**	58.43	341	P	P	05 45 27.9	-0.3
	comp=Z,13nm,0.9s,baz=223,slow=12,SNR=5.8						
KSRS	**Korea Array**	59.45	326	P	P	05 45 34.6	-0.8
	comp=Z,3.6nm,1.0s,baz=148,slow=6.8,SNR=5.3						
KS15	**Wonju Array Si**	59.47	326	*e*P	P	05 45 34.6	-0.9
KSAR	**Wonju Array Be**	59.47	326	P	P	05 45 34.6	-0.9
KSAR	**Wonju Array Be**	59.47	326	P	P	05 45 34.6	-0.9
KS01	**Wonju Array Si**	59.48	326	*e*P	P	05 45 35.7	+0.1
YSS	**Yuzh-Sakhalins**	60.93	342	*e*P	P	05 45 46.1	+0.8
YSS				pmax	pmax		
	comp=Z,190nm,1.4s						
NJ2	**Nanjing**	61.57	316	*e*P	P	05 45 51.1	+1.1
NJ2				pmax	pmax		
	comp=Z,140nm,0.7s						
VLA	**Vladivostok**	61.74	333	⇓*i*P	P	05 45 50.6	-0.3
VLA				pmax	pmax		
	comp=Z,20nm,0.6s						
USRK	**Ussuriysk Ar.**	62.55	334	P	P	05 45 56.6	+0.3
	comp=Z,6.1nm,0.9s,baz=138,slow=6.9,SNR=7.0						
USA0B	**Ussuriysk Arra**	62.55	334	*e*P	P	05 45 56.3	0.0
	comp=Z,47nm,1.7s						
MDJ	**Mudanjiang**	63.95	332	P	P	05 46 06.8	+1.2
MDJ				pmax	pmax		
	comp=Z,15nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,540nm,4.9s						
PETK	**Petropavlovsk-**	63.98	355	P	P	05 46 03.9	-1.8
	comp=Z,4.8nm,0.8s,baz=157,slow=7.9,SNR=3.6						
PEA1	**Petropavlovsk-**	63.99	355	*e*P	P	05 46 03.9	-1.8
TYV	**Tymovskoe**	64.50	344	*e*P	P	05 46 12.7	+3.7
TYV				*e*S	S	05 54 56.4	+10
TYV				pmax	pmax		
	comp=Z,400nm,5.5s						
TYV				smax	smax		
	comp=E,400nm,4.3s						
CN2	**Changchun**	65.33	329	*e*P	P	05 46 14.6	0.0
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
KLR	**Kul'dur**	66.67	337	⇓*i*P	P	05 46 23.4	+0.3
VNDA	**Vanda**	66.74	181	P	P	05 46 23.8	+0.6
	comp=Z,9.4nm,1.3s,baz=12,slow=5.8,SNR=2.2						
NKL	**Nikolayevsk**	67.09	344	*e*P	P	05 46 26.0	+0.3
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
ENH	**Enshi**	67.44	309	*e*P	P	05 46 27.9	-0.6
	comp=Z,15nm,0.8s						
GYA	**Guiyang**	67.96	304	⇑*i*P	P	05 46 32.5	+0.6
GYA				PP	PP	05 49 06.4	+4.2
GYA				S	S	05 55 32.0	+2.6
GYA				SKS	SKKSac	05 56 28.8	+0.1
GYA	**Guiyang**	67.96	304	SS	SS	05 59 55.2	+3.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.8s						
GYA				LR	LR		
	comp=N,550nm,18.2s						
GYA				LR	LR		
	comp=E,580nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
XAN	**Xi'an**	69.67	312	P	P	05 46 42.2	-0.1
XAN				pP	pP	05 46 50.6	-0.4
XAN				sP	sP	05 46 54.5	+0.3
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				LR	LR		
	comp=N,660nm,19.5s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
XAN	**Xi'an**	69.67	312	*e*P	P	05 46 41.8	-0.5
	comp=Z,21nm,1.4s						
XAN	**Xi'an**	69.67	312	*e*P	P	05 46 41.8	-0.5
XAN				pmax	pmax		
	comp=Z,21nm,1.4s						
KMI	**Kunming**	70.66	301	P	P	05 46 50.0	+1.2
KMI				pP	pP	05 46 55.4	-2.1
KMI				sP	sP	05 46 58.2	-2.5
KMI				pmax	pmax		
	comp=Z,15nm,1.6s						
HHC	**Hu-ho-hao-te**	71.39	320	*e*P	P	05 46 56.1	+3.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CM01	**Chiang Mai Arr**	71.63	294	*e*P	P	05 46 54.8	+0.3
CM31	**Chiang Mai Arr**	71.66	294	*e*P	P	05 46 55.2	+0.5
CMAR	**Chiang Mai Arr**	71.66	294	P	P	05 46 55.2	+0.5
	comp=Z,1.7nm,0.8s,baz=117,slow=4.6,SNR=4.2						
HIA	**Hailar**	71.96	331	*e*P	P	05 46 56.2	+0.3
	comp=Z,16nm,1.0s						
HIA	**Hailar**	71.96	331	⇓*i*P	P	05 46 56.2	+0.3
HIA				pmax	pmax		
	comp=Z,17nm,1.0s						
ZEA	**Zeya**	71.96	337	*e*P	P	05 46 56.8	+1.0
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
CD2	**Chengdu**	72.14	307	P	P	05 46 58.1	+0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,190nm,5.1s						
LZH	**Lanzhou**	74.30	312	⇑P	P	05 47 12.1	+1.8
LZH				pP	pP	05 47 18.5	-0.4
LZH				sP	pwP	05 47 20.5	-1.6
LZH				PP	PP	05 49 58.2	+1.6
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,99nm,4.8s						
LZH				LR	LR		
	comp=N,530nm,16.3s						
LZH				LR	LR		
	comp=E,510nm,16.4s						
LZH				LR	LR		
	comp=Z,570nm,17.5s						
GAMB	**Gambell**	76.39	10	*e*P	P	05 47 20.4	-1.0
	comp=Z,16nm,1.1s						
KDAK	**Kodiak Island**	76.49	22	P	P	05 47 21.4	-0.6
	comp=Z,8.5nm,0.9s,baz=222,slow=9.2,SNR=3.1						
ULN	**Ulaanbaatar**	77.87	324	*e*P	P	05 47 30.1	-0.3
	comp=Z,10.0nm,1.0s						
ULN	**Ulaanbaatar**	77.87	324	⇑*i*P	P	05 47 31.2	+0.9
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONA0	**Songino Array**	78.24	324	*e*P	P	05 47 32.3	0.0
SONM	**Songino Array**	78.24	324	P	P	05 47 32.3	+0.1
	comp=Z,5.1nm,1.0s,baz=140,slow=5.7,SNR=8.3						
SONA1	**Songino Array**	78.24	324	*e*P	P	05 47 32.6	+0.3
ANM	**Nome**	78.33	12	*e*P	P	05 47 34.0	+1.8
	comp=Z,34nm,1.8s						
ANM	**Nome**	78.33	12	*e*P	P	05 47 34.0	+1.8
ANM				pmax	pmax		
	comp=Z,34nm,1.8s						
RSO	**Redoubt South**	78.41	20	*e*P	P	05 47 32.6	-0.5
BRLK	**Bradley Lake**	78.54	21	*e*P	P	05 47 34.3	+0.7
	comp=Z,20nm,1.0s						
GTA	**Gaotai**	78.61	314	⇓P	P	05 47 35.1	+0.6
GTA				pP	pP	05 47 39.9	-3.4
GTA				sP	PcP	05 47 42.3	-1.2
GTA				pmax	pmax		
	comp=Z,11nm,1.4s						
GTA				pmax	pmax		
	comp=Z,120nm,5.1s						
GTA				LR	LR		
	comp=N,650nm,17.1s						
GTA				LR	LR		
	comp=E,460nm,17.8s						
GTA				LR	LR		
	comp=Z,550nm,17.8s						
BILL	**Bilibino**	78.63	0	⇓*i*P	P	05 47 33.8	0.0
BILL				pmax	pmax		
	comp=Z,20nm,1.3s						
QSPA	**South Pole Qui**	79.21	180	*e*P	P	05 47 37.8	+0.4
	comp=Z,18nm,1.1s						
SUA	**Susitna One**	79.82	20	*e*P	P	05 47 40.7	+0.1
	comp=Z,9.7nm,0.9s						
RC01	**Rabbit Creek A**	79.89	20	*e*P	P	05 47 41.1	+0.3
	comp=Z,50nm,1.6s						
CAST	**Castle Rocks**	80.83	18	*e*P	P	05 47 46.1	+0.2
	comp=Z,6.6nm,0.8s						
ZAK	**Zakamensk**	81.28	325	*e*P	P	05 47 48.7	0.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KLU	**Klutina**	81.50	21	*e*P	P	05 47 49.9	+0.2
	comp=Z,25nm,1.4s						
TLY	**Talaya**	81.70	326	c*e*P	P	05 47 51.5	+0.7
RND	**Reindeer**	81.82	19	*e*P	P	05 47 51.2	0.0
	comp=Z,20nm,1.3s						
RND	**Reindeer**	81.82	19	*e*P	P	05 47 51.3	0.0
RND				pmax	pmax		
	comp=Z,20nm,1.3s						
MCK	**McKinley**	82.03	19	*e*P	P	05 47 52.6	+0.3
	comp=Z,39nm,1.6s						
MCK	**McKinley**	82.03	19	*e*P	P	05 47 52.6	+0.3
MCK				pmax	pmax		
	comp=Z,39nm,1.6s						
IM3	**Indian Mountai**	82.28	16	*e*P	P	05 47 53.5	0.0
MDM	**Murphy Dome**	83.11	18	*e*P	P	05 47 57.4	-0.5
	comp=Z,13nm,1.2s						
HDA	**Harding Lake**	83.13	19	*e*P	P	05 47 57.4	-0.6
	comp=Z,19nm,0.9s						
HDA	**Harding Lake**	83.13	19	P	P	05 47 57.9	0.0
	baz=227						
COLA	**College**	83.17	18	⇓*i*P	P	05 47 57.8	-0.3
COLA				pmax	pmax		
	comp=Z,12nm,1.0s						
ILAR	**Eielson Array**	83.40	19	P	P	05 47 59.1	-0.2
	comp=Z,2.9nm,0.8s,baz=241,slow=4.9,SNR=22						
ILB	**Eielson Array**	83.40	19	*e*P	P	05 47 58.3	-1.0
	comp=Z,7.1nm,0.9s						
IL1	**Eielson Array**	83.40	19	*e*P	P	05 47 58.1	-1.2
O02D	**Mt. Diablo Mer**	83.40	47	P	P	05 47 60.0	-0.1
	baz=250						
POKR	**Poker Plat Res**	83.46	18	P	P	05 47 58.9	-0.8
	baz=227						
K02D	**Willamette Mer**	83.66	45	P	P	05 48 01.7	+0.4
	baz=249						
WDC	**Whiskeytown Da**	83.72	47	*e*P	P	05 48 01.4	-0.1
	comp=Z,20nm,1.3s						
WDC	**Whiskeytown Da**	83.72	47	*e*P	P	05 48 01.4	-0.1
WDC				pmax	pmax		
	comp=Z,21nm,1.3s						
N02D	**Trinity Center**	83.74	46	P	P	05 48 02.5	+0.8
	baz=250						
SCRK	**Sand Creek**	83.81	20	*e*P	P	05 48 02.0	+0.4
	comp=Z,34nm,1.6s						
HUMO	**Hull Mountain**	84.12	45	*e*P	P	05 48 04.3	+0.7
	comp=Z,12nm,1.1s						
ORV	**Oroville**	84.13	48	*e*P	P	05 48 03.9	+0.2
	comp=Z,8.1nm,1.1s						
ORV	**Oroville**	84.13	48	*e*P	P	05 48 03.9	+0.2
ORV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
O03E	**Paynes Creek**	84.15	47	P	P	05 48 04.4	+0.5
	baz=251,SNR=6.8						
HYT	**Haines Junctio**	84.32	24	*e*P	P	05 48 05.3	+1.0
	comp=Z,15nm,1.2s						
L04D	**Klamath Falls**	84.44	45	P	P	05 48 05.8	+0.5
	baz=250						
CMB	**Columbia Colle**	84.47	50	*e*P	P	05 48 05.5	0.0
	comp=Z,9.4nm,1.0s						
CMB	**Columbia Colle**	84.47	50	*e*P	P	05 48 05.5	0.0
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
M04C	**Macdoel**	84.62	46	P	P	05 48 06.7	+0.5
	baz=251,SNR=5.4						
ARVC	**Arvin**	84.79	53	P	P	05 48 07.4	+0.3
	baz=253						
VES	**Vestal, Richgr**	84.80	52	P	P	05 48 07.0	-0.1
	baz=253						
I04A	**Tendick Farm,**	84.91	44	P	P	05 48 07.5	-0.1
	baz=250						
J04D	**Umpqua Nationa**	84.92	44	P	P	05 48 07.3	-0.5
	baz=250						
K04D	**Chiloquin, OR**	84.96	45	P	P	05 48 08.1	+0.1
	baz=250						
BEKR	**Beckworth**	85.06	48	*e*P	P	05 48 09.1	+0.5
	comp=Z,11nm,1.2s						
ISA	**Isabella, Lake**	85.22	53	P	P	05 48 09.2	-0.1
	baz=253						
WAKR	**Walker**	85.33	50	*e*P	P	05 48 10.8	+0.8
	comp=Z,24nm,1.4s						
MDPB	**Devils Postpil**	85.33	50	*e*P	P	05 48 10.0	-0.1
	comp=Z,9.9nm,1.0s						
EDW2	**Edwards Air Fo**	85.38	53	P	P	05 48 10.0	-0.1
	baz=254						
OMMB	**Old Mammoth Mi**	85.39	51	*e*P	P	05 48 10.7	+0.3
	comp=Z,15nm,1.5s						
DAWY	**Dawson**	85.46	21	*e*P	P	05 48 10.9	+1.0
	comp=Z,14nm,1.1s						
BFSC	**Mount Baldy Ra**	85.46	54	P	P	05 48 10.0	-0.7
	baz=254,SNR=7.3						
MLAC	**Mammoth, Mammo**	85.52	51	P	P	05 48 11.3	+0.3
	baz=253						
109C	**Camp Elliot, M**	85.54	55	P	P	05 48 11.0	+0.1
	baz=254						
J05D	**Fort Rock, OR**	85.54	45	P	P	05 48 11.3	+0.5
	baz=251						
MURC	**Murrieta**	85.66	55	P	P	05 48 11.9	+0.4
	baz=254						
PAHR	**Pah Rah Range**	85.73	48	*e*P	P	05 48 12.8	+0.9
	comp=Z,9.9nm,1.2s						
MOD	**Modoc Plateau**	85.75	46	*e*P	P	05 48 11.0	-1.0
	comp=Z,14nm,1.4s						
CWC	**Cottonwood Cre**	85.75	52	P	P	05 48 12.2	+0.1
	baz=253						
E04D	**Cinebar**	85.76	41	P	P	05 48 12.4	+0.8
	baz=250						
D03D	**Eldon**	85.77	40	P	P	05 48 12.3	+0.7
	baz=249						
TIXI	**Tiksi**	85.77	349	⇓*i*P	P	05 48 11.0	-0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TIN	**Tinemaha, Big**	85.81	51	P	P	05 48 12.7	+0.4
	baz=253						
I05D	**Terrebonne, OR**	85.82	44	P	P	05 48 12.8	+0.7
	baz=251						
MONP2	**Monument Peak**	86.09	56	P	P	05 48 14.3	+0.4
	baz=255,SNR=6.4						
MPMC	**Manual Prospec**	86.10	52	P	P	05 48 13.7	-0.2
	baz=254,SNR=6.0						
NV01	**Mina Array Sit**	86.16	50	*e*P	P	05 48 14.1	0.0
NVAR	**Mina Array Bea**	86.16	50	P	P	05 48 14.1	0.0
	comp=Z,8.4nm,1.0s,baz=236,slow=7.1,SNR=13						
F05D	**White Salmon**	86.25	42	P	P	05 48 14.6	+0.5
	baz=250						
PFO	**Pinyon Flats O**	86.25	55	*e*P	P	05 48 14.9	+0.3
	comp=Z,5.0nm,1.0s						
PFO	**Pinyon Flats O**	86.25	55	*e*P	P	05 48 14.9	+0.3
PFO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PFO	**Pinyon Flats O**	86.25	55	P	P	05 48 14.1	-0.5
	baz=255						
XPFO	**Pion Flat**	86.25	55	*e*P	P	05 48 14.9	+0.3
	comp=Z,5.4nm,1.0s						
NV11	**Mina Array Sit**	86.27	50	*e*P	P	05 48 13.6	-1.0
	comp=Z,1.1nm,1.1s						
IKP	**In-Ko-Pah, Jac**	86.28	56	P	P	05 48 14.9	+0.2
	baz=255						
A04D	**Lummi Island**	86.43	39	P	P	05 48 15.6	+0.7
	baz=249						
GSC	**Goldstone, Bar**	86.43	53	P	P	05 48 15.5	+0.1
	baz=254						
GRAC	**Grapevine Rang**	86.46	51	P	P	05 48 16.0	+0.6
	baz=254						
KVN	**Kaiserville**	86.49	49	*e*P	P	05 48 16.4	+0.8
	comp=Z,8.4nm,1.1s						
KVN	**Kaiserville**	86.49	49	*e*P	P	05 48 16.5	+0.8
KVN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SWSC	**Sam W. Stewart**	86.61	56	P	P	05 48 16.5	+0.3
	baz=255,SNR=5.7						
B05A	**Bryant**	86.65	40	P	P	05 48 16.4	+0.5
	baz=250						
HEC	**Hector,Ludlow**	86.67	54	P	P	05 48 16.6	0.0
	baz=255						
FURC	**Furnace Creek,**	86.70	52	P	P	05 48 16.7	+0.2
	baz=254						
BELC	**Belle Mtn. Jos**	86.72	55	P	P	05 48 16.7	-0.2
	baz=255,SNR=7.5						
I07A	**Izee**	86.98	44	*e*P	P	05 48 18.4	+0.5
	comp=Z,27nm,1.5s						
SHOC	**Shoshone, Teco**	87.01	53	P	P	05 48 18.3	+0.2
	baz=254						
BC3	**Big Chuckawall**	87.07	55	P	P	05 48 18.5	-0.1
	baz=255						
WVOR	**Wild Horse Val**	87.09	46	*e*P	P	05 48 18.9	+0.4
	comp=Z,16nm,1.3s						
WVOR	**Wild Horse Val**	87.09	46	*e*P	P	05 48 18.9	+0.4
WVOR				pmax	pmax		
	comp=Z,16nm,1.3s						
GMRC	**Granite Mounta**	87.20	54	P	P	05 48 19.2	+0.1
	baz=255						
TPNV	**Topopah Spring**	87.31	52	P	P	05 48 20.0	+0.3
	baz=254						
GLA	**Glamis**	87.43	56	P	P	05 48 20.8	+0.6
	baz=256						
IRM	**Iron Mountain**	87.45	55	P	P	05 48 20.4	+0.2
	baz=255,SNR=6.9						
J08A	**Circle Bar Ran**	87.48	45	*e*P	P	05 48 20.4	+0.1
	comp=Z,16nm,1.3s						
HAWA	**Hanford**	87.68	42	*e*P	P	05 48 20.9	-0.1
	comp=Z,15nm,1.3s						
G08A	**Pilot Rock**	87.72	43	*e*P	P	05 48 21.7	+0.2
	comp=Z,12nm,1.1s						
Y12C	**Blythe**	87.85	55	*e*P	P	05 48 21.8	-0.3
	comp=Z,11nm,1.0s						
Y12C	**Blythe**	87.85	55	P	P	05 48 22.4	+0.3
	baz=256,SNR=6.0						
E08A	**Dider Farm, El**	88.02	42	*e*P	P	05 48 23.3	+0.6
	comp=Z,16nm,1.2s						
NEE2	**Needles Airpor**	88.02	54	P	P	05 48 23.5	+0.5
	baz=256						
SHPR	**Sheep Range**	88.04	52	*e*P	P	05 48 24.5	+1.3
	comp=Z,18nm,1.5s						
R11A	**Troy Canyon, C**	88.19	51	*e*P	P	05 48 23.1	-0.8
	comp=Z,8.8nm,1.5s						
R11A	**Troy Canyon, C**	88.19	51	P	P	05 48 24.2	+0.3
	baz=255						
PDMCI	**Parker Dam,Lak**	88.29	55	P	P	05 48 24.5	+0.3
	baz=256,SNR=5.6						
WMQ	**Urumqi**	88.65	315	*e*P	P	05 48 26.6	+0.8
WMQ				sP	pP	05 48 35.0	+0.4
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
WMQ				LR	LR		
	comp=N,2µm,13.7s						
WMQ				LR	LR		
	comp=E,1µm,15.9s						
WMQ				LR	LR		
	comp=Z,1µm,23.1s						

W13A	Hualapai Mount	88.69	54	*e*P	P	05 48 27.2	+0.8
	comp=Z,13nm,1.4s						
BMO	Blue Mountains	88.72	44	*e*P	P	05 48 26.3	+0.2
	comp=Z,26nm,2.0s						
BMO	Blue Mountains	88.72	44	*e*P	P	05 48 26.3	+0.2
BMO				pmax	pmax		
	comp=Z,26nm,2.0s						
214A	Organ Pipe Nat	88.82	57	P	P	05 48 27.5	+0.6
	baz=257,SNR=9.2						
F10A	Beach Ranch, E	89.09	43	*e*P	P	05 48 27.9	0.0
	comp=Z,7.7nm,1.1s						
Y14A	Wickenburg	89.12	55	*e*P	P	05 48 29.0	+0.7
	comp=Z,7.2nm,1.3s						
MFID	Camas Ranch	89.34	46	*e*P	P	05 48 29.1	-0.1
	comp=Z,6.9nm,1.1s						
PSUT	Pine Spring	89.55	51	*e*P	P	05 48 30.1	-0.3
	comp=Z,4.6nm,1.0s						
LCMT	Little Creek M	89.65	52	*e*P	P	05 48 32.0	+1.3
	comp=Z,12nm,1.3s						
CCUT	Cedar City	89.69	52	*e*P	P	05 48 31.0	0.0
	comp=Z,9.1nm,1.1s						
INK	Inuvik	89.79	19	*e*P	P	05 48 29.1	-1.3
	comp=Z,28nm,2.0s						
INK	Inuvik	89.79	19	*e*P	P	05 48 29.2	-1.3
INK				pmax	pmax		
	comp=Z,29nm,2.0s						
INK	Inuvik	89.79	19	P	P	05 48 29.1	-1.3
	comp=Z,3.1nm,1.2s,baz=244,slow=10.0,SNR=3.3						
NEW	Newport	89.80	41	P	P	05 48 30.9	-0.2
	baz=254						
SZCU	Shurtz Canyon	89.91	52	*e*P	P	05 48 32.0	0.0
	comp=Z,7.6nm,1.0s						
U15A	North Rim	90.26	53	*e*P	P	05 48 35.0	+1.1
	comp=Z,11nm,0.9s						
HLID	Hailey	90.38	46	*e*P	P	05 48 34.9	+0.8
	comp=Z,6.3nm,1.0s						
HLID	Hailey	90.38	46	P	P	05 48 34.7	+0.6
	baz=256						
DGZ	Jazzator, Alta	90.46	321	⇑*i*P	P	05 48 34.3	0.0
PKCU	Pink Cliffs	90.48	52	*e*P	P	05 48 36.2	+1.3
	comp=Z,27nm,1.2s						
X16A	Lo Mia Camp, P	90.49	55	*e*P	P	05 48 34.8	0.0
	comp=Z,6.5nm,1.0s						
TUC	Tucson	90.57	57	*e*P	P	05 48 35.3	+0.2
	comp=Z,5.5nm,1.1s						
TUC	Tucson	90.57	57	*e*P	P	05 48 35.3	+0.2
TUC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TUC	Tucson	90.57	57	P	P	05 48 35.7	+0.6
	baz=258						
MTPU	Mount Pierson	90.71	52	*e*P	P	05 48 37.3	+1.3
	comp=Z,8.4nm,1.0s						
DUG	Dugway, Tooele	90.73	49	P	P	05 48 36.3	+0.5
	baz=257						
BGU	Big Grassy Mou	90.73	49	*e*P	P	05 48 36.1	+0.4
	comp=Z,8.6nm,1.2s						
WUAZ	Wupatki	90.78	54	*e*P	P	05 48 35.6	-0.6
	comp=Z,10nm,1.2s						
WUAZ	Wupatki	90.78	54	P	P	05 48 36.7	+0.6
	baz=257						
MSU	Marysvale	90.82	51	*e*P	P	05 48 37.7	+1.4
MSU	Marysvale	90.82	51	*e*P	P	05 48 37.7	+1.4
HVU	Hansel Valley	91.12	48	*e*P	P	05 48 38.4	+0.8
	comp=Z,12nm,1.0s						
HVU	Hansel Valley	91.12	48	*e*P	P	05 48 38.4	+0.8
HVU				pmax	pmax		
	comp=Z,12nm,1.0s						
NLU	North Lily Min	91.22	50	*e*P	P	05 48 39.3	+1.1
	comp=Z,11nm,1.1s						
MPU	Maple Canyon	91.57	50	*e*P	P	05 48 39.9	+0.2
	comp=Z,16nm,1.5s						
CTU	Camp Tracy	91.63	49	*e*P	P	05 48 39.3	-0.6
	comp=Z,6.9nm,1.1s						
MCMT	McKenzie Canyo	91.77	45	*e*P	P	05 48 40.7	+0.1
WALA	Waterton Lakes	92.07	41	*e*P	P	05 48 42.5	+0.8
	comp=Z,26nm,1.4s						
DLMT	Dillon	92.07	44	*e*P	P	05 48 42.6	+0.7
	comp=Z,16nm,1.1s						
BOZ	Bozeman (W)	92.78	44	*e*P	P	05 48 46.3	+1.1
	comp=Z,10nm,0.6s						
FXWY	Fox Creek	92.79	46	*e*P	P	05 48 45.9	+0.6
	comp=Z,8.0nm,1.4s						
HRY	Holter Researc	92.89	43	*e*P	P	05 48 44.4	-1.1
MK01	Makanchi Array	93.06	317	*e*P	P	05 48 44.9	-1.3
MK32	Makanchi Array	93.08	317	*e*P	P	05 48 46.2	0.0
MKAR	Makanchi Array	93.08	317	P	P	05 48 46.2	0.0
	comp=Z,5.6nm,1.2s,baz=270,slow=8.5,SNR=5.7						
121A	Cookes Peak, D	93.10	58	P	P	05 48 47.5	+0.6
	baz=259						
ZAA0	Zalesovo Array	93.13	324	*e*P	P	05 48 45.1	-1.2
	comp=Z,17nm,1.4s						
ZALV	Zalesovo Beam	93.13	324	*e*P	P	05 48 45.3	-1.0
ZALV	Zalesovo Beam	93.13	324	P	P	05 48 45.4	-0.9
	comp=Z,2.2nm,0.8s,baz=106,slow=3.2,SNR=6.8						
ZAA1	Zalesovo Array	93.13	324	*e*P	P	05 48 45.4	-0.9
H17A	Grant Village	93.26	46	P	P	05 48 48.7	+1.2
	baz=258						
MAKZ	Makanchi	93.29	317	*e*P	P	05 48 46.7	-0.6
	comp=Z,12nm,1.3s						
MAKZ	Makanchi	93.29	317	*e*P	P	05 48 46.7	-0.6
MAKZ				pmax	pmax		
	comp=Z,12nm,1.3s						
BW06	Boulder Array	93.66	47	P	P	05 48 49.3	-0.1
	baz=259						
PDAR	Pinedale Array	93.66	47	*e*P	P	05 48 48.3	-1.0
PDAR	Pinedale Array	93.66	47	P	P	05 48 49.0	-0.4
	comp=Z,2.5nm,1.0s,baz=247,slow=3.1,SNR=7.8						
EGMT	Eagleton	94.54	42	P	P	05 48 53.2	+0.1
	baz=259						
ANMO	Albuquerque	94.62	55	c*e*P	P	05 48 54.5	+0.6
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	94.62	55	P	P	05 48 54.0	+0.1
	baz=260						
ANMO	Albuquerque	94.62	55	P	P	05 48 54.0	+0.1
	comp=Z,1.4nm,1.0s,baz=216,slow=6.4,SNR=4.4						
YKA	Yellowknife Ar	94.93	27	P	P	05 48 52.2	-2.1
	comp=Z,1.1nm,0.8s,baz=257,slow=4.5,SNR=9.2						
YKB5	Yellowknife Ar	94.93	27	*e*P	P	05 48 52.2	-2.1
MNTX	Cornudas Mount	94.96	59	P	P	05 48 55.7	+0.4
	baz=260						
LTX	Lajitas	96.05	61	*e*P	P	05 49 00.4	0.0
LTX				*e*PP	PP	05 52 52.5	-0.9
LTX	Lajitas	96.05	61	*e*P	P	05 49 00.4	0.0
LTX				*e*		05 52 52.6	
TXAR	Lajitas Array	96.05	61	P	P	05 49 00.4	0.0
	comp=Z,0.6nm,0.8s,baz=229,slow=5.5,SNR=4.2						
TXAR				PP	PP	05 52 52.5	-0.9
	comp=Z,1.4nm,1.2s,baz=208,slow=7.2,SNR=5.1						
KURK	Kurchatov	96.20	320	⇓*i*P	P	05 49 00.8	+0.4
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KSH	Kashi	96.30	309	P	P	05 49 04.9	+3.5
KSH				pP	pP	05 49 08.5	-1.6
KSH				pmax	pmax		
	comp=Z,620nm,5.6s						
DGMT	Dagmar	98.28	42	P	Pdif	05 49 10.2	+0.2
	baz=263						
ARA0	ARCESS Array S	115.99	345	*e*PKPdf	PKiKP	05 54 14.4	-0.4
ARCES	ARCESS Array B	115.99	345	PKP	PKiKP	05 54 14.4	-0.4
	comp=Z,2.9nm,1.0s,baz=29,slow=2.1,SNR=4.5						
OBN	Obninsk	120.39	329	*e*PKIKP	PKPdf	05 54 21.7	-1.8
OBN				*e*		05 55 49.8	
OBN				*e*PPP	PPP	05 58 21.2	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LPAZ	La Paz	120.64	116	PKP	PKPdf	05 54 25.3	-0.7
	comp=Z,0.7nm,0.6s,baz=243,slow=2.3,SNR=3.0						
FIA0	FINESS Array S	121.40	338	*e*PKPdf	PKiKP	05 54 25.6	+0.1
FIA0	FINESS Array S	121.40	338	*e*PKIKP	PKiKP	05 54 25.6	+0.1
FINES	FINESS Array B	121.40	338	PKP	PKiKP	05 54 25.6	+0.1
	comp=Z,1.9nm,0.9s,baz=343,slow=4.4,SNR=4.1						
BOSA	Boshof	125.04	224	PKP	PKPdf	05 54 33.5	-0.1
	comp=Z,3.2nm,0.9s,baz=135,slow=11,SNR=3.2						
NB200	NORSAR Array S	126.36	345	*e*PKPdf	PKPdf	05 54 33.8	-1.2
NOA	NORSAR Array B	126.36	345	PKP	PKPdf	05 54 33.8	-1.2
	comp=Z,0.5nm,0.7s,baz=31,slow=2.0,SNR=2.3						
AKASG	Malin Array Be	126.44	327	PKP	PKPdf	05 54 34.8	-0.6
	comp=Z,0.1nm,0.3s,baz=63,slow=2.0,SNR=4.0						
CLL	Collm	133.72	336	*e*PKPdf	PKiKP	05 54 51.0	+0.6
CLL				*e*		05 54 57.0	
CLL	Collm	133.72	336	*e*PKIKP	PKiKP	05 54 51.0	+0.6
GEC2	GERESS Array S	135.31	334	*e*PKPdf	PKPdf	05 54 52.5	+0.2
GEC2	GERESS Array S	135.31	334	*e*PKIKP	PKPdf	05 54 52.5	+0.2
GERES	GERESS Array B	135.31	334	PKP	PKPdf	05 54 52.5	+0.2
	comp=Z,0.4nm,0.5s,baz=29,slow=2.2,SNR=4.3						
KEST	Kesra	146.98	323	PKPbc	PKPbc	05 55 15.6	0.0
	comp=Z,8.2nm,0.8s,baz=0.0,slow=1.0,SNR=4.9						
ESDC	Sonseca Array	149.71	344	PKPbc	PKPbc	05 55 22.5	0.0
	comp=Z,0.3nm,0.5s,baz=6.9,slow=3.7,SNR=3.4						
TORD	Torodi Ar. Bea	163.84	280	PKP	PKPdf	05 55 35.4	-1.2
	comp=Z,1.6nm,1.1s,baz=117,slow=0.6,SNR=3.3						
TORD				PKPab	PKPab	05 56 28.7	-0.4
	comp=Z,1.4nm,1.0s,baz=112,slow=2.5,SNR=3.6						
TOA1	Torodi Ar. Sit	163.85	280	*e*PKPdf	PKPdf	05 55 35.4	-1.2
TOA1				*e*PKPab	PKPab	05 56 28.7	-0.4

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*IDC **06** 05:36:33.1±0.7, 10°.97S×165°.59E, h0^{km}, mb4.6/12, mb1 4.8/14, mb1mx4.5/40, mbtmp4.6/14, ML4.8/2, Error ellipse: s-maj=28.8km s-min=17.6km az=141.0*

*NEIC **06** 05:36:34.5±0.3, 10°.98S×165°.66E, h10^{km}, mb4.8/6, Error ellipse: s-maj=8.8km s-min=7.3km az=109.0*

*ISCJB **06** 05:36:35.7±0.5, 11°.17S±0°.06×165°.64E±0°.08, h30^{km}, mb4.7/17, Error ellipse: s-maj=11.9km s-min=9.1km az=0.5*

ISC 06 05:36:37.3±0.6**, 11°.04S**±0°.10×**165°.6E**±0°.1**, h30^{km}, n44, σ1^{s}.12**/46**, mb4.7**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.83	285	*e*Pn	Pn	05 37 59.9	-1.9
HNR				*e*Pn	Pn	05 38 03.0	+1.3
HNR	Honiara	5.83	285	Pn	Pn	05 37 59.8	-1.9
	46nm,0.3s,baz=102,slow=19,SNR=1.3						
MARNC	Mare, Loyalty	10.63	168	*e*Pn	Pn	05 39 07.3	-0.4
DZM	Mont Dzumac	11.00	176	Pn	Pn	05 39 12.4	-0.5
	3.8nm,0.3s,baz=342,slow=20,SNR=1.7						
ONTNC	Ouen Toro	11.23	176	*e*Pn	Pn	05 39 16.0	+0.1
MANU	Manus Island	20.22	295	*e*P	Pn	05 41 14.3	+2.1
	127nm,0.8s						
CTA	Charters Tower	20.71	242	P	P	05 41 15.5	+0.1
	23nm,0.9s,baz=68,slow=14,SNR=2.1						
CTAO	Charters Tower	20.71	242	*e*P	Pn	05 41 18.4	+0.4
	33nm,0.9s						
COEN	Coen	22.12	260	*e*P	P	05 41 33.5	+2.9
	32nm,1.0s						
RAO	Raoul Island	23.75	142	*e*Sn	PcP	05 45 29.2	-1.5
STKA	Stephens Creek	30.38	223	*e*P	P	05 42 46.9	+0.1
	1.4nm,0.6s						
STKA	Stephens Creek	30.38	223	P	P	05 42 46.9	+0.1
	7.1nm,0.7s,baz=39,slow=8.8,SNR=6.2						
WB2	Warramunga Arr	31.38	250	*e*P	P	05 42 56.4	+0.5
WB2				*e*P	P	05 42 56.9	+1.1
WR1	Warramunga Arr	31.39	250	*e*P	P	05 42 56.3	+0.4
	25nm,0.8s						
WRA	Warramunga Arr	31.39	250	P	P	05 42 56.3	+0.3
	20nm,0.7s,baz=82,slow=9.1,SNR=15						
ASAR	Alice Springs	32.70	243	P	P	05 43 06.7	-0.8
	5.0nm,0.8s,baz=72,slow=9.7,SNR=4.3						
FITZ	Fitzroy Crossi	39.28	255	P	P	05 44 04.0	+0.2
	14nm,0.9s,baz=90,slow=9.1,SNR=4.9						
IPM	Ipoh	66.12	280	*e*P	P	05 47 22.2	-0.3
	28nm,0.9s						
CM01	Chiang Mai Arr	71.99	294	*e*P	P	05 47 58.4	-0.4
CMAR	Chiang Mai Arr	72.02	294	P	P	05 47 58.3	-0.6
	3.4nm,0.8s,baz=120,slow=4.9,SNR=2.8						
SONA0	Songino Array	78.60	324	*e*P	P	05 48 36.2	-0.2
SONM	Songino Array	78.60	324	P	P	05 48 36.2	-0.2
	3.1nm,1.1s,baz=139,slow=6.8,SNR=2.3						
MDM	Murphy Dome	83.25	18	*e*P	P	05 49 02.5	+1.8
	7.6nm,0.9s						
HDA	Harding Lake	83.27	19	*e*P	P	05 49 01.8	+1.1
	19nm,0.9s						
ILAR	Eielson Array	83.54	19	P	P	05 49 03.5	+1.4
	3.4nm,0.7s,baz=230,slow=6.0,SNR=6.0						
NVAR	Mina Array Bea	86.10	50	P	P	05 49 16.2	+0.3
	1.1nm,0.8s,baz=239,slow=8.3,SNR=2.6						
MK32	Makanchi Array	93.45	317	*e*P	P	05 49 50.5	+0.5
MKAR	Makanchi Array	93.45	317	P	P	05 49 50.5	+0.5
	3.3nm,0.7s,baz=97,slow=5.6,SNR=5.4						
ZAA0	Zalesovo Array	93.49	324	*e*P	P	05 49 45.7	-4.4
	6.3nm,1.0s						
ZALV	Zalesovo Beam	93.49	324	P	P	05 49 49.4	-0.7
	1.7nm,0.3s,baz=121,slow=5.4,SNR=12						
ZAA1	Zalesovo Array	93.49	324	*e*P	P	05 49 49.4	-0.7
YKA	Yellowknife Ar	95.01	27	P	P	05 49 56.7	-0.1
	0.5nm,0.8s,baz=258,slow=4.5,SNR=2.9						
YKB5	Yellowknife Ar	95.01	27	*e*P	P	05 49 56.7	-0.1
ARA0	ARCESS Array S	116.30	345	*e*PKPdf	PKiKP	05 55 17.2	-0.2
ARCES	ARCESS Array B	116.30	345	PKP	PKiKP	05 55 17.2	-0.2
	5.4nm,1.0s,baz=70,slow=1.4,SNR=4.2						
LPAZ	La Paz	120.28	116	PKP	PKiKP	05 55 28.2	+0.8
	1.4nm,0.9s,baz=256,slow=4.2,SNR=1.9						
AKASG	Malin Array Be	126.80	327	PKP	PKPdf	05 55 37.6	-0.4
	0.5nm,0.6s,baz=55,slow=2.7,SNR=3.7						
BR101	Keskin Array S	128.88	313	*e*PKPdf	PKiKP	05 55 43.1	-0.2
BRTR	Keskin Array B	128.88	313	PKP	PKiKP	05 55 43.1	-0.2
	1.6nm,1.1s,baz=38,slow=2.2,SNR=3.6						
BDFB	Brasilia	137.42	128	PKP	PKPdf	05 55 59.2	-0.1
	3.1nm,0.8s,baz=195,slow=18,SNR=3.4						
KEST	Kesra	147.35	323	PKPbc	PKPbc	05 56 18.2	-0.5
	14nm,1.1s,baz=0.0,slow=2.0,SNR=2.4						
ESDC	Sonseca Array	150.02	344	PKPbc	PKiKP	05 56 26.0	-0.3
	1.4nm,0.7s,baz=355,slow=4.3,SNR=3.4						
TORD	Torodi Ar. Bea	164.16	279	PKP	PKPdf	05 56 39.1	+0.2
	2.0nm,1.0s,baz=58,slow=1.4,SNR=4.3						
TORD				PKPab	PKPab	05 57 33.7	+1.1
	1.7nm,1.2s,baz=78,slow=3.6,SNR=3.8						
TOA1	Torodi Ar. Sit	164.16	279	*e*PKPdf	PKPdf	05 56 39.1	+0.2
TOA1				*e*PKPab	PKPab	05 57 33.6	+1.0

MEX 06 05:36:37.7±0.5**, 16°.22N×98°.08W, h2^{km}, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.18	344	*i* P	Pg	05 36 40.9	-0.3
PNIG				*e*S	Sg	05 36 43.9	+0.3
VHO	Vista Hermosa	1.54	56	*e*P	Pn	05 37 04.0	-2.5

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*IDC **06** 05:38:38.9±1.2, 10°.72S×164°.70E, h0^{km}, mb4.3/11, mb1 4.4/13, mb1mx4.2/40, mbtmp4.3/13, ML4.2/2, Error ellipse: s-maj=34.1km s-min=21.5km az=127.0*

*NEIC **06** 05:38:40.5±0.4, 10°.68S×164°.68E, h10^{km}, mb4.5/7, Error ellipse: s-maj=9.7km s-min=6.3km az=76.0*

*ISCJB **06** 05:38:41.9±0.5, 10°.84S±0°.06×164°.65E±0°.09, h31^{km}, mb4.2/13, Error ellipse: s-maj=13.0km s-min=8.3km az=163.4*

ISC 06 05:38:43.4±0.8**, 10°.8S**±0°.1×**164°.81E**±0°.09**, h31^{km}, n34, σ1^{s}.19**/31**, mb4.3**/13**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.96	285	*e*Pn	Pn	05 39 54.4	-1.4
HNR				*e*Pn	Pn	05 39 55.0	-0.8
HNR				*e*Sn	Sn	05 40 54.7	+2.5
HNR	Honiara	4.96	285	Pn	Pn	05 39 54.4	-1.4
	8.7nm,0.3s,baz=120,slow=20,SNR=1.8						
HNR				Sn	Sn	05 40 54.7	+2.5
	21nm,0.3s,baz=170,slow=17,SNR=2.0						
MARNC	Mare, Loyalty	11.10	164	*e*Pn	Pn	05 41 20.1	+0.1
DZM	Mont Dzumac	11.35	172	Pn	Pn	05 41 23.9	+0.3
	2.2nm,0.3s,baz=330,slow=20,SNR=5.6						
ONTNC	Ouen Toro	11.59	172	*e*Pn	Pn	05 41 28.6	+1.9
PINNC	Pines Island,	12.05	168	*e*Pn	Pn	05 41 34.7	+1.6
EIDS	Eidsvold	19.50	220	*e*P	P	05 43 07.8	-0.3
	41nm,0.9s						
CTA	Charters Tower	20.12	240	P	P	05 43 15.4	+0.4
	9.3nm,0.8s,baz=64,slow=12,SNR=2.8						
CTAO	Charters Tower	20.12	240	*e*P	P	05 43 14.3	-0.6
	28nm,1.1s						
ARMA	Armidale	23.08	210	*e*P	P	05 43 46.0	-0.6
	22nm,0.9s						
H11S2	WAKE ISLAND Hy	29.13	4	T	T	06 14 52.8	
	baz=184						
H11S3	WAKE ISLAND Hy	29.13	4	T	T	06 14 55.1	
	baz=184						
H11S1	WAKE ISLAND Hy	29.15	4	T	T	06 14 56.6	
	baz=184						
STKA	Stephens Creek	30.02	222	*e*P	P	05 44 49.8	+0.3
	3.0nm,0.8s						
STKA	Stephens Creek	30.02	222	P	P	05 44 49.8	+0.3
	10nm,0.7s,baz=31,slow=9.8,SNR=8.8						
H11N1	WAKE ISLAND Hy	30.36	4	T	T	06 16 29.7	
	baz=183						
H11N3	WAKE ISLAND Hy	30.36	4	T	T	06 16 32.1	
	baz=183						
H11N2	WAKE ISLAND Hy	30.37	4	T	T	06 16 31.0	
	baz=183						
WR1	Warramunga Arr	30.72	249	*e*P	P	05 44 54.5	-1.4
	7.6nm,0.9s						
WRA	Warramunga Arr	30.72	249	P	P	05 44 54.5	-1.4
	1.9nm,0.5s,baz=79,slow=9.5,SNR=5.0						
ASAR	Alice Springs	32.10	242	P	P	05 45 06.5	-1.6
	1.0nm,0.5s,baz=66,slow=9.6,SNR=4.5						
FITZ	Fitzroy Crossi	38.56	255	*e*P	P	05 46 02.1	-1.6
	4.9nm,0.9s						
FITZ	Fitzroy Crossi	38.56	255	P	P	05 46 02.1	-1.6
	3.9nm,0.7s,baz=94,slow=7.6,SNR=6.2						
CMAR	Chiang Mai Arr	71.15	294	P	P	05 50 00.2	+0.6
	1.4nm,0.6s,baz=123,slow=4.8,SNR=5.1						
SONA0	Songino Array	77.90	324	*e*P	P	05 50 38.5	+0.1
SONM	Songino Array	77.90	324	P	P	05 50 38.5	+0.1
	1.9nm,1.0s,baz=142,slow=8.4,SNR=4.0						
ILAR	Eielson Array	83.54	19	P	P	05 51 08.8	+0.8
	0.6nm,0.7s,baz=240,slow=4.9,SNR=3.7						
MK01	Makanchi Array	92.67	317	*e*P	P	05 51 51.3	-1.1
MK31	Makanchi Array	92.69	317	*e*P	P	05 51 52.2	-0.2
	2.1nm,0.8s						
MK32	Makanchi Array	92.69	317	*e*P	P	05 51 52.1	-0.3
MKAR	Makanchi Array	92.69	317	P	P	05 51 52.1	-0.3
	2.5nm,0.8s,baz=97,slow=6.1,SNR=5.7						
ZALV	Zalesovo Beam	92.79	324	P	P	05 51 51.9	-0.8
	0.6nm,0.4s,baz=103,slow=4.6,SNR=3.7						
ZAA1	Zalesovo Array	92.79	324	*e*P	P	05 51 51.9	-0.8
PDAR	Pinedale Array	94.04	47	P	P	05 51 59.5	+0.4
	0.6nm,0.9s,baz=212,slow=3.2,SNR=3.2						

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*IDC **06** 05:40:40.5±0.5, 10°.96S×165°.48E, h0^{km}, mb4.4/18, mb1 4.7/20, mb1mx4.5/39, mbtmp4.5/20, ML5.0/2, Error ellipse: s-maj=16.6km s-min=14.7km az=113.0*

*NEIC **06** 05:40:42.4±0.1, 10°.95S×165°.43E, h10^{km}, mb4.8/35, Error ellipse: s-maj=4.7km s-min=3.5km az=109.0*

*ISCJB **06** 05:40:43.7±0.2, 11°.08S±0°.03×165°.38E±0°.04, h30^{km}, mb4.6/50, Error ellipse: s-maj=5.9km s-min=4.7km az=169.5*

ISC 06 05:40:45.0±0.4**, 11°.02S**±0°.06×**165°.51E**±0°.07**, h30^{km}, n101, σ0^{s}.98**/111**, mb4.8**/50**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.70	286	*e*Pn	Pn	05 42 06.0	-1.7
HNR				*e*Pn	Pn	05 42 08.5	+0.8
HNR				*e*Sn	Sn	05 43 11.8	-0.4
HNR	Honiara	5.70	286	Pn	Pn	05 42 06.0	-1.7
	70nm,0.3s,baz=140,slow=4.9,SNR=4.0						
HNR				Sn	Sn	05 43 11.8	-0.4
	20nm,0.3s,baz=141,slow=18,SNR=1.1						
MARNC	Mare, Loyalty	10.68	167	*e*Pn	Pn	05 43 17.0	+0.9
DZM	Mont Dzumac	11.03	175	*e*Pn	Pn	05 43 21.2	+0.3
DZM				*e*Sn	Sn	05 45 22.3	-1.0
DZM	Mont Dzumac	11.03	175	Pn	Pn	05 43 20.8	-0.1
	8.0nm,0.3s,baz=357,slow=10,SNR=8.1						
DZM				Sn	Sn	05 45 22.3	-1.0
	baz=321,slow=22,SNR=0.9						
ONTNC	Ouen Toro	11.27	176	*e*Pn	Pn	05 43 24.9	+0.9
PINNC	Pines Island,	11.68	171	*e*Pn	Pn	05 43 29.4	-0.3
MSVF	Nonsavu	13.86	120	*e*Pn	P	05 44 04.3	-3.2
EIDS	Eidsvold	19.77	222	*e*P	Pn	05 45 14.2	-0.2
EIDS				*e*Pn	P	05 45 14.4	+1.6
CTA	Charters Tower	20.61	242	P	P	05 45 22.6	+0.6
	18nm,0.9s,baz=66,slow=12,SNR=5.4						
CTAO	Charters Tower	20.61	242	*e*P	P	05 45 21.5	-0.5
	39nm,1.1s						
COEN	Coen	22.00	260	*e*P	P	05 45 37.1	+0.1
	32nm,1.0s						
ARMA	Armidale	23.22	212	*e*P	P	05 45 49.5	-0.4
	25nm,1.0s						
OUZ	Omahuta	25.19	164	*e*P	P	05 46 10.5	+2.5
	45nm,1.2s						
MKAZ	Moumakai	27.39	163	P	P	05 46 28.8	+1.0
MXZ	Matakaoa Point	28.83	159	*e*P	P	05 46 41.9	+1.2
	45nm,0.9s						
URZ	Urewera	29.05	161	*e*P	P	05 46 43.0	+0.4
URZ				*e*P	P	05 46 43.5	+1.0
URZ	Urewera	29.05	161	P	P	05 46 43.0	+0.4
	12nm,0.6s,baz=219,slow=2.2,SNR=10						
URZ	Urewera	29.05	161	P	P	05 46 43.6	+1.0
MWZ	Matawai	29.25	160	P	P	05 46 44.5	+0.1
MTHZ	Maungataniwha	29.51	162	P	P	05 46 48.1	+1.4
CNGZ	Carnagh Statio	29.62	160	P	P	05 46 47.7	+0.1
RAHZ	Arahi	29.64	162	P	P	05 46 49.0	+1.1
RIGZ	Rimuhau	29.67	160	P	P	05 46 48.7	+0.5
BKZ	Black Stump Fm	29.69	163	*e*P	P	05 46 49.6	+1.3
	41nm,0.5s						
BKZ	Black Stump Fm	29.69	163	P	P	05 46 49.5	+1.1
NMHZ	Naumai	29.72	162	P	P	05 46 50.2	+1.5
BHHZ	Black Hill Sta	29.87	163	P	P	05 46 51.3	+1.3
KWHZ	Kaweka Forest	29.91	163	P	P	05 46 51.5	+1.2
STKA	Stephens Creek	30.31	223	*e*P	P	05 46 53.9	0.0
	2.3nm,0.8s						
STKA	Stephens Creek	30.31	223	P	P	05 46 53.9	0.0
	10nm,0.8s,baz=39,slow=8.7,SNR=9.6						
H11N1	WAKE ISLAND Hy	30.57	3	T	T	06 19 04.4	
	baz=182						
H11N3	WAKE ISLAND Hy	30.57	3	T	T	06 19 00.8	
	baz=182						
H11N2	WAKE ISLAND Hy	30.58	3	T	T	06 19 03.7	
	baz=182						
WRAB	Tennant Creek	31.27	250	*e*P	P	05 47 01.7	-0.8
	17nm,0.9s						
WR1	Warramunga Arr	31.28	250	*e*P	P	05 47 02.2	-0.4
	22nm,0.8s						
WR1				*e*PcP	PcP	05 49 57.6	+1.0
WRA	Warramunga Arr	31.28	250	P	P	05 47 02.2	-0.4
	18nm,0.9s,baz=80,slow=8.8,SNR=13						
WRA				PcP	PcP	05 49 57.7	+1.0
	1.5nm,0.9s,baz=68,slow=4.1,SNR=4.6						
THZ	Tophouse	31.31	169	*e*P	P	05 47 04.1	+1.5
	22nm,0.8s						
LTZ	Lake Taylor	32.19	171	*e*P	P	05 47 12.0	+1.6
	18nm,0.8s						
AS01	Alice Springs	32.56	243	*e*P	P	05 47 13.0	-0.9
AS31	Alice Springs	32.60	243	*e*P	P	05 47 13.2	-1.0
	2.1nm,0.7s						
ASAR	Alice Springs	32.60	243	P	P	05 47 13.6	-0.7
	11nm,1.0s,baz=64,slow=10,SNR=12						
ASAR				PcP	PcP	05 50 00.4	+0.2
	1.7nm,0.8s,baz=82,slow=3.1,SNR=4.6						
ASAR				ScP	ScP	05 53 45.4	+3.2
	0.4nm,0.7s,baz=72,slow=3.0,SNR=3.5						
RPZ	Rata Peaks	32.93	173	P	P	05 47 17.1	+0.3
	6.2nm,0.6s,baz=20,slow=18,SNR=2.5						
FITZ	Fitzroy Crossi	39.17	255	*e*P	P	05 48 09.6	-0.9
	7.6nm,0.8s						
FITZ	Fitzroy Crossi	39.17	255	P	P	05 48 09.6	-0.9
	8.5nm,0.9s,baz=109,slow=8.7,SNR=7.9						
MJAR	Matsushiro Arr	53.84	333	P	P	05 50 04.9	-0.4
	0.8nm,0.3s,baz=139,slow=8.0,SNR=3.3						
MAJO	Matsushiro	53.84	333	*e*P	P	05 50 04.9	-0.4
VNDA	Vanda	66.52	181	P	P	05 51 32.2	+0.7
	3.7nm,1.1s,baz=315,slow=2.9,SNR=2.0						
CMAR	Chiang Mai Arr	71.89	294	P	P	05 52 06.2	+0.3
	0.8nm,0.3s,baz=106,slow=3.2,SNR=3.4						
SVW2	Sparrevohn	78.16	18	*e*P	P	05 52 42.2	+1.1
	11nm,1.1s						
SONA0	Songino Array	78.51	324	*e*P	P	05 52 43.8	+0.3
SONM	Songino Array	78.51	324	P	P	05 52 43.8	+0.3
	0.7nm,0.8s,baz=116,slow=6.6,SNR=3.4						
ANM	Nome	78.51	12	*e*P	P	05 52 44.3	+1.3
	2.1nm,1.0s						
QSPA	South Pole Qui	78.99	180	*e*P	P	05 52 46.3	+0.4
	12nm,1.0s						
SUA	Susitna One	79.97	20	*e*P	P	05 52 51.5	+0.3
	13nm,1.2s						
KNK	Knik Glacier	80.71	21	*e*P	P	05 52 56.1	+1.0
	17nm,1.2s						
CAST	Castle Rocks	80.99	18	*e*P	P	05 52 56.6	+0.1
	6.3nm,0.8s						
DIV	Divide	81.47	22	*e*P	P	05 52 59.9	+0.8
	11nm,0.9s						
KLU	Klutina	81.65	21	*e*P	P	05 53 00.9	+0.8
	12nm,1.2s						
RND	Reindeer	81.98	19	*e*P	P	05 53 03.0	+1.1
	9.2nm,1.0s						
MCK	McKinley	82.19	19	*e*P	P	05 53 04.2	+1.3
	7.8nm,1.0s						
ILAR	Eielson Array	83.56	19	P	P	05 53 10.3	+0.4
	3.8nm,0.6s,baz=241,slow=4.9,SNR=19						
BEKR	Beckworth	85.10	48	*e*P	P	05 53 19.2	+0.7
	3.7nm,1.0s						
WAKR	Walker	85.35	50	*e*P	P	05 53 20.8	+1.0

	6.1nm,1.1s						
MDPB	Devils Postpil	85.36	50	eP	P	05 53 20.4	+0.4
	6.7nm,1.1s						
DAWY	Dawson	85.61	21	eP	P	05 53 21.6	+1.2
	4.5nm,0.8s						
NV01	Mina Array Sit	86.18	50	eP	P	05 53 24.0	0.0
NVAR	Mina Array Bea	86.18	50	P	P	05 53 24.6	+0.6
	3.0nm,0.9s,baz=228,slow=8.4,SNR=9.8						
NV11	Mina Array Sit	86.29	50	eP	P	05 53 25.0	+0.6
	0.5nm,1.0s						
J08A	Circle Bar Ran	87.52	45	eP	P	05 53 30.9	+0.6
	8.6nm,1.0s						
LDFC	Landfair	87.72	54	eP	P	05 53 30.4	-1.0
	7.6nm,0.9s						
SHPR	Sheep Range	88.05	52	eP	P	05 53 33.0	0.0
LCMT	Little Creek M	89.66	52	eP	P	05 53 41.2	+0.6
	6.9nm,1.1s						
CCUT	Cedar City	89.70	52	eP	P	05 53 42.1	+1.3
	7.3nm,1.1s						
U15A	North Rim	90.27	53	eP	P	05 53 44.9	+1.3
	6.3nm,0.9s						
X16A	Lo Mia Camp, P	90.49	55	eP	P	05 53 45.8	+1.3
	5.4nm,1.1s						
MSU	Marysvale	90.84	51	eP	P	05 53 47.7	+1.5
HVU	Hansel Valley	91.16	48	eP	P	05 53 48.4	+1.0
	7.8nm,1.1s						
HRY	Holter Researc	92.95	43	eP	P	05 53 56.5	+1.0
MK32	Makanchi Array	93.34	317	eP	P	05 53 57.1	-0.1
MKAR	Makanchi Array	93.34	317	P	P	05 53 57.1	-0.1
	0.8nm,0.8s,baz=100,slow=6.3,SNR=3.5						
ZALV	Zalesovo Beam	93.40	324	eP	P	05 53 57.3	0.0
ZALV	Zalesovo Beam	93.40	324	P	P	05 53 56.3	-0.9
	0.4nm,0.4s,baz=123,slow=5.3,SNR=3.7						
ZAA1	Zalesovo Array	93.40	324	eP	P	05 53 56.4	-0.9
MAKZ	Makanchi	93.56	317	eP	P	05 53 58.5	+0.3
	1.0nm,1.1s						
PDAR	Pinedale Array	93.70	47	P	P	05 53 59.1	-0.2
	0.9nm,0.9s,baz=90,slow=0.1,SNR=5.2						
YKA	Yellowknife Ar	95.05	27	P	P	05 54 03.4	-1.2
	0.6nm,0.5s,baz=258,slow=4.5,SNR=12						
YKB5	Yellowknife Ar	95.05	27	eP	P	05 54 03.3	-1.4
LTX	Lajitas	96.02	61	eP	P	05 54 10.2	+0.2
TXAR	Lajitas Array	96.02	61	P	P	05 54 10.2	+0.2
	0.3nm,0.8s,baz=256,slow=3.6,SNR=3.0						
LPAZ	La Paz	120.40	116	PKP	PKiKP	05 59 35.4	+0.1
	2.1nm,1.1s,baz=139,slow=1.3,SNR=3.8						
CPUP	Villa Florida	124.22	132	PKP	PKPdf	05 59 41.0	-0.6
	1.5nm,0.9s,baz=58,slow=2.5,SNR=2.9						
BOSA	Boshof	124.98	223	PKP	PKiKP	05 59 44.0	+0.5
	2.7nm,0.8s,baz=112,slow=11,SNR=3.2						
AKASG	Malin Array Be	126.71	327	PKP	PKPdf	05 59 45.5	-0.1
	0.1nm,0.3s,baz=73,slow=2.9,SNR=2.4						
GEC2	GERESS Array S	135.58	334	ePKPdf	PKiKP	06 00 03.3	-0.8
GERES	GERESS Array B	135.58	334	PKP	PKiKP	06 00 03.3	-0.8
	0.2nm,0.4s,baz=11,slow=2.5,SNR=2.6						
KEST	Kesra	147.25	323	PKPbc	PKPbc	06 00 25.4	-0.7
	3.7nm,0.8s,baz=333,slow=2.3,SNR=2.8						
ESDC	Sonseca Array	149.97	344	PKPbc	PKiKP	06 00 33.4	-0.5
	0.2nm,0.4s,baz=35,slow=4.3,SNR=2.8						
TOA0	Torodi Ar. Sit	164.03	279	ePKPdf	PKPdf	06 00 47.2	+0.7
TORD	Torodi Ar. Bea	164.03	279	PKP	PKPdf	06 00 46.6	+0.2
	1.1nm,0.9s,baz=349,slow=3.1,SNR=5.1						
TORD				PKPab	PKPab	06 01 40.0	+0.3
	1.0nm,1.0s,baz=88,slow=5.0,SNR=2.6						
TOA1	Torodi Ar. Sit	164.04	279	ePKPdf	PKPdf	06 00 46.6	+0.2
TOA1				ePKPab	PKPab	06 01 40.0	+0.3

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*ISCJB **06** 05:41:59.2±0.6, 11°.02S±0°.07×165°.9E±0°.1, h10^{km}, mb4.3/13, Error ellipse: s-maj=14.9km s-min=9.5km az=167.2*

*IDC **06** 05:41:59.2±0.9, 10°.95S×165°.95E, h0^{km}, mb4.2/11, mb1 4.4/12, mb1mx4.2/37, mbtmp4.2/12, ML3.7/1, Error ellipse: s-maj=31.2km s-min=20.8km az=132.0*

*NEIC **06** 05:42:00.7±0.4, 10°.91S×165°.92E, h10^{km}, mb4.0/2, Error ellipse: s-maj=10.6km s-min=6.8km az=80.0*

ISC 06 05:42:00.8±0.7**, 10°.92S**±0°.10×**165°.9E**±0°.1**, h10^{km}, n29,** σ**0^{s}.69**/25**, mb4.4**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	10.69	169	ePn	Pn	05 44 35.3	+1.2
DZM	Mont Dzumac	11.10	177	Pn	Pn	05 44 39.2	-0.6
	0.5nm,0.3s,baz=354,slow=18,SNR=3.1						
ONTNC	Ouen Toro	11.33	178	ePn	Pn	05 44 42.2	-0.7
PINNC	Pines Island,	11.72	173	ePn	Pn	05 44 49.1	+0.9
CTA	Charters Tower	21.01	242	P	P	05 46 45.5	+0.8
	8.1nm,0.9s,baz=69,slow=8.6,SNR=2.3						
H11S2	WAKE ISLAND Hy	29.24	2	T	T	06 18 33.4	
	baz=181						
H11S3	WAKE ISLAND Hy	29.24	1	T	T	06 18 33.9	
	baz=181						
H11S1	WAKE ISLAND Hy	29.25	2	T	T	06 18 35.0	
	baz=181						
BKZ	Black Stump Fm	29.66	163	eP	P	05 48 06.4	-0.4
	11nm,0.8s						
H11N1	WAKE ISLAND Hy	30.46	2	T	T	06 20 05.3	
	baz=182						
H11N3	WAKE ISLAND Hy	30.46	2	T	T	06 20 04.0	
	baz=182						
H11N2	WAKE ISLAND Hy	30.48	2	T	T	06 20 06.4	
	baz=182						
STKA	Stephens Creek	30.65	223	eP	P	05 48 15.4	-0.1
	1.1nm,1.1s						
STKA	Stephens Creek	30.65	223	P	P	05 48 15.9	+0.3
	1.5nm,0.6s,baz=70,slow=11,SNR=3.0						
WR1	Warramunga Arr	31.69	250	eP	P	05 48 24.8	-0.1
	11nm,0.8s						
WRA	Warramunga Arr	31.69	250	P	P	05 48 24.8	-0.1
	7.1nm,0.8s,baz=82,slow=9.2,SNR=8.8						
WRA				PcP	PcP	05 51 16.8	0.0
	0.8nm,1.0s,baz=85,slow=3.2,SNR=2.5						
RPZ	Rata Peaks	32.97	173	P	P	05 48 35.4	-0.5
	6.9nm,0.6s,baz=330,slow=4.8,SNR=3.7						
ASAR	Alice Springs	33.00	243	P	P	05 48 35.2	-1.2
	1.6nm,0.6s,baz=68,slow=10,SNR=3.8						
ASAR				PcP	PcP	05 51 20.9	+0.5
	1.2nm,0.8s,baz=67,slow=3.1,SNR=3.8						
FITZ	Fitzroy Crossi	39.58	255	eP	P	05 49 32.0	-0.7
	7.6nm,0.8s						
FITZ	Fitzroy Crossi	39.58	255	P	P	05 49 32.0	-0.7
	5.5nm,0.7s,baz=103,slow=6.1,SNR=6.8						
CMAR	Chiang Mai Arr	72.22	293	P	P	05 53 28.0	+1.3
	1.1nm,0.3s,baz=126,slow=4.7,SNR=3.4						
ULN	Ulaanbaatar	78.31	324	eP	P	05 54 01.4	0.0
	11nm,0.7s						
ILAR	Eielson Array	83.34	18	P	P	05 54 27.8	+0.1
	0.6nm,0.6s,baz=231,slow=5.5,SNR=3.0						
NVAR	Mina Array Bea	85.81	50	P	P	05 54 41.3	+0.2
	0.4nm,0.5s,baz=251,slow=8.5,SNR=2.4						
MK32	Makanchi Array	93.55	317	eP	P	05 55 17.0	-0.2
MKAR	Makanchi Array	93.55	317	P	P	05 55 17.0	-0.2
	1.4nm,0.9s,baz=83,slow=4.9,SNR=2.8						
YKA	Yellowknife Ar	94.78	27	P	P	05 55 22.1	-0.4
	0.2nm,0.6s,baz=258,slow=4.6,SNR=2.6						
ARA0	ARCESS Array S	116.26	346	ePKPdf	PKPdf	06 00 43.2	-0.9
ARCES	ARCESS Array B	116.26	346	PKP	PKPdf	06 00 43.2	-0.9
	1.2nm,0.8s,baz=57,slow=3.3,SNR=4.9						

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*ISCJB **06** 05:42:38.6±1.4, 10°.6S±0°.4×165°.2E±0°.3, h10^{km}, mb3.9/6, Error ellipse: s-maj=77.4km s-min=18.6km az=143.5*

*IDC **06** 05:42:38.5±1.9, 10°.59S×165°.24E, h0^{km}, mb4.0/7, mb1 4.2/7, mb1mx4.0/35, mbtmp3.9/7, Error ellipse: s-maj=106.9km s-min=25.6km az=143.0*

ISC 06 05:42:39.7±1.6**, 10°.7S**±0°.5×**165°.2E**±0°.4**, h10^{km}, n7,** σ**1^{s}.28**/6**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.53	241	P	Pn	05 47 21.2	+0.5
	6.1nm,0.8s,baz=48,slow=13,SNR=2.3						
WRA	Warramunga Arr	31.14	249	P	P	05 48 58.9	-0.1
	2.3nm,0.9s,baz=79,slow=9.0,SNR=1.4						
ASAR	Alice Springs	32.51	243	P	P	05 49 11.2	+0.2
	2.0nm,0.6s,baz=69,slow=9.9,SNR=4.2						
ILAR	Eielson Array	83.34	19	P	P	05 55 08.1	+1.5
	0.5nm,0.6s,baz=234,slow=5.2,SNR=1.7						
MKAR	Makanchi Array	92.92	317	P	P	05 55 53.0	-0.2
	0.3nm,0.6s,baz=95,slow=6.9,SNR=1.5						
YKA	Yellowknife Ar	94.89	27	P	P	05 56 00.2	-1.6
	0.2nm,0.6s,baz=257,slow=4.3,SNR=1.8						
TXAR	Lajitas Array	96.10	61	P	P	05 56 08.5	+0.2
	0.2nm,0.8s,baz=276,slow=3.4,SNR=2.2						

IDC 06 05:44:30.6±1.5**, 11°.44S**×**165°.19E, h0^{km}, mb4.0**/4**, mb1 4.2**/5**, mb1mx3.8**/36**, mbtmp4.0**/5**, ML3.0**/1**, Error ellipse: s-maj=51.5km s-min=28.3km az=131.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.64	174	Pn	Pn	05 47 04.4	-0.1
	0.1nm,0.3s,baz=143,slow=20,SNR=2.2						
WRA	Warramunga Arr	30.84	250	P	P	05 50 48.9	+0.1
	2.6nm,1.0s,baz=81,slow=9.0,SNR=5.0						
ASAR	Alice Springs	32.13	244	P	P	05 51 00.0	-0.1
	1.2nm,0.9s,baz=75,slow=11,SNR=3.4						
ILAR	Eielson Array	84.06	19	P	P	05 57 03.0	+0.1
	0.7nm,0.6s,baz=240,slow=5.1,SNR=5.6						
YKA	Yellowknife Ar	95.57	27	P	P	05 57 57.2	-0.4
	0.2nm,0.7s,baz=261,slow=4.6,SNR=2.5						

IDC 06 05:46:17.6±1.9**, 10°.78S**×**167°.06E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/37**, mbtmp3.7**/5**, ML3.8**/1**, Error ellipse: s-maj=55.5km s-min=32.4km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.25	183	Pn	Pn	05 48 59.6	-0.2
	0.6nm,0.3s,baz=342,slow=20,SNR=2.7						
WRA	Warramunga Arr	32.79	250	P	P	05 52 53.5	+0.6
	0.5nm,0.6s,baz=80,slow=9.1,SNR=4.8						
ASAR	Alice Springs	34.07	244	P	P	05 53 03.2	-0.9
	0.7nm,0.8s,baz=76,slow=8.7,SNR=4.0						
FITZ	Fitzroy Crossi	40.70	255	P	P	05 54 00.3	0.0
	1.3nm,0.7s,baz=94,slow=8.9,SNR=5.6						
ILAR	Eielson Array	82.85	18	P	P	05 58 43.7	0.0
	0.4nm,0.8s,baz=239,slow=6.2,SNR=4.1						

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*IDC **06** 05:48:14.4±0.5, 10°.89S×165°.74E, h0^{km}, mb4.4/28, mb1 4.5/29, mb1mx4.5/41, mbtmp4.4/29, ML5.3/1, Error ellipse: s-maj=16.9km s-min=13.0km az=115.0*

*NEIC **06** 05:48:16.3±0.1, 10°.80S×165°.62E, h10^{km}, mb4.8/48, Error ellipse: s-maj=4.9km s-min=4.0km az=117.0*

*ISCJB **06** 05:48:17.6±0.2, 10°.88S±0°.04×165°.58E±0°.04, h30^{km}, mb4.6/71, MS4.7/1, Error ellipse: s-maj=6.0km s-min=5.4km az=13.7*

ISC 06 05:48:19.4±0.3**, 10°.89S**±0°.05×**165°.63E**±0°.07**, h30^{km}, n137,** σ**1^{s}.09**/140**, mb4.7**/71**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.78	284	ePn	Pn	05 49 43.1	0.0
HNR				ePn	Pn	05 49 44.5	+1.4
HNR	Honiara	5.78	284	Pn	Pn	05 49 44.5	+1.4
	77nm,0.3s,baz=142,slow=6.7,SNR=7.9						
MARNC	Mare, Loyalty	10.78	168	ePn	Pn	05 50 52.0	+0.2
DZM	Mont Dzumac	11.14	176	ePn	Pn	05 50 56.2	-0.7
DZM				Sn	Sn	05 52 57.9	-2.6
DZM	Mont Dzumac	11.14	176	Pn	Pn	05 50 58.9	+2.0
	2.0nm,0.3s,baz=322,slow=15,SNR=11						
DZM				Sn	Sn	05 52 57.9	-2.6
	0.7nm,0.3s,baz=344,slow=23,SNR=1.1						
ONTNC	Ouen Toro	11.38	176	ePn	Pn	05 51 01.2	+1.2
PINNC	Pines Island,	11.79	172	ePn	Pn	05 51 07.4	+1.9
MSVF	Nonsavu	13.82	121	ePn	Pn	05 51 36.0	+2.5
TARA	Tarawa	14.16	31	ePn	Pn	05 51 37.1	-1.0
EIDS	Eidsvold	19.93	222	eP	P	05 52 47.2	-1.8
	9.0nm,1.1s						
MANU	Manus Island	20.15	295	eP	P	05 52 49.4	-1.9
	37nm,0.8s						
CTA	Charters Tower	20.77	242	P	Pn	05 52 59.8	-0.8
	8.1nm,0.9s,baz=73,slow=11,SNR=4.3						
CTAO	Charters Tower	20.77	242	eP	P	05 52 57.8	-0.3
	12nm,0.9s						
COEN	Coen	22.14	260	eP	P	05 53 12.4	-0.4
	5.2nm,0.9s						
ARMA	Armidale	23.39	212	eP	P	05 53 25.5	-0.3
NIUE	Niue	24.95	112	eP	P	05 53 40.8	+0.4
	128nm,1.1s						
URZ	Urewera	29.13	161	eP	P	05 54 18.1	+0.5
URZ				eP	P	05 54 18.6	+0.9
URZ	Urewera	29.13	161	P	P	05 54 18.1	+0.5
	5.9nm,0.7s,baz=230,slow=1.3,SNR=6.2						
H11S2	WAKE ISLAND Hy	29.21	2	T	T	06 24 58.6	
	baz=181						
H11S3	WAKE ISLAND Hy	29.22	2	T	T	06 24 55.3	
	baz=181						
H11S1	WAKE ISLAND Hy	29.23	2	T	T	06 24 52.8	
	baz=181						
BKZ	Black Stump Fm	29.78	163	eP	P	05 54 25.2	+1.7
	16nm,0.5s						
H11N1	WAKE ISLAND Hy	30.44	2	T	T	06 26 20.6	
	baz=182						
H11N3	WAKE ISLAND Hy	30.44	2	T	T	06 26 24.5	
	baz=182						
H11N2	WAKE ISLAND Hy	30.45	2	T	T	06 26 33.6	
	baz=182						
STKA	Stephens Creek	30.47	223	P	P	05 54 29.9	+0.2
	0.7nm,0.5s,baz=55,slow=6.7,SNR=2.9						
WR1	Warramunga Arr	31.43	250	eP	P	05 54 38.5	+0.3
	4.9nm,0.9s						
WR1				ePcP	PcP	05 57 31.3	-0.1
WRA	Warramunga Arr	31.43	250	P	P	05 54 38.5	+0.2
	3.2nm,0.9s,baz=78,slow=9.3,SNR=11						
WRA				PcP	PcP	05 57 31.3	-0.1
	1.0nm,0.7s,baz=77,slow=3.6,SNR=4.1						
AS31	Alice Springs	32.76	243	eP	P	05 54 49.5	-0.4
	1.3nm,0.7s						
ASAR	Alice Springs	32.76	243	P	P	05 54 49.5	-0.4
	4.7nm,0.8s,baz=73,slow=9.5,SNR=25						
ASAR				PcP	PcP	05 57 34.6	-0.5
	1.5nm,0.6s,baz=81,slow=2.2,SNR=5.2						
RPZ	Rata Peaks	33.04	173	P	P	05 54 50.9	-1.2
	5.4nm,0.7s,baz=26,slow=15,SNR=1.9						
FITZ	Fitzroy Crossi	39.31	255	P	P	05 55 46.1	+0.1
	3.1nm,0.8s,baz=98,slow=5.7,SNR=7.3						
CBIJ	Chichi jima	44.09	329	eP	P	05 56 24.7	-0.3
JCJ	Chichijima	44.09	329	P	P	05 56 24.7	-0.3
	27nm,0.4s,baz=108,slow=18,SNR=1.7						
NWAO	Narrogin (SRO)	49.45	236	P	P	05 57 07.0	0.0
	5.2nm,0.8s,baz=51,slow=6.5						
MJAR	Matsushiro Arr	53.78	333	P	P	05 57 38.8	-0.4
	1.9nm,0.6s,baz=42,slow=2.0,SNR=5.3						
MAJO	Matsushiro	53.78	333	eP	P	05 57 38.8	-0.4
MAT	Matsushiro	53.78	333	P	P	05 57 38.7	-0.5
JNU	Nakatsue	54.89	324	eP	P	05 57 47.5	+0.1
	9.9nm,0.9s						
JNU	Nakatsue	54.89	324	P	P	05 57 47.5	+0.1
	9.4nm,0.9s,baz=262,slow=17,SNR=2.1						
ASAJ	Asahikawa	58.61	341	P	P	05 58 14.5	+0.9
	11nm,0.7s,baz=209,slow=14,SNR=8.9						
KSRS	Korea Array	59.69	326	P	P	05 58 21.7	+0.6
	0.5nm,0.3s,baz=136,slow=6.4,SNR=3.2						
KSAR	Wonju Array Be	59.70	326	P	P	05 58 21.7	+0.5
NJ2	Nanjing	61.83	315	eP	P	05 58 35.2	-0.6
USRK	Ussuriysk Ar.	62.76	333	P	P	05 58 42.6	+0.8
	2.7nm,0.8s,baz=136,slow=8.8,SNR=5.9						
PETK	Petropavlovsk-	64.11	355	P	P	05 58 50.4	-0.1
	2.3nm,0.8s,baz=157,slow=9.4,SNR=2.7						
PEA1	Petropavlovsk-	64.11	355	eP	P	05 58 50.4	-0.1
GYA	Guiyang	68.24	304	eP	P	05 59 19.0	+1.2
GYA				PP	PP	06 02 25.4	+37
GYA				S	SKiKP	06 08 50.0	-21
KMI	Kunming	70.94	301	P	P	05 59 38.9	+4.3
HHC	Hu-ho-hao-te	71.64	320	eP	P	05 59 39.7	+1.3
CMAR	Chiang Mai Arr	71.95	294	P	P	05 59 41.6	+1.1
	1.0nm,0.5s,baz=135,slow=6.1,SNR=5.6						
CD2	Chengdu	72.42	307	eP	P	05 59 43.0	-0.2
SEY	Seymchan	74.31	354	P	P	05 59 53.2	-0.3
	1.2nm,0.3s,baz=16,slow=23,SNR=2.1						
LZH	Lanzhou	74.57	312	eP	P	05 59 57.5	+1.6
LZH				pP	pP	06 00 02.8	-2.1
LZH				sP	pwP	06 00 05.3	+0.4
LZH				PP	PP	06 02 42.7	-0.3
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZH				pmax	pmax		
	comp=Z,96nm,4.9s						
LZH				LR	LR		
	comp=N,260nm,16.5s						
LZH				LR	LR		
	comp=E,280nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
ULN	Ulaanbaatar	78.11	324	eP	P	06 00 16.5	+0.8
	comp=Z,4.9nm,0.7s						
SONA0	Songino Array	78.47	324	eP	P	06 00 18.0	+0.3
SONM	Songino Array	78.47	324	P	P	06 00 18.0	+0.3
	comp=Z,1.5nm,0.7s,baz=145,slow=7.7,SNR=12						
SONA1	Songino Array	78.48	324	eP	P	06 00 17.8	+0.1
GTA	Gaotai	78.87	314	⇓P	P	06 00 21.0	+0.9
GTA				pP	PcP	06 00 25.8	-2.9
GTA				sP	pP	06 00 28.1	-1.0
QSPA	South Pole Qui	79.11	180	eP	P	06 00 21.8	+0.9
	comp=Z,7.4nm,1.0s						
CAST	Castle Rocks	80.84	18	eP	P	06 00 28.7	-1.3
	comp=Z,6.2nm,0.7s						
RND	Reindeer	81.83	19	eP	P	06 00 34.2	-1.1
	comp=Z,5.2nm,0.8s						
MCK	McKinley	82.04	19	eP	P	06 00 34.8	-1.6
	comp=Z,8.0nm,1.0s						
IM3	Indian Mountai	82.31	16	eP	P	06 00 37.1	-0.6
HARP	HAARP	82.38	21	eP	P	06 00 38.0	-0.3
	comp=Z,17nm,0.9s						
MDM	Murphy Dome	83.12	18	eP	P	06 00 40.7	-1.3
	comp=Z,8.2nm,0.8s						
HDA	Harding Lake	83.14	19	eP	P	06 00 41.4	-0.7
	comp=Z,17nm,0.7s						
COLA	College	83.18	18	eP	P	06 00 41.5	-0.7
	comp=Z,13nm,0.8s						
RIDG	Independ'e Rid	83.37	20	eP	P	06 00 42.3	-1.1
	comp=Z,8.5nm,1.0s						
ILAR	Eielson Array	83.40	19	P	P	06 00 43.4	-0.1
	comp=Z,5.1nm,0.6s,baz=237,slow=5.2,SNR=65						
ILB	Eielson Array	83.40	19	eP	P	06 00 42.9	-0.6
IL1	Eielson Array	83.41	19	eP	P	06 00 42.4	-1.0
IL1				eS	S	06 11 04.9	+2.5
SCRK	Sand Creek	83.81	20	eP	P	06 00 45.5	-0.2
	comp=Z,5.7nm,0.8s						
ORV	Oroville	84.00	48	eP	P	06 00 46.5	-0.6
	comp=Z,4.8nm,1.0s						
AFDM	Forest Hills D	84.19	49	eP	P	06 00 47.8	-0.3
	comp=Z,6.8nm,0.9s						
CMB	Columbia Colle	84.33	50	eP	P	06 00 48.2	-0.7
	comp=Z,5.7nm,0.9s						
BEKR	Beckworth	84.93	48	eP	P	06 00 51.4	-0.7
	comp=Z,5.3nm,0.8s						
MDPB	Devils Postpil	85.19	50	eP	P	06 00 53.1	-0.4
	comp=Z,8.9nm,1.0s						
DAWY	Dawson	85.45	21	eP	P	06 00 54.3	+0.4
	comp=Z,5.8nm,0.8s						
TIXI	Tiksi	85.92	349	P	P	06 00 55.8	-0.2
	comp=Z,1.8nm,0.3s,baz=202,slow=1.6,SNR=4.1						
DAC	Darwin (Calif)	85.93	52	eP	P	06 00 54.5	-2.7
	comp=Z,5.8nm,1.1s						
NV01	Mina Array Sit	86.01	50	eP	P	06 00 56.6	-0.9
NVAR	Mina Array Bea	86.01	50	P	P	06 00 58.0	+0.5
	comp=Z,5.1nm,0.9s,baz=230,slow=8.2,SNR=18						
DLBC	Dease Lake	86.33	28	P	P	06 00 58.2	-0.2
	comp=Z,2.2nm,0.8s,baz=257,slow=14,SNR=3.8						
KVN	Kaiserville	86.35	49	eP	P	06 00 58.8	-0.3
	comp=Z,8.9nm,1.1s						
J08A	Circle Bar Ran	87.36	45	eP	P	06 01 04.4	+0.5
	comp=Z,4.1nm,0.8s						
WMQ	Urumqi	88.91	315	eP	P	06 01 11.9	+0.8
LCMT	Little Creek M	89.50	52	eP	P	06 01 14.5	+0.4
	comp=Z,4.3nm,0.9s						
CCUT	Cedar City	89.54	52	eP	P	06 01 14.1	-0.3
	comp=Z,5.4nm,0.9s						
SZCU	Shurtz Canyon	89.76	52	eP	P	06 01 16.0	+0.5
	comp=Z,5.6nm,0.9s						
INK	Inuvik	89.79	19	P	P	06 01 13.7	-0.9
	comp=Z,0.5nm,0.6s,baz=225,slow=5.9,SNR=3.1						
KNB	Kanab	89.83	52	eP	P	06 01 16.4	+0.7
	comp=Z,4.1nm,0.9s						
U15A	North Rim	90.11	53	eP	P	06 01 17.9	+0.7
	comp=Z,6.5nm,0.8s						
HLID	Hailey	90.25	46	eP	P	06 01 17.4	-0.2
	comp=Z,3.4nm,0.8s						
PKCU	Pink Cliffs	90.33	52	eP	P	06 01 18.2	0.0
	comp=Z,7.7nm,1.0s						
X16A	Lo Mia Camp, P	90.33	55	eP	P	06 01 17.3	-0.8
	comp=Z,3.9nm,0.9s						
TCRU	Three Creeks R	90.49	51	eP	P	06 01 20.4	+1.5
	comp=Z,7.0nm,0.7s						
MTPU	Mount Pierson	90.56	51	eP	P	06 01 19.7	+0.3
	comp=Z,5.7nm,0.9s						
WUAZ	Wupatki	90.62	54	eP	P	06 01 19.1	-0.4
	comp=Z,4.3nm,0.9s						
MSU	Marysvale	90.67	51	eP	P	06 01 20.6	+0.9
HVU	Hansel Valley	90.99	48	eP	P	06 01 21.7	+0.7
	comp=Z,5.9nm,0.8s						
NLU	North Lily Min	91.08	50	eP	P	06 01 21.6	0.0
	comp=Z,4.3nm,0.8s						
TMUT	Trail Mountain	91.59	50	eP	P	06 01 23.5	-0.5
	comp=Z,3.0nm,0.8s						
DLMT	Dillon	91.95	44	eP	P	06 01 24.9	-0.5
	comp=Z,7.1nm,0.8s						
LRM	Limekiln Ridge	92.16	44	eP	P	06 01 26.8	+0.3
FXWY	Fox Creek	92.66	46	eP	P	06 01 28.3	-0.5
	comp=Z,2.2nm,0.8s						
HRY	Holter Researc	92.78	43	eP	P	06 01 28.8	-0.3
YMR	Madison River	92.93	45	eP	P	06 01 28.1	-1.9
	comp=Z,3.7nm,0.8s						
MK01	Makanchi Array	93.32	317	eP	P	06 01 31.1	-0.5
MK31	Makanchi Array	93.33	317	eP	P	06 01 31.5	-0.1
MK32	Makanchi Array	93.33	317	eP	P	06 01 31.4	-0.2
MKAR	Makanchi Array	93.33	317	eP	P	06 01 31.5	-0.1
	comp=Z,10nm,0.8s						
MKAR	Makanchi Array	93.33	317	P	P	06 01 31.4	-0.1
	comp=Z,1.9nm,0.7s,baz=91,slow=6.3,SNR=16						
ZAA1	Zalesovo Array	93.36	324	eP	P	06 01 30.4	-1.1
ZALV	Zalesovo Beam	93.36	324	eP	P	06 01 30.0	-1.5
ZALV	Zalesovo Beam	93.36	324	P	P	06 01 30.4	-1.1
	comp=Z,1.3nm,0.6s,baz=118,slow=5.4,SNR=6.2						
PD31	Pinedale Array	93.53	47	eP	P	06 01 32.5	-0.4
PDAR	Pinedale Array	93.53	47	eP	P	06 01 31.8	-1.1
PDAR	Pinedale Array	93.53	47	P	P	06 01 32.6	-0.3
	comp=Z,1.3nm,0.9s,baz=253,slow=2.7,SNR=10.0						
YKA	Yellowknife Ar	94.89	27	P	P	06 01 36.7	-1.6
	comp=Z,1.2nm,0.8s,baz=255,slow=4.6,SNR=17						
YKB5	Yellowknife Ar	94.89	27	eP	P	06 01 36.0	-2.2
LTX	Lajitas	95.86	61	eP	P	06 01 42.7	-1.0
TXAR	Lajitas Array	95.86	61	P	P	06 01 42.7	-1.0
	comp=Z,0.2nm,0.6s,baz=243,slow=4.0,SNR=3.5						
KURK	Kurchatov	96.45	320	eP	P	06 01 44.2	-1.5
KURBB	Kurchatov Arra	96.49	320	P	P	06 01 44.2	-1.7
	comp=Z,0.4nm,0.8s,baz=99,slow=4.1,SNR=3.4						
KSH	Kashi	96.57	309	P	P	06 01 50.7	+4.0
KSH				sP	pP	06 01 57.2	+1.5
BVAR	Borovoye Array	101.76	322	P	Pdif	06 02 07.7	-1.7
	comp=Z,0.2nm,0.4s						
ARA0	ARCESS Array S	116.16	345	ePKPdf	PKiKP	06 06 58.4	-0.8
ARCES	ARCESS Array B	116.16	345	PKP	PKiKP	06 06 58.4	-0.8
	comp=Z,2.3nm,0.9s,baz=89,slow=2.4,SNR=13						
KVAR	Kislovodsk Arr	121.03	315	PKP	PKPdf	06 07 08.7	-0.7
	comp=Z,2.1nm,0.3s,baz=39,slow=6.5,SNR=2.0						
CPUP	Villa Florida	124.22	132	PKP	PKPdf	06 07 15.7	-0.3
	comp=Z,1.1nm,0.6s,baz=349,slow=2.9,SNR=3.9						
BOSA	Boshof	125.15	223	PKP	PKPdf	06 07 17.2	-0.6
	comp=Z,2.9nm,1.0s,baz=45,slow=1.4,SNR=3.1						
NB200	NORSAR Array S	126.52	345	ePKPdf	PKPdf	06 07 19.1	-0.2
NOA	NORSAR Array B	126.52	345	PKP	PKPdf	06 07 19.1	-0.2
	comp=Z,0.5nm,0.7s,baz=0.0,slow=4.0,SNR=2.3						
ESDC	Sonseca Array	149.88	344	PKPbc	PKPbc	06 08 06.2	-0.9
	comp=Z,0.1nm,0.3s,baz=306,slow=25,SNR=4.1						
ESDC				PKPab	pPKPdf	06 08 12.0	+0.1
	comp=Z,0.7nm,0.7s,baz=354,slow=4.9,SNR=4.3						
TORD	Torodi Ar. Bea	164.12	280	PKP	PKPdf	06 08 21.3	+0.5
	comp=Z,0.2nm,0.7s,baz=29,slow=1.7,SNR=3.1						
TOA1	Torodi Ar. Sit	164.13	280	ePKPdf	PKPdf	06 08 21.3	+0.5

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*ISCJB **06** 05:48:52.5±0.2, 11°.17S±0°.03×164°.82E±0°.04, h14^{km}, mb5.0/71, Error ellipse: s-maj=5.5km s-min=4.5km az=2.8*

*IDC **06** 05:48:52.2±0.5, 11°.14S×164°.84E, h0^{km}, mb4.7/26, mb1 4.8/29, mb1mx4.7/44, mbtmp4.7/29, ML4.7/3, MS4.6/1, Ms1 4.6/1, ms1mx3.7/45, Error ellipse: s-maj=16.9km s-min=12.8km az=106.0*

*NEIC **06** 05:48:53.5±0.2, 11°.14S×164°.80E, h10^{km}, mb5.2/44, Error ellipse: s-maj=5.0km s-min=4.0km az=91.0*

ISC 06 05:48:53.2±1.4**, 11°.14S**±0°.05×**164°.84E**±0°.06**, h8^{km}**±8^{km}**, n162,** σ**1^{s}.00**/171**, mb5.1**/71**, 2D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.10	289	ePn	Pn	05 50 08.6	-1.4
HNR				eSn	Sn	05 51 09.6	+0.4

HNR	Honiara	5.10	289	Pn	Pn	05 50 12.1	+2.1
	44nm,0.3s,baz=269,slow=16,SNR=3.7						
HNR				Sn	Sn	05 51 09.5	+0.4
	13nm,0.3s,baz=11,slow=20,SNR=1.9						
MARNC	Mare, Loyalty	10.73	164	*e*Pn	Pn	05 51 27.0	-0.2
DZM	Mont Dzumac	10.98	172	Pn	Pn	05 51 31.4	+0.6
	3.9nm,0.3s,baz=11,slow=16,SNR=9.2						
DZM				Sn	Sn	05 53 32.0	-1.9
	0.6nm,0.3s,baz=335,slow=23,SNR=1.4						
DZM				LR	LR	05 55 22.4	
	comp=Z,3µm,18.1s,baz=144,slow=36						
ONTNC	Ouen Toro	11.22	172	*e*Pn	Pn	05 51 32.9	-1.0
PINNC	Pines Island,	11.68	168	*e*Pn	Pn	05 51 40.8	+0.5
FUNA	Funafuti	14.38	81	*e*Pn	Pn	05 52 18.3	+1.0
PATS	Pohnpei	19.00	340	*e*P	P	05 53 13.6	-1.8
	401nm,1.5s						
EIDS	Eidsvold	19.24	221	*e*P	P	05 53 17.1	-0.9
	32nm,1.1s						
MANU	Manus Island	19.55	296	*e*P	Pn	05 53 24.0	+1.2
	81nm,1.1s						
CTA	Charters Tower	19.97	241	P	P	05 53 26.8	+0.7
	1.0nm,0.3s,baz=61,slow=14,SNR=11						
CTAO	Charters Tower	19.97	241	*e*P	P	05 53 24.6	-1.5
	43nm,0.9s						
KWAJ	Kwajalein Atol	20.00	8	*e*P	P	05 53 22.0	-4.4
	414nm,1.2s						
MTSU	Mount Surprise	21.03	248	P	P	05 53 39.3	+1.7
	baz=21,SNR=7.5						
COEN	Coen	21.33	260	P	P	05 53 42.7	+1.8
	baz=21,SNR=7.8						
COEN	Coen	21.33	260	*e*P	P	05 53 41.9	+1.0
	39nm,0.9s						
RMQ	Roma	21.52	223	P	P	05 53 44.4	+1.6
	baz=22,SNR=4.1						
ARMA	Armidale	22.78	211	P	P	05 53 57.0	+0.7
	baz=23,SNR=6.9						
ARMA	Armidale	22.78	211	*e*P	P	05 53 56.3	0.0
	40nm,0.9s						
RAO	Raoul Island	24.16	141	*e*P	P	05 54 11.7	+1.7
	227nm,0.8s						
QLP	Quilpie	24.76	229	P	P	05 54 17.0	+1.5
	baz=25,SNR=6.0						
QIS	Mount Isa	25.99	246	P	P	05 54 27.0	+0.3
	baz=26,SNR=11						
YNG	Young	27.51	210	P	P	05 54 40.7	+0.4
	baz=28,SNR=5.2						
CAN	Canberra	28.05	208	*e*P	P	05 54 46.2	+1.1
	20nm,1.2s						
URZ	Urewera	29.16	160	P	P	05 54 55.1	+0.3
	9.8nm,0.9s,baz=263,slow=19,SNR=2.6						
H11S2	WAKE ISLAND Hy	29.50	4	T	T	06 25 58.3	
	baz=184,slow=76						
H11S3	WAKE ISLAND Hy	29.50	4	T	T	06 25 59.3	
	baz=184,slow=76						
H11S1	WAKE ISLAND Hy	29.51	4	T	T	06 26 00.1	
	baz=184,slow=76						
STKA	Stephens Creek	29.77	223	P	P	05 55 01.9	+1.4
	baz=30,SNR=5.0						
STKA	Stephens Creek	29.77	223	*e*P	P	05 54 59.7	-0.7
	2.1nm,0.9s						
STKA				PcP	PcP	05 58 04.6	+0.4
STKA	Stephens Creek	29.77	223	P	P	05 55 01.0	+0.6
	6.2nm,0.7s,baz=35,slow=10,SNR=11						
STKA				PcP	PcP	05 58 04.6	+0.4
	4.4nm,0.8s,baz=103,slow=3.3,SNR=3.7						
BKZ	Black Stump Fm	29.78	162	*e*P	P	05 54 59.4	-1.1
	82nm,1.7s						
WAKE	Wake Island	30.28	3	*e*P	P	05 55 07.2	+2.3
	78nm,0.6s						
WRAB	Tennant Creek	30.61	250	*e*P	P	05 55 08.2	+0.2
	50nm,0.9s						
WB2	Warramunga Arr	30.61	250	*e*P	P	05 55 07.1	-0.9
	58nm,1.0s						
WB2				*e*P	P	05 55 07.9	-0.1
WB2				*e*PcP	PcP	05 58 07.6	+1.0
WR1	Warramunga Arr	30.62	250	*e*P	P	05 55 07.8	-0.2
	65nm,1.0s						
WRA	Warramunga Arr	30.62	250	P	P	05 55 07.8	-0.2
	39nm,1.0s,baz=77,slow=9.0,SNR=28						
WRA				PcP	PcP	05 58 07.4	+0.8
	4.7nm,0.8s,baz=77,slow=2.6,SNR=8.7						
H11N1	WAKE ISLAND Hy	30.72	4	T	T	06 27 35.4	
	baz=183						
H11N3	WAKE ISLAND Hy	30.73	4	T	T	06 27 34.2	
	baz=183						
H11N2	WAKE ISLAND Hy	30.74	4	T	T	06 27 35.1	
	baz=183						
TOO	Toolangi	31.54	210	P	P	05 55 17.2	+1.2
	baz=32,SNR=5.6						
KDU	Kakadu	31.70	264	P	P	05 55 18.1	+0.5
	baz=32,SNR=5.7						
AS01	Alice Springs	31.92	243	*e*P	P	05 55 19.6	+0.1
AS01				*e*PcP	PcP	05 58 10.4	+0.4
AS31	Alice Springs	31.96	243	*e*P	P	05 55 19.7	-0.1
	4.5nm,0.8s						
ASAR	Alice Springs	31.96	243	P	P	05 55 20.0	+0.1
	11nm,0.6s,baz=65,slow=10,SNR=20						
ASAR				PcP	PcP	05 58 10.9	+0.8
	5.8nm,0.8s,baz=67,slow=2.7,SNR=15						
HTT	Hallett	32.50	223	P	P	05 55 25.6	+1.1
	baz=33,SNR=5.1						
ARPS	Mount Arapiles	32.88	215	P	P	05 55 29.1	+1.3
	baz=33,SNR=5.4						
RPZ	Rata Peaks	32.90	172	*e*P	P	05 55 28.7	+0.9
	19nm,0.9s						
BBOO	Buckleboo	34.12	226	P	P	05 55 38.7	+0.1
	baz=34,SNR=5.8						
PYZ	Puysegur Point	34.95	178	*e*P	P	05 55 47.1	+1.5
	106nm,1.2s						
KNRA	Kununurra	35.35	259	P	P	05 55 49.2	-0.3
	baz=36,SNR=27						
WRKA	Warakurna	37.25	243	P	P	05 56 06.0	+0.3
	baz=37,SNR=10						
FITZ	Fitzroy Crossi	38.50	255	P	P	05 56 16.1	-0.1
	baz=39,SNR=20						
FITZ	Fitzroy Crossi	38.50	255	*e*P	P	05 56 15.9	-0.3
	55nm,0.9s						
FITZ	Fitzroy Crossi	38.50	255	P	P	05 56 15.9	-0.3
	65nm,1.0s,baz=102,slow=6.1,SNR=28						
MBWA	Marble Bar	44.33	251	*e*P	P	05 57 04.0	-0.1
	32nm,1.1s						
MEEK	Meekatharra	46.11	244	P	P	05 57 18.7	+0.5
	baz=46,SNR=3.2						
NWAO	Narrogin (SRO)	48.67	236	*e*P	P	05 57 36.4	-1.7
NWAO	Narrogin (SRO)	48.67	236	P	P	05 57 37.7	-0.4
	12nm,0.9s,baz=48,slow=14,SNR=4.1						
KKM	Kota Kinabalu	51.31	287	*e*P	P	05 57 57.5	-1.0
	43nm,1.1s						
INU	Inuyama	53.20	332	*e*P	P	05 58 12.0	0.0
	52nm,1.2s						
MJAR	Matsushiro Arr	53.65	333	P	P	05 58 14.7	-0.6
	16nm,0.8s,baz=167,slow=7.8,SNR=15						
MAJO	Matsushiro	53.65	333	*e*P	P	05 58 15.2	-0.2
	59nm,1.3s						
MAT	Matsushiro	53.65	333	P	P	05 58 14.9	-0.4
MJB9	Matsu-Tunnel	53.65	333	*e*P	P	05 58 15.2	-0.2
	66nm,1.4s						
JNU	Nakatsue	54.64	325	*e*P	P	05 58 21.4	-1.2
	63nm,1.1s						
JNU	Nakatsue	54.64	325	P	P	05 58 23.1	+0.4
	29nm,0.9s,baz=71,slow=2.7,SNR=6.5						
ASAJ	Asahikawa	58.59	341	P	P	05 58 51.8	+1.3
	20nm,0.6s,baz=228,slow=9.1,SNR=12						
SSE	Sheshan	59.30	316	P	P	05 58 56.1	+0.4
SSE				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,200nm,3.8s						
SSE	Sheshan	59.30	316	*e*P	P	05 58 54.9	-0.8
	comp=Z,48nm,0.8s						
KSRS	Korea Array	59.45	326	P	P	05 58 56.8	+0.1
	comp=Z,7.4nm,0.9s,baz=142,slow=7.0,SNR=14						
KSAR	Wonju Array Be	59.47	326	P	P	05 58 56.8	0.0
KS01	Wonju Array Si	59.49	326	*e*P	P	05 58 56.9	+0.1
YSS	Yuzh-Sakhalins	61.11	343	*e*P	P	05 59 07.9	+0.2
	comp=Z,91nm,1.4s						
NJ2	Nanjing	61.46	316	*e*P	P	05 59 10.0	-0.5
NJ2				pmax	pmax		
	comp=Z,80nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,200nm,0.5s						
USA0B	Ussuriysk Arra	62.63	334	*e*P	P	05 59 18.7	+0.6
	comp=Z,78nm,1.4s						
USRK	Ussuriysk Ar.	62.63	334	P	P	05 59 19.1	+1.0
	comp=Z,14nm,0.7s,baz=143,slow=6.9,SNR=18						
MDJ	Mudanjiang	64.02	333	P	P	05 59 28.6	+1.3
MDJ				pmax	pmax		
	comp=Z,18nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,310nm,2.6s						
MDJ	Mudanjiang	64.02	333	*e*P	P	05 59 28.5	+1.3
	comp=Z,63nm,1.4s						
DL2	Dalian	64.02	324	⇓P	P	05 59 29.9	+2.5
DL2				pmax	pmax		
	comp=Z,37nm,1.1s						
PETK	Petropavlovsk-	64.28	355	*e*P	P	05 59 29.7	+0.9
PETK	Petropavlovsk-	64.28	355	P	P	05 59 29.6	+0.8
	comp=Z,10nm,0.9s,baz=167,slow=8.4,SNR=5.9						
PEA1	Petropavlovsk-	64.28	355	*e*P	P	05 59 29.6	+0.7
CN2	Changchun	65.37	330	*e*P	P	05 59 36.6	+0.5
CN2				*e*S	S	06 08 05.5	-15
CN2				pmax	pmax		
	comp=Z,40nm,0.9s						
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				LR	LR		
	comp=N,1µm,17.0s						
CN2				LR	LR		
	comp=E,1µm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
VNDA	Vanda	66.39	181	P	P	05 59 42.5	+0.2
	comp=Z,7.7nm,1.0s,baz=5.0,slow=7.1,SNR=5.6						
ENH	Enshi	67.27	309	*e*P	P	05 59 48.7	0.0
	comp=Z,38nm,1.0s						
GYA	Guiyang	67.73	305	SS	SS	06 13 12.5	+0.8
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,6.8s						
GYA				LR	LR		
	comp=N,570nm,18.2s						
GYA				LR	LR		
	comp=E,610nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
PBKT	Sadao Pong	68.89	293	*e*P	P	05 59 58.1	-0.9
	comp=Z,5.8nm,0.9s						
XAN	Xi'an	69.53	313	P	P	06 00 02.7	0.0
XAN				pP	PcP	06 00 26.5	+0.6
XAN				pmax	pmax		
	comp=Z,18nm,1.0s						
XAN				LR	LR		
	comp=N,700nm,18.4s						
XAN				LR	LR		
	comp=Z,770nm,20.6s						
XAN	Xi'an	69.53	313	*e*P	P	06 00 01.2	-1.5
	comp=Z,14nm,0.8s						
KMI	Kunming	70.41	302	P	P	06 00 10.3	+1.7
KMI				pP	sP	06 00 12.1	+1.7
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CM01	Chiang Mai Arr	71.31	294	*e*P	P	06 00 14.3	+0.5
HHC	Hu-ho-hao-te	71.33	320	*e*P	P	06 00 15.5	+1.8
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CM31	Chiang Mai Arr	71.33	294	*e*P	P	06 00 14.6	+0.5
CMAR	Chiang Mai Arr	71.33	294	P	P	06 00 14.6	+0.5
	comp=Z,5.4nm,1.0s,baz=115,slow=4.4,SNR=12						
CHTO	Chiang Mai	71.45	294	*e*P	P	06 00 13.6	-1.1
	comp=Z,12nm,1.3s						
CHTO	Chiang Mai	71.45	294	P	P	06 00 17.0	+2.3
	comp=Z,40nm,1.3s						
CD2	Chengdu	71.95	308	P	P	06 00 18.5	+0.9
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
HIA	Hailar	72.01	331	*e*P	P	06 00 17.5	0.0
	comp=Z,37nm,1.1s						
LZH	Lanzhou	74.16	313	*e*P	P	06 00 31.3	+0.6
LZH				pP	pwP	06 00 36.8	-0.8
LZH				sP	PcP	06 00 38.9	-6.8
LZH				PP	PP	06 03 14.0	-2.5
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,93nm,4.9s						
LZH				LR	LR		
	comp=N,590nm,16.3s						
LZH				LR	LR		
	comp=E,540nm,16.4s						
LZH				LR	LR		
	comp=Z,650nm,17.5s						
SEY	Seymchan	74.47	354	P	P	06 00 32.7	+1.0
	comp=Z,1.2nm,0.4s,baz=131,slow=7.3,SNR=6.3						
ULN	Ulaanbaatar	77.85	324	*e*P	P	06 00 52.5	+1.0
	comp=Z,38nm,1.2s						
SONA0	Songino Array	78.22	324	*e*P	P	06 00 54.2	+0.7
SONM	Songino Array	78.22	324	P	P	06 00 54.2	+0.7
	comp=Z,13nm,1.1s,baz=137,slow=4.4,SNR=24						
SONA1	Songino Array	78.22	324	*e*P	P	06 00 54.1	+0.6
GTA	Gaotai	78.48	314	⇓P	P	06 00 56.2	+1.0
GTA				pP	pwP	06 01 00.5	-1.5
GTA				sP	PcP	06 01 03.4	-0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,150nm,4.8s						
GTA				LR	LR		
	comp=N,360nm,20.3s						
GTA				LR	LR		
	comp=E,410nm,19.7s						
GTA				LR	LR		
	comp=Z,730nm,19.0s						
MCK	McKinley	82.52	19	*e*P	P	06 01 17.7	+1.5
	comp=Z,24nm,1.5s						
IM3	Indian Mountai	82.75	16	*e*P	P	06 01 16.8	-0.5
HDA	Harding Lake	83.62	19	*e*P	P	06 01 21.0	-0.8
	comp=Z,11nm,0.9s						
ILAR	Eielson Array	83.88	19	P	P	06 01 23.5	+0.4
	comp=Z,1.7nm,0.7s,baz=233,slow=5.1,SNR=5.5						
ILB	Eielson Array	83.88	19	*e*P	P	06 01 23.5	+0.4
IL1	Eielson Array	83.88	19	*e*P	P	06 01 22.9	-0.2
TIXI	Tiksi	86.01	349	*e*P	P	06 01 33.0	-0.7
	comp=Z,18nm,1.5s						
TIXI				*e*P	P	06 01 33.5	-0.2
TIXI	Tiksi	86.01	349	P	P	06 01 33.5	-0.2
	comp=Z,3.0nm,0.4s,baz=130,slow=9.1,SNR=6.4						
NV01	Mina Array Sit	86.76	50	*e*P	P	06 01 37.2	-1.2
NVAR	Mina Array Bea	86.76	50	P	P	06 01 39.6	+1.2
	comp=Z,2.7nm,0.9s,baz=235,slow=7.9,SNR=4.4						
WMQ	Urumqi	88.53	315	*e*P	P	06 01 47.0	+0.4
WMQ				pP	pwP	06 01 52.3	-1.2
WMQ				pmax	pmax		
	comp=Z,20nm,1.5s						
SHPR	Sheep Range	88.65	53	*e*P	P	06 01 48.0	+0.6
	comp=Z,8.8nm,1.6s						
BMO	Blue Mountains	89.31	44	*e*P	P	06 01 50.7	+0.4
	comp=Z,3.8nm,1.1s						
ELK	Elko	89.67	48	*e*P	P	06 01 52.4	+0.2
	comp=Z,4.9nm,1.5s						
HVU	Hansel Valley	91.73	48	*e*P	P	06 02 01.4	-0.3
	comp=Z,7.1nm,1.1s						
MK01	Makanchi Array	92.97	317	*e*P	P	06 02 07.2	0.0
MK31	Makanchi Array	92.98	317	*e*P	P	06 02 07.1	-0.1
MK32	Makanchi Array	92.98	317	*e*P	P	06 02 07.5	+0.3
MKAR	Makanchi Array	92.98	317	*e*P	P	06 02 07.6	+0.3
	comp=Z,38nm,1.1s						
MKAR	Makanchi Array	92.98	317	P	P	06 02 07.5	+0.3
	comp=Z,2.7nm,0.8s,baz=101,slow=6.3,SNR=9.9						
ZAA0	Zalesovo Array	93.11	324	*e*P	P	06 02 07.0	-0.5
	comp=Z,19nm,1.4s						
ZALV	Zalesovo Beam	93.11	324	*e*P	P	06 02 06.3	-1.3
ZALV	Zalesovo Beam	93.11	324	P	P	06 02 06.8	-0.8
	comp=Z,2.3nm,0.7s,baz=90,slow=6.5,SNR=7.7						
ZAA1	Zalesovo Array	93.11	324	*e*P	P	06 02 06.8	-0.8
MAKZ	Makanchi	93.19	317	*e*P	P	06 02 09.0	+0.8
	comp=Z,20nm,1.4s						
PDAR	Pinedale Array	94.27	47	P	P	06 02 12.0	-1.5
	comp=Z,1.0nm,0.9s,baz=262,slow=2.7,SNR=4.3						
PDAR				PKKP	PKKPdf	06 19 14.0	-1.2
	comp=Z,0.4nm,0.7s,baz=92,slow=4.9,SNR=3.6						
YKA	Yellowknife Ar	95.46	27	P	P	06 02 17.3	-0.9
	comp=Z,0.3nm,0.7s,baz=255,slow=4.4,SNR=3.4						
YKB5	Yellowknife Ar	95.46	27	*e*P	P	06 02 17.3	-0.9
NRIK	Noril'sk	95.90	340	P	P	06 02 19.4	-0.7
	comp=Z,1.4nm,0.3s,baz=115,slow=11,SNR=4.7						
KSH	Kashi	96.12	309	*e*S	S	06 13 39.4	-2.3
KSH	Kashi	96.12	309	*e*sS	sS	06 13 49.3	+5.4
KSH				pmax	pmax		
	comp=Z,300nm,4.1s						
KSH				pmax	pmax		
	comp=Z,440nm,4.5s						
KSH				LR	LR		
	comp=N,290nm,7.5s						
KSH				LR	LR		
	comp=E,200nm,4.5s						
KSH				LR	LR		
	comp=Z,840nm,10.4s						
KURK	Kurchatov	96.14	320	*e*P	P	06 02 21.8	+0.3
KURBB	Kurchatov Arra	96.18	320	P	P	06 02 21.8	+0.1
	comp=Z,1.0nm,1.1s,baz=84,slow=3.8,SNR=4.7						
LTX	Lajitas	96.65	61	*e*P	P	06 02 25.4	+0.9
TXAR	Lajitas Array	96.65	61	P	P	06 02 25.4	+0.9
	comp=Z,1.2nm,1.3s,baz=248,slow=3.8,SNR=2.4						
TXAR				PKKP	PKKPdf	06 19 09.5	-0.7
	comp=Z,0.4nm,0.7s,baz=111,slow=4.8,SNR=5.1						
BVAR	Borovoye Array	101.47	322	P	Pdif	06 02 44.9	-0.5
	comp=Z,0.7nm,0.7s,baz=106,slow=3.2,SNR=4.2						
ARA0	ARCESS Array S	116.20	345	*e*PKPdf	PKiKP	06 07 36.4	-0.2
ARCES	ARCESS Array B	116.20	345	PKP	PKiKP	06 07 36.4	-0.2
	comp=Z,1.2nm,0.8s,baz=20,slow=2.9,SNR=4.3						
FIA0	FINESS Array S	121.53	338	*e*PKPdf	PKPdf	06 07 46.9	-0.1
FINES	FINESS Array B	121.53	338	PKP	PKPdf	06 07 46.9	-0.1
	comp=Z,2.1nm,1.0s,baz=72,slow=4.5,SNR=3.3						
BOSA	Boshof	124.44	224	PKP	PKiKP	06 07 54.6	+0.5
	comp=Z,2.9nm,0.7s,baz=117,slow=3.3,SNR=4.5						
CPUP	Villa Florida	124.62	133	PKP	PKiKP	06 07 54.3	-0.1
	comp=Z,3.9nm,1.1s,baz=224,slow=2.8,SNR=4.9						
SDV	Santo Domingo	125.39	87	*e*PKPdf	PKPdf	06 07 55.4	-0.7
AKASG	Malin Array Be	126.45	326	PKP	PKPdf	06 07 56.4	-0.4
	comp=Z,0.5nm,0.6s,baz=59,slow=2.7,SNR=3.5						
KMBO	Kilima Mbogo	126.50	260	PKP	PKiKP	06 07 59.1	+0.3
	comp=Z,0.8nm,0.3s,baz=153,slow=6.8,SNR=3.3						
NB200	NORSAR Array S	126.55	344	*e*PKPdf	PKPdf	06 07 56.1	-0.7
NOA	NORSAR Array B	126.55	344	PKP	PKPdf	06 07 56.1	-0.7
	comp=Z,0.6nm,0.8s,baz=45,slow=1.9,SNR=2.6						
BR101	Keskin Array S	128.37	312	*e*PKPdf	PKPdf	06 08 00.6	-0.4
BRTR	Keskin Array B	128.37	312	PKP	PKPdf	06 08 00.6	-0.4
	comp=Z,1.0nm,0.9s,baz=34,slow=9.0,SNR=4.0						
LSZ	Lusaka	129.68	239	*e*PKPdf	PKPdf	06 08 01.4	-2.7
GERES	GERESS Array B	135.39	333	PKP	PKPdf	06 08 13.2	-0.8
	comp=Z,1.5nm,0.9s,baz=90,slow=3.0,SNR=2.9						
KEST	Kesra	146.94	322	PKPbc	PKPbc	06 08 37.4	+0.5
	comp=Z,13nm,0.9s,baz=274,slow=2.8,SNR=6.9						
ESDC	Sonseca Array	149.89	343	PKPbc	PKPbc	06 08 44.8	+0.4
	comp=Z,0.7nm,0.6s,baz=346,slow=3.1,SNR=4.4						
TOA0	Torodi Ar. Sit	163.40	279	*e*PKPdf	PKPdf	06 08 56.7	-0.9
TOA0				*e*PKPdf	pPKPdf	06 08 57.0	-1.6
TORD	Torodi Ar. Bea	163.40	279	PKP	PKPdf	06 08 57.8	+0.2
	comp=Z,3.3nm,1.0s,baz=53,slow=1.0,SNR=12						
TORD				PKPab	PKPab	06 09 48.4	-0.2
	comp=Z,0.9nm,1.1s,baz=67,slow=3.7,SNR=3.7						
TOA1	Torodi Ar. Sit	163.40	279	*e*PKPdf	PKPdf	06 08 57.8	+0.2
TOA1				*e*PKPab	PKPab	06 09 48.4	-0.2

PGC 06 05:49:03.5±1.1**, 47°.50N**×**129°.01W, h10**^{km}**, MLSn3.3**/24**,**
Mw3.9/24**, 293km Wsw of Tofino, Bc Off Coast Of**
Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	0.45	352	P	Pg	05 49 11.6	-0.6
KEMF				S	Sg	05 49 16.6	-1.6
NC27	ODP1027	0.88	73	P	Pg	05 49 18.8	-1.7
NC89	ODP889	1.86	50	Sn	Sn	05 49 57.3	-1.4
TOFB	Tofino	2.65	50	Sn	Sn	05 50 14.1	-4.3
B928	Bamfield	2.91	61	Pn	Pn	05 49 48.6	-1.3
GDR	Gold River	3.01	40	Pn	Pn	05 49 50.8	-0.5
GDR				Sn	Sn	05 50 24.0	-3.4
BTB	Buttle Lake	3.04	48	Pn	Pn	05 49 51.2	-0.6
BTB				Sn	Sn	05 50 24.5	-3.8
WOSB	Woss	3.11	30	Pn	Pn	05 49 52.6	-0.1
PFB	Port Renfrew	3.25	69	Pn	Pn	05 49 52.8	-1.7
MGB	Mount Grey	3.25	61	Pn	Pn	05 49 53.2	-1.5
MGB				Sn	Sn	05 50 29.7	-3.8
TLCB	Telegraph Cove	3.36	24	Pn	Pn	05 49 56.1	+0.1
TLCB				Sn	Sn	05 50 33.7	-2.4
NCRB	Newcastle Ridg	3.49	33	Pn	Pn	05 49 58.3	+0.2
CBB	Campbell River	3.49	42	Pn	Pn	05 49 57.9	-0.1
CBB				Sn	Sn	05 50 35.8	-3.5
B926	Mesachie Lake	3.52	66	Pn	Pn	05 49 56.8	-1.4
B926				Sn	Sn	05 50 36.2	-3.7
LZB	Mount Lazard	3.65	70	Pn	Pn	05 49 58.4	-1.7
GHNB	Nanoose	3.65	59	Pn	Pn	05 49 59.8	-0.3
GHNB				Sn	Sn	05 50 40.8	-2.4
TXB	Texada	3.74	52	Pn	Pn	05 50 00.5	-0.9
NLLB	Nanaimo Lost L	3.76	61	Pn	Pn	05 50 00.8	-0.8
NLLB				Sn	Sn	05 50 43.7	-2.2
B009	North Saanich	3.90	71	Pn	Pn	05 50 02.2	-1.3
B010	North Saanich	3.90	71	Pn	Pn	05 50 02.1	-1.3
PGC	Sidney	3.90	71	Pn	Pn	05 50 01.9	-1.5
PGC				Sn	Sn	05 50 45.5	-3.7
PA12	PA12 Sannich	3.90	71	Pn	Pn	05 50 02.2	-1.2
B011	North Saanich	3.90	71	Pn	Pn	05 50 02.2	-1.2
B011				Sn	Sn	05 50 47.0	-2.2
SHB	Sechelt	4.00	57	Pn	Pn	05 50 04.9	-0.1
HDW	Hoodsport	4.03	86	Pn	Pn	05 50 05.5	+0.1
BLN	Blyn Mountain	4.10	81	Pn	Pn	05 50 06.3	0.0
BIB	Bowen Island	4.24	61	Pn	Pn	05 50 08.0	-0.2
MCW	Mount Constitu	4.30	72	Pn	Pn	05 50 07.6	-1.5
WPB	Watts Point	4.41	59	Pn	Pn	05 50 10.2	-0.3
BBB	Bella Bella	4.72	7	Pn	Pn	05 50 15.8	+1.0
WSLR	Whistler	4.80	55	Pn	Pn	05 50 16.6	+0.6
JCW	Jim Creek	4.81	79	Pn	Pn	05 50 16.7	+0.6
VDB	Vedder Mountai	4.86	69	Pn	Pn	05 50 16.1	-0.6
MBW	Mount Baker	4.93	72	Pn	Pn	05 50 17.7	0.0
LON	Longmire	4.97	96	Pn	Pn	05 50 19.2	+0.9
FMW	Mount Fremont	5.03	94	Pn	Pn	05 50 19.8	+0.6
LLLB	Lillooet	5.62	54	Pn	Pn	05 50 26.9	-0.3
LTY	Liberty	5.67	89	Pn	Pn	05 50 28.9	+1.0

MEX 06 05:49:27.0±0.3**, 16°.22N**×**98°.06W, h2**^{km}**, MD3.5, Near**
coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	339	*i* P	Pg	05 49 30.3	-0.3
PNIG				*i* S	Sg	05 49 33.3	+0.3
VHO	Vista Hermosa	1.53	56	*e*P	Pn	05 49 53.3	-2.2

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*IDC **06** 05:53:34.4±1.3, 11°.62S×165°.17E, h0^{km}, mb3.9/7,*
mb1 4.1/8, mb1mx3.8/47, mbtmp3.9/8, ML3.1/1, Error
ellipse: s-maj=45.9km s-min=25.4km az=133.0

*ISCJB **06** 05:53:38.1±0.9, 11°.8S±0°.1×165°.1E±0°.2, h34^{km}, mb3.9/6,*
Error ellipse: s-maj=23.5km s-min=17.8km az=19.5

ISC 06 05:53:39.6±1.0**, 11°.7S**±0°.1×**165°.2E**±0°.2**, h34**^{km}**, n8,**
σ1^{s}.10/8**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.38	173	Pn	Pn	05 56 06.0	-0.1
	0.2nm,0.3s,baz=353,slow=19,SNR=1.9						
CTA	Charters Tower	19.99	243	P	P	05 58 09.7	+0.3
	4.7nm,0.9s,baz=9.0,slow=19,SNR=1.9						
WRA	Warramunga Arr	30.73	251	P	P	05 59 50.9	-0.9
	0.6nm,0.7s,baz=80,slow=9.0,SNR=3.1						
ASAR	Alice Springs	31.99	244	P	P	06 00 03.1	+0.1
	0.9nm,0.8s,baz=72,slow=9.4,SNR=5.0						
ILAR	Eielson Array	84.32	19	P	P	06 06 06.1	-1.6
	0.6nm,0.8s,baz=236,slow=5.1,SNR=5.8						
MKAR	Makanchi Array	93.62	317	P	P	06 06 53.7	+1.2
	0.9nm,0.8s,baz=102,slow=4.8,SNR=4.2						
ZALV	Zalesovo Beam	93.76	324	P	P	06 06 53.1	+0.2
	0.3nm,0.4s,baz=104,slow=0.6,SNR=2.5						
PDAR	Pinedale Array	94.42	47	P	P	06 06 57.6	+1.0
	0.6nm,1.0s,baz=225,slow=1.1,SNR=2.6						

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*IDC **06** 05:53:50.9±0.9, 10°.77S×165°.38E, h0^{km}, mb3.9/9,*
mb1 4.1/11, mb1mx3.9/48, mbtmp4.0/11, ML4.9/2, Error
ellipse: s-maj=30.6km s-min=18.4km az=138.0

*ISCJB **06** 05:53:53.8±0.7, 10°.89S±0°.10×165°.36E±0°.08, h30^{km},*
mb3.8/8, Error ellipse: s-maj=14.4km s-min=10.5km
az=16.5

ISC 06 05:53:55.6±0.8**, 10°.8S**±0°.1×**165°.40E**±0°.10**, h30**^{km}**, n18,**
σ0^{s}.96/13**, mb3.8**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.54	284	Pn	Pn	05 55 15.9	-0.2
	86nm,0.3s,baz=149,slow=8.1,SNR=8.4						
HNR				Sn	Sn	05 56 20.0	+1.2
	18nm,0.3s,baz=322,slow=12,SNR=1.1						
DZM	Mont Dzumac	11.25	175	Pn	Pn	05 56 35.4	+0.9
	3.6nm,0.3s,baz=42,slow=15,SNR=11						
CTA	Charters Tower	20.62	241	P	P	05 58 33.2	+0.5
	2.5nm,0.6s,baz=66,slow=14,SNR=5.1						
H11S2	WAKE ISLAND Hy	29.13	3	T	T	06 30 24.3	
	baz=184,slow=76,SNR=6.6						
H11S3	WAKE ISLAND Hy	29.14	3	T	T	06 30 28.6	
	baz=184,slow=76,SNR=7.6						
H11S1	WAKE ISLAND Hy	29.15	3	T	T	06 30 28.5	
	baz=184,slow=76,SNR=8.0						
H11N1	WAKE ISLAND Hy	30.36	3	T	T	06 31 58.0	
	baz=182,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	30.36	3	T	T	06 31 52.1	
	baz=182,slow=76,SNR=6.0						
H11N2	WAKE ISLAND Hy	30.37	3	T	T	06 32 00.8	
	baz=182,slow=76,SNR=7.8						
STKA	Stephens Creek	30.39	223	P	P	06 00 04.2	-0.9
	0.6nm,0.4s,baz=73,slow=18,SNR=2.3						
WRA	Warramunga Arr	31.25	249	P	P	06 00 12.5	-0.4
	1.5nm,0.9s,baz=82,slow=8.9,SNR=3.7						
ASAR	Alice Springs	32.60	243	P	P	06 00 23.5	-1.3
	0.9nm,0.5s,baz=64,slow=10,SNR=9.3						
SONM	Songino Array	78.27	324	P	P	06 05 52.6	-0.2
	0.5nm,0.8s,baz=126,slow=4.5,SNR=2.4						
ILAR	Eielson Array	83.39	19	P	P	06 06 20.3	+0.7
	0.8nm,0.7s,baz=239,slow=4.6,SNR=11						
NVAR	Mina Array Bea	86.12	50	P	P	06 06 35.0	+0.8
	0.2nm,0.3s,baz=224,slow=6.3,SNR=3.1						
MKAR	Makanchi Array	93.11	317	P	P	06 07 06.9	+0.1
	0.5nm,0.7s,baz=97,slow=4.9,SNR=3.3						
YKA	Yellowknife Ar	94.91	27	P	P	06 07 13.1	-1.5
	0.2nm,0.6s,baz=256,slow=4.4,SNR=3.4						
KEST	Kesra	147.02	323	PKPbc	PKPdf	06 13 34.7	+0.7
	7.1nm,1.1s,baz=90,slow=6.1,SNR=2.6						

IDC 06 05:54:16.7±1.6, 10°.73S×165°.81E, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.8/47, mbtmp4.1/6, ML4.4/1, Error ellipse: s-maj=34.9km s-min=33.9km az=65.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.29	177	Pn	Pn	05 57 01.6	+2.0
	2.3nm,0.3s,baz=277,slow=14,SNR=6.5						
URZ	Urewera	29.22	162	P	P	06 00 19.5	-0.7
	5.1nm,0.7s,baz=324,slow=19,SNR=3.1						
WRA	Warramunga Arr	31.65	249	P	P	06 00 41.9	-0.1
	1.0nm,0.6s,baz=81,slow=9.1,SNR=4.7						
ASAR	Alice Springs	32.99	243	P	P	06 00 53.5	-0.2
	1.5nm,0.9s,baz=72,slow=9.8,SNR=3.2						
FITZ	Fitzroy Crossi	39.52	255	P	P	06 01 49.5	-0.1
	2.0nm,0.8s,baz=79,slow=5.2,SNR=2.8						
ILAR	Eielson Array	83.19	18	P	P	06 06 44.7	+0.2
	0.4nm,0.7s,baz=236,slow=5.6,SNR=2.9						

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*IDC **06** 05:56:14.6±0.8, 11°.73S×165°.61E, h0km, mb4.1/14, mb1 4.3/15, mb1mx4.1/49, mbtmp4.1/15, ML4.3/1, Error ellipse: s-maj=26.6km s-min=18.1km az=115.0*

*ISCJB **06** 05:56:16.8±0.5, 11°.85S±0°.06×165°.52E±0°.09, h24km, mb4.1/18, Error ellipse: s-maj=12.6km s-min=7.8km az=165.0*

*NEIC **06** 05:56:16.2±0.3, 11°.71S×165°.60E, h10km, mb4.3/6, Error ellipse: s-maj=9.3km s-min=6.3km az=84.0*

ISC 06 05:56:18.5±0.6, 11°.76S±0°.08×165°.6E±0°.1, h24km, n46, σ0s.94/42, mb4.1/18, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.98	292	*e*Pn	Pn	05 57 44.1	-1.4
MARNC	Mare, Loyalty	9.96	167	*e*Pn	Pn	05 58 39.8	-0.3
DZM	Mont Dzumac	10.29	175	Pn	Pn	05 58 44.1	-0.7
	2.7nm,0.3s,baz=295,slow=12,SNR=12						
ONTNC	Ouen Toro	10.53	175	*e*Pn	Pn	05 58 48.2	+0.3
PINNC	Pines Island,	10.95	171	*e*Pn	Pn	05 58 54.4	+0.7
CTA	Charters Tower	20.31	244	P	P	06 00 51.6	-1.3
	1.1nm,0.3s,baz=74,slow=18,SNR=2.0						
COEN	Coen	21.93	262	*e*P	P	06 01 12.3	+1.9
	8.8nm,1.0s						
ARMA	Armidale	22.62	213	*e*P	P	06 01 20.2	+2.4
	33nm,1.1s						
STKA	Stephens Creek	29.80	224	P	P	06 02 24.3	+0.7
	3.2nm,0.7s,baz=47,slow=12,SNR=5.4						
H11S2	WAKE ISLAND Hy	30.07	2	T	T	06 32 42.0	
	baz=181						
H11S3	WAKE ISLAND Hy	30.08	2	T	T	06 32 42.8	
	baz=181						
H11S1	WAKE ISLAND Hy	30.09	2	T	T	06 32 43.9	
	baz=181						
WB2	Warramunga Arr	31.06	251	*e*P	P	06 02 35.1	+0.2
WR1	Warramunga Arr	31.07	251	*e*P	P	06 02 35.5	+0.5
	7.7nm,1.1s						
WRA	Warramunga Arr	31.07	251	P	P	06 02 35.5	+0.5
	1.8nm,0.6s,baz=82,slow=9.1,SNR=8.8						
H11N1	WAKE ISLAND Hy	31.30	2	T	T	06 34 14.0	
	baz=182,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	31.30	2	T	T	06 34 14.4	
	baz=182,slow=76,SNR=26						
H11N2	WAKE ISLAND Hy	31.32	2	T	T	06 34 15.0	
	baz=182,slow=76,SNR=21						
RPZ	Rata Peaks	32.20	173	P	P	06 02 44.8	+0.2
	14nm,0.8s,baz=115,slow=16,SNR=4.6						
ASAR	Alice Springs	32.31	244	P	P	06 02 46.2	+0.3
	2.6nm,0.8s,baz=70,slow=9.2,SNR=9.8						
FITZ	Fitzroy Crossi	39.02	256	*e*P	P	06 03 43.1	-0.5
	4.5nm,1.0s						
FITZ	Fitzroy Crossi	39.02	256	P	P	06 03 43.1	-0.5
	1.8nm,0.9s,baz=100,slow=6.5,SNR=3.6						
MJAR	Matsushiro Arr	54.51	333	P	P	06 05 44.6	+0.2
	0.5nm,0.3s,baz=142,slow=4.5,SNR=3.3						
MAJO	Matsushiro	54.51	333	*e*P	P	06 05 44.6	+0.1
KLR	Kul'dur	67.63	337	P	P	06 07 13.2	-0.1
	0.6nm,0.5s,baz=120,slow=12,SNR=2.3						
CMAR	Chiang Mai Arr	72.22	294	P	P	06 07 42.5	+0.4
	1.3nm,0.8s,baz=119,slow=4.3,SNR=6.4						
QSPA	South Pole Qui	78.25	180	*e*P	P	06 08 14.1	-2.1
	7.4nm,1.1s						
SONA0	Songino Array	79.12	324	*e*P	P	06 08 22.1	+0.9
SONM	Songino Array	79.12	324	P	P	06 08 22.1	+0.9
	1.8nm,0.9s,baz=136,slow=6.3,SNR=6.7						
ILAR	Eielson Array	84.24	19	P	P	06 08 46.5	-1.3
	0.4nm,0.5s,baz=260,slow=4.7,SNR=5.1						
ILB	Eielson Array	84.24	19	*e*P	P	06 08 47.1	-0.7
	0.9nm,1.0s						
NVAR	Mina Array Bea	86.62	50	P	P	06 09 00.9	+0.4
	0.2nm,0.3s,baz=225,slow=5.0,SNR=2.3						
MK32	Makanchi Array	93.91	317	*e*P	P	06 09 34.7	+0.5
MKAR	Makanchi Array	93.91	317	P	P	06 09 34.7	+0.5
	1.0nm,0.7s,baz=90,slow=7.3,SNR=7.8						
ZALV	Zalesovo Beam	94.02	324	P	P	06 09 34.5	0.0
	0.6nm,0.7s,baz=157,slow=4.2,SNR=3.5						
ZAA1	Zalesovo Array	94.02	324	*e*P	P	06 09 34.5	0.0
YKA	Yellowknife Ar	95.69	27	P	P	06 09 44.2	+2.2
	0.1nm,0.4s,baz=257,slow=4.4,SNR=3.0						
ARA0	ARCESS Array S	116.97	345	*e*PKPdf	PKiKP	06 14 59.9	-0.8
ARCES	ARCESS Array B	116.97	345	PKP	PKiKP	06 14 59.9	-0.8
	1.3nm,0.7s,baz=90,slow=2.4,SNR=9.5						
FIA0	FINESS Array S	122.36	338	*e*PKPdf	PKiKP	06 15 11.0	-0.4
FINES	FINESS Array B	122.36	338	PKP	PKiKP	06 15 11.0	-0.4
	2.9nm,1.1s,baz=85,slow=2.1,SNR=1.8						
NB200	NORSAR Array S	127.33	345	*e*PKPdf	PKiKP	06 15 20.4	-1.0
NOA	NORSAR Array B	127.33	345	PKP	PKiKP	06 15 20.4	-1.0
	0.4nm,0.6s,baz=30,slow=3.2,SNR=2.7						
ESDC	Sonseca Array	150.68	343	PKPbc	PKiKP	06 16 09.1	-0.6
	0.4nm,0.5s,baz=354,slow=4.5,SNR=4.7						
TORD	Torodi Ar. Bea	164.18	277	PKP	PKPdf	06 16 20.4	-0.5
	0.7nm,0.9s,baz=23,slow=1.1,SNR=3.6						
TORD				PKPab	PKPab	06 17 14.9	+0.2
	0.4nm,0.9s,baz=78,slow=3.7,SNR=2.5						
TOA1	Torodi Ar. Sit	164.18	277	*e*PKPdf	PKPdf	06 16 20.4	-0.5
TOA1				*e*PKPab	PKPab	06 17 14.9	+0.2

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*IDC **06** 05:56:45.8±1.0, 11°.07S×165°.54E, h0km, mb4.1/8, mb1 4.4/9, mb1mx4.0/50, mbtmp4.1/9, ML4.6/1, Error ellipse: s-maj=49.8km s-min=20.0km az=136.0*

*ISCJB **06** 05:56:48.6±0.7, 11°.3S±0°.1×165°.5E±0°.2, h30km, mb4.0/7, Error ellipse: s-maj=24.5km s-min=14.6km az=38.2*

ISC 06 05:56:50.2±0.8, 11°.2S±0°.1×165°.6E±0°.2, h30km, n10, σ0s.83/10, mb4.1/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.88	176	Pn	Pn	05 59 23.8	-0.3
	4.1nm,0.3s,baz=154,slow=23,SNR=6.4						
CTA	Charters Tower	20.59	242	P	P	06 01 26.2	-0.9
	6.3nm,1.0s,baz=61,slow=19,SNR=2.0						
STKA	Stephens Creek	30.24	223	P	P	06 02 59.9	+1.4
	4.0nm,0.8s,baz=23,slow=6.7,SNR=3.9						
WRA	Warramunga Arr	31.28	250	P	P	06 03 07.5	-0.4
	3.3nm,1.0s,baz=81,slow=8.8,SNR=4.5						
ASAR	Alice Springs	32.59	243	P	P	06 03 19.2	-0.1
	2.5nm,0.9s,baz=67,slow=9.2,SNR=4.6						
ILAR	Eielson Array	83.68	19	P	P	06 09 16.6	+0.9
	1.2nm,0.7s,baz=238,slow=5.3,SNR=8.9						
NVAR	Mina Array Bea	86.23	50	P	P	06 09 29.4	-0.1
	0.3nm,0.4s,baz=237,slow=6.9,SNR=4.1						
PDAR	Pinedale Array	93.76	47	P	P	06 10 05.1	+0.3
	0.3nm,0.7s,baz=251,slow=2.8,SNR=2.8						
YKA	Yellowknife Ar	95.15	27	P	P	06 10 09.4	-1.0
	0.5nm,0.8s,baz=256,slow=4.7,SNR=8.0						
ARCES	ARCESS Array B	116.40	345	PKP	PKPdf	06 15 30.2	-0.2
	2.9nm,0.9s,baz=72,slow=2.9,SNR=2.4						

IDC 06 05:57:51.9±2.8, 11°.35S×165°.07E, h0km, mb4.2/4, mb1 4.4/5, mb1mx3.9/50, mbtmp4.2/5, Error ellipse: s-maj=57.9km s-min=37.1km az=92.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.74	173	Pn	Pn	06 00 27.6	+0.4
	baz=331,slow=13,SNR=1.7						
WRA	Warramunga Arr	30.75	250	P	P	06 04 09.7	+0.5
	4.8nm,0.9s,baz=81,slow=9.1,SNR=8.6						
ASAR	Alice Springs	32.06	243	P	P	06 04 20.3	-0.4
	2.5nm,0.8s,baz=75,slow=9.8,SNR=5.4						
FITZ	Fitzroy Crossi	38.66	255	P	P	06 05 17.2	-0.3
	5.6nm,0.9s,baz=79,slow=8.6,SNR=7.0						
SONM	Songino Array	78.52	324	P	P	06 09 55.2	0.0
	1.6nm,1.1s,baz=134,slow=6.2,SNR=4.6						

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*IDC **06** 05:58:39.2±0.5, 10°.78S×165°.28E, h0km, mb4.6/30, mb1 4.8/32, mb1mx4.7/50, mbtmp4.7/32, ML5.2/2, Error ellipse: s-maj=15.2km s-min=11.9km az=104.0*

*NEIC **06** 05:58:40.8±0.7, 10°.78S×165°.23E, h9km±4km, mb5.0/91, Error ellipse: s-maj=4.0km s-min=3.5km az=105.0*

*ISCJB **06** 05:58:42.4±0.1, 10°.90S±0°.03×165°.22E±0°.03, h30km, mb4.8/127, Error ellipse: s-maj=4.2km s-min=3.5km az=16.8*

ISC 06 05:58:43.9±0.3, 10°.83S±0°.05×165°.29E±0°.05, h30km, n250, σ1s.41/258, mb4.9/127, 1C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.44	284	*e*Pn	Pn	05 59 59.8	-3.2
HNR				*e*Pn	Pn	06 00 02.8	-0.2
HNR				*e*Sn	Sn	06 01 06.8	+2.1
HNR	Honiara	5.44	284	Pn	Pn	05 59 59.8	-3.2
	140nm,0.3s,baz=144,slow=8.4,SNR=10						
HNR				Sn	Sn	06 01 06.8	+2.1
	42nm,0.3s,baz=212,slow=17,SNR=1.0						
MARNC	Mare, Loyalty	10.91	166	*e*Pn	Pn	06 01 18.6	+0.5
MARNC				*e*Sn	Sn	06 03 18.5	-0.8
DZM	Mont Dzumac	11.23	174	*e*Pn	Pn	06 01 22.9	+0.3
DZM				Sn	Sn	06 03 26.6	-0.7
DZM	Mont Dzumac	11.23	174	Pn	Pn	06 01 22.5	-0.1
	10nm,0.3s,baz=11,slow=18,SNR=22						
DZM				Sn	Sn	06 03 26.6	-0.7
	baz=309,slow=17,SNR=1.2						
ONTNC	Ouen Toro	11.47	175	*e*Pn	Pn	06 01 25.0	-0.7
PINNC	Pines Island,	11.90	170	*e*Pn	Pn	06 01 32.2	+0.6
MSVF	Nonsavu	14.14	120	*e*Pn	Pn	06 02 01.8	-0.5
TARA	Tarawa	14.29	33	*e*Pn	Pn	06 02 03.1	-1.2
RABL	Rabaul	14.58	296	*e*Pn	Pn	06 02 05.2	-3.2
EIDS	Eidsvold	19.76	221	P	Pn	06 03 12.3	-1.0
	baz=20,SNR=7.5						
EIDS	Eidsvold	19.76	221	*e*P	P	06 03 11.7	+0.1
	72nm,1.2s						
MANU	Manus Island	19.82	295	*e*P	P	06 03 11.1	-1.2
	344nm,1.3s						
CTA	Charters Tower	20.51	241	P	Pn	06 03 21.0	-1.1
	16nm,0.6s,baz=71,slow=12,SNR=13						
CTAO	Charters Tower	20.51	241	*e*P	Pn	06 03 20.8	-1.4
	65nm,1.3s						
MTSU	Mount Surprise	21.55	248	P	P	06 03 30.5	-0.6
	baz=21,SNR=7.9						
COEN	Coen	21.82	260	P	P	06 03 33.8	-0.2
	baz=22,SNR=10						
COEN	Coen	21.82	260	*e*P	P	06 03 33.8	-0.2
	20nm,0.8s						
RMQ	Roma	22.05	223	P	P	06 03 37.2	+0.9
	baz=22,SNR=8.0						
ARMA	Armidale	23.27	211	P	P	06 03 50.1	+0.9
	baz=23,SNR=6.7						
ARMA	Armidale	23.27	211	*e*P	P	06 03 50.1	+0.9
	32nm,1.0s						
QLP	Quilpie	25.30	229	P	P	06 04 08.7	+0.7
	baz=25,SNR=6.8						
OUZ	Omahuta	25.43	164	*e*P	P	06 04 09.7	+0.7
	109nm,1.3s						
MGCD	Mangrove Creek	25.80	208	P	P	06 04 13.8	+1.3
	baz=26,SNR=4.4						
QIS	Mount Isa	26.51	245	P	P	06 04 18.8	-0.3
	baz=26,SNR=3.3						
HIZ	Hauiti	28.87	164	*e*P	P	06 04 40.0	+0.1
	155nm,1.5s						
MXZ	Matakaoa Point	29.08	158	*e*P	P	06 04 41.4	-0.4
	218nm,1.5s						
H11S2	WAKE ISLAND Hy	29.17	3	T	T	06 35 11.5	
	baz=184,slow=76,SNR=75						
H11S3	WAKE ISLAND Hy	29.17	3	T	T	06 35 11.8	
	baz=184,slow=76,SNR=122						
H11S1	WAKE ISLAND Hy	29.18	3	T	T	06 35 13.2	
	baz=184,slow=76,SNR=127						
URZ	Urewera	29.30	161	*e*P	P	06 04 43.6	-0.1
URZ				*e*P	P	06 04 44.5	+0.8
URZ	Urewera	29.30	161	P	P	06 04 43.6	-0.1
	23nm,0.8s,baz=266,slow=5.0,SNR=8.1						
BKZ	Black Stump Fm	29.93	162	*e*P	P	06 04 50.1	+0.6
	47nm,0.6s						
STKA	Stephens Creek	30.29	223	P	P	06 04 53.6	+0.9
	baz=30,SNR=5.8						
STKA	Stephens Creek	30.29	223	*e*P	P	06 04 52.4	-0.3
	6.1nm,1.5s						
STKA	Stephens Creek	30.29	223	P	P	06 04 53.0	+0.3
	5.5nm,0.7s,baz=47,slow=11,SNR=9.7						
H11N1	WAKE ISLAND Hy	30.39	3	T	T	06 36 39.4	
	baz=182,slow=76,SNR=130						
H11N3	WAKE ISLAND Hy	30.40	3	T	T	06 36 40.2	
	baz=182,slow=76,SNR=141						
H11N2	WAKE ISLAND Hy	30.41	3	T	T	06 36 40.8	
	baz=182,slow=76,SNR=89						
WRAB	Tennant Creek	31.13	249	*e*P	P	06 04 59.6	-0.5
	7.4nm,0.8s						
WB2	Warramunga Arr	31.13	249	*e*P	P	06 04 59.6	-0.6
	15nm,1.3s						
WB2				*e*P	P	06 05 00.2	0.0
WR1	Warramunga Arr	31.14	249	*e*P	P	06 04 59.1	-1.2
	12nm,0.9s						
WR1				*e*PcP	PcP	06 07 56.4	+1.2
WRA	Warramunga Arr	31.14	249	P	P	06 04 59.1	-1.2
	3.8nm,0.8s,baz=82,slow=9.3,SNR=9.2						
WRA				PcP	PcP	06 07 56.4	+1.1
	0.6nm,0.6s,baz=81,slow=3.4,SNR=3.3						
WRA				ScP	ScP	06 11 43.2	+7.0
	1.8nm,0.9s,baz=77,slow=3.6,SNR=4.5						
BFZ	Birch Farm	31.27	164	*e*P	P	06 05 01.1	0.0
	43nm,0.6s						
SNZO	South Karori	31.47	166	*e*P	P	06 05 02.4	-0.5
	44nm,0.7s						
THZ	Tophouse	31.53	169	*e*P	P	06 05 04.3	+0.8
	154nm,1.8s						
TOO	Toolangi	32.03	210	P	P	06 05 08.7	+0.8
	baz=32,SNR=7.2						
KHZ	Kahutara	32.28	169	*e*P	P	06 05 10.2	+0.2
	28nm,1.0s						
LTZ	Lake Taylor	32.41	170	*e*P	P	06 05 10.7	-0.5
	21nm,0.8s						
AS01	Alice Springs	32.45	243	*e*P	P	06 05 11.5	-0.3
AS31	Alice Springs	32.49	243	*e*P	P	06 05 11.4	-0.8
	2.3nm,0.6s						
ASAR	Alice Springs	32.49	243	P	P	06 05 11.2	-0.9
	5.8nm,0.6s,baz=64,slow=10,SNR=25						
ASAR				PcP	PcP	06 07 58.4	-0.5
	2.3nm,0.9s,baz=76,slow=3.1,SNR=5.3						
ASAR				ScP	ScP	06 11 47.5	+6.8
	1.4nm,0.7s,baz=99,slow=3.1,SNR=3.1						
OXZ	Oxford	32.90	171	*e*P	P	06 05 16.8	+1.3
	21nm,0.6s						
HTT	Hallett	33.02	223	P	P	06 05 17.4	+0.6
	baz=33,SNR=3.5						
RPZ	Rata Peaks	33.14	172	*e*P	P	06 05 17.5	-0.1
RPZ				*e*P	P	06 05 17.6	+0.1
RPZ	Rata Peaks	33.14	172	P	P	06 05 17.5	-0.1
	13nm,0.6s,baz=325,slow=12,SNR=7.3						
BBOO	Buckleboo	34.65	226	P	P	06 05 31.5	+0.7
	baz=34,SNR=17						
WRKA	Warakurna	37.78	243	P	P	06 05 57.2	-0.6
	baz=38,SNR=9.2						
FITZ	Fitzroy Crossi	39.00	255	P	P	06 06 07.5	-0.6
	baz=39,SNR=6.5						
FITZ	Fitzroy Crossi	39.00	255	P	P	06 06 07.1	-0.9
	5.0nm,0.9s,baz=53,slow=7.2,SNR=6.0						
BATI	Baumata	40.91	267	P	P	06 06 23.7	-0.3
	9.8nm,0.3s,baz=69,slow=8.6,SNR=2.8						
MEEK	Meekatharra	46.64	244	P	P	06 07 09.5	-0.5
	baz=46,SNR=8.8						
KLBR	Kellerberrin	48.45	237	P	P	06 07 23.5	-0.4
	baz=48,SNR=5.2						
NWAO	Narrogin (SRO)	49.21	236	P	P	06 07 29.4	-0.4
	baz=270,slow=5.3						
MORW	Morawa	49.34	241	P	P	06 07 29.8	-1.0
	baz=49,SNR=3.8						
KKM	Kota Kinabalu	51.65	287	*e*P	P	06 07 47.7	-0.8
	25nm,0.9s						
MJAR	Matsushiro Arr	53.58	333	P	P	06 08 01.0	-1.3
MJAR	Matsushiro Arr	53.58	333	P	P	06 08 01.0	-1.3
	6.1nm,0.9s,baz=166,slow=7.2,SNR=8.0						
MAJO	Matsushiro	53.58	333	*e*P	P	06 08 01.0	-1.3
MAT	Matsushiro	53.58	333	P	P	06 08 01.2	-1.1
JNU	Nakatsue	54.65	324	*e*P	P	06 08 09.3	-0.8
	37nm,1.0s						
JNU	Nakatsue	54.65	324	P	P	06 08 09.3	-0.8
	20nm,0.9s,baz=74,slow=8.1,SNR=5.4						
ASAJ	Asahikawa	58.44	341	P	P	06 08 35.5	-1.5
	15nm,1.0s,baz=232,slow=12,SNR=7.1						
KSRS	Korea Array	59.45	326	P	P	06 08 43.0	-1.0
	3.4nm,0.7s,baz=122,slow=40,SNR=9.6						
KSAR	Wonju Array Be	59.46	326	P	P	06 08 43.0	-1.1
KS01	Wonju Array Si	59.48	326	*e*P	P	06 08 43.6	-0.7
NJ2	Nanjing	61.55	316	*e*P	P	06 08 59.1	+0.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.8s						
USA0B	Ussuriysk Arra	62.55	334	*e*P	P	06 09 04.2	-0.8
	comp=Z,33nm,1.4s						
USRK	Ussuriysk Ar.	62.55	334	P	P	06 09 04.4	-0.6
	comp=Z,4.9nm,0.7s,baz=114,slow=8.8,SNR=12						
MDJ	Mudanjiang	63.95	332	P	P	06 09 19.0	+4.7
MDJ				pmax	pmax		
	comp=Z,16nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,600nm,8.5s						
PETK	Petropavlovsk-	64.01	355	P	P	06 09 14.7	+0.2
	comp=Z,5.6nm,0.8s,baz=160,slow=9.5,SNR=5.4						
PEA1	Petropavlovsk-	64.02	355	*e*P	P	06 09 14.7	+0.2
SKNT	Sakolnakorn	66.60	294	P	P	06 09 34.3	+2.3
	comp=Z,6.3nm,1.0s						
KLR	Kul'dur	66.68	337	P	P	06 09 30.8	-1.1
	comp=Z,14nm,1.2s,baz=117,slow=7.5,SNR=12						
VNDA	Vanda	66.70	181	P	P	06 09 30.3	-1.3
	comp=Z,6.9nm,1.2s,baz=14,slow=7.0,SNR=3.8						
PSI	Prapat	67.40	278	P	P	06 09 37.7	+0.4
	comp=Z,1.4nm,0.3s,baz=179,slow=2.6,SNR=4.0						
ENH	Enshi	67.41	309	*e*P	P	06 09 36.2	-0.7
	comp=Z,25nm,1.1s						
NONG	Nongkai	67.72	295	P	P	06 09 41.8	+2.7
	comp=Z,0.2nm,0.9s,comp=Z,53nm						
GYA	Guiyang	67.93	304	⇑*i*P	P	06 09 40.7	+0.3
GYA				PP	pP	06 09 42.0	-7.0
GYA				S	S	06 18 40.8	+3.1
GYA				SKS	ScS	06 19 37.6	-0.1
GYA	Guiyang	67.93	304	SS	SS	06 23 04.8	+4.6
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.5s						
GYA				LR	LR		
	comp=N,570nm,18.2s						
GYA				LR	LR		
	comp=E,610nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
PBKT	Sadao Pong	69.18	292	P	P	06 09 53.6	+5.4
	comp=Z,7.0nm,1.1s,comp=Z,640nm						
XAN	Xi'an	69.65	312	P	P	06 09 53.6	+2.7
XAN				pP	sP	06 10 04.2	+1.5
XAN				sP	PcP	06 10 10.0	-3.7
XAN				PcP	pwP	06 10 17.0	+14
XAN				pmax	pmax		
	comp=Z,5.0nm,1.5s						
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN				LR	LR		
	comp=N,720nm,18.4s						
XAN				LR	LR		
	comp=E,470nm,21.7s						
XAN				LR	LR		
	comp=Z,1µm,28.2s						
XAN	Xi'an	69.65	312	*e*P	P	06 09 50.4	-0.4
	comp=Z,9.4nm,0.8s						
KMI	Kunming	70.63	301	P	P	06 09 58.3	+1.0
KMI				pP	pP	06 10 02.6	-3.3
KMI				sP	pwP	06 10 05.2	-3.9
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC	Hu-ho-hao-te	71.38	320	*e*P	P	06 10 04.1	+2.7
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CM01	Chiang Mai Arr	71.59	294	*e*P	P	06 10 03.5	+0.6
CM31	Chiang Mai Arr	71.62	294	*e*P	P	06 10 02.7	-0.4
CMAR	Chiang Mai Arr	71.62	294	P	P	06 10 03.7	+0.6
	comp=Z,1.0nm,0.3s,baz=115,slow=4.4,SNR=8.6						
CMMT	Chiang Mai	71.72	294	P	P	06 10 12.6	+8.8
CHTO	Chiang Mai	71.73	294	P	P	06 10 12.7	+8.9
	comp=Z,39nm,1.8s						
HIA	Hailar	71.96	331	*e*P	P	06 10 04.4	-0.2
	comp=Z,12nm,0.9s						
CD2	Chengdu	72.12	307	P	P	06 10 06.4	+0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
SEY	Seymchan	74.21	354	P	P	06 10 16.3	-1.2
	comp=Z,0.7nm,0.3s,baz=182,slow=7.9,SNR=3.2						
LZH	Lanzhou	74.28	312	*e*P	P	06 10 20.4	+1.6
LZH				pP	pP	06 10 24.3	-3.1
LZH				sP	pwP	06 10 28.2	-2.6
LZH				PP	PP	06 13 12.3	+7.2
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,93nm,4.9s						
LZH				LR	LR		
	comp=N,260nm,16.5s						
LZH				LR	LR		
	comp=E,280nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
GAMB	Gambell	76.44	10	*e*P	P	06 10 29.9	-0.4
	comp=Z,14nm,0.9s						
KDAK	Kodiak Island	76.54	22	P	P	06 10 30.8	-0.2
	comp=Z,11nm,1.0s,baz=232,slow=19,SNR=3.5						
ULN	Ulaanbaatar	77.86	324	*e*P	P	06 10 36.9	-2.1
	comp=Z,11nm,0.9s						
SVW2	Sparrevohn	78.05	18	*e*P	P	06 10 40.4	+1.0
	comp=Z,8.2nm,0.8s						
SONA0	Songino Array	78.23	324	*e*P	P	06 10 41.3	+0.4
SONM	Songino Array	78.23	324	P	P	06 10 41.3	+0.4
	comp=Z,3.3nm,0.8s,baz=141,slow=6.3,SNR=12						
SONA1	Songino Array	78.23	324	*e*P	P	06 10 41.0	0.0
RSO	Redoubt South	78.47	20	*e*P	P	06 10 41.7	-0.3
GTA	Gaotai	78.59	314	⇓P	P	06 10 43.8	+0.7
GTA				pP	pP	06 10 48.4	-3.3
GTA				sP	PcP	06 10 50.9	-1.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,220nm,5.7s						

GTA				LR	LR		
	comp=N,560nm,19.0s						
GTA				LR	LR		
	comp=E,490nm,21.0s						
GTA				LR	LR		
	comp=Z,830nm,20.3s						
BRLK	Bradley Lake	78.60	21	*e*P	P	06 10 44.0	+1.5
	comp=Z,29nm,1.2s						
BILL	Bilibino	78.67	0	*e*P	P	06 10 42.8	+0.1
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	79.17	180	*e*P	P	06 10 46.4	+0.5
	comp=Z,20nm,1.1s						
BRDH	Bariadhala	79.40	296	P	P	06 10 48.5	+0.8
	comp=Z,9.0nm,0.3s,baz=105,slow=20,SNR=2.2						
SUA	Susitna One	79.88	20	*e*P	P	06 10 49.7	+0.1
	comp=Z,7.3nm,0.8s						
CAST	Castle Rocks	80.88	18	*e*P	P	06 10 55.3	+0.4
	comp=Z,7.9nm,0.8s						
DIV	Divide	81.38	22	*e*P	P	06 10 59.0	+1.4
	comp=Z,8.8nm,0.8s						
TRF	Thorofare Moun	81.46	19	*e*P	P	06 10 59.5	+1.5
	comp=Z,63nm,2.0s						
KLU	Klutina	81.56	21	*e*P	P	06 11 00.7	+2.2
	comp=Z,9.3nm,1.1s						
RND	Reindeer	81.88	19	*e*P	P	06 11 00.2	0.0
	comp=Z,7.7nm,0.8s						
RDOG	Red Dog Mine	81.90	12	*e*P	P	06 11 00.4	+0.3
	comp=Z,16nm,1.3s						
IM3	Indian Mountai	82.34	16	*e*P	P	06 11 01.9	-0.5
MLY	Manley	82.47	17	*e*P	P	06 11 03.2	0.0
	comp=Z,11nm,1.6s						
WRH	Wood River Hil	82.87	19	*e*P	P	06 11 05.4	+0.1
	comp=Z,4.9nm,0.8s						
MDM	Murphy Dome	83.17	18	*e*P	P	06 11 07.0	+0.2
	comp=Z,18nm,1.6s						
HDA	Harding Lake	83.19	19	*e*P	P	06 11 05.5	-1.4
	comp=Z,7.1nm,0.8s						
HDA	Harding Lake	83.19	19	P	P	06 11 07.4	+0.5
	baz=227						
RIDG	Independ'e Rid	83.43	20	*e*P	P	06 11 08.5	+0.3
	comp=Z,10.0nm,0.8s						
ILAR	Eielson Array	83.45	19	P	P	06 11 08.2	0.0
	comp=Z,5.6nm,0.7s,baz=235,slow=5.4,SNR=26						
ILB	Eielson Array	83.45	19	*e*P	P	06 11 07.7	-0.6
O02D	Mt. Diablo Mer	83.48	47	P	P	06 11 09.5	+0.5
	baz=250						
POKR	Poker Plat Res	83.52	18	P	P	06 11 09.3	+0.6
	baz=227						
N02D	Trinity Center	83.81	46	P	P	06 11 10.9	+0.1
	baz=250						
M02C	Callahan	83.84	46	P	P	06 11 11.9	+0.9
	baz=250						
SCRK	Sand Creek	83.87	20	*e*P	P	06 11 09.8	-0.7
	comp=Z,11nm,0.9s						
YBH	Yreka Blue Hor	84.06	46	*e*P	P	06 11 12.2	+0.2
	comp=Z,38nm,1.9s						
ORV	Oroville	84.20	48	*e*P	P	06 11 14.0	+1.3
	comp=Z,4.4nm,1.0s						
O03E	Paynes Creek	84.23	47	P	P	06 11 13.8	+0.9
	baz=251						
HYT	Haines Junctio	84.38	24	*e*P	P	06 11 12.9	-0.4
	comp=Z,5.1nm,0.8s						
AFDM	Forest Hills D	84.40	49	*e*P	P	06 11 14.3	+0.6
	comp=Z,7.8nm,0.9s						
CMB	Columbia Colle	84.55	50	*e*P	P	06 11 13.8	-0.7
	comp=Z,5.8nm,0.9s						
BEKR	Beckworth	85.14	48	*e*P	P	06 11 18.3	+0.7
	comp=Z,19nm,1.5s						
WAKR	Walker	85.40	50	*e*P	P	06 11 19.5	+0.5
	comp=Z,23nm,1.6s						
MDPB	Devils Postpil	85.41	50	*e*P	P	06 11 19.4	+0.2
	comp=Z,7.5nm,0.9s						
EDW2	Edwards Air Fo	85.45	53	P	P	06 11 19.0	-0.2
	baz=254						
OMMB	Old Mammoth Mi	85.46	51	*e*P	P	06 11 19.2	-0.2
	comp=Z,8.1nm,1.1s						
DAWY	Dawson	85.52	21	*e*P	P	06 11 19.6	+0.8
	comp=Z,5.6nm,0.8s						
BFSC	Mount Baldy Ra	85.54	54	P	P	06 11 18.9	-0.8
	baz=254						
J05D	Fort Rock, OR	85.61	45	P	P	06 11 19.8	-0.1
	baz=251						
MURC	Murrieta	85.73	55	P	P	06 11 21.8	+1.2
	baz=254						
TIXI	Tiksi	85.79	349	*e*P	P	06 11 20.6	+0.7
	comp=Z,28nm,1.8s						
TIXI				*e*P	P	06 11 21.1	+1.1
TIXI	Tiksi	85.79	349	P	P	06 11 21.1	+1.1
	comp=Z,2.3nm,0.7s,baz=125,slow=8.0,SNR=6.5						
PAHR	Pah Rah Range	85.80	48	*e*P	P	06 11 21.7	+0.8
	comp=Z,5.8nm,1.0s						
MOD	Modoc Plateau	85.82	46	*e*P	P	06 11 21.6	+0.6
	comp=Z,8.7nm,1.2s						
CWC	Cottonwood Cre	85.83	52	P	P	06 11 20.5	-0.6
	baz=253						
MONP2	Monument Peak	86.17	56	P	P	06 11 22.4	-0.5
	baz=255						
NV01	Mina Array Sit	86.23	50	*e*P	P	06 11 23.3	+0.1
NVAR	Mina Array Bea	86.23	50	P	P	06 11 23.0	-0.1
	comp=Z,3.5nm,0.8s,baz=239,slow=7.0,SNR=11						
PFO	Pinyon Flats O	86.33	55	P	P	06 11 23.4	-0.2
	baz=255						
TPFO	Pinon Flats	86.33	55	P	P	06 11 23.2	-0.5
	baz=255						
NV11	Mina Array Sit	86.34	50	*e*P	P	06 11 23.2	-0.4
	comp=Z,0.9nm,1.3s						
KVN	Kaiserville	86.56	49	*e*P	P	06 11 25.3	+0.5
	comp=Z,3.7nm,0.9s						
SWSC	Sam W. Stewart	86.68	56	P	P	06 11 24.8	-0.4
	baz=255						
HEC	Hector,Ludlow	86.75	54	P	P	06 11 26.0	+0.4
	baz=255						
BELC	Belle Mtn. Jos	86.80	55	P	P	06 11 25.5	-0.4
	baz=255						
WVOR	Wild Horse Val	87.16	46	*e*P	P	06 11 26.9	-0.5
	comp=Z,12nm,1.4s						
GMRC	Granite Mounta	87.27	54	P	P	06 11 28.9	+0.6
	baz=255						
IRM	Iron Mountain	87.52	55	P	P	06 11 30.8	+1.5
	baz=255						
J08A	Circle Bar Ran	87.55	45	*e*P	P	06 11 29.8	+0.5
	comp=Z,9.7nm,1.0s						
G08A	Pilot Rock	87.80	43	*e*P	P	06 11 32.4	+1.9
	comp=Z,10nm,1.2s						
Y12C	Blythe	87.92	55	*e*P	P	06 11 32.5	+1.3
	comp=Z,8.2nm,1.1s						
Y12C	Blythe	87.92	55	P	P	06 11 32.4	+1.2
	baz=256						
E08A	Dider Farm, El	88.09	42	*e*P	P	06 11 33.4	+1.7
	comp=Z,26nm,1.7s						
SHPR	Sheep Range	88.11	52	*e*P	P	06 11 32.6	+0.4
	comp=Z,9.3nm,1.5s						
PDMCI	Parker Dam,Lak	88.36	55	P	P	06 11 34.6	+1.4
	baz=256						
WMQ	Urumqi	88.63	315	*e*P	P	06 11 35.4	+1.0
WMQ				pP	pP	06 11 41.2	-1.9
WMQ				pmax	pmax		
	comp=Z,24nm,1.5s						
214A	Organ Pipe Nat	88.89	57	P	P	06 11 36.0	+0.1
	baz=257						
ELK	Elko	89.14	48	*e*P	P	06 11 35.8	-1.3
	comp=Z,16nm,1.9s						
PSUT	Pine Spring	89.62	51	*e*P	P	06 11 39.7	+0.4
	comp=Z,3.3nm,0.8s						
LCMT	Little Creek M	89.72	52	*e*P	P	06 11 40.4	+0.6
	comp=Z,6.1nm,1.0s						
CCUT	Cedar City	89.76	52	*e*P	P	06 11 40.1	0.0
	comp=Z,6.6nm,1.1s						
SZCU	Shurtz Canyon	89.98	52	*e*P	P	06 11 41.7	+0.6
	comp=Z,4.9nm,1.0s						
KNB	Kanab	90.06	52	*e*P	P	06 11 42.6	+1.3
	comp=Z,6.7nm,1.2s						
U15A	North Rim	90.33	53	*e*P	P	06 11 43.4	+0.5
	comp=Z,8.6nm,0.8s						
HLID	Hailey	90.45	46	*e*P	P	06 11 43.8	+0.8
	comp=Z,16nm,1.8s						
HLID	Hailey	90.45	46	P	P	06 11 44.2	+1.2
	baz=256						
X16A	Lo Mia Camp, P	90.56	55	*e*P	P	06 11 45.3	+1.5
	comp=Z,4.3nm,0.9s						
TUC	Tucson	90.65	57	P	P	06 11 45.3	+1.2
	baz=258						
TCRU	Three Creeks R	90.71	51	*e*P	P	06 11 44.4	-0.1
	comp=Z,5.8nm,0.7s						
MTPU	Mount Pierson	90.78	52	*e*P	P	06 11 43.5	-1.5
	comp=Z,17nm,1.5s						
DUG	Dugway, Tooele	90.80	49	*e*P	P	06 11 43.5	-1.2
	comp=Z,18nm,1.9s						
BGU	Big Grassy Mou	90.81	49	*e*P	P	06 11 45.8	+1.0
	comp=Z,3.0nm,0.9s						
WUAZ	Wupatki	90.86	54	*e*P	P	06 11 44.4	-0.7
	comp=Z,7.3nm,1.0s						
MSU	Marysvale	90.89	51	*e*P	P	06 11 46.4	+1.0
HVU	Hansel Valley	91.19	48	*e*P	P	06 11 44.1	-2.4
	comp=Z,19nm,1.7s						
Q16A	Castle Valley	91.75	51	*e*P	P	06 11 48.8	-0.5
	comp=Z,21nm,1.7s						
JLU	Jordanelle	91.91	49	*e*P	P	06 11 49.4	-0.6
	comp=Z,4.4nm,1.0s						
DLMT	Dillon	92.14	44	*e*P	P	06 11 50.7	-0.1
	comp=Z,7.8nm,0.9s						
LRM	Limekiln Ridge	92.34	44	*e*P	P	06 11 53.2	+1.3
FXWY	Fox Creek	92.86	46	*e*P	P	06 11 55.3	+1.0
	comp=Z,3.0nm,0.8s						
HRY	Holter Researc	92.96	43	*e*P	P	06 11 55.4	+0.8
IMW	Indian Meadow	92.98	46	*e*P	P	06 11 56.0	+1.1
	comp=Z,4.6nm,1.1s						
MK01	Makanchi Array	93.05	317	*e*P	P	06 11 55.2	+0.4
MK31	Makanchi Array	93.06	317	*e*P	P	06 11 56.4	+1.5
MK32	Makanchi Array	93.06	317	*e*P	P	06 11 55.4	+0.5
MKAR	Makanchi Array	93.06	317	*e*P	P	06 11 54.6	-0.3
	comp=Z,18nm,0.6s						
MKAR	Makanchi Array	93.06	317	P	P	06 11 55.4	+0.5
	comp=Z,2.4nm,0.6s,baz=88,slow=6.2,SNR=14						
YMR	Madison River	93.12	45	*e*P	P	06 11 57.7	+2.2
	comp=Z,4.9nm,0.8s						
ZAA0	Zalesovo Array	93.12	324	*e*P	P	06 11 55.2	+0.3
	comp=Z,3.9nm,0.8s						
ZALV	Zalesovo Beam	93.12	324	*e*P	P	06 11 53.7	-1.2
ZALV	Zalesovo Beam	93.12	324	P	P	06 11 53.0	-1.9
	comp=Z,2.0nm,0.5s,baz=124,slow=3.9,SNR=8.9						
ZAA1	Zalesovo Array	93.12	324	*e*P	P	06 11 53.0	-1.9
MAKZ	Makanchi	93.27	317	*e*P	P	06 11 57.4	+1.5
	comp=Z,7.2nm,1.1s						
PV23	Carpenter Ridg	93.31	52	*e*P	P	06 11 57.2	+0.7
	comp=Z,7.6nm,0.7s						
PD31	Pinedale Array	93.74	47	*e*P	P	06 11 59.1	+0.7
PDAR	Pinedale Array	93.74	47	*e*P	P	06 11 58.1	-0.3
PDAR	Pinedale Array	93.74	47	P	P	06 11 59.1	+0.7
	comp=Z,1.9nm,1.0s,baz=234,slow=2.1,SNR=8.7						
YKA	Yellowknife Ar	94.99	27	P	P	06 12 00.8	-2.5
	comp=Z,1.4nm,0.8s,baz=256,slow=4.7,SNR=13						
YKB5	Yellowknife Ar	94.99	27	*e*P	P	06 12 01.0	-2.3
LTX	Lajitas	96.12	61	*e*P	P	06 12 10.2	+0.8
TXAR	Lajitas Array	96.12	61	P	P	06 12 10.2	+0.8
	comp=Z,0.5nm,0.8s,baz=246,slow=4.5,SNR=3.7						
KURK	Kurchatov	96.19	320	*e*P	P	06 12 09.4	+0.4
KURBB	Kurchatov Arra	96.23	320	P	P	06 12 09.4	+0.2
	comp=Z,0.4nm,0.7s,baz=91,slow=4.1,SNR=2.8						
KSH	Kashi	96.27	309	P	P	06 12 13.9	+4.0
KSH				sP	pP	06 12 20.0	+1.3
KSH				pmax	pmax		
	comp=Z,310nm,3.9s						
BVAR	Borovoye Array	101.50	322	P	Pdif	06 12 32.9	0.0
	comp=Z,0.7nm,0.7s,baz=138,slow=5.1,SNR=3.2						
ARA0	ARCESS Array S	116.01	345	*e*PKPdf	PKiKP	06 17 22.8	-0.6
ARCES	ARCESS Array B	116.01	345	PKP	PKiKP	06 17 22.8	-0.6
	comp=Z,2.3nm,0.7s,baz=63,slow=1.5,SNR=8.3						
FIA0	FINESS Array S	121.41	338	*e*PKPdf	PKPdf	06 17 32.9	-1.0
FINES	FINESS Array B	121.41	338	PKP	PKPdf	06 17 32.9	-1.0
	comp=Z,1.5nm,0.9s,baz=66,slow=3.5,SNR=2.9						
CPUP	Villa Florida	124.50	132	PKP	PKPdf	06 17 40.0	-1.0
	comp=Z,1.5nm,0.8s,baz=203,slow=3.7,SNR=2.6						
BOSA	Boshof	124.96	224	PKP	PKiKP	06 17 42.2	-0.2
	comp=Z,2.1nm,0.6s,baz=77,slow=1.5,SNR=7.2						
NB2	NORSAR Subarra	126.38	345	PKPdf	PKiKP	06 17 47.3	+3.2
	comp=Z,13nm,1.7s,baz=31,slow=1.9						
NB2	NORSAR Subarra	126.38	345	PKPdf	PKiKP	06 17 47.3	+3.2
	comp=Z,0.3nm,0.6s,baz=31,slow=1.9						
NB2	NORSAR Subarra	126.38	345	PKPdf	PKiKP	06 17 47.3	+3.2
	baz=31,slow=1.9						
NB200	NORSAR Array S	126.38	345	*e*PKPdf	PKiKP	06 17 43.9	-0.2
NOA	NORSAR Array B	126.38	345	PKP	PKiKP	06 17 43.9	-0.2
	comp=Z,0.6nm,0.6s,baz=32,slow=3.2,SNR=3.7						
AKASG	Malin Array Be	126.44	327	PKP	PKPdf	06 17 43.9	-0.1
	comp=Z,0.8nm,0.4s,baz=44,slow=2.6,SNR=7.3						
BR101	Keskin Array S	128.49	313	*e*PKPdf	PKiKP	06 17 48.7	-0.4
BRTR	Keskin Array B	128.49	313	PKP	PKiKP	06 17 48.7	-0.4
	comp=Z,0.3nm,0.5s,baz=96,slow=2.9,SNR=2.4						
CLL	Collm	133.73	336	*e*(PKPdf)	PKiKP	06 18 02.0	+2.9
GERES	GERESS Array B	135.31	333	PKP	PKPdf	06 18 00.1	-0.9
	comp=Z,0.4nm,0.6s,baz=52,slow=1.6,SNR=2.6						
BDFB	Brasilia	137.82	128	PKP	PKPdf	06 18 06.0	-0.6
	comp=Z,3.0nm,0.8s,baz=179,slow=13,SNR=3.0						
KEST	Kesra	146.97	323	PKPbc	PKPbc	06 18 24.4	+0.2
	comp=Z,13nm,0.9s,baz=84,slow=3.1,SNR=7.8						
ES19	SONSECA Array	149.68	343	*e*pPKPdf	PKPbc	06 18 29.9	-1.3
ESDC	Sonseca Array	149.73	343	PKPbc	PKPbc	06 18 31.4	+0.1
	comp=Z,0.6nm,0.5s,baz=338,slow=3.1,SNR=3.2						
TORD	Torodi Ar. Bea	163.79	280	PKP	PKPdf	06 18 45.2	+0.1
	comp=Z,0.6nm,0.8s,baz=5.6,slow=1.6,SNR=2.9						
TORD				PKPab	PKPab	06 19 38.4	+0.9
	comp=Z,0.8nm,1.0s,baz=64,slow=3.4,SNR=2.6						
TOA1	Torodi Ar. Sit	163.79	280	*e*PKPdf	PKPdf	06 18 45.2	+0.1
TOA1				*e*PKPab	PKPab	06 19 38.4	+0.9

IDC 06 06:01:55.9±4.4**,11°.45S**×**164°.83E,h0^{km},mb3.9**/4**,**
mb1 4.1/4**,mb1mx3.7**/44**,mbtmp3.9**/4**,Error ellipse:**
s-maj=185.1km s-min=35.7km az=136.0,Santa Cruz
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.50	250	P	P	06 08 11.2	+0.1
	1.2nm,0.8s,baz=81,slow=9.4,SNR=3.8						
ASAR	Alice Springs	31.81	243	P	P	06 08 22.4	-0.2
	2.0nm,0.8s,baz=73,slow=7.7,SNR=4.2						
ILAR	Eielson Array	84.18	19	P	P	06 14 28.7	-0.1
	0.3nm,0.8s,baz=235,slow=4.0,SNR=1.7						
MKAR	Makanchi Array	93.21	317	P	P	06 15 12.4	0.0
	1.1nm,0.8s,baz=100,slow=5.2,SNR=4.9						

IDC 06 06:02:21.5±3.8**,11°.17S**×**165°.47E,h0^{km},mb4.1**/4**,**
mb1 4.3/4**,mb1mx3.8**/45**,mbtmp4.0**/4**,Error ellipse:**
s-maj=163.1km s-min=33.8km az=137.0,Santa Cruz
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WB2	Warramunga Arr	31.18	250	*e*P	P	06 08 46.5	+3.9
	71nm,1.6s						
WRA	Warramunga Arr	31.19	250	P	P	06 08 42.5	-0.2
	2.4nm,0.9s,baz=81,slow=9.0,SNR=5.4						
WRA	Warramunga Arr	31.19	250	P	P	06 08 42.5	-0.2
ASAR	Alice Springs	32.49	243	P	P	06 08 54.4	+0.2
	3.4nm,1.0s,baz=71,slow=10,SNR=4.5						
ASAR	Alice Springs	32.49	243	P	P	06 08 54.4	+0.2
ILAR	Eielson Array	83.72	19	P	P	06 14 52.1	+0.1
	0.9nm,0.8s,baz=232,slow=5.6,SNR=4.5						
MKAR	Makanchi Array	93.43	317	P	P	06 15 38.8	-0.2
	0.5nm,0.8s,baz=85,slow=6.0,SNR=2.8						

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*IDC **06** 06:02:34.8±0.4, 10°.75S×164°.56E, h0^{km}, mb4.9/34,*
mb1 5.0/37, mb1mx4.9/48, mbtmp4.9/37, ML5.3/3, MS5.1/1,
Ms1 5.1/1, ms1mx3.9/35, Error ellipse: s-maj=14.5km
s-min=11.5km az=107.0
*NEIC **06** 06:02:36.4±0.1, 10°.77S×164°.58E, h10^{km}, mb5.2/114,*
Error ellipse: s-maj=4.3km s-min=3.8km az=111.0
*ISCJB **06** 06:02:37.7±0.1, 10°.80S±0°.03×164°.54E±0°.03, h29^{km},*
mb5.1/151, MS5.1/2, Error ellipse: s-maj=4.2km
s-min=3.6km az=137.0
*MOS **06** 06:02:38.5±1.1, 10°.76S×164°.50E, h32^{km}, mb5.4/45, Error*
ellipse: s-maj=8.6km s-min=7.3km az=114.2
ISC 06 06:02:39.2±0.3**,10°.78S**±0°.04×**164°.65E**±0°.05**,h29^{km},n361,**
σ1^{s}31/369**,mb5.2**/159**,5C-15D,Santa Cruz Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.82	286	*e*Pn	Pn	06 03 49.0	-0.9
HNR				*e*Pn	Pn	06 03 50.0	+0.1
HNR				*e*Sn	Sn	06 04 45.2	+0.4
HNR	Honiara	4.82	286	Pn	Pn	06 03 49.0	-0.9
	634nm,0.3s,baz=140,slow=6.1,SNR=37						
HNR				Sn	Sn	06 04 45.2	+0.4
	104nm,0.3s,baz=205,slow=22,SNR=6.9						
MARNC	Mare, Loyalty	11.13	163	*e*Pn	Pn	06 05 15.7	-0.7
DZM	Mont Dzumac	11.36	172	*e*Pn	Pn	06 05 19.8	+0.1
	110nm,0.5s						
DZM				*e*LR	LR	06 07 51.8	
	comp=Z,20µm,25.1s						
DZM	Mont Dzumac	11.36	172	*e*Pn	Pn	06 05 19.7	+0.1
DZM				Sn	Sn	06 07 22.0	-3.8
DZM	Mont Dzumac	11.36	172	Pn	Pn	06 05 20.1	+0.4
	16nm,0.3s,baz=123,slow=20,SNR=20						
DZM				Sn	Sn	06 07 22.0	-3.8
	baz=295,slow=20,SNR=1.3						
ONTNC	Ouen Toro	11.60	172	*e*Pn	Pn	06 05 23.1	+0.3
PINNC	Pines Island,	12.07	168	*e*Pn	Pn	06 05 29.2	-0.1
RABL	Rabaul	14.00	297	*e*Pn	Pn	06 05 51.7	-4.0
TARA	Tarawa	14.59	35	*e*Pn	Pn	06 06 04.0	+0.2
TARA				*e*Sn	Sn	06 08 39.0	-5.7
MSVF	Nonsavu	14.71	120	*e*Pn	Pn	06 06 07.3	+1.9
MSVF	Nonsavu	14.71	120	*e*P	Pn	06 06 07.3	+1.9
PATS	Pohnpei	18.60	340	P	Pn	06 06 55.1	+0.4
	baz=18,SNR=3.4						
PATS	Pohnpei	18.60	340	*e*P	P	06 06 53.2	-1.1
	560nm,1.4s						
MANU	Manus Island	19.23	296	*e*P	Pn	06 07 01.9	-0.5
	372nm,0.9s						
EIDS	Eidsvold	19.39	220	P	Pn	06 07 03.7	-0.5
	baz=19,SNR=14						
EIDS	Eidsvold	19.39	220	*e*P	P	06 07 02.8	-0.1
	124nm,1.1s						
KWAJ	Kwajalein Atol	19.67	9	*e*P	Pn	06 07 07.0	-0.6
	683nm,1.3s						
KWAJ	Kwajalein Atol	19.67	9	*e*P	Pn	06 07 07.0	-0.6
KWAJ				pmax	pmax		
	comp=Z,683nm,1.3s						
CTA	Charters Tower	19.99	240	P	P	06 07 09.7	+0.2
	comp=Z,2.3nm,0.3s,baz=67,slow=12,SNR=33						
CTAO	Charters Tower	19.99	240	*e*P	P	06 07 09.8	+0.2
	comp=Z,115nm,0.9s						
CTAO	Charters Tower	19.99	240	*e*P	P	06 07 09.8	+0.2
CTAO				pmax	pmax		
	comp=Z,115nm,0.9s						
MTSU	Mount Surprise	20.99	247	P	P	06 07 19.8	-0.7
	baz=21,SNR=19						
COEN	Coen	21.21	259	P	P	06 07 22.0	-0.9
	baz=21,SNR=23						
COEN	Coen	21.21	259	*e*P	P	06 07 21.9	-1.0
	comp=Z,51nm,0.9s						
LHI	Lord Howe Isla	21.28	193	*e*P	P	06 07 22.4	-1.0
	comp=Z,133nm,1.0s						
RMQ	Roma	21.66	222	P	P	06 07 28.9	+1.3
	baz=22,SNR=17						
ARMA	Armidale	23.00	210	P	P	06 07 43.8	+2.0
	baz=23,SNR=6.5						
ARMA	Armidale	23.00	210	*e*P	P	06 07 43.2	+1.3
	comp=Z,65nm,0.9s						
RAO	Raoul Island	24.56	141	LR	LR	06 15 56.4	
	comp=Z,4µm,20.6s,baz=306,slow=32						
QLP	Quilpie	24.87	228	P	P	06 08 00.1	+0.7
	baz=25,SNR=13						
MGCD	Mangrove Creek	25.56	207	P	P	06 08 07.6	+1.9
	baz=26,SNR=4.8						
OUZ	Omahuta	25.66	163	*e*P	P	06 08 08.9	+2.4
	comp=Z,67nm,1.2s						
QIS	Mount Isa	25.97	245	P	P	06 08 09.1	-0.5
	baz=26,SNR=4.2						
CMSA	Cobar Meteorol	27.11	218	P	P	06 08 20.7	+1.1
	baz=27,SNR=11						
YNG	Young	27.73	210	P	P	06 08 27.2	+1.9
	baz=28,SNR=8.7						
H11S2	WAKE ISLAND Hy	29.15	4	T	T	06 38 60.0	
	baz=184,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	29.15	4	T	T	06 38 58.3	
	baz=184,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	29.17	4	T	T	06 39 13.5	
	baz=184,slow=76,SNR=32						
URZ	Urewera	29.56	160	*e*P	P	06 08 41.5	+0.1
	comp=Z,26nm,1.1s						
URZ				*e*P	P	06 08 43.5	+2.1
URZ	Urewera	29.56	160	P	P	06 08 43.5	+2.1
	comp=Z,9.6nm,0.7s,baz=41,slow=7.0,SNR=5.4						
STKA	Stephens Creek	29.91	222	P	P	06 08 46.1	+1.4
	baz=30,SNR=7.9						
STKA	Stephens Creek	29.91	222	*e*P	P	06 08 45.7	+1.0
	comp=Z,19nm,1.6s						
STKA	Stephens Creek	29.91	222	P	P	06 08 45.6	+1.0
	comp=Z,8.7nm,0.8s,baz=34,slow=7.9,SNR=12						
H11N1	WAKE ISLAND Hy	30.38	4	T	T	06 40 32.5	
	baz=184,slow=76,SNR=36						
H11N3	WAKE ISLAND Hy	30.38	4	T	T	06 40 46.1	
	baz=184,slow=76,SNR=31						
H11N2	WAKE ISLAND Hy	30.39	4	T	T	06 40 42.6	
	baz=184,slow=76,SNR=38						
WRAB	Tennant Creek	30.56	249	*e*P	P	06 08 47.7	-2.9
	comp=Z,49nm,1.3s						
WRAB	Tennant Creek	30.56	249	⇑*i*P	P	06 08 48.2	-2.4
WRAB				pmax	pmax		
	comp=Z,34nm,1.3s						
WB2	Warramunga Arr	30.56	249	*e*P	P	06 08 48.0	-2.6
WR1	Warramunga Arr	30.57	249	*e*P	P	06 08 49.1	-1.5
	comp=Z,30nm,1.0s						
WRA	Warramunga Arr	30.57	249	P	P	06 08 49.1	-1.5
WRA	Warramunga Arr	30.57	249	P	P	06 08 49.1	-1.5
	comp=Z,11nm,0.8s,baz=79,slow=9.5,SNR=20						
KDU	Kakadu	31.55	263	P	P	06 08 56.8	-2.5
	baz=31,SNR=7.2						
TOO	Toolangi	31.76	210	P	P	06 09 02.9	+1.9
	baz=32,SNR=13						
AS01	Alice Springs	31.92	242	*e*P	P	06 09 00.7	-1.8
AS31	Alice Springs	31.96	242	*e*P	P	06 09 00.2	-2.7
	comp=Z,7.4nm,1.4s						
ASAR	Alice Springs	31.96	242	P	P	06 09 01.0	-1.9
ASAR	Alice Springs	31.96	242	P	P	06 09 01.0	-1.9
	comp=Z,5.8nm,0.7s,baz=64,slow=10,SNR=13						
HTT	Hallett	32.64	222	P	P	06 09 10.0	+1.2
	baz=33,SNR=12						
OXZ	Oxford	33.06	170	*e*P	P	06 09 11.5	-0.7
	comp=Z,52nm,1.2s						
ARPS	Mount Arapiles	33.07	215	P	P	06 09 13.6	+1.2
	baz=33,SNR=5.6						
RPZ	Rata Peaks	33.28	172	*e*P	P	06 09 14.3	+0.1
	comp=Z,41nm,0.9s						
RPZ				*e*P	P	06 09 14.9	+0.8
RPZ	Rata Peaks	33.28	172	P	P	06 09 14.9	+0.8
	comp=Z,21nm,0.9s,baz=180,slow=4.9,SNR=5.4						
BBOO	Buckleboo	34.24	226	P	P	06 09 23.0	+0.4
	baz=34,SNR=14						
KNRA	Kununurra	35.25	258	P	P	06 09 29.0	-2.5
	baz=35,SNR=22						
WRKA	Warakurna	37.25	243	P	P	06 09 47.1	-1.6
	baz=37,SNR=10						
FITZ	Fitzroy Crossi	38.41	254	P	P	06 09 56.1	-2.4
	baz=38,SNR=35						
FITZ	Fitzroy Crossi	38.41	254	*e*P	P	06 09 55.8	-2.7
	comp=Z,33nm,0.8s						
FITZ	Fitzroy Crossi	38.41	254	P	P	06 09 55.8	-2.7
	comp=Z,23nm,0.8s,baz=62,slow=8.8,SNR=54						
FORT	Forrest	39.33	234	P	P	06 10 06.3	+0.3
	baz=39,SNR=8.5						
BATI	Baumata	40.29	267	P	P	06 10 13.3	-0.9
	comp=Z,21nm,0.6s,baz=90,slow=5.1,SNR=2.5						
PPT2	Papeete2	44.80	104	*e*S	S	06 17 30.7	+3.9
	comp=Z,2µm,23.0s						
PPT2				*e*LQ	LQ	06 21 27.4	
	comp=Z,6µm,29.0s						
PPT2				*e*LR	LR	06 23 17.4	
	comp=Z,3µm,23.2s						
TBI	Tubuai	45.43	112	*e*S	S	06 17 40.3	+4.8
	comp=Z,3µm,30.2s						
TBI				*e*LQ	LQ	06 21 40.5	
	comp=Z,10µm,31.0s						
TBI				*e*LR	LR	06 23 35.0	
	comp=Z,3µm,30.8s						
MEEK	Meekatharra	46.10	243	P	P	06 11 00.4	-0.7
	baz=46,SNR=5.8						
TSM	Tawau	48.91	285	P	P	06 11 36.1	+13
SDKM	Sandakan	49.98	287	P	P	06 11 28.9	-2.4
KDM	Kudat	50.74	288	P	P	06 11 36.1	-0.8
KKM	Kota Kinabalu	51.03	287	P	P	06 11 42.9	+3.6
INU	Inuyama	52.80	332	*e*P	P	06 11 52.5	+0.6
	comp=Z,123nm,1.6s						
BTM	Bintulu	53.17	282	P	P	06 11 56.8	+1.7
MJAR	Matsushiro Arr	53.24	333	P	P	06 11 54.6	-0.6
	comp=Z,16nm,0.9s,baz=169,slow=7.9,SNR=22						
MAJO	Matsushiro	53.25	333	*e*P	P	06 11 55.1	-0.2
	comp=Z,30nm,1.0s						
MAJO	Matsushiro	53.25	333	⇓*i*P	P	06 11 52.4	-2.8
MAJO				pmax	pmax		
	comp=Z,56nm,1.5s						
MAT	Matsushiro	53.25	333	P	P	06 11 54.6	-0.6
MJB9	Matsu-Tunnel	53.25	333	*e*P	P	06 11 55.2	-0.1
	comp=Z,28nm,0.9s						

SBUM	Sibu	53.80	281	P	P	06 12 09.3	+10
JNU	Nakatsue	54.24	325	eP	P	06 12 03.1	+0.5
	comp=Z,80nm,1.2s						
JNU	Nakatsue	54.24	325	P	P	06 12 02.8	+0.2
	comp=Z,33nm,0.9s,baz=115,slow=3.8,SNR=11						
YULB	Yu-li	54.33	309	eP	P	06 12 03.8	+0.4
	comp=Z,30nm,1.0s						
TPUB	Ta-pu	54.79	309	eP	P	06 12 06.4	-0.4
	comp=Z,64nm,1.3s						
SSLB	Suanglung	54.81	309	eP	P	06 12 07.3	+0.4
	comp=Z,21nm,0.9s						
ASAJ	Asahikawa	58.19	341	P	P	06 12 31.5	+0.9
	comp=Z,64nm,1.0s,baz=222,slow=11,SNR=27						
RKT	Rikitea	58.69	110	eLQ	LQ	06 27 16.3	
	comp=Z,3µm,33.0s						
RKT				eLR	LR	06 29 43.5	
	comp=Z,3µm,32.8s						
SSE	Sheshan	58.92	316	P	P	06 12 36.0	+0.1
SSE				pmax	pmax		
	comp=Z,16nm,0.9s						
SSE				pmax	pmax		
	comp=Z,66nm,5.7s						
SSE	Sheshan	58.92	316	eP	P	06 12 36.4	+0.5
KSRS	Korea Array	59.05	326	P	P	06 12 37.5	+0.8
	comp=Z,9.4nm,1.0s,baz=141,slow=7.5,SNR=18						
KS15	Wonju Array Si	59.07	326	eP	P	06 12 37.5	+0.7
KSAR	Wonju Array Be	59.07	326	P	P	06 12 37.5	+0.7
KSAR	Wonju Array Be	59.07	326	P	P	06 12 37.5	+0.7
KS01	Wonju Array Si	59.09	326	eP	P	06 12 37.1	+0.2
YSS	Yuzh-Sakhalins	60.71	343	eP	P	06 12 49.2	+1.3
	comp=Z,130nm,1.4s						
YSS	Yuzh-Sakhalins	60.71	343	⇓eP	P	06 12 48.6	+0.7
YSS				e		06 12 57.4	
YSS				pmax	pmax		
	comp=Z,320nm,1.3s						
TEY	Ternei	61.06	338	⇓eP	P	06 12 51.3	+1.0
TEY				pmax	pmax		
	comp=N,10.0nm,1.3s						
TEY				pmax	pmax		
	comp=Z,20nm,1.7s						
NJ2	Nanjing	61.08	316	eP	P	06 12 50.5	-0.2
NJ2				pmax	pmax		
	comp=Z,33nm,1.0s						
MSHR	Mys Shultsa	61.32	332	⇓iP	P	06 12 50.9	-1.2
VLA	Vladivostok	61.41	333	⇓iP	P	06 12 54.2	+1.5
VLA				pmax	pmax		
	comp=Z,64nm,1.3s						
USA0B	Ussuriysk Arra	62.23	334	eP	P	06 12 59.1	+0.9
	comp=Z,71nm,1.4s						
USRK	Ussuriysk Ar.	62.23	334	P	P	06 12 58.9	+0.7
	comp=Z,33nm,1.1s,baz=144,slow=6.5,SNR=23						
MDJ	Mudanjiang	63.62	333	P	P	06 13 09.1	+1.7
MDJ				pmax	pmax		
	comp=Z,36nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,690nm,6.5s						
MDJ	Mudanjiang	63.62	333	eP	P	06 13 08.0	+0.5
	comp=Z,44nm,1.3s						
PEA0B	Petropavlovsk-	63.91	355	eP	P	06 13 11.1	+1.9
	comp=Z,186nm,1.6s						
PETK	Petropavlovsk-	63.91	355	P	P	06 13 10.4	+1.2
	comp=Z,21nm,0.8s,baz=161,slow=8.6,SNR=17						
PEA1	Petropavlovsk-	63.91	355	eP	P	06 13 10.4	+1.2
TYV	Tymovskoe	64.30	345	eP	P	06 13 12.6	+0.8
TYV				pmax	pmax		
	comp=Z,23nm,1.4s						
CN2	Changchun	64.97	330	eP	P	06 13 16.8	+0.5
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
IPM	Ipoh	65.12	280	eP	P	06 13 17.8	-0.2
	comp=Z,46nm,1.4s						
IPM	Ipoh	65.12	280	P	P	06 13 18.2	+0.3
KULM	Kulim	65.68	281	P	P	06 13 21.9	+0.3
GRNR	Gornyy	66.03	341	eP	P	06 13 25.0	+1.9
GRNR				pmax	pmax		
	comp=Z,29nm,1.0s						
CASY	Casey	66.24	201	eP	P	06 13 24.9	+0.7
	comp=Z,27nm,1.1s						
KLR	Kul'dur	66.39	337	P	P	06 13 25.9	+0.5
	comp=Z,20nm,1.0s,baz=130,slow=5.1,SNR=29						
VNDA	Vanda	66.75	181	eP	P	06 13 28.7	+1.4
	comp=Z,75nm,1.5s						
VNDA	Vanda	66.75	181	P	P	06 13 28.3	+1.0
	comp=Z,11nm,0.9s,baz=346,slow=7.4,SNR=8.1						
PSI	Prapat	66.77	278	P	P	06 13 27.1	-1.6
	comp=Z,5.5nm,0.8s,baz=180,slow=3.9,SNR=5.0						
ENH	Enshi	66.90	309	eP	P	06 13 29.2	+0.2
	comp=Z,38nm,1.1s						
GYA	Guiyang	67.38	305	⇓iP	P	06 13 32.7	+0.4
GYA				PP	PP	06 16 05.4	+4.2
GYA				S	S	06 22 29.8	+3.2
GYA				SKS	ScS	06 23 28.6	-0.3
GYA	Guiyang	67.38	305	SS	SS	06 26 51.2	+4.0
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,140nm,6.5s						
GYA				LR	LR		
	comp=N,570nm,18.2s						
GYA				LR	LR		
	comp=E,610nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
PBKT	Sadao Pong	68.59	293	eP	P	06 13 39.8	-0.1
	comp=Z,13nm,0.8s						
XAN	Xi'an	69.15	313	P	P	06 13 42.8	-0.4
XAN				pP	PcP	06 14 02.4	-4.6
XAN				sP	pwP	06 14 10.1	+12
XAN				pmax	pmax		
	comp=Z,14nm,1.2s						
XAN				pmax	pmax		
	comp=Z,690nm,8.3s						
XAN				LR	LR		
	comp=N,810nm,20.6s						
XAN				LR	LR		
	comp=E,980nm,19.5s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
XAN	Xi'an	69.15	313	eP	P	06 13 43.3	+0.1
	comp=Z,24nm,1.3s						
XAN	Xi'an	69.15	313	eP	P	06 13 43.3	+0.1
XAN				pmax	pmax		
	comp=Z,24nm,1.3s						
KMI	Kunming	70.07	302	P	P	06 13 50.5	+1.3
KMI				pP	pP	06 13 57.7	+1.0
KMI				sP	sP	06 14 00.9	+1.3
KMI				pmax	pmax		
	comp=Z,21nm,1.2s						
KMI	Kunming	70.07	302	eP	P	06 13 51.1	+1.9
	comp=Z,47nm,1.3s						
KMI	Kunming	70.07	302	eP	P	06 13 51.1	+1.9
KMI				pmax	pmax		
	comp=Z,47nm,1.3s						
HHC	Hu-ho-hao-te	70.94	320	eP	P	06 13 56.1	+2.0
HHC				S	S	06 23 10.3	+2.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,350nm,5.5s						
HHC				LR	LR		
	comp=N,1µm,18.0s						
HHC				LR	LR		
	comp=E,1µm,16.3s						
HHC				LR	LR		
	comp=Z,2µm,16.7s						
CM01	Chiang Mai Arr	71.00	294	eP	P	06 13 55.0	+0.2
MA2	Magadan	71.00	353	⇑iP	P	06 13 54.2	+0.3
MA2				pmax	pmax		
	comp=Z,33nm,1.6s						
MA2	Magadan	71.00	353	P	P	06 13 54.0	+0.1
	comp=Z,6.5nm,0.6s,baz=153,slow=10,SNR=5.8						
CM31	Chiang Mai Arr	71.02	294	eP	P	06 13 54.6	-0.3
CMAR	Chiang Mai Arr	71.02	294	P	P	06 13 54.6	-0.3
	comp=Z,5.9nm,0.8s,baz=122,slow=4.9,SNR=14						
CHTO	Chiang Mai	71.14	294	eP	P	06 13 54.6	-1.0
	comp=Z,34nm,1.5s						
CHTO	Chiang Mai	71.14	294	eP	P	06 13 54.6	-1.0
CHTO				pmax	pmax		
	comp=Z,34nm,1.5s						
CD2	Chengdu	71.59	308	P	P	06 13 58.6	+0.4
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,280nm,4.1s						
HIA	Hailar	71.61	331	eP	P	06 13 57.9	0.0
	comp=Z,26nm,0.9s						
HIA	Hailar	71.61	331	⇓iP	P	06 13 58.7	+0.8
HIA				pmax	pmax		
	comp=Z,41nm,1.2s						
ZEA	Zeya	71.68	338	eP	P	06 13 59.3	+1.2
ZEA				pmax	pmax		
	comp=N,74nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.6s						
LZH	Lanzhou	73.78	313	eP	P	06 14 13.3	+2.0
LZH				pP	pP	06 14 17.6	-1.2
LZH				sP	sP	06 14 20.5	-1.1
LZH				PP	PP	06 16 59.3	+3.0
LZH				pmax	pmax		
	comp=Z,37nm,1.5s						
LZH				pmax	pmax		
	comp=Z,160nm,4.3s						
LZH				LR	LR		
	comp=N,560nm,16.5s						
LZH				LR	LR		
	comp=E,580nm,16.9s						
LZH				LR	LR		
	comp=Z,630nm,19.3s						
SEY	Seymchan	74.09	354	⇓iP	P	06 14 12.7	+0.5
SEY	Seymchan	74.09	354	P	P	06 14 12.5	+0.2
	comp=Z,8.9nm,0.8s,baz=163,slow=6.6,SNR=15						
GAMB	Gambell	76.50	11	eP	P	06 14 27.5	+1.5
	comp=Z,26nm,1.0s						
KDAK	Kodiak Island	76.73	22	eP	P	06 14 28.1	+0.7
	comp=Z,31nm,1.3s						
KDAK	Kodiak Island	76.73	22	eP	P	06 14 28.1	+0.7
KDAK				pmax	pmax		
	comp=Z,31nm,1.3s						
KDAK	Kodiak Island	76.73	22	P	P	06 14 28.1	+0.7
	comp=Z,5.9nm,0.7s,baz=265,slow=12,SNR=4.5						
ULN	Ulaanbaatar	77.46	324	eP	P	06 14 33.1	+1.1
	comp=Z,26nm,1.0s						
ULN	Ulaanbaatar	77.46	324	⇓iP	P	06 14 33.2	+1.1
ULN				pmax	pmax		
	comp=Z,36nm,1.2s						
YAK	Yakutsk	77.54	344	eP	P	06 14 30.2	-1.7
YAK				pmax	pmax		
	comp=Z,64nm,1.2s						
YAK				pmax	pmax		
	comp=N,22nm,1.5s						
YAK				pmax	pmax		
	comp=E,12nm,1.6s						
SONA0	Songino Array	77.82	324	eP	P	06 14 32.9	-1.1
SONM	Songino Array	77.82	324	P	P	06 14 32.9	-1.1
	comp=E,12nm,1.1s,baz=136,slow=5.9,SNR=30						
SONA1	Songino Array	77.82	324	eP	P	06 14 34.5	+0.4
GTA	Gaotai	78.10	314	⇓P	P	06 14 37.0	+1.2
GTA				pP	pP	06 14 43.9	+0.5
GTA				sP	sP	06 14 47.0	+0.8
GTA				pmax	pmax		
	comp=Z,20nm,1.2s						
GTA				pmax	pmax		
	comp=Z,190nm,5.1s						
GTA				LR	LR		
	comp=N,460nm,18.4s						
GTA				LR	LR		
	comp=E,690nm,17.1s						
GTA				LR	LR		
	comp=Z,1µm,19.4s						
SVW2	Sparrevohn	78.20	19	eP	P	06 14 36.6	+1.0
	comp=Z,60nm,1.4s						
ANM	Nome	78.46	13	eP	P	06 14 38.2	+1.1
	comp=Z,46nm,1.5s						
BILL	Bilibino	78.62	1	eP	P	06 14 38.0	+0.2
	comp=Z,32nm,1.0s						
BILL	Bilibino	78.62	1	⇓iP	P	06 14 38.5	+0.7
BILL				pmax	pmax		
	comp=Z,48nm,1.3s						
RSO	Redoubt South	78.63	20	eP	P	06 14 39.2	+0.9
BRLK	Bradley Lake	78.77	21	eP	P	06 14 39.9	+1.1
	comp=Z,25nm,1.1s						
QSPA	South Pole Qui	79.23	180	eP	P	06 14 43.2	+1.6
	comp=Z,68nm,1.3s						
SHL	Shillong	79.45	299	eP	P	06 14 43.8	+0.3
	comp=Z,66nm,1.6s						
SHL	Shillong	79.45	299	eP	P	06 14 43.8	+0.3
SHL				pmax	pmax		
	comp=Z,66nm,1.6s						
SHL	Shillong	79.45	299	eP	P	06 14 43.0	-0.5
SUA	Susitna One	80.04	20	eP	P	06 14 46.5	+0.6
	comp=Z,58nm,1.7s						
RC01	Rabbit Creek A	80.11	21	eP	P	06 14 46.7	+0.6
	comp=Z,19nm,1.2s						
PMR	Palmer	80.68	20	eP	P	06 14 50.2	+1.1
	comp=Z,35nm,1.4s						
PMR	Palmer	80.68	20	eP	P	06 14 50.2	+1.1
PMR				pmax	pmax		
	comp=Z,35nm,1.4s						
KNK	Knik Glacier	80.79	21	eP	P	06 14 49.5	-0.3
	comp=Z,40nm,1.4s						
ZAK	Zakamensk	80.87	325	eP	P	06 14 49.7	-0.9
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s						
CAST	Castle Rocks	81.03	18	eP	P	06 14 50.6	-0.4
	comp=Z,30nm,1.2s						
SML	Sawmill	81.10	21	eP	P	06 14 53.2	+1.8
	comp=Z,35nm,1.2s						
TLY	Talaya	81.31	327	eP	P	06 14 53.2	+0.4
TLY				eP	P	06 14 53.5	+0.7
TLY	Talaya	81.31	327	P	P	06 14 53.2	+0.4
	comp=Z,2.9nm,0.9s,baz=154,slow=3.7,SNR=9.6						
DIV	Divide	81.56	22	eP	P	06 14 54.3	+0.4
	comp=Z,34nm,1.3s						
TRF	Thorofare Moun	81.61	19	eP	P	06 14 55.3	+1.1
	comp=Z,31nm,1.4s						
KLU	Klutina	81.74	22	eP	P	06 14 56.2	+1.3
	comp=Z,18nm,1.0s						
BPAW	Bear Paw Mtn.	81.86	18	eP	P	06 14 54.4	-1.0
	comp=Z,20nm,1.4s						
RDOG	Red Dog Mine	81.98	12	eP	P	06 14 56.5	+0.6
	comp=Z,26nm,0.7s						
RND	Reindeer	82.03	19	eP	P	06 14 55.1	-1.3
	comp=Z,28nm,1.1s						
RND	Reindeer	82.03	19	eP	P	06 14 55.1	-1.3
RND				pmax	pmax		
	comp=Z,28nm,1.1s						
MCK	McKinley	82.24	19	eP	P	06 14 58.9	+1.5
	comp=Z,41nm,1.3s						
MCK	McKinley	82.24	19	eP	P	06 14 58.9	+1.5
MCK				pmax	pmax		
	comp=Z,41nm,1.3s						
DHY	Denali Highway	82.30	20	eP	P	06 14 57.2	-0.7
	comp=Z,9.8nm,1.0s						
BWN	Browne	82.38	18	eP	P	06 15 00.3	+2.2
	comp=Z,34nm,0.8s						
IM3	Indian Mountai	82.46	16	eP	P	06 14 58.7	+0.2
MLY	Manley	82.60	17	eP	P	06 14 59.5	+0.2
	comp=Z,32nm,1.4s						
HARP	HAARP	82.62	21	eP	P	06 15 00.8	+1.4
	comp=Z,53nm,1.2s						
WRH	Wood River Hil	83.02	19	eP	P	06 15 01.5	+0.1
	comp=Z,27nm,1.2s						
MDM	Murphy Dome	83.31	18	eP	P	06 15 03.0	+0.1
	comp=Z,21nm,1.0s						
HDA	Harding Lake	83.34	19	P	P	06 15 03.3	+0.2
	baz=228						
TCOL	CIGO, UAF Yank	83.36	18	P	P	06 15 03.2	0.0
	baz=227						
COLA	College	83.37	18	eP	P	06 15 03.3	+0.1
	comp=Z,25nm,0.8s						
COLA	College	83.37	18	⇑iP	P	06 15 05.5	+2.3
COLA				pmax	pmax		
	comp=Z,25nm,0.8s						
RIDG	Independ'e Rid	83.59	20	eP	P	06 15 05.9	+1.5
	comp=Z,33nm,1.0s						
IL1	Eielson Array	83.60	19	eP	P	06 15 03.5	-0.9
ILAR	Eielson Array	83.60	19	P	P	06 15 05.0	+0.6
	comp=Z,12nm,0.8s,baz=235,slow=5.3,SNR=35						
ILB	Eielson Array	83.60	19	eP	P	06 15 04.1	-0.3
POKR	Poker Plat Res	83.67	18	P	P	06 15 04.6	-0.1
	baz=227						
ODAN	Odare	83.68	299	eP	P	06 15 06.6	+0.6
SCRK	Sand Creek	84.03	20	eP	P	06 15 07.9	+1.1
	comp=Z,18nm,0.9s						
N02D	Trinity Center	84.22	47	P	P	06 15 08.4	+0.2
	baz=250						
KNGR	Kungurtug, Tuv	84.25	324	⇓iP	P	06 15 08.2	0.0
M02C	Callahan	84.26	46	P	P	06 15 08.8	+0.3
	baz=250						
COLD	Coldfoot	84.34	16	eP	P	06 15 10.3	+2.2
	comp=Z,8.4nm,1.0s						
RAMN	Ramite	84.39	299	eP	P	06 15 09.6	0.0
	comp=Z,31nm,1.1s						
PRP	Porcupine Dome	84.53	19	eP	P	06 15 09.1	-0.2
	comp=Z,4.6nm,1.0s						
HYT	Haines Junctio	84.59	25	eP	P	06 15 10.7	+1.1
	comp=Z,12nm,0.9s						
ORV	Oroville	84.63	48	eP	P	06 15 10.2	-0.1
	comp=Z,15nm,1.5s						
ORV	Oroville	84.63	48	eP	P	06 15 10.2	-0.1
ORV				pmax	pmax		
	comp=Z,15nm,1.5s						
O03E	Paynes Creek	84.65	47	P	P	06 15 10.8	+0.4
	baz=251						
SKAG	Skagway	84.78	26	eP	P	06 15 11.5	+1.1
	comp=Z,32nm,1.2s						
AFDM	Forest Hills D	84.83	49	eP	P	06 15 11.3	0.0
	comp=Z,9.8nm,1.1s						
JIRN	Jiri	84.92	299	eP	P	06 15 12.6	+0.2
	comp=Z,130nm,1.4s						
CMB	Columbia Colle	84.99	50	eP	P	06 15 11.2	-0.9
	comp=Z,16nm,1.4s						
CMB	Columbia Colle	84.99	50	eP	P	06 15 11.2	-0.9
CMB				pmax	pmax		
	comp=Z,16nm,1.4s						
M04C	Macdoel	85.11	46	P	P	06 15 10.5	-2.3
	baz=251						
GUN	Gumba	85.25	299	eP	P	06 15 14.2	+0.1
	comp=Z,65nm,1.2s						
BEKR	Beckworth	85.57	48	eP	P	06 15 15.7	+0.5
	comp=Z,17nm,1.3s						
PKI	Pulchoki	85.57	299	eP	P	06 15 15.5	-0.1
	comp=Z,81nm,1.4s						
PKIN	Phulchoki	85.58	299	eP	P	06 15 15.4	-0.2
	comp=Z,27nm,1.1s						
TIXI	Tiksi	85.62	349	eP	P	06 15 14.0	-0.5
TIXI				eP	P	06 15 14.2	-0.3
TIXI	Tiksi	85.62	349	⇓iP	P	06 15 14.6	+0.1
TIXI				pmax	pmax		
	comp=Z,37nm,1.4s						
TIXI	Tiksi	85.62	349	P	P	06 15 14.0	-0.5
	comp=Z,20nm,1.1s,baz=110,slow=8.0,SNR=17						
MWC	Mount Wilson	85.69	54	eP	P	06 15 16.9	+1.0
	comp=Z,19nm,1.3s						
MWC	Mount Wilson	85.69	54	eP	P	06 15 16.9	+1.0
MWC				pmax	pmax		
	comp=Z,19nm,1.3s						
DAWY	Dawson	85.70	21	eP	P	06 15 15.5	+0.4
	comp=Z,22nm,1.3s						
DMN	Daman	85.84	299	eP	P	06 15 17.1	+0.2
	comp=Z,89nm,1.3s						
WAKR	Walker	85.84	50	eP	P	06 15 16.6	0.0
	comp=Z,36nm,1.5s						
MDPB	Devils Postpil	85.86	51	eP	P	06 15 16.4	-0.4
	comp=Z,12nm,1.1s						
EDW2	Edwards Air Fo	85.92	54	P	P	06 15 16.6	-0.3
	baz=254						
BFSC	Mount Baldy Ra	86.01	54	P	P	06 15 17.3	-0.1
	baz=254						
PAHR	Pah Rah Range	86.23	49	eP	P	06 15 17.7	-0.7
	comp=Z,30nm,1.5s						
CWC	Cottonwood Cre	86.28	52	P	P	06 15 18.4	-0.3
	baz=254						
MONP2	Monument Peak	86.65	56	P	P	06 15 20.4	-0.3
	baz=255						
NV01	Mina Array Sit	86.67	50	eP	P	06 15 20.5	-0.2
NVAR	Mina Array Bea	86.67	50	P	P	06 15 20.8	0.0
	comp=Z,3.6nm,1.0s,baz=238,slow=7.2,SNR=8.8						
DLBC	Dease Lake	86.69	29	P	P	06 15 19.6	-0.5
	comp=Z,3.4nm,1.0s,baz=245,slow=14,SNR=2.8						
NV11	Mina Array Sit	86.78	50	eP	P	06 15 21.8	+0.6
	comp=Z,2.1nm,1.4s						
PFO	Pinyon Flats O	86.81	55	eP	P	06 15 21.8	+0.4
	comp=Z,4.9nm,0.9s						
PFO	Pinyon Flats O	86.81	55	eP	P	06 15 21.8	+0.4
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PFO	Pinyon Flats O	86.81	55	P	P	06 15 20.6	-0.7
	baz=255						
DANN	Dangsing	87.17	299	eP	P	06 15 22.6	-0.9
	comp=Z,30nm,1.1s						
KOLN	Koldanda	87.17	299	eP	P	06 15 22.6	-0.8
HEC	Hector,Ludlow	87.22	54	P	P	06 15 23.3	0.0
	baz=255						
BELC	Belle Mtn. Jos	87.28	55	P	P	06 15 23.9	+0.3
	baz=255						
GMRC	Granite Mounta	87.75	54	P	P	06 15 25.9	0.0
	baz=255						
PYUN	Piuthan	87.78	299	eP	P	06 15 25.2	-1.1
	comp=Z,24nm,1.0s						
TPNV	Topopah Spring	87.84	52	eP	P	06 15 26.7	+0.4
	comp=Z,7.1nm,1.3s						
TPNV	Topopah Spring	87.84	52	eP	P	06 15 26.7	+0.4
TPNV				pmax	pmax		
	comp=Z,7.0nm,1.3s						
J08A	Circle Bar Ran	87.95	45	eP	P	06 15 26.8	+0.1
	comp=Z,24nm,1.6s						
GLA	Glamis	87.99	56	P	P	06 15 27.7	+0.7
	baz=256						
IRM	Iron Mountain	88.00	55	P	P	06 15 27.9	+0.9
	baz=256						
WMQ	Urumqi	88.15	315	P	P	06 15 28.4	+0.9
WMQ				sP	pP	06 15 35.8	+0.6
WMQ				pmax	pmax		
	comp=Z,41nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1µm,7.5s						
WMQ				LR	LR		
	comp=N,2µm,15.9s						
WMQ				LR	LR		
	comp=E,3µm,17.1s						
WMQ				LR	LR		
	comp=Z,1µm,20.5s						
WMQ	Urumqi	88.15	315	eP	P	06 15 28.2	+0.7
	comp=Z,43nm,1.4s						
WMQ	Urumqi	88.15	315	eP	P	06 15 28.2	+0.7
WMQ				pmax	pmax		
	comp=Z,43nm,1.4s						
G08A	Pilot Rock	88.19	43	eP	P	06 15 28.3	+0.6
	comp=Z,14nm,1.4s						
Y12C	Blythe	88.40	55	eP	P	06 15 28.2	-0.7
	comp=Z,14nm,1.3s						
Y12C	Blythe	88.40	55	P	P	06 15 29.1	+0.2
	baz=256						
SHPR	Sheep Range	88.57	53	eP	P	06 15 31.1	+1.3
	comp=Z,30nm,1.7s						
R11A	Troy Canyon, C	88.71	51	eP	P	06 15 30.6	+0.1
	comp=Z,8.2nm,1.5s						
R11A	Troy Canyon, C	88.71	51	P	P	06 15 30.8	+0.4
	baz=255						
PDMCI	Parker Dam,Lak	88.84	55	P	P	06 15 31.5	+0.6
	baz=256						
214A	Organ Pipe Nat	89.39	57	P	P	06 15 34.3	+0.7
	baz=257						
F10A	Beach Ranch, E	89.54	43	eP	P	06 15 35.5	+1.5
	comp=Z,25nm,1.6s						
ELK	Elko	89.57	48	eP	P	06 15 34.9	+0.4
	comp=Z,19nm,1.6s						
ELK	Elko	89.57	48	eP	P	06 15 34.9	+0.4
ELK				pmax	pmax		
	comp=Z,19nm,1.6s						
INK	Inuvik	90.00	19	eP	P	06 15 36.6	+1.1
	comp=Z,21nm,1.4s						
INK	Inuvik	90.00	19	eP	P	06 15 36.6	+1.1
INK				pmax	pmax		
	comp=Z,21nm,1.4s						
INK	Inuvik	90.00	19	P	P	06 15 35.9	+0.4
	comp=Z,9.7nm,1.2s,baz=222,slow=5.9,SNR=9.2						
DGZ	Jazzator, Alta	90.01	321	⇓iP	P	06 15 36.1	-0.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PSUT	Pine Spring	90.07	51	eP	P	06 15 37.6	+0.7
	comp=Z,20nm,1.7s						
LCMT	Little Creek M	90.19	52	eP	P	06 15 37.8	+0.4
	comp=Z,20nm,1.5s						
CCUT	Cedar City	90.22	52	eP	P	06 15 38.4	+0.8
	comp=Z,14nm,1.3s						
KNB	Kanab	90.52	53	eP	P	06 15 39.4	+0.5
	comp=Z,34nm,1.6s						
KNB	Kanab	90.52	53	eP	P	06 15 39.4	+0.5
KNB				pmax	pmax		
	comp=Z,34nm,1.6s						
U15A	North Rim	90.80	53	eP	P	06 15 41.1	+0.8
	comp=Z,11nm,1.1s						
HLID	Hailey	90.86	46	eP	P	06 15 40.7	+0.4
	comp=Z,22nm,1.5s						
HLID	Hailey	90.86	46	P	P	06 15 41.1	+0.8
	baz=256						
PKCU	Pink Cliffs	91.01	52	eP	P	06 15 42.4	+1.0
	comp=Z,25nm,1.3s						

X16A	Lo Mia Camp, P	91.05	55	eP	P	06 15 42.1	+0.6
	comp=Z,3.7nm,0.9s						
TUC	Tucson	91.14	57	P	P	06 15 41.5	-0.3
	baz=258						
TCRU	Three Creeks R	91.16	51	eP	P	06 15 43.4	+1.4
	comp=Z,31nm,1.6s						
DUG	Dugway, Tooele	91.24	49	P	P	06 15 42.1	0.0
	baz=257						
MTPU	Mount Pierson	91.24	52	eP	P	06 15 40.2	-2.3
	comp=Z,22nm,1.6s						
BGU	Big Grassy Mou	91.24	49	eP	P	06 15 42.4	+0.2
	comp=Z,11nm,1.3s						
WUAZ	Wupatki	91.33	54	eP	P	06 15 42.1	-0.6
	comp=Z,5.5nm,0.9s						
WUAZ	Wupatki	91.33	54	P	P	06 15 42.5	-0.3
	baz=258						
MSU	Marysvale	91.35	51	eP	P	06 15 43.3	+0.5
MSU	Marysvale	91.35	51	eP	P	06 15 43.3	+0.5
HVU	Hansel Valley	91.62	48	eP	P	06 15 44.9	+1.0
	comp=Z,16nm,1.2s						
HVU	Hansel Valley	91.62	48	eP	P	06 15 44.9	+1.0
HVU				pmax	pmax		
	comp=Z,16nm,1.2s						
SYO	Syowa Base	91.73	197	⇑iP	P	06 15 43.0	-0.7
NLU	North Lily Min	91.74	50	eP	P	06 15 45.0	+0.5
	comp=Z,25nm,1.7s						
MPU	Maple Canyon	92.08	50	eP	P	06 15 47.4	+1.3
	comp=Z,8.4nm,1.3s						
Q16A	Castle Valley	92.20	51	eP	P	06 15 46.8	+0.1
	comp=Z,12nm,1.3s						
DLMT	Dillon	92.54	44	eP	P	06 15 48.8	+0.7
	comp=Z,23nm,1.3s						
MK01	Makanchi Array	92.58	317	eP	P	06 15 47.7	-0.3
MK31	Makanchi Array	92.59	317	eP	P	06 15 48.1	0.0
MK32	Makanchi Array	92.59	317	eP	P	06 15 47.6	-0.5
MKAR	Makanchi Array	92.59	317	eP	P	06 15 48.1	0.0
	comp=Z,108nm,1.3s						
MKAR	Makanchi Array	92.59	317	P	P	06 15 47.6	-0.5
	comp=Z,12nm,1.1s,baz=100,slow=6.8,SNR=27						
ZAA0	Zalesovo Array	92.71	324	eP	P	06 15 47.6	-0.8
	comp=Z,11nm,1.1s						
ZALV	Zalesovo Beam	92.71	324	P	P	06 15 47.3	-1.1
	comp=Z,5.7nm,0.9s,baz=108,slow=4.8,SNR=19						
ZALV				PP	PP	06 19 34.6	+4.0
	comp=Z,0.9nm,0.3s,baz=73,slow=5.0,SNR=4.1						
ZAA1	Zalesovo Array	92.71	324	eP	P	06 15 47.3	-1.2
ZAA1				ePP	PP	06 19 34.6	+4.0
MAKZ	Makanchi	92.81	317	eP	P	06 15 49.2	+0.1
	comp=Z,23nm,1.1s						
MAKZ	Makanchi	92.81	317	eP	P	06 15 49.2	+0.1
MAKZ				pmax	pmax		
	comp=Z,23nm,1.1s						
PDAR	Pinedale Array	94.16	47	P	P	06 15 55.1	-0.6
	comp=Z,0.9nm,0.8s,baz=225,slow=4.0,SNR=6.0						
ANMO	Albuquerque	95.18	56	eP	P	06 16 00.6	+0.1
	comp=Z,3.2nm,1.2s						
ANMO	Albuquerque	95.18	56	P	P	06 16 00.8	+0.3
	baz=261						
YKA	Yellowknife Ar	95.23	27	P	P	06 15 59.1	-0.7
	comp=Z,0.6nm,0.8s,baz=255,slow=4.7,SNR=7.7						
YKB5	Yellowknife Ar	95.23	27	eP	P	06 15 59.6	-0.1
NRIK	Noril'sk	95.50	340	P	P	06 15 59.1	-1.8
	comp=Z,4.7nm,0.6s,baz=111,slow=5.1,SNR=7.1						
KURK	Kurchatov	95.75	320	eP	P	06 16 00.8	-1.7
KURK				eP	P	06 16 02.8	+0.4
KURK				ePP	PP	06 19 45.5	-8.9
KURK	Kurchatov	95.75	320	⇓iP	P	06 16 00.8	-1.7
KURK				pmax	pmax		
	comp=Z,14nm,1.4s						
KSH	Kashi	95.75	309	P	P	06 16 07.7	+4.8
KSH				sP	pP	06 16 11.3	+0.6
KSH	Kashi	95.75	309	S	S	06 27 22.1	+3.1
KSH	Kashi	95.75	309	sS	sS	06 27 26.5	-5.0
KSH	Kashi	95.75	309	SS	SS	06 33 54.3	+5.3
KSH				pmax	pmax		
	comp=Z,430nm,5.6s						
KSH				LR	LR		
	comp=N,380nm,7.1s						
KSH				LR	LR		
	comp=E,460nm,6.9s						
KSH				LR	LR		
	comp=Z,1μm,9.4s						
KURBB	Kurchatov Arra	95.79	320	P	P	06 16 00.8	-1.9
	comp=Z,2.1nm,1.0s,baz=96,slow=4.4,SNR=7.4						
KURBB				PP	PP	06 19 45.5	-9.2
	comp=Z,0.8nm,0.8s,baz=92,slow=7.9,SNR=4.2						
LTX	Lajitas	96.64	61	eP	P	06 16 05.8	-1.4
LTX				ePP	PP	06 19 57.0	-5.2
LTX	Lajitas	96.64	61	eP	P	06 16 05.8	-1.4
TXAR	Lajitas Array	96.64	61	P	P	06 16 05.8	-1.4
	comp=Z,2.7nm,1.3s,baz=232,slow=6.1,SNR=5.2						
TXAR				PP	PP	06 19 57.0	-5.2
	comp=Z,1.5nm,1.2s,baz=267,slow=4.5,SNR=4.0						
SNAA	Sanae	97.31	184	P	Pdif	06 16 09.3	-0.1
VNA3	Neumayer Olymp	98.08	182	P	P	06 16 11.8	-0.9
VNA2	Neumayer--Watz	98.31	183	P	P	06 16 13.3	-0.5
BVAR	Borovoye Array	101.08	322	P	Pdif	06 16 24.6	-1.7
	comp=Z,1.8nm,0.9s,baz=97,slow=4.8,SNR=9.2						
BRVK	Borovoye	101.14	322	ePdif	Pdif	06 16 26.6	0.0
BRVK	Borovoye	101.14	322	eP	Pdif	06 16 26.6	0.0
ARA0	ARCESS Array S	115.80	345	ePKPdf	PKiKP	06 21 17.4	-1.1
ARCES	ARCESS Array B	115.80	345	PKP	PKiKP	06 21 17.4	-1.1
	comp=Z,2.2nm,0.6s,baz=87,slow=2.2,SNR=26						
OBN	Obninsk	120.02	329	ePKIKP	PKiKP	06 21 27.8	+0.9
OBN				e		06 22 50.6	
OBN				ePPP	PPP	06 25 20.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FIA0	FINESS Array S	121.13	338	ePKPdf	PKPdf	06 21 28.4	-0.5
FIA0	FINESS Array S	121.13	338	ePKIKP	PKPdf	06 21 28.4	-0.5
FINES	FINESS Array B	121.13	338	PKP	PKPdf	06 21 28.4	-0.5
	comp=Z,3.9nm,1.0s,baz=4.8,slow=2.3,SNR=5.4						
VSU	Vasula	122.78	335	c iPKIKP	PKiKP	06 21 33.2	+0.9
VSU				pmax	pmax		
	comp=Z,78nm,2.5s						
BOSA	Boshof	124.57	224	PKP	PKiKP	06 21 37.0	0.0
	comp=Z,2.3nm,0.7s,baz=155,slow=4.2,SNR=3.8						
CPUP	Villa Florida	125.00	133	PKP	PKPdf	06 21 37.5	+0.1
	comp=Z,1.2nm,0.7s,baz=18,slow=6.5,SNR=3.9						
AKASG	Malin Array Be	126.05	326	PKP	PKiKP	06 21 38.8	-0.2
	comp=Z,0.4nm,0.3s,baz=64,slow=2.2,SNR=8.9						
AK11	Malin Array Si	126.09	326	ePKPdf	PKPdf	06 21 38.2	-0.5
NB200	NORSAR Array S	126.16	344	ePKPdf	PKPdf	06 21 38.4	-0.2
NOA	NORSAR Array B	126.16	344	PKP	PKPdf	06 21 38.4	-0.2
	comp=Z,1.0nm,0.8s,baz=33,slow=2.1,SNR=2.9						
BR101	Keskin Array S	127.99	312	ePKPdf	PKPdf	06 21 42.1	-0.8
BRTR	Keskin Array B	127.99	312	PKP	PKPdf	06 21 42.1	-0.8
	comp=Z,0.9nm,0.9s,baz=90,slow=5.8,SNR=3.6						
CLL	Collm	133.43	336	ePKPdf	PKPdf	06 21 53.0	+0.4
CLL	Collm	133.43	336	ePKIKP	PKPdf	06 21 53.0	+0.4
GERES	GERESS Array B	134.98	333	PKP	PKiKP	06 21 56.5	-0.7
	comp=Z,1.3nm,0.8s,baz=356,slow=1.7,SNR=4.9						
KEST	Kesra	146.55	322	ePKPdf	PKPab	06 22 19.4	+0.1
KEST	Kesra	146.55	322	PKPbc	PKPab	06 22 18.8	-0.6
	comp=Z,29nm,0.9s,baz=288,slow=2.9,SNR=14						
ES19	SONSECA Array	149.45	342	ePKPdf	PKPdf	06 22 21.8	+0.3
ES19				ePKPbc	PKiKP	06 22 27.1	-0.1
ESDC	Sonseca Array	149.49	343	PKPbc	PKiKP	06 22 26.8	-0.5
	comp=Z,2.7nm,0.7s,baz=25,slow=2.5,SNR=9.4						
TOA0	Torodi Ar. Sit	163.16	280	ePKPdf	PKPdf	06 22 39.1	-0.9
TORD	Torodi Ar. Bea	163.16	280	PKP	PKPdf	06 22 38.5	-1.4
	comp=Z,2.9nm,1.0s,baz=338,slow=1.1,SNR=8.5						
TORD				PKPab	PKPab	06 23 29.8	-0.4
	comp=Z,2.7nm,1.0s,baz=69,slow=3.0,SNR=4.3						
TOA1	Torodi Ar. Sit	163.16	280	ePKPdf	PKPdf	06 22 38.5	-1.4
TOA1				ePKPab	PKPab	06 23 29.8	-0.4

PGC 06 06:08:48.6±2.5, 47°.50N×129°.02W, h10km, MLSn3.1/9, Mw3.8/9, 294km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	0.45	353	P	Pg	06 08 56.0	-1.4
KEMF				S	Sg	06 09 01.9	-1.5
NC27	ODP1027	0.90	72	P	Pg	06 09 04.6	-1.2
NC27				S	Sg	06 09 16.4	-1.0
NC89	ODP889	1.87	50	Sn	Sn	06 09 42.1	-2.0
B928	Bamfield	2.92	61	Pn	Pn	06 09 33.0	-2.1
BTB	Buttle Lake	3.05	48	Pn	Pn	06 09 35.8	-1.3
BTB				Sn	Sn	06 10 09.5	-4.3
WOSB	Woss	3.12	30	Pn	Pn	06 09 37.2	-0.8
WOSB				Sn	Sn	06 10 12.5	-2.7
MGB	Mount Grey	3.26	61	Pn	Pn	06 09 37.8	-2.2
NCRB	Newcastle Ridg	3.50	33	Pn	Pn	06 09 42.8	-0.4
NCRB				Sn	Sn	06 10 22.3	-2.5
B926	Mesachie Lake	3.53	66	Pn	Pn	06 09 41.4	-2.1
B926				Sn	Sn	06 10 21.5	-3.8
GHNB	Nanoose	3.67	59	Pn	Pn	06 09 44.1	-1.2
TXB	Texada	3.75	52	Pn	Pn	06 09 44.8	-1.9
SHB	Sechelt	4.01	57	Pn	Pn	06 09 49.4	-0.8
SHB				Sn	Sn	06 10 33.5	-3.9
BBB	Bella Bella	4.73	7	Pn	Pn	06 10 00.2	+0.3

IDC 06 06:08:49.4±2.6, 11°.08S×164°.78E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/38, mbtmp3.7/5, Error ellipse: s-maj=109.1km s-min=30.4km az=139.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.58	250	P	P	06 15 04.9	-0.3
	1.7nm,1.0s,baz=80,slow=8.4,SNR=3.4						
ASAR	Alice Springs	31.93	243	P	P	06 15 17.5	+0.3
	0.8nm,0.7s,baz=79,slow=9.5,SNR=3.1						
SONM	Songino Array	78.14	324	P	P	06 20 50.5	-0.1
	0.2nm,0.7s,baz=137,slow=11,SNR=1.2						
ILAR	Eielson Array	83.85	19	P	P	06 21 21.2	+0.7
	0.5nm,0.6s,baz=239,slow=5.4,SNR=6.5						
YKA	Yellowknife Ar	95.44	27	P	P	06 22 14.7	-1.0
	0.3nm,0.8s,baz=265,slow=5.5,SNR=3.0						

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*IDC **06** 06:09:35.1±0.4, 11°.05S×164°.87E, h0km, mb5.1/30, mb1 5.2/32, mb1mx5.1/43, mbtmp5.1/32, ML5.3/2, MS4.9/3, Ms1 4.8/3, ms1mx4.1/38, Error ellipse: s-maj=14.9km s-min=11.1km az=95.0*

*NEIC **06** 06:09:36.6±0.1, 11°.06S×164°.87E, h10km, mb5.3/132, Error ellipse: s-maj=3.4km s-min=3.0km az=117.0*

*ISCJB **06** 06:09:38.4±0.1, 11°.11S±0°.02×164°.77E±0°.02, h31km, mb5.2/182, Error ellipse: s-maj=3.5km s-min=3.2km az=34.9*

*MOS **06** 06:09:38.0±0.8, 11°.04S×164°.80E, h28km, mb5.4/46, Error ellipse: s-maj=8.3km s-min=6.9km az=111.4*

ISC 06 06:09:39.6±0.3, 11°.10S±0°.05×164°.88E±0°.05, h31km, n489, σ1ˢ.35/504, mb5.2/182, 10C-16D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.13	288	ePn	Pn	06 10 53.5	-0.9
HNR				ePn	Pn	06 10 53.9	-0.5
HNR				eSn	Sn	06 11 51.1	-1.4
HNR	Honiara	5.13	288	eP	Pn	06 10 53.5	-0.9
HNR				e		06 11 51.2	
HNR	Honiara	5.13	288	Pn	Pn	06 10 53.9	-0.5
	258nm,0.3s,baz=115,slow=7.2,SNR=17						
HNR				Sn	Sn	06 11 51.1	-1.4
	48nm,0.3s,baz=193,slow=20,SNR=3.1						
MARNC	Mare, Loyalty	10.76	164	ePn	Pn	06 12 10.2	-1.4
DZM	Mont Dzumac	11.01	172	ePn	Pn	06 12 15.6	+0.4
	990nm,1.4s						
DZM				eSn	Sn	06 14 14.4	-3.1
	164nm,1.6s						
DZM				eLR	LR	06 14 47.8	
	comp=Z,5μm,24.9s						
DZM	Mont Dzumac	11.01	172	ePn	Pn	06 12 15.9	+0.7
DZM				eSn	Sn	06 14 14.2	-3.3
DZM	Mont Dzumac	11.01	172	Pn	Pn	06 12 15.9	+0.7
	9.3nm,0.3s,baz=19,slow=12,SNR=27						
DZM				Sn	Sn	06 14 13.0	-4.5
	0.8nm,0.3s,baz=339,slow=21,SNR=1.9						
ONTNC	Ouen Toro	11.25	173	ePn	Pn	06 12 19.2	+0.9
PINNC	Pines Island,	11.71	168	ePn	Pn	06 12 24.7	0.0
MSVF	Nonsavu	14.36	119	ePn	Pn	06 13 02.2	+1.3
MSVF	Nonsavu	14.36	119	eP	Pn	06 13 02.2	+1.3
EIDS	Eidsvold	19.29	221	P	Pn	06 14 04.6	+1.3
	baz=20,SNR=9.6						
EIDS	Eidsvold	19.29	221	eP	Pn	06 14 04.2	+0.9
	138nm,0.9s						
MANU	Manus Island	19.57	296	eP	P	06 14 05.0	-0.3
	469nm,1.0s						
CTA	Charters Tower	20.03	241	P	P	06 14 10.1	-0.1
	baz=20						
CTA	Charters Tower	20.03	241	P	Pn	06 14 11.6	-0.5
	65nm,0.9s,baz=66,slow=11,SNR=17						
CTAO	Charters Tower	20.03	241	eP	Pn	06 14 11.7	-0.4
	172nm,0.9s						
CTAO	Charters Tower	20.03	241	eP	Pn	06 14 11.7	-0.4
CTAO				pmax	pmax		
	comp=Z,172nm,0.9s						
LHI	Lord Howe Isla	21.02	194	P	P	06 14 26.2	+5.4
	baz=21,SNR=3.3						
MTSU	Mount Surprise	21.08	248	P	P	06 14 22.7	+1.1
	baz=21,SNR=42						
COEN	Coen	21.38	260	P	P	06 14 25.0	+0.2
	baz=21,SNR=11						
COEN	Coen	21.38	260	eP	P	06 14 25.0	+0.2
	comp=Z,156nm,1.3s						
RMQ	Roma	21.58	223	P	P	06 14 29.2	+2.4
	baz=22,SNR=8.3						
ARMA	Armidale	22.83	211	P	P	06 14 41.0	+0.6
	baz=23,SNR=9.9						
ARMA	Armidale	22.83	211	eP	P	06 14 40.8	+0.4
	comp=Z,90nm,0.9s						
QLP	Quilpie	24.82	229	P	P	06 15 00.1	+0.9
	baz=25,SNR=9.8						
OUZ	Omahuta	25.29	163	eP	P	06 15 04.2	+0.8
	comp=Z,126nm,1.1s						
MGCD	Mangrove Creek	25.38	208	P	P	06 15 05.4	+1.2
	baz=26,SNR=4.7						
RIV	Riverview	25.88	207	P	P	06 15 11.5	+2.8
	baz=26,SNR=5.4						
QIS	Mount Isa	26.04	246	P	P	06 15 10.2	-0.2
	baz=26,SNR=31						
CMSA	Cobar Meteorol	26.99	218	P	P	06 15 18.9	0.0
	baz=27,SNR=11						
MKAZ	Moumakai	27.50	162	P	P	06 15 28.6	+5.3
YNG	Young	27.57	211	P	P	06 15 24.7	+0.7
	baz=28,SNR=7.2						
CNB	Canberra Magne	27.93	208	P	P	06 15 28.6	+1.3
	baz=28,SNR=5.2						
CAN	Canberra	28.10	208	P	P	06 15 29.6	+0.9
	baz=28						
CAN	Canberra	28.10	208	eP	P	06 15 29.7	+0.9
	comp=Z,86nm,1.6s						
CAN	Canberra	28.10	208	eP	P	06 15 29.7	+0.9
CAN				pmax	pmax		
	comp=Z,87nm,1.6s						
HAZ	Te Kaha	28.96	159	P	P	06 15 37.6	+1.2
RUGZ	Raukumara Rang	29.11	159	P	P	06 15 39.5	+1.7
URZ	Urewera	29.18	160	eP	P	06 15 39.4	+1.2
	comp=Z,43nm,0.9s						
URZ				eP	P	06 15 40.3	+2.1
URZ	Urewera	29.18	160	P	P	06 15 40.3	+2.1
	comp=Z,22nm,0.8s,baz=292,slow=5.6,SNR=7.6						
PKGZ	Pakihiroa	29.18	158	P	P	06 15 41.0	+2.6
WMGZ	Waiomatatini S	29.25	158	P	P	06 15 40.7	+1.8
MWZ	Matawai	29.39	159	P	P	06 15 41.4	+1.2
TWGZ	Tauwhareparae	29.41	159	P	P	06 15 46.7	+6.3
PUZ	Puketiti	29.41	158	P	P	06 15 40.4	0.0
H11S2	WAKE ISLAND Hy	29.46	4	T	T	06 46 28.1	
	baz=184,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.46	3	T	T	06 46 15.8	
	baz=184,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	29.47	4	T	T	06 46 18.9	
	baz=184,slow=76,SNR=16						
CNGZ	Carnagh Statio	29.76	159	P	P	06 15 43.9	+0.4
RAHZ	Arahi	29.77	161	P	P	06 15 42.6	-0.9
RIGZ	Rimuhau	29.80	159	P	P	06 15 39.2	-4.7
BKZ	Black Stump Fm	29.80	162	eP	P	06 15 43.4	-0.5
	comp=Z,36nm,0.5s						
BKZ	Black Stump Fm	29.80	162	P	P	06 15 36.8	-7.1
STKA	Stephens Creek	29.82	223	P	P	06 15 44.7	+0.6
	baz=30,SNR=7.1						
STKA	Stephens Creek	29.82	223	eP	P	06 15 44.9	+0.8
	comp=Z,5.8nm,0.9s						
STKA				PcP	PcP	06 18 47.8	+0.6
STKA	Stephens Creek	29.82	223	eP	P	06 15 44.9	+0.8
STKA						06 18 47.8	
STKA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STKA	Stephens Creek	29.82	223	P	P	06 15 44.0	-0.1
	comp=Z,9.5nm,0.7s,baz=54,slow=9.0,SNR=9.0						
STKA				PcP	PcP	06 18 47.8	+0.6
	comp=Z,11nm,0.8s,baz=31,slow=6.5,SNR=4.0						
STKA				LR	LR	06 26 52.3	
	comp=Z,3μm,19.9s,baz=35,slow=35						
NMHZ	Naumai	29.84	161	P	P	06 15 44.0	-0.3
BHHZ	Black Hill Sta	29.97	163	P	P	06 15 45.6	+0.2
KWHZ	Kaweka Forest	30.02	162	P	P	06 15 47.2	+1.4
KAHZ	Kahuranaki	30.50	162	P	P	06 15 51.8	+1.8
WRAB	Tennant Creek	30.66	250	eP	P	06 15 50.9	-0.7
	comp=Z,176nm,1.1s						
WRAB	Tennant Creek	30.66	250	⇑iP	P	06 15 50.8	-0.8
WRAB				pmax	pmax		
	comp=Z,211nm,1.2s						
WB2	Warramunga Arr	30.66	250	eP	P	06 15 50.4	-1.2
WB2				eP	P	06 15 51.0	-0.6
WR1	Warramunga Arr	30.67	250	eP	P	06 15 50.8	-1.0
	comp=Z,219nm,1.1s						
WRA	Warramunga Arr	30.67	250	P	P	06 15 50.8	-1.0
	comp=Z,92nm,0.9s,baz=78,slow=8.9,SNR=57						
WRA				PKiKP	PKiKP	06 26 20.6	-0.1
	comp=Z,1.1nm,1.1s,baz=19,slow=0.8,SNR=4.8						
H11N1	WAKE ISLAND Hy	30.68	4	T	T	06 48 03.5	
	baz=182,slow=76,SNR=4.9						
H11N3	WAKE ISLAND Hy	30.69	4	T	T	06 47 44.8	
	baz=182,slow=76,SNR=15						
H11N2	WAKE ISLAND Hy	30.70	4	T	T	06 47 53.8	
	baz=182,slow=76,SNR=2.1						
BFZ	Birch Farm	31.13	163	P	P	06 15 57.8	+2.3
THZ	Tophouse	31.35	168	eP	P	06 15 59.5	+2.0
	comp=Z,44nm,0.9s						
TOO	Toolangi	31.59	210	P	P	06 16 00.5	+0.8
	baz=32,SNR=12						
KDU	Kakadu	31.74	264	P	P	06 15 59.4	-1.8
	baz=32,SNR=13						
AS01	Alice Springs	31.97	243	eP	P	06 16 02.3	-0.9
AS31	Alice Springs	32.01	243	eP	P	06 16 03.0	-0.5
	comp=Z,16nm,1.0s						
ASAR	Alice Springs	32.01	243	P	P	06 16 02.8	-0.8
	comp=Z,32nm,0.7s,baz=63,slow=10.0,SNR=81						
ASAR				PcP	PcP	06 18 53.5	+0.4
	comp=Z,13nm,0.7s,baz=67,slow=2.5,SNR=14						
HTT	Hallett	32.55	223	P	P	06 16 08.4	+0.1
	baz=33,SNR=9.5						
OXZ	Oxford	32.70	170	eP	P	06 16 09.3	0.0
	comp=Z,41nm,0.9s						
RPZ	Rata Peaks	32.94	172	eP	P	06 16 11.3	0.0
	comp=Z,81nm,1.4s						
RPZ				eP	P	06 16 11.6	+0.3
RPZ	Rata Peaks	32.94	172	P	P	06 16 11.6	+0.3
	comp=Z,21nm,0.7s,baz=228,slow=16,SNR=7.5						
ARPS	Mount Arapiles	32.94	215	P	P	06 16 12.4	+1.0
	baz=33,SNR=9.2						
WKZ	Wanaka	33.80	175	eP	P	06 16 19.6	+0.8
	comp=Z,122nm,1.6s						
BBOO	Buckleboo	34.17	226	P	P	06 16 22.2	-0.1
	baz=34,SNR=13						
MLZ	Mavora Lakes	34.26	176	eP	P	06 16 23.1	+0.2
	comp=Z,104nm,1.6s						
DCZ	Deep Cove	34.30	177	eP	P	06 16 23.5	+0.4
	comp=Z,127nm,1.5s						
RAR	Rarotonga	35.33	111	LR	LR	06 27 60.0	
	comp=Z,2μm,20.7s,baz=270,slow=31						
KNRA	Kununurra	35.40	259	P	P	06 16 31.9	-1.1
	baz=36,SNR=8.5						
WRKA	Warakurna	37.30	243	P	P	06 16 48.5	-0.7
	baz=37,SNR=28						
FITZ	Fitzroy Crossi	38.55	255	P	P	06 16 58.8	-1.1
	baz=39,SNR=42						
FITZ	Fitzroy Crossi	38.55	255	eP	P	06 16 58.7	-1.1
	comp=Z,95nm,0.9s						
FITZ	Fitzroy Crossi	38.55	255	P	P	06 16 58.7	-1.1
	comp=Z,85nm,0.9s,baz=78,slow=9.2,SNR=35						
FORT	Forrest	39.32	234	P	P	06 17 07.7	+1.6
	baz=40,SNR=9.1						
SANI	Sanana	39.62	280	P	P	06 17 08.4	-0.4
BATI	Baumata	40.49	267	P	P	06 17 16.6	+0.5
	comp=Z,28nm,0.6s,baz=209,slow=2.1,SNR=4.1						
EDFI	Ende, Flores	42.58	269	P	P	06 17 32.6	-0.7
DAV	Davao City (W)	43.07	293	LR	LR	06 33 52.0	
	comp=Z,986nm,21.1s,baz=132,slow=34						
MBWA	Marble Bar	44.38	251	eP	P	06 17 46.9	-0.7
	comp=Z,58nm,1.1s						
MBWA	Marble Bar	44.38	251	P	P	06 17 42.7	-4.9
	SNR=5.4						
PPT2	Papeete2	44.51	104	eLQ	LQ	06 28 24.3	
	comp=Z,3μm,28.0s						
PPT2				eLR	LR	06 30 17.8	
	comp=Z,6μm,31.0s						
TBI	Tubuai	45.10	112	eLR	LR	06 30 37.0	
	comp=Z,6μm,28.5s						
MEEK	Meekatharra	46.16	244	P	P	06 18 01.0	-0.8
	baz=46,SNR=28						
PLAI	Plampang	46.41	268	P	P	06 18 03.0	-0.9
KLBR	Kellerberrin	47.96	237	P	P	06 18 15.1	-0.7
	baz=48,SNR=11						
BLDU	Ballidu	48.60	239	P	P	06 18 20.2	-0.5
	baz=49,SNR=4.7						
NWAO	Narrogin (SRO)	48.73	236	P	P	06 18 21.6	-0.1
	baz=49,SNR=6.0						
NWAO	Narrogin (SRO)	48.73	236	eP	P	06 18 21.5	-0.1
NWAO				eP	P	06 18 22.0	+0.4
NWAO	Narrogin (SRO)	48.73	236	P	P	06 18 21.6	-0.1
	SNR=6.0						
NWAO	Narrogin (SRO)	48.73	236	P	P	06 18 21.5	-0.1
	comp=Z,37nm,1.1s,baz=336,slow=5.7,SNR=7.6						
MORW	Morawa	48.85	241	P	P	06 18 21.7	-1.0
	baz=49,SNR=13						
MUN	Mundaring	49.33	237	P	P	06 18 26.2	-0.1
	baz=50,SNR=5.2						
RKGY	Rocky Gully	49.39	234	P	P	06 18 25.9	-0.7
	baz=50,SNR=4.6						
JAGI	Jajag, Banyuwa	50.01	268	eP	P	06 18 32.6	+0.9
	comp=Z,22nm,0.9s						
KDM	Kudat	51.05	288	P	P	06 18 48.1	+8.6
KKM	Kota Kinabalu	51.34	287	P	P	06 18 44.4	+2.6
PWJI	Pagerwojo	52.38	268	P	P	06 18 47.1	-2.3
	comp=Z,32nm,0.9s						
INU	Inuyama	53.19	331	eP	P	06 18 54.9	-0.1
	comp=Z,115nm,1.4s						
MJAR	Matsushiro Arr	53.63	333	P	P	06 18 57.5	-0.7
	comp=Z,25nm,1.0s,baz=169,slow=8.2,SNR=24						
MAJO	Matsushiro	53.63	333	eP	P	06 18 57.4	-0.8
	comp=Z,59nm,1.1s						
MAJO	Matsushiro	53.63	333	⇑iP	P	06 18 58.3	0.0
MAJO				pmax	pmax		
	comp=Z,70nm,1.2s						
MAT	Matsushiro	53.63	333	P	P	06 18 57.5	-0.8
MJB9	Matsu-Tunnel	53.64	333	eP	P	06 18 57.7	-0.6
	comp=Z,61nm,1.1s						
SBUM	Sibu	54.08	281	eP	P	06 19 02.7	+0.7
	comp=Z,8.3nm,1.1s						
SBUM	Sibu	54.08	281	P	P	06 19 09.6	+7.6
TAOE	Nuku Hiva Isla	54.13	93	eLR	LR	06 34 32.1	
	comp=Z,3μm,29.8s						
JNU	Nakatsue	54.63	325	eP	P	06 19 05.5	-0.1
	comp=Z,76nm,1.0s						
JNU	Nakatsue	54.63	325	P	P	06 19 05.8	+0.1
	comp=Z,46nm,0.9s,baz=112,slow=7.6,SNR=13						
YULB	Yu-li	54.71	309	eP	P	06 19 06.5	+0.1
	comp=Z,27nm,0.8s						
NACB	Ninganchiao	54.92	310	eP	P	06 19 07.5	-0.3
	comp=Z,35nm,0.9s						
TPUB	Ta-pu	55.17	309	eP	P	06 19 10.0	+0.3
	comp=Z,63nm,0.9s						
YHNB	Yeheng	55.37	310	eP	P	06 19 10.9	-0.3
	comp=Z,116nm,1.3s						
KSM	Kuching	55.67	279	P	P	06 19 16.2	+2.7
RKT	Rikitea	58.37	110	eS	S	06 27 37.2	+3.7
	comp=Z,3μm,33.0s						
RKT				eLR	LR	06 36 48.6	
	comp=Z,4μm,26.8s						
ASAJ	Asahikawa	58.57	341	P	P	06 19 34.1	+0.8
	comp=Z,34nm,0.8s,baz=212,slow=5.3,SNR=17						
SSE	Sheshan	59.30	316	P	P	06 19 38.7	0.0
SSE				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SSE				pmax	pmax		
	comp=Z,310nm,8.0s						
SSE	Sheshan	59.30	316	eP	P	06 19 37.9	-0.8
	comp=Z,80nm,0.8s						
KSRS	Korea Array	59.44	326	P	P	06 19 40.1	+0.6
	comp=Z,12nm,0.8s,baz=137,slow=7.5,SNR=22						
KS15	Wonju Array Si	59.46	326	eP	P	06 19 40.2	+0.5
KSAR	Wonju Array Be	59.46	326	P	P	06 19 40.1	+0.5
KSAR	Wonju Array Be	59.46	326	P	P	06 19 40.2	+0.5
KS01	Wonju Array Si	59.48	326	eP	P	06 19 39.8	0.0
YSS	Yuzh-Sakhalins	61.08	343	eP	P	06 19 51.6	+1.0
	comp=Z,94nm,1.6s						
YSS	Yuzh-Sakhalins	61.08	343	⇓eP	P	06 19 50.8	+0.2
YSS				e		06 19 59.8	

YSS				*e*		06 20 07.5	
YSS				pmax	pmax		
	comp=Z,140nm,0.7s						
TEY	Ternei	61.44	338	⇓*e*P	P	06 19 52.2	-0.9
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
NJ2	Nanjing	61.46	316	*e*P	P	06 19 53.7	+0.2
NJ2				pmax	pmax		
	comp=Z,18nm,0.7s						
MSHR	Mys Shultsa	61.70	332	⇑*i*P	P	06 19 57.0	+2.1
VLA	Vladivostok	61.80	333	⇑*i*P	P	06 19 56.8	+1.3
VLA				pmax	pmax		
	comp=Z,112nm,1.1s						
QIZ	Qiongzhong	61.96	299	*e*P	P	06 19 57.4	+0.3
	comp=Z,41nm,1.3s						
SKR	Severo-Kuril’s	61.99	354	⇓*i*P	P	06 19 57.4	+0.8
MYKOM	Kota Tinggi	62.01	278	P	P	06 19 59.5	+1.9
KGM	Kluang	62.58	278	P	P	06 20 04.0	+2.6
USA0B	Ussuriysk Arra	62.62	334	*e*P	P	06 20 02.2	+1.2
	comp=Z,104nm,1.1s						
USRK	Ussuriysk Ar.	62.62	334	P	P	06 20 01.9	+0.9
	comp=Z,34nm,0.9s,baz=135,slow=5.9,SNR=31						
KTGM	Kuala Trenggan	63.58	282	P	P	06 20 11.1	+3.1
MDJ	Mudanjiang	64.00	333	P	P	06 20 11.4	+1.2
MDJ				pmax	pmax		
	comp=Z,21nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,520nm,2.9s						
MDJ	Mudanjiang	64.00	333	*e*P	P	06 20 11.2	+1.0
	comp=Z,77nm,1.1s						
DL2	Dalian	64.01	324	*e*P	P	06 20 13.4	+3.1
DL2				pmax	pmax		
	comp=Z,41nm,1.5s						
PET	Petropavlovsk	64.09	356	⇓*i*P	P	06 20 11.3	+0.8
PET				pmax	pmax		
	comp=Z,42nm,1.1s						
PEA0B	Petropavlovsk-	64.24	355	*e*P	P	06 20 13.6	+2.0
	comp=Z,90nm,1.3s						
PETK	Petropavlovsk-	64.24	355	P	P	06 20 12.2	+0.7
	comp=Z,18nm,0.9s,baz=134,slow=8.5,SNR=11						
PEA1	Petropavlovsk-	64.25	355	*e*P	P	06 20 12.2	+0.6
BKNI	Bangkinang	64.43	276	P	P	06 20 11.6	-2.0
TYV	Tymovskoe	64.67	345	*e*P	P	06 20 14.9	+0.5
TYV				pmax	pmax		
	comp=Z,19nm,0.9s						
CN2	Changchun	65.35	330	*e*P	P	06 20 19.3	+0.3
CN2				*e*pP	pP	06 20 22.2	-5.0
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
IPM	Ipoh	65.39	280	*e*P	P	06 20 20.8	+0.9
	comp=Z,77nm,1.4s						
CASY	Casey	66.02	201	*e*P	P	06 20 23.2	+0.2
	comp=Z,39nm,1.3s						
SKNT	Sakolnakorn	66.34	294	P	P	06 20 26.6	+0.7
	comp=Z,16nm,1.4s						
VNDA	Vanda	66.43	181	*e*P	P	06 20 27.0	+1.6
	comp=Z,86nm,1.4s						
VNDA	Vanda	66.43	181	*e*P	P	06 20 27.0	+1.6
VNDA				pmax	pmax		
	comp=Z,87nm,1.4s						
VNDA	Vanda	66.43	181	P	P	06 20 27.0	+1.6
	comp=Z,16nm,1.0s,baz=1.2,slow=7.9,SNR=7.0						
KLR	Kul'dur	66.77	337	⇓*i*P	P	06 20 28.7	+0.7
KLR	Kul'dur	66.77	337	P	P	06 20 28.4	+0.4
	comp=Z,11nm,1.0s,baz=152,slow=1.6,SNR=3.5						
NKL	Nikolayevsk	67.26	344	*e*P	P	06 20 31.4	+0.4
NKL				pmax	pmax		
	comp=Z,26nm,1.0s						
ENH	Enshi	67.27	309	*e*P	P	06 20 30.3	-1.4
	comp=Z,62nm,1.0s						
TRTT	Trang	67.53	283	P	P	06 20 40.1	+6.6
	comp=Z,8.9nm,1.5s						
GYA	Guiyang	67.75	305	⇑*i*P	P	06 20 35.2	+0.4
GYA				PP	PP	06 23 08.7	+4.1
GYA				S	S	06 29 33.4	+2.4
GYA				SKS	ScS	06 30 31.8	0.0
GYA	Guiyang	67.75	305	SS	SS	06 33 56.2	+3.3
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,6.5s						
GYA				LR	LR		
	comp=N,570nm,18.2s						
GYA				LR	LR		
	comp=E,610nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
CHAI	Chaiyaphum	67.77	292	P	P	06 20 38.0	+3.0
	comp=Z,4.9nm,0.9s						
BJT	Baijiatuau	67.98	322	*e*P	P	06 20 36.4	+0.5
	comp=Z,41nm,1.2s						
BJT	Baijiatuau	67.98	322	*e*P	P	06 20 36.4	+0.5
BJT				pmax	pmax		
	comp=Z,41nm,1.2s						
PBKT	Sadao Pong	68.91	293	*e*P	P	06 20 41.7	-0.4
	comp=Z,12nm,1.0s						
PBKT	Sadao Pong	68.91	293	P	P	06 20 45.3	+3.2
	comp=Z,20nm,1.6s						
PHET	Kaeng Krachan	69.01	288	P	P	06 20 49.4	+6.6
	comp=Z,4.7nm,1.1s						
TIY	Taiyuan	69.02	318	*e*P	P	06 20 46.4	+3.9
TIY				pmax	pmax		
	comp=Z,23nm,0.5s						
XAN	Xi'an	69.53	313	P	P	06 20 45.7	0.0
XAN				pP	sP	06 20 57.8	+0.8
XAN				sP	pwP	06 21 03.7	+3.7
XAN				PcP	PcP	06 21 08.9	+0.1
XAN				PP	PP	06 23 18.6	-1.3
XAN				pmax	pmax		
	comp=Z,38nm,0.8s						
XAN				LR	LR		
	comp=E,1µm,17.3s						
XAN	Xi'an	69.53	313	*e*P	P	06 20 45.8	0.0
	comp=E,34nm,0.9s						
XAN	Xi'an	69.53	313	*e*P	P	06 20 45.8	0.0
XAN				pmax	pmax		
	comp=Z,34nm,0.9s						
UTTA	Uttaradit	69.67	294	P	P	06 20 50.4	+3.6
	comp=Z,3.8nm,0.5s,comp=Z,142nm						
SRDT	SRDT	69.91	290	P	P	06 20 52.4	+4.1
	comp=Z,12nm,1.8s						
UTHA	Uthaitani	69.98	291	P	P	06 20 52.3	+3.5
	comp=Z,5.6nm,1.3s,comp=Z,66nm						
SUKH	Sukhothai	70.42	293	P	P	06 20 55.6	+4.2
	comp=Z,3.5nm,1.2s						
KMI	Kunming	70.42	302	P	P	06 20 52.9	+1.3
KMI				pP	pP	06 20 55.6	-4.2
KMI				sP	sP	06 20 57.6	-5.2
KMI				pmax	pmax		
	comp=Z,15nm,1.5s						
KMI	Kunming	70.42	302	*e*P	P	06 20 52.5	+0.9
	comp=Z,217nm,1.9s						
KMI	Kunming	70.42	302	*e*P	P	06 20 52.5	+0.9
KMI				pmax	pmax		
	comp=Z,217nm,1.9s						
HHC	Hu-ho-hao-te	71.32	320	*e*P	P	06 20 58.6	+2.0
HHC				LR	LR		
	comp=Z,32nm,1.5s						
CM01	Chiang Mai Arr	71.33	294	*e*P	P	06 20 57.5	+0.6
MA2	Magadan	71.35	352	⇓*i*P	P	06 20 57.6	+1.4
MA2				pmax	pmax		
	comp=Z,29nm,1.2s						
MA2	Magadan	71.35	352	P	P	06 20 56.5	+0.3
	comp=Z,11nm,0.8s,baz=166,slow=5.7,SNR=6.2						
CM31	Chiang Mai Arr	71.36	294	*e*P	P	06 20 58.0	+0.9
CM31	Chiang Mai Arr	71.36	294	P	P	06 20 59.8	+2.7
	SNR=6.9						
CMAR	Chiang Mai Arr	71.36	294	P	P	06 20 58.0	+0.9
	comp=Z,7.3nm,0.9s,baz=115,slow=4.4,SNR=22						
CMMT	Chiang Mai	71.47	294	P	P	06 21 00.8	+3.0
CHTO	Chiang Mai	71.47	294	*e*P	P	06 20 58.2	+0.4
	comp=Z,32nm,1.4s						
CHTO	Chiang Mai	71.47	294	*e*P	P	06 20 58.2	+0.4
CHTO				pmax	pmax		
	comp=Z,32nm,1.4s						
CHTO	Chiang Mai	71.47	294	P	P	06 21 00.6	+2.8
	SNR=11						
CHTO				P	P	06 21 00.6	+2.8
	SNR=11						
CHTO	Chiang Mai	71.47	294	P	P	06 21 00.8	+3.0
	comp=Z,89nm,1.7s						
CD2	Chengdu	71.96	308	⇑P	P	06 21 01.1	+0.5
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,20nm,5.2s						
HIA	Hailar	72.00	331	*e*P	P	06 21 00.7	+0.3
	comp=Z,83nm,1.1s						
HIA	Hailar	72.00	331	⇓*i*P	P	06 21 01.0	+0.6
HIA				pmax	pmax		
	comp=Z,89nm,1.1s						
ZEA	Zeya	72.06	338	*e*P	P	06 21 00.5	-0.1
ZEA				pmax	pmax		
	comp=N,65nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,85nm,1.2s						
BTO	Baotou	72.17	319	*e*P	P	06 21 03.1	+1.4
LZH	Lanzhou	74.17	313	⇑P	P	06 21 15.3	+1.6
LZH				pP	pP	06 21 18.2	-3.7
LZH				sP	sP	06 21 22.4	-2.6
LZH				PP	PP	06 23 55.4	-4.3
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,91nm,4.8s						
LZH				LR	LR		
	comp=N,530nm,16.3s						
LZH				LR	LR		
	comp=E,510nm,16.4s						
LZH				LR	LR		
	comp=Z,570nm,17.5s						
SEY	Seymchan	74.44	354	⇓*i*P	P	06 21 14.4	0.0
GAMB	Gambell	76.77	10	*e*P	P	06 21 28.9	+1.2
	comp=Z,24nm,1.1s						
CIT	Chita	76.78	330	*e*P	P	06 21 28.8	+0.6
CIT				*e*		06 21 37.9	
CIT				pmax	pmax		
	comp=Z,198nm,1.6s						
ULN	Ulaanbaatar	77.85	324	*e*P	P	06 21 34.7	+0.4
	comp=Z,72nm,1.3s						
ULN	Ulaanbaatar	77.85	324	⇓*i*P	P	06 21 35.1	+0.7
ULN				pmax	pmax		
	comp=Z,71nm,1.4s						
ULN	Ulaanbaatar	77.85	324	P	P	06 21 35.4	+1.0
	SNR=20						
ULN				P	P	06 21 35.4	+1.0
	SNR=20						
YAK	Yakutsk	77.91	344	*e*P	P	06 21 33.4	-0.8
YAK				pmax	pmax		
	comp=Z,42nm,1.3s						
YAK				pmax	pmax		
	comp=N,15nm,1.5s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.5s						
SONA0	Songino Array	78.21	324	*e*P	P	06 21 36.3	-0.1
SONM	Songino Array	78.21	324	P	P	06 21 36.3	-0.1
	comp=E,12nm,0.9s,baz=149,slow=6.2,SNR=32						
SONA1	Songino Array	78.21	324	*e*P	P	06 21 36.4	0.0
SVW2	Sparrevohn	78.43	18	*e*P	P	06 21 36.5	-0.6
	comp=E,60nm,1.8s						
GTA	Gaotai	78.48	314	P	P	06 21 38.1	0.0
GTA				pP	pP	06 21 42.6	-3.8
GTA				sP	PcP	06 21 45.2	-2.0
GTA				pmax	pmax		
	comp=Z,13nm,1.3s						
GTA				pmax	pmax		
	comp=Z,270nm,6.4s						
GTA				LR	LR		
	comp=N,490nm,17.8s						
GTA				LR	LR		
	comp=E,690nm,17.5s						
GTA				LR	LR		
	comp=Z,960nm,19.7s						
ANM	Nome	78.72	13	*e*P	P	06 21 39.1	+0.4
	comp=Z,14nm,1.1s						
ANM	Nome	78.72	13	*e*P	P	06 21 39.1	+0.4
ANM				pmax	pmax		
	comp=Z,14nm,1.1s						
RSO	Redoubt South	78.86	20	*e*P	P	06 21 40.3	+0.6
QSPA	South Pole Qui	78.91	180	*e*P	P	06 21 40.5	+0.5
QSPA				*e*P	P	06 21 40.7	+0.8
QSPA	South Pole Qui	78.91	180	P	P	06 21 40.5	+0.5
	comp=Z,38nm,0.9s,baz=355,slow=1.3,SNR=44						
BILL	Bilibino	78.94	1	⇓*i*P	P	06 21 40.0	+0.2
BILL				pmax	pmax		
	comp=Z,41nm,1.1s						
BRLK	Bradley Lake	78.99	21	*e*P	P	06 21 41.0	+0.7
	comp=Z,21nm,0.9s						
SHL	Shillong	79.80	299	*e*P	P	06 21 45.6	0.0
	comp=Z,128nm,1.8s						
SHL	Shillong	79.80	299	*e*P	P	06 21 45.6	0.0
SHL				pmax	pmax		
	comp=Z,128nm,1.8s						
BOD	Bodaibo	80.22	335	*e*P	P	06 21 45.6	-1.3
BOD				pmax	pmax		
	comp=Z,30nm,1.6s						
SUA	Susitna One	80.26	20	*e*P	P	06 21 48.3	+1.1
	comp=Z,11nm,0.9s						
ZAK	Zakamensk	81.26	325	*e*P	P	06 21 51.9	-0.9
ZAK				pmax	pmax		
	comp=Z,18nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
CAST	Castle Rocks	81.26	18	*e*P	P	06 21 52.0	-0.4
	comp=Z,10nm,0.8s						
TLY	Talaya	81.70	327	*e*P	P	06 21 55.5	+0.5
	comp=Z,51nm,1.0s						
TLY	Talaya	81.70	327	*ce*P	P	06 21 55.5	+0.5
TLY	Talaya	81.70	327	P	P	06 21 55.9	+0.9
	SNR=9.4						
TLY				P	P	06 21 55.9	+0.9
	SNR=9.4						
DIV	Divide	81.77	22	*e*P	P	06 21 55.9	+0.7
	comp=Z,18nm,1.0s						
TRF	Thorofare Moun	81.84	19	*e*P	P	06 21 56.2	+0.6
	comp=Z,10nm,1.1s						
KLU	Klutina	81.96	22	*e*P	P	06 21 57.3	+1.1
	comp=Z,14nm,1.0s						
RDOG	Red Dog Mine	82.25	12	*e*P	P	06 21 57.9	+0.4
	comp=Z,30nm,0.8s						
RND	Reindeer	82.26	19	*e*P	P	06 21 58.3	+0.5
	comp=Z,24nm,1.3s						
MCK	McKinley	82.47	19	*e*P	P	06 21 58.0	-0.8
	comp=Z,25nm,1.2s						
MCK	McKinley	82.47	19	*e*P	P	06 21 58.0	-0.8
MCK				pmax	pmax		
	comp=Z,25nm,1.2s						
DHY	Denali Highway	82.52	20	*e*P	P	06 22 00.6	+1.3
	comp=Z,57nm,2.0s						
IM3	Indian Mountai	82.70	16	*e*P	P	06 22 00.4	+0.5
HARP	HAARP	82.83	21	*e*P	P	06 22 02.8	+2.1
	comp=Z,27nm,0.9s						
MLY	Manley	82.84	17	*e*P	P	06 22 01.7	+0.9
	comp=Z,14nm,1.2s						
MOY	Mondy	83.14	326	*e*P	P	06 22 05.6	+2.9
MOY				pmax	pmax		
	comp=Z,48nm,2.6s						
WRH	Wood River Hil	83.25	19	*e*P	P	06 22 02.5	-0.3
	comp=Z,17nm,1.0s						
KMRM	Mail Ridge	83.31	47	*e*P	P	06 22 04.2	+0.5
	comp=Z,36nm,1.2s						
MDM	Murphy Dome	83.55	18	*e*P	P	06 22 03.9	-0.4
	comp=Z,14nm,0.9s						
HDA	Harding Lake	83.57	19	*e*P	P	06 22 04.6	+0.2
	comp=Z,30nm,0.9s						
HDA	Harding Lake	83.57	19	P	P	06 22 04.8	+0.4
	baz=227						
TCOL	CIGO, UAF Yank	83.60	18	P	P	06 22 04.3	-0.3
	baz=226						
COLA	College	83.60	18	*e*P	P	06 22 04.5	-0.1
	comp=Z,28nm,1.0s						
COLA	College	83.60	18	⇑*i*P	P	06 22 04.5	-0.1
COLA				pmax	pmax		
	comp=Z,24nm,1.0s						
RIDG	Independ’e Rid	83.81	20	*e*P	P	06 22 05.8	0.0
	comp=Z,60nm,1.6s						
IL1	Eielson Array	83.83	19	*e*P	P	06 22 05.0	-0.8
ILAR	Eielson Array	83.83	19	P	P	06 22 05.0	-0.8
	comp=Z,4.8nm,0.8s,baz=222,slow=2.5,SNR=29						
ILB	Eielson Array	83.83	19	*e*P	P	06 22 05.4	-0.4
	comp=Z,7.6nm,0.8s						
POKR	Poker Plat Res	83.90	18	P	P	06 22 06.4	+0.3
	baz=227						
O02D	Mt. Diablo Mer	83.95	47	P	P	06 22 08.5	+1.4
	baz=250						
K02D	Willamette Mer	84.21	45	P	P	06 22 09.9	+1.6
	baz=249						
SCRK	Sand Creek	84.26	20	*e*P	P	06 22 08.9	+0.8
	comp=Z,80nm,2.0s						
N02D	Trinity Center	84.28	47	P	P	06 22 10.1	+1.4
	baz=250						
M02C	Callahan	84.32	46	P	P	06 22 10.3	+1.4
	baz=250						
YBH	Yreka Blue Hor	84.54	46	*e*P	P	06 22 10.7	+0.7
	comp=Z,34nm,1.5s						
YBH	Yreka Blue Hor	84.54	46	*e*P	P	06 22 10.7	+0.7
YBH				pmax	pmax		
	comp=Z,34nm,1.5s						
COLD	Coldfoot	84.58	16	*e*P	P	06 22 10.7	+1.2
	comp=Z,6.1nm,1.1s						
KNGR	Kungurtug, Tuv	84.64	324	⇓*i*P	P	06 22 10.1	-0.3
ORV	Oroville	84.68	48	*e*P	P	06 22 11.1	+0.4
	comp=Z,6.9nm,1.0s						
ORV	Oroville	84.68	48	*e*P	P	06 22 11.1	+0.4
ORV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
O03E	Paynes Creek	84.70	47	P	P	06 22 11.9	+1.0
	baz=251						
RAMN	Ramite	84.73	299	*e*P	P	06 22 11.3	-0.2
HYT	Haines Junctio	84.79	25	*e*P	P	06 22 11.1	+0.2
	comp=Z,9.9nm,0.9s						
AFDM	Forest Hills D	84.88	49	*e*P	P	06 22 12.5	+0.8
	comp=Z,16nm,1.0s						
SKAG	Skagway	84.97	26	*e*P	P	06 22 12.5	+0.9
	comp=Z,52nm,1.6s						
L04D	Klamath Falls	84.99	45	P	P	06 22 13.4	+1.1
	baz=250						
CMB	Columbia Colle	85.02	50	*e*P	P	06 22 13.2	+0.7
	comp=Z,11nm,1.2s						
CMB	Columbia Colle	85.02	50	*e*P	P	06 22 13.2	+0.7
CMB				pmax	pmax		
	comp=Z,11nm,1.2s						
M04C	Macdoel	85.17	46	P	P	06 22 14.1	+0.8
	baz=251						
JIRN	Jiri	85.27	299	*e*P	P	06 22 14.4	0.0
	comp=Z,213nm,1.6s						
VES	Vestal, Richgr	85.36	52	P	P	06 22 14.6	+0.5
	baz=253						
GUN	Gumba	85.60	299	*e*P	P	06 22 15.9	-0.1
	comp=Z,176nm,1.7s						
BEKR	Beckworth	85.61	48	*e*P	P	06 22 16.3	+0.7
	comp=Z,15nm,1.1s						
PALK	Pallekele	85.71	278	*e*P	P	06 22 16.2	-0.3
	comp=Z,58nm,1.5s						
ISA	Isabella, Lake	85.78	53	*e*P	P	06 22 16.0	-0.3
	comp=Z,11nm,1.2s						
ISA	Isabella, Lake	85.78	53	P	P	06 22 16.7	+0.4
	baz=253						
WAKR	Walker	85.88	50	*e*P	P	06 22 17.8	+0.8
	comp=Z,19nm,1.2s						
MDPB	Devils Postpil	85.89	51	*e*P	P	06 22 16.6	-0.5
	comp=Z,16nm,1.0s						
DAWY	Dawson	85.91	21	*e*P	P	06 22 17.0	+0.7
	comp=Z,14nm,1.1s						
PKI	Pulchoki	85.92	299	*e*P	P	06 22 17.1	-0.4
	comp=Z,140nm,1.5s						
PKIN	Phulchoki	85.93	299	*e*P	P	06 22 17.1	-0.4
	comp=Z,55nm,1.2s						
EDW2	Edwards Air Fo	85.93	53	P	P	06 22 18.2	+1.1
	baz=254						
OMMB	Old Mammoth Mi	85.94	51	*e*P	P	06 22 17.4	0.0
	comp=Z,16nm,1.4s						
TIXI	Tiksi	85.98	349	*e*P	P	06 22 15.8	-0.6
	comp=Z,29nm,1.4s						
TIXI	Tiksi	85.98	349	⇓*i*P	P	06 22 16.1	-0.3
TIXI				pmax	pmax		
	comp=Z,27nm,1.6s						
BFSC	Mount Baldy Ra	86.02	54	P	P	06 22 18.3	+0.6
	baz=254						
KKN	Kakani	86.08	299	*e*P	P	06 22 18.2	0.0
	comp=Z,63nm,1.1s						
J05D	Fort Rock, OR	86.08	45	P	P	06 22 19.0	+1.2
	baz=251						
YERR	Yerington	86.17	49	*e*P	P	06 22 18.6	+0.3
	comp=Z,18nm,1.6s						
DMN	Daman	86.19	299	*e*P	P	06 22 18.3	-0.5
	comp=Z,152nm,1.4s						
PAHR	Pah Rah Range	86.28	49	*e*P	P	06 22 19.9	+1.1
	comp=Z,15nm,1.3s						
MOD	Modoc Plateau	86.29	46	*e*P	P	06 22 18.8	0.0
	comp=Z,11nm,1.0s						
CWC	Cottonwood Cre	86.31	52	P	P	06 22 19.8	+0.7
	baz=253						
RYN	Ryan	86.60	50	*e*P	P	06 22 20.2	-0.2
	comp=Z,13nm,1.2s						
DAC	Darwin (Calif)	86.64	52	*e*P	P	06 22 20.9	+0.2
	comp=Z,12nm,1.3s						
DAC	Darwin (Calif)	86.64	52	*e*P	P	06 22 21.0	+0.2
DAC				pmax	pmax		
	comp=Z,12nm,1.3s						
MONP2	Monument Peak	86.65	56	P	P	06 22 21.8	+0.9
	baz=255						
MPMC	Manual Prospec	86.66	52	P	P	06 22 22.0	+1.1
	baz=254						
NV01	Mina Array Sit	86.71	50	*e*P	P	06 22 21.3	+0.2
NVAR	Mina Array Bea	86.71	50	P	P	06 22 21.9	+0.8
	comp=Z,7.1nm,0.9s,baz=231,slow=7.8,SNR=18						
NVAR				PKKP	PKKPbc	06 40 18.2	+0.9
	comp=Z,0.7nm,0.6s,baz=108,slow=4.2,SNR=3.7						
PFO	Pinyon Flats O	86.81	55	P	P	06 22 22.1	+0.6
	baz=254						
TPFO	Pinon Flats	86.81	55	P	P	06 22 22.2	+0.7
	baz=254						
NV11	Mina Array Sit	86.82	50	*e*P	P	06 22 22.3	+0.8
	comp=Z,1.4nm,1.2s						
IKP	In-Ko-Pah, Jac	86.84	56	P	P	06 22 22.9	+1.2
	baz=255						
GRAC	Grapevine Rang	87.01	52	P	P	06 22 23.6	+1.2
	baz=254						
KVN	Kaiserville	87.04	49	*e*P	P	06 22 22.5	-0.1
	comp=Z,13nm,1.3s						
KVN	Kaiserville	87.04	49	*e*P	P	06 22 22.5	-0.1
KVN				pmax	pmax		
	comp=Z,13nm,1.3s						
SWSC	Sam W. Stewart	87.17	56	P	P	06 22 24.0	+0.9
	baz=255						
B05A	Bryant	87.18	40	P	P	06 22 24.7	+2.0
	baz=250						
FURC	Furnace Creek,	87.26	52	P	P	06 22 24.6	+1.2
	baz=254						
BELC	Belle Mtn. Jos	87.28	55	P	P	06 22 24.9	+1.0
	baz=255						
KOLN	Koldanda	87.52	299	*e*P	P	06 22 24.1	-1.1
	comp=Z,70nm,1.7s						
DANN	Dangsing	87.52	299	*e*P	P	06 22 24.3	-1.0
	comp=Z,66nm,1.3s						
I07A	Izee	87.53	44	*e*P	P	06 22 23.2	-1.6
	comp=Z,28nm,1.5s						
BC3	Big Chuckawall	87.63	55	P	P	06 22 26.5	+1.0
	baz=255						
WVOR	Wild Horse Val	87.64	46	*e*P	P	06 22 25.4	0.0
	comp=Z,18nm,1.4s						
WVOR	Wild Horse Val	87.64	46	*e*P	P	06 22 25.4	0.0
WVOR				pmax	pmax		
	comp=Z,18nm,1.4s						
GMRC	Granite Mounta	87.76	54	P	P	06 22 26.7	+0.6
	baz=255						
TPNV	Topopah Spring	87.86	52	P	P	06 22 27.5	+0.9
	baz=254						
GLA	Glamis	87.98	56	P	P	06 22 29.0	+1.9
	baz=256						
IRM	Iron Mountain	88.01	55	P	P	06 22 27.9	+0.8
	baz=255						
J08A	Circle Bar Ran	88.02	45	*e*P	P	06 22 27.7	+0.6
	comp=Z,17nm,1.3s						
PYUN	Piuthan	88.12	299	*e*P	P	06 22 26.5	-1.6
	comp=Z,34nm,1.1s						
G08A	Pilot Rock	88.27	43	*e*P	P	06 22 28.9	+0.7
	comp=Z,12nm,1.0s						
LDFC	Landfair	88.27	54	*e*P	P	06 22 27.1	-1.4
	comp=Z,22nm,1.0s						
Y12C	Blythe	88.40	55	*e*P	P	06 22 29.6	+0.6
	comp=Z,11nm,1.1s						
Y12C	Blythe	88.40	55	P	P	06 22 29.8	+0.8
	baz=256						
WMQ	Urumqi	88.53	315	P	P	06 22 30.0	+0.5
WMQ				sP	sP	06 22 39.7	-0.9
WMQ				pmax	pmax		
	comp=Z,57nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,760nm,5.1s						
WMQ				LR	LR		
	comp=N,6µm,24.1s						
WMQ				LR	LR		
	comp=E,4µm,26.1s						
WMQ				LR	LR		
	comp=Z,3µm,24.3s						
WMQ	Urumqi	88.53	315	*e*P	P	06 22 29.8	+0.3
	comp=Z,104nm,1.7s						
WMQ	Urumqi	88.53	315	*e*P	P	06 22 29.8	+0.3
WMQ				pmax	pmax		

	comp=Z,104nm,1.7s						
SHPR	**Sheep Range**	88.59	53	*e*P	P	06 22 29.8	-0.3
	comp=Z,13nm,1.4s						
R11A	**Troy Canyon, C**	88.74	51	*e*P	P	06 22 30.1	-0.7
	comp=Z,8.4nm,1.3s						
R11A	**Troy Canyon, C**	88.74	51	P	P	06 22 31.2	+0.4
	baz=255						
PDMCI	**Parker Dam,Lak**	88.85	55	P	P	06 22 32.5	+1.4
	baz=256						
BMO	**Blue Mountains**	89.26	44	*e*P	P	06 22 33.5	+0.6
	comp=Z,8.6nm,1.1s						
BMO	**Blue Mountains**	89.26	44	*e*P	P	06 22 33.5	+0.6
BMO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
214A	**Organ Pipe Nat**	89.37	57	P	P	06 22 35.4	+1.7
	baz=257						
ELK	**Elko**	89.62	48	*e*P	P	06 22 33.9	-1.0
	comp=Z,12nm,1.4s						
ELK	**Elko**	89.62	48	*e*P	P	06 22 33.9	-1.0
ELK				pmax	pmax		
	comp=Z,12nm,1.4s						
F10A	**Beach Ranch, E**	89.63	43	*e*P	P	06 22 35.1	+0.5
	comp=Z,13nm,1.1s						
MFID	**Camas Ranch**	89.89	46	*e*P	P	06 22 36.5	+0.6
	comp=Z,14nm,1.4s						
PSUT	**Pine Spring**	90.10	51	*e*P	P	06 22 37.0	-0.2
	comp=Z,9.4nm,1.1s						
LCMT	**Little Creek M**	90.21	52	*e*P	P	06 22 37.8	+0.2
	comp=Z,8.2nm,1.0s						
INK	**Inuvik**	90.23	19	P	P	06 22 37.0	+0.3
	comp=Z,2.7nm,1.1s,baz=171,slow=7.3,SNR=3.5						
CCUT	**Cedar City**	90.24	52	*e*P	P	06 22 37.1	-0.8
	comp=Z,10nm,1.1s						
DGZ	**Jazzator, Alta**	90.40	321	⇓*i*P	P	06 22 38.7	+0.5
DGZ				pmax	pmax		
	comp=Z,11nm,1.5s						
SZCU	**Shurtz Canyon**	90.47	52	*e*P	P	06 22 38.3	-0.6
	comp=Z,9.5nm,1.1s						
KNB	**Kanab**	90.54	52	*e*P	P	06 22 39.8	+0.6
	comp=Z,21nm,1.4s						
KNB	**Kanab**	90.54	52	*e*P	P	06 22 39.8	+0.6
KNB				pmax	pmax		
	comp=Z,21nm,1.4s						
U15A	**North Rim**	90.82	53	*e*P	P	06 22 41.6	+0.9
	comp=Z,13nm,0.9s						
HLID	**Hailey**	90.92	46	*e*P	P	06 22 42.0	+1.1
HLID	**Hailey**	90.92	46	P	P	06 22 41.9	+1.1
	baz=256						
X16A	**Lo Mia Camp, P**	91.05	55	*e*P	P	06 22 41.8	+0.2
	comp=Z,6.7nm,0.9s						
TUC	**Tucson**	91.13	57	P	P	06 22 43.3	+1.4
	baz=258						
DUG	**Dugway, Tooele**	91.28	49	*e*P	P	06 22 42.6	+0.1
	comp=Z,6.3nm,1.0s						
DUG	**Dugway, Tooele**	91.28	49	*e*P	P	06 22 42.6	+0.1
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DUG	**Dugway, Tooele**	91.28	49	P	P	06 22 43.2	+0.7
	baz=257						
BGU	**Big Grassy Mou**	91.29	49	*e*P	P	06 22 43.0	+0.4
WUAZ	**Wupatki**	91.34	54	*e*P	P	06 22 43.2	+0.2
	comp=Z,8.8nm,1.0s						
WUAZ	**Wupatki**	91.34	54	P	P	06 22 44.0	+1.1
	baz=257						
SYO	**Syowa Base**	91.48	197	⇓*e*P	P	06 22 42.0	-0.7
HVU	**Hansel Valley**	91.67	48	*e*P	P	06 22 44.3	0.0
	comp=Z,12nm,1.0s						
HVU	**Hansel Valley**	91.67	48	*e*P	P	06 22 44.3	0.0
HVU				pmax	pmax		
	comp=Z,12nm,1.0s						
NLU	**North Lily Min**	91.78	50	*e*P	P	06 22 44.8	-0.2
	comp=Z,12nm,1.2s						
SPUT	**South Promonto**	91.80	48	*e*P	P	06 22 45.0	+0.1
	comp=Z,22nm,1.8s						
MPU	**Maple Canyon**	92.12	50	*e*P	P	06 22 47.4	+0.9
	comp=Z,18nm,1.6s						
CTU	**Camp Tracy**	92.18	49	*e*P	P	06 22 46.9	+0.2
	comp=Z,7.5nm,1.0s						
MCMT	**McKenzie Canyo**	92.32	45	*e*P	P	06 22 47.1	-0.2
JLU	**Jordanelle**	92.38	49	*e*P	P	06 22 48.7	+1.0
	comp=Z,7.4nm,1.1s						
DLMT	**Dillon**	92.61	44	*e*P	P	06 22 49.7	+1.1
	comp=Z,19nm,1.1s						
LRM	**Limekiln Ridge**	92.82	44	*e*P	P	06 22 51.0	+1.3
MK31	**Makanchi Array**	92.98	317	*e*P	P	06 22 50.3	+0.2
MK32	**Makanchi Array**	92.98	317	*e*P	P	06 22 49.9	-0.1
MKAR	**Makanchi Array**	92.98	317	*e*P	P	06 22 50.3	+0.2
	comp=Z,419nm,1.9s						
MKAR				PKKP	PKKPdf	06 39 59.8	-0.3
MKAR	**Makanchi Array**	92.98	317	P	P	06 22 49.9	-0.1
	comp=Z,4.7nm,0.7s,baz=99,slow=6.3,SNR=22						
MKAR				PKKP	PKKPdf	06 39 59.8	-0.3
	comp=Z,0.9nm,0.8s,baz=90,slow=1.2,SNR=6.1						
ZAA0	**Zalesovo Array**	93.10	324	*e*P	P	06 22 49.3	-1.1
	comp=Z,29nm,1.3s						
ZALV	**Zalesovo Beam**	93.10	324	*e*P	P	06 22 49.0	-1.3
ZALV	**Zalesovo Beam**	93.10	324	P	P	06 22 49.7	-0.7
	comp=Z,11nm,1.0s,baz=104,slow=4.7,SNR=27						
ZAA1	**Zalesovo Array**	93.10	324	*e*P	P	06 22 49.7	-0.7
MAKZ	**Makanchi**	93.19	317	*e*P	P	06 22 51.2	+0.1
	comp=Z,55nm,1.4s						
MAKZ	**Makanchi**	93.19	317	*e*P	P	06 22 51.2	+0.1
MAKZ				pmax	pmax		
	comp=Z,55nm,1.4s						
BOZ	**Bozeman (W)**	93.33	44	*e*P	P	06 22 52.1	+0.2
	comp=Z,15nm,1.4s						
BOZ	**Bozeman (W)**	93.33	44	*e*P	P	06 22 52.1	+0.2
BOZ				pmax	pmax		
	comp=Z,15nm,1.4s						
BOZ	**Bozeman (W)**	93.33	44	P	P	06 22 52.6	+0.8
	baz=258						
FXWY	**Fox Creek**	93.34	46	*e*P	P	06 22 53.0	+0.9
	comp=Z,4.4nm,1.0s						
HRY	**Holter Researc**	93.43	43	*e*P	P	06 22 53.0	+0.7
IMW	**Indian Meadow**	93.45	46	*e*P	P	06 22 54.4	+1.7
	comp=Z,15nm,1.6s						
121A	**Cookes Peak, D**	93.66	58	P	P	06 22 55.4	+1.7
	baz=259						
H17A	**Grant Village**	93.81	46	P	P	06 22 56.4	+2.2
	baz=258						
BW06	**Boulder Array**	94.21	47	*e*P	P	06 22 56.2	+0.1
	comp=Z,16nm,1.7s						
BW06	**Boulder Array**	94.21	47	P	P	06 22 56.7	+0.6
	baz=259						
PD31	**Pinedale Array**	94.21	47	*e*P	P	06 22 55.6	-0.5
	comp=Z,16nm,1.8s						
PDAR	**Pinedale Array**	94.21	47	*e*P	P	06 22 55.5	-0.6
PDAR				PKKP	PKKPdf	06 39 58.1	+0.1
PDAR	**Pinedale Array**	94.21	47	P	P	06 22 56.2	+0.1
	comp=Z,1.9nm,0.9s,baz=228,slow=1.8,SNR=9.5						
PDAR				PKKP	PKKPdf	06 39 58.1	+0.1
	comp=Z,1.1nm,0.8s,baz=99,slow=4.7,SNR=7.0						
NVS	**Novosibirsk**	94.22	325	⇑*i*P	P	06 22 56.0	+0.5
NVS				pmax	pmax		
	comp=Z,31nm,1.4s						
NVS				pmax	pmax		
	comp=N,9.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,14nm,1.5s						
ANMO	**Albuquerque**	95.18	56	⇓*i*P	P	06 22 55.9	-4.8
ANMO				pmax	pmax		
	comp=Z,11nm,3.0s						
ANMO	**Albuquerque**	95.18	56	P	P	06 23 01.2	+0.5
	baz=260						
YKA	**Yellowknife Ar**	95.41	27	P	P	06 22 59.6	-1.2
	comp=Z,1.6nm,0.8s,baz=255,slow=4.7,SNR=18						
YKA				PKKP	PKKPdf	06 39 57.9	+1.8
	comp=Z,0.3nm,0.8s,baz=75,slow=2.5,SNR=4.6						
YKB5	**Yellowknife Ar**	95.41	27	*e*P	P	06 22 59.0	-1.8
MNTX	**Cornudas Mount**	95.52	59	P	P	06 23 02.7	+0.7
	baz=260						
NRIK	**Noril'sk**	95.88	340	P	P	06 23 02.0	-0.8
	comp=Z,4.3nm,0.6s,baz=136,slow=4.4,SNR=6.5						
KSH	**Kashi**	96.13	309	P	P	06 23 06.4	+1.6
KSH				PP	PP	06 26 58.9	+0.8
KSH				pmax	pmax		
	comp=Z,580nm,6.3s						
KURK	**Kurchatov**	96.14	320	*e*P	P	06 23 03.2	-1.2
	comp=Z,40nm,1.9s						
KURK	**Kurchatov**	96.14	320	⇓*i*P	P	06 23 03.7	-0.7
KURK				pmax	pmax		
	comp=Z,19nm,1.7s						
LTX	**Lajitas**	96.60	61	*e*P	P	06 23 07.2	0.0
LTX	**Lajitas**	96.60	61	*e*P	P	06 23 07.2	0.0
TXAR	**Lajitas Array**	96.60	61	P	P	06 23 07.2	0.0
	comp=Z,0.3nm,0.7s,baz=222,slow=4.1,SNR=4.4						
TXAR				PP	PP	06 27 03.6	+1.6
	comp=Z,1.4nm,1.2s,baz=302,slow=7.2,SNR=3.5						
TXAR				PKKP	PKKPdf	06 39 53.1	0.0
	comp=Z,0.5nm,0.6s,baz=99,slow=3.8,SNR=8.7						
SNAA	**Sanae**	97.01	184	*e*P	P	06 23 07.5	-0.6
	comp=Z,45nm,1.8s						
SNAA	**Sanae**	97.01	184	*e*P	P	06 23 07.5	-0.6
SNAA				pmax	pmax		
	comp=Z,45nm,1.8s						
VNA3	**Neumayer Olymp**	97.77	182	P	Pdif	06 23 14.8	+3.2
VNA2	**Neumayer--Watz**	98.00	183	P	P	06 23 12.0	-0.6
BRVK	**Borovoye**	101.53	322	*e*Pdif	Pdif	06 23 29.6	+1.1
BRVK	**Borovoye**	101.53	322	*e*P	Pdif	06 23 29.6	+1.1
ARA0	**ARCESS Array S**	116.17	345	*e*PKPdf	PKiKP	06 28 18.9	-0.4
ARCES	**ARCESS Array B**	116.17	345	PKP	PKiKP	06 28 18.9	-0.4
	comp=Z,1.8nm,0.8s,baz=83,slow=2.3,SNR=8.5						
ARCES				PKKPbc	PKKPab	06 38 53.3	-0.2
	comp=Z,2.4nm,0.9s,baz=183,slow=4.9,SNR=6.0						
SOTA	**Rioblanco**	118.38	94	*e*P	PKPdf	06 28 22.4	-3.4
SOTA	**Rioblanco**	118.38	94	*e*P	PKPdf	06 28 22.4	-3.4
YOTC	**Yotoco, Valle**	118.98	92	*e*P	PKiKP	06 28 26.5	0.0
YOTC	**Yotoco, Valle**	118.98	92	*e*P	PKiKP	06 28 26.5	0.0
PTLC	**Puerto Leguiza**	119.74	96	*e*P	PKPdf	06 28 27.0	-0.9
PTLC	**Puerto Leguiza**	119.74	96	*e*P	PKPdf	06 28 27.0	-0.9
HELC	**Santa Helena**	120.16	89	*e*P	PKPdf	06 28 26.5	-2.5
HELC	**Santa Helena**	120.16	89	*e*P	PKPdf	06 28 26.5	-2.5
OBN	**Obninsk**	120.41	328	*e*PKIKP	PKiKP	06 28 28.1	+0.2
OBN				*e*		06 29 52.4	
OBN				*e*PPP	PPP	06 32 27.4	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ROSC	**El Rosal**	121.12	91	PKP	PKiKP	06 28 31.2	+0.2
	comp=Z,5.0nm,0.7s,baz=60,slow=12,SNR=5.8						
PTBC	**PUERTO BERRIO,**	121.27	89	*e*P	PKPdf	06 28 27.9	-2.8
PTBC	**PUERTO BERRIO,**	121.27	89	*e*P	PKPdf	06 28 27.9	-2.8
FIA0	**FINESS Array S**	121.51	338	*e*PKPdf	PKPdf	06 28 28.8	-0.9
FIA0	**FINESS Array S**	121.51	338	*e*PKIKP	PKPdf	06 28 28.8	-0.9
FINES	**FINESS Array B**	121.51	338	PKP	PKPdf	06 28 28.8	-0.9
	comp=Z,3.8nm,0.9s,baz=114,slow=2.3,SNR=5.9						
CHIC	**Chingaza**	121.66	91	*e*P	PKPdf	06 28 29.3	-2.7
CHIC	**Chingaza**	121.66	91	*e*P	PKPdf	06 28 29.3	-2.7
RUSC	**La Rusia**	122.51	90	*e*P	PKPdf	06 28 31.6	-2.1
RUSC	**La Rusia**	122.51	90	*e*P	PKPdf	06 28 31.6	-2.1
PAMC	**Pamplona, Colo**	123.11	88	*e*P	PKPdf	06 28 33.7	-1.2
PAMC	**Pamplona, Colo**	123.11	88	*e*P	PKPdf	06 28 33.7	-1.2
BOSA	**Boshof**	124.49	224	*e*PKPdf	PKPdf	06 28 36.5	-0.2
BOSA				*e*PKPdf	PKiKP	06 28 36.8	-0.3
BOSA	**Boshof**	124.49	224	PKP	PKiKP	06 28 36.8	-0.3
	comp=Z,14nm,1.1s,baz=155,slow=1.6,SNR=9.4						
CPUP	**Villa Florida**	124.62	133	*e*PKPdf	PKPdf	06 28 34.0	-2.8
CPUP	**Villa Florida**	124.62	133	*e*PKIKP	PKPdf	06 28 34.0	-2.8
CPUP	**Villa Florida**	124.62	133	PKP	PKiKP	06 28 37.1	0.0
	comp=Z,9.8nm,1.0s,baz=293,slow=2.7,SNR=13						
SDV	**Santo Domingo**	125.35	87	*e*PKPdf	PKPdf	06 28 38.8	+0.1
SDV	**Santo Domingo**	125.35	87	*e*P	PKPdf	06 28 37.5	-1.3
SDV	**Santo Domingo**	125.35	87	*e*P	PKPdf	06 28 37.5	-1.3
AKASG	**Malin Array Be**	126.44	326	PKP	PKPdf	06 28 39.4	-0.1
	comp=Z,3.8nm,0.8s,baz=65,slow=1.9,SNR=10						
AKBB	**Malin Array Si**	126.44	326	*e*PKPdf	PKPdf	06 28 39.4	-0.1
AKBB	**Malin Array Si**	126.44	326	*e*PKIKP	PKPdf	06 28 39.4	-0.1
AK11	**Malin Array Si**	126.48	326	*e*PKPpre	PKPpre	06 28 33.6	
KMBO	**Kilima Mbogo**	126.54	260	PKP	PKiKP	06 28 41.4	-0.3
	comp=Z,0.9nm,0.3s,baz=292,slow=5.1,SNR=4.1						
BR101	**Keskin Array S**	128.37	312	*e*PKPdf	PKPdf	06 28 44.0	+0.2
BRTR	**Keskin Array B**	128.37	312	PKP	PKPdf	06 28 44.0	+0.2
	comp=Z,2.5nm,1.0s,baz=90,slow=1.2,SNR=7.7						
BRTR				PP	PP	06 30 45.5	-2.9
	comp=Z,1.6nm,1.0s,baz=108,slow=4.0,SNR=4.3						
LSZ	**Lusaka**	129.74	239	*e*PKPdf	PKPdf	06 28 46.6	-0.4
SJG	**San Juan**	130.26	76	*e*PKPdf	PKPdf	06 28 42.9	-4.8
SJG	**San Juan**	130.26	76	*e*PKIKP	PKPdf	06 28 42.9	-4.8
BUR04	**Bucovina Ar. S**	130.32	325	*e*PKPdf	PKPdf	06 28 46.1	-1.1
HUMP	**Col San Antoni**	130.54	76	*e*PKPdf	PKPdf	06 28 46.9	-1.4
BRG	**Berggiesshubel**	133.75	335	*e*(PKP)	PKiKP	06 28 56.0	+1.3
	comp=Z,14nm,1.6s						
BRG	**Berggiesshubel**	133.75	335	*e*PKIKP	PKiKP	06 28 56.0	+1.3
BRG				pmax	pmax		
	comp=Z,14nm,1.6s						
CLL	**Collm**	133.81	336	*e*PKPdf	PKiKP	06 28 55.0	+0.2
CLL				*e*PP	PP	06 31 19.0	-3.5
CLL	**Collm**	133.81	336	*e*PKIKP	PKiKP	06 28 55.0	+0.2
KHC	**Kasperske Hory**	135.21	333	*e*PKPDF	PKiKP	06 28 58.2	+0.4
KHC				*e*pPKP	pPKPdf	06 29 01.0	-3.7
KHC	**Kasperske Hory**	135.21	333	*e*PKIKP	PKiKP	06 28 58.2	+0.4
KHC				*e*		06 29 01.0	
GERES	**GERESS Array B**	135.37	333	PKP	PKPdf	06 28 56.1	-0.6
	comp=Z,1.3nm,0.7s,baz=180,slow=1.1,SNR=6.9						
BDFB	**Brasilia**	137.97	129	PKP	PKiKP	06 29 03.4	-1.1
	comp=Z,9.3nm,1.0s,baz=91,slow=5.1,SNR=6.6						
KEST	**Kesra**	146.94	322	*e*PKPdf	PKPdf	06 29 17.6	-0.2
KEST	**Kesra**	146.94	322	PKPbc	PKPbc	06 29 19.8	+0.1
	comp=Z,49nm,0.9s,baz=313,slow=1.6,SNR=20						
ES19	**SONSECA Array**	149.82	343	*e*PKPdf	PKPdf	06 29 18.7	-3.6
ESDC	**Sonseca Array**	149.86	343	PKPbc	PKPbc	06 29 26.5	-0.6
	comp=Z,0.7nm,0.7s,baz=31,slow=33,SNR=4.2						
TOA0	**Torodi Ar. Sit**	163.43	279	*e*PKPdf	PKPdf	06 29 39.9	-0.5
TOA0				*e*PKPdf	PKPdf	06 29 40.8	+0.5
TORD	**Torodi Ar. Bea**	163.43	279	PKP	PKPdf	06 29 39.6	-0.8
	comp=Z,8.6nm,1.1s,baz=134,slow=1.7,SNR=16						
TOA1	**Torodi Ar. Sit**	163.44	279	*e*PKPdf	PKPdf	06 29 39.6	-0.8
DBIC	**Dimbokro**	168.95	247	PKIKP	PKPdf	06 29 44.0	-0.8
DBIC	**Dimbokro**	168.95	247	PKP	PKPdf	06 29 44.0	-0.8
	comp=Z,11nm,1.0s,baz=54,slow=1.5,SNR=5.9						

IDC ***06*** *06:12:23.9±0.7, 11.°41S×165.°50E, h0km, mb4.6/14, mb1 4.7/16, mb1mx4.5/44, mbtmp4.5/16, ML4.6/2, Error ellipse: s-maj=23.2km s-min=18.5km az=115.0*

NEIC ***06*** *06:12:25.6±0.2, 11.°44S×165.°41E, h10km, mb4.9/50, Error ellipse: s-maj=7.1km s-min=5.0km az=150.0*

ISCJB ***06*** *06:12:26.1±0.3, 11.°50S±0.°06×165.°32E±0.°05, h24km, mb4.8/58, Error ellipse: s-maj=9.5km s-min=6.9km az=147.9*

ISC 06 06:12:27.6±0.5**, 11.°43S**±0.°08×**165.°44E**±0.°09**, h24km, n89, σ0.s85**/87**, mb4.8**/58**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.76	290	*e*Pn	Pn	06 13 51.1	-0.5
HNR				*e*Pn	Pn	06 13 51.3	-0.3
HNR	**Honiara**	5.76	290	Pn	Pn	06 13 51.1	-0.5
	19nm,0.3s,baz=168,slow=17,SNR=2.2						
DZM	**Mont Dzumac**	10.62	175	Pn	Pn	06 14 58.5	-0.1
	3.5nm,0.3s,baz=192,slow=20,SNR=4.1						
EIDS	**Eidsvold**	19.41	222	*e*P	P	06 16 50.0	-2.2
	15nm,0.8s						
MANU	**Manus Island**	20.21	296	*e*P	P	06 17 01.6	+0.6
	97nm,1.1s						
KWAJ	**Kwajalein Atol**	20.21	6	*e*P	Pn	06 17 04.6	+1.6
	189nm,0.8s						
COEN	**Coen**	21.86	261	*e*P	P	06 17 19.7	+0.8
	25nm,1.1s						
ARMA	**Armidale**	22.84	212	*e*P	P	06 17 28.9	-0.3
	31nm,1.1s						
BKZ	**Black Stump Fm**	29.32	162	*e*P	P	06 18 29.2	+0.7
	20nm,1.0s						
STKA	**Stephens Creek**	29.96	224	*e*P	P	06 18 35.0	+0.8
	3.4nm,0.9s						
STKA	**Stephens Creek**	29.96	224	P	P	06 18 35.0	+0.8
	5.9nm,0.8s,baz=54,slow=8.7,SNR=3.2						
H11N1	**WAKE ISLAND Hy**	30.98	3	T	T	06 51 48.6	
	baz=192,slow=76,SNR=3.3						
H11N3	**WAKE ISLAND Hy**	30.98	3	T	T	06 51 44.0	
	baz=192,slow=76,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	31.00	3	T	T	06 51 50.2	
	baz=192,slow=76,SNR=5.7						
WB2	**Warramunga Arr**	31.06	250	*e*P	P	06 18 42.7	-1.3
	45nm,1.0s						
WR1	**Warramunga Arr**	31.07	250	*e*P	P	06 18 42.7	-1.5
	44nm,1.0s						
WRA	**Warramunga Arr**	31.07	250	P	P	06 18 42.7	-1.5
	26nm,0.9s,baz=83,slow=8.9,SNR=11						
USRK	**Ussuriysk Ar.**	63.16	334	P	P	06 22 54.2	+0.7
	3.8nm,1.0s,baz=129,slow=6.1,SNR=4.4						
PETK	**Petropavlovsk-**	64.62	355	P	P	06 23 01.7	-1.3
	2.9nm,0.8s,baz=207,slow=3.2,SNR=3.0						
PEA1	**Petropavlovsk-**	64.63	355	*e*P	P	06 23 01.7	-1.3
KLR	**Kul'dur**	67.29	337	P	P	06 23 20.7	+0.4
	3.8nm,1.0s,baz=121,slow=9.7,SNR=3.8						
ENH	**Enshi**	67.91	309	*e*P	P	06 23 24.8	+0.1
	13nm,0.8s						
CMAR	**Chiang Mai Arr**	71.99	294	P	P	06 23 52.1	+2.2
	1.3nm,0.3s,baz=120,slow=4.3,SNR=4.2						
QSPA	**South Pole Qui**	78.58	180	P	P	06 24 27.1	0.0
	5.9nm,1.0s,baz=19,slow=5.4,SNR=7.1						
BILL	**Bilibino**	79.26	0	*e*P	P	06 24 31.2	+0.7
	8.6nm,0.7s						
HDA	**Harding Lake**	83.70	19	*e*P	P	06 24 54.1	0.0
	18nm,0.8s						
ILAR	**Eielson Array**	83.97	19	P	P	06 24 55.8	+0.3
	2.4nm,0.6s,baz=241,slow=4.7,SNR=16						
ILB	**Eielson Array**	83.97	19	*e*P	P	06 24 55.7	+0.3
	3.8nm,0.8s						
YBH	**Yreka Blue Hor**	84.38	46	*e*P	P	06 24 58.5	+0.3
	16nm,1.1s						
SCRK	**Sand Creek**	84.38	20	*e*P	P	06 24 58.1	+0.4
	13nm,1.2s						
ORV	**Oroville**	84.49	48	*e*P	P	06 24 58.7	0.0
	6.1nm,1.0s						
CMB	**Columbia Colle**	84.82	50	*e*P	P	06 25 00.2	-0.3
	9.1nm,1.1s						
BEKR	**Beckworth**	85.43	48	*e*P	P	06 25 03.8	+0.1
	5.1nm,0.9s						
MDPB	**Devils Postpil**	85.67	50	*e*P	P	06 25 04.9	-0.2
	12nm,1.1s						
WAKR	**Walker**	85.67	50	*e*P	P	06 25 05.0	+0.1
	9.5nm,1.1s						
OMMB	**Old Mammoth Mi**	85.73	50	*e*P	P	06 25 05.1	-0.2
	5.3nm,1.0s						
YERR	**Yerington**	85.97	49	*e*P	P	06 25 06.7	+0.4
	5.4nm,1.1s						
PAHR	**Pah Rah Range**	86.09	48	*e*P	P	06 25 07.0	+0.2
	6.0nm,0.9s						
NV01	**Mina Array Sit**	86.50	50	*e*P	P	06 25 08.1	-0.9
NVAR	**Mina Array Bea**	86.50	50	P	P	06 25 09.1	0.0
	7.3nm,1.0s,baz=231,slow=7.8,SNR=8.9						
NV11	**Mina Array Sit**	86.61	50	*e*P	P	06 25 09.1	-0.4
	0.8nm,1.1s						
KVN	**Kaiserville**	86.84	49	*e*P	P	06 25 10.7	+0.1
	6.7nm,1.0s						
Y12C	**Blythe**	88.14	55	*e*P	P	06 25 17.1	+0.4
	11nm,1.1s						
SHPR	**Sheep Range**	88.36	52	*e*P	P	06 25 19.2	+1.2
	9.1nm,1.2s						
R11A	**Troy Canyon, C**	88.52	51	*e*P	P	06 25 19.6	+0.9
	3.4nm,1.1s						
W13A	**Hualapai Mount**	88.99	54	*e*P	P	06 25 22.3	+1.2
	6.1nm,0.9s						
Y14A	**Wickenburg**	89.41	55	*e*P	P	06 25 22.7	-0.2
	2.2nm,0.9s						
ELK	**Elko**	89.43	48	*e*P	P	06 25 23.0	0.0
	2.7nm,1.1s						
MFID	**Camas Ranch**	89.73	46	*e*P	P	06 25 24.4	+0.2
	2.7nm,0.9s						
PSUT	**Pine Spring**	89.88	51	*e*P	P	06 25 25.4	+0.3
	4.3nm,0.8s						
LCMT	**Little Creek M**	89.97	52	*e*P	P	06 25 25.7	+0.2
	8.2nm,1.0s						
CCUT	**Cedar City**	90.01	52	*e*P	P	06 25 27.3	+1.5
	10nm,1.1s						
SZCU	**Shurtz Canyon**	90.24	52	*e*P	P	06 25 27.4	+0.5
	9.5nm,1.1s						
KNB	**Kanab**	90.30	52	*e*P	P	06 25 26.1	-1.0
	12nm,1.2s						
HLID	**Hailey**	90.76	46	*e*P	P	06 25 29.4	+0.3
	5.7nm,1.0s						
X16A	**Lo Mia Camp, P**	90.78	55	*e*P	P	06 25 30.9	+1.5
	6.7nm,0.9s						
TCRU	**Three Creeks R**	90.97	51	*e*P	P	06 25 32.1	+1.8
	10nm,0.9s						
MTPU	**Mount Pierson**	91.04	52	*e*P	P	06 25 32.3	+1.6
	9.9nm,1.0s						
WUAZ	**Wupatki**	91.09	54	*e*P	P	06 25 31.7	+0.9
	8.8nm,1.0s						
BGU	**Big Grassy Mou**	91.09	49	*e*P	P	06 25 31.6	+1.0
	5.6nm,1.0s						
MSU	**Marysvale**	91.16	51	*e*P	P	06 25 32.9	+1.8
HVU	**Hansel Valley**	91.48	48	*e*P	P	06 25 33.1	+0.7
	14nm,1.0s						
NLU	**North Lily Min**	91.57	50	*e*P	P	06 25 33.5	+0.6
	8.3nm,1.0s						
MPU	**Maple Canyon**	91.91	50	*e*P	P	06 25 35.3	+0.7
	5.0nm,1.1s						
DLMT	**Dillon**	92.47	44	*e*P	P	06 25 37.7	+0.8
	10nm,1.1s						
LRM	**Limekiln Ridge**	92.67	44	*e*P	P	06 25 38.3	+0.3
BOZ	**Bozeman (W)**	93.18	44	*e*P	P	06 25 41.0	+0.8
	6.7nm,1.1s						
BOZ				*e*S	S	06 36 44.3	-1.6
MK01	**Makanchi Array**	93.58	317	*e*P	P	06 25 42.4	+0.5
MK31	**Makanchi Array**	93.60	317	*e*P	P	06 25 43.5	+1.6
	2.4nm,1.0s						
MK32	**Makanchi Array**	93.60	317	*e*P	P	06 25 41.6	-0.3
MKAR	**Makanchi Array**	93.60	317	*e*P	P	06 25 42.2	+0.3
	21nm,1.0s						
MKAR	**Makanchi Array**	93.60	317	P	P	06 25 41.6	-0.3
	2.9nm,1.0s,baz=101,slow=5.9,SNR=5.4						
ZALV	**Zalesovo Beam**	93.69	324	P	P	06 25 41.5	-0.6
	1.4nm,0.7s,baz=116,slow=6.6,SNR=4.7						
ZAA1	**Zalesovo Array**	93.69	324	*e*P	P	06 25 41.5	-0.6
PD31	**Pinedale Array**	94.03	47	*e*P	P	06 25 44.2	-0.1
	3.4nm,1.1s						
PDAR	**Pinedale Array**	94.03	47	*e*P	P	06 25 43.8	-0.5
PDAR	**Pinedale Array**	94.03	47	P	P	06 25 44.2	-0.1
	2.0nm,1.0s,baz=232,slow=1.7,SNR=6.7						
YKA	**Yellowknife Ar**	95.45	27	P	P	06 25 48.6	-1.4
	0.9nm,0.9s,baz=259,slow=4.6,SNR=5.4						
YKB5	**Yellowknife Ar**	95.45	27	*e*P	P	06 25 48.6	-1.4
LTX	**Lajitas**	96.28	61	*e*P	P	06 25 54.5	-0.2
TXAR	**Lajitas Array**	96.28	61	P	P	06 25 54.5	-0.2
	0.4nm,0.7s,baz=237,slow=5.2,SNR=4.0						
ARA0	**ARCESS Array S**	116.63	345	*e*PKPdf	PKiKP	06 31 09.6	+0.4
ARCES	**ARCESS Array B**	116.63	345	PKP	PKiKP	06 31 09.6	+0.4
	1.9nm,0.7s,baz=58,slow=3.0,SNR=3.7						
NB200	**NORSAR Array S**	126.99	345	*e*PKPdf	PKPdf	06 31 29.4	0.0
NOA	**NORSAR Array B**	126.99	345	PKP	PKPdf	06 31 29.4	0.0
	1.1nm,0.9s,baz=34,slow=1.9,SNR=3.0						
BDFB	**Brasilia**	137.34	128	PKP	PKPdf	06 31 50.6	+0.3
	4.4nm,0.8s,baz=155,slow=3.2,SNR=4.2						
KEST	**Kesra**	147.54	322	PKPbc	PKPbc	06 32 10.7	+0.3
	11nm,0.9s,baz=302,slow=1.9,SNR=4.0						
ES19	**SONSECA Array**	150.30	343	*e*PKPbc	PKiKP	06 32 18.3	+0.2
ESDC	**Sonseca Array**	150.34	343	PKPbc	PKiKP	06 32 17.9	-0.3
	2.1nm,0.9s,baz=21,slow=1.6,SNR=5.1						

IDC ***06*** *06:14:23.8±1.1, 11.°06S×164.°81E, h0km, mb4.4/11, mb1 4.5/13, mb1mx4.2/42, mbtmp4.4/13, ML4.1/2, Error ellipse: s-maj=32.1km s-min=19.2km az=105.0*

NEIC ***06*** *06:14:25.4±0.4, 11.°05S×164.°81E, h10km, mb4.7/10, Error ellipse: s-maj=9.2km s-min=5.8km az=83.0*

ISCJB ***06*** *06:14:26.4±0.6, 11.°12S±0.°06×164.°8E±0.°1, h31km, mb4.4/16, Error ellipse: s-maj=15.4km s-min=9.0km az=172.0*

ISC 06 06:14:28.5±0.8**, 11.°09S**±0.°09×**164.°8E**±0.°1**, h31km, n27, σ0.s39**/29**, mb4.5**/17**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	11.03	172	*e*Pn	Pn	06 17 04.2	-0.2
DZM	**Mont Dzumac**	11.03	172	Pn	Pn	06 17 04.5	+0.2
	0.6nm,0.3s,baz=10,slow=17,SNR=3.4						
PINNC	**Pines Island,**	11.74	168	*e*Pn	Pn	06 17 13.3	-0.6
CTA	**Charters Tower**	19.95	241	P	Pn	06 18 59.8	-0.2
	0.5nm,0.3s,baz=72,slow=15,SNR=4.0						
CTAO	**Charters Tower**	19.95	241	*e*P	P	06 18 57.8	-0.4
	18nm,0.9s						
LHI	**Lord Howe Isla**	21.01	194	*e*P	P	06 19 09.8	+0.2
	121nm,1.1s						
COEN	**Coen**	21.28	260	*e*P	P	06 19 13.4	+0.7
	7.2nm,0.8s						
ARMA	**Armidale**	22.79	210	*e*P	P	06 19 28.8	+0.1
	8.5nm,1.0s						
BKZ	**Black Stump Fm**	29.84	162	*e*P	P	06 20 33.4	+0.3
	15nm,1.0s						
WR1	**Warramunga Arr**	30.58	250	*e*P	P	06 20 39.9	0.0
	18nm,0.9s						
WRA	**Warramunga Arr**	30.58	250	P	P	06 20 39.9	0.0
	8.5nm,0.7s,baz=80,slow=8.9,SNR=15						
AS31	**Alice Springs**	31.93	243	*e*P	P	06 20 51.2	-0.4
	1.9nm,0.7s						
ASAR	**Alice Springs**	31.93	243	P	P	06 20 51.2	-0.4
	4.7nm,0.6s,baz=65,slow=10,SNR=16						
ASAR				PcP	PcP	06 23 41.9	+0.1
	1.2nm,0.7s,baz=71,slow=2.5,SNR=6.1						
FITZ	**Fitzroy Crossi**	38.45	255	P	P	06 21 47.7	-0.2
	8.5nm,0.6s,baz=94,slow=7.9,SNR=14						
JNU	**Nakatsue**	54.57	325	*e*P	P	06 23 53.7	-0.4
	19nm,1.1s						
JNU	**Nakatsue**	54.57	325	P	P	06 23 53.7	-0.4
	9.7nm,0.9s,baz=45,slow=4.3,SNR=1.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	58.53	341	P	P	06 24 22.2	+0.2
	5.1nm,0.5s,baz=269,slow=7.2,SNR=4.7						
KSRS	Korea Array	59.38	326	P	P	06 24 28.0	0.0
	0.7nm,0.4s,baz=142,slow=7.3,SNR=2.7						
KSAR	Wonju Array Be	59.40	326	P	P	06 24 28.0	-0.1
USRK	Ussuriysk Ar.	62.57	334	P	P	06 24 50.4	+0.8
	2.1nm,0.6s,baz=127,slow=5.2,SNR=5.0						
SONA0	Songino Array	78.15	324	eP	P	06 26 24.4	-0.4
SONM	Songino Array	78.15	324	P	P	06 26 24.4	-0.4
	0.5nm,0.6s,baz=152,slow=6.4,SNR=3.3						
QSPA	South Pole Qui	78.91	180	eP	P	06 26 29.0	+0.1
	19nm,1.1s						
QSPA				eP	P	06 26 29.2	+0.4
QSPA	South Pole Qui	78.91	180	P	P	06 26 29.2	+0.4
	6.4nm,0.8s,baz=357,slow=1.1,SNR=6.4						
ILAR	Eielson Array	83.86	19	P	P	06 26 54.3	-0.4
	0.5nm,0.8s,baz=225,slow=6.3,SNR=2.9						
MK32	Makanchi Array	92.91	317	eP	P	06 27 39.0	+0.4
MKAR	Makanchi Array	92.91	317	P	P	06 27 39.0	+0.4
	0.5nm,0.6s,baz=93,slow=6.0,SNR=4.1						

IDC 06 06:15:37.7±3.3**,12°.23S×166°.00E,h0**^{km}**,mb3.9**/5**, mb1 4.0**/5**,mb1mx3.7**/41**,mbtmp3.8**/5**,Error ellipse: s-maj=156.4km s-min=31.2km az=141.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.33	252	P	P	06 21 59.2	-0.9
	0.9nm,0.7s,baz=82,slow=8.6,SNR=1.3						
ASAR	Alice Springs	32.50	245	P	P	06 22 11.0	+0.6
	0.7nm,0.8s,baz=66,slow=10.0,SNR=1.3						
ILAR	Eielson Array	84.55	18	P	P	06 28 13.1	+0.7
	0.8nm,0.6s,baz=239,slow=5.3,SNR=7.0						
MKAR	Makanchi Array	94.54	317	P	P	06 29 00.8	+0.5
	0.7nm,0.8s,baz=107,slow=4.8,SNR=2.6						
YKA	Yellowknife Ar	95.90	27	P	P	06 29 04.4	-1.6
	0.1nm,0.3s,baz=262,slow=3.9,SNR=2.1						

IDC 06 06:20:30.7±2.5**,11°.39S×165°.85E,h0**^{km}**,mb4.0**/6**, mb1 4.2**/6**,mb1mx3.9**/39**,mbtmp3.9**/6**,Error ellipse: s-maj=117.5km s-min=25.6km az=140.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.46	250	P	P	06 26 54.4	+0.1
	2.4nm,0.8s,baz=81,slow=8.9,SNR=7.9						
ASAR	Alice Springs	32.73	244	P	P	06 27 05.2	-0.2
	2.7nm,1.0s,baz=74,slow=9.5,SNR=8.5						
SONM	Songino Array	79.00	324	P	P	06 32 36.5	-0.1
	0.2nm,0.5s,baz=134,slow=8.0,SNR=1.9						
ILAR	Eielson Array	83.80	18	P	P	06 33 02.2	+0.6
	0.9nm,0.6s,baz=235,slow=5.4,SNR=13						
INK	Inuvik	90.19	19	P	P	06 33 31.9	-0.7
	1.3nm,1.0s,baz=200,slow=3.2,SNR=3.3						
YKA	Yellowknife Ar	95.23	27	P	P	06 33 55.1	-0.8
	0.2nm,0.6s,baz=262,slow=4.4,SNR=4.4						
ARCES	ARCESS Array B	116.69	345	PKP	PKiKP	06 39 16.8	+0.3
	2.2nm,0.9s,baz=46,slow=3.9,SNR=1.8						

*ISCJB **06** 06:20:57.7±1.6, 11°.4S±0°.4×165°.8E±0°.3, h10^{km}, mb4.4/16, Error ellipse: s-maj=60.0km s-min=16.2km az=146.5*

*IDC **06** 06:20:57.1±2.1, 11°.37S×165°.91E, h0^{km}, mb4.3/8, mb1 4.4/8, mb1mx4.0/39, mbtmp4.2/8, Error ellipse: s-maj=84.9km s-min=29.8km az=150.0*

*NEIC **06** 06:20:58.8±0.9, 11°.38S×165°.88E, h10^{km}, mb4.6/9, Error ellipse: s-maj=36.3km s-min=11.1km az=146.0*

ISC 06 06:20:58.3±2.0**,11°.5S**±0°.4×**166°.0E**±0°.3**,h10**^{km}**,n22, σ0ˢ.73**/22**,mb4.5**/16**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WR1	Warramunga Arr	31.54	251	eP	P	06 27 21.6	+0.4
	3.7nm,0.9s						
WRA	Warramunga Arr	31.55	251	P	P	06 27 21.6	+0.4
	2.2nm,0.8s,baz=80,slow=9.2,SNR=6.7						
CMAR	Chiang Mai Arr	72.47	294	P	P	06 32 25.4	-0.3
	1.2nm,0.4s,baz=128,slow=4.8,SNR=5.2						
SONA0	Songino Array	79.12	324	eP	P	06 33 02.8	-0.6
SONM	Songino Array	79.12	324	P	P	06 33 02.8	-0.6
	0.5nm,0.8s,baz=149,slow=5.1,SNR=3.5						
BILL	Bilibino	79.29	0	eP	P	06 33 03.5	-0.1
	4.8nm,0.9s						
CAST	Castle Rocks	81.27	18	eP	P	06 33 15.9	+1.5
	3.2nm,0.7s						
WRH	Wood River Hil	83.25	18	eP	P	06 33 25.7	+0.9
	3.7nm,0.8s						
MDM	Murphy Dome	83.56	18	eP	P	06 33 26.7	+0.4
	6.0nm,1.0s						
HDA	Harding Lake	83.56	19	eP	P	06 33 26.8	+0.4
	9.9nm,0.9s						
COLA	College	83.61	18	eP	P	06 33 27.1	+0.5
	7.9nm,0.7s						
ILAR	Eielson Array	83.83	18	P	P	06 33 27.6	-0.1
	1.6nm,0.7s,baz=230,slow=6.2,SNR=12						
ILB	Eielson Array	83.83	18	eP	P	06 33 27.6	-0.1
	1.9nm,0.8s						
SCRK	Sand Creek	84.23	20	eP	P	06 33 30.6	+0.7
	5.3nm,1.1s						
TIXI	Tiksi	86.53	349	P	P	06 33 42.3	+1.2
	3.7nm,0.5s,baz=288,slow=2.4,SNR=6.1						
DLBC	Dease Lake	86.67	28	P	P	06 33 43.1	+1.0
	3.3nm,1.1s,baz=163,slow=11,SNR=2.2						
MK32	Makanchi Array	93.97	317	eP	P	06 34 16.4	-0.3
MKAR	Makanchi Array	93.97	317	P	P	06 34 16.4	-0.3
	1.3nm,0.7s,baz=104,slow=5.8,SNR=8.0						
YKA	Yellowknife Ar	95.24	27	P	P	06 34 20.6	-1.4
	0.1nm,0.5s,baz=54,slow=3.6,SNR=3.5						
ARA0	ARCESS Array S	116.78	345	ePKPdf	PKiKP	06 39 42.5	-0.1
ARCES	ARCESS Array B	116.78	345	PKP	PKiKP	06 39 42.5	-0.1
	1.7nm,0.8s,baz=326,slow=4.7,SNR=4.1						
ESDC	Sonseca Array	150.51	344	PKPbc	PKiKP	06 40 50.9	-0.7
	0.3nm,0.5s,baz=40,slow=2.2,SNR=3.3						

*IDC **06** 06:21:31.8±1.5, 11°.65S×165°.16E, h0^{km}, mb4.0/8, mb1 4.3/8, mb1mx3.9/39, mbtmp3.9/8, Error ellipse: s-maj=69.6km s-min=24.6km az=148.0*

*ISCJB **06** 06:21:35.4±1.2, 11°.8S±0°.4×165°.1E±0°.2, h34^{km}, mb3.9/8, Error ellipse: s-maj=57.8km s-min=19.8km az=149.2*

ISC 06 06:21:36.9±1.4**,11°.7S**±0°.4×**165°.2E**±0°.3**,h34**^{km}**,n8, σ0ˢ.68**/8**,mb3.9**/8**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.72	251	P	P	06 27 48.5	-0.5
	1.1nm,0.5s,baz=80,slow=8.9,SNR=5.5						
ASAR	Alice Springs	31.98	244	P	P	06 28 00.6	+0.4
	1.1nm,0.8s,baz=72,slow=10,SNR=3.5						
SONM	Songino Array	78.85	324	P	P	06 33 36.4	-0.3
	0.5nm,0.7s,baz=143,slow=3.6,SNR=3.9						
ILAR	Eielson Array	84.31	19	P	P	06 34 05.7	+0.7
	1.1nm,0.7s,baz=238,slow=5.5,SNR=5.0						
NVAR	Mina Array Bea	86.89	50	P	P	06 34 19.1	+0.4
	0.8nm,0.7s,baz=236,slow=6.7,SNR=4.6						
MKAR	Makanchi Array	93.60	317	P	P	06 34 50.2	+0.5
	0.5nm,0.8s,baz=101,slow=6.0,SNR=2.2						
YKA	Yellowknife Ar	95.81	27	P	P	06 34 58.5	-0.9
	0.4nm,0.8s,baz=255,slow=4.6,SNR=5.9						
TXAR	Lajitas Array	96.65	62	P	P	06 35 03.9	-0.3
	0.2nm,0.7s,baz=245,slow=2.6,SNR=3.8						

IDC 06 06:23:12.2±3.5**,11°.26S×165°.33E,h0**^{km}**,mb3.7**/3**, mb1 4.1**/3**,mb1mx3.6**/39**,mbtmp3.7**/3**,Error ellipse: s-maj=181.8km s-min=37.7km az=143.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.02	250	P	P	06 29 31.9	0.0
	0.7nm,0.5s,baz=81,slow=8.9,SNR=4.3						
ILAR	Eielson Array	83.84	19	P	P	06 35 44.2	+0.9
	0.4nm,0.6s,baz=233,slow=4.8,SNR=4.9						
YKA	Yellowknife Ar	95.35	27	P	P	06 36 36.6	-1.4
	0.1nm,0.7s,baz=263,slow=5.4,SNR=2.2						

*ISCJB **06** 06:24:46.2±1.0, 11°.6S±0°.1×164°.8E±0°.2, h10^{km}, mb3.9/6, Error ellipse: s-maj=27.8km s-min=18.8km az=0.1*

*IDC **06** 06:24:46.9±1.2, 11°.39S×164°.70E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/38, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=41.0km s-min=24.5km az=134.0*

ISC 06 06:24:48.1±0.9**,11°.5S**±0°.1×**164°.7E**±0°.2**,h10**^{km}**,n7, σ1ˢ.32**/7**,mb4.0**/6**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.65	171	Pn	Pn	06 27 20.4	-0.5
	0.4nm,0.3s,baz=353,slow=18,SNR=2.9						
WRA	Warramunga Arr	30.40	250	P	P	06 31 01.4	+0.6
	2.3nm,0.7s,baz=80,slow=9.1,SNR=11						
ASAR	Alice Springs	31.70	243	P	P	06 31 13.1	+0.8
	2.6nm,0.8s,baz=73,slow=9.2,SNR=16						
SONM	Songino Array	78.44	324	P	P	06 36 49.3	-0.1
	0.6nm,0.9s,baz=139,slow=9.8,SNR=4.5						
ILAR	Eielson Array	84.25	19	P	P	06 37 18.6	-1.1
	0.4nm,0.7s,baz=226,slow=5.7,SNR=4.3						
NVAR	Mina Array Bea	87.07	50	P	P	06 37 36.4	+1.8
	0.1nm,0.3s,baz=240,slow=1.8,SNR=3.3						
MKAR	Makanchi Array	93.17	317	P	P	06 38 01.7	-1.0
	1.3nm,0.8s,baz=103,slow=5.2,SNR=9.0						

*SOME **06** 06:26:17.3, 42°.60N×79°.62E, h5^{km}*

*KRNET **06** 06:26:18.6±0.1, 42°.68N×79°.58E, h16^{km}, mb2.6*

*NNC **06** 06:26:19.6±1.1, 42°.74N×79°.62E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=6.7km s-min=4.2km az=142.0*

ISC 06 06:26:18.7±2.1**,42°.68N**±0°.06×**79°.60E**±0°.08**,h6**^{km}±12^{km}**, n14,σ0ˢ.73**/25**,6C-4D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.63	318	P	Pg	06 26 31.6	+0.6
	0.8nm,0.2s						
UZB				S	Sg	06 26 40.2	+0.9
	11nm,0.3s						
UZB	Uzynbulak	0.63	318	eP	Pg	06 26 31.1	+0.1
	1.0nm,0.1s						
UZB				eS	Sb	06 26 40.9	-0.6
	9.5nm,0.3s						
PDGK	Podgornoye	0.66	353	P	Pg	06 26 31.2	-0.2
	1.4nm,0.2s						
PDGK				S	Sg	06 26 39.7	-0.2
	1.3nm,0.2s						
PDGK	Podgornoye	0.66	353	⇑iP	Pg	06 26 30.7	-0.7
	baz=54						
PDGK				⇑iS	Sg	06 26 40.5	+0.6
	baz=54						
PRZ	Przheval'sk	0.91	258	⇑iP	Pg	06 26 35.5	-0.7
	baz=58						
PRZ				⇑iS	Sg	06 26 47.3	-0.7
	baz=58						
SATY	Saty	0.96	294	P	Pb	06 26 37.7	-0.1
	2.7nm,0.2s						
SATY				S	Sb	06 26 50.7	-0.2
	6.5nm,0.1s						
SATY	Saty	0.96	294	eP	Pg	06 26 36.7	-0.4
	6.2nm,0.1s						
SATY				eS	Sb	06 26 50.5	-0.4
	11nm,0.3s						
KDJ	Kajisay	1.88	254	⇑iP	Pn	06 26 52.6	+1.1
	baz=53						
KDJ				⇑iS	Sb	06 27 17.1	-0.2
	baz=53						
ARXS	Arharly	2.00	320	Pg	Pg	06 26 56.5	-0.6
	0.9nm,0.4s						
ARXS				Lg	Lg	06 27 22.9	
	4.8nm,0.3s						
ARXS	Arharly	2.00	320	eP	Pb	06 26 55.1	-0.6
	1.2nm,0.5s						
ARXS				eS	Sg	06 27 22.7	-0.4
	5.2nm,0.3s						
KTBS	Karatobe	2.37	297	Pg	Pb	06 27 03.0	+1.2
	1.0nm,0.4s						
KTBS				Lg	Lg	06 27 34.0	
	5.2nm,0.3s						
KAPS	Kapalarasan	2.61	356	Pg	Pb	06 27 05.7	-0.2
	0.6nm,0.4s						
KAPS				Lg	Lg	06 27 38.7	
	1.1nm,0.5s						
BOOM	Boomskoye usch	2.71	267	⇓iP	Pn	06 27 03.6	+0.6
	baz=67						
BOOM				⇓iS	Sn	06 27 36.8	+0.6
	baz=67						
TKM2	Tokmak 2	2.96	276	⇓iP	Pn	06 27 07.2	+0.8
	baz=76						
TKM2				⇓iS	Sn	06 27 40.7	-1.6
	baz=76						

*IDC **06** 06:27:12.1±1.8, 10°.58S×164°.36E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.9/39, mbtmp3.9/9, ML4.8/1, Error ellipse: s-maj=51.1km s-min=23.0km az=122.0*

*ISCJB **06** 06:27:14.7±1.2, 10°.5S±0°.2×164°.2E±0°.2, h24^{km}, mb3.8/8, Error ellipse: s-maj=28.2km s-min=18.1km az=37.0*

ISC 06 06:27:16.6±1.4**,10°.5S**±0°.2×**164°.2E**±0°.2**,h24**^{km}**,n15, σ1ˢ.12**/9**,mb4.0**/8**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.31	284	Pn	Pn	06 28 20.1	-0.7
	46nm,0.3s,baz=213,slow=9.9,SNR=4.0						
H11S2	WAKE ISLAND Hy	28.92	5	T	T	07 03 30.5	
	baz=184,slow=76,SNR=8.3						
H11S3	WAKE ISLAND Hy	28.92	5	T	T	07 03 27.8	
	baz=184,slow=76,SNR=8.8						
H11S1	WAKE ISLAND Hy	28.93	5	T	T	07 03 34.1	
	baz=184,slow=76,SNR=7.9						
STKA	Stephens Creek	29.81	221	P	P	06 33 22.7	+0.9
	2.4nm,0.7s,baz=24,slow=9.3,SNR=4.9						
H11N1	WAKE ISLAND Hy	30.14	5	T	T	07 05 02.1	
	baz=184,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy	30.15	5	T	T	07 05 04.3	
	baz=184,slow=76,SNR=7.0						
H11N2	WAKE ISLAND Hy	30.16	5	T	T	07 05 03.6	
	baz=184,slow=76,SNR=6.5						
WRA	Warramunga Arr	30.25	248	P	P	06 33 25.6	-0.3
	0.5nm,0.5s,baz=80,slow=9.4,SNR=7.0						
ASAR	Alice Springs	31.68	242	P	P	06 33 38.0	-0.6
	0.5nm,0.6s,baz=63,slow=9.9,SNR=6.1						
MJAR	Matsushiro Arr	52.80	334	P	P	06 36 31.1	+1.0
	0.9nm,0.4s,baz=171,slow=8.6,SNR=3.5						
KLR	Kul'dur	65.96	337	P	P	06 38 01.6	+0.8
	1.0nm,0.7s,baz=151,slow=1.4,SNR=4.7						
SONM	Songino Array	77.33	324	P	P	06 39 10.5	+1.1
	0.5nm,0.8s,baz=148,slow=8.7,SNR=3.8						
ILAR	Eielson Array	83.50	19	P	P	06 39 40.5	-1.5
	0.7nm,0.7s,baz=246,slow=5.5,SNR=6.8						
MKAR	Makanchi Array	92.08	317	P	P	06 40 23.1	-0.9
	0.5nm,0.6s,baz=85,slow=6.6,SNR=3.7						

IDC 06 06:28:17.1±3.9**,11°.83S×165°.60E,h0**^{km}**,mb3.6**/4**, mb1 3.8**/4**,mb1mx3.5**/39**,mbtmp3.6**/4**,Error ellipse: s-maj=157.2km s-min=36.4km az=137.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.09	251	P	P	06 34 38.2	+0.7
	0.5nm,0.6s,baz=82,slow=8.6,SNR=4.5						
ASAR	Alice Springs	32.33	244	P	P	06 34 47.5	-0.8
	0.5nm,0.8s,baz=74,slow=9.8,SNR=1.7						
ILAR	Eielson Array	84.29	19	P	P	06 40 50.8	+0.2
	0.2nm,0.7s,baz=238,slow=5.0,SNR=1.4						
MKAR	Makanchi Array	93.99	317	P	P	06 41 36.8	-0.4
	0.5nm,0.8s,baz=99,slow=6.6,SNR=2.0						

IDC 06 06:29:39.4±5.0**,11°.77S×165°.10E,h0**^{km}**,mb3.4**/3**, mb1 3.7**/3**,mb1mx3.4**/39**,mbtmp3.4**/3**,Error ellipse: s-maj=250.2km s-min=37.9km az=139.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.65	251	P	P	06 35 56.0	+0.1
	0.3nm,0.7s,baz=82,slow=9.3,SNR=1.9						
ASAR	Alice Springs	31.91	244	P	P	06 36 06.8	-0.1
	0.5nm,0.6s,baz=65,slow=10.0,SNR=4.1						
ILAR	Eielson Array	84.40	19	P	P	06 42 13.4	0.0
	0.3nm,0.9s,baz=237,slow=4.2,SNR=1.5						

IDC 06 06:31:07.0±1.8**,10°.76S×165°.21E,h0**^{km}**,mb3.6**/4**, mb1 3.9**/5**,mb1mx3.6**/44**,mbtmp3.7**/5**,ML3.7**/1**,Error ellipse: s-maj=52.9km s-min=33.2km az=117.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.31	174	Pn	Pn	06 33 49.9	-0.2
	0.5nm,0.3s,baz=332,slow=20,SNR=7.3						
WRA	Warramunga Arr	31.09	249	P	P	06 37 28.1	+0.7
	1.7nm,0.7s,baz=81,slow=9.1,SNR=2.4						
ASAR	Alice Springs	32.45	243	P	P	06 37 39.2	-0.1
	0.5nm,0.8s,baz=75,slow=8.7,SNR=3.4						
ILAR	Eielson Array	83.41	19	P	P	06 43 36.7	+0.8
	0.2nm,0.6s,baz=230,slow=6.9,SNR=1.9						
MKAR	Makanchi Array	92.95	317	P	P	06 44 21.2	-1.1
	0.2nm,0.8s,baz=85,slow=5.1,SNR=2.3						

*IDC **06** 06:33:23.4±0.9, 11°.31S×165°.36E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.0/49, mbtmp4.1/11, ML3.9/1, Error ellipse: s-maj=37.3km s-min=19.0km az=136.0*

*ISCJB **06** 06:33:25.5±0.5, 11°.42S±0°.07×165°.31E±0°.09, h24^{km}, mb4.0/11, Error ellipse: s-maj=13.7km s-min=9.8km az=23.6*

*NEIC **06** 06:33:25.1±0.3, 11°.31S×165°.33E, h10^{km}, mb4.3/4, Error ellipse: s-maj=9.7km s-min=7.2km az=114.0*

ISC 06 06:33:27.2±0.7**,11°.3S**±0°.1×**165°.3E**±0°.1**,h24**^{km}**,n23, σ0ˢ.76**/22**,mb4.2**/11**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.74	174	Pn	Pn	06 35 58.8	-1.0
	0.9nm,0.3s,baz=303,slow=19,SNR=7.4						
PINNC	Pines Island,	11.41	170	ePn	Pn	06 36 09.1	+0.3
MANU	Manus Island	20.05	296	eP	P	06 37 57.4	-1.5
	244nm,0.1s						
KWAJ	Kwajalein Atol	20.12	7	eP	Pn	06 38 00.6	-0.9
	163nm,0.8s						
CTA	Charters Tower	20.30	242	P	P	06 38 02.0	+0.4
	9.7nm,1.0s,baz=23,slow=13,SNR=2.3						
STKA	Stephens Creek	29.96	223	P	P	06 39 34.3	+0.6
	1.4nm,0.3s,baz=17,slow=13,SNR=2.8						
WB2	Warramunga Arr	30.99	250	eP	P	06 39 43.9	+0.9
WR1	Warramunga Arr	31.00	250	eP	P	06 39 43.1	0.0
	7.8nm,1.1s						
WRA	Warramunga Arr	31.00	250	P	P	06 39 43.1	0.0
	2.3nm,0.8s,baz=80,slow=9.2,SNR=9.2						
ASAR	Alice Springs	32.30	243	P	P	06 39 53.9	-0.7
	1.3nm,0.8s,baz=71,slow=9.6,SNR=7.7						
SONA0	Songino Array	78.64	324	eP	P	06 45 28.3	+1.0
SONM	Songino Array	78.64	324	P	P	06 45 28.3	+1.0
	0.6nm,0.8s,baz=124,slow=7.7,SNR=3.3						
ILAR	Eielson Array	83.90	19	P	P	06 45 54.2	-0.5
	1.7nm,0.6s,baz=247,slow=5.3,SNR=26						
ILB	Eielson Array	83.90	19	eP	P	06 45 55.3	+0.6
	2.3nm,0.8s						
NVAR	Mina Array Bea	86.52	50	P	P	06 46 09.1	+0.3
	1.6nm,1.0s,baz=217,slow=8.4,SNR=4.5						
NV01	Mina Array Sit	86.52	50	eP	P	06 46 09.1	+0.3
MK31	Makanchi Array	93.44	317	eP	P	06 46 41.5	+0.7
	0.8nm,0.8s						
MK32	Makanchi Array	93.44	317	eP	P	06 46 40.6	-0.1
MKAR	Makanchi Array	93.44	317	P	P	06 46 40.6	-0.1
	1.1nm,0.7s,baz=89,slow=6.3,SNR=10						
YKA	Yellowknife Ar	95.41	27	P	P	06 46 48.3	-1.1
	0.4nm,0.8s,baz=261,slow=4.7,SNR=6.2						
YKB5	Yellowknife Ar	95.41	27	eP	P	06 46 48.3	-1.1
LTX	Lajitas	96.33	61	eP	P	06 46 54.7	+0.2
TXAR	Lajitas Array	96.33	61	P	P	06 46 54.7	+0.2
	0.1nm,0.6s,baz=258,slow=4.3,SNR=3.2						

*IDC **06** 06:35:17.2±0.4, 10°.77S×164°.63E, h0^{km}, mb5.5/41, mb1 5.5/44, mb1mx5.4/49, mbtmp5.4/44, ML5.3/3, MS5.8/17, Ms1 5.8/17, ms1mx5.7/22, Error ellipse: s-maj=13.3km s-min=10.7km az=93.0*

*BJI **06** 06:35:18.0, 10°.71S×164°.52E, h6^{km}, mB6.0/73, mb5.7/63, Ms6.1/90, Ms7 5.9/85*

*NEIC **06** 06:35:19.2±0.1, 10°.79S×164°.55E, h10^{km}, mb5.7/257, MS5.9/297, Error ellipse: s-maj=3.5km s-min=3.1km az=137.0*

*ISCJB **06** 06:35:20.6±0.1, 10°.82S±0°.02×164°.52E±0°.02, h29^{km}, mb5.6/335, MS5.9/554, Error ellipse: s-maj=2.9km s-min=2.6km az=159.2*

*MOS **06** 06:35:20.1±0.9, 10°.78S×164°.48E, h25^{km}, mb5.9/78, MS5.8/39, Error ellipse: s-maj=7.1km s-min=5.9km az=102.5*

*GCMT **06** 06:35:23.2±0.2, 10°.69S±0°.01×164°.43E±0°.01, h13^{km}±1^{km}, MW6.1/123, Moment Tensor Solution. s23,c27; s123,c220; Duration: 2ˢ.7 Moment tensor: Scale 10^{18} Nm; M_{rr}0.23±.05; $M_{\theta\theta}$1.34±.04; $M_{\phi\phi}$-1.57±.05; $M_{r\theta}$0.24±.14; $M_{\theta\phi}$0.86±.04; $M_{\phi r}$-0.52±.15; Best double couple: $M_0$1.76500×10^{18} NP1:ϕ_s299.00000°,δ83.00000°, λ-14.00000°. NP2:ϕ_s31.00000°,δ77.00000°, λ-173.00000°. Principal axes: T 1.5820, Plg5.0000°, Azm346.0000°; N 0.3720, Plg75.0000°, Azm92.0000°; P -1.9490, Plg14.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 06:35:22.0±0.2**,10°.86S**±0°.03×**164°.61E**±0°.04**,h29**^{km}**, n1224,σ1ˢ.71**/963**,mb5.7**/339**,MS5.9**/555**,62C-14D,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.81	287	ePn	Pn	06 36 30.7	-1.8
HNR				eSn	Sn	06 37 27.0	-0.3
HNR				eSn	Sn	06 37 27.6	+0.2
HNR	Honiara	4.81	287	Pn	Pn	06 36 30.7	-1.8
	478nm,0.3s,baz=152,slow=8.4,SNR=34						
HNR				Sn	Sn	06 37 27.0	-0.3
	baz=344,slow=20,SNR=2.3						
MARNC	Mare, Loyalty	11.06	163	ePn	Pn	06 37 58.9	+0.6
DZM	Mont Dzumac	11.29	171	ePn	Pn	06 38 00.3	-1.2
	2µm,1.4s						
DZM				eLR	LR	06 40 25.0	
	comp=Z,199µm,23.6s						
DZM	Mont Dzumac	11.29	171	ePn	Pn	06 38 01.5	0.0
DZM				eSn	Sn	06 40 07.4	+0.7
DZM	Mont Dzumac	11.29	171	Pn	Pn	06 38 00.7	-0.8
	20nm,0.3s,baz=33,slow=11,SNR=46						
DZM				Sn	Sn	06 40 07.4	+0.7
	2.0nm,0.3s,baz=354,slow=17,SNR=2.0						
ONTNC	Ouen Toro	11.52	171	ePn	Pn	06 38 04.5	-0.1
PINNC	Pines Island,	12.00	167	ePn	Pn	06 38 11.0	-0.1
RABL	Rabaul	14.00	297	ePn	Pn	06 38 36.1	-2.5
FUNA	Funafuti	14.56	82	ePn	Pn	06 38 47.2	+1.0
TARA	Tarawa	14.68	35	ePn	Pn	06 38 46.1	-1.8
MSVF	Nonsavu	14.70	119	ePn	P	06 38 51.4	-2.6
MSVF	Nonsavu	14.70	119	eP	P	06 38 51.4	-2.6
PATS	Pohnpei	18.67	340	P	P	06 39 37.0	-0.9
	baz=19,SNR=6.0						
PATS	Pohnpei	18.67	340	eP	P	06 39 36.9	-0.9
	670nm,1.2s						
MANU	Manus Island	19.23	296	eP	P	06 39 43.9	-0.3
	7µm,1.7s						
EIDS	Eidsvold	19.30	220	P	Pn	06 39 45.7	-0.3
	baz=19,SNR=38						
EIDS	Eidsvold	19.30	220	eP	Pn	06 39 47.1	+1.0
	390nm,1.0s						
KWAJ	Kwajalein Atol	19.76	9	eP	Pn	06 39 50.8	-0.7
	6µm,1.9s						
KWAJ	Kwajalein Atol	19.76	9	eP	Pn	06 39 50.8	-0.7
KWAJ				pmax	pmax		
	comp=Z,6µm,1.9s						
CTA	Charters Tower	19.91	240	eP	P	06 39 51.0	-0.6
CTA	Charters Tower	19.91	240	P	P	06 39 51.0	-0.6
	comp=Z,2.5nm,0.3s,baz=68,slow=13,SNR=39						
CTA				LR	LR	06 46 30.3	
	comp=Z,20µm,20.5s,baz=60,slow=34						
CTAO	Charters Tower	19.91	240	eP	P	06 39 51.2	-0.4
	comp=Z,712nm,1.1s						
CTAO	Charters Tower	19.91	240	eP	P	06 39 51.2	-0.4
CTAO				pmax	pmax		
	comp=Z,712nm,1.1s						
MTSU	Mount Surprise	20.93	247	P	P	06 40 01.3	-1.4
	baz=21,SNR=17						
COEN	Coen	21.16	259	P	P	06 40 02.7	-2.5
	baz=21,SNR=65						
COEN	Coen	21.16	259	eP	P	06 40 03.8	-1.4
	comp=Z,232nm,0.9s						
LHI	Lord Howe Isla	21.19	193	P	P	06 40 07.3	+2.0
	baz=21,SNR=7.4						

LHI	**Lord Howe Isla**	**21.19**	**193**	*e*P	**P**	**06 40 05.8**	**+0.5**
	comp=Z,969nm,1.3s						
RMQ	**Roma**	**21.58**	**222**	P	**P**	**06 40 10.7**	**+1.2**
	baz=22,SNR=75						
ARMA	**Armidale**	**22.90**	**210**	P	**P**	**06 40 25.0**	**+1.2**
	baz=23,SNR=18						
ARMA	**Armidale**	**22.90**	**210**	*e*P	**P**	**06 40 25.0**	**+1.2**
	comp=Z,394nm,1.3s						
RAO	**Raoul Island**	**24.52**	**141**	PFAKE		06 40 50.0	+11
RAO				LR	LR		
	comp=Z,10µm,20.0s						
QLP	**Quilpie**	**24.78**	**228**	P	**P**	**06 40 40.7**	**-0.8**
	baz=25,SNR=50						
KNTN	**Kanton**	**24.82**	**73**	*e*P	**P**	**06 40 41.1**	**-0.8**
	comp=Z,506nm,1.1s						
KNTN				LR	LR		
	comp=Z,27µm,22.0s						
JAY	**Jayapura**	**25.13**	**288**	P	**P**	**06 40 43.3**	**-1.6**
	comp=Z,2µm,1.2s,comp=Z,45µm						
MGCD	**Mangrove Creek**	**25.47**	**207**	P	**P**	**06 40 49.9**	**+2.2**
	baz=26,SNR=15						
OUZ	**Omahuta**	**25.59**	**163**	*e*P	**P**	**06 40 49.5**	**+0.7**
	comp=Z,255nm,1.4s						
QIS	**Mount Isa**	**25.90**	**245**	P	**P**	**06 40 51.6**	**-0.2**
	baz=26,SNR=18						
RIV	**Riverview**	**25.97**	**206**	P	**P**	**06 40 54.5**	**+2.2**
	baz=26,SNR=7.8						
CMSA	**Cobar Meteorol**	**27.02**	**218**	P	**P**	**06 41 01.3**	**-0.4**
	baz=27,SNR=31						
YNG	**Young**	**27.64**	**210**	P	**P**	**06 41 08.5**	**+1.2**
	baz=28,SNR=23						
CNB	**Canberra Magne**	**28.02**	**207**	P	**P**	**06 41 12.0**	**+1.3**
	baz=28,SNR=6.9						
CAN	**Canberra**	**28.19**	**208**	*e*P	**P**	**06 41 13.0**	**+0.8**
	comp=Z,93nm,1.2s						
CAN				LR	LR		
	comp=Z,14µm,20.0s						
CAN	**Canberra**	**28.19**	**208**	*e*P	**P**	**06 41 13.0**	**+0.8**
CAN				pmax	pmax		
	comp=Z,93nm,1.2s						
CAN				MLR	MLR		
	comp=Z,14µm,20.0s						
HIZ	**Hauiti**	**29.02**	**163**	*e*P	**P**	**06 41 20.4**	**+0.9**
	comp=Z,297nm,1.5s						
HIZ				LR	LR		
	comp=Z,18µm,18.0s						
H11S2	**WAKE ISLAND Hy**	**29.24**	**4**	T	T	07 11 43.3	
	baz=184,slow=76,SNR=92						
H11S3	**WAKE ISLAND Hy**	**29.24**	**4**	T	T	07 11 42.5	
	baz=184,slow=76,SNR=62						
H11S1	**WAKE ISLAND Hy**	**29.25**	**4**	T	T	07 11 39.3	
	baz=184,slow=76,SNR=103						
MXZ	**Matakaoa Point**	**29.30**	**157**	*e*P	**P**	**06 41 23.9**	**+1.9**
	comp=Z,207nm,1.2s						
URZ	**Urewera**	**29.49**	**160**	*e*P	**P**	**06 41 23.3**	**-0.4**
URZ				*e*P	**P**	**06 41 26.4**	**+2.7**
URZ				LR	LR		
	comp=Z,34µm,18.0s						
URZ	**Urewera**	**29.49**	**160**	P	**P**	**06 41 23.3**	**-0.4**
	comp=Z,31nm,1.0s,baz=10,slow=23,SNR=3.4						
URZ	**Urewera**	**29.49**	**160**	P	**P**	**06 41 26.8**	**+3.1**
MWZ	**Matawai**	**29.70**	**159**	P	**P**	**06 41 28.2**	**+2.6**
PUZ	**Puketiti**	**29.73**	**158**	P	**P**	**06 41 27.2**	**+1.3**
WTVZ	**West Tongariro**	**29.79**	**163**	P	P	06 41 33.2	+6.7
STKA	**Stephens Creek**	**29.82**	**222**	P	**P**	**06 41 27.6**	**+0.9**
	baz=30,SNR=21						
STKA	**Stephens Creek**	**29.82**	**222**	*e*P	**P**	**06 41 26.6**	**-0.1**
	comp=Z,112nm,1.8s						
STKA				LR	LR		
	comp=Z,6µm,19.0s						
STKA	**Stephens Creek**	**29.82**	**222**	*e*P	**P**	**06 41 26.6**	**-0.1**
STKA				pmax	pmax		
	comp=Z,112nm,1.8s						
STKA				MLR	MLR		
	comp=Z,6µm,19.0s						
STKA	**Stephens Creek**	**29.82**	**222**	P	**P**	**06 41 26.0**	**-0.7**
	comp=Z,11nm,0.8s,baz=12,slow=9.6,SNR=7.5						
NGZ	**Ngauruhoe**	**29.85**	**163**	P	P	06 41 39.5	+12
MTHZ	**Maungataniwha**	**29.94**	**161**	P	**P**	**06 41 31.8**	**+4.1**
WAKE	**Wake Island**	**30.02**	**4**	PFAKE		06 41 40.0	+12
WAKE				LR	LR		
	comp=Z,18µm,18.0s						
SNGZ	**Shannon Statio**	**30.04**	**160**	P	**P**	**06 41 30.3**	**+1.7**
RAHZ	**Arahi**	**30.07**	**160**	P	P	06 41 34.6	+5.7
MOVZ	**Moawhango**	**30.11**	**163**	P	P	06 41 34.2	+5.0
BKZ	**Black Stump Fm**	**30.11**	**161**	*e*P	**P**	**06 41 31.3**	**+2.1**
	comp=Z,305nm,1.6s						
BKZ				LR	LR		
	comp=Z,26µm,21.0s						
BKZ	**Black Stump Fm**	**30.11**	**161**	P	**P**	**06 41 31.4**	**+2.1**
RIGZ	**Rimuhau**	**30.12**	**159**	P	**P**	**06 41 33.2**	**+3.9**
NMHZ	**Naumai**	**30.15**	**161**	P	**P**	**06 41 34.0**	**+4.4**
BHHZ	**Black Hill Sta**	**30.28**	**162**	P	P	06 41 36.3	+5.6
KWHZ	**Kaweka Forest**	**30.33**	**162**	P	**P**	**06 41 34.0**	**+2.8**
WR0	**Warramunga Arr**	**30.33**	**249**	PFAKE		06 41 40.0	+8.6
WR0				LR	LR		
	comp=Z,38µm,18.0s						
WR9	**Warramunga Arr**	**30.35**	**249**	PFAKE		06 41 40.0	+8.4
WR9				LR	LR		
	comp=Z,32µm,18.0s						
WR8	**Warramunga Arr**	**30.36**	**249**	PFAKE		06 41 40.0	+8.3
WR8				LR	LR		
	comp=Z,38µm,18.0s						
WR7	**Warramunga Arr**	**30.38**	**249**	PFAKE		06 41 40.0	+8.1
WR7				LR	LR		
	comp=Z,33µm,18.0s						
WR6	**Warramunga Arr**	**30.40**	**249**	PFAKE		06 41 40.0	+8.0
WR6				LR	LR		
	comp=Z,37µm,18.0s						
WB0	**Warramunga Arr**	**30.42**	**249**	PFAKE		06 41 40.0	+7.8
WB0				LR	LR		
	comp=Z,32µm,20.0s						
WR5	**Warramunga Arr**	**30.43**	**249**	PFAKE		06 41 40.0	+7.8
WR5				LR	LR		
	comp=Z,33µm,19.0s						
WB9	**Warramunga Arr**	**30.43**	**249**	PFAKE		06 41 40.0	+7.7
WB9				LR	LR		
	comp=Z,67µm,19.0s						
WB8	**Warramunga Arr**	**30.44**	**249**	PFAKE		06 41 40.0	+7.6
WB8				LR	LR		
	comp=Z,33µm,19.0s						
WR4	**Warramunga Arr**	**30.45**	**249**	PFAKE		06 41 40.0	+7.6
WR4				LR	LR		
	comp=Z,32µm,19.0s						
WB6	**Warramunga Arr**	**30.46**	**249**	PFAKE		06 41 40.0	+7.4
WB6				LR	LR		
	comp=Z,33µm,19.0s						
H11N1	**WAKE ISLAND Hy**	**30.46**	**4**	T	T	07 13 18.3	
	baz=184,slow=76,SNR=87						
WR3	**Warramunga Arr**	**30.46**	**249**	PFAKE		06 41 40.0	+7.4
WR3				LR	LR		
	comp=Z,33µm,19.0s						
WB5	**Warramunga Arr**	**30.47**	**249**	PFAKE		06 41 40.0	+7.4
WB5				LR	LR		
	comp=Z,33µm,19.0s						
H11N3	**WAKE ISLAND Hy**	**30.47**	**4**	T	T	07 13 20.4	
	baz=184,slow=76,SNR=87						
WC2	**Warramunga Arr**	**30.48**	**249**	PFAKE		06 41 40.0	+7.3
WC2				LR	LR		
	comp=Z,36µm,19.0s						
WB4	**Warramunga Arr**	**30.48**	**249**	PFAKE		06 41 40.0	+7.3
WB4				LR	LR		
	comp=Z,33µm,19.0s						
WC3	**Warramunga Arr**	**30.48**	**249**	PFAKE		06 41 40.0	+7.3
WC3				LR	LR		
	comp=Z,34µm,20.0s						
H11N2	**WAKE ISLAND Hy**	**30.48**	**4**	T	T	07 13 23.5	
	baz=184,slow=76,SNR=112						
WR2	**Warramunga Arr**	**30.49**	**249**	PFAKE		06 41 40.0	+7.2
WR2				LR	LR		
	comp=Z,32µm,19.0s						
WB3	**Warramunga Arr**	**30.49**	**249**	PFAKE		06 41 40.0	+7.2
WB3				LR	LR		
	comp=Z,34µm,20.0s						
WRAB	**Tennant Creek**	**30.50**	**249**	*e*P	**P**	**06 41 31.2**	**-1.6**
	comp=Z,180nm,1.4s						
WRAB				LR	LR		
	comp=Z,36µm,19.0s						
WRAB	**Tennant Creek**	**30.50**	**249**⇓	*e*P	**P**	**06 41 30.9**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,174nm,1.7s						
WB2	**Warramunga Arr**	**30.50**	**249**	*e*P	**P**	**06 41 30.2**	**-2.6**
WB2				*e*P	**P**	**06 41 31.3**	**-1.5**
WB2				LR	LR		
	comp=Z,36µm,20.0s						
WC1	**Warramunga Arr**	**30.50**	**249**	PFAKE		06 41 40.0	+7.1
WC1				LR	LR		
	comp=Z,26µm,19.0s						
WR1	**Warramunga Arr**	**30.51**	**249**	*e*P	**P**	**06 41 31.1**	**-1.8**
	comp=Z,150nm,1.1s						
WRA	**Warramunga Arr**	**30.51**	**249**	P	**P**	**06 41 31.1**	**-1.8**
	comp=Z,64nm,1.0s,baz=78,slow=9.0,SNR=39						
WRA				LR	LR	06 53 53.2	
	comp=Z,32µm,18.1s,baz=65,slow=36						
WC4	**Warramunga Arr**	**30.51**	**249**	PFAKE		06 41 40.0	+7.0
WC4				LR	LR		
	comp=Z,34µm,19.0s						
KAHZ	**Kahuranaki**	**30.81**	**161**	P	**P**	**06 41 39.0**	**+3.6**
GUMO	**Guam**	**31.21**	**321**	LR	LR	06 54 01.9	
	comp=Z,23µm,18.1s,baz=148,slow=36						
BFZ	**Birch Farm**	**31.43**	**163**	PFAKE		06 41 50.0	+9.2
BFZ				LR	LR		
	comp=Z,24µm,18.0s						
BFZ	**Birch Farm**	**31.43**	**163**	P	P	06 41 45.9	+5.1
SNZO	**South Karori**	**31.61**	**165**	PFAKE		06 42 00.0	+18
SNZO				LR	LR		
	comp=Z,12µm,20.0s						
THZ	**Tophouse**	**31.63**	**168**	*e*P	**P**	**06 41 44.2**	**+1.6**
	comp=Z,95nm,0.9s						
THZ				LR	LR		
	comp=Z,22µm,19.0s						
TOO	**Toolangi**	**31.67**	**210**	P	**P**	**06 41 43.4**	**+0.4**
	baz=32,SNR=16						
AS01	**Alice Springs**	**31.85**	**242**	*e*P	**P**	**06 41 44.5**	**-0.3**
AS31	**Alice Springs**	**31.89**	**242**	*e*P	**P**	**06 41 44.0**	**-1.2**
	comp=Z,12nm,1.1s						
AS31				LR	LR		
	comp=Z,400nm,21.0s						
ASAR	**Alice Springs**	**31.89**	**242**	P	**P**	**06 41 42.1**	**-3.0**
	comp=Z,14nm,1.1s,baz=65,slow=9.6,SNR=28						
KHZ	**Kahutara**	**32.39**	**168**	PFAKE		06 42 00.0	+11
KHZ				LR	LR		
	comp=Z,28µm,20.0s						
LTZ	**Lake Taylor**	**32.49**	**169**	*e*P	**P**	**06 41 52.6**	**+2.4**
	comp=Z,61nm,0.8s						
LTZ				LR	LR		
	comp=Z,35µm,20.0s						
HTT	**Hallett**	**32.55**	**222**	P	**P**	**06 41 50.8**	**0.0**
	baz=33,SNR=29						
MTN	**Manton Dam**	**32.81**	**263**	PFAKE		06 42 00.0	+6.7
MTN				LR	LR		
	comp=Z,19µm,19.0s						
FOZ	**Fox Glacier**	**32.86**	**173**	*e*P	**P**	**06 41 55.6**	**+2.3**
	comp=Z,119nm,1.1s						
FOZ				LR	LR		
	comp=Z,32µm,20.0s						
ANA2	**Anatahan**	**32.87**	**325**	PFAKE		06 42 00.0	+6.3
ANA2				LR	LR		
	comp=Z,13µm,21.0s						
SAUI	**Saumlaki**	**32.98**	**272**	PFAKE		06 42 10.0	+15
SAUI				LR	LR		
	comp=Z,32µm,18.0s						
ARPS	**Mount Arapiles**	**32.98**	**215**	P	**P**	**06 41 55.7**	**+1.3**
	baz=33,SNR=23						
OXZ	**Oxford**	**32.98**	**170**	*e*P	**P**	**06 41 55.6**	**+1.2**
	comp=Z,192nm,1.3s						
OXZ				LR	LR		
	comp=Z,35µm,20.0s						
FAKI	**Fak Fak**	**33.06**	**281**	PFAKE		06 42 10.0	+15
FAKI				LR	LR		
	comp=Z,24µm,20.0s						
SARN	**Sarigan**	**33.12**	**326**	*e*P	**P**	**06 41 56.1**	**+0.2**
	comp=Z,160nm,1.2s						
SARN				LR	LR		
	comp=Z,8µm,18.0s						
RPZ	**Rata Peaks**	**33.21**	**171**	*e*P	**P**	**06 41 55.8**	**-0.6**
RPZ				*e*P	**P**	**06 41 57.1**	**+0.7**
RPZ				LR	LR		
	comp=Z,49µm,22.0s						
RPZ	**Rata Peaks**	**33.21**	**171**	P	**P**	**06 41 55.8**	**-0.6**
	comp=Z,23nm,0.7s,baz=344,slow=5.8,SNR=10						
CRLZ	**Canterbury Las**	**33.33**	**169**	PFAKE		06 42 10.0	+13
CRLZ				LR	LR		
	comp=Z,25µm,20.0s						
MQZ	**McQueen’s Vall**	**33.46**	**169**	PFAKE		06 42 10.0	+11
MQZ				LR	LR		
	comp=Z,22µm,20.0s						
LBZ	**Lake Benmore**	**33.75**	**173**	*e*P	**P**	**06 42 03.7**	**+2.6**
	comp=Z,63nm,1.2s						
LBZ				LR	LR		
	comp=Z,43µm,21.0s						
WKZ	**Wanaka**	**34.06**	**174**	*e*P	**P**	**06 42 05.2**	**+1.5**
	comp=Z,269nm,1.4s						
WKZ				LR	LR		
	comp=Z,26µm,19.0s						
BBOO	**Buckleboo**	**34.15**	**226**	P	**P**	**06 42 03.4**	**-1.3**
	baz=34,SNR=31						
ODZ	**Otahua Downs**	**34.45**	**172**	PFAKE		06 42 20.0	+13
ODZ				LR	LR		
	comp=Z,31µm,21.0s						
MLZ	**Mavora Lakes**	**34.52**	**176**	*e*P	**P**	**06 42 07.4**	**-0.3**
	comp=Z,184nm,1.7s						
MLZ				LR	LR		
	comp=Z,27µm,19.0s						
DCZ	**Deep Cove**	**34.55**	**177**	*e*P	**P**	**06 42 07.7**	**-0.3**
	comp=Z,131nm,1.1s						
DCZ				LR	LR		
	comp=Z,14µm,21.0s						
BNDI	**Bandanaira**	**34.95**	**278**	P	**P**	**06 42 10.4**	**-1.4**
MOO	**Moorlands**	**34.95**	**203**	P	**P**	**06 42 13.6**	**+2.1**
	baz=35,SNR=4.3						
WHZ	**Wether Hill Ro**	**35.03**	**176**	*e*P	**P**	**06 42 12.8**	**+0.7**
	comp=Z,64nm,1.2s						
WHZ				LR	LR		
	comp=Z,16µm,19.0s						
PYZ	**Puysegur Point**	**35.23**	**178**	PFAKE		06 42 30.0	+16
PYZ				LR	LR		
	comp=Z,20µm,18.0s						
TAU	**Tasmania Unive**	**35.31**	**202**	*e*P	**P**	**06 42 16.4**	**+1.9**
	comp=Z,112nm,1.3s						
TAU				LR	LR		
	comp=Z,12µm,18.0s						
TAU	**Tasmania Unive**	**35.31**	**202**	*e*P	**P**	**06 42 16.4**	**+1.9**
TAU				pmax	pmax		
	comp=Z,112nm,1.3s						
TAU				MLR	MLR		
	comp=Z,12µm,18.0s						
RAR	**Rarotonga**	**35.66**	**111**	LR	LR	06 54 05.5	
	comp=Z,5µm,21.4s,baz=278,slow=32						
JOHN	**Johnston Islan**	**37.49**	**43**	PFAKE		06 42 50.0	+17
JOHN				LR	LR		
	comp=Z,15µm,20.0s						
NLAI	**Namlea**	**37.96**	**279**	P	**P**	**06 42 35.9**	**-1.7**
	comp=Z,128nm,1.7s,comp=Z,3µm						
FITZ	**Fitzroy Crossi**	**38.36**	**255**	*e*P	**P**	**06 42 37.0**	**-3.9**
	comp=Z,125nm,1.1s						
FITZ	**Fitzroy Crossi**	**38.36**	**255**	P	**P**	**06 42 37.0**	**-3.9**
	comp=Z,60nm,0.7s,baz=57,slow=8.7,SNR=30						
FITZ				LR	LR	06 57 02.7	
	comp=Z,20µm,21.9s,baz=83,slow=34						
TNTI	**Ternate**	**38.80**	**285**	PFAKE		06 43 00.0	+15
TNTI				LR	LR		
	comp=Z,8µm,21.0s						
FORT	**Forrest**	**39.24**	**234**	P	**P**	**06 42 47.8**	**-0.3**
	baz=39,SNR=24						
SANI	**Sanana**	**39.32**	**280**	P	**P**	**06 42 47.6**	**-1.4**
SOEI	**Soe**	**39.69**	**268**	*e*P	**P**	**06 42 51.8**	**-0.4**
	comp=Z,140nm,1.2s						
SOEI				LR	LR		
	comp=Z,13µm,20.0s						
SOEI	**Soe**	**39.69**	**268**	P	**P**	**06 42 49.7**	**-2.5**
	comp=Z,57nm,1.3s,comp=Z,3µm						
XMAS	**Kiritimati**	**39.86**	**73**	PFAKE		06 43 10.0	+17
XMAS				LR	LR		
	comp=Z,13µm,20.0s						
BATI	**Baumata**	**40.24**	**267**	P	**P**	**06 42 55.3**	**-1.4**
BATI	**Baumata**	**40.24**	**267**	P	**P**	**06 42 55.9**	**-0.9**
	comp=Z,88nm,0.9s,baz=193,slow=1.6,SNR=16						
MMRI	**Maumere**	**41.80**	**269**	*e*P	**P**	**06 43 08.7**	**-0.8**
	comp=Z,394nm,1.5s						
MMRI				LR	LR		
	comp=Z,7µm,18.0s						
MMRI	**Maumere**	**41.80**	**269**	P	**P**	**06 43 08.1**	**-1.4**
EDFI	**Ende, Flores**	**42.33**	**269**	P	**P**	**06 43 11.7**	**-2.2**
	comp=Z,53nm,1.4s,comp=Z,3µm						
LUWI	**Luwuk**	**42.69**	**280**	*e*P	**P**	**06 43 15.4**	**-1.4**
	comp=Z,297nm,1.2s						
LUWI	**Luwuk**	**42.69**	**280**	P	**P**	**06 43 15.3**	**-1.4**
DAV	**Davao City (W)**	**42.74**	**293**	LR	LR	07 01 00.6	
	comp=Z,4µm,19.5s,baz=105,slow=36						
JCJ	**Chichijima**	**43.56**	**330**	P	**P**	**06 43 21.1**	**-2.5**
	comp=Z,152nm,0.9s,baz=130,slow=11,SNR=5.0						
JCJ				LR	LR	06 58 39.5	
	comp=Z,12µm,21.7s,baz=149,slow=32						
CBIJ	**Chichi jima**	**43.56**	**330**	*e*P	**P**	**06 43 21.1**	**-2.5**
APSI	**Ampana**	**43.81**	**280**	P	**P**	**06 43 24.3**	**-1.5**
MBWA	**Marble Bar**	**44.21**	**251**	*e*P	**P**	**06 43 29.3**	**+0.4**
	comp=Z,41nm,1.1s						
MBWA				LR	LR		
	comp=Z,22µm,19.0s						
BKSI	**Bulukumba**	**44.36**	**273**	P	**P**	**06 43 28.8**	**-1.4**
KAPI	**Kappang**	**44.77**	**274**	PFAKE		06 43 40.0	+6.5
KAPI				LR	LR		
	comp=Z,7µm,20.0s						
PAE	**Paea**	**44.82**	**104**	*e*P	**P**	**06 43 32.7**	**-1.1**
	comp=Z,17nm,1.2s						
PPT	**Papeete**	**44.82**	**104**	LR	LR	06 57 56.6	
	comp=Z,12µm,21.6s,baz=269,slow=30						
PPT2	**Papeete2**	**44.82**	**104**	*e*P	**P**	**06 43 32.9**	**-1.0**
	comp=Z,174nm,1.4s						
PPT2				*e*S	S	06 49 56.3	-14
	comp=Z,5µm,25.0s						
PPT2				*e*LQ	LQ	06 53 34.8	
	comp=Z,19µm,29.5s						
PPT2				*e*LR	LR	06 55 22.2	
	comp=Z,35µm,26.0s						
TVO	**Taravao**	**45.14**	**104**	*e*P	**P**	**06 43 35.6**	**-0.8**
	comp=Z,48nm,1.3s						
TBI	**Tubuai**	**45.43**	**112**	*e*P	**P**	**06 43 37.5**	**-1.1**
	comp=Z,273nm,1.0s						
TBI				*e*S	S	06 50 05.2	-13
	comp=Z,6µm,28.5s						
TBI				*e*LQ	LQ	06 53 49.9	
	comp=Z,72µm,29.8s						
TBI				*e*LR	LR	06 55 41.0	
	comp=Z,30µm,27.5s						
MEEK	**Meekatharra**	**46.03**	**243**	P	**P**	**06 43 43.1**	**-0.3**
	baz=46,SNR=16						
PMOR	**Pomariorio Ree**	**46.40**	**100**	*e*P	**P**	**06 43 45.7**	**-0.7**
	comp=Z,230nm,1.3s						
VAH	**Vaihoa**	**46.66**	**101**	*e*P	**P**	**06 43 47.6**	**-0.8**
	comp=Z,179nm,1.5s						
RCP	**Roxas**	**47.19**	**297**⇑	*e*P	**P**	**06 43 55.8**	**+3.2**
KLBR	**Kellerberrin**	**47.87**	**237**	P	**P**	**06 43 57.9**	**+0.2**
	baz=48,SNR=9.8						
NWAO	**Narrogin (SRO)**	**48.65**	**236**	P	**P**	**06 44 03.9**	**+0.2**
	baz=49,SNR=4.9						
NWAO	**Narrogin (SRO)**	**48.65**	**236**	*e*P	**P**	**06 44 02.8**	**-0.8**
NWAO				*e*P	**P**	**06 44 03.3**	**-0.3**
NWAO				*e*PP	**PP**	**06 45 57.5**	**+0.7**
NWAO				LR	LR		
	comp=Z,45µm,18.0s						
NWAO	**Narrogin (SRO)**	**48.65**	**236**	*e*P	**P**	**06 44 02.8**	**-0.8**
NWAO				*e*		06 45 57.5	
NWAO				MLR	MLR		
	comp=Z,45µm,18.0s						
NWAO	**Narrogin (SRO)**	**48.65**	**236**	P	**P**	**06 44 03.5**	**-0.1**
	comp=Z,28nm,0.9s,baz=300,slow=8.8,SNR=8.8						
NWAO				PP	**PP**	**06 45 57.5**	**+0.7**
	comp=Z,17nm,0.9s,baz=312,slow=10,SNR=3.9						
HON	**Honolulu**	**48.70**	**49**	PFAKE		06 44 20.0	+16
HON				LR	LR		
	comp=Z,11µm,21.0s						
MORW	**Morawa**	**48.74**	**241**	P	**P**	**06 44 04.4**	**0.0**
	baz=49,SNR=6.7						
TSM	**Tawau**	**48.90**	**285**	P	**P**	**06 44 07.7**	**+1.9**
OPA	**Opana**	**48.91**	**49**	*e*P	**P**	**06 44 05.8**	**+0.1**
	comp=Z,290nm,1.0s						
OPA	**Opana**	**48.91**	**49**	*e*P	**P**	**06 44 05.8**	**+0.1**
OPA				pmax	pmax		
	comp=Z,290nm,1.0s						
AIN	**Ainahou**	**49.50**	**53**	*e*P	**P**	**06 44 10.9**	**+0.5**
	comp=Z,256nm,1.0s						
HMH	**Humuʻula Sheep**	**49.61**	**53**	*e*P	**P**	**06 44 13.5**	**+2.0**
	comp=Z,257nm,1.1s						
POHA	**Pohakuloa**	**49.66**	**52**	PFAKE		06 44 20.0	+8.2
POHA				LR	LR		
	comp=Z,7µm,19.0s						
KKO	**Keanakako`i**	**49.66**	**53**	PFAKE		06 44 20.0	+8.3
KKO				LR	LR		
	comp=Z,7µm,20.0s						
UWB	**Uwekahuna B**	**49.67**	**53**	PFAKE		06 44 20.0	+8.3
UWB				LR	LR		
	comp=Z,7µm,19.0s						
BYL	**Byron's Ledge**	**49.68**	**53**	PFAKE		06 44 20.0	+8.2
BYL				LR	LR		
	comp=Z,6µm,19.0s						
HATHI	**Halemaʻumaʻu T**	**49.68**	**53**	PFAKE		06 44 20.0	+8.2
HATHI				LR	LR		
	comp=Z,7µm,20.0s						
JHJ	**Hachijo jima 2**	**49.73**	**332**	P	**P**	**06 44 09.8**	**-2.0**
	comp=Z,325nm,0.9s,baz=174,slow=6.0,SNR=3.0						
JAGI	**Jajag, Banyuwa**	**49.76**	**268**	*e*P	**P**	**06 44 11.8**	**-0.7**
	comp=Z,104nm,1.3s						
STCH	**Steam Cracks**	**49.77**	**53**	PFAKE		06 44 20.0	+7.6
STCH				LR	LR		
	comp=Z,8µm,19.0s						
JCUZ	**Jacuzzi**	**49.79**	**53**	PFAKE		06 44 20.0	+7.4
JCUZ				LR	LR		
	comp=Z,3µm,21.0s						
TGY	**Tagaytay City**	**49.91**	**299**	P	**P**	**06 44 14.1**	**+0.6**
	comp=Z,160nm,0.3s,baz=67,slow=1.3,SNR=5.9						
KKM	**Kota Kinabalu**	**51.02**	**287**	*e*P	**P**	**06 44 22.3**	**+0.2**
	comp=Z,190nm,1.3s						
KKM	**Kota Kinabalu**	**51.02**	**287**	P	**P**	**06 44 22.5**	**+0.4**
JOW	**Kunigami**	**51.47**	**317**	*e*P	**P**	**06 44 25.3**	**+0.2**
	comp=Z,105nm,1.0s						
JOW	**Kunigami**	**51.47**	**317**	P	**P**	**06 44 24.6**	**-0.4**
	comp=Z,17nm,1.0s,baz=143,slow=12,SNR=9.9						
INU	**Inuyama**	**52.85**	**332**	*e*P	**P**	**06 44 36.3**	**+1.1**
	comp=Z,556nm,1.5s						
INU				LR	LR		
	comp=Z,9µm,18.0s						
MJAR	**Matsushiro Arr**	**53.30**	**333**	P	**P**	**06 44 37.0**	**-1.5**
	comp=Z,159nm,1.2s,baz=165,slow=6.8,SNR=62						
MAJO	**Matsushiro**	**53.30**	**333**	*e*P	**P**	**06 44 38.0**	**-0.5**
	comp=Z,263nm,1.2s						
MAJO				LR	LR		
	comp=Z,7µm,21.0s						
MAJO	**Matsushiro**	**53.30**	**333**	*c i*P	**P**	**06 44 38.6**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,297nm,1.3s						
MAT	**Matsushiro**	**53.30**	**333**	P	**P**	**06 44 36.9**	**-1.6**
MAT				S	**S**	**06 52 06.6**	**-1.8**
MJB9	**Matsu-Tunnel**	**53.31**	**333**	*e*P	**P**	**06 44 38.2**	**-0.4**
	comp=Z,267nm,1.2s						
MJB9				LR	LR		
	comp=Z,8µm,21.0s						
YOJ	**Yonaguni jima**	**53.68**	**311**	*e*P	**P**	**06 44 40.9**	**-0.6**
	comp=Z,352nm,1.0s						
YOJ				LR	LR		
	comp=Z,11µm,21.0s						
YOJ	**Yonaguni jima**	**53.68**	**311**	*e*P	**P**	**06 44 40.9**	**-0.6**
YOJ				pmax	pmax		
	comp=Z,352nm,1.0s						
YOJ				MLR	MLR		
	comp=Z,11µm,21.0s						
SBUM	**Sibu**	**53.78**	**281**	*e*P	**P**	**06 44 41.8**	**-0.6**
	comp=Z,30nm,1.3s						
SBUM	**Sibu**	**53.78**	**281**	P	**P**	**06 44 43.1**	**+0.7**
TWG	**Pinlang**	**54.21**	**308**	*e*P	**P**	**06 44 45.3**	**-0.1**
	comp=Z,494nm,1.2s						
TWG				LR	LR		
	comp=Z,24µm,21.0s						
JNU	**Nakatsue**	**54.29**	**325**	*e*P	**P**	**06 44 45.7**	**-0.1**
	comp=Z,689nm,1.3s						
JNU	**Nakatsue**	**54.29**	**325**	P	**P**	**06 44 45.3**	**-0.5**
	comp=Z,314nm,1.0s,baz=116,slow=4.4,SNR=25						
YULB	**Yu-li**	**54.36**	**309**	*e*P	**P**	**06 44 45.5**	**-1.0**
	comp=Z,140nm,0.9s						
YULB				LR	LR		
	comp=Z,8µm,19.0s						
TAOE	**Nuku Hiva Isla**	**54.40**	**93**	*e*P	**P**	**06 44 48.5**	**+1.4**
	comp=Z,217nm,1.1s						
TAOE				*e*S	S	06 52 13.5	-11
	comp=Z,6µm,26.5s						
TAOE				*e*LR	LR	06 59 50.6	
	comp=Z,17µm,26.5s						
TAOE	**Nuku Hiva Isla**	**54.40**	**93**	PFAKE		06 45 00.0	+13
TAOE				LR	LR		
	comp=Z,7µm,22.0s						
NACB	**Ninganchiao**	**54.57**	**310**	*e*P	**P**	**06 44 48.8**	**+0.8**
	comp=Z,258nm,1.2s						
NACB				LR	LR		
	comp=Z,8µm,21.0s						
TPUB	**Ta-pu**	**54.82**	**309**	*e*P	**P**	**06 44 48.8**	**-1.1**
	comp=Z,248nm,1.0s						
TPUB				LR	LR		
	comp=Z,6µm,20.0s						
SSLB	**Suanglung**	**54.84**	**309**	*e*P	**P**	**06 44 49.2**	**-0.8**

	comp=Z,168nm,1.1s						
SSLB				LR	LR		
	comp=Z,9µm,20.0s						
YHNB	**Yeheng**	**55.02**	**310**	*e*P	**P**	**06 44 52.3**	**+1.0**
	comp=Z,331nm,1.1s						
YHNB				LR	LR		
	comp=Z,12µm,20.0s						
TATO	**Taipei**	**55.10**	**311**	PFAKE		06 45 00.0	+8.2
TATO				LR	LR		
	comp=Z,12µm,20.0s						
KSM	**Kuching**	**55.38**	**279**	*e*P	**P**	**06 44 53.6**	**-0.5**
	comp=Z,92nm,1.3s						
KSM	**Kuching**	**55.38**	**279**	P	**P**	**06 44 54.5**	**+0.5**
CISI	**Cisompet, Garu**	**56.10**	**268**	*e*P	**P**	**06 44 58.6**	**-0.7**
	comp=Z,315nm,1.8s						
ERM	**Erimo**	**56.19**	**341**	*e*P	**P**	**06 45 00.4**	**+1.1**
	comp=Z,158nm,1.3s						
ERM				LR	LR		
	comp=Z,15µm,21.0s						
ERM	**Erimo**	**56.19**	**341**	*de*P	**P**	**06 45 01.1**	**+1.8**
LEM	**Lembang**	**56.40**	**269**	P	**P**	**06 45 01.6**	**0.0**
	comp=Z,54nm,0.8s,baz=108,slow=5.7,SNR=8.6						
KUR	**Kuril'sk**	**57.85**	**346**	*c i*P	**P**	**06 45 10.9**	**0.0**
KUR				*i* S	**S**	**06 53 10.4**	**+1.8**
KUR				pmax	pmax		
	comp=Z,411nm,1.2s						
KUR				pmax	pmax		
	comp=E,178nm,1.3s						
KUR				pmax	pmax		
	comp=N,137nm,1.1s						
KUR				MLR	MLR		
	comp=Z,5µm,17.0s						
KUR				MLR	MLR		
	comp=N,3µm,16.0s						
KUR				MLR	MLR		
	comp=E,924nm,11.0s						
ASAJ	**Asahikawa**	**58.26**	**341**	P	**P**	**06 45 13.0**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,120nm,1.0s						
ASAJ	**Asahikawa**	**58.26**	**341**	P	**P**	**06 45 13.0**	**-0.9**
	comp=Z,117nm,0.9s,baz=222,slow=11,SNR=34						
ASAJ				LR	LR	07 05 49.9	
	comp=Z,14µm,21.9s,baz=180,slow=32						
RKT	**Rikitea**	**58.69**	**110**	*e*S	S	06 53 09.9	-11
	comp=Z,4µm,29.0s						
RKT				*e*LQ	LQ	06 59 23.8	
	comp=Z,21µm,31.5s						
RKT				*e*LR	LR	07 01 47.9	
	comp=Z,21µm,27.8s						
SSE	**Sheshan**	**58.95**	**317**	P	**P**	**06 45 19.4**	**+0.4**
SSE				S	**S**	**06 53 26.9**	**+3.4**
SSE				pmax	pmax		
	comp=Z,470nm,5.1s						
SSE				LR	LR		
	comp=Z,2µm,17.3s						
SSE				LR	LR		
	comp=Z,3µm,19.8s						
SSE	**Sheshan**	**58.95**	**317**	*e*P	**P**	**06 45 19.2**	**+0.2**
	comp=Z,374nm,0.9s						
SSE				LR	LR		
	comp=Z,8µm,20.0s						
KSRS	**Korea Array**	**59.10**	**326**	P	**P**	**06 45 18.5**	**-1.4**
	comp=Z,30nm,1.1s,baz=142,slow=6.6,SNR=51						
KS15	**Wonju Array Si**	**59.12**	**326**	*e*P	**P**	**06 45 20.2**	**+0.2**
	comp=Z,194nm,1.3s						
KSAR	**Wonju Array Be**	**59.12**	**326**	P	**P**	**06 45 18.5**	**-1.5**
KSAR	**Wonju Array Be**	**59.12**	**326**	P	**P**	**06 45 18.5**	**-1.5**
KS01	**Wonju Array Si**	**59.14**	**326**	*e*P	**P**	**06 45 19.9**	**-0.2**
MCO	**Taipa Grande**	**59.84**	**303**	P	**P**	**06 45 27.0**	**+1.7**
YSS	**Yuzh-Sakhalins**	**60.78**	**343**	*e*P	**P**	**06 45 31.3**	**+0.1**
	comp=Z,384nm,1.3s						
YSS				LR	LR		
	comp=Z,8µm,20.0s						
YSS	**Yuzh-Sakhalins**	**60.78**	**343**	⇑*e*P	**P**	**06 45 31.9**	**+0.7**
YSS				*e*		06 45 40.7	
YSS				*e*		06 46 21.7	
YSS				*e*		06 47 53.0	
YSS				*e*PPP	PPP	06 49 11.9	
YSS				*e*S	**S**	**06 53 46.3**	**-0.2**
YSS				*e*PS	**PnS**	**06 53 52.4**	**-10**
YSS				*e*		06 55 11.0	
YSS				pmax	pmax		
	comp=Z,130nm,1.3s						
YSS				pmax	pmax		
	comp=N,60nm,1.5s						
YSS				pmax	pmax		
	comp=E,70nm,1.2s						
YSS				pmax	pmax		
	comp=Z,1µm,3.8s						
YSS				pmax	pmax		
	comp=N,800nm,6.4s						
YSS				pmax	pmax		
	comp=E,300nm,3.9s						
NJ2	**Nanjing**	**61.11**	**316**	*e*P	**P**	**06 45 34.8**	**+1.0**
NJ2				pP	**pP**	**06 45 37.6**	**-3.2**
NJ2				S	**S**	**06 53 55.8**	**+4.5**
NJ2				SS	**SS**	**06 57 53.0**	**+1.2**
NJ2				pmax	pmax		
	comp=E,140nm,1.1s						
NJ2				pmax	pmax		
	comp=E,1µm,6.4s						
NJ2				LR	LR		
	comp=E,5µm,15.7s						
NJ2				LR	LR		
	comp=E,7µm,19.6s						
NJ2				LR	LR		
	comp=E,8µm,19.6s						
TEY	**Ternei**	**61.12**	**338**	⇓*e*P	**P**	**06 45 33.3**	**-0.3**
TEY				*e*		06 45 41.3	
TEY				*e*S	**S**	**06 53 54.3**	**+3.3**
TEY				pmax	pmax		
	comp=Z,80nm,1.3s						
TEY				pmax	pmax		
	comp=N,40nm,1.2s						
TEY				pmax	pmax		
	comp=E,30nm,1.2s						
TEY				MLR	MLR		
	comp=Z,5µm,17.0s						
MNAI	**Manna**	**61.37**	**271**	PFAKE		06 45 50.0	+14
MNAI				LR	LR		
	comp=Z,4µm,22.0s						
MSHR	**Mys Shultsa**	**61.37**	**332**	*c i*P	**P**	**06 45 36.3**	**+1.0**
VLA	**Vladivostok**	**61.47**	**333**	*c i*P	**P**	**06 45 37.5**	**+1.5**
VLA				pmax	pmax		
	comp=Z,322nm,1.4s						
QIZ	**Qiongzhong**	**61.62**	**299**	P	**P**	**06 45 38.8**	**+1.4**
QIZ				S	**S**	**06 54 00.2**	**+2.0**
QIZ				sS	**pS**	**06 54 04.4**	**-3.1**
QIZ				pmax	pmax		
	comp=Z,960nm,3.5s						
QIZ				LR	LR		
	comp=Z,3µm,24.5s						
QIZ				LR	LR		
	comp=Z,3µm,16.7s						
QIZ				LR	LR		
	comp=Z,4µm,24.5s						
QIZ	**Qiongzhong**	**61.62**	**299**	*e*P	**P**	**06 45 39.0**	**+1.5**
	comp=Z,135nm,1.3s						
QIZ				LR	LR		
	comp=Z,4µm,21.0s						
SKR	**Severo-Kuril's**	**61.73**	**354**	*e*P	**P**	**06 45 37.9**	**+0.4**
SKR				*e*S	**S**	**06 53 51.6**	**-6.8**
SKR				pmax	pmax		
	comp=Z,176nm,1.4s						
SKR				MLR	MLR		
	comp=Z,7µm,16.0s						
SKR				MLR	MLR		
	comp=Z,8µm,18.0s						
USA0B	**Ussuriysk Arra**	**62.29**	**334**	*e*P	**P**	**06 45 41.5**	**+0.1**
	comp=Z,573nm,1.4s						
USA0B				LR	LR		
	comp=Z,6µm,20.0s						
USRK	**Ussuriysk Ar.**	**62.29**	**334**	P	**P**	**06 45 41.1**	**-0.3**
	comp=Z,83nm,0.9s,baz=128,slow=6.8,SNR=85						
KGM	**Kluang**	**62.29**	**278**	P	**P**	**06 45 43.2**	**+1.1**
KTGM	**Kuala Trenggan**	**63.27**	**282**	P	**P**	**06 45 50.9**	**+2.2**
WHN	**Wuhan**	**63.44**	**312**	⇓P	**P**	**06 45 50.1**	**+0.7**
WHN				S	**S**	**06 54 11.8**	**-8.9**
WHN				LR	LR		
	comp=Z,18µm,20.6s						
WHN				LR	LR		
	comp=Z,11µm,15.4s						
WHN				LR	LR		
	comp=Z,23µm,19.6s						
DL2	**Dalian**	**63.67**	**324**	P	**P**	**06 45 51.8**	**+1.1**
DL2				S	**S**	**06 54 29.3**	**+6.1**
DL2				pmax	pmax		
	comp=Z,130nm,1.2s						
DL2				pmax	pmax		
	comp=Z,270nm,4.9s						
DL2				LR	LR		
	comp=Z,4µm,20.9s						
DL2				LR	LR		
	comp=Z,5µm,25.6s						
DL2				LR	LR		
	comp=Z,9µm,27.4s						
MDJ	**Mudanjiang**	**63.67**	**333**	P	**P**	**06 45 51.6**	**+0.9**
MDJ				pP	pP	06 45 54.8	-2.9
MDJ				sP	sP	06 45 56.1	-4.3
MDJ				PP	**PP**	**06 48 11.9**	**+0.8**
MDJ				S	**S**	**06 54 27.7**	**+4.6**
MDJ				SS	**SS**	**06 58 36.8**	**+5.3**
MDJ				pmax	pmax		
	comp=Z,120nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,2µm,3.1s						
MDJ				LR	LR		
	comp=Z,6µm,19.0s						
MDJ				LR	LR		
	comp=Z,4µm,17.5s						
MDJ				LR	LR		
	comp=Z,10µm,37.5s						
MDJ	**Mudanjiang**	**63.67**	**333**	*e*P	**P**	**06 45 51.3**	**+0.7**
	comp=Z,377nm,1.4s						
MDJ				LR	LR		
	comp=Z,6µm,20.0s						
PET	**Petropavlovsk**	**63.83**	**356**	*e*P	**P**	**06 45 52.7**	**+1.2**
	comp=Z,211nm,1.4s						
PET				LR	LR		
	comp=Z,9µm,22.0s						
PET	**Petropavlovsk**	**63.83**	**356**	⇓*i*P	**P**	**06 45 52.5**	**+1.0**
PET				*e*S	**S**	**06 54 24.6**	**-0.1**
PET				*e*SS	**SS**	**06 58 37.4**	**+3.8**
PET				pmax	pmax		
	comp=Z,113nm,1.5s						
SMY	**Shemya**	**63.86**	**6**	PFAKE		06 46 00.0	+8.3
SMY				LR	LR		
	comp=Z,9µm,22.0s						
PEA0B	**Petropavlovsk-**	**63.99**	**355**	*e*P	**P**	**06 45 53.0**	**+0.5**
	comp=Z,144nm,1.1s						
PEA0B				LR	LR		
	comp=Z,10µm,20.0s						
PETK	**Petropavlovsk-**	**63.99**	**355**	*e*P	**P**	**06 45 52.1**	**-0.5**
PETK	**Petropavlovsk-**	**63.99**	**355**	*e*P	**P**	**06 45 52.1**	**-0.5**
PETK	**Petropavlovsk-**	**63.99**	**355**	P	**P**	**06 45 51.5**	**-1.0**
	comp=Z,50nm,0.8s,baz=153,slow=7.5,SNR=18						
PETK				LR	LR	07 08 41.2	
	comp=Z,9µm,21.0s,baz=181,slow=31						
PEA1	**Petropavlovsk-**	**63.99**	**355**	*e*P	**P**	**06 45 51.5**	**-1.0**
BKNI	**Bangkinang**	**64.14**	**276**	*e*P	**P**	**06 45 54.2**	**-0.2**
	comp=Z,224nm,1.0s						
BKNI				LR	LR		
	comp=Z,5µm,20.0s						
TYV	**Tymovskoe**	**64.37**	**345**	*e*P	**P**	**06 45 54.5**	**-0.6**
TYV				pmax	pmax		
	comp=Z,60nm,1.4s						
TYV				pmax	pmax		
	comp=Z,900nm,4.7s						
ADK	**Adak**	**64.54**	**13**	PFAKE		06 46 10.0	+14
ADK				LR	LR		
	comp=Z,8µm,18.0s						
SNY	**Shenyang**	**64.57**	**327**	⇑P	**P**	**06 45 57.0**	**+0.4**
SNY				S	**S**	**06 54 39.3**	**+5.0**
SNY				LR	LR		
	comp=Z,6µm,16.9s						
SNY				LR	LR		
	comp=Z,5µm,23.3s						
SNY				LR	LR		
	comp=Z,14µm,22.6s						
TIA	**Tai'an**	**64.74**	**319**	P	**P**	**06 45 57.8**	**-0.1**
TIA				S	**S**	**06 54 36.5**	**-0.2**
TIA				pmax	pmax		
	comp=Z,740nm,10.3s						
TIA				LR	LR		
	comp=Z,2µm,22.7s						
TIA				LR	LR		
	comp=Z,3µm,23.5s						
TIA				LR	LR		
	comp=Z,7µm,21.6s						
CN2	**Changchun**	**65.02**	**330**	*e*P	**P**	**06 46 00.3**	**+0.8**
CN2				*e*S	**S**	**06 54 42.8**	**+3.0**
CN2				SS	**SS**	**06 58 56.3**	**+3.8**
CN2				pmax	pmax		
	comp=Z,90nm,1.1s						
CN2				pmax	pmax		
	comp=Z,1µm,4.0s						
CN2				LR	LR		
	comp=Z,5µm,18.0s						
CN2				LR	LR		
	comp=Z,6µm,18.0s						
CN2				LR	LR		
	comp=Z,8µm,19.0s						
IPM	**Ipoh**	**65.10**	**280**	*e*P	**P**	**06 46 00.4**	**-0.2**
	comp=Z,161nm,1.3s						
IPM				LR	LR		
	comp=Z,3µm,22.0s						
ATKA	**Atka Island**	**65.41**	**14**	PFAKE		06 46 10.0	+8.2
ATKA				LR	LR		
	comp=Z,9µm,20.0s						
KULM	**Kulim**	**65.66**	**281**	*e*P	**P**	**06 46 03.8**	**-0.5**
	comp=Z,71nm,1.2s						
SKNT	**Sakolnakorn**	**66.00**	**294**	P	**P**	**06 46 06.4**	**0.0**
	comp=Z,54nm,1.6s						
GRNR	**Gornyy**	**66.10**	**341**	*e*P	**P**	**06 46 07.8**	**+1.4**
GRNR				pmax	pmax		
	comp=N,40nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,67nm,1.0s						
CASY	**Casey**	**66.15**	**201**	*e*P	**P**	**06 46 06.8**	**+0.3**
	comp=Z,144nm,1.1s						
CASY				LR	LR		
	comp=Z,8µm,18.0s						
SKLT	**Songkhla**	**66.16**	**283**	P	**P**	**06 46 11.3**	**+3.8**
	comp=Z,42nm,1.2s,comp=Z,1µm						
COCO	**West Island**	**66.27**	**261**	PFAKE		06 46 20.0	+12
COCO				LR	LR		
	comp=Z,6µm,21.0s						
KLR	**Kul'dur**	**66.45**	**337**	*d i*P	**P**	**06 46 08.7**	**+0.1**
KLR	**Kul'dur**	**66.45**	**337**	P	**P**	**06 46 08.2**	**-0.5**
	comp=Z,57nm,0.9s,baz=200,slow=1.9,SNR=49						
VNDA	**Vanda**	**66.66**	**181**	*e*P	**P**	**06 46 10.5**	**+0.9**
	comp=Z,288nm,1.5s						
VNDA	**Vanda**	**66.66**	**181**	P	**P**	**06 46 10.6**	**+1.0**
	comp=Z,55nm,1.1s,baz=340,slow=7.4,SNR=19						
PSI	**Prapat**	**66.75**	**278**	P	**P**	**06 46 09.9**	**-1.5**
	comp=Z,18nm,0.9s,baz=180,slow=2.8,SNR=17						
SRAK	**Srakaew**	**66.79**	**290**	P	**P**	**06 46 11.2**	**-0.2**
	comp=Z,63nm,1.5s,comp=Z,983nm						
ENH	**Enshi**	**66.92**	**310**	*e*P	**P**	**06 46 11.7**	**-0.4**
	comp=Z,283nm,1.1s						
ENH				LR	LR		
	comp=Z,4µm,21.0s						
NKL	**Nikolayevsk**	**66.96**	**345**	*e*P	**P**	**06 46 11.0**	**-0.7**
NKL				*e*S	**S**	**06 55 07.0**	**+4.0**
NKL				pmax	pmax		
	comp=N,65nm,1.0s						
NKL				pmax	pmax		
	comp=Z,94nm,1.0s						
NKL				pmax	pmax		
	comp=Z,1µm,4.0s						
NKL				smax	smax		
	comp=E,3µm,12.0s						
NKL				MLR	MLR		
	comp=N,3µm,14.0s						
NKL				MLR	MLR		
	comp=Z,4µm,14.0s						
SBA	**Scott Base**	**66.99**	**180**	*e*P	**P**	**06 46 13.1**	**+1.4**
	comp=Z,275nm,1.1s						
SBA				LR	LR		
	comp=Z,7µm,18.0s						
SBA	**Scott Base**	**66.99**	**180**	*e*P	**P**	**06 46 13.1**	**+1.4**
SBA				pmax	pmax		
	comp=Z,275nm,1.1s						
SBA				MLR	MLR		
	comp=Z,7µm,18.0s						
NONG	**Nongkai**	**67.13**	**295**	P	**P**	**06 46 14.2**	**+0.6**
	comp=Z,2.1nm,1.1s,comp=Z,63nm						
TRTT	**Trang**	**67.22**	**283**	P	**P**	**06 46 16.7**	**+2.4**
	comp=Z,23nm,1.6s,comp=Z,972nm						
GYA	**Guiyang**	**67.40**	**305**	⇑*i*P	**P**	**06 46 15.9**	**+0.6**
GYA				PP	**PP**	**06 48 48.0**	**+3.8**
GYA				S	**S**	**06 55 11.4**	**+1.8**
GYA				SKS	**ScS**	**06 56 11.6**	**-0.3**
GYA				SS	**SS**	**06 59 33.2**	**+2.9**
GYA				pmax	pmax		
	comp=Z,90nm,1.0s						
GYA				pmax	pmax		
	comp=Z,260nm,6.9s						
GYA				LR	LR		
	comp=Z,27µm,18.0s						
CHAI	**Chaiyaphum**	**67.44**	**292**	P	**P**	**06 46 15.8**	**+0.2**
	comp=Z,12nm,0.9s,comp=Z,162nm						
NIKH	**Nikolski High**	**67.52**	**17**	*e*P	**P**	**06 46 15.5**	**+0.2**
	comp=Z,744nm,1.7s						
PATY	**Pattaya**	**67.54**	**289**	P	**P**	**06 46 19.0**	**+2.8**
	comp=Z,26nm,0.9s,comp=Z,2µm						
BJT	**Baijiatuau**	**67.64**	**322**	*e*P	**P**	**06 46 17.3**	**+0.9**
	comp=Z,99nm,1.3s						
BJT				LR	LR		
	comp=Z,15µm,21.0s						
BJT	**Baijiatuau**	**67.64**	**322**	*e*P	**P**	**06 46 17.3**	**+0.9**
BJT				pmax	pmax		
	comp=Z,99nm,1.3s						
BJT				MLR	MLR		
	comp=Z,15µm,21.0s						
BJI	**Beijing**	**67.64**	**322**	P	**P**	**06 46 17.1**	**+0.7**
BJI				S	**S**	**06 55 13.6**	**+1.8**
BJI				LR	LR		
	comp=Z,6µm,25.0s						
BJI				LR	LR		
	comp=Z,7µm,22.6s						
GSI	**Gunungsitoli**	**67.74**	**276**	*e*P	**P**	**06 46 18.6**	**+1.1**
	comp=Z,59nm,0.8s						
GSI				LR	LR		
	comp=Z,6µm,21.0s						
PKDT	**Phuket**	**68.53**	**283**	P	**P**	**06 46 26.5**	**+4.0**
	comp=Z,19nm,1.4s,comp=Z,873nm						
PBKT	**Sadao Pong**	**68.58**	**293**	*e*P	**P**	**06 46 23.1**	**+0.4**
PBKT	**Sadao Pong**	**68.58**	**293**	P	**P**	**06 46 23.4**	**+0.7**
	comp=Z,47nm,1.3s,comp=Z,2µm						
TIY	**Taiyuan**	**68.67**	**318**	*e*P	**P**	**06 46 24.8**	**+1.8**
TIY				pmax	pmax		
	comp=Z,900nm,4.4s						
TIY				LR	LR		
	comp=Z,3µm,11.1s						
TIY				LR	LR		
	comp=Z,4µm,14.4s						
TIY				LR	LR		
	comp=Z,7µm,17.6s						
PHET	**Kaeng Krachan**	**68.69**	**288**	P	**P**	**06 46 26.2**	**+2.8**
	comp=Z,10nm,0.9s,comp=Z,236nmcomp=Z,1µm						
UNV	**Unalaska Valle**	**68.97**	**18**	*e*P	**P**	**06 46 23.6**	**-0.7**
	comp=Z,77nm,1.0s						
UNV				LR	LR		
	comp=Z,9µm,21.0s						
XAN	**Xi'an**	**69.18**	**313**	P	**P**	**06 46 25.3**	**-0.9**
XAN				S	**S**	**06 55 30.8**	**+0.3**
XAN				ScS	**SKSac**	**06 56 20.6**	**-3.9**
XAN				SS	**SS**	**06 59 55.2**	**-2.3**
XAN				pmax	pmax		
	comp=Z,100nm,1.1s						
XAN				pmax	pmax		
	comp=Z,1µm,3.9s						
XAN				LR	LR		
	comp=Z,3µm,19.5s						
XAN				LR	LR		
	comp=Z,6µm,20.6s						
XAN				LR	LR		
	comp=Z,10µm,20.1s						
XAN	**Xi'an**	**69.18**	**313**	*e*P	**P**	**06 46 25.5**	**-0.7**
	comp=Z,125nm,1.1s						
XAN				LR	LR		
	comp=Z,10µm,20.0s						
XAN	**Xi'an**	**69.18**	**313**	*e*P	**P**	**06 46 25.5**	**-0.7**
XAN				pmax	pmax		
	comp=Z,125nm,1.1s						
XAN				MLR	MLR		
	comp=Z,10µm,20.0s						
UTTA	**Uttaradit**	**69.34**	**294**	P	**P**	**06 46 28.3**	**+0.9**
	comp=Z,14nm,1.3s,comp=Z,158nm						
AKUT	**Akutan**	**69.44**	**18**	*e*P	**P**	**06 46 27.8**	**+0.5**
	comp=Z,191nm,1.3s						
SRDT	**SRDT**	**69.58**	**290**	P	**P**	**06 46 30.9**	**+1.9**
	comp=Z,69nm,1.5s,comp=Z,4µm						
UTHA	**Uthaitani**	**69.65**	**291**	P	**P**	**06 46 30.5**	**+1.1**
	comp=Z,15nm,1.3s,comp=Z,177nm						
KMI	**Kunming**	**70.08**	**302**	P	**P**	**06 46 33.9**	**+1.7**
KMI				sP	sP	06 46 42.1	+0.1
KMI				PP	**PP**	**06 49 13.5**	**+5.9**
KMI				S	**S**	**06 55 48.5**	**+6.8**
KMI				pmax	pmax		
	comp=Z,160nm,1.3s						
KMI				pmax	pmax		
	comp=Z,1µm,4.7s						
KMI				LR	LR		
	comp=Z,3µm,18.6s						
KMI				LR	LR		
	comp=Z,5µm,21.4s						
KMI				LR	LR		
	comp=Z,6µm,21.8s						
KMI	**Kunming**	**70.08**	**302**	*e*P	**P**	**06 46 34.4**	**+2.2**
	comp=Z,277nm,1.3s						
KMI				LR	LR		
	comp=Z,6µm,22.0s						
KMI	**Kunming**	**70.08**	**302**	*e*P	**P**	**06 46 34.4**	**+2.2**
KMI				pmax	pmax		
	comp=Z,277nm,1.3s						
KMI				MLR	MLR		
	comp=Z,6µm,22.0s						
SUKH	**Sukhothai**	**70.09**	**293**	P	**P**	**06 46 33.7**	**+1.6**
	comp=Z,9.3nm,1.1s						
UMPA	**Umpang Tak**	**70.39**	**292**	P	**P**	**06 46 35.8**	**+1.8**
	comp=Z,7.0nm,1.0s,comp=Z,1µm						
SPIA	**Saint Paul Isl**	**70.89**	**14**	*e*P	**P**	**06 46 36.6**	**+0.4**
	comp=Z,224nm,1.0s						
SPIA				LR	LR		
	comp=Z,10µm,22.0s						
HHC	**Hu-ho-hao-te**	**70.98**	**320**	⇑*i*P	**P**	**06 46 38.7**	**+1.5**
HHC				pP	pP	06 46 43.4	-0.9
HHC				sP	sP	06 46 45.7	-1.3
HHC				S	**S**	**06 55 52.9**	**+1.5**
HHC				sS	pS	06 56 00.7	+0.2
HHC				SS	**SS**	**07 00 27.9**	**+2.9**
HHC				pmax	pmax		
	comp=Z,650nm,5.4s						
HHC				LR	LR		
	comp=Z,6µm,19.8s						
HHC				LR	LR		
	comp=Z,6µm,20.6s						
HHC				LR	LR		
	comp=Z,9µm,21.6s						
CM01	**Chiang Mai Arr**	**71.00**	**294**	*e*P	**P**	**06 46 38.2**	**+0.6**
CM31	**Chiang Mai Arr**	**71.02**	**294**	*e*P	**P**	**06 46 37.0**	**-0.7**
	comp=Z,100nm,1.2s						
CM31	**Chiang Mai Arr**	**71.02**	**294**	P	**P**	**06 46 39.3**	**+1.5**
	SNR=24						
CMAR	**Chiang Mai Arr**	**71.02**	**294**	P	**P**	**06 46 37.6**	**-0.2**
	comp=Z,24nm,0.9s,baz=112,slow=4.5,SNR=53						
MA2	**Magadan**	**71.08**	**353**	*e*P	**P**	**06 46 35.9**	**-1.3**
	comp=Z,53nm,1.0s						
MA2	**Magadan**	**71.08**	**353**	*de*P	**P**	**06 46 36.8**	**-0.4**
MA2				pmax	pmax		
	comp=Z,94nm,1.7s						
MA2	**Magadan**	**71.08**	**353**	P	**P**	**06 46 35.9**	**-1.3**
	comp=Z,26nm,0.7s,baz=143,slow=5.5,SNR=12						
MA2				LR	LR	07 12 38.1	
	comp=Z,10µm,21.8s,baz=170,slow=32						
CMMT	**Chiang Mai**	**71.13**	**294**	P	**P**	**06 46 39.4**	**+1.0**
	comp=Z,74nm,1.4s,comp=Z,2µm						
CHTO	**Chiang Mai**	**71.14**	**294**	*e*P	**P**	**06 46 38.9**	**+0.4**
	comp=Z,100nm,1.3s						
CHTO	**Chiang Mai**	**71.14**	**294**	*e*P	**P**	**06 46 38.9**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,100nm,1.3s						
CHTO	**Chiang Mai**	**71.14**	**294**	P	**P**	**06 46 39.5**	**+1.0**
	SNR=30						
CHTO				P	**P**	**06 46 39.5**	**+1.0**
	SNR=30						
CHTO	**Chiang Mai**	**71.14**	**294**	P	**P**	**06 46 39.4**	**+1.0**
	comp=Z,330nm,1.5s,comp=Z,8µm						
CD2	**Chengdu**	**71.61**	**308**	⇑P	**P**	**06 46 42.0**	**+0.8**
CD2				PP	**PP**	**06 49 20.6**	**+0.1**
CD2				S	**S**	**06 56 01.5**	**+2.5**
CD2				SS	**SS**	**07 00 37.7**	**+2.7**
CD2				pmax	pmax		
	comp=Z,150nm,0.9s						
CD2				pmax	pmax		
	comp=Z,2µm,4.7s						
CD2				LR	LR		
	comp=Z,6µm,17.2s						

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CD2                                       LR        LR
      comp=Z,7µm,18.1s
CD2                                       LR        LR
      comp=Z,7µm,16.7s
HIA   Hailar           71.67 331 eP       P         06 46 40.9 -0.2
      comp=Z,194nm,1.1s
HIA                                       LR        LR
      comp=Z,6µm,18.0s
HIA   Hailar           71.67 331 eP       P         06 46 40.9 -0.2
HIA                                       pmax      pmax
      comp=Z,194nm,1.1s
HIA                                       MLR       MLR
      comp=Z,6µm,18.0s
ZEA   Zeya             71.75 338 eP       P         06 46 40.8 -0.6
ZEA                              eS       S         06 56 02.0 +2.5
ZEA                              ePS      PnS       06 56 34.0 +2.4
ZEA                              eSS      SS        07 00 28.0 -8.1
ZEA                                       pmax      pmax
      comp=N,290nm,1.4s
ZEA                                       pmax      pmax
      comp=E,100nm,1.4s
ZEA                                       pmax      pmax
      comp=Z,290nm,1.2s
ZEA                                       pmax      pmax
      comp=Z,1µm,4.0s
ZEA                                       pmax      pmax
      comp=E,500nm,3.0s
ZEA                                       pmax      pmax
      comp=N,900nm,4.0s
ZEA                                       smax      smax
      comp=E,2µm,13.0s
BTO   Baotou           71.82 319 eP       P         06 46 42.6 +0.3
BTO                               S       S         06 55 57.8 -3.4
LZH   Lanzhou          73.81 313 ⇑P       P         06 46 56.1 +1.8
LZH                               pP      pP        06 47 00.1 -1.4
LZH                               sP      sP        06 47 03.3 -0.9
LZH                               S       S         06 56 28.1 +3.9
LZH                               sS      sS        06 56 38.4 +1.5
LZH                                       pmax      pmax
      comp=E,350nm,1.5s
LZH                                       pmax      pmax
      comp=E,1µm,5.8s
LZH                                       LR        LR
      comp=E,7µm,17.9s
LZH                                       LR        LR
      comp=E,10µm,17.3s
LZH                                       LR        LR
      comp=E,16µm,17.9s
SEY   Seymchan         74.17 354⇑eP       P         06 46 54.9 -0.7
SEY   Seymchan         74.17 354  P       P         06 46 53.6 -1.9
      comp=E,54nm,1.1s,baz=151,slow=5.6,SNR=36
SEY                               LR      LR        07 15 01.6
      comp=E,10µm,20.6s,baz=151,slow=32
PBA   Port Blair       74.82 285  PFAKE             06 47 10.0  +10
PBA                               LR      LR
      comp=Z,6µm,21.0s
PBA   Port Blair       74.82 285 eP       P         06 47 00.1 -0.3
OHAK  Old Harbor       76.15  22 eP       P         06 47 07.3 +0.3
      comp=Z,263nm,1.5s
CIT   Chita            76.45 330 eP       P         06 47 10.1 +1.1
CIT                              e                  06 47 16.3
CIT                                       pmax      pmax
      comp=Z,404nm,1.4s
GAMB  Gambell          76.59  11 eP       P         06 47 09.7 +0.3
      comp=Z,202nm,1.4s
GAMB                                      LR        LR
      comp=Z,5µm,20.0s
KDAK  Kodiak Island    76.82  22 eP       P         06 47 11.0 +0.1
      comp=Z,380nm,2.0s
KDAK  Kodiak Island    76.82  22 i P      P         06 47 11.7 +0.9
KDAK  Kodiak Island    76.82  22  P       P         06 47 10.2 -0.6
      comp=Z,22nm,0.8s,baz=296,slow=12,SNR=9.7
ULN   Ulaanbaatar      77.50 324 eP       P         06 47 14.5 -0.6
      comp=Z,114nm,1.0s
ULN                                       LR        LR
      comp=Z,6µm,19.0s
ULN   Ulaanbaatar      77.50 324c iP      P         06 47 16.5 +1.4
ULN                                       pmax      pmax
      comp=Z,230nm,1.7s
ULN   Ulaanbaatar      77.50 324  P       P         06 47 16.7 +1.6
      SNR=46
ULN                               P       P         06 47 16.7 +1.6
      SNR=46
YAK   Yakutsk          77.61 344 eP       P         06 47 15.7 +0.5
YAK                              e                  06 47 23.6
YAK                              e                  06 50 07.3
YAK                              ePPP     PPP       06 52 05.7
YAK                              eS       S         06 57 06.2 +1.6
YAK                              e*SS     SKSac     06 57 22.2 -4.0
YAK                              e                  06 57 34.7
YAK                              eSS      SS        07 02 10.0 +5.1
YAK                              eSSS     SSS       07 05 27.3
YAK                                       pmax      pmax
      comp=Z,161nm,1.4s
YAK                                       pmax      pmax
      comp=N,75nm,1.6s
YAK                                       pmax      pmax
      comp=E,36nm,1.5s
YAK                                       pmax      pmax
      comp=Z,95nm,1.6s
YAK                                       pmax      pmax
      comp=N,97nm,2.0s
YAK                                       pmax      pmax
      comp=E,105nm,2.0s
YAK                                       smax      smax
      comp=N,569nm,5.3s
YAK                                       smax      smax
      comp=E,898nm,7.5s
SONA0 Songino Array    77.86 324 eP       P         06 47 16.5 -0.6
SONM  Songino Array    77.86 324  P       P         06 47 16.5 -0.6
      comp=E,24nm,1.0s,baz=137,slow=5.6,SNR=94
SONA1 Songino Array    77.87 324 eP       P         06 47 17.1  0.0
GTA   Gaotai           78.13 314 ⇑P       P         06 47 20.5 +1.7
GTA                               pP      pP        06 47 26.0  0.0
GTA                               sP      sP        06 47 28.8 +0.1
GTA                               S       S         06 57 17.3 +5.7
GTA                               sS      SKSac     06 57 27.5 -3.9
GTA                                       pmax      pmax
      comp=E,63nm,1.4s
GTA                                       pmax      pmax
      comp=E,660nm,5.9s
GTA                                       LR        LR
      comp=E,2µm,20.3s
GTA                                       LR        LR
      comp=E,4µm,20.0s
GTA                                       LR        LR
      comp=E,5µm,20.0s
SVW2  Sparrevohn       78.29  19 eP       P         06 47 18.0 -1.0
      comp=E,169nm,1.2s
HOM   Homer            78.52  21 eP       P         06 47 22.1 +1.8
      comp=E,278nm,1.1s
ANM   Nome             78.55  13 eP       P         06 47 20.9 +0.5
      comp=E,150nm,1.4s
ANM                                       LR        LR
      comp=Z,5µm,19.0s
BILL  Bilibino         78.70   1 eP       P         06 47 20.6 -0.6
      comp=Z,198nm,1.2s
BILL                                      LR        LR
      comp=Z,3µm,20.0s
BILL  Bilibino         78.70   1d iP      P         06 47 21.1 -0.1
BILL                                      pmax      pmax
      comp=Z,183nm,1.3s
RSO   Redoubt South    78.73  20 eP       P         06 47 18.6 -3.1
BRDH  Bariadhala       78.82 296  P       P         06 47 23.2 +0.4
      comp=Z,122nm,1.0s,baz=81,slow=8.3,SNR=20
BRLK  Bradley Lake     78.86  21 eP       P         06 47 21.7 -0.5
      comp=Z,153nm,1.3s
QSPA  South Pole Qui   79.14 180 eP       P         06 47 23.7 -0.3
      comp=Z,165nm,1.0s
QSPA                                      LR        LR
      comp=Z,7µm,21.0s
SHL   Shillong         79.45 299 eP       P         06 47 27.2 +0.8
      comp=Z,277nm,1.4s
SHL   Shillong         79.45 299 eP       P         06 47 27.2 +0.8
SHL                                       pmax      pmax
      comp=Z,277nm,1.4s
SHL   Shillong         79.45 299 eP       P         06 47 26.0 -0.4
SHL                              ex       x         06 52 07.5
SEW   Seward           79.62  21 eP       P         06 47 26.2 -0.1
      comp=Z,50nm,0.9s
BOD   Bodaibo          79.89 335 eP       P         06 47 27.2 -0.6
BOD                                       pmax      pmax
      comp=Z,91nm,1.9s
SUA   Susitna One      80.13  20 eP       P         06 47 28.6 -0.6
      comp=Z,177nm,1.4s
RC01  Rabbit Creek A   80.21  21 eP       P         06 47 29.2 -0.3
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      comp=Z,72nm,1.1s
PPLA  Purkeypile       80.70  19 eP       P         06 47 32.1 -0.2
      comp=Z,130nm,1.5s
PMR   Palmer           80.77  20 eP       P         06 47 31.9 -0.6
      comp=Z,164nm,1.5s
PMR   Palmer           80.77  20 eP       P         06 47 31.9 -0.6
PMR                                       pmax      pmax
      comp=Z,164nm,1.5s
KNK   Knik Glacier     80.88  21 eP       P         06 47 34.3 +1.2
      comp=Z,195nm,1.6s
ZAK   Zakamensk        80.92 325 eP       P         06 47 33.4 -0.3
ZAK                                       pmax      pmax
      comp=Z,59nm,1.3s
GHO   Glory Hole Cre   80.97  20  PFAKE             06 47 50.0  +16
GHO                               LR      LR
      comp=Z,5µm,19.0s
GLI   Glacier Island   81.00  22 eP       P         06 47 33.9 +0.2
      comp=Z,232nm,1.6s
CAST  Castle Rocks     81.12  18 eP       P         06 47 33.7 -0.7
      comp=Z,117nm,1.1s
SML   Sawmill          81.19  21 eP       P         06 47 35.1 +0.3
      comp=Z,188nm,1.4s
SML   Sawmill          81.19  21 eP       P         06 47 35.1 +0.3
SML                                       pmax      pmax
      comp=Z,188nm,1.4s
EYAK  Cordova Ski Ar   81.28  22 eP       P         06 47 35.8 +0.6
      comp=Z,96nm,1.2s
EYAK                                      LR        LR
      comp=Z,6µm,20.0s
IRK   Irkutsk          81.30 327 eP       P         06 47 35.5 -0.1
IRK                                       pmax      pmax
      comp=Z,143nm,2.2s
LSA   Lhasa            81.32 302  P       P         06 47 38.2 +1.5
LSA   Lhasa            81.32 302 eP       P         06 47 38.3 +1.6
      comp=Z,56nm,1.1s
LSA                                       LR        LR
      comp=Z,4µm,20.0s
TLY   Talaya           81.36 327 eP       P         06 47 36.1 +0.2
TLY                              eP       P         06 47 36.3 +0.4
TLY   Talaya           81.36 327c iP      P         06 47 36.6 +0.7
TLY   Talaya           81.36 327  P       P         06 47 36.8 +0.9
      SNR=32
TLY                               P       P         06 47 36.8 +0.9
      SNR=32
TLY   Talaya           81.36 327  P       P         06 47 36.1 +0.2
      comp=Z,7.3nm,0.7s,baz=156,slow=4.0,SNR=28
TLY                               LR      LR        07 21 01.6
      comp=Z,13µm,21.6s,baz=120,slow=34
DIV   Divide           81.65  22 eP       P         06 47 37.4 +0.1
      comp=Z,175nm,1.4s
TRF   Thorofare Moun   81.70  19 eP       P         06 47 36.6 -1.0
      comp=Z,234nm,1.8s
TRF                                       LR        LR
      comp=Z,6µm,21.0s
HMT   Hamilton         81.70  23 eP       P         06 47 37.5  0.0
      comp=Z,300nm,1.8s
KLU   Klutina          81.83  22 eP       P         06 47 39.0 +0.7
      comp=Z,123nm,1.5s
BPAW  Bear Paw Mtn.    81.95  18 eP       P         06 47 38.4 -0.3
      comp=Z,60nm,1.3s
RDOG  Red Dog Mine     82.07  12 eP       P         06 47 38.1 -1.2
      comp=Z,130nm,0.9s
RDOG                                      LR        LR
      comp=Z,5µm,20.0s
RND   Reindeer         82.13  19 eP       P         06 47 39.3 -0.5
      comp=Z,233nm,1.6s
RND                                       LR        LR
      comp=Z,6µm,19.0s
RND   Reindeer         82.13  19 eP       P         06 47 39.3 -0.5
RND                                       pmax      pmax
      comp=Z,233nm,1.6s
RND                                       MLR       MLR
      comp=Z,6µm,19.0s
MCK   McKinley         82.33  19 eP       P         06 47 40.1 -0.6
      comp=Z,103nm,1.0s
MCK   McKinley         82.33  19 eP       P         06 47 40.1 -0.6
MCK                                       pmax      pmax
      comp=Z,103nm,1.0s
DHY   Denali Highway   82.39  20 eP       P         06 47 41.8 +0.6
      comp=Z,86nm,1.2s
BWN   Browne           82.47  19 eP       P         06 47 41.6 +0.2
      comp=Z,164nm,1.0s
IM3   Indian Mountai   82.55  16 eP       P         06 47 41.6 -0.2
MLY   Manley           82.69  18 eP       P         06 47 42.5 -0.2
      comp=Z,160nm,1.5s
HARP  HAARP            82.71  21 eP       P         06 47 42.6 -0.1
      comp=Z,135nm,1.2s
MOY   Mondy            82.80 326 eP       P         06 47 43.9 +0.3
MOY                                       pmax      pmax
      comp=Z,169nm,3.5s
WRH   Wood River Hil   83.11  19 eP       P         06 47 44.1 -0.7
      comp=Z,93nm,1.0s
WRH                                       LR        LR
      comp=Z,6µm,21.0s
MCCM  Marconi Confer   83.24  49  PFAKE             06 48 00.0  +14
MCCM                              LR      LR
      comp=Z,5µm,21.0s
KCPM  Cahto Peak       83.24  48 eP       P         06 47 47.0 +0.9
      comp=Z,60nm,1.2s
KMRM  Mail Ridge       83.34  47 eP       P         06 47 47.2 +0.6
      comp=Z,76nm,1.3s
HOPS  Hopland Field    83.38  48  PFAKE             06 48 00.0  +13
HOPS                              LR      LR
      comp=Z,6µm,19.0s
MDM   Murphy Dome      83.40  18 eP       P         06 47 45.2 -1.1
      comp=Z,136nm,1.0s
MDM                                       LR        LR
      comp=Z,4µm,19.0s
HDA   Harding Lake     83.43  19 eP       P         06 47 45.9 -0.6
      comp=Z,184nm,0.9s
HDA                                       LR        LR
      comp=Z,4µm,20.0s
HDA   Harding Lake     83.43  19  P       P         06 47 45.5 -0.9
      baz=228
TCOL  CIGO, UAF Yank   83.46  18  P       P         06 47 45.8 -0.7
      baz=227
COLA  College          83.46  18 eP       P         06 47 45.9 -0.6
      comp=Z,131nm,0.9s
COLA                                      LR        LR
      comp=Z,4µm,20.0s
COLA  College          83.46  18ceP       P         06 47 45.6 -0.9
COLA                                      pmax      pmax
      comp=Z,141nm,1.0s
GDXM  Geysers          83.52  49 eP       P         06 47 48.2 +0.6
      comp=Z,78nm,1.6s
GDXM                                      LR        LR
      comp=Z,6µm,19.0s
KHMM  Horse Mountain   83.55  46 eP       P         06 47 50.0 +2.3
      comp=Z,53nm,1.2s
KHMM                                      LR        LR
      comp=Z,4µm,20.0s
SIT   Sitka            83.62  28  PFAKE             06 48 00.0  +13
SIT                               LR      LR
      comp=Z,4µm,20.0s
RIDG  Independ'e Rid   83.68  20  PFAKE             06 48 00.0  +12
RIDG                              LR      LR
      comp=Z,6µm,22.0s
ODAN  Odare            83.69 299 eP       P         06 47 49.5 +0.6
      comp=Z,525nm,1.2s
ILAR  Eielson Array    83.69  19  P       P         06 47 47.0 -0.8
ILAR  Eielson Array    83.69  19  P       P         06 47 47.0 -0.8
      comp=Z,74nm,1.0s,baz=228,slow=5.0,SNR=78
ILB   Eielson Array    83.69  19 eP       P         06 47 46.2 -1.5
IL1   Eielson Array    83.69  19 eP       P         06 47 45.7 -2.1
POKR  Poker Plat Res   83.76  18  P       P         06 47 47.1 -1.0
      baz=227
SAO   San Andreas Ge   83.88  51 eP       P         06 47 49.5 +0.2
      comp=Z,44nm,1.4s
SAO                                       LR        LR
      comp=Z,6µm,21.0s
SAO   San Andreas Ge   83.88  51 eP       P         06 47 49.5 +0.2
SAO                                       pmax      pmax
      comp=Z,44nm,1.4s
SAO                                       MLR       MLR
      comp=Z,6µm,21.0s
CRAG  Craig            83.89  30  PFAKE             06 48 00.0  +11
CRAG                              LR      LR
      comp=Z,6µm,19.0s
DOT   Dot Lake         83.89  21  PFAKE             06 48 00.0  +11
DOT                               LR      LR
      comp=Z,5µm,22.0s
O02D  Mt. Diablo Mer   83.98  47  P       P         06 47 49.5 -0.4
      baz=250
SCRK  Sand Creek       84.13  20 eP       P         06 47 50.4 +0.3
      comp=Z,124nm,1.2s
SCRK                                      LR        LR
      comp=Z,4µm,21.0s
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J01E  Myrtle Point     84.20  44  P       P         06 47 50.8  0.0
      baz=249
BOK   Bokaro           84.22 295 eP       P         06 47 51.7 +0.3
K02D  Willamette Mer   84.22  45  P       P         06 47 51.0 -0.1
      baz=250
WDC   Whiskeytown Da   84.30  47 eP       P         06 47 52.1 +0.7
      comp=Z,36nm,1.4s
WDC                                       LR        LR
      comp=Z,4µm,19.0s
WDC   Whiskeytown Da   84.30  47 eP       P         06 47 52.1 +0.7
WDC                                       pmax      pmax
      comp=Z,36nm,1.4s
WDC                                       MLR       MLR
      comp=Z,4µm,19.0s
N02D  Trinity Center   84.31  47  P       P         06 47 51.8 +0.2
      baz=250,SNR=6.9
SNCC  San Nicolas Is   84.32  55  P       P         06 47 50.9 -0.8
      baz=253
M02C  Callahan         84.34  46  P       P         06 47 52.6 +0.9
      baz=250,SNR=12
RAMN  Ramite           84.39 299 eP       P         06 47 52.8 +0.3
      comp=Z,190nm,1.2s
COLD  Coldfoot         84.43  16 eP       P         06 47 52.5 +1.0
      comp=Z,31nm,1.0s
COLD                                      LR        LR
      comp=Z,6µm,20.0s
MAW   Mawson           84.47 202 eP       P         06 47 53.8 +2.1
      comp=Z,97nm,2.0s
MAW                                       LR        LR
      comp=Z,900nm,21.0s
MAW   Mawson           84.47 202  P       P         06 47 53.8 +2.1
      comp=Z,49nm,1.1s,baz=248,slow=3.2,SNR=3.7
PAGB  Antelope Grade   84.48  52  PFAKE             06 48 00.0 +7.5
PAGB                              LR      LR
      comp=Z,5µm,20.0s
SBC   Santa Barbara    84.52  54  P       P         06 47 52.1 -0.5
      baz=253
SMMC  Simmler          84.55  53  P       P         06 47 53.1 +0.2
      baz=253
YBH   Yreka Blue Hor   84.56  46 eP       P         06 47 53.7 +0.9
      comp=Z,30nm,1.1s
PKM   Mcpherson Peak   84.57  53  P       P         06 47 52.4 -0.8
      baz=253
I02D  Swisshome        84.59  43  P       P         06 47 52.4 -0.4
      baz=249
BESE  Bessie Mountai   84.62  27 eP       P         06 47 54.9 +2.2
      comp=Z,111nm,1.2s
BESE                                      LR        LR
      comp=Z,6µm,19.0s
PRP   Porcupine Dome   84.62  19 eP       P         06 47 51.4 -1.3
      comp=Z,98nm,1.8s
PRP                                       LR        LR
      comp=Z,4µm,19.0s
HYT   Haines Junctio   84.68  25 eP       P         06 47 53.5 +0.5
      comp=Z,30nm,0.9s
JIS   Juneau Island    84.68  28 eP       P         06 47 54.6 +1.8
      comp=Z,207nm,1.8s
JIS                                       LR        LR
      comp=Z,6µm,20.0s
HUMO  Hull Mountain    84.68  45 eP       P         06 47 54.6 +1.3
      comp=Z,29nm,1.1s
HUMO                                      LR        LR
      comp=Z,4µm,20.0s
ORV   Oroville         84.72  48 eP       P         06 47 53.1 -0.4
      comp=Z,40nm,1.4s
ORV   Oroville         84.72  48 eP       P         06 47 53.1 -0.4
ORV                                       pmax      pmax
      comp=Z,40nm,1.4s
WRAK  Wrangell Islan   84.73  30 eP       P         06 47 52.8 -0.3
      comp=Z,96nm,1.4s
O03E  Paynes Creek     84.74  47  P       P         06 47 53.2 -0.5
      baz=251
I03D  Drain, OR        84.79  44  P       P         06 47 53.6 -0.2
      baz=250
SKAG  Skagway          84.87  26 eP       P         06 47 54.8 +1.1
      comp=Z,137nm,1.3s
SKAG                                      LR        LR
      comp=Z,7µm,19.0s
AFDM  Forest Hills D   84.92  49 eP       P         06 47 54.4 -0.2
      comp=Z,37nm,1.1s
AFDM                                      LR        LR
      comp=Z,3µm,22.0s
JIRN  Jiri             84.93 299 eP       P         06 47 55.8 +0.5
      comp=Z,462nm,1.2s
L04D  Klamath Falls    85.01  46  P       P         06 47 55.6 +0.5
      baz=251
SCI2  San Clemente I   85.03  55  P       P         06 47 56.1 +0.8
      baz=254
CMB   Columbia Colle   85.07  50 eP       P         06 47 55.6 +0.2
      comp=Z,24nm,1.1s
CMB                                       LR        LR
      comp=Z,6µm,22.0s
CMB   Columbia Colle   85.07  50 eP       P         06 47 55.6 +0.2
CMB                                       pmax      pmax
      comp=Z,24nm,1.1s
CMB                                       MLR       MLR
      comp=Z,6µm,22.0s
COR   Corvallis        85.12  43  PFAKE             06 48 10.0  +15
COR                               LR      LR
      comp=Z,5µm,21.0s
M04C  Macdoel          85.19  46  P       P         06 47 56.6 +0.6
      baz=251,SNR=7.3
CIS   Catalina Islan   85.26  55  P       P         06 47 56.1 -0.3
      baz=254
GUN   Gumba            85.26 299 eP       P         06 47 57.5 +0.5
      comp=Z,379nm,1.3s
VOG   Valley Oaks Go   85.33  52  P       P         06 47 56.6  0.0
      baz=253
OSI   Osito Audit: C   85.35  54  PFAKE             06 48 10.0  +13
OSI                               LR      LR
      comp=Z,7µm,22.0s
OSI   Osito Audit: C   85.35  54  P       P         06 47 55.7 -1.2
      baz=254
G03D  McMinnville, O   85.37  42  P       P         06 47 56.4 -0.3
      baz=250
FYU   Fort Yukon       85.40  18 eP       P         06 47 57.2 +0.9
      comp=Z,289nm,1.9s
FYU                                       LR        LR
      comp=Z,4µm,19.0s
ARVC  Arvin            85.41  53  P       P         06 47 57.1  0.0
      baz=253
VES   Vestal, Richgr   85.42  52  P       P         06 47 56.4 -0.7
      baz=253
PALK  Pallekele        85.42 278 eP       P         06 47 58.9 +1.2
      comp=Z,86nm,1.2s
PALK                                      LR        LR
      comp=Z,3µm,19.0s
PALK  Pallekele        85.42 278  P       P         06 48 01.4 +3.7
      SNR=5.8
PALK  Pallekele        85.42 278  P       P         06 47 58.6 +0.9
      comp=Z,33nm,0.9s,baz=116,slow=6.5,SNR=9.4
FMP   Fort Macarthur   85.44  55  P       P         06 47 56.7 -0.6
      baz=254
I04A  Tendick Farm,    85.46  44  P       P         06 47 58.3 +1.1
      baz=250
J04D  Umpqua Nationa   85.48  45  P       P         06 47 58.0 +0.4
      baz=251
K04D  Chiloquin, OR    85.53  45  P       P         06 47 57.8 +0.2
      baz=251
RUBR  Rubicon Trail    85.55  49  PFAKE             06 48 10.0  +12
RUBR                              LR      LR
      comp=Z,4µm,20.0s
PKI   Pulchoki         85.58 299 eP       P         06 47 58.6 +0.1
      comp=Z,399nm,1.3s
EGAK  Eagle            85.59  20  PFAKE             06 48 10.0  +13
EGAK                              LR      LR
      comp=Z,4µm,22.0s
PKIN  Phulchoki        85.59 299 eP       P         06 47 58.6 +0.1
      comp=Z,245nm,1.3s
BEKR  Beckworth        85.65  48 eP       P         06 47 55.5 -2.9
      comp=Z,88nm,1.8s
BEKR                                      LR        LR
      comp=Z,3µm,21.0s
PASC  Pasadena Art C   85.65  54  PFAKE             06 48 10.0  +12
PASC                              LR      LR
      comp=Z,3µm,20.0s
WHY   Whitehorse       85.68  25 eP       P         06 47 59.1 +1.1
      comp=Z,117nm,1.9s
TIXI  Tiksi            85.70 349 eP       P         06 47 56.9 -0.8
TIXI                              LR      LR
      comp=Z,6µm,22.0s
TIXI  Tiksi            85.70 349⇓eP       P         06 47 57.3 -0.4
TIXI                                      pmax      pmax
      comp=Z,178nm,1.7s
TIXI  Tiksi            85.70 349  P       P         06 47 56.9 -0.8
      comp=Z,57nm,1.1s,baz=130,slow=6.8,SNR=61
KKN   Kakani           85.74 299 eP       P         06 47 59.3 +0.1
      comp=Z,265nm,1.2s
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NLWA	Neilton Lookou	85.74	40	PFAKE		06 48 10.0	+11
NLWA				LR	LR		
	comp=Z,6µm,21.0s						
MWC	Mount Wilson	85.77	54	*e*P	P	06 47 59.6	+0.5
	comp=Z,113nm,1.5s						
MWC				LR	LR		
	comp=Z,6µm,22.0s						
DAWY	Dawson	85.79	21	*e*P	P	06 47 59.2	+0.8
	comp=Z,111nm,1.3s						
DAWY				LR	LR		
	comp=Z,5µm,20.0s						
ISA	Isabella, Lake	85.84	53	*e*P	P	06 47 58.8	-0.5
	comp=Z,40nm,1.4s						
ISA				LR	LR		
	comp=Z,4µm,20.0s						
ISA	Isabella, Lake	85.84	53	*e*P	P	06 47 58.8	-0.5
ISA				pmax	pmax		
	comp=Z,40nm,1.4s						
ISA				MLR	MLR		
	comp=Z,4µm,20.0s						
ISA	Isabella, Lake	85.84	53	P	P	06 47 59.3	-0.1
	baz=254,SNR=11						
DMN	Daman	85.85	299	*e*P	P	06 48 00.2	+0.4
	comp=Z,594nm,1.3s						
H04A	Detroit Lake	85.91	43	PFAKE		06 48 10.0	+11
H04A				LR	LR		
	comp=Z,5µm,21.0s						
WAKR	Walker	85.92	50	*e*P	P	06 47 59.3	-0.6
	comp=Z,135nm,1.7s						
WAKR				LR	LR		
	comp=Z,7µm,22.0s						
MDPB	Devils Postpil	85.94	51	*e*P	P	06 48 00.4	+0.4
	comp=Z,37nm,1.2s						
MDPB				LR	LR		
	comp=Z,5µm,21.0s						
PNTR	Pine Nut	85.98	49	*e*P	P	06 47 59.9	-0.3
	comp=Z,33nm,1.1s						
OMMB	Old Mammoth Mi	85.99	51	*e*P	P	06 48 01.0	+0.7
	comp=Z,40nm,1.4s						
OMMB				LR	LR		
	comp=Z,6µm,21.0s						
VCNR	Virginia City	86.00	49	*e*P	P	06 48 00.4	+0.2
	comp=Z,26nm,1.3s						
EDW2	Edwards Air Fo	86.00	54	P	P	06 47 59.9	-0.2
	baz=254,SNR=9.6						
BFSC	Mount Baldy Ra	86.09	54	P	P	06 48 00.4	-0.3
	baz=254,SNR=9.7						
J05D	Fort Rock, OR	86.10	45	P	P	06 48 00.8	+0.2
	baz=251						
MLAC	Mammoth, Mammo	86.12	51	P	P	06 48 00.8	-0.1
	baz=253						
109C	Camp Elliot, M	86.17	56	P	P	06 48 00.9	0.0
	baz=255						
CPE	Camp Elliot	86.17	56	PFAKE		06 48 10.0	+9.1
CPE				LR	LR		
	comp=Z,4µm,22.0s						
YERR	Yerington	86.21	49	*e*P	P	06 48 01.6	+0.3
	comp=Z,59nm,1.7s						
E04D	Cinebar	86.29	41	P	P	06 48 01.7	+0.5
	baz=250						
D03D	Eldon	86.29	40	P	P	06 48 01.8	+0.7
	baz=250						
MURC	Murrieta	86.29	55	P	P	06 48 01.5	-0.1
	baz=254						
MOD	Modoc Plateau	86.32	46	*e*P	P	06 48 01.4	-0.2
	comp=Z,20nm,1.0s						
PAHR	Pah Rah Range	86.32	49	*e*P	P	06 48 02.1	+0.4
	comp=Z,46nm,1.3s						
CWC	Cottonwood Cre	86.37	52	P	P	06 48 01.6	-0.4
	baz=254						
I05D	Terrebonne, OR	86.37	44	P	P	06 48 02.2	+0.5
	baz=251						
D04E	Lakebay	86.37	41	P	P	06 48 01.3	-0.2
	baz=250						
LRMC	Laurel Mtn Rad	86.41	53	P	P	06 48 02.2	-0.1
	baz=254						
TIN	Tinemaha, Big	86.42	51	P	P	06 48 02.0	-0.2
	baz=254						
PINE	Pine Mountain	86.46	44	*e*P	P	06 48 02.4	0.0
	comp=Z,44nm,1.3s						
PINE				LR	LR		
	comp=Z,5µm,22.0s						
BAR	Barrett	86.47	56	*e*P	P	06 48 02.3	-0.2
	comp=Z,24nm,1.3s						
BAR				LR	LR		
	comp=Z,4µm,22.0s						
RYN	Ryan	86.65	50	*e*P	P	06 48 02.5	-0.8
	comp=Z,45nm,1.4s						
RYN				LR	LR		
	comp=Z,5µm,21.0s						
G05D	Wamic, OR	86.67	43	P	P	06 48 03.7	+0.5
	baz=251						
BBRC	Big Bear Solar	86.69	54	P	P	06 48 03.1	-0.7
	baz=255						
DAC	Darwin (Calif)	86.70	52	*e*P	P	06 48 03.2	-0.4
	comp=Z,47nm,1.5s						
DAC				LR	LR		
	comp=Z,6µm,21.0s						
DAC	Darwin (Calif)	86.70	52	*e*P	P	06 48 03.3	-0.4
DAC				pmax	pmax		
	comp=Z,47nm,1.5s						
DAC				MLR	MLR		
	comp=Z,6µm,21.0s						
MPMC	Manual Prospec	86.72	53	P	P	06 48 03.6	-0.3
	baz=254,SNR=7.8						
MONP2	Monument Peak	86.73	56	P	P	06 48 03.6	-0.3
	baz=255,SNR=10						
NV01	Mina Array Sit	86.75	50	*e*P	P	06 48 03.4	-0.6
NVAR	Mina Array Bea	86.75	50	P	P	06 48 03.4	-0.6
	comp=Z,15nm,1.0s,baz=238,slow=6.6,SNR=32						
NVAR				LR	LR	07 18 24.7	
	comp=Z,5µm,21.3s,baz=260,slow=30						
DLBC	Dease Lake	86.78	29	*e*P	P	06 48 03.3	-0.1
	comp=Z,33nm,1.2s						
DLBC				LR	LR		
	comp=Z,5µm,19.0s						
F05D	White Salmon	86.79	42	P	P	06 48 04.5	+0.8
	baz=251						
LON	Longmire	86.84	41	PFAKE		06 48 20.0	+16
LON				LR	LR		
	comp=Z,4µm,21.0s						
NV11	Mina Array Sit	86.87	50	PFAKE		06 48 20.0	+16
NV11				LR	LR		
	comp=Z,400nm,21.0s						
D05A	Enumclaw	86.87	41	PFAKE		06 48 20.0	+16
D05A				LR	LR		
	comp=Z,5µm,19.0s						
PFO	Pinyon Flats O	86.89	55	*e*P	P	06 48 03.9	-0.7
	comp=Z,19nm,1.1s						
PFO				LR	LR		
	comp=Z,4µm,19.0s						
PFO	Pinyon Flats O	86.89	55	*e*P	P	06 48 03.9	-0.7
PFO				pmax	pmax		
	comp=Z,19nm,1.1s						
PFO				MLR	MLR		
	comp=Z,4µm,19.0s						
PFO	Pinyon Flats O	86.89	55	P	P	06 48 04.0	-0.6
	baz=255,SNR=7.8						
XPFO	Pion Flat	86.89	55	*e*P	P	06 48 03.9	-0.8
	comp=Z,20nm,1.1s						
XPFO				LR	LR		
	comp=Z,5µm,19.0s						
IKP	In-Ko-Pah, Jac	86.92	56	P	P	06 48 03.9	-0.9
	baz=255						
A04D	Lummi Island	86.94	39	P	P	06 48 04.4	+0.1
	baz=250						
MDRS	Chennai	87.03	284	*e*P	P	06 48 04.9	-0.6
MDRS				IAmb	IAmb	06 48 09.6	
	comp=Z,156nm,1.9s						
GSC	Goldstone, Bar	87.05	53	*e*P	P	06 48 06.6	+1.3
	comp=Z,33nm,1.3s						
GSC				LR	LR		
	comp=Z,5µm,19.0s						
GSC	Goldstone, Bar	87.05	53	P	P	06 48 05.5	+0.2
	baz=255						
GRAC	Grapevine Rang	87.07	52	P	P	06 48 05.3	0.0
	baz=254,SNR=6.4						
KVN	Kaiserville	87.08	50	*e*P	P	06 48 05.8	+0.3
	comp=Z,33nm,1.2s						
KVN	Kaiserville	87.08	50	*e*P	P	06 48 05.8	+0.3
KVN				pmax	pmax		
	comp=Z,33nm,1.2s						
B05A	Bryant	87.17	40	P	P	06 48 05.8	+0.4
	baz=250						
DANN	Dangsing	87.18	299	*e*P	P	06 48 05.6	-0.8
	comp=Z,210nm,1.2s						
SWSC	Sam W. Stewart	87.25	56	P	P	06 48 05.7	-0.5
	baz=255,SNR=8.6						
HEC	Hector,Ludlow	87.30	54	P	P	06 48 06.0	-0.5
	baz=255						
FURC	Furnace Creek,	87.32	52	P	P	06 48 06.7	+0.3
	baz=255,SNR=5.4						
BELC	Belle Mtn. Jos	87.36	55	P	P	06 48 06.3	-0.6
	baz=255,SNR=15						
I07A	Izee	87.54	44	*e*P	P	06 48 07.1	-0.4
	comp=Z,44nm,1.4s						
I07A				LR	LR		
	comp=Z,5µm,22.0s						
SHOC	Shoshone, Teco	87.63	53	P	P	06 48 07.4	-0.6
	baz=255						
WVOR	Wild Horse Val	87.66	46	*e*P	P	06 48 08.2	0.0
	comp=Z,51nm,1.2s						
WVOR	Wild Horse Val	87.66	46	*e*P	P	06 48 08.2	0.0
WVOR				pmax	pmax		
	comp=Z,51nm,1.2s						
BC3	Big Chuckawall	87.71	55	P	P	06 48 09.1	+0.6
	baz=256,SNR=7.8						
LTY	Liberty	87.75	41	PFAKE		06 48 20.0	+12
LTY				LR	LR		
	comp=Z,3µm,19.0s						
PYUN	Piuthan	87.78	299	*e*P	P	06 48 08.2	-1.0
	comp=Z,132nm,1.1s						
TUQ	Turquoise Moun	87.78	53	P	P	06 48 08.2	-0.7
	baz=255						
F07A	Phinny Hill Vi	87.81	43	*e*P	P	06 48 09.9	+1.4
	comp=Z,35nm,1.3s						
GMRC	Granite Mounta	87.83	54	P	P	06 48 09.1	0.0
	baz=255,SNR=9.7						
TPNV	Topopah Spring	87.92	52	*e*P	P	06 48 10.3	+0.7
	comp=Z,87nm,1.8s						
TPNV				LR	LR		
	comp=Z,4µm,20.0s						
TPNV	Topopah Spring	87.92	52	*e*P	P	06 48 10.3	+0.7
TPNV				pmax	pmax		
	comp=Z,87nm,1.8s						
TPNV				MLR	MLR		
	comp=Z,4µm,20.0s						
TPNV	Topopah Spring	87.92	52	P	P	06 48 08.8	-0.8
	baz=255						
J08A	Circle Bar Ran	88.04	45	*e*P	P	06 48 09.4	-0.5
	comp=Z,39nm,1.1s						
J08A				LR	LR		
	comp=Z,3µm,21.0s						
GLA	Glamis	88.07	56	*e*P	P	06 48 11.1	+0.9
	comp=Z,100nm,1.5s						
GLA				LR	LR		
	comp=Z,3µm,22.0s						
GLA	Glamis	88.07	56	*e*P	P	06 48 11.1	+0.9
GLA				pmax	pmax		
	comp=Z,100nm,1.5s						
GLA				MLR	MLR		
	comp=Z,3µm,22.0s						
GLA	Glamis	88.07	56	P	P	06 48 10.4	+0.2
	baz=256,SNR=7.7						
IRM	Iron Mountain	88.08	55	P	P	06 48 10.5	+0.3
	baz=256,SNR=15						
WMQ	Urumqi	88.18	315	P	P	06 48 11.1	+0.6
WMQ				pP	PcP	06 48 13.5	+1.3
WMQ				PP	PP	06 51 35.1	-2.8
WMQ				SKS	SKSac	06 58 35.2	-2.1
WMQ				S	S	06 58 54.9	+1.7
WMQ				SS	SS	07 04 42.8	+0.1
WMQ				pmax	pmax		
	comp=Z,170nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,850nm,3.7s						
WMQ				LR	LR		
	comp=Z,7µm,16.7s						
WMQ				LR	LR		
	comp=Z,12µm,22.3s						
WMQ	Urumqi	88.18	315	*e*P	P	06 48 11.3	+0.8
	comp=Z,218nm,1.4s						
WMQ				LR	LR		
	comp=Z,7µm,21.0s						
WMQ	Urumqi	88.18	315	*e*P	P	06 48 11.3	+0.8
WMQ				pmax	pmax		
	comp=Z,218nm,1.4s						
WMQ				MLR	MLR		
	comp=Z,7µm,21.0s						
HAWA	Hanford	88.22	42	*e*P	P	06 48 09.1	-1.4
	comp=Z,89nm,1.9s						
G08A	Pilot Rock	88.27	43	*e*P	P	06 48 11.2	+0.2
	comp=Z,27nm,1.0s						
G08A				LR	LR		
	comp=Z,4µm,20.0s						
LDFC	Landfair	88.34	54	*e*P	P	06 48 11.9	+0.4
	comp=Z,122nm,1.4s						
LDFC				LR	LR		
	comp=Z,4µm,18.0s						
Y12C	Blythe	88.48	55	*e*P	P	06 48 12.4	+0.4
	comp=Z,62nm,1.5s						
Y12C				LR	LR		
	comp=Z,4µm,18.0s						
Y12C	Blythe	88.48	55	P	P	06 48 12.8	+0.7
	baz=256,SNR=14						
E08A	Dider Farm, El	88.56	42	*e*P	P	06 48 13.0	+0.9
	comp=Z,42nm,1.3s						
NEE2	Needles Airpor	88.65	54	P	P	06 48 12.4	-0.4
	baz=256						
SHPR	Sheep Range	88.65	53	*e*P	P	06 48 12.8	-0.2
	comp=Z,126nm,1.9s						
SHPR				LR	LR		
	comp=Z,6µm,20.0s						
R11A	Troy Canyon, C	88.79	51	*e*P	P	06 48 13.4	-0.3
	comp=Z,24nm,1.3s						
R11A				LR	LR		
	comp=Z,6µm,21.0s						
R11A	Troy Canyon, C	88.79	51	P	P	06 48 13.4	-0.3
	baz=255,SNR=9.6						
D08A	Wollman Farm,	88.82	42	*e*P	P	06 48 12.4	-1.0
	comp=Z,60nm,1.5s						
113A	Mohawk Valley,	88.87	56	*e*P	P	06 48 14.4	+0.5
	comp=Z,79nm,1.8s						
113A				LR	LR		
	comp=Z,5µm,18.0s						
SRIG	Santa Rosalia	88.92	62	PFAKE		06 48 30.0	+16
SRIG				LR	LR		
	comp=Z,3µm,22.0s						
PDMCI	Parker Dam,Lak	88.92	55	P	P	06 48 14.6	+0.5
	baz=256,SNR=9.4						
B08A	Colville Reser	88.94	40	*e*P	P	06 48 13.1	-0.9
	comp=Z,55nm,1.7s						
E09A	Wood Farm, Sta	89.17	42	*e*P	P	06 48 13.2	-1.8
	comp=Z,55nm,1.5s						
BMO	Blue Mountains	89.27	44	*e*P	P	06 48 15.4	-0.2
	comp=Z,115nm,1.9s						
BMO	Blue Mountains	89.27	44	*e*P	P	06 48 15.4	-0.2
BMO				pmax	pmax		
	comp=Z,115nm,1.9s						
TRD	Trivandrum	89.30	279	*e*P	P	06 48 15.6	-0.7
W13A	Hualapai Mount	89.32	54	*e*P	P	06 48 15.6	-0.6
	comp=Z,92nm,1.9s						
W13A				LR	LR		
	comp=Z,4µm,21.0s						
214A	Organ Pipe Nat	89.47	57	P	P	06 48 17.0	+0.2
	baz=257,SNR=25						
HYB	Hyderabad	89.50	288	*i* P	P	06 48 17.0	-0.2
HYB	Hyderabad	89.50	288	*e*P	P	06 48 18.7	+1.5
HYB				IAmb	IAmb	06 48 20.7	
	comp=Z,26nm,1.1s						
F10A	Beach Ranch, E	89.63	43	*e*P	P	06 48 18.1	+0.8
	comp=Z,71nm,1.5s						
F10A				LR	LR		
	comp=Z,2µm,19.0s						
ELK	Elko	89.66	48	*e*P	P	06 48 16.9	-0.9
	comp=Z,41nm,1.4s						
ELK				LR	LR		
	comp=Z,3µm,20.0s						
ELK	Elko	89.66	48	*e*P	P	06 48 16.9	-0.9
ELK				pmax	pmax		
	comp=Z,41nm,1.4s						
ELK				MLR	MLR		
	comp=Z,3µm,20.0s						
Y14A	Wickenburg	89.76	55	PFAKE		06 48 30.0	+12
Y14A				LR	LR		
	comp=Z,4µm,18.0s						
NGP	Nagpur	89.78	291⇑	*e*P	P	06 48 18.1	-0.3
NGP				IAmb	IAmb	06 48 21.4	
	comp=Z,40nm,1.2s						
NGP				*e*x	x	06 59 21.7	
NGP				*e*x	x	07 43 11.6	
	comp=Z,2µm,22.0s						
MFID	Camas Ranch	89.91	46	*e*P	P	06 48 18.8	+0.1
	comp=Z,47nm,1.4s						
MFID				LR	LR		
	comp=Z,3µm,21.0s						
DGZ	Jazzator, Alta	90.05	321*c*	*i*P	P	06 48 19.5	+0.2
DGZ				pmax	pmax		
	comp=Z,34nm,1.0s						
INK	Inuvik	90.09	19	*e*P	P	06 48 19.0	+0.2
	comp=Z,48nm,1.3s						
INK				LR	LR		
	comp=Z,6µm,20.0s						
INK	Inuvik	90.09	19	P	P	06 48 18.9	+0.1
	comp=Z,22nm,1.1s,baz=227,slow=5.5,SNR=23						
PSUT	Pine Spring	90.15	51	*e*P	P	06 48 20.3	+0.2
	comp=Z,18nm,1.0s						
PSUT				LR	LR		
	comp=Z,6µm,21.0s						
SLBS	Sierra La Lagu	90.18	66	*e*P	P	06 48 19.4	-1.0
	comp=Z,50nm,1.3s						
LCMT	Little Creek M	90.27	52	*e*P	P	06 48 20.9	+0.3
	comp=Z,41nm,1.2s						
LCMT				LR	LR		
	comp=Z,5µm,19.0s						
CCUT	Cedar City	90.30	52	*e*P	P	06 48 21.4	+0.6
	comp=Z,100nm,1.9s						
CCUT				LR	LR		
	comp=Z,6µm,21.0s						
NEW	Newport	90.33	41	*e*P	P	06 48 17.8	-2.7
	comp=Z,69nm,1.8s						
NEW	Newport	90.33	41	*e*P	P	06 48 17.8	-2.7
NEW				pmax	pmax		
	comp=Z,69nm,1.8s						
NEW	Newport	90.33	41	P	P	06 48 20.3	-0.1
	baz=254						
HSIG		90.40	61	*e*P	P	06 48 22.9	+1.7
	comp=Z,74nm,1.6s						
HSIG				LR	LR		
	comp=Z,4µm,20.0s						
SZCU	Shurtz Canyon	90.53	52	*e*P	P	06 48 21.8	-0.1
	comp=Z,62nm,1.6s						
SZCU				LR	LR		
	comp=Z,6µm,21.0s						
KNB	Kanab	90.60	53	*e*P	P	06 48 22.7	+0.6
	comp=Z,73nm,1.4s						
KNB				LR	LR		
	comp=Z,5µm,20.0s						
KNB	Kanab	90.60	53	*e*P	P	06 48 22.7	+0.6
KNB				pmax	pmax		
	comp=Z,73nm,1.4s						
KNB				MLR	MLR		
	comp=Z,5µm,20.0s						
DGAR	Diego Garcia	90.73	262	PFAKE		06 48 30.0	+7.0
DGAR				LR	LR		
	comp=Z,7µm,19.0s						
U15A	North Rim	90.88	53	*e*P	P	06 48 23.8	+0.1
	comp=Z,33nm,1.1s						
U15A				LR	LR		
	comp=Z,3µm,19.0s						
HLID	Hailey	90.94	46	*e*P	P	06 48 23.5	-0.1
	comp=Z,71nm,1.7s						
HLID				LR	LR		
	comp=Z,4µm,22.0s						
HLID	Hailey	90.94	46	P	P	06 48 23.8	+0.2
	baz=256						
PKCU	Pink Cliffs	91.09	52	*e*P	P	06 48 24.9	+0.2
	comp=Z,82nm,1.3s						
PKCU				LR	LR		
	comp=Z,5µm,22.0s						
X16A	Lo Mia Camp, P	91.13	55	*e*P	P	06 48 25.3	+0.6
	comp=Z,27nm,1.3s						
X16A				LR	LR		
	comp=Z,3µm,19.0s						
TUC	Tucson	91.22	57	*e*P	P	06 48 25.6	+0.6
	comp=Z,14nm,1.1s						
TUC				LR	LR		
	comp=Z,4µm,21.0s						
TUC	Tucson	91.22	57	P	P	06 48 25.5	+0.5
	baz=258						
TCRU	Three Creeks R	91.25	51	*e*P	P	06 48 26.6	+1.4
	comp=Z,22nm,0.9s						
TCRU				LR	LR		
	comp=Z,4µm,20.0s						
MTPU	Mount Pierson	91.32	52	*e*P	P	06 48 24.8	-0.9
	comp=Z,68nm,1.5s						
MTPU				LR	LR		
	comp=Z,6µm,22.0s						
DUG	Dugway, Tooele	91.32	49	*e*P	P	06 48 23.5	-1.9
	comp=Z,20nm,1.1s						
DUG				LR	LR		
	comp=Z,3µm,20.0s						
DUG	Dugway, Tooele	91.32	49	*e*P	P	06 48 23.5	-1.9
DUG				pmax	pmax		
	comp=Z,20nm,1.1s						
DUG				MLR	MLR		
	comp=Z,3µm,20.0s						
DUG	Dugway, Tooele	91.32	49	P	P	06 48 25.9	+0.5
	baz=257						
BGU	Big Grassy Mou	91.33	49	*e*P	P	06 48 25.6	+0.1
	comp=Z,35nm,1.3s						
WUAZ	Wupatki	91.41	54	*e*P	P	06 48 26.4	+0.5
	comp=Z,27nm,1.2s						
WUAZ				LR	LR		
	comp=Z,5µm,22.0s						
WUAZ	Wupatki	91.41	54	P	P	06 48 26.4	+0.5
	baz=258						
MSU	Marysvale	91.43	51	*e*P	P	06 48 26.6	+0.6
MSU	Marysvale	91.43	51	*e*P	P	06 48 26.6	+0.6
SYO	Syowa Base	91.63	197⇑	*i*P	P	06 48 25.0	-1.1
SYO	Syowa Base	91.63	197⇑	*e*P	P	06 48 31.0	+4.9
BHPL	Bhopal	91.67	293	*e*P	P	06 48 26.3	-0.9
BHPL				IAmb	IAmb	06 48 29.6	
	comp=Z,34nm,1.3s						
HVU	Hansel Valley	91.71	48	*e*P	P	06 48 27.5	+0.3
	comp=Z,61nm,1.2s						
HVU				LR	LR		
	comp=Z,3µm,21.0s						
HVU	Hansel Valley	91.71	48	*e*P	P	06 48 27.5	+0.3
HVU				pmax	pmax		
	comp=Z,61nm,1.2s						
HVU				MLR	MLR		
	comp=Z,3µm,21.0s						
NLU	North Lily Min	91.82	50	*e*P	P	06 48 27.2	-0.6
	comp=Z,46nm,1.4s						
NLU				LR	LR		
	comp=Z,4µm,20.0s						
SPUT	South Promonto	91.84	48	*e*P	P	06 48 27.9	+0.1
	comp=Z,35nm,1.3s						
MSO	Missoula	92.05	43	P	P	06 48 29.1	+0.5
	baz=256						
MPU	Maple Canyon	92.17	50	*e*P	P	06 48 29.4	0.0
	comp=Z,40nm,1.4s						
MPU				LR	LR		
	comp=Z,5µm,22.0s						
CTU	Camp Tracy	92.22	49	*e*P	P	06 48 28.4	-1.2
	comp=Z,36nm,1.3s						
Q16A	Castle Valley	92.28	51	*e*P	P	06 48 31.4	+1.4
	comp=Z,37nm,1.3s						
Q16A				LR	LR		
	comp=Z,3µm,19.0s						
319A	Douglas	92.29	59	*e*P	P	06 48 29.2	-0.9
	comp=Z,18nm,1.1s						
319A				LR	LR		
	comp=Z,5µm,20.0s						
MCMT	McKenzie Canyo	92.33	45	*e*P	P	06 48 30.9	+0.7
TMUT	Trail Mountain	92.34	51	*e*P	P	06 48 32.5	+2.2
	comp=Z,12nm,1.0s						
TMUT				LR	LR		
	comp=Z,4µm,21.0s						
X18A	Snowflake	92.36	55	*e*P	P	06 48 29.8	-0.6
	comp=Z,15nm,1.1s						
X18A				LR	LR		
	comp=Z,2µm,20.0s						
JLU	Jordanelle	92.43	49	*e*P	P	06 48 31.2	+0.6
	comp=Z,26nm,1.3s						
DDI	Dehra Dun	92.47	300	*e*P	P	06 48 30.5	-0.3
TCUT	Toone Canyon	92.56	49	*e*P	P	06 48 30.4	-0.9
	comp=Z,84nm,1.5s						
MK01	Makanchi Array	92.62	317	*e*P	P	06 48 30.5	-0.6
DLMT	Dillon	92.63	44	*e*P	P	06 48 31.0	-0.3
	comp=Z,53nm,1.1s						
MK32	Makanchi Array	92.63	317	*e*P	P	06 48 29.8	-1.4
MK32				*e*PP	PP	06 52 16.5	+3.4
MKAR	Makanchi Array	92.63	317	P	P	06 48 29.8	-1.4
MKAR				PP	PP	06 52 16.5	+3.4
MKAR				PKKP	PKKPbc	07 05 44.3	-1.0
MKAR				LR	LR		
	comp=Z,1µm,21.0s						
MKAR	Makanchi Array	92.63	317	P	P	06 48 29.8	-1.4
MKAR						06 52 16.5	
MKAR						07 05 44.3	

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MKAR                                 MLR      MLR
      comp=Z,1µm,21.0s
MKAR  Makanchi Array     92.63 317   P        P        06 48 29.8  -1.4
      comp=Z,32nm,1.0s,baz=62,slow=5.2,SNR=6.8
MKAR                                 PP       PP       06 52 16.5  +3.4
      comp=Z,9.5nm,1.1s,baz=117,slow=7.5,SNR=4.2
MKAR                                 PKKP     PKKPbc   07 05 44.3  -1.0
      comp=Z,1.0nm,0.6s,baz=269,slow=4.0,SNR=5.8
W18A  Petrified Fore     92.64  55  eP        P        06 48 30.5  -1.2
      comp=Z,15nm,1.0s
W18A                                 LR       LR
      comp=Z,3µm,18.0s
W18A  Petrified Fore     92.64  55   P        P        06 48 32.4  +0.7
      baz=259
HMDM  Hanimaadhoo        92.66 276   PFAKE             06 48 40.0  +8.1
HMDM                                 LR       LR
      comp=Z,2µm,20.0s
P17A  Butcher Ranch,     92.73  50  eP        P        06 48 32.1  +0.2
      comp=Z,14nm,1.1s
P17A                                 LR       LR
      comp=Z,4µm,20.0s
ZAA0  Zalesovo Array     92.76 324  eP        P        06 48 30.9  -0.6
      comp=Z,113nm,1.4s
ZAA0                                 LR       LR
      comp=Z,5µm,20.0s
ZALV  Zalesovo Beam      92.76 324   P        P        06 48 30.0  -1.5
      comp=Z,26nm,1.0s,baz=106,slow=4.8,SNR=46
ZALV                                 PP       PP       06 52 14.1  +0.2
      comp=Z,3.8nm,1.0s,baz=134,slow=4.3,SNR=4.1
ZALV                                 LR       LR       07 28 13.3
      comp=Z,5µm,21.9s,baz=113,slow=34
ZAA1  Zalesovo Array     92.76 324  eP        P        06 48 30.0  -1.5
ZAA1                                ePP       PP       06 52 14.1  +0.2
SRU   San Rafael Swe     92.82  51  eP        P        06 48 34.1  +1.7
      comp=Z,13nm,1.2s
SRU                                  LR       LR
      comp=Z,3µm,21.0s
SRU   San Rafael Swe     92.82  51  eP        P        06 48 34.1  +1.7
SRU                                  pmax     pmax
      comp=Z,13nm,1.2s
SRU                                  MLR      MLR
      comp=Z,3µm,21.0s
LRM   Limekiln Ridge     92.83  44  eP        P        06 48 32.2  -0.1
MAKZ  Makanchi           92.84 317  eP        P        06 48 32.1   0.0
      comp=Z,153nm,1.3s
MAKZ                                 LR       LR
      comp=Z,6µm,20.0s
MAKZ  Makanchi           92.84 317  eP        P        06 48 32.1   0.0
MAKZ                                 pmax     pmax
      comp=Z,153nm,1.3s
MAKZ                                 MLR      MLR
      comp=Z,6µm,20.0s
NDI   New Delhi          92.88 298  eP        P        06 48 32.5  -0.2
MNCY  Minicoy            93.07 278  eP        P        06 48 33.0  -0.9
AHID  Auburn Hatcher     93.13  47  eP        P        06 48 36.1  +2.3
      comp=Z,40nm,1.7s
AHID                                 LR       LR
      comp=Z,3µm,21.0s
QLMT  Earthquake Lak     93.32  45  eP        P        06 48 35.4  +0.8
BOZ   Bozeman (W)        93.34  44  eP        P        06 48 34.8  +0.2
      comp=Z,49nm,1.5s
BOZ                                  LR       LR
      comp=Z,3µm,22.0s
BOZ   Bozeman (W)        93.34  44  eP        P        06 48 34.8  +0.2
BOZ                                  pmax     pmax
      comp=Z,49nm,1.5s
BOZ                                  MLR      MLR
      comp=Z,3µm,22.0s
BOZ   Bozeman (W)        93.34  44   P        P        06 48 35.1  +0.4
      baz=258
FXWY  Fox Creek          93.36  46  eP        P        06 48 34.9  +0.1
      comp=Z,11nm,1.1s
SMLA  Simla              93.37 301  eP        P        06 48 32.9  -2.0
SMLA                                 IAML              06 48 37.8
      comp=Z,145nm,0.3s
TPAW  Teton Pass         93.39  47  eP        P        06 48 35.8  +0.8
      comp=Z,56nm,1.9s
REDW  Red Top Meadow     93.43  47  eP        P        06 48 37.2  +2.0
      comp=Z,35nm,1.5s
HRY   Holter Researc     93.44  43  eP        P        06 48 35.6  +0.6
YHB   Horse Butte        93.47  45  eP        P        06 48 34.8  -0.5
      comp=Z,27nm,1.3s
YHB                                  LR       LR
      comp=Z,6µm,22.0s
IMW   Indian Meadow      93.48  46  eP        P        06 48 37.2  +1.7
      comp=Z,34nm,1.5s
IMW                                  LR       LR
      comp=Z,3µm,21.0s
SNOW  Snow King Moun     93.52  47  eP        P        06 48 36.0  +0.4
      comp=Z,58nm,1.8s
MOOW  Moose Ponds        93.58  46  eP        P        06 48 35.8  -0.1
      comp=Z,11nm,1.1s
MOOW                                 LR       LR
      comp=Z,3µm,19.0s
GOA   Goa                93.60 285  eP        P        06 48 34.8  -1.4
YMR   Madison River      93.61  45  eP        P        06 48 34.8  -1.2
      comp=Z,50nm,1.5s
YMR                                  LR       LR
      comp=Z,4µm,18.0s
YPP   Pitchstone Pla     93.64  46   PFAKE             06 48 50.0   +14
YPP                                  LR       LR
      comp=Z,7µm,22.0s
LOHW  Long Hollow        93.66  46  eP        P        06 48 36.9  +0.7
      comp=Z,18nm,1.4s
YFT   Old Faithful       93.66  46  eP        P        06 48 36.9  +0.7
      comp=Z,52nm,1.9s
FLWY  Flagg Ranch        93.68  46  eP        P        06 48 38.7  +2.4
      comp=Z,44nm,1.5s
FLWY                                 LR       LR
      comp=Z,4µm,22.0s
121A  Cookes Peak, D     93.75  58   P        P        06 48 37.9  +1.1
      baz=260
PV09  Paradox Valley     93.77  52  eP        P        06 48 39.6  +2.6
PV10  Paradox Valley     93.81  52   PFAKE             06 48 50.0   +13
PV10                                 LR       LR
      comp=Z,7µm,22.0s
YNR   Norris Junctio     93.82  45   PFAKE             06 48 50.0   +13
YNR                                  LR       LR
      comp=Z,5µm,21.0s
PV14  Lion Creek, Pa     93.83  52  eP        P        06 48 38.6  +1.4
      comp=Z,10nm,1.0s
PV14                                 LR       LR
      comp=Z,8µm,22.0s
H17A  Grant Village      93.83  46  eP        P        06 48 37.7  +0.7
      comp=Z,13nm,1.0s
H17A  Grant Village      93.83  46   P        P        06 48 38.3  +1.2
      baz=259
PDGK  Podgornoye         93.85 313   P        P        06 48 36.6  -0.4
PDGK                                 pmax     pmax
      comp=Z,66nm,1.4s
PV19  Morning Glory      93.85  52  eP        P        06 48 38.9  +1.7
      comp=Z,8.4nm,0.9s
PV19                                 LR       LR
      comp=Z,6µm,22.0s
PV23  Carpenter Ridg     93.85  52  eP        P        06 48 39.6  +2.4
      comp=Z,14nm,0.8s
PV17  East Wray Mesa     93.86  52  eP        P        06 48 37.2  -0.1
      comp=Z,14nm,1.2s
PV17                                 LR       LR
      comp=Z,6µm,21.0s
PV20  West Nyswonger     93.86  52   PFAKE             06 48 50.0   +13
PV20                                 LR       LR
      comp=Z,6µm,22.0s
NVS   Novosibirsk        93.87 325⇑iP        P        06 48 37.0  +0.4
NVS                                 i                  06 52 21.0
NVS                                  pmax     pmax
      comp=Z,68nm,1.5s
NVS                                  pmax     pmax
      comp=N,16nm,1.4s
NVS                                  pmax     pmax
      comp=E,38nm,1.6s
PV16  Nyswonger Mesa     93.90  52   PFAKE             06 48 50.0   +13
PV16                                 LR       LR
      comp=Z,5µm,22.0s
PV21  Cone Mtn., Par     93.90  52  eP        P        06 48 38.5  +1.0
      comp=Z,14nm,1.2s
PV21                                 LR       LR
      comp=Z,7µm,21.0s
PV04  Paradox Valley     93.92  52  eP        P        06 48 38.5  +1.0
      comp=Z,14nm,1.0s
PV04                                 LR       LR
      comp=Z,7µm,22.0s
PV11  David Mesa, Pa     93.93  52   PFAKE             06 48 50.0   +12
PV11                                 LR       LR
      comp=Z,6µm,20.0s
PV03  Paradox Valley     93.94  52  eP        P        06 48 39.4  +1.7
      comp=Z,22nm,1.6s
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PV03                                 LR       LR
      comp=Z,4µm,21.0s
PV13  Radium Mtn., P     93.94  52   PFAKE             06 48 50.0   +12
PV13                                 LR       LR
      comp=Z,4µm,21.0s
PV12  Saucer Basin,      93.99  52  eP        P        06 48 38.2  +0.4
      comp=Z,43nm,1.7s
PV12                                 LR       LR
      comp=Z,8µm,22.0s
LKWY  Lake               93.99  46  eP        P        06 48 41.3  +3.5
      comp=Z,36nm,1.8s
LKWY  Lake               93.99  46  eP        P        06 48 41.3  +3.5
LKWY                                 pmax     pmax
      comp=Z,36nm,1.8s
PV02  Paradox Valley     94.02  52   PFAKE             06 48 50.0   +12
PV02                                 LR       LR
      comp=Z,6µm,22.0s
MVCO  Mesa Verde         94.02  53   PFAKE             06 48 50.0   +12
MVCO                                 LR       LR
      comp=Z,2µm,20.0s
MVCO  Mesa Verde         94.02  53   P        P        06 48 38.6  +0.5
      baz=260
POO   Poona              94.11 288  eP        P        06 48 37.4  -1.2
POO                                  IAmb     IAmb     06 48 41.0
      comp=Z,35nm,0.9s
PV07  Paradox Valley     94.13  52  eP        P        06 48 40.0  +1.5
      comp=Z,12nm,1.2s
PV07                                 LR       LR
      comp=Z,5µm,20.0s
PV01  Paradox Valley     94.13  52  eP        P        06 48 39.2  +0.6
      comp=Z,14nm,1.3s
PV15  Paradox Valley     94.24  52   PFAKE             06 48 50.0   +11
PV15                                 LR       LR
      comp=Z,4µm,20.0s
BW06  Boulder Array      94.25  47  eP        P        06 48 38.8  -0.2
      comp=Z,16nm,1.2s
BW06                                 LR       LR
      comp=Z,2µm,20.0s
BW06  Boulder Array      94.25  47   P        P        06 48 39.3  +0.3
      baz=259
PD31  Pinedale Array     94.25  47  eP        P        06 48 38.3  -0.7
      comp=Z,15nm,1.2s
PDAR  Pinedale Array     94.25  47  eP        P        06 48 38.1  -0.8
PDAR  Pinedale Array     94.25  47   P        P        06 48 37.6  -1.4
      comp=Z,6.4nm,0.9s,baz=250,slow=4.4,SNR=29
DHRM  DHARAMSHALA        94.30 302  eP        P        06 48 37.9  -1.6
DHRM                                 IAmb     IAmb     06 48 40.2
      comp=Z,124nm,1.5s
HPIG                     94.59  64   PFAKE             06 48 50.0  +9.1
HPIG                                 LR       LR
      comp=Z,4µm,19.0s
O20A  White River Ci     94.74  50   PFAKE             06 48 50.0  +8.7
O20A                                 LR       LR
      comp=Z,3µm,19.0s
TARG  Taragay, Kyrgy     94.77 311   PFAKE             06 48 50.0  +8.4
TARG                                 LR       LR
      comp=Z,4µm,22.0s
BNM   Barren Site        94.99  56  eP        P        06 48 43.0  +0.4
EGMT  Eagleton           95.08  42  eP        P        06 48 44.2  +1.8
      comp=Z,32nm,1.3s
EGMT  Eagleton           95.08  42   P        P        06 48 43.7  +1.2
      baz=260
ANMO  Albuquerque        95.26  56  eP        P        06 48 42.6  -1.2
      comp=Z,6.8nm,1.1s
ANMO  Albuquerque        95.26  56⇓eP        P        06 48 44.4  +0.6
ANMO                                 pmax     pmax
      comp=Z,6.0nm,1.1s
ANMO  Albuquerque        95.26  56   P        P        06 48 44.3  +0.6
      baz=261
YKA   Yellowknife Ar     95.32  27   P        P        06 48 42.0  -1.0
      comp=Z,5.7nm,0.9s,baz=256,slow=4.4,SNR=33
YKA                                  PP       PP       06 52 36.3  +2.7
      comp=Z,1.5nm,1.0s,baz=264,slow=7.6,SNR=4.7
YKB5  Yellowknife Ar     95.32  27  eP        P        06 48 41.6  -1.5
YKW3  Yellowknife Ar     95.33  27  eP        P        06 48 39.8  -3.3
      comp=Z,22nm,1.4s
YKW3                                 LR       LR
      comp=Z,5µm,22.0s
S22A  4UR Ranch, Cre     95.42  53  eP        P        06 48 43.8  -0.7
      comp=Z,20nm,1.5s
S22A                                 LR       LR
      comp=Z,5µm,21.0s
S22A  4UR Ranch, Cre     95.42  53   P        P        06 48 45.4  +0.9
      baz=261
SMCO  Snowmass           95.55  51   PFAKE             06 49 00.0   +15
SMCO                                 LR       LR
      comp=Z,7µm,20.0s
NRIK  Noril'sk           95.56 340   P        P        06 48 43.1  -0.9
      comp=Z,21nm,1.1s,baz=98,slow=4.8,SNR=24
NRIK                                 PP       PP       06 52 35.3   0.0
      comp=Z,1.6nm,0.4s,baz=139,slow=6.9,SNR=4.3
NRIK                                 LR       LR       07 28 50.7
      comp=Z,7µm,21.9s,baz=114,slow=34
MNTX  Cornudas Mount     95.62  59  eP        P        06 48 44.9  -0.3
      comp=Z,14nm,1.6s
MNTX                                 LR       LR
      comp=Z,4µm,21.0s
MNTX  Cornudas Mount     95.62  59   P        P        06 48 45.6  +0.4
      baz=261
KSH   Kashi              95.78 309   P        P        06 48 47.3  +1.4
KSH                                  sP       sP       06 48 56.2  +0.3
KSH                                  PP       PP       06 52 43.4  +5.4
KSH                                  S        S        06 59 59.0  -3.0
KSH                                  sS       sS       07 00 15.5  +1.3
KSH                                  SS       SS       07 06 37.5  +5.3
KSH                                  pmax     pmax
      comp=Z,14nm,0.6s
KSH                                  pmax     pmax
      comp=Z,480nm,4.6s
KSH                                  LR       LR
      comp=Z,2µm,11.4s
KSH                                  LR       LR
      comp=Z,2µm,12.1s
KSH                                  LR       LR
      comp=Z,6µm,19.5s
KURK  Kurchatov          95.79 320  eP        P        06 48 44.5  -0.9
KURK                                eP        P        06 48 45.2  -0.3
KURK                                 LR       LR
      comp=Z,9µm,21.0s
KURK  Kurchatov          95.79 320c iP        P        06 48 45.0  -0.5
KURK                                 pmax     pmax
      comp=Z,73nm,1.4s
KURK  Kurchatov          95.79 320   P        P        06 48 45.4   0.0
      SNR=16
KURK                                 P        P        06 48 45.4   0.0
      SNR=16
KURBB Kurchatov Arra     95.83 320   P        P        06 48 44.5  -1.1
      comp=Z,12nm,1.1s,baz=105,slow=3.4,SNR=20
NRN   Naryn              96.06 311   PFAKE             06 49 00.0   +13
NRN                                  LR       LR
      comp=Z,4µm,22.0s
K22A  Casper             96.43  48   PFAKE             06 49 00.0   +11
K22A                                 LR       LR
      comp=Z,2µm,20.0s
SDCO  Great Sand Dun     96.46  53   PFAKE             06 49 00.0   +11
SDCO                                 LR       LR
      comp=Z,4µm,22.0s
NVL   N'lazarevskaya     96.48 189  eP        P        06 48 49.0  +0.7
NVL                                  MLR      MLR
      comp=Z,5µm,16.0s
N23A  Red Feather La     96.59  50   PFAKE             06 49 00.0   +10
N23A                                 LR       LR
      comp=Z,4µm,21.0s
ISCO  Idaho Springs      96.68  51   PFAKE             06 49 00.0   +10
ISCO                                 LR       LR
      comp=Z,6µm,21.0s
ISCO  Idaho Springs      96.68  51   P        P        06 48 49.8  -0.4
      baz=262
ZAIG  Zacatecas          96.70  68   PFAKE             06 49 00.0  +9.3
ZAIG                                 LR       LR
      comp=Z,4µm,21.0s
TX31  Lajitas Ar. Si     96.72  62  eP        P        06 48 49.0  -1.4
TX31                                eP        P        06 48 49.8  -0.6
LTX   Lajitas            96.72  62  eP        P        06 48 49.4  -1.0
LTX                                 ePP       PP       06 52 49.0  +3.4
LTX   Lajitas            96.72  62  eP        P        06 48 49.4  -1.0
LTX                                 e                  06 52 49.0
TXAR  Lajitas Array      96.72  62   P        P        06 48 49.4  -1.0
      comp=Z,1.3nm,0.8s,baz=226,slow=5.3,SNR=14
TXAR                                 PP       PP       06 52 49.0  +3.4
      comp=Z,1.2nm,1.0s,baz=252,slow=6.4,SNR=4.6
TXAR                                 LR       LR       07 25 05.8
      comp=Z,3µm,19.7s,baz=0.0,slow=31
Q24A  Divide             96.92  52   PFAKE             06 49 00.0  +8.7
Q24A                                 LR       LR
      comp=Z,5µm,22.0s
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PHWY  Pilot Hill          97.02  49   PFAKE             06 49 00.0  +8.2
PHWY                                  LR       LR
      comp=Z,3µm,22.0s
NIL   Nilore              97.05 303  eP        Pdif     06 48 52.1  +0.3
      comp=Z,65nm,1.4s
NIL                                   LR       LR
      comp=Z,2µm,19.0s
SNAA  Sanae               97.23 184   P        Pdif     06 48 52.3  +0.4
SNAA  Sanae               97.23 184  eP        Pdif     06 48 51.9   0.0
      comp=Z,28nm,1.1s
SNAA                                  LR       LR
      comp=Z,10µm,20.0s
SNAA  Sanae               97.23 184ceP        Pdif     06 48 52.1  +0.2
T25A  Trinidad            97.23  54   PFAKE             06 49 00.0  +7.2
T25A                                  LR       LR
      comp=Z,4µm,22.0s
LAO   LASA Array          97.23  44   PFAKE             06 49 00.0  +7.7
LAO                                   LR       LR
      comp=Z,3µm,19.0s
AAK   Ala-Archa           97.35 312  eP        P        06 48 52.8  -0.2
AAK                                   LR       LR
      comp=Z,3µm,19.0s
AAK   Ala-Archa           97.35 312⇑eP        Pdif     06 48 53.0  -0.1
AAK                                   pmax     pmax
      comp=Z,9.0nm,1.1s
AAK   Ala-Archa           97.35 312   P        P        06 48 52.8  -0.2
      comp=Z,3.7nm,0.9s,baz=92,slow=1.2,SNR=7.1
MSTX  Muleshoe            98.12  57   PFAKE             06 49 10.0   +13
MSTX                                  LR       LR
      comp=Z,4µm,22.0s
VNA2  Neumayer--Watz      98.22 183   P        P        06 48 55.1  -1.1
RSSD  Black Hills         98.43  47   PFAKE             06 49 10.0   +12
RSSD                                  LR       LR
      comp=Z,3µm,21.0s
VNA1  Neumayer--Stat      98.53 182   P        P        06 48 56.8  -0.7
KSCO  Kaye Shedlock'      98.87  52   PFAKE             06 49 10.0   +10
KSCO                                  LR       LR
      comp=Z,5µm,22.0s
AMTX  Amarillo            99.14  56   PFAKE             06 49 10.0  +8.9
AMTX                                  LR       LR
      comp=Z,3µm,18.0s
UNM   Universidad Na      99.32  72   PFAKE             06 49 10.0  +7.5
UNM                                   LR       LR
      comp=Z,2µm,19.0s
OGNE  Ogallala            99.54  50   PFAKE             06 49 10.0  +7.2
OGNE                                  LR       LR
      comp=Z,3µm,21.0s
BTK   Batken              99.78 309   PFAKE             06 49 10.0  +6.1
BTK                                   LR       LR
      comp=Z,3µm,22.0s
LNIG  Linares             99.81  66   PFAKE             06 49 20.0   +16
LNIG                                  LR       LR
      comp=Z,3µm,20.0s
GAR   Garm               100.06 308  ePdif     Pdif     06 49 01.2  -4.0
GAR   Garm               100.06 308  eP        Pdif     06 49 01.2  -4.0
JCT   Junction City      100.19  61   PFAKE             06 49 20.0   +14
JCT                                   LR       LR
      comp=Z,4µm,21.0s
833A  Chaparral WMA,     100.30  63   PFAKE             06 49 20.0   +14
833A                                  LR       LR
      comp=Z,3µm,20.0s
KK31  Karatay Array      100.31 312  ePdif     Pdif     06 49 06.2  +0.1
KK31  Karatay Array      100.31 312  i P       Pdif     06 49 04.8  -1.3
KK31                                  pmax     pmax
      comp=Z,10.0nm,1.0s
KKAR  Karatay Array      100.31 312  ePdif     Pdif     06 49 06.2  +0.1
KKAR  Karatay Array      100.31 312  eP        Pdif     06 49 06.2  +0.1
ABTX  Abilene, Hawle     100.57  59   PFAKE             06 49 20.0   +13
ABTX                                  LR       LR
      comp=Z,5µm,22.0s
KBL   Kabul              100.62 303  ePdif     Pdif     06 49 06.8  -1.1
KBL                                   LR       LR
      comp=Z,2µm,22.0s
KBL   Kabul              100.62 303  eP        Pdif     06 49 06.8  -1.1
KBL                                   MLR      MLR
      comp=Z,2µm,22.0s
FFC   Flin Flon          100.74  36   PFAKE             06 49 20.0   +12
FFC                                   LR       LR
      comp=Z,4µm,20.0s
CHGR  Chuyangaron        100.93 307  ePdif     Pdif     06 49 08.2  -0.8
CBKS  Cedar Bluff        101.09  52   PFAKE             06 49 20.0   +10
CBKS                                  LR       LR
      comp=Z,2µm,22.0s
BVA0  Borovoye Array     101.12 322  i P       Pdif     06 49 07.7  -1.7
BVA0                                  pmax     pmax
      comp=Z,36nm,1.4s
BVAR  Borovoye Array     101.12 322   P        Pdif     06 49 09.4   0.0
      comp=Z,9.8nm,0.9s,baz=108,slow=4.8,SNR=28
BVAR                                  PP       PP       06 53 11.0  -7.4
      comp=Z,3.7nm,1.0s,baz=74,slow=5.3,SNR=4.5
BRVK  Borovoye           101.19 322  ePdif     Pdif     06 49 09.0  -0.7
BRVK                                  LR       LR
      comp=Z,7µm,22.0s
BRVK  Borovoye           101.19 322c iP        Pdif     06 49 09.5  -0.2
BRVK                                  pmax     pmax
      comp=Z,25nm,1.3s
BRVK  Borovoye           101.19 322   P        Pdif     06 49 08.6  -1.1
      SNR=7.1
U32A  Winter Ranch,      101.46  55   PFAKE             06 49 20.0  +8.6
U32A                                  LR       LR
      comp=Z,3µm,20.0s
WMOK  Wichita Mounta     101.49  57   PFAKE             06 49 20.0  +8.5
WMOK                                  LR       LR
      comp=Z,4µm,22.0s
KVTX  Kingsville         101.53  64   PFAKE             06 49 20.0  +8.2
KVTX                                  LR       LR
      comp=Z,3µm,20.0s
MRIV  Mauritius Mete     101.94 246   PFAKE             06 49 30.0   +16
MRIV                                  LR       LR
      comp=Z,2µm,21.0s
LVIG  Laguna Verde       101.95  72   PFAKE             06 49 30.0   +16
LVIG                                  LR       LR
      comp=Z,3µm,22.0s
435B  Jarrell            102.13  61   PFAKE             06 49 30.0   +16
435B                                  LR       LR
      comp=Z,4µm,20.0s
WHTX  Lake Whitney,      102.35  59   PFAKE             06 49 30.0   +15
WHTX                                  LR       LR
      comp=Z,3µm,20.0s
BGNE  Belgrade           102.50  50   PFAKE             06 49 30.0   +14
BGNE                                  LR       LR
      comp=Z,2µm,19.0s
RES   Resolute Bay       103.18  16   PFAKE             06 49 30.0   +12
RES                                   LR       LR
      comp=Z,3µm,20.0s
KSU1  Kansas State U     103.55  52   PFAKE             06 49 30.0  +9.5
KSU1                                  LR       LR
      comp=Z,3µm,20.0s
ECSD  EROS Data Cent     103.74  48   PFAKE             06 49 30.0  +8.7
ECSD                                  LR       LR
      comp=Z,4µm,22.0s
TUL1  Leonard            104.02  56   PFAKE             06 49 30.0  +7.3
TUL1                                  LR       LR
      comp=Z,4µm,18.0s
X37A  Clayton            104.28  57   PFAKE             06 49 40.0   +16
X37A                                  LR       LR
      comp=Z,3µm,20.0s
PAYG  Puerto Ayora       104.70  94   PFAKE             06 49 40.0   +14
PAYG                                  LR       LR
      comp=Z,3µm,20.0s
NATX  Nacogdoches        104.70  60   PFAKE             06 49 40.0   +14
NATX                                  LR       LR
      comp=Z,4µm,21.0s
CCIG  Comitan            105.57  76   PFAKE             06 54 00.0   +16
CCIG                                  LR       LR
      comp=Z,2µm,22.0s
W39A  Magazine           105.62  56   PFAKE             06 53 50.0  +7.0
W39A                                  LR       LR
      comp=Z,3µm,22.0s
MIAR  Mount Ida          105.76  57   PFAKE             06 54 00.0   +17
MIAR                                  LR       LR
      comp=Z,5µm,21.0s
SCIA  State Center       106.21  49   PFAKE             06 54 00.0   +16
SCIA                                  LR       LR
      comp=Z,4µm,22.0s
Z41A  Richland Creek     106.35  58   PFAKE             06 54 00.0   +16
Z41A                                  LR       LR
      comp=Z,4µm,21.0s
X40A  Basin Creek Fa     106.37  57   PFAKE             06 54 00.0   +16
X40A                                  LR       LR
      comp=Z,4µm,22.0s
SPMN  Marine on St.      106.48  46   PFAKE             06 54 00.0   +16
SPMN                                  LR       LR
      comp=Z,4µm,21.0s
UALR  University of      106.78  57   PFAKE             06 54 00.0   +15
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UALR                                 LR      LR
      comp=Z,5µm,21.0s
WHAR  Wooly Hollow     106.84  56    PFAKE             06 54 00.0  +15
WHAR                                 LR      LR
      comp=Z,4µm,21.0s
W41B  Gary Mavity, V   106.87  56    PFAKE             06 54 00.0  +15
W41B                                 LR      LR
      comp=Z,7µm,21.0s
I39A  Houston          107.43  47    PFAKE             06 54 00.0  +14
I39A                                 LR      LR
      comp=Z,3µm,20.0s
EFI   East Falkland    107.65 154    PFAKE             06 54 00.0  +14
EFI                                  LR      LR
      comp=Z,4µm,22.0s
L40A  Anamosa          107.69  49    PFAKE             06 54 00.0  +13
L40A                                 LR      LR
      comp=Z,4µm,21.0s
CCM   Cathedral Cave   107.72  53    PFAKE             06 54 00.0  +13
CCM                                  LR      LR
      comp=Z,4µm,19.0s
ABKAR Akbulak array    107.72 318   ePdif    Pdif      06 49 38.2  -0.6
GO06  Curarrehue       107.74 138    PFAKE             06 54 00.0  +13
GO06                                 LR      LR
      comp=Z,4µm,22.0s
T42A  Van Buren        107.84  55    PFAKE             06 54 00.0  +13
T42A                                 LR      LR
      comp=Z,4µm,18.0s
ARU   Arti             107.85 326    PFAKE             06 54 00.0  +13
ARU                                  LR      LR
      comp=Z,4µm,18.0s
ARU   Arti             107.85 326    P       Pdif      06 49 38.2  -1.0
X43A  Marvell          107.98  57    PFAKE             06 54 00.0  +13
X43A                                 LR      LR
      comp=Z,3µm,20.0s
N41A  Harden Midland   108.00  51    PFAKE             06 54 00.0  +13
N41A                                 LR      LR
      comp=Z,8µm,22.0s
VBMS  Vicksburg        108.24  60    PFAKE             06 54 00.0  +12
VBMS                                 LR      LR
      comp=Z,2µm,20.0s
MYIG  Mrida            108.31  71    PFAKE             06 54 00.0  +12
MYIG                                 LR      LR
      comp=Z,2µm,20.0s
G40A  Rib Lake         108.31  46    PFAKE             06 54 00.0  +12
G40A                                 LR      LR
      comp=Z,5µm,22.0s
PBMO  Poplar Bluff     108.37  55    PFAKE             06 54 00.0  +12
PBMO                                 LR      LR
      comp=Z,4µm,18.0s
P42A  Winchester       108.41  52    PFAKE             06 54 00.0  +12
P42A                                 LR      LR
      comp=Z,5µm,22.0s
SLM   Saint Louis      108.51  53    PFAKE             06 54 00.0  +12
SLM                                  LR      LR
      comp=Z,4µm,20.0s
H41A  Junction City    108.74  47    PFAKE             06 54 00.0  +11
H41A                                 LR      LR
      comp=Z,3µm,20.0s
MET   Memphis--Engin   108.77  57    PFAKE             06 54 00.0  +11
MET                                  LR      LR
      comp=Z,4µm,21.0s
L42A  Oliver, Polo     108.85  49    PFAKE             06 54 00.0  +11
L42A                                 LR      LR
      comp=Z,5µm,20.0s
AKTO  Aktyubinsk       108.87 320    PP      PP        06 54 16.8  +1.0
      comp=Z,1.9nm,0.8s,baz=110,slow=14,SNR=3.8
AKTO                                 PKKP    PKKPab    07 05 10.9  +1.9
      comp=Z,4.3nm,0.9s,baz=269,slow=4.4,SNR=7.2
F41A  Three Lakes      109.06  45    PFAKE             06 54 00.0  +11
F41A                                 LR      LR
      comp=Z,4µm,20.0s
HDIL  Hopedale         109.19  51    PFAKE             06 54 00.0  +10
HDIL                                 LR      LR
      comp=Z,6µm,21.0s
OXF   Oxford           109.20  57    PFAKE             06 54 00.0  +10
OXF                                  LR      LR
      comp=Z,4µm,21.0s
D41A  Chassel          109.33  44    PFAKE             06 54 00.0  +10
D41A                                 LR      LR
      comp=Z,3µm,20.0s
SIUC  Southern Illin   109.33  54    PFAKE             06 54 00.0  +10
SIUC                                 LR      LR
      comp=Z,4µm,20.0s
Q44A  Meyer Farm, Va   109.46  53    PFAKE             06 54 00.0  +10
Q44A                                 LR      LR
      comp=Z,3µm,20.0s
G42A  Mountain         109.57  46    PFAKE             06 54 00.0  +10
G42A                                 LR      LR
      comp=Z,4µm,21.0s
GEYT  Alibeck          109.58 306    PP      PP        06 54 21.2  -0.3
      comp=Z,2.1nm,0.4s,baz=68,slow=4.0,SNR=6.3
T45A  Paducah          109.80  55    PFAKE             06 54 00.0 +9.2
T45A                                 LR      LR
      comp=Z,3µm,19.0s
K43A  Burlington       109.81  49    PFAKE             06 54 00.0 +9.4
K43A                                 LR      LR
      comp=Z,3µm,20.0s
G43A  Wallace          110.09  46    PFAKE             06 54 00.0 +8.9
G43A                                 LR      LR
      comp=Z,4µm,20.0s
H43A  Windswept, Lux   110.09  47    PFAKE             06 54 00.0 +8.9
H43A                                 LR      LR
      comp=Z,3µm,22.0s
M44A  Midewin, Midew   110.10  50    PFAKE             06 54 00.0 +8.8
M44A                                 LR      LR
      comp=Z,3µm,20.0s
147A  Livingston       110.14  59    PFAKE             06 54 00.0 +8.5
147A                                 LR      LR
      comp=Z,3µm,21.0s
PLAL  Pickwick Lake    110.30  57    PFAKE             06 54 00.0 +8.2
PLAL                                 LR      LR
      comp=Z,4µm,22.0s
P45A  Graceland, Par   110.42  52    PFAKE             06 54 00.0 +8.1
P45A                                 LR      LR
      comp=Z,3µm,21.0s
WVT   Waverly          110.47  55    PFAKE             06 54 00.0 +7.9
WVT                                  LR      LR
      comp=Z,3µm,20.0s
USIN  University of    110.55  54    PFAKE             06 54 00.0 +7.8
USIN                                 LR      LR
      comp=Z,5µm,22.0s
KBS   Kingsbay         110.63 355    PFAKE             06 54 00.0 +8.8
KBS                                  LR      LR
      comp=Z,2µm,20.0s
ESTN  Estel            110.73  80    PFAKE             06 54 10.0  +17
ESTN                                 LR      LR
      comp=Z,4µm,21.0s
SFIN  Lafayette        110.87  51    PFAKE             06 54 00.0 +7.3
SFIN                                 LR      LR
      comp=Z,7µm,22.0s
X48A  Hartselle        111.15  57    PFAKE             06 54 10.0  +17
X48A                                 LR      LR
      comp=Z,4µm,21.0s
LRAL  Lakeview Retre   111.22  59    PFAKE             06 54 10.0  +16
LRAL                                 LR      LR
      comp=Z,5µm,20.0s
V48A  Smith Brothers   111.30  56    PFAKE             06 54 10.0  +16
V48A                                 LR      LR
      comp=Z,3µm,22.0s
BOAB  BOACO BROADBA111.34  81        PFAKE             06 54 10.0  +16
BOAB                                 LR      LR
      comp=Z,500nm,20.0s
M46A  Old House Fiel   111.37  50    PFAKE             06 54 10.0  +16
M46A                                 LR      LR
      comp=Z,4µm,21.0s
BLO   Bloomington      111.39  52    PFAKE             06 54 10.0  +16
BLO                                  LR      LR
      comp=Z,3µm,20.0s
ABPO  Ambohimpanom     111.52 245    PFAKE             06 54 10.0  +15
ABPO                                 LR      LR
      comp=Z,4µm,18.0s
PEL   Peldehue         111.55 132    PFAKE             06 54 10.0  +16
PEL                                  LR      LR
      comp=Z,4µm,22.0s
WCI   Wyandotte Cave   111.62  53    PFAKE             06 54 10.0  +16
WCI                                  LR      LR
      comp=Z,4µm,20.0s
Y49A  Blount Mountai   111.69  58    PFAKE             06 54 10.0  +16
Y49A                                 LR      LR
      comp=Z,4µm,21.0s
JTS   JuntasAbangare   111.76  83    PFAKE             06 54 10.0  +15
JTS                                  LR      LR
      comp=Z,3µm,20.0s
SWET  Sewanee          112.05  56    PFAKE             06 54 10.0  +15
SWET                                 LR      LR
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      comp=Z,4µm,22.0s
Z50A  Ashland          112.11  59    PFAKE             06 54 10.0  +15
Z50A                                 LR      LR
      comp=Z,3µm,20.0s
KIRV  Kirov            112.24 329    PP      PP        06 54 38.5  -1.2
      comp=Z,7.0nm,0.4s,baz=66,slow=15,SNR=4.1
T49A  Edmonton         112.28  54    PFAKE             06 54 10.0  +15
T49A                                 LR      LR
      comp=Z,3µm,20.0s
GLMI  Grayling         112.30  46    PFAKE             06 54 10.0  +15
GLMI                                 LR      LR
      comp=Z,4µm,22.0s
HDC   Heredia          112.54  84    PFAKE             06 54 10.0  +13
HDC                                  LR      LR
      comp=Z,3µm,20.0s
W50A  Signal Mountai   112.55  56    PFAKE             06 54 10.0  +14
W50A                                 LR      LR
      comp=Z,4µm,22.0s
M48A  Edgerton         112.58  50    PFAKE             06 54 10.0  +14
M48A                                 LR      LR
      comp=Z,4µm,20.0s
ESPN  Las Esperanzas   112.63  81    PFAKE             06 54 10.0  +13
ESPN                                 LR      LR
      comp=Z,3µm,21.0s
GO04  Tololo Observa   112.91 129    PFAKE             06 54 10.0  +13
GO04                                 LR      LR
      comp=Z,3µm,22.0s
X51A  Calhoun          112.95  57    PFAKE             06 54 10.0  +13
X51A                                 LR      LR
      comp=Z,4µm,22.0s
352A  Blakely          112.99  60    PFAKE             06 54 10.0  +13
352A                                 LR      LR
      comp=Z,2µm,21.0s
O49A  Covington        112.99  51    PFAKE             06 54 10.0  +13
O49A                                 LR      LR
      comp=Z,5µm,20.0s
N49A  Columbus Grove   113.04  50    PFAKE             06 54 10.0  +13
N49A                                 LR      LR
      comp=Z,3µm,19.0s
PRGR  Permogore        113.07 333  i PKIKP   PKiKP     06 54 03.5  +7.3
PRGR                                 pmax    pmax
      comp=Z,11nm,1.0s
152A  Waverly Hall     113.14  59    PFAKE             06 54 10.0  +13
152A                                 LR      LR
      comp=Z,4µm,22.0s
CPCT  Cooper Cave      113.19  56    PFAKE             06 54 10.0  +13
CPCT                                 LR      LR
      comp=Z,3µm,21.0s
AAM   Ann Arbor        113.29  49    PFAKE             06 54 10.0  +13
AAM                                  LR      LR
      comp=Z,3µm,21.0s
V51A  Loudon           113.31  56    PFAKE             06 54 10.0  +13
V51A                                 LR      LR
      comp=Z,3µm,20.0s
LCO   Las Campanas     113.53 128    PFAKE             06 54 10.0  +11
LCO                                  LR      LR
      comp=Z,3µm,22.0s
Y52A  Lilburn          113.64  58    PFAKE             06 54 10.0  +12
Y52A                                 LR      LR
      comp=Z,4µm,21.0s
W52A  Murphy           113.69  56    PFAKE             06 54 10.0  +12
W52A                                 LR      LR
      comp=Z,3µm,21.0s
TKL   Tuckaleechee C   113.78  56    PFAKE             06 54 10.0  +12
TKL                                  LR      LR
      comp=Z,3µm,21.0s
S51A  Beattyville      113.79  54    PFAKE             06 54 10.0  +12
S51A                                 LR      LR
      comp=Z,4µm,19.0s
M50A  Fremont          113.84  50    PFAKE             06 54 10.0  +12
M50A                                 LR      LR
      comp=Z,4µm,22.0s
Q51A  Peebles          113.86  52    PFAKE             06 54 10.0  +12
Q51A                                 LR      LR
      comp=Z,5µm,22.0s
V52A  Sevierville      113.92  56    PFAKE             06 54 10.0  +11
V52A                                 LR      LR
      comp=Z,3µm,21.0s
ACSO  Alum Creek Sta   114.02  51    PFAKE             06 54 10.0  +11
ACSO                                 LR      LR
      comp=Z,2µm,20.0s
P51A  Williamsport     114.04  52    PFAKE             06 54 10.0  +11
P51A                                 LR      LR
      comp=Z,6µm,20.0s
TIGA  Tifton           114.14  60    PFAKE             06 54 10.0  +11
TIGA                                 LR      LR
      comp=Z,2µm,22.0s
GOGA  Godfrey          114.16  58    PFAKE             06 54 10.0  +11
GOGA                                 LR      LR
      comp=Z,4µm,22.0s
LVZ   Lovozero         114.33 341    PFAKE             06 54 10.0  +11
LVZ                                  LR      LR
      comp=Z,6µm,20.0s
154A  Montrose         114.50  59    PFAKE             06 54 10.0  +10
154A                                 LR      LR
      comp=Z,3µm,21.0s
V53A  Saluda           114.56  56    PFAKE             06 54 10.0  +10
V53A                                 LR      LR
      comp=Z,3µm,22.0s
TRQA  Tornquist        114.70 141    PFAKE             06 54 10.0  +10
TRQA                                 LR      LR
      comp=Z,3µm,20.0s
555A  McAlpin          114.71  62    PFAKE             06 54 10.0  +10
555A                                 LR      LR
      comp=Z,2µm,20.0s
NNA   Nana             114.88 109    PFAKE             06 54 10.0 +8.9
NNA                                  LR      LR
      comp=Z,2µm,21.0s
O52A  Adamsville       114.91  51    PFAKE             06 54 10.0  +10
O52A                                 LR      LR
      comp=Z,3µm,18.0s
APA   Apatity          114.91 341⇓i PKIKP    PKiKP     06 53 52.7  -6.9
APA                                  pmax    pmax
      comp=Z,8.0nm,1.0s
APA                                  MLR     MLR
      comp=Z,7µm,23.0s
255A  Hazlehurst       115.07  60    PFAKE             06 54 10.0 +9.1
255A                                 LR      LR
      comp=Z,2µm,20.0s
656A  Willston         115.11  63    PFAKE             06 54 10.0 +8.9
656A                                 LR      LR
      comp=Z,2µm,22.0s
TMCR  Tamitsa          115.14 337   ePKIKP   PKiKP     06 53 59.7  -0.4
P53A  Whipple          115.32  51    PFAKE             06 54 10.0 +8.8
P53A                                 LR      LR
      comp=Z,5µm,22.0s
KEV   Kevo             115.34 345    PFAKE             06 54 10.0  +10
KEV                                  LR      LR
      comp=Z,5µm,20.0s
957A  Wimauma          115.40  65    PFAKE             06 54 10.0 +8.3
957A                                 LR      LR
      comp=Z,2µm,19.0s
PRVC  Isla de Provid   115.61  80   eP       PKiKP     06 54 13.2  +11
PRVC  Isla de Provid   115.61  80   eP       PKiKP     06 54 13.2  +11
ARA0  ARCESS Array S   115.88 345   ePKPdf   PKiKP     06 53 59.2  -2.2
ARCES ARCESS Array B   115.88 345    PKP     PKiKP     06 53 59.2  -2.2
      comp=Z,2.6nm,0.6s,baz=64,slow=1.8,SNR=16
ARCES                                PKKPbc  PKKPbc    07 04 34.4  -1.1
      comp=Z,3.1nm,1.0s,baz=264,slow=1.2,SNR=8.2
ARE0  ARCESS Array S   115.88 345    PFAKE             06 54 10.0 +8.6
ARE0                                 LR      LR
      comp=Z,300nm,21.0s
ERPA  Erie             116.01  48    PFAKE             06 54 10.0 +7.5
ERPA                                 LR      LR
      comp=Z,3µm,21.0s
KLMR  Klimovskoe       116.09 334   ePKIKP   PKiKP     06 54 00.9  -1.1
KLMR                                e                  06 55 03.0
KLMR                                e                  07 04 37.9
KLMR                                 pmax    pmax
      comp=Z,11nm,1.1s
KLMR  Klimovskoe       116.09 334   ePKPdf   PKiKP     06 54 00.9  -1.1
KLMR                                 AMP               06 54 19.8
      comp=Z,11nm,1.1s
KLMR                                ePP      PP        06 55 03.1  -3.7
KLMR                                ePKKPab  PKKPab    07 04 37.9  +1.2
DWPF  Disney Wildern   116.11  64    PFAKE             06 54 10.0 +7.0
DWPF                                 LR      LR
      comp=Z,2µm,22.0s
SADO  Sadowa           116.16  45    PFAKE             06 54 10.0 +7.3
SADO                                 LR      LR
      comp=Z,4µm,19.0s
N54A  Moraine State    116.19  50    PFAKE             06 54 10.0 +7.1
N54A                                 LR      LR
      comp=Z,5µm,22.0s
658A  Bunnell          116.22  63    PFAKE             06 54 20.0  +17
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658A                                 LR      LR
      comp=Z,2µm,18.0s
257A  Skidaway Islan   116.30  60    PFAKE             06 54 20.0  +17
257A                                 LR      LR
      comp=Z,2µm,21.0s
BLA   Blacksburg       116.34  54    PFAKE             06 54 20.0  +17
BLA                                  LR      LR
      comp=Z,3µm,20.0s
M54A  Oil Creek Stat   116.35  49    PFAKE             06 54 20.0  +17
M54A                                 LR      LR
      comp=Z,4µm,21.0s
059A  Moore Haven      116.39  65    PFAKE             06 54 20.0  +16
059A                                 LR      LR
      comp=Z,2µm,22.0s
OTAV  Otavalo          116.47  95    PFAKE             06 54 20.0  +15
OTAV                                 LR      LR
      comp=Z,3µm,22.0s
MCWV  Mont Chateau     116.48  51    PFAKE             06 54 20.0  +17
MCWV                                 LR      LR
      comp=Z,2µm,21.0s
BCIP  Isla Barro Col   116.61  85    PFAKE             06 54 20.0  +16
BCIP                                 LR      LR
      comp=Z,2µm,21.0s
061Z  Ochoppi          116.61  67    PFAKE             06 54 20.0  +16
061Z                                 LR      LR
      comp=Z,2µm,20.0s
NHSC  New Hope         116.93  58    PFAKE             06 54 20.0  +16
NHSC                                 LR      LR
      comp=Z,3µm,20.0s
PB04  IPOC Station P   117.00 122    PFAKE             06 54 20.0  +15
PB04                                 LR      LR
      comp=Z,2µm,20.0s
O56A  Blue Knob Stat   117.36  50    PFAKE             06 54 20.0  +15
O56A                                 LR      LR
      comp=Z,5µm,21.0s
MMNY  Mt. Morris Dam   117.42  47    PFAKE             06 54 20.0  +15
MMNY                                 LR      LR
      comp=Z,5µm,19.0s
SSPA  Standing Stone   117.81  50    PFAKE             06 54 20.0  +14
SSPA                                 LR      LR
      comp=Z,3µm,21.0s
LVC   Limon Verde      117.91 123    PFAKE             06 54 20.0  +13
LVC                                  LR      LR
      comp=Z,2µm,20.0s
PB01  IPOC Station P   118.11 121    PFAKE             06 54 20.0  +13
PB01                                 LR      LR
      comp=Z,3µm,22.0s
R58B  Mineral          118.25  53    PFAKE             06 54 20.0  +13
R58B                                 LR      LR
      comp=Z,4µm,18.0s
MALC  Bahia Malaga     118.28  91   eP       PKiKP     06 54 15.2  +7.5
MALC  Bahia Malaga     118.28  91   eP       PKiKP     06 54 15.2  +7.5
PB11  IPOC Station P   118.51 120    PFAKE             06 54 20.0  +12
PB11                                 LR      LR
      comp=Z,3µm,22.0s
CBN   Corbin Frederi   118.61  52    PFAKE             06 54 20.0  +12
CBN                                  LR      LR
      comp=Z,4µm,19.0s
VRH   Novokhopyorsk    118.76 323   ePKIKP   PKPdf     06 54 04.7  -2.7
VRH                                  pmax    pmax
      comp=Z,10.0nm,1.0s
PAGS  Pennsylvania G   118.76  50    PFAKE             06 54 20.0  +12
PAGS                                 LR      LR
      comp=Z,5µm,22.0s
SDMD  Soldier's Deli   118.82  51    PFAKE             06 54 20.0  +12
SDMD                                 LR      LR
      comp=Z,1µm,21.0s
MNMC  Minye Minye      118.83 119   ePKPdf   PKPdf     06 54 08.4  -0.5
MNMC                                 LR      LR
      comp=Z,3µm,22.0s
BINY  Binghamton       118.92  48    PFAKE             06 54 20.0  +12
BINY                                 LR      LR
      comp=Z,4µm,20.0s
MVL   Millersville     119.08  50    PFAKE             06 54 20.0  +12
MVL                                  LR      LR
      comp=Z,5µm,22.0s
MOS   Moscow           119.25 329   ePKIKP   PKPdf     06 54 07.1  -1.1
MOS                                 e                  06 55 33.4
MOS                                  MLR     MLR
      comp=Z,3µm,20.0s
N59A  State Game Lan   119.34  49    PFAKE             06 54 20.0  +11
N59A                                 LR      LR
      comp=Z,3µm,20.0s
PLMC  San Jos del P    119.47  90   eP       PKiKP     06 54 11.9  +1.8
PLMC  San Jos del P    119.47  90   eP       PKiKP     06 54 11.9  +1.8
MTDJ  Mount Denham     119.63  75    PFAKE             06 54 20.0  +10
MTDJ                                 LR      LR
      comp=Z,2µm,22.0s
GNI   Garni            119.69 310   ePKPdf   PKPdf     06 54 08.1  -1.7
GNI   Garni            119.69 310⇑i PKIKP    PKiKP     06 54 10.9  +1.0
ZEI   Tsey             119.74 313  i PKIKP   PKPdf     06 54 07.4  -2.5
ZEI                                  pmax    pmax
      comp=Z,13nm,1.4s
GOF   Gofitskoye       119.77 316   ePKIKP   PKPpre    06 53 56.1
GOF                                  pmax    pmax
      comp=Z,40nm,0.6s
LPSR  Galich'ya Gora   119.86 325   ePKIKP   PKiKP     06 54 09.4  -0.2
LPSR                                 pmax    pmax
      comp=Z,10.0nm,1.0s
OBN   Obninsk          120.07 328   ePKPdf   PKiKP     06 54 11.3  +1.4
OBN                                  LR      LR
      comp=Z,6µm,21.0s
OBN   Obninsk          120.07 328  i PKIKP   PKiKP     06 54 10.4  +0.5
OBN                                 e                  06 55 36.3
OBN                                 ePPP     PPP       06 58 08.4
OBN                                 eSS      SS        07 11 59.2  +0.2
OBN                                  pmax    pmax
      comp=Z,12nm,1.2s
OBN                                  MLR     MLR
      comp=Z,5µm,21.0s
OBN   Obninsk          120.07 328    PKP     PKiKP     06 54 11.3  +1.4
      comp=Z,4.5nm,0.3s,baz=211,slow=18,SNR=3.9
ODNJ  Ogdensburg       120.17  49    PFAKE             06 54 20.0 +9.4
ODNJ                                 LR      LR
      comp=Z,3µm,19.0s
KBZ   Khabaz           120.22 314    PKP     PKiKP     06 54 12.6  +2.0
      comp=Z,0.7nm,0.4s,baz=45,slow=1.4,SNR=2.2
KBZ                                  PP      PP        06 55 24.8   -11
      comp=Z,2.8nm,1.0s,baz=73,slow=5.0,SNR=4.0
VSR   Storozhevoye     120.25 324⇑i PKIKP    PKiKP     06 54 10.2  -0.2
BRNJ  Basking Ridge    120.28  49    PFAKE             06 54 20.0 +9.2
BRNJ                                 LR      LR
      comp=Z,4µm,20.0s
ACCN  Adirondack Com   120.31  46    PFAKE             06 54 20.0 +9.2
ACCN                                 LR      LR
      comp=Z,3µm,20.0s
KIV   Kislovodsk       120.31 315    PFAKE             06 54 20.0 +9.1
KIV                                  LR      LR
      comp=Z,4µm,20.0s
KIV   Kislovodsk       120.31 315  i PKIKP   PKiKP     06 54 12.0  +1.1
KIV                                 e                  06 55 37.1
KIV                                 ePS      PS        07 05 27.2  -0.7
KIV                                 eSS      SS        07 12 05.5  +2.2
KIV                                  pmax    pmax
      comp=Z,14nm,1.0s
KIV                                  MLR     MLR
      comp=Z,4µm,23.0s
HELC  Santa Helena     120.42  89   eP       PKiKP     06 54 12.5  +0.2
HELC  Santa Helena     120.42  89   eP       PKiKP     06 54 12.5  +0.2
SCHQ  Schefferville    120.46  32    PFAKE             06 54 20.0 +9.2
SCHQ                                 LR      LR
      comp=Z,5µm,20.0s
NEY   Neytrino         120.47 314⇑i PKIKP    PKiKP     06 54 12.4  +1.0
PAL   Palisades        120.70  49    PFAKE             06 54 20.0 +8.4
PAL                                  LR      LR
      comp=Z,3µm,21.0s
FIA1  FINESS Array S   121.19 338   ePKPdf   PKPdf     06 54 10.2  -1.6
FIA1                                ePKPdf   PKiKP     06 54 13.6  +1.6
FIA0  FINESS Array S   121.19 338   ePKPdf   PKiKP     06 54 12.2  +0.2
FIA0  FINESS Array S   121.19 338   ePKIKP   PKiKP     06 54 12.2  +0.2
FINES FINESS Array B   121.19 338    PKP     PKiKP     06 54 12.2  +0.2
      comp=Z,4.2nm,0.8s,baz=5.7,slow=3.8,SNR=8.4
ROSC  El Rosal         121.39  91    PFAKE             06 54 30.0  +16
ROSC                                 LR      LR
      comp=Z,900nm,20.0s
PTBC  PUERTO BERRIO121.52  89       eP       PKiKP     06 54 14.5  +0.5
PTBC  PUERTO BERRIO121.52  89       eP       PKiKP     06 54 14.5  +0.5
DAMY  Dhamar           121.71 280    PFAKE             06 54 30.0  +15
DAMY                                 LR      LR
      comp=Z,3µm,20.0s
CHIC  Chingaza         121.93  91   eP       PKPdf     06 54 12.9  -2.3
CHIC  Chingaza         121.93  91   eP       PKPdf     06 54 12.9  -2.3
SIRT  Sirnak           121.97 307    PFAKE             06 54 30.0  +16
SIRT                                 LR      LR
      comp=Z,6µm,22.0s
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HRV	Adam Dziewonsk	122.03	46	PFAKE		06 54 30.0	+16
HRV				LR	LR		
	comp=Z,3µm,18.0s						
WES	Weston	122.23	47	PFAKE		06 54 30.0	+15
WES				LR	LR		
	comp=Z,3µm,21.0s						
RUSC	La Rusia	122.77	90	eP	PKPdf	06 54 13.9	-3.0
RUSC	La Rusia	122.77	90	eP	PKPdf	06 54 13.9	-3.0
VSU	Vasula	122.84	335	⇓iPKIKP	PKiKP	06 54 15.8	+0.5
ATD	Arta Tunnel	122.96	277	PFAKE		06 54 30.0	+13
ATD				LR	LR		
	comp=Z,4µm,20.0s						
ANN	Anapa	123.65	317	i PKIKP	PKPdf	06 54 14.7	-2.3
ANN				e		07 01 15.3	
ANN				pmax	pmax		
	comp=Z,47nm,1.3s						
GGN	Saint George	124.44	42	PFAKE		06 54 30.0	+11
GGN				LR	LR		
	comp=Z,3µm,22.0s						
BOSA	Boshof	124.48	224	ePKPdf	PKPdf	06 54 18.6	-0.8
BOSA				ePKPdf	PKiKP	06 54 20.7	+1.0
BOSA	Boshof	124.48	224	ePKIKP	PKPdf	06 54 18.6	-0.8
BOSA				e		06 54 20.7	
BOSA	Boshof	124.48	224	PKP	PKPdf	06 54 18.6	-0.8
	comp=Z,6.5nm,1.0s,baz=96,slow=3.0,SNR=6.5						
MICGM	Minsk	124.70	331	e	PKPdf	06 54 18.0	-0.8
MICGM				eLR	LR	07 40 36.0	
MNK	Minsk	124.70	331	ePKIKP	PKPdf	06 54 18.0	-0.8
IZAR	Zarasai	124.72	333	eP	PKPdf	06 54 16.6	-2.1
IDID	Didziasalis	124.76	332	eP	PKPdf	06 54 18.0	-0.8
ISAL	Salakas	124.88	333	eP	PKPpre	06 54 12.9	
CPUP	Villa Florida	124.97	133	ePKPdf	PKiKP	06 54 21.3	+0.8
CPUP	Villa Florida	124.97	133	PKP	PKPdf	06 54 19.0	-1.2
	comp=Z,4.4nm,0.9s,baz=232,slow=2.7,SNR=11						
LMN	Caledonia Moun	125.49	41	PFAKE		06 54 30.0	+9.0
LMN				LR	LR		
	comp=Z,5µm,22.0s						
SDDR	Presa de Saban	125.57	74	PFAKE		06 54 30.0	+8.1
SDDR				LR	LR		
	comp=Z,3µm,20.0s						
SDV	Santo Domingo	125.59	87	ePKPdf	PKPdf	06 54 20.0	-1.9
SDV				LR	LR		
	comp=Z,2µm,19.0s						
AKASG	Malin Array Be	126.10	326	PKP	PKPdf	06 54 21.3	-0.3
	comp=Z,7.3nm,1.0s,baz=59,slow=2.1,SNR=24						
AKASG				PP	PP	06 56 12.2	-3.1
	comp=Z,4.1nm,1.0s,baz=50,slow=6.5,SNR=4.5						
AKBB	Malin Array Si	126.10	326	ePKPdf	PKPdf	06 54 20.6	-1.0
KIEV	Kiev	126.11	326	ePKPdf	PKPdf	06 54 21.0	-0.6
KIEV				LR	LR		
	comp=Z,4µm,19.0s						
KIEV	Kiev	126.11	326	⇑iP	PKiKP	06 54 22.3	+0.3
KIEV	Kiev	126.11	326	⇑PKIKP	PKiKP	06 54 22.3	+0.3
SNOP	Sinop	126.12	315	PFAKE		06 54 30.0	+7.7
SNOP				LR	LR		
	comp=Z,2µm,20.0s						
AK11	Malin Array Si	126.14	326	ePKPdf	PKPdf	06 54 21.6	0.0
NB2	NORSAR Subarra	126.23	344	PKPdf	PKiKP	06 54 21.8	-0.2
	comp=Z,60nm,2.0s,baz=31,slow=1.9						
NB2	NORSAR Subarra	126.23	344	PKPdf	PKiKP	06 54 21.8	-0.2
	baz=31,slow=1.9						
NB200	NORSAR Array S	126.23	344	ePKPdf	PKPdf	06 54 20.5	-1.1
NOA	NORSAR Array B	126.23	344	PKP	PKPdf	06 54 20.5	-1.1
	comp=Z,3.4nm,1.0s,baz=38,slow=2.2,SNR=5.3						
KMBO	Kilima Mbogo	126.32	261	PKP	PKiKP	06 54 23.7	-0.2
KMBO				LR	LR		
	comp=Z,4µm,21.0s						
KMBO	Kilima Mbogo	126.32	261	PKP	PKiKP	06 54 23.7	-0.2
	comp=Z,0.9nm,0.3s,baz=270,slow=4.2,SNR=3.8						
FURI	Furi	126.76	273	PFAKE		06 54 40.0	+15
FURI				LR	LR		
	comp=Z,3µm,20.0s						
HAL	Halifax	126.76	42	PFAKE		06 54 30.0	+6.5
HAL				LR	LR		
	comp=Z,4µm,21.0s						
SDD	Santo Domingo	126.87	75	PFAKE		06 54 40.0	+16
SDD				LR	LR		
	comp=Z,2µm,21.0s						
SUW	Suwalki	127.19	332	PFAKE		06 54 40.0	+16
SUW				LR	LR		
	comp=Z,4µm,22.0s						
ILGA	Ilgaz	127.51	314	ePKPdf	PKiKP	06 54 27.1	+1.7
ILGA				LR	LR		
	comp=Z,3µm,21.0s						
BR101	Keskin Array S	128.02	312	ePKPdf	PKPdf	06 54 25.3	-0.5
BR101				ePP	PP	06 56 22.4	-6.4
BR131	Keskin Array S	128.02	312	ePKPdf	PKiKP	06 54 26.0	-0.4
BRTR	Keskin Array B	128.02	312	PKP	PKPdf	06 54 25.3	-0.5
	comp=Z,3.6nm,1.0s,baz=126,slow=2.1,SNR=16						
BRTR				PP	PP	06 56 22.4	-6.4
	comp=Z,8.6nm,1.3s,baz=132,slow=1.8,SNR=4.2						
KLNR	Kaliningrad	128.10	335	⇓ePKIKP	PKiKP	06 54 25.6	-0.2
KIS	Kishinev	128.21	323	ePKP	PKiKP	06 54 45.0	+19
KIS	Kishinev	128.21	323	ePP	PP	06 56 35.0	+5.6
KIS				LRM	MLR	07 50 20.0	
	comp=Z,5µm,24.0s						
ANTO	Ankara	128.58	313	ePKPpre	PKPpre	06 54 22.0	
ANTO				LR	LR		
	comp=Z,2µm,21.0s						
ANTO	Ankara	128.58	313	⇑iP	PKPdf	06 54 26.6	-0.2
ANTO	Ankara	128.58	313	⇑PKIKP	PKPdf	06 54 26.6	-0.2
LVV	L'vov	129.36	328	i PKIKP	PKiKP	06 54 28.7	+0.1
LVV				pmax	pmax		
	comp=E,3µm,21.0s						
LVV				pmax	pmax		
	comp=N,3µm,20.0s						
LVV				pmax	pmax		
	comp=Z,5µm,21.0s						
CFR	Carcaliu	129.50	321	⇑iP	PKiKP	06 54 30.0	+1.0
CFR	Carcaliu	129.50	321	⇑PKIKP	PKiKP	06 54 30.0	+1.0
LSZ	Lusaka	129.63	240	ePKPdf	PKiKP	06 54 30.1	-0.1
LSZ				LR	LR		
	comp=Z,6µm,19.0s						
TIRR	Tirgusor	129.67	320	PFAKE		06 54 40.0	+11
TIRR				LR	LR		
	comp=Z,6µm,22.0s						
CSS	Mathiatis	129.73	307	PFAKE		06 54 40.0	+10
CSS				LR	LR		
	comp=Z,3µm,22.0s						
BIZ	Bicaz	129.83	324	⇑iP	PKiKP	06 54 31.6	+2.0
TLB	Topalu	129.85	320	⇑iP	PKiKP	06 54 29.7	0.0
TLB	Topalu	129.85	320	⇑PKIKP	PKiKP	06 54 29.7	0.0
BURAR	Bucovina Array	129.97	325	⇑iP	PKiKP	06 54 33.6	+3.6
BURAR	Bucovina Array	129.97	325	⇑PKIKP	PKiKP	06 54 33.6	+3.6
BUR04	Bucovina Ar. S	129.98	325	ePKPdf	PKPdf	06 54 29.2	0.0
OBIP	Obispado Ponce	130.02	76	PFAKE		06 54 40.0	+9.2
OBIP				LR	LR		
	comp=Z,3µm,22.0s						
KWP	Kalwaria Pacla	130.16	328	ePKPdf	PKPdf	06 54 27.3	-2.1
KWP				LR	LR		
	comp=Z,43µm,20.0s						
SJG	San Juan	130.45	75	PFAKE		06 54 40.0	+8.4
SJG				LR	LR		
	comp=Z,1µm,20.0s						
MLR	Muntele Rosu	130.69	322	ePKPdf	PKPdf	06 54 28.6	-2.1
MLR				LR	LR		
	comp=Z,4µm,20.0s						
MLR	Muntele Rosu	130.69	322	⇑iP	PKiKP	06 54 31.5	-0.1
MLR	Muntele Rosu	130.69	322	⇑PKIKP	PKiKP	06 54 31.5	-0.1
CBYP	Canovanas	130.72	75	PFAKE		06 54 40.0	+7.7
CBYP				LR	LR		
	comp=Z,2µm,20.0s						
HUMP	Col San Antoni	130.73	75	ePKPdf	PKPdf	06 54 29.3	-2.0
HUMP				LR	LR		
	comp=Z,2µm,22.0s						
DOPR	Dopca	130.77	323	⇑iP	PKiKP	06 54 34.5	+2.9
RGN	Rugen	130.85	338	PFAKE		06 54 40.0	+8.6
RGN				LR	LR		
	comp=Z,5µm,20.0s						
MTP	Monte Pirata	131.02	75	PFAKE		06 54 40.0	+7.2
MTP				LR	LR		
	comp=Z,1µm,22.0s						
TRPA	Tarpa	131.15	327	⇑iP	PKiKP	06 54 33.0	+0.8
OJC	Ojcow	131.24	331	ePKP	PKiKP	06 54 32.8	+0.4
OJC	Ojcow	131.24	331	ePKPdf	PKPdf	06 54 28.0	-3.4
OJC	Ojcow	131.24	331	ePKIKP	PKiKP	06 54 32.8	+0.4
VOIR		131.25	323	⇑iP	PKiKP	06 54 37.5	+4.9
VOIR		131.25	323	⇑PKIKP	PKiKP	06 54 37.5	+4.9
CUPR	Culebra, Puert	131.27	75	PFAKE		06 54 40.0	+6.7
CUPR				LR	LR		
	comp=Z,3µm,21.0s						
NIE	Niedzica	131.52	329	ePKP	PKiKP	06 54 32.6	-0.3
ARR	Arges	131.54	323	⇑iP	PKiKP	06 54 33.5	+0.3
DRGR		131.85	325	⇑iP	PKiKP	06 54 34.6	+0.8
DRGR		131.85	325	⇑PKIKP	PKiKP	06 54 34.6	+0.8
ABVI	Anegada Island	132.16	75	PFAKE		06 54 50.0	+15
ABVI				LR	LR		
	comp=Z,2µm,20.0s						
TRIS	Tristan da Cun	132.24	183	PFAKE		06 54 50.0	+15
TRIS				LR	LR		
	comp=Z,4µm,20.0s						
OKC	Ostrava-Krasne	132.29	331	AMS	AMS	07 49 40.0	
	comp=Z,3µm,22.9s						
KSP	Ksiaz	132.44	333	ePKP	PKiKP	06 54 36.6	+1.8
KSP	Ksiaz	132.44	333	ePKIKP	PKiKP	06 54 36.6	+1.8
GZR	Gura Zlata	132.61	324	⇑iP	PKiKP	06 54 36.2	+0.8
GZR	Gura Zlata	132.61	324	⇑PKIKP	PKiKP	06 54 36.2	+0.8
MORC	Moravsky Berou	132.61	331	ePKPpre	PKPpre	06 54 25.8	
MORC				LR	LR		
	comp=Z,5µm,21.0s						
MORC	Moravsky Berou	132.61	331	ePKP	PKiKP	06 54 35.7	+0.5
MORC				e		06 54 44.6	
PSZ	Piszkesteto	132.68	328	ePKPdf	PKPdf	06 54 32.4	-1.9
PSZ				LR	LR		
	comp=Z,5µm,20.0s						
PSZ	Piszkesteto	132.68	328	⇑iP	PKiKP	06 54 36.3	+0.9
PSZ	Piszkesteto	132.68	328	⇑PKIKP	PKiKP	06 54 36.3	+0.9
MBAR	Mbarara	132.75	259	PFAKE		06 54 50.0	+13
MBAR				LR	LR		
	comp=Z,4µm,18.0s						
DPC	Dobruska-Polom	132.78	333	AMS	AMS	07 51 10.0	
	comp=Z,4µm,24.3s						
UPC	Upice	132.80	333	AMS	AMS	07 52 00.0	
	comp=Z,5µm,21.1s						
VYHS	Vyhne	132.85	329	ePKIKP	PKiKP	06 54 37.0	+1.3
VYHS				e		06 57 06.3	
VYHS	Vyhne	132.85	329	ePKP	PKiKP	06 54 37.0	+1.3
VYHS				ePP	PP	06 57 06.3	+7.0
ALN	Alexandroupoli	132.88	317	PFAKE		06 54 50.0	+14
ALN				LR	LR		
	comp=Z,2µm,22.0s						
BZS	Buzias	133.15	325	⇑iP	PKiKP	06 54 37.7	+1.4
BZS	Buzias	133.15	325	⇑PKIKP	PKiKP	06 54 37.7	+1.4
VRAC	Vranov	133.38	332	⇑iP	PKiKP	06 54 39.2	+2.5
VRAC	Vranov	133.38	332	⇑PKIKP	PKiKP	06 54 39.2	+2.5
VRAC	Vranov	133.38	332	ePKP	PKiKP	06 54 38.1	+1.4
VRAC				e		06 54 46.2	
PVCC	Panska Ves	133.42	334	AMS	AMS	07 51 20.0	
	comp=Z,6µm,22.2s						
BRG	Berggiesshubel	133.43	335	ePKP	PKiKP	06 54 37.6	+0.9
	comp=Z,30nm,1.7s						
BRG				i		06 54 46.0	
	comp=Z,28nm,1.5s						
BRG				ePP	PP	06 57 05.3	+2.5
	comp=Z,12nm,1.2s						
BRG				SKP		06 58 08.9	
	comp=Z,20nm,1.8s						
	comp=N,5µm,18.9s						
	comp=E,3µm,19.5s						
	comp=Z,6µm,21.5s						
BRG	Berggiesshubel	133.43	335	ePKP	PKiKP	06 54 37.6	+0.9
	comp=Z,10nm,1.1s						
BRG	Berggiesshubel	133.43	335	ePKIKP	PKiKP	06 54 37.6	+0.9
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SEUS	St. Eustatius	133.48	76	PFAKE		06 54 50.0	+12
SEUS				LR	LR		
	comp=Z,2µm,20.0s						
CLL	Collm	133.49	336	PFAKE		06 54 50.0	+13
CLL				LR	LR		
	comp=Z,6µm,22.0s						
CLL	Collm	133.49	336	ePKPdf	PKiKP	06 54 38.0	+1.2
CLL				e		06 54 46.0	
	comp=Z,21nm,1.2s						
CLL				ePP	PP	06 57 03.0	-0.1
	comp=Z,87nm,2.1s						
CLL				eSS	SS	07 14 48.0	+2.1
CLL				eSSS	SSS	07 19 24.0	
CLL				Lmax		07 51 00.0	
CLL	Collm	133.49	336	ePKIKP	PKiKP	06 54 38.0	+1.2
CLL				e		06 54 46.0	
CLL				e		06 57 03.0	
CLL				pmax	pmax		
	comp=Z,12nm,2.1s						
SPB	Sao Paulo	133.58	138	PFAKE		06 54 50.0	+12
SPB				LR	LR		
	comp=Z,2µm,20.0s						
MDVR	Moldovita	133.58	324	⇑iP	PKiKP	06 54 38.5	+1.2
KRUC	Moravsky	133.65	331	ePKP	PKiKP	06 54 38.7	+1.4
MODS	Modra-Piesok	133.70	330	ePKIKP	PKiKP	06 54 38.8	+1.4
MODS				e		06 57 06.1	
MODS	Modra-Piesok	133.70	330	ePKP	PKiKP	06 54 38.8	+1.4
MODS				ePP	PP	06 57 06.1	+1.4
PRA	Prague	133.81	334	AMS	AMS	07 49 40.0	
	comp=Z,7µm,24.5s						
PRU	Pruhonice	133.83	333	AMS	AMS	07 49 20.0	
	comp=Z,8µm,25.9s						
VTS	Vitosha	133.85	320	⇑iP	PKiKP	06 54 40.0	+2.0
VTS	Vitosha	133.85	320	⇑PKIKP	PKiKP	06 54 40.1	+2.0
TREC	Trest	133.91	332	AMS	AMS	07 52 20.0	
	comp=Z,5µm,20.8s						
ANWB	Willy Bob	134.62	76	PFAKE		06 54 50.0	+10
ANWB				LR	LR		
	comp=Z,2µm,22.0s						
CONA	Conrad Observa	134.70	331	i PKiKP	PKiKP	06 54 39.5	0.0
	comp=Z,9.4nm,1.0s						
KHC	Kasperske Hory	134.88	333	ePKPdf	PKPdf	06 54 34.8	-3.6
KHC				LR	LR		
	comp=Z,2µm,19.0s						
KHC	Kasperske Hory	134.88	333	ePKP	PKiKP	06 54 41.8	+2.0
KHC				ex	x	06 54 49.4	
KHC				AMS	AMS	07 51 10.0	
	comp=Z,8µm,24.2s						
KHC	Kasperske Hory	134.88	333	ePKIKP	PKiKP	06 54 41.8	+2.0
KHC				e		06 54 49.4	
KHC				MLR	MLR		
	comp=Z,8µm,24.2s						
DIVS	Divibare	134.98	324	ePKPdf	PKPpre	06 54 34.6	
DIVS				LR	LR		
	comp=Z,3µm,20.0s						
STIP	Stip	135.00	320	i P	PKiKP	06 54 46.8	+6.6
GEC2	GERESS Array S	135.04	333	ePKPdf	PKPdf	06 54 37.9	-0.8
GEC2				LR	LR		
	comp=Z,6µm,21.0s						
GEC2	GERESS Array S	135.04	333	ePKIKP	PKPdf	06 54 37.9	-0.8
GEC2				MLR	MLR		
	comp=Z,6µm,21.0s						
GERES	GERESS Array B	135.04	333	PKP	PKiKP	06 54 39.3	-0.9
	comp=Z,3.7nm,0.9s,baz=29,slow=2.2,SNR=14						
SANT	Santorini	135.26	311	⇑iP	PKPdf	06 54 39.4	0.0
FDF	Fort de France	135.26	80	PFAKE		06 54 50.0	+8.5
FDF				LR	LR		
	comp=Z,2µm,22.0s						
GRA1	Grafenberg Arr	135.46	336	PFAKE		06 54 50.0	+9.1
GRA1				LR	LR		
	comp=Z,6µm,22.0s						
GRFO	Grafenberg	135.46	336	PFAKE		06 54 50.0	+9.1
GRFO				LR	LR		
	comp=Z,5µm,22.0s						
MOA	Molln	135.51	332	i P	PKiKP	06 54 43.2	+2.1
	comp=Z,9.1nm,1.2s						
LIT	Litokhoron	135.63	318	PFAKE		06 54 50.0	+8.4
LIT				LR	LR		
	comp=Z,3µm,20.0s						
KRUS	Krusevo	135.77	320	i P	PKiKP	06 54 41.8	-0.1
TSUM	Tsumeb	135.86	228	ePKPdf	PKPpre	06 54 36.1	
TSUM				LR	LR		
	comp=Z,6µm,21.0s						
PERS	Pernice	135.96	330	i PKPdf	PKiKP	06 54 43.5	+1.4
SOKA	Soboth	135.97	330	i pPKiKP	PKiKP	06 54 45.0	+2.8
	comp=Z,13nm,1.1s						
BLY	Banja Luka	136.16	326	PFAKE		06 54 50.0	+7.5
BLY				LR	LR		
	comp=Z,4µm,21.0s						
AGG	Agios Georgios	136.28	316	PFAKE		06 54 50.0	+7.0
AGG				LR	LR		
	comp=Z,4µm,22.0s						
OBKA	Obir	136.33	330	i PKiKP	PKPdf	06 54 41.8	+0.6
	comp=Z,17nm,1.4s						
TTG	Podgorica	136.40	322	PFAKE		06 54 50.0	+7.0
TTG				LR	LR		
	comp=Z,3µm,20.0s						
KBA	Koelnbreinsper	136.50	331	i pPKiKP	PKiKP	06 54 45.9	+2.5
	comp=Z,11nm,1.2s						
MEM	Membach	136.64	340	⇑PKiKP	PKiKP	06 54 43.4	+0.2
TIR	Tirane	136.65	321	PFAKE		06 54 50.0	+6.4
TIR				LR	LR		
	comp=Z,5µm,22.0s						
BOJS	Bojanci	136.68	329	i PKPdf	PKiKP	06 54 44.5	+1.0
VISS	Visnje	136.68	329	i PKPdf	PKiKP	06 54 44.9	+1.4
MYKA	Terra Mystica	136.68	331	i PKiKP	PKiKP	06 54 43.0	-0.6
	comp=Z,13nm,1.2s						
UCC	Uccle	137.00	342	PFAKE		06 54 50.0	+6.0
UCC				LR	LR		
	comp=Z,5µm,20.0s						
WATA	Walderalm	137.12	333	i PKiKP	PKiKP	06 54 44.3	-0.3
	comp=Z,11nm,1.0s						
ABTA	Abfaltersbach	137.13	332	i pPKPdf	PKiKP	06 54 45.3	+0.8
	comp=Z,14nm,0.9s						
TRI	Trieste	137.28	330	PFAKE		06 54 50.0	+5.3
TRI				LR	LR		
	comp=Z,5µm,20.0s						
MOTA	Moosalm	137.32	333	i pPKPdf	PKiKP	06 54 45.7	+0.7
	comp=Z,20nm,1.1s						
RETA	Reutte	137.36	334	i PKPdf	PKPdf	06 54 40.5	-2.6
	comp=Z,12nm,1.4s						
SQTA	Sankt Quirin	137.37	333	i PKiKP	PKiKP	06 54 44.5	-0.6
	comp=Z,19nm,1.2s						
WLF	Walferdange	137.39	339	PFAKE		06 54 50.0	+5.2
WLF				LR	LR		
	comp=Z,20µm,20.0s						
WLF	Walferdange	137.39	339	⇓PKiKP	PKiKP	06 54 47.0	+2.1
ITM	Ithomi	137.45	314	PFAKE		06 55 00.0	+15
ITM				LR	LR		
	comp=Z,4µm,22.0s						
DOU	Dourbes	137.54	341	⇑PKiKP	PKiKP	06 54 46.2	+1.1
FETA	Feichten	137.73	333	i PKiKP	PKiKP	06 54 45.1	-0.7
	comp=Z,28nm,1.2s						
DAVA	Damuels	137.89	334	i PKiKP	PKPdf	06 54 44.9	+0.8
	comp=Z,26nm,1.5s						
FUORN	Ofenpass-Fuorn	138.24	333	PFAKE		06 55 00.0	+13
FUORN				LR	LR		
	comp=Z,5µm,21.0s						
BDFB	Brasilia	138.32	129	ePKPpre	PKPpre	06 54 40.9	
BDFB				ePKPdf	PKPpre	06 54 41.7	
BDFB				LR	LR		
	comp=Z,2µm,21.0s						
BDFB	Brasilia	138.32	129	PKhKP	PKPpre	06 54 41.7	
	comp=Z,3.2nm,0.7s,baz=346,slow=4.3,SNR=6.8						
TUE	Stuetta	138.76	334	PFAKE		06 55 00.0	+12
TUE				LR	LR		
	comp=Z,5µm,20.0s						
AQU	L'Aquila	139.80	326	PFAKE		06 55 00.0	+10
AQU				LR	LR		
	comp=Z,5µm,21.0s						
TIP	Timpagrande	139.84	320	PFAKE		06 55 00.0	+10
TIP				LR	LR		
	comp=Z,2µm,21.0s						
CUC	Castrocucco	139.94	322	PFAKE		06 55 00.0	+10
CUC				LR	LR		
	comp=Z,3µm,22.0s						
VLC	Villacollemand	140.05	331	PFAKE		06 55 00.0	+10
VLC				LR	LR		
	comp=Z,5µm,20.0s						
CEL	Celeste	140.93	320	PFAKE		06 55 00.0	+7.5
CEL				LR	LR		
	comp=Z,2µm,22.0s						
BNI	Bardonecchia	141.02	335	PFAKE		06 55 00.0	+7.4
BNI				LR	LR		
	comp=Z,6µm,21.0s						
CLTB	Caltabellotta	143.03	321	PFAKE		06 55 10.0	+13
CLTB				LR	LR		
	comp=Z,3µm,22.0s						
TAMR	Tamra	145.84	324	ePKPdf	PKiKP	06 55 00.8	-1.7
TAMR				LR	LR		
	comp=Z,3µm,22.0s						
KEST	Kesra	146.59	322	ePKPdf	PKPdf	06 54 59.5	-0.4
KEST				LR	LR		
	comp=Z,5µm,22.0s						
KEST	Kesra	146.59	322	PKPbc	PKPab	06 55 02.6	+0.2
	comp=Z,98nm,0.9s,baz=266,slow=1.7,SNR=33						
CMAH	Djebel Manchou	147.10	325	P	PKPab	06 55 03.6	-0.8
ABSA	Djebel Ababsia	147.32	324	P	PKiKP	06 55 07.4	+1.6
CASM	Ain Smara	147.89	325	P	PKPbc	06 55 05.5	+0.5
CTEI	Djebel Teioual	148.08	325	P	PKPab	06 55 08.0	-0.3
PBRG	Braganca	148.25	348	ePKPdf	PKiKP	06 55 07.7	+0.3
PGAV	Gavieira, Arco	148.39	350	ePKPdf	PKPdf	06 55 02.3	-0.4
SET	Setif	148.53	327	P	PKPab	06 55 09.0	-1.1
POLO	Lamas de Olo	148.88	349	ePKPdf	PKiKP	06 55 08.6	-0.2
MVO	Moncorvo	148.93	348	ePKPdf	PKiKP	06 55 09.0	+0.1
PVRL	Vila Real	148.96	349	ePKPdf	PKPdf	06 55 03.9	+0.3
ES19	SONSECA Array	149.52	342	ePKPbc	PKPbc	06 55 08.8	-0.2
PVIS	Viseu	149.54	349	ePKPdf	PKiKP	06 55 10.8	+0.7
ESDC	Sonseca Array	149.56	342	PKPbc	PKPbc	06 55 08.9	-0.2
	comp=Z,12nm,0.9s,baz=15,slow=2.7,SNR=32						
ESLA	Sonseca Array	149.56	342	ePKPbc	PKiKP	06 55 10.3	+0.1
MTE	Manteigas	149.77	348	ePKPdf	PKPbc	06 55 09.9	+0.3
MTE	Manteigas	149.77	348	ePKPbc	PKiKP	06 55 11.2	+0.6
PAB	San Pablo	149.79	343	ePKPbc	PKiKP	06 55 11.4	+0.7
PAB	San Pablo	149.79	343	ePKP2	PKiKP	06 55 11.4	+0.7
PCAS	Casmilo, Conde	150.29	349	ePKPdf	PKiKP	06 55 11.8	+0.2
PMRV	Marv??o	150.67	347	ePKPdf	PKiKP	06 55 13.0	+0.5
PTOM	Tomar	150.70	349	ePKPdf	PKiKP	06 55 13.8	+1.3
PMTG	Montargil	151.19	348	ePKPdf	PKiKP	06 55 13.5	0.0
PESTR	Estremoz	151.25	347	ePKPdf	PKiKP	06 55 14.4	+0.7
PESTR	Estremoz	151.25	347	ePKPbc	PKiKP	06 55 14.3	+0.6
PESTR				LR	LR		
	comp=Z,3µm,20.0s						
PBEJ	Beja	152.12	347	ePKPdf	PKiKP	06 55 15.9	+0.4
PNCL	Nicolau / Gran	152.18	348	ePKPdf	PKPdf	06 55 11.2	+2.6
MESJ	Messejana	152.38	348	ePKPdf	PKiKP	06 55 16.7	+0.7
PVAQ	Vaqueiros	152.69	347	ePKPdf	PKPbc	06 55 14.3	-2.1
PBDV	Barranco-do-Ve	152.89	347	ePKPdf	PKPbc	06 55 15.6	-1.3
PFVI	Vila Bisbo	153.18	348	PFAKE		06 55 20.0	+2.3
PFVI				LR	LR		
	comp=Z,4µm,20.0s						
RCBR	Riachuelo	153.69	128	PFAKE		06 55 20.0	+0.5
RCBR				LR	LR		
	comp=Z,3µm,20.0s						
RTC	Rabat Centre	155.69	343	PFAKE		06 55 20.0	+6.3
RTC				LR	LR		
	comp=Z,9µm,22.0s						
TAM	Tamanrasset	156.77	303	PFAKE		06 55 30.0	+14
TAM				LR	LR		
	comp=Z,4µm,19.0s						
TOA0	Torodi Ar. Sit	163.14	279	ePKPdf	PKPdf	06 55 21.4	-1.4
TOA0				ePKPdf	PKPdf	06 55 23.6	+0.8
TORD	Torodi Ar. Bea	163.14	279	PKP	PKPdf	06 55 21.3	-1.5
	comp=Z,7.5nm,1.0s,baz=4.6,slow=2.1,SNR=27						
TORD				PP	PP	07 00 02.2	+4.0
	comp=Z,4.1nm,1.1s,baz=71,slow=3.4,SNR=4.7						
TOA1	Torodi Ar. Sit	163.14	279	ePKPdf	PKPdf	06 55 21.3	-1.5
TOA1				ePP	PP	07 00 02.2	+4.0
KIC	Kosan Boka	168.57	248	ePKP2	PKPdf	06 55 27.3	+0.1
	comp=Z,47nm,1.1s						
LIC	Lamto	168.77	247	ePKP2	PKPdf	06 55 27.3	-0.1
	comp=Z,98nm,1.8s						
DBIC	Dimbokro	168.79	249	PKP	PKPdf	06 55 26.9	-0.5
	comp=Z,11nm,1.0s,baz=271,slow=3.3,SNR=7.2						
TIC	Toumodi	168.93	249	ePKP2	PKPdf	06 55 28.8	+1.3

IDC 06 06:37:02.0±3.2, 12.°81S×165.°17E, h0km, mb4.9/10, mb1 5.0/10, mb1mx4.6/46, mbtmp4.9/10, Error ellipse: s-maj=85.3km s-min=30.4km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.38	252	P	P	06 43 15.6	-0.4
	20nm,1.2s,baz=80,slow=8.8,SNR=1.2						
ASAR	Alice Springs	31.52	246	P	P	06 43 26.0	-0.2
	7.8nm,1.0s,baz=90,slow=8.3,SNR=1.1						
MJAR	Matsushiro Arr	55.28	334	P	P	06 46 35.4	-1.9
	22nm,1.3s,baz=162,slow=8.1,SNR=2.1						
JNU	Nakatsue	56.19	325	P	P	06 46 43.3	-0.7
	27nm,0.8s,baz=92,slow=3.5,SNR=2.9						
ASAJ	Asahikawa	60.27	341	P	P	06 47 12.0	-0.2
	19nm,0.8s,baz=138,slow=14,SNR=2.7						
KSRS	Korea Array	61.02	327	P	P	06 47 17.9	+0.5
	4.9nm,0.8s,baz=130,slow=7.7,SNR=3.0						
USRK	Ussuriysk Ar.	64.27	334	P	P	06 47 39.9	+0.8
	17nm,1.0s,baz=139,slow=6.6,SNR=2.7						
KLR	Kul'dur	68.45	337	P	P	06 48 06.5	+0.8
	8.0nm,0.9s,baz=96,slow=2.0,SNR=2.1						
ILAR	Eielson Array	85.35	19	P	P	06 49 40.0	-0.8
	4.7nm,0.9s,baz=239,slow=5.1,SNR=2.1						
MKAR	Makanchi Array	94.41	317	P	P	06 50 25.7	+1.7
	6.1nm,0.8s,baz=92,slow=7.2,SNR=3.1						

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*IDC **06** 06:37:54.2±2.3, 10.°86S×164.°60E, h0km, mb4.7/9, mb1 4.8/10, mb1mx4.4/47, mbtmp4.7/10, ML5.5/1, Error*

ellipse: s-maj=57.7km s-min=33.3km az=151.0
*ISCJB **06** 06:37:57.4±1.3, 10°.8S±0°.2×164°.47E±0°.08, h29^{km}, mb4.6/9, Error ellipse: s-maj=32.1km s-min=12.0km az=0.4*
ISC 06 06:37:59.1±1.5**, 10°.8S**±0°.3×**164°.5E**±0°.1**, h29^{km}, n10, σ0^{s}.81**/11**, mb4.8**/9**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.69**	**287**	Pn	**Pn**	**06 39 07.9**	**-0.1**
	201nm,0.3s,baz=141,slow=13,SNR=0.8						
HNR				Sn	**Sn**	**06 40 01.3**	**-0.2**
	106nm,0.3s,baz=188,slow=19,SNR=1.1						
WRA	**Warramunga Arr**	**30.42**	**249**	P	**P**	**06 44 09.4**	**+0.1**
	6.0nm,0.9s,baz=71,slow=8.1,SNR=1.6						
MJAR	**Matsushiro Arr**	**53.22**	**334**	P	**P**	**06 47 14.1**	**-0.8**
	4.6nm,0.8s,baz=180,slow=6.7,SNR=2.6						
JNU	**Nakatsue**	**54.19**	**325**	P	**P**	**06 47 21.2**	**-1.0**
	23nm,0.8s,baz=131,slow=4.5,SNR=3.5						
KSRS	**Korea Array**	**59.01**	**326**	P	**P**	**06 47 56.9**	**+0.6**
	7.3nm,1.0s,baz=134,slow=7.6,SNR=3.4						
PETK	**Petropavlovsk-**	**63.94**	**355**	P	**P**	**06 48 29.9**	**+0.6**
	8.8nm,0.9s,baz=166,slow=6.7,SNR=3.4						
KLR	**Kul'dur**	**66.37**	**337**	P	**P**	**06 48 46.5**	**+1.3**
	8.5nm,1.0s,baz=104,slow=4.2,SNR=2.5						
ILAR	**Eielson Array**	**83.69**	**19**	P	**P**	**06 50 23.9**	**-1.0**
	6.6nm,0.8s,baz=239,slow=5.1,SNR=4.4						
MKAR	**Makanchi Array**	**92.53**	**317**	P	**P**	**06 51 07.4**	**-0.3**
	2.7nm,0.8s,baz=82,slow=7.3,SNR=2.0						
YKA	**Yellowknife Ar**	**95.34**	**27**	P	**P**	**06 51 20.2**	**0.0**
	0.6nm,0.8s,baz=257,slow=4.6,SNR=2.7						

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*SOME **06** 06:39:15.3, 41°.25N×71°.02E, h0^{km}*
*KRNET **06** 06:39:16.5±0.1, 41°.43N×70°.98E, mb2.8*
ISC 06 06:39:18.4±1.2**, 41°.34N**±0°.04×**71°.01E**±0°.04**, h15^{km}**±12^{km}**, n10, σ1^{s}.23**/20**, 11C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.09**	**318**	eP	**Pb**	**06 39 37.7**	**-1.4**
	6.6nm,0.4s						
IUG				eS	**Sb**	**06 39 54.1**	**+0.9**
	11nm,0.7s						
BTK	**Batken**	**1.29**	**187**	⇑iP	**Pg**	**06 39 42.6**	**-0.7**
	baz=85						
BTK				⇑iS	**Sg**	**06 40 01.9**	**+1.8**
	baz=85						
ARSB	**Arslanbob**	**1.48**	**90**	⇓iP	**Pn**	**06 39 44.8**	**0.0**
	baz=93						
ARSB				⇓iS	**Sg**	**06 40 06.3**	**0.0**
	baz=93						
KK31	**Karatay Array**	**1.80**	**348**	Pn	**Pb**	**06 39 51.4**	**+0.2**
	2.4nm,0.3s,baz=143,slow=14,SNR=37						
KK31				⇑Sn	**Sg**	**06 40 16.7**	**+0.3**
	7.3nm,0.5s,baz=144,slow=25,SNR=14						
AML	**Almayashu**	**2.16**	**68**	⇑iP	**Pb**	**06 39 56.8**	**-0.7**
	baz=70						
AML				⇑iS	**Sb**	**06 40 24.4**	**+0.2**
	baz=70						
MRKS	**Merke**	**2.17**	**49**	eP	**Pb**	**06 39 57.0**	**-0.5**
	1.8nm,0.3s						
MRKS				eS	**Sg**	**06 40 27.5**	**-0.6**
	3.9nm,0.6s						
SFK	**Sufi-Kurgan**	**2.31**	**124**	⇑iP	**Pb**	**06 39 58.9**	**-1.1**
	baz=25						
SFK				⇑iS	**Sb**	**06 40 29.9**	**+1.4**
	baz=25						
EKS2	**Erkin-Say**	**2.45**	**56**	⇑iP	**Pb**	**06 40 03.0**	**+0.7**
	baz=58						
EKS2				⇑iS	**Sb**	**06 40 34.2**	**+1.9**
	baz=58						
UCH	**Uchtor**	**2.77**	**70**	⇑iP	**Pn**	**06 40 04.3**	**+1.6**
	baz=72						
UCH				⇑iS	**Sn**	**06 40 36.5**	**+0.4**
	baz=72						
KZA	**Kyzart**	**3.26**	**76**	⇓iP	**Pn**	**06 40 09.2**	**-0.2**
	baz=77						
KZA				⇓iS	**Sn**	**06 40 45.6**	**-2.6**
	baz=77						

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*KRSC **06** 06:40:00.1±2.1, 50°.24N×156°.94E, h82^{km}±26^{km}, ML4.5*
*ISCJB **06** 06:40:01.5±0.5, 50°.54N±0°.06×156°.16E±0°.08, h115^{km}±3^{km}, mb3.7/14, Error ellipse: s-maj=12.0km s-min=4.7km az=138.5*
*MOS **06** 06:40:02.0±1.2, 50°.59N×156°.19E, h114^{km}, mb3.9/3, Error ellipse: s-maj=13.5km s-min=4.5km az=69.9*
*IDC **06** 06:40:07.9±1.8, 50°.98N×155°.92E, h146^{km}±13^{km}, mb3.4/13, mb1 3.5/17, mb1mx3.4/64, mbtmp3.8/17, Error ellipse: s-maj=23.1km s-min=10.8km az=156.0*
ISC 06 06:40:01.7±0.9**, 50°.46N**±0°.08×**156°.37E**±0°.06**, h108^{km}**±6^{km}**, n86, σ1^{s}.71**/105**, mb3.8**/14**, 2C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.27**	**324**	eP	**Pn**	**06 40 17.4**	**+0.3**
SKR				eS	**Sn**	**06 40 28.0**	**-0.6**
SKR	**Severo-Kuril's**	**0.27**	**324**	PN	**Pn**	**06 40 17.4**	**+0.3**
SKR				S	**Sn**	**06 40 28.0**	**-0.6**
ALID	**Alaid**	**0.66**	**308**	eP	**Pn**	**06 40 19.6**	**-0.1**
ALID	**Alaid**	**0.66**	**308**	PN	**Pn**	**06 40 19.6**	**-0.1**
PAU	**Pauzhetka**	**1.04**	**15**	eP	**Pn**	**06 40 23.2**	**+0.1**
PAU				eS	**Sn**	**06 40 38.9**	**-0.4**
PAU	**Pauzhetka**	**1.04**	**15**	PN	**Pn**	**06 40 23.2**	**+0.1**
PAU				S	**Sn**	**06 40 38.9**	**-0.4**
KDTR	**Khodutka, Kamc**	**1.72**	**38**	eP	**Pn**	**06 40 31.1**	**0.0**
KDTR				eS	**Sn**	**06 40 52.2**	**-1.2**
KDTR	**Khodutka, Kamc**	**1.72**	**38**	PN	**Pn**	**06 40 31.1**	**0.0**
KDTR				S	**Sn**	**06 40 52.2**	**-1.2**
MTVR	**Mutnovka**	**2.32**	**29**	eP	**Pn**	**06 40 39.9**	**+1.1**
MTVR				eS	**Sn**	**06 41 08.6**	**+1.4**
MTVR	**Mutnovka**	**2.32**	**29**	PN	**Pn**	**06 40 39.9**	**+1.1**
MTVR				S	**Sn**	**06 41 08.6**	**+1.4**
GRL	**Gorelyy**	**2.35**	**26**	eP	**Pn**	**06 40 40.4**	**+1.3**
GRL				eS	**Sn**	**06 41 09.8**	**+2.0**
GRL	**Gorelyy**	**2.35**	**26**	PN	**Pn**	**06 40 40.4**	**+1.3**
GRL				S	**Sn**	**06 41 09.8**	**+2.0**
RUS	**Russkaya**	**2.38**	**33**	eP	**Pn**	**06 40 39.5**	**0.0**
RUS				eS	**Sn**	**06 41 07.4**	**-1.1**
RUS	**Russkaya**	**2.38**	**33**	PN	**Pn**	**06 40 39.5**	**0.0**
RUS				S	**Sn**	**06 41 07.4**	**-1.1**
APC	**Apacha**	**2.51**	**11**	eP	**Pn**	**06 40 41.1**	**-0.1**
APC	**Apacha**	**2.51**	**11**	PN	**Pn**	**06 40 41.1**	**-0.1**
KRMR	**Karymshinskiy**	**2.61**	**24**	eP	**Pn**	**06 40 43.4**	**+0.9**
KRMR	**Karymshinskiy**	**2.61**	**24**	PN	**Pn**	**06 40 43.4**	**+0.9**
PETK	**Petropavlovsk-**	**2.77**	**17**	P	**Pn**	**06 40 45.5**	**+0.9**
	22nm,0.3s,baz=189,slow=11,SNR=271						
PETK				S	**Sn**	**06 41 19.3**	**+1.6**
	7.2nm,0.3s,baz=218,slow=11,SNR=1.9						
PET	**Petropavlovsk**	**2.93**	**28**	eP	**Pn**	**06 40 47.3**	**+0.7**
PET	**Petropavlovsk**	**2.93**	**28**	PN	**Pn**	**06 40 47.3**	**+0.7**
DALK	**Dalny**	**2.97**	**29**	eP	**Pn**	**06 40 48.2**	**+1.1**
DALK				eS	**Sn**	**06 41 23.4**	**+1.3**
DALK	**Dalny**	**2.97**	**29**	PN	**Pn**	**06 40 48.2**	**+1.1**
DALK				S	**Sn**	**06 41 23.4**	**+1.3**
UGLR	**Uglovaya**	**3.14**	**28**	eP	**Pn**	**06 40 51.3**	**+1.7**
UGLR	**Uglovaya**	**3.14**	**28**	PN	**Pn**	**06 40 51.3**	**+1.7**
KOK	**Koryaka**	**3.16**	**25**	eP	**Pn**	**06 40 51.8**	**+2.0**
KOK	**Koryaka**	**3.16**	**25**	PN	**Pn**	**06 40 51.8**	**+2.0**
AVH	**Avacha**	**3.17**	**27**	eP	**Pn**	**06 40 51.9**	**+2.0**
AVH	**Avacha**	**3.17**	**27**	PN	**Pn**	**06 40 51.9**	**+2.0**
SMAR	**Somma**	**3.18**	**27**	eP	**Pn**	**06 40 51.6**	**+1.4**
SMAR	**Somma**	**3.18**	**27**	PN	**Pn**	**06 40 51.6**	**+1.4**
SDLR	**Sedlovina**	**3.22**	**28**	eP	**Pn**	**06 40 51.6**	**+1.0**
SDLR				eS	**Sn**	**06 41 29.2**	**+0.8**
SDLR	**Sedlovina**	**3.22**	**28**	PN	**Pn**	**06 40 51.6**	**+1.0**
SDLR				S	**Sn**	**06 41 29.2**	**+0.8**
KRX	**Arik**	**3.22**	**25**	eP	**Pn**	**06 40 52.3**	**+1.6**
KRX	**Arik**	**3.22**	**25**	PN	**Pn**	**06 40 52.3**	**+1.6**
NLC	**Nalytchevo**	**3.28**	**33**	eP	**Pn**	**06 40 50.8**	**-0.5**
NLC	**Nalytchevo**	**3.28**	**33**	PN	**Pn**	**06 40 50.8**	**-0.5**
GNL	**Ganaly**	**3.38**	**16**	eP	**Pn**	**06 40 53.9**	**+1.2**
GNL	**Ganaly**	**3.38**	**16**	PN	**Pn**	**06 40 53.9**	**+1.2**
SPN	**Mys Shipunski**	**3.48**	**39**	eP	**Pn**	**06 40 53.9**	**-0.1**
SPN				eS	**Sn**	**06 41 32.8**	**-1.5**
SPN	**Mys Shipunski**	**3.48**	**39**	PN	**Pn**	**06 40 53.9**	**-0.1**
SPN				S	**Sn**	**06 41 32.8**	**-1.5**
KII	**Karymskiy**	**4.05**	**27**	eP	**Pn**	**06 41 03.4**	**+1.8**
KII	**Karymskiy**	**4.05**	**27**	PN	**Pn**	**06 41 03.4**	**+1.8**
KZV	**Kizimen**	**5.23**	**26**	eP	**Pn**	**06 41 20.6**	**+2.9**
KZV	**Kizimen**	**5.23**	**26**	PN	**Pn**	**06 41 20.6**	**+2.9**
MKZ	**Mys Kozlova**	**5.24**	**37**	eP	**Pn**	**06 41 16.5**	**-1.2**
MKZ	**Mys Kozlova**	**5.24**	**37**	PN	**Pn**	**06 41 16.5**	**-1.2**
TUMD	**Tumrok D**	**5.34**	**26**	eP	**Pn**	**06 41 21.4**	**+2.4**
TUMD				eS	**Sn**	**06 42 22.9**	**+3.7**
TUMR	**Tumrok**	**5.34**	**24**	eP	**Pn**	**06 41 22.1**	**+3.0**
TUMR	**Tumrok**	**5.34**	**24**	PN	**Pn**	**06 41 21.4**	**+2.3**
TUMR				S	**Sn**	**06 42 22.9**	**+3.5**
KBTR	**Krutoberegovo**	**6.93**	**31**	eP	**Pn**	**06 41 40.3**	**-0.2**
KBTR	**Krutoberegovo**	**6.93**	**31**	PN	**Pn**	**06 41 40.3**	**-0.2**
TYV	**Tymovskoe**	**8.73**	**278**	ePN	**Pn**	**06 42 07.2**	**+2.3**
TYV				eS	**Sn**	**06 43 39.2**	**-2.2**
TYV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TYV				smax	smax		
	comp=E,4.0nm,0.9s						
SHO	**Shikotan**	**9.26**	**228**	PN	**Pn**	**06 42 11.8**	**-0.3**
SHO				pmax	pmax		
	comp=Z,8.0nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**9.61**	**232**	⇓ePN	**Pn**	**06 42 19.5**	**+2.6**
ASAJ	**Asahikawa**	**11.30**	**241**	P	**Pn**	**06 42 41.9**	**+2.1**
	comp=Z,1.8nm,0.3s,baz=74,slow=13,SNR=6.7						
ERM	**Erimo**	**12.44**	**232**	⇓ePN	**Pn**	**06 42 53.7**	**-1.2**
SEY	**Seymchan**	**12.69**	**352**	⇓ePN	**Pn**	**06 42 56.8**	**-1.2**
SEY	**Seymchan**	**12.69**	**352**	P	**Pn**	**06 42 57.3**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=163,slow=19,SNR=2.6						
KLR	**Kul'dur**	**15.91**	**275**	⇑eP	**Pn**	**06 43 40.2**	**+0.9**
KLR	**Kul'dur**	**15.91**	**275**	P	**P**	**06 43 42.9**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=73,slow=11,SNR=14						
USRK	**Ussuriysk Ar.**	**17.63**	**259**	P	**Pn**	**06 44 03.1**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=88,slow=17,SNR=4.9						
BILL	**Bilibino**	**18.30**	**12**	eP	**P**	**06 44 00.8**	**-6.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YAK	**Yakutsk**	**18.65**	**319**	eP	**P**	**06 44 09.4**	**-1.4**
YAK				pmax	pmax		
	comp=Z,39nm,1.2s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,15nm,1.4s						
MJAR	**Matsushiro Arr**	**19.09**	**230**	P	**Pn**	**06 44 20.4**	**+2.6**
	comp=E,0.2nm,0.3s,baz=33,slow=7.4,SNR=4.7						
KSRS	**Korea Array**	**24.09**	**248**	P	**P**	**06 45 09.3**	**+2.3**
	comp=E,1.7nm,0.7s,baz=57,slow=9.6,SNR=5.0						
TIXI	**Tiksi**	**24.62**	**339**	⇑eP	**P**	**06 45 11.1**	**-0.5**
SONM	**Songino Array**	**32.30**	**285**	P	**P**	**06 46 18.8**	**-1.5**
	comp=E,0.4nm,0.5s,baz=65,slow=6.9,SNR=5.8						
ILAR	**Eielson Array**	**32.31**	**42**	P	**P**	**06 46 21.0**	**+0.9**
ILAR	**Eielson Array**	**32.31**	**42**	P	**P**	**06 46 20.9**	**+0.9**
	comp=E,0.4nm,0.7s,baz=262,slow=5.9,SNR=5.7						
H11S1	**WAKE ISLAND Hy**	**32.93**	**162**	T	T	07 21 11.1	
	baz=348,slow=76,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**32.94**	**162**	T	T	07 21 02.6	
	baz=348,slow=76,SNR=9.4						
H11S2	**WAKE ISLAND Hy**	**32.95**	**162**	T	T	07 21 11.2	
	baz=348,slow=76,SNR=5.8						
INK	**Inuvik**	**37.36**	**35**	P	**P**	**06 47 03.7**	**+0.4**
	comp=E,1.1nm,0.4s,baz=283,slow=6.1,SNR=19						
YKA	**Yellowknife Ar**	**46.67**	**40**	P	**P**	**06 48 19.2**	**+0.3**
	comp=E,0.4nm,0.5s,baz=295,slow=7.6,SNR=14						
KURK	**Kurchatov**	**47.16**	**302**	P	**P**	**06 48 21.4**	**-1.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**47.21**	**296**	P	**P**	**06 48 21.4**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=55,slow=6.2,SNR=11						
KURBB	**Kurchatov Arra**	**47.26**	**302**	P	**P**	**06 48 21.4**	**-2.4**
	comp=Z,0.8nm,0.4s,baz=60,slow=7.3,SNR=4.8						
BVAR	**Borovoye Array**	**50.21**	**308**	P	**P**	**06 48 43.7**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=42,slow=6.9,SNR=5.0						
ARCES	**ARCESS Array B**	**55.05**	**341**	eP	**P**	**06 49 19.5**	**-2.1**
ARCES	**ARCESS Array B**	**55.05**	**341**	P	**P**	**06 49 19.3**	**-2.3**
	comp=Z,1.3nm,0.8s,baz=43,slow=7.7,SNR=14						
CMAR	**Chiang Mai Arr**	**55.35**	**257**	P	**P**	**06 49 26.0**	**+1.6**
	comp=Z,3.3nm,0.8s,baz=34,slow=6.6,SNR=3.8						
AB31	**Akbulak array**	**57.71**	**310**	i P	**P**	**06 49 37.5**	**-3.3**
AKTO	**Aktyubinsk**	**57.87**	**312**	P	**P**	**06 49 40.5**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=63,slow=11,SNR=2.8						
NVAR	**Mina Array Bea**	**58.87**	**66**	P	**P**	**06 49 51.9**	**+2.6**
	comp=Z,0.5nm,0.5s,baz=306,slow=7.7,SNR=3.2						
TXAR	**Lajitas Array**	**73.84**	**64**	P	**P**	**06 51 26.6**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=285,slow=4.5,SNR=8.9						

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*IDC **06** 06:40:30.4±0.6, 10°.80S×164°.56E, h0^{km}, mb4.6/22, mb1 4.8/25, mb1mx4.6/50, mbtmp4.7/25, ML5.1/3, Error ellipse: s-maj=19.8km s-min=14.2km az=103.0*
*ISCJB **06** 06:40:33.0±0.5, 10°.85S±0°.07×164°.49E±0°.09, h29^{km}, mb4.6/22, Error ellipse: s-maj=13.1km s-min=9.9km az=5.1*
ISC 06 06:40:34.9±0.6**, 10°.81S**±0°.09×**164°.5E**±0°.1**, h29^{km}, n29, σ0^{s}.87**/29**, mb4.6**/22**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.72**	**286**	Pn	**Pn**	**06 41 44.4**	**+0.3**
	301nm,0.3s,baz=121,slow=3.1,SNR=7.5						
DZM	**Mont Dzumac**	**11.35**	**171**	Pn	**Pn**	**06 43 15.4**	**+0.2**
	16nm,0.3s,baz=126,slow=21,SNR=11						
CTA	**Charters Tower**	**19.87**	**240**	P	**Pn**	**06 45 05.5**	**-0.2**
	1.1nm,0.3s,baz=65,slow=13,SNR=6.9						
STKA	**Stephens Creek**	**29.81**	**222**	P	**P**	**06 46 40.2**	**+0.8**
	8.9nm,0.8s,baz=83,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**30.45**	**249**	P	**P**	**06 46 43.8**	**-1.5**
	6.7nm,0.9s,baz=79,slow=9.2,SNR=4.8						
ASAR	**Alice Springs**	**31.84**	**242**	P	**P**	**06 46 56.6**	**-0.9**
	6.5nm,1.0s,baz=69,slow=9.8,SNR=4.6						
RPZ	**Rata Peaks**	**33.27**	**171**	P	**P**	**06 47 09.8**	**0.0**
	15nm,0.8s,baz=238,slow=2.4,SNR=5.7						
FITZ	**Fitzroy Crossi**	**38.29**	**255**	P	**P**	**06 47 51.1**	**-2.0**
	19nm,0.7s,baz=113,slow=6.8,SNR=6.8						
MJAR	**Matsushiro Arr**	**53.22**	**334**	P	**P**	**06 49 49.7**	**-1.0**
	7.3nm,1.0s,baz=155,slow=6.8,SNR=4.6						
JNU	**Nakatsue**	**54.20**	**325**	P	**P**	**06 49 58.3**	**+0.3**
	40nm,1.2s,baz=168,slow=7.4,SNR=3.3						
ASAJ	**Asahikawa**	**58.19**	**342**	P	**P**	**06 50 26.8**	**+0.6**
	13nm,0.8s,baz=206,slow=9.4,SNR=5.6						
KSRS	**Korea Array**	**59.02**	**326**	P	**P**	**06 50 32.5**	**+0.5**
	2.3nm,0.8s,baz=120,slow=7.2,SNR=3.9						
USRK	**Ussuriysk Ar.**	**62.21**	**334**	P	**P**	**06 50 54.5**	**+0.8**
	5.2nm,0.9s,baz=134,slow=5.5,SNR=5.3						
PETK	**Petropavlovsk-**	**63.93**	**355**	P	**P**	**06 51 06.1**	**+1.1**
	4.5nm,0.8s,baz=152,slow=9.6,SNR=3.6						
KLR	**Kul'dur**	**66.37**	**337**	P	**P**	**06 51 21.4**	**+0.4**
	4.0nm,0.9s,baz=141,slow=7.3,SNR=4.0						
VNDA	**Vanda**	**66.71**	**181**	P	**P**	**06 51 24.1**	**+1.3**
	3.6nm,0.8s,baz=42,slow=5.2,SNR=5.8						
CMAR	**Chiang Mai Arr**	**70.92**	**294**	P	**P**	**06 51 51.5**	**+1.5**
	2.2nm,0.3s,baz=123,slow=4.4,SNR=5.8						
SONM	**Songino Array**	**77.77**	**324**	P	**P**	**06 52 30.3**	**+0.8**
	5.3nm,1.1s,baz=138,slow=4.3,SNR=3.7						
ILAR	**Eielson Array**	**83.67**	**19**	P	**P**	**06 53 00.3**	**-0.2**
	4.7nm,0.7s,baz=235,slow=4.7,SNR=11						
TIXI	**Tiksi**	**85.64**	**349**	P	**P**	**06 53 09.5**	**-0.7**
	1.5nm,0.3s,baz=135,slow=5.5,SNR=3.2						
NVAR	**Mina Array Bea**	**86.78**	**50**	P	**P**	**06 53 16.4**	**-0.6**
	2.0nm,0.9s,baz=234,slow=6.1,SNR=4.2						
MKAR	**Makanchi Array**	**92.53**	**317**	P	**P**	**06 53 43.8**	**+0.3**
	4.1nm,0.9s,baz=96,slow=4.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**92.67**	**324**	P	**P**	**06 53 43.2**	**-0.7**
	4.5nm,1.1s,baz=123,slow=5.5,SNR=3.7						
PDAR	**Pinedale Array**	**94.27**	**47**	P	**P**	**06 53 51.4**	**-0.5**
	0.4nm,0.7s,baz=262,slow=1.8,SNR=2.7						
YKA	**Yellowknife Ar**	**95.31**	**27**	P	**P**	**06 53 55.5**	**-0.3**
	0.8nm,0.9s,baz=259,slow=4.9,SNR=3.7						
ARCES	**ARCESS Array B**	**115.80**	**345**	PKP	**PKiKP**	**06 59 13.6**	**-0.6**
	1.9nm,0.9s,baz=78,slow=2.5,SNR=9.7						
BOSA	**Boshof**	**124.46**	**224**	PKP	**PKPdf**	**06 59 31.4**	**-0.8**
	1.9nm,0.7s,baz=153,slow=3.1,SNR=5.0						
KEST	**Kesra**	**146.50**	**322**	PKPbc	**PKPbc**	**07 00 13.2**	**-0.7**
	13nm,0.9s,baz=101,slow=1.3,SNR=3.5						
ESDC	**Sonseca Array**	**149.49**	**342**	PKPbc	**PKiKP**	**07 00 22.2**	**-0.7**
	1.0nm,0.7s,baz=102,slow=1.8,SNR=2.7						

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*IDC **06** 06:41:22.8±0.8, 10°.74S×164°.82E, h0^{km}, mb4.6/15, mb1 4.7/17, mb1mx4.5/48, mbtmp4.6/17, ML5.2/2, Error ellipse: s-maj=25.0km s-min=15.4km az=99.0*
*ISCJB **06** 06:41:25.2±0.4, 10°.79S±0°.05×164°.57E±0°.07, h24^{km}, mb4.6/18, Error ellipse: s-maj=9.8km s-min=6.8km az=151.5*
*NEIC **06** 06:41:25.1±0.4, 10°.70S×164°.63E, h10^{km}, mb4.9/6, Error ellipse: s-maj=12.6km s-min=8.0km az=81.0*
ISC 06 06:41:27.1±0.6**, 10°.74S**±0°.08×**164°.60E**±0°.09**, h24^{km}, n36, σ1^{s}.24**/36**, mb4.7**/18**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.76**	**285**	Pn	**Pn**	**06 42 37.7**	**+0.4**
	324nm,0.3s,baz=148,slow=8.3,SNR=6.1						
HNR				Sn	**Sn**	**06 43 31.0**	**-0.7**
	119nm,0.3s,baz=5.9,slow=17,SNR=2.6						
MARNC	**Mare, Loyalty**	**11.18**	**163**	ePn	**Pn**	**06 44 05.4**	**+0.1**
DZM	**Mont Dzumac**	**11.40**	**171**	Pn	**Pn**	**06 44 08.7**	**+0.1**
	3.7nm,0.3s,baz=318,slow=16,SNR=3.5						
ONTNC	**Ouen Toro**	**11.64**	**171**	ePn	**Pn**	**06 44 13.5**	**+1.8**
PINNC	**Pines Island,**	**12.12**	**167**	ePn	**Pn**	**06 44 18.7**	**+0.4**
CTA	**Charters Tower**	**19.96**	**240**	P	Pn	06 45 59.0	-0.4
	20nm,0.8s,baz=67,slow=16,SNR=2.4						
COEN	**Coen**	**21.16**	**259**	eP	**P**	**06 46 09.2**	**-1.6**
	28nm,0.9s						
STKA	**Stephens Creek**	**29.90**	**222**	eP	**P**	**06 47 33.6**	**+0.6**
	3.3nm,0.9s						
STKA	**Stephens Creek**	**29.90**	**222**	P	**P**	**06 47 33.6**	**+0.6**
	4.4nm,0.7s,baz=40,slow=13,SNR=2.4						
WR1	**Warramunga Arr**	**30.53**	**249**	eP	**P**	**06 47 41.1**	**+2.2**
	26nm,1.0s						
WRA	**Warramunga Arr**	**30.53**	**249**	P	**P**	**06 47 41.1**	**+2.2**
	13nm,0.9s,baz=79,slow=9.1,SNR=3.4						
ASAR	**Alice Springs**	**31.93**	**242**	P	**P**	**06 47 50.8**	**-0.3**
	2.9nm,0.7s,baz=67,slow=9.5,SNR=3.0						
RPZ	**Rata Peaks**	**33.33**	**171**	eP	**P**	**06 48 02.0**	**-1.1**
RPZ	**Rata Peaks**	**33.33**	**171**	P	**P**	**06 48 02.0**	**-1.1**
	18nm,0.9s,baz=300,slow=20,SNR=2.8						
FITZ	**Fitzroy Crossi**	**38.37**	**254**	eP	**P**	**06 48 44.1**	**-2.5**
	12nm,0.6s						
FITZ	**Fitzroy Crossi**	**38.37**	**254**	P	**P**	**06 48 44.1**	**-2.5**
	9.8nm,0.5s,baz=94,slow=8.9,SNR=3.1						
MJAR	**Matsushiro Arr**	**53.19**	**333**	P	**P**	**06 50 42.9**	**-0.5**
	5.9nm,0.9s,baz=69,slow=3.2,SNR=4.9						
MAJO	**Matsushiro**	**53.19**	**333**	eP	**P**	**06 50 42.9**	**-0.5**
KSRS	**Korea Array**	**59.00**	**326**	P	**P**	**06 51 25.6**	**+0.7**
	3.1nm,0.9s,baz=143,slow=6.3,SNR=3.1						
KSAR	**Wonju Array Be**	**59.01**	**326**	P	**P**	**06 51 25.6**	**+0.6**
USRK	**Ussuriysk Ar.**	**62.18**	**334**	P	**P**	**06 51 46.8**	**+0.4**
	11nm,1.1s,baz=123,slow=6.5,SNR=4.7						
PETK	**Petropavlovsk-**	**63.87**	**355**	P	**P**	**06 51 58.2**	**+0.7**
	7.4nm,0.8s,baz=158,slow=9.3,SNR=4.6						
PEA1	**Petropavlovsk-**	**63.87**	**355**	eP	**P**	**06 51 58.2**	**+0.7**
KLR	**Kul'dur**	**66.34**	**337**	P	**P**	**06 52 14.5**	**+0.9**
	5.6nm,0.9s,baz=139,slow=7.4,SNR=3.8						
VNDA	**Vanda**	**66.78**	**181**	P	**P**	**06 52 16.0**	**-0.1**
	5.1nm,0.9s,baz=359,slow=3.9,SNR=3.3						
SONA0	**Songino Array**	**77.76**	**324**	eP	**P**	**06 53 22.9**	**+0.6**
SONM	**Songino Array**	**77.76**	**324**	P	**P**	**06 53 22.9**	**+0.6**
	2.1nm,0.7s,baz=134,slow=6.2,SNR=2.7						
ILAR	**Eielson Array**	**83.59**	**19**	P	**P**	**06 53 52.0**	**-0.9**
	7.2nm,0.8s,baz=242,slow=4.7,SNR=7.2						
ILB	**Eielson Array**	**83.59**	**19**	eP	**P**	**06 53 53.8**	**+0.8**
	15nm,0.9s						
SCRK	**Sand Creek**	**84.02**	**20**	eP	**P**	**06 53 56.8**	**+1.5**
	14nm,0.9s						
MK32	**Makanchi Array**	**92.53**	**317**	eP	**P**	**06 54 36.7**	**+0.2**
MKAR	**Makanchi Array**	**92.53**	**317**	P	**P**	**06 54 36.7**	**+0.2**
	1.6nm,0.7s,baz=89,slow=5.8,SNR=3.3						
YKA	**Yellowknife Ar**	**95.22**	**27**	P	**P**	**06 54 46.6**	**-1.8**
	0.7nm,0.8s,baz=253,slow=4.6,SNR=3.1						
ARA0	**ARCESS Array S**	**115.76**	**345**	ePKPdf	**PKiKP**	**07 00 05.2**	**-1.7**
ARCES	**ARCESS Array B**	**115.76**	**345**	PKP	**PKiKP**	**07 00 05.2**	**-1.7**
	1.5nm,0.9s,baz=56,slow=1.5,SNR=7.2						
KWP	**Kalwaria Pacla**	**130.05**	**328**	ePKPdf	**PKiKP**	**07 00 36.9**	**+1.1**

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*ISCJB **06** 06:46:55.4±0.3, 11°.04S±0°.04×165°.77E±0°.06, h10^{km}, mb4.6/39, Error ellipse: s-maj=7.8km s-min=6.2km az=173.3*
*IDC **06** 06:46:55.2±0.6, 11°.07S×166°.02E, h0^{km}, mb4.4/21, mb1 4.6/23, mb1mx4.4/41, mbtmp4.4/23, ML5.0/2, Error ellipse: s-maj=18.3km s-min=13.8km az=109.0*
*NEIC **06** 06:46:57.1±0.3, 10°.99S×165°.82E, h10^{km}, mb4.8/23, Error ellipse: s-maj=7.5km s-min=6.3km az=87.0*
ISC 06 06:46:57.0±0.5**, 11°.02S**±0°.08×**165°.88E**±0°.09**, h10^{km}, n71, σ1^{s}.22**/74**, mb4.6**/39**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.05**	**285**	ePn	**Pn**	**06 48 27.4**	**+0.9**
HNR				ePn	**Pn**	**06 48 29.9**	**+3.3**
HNR	**Honiara**	**6.05**	**285**	Pn	**Pn**	**06 48 29.9**	**+3.3**
	199nm,0.3s,baz=121,slow=5.2,SNR=12						
DZM	**Mont Dzumac**	**11.00**	**177**	ePn	**Pn**	**06 49 36.1**	**+1.5**
DZM	**Mont Dzumac**	**11.00**	**177**	Pn	**Pn**	**06 49 35.1**	**+0.5**
	2.2nm,0.3s,baz=20,slow=20,SNR=2.4						
OUENC	**Ouen Island, N**	**11.37**	**175**	ePn	**Pn**	**06 49 40.1**	**+0.5**
PINNC	**Pines Island,**	**11.62**	**173**	ePn	Pn	06 49 45.3	+2.2
MSVF	**Nonsavu**	**13.54**	**121**	ePn	P	06 50 11.9	-6.6
EIDS	**Eidsvold**	**20.00**	**222**	eP	Pn	06 51 30.1	-1.6
	17nm,0.8s						
MANU	**Manus Island**	**20.43**	**295**	eP	**P**	**06 51 33.9**	**-0.7**
	36nm,1.1s						
CTA	**Charters Tower**	**20.93**	**242**	P	**P**	**06 51 41.1**	**+1.1**
	14nm,0.8s,baz=75,slow=12,SNR=7.3						
CTAO	**Charters Tower**	**20.93**	**242**	eP	**P**	**06 51 39.9**	**-0.1**
	26nm,1.0s						
COEN	**Coen**	**22.36**	**260**	eP	**P**	**06 51 52.6**	**-2.8**
	12nm,0.9s						
ARMA	**Armidale**	**23.41**	**212**	eP	**P**	**06 52 06.5**	**+0.1**
	38nm,1.1s						
URZ	**Urewera**	**28.93**	**162**	eP	**P**	**06 52 56.0**	**-0.3**
URZ				eP	**P**	**06 52 57.1**	**+0.8**
URZ	**Urewera**	**28.93**	**162**	P	**P**	**06 52 56.0**	**-0.3**
	7.4nm,0.7s,baz=307,slow=5.1,SNR=3.4						
BKZ	**Black Stump Fm**	**29.58**	**163**	eP	**P**	**06 53 02.2**	**0.0**
	18nm,0.6s						
STKA	**Stephens Creek**	**30.55**	**224**	eP	**P**	**06 53 10.9**	**+0.1**
	1.6nm,0.9s						
STKA	**Stephens Creek**	**30.55**	**224**	P	**P**	**06 53 10.9**	**+0.1**
	7.4nm,0.8s,baz=32,slow=9.4,SNR=6.2						
WRAB	**Tennant Creek**	**31.60**	**250**	eP	**P**	**06 53 19.8**	**-0.5**
	15nm,0.8s						
WB2	**Warramunga Arr**	**31.61**	**250**	eP	**P**	**06 53 19.4**	**-0.9**
	16nm,0.8s						
WB2				eP	**P**	**06 53 19.7**	**-0.6**
WR1	**Warramunga Arr**	**31.62**	**250**	eP	**P**	**06 53 20.4**	**+0.1**
	21nm,0.8s						
WRA	**Warramunga Arr**	**31.62**	**250**	P	**P**	**06 53 20.4**	**0.0**
	20nm,0.7s,baz=81,slow=9.1,SNR=50						
LTZ	**Lake Taylor**	**32.13**	**171**	eP	**P**	**06 53 26.4**	**+1.7**
	28nm,0.8s						
OXZ	**Oxford**	**32.63**	**172**	eP	**P**	**06 53 29.4**	**+0.4**
	24nm,0.7s						
RPZ	**Rata Peaks**	**32.88**	**173**	eP	**P**	**06 53 30.1**	**-1.1**
RPZ				eP	**P**	**06 53 31.7**	**+0.5**
RPZ	**Rata Peaks**	**32.88**	**173**	P	**P**	**06 53 30.1**	**-1.1**
	24nm,0.7s,baz=110,slow=6.4,SNR=10						
AS31	**Alice Springs**	**32.92**	**243**	eP	**P**	**06 53 31.1**	**-0.7**
	2.7nm,1.0s						
ASAR	**Alice Springs**	**32.92**	**243**	P	**P**	**06 53 31.1**	**-0.7**
	4.6nm,0.7s,baz=74,slow=9.4,SNR=17						
ASAR				PcP	**PcP**	**06 56 16.4**	**+0.1**
	1.7nm,0.9s,baz=78,slow=2.7,SNR=4.6						
FITZ	**Fitzroy Crossi**	**39.51**	**255**	eP	**P**	**06 54 28.4**	**+0.2**
	20nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.51**	**255**	P	**P**	**06 54 28.4**	**+0.2**
	21nm,0.7s,baz=137,slow=6.7,SNR=30						
FITZ				PcP	**PcP**	**06 56 37.0**	**+1.0**
	3.1nm,0.6s,baz=84,slow=0.4,SNR=2.6						
MMRI	**Maumere**	**43.04**	**269**	eP	**P**	**06 54 55.1**	**-2.3**
	34nm,1.1s						
MBWA	**Marble Bar**	**45.33**	**251**	eP	**P**	**06 55 13.0**	**-2.6**
	23nm,0.9s						
JAGI	**Jajag, Banyuwa**	**51.00**	**268**	eP	**P**	**06 55 57.8**	**-1.8**
	24nm,0.8s						
MJAR	**Matsushiro Arr**	**54.01**	**332**	P	**P**	**06 56 20.5**	**-1.0**
	1.6nm,0.6s,baz=176,slow=9.1,SNR=4.6						
MAJO	**Matsushiro**	**54.01**	**332**	eP	**P**	**06 56 20.5**	**-1.0**
LEM	**Lembang**	**57.64**	**269**	P	**P**	**06 56 49.1**	**+0.9**
	22nm,0.6s,baz=122,slow=16,SNR=7.4						
ASAJ	**Asahikawa**	**58.81**	**341**	P	**P**	**06 56 56.4**	**+0.9**
	1.2nm,0.3s,baz=208,slow=13,SNR=3.8						
KSRS	**Korea Array**	**59.93**	**326**	P	**P**	**06 57 04.4**	**+1.0**
	0.9nm,0.7s,baz=136,slow=8.0,SNR=3.3						
KSAR	**Wonju Array Be**	**59.94**	**326**	P	**P**	**06 57 04.4**	**+0.9**
USRK	**Ussuriysk Ar.**	**62.98**	**333**	P	**P**	**06 57 24.9**	**+0.9**
	2.4nm,0.6s,baz=119,slow=5.8,SNR=6.1						
PETK	**Petropavlovsk-**	**64.25**	**355**	P	**P**	**06 57 33.6**	**+1.5**
	3.1nm,0.9s,baz=153,slow=9.7,SNR=3.2						
PEA1	**Petropavlovsk-**	**64.26**	**355**	eP	**P**	**06 57 33.6**	**+1.4**
IPM	**Ipoh**	**66.35**	**280**	eP	**P**	**06 57 44.5**	**-2.1**
	15nm,0.9s						
KLR	**Kul'dur**	**67.09**	**336**	P	**P**	**06 57 52.1**	**+1.5**
	1.8nm,0.7s,baz=136,slow=5.6,SNR=5.2						

PBKT	Sadao Pong	69.79	292	*e*P	P	06 58 08.7	+0.6
	5.7nm,1.0s						
CM01	Chiang Mai Arr	72.20	293	*e*P	P	06 58 24.0	+1.3
CMAR	Chiang Mai Arr	72.22	293	P	P	06 58 24.4	+1.5
	3.5nm,0.8s,baz=123,slow=4.7,SNR=11						
SONA0	Songino Array	78.72	324	*e*P	P	06 59 00.6	+0.8
SONM	Songino Array	78.72	324	P	P	06 59 00.6	+0.8
	1.0nm,0.8s,baz=137,slow=4.7,SNR=4.2						
BILL	Bilibino	78.85	0	*e*P	P	06 59 00.5	+0.7
	8.0nm,1.1s						
QSPA	South Pole Qui	78.98	180	*e*P	P	06 59 02.0	+1.0
	9.0nm,1.1s						
IL1	Eielson Array	83.45	18	*e*P	P	06 59 24.9	+0.5
ILAR	Eielson Array	83.45	18	P	P	06 59 23.6	-0.8
	1.6nm,0.6s,baz=229,slow=5.3,SNR=16						
ILB	Eielson Array	83.45	18	*e*P	P	06 59 23.1	-1.3
AFDM	Forest Hills D	84.08	49	*e*P	P	06 59 28.4	+0.1
	3.1nm,0.9s						
NV01	Mina Array Sit	85.91	50	*e*P	P	06 59 37.8	+0.1
NVAR	Mina Array Bea	85.91	50	P	P	06 59 37.4	-0.3
	2.0nm,0.9s,baz=243,slow=8.2,SNR=4.3						
U15A	North Rim	89.98	53	*e*P	P	06 59 57.9	+0.5
	3.3nm,0.9s						
PDAR	Pinedale Array	93.44	47	P	P	07 00 12.8	-0.4
	0.2nm,0.5s,baz=270,slow=2.4,SNR=2.7						
MK01	Makanchi Array	93.58	317	*e*P	P	07 00 13.2	-0.2
MK32	Makanchi Array	93.59	317	*e*P	P	07 00 12.8	-0.7
MKAR	Makanchi Array	93.59	317	P	P	07 00 12.8	-0.7
	1.2nm,0.6s,baz=92,slow=6.8,SNR=8.2						
ZALV	Zalesovo Beam	93.61	324	P	P	07 00 12.5	-0.9
	0.7nm,0.7s,baz=108,slow=4.7,SNR=3.6						
ZAA1	Zalesovo Array	93.61	324	*e*P	P	07 00 12.5	-0.9
YKA	Yellowknife Ar	94.89	27	P	P	07 00 17.0	-2.0
	0.3nm,0.6s,baz=258,slow=4.5,SNR=9.4						
YKB5	Yellowknife Ar	94.89	27	*e*P	P	07 00 17.0	-2.1
ARA0	ARCESS Array S	116.34	346	*e*PKPdf	PKiKP	07 05 38.8	-1.6
ARCES	ARCESS Array B	116.34	346	PKP	PKiKP	07 05 38.8	-1.6
	2.3nm,0.9s,baz=63,slow=2.1,SNR=7.2						
CBN	Corbin Frederi	117.72	53	*e*PKPdf	PKiKP	07 05 44.6	+0.8
ESDC	Sonseca Array	150.07	344	PKPbc	PKiKP	07 06 49.2	-0.1
	0.6nm,0.6s,baz=14,slow=4.0,SNR=2.7						
TORD	Torodi Ar. Bea	164.39	279	PKP	PKPdf	07 07 02.6	+0.7
	0.4nm,0.6s,baz=156,slow=1.5,SNR=3.5						

IDC ***06*** *06:47:16.4±0.9, 10°.76S×165°.64E, h0^{km}, mb4.4/9, mb1 4.6/10, mb1mx4.3/41, mbtmp4.4/10, ML4.7/1, Error ellipse: s-maj=32.5km s-min=22.8km az=100.0*

NEIC ***06*** *06:47:18.5±0.4, 10°.77S×165°.50E, h10^{km}, mb4.9/13, Error ellipse: s-maj=19.7km s-min=9.8km az=90.0*

ISCJB ***06*** *06:47:19.8±0.4, 10°.87S±0°.06×165°.4E±0°.1, h30^{km}, mb4.6/20, Error ellipse: s-maj=15.1km s-min=8.4km az=3.1*

ISC 06 06:47:21.2±0.6**, 10°.76S**±0°.08×**165°.6E**±0°.2**, h30^{km}, n37, σ1^s.61**/34**, mb4.7**/20**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.28	176	Pn	Pn	06 49 58.1	-2.4
	5.3nm,0.3s,baz=46,slow=22,SNR=6.2						
OUENC	Ouen Island, N	11.65	174	*e*Pn	Pn	06 50 05.0	-0.5
PINNC	Pines Island,	11.92	172	*e*Pn	Pn	06 50 10.7	+1.6
TARA	Tarawa	14.06	32	*e*Pn	P	06 50 43.8	-2.2
PATS	Pohnpei	18.93	337	*e*P	Pn	06 51 41.1	+0.4
	37nm,1.1s						
H11S2	WAKE ISLAND Hy	29.08	2	T	T	07 23 32.3	
	baz=183,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.09	2	T	T	07 23 32.5	
	baz=183,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	29.10	2	T	T	07 23 33.6	
	baz=183,slow=76,SNR=9.5						
WR1	Warramunga Arr	31.46	249	*e*P	P	06 53 40.1	-0.3
	11nm,1.0s						
WRA	Warramunga Arr	31.46	249	P	P	06 53 40.1	-0.3
	7.5nm,1.1s,baz=79,slow=9.4,SNR=4.0						
MJAR	Matsushiro Arr	53.66	333	P	P	06 56 38.4	-1.8
	3.8nm,0.9s,baz=169,slow=9.2,SNR=5.2						
MAJO	Matsushiro	53.66	333	*e*P	P	06 56 38.4	-1.8
KSRS	Korea Array	59.57	326	P	P	06 57 23.7	+1.6
	3.6nm,0.9s,baz=142,slow=7.9,SNR=6.8						
KSAR	Wonju Array Be	59.58	326	P	P	06 57 23.7	+1.5
PETK	Petropavlovsk-	63.97	355	P	P	06 57 51.7	+0.1
	6.6nm,0.8s,baz=164,slow=9.2,SNR=4.5						
PEA1	Petropavlovsk-	63.98	355	*e*P	P	06 57 51.7	+0.1
VNDA	Vanda	66.78	181	*e*P	P	06 58 10.6	+1.2
VNDA	Vanda	66.78	181	P	P	06 58 10.0	+0.6
	4.6nm,0.8s,baz=125,slow=1.8,SNR=3.7						
SVW2	Sparrevohn	77.88	18	*e*P	P	06 59 19.0	+3.1
	13nm,1.2s						
QSPA	South Pole Qui	79.24	180	*e*P	P	06 59 23.0	-0.5
	14nm,0.9s						
RDOG	Red Dog Mine	81.77	11	*e*P	P	06 59 37.6	+0.8
	10.0nm,0.8s						
IM3	Indian Mountai	82.19	16	*e*P	P	06 59 39.1	+0.1
MLY	Manley	82.31	17	*e*P	P	06 59 43.3	+3.7
	4.1nm,1.2s						
MDM	Murphy Dome	83.00	18	*e*P	P	06 59 43.5	+0.3
	15nm,1.2s						
COLA	College	83.06	18	*e*P	P	06 59 44.6	+1.2
	12nm,0.9s						
ILAR	Eielson Array	83.28	19	P	P	06 59 44.0	-0.7
	3.9nm,0.9s,baz=228,slow=5.2,SNR=8.0						
ILB	Eielson Array	83.28	19	*e*P	P	06 59 44.0	-0.7
	8.4nm,1.0s						
SCRK	Sand Creek	83.69	20	*e*P	P	06 59 48.8	+1.8
	11nm,1.2s						
NV01	Mina Array Sit	85.94	50	*e*P	P	06 59 59.3	+0.3
NVAR	Mina Array Bea	85.94	50	P	P	06 59 59.3	+0.3
	1.6nm,0.8s,baz=246,slow=5.6,SNR=4.1						
HVU	Hansel Valley	90.91	48	*e*P	P	07 00 24.9	+2.4
	5.4nm,1.1s						
DLMT	Dillon	91.87	44	*e*P	P	07 00 28.4	+1.5
	10nm,1.1s						
BOZ	Bozeman (W)	92.58	44	*e*P	P	07 00 27.1	-3.1
	5.4nm,1.1s						
PDAR	Pinedale Array	93.45	47	P	P	07 00 34.0	-0.4
	0.7nm,0.9s,baz=204,slow=3.3,SNR=3.9						
YKA	Yellowknife Ar	94.78	27	P	P	07 00 40.7	+1.1
	0.3nm,0.6s,baz=258,slow=4.4,SNR=3.5						
ARA0	ARCESS Array S	116.03	345	*e*PKPdf	PKiKP	07 05 59.2	-1.6
ARCES	ARCESS Array B	116.03	345	PKP	PKiKP	07 05 59.2	-1.6
	3.8nm,1.0s,baz=69,slow=1.6,SNR=7.5						

IDC ***06*** *06:50:36.7±2.0, 11°.70S×165°.59E, h0^{km}, mb3.8/7, mb1 4.1/7, mb1mx3.8/36, mbtmp3.8/7, Error ellipse: s-maj=88.3km s-min=28.4km az=145.0*

ISCJB ***06*** *06:50:38.9±1.6, 11°.8S±0°.4×165°.6E±0°.3, h24^{km}, mb3.8/7, Error ellipse: s-maj=71.3km s-min=21.6km az=144.8*

ISC 06 06:50:40.3±1.7**, 11°.8S**±0°.4×**165°.6E**±0°.3**, h24^{km}, n7, σ1^s.14**/7**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.12	251	P	P	06 56 57.9	+0.5
	0.7nm,0.6s,baz=83,slow=8.9,SNR=2.3						
ASAR	Alice Springs	32.36	244	P	P	06 57 07.9	-0.3
	1.6nm,0.7s,baz=73,slow=8.6,SNR=4.6						
SONM	Songino Array	79.17	324	P	P	07 02 43.3	0.0
	0.4nm,0.8s,baz=120,slow=5.2,SNR=1.8						
ILAR	Eielson Array	84.24	19	P	P	07 03 10.6	+1.1
	0.4nm,0.8s,baz=217,slow=5.9,SNR=2.0						
NVAR	Mina Array Bea	86.59	50	P	P	07 03 22.9	+0.8
	0.2nm,0.3s,baz=245,slow=5.8,SNR=1.9						
MKAR	Makanchi Array	93.96	317	P	P	07 03 56.1	-0.2
	1.2nm,0.7s,baz=92,slow=6.1,SNR=6.3						
YKA	Yellowknife Ar	95.67	27	P	P	07 04 01.9	-1.7
	0.1nm,0.6s,baz=265,slow=5.4,SNR=2.0						

IDC ***06*** *06:50:52.5±1.0, 10°.93S×165°.40E, h0^{km}, mb4.3/14, mb1 4.5/16, mb1mx4.3/38, mbtmp4.4/16, ML4.7/2, Error ellipse: s-maj=28.3km s-min=19.3km az=125.0*

NEIC ***06*** *06:50:53.7±0.5, 10°.91S×165°.42E, h10^{km}, mb4.4/2, Error ellipse: s-maj=13.1km s-min=10.3km az=127.0*

ISCJB ***06*** *06:50:54.6±0.6, 10°.98S±0°.08×165°.38E±0°.09, h30^{km}, mb4.4/17, Error ellipse: s-maj=13.4km s-min=10.4km az=32.8*

ISC 06 06:50:56.7±0.7**, 10°.9S**±0°.1×**165°.4E**±0°.1**, h30^{km}, n33, σ1^s.11**/34**, mb4.3**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.58	285	*e*Pn	Pn	06 52 16.3	-1.4
HNR				*e*Pn	Pn	06 52 17.4	-0.3
HNR	Honiara	5.58	285	Pn	Pn	06 52 17.4	-0.3
	28nm,0.3s,baz=346,slow=4.6,SNR=2.3						
DZM	Mont Dzumac	11.13	175	Pn	Pn	06 53 34.3	+0.3
	4.1nm,0.3s,baz=14,slow=20,SNR=6.4						
MANU	Manus Island	19.96	295	*e*P	P	06 55 27.3	+0.6
	180nm,1.1s						
CTA	Charters Tower	20.57	241	P	P	06 55 34.1	+0.9
	26nm,0.8s,baz=73,slow=12,SNR=7.1						
WR1	Warramunga Arr	31.21	250	*e*P	P	06 57 13.3	-0.5
	10nm,1.1s						
WRA	Warramunga Arr	31.21	250	P	P	06 57 13.3	-0.5
	3.3nm,0.8s,baz=79,slow=9.4,SNR=5.6						
AS01	Alice Springs	32.51	243	*e*P	P	06 57 23.4	-1.7
AS31	Alice Springs	32.55	243	*e*P	P	06 57 24.6	-1.0
	2.6nm,0.8s						
ASAR	Alice Springs	32.55	243	P	P	06 57 24.5	-1.0
	10nm,0.8s,baz=72,slow=9.6,SNR=23						
SOEI	Soe	40.47	268	*e*P	P	06 58 33.0	-0.3
	28nm,0.5s						
MJAR	Matsushiro Arr	53.71	333	P	P	07 00 15.7	-0.4
	2.2nm,0.8s,baz=172,slow=7.8,SNR=5.7						
MAJO	Matsushiro	53.71	333	*e*P	P	07 00 15.7	-0.4
ASAJ	Asahikawa	58.57	341	P	P	07 00 51.6	+1.0
	11nm,0.9s,baz=242,slow=10.0,SNR=5.8						
KSRS	Korea Array	59.59	326	P	P	07 00 58.2	+0.4
	1.3nm,0.6s,baz=132,slow=8.7,SNR=4.4						
KSAR	Wonju Array Be	59.60	326	P	P	07 00 58.2	+0.3
USRK	Ussuriysk Ar.	62.69	334	P	P	07 01 19.8	+1.1
	4.6nm,0.9s,baz=116,slow=6.6,SNR=5.4						
KLR	Kul'dur	66.81	337	P	P	07 01 46.6	+1.1
	4.2nm,1.0s,baz=137,slow=4.2,SNR=9.8						
CM31	Chiang Mai Arr	71.76	294	*e*P	P	07 02 17.8	+1.0
	6.8nm,0.4s						
CMAR	Chiang Mai Arr	71.76	294	P	P	07 02 17.8	+1.0
	0.8nm,0.4s,baz=112,slow=7.0,SNR=1.8						
SONA0	Songino Array	78.37	324	*e*P	P	07 02 54.6	+0.1
SONM	Songino Array	78.37	324	P	P	07 02 54.6	+0.1
	0.8nm,0.8s,baz=134,slow=7.2,SNR=4.0						
ILAR	Eielson Array	83.50	19	P	P	07 03 21.6	+0.3
	1.2nm,0.7s,baz=238,slow=4.9,SNR=6.6						
NV01	Mina Array Sit	86.20	50	*e*P	P	07 03 32.9	-2.9
NVAR	Mina Array Bea	86.20	50	P	P	07 03 36.4	+0.6
	1.8nm,0.9s,baz=234,slow=8.1,SNR=5.1						
MK01	Makanchi Array	93.19	317	*e*P	P	07 04 07.4	-0.9
MK32	Makanchi Array	93.21	317	*e*P	P	07 04 07.0	-1.3
MKAR	Makanchi Array	93.21	317	P	P	07 04 07.0	-1.3
	1.3nm,0.8s,baz=100,slow=7.0,SNR=7.0						
YKA	Yellowknife Ar	95.02	27	P	P	07 04 15.2	-1.0
	0.3nm,0.8s,baz=253,slow=4.8,SNR=4.0						
YKB5	Yellowknife Ar	95.02	27	*e*P	P	07 04 15.2	-1.0
ARA0	ARCESS Array S	116.13	345	*e*PKPdf	PKPdf	07 09 38.5	+2.0
ARCES	ARCESS Array B	116.13	345	PKP	PKPdf	07 09 38.5	+2.0
	1.7nm,0.9s,baz=0.0,slow=1.5,SNR=6.1						
BOSA	Boshof	124.98	223	PKP	PKiKP	07 09 55.7	+0.5
	2.1nm,0.8s,baz=151,slow=3.5,SNR=3.9						

IDC ***06*** *06:52:34.7±1.1, 11°.68S×165°.57E, h0^{km}, mb4.3/16, mb1 4.5/16, mb1mx4.4/35, mbtmp4.3/16, Error ellipse: s-maj=34.5km s-min=17.9km az=135.0*

NEIC ***06*** *06:52:37.2±0.3, 11°.62S×165°.37E, h10^{km}, mb4.7/35, Error ellipse: s-maj=12.0km s-min=5.6km az=148.0*

ISCJB ***06*** *06:52:38.3±0.3, 11°.48S±0°.07×165°.18E±0°.06, h24^{km}, mb4.5/49, Error ellipse: s-maj=11.6km s-min=6.8km az=148.9*

ISC 06 06:52:39.7±0.6**, 11°.4S**±0°.1×**165°.3E**±0°.1**, h24^{km}, n66, σ1^s.03**/66**, mb4.6**/49**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARA	Tarawa	14.78	31	*e*Pn	P	06 56 10.9	-2.2
KWAJ	Kwajalein Atol	20.23	7	*e*P	Pn	06 57 15.8	+0.5
	147nm,0.7s						
CTA	Charters Tower	20.26	243	P	P	06 57 13.2	-0.4
	7.5nm,0.9s,baz=69,slow=15,SNR=2.9						
COEN	Coen	21.76	261	*e*P	P	06 57 30.6	+0.8
	10nm,1.1s						
RAO	Raoul Island	23.63	141	*e*pP	pP	06 57 57.8	+3.5
RAO				*e*S	S	07 02 01.2	-1.2
RAO				*e*sS	Sn	07 02 24.9	+1.0
RAO				*e*Sn	Sn	07 02 39.6	+16
HIZ	Hauiti	28.27	164	*e*P	P	06 58 24.1	-7.1
	47nm,1.2s						
STKA	Stephens Creek	29.88	223	*e*P	P	06 58 44.6	-0.9
	0.2nm,0.3s						
STKA	Stephens Creek	29.88	223	P	P	06 58 44.6	-0.9
	1.1nm,0.6s,baz=40,slow=10,SNR=2.9						
WRAB	Tennant Creek	30.96	250	*e*P	P	06 58 54.1	-1.2
	20nm,1.0s						
WB2	Warramunga Arr	30.96	250	*e*P	P	06 58 54.7	-0.6
WB2				*e*P	P	06 58 55.1	-0.1
WR1	Warramunga Arr	30.97	250	*e*P	P	06 58 55.2	-0.2
	23nm,1.1s						
WRA	Warramunga Arr	30.97	250	P	P	06 58 55.2	-0.2
	15nm,1.0s,baz=81,slow=8.8,SNR=15						
AS01	Alice Springs	32.21	244	*e*P	P	06 59 05.3	-1.0
AS31	Alice Springs	32.25	244	*e*P	P	06 59 05.7	-1.0
	1.3nm,0.9s						
ASAR	Alice Springs	32.26	244	P	P	06 59 05.7	-1.0
	1.7nm,0.7s,baz=80,slow=9.0,SNR=5.3						
MJAR	Matsushiro Arr	54.13	333	P	P	07 02 03.1	+0.1
	1.2nm,0.3s,baz=65,slow=12,SNR=3.4						
MAJO	Matsushiro	54.13	333	*e*P	P	07 02 03.1	+0.1
KSRS	Korea Array	59.97	326	P	P	07 02 45.1	+0.9
	0.5nm,0.4s,baz=172,slow=3.8,SNR=4.2						
KS15	Wonju Array Si	59.98	326	*e*P	P	07 02 45.1	+0.8
	6.3nm,1.0s						
KSAR	Wonju Array Be	59.98	326	P	P	07 02 45.1	+0.8
USRK	Ussuriysk Ar.	63.12	334	P	P	07 03 06.2	+0.9
	2.3nm,0.8s,baz=135,slow=9.2,SNR=4.7						
PETK	Petropavlovsk-	64.62	355	P	P	07 03 16.2	+1.1
	4.2nm,0.9s,baz=175,slow=7.2,SNR=2.8						
PEA1	Petropavlovsk-	64.62	355	*e*P	P	07 03 16.2	+1.1
KLR	Kul'dur	67.25	337	P	P	07 03 33.7	+1.5
	2.5nm,0.9s,baz=185,slow=2.1,SNR=5.2						
XAN	Xi'an	70.08	313	P	P	07 03 49.6	-0.6
XAN				pP	sP	07 03 57.7	-0.3
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CM31	Chiang Mai Arr	71.90	294	*e*P	P	07 04 02.3	+0.8
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	71.90	294	P	P	07 04 02.3	+0.8
	comp=Z,1.2nm,0.6s,baz=116,slow=4.9,SNR=5.8						
SONA0	Songino Array	78.74	324	*e*P	P	07 04 41.2	+0.8
SONM	Songino Array	78.74	324	P	P	07 04 41.2	+0.8
	comp=Z,0.8nm,0.7s,baz=138,slow=7.2,SNR=4.7						
BILL	Bilibino	79.27	0	*e*P	P	07 04 43.3	+0.7
	comp=Z,6.3nm,0.9s						
WRH	Wood River Hil	83.43	18	*e*P	P	07 05 04.7	-0.1
	comp=Z,3.0nm,0.8s						
HDA	Harding Lake	83.74	19	*e*P	P	07 05 06.4	0.0
	comp=Z,7.4nm,0.8s						
RIDG	Independ'e Rid	83.98	20	*e*P	P	07 05 09.0	+1.3
	comp=Z,8.9nm,1.2s						
ILAR	Eielson Array	84.01	19	P	P	07 05 07.8	+0.1
	comp=Z,1.5nm,0.6s,baz=239,slow=5.2,SNR=18						
ILB	Eielson Array	84.01	19	*e*P	P	07 05 07.6	-0.2
	comp=Z,0.5nm,0.9s						
SCRK	Sand Creek	84.42	20	*e*P	P	07 05 10.7	+0.7
	comp=Z,7.2nm,1.1s						
ORV	Oroville	84.58	48	*e*P	P	07 05 10.9	-0.3
	comp=Z,3.9nm,1.1s						
AFDM	Forest Hills D	84.76	49	*e*P	P	07 05 12.4	+0.2
	comp=Z,6.2nm,1.0s						
CMB	Columbia Colle	84.90	50	*e*P	P	07 05 12.2	-0.8
	comp=Z,2.7nm,1.0s						
MDPB	Devils Postpil	85.76	50	*e*P	P	07 05 18.1	+0.6
	comp=Z,6.6nm,1.1s						
PAHR	Pah Rah Range	86.17	48	*e*P	P	07 05 19.6	+0.3
	comp=Z,5.5nm,1.2s						
TIXI	Tiksi	86.40	349	P	P	07 05 19.7	+0.1
	comp=Z,2.0nm,0.3s,baz=101,slow=1.7,SNR=4.2						
NV01	Mina Array Sit	86.58	50	*e*P	P	07 05 21.2	-0.3
NVAR	Mina Array Bea	86.58	50	P	P	07 05 20.4	-1.2
	comp=Z,4.4nm,1.1s,baz=230,slow=7.6,SNR=8.7						
NV11	Mina Array Sit	86.70	50	*e*P	P	07 05 22.3	+0.3
	comp=Z,0.3nm,1.0s						
J08A	Circle Bar Ran	87.94	45	*e*P	P	07 05 28.1	+0.3
	comp=Z,5.2nm,1.0s						
LDFC	Landfair	88.11	54	*e*P	P	07 05 29.4	+0.6
	comp=Z,11nm,1.1s						
SHPR	Sheep Range	88.44	52	*e*P	P	07 05 31.5	+1.0
	comp=Z,2.2nm,1.1s						
LCMT	Little Creek M	90.06	52	*e*P	P	07 05 39.1	+1.1
	comp=Z,3.9nm,1.0s						
CCUT	Cedar City	90.10	52	*e*P	P	07 05 39.3	+1.0
	comp=Z,4.9nm,1.0s						
KNB	Kanab	90.39	52	*e*P	P	07 05 40.4	+0.8
	comp=Z,2.5nm,1.0s						
U15A	North Rim	90.66	53	*e*P	P	07 05 41.9	+0.9
	comp=Z,7.2nm,0.9s						
MTPU	Mount Pierson	91.13	52	*e*P	P	07 05 44.8	+1.5
	comp=Z,4.9nm,0.9s						
BGU	Big Grassy Mou	91.18	49	*e*P	P	07 05 43.5	+0.4
	comp=Z,2.6nm,1.0s						
MSU	Marysvale	91.24	51	*e*P	P	07 05 44.8	+1.2
HVU	Hansel Valley	91.57	48	*e*P	P	07 05 45.6	+0.6
	comp=Z,7.8nm,1.1s						
NLU	North Lily Min	91.66	50	*e*P	P	07 05 46.4	+1.0
	comp=Z,5.8nm,1.0s						
SPUT	South Promonto	91.69	48	*e*P	P	07 05 46.4	+0.8
	comp=Z,1.4nm,0.9s						
JLU	Jordanelle	92.27	49	*e*P	P	07 05 49.2	+0.9
	comp=Z,3.7nm,1.0s						
DLMT	Dillon	92.54	44	*e*P	P	07 05 50.1	+0.7
	comp=Z,6.1nm,1.1s						
MK31	Makanchi Array	93.53	317	*e*P	P	07 05 52.0	-1.7
	comp=Z,2.9nm,1.0s						
PD31	Pinedale Array	94.11	47	*e*P	P	07 05 55.6	-1.1
	comp=Z,3.0nm,1.1s						
PDAR	Pinedale Array	94.11	47	P	P	07 05 55.6	-1.1
	comp=Z,1.4nm,1.0s,baz=256,slow=1.2,SNR=7.1						
YKA	Yellowknife Ar	95.51	27	P	P	07 06 00.5	-1.8
	comp=Z,0.8nm,0.8s,baz=260,slow=4.5,SNR=8.3						
YKB5	Yellowknife Ar	95.51	27	*e*P	P	07 06 00.5	-1.8
ESDC	Sonseca Array	150.32	343	PKPbc	PKPbc	07 12 28.5	-0.9
	comp=Z,1.3nm,0.8s,baz=32,slow=2.4,SNR=4.9						

BJI ***06*** *06:53:18.0, 10°.60S×164°.90E, h6^{km}, mB5.9/38, mb5.5/63, Ms5.9/48, Ms7 5.6/46*

IDC ***06*** *06:53:18.0±0.4, 10°.67S×164°.93E, h0^{km}, mb5.2/30, mb1 5.3/31, mb1mx5.2/39, mbtmp5.2/31, ML5.9/2, MS5.8/6, Ms1 5.8/6, ms1mx5.3/17, Error ellipse: s-maj=14.6km s-min=11.4km az=92.0*

ISCJB ***06*** *06:53:19.2±0.1, 10°.69S±0°.02×164°.95E±0°.02, h15^{km}, mb5.5/321, MS5.8/73, Error ellipse: s-maj=3.0km s-min=2.5km az=154.7*

NEIC ***06*** *06:53:20.0±0.7, 10°.64S×164°.95E, h10^{km}±4^{km}, mb5.6/261, MS5.8/52, Error ellipse: s-maj=3.2km s-min=2.9km az=106.0*

MOS ***06*** *06:53:21.1±0.9, 10°.60S×164°.91E, h26^{km}, mb5.7/71, MS5.7/8, Error ellipse: s-maj=7.5km s-min=5.9km az=96.6*

GCMT ***06*** *06:53:21.0±0.3, 10°.54S±0°.02×164°.85E±0°.02, h15^{km}, MW5.9/106, Moment Tensor Solution. s4,c4; s106,c144; Duration: 2^s.1 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.22±.04; M$_{\theta\theta}$0.64±.03; M$_{\phi\phi}$-0.86±.03; M$_{r\theta}$0.43±.14; M$_{\theta\phi}$-0.21±.03; M$_{\phi r}$-0.11±.13; Best double couple: M$_0$0.91800×10^{18} NP1:φ$_s$147.00000°, δ71.00000°, λ26.00000°. NP2:φ$_s$48.00000°, δ66.00000°, λ159.00000°. Principal axes: T 0.9420, Plg31.0000°, Azm9.0000°; N -0.0480, Plg58.0000°, Azm182.0000°; P -0.8940, Plg3.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 06:53:19.7±0.6**, 10°.70S**±0°.04×**164°.99E**±0°.04**, h9^{km}**±3^{km}**, h9^{km}:pP-P, n825, σ1^s.29**/831**, mb5.6**/331**, MS5.8**/73**, 22C-21D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.12	284	Pn	Pn	06 54 36.0	-0.6
	412nm,0.3s,baz=152,slow=3.3,SNR=55						
HNR				Sn	Sn	06 55 35.8	-0.1
	249nm,0.3s,baz=133,slow=3.8,SNR=2.9						
HNR				LR	LR	06 56 42.0	
	comp=Z,155µm,20.2s,baz=110,slow=40						
MARNC	Mare, Loyalty	11.11	165	*e*Pn	Pn	06 55 59.9	+1.1
DZM	Mont Dzumac	11.39	173	*e*Pn	Pn	06 56 04.0	+1.2
	2µm,1.6s						
DZM				*e*LR	LR	06 58 22.7	
	comp=Z,65µm,23.3s						
DZM	Mont Dzumac	11.39	173	*e*Pn	Pn	06 56 04.0	+1.2
DZM				*e*Sn	Sn	06 58 07.0	-3.3
DZM	Mont Dzumac	11.39	173	Pn	Pn	06 56 04.3	+1.5
	105nm,0.3s,baz=44,slow=13,SNR=104						
DZM				Sn	Sn	06 58 07.0	-3.3
	1.7nm,0.3s,baz=30,slow=17,SNR=1.3						
DZM				LR	LR	06 59 50.7	
	comp=Z,59µm,19.0s,baz=10,slow=34						
PINNC	Pines Island,	12.08	169	*e*Pn	Pn	06 56 13.3	+1.2
FUNA	Funafuti	14.18	82	*e*Pn	Pn	06 56 39.5	-1.4
RABL	Rabaul	14.26	296	*e*Pn	Pn	06 56 41.9	-0.1
MSVF	Nonsavu	14.46	120	*e*Pn	Pn	06 56 47.6	+2.8
MSVF	Nonsavu	14.46	120⇓	*e*P	Pn	06 56 46.2	+1.4
PATS	Pohnpei	18.65	339	P	Pn	06 57 39.1	+0.9
	baz=19,SNR=5.1						
PATS	Pohnpei	18.65	339	*e*P	P	06 57 36.0	-2.0
	628nm,1.3s						
MANU	Manus Island	19.50	295	*e*P	Pn	06 57 49.4	+0.9
	9µm,2.0s						
KWAJ	Kwajalein Atol	19.55	8	*e*P	P	06 57 48.1	+0.2
	1000nm,0.8s						
KWAJ	Kwajalein Atol	19.55	8	*e*P	P	06 57 48.1	+0.2
KWAJ				pmax	pmax		
	comp=Z,1µm,0.8s						
EIDS	Eidsvold	19.66	220	P	Pn	06 57 50.0	-0.4
	baz=20,SNR=57						
EIDS	Eidsvold	19.66	220	*e*P	Pn	06 57 51.7	+1.2
	comp=Z,1µm,1.6s						
CTA	Charters Tower	20.31	240	P	P	06 57 56.4	+0.2
	comp=Z,40nm,0.9s,baz=66,slow=11,SNR=12						
CTAO	Charters Tower	20.31	240	*e*P	P	06 57 56.5	+0.2
	comp=Z,200nm,1.1s						
CTAO	Charters Tower	20.31	240	*e*P	P	06 57 56.5	+0.2
CTAO				pmax	pmax		
	comp=Z,200nm,1.1s						
MTSU	Mount Surprise	21.32	247	P	P	06 58 07.7	+0.5
	baz=21,SNR=7.8						
LHI	Lord Howe Isla	21.43	194	P	P	06 58 10.0	+1.8
	baz=22,SNR=10.0						
LHI	Lord Howe Isla	21.43	194	*e*P	P	06 58 09.4	+1.2
	comp=Z,524nm,1.0s						
COEN	Coen	21.55	259	P	P	06 58 09.5	-0.2
	baz=22,SNR=5.2						
COEN	Coen	21.55	259	*e*P	P	06 58 09.4	-0.3
	comp=Z,116nm,1.1s						
RMQ	Roma	21.94	222	P	P	06 58 14.6	+0.8
	baz=22,SNR=27						
ARMA	Armidale	23.22	210	P	P	06 58 28.4	+1.0
	baz=23,SNR=67						
ARMA	Armidale	23.22	210	*e*P	P	06 58 28.7	+1.3
	comp=Z,312nm,0.9s						
RAO	Raoul Island	24.41	142	*e*Sn	S	07 03 28.8	+30
RAO	Raoul Island	24.41	142	LR	LR	07 06 43.4	
	comp=Z,13µm,20.1s,baz=307,slow=33						
RAO	Raoul Island	24.41	142	*e*	PcP	07 02 17.2	-0.7
KNTN	Kanton	24.42	73	*e*P	P	06 58 38.0	-0.9
	comp=Z,448nm,1.3s						
QLP	Quilpie	25.16	228	P	P	06 58 45.8	+0.3
	baz=25,SNR=52						
JAY	Jayapura	25.43	287	P	P	06 58 48.1	-0.1
	comp=Z,3µm,1.9s,comp=Z,76µm						
OUZ	Omahuta	25.64	164	*e*P	P	06 58 51.4	+1.7
	comp=Z,278nm,1.4s						
MGCD	Mangrove Creek	25.78	208	P	P	06 58 52.7	+1.7
	baz=26,SNR=42						
RIV	Riverview	26.28	207	P	P	06 58 56.6	+1.1
	baz=26,SNR=7.2						
QIS	Mount Isa	26.30	245	P	P	06 58 56.0	+0.1
	baz=26,SNR=5.3						
CMSA	Cobar Meteorol	27.37	218	P	P	06 59 05.7	+0.3
	baz=27,SNR=46						
KUZ	Kuaotunu	27.68	161	P	P	06 59 09.6	+1.5
YNG	Young	27.96	210	P	P	06 59 11.8	+1.0
	baz=28,SNR=24						
CNB	Canberra Magne	28.33	208	P	P	06 59 15.2	+1.2
	baz=28,SNR=10						
CAN	Canberra	28.50	208	*e*P	P	06 59 16.3	+0.8
	comp=Z,122nm,1.3s						
CAN	Canberra	28.50	208	*e*P	P	06 59 16.3	+0.8
CAN				pmax	pmax		
	comp=Z,122nm,1.3s						
KMRZ	Kaimai	28.77	162	P	P	06 59 27.0	+9.2
H11S2	WAKE ISLAND Hy	29.05	3	T	T	07 29 28.5	
	baz=184,slow=76,SNR=298						
H11S3	WAKE ISLAND Hy	29.06	3	T	T	07 29 29.7	
	baz=184,slow=76,SNR=221						

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HIZ    Hauiti            29.07 164  eP     P      06 59 22.6 +2.1
       comp=Z,233nm,1.3s
H11S1  WAKE ISLAND Hy    29.07   3   T      T      07 29 30.8
       baz=184,slow=76,SNR=375
HAZ    Te Kaha           29.29 159   P      P      06 59 23.6 +1.1
MXZ    Matakaoa Point    29.31 158  eP     P      06 59 23.5 +0.9
       comp=Z,261nm,1.4s
MXZ    Matakaoa Point    29.31 158   P      P      06 59 22.0 -0.6
RUGZ   Raukumara Rang    29.44 159   P      P      06 59 24.5 +0.6
URZ    Urewera           29.52 160  eP     P      06 59 25.6 +1.1
URZ                                 eP     P      06 59 25.8 +1.3
URZ    Urewera           29.52 160   P      P      06 59 25.6 +1.1
       comp=Z,26nm,0.7s,baz=275,slow=2.0,SNR=14
URZ                                  LR     LR     07 10 37.6
       comp=Z,20µm,18.5s,baz=340,slow=35
URZ    Urewera           29.52 160   P      P      06 59 25.4 +1.0
WMGZ   Waiomatatini S    29.57 158   P      P      06 59 25.4 +0.4
MWZ    Matawai           29.72 160   P      P      06 59 27.4 +1.0
TWGZ   Tauwhareparae     29.74 159   P      P      06 59 27.2 +0.7
PUZ    Puketiti          29.74 159   P      P      06 59 26.8 +0.3
MILA   Mila              29.87 206   P      P      06 59 28.6 +0.9
       baz=30,SNR=5.6
MTHZ   Maungataniwha     29.97 161   P      P      06 59 30.8 +2.3
SNGZ   Shannon Statio    30.06 161   P      P      06 59 30.0 +0.7
RIGZ   Rimuhau           30.14 160   P      P      06 59 30.1 +0.1
BKZ    Black Stump Fm    30.15 162  eP     P      06 59 30.9 +0.8
       comp=Z,142nm,0.5s
STKA   Stephens Creek    30.19 222   P      P      06 59 30.9 +0.3
       baz=30,SNR=51
STKA   Stephens Creek    30.19 222  eP     P      06 59 30.1 -0.4
       comp=Z,29nm,1.0s
STKA   Stephens Creek    30.19 222  eP     P      06 59 30.1 -0.4
STKA                                 pmax   pmax
       comp=Z,29nm,1.0s
STKA   Stephens Creek    30.19 222   P      P      06 59 30.1 -0.4
       comp=Z,67nm,0.8s,baz=36,slow=9.4,SNR=68
H11N1  WAKE ISLAND Hy    30.28   4   T      T      07 31 04.1
       baz=184,slow=76,SNR=77
H11N3  WAKE ISLAND Hy    30.29   4   T      T      07 31 00.0
       baz=184,slow=76,SNR=62
H11N2  WAKE ISLAND Hy    30.30   4   T      T      07 31 05.1
       baz=184,slow=76,SNR=80
WRAB   Tennant Creek     30.89 249  eP     P      06 59 34.9 -2.0
       comp=Z,131nm,1.5s
WRAB   Tennant Creek     30.89 249⇑eP     P      06 59 36.3 -0.6
WRAB                                 pmax   pmax
       comp=Z,39nm,1.3s
WB2    Warramunga Arr    30.89 249  eP     P      06 59 35.0 -1.9
       comp=Z,69nm,1.1s
WB2                                 eP     pP     06 59 35.6 -2.6
WR1    Warramunga Arr    30.91 249  eP     P      06 59 34.4 -2.6
       comp=Z,77nm,1.1s
WR1                                 ePcP   PcP    07 02 33.0 -0.8
WRA    Warramunga Arr    30.91 249   P      P      06 59 34.4 -2.7
       comp=Z,14nm,1.0s,baz=79,slow=9.8,SNR=18
WRA                                  PcP    PcP    07 02 33.0 -0.8
       comp=Z,4.0nm,0.9s,baz=75,slow=3.6,SNR=3.4
WRA                                  LR     LR     07 12 02.7
       comp=Z,24µm,18.2s,baz=55,slow=36
BFZ    Birch Farm        31.48 163  eP     P      06 59 42.3 +0.6
       comp=Z,260nm,1.4s
THZ    Tophouse          31.71 169  eP     P      06 59 45.2 +1.2
       comp=Z,323nm,1.8s
KDU    Kakadu            31.89 263   P      P      06 59 43.5 -2.2
       baz=32,SNR=6.1
RKPI   Ransiki, Papua    31.93 285   P      P      06 59 48.3 +2.2
TOO    Toolangi          31.99 210   P      P      06 59 47.5 +1.1
       baz=32,SNR=22
AS01   Alice Springs     32.24 242  eP     P      06 59 47.1 -1.7
AS31   Alice Springs     32.28 242  eP     P      06 59 48.8 -0.3
       comp=Z,5.5nm,0.7s
ASAR   Alice Springs     32.28 242   P      P      06 59 46.7 -2.5
       comp=Z,6.6nm,0.6s,baz=62,slow=10,SNR=30
ASAR                                 PcP    PcP    07 02 37.1 -0.4
       comp=Z,2.5nm,0.7s,baz=73,slow=3.5,SNR=4.5
KHZ    Kahutara          32.47 168  eP     P      06 59 50.3 -0.1
       comp=Z,115nm,1.4s
LTZ    Lake Taylor       32.59 170  eP     P      06 59 53.7 +2.1
       comp=Z,96nm,0.9s
HTT    Hallett           32.92 223   P      P      06 59 54.6  0.0
       baz=33,SNR=70
OXZ    Oxford            33.08 171  eP     P      06 59 56.6 +0.8
       comp=Z,400nm,1.9s
RPZ    Rata Peaks        33.31 172   P      P      06 59 57.2 -0.6
       comp=Z,38nm,0.9s,baz=44,slow=3.3,SNR=8.6
ARPS   Mount Arapiles    33.32 215   P      P      06 59 59.0 +1.0
       baz=33,SNR=12
FAKI   Fak Fak           33.38 281   PFAKE         07 00 10.0  +11
FAKI                                 LR     LR
       comp=Z,12µm,20.0s
CRLZ   Canterbury Las    33.42 170  eP     P      06 59 60.0 +1.3
       comp=Z,348nm,1.5s
MQZ    McQueen’s Vall    33.55 170  eP     P      07 00 02.3 +2.4
       comp=Z,85nm,1.0s
WKZ    Wanaka            34.18 175  eP     P      07 00 06.3 +0.9
       comp=Z,168nm,1.5s
BBOO   Buckleboo         34.52 226   P      P      07 00 08.5 -0.1
       baz=35,SNR=63
ODZ    Otahua Downs      34.56 173  eP     P      07 00 08.6 -0.1
       comp=Z,96nm,1.6s
MLZ    Mavora Lakes      34.65 176  eP     P      07 00 08.9 -0.6
       comp=Z,48nm,1.3s
DCZ    Deep Cove         34.69 177  eP     P      07 00 10.7 +0.9
       comp=Z,106nm,1.2s
WHZ    Wether Hill Ro    35.16 176  eP     P      07 00 12.9 -1.0
       comp=Z,48nm,1.1s
MOO    Moorlands         35.24 203   P      P      07 00 17.6 +3.0
       baz=35,SNR=10
PALU   Palau             35.27 299   P      P      07 00 15.4 +0.3
       baz=35,SNR=6.0
BNDI   Bandanaira        35.29 277   P      P      07 00 16.4 +1.1
RAR    Rarotonga         35.38 112   LR     LR     07 11 43.8
       comp=Z,9µm,21.4s,baz=273,slow=31
KNRA   Kununurra         35.58 258   P      P      07 00 16.0 -1.9
       baz=36,SNR=14
TAU    Tasmania Unive    35.59 203  eP     P      07 00 18.4 +0.8
       comp=Z,190nm,1.4s
TAU    Tasmania Unive    35.59 203  eP     P      07 00 18.4 +0.8
TAU                                  pmax   pmax
       comp=Z,190nm,1.4s
WRKA   Warakurna         37.58 243   P      P      07 00 33.3 -1.5
       baz=38,SNR=6.1
NLAI   Namlea            38.30 278   P      P      07 00 41.9 +0.9
FITZ   Fitzroy Crossi    38.75 254   P      P      07 00 42.9 -1.8
       baz=39,SNR=11
TNTI   Ternate           39.11 285   PFAKE         07 01 00.0  +12
TNTI                                 LR     LR
       comp=Z,3µm,18.0s
SANI   Sanana            39.66 280   P      P      07 00 54.4 +2.0
SOEI   Soe               40.06 268   P      P      07 00 56.5 +0.6
BATI   Baumata           40.62 267   P      P      07 01 01.0 +0.6
MMRI   Maumere           42.17 269   P      P      07 01 13.8 +0.7
KMSI   Cibinong          42.28 283   P      P      07 01 15.3 +1.2
EDFI   Ende, Flores      42.69 269   P      P      07 01 17.9 +0.4
       comp=Z,56nm,1.6s
APSI   Ampana            44.14 280   P      P      07 01 29.0 -0.1
       comp=Z,101nm,1.4s
MRSI   Marisa            44.22 282   P      P      07 01 30.9 +1.2
PPT2   Papeete2          44.50 104  eS     S      07 08 17.2 +9.3
       comp=Z,4µm,26.0s
PPT2                                eLQ    LQ     07 12 02.7
       comp=Z,12µm,24.8s
PPT2                                eLR    LR     07 13 52.7
       comp=Z,13µm,23.2s
BKSI   Bulukumba         44.71 273   P      P      07 01 34.5 +0.8
BNSI   Bone              44.89 275   P      P      07 01 34.6 -0.5
TBI    Tubuai            45.15 112  eS     S      07 08 22.5 +5.5
       comp=Z,2µm,30.5s
TBI                                 eLQ    LQ     07 12 15.8
       comp=Z,10µm,32.8s
TBI                                 eLR    LR     07 14 04.7
       comp=Z,30µm,28.0s
SPSI   Sidrap Palu       45.30 275   P      P      07 01 39.3 +0.9
TTSI   Tana Toraja       45.44 276   P      P      07 01 40.4 +1.0
PCI    Palu              45.90 279   P      P      07 01 44.2 +1.1
MPSI   Mapaga            46.15 281   P      P      07 01 43.7 -1.4
MEEK   Meekatharra       46.43 243   P      P      07 01 46.0 -1.2
       baz=46,SNR=4.0
PLAI   Plampang          46.53 268   P      P      07 01 48.3 +0.2
RCP    Roxas             47.44 297⇓eP     P      07 01 57.5 +2.4
KLBR   Kellerberrin      48.27 237   P      P      07 02 01.4 +0.1
       baz=48,SNR=4.9
KIP    Kipapa            48.37  49  eP     P      07 02 02.8 +0.6
       comp=Z,202nm,1.1s
KIP    Kipapa            48.37  49⇑eP     P      07 02 03.3 +1.1
KIP                                  pmax   pmax
       comp=Z,267nm,1.3s
OPA    Opana             48.53  48  eP     P      07 02 03.6 +0.1
       comp=Z,208nm,0.7s
OPA    Opana             48.53  48  eP     P      07 02 03.6 +0.1
OPA                                  pmax   pmax
       comp=Z,208nm,0.7s
BLDU   Ballidu           48.90 239   P      P      07 02 05.2 -1.1
       baz=49,SNR=3.8
KHU    Kahuku            48.92  53  eP     P      07 02 07.4 +0.7
       comp=Z,562nm,1.5s
KBKI   Kotabaru          48.96 275   P      P      07 02 07.9 +1.0
NWAO   Narrogin (SRO)    49.04 236   P      P      07 02 06.8 -0.6
       baz=49,SNR=4.3
NWAO   Narrogin (SRO)    49.04 236  eP     P      07 02 06.6 -0.7
       comp=Z,84nm,1.3s
NWAO   Narrogin (SRO)    49.04 236  eP     P      07 02 06.6 -0.7
NWAO                                 pmax   pmax
       comp=Z,84nm,1.3s
AIN    Ainahou           49.11  53  eP     P      07 02 07.1 -1.1
       comp=Z,331nm,1.2s
SRBI   Singaraja         49.14 269   P      P      07 02 09.0 +0.7
MORW   Morawa            49.14 241   P      P      07 02 07.4 -0.8
       baz=49,SNR=3.9
TSM    Tawau             49.21 285   P      P      07 02 08.9  0.0
HMH    Humu‘ula Sheep    49.22  52  eP     P      07 02 09.4 +0.3
       comp=Z,309nm,1.1s
KHLH   Kahului Airpor    49.24  50  eP     P      07 02 13.4 +4.5
       comp=Z,438nm,1.4s
POHA   Pohakuloa         49.27  52  eP     P      07 02 08.8 -0.7
       comp=Z,310nm,1.3s
KKO    Keanakako`i       49.28  53   PFAKE         07 02 20.0  +11
KKO                                  LR     LR
       comp=Z,3µm,22.0s
HATHI  Halema‘uma‘u T    49.30  53   PFAKE         07 02 20.0  +10
HATHI                                LR     LR
       comp=Z,6µm,20.0s
HPAH   Hawaii Prepara    49.30  52  eP     P      07 02 09.0 -0.5
       comp=Z,154nm,1.0s
NPOC   North of Pu‘u     49.40  53   PFAKE         07 02 20.0  +10
NPOC                                 LR     LR
       comp=Z,4µm,20.0s
JAGI   Jajag, Banyuwa    50.13 268   P      P      07 02 20.0 +4.1
SDKM   Sandakan          50.27 287   P      P      07 02 17.1  0.0
KDM    Kudat             51.03 288   P      P      07 02 25.6 +3.0
KKM    Kota Kinabalu     51.33 287  eP     P      07 02 25.1  0.0
       comp=Z,406nm,1.4s
KKM    Kota Kinabalu     51.33 287   P      P      07 02 26.8 +1.8
PWJI   Pagerwojo         52.49 268   P      P      07 02 34.1 +0.5
INU    Inuyama           52.89 331  eP     P      07 02 36.1  0.0
       comp=Z,194nm,1.6s
NGJI   Ngawi             52.91 269   P      P      07 02 37.5 +0.8
PCJI   Pacitan           53.09 268   P      P      07 02 38.7 +0.7
MJAR   Matsushiro Arr    53.33 333   P      P      07 02 37.8 -1.5
       comp=Z,18nm,0.9s,baz=168,slow=8.7,SNR=15
MJAR                                 PcP    PcP    07 03 47.6 +0.7
       comp=Z,17nm,1.0s,baz=174,slow=4.9,SNR=2.6
MAJO   Matsushiro        53.33 333  eP     P      07 02 39.3 -0.1
       comp=Z,90nm,1.1s
MAJO                                ePcP   PcP    07 03 47.6 +0.7
MAJO   Matsushiro        53.33 333⇓iP     P      07 02 39.3 -0.1
MAJO                                 pmax   pmax
       comp=Z,53nm,1.5s
MAT    Matsushiro        53.33 333   P      P      07 02 38.0 -1.4
MJB9   Matsu-Tunnel      53.33 333  eP     P      07 02 39.3 -0.1
       comp=Z,84nm,1.0s
BTM    Bintulu           53.47 282   P      P      07 02 41.7 +0.9
YOJ    Yonaguni jima     53.85 311   PFAKE         07 03 00.0  +17
YOJ                                  LR     LR
       comp=Z,6µm,20.0s
TAOE   Nuku Hiva Isla    54.04  93  eLQ    LQ     07 16 10.8
       comp=Z,4µm,22.1s
TAOE                                eLR    LR     07 18 10.4
       comp=Z,8µm,29.6s
SBUM   Sibu              54.10 281  eP     P      07 02 45.2 -0.3
       comp=Z,82nm,1.7s
SBUM   Sibu              54.10 281   P      P      07 02 46.9 +1.4
JNU    Nakatsue          54.37 325  eP     P      07 02 46.2 -0.9
       comp=Z,166nm,1.0s
TWG    Pinlang           54.40 308  eP     P      07 02 46.8 -0.7
       comp=Z,164nm,0.9s
TWG                                  LR     LR
       comp=Z,13µm,18.0s
YULB   Yu-li             54.54 309  eP     P      07 02 48.0 -0.5
       comp=Z,96nm,0.9s
NACB   Ninganchiao       54.75 310  eP     P      07 02 50.2 +0.2
       comp=Z,100nm,0.9s
TPUB   Ta-pu             55.00 308  eP     P      07 02 49.8 -2.0
       comp=Z,111nm,0.8s
TPUB                                 LR     LR
       comp=Z,4µm,21.0s
SSLB   Suanglung         55.02 309  eP     P      07 02 50.1 -1.9
       comp=Z,45nm,0.9s
YHNB   Yeheng            55.19 310  eP     P      07 02 53.9 +0.7
       comp=Z,160nm,1.0s
KPJI   Karang Pucung     55.41 268   P      P      07 03 07.9  +13
KSM    Kuching           55.71 279  eP     P      07 02 56.2 -1.0
       comp=Z,178nm,1.6s
KSM    Kuching           55.71 279   P      P      07 02 56.9 -0.3
ERM    Erimo             56.16 341⇓eP     P      07 03 00.9 +1.1
ERM                                  pmax   pmax
       comp=Z,32nm,0.8s
CISI   Cisompet, Garu    56.47 268   P      P      07 03 08.1 +5.4
YUK    Yuzh-Kuril'sk     57.18 344⇓iP     P      07 03 07.1 +0.1
TPI    Tanjungpandan     57.41 274   P      P      07 03 17.1 +7.9
ASAJ   Asahikawa         58.23 341   P      P      07 03 14.6 +0.2
       comp=Z,62nm,0.8s
RKT    Rikitea           58.41 111  eLQ    LQ     07 18 00.7
       comp=Z,5µm,30.5s
RKT                                 eLR    LR     07 20 15.2
       comp=Z,12µm,29.2s
PPBI   Pangkal Pinang    59.01 274   P      P      07 03 21.4 +1.0
SSE    Sheshan           59.09 316   P      P      07 03 20.9 +0.3
SSE                                  pmax   pmax
       comp=Z,33nm,1.3s
SSE                                  pmax   pmax
       comp=Z,590nm,8.0s
SSE    Sheshan           59.09 316  eP     P      07 03 19.7 -0.9
       comp=Z,114nm,0.8s
KSRS   Korea Array       59.17 326   P      P      07 03 20.9 -0.2
       comp=Z,13nm,0.8s,baz=139,slow=7.2,SNR=30
KS15   Wonju Array Si    59.19 326  eP     P      07 03 22.0 +0.8
KSAR   Wonju Array Be    59.19 326   P      P      07 03 20.9 -0.3
KSAR   Wonju Array Be    59.19 326   P      P      07 03 20.9 -0.3
KS01   Wonju Array Si    59.21 326  eP     P      07 03 21.0 -0.3
MDSI   Maura Dua         60.51 271   P      P      07 03 30.6 -0.2
YSS    Yuzh-Sakhalins    60.74 343  eP     P      07 03 32.3 +0.7
       comp=Z,194nm,1.5s
YSS    Yuzh-Sakhalins    60.74 343⇓eP     P      07 03 32.6 +1.0
YSS                                 e             07 03 41.3
YSS                                  pmax   pmax
       comp=Z,30nm,0.6s
YSS                                  MLR    MLR
       comp=Z,3µm,16.0s
YSS                                  MLR    MLR
       comp=N,3µm,17.0s
YSS                                  MLR    MLR
       comp=E,2µm,16.0s
TEY    Ternei            61.12 337⇓eP     P      07 03 34.8 +0.5
TEY                                  pmax   pmax
       comp=Z,10.0nm,4.3s
NJ2    Nanjing           61.25 316  eP     P      07 03 35.4 -0.1
NJ2                                  pP     sP     07 03 37.2 -0.1
NJ2                                  S      S      07 11 54.5 -1.3
NJ2                                  pmax   pmax
       comp=Z,56nm,0.9s
NJ2                                  pmax   pmax
       comp=Z,770nm,4.9s
NJ2                                  LR     LR
       comp=Z,5µm,15.7s
NJ2                                  LR     LR
       comp=Z,7µm,19.6s
NJ2                                  LR     LR
       comp=Z,8µm,19.6s
MSHR   Mys Shultsa       61.40 332⇓iP     P      07 03 37.2 +0.9
VLA    Vladivostok       61.50 333c iP    P      07 03 37.1 +0.2
VLA                                  pmax   pmax
       comp=Z,122nm,1.8s
SKR    Severo-Kuril’s    61.61 354⇑eP     P      07 03 36.5 -1.0
QIZ    Qiongzhong        61.86 298   P      P      07 03 41.3 +1.5
QIZ                                  S      S      07 12 03.1 -0.9
QIZ                                  pmax   pmax
       comp=Z,26nm,1.4s
QIZ                                  LR     LR
       comp=Z,2µm,15.7s
QIZ                                  LR     LR
       comp=Z,3µm,22.6s
QIZ                                  LR     LR
       comp=Z,7µm,22.1s
QIZ    Qiongzhong        61.86 298  eP     P      07 03 41.2 +1.3
       comp=Z,169nm,1.8s
QIZ                                  LR     LR
       comp=Z,6µm,22.0s
MYKOM  Kota Tinggi       62.06 278  eP     P      07 03 42.2 +0.9
       comp=Z,116nm,1.5s
USA0B  Ussuriysk Arra    62.31 334  eP     P      07 03 42.8 +0.4
       comp=Z,313nm,1.5s
USRK   Ussuriysk Ar.     62.31 334   P      P      07 03 42.6 +0.3
       comp=Z,38nm,1.1s,baz=142,slow=7.1,SNR=22
WHN    Wuhan             63.61 312 ⇓P      P      07 03 51.8 +0.5
SMY    Shemya            63.66   6   PFAKE         07 04 00.0 +8.9
SMY                                  LR     LR
       comp=Z,7µm,18.0s
MDJ    Mudanjiang        63.70 333   P      P      07 03 52.8 +1.2
MDJ                                  pmax   pmax
       comp=Z,42nm,1.3s
MDJ    Mudanjiang        63.70 333  eP     P      07 03 52.0 +0.5
       comp=Z,338nm,1.8s
PET    Petropavlovsk     63.70 356  eP     P      07 03 49.3 -2.1
PET                                  pmax   pmax
       comp=Z,58nm,1.5s
DL2    Dalian            63.76 323   P      P      07 03 53.4 +1.3
DL2                                 eS     S      07 12 28.2 +1.1
DL2                                  pmax   pmax
       comp=Z,64nm,0.9s
DL2                                  LR     LR
       comp=Z,3µm,15.2s
DL2                                  LR     LR
       comp=Z,2µm,14.2s
DL2                                  LR     LR
       comp=Z,3µm,24.6s
PEA0B  Petropavlovsk-    63.86 355  eP     P      07 03 52.8 +0.3
       comp=Z,168nm,1.4s
PETK   Petropavlovsk-    63.86 355   P      P      07 03 52.7 +0.2
PETK                                 pmax   pmax
       comp=Z,14nm,0.8s
PETK   Petropavlovsk-    63.86 355   P      P      07 03 52.7 +0.2
       comp=Z,15nm,0.8s,baz=156,slow=8.0,SNR=14
PEA1   Petropavlovsk-    63.87 355  eP     P      07 03 52.7 +0.2
ADK    Adak              64.31  12   PFAKE         07 04 10.0  +15
ADK                                  LR     LR
       comp=Z,9µm,21.0s
TYV    Tymovskoe         64.31 345  eP     P      07 03 55.9 +0.4
TYV                                  pmax   pmax
       comp=Z,23nm,1.5s
BKNI   Bangkinang        64.49 276   P      P      07 03 59.4 +1.9
SNY    Shenyang          64.64 327 ⇓P      P      07 03 57.7 -0.1
TIA    Tai'an            64.86 319   P      P      07 03 59.6 +0.2
CN2    Changchun         65.07 329  eP     P      07 04 00.4 -0.2
CN2                                 epP    pwP    07 04 05.1 -3.0
CN2                                  pmax   pmax
       comp=Z,50nm,0.8s
CN2                                  pmax   pmax
       comp=Z,600nm,3.0s
CN2                                  LR     LR
       comp=Z,4µm,15.0s
CN2                                  LR     LR
       comp=Z,3µm,15.0s
CN2                                  LR     LR
       comp=Z,3µm,16.0s
ATKA   Atka Island       65.17  14   PFAKE         07 04 10.0 +9.0
ATKA                                 LR     LR
       comp=Z,8µm,21.0s
IPM    Ipoh              65.43 280  eP     P      07 04 03.0 -0.6
       comp=Z,170nm,1.0s
KULM   Kulim             65.99 281  eP     P      07 04 08.1 +0.9
       comp=Z,137nm,1.3s
MNSI   Mandailing Nat    66.02 276   P      P      07 04 06.9 -0.5
GRNR   Gornyy            66.07 341  eP     P      07 04 08.0 +1.1
GRNR                                 pmax   pmax
       comp=Z,25nm,1.0s
SKNT   Sakolnakorn       66.27 294   P      P      07 04 09.0 +0.1
       comp=Z,57nm,1.8s
CASY   Casey             66.43 201  eP     P      07 04 09.1  0.0
       comp=Z,326nm,1.5s
KLR    Kul'dur           66.45 337c iP    P      07 04 09.3 -0.1
KLR    Kul'dur           66.45 337   P      P      07 04 09.5 +0.1
       comp=Z,37nm,1.1s,baz=164,slow=4.1,SNR=22
SKLT   Songkhla          66.48 283   P      P      07 04 15.3 +5.0
       comp=Z,76nm,1.1s
VNDA   Vanda             66.83 181  eP     P      07 04 13.0 +1.6
       comp=Z,353nm,1.5s
VNDA   Vanda             66.83 181  eP     P      07 04 13.0 +1.6
VNDA                                 pmax   pmax
       comp=Z,353nm,1.5s
VNDA   Vanda             66.83 181   P      P      07 04 12.9 +1.6
       comp=Z,92nm,1.2s,baz=347,slow=7.3,SNR=23
NKL    Nikolayevsk       66.91 344  eP     P      07 04 11.4 -0.8
NKL                                  pmax   pmax
       comp=N,72nm,2.0s
NKL                                  pmax   pmax
       comp=Z,340nm,2.0s
SRAK   Srakaew           67.07 290   P      P      07 04 12.8 -1.2
       comp=Z,71nm,1.4s,comp=Z,922nm
ENH    Enshi             67.10 309  eP     P      07 04 13.3 -0.7
       comp=Z,336nm,1.7s
PBSI   Pulau Batu        67.12 274   P      P      07 04 15.4 +1.0
SBA    Scott Base        67.15 180  eP     P      07 04 15.1 +1.6
       comp=Z,260nm,1.3s
SBA    Scott Base        67.15 180  eP     P      07 04 15.1 +1.6
SBA                                  pmax   pmax
       comp=Z,260nm,1.3s
NIKH   Nikolski High     67.26  17  eP     P      07 04 14.6 +0.2
       comp=Z,224nm,1.0s
NONG   Nongkai           67.39 295   P      P      07 04 16.4 +0.4
       comp=Z,2.4nm,1.2s,comp=Z,175nm
TRTT   Trang             67.54 283   P      P      07 04 19.4 +2.3
       comp=Z,31nm,1.7s,comp=Z,918nm
GYA    Guiyang           67.61 304⇑iP     P      07 04 16.6 -0.8
GYA                                  PP     PP     07 06 50.0 +3.4
GYA                                  S      S      07 13 15.2 +0.2
GYA                                  SKS    SKSac  07 14 13.6 -2.5
GYA                                  SS     SS     07 17 37.9 +1.8
GYA                                  pmax   pmax
       comp=Z,60nm,0.8s
GYA                                  pmax   pmax
       comp=Z,160nm,6.9s
GYA                                  LR     LR
       comp=Z,6µm,18.2s
GYA                                  LR     LR
       comp=Z,5µm,18.6s
GYA                                  LR     LR
       comp=Z,7µm,18.0s
CHAI   Chaiyaphum        67.72 292   P      P      07 04 18.3 +0.2
       comp=Z,14nm,0.9s,comp=Z,147nm
BJT    Baijiatuau        67.74 321  eP     P      07 04 18.8 +1.0
       comp=Z,250nm,1.9s
BJT    Baijiatuau        67.74 321  eP     P      07 04 18.8 +1.0
BJT                                  pmax   pmax
       comp=Z,250nm,1.9s
BJI    Beijing           67.75 321   P      P      07 04 18.7 +0.9
BJI                                  LR     LR
       comp=Z,6µm,22.1s
BJI                                  LR     LR
       comp=Z,7µm,24.5s
PATY   Pattaya           67.84 289   P      P      07 04 21.6 +2.7
       comp=Z,22nm,1.0s
GSI    Gunungsitoli      68.08 276  eP     P      07 04 19.7 -0.8
       comp=Z,174nm,1.1s
GSI    Gunungsitoli      68.08 276   P      P      07 04 21.2 +0.7
KCSI   Kotacane, Aceh    68.37 278   P      P      07 04 22.1 -0.2
UNV    Unalaska Valle    68.71  18  eP     P      07 04 22.9 -0.6
       comp=Z,68nm,1.0s
TIY    Taiyuan           68.80 318  eP     P      07 04 25.6 +1.0
TIY                                  pmax   pmax
       comp=Z,48nm,1.2s
TIY                                  LR     LR
       comp=Z,2µm,12.1s
TIY                                  LR     LR
       comp=Z,2µm,15.3s
TIY                                  LR     LR
       comp=Z,2µm,19.1s
PKDT   Phuket            68.86 283   P      P      07 04 28.2 +2.9
       comp=Z,25nm,1.8s,comp=Z,792nm
PBKT   Sadao Pong        68.86 292  eP     P      07 04 25.8 +0.5
       comp=Z,251nm,1.8s
PBKT   Sadao Pong        68.86 292   P      P      07 04 26.0 +0.8
       comp=Z,80nm,2.0s
PHET   Kaeng Krachan     68.98 288   P      P      07 04 29.3 +3.2
       comp=Z,20nm,1.6s,comp=Z,241nm
AKUT   Akutan            69.18  18  eP     P      07 04 26.8 +0.4
       comp=Z,193nm,1.5s
XAN    Xi'an             69.34 313   P      P      07 04 28.0  0.0
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XAN                               pmax    pmax
      comp=Z,53nm,0.9s
XAN                               pmax    pmax
      comp=Z,1µm,7.9s
XAN                               LR      LR
      comp=Z,2µm,16.3s
XAN                               LR      LR
      comp=Z,2µm,21.7s
XAN                               LR      LR
      comp=Z,3µm,19.5s
XAN   Xi'an             69.34 313 eP      P        07 04 28.4 +0.4
      comp=Z,39nm,0.8s
XAN   Xi'an             69.34 313 eP      P        07 04 28.4 +0.4
XAN                               pmax    pmax
      comp=Z,39nm,0.8s
UTTA  Uttaradit         69.61 293 P       P        07 04 31.7 +1.8
      comp=Z,10nm,1.1s,comp=Z,127nm
SRDT  SRDT              69.88 290 P       P        07 04 32.6 +1.0
      comp=Z,65nm,1.8s
UTHA  Uthaitani         69.94 291 P       P        07 04 34.0 +2.1
      comp=Z,16nm,1.2s,comp=Z,177nm
KMI   Kunming           70.31 302 P       P        07 04 36.3 +1.9
KMI                               pP      pwP      07 04 40.9 -0.9
KMI                               PcP     PcP      07 05 00.3 +4.3
KMI                               pmax    pmax
      comp=Z,88nm,1.3s
KMI                               pmax    pmax
      comp=Z,450nm,3.6s
KMI                               LR      LR
      comp=Z,2µm,17.9s
KMI                               LR      LR
      comp=Z,2µm,18.3s
KMI                               LR      LR
      comp=Z,3µm,19.5s
KMI   Kunming           70.31 302 eP      P        07 04 36.5 +2.1
      comp=Z,195nm,1.3s
KMI   Kunming           70.31 302 eP      P        07 04 36.5 +2.1
KMI                               pmax    pmax
      comp=Z,195nm,1.3s
SUKH  Sukhothai         70.36 293 P       P        07 04 37.0 +2.5
      comp=Z,10nm,1.0s
SPIA  Saint Paul Isl    70.65  14 eP      P        07 04 34.7 -0.7
      comp=Z,223nm,1.0s
SPIA                              LR      LR
      comp=Z,10µm,21.0s
UMPA  Umpang Tak        70.67 291 P       P        07 04 38.6 +2.1
      comp=Z,9.2nm,1.3s
MA2   Magadan           70.97 352 eP      P        07 04 37.0 -0.3
      comp=Z,122nm,1.6s
MA2   Magadan           70.97 352ceP      P        07 04 36.2 -1.2
MA2                               pmax    pmax
      comp=Z,67nm,1.7s
HHC   Hu-ho-hao-te      71.09 320 eP      P        07 04 40.3 +1.6
HHC                               pmax    pmax
      comp=Z,36nm,1.1s
CM01  Chiang Mai Arr    71.27 294 eP      P        07 04 39.7 -0.3
CM31  Chiang Mai Arr    71.29 294 eP      P        07 04 43.0 +2.8
CM31  Chiang Mai Arr    71.29 294 P       P        07 04 41.5 +1.3
      SNR=26
CMAR  Chiang Mai Arr    71.29 294 P       P        07 04 40.3 +0.1
      comp=Z,26nm,1.0s,baz=121,slow=4.1,SNR=48
CMMT  Chiang Mai        71.40 294 P       P        07 04 42.3 +1.4
      comp=Z,62nm,1.4s
CHTO  Chiang Mai        71.40 294 eP      P        07 04 41.2 +0.3
      comp=Z,111nm,1.4s
CHTO  Chiang Mai        71.40 294 eP      P        07 04 41.2 +0.3
CHTO                              pmax    pmax
      comp=Z,111nm,1.4s
CHTO  Chiang Mai        71.40 294 P       P        07 04 40.6 -0.3
      SNR=45
CHTO  Chiang Mai        71.40 294 P       P        07 04 42.3 +1.4
      comp=Z,279nm,2.0s
HIA   Hailar            71.70 331 eP      P        07 04 42.4 +0.3
      comp=Z,88nm,1.2s
HIA   Hailar            71.70 331c iP     P        07 04 42.4 +0.3
HIA                               pmax    pmax
      comp=Z,60nm,1.2s
ZEA   Zeya              71.74 337 eP      P        07 04 42.9 +0.8
ZEA                               pmax    pmax
      comp=E,190nm,2.0s
ZEA                               pmax    pmax
      comp=N,260nm,1.6s
ZEA                               pmax    pmax
      comp=Z,300nm,1.4s
ZEA                               pmax    pmax
      comp=Z,2µm,9.0s
CD2   Chengdu           71.80 308 P       P        07 04 43.3 +0.2
CD2                               S       S        07 14 04.8 +0.8
CD2                               pmax    pmax
      comp=Z,140nm,0.8s
CD2                               pmax    pmax
      comp=Z,2µm,8.0s
CD2                               LR      LR
      comp=Z,5µm,17.9s
CD2                               LR      LR
      comp=Z,5µm,18.4s
CD2                               LR      LR
      comp=Z,4µm,16.4s
LZH   Lanzhou           73.98 312 ⇓P      P        07 04 58.2 +2.2
LZH                               pP      pwP      07 05 01.8 -1.7
LZH                               sP      sP       07 05 03.9 +6.0
LZH                               pmax    pmax
      comp=Z,120nm,1.6s
LZH                               pmax    pmax
      comp=Z,510nm,4.9s
LZH                               LR      LR
      comp=Z,2µm,17.7s
LZH                               LR      LR
      comp=Z,2µm,17.7s
LZH                               LR      LR
      comp=Z,2µm,18.6s
SEY   Seymchan          74.05 354⇓iP      P        07 04 56.0 +0.3
SEY   Seymchan          74.05 354 P       P        07 04 55.0 -0.7
      comp=Z,8.0nm,0.7s
SII   Sitkinak Islan    75.04  22 eP      P        07 05 02.3 +0.7
      comp=Z,185nm,1.2s
OHAK  Old Harbor        75.86  22 eP      P        07 05 05.5 -0.7
      comp=Z,87nm,1.0s
GAMB  Gambell           76.36  10 eP      P        07 05 09.5 +0.6
      comp=Z,157nm,1.0s
GAMB                              LR      LR
      comp=Z,6µm,21.0s
CIT   Chita             76.49 330 eP      P        07 05 09.9 -0.1
CIT                               e                07 05 25.3
CIT                               pmax    pmax
      comp=Z,248nm,1.8s
KDAK  Kodiak Island     76.54  22 eP      P        07 05 10.4 +0.4
      comp=Z,79nm,1.1s
KDAK  Kodiak Island     76.54  22 eP      P        07 05 10.4 +0.4
KDAK                              pmax    pmax
      comp=Z,79nm,1.1s
KDAK  Kodiak Island     76.54  22 P       P        07 05 10.0  0.0
      comp=Z,41nm,0.9s,baz=237,slow=0.5,SNR=13
YAK   Yakutsk           77.56 344 eP      P        07 05 13.5 -2.2
YAK                               e                07 05 19.9
YAK                               e*PP    PcP      07 05 24.4 -1.5
YAK                               e                07 08 18.3
YAK                               eS      S        07 15 03.5 -3.5
YAK                               e*SS    SKKSac   07 15 30.8 +1.1
YAK                               e                07 15 48.9
YAK                               pmax    pmax
      comp=Z,46nm,1.1s
YAK                               pmax    pmax
      comp=N,14nm,1.2s
YAK                               pmax    pmax
      comp=E,11nm,1.3s
YAK                               pmax    pmax
      comp=Z,234nm,2.4s
YAK                               pmax    pmax
      comp=N,110nm,2.4s
YAK                               pmax    pmax
      comp=E,170nm,2.8s
YAK                               smax    smax
      comp=N,680nm,8.3s
YAK                               smax    smax
      comp=E,359nm,7.7s
YAK                               MLR     MLR
      comp=Z,3µm,17.0s
YAK                               MLR     MLR
      comp=N,2µm,17.0s
YAK                               MLR     MLR
      comp=E,2µm,19.0s
ULN   Ulaanbaatar       77.59 324 eP      P        07 05 16.6 +0.1
      comp=E,171nm,1.4s
ULN   Ulaanbaatar       77.59 324c iP     P        07 05 16.4  0.0
ULN                               pmax    pmax
      comp=Z,130nm,1.7s
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ULN   Ulaanbaatar       77.59 324 P       P        07 05 17.2 +0.8
      SNR=40
SONA0 Songino Array     77.95 324 eP      P        07 05 18.3 -0.1
SONM  Songino Array     77.95 324 P       P        07 05 18.3 -0.1
      comp=Z,24nm,1.0s,baz=140,slow=5.8,SNR=52
SONA1 Songino Array     77.95 324 eP      P        07 05 18.4 -0.1
SVW2  Sparrevohn        78.02  18 eP      P        07 05 18.6 +0.2
      comp=Z,150nm,1.2s
HOM   Homer             78.24  21 eP      P        07 05 20.3 +0.8
      comp=Z,362nm,1.0s
HOM                               LR      LR
      comp=Z,4µm,20.0s
GTA   Gaotai            78.28 314 ⇑P      P        07 05 20.9 +0.4
GTA                               pP      pwP      07 05 26.8 -1.2
GTA                               sP      PcP      07 05 29.8 -0.1
GTA                               pmax    pmax
      comp=Z,62nm,1.3s
GTA                               pmax    pmax
      comp=Z,460nm,5.6s
GTA                               LR      LR
      comp=Z,3µm,19.4s
GTA                               LR      LR
      comp=Z,3µm,18.1s
GTA                               LR      LR
      comp=Z,3µm,20.0s
ANM   Nome              78.32  13 eP      P        07 05 20.6 +0.7
      comp=Z,99nm,1.3s
ANM                               LR      LR
      comp=Z,5µm,20.0s
ANM   Nome              78.32  13 eP      P        07 05 20.6 +0.7
ANM                               pmax    pmax
      comp=Z,99nm,1.3s
ANM                               MLR     MLR
      comp=Z,5µm,20.0s
RSO   Redoubt South     78.45  20 eP      P        07 05 20.2 -0.8
BILL  Bilibino          78.54   0 eP      P        07 05 20.6 -0.4
      comp=Z,183nm,1.1s
BILL  Bilibino          78.54   0c iP     P        07 05 21.1  0.0
BILL                              pmax    pmax
      comp=Z,177nm,1.7s
BRLK  Bradley Lake      78.58  21 eP      P        07 05 21.9 +0.4
      comp=Z,96nm,1.0s
BRLK                              LR      LR
      comp=Z,4µm,20.0s
QSPA  South Pole Qui    79.30 180 eP      P        07 05 26.0 +0.3
      comp=Z,654nm,1.8s
SEW   Seward            79.34  21 eP      P        07 05 25.7 +0.1
      comp=Z,53nm,1.0s
SHL   Shillong          79.70 299 eP      P        07 05 29.9 +1.3
      comp=Z,324nm,1.5s
SHL   Shillong          79.70 299 eP      P        07 05 29.9 +1.3
SHL                               pmax    pmax
      comp=Z,324nm,1.5s
SHL   Shillong          79.70 299 eP      P        07 05 27.0 -1.6
SUA   Susitna One       79.86  20 eP      P        07 05 28.2 -0.3
      comp=Z,198nm,1.6s
BOD   Bodaibo           79.90 335 eP      P        07 05 27.7 -1.0
BOD                               pmax    pmax
      comp=Z,59nm,1.8s
RC01  Rabbit Creek A    79.93  21 eP      P        07 05 29.1 +0.3
      comp=Z,62nm,1.2s
PPLA  Purkeypile        80.43  18 eP      P        07 05 32.8 +1.1
      comp=Z,48nm,1.3s
PMR   Palmer            80.49  20 eP      P        07 05 31.2 -0.6
      comp=Z,54nm,1.0s
PMR   Palmer            80.49  20 eP      P        07 05 31.2 -0.6
PMR                               pmax    pmax
      comp=Z,54nm,1.0s
KNK   Knik Glacier      80.60  21 eP      P        07 05 32.6 +0.2
      comp=Z,72nm,1.1s
GLI   Glacier Island    80.72  22 eP      P        07 05 33.0 -0.1
      comp=Z,104nm,1.3s
CAST  Castle Rocks      80.85  18 eP      P        07 05 33.2 -0.6
      comp=Z,50nm,0.9s
SML   Sawmill           80.92  20 eP      P        07 05 34.5 +0.3
      comp=Z,117nm,1.2s
SML   Sawmill           80.92  20 eP      P        07 05 34.5 +0.3
SML                               pmax    pmax
      comp=Z,117nm,1.2s
EYAK  Cordova Ski Ar    80.99  22 eP      P        07 05 33.1 -1.4
      comp=Z,119nm,1.3s
ZAK   Zakamensk         81.00 325 eP      P        07 05 32.8 -2.1
ZAK                               pmax    pmax
      comp=Z,43nm,1.3s
DIV   Divide            81.37  22 eP      P        07 05 37.1 +0.5
      comp=Z,116nm,1.3s
DIV                               LR      LR
      comp=Z,4µm,20.0s
IRK   Irkutsk           81.37 327 eP      P        07 05 36.2 -0.5
IRK                               pmax    pmax
      comp=Z,106nm,3.0s
RPN   Rapa Nui          81.39 116 eP      P        07 05 37.3 -0.2
      comp=Z,718nm,2.0s
RPN   Rapa Nui          81.39 116 P       P        07 05 38.0 +0.6
      comp=Z,73nm,0.9s,baz=297,slow=6.9,SNR=4.6
HMT   Hamilton          81.42  23 eP      P        07 05 36.9  0.0
      comp=Z,137nm,1.2s
TLY   Talaya            81.43 326c iP     P        07 05 36.8 -0.3
TLY   Talaya            81.43 326 P       P        07 05 37.0  0.0
      SNR=26
TLY   Talaya            81.43 326 P       P        07 05 36.0 -1.1
      comp=Z,5.6nm,0.7s,baz=192,slow=2.9,SNR=32
TRF   Thorofare Moun    81.43  19 eP      P        07 05 36.5 -0.5
      comp=Z,29nm,1.0s
TRF                               LR      LR
      comp=Z,5µm,21.0s
LSA   Lhasa             81.54 302 P       P        07 05 40.2 +1.4
LSA                               pmax    pmax
      comp=Z,29nm,1.4s
LSA   Lhasa             81.54 302 eP      P        07 05 40.6 +1.8
      comp=Z,183nm,1.8s
KLU   Klutina           81.55  22 eP      P        07 05 38.2 +0.6
      comp=Z,111nm,1.2s
BPAW  Bear Paw Mtn.     81.68  18 eP      P        07 05 37.5 -0.7
      comp=Z,74nm,1.6s
RDOG  Red Dog Mine      81.84  12 eP      P        07 05 39.4 +0.5
      comp=Z,166nm,1.0s
RND   Reindeer          81.86  19 eP      P        07 05 38.9 -0.3
      comp=Z,52nm,1.2s
RND   Reindeer          81.86  19 eP      P        07 05 38.9 -0.3
RND                               pmax    pmax
      comp=Z,52nm,1.2s
MCK   McKinley          82.06  19 eP      P        07 05 40.0 -0.2
      comp=Z,234nm,1.8s
MCK   McKinley          82.06  19 eP      P        07 05 40.0 -0.2
MCK                               pmax    pmax
      comp=Z,234nm,1.8s
DHY   Denali Highway    82.11  20 eP      P        07 05 40.9 +0.2
      comp=Z,85nm,1.4s
DHY                               LR      LR
      comp=Z,4µm,20.0s
BWN   Browne            82.20  18 eP      P        07 05 42.8 +2.0
      comp=Z,119nm,1.1s
IM3   Indian Mountai    82.30  16 eP      P        07 05 40.8 -0.5
HARP  HAARP             82.43  21 eP      P        07 05 42.8 +0.7
      comp=Z,65nm,1.0s
MLY   Manley            82.43  17 eP      P        07 05 42.1  0.0
      comp=Z,95nm,1.6s
PAX   Paxson            82.69  21 PFAKE            07 05 50.0 +6.4
PAX                               LR      LR
      comp=Z,3µm,21.0s
YKU2  Yakutat           82.75  25 PFAKE            07 05 50.0 +6.3
YKU2                              LR      LR
      comp=Z,7µm,21.0s
WRH   Wood River Hil    82.84  19 eP      P        07 05 43.8 -0.4
      comp=Z,45nm,1.1s
KCPM  Cahto Peak        82.87  47 eP      P        07 05 45.2 +0.1
      comp=Z,83nm,1.3s
MOY   Mondy             82.87 326 eP      P        07 05 44.9 +0.1
MOY                               pmax    pmax
      comp=Z,77nm,3.2s
KMRM  Mail Ridge        82.96  47 eP      P        07 05 46.7 +1.3
      comp=Z,69nm,1.2s
HOPS  Hopland Field     83.00  48 eP      P        07 05 45.2 -0.4
      comp=Z,67nm,1.3s
MDM   Murphy Dome       83.14  18 eP      P        07 05 45.1 -0.6
      comp=Z,113nm,1.4s
GDXM  Geysers           83.14  49 eP      P        07 05 45.7 -0.8
      comp=Z,23nm,1.1s
HDA   Harding Lake      83.16  19 eP      P        07 05 45.7 -0.1
      comp=Z,141nm,1.2s
HDA   Harding Lake      83.16  19 P       P        07 05 45.2 -0.7
      baz=227,SNR=40
KHMM  Horse Mountain    83.17  46 eP      P        07 05 46.1 -0.6
      comp=Z,57nm,1.2s
TCOL  CIGO, UAF Yank    83.19  18 P       P        07 05 45.0 -1.0
      baz=226,SNR=14
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COLA  College           83.19  18 eP      P        07 05 45.5 -0.5
      comp=Z,63nm,1.0s
COLA                              LR      LR
      comp=Z,4µm,20.0s
COLA  College           83.19  18c iP     P        07 05 45.0 -1.0
COLA                              pmax    pmax
      comp=Z,24nm,0.9s
SIT   Sitka             83.31  28 PFAKE            07 06 00.0  +13
SIT                               LR      LR
      comp=Z,6µm,20.0s
RIDG  Independ'e Rid    83.41  20 eP      P        07 05 47.7 +0.5
      comp=Z,90nm,1.0s
ILAR  Eielson Array     83.43  19 P       P        07 05 46.7 -0.5
      comp=Z,22nm,0.8s,baz=225,slow=5.7,SNR=44
ILB   Eielson Array     83.43  19 eP      P        07 05 46.7 -0.5
IL1   Eielson Array     83.43  19 eP      P        07 05 45.5 -1.7
POKR  Poker Plat Res    83.49  18 P       P        07 05 46.5 -1.0
      baz=227,SNR=23
SAO   San Andreas Ge    83.49  51 eP      P        07 05 47.3 -0.9
      comp=Z,23nm,1.1s
SAO   San Andreas Ge    83.49  51 eP      P        07 05 47.3 -0.9
SAO                               pmax    pmax
      comp=Z,23nm,1.1s
O02D  Mt. Diablo Mer    83.61  47 P       P        07 05 47.8 -1.0
      baz=250
TAPN  Taplejung         83.79 299 eP      P        07 05 50.3  0.0
      comp=Z,482nm,1.7s
J01E  Myrtle Point      83.83  44 P       P        07 05 49.6 -0.1
      baz=249
SCRK  Sand Creek        83.85  20 eP      P        07 05 49.6  0.0
      comp=Z,62nm,1.1s
K02D  Willamette Mer    83.85  45 P       P        07 05 49.6 -0.4
      baz=250,SNR=5.7
WDC   Whiskeytown Da    83.92  47 eP      P        07 05 50.8 +0.5
      comp=Z,50nm,1.4s
WDC   Whiskeytown Da    83.92  47 eP      P        07 05 50.8 +0.5
WDC                               pmax    pmax
      comp=Z,50nm,1.4s
ODAN  Odare             83.93 299 eP      P        07 05 50.6 -0.4
      comp=Z,306nm,1.0s
SNCC  San Nicolas Is    83.93  55 P       P        07 05 50.3 -0.3
      baz=253
N02D  Trinity Center    83.94  47 P       P        07 05 50.7 +0.2
      baz=250,SNR=12
M02C  Callahan          83.97  46 P       P        07 05 51.0 +0.3
      baz=250,SNR=9.0
PAGB  Antelope Grade    84.09  52 PFAKE            07 06 00.0 +8.7
PAGB                              LR      LR
      comp=Z,3µm,18.0s
SMMC  Simmler           84.17  53 P       P        07 05 50.9 -0.8
      baz=253
COLD  Coldfoot          84.17  16 eP      P        07 05 52.9 +1.9
      comp=Z,14nm,0.8s
PKM   Mcpherson Peak    84.18  53 P       P        07 05 52.1 +0.1
      baz=253
YBH   Yreka Blue Hor    84.19  46 eP      P        07 05 52.5 +0.7
      comp=Z,44nm,1.0s
HUMO  Hull Mountain     84.31  45 eP      P        07 05 50.9 -1.4
      comp=Z,50nm,1.0s
BESE  Bessie Mountai    84.31  27 eP      P        07 05 51.4 -0.6
      comp=Z,224nm,1.5s
BESE                              LR      LR
      comp=Z,6µm,19.0s
ORV   Oroville          84.34  48 eP      P        07 05 51.7 -0.8
      comp=Z,34nm,1.4s
ORV   Oroville          84.34  48 eP      P        07 05 51.7 -0.8
ORV                               pmax    pmax
      comp=Z,34nm,1.4s
PRP   Porcupine Dome    84.36  19 eP      P        07 05 51.6 -0.5
      comp=Z,17nm,1.1s
O03E  Paynes Creek      84.36  47 P       P        07 05 52.2 -0.5
      baz=251,SNR=20
JIS   Juneau Island     84.37  28 PFAKE            07 06 00.0 +7.9
JIS                               LR      LR
      comp=Z,7µm,19.0s
HYT   Haines Junctio    84.38  25 eP      P        07 05 51.9 -0.5
      comp=Z,103nm,1.5s
KNGR  Kungurtug, Tuv    84.39 324c iP     P        07 05 52.1 -0.5
WRAK  Wrangell Islan    84.41  30 eP      P        07 05 50.8 -1.6
      comp=Z,101nm,1.2s
AFDM  Forest Hills D    84.54  49 eP      P        07 05 53.6  0.0
      comp=Z,47nm,1.1s
SKAG  Skagway           84.56  26 eP      P        07 05 53.6 +0.5
      comp=Z,188nm,1.4s
SKAG                              LR      LR
      comp=Z,7µm,19.0s
L04D  Klamath Falls     84.64  45 P       P        07 05 53.9 -0.2
      baz=250,SNR=9.5
RAMN  Ramite            84.64 299 eP      P        07 05 54.1 -0.5
      comp=Z,340nm,1.7s
CMB   Columbia Colle    84.69  50 eP      P        07 05 53.5 -0.8
      comp=Z,29nm,1.3s
CMB   Columbia Colle    84.69  50 eP      P        07 05 53.5 -0.8
CMB                               pmax    pmax
      comp=Z,29nm,1.3s
M04C  Macdoel           84.82  46 P       P        07 05 54.9 -0.1
      baz=251,SNR=18
CIS   Catalina Islan    84.87  55 P       P        07 05 54.9 -0.4
      baz=254
VOG   Valley Oaks Go    84.94  52 P       P        07 05 54.9 -0.6
      baz=253
ARVC  Arvin             85.03  53 P       P        07 05 55.8 -0.2
      baz=253,SNR=6.7
VES   Vestal, Richgr    85.03  52 P       P        07 05 55.5 -0.5
      baz=253,SNR=8.3
FMP   Fort Macarthur    85.05  55 P       P        07 05 55.1 -1.0
      baz=254
I04A  Tendick Farm,     85.09  44 P       P        07 05 56.4 +0.2
      baz=250
J04D  Umpqua Nationa    85.11  45 P       P        07 05 56.4 -0.1
      baz=250,SNR=7.6
H04D  Lebanon           85.12  43 P       P        07 05 56.0 -0.3
      baz=250
FYU   Fort Yukon        85.14  18 eP      P        07 05 56.7 +0.9
      comp=Z,49nm,1.4s
FYU                               LR      LR
      comp=Z,4µm,22.0s
K04D  Chiloquin, OR     85.16  45 P       P        07 05 56.3 -0.4
      baz=251
DECC  Green Verdugo     85.17  54 P       P        07 05 56.4 -0.4
      baz=254
JIRN  Jiri              85.17 299 eP      P        07 05 56.9 -0.5
      comp=Z,957nm,1.6s
BEKR  Beckworth         85.27  48 eP      P        07 05 55.4 -2.0
      comp=Z,46nm,1.3s
MWC   Mount Wilson      85.38  54 eP      P        07 05 58.1 +0.1
      comp=Z,75nm,1.5s
WHY   Whitehorse        85.38  25 eP      P        07 05 58.1 +0.8
      comp=Z,86nm,1.8s
WHY                               LR      LR
      comp=Z,8µm,21.0s
ISA   Isabella, Lake    85.46  53 eP      P        07 05 58.7 +0.4
      comp=Z,32nm,1.1s
ISA   Isabella, Lake    85.46  53 P       P        07 05 57.7 -0.6
      baz=254,SNR=12
F04D  Rainier, OR       85.47  42 P       P        07 05 57.8 -0.2
      baz=250
GUN   Gumba             85.50 299 eP      P        07 05 58.3 -0.7
      comp=Z,454nm,1.3s
DAWY  Dawson            85.51  21 eP      P        07 05 58.1 +0.2
      comp=Z,138nm,1.5s
WAKR  Walker            85.54  50 eP      P        07 05 58.8  0.0
      comp=Z,57nm,1.2s
MDPB  Devils Postpil    85.56  51 eP      P        07 05 59.2 +0.2
      comp=Z,44nm,1.1s
PNTR  Pine Nut          85.60  49 eP      P        07 05 59.6 +0.6
      comp=Z,36nm,1.1s
OMMB  Old Mammoth Mi    85.61  51 eP      P        07 05 59.6 +0.3
      comp=Z,35nm,1.2s
TIXI  Tiksi             85.61 349 eP      P        07 05 57.5 -0.7
      comp=Z,81nm,1.1s
TIXI                              eP      P        07 05 57.9 -0.2
TIXI  Tiksi             85.61 349c iP     P        07 05 57.4 -0.7
TIXI                              pmax    pmax
      comp=Z,99nm,1.7s
TIXI  Tiksi             85.61 349 P       P        07 05 57.9 -0.2
      comp=Z,27nm,1.2s,baz=121,slow=8.0,SNR=40
EDW2  Edwards Air Fo    85.61  53 P       P        07 05 58.8 -0.2
      baz=254,SNR=15
VCNR  Virginia City     85.62  49 eP      P        07 05 59.9 +0.7
      comp=Z,17nm,1.1s
BFSC  Mount Baldy Ra    85.70  54 P       P        07 05 59.0 -0.6
      baz=254,SNR=21
J05D  Fort Rock, OR     85.73  45 P       P        07 05 59.7 +0.1
      baz=251,SNR=18
MLAC  Mammoth, Mammo85.74  51 P       P        07 05 59.6 -0.3
      baz=253,SNR=9.3
PALK  Pallekele         85.76 278 eP      P        07 06 02.6 +2.4
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	comp=Z,84nm,1.3s						
PALK	**Pallekele**	85.76	278	P	P	07 06 03.4	+3.1
	SNR=8.0						
109C	**Camp Elliot, M**	85.78	56	P	P	07 05 59.0	-0.9
	baz=254						
CPE	**Camp Elliot**	85.78	56	*e*P	P	07 05 58.2	-1.7
	comp=Z,50nm,1.5s						
PKI	**Pulchoki**	85.82	299	*e*P	P	07 06 00.1	-0.5
	comp=Z,577nm,1.6s						
PKIN	**Phulchoki**	85.83	299	*e*P	P	07 06 00.1	-0.5
YERR	**Yerington**	85.83	49	*e*P	P	07 06 00.5	+0.3
	comp=Z,23nm,1.3s						
MURC	**Murrieta**	85.90	55	P	P	07 05 59.7	-0.8
	baz=254						
E04D	**Cinebar**	85.93	41	P	P	07 06 00.5	+0.2
	baz=250						
D03D	**Eldon**	85.93	40	P	P	07 06 00.0	-0.2
	baz=250						
PAHR	**Pah Rah Range**	85.94	49	*e*P	P	07 06 00.9	+0.2
	comp=Z,37nm,1.2s						
PAHR				LR	LR		
	comp=Z,3µm,18.0s						
MOD	**Modoc Plateau**	85.94	46	*e*P	P	07 05 59.4	-1.3
	comp=Z,27nm,1.0s						
CWC	**Cottonwood Cre**	85.98	52	P	P	07 06 00.2	-0.8
	baz=254						
KKN	**Kakani**	85.98	299	*e*P	P	07 06 01.0	-0.3
	comp=Z,316nm,1.1s						
I05D	**Terrebonne, OR**	86.00	44	P	P	07 06 00.6	-0.2
	baz=251						
LRMC	**Laurel Mtn Rad**	86.03	53	P	P	07 06 00.8	-0.4
	baz=254						
TIN	**Tinemaha, Big**	86.04	51	P	P	07 06 00.4	-0.8
	baz=254						
BAR	**Barrett**	86.08	56	*e*P	P	07 06 00.4	-1.0
	comp=Z,18nm,1.1s						
DMN	**Daman**	86.09	299	*e*P	P	07 06 01.7	-0.1
	comp=Z,412nm,1.1s						
PINE	**Pine Mountain**	86.10	44	*e*P	P	07 06 02.1	+0.7
	comp=Z,37nm,0.9s						
RYN	**Ryan**	86.27	50	*e*P	P	07 06 01.4	-0.9
	comp=Z,25nm,1.1s						
BBRC	**Big Bear Solar**	86.30	54	P	P	07 06 02.1	-0.6
	baz=254						
G05D	**Wamic, OR**	86.31	43	P	P	07 06 01.8	-0.5
	baz=251						
DAC	**Darwin (Calif)**	86.31	52	*e*P	P	07 06 02.2	-0.5
	comp=Z,34nm,1.3s						
DAC	**Darwin (Calif)**	86.31	52	*e*P	P	07 06 02.2	-0.5
DAC				pmax	pmax		
	comp=Z,34nm,1.3s						
MPMC	**Manual Prospec**	86.33	52	P	P	07 06 02.2	-0.6
	baz=254,SNR=17						
MONP2	**Monument Peak**	86.34	56	P	P	07 06 01.8	-1.1
	baz=255,SNR=15						
NV01	**Mina Array Sit**	86.37	50	*e*P	P	07 06 02.0	-0.9
NVAR	**Mina Array Bea**	86.37	50	P	P	07 06 02.5	-0.4
	comp=Z,23nm,1.0s,baz=234,slow=7.2,SNR=39						
RRX	**Edison Barstow**	86.40	54	P	P	07 06 02.3	-0.7
	baz=254						
F05D	**White Salmon**	86.42	42	P	P	07 06 02.2	-0.5
	baz=251						
DLBC	**Dease Lake**	86.46	29	PFAKE		07 06 10.0	+7.3
DLBC				LR	LR		
	comp=Z,5µm,19.0s						
NV11	**Mina Array Sit**	86.48	50	*e*P	P	07 06 02.9	-0.5
	comp=Z,4.1nm,1.1s						
PFO	**Pinyon Flats O**	86.50	55	*e*P	P	07 06 03.8	+0.3
	comp=Z,28nm,1.3s						
PFO				LR	LR		
	comp=Z,4µm,18.0s						
PFO	**Pinyon Flats O**	86.50	55	*e*P	P	07 06 03.8	+0.3
PFO				pmax	pmax		
	comp=Z,28nm,1.3s						
PFO				MLR	MLR		
	comp=Z,4µm,18.0s						
PFO	**Pinyon Flats O**	86.50	55	P	P	07 06 03.3	-0.3
	baz=255,SNR=9.2						
XPFO	**Pion Flat**	86.50	55	*e*P	P	07 06 01.4	-2.2
	comp=Z,28nm,1.3s						
XPFO				LR	LR		
	comp=Z,4µm,18.0s						
D05A	**Enumclaw**	86.51	41	*e*P	P	07 06 04.1	+0.9
	comp=Z,94nm,1.3s						
IKP	**In-Ko-Pah, Jac**	86.53	56	P	P	07 06 03.6	-0.1
	baz=255						
A04D	**Lummi Island**	86.58	39	P	P	07 06 03.8	+0.4
	baz=250						
GSC	**Goldstone, Bar**	86.67	53	*e*P	P	07 06 04.6	+0.3
	comp=Z,22nm,1.2s						
GSC	**Goldstone, Bar**	86.67	53	P	P	07 06 04.1	-0.2
	baz=254,SNR=6.7						
GRAC	**Grapevine Rang**	86.69	52	P	P	07 06 04.3	0.0
	baz=254,SNR=13						
KVN	**Kaiserville**	86.70	49	*e*P	P	07 06 03.9	-0.6
	comp=Z,26nm,1.2s						
KVN	**Kaiserville**	86.70	49	*e*P	P	07 06 03.9	-0.6
KVN				pmax	pmax		
	comp=Z,26nm,1.2s						
B05A	**Bryant**	86.81	40	P	P	07 06 04.4	-0.1
	baz=250						
SWSC	**Sam W. Stewart**	86.86	56	P	P	07 06 04.9	-0.2
	baz=255,SNR=10.0						
HEC	**Hector,Ludlow**	86.91	54	P	P	07 06 05.0	-0.5
	baz=255,SNR=12						
FURC	**Furnace Creek,**	86.93	52	P	P	07 06 05.1	-0.3
	baz=254,SNR=11						
BELC	**Belle Mtn. Jos**	86.97	55	P	P	07 06 05.6	-0.3
	baz=255,SNR=22						
I07A	**Izee**	87.17	44	*e*P	P	07 06 06.9	+0.3
	comp=Z,44nm,1.1s						
SHOC	**Shoshone, Teco**	87.24	53	P	P	07 06 07.0	0.0
	baz=255						
WVOR	**Wild Horse Val**	87.28	46	*e*P	P	07 06 06.8	-0.4
	comp=Z,46nm,1.2s						
WVOR	**Wild Horse Val**	87.28	46	*e*P	P	07 06 06.8	-0.4
WVOR				pmax	pmax		
	comp=Z,46nm,1.2s						
BC3	**Big Chuckawall**	87.32	55	P	P	07 06 07.6	+0.1
	baz=255,SNR=8.4						
LTY	**Liberty**	87.39	41	*e*P	P	07 06 06.2	-1.3
	comp=Z,32nm,1.3s						
TUQ	**Turquoise Moun**	87.40	53	P	P	07 06 07.5	-0.4
	baz=255						
DANN	**Dangsing**	87.42	299	*e*P	P	07 06 07.1	-1.3
	comp=Z,143nm,1.1s						
KOLN	**Koldanda**	87.42	299	*e*P	P	07 06 08.0	-0.3
	comp=Z,158nm,1.2s						
GMRC	**Granite Mounta**	87.44	54	P	P	07 06 08.0	-0.2
	baz=255,SNR=14						
F07A	**Phinny Hill Vi**	87.44	42	*e*P	P	07 06 07.5	-0.1
	comp=Z,52nm,1.3s						
C06D	**Leavenworth**	87.46	40	P	P	07 06 08.0	+0.3
	baz=251						
TPNV	**Topopah Spring**	87.53	52	*e*P	P	07 06 08.3	-0.3
	comp=Z,49nm,1.4s						
TPNV				LR	LR		
	comp=Z,3µm,19.0s						
TPNV	**Topopah Spring**	87.53	52	*e*P	P	07 06 08.3	-0.3
TPNV				pmax	pmax		
	comp=Z,49nm,1.4s						
TPNV				MLR	MLR		
	comp=Z,3µm,19.0s						
TPNV	**Topopah Spring**	87.53	52	P	P	07 06 07.8	-0.8
	baz=255						
J08A	**Circle Bar Ran**	87.67	45	*e*P	P	07 06 08.5	-0.5
GLA	**Glamis**	87.68	56	*e*P	P	07 06 08.9	-0.3
	comp=Z,52nm,1.1s						
GLA				LR	LR		
	comp=Z,4µm,18.0s						
GLA	**Glamis**	87.68	56	P	P	07 06 09.3	+0.1
	baz=256,SNR=9.5						
IRM	**Iron Mountain**	87.69	55	P	P	07 06 09.2	-0.1
	baz=256,SNR=24						
BMN	**Battle Mountai**	87.74	48	*e*P	P	07 06 08.6	-0.9
	comp=Z,44nm,1.6s						
BMN	**Battle Mountai**	87.74	48	*e*P	P	07 06 08.6	-0.9
BMN				pmax	pmax		
	comp=Z,44nm,1.6s						
HAWA	**Hanford**	87.86	42	*e*P	P	07 06 10.0	+0.3
	comp=Z,32nm,1.0s						
G08A	**Pilot Rock**	87.91	43	*e*P	P	07 06 10.2	+0.1
	comp=Z,33nm,1.0s						
LDFC	**Landfair**	87.95	54	*e*P	P	07 06 11.2	+0.7
	comp=Z,82nm,1.1s						
PYUN	**Piuthan**	88.03	299	*e*P	P	07 06 09.7	-1.5
	comp=Z,126nm,1.1s						
Y12C	**Blythe**	88.09	55	*e*P	P	07 06 11.8	+0.7
	comp=Z,41nm,1.1s						
Y12C				LR	LR		
	comp=Z,3µm,18.0s						
Y12C	**Blythe**	88.09	55	P	P	07 06 11.3	+0.2
	baz=256,SNR=17						
E08A	**Dider Farm, El**	88.20	42	*e*P	P	07 06 11.7	+0.4
	comp=Z,62nm,1.3s						
SHPR	**Sheep Range**	88.27	53	*e*P	P	07 06 12.0	-0.1
	comp=Z,62nm,1.5s						
WMQ	**Urumqi**	88.33	315	P	P	07 06 12.5	+0.4
WMQ				pP	pwP	07 06 18.7	-0.9
WMQ				PP	PP	07 09 39.6	-0.1
WMQ				SKS	SKSac	07 16 35.1	-6.3
WMQ				SS	SS	07 22 44.9	-2.5
WMQ				pmax	pmax		
	comp=Z,130nm,1.7s						
WMQ				LR	LR		
	comp=Z,4µm,17.9s						
WMQ				LR	LR		
	comp=Z,4µm,22.9s						
WMQ				LR	LR		
	comp=Z,4µm,21.3s						
WMQ	**Urumqi**	88.33	315	*e*P	P	07 06 13.1	+1.0
	comp=Z,339nm,1.8s						
WMQ	**Urumqi**	88.33	315	*e*P	P	07 06 13.1	+1.0
WMQ				pmax	pmax		
	comp=Z,339nm,1.8s						
R11A	**Troy Canyon, C**	88.41	51	*e*P	P	07 06 12.7	0.0
	comp=Z,44nm,1.7s						
R11A	**Troy Canyon, C**	88.41	51	P	P	07 06 12.5	-0.3
	baz=255,SNR=14						
D08A	**Wollman Farm,**	88.46	42	*e*P	P	07 06 12.0	-0.6
	comp=Z,31nm,1.3s						
113A	**Mohawk Valley,**	88.47	56	*e*P	P	07 06 12.9	0.0
	comp=Z,40nm,1.4s						
113A				LR	LR		
	comp=Z,4µm,19.0s						
SRIG	**Santa Rosalia**	88.52	62	*e*P	P	07 06 11.3	-2.0
	comp=Z,117nm,1.9s						
SRIG				*e*S	S	07 16 59.5	-0.4
PDMCI	**Parker Dam,Lak**	88.53	55	P	P	07 06 13.1	0.0
	baz=256,SNR=14						
B08A	**Colville Reser**	88.59	40	*e*P	P	07 06 11.9	-1.3
	comp=Z,23nm,1.3s						
E09A	**Wood Farm, Sta**	88.81	42	*e*P	P	07 06 14.6	+0.4
	comp=Z,30nm,1.1s						
BMO	**Blue Mountains**	88.90	44	*e*P	P	07 06 14.0	-0.8
	comp=Z,33nm,1.3s						
BMO	**Blue Mountains**	88.90	44	*e*P	P	07 06 14.0	-0.8
BMO				pmax	pmax		
	comp=Z,33nm,1.3s						
W13A	**Hualapai Mount**	88.93	54	*e*P	P	07 06 16.0	+0.7
	comp=Z,46nm,1.4s						
214A	**Organ Pipe Nat**	89.07	57	P	P	07 06 15.7	-0.2
	baz=257						
C09A	**Chrisman Ranch**	89.10	41	*e*P	P	07 06 14.8	-0.7
	comp=Z,19nm,1.3s						
F10A	**Beach Ranch, E**	89.27	43	*e*P	P	07 06 15.6	-0.9
	comp=Z,83nm,1.5s						
ELK	**Elko**	89.28	48	*e*P	P	07 06 16.6	-0.3
	comp=Z,26nm,1.4s						
ELK	**Elko**	89.28	48	*e*P	P	07 06 16.6	-0.3
ELK				pmax	pmax		
	comp=Z,26nm,1.4s						
Y14A	**Wickenburg**	89.36	55	*e*P	P	07 06 17.8	+0.6
	comp=Z,24nm,1.3s						
Y14A				LR	LR		
	comp=Z,2µm,18.0s						
MFID	**Camas Ranch**	89.54	46	*e*P	P	07 06 17.5	-0.3
	comp=Z,46nm,1.4s						
PSUT	**Pine Spring**	89.77	51	*e*P	P	07 06 19.7	+0.5
	comp=Z,27nm,1.1s						
HYB	**Hyderabad**	89.80	288	*i* P	P	07 06 20.0	+0.5
INK	**Inuvik**	89.82	19	*e*P	P	07 06 18.7	+0.3
	comp=Z,55nm,1.7s						
INK				LR	LR		
	comp=Z,6µm,22.0s						
INK	**Inuvik**	89.82	19	P	P	07 06 17.8	-0.6
	comp=Z,5.4nm,0.8s,baz=266,slow=4.2,SNR=10						
LCMT	**Little Creek M**	89.88	52	*e*P	P	07 06 20.2	+0.6
	comp=Z,37nm,1.3s						
CCUT	**Cedar City**	89.92	52	*e*P	P	07 06 20.2	+0.3
	comp=Z,30nm,1.1s						
NEW	**Newport**	89.97	41	*e*P	P	07 06 18.1	-1.6
	comp=Z,21nm,1.2s						
NEW	**Newport**	89.97	41	*e*P	P	07 06 18.1	-1.6
NEW				pmax	pmax		
	comp=Z,21nm,1.2s						
NEW	**Newport**	89.97	41	P	P	07 06 19.3	-0.3
	baz=254						
HSIG		90.00	61	*e*P	P	07 06 20.2	0.0
	comp=Z,49nm,1.4s						
SZCU	**Shurtz Canyon**	90.14	52	*e*P	P	07 06 21.5	+0.6
	comp=Z,45nm,1.2s						
DGZ	**Jazzator, Alta**	90.16	321	*ce*P	P	07 06 20.2	-0.4
DGZ				pmax	pmax		
	comp=Z,20nm,1.3s						
KNB	**Kanab**	90.21	52	*e*P	P	07 06 22.1	+0.9
	comp=Z,62nm,1.3s						
KNB	**Kanab**	90.21	52	*e*P	P	07 06 22.2	+0.9
KNB				pmax	pmax		
	comp=Z,62nm,1.3s						
U15A	**North Rim**	90.50	53	*e*P	P	07 06 22.7	0.0
	comp=Z,38nm,1.1s						
HLID	**Hailey**	90.57	46	*e*P	P	07 06 22.6	-0.2
	comp=Z,33nm,1.1s						
HLID	**Hailey**	90.57	46	P	P	07 06 22.5	-0.3
	baz=256						
PKCU	**Pink Cliffs**	90.71	52	*e*P	P	07 06 23.9	+0.2
	comp=Z,54nm,1.2s						
X16A	**Lo Mia Camp, P**	90.74	55	*e*P	P	07 06 24.9	+1.1
	comp=Z,16nm,1.0s						
TUC	**Tucson**	90.83	57	*e*P	P	07 06 23.8	-0.3
	comp=Z,16nm,1.3s						
TUC	**Tucson**	90.83	57	*e*P	P	07 06 23.8	-0.3
TUC				pmax	pmax		
	comp=Z,16nm,1.3s						
TUC	**Tucson**	90.83	57	P	P	07 06 23.6	-0.5
	baz=258						
TCRU	**Three Creeks R**	90.86	51	*e*P	P	07 06 25.4	+1.1
	comp=Z,38nm,1.1s						
TCRU				LR	LR		
	comp=Z,4µm,18.0s						
MTPU	**Mount Pierson**	90.94	52	*e*P	P	07 06 25.3	+0.5
	comp=Z,32nm,1.1s						
DUG	**Dugway, Tooele**	90.94	49	*e*P	P	07 06 24.9	+0.4
	comp=Z,34nm,1.4s						
DUG	**Dugway, Tooele**	90.94	49	*e*P	P	07 06 24.9	+0.4
DUG				pmax	pmax		
	comp=Z,34nm,1.4s						
DUG	**Dugway, Tooele**	90.94	49	P	P	07 06 23.9	-0.6
	baz=257						
BGU	**Big Grassy Mou**	90.95	49	*e*P	P	07 06 24.9	+0.4
	comp=Z,25nm,1.1s						
WUAZ	**Wupatki**	91.02	54	*e*P	P	07 06 25.9	+0.9
	comp=Z,26nm,1.1s						
WUAZ	**Wupatki**	91.02	54	P	P	07 06 24.5	-0.5
	baz=258						
MSU	**Marysvale**	91.05	51	*e*P	P	07 06 25.7	+0.6
MSU	**Marysvale**	91.05	51	*e*P	P	07 06 25.7	+0.6
HVU	**Hansel Valley**	91.33	48	*e*P	P	07 06 26.2	-0.1
	comp=Z,44nm,1.1s						
HVU	**Hansel Valley**	91.33	48	*e*P	P	07 06 26.2	-0.1
HVU				pmax	pmax		
	comp=Z,44nm,1.1s						
NLU	**North Lily Min**	91.44	50	*e*P	P	07 06 25.8	-1.1
	comp=Z,22nm,1.0s						
SPUT	**South Promonto**	91.46	48	*e*P	P	07 06 25.9	-1.0
	comp=Z,48nm,1.5s						
MSO	**Missoula**	91.69	43	P	P	07 06 27.5	-0.3
	baz=256						
MPU	**Maple Canyon**	91.78	50	*e*P	P	07 06 28.9	+0.4
	comp=Z,40nm,1.4s						
CTU	**Camp Tracy**	91.84	49	*e*P	P	07 06 28.9	+0.2
	comp=Z,27nm,1.0s						
319A	**Douglas**	91.89	59	*e*P	P	07 06 28.6	-0.5
	comp=Z,14nm,1.0s						
SYO	**Syowa Base**	91.89	197⇑	*e*P	P	07 06 26.0	-2.1
SYO	**Syowa Base**	91.89	197⇑	*i*PcP	PcP	07 06 29.0	0.0
Q16A	**Castle Valley**	91.90	51	*e*P	P	07 06 28.6	-0.4
	comp=Z,36nm,1.3s						
TMUT	**Trail Mountain**	91.95	51	*e*P	P	07 06 29.0	-0.4
	comp=Z,15nm,1.0s						
MCMT	**McKenzie Canyo**	91.96	45	*e*P	P	07 06 29.8	+0.6
X18A	**Snowflake**	91.96	55	*e*P	P	07 06 29.4	-0.1
	comp=Z,32nm,1.4s						
JLU	**Jordanelle**	92.05	49	*e*P	P	07 06 29.4	-0.3
	comp=Z,22nm,1.1s						
TCUT	**Toone Canyon**	92.19	49	*e*P	P	07 06 30.5	+0.1
	comp=Z,33nm,1.0s						
W18A	**Petrified Fore**	92.25	55	*e*P	P	07 06 30.6	-0.2
	comp=Z,15nm,1.0s						
W18A	**Petrified Fore**	92.25	55	P	P	07 06 30.0	-0.8
	baz=259						
DLMT	**Dillon**	92.26	44	*e*P	P	07 06 30.3	-0.2
	comp=Z,47nm,1.0s						
P17A	**Butcher Ranch,**	92.34	50	*e*P	P	07 06 28.9	-2.2
	comp=Z,23nm,1.3s						
SRU	**San Rafael Swe**	92.44	51	*e*P	P	07 06 30.8	-0.7
	comp=Z,16nm,1.4s						
SRU	**San Rafael Swe**	92.44	51	*e*P	P	07 06 30.8	-0.7
SRU				pmax	pmax		
	comp=Z,16nm,1.4s						
LRM	**Limekiln Ridge**	92.46	44	*e*P	P	07 06 31.8	+0.3
MK01	**Makanchi Array**	92.75	317	*e*P	P	07 06 31.7	-0.8
MK31	**Makanchi Array**	92.76	317	*e*P	P	07 06 32.1	-0.5
MK32	**Makanchi Array**	92.76	317	*e*P	P	07 06 32.0	-0.6
MKAR	**Makanchi Array**	92.76	317	*e*P	P	07 06 32.1	-0.6
	comp=Z,324nm,0.9s						
MKAR				PP	PP	07 10 12.9	-1.9
MKAR				PKKP	PKKPdf	07 23 43.4	-0.8
MKAR	**Makanchi Array**	92.76	317	P	P	07 06 32.0	-0.6
	comp=Z,23nm,0.8s,baz=91,slow=6.1,SNR=46						
MKAR				PP	PP	07 10 12.9	-1.9
	comp=Z,0.6nm,0.5s,baz=32,slow=12,SNR=4.6						
MKAR				PKKP	PKKPdf	07 23 43.4	-0.8
	comp=Z,2.7nm,0.9s,baz=304,slow=2.8,SNR=11						
ZAA0	**Zalesovo Array**	92.84	324	*e*P	P	07 06 32.2	-0.6
	comp=Z,64nm,1.1s						
ZALV	**Zalesovo Beam**	92.84	324	*e*P	P	07 06 30.9	-1.9
ZALV	**Zalesovo Beam**	92.84	324	P	P	07 06 32.0	-0.7
	comp=Z,37nm,1.1s,baz=112,slow=4.0,SNR=24						
ZAA1	**Zalesovo Array**	92.84	324	*e*P	P	07 06 32.0	-0.7
QLMT	**Earthquake Lak**	92.95	45	*e*P	P	07 06 35.0	+1.2
BOZ	**Bozeman (W)**	92.97	44	*e*P	P	07 06 34.2	+0.4
	comp=Z,42nm,1.3s						
BOZ	**Bozeman (W)**	92.97	44	*e*P	P	07 06 34.2	+0.4
BOZ				pmax	pmax		
	comp=Z,42nm,1.3s						
BOZ	**Bozeman (W)**	92.97	44	P	P	07 06 33.3	-0.5
	baz=258						
MAKZ	**Makanchi**	92.98	317	*e*P	P	07 06 33.1	-0.5
	comp=Z,103nm,1.1s						
MAKZ	**Makanchi**	92.98	317	*e*P	P	07 06 33.1	-0.5
MAKZ				pmax	pmax		
	comp=Z,103nm,1.1s						
FXWY	**Fox Creek**	92.99	46	*e*P	P	07 06 33.6	-0.4
	comp=Z,11nm,0.9s						
TPAW	**Teton Pass**	93.01	46	*e*P	P	07 06 33.8	-0.3
	comp=Z,38nm,1.7s						
REDW	**Red Top Meadow**	93.06	47	*e*P	P	07 06 34.7	+0.4
	comp=Z,72nm,1.9s						
HRY	**Holter Researc**	93.07	43	*e*P	P	07 06 34.8	+0.6
YHB	**Horse Butte**	93.10	45	*e*P	P	07 06 34.9	+0.4
	comp=Z,19nm,1.1s						
IMW	**Indian Meadow**	93.10	46	*e*P	P	07 06 35.8	+1.2
	comp=Z,17nm,1.1s						
SNOW	**Snow King Moun**	93.14	47	*e*P	P	07 06 35.4	+0.6
	comp=Z,16nm,1.1s						
MOOW	**Moose Ponds**	93.21	46	*e*P	P	07 06 35.4	+0.3
	comp=Z,7.6nm,1.0s						
YMR	**Madison River**	93.24	45	*e*P	P	07 06 35.1	0.0
	comp=Z,54nm,1.5s						
YPP	**Pitchstone Pla**	93.27	46	*e*P	P	07 06 35.3	-0.1
	comp=Z,35nm,1.9s						
LOHW	**Long Hollow**	93.28	46	*e*P	P	07 06 35.9	+0.5
	comp=Z,15nm,1.3s						
YFT	**Old Faithful**	93.29	46	*e*P	P	07 06 35.8	+0.4
	comp=Z,11nm,1.1s						
FLWY	**Flagg Ranch**	93.31	46	*e*P	P	07 06 36.8	+1.3
	comp=Z,56nm,1.8s						
121A	**Cookes Peak, D**	93.36	58	P	P	07 06 36.0	+0.1
	baz=260						
PV09	**Paradox Valley**	93.38	52	*e*P	P	07 06 37.8	+1.8
YNR	**Norris Junctio**	93.45	45	*e*P	P	07 06 36.9	+0.8
	comp=Z,35nm,1.5s						
H17A	**Grant Village**	93.46	46	*e*P	P	07 06 36.1	-0.1
	comp=Z,14nm,1.1s						
H17A	**Grant Village**	93.46	46	P	P	07 06 37.0	+0.8
	baz=258						
PV19	**Morning Glory**	93.46	52	*e*P	P	07 06 37.1	+0.8
	comp=Z,18nm,1.4s						
PV23	**Carpenter Ridg**	93.47	52	*e*P	P	07 06 38.1	+1.7
	comp=Z,12nm,0.8s						
PV17	**East Wray Mesa**	93.47	52	*e*P	P	07 06 37.9	+1.5
	comp=Z,10nm,1.2s						
PV20	**West Nyswonger**	93.48	52	*e*P	P	07 06 36.5	+0.2
	comp=Z,23nm,1.4s						
PV21	**Cone Mtn., Par**	93.51	52	*e*P	P	07 06 37.4	+0.8
	comp=Z,15nm,1.1s						
PV04	**Paradox Valley**	93.54	52	*e*P	P	07 06 35.4	-1.2
	comp=Z,55nm,1.9s						
PV12	**Saucer Basin,**	93.60	52	*e*P	P	07 06 36.5	-0.4
	comp=Z,28nm,1.5s						
PV07	**Paradox Valley**	93.74	52	*e*P	P	07 06 37.9	+0.3
	comp=Z,10nm,1.1s						
PV01	**Paradox Valley**	93.75	52	*e*P	P	07 06 37.4	-0.3
	comp=Z,6.8nm,1.1s						
BW06	**Boulder Array**	93.87	47	*e*P	P	07 06 37.5	-0.6
	comp=Z,36nm,1.6s						
BW06	**Boulder Array**	93.87	47	P	P	07 06 38.1	0.0
	baz=259						
PD31	**Pinedale Array**	93.87	47	*e*P	P	07 06 38.2	+0.2
PDAR	**Pinedale Array**	93.87	47	*e*P	P	07 06 36.9	-1.2
PDAR				PP	PP	07 10 29.1	+5.2
PDAR	**Pinedale Array**	93.87	47	P	P	07 06 37.8	-0.3
	comp=Z,7.0nm,0.9s,baz=248,slow=2.9,SNR=20						
PDAR				PP	PP	07 10 29.1	+5.2
	comp=Z,0.4nm,0.7s,baz=241,slow=6.1,SNR=3.6						
NVS	**Novosibirsk**	93.95	325	*e*P	P	07 06 38.1	+0.3
NVS				pmax	pmax		
	comp=Z,65nm,1.5s						
NVS				pmax	pmax		
	comp=N,12nm,0.9s						
NVS				pmax	pmax		
	comp=E,30nm,1.3s						
O20A	**White River Ci**	94.36	50	P	P	07 06 40.7	+0.4
	baz=260						
POO	**Poona**	94.40	288	*e*P	P	07 06 37.0	-3.8
EGMT	**Eagleton**	94.72	42	*e*P	P	07 06 42.0	+0.3
	comp=E,29nm,1.0s						
EGMT	**Eagleton**	94.72	42	P	P	07 06 41.9	+0.3
	baz=259						
ANMO	**Albuquerque**	94.87	56	*e*P	P	07 06 43.2	+0.4
	comp=E,6.4nm,1.1s						
ANMO	**Albuquerque**	94.87	56⇓	*i*P	P	07 06 42.6	-0.2
ANMO				pmax	pmax		
	comp=Z,19nm,3.3s						
ANMO	**Albuquerque**	94.87	56	P	P	07 06 42.8	0.0
	baz=260						
ANMO	**Albuquerque**	94.87	56	P	P	07 06 42.1	-0.7
	comp=Z,3.7nm,1.0s,baz=218,slow=5.1,SNR=9.4						
YKA	**Yellowknife Ar**	95.01	27	P	P	07 06 40.7	-1.8
	comp=Z,2.6nm,0.8s,baz=256,slow=4.7,SNR=14						
YKA				PP	PP	07 10 30.0	-1.9
	comp=Z,1.7nm,1.0s,baz=255,slow=7.2,SNR=5.4						
YKB5	**Yellowknife Ar**	95.01	27	*e*P	P	07 06 41.0	-1.5
YKW3	**Yellowknife Ar**	95.02	27	*e*P	P	07 06 41.8	-0.7
	comp=Z,18nm,1.3s						
S22A	**4UR Ranch, Cre**	95.03	53	*e*P	P	07 06 43.3	-0.4
	comp=Z,9.2nm,1.3s						
S22A	**4UR Ranch, Cre**	95.03	53	P	P	07 06 43.6	-0.1
	baz=260						
SMCO	**Snowmass**	95.16	51	*e*P	P	07 06 42.0	-2.3
	comp=Z,14nm,1.6s						
SMCO				LR	LR		
	comp=Z,3µm,18.0s						
MNTX	**Cornudas Mount**	95.22	59	*e*P	P	07 06 41.1	-3.2
	comp=Z,8.8nm,1.4s						
MNTX	**Cornudas Mount**	95.22	59	P	P	07 06 44.0	-0.3
	baz=261						
NRIK	**Noril'sk**	95.54	340	P	P	07 06 43.3	-1.5
NRIK				pmax	pmax		
	comp=Z,24nm,0.9s						
NRIK	**Noril'sk**	95.54	340	P	P	07 06 43.3	-1.5
	comp=Z,8.0nm,0.7s,baz=119,slow=5.0,SNR=17						
KURK	**Kurchatov**	95.90	320	*e*P	P	07 06 46.9	+0.1
	comp=Z,86nm,1.7s						
KURK	**Kurchatov**	95.90	320	*d i*P	P	07 06 46.4	-0.5
KURK				pmax	pmax		
	comp=Z,46nm,1.7s						
KURK	**Kurchatov**	95.90	320	P	P	07 06 47.0	+0.1
	SNR=10						
KSH	**Kashi**	95.96	309	P	P	07 06 49.9	+2.3

KSH				pP	pwP	07 06 54.4	-0.7
KSH				PP	PP	07 10 42.1	+2.0
KSH				S	S	07 18 02.7	-3.9
KSH				sS	sS	07 18 11.6	+2.7
KSH				SS	SS	07 24 39.5	+2.0
KSH				LR	LR		
	comp=Z,480nm,5.3s						
KSH				LR	LR		
	comp=Z,850nm,5.1s						
KSH				LR	LR		
	comp=Z,6µm,21.1s						
LTX	Lajitas	96.32	61	eP	P	07 06 48.8	-0.6
LTX	Lajitas	96.32	61	eP	P	07 06 48.8	-0.6
TXAR	Lajitas Array	96.32	61	P	P	07 06 48.8	-0.6
	comp=Z,1.2nm,0.9s,baz=225,slow=5.1,SNR=7.1						
TXAR				PP	PP	07 10 42.6	-0.5
	comp=Z,3.4nm,1.1s,baz=242,slow=5.3,SNR=7.7						
TXAR				PKKP	PKKPdf	07 23 38.2	+0.9
	comp=Z,0.3nm,0.7s,baz=90,slow=3.9,SNR=3.6						
LAO	LASA Array	96.86	44	eP	P	07 06 49.5	-2.0
	comp=Z,35nm,1.4s						
LAO	LASA Array	96.86	44	P	P	07 06 51.5	0.0
	baz=262						
NIL	Nilore	97.27	303	eP	Pdif	07 06 54.2	+0.5
	comp=Z,19nm,1.0s						
SNAA	Sanae	97.41	184	P	P	07 06 52.1	-1.4
SNAA	Sanae	97.41	184	eP	P	07 06 52.7	-0.8
	comp=Z,26nm,1.3s						
SNAA	Sanae	97.41	184	d iP	P	07 06 53.5	0.0
VNA2	Neumayer--Watz	98.40	183	P	P	07 06 55.7	-2.2
DGMT	Dagmar	98.45	42	eP	Pdif	07 06 59.6	+1.1
	comp=Z,16nm,1.0s						
DGMT	Dagmar	98.45	42	Pdiff	P	07 06 58.4	-0.1
	baz=264						
833A	Chaparral WMA,	99.90	63	PFAKE		07 07 20.0	+15
833A				LR	LR		
	comp=Z,2µm,18.0s						
FFC	Flin Flon	100.40	36	i P	Pdif	07 07 06.9	-0.1
KK31	Karatay Array	100.47	312	ePdif	Pdif	07 07 04.1	-3.5
KK31	Karatay Array	100.47	312	eP	Pdif	07 07 04.1	-3.5
KKAR	Karatay Array	100.47	312	ePdif	Pdif	07 07 02.8	-4.9
KKAR	Karatay Array	100.47	312	eP	Pdif	07 07 02.8	-4.9
BRVK	Borovoye	101.29	322	ePdif	Pdif	07 07 11.0	0.0
BRVK	Borovoye	101.29	322	⇓iP	Pdif	07 07 10.2	-0.8
BRVK	Borovoye	101.29	322	P	Pdif	07 07 10.4	-0.6
	SNR=6.7						
FCC	Fort Churchill	104.75	32	PFAKE		07 07 40.0	+14
FCC				LR	LR		
	comp=Z,5µm,20.0s						
ESTN	Estel	110.35	80	PFAKE		07 12 10.0	+17
ESTN				LR	LR		
	comp=Z,600nm,21.0s						
ESPN	Las Esperanzas	112.25	81	PFAKE		07 12 10.0	+13
ESPN				LR	LR		
	comp=Z,2µm,18.0s						
LVZ	Lovozero	114.30	342	⇓iPKIKP	PKiKP	07 12 01.8	+2.4
APA	Apatity	114.88	342	⇓iPKIKP	PKiKP	07 11 58.1	-2.4
APA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,4µm,23.0s						
ARA0	ARCESS Array S	115.81	345	ePKPdf	PKiKP	07 12 01.1	-1.1
ARCES	ARCESS Array B	115.81	345	PKP	PKiKP	07 12 01.1	-1.1
	comp=Z,2.9nm,0.7s,baz=84,slow=2.0,SNR=15						
ARCES				PKKPbc	PKKPbc	07 22 31.9	-4.7
	comp=Z,1.4nm,0.7s,baz=214,slow=4.1,SNR=5.0						
658A	Bunnell	115.82	63	PFAKE		07 12 20.0	+17
658A				LR	LR		
	comp=Z,2µm,19.0s						
KLMR	Klimovskoe	116.11	334	ePKIKP	PKiKP	07 12 02.4	-0.6
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KLMR	Klimovskoe	116.11	334	ePKPdf	PKiKP	07 12 02.4	-0.6
KLMR				AMP		07 12 07.4	
	comp=Z,8.0nm,1.1s						
KLMR				ePKKPab	PKKPbc	07 22 34.9	-0.4
MNMC	Minye Minye	118.58	119	ePKPdf	PKPdf	07 12 07.1	-2.3
VRH	Novokhopyorsk	118.85	323	ePKIKP	PKPdf	07 12 07.2	-1.4
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEI	Tsey	119.89	313	i PKIKP	PKiKP	07 12 11.3	+0.1
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LPSR	Galich'ya Gora	119.94	325	ePKIKP	PKPdf	07 12 10.6	0.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NCK	Nalchik	119.94	314	⇓iPKIKP	PKiKP	07 12 11.9	+0.8
OBN	Obninsk	120.12	329	i PKIKP	PKPdf	07 12 10.1	-0.8
OBN				e		07 13 35.8	
OBN				ePPP	PPP	07 16 13.8	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VSR	Storozhevoye	120.34	324	⇑iPKIKP	PKPdf	07 12 11.3	-0.2
KBZ	Khabaz	120.37	315	PKP	PKiKP	07 12 11.8	0.0
	comp=Z,1.0nm,0.7s,baz=197,slow=11,SNR=2.9						
KIV	Kislovodsk	120.46	315	ePKIKP	PKPdf	07 12 11.8	-0.3
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEY	Neytrino	120.62	314	⇑iPKIKP	PKiKP	07 12 13.4	+0.8
FIA1	FINESS Array S	121.18	338	ePKPdf	PKPdf	07 12 11.5	-1.3
FIA0	FINESS Array S	121.18	338	ePKPdf	PKPdf	07 12 11.2	-1.6
FIA0	FINESS Array S	121.18	338	ePKIKP	PKPdf	07 12 11.2	-1.6
FINES	FINESS Array B	121.18	338	PKP	PKPdf	07 12 11.2	-1.6
	comp=Z,8.7nm,1.0s,baz=83,slow=2.3,SNR=8.9						
VSU	Vasula	122.84	335	⇓iPKIKP	PKPdf	07 12 16.0	0.0
ANN	Anapa	123.78	317	i PKIKP	PKPdf	07 12 14.2	-4.0
ANN				e		07 13 58.3	
ANN				e		07 19 14.2	
ANN				eSS	SS	07 30 42.7	-7.1
ANN				eSSS	SSS	07 35 22.3	
ANN				pmax	pmax		
	comp=Z,47nm,1.1s						
IZAR	Zarasai	124.74	333	eP	PKiKP	07 12 23.9	+3.8
IDID	Didziasalis	124.79	332	eP	PKiKP	07 12 23.9	+3.7
CPUP	Villa Florida	124.81	133	ePKPpre	PKPpre	07 12 15.8	
CPUP	Villa Florida	124.81	133	PKP	PKPdf	07 12 20.1	-0.7
	comp=Z,9.8nm,1.0s,baz=208,slow=1.5,SNR=7.5						
BOSA	Boshof	124.85	224	PKP	PKPdf	07 12 19.9	-1.2
	comp=Z,3.0nm,0.7s,baz=217,slow=2.4,SNR=5.7						
ISAL	Salakas	124.91	333	eP	PKiKP	07 12 24.2	+3.7
IIGN	Ignalina	125.00	333	eP	PKiKP	07 12 24.2	+3.5
NACGM	Naroch	125.01	332	e	PKiKP	07 12 21.0	+0.3
SDV	Santo Domingo	125.22	87	ePKPdf	PKPdf	07 12 20.8	-1.4
AKASG	Malin Array Be	126.17	327	PKP	PKPdf	07 12 21.3	-1.3
	comp=Z,3.0nm,0.8s,baz=62,slow=2.5,SNR=9.9						
AKBB	Malin Array Si	126.17	327	ePKPdf	PKPdf	07 12 22.9	+0.2
NB2	NORSAR Subarra	126.17	345	PKPdf	PKPdf	07 12 20.6	-1.8
	comp=Z,17nm,1.2s,baz=30,slow=2.0						
NB2	NORSAR Subarra	126.17	345	PKPdf	PKPdf	07 12 20.6	-1.8
	baz=30,slow=2.0						
NB200	NORSAR Array S	126.17	345	ePKPdf	PKPdf	07 12 21.2	-1.2
NOA	NORSAR Array B	126.17	345	PKP	PKPdf	07 12 21.2	-1.2
	comp=Z,4.2nm,0.9s,baz=34,slow=1.9,SNR=6.6						
KIEV	Kiev	126.18	327	ePKPdf	PKPdf	07 12 22.4	-0.2
KIEV	Kiev	126.18	327	⇑iPKIKP	PKPdf	07 12 22.7	0.0
AK11	Malin Array Si	126.21	327	ePKPdf	PKPdf	07 12 21.5	-1.3
KMBO	Kilima Mbogo	126.71	261	PKP	PKPdf	07 12 25.4	+0.2
	comp=Z,0.8nm,0.3s,baz=39,slow=4.7,SNR=4.3						
KLNR	Kaliningrad	128.11	335	⇓ePKIKP	PKPdf	07 12 24.7	-1.5
BR101	Keskin Array S	128.18	313	ePKPdf	PKPdf	07 12 25.6	-1.5
BRTR	Keskin Array B	128.18	313	PKP	PKPdf	07 12 25.6	-1.5
	comp=Z,1.7nm,0.9s,baz=191,slow=0.6,SNR=5.9						
BRTR				PP	PP	07 14 33.4	+2.8
	comp=Z,1.5nm,0.8s,baz=108,slow=3.1,SNR=3.5						
ANTO	Ankara	128.74	313	PFAKE		07 12 40.0	+11
ANTO				LR	LR		
	comp=Z,2µm,21.0s						
OBIP	Obispado Ponce	129.62	75	PFAKE		07 12 40.0	+9.1
OBIP				LR	LR		
	comp=Z,2µm,22.0s						
ICMP	Isla Caja de M	129.70	76	PFAKE		07 12 40.0	+8.9
ICMP				LR	LR		
	comp=Z,800nm,19.0s						
LSZ	Lusaka	130.03	240	ePKPdf	PKiKP	07 12 32.3	+0.3
BUR04	Bucovina Ar. S	130.06	325	ePKPdf	PKiKP	07 12 30.8	-0.4
SJG	San Juan	130.06	75	ePKPdf	PKiKP	07 12 31.6	-0.2
SJG	San Juan	130.06	75	ePKIKP	PKiKP	07 12 31.6	-0.2
HUMP	Col San Antoni	130.34	75	ePKPdf	PKPdf	07 12 30.5	-1.1
ISP	Isparta	131.13	311	PFAKE		07 12 40.0	+6.4
ISP				LR	LR		
	comp=Z,2µm,22.0s						
OJC	Ojcow	131.28	331	ePKP	PKiKP	07 12 36.0	+2.6
OJC	Ojcow	131.28	331	ePKIKP	PKiKP	07 12 34.2	+0.8
NIE	Niedzica	131.56	330	ePKP	PKiKP	07 12 34.2	+0.2
MORC	Moravsky Berou	132.65	332	ePKPdf	PKPdf	07 12 34.9	-0.2
MORC	Moravsky Berou	132.65	332	ePKIKP	PKPdf	07 12 34.9	-0.2
MORC	Moravsky Berou	132.65	332	ePKP	PKiKP	07 12 36.3	+0.1
SMRT	St. Maarten	132.98	75	PFAKE		07 12 50.0	+12
SMRT				LR	LR		
	comp=Z,2µm,21.0s						
BRG	Berggiesshubel	133.44	335	ePKP	PKPdf	07 12 36.2	-0.3
	comp=Z,3.5nm,0.8s						
BRG				e		07 12 47.3	
	comp=Z,30nm,1.6s						
BRG				ePP	PP	07 15 09.9	+6.3
	comp=Z,7.0nm,1.1s						
BRG				eSKP		07 16 02.3	
	comp=Z,46nm,2.2s						
BRG	Berggiesshubel	133.44	335	ePKIKP	PKPdf	07 12 36.2	-0.3
BRG				e		07 12 47.3	
BRG				e		07 15 09.9	
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,4.0nm,1.6s						
BRG				pmax	pmax		
	comp=Z,30nm,1.1s						
BRG				pmax	pmax		
	comp=N,7.0nm,2.2s						
CLL	Collm	133.49	336	ePKPpre	PKPpre	07 12 35.0	
CLL				ePKPdf	PKiKP	07 12 38.0	+0.2
	comp=Z,10.0nm,1.0s						
CLL				e		07 12 50.0	
CLL				ePP	PP	07 15 09.0	+5.1
CLL				e		07 15 15.0	
CLL				LmV		08 12 00.0	
	comp=Z,3µm,21.9s						
CLL	Collm	133.49	336	ePKIKP	PKiKP	07 12 38.0	+0.2
CLL				e		07 12 50.0	
CLL				pmax	pmax		
	comp=Z,87nm,1.0s						
CLL				MLR	MLR		
	comp=Z,3µm,21.9s						
KRUC	Moravsky	133.69	332	ePKP	PKiKP	07 12 38.9	+0.6
MODS	Modra-Piesok	133.75	330	ePKIKP	PKiKP	07 12 39.3	+0.8
MODS	Modra-Piesok	133.75	330	ePKP	PKiKP	07 12 39.3	+0.8
PRU	Pruhonice	133.85	334	ePKPDF	PKiKP	07 12 38.5	-0.1
PRU				ex	x	07 12 42.3	
PRU	Pruhonice	133.85	334	ePKIKP	PKiKP	07 12 38.5	-0.1
PRU				e		07 12 42.3	
PTGA	Pitinga	133.88	101	ePKPdf	PKPdf	07 12 35.1	-3.3
CONA	Conrad Observa	134.74	331	PKiKP	PKPdf	07 12 39.7	+0.6
	comp=Z,3.8nm,0.6s						
KHC	Kasperske Hory	134.91	334	ePKPdf	PKiKP	07 12 41.1	+0.2
KHC	Kasperske Hory	134.91	334	ePKP	PKPdf	07 12 39.4	0.0
KHC	Kasperske Hory	134.91	334	ePKIKP	PKPdf	07 12 39.4	0.0
GEC2	GERESS Array S	135.06	333	ePKPdf	PKPdf	07 12 40.0	+0.2
GEC2	GERESS Array S	135.06	333	ePKIKP	PKPdf	07 12 40.0	+0.2
GERES	GERESS Array B	135.06	333	PKhKP	PKPpre	07 12 29.6	
	comp=Z,1.5nm,0.8s,baz=54,slow=2.3,SNR=6.7						
GERES				PKP	PKPdf	07 12 39.3	-0.4
	comp=Z,2.7nm,0.8s,baz=90,slow=1.3,SNR=8.7						
GERES				PP	PP	07 15 19.4	+5.3
	comp=Z,0.8nm,0.8s,baz=46,slow=3.9,SNR=3.4						
DIVS	Divibare	135.07	324	ePKPdf	PKPdf	07 12 39.7	-0.2
MOA	Molln	135.54	332	PKiKP	PKPdf	07 12 41.1	+0.6
	comp=Z,2.9nm,0.7s						
SOKA	Soboth	136.02	330	epPKPdf	PKiKP	07 12 43.5	+0.3
	comp=Z,7.5nm,1.2s						
MEM	Membach	136.61	341	⇑PKiKP	PKiKP	07 12 46.0	+1.9
VISS	Visnje	136.73	329	i PKPdf	PKPdf	07 12 42.3	-0.6
BOJS	Bojanci	136.73	329	i PKPdf	PKPdf	07 12 42.0	-0.8
WATA	Walderalm	137.14	333	epPKPdf	PKiKP	07 12 45.9	+0.4
	comp=Z,1.9nm,0.5s						
ABTA	Abfaltersbach	137.16	332	PKiKP	PKPdf	07 12 44.0	+0.3
	comp=Z,11nm,0.9s						
MOTA	Moosalm	137.34	334	ePKPdf	PKPdf	07 12 43.4	-0.7
	comp=Z,3.2nm,0.5s						
RETA	Reutte	137.38	334	ePKPdf	PKPdf	07 12 41.6	-2.5
	comp=Z,8.4nm,1.2s						
SQTA	Sankt Quirin	137.39	334	ePKiKP	PKiKP	07 12 45.6	-0.5
	comp=Z,7.9nm,1.1s						
FETA	Feichten	137.75	334	PKiKP	PKPdf	07 12 45.4	+0.5
	comp=Z,3.2nm,0.7s						
DAVA	Damuels	137.91	335	ePKPdf	PKPdf	07 12 42.1	-3.1
	comp=Z,24nm,1.9s						
BDFB	Brasilia	138.13	128	ePKPdf	PKPdf	07 12 46.2	-0.1
BDFB				ePKPdf	pPKPdf	07 12 47.1	-0.7
BDFB	Brasilia	138.13	128	PKP	PKPdf	07 12 46.2	-0.1
	comp=Z,13nm,1.0s,baz=332,slow=2.6,SNR=8.2						
KEST	Kesra	146.69	322	ePKPdf	PKPbc	07 13 02.7	+0.1
KEST	Kesra	146.69	322	PKPbc	PKPdf	07 13 01.8	+0.8
	comp=Z,99nm,1.0s,baz=299,slow=2.9,SNR=11						
CAEH	'Ain El Ouahch	147.38	326	P	PKiKP	07 13 10.8	+4.1
ABSA	Djebel Ababsia	147.40	325	P	PKiKP	07 13 07.7	+0.8
CASM	Ain Smara	147.96	326	P	PKPbc	07 13 05.1	-1.0
DFRA	Djebel Bou Aff	148.08	327	P	PKiKP	07 13 08.4	+0.1
CTEI	Djebel Teioual	148.15	326	P	PKPab	07 13 11.8	+2.3
PBRG	Braganca	148.18	348	ePKPdf	PKPab	07 13 09.5	+0.2
PGAV	Gavieira, Arco	148.30	350	ePKPdf	PKPbc	07 13 07.0	+0.1
SET	Setif	148.60	327	P	PKPdf	07 13 02.0	-2.2
CKHR	Kef el Ahmar	148.67	327	P	PKPab	07 13 13.3	+1.7
POLO	Lamas de Olo	148.79	349	ePKPdf	PKPdf	07 13 05.7	+1.4
MVO	Moncorvo	148.85	348	ePKPdf	PKPbc	07 13 08.8	+0.5
PVRL	Vila Real	148.87	349	ePKPdf	PKiKP	07 13 10.4	+0.7
PVIS	Viseu	149.45	349	ePKPdf	PKPab	07 13 14.5	0.0
ES19	SONSECA Array	149.47	343	ePKPdf	PKPdf	07 13 07.5	+2.1
ESDC	Sonseca Array	149.52	343	PKPbc	PKPbc	07 13 10.1	+0.1
	comp=Z,6.4nm,0.7s,baz=22,slow=2.6,SNR=11						
MTE	Manteigas	149.69	349	ePKPdf	PKiKP	07 13 11.5	+0.1
MTE	Manteigas	149.69	349	epPKPdf	PKPbc	07 13 08.9	-1.5
PAB	San Pablo	149.75	344	ePKPbc	PKiKP	07 13 11.3	-0.3
PAB	San Pablo	149.75	344	ePKP2	PKiKP	07 13 11.3	-0.3
PCAS	Casmilo, Conde	150.20	350	ePKPdf	PKPdf	07 13 06.6	+0.1
PCBR	Castelo Branco	150.22	348	ePKPdf	PKPdf	07 13 09.0	+2.5
PMRV	Marv??o	150.60	348	ePKPdf	PKPbc	07 13 11.1	-1.4
PTOM	Tomar	150.61	350	ePKPdf	PKPbc	07 13 10.6	-1.9
PMTG	Montargil	151.11	349	ePKPdf	PKPbc	07 13 14.0	+0.3
PESTR	Estremoz	151.18	348	ePKPdf	PKiKP	07 13 16.8	+2.3
PESTR	Estremoz	151.18	348	ePKPbc	PKiKP	07 13 15.0	+0.5
PBEJ	Beja	152.04	348	ePKPdf	PKPdf	07 13 11.2	+1.8
PNCL	Nicolau / Gran	152.09	349	ePKPdf	PKiKP	07 13 19.1	+2.8
MESJ	Messejana	152.30	348	ePKPdf	PKPdf	07 13 09.8	+0.1
PVAQ	Vaqueiros	152.61	347	ePKPdf	PKPdf	07 13 11.0	+0.8
RCBR	Riachuelo	153.50	127	ePKPdf	PKPdf	07 13 12.5	+0.3
RCBR	Riachuelo	153.50	127	ePKIKP	PKPdf	07 13 12.5	+0.3
TOA0	Torodi Ar. Sit	163.47	280	ePKPdf	PKPdf	07 13 23.1	-0.9
TOA0				ePKPdf	pPKPdf	07 13 24.4	-1.1
TORD	Torodi Ar. Bea	163.47	280	PKP	PKPdf	07 13 23.0	-1.1
	comp=Z,5.8nm,1.0s,baz=60,slow=1.0,SNR=10						
TORD				PKPab	pPKPab	07 14 16.1	-0.6
	comp=Z,10nm,1.0s,baz=89,slow=3.0,SNR=10						
TORD				PP	PP	07 18 06.0	+5.2
	comp=Z,4.3nm,1.2s,baz=116,slow=6.8,SNR=4.7						
TOA1	Torodi Ar. Sit	163.47	280	ePKPdf	PKPdf	07 13 23.0	-1.1
TOA1				ePKPab	pPKPab	07 14 16.1	-0.6
DBIC	Dimbokro	169.19	249	PKP	PKPdf	07 13 27.1	-1.4
	comp=Z,4.8nm,0.9s,baz=258,slow=2.2,SNR=3.3						

IDC 06 06:56:04.1±2.8, 17°.67S×174°.29W, h0km, mb4.0/3, mb1 4.4/3, mb1mx3.9/35, mbtmp4.0/3, Error ellipse: s-maj=294.8km s-min=37.1km az=158.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.53	259	P	P	07 04 49.4	-0.1
	1.4nm,0.8s,baz=96,slow=7.2,SNR=1.8						
ASAR	Alice Springs	48.63	254	P	P	07 04 50.0	-0.1
	2.2nm,0.5s,baz=89,slow=8.6,SNR=3.6						
TXAR	Lajitas Array	82.57	56	P	P	07 08 29.5	0.0
	1.1nm,1.1s,baz=223,slow=3.7,SNR=2.4						

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*IDC **06** 06:59:08.1±0.7, 10°.64S×165°.20E, h0km, mb4.3/13, mb1 4.5/14, mb1mx4.2/38, mbtmp4.3/14, ML4.4/1, Error ellipse: s-maj=24.7km s-min=17.3km az=114.0*

*NEIC **06** 06:59:09.7±0.4, 10°.69S×165°.28E, h10km, mb4.5/6, Error ellipse: s-maj=9.7km s-min=8.4km az=112.0*

*ISCJB **06** 06:59:11.0±0.4, 10°.77S±0°.06×165°.20E±0°.07, h31km, mb4.3/16, Error ellipse: s-maj=10.3km s-min=7.8km az=158.7*

ISC 06 06:59:12.8±0.5, 10°.71S±0°.08×165°.27E±0°.09, h31km, n46, σ1.s07/40, mb4.3/16, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.39	283	ePn	Pn	07 00 32.2	+1.1
HNR				ePn	Pn	07 00 33.0	+1.8
HNR	Honiara	5.39	283	Pn	Pn	07 00 32.2	+1.1
	276nm,0.3s,baz=134,slow=7.3,SNR=24						
MARNC	Mare, Loyalty	11.03	166	ePn	Pn	07 01 48.4	-0.2
DZM	Mont Dzumac	11.35	174	ePn	Pn	07 01 52.5	-0.5
DZM	Mont Dzumac	11.35	174	Pn	Pn	07 01 52.2	-0.8
	2.8nm,0.3s,baz=299,slow=15,SNR=16						
MSVF	Nonsavu	14.22	121	eP	P	07 02 40.2	+1.0
CTA	Charters Tower	20.55	241	P	P	07 03 49.6	+0.7
	19nm,1.0s,baz=75,slow=13,SNR=4.7						
CTAO	Charters Tower	20.55	241	eP	P	07 03 49.1	+0.1
	43nm,1.1s						
COEN	Coen	21.82	259	eP	P	07 04 03.1	+0.4
	18nm,1.1s						
H11S2	WAKE ISLAND Hy	29.05	3	T	T	07 35 44.3	
	baz=184,slow=76,SNR=9.7						
H11S3	WAKE ISLAND Hy	29.05	3	T	T	07 35 43.4	
	baz=184,slow=76,SNR=9.3						
H11S1	WAKE ISLAND Hy	29.07	3	T	T	07 35 45.3	
	baz=184,slow=76,SNR=10						
MKRZ	Makatiti	29.10	162	P	P	07 05 18.7	+7.8
MXZ	Matakaoa Point	29.20	158	eP	P	07 05 11.2	-0.4
	84nm,1.2s						
URZ	Urewera	29.41	161	P	P	07 05 14.7	+1.2
	14nm,0.7s,baz=33,slow=4.1,SNR=3.3						
BKZ	Black Stump Fm	30.05	162	P	P	07 05 20.1	+0.8
NMHZ	Naumai	30.09	162	P	P	07 05 21.1	+1.5
BHHZ	Black Hill Sta	30.23	163	P	P	07 05 22.3	+1.4
KWHZ	Kaweka Forest	30.27	163	P	P	07 05 21.4	+0.2
H11N1	WAKE ISLAND Hy	30.27	3	T	T	07 37 14.6	
	baz=182,slow=76,SNR=7.7						
H11N3	WAKE ISLAND Hy	30.28	3	T	T	07 37 13.8	
	baz=182,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.29	3	T	T	07 37 14.5	
	baz=182,slow=76,SNR=7.9						
STKA	Stephens Creek	30.36	223	P	P	07 05 22.4	+0.3
	3.9nm,0.8s,baz=89,slow=8.4,SNR=2.9						
KAHZ	Kahuranaki	30.75	162	P	P	07 05 25.5	+0.1
DVHZ	Dannevirke	31.01	164	P	P	07 05 28.0	+0.4
WR1	Warramunga Arr	31.16	249	eP	P	07 05 27.7	-1.6
	9.2nm,1.1s						
WRA	Warramunga Arr	31.16	249	P	P	07 05 27.7	-1.6
	3.3nm,1.1s,baz=79,slow=9.0,SNR=5.9						
HOWZ	Holdsworth Sta	31.40	165	P	P	07 05 30.3	-0.8
AS31	Alice Springs	32.52	243	eP	P	07 05 39.8	-1.4
	1.8nm,0.8s						
ASAR	Alice Springs	32.52	243	P	P	07 05 39.8	-1.4
	2.4nm,0.7s,baz=68,slow=9.6,SNR=6.2						
KSRS	Korea Array	59.34	326	P	P	07 09 09.8	-2.2
	1.1nm,0.7s,baz=139,slow=6.5,SNR=3.7						
KSAR	Wonju Array Be	59.35	326	P	P	07 09 09.8	-2.3
PETK	Petropavlovsk-	63.89	355	P	P	07 09 43.3	+0.8
	4.5nm,0.9s,baz=148,slow=8.5,SNR=4.1						
PEA1	Petropavlovsk-	63.90	355	eP	P	07 09 43.3	+0.8
KLR	Kul'dur	66.56	337	P	P	07 10 00.6	+0.7
	2.1nm,0.8s,baz=167,slow=2.4,SNR=4.9						
ILAR	Eielson Array	83.35	19	P	P	07 11 36.5	+0.1
	0.7nm,0.5s,baz=245,slow=4.8,SNR=12						
ILB	Eielson Array	83.35	19	eP	P	07 11 36.5	+0.1
	1.2nm,0.6s						
NV01	Mina Array Sit	86.17	50	eP	P	07 11 51.7	+0.1
NVAR	Mina Array Bea	86.17	50	P	P	07 11 51.3	-0.3
	1.1nm,0.6s,baz=228,slow=6.6,SNR=5.5						
MK32	Makanchi Array	92.96	317	eP	P	07 12 24.2	+1.0
MKAR	Makanchi Array	92.96	317	P	P	07 12 24.2	+1.0
	1.7nm,0.8s,baz=106,slow=8.2,SNR=5.0						
YKA	Yellowknife Ar	94.89	27	P	P	07 12 29.7	-1.9
	0.2nm,0.7s,baz=259,slow=4.5,SNR=2.9						
LTX	Lajitas	96.08	61	eP	P	07 12 38.0	0.0
TXAR	Lajitas Array	96.08	61	P	P	07 12 38.0	0.0
	0.4nm,0.8s,baz=232,slow=4.4,SNR=2.4						
ARA0	ARCESS Array S	115.89	345	ePKPdf	PKPdf	07 17 52.3	+0.4
ARCES	ARCESS Array B	115.89	345	PKP	PKPdf	07 17 52.3	+0.4
	1.0nm,0.9s,baz=123,slow=3.3,SNR=2.7						

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*IDC **06** 06:59:59.7±1.2, 10°.96S×165°.38E, h0km, mb4.3/9, mb1 4.6/11, mb1mx4.2/39, mbtmp4.5/11, ML4.8/2, Error ellipse: s-maj=34.0km s-min=21.2km az=128.0*

*ISCJB **06** 07:00:02.5±0.8, 11°.0S±0°.1×165°.3E±0°.1, h30km, mb4.3/8, Error ellipse: s-maj=17.1km s-min=14.4km az=11.0*

ISC 06 07:00:04.3±0.9, 11°.0S±0°.1×165°.4E±0°.1, h30km, n12, σ0.s80/12, mb4.3/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.55	285	Pn	Pn	07 01 24.7	-0.2
	30nm,0.3s,baz=180,slow=6.1,SNR=1.8						
DZM	Mont Dzumac	11.10	175	Pn	Pn	07 02 41.1	-0.1
	6.5nm,0.3s,baz=309,slow=23,SNR=5.2						
CTA	Charters Tower	20.51	241	P	P	07 04 41.2	+1.0
	24nm,1.0s,baz=80,slow=11,SNR=2.7						
STKA	Stephens Creek	30.25	223	P	P	07 06 13.1	+0.4
	2.6nm,0.5s,baz=36,slow=12,SNR=2.1						
WRA	Warramunga Arr	31.16	250	P	P	07 06 20.5	-0.4
	2.6nm,0.5s,baz=81,slow=8.9,SNR=2.9						
ASAR	Alice Springs	32.50	243	P	P	07 06 31.8	-0.9
	11nm,0.6s,baz=65,slow=10,SNR=10						
FITZ	Fitzroy Crossi	39.04	255	P	P	07 07 27.4	-1.3
	baz=111,slow=8.6						
MJAR	Matsushiro Arr	53.73	333	P	P	07 09 23.5	-0.3
	1.8nm,0.6s,baz=166,slow=9.4,SNR=2.6						
SONM	Songino Array	78.38	324	P	P	07 12 03.3	+1.2
	1.2nm,0.8s,baz=134,slow=6.9,SNR=2.6						
ILAR	Eielson Array	83.55	19	P	P	07 12 28.9	-0.2
	1.1nm,0.8s,baz=244,slow=4.6,SNR=1.9						
NVAR	Mina Array Bea	86.25	50	P	P	07 12 43.2	-0.4
	2.2nm,0.9s,baz=234,slow=7.5,SNR=3.1						
MKAR	Makanchi Array	93.21	317	P	P	07 13 16.4	+0.4
	1.0nm,0.7s,baz=104,slow=6.1,SNR=2.9						

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*IDC **06** 07:01:38.3±1.7, 11°.52S×165°.44E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/38, mbtmp3.9/6, ML4.2/1, Error ellipse: s-maj=49.3km s-min=28.6km az=116.0*

*ISCJB **06** 07:01:40.1±1.2, 11°.7S±0°.1×165°.5E±0°.2, h24km, mb3.8/5, Error ellipse: s-maj=32.7km s-min=19.5km az=177.9*

ISC 06 07:01:41.9±1.2, 11°.6S±0°.1×165°.5E±0°.3, h24km, n6, σ0.s78/6, mb4.0/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.49	175	Pn	Pn	07 04 11.1	+0.1
	1.9nm,0.3s,baz=298,slow=15,SNR=3.0						
WRA	Warramunga Arr	31.05	251	P	P	07 07 57.4	-0.9
	2.8nm,0.9s,baz=80,slow=9.2,SNR=4.3						
ASAR	Alice Springs	32.32	244	P	P	07 08 09.8	+0.3
	0.8nm,0.9s,baz=72,slow=8.9,SNR=2.6						
SONM	Songino Array	78.92	324	P	P	07 13 44.1	+0.5
	0.7nm,0.8s,baz=134,slow=4.4,SNR=2.2						
ILAR	Eielson Array	84.09	19	P	P	07 14 09.8	-0.6
	0.6nm,0.6s,baz=239,slow=4.7,SNR=4.1						
MKAR	Makanchi Array	93.71	317	P	P	07 14 57.2	+0.4
	0.4nm,0.7s,baz=117,slow=5.0,SNR=2.5						

IDC 06 07:02:14.0±3.9, 10°.99S×165°.51E, h0km, mb4.1/4, mb1 4.4/4, mb1mx4.0/36, mbtmp4.0/4, Error ellipse: s-maj=185.0km s-min=68.9km az=165.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	83.54	19	P	P	07 14 44.1	+0.6
	0.9nm,0.6s,baz=238,slow=5.1,SNR=5.9						
NVAR	Mina Array Bea	86.16	50	P	P	07 14 58.1	+0.4
	1.6nm,0.9s,baz=224,slow=8.3,SNR=3.6						
PDAR	Pinedale Array	93.69	47	P	P	07 15 33.2	+0.1
	0.9nm,1.0s,baz=267,slow=1.7,SNR=3.9						
YKA	Yellowknife Ar	95.03	27	P	P	07 15 37.1	-1.3
	0.3nm,0.8s,baz=260,slow=5.3,SNR=4.1						
KEST	Kesra	147.24	323	PKPbc	PKPbc	07 21 59.8	-0.2
	6.5nm,1.1s,baz=135,slow=1.4,SNR=2.4						
ESDC	Sonseca Array	149.94	344	PKPbc	PKPbc	07 22 05.8	-1.0
	0.3nm,0.4s,baz=55,slow=5.4,SNR=2.4						

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*NEIC **06** 07:02:22.8±0.3, 10°.81S×164°.26E, h10km, mb4.9/28, Error ellipse: s-maj=8.8km s-min=7.2km az=94.0*

*ISCJB **06** 07:02:23.7±0.3, 10°.91S±0°.04×164°.24E±0°.05, h29km, mb4.7/50, MS5.4/1, Error ellipse: s-maj=7.0km s-min=6.4km az=165.3*

*IDC **06** 07:02:29.3±2.9, 11°.08S×164°.13E, h67km±24km, mb4.1/20,* *mb1 4.3/22,mb1mx4.3/35,mbtmp4.5/22,Error ellipse: s-maj=19.4km s-min=15.8km az=95.0*

ISC 06 07:02:25.8±0.4,10°.87S±0°.07×164°.28E±0°.07,h29km,n91, σ1s.51/86,mb4.8/50,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.49	288	ePn	Pn	07 03 34.0	+2.0
HNR				ePn	Pn	07 03 34.8	+2.8
HNR				eSn	Sn	07 04 25.5	+2.2
HNR	Honiara	4.49	288	P	Pn	07 03 34.0	+2.0
	174nm,0.3s,baz=150,slow=6.8,SNR=10						
HNR				S	Sn	07 04 25.5	+2.2
	14nm,0.3s,baz=176,slow=16,SNR=1.4						
MARNC	Mare, Loyalty	11.15	162	ePn	Pn	07 05 03.1	-0.3
DZM	Mont Dzumac	11.33	170	ePn	Pn	07 05 06.5	+0.6
DZM	Mont Dzumac	11.33	170	P	Pn	07 05 07.1	+1.2
	10nm,0.3s,baz=1.5,slow=14,SNR=15						
PINNC	Pines Island,	12.06	166	ePn	Pn	07 05 16.6	+0.8
MSVF	Nonsavu	14.98	119	ePn	Pn	07 05 57.8	+2.0
	28nm,1.0s						
MANU	Manus Island	18.94	296	eP	Pn	07 06 45.9	+0.4
	261nm,0.9s						
EIDS	Eidsvold	19.09	219	eP	P	07 06 45.5	-0.7
	78nm,1.1s						
CTA	Charters Tower	19.62	240	P	Pn	07 06 54.1	+0.4
	0.9nm,0.3s,baz=60,slow=14,SNR=12						
COEN	Coen	20.83	259	eP	P	07 07 05.9	+0.5
	30nm,1.0s						
H11S2	WAKE ISLAND Hy	29.27	5	T	T	07 38 44.6	
	baz=184,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.28	5	T	T	07 38 45.1	
	baz=184,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.29	5	T	T	07 38 46.5	
	baz=184,slow=76,SNR=14						
STKA	Stephens Creek	29.59	222	P	P	07 08 26.3	-2.2
	2.6nm,0.7s,baz=54,slow=8.7,SNR=2.0						
WB2	Warramunga Arr	30.18	249	eP	P	07 08 31.1	-2.8
WR1	Warramunga Arr	30.19	249	eP	P	07 08 31.2	-2.8
	23nm,1.1s						
WRA	Warramunga Arr	30.19	249	P	P	07 08 31.2	-2.8
	6.8nm,0.8s,baz=78,slow=9.2,SNR=7.3						
H11N1	WAKE ISLAND Hy	30.50	5	T	T	07 40 19.3	
	baz=184,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.51	5	T	T	07 40 18.2	
	baz=184,slow=76,SNR=9.2						
H11N2	WAKE ISLAND Hy	30.52	5	T	T	07 40 20.6	
	baz=184,slow=76,SNR=11						
ASAR	Alice Springs	31.59	242	P	P	07 08 42.2	-4.1
	2.1nm,0.9s,baz=78,slow=8.6,SNR=3.4						
RPZ	Rata Peaks	33.25	171	P	P	07 09 01.7	+1.2
	19nm,0.9s,baz=27,slow=2.9,SNR=4.1						
FITZ	Fitzroy Crossi	38.03	255	eP	P	07 09 38.2	-3.7
	21nm,0.9s						
FITZ	Fitzroy Crossi	38.03	255	P	P	07 09 39.2	-2.7
	13nm,0.7s,baz=57,slow=8.7,SNR=23						
MJAR	Matsushiro Arr	53.16	334	P	P	07 11 41.5	+0.3
	3.0nm,0.8s,baz=170,slow=8.7,SNR=5.7						
MAJO	Matsushiro	53.16	334	eP	P	07 11 41.5	+0.2
ASAJ	Asahikawa	58.16	342	P	P	07 12 18.1	+1.1
	12nm,1.0s,baz=189,slow=12,SNR=5.7						
KSRS	Korea Array	58.93	327	P	P	07 12 24.2	+1.8
	1.9nm,0.8s,baz=102,slow=6.0,SNR=3.6						
KSAR	Wonju Array Be	58.94	327	P	P	07 12 24.2	+1.7
USRK	Ussuriysk Ar.	62.15	334	P	P	07 12 43.6	-0.7
	6.6nm,1.0s,baz=140,slow=6.6,SNR=11						
PETK	Petropavlovsk-	63.97	356	P	P	07 12 56.2	-0.1
	6.0nm,0.8s,baz=149,slow=9.4,SNR=5.4						
PEA1	Petropavlovsk-	63.98	356	eP	P	07 12 56.2	-0.1
CN2	Changchun	64.86	330	eP	P	07 13 00.7	-1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLR	Kul'dur	66.33	337	P	P	07 13 09.9	-1.7
	comp=Z,1.4nm,0.6s,baz=132,slow=10.0,SNR=6.6						
VNDA	Vanda	66.65	181	P	P	07 13 14.6	+1.3
	comp=Z,7.7nm,1.0s,baz=348,slow=7.9,SNR=5.0						
KMI	Kunming	69.80	302	P	P	07 13 43.4	+9.2
KMI				pmax	pmax		
	comp=Z,21nm,1.4s						
CMAR	Chiang Mai Arr	70.72	294	P	P	07 13 39.7	0.0
	comp=Z,1.9nm,0.3s,baz=124,slow=4.5,SNR=7.6						
HHC	Hu-ho-hao-te	70.77	320	eP	P	07 13 47.0	+7.3
HHC				pP	sP	07 13 51.2	+0.7
HHC				sP	pwP	07 13 54.1	+1.0
HHC				S	SKiKP	07 23 39.2	+18
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,2μm,5.5s						
HHC				LR	LR		
	comp=N,950nm,13.8s						
HHC				LR	LR		
	comp=E,920nm,13.0s						
HHC				LR	LR		
	comp=Z,1μm,10.4s						
CHTO	Chiang Mai	70.83	294	eP	P	07 13 39.6	-0.8
	comp=Z,4.0nm,0.9s						
SEY	Seymchan	74.15	354	P	P	07 13 58.7	-0.5
	comp=Z,4.4nm,0.9s,baz=174,slow=8.0,SNR=7.9						
GAMB	Gambell	76.66	11	eP	P	07 14 12.9	-0.6
	comp=Z,13nm,1.1s						
ULN	Ulaanbaatar	77.32	325	eP	P	07 14 17.9	0.0
	comp=Z,13nm,1.0s						
SONA0	Songino Array	77.68	324	eP	P	07 14 18.7	-1.1
SONM	Songino Array	77.68	324	P	P	07 14 18.7	-1.1
	comp=Z,1.4nm,0.7s,baz=146,slow=6.6,SNR=4.8						
SONA1	Songino Array	77.68	324	eP	P	07 14 21.1	+1.2
GTA	Gaotai	77.90	314	eP	P	07 14 22.5	+1.2
GTA				pP	pP	07 14 26.7	-2.5
GTA				sP	PcP	07 14 29.7	-1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SVW2	Sparrevohn	78.40	19	eP	P	07 14 22.6	-0.9
	comp=Z,26nm,1.2s						
ANM	Nome	78.64	13	eP	P	07 14 25.5	+0.9
	comp=Z,5.6nm,1.0s						
RSO	Redoubt South	78.85	20	eP	P	07 14 26.0	-0.2
BRLK	Bradley Lake	78.99	21	eP	P	07 14 25.8	-0.9
	comp=Z,16nm,1.0s						
QSPA	South Pole Qui	79.13	180	eP	P	07 14 28.4	+0.7
	comp=Z,25nm,1.1s						
SUA	Susitna One	80.25	20	eP	P	07 14 32.2	-1.4
	comp=Z,17nm,1.1s						
CAST	Castle Rocks	81.23	18	eP	P	07 14 37.4	-1.3
	comp=Z,18nm,1.2s						
KLU	Klutina	81.97	22	eP	P	07 14 42.2	-0.5
	comp=Z,8.9nm,1.0s						
RND	Reindeer	82.25	19	eP	P	07 14 43.2	-1.0
	comp=Z,11nm,1.0s						
MCK	McKinley	82.45	19	eP	P	07 14 45.1	0.0
	comp=Z,17nm,1.2s						
DHY	Denali Highway	82.51	20	eP	P	07 14 48.2	+2.6
	comp=Z,7.7nm,1.1s						
BWN	Browne	82.58	19	eP	P	07 14 48.8	+3.0
	comp=Z,54nm,1.2s						
IM3	Indian Mountai	82.65	16	eP	P	07 14 45.1	-1.0
MLY	Manley	82.81	18	eP	P	07 14 46.7	-0.3
	comp=Z,10nm,1.2s						
WRH	Wood River Hil	83.22	19	eP	P	07 14 47.8	-1.3
	comp=Z,18nm,1.0s						
MDM	Murphy Dome	83.52	18	eP	P	07 14 49.2	-1.4
	comp=Z,20nm,1.0s						
COLA	College	83.58	19	eP	P	07 14 50.2	-0.6
	comp=Z,23nm,0.9s						
RIDG	Independ'e Rid	83.81	20	eP	P	07 14 52.2	0.0
	comp=Z,19nm,1.0s						
ILAR	Eielson Array	83.81	19	P	P	07 14 51.5	-0.7
	comp=Z,10.0nm,0.9s,baz=239,slow=5.4,SNR=22						
ILB	Eielson Array	83.81	19	eP	P	07 14 50.8	-1.4
	comp=Z,12nm,0.9s						
IL1	Eielson Array	83.81	19	eP	P	07 14 50.3	-1.8
SCRK	Sand Creek	84.25	20	eP	P	07 14 54.3	-0.2
	comp=Z,13nm,1.0s						
HYT	Haines Junctio	84.83	25	eP	P	07 14 57.2	-0.3
	comp=Z,9.7nm,1.1s						
TIXI	Tiksi	85.65	349	eP	P	07 15 03.5	+2.3
	comp=Z,22nm,1.1s						
DAWY	Dawson	85.92	22	eP	P	07 15 02.8	-0.1
	comp=Z,4.6nm,1.1s						
NV01	Mina Array Sit	87.02	50	eP	P	07 15 09.4	+0.4
NVAR	Mina Array Bea	87.02	50	P	P	07 15 08.8	-0.2
	comp=Z,1.5nm,0.9s,baz=242,slow=9.8,SNR=3.6						
MK32	Makanchi Array	92.41	317	eP	P	07 15 31.4	-2.5
MKAR	Makanchi Array	92.41	317	eP	P	07 15 34.3	+0.4
MKAR	Makanchi Array	92.41	317	P	P	07 15 31.4	-2.5
	comp=Z,2.4nm,0.8s,baz=96,slow=6.0,SNR=7.4						
ZALV	Zalesovo Beam	92.57	324	P	P	07 15 33.3	-1.1
	comp=Z,0.6nm,0.6s,baz=90,slow=5.8,SNR=2.9						
ZAA1	Zalesovo Array	92.57	324	eP	P	07 15 33.4	-1.1
PDAR	Pinedale Array	94.50	47	P	P	07 15 44.0	+0.2
	comp=Z,0.7nm,0.8s,baz=90,slow=0.4,SNR=3.7						
NRIK	Noril'sk	95.46	340	P	P	07 15 46.3	-1.0
	comp=Z,0.9nm,0.4s,baz=135,slow=8.6,SNR=2.3						
YKA	Yellowknife Ar	95.48	27	P	P	07 15 47.5	-0.1
	comp=Z,0.8nm,0.9s,baz=258,slow=4.8,SNR=4.4						
ARA0	ARCESS Array S	115.80	345	ePKPdf	PKiKP	07 21 03.5	-1.5
ARCES	ARCESS Array B	115.80	345	PKP	PKiKP	07 21 03.5	-1.5
	comp=Z,0.6nm,0.6s,baz=28,slow=4.1,SNR=3.5						
AKASG	Malin Array Be	125.92	326	PKP	PKPdf	07 21 24.5	-0.5
	comp=Z,0.1nm,0.2s,baz=67,slow=2.1,SNR=4.1						
CLL	Collm	133.36	335	e(PKPdf)	PKiKP	07 21 43.0	+2.7
KEST	Kesra	146.39	321	PKPbc	PKPbc	07 22 04.7	+0.1
	comp=Z,7.7nm,0.9s,baz=317,slow=5.3,SNR=7.1						
ES19	SONSECA Array	149.42	342	ePKPbc	PKiKP	07 22 13.2	-0.5
ESDC	Sonseca Array	149.47	342	PKPbc	PKPbc	07 22 12.5	-0.2
	comp=Z,1.1nm,0.7s,baz=9.8,slow=3.4,SNR=4.3						
TORD	Torodi Ar. Bea	162.81	279	PKP	PKPdf	07 22 26.0	-0.2
	comp=Z,1.1nm,0.9s,baz=97,slow=3.5,SNR=3.1						
TOA1	Torodi Ar. Sit	162.81	279	ePKPdf	PKPdf	07 22 26.0	-0.2

ISCJB 06 07:06:07.7±0.5,11°.56S±0°.07×165°.8E±0°.1,h10km, mb4.5/15,Error ellipse: s-maj=14.8km s-min=9.6km az=19.9

IDC 06 07:06:07.5±1.0,11°.51S×165°.85E,h0km,mb4.3/9, mb1 4.5/10,mb1mx4.2/37,mbtmp4.3/10,ML4.4/1,Error ellipse: s-maj=38.5km s-min=20.5km az=139.0

NEIC 06 07:06:09.0±0.3,11°.47S×165°.87E,h10km,mb4.6/7,Error ellipse: s-maj=11.2km s-min=7.3km az=115.0

ISC 06 07:06:09.0±0.7,11°.5S±0°.1×165°.8E±0°.1,h10km,n32, σ0s.95/32,mb4.6/15,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.55	177	Pn	Pn	07 08 41.1	+0.6
	3.0nm,0.3s,baz=120,slow=20,SNR=4.1						
PINNC	Pines Island,	11.18	172	ePn	Pn	07 08 49.6	+0.6
EIDS	Eidsvold	19.64	223	eP	Pn	07 10 38.6	-0.8
	14nm,0.8s						
CTA	Charters Tower	20.68	243	P	P	07 10 48.4	-1.1
	14nm,0.9s,baz=63,slow=14,SNR=4.8						
COEN	Coen	22.24	261	eP	P	07 11 07.7	+1.4
	12nm,1.0s						
ARMA	Armidale	23.00	213	eP	P	07 11 14.5	+0.2
	19nm,0.8s						
WR1	Warramunga Arr	31.42	251	eP	P	07 12 30.8	0.0
	9.2nm,1.1s						
WRA	Warramunga Arr	31.42	251	P	P	07 12 30.8	0.0
	2.7nm,0.8s,baz=83,slow=8.9,SNR=8.2						
ASAR	Alice Springs	32.68	244	P	P	07 12 41.4	-0.4
	5.6nm,0.7s,baz=71,slow=9.5,SNR=15						
FITZ	Fitzroy Crossi	39.36	255	P	P	07 13 38.6	-0.4
	5.6nm,0.9s,baz=76,slow=6.0,SNR=5.7						
CMAR	Chiang Mai Arr	72.37	294	P	P	07 17 37.5	+1.7
	0.7nm,0.3s,baz=116,slow=5.1,SNR=3.3						
SONA0	Songino Array	79.07	324	eP	P	07 18 14.5	+0.7
SONM	Songino Array	79.07	324	P	P	07 18 14.5	+0.7
	1.2nm,0.8s,baz=149,slow=6.1,SNR=4.3						
HDA	Harding Lake	83.62	19	eP	P	07 18 37.1	-0.3
	8.7nm,0.8s						
RIDG	Independ'e Rid	83.85	20	eP	P	07 18 38.8	+0.1
	13nm,1.1s						
IL1	Eielson Array	83.89	18	eP	P	07 18 37.9	-0.8
ILAR	Eielson Array	83.89	18	P	P	07 18 37.5	-1.3
	1.5nm,0.8s,baz=239,slow=5.3,SNR=6.7						
SCRK	Sand Creek	84.29	20	eP	P	07 18 40.8	-0.2
	8.3nm,1.0s						
NVAR	Mina Array Bea	86.23	50	P	P	07 18 53.1	+1.8
	1.7nm,0.9s,baz=241,slow=4.9,SNR=4.7						
MK01	Makanchi Array	93.89	317	eP	P	07 19 27.3	+0.3
MK31	Makanchi Array	93.90	317	eP	P	07 19 27.5	+0.5
	2.7nm,0.9s						
MK32	Makanchi Array	93.90	317	eP	P	07 19 27.4	+0.3
MKAR	Makanchi Array	93.90	317	eP	P	07 19 27.1	+0.1
	15nm,0.8s						
MKAR	Makanchi Array	93.90	317	P	P	07 19 27.4	+0.3
	2.5nm,0.8s,baz=98,slow=6.0,SNR=12						
ARA0	ARCESS Array S	116.78	345	ePKPdf	PKiKP	07 24 52.5	-0.7
ARCES	ARCESS Array B	116.78	345	PKP	PKiKP	07 24 52.5	-0.7
	2.4nm,0.8s,baz=50,slow=1.9,SNR=4.9						
NB200	NORSAR Array S	127.14	345	ePKPdf	PKiKP	07 25 12.3	-1.7
NOA	NORSAR Array B	127.14	345	PKP	PKiKP	07 25 12.3	-1.7
	0.6nm,0.7s,baz=32,slow=1.9,SNR=3.3						
KEST	Kesra	147.82	322	PKPbc	PKPab	07 25 56.0	-1.3
	7.1nm,0.8s,baz=293,slow=7.7,SNR=5.6						
ESDC	Sonseca Array	150.50	344	PKPbc	PKiKP	07 26 00.6	-1.6
	0.6nm,0.5s,baz=46,slow=2.2,SNR=3.9						
TORD	Torodi Ar. Bea	164.42	278	PKP	PKPdf	07 26 13.6	-0.5
	0.7nm,0.9s,baz=108,slow=0.5,SNR=3.7						
TOA1	Torodi Ar. Sit	164.42	278	ePKPdf	PKPdf	07 26 13.6	-0.5

UCR 06 07:06:51.6±2.2,8°.35N×82°.80W,h28km±4km,MD4.0, ML3.8,3C-1D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVD	David	0.36	76⇑	eP	Pb	07 06 59.6	-0.1
DVD				i S	Sn	07 07 06.8	-0.3
BRU2	Volcan	0.46	14⇑	iP	Pb	07 07 01.2	-0.2
	baz=193,slow=3.0						
BRU2				AMP		07 07 02.0	
	comp=Z,6μm,0.2s						
BRU2				eS	Sn	07 07 09.6	-0.3
PTJ1	Puerto Jimnez	0.53	291	eP	Pb	07 07 00.8	-1.7
PTJ1				eS	Sb	07 07 09.8	0.0
LCR2	La Lucha 2	1.83	320	eP	Pn	07 07 20.4	-1.0
CVTR	Volcan Turrial	1.91	330	eP	Pn	07 07 23.0	+0.3
SJS	Escuela Geolog	2.01	322	eP	Pn	07 07 25.3	+1.5
HDC	Heredia	2.09	322	eP	Pn	07 07 24.9	-0.1
HDC				i S	Sb	07 07 52.5	-2.1
AZU	Azuero	2.56	102	eP	Pn	07 07 32.0	+0.7
AZU				eS	Sn	07 08 02.3	+0.7
ARE1	Arenal 1	2.83	318	eP	Pn	07 07 36.5	+1.5
CEDE	Laguna Cedeo	2.84	319	eP	Pn	07 07 36.2	+1.1
JTS	JuntasAbangare	2.87	312⇓	eP	Pn	07 07 34.4	-1.2
ZANG	Zanguenga, Cho	2.96	78	eP	Pn	07 07 37.5	+0.7
ZANG				i S	Sn	07 08 10.9	-0.6
BCIP	Isla Barro Col	3.04	74⇑	eP	Pn	07 07 38.8	+0.9
BCIP				eS	Sn	07 08 13.2	-0.2
FRIJ	El Hiral	3.16	74	eP	Pn	07 07 41.0	+1.4
FRIJ				eS	Sn	07 08 17.3	+0.9
PLVR	Palo Verde	3.21	309	eP	Pn	07 07 40.2	-0.1
CUI	Cuipilapa	3.27	315	eP	Pn	07 07 42.3	+1.2
FLAM	Flamenco Islan	3.28	80	eP	Pn	07 07 41.9	+0.7
FLAM				eS	Sn	07 08 19.8	+0.6
UPA	Univ. de Panam	3.29	79	eP	Pn	07 07 42.6	+1.2
UPA				eS	Sn	07 08 19.1	-0.4
MESS	Mesas	3.35	315	i P	Pn	07 07 43.3	+1.1
NY14	Universidad de	3.54	311	i P	Pn	07 07 45.0	+0.3
BUEV	Buena Vista	3.54	314	eP	Pn	07 07 45.7	+0.8
UPD2	Meteti	4.74	87	eP	Pn	07 08 00.3	-0.9

IDC 06 07:07:28.7±1.7,11°.32S×165°.13E,h0km,mb4.0/4, mb1 4.2/5,mb1mx3.8/37,mbtmp4.0/5,Error ellipse: s-maj=50.5km s-min=31.1km az=122.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.77	173	Pn	Pn	07 10 04.5	+0.2
	baz=307,slow=20,SNR=2.4						
WRA	Warramunga Arr	30.82	250	P	P	07 13 47.4	+0.8
	2.5nm,0.9s,baz=81,slow=9.4,SNR=5.5						
ASAR	Alice Springs	32.13	243	P	P	07 13 57.3	-0.8
	1.1nm,0.8s,baz=68,slow=10,SNR=2.8						
ILAR	Eielson Array	83.96	19	P	P	07 20 00.3	-0.2
	0.5nm,0.5s,baz=240,slow=5.1,SNR=4.6						
MKAR	Makanchi Array	93.30	317	P	P	07 20 45.7	+0.1
	0.7nm,0.9s,baz=107,slow=7.7,SNR=2.1						

IDC 06 07:11:32.1±0.8,11°.36S×165°.05E,h0km,mb4.2/14, mb1 4.4/16,mb1mx4.2/38,mbtmp4.3/16,ML4.7/2,Error ellipse: s-maj=23.3km s-min=17.9km az=124.0

NEIC 06 07:11:33.5±0.4,11°.35S×165°.07E,h10km,mb4.5/9,Error ellipse: s-maj=10.5km s-min=7.4km az=77.0

ISCJB 06 07:11:35.1±0.5,11°.51S±0°.06×165°.06E±0°.08,h34km, mb4.2/19,Error ellipse: s-maj=12.2km s-min=8.6km az=163.6

ISC 06 07:11:37.0±0.6,11°.39S±0°.08×165°.1E±0°.1,h34km,n36, σ1s.20/37,mb4.2/19,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.38	291	Pn	Pn	07 12 54.3	-0.6
	27nm,0.3s,baz=215,slow=2.0,SNR=4.6						
MARNC	Mare, Loyalty	10.43	164	ePn	Pn	07 14 02.5	-1.8
DZM	Mont Dzumac	10.70	173	ePn	Pn	07 14 06.7	-1.4
DZM	Mont Dzumac	10.70	173	Pn	Pn	07 14 06.2	-1.9
	4.6nm,0.3s,baz=281,slow=16,SNR=13						
PINNC	Pines Island,	11.39	169	ePn	Pn	07 14 16.4	-1.1
PATS	Pohnpei	19.31	339	eP	P	07 15 57.0	-2.4
	116nm,0.5s						
CTA	Charters Tower	20.03	242	P	P	07 16 07.0	-0.3
	8.3nm,0.9s,baz=76,slow=12,SNR=5.4						
CTAO	Charters Tower	20.03	242	eP	P	07 16 07.2	-0.1
	11nm,0.9s						
OUZ	Omahuta	24.96	163	eP	P	07 16 59.8	+2.4
	17nm,1.0s						
URZ	Urewera	28.85	160	P	P	07 17 33.0	+0.7
	7.5nm,0.9s,baz=170,slow=11,SNR=3.1						
STKA	Stephens Creek	29.72	223	eP	P	07 17 40.6	+0.4
	0.5nm,0.9s						
STKA	Stephens Creek	29.72	223	P	P	07 17 40.6	+0.4
	1.6nm,0.4s,baz=14,slow=15,SNR=4.5						
WRAB	Tennant Creek	30.71	250	eP	P	07 17 49.9	+0.9
	9.9nm,1.0s						
WB2	Warramunga Arr	30.71	250	eP	P	07 17 49.2	+0.1
WB2				eP	P	07 17 50.0	+0.9
WR1	Warramunga Arr	30.72	250	eP	P	07 17 49.4	+0.2
	13nm,1.0s						
WRA	Warramunga Arr	30.72	250	P	P	07 17 49.4	+0.2
	8.5nm,1.0s,baz=80,slow=9.2,SNR=15						
AS31	Alice Springs	32.02	243	eP	P	07 18 00.4	-0.3
	1.0nm,0.8s						
ASAR	Alice Springs	32.02	243	P	P	07 18 00.4	-0.3
	3.4nm,1.0s,baz=75,slow=9.7,SNR=11						
FITZ	Fitzroy Crossi	38.63	255	eP	P	07 18 56.9	-0.5
	3.6nm,0.9s						
FITZ	Fitzroy Crossi	38.63	255	P	P	07 18 56.9	-0.5
	4.8nm,1.0s,baz=108,slow=4.9,SNR=6.4						
MJAR	Matsushiro Arr	53.97	333	P	P	07 20 57.1	-0.6
	1.0nm,0.5s,baz=133,slow=9.0,SNR=3.7						
MAJO	Matsushiro	53.97	333	eP	P	07 20 57.1	-0.6
ENH	Enshi	67.58	309	eP	P	07 22 31.5	+0.9
	11nm,0.8s						
CM01	Chiang Mai Arr	71.60	294	eP	P	07 22 57.8	+2.3
CM31	Chiang Mai Arr	71.62	294	eP	P	07 22 56.8	+1.1
	7.4nm,1.1s						
CMAR	Chiang Mai Arr	71.62	294	P	P	07 22 56.8	+1.1
	0.5nm,0.3s,baz=121,slow=4.6,SNR=8.7						
SONA0	Songino Array	78.54	324	eP	P	07 23 36.5	+1.3
SONM	Songino Array	78.54	324	P	P	07 23 36.5	+1.3
	1.7nm,0.9s,baz=149,slow=7.8,SNR=9.3						
ILAR	Eielson Array	84.06	19	P	P	07 24 04.6	+0.7
	0.5nm,0.7s,baz=232,slow=5.0,SNR=6.8						
ILB	Eielson Array	84.06	19	eP	P	07 24 04.6	+0.7
	1.3nm,0.6s						
NVAR	Mina Array Bea	86.77	50	P	P	07 24 19.7	+1.3
	1.0nm,0.9s,baz=242,slow=7.0,SNR=3.7						
MK32	Makanchi Array	93.30	317	eP	P	07 24 47.4	-1.1
MKAR	Makanchi Array	93.30	317	P	P	07 24 47.4	-1.1
	1.9nm,0.9s,baz=100,slow=6.0,SNR=5.2						
ZAA1	Zalesovo Array	93.44	324	eP	P	07 24 47.5	-1.4
ZALV	Zalesovo Beam	93.44	324	P	P	07 24 47.5	-1.4
	0.9nm,0.8s,baz=162,slow=6.1,SNR=3.9						
YKA	Yellowknife Ar	95.59	27	P	P	07 24 57.0	-1.5
	0.2nm,0.7s,baz=259,slow=4.8,SNR=4.7						

IDC 06 07:12:41.4±1.6,11°.04S×165°.15E,h0km,mb4.1/5, mb1 4.3/6,mb1mx3.8/36,mbtmp4.1/6,ML3.9/1,Error ellipse: s-maj=46.8km s-min=28.2km az=129.0

ISCJB 06 07:12:44.0±1.5,11°.2S±0°.2×165°.2E±0°.2,h31km,mb3.9/5, Error ellipse: s-maj=29.3km s-min=23.0km az=171.8

ISC 06 07:12:45.9±1.5,11°.1S±0°.2×165°.2E±0°.2,h31km,n6, σ0s.72/6,mb4.0/5,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.94	174	Pn	Pn	07 15 20.1	-0.2
	0.9nm,0.3s,baz=97,slow=16,SNR=2.5						
STKA	Stephens Creek	30.01	223	P	P	07 18 53.0	+1.0
	0.5nm,0.3s,baz=30,slow=10.0,SNR=4.7						
WRA	Warramunga Arr	30.95	250	P	P	07 19 00.1	-0.4
	1.8nm,0.6s,baz=81,slow=9.1,SNR=7.6						
ASAR	Alice Springs	32.28	243	P	P	07 19 11.6	-0.6
	1.7nm,0.5s,baz=65,slow=10,SNR=10						
FITZ	Fitzroy Crossi	38.84	255	P	P	07 20 08.4	-0.1
	3.1nm,0.6s,baz=88,slow=6.3,SNR=7.8						
ILAR	Eielson Array	83.77	19	P	P	07 25 11.7	0.0
	0.2nm,0.5s,baz=237,slow=5.0,SNR=2.7						

IDC 06 07:13:38.1±0.8,11°.39S×165°.03E,h0km,mb4.5/15, mb1 4.7/17,mb1mx4.6/37,mbtmp4.5/17,ML4.6/2,Error ellipse: s-maj=20.8km s-min=16.2km az=94.0

ISCJB 06 07:13:41.5±0.5,11°.50S±0°.07×164°.96E±0°.10,h34km, mb4.5/17,Error ellipse: s-maj=13.5km s-min=10.2km az=170.7

ISC 06 07:13:43.2±0.7,11°.47S±0°.09×165°.0E±0°.1,h34km,n33, σ0s.74/33,mb4.5/17,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.36	292	Pn	Pn	07 15 01.4	+0.5
	42nm,0.3s,baz=156,slow=10.0,SNR=4.0						
HNR	Honiara	5.36	292	ePn	Pn	07 15 01.4	+0.5
DZM	Mont Dzumac	10.64	173	Pn	Pn	07 16 13.1	-0.3
	1.7nm,0.3s,baz=13,slow=7.1,SNR=6.2						
CTA	Charters Tower	19.95	242	P	Pn	07 18 14.1	-0.4
	14nm,1.1s,baz=76,slow=12,SNR=3.7						
URZ	Urewera	28.80	160	P	P	07 19 39.2	+1.2
	11nm,1.1s,baz=225,slow=1.4,SNR=2.1						
STKA	Stephens Creek	29.63	223	P	P	07 19 46.0	+0.4
	2.0nm,0.6s,baz=17,slow=8.5,SNR=6.2						
WRA	Warramunga Arr	30.65	250	P	P	07 19 54.4	-0.4
	5.7nm,0.8s,baz=80,slow=9.1,SNR=10.0						
ASAR	Alice Springs	31.95	243	P	P	07 20 05.5	-0.7
	5.2nm,0.8s,baz=72,slow=9.7,SNR=14						
RPZ	Rata Peaks	32.56	172	P	P	07 20 11.6	+0.3
	9.3nm,0.8s,baz=100,slow=12,SNR=2.8						
FITZ	Fitzroy Crossi	38.56	255	P	P	07 21 02.5	-0.6
	4.6nm,0.8s,baz=121,slow=5.0,SNR=7.1						
MJAR	Matsushiro Arr	54.01	333	P	P	07 23 03.1	-1.0
	8.9nm,1.0s,baz=173,slow=8.4,SNR=2.9						
MAJO	Matsushiro	54.01	333	eP	P	07 23 03.1	-1.0
USRK	Ussuriysk Ar.	62.99	334	P	P	07 24 07.7	+1.0
	15nm,0.9s,baz=130,slow=4.5,SNR=2.7						
MNSI	Mandailing Nat	66.11	276	P	P	07 24 26.9	-0.7
CMAR	Chiang Mai Arr	71.61	294	P	P	07 25 02.5	+0.7
	1.1nm,0.5s,baz=128,slow=4.7,SNR=5.4						
CMAR	Chiang Mai Arr	71.61	294	P	P	07 25 02.5	+0.7
CMAR	Chiang Mai Arr	71.61	294	P	P	07 25 02.5	+0.7
ULN	Ulaanbaatar	78.21	324	eP	P	07 25 40.5	+1.0
	71nm,1.1s						
SONA0	Songino Array	78.57	324	eP	P	07 25 41.1	-0.4
SONM	Songino Array	78.57	324	P	P	07 25 41.1	-0.4
	1.1nm,0.8s,baz=152,slow=6.7,SNR=4.9						
SONM	Songino Array	78.57	324	P	P	07 25 41.1	-0.4
GTA	Gaotai	78.82	314	eP	P	07 25 44.3	+1.2
GTA				pP	PcP	07 25 48.7	-3.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ILAR	Eielson Array	84.14	19	P	P	07 26 09.1	-1.4
	comp=Z,1.5nm,0.9s,baz=209,slow=7.2,SNR=6.6						
ILAR	Eielson Array	84.14	19	P	P	07 26 09.1	-1.4
NVAR	Mina Array Bea	86.85	50	P	P	07 26 25.0	+0.1
	comp=Z,10nm,1.1s,baz=249,slow=1.7,SNR=3.4						
BMO	Blue Mountains	89.44	44	eP	P	07 26 37.2	+0.3
	comp=Z,9.6nm,1.1s						
BMO	Blue Mountains	89.44	44	eP	P	07 26 37.2	+0.3
BMO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MK32	Makanchi Array	93.32	317	eP	P	07 26 55.1	+0.3
MKAR	Makanchi Array	93.32	317	P	P	07 26 55.1	+0.3
	comp=Z,2.5nm,0.8s,baz=103,slow=5.9,SNR=14						
MKAR	Makanchi Array	93.32	317	P	P	07 26 55.1	+0.3
MKAR	Makanchi Array	93.32	317	P	P	07 26 55.1	+0.3
ZALV	Zalesovo Beam	93.47	324	P	P	07 26 55.0	-0.2
	comp=Z,2.0nm,0.9s,baz=116,slow=3.4,SNR=5.9						
ZAA1	Zalesovo Array	93.47	324	eP	P	07 26 55.0	-0.2

IDC ***06*** *07:13:46.0±0.4, 10°.68S×165°.43E, h0km, mb5.0/30, mb1 5.1/32, mb1mx5.1/39, mbtmp5.0/32, ML5.4/2, MS4.8/1, Ms1 4.8/1, ms1mx3.9/38, Error ellipse: s-maj=14.8km s-min=11.2km az=105.0*

NEIC ***06*** *07:13:47.3±0.1, 10°.69S×165°.34E, h10km, mb5.3/189, Error ellipse: s-maj=4.5km s-min=3.4km az=123.0*

BJI ***06*** *07:13:47.1, 10°.29S×165°.28E, h6km, mB5.8/15, mb5.4/59, Ms5.4/17, Ms7 5.2/18*

ISCJB ***06*** *07:13:49.3±0.1, 10°.69S±0°.02×165°.31E±0°.02, h31km, mb5.2/243, MS4.7/1, Error ellipse: s-maj=3.4km s-min=3.0km az=40.8*

MOS ***06*** *07:13:49.0±0.8, 10°.64S×165°.26E, h28km, mb5.4/66, Error ellipse: s-maj=7.9km s-min=6.7km az=91.1*

ISC 06 07:13:50.4±0.3**, 10°.72S**±0°.05×**165°.42E**±0°.05**, h31km, n588, σ1s.06**/598**, mb5.2**/243**, 16C-9D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.54	283	ePn	Pn	07 15 09.7	-1.1
HNR				ePg	Pn	07 15 11.3	+0.6
HNR				eSn	Sn	07 16 13.2	-0.1
HNR	Honiara	5.54	283	P	Pn	07 15 11.3	+0.6
HNR						07 16 13.2	
HNR				pmax	pmax		
	comp=Z,423nm,0.3s						
HNR				smax	smax		
	comp=N,42nm,0.3s						
HNR	Honiara	5.54	283	Pn	Pn	07 15 11.3	+0.6
	comp=N,423nm,0.3s,baz=141,slow=8.8,SNR=25						
HNR				Sn	Sn	07 16 13.2	-0.1
	comp=N,48nm,0.3s,baz=0.0,slow=20,SNR=2.5						
MARNC	Mare, Loyalty	10.99	167	ePn	Pn	07 16 25.9	+0.3
DZM	Mont Dzumac	11.33	175	ePn	Pn	07 16 30.4	0.0
DZM	Mont Dzumac	11.33	175	Pn	Pn	07 16 31.7	+1.3
	comp=N,7.5nm,0.3s,baz=349,slow=11,SNR=24						
PINNC	Pines Island,	11.98	171	ePn	Pn	07 16 41.6	+2.4
MSVF	Nonsavu	14.09	121	ePn	Pn	07 17 07.9	-0.2
MSVF	Nonsavu	14.09	121	eP	Pn	07 17 07.9	-0.2
MANU	Manus Island	19.89	294	eP	Pn	07 18 21.2	-0.1
	comp=N,435nm,1.0s						
EIDS	Eidsvold	19.92	221	P	Pn	07 18 22.3	+0.7
	baz=20,SNR=7.0						
EIDS	Eidsvold	19.92	221	eP	Pn	07 18 21.6	0.0
	comp=N,123nm,0.9s						
CTA	Charters Tower	20.67	241	P	Pn	07 18 29.4	-1.0
	comp=N,76nm,1.1s,baz=61,slow=14,SNR=7.0						
CTAO	Charters Tower	20.67	241	eP	P	07 18 26.1	-1.8
	comp=N,268nm,1.4s						
CTAO	Charters Tower	20.67	241	eP	P	07 18 26.1	-1.8
CTAO				pmax	pmax		
	comp=Z,268nm,1.4s						
LHI	Lord Howe Isla	21.52	195	eP	P	07 18 33.7	-3.3
	comp=Z,221nm,1.0s						
MTSU	Mount Surprise	21.71	248	P	P	07 18 39.2	+0.1
	baz=22,SNR=5.3						
COEN	Coen	21.96	259	P	P	07 18 42.6	+0.7
	baz=22,SNR=7.6						
COEN	Coen	21.96	259	eP	P	07 18 38.6	-3.3
	comp=Z,40nm,1.0s						
RMQ	Roma	22.21	223	P	P	07 18 46.6	+2.2
	baz=22,SNR=11						
ARMA	Armidale	23.42	211	P	P	07 18 58.7	+1.6
	baz=24,SNR=6.3						
ARMA	Armidale	23.42	211	eP	P	07 18 57.8	+0.7
	comp=Z,34nm,0.9s						
KNTN	Kanton	24.02	72	eP	P	07 19 03.0	+0.2
	comp=Z,192nm,1.3s						
QLP	Quilpie	25.46	229	P	P	07 19 16.9	+1.0
	baz=26,SNR=37						
OUZ	Omahuta	25.50	164	eP	P	07 19 15.0	-1.1
	comp=Z,130nm,1.1s						
JAY	Jayapura	25.84	287	P	P	07 19 20.2	+0.7
MGCD	Mangrove Creek	25.96	208	P	P	07 19 21.7	+1.4
	baz=26,SNR=5.2						
RIV	Riverview	26.45	207	P	P	07 19 27.1	+2.4
	baz=27,SNR=5.4						
CMSA	Cobar Meteorol	27.61	218	P	P	07 19 35.9	+0.7
	baz=28,SNR=5.4						
CNB	Canberra Magne	28.51	208	P	P	07 19 45.1	+1.9
	baz=29,SNR=5.2						
HIZ	Hauiti	28.94	165	eP	P	07 19 48.5	+1.6
	comp=Z,141nm,1.3s						
H11S2	WAKE ISLAND Hy	29.05	3	T	T	07 50 22.8	
	baz=184,slow=76,SNR=92						
H11S3	WAKE ISLAND Hy	29.06	2	T	T	07 50 18.4	
	baz=184,slow=76,SNR=110						
H11S1	WAKE ISLAND Hy	29.07	3	T	T	07 50 21.8	
	baz=184,slow=76,SNR=84						
MXZ	Matakaoa Point	29.14	159	eP	P	07 19 50.1	+1.5
	comp=Z,187nm,1.3s						
URZ	Urewera	29.36	161	P	P	07 19 51.5	+0.8
	comp=Z,43nm,1.0s,baz=310,slow=1.7,SNR=10						
KATZ	Kakaramea	29.60	164	P	P	07 19 56.9	+4.0
WTVZ	West Tongariro	29.70	164	P	P	07 19 57.3	+3.5
NGZ	Ngauruhoe	29.76	164	P	P	07 19 58.3	+3.9
BKZ	Black Stump Fm	30.00	163	eP	P	07 19 55.9	-0.5
	comp=Z,54nm,0.9s						
BKZ	Black Stump Fm	30.00	163	P	P	07 19 59.0	+2.6
MOVZ	Moawhango	30.02	164	P	P	07 19 59.8	+3.2
BHHZ	Black Hill Sta	30.18	163	P	P	07 20 00.0	+2.1
KWHZ	Kaweka Forest	30.22	163	P	P	07 19 59.8	+1.4
H11N1	WAKE ISLAND Hy	30.28	3	T	T	07 51 44.4	
	baz=182,slow=76,SNR=81						
H11N3	WAKE ISLAND Hy	30.28	3	T	T	07 51 45.0	
	baz=182,slow=76,SNR=46						
H11N2	WAKE ISLAND Hy	30.29	3	T	T	07 51 46.9	
	baz=182,slow=76,SNR=39						
MCHZ	McNeill Hill	30.32	163	P	P	07 20 00.4	+1.3
STKA	Stephens Creek	30.46	223	P	P	07 20 01.9	+1.4
	baz=31,SNR=6.2						
STKA	Stephens Creek	30.46	223	eP	P	07 20 01.5	+1.0
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	30.46	223	P	P	07 20 01.3	+0.8
	comp=Z,16nm,1.0s,baz=40,slow=7.4,SNR=15						
KAHZ	Kahuranaki	30.70	163	P	P	07 20 05.0	+2.5
DUWZ	D'Urville Isla	30.89	167	P	P	07 20 09.0	+4.8
PXZ	Pawanui	30.91	163	P	P	07 20 07.0	+2.7
DVHZ	Dannevirke	30.96	164	P	P	07 20 06.6	+1.8
PRWZ	Pori Road	31.15	164	P	P	07 20 08.8	+2.3
KIW	Kapiti Island	31.17	166	P	P	07 20 11.0	+4.4
NNZ	Nelson	31.18	168	P	P	07 20 13.7	+7.0
WRAB	Tennant Creek	31.28	249	eP	P	07 20 06.7	-1.3
	comp=Z,46nm,1.4s						
WRAB	Tennant Creek	31.28	249	⇓iP	P	07 20 08.7	+0.8
WRAB				pmax	pmax		
	comp=Z,37nm,1.7s						
WB2	Warramunga Arr	31.28	249	eP	P	07 20 07.0	-0.9
WB2				eP	P	07 20 07.3	-0.6
WR1	Warramunga Arr	31.29	249	eP	P	07 20 07.0	-1.0
	comp=Z,34nm,1.2s						
WR1				ePcP	PcP	07 23 02.1	+0.1
WRA	Warramunga Arr	31.29	249	P	P	07 20 07.0	-1.0
	comp=Z,14nm,1.0s,baz=80,slow=9.1,SNR=13						
WRA				PcP	PcP	07 23 02.1	+0.1
	comp=Z,3.8nm,0.9s,baz=80,slow=3.2,SNR=6.1						
WRA				LR	LR	07 30 49.3	
	comp=Z,2µm,20.2s,baz=35,slow=33						
BFZ	Birch Farm	31.34	164	eP	P	07 20 08.2	+0.1
	comp=Z,78nm,0.9s						
BFZ	Birch Farm	31.34	164	P	P	07 20 10.2	+2.0
HOWZ	Holdsworth Sta	31.35	165	P	P	07 20 08.4	+0.1
TUWZ	Tuamarina	31.50	168	P	P	07 20 16.4	+6.9
MTW	Mount Morrison	31.59	165	P	P	07 20 10.8	+0.4
GUMO	Guam	31.61	319	eP	P	07 20 09.8	-0.8
	comp=Z,346nm,1.4s						
GUMO	Guam	31.61	319	eP	P	07 20 09.9	-0.8
GUMO				pmax	pmax		
	comp=Z,345nm,1.4s						
THZ	Tophouse	31.61	169	eP	P	07 20 11.3	+0.6
	comp=Z,100nm,1.0s						
TMWZ	Te Maipa	31.64	165	P	P	07 20 11.0	+0.1
MSWZ	Moikau Station	31.78	166	P	P	07 20 14.3	+2.3
PAWZ	Paruwai Farm	31.79	166	P	P	07 20 14.2	+2.0
TRWZ	Traveller	31.87	165	P	P	07 20 15.1	+2.3
TOO	Toolangi	32.18	211	P	P	07 20 16.4	+0.7
	baz=32,SNR=6.2						
TOO	Toolangi	32.18	211	eP	P	07 20 15.6	-0.1
	comp=Z,21nm,1.0s						
TOO	Toolangi	32.18	211	eP	P	07 20 15.6	-0.1
TOO				pmax	pmax		
	comp=Z,21nm,1.0s						
KDU	Kakadu	32.30	263	P	P	07 20 15.8	-1.2
	baz=32,SNR=5.6						
KHZ	Kahutara	32.37	169	eP	P	07 20 18.6	+1.5
	comp=Z,91nm,1.4s						
LTZ	Lake Taylor	32.50	171	eP	P	07 20 19.1	+0.8
	comp=Z,34nm,0.8s						
AS01	Alice Springs	32.61	243	eP	P	07 20 18.6	-1.0
AS31	Alice Springs	32.65	243	eP	P	07 20 18.3	-1.6
	comp=Z,5.2nm,1.1s						
AS31				ePcP	PcP	07 23 06.1	+0.4
ASAR	Alice Springs	32.65	243	P	P	07 20 18.8	-1.2
	comp=Z,11nm,0.9s,baz=76,slow=9.4,SNR=17						
ASAR				PcP	PcP	07 23 06.1	+0.4
	comp=Z,3.0nm,0.8s,baz=64,slow=2.5,SNR=5.5						
OXZ	Oxford	32.99	171	eP	P	07 20 24.5	+1.9
	comp=Z,114nm,1.5s						
HTT	Hallett	33.19	223	P	P	07 20 25.7	+1.2
	baz=33,SNR=18						
RPZ	Rata Peaks	33.23	173	eP	P	07 20 25.4	+0.6
RPZ				eP	P	07 20 25.5	+0.8
RPZ	Rata Peaks	33.23	173	P	P	07 20 25.3	+0.6
	comp=Z,28nm,0.8s,baz=255,slow=1.6,SNR=5.2						
MQZ	McQueen's Vall	33.46	170	eP	P	07 20 27.6	+0.9
	comp=Z,140nm,1.5s						
ARPS	Mount Arapiles	33.55	216	P	P	07 20 29.1	+1.5
	baz=34,SNR=7.3						
BBOO	Buckleboo	34.81	226	P	P	07 20 39.1	+0.5
	baz=35,SNR=18						
BBOO	Buckleboo	34.81	226	eP	P	07 20 38.0	-0.6
	comp=Z,82nm,0.9s						
WRKA	Warakurna	37.94	243	P	P	07 21 04.3	-1.2
	baz=38,SNR=3.6						
FITZ	Fitzroy Crossi	39.15	255	P	P	07 21 14.4	-1.3
	baz=39,SNR=4.8						
FITZ	Fitzroy Crossi	39.15	255	eP	P	07 21 14.6	-1.1
	comp=Z,12nm,0.9s						
FITZ	Fitzroy Crossi	39.15	255	P	P	07 21 16.1	+0.5
	comp=Z,11nm,0.9s,baz=110,slow=3.9,SNR=10.0						
FORT	Forrest	39.97	234	eP	P	07 21 20.3	-2.0
	comp=Z,51nm,0.8s						
KMSI	Cibinong	42.70	283	P	P	07 21 45.4	+0.4
EDFI	Ende, Flores	43.11	269	P	P	07 21 49.4	+0.9
APSI	Ampana	44.56	280	P	P	07 22 00.5	+0.6
BNSI	Bone	45.31	274	P	P	07 22 06.7	+0.8
PCI	Palu	46.31	279	P	P	07 22 14.4	+0.5
MEEK	Meekatharra	46.80	244	P	P	07 22 16.7	-0.8
	baz=47,SNR=4.1						
KLBR	Kellerberrin	48.61	237	P	P	07 22 31.0	-0.5
	baz=49,SNR=5.2						
NWAO	Narrogin (SRO)	49.38	236	P	P	07 22 36.4	-0.9
	baz=49,SNR=5.7						
NWAO	Narrogin (SRO)	49.38	236	eP	P	07 22 36.5	-0.9
	comp=Z,70nm,1.2s						
NWAO	Narrogin (SRO)	49.38	236	eP	P	07 22 36.5	-0.9
NWAO				pmax	pmax		
	comp=Z,70nm,1.2s						
NWAO	Narrogin (SRO)	49.38	236	P	P	07 22 37.8	+0.4
	comp=Z,30nm,0.9s,baz=304,slow=5.2,SNR=8.0						
MORW	Morawa	49.50	241	P	P	07 22 37.2	-1.2
	baz=50,SNR=4.2						
MUN	Mundaring	49.98	237	P	P	07 22 41.2	-0.8
	baz=50,SNR=3.2						
KKM	Kota Kinabalu	51.73	286	eP	P	07 22 55.6	+0.1
	comp=Z,72nm,1.1s						
PWJI	Pagerwojo	52.91	268	P	P	07 23 04.8	+0.6
MJAR	Matsushiro Arr	53.53	333	P	P	07 23 07.9	-0.5
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MJAR	Matsushiro Arr	53.53	333	P	P	07 23 07.8	-0.5
	comp=Z,11nm,0.8s,baz=170,slow=8.6,SNR=14						
MAJO	Matsushiro	53.54	333	esP	P	07 23 07.8	-0.5
MAJO	Matsushiro	53.54	333	⇑eP	P	07 23 08.2	-0.2
MAJO				pmax	pmax		
	comp=Z,37nm,1.2s						
MAT	Matsushiro	53.54	333	P	P	07 23 07.7	-0.7
SBUM	Sibu	54.52	281	eP	P	07 23 16.0	0.0
	comp=Z,9.4nm,1.2s						
JNU	Nakatsue	54.63	324	eP	P	07 23 16.7	+0.3
	comp=Z,61nm,1.1s						
ASAJ	Asahikawa	58.38	341	P	P	07 23 43.9	+1.0
	comp=Z,33nm,0.9s,baz=228,slow=11,SNR=20						
SSE	Sheshan	59.39	316	P	P	07 23 50.3	+0.1
SSE				pmax	pmax		
	comp=Z,20nm,0.8s						
SSE	Sheshan	59.39	316	eP	P	07 23 50.5	+0.3
	comp=Z,81nm,0.9s						
KSRS	Korea Array	59.43	326	P	P	07 23 50.9	+0.6
	comp=Z,9.6nm,1.0s,baz=149,slow=6.9,SNR=17						
KS15	Wonju Array Si	59.44	326	eP	P	07 23 50.9	+0.5
KSAR	Wonju Array Be	59.44	326	P	P	07 23 50.9	+0.5
KSAR	Wonju Array Be	59.44	326	P	P	07 23 50.9	+0.5
YSS	Yuzh-Sakhalins	60.88	342	⇓eP	P	07 24 00.3	+0.3
YSS				e		07 24 10.2	
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
TEY	Ternei	61.30	337	⇓eP	P	07 24 02.1	-0.8
TEY				pmax	pmax		
	comp=Z,30nm,1.2s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
NJ2	Nanjing	61.56	315	eP	P	07 24 05.1	+0.2
NJ2				pmax	pmax		
	comp=E,46nm,1.1s						
VLA	Vladivostok	61.71	333	⇓eP	P	07 24 06.3	+0.6
VLA				pmax	pmax		
	comp=Z,73nm,1.9s						
QIZ	Qiongzhong	62.24	298	P	P	07 24 10.8	+1.0
QIZ				S	S	07 32 35.3	+1.3
QIZ				pmax	pmax		
	comp=Z,21nm,0.9s						
QIZ	Qiongzhong	62.24	298	eP	P	07 24 10.3	+0.5
	comp=Z,30nm,1.1s						
USA0B	Ussuriysk Arra	62.51	333	eP	P	07 24 12.5	+1.4
	comp=Z,66nm,1.3s						
USRK	Ussuriysk Ar.	62.51	333	P	P	07 24 11.8	+0.8
	comp=Z,18nm,1.0s,baz=145,slow=7.0,SNR=28						
MDJ	Mudanjiang	63.91	332	P	P	07 24 21.8	+1.4
MDJ				pmax	pmax		
	comp=Z,38nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,2µm,12.3s						
MDJ	Mudanjiang	63.91	332	eP	P	07 24 21.4	+1.0
	comp=Z,38nm,1.1s						
PEA0B	Petropavlovsk-	63.92	355	eP	P	07 24 21.6	+1.3
	comp=Z,128nm,1.5s						
PETK	Petropavlovsk-	63.92	355	eP	P	07 24 20.9	+0.7
PETK	Petropavlovsk-	63.92	355	eP	P	07 24 20.9	+0.7
PETK	Petropavlovsk-	63.92	355	P	P	07 24 21.4	+1.2
	comp=Z,22nm,0.9s,baz=163,slow=9.8,SNR=18						
PEA1	Petropavlovsk-	63.92	355	eP	P	07 24 21.4	+1.1
WHN	Wuhan	63.94	312	⇑P	P	07 24 20.8	0.0
DL2	Dalian	64.03	323	P	P	07 24 21.4	+0.2
DL2				pmax	pmax		
	comp=Z,77nm,1.1s						
TYV	Tymovskoe	64.45	344	eP	P	07 24 23.6	-0.1
TYV				pmax	pmax		
	comp=Z,27nm,1.8s						
ATKA	Atka Island	65.08	14	eP	P	07 24 28.4	+0.5
	comp=Z,164nm,1.3s						
TIA	Tai'an	65.16	318	P	P	07 24 28.0	-0.7
CN2	Changchun	65.30	329	eP	P	07 24 29.9	+0.5
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
IPM	Ipoh	65.85	280	eP	P	07 24 33.2	-0.4
	comp=Z,68nm,1.2s						
GRNR	Gornyy	66.23	340	eP	P	07 24 37.1	+1.8
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
CASY	Casey	66.56	201	eP	P	07 24 38.3	+1.1
	comp=Z,68nm,1.3s						
KLR	Kul'dur	66.63	337	P	P	07 24 38.8	+0.9
	comp=Z,25nm,1.0s,baz=130,slow=4.0,SNR=45						
VNDA	Vanda	66.81	181	epP	P	07 24 40.3	+1.6
VNDA	Vanda	66.81	181	P	P	07 24 40.7	+2.0
	comp=Z,20nm,1.2s,baz=358,slow=9.9,SNR=6.1						
VNDA	Vanda	66.81	181	eP	P	07 24 35.2	-3.5
	comp=Z,83nm,1.8s						
NKL	Nikolayevsk	67.04	344	i P	P	07 24 40.8	+0.4
NKL				pmax	pmax		
	comp=Z,66nm,0.9s						
NIKH	Nikolski High	67.15	17	eP	P	07 24 39.9	-1.3
	comp=Z,121nm,0.7s						
SRAK	Srakaew	67.48	290	P	P	07 24 45.4	+1.5
	comp=Z,21nm,0.9s						
TRTT	Trang	67.96	283	P	P	07 24 49.9	+2.9
	comp=Z,6.7nm,1.4s						
GYA	Guiyang	67.97	304	⇑iP	P	07 24 47.4	+0.4
GYA				PP	PP	07 27 20.8	+3.5
GYA				S	S	07 33 46.2	+1.8
GYA				SKS	SKSac	07 34 43.5	-0.2
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,6.9s						
GYA				LR	LR		
	comp=Z,670nm,18.2s						
GYA				LR	LR		
	comp=Z,610nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
BJT	Baijiatuau	68.02	321	eP	P	07 24 46.5	-0.4
	comp=Z,67nm,1.3s						
BJT	Baijiatuau	68.02	321	eP	P	07 24 46.5	-0.4
BJT				pmax	pmax		
	comp=Z,67nm,1.3s						
CHAI	Chaiyaphum	68.12	292	P	P	07 24 48.5	+0.5
	comp=Z,5.5nm,1.0s,comp=Z,112nm						
PATY	Pattaya	68.24	289	P	P	07 24 51.0	+2.2
	comp=Z,12nm,1.1s						
UNV	Unalaska Valle	68.60	17	eP	P	07 24 49.9	-0.2
	comp=Z,28nm,0.9s						
TIY	Taiyuan	69.10	317	eP	P	07 24 54.5	+0.7
TIY				pmax	pmax		
	comp=Z,22nm,0.6s						
PBKT	Sadao Pong	69.26	292	P	P	07 24 55.8	+0.8
	comp=Z,30nm,1.1s						
PHET	Kaeng Krachan	69.39	288	P	P	07 24 57.9	+2.0
	comp=Z,5.3nm,1.1s,comp=Z,199nm						
XAN	Xi'an	69.66	312	P	P	07 24 57.3	0.0
XAN				pmax	pmax		
	comp=Z,34nm,1.0s						
XAN	Xi'an	69.66	312	eP	P	07 24 57.5	+0.2
	comp=Z,51nm,1.2s						
XAN	Xi'an	69.66	312	eP	P	07 24 57.5	+0.2
XAN				pmax	pmax		
	comp=Z,51nm,1.2s						
UTTA	Uttaradit	70.01	293	P	P	07 25 00.5	+0.8
	comp=Z,6.1nm,1.1s,comp=Z,61nm						
SRDT	SRDT	70.28	289	P	P	07 25 02.8	+1.4
	comp=Z,25nm,1.2s,comp=Z,3µm						
UTHA	Uthaitani	70.34	291	P	P	07 25 03.0	+1.3
	comp=Z,7.0nm,1.1s,comp=Z,76nm						
SPIA	Saint Paul Isl	70.57	14	eP	P	07 25 01.9	-0.3
	comp=Z,218nm,1.4s						
KMI	Kunming	70.68	301	P	P	07 25 05.3	+1.4
KMI				sP	pP	07 25 13.6	+0.5
KMI				pmax	pmax		
	comp=Z,47nm,1.6s						
KMI	Kunming	70.68	301	eP	P	07 25 04.9	+0.9
	comp=Z,73nm,1.3s						
SUKH	Sukhothai	70.76	293	P	P	07 25 05.8	+1.5
	comp=Z,6.3nm,1.0s						
MA2	Magadan	71.04	352	ceP	P	07 25 04.8	-0.3
MA2				pmax	pmax		
	comp=Z,62nm,2.5s						
UMPA	Umpang Tak	71.07	291	P	P	07 25 08.0	+1.8
	comp=Z,5.0nm,1.2s,comp=Z,2µm						
HHC	Hu-ho-hao-te	71.38	320	eP	P	07 25 08.8	+1.1
HHC				pmax	pmax		
	comp=Z,33nm,1.3s						
CM31	Chiang Mai Arr	71.69	294	eP	P	07 25 09.4	-0.5
	comp=Z,39nm,1.1s						
CM31				eS	S	07 34 25.7	-2.4
CMAR	Chiang Mai Arr	71.69	294	P	P	07 25 11.4	+1.5
CMAR	Chiang Mai Arr	71.69	294		P	07 25 11.4	+1.5
CMAR	Chiang Mai Arr	71.69	294	P	P	07 25 11.4	+1.5
	comp=Z,17nm,1.0s,baz=112,slow=4.6,SNR=40						
CMMT	Chiang Mai	71.79	294	P	P	07 25 11.3	+0.7
	comp=Z,28nm,1.2s						
CHTO	Chiang Mai	71.80	294	eP	P	07 25 10.5	-0.1
	comp=Z,50nm,1.4s						
CHTO	Chiang Mai	71.80	294	eP	P	07 25 10.5	-0.1
CHTO				pmax	pmax		
	comp=Z,50nm,1.4s						
CHTO	Chiang Mai	71.80	294	P	P	07 25 11.4	+0.8
	comp=Z,122nm,1.2s						
ZEA	Zeya	71.92	337	eP	P	07 25 11.2	+0.7
ZEA				pmax	pmax		
	comp=N,72nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.2s						
HIA	Hailar	71.93	330	eP	P	07 25 11.0	+0.2
	comp=Z,56nm,1.1s						
HIA	Hailar	71.93	330	eP	P	07 25 11.0	+0.2
HIA				pmax	pmax		
	comp=Z,56nm,1.1s						
CD2	Chengdu	72.15	307	⇑P	P	07 25 13.0	+0.5
CD2				pmax	pmax		
	comp=Z,230nm,5.2s						
SEY	Seymchan	74.12	354	c iP	P	07 25 23.6	+0.2
LZH	Lanzhou	74.30	312	⇑P	P	07 25 26.7	+1.4
LZH				pP	pP	07 25 31.0	-3.2
LZH				sP	sP	07 25 33.8	-3.5
LZH				pmax	pmax		
	comp=Z,91nm,1.2s						
LZH				pmax	pmax		
	comp=Z,430nm,4.3s						
LZH				LR	LR		
	comp=Z,690nm,16.3s						
LZH				LR	LR		
	comp=Z,640nm,16.4s						
LZH				LR	LR		
	comp=Z,750nm,17.5s						
GAMB	Gambell	76.31	10	eP	P	07 25 36.9	+1.0
	comp=Z,55nm,1.0s						
KDAK	Kodiak Island	76.40	22	P	P	07 25 37.3	+0.8
	comp=Z,15nm,0.9s,baz=236,slow=7.6,SNR=12						
CIT	Chita	76.72	330	eP	P	07 25 38.7	+0.1
CIT				e		07 25 47.7	
CIT				pmax	pmax		
	comp=Z,161nm,1.3s						
YAK	Yakutsk	77.69	344	eP	P	07 25 42.3	-1.5
YAK				pmax	pmax		
	comp=Z,66nm,1.3s						
YAK				pmax	pmax		
	comp=N,20nm,1.5s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
ULN	Ulaanbaatar	77.85	324	c iP	P	07 25 46.1	+0.9
ULN				pmax	pmax		
	comp=Z,72nm,1.1s						
SVW2	Sparrevohn	77.91	18	eP	P	07 25 45.0	0.0
	comp=Z,77nm,1.3s						
SONA0	Songino Array	78.21	324	esP	P	07 25 47.8	+0.6
SONM	Songino Array	78.21	324	P	P	07 25 47.8	+0.6
SONM	Songino Array	78.21	324	P	P	07 25 47.8	+0.6
	comp=Z,19nm,0.9s,baz=146,slow=6.5,SNR=54						
ANM	Nome	78.24	12	eP	P	07 25 47.4	+0.6
	comp=Z,59nm,1.4s						
ANM	Nome	78.24	12	eP	P	07 25 47.4	+0.6
ANM				pmax	pmax		
	comp=Z,59nm,1.4s						
RSO	Redoubt South	78.33	20	eP	P	07 25 47.4	-0.2
BRLK	Bradley Lake	78.45	21	eP	P	07 25 48.2	+0.1
	comp=Z,33nm,0.9s						
BILL	Bilibino	78.56	0	eP	P	07 25 49.2	+0.7
	comp=Z,68nm,1.1s						
BILL	Bilibino	78.56	0	c iP	P	07 25 49.0	+0.5
BILL				pmax	pmax		
	comp=Z,111nm,1.7s						
GTA	Gaotai	78.60	314	⇑P	P	07 25 50.7	+1.2
GTA				pP	pP	07 25 55.6	-2.8
GTA				sP	PcP	07 25 57.9	-0.6
GTA				pmax	pmax		
	comp=Z,760nm,4.9s						
GTA				LR	LR		
	comp=Z,550nm,17.5s						
GTA				LR	LR		
	comp=Z,820nm,17.1s						
GTA				LR	LR		
	comp=Z,1µm,19.7s						
QSPA	South Pole Qui	79.28	180	eP	P	07 25 52.9	+0.1
	comp=Z,84nm,1.1s						
SUA	Susitna One	79.73	20	eP	P	07 25 55.0	-0.2
	comp=Z,16nm,1.0s						
RC01	Rabbit Creek A	79.80	20	eP	P	07 25 56.1	+0.7
	comp=Z,33nm,1.3s						
SHL	Shillong	80.08	298	eP	P	07 25 57.3	-0.6
	comp=Z,81nm,1.4s						
SHL	Shillong	80.08	298	eP	P	07 25 57.3	-0.6
SHL				pmax	pmax		
	comp=Z,81nm,1.4s						

SHL	Shillong	80.08	298	eP	P	07 25 57.5	-0.4
BOD	Bodaibo	80.10	335	eP	P	07 25 57.0	-0.1
BOD				pmax	pmax		
	comp=Z,28nm,1.7s						
PMR	Palmer	80.36	20	eP	P	07 25 58.7	+0.3
	comp=Z,34nm,1.4s						
PMR	Palmer	80.36	20	eP	P	07 25 58.7	+0.3
PMR				pmax	pmax		
	comp=Z,34nm,1.4s						
KNK	Knik Glacier	80.47	21	eP	P	07 26 00.2	+1.1
	comp=Z,58nm,1.4s						
GLI	Glacier Island	80.58	21	eP	P	07 25 59.2	-0.5
	comp=Z,67nm,1.4s						
CAST	Castle Rocks	80.74	18	eP	P	07 25 60.0	-0.5
	comp=Z,18nm,0.8s						
SML	Sawmill	80.79	20	eP	P	07 26 01.9	+1.1
	comp=Z,83nm,1.5s						
SML	Sawmill	80.79	20	eP	P	07 26 01.9	+1.1
SML				pmax	pmax		
	comp=Z,83nm,1.5s						
DIV	Divide	81.23	22	eP	P	07 26 02.8	-0.4
	comp=Z,40nm,1.1s						
ZAK	Zakamensk	81.25	325	eP	P	07 26 03.4	-0.2
ZAK				pmax	pmax		
	comp=Z,22nm,1.2s						
TRF	Thorofare Moun	81.31	19	eP	P	07 26 03.0	-0.7
	comp=Z,31nm,1.4s						
KLU	Klutina	81.42	21	eP	P	07 26 05.0	+0.9
	comp=Z,33nm,1.2s						
BPAW	Bear Paw Mtn.	81.57	18	eP	P	07 26 04.9	0.0
	comp=Z,38nm,1.7s						
TLY	Talaya	81.67	326	eP	P	07 26 05.7	0.0
	comp=Z,62nm,1.0s						
TLY				eP	P	07 26 05.9	+0.2
TLY	Talaya	81.67	326	⇑iP	P	07 26 05.8	+0.1
TLY	Talaya	81.67	326	P	P	07 26 05.9	+0.2
	comp=Z,6.7nm,0.9s,baz=150,slow=3.2,SNR=28						
RDOG	Red Dog Mine	81.77	12	eP	P	07 26 06.8	+1.0
	comp=Z,34nm,0.8s						
LSA	Lhasa	81.91	302	eP	P	07 26 06.9	-1.1
	comp=Z,56nm,1.9s						
LSA	Lhasa	81.91	302	eP	P	07 26 06.9	-1.1
LSA				pmax	pmax		
	comp=Z,56nm,1.9s						
MCK	McKinley	81.94	19	eP	P	07 26 07.0	+0.2
	comp=Z,33nm,1.2s						
MCK	McKinley	81.94	19	eP	P	07 26 07.0	+0.2
MCK				pmax	pmax		
	comp=Z,33nm,1.2s						
DHY	Denali Highway	81.99	20	eP	P	07 26 07.3	+0.1
	comp=Z,21nm,1.2s						
BWN	Browne	82.09	18	eP	P	07 26 07.4	-0.1
	comp=Z,32nm,0.8s						
IM3	Indian Mountai	82.20	16	eP	P	07 26 08.9	+0.8
HARP	HAARP	82.30	21	eP	P	07 26 10.0	+1.3
	comp=Z,37nm,1.2s						
MLY	Manley	82.33	17	eP	P	07 26 09.5	+0.6
	comp=Z,25nm,1.4s						
KMRM	Mail Ridge	82.67	47	eP	P	07 26 12.2	+1.0
	comp=Z,36nm,1.0s						
WRH	Wood River Hil	82.73	18	eP	P	07 26 10.2	-0.7
	comp=Z,15nm,1.0s						
GDXM	Geysers	82.84	48	eP	P	07 26 14.3	+2.2
	comp=Z,12nm,0.9s						
MDM	Murphy Dome	83.02	18	eP	P	07 26 11.6	-0.9
	comp=Z,20nm,1.1s						
HDA	Harding Lake	83.04	19	eP	P	07 26 12.7	+0.2
	comp=Z,46nm,1.1s						
HDA	Harding Lake	83.04	19	P	P	07 26 12.7	+0.2
	baz=227						
TCOL	CIGO, UAF Yank	83.08	18	P	P	07 26 12.4	-0.3
	baz=226						
COLA	College	83.08	18	eP	P	07 26 12.7	+0.1
	comp=Z,18nm,0.8s						
COLA	College	83.08	18	ceP	P	07 26 12.2	-0.5
COLA				pmax	pmax		
	comp=Z,24nm,1.1s						
MOY	Mondy	83.13	326	eP	P	07 26 13.2	-0.2
MOY				pmax	pmax		
	comp=Z,28nm,3.2s						
RIDG	Independ'e Rid	83.28	20	eP	P	07 26 14.1	+0.2
	comp=Z,44nm,1.1s						
ILAR	Eielson Array	83.31	19	P	P	07 26 14.2	+0.3
ILAR	Eielson Array	83.31	19	P	P	07 26 14.2	+0.3
	comp=Z,7.6nm,0.5s,baz=242,slow=4.6,SNR=113						
ILB	Eielson Array	83.31	19	eP	P	07 26 12.4	-1.4
IL1	Eielson Array	83.31	19	eP	P	07 26 12.5	-1.4
O02D	Mt. Diablo Mer	83.31	47	P	P	07 26 15.8	+1.2
	baz=250,SNR=8.0						
POKR	Poker Plat Res	83.38	18	P	P	07 26 13.7	-0.6
	baz=227						
K02D	Willamette Mer	83.57	45	P	P	07 26 16.2	+0.4
	baz=249						
SNCC	San Nicolas Is	83.60	55	P	P	07 26 16.4	+0.3
	baz=253						
WDC	Whiskeytown Da	83.63	47	eP	P	07 26 15.4	-0.7
	comp=Z,21nm,1.4s						
WDC	Whiskeytown Da	83.63	47	eP	P	07 26 15.4	-0.7
WDC				pmax	pmax		
	comp=Z,21nm,1.4s						
N02D	Trinity Center	83.64	46	P	P	07 26 17.4	+1.1
	baz=250,SNR=5.5						
M02C	Callahan	83.68	46	P	P	07 26 17.0	+0.6
	baz=250						
SCRK	Sand Creek	83.72	20	eP	P	07 26 16.2	0.0
	comp=Z,85nm,1.4s						
PAGB	Antelope Grade	83.77	52	eP	P	07 26 18.7	+1.7
	comp=Z,25nm,1.2s						
SMMC	Simmler	83.84	52	P	P	07 26 18.0	+0.6
	baz=252						
PKM	Mcpherson Peak	83.86	53	P	P	07 26 18.4	+0.7
	baz=252						
YBH	Yreka Blue Hor	83.90	46	eP	P	07 26 17.3	-0.2
	comp=Z,17nm,1.0s						
YBH	Yreka Blue Hor	83.90	46	eP	P	07 26 17.3	-0.2
YBH				pmax	pmax		
	comp=Z,17nm,1.0s						
ORV	Oroville	84.04	48	eP	P	07 26 18.6	+0.4
	comp=Z,12nm,1.0s						
ORV	Oroville	84.04	48	eP	P	07 26 18.6	+0.4
ORV				pmax	pmax		
	comp=Z,12nm,1.0s						
O03E	Paynes Creek	84.06	47	P	P	07 26 18.8	+0.4
	baz=251,SNR=11						
COLD	Coldfoot	84.08	16	eP	P	07 26 18.8	+1.0
	comp=Z,7.1nm,1.2s						
JIS	Juneau Island	84.19	27	eP	P	07 26 20.3	+1.8
	comp=Z,74nm,1.7s						
AFDM	Forest Hills D	84.23	49	eP	P	07 26 19.9	+0.7
	comp=Z,26nm,1.0s						
PRP	Porcupine Dome	84.24	18	eP	P	07 26 18.8	0.0
	comp=Z,27nm,1.8s						
L04D	Klamath Falls	84.35	45	P	P	07 26 20.5	+0.6
	baz=250						
CMB	Columbia Colle	84.38	50	eP	P	07 26 20.9	+0.9
	comp=Z,16nm,1.0s						
CMB	Columbia Colle	84.38	50	eP	P	07 26 20.9	+0.9
CMB				pmax	pmax		
	comp=Z,16nm,1.0s						
M04C	Macdoel	84.53	46	P	P	07 26 21.6	+0.8
	baz=250,SNR=6.7						
CIS	Catalina Islan	84.53	55	P	P	07 26 21.2	+0.3
	baz=254						
KNGR	Kungurtug, Tuv	84.65	324	⇓iP	P	07 26 21.5	+0.3
ARVC	Arvin	84.70	53	P	P	07 26 22.0	+0.4
	baz=253						
VES	Vestal, Richgr	84.71	52	P	P	07 26 22.2	+0.5
	baz=253,SNR=5.2						
I04A	Tendick Farm,	84.81	44	P	P	07 26 22.8	+0.7
	baz=250						
J04D	Umpqua Nationa	84.83	44	P	P	07 26 23.3	+0.9
	baz=250						
H04D	Lebanon	84.84	43	P	P	07 26 22.8	+0.6
	baz=250						
K04D	Chiloquin, OR	84.87	45	P	P	07 26 23.0	+0.5
	baz=250						
MAW	Mawson	84.90	202	P	P	07 26 23.7	+1.7
	comp=Z,42nm,0.8s,baz=89,slow=5.5,SNR=6.3						
BEKR	Beckworth	84.97	48	eP	P	07 26 22.9	-0.2
	comp=Z,16nm,1.0s						
MWC	Mount Wilson	85.05	54	eP	P	07 26 24.5	+0.8
	comp=Z,56nm,1.5s						
MWC	Mount Wilson	85.05	54	eP	P	07 26 24.5	+0.8
MWC				pmax	pmax		
	comp=Z,56nm,1.5s						
ISA	Isabella, Lake	85.13	53	P	P	07 26 24.7	+0.7
	baz=253,SNR=7.2						
WAKR	Walker	85.23	50	eP	P	07 26 24.8	+0.3
	comp=Z,32nm,1.3s						
MDPB	Devils Postpil	85.24	50	eP	P	07 26 25.8	+1.1
	comp=Z,23nm,1.0s						
EDW2	Edwards Air Fo	85.29	53	P	P	07 26 25.4	+0.7
	baz=254,SNR=11						
OMMB	Old Mammoth Mi	85.30	51	eP	P	07 26 23.9	-1.1
	comp=Z,18nm,1.2s						
VCNR	Virginia City	85.32	49	eP	P	07 26 24.9	0.0
	comp=Z,11nm,1.1s						
DAWY	Dawson	85.37	21	eP	P	07 26 24.7	+0.2
	comp=Z,16nm,1.0s						
BFSC	Mount Baldy Ra	85.37	54	P	P	07 26 25.4	+0.2
	baz=254,SNR=11						
109C	Camp Elliot, M	85.45	55	P	P	07 26 26.0	+0.6
	baz=254						
CPE	Camp Elliot	85.45	55	eP	P	07 26 26.6	+1.2
	comp=Z,24nm,1.4s						
J05D	Fort Rock, OR	85.45	45	P	P	07 26 26.3	+0.9
	baz=251						
YERR	Yerington	85.53	49	eP	P	07 26 25.7	-0.3
	comp=Z,33nm,1.8s						
MURC	Murrieta	85.57	55	P	P	07 26 26.5	+0.4
	baz=254						
PAHR	Pah Rah Range	85.64	48	eP	P	07 26 27.6	+1.1
	comp=Z,18nm,1.1s						
MOD	Modoc Plateau	85.65	46	eP	P	07 26 26.3	-0.2
	comp=Z,12nm,1.0s						
CWC	Cottonwood Cre	85.66	52	P	P	07 26 27.1	+0.4
	baz=253						
D03D	Eldon	85.67	40	P	P	07 26 27.1	+0.9
	baz=249						
LRMC	Laurel Mtn Rad	85.70	53	P	P	07 26 27.4	+0.5
	baz=254						
TIXI	Tiksi	85.71	349	eP	P	07 26 25.6	-0.3
	comp=Z,35nm,1.3s						
TIXI				eP	P	07 26 25.9	0.0
TIXI	Tiksi	85.71	349	ceP	P	07 26 25.8	-0.1
TIXI				pmax	pmax		
	comp=Z,40nm,1.7s						
TIXI	Tiksi	85.71	349	P	P	07 26 25.9	0.0
	comp=Z,8.4nm,1.0s,baz=139,slow=5.1,SNR=17						
TIN	Tinemaha, Big	85.72	51	P	P	07 26 27.6	+0.7
	baz=253						
I05D	Terrebonne, OR	85.72	44	P	P	07 26 27.1	+0.5
	baz=251						
BAR	Barrett	85.74	56	eP	P	07 26 28.1	+1.1
	comp=Z,5.8nm,0.9s						
PINE	Pine Mountain	85.81	44	eP	P	07 26 27.8	+0.5
	comp=Z,20nm,0.9s						
RYN	Ryan	85.96	50	eP	P	07 26 27.9	-0.2
	comp=Z,16nm,1.1s						
BBRC	Big Bear Solar	85.97	54	P	P	07 26 28.8	+0.5
	baz=254						
DAC	Darwin (Calif)	85.99	52	eP	P	07 26 29.0	+0.6
	comp=Z,15nm,1.1s						
DAC	Darwin (Calif)	85.99	52	eP	P	07 26 29.0	+0.6
DAC				pmax	pmax		
	comp=Z,15nm,1.1s						
MONP2	Monument Peak	86.00	56	P	P	07 26 29.3	+0.8
	baz=255,SNR=14						
MPMC	Manual Prospec	86.01	52	P	P	07 26 29.1	+0.7
	baz=254,SNR=13						
NV01	Mina Array Sit	86.06	50	eP	P	07 26 28.6	0.0
NVAR	Mina Array Bea	86.06	50	P	P	07 26 29.8	+1.1
	comp=Z,15nm,1.0s,baz=232,slow=7.7,SNR=37						
F05D	White Salmon	86.16	42	P	P	07 26 29.5	+0.8
	baz=250						
PFO	Pinyon Flats O	86.16	55	eP	P	07 26 29.4	+0.2
	comp=Z,14nm,1.1s						
PFO	Pinyon Flats O	86.16	55	eP	P	07 26 29.4	+0.2
PFO				pmax	pmax		
	comp=Z,14nm,1.1s						
PFO	Pinyon Flats O	86.16	55	P	P	07 26 29.6	+0.5
	baz=255,SNR=8.1						
XPFO	Pion Flat	86.17	55	eP	P	07 26 28.9	-0.2
	comp=Z,14nm,1.0s						
NV11	Mina Array Sit	86.17	50	eP	P	07 26 30.2	+1.1
	comp=Z,1.9nm,1.1s						
IKP	In-Ko-Pah, Jac	86.19	56	P	P	07 26 29.8	+0.5
	baz=255						
D05A	Enumclaw	86.25	41	eP	P	07 26 29.5	+0.4
	comp=Z,109nm,1.5s						
A04D	Lummi Island	86.33	39	P	P	07 26 30.2	+0.8
	baz=249						
GSC	Goldstone, Bar	86.34	53	eP	P	07 26 30.1	+0.1
	comp=Z,14nm,1.3s						
GSC	Goldstone, Bar	86.34	53	eP	P	07 26 30.1	+0.1
GSC				pmax	pmax		
	comp=Z,14nm,1.3s						
GSC	Goldstone, Bar	86.34	53	P	P	07 26 30.4	+0.4
	baz=254,SNR=6.1						
GRAC	Grapevine Rang	86.37	51	P	P	07 26 31.0	+1.0
	baz=254,SNR=6.6						
KVN	Kaiserville	86.39	49	eP	P	07 26 31.2	+0.9
	comp=Z,18nm,1.1s						
KVN	Kaiserville	86.39	49	eP	P	07 26 31.2	+0.9
KVN				pmax	pmax		
	comp=Z,18nm,1.1s						
SWSC	Sam W. Stewart	86.52	56	P	P	07 26 31.6	+0.9
	baz=255,SNR=9.1						
B05A	Bryant	86.56	40	P	P	07 26 31.6	+1.0
	baz=250						
HEC	Hector,Ludlow	86.58	54	P	P	07 26 31.5	+0.3
	baz=255,SNR=9.0						
FURC	Furnace Creek,	86.61	52	P	P	07 26 31.8	+0.8
	baz=254,SNR=7.9						
BELC	Belle Mtn. Jos	86.64	55	P	P	07 26 32.2	+0.7
	baz=255,SNR=14						
I07A	Izee	86.89	44	eP	P	07 26 32.8	+0.3
	comp=Z,16nm,1.1s						
SHOC	Shoshone, Teco	86.92	53	P	P	07 26 33.2	+0.5
	baz=254						
BC3	Big Chuckawall	86.98	55	P	P	07 26 33.9	+0.7
	baz=255,SNR=6.7						
WVOR	Wild Horse Val	87.00	46	eP	P	07 26 34.2	+1.2
	comp=Z,32nm,1.3s						
WVOR	Wild Horse Val	87.00	46	eP	P	07 26 34.2	+1.2
WVOR				pmax	pmax		
	comp=Z,32nm,1.3s						
GMRC	Granite Mounta	87.11	54	P	P	07 26 34.5	+0.7
	baz=255,SNR=7.7						
C06D	Leavenworth	87.20	40	P	P	07 26 34.4	+0.7
	baz=251						
TPNV	Topopah Spring	87.22	52	eP	P	07 26 35.4	+1.1
	comp=Z,5.6nm,0.9s						
TPNV	Topopah Spring	87.22	52	eP	P	07 26 35.4	+1.1
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TPNV	Topopah Spring	87.22	52	P	P	07 26 34.7	+0.4
	baz=254						
GLA	Glamis	87.34	56	eP	P	07 26 36.1	+1.3
	comp=Z,32nm,1.1s						
GLA	Glamis	87.34	56	eP	P	07 26 36.1	+1.3
GLA				pmax	pmax		
	comp=Z,33nm,1.1s						
GLA	Glamis	87.34	56	P	P	07 26 36.0	+1.3
	baz=256,SNR=8.3						
IRM	Iron Mountain	87.36	55	P	P	07 26 35.8	+0.9
	baz=255,SNR=14						
J08A	Circle Bar Ran	87.38	45	eP	P	07 26 35.5	+0.6
	comp=Z,19nm,1.0s						
HAWA	Hanford	87.59	42	eP	P	07 26 35.6	0.0
	comp=Z,19nm,1.1s						
LDFC	Landfair	87.62	54	eP	P	07 26 35.1	-1.1
	comp=Z,48nm,1.2s						
G08A	Pilot Rock	87.63	43	eP	P	07 26 35.6	-0.5
	comp=Z,17nm,1.0s						
Y12C	Blythe	87.76	55	eP	P	07 26 37.4	+0.6
	comp=Z,19nm,1.0s						
Y12C	Blythe	87.76	55	P	P	07 26 37.8	+1.1
	baz=256,SNR=9.8						
E08A	Dider Farm, El	87.93	42	eP	P	07 26 37.8	+0.6
	comp=Z,22nm,1.0s						
NEE2	Needles Airpor	87.93	54	P	P	07 26 38.4	+0.8
	baz=256						
SHPR	Sheep Range	87.94	52	eP	P	07 26 37.6	-0.2
	comp=Z,16nm,1.3s						
R11A	Troy Canyon, C	88.09	51	eP	P	07 26 37.3	-1.2
	comp=Z,11nm,1.2s						
R11A	Troy Canyon, C	88.09	51	P	P	07 26 39.0	+0.6
	baz=255						
113A	Mohawk Valley,	88.13	56	eP	P	07 26 37.8	-0.8
	comp=Z,16nm,1.1s						
D08A	Wollman Farm,	88.19	42	eP	P	07 26 39.5	+1.0
	comp=Z,12nm,1.1s						
PDMCI	Parker Dam,Lak	88.20	55	P	P	07 26 39.8	+1.0
	baz=256,SNR=9.2						
B08A	Colville Reser	88.33	40	eP	P	07 26 38.2	-1.0
	comp=Z,12nm,1.1s						
E09A	Wood Farm, Sta	88.54	42	eP	P	07 26 41.1	+1.0
	comp=Z,12nm,1.2s						
W13A	Hualapai Mount	88.60	54	eP	P	07 26 40.9	-0.1
	comp=Z,20nm,1.4s						
WMQ	Urumqi	88.64	315	P	P	07 26 40.9	+0.1
WMQ				pP	PcP	07 26 44.4	+2.0
WMQ				sP	pP	07 26 51.1	+1.4
WMQ				pmax	pmax		
	comp=Z,47nm,1.3s						
WMQ				LR	LR		
	comp=Z,2µm,19.7s						
WMQ	Urumqi	88.64	315	eP	P	07 26 40.5	-0.3
	comp=Z,43nm,1.4s						
214A	Organ Pipe Nat	88.73	57	P	P	07 26 42.6	+1.2
	baz=257,SNR=12						
ELK	Elko	88.97	48	eP	P	07 26 42.0	-0.7
	comp=Z,29nm,1.8s						
ELK	Elko	88.97	48	eP	P	07 26 42.0	-0.7
ELK				pmax	pmax		
	comp=Z,29nm,1.8s						
F10A	Beach Ranch, E	88.99	43	eP	P	07 26 41.5	-1.0
	comp=Z,13nm,1.1s						
Y14A	Wickenburg	89.03	55	eP	P	07 26 41.0	-1.8
	comp=Z,12nm,1.3s						
MFID	Camas Ranch	89.25	46	eP	P	07 26 44.8	+1.1
	comp=Z,20nm,1.4s						
PSUT	Pine Spring	89.45	51	eP	P	07 26 43.4	-1.5
	comp=Z,9.5nm,1.0s						
LCMT	Little Creek M	89.56	52	eP	P	07 26 44.6	-0.8
	comp=Z,18nm,1.0s						
CCUT	Cedar City	89.60	52	eP	P	07 26 44.8	-0.9
	comp=Z,15nm,1.0s						
HSIG		89.64	61	eP	P	07 26 44.9	-0.8
	comp=Z,26nm,1.3s						
INK	Inuvik	89.70	19	P	P	07 26 47.3	+2.2
	baz=271,slow=7.1						
NEW	Newport	89.71	41	eP	P	07 26 46.2	+0.6
	comp=Z,24nm,1.7s						
NEW	Newport	89.71	41	eP	P	07 26 46.3	+0.6
NEW				pmax	pmax		
	comp=Z,24nm,1.7s						
NEW	Newport	89.71	41	P	P	07 26 45.9	+0.2
	baz=254						
SZCU	Shurtz Canyon	89.82	52	eP	P	07 26 48.3	+1.6
	comp=Z,16nm,1.0s						
KNB	Kanab	89.89	52	eP	P	07 26 48.6	+1.7
	comp=Z,30nm,1.3s						
KNB	Kanab	89.89	52	eP	P	07 26 48.6	+1.7
KNB				pmax	pmax		
	comp=Z,30nm,1.3s						
U15A	North Rim	90.17	53	eP	P	07 26 47.2	-1.3
	comp=Z,21nm,0.9s						
HLID	Hailey	90.28	46	eP	P	07 26 47.2	-1.4
	comp=Z,14nm,1.0s						
HLID	Hailey	90.28	46	P	P	07 26 49.5	+0.8
	baz=256						
PKCU	Pink Cliffs	90.39	52	eP	P	07 26 51.8	+2.3
	comp=Z,27nm,1.0s						
X16A	Lo Mia Camp, P	90.40	55	eP	P	07 26 48.5	-1.0
	comp=Z,12nm,0.9s						
DGZ	Jazzator, Alta	90.44	321	c iP	P	07 26 48.9	-0.3
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TUC	Tucson	90.48	57	eP	P	07 26 49.5	-0.2
	comp=Z,6.8nm,0.9s						
TUC	Tucson	90.48	57	eP	P	07 26 49.5	-0.2
TUC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TCRU	Three Creeks R	90.55	51	eP	P	07 26 52.0	+2.0
	comp=Z,19nm,0.9s						
MTPU	Mount Pierson	90.62	52	eP	P	07 26 52.4	+1.9
	comp=Z,18nm,0.9s						
DUG	Dugway, Tooele	90.63	49	eP	P	07 26 50.1	-0.2
	comp=Z,7.6nm,1.0s						
DUG	Dugway, Tooele	90.63	49	eP	P	07 26 50.1	-0.2
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DUG	Dugway, Tooele	90.63	49	P	P	07 26 51.0	+0.7
	baz=257						
BGU	Big Grassy Mou	90.64	49	eP	P	07 26 50.7	+0.4
	comp=Z,9.7nm,1.0s						
WUAZ	Wupatki	90.69	54	eP	P	07 26 50.2	-0.5
	comp=Z,16nm,1.0s						
WUAZ	Wupatki	90.69	54	P	P	07 26 51.8	+1.0
	baz=257						
MSU	Marysvale	90.73	51	eP	P	07 26 51.0	+0.1
MSU	Marysvale	90.73	51	eP	P	07 26 51.0	+0.1
HVU	Hansel Valley	91.03	48	eP	P	07 26 53.5	+1.4
	comp=Z,23nm,1.0s						
HVU	Hansel Valley	91.03	48	eP	P	07 26 53.5	+1.4
HVU				pmax	pmax		
	comp=Z,23nm,1.0s						
NLU	North Lily Min	91.13	50	eP	P	07 26 54.1	+1.4
	comp=Z,13nm,1.0s						
SPUT	South Promonto	91.16	48	eP	P	07 26 51.3	-1.4
	comp=Z,7.8nm,0.9s						
MSO	Missoula	91.41	43	P	P	07 26 54.1	+0.4
	baz=256						
MPU	Maple Canyon	91.47	50	eP	P	07 26 54.6	+0.3
	comp=Z,14nm,1.3s						
CTU	Camp Tracy	91.54	49	eP	P	07 26 55.7	+1.2
	comp=Z,14nm,1.0s						
319A	Douglas	91.54	59	eP	P	07 26 55.7	+1.0
	comp=Z,10nm,1.0s						
Q16A	Castle Valley	91.59	51	eP	P	07 26 56.8	+1.9
	comp=Z,15nm,1.1s						
X18A	Snowflake	91.63	55	eP	P	07 26 56.0	+0.9
	comp=Z,8.3nm,1.1s						
TMUT	Trail Mountain	91.64	50	eP	P	07 26 56.9	+1.7
	comp=Z,9.1nm,1.1s						
MCMT	McKenzie Canyo	91.68	45	eP	P	07 26 56.1	+0.9
JLU	Jordanelle	91.74	49	eP	P	07 26 56.9	+1.3
	comp=Z,9.7nm,1.1s						
TCUT	Toone Canyon	91.88	49	eP	P	07 26 55.3	-1.0
	comp=Z,16nm,1.0s						
W18A	Petrified Fore	91.92	55	P	P	07 26 57.1	+0.6
	baz=258						
DLMT	Dillon	91.98	44	eP	P	07 26 57.2	+0.8
	comp=Z,30nm,1.0s						
SYO	Syowa Base	92.00	197	⇑iX	P	07 26 54.0	-1.9
SYO	Syowa Base	92.00	197	⇓iPcP	PcP	07 26 57.4	+0.7
SRU	San Rafael Swe	92.12	51	eP	P	07 26 58.9	+1.6
	comp=Z,4.2nm,1.0s						
LRM	Limekiln Ridge	92.18	44	eP	P	07 26 58.4	+0.9
QLMT	Earthquake Lak	92.67	45	eP	P	07 27 01.4	+1.7
BOZ	Bozeman (W)	92.69	44	eP	P	07 27 01.0	+1.3
	comp=Z,18nm,1.0s						
BOZ	Bozeman (W)	92.69	44	P	P	07 27 00.8	+1.0
	baz=258						
FXWY	Fox Creek	92.70	46	eP	P	07 27 01.0	+1.0
	comp=Z,6.3nm,0.8s						
HRY	Holter Researc	92.80	43	eP	P	07 27 01.3	+1.1
IMW	Indian Meadow	92.81	46	eP	P	07 27 01.9	+1.4
	comp=Z,7.2nm,0.9s						
YHB	Horse Butte	92.81	45	eP	P	07 27 02.2	+1.8
	comp=Z,12nm,1.0s						
SNOW	Snow King Moun	92.85	46	eP	P	07 27 01.9	+1.3
	comp=Z,5.8nm,0.8s						
MOOW	Moose Ponds	92.92	46	eP	P	07 27 02.0	+1.0
	comp=Z,5.2nm,1.0s						
YMR	Madison River	92.95	45	eP	P	07 27 00.4	-0.6
	comp=Z,35nm,1.8s						
LOHW	Long Hollow	92.99	46	eP	P	07 27 02.2	+1.0
	comp=Z,26nm,2.0s						
121A	Cookes Peak, D	93.01	58	P	P	07 27 02.6	+1.0
	baz=259						
FLWY	Flagg Ranch	93.02	46	eP	P	07 27 02.8	+1.4
	comp=Z,7.8nm,1.0s						
PV09	Paradox Valley	93.06	52	eP	P	07 26 59.5	-2.3
MK31	Makanchi Array	93.06	317	eP	P	07 27 01.2	-0.1
	comp=Z,27nm,1.2s						
MK32	Makanchi Array	93.06	317	ePcP	P	07 27 01.2	-0.1
MKAR	Makanchi Array	93.06	317	eP	P	07 27 01.2	-0.1
MKAR				PKKP	PKKPdf	07 44 09.8	-0.9
MKAR	Makanchi Array	93.06	317	e	P	07 27 01.2	-0.1
MKAR	Makanchi Array	93.06	317	P	P	07 27 01.2	-0.1
	comp=Z,12nm,0.9s,baz=101,slow=6.3,SNR=41						
MKAR				PKKP	PKKPdf	07 44 09.8	-0.9
	comp=Z,1.2nm,0.7s,baz=278,slow=2.1,SNR=5.8						
ZAA0	Zalesovo Array	93.10	324	eP	P	07 26 59.6	-1.6
	comp=Z,17nm,1.0s						
ZALV	Zalesovo Beam	93.10	324	eP	P	07 27 00.0	-1.2
ZALV	Zalesovo Beam	93.10	324	eP	P	07 27 00.0	-1.2
ZALV	Zalesovo Beam	93.10	324	P	P	07 27 00.8	-0.5
	comp=Z,15nm,1.0s,baz=108,slow=4.8,SNR=30						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAA1	Zalesovo Array	93.11	324	ePcP	P	07 27 00.8	-0.5
PV17	East Wray Mesa	93.15	52	eP	P	07 27 03.8	+1.7
	comp=Z,6.9nm,1.0s						
H17A	Grant Village	93.17	46	eP	P	07 27 02.7	+0.6
	comp=Z,5.7nm,0.8s						
H17A	Grant Village	93.17	46	P	P	07 27 03.8	+1.7
	baz=258						
MAKZ	Makanchi	93.28	317	eP	P	07 27 02.5	+0.3
	comp=Z,37nm,1.2s						
MAKZ	Makanchi	93.28	317	eP	P	07 27 02.5	+0.3
MAKZ				pmax	pmax		
	comp=Z,37nm,1.2s						
PV12	Saucer Basin,	93.28	52	eP	P	07 27 01.9	-0.8
	comp=Z,6.2nm,0.8s						
PV07	Paradox Valley	93.42	52	eP	P	07 27 03.5	+0.2
	comp=Z,19nm,1.7s						
PV01	Paradox Valley	93.43	52	eP	P	07 27 05.0	+1.6
	comp=Z,3.3nm,0.9s						
BW06	Boulder Array	93.57	47	eP	P	07 27 04.2	+0.2
	comp=Z,4.4nm,0.9s						
BW06	Boulder Array	93.57	47	P	P	07 27 04.2	+0.2
	baz=259						
PD31	Pinedale Array	93.57	47	eP	P	07 27 04.3	+0.3
PDAR	Pinedale Array	93.57	47	eP	P	07 27 03.2	-0.7
PDAR	Pinedale Array	93.57	47	P	P	07 27 04.2	+0.3
	comp=Z,4.3nm,0.9s,baz=238,slow=2.2,SNR=22						
O20A	White River Ci	94.05	50	P	P	07 27 06.4	+0.2
	baz=260						
NVS	Novosibirsk	94.21	325	i P	P	07 27 06.0	-0.3
EGMT	Eagleton	94.45	42	eP	P	07 27 08.5	+0.8
	comp=Z,11nm,1.0s						
EGMT	Eagleton	94.45	42	P	P	07 27 08.1	+0.5
	baz=259						
ANMO	Albuquerque	94.53	55	eP	P	07 27 06.6	-1.9
	comp=Z,3.6nm,0.9s						
ANMO	Albuquerque	94.53	55⇓	eP	P	07 27 09.0	+0.5
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANMO	Albuquerque	94.53	55	P	P	07 27 09.0	+0.5
	baz=260						
S22A	4UR Ranch, Cre	94.71	53	eP	P	07 27 11.2	+1.8
	comp=Z,18nm,1.9s						
S22A	4UR Ranch, Cre	94.71	53	P	P	07 27 10.2	+0.8
	baz=260						
YKA	Yellowknife Ar	94.83	27	P	P	07 27 08.0	-1.0
YKA	Yellowknife Ar	94.83	27	P	P	07 27 08.0	-1.0
YKA	Yellowknife Ar	94.83	27	P	P	07 27 08.0	-1.0
	comp=Z,3.9nm,0.8s,baz=256,slow=4.6,SNR=46						
YKB5	Yellowknife Ar	94.83	27	eP	P	07 27 06.6	-2.3
MNTX	Cornudas Mount	94.88	59	eP	P	07 27 10.5	+0.6
	comp=Z,5.9nm,1.2s						
MNTX	Cornudas Mount	94.88	59	P	P	07 27 10.4	+0.5
	baz=260						
NRIK	Noril'sk	95.71	340	P	P	07 27 12.3	-0.5
	comp=Z,6.5nm,0.9s,baz=125,slow=4.2,SNR=9.3						
K22A	Casper	95.75	48	P	P	07 27 14.4	+0.5
	baz=261						
N23A	Red Feather La	95.90	50	P	P	07 27 15.7	+0.9
	baz=261						
TX31	Lajitas Ar. Si	95.96	61	eP	P	07 27 13.7	-1.3
LTX	Lajitas	95.96	61	eP	P	07 27 14.4	-0.6
TXAR	Lajitas Array	95.96	61	P	P	07 27 14.4	-0.6
	comp=Z,0.9nm,0.7s,baz=225,slow=6.0,SNR=11						
TXAR				PP	PP	07 31 06.2	-1.6
	comp=Z,0.6nm,1.0s,baz=240,slow=5.1,SNR=4.8						
ISCO	Idaho Springs	95.98	51	P	P	07 27 15.3	+0.1
	baz=261						
KURK	Kurchatov	96.18	320	eP	P	07 27 14.3	-1.1
KURK				eP	P	07 27 14.6	-0.7
KURK	Kurchatov	96.18	320⇓	iP	P	07 27 14.7	-0.7
KURK				pmax	pmax		
	comp=Z,16nm,1.6s						
KURBB	Kurchatov Arra	96.23	320	P	P	07 27 14.3	-1.3
	comp=Z,1.1nm,0.7s,baz=98,slow=4.8,SNR=8.8						
KSH	Kashi	96.30	309	P	P	07 27 18.3	+1.9
KSH				sP	pP	07 27 25.5	-0.3
LAO	LASA Array	96.59	44	P	P	07 27 18.5	+1.1
	baz=262						
MSTX	Muleshoe	97.39	57	P	Pdif	07 27 21.8	+0.3
	baz=262						
SNAA	Sanae	97.42	184	P	Pdif	07 27 21.2	+0.4
SNAA	Sanae	97.42	184	eP	P	07 27 20.6	-0.2
	comp=Z,26nm,1.0s						
SNAA	Sanae	97.42	184	deP	P	07 27 20.3	-0.5
VNA3	Neumayer Olymp	98.16	182	P	Pdif	07 27 24.4	+0.3
DGMT	Dagmar	98.19	42	P	Pdif	07 27 25.3	+0.7
	baz=263						
VNA2	Neumayer--Watz	98.40	182	P	Pdif	07 27 25.7	+0.6
FFC	Flin Flon	100.16	36	i P	Pdif	07 27 33.6	+0.4
BVAR	Borovoye Array	101.50	322	P	Pdif	07 27 38.4	-0.8
	comp=Z,2.7nm,0.9s,baz=83,slow=4.8,SNR=11						
BRVK	Borovoye	101.56	322⇑	iP	Pdif	07 27 38.4	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARA0	ARCESS Array S	115.94	345	ePKPdf	PKiKP	07 32 29.1	-0.6
ARCES	ARCESS Array B	115.94	345	PKP	PKiKP	07 32 29.1	-0.6
	comp=Z,3.5nm,0.5s,baz=66,slow=1.1,SNR=30						
ARCES				PKKPbc	PKKPbc	07 43 01.6	-1.8
	comp=Z,3.4nm,1.0s,baz=243,slow=0.8,SNR=6.7						
VRH	Novokhopyorsk	119.12	323	ePKIKP	PKPdf	07 32 34.9	-1.3
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SCHQ	Schefferville	119.92	32	PKP	PKPdf	07 32 37.0	-0.7
	comp=Z,3.7nm,0.8s,baz=243,slow=2.3,SNR=3.1						
LPSR	Galich'ya Gora	120.19	325	ePKIKP	PKPdf	07 32 37.9	-0.4
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ZEI	Tsey	120.21	313	i PKIKP	PKPdf	07 32 37.6	-1.3
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN	Obninsk	120.36	329	i PKIKP	PKPdf	07 32 37.6	-0.9
OBN				e		07 34 05.5	
OBN				ePPP	PPP	07 36 36.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VSR	Storozhevoye	120.61	324	ePKIKP	PKPdf	07 32 37.6	-1.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FIA0	FINESS Array S	121.35	338	ePKPdf	PKPdf	07 32 39.2	-1.0
FIA0	FINESS Array S	121.35	338	ePKIKP	PKPdf	07 32 39.2	-1.0
FINES	FINESS Array B	121.35	338	PKP	PKPdf	07 32 39.2	-1.0
	comp=Z,4.7nm,0.9s,baz=70,slow=2.7,SNR=13						
CPUP	Villa Florida	124.48	132	PKP	PKPdf	07 32 46.8	-0.5
	comp=Z,4.4nm,0.8s,baz=250,slow=2.0,SNR=8.4						
SDV	Santo Domingo	124.80	87	ePKPdf	PKPdf	07 32 48.2	-0.3
BOSA	Boshof	125.13	224	PKP	PKiKP	07 32 49.1	0.0
	comp=Z,4.7nm,0.9s,baz=13,slow=1.3,SNR=7.1						
NACGM	Naroch	125.23	332	e	PKPdf	07 32 47.0	-0.9
NB2	NORSAR Subarra	126.30	345	PKPdf	PKPdf	07 32 49.4	-0.4
	comp=Z,3.5nm,0.8s,baz=32,slow=2.0						
NB2	NORSAR Subarra	126.30	345	PKPdf	PKPdf	07 32 49.4	-0.4
	baz=32,slow=2.0						
NB200	NORSAR Array S	126.30	345	ePKPdf	PKPdf	07 32 49.6	-0.3
NOA	NORSAR Array B	126.30	345	PKP	PKPdf	07 32 49.6	-0.3
	comp=Z,2.9nm,0.8s,baz=33,slow=2.0,SNR=8.0						
HFS	Hagfors	126.38	343	PKP	PKPdf	07 32 49.7	-0.3
	comp=Z,2.8nm,0.7s,baz=151,slow=6.8,SNR=3.9						
AKASG	Malin Array Be	126.42	327	PKIKP	PKPdf	07 32 50.0	-0.3
AKASG	Malin Array Be	126.42	327	PKP	PKPdf	07 32 50.0	-0.3
	comp=Z,1.0nm,0.5s,baz=66,slow=2.3,SNR=12						
BR101	Keskin Array S	128.51	313	ePKPdf	PKPdf	07 32 55.0	+0.2
BR131	Keskin Array S	128.51	313	ePKPdf	PKPdf	07 32 53.7	-1.2
BRTR	Keskin Array B	128.51	313	PKP	PKPdf	07 32 55.0	+0.2
	comp=Z,2.3nm,0.9s,baz=180,slow=1.2,SNR=8.2						
BRTR				PP	PP	07 34 57.5	-2.6
	comp=Z,1.4nm,1.0s,baz=103,slow=3.9,SNR=4.1						
HUMP	Col San Antoni	129.94	75	ePKPdf	PKiKP	07 32 58.6	-0.1
BUR04	Bucovina Ar. S	130.31	325	ePKPdf	PKPdf	07 32 58.3	+0.4
LSZ	Lusaka	130.38	239	ePKPdf	PKPdf	07 32 58.7	-0.4
LSZ	Lusaka	130.38	239	ePKIKP	PKPdf	07 32 58.7	-0.4
MLR	Muntele Rosu	131.06	323	PKP	PKiKP	07 33 01.4	+1.0
	comp=Z,1.1nm,0.4s,baz=16,slow=3.0,SNR=3.6						
MORC	Moravsky Berou	132.87	332	ePKP	PKPdf	07 33 02.8	+0.1
PTGA	Pitinga	133.46	101	ePKPdf	PKPdf	07 33 04.0	-0.8
BRG	Berggiesshubel	133.63	335	ePKP	PKPdf	07 33 04.6	+0.6
	comp=Z,7.1nm,1.2s						
BRG	Berggiesshubel	133.63	335	ePKIKP	PKPdf	07 33 04.6	+0.6
BRG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CLL	Collm	133.68	336	i PKPdf	PKiKP	07 33 05.2	-0.1
CLL	Collm	133.68	336	i PKIKP	PKiKP	07 33 05.2	-0.1
KRUC	Moravsky	133.90	332	ePKP	PKPdf	07 33 04.9	+0.3
MODS	Modra-Piesok	133.97	331	ePKIKP	PKiKP	07 33 05.9	-0.2
MODS	Modra-Piesok	133.97	331	ePKP	PKiKP	07 33 05.9	-0.2
CONA	Conrad Observa	134.96	331	epPKPdf	PKiKP	07 33 08.7	+0.6
	comp=Z,3.6nm,0.6s						
KHC	Kasperske Hory	135.11	334	ePKPdf	PKPdf	07 33 06.3	-0.6
KHC	Kasperske Hory	135.11	334	ePKIKP	PKPdf	07 33 06.3	-0.6
GEC2	GERESS Array S	135.27	334	ePKPdf	PKPdf	07 33 07.3	0.0
GEC2	GERESS Array S	135.27	334	ePKIKP	PKPdf	07 33 07.3	0.0
GERES	GERESS Array B	135.27	334	PKP	PKPdf	07 33 07.8	+0.5
	comp=Z,3.6nm,0.8s,baz=50,slow=2.1,SNR=17						
GEA0	GERESS Array S	135.28	334	ePKPdf	PKPdf	07 33 07.4	+0.1
DIVS	Divibare	135.33	324	ePKPdf	PKPdf	07 33 07.0	-0.5
KBA	Koelnbreinsper	136.75	332	ePKiKP	PKiKP	07 33 11.2	-0.7
	comp=Z,7.4nm,1.0s						
MYKA	Terra Mystica	136.94	331	PKiKP	PKiKP	07 33 11.8	-0.4
	comp=Z,6.6nm,0.9s						
ABTA	Abfaltersbach	137.38	332	ePKPdf	PKPdf	07 33 11.1	-0.1
	comp=Z,8.8nm,0.8s						
MOTA	Moosalm	137.54	334	ePKiKP	PKPdf	07 33 12.4	+0.8
	comp=Z,3.0nm,0.7s						
SQTA	Sankt Quirin	137.59	334	ePKiKP	PKiKP	07 33 13.6	0.0
	comp=Z,5.8nm,0.8s						
BDFB	Brasilia	137.79	128	PKP	PKPdf	07 33 12.7	-0.2
	comp=Z,1.9nm,0.5s,baz=159,slow=3.1,SNR=3.4						
FETA	Feichten	137.95	334	ePKiKP	PKPdf	07 33 13.0	+0.6
	comp=Z,10.0nm,1.1s						
DAVOX	Davos/Dischmat	138.50	335	PKP	PKPdf	07 33 13.9	+0.5
	comp=Z,7.7nm,0.8s,baz=23,slow=7.9,SNR=5.3						
KEST	Kesra	146.96	323	ePKPdf	PKPbc	07 33 30.6	0.0
KEST	Kesra	146.96	323	PKPbc	PKPbc	07 33 31.1	+0.5
	comp=Z,42nm,0.9s,baz=125,slow=0.5,SNR=24						
PBRG	Braganca	148.28	349	ePKPdf	PKPab	07 33 36.8	-0.1
POLO	Lamas de Olo	148.89	350	ePKPdf	PKPbc	07 33 33.6	-2.0
MVO	Moncorvo	148.95	349	ePKPdf	PKPdf	07 33 31.3	-0.4
PVRL	Vila Real	148.97	350	ePKPdf	PKiKP	07 33 36.4	-0.6
PVIS	Viseu	149.54	350	ePKPdf	PKPbc	07 33 37.3	+0.1
ES19	SONSECA Array	149.61	344	ePKPbc	PKPbc	07 33 37.0	-0.4
ESDC	Sonseca Array	149.66	344	PKPbc	PKPbc	07 33 37.3	-0.2
	comp=Z,3.3nm,0.7s,baz=9.6,slow=3.2,SNR=14						
MTE	Manteigas	149.79	349	ePKPdf	PKPbc	07 33 37.8	0.0
PCAS	Casmilo, Conde	150.29	351	ePKPdf	PKPbc	07 33 39.3	+0.4
PCBR	Castelo Branco	150.32	349	ePKPdf	PKPdf	07 33 32.4	-1.4
PMRV	Marv??o	150.70	349	ePKPdf	PKPdf	07 33 36.4	+2.0
PTOM	Tomar	150.70	350	ePKPdf	PKPdf	07 33 33.4	-1.0
PMTG	Montargil	151.20	350	ePKPdf	PKPbc	07 33 41.0	-0.1
PESTR	Estremoz	151.28	349	ePKPdf	PKPbc	07 33 41.5	+0.2
PBEJ	Beja	152.15	349	ePKPdf	PKPdf	07 33 39.3	+2.6
MESJ	Messejana	152.40	349	ePKPdf	PKPdf	07 33 38.2	+1.2
PTEO	Sao Teotonio	152.77	350	ePKPdf	PKPdf	07 33 39.4	+1.8
MDT	Midelt	156.17	339	PKP	PKPdf	07 33 41.7	-0.9
	comp=Z,3.0nm,0.9s,baz=36,slow=10,SNR=4.0						
TOA0	Torodi Ar. Sit	163.89	280	ePKPdf	PKPdf	07 33 50.4	-1.2
TOA0				ePKPdf	PKPdf	07 33 51.8	+0.2
TORD	Torodi Ar. Bea	163.89	280	PKP	PKPdf	07 33 51.1	-0.5
	comp=Z,4.2nm,1.0s,baz=349,slow=3.8,SNR=15						
TORD				PKPab	PKPab	07 34 43.9	-0.4
	comp=Z,4.9nm,1.0s,baz=71,slow=4.7,SNR=8.6						
TOA1	Torodi Ar. Sit	163.89	280	ePKPdf	PKPdf	07 33 51.1	-0.5
TOA1				ePKPab	PKPab	07 34 43.9	-0.4
DBIC	Dimbokro	169.58	248	PKP	PKPdf	07 33 55.2	-0.7
	comp=Z,8.9nm,1.1s,baz=263,slow=4.0,SNR=5.3						

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*IDC **06** 07:15:07.8±1.4, 10°.70S×165°.43E, h0km, mb4.4/7, mb1 4.7/8, mb1mx4.3/37, mbtmp4.5/8, ML4.7/1, Error ellipse: s-maj=43.3km s-min=22.6km az=125.0*

*ISCJB **06** 07:15:10.4±0.9, 10°.8S±0°.1×165°.4E±0°.2, h31km, mb4.3/6, Error ellipse: s-maj=25.3km s-min=16.4km az=14.4*

ISC 06 07:15:12.3±1.0, 10°.8S±0°.1×165°.4E±0°.2, h31km, n8, σ0s.76/8, mb4.4/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.30	175	Pn	Pn	07 17 51.8	0.0
	4.6nm,0.3s,baz=34,slow=18,SNR=2.7						
CTA	Charters Tower	20.68	241	P	P	07 19 50.3	+0.4
	16nm,0.9s,baz=73,slow=16,SNR=1.9						
WRA	Warramunga Arr	31.31	249	P	P	07 21 30.0	0.0
	5.1nm,0.8s,baz=80,slow=9.8,SNR=3.0						
ASAR	Alice Springs	32.66	243	P	P	07 21 41.5	-0.4
	5.9nm,0.7s,baz=70,slow=9.7,SNR=5.1						
MJAR	Matsushiro Arr	53.57	333	P	P	07 24 30.0	-0.5
	3.6nm,0.9s,baz=169,slow=7.1,SNR=2.9						
ILAR	Eielson Array	83.33	19	P	P	07 27 36.9	+1.1
	2.0nm,0.8s,baz=236,slow=5.4,SNR=2.8						
MKAR	Makanchi Array	93.10	317	P	P	07 28 23.8	+0.5
	1.6nm,0.9s,baz=94,slow=6.0,SNR=1.6						
YKA	Yellowknife Ar	94.85	27	P	P	07 28 29.9	-0.9
	0.4nm,0.7s,baz=256,slow=4.8,SNR=2.8						

MEX 06 07:17:26.3±0.8, 19°.07N×105°.18W, h5km±8km, MD3.6, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CJM	Chamela	0.45	17	eP	Pg	07 17 34.6	-0.3
CJM				i S	Sg	07 17 41.0	+0.3
R15V		1.14	85	eP	Pg	07 17 44.9	-3.2
R15V				i S	Sg	07 17 59.2	-3.7
EZ5V		1.55	75	eP	Pn	07 17 52.2	-2.6

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*IDC **06** 07:18:00.3±1.0, 11°.26S×164°.79E, h0km, mb4.1/7, mb1 4.3/8, mb1mx4.0/36, mbtmp4.0/8, ML4.2/1, Error ellipse: s-maj=43.8km s-min=23.3km az=140.0*

*NEIC **06** 07:18:02.8±0.5, 11°.29S×164°.91E, h10km, mb4.5/4, Error ellipse: s-maj=15.2km s-min=11.2km az=72.0*

*ISCJB **06** 07:18:04.2±0.5, 11°.42S±0°.07×164°.82E±0°.09, h34km, mb4.1/10, Error ellipse: s-maj=12.9km s-min=9.7km az=162.6*

ISC 06 07:18:05.8±0.7, 11°.3S±0°.1×164°.9E±0°.1, h34km, n24, σ1s.31/21, mb4.1/10, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.24	291	Pn	Pn	07 19 23.5	+1.7
	59nm,0.3s,baz=155,slow=6.9,SNR=5.5						
MARNC	Mare, Loyalty	10.53	164	ePn	Pn	07 20 35.2	+0.8
DZM	Mont Dzumac	10.78	172	ePn	Pn	07 20 38.5	+0.6
DZM	Mont Dzumac	10.78	172	Pn	Pn	07 20 38.8	+0.8
	1.8nm,0.3s,baz=308,slow=15,SNR=7.9						
PINNC	Pines Island,	11.48	168	ePn	Pn	07 20 49.2	+1.9
PATS	Pohnpei	19.21	340	eP	Pn	07 22 28.7	+0.5
	59nm,0.4s						
COEN	Coen	21.38	261	eP	P	07 22 50.2	-0.5
	6.3nm,0.8s						
WR1	Warramunga Arr	30.62	250	eP	P	07 24 15.2	-1.9
	12nm,1.1s						
WRA	Warramunga Arr	30.62	250	P	P	07 24 15.2	-1.9
	1.1nm,0.8s,baz=78,slow=8.5,SNR=2.6						
H11N1	WAKE ISLAND Hy	30.91	4	T	T	07 55 52.3	
	baz=192,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.91	4	T	T	07 55 58.7	
	baz=192,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.93	4	T	T	07 55 55.7	
	baz=192,slow=76,SNR=11						
ASAR	Alice Springs	31.94	243	P	P	07 24 26.4	-2.3
	1.0nm,0.9s,baz=64,slow=10,SNR=3.2						
HDA	Harding Lake	83.77	19	eP	P	07 30 32.5	+1.3
	7.1nm,1.1s						
ILAR	Eielson Array	84.04	19	P	P	07 30 32.7	+0.1
	1.0nm,0.6s,baz=240,slow=5.0,SNR=8.6						
ILB	Eielson Array	84.04	19	eP	P	07 30 32.7	+0.1
	1.6nm,0.6s						
NVAR	Mina Array Bea	86.83	50	P	P	07 30 47.1	-0.2
	1.0nm,0.9s,baz=242,slow=3.9,SNR=3.6						
MK32	Makanchi Array	93.17	317	eP	P	07 31 17.4	+0.7
MKAR	Makanchi Array	93.17	317	P	P	07 31 17.4	+0.7
	1.0nm,0.9s,baz=103,slow=5.2,SNR=5.4						
YKA	Yellowknife Ar	95.60	27	P	P	07 31 25.3	-2.0
	0.5nm,0.8s,baz=261,slow=4.6,SNR=4.9						
LTX	Lajitas	96.68	62	eP	P	07 31 32.8	-0.5
TXAR	Lajitas Array	96.68	62	P	P	07 31 32.8	-0.5
	0.2nm,0.7s,baz=215,slow=7.6,SNR=2.2						
ARA0	ARCESS Array S	116.40	345	ePKPdf	PKiKP	07 36 46.6	+1.1
ARCES	ARCESS Array B	116.40	345	PKP	PKiKP	07 36 46.6	+1.1
	1.4nm,0.9s,baz=64,slow=2.1,SNR=5.0						

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*IDC **06** 07:20:37.3±1.5, 11°.06S×165°.73E, h0km, mb4.1/7, mb1 4.4/9, mb1mx4.0/34, mbtmp4.3/9, ML4.8/2, Error ellipse: s-maj=38.6km s-min=24.9km az=121.0*

*ISCJB **06** 07:20:40.2±1.2, 11°.2S±0°.1×165°.6E±0°.2, h30km, mb4.1/6, Error ellipse: s-maj=22.4km s-min=16.7km az=161.4*

ISC 06 07:20:41.9±1.3, 11°.1S±0°.1×165°.7E±0°.2, h30km, n9, σ0s.88/9, mb4.1/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.88	286	Pn	Pn	07 22 06.5	-0.6
	42nm,0.3s,baz=138,slow=8.4,SNR=4.6						
DZM	Mont Dzumac	10.96	176	Pn	Pn	07 23 16.6	-0.2
	3.2nm,0.3s,baz=340,slow=17,SNR=8.0						
CTA	Charters Tower	20.73	242	P	P	07 25 20.8	+0.6
	7.9nm,0.9s,baz=90,slow=11,SNR=3.5						
STKA	Stephens Creek	30.38	223	P	P	07 26 52.0	+0.6
	2.0nm,0.7s,baz=15,slow=11,SNR=4.5						
WRA	Warramunga Arr	31.41	250	P	P	07 27 00.3	-0.4
	6.8nm,0.7s,baz=82,slow=9.1,SNR=22						
ASAR	Alice Springs	32.72	243	P	P	07 27 11.1	-1.1
	2.1nm,0.8s,baz=65,slow=10.0,SNR=9.3						
CMAR	Chiang Mai Arr	72.07	294	P	P	07 32 05.3	+1.4
	0.7nm,0.3s,baz=112,slow=4.0,SNR=4.1						
ILAR	Eielson Array	83.56	19	P	P	07 33 06.5	-0.4
	0.5nm,0.6s,baz=236,slow=5.0,SNR=7.3						
MKAR	Makanchi Array	93.50	317	P	P	07 33 54.7	-0.2
	0.4nm,0.9s,baz=92,slow=5.9,SNR=2.2						

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*IDC **06** 07:21:21.8±1.6, 10°.45S×165°.63E, h0km, mb3.7/4, mb1 4.1/6, mb1mx3.8/34, mbtmp4.0/6, ML4.9/1, Error ellipse: s-maj=41.2km s-min=27.5km az=126.0*

*ISCJB **06** 07:21:24.2±1.3, 10°.7S±0°.1×165°.6E±0°.2, h31km, mb3.7/4, Error ellipse: s-maj=27.6km s-min=19.7km az=163.2*

ISC 06 07:21:26.1±1.3, 10°.6S±0°.1×165°.5E±0°.2, h31km, n6, σ2s.21/6, mb3.7/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.62	281	Pn	Pn	07 22 46.0	-1.7
	36nm,0.3s,baz=113,slow=7.7,SNR=3.7						
DZM	Mont Dzumac	11.45	176	Pn	Pn	07 24 06.5	-1.2
	baz=93,slow=19,SNR=3.0						
WRA	Warramunga Arr	31.45	249	P	P	07 27 46.3	+1.2
	0.9nm,0.8s,baz=79,slow=9.8,SNR=3.1						
ASAR	Alice Springs	32.81	243	P	P	07 28 00.1	+3.0
	0.8nm,0.6s,baz=70,slow=9.4,SNR=3.4						
SONM	Songino Array	78.18	324	P	P	07 33 22.6	-0.1
	0.3nm,0.5s,baz=130,slow=6.0,SNR=2.6						
ILAR	Eielson Array	83.16	19	P	P	07 33 48.9	+0.1
	0.7nm,0.8s,baz=232,slow=4.8,SNR=3.2						

IDC 06 07:22:42.3±5.1, 11°.40S×165°.06E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/33, mbtmp3.8/3, Error ellipse: s-maj=262.6km s-min=37.7km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.73	250	P	P	07 28 59.8	+0.4
	1.3nm,0.7s,baz=80,slow=8.7,SNR=3.9						
ASAR	Alice Springs	32.03	243	P	P	07 29 10.4	-0.5
	1.2nm,0.9s,baz=77,slow=9.9,SNR=3.2						
ILAR	Eielson Array	84.06	19	P	P	07 35 14.6	0.0
	0.4nm,0.6s,baz=232,slow=4.7,SNR=2.4						

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*IDC **06** 07:23:10.6±0.5, 10°.98S×165°.58E, h0km, mb4.7/22, mb1 4.8/24, mb1mx4.7/35, mbtmp4.7/24, ML5.0/2, Error ellipse: s-maj=17.6km s-min=14.3km az=117.0*

*ISCJB **06** 07:23:13.7±0.1, 11°.01S±0°.04×165°.40E±0°.03, h30km, mb4.9/124, Error ellipse: s-maj=5.5km s-min=4.0km az=153.0*

*NEIC **06** 07:23:13.7±2.2, 10°.95S×165°.47E, h19km±13km, mb5.0/101, Error ellipse: s-maj=5.4km s-min=4.2km az=155.0*

ISC 06 07:23:15.1±0.3, 10°.95S±0°.06×165°.51E±0°.05, h30km, n259, σ1s.00/261, mb5.0/124, 1C-2D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.68	285	ePn	Pn	07 24 37.6	+0.1
HNR				ePn	Pn	07 24 38.2	+0.8
HNR				eSn	Sn	07 25 44.6	+2.9
HNR	Honiara	5.68	285	Pn	Pn	07 24 37.6	+0.1
	61nm,0.3s,baz=159,slow=7.4,SNR=5.3						
HNR				Sn	Sn	07 25 44.6	+2.9
	15nm,0.3s,baz=277,slow=22,SNR=3.6						
DZM	Mont Dzumac	11.10	175	ePn	Pn	07 25 51.5	-0.5
DZM	Mont Dzumac	11.10	175	Pn	Pn	07 25 50.8	-1.1
	7.4nm,0.3s,baz=354,slow=11,SNR=12						
PINNC	Pines Island,	11.75	171	ePn	Pn	07 26 01.3	+0.6
MSVF	Nonsavu	13.89	120	ePn	Pn	07 26 29.2	-1.0
MSVF				eSn	Sn	07 29 06.6	+3.1
TARA	Tarawa	14.28	32	ePn	Pn	07 26 33.6	-1.7
EIDS	Eidsvold	19.81	222	P	P	07 27 43.9	+0.6
	baz=20,SNR=4.1						
EIDS	Eidsvold	19.81	222	eP	P	07 27 42.3	-1.0
	64nm,1.5s						
MANU	Manus Island	20.06	295	eP	Pn	07 27 47.6	-0.5
	547nm,1.1s						
CTA	Charters Tower	20.64	242	P	Pn	07 27 53.9	-1.0
	43nm,1.1s,baz=73,slow=13,SNR=13						
CTAO	Charters Tower	20.64	242	eP	P	07 27 51.9	-0.5
	110nm,1.3s						
MTSU	Mount Surprise	21.71	248	P	P	07 28 03.4	-0.5
	baz=22,SNR=21						
COEN	Coen	22.01	260	P	P	07 28 06.2	-1.0
	baz=22,SNR=8.6						
COEN	Coen	22.01	260	eP	P	07 28 06.3	-1.0
	92nm,1.3s						
RMQ	Roma	22.11	223	P	P	07 28 09.1	+1.0
	baz=22,SNR=11						
ARMA	Armidale	23.28	212	P	P	07 28 20.9	+0.5
	baz=23,SNR=5.1						
ARMA	Armidale	23.28	212	eP	P	07 28 20.7	+0.3
	36nm,1.3s						
QIS	Mount Isa	26.66	246	P	P	07 28 50.7	-0.9
	baz=27,SNR=8.8						
CMSA	Cobar Meteorol	27.49	219	P	P	07 28 58.9	0.0
	baz=28,SNR=7.2						
URZ	Urewera	29.11	161	P	P	07 29 13.5	+0.2
	17nm,1.0s,baz=244,slow=5.1,SNR=6.5						
H11S2	WAKE ISLAND Hy	29.28	2	T	T	08 00 03.0	
	baz=184,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.28	2	T	T	08 00 02.9	
	baz=184,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	08 00 03.4	
	baz=184,slow=76,SNR=14						
BKZ	Black Stump Fm	29.76	163	eP	P	07 29 19.9	+0.9
	90nm,1.4s						
STKA	Stephens Creek	30.35	223	P	P	07 29 24.9	+0.5
	baz=30,SNR=6.4						
STKA	Stephens Creek	30.35	223	eP	P	07 29 23.6	-0.7
	2.5nm,0.9s						
STKA	Stephens Creek	30.35	223	P	P	07 29 24.6	+0.3
	9.2nm,0.9s,baz=31,slow=10.0,SNR=11						
WRAB	Tennant Creek	31.29	250	eP	P	07 29 31.6	-1.2
	64nm,1.5s						
WB2	Warramunga Arr	31.29	250	eP	P	07 29 31.3	-1.5
	38nm,1.1s						
WB2				eP	P	07 29 31.7	-1.1
WR1	Warramunga Arr	31.30	250	eP	P	07 29 32.2	-0.7
	37nm,1.0s						
WRA	Warramunga Arr	31.30	250	P	P	07 29 32.2	-0.7
	17nm,0.8s,baz=82,slow=9.0,SNR=37						
TOO	Toolangi	32.03	211	P	P	07 29 40.0	+0.8
	baz=32,SNR=3.8						
AS01	Alice Springs	32.59	243	eP	P	07 29 42.5	-1.7
AS31	Alice Springs	32.63	243	eP	P	07 29 43.8	-0.7
	6.9nm,0.9s						
ASAR	Alice Springs	32.63	243	P	P	07 29 43.6	-1.0
	24nm,0.9s,baz=72,slow=9.5,SNR=59						
HTT	Hallett	33.09	223	P	P	07 29 48.7	+0.3
	baz=33,SNR=4.5						
WRKA	Warakurna	37.92	243	P	P	07 30 29.6	-0.5
	baz=38,SNR=22						
FITZ	Fitzroy Crossi	39.18	255	P	P	07 30 39.0	-1.7
	baz=39,SNR=5.4						
FITZ	Fitzroy Crossi	39.18	255	eP	P	07 30 39.5	-1.2
	14nm,1.1s						
MEEK	Meekatharra	46.78	244	P	P	07 31 41.2	-1.1
	baz=47,SNR=16						
MORW	Morawa	49.47	241	P	P	07 32 01.9	-1.0
	baz=50,SNR=3.6						
MORW	Morawa	49.47	241	eP	P	07 32 02.2	-0.7
	30nm,1.1s						
MJAR	Matsushiro Arr	53.78	333	P	P	07 32 34.6	-0.3
	4.4nm,0.6s,baz=171,slow=8.4,SNR=12						
MAJO	Matsushiro	53.78	333	eP	P	07 32 34.6	-0.3
MAT	Matsushiro	53.78	333	P	P	07 32 34.9	0.0

ASAJ	Asahikawa	58.63	341	P	P	07 33 11.0	+1.6
	9.7nm,0.8s,baz=196,slow=11,SNR=10						
KSRS	Korea Array	59.67	326	P	P	07 33 17.5	+0.8
	2.1nm,0.8s,baz=144,slow=6.3,SNR=5.7						
KSAR	Wonju Array Be	59.68	326	P	P	07 33 17.5	+0.7
KS01	Wonju Array Si	59.70	326	*e*P	P	07 33 13.9	-3.0
NJ2	Nanjing	61.79	316	*e*P	P	07 33 30.8	-0.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
USRK	Ussuriysk Ar.	62.76	333	P	P	07 33 38.9	+1.3
	comp=Z,4.7nm,0.9s,baz=114,slow=4.8,SNR=6.0						
PETK	Petropavlovsk-	64.15	355	P	P	07 33 47.5	+1.0
	comp=Z,3.8nm,0.6s,baz=168,slow=5.5,SNR=9.7						
PEA1	Petropavlovsk-	64.16	355	*e*P	P	07 33 47.5	+0.9
CASY	Casey	66.38	201	*e*P	P	07 34 00.5	-0.4
	comp=Z,15nm,1.0s						
KLR	Kul'dur	66.88	337	P	P	07 34 05.5	+1.2
	comp=Z,6.3nm,1.0s,baz=122,slow=3.1,SNR=8.3						
GYA	Guiyang	68.17	304	*e*P	P	07 34 14.0	+0.9
GYA	Guiyang	68.17	304	SS	SS	07 47 36.4	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.5s						
GYA				LR	LR		
	comp=N,470nm,18.2s						
GYA				LR	LR		
	comp=E,490nm,18.6s						
GYA				LR	LR		
	comp=Z,460nm,18.0s						
KMI	Kunming	70.87	301	P	P	07 34 30.7	+0.8
KMI				pmax	pmax		
	comp=Z,14nm,1.3s						
HHC	Hu-ho-hao-te	71.61	320	*e*P	P	07 34 34.7	+0.8
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
CM01	Chiang Mai Arr	71.83	294	*e*P	P	07 34 36.4	+0.8
CMAR	Chiang Mai Arr	71.86	294	P	P	07 34 37.0	+1.3
	comp=Z,1.7nm,0.3s,baz=118,slow=4.8,SNR=10						
CD2	Chengdu	72.36	307	*e*P	P	07 34 38.8	+0.2
LZH	Lanzhou	74.52	312	⇑P	P	07 34 53.2	+1.9
LZH				pP	pP	07 34 57.6	-2.6
LZH				sP	pwP	07 35 00.4	-2.3
LZH				PP	PP	07 37 32.7	-5.6
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,88nm,4.8s						
LZH				LR	LR		
	comp=N,430nm,16.3s						
LZH				LR	LR		
	comp=E,410nm,16.4s						
LZH				LR	LR		
	comp=Z,470nm,17.5s						
GAMB	Gambell	76.52	10	*e*P	P	07 34 59.2	-2.6
	comp=Z,15nm,1.0s						
SVW2	Sparrevohn	78.09	18	*e*P	P	07 35 09.8	-1.1
	comp=Z,17nm,1.0s						
ANM	Nome	78.45	12	*e*P	P	07 35 11.6	-1.1
	comp=Z,12nm,1.3s						
SONA0	Songino Array	78.45	324	*e*P	P	07 35 14.1	+0.8
SONM	Songino Array	78.45	324	P	P	07 35 14.1	+0.8
	comp=Z,3.0nm,0.7s,baz=141,slow=6.5,SNR=11						
SONA1	Songino Array	78.45	324	*e*P	P	07 35 12.4	-0.9
RSO	Redoubt South	78.51	20	*e*P	P	07 35 09.8	-3.7
BRLK	Bradley Lake	78.63	21	*e*P	P	07 35 12.3	-1.6
	comp=Z,31nm,0.9s						
GTA	Gaotai	78.82	314	⇓P	P	07 35 16.3	+0.7
GTA				pP	PcP	07 35 21.6	-2.6
GTA				sP	pP	07 35 24.8	+0.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA				LR	LR		
	comp=N,770nm,17.5s						
GTA				LR	LR		
	comp=E,990nm,17.5s						
GTA				LR	LR		
	comp=Z,1µm,17.1s						
QSPA	South Pole Qui	79.06	180	*e*P	P	07 35 16.4	+0.1
	comp=Z,14nm,0.9s						
SUA	Susitna One	79.91	20	*e*P	P	07 35 20.8	-0.1
	comp=Z,12nm,1.0s						
GLI	Glacier Island	80.76	21	*e*P	P	07 35 26.2	+0.8
	comp=Z,23nm,0.8s						
DIV	Divide	81.41	22	*e*P	P	07 35 29.7	+0.8
	comp=Z,21nm,0.8s						
TRF	Thorofare Moun	81.50	18	*e*P	P	07 35 28.7	-0.8
	comp=Z,20nm,1.5s						
KLU	Klutina	81.59	21	*e*P	P	07 35 30.8	+0.8
	comp=Z,14nm,0.9s						
RND	Reindeer	81.92	19	*e*P	P	07 35 31.7	+0.1
	comp=Z,10nm,0.9s						
MCK	McKinley	82.13	19	*e*P	P	07 35 32.9	+0.3
	comp=Z,21nm,1.2s						
DHY	Denali Highway	82.17	20	*e*P	P	07 35 33.3	+0.3
	comp=Z,6.1nm,0.8s						
BWN	Browne	82.28	18	*e*P	P	07 35 33.7	+0.4
	comp=Z,21nm,1.0s						
IM3	Indian Mountai	82.39	16	*e*P	P	07 35 34.1	+0.2
HARP	HAARP	82.47	21	*e*P	P	07 35 35.6	+1.2
	comp=Z,25nm,0.8s						
KCPM	Cahto Peak	82.66	47	*e*P	P	07 35 37.1	+1.1
	comp=Z,20nm,0.8s						
KMRM	Mail Ridge	82.75	47	*e*P	P	07 35 37.6	+1.1
	comp=Z,26nm,0.8s						
WRH	Wood River Hil	82.91	18	*e*P	P	07 35 36.4	-0.3
	comp=Z,9.3nm,0.8s						
MDM	Murphy Dome	83.21	18	*e*P	P	07 35 38.0	-0.3
	comp=Z,12nm,0.9s						
HDA	Harding Lake	83.23	19	*e*P	P	07 35 38.5	+0.2
	comp=Z,26nm,0.8s						
HDA	Harding Lake	83.23	19	P	P	07 35 38.5	+0.2
	baz=227						
TCOL	CIGO, UAF Yank	83.26	18	P	P	07 35 38.4	0.0
	baz=226						
COLA	College	83.27	18	*e*P	P	07 35 38.0	-0.4
	comp=Z,20nm,0.8s						
O02D	Mt. Diablo Mer	83.40	47	P	P	07 35 41.2	+1.4
	baz=250						
RIDG	Independ'e Rid	83.46	20	*e*P	P	07 35 40.3	+0.7
	comp=Z,14nm,0.8s						
IL1	Eielson Array	83.50	19	*e*P	P	07 35 38.9	-0.8
ILAR	Eielson Array	83.50	19	P	P	07 35 39.3	-0.3
	comp=Z,6.5nm,0.7s,baz=237,slow=5.0,SNR=52						
ILB	Eielson Array	83.50	19	*e*P	P	07 35 39.4	-0.3
POKR	Poker Plat Res	83.56	18	P	P	07 35 39.6	-0.4
	baz=226						
K02D	Willamette Mer	83.67	44	P	P	07 35 42.1	+0.9
	baz=249						
WDC	Whiskeytown Da	83.72	47	*e*P	P	07 35 42.6	+1.3
	comp=Z,6.0nm,0.9s						
N02D	Trinity Center	83.73	46	P	P	07 35 42.8	+1.3
	baz=250						
M02C	Callahan	83.77	46	P	P	07 35 43.0	+1.3
	baz=250						
SCRK	Sand Creek	83.91	20	*e*P	P	07 35 42.8	+0.8
	comp=Z,39nm,1.4s						
YBH	Yreka Blue Hor	83.99	46	*e*P	P	07 35 43.9	+1.1
	comp=Z,12nm,0.8s						
ORV	Oroville	84.12	48	*e*P	P	07 35 43.9	+0.4
	comp=Z,7.8nm,0.9s						
O03E	Paynes Creek	84.15	47	P	P	07 35 44.4	+0.7
	baz=250						
AFDM	Forest Hills D	84.31	49	*e*P	P	07 35 45.1	+0.7
	comp=Z,17nm,1.0s						
L04D	Klamath Falls	84.44	45	P	P	07 35 46.2	+1.0
	baz=250						
CMB	Columbia Colle	84.46	50	*e*P	P	07 35 45.7	+0.5
	comp=Z,8.2nm,0.9s						
M04C	Macdoel	84.62	46	P	P	07 35 47.1	+1.0
	baz=250						
I04A	Tendick Farm,	84.91	44	P	P	07 35 47.8	+0.4
	baz=250						
J04D	Umpqua Nationa	84.93	44	P	P	07 35 48.5	+0.8
	baz=250						
BEKR	Beckworth	85.06	48	*e*P	P	07 35 48.1	-0.3
	comp=Z,9.5nm,0.7s						
MWC	Mount Wilson	85.11	54	*e*P	P	07 35 49.1	+0.3
	comp=Z,28nm,1.6s						
ISA	Isabella, Lake	85.20	52	P	P	07 35 49.4	+0.3
	baz=253						
WAKR	Walker	85.31	50	*e*P	P	07 35 50.4	+0.6
	comp=Z,9.3nm,1.0s						
MDPB	Devils Postpil	85.32	50	*e*P	P	07 35 50.0	+0.1
	comp=Z,13nm,1.0s						
EDW2	Edwards Air Fo	85.35	53	P	P	07 35 50.6	+0.8
	baz=253						
PNTR	Pine Nut	85.37	49	*e*P	P	07 35 50.6	+0.6
	comp=Z,9.6nm,0.9s						
OMMB	Old Mammoth Mi	85.37	50	*e*P	P	07 35 50.6	+0.4
	comp=Z,20nm,1.6s						
VCNR	Virginia City	85.40	49	*e*P	P	07 35 50.6	+0.4
	comp=Z,4.9nm,0.9s						
BFSC	Mount Baldy Ra	85.43	54	P	P	07 35 50.8	+0.5
	baz=254						
J05D	Fort Rock, OR	85.55	45	P	P	07 35 51.7	+1.0
	baz=251						
DAWY	Dawson	85.55	21	*e*P	P	07 35 50.8	+0.7
	comp=Z,10nm,0.8s						
YERR	Yerington	85.61	49	*e*P	P	07 35 50.8	-0.4
	comp=Z,5.0nm,0.8s						
PAHR	Pah Rah Range	85.72	48	*e*P	P	07 35 52.4	+0.7
	comp=Z,8.2nm,0.8s						
CWC	Cottonwood Cre	85.73	52	P	P	07 35 52.3	+0.5
	baz=253						
MOD	Modoc Plateau	85.75	46	*e*P	P	07 35 52.0	+0.3
	comp=Z,7.0nm,0.7s						
LRMC	Laurel Mtn Rad	85.76	53	P	P	07 35 52.9	+0.9
	baz=253						
D03D	Eldon	85.79	40	P	P	07 35 52.6	+1.0
	baz=249						
TIN	Tinemaha, Big	85.79	51	P	P	07 35 53.2	+1.1
	baz=253						
I05D	Terrebonne, OR	85.83	44	P	P	07 35 53.1	+1.1
	baz=250						
PINE	Pine Mountain	85.92	44	*e*P	P	07 35 53.3	+0.7
	comp=Z,14nm,0.8s						
TIXI	Tiksi	85.95	349	P	P	07 35 52.1	+0.3
	comp=Z,2.7nm,0.7s,baz=137,slow=2.4,SNR=5.1						
RYN	Ryan	86.03	50	*e*P	P	07 35 53.8	+0.6
	comp=Z,10nm,0.9s						
MONP2	Monument Peak	86.05	56	P	P	07 35 54.5	+0.9
	baz=254						
DAC	Darwin (Calif)	86.06	52	*e*P	P	07 35 54.2	+0.7
	comp=Z,7.8nm,1.0s						
MPMC	Manual Prospec	86.08	52	P	P	07 35 54.4	+0.8
	baz=254						
NV01	Mina Array Sit	86.14	50	*e*P	P	07 35 54.0	+0.2
NVAR	Mina Array Bea	86.14	50	P	P	07 35 54.4	+0.6
	comp=Z,7.8nm,0.9s,baz=231,slow=8.1,SNR=26						
G05D	Wamic, OR	86.14	43	P	P	07 35 54.4	+0.9
	baz=250						
PFO	Pinyon Flats O	86.22	55	P	P	07 35 54.9	+0.6
	baz=254						
TPFO	Pinon Flats	86.22	55	P	P	07 35 54.9	+0.6
	baz=254						
NV11	Mina Array Sit	86.25	50	*e*P	P	07 35 54.2	-0.1
	comp=Z,0.8nm,0.9s						
GSC	Goldstone, Bar	86.40	53	P	P	07 35 55.8	+0.7
	baz=254						
GRAC	Grapevine Rang	86.44	51	P	P	07 35 56.0	+0.8
	baz=254						
A04D	Lummi Island	86.45	39	P	P	07 35 55.9	+1.1
	baz=249						
KVN	Kaiserville	86.47	49	*e*P	P	07 35 56.0	+0.6
	comp=Z,6.6nm,0.9s						
SWSC	Sam W. Stewart	86.57	56	P	P	07 35 56.7	+0.9
	baz=255						
HEC	Hector,Ludlow	86.64	54	P	P	07 35 56.7	+0.5
	baz=254						
B05A	Bryant	86.67	40	P	P	07 35 57.0	+1.0
	baz=250						
FURC	Furnace Creek,	86.68	52	P	P	07 35 57.2	+1.0
	baz=254						
BELC	Belle Mtn. Jos	86.69	55	P	P	07 35 57.0	+0.4
	baz=254						
SHOC	Shoshone, Teco	86.98	53	P	P	07 35 58.3	+0.5
	baz=254						
BC3	Big Chuckawall	87.04	55	P	P	07 35 58.7	+0.5
	baz=255						
WVOR	Wild Horse Val	87.09	46	*e*P	P	07 35 58.9	+0.6
	comp=Z,8.3nm,1.0s						
GMRC	Granite Mounta	87.17	54	P	P	07 35 59.6	+0.7
	baz=255						
TPNV	Topopah Spring	87.28	52	P	P	07 35 59.7	+0.2
	baz=254						
GLA	Glamis	87.39	56	*e*P	P	07 35 58.3	-1.6
	comp=Z,12nm,0.9s						
GLA	Glamis	87.39	56	P	P	07 36 00.8	+1.0
	baz=255						
IRM	Iron Mountain	87.42	55	P	P	07 36 00.6	+0.6
	baz=255						
J08A	Circle Bar Ran	87.48	45	*e*P	P	07 36 00.3	+0.2
	comp=Z,8.2nm,0.8s						
LDFC	Landfair	87.68	54	*e*P	P	07 36 01.9	+0.6
	comp=Z,17nm,0.9s						
G08A	Pilot Rock	87.73	43	*e*P	P	07 36 00.4	-0.9
	comp=Z,10nm,1.0s						
Y12C	Blythe	87.81	55	*e*P	P	07 36 02.9	+1.1
	comp=Z,9.2nm,0.8s						
Y12C	Blythe	87.81	55	P	P	07 36 03.0	+1.1
	baz=255						
SHPR	Sheep Range	88.01	52	*e*P	P	07 36 03.6	+0.6
	comp=Z,8.9nm,1.3s						
E08A	Dider Farm, El	88.04	42	*e*P	P	07 36 02.7	+0.1
	comp=Z,12nm,0.9s						
R11A	Troy Canyon, C	88.17	51	P	P	07 36 04.0	+0.4
	baz=255						
PDMCI	Parker Dam,Lak	88.26	55	P	P	07 36 04.7	+0.8
	baz=256						
W13A	Hualapai Mount	88.66	54	*e*P	P	07 36 05.1	-0.9
	comp=Z,7.6nm,1.2s						
BMO	Blue Mountains	88.72	44	*e*P	P	07 36 05.5	-0.5
	comp=Z,3.7nm,0.8s						
214A	Organ Pipe Nat	88.77	57	P	P	07 36 07.5	+1.0
	baz=256						
WMQ	Urumqi	88.86	315	*e*P	P	07 36 06.9	+0.3
WMQ				pP	PcP	07 36 11.7	+3.5
WMQ				sP	pP	07 36 15.0	-0.7
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,1µm,6.7s						
WMQ				LR	LR		
	comp=N,1µm,17.9s						
WMQ				LR	LR		
	comp=E,740nm,16.5s						
WMQ				LR	LR		
	comp=Z,1µm,22.3s						
ELK	Elko	89.06	48	*e*P	P	07 36 07.8	0.0
	comp=Z,14nm,1.5s						
Y14A	Wickenburg	89.08	55	*e*P	P	07 36 08.6	+0.6
	comp=Z,4.1nm,1.0s						
F10A	Beach Ranch, E	89.10	43	*e*P	P	07 36 08.2	+0.4
	comp=Z,8.5nm,0.8s						
MFID	Camas Ranch	89.34	46	*e*P	P	07 36 08.1	-0.9
	comp=Z,4.8nm,0.9s						
PSUT	Pine Spring	89.53	51	*e*P	P	07 36 08.8	-1.3
	comp=Z,5.0nm,0.8s						
LCMT	Little Creek M	89.63	52	*e*P	P	07 36 11.1	+0.6
	comp=Z,7.6nm,0.9s						
CCUT	Cedar City	89.67	52	*e*P	P	07 36 12.1	+1.3
	comp=Z,8.7nm,0.9s						
NEW	Newport	89.82	41	P	P	07 36 11.1	+0.1
	baz=253						
INK	Inuvik	89.89	19	P	P	07 36 10.2	-0.6
	comp=Z,1.8nm,0.9s,baz=238,slow=6.5,SNR=6.0						
SZCU	Shurtz Canyon	89.89	52	*e*P	P	07 36 11.6	-0.2
	comp=Z,7.8nm,0.9s						
KNB	Kanab	89.96	52	*e*P	P	07 36 13.3	+1.2
	comp=Z,8.8nm,1.1s						
U15A	North Rim	90.23	53	*e*P	P	07 36 14.3	+0.8
	comp=Z,10nm,0.8s						
HLID	Hailey	90.38	46	*e*P	P	07 36 14.9	+1.0
	comp=Z,4.4nm,0.8s						
HLID	Hailey	90.38	46	P	P	07 36 14.9	+1.0
	baz=255						
PKCU	Pink Cliffs	90.45	52	*e*P	P	07 36 15.9	+1.3
	comp=Z,13nm,1.0s						
X16A	Lo Mia Camp, P	90.45	55	*e*P	P	07 36 15.8	+1.3
	comp=Z,5.0nm,0.8s						
TUC	Tucson	90.53	57	*e*P	P	07 36 16.1	+1.4
	comp=Z,3.3nm,0.8s						
TUC	Tucson	90.53	57	P	P	07 36 16.2	+1.4
	baz=257						
TCRU	Three Creeks R	90.62	51	*e*P	P	07 36 16.8	+1.6
	comp=Z,14nm,0.5s						
MTPU	Mount Pierson	90.69	51	*e*P	P	07 36 17.3	+1.6
	comp=Z,7.3nm,0.8s						
DUG	Dugway, Tooele	90.71	49	*e*P	P	07 36 16.0	+0.5
	comp=Z,4.1nm,0.8s						
DUG	Dugway, Tooele	90.71	49	P	P	07 36 16.3	+0.8
	baz=256						
BGU	Big Grassy Mou	90.72	49	*e*P	P	07 36 15.8	+0.2
	comp=Z,6.4nm,0.9s						
WUAZ	Wupatki	90.75	54	*e*P	P	07 36 16.9	+1.1
	comp=Z,9.9nm,1.0s						
WUAZ	Wupatki	90.75	54	P	P	07 36 17.1	+1.3
	baz=257						
HVU	Hansel Valley	91.11	48	*e*P	P	07 36 18.4	+1.1
	comp=Z,10nm,0.8s						
NLU	North Lily Min	91.21	50	*e*P	P	07 36 17.7	-0.2
	comp=Z,7.4nm,0.9s						
SPUT	South Promonto	91.24	48	*e*P	P	07 36 18.8	+0.9
	comp=Z,4.1nm,1.0s						
MSO	Missoula	91.52	43	P	P	07 36 18.5	-0.5
	baz=256						
MPU	Maple Canyon	91.55	50	*e*P	P	07 36 19.6	+0.1
	comp=Z,7.5nm,1.3s						
CTU	Camp Tracy	91.62	49	*e*P	P	07 36 20.9	+1.2
	comp=Z,12nm,1.2s						
TMUT	Trail Mountain	91.71	50	*e*P	P	07 36 21.3	+0.9
	comp=Z,3.7nm,0.9s						
MCMT	McKenzie Canyo	91.78	45	*e*P	P	07 36 21.4	+0.9
SYO	Syowa Base	91.81	197	⇓*e*P	P	07 36 19.0	-0.8
JLU	Jordanelle	91.82	49	*e*P	P	07 36 21.8	+1.1
	comp=Z,4.5nm,0.9s						
TCUT	Toone Canyon	91.96	49	*e*P	P	07 36 22.2	+0.8
	comp=Z,9.0nm,0.8s						
DLMT	Dillon	92.08	44	*e*P	P	07 36 21.7	0.0
	comp=Z,12nm,0.9s						
LRM	Limekiln Ridge	92.28	44	*e*P	P	07 36 23.2	+0.5
FXWY	Fox Creek	92.79	46	*e*P	P	07 36 26.0	+0.8
	comp=Z,3.7nm,0.8s						
BOZ	Bozeman (W)	92.79	44	*e*P	P	07 36 25.2	+0.2
	comp=Z,8.3nm,1.1s						
BOZ	Bozeman (W)	92.79	44	P	P	07 36 26.0	+1.0
	baz=257						
HRY	Holter Researc	92.90	43	*e*P	P	07 36 26.2	+0.8
IMW	Indian Meadow	92.90	46	*e*P	P	07 36 26.5	+0.8
	comp=Z,3.0nm,0.8s						
H17A	Grant Village	93.26	46	P	P	07 36 29.4	+2.1
	baz=258						
MK01	Makanchi Array	93.28	317	*e*P	P	07 36 26.9	-0.2
MK31	Makanchi Array	93.29	317	*e*P	P	07 36 27.3	+0.2
	comp=Z,4.8nm,1.0s						
MK32	Makanchi Array	93.29	317	*e*P	P	07 36 27.4	+0.2
MKAR	Makanchi Array	93.29	317	*e*P	P	07 36 27.4	+0.2
	comp=Z,22nm,0.9s						
MKAR	Makanchi Array	93.29	317	P	P	07 36 27.4	+0.2
	comp=Z,2.2nm,0.7s,baz=95,slow=6.1,SNR=17						
ZALV	Zalesovo Beam	93.34	324	P	P	07 36 26.3	-0.8
	comp=Z,2.4nm,0.7s,baz=107,slow=5.1,SNR=9.3						
ZAA1	Zalesovo Array	93.34	324	*e*P	P	07 36 26.3	-0.8
BW06	Boulder Array	93.66	47	P	P	07 36 29.8	+0.6
	baz=259						
PD31	Pinedale Array	93.66	47	*e*P	P	07 36 28.7	-0.5
	comp=Z,3.2nm,1.1s						
PDAR	Pinedale Array	93.66	47	*e*P	P	07 36 28.3	-0.8
PDAR	Pinedale Array	93.66	47	P	P	07 36 29.4	+0.2
	comp=Z,2.3nm,0.9s,baz=258,slow=3.2,SNR=13						
EGMT	Eagleton	94.55	42	P	P	07 36 33.5	+0.5
	baz=259						
ANMO	Albuquerque	94.58	55	P	P	07 36 33.7	+0.1
	baz=260						
MNTX	Cornudas Mount	94.91	59	P	P	07 36 35.4	+0.5
	baz=260						
YKA	Yellowknife Ar	95.00	27	P	P	07 36 33.3	-1.1
	comp=Z,2.0nm,0.7s,baz=256,slow=4.6,SNR=37						
YKB5	Yellowknife Ar	95.00	27	*e*P	P	07 36 33.0	-1.5
LTX	Lajitas	95.99	61	*e*P	P	07 36 40.2	+0.2
TXAR	Lajitas Array	95.99	61	P	P	07 36 40.2	+0.3
	comp=Z,0.4nm,0.7s,baz=217,slow=5.4,SNR=4.1						
KSH	Kashi	96.51	309	P	P	07 36 43.2	+1.0
KSH				sP	pP	07 36 51.5	+0.3
KSH				pmax	pmax		
	comp=Z,680nm,6.2s						
ARA0	ARCESS Array S	116.18	345	*e*PKPdf	PKiKP	07 41 54.4	-0.6
ARCES	ARCESS Array B	116.18	345	PKP	PKiKP	07 41 54.4	-0.6
	comp=Z,0.8nm,0.4s,baz=76,slow=2.5,SNR=18						
FIA0	FINESS Array S	121.60	338	*e*PKPdf	PKPdf	07 42 05.1	-0.4
FINES	FINESS Array B	121.60	338	PKP	PKPdf	07 42 05.1	-0.4
	comp=Z,2.9nm,0.9s,baz=190,slow=4.2,SNR=4.0						
CPUP	Villa Florida	124.26	132	PKP	PKiKP	07 42 12.0	0.0
	comp=Z,0.6nm,0.4s,baz=213,slow=6.4,SNR=3.5						
SDV	Santo Domingo	124.72	87	*e*PKPdf	PKPdf	07 42 13.0	-0.2
BOSA	Boshof	125.03	223	PKP	PKiKP	07 42 14.4	+0.8
	comp=Z,5.7nm,0.7s,baz=128,slow=2.2,SNR=13						
KMBO	Kilima Mbogo	127.17	260	PKP	PKiKP	07 42 20.2	+1.7
	comp=Z,0.8nm,0.3s,baz=166,slow=3.1,SNR=3.1						
BR101	Keskin Array S	128.73	313	*e*PKPdf	PKiKP	07 42 21.1	+0.4
BRTR	Keskin Array B	128.73	313	PKP	PKiKP	07 42 21.1	+0.4
	comp=Z,0.3nm,0.4s,baz=132,slow=1.8,SNR=4.1						
LSZ	Lusaka	130.34	239	*e*PKPdf	PKiKP	07 42 25.1	+0.5
CLL	Collm	133.92	336	*e*PKPdf	PKiKP	07 42 31.0	+0.4
GEC2	GERESS Array S	135.51	334	*e*PKPdf	PKPdf	07 42 32.5	-0.1
GERES	GERESS Array B	135.51	334	PKP	PKPdf	07 42 32.5	-0.1
	comp=Z,0.6nm,0.6s,baz=2.9,slow=2.7,SNR=4.4						
KEST	Kesra	147.20	323	PKPbc	PKPbc	07 42 55.9	-0.1
	comp=Z,14nm,1.0s,baz=321,slow=4.5,SNR=7.2						
ES19	SONSECA Array	149.86	344	*e*PKPbc	PKPbc	07 43 03.0	+0.3
ESDC	Sonseca Array	149.90	344	PKPbc	PKPbc	07 43 03.0	+0.1
	comp=Z,2.0nm,0.8s,baz=4.8,slow=3.0,SNR=5.7						
TOA0	Torodi Ar. Sit	164.02	279	*e*PKPdf	PKPdf	07 43 16.6	0.0
TORD	Torodi Ar. Bea	164.02	279	PKP	PKPdf	07 43 15.7	-0.8
	comp=Z,1.8nm,0.9s,baz=353,slow=4.4,SNR=7.1						
TORD				PKPab	PKPab	07 44 09.8	0.0
	comp=Z,2.9nm,1.1s,baz=83,slow=2.7,SNR=6.7						
TOA1	Torodi Ar. Sit	164.02	280	*e*PKPdf	PKPdf	07 43 15.7	-0.8
TOA1				*e*PKPab	PKPab	07 44 09.8	0.0
DBIC	Dimbokro	169.57	247	PKP	PKPdf	07 43 19.4	-1.4
	comp=Z,6.4nm,1.0s,baz=260,slow=2.1,SNR=5.1						

IDC 06 07:24:28.4±2.0**, 10°.74S×165°.29E, h0^{km}, mb4.0**/3**, mb1 4.3**/4**, mb1mx3.8**/36**, mbtmp4.1**/4**, ML4.1**/1**, Error ellipse: s-maj=53.9km s-min=35.2km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.32	175	Pn	Pn	07 27 11.5	-0.1
	1.2nm,0.3s,baz=143,slow=20,SNR=3.7						
WRA	Warramunga Arr	31.17	249	P	P	07 30 49.9	+0.4
	1.1nm,0.6s,baz=82,slow=9.3,SNR=2.6						
ASAR	Alice Springs	32.53	243	P	P	07 31 01.1	-0.4
	3.2nm,0.7s,baz=62,slow=10,SNR=5.0						
ILAR	Eielson Array	83.37	19	P	P	07 36 57.1	0.0
	0.4nm,0.7s,baz=242,slow=5.7,SNR=0.9						

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*IDC **06** 07:25:12.3±1.4, 10°.96S×164°.54E, h0^{km}, mb4.1/6, mb1 4.3/8, mb1mx4.0/36, mbtmp4.2/8, ML4.4/2, Error ellipse: s-maj=37.6km s-min=25.4km az=118.0*

*ISCJB **06** 07:25:15.0±1.0, 11°.0S±0°.1×164°.5E±0°.2, h29^{km}, mb4.0/6, Error ellipse: s-maj=22.7km s-min=16.2km az=158.4*

ISC 06 07:25:17.0±1.1**, 11°.0S**±0°.1×**164°.5E**±0°.2**, h29^{km}, n8, σ0ˢ.91**/8**, mb4.0**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.70	288	Pn	Pn	07 26 25.8	-0.1
	17nm,0.3s,baz=127,slow=5.1,SNR=1.8						
DZM	Mont Dzumac	11.21	170	Pn	Pn	07 27 55.8	+0.3
	2.3nm,0.3s,baz=294,slow=20,SNR=2.9						
WRA	Warramunga Arr	30.33	249	P	P	07 31 26.9	+0.5
	1.7nm,0.7s,baz=80,slow=9.0,SNR=4.2						
ASAR	Alice Springs	31.71	242	P	P	07 31 37.7	-0.8
	2.3nm,0.8s,baz=74,slow=9.6,SNR=3.3						
KLR	Kul'dur	66.48	337	P	P	07 36 05.2	+1.5
	1.5nm,1.0s,baz=124,slow=7.2,SNR=2.7						
SONM	Songino Array	77.85	324	P	P	07 37 11.8	-0.2
	1.0nm,0.9s,baz=127,slow=4.8,SNR=3.5						
ILAR	Eielson Array	83.83	19	P	P	07 37 42.6	-0.8
	1.1nm,0.9s,baz=232,slow=5.6,SNR=3.2						
MKAR	Makanchi Array	92.60	317	P	P	07 38 25.4	-0.5
	1.5nm,0.8s,baz=97,slow=6.2,SNR=5.6						

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*IDC **06** 07:25:56.1±0.5, 10°.85S×165°.33E, h0^{km}, mb4.5/23, mb1 4.7/25, mb1mx4.6/37, mbtmp4.6/25, ML5.0/2, MS4.5/1, Ms1 4.5/1, ms1mx3.6/37, Error ellipse: s-maj=17.5km s-min=14.1km az=94.0*

*NEIC **06** 07:25:58.1±0.2, 10°.78S×165°.31E, h10^{km}, mb4.9/26, Error ellipse: s-maj=6.2km s-min=5.4km az=109.0*

*ISCJB **06** 07:25:59.4±0.2, 10°.83S±0°.04×165°.23E±0°.05, h30^{km}, mb4.7/45, Error ellipse: s-maj=6.9km s-min=4.7km*

az=158.5

ISC 06 07:26:01.0±0.4, **10°.82S**±0°.07×**165°.34E**±0°.07, **h30^{km}**, **n108**, σ**1^{s}.04**/108, **mb4.7**/45, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.49	284	*e*Pn	Pn	07 27 19.6	-1.1
HNR				*e*Pn	Pn	07 27 20.3	-0.4
HNR				*e*Sn	Sn	07 28 25.1	+2.2
HNR	Honiara	5.49	284	Pn	Pn	07 27 19.6	-1.1
	84nm,0.3s,baz=128,slow=5.3,SNR=4.5						
HNR				Sn	Sn	07 28 25.1	+2.2
	5.6nm,0.3s,baz=180,slow=20,SNR=1.9						
HNR				LR	LR	07 29 17.9	
	comp=Z,4μm,18.5s,baz=64,slow=37						
DZM	Mont Dzumac	11.24	175	Pn	Pn	07 28 39.3	-0.5
	6.8nm,0.3s,baz=266,slow=16,SNR=9.0						
RABL	Rabaul	14.62	296	*e*Pn	Pn	07 29 26.8	+0.8
EIDS	Eidsvold	19.80	221	*e*P	Pn	07 30 29.9	-0.8
	25nm,0.9s						
MANU	Manus Island	19.86	295	*e*P	P	07 30 30.4	+0.6
	167nm,1.0s						
CTA	Charters Tower	20.56	241	P	P	07 30 37.4	0.0
	62nm,0.9s,baz=70,slow=12,SNR=11						
CTAO	Charters Tower	20.56	241	*e*P	P	07 30 37.8	+0.4
	111nm,1.0s						
COEN	Coen	21.87	260	*e*P	P	07 30 50.4	-1.2
	17nm,1.0s						
ARMA	Armidale	23.30	211	*e*P	P	07 31 06.8	+0.3
	18nm,1.0s						
OUZ	Omahuta	25.43	164	*e*P	P	07 31 27.9	+1.8
	43nm,1.0s						
MKAZ	Moumakai	27.63	163	P	P	07 31 47.1	+1.2
HAZ	Te Kaha	29.06	159	P	P	07 31 59.4	+0.8
MXZ	Matakaoa Point	29.07	158	*e*P	P	07 31 59.5	+0.7
	51nm,0.8s						
MXZ	Matakaoa Point	29.07	158	P	P	07 31 59.5	+0.7
H11S2	WAKE ISLAND Hy	29.15	3	T	T	08 02 26.0	
	baz=184,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	29.16	3	T	T	08 02 47.7	
	baz=184,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	29.17	3	T	T	08 02 52.7	
	baz=184,slow=76,SNR=19						
RUGZ	Raukumara Rang	29.21	160	P	P	07 32 01.7	+1.5
URZ	Urewera	29.29	161	*e*P	P	07 32 00.3	-0.4
URZ				*e*P	P	07 32 01.8	+1.1
URZ	Urewera	29.29	161	P	P	07 32 00.3	-0.4
	31nm,0.8s,baz=18,slow=5.0,SNR=9.7						
URZ	Urewera	29.29	161	P	P	07 32 02.0	+1.3
WMGZ	Waiomatatini S	29.34	159	P	P	07 32 01.4	+0.3
MWZ	Matawai	29.50	160	S	P	07 32 02.1	-0.5
PUZ	Puketiti	29.51	159	P	P	07 32 02.8	+0.1
TWVZ	Taurewa	29.54	164	S	P	07 32 05.0	+1.9
WTVZ	West Tongariro	29.63	164	S	P	07 32 06.8	+3.0
NGZ	Ngauruhoe	29.69	164	S	P	07 32 06.9	+2.5
CNGZ	Carnagh Statio	29.86	159	S	P	07 32 06.3	+0.6
RAHZ	Arahi	29.88	161	S	P	07 32 06.4	+0.4
RIGZ	Rimuhau	29.91	160	S	P	07 32 06.0	-0.2
BKZ	Black Stump Fm	29.93	162	*e*P	P	07 32 07.7	+1.2
	40nm,0.9s						
BKZ	Black Stump Fm	29.93	162	P	P	07 32 07.7	+1.2
MOVZ	Moawhango	29.94	164	S	P	07 32 07.9	+1.3
NMHZ	Naumai	29.96	162	S	P	07 32 07.2	+0.5
BHHZ	Black Hill Sta	30.11	163	P	P	07 32 09.8	+1.8
KWHZ	Kaweka Forest	30.15	163	S	P	07 32 09.2	+0.8
ARHZ	Aropaoanui	30.17	162	S	P	07 32 07.9	-0.6
STKA	Stephens Creek	30.34	223	*e*P	P	07 32 10.3	+0.3
	2.3nm,1.0s						
STKA	Stephens Creek	30.34	223	P	P	07 32 10.3	+0.3
	5.6nm,0.8s,baz=36,slow=12,SNR=4.8						
H11N1	WAKE ISLAND Hy	30.38	3	T	T	08 04 05.5	
	baz=182,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.38	3	T	T	08 04 03.0	
	baz=182,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.39	3	T	T	08 04 07.1	
	baz=182,slow=76,SNR=12						
TSZ	Takapari Road	30.61	164	P	P	07 32 13.6	+1.2
WB2	Warramunga Arr	31.18	249	*e*P	P	07 32 16.9	-0.8
WR1	Warramunga Arr	31.19	249	*e*P	P	07 32 15.9	-1.9
	13nm,1.0s						
WRA	Warramunga Arr	31.19	249	P	P	07 32 15.9	-1.9
	9.1nm,1.0s,baz=80,slow=9.1,SNR=5.5						
ASAR	Alice Springs	32.54	243	P	P	07 32 27.8	-1.9
	4.3nm,0.7s,baz=68,slow=9.7,SNR=9.4						
OXZ	Oxford	32.91	171	*e*P	P	07 32 34.2	+1.7
	24nm,0.8s						
RPZ	Rata Peaks	33.15	172	P	P	07 32 32.9	-1.7
	12nm,0.7s,baz=315,slow=1.4,SNR=3.0						
FORT	Forrest	39.85	234	*e*P	P	07 33 31.5	-0.5
	88nm,0.9s						
ASAJ	Asahikawa	58.45	341	P	P	07 35 54.2	+0.2
	12nm,0.9s,baz=203,slow=7.3,SNR=7.6						
KSRS	Korea Array	59.47	326	P	P	07 36 01.2	+0.1
	2.6nm,0.8s,baz=144,slow=6.8,SNR=6.3						
KSAR	Wonju Array Be	59.48	326	P	P	07 36 01.2	0.0
USRK	Ussuriysk Ar.	62.57	334	P	P	07 36 22.6	+0.5
	3.8nm,0.6s,baz=134,slow=6.2,SNR=9.0						
PETK	Petropavlovsk-	64.00	355	P	P	07 36 31.8	+0.3
	3.7nm,0.8s,baz=173,slow=7.3,SNR=5.6						
PEA1	Petropavlovsk-	64.01	355	*e*P	P	07 36 31.8	+0.3
KLR	Kul'dur	66.69	337	P	P	07 36 49.7	+0.8
	8.6nm,1.0s,baz=132,slow=6.9,SNR=10						
ENH	Enshi	67.45	309	*e*P	P	07 36 53.5	-0.7
	26nm,1.1s						
XAN	Xi'an	69.67	312	*e*P	P	07 37 07.8	-0.3
	62nm,0.9s						
CM01	Chiang Mai Arr	71.63	294	*e*P	P	07 37 20.6	+0.4
CMAR	Chiang Mai Arr	71.66	294	P	P	07 37 21.0	+0.6
	1.9nm,0.3s,baz=101,slow=4.7,SNR=3.4						
HIA	Hailar	71.98	331	*e*P	P	07 37 21.1	-0.6
	13nm,0.9s						
ULN	Ulaanbaatar	77.88	324	*e*P	P	07 37 53.7	-2.3
	11nm,0.9s						
SONA0	Songino Array	78.25	324	*e*P	P	07 37 58.7	+0.6
SONM	Songino Array	78.25	324	P	P	07 37 58.7	+0.6
	4.8nm,0.9s,baz=140,slow=7.0,SNR=7.7						
SONA1	Songino Array	78.25	324	*e*P	P	07 37 58.4	+0.4
RSO	Redoubt South	78.44	20	*e*P	P	07 38 00.1	+1.2
BILL	Bilibino	78.65	0	*e*P	P	07 37 59.9	+0.2
	5.8nm,0.8s						
QSPA	South Pole Qui	79.19	180	*e*P	P	07 38 04.6	+1.6
	18nm,1.0s						
SUA	Susitna One	79.85	20	*e*P	P	07 38 05.5	-1.0
	14nm,1.1s						
TLY	Talaya	81.71	326	P	P	07 38 16.8	+0.2
	1.7nm,0.6s,baz=124,slow=18,SNR=4.8						
ILAR	Eielson Array	83.42	19	P	P	07 38 25.1	0.0
	2.9nm,0.8s,baz=234,slow=5.1,SNR=7.7						
ILB	Eielson Array	83.42	19	*e*P	P	07 38 25.4	+0.2
	3.0nm,0.8s						
IL1	Eielson Array	83.42	19	*e*P	P	07 38 25.5	+0.4
SCRK	Sand Creek	83.84	20	*e*P	P	07 38 27.8	+0.4
	5.7nm,0.8s						
AFDM	Forest Hills D	84.35	49	*e*P	P	07 38 31.1	+0.5
	5.2nm,0.9s						
WAKR	Walker	85.35	50	*e*P	P	07 38 37.1	+1.3
	6.3nm,1.1s						
PAHR	Pah Rah Range	85.76	48	*e*P	P	07 38 39.0	+1.3
	5.4nm,1.0s						
TIXI	Tiksi	85.79	349	P	P	07 38 35.5	-1.4
	0.6nm,0.3s,baz=127,slow=2.4,SNR=1.6						
NV01	Mina Array Sit	86.18	50	*e*P	P	07 38 39.5	-0.4
NVAR	Mina Array Bea	86.18	50	P	P	07 38 39.9	0.0
	3.9nm,1.0s,baz=234,slow=7.9,SNR=8.3						
NV11	Mina Array Sit	86.29	50	*e*P	P	07 38 40.8	+0.4
	0.5nm,1.0s						
HVU	Hansel Valley	91.15	48	*e*P	P	07 39 04.0	+0.6
	6.1nm,1.0s						
DLMT	Dillon	92.10	44	*e*P	P	07 39 07.5	-0.1
	6.6nm,1.0s						
BOZ	Bozeman (W)	92.81	44	*e*P	P	07 39 10.0	-1.0
	2.6nm,0.8s						
MK01	Makanchi Array	93.07	317	*e*P	P	07 39 12.0	+0.1
MK32	Makanchi Array	93.08	317	*e*P	P	07 39 11.6	-0.4
MKAR	Makanchi Array	93.08	317	P	P	07 39 11.6	-0.4
	1.9nm,0.7s,baz=84,slow=6.7,SNR=5.6						
ZALV	Zalesovo Beam	93.14	324	P	P	07 39 11.5	-0.5
	1.6nm,0.6s,baz=128,slow=4.1,SNR=4.2						
ZAA1	Zalesovo Array	93.14	324	*e*P	P	07 39 11.5	-0.5
PDAR	Pinedale Array	93.69	47	P	P	07 39 15.4	+0.3
	0.8nm,0.8s,baz=243,slow=3.0,SNR=5.6						
YKA	Yellowknife Ar	94.95	27	P	P	07 39 18.3	-1.8
	0.9nm,0.7s,baz=258,slow=4.6,SNR=12						
YKB5	Yellowknife Ar	94.95	27	*e*P	P	07 39 18.2	-2.0
LTX	Lajitas	96.07	61	*e*P	P	07 39 27.0	+0.8
TXAR	Lajitas Array	96.07	61	P	P	07 39 27.0	+0.8
	0.3nm,0.7s,baz=213,slow=6.0,SNR=4.5						
KURK	Kurchatov	96.21	320	*e*P	P	07 39 25.3	-0.9
KURBB	Kurchatov Arra	96.25	320	P	P	07 39 25.3	-1.1
	0.2nm,0.4s,baz=78,slow=3.5,SNR=2.6						
ARA0	ARCESS Array S	116.01	345	*e*PKPdf	PKiKP	07 44 40.2	-0.3
ARCES	ARCESS Array B	116.01	345	PKP	PKiKP	07 44 40.2	-0.2
	1.7nm,0.9s,baz=46,slow=4.0,SNR=3.5						
CNNC	Cliffs of the	117.99	56	*e*PKPdf	PKiKP	07 44 47.0	+1.8
CPUP	Villa Florida	124.47	132	PKP	PKiKP	07 44 58.6	+0.2
	1.4nm,0.7s,baz=243,slow=2.3,SNR=4.0						
BOSA	Boshof	125.01	224	PKP	PKiKP	07 44 59.4	-0.1
	1.8nm,0.6s,baz=112,slow=1.0,SNR=5.9						
GERES	GERESS Array B	135.32	333	PKP	PKiKP	07 45 19.9	+0.4
	0.6nm,0.6s,baz=40,slow=2.3,SNR=3.8						
BDFB	Brasilia	137.79	128	PKP	PKiKP	07 45 24.9	-0.6
	1.8nm,0.7s,baz=198,slow=5.3,SNR=3.2						
KEST	Kesra	146.99	323	PKPbc	PKPdf	07 45 40.1	+0.8
	5.2nm,0.7s,baz=48,slow=1.0,SNR=4.1						
TORD	Torodi Ar. Bea	163.84	280	PKP	PKPdf	07 46 02.8	+0.6
	1.6nm,1.2s,baz=96,slow=1.9,SNR=3.1						
TORD				PKPab	PKPab	07 46 54.1	-0.7
	1.7nm,1.0s,baz=87,slow=3.1,SNR=2.7						
TOA1	Torodi Ar. Sit	163.84	280	*e*PKPdf	PKPdf	07 46 02.8	+0.6
TOA1				*e*PKPab	PKPab	07 46 54.1	-0.7

IDC ***06*** *07:29:28.8±0.5, 11°.55S×165°.24E, h0^{km}, mb4.6/24, mb1 4.7/26, mb1mx4.6/40, mbtmp4.6/26, ML5.0/2, Error ellipse: s-maj=17.0km s-min=13.1km az=87.0*

NEIC ***06*** *07:29:30.2±0.1, 11°.54S×165°.21E, h10^{km}, mb4.8/51, Error ellipse: s-maj=4.9km s-min=4.5km az=136.0*

ISCJB ***06*** *07:29:32.2±0.2, 11°.67S±0°.04×165°.15E±0°.04, h34^{km}, mb4.7/85, Error ellipse: s-maj=5.5km s-min=4.9km az=140.0*

ISC 06 07:29:33.8±0.4, **11°.60S**±0°.06×**165°.21E**±0°.06, **h34^{km}**, **n132**, σ**0^{s}.90**/144, **mb4.8**/85, **1D**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.61	292	*e*Pn	Pn	07 30 54.2	-0.7
HNR				*e*Pn	Pn	07 30 55.3	+0.4
HNR				*e*Sn	Sn	07 31 57.6	-0.6
HNR				*e*Sn	Sn	07 31 58.2	0.0
HNR	Honiara	5.61	292	Pn	Pn	07 30 55.3	+0.4
	60nm,0.3s,baz=147,slow=6.5,SNR=6.5						
HNR				Sn	Sn	07 31 58.2	0.0
	72nm,0.3s,baz=332,slow=21,SNR=7.3						
MARNC	Mare, Loyalty	10.19	165	*e*Pn	Pn	07 31 57.2	-0.4
DZM	Mont Dzumac	10.48	174	*e*Pn	Pn	07 32 01.6	-0.1
DZM				*e*Sn	Sn	07 33 57.4	-0.6
DZM	Mont Dzumac	10.48	174	Pn	Pn	07 32 01.6	-0.1
	7.2nm,0.3s,baz=304,slow=17,SNR=15						
PINNC	Pines Island,	11.15	169	*e*Pn	Pn	07 32 11.4	+0.5
MSVF	Nonsavu	13.83	118	*e*Pn	Pn	07 32 48.1	+0.5
CTA	Charters Tower	20.08	243	P	P	07 34 04.8	+0.2
	36nm,1.0s,baz=18,slow=3.2,SNR=4.9						
CTAO	Charters Tower	20.08	243	*e*P	P	07 34 05.1	+0.6
	78nm,1.1s						
MANU	Manus Island	20.09	297	*e*P	P	07 34 03.5	-1.2
	374nm,0.1s						
COEN	Coen	21.62	261	*e*P	P	07 34 21.7	+0.5
	36nm,1.0s						
ARMA	Armidale	22.57	212	*e*P	P	07 34 32.3	+0.9
	38nm,1.0s						
URZ	Urewera	28.60	160	P	P	07 35 27.5	+0.7
	9.5nm,0.8s,baz=255,slow=20,SNR=4.5						
BKZ	Black Stump Fm	29.23	162	*e*P	P	07 35 32.6	+0.1
	12nm,0.8s						
STKA	Stephens Creek	29.68	224	*e*P	P	07 35 37.0	+0.5
	1.2nm,1.0s						
STKA	Stephens Creek	29.68	224	P	P	07 35 37.0	+0.5
	3.1nm,0.8s,baz=47,slow=7.8,SNR=3.2						
WRAB	Tennant Creek	30.79	251	*e*P	P	07 35 45.4	-1.1
	14nm,0.9s						
WR1	Warramunga Arr	30.80	251	*e*P	P	07 35 46.6	-0.1
	22nm,1.0s						
WRA	Warramunga Arr	30.80	251	P	P	07 35 46.6	-0.1
	13nm,1.0s,baz=81,slow=9.2,SNR=16						
AS31	Alice Springs	32.08	244	*e*P	P	07 35 57.0	-0.9
	1.6nm,0.6s						
ASAR	Alice Springs	32.08	244	P	P	07 35 57.0	-0.9
	5.2nm,0.8s,baz=66,slow=9.6,SNR=8.5						
ASAR				PcP	PcP	07 38 46.9	-0.1
	2.0nm,0.8s,baz=65,slow=2.6,SNR=7.5						
RPZ	Rata Peaks	32.39	172	P	P	07 36 01.5	+1.2
	10nm,0.8s,baz=319,slow=11,SNR=4.3						
FITZ	Fitzroy Crossi	38.73	256	*e*P	P	07 36 54.9	-0.2
	5.2nm,1.0s						
MJAR	Matsushiro Arr	54.23	333	P	P	07 38 55.8	-0.5
	7.3nm,1.0s,baz=170,slow=7.3,SNR=10.0						
MAJO	Matsushiro	54.23	333	*e*P	P	07 38 55.8	-0.5
MAT	Matsushiro	54.23	333	P	P	07 38 55.6	-0.7
KSM	Kuching	56.08	280	*e*P	P	07 39 07.7	-2.4
	7.1nm,0.9s						
ASAJ	Asahikawa	59.15	341	P	P	07 39 32.1	+1.1
	20nm,1.0s,baz=220,slow=11,SNR=10						
KSRS	Korea Array	60.04	326	P	P	07 39 37.8	+0.4
	4.8nm,1.0s,baz=142,slow=7.3,SNR=9.1						
KSAR	Wonju Array Be	60.06	326	P	P	07 39 37.8	+0.3
KS01	Wonju Array Si	60.08	326	*e*P	P	07 39 36.1	-1.5
NJ2	Nanjing	62.05	316	*e*P	P	07 39 50.1	-1.0
NJ2				pmax	pmax		
	comp=Z,22nm,1.1s						
USRK	Ussuriysk Ar.	63.21	334	P	P	07 39 59.0	+0.3
	comp=Z,9.9nm,1.0s,baz=141,slow=6.4,SNR=13						
MDJ	Mudanjiang	64.60	333	P	P	07 40 08.6	+0.8
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,1μm,13.1s						
VNDA	Vanda	65.93	181	P	P	07 40 17.0	+1.1
	comp=Z,2.3nm,0.8s,baz=304,slow=11,SNR=2.6						
CN2	Changchun	65.95	330	*e*P	P	07 40 16.3	-0.2
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
SKNT	Sakolnakorn	66.84	294	P	P	07 40 24.0	+1.2
	comp=Z,11nm,1.4s						
ENH	Enshi	67.84	309	*e*P	P	07 40 29.2	+0.3
	comp=Z,42nm,1.1s						
GYA	Guiyang	68.30	305	*e*P	P	07 40 32.1	+0.1
GYA				PP	PP	07 43 06.0	+2.9
GYA				S	S	07 49 32.8	+1.8
GYA				SKS	SKSac	07 50 28.1	-0.7
GYA	Guiyang	68.30	305	SS	SS	07 53 58.9	+4.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.5s						
GYA				LR	LR		
	comp=N,520nm,18.2s						
GYA				LR	LR		
	comp=E,490nm,18.6s						
GYA				LR	LR		
	comp=Z,480nm,18.0s						
PBKT	Sadao Pong	69.41	293	P	P	07 40 40.7	+1.8
	comp=Z,17nm,1.6s						
XAN	Xi'an	70.11	313	P	P	07 40 43.4	+0.4
XAN				pP	PcP	07 41 17.3	+12
XAN				pmax	pmax		
	comp=Z,15nm,1.1s						
XAN				LR	LR		
	comp=N,660nm,16.3s						
XAN				LR	LR		
	comp=Z,630nm,16.3s						
XAN	Xi'an	70.11	313	*e*P	P	07 40 43.5	+0.6
	comp=Z,14nm,1.0s						
KMI	Kunming	70.97	302	P	P	07 40 50.2	+1.6
KMI				pP	pP	07 40 52.6	-5.0
KMI				sP	sP	07 40 54.0	-6.7
KMI				pmax	pmax		
	comp=Z,30nm,1.3s						
CM01	Chiang Mai Arr	71.83	294	*e*P	P	07 40 54.1	+0.4
CMAR	Chiang Mai Arr	71.86	294	P	P	07 40 55.6	+1.8
	comp=Z,2.7nm,0.5s,baz=115,slow=4.5,SNR=19						
HHC	Hu-ho-hao-te	71.92	320	*e*P	P	07 40 55.1	+1.2
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
CMMT	Chiang Mai	71.97	294	P	P	07 40 56.1	+1.6
	comp=Z,13nm,1.4s						
CHTO	Chiang Mai	71.97	294	*e*P	P	07 40 54.9	+0.3
	comp=Z,2.9nm,0.7s						
CHTO	Chiang Mai	71.97	294	P	P	07 40 56.2	+1.7
	comp=Z,58nm,1.3s						
CD2	Chengdu	72.53	308	P	P	07 40 58.5	+0.9
CD2				pmax	pmax		
	comp=Z,80nm,1.0s						
CD2				pmax	pmax		
	comp=Z,130nm,3.5s						
LZH	Lanzhou	74.75	313	*e*P	P	07 41 12.0	+1.3
LZH				pP	pP	07 41 17.0	-2.8
LZH				sP	sP	07 41 18.7	-4.4
LZH				PP	PP	07 43 59.5	+1.2
LZH				pmax	pmax		
	comp=Z,46nm,1.4s						
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
LZH				LR	LR		
	comp=N,260nm,16.5s						
LZH				LR	LR		
	comp=E,280nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
SEY	Seymchan	74.97	354	P	P	07 41 09.6	-1.6
	comp=Z,3.4nm,1.0s,baz=71,slow=6.7,SNR=5.4						
QSPA	South Pole Qui	78.41	180	*e*P	P	07 41 29.8	-1.1
	comp=Z,13nm,1.1s						
ULN	Ulaanbaatar	78.44	324	*e*P	P	07 41 29.8	-1.6
	comp=Z,8.5nm,0.9s						
SONA0	Songino Array	78.81	324	*e*P	P	07 41 34.3	+1.0
SONM	Songino Array	78.81	324	P	P	07 41 34.3	+1.0
	comp=Z,3.0nm,0.9s,baz=136,slow=5.5,SNR=12						
SONA1	Songino Array	78.81	324	*e*P	P	07 41 32.4	-1.0
GTA	Gaotai	79.07	314	⇓P	P	07 41 36.3	+1.3
GTA				pP	PcP	07 41 39.8	-3.6
GTA				sP	pP	07 41 43.3	-0.8
GTA				pmax	pmax		
	comp=Z,17nm,1.2s						
GTA				pmax	pmax		
	comp=Z,210nm,5.6s						
GTA				LR	LR		
	comp=N,510nm,17.1s						
GTA				LR	LR		
	comp=E,710nm,16.8s						
GTA				LR	LR		
	comp=Z,960nm,16.8s						
BILL	Bilibino	79.44	0	*e*P	P	07 41 36.4	+0.3
	comp=Z,12nm,1.1s						
SHL	Shillong	80.32	299	*e*P	P	07 41 41.8	-0.3
DIV	Divide	82.12	22	*e*P	P	07 41 51.1	+0.4
	comp=Z,14nm,1.2s						
TLY	Talaya	82.30	326	*e*P	P	07 41 51.5	-0.3
	comp=Z,4.9nm,1.1s						
TLY				*e*P	P	07 41 52.3	+0.5
TLY	Talaya	82.30	326	P	P	07 41 52.3	+0.5
	comp=Z,0.4nm,0.4s,baz=9.0,slow=19,SNR=5.3						
RND	Reindeer	82.63	19	*e*P	P	07 41 53.8	+0.5
	comp=Z,11nm,1.1s						
IM3	Indian Mountai	83.10	16	*e*P	P	07 41 55.1	-0.5
WRH	Wood River Hil	83.62	18	*e*P	P	07 41 58.4	0.0
	comp=Z,3.7nm,1.0s						
MDM	Murphy Dome	83.92	18	*e*P	P	07 42 00.3	+0.4
	comp=Z,4.5nm,0.9s						
HDA	Harding Lake	83.94	19	*e*P	P	07 41 60.0	0.0
	comp=Z,11nm,0.8s						
RIDG	Independ'e Rid	84.17	20	*e*P	P	07 42 01.8	+0.5
	comp=Z,14nm,1.2s						
ILAR	Eielson Array	84.20	19	P	P	07 42 01.4	+0.1
	comp=Z,1.8nm,0.6s,baz=234,slow=5.0,SNR=19						
ILB	Eielson Array	84.20	19	*e*P	P	07 42 01.4	+0.1
IL1	Eielson Array	84.20	19	*e*P	P	07 42 01.0	-0.3
SCRK	Sand Creek	84.62	20	*e*P	P	07 42 03.6	0.0
	comp=Z,13nm,1.2s						
YBH	Yreka Blue Hor	84.65	46	*e*P	P	07 42 04.9	+0.7
	comp=Z,6.9nm,1.1s						
ORV	Oroville	84.77	48	*e*P	P	07 42 04.9	+0.1
	comp=Z,4.7nm,1.0s						
AFDM	Forest Hills D	84.96	49	*e*P	P	07 42 05.4	-0.4
	comp=Z,6.1nm,1.0s						
CMB	Columbia Colle	85.10	50	*e*P	P	07 42 05.5	-1.0
	comp=Z,3.6nm,0.9s						
BEKR	Beckworth	85.71	48	*e*P	P	07 42 08.7	-1.0
	comp=Z,6.1nm,1.1s						
MDPB	Devils Postpil	85.95	50	*e*P	P	07 42 11.0	-0.1
	comp=Z,8.3nm,1.1s						
WAKR	Walker	85.95	50	*e*P	P	07 42 10.4	-0.6
	comp=Z,8.0nm,1.2s						
OMMB	Old Mammoth Mi	86.01	51	*e*P	P	07 42 11.5	+0.1
	comp=Z,7.2nm,1.2s						
DAWY	Dawson	86.26	21	*e*P	P	07 42 12.3	+0.6
	comp=Z,4.2nm,0.9s						
PAHR	Pah Rah Range	86.37	48	*e*P	P	07 42 12.3	-0.7
	comp=Z,7.0nm,1.2s						
TIXI	Tiksi	86.54	349	P	P	07 42 13.2	+0.5
	comp=Z,2.1nm,0.3s,baz=46,slow=3.3,SNR=7.3						
NV01	Mina Array Sit	86.78	50	*e*P	P	07 42 14.7	-0.3
NVAR	Mina Array Bea	86.78	50	P	P	07 42 15.4	+0.3
	comp=Z,3.3nm,0.9s,baz=228,slow=8.4,SNR=12						
NV11	Mina Array Sit	86.89	50	*e*P	P	07 42 13.3	-2.2
	comp=Z,0.5nm,1.1s						
GSC	Goldstone, Bar	87.02	53	*e*P	P	07 42 14.5	-1.6
	comp=Z,4.8nm,1.0s						
KVN	Kaiserville	87.12	49	*e*P	P	07 42 17.1	+0.4
	comp=Z,6.9nm,1.1s						
Y12C	Blythe	88.42	55	*e*P	P	07 42 23.4	+0.6
	comp=Z,9.2nm,1.1s						
SHPR	Sheep Range	88.64	52	*e*P	P	07 42 22.5	-1.4
	comp=Z,5.0nm,1.2s						
R11A	Troy Canyon, C	88.80	51	*e*P	P	07 42 23.6	-1.1
	comp=Z,4.5nm,1.1s						
WMQ	Urumqi	89.12	315	*e*P	P	07 42 26.2	+0.3
WMQ				sP	pP	07 42 33.2	-1.9
WMQ				pmax	pmax		
	comp=Z,17nm,1.7s						
W13A	Hualapai Mount	89.27	54	*e*P	P	07 42 26.3	-0.7
PSUT	Pine Spring	90.16	51	*e*P	P	07 42 31.4	+0.3
	comp=Z,5.4nm,0.9s						
LCMT	Little Creek M	90.25	52	*e*P	P	07 42 31.8	+0.4
	comp=Z,5.7nm,1.0s						
CCUT	Cedar City	90.30	52	*e*P	P	07 42 31.8	0.0
	comp=Z,4.1nm,0.9s						
SZCU	Shurtz Canyon	90.52	52	*e*P	P	07 42 33.4	+0.6
	comp=Z,6.8nm,1.2s						
U15A	North Rim	90.86	53	*e*P	P	07 42 35.6	+1.1
	comp=Z,9.3nm,0.9s						
X16A	Lo Mia Camp, P	91.06	55	*e*P	P	07 42 35.9	+0.6
	comp=Z,4.1nm,0.9s						
TUC	Tucson	91.12	57	*e*P	P	07 42 36.2	+0.6
	comp=Z,3.2nm,1.1s						
MTPU	Mount Pierson	91.32	52	*e*P	P	07 42 37.9	+1.2
	comp=Z,6.0nm,0.9s						
MSU	Marysvale	91.44	51	*e*P	P	07 42 38.0	+0.9
HVU	Hansel Valley	91.77	48	*e*P	P	07 42 39.3	+0.9
	comp=Z,6.9nm,1.2s						
NLU	North Lily Min	91.85	50	*e*P	P	07 42 38.5	-0.5
	comp=Z,5.3nm,1.0s						
MK01	Makanchi Array	93.56	317	*e*P	P	07 42 46.4	-0.1
MK31	Makanchi Array	93.57	317	*e*P	P	07 42 45.3	-1.2
	comp=Z,6.2nm,1.1s						
MK32	Makanchi Array	93.57	317	*e*P	P	07 42 47.0	+0.5
MKAR	Makanchi Array	93.57	317	*e*P	P	07 42 46.9	+0.5
	comp=Z,39nm,1.1s						
MKAR	Makanchi Array	93.57	317	P	P	07 42 47.0	+0.5
	comp=Z,4.5nm,1.0s,baz=101,slow=6.3,SNR=14						
ZALV	Zalesovo Beam	93.70	324	*e*P	P	07 42 45.7	-1.1
ZALV	Zalesovo Beam	93.70	324	P	P	07 42 46.0	-0.8
	comp=Z,4.7nm,1.0s,baz=108,slow=4.8,SNR=11						
ZAA1	Zalesovo Array	93.70	324	*e*P	P	07 42 46.0	-0.8
MAKZ	Makanchi	93.78	317	*e*P	P	07 42 47.8	+0.4
	comp=Z,8.7nm,1.1s						
PDAR	Pinedale Array	94.31	47	P	P	07 42 50.7	+0.5
	comp=Z,0.6nm,0.9s,baz=279,slow=6.0,SNR=3.4						
YKA	Yellowknife Ar	95.70	27	P	P	07 42 54.4	-1.4
	comp=Z,0.7nm,0.8s,baz=258,slow=4.6,SNR=10.0						
YKB5	Yellowknife Ar	95.70	27	*e*P	P	07 42 54.4	-1.4
NRIK	Noril'sk	96.46	340	P	P	07 42 58.8	-0.3
	comp=Z,1.1nm,0.3s,baz=156,slow=20,SNR=3.1						
LTX	Lajitas	96.55	61	*e*P	P	07 43 02.1	+1.5
TXAR	Lajitas Array	96.55	61	P	P	07 43 02.1	+1.5
	comp=Z,0.4nm,0.6s,baz=227,slow=4.8,SNR=6.8						
ARA0	ARCESS Array S	116.74	345	*e*PKPdf	PKPdf	07 48 13.8	-0.2
ARCES	ARCESS Array B	116.74	345	PKP	PKPdf	07 48 13.8	-0.2
	comp=Z,0.8nm,0.5s,baz=64,slow=2.8,SNR=10						
CPUP	Villa Florida	124.03	133	PKP	PKPdf	07 48 29.0	-0.3
	comp=Z,0.4nm,0.3s,baz=0.0,slow=5.1,SNR=2.9						
SDV	Santo Domingo	125.05	87	*e*PKPdf	PKPdf	07 48 30.2	-1.6
AKASG	Malin Array Be	127.04	326	PKP	PKPdf	07 48 33.5	-0.8
	comp=Z,0.6nm,0.6s,baz=68,slow=2.5,SNR=5.3						
KEST	Kesra	147.53	322	PKPbc	PKPab	07 49 16.1	-1.0
	comp=Z,11nm,1.0s,baz=327,slow=4.9,SNR=4.2						
ES19	SONSECA Array	150.40	343	*e*PKPbc	PKiKP	07 49 22.6	-0.3
ESDC	Sonseca Array	150.44	343	PKPbc	PKPbc	07 49 21.8	-0.5
	comp=Z,1.8nm,0.8s,baz=7.5,slow=3.2,SNR=6.5						

TOA0	Torodi Ar. Sit	163.83	277	*e*PKPdf	PKPdf	07 49 34.1	-0.3
TORD	Torodi Ar. Bea	163.83	277	PKP	PKPdf	07 49 33.5	-0.9
	comp=Z,1.4nm,1.0s,baz=0.0,slow=0.6,SNR=5.1						
TORD				PKPab	PKPab	07 50 26.1	-0.8
	comp=Z,3.1nm,1.1s,baz=89,slow=4.6,SNR=7.4						
TOA1	Torodi Ar. Sit	163.83	277	*e*PKPdf	PKPdf	07 49 33.5	-0.9
TOA1				*e*PKPab	PKPab	07 50 26.1	-0.9

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*IDC **06** 07:32:20.0±1.0, 10°.68S×165°.33E, h0^{km}, mb4.2/8, mb1 4.5/10, mb1mx4.1/41, mbtmp4.3/10, ML4.7/2, Error ellipse: s-maj=28.0km s-min=20.3km az=138.0*

*NEIC **06** 07:32:21.3±0.6, 10°.64S×165°.26E, h10^{km}, mb4.3/8, Error ellipse: s-maj=12.0km s-min=10.9km az=90.0*

*ISCJB **06** 07:32:23.1±0.6, 10°.84S±0°.08×165°.24E±0°.08, h31^{km}, mb4.2/11, Error ellipse: s-maj=12.7km s-min=10.6km az=44.3*

ISC 06 07:32:24.4±0.8**, 10°.68S**±0°.09×**165°.3E**±0°.1**, h31^{km}, n28, σ1^{s}.40**/23**, mb4.2**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.42	283	*e*Pn	Pn	07 33 44.5	+1.3
HNR				*e*Pn	Pn	07 33 45.0	+1.9
HNR	Honiara	5.42	283	Pn	Pn	07 33 44.5	+1.3
	58nm,0.3s,baz=140,slow=9.6,SNR=4.7						
DZM	Mont Dzumac	11.38	175	Pn	Pn	07 35 04.4	-0.6
	2.3nm,0.3s,baz=307,slow=18,SNR=8.6						
PINNC	Pines Island,	12.04	170	*e*Pn	Pn	07 35 14.1	+0.1
PATS	Pohnpei	18.74	338	*e*P	P	07 36 37.9	-3.0
	108nm,0.9s						
MANU	Manus Island	19.77	294	*e*P	Pn	07 36 55.6	+1.8
	131nm,1.1s						
CTA	Charters Tower	20.60	241	P	P	07 37 01.7	+0.6
	16nm,1.0s,baz=64,slow=13,SNR=6.2						
CTAO	Charters Tower	20.60	241	*e*P	P	07 36 59.9	-1.3
	14nm,0.9s						
COEN	Coen	21.87	259	*e*P	P	07 37 11.7	-3.2
	11nm,1.1s						
H11S2	WAKE ISLAND Hy	29.01	3	T	T	08 08 59.0	
	baz=184,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	29.02	3	T	T	08 09 02.0	
	baz=184,slow=76,SNR=7.8						
H11S1	WAKE ISLAND Hy	29.03	3	T	T	08 08 57.4	
	baz=184,slow=76,SNR=9.0						
URZ	Urewera	29.43	161	P	P	07 38 25.6	+0.3
	6.3nm,0.8s,baz=100,slow=6.1,SNR=2.3						
BKZ	Black Stump Fm	30.07	162	*e*P	P	07 38 31.6	+0.6
	24nm,1.1s						
H11N1	WAKE ISLAND Hy	30.24	3	T	T	08 10 28.1	
	baz=184,slow=74,SNR=6.8						
H11N3	WAKE ISLAND Hy	30.24	3	T	T	08 10 26.8	
	baz=184,slow=74,SNR=8.0						
H11N2	WAKE ISLAND Hy	30.26	3	T	T	08 10 38.4	
	baz=184						
STKA	Stephens Creek	30.42	223	*e*P	P	07 38 34.2	+0.1
	1.6nm,1.1s						
STKA	Stephens Creek	30.42	223	P	P	07 38 34.2	+0.1
	2.5nm,0.8s,baz=312,slow=9.2,SNR=3.2						
WR1	Warramunga Arr	31.21	249	*e*P	P	07 38 40.8	-0.5
	8.1nm,1.0s						
WRA	Warramunga Arr	31.21	249	P	P	07 38 40.8	-0.5
	4.2nm,1.1s,baz=79,slow=9.1,SNR=7.8						
AS31	Alice Springs	32.58	243	*e*P	P	07 38 51.8	-1.5
	0.8nm,0.6s						
ASAR	Alice Springs	32.58	243	P	P	07 38 53.2	-0.1
	1.6nm,0.6s,baz=63,slow=10,SNR=7.0						
ILAR	Eielson Array	83.30	19	P	P	07 44 49.0	+1.1
	1.1nm,0.7s,baz=235,slow=5.1,SNR=8.0						
ILB	Eielson Array	83.30	19	*e*P	P	07 44 49.0	+1.1
	1.1nm,0.6s						
NV01	Mina Array Sit	86.11	50	*e*P	P	07 45 03.6	+0.7
NVAR	Mina Array Bea	86.11	50	P	P	07 45 03.7	+0.8
	2.0nm,1.0s,baz=244,slow=7.9,SNR=5.5						
YKA	Yellowknife Ar	94.84	27	P	P	07 45 41.8	-1.1
	0.3nm,0.7s,baz=259,slow=4.6,SNR=4.3						

IDC 06 07:33:59.0±1.7**, 10°.92S**×**165°.58E, h0^{km}, mb3.9**/3**, mb1 4.2**/4**, mb1mx3.7**/40**, mbtmp4.0**/4**, ML4.3**/1**, Error ellipse: s-maj=52.8km s-min=30.5km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.12	176	Pn	Pn	07 36 39.8	+0.2
	2.1nm,0.3s,baz=352,slow=19,SNR=4.4						
WRA	Warramunga Arr	31.37	250	P	P	07 40 22.1	+0.3
	2.6nm,0.7s,baz=82,slow=8.9,SNR=8.6						
ASAR	Alice Springs	32.70	243	P	P	07 40 33.1	-0.4
	0.9nm,0.7s,baz=65,slow=9.5,SNR=4.3						
ILAR	Eielson Array	83.44	19	P	P	07 46 28.1	0.0
	0.3nm,0.6s,baz=224,slow=5.0,SNR=4.2						

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*IDC **06** 07:35:56.8±0.7, 10°.90S×164°.63E, h0^{km}, mb4.3/21, mb1 4.5/24, mb1mx4.4/41, mbtmp4.4/24, ML4.4/3, MS4.4/4, Ms1 4.4/4, ms1mx3.9/38, Error ellipse: s-maj=23.2km s-min=15.7km az=113.0*

*NEIC **06** 07:35:57.8±0.3, 10°.86S×164°.75E, h10^{km}, mb4.7/29, Error ellipse: s-maj=8.6km s-min=6.5km az=123.0*

*ISCJB **06** 07:35:59.2±0.3, 10°.94S±0°.05×164°.72E±0°.05, h31^{km}, mb4.5/54, Error ellipse: s-maj=7.3km s-min=6.3km az=35.7*

ISC 06 07:36:01.0±0.4**, 10°.90S**±0°.07×**164°.82E**±0°.06**, h31^{km}, n95, σ1^{s}.43**/93**, mb4.6**/54**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.01	287	*e*Pn	Pn	07 37 10.8	-3.3
HNR				*e*Pn	Pn	07 37 11.3	-2.8
HNR				*e*Sn	Sn	07 38 12.4	+1.3
HNR	Honiara	5.01	287	Pn	Pn	07 37 11.3	-2.8
	40nm,0.3s,baz=60,slow=1.5,SNR=8.8						
HNR				Sn	Sn	07 38 12.4	+1.3
	18nm,0.3s,baz=165,slow=20,SNR=1.8						
HNR				LR	LR	07 39 02.3	
	comp=Z,2µm,19.5s,baz=134,slow=38						
DZM	Mont Dzumac	11.21	172	*e*Pn	Pn	07 38 40.7	+1.4
DZM	Mont Dzumac	11.21	172	Pn	Pn	07 38 40.4	+1.1
	5.2nm,0.3s,baz=21,slow=9.9,SNR=23						
PINNC	Pines Island,	11.91	168	*e*Pn	Pn	07 38 49.9	+1.2
MSVF	Nonsavu	14.50	119	*e*Pn	Pn	07 39 21.5	-2.8
TARA	Tarawa	14.60	34	*e*Pn	Pn	07 39 24.2	-1.4
EIDS	Eidsvold	19.40	220	*e*P	P	07 40 24.6	0.0
	59nm,1.1s						
MANU	Manus Island	19.43	296	*e*P	P	07 40 24.8	-0.2
	131nm,1.1s						
CTA	Charters Tower	20.07	241	P	P	07 40 32.1	+0.2
	0.3nm,0.3s,baz=58,slow=10,SNR=6.2						
CTAO	Charters Tower	20.07	241	*e*P	P	07 40 32.2	+0.2
	52nm,1.0s						
COEN	Coen	21.35	260	*e*P	P	07 40 43.5	-2.4
	16nm,1.0s						
ARMA	Armidale	22.97	210	*e*P	P	07 41 04.0	+0.9
	18nm,1.1s						
H11S2	WAKE ISLAND Hy	29.27	4	T	T	08 12 31.8	
	baz=184,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	29.27	4	T	T	08 12 30.7	
	baz=184,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.28	4	T	T	08 12 34.0	
	baz=184,slow=76,SNR=16						
STKA	Stephens Creek	29.93	222	*e*P	P	07 42 06.8	+0.4
	2.7nm,1.1s						
STKA	Stephens Creek	29.93	222	P	P	07 42 06.6	+0.3
	4.5nm,0.8s,baz=20,slow=8.1,SNR=6.0						
H11N1	WAKE ISLAND Hy	30.49	4	T	T	08 14 02.7	
	baz=184,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	30.50	4	T	T	08 14 03.1	
	baz=184,slow=76,SNR=23						
H11N2	WAKE ISLAND Hy	30.51	4	T	T	08 14 04.0	
	baz=184,slow=76,SNR=26						
WB2	Warramunga Arr	30.67	249	*e*P	P	07 42 13.5	+0.5
WB2				*e*P	P	07 42 14.2	+1.2
WR1	Warramunga Arr	30.68	249	*e*P	P	07 42 10.0	-3.1
	7.5nm,1.0s						
WRA	Warramunga Arr	30.68	249	P	P	07 42 10.0	-3.1
	1.4nm,0.6s,baz=79,slow=9.0,SNR=9.2						
WRA				LR	LR	07 53 17.6	
	comp=Z,849nm,19.9s,baz=90,slow=34						
GUMO	Guam	31.37	320	LR	LR	07 54 39.9	
	comp=Z,690nm,19.6s,baz=146,slow=36						
TOO	Toolangi	31.73	210	*e*P	P	07 42 21.8	-0.4
	7.1nm,0.8s						
AS31	Alice Springs	32.04	243	*e*P	P	07 42 22.6	-2.6
	1.4nm,0.8s						
ASAR	Alice Springs	32.05	243	P	P	07 42 22.6	-2.6
	2.5nm,1.0s,baz=61,slow=10,SNR=7.8						
ASAR				LR	LR	07 54 33.1	
	comp=Z,940nm,19.1s,baz=84,slow=35						
FITZ	Fitzroy Crossi	38.54	255	*e*P	P	07 43 17.7	-3.4
	9.8nm,0.8s						
FORT	Forrest	39.38	234	*e*P	P	07 43 27.3	-0.7
	36nm,1.0s						
JNU	Nakatsue	54.44	325	*e*P	P	07 45 26.4	+0.9
	18nm,1.0s						
JNU	Nakatsue	54.44	325	P	P	07 45 26.4	+0.9
	11nm,0.9s,baz=244,slow=3.3,SNR=3.9						
ASAJ	Asahikawa	58.36	341	P	P	07 45 54.3	+1.1
	6.7nm,0.8s,baz=224,slow=13,SNR=6.7						
KSRS	Korea Array	59.25	326	P	P	07 46 00.1	+0.6
	1.0nm,0.7s,baz=156,slow=10,SNR=3.3						
KS15	Wonju Array Si	59.26	326	*e*P	P	07 46 00.1	+0.5
KSAR	Wonju Array Be	59.26	326	P	P	07 46 00.1	+0.5
NJ2	Nanjing	61.28	316	*e*P	P	07 46 12.9	-0.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	62.41	334	P	P	07 46 21.4	+0.5
	comp=Z,2.2nm,0.9s,baz=83,slow=6.0,SNR=4.7						
PETK	Petropavlovsk-	64.05	355	P	P	07 46 32.9	+1.3
	comp=Z,4.5nm,1.0s,baz=201,slow=7.7,SNR=2.5						
PEA1	Petropavlovsk-	64.05	355	*e*P	P	07 46 32.9	+1.3
CN2	Changchun	65.16	330	*e*P	P	07 46 46.2	+7.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VNDA	Vanda	66.62	181	P	P	07 46 49.2	+1.2
	comp=Z,9.8nm,1.1s,baz=17,slow=7.0,SNR=4.2						
GYA	Guiyang	67.59	305	P	P	07 46 57.5	+2.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	Xi'an	69.35	313	P	P	07 47 12.2	+6.3
XAN				pP	pwP	07 47 23.5	+2.6
XAN				sP	PcP	07 47 29.4	+0.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				LR	LR		
	comp=N,600nm,14.1s						
XAN				LR	LR		
	comp=E,560nm,14.1s						
XAN				LR	LR		
	comp=Z,530nm,14.1s						
HHC	Hu-ho-hao-te	71.14	320	*e*P	P	07 47 18.3	+1.5
HHC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CMAR	Chiang Mai Arr	71.22	294	P	P	07 47 16.9	-0.8
	comp=Z,1.0nm,0.3s,baz=122,slow=3.1,SNR=6.7						
CD2	Chengdu	71.79	308	P	P	07 47 21.0	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	Lanzhou	73.99	313	*e*P	P	07 47 32.7	-1.3
LZH				pP	pP	07 47 37.8	-3.9
LZH				sP	sP	07 47 40.9	-4.0
LZH				PP	PP	07 50 21.3	+1.8
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,98nm,4.9s						
LZH				LR	LR		
	comp=N,260nm,16.5s						
LZH				LR	LR		
	comp=E,280nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
SEY	Seymchan	74.24	354	P	P	07 47 35.1	+0.6
	comp=Z,0.9nm,0.7s,baz=217,slow=20,SNR=2.6						
ULN	Ulaanbaatar	77.65	324	*e*P	P	07 47 56.5	+1.9
	comp=Z,8.0nm,1.0s						
SONA0	Songino Array	78.02	324	*e*P	P	07 47 56.9	+0.3
SONM	Songino Array	78.02	324	P	P	07 47 56.9	+0.3
	comp=Z,3.2nm,1.1s,baz=132,slow=5.6,SNR=7.2						
SONA1	Songino Array	78.02	324	*e*P	P	07 47 55.9	-0.8
GTA	Gaotai	78.31	314	*e*P	P	07 47 58.8	+0.4
GTA				pP	pP	07 48 03.3	-3.1
GTA				sP	PcP	07 48 05.9	-1.8
GTA	Gaotai	78.31	314	P	P	07 48 05.9	+7.5
GTA				pP	sP	07 48 11.3	+1.9
GTA				sP	pwP	07 48 14.0	+0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,11nm,1.2s						
GTA				LR	LR		
	comp=N,470nm,16.2s						
GTA				LR	LR		
	comp=E,680nm,17.1s						
GTA				LR	LR		
	comp=Z,560nm,16.2s						
ANM	Nome	78.55	13	*e*P	P	07 47 58.4	-0.6
	comp=Z,5.6nm,1.1s						
BILL	Bilibino	78.74	1	*e*P	P	07 47 58.8	-1.2
	comp=Z,7.7nm,0.9s						
QSPA	South Pole Qui	79.10	180	*e*P	P	07 48 03.6	+1.3
	comp=Z,13nm,1.1s						
CAST	Castle Rocks	81.09	18	*e*P	P	07 48 13.1	+0.2
	comp=Z,6.6nm,1.0s						
TLY	Talaya	81.50	327	P	P	07 48 15.4	+0.2
	comp=Z,0.7nm,0.5s,baz=172,slow=7.1,SNR=3.6						
RDOG	Red Dog Mine	82.07	12	*e*P	P	07 48 16.9	-0.9
	comp=Z,12nm,0.7s						
IM3	Indian Mountai	82.53	16	*e*P	P	07 48 20.7	+0.4
MDM	Murphy Dome	83.38	18	*e*P	P	07 48 23.0	-1.8
	comp=Z,12nm,1.2s						
HDA	Harding Lake	83.40	19	*e*P	P	07 48 23.2	-1.7
	comp=Z,17nm,1.1s						
IL1	Eielson Array	83.67	19	*e*P	P	07 48 25.7	-0.5
ILAR	Eielson Array	83.67	19	P	P	07 48 26.9	+0.6
	comp=Z,3.3nm,1.0s,baz=236,slow=5.5,SNR=11						
ILB	Eielson Array	83.67	19	*e*P	P	07 48 25.5	-0.8
SCRK	Sand Creek	84.10	20	*e*P	P	07 48 29.5	+0.9
	comp=Z,5.0nm,1.1s						
TIXI	Tiksi	85.78	349	*e*P	P	07 48 36.5	-0.2
	comp=Z,12nm,1.1s						
TIXI				*e*P	P	07 48 36.8	0.0
TIXI	Tiksi	85.78	349	P	P	07 48 36.8	0.0
	comp=Z,1.3nm,0.3s,baz=122,slow=9.0,SNR=5.2						
NV01	Mina Array Sit	86.63	50	*e*P	P	07 48 40.4	-1.6
NVAR	Mina Array Bea	86.63	50	P	P	07 48 43.0	+1.0
	comp=Z,4.4nm,1.2s,baz=230,slow=7.5,SNR=8.1						
NV11	Mina Array Sit	86.74	50	*e*P	P	07 48 42.2	-0.3
	comp=Z,0.3nm,1.1s						
WMQ	Urumqi	88.35	315	*e*P	P	07 48 51.5	+1.6
WMQ				pP	pP	07 48 55.2	-2.9
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
W13A	Hualapai Mount	89.18	54	*e*P	P	07 48 54.3	0.0
	comp=Z,1.9nm,1.0s						
LCMT	Little Creek M	90.14	52	*e*P	P	07 48 58.9	+0.3
	comp=Z,2.8nm,1.0s						
SZCU	Shurtz Canyon	90.39	52	*e*P	P	07 48 59.9	+0.1
	comp=Z,2.9nm,1.0s						
U15A	North Rim	90.75	53	*e*P	P	07 49 02.1	+0.5
	comp=Z,4.0nm,1.0s						
MK01	Makanchi Array	92.78	317	*e*P	P	07 49 08.9	-1.6
MK31	Makanchi Array	92.80	317	*e*P	P	07 49 09.3	-1.2
	comp=Z,6.6nm,0.9s						
MK32	Makanchi Array	92.80	317	*e*P	P	07 49 09.6	-1.0
MKAR	Makanchi Array	92.80	317	*e*P	P	07 49 09.3	-1.2
	comp=Z,36nm,0.9s						
MKAR	Makanchi Array	92.80	317	P	P	07 49 09.6	-1.0
	comp=Z,2.6nm,0.9s,baz=98,slow=5.4,SNR=12						
ZAA0	Zalesovo Array	92.91	324	*e*P	P	07 49 10.5	-0.3
	comp=Z,7.1nm,1.1s						
ZALV	Zalesovo Beam	92.91	324	*e*P	P	07 49 10.4	-0.4
ZALV	Zalesovo Beam	92.91	324	P	P	07 49 11.0	+0.2
	comp=Z,1.4nm,0.9s,baz=107,slow=1.5,SNR=5.9						
ZAA1	Zalesovo Array	92.91	324	*e*P	P	07 49 11.0	+0.1
MAKZ	Makanchi	93.01	317	*e*P	P	07 49 10.6	-0.9
	comp=Z,10nm,1.0s						
PDAR	Pinedale Array	94.13	47	P	P	07 49 16.9	-0.1
	comp=Z,0.6nm,0.9s,baz=303,slow=3.0,SNR=4.6						
NRIK	Noril'sk	95.67	340	P	P	07 49 22.8	-0.4
	comp=Z,0.7nm,0.3s,baz=148,slow=9.5,SNR=2.5						
KURK	Kurchatov	95.95	320	*e*P	P	07 49 25.1	+0.2
KURBB	Kurchatov Arra	95.99	320	P	P	07 49 25.1	0.0
	comp=Z,0.3nm,0.8s,baz=78,slow=6.0,SNR=3.2						
KEST	Kesra	146.75	322	PKPbc	PKPbc	07 55 40.5	0.0
	comp=Z,4.8nm,0.8s,baz=63,slow=4.5,SNR=2.0						
TORD	Torodi Ar. Bea	163.34	279	PKP	PKPdf	07 56 03.6	+2.0
	comp=Z,0.8nm,1.0s,baz=133,slow=0.3,SNR=3.2						
TORD				PKPab	PKPab	07 56 55.9	+3.4
	comp=Z,0.9nm,1.0s,baz=64,slow=3.4,SNR=2.9						
TOA1	Torodi Ar. Sit	163.34	279	*e*PKPdf	PKPdf	07 56 03.6	+2.0
TOA1				*e*PKPab	PKPab	07 56 55.9	+3.4

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*NNC **06** 07:36:19.2±4.8, 51°.47N×81°.82E, h0^{km}, mb2.9, mpv2.4, Error ellipse: s-maj=47.5km s-min=19.9km az=14.0, Suspected Mining explosion.*

IDC 06 07:36:20.6±1.2**, 51°.34N**×**81°.84E, h0^{km}, mb1 2.3**/2**, mb1mx2.3**/59**, mbtmp2.3**/2**, ML1.9**/2**, 5C-1D, Error ellipse: s-maj=13.7km s-min=10.9km az=141.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.13	254	⇑Pg	Pn	07 36 58.0	+0.6
	0.7nm,0.3s						
KURK				⇑Lg	Lg	07 37 27.7	
	8.3nm,0.6s						
KURBB	Kurchatov Arra	2.21	252	⇑Pg	Pn	07 36 59.6	+1.0
	1.3nm,0.3s,baz=74,slow=20						
KURBB				⇓Lg	Lg	07 37 31.7	
	2.8nm,0.3s						
KURBB	Kurchatov Arra	2.21	252	Pg	Pn	07 36 60.0	+1.4
	0.2nm,0.3s,baz=71,slow=18,SNR=15						
KURBB				Lg	Lg	07 37 31.6	
	0.3nm,0.3s,baz=72,slow=33,SNR=7.6						
I46RU	ZALESOVO INFRA	3.18	34	*i*		07 55 00.0	
	baz=207,slow=320,SNR=2.3						
ZALV	Zalesovo Beam	3.18	34	Pn	Pn	07 37 12.5	+0.7
	0.4nm,0.3s,baz=213,slow=15,SNR=2.8						
ZALV				Pg	Pb	07 37 17.9	0.0
	0.4nm,0.3s,baz=217,slow=16,SNR=3.7						
ZALV				Sn	Sn	07 37 46.2	-4.2
	0.2nm,0.3s,baz=219,slow=23,SNR=3.7						
ZALV				Lg	Lg	07 38 00.6	
	0.6nm,0.3s,baz=218,slow=25,SNR=7.0						
MK31	Makanchi Array	4.56	176	⇑Pn	Pn	07 37 32.5	+1.6
	baz=7.6,slow=12,SNR=18						
MK31				⇑Lg	Lg	07 38 45.3	
	1.4nm,0.6s,baz=3.3,slow=28,SNR=4.3						
MKAR	Makanchi Array	4.56	176	Pn	Pn	07 37 32.5	+1.6
	0.1nm,0.3s,baz=7.5,slow=12,SNR=19						
MKAR				Lg	Lg	07 38 42.7	
	0.2nm,0.3s,baz=360,slow=30,SNR=5.5						

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*IDC **06** 07:37:18.4±0.7, 10°.93S×165°.21E, h0^{km}, mb4.6/20, mb1 4.8/22, mb1mx4.6/41, mbtmp4.6/22, ML4.9/2, MS4.4/1, Ms1 4.4/1, ms1mx3.5/35, Error ellipse: s-maj=20.7km s-min=14.7km az=126.0*

*NEIC **06** 07:37:20.0±0.3, 10°.87S×165°.18E, h10^{km}, mb4.6/13, Error ellipse: s-maj=8.2km s-min=6.3km az=99.0*

*ISCJB **06** 07:37:21.2±0.3, 10°.95S±0°.05×165°.12E±0°.06, h31^{km}, mb4.6/28, MS4.4/1, Error ellipse: s-maj=9.1km s-min=6.7km az=2.5*

ISC 06 07:37:23.2±0.5**, 10°.92S**±0°.08×**165°.16E**±0°.09**, h31^{km}, n62, σ0^{s}.90**/62**, mb4.6**/28**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.34	286	*e*Pn	Pn	07 38 41.7	+0.9
HNR				*e*Pn	Pn	07 38 42.0	+1.2
HNR	Honiara	5.34	286	Pn	Pn	07 38 41.7	+0.9
	57nm,0.3s,baz=289,slow=17,SNR=3.8						
DZM	Mont Dzumac	11.16	174	Pn	Pn	07 40 00.8	0.0
	5.7nm,0.3s,baz=51,slow=13,SNR=5.2						
ONTNC	Ouen Toro	11.39	174	*e*Pn	Pn	07 40 04.0	+0.1
PINNC	Pines Island,	11.83	170	*e*Pn	Pn	07 40 10.0	+0.1
EIDS	Eidsvold	19.61	221	*e*P	Pn	07 41 50.5	-0.1
	20nm,0.9s						
MANU	Manus Island	19.74	295	*e*P	Pn	07 41 52.0	-0.3
	359nm,1.0s						
CTA	Charters Tower	20.36	241	P	Pn	07 41 59.0	-0.4
	66nm,1.0s,baz=69,slow=12,SNR=11						
CTAO	Charters Tower	20.36	241	*e*P	Pn	07 41 59.0	-0.5
	97nm,1.0s						
COEN	Coen	21.68	260	*e*P	P	07 42 10.4	-1.2
	19nm,0.9s						
ARMA	Armidale	23.13	211	*e*P	P	07 42 26.9	0.0
	20nm,1.1s						
URZ	Urewera	29.25	161	*e*P	P	07 43 22.6	+0.1
	21nm,1.2s						
H11S2	WAKE ISLAND Hy	29.26	3	T	T	08 13 54.8	
	baz=184,slow=76,SNR=6.5						
H11S3	WAKE ISLAND Hy	29.27	3	T	T	08 13 57.1	
	baz=184,slow=76,SNR=5.7						
H11S1	WAKE ISLAND Hy	29.28	3	T	T	08 13 53.6	
	baz=184,slow=76,SNR=9.4						
BKZ	Black Stump Fm	29.89	162	*e*P	P	07 43 29.9	+1.7
	15nm,0.7s						
STKA	Stephens Creek	30.14	223	*e*P	P	07 43 30.1	-0.4
	2.2nm,0.8s						
STKA				PcP	PcP	07 46 32.2	+0.7
STKA	Stephens Creek	30.14	223	P	P	07 43 31.0	+0.5
	8.6nm,0.8s,baz=26,slow=10,SNR=7.0						
STKA				PcP	PcP	07 46 32.2	+0.7
	1.2nm,0.7s,baz=0.0,slow=5.1,SNR=3.0						
H11N1	WAKE ISLAND Hy	30.49	3	T	T	08 15 25.3	
	baz=182,slow=76,SNR=5.3						
H11N3	WAKE ISLAND Hy	30.49	3	T	T	08 15 28.1	
	baz=182,slow=76,SNR=5.7						
H11N2	WAKE ISLAND Hy	30.50	3	T	T	08 15 26.3	
	baz=182,slow=76,SNR=4.5						
WRAB	Tennant Creek	30.98	249	*e*P	P	07 43 37.6	-0.4
	10nm,0.8s						
WB2	Warramunga Arr	30.98	249	*e*P	P	07 43 37.1	-0.9
WR1	Warramunga Arr	30.99	249	*e*P	P	07 43 37.2	-0.9
	21nm,1.0s						
WRA	Warramunga Arr	30.99	249	P	P	07 43 37.2	-0.9
	9.5nm,0.6s,baz=81,slow=9.1,SNR=27						
WRA				PcP	PcP	07 46 34.5	+0.6
	1.1nm,0.7s,baz=77,slow=2.3,SNR=3.6						
AS01	Alice Springs	32.30	243	*e*P	P	07 43 48.1	-1.6
AS31	Alice Springs	32.34	243	*e*P	P	07 43 48.9	-1.1
	4.1nm,0.8s						
ASAR	Alice Springs	32.34	243	P	P	07 43 49.0	-1.0
	16nm,0.8s,baz=71,slow=9.6,SNR=20						
ASAR				PcP	PcP	07 46 37.5	-0.1
	1.9nm,0.7s,baz=67,slow=3.4,SNR=5.6						
FITZ	Fitzroy Crossi	38.86	255	*e*P	P	07 44 44.5	-1.4
	9.1nm,1.0s						
FITZ	Fitzroy Crossi	38.86	255	P	P	07 44 44.5	-1.4
	4.3nm,0.6s,baz=106,slow=8.7						
FORT	Forrest	39.65	234	*e*P	P	07 44 52.9	+0.5
	77nm,0.9s						
MJAR	Matsushiro Arr	53.60	333	P	P	07 46 40.8	-0.8
	7.4nm,0.8s,baz=171,slow=9.0,SNR=8.4						
MAJO	Matsushiro	53.60	333	*e*P	P	07 46 40.8	-0.8
JNU	Nakatsue	54.64	325	*e*P	P	07 46 48.5	-0.8
	36nm,0.9s						
JNU	Nakatsue	54.64	325	P	P	07 46 49.4	+0.1
	27nm,0.8s,baz=129,slow=2.5,SNR=9.7						
JNU				LR	LR	08 05 04.9	
	comp=Z,377nm,20.9s,baz=116,slow=30						
ASAJ	Asahikawa	58.49	341	P	P	07 47 17.4	+1.1
	26nm,0.8s,baz=216,slow=9.9,SNR=14						
KSRS	Korea Array	59.45	326	P	P	07 47 23.7	+0.5
	4.9nm,0.8s,baz=146,slow=7.4,SNR=9.2						
KSAR	Wonju Array Be	59.46	326	P	P	07 47 23.7	+0.4
KS01	Wonju Array Si	59.48	326	*e*P	P	07 47 22.9	-0.6
USRK	Ussuriysk Ar.	62.58	334	P	P	07 47 45.2	+0.9
	8.1nm,0.8s,baz=136,slow=6.2,SNR=9.7						
PETK	Petropavlovsk-	64.09	355	P	P	07 47 54.7	+0.6
	3.7nm,0.8s,baz=163,slow=10,SNR=2.8						
PEA1	Petropavlovsk-	64.09	355	*e*P	P	07 47 54.7	+0.6
CMAR	Chiang Mai Arr	71.54	294	P	P	07 48 43.0	+1.2
	0.7nm,0.4s,baz=104,slow=5.1,SNR=3.3						
SONA0	Songino Array	78.23	324	*e*P	P	07 49 20.7	+0.7
SONM	Songino Array	78.23	324	P	P	07 49 20.7	+0.7
	3.2nm,1.1s,baz=164,slow=4.6,SNR=3.6						
ILAR	Eielson Array	83.58	19	P	P	07 49 47.6	-0.4
	2.2nm,0.7s,baz=235,slow=5.0,SNR=14						
ILB	Eielson Array	83.58	19	*e*P	P	07 49 47.4	-0.7
	5.0nm,0.9s						
NVAR	Mina Array Bea	86.38	50	P	P	07 50 02.7	-0.3
	1.3nm,0.8s,baz=236,slow=6.1,SNR=3.1						
MK31	Makanchi Array	93.04	317	*e*P	P	07 50 33.8	-0.1
	2.9nm,0.9s						
MK32	Makanchi Array	93.04	317	*e*P	P	07 50 33.7	-0.2
MKAR	Makanchi Array	93.04	317	P	P	07 50 33.7	-0.2
	2.5nm,0.7s,baz=87,slow=6.0,SNR=9.5						
MKAR				PKKPbc	PKKPdf	08 07 42.0	-1.5
	0.7nm,0.7s,baz=289,slow=2.7,SNR=4.6						
ZALV	Zalesovo Beam	93.12	324	P	P	07 50 32.9	-1.2
	1.2nm,0.5s,baz=94,slow=9.4,SNR=3.8						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA1	Zalesovo Array	93.12	324	*e*P	P	07 50 32.9	-1.2
PDAR	Pinedale Array	93.89	47	P	P	07 50 37.1	-1.1
	0.6nm,0.9s,baz=227,slow=2.0,SNR=2.9						
YKA	Yellowknife Ar	95.12	27	P	P	07 50 41.1	-1.9
	0.7nm,0.7s,baz=257,slow=4.7,SNR=5.2						
YKB5	Yellowknife Ar	95.12	27	*e*P	P	07 50 41.1	-1.9
LTX	Lajitas	96.27	61	*e*P	P	07 50 50.8	+1.6
TXAR	Lajitas Array	96.27	61	P	P	07 50 50.8	+1.6
	0.5nm,0.9s,baz=249,slow=0.8,SNR=3.2						
CPUP	Villa Florida	124.53	133	PKP	PKPdf	07 56 20.3	+0.1
	2.8nm,0.8s,baz=137,slow=1.6,SNR=5.4						
BOSA	Boshof	124.81	224	PKP	PKiKP	07 56 21.5	+0.3
	2.4nm,0.5s,baz=166,slow=2.0,SNR=7.2						
TORD	Torodi Ar. Bea	163.68	279	PKP	PKPdf	07 57 23.9	-0.2
	1.5nm,1.1s,baz=116,slow=3.4,SNR=3.8						
TORD				PKPab	PKPab	07 58 16.5	+0.3
	0.7nm,1.0s,baz=72,slow=4.7,SNR=2.0						
TOA1	Torodi Ar. Sit	163.68	279	*e*PKPdf	PKPdf	07 57 23.9	-0.2
TOA1				*e*PKPab	PKPab	07 58 16.5	+0.3

IDC ***06*** *07:38:52.5±0.7, 11°.87S×165°.71E, h0^{km}, mb4.3/11, mb1 4.5/11, mb1mx4.1/42, mbtmp4.3/11, Error ellipse: s-maj=29.0km s-min=21.7km az=135.0*

NEIC ***06*** *07:38:54.0±0.4, 11°.76S×165°.69E, h10^{km}, mb4.5/6, Error ellipse: s-maj=12.6km s-min=8.2km az=89.0*

ISCJB ***06*** *07:38:56.2±0.4, 11°.93S±0°.06×165°.66E±0°.09, h33^{km}, mb4.3/17, Error ellipse: s-maj=13.2km s-min=8.7km az=177.5*

ISC 06 07:38:57.9±0.6**, 11°.85S**±0°.09×**165°.7E**±0°.1**, h35^{km}, n32, σ0^s.95**/35**, mb4.3**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	9.83	167	*e*Pn	Pn	07 41 18.5	+1.7
DZM	Mont Dzumac	10.19	176	*e*Pn	Pn	07 41 22.2	+0.4
ONTNC	Ouen Toro	10.42	176	*e*Pn	Pn	07 41 24.8	-0.1
ARMA	Armidale	22.61	213	*e*P	P	07 43 55.7	-0.1
	11nm,0.8s						
BKZ	Black Stump Fm	28.85	162	*e*P	P	07 44 51.4	-1.7
	11nm,1.1s						
WR1	Warramunga Arr	31.16	251	*e*P	P	07 45 14.6	+0.8
	5.5nm,0.9s						
WRA	Warramunga Arr	31.16	251	P	P	07 45 14.6	+0.8
	1.1nm,0.6s,baz=84,slow=9.0,SNR=3.8						
WRA				PcP	PcP	07 48 08.3	-0.1
	1.0nm,0.8s,baz=81,slow=2.9,SNR=4.4						
RPZ	Rata Peaks	32.08	173	*e*P	P	07 45 21.0	-0.6
RPZ				*e*P	P	07 45 21.6	0.0
RPZ	Rata Peaks	32.08	173	P	P	07 45 21.0	-0.6
	23nm,0.7s,baz=301,slow=2.9,SNR=9.7						
AS31	Alice Springs	32.38	244	*e*P	P	07 45 24.8	+0.3
	1.5nm,0.8s						
ASAR	Alice Springs	32.38	244	P	P	07 45 24.8	+0.3
	3.0nm,0.7s,baz=71,slow=9.7,SNR=5.4						
ASAR				PcP	PcP	07 48 11.1	-0.7
	1.6nm,0.7s,baz=91,slow=2.0,SNR=6.5						
CMAR	Chiang Mai Arr	72.38	294	P	P	07 50 22.5	+1.6
	1.6nm,0.7s,baz=128,slow=4.7,SNR=4.8						
SONA0	Songino Array	79.28	324	*e*P	P	07 50 59.3	-0.6
SONM	Songino Array	79.28	324	P	P	07 50 59.3	-0.6
	1.9nm,0.8s,baz=130,slow=5.9,SNR=4.2						
TLY	Talaya	82.76	326	*e*P	P	07 51 18.1	-0.2
	4.5nm,0.9s						
ILAR	Eielson Array	84.29	18	P	P	07 51 26.9	+1.1
	0.6nm,0.7s,baz=235,slow=5.7,SNR=4.4						
NV01	Mina Array Sit	86.59	50	*e*P	P	07 51 38.2	+0.1
NVAR	Mina Array Bea	86.59	50	P	P	07 51 39.3	+1.1
	0.7nm,0.7s,baz=235,slow=8.7,SNR=3.3						
MK01	Makanchi Array	94.05	317	*e*P	P	07 52 12.2	-0.5
MK31	Makanchi Array	94.07	317	*e*P	P	07 52 12.4	-0.4
	6.1nm,1.0s						
MK32	Makanchi Array	94.07	317	*e*P	P	07 52 12.6	-0.1
MKAR	Makanchi Array	94.07	317	*e*P	P	07 52 12.3	-0.4
	26nm,0.8s						
MKAR	Makanchi Array	94.07	317	P	P	07 52 12.6	-0.1
	4.3nm,0.7s,baz=83,slow=6.3,SNR=13						
ZALV	Zalesovo Beam	94.17	324	P	P	07 52 11.6	-1.3
	3.4nm,0.8s,baz=120,slow=5.3,SNR=5.2						
ZAA1	Zalesovo Array	94.17	324	*e*P	P	07 52 11.6	-1.3
YKA	Yellowknife Ar	95.72	27	P	P	07 52 20.3	+0.5
	0.1nm,0.4s,baz=256,slow=4.4,SNR=5.0						
YKB5	Yellowknife Ar	95.72	27	*e*P	P	07 52 19.9	+0.1
LTX	Lajitas	96.27	61	*e*P	P	07 52 23.6	+0.3
TXAR	Lajitas Array	96.27	61	P	P	07 52 23.6	+0.3
	0.3nm,0.9s,baz=212,slow=3.2,SNR=2.9						
ARA0	ARCESS Array S	117.10	345	*e*PKPdf	PKPdf	07 57 36.5	-2.2
ARCES	ARCESS Array B	117.10	345	PKP	PKPdf	07 57 36.5	-2.2
	2.5nm,0.9s,baz=46,slow=2.6,SNR=3.7						
BOSA	Boshof	124.49	223	PKP	PKPdf	07 57 53.8	-0.6
	1.8nm,0.6s,baz=114,slow=4.0,SNR=4.4						

ISCJB ***06*** *07:42:43.8±3.4, 10°.99S±0°.04×165°.45E±0°.04, h5^{km}±21^{km}, mb4.7/76, MS4.8/2, Error ellipse: s-maj=7.6km s-min=6.8km az=29.6*

IDC ***06*** *07:42:44.8±0.5, 10°.95S×165°.53E, h0^{km}, mb4.6/23, mb1 4.7/25, mb1mx4.6/42, mbtmp4.6/25, ML5.0/2, MS4.3/1, Ms1 4.3/1, ms1mx3.6/37, Error ellipse: s-maj=18.0km s-min=13.7km az=115.0*

NEIC ***06*** *07:42:46.1±0.2, 10°.95S×165°.50E, h10^{km}, mb4.8/52, Error ellipse: s-maj=5.5km s-min=4.2km az=129.0*

ISC 06 07:42:45.5±1.4**, 10°.95S**±0°.06×**165°.50E**±0°.07**, h6^{km}**±8^{km}**, n135, σ0^s.88**/144**, mb4.8**/76**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.67	285	*e*Pn	Pn	07 44 11.7	+1.3
HNR				*e*Pn	Pn	07 44 12.6	+2.2
HNR	Honiara	5.67	285	Pn	Pn	07 44 12.6	+2.2
	45nm,0.3s,baz=131,slow=1.9,SNR=6.5						
DZM	Mont Dzumac	11.09	175	*e*Pn	Pn	07 45 25.6	+0.7
DZM	Mont Dzumac	11.09	175	Pn	Pn	07 45 25.7	+0.9
	9.4nm,0.3s,baz=350,slow=15,SNR=21						
DZM				LR	LR	07 48 54.2	
	comp=Z,1µm,20.2s,baz=338,slow=33						
ONTNC	Ouen Toro	11.33	176	*e*Pn	Pn	07 45 29.4	+1.5
PINNC	Pines Island,	11.74	171	*e*Pn	Pn	07 45 33.6	-0.1
MSVF	Nonsavu	13.89	120	*e*Pn	Pn	07 46 04.8	+1.7
TARA	Tarawa	14.28	32	*e*Pn	Pn	07 46 08.3	-0.1
EIDS	Eidsvold	19.80	222	*e*P	Pn	07 47 18.2	-0.2
	19nm,0.8s						
MANU	Manus Island	20.06	295	*e*P	Pn	07 47 21.4	-0.1
	453nm,1.0s						
CTA	Charters Tower	20.63	242	P	Pn	07 47 27.9	-0.3
	34nm,0.9s,baz=73,slow=13,SNR=19						
CTAO	Charters Tower	20.63	242	*e*P	P	07 47 26.6	+0.6
	66nm,1.0s						
COEN	Coen	22.00	260	*e*P	P	07 47 41.8	+1.0
	62nm,1.0s						
MKAZ	Moumakai	27.45	163	P	P	07 48 33.1	+0.7
HAZ	Te Kaha	28.88	160	P	P	07 48 45.8	+0.8
URZ	Urewera	29.11	161	P	P	07 48 47.3	+0.2
	10nm,0.6s,baz=251,slow=3.1,SNR=11						
URZ	Urewera	29.11	161	P	P	07 48 47.5	+0.4
MWZ	Matawai	29.31	160	P	P	07 48 48.4	-0.6
MTHZ	Maungataniwha	29.57	162	P	P	07 48 52.1	+0.9
RAHZ	Arahi	29.70	162	P	P	07 48 52.9	+0.5
RIGZ	Rimuhau	29.73	160	P	P	07 48 52.7	+0.1
BKZ	Black Stump Fm	29.75	163	*e*P	P	07 48 53.6	+0.7
	24nm,0.5s						
BKZ	Black Stump Fm	29.75	163	P	P	07 48 53.4	+0.6
NMHZ	Naumai	29.78	162	P	P	07 48 54.2	+1.1
KWHZ	Kaweka Forest	29.97	163	P	P	07 48 55.5	+0.7
STKA	Stephens Creek	30.34	223	*e*P	P	07 48 57.1	-1.0
	2.7nm,0.8s						
STKA				PcP	PcP	07 51 58.9	+0.5
STKA	Stephens Creek	30.34	223	P	P	07 48 58.8	+0.7
	11nm,0.8s,baz=28,slow=10.0,SNR=16						
STKA				PcP	PcP	07 51 58.9	+0.5
	1.2nm,0.8s,baz=106,slow=5.7,SNR=3.8						
WRAB	Tennant Creek	31.28	250	*e*P	P	07 49 06.0	-0.6
	50nm,1.1s						
WB2	Warramunga Arr	31.28	250	*e*P	P	07 49 05.5	-1.1
WB2				*e*P	pP	07 49 06.4	-1.2
WR1	Warramunga Arr	31.29	250	*e*P	P	07 49 06.0	-0.7
	61nm,1.1s						
WR1				*e*PcP	PcP	07 52 01.8	+0.6
WRA	Warramunga Arr	31.29	250	P	P	07 49 06.0	-0.7
	20nm,0.9s,baz=82,slow=9.1,SNR=44						
WRA				PcP	PcP	07 52 01.8	+0.6
	4.8nm,0.9s,baz=72,slow=2.8,SNR=12						
TOO	Toolangi	32.03	211	*e*P	P	07 49 12.9	0.0
	12nm,0.9s						
AS01	Alice Springs	32.58	243	*e*P	P	07 49 16.3	-1.7
AS31	Alice Springs	32.62	243	*e*P	P	07 49 17.0	-1.4
	7.6nm,1.0s						
ASAR	Alice Springs	32.62	243	P	P	07 49 17.4	-0.9
	19nm,0.9s,baz=72,slow=9.4,SNR=53						
ASAR				PcP	PcP	07 52 05.0	+0.3
	3.8nm,0.9s,baz=76,slow=3.2,SNR=8.1						
BBOO	Buckleboo	34.72	227	*e*P	P	07 49 36.6	+0.1
	25nm,1.0s						
FITZ	Fitzroy Crossi	39.17	255	*e*P	P	07 50 13.7	-0.9
	18nm,1.1s						
FITZ				PcP	PcP	07 52 24.6	+0.4
FITZ	Fitzroy Crossi	39.17	255	P	P	07 50 13.7	-0.9
	12nm,1.0s,baz=90,slow=6.4,SNR=14						
FITZ				PcP	PcP	07 52 24.6	+0.4
	7.4nm,1.0s,baz=111,slow=5.1,SNR=4.0						
MBWA	Marble Bar	45.00	251	*e*P	P	07 51 02.0	-0.2
	19nm,1.0s						
MJAR	Matsushiro Arr	53.78	333	P	P	07 52 07.4	-1.5
	4.3nm,0.9s,baz=164,slow=7.0,SNR=7.5						
MAJO	Matsushiro	53.78	333	*e*P	P	07 52 07.4	-1.5
MAT	Matsushiro	53.78	333	P	P	07 52 08.6	-0.4
JNU	Nakatsue	54.87	324	*e*P	P	07 52 17.1	+0.1
	32nm,1.0s						
JNU	Nakatsue	54.87	324	P	P	07 52 17.1	+0.1
	10nm,0.7s,baz=81,slow=5.0,SNR=4.7						
ASAJ	Asahikawa	58.63	341	P	P	07 52 44.7	+1.2
	2.0nm,0.3s,baz=212,slow=12,SNR=7.8						
KSRS	Korea Array	59.67	326	P	P	07 52 51.6	+0.8
	2.4nm,0.9s,baz=123,slow=6.1,SNR=6.0						
KSAR	Wonju Array Be	59.68	326	P	P	07 52 51.6	+0.7
KS01	Wonju Array Si	59.70	326	*e*P	P	07 52 50.8	-0.2
NJ2	Nanjing	61.79	316	*e*P	P	07 53 05.3	-0.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.9s						
USRK	Ussuriysk Ar.	62.76	333	P	P	07 53 12.7	+1.1
	comp=Z,7.8nm,1.1s,baz=141,slow=6.4,SNR=8.1						
CN2	Changchun	65.54	329	*e*P	P	07 53 30.2	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IPM	Ipoh	65.97	280	*e*P	P	07 53 33.1	-0.2
	comp=Z,20nm,0.8s						
CASY	Casey	66.38	201	*e*P	P	07 53 32.6	-2.4
	comp=Z,15nm,1.0s						
KLR	Kul'dur	66.88	337	P	P	07 53 39.5	+1.1
	comp=Z,3.5nm,0.8s,baz=129,slow=1.8,SNR=5.8						
GYA	Guiyang	68.17	304	*e*P	P	07 53 48.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	69.89	312	P	P	07 53 57.9	+0.3
XAN				pP	pwP	07 54 10.4	+8.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC	Hu-ho-hao-te	71.61	320	*e*P	P	07 54 09.9	+1.8
HHC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CM01	Chiang Mai Arr	71.83	294	*e*P	P	07 54 09.2	-0.5
CMAR	Chiang Mai Arr	71.86	294	P	P	07 54 11.2	+1.4
	comp=Z,3.2nm,0.7s,baz=120,slow=4.8,SNR=12						
CD2	Chengdu	72.36	307	P	P	07 54 13.1	+0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
SEY	Seymchan	74.36	354	P	P	07 54 23.9	+0.2
	comp=Z,2.0nm,0.9s,baz=151,slow=5.4,SNR=4.0						
LZH	Lanzhou	74.52	312	*e*P	P	07 54 26.3	+0.8
LZH				pP	pwP	07 54 31.0	+0.7
LZH				sP	PcP	07 54 34.3	-5.7
LZH				PP	PP	07 57 21.7	+9.5
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=N,260nm,16.5s						
LZH				LR	LR		
	comp=E,280nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
GAMB	Gambell	76.52	10	*e*P	P	07 54 35.2	-0.8
	comp=Z,17nm,1.1s						
SVW2	Sparrevohn	78.10	18	*e*P	P	07 54 45.5	+0.4
	comp=Z,12nm,1.2s						
ANM	Nome	78.45	12	*e*P	P	07 54 46.7	-0.2
	comp=Z,6.4nm,1.2s						
SONA0	Songino Array	78.45	324	*e*P	P	07 54 48.2	+0.8
SONM	Songino Array	78.45	324	P	P	07 54 48.2	+0.8
	comp=Z,3.1nm,0.9s,baz=145,slow=7.3,SNR=15						
SONA1	Songino Array	78.45	324	*e*P	P	07 54 47.7	+0.2
RSO	Redoubt South	78.52	20	*e*P	P	07 54 47.1	-0.5
BILL	Bilibino	78.79	0	*e*P	P	07 54 48.8	0.0
	comp=Z,13nm,1.0s						
GTA	Gaotai	78.82	314	P	P	07 54 50.3	+0.6
GTA				pP	pwP	07 54 55.6	+1.1
GTA				sP	PcP	07 54 58.4	-0.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				LR	LR		
	comp=N,380nm,17.8s						
GTA				LR	LR		
	comp=E,470nm,17.1s						
GTA				LR	LR		
	comp=Z,550nm,18.1s						
QSPA	South Pole Qui	79.05	180	*e*P	P	07 54 49.7	-0.8
	comp=Z,10nm,0.9s						
DIV	Divide	81.41	22	*e*P	P	07 55 03.0	-0.2
	comp=Z,13nm,0.9s						
KLU	Klutina	81.60	21	*e*P	P	07 55 04.0	-0.2
	comp=Z,10nm,1.0s						
RND	Reindeer	81.93	19	*e*P	P	07 55 05.6	-0.2
	comp=Z,9.1nm,1.0s						
MCK	McKinley	82.13	19	*e*P	P	07 55 07.0	+0.1
	comp=Z,12nm,1.1s						
IM3	Indian Mountai	82.40	16	*e*P	P	07 55 08.4	+0.3
HARP	HAARP	82.48	21	*e*P	P	07 55 09.5	+0.8
	comp=Z,16nm,1.0s						
MLY	Manley	82.52	17	*e*P	P	07 55 09.3	+0.4
	comp=Z,4.6nm,1.0s						
MDM	Murphy Dome	83.22	18	*e*P	P	07 55 12.9	+0.4
	comp=Z,5.8nm,0.9s						
HDA	Harding Lake	83.23	19	*e*P	P	07 55 12.4	-0.1
	comp=Z,15nm,0.9s						
COLA	College	83.27	18	*e*P	P	07 55 12.8	+0.1
	comp=Z,12nm,1.0s						
RIDG	Independ'e Rid	83.47	20	*e*P	P	07 55 13.9	+0.1
	comp=Z,17nm,1.2s						
ILAR	Eielson Array	83.50	19	P	P	07 55 13.8	0.0
	comp=Z,3.4nm,0.6s,baz=239,slow=5.1,SNR=39						
ILB	Eielson Array	83.50	19	*e*P	P	07 55 13.5	-0.4
	comp=Z,4.1nm,0.8s						
IL1	Eielson Array	83.50	19	*e*P	P	07 55 13.7	-0.2
SCRK	Sand Creek	83.91	20	*e*P	P	07 55 16.0	-0.2
	comp=Z,17nm,1.2s						
ORV	Oroville	84.13	48	*e*P	P	07 55 17.7	0.0
	comp=Z,3.6nm,1.0s						
AFDM	Forest Hills D	84.32	49	*e*P	P	07 55 18.9	+0.2
	comp=Z,6.1nm,1.1s						
CMB	Columbia Colle	84.46	50	*e*P	P	07 55 19.6	+0.1
	comp=Z,2.8nm,0.9s						
BEKR	Beckworth	85.06	48	*e*P	P	07 55 22.5	-0.1
	comp=Z,4.9nm,0.9s						
MDPB	Devils Postpil	85.33	50	*e*P	P	07 55 24.1	+0.1
	comp=Z,6.0nm,1.0s						
DAWY	Dawson	85.56	21	*e*P	P	07 55 25.0	+0.6
	comp=Z,5.8nm,0.9s						
TIXI	Tiksi	85.96	349	P	P	07 55 25.6	-0.5
	comp=Z,1.8nm,0.3s,baz=133,slow=9.5,SNR=3.3						
NVAR	Mina Array Bea	86.15	50	P	P	07 55 28.1	0.0
	comp=Z,2.7nm,0.8s,baz=236,slow=6.4,SNR=11						
NV01	Mina Array Sit	86.15	50	*e*P	P	07 55 27.9	-0.2
NV11	Mina Array Sit	86.26	50	*e*P	P	07 55 28.8	+0.3
	comp=Z,0.3nm,1.0s						
KVN	Kaiserville	86.48	49	*e*P	P	07 55 29.4	-0.3
	comp=Z,5.2nm,1.2s						
I07A	Izee	87.00	44	*e*P	P	07 55 31.9	-0.1
	comp=Z,4.3nm,0.8s						
WMQ	Urumqi	88.86	315	*e*P	P	07 55 42.1	+1.2
WMQ				pP	pwP	07 55 44.4	-1.3
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
LCMT	Little Creek M	89.64	52	*e*P	P	07 55 44.6	-0.2
	comp=Z,4.8nm,1.2s						
CCUT	Cedar City	89.67	52	*e*P	P	07 55 44.0	-1.1
	comp=Z,3.7nm,1.1s						
U15A	North Rim	90.24	53	*e*P	P	07 55 47.6	-0.2
	comp=Z,5.7nm,1.0s						
HLID	Hailey	90.38	46	*e*P	P	07 55 46.7	-1.5
	comp=Z,2.3nm,0.9s						
X16A	Lo Mia Camp, P	90.46	55	*e*P	P	07 55 49.8	+1.1
	comp=Z,2.5nm,0.9s						
MTPU	Mount Pierson	90.69	51	*e*P	P	07 55 49.1	-0.9
	comp=Z,3.6nm,1.0s						
MSU	Marysvale	90.81	51	*e*P	P	07 55 50.5	+0.1
HVU	Hansel Valley	91.12	48	*e*P	P	07 55 51.8	+0.2
	comp=Z,2.6nm,0.8s						
DLMT	Dillon	92.08	44	*e*P	P	07 55 56.4	+0.4
	comp=Z,6.6nm,1.1s						
HRY	Holter Researc	92.91	43	*e*P	P	07 55 58.3	-1.4
MK01	Makanchi Array	93.28	317	*e*P	P	07 56 01.0	-0.3
MK31	Makanchi Array	93.29	317	*e*P	P	07 56 00.7	-0.7
	comp=Z,2.6nm,1.0s						
MK32	Makanchi Array	93.29	317	*e*P	P	07 56 01.5	+0.1
MKAR	Makanchi Array	93.29	317	*e*P	P	07 56 01.4	+0.1
	comp=Z,17nm,0.9s						
MKAR	Makanchi Array	93.29	317	P	P	07 56 01.5	+0.1
	comp=Z,2.2nm,0.8s,baz=93,slow=6.4,SNR=13						
ZALV	Zalesovo Beam	93.34	324	*e*P	P	07 55 60.0	-1.4
ZALV	Zalesovo Beam	93.34	324	P	P	07 55 59.8	-1.5
	comp=Z,1.5nm,0.7s,baz=101,slow=4.7,SNR=7.1						
ZAA1	Zalesovo Array	93.34	324	*e*P	P	07 55 59.8	-1.6
MAKZ	Makanchi	93.51	317	*e*P	P	07 56 01.8	-0.6
	comp=Z,3.7nm,1.1s						
PDAR	Pinedale Array	93.67	47	P	P	07 56 02.4	-1.1
	comp=Z,0.7nm,0.8s,baz=288,slow=1.4,SNR=4.8						
YKA	Yellowknife Ar	95.00	27	P	P	07 56 07.1	-1.6
	comp=Z,0.7nm,0.6s,baz=259,slow=4.5,SNR=16						
YKB5	Yellowknife Ar	95.00	27	*e*P	P	07 56 06.9	-1.8
LTX	Lajitas	95.99	61	*e*P	P	07 56 15.8	+1.6
TXAR	Lajitas Array	95.99	61	P	P	07 56 15.8	+1.6
	comp=Z,0.2nm,0.7s,baz=223,slow=6.1,SNR=3.4						
ARA0	ARCESS Array S	116.19	345	*e*PKPdf	PKiKP	08 01 28.6	-0.7
ARCES	ARCESS Array B	116.19	345	PKP	PKiKP	08 01 28.6	-0.7
	comp=Z,0.8nm,0.6s,baz=98,slow=2.7,SNR=4.1						
BOSA	Boshof	125.02	223	PKP	PKPdf	08 01 47.8	+0.1
	comp=Z,4.9nm,0.7s,baz=131,slow=2.9,SNR=8.5						
AKASG	Malin Array Be	126.66	327	PKP	PKPdf	08 01 49.1	-0.8
	comp=Z,0.2nm,0.4s,baz=59,slow=2.2,SNR=4.6						
KMBO	Kilima Mbogo	127.17	260	PKP	PKiKP	08 01 53.4	+0.6
	comp=Z,1.5nm,0.3s,baz=14,slow=4.2,SNR=3.1						
GERES	GERESS Array B	135.52	334	PKP	PKiKP	08 02 08.5	+0.1
	comp=Z,0.5nm,0.7s,baz=62,slow=2.3,SNR=3.4						
KEST	Kesra	147.20	323	PKPbc	PKPbc	08 02 30.9	+0.5
	comp=Z,10nm,1.0s,baz=82,slow=4.0,SNR=4.4						
ESDC	Sonseca Array	149.90	344	PKPbc	PKPbc	08 02 36.9	-0.3
	comp=Z,0.3nm,0.4s,baz=29,slow=2.9,SNR=4.3						
TOA0	Torodi Ar. Sit	164.01	279	*e*PKPdf	PKPdf	08 02 48.0	-2.9
TORD	Torodi Ar. Bea	164.01	279	PKP	PKPdf	08 02 51.0	+0.1
	comp=Z,1.4nm,1.0s,baz=346,slow=3.2,SNR=6.1						
TORD				PKPab	PKPab	08 03 42.9	-1.1
	comp=Z,2.5nm,1.0s,baz=38,slow=3.0,SNR=7.4						
TOA1	Torodi Ar. Sit	164.02	279	*e*PKPdf	PKPdf	08 02 51.0	+0.1
TOA1				*e*PKPab	PKPab	08 03 42.9	-1.1

DDA ***06*** *07:44:51.8, 42°.22N×40°.94E, h7^{km}±4^{km}, ML3.1*

TIF ***06*** *07:44:51.2, 42°.47N×41°.40E, h24^{km}±1^{km}*

MOS ***06*** *07:44:52.5±0.0, 42°.57N×41°.11E, h16^{km}, MPVA3.8*

NORS ***06*** *07:44:55.4±0.0, 42°.57N×41°.56E, h1^{km}, MPVA3.4*

ISC 06 07:44:52.3±1.2**, 42°.38N**±0°.02×**41°.25E**±0°.04**, h17^{km}**±10^{km}**, n18, σ1^s.05**/38**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.84	157	P	Pn	07 45 08.8	-0.6
BATM				S	Sn	07 45 21.0	-0.3
DOMR	Dombai	0.95	17	*i* Pg	Pb	07 45 09.9	-0.6
DOMR				*i* Sg	Sb	07 45 22.4	-0.5
DBOC	Borcka	1.08	163	*i* P	Pg	07 45 13.2	+0.1
DBOC				*i* S	Sn	07 45 28.4	+1.2
ARXR	Arkhyz	1.19	1	*i* Pg	Pn	07 45 14.0	-0.2
ARXR				*i* Sg	Sb	07 45 28.7	-0.9
ARTV	Artvin	1.29	157	*i* P	Pg	07 45 17.0	-0.3
ARTV				*i* S	Sg	07 45 34.0	-0.2
NEY	Neytrino	1.39	51	*i* Pg	Pg	07 45 18.9	-0.2
NEY				*e*Sg	Sg	07 45 38.3	+1.1
DAGI	Agillar	1.39	159	*i* P	Pb	07 45 17.6	-0.3
DAGI				*i* S	Sg	07 45 36.1	-1.1
DAGI				IAML_P			
	comp=Z,709nm,0.1s						
DBAD	Bademkaya	1.40	166	*i* P	Pb	07 45 17.3	-0.7
DBAD				*i* S	Sg	07 45 36.5	-0.9
DBAD				IAML_P			
	comp=Z,1µm,0.1s						
RPOR	Krasnaya Polya	1.51	332	*i* Pg	Pn	07 45 17.9	-0.7
RPOR				*i* Sg	Sn	07 45 35.8	-2.0
DDEM	Demirkent	1.53	166	*i* P	Pb	07 45 19.9	-0.3
DDEM				*i* S	Sg	07 45 40.5	-1.1
DDEM				IAML_P			
	comp=Z,2µm,0.2s						
SOC	Sochi	1.65	317	*e*Pg	Pn	07 45 20.2	-0.3
SOC				*i* Sg	Sn	07 45 39.6	-1.7
SHA1	Shidzhatmaz	1.71	37	*e*Pg	Pb	07 45 23.9	+0.6
SHA1				*e*Pg	Pg	07 45 24.8	-0.3
SHA1				*e*Sg	Sg	07 45 46.6	-0.8
SHA1				*e*Sg	Sb	07 45 47.4	+2.7
DIGR	Digorskoe uzhe	1.80	72	*e*Pg	Pg	07 45 26.2	-0.6
DIGR				*e*Sg	Sg	07 45 50.2	0.0
KIV0	Kislovodsk Arr	1.90	33	*e*Pg	Pg	07 45 30.7	+1.9
KIV0				*e*Sg	Sb	07 45 51.3	+1.2
ZEI	Tsey	2.00	77	*e*Pg	Pg	07 45 31.5	+0.8
ZEI				*e*Sg	Sg	07 45 57.0	+0.3
LZRR	Lazarevskoye	2.07	319	*i* Pg	Pn	07 45 27.2	+0.9
LZRR				*i* Sg	Sn	07 45 52.0	+0.3
BAYB	BAYBURT	2.25	200	*i* P	Pg	07 45 37.6	+2.2
BAYB				*i* S	Sn	07 45 57.2	+0.9
BAYB				IAML_P			
	comp=Z,136nm,0.2s						
LACR	Lac	2.29	78	*e*Pn	Pg	07 45 35.9	-0.4
LACR				*e*Sn	Sg	07 46 05.7	-0.3

MEX 06 07:45:33.8±0.7**, 16°.05N**×**98°.69W, h2^{km}, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.64	58	*e*P	Pg	07 45 45.1	-0.9
PNIG				*i* S	Sg	07 45 55.0	+0.8
CAIG	El Cayaco	1.81	303	*e*P	Pn	07 46 02.0	-4.0
VHO	Vista Hermosa	2.13	61	*e*P	Pn	07 46 02.3	-8.3
HUIG	Huatulco	2.50	96	*e*P	Pn	07 46 15.6	+0.1

IDC 06 07:46:43.5±1.6**, 10°.96S**×**165°.18E, h0^{km}, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.7**/45**, mbtmp3.9**/5**, ML4.0**/1**, Error ellipse: s-maj=51.3km s-min=30.6km az=123.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.12	174	Pn	Pn	07 49 24.3	+0.5
	1.2nm,0.3s,baz=48,slow=12,SNR=6.9						
WRA	Warramunga Arr	30.99	249	P	P	07 53 02.3	-0.6
	1.1nm,0.7s,baz=80,slow=8.5,SNR=4.0						
ASAR	Alice Springs	32.34	243	P	P	07 53 14.8	+0.1
	0.8nm,0.6s,baz=69,slow=9.8,SNR=4.3						
ILAR	Eielson Array	83.61	19	P	P	07 59 12.8	-0.6
	0.3nm,0.5s,baz=232,slow=4.5,SNR=6.0						
MKAR	Makanchi Array	93.08	317	P	P	08 00 00.4	+1.0
	0.3nm,0.7s,baz=99,slow=7.6,SNR=3.0						

IDC 06 07:47:29.1±1.7**, 11°.26S**×**164°.92E, h0^{km}, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/44**, mbtmp3.7**/4**, ML3.5**/1**, Error ellipse: s-maj=51.5km s-min=31.4km az=128.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.85	172	Pn	Pn	07 50 05.4	-0.5
	0.4nm,0.3s,baz=83,slow=17,SNR=4.1						
H11S2	WAKE ISLAND Hy	29.61	3	T	T	08 24 17.7	
	baz=184,slow=76,SNR=5.1						
H11S3	WAKE ISLAND Hy	29.62	3	T	T	08 24 16.7	
	baz=184,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.63	3	T	T	08 24 25.3	
	baz=184,slow=76,SNR=15						
WRA	Warramunga Arr	30.65	250	P	P	07 53 46.2	+0.7
	0.8nm,0.9s,baz=81,slow=8.9,SNR=3.8						
H11N1	WAKE ISLAND Hy	30.84	4	T	T	08 25 47.8	
	baz=182,slow=76,SNR=5.4						
H11N3	WAKE ISLAND Hy	30.84	4	T	T	08 25 48.0	
	baz=182,slow=76,SNR=3.3						

H11N2	**WAKE ISLAND Hy**	30.86	4	T	T	08 25 49.2	
	baz=182,slow=76,SNR=5.9						
ASAR	**Alice Springs**	31.97	243	P	P	07 53 56.4	-0.8
	0.8nm,0.6s,baz=64,slow=9.8,SNR=4.6						
ILAR	**Eielson Array**	83.97	19	P	P	08 00 00.9	0.0
	0.3nm,0.7s,baz=230,slow=5.3,SNR=3.0						

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*IDC **06** 07:47:49.0±1.0, 10°.64S×165°.49E, h0^{km}, mb4.0/10, mb1 4.2/12, mb1mx4.0/45, mbtmp4.1/12, ML4.6/2, Error ellipse: s-maj=32.4km s-min=20.9km az=138.0*

*NEIC **06** 07:47:50.9±0.3, 10°.58S×165°.42E, h10^{km}, mb4.2/3, Error ellipse: s-maj=9.3km s-min=7.3km az=96.0*

*ISCJB **06** 07:47:52.0±0.4, 10°.70S±0°.07×165°.40E±0°.08, h31^{km}, mb4.0/12, Error ellipse: s-maj=11.8km s-min=9.3km az=2.9*

ISC 06 07:47:53.9±0.6**, 10°.6S**±0°.1×**165°.4E**±0°.1**, h31**^{km}**, n25, σ0^{s}.75**/26**, mb4.0**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.49	282	*e*Pn	Pn	07 49 13.3	-0.4
HNR				*e*Pn	Pn	07 49 14.2	+0.6
HNR	**Honiara**	5.49	282	Pn	Pn	07 49 13.3	-0.4
	64nm,0.3s,baz=138,slow=8.9,SNR=7.4						
DZM	**Mont Dzumac**	11.42	175	Pn	Pn	07 50 35.1	+0.1
	1.3nm,0.3s,baz=233,slow=20,SNR=4.7						
ONTNC	**Ouen Toro**	11.65	175	*e*Pn	Pn	07 50 37.9	-0.3
PINNC	**Pines Island,**	12.07	171	*e*Pn	Pn	07 50 44.7	+0.8
COEN	**Coen**	21.95	259	*e*P	P	07 52 45.1	-0.2
	4.6nm,1.0s						
WR1	**Warramunga Arr**	31.30	249	*e*P	P	07 54 12.0	+0.5
	4.5nm,1.1s						
WRA	**Warramunga Arr**	31.30	249	P	P	07 54 12.0	+0.5
	1.2nm,0.9s,baz=80,slow=8.6,SNR=3.1						
ASAR	**Alice Springs**	32.67	243	P	P	07 54 23.4	-0.1
	0.3nm,0.6s,baz=72,slow=9.3,SNR=3.0						
LPH	**Laupahoehoe**	49.15	52	*e*P	P	07 56 40.1	+1.0
PETK	**Petropavlovsk-**	63.83	355	P	P	07 58 24.2	+1.1
	3.4nm,0.8s,baz=166,slow=6.7,SNR=2.9						
PEA1	**Petropavlovsk-**	63.83	355	*e*P	P	07 58 24.2	+1.0
KLR	**Kul'dur**	66.54	337	P	P	07 58 40.8	-0.1
	1.8nm,1.0s,baz=136,slow=5.4,SNR=4.8						
SONA0	**Songino Array**	78.13	324	*e*P	P	07 59 51.0	+0.8
SONM	**Songino Array**	78.13	324	P	P	07 59 51.0	+0.8
	1.0nm,0.7s,baz=128,slow=7.1,SNR=7.1						
SONA1	**Songino Array**	78.13	324	*e*P	P	07 59 50.8	+0.6
ILAR	**Eielson Array**	83.24	19	P	P	08 00 17.4	+0.4
	0.9nm,0.5s,baz=240,slow=5.0,SNR=19						
ILB	**Eielson Array**	83.24	19	*e*P	P	08 00 17.4	+0.4
	2.0nm,1.1s						
NV01	**Mina Array Sit**	86.03	50	*e*P	P	08 00 30.9	-1.1
NVAR	**Mina Array Bea**	86.03	50	P	P	08 00 30.9	-1.1
	0.9nm,0.8s,baz=238,slow=8.3,SNR=4.9						
MK32	**Makanchi Array**	92.98	317	*e*P	P	08 01 03.5	-0.9
MKAR	**Makanchi Array**	92.98	317	P	P	08 01 03.5	-0.9
	0.6nm,0.8s,baz=92,slow=4.0,SNR=4.3						
PDAR	**Pinedale Array**	93.53	47	P	P	08 01 06.6	-0.7
	0.5nm,0.9s,baz=291,slow=2.8,SNR=3.3						
YKA	**Yellowknife Ar**	94.77	27	P	P	08 01 10.8	-1.3
	0.4nm,0.8s,baz=255,slow=4.5,SNR=5.3						
KEST	**Kesra**	146.88	323	PKPbc	PKPbc	08 07 33.6	-0.2
	5.2nm,0.8s,baz=12,slow=9.3,SNR=3.5						

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*IDC **06** 07:48:39.5±1.2, 11°.30S×164°.61E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/42, mbtmp3.9/7, ML3.7/1, Error ellipse: s-maj=43.2km s-min=24.4km az=133.0*

*ISCJB **06** 07:48:42.8±0.9, 11°.5S±0°.1×164°.6E±0°.2, h33^{km}, mb3.8/6, Error ellipse: s-maj=24.9km s-min=18.9km az=17.2*

ISC 06 07:48:44.6±1.0**, 11°.4S**±0°.1×**164°.7E**±0°.2**, h35**^{km}**, n7, σ0^{s}.69**/7**, mb3.9**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	10.74	171	Pn	Pn	07 51 15.9	-0.3
	0.6nm,0.3s,baz=143,slow=20,SNR=2.1						
STKA	**Stephens Creek**	29.45	223	P	P	07 54 45.6	+0.4
	1.8nm,0.7s,baz=96,slow=9.2,SNR=3.0						
WRA	**Warramunga Arr**	30.35	250	P	P	07 54 53.9	+0.5
	0.9nm,0.5s,baz=80,slow=9.2,SNR=5.4						
ASAR	**Alice Springs**	31.67	243	P	P	07 55 04.9	-0.1
	0.7nm,0.6s,baz=66,slow=10.0,SNR=2.9						
ILAR	**Eielson Array**	84.20	19	P	P	08 01 12.5	+0.5
	0.5nm,1.0s,baz=226,slow=6.1,SNR=2.3						
MKAR	**Makanchi Array**	93.05	317	P	P	08 01 53.7	-1.1
	0.5nm,0.8s,baz=117,slow=5.0,SNR=2.8						
TXAR	**Lajitas Array**	96.94	62	P	P	08 02 13.3	+0.2
	0.4nm,0.9s,baz=197,slow=2.8,SNR=2.9						

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*IDC **06** 07:49:33.2±1.2, 10°.76S×165°.33E, h0^{km}, mb4.1/9, mb1 4.3/11, mb1mx4.0/44, mbtmp4.2/11, ML4.9/2, Error ellipse: s-maj=32.7km s-min=19.6km az=122.0*

*NEIC **06** 07:49:34.8±0.6, 10°.75S×165°.32E, h10^{km}, mb4.2/3, Error ellipse: s-maj=13.1km s-min=9.0km az=75.0*

*ISCJB **06** 07:49:35.3±0.6, 10°.86S±0°.07×165°.38E±0°.07, h30^{km}, mb4.1/11, Error ellipse: s-maj=11.9km s-min=8.2km az=140.5*

ISC 06 07:49:37.6±0.8**, 10°.79S**±0°.10×**165°.40E**±0°.09**, h30**^{km}**, n27, σ1^{s}.19**/24**, mb4.0**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.54	284	*e*Pn	Pn	07 50 57.7	-0.3
HNR				*e*Pn	Pn	07 50 57.8	-0.3
HNR				*e*Sn	Sn	07 52 02.6	+1.8
HNR	**Honiara**	5.54	284	Pn	Pn	07 50 57.7	-0.3
	92nm,0.3s,baz=138,slow=5.9,SNR=7.1						
HNR				Sn	Sn	07 52 02.6	+1.8
	22nm,0.3s,baz=90,slow=20,SNR=2.4						
DZM	**Mont Dzumac**	11.26	175	*e*Pn	Pn	07 52 16.5	-0.1
DZM	**Mont Dzumac**	11.26	175	Pn	Pn	07 52 16.4	-0.2
	3.3nm,0.3s,baz=9.9,slow=13,SNR=6.7						
ONTNC	**Ouen Toro**	11.49	175	*e*Pn	Pn	07 52 19.6	-0.1
PINNC	**Pines Island,**	11.91	171	*e*Pn	Pn	07 52 25.6	+0.1
CTA	**Charters Tower**	20.62	241	P	P	07 54 14.7	+0.1
	3.7nm,0.6s,baz=70,slow=10,SNR=5.2						
CTAO	**Charters Tower**	20.62	241	*e*P	P	07 54 14.0	-0.6
	13nm,1.1s						
COEN	**Coen**	21.93	259	*e*P	P	07 54 27.9	-0.9
	4.8nm,0.9s						
H11S2	**WAKE ISLAND Hy**	29.13	3	T	T	08 26 09.1	
	baz=184						
H11S3	**WAKE ISLAND Hy**	29.13	3	T	T	08 26 06.2	
	baz=184						
H11S1	**WAKE ISLAND Hy**	29.14	3	T	T	08 26 10.8	
	baz=184						
BKZ	**Black Stump Fm**	29.94	163	*e*P	P	07 55 44.4	+1.4
	11nm,0.6s						
H11N1	**WAKE ISLAND Hy**	30.35	3	T	T	08 27 37.0	
	baz=187						
H11N3	**WAKE ISLAND Hy**	30.36	3	T	T	08 27 40.4	
	baz=187						
H11N2	**WAKE ISLAND Hy**	30.37	3	T	T	08 27 37.3	
	baz=187						
STKA	**Stephens Creek**	30.39	223	P	P	07 55 48.6	+1.4
	1.1nm,0.5s,baz=23,slow=13,SNR=2.5						
WR1	**Warramunga Arr**	31.25	249	*e*P	P	07 55 53.3	-1.6
	5.5nm,1.1s						
WRA	**Warramunga Arr**	31.25	249	P	P	07 55 53.3	-1.6
	1.0nm,0.9s,baz=80,slow=8.7,SNR=3.8						
ASAR	**Alice Springs**	32.60	243	P	P	07 56 04.8	-2.0
	1.2nm,0.7s,baz=64,slow=10.0,SNR=5.1						
PETK	**Petropavlovsk-**	63.99	355	P	P	08 00 08.5	+0.6
	4.7nm,0.9s,baz=153,slow=11,SNR=3.1						
PEA1	**Petropavlovsk-**	63.99	355	*e*P	P	08 00 08.6	+0.6
KLR	**Kul'dur**	66.69	337	P	P	08 00 26.0	+0.5
	0.9nm,0.6s,baz=146,slow=14,SNR=4.6						
CMAR	**Chiang Mai Arr**	71.70	294	P	P	08 00 57.1	-0.2
	0.6nm,0.3s,baz=123,slow=6.6,SNR=4.9						
ILAR	**Eielson Array**	83.38	19	P	P	08 02 02.1	+0.6
	0.8nm,0.7s,baz=236,slow=5.5,SNR=6.8						
MK32	**Makanchi Array**	93.11	317	*e*P	P	08 02 46.9	-1.9
MKAR	**Makanchi Array**	93.11	317	P	P	08 02 46.9	-1.9
	0.8nm,0.8s,baz=87,slow=7.2,SNR=4.6						

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*ISCJB **06** 07:50:14.1±0.6, 11°.09S±0°.10×164°.7E±0°.1, h31^{km}, mb4.2/11, Error ellipse: s-maj=19.4km s-min=13.1km az=22.2*

*IDC **06** 07:50:15.9±0.8, 11°.08S×164°.78E, h31^{km}±4^{km}, mb4.0/11, mb1 4.2/13, mb1mx4.0/42, mbtmp4.2/13, ML3.9/2, Error ellipse: s-maj=29.0km s-min=15.2km az=137.0*

ISC 06 07:50:16.3±0.6**, 11°.0S**±0°.1×**164°.8E**±0°.1**, h31**^{km}**, n13, σ1^{s}.02**/21**, mb4.3**/11**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	11.09	172	Pn	Pn	07 52 53.1	+0.2
	0.7nm,0.3s,baz=4.8,slow=16,SNR=3.3						
CTA	**Charters Tower**	19.96	241	P	P	07 54 47.0	+0.8
	0.3nm,0.3s,baz=72,slow=12,SNR=11						
WRA	**Warramunga Arr**	30.59	249	P	P	07 56 27.0	-0.7
	2.9nm,0.8s,baz=77,slow=9.2,SNR=8.3						
WRA				pP	pP	07 56 36.3	+0.7
	1.9nm,0.6s,baz=80,slow=9.3,SNR=4.6						
ASAR	**Alice Springs**	31.95	243	P	P	07 56 37.9	-1.8
	4.0nm,0.8s,baz=73,slow=9.6,SNR=10						
ASAR				pP	pP	07 56 48.3	+0.8
	2.2nm,0.5s,baz=62,slow=10,SNR=4.4						
USRK	**Ussuriysk Ar.**	62.52	334	P	P	08 00 37.4	+0.5
	1.9nm,0.8s,baz=96,slow=12,SNR=5.5						
PETK	**Petropavlovsk-**	64.17	355	P	P	08 00 47.5	-0.3
	4.3nm,0.9s,baz=162,slow=5.2,SNR=2.7						
KLR	**Kul'dur**	66.67	337	P	P	08 01 04.1	+0.1
	2.0nm,0.8s,baz=131,slow=8.5,SNR=4.8						
SONM	**Songino Array**	78.10	324	P	P	08 02 12.0	-0.4
	1.5nm,0.9s,baz=134,slow=6.4,SNR=6.2						
SONM				pP	PcP	08 02 22.6	+0.7
	1.4nm,0.7s,baz=144,slow=4.7,SNR=5.4						
ILAR	**Eielson Array**	83.81	19	P	P	08 02 42.5	+0.2
	1.8nm,0.9s,baz=230,slow=6.1,SNR=6.5						
ILAR				pP	pP	08 02 52.5	+2.1
	2.7nm,0.9s,baz=228,slow=6.2,SNR=8.0						
NVAR	**Mina Array Bea**	86.75	50	P	P	08 02 58.3	+0.4
	0.8nm,0.7s,baz=232,slow=6.7,SNR=5.1						
NVAR				pP	sP	08 03 08.0	-0.8
	1.2nm,0.8s,baz=244,slow=7.1,SNR=4.0						
MKAR	**Makanchi Array**	92.86	317	P	P	08 03 25.5	-0.7
	1.5nm,0.8s,baz=101,slow=6.3,SNR=7.5						
MKAR				pP	pP	08 03 35.5	+1.2
	1.3nm,0.7s,baz=96,slow=6.6,SNR=5.7						
PDAR	**Pinedale Array**	94.25	47	P	P	08 03 31.9	-1.0
	0.4nm,0.8s,baz=274,slow=2.4,SNR=2.5						
PDAR				pP	pP	08 03 42.2	+1.2
	0.8nm,0.9s,baz=232,slow=1.7,SNR=3.3						
YKA	**Yellowknife Ar**	95.41	27	P	P	08 03 35.8	-1.6
	0.3nm,0.8s,baz=261,slow=4.4,SNR=4.8						
YKA				pP	pP	08 03 45.8	+0.2
	0.5nm,0.9s,baz=254,slow=4.8,SNR=4.2						

IDC 06 07:52:07.0±1.9**, 10°.74S**×**166°.49E, h0**^{km}**, mb4.1**/5**, mb1 4.4**/5**, mb1mx3.9**/41**, mbtmp4.1**/5**, Error ellipse: s-maj=96.7km s-min=27.0km az=145.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	32.28	250	P	P	07 58 38.0	+0.2
	1.9nm,0.7s,baz=81,slow=9.0,SNR=6.4						
ASAR	**Alice Springs**	33.59	243	P	P	07 58 48.9	-0.4
	1.8nm,0.9s,baz=71,slow=9.0,SNR=4.0						
ILAR	**Eielson Array**	82.99	18	P	P	08 04 33.6	-0.2
	1.3nm,0.8s,baz=231,slow=5.7,SNR=2.9						
NVAR	**Mina Array Bea**	85.26	50	P	P	08 04 46.4	+0.2
	1.7nm,0.9s,baz=219,slow=7.2,SNR=6.7						
MKAR	**Makanchi Array**	93.80	317	P	P	08 05 26.2	0.0
	0.9nm,1.1s,baz=91,slow=6.2,SNR=2.6						

MEX 06 07:53:09.8±1.9**, 15°.23N**×**96°.08W, h1**^{km}**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.54	357	*i* P	Pg	07 53 19.2	-0.9
HUIG				*i* S	Sg	07 53 27.9	+0.8
VHO	**Vista Hermosa**	1.94	341	*e*P	Pn	07 53 42.0	-2.1
VHO				*e*S	Sn	07 54 06.7	-2.5
PNIG	**Pinotepa**	2.29	301	*e*P	Pn	07 53 45.4	-3.3
PNIG				*i* S	Sn	07 54 11.6	-6.0

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*IDC **06** 07:55:59.2±1.7, 10°.76S×164°.65E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/38, mbtmp3.9/6, ML4.2/1, Error ellipse: s-maj=50.7km s-min=28.9km az=120.0*

*ISCJB **06** 07:56:01.4±1.2, 11°.0S±0°.1×164°.9E±0°.2, h29^{km}, mb3.7/5, Error ellipse: s-maj=27.1km s-min=20.0km az=4.5*

ISC 06 07:56:03.2±1.3**, 10°.9S**±0°.1×**164°.8E**±0°.2**, h29**^{km}**, n7, σ1^{s}.30**/7**, mb3.6**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	11.22	172	Pn	Pn	07 58 41.4	-0.5
	1.5nm,0.3s,baz=287,slow=6.7,SNR=3.7						
CTA	**Charters Tower**	20.07	241	P	Pn	08 00 36.6	+0.2
	0.3nm,0.3s,baz=63,slow=10,SNR=3.1						
STKA	**Stephens Creek**	29.93	222	P	P	08 02 10.8	+1.9
	0.7nm,0.4s,baz=49,slow=8.1,SNR=3.2						
WRA	**Warramunga Arr**	30.68	249	P	P	08 02 14.6	-1.1
	0.4nm,0.5s,baz=78,slow=9.1,SNR=5.2						
ASAR	**Alice Springs**	32.05	243	P	P	08 02 26.4	-1.3
	0.6nm,0.7s,baz=67,slow=10,SNR=7.1						
ILAR	**Eielson Array**	83.66	19	P	P	08 08 29.0	+0.2
	0.3nm,0.6s,baz=231,slow=4.3,SNR=4.5						
MKAR	**Makanchi Array**	92.79	317	P	P	08 09 12.9	-0.1
	0.7nm,0.8s,baz=101,slow=6.5,SNR=4.2						

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*ISCJB **06** 07:56:52.0±1.3, 10°.5S±0°.1×166°.5E±0°.2, h10^{km}, mb4.0/6, MS4.4/1, Error ellipse: s-maj=31.0km s-min=19.7km az=6.7*

*IDC **06** 07:56:52.0±1.6, 10°.40S×166°.51E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/38, mbtmp4.0/7, ML4.1/1, MS4.4/1, Ms1 4.4/1, ms1mx3.4/30, Error ellipse: s-maj=50.2km s-min=25.9km az=124.0*

ISC 06 07:56:53.7±1.4**, 10°.4S**±0°.1×**166°.5E**±0°.2**, h10**^{km}**, n7, σ1^{s}.17**/7**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	11.60	180	Pn	Pn	07 59 39.3	-0.3
	1.1nm,0.3s,baz=15,slow=19,SNR=3.5						
STKA	**Stephens Creek**	31.42	223	P	P	08 03 16.6	+1.3
	1.4nm,0.7s,baz=32,slow=13,SNR=3.4						
WRA	**Warramunga Arr**	32.41	249	P	P	08 03 22.4	-1.7
	2.6nm,0.9s,baz=82,slow=9.1,SNR=7.0						
ASAR	**Alice Springs**	33.75	243	P	P	08 03 35.1	-0.7
	2.2nm,1.0s,baz=71,slow=9.3,SNR=4.1						
FITZ	**Fitzroy Crossi**	40.27	254	P	P	08 04 31.8	+0.5
	3.5nm,0.9s,baz=94,slow=6.9,SNR=3.7						
FITZ				LR	LR	08 20 09.3	
	comp=Z,550nm,19.6s,baz=73,slow=35						
ILAR	**Eielson Array**	82.67	18	P	P	08 09 16.9	-0.2
	1.3nm,1.0s,baz=228,slow=6.3,SNR=3.8						
MKAR	**Makanchi Array**	93.57	317	P	P	08 10 10.5	+0.3
	0.4nm,0.8s,baz=98,slow=6.4,SNR=2.8						

MEX 06 07:57:40.6±0.6**, 17°.32N**×**100°.48W, h32**^{km}±12^{km}**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.34	143	*i* P	Pb	07 57 47.1	-1.7
CAIG				*e*S	Sb	07 57 52.7	-1.6
ARIG	**Puente Sto Nin**	0.96	8	*e*P	Pn	07 57 55.9	-2.1
ARIG				*e*S	Sn	07 58 08.2	-2.4
ZIIG	**Zihuatanejo**	0.98	287	*e*S	Sn	07 58 07.8	-3.2
MEIG	**Mezcala**	1.02	54	*e*P	Pn	07 57 56.0	-2.8
MEIG				*e*S	Sn	07 58 08.9	-3.2
PLIG	**Platanillo**	1.42	41	*i* P	Pn	07 58 02.3	-2.0
PLIG				*e*S	Sn	07 58 19.7	-2.2

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*IDC **06** 07:57:50.7±0.5, 11°.38S×165°.52E, h0^{km}, mb4.6/24, mb1 4.7/26, mb1mx4.7/37, mbtmp4.6/26, ML5.1/2, MS4.5/3, Ms1 4.5/3, ms1mx3.9/30, Error ellipse: s-maj=16.3km s-min=13.3km az=104.0*

*ISCJB **06** 07:57:51.8±0.2, 11°.36S±0°.03×165°.47E±0°.04, h17^{km}, mb4.8/84, MS4.2/1, Error ellipse: s-maj=5.0km s-min=4.4km az=173.1*

*NEIC **06** 07:57:52.3±0.1, 11°.31S×165°.51E, h10^{km}, mb4.9/60, Error ellipse: s-maj=4.3km s-min=3.5km az=104.0*

ISC 06 07:57:51.4±1.3**, 11°.32S**±0°.07×**165°.52E**±0°.06**, h4**^{km}±8^{km}**, n174, σ1^{s}.02**/188**, mb4.9**/84**, 2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.80	288	*e*Pn	Pn	07 59 16.6	-1.6
HNR				*e*Pn	Pn	07 59 17.1	-1.1
HNR				*e*Sn	Sn	08 00 27.4	+2.2
HNR	**Honiara**	5.80	288	Pn	Pn	07 59 17.1	-1.1
	113nm,0.3s,baz=125,slow=4.5,SNR=7.7						
HNR				Sn	Sn	08 00 27.4	+2.2
	32nm,0.3s,baz=250,slow=18,SNR=2.7						
MARNC	**Mare, Loyalty**	10.39	167	*e*Pn	Pn	08 00 19.8	-1.4
DZM	**Mont Dzumac**	10.73	175	Pn	Pn	08 00 24.8	-1.2
	8.0nm,0.3s,baz=72,slow=22,SNR=16						
DZM				LR	LR	08 04 20.2	
	comp=Z,6μm,18.3s,baz=38,slow=36						
ONTNC	**Ouen Toro**	10.96	175	*e*Pn	Pn	08 00 29.9	+0.8
PINNC	**Pines Island,**	11.38	171	*e*Pn	Pn	08 00 35.5	+0.6
MSVF	**Nonsavu**	13.70	119	*e*Pn	Pn	08 01 08.5	+1.9
EIDS	**Eidsvold**	19.55	222	*e*P	Pn	08 02 21.1	-0.3
	33nm,1.0s						
MANU	**Manus Island**	20.23	296	*e*P	P	08 02 27.7	0.0
	223nm,1.1s						
MANU				*e*S	S	08 06 14.3	-1.1
CTA	**Charters Tower**	20.48	242	P	P	08 02 29.4	-1.1
	13nm,0.7s,baz=74,slow=12,SNR=13						
CTA				LR	LR	08 10 03.7	
	comp=Z,934nm,18.5s,baz=56,slow=36						
CTAO	**Charters Tower**	20.48	242	*e*P	P	08 02 30.9	+0.5
	43nm,1.0s						
COEN	**Coen**	21.96	261	*e*P	P	08 02 47.3	+0.8
	12nm,0.7s						
ARMA	**Armidale**	22.97	212	*e*P	P	08 02 58.0	+0.8
	18nm,0.8s						
OUZ	**Omahuta**	24.90	164	*e*P	P	08 03 17.5	+2.0
	82nm,1.2s						
RUGZ	**Raukumara Rang**	28.68	160	P	P	08 03 48.7	-0.9
URZ	**Urewera**	28.76	161	*e*P	P	08 03 50.5	+0.3
URZ				*e*P	P	08 03 50.9	+0.8
URZ	**Urewera**	28.76	161	P	P	08 03 50.5	+0.3
	11nm,0.8s,baz=100,slow=16,SNR=6.7						
RAHZ	**Arahi**	29.35	161	P	P	08 03 56.2	+0.7
BKZ	**Black Stump Fm**	29.40	162	*e*P	P	08 03 55.5	-0.4
	59nm,1.1s						
BKZ	**Black Stump Fm**	29.40	162	P	P	08 03 56.8	+0.9
NMHZ	**Naumai**	29.43	162	P	P	08 03 58.6	+2.4
BHHZ	**Black Hill Sta**	29.58	163	P	P	08 03 58.8	+1.3
KWHZ	**Kaweka Forest**	29.62	163	P	P	08 03 58.4	+0.6
STKA	**Stephens Creek**	30.09	223	*e*P	P	08 04 02.0	-0.1
	2.5nm,0.8s						
STKA	**Stephens Creek**	30.09	223	P	P	08 04 01.9	-0.2
	8.5nm,0.7s,baz=28,slow=11,SNR=17						
BFZ	**Birch Farm**	30.74	164	P	P	08 04 07.4	-0.3
HOWZ	**Holdsworth Sta**	30.75	165	P	P	08 04 07.8	-0.1
CAW	**Cannon Point**	30.84	166	P	P	08 04 10.9	+2.4
THZ	**Tophouse**	31.01	169	*e*P	P	08 04 11.2	+1.1
	30nm,0.9s						
WRAB	**Tennant Creek**	31.17	250	*e*P	P	08 04 11.8	0.0
	21nm,0.8s						
WB2	**Warramunga Arr**	31.18	250	*e*P	P	08 04 11.2	-0.6
WB2				*e*P	pP	08 04 11.6	-0.2
WR1	**Warramunga Arr**	31.18	250	*e*P	P	08 04 11.8	-0.1
	28nm,0.8s						
WR1				*e*PcP	PcP	08 07 05.8	-1.2
WRA	**Warramunga Arr**	31.19	250	P	P	08 04 11.8	-0.1
	22nm,0.7s,baz=82,slow=9.0,SNR=44						
WRA				PcP	PcP	08 07 05.8	-1.2
	1.2nm,0.7s,baz=74,slow=2.8,SNR=4.4						
TOO	**Toolangi**	31.73	211	*e*P	P	08 04 17.3	+0.8
	7.4nm,0.8s						
LTZ	**Lake Taylor**	31.89	171	*e*P	P	08 04 18.6	+0.8
	22nm,0.7s						
OXZ	**Oxford**	32.39	171	*e*P	P	08 04 22.7	+0.5
	36nm,1.2s						
AS01	**Alice Springs**	32.43	244	*e*P	P	08 04 22.6	-0.3
AS31	**Alice Springs**	32.48	244	*e*P	P	08 04 22.4	-0.9
	1.6nm,0.7s						
AS31				*e*PcP	PcP	08 07 10.3	-0.2
ASAR	**Alice Springs**	32.48	244	P	P	08 04 22.2	-1.1
	3.2nm,0.6s,baz=70,slow=9.3,SNR=15						
ASAR				PcP	PcP	08 07 10.3	-0.2
	1.6nm,0.7s,baz=73,slow=3.4,SNR=5.4						
RPZ	**Rata Peaks**	32.63	173	P	P	08 04 22.3	-2.0
	7.0nm,0.5s,baz=18,slow=3.2,SNR=4.0						
FITZ	**Fitzroy Crossi**	39.10	255	*e*P	P	08 05 20.1	0.0
	9.7nm,0.8s						
FITZ	**Fitzroy Crossi**	39.10	255	P	P	08 05 18.8	-1.4
	8.4nm,0.8s,baz=90,slow=8.0,SNR=9.7						
FORT	**Forrest**	39.71	235	*e*P	P	08 05 24.1	-1.0
	56nm,0.9s						
MJAR	**Matsushiro Arr**	54.11	333	P	P	08 07 17.0	-0.5
	4.3nm,0.8s,baz=172,slow=9.0,SNR=7.6						
MAJO	**Matsushiro**	54.11	333	*e*P	P	08 07 17.0	-0.6
MAT	**Matsushiro**	54.11	333	P	P	08 07 16.9	-0.7
JNU	**Nakatsue**	55.17	324	*e*P	P	08 07 26.4	+1.0
	30nm,1.0s						
JNU	**Nakatsue**	55.17	324	P	P	08 07 26.4	+1.0
	16nm,0.8s,baz=57,slow=2.9,SNR=4.9						
KSRS	**Korea Array**	59.98	326	P	P	08 07 57.4	-1.7
	1.6nm,0.7s,baz=141,slow=7.2,SNR=5.2						
KSAR	**Wonju Array Be**	59.99	326	P	P	08 07 57.4	-1.8
KS01	**Wonju Array Si**	60.01	326	*e*P	P	08 07 58.4	-0.9
NJ2	**Nanjing**	62.06	316	*e*P	P	08 08 15.1	+1.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.8s						
USRK	**Ussuriysk Ar.**	63.09	334	P	P	08 08 19.5	-0.5
	comp=Z,2.9nm,0.6s,baz=141,slow=6.4,SNR=7.5						
USRK				LR	LR	08 33 58.2	
	comp=Z,192nm,20.6s,baz=61,slow=34						
PETK	**Petropavlovsk-**	64.52	355	P	P	08 08 29.1	-0.1
	comp=Z,3.1nm,0.8s,baz=123,slow=11,SNR=3.8						
PEA1	**Petropavlovsk-**	64.52	355	*e*P	P	08 08 29.1	-0.1
CN2	**Changchun**	65.86	329	*e*P	P	08 08 38.5	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CASY	**Casey**	66.05	201	*e*P	P	08 08 38.8	-0.3
	comp=Z,10.0nm,0.9s						
IPM	**Ipoh**	66.05	280	*e*P	P	08 08 40.8	+0.7
	comp=Z,28nm,0.9s						
KLR	**Kul'dur**	67.22	337	P	P	08 08 47.0	+0.3
	comp=Z,4.4nm,0.7s,baz=132,slow=9.8,SNR=8.9						
ENH	**Enshi**	67.90	309	*e*P	P	08 08 50.6	-0.9
	comp=Z,27nm,1.1s						
GYA	**Guiyang**	68.39	304	P	P	08 08 55.4	+0.6
GYA				PP	PP	08 11 30.0	+4.2
GYA				S	S	08 17 57.4	+0.2
GYA				SKS	ScS	08 18 55.2	-0.5
GYA	**Guiyang**	68.39	304	SS	SS	08 22 23.5	+2.5
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.5s						
GYA				LR	LR		
	comp=N,520nm,18.2s						
GYA				LR	LR		
	comp=E,490nm,18.6s						
GYA				LR	LR		
	comp=Z,480nm,18.0s						
XAN	**Xi'an**	70.14	313	P	P	08 09 04.6	-0.8
XAN				pP	pwP	08 09 16.8	+5.4
XAN				sP	PcP	08 09 22.7	-4.7
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				LR	LR		
	comp=N,390nm,18.4s						
XAN				LR	LR		
	comp=E,390nm,17.4s						
XAN				LR	LR		
	comp=Z,560nm,18.4s						
XAN	**Xi'an**	70.14	313	*e*P	P	08 09 04.9	-0.5
	comp=Z,9.6nm,0.9s						
KMI	**Kunming**	71.08	302	P	P	08 09 13.8	+2.3
KMI				pP	pwP	08 09 18.5	+1.0
KMI				sP	sP	08 09 20.6	+9.2
KMI				pmax	pmax		
	comp=Z,19nm,1.5s						
KMI				pmax	pmax		
	comp=Z,100nm,3.1s						
HHC	**Hu-ho-hao-te**	71.90	320	*e*P	P	08 09 18.1	+2.1
CM01	**Chiang Mai Arr**	72.00	294	*e*P	P	08 09 16.8	-0.1
CMAR	**Chiang Mai Arr**	72.02	294	P	P	08 09 18.9	+1.9
	comp=Z,3.2nm,0.6s,baz=128,slow=4.7,SNR=15						
CHTO	**Chiang Mai**	72.14	294	P	P	08 09 30.8	+13
HIA	**Hailar**	72.50	331	*e*P	P	08 09 18.9	-0.4
	comp=Z,22nm,1.1s						
CD2	**Chengdu**	72.59	307	⇓P	P	08 09 21.2	+0.9

CD2				pmax	pmax		
	comp=Z,60nm,1.0s						
CD2				pmax	pmax		
	comp=Z,180nm,5.4s						
SEY	Seymchan	74.72	354	P	P	08 09 32.5	+0.5
	comp=Z,2.9nm,0.8s,baz=163,slow=7.6,SNR=5.3						
LZH	Lanzhou	74.78	312	*e*P	P	08 09 33.8	+0.6
LZH				pP	pwP	08 09 38.7	-0.5
LZH				sP	PcP	08 09 42.1	-5.2
LZH				PP	PP	08 12 16.7	-3.9
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=N,260nm,16.5s						
LZH				LR	LR		
	comp=E,280nm,16.9s						
LZH				LR	LR		
	comp=Z,320nm,19.3s						
ULN	Ulaanbaatar	78.39	324	*e*P	P	08 09 53.5	+0.1
	comp=Z,20nm,0.8s						
QSPA	South Pole Qui	78.69	180	*e*P	P	08 09 54.9	+0.2
	comp=Z,22nm,1.1s						
SONA0	Songino Array	78.76	324	*e*P	P	08 09 56.5	+1.2
SONM	Songino Array	78.76	324	P	P	08 09 56.5	+1.2
	comp=Z,6.9nm,0.9s,baz=142,slow=6.9,SNR=20						
SONA1	Songino Array	78.76	324	*e*P	P	08 09 55.8	+0.4
ANM	Nome	78.80	12	*e*P	P	08 09 56.1	+1.0
	comp=Z,2.7nm,0.9s						
RSO	Redoubt South	78.85	20	*e*P	P	08 09 55.7	+0.1
BRLK	Bradley Lake	78.97	21	*e*P	P	08 09 56.0	-0.1
	comp=Z,26nm,1.2s						
GTA	Gaotai	79.09	314	⇓P	P	08 09 59.0	+1.6
GTA				pP	pwP	08 10 04.3	+0.9
GTA				sP	PcP	08 10 07.7	+1.9
GTA				pmax	pmax		
	comp=Z,17nm,1.1s						
GTA				LR	LR		
	comp=N,380nm,18.1s						
GTA				LR	LR		
	comp=E,420nm,18.4s						
GTA				LR	LR		
	comp=Z,520nm,17.8s						
BILL	Bilibino	79.15	0	*e*P	P	08 09 57.1	+0.2
	comp=Z,11nm,0.9s						
SUA	Susitna One	80.25	20	*e*P	P	08 10 03.4	+0.2
	comp=Z,9.9nm,1.1s						
CAST	Castle Rocks	81.27	18	*e*P	P	08 10 08.3	-0.2
	comp=Z,9.0nm,0.7s						
MCK	McKinley	82.47	19	*e*P	P	08 10 14.7	-0.1
	comp=Z,7.4nm,1.0s						
DHY	Denali Highway	82.51	20	*e*P	P	08 10 14.8	-0.4
	comp=Z,8.2nm,1.1s						
IM3	Indian Mountai	82.74	16	*e*P	P	08 10 16.6	+0.5
HARP	HAARP	82.81	21	*e*P	P	08 10 16.6	0.0
	comp=Z,18nm,0.9s						
MLY	Manley	82.86	17	*e*P	P	08 10 17.1	+0.3
	comp=Z,2.7nm,0.8s						
WRH	Wood River Hil	83.26	18	*e*P	P	08 10 18.3	-0.4
	comp=Z,6.9nm,0.8s						
MDM	Murphy Dome	83.56	18	*e*P	P	08 10 20.2	-0.2
	comp=Z,11nm,1.2s						
HDA	Harding Lake	83.57	19	*e*P	P	08 10 20.3	-0.2
	comp=Z,12nm,0.9s						
HDA	Harding Lake	83.57	19	P	P	08 10 20.2	-0.2
	baz=227						
TCOL	CIGO, UAF Yank	83.61	18	P	P	08 10 20.6	+0.1
	baz=226						
COLA	College	83.61	18	*e*P	P	08 10 20.3	-0.3
	comp=Z,9.8nm,0.6s						
O02D	Mt. Diablo Mer	83.64	47	P	P	08 10 22.3	+0.9
	baz=250						
RIDG	Independ'e Rid	83.80	20	*e*P	P	08 10 22.1	+0.3
	comp=Z,13nm,1.1s						
IL1	Eielson Array	83.84	19	*e*P	P	08 10 21.4	-0.4
ILAR	Eielson Array	83.84	19	P	P	08 10 21.9	+0.2
	comp=Z,4.1nm,0.6s,baz=232,slow=5.2,SNR=42						
ILB	Eielson Array	83.84	19	*e*P	P	08 10 21.6	-0.2
POKR	Poker Plat Res	83.91	18	P	P	08 10 21.3	-0.9
	baz=226						
N02D	Trinity Center	83.98	46	P	P	08 10 23.8	+0.6
	baz=250						
M02C	Callahan	84.02	46	P	P	08 10 24.2	+0.8
	baz=249						
SCRK	Sand Creek	84.25	20	*e*P	P	08 10 24.6	+0.5
	comp=Z,15nm,1.1s						
ORV	Oroville	84.36	48	*e*P	P	08 10 24.7	-0.3
	comp=Z,1.9nm,0.7s						
AFDM	Forest Hills D	84.54	49	*e*P	P	08 10 25.2	-0.8
	comp=Z,6.1nm,1.0s						
CMB	Columbia Colle	84.68	50	*e*P	P	08 10 25.1	-1.7
	comp=Z,3.3nm,0.6s						
BEKR	Beckworth	85.29	48	*e*P	P	08 10 29.6	-0.3
	comp=Z,4.7nm,0.9s						
J05D	Fort Rock, OR	85.80	45	P	P	08 10 32.8	+0.5
	baz=250						
DAWY	Dawson	85.89	21	*e*P	P	08 10 32.9	+0.7
	comp=Z,8.0nm,1.0s						
CWC	Cottonwood Cre	85.94	52	P	P	08 10 33.5	+0.3
	baz=253						
PAHR	Pah Rah Range	85.95	48	*e*P	P	08 10 31.8	-1.4
	comp=Z,8.1nm,1.1s						
TIXI	Tiksi	86.31	349	P	P	08 10 34.1	+0.1
	comp=Z,1.1nm,0.5s,baz=64,slow=3.9,SNR=2.3						
NV01	Mina Array Sit	86.36	50	*e*P	P	08 10 34.9	-0.4
NVAR	Mina Array Bea	86.36	50	P	P	08 10 34.5	-0.8
	comp=Z,2.3nm,0.7s,baz=238,slow=8.8,SNR=5.4						
PFO	Pinyon Flats O	86.42	55	*e*P	P	08 10 33.2	-2.4
	comp=Z,3.8nm,0.9s						
XPFO	Pion Flat	86.42	55	*e*P	P	08 10 32.5	-3.1
	comp=Z,3.7nm,0.8s						
IRM	Iron Mountain	87.62	55	P	P	08 10 41.6	+0.2
	baz=255						
Y12C	Blythe	88.01	55	*e*P	P	08 10 43.4	+0.2
	comp=Z,7.2nm,1.1s						
Y12C	Blythe	88.01	55	P	P	08 10 43.9	+0.7
	baz=255						
113A	Mohawk Valley,	88.38	56	*e*P	P	08 10 44.4	-0.5
	comp=Z,4.1nm,1.0s						
214A	Organ Pipe Nat	88.96	57	P	P	08 10 48.1	+0.3
	baz=256						
WMQ	Urumqi	89.13	315	*e*P	P	08 10 48.8	+0.5
WMQ				pP	pwP	08 10 54.7	+0.4
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.5s						
WMQ				LR	LR		
	comp=N,780nm,23.3s						
WMQ				LR	LR		
	comp=E,880nm,18.9s						
WMQ				LR	LR		
	comp=Z,920nm,22.1s						
LCMT	Little Creek M	89.84	52	*e*P	P	08 10 51.4	-0.5
	comp=Z,5.1nm,1.0s						
NEW	Newport	90.09	41	P	P	08 10 52.7	0.0
	baz=253						
U15A	North Rim	90.44	53	*e*P	P	08 10 54.2	-0.7
	comp=Z,6.6nm,0.9s						
HLID	Hailey	90.62	46	P	P	08 10 56.0	+0.5
	baz=255						
X16A	Lo Mia Camp, P	90.65	55	*e*P	P	08 10 56.5	+0.7
	comp=Z,3.8nm,0.9s						
MTPU	Mount Pierson	90.91	51	*e*P	P	08 10 57.7	+0.6
	comp=Z,4.8nm,1.0s						
WUAZ	Wupatki	90.96	54	P	P	08 10 56.7	-0.5
	baz=257						
MSU	Marysvale	91.02	51	*e*P	P	08 10 58.2	+0.7
HVU	Hansel Valley	91.35	48	*e*P	P	08 10 59.2	+0.3
	comp=Z,6.6nm,0.9s						
TCUT	Toone Canyon	92.19	49	*e*P	P	08 11 01.7	-1.2
	comp=Z,4.5nm,0.8s						
DLMT	Dillon	92.33	44	*e*P	P	08 11 03.6	+0.4
	comp=Z,5.7nm,1.0s						
BOZ	Bozeman (W)	93.04	44	P	P	08 11 07.2	+0.6
	baz=257						
MK01	Makanchi Array	93.56	317	*e*P	P	08 11 08.1	-0.7
MK31	Makanchi Array	93.57	317	*e*P	P	08 11 09.4	+0.6
MK32	Makanchi Array	93.57	317	*e*P	P	08 11 09.4	+0.6
MKAR	Makanchi Array	93.57	317	*e*P	P	08 11 08.8	0.0
	comp=Z,33nm,0.8s						
MKAR	Makanchi Array	93.57	317	P	P	08 11 09.4	+0.6
	comp=Z,4.7nm,0.7s,baz=94,slow=6.6,SNR=23						
MKAR				PKKP	PKKPdf	08 28 12.2	-3.1
	comp=Z,0.4nm,0.7s,baz=250,slow=2.9,SNR=4.8						
ZAA0	Zalesovo Array	93.65	324	*e*P	P	08 11 08.7	-0.3
	comp=Z,7.0nm,1.0s						
ZALV	Zalesovo Beam	93.65	324	*e*P	P	08 11 08.2	-0.8
ZALV	Zalesovo Beam	93.65	324	P	P	08 11 08.6	-0.3
	comp=Z,4.5nm,0.8s,baz=112,slow=4.5,SNR=16						
ZAA1	Zalesovo Array	93.65	324	*e*P	P	08 11 08.6	-0.3
MAKZ	Makanchi	93.78	317	*e*P	P	08 11 09.4	-0.4
	comp=Z,7.0nm,0.9s						
BW06	Boulder Array	93.90	47	P	P	08 11 10.9	+0.2
	baz=258						
PDAR	Pinedale Array	93.90	47	P	P	08 11 10.7	0.0
	comp=Z,0.7nm,0.8s,baz=252,slow=3.0,SNR=6.4						
YKA	Yellowknife Ar	95.31	27	P	P	08 11 14.5	-1.8
	comp=Z,0.7nm,0.6s,baz=259,slow=4.5,SNR=17						
YKB5	Yellowknife Ar	95.31	27	*e*P	P	08 11 14.4	-1.9
LTX	Lajitas	96.15	61	*e*P	P	08 11 22.5	+1.4
TXAR	Lajitas Array	96.15	61	P	P	08 11 22.5	+1.4
	comp=Z,0.3nm,0.7s,baz=216,slow=4.5,SNR=3.3						
ARA0	ARCESS Array S	116.54	345	*e*PKPdf	PKPdf	08 16 36.0	-0.2
ARCES	ARCESS Array B	116.54	345	PKP	PKPdf	08 16 36.0	-0.2
	comp=Z,1.8nm,0.7s,baz=27,slow=3.0,SNR=5.0						
ARCES				PKKPab	PKKPab	08 27 08.7	+0.8
	comp=Z,2.3nm,0.8s,baz=147,slow=2.5,SNR=5.9						
FIA0	FINESS Array S	121.94	338	*e*PKPdf	PKPdf	08 16 46.6	-0.1
FINES	FINESS Array B	121.94	338	PKP	PKPdf	08 16 46.6	-0.1
	comp=Z,2.9nm,0.9s,baz=302,slow=3.6,SNR=4.1						
CPUP	Villa Florida	124.00	133	PKP	PKPdf	08 16 51.5	-0.3
	comp=Z,2.4nm,1.0s,baz=144,slow=2.2,SNR=3.6						
SDV	Santo Domingo	124.73	87	*e*PKPdf	PKPdf	08 16 53.4	-0.3
BOSA	Boshof	124.77	223	PKP	PKiKP	08 16 53.6	-0.1
	comp=Z,2.0nm,0.7s,baz=184,slow=3.5,SNR=3.6						
NB2	NORSAR Subarra	126.91	345	PKPdf	PKPdf	08 16 56.3	0.0
	comp=Z,0.9nm,0.8s,baz=37,slow=2.1						
NB200	NORSAR Array S	126.91	345	*e*PKPdf	PKiKP	08 16 56.5	-0.3
NOA	NORSAR Array B	126.91	345	PKP	PKiKP	08 16 56.5	-0.3
	comp=Z,1.6nm,0.8s,baz=33,slow=2.0,SNR=4.9						
AKASG	Malin Array Be	126.97	327	PKP	PKPdf	08 16 56.3	-0.4
	comp=Z,0.2nm,0.3s,baz=62,slow=1.7,SNR=3.7						
CLL	Collm	134.26	336	*e*PKPdf	PKPdf	08 17 11.0	+0.5
GEC2	GERESS Array S	135.85	333	*e*PKPdf	PKPdf	08 17 13.7	0.0
GERES	GERESS Array B	135.85	333	PKP	PKPdf	08 17 13.7	0.0
	comp=Z,1.1nm,0.8s,baz=323,slow=2.0,SNR=5.4						
BDFB	Brasilia	137.34	128	PKP	PKPdf	08 17 17.2	-0.3
	comp=Z,2.0nm,0.6s,baz=222,slow=8.8,SNR=3.5						
KEST	Kesra	147.50	322	*e*PKPbc	PKPbc	08 17 38.2	+0.9
KEST	Kesra	147.50	322	PKPbc	PKPab	08 17 38.5	-0.9
	comp=Z,18nm,0.8s,baz=311,slow=1.0,SNR=13						
ES19	SONSECA Array	150.21	343	*e*PKPbc	PKiKP	08 17 44.7	-0.3
ESDC	Sonseca Array	150.26	344	PKPbc	PKiKP	08 17 45.0	-0.1
	comp=Z,2.9nm,0.8s,baz=31,slow=1.8,SNR=8.1						
TOA0	Torodi Ar. Sit	164.09	278	*e*PKPdf	PKPdf	08 17 56.9	-0.3
TORD	Torodi Ar. Bea	164.09	278	PKP	PKPdf	08 17 57.2	0.0
	comp=Z,1.6nm,0.9s,baz=2.1,slow=2.6,SNR=6.5						
TOA1	Torodi Ar. Sit	164.09	278	*e*PKPdf	PKPdf	08 17 57.2	0.0

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*IDC **06** 07:59:49.8±0.9, 53°.82N×163°.31W, h0^{km}, mb4.0/20, mb1 4.2/23, mb1mx4.0/55, mbtmp4.0/23, ML3.7/3, Error ellipse: s-maj=25.4km s-min=12.4km az=2.0*

*NEIC **06** 07:59:52.5±0.0, 53°.54N×163°.15W, h38^{km}, mb4.2/24, ML3.8(AEIC), After AEIC.*

*ISCJB **06** 07:59:53.3±0.3, 53°.93N±0°.04×163°.12W±0°.04, h32^{km}, mb4.3/51, Error ellipse: s-maj=6.0km s-min=3.3km az=167.5*

ISC 06 07:59:54.3±0.6**, 53°.73N**±0°.07×**163°.10W**±0°.04**, h32**^{km}**, n134,** σ**1^{s}25**/137**, mb4.3**/51**, 3C-3D, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	1.15	351	*e*Pn	Pb	08 00 15.2	-0.4
FALS				*e*Sn	Sn	08 00 28.9	+0.2
AKUT	Akutan	1.63	286	*e*Pn	Pn	08 00 19.8	-1.0
AKUT				*e*Sn	Sn	08 00 39.7	-0.9
UNV	Unalaska Valle	2.02	275	*e*Pn	Pn	08 00 24.6	-1.5
UNV				*e*Sn	Sn	08 00 48.2	-2.1
SDPT	Sand Point	2.23	42	*e*Pn	Pn	08 00 30.4	+1.4
SDPT				*e*Sn	Sb	08 00 59.3	-1.8
NIKH	Nikolski High	3.53	260	*e*Pn	Pn	08 00 45.1	-1.7
CHGN	Chignik	3.73	44	*e*Pn	Pn	08 00 51.0	+1.4
SPIA	Saint Paul Isl	5.34	313	*e*Pn	Pn	08 01 12.8	+1.2
SII	Sitkinak Islan	5.85	57	*e*Pn	Pn	08 01 19.3	+0.6
OHAK	Old Harbor	6.59	54	*e*Pn	Pn	08 01 28.0	-0.7
KDAK	Kodiak Island	7.19	51	*e*Pn	Pn	08 01 36.6	-0.4
KDAK				*e*		08 01 37.2	
KDAK				Sn	Sn	08 02 54.5	-3.0
KDAK	Kodiak Island	7.19	51	Pn	Pn	08 01 36.4	-0.6
	3.4nm,0.3s,baz=209,slow=7.1,SNR=33						
KDAK				Sn	Sn	08 02 54.5	-3.0
	1.2nm,0.3s,baz=143,slow=20,SNR=7.3						
SVW2	Sparrevohn	8.43	26	*e*Pn	Pn	08 01 54.7	+0.7
ADK	Adak	8.44	263	*e*Pn	Pn	08 01 53.0	-1.1
RSO	Redoubt South	8.78	36	*e*Pn	Pn	08 01 58.2	-0.8
BRLK	Bradley Lake	9.03	43	*e*Pn	Pn	08 02 02.3	+0.1
SEW	Seward	9.81	44	*e*Pn	Pn	08 02 13.3	+0.4
SUA	Susitna One	10.19	36	*e*Pn	Pn	08 02 18.7	+0.4
RC01	Rabbit Creek A	10.30	39	*e*Pn	Pn	08 02 20.3	+0.7
PPLA	Purkeypile	10.82	27	*e*Pn	Pn	08 02 27.9	+1.0
PMR	Palmer	10.85	38	*e*Pn	Pn	08 02 26.2	-0.8
ANM	Nome	10.94	355	*e*Pn	Pn	08 02 30.5	+2.2
KNK	Knik Glacier	10.98	40	*e*Pn	Pn	08 02 28.6	-0.4
GHO	Glory Hole Cre	11.04	37	*e*Pn	Pn	08 02 29.1	-0.7
GLI	Glacier Island	11.21	44	*e*Pn	Pn	08 02 31.8	-0.3
CAST	Castle Rocks	11.27	26	*e*Pn	Pn	08 02 34.6	+1.7
SML	Sawmill	11.28	38	*e*Pn	Pn	08 02 32.3	-0.7
EYAK	Cordova Ski Ar	11.62	47	*e*Pn	Pn	08 02 36.9	-0.7
SCM	Sheep Creek Mo	11.67	40	*e*Pn	Pn	08 02 36.9	-1.6
TRF	Thorofare Moun	11.79	29	*e*Pn	Pn	08 02 40.6	+0.4
DIV	Divide	11.89	45	*e*Pn	Pn	08 02 41.0	-0.6
KLU	Klutina	12.03	43	*e*Pn	Pn	08 02 42.6	-0.7
BPAW	Bear Paw Mtn.	12.11	26	*e*Pn	Pn	08 02 42.8	-1.6
HMT	Hamilton	12.18	50	*e*Pn	Pn	08 02 45.1	-0.3
RND	Reindeer	12.19	32	*e*Pn	Pn	08 02 44.6	-0.9
MCK	McKinley	12.40	30	*e*Pn	Pn	08 02 48.5	0.0
DHY	Denali Highway	12.44	35	*e*Pn	Pn	08 02 47.2	-1.9
HARP	HAARP	12.84	40	*e*Pn	Pn	08 02 54.1	-0.2
MLY	Manley	12.94	24	*e*Pn	Pn	08 02 56.9	+1.2
PAX	Paxson	13.05	38	*e*Pn	Pn	08 02 56.8	-0.4
IM3	Indian Mountai	13.14	17	*e*Pn	Pn	08 03 01.1	+2.7
WRH	Wood River Hil	13.20	29	*e*Pn	Pn	08 02 57.5	-1.8
HDA	Harding Lake	13.50	31	*e*Pn	Pn	08 03 01.4	-1.9
MDM	Murphy Dome	13.53	28	*e*Pn	Pn	08 03 02.0	-1.7
RIDG	Independ'e Rid	13.75	36	*e*Pn	Pn	08 03 06.3	-0.5
IL1	Eielson Array	13.78	30	*e*Pn	Pn	08 03 04.3	-2.8
ILAR	Eielson Array	13.78	30	Pn	Pn	08 03 03.8	-3.3
	0.2nm,0.3s,baz=207,slow=13,SNR=8.4						
ILB	Eielson Array	13.78	30	*e*Pn	Pn	08 03 07.7	+0.6
DOT	Dot Lake	13.96	37	*e*Pn	Pn	08 03 08.4	-1.3
SCRK	Sand Creek	14.19	36	*e*Pn	Pn	08 03 11.1	-1.8
PRP	Porcupine Dome	14.72	30	*e*Pn	Pn	08 03 17.9	-2.1
COLD	Coldfoot	14.91	20	*e*Pn	Pn	08 03 24.6	+2.1
FYU	Fort Yukon	15.56	27	*e*Pn	Pn	08 03 30.8	-0.2
	2.6nm,0.8s						
EGAK	Eagle	15.66	36	*e*Pn	Pn	08 03 31.0	-1.2
	7.4nm,0.9s						
DAWY	Dawson	15.93	40	*e*Pn	Pn	08 03 35.0	-0.8
	7.8nm,0.7s						
SKAG	Skagway	16.26	58	*e*Pn	P	08 03 41.6	-1.1
	18nm,1.0s						
WHY	Whitehorse	16.69	54	*e*Pn	P	08 03 47.0	-0.7
	15nm,0.9s						
DLBC	Dease Lake	18.92	62	*e*P	P	08 04 12.2	0.0
	7.9nm,1.0s						
DLBC	Dease Lake	18.92	62	P	Pn	08 04 13.3	+0.3
	0.1nm,0.3s,baz=274,slow=9.6,SNR=6.3						
INK	Inuvik	20.15	32	*e*P	P	08 04 24.5	-1.0
	7.3nm,1.0s						
INK	Inuvik	20.15	32	P	P	08 04 24.5	-1.0
	1.9nm,0.4s,baz=207,slow=12,SNR=16						
PEA1	Petropavlovsk-	23.18	284	*e*P	P	08 04 56.9	-0.9
PETK	Petropavlovsk-	23.18	284	P	P	08 04 56.9	-0.9
	2.4nm,0.5s,baz=86,slow=13,SNR=8.1						
SEY	Seymchan	24.63	310	P	P	08 05 10.4	-1.0
	0.8nm,0.4s,baz=135,slow=5.7,SNR=2.5						
YKW3	Yellowknife Ar	26.46	51	*e*P	P	08 05 28.8	+0.8
	3.7nm,1.1s						
YKA	Yellowknife Ar	26.47	51	P	P	08 05 29.0	+1.0
	3.2nm,0.9s,baz=273,slow=9.1,SNR=31						
YKB5	Yellowknife Ar	26.47	51	*e*P	P	08 05 28.4	+0.3
HLID	Hailey	33.12	88	*e*P	P	08 06 29.3	+1.9
	2.6nm,0.8s						
NV01	Mina Array Sit	34.00	98	*e*P	P	08 06 37.2	+2.1
NVAR	Mina Array Bea	34.00	98	P	P	08 06 37.2	+2.1
	0.8nm,0.7s,baz=297,slow=8.7,SNR=3.6						
ELK	Elko	34.32	92	*e*P	P	08 06 40.1	+2.2
	3.5nm,0.9s						
HVU	Hansel Valley	35.15	89	*e*P	P	08 06 45.1	+0.1
	4.9nm,0.9s						
BGU	Big Grassy Mou	35.52	90	*e*P	P	08 06 49.5	+1.3
	3.6nm,0.9s						
R11A	Troy Canyon, C	35.66	96	*e*P	P	08 06 51.1	+1.8
	2.6nm,1.0s						
DUG	Dugway, Tooele	36.11	91	*e*P	P	08 06 54.6	+1.4
	7.6nm,1.0s						
PDAR	Pinedale Array	36.47	85	P	P	08 06 57.6	+1.2
	0.6nm,0.9s,baz=282,slow=4.3,SNR=3.2						
FCC	Fort Churchill	37.12	54	*e*P	P	08 07 02.2	+0.8
	4.5nm,1.1s						
TMUT	Trail Mountain	37.63	91	*e*P	P	08 07 07.7	+1.3
	6.3nm,0.9s						
Q16A	Castle Valley	37.90	91	*e*P	P	08 07 07.4	-1.1
	10nm,1.2s						
SRU	San Rafael Swe	38.16	91	*e*P	P	08 07 09.4	-1.2
	4.9nm,1.0s						
O20A	White River Ci	38.86	88	*e*P	P	08 07 16.9	+0.3
	7.7nm,0.8s						
MDND	Maddock	39.37	72	*e*P	P	08 07 22.3	+1.8
	22nm,0.9s						
KLR	Kul'dur	39.55	291	P	P	08 07 19.5	-2.5
	1.0nm,0.6s,baz=111,slow=4.4,SNR=5.1						
PV17	East Wray Mesa	39.63	90	*e*P	P	08 07 23.5	+0.5
	8.8nm,1.2s						
PV12	Saucer Basin,	39.70	90	*e*P	P	08 07 26.2	+2.6
	8.6nm,1.0s						
PV03	Paradox Valley	39.71	90	*e*P	P	08 07 24.8	+1.1
	4.4nm,0.8s						
PV13	Radium Mtn., P	39.79	90	*e*P	P	08 07 23.1	-1.3
	9.5nm,0.9s						
PV02	Paradox Valley	39.81	90	*e*P	P	08 07 25.0	+0.5
	7.4nm,0.9s						
PV01	Paradox Valley	39.96	90	*e*P	P	08 07 27.2	+1.5
	4.9nm,0.8s						
ULM	Lac du Bonnet	40.15	67	P	P	08 07 27.1	+0.2
	2.2nm,0.8s,baz=304,slow=10,SNR=4.3						
H11N2	WAKE ISLAND Hy	41.00	226	T	T	08 51 22.5	
	baz=26,slow=76,SNR=3.7						
H11N3	WAKE ISLAND Hy	41.01	226	T	T	08 51 24.3	
	baz=26,slow=76,SNR=7.6						
H11N1	WAKE ISLAND Hy	41.02	226	T	T	08 51 23.9	
	baz=26,slow=76,SNR=3.3						
SUMG	Summit	48.31	19	*e*P	P	08 08 32.5	+0.2
	7.8nm,1.1s						
SUMG	Summit	48.31	19	*i* P	P	08 08 33.1	+0.7
TX31	Lajitas Ar. Si	49.01	95	*e*P	P	08 08 38.5	+0.6
TX31				*e*P	P	08 08 39.7	+1.7
LTX	Lajitas	49.01	95	*e*P	P	08 08 38.5	+0.6
TXAR	Lajitas Array	49.01	95	P	P	08 08 38.5	+0.6
	0.6nm,0.5s,baz=297,slow=5.6,SNR=23						
HDIL	Hopedale	49.67	74	*e*P	P	08 08 42.8	0.0
	24nm,1.1s						
WVT	Waverly	53.52	77	*e*P	P	08 09 11.2	-0.4
	5.1nm,0.8s						
SONA1	Songino Array	53.77	303	*e*P	P	08 09 12.5	-0.9
SONA0	Songino Array	53.79	303	*e*P	P	08 09 13.2	-0.3
SONM	Songino Array	53.79	303	P	P	08 09 13.2	-0.3
	1.0nm,0.6s,baz=44,slow=7.7,SNR=7.0						
HHC	Hu-ho-hao-te	55.90	294	*e*P	P	08 09 30.4	+1.5
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ARA0	ARCESS Array S	56.89	356	*e*P	P	08 09 34.9	-0.5
ARCES	ARCESS Array B	56.89	356	P	P	08 09 34.9	-0.5
	comp=Z,1.1nm,0.6s,baz=14,slow=7.9,SNR=15						
ZAA1	Zalesovo Array	58.89	320	*e*P	P	08 09 49.3	-0.3
ZALV	Zalesovo Beam	58.89	320	P	P	08 09 49.3	-0.3
	comp=Z,0.5nm,0.4s,baz=46,slow=10,SNR=3.3						
LZH	Lanzhou	63.51	295	*e*P	P	08 10 22.2	+0.8
LZH				pP	pP	08 10 30.0	-0.8
LZH				sP	sP	08 10 32.2	-2.2
LZH				PP	PP	08 12 44.2	+3.3
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,96nm,4.9s						
KURK	Kurchatov	63.78	321	*e*P	P	08 10 23.0	+0.3
	comp=Z,7.9nm,1.1s						
KURK	Kurchatov	63.78	321	⇑Pn	P	08 10 22.8	+0.2
	comp=Z,10.0nm,1.2s						
KURK				⇓Lg	Lg	08 10 57.3	
	comp=Z,9.1nm,0.7s						
KURBB	Kurchatov Arra	63.89	321	⇑Pn	P	08 10 23.8	+0.4
	comp=Z,4.6nm,0.8s						
KURBB				⇓Lg	Lg	08 11 00.4	
	comp=Z,19nm,0.7s,baz=308,slow=27						
BVA0	Borovoye Array	64.70	328	⇑Lg	Lg	08 11 36.8	
	comp=Z,1.4nm,0.5s						
BRVK	Borovoye	64.70	328	*e*P	P	08 10 29.0	+0.2
	comp=Z,3.7nm,0.8s						
FIA0	FINESS Array S	64.95	355	*e*P	P	08 10 29.8	-0.4
FINES	FINESS Array B	64.95	355	P	P	08 10 29.8	-0.4
	comp=Z,1.7nm,0.7s,baz=25,slow=6.3,SNR=6.8						
NB200	NORSAR Array S	65.49	3	*e*P	P	08 10 34.1	+0.3
NOA	NORSAR Array B	65.49	3	P	P	08 10 34.1	+0.3
	comp=Z,1.6nm,0.8s,baz=357,slow=6.6,SNR=4.1						
MK31	Makanchi Array	65.52	317	*e*P	P	08 10 34.0	-0.2
	comp=Z,1.5nm,1.1s						
MK31	Makanchi Array	65.52	317	⇓Lg	Lg	08 13 19.6	
	comp=Z,1.7nm,0.8s,baz=321,slow=28,SNR=3.9						
MK32	Makanchi Array	65.52	317	*e*P	P	08 10 33.6	-0.6
MKAR	Makanchi Array	65.52	317	*e*P	P	08 10 34.0	-0.2
	comp=Z,7.8nm,0.9s						
MKAR	Makanchi Array	65.52	317	P	P	08 10 33.6	-0.6
	comp=Z,0.5nm,0.4s,baz=44,slow=7.8,SNR=14						
WMQ	Urumqi	65.58	311	*e*P	P	08 10 37.4	+2.7
ABKAR	Akbulak array	71.15	332	*e*P	P	08 11 09.8	+0.5
	comp=Z,8.2nm,0.8s						
AKASG	Malin Array Be	75.43	352	P	P	08 11 34.1	-0.4
	comp=Z,1.4nm,0.4s,baz=11,slow=5.7,SNR=9.0						
AKBB	Malin Array Si	75.43	352	*e*P	P	08 11 34.1	-0.4
	comp=Z,5.0nm,0.6s						
BRG	Berggiesshubel	75.75	2	*e*P	P	08 11 36.8	+0.5
	comp=Z,18nm,1.5s						
CHGR	Chuyangaron	77.55	321	*e*P	P	08 11 46.9	0.0
	comp=Z,16nm,0.8s						
GERES	GERESS Array B	77.77	2	P	P	08 11 48.4	+0.5
	comp=Z,0.8nm,0.6s,baz=347,slow=4.1,SNR=6.5						
BUR04	Bucovina Ar. S	78.79	354	*e*P	P	08 11 54.1	+0.6
CMAR	Chiang Mai Arr	79.92	287	P	P	08 11 59.9	-0.1
	comp=Z,0.9nm,0.4s,baz=20,slow=5.8,SNR=5.3						
KBZ	Khabaz	80.40	341	P	P	08 12 02.0	-0.1
	comp=Z,1.7nm,0.9s,baz=56,slow=3.6,SNR=2.8						
BR101	Keskin Array S	85.81	347	*e*P	P	08 12 30.8	+0.3
BRTR	Keskin Array B	85.81	347	P	P	08 12 30.8	+0.3
	comp=Z,1.9nm,0.9s,baz=58,slow=1.3,SNR=6.4						

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*ISCJB **06** 08:02:19.1±0.7, 10°.9S±0°.1×165°.6E±0°.1, h30^{km}, mb4.0/8, Error ellipse: s-maj=17.1km s-min=14.0km az=148.1*

*IDC **06** 08:02:23.3±3.9, 10°.87S×165°.56E, h53^{km}±35^{km}, mb3.8/9, mb1 4.2/11, mb1mx3.8/38, mbtmp4.2/11, ML4.7/2, Error ellipse: s-maj=30.5km s-min=22.5km az=134.0*

ISC 06 08:02:20.7±0.8**, 10°.8S**±0°.1×**165°.7E**±0°.1**, h30**^{km}**, n11,** σ**1^{s}22**/11**, mb4.1**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.81	283	P	Pn	08 03 46.0	+1.1
	52nm,0.3s,baz=148,slow=4.3,SNR=5.0						
DZM	Mont Dzumac	11.20	176	P	Pn	08 04 59.5	+0.5
	2.5nm,0.3s,baz=313,slow=19,SNR=7.8						
CTA	Charters Tower	20.84	241	P	P	08 07 00.9	+0.7
	11nm,0.8s,baz=72,slow=13,SNR=6.7						
WRA	Warramunga Arr	31.49	249	P	P	08 08 38.6	-1.6
	1.6nm,0.8s,baz=80,slow=8.9,SNR=4.7						
ASAR	Alice Springs	32.83	243	P	P	08 08 50.5	-1.4
	3.3nm,0.8s,baz=65,slow=10,SNR=13						
QSPA	South Pole Qui	79.17	180	P	P	08 14 22.4	-0.2
	2.0nm,0.9s,baz=11,slow=3.9,SNR=4.0						
ILAR	Eielson Array	83.33	19	P	P	08 14 45.0	+0.5
	1.7nm,0.6s,baz=238,slow=5.2,SNR=20						
NVAR	Mina Array Bea	85.94	50	P	P	08 14 58.2	-0.3
	1.0nm,0.7s,baz=237,slow=5.1,SNR=4.9						
PDAR	Pinedale Array	93.46	47	P	P	08 15 34.1	+0.2
	0.3nm,0.7s,baz=238,slow=5.2,SNR=3.4						
YKA	Yellowknife Ar	94.82	27	P	P	08 15 37.5	-1.7
	0.4nm,0.7s,baz=259,slow=4.7,SNR=6.4						
TXAR	Lajitas Array	95.79	61	P	P	08 15 46.1	+1.4
	0.1nm,0.7s,baz=206,slow=6.0,SNR=2.1						

IDC ***06*** *08:03:29.8±1.4, 11°.10S×165°.56E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.8/38, mbtmp3.9/7, ML3.9/1, Error ellipse: s-maj=44.9km s-min=26.2km az=131.0*

ISCJB ***06*** *08:03:32.5±1.0, 11°.2S±0°.1×165°.5E±0°.2, h30km, mb3.8/6, Error ellipse: s-maj=27.8km s-min=18.6km az=6.7*

ISC 06 08:03:34.3±1.0**, 11°.1S**±0°.1×**165°.6E**±0°.2**, h30km, n7, σ0ˢ89**/7**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.90	176	Pn	Pn	08 06 08.6	+0.1
	0.8nm,0.3s,baz=331,slow=19,SNR=3.8						
WRA	Warramunga Arr	31.28	250	P	P	08 09 51.4	-0.5
	3.3nm,0.8s,baz=80,slow=8.8,SNR=6.9						
ASAR	Alice Springs	32.58	243	P	P	08 10 03.1	-0.3
	0.6nm,0.7s,baz=65,slow=9.9,SNR=3.3						
CMAR	Chiang Mai Arr	71.98	294	P	P	08 14 57.1	+1.3
	0.6nm,0.3s,baz=120,slow=5.3,SNR=3.5						
ILAR	Eielson Array	83.66	19	P	P	08 15 59.3	-0.4
	0.3nm,0.7s,baz=232,slow=5.0,SNR=2.3						
MKAR	Makanchi Array	93.47	317	P	P	08 16 46.4	-0.8
	0.4nm,0.8s,baz=97,slow=6.0,SNR=2.7						
YKA	Yellowknife Ar	95.14	27	P	P	08 16 54.8	+0.3
	0.1nm,0.6s,baz=265,slow=5.0,SNR=2.5						

IDC 06 08:04:04.5±1.7**, 10°.89S**×**165°.40E, h0km, mb3.8**/3**, mb1 4.1**/4**, mb1mx3.7**/38**, mbtmp3.9**/4**, ML3.9**/1**, Error ellipse: s-maj=53.8km s-min=31.1km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.17	175	Pn	Pn	08 06 46.0	+0.4
	0.8nm,0.3s,baz=321,slow=19,SNR=5.0						
WRA	Warramunga Arr	31.22	249	P	P	08 10 26.1	+0.1
	0.8nm,0.6s,baz=82,slow=9.3,SNR=3.7						
ASAR	Alice Springs	32.56	243	P	P	08 10 37.5	-0.2
	1.6nm,0.8s,baz=72,slow=9.7,SNR=4.5						
ILAR	Eielson Array	83.47	19	P	P	08 16 33.6	0.0
	0.3nm,0.6s,baz=234,slow=5.1,SNR=3.6						

IDC ***06*** *08:04:30.1±0.4, 15°.95S×172°.17W, h0km, mb4.8/24, mb1 4.9/24, mb1mx4.9/33, mbtmp4.8/24, MS4.5/4, Ms1 4.5/4, ms1mx3.9/38, Error ellipse: s-maj=18.6km s-min=12.7km az=132.0*

ISCJB ***06*** *08:04:34.8±0.1, 15°.98S±0°.04×172°.21W±0°.03, h41km, mb4.9/234, MS4.9/1, Error ellipse: s-maj=6.8km s-min=3.4km az=145.0*

NEIC ***06*** *08:04:34.0±2.6, 15°.96S×172°.24W, h24km±17km, mb5.0/200, Error ellipse: s-maj=5.8km s-min=3.2km az=145.0*

MOS ***06*** *08:04:34.9±1.5, 15°.83S×172°.23W, h33km, mb5.1/39, Error ellipse: s-maj=10.2km s-min=7.4km az=53.3*

ISC 06 08:04:36.2±0.3**, 16°.04S**±0°.07×**172°.12W**±0°.06**, h41km, n653, σ0ˢ93**/656**, mb4.9**/234**, 43C-31D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.67	146	*e*Pn	Pn	08 05 24.3	-6.2
MSVF	Nonsavu	9.56	258	*e*Pn	Pn	08 06 53.5	+2.0
MSVF	Nonsavu	9.56	258	*e*P	Pn	08 06 53.5	+2.0
RAR	Rarotonga	12.78	116	Pn	Pn	08 07 28.4	-7.0
	3.8nm,0.3s,baz=323,slow=5.1,SNR=3.4						
RAR				LR	LR	08 10 58.2	
	comp=Z,2μm,19.6s,baz=294,slow=30						
MARNC	Mare, Loyalty	19.56	251	*e*P	P	08 08 59.7	-0.9
	158nm,0.9s						
PINNC	Pines Island,	20.35	248	*e*P	P	08 09 07.3	-2.0
	51nm,1.1s						
DZM	Mont Dzumac	21.12	250	*e*LR	LR	08 14 40.8	
	comp=Z,4μm,27.1s						
DZM	Mont Dzumac	21.12	250	*e*P	P	08 09 16.1	-1.7
	33nm,1.1s						
DZM	Mont Dzumac	21.12	250	P	P	08 09 19.1	+1.3
	12nm,0.8s,baz=93,slow=18,SNR=4.5						
DZM				LR	LR	08 16 06.5	
	comp=Z,2μm,21.4s,baz=94,slow=33						
PPT	Papeete	21.63	97	LR	LR	08 15 12.7	
	comp=Z,599nm,21.0s,baz=258,slow=30						
PPT2	Papeete2	21.63	97	*e*LR	LR	08 14 04.7	
	comp=Z,2μm,27.8s,baz=275						
TBI	Tubuai	22.52	112	*e*LQ	LQ	08 13 38.9	
	2μm,29.5s						
TBI				*e*LR	LR	08 14 35.5	
	comp=Z,2μm,27.8s,baz=294						
OUZ	Omahuta	22.99	211	*e*P	P	08 09 37.3	-0.1
	38nm,1.0s						
URZ	Urewera	24.08	201	*e*P	P	08 09 49.0	+1.2
URZ				*e*P	P	08 09 49.3	+1.5
URZ				*e*S	S	08 14 01.9	-0.7
URZ	Urewera	24.08	201	P	P	08 09 49.0	+1.2
	27nm,0.6s,baz=121,slow=3.3,SNR=14						
URZ				S	S	08 14 01.9	-0.7
	11nm,1.0s,baz=12,slow=20,SNR=3.5						
HIZ	Hauiti	25.15	205	*e*P	P	08 09 58.1	+0.6
	82nm,1.2s						
THZ	Tophouse	28.70	204	*e*P	P	08 10 31.1	+1.6
	22nm,0.8s						
KHZ	Kahutara	29.03	202	*e*P	P	08 10 31.7	-0.6
	19nm,0.9s						
LTZ	Lake Taylor	29.82	203	*e*P	P	08 10 40.2	+0.8
	30nm,0.5s						
OXZ	Oxford	30.37	203	*e*P	P	08 10 43.2	-1.0
	32nm,0.6s						
RPZ	Rata Peaks	31.08	204	*e*P	P	08 10 50.9	+0.4
	26nm,0.9s						
RPZ				*e*P	P	08 10 54.8	+4.3
RPZ	Rata Peaks	31.08	204	P	P	08 10 54.7	+4.3
	18nm,0.9s,baz=15,slow=17,SNR=2.5						
TAOE	Nuku Hiva Isla	31.99	81	*e*LR	LR	08 18 59.9	
	comp=Z,1μm,27.6s						
RKT	Rikitea	35.62	107	*e*LR	LR	08 20 43.5	
	comp=Z,2μm,28.5s						
CTA	Charters Tower	39.71	258	P	P	08 12 03.8	-1.2
	4.5nm,0.8s,baz=99,slow=12,SNR=4.2						
KIP	Kipapa	39.72	21⇓	*e*P	P	08 12 04.9	+0.1
KIP				pmax	pmax		
	comp=Z,377nm,2.5s						
TOO	Toolangi	43.03	232	*e*P	P	08 12 31.4	-0.6
	comp=Z,35nm,1.0s						
TOO	Toolangi	43.03	232	*e*P	P	08 12 31.4	-0.6
TOO				pmax	pmax		
	comp=Z,35nm,1.0s						
COEN	Coen	43.18	267	*e*P	P	08 12 32.3	-1.1
	comp=Z,21nm,1.0s						
STKA	Stephens Creek	44.80	241	*e*P	P	08 12 45.2	-1.0
	comp=Z,2.2nm,0.8s						
STKA	Stephens Creek	44.80	241	*e*P	P	08 12 45.2	-1.0
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	44.80	241	P	P	08 12 44.8	-1.4
	comp=Z,14nm,1.0s,baz=100,slow=10,SNR=14						
BBOO	Buckleboo	49.57	240	*e*P	P	08 13 23.3	-0.1
	comp=Z,17nm,0.9s						
WB2	Warramunga Arr	50.89	257	*e*P	P	08 13 31.7	-1.9
WB2				*e*P	P	08 13 32.0	-1.6
WRAB	Tennant Creek	50.90	257	*e*P	P	08 13 31.8	-1.8
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	50.90	257⇑	*e*P	P	08 13 32.0	-1.6
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WR1	Warramunga Arr	50.91	257	*e*P	P	08 13 31.7	-2.0
	comp=Z,17nm,1.0s						
WRA	Warramunga Arr	50.91	257	P	P	08 13 31.7	-2.0
	comp=Z,5.9nm,0.8s,baz=92,slow=7.7,SNR=28						
AS01	Alice Springs	51.05	252	*e*P	P	08 13 33.4	-1.4
AS31	Alice Springs	51.09	252	*e*P	P	08 13 33.5	-1.6
	comp=Z,11nm,1.1s						
AS31				*e*S	S	08 20 48.9	-1.4
ASAR	Alice Springs	51.09	252	P	P	08 13 33.4	-1.7
	comp=Z,14nm,0.6s,baz=88,slow=8.1,SNR=119						
ASAR				S	S	08 20 48.9	-1.5
	comp=Z,0.5nm,0.7s,baz=87,slow=16,SNR=3.0						
FITZ	Fitzroy Crossi	59.29	258	*e*P	P	08 14 34.5	+0.2
	comp=Z,8.7nm,1.0s						
FITZ	Fitzroy Crossi	59.29	258	P	P	08 14 34.3	+0.1
	comp=Z,7.0nm,0.9s,baz=117,slow=9.1,SNR=6.6						
SOEI	Soe	62.13	267	*e*P	P	08 14 54.5	+0.7
	comp=Z,51nm,0.9s						
VNDA	Vanda	62.87	186	*e*P	P	08 14 59.0	+1.4
VNDA	Vanda	62.87	186	P	P	08 14 59.0	+1.4
	comp=Z,17nm,0.9s,baz=4.4,slow=7.4,SNR=12						
MBWA	Marble Bar	64.37	254	*e*P	P	08 15 08.6	+0.2
	comp=Z,23nm,1.1s						
NWAO	Narrogin (SRO)	65.39	241	P	P	08 15 15.2	+0.3
	comp=Z,5.6nm,0.7s,baz=19,slow=7.7,SNR=4.1						
MJAR	Matsushiro Arr	70.22	319	P	P	08 15 44.6	-0.5
	comp=Z,3.5nm,0.8s,baz=157,slow=5.3,SNR=6.1						
MAJO	Matsushiro	70.22	319	*e*P	P	08 15 44.6	-0.5
MAJO	Matsushiro	70.22	319⇑	*e*P	P	08 15 44.4	-0.7
MAJO				pmax	pmax		
	comp=Z,12nm,1.0s						
CASY	Casey	70.35	205	*e*P	P	08 15 45.9	+0.5
	comp=Z,15nm,1.1s						
KMRM	Mail Ridge	71.81	37	*e*P	P	08 15 55.5	+0.8
	comp=Z,36nm,0.8s						
VES	Vestal, Richgr	71.95	43	P	P	08 15 55.6	+0.1
	baz=234,SNR=5.7						
BFSC	Mount Baldy Ra	71.98	45	P	P	08 15 56.4	+0.4
	baz=235						
MONP2	Monument Peak	72.09	47	P	P	08 15 56.8	+0.1
	baz=237						
EDW2	Edwards Air Fo	72.12	44	P	P	08 15 56.9	+0.2
	baz=235						
JAGI	Jajag, Banyuwa	72.14	266	*e*P	P	08 15 56.5	-0.7
	comp=Z,88nm,1.1s						
IKP	In-Ko-Pah, Jac	72.17	47	P	P	08 15 57.5	+0.4
	baz=237						
ISA	Isabella, Lake	72.25	44	*e*P	P	08 15 57.5	0.0
	comp=Z,9.6nm,1.1s						
ISA				*e*S	S	08 25 17.2	-0.4
ISA	Isabella, Lake	72.25	44	*e*P	P	08 15 57.5	0.0
ISA				*e*S	S	08 25 17.2	-0.4
ISA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ISA	Isabella, Lake	72.25	44	P	P	08 15 58.0	+0.5
	baz=234						
O02D	Mt. Diablo Mer	72.32	38	P	P	08 15 58.5	+0.7
	baz=230						
CMB	Columbia Colle	72.43	41	*e*P	P	08 15 58.5	+0.1
	comp=Z,13nm,1.0s						
CMB	Columbia Colle	72.43	41	*e*P	P	08 15 58.5	+0.1
CMB				pmax	pmax		
	comp=Z,13nm,1.0s						
PFO	Pinyon Flats O	72.46	46	P	P	08 15 58.4	-0.4
	baz=236						
SWSC	Sam W. Stewart	72.55	47	P	P	08 15 59.4	+0.2
	baz=237						
AFDM	Forest Hills D	72.63	40	*e*P	P	08 15 57.1	-2.5
	comp=Z,12nm,1.1s						
LRMC	Laurel Mtn Rad	72.67	44	P	P	08 16 00.5	+0.4
	baz=235						
ORV	Oroville	72.69	39	*e*P	P	08 15 59.5	-0.4
	comp=Z,8.9nm,1.1s						
ORV	Oroville	72.69	39	*e*P	P	08 15 59.5	-0.4
ORV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WDC	Whiskeytown Da	72.72	37	*e*P	P	08 16 00.5	+0.4
	comp=Z,2.2nm,0.8s						
WDC	Whiskeytown Da	72.72	37	*e*P	P	08 16 00.5	+0.4
WDC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
N02D	Trinity Center	72.88	37	P	P	08 16 01.4	+0.4
	baz=230						
CWC	Cottonwood Cre	72.96	43	P	P	08 16 01.8	0.0
	baz=234						
O03E	Paynes Creek	72.97	38	P	P	08 16 01.5	-0.1
	baz=231						
BELC	Belle Mtn. Jos	72.99	46	P	P	08 16 02.0	0.0
	baz=237						
MDPB	Devils Postpil	73.02	42	*e*P	P	08 16 02.0	-0.2
	comp=Z,9.5nm,1.0s						
OMMB	Old Mammoth Mi	73.06	42	*e*P	P	08 16 02.7	+0.2
	comp=Z,3.3nm,0.9s						
M02C	Callahan	73.06	37	P	P	08 16 02.7	+0.5
	baz=230						
MPMC	Manual Prospec	73.13	44	P	P	08 16 02.4	-0.4
	baz=235,SNR=13						
GSC	Goldstone, Bar	73.16	45	*e*P	P	08 16 03.3	+0.4
	comp=Z,2.7nm,1.1s						
GSC	Goldstone, Bar	73.16	45	P	P	08 16 02.9	0.0
	baz=236						
BC3	Big Chuckawall	73.18	47	P	P	08 16 03.3	+0.3
	baz=237						
DAC	Darwin (Calif)	73.19	43	*e*P	P	08 16 02.2	-1.0
	comp=Z,4.5nm,1.0s						
DAC	Darwin (Calif)	73.19	43	*e*P	P	08 16 02.2	-1.0
DAC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HEC	Hector,Ludlow	73.22	45	P	P	08 16 03.6	+0.3
	baz=236						
TIN	Tinemaha, Big	73.22	42	P	P	08 16 03.6	+0.4
	baz=234						
GLA	Glamis	73.30	48	P	P	08 16 04.5	+0.8
	baz=238						
WAKR	Walker	73.31	41	*e*P	P	08 16 03.9	+0.1
	comp=Z,15nm,1.2s						
K02D	Willamette Mer	73.46	35	P	P	08 16 05.0	+0.5
	baz=229						
PNTR	Pine Nut	73.56	40	*e*P	P	08 16 04.8	-0.5
	comp=Z,18nm,1.0s						
BEKR	Beckworth	73.57	39	*e*P	P	08 16 05.9	+0.6
	comp=Z,17nm,1.1s						
PETK	Petropavlovsk-	73.62	342	P	P	08 16 04.7	-0.4
	comp=Z,8.3nm,0.8s,baz=151,slow=11,SNR=6.9						
J01E	Myrtle Point	73.62	35	P	P	08 16 06.6	+1.3
	baz=228						
PEA1	Petropavlovsk-	73.62	342	*e*P	P	08 16 04.7	-0.4
GMRC	Granite Mounta	73.66	46	P	P	08 16 06.2	+0.4
	baz=237						
VCNR	Virginia City	73.66	40	*e*P	P	08 16 06.4	+0.5
	comp=Z,12nm,1.0s						
IRM	Iron Mountain	73.67	46	P	P	08 16 06.1	+0.2
	baz=237						
YERR	Yerington	73.72	40	*e*P	P	08 16 06.8	+0.5
	comp=Z,15nm,1.1s						
GRAC	Grapevine Rang	73.75	43	P	P	08 16 06.6	+0.3
	baz=235,SNR=7.4						
FURC	Furnace Creek,	73.78	44	P	P	08 16 06.9	+0.5
	baz=235						
TUQ	Turquoise Moun	73.83	45	P	P	08 16 07.3	+0.4
	baz=236						
SHOC	Shoshone, Teco	73.85	44	P	P	08 16 07.4	+0.6
	baz=236						
Y12C	Blythe	73.89	47	P	P	08 16 07.4	+0.3
	baz=238						
M04C	Macdoel	73.90	37	P	P	08 16 07.7	+0.5
	baz=230						
L04D	Klamath Falls	73.91	36	P	P	08 16 07.6	+0.4
	baz=230						
RYN	Ryan	73.96	41	*e*P	P	08 16 08.3	+0.7
	comp=Z,7.7nm,1.0s						
NV01	Mina Array Sit	73.98	41	*e*P	P	08 16 07.3	-0.5
NVAR	Mina Array Bea	73.98	41	P	P	08 16 08.1	+0.3
	comp=Z,11nm,0.9s,baz=227,slow=9.8,SNR=30						
QSPA	South Pole Qui	74.01	180	*e*P	P	08 16 08.3	+0.8
	comp=Z,50nm,0.9s						
QSPA				*e*P	P	08 16 08.4	+0.9
QSPA	South Pole Qui	74.01	180	P	P	08 16 08.4	+0.9
	comp=Z,45nm,1.0s,baz=40,slow=1.4,SNR=54						
PAHR	Pah Rah Range	74.07	40	*e*P	P	08 16 08.2	0.0
	comp=Z,12nm,1.0s						
NV11	Mina Array Sit	74.08	41	*e*P	P	08 16 08.4	+0.1
	comp=Z,1.3nm,1.1s						
214A	Organ Pipe Nat	74.18	49	P	P	08 16 09.0	+0.2
	baz=239						
LDFC	Landfair	74.19	46	*e*P	P	08 16 09.5	+0.5
	comp=Z,10nm,1.0s						
KKM	Kota Kinabalu	74.22	281	*e*P	P	08 16 09.8	+0.3
	comp=Z,40nm,1.0s						
PDMCI	Parker Dam,Lak	74.45	47	P	P	08 16 10.5	+0.2
	baz=238						
TPNV	Topopah Spring	74.46	43	*e*P	P	08 16 09.8	-0.8
	comp=Z,7.6nm,1.0s						
TPNV	Topopah Spring	74.46	43	*e*P	P	08 16 09.8	-0.8
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TPNV	Topopah Spring	74.46	43	P	P	08 16 11.0	+0.4
	baz=236						
KVN	Kaiserville	74.48	41	*e*P	P	08 16 11.1	+0.5
	comp=Z,14nm,1.1s						
KVN	Kaiserville	74.48	41	*e*P	P	08 16 11.1	+0.5
KVN				pmax	pmax		
	comp=Z,14nm,1.1s						
K04D	Chiloquin, OR	74.48	36	P	P	08 16 11.4	+0.9
	baz=230						
YSS	Yuzh-Sakhalins	74.65	330	*e*P	P	08 16 11.2	0.0
	comp=Z,20nm,0.8s						
YSS	Yuzh-Sakhalins	74.65	330⇓	*e*P	P	08 16 10.4	-0.8
YSS				*e*		08 16 15.7	
YSS				*e*		08 16 27.8	
YSS				pmax	pmax		
	comp=Z,160nm,0.8s						
J04D	Umpqua Nationa	74.68	35	P	P	08 16 12.2	+0.5
	baz=230						
MOD	Modoc Plateau	74.86	37	*e*P	P	08 16 12.2	-0.6
	comp=Z,22nm,0.9s						
I04A	Tendick Farm,	74.87	35	P	P	08 16 13.4	+0.8
	baz=230						
SHPR	Sheep Range	74.94	44	*e*P	P	08 16 14.2	+0.8
	comp=Z,12nm,1.1s						
W13A	Hualapai Mount	75.05	46	*e*P	P	08 16 14.9	+0.8
	comp=Z,5.5nm,1.0s						
Y14A	Wickenburg	75.06	48	*e*P	P	08 16 14.1	+0.1
	comp=Z,4.9nm,0.8s						
J05D	Fort Rock, OR	75.20	36	P	P	08 16 15.3	+0.6
	baz=230						
KDAK	Kodiak Island	75.31	11	*e*P	P	08 16 15.0	+0.3
	comp=Z,36nm,0.9s						
KDAK	Kodiak Island	75.31	11	*i* P	P	08 16 14.6	-0.1
R11A	Troy Canyon, C	75.68	43	*e*P	P	08 16 17.7	+0.1
	comp=Z,2.6nm,1.1s						
R11A	Troy Canyon, C	75.68	43	P	P	08 16 17.3	-0.3
	baz=236,SNR=8.6						
I05D	Terrebonne, OR	75.81	35	P	P	08 16 18.6	+0.5
	baz=230						
TUC	Tucson	75.84	50	*e*P	P	08 16 19.1	+0.6
	comp=Z,11nm,1.1s						
TUC	Tucson	75.84	50	*e*P	P	08 16 19.1	+0.6
TUC				pmax	pmax		
	comp=Z,11nm,1.1s						
TUC	Tucson	75.84	50	P	P	08 16 19.2	+0.6
	baz=240						
F04D	Rainier, OR	76.05	33	P	P	08 16 20.5	+1.2
	baz=229						
WVOR	Wild Horse Val	76.17	38	*e*P	P	08 16 19.9	-0.3
	comp=Z,15nm,1.0s						
WVOR	Wild Horse Val	76.17	38	*e*P	P	08 16 19.9	-0.3
WVOR				pmax	pmax		
	comp=Z,15nm,1.0s						
G05D	Wamic, OR	76.41	34	P	P	08 16 22.2	+0.8
	baz=230						
X16A	Lo Mia Camp, P	76.42	48	*e*P	P	08 16 23.0	+1.1
	comp=Z,10nm,1.1s						
LCMT	Little Creek M	76.51	45	*e*P	P	08 16 23.1	+0.8
	comp=Z,3.6nm,0.9s						
319A	Douglas	76.51	51	*e*P	P	08 16 23.1	+0.7
	comp=Z,25nm,1.0s						
E04D	Cinebar	76.60	33	P	P	08 16 23.3	+0.9
	baz=229						
I07A	Izee	76.68	36	*e*P	P	08 16 23.9	+0.8
	comp=Z,18nm,1.0s						
CCUT	Cedar City	76.71	44	*e*P	P	08 16 24.7	+1.1
	comp=Z,9.7nm,1.1s						
F05D	White Salmon	76.74	34	P	P	08 16 23.7	+0.5
	baz=230						
KNB	Kanab	76.80	45	*e*P	P	08 16 25.1	+1.1
	comp=Z,4.4nm,1.0s						
KNB	Kanab	76.80	45	*e*P	P	08 16 25.1	+1.1
KNB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
J08A	Circle Bar Ran	76.82	37	*e*P	P	08 16 24.6	+0.7
	comp=Z,20nm,1.0s						
U15A	North Rim	76.85	46	*e*P	P	08 16 25.6	+1.1
	comp=Z,3.4nm,1.1s						
PSUT	Pine Spring	76.92	43	*e*P	P	08 16 24.4	-0.2
	comp=Z,6.0nm,0.9s						
SZCU	Shurtz Canyon	76.92	44	*e*P	P	08 16 25.8	+1.1
	comp=Z,8.1nm,1.2s						
SBUM	Sibu	76.93	276	*e*P	P	08 16 26.2	+1.2
	comp=Z,9.3nm,1.0s						
D03D	Eldon	76.98	32	P	P	08 16 24.8	+0.3
	baz=228						
WUAZ	Wupatki	77.02	47	*e*P	P	08 16 25.7	+0.5
	comp=Z,2.8nm,0.8s						
WUAZ	Wupatki	77.02	47	P	P	08 16 25.5	+0.3
	baz=239						
ELK	Elko	77.25	41	*e*P	P	08 16 26.6	+0.2
	comp=Z,12nm,1.1s						
ELK	Elko	77.25	41	*e*P	P	08 16 26.7	+0.2
ELK				pmax	pmax		
	comp=Z,12nm,1.1s						
HPIG		77.33	57	*e*P	P	08 16 27.5	+0.3
	comp=Z,11nm,1.1s						
PKCU	Pink Cliffs	77.37	45	*e*P	P	08 16 28.2	+0.9
	comp=Z,16nm,1.2s						
BRLK	Bradley Lake	77.48	11	*e*P	P	08 16 27.2	+0.1
	comp=Z,47nm,1.2s						
KSRS	Korea Array	77.48	315	P	P	08 16 29.0	+1.5
KSRS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSRS	Korea Array	77.48	315	P	P	08 16 29.0	+1.5
	comp=Z,6.6nm,1.0s,baz=125,slow=6.1,SNR=15						
TYV	Tymovskoe	77.48	333	*e*P	P	08 16 26.9	-0.3
TYV				pmax	pmax		
	comp=Z,14nm,1.1s						
KS15	Wonju Array Si	77.50	315	*e*P	P	08 16 29.0	+1.4
KSAR	Wonju Array Be	77.50	315	P	P	08 16 29.0	+1.4
KSAR	Wonju Array Be	77.50	315	P	P	08 16 29.0	+1.4
KS01	Wonju Array Si	77.51	315	*e*P	P	08 16 28.7	+1.0
X18A	Snowflake	77.54	48	*e*P	P	08 16 28.2	0.0
	comp=Z,4.9nm,1.0s						
G08A	Pilot Rock	77.73	35	*e*P	P	08 16 26.6	-2.3
	comp=Z,18nm,1.1s						
MTPU	Mount Pierson	77.77	44	*e*P	P	08 16 30.9	+1.3
	comp=Z,23nm,1.1s						
TCRU	Three Creeks R	77.89	44	*e*P	P	08 16 31.5	+1.4
	comp=Z,12nm,0.9s						
A04D	Lummi Island	77.96	31	P	P	08 16 30.5	+0.6
	baz=228						
B05A	Bryant	77.96	32	P	P	08 16 30.3	+0.3
	baz=229						
W18A	Petrified Fore	77.98	48	*e*P	P	08 16 31.2	+0.5
	comp=Z,6.1nm,0.9s						
W18A	Petrified Fore	77.98	48	P	P	08 16 30.8	+0.2
	baz=241						
SVW2	Sparrevohn	78.00	8	*e*P	P	08 16 29.2	-0.7
	comp=Z,14nm,1.0s						
MSU	Marysvale	78.02	44	*e*P	P	08 16 32.3	+1.5
LTY	Liberty	78.04	33	*e*P	P	08 16 30.6	+0.1
	comp=Z,6.8nm,0.9s						
HAWA	Hanford	78.10	34	*e*P	P	08 16 31.5	+0.7
121A	Cookes Peak, D	78.18	51	P	P	08 16 31.9	+0.1
	baz=242,SNR=11						
C06D	Leavenworth	78.35	32	P	P	08 16 32.4	+0.3
	baz=230						
BMO	Blue Mountains	78.39	36	*e*P	P	08 16 30.3	-2.3
	comp=Z,8.2nm,0.9s						
BMO	Blue Mountains	78.39	36	*e*P	P	08 16 30.3	-2.3
BMO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MFID	Camas Ranch	78.41	38	*e*P	P	08 16 31.8	-1.0
	comp=Z,9.3nm,0.9s						
E08A	Dider Farm, El	78.42	34	*e*P	P	08 16 31.8	-0.7
	comp=Z,10nm,1.1s						
KSM	Kuching	78.47	275	*e*P	P	08 16 32.8	-0.8
	comp=Z,94nm,1.1s						
DUG	Dugway, Tooele	78.49	42	*e*P	P	08 16 33.8	+0.5
	comp=Z,9.8nm,1.0s						
DUG	Dugway, Tooele	78.49	42	*e*P	P	08 16 33.8	+0.5
DUG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DUG	Dugway, Tooele	78.49	42	P	P	08 16 33.3	-0.1
	baz=238,SNR=12						
USRK	Ussuriysk Ar.	78.64	323	P	P	08 16 34.2	+0.5
	comp=Z,4.3nm,1.0s,baz=108,slow=5.5,SNR=5.0						
LEM	Lembang	78.82	266	P	P	08 16 36.4	+0.7
	comp=Z,40nm,0.7s,baz=103,slow=5.1,SNR=8.7						
D08A	Wollman Farm,	78.84	34	*e*P	P	08 16 35.0	+0.1
	comp=Z,17nm,1.0s						
NLU	North Lily Min	78.84	43	*e*P	P	08 16 36.1	+0.8
	comp=Z,8.4nm,1.2s						
Q16A	Castle Valley	78.90	44	*e*P	P	08 16 35.8	+0.1
	comp=Z,15nm,1.1s						
RC01	Rabbit Creek A	78.92	11	*e*P	P	08 16 32.8	-2.2
	comp=Z,28nm,1.0s						
E09A	Wood Farm, Sta	78.93	35	*e*P	P	08 16 35.7	+0.3
	comp=Z,9.7nm,0.9s						
TMUT	Trail Mountain	79.07	44	*e*P	P	08 16 37.6	+0.9
	comp=Z,31nm,1.0s						
SUA	Susitna One	79.10	10	*e*P	P	08 16 35.3	-0.7
	comp=Z,25nm,0.8s						
F10A	Beach Ranch, E	79.11	36	*e*P	P	08 16 36.5	+0.1
	comp=Z,16nm,0.9s						
MPU	Maple Canyon	79.16	43	*e*P	P	08 16 37.2	+0.2
	comp=Z,14nm,1.1s						
GLI	Glacier Island	79.24	12	*e*P	P	08 16 36.5	-0.2
	comp=Z,57nm,0.9s						

SPUT	**South Promonto**	**79.32**	**41**	*e*P	**P**	**08 16 38.5**	**+0.6**
	comp=Z,4.7nm,1.1s						
HLID	**Hailey**	**79.34**	**39**	*e*P	**P**	**08 16 38.4**	**+0.5**
	comp=Z,16nm,1.0s						
HLID	**Hailey**	**79.34**	**39**	P	**P**	**08 16 38.4**	**+0.5**
	baz=236,SNR=22						
HVU	**Hansel Valley**	**79.37**	**41**	*e*P	**P**	**08 16 38.2**	**+0.1**
	comp=Z,12nm,1.0s						
SRU	**San Rafael Swe**	**79.43**	**44**	*e*P	**P**	**08 16 39.3**	**+0.8**
	comp=Z,26nm,1.2s						
SRU	**San Rafael Swe**	**79.43**	**44**	*e*P	**P**	**08 16 39.3**	**+0.8**
SRU				pmax	pmax		
	comp=Z,26nm,1.2s						
B08A	**Colville Reser**	**79.44**	**33**	*e*P	**P**	**08 16 36.3**	**-1.9**
	comp=Z,14nm,1.0s						
KNK	**Knik Glacier**	**79.46**	**11**	*e*P	**P**	**08 16 36.5**	**-1.4**
	comp=Z,29nm,0.9s						
P17A	**Butcher Ranch,**	**79.47**	**44**	*e*P	**P**	**08 16 39.9**	**+1.2**
	comp=Z,26nm,1.1s						
PMR	**Palmer**	**79.50**	**11**	*e*P	**P**	**08 16 37.5**	**-0.6**
	comp=Z,36nm,1.2s						
PMR	**Palmer**	**79.50**	**11**	*e*P	**P**	**08 16 37.5**	**-0.6**
PMR				pmax	pmax		
	comp=Z,36nm,1.2s						
LAZ	**Ladron**	**79.52**	**50**	*e*P	**P**	**08 16 39.5**	**+0.3**
LENM	**Lemitar**	**79.53**	**50**	*e*P	**P**	**08 16 40.1**	**+0.9**
JLU	**Jordanelle**	**79.59**	**42**	*e*P	**P**	**08 16 40.1**	**+0.6**
	comp=Z,18nm,1.1s						
LLLB	**Lillooet**	**79.61**	**30**	*e*P	**P**	**08 16 38.9**	**-0.2**
	comp=Z,20nm,1.0s						
MNTX	**Cornudas Mount**	**79.62**	**53**	*e*P	**P**	**08 16 40.0**	**+0.4**
	comp=Z,26nm,1.1s						
MNTX	**Cornudas Mount**	**79.62**	**53**	P	**P**	**08 16 40.1**	**+0.6**
	baz=244,SNR=32						
C09A	**Chrisman Ranch**	**79.65**	**34**	*e*P	**P**	**08 16 39.6**	**+0.3**
	comp=Z,11nm,0.8s						
DIV	**Divide**	**79.74**	**13**	*e*P	**P**	**08 16 39.6**	**+0.1**
	comp=Z,52nm,0.8s						
BNM	**Barren Site**	**79.78**	**50**	*e*P	**P**	**08 16 41.3**	**+0.7**
SML	**Sawmill**	**79.85**	**11**	*e*P	**P**	**08 16 40.0**	**-0.1**
	comp=Z,20nm,1.2s						
SML	**Sawmill**	**79.85**	**11**	*e*P	**P**	**08 16 40.0**	**-0.1**
SML				pmax	pmax		
	comp=Z,20nm,1.2s						
MVCO	**Mesa Verde**	**79.88**	**47**	*e*P	**P**	**08 16 40.7**	**-0.3**
	comp=Z,3.8nm,0.9s						
MVCO	**Mesa Verde**	**79.88**	**47**	P	**P**	**08 16 40.8**	**-0.2**
	baz=241						
PV05	**Paradox Valley**	**79.88**	**46**	*e*P	**P**	**08 16 42.6**	**+1.5**
	comp=Z,28nm,1.1s						
TCUT	**Toone Canyon**	**79.89**	**42**	*e*P	**P**	**08 16 42.0**	**+0.9**
	comp=Z,61nm,1.0s						
TX31	**Lajitas Ar. Si**	**79.94**	**56**	*e*P	**P**	**08 16 42.0**	**+0.6**
TX31				*e*P	**P**	**08 16 42.3**	**+0.8**
LTX	**Lajitas**	**79.94**	**56**	*e*P	**P**	**08 16 42.2**	**+0.8**
LTX	**Lajitas**	**79.94**	**56**	*e*P	**P**	**08 16 42.3**	**+0.8**
TXAR	**Lajitas Array**	**79.94**	**56**	P	**P**	**08 16 42.2**	**+0.8**
	comp=Z,9.5nm,1.0s,baz=218,slow=7.8,SNR=54						
KLU	**Klutina**	**80.03**	**12**	*e*P	**P**	**08 16 41.2**	**0.0**
	comp=Z,23nm,1.0s						
PV09	**Paradox Valley**	**80.06**	**45**	*e*P	**P**	**08 16 42.8**	**+0.6**
PV19	**Morning Glory**	**80.08**	**45**	*e*P	**P**	**08 16 43.0**	**+1.0**
	comp=Z,24nm,1.0s						
PV17	**East Wray Mesa**	**80.08**	**45**	*e*P	**P**	**08 16 42.5**	**+0.4**
	comp=Z,12nm,0.9s						
PV14	**Lion Creek, Pa**	**80.08**	**45**	*e*P	**P**	**08 16 43.0**	**+0.8**
	comp=Z,24nm,1.0s						
PV20	**West Nyswonger**	**80.10**	**45**	*e*P	**P**	**08 16 43.0**	**+0.8**
	comp=Z,12nm,0.9s						
PV13	**Radium Mtn., P**	**80.11**	**46**	*e*P	**P**	**08 16 42.0**	**-0.3**
	comp=Z,17nm,1.1s						
PV16	**Nyswonger Mesa**	**80.12**	**45**	*e*P	**P**	**08 16 43.2**	**+0.8**
	comp=Z,11nm,1.1s						
PV23	**Carpenter Ridg**	**80.12**	**45**	*e*P	**P**	**08 16 43.4**	**+0.9**
	comp=Z,28nm,0.9s						
PV03	**Paradox Valley**	**80.14**	**46**	*e*P	**P**	**08 16 43.2**	**+0.7**
	comp=Z,17nm,1.1s						
PV11	**David Mesa, Pa**	**80.14**	**45**	*e*P	**P**	**08 16 43.2**	**+0.8**
	comp=Z,17nm,1.1s						
PV04	**Paradox Valley**	**80.17**	**45**	*e*P	**P**	**08 16 43.5**	**+1.0**
	comp=Z,21nm,1.0s						
PV02	**Paradox Valley**	**80.19**	**46**	*e*P	**P**	**08 16 42.2**	**-0.6**
	comp=Z,19nm,1.0s						
PV12	**Saucer Basin,**	**80.20**	**45**	*e*P	**P**	**08 16 43.0**	**+0.3**
	comp=Z,17nm,1.0s						
PV21	**Cone Mtn., Par**	**80.20**	**45**	*e*P	**P**	**08 16 43.2**	**+0.4**
	comp=Z,21nm,0.9s						
ANMO	**Albuquerque**	**80.27**	**49**	*e*P	**P**	**08 16 43.7**	**+0.5**
	comp=Z,9.1nm,0.9s						
ANMO	**Albuquerque**	**80.27**	**49**	⇓*i*P	**P**	**08 16 43.4**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,17nm,1.3s						
ANMO	**Albuquerque**	**80.27**	**49**	P	**P**	**08 16 44.0**	**+0.8**
	baz=243						
PV01	**Paradox Valley**	**80.27**	**46**	*e*P	**P**	**08 16 43.0**	**-0.2**
	comp=Z,20nm,1.0s						
PV07	**Paradox Valley**	**80.37**	**45**	*e*P	**P**	**08 16 44.5**	**+0.8**
	comp=Z,10nm,0.9s						
PV15	**Paradox Valley**	**80.44**	**46**	*e*P	**P**	**08 16 43.8**	**-0.3**
	comp=Z,15nm,0.9s						
ANM	**Nome**	**80.52**	**3**	*e*P	**P**	**08 16 44.6**	**+1.1**
	comp=Z,14nm,1.1s						
ANM	**Nome**	**80.52**	**3**	*e*P	**P**	**08 16 44.6**	**+1.1**
ANM				pmax	pmax		
	comp=Z,14nm,1.1s						
GDL2	**Guadalupe Moun**	**80.62**	**53**	*e*P	**P**	**08 16 45.5**	**+0.4**
CAST	**Castle Rocks**	**80.72**	**9**	*e*P	**P**	**08 16 42.8**	**-2.0**
	comp=Z,12nm,1.0s						
AHID	**Auburn Hatcher**	**80.94**	**41**	*e*P	**P**	**08 16 46.9**	**+0.2**
	comp=Z,13nm,0.8s						
SKAG	**Skagway**	**80.95**	**18**	*e*P	**P**	**08 16 46.5**	**+0.6**
	comp=Z,22nm,1.2s						
MCMT	**McKenzie Canyo**	**80.98**	**38**	*e*P	**P**	**08 16 47.6**	**+0.8**
HARP	**HAARP**	**81.02**	**12**	*e*P	**P**	**08 16 46.7**	**+0.3**
	comp=Z,32nm,1.0s						
TRF	**Thorofare Moun**	**81.03**	**10**	*e*P	**P**	**08 16 46.2**	**-0.4**
	comp=Z,34nm,1.0s						
MA2	**Magadan**	**81.15**	**342**	⇓*e*P	**P**	**08 16 44.7**	**-2.3**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DHY	**Denali Highway**	**81.19**	**11**	*e*P	**P**	**08 16 47.3**	**-0.1**
	comp=Z,24nm,1.1s						
RND	**Reindeer**	**81.23**	**10**	*e*P	**P**	**08 16 46.9**	**-0.6**
	comp=Z,45nm,1.0s						
RND	**Reindeer**	**81.23**	**10**	*e*P	**P**	**08 16 46.9**	**-0.6**
RND				pmax	pmax		
	comp=Z,45nm,1.0s						
S22A	**4UR Ranch, Cre**	**81.30**	**47**	*e*P	**P**	**08 16 49.3**	**+0.6**
	comp=Z,15nm,0.9s						
S22A	**4UR Ranch, Cre**	**81.30**	**47**	P	**P**	**08 16 49.4**	**+0.7**
	baz=242,SNR=22						
REDW	**Red Top Meadow**	**81.41**	**40**	*e*P	**P**	**08 16 49.8**	**+0.6**
	comp=Z,11nm,1.1s						
TPAW	**Teton Pass**	**81.42**	**40**	*e*P	**P**	**08 16 47.7**	**-1.5**
	comp=Z,14nm,0.9s						
DLMT	**Dillon**	**81.42**	**38**	*e*P	**P**	**08 16 49.8**	**+0.7**
	comp=Z,8.5nm,1.0s						
FXWY	**Fox Creek**	**81.45**	**40**	*e*P	**P**	**08 16 48.8**	**-0.5**
	comp=Z,10.0nm,1.1s						
MSO	**Missoula**	**81.46**	**36**	*e*P	**P**	**08 16 48.0**	**-1.1**
	comp=Z,7.4nm,1.0s						
MSO	**Missoula**	**81.46**	**36**	P	**P**	**08 16 48.5**	**-0.6**
	baz=236,SNR=6.5						
HYT	**Haines Junctio**	**81.47**	**16**	*e*P	**P**	**08 16 49.7**	**+0.9**
	comp=Z,30nm,1.1s						
O20A	**White River Ci**	**81.47**	**44**	*e*P	**P**	**08 16 49.8**	**+0.3**
	comp=Z,8.1nm,1.0s						
O20A	**White River Ci**	**81.47**	**44**	P	**P**	**08 16 49.2**	**-0.2**
	baz=241						
MCK	**McKinley**	**81.52**	**10**	*e*P	**P**	**08 16 48.6**	**-0.4**
	comp=Z,71nm,1.0s						
MCK	**McKinley**	**81.52**	**10**	*e*P	**P**	**08 16 48.6**	**-0.4**
MCK				pmax	pmax		
	comp=Z,71nm,1.0s						
SNOW	**Snow King Moun**	**81.53**	**40**	*e*P	**P**	**08 16 50.5**	**+0.8**
	comp=Z,15nm,0.9s						
BPAW	**Bear Paw Mtn.**	**81.53**	**9**	*e*P	**P**	**08 16 48.1**	**-0.9**
	comp=Z,13nm,1.1s						
NJ2	**Nanjing**	**81.53**	**307**	*e*P	**P**	**08 16 49.9**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LNIG	**Linares**	**81.64**	**61**	*e*P	**P**	**08 16 50.2**	**-0.3**
	comp=Z,17nm,0.9s						
IMW	**Indian Meadow**	**81.64**	**40**	*e*P	**P**	**08 16 51.1**	**+0.7**
	comp=Z,12nm,1.1s						
MOOW	**Moose Ponds**	**81.68**	**40**	*e*P	**P**	**08 16 51.0**	**+0.5**
	comp=Z,1.5nm,0.9s						
LOHW	**Long Hollow**	**81.70**	**40**	*e*P	**P**	**08 16 50.8**	**+0.2**
	comp=Z,4.8nm,1.1s						
KLR	**Kul'dur**	**81.72**	**327**	⇓*i*P	**P**	**08 16 50.3**	**0.0**
KLR	**Kul'dur**	**81.72**	**327**	P	**P**	**08 16 49.9**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=94,slow=4.3,SNR=8.1						
QLMT	**Earthquake Lak**	**81.83**	**39**	*e*P	**P**	**08 16 52.6**	**+1.3**
BWN	**Browne**	**81.84**	**10**	*e*P	**P**	**08 16 50.5**	**-0.1**
	comp=Z,73nm,1.0s						
SMCO	**Snowmass**	**81.87**	**45**	*e*P	**P**	**08 16 52.4**	**+0.6**
	comp=Z,15nm,1.1s						
FLWY	**Flagg Ranch**	**81.88**	**40**	*e*P	**P**	**08 16 52.7**	**+1.1**
	comp=Z,25nm,1.1s						
YPP	**Pitchstone Pla**	**81.92**	**40**	*e*P	**P**	**08 16 52.1**	**+0.3**
	comp=Z,3.6nm,1.2s						
BW06	**Boulder Array**	**81.92**	**41**	*e*P	**P**	**08 16 51.9**	**+0.1**
	comp=Z,9.2nm,1.1s						
BW06	**Boulder Array**	**81.92**	**41**	P	**P**	**08 16 51.6**	**-0.2**
	baz=240,SNR=7.5						
PD31	**Pinedale Array**	**81.92**	**41**	*e*P	**P**	**08 16 51.9**	**+0.1**
PDAR	**Pinedale Array**	**81.92**	**41**	*e*P	**P**	**08 16 51.3**	**-0.5**
PDAR	**Pinedale Array**	**81.92**	**41**	P	**P**	**08 16 51.8**	**-0.1**
	comp=Z,5.7nm,1.0s,baz=207,slow=3.0,SNR=22						
YHB	**Horse Butte**	**81.93**	**39**	*e*P	**P**	**08 16 52.2**	**+0.4**
	comp=Z,19nm,1.0s						
YMR	**Madison River**	**82.03**	**39**	*e*P	**P**	**08 16 53.2**	**+0.8**
	comp=Z,13nm,1.1s						
BOZ	**Bozeman (W)**	**82.12**	**38**	*e*P	**P**	**08 16 53.4**	**+0.7**
	comp=Z,6.9nm,1.0s						
BOZ	**Bozeman (W)**	**82.12**	**38**	*e*P	**P**	**08 16 53.4**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOZ	**Bozeman (W)**	**82.12**	**38**	P	**P**	**08 16 53.1**	**+0.3**
	baz=238,SNR=12						
H17A	**Grant Village**	**82.12**	**40**	*e*P	**P**	**08 16 53.3**	**+0.4**
	comp=Z,5.5nm,1.1s						
H17A	**Grant Village**	**82.12**	**40**	P	**P**	**08 16 54.2**	**+1.3**
	baz=239,SNR=5.2						
YNR	**Norris Junctio**	**82.23**	**39**	*e*P	**P**	**08 16 54.4**	**+0.9**
	comp=Z,9.4nm,1.2s						
SDCO	**Great Sand Dun**	**82.23**	**47**	*e*P	**P**	**08 16 53.1**	**-0.5**
	comp=Z,4.9nm,1.0s						
SDCO	**Great Sand Dun**	**82.23**	**47**	P	**P**	**08 16 54.0**	**+0.3**
	baz=243,SNR=11						
RIDG	**Independ'e Rid**	**82.28**	**12**	*e*P	**P**	**08 16 53.2**	**+0.2**
	comp=Z,38nm,1.2s						
LKWY	**Lake**	**82.32**	**39**	*e*P	**P**	**08 16 56.1**	**+2.1**
	comp=Z,20nm,1.1s						
WRH	**Wood River Hil**	**82.35**	**10**	*e*P	**P**	**08 16 52.9**	**-0.4**
	comp=Z,84nm,1.0s						
CN2	**Changchun**	**82.37**	**320**	*e*P	**P**	**08 16 54.2**	**+0.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
MLY	**Manley**	**82.44**	**9**	*e*P	**P**	**08 16 53.4**	**-0.4**
	comp=Z,28nm,0.9s						
HDA	**Harding Lake**	**82.49**	**11**	*e*P	**P**	**08 16 53.8**	**-0.2**
	comp=Z,35nm,0.9s						
HDA	**Harding Lake**	**82.49**	**11**	P	**P**	**08 16 53.5**	**-0.5**
	baz=204,SNR=28						
MSTX	**Muleshoe**	**82.58**	**52**	*e*P	**P**	**08 16 56.0**	**+0.6**
	comp=Z,37nm,1.0s						
MSTX	**Muleshoe**	**82.58**	**52**	P	**P**	**08 16 55.4**	**+0.1**
	baz=245						
HRY	**Holter Researc**	**82.60**	**37**	*e*P	**P**	**08 16 55.6**	**+0.5**
SCRK	**Sand Creek**	**82.67**	**12**	*e*P	**P**	**08 16 55.1**	**0.0**
	comp=Z,28nm,1.0s						
T25A	**Trinidad**	**82.73**	**48**	*e*P	**P**	**08 16 56.8**	**+0.5**
	comp=Z,13nm,1.0s						
T25A	**Trinidad**	**82.73**	**48**	P	**P**	**08 16 56.3**	**+0.1**
	baz=244,SNR=8.0						
TCOL	**CIGO, UAF Yank**	**82.76**	**10**	P	**P**	**08 16 55.0**	**-0.4**
	baz=204,SNR=14						
COLA	**College**	**82.76**	**10**	*e*P	**P**	**08 16 54.9**	**-0.5**
	comp=Z,67nm,0.9s						
COLA	**College**	**82.76**	**10**	*d* *i*P	**P**	**08 16 54.6**	**-0.8**
COLA				pmax	pmax		
	comp=Z,78nm,1.0s						
MDM	**Murphy Dome**	**82.78**	**10**	*e*P	**P**	**08 16 55.0**	**-0.5**
	comp=Z,57nm,1.2s						
IL1	**Eielson Array**	**82.83**	**11**	*e*P	**P**	**08 16 54.8**	**-1.0**
ILAR	**Eielson Array**	**82.83**	**11**	P	**P**	**08 16 55.1**	**-0.7**
	comp=Z,9.9nm,0.8s,baz=212,slow=5.8,SNR=53						
ILB	**Eielson Array**	**82.83**	**11**	*e*P	**P**	**08 16 55.5**	**-0.3**
RWWY	**Rawlins**	**82.91**	**43**	*e*P	**P**	**08 16 56.5**	**-0.6**
	comp=Z,45nm,1.1s						
IM3	**Indian Mountai**	**82.94**	**7**	*e*P	**P**	**08 16 56.4**	**+0.2**
Q24A	**Divide**	**83.03**	**46**	*e*P	**P**	**08 16 58.1**	**+0.3**
	comp=Z,29nm,1.0s						
Q24A	**Divide**	**83.03**	**46**	P	**P**	**08 16 58.7**	**+0.9**
	baz=243,SNR=6.5						
POKR	**Poker Plat Res**	**83.06**	**10**	P	**P**	**08 16 56.4**	**-0.6**
	baz=204,SNR=34						
ISCO	**Idaho Springs**	**83.09**	**45**	*e*P	**P**	**08 16 58.6**	**+0.5**
	comp=Z,9.9nm,1.0s						
ISCO	**Idaho Springs**	**83.09**	**45**	*e*P	**P**	**08 16 58.6**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ISCO	**Idaho Springs**	**83.09**	**45**	P	**P**	**08 16 58.4**	**+0.3**
	baz=243,SNR=10						
RLMT	**Red Lodge**	**83.30**	**39**	*e*P	**P**	**08 16 59.8**	**+0.9**
	comp=Z,19nm,1.0s						
RLMT	**Red Lodge**	**83.30**	**39**	P	**P**	**08 16 59.3**	**+0.4**
	baz=240,SNR=12						
N23A	**Red Feather La**	**83.37**	**44**	*e*P	**P**	**08 17 00.3**	**+0.8**
	comp=Z,26nm,1.0s						
N23A	**Red Feather La**	**83.37**	**44**	P	**P**	**08 16 59.4**	**0.0**
	baz=242,SNR=14						
GCMT	**Greycliff**	**83.39**	**39**	*e*P	**P**	**08 16 59.5**	**+0.2**
SEY	**Seymchan**	**83.46**	**344**	⇓*i*P	**P**	**08 16 58.2**	**-0.8**
JCT	**Junction City**	**83.48**	**56**	*e*P	**P**	**08 16 59.9**	**-0.1**
	comp=Z,9.4nm,1.0s						
JCT	**Junction City**	**83.48**	**56**	*e*P	**P**	**08 16 59.9**	**-0.1**
JCT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
JCT	**Junction City**	**83.48**	**56**	P	**P**	**08 16 59.3**	**-0.6**
	baz=247						
DAWY	**Dawson**	**83.74**	**14**	*e*P	**P**	**08 17 00.8**	**+0.2**
	comp=Z,36nm,0.9s						
PRP	**Porcupine Dome**	**83.76**	**11**	*e*P	**P**	**08 17 00.7**	**0.0**
	comp=Z,62nm,1.1s						
AMTX	**Amarillo**	**83.78**	**51**	*e*P	**P**	**08 17 01.5**	**0.0**
	comp=Z,35nm,1.0s						
AMTX	**Amarillo**	**83.78**	**51**	P	**P**	**08 17 00.9**	**-0.6**
	baz=246						
K22A	**Casper**	**83.81**	**43**	*e*P	**P**	**08 17 01.9**	**+0.4**
	comp=Z,8.6nm,1.0s						
K22A	**Casper**	**83.81**	**43**	P	**P**	**08 17 01.3**	**-0.2**
	baz=242,SNR=8.0						
PHWY	**Pilot Hill**	**83.89**	**44**	*e*P	**P**	**08 17 02.4**	**+0.3**
	comp=Z,10.0nm,0.9s						
ABTX	**Abilene, Hawle**	**84.43**	**54**	*e*P	**P**	**08 17 04.8**	**+0.1**
	comp=Z,43nm,1.0s						
ABTX	**Abilene, Hawle**	**84.43**	**54**	P	**P**	**08 17 04.6**	**-0.1**
	baz=247						
EGMT	**Eagleton**	**84.49**	**37**	*e*P	**P**	**08 17 05.1**	**+0.3**
	comp=Z,19nm,1.1s						
EGMT	**Eagleton**	**84.49**	**37**	P	**P**	**08 17 04.6**	**-0.2**
	baz=239,SNR=5.5						
COLD	**Coldfoot**	**84.58**	**8**	*e*P	**P**	**08 17 05.8**	**+1.1**
	comp=Z,12nm,1.2s						
KSCO	**Kaye Shedlock'**	**84.81**	**47**	P	**P**	**08 17 06.5**	**-0.2**
	baz=245						
BILL	**Bilibino**	**85.31**	**352**	*d* *i*P	**P**	**08 17 07.8**	**-0.5**
BILL				pmax	pmax		
	comp=Z,29nm,1.3s						
435B	**Jarrell**	**85.36**	**56**	P	**P**	**08 17 09.4**	**-0.1**
	baz=248						
WHTX	**Lake Whitney,**	**85.91**	**55**	*e*P	**P**	**08 17 12.8**	**+0.7**
	comp=Z,6.3nm,0.9s						
WHTX	**Lake Whitney,**	**85.91**	**55**	P	**P**	**08 17 12.1**	**0.0**
	baz=248						
WMOK	**Wichita Mounta**	**85.91**	**52**	*e*P	**P**	**08 17 11.9**	**-0.2**
	comp=Z,5.4nm,1.1s						
WMOK	**Wichita Mounta**	**85.91**	**52**	*e*P	**P**	**08 17 12.0**	**-0.2**
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WMOK	**Wichita Mounta**	**85.91**	**52**	P	**P**	**08 17 11.9**	**-0.2**
	baz=248						
LAO	**LASA Array**	**85.92**	**39**	*e*P	**P**	**08 17 12.9**	**+1.0**
	comp=Z,7.2nm,0.9s						
LAO	**LASA Array**	**85.92**	**39**	P	**P**	**08 17 12.1**	**+0.2**
	baz=242						
RSSD	**Black Hills**	**86.10**	**42**	P	**P**	**08 17 12.8**	**-0.3**
	baz=244						
U32A	**Winter Ranch,**	**86.37**	**51**	*e*P	**P**	**08 17 14.6**	**+0.2**
	comp=Z,18nm,0.9s						
ZEA	**Zeya**	**86.60**	**329**	*e*P	**P**	**08 17 14.1**	**-0.9**
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
CBKS	**Cedar Bluff**	**86.79**	**48**	*e*P	**P**	**08 17 16.5**	**+0.1**
	comp=Z,18nm,1.1s						
CBKS	**Cedar Bluff**	**86.79**	**48**	*e*P	**P**	**08 17 16.5**	**+0.1**
CBKS				pmax	pmax		
	comp=Z,18nm,1.1s						
CBKS	**Cedar Bluff**	**86.79**	**48**	P	**P**	**08 17 16.5**	**+0.1**
	baz=247						
GO06	**Curarrehue**	**87.88**	**131**	*e*P	**P**	**08 17 23.4**	**+1.6**
	comp=Z,22nm,1.0s						
DGMT	**Dagmar**	**87.96**	**38**	*e*P	**P**	**08 17 22.3**	**+0.5**
	comp=Z,13nm,0.8s						
DGMT	**Dagmar**	**87.96**	**38**	P	**P**	**08 17 22.3**	**+0.5**
	baz=243						
PLCA	**Paso Flores**	**88.17**	**132**	*e*P	**P**	**08 17 25.0**	**+1.8**
	comp=Z,20nm,1.1s						
HIA	**Hailar**	**88.45**	**323**	*de*P	**P**	**08 17 24.1**	**0.0**
HIA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
INK	**Inuvik**	**88.59**	**13**	*e*P	**P**	**08 17 24.3**	**+0.1**
	comp=Z,4.5nm,1.0s						
INK	**Inuvik**	**88.59**	**13**	*e*P	**P**	**08 17 24.3**	**+0.1**
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUL1	**Leonard**	**88.61**	**52**	P	**P**	**08 17 25.7**	**+0.6**
	baz=249						
BGNE	**Belgrade**	**88.92**	**46**	P	**P**	**08 17 26.8**	**+0.3**
	baz=248						
SKNT	**Sakolnakorn**	**88.96**	**288**	P	**P**	**08 17 29.1**	**+1.9**
KSU1	**Kansas State U**	**89.15**	**49**	P	**P**	**08 17 27.9**	**+0.4**
	baz=249						
GYA	**Guiyang**	**89.43**	**298**	P	**P**	**08 17 30.8**	**+1.5**
GYA				pP	sP	08 17 41.4	-1.6
GYA				PP	**PP**	**08 21 04.0**	**+2.9**
GYA	**Guiyang**	**89.43**	**298**	SKS	**SKSac**	**08 27 55.6**	**-1.2**
GYA	**Guiyang**	**89.43**	**298**	S	**S**	**08 28 16.8**	**-0.3**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	**Xi'an**	**90.01**	**305**	P	**P**	**08 17 32.9**	**+1.1**
XAN				pP	sP	08 17 48.2	+2.8
XAN				pmax	pmax		
	comp=Z,7.0nm,1.8s						
JTS	**JuntasAbangare**	**90.11**	**79**	*e*P	**P**	**08 17 34.7**	**+2.0**
	comp=Z,42nm,1.0s						
JTS	**JuntasAbangare**	**90.11**	**79**	*d* *i*P	**P**	**08 17 34.0**	**+1.4**
YKA	**Yellowknife Ar**	**90.19**	**23**	P	**P**	**08 17 32.0**	**+0.2**
YKA	**Yellowknife Ar**	**90.19**	**23**	P	**P**	**08 17 32.0**	**+0.2**
	comp=Z,7.8nm,0.9s,baz=235,slow=4.4,SNR=74						
YKB5	**Yellowknife Ar**	**90.19**	**23**	*e*P	**P**	**08 17 31.1**	**-0.7**
YKW3	**Yellowknife Ar**	**90.23**	**23**	*e*P	**P**	**08 17 32.2**	**+0.2**
	comp=Z,12nm,1.0s						
CHAI	**Chaiyaphum**	**90.49**	**286**	P	**P**	**08 17 36.6**	**+2.3**
PEL	**Peldehue**	**90.60**	**125**	*e*P	**P**	**08 17 34.8**	**+0.1**
	comp=Z,25nm,1.0s						
PEL	**Peldehue**	**90.60**	**125**	*e*P	**P**	**08 17 34.8**	**+0.1**
PEL				pmax	pmax		
	comp=Z,25nm,1.0s						
X41A	**Kaden, Bauxite**	**90.66**	**54**	P	**P**	**08 17 34.8**	**+0.1**
	baz=251						
ECSD	**EROS Data Cent**	**90.84**	**45**	P	**P**	**08 17 35.7**	**+0.3**
	baz=249						
U40A	**Yellville**	**91.00**	**52**	P	**P**	**08 17 36.9**	**+0.6**
	baz=251						
Y42A	**Garnett, Star**	**91.02**	**55**	P	**P**	**08 17 37.0**	**+0.7**
	baz=252						
W41B	**Gary Mavity, V**	**91.08**	**54**	P	**P**	**08 17 37.1**	**+0.5**
	baz=251						
GO04	**Tololo Observa**	**91.50**	**122**	*e*P	**P**	**08 17 38.2**	**-0.9**
	comp=Z,29nm,1.1s						
PBKT	**Sadao Pong**	**91.61**	**287**	P	**P**	**08 17 41.7**	**+2.2**
U41A	**Viola**	**91.71**	**53**	P	**P**	**08 17 39.6**	**0.0**
	baz=252						
PHET	**Kaeng Krachan**	**91.86**	**283**	P	**P**	**08 17 44.0**	**+3.3**
PHET	**Kaeng Krachan**	**91.86**	**283**	P	**P**	**08 17 44.0**	**+3.3**
V42A	**Cord**	**91.95**	**53**	P	**P**	**08 17 40.6**	**0.0**
	baz=252						
FFC	**Flin Flon**	**91.96**	**33**	*e*P	**P**	**08 17 38.9**	**-1.3**
FFC	**Flin Flon**	**91.96**	**33**	*e*P	**P**	**08 17 38.9**	**-1.3**
LCO	**Las Campanas**	**91.96**	**121**	*e*P	**P**	**08 17 41.8**	**+0.4**
	comp=Z,20nm,1.0s						
T41A	**Mountain View**	**92.05**	**52**	P	**P**	**08 17 41.1**	**0.0**
	baz=252						
VNA3	**Neumayer Olymp**	**92.11**	**174**	P	**P**	**08 17 40.8**	**0.0**
SNAA	**Sanae**	**92.20**	**177**	P	**P**	**08 17 41.4**	**+0.1**
SNAA	**Sanae**	**92.20**	**177**	*e*P	**P**	**08 17 41.4**	**+0.1**
	comp=Z,8.1nm,1.0s						
SNAA	**Sanae**	**92.20**	**177**	*de*P	**P**	**08 17 41.4**	**+0.1**
SYO	**Syowa Base**	**92.22**	**191**	⇑*e*P	**P**	**08 17 39.4**	**-1.9**
SYO	**Syowa Base**	**92.22**	**191**	⇓*e*pP	pP	08 17 49.8	-1.5
U42A	**Revenden**	**92.23**	**53**	P	**P**	**08 17 41.9**	**-0.1**
	baz=252						
S41A	**Jillco Farms,**	**92.23**	**52**	P	**P**	**08 17 41.9**	**-0.1**
	baz=252						
UTTA	**Uttaradit**	**92.32**	**288**	P	**P**	**08 17 45.0**	**+2.3**
UTTA	**Uttaradit**	**92.32**	**288**	P	**P**	**08 17 45.0**	**+2.3**
T42A	**Van Buren**	**92.56**	**52**	P	**P**	**08 17 42.9**	**-0.6**
	baz=252						
VNA2	**Neumayer--Watz**	**92.62**	**175**	P	**P**	**08 17 44.0**	**+0.8**
SRDT	**SRDT**	**92.72**	**284**	P	**P**	**08 17 47.4**	**+2.7**
SRDT	**SRDT**	**92.72**	**284**	P	**P**	**08 17 47.4**	**+2.7**
R41A	**Rosebud**	**92.73**	**51**	P	**P**	**08 17 43.9**	**-0.3**
	baz=252						
UTHA	**Uthaitani**	**92.75**	**285**	P	**P**	**08 17 47.1**	**+2.3**
UTHA	**Uthaitani**	**92.75**	**285**	P	**P**	**08 17 47.1**	**+2.3**
CCM	**Cathedral Cave**	**92.76**	**51**	P	**P**	**08 17 44.0**	**-0.3**
	baz=252						
S42A	**Caledonia**	**93.01**	**52**	P	**P**	**08 17 45.4**	**-0.1**
	baz=252						
Q41A	**Truxton**	**93.05**	**50**	P	**P**	**08 17 45.6**	**-0.1**
	baz=252						
X45A	**UM Field Stati**	**93.08**	**55**	P	**P**	**08 17 46.2**	**+0.3**
	baz=253						
SUKH	**Sukhothai**	**93.10**	**287**	P	**P**	**08 17 48.7**	**+2.4**
SUKH	**Sukhothai**	**93.10**	**287**	P	**P**	**08 17 48.7**	**+2.4**
	comp=Z,5.4nm,0.7s						
M39A	**Webster**	**93.15**	**48**	P	**P**	**08 17 46.1**	**0.0**
	baz=252						
T43A	**Greenville**	**93.18**	**52**	P	**P**	**08 17 46.2**	**-0.1**
	baz=252						
CD2	**Chengdu**	**93.20**	**301**	*e*P	**P**	**08 17 46.7**	**+0.1**
Y46A	**Houston**	**93.35**	**56**	P	**P**	**08 17 48.3**	**+1.2**
	baz=253						
N40A	**Mertquake, Sal**	**93.39**	**49**	P	**P**	**08 17 47.0**	**-0.1**
	baz=252						
UMPA	**Umpang Tak**	**93.46**	**286**	P	**P**	**08 17 50.9**	**+2.8**
UMPA	**Umpang Tak**	**93.46**	**286**	P	**P**	**08 17 50.9**	**+2.8**
	comp=Z,6.6nm,1.1s						
S43A	**Fulton Ridge,**	**93.49**	**52**	P	**P**	**08 17 47.7**	**0.0**
	baz=253						
Q42A	**Golden Eagle**	**93.55**	**51**	P	**P**	**08 17 48.1**	**+0.1**
	baz=252						
M40A	**Post Highland**	**93.60**	**48**	P	**P**	**08 17 48.3**	**+0.1**
	baz=252						
ULM	**Lac du Bonnet**	**93.65**	**39**	P	**P**	**08 17 46.6**	**-1.6**
	comp=Z,3.9nm,0.9s,baz=311,slow=6.1,SNR=4.3						
O41A	**Passleys Farm,**	**93.66**	**49**	P	**P**	**08 17 48.2**	**-0.3**
	baz=252						
N41A	**Harden Midland**	**93.86**	**49**	P	**P**	**08 17 49.4**	**+0.1**
	baz=252						
P42A	**Winchester**	**93.89**	**50**	P	**P**	**08 17 49.2**	**-0.3**
	baz=253						
SPMN	**Marine on St.**	**93.91**	**44**	P	**P**	**08 17 49.6**	**+0.1**
	baz=251						
CM01	**Chiang Mai Arr**	**93.96**	**288**	*e*P	**P**	**08 17 51.3**	**+1.0**
CM31	**Chiang Mai Arr**	**93.99**	**288**	*e*PP	**PP**	**08 21 34.4**	**-2.7**
CMAR	**Chiang Mai Arr**	**93.99**	**288**	P	**P**	**08 17 51.5**	**+1.0**
	comp=Z,8.5nm,1.1s,baz=100,slow=2.9,SNR=26						
CMAR				PP	**PP**	**08 21 34.4**	**-2.7**
	comp=Z,1.7nm,0.6s,baz=108,slow=4.6,SNR=6.9						
L40A	**Anamosa**	**94.01**	**47**	P	**P**	**08 17 50.1**	**+0.1**
	baz=252						
J39A	**Decorah**	**94.06**	**46**	P	**P**	**08 17 49.1**	**-1.1**
	baz=252						
CMMT	**Chiang Mai**	**94.08**	**288**	P	**P**	**08 17 53.1**	**+2.2**
CMMT	**Chiang Mai**	**94.08**	**288**	P	**P**	**08 17 53.1**	**+2.2**
CHTO	**Chiang Mai**	**94.08**	**288**	*e*P	**P**	**08 17 50.0**	**-0.9**
	comp=Z,6.0nm,1.0s						
CHTO	**Chiang Mai**	**94.08**	**288**	*e*P	**P**	**08 17 50.0**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHTO	**Chiang Mai**	**94.08**	**288**	P	**P**	**08 17 53.2**	**+2.3**
CHTO	**Chiang Mai**	**94.08**	**288**	P	**P**	**08 17 53.2**	**+2.3**
	comp=Z,39nm,1.1s						
CHTO	**Chiang Mai**	**94.08**	**288**	P	**P**	**08 17 53.2**	**+2.3**
	comp=Z,39nm,1.1s						
S44A	**Carbondale**	**94.15**	**52**	P	**P**	**08 17 50.9**	**+0.1**

	baz=253						
F37A	Hinrichs Farm,	94.19	44	P	P	08 17 50.8	+0.1
	baz=252						
M41A	Milan	94.29	48	P	P	08 17 51.0	-0.3
	baz=253						
N42A	Yates City	94.49	49	P	P	08 17 52.4	+0.2
	baz=253						
L41A	Preston	94.53	48	P	P	08 17 52.0	-0.4
	baz=253						
G38A	Ridgeland	94.53	44	P	P	08 17 52.0	-0.3
	baz=252						
LZH	Lanzhou	94.60	306	eP	P	08 17 58.6	+5.5
LZH				pP	sP	08 18 05.0	-1.8
LZH				sP	pwP	08 18 08.6	-4.8
LZH				PP	PP	08 21 51.3	+10
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,90nm,4.3s						
LZH				LR	LR		
	comp=N,340nm,17.5s						
LZH				LR	LR		
	comp=E,350nm,17.9s						
LZH				LR	LR		
	comp=Z,430nm,19.3s						
LRAL	Lakeview Retre	94.60	57	P	P	08 17 53.8	+0.9
	baz=254						
149A	Jones	94.65	58	P	P	08 17 54.0	+0.8
	baz=254						
J40A	Soldiers Grove	94.75	46	P	P	08 17 53.0	-0.4
	baz=253						
F38A	Pierce - Schro	94.76	44	P	P	08 17 53.4	0.0
	baz=252						
H39A	Augusta	94.77	45	P	P	08 17 53.1	-0.3
	baz=252						
K41A	Shullsburg	94.82	47	P	P	08 17 53.2	-0.5
	baz=253						
JFWS	Jewell Farm	94.95	47	P	P	08 17 54.0	-0.4
	baz=253						
V47A	Nunnelly	94.96	54	P	P	08 17 54.4	-0.1
	baz=254						
I40A	Norwalk	94.99	46	P	P	08 17 54.0	-0.5
	baz=253						
G39A	Holcombe	95.03	44	P	P	08 17 54.2	-0.5
	baz=252						
J41A	Loganville	95.25	47	P	P	08 17 55.3	-0.4
	baz=253						
H40A	Chili	95.36	45	P	P	08 17 55.4	-0.7
	baz=253						
F39A	Loretta	95.39	44	P	P	08 17 55.8	-0.5
	baz=253						
K42A	Prairie Point,	95.55	47	P	P	08 17 56.6	-0.4
	baz=254						
EYMN	Ely	95.62	42	P	P	08 17 58.0	+0.7
	baz=252						
G40A	Rib Lake	95.68	45	P	P	08 17 57.2	-0.4
	baz=253						
ULN	Ulaanbaatar	95.73	318	⇑eP	P	08 17 57.9	-0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
E39A	Mellen	95.76	43	P	P	08 17 57.2	-0.8
	baz=253						
P45A	Graceland, Par	95.80	51	P	P	08 17 58.5	+0.2
	baz=254						
F40A	Park Falls	95.92	44	P	P	08 17 58.4	-0.3
	baz=253						
TIXI	Tiksi	95.95	344	⇑eP	P	08 17 57.6	-0.6
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
TIXI	Tiksi	95.95	344	P	P	08 17 57.5	-0.6
	comp=Z,1.0nm,0.6s,baz=134,slow=4.2,SNR=3.6						
TIXI				LR	LR	08 54 17.4	
	comp=Z,393nm,21.2s,baz=64,slow=31						
SONA0	Songino Array	96.14	318	eP	P	08 17 58.7	-1.1
SONA0				ePP	PP	08 21 56.9	+3.6
SONM	Songino Array	96.14	318	P	P	08 17 58.7	-1.1
	comp=Z,0.6nm,0.7s,baz=89,slow=3.7,SNR=4.0						
SONM				PP	PP	08 21 56.9	+3.6
	comp=Z,0.7nm,1.0s,baz=133,slow=6.3,SNR=4.4						
MK32	Makanchi Array	112.15	314	ePKiKP	PKiKP	08 23 06.4	-0.9
MKAR	Makanchi Array	112.15	314	PKiKP	PKiKP	08 23 06.4	-0.9
	comp=Z,0.9nm,0.8s,baz=98,slow=0.6,SNR=6.7						
KURK	Kurchatov	114.43	319	ePKiKP	PKPdf	08 23 10.6	-0.9
KURK	Kurchatov	114.43	319	⇓iPKIKP	PKPdf	08 23 11.3	-0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURBB	Kurchatov Arra	114.50	319	PKiKP	PKPdf	08 23 10.6	-1.1
	comp=Z,1.6nm,0.9s,baz=96,slow=1.7,SNR=12						
BVAR	Borovoye Array	119.14	322	PKP	PKPdf	08 23 20.1	-0.5
	comp=Z,2.5nm,0.7s,baz=90,slow=3.0,SNR=16						
BRVK	Borovoye	119.20	322	⇑iPKIKP	PKPdf	08 23 19.7	-0.9
NRS	Narsarsuaq	121.25	27	ePKPdf	PKiKP	08 23 25.9	+1.5
NRS	Narsarsuaq	121.25	27	ePKIKP	PKiKP	08 23 25.9	+1.5
KBL	Kabul	122.54	301	ePKPdf	PKPdf	08 23 27.4	-0.6
KBL	Kabul	122.54	301	ePKIKP	PKPdf	08 23 27.4	-0.6
ARU	Arti	124.53	329	i PKIKP	PKPdf	08 23 30.3	-0.5
ARU						08 25 17.5	
ARU						08 30 41.7	
ARA0	ARCESS Array S	125.40	352	ePKPdf	PKPdf	08 23 32.0	-0.1
ARCES	ARCESS Array B	125.40	352	PKP	PKPdf	08 23 32.0	-0.1
	comp=Z,7.9nm,1.0s,baz=22,slow=1.0,SNR=7.6						
ABKAR	Akbulak array	126.50	320	ePKPpre	PKPpre	08 23 30.6	
AKTO	Aktyubinsk	127.25	322	PKP	PKPdf	08 23 35.4	-0.8
	comp=Z,2.3nm,1.0s,baz=15,slow=3.8,SNR=6.4						
KIRV	Kirov	127.66	334	PKP	PKPdf	08 23 36.6	0.0
	comp=Z,13nm,0.7s,baz=113,slow=3.2,SNR=5.1						
BOSA	Boshof	132.54	201	PKP	PKiKP	08 23 48.3	+0.1
	comp=Z,4.4nm,1.0s,baz=132,slow=8.6,SNR=4.7						
FIA0	FINESS Array S	132.82	348	ePKPdf	PKPdf	08 23 46.6	+0.2
FIA0	FINESS Array S	132.82	348	ePKIKP	PKPdf	08 23 46.6	+0.2
FINES	FINESS Array B	132.82	348	PKP	PKPdf	08 23 46.6	+0.2
	comp=Z,3.4nm,0.8s,baz=90,slow=3.8,SNR=6.5						
OBN	Obninsk	135.18	337	i PKIKP	PKPdf	08 23 51.2	+0.2
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR	Storozhevoye	136.91	331	⇑ePKIKP	PKPdf	08 23 55.1	+0.7
KIV	Kislovodsk	139.48	321	ePKIKP	PKiKP	08 24 01.6	-0.2
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NEY	Neytrino	139.83	320	⇓ePKIKP	PKPdf	08 23 57.0	-3.2
GNI	Garni	140.00	314	⇑iPKIKP	PKPdf	08 24 01.5	+0.9
AKASG	Malin Array Be	141.39	338	PKhKP	PKPpre	08 23 55.5	
	comp=Z,2.9nm,0.9s,baz=37,slow=4.0,SNR=7.3						
KIEV	Kiev	141.40	338	⇓ePKIKP	PKPdf	08 24 02.6	0.0
TSUM	Tsumeb	143.70	196	ePKPdf	PKPbc	08 24 06.4	+1.1
KWP	Kalwaria Pacla	144.39	343	ePKPdf	PKPbc	08 24 06.6	+0.2
OJC	Ojcow	144.57	347	ePKPdf	PKPbc	08 24 07.0	0.0
CLL	Collm	144.58	354	ePKPdf	PKPab	08 24 06.2	-0.5
CLL	Collm	144.58	354	i PKPdf	PKPab	08 24 06.4	-0.3
	comp=Z,11nm,0.9s						
CLL				i PKiKP	PKiKP	08 24 10.1	-1.8
CLL	Collm	144.58	354	i PKIKP	PKPab	08 24 06.4	-0.3
CLL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
UPC	Upice	145.00	351	ePKP	PKPab	08 24 08.5	+0.2
UPC	Upice	145.00	351	ePKIKP	PKPab	08 24 08.5	+0.2
DPC	Dobruska-Polom	145.10	351	ePKP	PKPdf	08 24 09.3	+0.1
DPC	Dobruska-Polom	145.10	351	ePKIKP	PKPdf	08 24 09.3	+0.1
BEBN	Eben Emael	145.28	2	⇑PKP	PKPdf	08 24 09.4	0.0
KRLC	Kraliky	145.29	350	ePKP	PKPdf	08 24 09.7	+0.2
KRLC	Kraliky	145.29	350	ePKIKP	PKPdf	08 24 09.7	+0.2
BUR08	Bucovina Ar. S	145.39	339	ePKPbc	PKPab	08 24 10.2	+0.2
BUR04	Bucovina Ar. S	145.41	339	ePKPbc	PKPbc	08 24 09.2	-0.6
BURAR	Bucovina Array	145.41	339	⇓iP	PKPab	08 24 10.6	+0.6
BURAR	Bucovina Array	145.41	339	⇓PKIKP	PKPab	08 24 10.7	+0.7
UZH	Uzhgorod	145.41	343	⇑iPKIKP	PKPab	08 24 10.0	+0.1
UZH				e		08 24 15.4	
MORC	Moravsky Berou	145.45	349	ePKPbc	PKPab	08 24 10.3	+0.3
MORC	Moravsky Berou	145.45	349	⇑iP	PKPab	08 24 10.3	+0.3
MORC	Moravsky Berou	145.45	349	⇑PKIKP	PKPab	08 24 10.3	+0.3
MORC	Moravsky Berou	145.45	349	ePKP	PKPab	08 24 10.1	+0.1
MEM	Membach	145.48	2	⇑PKP	PKPdf	08 24 08.6	-1.2
BIZ	Bicaz	145.67	338	⇑iP	PKPab	08 24 11.5	+0.6
NKC	Novy Kostel	145.69	355	ePKP	PKPab	08 24 10.8	-0.1
NKC	Novy Kostel	145.69	355	ePKIKP	PKPab	08 24 10.8	-0.1
PRU	Pruhonice	145.71	352	ePKP	PKPab	08 24 10.8	-0.1
PRU	Pruhonice	145.71	352	ePKIKP	PKPab	08 24 10.8	-0.1
TRPA	Tarpa	145.80	342	⇑iP	PKPab	08 24 11.2	-0.1
BMR	Baia Mare	145.92	341	⇓iP	PKPab	08 24 11.9	+0.1
BMR	Baia Mare	145.92	341	⇓PKP2	PKPab	08 24 12.0	+0.2
DOU	Dourbes	145.93	4	⇑PKP	PKPab	08 24 11.5	-0.2
DOU				⇓pPKP	pPKPdf	08 24 20.9	0.0
TLCR		146.02	333	⇓iP	PKPab	08 24 12.5	+0.3
TLCR		146.02	333	⇓PKP2	PKPab	08 24 12.5	+0.3
VRAC	Vranov	146.07	350	⇓iP	PKPab	08 24 12.4	+0.1
VRAC	Vranov	146.07	350	⇓PKP2	PKPab	08 24 12.4	+0.1
VRAC	Vranov	146.07	350	ePKP	PKPab	08 24 12.0	-0.3
CFR	Carcaliu	146.32	334	⇑PKP2	PKPab	08 24 13.1	-0.3
GRA1	Grafenberg Arr	146.32	356	ePKPdf	PKPbc	08 24 12.2	-0.3
GRFO	Grafenberg	146.32	356	ePKPdf	PKPbc	08 24 12.0	-0.4
VRI	Vrincioaia	146.34	336	⇑iP	PKPbc	08 24 12.9	+0.3
VRI	Vrincioaia	146.34	336	⇑PKP2	PKPbc	08 24 12.9	+0.3
KRUC	Moravsky	146.34	350	ePKP	PKPbc	08 24 12.5	0.0
KMBO	Kilima Mbogo	146.35	242	PKPbc	PKPab	08 24 14.5	-0.3
	comp=Z,2.9nm,0.3s,baz=175,slow=3.6,SNR=4.3						
PLOR	Plostina	146.38	336	⇑iP	PKPbc	08 24 13.1	+0.3
PLOR	Plostina	146.38	336	⇑PKP2	PKPbc	08 24 13.1	+0.3
VYHS	Vyhne	146.41	347	ePKP2	PKPbc	08 24 13.0	+0.2
VYHS	Vyhne	146.41	347	ePKP	PKPbc	08 24 13.0	+0.2
WLF	Walferdange	146.43	2	ePKPdf	PKPdf	08 24 11.5	+0.1
WLF	Walferdange	146.43	2	ePKIKP	PKPdf	08 24 11.5	+0.1
WLF	Walferdange	146.43	2	⇑PKP	PKPab	08 24 13.2	-0.4
OZUR		146.50	337	⇑iP	PKPab	08 24 14.0	-0.1
ILGA	Ilgaz	146.53	323	ePKPdf	PKPab	08 24 14.3	-0.4
KHC	Kasperske Hory	146.67	353	ePKPdf	PKPbc	08 24 12.7	-0.8
KHC	Kasperske Hory	146.67	353	ePKP	PKPbc	08 24 12.8	-0.8
KHC	Kasperske Hory	146.67	353	ePKP2	PKPbc	08 24 12.8	-0.8
PSZ	Piszkesteto	146.70	345	ePKPdf	PKPdf	08 24 12.0	-0.1
PSZ	Piszkesteto	146.70	345	ePKIKP	PKPdf	08 24 12.0	-0.1
DOPR	Dopca	146.76	337	⇓iP	PKPab	08 24 14.8	-0.3
TIRR	Tirgusor	146.77	333	⇑iP	PKPbc	08 24 14.4	+0.5
TIRR	Tirgusor	146.77	333	⇑PKP2	PKPbc	08 24 14.4	+0.5
HARR	Harsova	146.80	333	⇑PKP2	PKPbc	08 24 14.5	+0.5
TLB	Topalu	146.83	333	⇑iP	PKPab	08 24 14.7	-0.7
TLB	Topalu	146.83	333	⇑PKP2	PKPab	08 24 14.7	-0.7
MODS	Modra-Piesok	146.84	349	ePKP2	PKPbc	08 24 14.4	+0.4
MODS	Modra-Piesok	146.84	349	ePKP	PKPbc	08 24 14.4	+0.4
GEC2	GERESS Array S	146.94	353	ePKPdf	PKPbc	08 24 13.9	-0.5
GEC2	GERESS Array S	146.94	353	ePKP2	PKPbc	08 24 13.9	-0.5
GERES	GERESS Array B	146.94	353	PKPbc	PKPdf	08 24 13.1	+0.6
	comp=Z,5.0nm,0.9s,baz=38,slow=2.4,SNR=24						
GEA0	GERESS Array S	146.94	353	ePKPdf	PKPdf	08 24 13.2	+0.8
DRGR		146.95	341	⇑iP	PKPbc	08 24 14.4	-0.1
DRGR		146.95	341	⇑PKP2	PKPbc	08 24 14.4	-0.1
MLR	Muntele Rosu	146.95	336	ePKPdf	PKPdf	08 24 13.2	+0.6
MLR	Muntele Rosu	146.95	336	⇓iP	PKPab	08 24 15.5	-0.5
MLR	Muntele Rosu	146.95	336	⇓PKP2	PKPab	08 24 15.5	-0.5
ISR	Istrita	147.03	335	⇑PKP2	PKPbc	08 24 15.3	+0.6
ZST	Bratislava	147.04	349	ePKP	PKPbc	08 24 15.0	+0.4
VOIR		147.34	337	⇑iP	PKPab	08 24 16.8	-0.7
VOIR		147.34	337	⇑PKP2	PKPab	08 24 16.8	-0.7
BR101	Keskin Array S	147.43	322	ePKPbc	PKPbc	08 24 16.6	+0.5
BR131	Keskin Array S	147.43	322	ePKPdf	PKPdf	08 24 14.1	+0.5
BRTR	Keskin Array B	147.43	322	PKPbc	PKPbc	08 24 16.6	+0.5
	comp=Z,29nm,0.9s,baz=120,slow=2.1,SNR=86						
MTUR	Matau	147.51	337	⇑iP	PKPbc	08 24 16.4	+0.3
MTUR	Matau	147.51	337	⇑PKP2	PKPbc	08 24 16.4	+0.3
CONA	Conrad Observa	147.53	350	ePKPab	PKPbc	08 24 16.7	+0.7
	comp=Z,34nm,1.2s,SNR=9.1						
BFO	Black Forest	147.79	359	ePKPbc	PKPbc	08 24 17.2	+0.5
BFO	Black Forest	147.79	359	ePKP2	PKPbc	08 24 17.2	+0.5
ANTO	Ankara	147.83	322	ePKPbc	PKPbc	08 24 17.8	+0.7
MOA	Molln	147.84	352	ePKPab	PKPbc	08 24 17.5	+0.7
	comp=Z,18nm,1.2s						
GZR	Gura Zlata	148.17	340	⇑iP	PKPbc	08 24 18.0	+0.2
GZR	Gura Zlata	148.17	340	⇑PKIKP	PKPbc	08 24 18.0	+0.2
ARSA	Arzberg	148.24	350	ePKiKP	PKPbc	08 24 18.6	+0.7
	comp=Z,14nm,1.0s						
BZS	Buzias	148.34	341	⇑iP	PKPbc	08 24 18.6	+0.4
BZS	Buzias	148.34	341	⇑PKP2	PKPbc	08 24 18.6	+0.4
RETA	Reutte	148.55	356	ePKiKP	PKPbc	08 24 19.4	+0.6
	comp=Z,21nm,1.3s						
WATA	Walderalm	148.64	355	ePKiKP	PKPbc	08 24 19.3	+0.2
	comp=Z,8.9nm,0.8s						
SRE	Strehaia	148.67	339	⇑iP	PKPbc	08 24 18.9	-0.2
SRE	Strehaia	148.67	339	⇑PKP2	PKPbc	08 24 18.9	-0.2
MOTA	Moosalm	148.67	356	ePKiKP	PKPbc	08 24 19.6	+0.4
	comp=Z,19nm,1.0s						
KBA	Koelnbreinsper	148.72	353	ePKPbc	PKPbc	08 24 19.0	-0.3
	comp=Z,11nm,1.1s						
HERR	Herculane	148.74	340	⇑iP	PKPbc	08 24 18.1	-1.1
SQTA	Sankt Quirin	148.78	356	ePKiKP	PKPbc	08 24 20.0	+0.5
	comp=Z,18nm,1.0s						
DAVA	Damuels	148.80	357	ePKiKP	PKiKP	08 24 20.3	-0.6
	comp=Z,26nm,1.1s						
SOKA	Soboth	148.88	350	ePKiKP	PKPbc	08 24 19.6	0.0
	comp=Z,19nm,1.0s						
FETA	Feichten	149.02	356	ePKiKP	PKiKP	08 24 20.8	-0.6
	comp=Z,31nm,1.3s,SNR=5.1						
MDVR	Moldovita	149.06	341	⇓iP	PKPbc	08 24 20.3	+0.2
OBKA	Obir	149.11	351	ePKPbc	PKPbc	08 24 19.9	-0.4
	comp=Z,13nm,1.1s						
MYKA	Terra Mystica	149.12	352	ePKPbc	PKPbc	08 24 19.9	-0.3
	comp=Z,14nm,1.1s						
ABTA	Abfaltersbach	149.14	354	ePKiKP	PKPbc	08 24 20.4	0.0
	comp=Z,21nm,1.1s						
FUORN	Ofenpass-Fuorn	149.44	357	ePKPbc	PKPbc	08 24 21.8	+0.5
DIVS	Divibare	150.20	342	ePKPbc	PKiKP	08 24 23.5	-0.3
BLY	Banja Luka	150.32	347	ePKPbc	PKiKP	08 24 23.9	0.0
BLY	Banja Luka	150.32	347	⇓iP	PKPbc	08 24 22.0	-1.1
VTS	Vitosha	150.42	337	ePKPbc	PKiKP	08 24 24.0	-0.4
VTS	Vitosha	150.42	337	⇓iP	PKPbc	08 24 23.6	-0.1
VTS	Vitosha	150.42	337	⇓PKIKP	PKPbc	08 24 23.7	0.0
ALN	Alexandroupoli	150.65	331	ePKPbc	PKPbc	08 24 23.9	-0.2
ALN	Alexandroupoli	150.65	331	ePKIKP	PKPbc	08 24 23.9	-0.2
MANT	Manisa	151.18	325	ePKPbc	PKiKP	08 24 26.2	0.0
STIP	Stip	151.61	337	i P	PKPbc	08 24 26.0	-0.3
SKO	Skopje	151.64	338	i P	PKiKP	08 24 26.7	0.0
VAY	Valandovo	151.79	336	i P	PKPbc	08 24 26.4	-0.3
PDG	Podgorica	151.94	342	⇑iP	PKPbc	08 24 25.5	-1.5
ESDC	Sonseca Array	154.28	21	PKPab	PKPab	08 24 45.9	-0.3
	comp=Z,0.4nm,0.4s,baz=332,slow=4.1,SNR=4.6						
TOA1	Torodi Ar. Sit	173.35	115	ePKPdf	PKPdf	08 24 39.8	-2.3
TOA1				ePKPab	PKPab	08 26 09.4	-1.1
TOA1				ePP	PP	08 30 00.4	-1.9
TORD	Torodi Ar. Bea	173.35	115	PKP	PKPdf	08 24 39.8	-2.3
	comp=Z,5.8nm,0.9s,baz=292,slow=0.6,SNR=22						
TORD				PKPab	PKPab	08 26 09.4	-1.1
	comp=Z,3.7nm,0.9s,baz=285,slow=5.1,SNR=11						
TORD				PP	PP	08 30 00.4	-1.9
	comp=Z,1.4nm,1.1s,baz=189,slow=3.8,SNR=4.3						

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*IGQ **06** 08:04:41.7±0.4, 1°N±2°×7°7W±°, $h10^{km}$, MLv4.2*
*RSNC **06** 08:04:42.2±1.3, 0°.47N×77°.30W, $h6^{km}\pm10^{km}$, ML4.0, Mw3.7*
ISC 06 08:04:40.0±1.1**, 0°.49N**±0°.02×**77°.23W**±0°.03**, $h11^{km}\pm9^{km}$, n60,** σ**0ˢ.93**/101**, 2C-2D, Colombia-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATUL	Tulcn	0.57	299	P	Pg	08 04 51.7	+0.6
ATUL				S	Sg	08 04 58.6	0.0
TULM	Tulcn-Chalpat	0.60	292	P	Pg	08 04 52.1	+0.3
TULM				S	Sg	08 04 58.8	-1.0
CONE	Cono NE Rev Vo	0.70	216	P	Pg	08 04 53.8	+0.3
CPAS2	Pasto	0.72	358	⇑eP	Pn	08 04 56.6	+0.1
CPAS2				eS	Sn	08 05 05.9	-1.9
CPAS2				IAML		08 05 09.5	
	comp=Z,14μm,0.4s						
GCUF	Volcan Galeras	0.74	351	⇑iP	Pn	08 04 55.9	-0.9
GCUF				eS	Sb	08 05 06.1	+0.6
GCUF				i		08 05 07.6	
	comp=Z,11μm,0.2s						
CMBC	Cumbal	0.74	307	⇓iP	Pb	08 04 55.5	+0.3
CMBC				ePg	Pn	08 04 55.8	-1.0
CMBC				eS	Sg	08 05 05.4	+1.2
CMBC				i		08 05 05.6	
	comp=Z,7μm,0.3s						
YAHU	Yahuarcocha	0.85	262	P	Pg	08 04 56.1	-0.4
YAHU				S	Sg	08 05 06.8	-0.8
CAYA	Cayambe	0.87	241	P	Pg	08 04 56.4	-0.4
CAYA				S	Sg	08 05 07.7	-0.5
IMBA	Imbabura, San	0.99	257	P	Pg	08 04 59.6	+0.4
IMBA				S	Sg	08 05 12.8	+0.7
URCU	Urcuqui	1.03	267	P	Pg	08 04 59.8	0.0
URCU				S	Sg	08 05 13.5	+0.2
CRUC	La Cruz	1.10	15	⇓iP	Pn	08 05 02.7	+1.0
CRUC				eS	Sn	08 05 18.2	+1.1
CRUC				i		08 05 20.7	
	comp=Z,2μm,0.4s						
COTA	Cotacachi	1.12	262	P	Pg	08 05 01.7	+0.1
COTA				S	Sg	08 05 14.6	-1.6
CUIC	Cuicocha-Domo	1.15	261	P	Pb	08 05 01.7	-0.4
CUIC				S	Sg	08 05 17.7	+0.6
OTAV	Otavalo	1.25	258	eP	Pn	08 05 02.5	-1.3
OTAV				eS	Sb	08 05 19.1	-1.1
OTAV	Otavalo	1.25	258	P	Pn	08 05 03.2	-0.6
ANTI	Antisana	1.32	225	P	Pn	08 05 04.9	-0.1
ANTS	Antisana-Sarah	1.36	224	P	Pn	08 05 05.4	-0.1
ANTS				S	Sb	08 05 22.6	-0.9
ANTG	Antisana-Guama	1.43	226	P	Pn	08 05 06.5	+0.2
ANTG				S	Sn	08 05 24.6	-0.8
ANTM	Antisana-La Mi	1.43	224	P	Pn	08 05 06.4	+0.1
ANTM				S	Sn	08 05 23.7	-1.7
YANA	Yana	1.47	246	P	Pn	08 05 07.3	+0.3
GGPC	Guagua Pichinc	1.52	244	P	Pn	08 05 08.2	+0.5
GGPC				S	Sn	08 05 27.8	-0.1
PAC1	Pacto, Paraso	1.58	262	P	Pn	08 05 08.4	+0.3
PAC1				S	Sn	08 05 28.4	-0.2
ARDO	Archidona, Ten	1.58	201	P	Pb	08 05 08.8	-0.6
ARDO				S	Sb	08 05 29.7	+0.3
PITA	Cotopaxi Volc	1.59	229	P	Pb	08 05 10.2	+0.4
PITA				S	Sn	08 05 30.5	+1.0
VC1	Cotopaxi 1	1.63	226	P	Pb	08 05 10.6	+0.2
NINA	Atacazo Ninahu	1.64	238	P	Pb	08 05 10.7	0.0
NINA				S	Sn	08 05 31.5	+0.7
BVC2	Cotopaxi Volca	1.65	226	P	Pb	08 05 11.1	+0.4
BVC2				S	Sb	08 05 32.8	+1.1
BTAM	Cotopaxi Volca	1.65	225	P	Pb	08 05 11.1	+0.4
BTAM				S	Sg	08 05 33.8	+0.7
BREF	Cotopaxi Volca	1.67	226	P	Pg	08 05 12.6	+0.4
BREF				S	Sg	08 05 35.6	+1.6
NAS2	Nasa	1.68	228	P	Pb	08 05 11.8	+0.6
NAS2				S	Sb	08 05 34.2	+1.6
BNAS	Cotopaxi Volca	1.70	227	P	Pg	08 05 12.5	-0.2
BMOR	Cotopaxi Volca	1.73	225	P	Pb	08 05 12.2	+0.1
BMOR				S	Sb	08 05 35.2	+1.1
SOTA	Rioblanco	1.75	21	eP	Pg	08 05 14.0	+0.5
SOTA				eS	Sg	08 05 36.5	+0.3
SOTA				i		08 05 42.1	
	comp=Z,370nm,0.3s						
PAST	Pastocalle	1.84	230	P	Pg	08 05 15.1	-0.2
ILLI	Illinizas Sur	1.92	231	P	Pb	08 05 15.6	+0.2
PIS1	Pisayambo	1.93	217	P	Pb	08 05 15.3	-0.2
PIS1				S	Sb	08 05 41.0	+1.2
PISA	Pisayambo	1.93	217	P	Pb	08 05 15.3	-0.2
PISA				S	Sg	08 05 41.8	-0.2
TUMC	Tumaco	2.00	311	eP	Pb	08 05 16.8	+0.5
PCON	Cinco Dias	2.00	25	eP	Pg	08 05 19.1	+0.6
PCON				eS	Sg	08 05 46.2	+1.7
PUYO	Puyo, Santa Ro	2.13	202	P	Pb	08 05 17.9	-0.7
PUYO				S	Sg	08 05 48.0	-0.5
SAGO	Sagoatoa	2.18	221	P	Pb	08 05 20.4	+0.7
SAGO				S	Sg	08 05 49.7	-0.4
BRUN	Tungurahua Vol	2.24	212	P	Pb	08 05 20.0	-0.7
BRUN				S	Sb	08 05 50.8	+2.2
RUN5	Runtun	2.24	212	P	Pb	08 05 19.9	-0.9
RUN5				S	Sb	08 05 49.2	+0.6
BULB	Ulba Tungurahu	2.25	212	P	Pb	08 05 19.9	-1.0
BULB				S	Sb	08 05 51.0	+2.0
POND	Pondoa	2.26	213	P	Pb	08 05 20.0	-1.1
POND				S	Sg	08 05 51.9	-0.8
JUI6	Juive	2.27	213	P	Pb	08 05 20.0	-1.3
JUI6				S	Sg	08 05 52.8	-0.4
BBIL	Ulba Tungurahu	2.30	213	P	Pb	08 05 20.6	-1.3
BIL2	Estacion Bilba	2.32	213	P	Pn	08 05 20.0	+1.5
BPAT	Tungurahua Vol	2.32	211	P	Pb	08 05 21.1	-1.1
BPAT				S	Sb	08 05 52.4	+1.3
PAT1	Patacocha	2.33	211	P	Pb	08 05 21.3	-0.9
ARRY	Arrayan	2.33	212	P	Pb	08 05 21.2	-1.2
BMAS	Trigal station	2.34	212	P	Pb	08 05 21.2	-1.3
BMAS				S	Sb	08 05 53.5	+1.8
PTLC	Puerto Leguiza	2.45	98	eP	Pb	08 05 22.7	-1.5
PTLC				i		08 06 02.8	
	comp=Z,1μm,0.2s						
MAG1	Magdalena	2.60	258	P	Pb	08 05 25.5	-1.3
MARP	Paez Belalcaza	2.66	29	eP	Pg	08 05 30.1	-0.9
MARP				eS	Sg	08 06 06.5	+1.0
COHC	Cochancay	3.57	215	P	Pb	08 05 43.4	+0.2
YOTC	Yotoco, Valle	3.58	14	eP	Pb	08 05 41.6	-1.8
MORR	Playas El Morr	4.40	225	P	Pn	08 05 46.5	-0.3
SALI	Salinas	4.61	235	P	Pn	08 05 47.8	-1.8
MCRA	Macar, Loja	5.54	209	P	Pn	08 06 03.1	+0.5

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*ISCJB **06** 08:10:00.3±1.0, 11°.8S±0°.1×165°.7E±0°.2, $h10^{km}$, mb3.6/5, MS3.9/1, Error ellipse: s-maj=22.9km s-min=15.8km az=162.5*
*IDC **06** 08:10:00.2±1.4, 11°.75S×165°.77E, $h0^{km}$, mb3.7/5, mb1 4.0/7, mb1mx3.8/40, mbtmp3.9/7, ML4.5/2, MS3.9/1, Ms1 3.9/1, ms1mx3.4/37, Error ellipse: s-maj=38.3km s-min=26.6km az=119.0*
ISC 06 08:10:02.1±1.1**, 11°.7S**±0°.1×**165°.8E**±0°.2**, $h10^{km}$, n15,** σ**1ˢ.11**/8**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.17	291	Pn	Pn	08 11 33.9	+0.6
	38nm,0.3s,baz=132,slow=8.1,SNR=4.5						
DZM	Mont Dzumac	10.32	177	Pn	Pn	08 12 31.2	+0.8
	1.0nm,0.3s,baz=330,slow=16,SNR=4.2						
H11S2	WAKE ISLAND Hy	30.03	2	T	T	08 46 42.5	
	baz=184,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	30.03	2	T	T	08 46 40.5	
	baz=184,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	30.05	2	T	T	08 46 43.8	
	baz=184,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	31.25	2	T	T	08 48 14.0	
	baz=182,slow=76,SNR=9.5						
H11N3	WAKE ISLAND Hy	31.26	2	T	T	08 48 13.0	
	baz=182,slow=76,SNR=8.9						
H11N2	WAKE ISLAND Hy	31.27	2	T	T	08 48 10.6	
	baz=182,slow=76,SNR=8.7						
WRA	Warramunga Arr	31.29	251	P	P	08 16 21.9	-0.7
	0.4nm,0.5s,baz=81,slow=9.0,SNR=3.8						
ASAR	Alice Springs	32.53	244	P	P	08 16 32.1	-1.4
	0.4nm,0.5s,baz=71,slow=9.1,SNR=4.0						
DAV	Davao City (W)	44.13	293	LR	LR	08 35 46.9	
	comp=Z,142nm,18.1s,baz=158,slow=35						
KLR	Kul'dur	67.68	337	P	P	08 21 00.6	+1.2
	0.8nm,0.7s,baz=118,slow=10,SNR=4.0						
SONM	Songino Array	79.22	324	P	P	08 22 07.8	+0.1
	1.0nm,0.8s,baz=115,slow=6.3,SNR=6.3						
ILAR	Eielson Array	84.14	18	P	P	08 22 32.2	-0.8
	0.2nm,0.5s,baz=236,slow=5.7,SNR=4.6						
ARCES	ARCESS Array B	116.99	345	PKP	PKiKP	08 28 46.1	-0.6
	2.0nm,0.9s,baz=45,slow=2.5,SNR=3.6						

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*NEIC **06** 08:12:31.1±0.6, 10°.70S×164°.68E, $h10^{km}$, mb4.3/6, Error ellipse: s-maj=13.0km s-min=10.4km az=80.0*
*ISCJB **06** 08:12:32.2±0.5, 10°.85S±0°.06×164°.65E±0°.07, $h29^{km}$, mb4.0/15, Error ellipse: s-maj=11.0km s-min=7.9km az=144.0*
*IDC **06** 08:12:37.9±3.3, 10°.91S×164°.57E, $h62^{km}\pm27^{km}$, mb3.8/13, mb1 4.0/16, mb1mx3.9/39, mbtmp4.1/16, ML4.4/3, Error ellipse: s-maj=21.7km s-min=16.9km az=76.0*
ISC 06 08:12:33.6±0.6**, 10°.83S**±0°.07×**164°.77E**±0°.08**, $h29^{km}$, n29,** σ**1ˢ.63**/32**, mb4.2**/15**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.95	286	ePn	Pn	08 13 45.9	0.0
HNR				ePn	Pn	08 13 46.3	+0.3
HNR				eSn	Sn	08 14 43.6	+1.4
HNR	Honiara	4.95	286	P	Pn	08 13 45.9	0.0
	70nm,0.3s,baz=162,slow=7.6,SNR=6.5						
HNR				S	Sn	08 14 43.6	+1.4
	32nm,0.3s,baz=180,slow=20,SNR=3.4						
MARNC	Mare, Loyalty	11.05	164	ePn	Pn	08 15 12.1	+2.4
DZM	Mont Dzumac	11.30	172	P	Pn	08 15 14.6	+1.4
	2.4nm,0.3s,baz=309,slow=13,SNR=9.1						
DZM				S	Sn	08 17 15.2	-3.4
	0.2nm,0.3s,baz=307,slow=20,SNR=2.1						
PINNC	Pines Island,	12.00	168	ePn	Pn	08 15 24.6	+1.9
MANU	Manus Island	19.35	296	eP	P	08 16 56.2	-0.8
	50nm,0.9s						
EIDS	Eidsvold	19.43	220	eP	Pn	08 17 00.3	+1.2
	21nm,1.0s						
CTA	Charters Tower	20.06	240	P	P	08 17 05.4	+0.7
	0.4nm,0.3s,baz=59,slow=14,SNR=9.0						
CTAO	Charters Tower	20.06	240	eP	Pn	08 17 05.5	-1.2
	15nm,0.8s						
COEN	Coen	21.32	259	eP	P	08 17 17.2	-1.1
	10nm,1.1s						
STKA	Stephens Creek	29.95	222	P	P	08 18 40.2	+0.8
	2.0nm,0.7s,baz=34,slow=11,SNR=3.8						
WR1	Warramunga Arr	30.66	249	eP	P	08 18 43.6	-2.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	4.4nm,1.0s						
WRA	Warramunga Arr	30.66	249	P	P	08 18 43.6	-2.2
	1.8nm,0.8s,baz=76,slow=9.3,SNR=7.6						
ASAR	Alice Springs	32.04	242	P	P	08 18 55.7	-2.3
	0.7nm,0.7s,baz=65,slow=10.0,SNR=4.3						
FITZ	Fitzroy Crossi	38.51	255	*e*P	P	08 19 50.9	-2.8
	5.0nm,0.8s						
FITZ	Fitzroy Crossi	38.51	255	P	P	08 19 51.1	-2.5
	4.9nm,0.8s,baz=96,slow=5.5,SNR=11						
LPH	Laupahoehoe	49.75	52	*e*P	P	08 21 21.1	-2.6
USRK	Ussuriysk Ar.	62.33	334	P	P	08 22 54.3	+1.0
	1.7nm,0.9s,baz=168,slow=7.4,SNR=2.8						
KLR	Kul'dur	66.48	337	P	P	08 23 21.2	+0.9
	0.9nm,0.7s,baz=133,slow=6.2,SNR=6.4						
CMAR	Chiang Mai Arr	71.15	294	P	P	08 23 50.4	+0.3
	1.3nm,0.5s,baz=122,slow=3.8,SNR=7.1						
SONA0	Songino Array	77.92	324	*e*P	P	08 24 27.9	-1.1
SONM	Songino Array	77.92	324	P	P	08 24 27.9	-1.1
	0.7nm,0.9s,baz=123,slow=2.4,SNR=3.1						
QSPA	South Pole Qui	79.18	180	P	P	08 24 37.1	+1.4
	1.6nm,0.9s,baz=0.0,slow=3.0,SNR=5.3						
ILAR	Eielson Array	83.61	19	P	P	08 24 59.6	+0.7
	1.5nm,0.9s,baz=224,slow=6.3,SNR=8.4						
NVAR	Mina Array Bea	86.62	50	P	P	08 25 16.4	+1.6
	0.2nm,0.5s,baz=216,slow=5.5,SNR=3.4						
MK32	Makanchi Array	92.71	317	*e*P	P	08 25 43.1	+0.1
MKAR	Makanchi Array	92.71	317	P	P	08 25 43.1	+0.1
	1.1nm,0.8s,baz=95,slow=6.1,SNR=7.6						
ZALV	Zalesovo Beam	92.82	324	P	P	08 25 42.9	-0.4
	0.5nm,0.5s,baz=93,slow=2.9,SNR=2.7						
ZAA1	Zalesovo Array	92.82	324	*e*P	P	08 25 42.9	-0.4

IDC 06 08:13:55.0±4.1, 10°.48S×165°.02E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/37, mbtmp3.6/3, Error ellipse: s-maj=208.9km s-min=34.0km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.01	249	P	P	08 20 15.4	+0.8
	0.8nm,0.9s,baz=80,slow=8.6,SNR=2.8						
ASAR	Alice Springs	32.41	242	P	P	08 20 26.1	-0.8
	0.8nm,0.9s,baz=63,slow=10.0,SNR=2.6						
ILAR	Eielson Array	83.21	19	P	P	08 26 22.9	0.0
	0.2nm,0.4s,baz=239,slow=4.9,SNR=4.2						

IDC 06 08:16:21.1±1.7, 10°.97S×164°.69E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.6/35, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=51.6km s-min=31.0km az=129.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.16	172	Pn	Pn	08 19 01.9	-0.2
	0.6nm,0.3s,baz=312,slow=16,SNR=2.6						
WRA	Warramunga Arr	30.54	249	P	P	08 22 36.6	+0.1
	0.4nm,0.6s,baz=81,slow=9.1,SNR=2.8						
ASAR	Alice Springs	31.90	243	P	P	08 22 48.5	-0.1
	0.6nm,0.6s,baz=66,slow=9.8,SNR=6.4						
ILAR	Eielson Array	83.78	19	P	P	08 28 51.9	0.0
	0.2nm,0.6s,baz=239,slow=5.1,SNR=3.2						

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*IDC **06** 08:18:04.9±0.7, 10°.91S×165°.32E, h0km, mb4.2/18, mb1 4.3/20, mb1mx4.2/37, mbtmp4.2/20, ML4.6/2, Error ellipse: s-maj=21.3km s-min=15.3km az=101.0*

*NEIC **06** 08:18:06.3±0.3, 10°.87S×165°.34E, h10km, mb4.3/7, Error ellipse: s-maj=8.6km s-min=6.4km az=90.0*

*ISCJB **06** 08:18:07.2±0.4, 10°.97S±0°.05×165°.31E±0°.06, h30km, mb4.2/21, Error ellipse: s-maj=9.3km s-min=7.5km az=153.1*

ISC 06 08:18:09.2±0.6, 10°.94S±0°.08×165°.37E±0°.08, h30km, n46, σ1s.23/44, mb4.2/21, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.54	285	*e*Pn	Pn	08 19 29.0	-0.6
HNR				*e*Pn	Pn	08 19 29.3	-0.4
HNR				*e*Sn	Sn	08 20 34.1	+1.7
HNR	Honiara	5.54	285	Pn	Pn	08 19 29.0	-0.6
	28nm,0.3s,baz=77,slow=17,SNR=3.1						
HNR				Sn	Sn	08 20 34.1	+1.7
	13nm,0.3s,baz=123,slow=17,SNR=2.7						
DZM	Mont Dzumac	11.12	175	Pn	Pn	08 20 46.6	+0.4
	2.2nm,0.3s,baz=57,slow=20,SNR=5.4						
PINNC	Pines Island,	11.78	171	*e*Pn	Pn	08 20 56.0	+0.8
EIDS	Eidsvold	19.72	221	*e*P	P	08 22 36.7	+0.2
	8.2nm,0.8s						
MANU	Manus Island	19.93	295	*e*P	P	08 22 38.1	-0.7
	101nm,1.0s						
CTA	Charters Tower	20.52	241	P	P	08 22 46.3	+1.1
	14nm,0.7s,baz=55,slow=10,SNR=5.5						
CTAO	Charters Tower	20.52	241	*e*P	P	08 22 45.8	+0.6
	25nm,1.0s						
LHI	Lord Howe Isla	21.29	195	*e*P	P	08 22 49.9	-3.5
	65nm,0.9s						
URZ	Urewera	29.17	161	P	P	08 24 08.3	+0.5
	15nm,1.0s,baz=351,slow=13,SNR=2.7						
H11S2	WAKE ISLAND Hy	29.27	3	T	T	08 54 42.4	
	baz=184						
H11S3	WAKE ISLAND Hy	29.28	3	T	T	08 54 48.1	
	baz=184						
H11S1	WAKE ISLAND Hy	29.29	3	T	T	08 54 42.9	
	baz=184						
BKZ	Black Stump Fm	29.81	162	*e*P	P	08 24 15.3	+1.7
	5.7nm,0.6s						
STKA	Stephens Creek	30.26	223	P	P	08 24 18.1	+0.5
	2.1nm,0.7s,baz=21,slow=9.1,SNR=3.4						
H11N1	WAKE ISLAND Hy	30.50	3	T	T	08 56 12.3	
	baz=182,slow=74						
H11N3	WAKE ISLAND Hy	30.50	3	T	T	08 56 16.2	
	baz=182						
H11N2	WAKE ISLAND Hy	30.52	3	T	T	08 56 14.6	
	baz=182,slow=74						
WR1	Warramunga Arr	31.17	250	*e*P	P	08 24 24.8	-1.0
	3.7nm,0.9s						
WRA	Warramunga Arr	31.17	250	P	P	08 24 24.8	-1.0
	1.8nm,0.6s,baz=81,slow=9.1,SNR=7.2						
AS01	Alice Springs	32.46	243	*e*P	P	08 24 33.3	-3.9
AS31	Alice Springs	32.50	243	*e*P	P	08 24 36.8	-0.8
	2.2nm,0.9s						
ASAR	Alice Springs	32.51	243	P	P	08 24 36.4	-1.2
	10.0nm,1.0s,baz=72,slow=9.5,SNR=24						
ASAR				PcP	PcP	08 27 24.8	+0.6
	0.6nm,0.8s,baz=64,slow=2.5,SNR=4.9						
FITZ	Fitzroy Crossi	39.05	255	*e*P	P	08 25 33.3	-0.4
	3.0nm,0.9s						
FITZ	Fitzroy Crossi	39.05	255	P	P	08 25 33.0	-0.7
	1.8nm,0.7s,baz=101,slow=10,SNR=2.7						
MJAR	Matsushiro Arr	53.71	333	P	P	08 27 27.9	-0.6
	0.7nm,0.3s,baz=167,slow=8.5,SNR=4.6						
MAJO	Matsushiro	53.71	333	*e*P	P	08 27 27.9	-0.6
ASAJ	Asahikawa	58.57	341	P	P	08 28 03.4	+0.3
	6.0nm,0.7s,baz=207,slow=12,SNR=4.9						
KSRS	Korea Array	59.58	326	P	P	08 28 10.8	+0.6
	1.5nm,0.7s,baz=134,slow=7.0,SNR=5.0						
KSAR	Wonju Array Be	59.59	326	P	P	08 28 10.8	+0.5
USRK	Ussuriysk Ar.	62.69	334	P	P	08 28 31.6	+0.5
	2.2nm,0.7s,baz=132,slow=5.7,SNR=5.1						
KLR	Kul'dur	66.81	337	P	P	08 28 58.6	+0.7
	3.2nm,1.0s,baz=137,slow=7.8,SNR=8.8						
SONA0	Songino Array	78.36	324	*e*P	P	08 30 07.4	+0.5
SONM	Songino Array	78.36	324	P	P	08 30 07.4	+0.5
	0.3nm,0.5s,baz=130,slow=2.3,SNR=2.6						
QSPA	South Pole Qui	79.06	180	P	P	08 30 11.6	+1.1
	4.2nm,1.1s,baz=355,slow=5.3,SNR=4.5						
ILAR	Eielson Array	83.53	19	P	P	08 30 34.3	+0.4
	0.4nm,0.5s,baz=236,slow=5.0,SNR=8.3						
ILB	Eielson Array	83.53	19	*e*P	P	08 30 34.3	+0.4
	2.9nm,1.1s						
NVAR	Mina Array Bea	86.24	50	P	P	08 30 49.6	+1.2
	0.8nm,0.8s,baz=256,slow=6.0,SNR=3.9						
MK32	Makanchi Array	93.19	317	*e*P	P	08 31 20.3	-0.4
MKAR	Makanchi Array	93.19	317	P	P	08 31 20.3	-0.4
	1.0nm,0.8s,baz=102,slow=5.1,SNR=4.6						
ZALV	Zalesovo Beam	93.25	324	P	P	08 31 20.1	-0.6
	0.5nm,0.6s,baz=107,slow=7.7,SNR=2.8						
ZAA1	Zalesovo Array	93.25	324	*e*P	P	08 31 20.1	-0.6
YKA	Yellowknife Ar	95.05	27	P	P	08 31 27.5	-1.3
	0.2nm,0.7s,baz=256,slow=4.1,SNR=4.7						
YKB5	Yellowknife Ar	95.05	27	*e*P	P	08 31 26.1	-2.8
TORD	Torodi Ar. Bea	163.88	279	PKP	PKPdf	08 38 10.7	+0.2
	1.3nm,1.2s,baz=30,slow=1.5,SNR=3.7						
TOA1	Torodi Ar. Sit	163.88	279	*e*PKPdf	PKPdf	08 38 10.7	+0.2

IDC 06 08:20:37.4±1.7, 11°.35S×164°.75E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/35, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=49.3km s-min=30.9km az=123.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.78	172	Pn	Pn	08 23 13.3	+0.1
	0.3nm,0.3s,baz=315,slow=20,SNR=3.9						
WRA	Warramunga Arr	30.45	250	P	P	08 26 52.3	+0.2
	0.3nm,0.7s,baz=79,slow=8.9,SNR=2.9						
ASAR	Alice Springs	31.78	243	P	P	08 27 03.1	-0.6
	0.3nm,0.5s,baz=61,slow=10,SNR=3.0						
ILAR	Eielson Array	84.12	19	P	P	08 33 09.4	-0.5
	0.8nm,0.9s,baz=227,slow=5.0,SNR=4.9						
MKAR	Makanchi Array	93.08	317	P	P	08 33 54.0	+0.8
	0.2nm,0.6s,baz=89,slow=5.9,SNR=2.5						

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*IDC **06** 08:23:16.7±0.8, 10°.84S×165°.18E, h0km, mb4.2/16, mb1 4.3/18, mb1mx4.2/43, mbtmp4.2/18, ML4.4/2, Error ellipse: s-maj=24.5km s-min=16.4km az=127.0*

*NEIC **06** 08:23:18.7±0.4, 10°.82S×165°.12E, h10km, mb4.2/10, Error ellipse: s-maj=9.0km s-min=6.9km az=90.0*

*ISCJB **06** 08:23:19.9±0.4, 10°.93S±0°.05×165°.10E±0°.06, h31km, mb4.2/21, Error ellipse: s-maj=8.3km s-min=6.8km az=143.9*

ISC 06 08:23:21.8±0.5, 10°.87S±0°.08×165°.14E±0°.07, h31km, n40, σ1s.21/43, mb4.2/21, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.30	285	*e*Pn	Pn	08 24 38.9	-0.1
HNR				*e*Pn	Pn	08 24 39.4	+0.4
HNR				*e*Sn	Sn	08 25 39.9	+0.8
HNR	Honiara	5.30	285	Pn	Pn	08 24 38.8	-0.1
	16nm,0.3s,baz=139,slow=11,SNR=2.8						
HNR				Sn	Sn	08 25 39.9	+0.8
	11nm,0.3s,baz=176,slow=16,SNR=2.2						
MARNC	Mare, Loyalty	10.91	166	*e*Pn	Pn	08 25 56.1	+0.2
DZM	Mont Dzumac	11.21	174	Pn	Pn	08 25 59.4	-0.7
	2.2nm,0.3s,baz=15,slow=17,SNR=3.7						
ONTNC	Ouen Toro	11.44	174	*e*Pn	Pn	08 26 04.8	+1.6
PINNC	Pines Island,	11.88	170	*e*Pn	Pn	08 26 10.1	+0.9
TARA	Tarawa	14.40	33	*e*Pn	Pn	08 26 44.7	+1.0
MANU	Manus Island	19.70	295	*e*P	Pn	08 27 49.9	-0.5
	108nm,1.0s						
CTA	Charters Tower	20.36	241	P	Pn	08 27 57.0	-1.1
	18nm,0.7s,baz=73,slow=12,SNR=15						
CTAO	Charters Tower	20.36	241	*e*P	P	08 27 54.2	-1.7
	26nm,0.8s						
COEN	Coen	21.66	260	*e*P	P	08 28 09.5	-0.5
	4.7nm,0.9s						
ARMA	Armidale	23.15	211	*e*P	P	08 28 27.1	+1.3
	14nm,1.0s						
RAO	Raoul Island	24.19	142	*e*P	P	08 28 34.5	-1.1
	615nm,0.9s						
STKA	Stephens Creek	30.16	223	*e*P	P	08 29 30.5	+1.3
	1.4nm,0.9s						
STKA	Stephens Creek	30.16	223	P	P	08 29 29.9	+0.7
	4.6nm,0.8s,baz=21,slow=13,SNR=7.9						
WR1	Warramunga Arr	30.98	249	*e*P	P	08 29 35.4	-1.2
	4.0nm,1.0s						
WRA	Warramunga Arr	30.98	249	P	P	08 29 35.4	-1.2
	1.4nm,0.8s,baz=76,slow=8.9,SNR=11						
AS31	Alice Springs	32.34	243	*e*P	P	08 29 47.5	-1.1
	1.3nm,0.9s						
ASAR	Alice Springs	32.34	243	P	P	08 29 47.4	-1.2
	2.7nm,0.7s,baz=68,slow=9.8,SNR=21						
FITZ	Fitzroy Crossi	38.85	255	*e*P	P	08 30 40.9	-3.6
	1.9nm,0.9s						
FITZ	Fitzroy Crossi	38.85	255	P	P	08 30 43.7	-0.8
	1.4nm,0.8s,baz=62,slow=6.4,SNR=5.8						
SMRI	Semarang	54.11	269	*e*PcP	PcP	08 33 52.8	+3.8
ASAJ	Asahikawa	58.43	341	P	P	08 33 15.2	+0.6
	5.4nm,1.0s,baz=233,slow=14,SNR=4.3						
KLR	Kul'dur	66.66	337	P	P	08 34 09.9	+0.5
	2.0nm,0.8s,baz=112,slow=1.4,SNR=6.1						
CMAR	Chiang Mai Arr	71.50	294	P	P	08 34 40.6	+0.5
	0.9nm,0.3s,baz=135,slow=1.0,SNR=6.7						
ULN	Ulaanbaatar	77.81	324	*e*P	P	08 35 16.6	+0.3
	4.3nm,0.9s						
SONA0	Songino Array	78.17	324	*e*P	P	08 35 18.5	+0.2
SONM	Songino Array	78.17	324	P	P	08 35 18.5	+0.2
	1.5nm,0.8s,baz=144,slow=5.4,SNR=7.8						
SONA1	Songino Array	78.17	324	*e*P	P	08 35 18.8	+0.5
QSPA	South Pole Qui	79.13	180	*e*P	P	08 35 23.9	+0.5
QSPA				*e*P	P	08 35 24.4	+1.1
QSPA	South Pole Qui	79.13	180	P	P	08 35 23.9	+0.5
	5.5nm,1.0s,baz=326,slow=2.9,SNR=7.0						
ILAR	Eielson Array	83.54	19	P	P	08 35 45.5	-0.9
	0.9nm,0.7s,baz=234,slow=5.2,SNR=7.4						
ILB	Eielson Array	83.54	19	*e*P	P	08 35 45.5	-0.9
	3.2nm,1.1s						
NVAR	Mina Array Bea	86.37	50	P	P	08 36 01.2	-0.3
	0.6nm,0.8s,baz=250,slow=8.8,SNR=3.6						
MK32	Makanchi Array	92.99	317	*e*P	P	08 36 31.6	-0.7
MKAR	Makanchi Array	92.99	317	P	P	08 36 31.6	-0.7
	0.9nm,0.8s,baz=96,slow=6.1,SNR=5.9						
ZALV	Zalesovo Beam	93.06	324	P	P	08 36 31.5	-0.9
	0.5nm,0.6s,baz=98,slow=6.0,SNR=2.8						
ZAA1	Zalesovo Array	93.07	324	*e*P	P	08 36 31.5	-0.9
PDAR	Pinedale Array	93.87	47	P	P	08 36 36.7	0.0
	0.4nm,0.8s,baz=238,slow=2.8,SNR=3.2						
YKA	Yellowknife Ar	95.09	27	P	P	08 36 39.8	-1.6
	0.4nm,0.8s,baz=251,slow=4.7,SNR=5.2						

IDC 06 08:23:55.0±1.6, 10°.88S×164°.61E, h0km, mb4.1/4, mb1 4.3/5, mb1mx3.8/43, mbtmp4.1/5, ML4.1/1, Error ellipse: s-maj=46.0km s-min=34.5km az=113.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.26	171	Pn	Pn	08 26 37.2	-0.2
	1.3nm,0.3s,baz=323,slow=20,SNR=3.0						
WRA	Warramunga Arr	30.50	249	P	P	08 30 09.8	-0.3
	0.7nm,0.5s,baz=79,slow=9.2,SNR=5.6						
CMAR	Chiang Mai Arr	71.03	294	P	P	08 35 15.4	+0.1
	1.2nm,0.4s,baz=116,slow=3.3,SNR=5.0						
ILAR	Eielson Array	83.72	19	P	P	08 36 25.3	-0.2
	0.7nm,0.8s,baz=234,slow=5.4,SNR=3.0						
MKAR	Makanchi Array	92.64	317	P	P	08 37 09.3	+0.4
	0.7nm,0.7s,baz=103,slow=6.0,SNR=4.2						

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*IDC **06** 08:27:01.6±0.6, 10°.78S×165°.28E, h0km, mb4.5/24, mb1 4.6/26, mb1mx4.5/44, mbtmp4.5/26, ML5.1/2, MS4.7/4, Ms1 4.7/4, ms1mx3.9/43, Error ellipse: s-maj=17.5km s-min=12.8km az=100.0*

*ISCJB **06** 08:27:04.6±0.2, 10°.90S±0°.04×165°.32E±0°.04, h30km, mb4.6/70, Error ellipse: s-maj=5.7km s-min=5.3km az=169.1*

*NEIC **06** 08:27:05.8±2.5, 10°.82S×165°.33E, h27km±17km, mb4.7/41, Error ellipse: s-maj=7.3km s-min=6.0km az=190.0*

ISC 06 08:27:06.6±0.4, 10°.84S±0°.07×165°.41E±0°.06, h30km, n122, σ1s.51/119, mb4.7/70, 1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.55	284	*e*Pn	Pn	08 28 25.8	-1.4
HNR				*e*Pn	Pn	08 28 26.0	-1.3
HNR				*e*Sn	Sn	08 29 30.8	+0.7
HNR	Honiara	5.55	284	Pn	Pn	08 28 25.8	-1.4
	130nm,0.3s,baz=145,slow=5.6,SNR=20						
HNR				Sn	Sn	08 29 30.8	+0.7
	16nm,0.3s,baz=49,slow=19,SNR=2.7						
MARNC	Mare, Loyalty	10.88	167	*e*Pn	Pn	08 29 40.1	-0.2
DZM	Mont Dzumac	11.21	175	*e*Pn	Pn	08 29 44.7	-0.3
	32nm,0.3s						
DZM				*e*LR	LR	08 32 14.8	
	comp=Z,3µm,24.9s						
DZM	Mont Dzumac	11.21	175	Pn	Pn	08 29 44.8	-0.2
	6.6nm,0.3s,baz=43,slow=9.0,SNR=34						
ONTNC	Ouen Toro	11.45	175	*e*Pn	Pn	08 29 47.8	-0.3
PINNC	Pines Island,	11.87	171	*e*Pn	Pn	08 29 54.5	+0.6
MSVF	Nonsavu	14.04	121	*e*Pn	Pn	08 30 24.0	+0.4
EIDS	Eidsvold	19.83	221	*e*P	P	08 31 33.7	-1.3
	36nm,1.0s						
MANU	Manus Island	19.93	295	*e*P	P	08 31 34.5	-1.7
	178nm,1.1s						
CTA	Charters Tower	20.60	241	P	P	08 31 42.7	-0.8
	14nm,0.7s,baz=64,slow=12,SNR=10.0						
CTAO	Charters Tower	20.60	241	*e*P	P	08 31 42.8	-0.8
	61nm,1.0s						
COEN	Coen	21.93	260	*e*P	P	08 31 56.2	-1.7
	28nm,1.1s						
ARMA	Armidale	23.32	211	*e*P	P	08 32 12.5	+0.2
	6.3nm,0.9s						
H11S2	WAKE ISLAND Hy	29.17	3	T	T	09 03 36.6	
	baz=184,slow=76						
H11S3	WAKE ISLAND Hy	29.18	2	T	T	09 03 29.1	
	baz=184,slow=76,SNR=102						
H11S1	WAKE ISLAND Hy	29.19	3	T	T	09 03 39.7	
	baz=184,slow=76,SNR=81						
URZ	Urewera	29.25	161	P	P	08 33 06.5	+0.5
	16nm,0.9s,baz=0.0,slow=8.1,SNR=5.1						
BKZ	Black Stump Fm	29.89	163	*e*P	P	08 33 12.4	+0.7
	19nm,0.8s						
STKA	Stephens Creek	30.36	223	*e*P	P	08 33 16.3	+0.3
	2.4nm,1.1s						
STKA	Stephens Creek	30.36	223	P	P	08 33 15.6	-0.4
	12nm,1.1s,baz=41,slow=9.1,SNR=6.1						
STKA				LR	LR	08 46 02.8	
	comp=Z,1µm,18.3s,baz=36,slow=38						
H11N1	WAKE ISLAND Hy	30.39	3	T	T	09 05 02.7	
	baz=182,slow=76,SNR=71						
H11N3	WAKE ISLAND Hy	30.40	3	T	T	09 05 03.3	
	baz=182,slow=76,SNR=65						
H11N2	WAKE ISLAND Hy	30.41	3	T	T	09 05 04.2	
	baz=182,slow=76,SNR=56						
WRAB	Tennant Creek	31.23	249	*e*P	P	08 33 23.5	-0.2
	4.9nm,0.9s						
WB2	Warramunga Arr	31.23	249	*e*P	P	08 33 21.4	-2.3
	16nm,1.1s						
WR1	Warramunga Arr	31.24	249	*e*P	P	08 33 21.4	-2.4
	29nm,1.1s						
WRA	Warramunga Arr	31.24	249	P	P	08 33 21.4	-2.4
	3.1nm,0.9s,baz=80,slow=7.6,SNR=9.0						
AS01	Alice Springs	32.55	243	*e*P	P	08 33 35.6	+0.3
AS31	Alice Springs	32.59	243	*e*P	P	08 33 33.5	-2.2
	1.6nm,0.6s						
ASAR	Alice Springs	32.59	243	P	P	08 33 32.5	-3.1
	3.9nm,0.6s,baz=70,slow=9.4,SNR=18						
ASAR				LR	LR	08 45 36.2	
	comp=Z,532nm,19.4s,baz=67,slow=34						
RPZ	Rata Peaks	33.12	172	P	P	08 33 40.7	+0.7
	11nm,0.7s,baz=324,slow=3.6,SNR=5.1						
BBOO	Buckleboo	34.73	226	*e*P	P	08 33 53.6	-0.5
	16nm,1.1s						
FITZ	Fitzroy Crossi	39.11	255	*e*P	P	08 34 30.0	-1.6
	5.4nm,0.9s						
FITZ	Fitzroy Crossi	39.11	255	P	P	08 34 29.6	-2.0
	3.8nm,0.9s,baz=81,slow=9.2,SNR=6.9						
FITZ				LR	LR	08 51 24.2	
	comp=Z,916nm,18.2s,baz=82,slow=38						
FORT	Forrest	39.89	235	*e*P	P	08 34 37.2	-0.7
	91nm,1.1s						
EDFI	Ende, Flores	43.10	269	P	P	08 35 07.8	+3.1
PPT2	Papeete2	44.07	104	*e*LR	LR	08 47 40.6	
	comp=Z,903nm,25.2s						
TBI	Tubuai	44.72	112	*e*LR	LR	08 48 01.7	
	comp=Z,1µm,28.5s						
BNSI	Bone	45.31	275	P	P	08 35 25.6	+3.4
NWAO	Narrogin (SRO)	49.30	236	P	P	08 35 52.1	-1.0
	18nm,1.0s,baz=61,slow=6.1,SNR=4.1						
NWAO				LR	LR	08 56 56.9	
	comp=Z,2µm,18.5s,baz=323,slow=36						
MJAR	Matsushiro Arr	53.64	333	P	P	08 36 24.1	-1.2
	7.4nm,1.2s,baz=164,slow=7.9,SNR=5.7						
MAJO	Matsushiro	53.64	333	*e*P	P	08 36 24.1	-1.2
JNU	Nakatsue	54.72	324	P	P	08 36 30.6	-2.8
	8.3nm,1.0s,baz=148,slow=7.9,SNR=2.3						
ASAJ	Asahikawa	58.49	341	P	P	08 36 59.3	-0.6
	1.7nm,0.3s,baz=99,slow=13,SNR=3.2						
KSRS	Korea Array	59.52	326	P	P	08 37 06.5	-0.7
	2.6nm,0.7s,baz=150,slow=7.1,SNR=9.5						
KSAR	Wonju Array Be	59.53	326	P	P	08 37 06.5	-0.8
KS01	Wonju Array Si	59.55	326	*e*P	P	08 37 08.1	+0.7
NJ2	Nanjing	61.64	316	*e*P	P	08 37 24.2	+2.4
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
USA0B	Ussuriysk Arra	62.62	334	*e*P	P	08 37 28.7	+0.6
	comp=Z,9.4nm,1.0s						
USRK	Ussuriysk Ar.	62.62	334	P	P	08 37 27.1	-0.9
	comp=Z,3.0nm,0.8s,baz=155,slow=5.9,SNR=5.4						
MDJ	Mudanjiang	64.01	332	P	P	08 37 39.9	+2.6
MDJ				pmax	pmax		
	comp=Z,21nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.3s						
PETK	Petropavlovsk-	64.03	355	P	P	08 37 37.0	-0.3
	comp=Z,6.5nm,1.1s,baz=145,slow=5.3,SNR=3.0						
PEA1	Petropavlovsk-	64.04	355	*e*P	P	08 37 37.0	-0.4
CN2	Changchun	65.39	329	*e*P	P	08 37 44.6	-1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CASY	Casey	66.45	201	*e*P	P	08 37 54.8	+2.0
	comp=Z,7.9nm,1.0s						
SKNT	Sakolnakorn	66.70	294	P	P	08 37 57.5	+2.2
	comp=Z,5.7nm,1.5s,comp=Z,586nm						
KLR	Kul'dur	66.74	337	P	P	08 37 53.2	-1.6
	comp=Z,3.5nm,0.8s,baz=122,slow=9.5,SNR=7.1						
ENH	Enshi	67.51	309	*e*P	P	08 38 01.0	+0.8
	comp=Z,26nm,1.1s						
GYA	Guiyang	68.03	304	P	P	08 38 05.3	+1.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PBKT	Sadao Pong	69.29	292	*e*P	P	08 38 13.5	+2.0
	comp=Z,7.4nm,1.0s						
XAN	Xi'an	69.74	312	P	P	08 38 15.5	+1.4
XAN				pP	PcP	08 38 32.5	-4.2
XAN				PcP	sP	08 38 37.7	+12
XAN				pmax	pmax		
	comp=Z,12nm,1.5s						
XAN				LR	LR		
	comp=N,310nm,18.4s						
XAN				LR	LR		
	comp=Z,370nm,18.4s						
XAN	Xi'an	69.74	312	*e*P	P	08 38 15.9	+1.8
	comp=Z,10nm,0.9s						
KMI	Kunming	70.73	301	P	P	08 38 21.7	+1.1
KMI				pP	pwP	08 38 30.5	-1.2
KMI				pmax	pmax		
	comp=Z,33nm,1.3s						
HHC	Hu-ho-hao-te	71.46	320	*e*P	P	08 38 26.7	+2.2
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
CM01	Chiang Mai Arr	71.70	294	*e*P	P	08 38 26.5	+0.2
CMAR	Chiang Mai Arr	71.72	294	P	P	08 38 27.2	+0.8
	comp=Z,1.5nm,0.3s,baz=118,slow=3.8,SNR=14						
CHTO	Chiang Mai	71.84	294	*e*P	P	08 38 27.9	+0.8
	comp=Z,13nm,1.1s						
CHTO	Chiang Mai	71.84	294	P	P	08 38 30.8	+3.7
	comp=Z,47nm,1.4s						
HIA	Hailar	72.03	330	*e*P	P	08 38 27.8	+0.1
	comp=Z,15nm,1.0s						
CD2	Chengdu	72.21	307	*e*P	P	08 38 31.0	+1.8
LZH	Lanzhou	74.37	312	*e*P	P	08 38 44.5	+2.5
LZH				pP	pP	08 38 49.6	-1.3
LZH				sP	pwP	08 38 52.6	-0.7
LZH				PP	PP	08 41 34.1	+5.6
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				pmax	pmax		
	comp=Z,84nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,16.3s						
LZH				LR	LR		
	comp=E,210nm,16.4s						
LZH				LR	LR		
	comp=Z,270nm,17.5s						
ULN	Ulaanbaatar	77.94	324	*e*P	P	08 39 02.4	+0.4
	comp=Z,11nm,1.0s						
SVW2	Sparrevohn	78.02	18	*e*P	P	08 39 01.3	-0.6
	comp=Z,9.9nm,1.2s						
SONA0	Songino Array	78.30	324	*e*P	P	08 39 03.9	-0.1
SONM	Songino Array	78.30	324	P	P	08 39 03.9	-0.1
	comp=Z,6.4nm,1.1s,baz=133,slow=4.4,SNR=16						
SONA1	Songino Array	78.31	324	*e*P	P	08 39 03.7	-0.3
ANM	Nome	78.36	12	*e*P	P	08 39 03.9	+0.1
	comp=Z,3.1nm,1.1s						
BILL	Bilibino	78.68	0	*e*P	P	08 39 04.8	-0.6
	comp=Z,6.3nm,1.0s						
GTA	Gaotai	78.68	314	⇓P	P	08 39 09.2	+3.0
GTA				pP	pP	08 39 15.4	+0.2
GTA				sP	sP	08 39 18.4	0.0
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						

GTA				pmax	pmax		
	comp=Z,280nm,5.6s						
GTA				LR	LR		
	comp=N,280nm,18.7s						
GTA				LR	LR		
	comp=E,300nm,19.0s						
GTA				LR	LR		
	comp=Z,410nm,21.3s						
QSPA	South Pole Qui	79.16	180	*e*P	P	08 39 08.8	+0.3
QSPA				*e*P	P	08 39 09.3	+0.8
QSPA	South Pole Qui	79.16	180	P	P	08 39 08.8	+0.3
	comp=Z,10nm,1.0s,baz=354,slow=4.9,SNR=8.8						
IM3	Indian Mountai	82.32	16	*e*P	P	08 39 26.8	+1.8
HDA	Harding Lake	83.16	19	*e*P	P	08 39 29.6	+0.2
	comp=Z,12nm,1.1s						
IL1	Eielson Array	83.42	19	*e*P	P	08 39 30.1	-0.6
ILAR	Eielson Array	83.42	19	P	P	08 39 30.1	-0.6
	comp=Z,1.0nm,0.7s,baz=236,slow=5.0,SNR=13						
ILB	Eielson Array	83.42	19	*e*P	P	08 39 30.6	-0.2
SCRK	Sand Creek	83.84	20	*e*P	P	08 39 32.8	-0.3
	comp=Z,5.8nm,1.1s						
WAKR	Walker	85.32	50	*e*P	P	08 39 40.9	-0.4
	comp=Z,8.0nm,1.2s						
DAWY	Dawson	85.48	21	*e*P	P	08 39 41.9	+0.6
	comp=Z,7.8nm,1.1s						
NV01	Mina Array Sit	86.15	50	*e*P	P	08 39 44.9	-0.5
NVAR	Mina Array Bea	86.15	50	P	P	08 39 45.4	0.0
	comp=Z,2.8nm,1.0s,baz=238,slow=7.3,SNR=8.4						
NV11	Mina Array Sit	86.26	50	*e*P	P	08 39 45.3	-0.5
	comp=Z,0.3nm,1.0s						
KVN	Kaiserville	86.48	49	*e*P	P	08 39 46.8	-0.1
	comp=Z,3.4nm,1.1s						
W13A	Hualapai Mount	88.68	54	*e*P	P	08 39 56.9	-0.8
	comp=Z,2.9nm,1.0s						
WMQ	Urumqi	88.72	315	*e*P	P	08 40 00.1	+2.7
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
CCUT	Cedar City	89.68	52	*e*P	P	08 40 02.1	-0.3
	comp=Z,4.0nm,1.2s						
KNB	Kanab	89.97	52	*e*P	P	08 40 02.6	-1.0
	comp=Z,6.1nm,1.2s						
U15A	North Rim	90.25	53	*e*P	P	08 40 06.0	+0.9
	comp=Z,4.6nm,1.0s						
HLID	Hailey	90.37	46	*e*P	P	08 40 05.8	+0.4
	comp=Z,2.6nm,1.1s						
HVU	Hansel Valley	91.11	48	*e*P	P	08 40 08.1	-0.8
	comp=Z,5.2nm,1.1s						
DLMT	Dillon	92.07	44	*e*P	P	08 40 12.2	-1.0
	comp=Z,8.0nm,1.1s						
MK01	Makanchi Array	93.13	317	*e*P	P	08 40 16.8	-1.1
MK31	Makanchi Array	93.14	317	*e*P	P	08 40 16.5	-1.4
	comp=Z,2.2nm,0.9s						
MK32	Makanchi Array	93.14	317	*e*P	P	08 40 16.6	-1.3
MKAR	Makanchi Array	93.14	317	*e*P	P	08 40 16.6	-1.3
	comp=Z,15nm,0.8s						
MKAR	Makanchi Array	93.14	317	P	P	08 40 16.6	-1.3
	comp=Z,3.6nm,1.1s,baz=96,slow=7.4,SNR=9.3						
ZAA0	Zalesovo Array	93.19	324	*e*P	P	08 40 17.9	0.0
	comp=Z,4.1nm,1.0s						
ZALV	Zalesovo Beam	93.19	324	*e*P	P	08 40 17.2	-0.7
ZALV	Zalesovo Beam	93.19	324	P	P	08 40 16.6	-1.3
	comp=Z,0.4nm,0.4s,baz=123,slow=5.5,SNR=6.3						
ZAA1	Zalesovo Array	93.20	324	*e*P	P	08 40 16.6	-1.3
MAKZ	Makanchi	93.36	317	*e*P	P	08 40 18.7	-0.2
	comp=Z,2.7nm,1.0s						
PDAR	Pinedale Array	93.66	47	P	P	08 40 20.0	-0.7
	comp=Z,0.6nm,0.9s,baz=238,slow=3.1,SNR=3.2						
YKA	Yellowknife Ar	94.94	27	P	P	08 40 23.0	-2.8
	comp=Z,0.4nm,0.8s,baz=258,slow=4.4,SNR=6.4						
YKB5	Yellowknife Ar	94.94	27	*e*P	P	08 40 23.0	-2.8
LTX	Lajitas	96.02	61	*e*P	P	08 40 32.8	+1.1
TXAR	Lajitas Array	96.02	61	P	P	08 40 32.8	+1.1
	comp=Z,0.3nm,1.0s,baz=232,slow=4.4,SNR=2.6						
ARA0	ARCESS Array S	116.05	345	*e*PKPdf	PKiKP	08 45 44.5	-1.6
ARCES	ARCESS Array B	116.05	345	PKP	PKiKP	08 45 44.5	-1.6
	comp=Z,1.1nm,0.8s,baz=35,slow=3.3,SNR=3.6						
TOA0	Torodi Ar. Sit	163.90	280	*e*PKPab	PKPab	08 47 58.4	-2.3
TORD	Torodi Ar. Bea	163.90	280	PKP	PKPdf	08 47 06.7	-1.2
	comp=Z,0.8nm,1.1s,baz=72,slow=1.8,SNR=3.5						
TOA1	Torodi Ar. Sit	163.90	280	*e*PKPdf	PKPdf	08 47 06.7	-1.3

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*IDC **06** 08:28:38.1±1.0, 10°.93S×165°.25E, h0^{km}, mb4.3/16, mb1 4.4/17, mb1mx4.3/42, mbtmp4.3/17, ML4.4/1, MS4.8/2, Ms1 4.8/2, ms1mx3.8/42, Error ellipse: s-maj=28.1km s-min=19.6km az=126.0*

*ISCJB **06** 08:28:40.8±0.6, 10°.99S±0°.09×165°.2E±0°.1, h30^{km}, mb4.2/15, MS4.7/2, Error ellipse: s-maj=18.3km s-min=12.7km az=12.0*

ISC 06 08:28:42.6±0.7**, 11°.0S**±0°.1×**165°.2E**±0°.2**, h30^{km}, n24, σ0^s.78**/16**, mb4.3**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.11	174	Pn	Pn	08 31 19.7	+0.2
	2.8nm,0.3s,baz=18,slow=20,SNR=3.3						
CTA	Charters Tower	20.36	241	P	Pn	08 33 19.1	0.0
	47nm,1.1s,baz=60,slow=13,SNR=5.4						
H11S2	WAKE ISLAND Hy	29.31	3	T	T	09 05 45.3	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.31	3	T	T	09 05 46.4	
	baz=184,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	29.33	3	T	T	09 05 46.4	
	baz=184,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	30.53	3	T	T	09 07 17.7	
	baz=184,slow=76,SNR=9.1						
H11N3	WAKE ISLAND Hy	30.54	3	T	T	09 07 20.3	
	baz=184,slow=76,SNR=8.1						
H11N2	WAKE ISLAND Hy	30.55	3	T	T	09 07 18.6	
	baz=184,slow=76,SNR=9.0						
WRA	Warramunga Arr	31.01	250	P	P	08 34 57.5	-0.3
	2.6nm,0.6s,baz=80,slow=9.2,SNR=3.6						
WRA				LR	LR	08 46 26.2	
	comp=Z,2µm,18.2s,baz=75,slow=34						
ASAR	Alice Springs	32.35	243	P	P	08 35 09.0	-0.6
	15nm,1.0s,baz=75,slow=9.6,SNR=13						
RPZ	Rata Peaks	33.02	172	LR	LR	08 47 51.3	
	comp=Z,1µm,20.6s,baz=338,slow=35						
MJAR	Matsushiro Arr	53.66	333	P	P	08 38 01.0	-0.5
	2.5nm,0.8s,baz=51,slow=2.0,SNR=4.6						
JNU	Nakatsue	54.70	325	P	P	08 38 09.2	-0.1
	9.6nm,0.9s,baz=98,slow=10,SNR=3.3						
ASAJ	Asahikawa	58.55	341	P	P	08 38 35.6	-0.7
	5.8nm,0.8s,baz=218,slow=12,SNR=4.4						
KSRS	Korea Array	59.51	326	P	P	08 38 43.8	+0.7
	1.9nm,0.7s,baz=137,slow=7.2,SNR=4.5						
USRK	Ussuriysk Ar.	62.64	334	P	P	08 39 05.1	+0.9
	3.5nm,0.9s,baz=148,slow=5.6,SNR=4.0						
KLR	Kul'dur	66.77	337	P	P	08 39 32.1	+1.0
	3.9nm,1.0s,baz=131,slow=8.4,SNR=4.9						
SONM	Songino Array	78.29	324	P	P	08 40 40.5	+0.6
	0.3nm,0.5s,baz=134,slow=6.2,SNR=3.1						
ILAR	Eielson Array	83.61	19	P	P	08 41 07.5	-0.2
	0.6nm,0.6s,baz=242,slow=4.9,SNR=5.5						
NVAR	Mina Array Bea	86.38	50	P	P	08 41 23.2	+0.6
	2.7nm,1.1s,baz=234,slow=6.6,SNR=4.7						
MKAR	Makanchi Array	93.10	317	P	P	08 41 54.0	+0.3
	1.0nm,0.8s,baz=100,slow=6.7,SNR=3.6						
ZALV	Zalesovo Beam	93.18	324	P	P	08 41 53.5	-0.3
	0.5nm,0.3s,baz=73,slow=5.0,SNR=3.2						
YKA	Yellowknife Ar	95.15	27	P	P	08 42 00.9	-1.8
	0.2nm,0.7s,baz=262,slow=4.3,SNR=3.6						
TXAR	Lajitas Array	96.26	61	P	P	08 42 09.2	+0.5
	0.1nm,0.4s,baz=236,slow=3.1,SNR=2.4						

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*ISCJB **06** 08:29:32.1±0.3, 10°.64S±0°.04×164°.94E±0°.05, h10^{km}, mb4.5/39, MS4.6/2, Error ellipse: s-maj=6.9km s-min=6.0km az=172.9*

*IDC **06** 08:29:32.3±0.6, 10°.65S×164°.90E, h0^{km}, mb4.5/21, mb1 4.7/23, mb1mx4.6/43, mbtmp4.6/23, ML5.1/2, MS4.6/4, Ms1 4.6/4, ms1mx3.8/43, Error ellipse: s-maj=19.2km s-min=14.0km az=93.0*

*NEIC **06** 08:29:33.7±0.3, 10°.61S×164°.97E, h10^{km}, mb4.8/24, Error ellipse: s-maj=7.8km s-min=5.7km az=101.0*

ISC 06 08:29:33.6±0.4**, 10°.65S**±0°.06×**164°.97E**±0°.06**, h10^{km}, n82, σ1^s.34**/77**, mb4.7**/39**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.09	283	*e*Pn	Pn	08 30 50.2	+0.3
HNR				*e*Pn	Pn	08 30 52.3	+2.3
HNR				*e*Sn	Sn	08 31 48.5	-0.4
HNR				*e*Sn	Sn	08 31 49.0	+0.2
HNR	Honiara	5.09	283	Pn	Pn	08 30 50.2	+0.3
	76nm,0.3s,baz=147,slow=4.8,SNR=4.8						
HNR				Sn	Sn	08 31 48.5	-0.4
	38nm,0.3s,baz=30,slow=20,SNR=3.2						
HNR				LR	LR	08 32 55.2	
	comp=Z,5µm,21.7s,baz=112,slow=40						
MARNC	Mare, Loyalty	11.17	165	*e*Pn	Pn	08 32 13.8	+0.4
DZM	Mont Dzumac	11.45	173	Pn	Pn	08 32 17.6	+0.2
	12nm,0.3s,baz=317,slow=7.3,SNR=19						
DZM				Sn	Sn	08 34 21.3	-4.1
	0.6nm,0.3s,baz=36,slow=19,SNR=2.8						
DZM				LR	LR	08 35 51.0	
	comp=Z,5µm,18.1s,baz=23,slow=33						
ONTNC	Ouen Toro	11.68	173	*e*Pn	Pn	08 32 22.3	+1.8
PINNC	Pines Island,	12.13	169	*e*Pn	Pn	08 32 27.6	+0.9
TARA	Tarawa	14.31	34	*e*Pn	Pn	08 32 55.5	-0.9
TARA				*e*Sn	Sn	08 35 13.7	-22
MANU	Manus Island	19.46	295	*e*P	Pn	08 34 00.2	-1.6
	77nm,1.0s						
EIDS	Eidsvold	19.69	220	*e*P	Pn	08 34 04.7	+0.1
	82nm,1.1s						
CTAO	Charters Tower	20.32	240	*e*P	Pn	08 34 11.3	-0.8
	23nm,0.9s						
COEN	Coen	21.54	259	*e*P	P	08 34 25.3	+2.0
	10nm,0.9s						
ARMA	Armidale	23.26	210	*e*P	P	08 34 42.2	+0.7
	45nm,1.0s						
URZ	Urewera	29.57	160	*e*P	P	08 35 40.4	+1.7
	10nm,0.9s						
URZ	Urewera	29.57	160	P	P	08 35 40.4	+1.7
	7.0nm,0.8s,baz=288,slow=9.6,SNR=1.8						
URZ				LR	LR	08 46 10.3	
	comp=Z,1µm,18.7s,baz=334,slow=34						
URZ	Urewera	29.57	160	P	P	08 35 44.0	+5.4
SNGZ	Shannon Statio	30.12	161	P	P	08 35 48.9	+5.4
RAHZ	Arahi	30.16	161	P	P	08 35 49.1	+5.2
BKZ	Black Stump Fm	30.20	162	P	P	08 35 47.5	+3.1
MOVZ	Moawhango	30.21	163	P	P	08 35 52.6	+8.2
STKA	Stephens Creek	30.21	222	*e*P	P	08 35 45.6	+1.1
	4.7nm,0.9s						
STKA	Stephens Creek	30.21	222	P	P	08 35 45.1	+0.6
	15nm,0.8s,baz=33,slow=11,SNR=12						
NMHZ	Naumai	30.24	162	P	P	08 35 51.9	+7.2
BHHZ	Black Hill Sta	30.38	163	P	P	08 35 50.7	+4.8
KWHZ	Kaweka Forest	30.42	162	P	P	08 35 51.0	+4.8
KAHZ	Kahuranaki	30.90	162	P	P	08 35 57.0	+6.5
WR1	Warramunga Arr	30.91	249	*e*P	P	08 35 48.7	-2.1
	6.8nm,1.0s						
WRA	Warramunga Arr	30.91	249	P	P	08 35 48.7	-2.1
	1.5nm,0.5s,baz=79,slow=9.6,SNR=5.8						
WRA				PcP	PcP	08 38 48.1	+0.6
	0.6nm,0.7s,baz=77,slow=3.7,SNR=3.5						
TOO	Toolangi	32.03	210	*e*P	P	08 36 01.3	+0.8
	6.9nm,0.7s						
AS31	Alice Springs	32.29	242	*e*P	P	08 36 00.8	-2.1
	1.3nm,0.6s						
ASAR	Alice Springs	32.30	242	P	P	08 36 00.8	-2.1
	2.2nm,0.7s,baz=63,slow=9.7,SNR=4.2						
FITZ	Fitzroy Crossi	38.75	254	*e*P	P	08 36 58.0	-0.5
	4.4nm,0.8s						
FITZ	Fitzroy Crossi	38.75	254	P	P	08 36 58.0	-0.5
	2.8nm,0.7s,baz=97,slow=5.6,SNR=4.0						
SOEI	Soe	40.05	267	*e*P	P	08 37 05.5	-4.1
	52nm,0.5s						
LPH	Laupahoehoe	49.49	52	*e*P	P	08 38 24.4	-0.1
JNU	Nakatsue	54.31	325	*e*P	P	08 39 00.5	+0.1
	31nm,1.1s						
JNU	Nakatsue	54.31	325	P	P	08 39 00.5	+0.1
	12nm,0.8s,baz=114,slow=5.1,SNR=5.5						
ASAJ	Asahikawa	58.17	341	P	P	08 39 28.8	+1.1
	24nm,0.8s,baz=204,slow=7.3,SNR=11						
KSRS	Korea Array	59.12	326	P	P	08 39 34.9	+0.5
	2.5nm,0.8s,baz=142,slow=7.8,SNR=4.5						
KSAR	Wonju Array Be	59.13	326	P	P	08 39 34.9	+0.4
USRK	Ussuriysk Ar.	62.25	334	P	P	08 39 56.6	+1.0
	4.2nm,0.8s,baz=124,slow=5.7,SNR=6.2						
PETK	Petropavlovsk-	63.80	355	P	P	08 40 06.0	+0.2
	2.7nm,0.7s,baz=78,slow=9.8,SNR=9.0						
PETK				LR	LR	09 02 42.4	
	comp=Z,309nm,20.5s,baz=110,slow=31						
PEA1	Petropavlovsk-	63.81	355	*e*P	P	08 40 06.0	+0.2
KLR	Kul'dur	66.39	337	P	P	08 40 23.1	+0.4
	3.5nm,0.7s,baz=120,slow=3.6,SNR=5.4						
CASY	Casey	66.47	201	*e*P	P	08 40 23.2	+0.2
	11nm,1.1s						
VNDA	Vanda	66.88	181	P	P	08 40 26.1	+0.7
	19nm,1.2s,baz=19,slow=6.0,SNR=4.1						
PBKT	Sadao Pong	68.82	292	*e*P	P	08 40 39.5	+0.8
	3.9nm,0.7s						
PBKT	Sadao Pong	68.82	292	P	P	08 40 42.5	+3.8
CM01	Chiang Mai Arr	71.23	294	*e*P	P	08 40 55.0	+1.5
CMAR	Chiang Mai Arr	71.25	294	P	P	08 40 54.1	+0.5
	1.4nm,0.3s,baz=109,slow=3.9,SNR=7.9						
CMMT	Chiang Mai	71.36	294	P	P	08 40 57.4	+3.1
	12nm,1.4s						
CHTO	Chiang Mai	71.37	294	*e*P	P	08 40 55.5	+1.2
	3.6nm,0.6s						
CHTO	Chiang Mai	71.37	294	P	P	08 40 57.5	+3.2
	55nm,1.4s						
ULN	Ulaanbaatar	77.53	324	*e*P	P	08 41 29.4	-0.4
	11nm,1.1s						
SONA0	Songino Array	77.89	324	*e*P	P	08 41 32.8	+1.0
SONM	Songino Array	77.89	324	P	P	08 41 32.8	+1.0
	2.6nm,0.9s,baz=138,slow=6.5,SNR=4.7						
QSPA	South Pole Qui	79.36	180	P	P	08 41 39.8	+0.2
	19nm,1.1s,baz=17,slow=2.9,SNR=6.6						
SHL	Shillong	79.66	299	*e*P	P	08 41 43.0	+1.0
	8.3nm,1.1s						
CAST	Castle Rocks	80.81	18	*e*P	P	08 41 47.4	+0.1
	4.7nm,0.8s						
BMRM	Bremner River	81.65	22	*e*P	P	08 41 49.7	-2.1
	8.0nm,0.7s						
HDA	Harding Lake	83.11	19	*e*P	P	08 41 59.9	+0.6
	8.7nm,0.8s						
IL1	Eielson Array	83.38	19	*e*P	P	08 42 00.3	-0.4
ILAR	Eielson Array	83.38	19	P	P	08 42 00.0	-0.6
	2.9nm,0.7s,baz=246,slow=5.7,SNR=7.8						
ILB	Eielson Array	83.38	19	*e*P	P	08 42 00.1	-0.6
	6.3nm,1.1s						
SCRK	Sand Creek	83.81	20	*e*P	P	08 42 03.8	+0.7
	4.8nm,0.7s						
NVAR	Mina Array Bea	86.35	50	P	P	08 42 16.6	0.0
	1.3nm,0.8s,baz=229,slow=9.4,SNR=3.2						
MK01	Makanchi Array	92.70	317	*e*P	P	08 42 46.0	0.0
MK32	Makanchi Array	92.71	317	*e*P	P	08 42 45.8	-0.3
MKAR	Makanchi Array	92.71	317	P	P	08 42 45.8	-0.3
	4.4nm,0.7s,baz=94,slow=6.0,SNR=10						
ZALV	Zalesovo Beam	92.79	324	*e*P	P	08 42 45.6	-0.6
ZALV	Zalesovo Beam	92.79	324	P	P	08 42 45.7	-0.5
	1.9nm,0.7s,baz=122,slow=5.4,SNR=6.8						
ZAA1	Zalesovo Array	92.79	324	*e*P	P	08 42 45.7	-0.5
MAKZ	Makanchi	92.92	317	*e*P	P	08 42 48.2	+1.1
	11nm,1.1s						
PDAR	Pinedale Array	93.84	47	P	P	08 42 49.8	-1.9
	0.6nm,0.8s,baz=222,slow=2.0,SNR=4.2						
YKA	Yellowknife Ar	94.97	27	P	P	08 42 54.7	-1.3
	0.3nm,0.8s,baz=255,slow=4.8,SNR=3.0						
LTX	Lajitas	96.31	61	*e*P	P	08 43 04.4	+1.3
TXAR	Lajitas Array	96.31	61	P	P	08 43 04.4	+1.3
	0.4nm,0.9s,baz=285,slow=3.5,SNR=2.7						
BVAR	Borovoye Array	101.17	322	P	Pdif	08 43 23.9	-0.3
	0.3nm,0.4s,baz=147,slow=2.9,SNR=3.9						
ARA0	ARCESS Array S	115.76	345	*e*PKPdf	PKPdf	08 48 14.8	-1.1
ARCES	ARCESS Array B	115.76	345	PKP	PKPdf	08 48 14.8	-1.1
	1.1nm,0.7s,baz=50,slow=2.8,SNR=2.8						
ESDC	Sonseca Array	149.46	343	PKPbc	PKiKP	08 49 24.4	-0.2
	1.4nm,0.7s,baz=12,slow=3.8,SNR=3.7						
TORD	Torodi Ar. Bea	163.44	280	PKP	PKPdf	08 49 36.1	-1.6
	0.8nm,0.8s,baz=98,slow=1.4,SNR=3.1						
TOA1	Torodi Ar. Sit	163.45	280	*e*PKPdf	PKPdf	08 49 36.1	-1.6

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*KRNET **06** 08:32:16.5±0.1, 40°.17N×77°.65E, mb3.0*

*NNC **06** 08:32:23.8±4.1, 40°.46N×77°.49E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=43.0km s-min=16.4km az=134.0*

ISC 06 08:32:17.5±2.7**, 40°.1N**±0°.1×**77°.9E**±0°.1**, h21^{km}, n11, σ1^s.10**/15**, 10C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.65	357	⇑*i*P	Pn	08 32 45.7	0.0
	baz=4.0						
TARG				⇑*i*S	Sn	08 33 07.1	+0.6
	baz=4.0						
NRN	Naryn	2.00	313	⇑*i*P	Pn	08 32 49.7	-0.7
	baz=15						
NRN				⇑*i*S	Sn	08 33 13.9	-1.0
	baz=15						
PRZ	Przheval'sk	2.43	8	⇑*i*P	Pb	08 32 58.9	-1.7
	baz=14						
PRZ				⇑*i*S	Sb	08 33 29.1	-1.0
	baz=14						
KZA	Kyzart	2.85	315	⇑*i*P	Pn	08 33 02.8	+0.7
	baz=17						
KZA				⇑*i*S	Sn	08 33 36.2	+0.2
	baz=17						
TNSS	Tian-Shan	3.05	346	Pg	Pb	08 33 11.1	-0.2
	4.7nm,0.6s						
TNSS				Lg	Lg	08 33 49.4	
	6.0nm,0.5s						
UZB	Uzynbulak	3.17	15	Pg	Pb	08 33 14.8	+1.5
	0.5nm,0.2s						
UZB				Lg	Lg	08 33 55.2	
	2.0nm,0.7s						
KOTS	Kotyrbulak	3.21	349	Pg	Pb	08 33 15.0	+1.1
KOTS				Lg	Lg	08 33 55.9	
SFK	Sufi-Kurgan	3.40	270	⇑Pn	Pb	08 33 18.1	+0.9
	0.1nm,0.3s						
SFK				⇓Lg	Lg	08 33 59.1	
	1.6nm,0.4s						
SFK	Sufi-Kurgan	3.40	270	Pg	Pb	08 33 16.8	-0.5
	0.3nm,0.1s						
SFK				Lg	Lg	08 33 58.6	
	1.4nm,0.3s						
PDGK	Podgornoye	3.45	19	⇑Pn	Pb	08 33 17.6	-0.3
	0.3nm,0.3s						
PDGK				⇓Lg	Lg	08 34 00.6	
	1.9nm,0.6s						
ARXS	Arharly	4.13	359	Pg	Pb	08 33 31.5	+1.9
	0.9nm,0.5s						
ARXS				Lg	Lg	08 34 24.1	
	3.4nm,0.5s						

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*IDC **06** 08:32:49.9±1.0, 11°.31S×165°.04E, h0^{km}, mb4.2/9, mb1 4.3/11, mb1mx4.1/40, mbtmp4.2/11, ML4.7/2, Error ellipse: s-maj=25.4km s-min=21.5km az=108.0*

*NEIC **06** 08:32:51.4±0.6, 11°.22S×165°.08E, h10^{km}, mb4.4/4, Error ellipse: s-maj=15.1km s-min=9.5km az=66.0*

*ISCJB **06** 08:32:53.2±0.6, 11°.38S±0°.07×165°.07E±0°.07, h34^{km}, mb4.2/11, Error ellipse: s-maj=12.5km s-min=7.3km az=138.7*

ISC 06 08:32:54.9±0.8**, 11°.3S**±0°.1×**165°.12E**±0°.10**, h34^{km}, n23, σ1^s.30**/25**, mb4.1**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.42	290	*e*Pn	Pn	08 34 11.7	-1.5
HNR				*e*Pn	Pn	08 34 12.0	-1.3
HNR				*e*Sn	Sn	08 35 16.3	+1.8
HNR	Honiara	5.42	290	Pn	Pn	08 34 11.7	-1.5
	48nm,0.3s,baz=140,slow=6.6,SNR=4.3						
HNR				Sn	Sn	08 35 16.3	+1.8
	8.5nm,0.3s,baz=31,slow=18,SNR=2.5						
MARNC	Mare, Loyalty	10.50	165	*e*Pn	Pn	08 35 23.4	+0.4
DZM	Mont Dzumac	10.78	173	Pn	Pn	08 35 27.3	+0.3
	2.9nm,0.3s,baz=296,slow=13,SNR=8.0						
ONTNC	Ouen Toro	11.01	173	*e*Pn	Pn	08 35 32.4	+2.2
PINNC	Pines Island,	11.46	169	*e*Pn	Pn	08 35 37.2	+0.9
CTA	Charters Tower	20.13	242	P	Pn	08 37 28.2	0.0
	6.4nm,0.7s,baz=74,slow=14,SNR=4.7						
URZ	Urewera	28.91	160	P	P	08 38 50.5	-0.2
	4.2nm,0.5s,baz=309,slow=2.7,SNR=4.9						
BKZ	Black Stump Fm	29.54	162	*e*P	P	08 38 55.6	-0.8
	9.2nm,0.5s						
STKA	Stephens Creek	29.83	223	*e*P	P	08 38 59.0	0.0
	0.7nm,0.8s						
STKA	Stephens Creek	29.83	223	P	P	08 38 59.7	+0.7
	2.9nm,0.7s,baz=51,slow=8.5,SNR=4.1						
WR1	Warramunga Arr	30.81	250	*e*P	P	08 39 06.4	-1.4
	6.0nm,0.8s						
WRA	Warramunga Arr	30.81	250	P	P	08 39 06.4	-1.4
	2.9nm,0.8s,baz=81,slow=9.2,SNR=6.1						
ASAR	Alice Springs	32.12	243	P	P	08 39 17.7	-1.7
	2.0nm,0.7s,baz=67,slow=9.5,SNR=7.7						
FITZ	Fitzroy Crossi	38.72	255	*e*P	P	08 40 15.2	-0.9
	6.2nm,0.9s						
FITZ	Fitzroy Crossi	38.72	255	P	P	08 40 15.2	-0.9
	1.6nm,0.7s,baz=90,slow=6.1,SNR=3.0						
SONA0	Songino Array	78.51	324	*e*P	P	08 44 53.2	+0.4
SONM	Songino Array	78.51	324	P	P	08 44 53.2	+0.4
	0.7nm,0.7s,baz=129,slow=5.4,SNR=3.6						
ILAR	Eielson Array	83.96	19	P	P	08 45 22.6	+1.4
	0.8nm,0.6s,baz=240,slow=5.2,SNR=2.7						
MK32	Makanchi Array	93.29	317	*e*P	P	08 46 07.4	+1.1
MKAR	Makanchi Array	93.29	317	P	P	08 46 07.4	+1.1
	1.6nm,0.7s,baz=95,slow=7.4,SNR=7.6						
YKA	Yellowknife Ar	95.49	27	P	P	08 46 14.6	-1.3
	0.2nm,0.7s,baz=258,slow=4.7,SNR=5.3						
YKB5	Yellowknife Ar	95.49	27	*e*P	P	08 46 14.6	-1.3

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*NEIC **06** 08:35:48.3±0.2, 10°.81S×165°.53E, h10^{km}, mb4.8/32, Error ellipse: s-maj=6.9km s-min=5.3km az=128.0*

*ISCJB **06** 08:35:49.6±0.2, 10°.97S±0°.05×165°.47E±0°.04, h30^{km}, mb4.6/43, Error ellipse: s-maj=6.7km s-min=5.9km az=153.6*

*IDC **06** 08:35:52.9±2.9, 10°.90S×165°.53E, h45^{km}±27^{km}, mb4.2/14, mb1 4.5/16, mb1mx4.2/36, mbtmp4.5/16, ML4.9/2, Error ellipse: s-maj=20.3km s-min=15.5km az=45.0*

ISC 06 08:35:51.1±0.5**, 10°.86S**±0°.09×**165°.59E**±0°.07**, h30^{km}, n76, σ1^s.16**/75**, mb4.6**/43**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.73	284	*e*Pn	Pn	08 37 15.1	+0.9
HNR				*e*Pn	Pn	08 37 15.2	+1.0
HNR				*e*Sn	Sn	08 38 19.1	+0.2
HNR	Honiara	5.73	284	P	Pn	08 37 15.1	+0.9
	154nm,0.3s,baz=140,slow=5.4,SNR=17						
HNR				S	Sn	08 38 19.1	+0.2
	11nm,0.3s,baz=186,slow=19,SNR=1.4						
MARNC	Mare, Loyalty	10.82	168	*e*Pn	Pn	08 38 24.7	+0.6
DZM	Mont Dzumac	11.18	176	*e*Pn	Pn	08 38 29.6	+0.5
DZM	Mont Dzumac	11.18	176	P	Pn	08 38 29.3	+0.2
	2.2nm,0.3s,baz=311,slow=19,SNR=14						
ONTNC	Ouen Toro	11.42	176	*e*Pn	Pn	08 38 32.6	+0.4
PINNC	Pines Island,	11.83	172	*e*Pn	Pn	08 38 38.9	+1.1
EIDS	Eidsvold	19.93	222	*e*P	P	08 40 19.6	-1.1
	31nm,1.4s						
MANU	Manus Island	20.09	295	*e*P	P	08 40 22.6	+0.1
	131nm,0.9s						
CTA	Charters Tower	20.75	241	P	P	08 40 30.4	+0.9
	21nm,0.7s,baz=66,slow=11,SNR=15						
CTAO	Charters Tower	20.75	241	*e*P	P	08 40 30.5	+0.9
	27nm,0.9s						
COEN	Coen	22.10	260	*e*P	P	08 40 43.7	-0.5
	10nm,0.8s						
URZ	Urewera	29.18	161	P	P	08 41 50.6	+0.7
	13nm,0.8s,baz=254,slow=3.5,SNR=11						
H11S2	WAKE ISLAND Hy	29.18	2	T	T	09 12 22.6	
	baz=182,slow=76,SNR=4.4						
H11S3	WAKE ISLAND Hy	29.18	2	T	T	09 12 18.8	
	baz=182,slow=76,SNR=4.0						
H11S1	WAKE ISLAND Hy	29.20	2	T	T	09 12 20.1	
	baz=182,slow=76,SNR=4.1						
BKZ	Black Stump Fm	29.82	163	*e*P	P	08 41 56.8	+1.2
	33nm,0.5s						
H11N1	WAKE ISLAND Hy	30.40	2	T	T	09 13 50.9	
	baz=183						
H11N3	WAKE ISLAND Hy	30.41	2	T	T	09 13 51.1	
	baz=183						
H11N2	WAKE ISLAND Hy	30.42	2	T	T	09 13 54.8	
	baz=183						
WB2	Warramunga Arr	31.39	249	*e*P	P	08 42 08.0	-1.7
WB2				*e*P	P	08 42 08.9	-0.8
WR1	Warramunga Arr	31.40	249	*e*P	P	08 42 08.4	-1.4
	9.7nm,1.0s						
WRA	Warramunga Arr	31.40	249	P	P	08 42 08.4	-1.4
	4.4nm,0.6s,baz=81,slow=8.8,SNR=25						
AS01	Alice Springs	32.70	243	*e*P	P	08 42 19.7	-1.5
AS31	Alice Springs	32.74	243	*e*P	P	08 42 20.4	-1.1
	2.5nm,0.8s						
ASAR	Alice Springs	32.74	243	P	P	08 42 20.3	-1.2
	6.8nm,0.8s,baz=72,slow=9.7,SNR=29						
RPZ	Rata Peaks	33.08	173	P	P	08 42 23.7	-0.5
	6.3nm,0.8s,baz=356,slow=15,SNR=3.2						
FITZ	Fitzroy Crossi	39.28	255	*e*P	P	08 43 16.1	-1.4
	5.9nm,1.1s						
FITZ	Fitzroy Crossi	39.28	255	P	P	08 43 16.1	-1.4
	3.8nm,0.9s,baz=90,slow=9.9,SNR=4.9						
CMAR	Chiang Mai Arr	71.89	294	P	P	08 47 12.9	+0.9
	0.9nm,0.2s,baz=145,slow=3.3,SNR=3.0						

SONA0	Songino Array	78.42	324	eP	P	08 47 50.3	+1.2
SONM	Songino Array	78.42	324	P	P	08 47 50.3	+1.2
	0.2nm,0.3s,baz=147,slow=6.2,SNR=4.5						
CAST	Castle Rocks	80.82	18	eP	P	08 48 02.8	+1.2
	4.3nm,0.8s						
IM3	Indian Mountai	82.28	16	eP	P	08 48 10.0	+0.6
MDM	Murphy Dome	83.10	18	eP	P	08 48 13.8	+0.1
	11nm,1.4s						
HDA	Harding Lake	83.11	19	eP	P	08 48 14.4	+0.6
	8.8nm,0.7s						
IL1	Eielson Array	83.38	19	eP	P	08 48 14.8	-0.2
ILAR	Eielson Array	83.38	19	P	P	08 48 14.8	-0.2
	2.4nm,0.6s,baz=238,slow=5.0,SNR=31						
ILB	Eielson Array	83.38	19	eP	P	08 48 15.7	+0.6
SCRK	Sand Creek	83.79	20	eP	P	08 48 18.3	+0.9
	13nm,1.4s						
ORV	Oroville	84.00	48	eP	P	08 48 19.3	+0.5
	4.4nm,1.0s						
CMB	Columbia Colle	84.34	50	eP	P	08 48 21.1	+0.4
	4.3nm,0.9s						
BEKR	Beckworth	84.94	48	eP	P	08 48 19.6	-4.2
	5.2nm,0.7s						
WAKR	Walker	85.19	50	eP	P	08 48 25.2	0.0
	30nm,1.9s						
DAWY	Dawson	85.44	21	eP	P	08 48 25.9	+0.3
	5.2nm,0.9s						
NV01	Mina Array Sit	86.02	50	eP	P	08 48 29.6	+0.3
NVAR	Mina Array Bea	86.02	50	P	P	08 48 29.6	+0.3
	3.8nm,0.9s,baz=232,slow=8.2,SNR=16						
NV11	Mina Array Sit	86.13	50	eP	P	08 48 26.2	-3.5
	0.3nm,0.9s						
KVN	Kaiserville	86.36	49	eP	P	08 48 31.2	+0.3
	5.7nm,1.1s						
J08A	Circle Bar Ran	87.36	45	eP	P	08 48 36.4	+0.8
	5.3nm,1.0s						
LCMT	Little Creek M	89.51	52	eP	P	08 48 43.7	-2.3
	3.3nm,0.9s						
U15A	North Rim	90.12	53	eP	P	08 48 49.7	+0.7
	5.3nm,0.8s						
HLID	Hailey	90.26	46	eP	P	08 48 49.7	+0.4
	2.1nm,0.7s						
PKCU	Pink Cliffs	90.34	52	eP	P	08 48 49.7	-0.4
	10nm,1.1s						
X16A	Lo Mia Camp, P	90.34	55	eP	P	08 48 50.1	+0.2
	3.1nm,0.8s						
TCRU	Three Creeks R	90.50	51	eP	P	08 48 52.8	+2.1
	4.7nm,0.8s						
MTPU	Mount Pierson	90.57	51	eP	P	08 48 52.6	+1.4
	4.4nm,0.9s						
WUAZ	Wupatki	90.64	54	eP	P	08 48 52.2	+0.9
	4.9nm,1.0s						
MSU	Marysvale	90.68	51	eP	P	08 48 53.2	+1.7
HVU	Hansel Valley	91.00	48	eP	P	08 48 53.9	+1.1
	5.2nm,0.8s						
NLU	North Lily Min	91.09	50	eP	P	08 48 53.7	+0.3
	3.9nm,0.9s						
SPUT	South Promonto	91.12	48	eP	P	08 48 54.3	+0.9
	17nm,1.8s						
TMUT	Trail Mountain	91.60	50	eP	P	08 48 57.0	+1.1
	4.7nm,1.0s						
DLMT	Dillon	91.96	44	eP	P	08 48 57.8	+0.6
	5.2nm,0.8s						
HRY	Holter Researc	92.78	43	eP	P	08 49 01.7	+0.8
MK32	Makanchi Array	93.28	317	eP	P	08 49 03.5	+0.4
MKAR	Makanchi Array	93.28	317	P	P	08 49 03.5	+0.4
	0.8nm,0.9s,baz=100,slow=6.4,SNR=2.4						
MKAR				PKKPbc	PKKPdf	09 06 10.2	-1.0
	0.5nm,0.7s,baz=299,slow=3.1,SNR=3.7						
ZALV	Zalesovo Beam	93.31	324	P	P	08 49 01.6	-1.3
	0.3nm,0.3s,baz=126,slow=7.3,SNR=2.2						
ZAA1	Zalesovo Array	93.31	324	eP	P	08 49 01.6	-1.3
PDAR	Pinedale Array	93.54	47	P	P	08 49 04.8	+0.2
	1.2nm,0.9s,baz=233,slow=2.6,SNR=6.7						
YKA	Yellowknife Ar	94.88	27	P	P	08 49 08.3	-1.7
	0.6nm,0.6s,baz=260,slow=4.4,SNR=12						
YKB5	Yellowknife Ar	94.88	27	eP	P	08 49 08.3	-1.7
TXAR	Lajitas Array	95.88	61	P	P	08 49 15.4	-0.1
	0.3nm,0.8s,baz=216,slow=4.5,SNR=3.5						
LTX	Lajitas	95.88	61	eP	P	08 49 15.4	-0.1
ARA0	ARCESS Array S	116.11	345	ePKPdf	PKiKP	08 54 30.0	-0.8
ARCES	ARCESS Array B	116.11	345	PKP	PKiKP	08 54 30.0	-0.8
	1.5nm,0.9s,baz=56,slow=2.3,SNR=4.5						

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*ISCJB **06** 08:38:24.9±0.5, 11°.06S±0°.07×165°.70E±0°.07, h10^{km}, mb4.3/17, Error ellipse: s-maj=10.4km s-min=9.3km az=166.3*

*NEIC **06** 08:38:26.4±0.3, 10°.98S×165°.73E, h10^{km}, mb4.5/10, Error ellipse: s-maj=7.6km s-min=6.8km az=103.0*

*IDC **06** 08:38:31.0±3.6, 11°.02S×165°.68E, h43^{km}±33^{km}, mb4.1/12, mb1 4.3/14, mb1mx4.0/40, mbtmp4.3/14, ML4.8/2, Error ellipse: s-maj=21.2km s-min=20.6km az=10.0*

ISC 06 08:38:26.3±0.6, **11°.09S**±0°.08×**165°.8E**±0°.1, **h10**^{km}, **n31,** σ**1^{s}36**/35, **mb4.3**/17, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.01	285	ePn	Pn	08 39 56.1	+0.8
HNR				ePn	Pn	08 39 56.3	+1.0
HNR	Honiara	6.01	285	P	Pn	08 39 56.1	+0.8
	45nm,0.3s,baz=141,slow=8.9,SNR=5.7						
DZM	Mont Dzumac	10.94	177	P	Pn	08 41 05.1	+2.0
	3.9nm,0.3s,baz=300,slow=20,SNR=14						
DZM				S	Sn	08 43 01.2	-4.5
	0.6nm,0.3s,baz=292,slow=19,SNR=2.0						
ONTNC	Ouen Toro	11.18	177	ePn	Pn	08 41 08.5	+2.3
PINNC	Pines Island,	11.57	172	ePn	Pn	08 41 14.2	+2.6
CTA	Charters Tower	20.84	242	P	P	08 43 08.9	+0.5
	10nm,0.9s,baz=77,slow=12,SNR=5.0						
CTAO	Charters Tower	20.84	242	eP	P	08 43 08.9	+0.5
	14nm,0.9s						
COEN	Coen	22.28	260	eP	P	08 43 22.8	-1.2
	14nm,1.1s						
ARMA	Armidale	23.32	212	eP	P	08 43 34.2	-0.7
	12nm,1.1s						
URZ	Urewera	28.89	161	P	P	08 44 26.5	+1.2
	3.0nm,0.5s,baz=288,slow=3.2,SNR=4.4						
BKZ	Black Stump Fm	29.54	163	eP	P	08 44 32.4	+1.3
	15nm,1.0s						
STKA	Stephens Creek	30.46	224	eP	P	08 44 39.0	-0.4
	1.1nm,0.8s						
STKA	Stephens Creek	30.46	224	P	P	08 44 39.8	+0.4
	3.9nm,0.7s,baz=47,slow=9.7,SNR=7.2						
WRAB	Tennant Creek	31.52	250	eP	P	08 44 48.3	-0.6
	6.6nm,0.8s						
WB2	Warramunga Arr	31.52	250	eP	P	08 44 47.9	-1.0
WB2				eP	P	08 44 48.4	-0.5
WR1	Warramunga Arr	31.53	250	eP	P	08 44 48.1	-0.9
	10nm,0.8s						
WRA	Warramunga Arr	31.53	250	P	P	08 44 48.1	-0.9
	7.3nm,0.7s,baz=82,slow=9.1,SNR=20						
RPZ	Rata Peaks	32.82	173	P	P	08 45 01.9	+1.9
	10nm,0.8s,baz=18,slow=1.4,SNR=4.5						
ASAR	Alice Springs	32.84	243	P	P	08 44 59.0	-1.4
	1.9nm,0.7s,baz=64,slow=10,SNR=8.9						
FITZ	Fitzroy Crossi	39.44	255	P	P	08 45 55.9	-1.0
	3.3nm,0.6s,baz=108,slow=6.9,SNR=10						
HDA	Harding Lake	83.26	19	eP	P	08 50 52.5	-0.2
	6.7nm,0.7s						
ILAR	Eielson Array	83.53	18	P	P	08 50 54.0	-0.2
	2.2nm,0.6s,baz=234,slow=5.1,SNR=28						
ILB	Eielson Array	83.53	18	eP	P	08 50 54.2	+0.1
	2.7nm,0.6s						
NVAR	Mina Array Bea	86.00	50	P	P	08 51 07.8	+0.3
	1.1nm,0.9s,baz=236,slow=9.0,SNR=3.8						
MK32	Makanchi Array	93.60	317	eP	P	08 51 43.3	+0.4
MKAR	Makanchi Array	93.60	317	P	P	08 51 43.3	+0.4
	0.4nm,0.7s,baz=96,slow=3.9,SNR=2.0						
MKAR				PKKPbc	PKKPdf	09 08 47.6	-1.5
	0.6nm,0.6s,baz=307,slow=1.7,SNR=5.9						
YKA	Yellowknife Ar	94.98	27	P	P	08 51 47.4	-1.4
	0.2nm,0.6s,baz=262,slow=4.5,SNR=5.0						
TXAR	Lajitas Array	95.79	61	P	P	08 51 53.3	-0.2
	0.3nm,1.0s,baz=260,slow=5.4,SNR=4.1						
LTX	Lajitas	95.79	61	eP	P	08 51 53.3	-0.2
ARA0	ARCESS Array S	116.39	345	ePKPdf	PKiKP	08 57 09.4	-0.4
ARCES	ARCESS Array B	116.39	345	PKP	PKiKP	08 57 09.4	-0.4
	1.8nm,0.9s,baz=90,slow=1.8,SNR=3.2						

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*IDC **06** 08:42:24.9±0.5, 11°.01S×165°.52E, h0^{km}, mb4.3/23, mb1 4.5/25, mb1mx4.5/39, mbtmp4.3/25, ML5.0/2, Error ellipse: s-maj=17.1km s-min=13.3km az=99.0*

*NEIC **06** 08:42:26.5±0.1, 11°.00S×165°.52E, h10^{km}, mb4.7/45, Error ellipse: s-maj=4.8km s-min=3.8km az=121.0*

*ISCJB **06** 08:42:27.9±0.2, 11°.07S±0°.03×165°.42E±0°.04, h30^{km}, mb4.6/67, MS4.6/1, Error ellipse: s-maj=5.5km s-min=4.5km az=162.5*

ISC 06 08:42:29.6±0.4, **11°.05S**±0°.06×**165°.49E**±0°.07, **h30**^{km}, **n126,** σ**0^{s}95**/127, **mb4.6**/67, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.68	286	ePn	Pn	08 43 51.9	-0.1
HNR				ePn	Pn	08 43 52.1	+0.1
HNR				eSn	Sn	08 44 55.7	-0.6
HNR	Honiara	5.68	286	Pn	Pn	08 43 52.1	+0.1
	108nm,0.3s,baz=142,slow=6.2,SNR=14						
HNR				Sn	Sn	08 44 55.7	-0.6
	baz=198,slow=20,SNR=2.6						
DZM	Mont Dzumac	11.00	175	ePn	Pn	08 45 04.8	-0.2
DZM				Sn	Sn	08 47 05.8	-1.4
DZM	Mont Dzumac	11.00	175	Pn	Pn	08 45 05.5	+0.5
	4.9nm,0.3s,baz=358,slow=22,SNR=18						
DZM				Sn	Sn	08 47 05.8	-1.4
	0.3nm,0.3s,baz=344,slow=18,SNR=1.5						
ONTNC	Ouen Toro	11.23	175	ePn	Pn	08 45 09.2	+1.0
OUENC	Ouen Island, N	11.38	174	ePn	Pn	08 45 10.8	+0.6
PINNC	Pines Island,	11.65	171	ePn	Pn	08 45 14.2	+0.3
EIDS	Eidsvold	19.72	222	eP	P	08 46 56.5	-0.3
	12nm,0.9s						
MANU	Manus Island	20.09	295	eP	Pn	08 47 02.2	-0.6
	200nm,0.9s						
CTA	Charters Tower	20.57	242	P	P	08 47 06.3	+0.1
	8.1nm,0.8s,baz=73,slow=14,SNR=5.3						
CTAO	Charters Tower	20.57	242	eP	P	08 47 06.8	+0.6
	44nm,0.9s						
COEN	Coen	21.97	260	eP	P	08 47 22.1	+0.8
	24nm,1.0s						
HAZ	Te Kaha	28.79	159	P	P	08 48 26.6	+1.6
URZ	Urewera	29.03	161	eP	P	08 48 27.9	+0.9
	34nm,1.2s						
URZ	Urewera	29.03	161	P	P	08 48 27.9	+0.9
	20nm,1.1s,baz=274,slow=16,SNR=6.7						
MWZ	Matawai	29.23	160	P	P	08 48 29.4	+0.5
TWGZ	Tauwhareparae	29.24	160	P	P	08 48 30.3	+1.4
PUZ	Puketiti	29.24	159	P	P	08 48 31.5	+2.5
RTZ	Ruatahuna	29.31	161	P	P	08 48 30.7	+1.1
H11S2	WAKE ISLAND Hy	29.38	2	T	T	09 19 05.9	
	baz=182						
H11S3	WAKE ISLAND Hy	29.38	2	T	T	09 19 02.6	
	baz=182						
H11S1	WAKE ISLAND Hy	29.39	2	T	T	09 19 11.9	
	baz=182						
CNGZ	Carnagh Statio	29.59	160	P	P	08 48 32.9	+0.9
RIGZ	Rimuhau	29.64	160	P	P	08 48 33.0	+0.5
BKZ	Black Stump Fm	29.67	163	eP	P	08 48 33.4	+0.6
	26nm,0.7s						
BKZ	Black Stump Fm	29.67	163	P	P	08 48 34.2	+1.4
NMHZ	Naumai	29.70	162	P	P	08 48 35.1	+2.0
BHHZ	Black Hill Sta	29.84	163	P	P	08 48 36.4	+2.1
KWHZ	Kaweka Forest	29.89	163	P	P	08 48 36.3	+1.6
STKA	Stephens Creek	30.26	223	eP	P	08 48 37.4	-0.7
	1.4nm,1.0s						
STKA	Stephens Creek	30.26	223	P	P	08 48 38.5	+0.5
	3.3nm,0.7s,baz=39,slow=8.8,SNR=7.3						
KAHZ	Kahuranaki	30.36	162	P	P	08 48 39.4	+0.6
PXZ	Pawanui	30.58	163	P	P	08 48 41.0	+0.3
H11N1	WAKE ISLAND Hy	30.60	3	T	T	09 20 40.1	
	baz=181						
H11N3	WAKE ISLAND Hy	30.61	3	T	T	09 20 41.7	
	baz=181						
H11N2	WAKE ISLAND Hy	30.62	3	T	T	09 20 52.5	
	baz=181						
WRAB	Tennant Creek	31.23	250	eP	P	08 48 46.7	-0.1
	14nm,1.1s						
WB2	Warramunga Arr	31.23	250	eP	P	08 48 46.4	-0.3
WB2				eP	P	08 48 46.9	+0.1
WR1	Warramunga Arr	31.24	250	eP	P	08 48 46.1	-0.8
	10nm,0.9s						
WRA	Warramunga Arr	31.24	250	P	P	08 48 46.1	-0.8
	3.6nm,0.7s,baz=80,slow=9.0,SNR=39						
AS01	Alice Springs	32.52	243	eP	P	08 48 57.5	-0.6
AS31	Alice Springs	32.56	243	eP	P	08 48 58.0	-0.5
	5.3nm,0.9s						
ASAR	Alice Springs	32.56	243	P	P	08 48 57.8	-0.7
	5.5nm,0.8s,baz=63,slow=10,SNR=37						
RPZ	Rata Peaks	32.90	173	eP	P	08 49 01.0	-0.1
RPZ	Rata Peaks	32.90	173	P	P	08 49 01.0	-0.1
	10nm,0.8s,baz=360,slow=0.9,SNR=5.2						
FITZ	Fitzroy Crossi	39.13	255	eP	P	08 49 54.5	-0.3
	5.1nm,0.8s						
FITZ	Fitzroy Crossi	39.13	255	P	P	08 49 54.5	-0.3
	2.8nm,0.8s,baz=165,slow=6.4,SNR=6.6						
MJAR	Matsushiro Arr	53.86	333	P	P	08 51 49.2	-0.8
	2.1nm,0.8s,baz=171,slow=8.4,SNR=4.8						
MAJO	Matsushiro	53.86	333	eP	P	08 51 49.2	-0.8
JNU	Nakatsue	54.94	324	eP	P	08 51 58.1	+0.2
	20nm,0.9s						
JNU	Nakatsue	54.94	324	P	P	08 51 58.1	+0.2
	8.5nm,0.9s,baz=90,slow=5.1,SNR=3.9						
KSRS	Korea Array	59.74	326	P	P	08 52 31.8	+0.2
	1.1nm,0.8s,baz=141,slow=7.9,SNR=3.2						
KSAR	Wonju Array Be	59.75	326	P	P	08 52 31.8	+0.1
NJ2	Nanjing	61.84	316	eP	P	08 52 46.2	+0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
USRK	Ussuriysk Ar.	62.84	334	P	P	08 52 52.3	-0.2
	comp=Z,1.7nm,0.8s,baz=128,slow=6.4,SNR=3.4						
PETK	Petropavlovsk-	64.25	355	P	P	08 53 02.4	+0.7
	comp=Z,2.7nm,0.9s,baz=170,slow=8.3,SNR=2.8						
PEA1	Petropavlovsk-	64.25	355	eP	P	08 53 02.4	+0.6
CN2	Changchun	65.61	329	eP	P	08 53 18.4	+7.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLR	Kul'dur	66.96	337	P	P	08 53 20.0	+0.7
	comp=Z,1.6nm,0.8s,baz=135,slow=14,SNR=4.0						
XAN	Xi'an	69.94	312	P	P	08 53 37.4	-0.9
XAN				pP	sP	08 53 48.7	-1.4
XAN				pmax	pmax		
	comp=Z,5.0nm,2.1s						
KMI	Kunming	70.91	301	P	P	08 53 47.4	+2.8
KMI				pmax	pmax		
	comp=Z,13nm,1.5s						
HHC	Hu-ho-hao-te	71.67	320	eP	P	08 53 50.9	+2.1
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	71.88	294	P	P	08 53 51.9	+1.5
	comp=Z,0.7nm,0.3s,baz=108,slow=4.8,SNR=2.6						
CD2	Chengdu	72.40	307	eP	P	08 53 54.5	+1.2
LZH	Lanzhou	74.57	312	eP	P	08 54 07.6	+1.5
LZH				pP	pP	08 54 12.5	-2.3
LZH				sP	sP	08 54 15.5	-2.5
LZH				PP	PP	08 56 41.6	-12
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,94nm,4.8s						
LZH				LR	LR		
	comp=N,230nm,16.3s						
LZH				LR	LR		
	comp=E,210nm,16.4s						
LZH				LR	LR		
	comp=Z,270nm,17.5s						
ULN	Ulaanbaatar	78.16	324	eP	P	08 54 26.9	+0.7
	comp=Z,3.2nm,0.8s						
SONA0	Songino Array	78.52	324	eP	P	08 54 28.3	+0.1
SONM	Songino Array	78.52	324	P	P	08 54 28.3	+0.1
	comp=Z,1.0nm,0.8s,baz=151,slow=5.7,SNR=7.1						
SONA1	Songino Array	78.52	324	eP	P	08 54 27.7	-0.5
GTA	Gaotai	78.88	314	eP	P	08 54 30.3	0.0
GTA				pP	PcP	08 54 35.2	-3.8
GTA				sP	pP	08 54 37.4	-1.8
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BILL	Bilibino	78.89	0	eP	P	08 54 28.9	-0.7
	comp=Z,8.8nm,1.0s						
QSPA	South Pole Qui	78.95	180	eP	P	08 54 30.8	+0.6
QSPA				eP	P	08 54 30.9	+0.6
QSPA	South Pole Qui	78.95	180	P	P	08 54 30.8	+0.6
	comp=Z,4.5nm,0.8s,baz=357,slow=1.2,SNR=15						
DIV	Divide	81.51	22	eP	P	08 54 44.4	+0.5
	comp=Z,13nm,1.2s						
KLU	Klutina	81.70	21	eP	P	08 54 44.9	0.0
	comp=Z,12nm,1.1s						
MCK	McKinley	82.23	19	eP	P	08 54 49.0	+1.4
	comp=Z,7.2nm,1.2s						
WRH	Wood River Hil	83.02	18	eP	P	08 54 51.4	-0.3
	comp=Z,3.3nm,0.9s						
MDM	Murphy Dome	83.31	18	eP	P	08 54 53.1	-0.2
	comp=Z,4.3nm,1.0s						
HDA	Harding Lake	83.33	19	eP	P	08 54 53.0	-0.3
	comp=Z,8.7nm,0.8s						
RIDG	Independ'e Rid	83.57	20	eP	P	08 54 55.3	+0.7
	comp=Z,8.0nm,1.0s						
ILAR	Eielson Array	83.60	19	P	P	08 54 54.3	-0.4
	comp=Z,1.7nm,0.6s,baz=239,slow=4.9,SNR=32						
ILB	Eielson Array	83.60	19	eP	P	08 54 55.0	+0.3
	comp=Z,2.2nm,0.6s						
IL1	Eielson Array	83.60	19	eP	P	08 54 53.6	-1.0
SCRK	Sand Creek	84.01	20	eP	P	08 54 57.6	+0.6
	comp=Z,3.8nm,0.8s						
ORV	Oroville	84.21	48	eP	P	08 54 58.8	+0.4
	comp=Z,4.9nm,1.0s						
AFDM	Forest Hills D	84.40	49	eP	P	08 54 57.8	-1.6
	comp=Z,5.4nm,0.9s						
CMB	Columbia Colle	84.54	50	eP	P	08 55 00.4	+0.3
	comp=Z,4.1nm,0.9s						
WAKR	Walker	85.40	50	eP	P	08 55 04.1	-0.6
	comp=Z,4.4nm,1.0s						
MDPB	Devils Postpil	85.40	50	eP	P	08 55 04.3	-0.5
	comp=Z,5.2nm,0.9s						
DAWY	Dawson	85.65	21	eP	P	08 55 05.3	+0.1
	comp=Z,3.8nm,0.9s						
NV01	Mina Array Sit	86.22	50	eP	P	08 55 07.9	-0.8
NVAR	Mina Array Bea	86.22	50	P	P	08 55 08.6	-0.1
	comp=Z,3.1nm,0.9s,baz=233,slow=8.2,SNR=13						
NV11	Mina Array Sit	86.33	50	eP	P	08 55 09.0	-0.2
	comp=Z,0.5nm,1.1s						
J08A	Circle Bar Ran	87.57	45	eP	P	08 55 14.2	-0.9
	comp=Z,5.7nm,0.9s						
LDFC	Landfair	87.76	54	eP	P	08 55 16.3	+0.1
	comp=Z,9.9nm,1.1s						
Y12C	Blythe	87.89	55	eP	P	08 55 16.6	-0.1
	comp=Z,7.5nm,1.1s						
W13A	Hualapai Mount	88.74	54	eP	P	08 55 20.5	-0.5
	comp=Z,2.8nm,1.0s						
WMQ	Urumqi	88.92	315	eP	P	08 55 23.6	+2.2
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
CCUT	Cedar City	89.75	52	eP	P	08 55 24.8	-0.9
	comp=Z,3.8nm,1.1s						
KNB	Kanab	90.04	52	eP	P	08 55 26.7	-0.3
	comp=Z,6.6nm,1.2s						
U15A	North Rim	90.31	53	eP	P	08 55 27.6	-0.8
	comp=Z,5.5nm,0.9s						
X16A	Lo Mia Camp, P	90.53	55	eP	P	08 55 28.7	-0.6
	comp=Z,2.7nm,0.8s						
PKCU	Pink Cliffs	90.53	52	eP	P	08 55 29.0	-0.4
	comp=Z,7.1nm,1.1s						
MTPU	Mount Pierson	90.77	51	eP	P	08 55 30.4	-0.2
	comp=Z,5.9nm,1.0s						
HVU	Hansel Valley	91.20	48	eP	P	08 55 32.2	0.0
	comp=Z,4.9nm,0.8s						
NLU	North Lily Min	91.29	50	eP	P	08 55 33.4	+0.7
	comp=Z,5.4nm,1.2s						
MPU	Maple Canyon	91.64	50	eP	P	08 55 34.1	-0.2
	comp=Z,3.0nm,1.1s						
DLMT	Dillon	92.16	44	eP	P	08 55 34.1	-2.5
	comp=Z,4.6nm,0.9s						
MK01	Makanchi Array	93.34	317	eP	P	08 55 41.0	-0.8
MK31	Makanchi Array	93.35	317	eP	P	08 55 42.3	+0.4
MK32	Makanchi Array	93.35	317	eP	P	08 55 41.7	-0.2
MKAR	Makanchi Array	93.35	317	eP	P	08 55 41.8	-0.1
	comp=Z,10nm,0.8s						
MKAR	Makanchi Array	93.35	317	P	P	08 55 41.7	-0.1
	comp=Z,1.3nm,0.9s,baz=100,slow=6.1,SNR=7.2						
ZALV	Zalesovo Beam	93.41	324	P	P	08 55 41.3	-0.6
	comp=Z,0.4nm,0.4s,baz=121,slow=5.2,SNR=3.3						
ZAA1	Zalesovo Array	93.41	324	eP	P	08 55 41.4	-0.6
PDAR	Pinedale Array	93.74	47	P	P	08 55 43.6	-0.5
	comp=Z,0.8nm,0.8s,baz=222,slow=2.0,SNR=5.5						
YKA	Yellowknife Ar	95.09	27	P	P	08 55 47.5	-1.9
	comp=Z,0.6nm,0.7s,baz=258,slow=4.5,SNR=10						
YKB5	Yellowknife Ar	95.09	27	eP	P	08 55 47.5	-1.9
LTX	Lajitas	96.06	61	eP	P	08 55 54.6	-0.2
TXAR	Lajitas Array	96.06	61	P	P	08 55 54.6	-0.2
	comp=Z,0.2nm,0.6s,baz=238,slow=5.2,SNR=3.2						
KURK	Kurchatov	96.48	320	eP	P	08 55 52.5	-3.5
	comp=Z,16nm,0.6s						
ARA0	ARCESS Array S	116.27	345	ePKPdf	PKiKP	09 01 09.1	-0.5
ARCES	ARCESS Array B	116.27	345	PKP	PKiKP	09 01 09.1	-0.6
	comp=Z,2.2nm,1.0s,baz=64,slow=2.8,SNR=5.4						
BOSA	Boshof	124.94	223	PKP	PKiKP	09 01 28.5	+0.5
	comp=Z,1.7nm,0.8s,baz=150,slow=6.4,SNR=4.8						
TORD	Torodi Ar. Bea	164.01	279	PKP	PKPdf	09 02 31.1	+0.1
	comp=Z,1.2nm,1.1s,baz=34,slow=1.7,SNR=4.5						
TORD				PKPab	PKPab	09 03 22.8	-1.4
	comp=Z,0.8nm,1.0s,baz=103,slow=2.2,SNR=2.3						
TOA1	Torodi Ar. Sit	164.01	279	ePKPdf	PKPdf	09 02 31.1	+0.1
TOA1				ePKPab	PKPab	09 03 22.8	-1.4

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*IDC **06** 08:45:00.5±0.5, 11°.56S×165°.91E, h0^{km}, mb4.8/26, mb1 4.9/28, mb1mx4.9/37, mbtmp4.8/28, ML4.9/2, MS4.4/9, Ms1 4.4/9, ms1mx4.0/47, Error ellipse: s-maj=16.2km s-min=12.7km az=110.0*

*ISCJB **06** 08:45:01.9±0.2, 11°.61S±0°.03×165°.64E±0°.03, h10^{km}, mb5.0/138, MS4.5/13, Error ellipse: s-maj=4.8km s-min=4.2km az=166.4*

*NEIC **06** 08:45:02.5±0.2, 11°.54S×165°.85E, h10^{km}, mb5.1/93, Error ellipse: s-maj=5.1km s-min=4.1km az=110.0*

ISC 06 08:45:02.0±0.3, **11°.59S**±0°.05×**165°.93E**±0°.06, **h10**^{km}, **n280,** σ**1^{s}24**/244, **mb5.1**/144, **MS4.6**/13, **1C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.26	289	ePn	Pn	08 46 33.7	-0.8
HNR				ePn	Pn	08 46 34.9	+0.4
HNR				eSn	Sn	08 47 42.5	-3.6
HNR	Honiara	6.26	289	Pn	Pn	08 46 34.9	+0.4
	36nm,0.3s,baz=116,slow=17,SNR=7.1						
HNR				Sn	Sn	08 47 42.5	-3.6
	4.1nm,0.3s,baz=167,slow=19,SNR=2.1						
HNR				LR	LR	08 49 01.6	
	comp=Z,4µm,20.9s,baz=122,slow=39						
MARNC	Mare, Loyalty	10.04	169	ePn	Pn	08 47 27.9	+1.5
DZM	Mont Dzumac	10.44	177	ePn	Pn	08 47 32.7	+0.8
	140nm,1.1s						
DZM				eLR	LR	08 50 14.6	
	comp=Z,2µm,22.0s						
DZM	Mont Dzumac	10.44	177	Pn	Pn	08 47 33.6	+1.7
	6.0nm,0.3s,baz=0.9,slow=19,SNR=14						
DZM				Sn	Sn	08 49 26.2	-2.9
	baz=343,slow=19,SNR=2.7						
ONTNC	Ouen Toro	10.68	177	ePn	Pn	08 47 36.4	+1.3
PINNC	Pines Island,	11.06	173	ePn	Pn	08 47 42.2	+1.8
MSVF	Nonsavu	13.22	119	ePn	P	08 48 16.6	-3.3
EIDS	Eidsvold	19.63	224	eP	Pn	08 49 32.9	+0.7
	87nm,1.0s						
PATS	Pohnpei	19.81	337	eP	Pn	08 49 34.6	+0.2
	246nm,1.0s						
MANU	Manus Island	20.71	296	eP	Pn	08 49 43.6	-1.4
	669nm,1.1s						
CTA	Charters Tower	20.71	243	P	Pn	08 49 43.5	-1.5
	73nm,1.0s,baz=71,slow=13,SNR=23						
CTA				LR	LR	08 57 04.8	
	comp=Z,1µm,18.7s,baz=75,slow=35						
CTAO	Charters Tower	20.71	243	eP	Pn	08 49 42.9	-2.2
	104nm,1.0s						
COEN	Coen	22.32	261	eP	P	08 50 00.5	+0.5
	63nm,0.9s						
ARMA	Armidale	22.96	213	eP	P	08 50 07.9	+1.0
	125nm,1.0s						
BKZ	Black Stump Fm	29.03	163	eP	P	08 51 02.0	-0.3
	44nm,1.1s						
STKA	Stephens Creek	30.18	224	eP	P	08 51 12.7	+0.1
	4.0nm,1.0s						
STKA	Stephens Creek	30.18	224	P	P	08 51 13.0	+0.4
	18nm,1.1s,baz=40,slow=9.5,SNR=12						
STKA				LR	LR	09 03 06.3	
	comp=Z,1µm,18.0s,baz=36,slow=36						
THZ	Tophouse	30.68	170	eP	P	08 51 19.6	+2.7
	36nm,0.8s						
WRAB	Tennant Creek	31.46	251	eP	P	08 51 23.7	-0.3
	29nm,1.1s						
WB2	Warramunga Arr	31.46	251	eP	P	08 51 23.1	-1.0
WB2				eP	P	08 51 23.5	-0.6
WR1	Warramunga Arr	31.47	251	eP	P	08 51 23.4	-0.7
	56nm,1.1s						
WR1				ePcP	PcP	08 54 18.1	+0.7
WRA	Warramunga Arr	31.47	251	P	P	08 51 23.4	-0.7
	19nm,0.9s,baz=82,slow=9.0,SNR=30						
WRA				PcP	PcP	08 54 18.1	+0.7
	2.6nm,1.0s,baz=91,slow=3.1,SNR=4.3						
WRA				LR	LR	09 02 37.3	

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      comp=Z,687nm,21.8s,baz=80,slow=34
LTZ   Lake Taylor      31.57 171  eP     P      08 51 27.3 +2.6
      22nm,0.9s
FOZ   Fox Glacier      32.01 175  eP     P      08 51 30.8 +2.3
      110nm,1.0s
OXZ   Oxford           32.07 172  eP     P      08 51 30.7 +1.7
      62nm,1.2s
RPZ   Rata Peaks       32.32 173  eP     P      08 51 32.8 +1.5
RPZ                               eP     P      08 51 33.3 +2.1
RPZ   Rata Peaks       32.32 173  P      P      08 51 32.7 +1.5
      37nm,0.8s,baz=358,slow=2.2,SNR=9.2
GUMO  Guam             32.59 320  LR     LR     09 04 23.5
      comp=Z,393nm,18.9s,baz=139,slow=36
AS01  Alice Springs    32.67 244  eP     P      08 51 33.0 -1.7
AS31  Alice Springs    32.72 244  eP     P      08 51 34.3 -0.8
      8.2nm,0.9s
ASAR  Alice Springs    32.72 244  P      P      08 51 33.9 -1.2
      27nm,0.8s,baz=75,slow=9.5,SNR=49
ASAR                              PcP    PcP    08 54 20.9 +0.1
      4.8nm,1.0s,baz=92,slow=2.1,SNR=8.0
RAR   Rarotonga        34.20 111  LR     LR     09 03 10.8
      comp=Z,523nm,21.2s,baz=296,slow=32
BBOO  Buckleboo        34.60 228  eP     P      08 51 50.8 -0.5
      24nm,1.0s
FITZ  Fitzroy Crossi   39.42 256  eP     P      08 52 32.0 -0.4
      42nm,0.9s
FITZ  Fitzroy Crossi   39.42 256  P      P      08 52 31.8 -0.6
      35nm,0.9s,baz=79,slow=8.2,SNR=33
FORT  Forrest          39.89 235  eP     P      08 52 36.5 +0.3
      80nm,1.0s
SANI  Sanana           40.72 280  P      P      08 52 43.7 +0.4
      38nm,1.4s
BATI  Baumata          41.50 268  P      P      08 52 50.8 +1.0
      35nm,0.7s,baz=157,slow=16,SNR=6.1
MMRI  Maumere          43.08 270  P      P      08 53 02.4 -0.3
PPT   Papeete          43.39 103  LR     LR     09 09 33.6
      comp=Z,718nm,19.3s,baz=316,slow=34
PPT2  Papeete2         43.39 103  eLR    LR     09 05 41.4
      comp=Z,722nm,24.8s
EDFI  Ende, Flores     43.60 269  P      P      08 53 06.0 -1.0
      17nm,0.9s,2µm
TBI   Tubuai           43.96 112  eLR    LR     09 05 58.0
      comp=Z,773nm,25.2s
LUWI  Luwuk            44.09 281  eP     P      08 53 11.2 +0.4
      109nm,0.9s
LUWI  Luwuk            44.09 281  P      P      08 53 10.7 -0.1
MBWA  Marble Bar       45.20 252  eP     P      08 53 20.2 +0.6
      44nm,1.0s
APSI  Ampana           45.20 280  P      P      08 53 20.3 +0.6
      83nm,1.3s,893nm
BKSI  Bulukumba        45.69 274  P      P      08 53 23.4 -0.1
BNSI  Bone             45.89 275  P      P      08 53 25.0 -0.1
SPSI  Sidrap Palu      46.31 276  P      P      08 53 28.1 -0.3
      35nm,1.1s
TTSI  Tana Toraja      46.46 277  P      P      08 53 29.5 -0.1
MPSI  Mapaga           47.23 281  P      P      08 53 35.2 -0.4
      42nm,1.2s
PLAI  Plampang         47.43 269  P      P      08 53 36.7 -0.5
      92nm,1.4s,1µm
NWAO  Narrogin (SRO)   49.31 236  eP     P      08 53 51.0 -0.5
NWAO                              eP     P      08 53 51.3 -0.2
NWAO  Narrogin (SRO)   49.31 236  P      P      08 53 51.0 -0.5
      38nm,1.0s,baz=7.1,slow=16,SNR=7.6
MORW  Morawa           49.53 242  eP     P      08 53 53.8 +0.6
      75nm,1.0s
SRBI  Singaraja        50.04 269  P      P      08 53 56.1 -1.2
      51nm,0.9s,552nm
TGY   Tagaytay City    51.39 299  LR     LR     09 13 52.9
      comp=Z,239nm,22.0s,baz=121,slow=34
KKM   Kota Kinabalu    52.47 287  eP     P      08 54 16.2 +0.6
      103nm,1.1s
TAOE  Nuku Hiva Isla   53.07  92  eLR    LR     09 10 05.7
      comp=Z,528nm,24.0s
PCJI  Pacitan          53.98 268  P      P      08 54 26.6 -0.1
MJAR  Matsushiro Arr   54.53 333  P      P      08 54 29.4 -0.9
      5.7nm,0.8s,baz=169,slow=9.1,SNR=11
MAJO  Matsushiro       54.53 333  eP     P      08 54 29.4 -0.9
MAT   Matsushiro       54.53 333  P      P      08 54 29.6 -0.7
UGM   Wanagama         54.66 268  eP     P      08 54 31.9 +0.2
      112nm,1.0s
UGM   Wanagama         54.66 268  P      P      08 54 31.5 -0.2
SBUM  Sibu             55.18 281  eP     P      08 54 36.7 +1.3
      9.4nm,1.1s
JNU   Nakatsue         55.62 324  eP     P      08 54 38.9 +0.7
      24nm,0.7s
JNU   Nakatsue         55.62 324  P      P      08 54 38.3  0.0
      16nm,0.8s,baz=153,slow=5.2,SNR=6.2
YULB  Yu-li            55.81 309  eP     P      08 54 40.8 +1.0
      34nm,1.1s
TPUB  Ta-pu            56.27 308  eP     P      08 54 42.8 -0.3
      50nm,0.9s
KSM   Kuching          56.77 279  eP     P      08 54 46.7 -0.1
      42nm,1.1s
RKT   Rikitea          57.23 110  eLR    LR     09 12 04.4
      comp=Z,951nm,24.8s
CISI  Cisompet, Garu   57.37 268  P      P      08 54 50.8 -0.3
LEM   Lembang          57.68 269  P      P      08 54 52.7 -0.8
      65nm,0.9s,baz=110,slow=13,SNR=6.1
PPBI  Pangkal Pinang   59.99 274  P      P      08 55 09.4 +0.1
SSE   Sheshan          60.36 316  P      P      08 55 11.6 +0.1
SSE                               pmax   pmax
      comp=Z,14nm,0.7s
SSE                               pmax   pmax
      comp=Z,150nm,7.6s
SSE   Sheshan          60.36 316  eP     P      08 55 12.0 +0.5
      comp=Z,50nm,0.9s
KSRS  Korea Array      60.42 326  P      P      08 55 11.3 -0.5
      comp=Z,2.7nm,0.7s,baz=139,slow=7.2,SNR=8.6
KSAR  Wonju Array Be   60.43 326  P      P      08 55 11.3 -0.6
KS01  Wonju Array Si   60.45 326  eP     P      08 55 12.0  0.0
KASI  Kota Agung       60.95 270  P      P      08 55 15.6 -0.3
      comp=Z,59nm,1.4s
MDSI  Maura Dua        61.45 271  P      P      08 55 18.4 -0.9
      comp=Z,17nm,1.6s,comp=Z,941nm
NJ2   Nanjing          62.53 316  eP     P      08 55 27.2 +1.1
NJ2                               pmax   pmax
      comp=Z,32nm,0.8s
USA0B Ussuriysk Arra   63.51 333  eP     P      08 55 33.4 +1.0
      comp=Z,14nm,1.0s
USRK  Ussuriysk Ar.    63.51 333  P      P      08 55 32.8 +0.4
      comp=Z,6.1nm,0.8s,baz=135,slow=6.3,SNR=12
PETK  Petropavlovsk-   64.82 355  P      P      08 55 40.5 -0.3
      comp=Z,3.7nm,0.8s,baz=171,slow=7.0,SNR=4.5
PEA1  Petropavlovsk-   64.82 355  eP     P      08 55 40.5 -0.4
WHN   Wuhan            64.88 312 ⇑P     P      08 55 41.8 +0.1
MDJ   Mudanjiang       64.91 332  P      P      08 55 42.4 +0.8
MDJ                               pmax   pmax
      comp=Z,13nm,0.8s
MDJ                               pmax   pmax
      comp=Z,110nm,2.8s
BKNI  Bangkinang       65.50 276  P      P      08 55 46.3 +0.2
CASY  Casey            65.95 201  eP     P      08 55 48.3 +0.3
      comp=Z,37nm,1.0s
VNDA  Vanda            65.96 181  P      P      08 55 46.9 -1.0
      comp=Z,4.8nm,1.0s,baz=12,slow=7.7,SNR=4.9
CN2   Changchun        66.30 329  eP     P      08 55 51.1 +0.5
CN2                               pmax   pmax
      comp=Z,20nm,0.8s
IPM   Ipoh             66.49 280  eP     P      08 55 53.1 +0.5
      comp=Z,28nm,0.9s
MNSI  Mandailing Nat   67.03 276  P      P      08 55 55.8 -0.1
      comp=Z,50nm,1.0s
KULM  Kulim            67.06 281  eP     P      08 55 55.5 -0.6
      comp=Z,18nm,1.1s
PSI   Prapat           68.12 278  P      P      08 56 01.7 -1.3
      comp=Z,15nm,1.0s,baz=179,slow=2.4,SNR=12
ENH   Enshi            68.38 309  eP     P      08 56 04.1  0.0
      comp=Z,58nm,1.1s
GYA   Guiyang          68.87 304 ⇓iP     P      08 56 07.8 +0.4
GYA                               PP     PP     08 58 44.0 +4.3
GYA                               S      S      09 05 12.4 +0.4
GYA                               SKS    SKSac  09 06 04.9 -2.7
GYA   Guiyang          68.87 304  SS     SS     09 09 38.2 +0.6
GYA                               pmax   pmax
      comp=Z,20nm,1.0s
GYA                               pmax   pmax
      comp=Z,120nm,6.5s
GYA                               LR     LR
      comp=N,520nm,18.2s
GYA                               LR     LR
      comp=E,490nm,18.6s
GYA                               LR     LR
      comp=Z,480nm,18.0s
CHAI  Chaiyaphum       68.91 292  P      P      08 56 08.9 +1.2
      comp=Z,3.1nm,0.9s
BJT   Baijiatuau       69.00 321  eP     P      08 56 07.9 +0.1
      comp=Z,19nm,1.0s
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GSI   Gunungsitoli     69.09 276  eP     P      08 56 09.8 +0.8
      comp=Z,51nm,0.9s
GSI   Gunungsitoli     69.09 276  P      P      08 56 09.1 +0.2
KCSI  Kotacane, Aceh   69.41 278  P      P      08 56 09.9 -1.0
      comp=Z,25nm,0.9s
PBKT  Sadao Pong       70.05 292  eP     P      08 56 14.1 -0.6
      comp=Z,12nm,0.9s
TIY   Taiyuan          70.08 317  eP     P      08 56 15.7 +1.1
TIY                               pmax   pmax
      comp=Z,16nm,0.6s
XAN   Xi'an            70.62 312  P      P      08 56 18.3 +0.4
XAN                               pP     PcP    08 56 31.7 -7.3
XAN                               sP     pwP    08 56 38.3  +12
XAN                               pmax   pmax
      comp=Z,28nm,1.1s
XAN                               LR     LR
      comp=N,380nm,21.7s
XAN                               LR     LR
      comp=Z,350nm,21.7s
XAN   Xi'an            70.62 312  eP     P      08 56 16.5 -1.4
      comp=Z,35nm,1.1s
UTHA  Uthaitani        71.12 291  P      P      08 56 23.1 +1.9
      comp=Z,3.0nm,1.1s,comp=Z,374nm
KMI   Kunming          71.56 301  P      P      08 56 25.4 +1.4
KMI                               sP     PcP    08 56 36.4 -7.0
KMI                               pmax   pmax
      comp=Z,34nm,1.5s
KMI   Kunming          71.56 301  eP     P      08 56 25.8 +1.7
      comp=Z,32nm,1.1s
UMPA  Umpang Tak       71.85 291  P      P      08 56 28.5 +2.8
      comp=Z,3.2nm,0.9s,comp=Z,2µm
UMPA  Umpang Tak       71.85 291  P      P      08 56 28.5 +2.8
      comp=Z,3.2nm,0.9s,comp=Z,2µm
HHC   Hu-ho-hao-te     72.36 320  eP     P      08 56 31.9 +3.5
HHC                               pmax   pmax
      comp=Z,10.0nm,1.1s
CM01  Chiang Mai Arr   72.47 294  eP     P      08 56 30.5 +1.2
CMAR  Chiang Mai Arr   72.49 294  P      P      08 56 30.9 +1.4
      comp=Z,8.3nm,0.7s,baz=117,slow=4.4,SNR=32
CMMT  Chiang Mai       72.60 294  P      P      08 56 31.4 +1.2
      comp=Z,15nm,1.2s
CMMT  Chiang Mai       72.60 294  P      P      08 56 31.4 +1.2
CHTO  Chiang Mai       72.61 294  eP     P      08 56 30.2 +0.1
      comp=Z,9.9nm,0.9s
CHTO  Chiang Mai       72.61 294  P      P      08 56 31.5 +1.3
      comp=Z,68nm,1.2s
CHTO  Chiang Mai       72.61 294  P      P      08 56 31.5 +1.3
      comp=Z,68nm,1.2s
CD2   Chengdu          73.07 307  P      P      08 56 33.8 +1.0
CD2                               pmax   pmax
      comp=Z,90nm,1.0s
CD2                               pmax   pmax
      comp=Z,350nm,4.0s
LZH   Lanzhou          75.25 312 ⇓P     P      08 56 47.6 +2.1
LZH                               pP     pwP    08 56 52.5 -1.2
LZH                               sP     PcP    08 56 55.5 -3.4
LZH                               PP     PP     08 59 36.6 +2.3
LZH                               pmax   pmax
      comp=Z,21nm,1.1s
LZH                               pmax   pmax
      comp=Z,93nm,4.8s
LZH                               LR     LR
      comp=N,430nm,16.3s
LZH                               LR     LR
      comp=E,410nm,16.4s
LZH                               LR     LR
      comp=Z,470nm,17.5s
KDAK  Kodiak Island    77.01  21  LR     LR     09 27 51.4
      comp=Z,303nm,18.2s,baz=74,slow=33
QSPA  South Pole Qui   78.42 180  eP     P      08 57 03.1 +0.3
QSPA                              eP     pP     08 57 03.6 -1.1
QSPA  South Pole Qui   78.42 180  P      P      08 57 03.1 +0.3
      comp=Z,14nm,1.1s,baz=27,slow=2.9,SNR=9.2
SVW2  Sparrevohn       78.57  18  eP     P      08 57 08.2 +4.8
      comp=Z,50nm,2.0s
ULN   Ulaanbaatar      78.84 324  eP     P      08 57 06.1 +0.6
      comp=Z,16nm,0.8s
BRLK  Bradley Lake     79.08  21  eP     P      08 57 10.2 +3.9
      comp=Z,15nm,0.8s
SONA0 Songino Array    79.21 324  eP     P      08 57 07.9 +0.4
SONM  Songino Array    79.21 324  P      P      08 57 07.9 +0.4
      comp=Z,4.8nm,0.8s,baz=145,slow=6.1,SNR=23
SONA1 Songino Array    79.21 324  eP     P      08 57 07.9 +0.5
BILL  Bilibino         79.42   0  eP     P      08 57 07.6 -0.3
      comp=Z,14nm,0.9s
GTA   Gaotai           79.56 314 ⇓P     P      08 57 10.8 +1.2
GTA                               pP     pwP    08 57 21.7 +4.0
GTA                               sP     PcP    08 57 25.6 +8.1
GTA                               pmax   pmax
      comp=Z,30nm,1.0s
GTA                               pmax   pmax
      comp=Z,170nm,6.2s
GTA                               LR     LR
      comp=N,240nm,17.5s
GTA                               LR     LR
      comp=E,390nm,18.1s
GTA                               LR     LR
      comp=Z,350nm,19.4s
SUA   Susitna One      80.37  20  eP     P      08 57 14.0 +0.6
      comp=Z,9.0nm,0.9s
PMR   Palmer           81.00  20  eP     P      08 57 21.6 +5.0
      comp=Z,6.8nm,1.0s
CAST  Castle Rocks     81.40  18  eP     P      08 57 19.9 +1.1
      comp=Z,8.7nm,0.8s
DIV   Divide           81.84  21  eP     P      08 57 26.9 +5.7
      comp=Z,31nm,1.4s
KLU   Klutina          82.03  21  eP     P      08 57 24.4 +2.2
      comp=Z,12nm,1.1s
RND   Reindeer         82.39  19  eP     P      08 57 24.5 +0.5
      comp=Z,8.1nm,0.9s
MCK   McKinley         82.59  19  eP     P      08 57 24.5 -0.5
      comp=Z,14nm,1.2s
DHY   Denali Highway   82.63  20  eP     P      08 57 28.1 +2.7
      comp=Z,9.2nm,1.0s
TLY   Talaya           82.67 326  eP     P      08 57 26.3 +0.6
      comp=Z,35nm,0.8s
IM3   Indian Mountai   82.89  15  eP     P      08 57 26.2 -0.3
HARP  HAARP            82.92  21  eP     P      08 57 32.6 +5.9
      comp=Z,18nm,1.0s
WRH   Wood River Hil   83.38  18  eP     P      08 57 28.4 -0.6
      comp=Z,10.0nm,1.0s
O02D  Mt. Diablo Mer   83.53  47  P      P      08 57 36.3 +5.8
      baz=249
MDM   Murphy Dome      83.69  18  eP     P      08 57 30.0 -0.7
      comp=Z,10nm,0.9s
HDA   Harding Lake     83.69  19  eP     P      08 57 30.0 -0.6
      comp=Z,22nm,0.8s
HDA   Harding Lake     83.69  19  P      P      08 57 30.7  0.0
      baz=226
COLA  College          83.74  18  eP     P      08 57 32.8 +2.0
      comp=Z,12nm,0.8s
K02D  Willamette Mer   83.83  44  P      P      08 57 37.3 +5.3
      baz=248
M02C  Callahan         83.92  46  P      P      08 57 38.0 +5.6
      baz=249
RIDG  Independ'e Rid   83.92  20  eP     P      08 57 31.7 -0.3
      comp=Z,17nm,1.0s
IL1   Eielson Array    83.96  18  eP     P      08 57 30.9 -1.1
ILAR  Eielson Array    83.96  18  P      P      08 57 30.9 -1.1
      comp=Z,2.9nm,0.8s,baz=234,slow=4.4,SNR=17
ILB   Eielson Array    83.96  18  eP     P      08 57 31.2 -0.8
POKR  Poker Plat Res   84.04  18  P      P      08 57 31.6 -0.9
      baz=226
ORV   Oroville         84.24  48  eP     P      08 57 38.7 +4.7
      comp=Z,6.5nm,1.0s
HUMO  Hull Mountain    84.28  45  eP     P      08 57 39.9 +5.7
      comp=Z,22nm,1.4s
SCRK  Sand Creek       84.36  20  eP     P      08 57 34.2  0.0
      comp=Z,18nm,0.9s
AFDM  Forest Hills D   84.42  49  eP     P      08 57 40.1 +5.1
      comp=Z,8.9nm,0.9s
CMB   Columbia Colle   84.55  50  eP     P      08 57 39.8 +4.1
      comp=Z,6.0nm,0.9s
L04D  Klamath Falls    84.59  45  P      P      08 57 37.5 +1.5
      baz=249
HYT   Haines Junctio   84.80  24  eP     P      08 57 37.4 +0.8
      comp=Z,7.6nm,0.8s
ODAN  Odare            85.17 299  eP     P      08 57 39.9 +0.6
BEKR  Beckworth        85.17  48  eP     P      08 57 40.6 +1.6
      comp=Z,6.3nm,0.9s
EDW2  Edwards Air Fo   85.40  53  P      P      08 57 45.2 +5.1
      baz=253
MDPB  Devils Postpil   85.40  50  eP     P      08 57 44.9 +4.6
      comp=Z,7.5nm,0.9s
WAKR  Walker           85.41  49  eP     P      08 57 41.7 +1.5
      comp=Z,11nm,1.2s
J05D  Fort Rock, OR    85.71  44  P      P      08 57 46.5 +5.0
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      baz=250
CWC   Cottonwood Cre   85.80  52  P      P      08 57 46.8 +4.6
      baz=252
LRMC  Laurel Mtn Rad   85.82  53  P      P      08 57 47.2 +5.0
      baz=253
PAHR  Pah Rah Range    85.83  48  eP     P      08 57 44.1 +1.9
      comp=Z,6.0nm,1.0s
RAMN  Ramite           85.87 298  eP     P      08 57 43.2 +0.4
      comp=Z,85nm,1.6s
DAWY  Dawson           85.99  21  eP     P      08 57 46.2 +3.9
      comp=Z,6.1nm,1.0s
MONP2 Monument Peak    86.07  55  P      P      08 57 48.7 +5.1
      baz=254
RYN   Ryan             86.13  49  eP     P      08 57 49.0 +5.2
      comp=Z,7.4nm,1.1s
NV01  Mina Array Sit   86.23  50  eP     P      08 57 43.7 -0.7
NV01                              eP     P      08 57 48.7 +4.4
NVAR  Mina Array Bea   86.23  50  P      P      08 57 43.7 -0.6
      comp=Z,0.9nm,0.8s,baz=243,slow=8.0,SNR=3.7
NV11  Mina Array Sit   86.34  50  eP     P      08 57 48.7 +3.9
      comp=Z,0.6nm,1.0s
JIRN  Jiri             86.41 299  eP     P      08 57 46.1 +0.5
      comp=Z,229nm,1.8s
GRAC  Grapevine Rang   86.51  51  P      P      08 57 50.8 +5.3
      baz=253
TIXI  Tiksi            86.65 349  eP     P      08 57 44.5 -0.8
      comp=Z,6.6nm,1.1s
HEC   Hector,Ludlow    86.69  54  P      P      08 57 51.9 +5.4
      baz=254
GUN   Gumba            86.74 299  eP     P      08 57 47.5 +0.3
FURC  Furnace Creek,   86.74  52  P      P      08 57 51.6 +5.1
      baz=253
SHOC  Shoshone, Teco   87.03  53  P      P      08 57 53.0 +4.9
      baz=254
PKI   Pulchoki         87.05 299  eP     P      08 57 48.5 -0.2
      comp=Z,78nm,1.4s
BC3   Big Chuckawall   87.06  55  P      P      08 57 53.5 +5.1
      baz=254
PKIN  Phulchoki        87.07 299  eP     P      08 57 48.8 +0.1
GMRC  Granite Mounta   87.21  54  P      P      08 57 48.8 -0.2
      baz=254
WVOR  Wild Horse Val   87.23  46  eP     P      08 57 54.3 +5.3
      comp=Z,11nm,1.4s
DMN   Daman            87.32 299  eP     P      08 57 50.3 +0.3
      comp=Z,81nm,1.2s
IRM   Iron Mountain    87.44  55  P      P      08 57 51.7 +1.6
      baz=254
J08A  Circle Bar Ran   87.63  45  eP     P      08 57 55.8 +4.9
      comp=Z,9.2nm,1.1s
LDFC  Landfair         87.72  54  eP     P      08 57 56.3 +4.8
      comp=Z,13nm,0.9s
Y12C  Blythe           87.83  55  eP     P      08 57 57.6 +5.7
      comp=Z,4.9nm,1.0s
Y12C  Blythe           87.83  55  P      P      08 57 53.4 +1.4
      baz=255
SHPR  Sheep Range      88.07  52  eP     P      08 57 58.8 +5.6
      comp=Z,3.4nm,1.0s
R11A  Troy Canyon, C   88.25  50  eP     P      08 57 55.8 +1.8
      comp=Z,1.2nm,1.1s
DANN  Dangsing         88.66 299  eP     P      08 57 55.8 -0.5
      comp=Z,45nm,1.2s
KOLN  Koldanda         88.66 299  eP     P      08 57 55.8 -0.4
W13A  Hualapai Mount   88.69  54  eP     P      08 58 00.6 +4.3
      comp=Z,3.8nm,1.0s
214A  Organ Pipe Nat   88.77  57  P      P      08 57 57.8 +1.4
      baz=256
ELK   Elko             89.17  48  eP     P      08 58 01.1 +2.6
      comp=Z,2.7nm,1.0s
PYUN  Piuthan          89.26 299  eP     P      08 57 58.4 -0.7
      comp=Z,46nm,1.1s
WMQ   Urumqi           89.60 315  P      P      08 58 00.7 +0.6
WMQ                               pP     pwP    08 58 11.2 +2.9
WMQ                               pmax   pmax
      comp=Z,32nm,1.7s
WMQ                               pmax   pmax
      comp=Z,1µm,6.3s
WMQ                               LR     LR
      comp=N,740nm,23.9s
WMQ                               LR     LR
      comp=E,550nm,23.9s
WMQ                               LR     LR
      comp=Z,750nm,26.7s
PSUT  Pine Spring      89.61  51  eP     P      08 58 05.4 +4.9
      comp=Z,3.2nm,0.9s
LCMT  Little Creek M   89.69  52  eP     P      08 58 04.4 +3.6
      comp=Z,4.7nm,0.9s
CCUT  Cedar City       89.73  52  eP     P      08 58 06.9 +5.8
      comp=Z,3.8nm,0.9s
U15A  North Rim        90.28  53  eP     P      08 58 04.5 +0.8
      comp=Z,6.5nm,0.9s
X16A  Lo Mia Camp, P   90.48  55  eP     P      08 58 09.3 +4.7
      comp=Z,3.4nm,0.8s
PKCU  Pink Cliffs      90.52  52  eP     P      08 58 11.4 +6.5
      comp=Z,15nm,1.2s
HLID  Hailey           90.52  46  eP     P      08 58 05.8 +1.2
      comp=Z,1.2nm,0.8s
HLID  Hailey           90.52  46  P      P      08 58 04.8 +0.3
      baz=255
MTPU  Mount Pierson    90.76  51  eP     P      08 58 07.0 +1.0
      comp=Z,6.1nm,0.9s
BGU   Big Grassy Mou   90.83  48  eP     P      08 58 11.4 +5.4
      comp=Z,5.2nm,1.1s
MSU   Marysvale        90.88  51  eP     P      08 58 07.3 +0.8
HVU   Hansel Valley    91.23  48  eP     P      08 58 10.1 +2.2
      comp=Z,6.3nm,1.0s
NLU   North Lily Min   91.30  50  eP     P      08 58 12.5 +4.2
      comp=Z,4.4nm,0.9s
FXWY  Fox Creek        92.92  46  eP     P      08 58 20.1 +4.3
      comp=Z,2.0nm,0.9s
PD31  Pinedale Array   93.78  47  eP     P      08 58 20.9 +1.1
PDAR  Pinedale Array   93.78  47  P      P      08 58 20.9 +1.1
      comp=Z,0.8nm,0.8s,baz=198,slow=0.5,SNR=5.1
MK01  Makanchi Array   94.03 317  eP     P      08 58 20.6 +0.1
MK31  Makanchi Array   94.04 317  eP     P      08 58 21.2 +0.6
MK32  Makanchi Array   94.04 317  eP     P      08 58 20.8 +0.3
MKAR  Makanchi Array   94.04 317  eP     P      08 58 21.2 +0.6
      comp=Z,82nm,0.8s
MKAR  Makanchi Array   94.04 317  P      P      08 58 20.8 +0.3
      comp=Z,15nm,0.8s,baz=97,slow=6.3,SNR=31
ZAA0  Zalesovo Array   94.10 324  eP     P      08 58 20.1 -0.5
      comp=Z,14nm,1.1s
ZALV  Zalesovo Beam    94.10 324  eP     P      08 58 19.6 -1.0
ZALV  Zalesovo Beam    94.10 324  P      P      08 58 19.9 -0.7
      comp=Z,5.1nm,0.8s,baz=99,slow=4.7,SNR=19
ZAA1  Zalesovo Array   94.10 324  eP     P      08 58 19.9 -0.8
YKA   Yellowknife Ar   95.37  27  P      P      08 58 23.8 -2.4
      comp=Z,0.3nm,0.7s,baz=258,slow=4.8,SNR=6.4
YKB5  Yellowknife Ar   95.37  27  eP     P      08 58 23.8 -2.4
LTX   Lajitas          95.93  61  eP     P      08 58 31.0 +1.2
TXAR  Lajitas Array    95.93  61  P      P      08 58 31.0 +1.3
      comp=Z,0.4nm,0.8s,baz=235,slow=4.0,SNR=5.5
NRIK  Noril'sk         96.69 340  P      P      08 58 31.1 -1.0
      comp=Z,1.4nm,0.3s,baz=149,slow=6.4,SNR=4.6
KSH   Kashi            97.23 309  P      Pdif   08 58 38.1 +2.6
KSH                               sP     pwP    08 58 45.2 +1.6
KSH                               pmax   pmax
      comp=Z,240nm,5.1s
ARA0  ARCESS Array S  116.90 345  ePKPdf PKiKP  09 03 46.0 -0.4
ARCES ARCESS Array B  116.90 345  PKP    PKiKP  09 03 46.0 -0.4
      comp=Z,2.4nm,0.4s,baz=82,slow=2.0,SNR=48
GNI   Garni           121.14 310  PKP    PKiKP  09 03 56.5 +0.7
      comp=Z,5.8nm,0.8s,baz=165,slow=5.5,SNR=3.8
KBZ   Khabaz          121.65 314  PKP    PKiKP  09 03 55.5 -0.8
      comp=Z,2.4nm,0.8s,baz=124,slow=5.6,SNR=4.7
FIA0  FINESS Array S  122.34 338  ePKPdf PKiKP  09 03 57.0 -0.2
FINES FINESS Array B  122.34 338  PKP    PKiKP  09 03 57.0 -0.2
      comp=Z,7.5nm,1.0s,baz=149,slow=4.4,SNR=4.4
BOSA  Boshof          124.85 223  PKP    PKiKP  09 04 03.1 -0.4
      comp=Z,3.1nm,0.8s,baz=159,slow=4.2,SNR=4.4
NB2   NORSAR Subarra  127.27 345  PKPdf  PKiKP  09 04 06.6 -0.5
      comp=Z,0.9nm,0.6s,baz=27,slow=1.9
NB200 NORSAR Array S  127.27 345  ePKPdf PKiKP  09 04 06.4 -0.7
NOA   NORSAR Array B  127.27 345  PKP    PKiKP  09 04 06.4 -0.7
      comp=Z,1.7nm,0.8s,baz=33,slow=2.0,SNR=7.0
AKASG Malin Array Be  127.41 327  PKP    PKiKP  09 04 07.0 -0.6
      comp=Z,1.6nm,0.8s,baz=76,slow=2.3,SNR=8.7
AK11  Malin Array Si  127.45 327  ePKPdf PKiKP  09 04 07.3 -0.4
BR101 Keskin Array S  129.46 312  ePKPdf PKiKP  09 04 11.1 -1.2
BRTR  Keskin Array B  129.46 312  PKP    PKiKP  09 04 11.1 -1.2
      comp=Z,2.5nm,1.0s,baz=128,slow=2.4,SNR=8.9
LSZ   Lusaka          130.37 238  ePKPdf PKiKP  09 04 15.5 +0.8
BUR04 Bucovina Ar. S  131.31 325  ePKPdf PKiKP  09 04 16.4 +0.7
KWP   Kalwaria Pacla  131.45 329  ePKPpre PKPpre 09 04 07.4
BRG   Berggiesshubel  134.63 335  ePKP   PKiKP  09 04 27.2 +5.1
      comp=Z,107nm,2.8s
CLL   Collm           134.67 336  ePKPdf PKiKP  09 04 24.0 +1.8
MODS  Modra-Piesok    134.97 331  ePKP   PKiKP  09 04 25.7 +2.7
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHC	Kasperske Hory	136.10	334	*e*PKPDF	PKiKP	09 04 25.5	+0.2
GEC2	GERESS Array S	136.26	334	*e*PKPdf	PKiKP	09 04 24.1	-1.6
GERES	GERESS Array B comp=Z,0.2nm,0.3s,baz=36,slow=3.7,SNR=2.8	136.26	334	PKhKP	PKPpre	09 04 11.0	
GERES	comp=Z,1.9nm,0.9s,baz=96,slow=1.3,SNR=6.9			PKP	PKiKP	09 04 24.1	-1.6
GEA0	GERESS Array S	136.27	334	*e*PKPdf	PKiKP	09 04 24.0	-1.7
DAVOX	Davos/Dischmat comp=Z,3.7nm,0.8s,baz=135,slow=7.1,SNR=3.8	139.50	335	PKP	PKiKP	09 04 30.5	-2.1
CLTB	Caltabellotta	144.40	321	*e*PKPdf	PKPdf	09 04 37.7	-1.4
KEST	Kesra comp=Z,38nm,0.8s,baz=351,slow=3.6,SNR=25	147.95	322	PKPbc	PKPab	09 04 49.0	-1.7
MVO	Moncorvo	149.89	349	*e*PKPdf	PKPab	09 04 56.5	-1.8
PVIS	Viseu	150.48	350	*e*PKPdf	PKiKP	09 04 54.5	-0.6
ES19	SONSECA Array	150.58	344	*e*PKPdf	PKPdf	09 04 48.5	-0.7
ES19				*e*PKPbc	PKiKP	09 04 54.0	-1.3
ESDC	Sonseca Array comp=Z,7.9nm,0.9s,baz=22,slow=2.5,SNR=12	150.62	344	PKPbc	PKiKP	09 04 54.8	-0.7
MTE	Manteigas	150.73	350	*e*PKPdf	PKiKP	09 04 56.0	+0.4
PTOM	Tomar	151.63	351	*e*PKPdf	PKiKP	09 04 58.0	+0.6
PMRV	Marv??o	151.64	349	*e*PKPdf	PKiKP	09 04 57.7	+0.2
PMTG	Montargil	152.14	350	*e*PKPdf	PKiKP	09 04 58.8	+0.3
TOA0	Torodi Ar. Sit	164.52	277	*e*PKPdf	PKPdf	09 05 06.4	-0.7
TORD	Torodi Ar. Bea comp=Z,3.4nm,0.9s,baz=2.9,slow=3.5,SNR=16	164.52	277	PKP	PKPdf	09 05 06.0	-1.0
TORD	comp=Z,1.5nm,1.0s,baz=106,slow=1.5,SNR=2.8			PKPab	pPKPab	09 06 01.4	-2.3
TORD	comp=Z,1.1nm,1.1s,baz=42,slow=5.3,SNR=3.6			PP	PP	09 09 49.0	+0.5
TOA1	Torodi Ar. Sit	164.52	277	*e*PKPdf	PKPdf	09 05 06.0	-1.0
TOA1				*e*PKPab	pPKPab	09 06 01.4	-2.3
TOA1				*e*PP	PP	09 09 49.0	+0.5

TAP 06 08:47:46.0,22°.91N×121°.16E,h19^{km}±1^{km},ML2.6,B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWGBT	Beinan baz=218	0.11	219	P	Pg	08 47 50.6	+0.6
TWGBT	baz=218			S	Sg	08 47 53.4	+0.8
TWG	Pinlang baz=218	0.12	222	P	Pg	08 47 50.6	+0.6
TWG	baz=218			S	Sg	08 47 53.4	+0.8
TTN	Taitung baz=180	0.15	183	*e*P	Pg	08 47 52.3	+1.9
TTN	baz=180			*e*S	Sg	08 47 57.0	+3.7
CHKT	Chengkung baz=46	0.27	45	P	Pb	08 47 53.3	+1.0
CHKT	baz=46			S	Sb	08 47 58.1	+1.7
ELDTW	Lidau baz=336	0.31	336	P	Pb	08 47 53.1	0.0
ELDTW	baz=336			*e*S	Sg	08 47 57.4	-0.2
ECL	Taimali baz=210	0.36	211	P	Pb	08 47 54.0	0.0
ECL	baz=210			*e*S	Sb	08 47 59.4	+0.2
STYT	Tauyuan baz=305	0.45	305	P	Pb	08 47 55.8	+0.3
STYT	baz=305			S	Sb	08 48 02.3	+0.4
TWF1	Yuli baz=17	0.46	16	P	Pg	08 47 55.1	-0.4
TWF1	baz=17			S	Sb	08 48 02.9	+0.7
SLGT	Liugui baz=280	0.48	281	P	Pb	08 47 56.5	+0.6
SLGT	baz=280			S	Sb	08 48 02.8	+0.1
YULB	Yu-li	0.50	15	*e*P	Pg	08 47 55.6	-0.6
YULB	Yu-li baz=15	0.50	15	*e*P	Pg	08 47 55.7	-0.6
YULB	baz=15			*e*S	Sb	08 48 04.1	+0.8
SSD	Sandimen baz=251	0.51	252	P	Pb	08 47 56.6	+0.2
SSD	baz=251			*e*S	Sg	08 48 03.0	-0.2
MASBT	Mashibuluo baz=238	0.56	239	P	Pg	08 47 57.8	+0.4
MASBT	baz=238			*e*S	Sg	08 48 05.0	0.0
EAST	Anshuo baz=207	0.59	209	P	Pg	08 47 58.3	+0.4
TAW	Tawu baz=203	0.60	204	P	Pg	08 47 58.0	0.0
WTP	Ta-pu baz=304	0.60	304	*e*P	Pn	08 47 59.3	-0.4
WTP	baz=304			*e*S	Sn	08 48 08.2	-0.8
TPUB	Ta-pu 94nm,0.6s	0.62	309	*e*P	Pn	08 47 59.7	-0.3
TPUB	Ta-pu baz=309	0.62	309	P	Pn	08 47 59.5	-0.4
TPUB	baz=309			*e*S	Sn	08 48 08.5	-1.0
HGSD	Ruisui baz=22	0.63	23	P	Pg	08 47 58.9	+0.3
HGSD	baz=22			*e*S	Sg	08 48 07.9	+0.8
CHN1	Nanshi baz=295	0.64	296	*e*P	Pn	08 48 00.6	+0.3
CHN1	baz=295			*e*S	Sn	08 48 09.9	0.0
CHN4	Tsaushan baz=310	0.68	311	P	Pn	08 48 00.7	-0.1
CHN4	baz=310			*e*S	Sn	08 48 10.9	0.0
SNST	Tainan City baz=297	0.68	297	*e*P	Pn	08 48 01.0	+0.3
SNST	baz=297			*e*S	Sn	08 48 11.5	+0.6
TWK	Hsinying baz=300	0.71	300	*e*P	Pn	08 48 01.6	+0.4
SCZT	Fangliau baz=222	0.73	223	P	Pg	08 48 00.7	+0.4
SCZT	baz=222			S	Sn	08 48 11.2	-0.7
WHYT	Xinyi Township baz=340	0.83	341	*e*P	Pn	08 48 02.8	0.0
VWDT	VWDT baz=359	0.84	359	P	Pb	08 48 02.3	+0.2
ESL	Shilin baz=16	0.94	16	*e*P	Pg	08 48 05.1	+0.8
SMLT	Sun Moon Lake baz=346	1.00	346	*e*P	Pg	08 48 05.8	+0.2
SMLT	baz=346			*e*S	Sn	08 48 21.8	+2.9
TYC	Yuchr baz=345	1.03	345	*e*P	Pg	08 48 07.3	+1.2
TYC	baz=345			*e*S	Sg	08 48 22.4	+2.7
OWD	Renai baz=1.0	1.04	1	*e*P	Pb	08 48 05.7	+0.1
OWD	baz=1.0			*e*S	Sg	08 48 20.5	+0.4

IDC 06 08:50:51.2±1.3,10°.83S×165°.05E,h0^{km},mb3.6/4, mb1 4.0/5,mb1mx3.6/43,mbtmp3.7/5,ML4.1/1,Error ellipse: s-maj=50.1km s-min=26.3km az=137.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.4nm,0.3s,baz=330,slow=20,SNR=5.8	11.26	173	Pn	Pn	08 53 32.1	-1.5
WRA	Warramunga Arr 0.6nm,0.7s,baz=80,slow=9.1,SNR=5.9	30.92	249	P	P	08 57 09.9	-0.1
ASAR	Alice Springs 0.5nm,0.5s,baz=67,slow=9.6,SNR=5.0	32.28	243	P	P	08 57 22.5	+0.5
ILAR	Eielson Array 0.2nm,0.5s,baz=241,slow=3.4,SNR=5.6	83.53	19	P	P	09 03 19.6	-1.1
NVAR	Mina Array Bea 0.6nm,0.8s,baz=232,slow=6.7,SNR=2.8	86.41	50	P	P	09 03 37.0	+1.0

ISCJB ***06*** *08:51:46.7±0.4, 11°.70S±0°.08×165°.04E±0°.09, h10^{km}, mb4.1/14, Error ellipse: s-maj=12.4km s-min=10.9km az=21.4*

IDC ***06*** *08:51:46.4±0.9, 11°.68S×165°.16E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.0/45, mbtmp4.0/11, ML3.8/1, Error ellipse: s-maj=34.6km s-min=22.5km az=140.0*

NEIC ***06*** *08:51:48.2±0.3, 11°.63S×165°.09E, h10^{km}, mb4.5/5, Error ellipse: s-maj=9.5km s-min=8.0km az=114.0*

ISC 06 08:51:48.2±0.6,11°.6S±0°.1×165°.1E±0°.1,h10^{km},n23, σ0s.80/22,mb4.1/14,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.50	293	*e*Pn	Pn	08 53 09.8	-0.5
DZM	Mont Dzumac 0.7nm,0.3s,baz=343,slow=19,SNR=2.3	10.46	173	Pn	Pn	08 54 17.8	-0.7
LHI	Lord Howe Isla 92nm,0.9s	20.56	195	*e*P	Pn	08 56 27.8	-1.6
BKZ	Black Stump Fm 20nm,1.2s	29.24	162	*e*P	P	08 57 51.6	+1.2
WB2	Warramunga Arr	30.66	251	*e*P	P	08 58 02.9	-0.3
WR1	Warramunga Arr 5.5nm,1.0s	30.67	251	*e*P	P	08 58 03.5	+0.2
WRA	Warramunga Arr 2.6nm,1.0s,baz=80,slow=9.1,SNR=7.8	30.67	251	P	P	08 58 03.5	+0.2
ASAR	Alice Springs 1.3nm,0.9s,baz=72,slow=8.9,SNR=5.2	31.95	244	P	P	08 58 14.2	-0.4
ASAJ	Asahikawa 3.2nm,0.7s,baz=194,slow=8.2,SNR=4.5	59.14	341	P	P	09 01 49.6	+0.6
SONA0	Songino Array	78.76	324	*e*P	P	09 03 52.6	+1.4
SONM	Songino Array 0.4nm,0.7s,baz=126,slow=7.3,SNR=3.6	78.76	324	P	P	09 03 52.6	+1.4
CAST	Castle Rocks 3.7nm,0.9s	81.70	18	*e*P	P	09 04 07.1	+0.5
HDA	Harding Lake 4.6nm,1.0s	84.01	19	*e*P	P	09 04 18.0	-0.5
ILAR	Eielson Array 1.0nm,0.6s,baz=238,slow=5.3,SNR=18	84.28	19	P	P	09 04 19.6	-0.3
ILB	Eielson Array 1.4nm,0.8s	84.28	19	*e*P	P	09 04 19.2	-0.7
NV01	Mina Array Sit	86.90	50	*e*P	P	09 04 33.6	-0.3
NVAR	Mina Array Bea 1.5nm,0.9s,baz=236,slow=7.5,SNR=5.3	86.90	50	P	P	09 04 33.6	-0.3
MK32	Makanchi Array	93.50	317	*e*P	P	09 05 04.3	-0.1
MKAR	Makanchi Array 0.6nm,0.8s,baz=102,slow=5.3,SNR=3.9	93.50	317	P	P	09 05 04.3	-0.1
PDAR	Pinedale Array 0.6nm,0.9s,baz=260,slow=5.4,SNR=3.8	94.43	47	P	P	09 05 08.1	-0.9
YKA	Yellowknife Ar 0.5nm,0.9s,baz=259,slow=4.8,SNR=4.8	95.79	27	P	P	09 05 12.7	-1.7
LTX	Lajitas	96.68	62	*e*P	P	09 05 20.0	+0.6
TXAR	Lajitas Array 0.3nm,0.9s,baz=233,slow=5.4,SNR=2.8	96.68	62	P	P	09 05 20.0	+0.6

ISCJB ***06*** *08:53:49.7±0.8, 10°.23S±0°.08×165°.86E±0°.08, h10^{km}, mb4.1/13, Error ellipse: s-maj=14.3km s-min=8.0km az=135.2*

IDC ***06*** *08:53:49.4±1.5, 10°.13S×165°.94E, h0^{km}, mb4.0/9, mb1 4.1/11, mb1mx3.9/47, mbtmp4.1/11, ML4.5/2, Error ellipse: s-maj=31.9km s-min=23.4km az=72.0*

NEIC ***06*** *08:53:51.5±0.8, 10°.15S×165°.84E, h10^{km}, mb4.1/4, Error ellipse: s-maj=16.9km s-min=8.8km az=62.0*

ISC 06 08:53:50.3±0.9,10°.1S±0°.1×166°.01E±0°.09,h10^{km},n31, σ1s.29/27,mb4.0/13,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.01	276	*e*Pn	Pn	08 55 20.5	+1.1
HNR				*e*Pn	Pn	08 55 20.7	+1.3
HNR				*e*Sn	Sn	08 56 27.6	-0.8
HNR	Honiara 29nm,0.3s,baz=37,slow=20,SNR=3.9	6.01	276	Pn	Pn	08 55 20.7	+1.3
HNR	25nm,0.3s,baz=142,slow=18,SNR=2.8			Sn	Sn	08 56 27.5	-0.8
MARNC	Mare, Loyalty	11.51	171	*e*Pn	Pn	08 56 36.5	+1.7
DZM	Mont Dzumac	11.94	178	*e*Pn	Pn	08 56 40.4	-0.3
DZM	Mont Dzumac 1.3nm,0.3s,baz=342,slow=20,SNR=3.1	11.94	178	Pn	Pn	08 56 40.0	-0.7
ONTNC	Ouen Toro	12.17	178	*e*Pn	Pn	08 56 45.3	+1.5
PINNC	Pines Island,	12.54	174	*e*Pn	Pn	08 56 49.7	+0.8
EIDS	Eidsvold 12nm,1.0s	20.79	221	*e*P	P	08 58 30.9	-0.9
CTA	Charters Tower 3.5nm,0.6s,baz=65,slow=14,SNR=3.1	21.50	240	P	P	08 58 39.5	+0.1
H11S2	WAKE ISLAND Hy baz=182	28.39	1	T	T	09 30 03.1	
H11S3	WAKE ISLAND Hy baz=182	28.39	1	T	T	09 29 58.6	
H11S1	WAKE ISLAND Hy baz=182	28.41	1	T	T	09 30 01.5	
H11N1	WAKE ISLAND Hy baz=182	29.61	2	T	T	09 31 32.8	
H11N3	WAKE ISLAND Hy baz=182	29.62	2	T	T	09 31 33.4	
H11N2	WAKE ISLAND Hy baz=182	29.63	2	T	T	09 31 34.4	
URZ	Urewera 11nm,1.0s,baz=341,slow=16,SNR=3.3	29.78	162	P	P	08 59 57.6	+0.4
STKA	Stephens Creek 0.4nm,0.9s	31.33	223	*e*P	P	09 00 09.4	-1.6
STKA	Stephens Creek 0.4nm,0.2s,baz=54,slow=14,SNR=2.2	31.33	223	P	P	09 00 11.8	+0.8
WR1	Warramunga Arr 5.4nm,1.1s	32.07	248	*e*P	P	09 00 17.1	-0.7
WRA	Warramunga Arr 0.3nm,0.6s,baz=81,slow=8.9,SNR=3.4	32.07	248	P	P	09 00 17.1	-0.7
AS31	Alice Springs 0.5nm,0.8s	33.47	242	*e*P	P	09 00 27.9	-2.0
ASAR	Alice Springs 0.7nm,0.8s,baz=67,slow=11,SNR=4.1	33.47	242	P	P	09 00 27.9	-2.0
FITZ	Fitzroy Crossi 4.0nm,1.1s	39.89	254	*e*P	P	09 01 24.8	0.0
FITZ	Fitzroy Crossi 1.3nm,0.7s,baz=74,slow=8.3,SNR=1.9	39.89	254	P	P	09 01 24.8	0.0
CMAR	Chiang Mai Arr 0.8nm,0.3s,baz=116,slow=6.2,SNR=3.7	71.97	293	P	P	09 05 14.4	-0.3
SONA0	Songino Array	78.05	324	*e*P	P	09 05 50.2	+0.9
SONM	Songino Array 1.1nm,0.8s,baz=152,slow=8.5,SNR=5.7	78.05	324	P	P	09 05 50.2	+0.9
GTA	Gaotai	78.58	314	*e*P	P	09 05 58.1	+5.6
GTA				pP	PcP	09 06 03.2	+1.7
GTA				sP	sP	09 06 06.2	+10
GTA	comp=Z,2.0nm,1.2s			pmax	pmax		
P18A	Preston Nutter comp=Z,707nm,1.2s	91.57	50	*e*P	P	09 06 55.4	-2.7
MK32	Makanchi Array	93.00	317	*e*P	P	09 07 05.7	+1.6
MKAR	Makanchi Array comp=Z,0.8nm,1.0s,baz=114,slow=6.5,SNR=2.9	93.00	317	P	P	09 07 05.7	+1.6

ISCJB ***06*** *08:55:46.7±0.3, 11°.11S±0°.05×165°.71E±0°.06, h10^{km}, mb4.4/30, Error ellipse: s-maj=8.7km s-min=6.7km az=0.3*

IDC ***06*** *08:55:46.7±0.6, 11°.05S×165°.75E, h0^{km}, mb4.3/20, mb1 4.5/22, mb1mx4.3/47, mbtmp4.3/22, ML4.9/2, Error ellipse: s-maj=18.2km s-min=14.4km az=115.0*

NEIC ***06*** *08:55:48.3±0.2, 11°.04S×165°.75E, h10^{km}, mb4.7/16, Error ellipse: s-maj=6.4km s-min=5.1km az=99.0*

ISC 06 08:55:48.2±0.5,11°.11S±0°.07×165°.81E±0°.09,h10^{km},n56, σ1s.25/61,mb4.5/30,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.00	286	*e*Pn	Pn	08 57 17.9	+0.8
HNR				*e*Pn	Pn	08 57 18.8	+1.7
HNR	Honiara 47nm,0.3s,baz=170,slow=5.3,SNR=4.1	6.00	286	Pn	Pn	08 57 17.9	+0.8
MARNC	Mare, Loyalty	10.53	169	*e*Pn	Pn	08 58 21.1	+1.9
DZM	Mont Dzumac 4.6nm,0.3s,baz=308,slow=20,SNR=12	10.92	177	Pn	Pn	08 58 25.7	+1.1
DZM	0.5nm,0.3s,baz=58,slow=19,SNR=2.1			Sn	Sn	09 00 23.1	-3.9
ONTNC	Ouen Toro	11.15	177	*e*Pn	Pn	08 58 30.2	+2.5
PINNC	Pines Island,	11.54	172	*e*Pn	Pn	08 58 35.4	+2.2
EIDS	Eidsvold 23nm,1.0s	19.89	223	*e*P	P	09 00 20.3	+0.4
MANU	Manus Island 66nm,0.8s	20.40	295	*e*P	Pn	09 00 26.4	-1.1
CTA	Charters Tower 20nm,1.0s,baz=70,slow=13,SNR=6.6	20.82	242	P	Pn	09 00 31.3	-1.3
CTAO	Charters Tower 39nm,1.1s	20.82	242	*e*P	P	09 00 30.1	0.0
COEN	Coen 41nm,1.1s	22.27	260	*e*P	P	09 00 46.0	+0.3
ARMA	Armidale 18nm,0.9s	23.30	212	*e*P	P	09 00 56.2	-0.2
URZ	Urewera 2.6nm,0.5s,baz=270,slow=8.1,SNR=3.9	28.87	161	P	P	09 01 48.3	+1.3
STKA	Stephens Creek 1.9nm,0.8s	30.44	224	*e*P	P	09 02 00.9	-0.1
STKA	Stephens Creek 7.4nm,0.8s,baz=30,slow=9.3,SNR=13	30.44	224	P	P	09 02 01.4	+0.4
WRAB	Tennant Creek 21nm,0.9s	31.51	250	*e*P	P	09 02 08.9	-1.7
WB2	Warramunga Arr 24nm,0.9s	31.51	250	*e*P	P	09 02 09.5	-1.1
WR1	Warramunga Arr 27nm,0.9s	31.52	250	*e*P	P	09 02 09.9	-0.8
WRA	Warramunga Arr 20nm,0.9s,baz=80,slow=9.2,SNR=47	31.52	250	P	P	09 02 09.9	-0.9
WRA	1.5nm,0.7s,baz=81,slow=3.1,SNR=9.8			PcP	PcP	09 05 04.0	+0.3
TOO	Toolangi 10nm,1.0s	32.05	211	*e*P	P	09 02 15.3	+0.1
RPZ	Rata Peaks 13nm,0.9s,baz=12,slow=19,SNR=3.8	32.80	173	P	P	09 02 22.1	+0.4
AS31	Alice Springs 1.4nm,0.8s	32.82	243	*e*P	P	09 02 21.1	-1.0
ASAR	Alice Springs 4.1nm,0.7s,baz=74,slow=9.5,SNR=18	32.82	243	P	P	09 02 20.8	-1.4
ASAR	1.7nm,0.7s,baz=68,slow=3.0,SNR=12			PcP	PcP	09 05 07.2	0.0
FITZ	Fitzroy Crossi 10nm,0.9s,baz=93,slow=6.5,SNR=15	39.42	255	P	P	09 03 17.6	-1.0
FITZ	1.7nm,0.7s,baz=120,slow=2.9,SNR=4.5			PcP	PcP	09 05 27.6	+0.7
MJAR	Matsushiro Arr 2.1nm,0.8s,baz=174,slow=9.0,SNR=4.0	54.06	333	P	P	09 05 11.5	-1.5
MAJO	Matsushiro	54.06	333	*e*P	P	09 05 11.5	-1.5
ASAJ	Asahikawa 3.8nm,0.7s,baz=198,slow=9.6,SNR=6.6	58.88	341	P	P	09 05 47.3	+0.2
USRK	Ussuriysk Ar. 1.2nm,0.7s,baz=123,slow=7.3,SNR=4.5	63.03	333	P	P	09 06 15.6	+0.2
CASY	Casey 12nm,1.0s	66.34	201	*e*P	P	09 06 36.7	0.0
KLR	Kul'dur 1.0nm,0.7s,baz=131,slow=11,SNR=3.5	67.14	337	P	P	09 06 42.1	0.0
SKNT	Sakolnakorn 4.1nm,0.9s	67.17	294	P	P	09 06 44.5	+1.6
PSI	Prapat 4.6nm,0.7s,baz=180,slow=14,SNR=5.3	67.94	278	P	P	09 06 46.9	-1.2
NONG	Nongkai	68.30	295	P	P	09 06 53.6	+3.6
PBKT	Sadao Pong	69.76	292	P	P	09 07 01.5	+2.4
CM01	Chiang Mai Arr	72.17	294	*e*P	P	09 07 14.3	+0.5
CMAR	Chiang Mai Arr 1.7nm,0.5s,baz=117,slow=4.9,SNR=9.1	72.19	294	P	P	09 07 14.5	+0.6
SONA0	Songino Array	78.75	324	*e*P	P	09 07 51.7	+0.5
SONM	Songino Array 0.5nm,0.7s,baz=132,slow=5.0,SNR=3.5	78.75	324	P	P	09 07 51.7	+0.5
HDA	Harding Lake 7.8nm,0.9s	83.28	19	*e*P	P	09 08 14.8	+0.1
ILAR	Eielson Array 1.6nm,0.5s,baz=230,slow=5.2,SNR=18	83.56	18	P	P	09 08 15.8	-0.4
ILB	Eielson Array 1.9nm,0.6s	83.56	18	*e*P	P	09 08 16.6	+0.4
NV01	Mina Array Sit	86.02	50	*e*P	P	09 08 29.6	+0.1
NVAR	Mina Array Bea 0.4nm,0.6s,baz=233,slow=7.2,SNR=3.6	86.02	50	P	P	09 08 29.6	+0.1
U15A	North Rim 4.3nm,0.8s	90.09	53	*e*P	P	09 08 49.9	+0.8
PDAR	Pinedale Array 0.4nm,0.9s,baz=255,slow=3.5,SNR=3.0	93.55	47	P	P	09 09 05.2	+0.3
MK32	Makanchi Array	93.61	317	*e*P	P	09 09 04.0	-0.8
MKAR	Makanchi Array 0.9nm,0.8s,baz=91,slow=6.8,SNR=5.3	93.61	317	P	P	09 09 04.0	-0.8
YKA	Yellowknife Ar 0.3nm,0.6s,baz=255,slow=5.0,SNR=3.8	95.00	27	P	P	09 09 09.1	-1.7
YKB5	Yellowknife Ar	95.00	27	*e*P	P	09 09 09.1	-1.6
LTX	Lajitas	95.81	61	*e*P	P	09 09 15.9	+0.6
TXAR	Lajitas Array 0.1nm,0.6s,baz=254,slow=6.5,SNR=2.7	95.81	61	P	P	09 09 15.9	+0.6
ARA0	ARCESS Array S	116.41	345	*e*PKPdf	PKiKP	09 14 31.3	-0.4
ARCES	ARCESS Array B 2.1nm,0.9s,baz=75,slow=1.4,SNR=4.0	116.41	345	PKP	PKiKP	09 14 31.3	-0.4
BOSA	Boshof 1.7nm,0.6s,baz=160,slow=5.1,SNR=4.1	125.11	223	PKP	PKPdf	09 14 49.8	0.0
TORD	Torodi Ar. Bea 0.3nm,0.6s,baz=30,slow=1.6,SNR=3.3	164.34	279	PKP	PKPdf	09 15 52.8	-0.3
TORD	1.0nm,1.0s,baz=88,slow=2.2,SNR=3.6			PKPab	PKPab	09 16 45.7	-1.7
TOA1	Torodi Ar. Sit	164.34	279	*e*PKPdf	PKPdf	09 15 52.8	-0.3
TOA1				*e*PKPab	PKPab	09 16 45.7	-1.7

IDC ***06*** *08:59:06.8±1.1, 10°.86S×164°.68E, h0^{km}, mb3.9/6, mb1 4.2/8, mb1mx3.8/49, mbtmp3.9/8, ML3.6/2, Error ellipse: s-maj=45.1km s-min=22.3km az=140.0*

ISCJB ***06*** *08:59:09.6±0.8, 11°.1S±0°.1×164°.7E±0°.1, h29^{km}, mb3.9/6, Error ellipse: s-maj=22.1km s-min=15.9km az=35.4*

ISC 06 08:59:11.2±0.9,11°.0S±0°.1×164°.7E±0°.2,h29^{km},n12, σ0s.54/9,mb3.8/6,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.6nm,0.3s,baz=342,slow=19,SNR=3.4	11.19	171	Pn	Pn	09 01 49.4	+0.1
CTA	Charters Tower 0.1nm,0.3s,baz=82,slow=18,SNR=4.7	19.91	241	P	Pn	09 03 42.2	-0.2
H11S2	WAKE ISLAND Hy baz=186	29.33	4	T	T	09 34 44.9	
H11S3	WAKE ISLAND Hy baz=186	29.33	4	T	T	09 34 39.8	
H11S1	WAKE ISLAND Hy baz=186	29.34	4	T	T	09 34 53.1	
WRA	Warramunga Arr 0.5nm,0.8s,baz=80,slow=9.8,SNR=3.6	30.52	249	P	P	09 05 22.1	0.0
ASAR	Alice Springs 1.1nm,0.7s,baz=62,slow=10,SNR=5.9	31.89	243	P	P	09 05 34.1	-0.1
ILAR	Eielson Array 0.9nm,0.8s,baz=228,slow=5.0,SNR=6.0	83.77	19	P	P	09 11 36.9	-0.4
NVAR	Mina Array Bea 0.5nm,0.9s,baz=278,slow=3.6,SNR=3.7	86.78	50	P	P	09 11 53.8	+0.5
MKAR	Makanchi Array 22nm,1.0s	92.73	317	*e*P	P	09 12 21.5	+0.8
MKAR	Makanchi Array 1.5nm,0.4s,baz=98,slow=6.8,SNR=38	92.73	317	P	P	09 12 21.0	+0.3
PDAR	Pinedale Array 0.2nm,0.6s,baz=241,slow=5.0,SNR=2.6	94.27	47	P	P	09 12 27.5	-0.7

ISCJB ***06*** *09:00:09.2±0.3, 24°.43N±0°.01×122°.04E±0°.01, h3^{km}±2^{km}, Error ellipse: s-maj=2.2km s-min=1.9km az=160.0*

JMA ***06*** *09:00:09.7±0.1, 24°.40N×121°.96E, h16^{km}±5^{km}, M3.8*

TAP ***06*** *09:00:09.7, 24°.44N×121°.98E, h14^{km}, ML4.2, B*

ASIES ***06*** *09:00:10.3, 24°.40N×121°.89E, h20^{km}, MW3.4*

BJI ***06*** *09:00:19.9, 25°.05N×121°.27E, h15^{km}, ML3.9/4, Ms3.9/1, Ms7 3.9/1*

ISC 06 09:00:09.7±0.8,24°.45N±0°.02×122°.00E±0°.02,h16^{km}±5^{km}, n120,σ1s.01/185,25C-21D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1 baz=45	0.15	49	⇓P	Pb	09 00 14.4	+0.3
EOS1	baz=45			S	Sg	09 00 17.9	+1.5
TWC	Suao baz=326	0.21	318	⇑*i*P	Pg	09 00 14.4	-0.2
TWC	baz=326			*i* S	Sg	09 00 17.4	-0.6
ENA	Nanau baz=272	0.24	265	⇓*i*P	Pg	09 00 14.6	-0.4
ENA	baz=272			S	Sg	09 00 17.5	-1.3
ILA	Ilan baz=320	0.39	324	⇑*i*P	Pb	09 00 18.1	-0.1
ILA	baz=320			*i* S	Sb	09 00 24.6	+0.6
EGS	baz=348	0.40	351	⇑*i*P	Pb	09 00 18.2	-0.1
EGS	baz=348			*e*S	Sg	09 00 23.0	-0.3
TWE	Neicheng baz=319	0.41	311	⇑*i*P	Pg	09 00 18.0	0.0
TWE	baz=319			S	Sg	09 00 23.1	-0.5
NTC	Toucheng baz=348	0.43	339	P	Pg	09 00 18.5	+0.1
ENTT	Nioudou baz=297	0.44	295	⇑*i*P	Pg	09 00 18.6	0.0
ENTT	baz=297			S	Sg	09 00 24.1	-0.6

NACB	Ninganchiao baz=233	0.46	234	⇓P	Pg	09 00 18.5	-0.5
NACB	baz=233			S	Sg	09 00 24.7	-0.5
NDT	Datong Townshi baz=290	0.47	289	⇑iP	Pb	09 00 19.2	-0.3
NDT	baz=290			S	Sg	09 00 25.0	-0.5
ETLH	Xiulin Townshi baz=251	0.53	243	⇓P	Pg	09 00 19.8	-0.5
ETLH	baz=251			eS	Sg	09 00 27.2	-0.3
TIPB	Shuangxi baz=344	0.54	343	⇑iP	Pb	09 00 20.8	-0.1
TIPB	baz=344			S	Sg	09 00 27.7	-0.1
TWB1	Santiao Chiao baz=353	0.56	359	⇑P	Pg	09 00 20.9	+0.2
TWB1	baz=353			eS	Sg	09 00 28.0	-0.1
NWLT	Wulai baz=299	0.56	306	⇑iP	Pb	09 00 20.9	-0.2
NWLT	baz=299			eS	Sb	09 00 28.3	-0.6
NNSB	Datong baz=269	0.57	268	⇓P	Pg	09 00 20.6	-0.3
NNSB	baz=269			S	Sg	09 00 27.4	-1.1
NNS	Nan Shan baz=270	0.57	269	⇓iP	Pg	09 00 20.8	-0.3
NNS	baz=270			i S	Sg	09 00 27.7	-1.1
HWA	Hwalien baz=223	0.59	218	eP	Pb	09 00 21.9	+0.2
YHNB	Yeheng baz=297	0.61	291	⇑P	Pb	09 00 21.9	-0.1
YHNB	baz=297			S	Sg	09 00 29.1	-0.9
NSK	Sanguang baz=297	0.63	291	⇑iP	Pb	09 00 22.1	-0.1
NSK	baz=297			S	Sg	09 00 29.4	-1.1
NWF	Wu-fen Shan baz=332	0.65	342	⇑iP	Pb	09 00 23.1	+0.4
NWF	baz=332			i S	Sb	09 00 31.7	+0.2
WFSB	Wu-fen Shan baz=332	0.65	342	⇑P	Pb	09 00 23.2	+0.6
WFSB	baz=332			S	Sb	09 00 31.8	+0.3
TWA	Mucha baz=326	0.65	324	⇑iP	Pb	09 00 23.0	+0.3
TWA	baz=326			S	Sb	09 00 32.0	+0.5
ENLB	Shoufeng baz=222	0.66	214	P	Pb	09 00 23.7	+1.0
NHDH	Xindian Distri baz=309	0.67	320	eP	Pb	09 00 23.4	+0.5
TATO	Taipei baz=309	0.70	318	⇑P	Pb	09 00 24.1	+0.6
TATO	baz=309			S	Sg	09 00 32.4	-0.4
WHF	Hehuan Shan baz=256	0.74	246	⇓iP	Pg	09 00 23.6	-0.6
WHF	baz=256			S	Sb	09 00 34.0	-0.3
TWT	Tachien baz=256	0.78	256	⇓iP	Pb	09 00 24.9	0.0
TWT	baz=256			eS	Sg	09 00 34.7	-0.6
WLTB	Daxi baz=301	0.79	301	P	Pn	09 00 26.3	+0.1
WLTB	baz=301			eS	Sn	09 00 36.8	-0.8
TDCB	Techi baz=256	0.80	256	⇓P	Pb	09 00 25.1	-0.1
TDCB	baz=256			S	Sg	09 00 34.4	-1.4
YM01	YM01 baz=339	0.80	330	⇑P	Pn	09 00 26.1	-0.1
YM01	baz=339			S	Sn	09 00 38.0	+0.2
YM11	YM11 baz=332	0.81	331	⇑P	Pn	09 00 26.3	-0.2
YM11	baz=332			eS	Sn	09 00 38.2	-0.1
YM05	YM05 baz=331	0.81	331	⇑P	Pb	09 00 26.3	+0.8
YM05	baz=331			eS	Sb	09 00 37.6	+1.3
YM04	YM04 baz=337	0.82	329	⇑P	Pn	09 00 26.4	-0.2
YM04	baz=337			eS	Sn	09 00 38.6	+0.3
ESL	Shilin baz=225	0.82	220	⇓P	Pg	09 00 24.9	-0.7
YM08	YM08 baz=334	0.82	333	⇑P	Pb	09 00 26.2	+0.6
YM08	baz=334			S	Sn	09 00 38.2	-0.3
TWS1	Kuangyinshan baz=314	0.84	321	eP	Pn	09 00 27.1	+0.4
TWS1	baz=314			eS	Sn	09 00 39.3	+0.6
CHGB	Renai baz=252	0.85	243	⇓P	Pg	09 00 26.0	-0.3
CHGB	baz=252			S	Sg	09 00 36.9	-0.6
JYNG	Yonagunijimaku	0.86	90	P	Pg	09 00 26.5	+0.1
JYNG				S	Sg	09 00 38.4	+0.7
NTST	Danshui baz=325	0.87	325	eP	Pn	09 00 27.4	+0.2
NTST	baz=325			eS	Sn	09 00 40.9	+1.4
TWY	Chenhua baz=337	0.90	336	⇑P	Pn	09 00 27.8	+0.2
TWY	baz=337			eS	Sn	09 00 41.2	+0.9
OWD	Renai baz=233	0.90	237	⇓P	Pg	09 00 26.7	-0.5
NCU	National Centr baz=306	0.91	305	P	Pn	09 00 28.4	+0.7
NCU	baz=306			eS	Sn	09 00 42.2	+1.8
NCUH	Zhongli baz=305	0.91	305	⇑P	Pn	09 00 28.6	+0.9
NCUH	baz=305			eS	Sn	09 00 41.6	+1.2
YOJ	Yonaguni jima baz=77	0.92	89	⇓P	Pg	09 00 27.3	-0.2
YOJ	baz=77			eS	Sg	09 00 38.8	-0.8
YOJ	Yonaguni jima	0.92	89	P	Pg	09 00 27.5	0.0
YOJ				S	Sg	09 00 39.7	+0.1
LIOB	Emei baz=283	0.92	282	⇑P	Pb	09 00 27.7	+0.5
LIOB	baz=283			S	Sg	09 00 38.9	-0.8
NSTT	Nanjuang baz=282	0.93	281	⇑iP	Pn	09 00 28.2	+0.1
NSTT	baz=282			S	Sg	09 00 39.1	-0.8
EGFH	Guangfu baz=225	0.94	214	⇓eP	Pg	09 00 27.3	-0.6
WHP	Taichung City baz=261	0.98	260	⇓iP	Pn	09 00 28.9	+0.1
WHP	baz=261			S	Sb	09 00 40.8	-0.2
SBCB	Hsinchu baz=285	0.99	290	P	Pn	09 00 30.1	+1.3
SBCB	baz=285			eS	Sn	09 00 42.7	+0.3
HSN	Hsinchu baz=289	1.00	291	eP	Pn	09 00 29.9	+0.8
HSN	baz=289			eS	Sn	09 00 43.0	+0.2
VWDT	VWDT baz=234	1.05	229	⇓P	Pb	09 00 29.1	-0.3
VWDT	baz=234			eS	Sn	09 00 44.7	+0.8
HGSD	Ruisui baz=209	1.09	209	⇓P	Pn	09 00 31.0	+0.8
HGSD	baz=209			eS	Sn	09 00 47.9	+2.9
NMLH	Miaoli baz=275	1.11	275	eP	Pn	09 00 31.9	+1.5
TWQ1	Liyutan baz=266	1.13	265	⇑eP	Pn	09 00 31.8	+1.1
TWQ1	baz=266			S	Sn	09 00 45.8	0.0
NSY	Sanyi baz=269	1.13	269	eP	Pg	09 00 31.8	+0.2
SMLT	Sun Moon Lake baz=248	1.16	241	⇓iP	Pn	09 00 31.6	+0.4
SMLT	baz=248			eS	Sn	09 00 46.9	+0.2
SSLB	Suanglung baz=243	1.16	236	⇓P	Pb	09 00 31.3	-0.1
SSLB	baz=243			S	Sb	09 00 45.1	-1.2
PCYT	Pengchaiyu baz=4.0	1.18	3	eP	Pg	09 00 32.8	+0.4
TYC	Yuchr baz=243	1.18	243	⇓iP	Pb	09 00 31.6	0.0
PTSB	Yuanli baz=271	1.18	270	eP	Pg	09 00 33.2	+0.7
PTSB	baz=271			eS	Sn	09 00 48.4	+1.2
YULB	Yu-li baz=223	1.24	212	eP	Pn	09 00 32.1	-0.1
YULB	baz=223			eS	Sg	09 00 50.5	+0.8
WDJ	Dajia District baz=266	1.25	266	eP	Pg	09 00 33.9	+0.2
WDJ	baz=266			eS	Sg	09 00 50.7	+0.7
TCU	Taichung baz=264	1.25	256	eP	Pg	09 00 34.5	+0.7
TCU	baz=264			eS	Sg	09 00 51.4	+1.4
TWF1	Yuli baz=225	1.27	211	eP	Pn	09 00 32.6	-0.1
WHYT	Xinyi Township baz=235	1.29	235	eP	Pb	09 00 34.0	+0.4
WJS	Zhushan baz=235	1.32	242	eP	Pg	09 00 35.3	+0.2
WNT	Mingjian baz=260	1.33	245	eP	Pg	09 00 35.9	+0.5
WNT	baz=260			eS	Sg	09 00 54.5	+1.7
WCHH	Zhanghua baz=255	1.37	255	eP	Pg	09 00 36.5	+0.4
CHKT	Chengkung baz=184	1.47	204	eP	Pn	09 00 34.8	-0.6
CHN5	Tsauling baz=238	1.48	235	P	Pg	09 00 38.1	-0.1
CHN5	baz=238			eS	Sg	09 01 00.6	+3.1
WGK	Gukeng baz=241	1.52	240	eP	Pg	09 00 38.9	0.0
WDLH	Douliu baz=242	1.54	241	eP	Pg	09 00 39.3	0.0
ELDTW	Lidau baz=215	1.55	216	eP	Pn	09 00 36.9	+0.3
IRIF	Iriomote-Funau	1.58	94	P	Pn	09 00 36.8	-0.1
IRIF				S	Sn	09 00 56.5	-0.5
RLNB	Erlin baz=264	1.60	250	eP	Pb	09 00 39.3	+0.5
RLNB	baz=264			eS	Sg	09 01 01.0	-0.3
CHN2	Minshiung baz=223	1.67	237	eP	Pg	09 00 41.3	-0.4
WTCT	Ta-ch'eng baz=251	1.68	250	eP	Pb	09 00 40.7	+0.6
HATJ	Hateruma jima	1.69	103	P	Pn	09 00 39.5	+1.0
HATJ				eS	Sn	09 01 00.3	+0.5
CHN4	Tsaushan baz=234	1.69	230	P	Pg	09 00 41.3	-0.9
CHN4	baz=234			eS	Sg	09 01 05.8	+1.6
TPUB	Ta-pu baz=231	1.70	228	⇓P	Pb	09 00 40.6	+0.1
TPUB	baz=231			eS	Sg	09 01 05.2	+0.7
STYT	Tauyuan baz=222	1.72	222	eP	Pb	09 00 40.5	-0.4
CHY	Chiayi baz=224	1.73	237	eP	Pb	09 00 41.6	+0.6
WTP	Ta-pu baz=228	1.75	227	eP	Pb	09 00 42.0	+0.7
WSF	Szhu baz=246	1.82	244	eP	Pb	09 00 42.9	+0.4
TWK	Hsinying baz=232	1.82	230	eP	Pb	09 00 42.9	+0.3
TWG	Pinlang baz=192	1.83	208	eP	Pn	09 00 40.4	-0.1
TWGBT	Beinan baz=192	1.83	208	eP	Pn	09 00 39.6	-0.8
WLGB	Puzi baz=240	1.83	238	eP	Pb	09 00 43.7	+0.9
JKRS	Kuro-shima	1.84	96	P	Pn	09 00 41.2	+0.6
JKRS				S	Sn	09 01 03.8	+0.3
SNST	Tainan City baz=231	1.84	229	eP	Pb	09 00 44.0	+1.0
CHN1	Nanshi baz=229	1.85	227	eP	Pb	09 00 43.6	+0.6
SLGT	Liugui baz=222	1.91	221	eP	Pb	09 00 44.5	+0.4
JIJ	Ishigaki jima	1.95	92	P	Pn	09 00 42.5	+0.4
JIJ				S	Sn	09 01 05.1	-1.1
JISG	Ishigakijimahi	2.11	86	P	Pn	09 00 44.2	0.0
JISG				S	Sn	09 01 09.7	-0.3
SSD	Sandimen baz=230	2.11	217	eP	Pb	09 00 47.0	-0.6
TWM1	Shoushan baz=223	2.17	222	eP	Pb	09 00 48.5	-0.1
MASBT	Mashibuluo baz=215	2.22	215	eP	Pb	09 00 48.6	-0.8
PTTC	Pingtan baz=297	2.28	298	eP	Pn	09 00 47.4	+0.8
EAST	Anshuo baz=194	2.31	208	eP	Pn	09 00 48.0	+0.9
SSPT	Xinbi baz=197	2.36	214	eP	Pb	09 00 51.4	-0.3
VWUC	VWUC baz=284	2.38	284	eP	Pn	09 00 48.5	+0.5
PNG	Penghu baz=252	2.41	249	eP	Pn	09 00 49.5	+1.2
PHUB	P'eng-hu baz=251	2.41	248	eP	Pn	09 00 49.7	+1.3
SCZT	Fangliau baz=196	2.43	212	eP	Pb	09 00 52.4	-0.6
LAY	Lan-yu baz=188	2.44	190	eP	Pn	09 00 47.8	-1.0
WDGT	Dungji baz=245	2.45	242	eP	Pn	09 00 50.9	+1.9
JTJ	Tarama	2.46	85	P	Pn	09 00 50.2	+1.1
JTJ				eS	Sn	09 01 19.7	+0.8
MATB	Ma-tsu baz=311	2.52	313	eP	Pn	09 00 50.1	+0.3
VCHM	Qimei baz=247	2.66	243	eP	Pn	09 00 53.6	+1.8
PTMZ	Houxiangcun baz=283	2.69	283	eP	Pn	09 00 53.0	+0.8
TWK1	Hengchun baz=190	2.73	204	eP	Pn	09 00 52.8	+0.1
TWKBT	Hengchun baz=190	2.73	204	eP	Pn	09 00 53.0	+0.2
LYJJ	Jianjiangzhen baz=315	2.91	316	eP	Pn	09 00 55.4	+0.1
XPSS	Dashiqiu baz=325	2.96	327	eP	Pn	09 00 56.6	+0.7
MHZQ	Yeshan baz=301	3.15	302	eP	Pn	09 00 59.0	+0.5
KNM	Kinmen baz=270	3.25	270	eP	Pn	09 01 03.4	+3.4
KNMB	Chin-men Tao baz=271	3.29	271	eP	Pn	09 01 01.1	+0.6
AXDP	Jialang baz=277	3.70	278	eP	Pn	09 01 07.5	+1.4
HHC	Hu-ho-hao-te	18.54	334	eP	Pn	09 04 27.5	+1.7
HHC				S	Sn	09 07 44.7	-8.1
HHC	comp=N,32nm,4.8s			LR	LR		
HHC	comp=E,140nm,6.1s			LR	LR		
HHC	comp=Z,180nm,6.1s			LR	LR		

IDC ***06*** *09:02:19.4±0.6, 1°.02N×126°.06E, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.1/63, mbtmp4.2/18, ML4.2/1, Error ellipse: s-maj=26.6km s-min=14.3km az=80.0*

ISCJB ***06*** *09:02:23.6±0.3, 1°.02N±0°.04×126°.09E±0°.05, h44km, mb4.3/28, Error ellipse: s-maj=8.2km s-min=5.3km az=156.8*

NEIC ***06*** *09:02:24.7±0.8, 0°.99N×126°.09E, h39km±8km, mb4.5/14, Error ellipse: s-maj=7.5km s-min=5.6km az=65.0*

DJA ***06*** *09:02:27.3±1.3, 1°N±9°×12°6E±°, h37km±27km, M4.5/8, mb4.8/2, mB5.2/1, MLv4.3/8, Mw(mB)4.5/1*

ISC 06 09:02:25.4±0.5**, 1°.02N**±0°.07×**126°.18E**±0°.04**, h44km, n65, σ1s.45**/70**, mb4.4**/31**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.21	102	ePn	Pn	09 02 46.2	+0.3
TNTI				eSn	Sn	09 03 04.9	+3.9
TNTI	Ternate	1.21	102	P	Pn	09 02 47.5	+1.6
TNTI				S	Sn	09 03 04.7	+3.6
KMSI	Cibinong	2.25	259	P	Pn	09 03 02.7	+2.6
KMSI				S	Sn	09 03 30.7	+4.1
SANI	Sanana	3.06	184	P	Pn	09 03 12.4	+1.2
LUWI	Luwuk	3.98	239	ePn	Pn	09 03 22.8	-1.1
LUWI	Luwuk	3.98	239	P	Pn	09 03 28.4	+4.5
MRSI	Marisa	4.28	263	P	Pn	09 03 30.9	+2.9
APSI	Ampana	4.92	247	P	Pn	09 03 40.4	+3.5
FAKI	Fak Fak	7.22	123	ePn	Pn	09 04 09.1	+0.7
SAUI	Saumlaki	10.30	150	ePn	Pn	09 04 49.4	-1.3
KKM	Kota Kinabalu	11.13	297	ePn	Pn	09 05 00.2	-1.9
JAGI	Jajag, Banyuwa 30nm,1.1s	15.26	232	ePn	Pn	09 05 56.6	-1.3
KSM	Kuching 12nm,0.7s	15.88	272	ePn	P	09 06 12.4	+3.3
FITZ	Fitzroy Crossi 12nm,1.4s	19.01	182	eP	P	09 06 40.9	-2.6
FITZ	Fitzroy Crossi 0.5nm,0.3s,baz=359,slow=10,SNR=9.3	19.01	182	P	P	09 06 43.2	-0.3
WRAB	Tennant Creek 12nm,0.8s	22.31	159	eP	P	09 07 19.2	-0.1
WR1	Warramunga Arr 56nm,1.6s	22.32	159	eP	P	09 07 19.1	-0.3
WRA	Warramunga Arr 11nm,0.8s,baz=338,slow=11,SNR=46	22.32	159	P	P	09 07 19.1	-0.3
WB2	Warramunga Arr	22.32	159	eP	P	09 07 19.6	+0.1
TPUB	Ta-pu 14nm,0.7s	22.79	347	eP	P	09 07 24.3	-0.1
MBWA	Marble Bar 12nm,1.1s	22.93	196	eP	P	09 07 26.4	+0.5
AS31	Alice Springs 1.9nm,0.8s	25.66	163	eP	P	09 07 51.7	+0.4
AS31				ePcP	PcP	09 11 21.3	+0.1
ASAR	Alice Springs 3.6nm,0.6s,baz=346,slow=12,SNR=34	25.66	163	P	P	09 07 51.9	+0.6
ASAR	0.4nm,0.6s,baz=352,slow=1.9,SNR=3.6			PcP	PcP	09 11 21.3	+0.1
AS01	Alice Springs	25.68	163	eP	P	09 07 50.3	-1.1
KULM	Kulim 25nm,1.3s	25.84	280	eP	P	09 07 51.0	-2.0
PSI	Prapat 5.8nm,0.7s,baz=2.1,slow=3.9,SNR=6.1	27.30	274	P	P	09 08 05.9	-0.4
KS15	Wonju Array Si	36.27	2	eP	P	09 09 25.2	+0.6
KSAR	Wonju Array Be	36.27	2	P	P	09 09 25.2	+0.6
KSRS	Korea Array 0.8nm,0.6s,baz=183,slow=10,SNR=3.3	36.29	2	P	P	09 09 25.2	+0.5
MAJO	Matsushiro	37.06	16	eP	P	09 09 31.0	-0.3
MJAR	Matsushiro Arr 1.3nm,0.6s,baz=188,slow=9.8,SNR=4.5	37.06	16	P	P	09 09 31.0	-0.3
USRK	Ussuriysk Ar. 2.5nm,0.6s,baz=193,slow=6.4,SNR=10	43.30	6	P	P	09 10 23.4	+0.6
RAMN	Ramite	45.91	308	eP	P	09 10 44.5	+0.2
JIRN	Jiri	46.56	308	eP	P	09 10 49.3	-0.2
GUN	Gumba	46.92	308	eP	P	09 10 52.0	-0.3
KLR	Kul'dur 1.6nm,0.7s,baz=199,slow=3.9,SNR=6.4	48.26	5	P	P	09 11 02.7	+0.8
KOLN	Koldanda 13nm,0.7s	48.66	307	eP	P	09 11 05.5	-0.1
DANN	Dangsing 15nm,0.6s	48.78	308	eP	P	09 11 05.6	-1.1
PYUN	Piuthan 21nm,0.8s	49.29	307	eP	P	09 11 10.4	0.0
SONA0	Songino Array	49.69	343	eP	P	09 11 13.6	+0.5
SONA0				ePcP	PcP	09 12 34.1	+0.3
SONM	Songino Array 1.1nm,0.7s,baz=142,slow=6.5,SNR=3.5	49.69	343	P	P	09 11 13.6	+0.5
SONM	0.7nm,0.7s,baz=163,slow=3.8,SNR=4.2			PcP	PcP	09 12 34.1	+0.3
PETK	Petropavlovsk- 1.9nm,0.6s,baz=191,slow=5.9,SNR=3.8	58.13	22	P	P	09 12 16.4	+2.0
PEA1	Petropavlovsk-	58.13	22	eP	P	09 12 16.4	+1.9
MK01	Makanchi Array	59.45	326	eP	P	09 12 20.3	-3.5
MK31	Makanchi Array	59.47	326	eP	P	09 12 21.5	-2.4
MK32	Makanchi Array	59.47	326	eP	P	09 12 24.4	+0.4
MKAR	Makanchi Array 1.6nm,0.4s,baz=121,slow=7.7,SNR=26	59.47	326	P	P	09 12 24.4	+0.4
MAKZ	Makanchi 4.9nm,1.1s	59.66	326	eP	P	09 12 24.0	-1.2
ZALV	Zalesovo Beam	62.75	334	eP	P	09 12 45.2	-0.7
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=134,slow=11,SNR=4.6	62.75	334	P	P	09 12 44.3	-1.6
ZAA1	Zalesovo Array	62.75	334	eP	P	09 12 44.3	-1.7
KURBB	Kurchatov Arra 3.0nm,0.5s,baz=128,slow=6.2,SNR=31	63.73	328	P	P	09 12 52.7	+0.3
KURK	Kurchatov 7.4nm,0.6s	63.73	328	eP	P	09 12 52.4	-0.1
BVAR	Borovoye Array 2.0nm,0.8s,baz=134,slow=8.4,SNR=9.4	69.29	328	P	P	09 13 27.9	-0.2
BRVK	Borovoye 4.4nm,1.0s	69.36	328	eP	P	09 13 29.1	+0.6
NRIK	Noril'sk 2.2nm,0.5s,baz=135,slow=8.4,SNR=3.7	72.92	347	P	P	09 13 49.1	-0.5
ABKAR	Akbulak array	73.90	321	eP	P	09 13 55.8	0.0
AKTO	Aktyubinsk 2.8nm,0.7s,baz=111,slow=5.8,SNR=11	75.44	322	P	P	09 14 04.7	-0.1
ARU	Arti 4.7nm,0.8s	76.92	328	eP	P	09 14 12.4	-0.6
KBZ	Khabaz 1.9nm,0.9s,baz=333,slow=2.8,SNR=3.6	84.44	314	P	P	09 14 54.0	+0.5
ILAR	Eielson Array 0.4nm,0.7s,baz=249,slow=4.4,SNR=4.5	87.77	25	P	P	09 15 09.0	-0.5
ILB	Eielson Array	87.77	25	eP	P	09 15 08.4	-1.0
KBS	Kingsbay 34nm,0.8s	93.55	350	eP	P	09 15 35.1	-1.1
TORD	Torodi Ar. Bea 0.6nm,0.8s,baz=36,slow=4.8,SNR=4.2	123.19	286	PKP	PKiKP	09 21 19.0	+0.4
TOA1	Torodi Ar. Sit	123.20	286	ePKPdf	PKiKP	09 21 19.0	+0.4

IDC ***06*** *09:02:53.1±0.8, 10°.91S×165°.44E, h0km, mb4.2/18, mb1 4.4/20, mb1mx4.2/51, mbtmp4.2/20, ML5.2/2, Error ellipse: s-maj=24.2km s-min=15.8km az=134.0*

NEIC ***06*** *09:02:55.4±0.3, 10°.67S×165°.42E, h10km, mb4.6/12, Error ellipse: s-maj=8.4km s-min=6.7km az=123.0*

ISCJB ***06*** *09:02:56.6±0.3, 10°.78S±0°.05×165°.38E±0°.05, h30km, mb4.3/28, Error ellipse: s-maj=7.5km s-min=6.9km az=159.7*

ISC 06 09:02:58.3±0.5**, 10°.76S**±0°.08×**165°.45E**±0°.07**, h30km, n59, σ1s.17**/58**, mb4.3**/28**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.57	283	ePn	Pn	09 04 17.9	-1.3
HNR				eSn	Sn	09 05 22.9	+0.6
HNR				eSn	Sn	09 05 23.6	+1.3
HNR	Honiara 218nm,0.3s,baz=140,slow=6.3,SNR=24	5.57	283	Pn	Pn	09 04 19.8	+0.6
HNR	117nm,0.3s,baz=196,slow=14,SNR=4.4			Sn	Sn	09 05 22.9	+0.6
MARNC	Mare, Loyalty	10.95	167	ePn	Pn	09 05 34.6	+1.6
DZM	Mont Dzumac	11.29	175	ePn	Pn	09 05 39.2	+1.5
DZM	Mont Dzumac 5.7nm,0.3s,baz=317,slow=15,SNR=20	11.29	175	Pn	Pn	09 05 35.5	-2.2
PINNC	Pines Island,	11.94	171	ePn	Pn	09 05 49.2	+2.6
EIDS	Eidsvold 45nm,1.0s	19.91	221	eP	Pn	09 07 28.6	-0.8
MANU	Manus Island 128nm,1.0s	19.93	295	eP	P	09 07 28.5	+0.6
CTA	Charters Tower 22nm,0.8s,baz=72,slow=11,SNR=18	20.68	241	P	P	09 07 35.9	-0.1
CTAO	Charters Tower 55nm,0.8s	20.68	241	eP	P	09 07 36.9	+0.9
COEN	Coen 28nm,1.1s	21.98	259	eP	P	09 07 50.5	+0.4
ARMA	Armidale 13nm,1.0s	23.41	211	eP	P	09 08 05.6	+0.7
KNTN	Kanton 181nm,1.4s	24.00	72	eP	P	09 08 09.8	-0.9
H11S2	WAKE ISLAND Hy baz=184,slow=76	29.09	2	T	T	09 39 31.6	

H11S3	**WAKE ISLAND Hy**	**29.09**	**2**	T	T	09 39 33.0	
	baz=184,slow=76						
H11S1	**WAKE ISLAND Hy**	**29.11**	**2**	T	T	09 39 32.4	
	baz=184,slow=76						
H11N1	**WAKE ISLAND Hy**	**30.32**	**3**	T	T	09 41 09.8	
	baz=182,slow=76						
H11N3	**WAKE ISLAND Hy**	**30.32**	**3**	T	T	09 41 06.8	
	baz=182,slow=76						
H11N2	**WAKE ISLAND Hy**	**30.33**	**3**	T	T	09 41 10.2	
	baz=182,slow=76						
STKA	**Stephens Creek**	**30.45**	**223**	*e*P	**P**	**09 09 09.1**	**+0.7**
	1.4nm,1.0s						
STKA	**Stephens Creek**	**30.45**	**223**	P	**P**	**09 09 07.0**	**-1.4**
	5.1nm,1.0s,baz=27,slow=10,SNR=6.8						
WRAB	**Tennant Creek**	**31.30**	**249**	*e*P	**P**	**09 09 15.8**	**-0.3**
	6.7nm,0.9s						
WB2	**Warramunga Arr**	**31.30**	**249**	*e*P	**P**	**09 09 16.1**	**+0.1**
WR1	**Warramunga Arr**	**31.31**	**249**	*e*P	**P**	**09 09 14.4**	**-1.7**
	8.4nm,0.9s						
WRA	**Warramunga Arr**	**31.31**	**249**	P	**P**	**09 09 14.4**	**-1.7**
	4.2nm,0.8s,baz=79,slow=9.0,SNR=9.8						
AS01	**Alice Springs**	**32.62**	**243**	*e*P	**P**	**09 09 26.8**	**-0.8**
AS31	**Alice Springs**	**32.66**	**243**	*e*P	**P**	**09 09 25.6**	**-2.5**
	2.6nm,1.1s						
AS31				*e*PcP	**PcP**	**09 12 13.5**	**-0.2**
ASAR	**Alice Springs**	**32.66**	**243**	P	**P**	**09 09 25.9**	**-2.2**
	8.7nm,1.0s,baz=72,slow=9.3,SNR=19						
ASAR				PcP	**PcP**	**09 12 13.5**	**-0.2**
	0.9nm,0.8s,baz=57,slow=3.4,SNR=4.5						
FITZ	**Fitzroy Crossi**	**39.17**	**255**	*e*P	**P**	**09 10 23.9**	**+0.1**
	4.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.17**	**255**	P	**P**	**09 10 20.8**	**-3.0**
	5.4nm,0.8s,baz=135,slow=9.8,SNR=7.6						
FORT	**Forrest**	**39.97**	**234**	*e*P	**P**	**09 10 30.0**	**-0.3**
	40nm,0.9s						
ASAJ	**Asahikawa**	**58.43**	**341**	P	**P**	**09 12 52.0**	**+0.8**
	4.8nm,0.8s,baz=234,slow=11,SNR=5.4						
KSRS	**Korea Array**	**59.48**	**326**	P	**P**	**09 12 59.9**	**+1.3**
	0.7nm,0.6s,baz=156,slow=7.3,SNR=3.5						
KS15	**Wonju Array Si**	**59.49**	**326**	*e*P	**P**	**09 12 59.5**	**+0.8**
KSAR	**Wonju Array Be**	**59.49**	**326**	P	**P**	**09 12 59.9**	**+1.2**
USRK	**Ussuriysk Ar.**	**62.56**	**333**	P	**P**	**09 13 20.8**	**+1.4**
	1.8nm,0.8s,baz=128,slow=5.4,SNR=4.8						
KLR	**Kul'dur**	**66.68**	**337**	P	**P**	**09 13 46.6**	**+0.4**
	1.4nm,0.7s,baz=31,slow=1.1,SNR=5.2						
CM31	**Chiang Mai Arr**	**71.73**	**294**	*e*P	**P**	**09 14 17.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**71.73**	**294**	P	**P**	**09 14 17.9**	**-0.3**
	1.0nm,0.3s,baz=110,slow=4.1,SNR=5.1						
ULN	**Ulaanbaatar**	**77.90**	**324**	*e*P	**P**	**09 14 54.7**	**+1.2**
	4.5nm,1.0s						
SONA0	**Songino Array**	**78.26**	**324**	*e*P	**P**	**09 14 55.0**	**-0.5**
SONM	**Songino Array**	**78.26**	**324**	P	**P**	**09 14 55.0**	**-0.5**
	1.5nm,1.0s,baz=130,slow=5.4,SNR=5.7						
BILL	**Bilibino**	**78.60**	**0**	*e*P	**P**	**09 14 57.4**	**+0.8**
	11nm,1.2s						
QSPA	**South Pole Qui**	**79.24**	**180**	*e*P	**P**	**09 15 01.7**	**+1.1**
	14nm,1.4s						
ILAR	**Eielson Array**	**83.34**	**19**	P	**P**	**09 15 22.4**	**+0.3**
	0.6nm,0.6s,baz=236,slow=4.8,SNR=9.6						
ILB	**Eielson Array**	**83.34**	**19**	*e*P	**P**	**09 15 22.3**	**+0.3**
BEKR	**Beckworth**	**84.98**	**48**	*e*P	**P**	**09 15 29.6**	**-1.6**
	5.8nm,0.6s						
NV01	**Mina Array Sit**	**86.06**	**50**	*e*P	**P**	**09 15 36.2**	**-0.5**
NVAR	**Mina Array Bea**	**86.06**	**50**	P	**P**	**09 15 37.5**	**+0.8**
	0.4nm,0.6s,baz=245,slow=7.8,SNR=4.8						
MK32	**Makanchi Array**	**93.11**	**317**	*e*P	**P**	**09 16 09.3**	**-0.1**
MKAR	**Makanchi Array**	**93.11**	**317**	P	**P**	**09 16 09.3**	**-0.1**
	0.7nm,0.9s,baz=100,slow=5.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**93.15**	**324**	P	**P**	**09 16 09.4**	**0.0**
	0.6nm,0.6s,baz=100,slow=6.0,SNR=3.4						
ZAA1	**Zalesovo Array**	**93.16**	**324**	*e*P	**P**	**09 16 09.4**	**0.0**
PD31	**Pinedale Array**	**93.58**	**47**	*e*P	**P**	**09 16 09.8**	**-2.2**
PDAR	**Pinedale Array**	**93.58**	**47**	P	**P**	**09 16 10.9**	**-1.1**
	0.3nm,0.6s,baz=239,slow=3.0,SNR=2.4						
YKA	**Yellowknife Ar**	**94.86**	**27**	P	**P**	**09 16 16.0**	**-1.1**
	0.2nm,0.6s,baz=257,slow=4.9,SNR=2.9						
YKB5	**Yellowknife Ar**	**94.86**	**27**	*e*P	**P**	**09 16 16.2**	**-0.8**
LTX	**Lajitas**	**95.95**	**61**	*e*P	**P**	**09 16 23.2**	**+0.2**
TXAR	**Lajitas Array**	**95.95**	**61**	P	**P**	**09 16 23.2**	**+0.2**
	0.1nm,0.8s,baz=247,slow=4.6,SNR=2.5						

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*ISCJB **06** 09:03:18.8±0.5, 39°.69N±0°.02×25°.60E±0°.02, h5^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.8km az=34.9*
*ATH **06** 09:03:18.3, 39°.69N×25°.61E, h27^{km}±1^{km}, ML2.2/6, Error ellipse: s-maj=3.1km s-min=0.9km az=235.0*
*ISK **06** 09:03:18.4, 39°.69N×25°.61E, h5^{km}, ML2.3/12*
*DDA **06** 09:03:19.6, 39°.75N×25°.70E, h7^{km}±4^{km}, ML2.8*
*THE **06** 09:03:19.3, 39°.70N×25°.63E, h11^{km}, ML2.1/10, Error ellipse: s-maj=1.0km s-min=0.5km az=76.0*
ISC 06 09:03:18.0±1.2**, 39°.68N**±0°.02×**25°.60E**±0°.02**, h5**^{km}±10^{km}**, n45,** σ**0^{s}.49**/69**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.38**	**65**	PG	**Pb**	**09 03 26.4**	**-0.9**
BOZC	**Bozcaada**	**0.38**	**65**	*i* P	**Pb**	**09 03 26.4**	**-0.9**
BOZC				*i* S	**Sg**	**09 03 29.9**	**-0.5**
BOZC				IAML_P			
	comp=Z,4μm,0.2s						
LIA	**Limnos Island**	**0.39**	**304**	P	**Pb**	**09 03 27.2**	**-0.3**
LIA				AML	AML	09 03 33.0	
	comp=N,773μm,0.3s						
LIA				S	**Sb**	**09 03 33.2**	**-0.6**
LIA				AML	AML	09 03 33.6	
	comp=E,790μm,0.2s						
LIA	**Limnos Island**	**0.39**	**304**	P	**Pb**	**09 03 27.0**	**-0.4**
LIA				S	**Sb**	**09 03 32.9**	**-0.8**
SIGR	**SIGRI**	**0.51**	**157**	PG	**Pb**	**09 03 28.8**	**-0.6**
SIGR				SG	**Sb**	**09 03 36.6**	**-0.5**
SIGR	**SIGRI**	**0.51**	**157**	P	**Pb**	**09 03 28.9**	**-0.6**
SIGR				S	**Sb**	**09 03 36.7**	**-0.4**
SIGR				AML	AML	09 03 37.5	
	comp=E,789μm,0.4s						
SIGR				AML	AML	09 03 37.7	
	comp=N,985μm,0.6s						
SIGR	**SIGRI**	**0.51**	**157**	P	**Pb**	**09 03 28.8**	**-0.6**
SIGR				S	**Sb**	**09 03 36.6**	**-0.5**
GADA	**Gvkgeada**	**0.56**	**24**	PG	**Pb**	**09 03 29.5**	**-0.8**
GADA	**Gvkgeada**	**0.56**	**24**	P	**Pb**	**09 03 29.4**	**-0.8**
GADA				S	**Sb**	**09 03 37.4**	**-1.2**
PRK	**Paraskevi**	**0.68**	**130**	P	**Pb**	**09 03 32.8**	**+0.5**
PRK				S	**Sb**	**09 03 42.1**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.73**	**85**	*i* P	**Pb**	**09 03 33.3**	**+0.1**
BAYC				*i* S	**Sb**	**09 03 43.7**	**+0.2**
BAYC				IAML_P			
	comp=Z,2μm,0.1s						
SMTH	**Samothraki Isl**	**0.79**	**356**	P	**Pb**	**09 03 34.2**	**-0.1**
SMTH				S	**Sb**	**09 03 45.2**	**-0.1**
AYVA	**Ayvalik**	**0.92**	**114**	*i* P	**Pn**	**09 03 37.4**	**-0.2**
AYVA				*i* S	**Sn**	**09 03 51.8**	**+0.6**
AYVA				IAML_P			
	comp=Z,857nm,0.1s						
GELI	**Tayfur-Gelibol**	**0.98**	**43**	PG	**Pb**	**09 03 37.1**	**-0.4**
GELI				SG	**Sb**	**09 03 51.2**	**+0.5**
LPK	**Lapseki**	**1.12**	**52**	PN	**Pg**	**09 03 39.7**	**+0.1**
ENEZ	**Enez**	**1.13**	**22**	PN	**Pn**	**09 03 40.5**	**-0.1**
SKY	**Skiros Island**	**1.15**	**226**	P	**Pn**	**09 03 40.7**	**0.0**
THAS	**Thassos island**	**1.15**	**324**	P	**Pg**	**09 03 40.1**	**+0.1**
THAS				S	**Sg**	**09 03 55.1**	**+0.3**
THAS				AML	AML	09 03 57.4	
	comp=N,171μm,0.4s						
THAS				AML	AML	09 04 03.7	
	comp=E,182μm,0.3s						
THAS	**Thassos island**	**1.15**	**324**	P	**Pb**	**09 03 40.4**	**+0.1**
THAS				S	**Sb**	**09 03 55.9**	**+0.4**
ERIK	**Erikli-Kesan**	**1.21**	**35**	PN	**Pn**	**09 03 42.4**	**+0.8**
ALN	**Alexandroupoli**	**1.26**	**15**	PN	**Pn**	**09 03 42.5**	**+0.2**
ALN	**Alexandroupoli**	**1.26**	**15**	P	**Pg**	**09 03 42.0**	**-0.2**
ALN				AML	AML	09 04 05.6	
	comp=E,69μm,0.8s						
ALN				AML	AML	09 04 08.4	
	comp=N,71μm,0.9s						
ALN	**Alexandroupoli**	**1.26**	**15**	P	**Pg**	**09 03 42.0**	**-0.2**
ALN				S	**Sg**	**09 03 58.3**	**-0.2**
CHOS	**Chios island**	**1.34**	**165**	P	**Pn**	**09 03 43.4**	**-0.1**
CHOS				S	**Sg**	**09 04 00.9**	**-0.2**
CHOS				AML	AML	09 04 06.8	
	comp=E,278μm,0.3s						
CHOS				AML	AML	09 04 08.1	
	comp=N,176μm,0.5s						
CHOS	**Chios island**	**1.34**	**165**	P	**Pn**	**09 03 43.2**	**-0.3**
CHOS				S	**Sn**	**09 04 01.8**	**+0.1**
OUR	**Ouranopolis**	**1.41**	**298**	PN	**Pg**	**09 03 45.1**	**+0.1**
OUR	**Ouranopolis**	**1.41**	**298**	P	**Pn**	**09 03 44.1**	**-0.2**
OUR				AML	AML	09 04 11.4	
	comp=N,242μm,0.6s						
OUR				AML	AML	09 04 14.3	
	comp=E,132μm,0.6s						
OUR	**Ouranopolis**	**1.41**	**298**	P	**Pn**	**09 03 44.3**	**0.0**
OUR				S	**Sn**	**09 04 03.5**	**+0.3**
KESN	**Edirne-Kesan**	**1.41**	**35**	*i* P	**Pg**	**09 03 45.2**	**+0.2**
KESN				*i* S	**Sn**	**09 04 04.6**	**+0.7**
KESN				IAML_P			
	comp=Z,157nm,0.2s						
AOS	**Alonnisos**	**1.43**	**250**	P	**Pn**	**09 03 44.1**	**-0.5**
AOS	**Alonnisos**	**1.43**	**250**	P	**Pb**	**09 03 44.9**	**-0.3**
AOS				S	**Sg**	**09 04 05.2**	**+1.3**
RDO	**Rodhopi**	**1.46**	**358**	PN	**Pb**	**09 03 45.8**	**+0.1**
KRBG	**Karabiga-Canak**	**1.48**	**61**	PN	**Pg**	**09 03 46.2**	**-0.2**
PAIG	**Paliouri**	**1.50**	**280**	P	**Pn**	**09 03 45.7**	**+0.1**
URLA	**Izmir**	**1.53**	**149**	*i* P	**Pn**	**09 03 46.0**	**0.0**
URLA				IAML_P			
	comp=Z,369nm,0.2s						
BALY	**Balya**	**1.56**	**87**	*i* P	**Pg**	**09 03 48.0**	**+0.2**
BALY				*i* S	**Sg**	**09 04 07.9**	**0.0**
BALY				IAML_P			
	comp=Z,313nm,0.2s						
KAVA	**Kavala**	**1.56**	**328**	P	**Pn**	**09 03 46.3**	**-0.1**
KAVA	**Kavala**	**1.56**	**328**	P	**Pn**	**09 03 46.4**	**0.0**
KAVA				S	**Sn**	**09 04 05.9**	**-1.0**
RKY	**Sarkoy-Tekirda**	**1.57**	**50**	PN	**Pb**	**09 03 47.7**	**+0.1**
KNL	**Balıkesir**	**1.59**	**68**	*i* P	**Pb**	**09 03 47.7**	**-0.2**
KNL				*i* S	**Sg**	**09 04 09.7**	**+0.6**
KNL				IAML_P			
	comp=Z,452nm,0.3s						
STEP	**BALIKESIR_Sava**	**1.66**	**100**	*i* P	**Pb**	**09 03 49.4**	**+0.3**
STEP				*i* S	**Sb**	**09 04 10.3**	**-0.2**
STEP				IAML_P			
	comp=Z,360nm,0.1s						
SKIA	**Skiathos**	**1.73**	**253**	P	**Pn**	**09 03 49.3**	**+0.5**
MRMT	**Marmara Adasi**	**1.78**	**58**	PN	**Pn**	**09 03 50.0**	**+0.4**
XOR	**Xorichti**	**1.89**	**261**	P	**Pn**	**09 03 51.7**	**+0.6**
SRS	**Serrai**	**2.10**	**314**	P	**Pn**	**09 03 54.8**	**+0.9**

IDC 06 09:03:32.0±3.5**, 11°.47S**×**165°.86E, h0**^{km}**, mb4.2**/4**, mb1 4.4**/4**, mb1mx3.8**/49**, mbtmp4.1**/4**, Error ellipse: s-maj=142.4km s-min=32.4km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.45**	**251**	P	P	09 09 55.2	-0.3
	2.6nm,0.6s,baz=81,slow=9.4,SNR=4.6						
ASAR	**Alice Springs**	**32.71**	**244**	P	P	09 10 06.7	+0.1
	4.2nm,0.9s,baz=71,slow=9.5,SNR=5.3						
ILAR	**Eielson Array**	**83.88**	**18**	P	P	09 16 03.1	-0.2
	0.6nm,0.5s,baz=241,slow=4.9,SNR=6.8						
MKAR	**Makanchi Array**	**93.91**	**317**	P	P	09 16 52.0	+0.3
	0.7nm,0.8s,baz=89,slow=5.7,SNR=3.2						

IDC 06 09:04:54.1±1.1**, 11°.17S**×**165°.86E, h0**^{km}**, mb3.9**/5**, mb1 4.3**/6**, mb1mx3.8**/49**, mbtmp4.0**/6**, ML3.0**/1**, Error ellipse: s-maj=51.2km s-min=23.4km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.85**	**177**	Pn	Pn	09 07 30.3	-0.6
	0.1nm,0.3s,baz=319,slow=9.3,SNR=5.0						
WRA	**Warramunga Arr**	**31.55**	**250**	P	P	09 11 18.5	0.0
	0.8nm,0.8s,baz=79,slow=9.2,SNR=2.4						
ASAR	**Alice Springs**	**32.84**	**244**	P	P	09 11 29.6	-0.3
	1.6nm,0.8s,baz=73,slow=10,SNR=4.1						
ASAR				PcP	PcP	09 14 15.2	+0.3
	0.3nm,0.7s,baz=95,slow=2.3,SNR=3.8						
ILAR	**Eielson Array**	**83.59**	**18**	P	P	09 17 24.3	+0.3
	1.2nm,0.6s,baz=227,slow=5.9,SNR=9.1						
NVAR	**Mina Array Bea**	**86.02**	**50**	P	P	09 17 37.5	+0.5
	1.2nm,1.0s,baz=248,slow=4.8,SNR=3.5						
YKA	**Yellowknife Ar**	**95.03**	**27**	P	P	09 18 17.1	-1.4
	0.2nm,0.6s,baz=256,slow=4.5,SNR=4.6						

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*IDC **06** 09:07:53.7±1.3, 10°.63S×165°.49E, h0^{km}, mb3.7/5, mb1 4.0/7, mb1mx3.7/47, mbtmp3.9/7, ML4.0/2, Error ellipse: s-maj=40.9km s-min=24.3km az=141.0*
*ISCJB **06** 09:07:56.7±1.1, 10°.8S±0°.1×165°.4E±0°.1, h31^{km}, mb3.7/5, Error ellipse: s-maj=21.0km s-min=18.7km az=143.8*
ISC 06 09:07:58.5±1.1**, 10°.7S**±0°.1×**165°.4E**±0°.2**, h31**^{km}**, n7,** σ**1^{s}.28**/7**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.51**	**282**	Pn	**Pn**	**09 09 17.9**	**-0.5**
	9.9nm,0.3s,baz=145,slow=12,SNR=2.5						
DZM	**Mont Dzumac**	**11.38**	**175**	Pn	**Pn**	**09 10 38.8**	**-0.3**
	0.5nm,0.3s,baz=344,slow=16,SNR=2.5						
WRA	**Warramunga Arr**	**31.29**	**249**	P	**P**	**09 14 16.3**	**+0.1**
	0.5nm,0.5s,baz=79,slow=9.0,SNR=5.1						
ASAR	**Alice Springs**	**32.66**	**243**	P	**P**	**09 14 27.9**	**-0.2**
	2.1nm,0.9s,baz=71,slow=9.7,SNR=7.7						
FITZ	**Fitzroy Crossi**	**39.15**	**254**	P	**P**	**09 15 24.9**	**+1.2**
	1.5nm,0.9s,baz=63,slow=6.8,SNR=2.4						
ILAR	**Eielson Array**	**83.27**	**19**	P	**P**	**09 20 20.2**	**-1.6**
	0.9nm,1.2s,baz=235,slow=5.8,SNR=3.3						
YKA	**Yellowknife Ar**	**94.80**	**27**	P	**P**	**09 21 18.4**	**+1.5**
	0.1nm,0.7s,baz=249,slow=5.7,SNR=2.7						

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*ISCJB **06** 09:08:02.0±0.6, 64°.71N±0°.03×30°.69E±0°.10, h0^{km}, Error ellipse: s-maj=6.2km s-min=3.7km az=22.5*
*MOS **06** 09:08:03.0, 64°.71N×30°.60E, M2.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*KOLA **06** 09:08:04.9, 64°.77N×30°.28E, h0^{km}*
*NAO **06** 09:08:05.3±1.5, 64°.75N×30°.12E, ML2.2*
*HEL **06** 09:08:05.0±0.2, 64°.75N×30°.59E, h0^{km}, ML2.0, Explosion*
*UPP **06** 09:08:06.1±2.8, 64°.67N×30°.30E, h0^{km}, ML1.8, Suspected explosion*
*BER **06** 09:08:06.0±3.6, 64°.79N×30°.16E, h0^{km}, ML2.2(NAO), Suspected explosion*
ISC 06 09:08:03.4±1.0**, 64°.71N**±0°.03×**30°.63E**±0°.05**, h0**^{km}**, n31,** σ**2^{s}.11**/49**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.36**	**347**	*e*P	**Pn**	**09 08 28.6**	**-1.1**
KU6				*e*S	**Sg**	**09 08 45.1**	**-2.0**
MSF	**Maaselka**	**1.38**	**332**	*e*P	**Pn**	**09 08 28.9**	**-1.0**
MSF				*e*S	**Sg**	**09 08 46.1**	**-1.6**
MSF				MSG		09 08 51.0	
	comp=Z,10nm,0.1s						
OUL	**Oulu**	**2.05**	**283**	*e*P	**Pn**	**09 08 40.6**	**+1.5**
OUL				*e*S	**Sn**	**09 09 05.9**	**+0.5**
OUL				MSG		09 09 10.1	
	comp=Z,10nm,0.1s						
RNF	**Rovaniemi**	**2.70**	**317**	*e*P	**Pn**	**09 08 48.9**	**+0.8**
RNF				*e*S	**Sn**	**09 09 22.7**	**+1.2**
SUF	**Sumiainen**	**2.82**	**227**	*e*P	**Pn**	**09 08 51.2**	**+1.6**
SUF				*e*S	**Sn**	**09 09 24.5**	**+0.2**
APA0	**Apatity Array**	**3.07**	**17**	Pn	**Pn**	**09 08 53.7**	**+0.6**
APA0				Lg	Lg	09 09 41.0	
APA0	**Apatity Array**	**3.07**	**17**	P	**Pn**	**09 08 53.7**	**+0.6**
APA0				S	**Sn**	**09 09 30.4**	**0.0**
APA0	**Apatity Array**	**3.07**	**17**	Pn	**Pn**	**09 08 53.7**	**+0.6**
APA0				Sg	**Sg**	**09 09 41.0**	**-0.8**
APA	**Apatity**	**3.09**	**20**	P	**Pn**	**09 08 54.3**	**+0.9**
APA				S	**Sn**	**09 09 31.1**	**+0.2**
KAF	**Kangasniemi**	**3.25**	**219**	*e*P	**Pn**	**09 08 57.7**	**+2.1**
KALU	**Kalix**	**3.27**	**294**	P	**Pn**	**09 08 57.0**	**+1.2**
KALU				S	**Sn**	**09 09 34.4**	**-1.0**
PAJU	**Pajala**	**3.87**	**310**	P	**Pn**	**09 09 04.7**	**+0.7**
FIA0	**FINESS Array S**	**3.87**	**214**	Pn	**Pn**	**09 09 04.8**	**+0.6**
	baz=38,slow=14						
FIA0				Sn	**Sn**	**09 09 49.9**	**-0.4**
	baz=41,slow=37						
FIA0				Lg	Lg	09 10 03.5	
	baz=23,slow=28						
FIA0	**FINESS Array S**	**3.87**	**214**	Pn	**Pn**	**09 09 04.8**	**+0.6**
	baz=38,slow=14						
FIA0				Sn	**Sn**	**09 09 49.9**	**-0.4**
	baz=41,slow=37						
FIA0				Sg	**Sb**	**09 10 03.5**	**+3.6**
	baz=23,slow=28						
SJUU	**Sjulsmark**	**3.90**	**286**	P	**Pn**	**09 09 05.2**	**+0.7**
ERTU	**Ertsjaerv**	**3.96**	**302**	P	**Pn**	**09 09 06.4**	**+1.1**
BURU	**Burvik**	**3.98**	**272**	P	**Pn**	**09 09 05.6**	**0.0**
HARU	**Harads**	**4.29**	**294**	P	**Pn**	**09 09 10.7**	**+0.9**
ODEU	**Stanfors**	**4.29**	**270**	P	**Pn**	**09 09 09.4**	**-0.4**
UMAU	**Umeaa**	**4.41**	**264**	P	**Pn**	**09 09 11.6**	**+0.1**
LILU	**Lilltraesk**	**4.61**	**282**	P	**Pn**	**09 09 14.9**	**+0.6**
SVAU	**Svanoeiden**	**4.77**	**272**	P	**Pn**	**09 09 16.9**	**+0.5**
DUNU	**Dundret**	**4.78**	**305**	P	**Pn**	**09 09 17.3**	**+0.6**
HUSU	**Husum**	**5.20**	**260**	P	**Pn**	**09 09 22.6**	**+0.2**
ARA0	**ARCESS Array S**	**5.24**	**340**	Pn	**Pn**	**09 09 22.6**	**-0.4**
	baz=153,slow=14						
ARA0				Sn	**Sn**	**09 10 18.9**	**-5.2**
	baz=162,slow=28						
ARA0				Lg	Lg	09 10 44.0	
	baz=161,slow=37						
ARA0	**ARCESS Array S**	**5.24**	**340**	Pn	**Pn**	**09 09 22.6**	**-0.4**
	baz=153,slow=14						
ARA0				Sn	**Sn**	**09 10 18.9**	**-5.2**
	baz=162,slow=28						
ARA0				Sg	**Sb**	**09 10 44.0**	**+4.7**
	baz=161,slow=37						
KLMR	**Klimovskoe**	**5.62**	**129**	*i* P	**Pn**	**09 09 26.9**	**-1.2**
KLMR				*i* S	**Sn**	**09 10 29.0**	**-4.2**
KLMR				*i* S	**Sn**	**09 10 29.0**	**-4.2**
KLMR				*i* S	**Sn**	**09 10 29.0**	**-4.2**
KLMR				AMP		09 10 30.0	
	comp=E,5.0nm,0.5s						
KLMR				AMP		09 10 31.1	
	comp=N,5.0nm,0.5s						
HFS	**Hagfors**	**9.08**	**247**	Pn	**Pn**	**09 10 11.8**	**-3.8**
HFS	**Hagfors**	**9.08**	**247**	Pn	**Pn**	**09 10 11.8**	**-3.8**
NRA0	**NORESS Array S**	**9.61**	**254**	Pn	**Pn**	**09 10 23.5**	**+0.7**
	baz=51,slow=11						
NRA0	**NORESS Array S**	**9.61**	**254**	Pn	**Pn**	**09 10 23.5**	**+0.7**
	baz=51,slow=11						

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*IDC **06** 09:09:17.9±0.8, 10°.95S×165°.40E, h0^{km}, mb4.2/13, mb1 4.3/15, mb1mx4.1/47, mbtmp4.2/15, ML4.5/2, Error ellipse: s-maj=22.3km s-min=16.9km az=140.0*
*NEIC **06** 09:09:19.1±0.3, 10°.95S×165°.33E, h10^{km}, mb4.6/13, Error ellipse: s-maj=6.7km s-min=6.0km az=101.0*
*ISCJB **06** 09:09:20.4±0.3, 11°.08S±0°.05×165°.30E±0°.05, h30^{km}, mb4.4/25, Error ellipse: s-maj=8.0km s-min=6.8km az=32.7*
ISC 06 09:09:22.0±0.6**, 10°.99S**±0°.08×**165°.37E**±0°.08**, h30**^{km}**, n43,** σ**0^{s}.92**/45**, mb4.4**/25**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.55**	**286**	*e*Pn	**Pn**	**09 10 41.2**	**-1.6**
HNR				*e*Sn	**Sn**	**09 11 46.3**	**+0.7**
HNR				*e*Sn	**Sn**	**09 11 47.3**	**+1.7**
HNR	**Honiara**	**5.55**	**286**	Pn	**Pn**	**09 10 42.2**	**-0.5**
	16nm,0.3s,baz=124,slow=11,SNR=3.3						
HNR				Sn	**Sn**	**09 11 47.3**	**+1.7**
	8.1nm,0.3s,baz=115,slow=19,SNR=1.8						
MARNC	**Mare, Loyalty**	**10.74**	**167**	*e*Pn	**Pn**	**09 11 53.5**	**-0.5**
DZM	**Mont Dzumac**	**11.07**	**175**	*e*Pn	**Pn**	**09 11 58.5**	**-0.1**
DZM	**Mont Dzumac**	**11.07**	**175**	Pn	**Pn**	**09 11 58.7**	**+0.1**
	3.6nm,0.3s,baz=307,slow=12,SNR=17						
PINNC	**Pines Island,**	**11.73**	**171**	*e*Pn	**Pn**	**09 12 08.5**	**+1.0**
MANU	**Manus Island**	**19.95**	**295**	*e*P	**P**	**09 13 50.9**	**-1.0**
	143nm,1.4s						
CTA	**Charters Tower**	**20.50**	**241**	P	Pn	09 13 59.6	-0.6
	5.7nm,0.9s,baz=59,slow=15,SNR=2.7						
COEN	**Coen**	**21.87**	**260**	*e*P	**P**	**09 14 11.6**	**-1.0**
	23nm,1.4s						
URZ	**Urewera**	**29.12**	**161**	P	**P**	**09 15 20.5**	**+0.2**
	12nm,1.0s,baz=5.7,slow=10,SNR=3.3						
BKZ	**Black Stump Fm**	**29.76**	**162**	*e*P	**P**	**09 15 26.2**	**+0.1**
	42nm,1.4s						
WAKE	**Wake Island**	**30.10**	**2**	*e*P	**P**	**09 15 28.0**	**-1.1**
	348nm,1.6s						
STKA	**Stephens Creek**	**30.23**	**223**	*e*P	**P**	**09 15 30.3**	**0.0**
	1.0nm,1.0s						
STKA	**Stephens Creek**	**30.23**	**223**	P	**P**	**09 15 31.1**	**+0.9**
	2.7nm,0.8s,baz=30,slow=11,SNR=4.2						
BFZ	**Birch Farm**	**31.10**	**164**	*e*P	**P**	**09 15 37.3**	**-0.5**
	48nm,1.1s						
WRAB	**Tennant Creek**	**31.14**	**250**	*e*P	**P**	**09 15 38.0**	**-0.5**
	17nm,1.5s						
WB2	**Warramunga Arr**	**31.14**	**250**	*e*P	**P**	**09 15 36.8**	**-1.6**
	11nm,1.4s						
WR1	**Warramunga Arr**	**31.16**	**250**	*e*P	**P**	**09 15 38.8**	**+0.3**
	4.1nm,0.8s						
WRA	**Warramunga Arr**	**31.16**	**250**	P	**P**	**09 15 38.8**	**+0.3**
	1.8nm,0.7s,baz=82,slow=8.9,SNR=8.9						
KHZ	**Kahutara**	**32.12**	**169**	*e*P	**P**	**09 15 46.8**	**+0.1**
	20nm,1.1s						
AS01	**Alice Springs**	**32.45**	**243**	*e*P	**P**	**09 15 48.0**	**-1.9**
AS31	**Alice Springs**	**32.49**	**243**	*e*P	**P**	**09 15 48.9**	**-1.3**
	3.2nm,1.3s						
ASAR	**Alice Springs**	**32.49**	**243**	P	**P**	**09 15 50.4**	**+0.1**
	5.9nm,0.9s,baz=62,slow=10,SNR=21						
FITZ	**Fitzroy Crossi**	**39.04**	**255**	*e*P	**P**	**09 16 45.7**	**-0.8**
	8.2nm,1.4s						
FITZ	**Fitzroy Crossi**	**39.04**	**255**	P	**P**	**09 16 46.6**	**+0.2**
	0.8nm,0.7s,baz=49,slow=9.3,SNR=2.0						
SONA0	**Songino Array**	**78.40**	**324**	*e*P	**P**	**09 21 21.5**	**+1.6**
SONM	**Songino Array**	**78.40**	**324**	P	**P**	**09 21 21.5**	**+1.6**
	0.7nm,0.9s,baz=128,slow=4.2,SNR=3.3						
ILAR	**Eielson Array**	**83.57**	**19**	P	**P**	**09 21 47.7**	**+0.8**
	0.6nm,0.5s,baz=238,slow=4.9,SNR=18						
ILB	**Eielson Array**	**83.57**	**19**	*e*P	**P**	**09 21 47.8**	**+0.8**
AFDM	**Forest Hills D**	**84.44**	**49**	*e*P	**P**	**09 21 51.4**	**-0.6**
	4.5nm,0.9s						
MDPB	**Devils Postpil**	**85.45**	**50**	*e*P	**P**	**09 21 57.6**	**+0.1**
	4.3nm,1.0s						
NV01	**Mina Array Sit**	**86.27**	**50**	*e*P	**P**	**09 22 01.6**	**+0.2**
NVAR	**Mina Array Bea**	**86.27**	**50**	P	**P**	**09 22 02.8**	**+1.3**
	2.6nm,0.9s,baz=232,slow=9.4,SNR=10						
NV11	**Mina Array Sit**	**86.38**	**50**	*e*P	**P**	**09 22 02.3**	**+0.4**
	0.3nm,1.0s						
CCUT	**Cedar City**	**89.80**	**52**	*e*P	**P**	**09 22 19.9**	**+1.5**
	2.2nm,0.9s						
MK32	**Makanchi Array**	**93.22**	**317**	*e*P	**P**	**09 22 33.9**	**+0.2**
MKAR	**Makanchi Array**	**93.22**	**317**	P	**P**	**09 22 33.9**	**+0.2**
	0.7nm,0.9s,baz=93,slow=6.1,SNR=4.0						
ZALV	**Zalesovo Beam**	**93.29**	**324**	P	**P**	**09 22 33.6**	**-0.2**
	0.5nm,0.3s,baz=84,slow=4.5,SNR=2.8						
ZAA1	**Zalesovo Array**	**93.29**	**324**	*e*P	**P**	**09 22 33.6**	**-0.2**
PD31	**Pinedale Array**	**93.78**	**47**	*e*P	**P**	**09 22 36.0**	**-0.7**
PDAR	**Pinedale Array**	**93.78**	**47**	P	**P**	**09 22 36.2**	**-0.5**
	0.6nm,0.9s,baz=248,slow=1.6,SNR=4.1						
YKA	**Yellowknife Ar**	**95.09**	**27**	P	**P**	**09 22 41.3**	**-0.6**
	0.4nm,0.8s,baz=257,slow=4.5,SNR=6.0						
YKB5	**Yellowknife Ar**	**95.09**	**27**	*e*P	**P**	**09 22 41.2**	**-0.7**

IDC 06 09:11:11.9±1.4**, 10°.85S**×**165°.55E, h0**^{km}**, mb3.6**/4**, mb1 4.0**/5**, mb1mx3.6**/45**, mbtmp3.7**/5**, ML4.1**/1**, Error ellipse: s-maj=53.6km s-min=27.8km az=130.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.19**	**176**	Pn	Pn	09 13 54.1	+0.7
	1.4nm,0.3s,baz=135,slow=19,SNR=7.6						
WRA	**Warramunga Arr**	**31.37**	**249**	P	P	09 17 35.0	+0.3
	1.1nm,0.8s,baz=81,slow=8.9,SNR=4.6						
ASAR	**Alice Springs**	**32.71**	**243**	P	P	09 17 45.9	-0.6
	0.6nm,0.8s,baz=63,slow=11,SNR=3.4						
ILAR	**Eielson Array**	**83.39**	**19**	P	P	09 23 42.2	+1.5
	0.4nm,0.6s,baz=234,slow=5.1,SNR=6.3						
YKA	**Yellowknife Ar**	**94.89**	**27**	P	P	09 24 33.8	-1.9
	0.1nm,0.7s,baz=253,slow=4.8,SNR=2.9						

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*IDC **06** 09:11:57.5±0.9, 10°.93S×165°.47E, h0^{km}, mb4.0/10, mb1 4.2/11, mb1mx3.9/45, mbtmp4.0/11, ML4.5/1, Error ellipse: s-maj=28.2km s-min=20.9km az=123.0*
*NEIC **06** 09:11:59.2±0.4, 10°.94S×165°.44E, h10^{km}, mb4.1/8, Error ellipse: s-maj=7.9km s-min=7.6km az=85.0*
*ISCJB **06** 09:12:00.1±0.5, 11°.04S±0°.06×165°.47E±0°.06, h30^{km}, mb4.1/15, Error ellipse: s-maj=9.3km s-min=8.4km az=155.0*
ISC 06 09:12:02.1±0.6**, 10°.98S**±0°.08×**165°.49E**±0°.09**, h30**^{km}**, n32,** σ**0^{s}.82**/36**, mb4.1**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.67**	**285**	*e*Pn	**Pn**	**09 13 26.4**	**+2.1**

MARNC	Mare, Loyalty	10.72	167	*e*Pn	Pn	09 14 34.0	+0.3
DZM	Mont Dzumac	11.07	175	*e*Pn	Pn	09 14 39.1	+0.6
DZM	Mont Dzumac	11.07	175	Pn	Pn	09 14 37.9	-0.6
	3.2nm,0.3s,baz=312,slow=11,SNR=9.4						
PINNC	Pines Island,	11.72	171	*e*Pn	Pn	09 14 48.4	+1.0
MSVF	Nonsavu	13.89	120	*e*Pn	Pn	09 15 17.5	+0.3
TARA	Tarawa	14.31	32	*e*Pn	Pn	09 15 22.6	-0.1
CTA	Charters Tower	20.61	242	P	P	09 16 38.1	-1.0
	4.5nm,0.7s,baz=62,slow=12,SNR=3.8						
CTAO	Charters Tower	20.61	242	*e*P	P	09 16 38.7	-0.4
	32nm,1.6s						
COEN	Coen	21.99	260	*e*P	P	09 16 53.2	-0.8
	8.8nm,1.1s						
URZ	Urewera	29.09	161	P	P	09 18 00.4	+0.4
	7.1nm,0.8s,baz=335,slow=14,SNR=6.3						
STKA	Stephens Creek	30.32	223	*e*P	P	09 18 10.0	-1.0
	1.8nm,1.5s						
STKA	Stephens Creek	30.32	223	P	P	09 18 11.0	0.0
	1.0nm,0.4s,baz=35,slow=12,SNR=4.3						
BFZ	Birch Farm	31.07	164	*e*P	P	09 18 17.5	-0.1
	69nm,1.2s						
WRAB	Tennant Creek	31.26	250	*e*P	P	09 18 16.7	-2.8
	3.6nm,0.8s						
WB2	Warramunga Arr	31.26	250	*e*P	P	09 18 18.7	-0.8
WR1	Warramunga Arr	31.27	250	*e*P	P	09 18 19.6	-0.1
	16nm,1.5s						
WR1				*e*PcP	PcP	09 21 14.0	+0.2
WRA	Warramunga Arr	31.27	250	P	P	09 18 19.6	-0.1
	2.5nm,0.5s,baz=81,slow=8.9,SNR=18						
WRA				PcP	PcP	09 21 14.0	+0.2
	1.3nm,1.2s,baz=76,slow=3.0,SNR=3.5						
TOO	Toolangi	32.00	211	*e*P	P	09 18 26.4	+0.5
	3.2nm,0.8s						
AS01	Alice Springs	32.56	243	*e*P	P	09 18 30.2	-0.7
AS31	Alice Springs	32.60	243	*e*P	P	09 18 30.5	-0.8
	0.9nm,0.8s						
AS31				*e*PcP	PcP	09 21 17.3	0.0
ASAR	Alice Springs	32.60	243	P	P	09 18 30.8	-0.6
	2.2nm,0.7s,baz=64,slow=9.9,SNR=11						
ASAR				PcP	PcP	09 21 17.3	0.0
	0.4nm,0.5s,baz=76,slow=2.1,SNR=4.9						
FITZ	Fitzroy Crossi	39.16	255	*e*P	P	09 19 26.6	-0.8
	3.2nm,1.2s						
FITZ	Fitzroy Crossi	39.16	255	P	P	09 19 27.5	0.0
	1.6nm,1.0s,baz=89,slow=9.8,SNR=3.8						
SONA0	Songino Array	78.47	324	*e*P	P	09 24 00.2	-0.1
SONM	Songino Array	78.47	324	P	P	09 24 00.2	-0.1
	0.2nm,0.5s,baz=108,slow=4.7,SNR=1.8						
ILAR	Eielson Array	83.53	19	P	P	09 24 27.4	+0.5
	0.5nm,0.6s,baz=235,slow=5.3,SNR=5.8						
ILB	Eielson Array	83.53	19	*e*P	P	09 24 26.9	0.0
MK32	Makanchi Array	93.30	317	*e*P	P	09 25 14.4	+0.2
MKAR	Makanchi Array	93.30	317	P	P	09 25 14.4	+0.2
	0.3nm,0.6s,baz=99,slow=4.5,SNR=2.4						
YKA	Yellowknife Ar	95.03	27	P	P	09 25 20.8	-0.9
	0.1nm,0.6s,baz=255,slow=4.4,SNR=3.4						
YKB5	Yellowknife Ar	95.03	27	*e*P	P	09 25 20.8	-0.9

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*IDC **06** 09:12:34.8±2.0, 11°.55S×165°.17E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.8/44, mbtmp3.7/8, Error ellipse: s-maj=88.8km s-min=24.0km az=145.0*

*ISCJB **06** 09:12:38.5±1.6, 11°.7S±0°.4×165°.1E±0°.3, h34^{km}, mb3.7/8, Error ellipse: s-maj=71.3km s-min=19.5km az=144.5*

ISC 06 09:12:39.9±1.7, **11°.6S**±0°.4×**165°.2E**±0°.3, **h34**^{km}**, n8,** σ**1^{s}.24**/8, **mb3.8**/8, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.73	251	P	P	09 18 52.9	+0.8
	1.7nm,0.8s,baz=79,slow=9.4,SNR=3.4						
ASAR	Alice Springs	32.01	244	P	P	09 19 02.5	-0.8
	1.1nm,0.8s,baz=71,slow=8.9,SNR=3.7						
FITZ	Fitzroy Crossi	38.66	256	P	P	09 20 01.3	+0.7
	1.3nm,0.8s,baz=94,slow=8.3,SNR=2.6						
SONM	Songino Array	78.80	324	P	P	09 24 39.8	+0.4
	0.3nm,0.6s,baz=130,slow=4.3,SNR=2.9						
ILAR	Eielson Array	84.26	19	P	P	09 25 07.3	-0.4
	0.5nm,0.7s,baz=242,slow=4.8,SNR=4.7						
NVAR	Mina Array Bea	86.85	50	P	P	09 25 23.2	+1.6
	0.2nm,0.4s,baz=236,slow=6.4,SNR=2.7						
MKAR	Makanchi Array	93.56	317	P	P	09 25 52.6	+0.1
	0.3nm,0.6s,baz=98,slow=6.0,SNR=2.9						
YKA	Yellowknife Ar	95.77	27	P	P	09 26 00.5	-1.7
	0.1nm,0.5s,baz=257,slow=4.4,SNR=2.6						

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*ISCJB **06** 09:14:52.5±0.4, 24°.12S±0°.03×67°.01W±0°.04, h203^{km}±5^{km}, mb3.2/3, Error ellipse: s-maj=7.2km s-min=4.5km az=152.2*

*NEIC **06** 09:14:53.5±0.6, 24°.14S×67°.00W, h202^{km}±19^{km}, mb4.4/2, ML4.5(GUC), Error ellipse: s-maj=15.8km s-min=9.6km az=99.0*

*SJA **06** 09:14:53.9±0.3, 24°.26S×66°.69W, h222^{km}±9^{km}, ML3.0, MW3.1*

*GUC **06** 09:14:54.8±0.5, 24°.07S×67°.39W, h218^{km}±13^{km}, ML4.5*

*IDC **06** 09:14:56.6±1.7, 23°.59S×66°.87W, h201^{km}±10^{km}, mb3.0/3, mb1 3.5/7, mb1mx3.3/27, mbtmp3.8/7, Error ellipse: s-maj=44.5km s-min=14.2km az=10.0*

ISC 06 09:14:53.1±0.7, **24°.12S**±0°.04×**66°.99W**±0°.05, **h194**^{km}±8^{km}, **n35,** σ**1^{s}.38**/53, **mb3.4**/3, **8C, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.48	114	*i* P	Pn	09 15 27.7	+1.5
SLA				*i* S	Sn	09 15 52.6	+0.7
SLA				IAML		09 15 54.2	
	comp=Z,74nm,0.6s						
LVC	Limon Verde	2.32	310	P	Pn	09 15 36.7	+1.7
	comp=Z,23nm,0.3s,baz=135,slow=7.0,SNR=371						
LVC				S	Sn	09 16 08.2	+0.6
	comp=Z,105nm,0.3s,baz=321,slow=21,SNR=48						
PB15	IPOC Station P	2.45	291	⇑*i*P	Pn	09 15 38.0	+1.7
PB15				*i* S	Sn	09 16 10.3	+0.4
GO02	Mina Guanaco	2.59	246	*e*Pn	Pn	09 15 39.5	+1.6
GO02				*e*S	Sn	09 16 13.9	+1.1
GO02	Mina Guanaco	2.59	246	⇑*i*P	Pn	09 15 39.3	+1.4
GO02				*i* S	Sn	09 16 13.8	+1.0
GO02				IAML		09 16 15.1	
	comp=E,2μm,0.3s						
PB06	IPOC Station P	2.76	300	⇑*i*P	Pn	09 15 41.3	+1.5
PB06				*i* S	Sn	09 16 16.0	-0.2
PB06				IAML		09 16 17.6	
	comp=N,2μm,0.4s						
AHML	Horco Molle	3.04	151	*i* P	Pn	09 15 42.9	-0.1
AHML				IAML		09 15 44.4	
	comp=Z,26nm,0.4s						
PB09	IPOC Station P	3.11	318	⇑*i*P	Pn	09 15 45.7	+1.7
PB09				*i* S	Sn	09 16 24.3	+0.7
PB09				IAML		09 16 25.9	
	comp=N,480nm,0.5s						
PB05	IPOC Station P	3.21	292	⇑*i*P	Pn	09 15 45.9	+0.8
PB05				*i* S	Sn	09 16 24.1	-1.5
PB05				IAML		09 16 28.5	
	comp=E,545nm,0.3s						
PB03	IPOC Station P	3.28	308	⇑*i*P	Pn	09 15 47.0	+1.0
PB03				*i* S	Sn	09 16 26.1	-1.1
PB03				IAML		09 16 30.4	
	comp=E,806nm,0.2s						
PB10	IPOC Station P	3.32	280	*e*Pn	Pn	09 15 47.5	+1.2
PB10				*e*S	Sn	09 16 27.7	-0.2
PB10	IPOC Station P	3.32	280	⇑*i*P	Pn	09 15 47.5	+1.2
PB10				*i* S	Sn	09 16 26.7	-1.2
PB10				IAML		09 16 29.5	
	comp=N,444nm,0.4s						
PB04	IPOC Station P	3.41	301	*e*Pn	Pn	09 15 48.5	+1.0
PB04				*e*S	Sn	09 16 28.5	-1.6
PB04	IPOC Station P	3.41	301	⇑*i*P	Pn	09 15 48.5	+1.0
PB04				*i* S	Sn	09 16 28.9	-1.1
PB04				IAML		09 16 33.1	
	comp=N,1μm,0.4s						
PB01	IPOC Station P	3.84	322	*e*Pn	Pn	09 15 53.4	+0.6
PB01				*e*S	Sn	09 16 38.4	-1.1
PB01	IPOC Station P	3.84	322	*e*P	Pn	09 15 53.2	+0.5
PB01				*i* S	Sn	09 16 38.0	-1.5
CYA	Choya	4.43	166	*i* P	Pn	09 16 00.1	0.0
CYA				IAML		09 16 02.6	
	comp=Z,5.9nm,0.6s						
PB11	IPOC Station P	5.00	330	*e*Pn	Pn	09 16 06.8	-0.7
PB11				*e*S	Sn	09 17 03.0	-3.0
ACLC	CERRO LA CRUZ	5.29	180	*i* P	Pn	09 16 11.7	+0.5
AGUA	GUANDACOL	5.51	194	*i* P	Pn	09 16 15.1	+1.1
MNMC	Minye Minye	5.53	333	*e*Pn	Pn	09 16 14.9	+0.5
MNMC				*e*S	Sn	09 17 16.4	-2.2
LCO	Las Campanas	5.90	214	*e*Pn	Pn	09 16 18.4	-0.8
LCO				*e*S	Sn	09 17 24.1	-3.0
APLL	PUNTA DE LOS L	6.26	176	*i* P	Pn	09 16 23.3	-0.4
APLL				IAML		09 16 24.4	
	comp=Z,10.0nm,0.2s						
GO04	Tololo Observa	6.92	209	*e*Pn	Pn	09 16 31.1	-1.3
GO04				*e*S	Sn	09 17 47.4	-3.7
CPUP	Villa Florida	9.02	106	*e*Pn	Pn	09 17 00.6	+1.0
CPUP	Villa Florida	9.02	106	P	Pn	09 17 05.8	+6.2
	comp=Z,0.4nm,0.3s,baz=274,slow=14,SNR=4.4						
SIV	San Ignacio	9.81	36	P	Pn	09 17 08.0	-2.1
	comp=Z,1.2nm,0.3s,baz=241,slow=12,SNR=23						
SIV				S	Sn	09 18 44.8	-15
	comp=Z,0.1nm,0.3s,baz=198,slow=20,SNR=3.0						
TRQA	Tornquist	14.54	164	*e*Pn	Pn	09 18 08.8	-1.0
GO06	Curarrehue	15.88	193	*e*P	Pn	09 18 27.6	+1.3
	comp=Z,9.9nm,0.9s						
BDFB	Brasilia	19.72	68	*e*P	P	09 19 08.2	+0.1
	comp=Z,15nm,0.8s						
BDFB	Brasilia	19.72	68	P	P	09 19 07.9	-0.2
	comp=Z,0.8nm,0.3s,baz=240,slow=11,SNR=19						
TXAR	Lajitas Array	63.78	324	P	P	09 25 05.8	+1.2
	comp=Z,0.2nm,0.7s,baz=154,slow=8.5,SNR=3.3						
TORD	Torodi Ar. Bea	76.60	69	P	P	09 26 22.5	-0.2
	comp=Z,0.7nm,0.9s,baz=242,slow=5.3,SNR=3.6						
YKA	Yellowknife Ar	94.24	340	P	P	09 27 50.7	+1.1
	comp=Z,0.2nm,0.6s,baz=130,slow=4.9,SNR=4.7						
MKAR	Makanchi Array	146.61	40	PKPbc	PKPbc	09 34 12.0	+0.3
	comp=Z,0.6nm,0.6s,baz=296,slow=2.9,SNR=5.8						

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*IDC **06** 09:16:23.6±1.6, 10°.72S×164°.41E, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.7/43, mbtmp3.9/6, ML4.3/2, Error ellipse: s-maj=35.4km s-min=29.5km az=156.0*

*ISCJB **06** 09:16:25.4±1.4, 10°.9S±0°.2×164°.4E±0°.1, h24^{km}, mb3.6/4, Error ellipse: s-maj=25.5km s-min=11.9km az=34.4*

ISC 06 09:16:27.2±1.5, **10°.8S**±0°.2×**164°.5E**±0°.1, **h24**^{km}**, n6,** σ**1^{s}.18**/7, **mb3.8**/4, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.65	286	Pn	Pn	09 17 36.1	+0.1
	22nm,0.3s,baz=148,slow=9.5,SNR=2.3						
HNR				Sn	Sn	09 18 30.4	+1.1
	8.8nm,0.3s,baz=309,slow=14,SNR=3.0						
DZM	Mont Dzumac	11.40	171	Pn	Pn	09 19 09.5	+0.7
	1.1nm,0.3s,baz=136,slow=22,SNR=12						
WRA	Warramunga Arr	30.41	249	P	P	09 22 37.1	-0.9
	0.8nm,0.8s,baz=76,slow=9.2,SNR=4.7						
ASAR	Alice Springs	31.81	242	P	P	09 22 50.4	+0.1
	0.2nm,0.5s,baz=65,slow=10,SNR=3.6						
FITZ	Fitzroy Crossi	38.25	254	P	P	09 23 44.1	-1.7
	1.4nm,0.6s,baz=95,slow=9.7,SNR=3.7						
ILAR	Eielson Array	83.64	19	P	P	09 28 53.7	+0.3
	0.9nm,0.8s,baz=242,slow=5.1,SNR=7.2						

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*IDC **06** 09:16:47.4±0.9, 10°.88S×165°.49E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.0/43, mbtmp4.2/11, ML4.5/1, Error ellipse: s-maj=29.6km s-min=19.9km az=135.0*

*NEIC **06** 09:16:48.8±0.4, 10°.86S×165°.52E, h10^{km}, mb4.4/11, Error ellipse: s-maj=9.8km s-min=7.5km az=119.0*

*ISCJB **06** 09:16:50.0±0.5, 10°.95S±0°.06×165°.48E±0°.06, h30^{km}, mb4.4/20, Error ellipse: s-maj=9.7km s-min=8.1km az=141.2*

ISC 06 09:16:52.0±0.6, **10°.92S**±0°.09×**165°.5E**±0°.1, **h30**^{km}**, n52,** σ**1^{s}.02**/51, **mb4.4**/20, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.12	175	*e*Pn	Pn	09 19 28.9	-0.3
DZM	Mont Dzumac	11.12	175	Pn	Pn	09 19 28.1	-1.1
	3.0nm,0.3s,baz=291,slow=10,SNR=14						
EIDS	Eidsvold	19.83	222	*e*P	Pn	09 21 22.5	+0.3
	17nm,1.1s						
CTA	Charters Tower	20.64	241	P	P	09 21 30.4	+0.9
	7.2nm,0.8s,baz=81,slow=14,SNR=4.8						
CTAO	Charters Tower	20.64	241	*e*P	P	09 21 29.0	-0.4
	16nm,1.1s						
LHI	Lord Howe Isla	21.35	195	*e*P	P	09 21 38.4	+1.5
	100nm,1.0s						
COEN	Coen	22.01	260	*e*P	P	09 21 45.1	+1.0
	18nm,1.1s						
ARMA	Armidale	23.29	212	*e*P	P	09 21 56.5	-1.1
	24nm,1.6s						
CAN	Canberra	28.55	209	*e*P	P	09 22 44.9	-0.4
	14nm,1.2s						
HAZ	Te Kaha	28.91	160	P	P	09 22 48.0	-0.4
URZ	Urewera	29.14	161	P	P	09 22 50.7	+0.3
	3.8nm,0.5s,baz=20,slow=17,SNR=5.7						
MUGZ	Murupara	29.23	162	P	P	09 22 50.6	-0.7
H11S2	WAKE ISLAND Hy	29.25	2	T	T	09 53 19.5	
	baz=183,slow=76,SNR=7.6						
H11S3	WAKE ISLAND Hy	29.25	2	T	T	09 52 55.0	
	baz=183,slow=76,SNR=5.0						
H11S1	WAKE ISLAND Hy	29.27	2	T	T	09 53 25.8	
	baz=183,slow=76,SNR=5.3						
MWZ	Matawai	29.34	160	P	P	09 22 51.2	-1.2
MRHZ	Matea Rd	29.45	162	P	P	09 22 50.2	-3.1
MTHZ	Maungataniwha	29.60	162	P	P	09 22 55.5	+1.0
SNGZ	Shannon Statio	29.69	161	P	P	09 22 55.6	+0.3
CNGZ	Carnagh Statio	29.71	160	P	P	09 22 54.6	-0.8
RAHZ	Arahi	29.73	162	P	P	09 22 56.5	+0.7
RIGZ	Rimuhau	29.76	160	P	P	09 22 56.1	+0.1
BKZ	Black Stump Fm	29.78	163	*e*P	P	09 22 56.6	+0.3
	21nm,0.5s						
BKZ	Black Stump Fm	29.78	163	P	P	09 22 57.2	+1.0
NMHZ	Naumai	29.81	162	P	P	09 22 58.0	+1.5
BHHZ	Black Hill Sta	29.96	164	P	P	09 22 58.6	+0.8
KWHZ	Kaweka Forest	30.00	163	P	P	09 22 59.1	+0.9
STKA	Stephens Creek	30.37	223	*e*P	P	09 23 01.3	-0.1
	1.0nm,0.8s						
STKA	Stephens Creek	30.37	223	P	P	09 23 01.6	+0.2
	3.6nm,0.7s,baz=37,slow=9.4,SNR=7.0						
H11N1	WAKE ISLAND Hy	30.47	3	T	T	09 54 23.6	
	baz=184,slow=76,SNR=4.3						
H11N3	WAKE ISLAND Hy	30.48	3	T	T	09 54 24.4	
	baz=184,slow=76,SNR=6.0						
H11N2	WAKE ISLAND Hy	30.49	3	T	T	09 54 26.1	
	baz=184,slow=76,SNR=6.0						
WRAB	Tennant Creek	31.29	250	*e*P	P	09 23 09.2	-0.6
	6.1nm,0.9s						
WB2	Warramunga Arr	31.29	250	*e*P	P	09 23 09.1	-0.6
WR1	Warramunga Arr	31.30	250	*e*P	P	09 23 09.2	-0.6
	6.3nm,0.9s						
WR1				*e*PcP	PcP	09 26 04.7	+0.9
WRA	Warramunga Arr	31.30	250	P	P	09 23 09.2	-0.6
	3.6nm,0.7s,baz=82,slow=9.0,SNR=24						
WRA				PcP	PcP	09 26 04.6	+0.9
	0.3nm,0.7s,baz=75,slow=3.6,SNR=4.1						
TOO	Toolangi	32.05	211	*e*P	P	09 23 16.8	+0.5
	4.8nm,0.8s						
AS01	Alice Springs	32.59	243	*e*P	P	09 23 20.3	-0.8
AS31	Alice Springs	32.63	243	*e*P	P	09 23 20.6	-1.0
	1.2nm,0.8s						
AS31				*e*PcP	PcP	09 26 07.3	0.0
ASAR	Alice Springs	32.63	243	P	P	09 23 20.6	-0.9
	4.6nm,0.9s,baz=65,slow=10,SNR=22						
ASAR				PcP	PcP	09 26 07.3	0.0
	0.8nm,0.8s,baz=82,slow=2.3,SNR=5.3						
LBZ	Lake Benmore	33.59	174	*e*P	P	09 23 29.4	-0.1
	37nm,1.5s						
SARN	Sarigan	33.67	324	*e*P	P	09 23 29.6	-0.9
	131nm,1.5s						
FITZ	Fitzroy Crossi	39.18	255	*e*P	P	09 24 17.1	-0.5
	4.9nm,1.1s						
FITZ	Fitzroy Crossi	39.18	255	P	P	09 24 16.6	-1.0
	2.0nm,0.8s,baz=91,slow=7.9,SNR=3.7						
ILAR	Eielson Array	83.47	19	P	P	09 29 16.5	0.0
	0.3nm,0.5s,baz=240,slow=5.0,SNR=6.1						
ILB	Eielson Array	83.47	19	*e*P	P	09 29 16.1	-0.4
NV01	Mina Array Sit	86.13	50	*e*P	P	09 29 29.0	-1.7
NV01				*e*S	S	09 40 06.6	+2.9
NVAR	Mina Array Bea	86.13	50	P	P	09 29 30.4	-0.4
	0.4nm,0.7s,baz=252,slow=8.4,SNR=3.0						
MK32	Makanchi Array	93.27	317	*e*P	P	09 30 05.2	+1.3
MKAR	Makanchi Array	93.27	317	P	P	09 30 05.2	+1.3
	0.3nm,0.7s,baz=104,slow=6.1,SNR=3.3						
YKA	Yellowknife Ar	94.97	27	P	P	09 30 10.9	-0.5
	0.2nm,0.6s,baz=254,slow=5.8,SNR=5.1						
YKB5	Yellowknife Ar	94.97	27	*e*P	P	09 30 10.2	-1.2

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*ISCJB **06** 09:17:58.5±1.1, 11°.5S±0°.3×165°.1E±0°.3, h10^{km}, mb3.9/8, Error ellipse: s-maj=50.4km s-min=15.6km az=137.3*

*IDC **06** 09:17:58.5±1.4, 11°.47S×165°.11E, h0^{km}, mb3.9/9, mb1 4.2/9, mb1mx3.9/43, mbtmp3.9/9, Error ellipse: s-maj=65.3km s-min=22.0km az=138.0*

ISC 06 09:18:00.0±1.2, **11°.5S**±0°.3×**165°.1E**±0°.3, **h10**^{km}**, n15,** σ**1^{s}.05**/9, **mb4.0**/8, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	20.02	242	P	Pn	09 22 35.2	+0.2
	3.9nm,0.7s,baz=80,slow=12,SNR=2.6						
STKA	Stephens Creek	29.68	223	P	P	09 24 06.7	+0.5
	0.8nm,0.4s,baz=48,slow=12,SNR=2.3						
H11S2	WAKE ISLAND Hy	29.83	3	T	T	09 56 32.4	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.83	3	T	T	09 56 32.7	
	baz=184,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.84	3	T	T	09 56 33.7	
	baz=184,slow=76,SNR=16						
WRA	Warramunga Arr	30.73	250	P	P	09 24 15.0	-0.6
	2.8nm,0.9s,baz=81,slow=8.9,SNR=4.9						
H11N1	WAKE ISLAND Hy	31.05	3	T	T	09 58 06.1	
	baz=183,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	31.06	3	T	T	09 58 05.6	
	baz=183,slow=76,SNR=8.7						
H11N2	WAKE ISLAND Hy	31.07	3	T	T	09 58 05.7	
	baz=183,slow=76,SNR=9.8						
ASAR	Alice Springs	32.02	244	P	P	09 24 26.6	-0.3
	1.7nm,0.8s,baz=70,slow=9.9,SNR=5.8						
ASAR				PcP	PcP	09 27 17.0	+0.1
	0.5nm,0.9s,baz=112,slow=2.5,SNR=3.2						
SONM	Songino Array	78.64	324	P	P	09 30 03.7	+1.4
	0.6nm,0.9s,baz=149,slow=6.1,SNR=3.0						
ILAR	Eielson Array	84.13	19	P	P	09 30 31.5	+0.5
	0.4nm,0.7s,baz=240,slow=5.8,SNR=2.6						
NVAR	Mina Array Bea	86.80	50	P	P	09 30 45.7	+0.6
	1.9nm,1.0s,baz=238,slow=8.1,SNR=5.6						
MKAR	Makanchi Array	93.40	317	P	P	09 31 14.8	-0.9
	0.5nm,0.7s,baz=108,slow=4.7,SNR=3.3						
YKA	Yellowknife Ar	95.66	27	P	P	09 31 24.0	-1.6
	0.2nm,0.8s,baz=257,slow=4.1,SNR=4.1						

IDC 06 09:19:59.8±1.9, **10°.66S**×**165°.07E, h0**^{km}**, mb3.5**/3, **mb1 3.9**/4, **mb1mx3.5**/45, **mbtmp3.7**/4, **ML4.2**/1, **Error ellipse: s-maj=53.7km s-min=34.1km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.43	174	Pn	Pn	09 22 43.8	-0.7
	1.7nm,0.3s,baz=302,slow=19,SNR=11						
WRA	Warramunga Arr	31.00	249	P	P	09 26 19.1	-0.3
	0.7nm,0.9s,baz=79,slow=8.9,SNR=3.4						
ASAR	Alice Springs	32.38	242	P	P	09 26 31.9	+0.4
	0.5nm,0.7s,baz=66,slow=9.8,SNR=4.3						
ILAR	Eielson Array	83.36	19	P	P	09 32 28.6	+0.1
	0.2nm,0.6s,baz=223,slow=4.8,SNR=4.2						

IDC 06 09:23:06.7±1.9, **10°.60S**×**165°.33E, h0**^{km}**, mb3.6**/4, **mb1 4.0**/6, **mb1mx3.6**/48, **mbtmp3.9**/6, **ML4.4**/2, **Error ellipse: s-maj=42.6km s-min=32.7km az=135.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.42	282	Pn	Pn	09 24 29.8	+1.0
	43nm,0.3s,baz=77,slow=19,SNR=7.6						
DZM	Mont Dzumac	11.46	175	Pn	Pn	09 25 52.2	+0.4
	0.7nm,0.3s,baz=337,slow=18,SNR=5.4						
CTA	Charters Tower	20.65	241	P	P	09 27 49.1	+0.9
	2.5nm,0.7s,baz=56,slow=11,SNR=3.0						
WRA	Warramunga Arr	31.25	249	P	P	09 29 27.9	-0.6
	0.6nm,0.8s,baz=79,slow=8.5,SNR=3.7						
ASAR	Alice Springs	32.63	242	P	P	09 29 40.0	-0.5
	0.8nm,0.6s,baz=63,slow=10,SNR=19						
ILAR	Eielson Array	83.22	19	P	P	09 35 34.7	+0.1
	0.4nm,0.9s,baz=226,slow=4.7,SNR=3.1						

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*IDC **06** 09:23:45.7±0.8, 10°.85S×164°.46E, h0^{km}, mb4.2/15, mb1 4.4/18, mb1mx4.3/48, mbtmp4.3/18, ML4.4/3, MS5.0/1, Ms1 4.9/1, ms1mx4.6/2, Error ellipse: s-maj=27.5km s-min=17.0km az=128.0*

ISC 06 09:23:51.5±0.5, **10°.86S**±0°.09×**164°.24E**±0°.08, **h29**^{km}**, n31,** σ**2^{s}.26**/30, **mb4.2**/17, **1C, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.46	288	*e*P	Pn	09 25 00.0	+2.8
HNR	Honiara	4.46	288	Pn	Pn	09 24 58.5	+1.3
	68nm,0.3s,baz=108,slow=2.0,SNR=10						
DZM	Mont Dzumac	11.35	170	*e*Pn	Pn	09 26 30.2	-1.6
	924nm,1.2s						
DZM				*e*LR	LR	09 29 10.3	
	comp=Z,21μm,23.4s						
DZM	Mont Dzumac	11.35	170	Pn	Pn	09 26 30.3	-1.6
	2.2nm,0.3s,baz=315,slow=10,SNR=10.0						
PATS	Pohnpei	18.54	341	*e*P	Pn	09 28 09.5	+3.1
	261nm,1.3s						
CTA	Charters Tower	19.60	240	P	Pn	09 28 19.0	-0.1
	0.2nm,0.3s,baz=61,slow=14,SNR=6.0						
STKA	Stephens Creek	29.58	222	P	P	09 29 53.5	-0.6
	1.9nm,0.7s,baz=37,slow=8.5,SNR=5.3						
STKA				LR	LR	09 40 13.6	
	comp=Z,3μm,20.4s,baz=38,slow=33						
WRA	Warramunga Arr	30.17	249	P	P	09 29 59.0	-0.4
	1.8nm,0.8s,baz=77,slow=8.9,SNR=14						
ASAR	Alice Springs	31.57	242	P	P	09 30 11.2	-0.6
	0.5nm,0.6s,baz=62,slow=10,SNR=4.5						
SAUI	Saumlaki	32.61	272	*e*P	P	09 30 23.9	+2.8
	116nm,0.8s						
PPT2	Papeete2	45.17	104	*e*S	S	09 38 51.0	+6.5
	621nm,26.0s						
PPT2				*e*LQ	LQ	09 42 50.7	
	4μm,32.2s						
PPT2				*e*LR	LR	09 44 53.3	
	comp=Z,4μm,23.5s,baz=274						
TBI	Tubuai	45.77	112	*e*S	S	09 38 57.6	+4.8
	553nm,29.8s						
TBI				*e*LQ	LQ	09 43 14.2	
	10μm,29.2s						
TBI				*e*LR	LR	09 45 05.9	
	comp=Z,3μm,27.0s,baz=287						
TAOE	Nuku Hiva Isla	54.77	93	*e*S	S	09 41 00.1	+1.5
	942nm,25.2s						
TAOE				*e*LR	LR	09 49 21.9	
	comp=Z,2μm,26.0s						
RKT	Rikitea	59.04	110	*e*S	S	09 42 00.4	+5.8
	492nm,29.2s						
RKT				*e*LQ	LQ	09 48 45.1	
	3μm,30.8s						
RKT				*e*LR	LR	09 51 18.2	
	comp=Z,2μm,24.5s,baz=277						
YSS	Yuzh-Sakhalins	60.67	343	*e*P	P	09 34 02.2	+2.3
USRK	Ussuriysk Ar.	62.13	334	P	P	09 34 10.0	+0.1
	4.8nm,1.0s,baz=139,slow=6.8,SNR=8.8						
PETK	Petropavlovsk-	63.96	356	P	P	09 34 20.5	-1.3
	5.2nm,0.9s,baz=153,slow=8.3,SNR=4.2						
CN2	Changchun	64.83	330	*e*P	P	09 34 29.7	+1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,700nm,18.0s						
CN2				LR	LR		
	comp=E,800nm,18.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
GRNR	Gornyy	65.98	341	*e*P	P	09 34 37.9	+2.9
KLR	Kul'dur	66.31	337	P	P	09 34 36.5	-0.7
	comp=Z,6.0nm,1.0s,baz=141,slow=4.2,SNR=14						
SEY	Seymchan	74.14	354	P	P	09 35 23.1	-1.7
	comp=Z,1.2nm,0.6s,baz=124,slow=7.4,SNR=4.3						
SONM	Songino Array	77.65	324	P	P	09 35 44.6	-0.8
	comp=Z,1.7nm,1.0s,baz=138,slow=6.2,SNR=7.2						
GTA	Gaotai	77.87	314	⇑P	P	09 35 47.4	+0.6
GTA				pP	pP	09 35 52.9	-1.7
GTA				sP	PcP	09 35 55.7	-0.9
ILAR	Eielson Array	83.81	19	P	P	09 36 15.9	-1.9
	comp=Z,5.7nm,0.9s,baz=239,slow=5.5,SNR=21						
NVAR	Mina Array Bea	87.03	50	P	P	09 36 31.5	-3.4
	comp=Z,1.6nm,0.9s,baz=235,slow=7.8,SNR=4.8						
INK	Inuvik	90.21	19	P	P	09 36 48.4	-0.4
	comp=Z,2.1nm,1.0s,baz=202,slow=5.1,SNR=4.5						
MKAR	Makanchi Array	92.38	317	P	P	09 36 59.0	-0.4

	comp=Z,2.9nm,0.9s,baz=100,slow=6.4,SNR=12						
ZALV	Zalesovo Beam	92.54	324	P	P	09 36 59.0	-1.0
	comp=Z,0.4nm,0.4s,baz=134,slow=4.3,SNR=3.9						
YKA	Yellowknife Ar	95.49	27	P	P	09 37 11.2	-2.1
	comp=Z,0.2nm,0.7s,baz=262,slow=4.6,SNR=5.1						
TXAR	Lajitas Array	97.04	62	P	P	09 37 20.6	-0.7
	comp=Z,0.2nm,0.8s,baz=224,slow=4.7,SNR=3.8						
KEST	Kesra	146.36	321	PKPbc	PKPbc	09 43 28.9	-1.3
	comp=Z,11nm,1.0s,baz=226,slow=4.3,SNR=5.6						

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*IDC **06** 09:23:58.2±0.4, 10°.85S×164°.40E, h0^{km}, mb4.9/28, mb1 5.0/31, mb1mx4.9/47, mbtmp4.9/31, ML5.2/3, Error ellipse: s-maj=15.0km s-min=12.1km az=98.0*

*MOS **06** 09:24:00.2±0.8, 10°.76S×164°.29E, h19^{km}, mb5.3/41, Error ellipse: s-maj=9.0km s-min=8.2km az=78.9*

*NEIC **06** 09:24:00.2±0.1, 10°.77S×164°.33E, h10^{km}, mb5.2/125, Error ellipse: s-maj=4.5km s-min=3.8km az=135.0*

*ISCJB **06** 09:24:01.8±0.1, 10°.77S±0°.03×164°.27E±0°.03, h29^{km}, mb5.1/162, MS5.2/1, Error ellipse: s-maj=4.8km s-min=3.6km az=142.9*

ISC 06 09:24:03.1±0.3**, 10°.79S**±0°.05×**164°.41E**±0°.05**, h29^{km}, n357, σ1^{s}35**/355**, mb5.1**/168**, 11C-9D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.60	287	Pn	Pn	09 25 10.9	+0.2
	111nm,0.3s,baz=226,slow=2.5,SNR=6.5						
HNR				Sn	Sn	09 26 04.0	+0.9
	baz=106,slow=20,SNR=2.7						
MARNC	Mare, Loyalty	11.18	162	*e*Pn	Pn	09 26 42.2	+1.2
DZM	Mont Dzumac	11.38	170	Pn	Pn	09 26 43.3	-0.6
	17nm,0.3s,baz=26,slow=15,SNR=23						
DZM				Sn	Sn	09 28 49.3	-0.9
	0.7nm,0.3s,baz=121,slow=19,SNR=2.6						
PINNC	Pines Island,	12.11	167	*e*Pn	Pn	09 26 54.2	+0.5
TARA	Tarawa	14.74	36	*e*Pn	Pn	09 27 27.3	-2.5
MSVF	Nonsavu	14.90	119	*e*Pn	Pn	09 27 28.2	-3.8
	109nm,1.3s						
MSVF	Nonsavu	14.90	119	*e*P	Pn	09 27 28.2	-3.8
MSVF				pmax	pmax		
	comp=Z,109nm,1.3s						
EIDS	Eidsvold	19.23	219	P	Pn	09 28 28.1	+1.9
	baz=20,SNR=12						
KWAJ	Kwajalein Atol	19.73	9	*e*P	Pn	09 28 31.4	-0.7
	comp=Z,598nm,1.3s						
CTA	Charters Tower	19.77	240	P	P	09 28 31.5	+0.4
	comp=Z,5.4nm,0.3s,baz=73,slow=12,SNR=23						
CTAO	Charters Tower	19.77	240	*e*P	P	09 28 29.4	-1.7
	comp=Z,933nm,1.0s						
CTAO	Charters Tower	19.77	240	*e*P	P	09 28 29.4	-1.7
CTAO				pmax	pmax		
	comp=Z,933nm,1.0s						
MTSU	Mount Surprise	20.77	247	P	P	09 28 42.7	+0.8
	baz=21,SNR=19						
COEN	Coen	20.98	259	P	P	09 28 44.5	+0.3
	baz=21,SNR=26						
RMQ	Roma	21.49	221	P	P	09 28 52.6	+3.0
	baz=22,SNR=5.7						
ARMA	Armidale	22.86	209	P	P	09 29 03.3	-1.0
	baz=23						
QLP	Quilpie	24.68	228	P	P	09 29 22.5	+0.8
	baz=25,SNR=6.0						
RAO	Raoul Island	24.69	141	*e*P	P	09 29 24.1	+2.4
	comp=Z,1µm,0.9s						
RAO	Raoul Island	24.69	141	*e*P	P	09 29 24.1	+2.4
RAO				pmax	pmax		
	comp=Z,1µm,0.9s						
KNTN	Kanton	24.99	73	*e*P	P	09 29 30.2	+5.7
	comp=Z,133nm,1.2s						
MGCD	Mangrove Creek	25.44	207	P	P	09 29 31.2	+2.8
	baz=26,SNR=5.3						
OUZ	Omahuta	25.71	162	*e*P	P	09 29 35.4	+4.5
	comp=Z,161nm,1.7s						
QIS	Mount Isa	25.75	245	P	P	09 29 30.5	-0.9
	baz=26,SNR=8.0						
CMSA	Cobar Meteorol	26.95	217	P	P	09 29 43.6	+1.5
	baz=28,SNR=8.9						
CNB	Canberra Magne	27.99	207	P	P	09 29 54.2	+2.7
	baz=29,SNR=5.7						
CAN	Canberra	28.16	207	*e*P	P	09 29 55.5	+2.5
	comp=Z,37nm,1.3s						
CAN	Canberra	28.16	207	*e*P	P	09 29 55.5	+2.5
CAN				pmax	pmax		
	comp=Z,37nm,1.3s						
H11S2	WAKE ISLAND Hy	29.18	4	T	T	10 00 25.4	
	baz=184,slow=76,SNR=50						
H11S3	WAKE ISLAND Hy	29.19	4	T	T	10 00 27.3	
	baz=184,slow=76,SNR=54						
H11S1	WAKE ISLAND Hy	29.20	4	T	T	10 00 28.3	
	baz=184,slow=76,SNR=49						
URZ	Urewera	29.62	160	*e*P	P	09 30 09.7	+3.9
	comp=Z,64nm,1.3s						
URZ	Urewera	29.62	160	P	P	09 30 04.8	-1.1
	comp=Z,16nm,1.1s,baz=0.0,slow=11,SNR=3.8						
STKA	Stephens Creek	29.74	222	P	P	09 30 08.4	+1.3
	baz=30,SNR=24						
STKA	Stephens Creek	29.74	222	*e*P	P	09 30 07.9	+0.8
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	29.74	222	P	P	09 30 07.1	+0.1
STKA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
STKA	Stephens Creek	29.74	222	P	P	09 30 07.1	+0.1
	comp=Z,16nm,0.7s,baz=20,slow=9.3,SNR=5.4						
BKZ	Black Stump Fm	30.24	161	*e*P	P	09 30 16.2	+4.8
	comp=Z,43nm,1.0s						
WC3	Warramunga Arr	30.32	249	*e*P	P	09 30 10.9	-1.4
	comp=Z,50nm,1.2s						
WRAB	Tennant Creek	30.33	249	*e*P	P	09 30 09.2	-3.3
	comp=Z,32nm,0.9s						
WRAB	Tennant Creek	30.33	249	*c i*P	P	09 30 11.3	-1.1
WB2	Warramunga Arr	30.33	249	*e*P	P	09 30 10.9	-1.5
WRA	Warramunga Arr	30.34	249	P	P	09 30 10.8	-1.7
	comp=Z,26nm,0.9s,baz=69,slow=9.1,SNR=43						
WRA				PcP	PcP	09 33 11.6	-0.8
	comp=Z,1.3nm,0.7s,baz=74,slow=3.6,SNR=5.0						
H11N1	WAKE ISLAND Hy	30.41	5	T	T	10 01 54.7	
	baz=184,slow=76,SNR=58						
H11N3	WAKE ISLAND Hy	30.42	5	T	T	10 01 55.1	
	baz=184,slow=76,SNR=80						
H11N2	WAKE ISLAND Hy	30.43	5	T	T	10 01 56.0	
	baz=184,slow=76,SNR=55						
KDU	Kakadu	31.32	263	P	P	09 30 18.7	-2.4
	baz=32,SNR=12						
BFZ	Birch Farm	31.55	163	*e*P	P	09 30 28.2	+5.3
	comp=Z,193nm,1.5s						
AS01	Alice Springs	31.70	242	*e*P	P	09 30 22.8	-1.7
SNZO	South Karori	31.72	165	*e*P	P	09 30 27.9	+3.5
	comp=Z,139nm,1.5s						
THZ	Tophouse	31.74	168	*e*P	P	09 30 26.4	+1.8
	comp=Z,30nm,0.9s						
AS31	Alice Springs	31.74	242	*e*P	P	09 30 23.6	-1.3
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	31.74	242	P	P	09 30 22.8	-2.1
	comp=Z,6.5nm,0.6s,baz=66,slow=9.9,SNR=32						
ASAR				PcP	PcP	09 33 15.0	-1.1
	comp=Z,1.2nm,0.6s,baz=74,slow=1.7,SNR=5.6						
HTT	Hallett	32.47	222	P	P	09 30 31.8	+0.7
	baz=33,SNR=19						
FAKI	Fak Fak	32.85	281	*e*P	P	09 30 32.2	-2.5
	comp=Z,22nm,1.2s						
OXZ	Oxford	33.08	170	*e*P	P	09 30 35.3	-1.0
	comp=Z,97nm,1.6s						
RPZ	Rata Peaks	33.30	171	*e*P	P	09 30 35.9	-2.4
	comp=Z,38nm,0.8s						
RPZ	Rata Peaks	33.30	171	P	P	09 30 36.5	-1.7
	comp=Z,18nm,0.8s,baz=338,slow=4.3,SNR=8.7						
MQZ	McQueen's Vall	33.56	169	*e*P	P	09 30 42.9	+2.5
	comp=Z,80nm,1.4s						
BBOO	Buckleboo	34.06	226	P	P	09 30 45.1	+0.1
	baz=35,SNR=12						
WKZ	Wanaka	34.14	174	*e*P	P	09 30 45.7	+0.1
	comp=Z,166nm,1.7s						
BNDI	Bandanaira	34.74	278	P	P	09 30 50.8	-0.3
KNRA	Kununurra	35.01	258	P	P	09 30 51.7	-1.6
	baz=36						
WRKA	Warakurna	37.03	243	P	P	09 31 09.0	-1.7
	baz=38,SNR=9.6						
NLAI	Namlea	37.75	279	P	P	09 31 16.7	-0.1
FITZ	Fitzroy Crossi	38.18	254	P	P	09 31 18.5	-1.9
	baz=39,SNR=5.7						
SANI	Sanana	39.12	280	P	P	09 31 28.2	-0.1
	comp=Z,45nm,1.1s,comp=Z,1µm						
FORT	Forrest	39.12	234	P	P	09 31 28.6	+0.4
	baz=40						
BATI	Baumata	40.05	267	P	P	09 31 35.9	-0.3
	comp=Z,38nm,0.5s,baz=129,slow=6.5,SNR=4.1						
MMRI	Maumere	41.60	269	P	P	09 31 48.5	-0.4
EDFI	Ende, Flores	42.13	269	P	P	09 31 52.8	-0.5
MBWA	Marble Bar	44.04	251	*e*P	P	09 32 07.2	-1.5
	comp=Z,18nm,0.8s						
BNSI	Bone	44.34	275	P	P	09 32 10.9	-0.2
MEEK	Meekatharra	45.88	243	P	P	09 32 22.3	-1.0
	baz=46,SNR=8.0						
PLAI	Plampang	45.96	268	P	P	09 32 22.5	-1.5
	comp=Z,33nm,1.4s						
MORW	Morawa	48.60	241	P	P	09 32 44.6	+0.2
	baz=49,SNR=3.2						
JHJ2	Mitsune	49.56	333	*e*P	P	09 32 49.8	-1.7
KKM	Kota Kinabalu	50.81	287	*e*P	P	09 33 01.3	-0.2
	comp=Z,34nm,0.9s						
JNU	Nakatsue	54.12	325	*e*P	P	09 33 25.1	-0.5
	comp=Z,56nm,1.0s						
JNU	Nakatsue	54.12	325	P	P	09 33 25.2	-0.4
	comp=Z,20nm,0.7s,baz=68,slow=2.6,SNR=12						
YULB	Yu-li	54.16	309	*e*P	P	09 33 22.7	-3.4
	comp=Z,24nm,0.9s						
TPUB	Ta-pu	54.62	309	*e*P	P	09 33 28.7	-0.7
	comp=Z,38nm,0.9s						
DBJI	Dramaga	57.09	269	P	P	09 33 58.6	+11
SSE	Sheshan	58.77	317	P	P	09 33 59.8	+1.1
SSE				pmax	pmax		
	comp=Z,19nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,4.3s						
SSE	Sheshan	58.77	317	*e*P	P	09 33 58.1	-0.6
	comp=Z,55nm,0.8s						
KSRS	Korea Array	58.94	326	P	P	09 34 00.3	+0.6
	comp=Z,5.8nm,0.9s,baz=138,slow=7.4,SNR=11						
KSAR	Wonju Array Be	58.95	326	P	P	09 34 00.3	+0.4
KSAR	Wonju Array Be	58.95	326	P	P	09 34 00.3	+0.4
KS01	Wonju Array Si	58.97	326	*e*P	P	09 34 00.2	+0.2
YSS	Yuzh-Sakhalins	60.66	343	*e*P	P	09 34 12.2	+0.8
	comp=Z,46nm,1.3s						
YSS	Yuzh-Sakhalins	60.66	343	*e*	P	09 34 13.3	+1.9
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
NJ2	Nanjing	60.93	316	*e*P	P	09 34 13.2	-0.3
NJ2				pmax	pmax		
	comp=Z,27nm,1.0s						
MSHR	Mys Shultsa	61.22	332	⇓*e*P	P	09 34 17.8	+2.5
QIZ	Qiongzhong	61.41	299	P	P	09 34 18.9	+1.8
QIZ				S	S	09 42 40.1	+3.5
QIZ				pmax	pmax		
	comp=Z,14nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,160nm,4.4s						
QIZ				LR	LR		
	comp=N,430nm,27.5s						
QIZ				LR	LR		
	comp=E,490nm,17.7s						
QIZ				LR	LR		
	comp=Z,490nm,26.5s						
QIZ	Qiongzhong	61.41	299	*e*P	P	09 34 14.8	-2.3
	comp=Z,38nm,1.4s						
USA0B	Ussuriysk Arra	62.14	334	*e*P	P	09 34 21.2	-0.3
	comp=Z,26nm,1.0s						
USRK	Ussuriysk Ar.	62.14	334	P	P	09 34 20.8	-0.7
	comp=Z,4.3nm,0.6s,baz=137,slow=10,SNR=11						
WHN	Wuhan	63.25	312	⇓P	P	09 34 27.8	-1.4
MDJ	Mudanjiang	63.52	333	P	P	09 34 32.4	+1.7
MDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,420nm,4.2s						
MDJ	Mudanjiang	63.52	333	*e*P	P	09 34 31.4	+0.8
	comp=Z,27nm,1.1s						
PETK	Petropavlovsk-	63.91	355	P	P	09 34 34.0	+1.0
	comp=Z,8.0nm,0.7s,baz=158,slow=8.7,SNR=8.4						
TYV	Tymovskoe	64.25	345	*e*P	P	09 34 35.5	+0.1
TYV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TIA	Tai'an	64.56	319	P	P	09 34 33.9	-3.8
TIA				pmax	pmax		
	comp=Z,3.0nm,1.6s						
IPM	Ipoh	64.89	280	*e*P	P	09 34 39.9	-0.4
	comp=Z,28nm,0.8s						
CASY	Casey	66.14	201	*e*P	P	09 34 48.0	+0.6
	comp=Z,18nm,1.0s						
KLR	Kul'dur	66.31	337	⇓*i*P	P	09 34 49.8	+1.0
KLR	Kul'dur	66.31	337	P	P	09 34 49.0	+0.2
	comp=Z,5.4nm,0.8s,baz=136,slow=5.4,SNR=9.8						
PSI	Prapat	66.54	278	P	P	09 34 50.0	-1.1
	comp=Z,11nm,0.7s,baz=179,slow=3.6,SNR=11						
ENH	Enshi	66.72	310	*e*P	P	09 34 50.6	-1.3
	comp=Z,34nm,1.0s						
VNDA	Vanda	66.73	181	P	P	09 34 51.5	+0.5
	comp=Z,9.2nm,0.9s,baz=336,slow=6.1,SNR=4.3						
GYA	Guiyang	67.20	305	⇑*i*P	P	09 34 55.5	+0.5
GYA				PP	PP	09 37 25.0	+1.5
GYA				S	S	09 43 48.2	0.0
GYA				SKS	SKSac	09 44 49.6	-1.4
GYA	Guiyang	67.20	305	SS	SS	09 48 09.4	+1.2
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,6.5s						
GYA				LR	LR		
	comp=N,590nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
GSI	Gunungsitoli	67.53	276	*e*P	P	09 34 56.6	-0.7
	comp=Z,32nm,0.8s						
PBKT	Sadao Pong	68.37	293	*e*P	P	09 35 02.3	-0.2
	comp=Z,17nm,0.7s						
XAN	Xi'an	68.99	313	P	P	09 35 05.6	-0.5
XAN				pP	pwP	09 35 21.2	+1.3
XAN				sP	PcP	09 35 28.9	-1.3
XAN				S	S	09 44 08.8	-0.4
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN				LR	LR		
	comp=N,590nm,21.7s						
XAN				LR	LR		
	comp=E,790nm,21.7s						
XAN				LR	LR		
	comp=Z,1µm,21.7s						
XAN	Xi'an	68.99	313	*e*P	P	09 35 05.1	-1.0
	comp=Z,20nm,1.1s						
XAN	Xi'an	68.99	313	*e*P	P	09 35 05.1	-1.0
XAN				pmax	pmax		
	comp=Z,20nm,1.1s						
KMI	Kunming	69.87	302	P	P	09 35 14.0	+2.1
KMI				pP	pP	09 35 20.5	+0.4
KMI				pmax	pmax		
	comp=Z,26nm,1.5s						
CM01	Chiang Mai Arr	70.79	294	*e*P	P	09 35 17.4	0.0
HHC	Hu-ho-hao-te	70.80	320	*e*P	P	09 35 17.9	+0.8
HHC				S	S	09 44 31.0	+0.7
HHC	Hu-ho-hao-te	70.80	320	SS	SS	09 49 05.1	+1.8
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,270nm,5.4s						
HHC				LR	LR		
	comp=N,930nm,18.4s						
HHC				LR	LR		
	comp=E,810nm,21.4s						
HHC				LR	LR		
	comp=Z,2µm,20.6s						
CMAR	Chiang Mai Arr	70.81	294	P	P	09 35 17.1	-0.4
	comp=Z,8.7nm,0.8s,baz=122,slow=4.6,SNR=22						
CHTO	Chiang Mai	70.93	294	*e*P	P	09 35 17.6	-0.6
CHTO	Chiang Mai	70.93	294	*e*P	P	09 35 17.6	-0.6
CHTO	Chiang Mai	70.93	294	P	P	09 35 19.4	+1.2
	comp=Z,52nm,1.2s,comp=Z,2µm						
MA2	Magadan	70.99	353	⇑*e*P	P	09 35 18.1	+0.4
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
MA2	Magadan	70.99	353	P	P	09 35 17.8	+0.1
	comp=Z,8.4nm,0.6s,baz=200,slow=5.7,SNR=5.0						
CD2	Chengdu	71.41	308	P	P	09 35 20.0	-1.0
CD2				PP	PP	09 37 58.0	-1.8
CD2				S	S	09 44 40.0	+2.3
CD2				pmax	pmax		
	comp=Z,120nm,0.6s						
CD2				pmax	pmax		
	comp=Z,530nm,3.8s						
CD2				LR	LR		
	comp=N,550nm,11.4s						
CD2				LR	LR		
	comp=E,1µm,16.9s						
CD2				LR	LR		
	comp=Z,960nm,17.3s						
HIA	Hailar	71.51	331	*e*P	P	09 35 21.1	0.0
	comp=Z,26nm,1.0s						
HIA	Hailar	71.51	331	⇓*i*P	P	09 35 22.4	+1.3
HIA				pmax	pmax		
	comp=Z,23nm,1.0s						
BTO	Baotou	71.64	319	*e*P	P	09 35 15.9	-6.3
BTO				S	S	09 44 38.5	-1.6
BTO				LR	LR		
	comp=N,693µm,10.8s						
BTO				LR	LR		
	comp=E,1128µm,18.4s						
LZH	Lanzhou	73.62	313	*e*P	P	09 35 35.6	+1.4
LZH				pP	pP	09 35 40.0	-1.9
LZH				sP	sP	09 35 43.8	-1.0
LZH				PP	PP	09 38 21.1	+2.3
LZH				pmax	pmax		
	comp=Z,41nm,1.6s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=N,630nm,16.3s						
LZH				LR	LR		
	comp=E,610nm,16.4s						
LZH				LR	LR		
	comp=Z,670nm,17.5s						
SEY	Seymchan	74.09	354	⇑*i*P	P	09 35 37.3	+1.2
SEY	Seymchan	74.09	354	P	P	09 35 35.8	-0.3
	comp=Z,5.5nm,0.7s,baz=172,slow=6.8,SNR=13						
CIT	Chita	76.29	330	*e*P	P	09 35 49.6	+0.5
CIT				*e*		09 35 57.1	
GAMB	Gambell	76.56	11	*e*P	P	09 35 51.7	+1.5
	comp=Z,22nm,1.0s						
KDAK	Kodiak Island	76.83	22	P	P	09 35 51.4	-0.5
	comp=Z,9.6nm,0.8s,baz=256,slow=4.0,SNR=4.1						
ULN	Ulaanbaatar	77.33	324	*e*P	P	09 35 54.8	-0.4
	comp=Z,19nm,1.0s						
ULN	Ulaanbaatar	77.33	324	*c i*P	P	09 35 56.1	+0.9
ULN				pmax	pmax		
	comp=Z,22nm,1.0s						
YAK	Yakutsk	77.49	344	*e*P	P	09 35 54.3	-1.2
YAK				pmax	pmax		
	comp=Z,23nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.7s						
SONM	Songino Array	77.69	324	P	P	09 35 57.7	+0.5
	comp=E,7.1nm,0.7s,baz=144,slow=6.1,SNR=28						
SONA1	Songino Array	77.69	324	*e*P	P	09 35 57.6	+0.3
GTA	Gaotai	77.94	314	⇓P	P	09 36 00.8	+2.0
GTA				pP	pP	09 36 07.1	+0.6
GTA				sP	sP	09 36 10.7	+1.2
GTA	Gaotai	77.94	314	S	S	09 45 53.3	+2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,18nm,1.4s						
GTA				pmax	pmax		
	comp=Z,300nm,5.1s						
GTA				LR	LR		
	comp=N,390nm,18.4s						
GTA				LR	LR		
	comp=E,660nm,19.4s						
GTA				LR	LR		
	comp=Z,950nm,20.6s						
ANM	Nome	78.53	13	*e*P	P	09 36 01.8	+0.5
	comp=Z,26nm,1.2s						
ANM	Nome	78.53	13	*e*P	P	09 36 01.8	+0.5
ANM				pmax	pmax		
	comp=Z,26nm,1.2s						
HOM	Homer	78.53	21	*e*P	P	09 36 02.8	+1.4
	comp=Z,71nm,0.8s						
BRDH	Bariadhala	78.61	296	P	P	09 36 03.4	+0.8
	comp=Z,43nm,0.4s,baz=76,slow=6.2,SNR=5.8						
BILL	Bilibino	78.64	1	*e*P	P	09 36 02.1	+0.3
	comp=Z,16nm,0.8s						
BILL	Bilibino	78.64	1	⇑*e*P	P	09 36 05.2	+3.4
BILL				pmax	pmax		
	comp=Z,51nm,2.5s						
RSO	Redoubt South	78.73	20	*e*P	P	09 36 03.5	+0.7
BRLK	Bradley Lake	78.87	21	*e*P	P	09 35 60.0	-3.4
	comp=Z,26nm,0.8s						
QSPA	South Pole Qui	79.21	180	*e*P	P	09 36 05.8	+0.5
	comp=Z,133nm,0.8s						
SHL	Shillong	79.25	299	*e*P	P	09 36 07.5	+1.2
BOD	Bodaibo	79.75	335	*e*P	P	09 36 03.5	-4.6
BOD				pmax	pmax		
	comp=Z,13nm,1.8s						
SUA	Susitna One	80.14	20	*e*P	P	09 36 09.4	-0.9
	comp=Z,23nm,1.0s						
RC01	Rabbit Creek A	80.22	21	*e*P	P	09 36 10.5	0.0
	comp=Z,21nm,1.0s						
ZAK	Zakamensk	80.75	325	*e*P	P	09 36 13.2	-0.6
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s						
PMR	Palmer	80.78	21	*e*P	P	09 36 13.3	-0.2
	comp=Z,24nm,1.1s						
PMR	Palmer	80.78	21	*e*P	P	09 36 13.3	-0.2
PMR				pmax	pmax		
	comp=Z,24nm,1.1s						
KNK	Knik Glacier	80.89	21	*e*P	P	09 36 15.5	+1.3
	comp=Z,16nm,1.0s						
GLI	Glacier Island	81.01	22	*e*P	P	09 36 15.1	+0.3
	comp=Z,22nm,0.9s						
LSA	Lhasa	81.11	303	*e*P	P	09 36 18.2	+1.6
	comp=Z,16nm,1.1s						
TLY	Talaya	81.19	327	*e*P	P	09 36 15.4	-0.6
	comp=Z,29nm,1.1s						
TLY	Talaya	81.19	327	⇑*i*P	P	09 36 17.0	+1.0
SML	Sawmill	81.20	21	*e*P	P	09 36 15.8	-0.1
	comp=Z,71nm,1.6s						
SML	Sawmill	81.20	21	*e*P	P	09 36 15.8	-0.1
SML				pmax	pmax		
	comp=Z,71nm,1.6s						
EYAK	Cordova Ski Ar	81.29	22	*e*P	P	09 36 16.2	-0.1
	comp=Z,39nm,1.2s						
DIV	Divide	81.66	22	*e*P	P	09 36 18.6	+0.2
	comp=Z,18nm,0.8s						
TRF	Thorofare Moun	81.70	19	*e*P	P	09 36 18.4	-0.3
	comp=Z,20nm,1.0s						
HMT	Hamilton	81.72	23	*e*P	P	09 36 19.3	+0.7
	comp=Z,38nm,1.1s						
KLU	Klutina	81.84	22	*e*P	P	09 36 19.2	-0.1
	comp=Z,15nm,0.9s						
BPAW	Bear Paw Mtn.	81.95	18	*e*P	P	09 36 19.5	-0.3
	comp=Z,20nm,1.3s						
RDOG	Red Dog Mine	82.04	12	*e*P	P	09 36 17.3	-2.9
	comp=Z,33nm,0.8s						
RND	Reindeer	82.13	19	*e*P	P	09 36 20.8	0.0
	comp=Z,27nm,1.0s						
RND	Reindeer	82.13	19	*e*P	P	09 36 20.8	0.0
RND				pmax	pmax		
	comp=Z,27nm,1.0s						
MCK	McKinley	82.33	19	*e*P	P	09 36 21.8	0.0
	comp=Z,45nm,1.1s						
MCK	McKinley	82.33	19	*e*P	P	09 36 21.8	0.0
MCK				pmax	pmax		
	comp=Z,45nm,1.1s						
DHY	Denali Highway	82.39	20	*e*P	P	09 36 22.7	+0.4
	comp=Z,15nm,0.9s						
MOY	Mondy	82.63	326	*e*P	P	09 36 27.0	+3.3
HARP	HAARP	82.72	21	*e*P	P	09 36 23.6	-0.2
	comp=Z,32nm,0.9s						
TAPN	Taplejung	83.34	299	*e*P	P	09 36 28.6	+0.4
HDA	Harding Lake	83.43	19	P	P	09 36 27.8	+0.3
	baz=228						
TCOL	CIGO, UAF Yank	83.46	19	P	P	09 36 28.3	+0.8
	baz=227						
COLA	College	83.46	19	*e*P	P	09 36 28.2	+0.7
	comp=Z,54nm,0.9s						
COLA	College	83.46	19	*c i*P	P	09 36 28.5	+1.0
COLA				pmax	pmax		
	comp=Z,42nm,0.9s						
ODAN	Odare	83.48	299	*e*P	P	09 36 29.0	+0.1
	comp=Z,78nm,1.1s						
ILAR	Eielson Array	83.69	19	P	P	09 36 28.9	+0.1
	comp=Z,17nm,0.8s,baz=216,slow=5.2,SNR=21						
POKR	Poker Plat Res	83.76	18	P	P	09 36 28.8	-0.3
	baz=228						
KNGR	Kungurtug, Tuv	84.13	324	⇑*e*P	P	09 36 31.1	-0.4
RAMN	Ramite	84.19	299	*e*P	P	09 36 31.6	-0.9
WDC	Whiskeytown Da	84.40	47	*e*P	P	09 36 32.5	-0.4

	comp=Z,19nm,1.5s						
WDC	Whiskeytown Da	84.40	47	eP	P	09 36 32.5	-0.4
WDC				pmax	pmax		
	comp=Z,19nm,1.5s						
N02D	Trinity Center	84.41	47	P	P	09 36 34.0	+1.0
	baz=251						
M02C	Callahan	84.44	46	P	P	09 36 34.1	+0.8
	baz=250						
PRP	Porcupine Dome	84.62	19	eP	P	09 36 33.2	-0.5
	comp=Z,7.6nm,1.0s						
YBH	Yreka Blue Hor	84.66	46	eP	P	09 36 35.8	+1.5
	comp=Z,22nm,1.3s						
HYT	Haines Junctio	84.70	25	eP	P	09 36 34.5	+0.4
	comp=Z,16nm,0.9s						
JIRN	Jiri	84.72	299	eP	P	09 36 34.6	-0.7
	comp=Z,41nm,0.8s						
ORV	Oroville	84.82	48	eP	P	09 36 35.1	0.0
	comp=Z,6.8nm,1.1s						
ORV	Oroville	84.82	48	eP	P	09 36 35.1	0.0
ORV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
O03E	Paynes Creek	84.84	48	P	P	09 36 35.3	+0.1
	baz=251						
SKAG	Skagway	84.90	26	eP	P	09 36 35.9	+0.9
	comp=Z,37nm,1.1s						
AFDM	Forest Hills D	85.02	49	eP	P	09 36 36.0	-0.1
	comp=Z,31nm,1.5s						
GUN	Gumba	85.05	299	eP	P	09 36 36.3	-0.7
	comp=Z,93nm,1.2s						
CMB	Columbia Colle	85.18	50	eP	P	09 36 36.9	-0.1
	comp=Z,8.2nm,1.1s						
CMB	Columbia Colle	85.18	50	eP	P	09 36 36.9	-0.1
CMB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PALK	Pallekele	85.22	278	eP	P	09 36 37.5	-0.1
	comp=Z,31nm,1.3s						
PALK	Pallekele	85.22	278	P	P	09 36 37.6	0.0
	comp=Z,12nm,0.8s,baz=115,slow=2.7,SNR=5.3						
PKI	Pulchoki	85.37	299	eP	P	09 36 37.1	-1.4
	comp=Z,80nm,1.2s						
PKIN	Phulchoki	85.38	299	eP	P	09 36 37.2	-1.3
	comp=Z,23nm,0.7s						
FYU	Fort Yukon	85.40	18	eP	P	09 36 38.3	+1.0
	comp=Z,12nm,0.8s						
TIXI	Tiksi	85.60	349	eP	P	09 36 37.2	-1.0
	comp=Z,15nm,1.1s						
TIXI	Tiksi	85.60	349	deP	P	09 36 38.7	+0.5
TIXI				pmax	pmax		
	comp=Z,18nm,1.7s						
DMN	Daman	85.64	299	eP	P	09 36 38.9	-0.9
	comp=Z,162nm,1.4s						
WHY	Whitehorse	85.71	26	eP	P	09 36 40.3	+1.1
	comp=Z,7.4nm,1.0s						
DAWY	Dawson	85.80	21	eP	P	09 36 36.6	-2.9
	comp=Z,29nm,1.2s						
ISA	Isabella, Lake	85.96	53	P	P	09 36 41.2	+0.3
	baz=254						
WAKR	Walker	86.03	50	eP	P	09 36 41.9	+0.5
	comp=Z,30nm,1.5s						
MDPB	Devils Postpil	86.05	51	eP	P	09 36 41.6	0.0
	comp=Z,8.8nm,1.0s						
PNTR	Pine Nut	86.08	49	eP	P	09 36 42.0	+0.3
	comp=Z,15nm,1.2s						
OMMB	Old Mammoth Mi	86.11	51	eP	P	09 36 42.0	+0.1
	comp=Z,8.7nm,1.2s						
EDW2	Edwards Air Fo	86.12	54	P	P	09 36 41.9	+0.1
	baz=254						
J05D	Fort Rock, OR	86.19	45	P	P	09 36 42.1	+0.1
	baz=252						
YERR	Yerington	86.32	49	eP	P	09 36 43.3	+0.5
	comp=Z,16nm,1.6s						
PAHR	Pah Rah Range	86.42	49	eP	P	09 36 43.6	+0.4
	comp=Z,19nm,1.4s						
PINE	Pine Mountain	86.56	44	eP	P	09 36 44.9	+1.1
	comp=Z,12nm,1.0s						
DLBC	Dease Lake	86.81	29	eP	P	09 36 46.7	+2.0
	comp=Z,23nm,1.4s						
DAC	Darwin (Calif)	86.82	52	eP	P	09 36 45.5	+0.3
	comp=Z,8.8nm,1.4s						
DAC	Darwin (Calif)	86.82	52	eP	P	09 36 45.6	+0.3
DAC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
NVAR	Mina Array Bea	86.86	50	P	P	09 36 45.6	+0.1
	comp=Z,8.1nm,1.2s,baz=236,slow=5.5,SNR=9.3						
DANN	Dangsing	86.97	299	eP	P	09 36 44.4	-2.0
NV11	Mina Array Sit	86.98	50	eP	P	09 36 46.2	+0.2
	comp=Z,1.9nm,1.5s						
KVN	Kaiserville	87.19	50	eP	P	09 36 47.1	0.0
	comp=Z,6.3nm,1.0s						
KVN	Kaiserville	87.19	50	eP	P	09 36 47.1	0.0
KVN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FURC	Furnace Creek,	87.44	52	P	P	09 36 48.7	+0.7
	baz=255						
WVOR	Wild Horse Val	87.76	46	eP	P	09 36 50.0	+0.4
	comp=Z,33nm,1.6s						
WVOR	Wild Horse Val	87.76	46	eP	P	09 36 50.0	+0.4
WVOR				pmax	pmax		
	comp=Z,33nm,1.6s						
BC3	Big Chuckawall	87.83	55	P	P	09 36 49.7	-0.5
	baz=256						
WMQ	Urumqi	87.99	315	P	P	09 36 51.5	+0.9
WMQ				pP	pP	09 36 58.7	+0.1
WMQ				sP	pwP	09 37 04.0	-0.2
WMQ				pmax	pmax		
	comp=Z,40nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,690nm,7.1s						
WMQ				LR	LR		
	comp=N,1μm,17.3s						
WMQ				LR	LR		
	comp=E,2μm,22.3s						
WMQ				LR	LR		
	comp=Z,2μm,25.7s						
WMQ	Urumqi	87.99	315	eP	P	09 36 50.5	-0.1
	comp=Z,35nm,1.4s						
TPNV	Topopah Spring	88.04	52	eP	P	09 36 50.4	-0.7
	comp=Z,11nm,1.4s						
TPNV	Topopah Spring	88.04	52	eP	P	09 36 50.4	-0.7
TPNV				pmax	pmax		
	comp=Z,11nm,1.4s						
TPNV	Topopah Spring	88.04	52	P	P	09 36 51.3	+0.2
	baz=255						
J08A	Circle Bar Ran	88.14	45	eP	P	09 36 51.3	-0.1
	comp=Z,19nm,1.2s						
IRM	Iron Mountain	88.21	55	P	P	09 36 52.5	+0.7
	baz=256						
G08A	Pilot Rock	88.36	43	eP	P	09 36 52.5	0.0
	comp=Z,12nm,1.1s						
LDFC	Landfair	88.46	54	eP	P	09 36 52.5	-0.6
	comp=Z,16nm,1.0s						
Y12C	Blythe	88.61	55	eP	P	09 36 54.2	+0.5
	comp=Z,18nm,1.4s						
Y12C	Blythe	88.61	55	P	P	09 36 55.0	+1.3
	baz=256						
SHPR	Sheep Range	88.77	53	eP	P	09 36 54.9	+0.2
	comp=Z,18nm,1.6s						
R11A	Troy Canyon, C	88.90	51	eP	P	09 36 55.4	+0.1
	comp=Z,4.2nm,1.3s						
R11A	Troy Canyon, C	88.90	51	P	P	09 36 55.3	+0.1
	baz=255						
PDMCI	Parker Dam,Lak	89.05	55	P	P	09 36 56.7	+0.9
	baz=256						
BMO	Blue Mountains	89.36	44	eP	P	09 36 56.6	-0.4
	comp=Z,22nm,1.6s						
BMO	Blue Mountains	89.36	44	eP	P	09 36 56.7	-0.4
BMO				pmax	pmax		
	comp=Z,22nm,1.6s						
F10A	Beach Ranch, E	89.72	43	eP	P	09 36 58.6	-0.2
	comp=Z,32nm,1.6s						
ELK	Elko	89.76	49	eP	P	09 36 59.6	+0.3
	comp=Z,19nm,1.6s						
ELK	Elko	89.76	49	eP	P	09 36 59.6	+0.3
ELK				pmax	pmax		
	comp=Z,19nm,1.6s						
DGZ	Jazzator, Alta	89.87	321	i P	P	09 36 59.7	+0.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MFID	Camas Ranch	90.01	46	eP	P	09 37 00.0	-0.2
	comp=Z,11nm,1.4s						
INK	Inuvik	90.09	19	eP	P	09 37 00.5	+0.7
	comp=Z,24nm,1.4s						
INK	Inuvik	90.09	19	eP	P	09 37 00.5	+0.7
INK				pmax	pmax		
	comp=Z,24nm,1.4s						
INK	Inuvik	90.09	19	P	P	09 37 01.5	+1.7
	comp=Z,7.7nm,1.1s,baz=188,slow=8.2,SNR=7.2						
PSUT	Pine Spring	90.27	51	eP	P	09 37 02.1	+0.4
	comp=Z,9.4nm,1.2s						
LCMT	Little Creek M	90.39	52	eP	P	09 37 03.0	+0.8
	comp=Z,12nm,1.3s						
NEW	Newport	90.41	41	P	P	09 37 01.7	-0.1
	baz=254						
CCUT	Cedar City	90.42	52	eP	P	09 36 58.6	-3.8
	comp=Z,12nm,1.2s						
SZCU	Shurtz Canyon	90.64	52	eP	P	09 37 04.5	+1.1
	comp=Z,11nm,1.3s						
KNB	Kanab	90.72	53	eP	P	09 37 04.8	+1.0
	comp=Z,10.0nm,1.2s						
KNB	Kanab	90.72	53	eP	P	09 37 04.8	+1.0
KNB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HLID	Hailey	91.04	46	P	P	09 37 05.5	+0.4
	baz=256						
PKCU	Pink Cliffs	91.21	52	eP	P	09 37 06.2	0.0
	comp=Z,23nm,1.4s						
X16A	Lo Mia Camp, P	91.25	55	eP	P	09 37 07.6	+1.3
	comp=Z,4.9nm,1.1s						
DUG	Dugway, Tooele	91.43	49	eP	P	09 37 07.3	+0.3
	comp=Z,6.8nm,1.3s						
DUG	Dugway, Tooele	91.43	49	eP	P	09 37 07.3	+0.3
DUG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DUG	Dugway, Tooele	91.43	49	P	P	09 37 07.2	+0.3
	baz=257						
BGU	Big Grassy Mou	91.43	49	eP	P	09 37 07.5	+0.6
	comp=Z,6.7nm,1.1s						
MTPU	Mount Pierson	91.44	52	eP	P	09 37 08.1	+0.8
	comp=Z,7.7nm,1.1s						
WUAZ	Wupatki	91.54	54	eP	P	09 37 08.5	+0.9
	comp=Z,4.9nm,0.8s						
MSU	Marysvale	91.54	51	eP	P	09 37 08.7	+1.1
MSU	Marysvale	91.54	51	eP	P	09 37 08.7	+1.1
SYO	Syowa Base	91.64	197	⇑eP	P	09 37 07.2	+0.1
HVU	Hansel Valley	91.81	48	eP	P	09 37 09.4	+0.7
	comp=Z,22nm,1.5s						
HVU	Hansel Valley	91.81	48	eP	P	09 37 09.4	+0.7
HVU				pmax	pmax		
	comp=Z,22nm,1.5s						
NLU	North Lily Min	91.93	50	eP	P	09 37 10.2	+0.8
	comp=Z,13nm,1.3s						
SPUT	South Promonto	91.94	48	eP	P	09 37 10.0	+0.7
	comp=Z,12nm,1.5s						
MSO	Missoula	92.14	43	P	P	09 37 10.0	0.0
	baz=257						
MPU	Maple Canyon	92.28	50	eP	P	09 37 11.8	+0.8
	comp=Z,15nm,1.7s						
CTU	Camp Tracy	92.33	49	eP	P	09 37 11.7	+0.6
	comp=Z,8.6nm,1.0s						
MCMT	McKenzie Canyo	92.43	45	eP	P	09 37 12.2	+0.6
MKAR	Makanchi Array	92.44	317	P	P	09 37 11.0	-0.3
	comp=Z,6.7nm,0.6s,baz=92,slow=6.2,SNR=30						
TMUT	Trail Mountain	92.45	51	eP	P	09 37 12.8	+1.0
	comp=Z,4.9nm,1.0s						
ZAA0	Zalesovo Array	92.59	324	eP	P	09 37 11.5	-0.3
	comp=Z,10nm,1.1s						
ZALV	Zalesovo Beam	92.59	324	P	P	09 37 11.3	-0.4
	comp=Z,2.7nm,0.9s,baz=106,slow=4.8,SNR=11						
DLMT	Dillon	92.72	44	eP	P	09 37 13.3	+0.6
	comp=Z,18nm,1.2s						
LRM	Limekiln Ridge	92.92	44	eP	P	09 37 13.9	+0.1
BOZ	Bozeman (W)	93.43	44	eP	P	09 37 16.6	+0.5
	comp=Z,13nm,1.4s						
BOZ	Bozeman (W)	93.43	44	eP	P	09 37 16.6	+0.5
BOZ				pmax	pmax		
	comp=Z,13nm,1.4s						
BOZ	Bozeman (W)	93.43	44	P	P	09 37 16.4	+0.3
	baz=258						
FXWY	Fox Creek	93.46	46	eP	P	09 37 17.8	+1.4
	comp=Z,3.6nm,0.9s						
YMR	Madison River	93.71	45	eP	P	09 37 19.6	+2.1
	comp=Z,8.2nm,1.1s						
PDAR	Pinedale Array	94.35	47	eP	P	09 37 16.3	-4.2
PDAR	Pinedale Array	94.35	47	P	P	09 37 20.7	+0.3
	comp=Z,1.3nm,0.9s,baz=238,slow=1.4,SNR=5.3						
YKA	Yellowknife Ar	95.35	27	P	P	09 37 23.3	-0.9
	comp=Z,2.9nm,0.9s,baz=256,slow=4.3,SNR=5.4						
YKB5	Yellowknife Ar	95.35	27	eP	P	09 37 24.1	-0.1
ANMO	Albuquerque	95.39	56	⇓eP	P	09 37 29.8	+4.5
ANMO				pmax	pmax		
	comp=Z,11nm,3.2s						
NRIK	Noril'sk	95.43	340	P	P	09 37 23.9	-0.6
	comp=Z,1.8nm,0.4s,baz=123,slow=5.8,SNR=5.5						
KSH	Kashi	95.58	309	P	P	09 37 28.7	+2.7
KSH				sP	sP	09 37 36.3	+0.5
KSH	Kashi	95.58	309	S	S	09 48 41.3	0.0
KSH	Kashi	95.58	309	sS	sS	09 48 48.7	-6.4
KSH	Kashi	95.58	309	SS	SS	09 55 16.5	+6.0
KSH				pmax	pmax		
	comp=Z,690nm,5.6s						
KSH				LR	LR		
	comp=N,310nm,6.7s						
KSH				LR	LR		
	comp=E,300nm,6.0s						
KSH				LR	LR		
	comp=Z,670nm,7.4s						
KURK	Kurchatov	95.61	320	eP	P	09 37 25.0	-0.7
	comp=Z,12nm,1.4s						
KURK	Kurchatov	95.61	320	⇓iP	P	09 37 25.4	-0.3
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TXAR	Lajitas Array	96.86	62	P	P	09 37 32.8	+0.8
	comp=Z,0.4nm,0.8s,baz=221,slow=5.1,SNR=5.3						
SNAA	Sanae	97.28	184	P	P	09 37 32.3	-0.7
SNAA	Sanae	97.28	184	⇓eP	Pdif	09 37 36.0	+2.9
VNA2	Neumayer--Watz	98.28	183	P	P	09 37 36.6	-0.9
BRVK	Borovoye	101.01	322	⇑eP	Pdif	09 37 50.4	+0.5
BRVK				pmax	pmax		
	comp=Z,16nm,3.4s						
ARCES	ARCESS Array B	115.76	345	PKIKP	PKiKP	09 42 41.0	-1.3
ARCES	ARCESS Array B	115.76	345	PKP	PKiKP	09 42 41.0	-1.3
	comp=Z,1.6nm,0.5s,baz=77,slow=1.5,SNR=23						
VRH	Novokhopyorsk	118.59	323	ePKIKP	PKPdf	09 42 45.8	-2.3
VRH				pmax	pmax		
	comp=Z,20nm,1.8s						
LPSR	Galich'ya Gora	119.69	325	ePKIKP	PKPdf	09 42 49.9	-0.3
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
OBN	Obninsk	119.91	328	ePKIKP	PKPdf	09 42 49.6	-0.9
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	Khabaz	120.03	314	PKP	PKPdf	09 42 50.1	-1.0
	comp=Z,1.6nm,0.8s,baz=158,slow=3.6,SNR=3.6						
VSR	Storozhevoye	120.08	324	ePKIKP	PKPdf	09 42 48.3	-2.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BOSA	Boshof	124.39	224	PKP	PKPdf	09 42 59.5	-0.7
	comp=Z,1.9nm,0.6s,baz=108,slow=6.4,SNR=2.5						
CPUP	Villa Florida	125.16	133	PKP	PKPdf	09 43 01.1	-0.5
	comp=Z,1.9nm,0.7s,baz=134,slow=0.4,SNR=4.4						
SDV	Santo Domingo	125.79	87	ePKPdf	PKPdf	09 43 03.3	-0.1
AKASG	Malin Array Be	125.93	326	PKP	PKPdf	09 43 01.3	-1.0
	comp=Z,1.1nm,0.6s,baz=56,slow=2.2,SNR=9.5						
AK11	Malin Array Si	125.97	326	ePKPdf	PKPdf	09 43 01.9	-0.5
NB2	NORSAR Subarra	126.11	344	PKPdf	PKiKP	09 43 03.1	+0.3
	comp=Z,0.6nm,0.7s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.11	344	PKP	PKPdf	09 43 01.2	-1.2
	comp=Z,1.8nm,0.8s,baz=35,slow=2.0,SNR=5.5						
BRTR	Keskin Array B	127.83	312	PKP	PKPdf	09 43 06.3	-0.1
	comp=Z,2.2nm,1.0s,baz=165,slow=5.1,SNR=6.6						
BUR04	Bucovina Ar. S	129.81	325	ePKPdf	PKiKP	09 43 11.9	+1.2
MLR	Muntele Rosu	130.51	322	ePKPdf	PKiKP	09 43 13.1	+0.9
MLR	Muntele Rosu	130.51	322	ePKIKP	PKiKP	09 43 13.1	+0.9
UZH	Uzhgorod	130.82	327	ePKHKP	PKPpre	09 43 00.2	
UZH				e		09 43 12.0	
BRG	Berggiesshubel	133.28	335	eP	PKiKP	09 43 19.4	+1.9
	comp=Z,23nm,1.6s						
CLL	Collm	133.34	336	ePKPdf	PKPdf	09 43 16.0	-0.3
CLL	Collm	133.34	336	ePKIKP	PKPdf	09 43 16.0	-0.3
KHC	Kasperske Hory	134.74	333	ePKPDF	PKiKP	09 43 19.7	-0.8
KHC	Kasperske Hory	134.74	333	ePKIKP	PKiKP	09 43 19.7	-0.8
GERES	GERESS Array B	134.89	333	PKP	PKPdf	09 43 18.8	-0.7
	comp=Z,1.2nm,0.6s,baz=20,slow=4.3,SNR=7.2						
GEA0	GERESS Array S	134.90	333	ePKPdf	PKPdf	09 43 19.8	+0.3
KEST	Kesra	146.41	322	ePKPdf	PKPbc	09 43 41.7	-0.2
KEST	Kesra	146.41	322	PKPbc	PKPdf	09 43 41.0	+0.4
	comp=Z,29nm,0.9s,baz=0.3,slow=0.8,SNR=13						
POLO	Lamas de Olo	148.78	349	ePKPdf	PKPbc	09 43 47.2	-1.0
MVO	Moncorvo	148.82	347	ePKPdf	PKPbc	09 43 48.4	+0.1
PVIS	Viseu	149.43	348	ePKPdf	PKiKP	09 43 50.7	-0.2
ESDC	Sonseca Array	149.44	342	PKPbc	PKPbc	09 43 50.0	+0.1
	comp=Z,6.3nm,0.9s,baz=7.4,slow=3.4,SNR=9.3						
MTE	Manteigas	149.66	348	ePKPdf	PKPdf	09 43 47.5	+1.7
PMRV	Marv??o	150.56	347	ePKPdf	PKiKP	09 43 53.7	+0.4
PTOM	Tomar	150.59	349	ePKPdf	PKPbc	09 43 50.5	-2.1
PMTG	Montargil	151.09	348	ePKPdf	PKiKP	09 43 54.3	0.0
PBEJ	Beja	152.01	347	ePKPdf	PKiKP	09 43 58.1	+1.8
TOA0	Torodi Ar. Sit	162.93	280	ePKPdf	PKPdf	09 44 02.9	-0.7
TORD	Torodi Ar. Bea	162.93	280	PKP	PKPdf	09 44 02.4	-1.2
	comp=Z,2.0nm,0.9s,baz=5.8,slow=1.8,SNR=7.4						

JMA 06 09:27:42.8±0.1, 23°.85N×124°.39E, h18^{km}±3^{km}, M3.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKRS	Kuro-shima	0.52	318	P	Pg	09 27 53.1	-0.2
JKRS				S	Sg	09 28 00.1	-0.2
JIJ	Ishigaki jima	0.56	336	P	Pg	09 27 53.6	-0.4
JIJ				S	Sg	09 28 00.8	-0.7
HATJ	Hateruma jima	0.57	291	P	Pg	09 27 53.8	-0.4
HATJ				S	Sb	09 28 02.1	0.0
JISG	Ishigakijimahi	0.74	354	P	Pb	09 27 56.5	-0.6
JISG				eS	Sb	09 28 06.6	-0.3
IRIF	Iriomote-Funau	0.77	309	P	Pb	09 27 57.5	-0.2
IRIF				S	Sg	09 28 08.2	0.0
JTJ	Tarama	0.84	20	P	Pb	09 27 58.7	-0.1
JTJ				S	Sb	09 28 09.9	+0.2
JIRB	Irabujima	1.21	36	P	Pn	09 28 04.3	-0.5
JIRB				S	Sb	09 28 19.9	-0.5
JMJ	Miyako jima 2	1.27	40	P	Pn	09 28 05.4	-0.2
JMJ				eS	Sn	09 28 22.8	+0.7
JOGS	Gusukube	1.30	45	P	Pn	09 28 06.0	0.0
JOGS				eS	Sn	09 28 22.7	-0.2
JIKM	Ikemajima	1.32	36	P	Pn	09 28 06.2	-0.2
JIKM				S	Sg	09 28 24.9	-0.8
YOJ	Yonaguni jima	1.40	296	P	Pn	09 28 06.7	-0.7
YOJ				eS	Sn	09 28 25.5	+0.1
JYNG	Yonagunijimaku	1.45	295	P	Pn	09 28 07.2	-0.9
JYNG				S	Sn	09 28 26.5	-0.2

IDC 06 09:29:40.6±1.8, 11°.88S×164°.20E, h0^{km}, mb3.8/3, mb1 4.1/4, mb1mx3.7/42, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=50.7km s-min=34.7km az=130.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.36	168	Pn	Pn	09 32 10.7	+0.1
	0.7nm,0.3s,baz=335,slow=19,SNR=3.3						
WRA	Warramunga Arr	29.77	251	P	P	09 35 49.3	0.0
	0.7nm,0.6s,baz=81,slow=9.1,SNR=4.8						
ASAR	Alice Springs	31.06	244	P	P	09 36 00.6	0.0
	1.3nm,0.7s,baz=71,slow=9.8,SNR=5.8						
ILAR	Eielson Array	84.79	19	P	P	09 42 16.5	0.0
	0.3nm,0.5s,baz=231,slow=4.9,SNR=4.3						

IDC 06 09:31:33.9±1.6, 11°.02S×165°.68E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/41, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=52.5km s-min=30.1km az=123.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.01	176	Pn	Pn	09 34 13.9	+1.0
	0.3nm,0.3s,baz=105,slow=20,SNR=2.1						
WRA	Warramunga Arr	31.43	250	P	P	09 37 57.5	+0.2
	1.4nm,0.8s,baz=83,slow=9.1,SNR=4.9						
ASAR	Alice Springs	32.75	243	P	P	09 38 08.0	-0.8
	0.7nm,0.8s,baz=66,slow=10,SNR=4.6						
ILAR	Eielson Array	83.51	19	P	P	09 44 02.9	-0.4
	0.3nm,0.9s,baz=232,slow=5.5,SNR=2.8						
MKAR	Makanchi Array	93.46	317	P	P	09 44 52.2	+0.6
	0.5nm,0.9s,baz=90,slow=3.3,SNR=3.1						

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*NIED **06** 09:31:00, 35°.80N×140°.10E, h38^{km}, Mw4.1 Best double couple: $M_0$1.48000×10^{15} NP1:ϕ_s220.00000°, δ8.00000°, λ47.00000°. NP2:ϕ_s84.00000°, δ84.00000°, λ95.00000°.*

*ISCJB **06** 09:31:47.4±0.3, 35°.70N±0°.03×140°.16E±0°.04, h55^{km}±3^{km}, mb3.9/14, Error ellipse: s-maj=5.8km s-min=5.2km az=162.6*

*IDC **06** 09:31:48.4±1.5, 35°.68N×140°.04E, h44^{km}±16^{km}, mb3.6/13, mb1 3.9/16, mb1mx3.7/50, mbtmp4.0/16, ML4.2/3, Error ellipse: s-maj=21.3km s-min=10.5km az=86.0*

*NEIC **06** 09:31:48.8±0.8, 35°.70N×140°.06E, h51^{km}±7^{km}, mb4.8/2, Error ellipse: s-maj=9.4km s-min=6.5km az=116.0*

NEIC Felt at Tsukuba.

*JMA **06** 09:31:48.1±0.1, 35°.83N×140°.08E, h39^{km}±2^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s63.00000°, δ71.00000°, λ83.00000°. NP2:ϕ_s263.00000°, δ20.00000°, λ109.00000°. Principal axes: T Plg63.0000°, Azm322.0000°; N Plg6.0000°, Azm65.0000°; P Plg26.0000°, Azm158.0000°;*

JMA Felt II J1.

ISC 06 09:31:48.3±0.8, 35°.72N±0°.04×140°.15E±0°.04, h45^{km}±7^{km}, n51, σ1^{s}.24/60, mb4.0/14, 2C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSMT	Sammumatsuo	0.26	107	P	Pn	09 31 57.2	+0.6
JSMT				eS	Sn	09 32 03.8	+1.4
JCN	Nagara	0.30	171	⇑P	Pn	09 31 58.2	+1.2
TOK	Tokyo	0.32	265	⇑P	Pn	09 31 56.9	-0.2
TOK				S	Sn	09 32 04.3	+1.0
JYT	Yasato	0.51	4	⇓P	Pn	09 31 57.5	-1.9
JYT				S	Sn	09 32 04.6	-2.7
JAG	Ashikaga	0.90	322	⇓P	Pn	09 32 02.7	-1.9
BSO3	Boso 3	0.96	162	⇓P	Pn	09 32 06.2	+1.1
JOD2	Odawara 2	0.97	243	P	Pn	09 32 05.2	-0.4
JOD2				eS	Sn	09 32 18.3	0.0
JRY	Ryogami san	1.05	287	⇓P	Pn	09 32 05.9	-0.8
JIM2	Oshima 3	1.16	211	P	Pn	09 32 07.8	-0.3
MJAR	Matsushiro Arr	1.77	298	P	Pn	09 32 16.3	-0.2
	8.2nm,0.3s,baz=112,slow=28,SNR=422						
MJAR				S	Sn	09 32 39.7	+1.9
	6.9nm,0.3s,baz=91,slow=24,SNR=7.6						
MAJO	Matsushiro	1.77	298	ePn	Pn	09 32 16.7	+0.2
MAJO				eSn	Sn	09 32 39.7	+1.9
MAT	Matsushiro	1.77	298	P	Pn	09 32 16.5	0.0
MAT				S	Sn	09 32 40.5	+2.7
MJB9	Matsu-Tunnel	1.77	298	ePn	Pn	09 32 16.7	+0.2
INU	Inuyama	2.58	263	ePn	Pn	09 32 29.5	+2.0
JHJ	Hachijo jima 2	2.61	187	P	Pn	09 32 27.9	0.0
	184nm,0.3s,baz=320,slow=21,SNR=37						
JHJ				S	Sn	09 32 57.7	-0.7
	142nm,0.3s,baz=49,slow=22,SNR=7.8						
JHJ2	Mitsune	2.61	186	ePn	Pn	09 32 28.4	+0.4
ERM	Erimo	6.71	20	ePn	Pn	09 33 23.8	-0.4
ERM				eSn	Sn	09 34 41.4	+2.1
ASAJ	Asahikawa	8.60	12	P	Pn	09 33 49.0	-1.0
	1.2nm,0.3s,baz=204,slow=8.7,SNR=8.1						
JCJ	Chichijima	8.77	168	P	Pn	09 33 50.8	-1.8
	20nm,0.3s,baz=305,slow=19,SNR=5.6						
TPUB	Ta-pu	20.97	239	eP	P	09 36 26.8	-0.8
PETK	Petropavlovsk-	21.34	30	eP	P	09 36 32.1	+0.8
MA2	Magadan	24.86	13	eP	P	09 37 08.3	+2.0
	11nm,0.5s						
MA2	Magadan	24.86	13	P	P	09 37 08.3	+2.0
	6.4nm,0.6s,baz=185,slow=12,SNR=4.2						
DAV	Davao City (W)	31.49	209	eP	P	09 38 03.6	-2.3
ZAA1	Zalesovo Array	42.06	313	eP	P	09 39 35.0	-0.4
ZALV	Zalesovo Beam	42.06	313	P	P	09 39 35.0	-0.4
	2.2nm,0.7s,baz=103,slow=6.7,SNR=5.2						
MK32	Makanchi Array	43.96	303	eP	P	09 39 50.0	-0.9
MKAR	Makanchi Array	43.96	303	P	P	09 39 50.0	-0.9
	1.1nm,0.8s,baz=93,slow=8.0,SNR=3.9						
KURK	Kurchatov	45.95	309	eP	P	09 40 06.0	-0.5
	22nm,1.0s						
KDAK	Kodiak Island	48.76	41	eP	P	09 40 28.7	+0.4
KDAK	Kodiak Island	48.76	41	P	P	09 40 28.0	-0.3
	10nm,1.2s,baz=263,slow=8.1,SNR=3.6						
ILAR	Eielson Array	51.15	32	P	P	09 40 47.1	+0.8
	1.2nm,0.8s,baz=276,slow=5.9,SNR=6.6						
ILB	Eielson Array	51.15	32	eP	P	09 40 47.4	+1.0
WR1	Warramunga Arr	55.63	187	eP	P	09 41 19.4	-0.3
WRA	Warramunga Arr	55.63	187	P	P	09 41 19.3	-0.3
	1.1nm,0.5s,baz=1.7,slow=7.6,SNR=23						
INK	Inuvik	56.02	27	eP	P	09 41 23.0	+1.1
INK	Inuvik	56.02	27	P	P	09 41 22.7	+0.8
	1.3nm,0.9s,baz=310,slow=9.0,SNR=4.8						

AS31	Alice Springs	59.35	187	*e*P	P	09 41 44.3	-1.5
ASAR	Alice Springs	59.35	187	P	P	09 41 46.5	+0.6
	0.4nm,0.4s,baz=20,slow=11,SNR=7.3						
ARA0	ARCESS Array S	64.86	339	*e*P	P	09 42 21.9	-0.4
ARCES	ARCESS Array B	64.86	339	P	P	09 42 21.9	-0.4
	2.2nm,0.9s,baz=54,slow=7.3,SNR=5.8						
YKA	Yellowknife Ar	65.46	30	P	P	09 42 27.0	+0.8
	0.3nm,0.9s,baz=296,slow=6.1,SNR=3.8						
YKB5	Yellowknife Ar	65.46	30	*e*P	P	09 42 26.2	0.0
NV01	Mina Array Sit	76.60	52	*e*P	P	09 43 34.3	-0.1
NVAR	Mina Array Bea	76.60	52	P	P	09 43 35.8	+1.4
	0.3nm,0.6s,baz=297,slow=4.0,SNR=2.3						
PD31	Pinedale Array	79.32	45	*e*P	P	09 43 49.0	-0.5
PDAR	Pinedale Array	79.32	45	P	P	09 43 50.6	+1.1
	0.3nm,0.6s,baz=222,slow=1.2,SNR=3.2						
LTX	Lajitas	91.74	52	*e*P	P	09 44 52.7	+1.3
TXAR	Lajitas Array	91.74	52	P	P	09 44 52.7	+1.3
	0.1nm,0.6s,baz=345,slow=2.1,SNR=3.3						
TOA1	Torodi Ar. Sit	117.51	313	*e*PKPdf	PKPdf	09 50 28.0	-1.7
TORD	Torodi Ar. Bea	117.51	313	PKP	PKPdf	09 50 28.0	-1.7
	0.7nm,0.9s,baz=72,slow=2.5,SNR=2.9						

IDC 06 09:34:00.8±3.4, 11°.71S×165°.29E, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.8/40, mbtmp4.0/4, Error ellipse: s-maj=148.7km s-min=30.0km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.84	251	P	P	09 40 19.1	+0.1
	3.4nm,1.2s,baz=81,slow=9.0,SNR=8.9						
ASAR	Alice Springs	32.10	244	P	P	09 40 29.7	-0.3
	1.4nm,0.8s,baz=70,slow=9.6,SNR=7.2						
ILAR	Eielson Array	84.28	19	P	P	09 46 34.0	-0.1
	0.6nm,0.6s,baz=240,slow=4.6,SNR=15						
MKAR	Makanchi Array	93.70	317	P	P	09 47 19.9	+0.4
	0.4nm,0.5s,baz=117,slow=3.6,SNR=4.1						

IDC 06 09:34:35.0±1.0, 10°.96S×165°.27E, h0^{km}, mb4.1/6, mb1 4.3/7, mb1mx3.9/40, mbtmp4.1/7, ML4.1/1, Error ellipse: s-maj=32.1km s-min=24.8km az=107.0

ISCJB 06 09:34:37.8±0.9, 11°.1S±0°.1×165°.2E±0°.2, h30^{km}, mb4.0/6, Error ellipse: s-maj=25.7km s-min=17.8km az=176.4

ISC 06 09:34:39.6±1.0, 11°.0S±0°.1×165°.3E±0°.2, h30^{km}, n7, σ1^{s}.03/7, mb4.0/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.08	174	Pn	Pn	09 37 16.3	+0.1
	1.5nm,0.3s,baz=324,slow=19,SNR=3.8						
URZ	Urewera	29.15	161	P	P	09 40 38.4	+0.2
	3.3nm,0.5s,baz=292,slow=8.0,SNR=5.4						
WRA	Warramunga Arr	31.07	250	P	P	09 40 55.2	-0.1
	2.2nm,0.8s,baz=82,slow=9.1,SNR=7.6						
ASAR	Alice Springs	32.40	243	P	P	09 41 06.1	-1.0
	1.2nm,0.8s,baz=66,slow=10,SNR=6.2						
ILAR	Eielson Array	83.61	19	P	P	09 47 04.8	0.0
	0.9nm,0.6s,baz=239,slow=4.9,SNR=14						
MKAR	Makanchi Array	93.16	317	P	P	09 47 52.4	+1.4
	0.5nm,0.8s,baz=99,slow=5.4,SNR=2.3						
YKA	Yellowknife Ar	95.14	27	P	P	09 47 58.6	-1.1
	0.2nm,0.6s,baz=257,slow=4.5,SNR=4.5						

IDC 06 09:35:40.1±1.2, 10°.75S×164°.59E, h0^{km}, mb4.1/8, mb1 4.3/11, mb1mx4.1/41, mbtmp4.2/11, ML4.5/3, Error ellipse: s-maj=35.4km s-min=21.0km az=122.0

ISCJB 06 09:35:42.1±0.4, 10°.77S±0°.05×164°.43E±0°.05, h24^{km}, mb4.2/16, Error ellipse: s-maj=8.0km s-min=6.8km az=40.1

NEIC 06 09:35:42.1±0.3, 10°.69S×164°.45E, h10^{km}, mb4.5/11, Error ellipse: s-maj=6.2km s-min=5.5km az=83.0

ISC 06 09:35:44.1±0.6, 10°.71S±0°.08×164°.45E±0°.07, h24^{km}, n44, σ0^{s}.76/40, mb4.3/17, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.62	286	*e*Pn	Pn	09 36 52.1	-0.3
HNR				*e*Sn	Sn	09 37 44.8	-0.5
HNR				*e*Sn	Sn	09 37 46.2	+0.9
HNR	Honiara	4.62	286	Pn	Pn	09 36 53.1	+0.7
	74nm,0.3s,baz=141,slow=7.8,SNR=10						
HNR				Sn	Sn	09 37 46.2	+0.9
	baz=270,slow=20,SNR=3.8						
MARNC	Mare, Loyalty	11.24	163	*e*Pn	Pn	09 38 23.0	-0.3
DZM	Mont Dzumac	11.45	171	*e*Pn	Pn	09 38 26.3	0.0
DZM	Mont Dzumac	11.45	171	Pn	Pn	09 38 25.9	-0.4
	1.8nm,0.3s,baz=344,slow=15,SNR=6.4						
PINNC	Pines Island,	12.17	167	*e*Pn	Pn	09 38 36.9	+0.8
RABL	Rabaul	13.80	297	*e*Pn	Pn	09 38 56.6	-1.7
MSVF	Nonsavu	14.91	119	*e*Pn	Pn	09 39 13.0	-0.5
PATS	Pohnpei	18.48	340	*e*P	P	09 39 57.1	-1.4
	329nm,1.5s						
MANU	Manus Island	19.03	296	*e*P	P	09 40 04.8	+0.2
	70nm,1.3s						
KWAJ	Kwajalein Atol	19.64	9	*e*P	P	09 40 11.7	+0.5
	309nm,1.2s						
CTA	Charters Tower	19.85	240	P	Pn	09 40 15.1	-0.2
	0.7nm,0.3s,baz=64,slow=13,SNR=5.8						
CTAO	Charters Tower	19.85	240	*e*P	P	09 40 13.8	+0.3
	18nm,0.9s						
COEN	Coen	21.03	259	*e*P	P	09 40 25.5	-1.0
	7.9nm,0.8s						
H11S2	WAKE ISLAND Hy	29.10	4	T	T	10 12 11.2	
	baz=183,slow=74						
H11S3	WAKE ISLAND Hy	29.11	4	T	T	10 12 05.8	
	baz=183,slow=74						
H11S1	WAKE ISLAND Hy	29.12	4	T	T	10 12 08.5	
	baz=183						
STKA	Stephens Creek	29.83	222	*e*P	P	09 41 49.7	+0.2
	1.0nm,1.0s						
STKA	Stephens Creek	29.83	222	P	P	09 41 50.2	+0.7
	1.8nm,0.7s,baz=20,slow=9.2,SNR=4.1						
H11N1	WAKE ISLAND Hy	30.33	5	T	T	10 13 35.1	
	baz=184,slow=76,SNR=3.6						
H11N3	WAKE ISLAND Hy	30.34	5	T	T	10 13 34.3	
	baz=184,slow=76,SNR=4.4						
H11N2	WAKE ISLAND Hy	30.35	5	T	T	10 13 40.1	
	baz=184,slow=76,SNR=4.4						
WRAB	Tennant Creek	30.40	249	*e*P	P	09 41 54.1	-0.6
	11nm,1.3s						
WB2	Warramunga Arr	30.40	249	*e*P	P	09 41 54.2	-0.5
	6.5nm,0.9s						
WR1	Warramunga Arr	30.41	249	*e*P	P	09 41 54.7	-0.2
	8.4nm,1.0s						
WRA	Warramunga Arr	30.41	249	P	P	09 41 54.7	-0.2
	2.6nm,0.9s,baz=76,slow=8.5,SNR=5.8						
AS31	Alice Springs	31.81	242	*e*P	P	09 42 07.2	0.0
	0.7nm,0.8s						
ASAR	Alice Springs	31.82	242	P	P	09 42 06.2	-1.0
	0.6nm,0.7s,baz=63,slow=10,SNR=4.6						
BBOO	Buckleboo	34.14	226	*e*P	P	09 42 28.0	+0.6
	14nm,1.0s						
FITZ	Fitzroy Crossi	38.24	254	*e*P	P	09 43 02.1	-0.5
	7.3nm,0.8s						
USRK	Ussuriysk Ar.	62.09	334	P	P	09 46 04.1	+1.2
	2.9nm,1.0s,baz=131,slow=8.0,SNR=4.6						
SONA0	Songino Array	77.65	324	*e*P	P	09 47 40.1	+1.4
SONM	Songino Array	77.65	324	P	P	09 47 40.1	+1.4
	0.8nm,0.8s,baz=132,slow=5.3,SNR=3.4						
HDA	Harding Lake	83.34	19	*e*P	P	09 48 09.1	+0.4
	11nm,0.9s						
IL1	Eielson Array	83.61	19	*e*P	P	09 48 09.6	-0.6
ILAR	Eielson Array	83.61	19	P	P	09 48 09.4	-0.7
	1.9nm,0.9s,baz=226,slow=5.9,SNR=10						
ILB	Eielson Array	83.61	19	*e*P	P	09 48 10.5	+0.4
SCRK	Sand Creek	84.04	20	*e*P	P	09 48 12.9	+0.3
	2.8nm,0.7s						
MK01	Makanchi Array	92.40	317	*e*P	P	09 48 53.1	+0.2
MK32	Makanchi Array	92.42	317	*e*P	P	09 48 53.5	+0.5
MKAR	Makanchi Array	92.42	317	P	P	09 48 53.5	+0.5
	1.0nm,0.8s,baz=91,slow=6.1,SNR=6.5						
YKA	Yellowknife Ar	95.26	27	P	P	09 49 04.5	-1.1
	0.4nm,1.0s,baz=257,slow=4.4,SNR=2.7						
YKB5	Yellowknife Ar	95.26	27	*e*P	P	09 49 05.0	-0.6
PTGA	Pitinga	134.39	102	*e*PKPpre	PKPpre	09 54 45.8	

ISCJB 06 09:37:16.0±0.5, 47°.22S±0°.08×32°.6E±0°.2, h10^{km}, mb4.1/14, MS4.0/4, Error ellipse: s-maj=16.3km s-min=8.7km az=150.6

IDC 06 09:37:16.4±0.8, 47°.22S×32°.59E, h0^{km}, mb4.1/10, mb1 4.2/12, mb1mx4.1/34, mbtmp4.1/12, ML3.9/2, MS4.1/6, Ms1 4.0/6, ms1mx3.8/33, Error ellipse: s-maj=31.2km s-min=16.4km az=72.0

NEIC 06 09:37:17.8±0.3, 47°.29S×32°.56E, h10^{km}, mb4.4/9, Error ellipse: s-maj=12.5km s-min=7.2km az=63.0

ISC 06 09:37:17.4±0.6, 47°.14S±0°.09×32°.4E±0°.1, h10^{km}, n29, σ2^{s}.20/26, mb4.2/14, MS3.9/4, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRZF	Crozet Islands	13.34	94	*e*Pn	Pn	09 40 25.5	-1.1
SUR	Sutherland	17.21	325	P	Pn	09 41 18.1	+0.1
	0.6nm,0.3s,baz=129,slow=12,SNR=12						
SUR				S	Sn	09 44 21.0	-8.4
	0.1nm,0.3s,baz=223,slow=19,SNR=2.0						
SUR				LR	LR	09 46 45.5	
	comp=Z,646nm,21.9s,baz=142,slow=33						
BOSA	Boshof	19.33	341	*e*P	Pn	09 41 44.7	+0.8
BOSA	Boshof	19.33	341	P	P	09 41 42.8	-0.1
	0.2nm,0.3s,baz=162,slow=13,SNR=4.8						
BOSA				LR	LR	09 48 00.4	
	comp=Z,478nm,20.3s,baz=190,slow=33						
LBTB	Lobatse	22.74	344	*e*P	P	09 42 20.6	+0.9
	9.9nm,0.8s						
LBTB	Lobatse	22.74	344	P	P	09 42 19.5	-0.2
	3.8nm,0.8s,baz=162,slow=9.6,SNR=1.8						
LBTB				LR	LR	09 50 33.1	
	comp=Z,257nm,19.4s,baz=178,slow=35						
MAW	Mawson	25.77	153	*e*P	P	09 42 47.6	-0.3
	24nm,1.4s						
MATP	Matopo	26.84	352	P	P	09 43 01.3	+3.2
	1.9nm,0.7s,baz=174,slow=10,SNR=5.0						
MATP				LR	LR	09 52 15.0	
	comp=Z,292nm,19.9s,baz=156,slow=33						
SNAA	Sanae	29.59	202	*e*P	P	09 43 22.2	0.0
	5.0nm,1.0s						
SNAA	Sanae	29.59	202	P	P	09 43 22.1	-0.1
	1.3nm,0.8s,baz=75,slow=9.6,SNR=4.8						
SNAA				LR	LR	09 53 22.1	
	comp=Z,289nm,18.3s,baz=42,slow=33						
TSUM	Tsumeb	30.40	331	*e*P	P	09 43 31.6	+1.8
	5.7nm,1.1s						
LSZ	Lusaka	31.97	352	*e*P	P	09 43 45.8	+2.1
	16nm,1.5s						
QSPA	South Pole Qui	43.08	180	*e*P	P	09 45 16.4	-0.9
	5.0nm,1.1s						
QSPA	South Pole Qui	43.08	180	P	P	09 45 16.4	-0.9
	4.4nm,0.8s,baz=259,slow=1.8,SNR=29						
VNDA	Vanda	51.76	168	*e*P	P	09 46 22.4	-2.0
VNDA	Vanda	51.76	168	P	P	09 46 24.5	+0.1
	4.4nm,0.8s,baz=216,slow=7.7,SNR=3.7						
H10S2	ASCENSION HYDR	55.09	298	T	T	10 46 40.5	
	baz=143,slow=75,SNR=91						
H10S1	ASCENSION HYDR	55.10	298	T	T	10 46 41.8	
	baz=143,slow=75,SNR=97						
H10S3	ASCENSION HYDR	55.10	298	T	T	10 46 41.8	
	baz=143,slow=75,SNR=78						
TORD	Torodi Ar. Bea	66.02	327	P	P	09 48 05.9	+1.7
	1.5nm,0.9s,baz=169,slow=7.1,SNR=2.5						
TOA1	Torodi Ar. Sit	66.03	327	*e*P	P	09 48 05.9	+1.7
CPUP	Villa Florida	71.04	252	*e*P	P	09 48 35.8	+0.3
	2.3nm,0.8s						
CPUP	Villa Florida	71.04	252	P	P	09 48 37.9	+2.4
	1.2nm,0.8s,baz=146,slow=6.1,SNR=2.8						
STKA	Stephens Creek	78.85	125	P	P	09 49 20.0	-0.7
	1.1nm,0.6s,baz=209,slow=10,SNR=2.2						
ASAR	Alice Springs	80.38	114	P	P	09 49 29.2	+0.1
	1.2nm,0.8s,baz=205,slow=5.3,SNR=8.5						
AS31	Alice Springs	80.38	114	*e*P	P	09 49 27.6	-1.6
	0.5nm,0.8s						
WR1	Warramunga Arr	83.38	112	*e*P	P	09 49 45.2	+0.3
WRA	Warramunga Arr	83.38	112	P	P	09 49 45.2	+0.3
	1.0nm,0.9s,baz=218,slow=4.2,SNR=6.0						
AKASG	Malin Array Be	97.50	358	LR	LR	10 39 03.2	
	comp=Z,148nm,18.8s,baz=35,slow=38						

IDC 06 09:39:01.0±0.8, 11°.66S×165°.18E, h0^{km}, mb4.3/14, mb1 4.5/16, mb1mx4.4/35, mbtmp4.3/16, ML4.3/2, Error ellipse: s-maj=23.7km s-min=17.1km az=131.0

ISCJB 06 09:39:01.1±0.2, 11°.68S±0°.04×165°.10E±0°.04, h10^{km}, mb4.6/51, Error ellipse: s-maj=6.6km s-min=5.7km az=157.6

NEIC 06 09:39:02.8±0.1, 11°.62S×165°.16E, h10^{km}, mb4.7/42, Error ellipse: s-maj=4.4km s-min=3.3km az=135.0

ISC 06 09:39:02.8±0.5, 11°.64S±0°.08×165°.18E±0°.08, h10^{km}, n80, σ0^{s}.73/80, mb4.7/51, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.60	293	*e*Pn	Pn	09 40 25.7	-0.4
HNR				*e*Sn	Sn	09 41 31.0	+0.4
HNR	Honiara	5.60	293	Pn	Pn	09 40 26.6	+0.5
	8.2nm,0.3s,baz=107,slow=18,SNR=2.2						
HNR				Sn	Sn	09 41 31.0	+0.4
	7.6nm,0.3s,baz=192,slow=14,SNR=2.3						
MARNC	Mare, Loyalty	10.16	165	*e*Pn	Pn	09 41 28.9	+0.1
DZM	Mont Dzumac	10.45	174	*e*Pn	Pn	09 41 33.0	+0.2
DZM	Mont Dzumac	10.45	174	Pn	Pn	09 41 32.6	-0.2
	2.6nm,0.3s,baz=314,slow=10,SNR=14						
PINNC	Pines Island,	11.13	169	*e*Pn	Pn	09 41 42.9	+0.9
CTA	Charters Tower	20.04	243	P	Pn	09 43 36.3	-1.6
	5.6nm,0.7s,baz=63,slow=14,SNR=4.9						
CTAO	Charters Tower	20.04	243	*e*P	Pn	09 43 37.0	-0.9
	9.1nm,0.9s						
MANU	Manus Island	20.08	297	*e*P	Pn	09 43 36.8	-1.6
	47nm,1.3s						
LHI	Lord Howe Isla	20.58	195	*e*P	Pn	09 43 41.8	-2.3
	166nm,1.3s						
COEN	Coen	21.59	261	*e*P	P	09 43 52.9	0.0
	7.1nm,0.9s						
ARMA	Armidale	22.53	212	*e*P	P	09 44 02.8	-0.3
	21nm,1.1s						
KNTN	Kanton	24.52	71	*e*P	P	09 44 23.3	+0.6
	86nm,1.0s						
STKA	Stephens Creek	29.64	224	*e*P	P	09 45 08.9	+0.4
	0.7nm,1.0s						
STKA	Stephens Creek	29.64	224	P	P	09 45 08.4	-0.1
	1.8nm,0.7s,baz=9.0,slow=12,SNR=3.6						
WB2	Warramunga Arr	30.75	251	*e*P	P	09 45 18.2	-0.4
	5.7nm,0.9s						
WRAB	Tennant Creek	30.75	251	*e*P	P	09 45 18.3	-0.3
	5.5nm,0.8s						
WR1	Warramunga Arr	30.77	251	*e*P	P	09 45 18.0	-0.7
	17nm,1.2s						
WRA	Warramunga Arr	30.77	251	P	P	09 45 18.0	-0.7
	6.9nm,0.9s,baz=81,slow=9.3,SNR=23						
AS01	Alice Springs	32.00	244	*e*P	P	09 45 29.2	-0.3
AS31	Alice Springs	32.04	244	*e*P	P	09 45 29.3	-0.6
	1.2nm,0.7s						
AS31				*e*PcP	PcP	09 48 18.9	-0.7
ASAR	Alice Springs	32.04	244	P	P	09 45 29.1	-0.8
	4.3nm,0.8s,baz=74,slow=9.3,SNR=28						
ASAR				PcP	PcP	09 48 18.9	-0.7
	1.0nm,0.8s,baz=86,slow=2.3,SNR=8.0						
FITZ	Fitzroy Crossi	38.70	256	*e*P	P	09 46 27.1	-0.1
	5.8nm,0.8s						
MJAR	Matsushiro Arr	54.24	333	P	P	09 48 28.3	-0.7
	2.7nm,0.9s,baz=175,slow=8.8,SNR=6.0						
MAJO	Matsushiro	54.24	333	*e*P	P	09 48 28.3	-0.7
ASAJ	Asahikawa	59.17	341	P	P	09 49 04.7	+0.8
	8.7nm,0.8s,baz=195,slow=7.9,SNR=9.6						
KSRS	Korea Array	60.05	326	P	P	09 49 09.2	-0.8
	1.1nm,0.8s,baz=133,slow=10,SNR=2.9						
KS15	Wonju Array Si	60.07	326	*e*P	P	09 49 09.3	-0.9
KSAR	Wonju Array Be	60.07	326	P	P	09 49 09.2	-0.9
USRK	Ussuriysk Ar.	63.23	334	P	P	09 49 30.9	-0.4
	3.1nm,0.8s,baz=142,slow=7.1,SNR=8.2						
CASY	Casey	65.63	201	*e*P	P	09 49 47.3	+0.5
	25nm,0.7s						
XAN	Xi'an	70.11	313	*e*P	P	09 50 15.2	-0.4
	5.0nm,0.9s						
QSPA	South Pole Qui	78.37	180	*e*P	P	09 51 03.0	-0.4
	8.2nm,1.0s						
SONA0	Songino Array	78.82	324	*e*P	P	09 51 07.3	+1.2
SONM	Songino Array	78.82	324	P	P	09 51 07.3	+1.2
	1.0nm,0.7s,baz=138,slow=6.8,SNR=6.1						
BILL	Bilibino	79.47	0	*e*P	P	09 51 09.3	+0.3
	8.5nm,1.0s						
CAST	Castle Rocks	81.67	18	*e*P	P	09 51 21.2	+0.2
	5.5nm,0.8s						
IM3	Indian Mountai	83.14	16	*e*P	P	09 51 28.7	+0.1
MDM	Murphy Dome	83.96	18	*e*P	P	09 51 32.4	-0.5
	4.6nm,0.8s						
HDA	Harding Lake	83.98	19	*e*P	P	09 51 33.0	+0.1
	7.5nm,0.7s						
COLA	College	84.02	18	*e*P	P	09 51 32.2	-0.8
	8.6nm,0.7s						
RIDG	Independ'e Rid	84.21	20	*e*P	P	09 51 34.9	+0.7
	9.4nm,1.1s						
IL1	Eielson Array	84.24	19	*e*P	P	09 51 34.0	-0.3
ILAR	Eielson Array	84.24	19	P	P	09 51 34.3	0.0
	2.7nm,0.6s,baz=238,slow=5.3,SNR=47						
ILB	Eielson Array	84.24	19	*e*P	P	09 51 34.0	-0.3
SCRK	Sand Creek	84.66	20	*e*P	P	09 51 36.9	+0.3
	10nm,1.1s						
AFDM	Forest Hills D	85.00	49	*e*P	P	09 51 39.0	+0.2
	6.9nm,1.0s						
BEKR	Beckworth	85.75	48	*e*P	P	09 51 42.9	+0.2
	3.6nm,0.6s						
MDPB	Devils Postpil	86.00	50	*e*P	P	09 51 44.1	+0.1
	4.4nm,0.8s						
PAHR	Pah Rah Range	86.41	48	*e*P	P	09 51 46.1	+0.2
	5.6nm,1.1s						
DAC	Darwin (Calif)	86.73	52	*e*P	P	09 51 47.3	-0.3
	5.8nm,1.1s						
NV01	Mina Array Sit	86.82	50	*e*P	P	09 51 48.0	0.0
NVAR	Mina Array Bea	86.82	50	P	P	09 51 48.5	+0.5
	4.2nm,0.9s,baz=232,slow=8.4,SNR=15						
KVN	Kaiserville	87.16	49	*e*P	P	09 51 49.6	0.0
	3.3nm,0.9s						
Y12C	Blythe	88.46	55	*e*P	P	09 51 56.3	+0.6
	5.5nm,0.8s						
R11A	Troy Canyon, C	88.85	51	*e*P	P	09 51 57.4	-0.3
	3.0nm,1.1s						
ELK	Elko	89.75	48	*e*P	P	09 52 01.2	-0.7
	2.5nm,1.1s						
PSUT	Pine Spring	90.21	51	*e*P	P	09 52 04.9	+0.8
	3.7nm,0.9s						
LCMT	Little Creek M	90.30	52	*e*P	P	09 52 04.6	+0.2
	3.7nm,0.9s						
CCUT	Cedar City	90.34	52	*e*P	P	09 52 05.6	+0.9
	5.5nm,1.2s						
KNB	Kanab	90.62	52	*e*P	P	09 52 06.3	+0.3
	6.1nm,1.2s						
U15A	North Rim	90.90	53	*e*P	P	09 52 07.8	+0.4
	6.3nm,0.9s						
HLID	Hailey	91.08	46	*e*P	P	09 52 06.8	-1.2
X16A	Lo Mia Camp, P	91.11	55	*e*P	P	09 52 09.2	+0.9
	2.9nm,0.9s						
MTPU	Mount Pierson	91.36	52	*e*P	P	09 52 10.9	+1.3
	3.4nm,0.9s						
BGU	Big Grassy Mou	91.42	49	*e*P	P	09 52 09.0	-0.6
	3.3nm,1.0s						
MSU	Marysvale	91.48	51	*e*P	P	09 52 09.3	-0.7
HVU	Hansel Valley	91.81	48	*e*P	P	09 52 11.5	+0.1
	6.0nm,1.1s						
NLU	North Lily Min	91.89	50	*e*P	P	09 52 11.5	-0.4
	3.3nm,1.0s						
MPU	Maple Canyon	92.24	50	*e*P	P	09 52 14.0	+0.6
	4.1nm,1.2s						
MK01	Makanchi Array	93.56	317	*e*P	P	09 52 19.2	0.0
MK31	Makanchi Array	93.57	317	*e*P	P	09 52 18.7	-0.5
MK32	Makanchi Array	93.57	317	*e*P	P	09 52 19.2	0.0
MKAR	Makanchi Array	93.57	317	*e*P	P	09 52 18.7	-0.5
	7.4nm,0.9s						
MKAR	Makanchi Array	93.57	317	P	P	09 52 19.2	0.0
	1.2nm,0.8s,baz=99,slow=7.5,SNR=9.0						
YKA	Yellowknife Ar	95.75	27	P	P	09 52 27.3	-1.4
	0.9nm,0.8s,baz=256,slow=4.7,SNR=13						
YKB5	Yellowknife Ar	95.75	27	*e*P	P	09 52 27.1	-1.7
LTX	Lajitas	96.59	62	*e*P	P	09 52 33.2	-0.3
TXAR	Lajitas Array	96.59	62	P	P	09 52 33.2	-0.3
	0.4nm,0.7s,baz=216,slow=4.9,SNR=6.2						
CLL	Collm	134.42	336	*e*PKPdf	PKiKP	09 58 26.0	+3.5

IDC 06 09:41:55.8±1.4, 10°.94S×165°.03E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.9/36, mbtmp4.0/10, ML4.4/2, MS3.8/1, Ms1 3.8/1, ms1mx3.3/34, Error ellipse: s-maj=38.6km s-min=23.4km az=118.0

NEIC 06 09:41:59.1±0.5, 10°.87S×164°.73E, h10^{km}, mb4.2/5, Error ellipse: s-maj=11.6km s-min=6.2km az=59.0

ISCJB 06 09:42:00.2±0.6, 10°.97S±0°.08×164°.73E±0°.08, h31^{km}, mb4.2/13, Error ellipse: s-maj=13.6km s-min=7.5km az=135.4

ISC 06 09:42:01.2±0.8, 10°.8S±0°.1×164°.85E±0°.10, h31^{km}, n27, σ0^{s}.98/28, mb4.2/13, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.02	285	*e*Pn	Pn	09 43 13.6	-0.9
HNR				*e*Sn	Sn	09 44 12.0	+0.4
HNR	Honiara	5.02	285	Pn	Pn	09 43 14.1	-0.4
	47nm,0.3s,baz=126,slow=5.6,SNR=9.5						
HNR				Sn	Sn	09 44 12.0	+0.4
	16nm,0.3s,baz=111,slow=17,SNR=2.1						
HNR				LR	LR	09 45 16.7	
	comp=Z,1μm,21.1s,baz=80,slow=38						
MARNC	Mare, Loyalty	11.04	164	*e*Pn	Pn	09 44 37.0	-0.1
DZM	Mont Dzumac	11.30	172	*e*Pn	Pn	09 44 41.2	+0.5
DZM	Mont Dzumac	11.30	172	Pn	Pn	09 44 36.1	-4.7
	0.8nm,0.3s,baz=343,slow=14,SNR=5.6						
PINNC	Pines Island,	11.99	168	*e*Pn	Pn	09 44 50.2	+0.1
MANU	Manus Island	19.43	295	*e*P	P	09 46 24.4	-0.9
	40nm,0.9s						
CTA	Charters Tower	20.14	241	P	P	09 46 33.5	+0.4
	2.9nm,0.9s,baz=32,slow=13,SNR=2.5						
ARMA	Armidale	23.06	210	*e*P	P	09 47 03.7	-0.6
	11nm,1.1s						
STKA	Stephens Creek	30.02	222	*e*P	P	09 48 07.6	+0.2
	1.0nm,1.0s						
STKA	Stephens Creek	30.02	222	P	P	09 48 07.8	+0.4
	3.1nm,0.9s,baz=23,slow=6.3,SNR=3.8						
BKZ	Black Stump Fm	30.08	162	*e*P	P	09 48 07.8	-0.2
	24nm,1.2s						
WB2	Warramunga Arr	30.73	249	*e*P	P	09 48 12.9	-1.0
WR1	Warramunga Arr	30.74	249	*e*P	P	09 48 13.2	-0.7
	11nm,1.1s						
WRA	Warramunga Arr	30.75	249	P	P	09 48 13.2	-0.7
	3.0nm,0.7s,baz=81,slow=9.5,SNR=8.0						
SNZO	South Karori	31.59	166	*e*P	P	09 48 20.9	-0.2
	77nm,1.3s						
AS31	Alice Springs	32.12	242	*e*P	P	09 48 25.4	-0.6
	0.7nm,0.9s						
ASAR	Alice Springs	32.12	242	P	P	09 48 25.4	-0.6
	0.6nm,0.8s,baz=64,slow=9.8,SNR=4.4						
SONA0	Songino Array	77.96	324	*e*P	P	09 53 57.2	+0.6
SONM	Songino Array	77.96	324	P	P	09 53 57.2	+0.6
	0.7nm,0.7s,baz=130,slow=5.8,SNR=3.4						
QSPA	South Pole Qui	79.19	180	*e*P	P	09 54 03.4	+0.3
	5.0nm,0.9s						
ILAR	Eielson Array	83.57	19	P	P	09 54 24.7	-1.3
	0.7nm,0.9s,baz=226,slow=6.5,SNR=4.6						
ILB	Eielson Array	83.57	19	*e*P	P	09 54 24.4	-1.7
MK32	Makanchi Array	92.75	317	*e*P	P	09 55 12.7	+2.1
MKAR	Makanchi Array	92.75	317	P	P	09 55 12.7	+2.1
	0.9nm,0.7s,baz=93,slow=6.1,SNR=7.5						
ZALV	Zalesovo Beam	92.86	324	P	P	09 55 12.2	+1.3
	0.3nm,0.4s,baz=134,slow=3.9,SNR=3.9						
ZAA1	Zalesovo Array	92.86	324	*e*P	P	09 55 12.2	+1.3

IDC 06 09:44:17.2±1.7, 11°.97S×165°.30E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.7/34, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=51.0km s-min=30.6km az=129.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.10	174	Pn	Pn	09 46 43.5	-0.2
	1.0nm,0.3s,baz=36,slow=14,SNR=4.3						
WRA	Warramunga Arr	30.76	251	P	P	09 50 33.9	-0.7
	0.6nm,0.7s,baz=81,slow=9.1,SNR=4.1						
ASAR	Alice Springs	31.99	244	P	P	09 50 46.2	+0.7
	0.9nm,0.9s,baz=81,slow=9.6,SNR=3.4						
ILAR	Eielson Array	84.53	19	P	P	09 56 51.8	0.0
	0.5nm,0.5s,baz=240,slow=4.8,SNR=9.9						

IDC 06 09:45:00.6±1.6, 11°.32S×165°.74E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/34, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=51.7km s-min=29.6km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.71	176	Pn	Pn	09 47 35.2	-0.3
	0.4nm,0.3s,baz=319,slow=18,SNR=4.0						
WRA	Warramunga Arr	31.39	250	P	P	09 51 23.2	-0.3
	1.0nm,0.7s,baz=81,slow=8.8,SNR=5.6						

ASAR	Alice Springs	32.67	244	P	P	09 51 35.3	+0.6
	0.5nm,0.8s,baz=83,slow=9.4,SNR=3.7						
ILAR	Eielson Array	83.78	18	P	P	09 57 31.7	+0.4
	0.4nm,0.8s,baz=241,slow=4.5,SNR=3.0						
MKAR	Makanchi Array	93.72	317	P	P	09 58 18.5	-0.9
	0.2nm,0.6s,baz=106,slow=5.1,SNR=2.7						

IDC 06 09:46:50.9±6.5**, 10°.76S**×**161°.65E, h125**^{km}±38^{km}**, mb3.5**/4**, mb1 3.7**/5**, mb1mx3.4**/33**, mbtmp4.0**/5**, Error ellipse: s-maj=88.2km s-min=33.4km az=131.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	2.14	308	*i* P	Pn	09 47 27.0	+0.7
HNR	Honiara	2.14	308	P	Pn	09 47 26.6	+0.3
	107nm,0.3s,baz=229,slow=7.6,SNR=132						
HNR				S	Sn	09 47 45.8	-7.7
	457nm,0.3s,baz=15,slow=20,SNR=28						
WRA	Warramunga Arr	27.84	248	P	P	09 52 27.8	-1.2
	1.2nm,0.9s,baz=69,slow=9.4,SNR=5.4						
SONM	Songino Array	76.10	325	P	P	09 58 25.6	+0.5
	2.0nm,0.8s,baz=134,slow=5.6,SNR=9.6						
ILAR	Eielson Array	84.56	20	P	P	09 59 08.6	-1.2
	0.2nm,0.5s,baz=230,slow=5.6,SNR=4.2						
MKAR	Makanchi Array	90.58	318	P	P	09 59 41.1	+1.9
	0.4nm,0.6s,baz=104,slow=4.0,SNR=4.7						

IDC 06 09:47:35.2±1.8**, 10°.46S**×**166°.30E, h0**^{km}**, mb3.8**/3**, mb1 4.1**/4**, mb1mx3.7**/32**, mbtmp3.9**/4**, ML4.3**/1**, Error ellipse: s-maj=57.2km s-min=30.8km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.55	179	Pn	Pn	09 50 21.4	-0.1
	2.1nm,0.3s,baz=0.9,slow=18,SNR=7.5						
WRA	Warramunga Arr	32.20	249	P	P	09 54 05.2	-0.1
	2.8nm,1.0s,baz=81,slow=9.1,SNR=6.2						
ASAR	Alice Springs	33.54	243	P	P	09 54 17.0	0.0
	0.4nm,0.8s,baz=64,slow=10,SNR=2.5						
ILAR	Eielson Array	82.79	18	P	P	10 00 00.9	0.0
	0.6nm,0.6s,baz=242,slow=5.0,SNR=6.9						

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*IDC **06** 09:53:27.4±0.8, 10°.99S×165°.50E, h0^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.2/38, mbtmp4.2/17, ML4.7/2, Error ellipse: s-maj=22.2km s-min=16.9km az=119.0*

*NEIC **06** 09:53:28.6±0.3, 11°.02S×165°.53E, h10^{km}, mb4.5/11, Error ellipse: s-maj=6.3km s-min=5.3km az=102.0*

*ISCJB **06** 09:53:29.6±0.3, 11°.11S±0°.05×165°.51E±0°.06, h30^{km}, mb4.3/25, Error ellipse: s-maj=8.2km s-min=6.9km az=8.0*

ISC 06 09:53:31.6±0.5**, 11°.05S**±0°.08×**165°.54E**±0°.08**, h30**^{km}**, n51, σ0**^{s}**94**/51**, mb4.4**/25**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.73	286	*e*Pn	Pn	09 54 54.2	-0.4
HNR	Honiara	5.73	286	Pn	Pn	09 54 54.7	0.0
	34nm,0.3s,baz=166,slow=6.2,SNR=5.1						
MARNC	Mare, Loyalty	10.64	167	*e*Pn	Pn	09 55 59.6	-2.4
DZM	Mont Dzumac	10.99	176	*e*Pn	Pn	09 56 07.3	+0.4
DZM	Mont Dzumac	10.99	176	Pn	Pn	09 56 07.8	+0.8
	4.3nm,0.3s,baz=334,slow=13,SNR=22						
ONTNC	Ouen Toro	11.23	176	*e*Pn	Pn	09 56 08.5	-1.6
PINNC	Pines Island,	11.64	171	*e*Pn	Pn	09 56 14.8	-1.0
FUNA	Funafuti	13.69	81	*e*Pn	Pn	09 56 43.8	0.0
PATS	Pohnpei	19.17	338	*e*P	P	09 57 52.0	-0.8
	257nm,1.4s						
EIDS	Eidsvold	19.75	222	*e*P	Pn	09 58 00.4	-0.4
	10nm,0.9s						
MANU	Manus Island	20.13	295	*e*P	P	09 58 01.7	-1.7
	130nm,1.0s						
CTA	Charters Tower	20.61	242	P	P	09 58 09.4	+0.8
	13nm,0.9s,baz=64,slow=13,SNR=9.0						
CTAO	Charters Tower	20.61	242	*e*P	P	09 58 09.3	+0.7
	31nm,1.3s						
COEN	Coen	22.02	260	*e*P	P	09 58 23.9	+0.1
	27nm,1.1s						
ARMA	Armidale	23.20	212	*e*P	P	09 58 37.3	+1.1
	14nm,1.2s						
CAN	Canberra	28.45	209	*e*P	P	09 59 22.5	-1.5
	17nm,1.3s						
URZ	Urewera	29.01	161	P	P	09 59 29.6	+0.8
	4.3nm,0.5s,baz=286,slow=2.8,SNR=9.9						
BKZ	Black Stump Fm	29.65	163	*e*P	P	09 59 36.1	+1.6
	49nm,1.4s						
STKA	Stephens Creek	30.30	223	*e*P	P	09 59 41.4	+1.0
	1.2nm,0.9s						
STKA	Stephens Creek	30.30	223	P	P	09 59 40.4	+0.1
	3.0nm,0.7s,baz=9.6,slow=13,SNR=7.5						
WRAB	Tennant Creek	31.28	250	*e*P	P	09 59 49.1	0.0
	14nm,1.1s						
WB2	Warramunga Arr	31.28	250	*e*P	P	09 59 48.9	-0.2
WR1	Warramunga Arr	31.29	250	*e*P	P	09 59 48.8	-0.4
	17nm,1.0s						
WRA	Warramunga Arr	31.29	250	P	P	09 59 48.8	-0.4
	7.1nm,0.9s,baz=81,slow=9.1,SNR=28						
AS01	Alice Springs	32.56	243	*e*P	P	10 00 00.1	-0.4
AS31	Alice Springs	32.60	243	*e*P	P	10 00 00.3	-0.5
	1.5nm,0.8s						
ASAR	Alice Springs	32.61	243	P	P	10 00 00.3	-0.5
	5.4nm,0.8s,baz=71,slow=9.2,SNR=34						
FITZ	Fitzroy Crossi	39.18	255	*e*P	P	10 00 56.3	-0.8
	8.3nm,1.1s						
MJAR	Matsushiro Arr	53.88	333	P	P	10 02 51.1	-1.0
	1.2nm,0.5s,baz=176,slow=4.9,SNR=4.0						
MAJO	Matsushiro	53.88	333	*e*P	P	10 02 51.1	-1.0
ASAJ	Asahikawa	58.73	341	P	P	10 03 27.0	+0.4
	3.1nm,0.7s,baz=205,slow=11,SNR=4.2						
HHC	Hu-ho-hao-te	71.70	320	*e*P	P	10 04 51.8	+0.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,350nm,15.6s						
CM31	Chiang Mai Arr	71.93	294	*e*P	P	10 04 53.5	+0.9
CMAR	Chiang Mai Arr	71.93	294	P	P	10 04 53.5	+0.9
	comp=Z,1.2nm,0.7s,baz=130,slow=4.4,SNR=5.1						
SONA0	Songino Array	78.55	324	*e*P	P	10 05 30.9	+0.6
SONM	Songino Array	78.55	324	P	P	10 05 30.9	+0.6
	comp=Z,0.5nm,0.7s,baz=132,slow=6.4,SNR=3.4						
GTA	Gaotai	78.91	314	*e*P	P	10 05 34.1	+1.6
GTA				pP	PcP	10 05 39.9	-1.2
GTA				sP	pP	10 05 42.6	+1.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HDA	Harding Lake	83.31	19	*e*P	P	10 05 55.8	+0.6
	comp=Z,6.3nm,0.8s						
ILAR	Eielson Array	83.58	19	P	P	10 05 56.8	+0.2
	comp=Z,1.6nm,0.6s,baz=238,slow=5.0,SNR=32						
ILB	Eielson Array	83.58	19	*e*P	P	10 05 56.7	+0.1
IL1	Eielson Array	83.58	19	*e*P	P	10 05 55.7	-0.9
NV01	Mina Array Sit	86.18	50	*e*P	P	10 06 10.4	-0.1
NVAR	Mina Array Bea	86.18	50	P	P	10 06 12.4	+1.9
	comp=Z,0.8nm,0.8s,baz=236,slow=8.6,SNR=5.1						
MK32	Makanchi Array	93.39	317	*e*P	P	10 06 44.3	+0.3
MKAR	Makanchi Array	93.39	317	P	P	10 06 44.3	+0.3
	comp=Z,0.5nm,0.7s,baz=91,slow=6.0,SNR=6.2						
ZALV	Zalesovo Beam	93.44	324	P	P	10 06 43.1	-0.9
	comp=Z,0.3nm,0.3s,baz=94,slow=5.8,SNR=2.4						
ZAA1	Zalesovo Array	93.44	324	*e*P	P	10 06 43.1	-0.9
PD31	Pinedale Array	93.71	47	*e*P	P	10 06 46.2	+0.3
PDAR	Pinedale Array	93.71	47	P	P	10 06 46.6	+0.7
	comp=Z,0.3nm,0.6s,baz=278,slow=2.6,SNR=2.2						
YKA	Yellowknife Ar	95.07	27	P	P	10 06 50.0	-1.3
	comp=Z,0.3nm,0.5s,baz=257,slow=4.7,SNR=6.5						
YKB5	Yellowknife Ar	95.07	27	*e*P	P	10 06 50.3	-1.0

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*ISCJB **06** 09:54:01.9±0.3, 11°.20S±0°.04×165°.86E±0°.04, h10^{km}, mb4.6/40, Error ellipse: s-maj=6.3km s-min=5.6km az=4.4*

*IDC **06** 09:54:01.8±0.7, 11°.24S×166°.00E, h0^{km}, mb4.4/14, mb1 4.5/16, mb1mx4.3/39, mbtmp4.4/16, ML4.8/2, Error ellipse: s-maj=23.8km s-min=17.0km az=115.0*

*NEIC **06** 09:54:03.7±0.7, 11°.14S×165°.87E, h11^{km}±4^{km}, mb4.7/19, Error ellipse: s-maj=5.5km s-min=4.2km az=107.0*

ISC 06 09:54:03.4±0.4**, 11°.15S**±0°.06×**165°.91E**±0°.07**, h10**^{km}**, n84, σ1**^{s}**03**/90**, mb4.8**/40**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.11	286	*e*Pn	Pn	09 55 33.3	-0.5
HNR				*e*Sn	Sn	09 56 43.8	-0.1
HNR	Honiara	6.11	286	Pn	Pn	09 55 36.7	+2.9
	50nm,0.3s,baz=182,slow=4.4,SNR=4.1						
MARNC	Mare, Loyalty	10.47	169	*e*Pn	Pn	09 56 35.5	+1.8
DZM	Mont Dzumac	10.87	177	*e*Pn	Pn	09 56 40.1	+0.8
DZM	Mont Dzumac	10.87	177	Pn	Pn	09 56 39.6	+0.3
	3.3nm,0.3s,baz=41,slow=19,SNR=5.3						
ONTNC	Ouen Toro	11.11	177	*e*Pn	Pn	09 56 43.7	+1.3
PINNC	Pines Island,	11.49	173	*e*Pn	Pn	09 56 49.3	+1.6
FUNA	Funafuti	13.35	80	*e*Pn	Pn	09 57 13.8	+0.8
TARA	Tarawa	14.24	30	*e*Pn	Pn	09 57 24.8	-0.5
TARA				*e*Sn	Sn	09 59 44.7	-19
PATS	Pohnpei	19.40	337	*e*P	Pn	09 58 30.1	-0.8
	208nm,1.2s						
KWAJ	Kwajalein Atol	19.89	5	*e*P	Pn	09 58 36.0	-0.8
	720nm,1.5s						
EIDS	Eidsvold	19.93	223	*e*P	Pn	09 58 35.6	-1.5
	40nm,1.5s						
MANU	Manus Island	20.51	295	*e*P	P	09 58 42.5	+0.6
	145nm,1.3s						
CTA	Charters Tower	20.90	242	P	P	09 58 44.4	-1.7
	7.0nm,0.9s,baz=55,slow=12,SNR=2.3						
LHI	Lord Howe Isla	21.24	196	*e*P	P	09 58 48.7	-0.9
	170nm,1.3s						
COEN	Coen	22.37	260	*e*P	P	09 59 02.4	+0.5
	20nm,1.1s						
ARMA	Armidale	23.32	213	*e*P	P	09 59 11.5	-0.3
	16nm,1.1s						
STKA	Stephens Creek	30.48	224	*e*P	P	10 00 16.7	+0.1
	1.0nm,1.1s						
STKA	Stephens Creek	30.48	224	P	P	10 00 16.4	-0.2
	2.8nm,0.5s,baz=42,slow=7.4,SNR=5.8						
BFZ	Birch Farm	30.80	165	*e*P	P	10 00 19.6	+0.3
	49nm,1.0s						
WRAB	Tennant Creek	31.59	250	*e*P	P	10 00 26.1	-0.5
	18nm,1.4s						
WB2	Warramunga Arr	31.59	250	*e*P	P	10 00 25.5	-1.1
	19nm,1.4s						
WR1	Warramunga Arr	31.60	250	*e*P	P	10 00 25.4	-1.3
	8.6nm,0.9s						
WR1				*e*PcP	PcP	10 03 19.3	+0.2
WRA	Warramunga Arr	31.60	250	P	P	10 00 25.4	-1.3
	5.2nm,0.7s,baz=80,slow=8.6,SNR=9.8						
WRA				PcP	PcP	10 03 19.3	+0.2
	0.6nm,0.8s,baz=78,slow=3.3,SNR=2.6						
OXZ	Oxford	32.50	172	*e*P	P	10 00 34.4	+0.2
	30nm,1.1s						
RPZ	Rata Peaks	32.75	173	P	P	10 00 36.3	-0.1
	8.6nm,1.0s,baz=333,slow=4.5,SNR=2.2						
AS01	Alice Springs	32.85	243	*e*P	P	10 00 37.7	+0.1
AS31	Alice Springs	32.89	243	*e*P	P	10 00 37.9	-0.1
	1.4nm,0.9s						
AS31				*e*PcP	PcP	10 03 22.8	+0.2
ASAR	Alice Springs	32.89	243	P	P	10 00 39.3	+1.4
	1.7nm,0.9s,baz=72,slow=9.9,SNR=2.5						
ASAR				PcP	PcP	10 03 22.8	+0.2
	0.7nm,0.8s,baz=106,slow=2.0,SNR=2.6						
ASAJ	Asahikawa	58.95	341	P	P	10 04 03.2	+0.4
	3.8nm,0.6s,baz=219,slow=12,SNR=3.6						
USRK	Ussuriysk Ar.	63.11	333	P	P	10 04 34.0	+2.8
	3.1nm,0.9s,baz=139,slow=6.3,SNR=5.3						
IPM	Ipoh	66.40	280	*e*P	P	10 04 53.6	+0.3
	29nm,1.0s						
SKNT	Sakolnakorn	67.28	294	P	P	10 04 59.9	+1.1
	6.8nm,1.0s						
ENH	Enshi	68.09	309	*e*P	P	10 05 03.7	0.0
	16nm,1.1s						
NONG	Nongkai	68.41	295	P	P	10 05 07.4	+1.5
PBKT	Sadao Pong	69.87	292	*e*P	P	10 05 14.7	-0.2
	9.3nm,1.0s						
XAN	Xi'an	70.31	312	P	P	10 05 17.8	+0.3
XAN				pP	PcP	10 05 34.4	-4.7
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN	Xi'an	70.31	312	*e*P	P	10 05 17.8	+0.3
	comp=Z,9.8nm,1.1s						
CM01	Chiang Mai Arr	72.28	293	*e*P	P	10 05 30.8	+1.2
CM31	Chiang Mai Arr	72.30	294	*e*P	P	10 05 31.6	+1.9
CMAR	Chiang Mai Arr	72.30	294	P	P	10 05 31.4	+1.6
	comp=Z,5.6nm,0.9s,baz=115,slow=4.5,SNR=21						
CMMT	Chiang Mai	72.41	294	P	P	10 05 32.3	+1.9
	comp=Z,9.9nm,1.3s						
CHTO	Chiang Mai	72.42	294	*e*P	P	10 05 30.5	+0.1
	comp=Z,15nm,1.3s						
CHTO	Chiang Mai	72.42	294	P	P	10 05 32.4	+2.0
	comp=Z,44nm,1.3s						
ULN	Ulaanbaatar	78.48	324	*e*P	P	10 06 05.0	+0.1
	comp=Z,7.2nm,1.1s						
SONA0	Songino Array	78.85	324	*e*P	P	10 06 08.2	+1.3
SONM	Songino Array	78.85	324	P	P	10 06 08.2	+1.3
	comp=Z,2.2nm,1.0s,baz=137,slow=6.0,SNR=8.3						
SONA1	Songino Array	78.85	324	*e*P	P	10 06 06.2	-0.7
QSPA	South Pole Qui	78.86	180	*e*P	P	10 06 06.0	-0.7
	comp=Z,8.6nm,1.0s						
DIV	Divide	81.44	22	*e*P	P	10 06 21.7	+1.2
	comp=Z,8.7nm,0.9s						
IM3	Indian Mountai	82.48	15	*e*P	P	10 06 26.0	+0.2
WRH	Wood River Hil	82.98	18	*e*P	P	10 06 28.9	+0.5
	comp=Z,5.5nm,0.8s						
MDM	Murphy Dome	83.28	18	*e*P	P	10 06 30.3	+0.4
	comp=Z,7.3nm,1.0s						
HDA	Harding Lake	83.29	19	*e*P	P	10 06 30.6	+0.7
	comp=Z,16nm,0.8s						
COLA	College	83.33	18	*e*P	P	10 06 30.3	+0.2
	comp=Z,10.0nm,0.6s						
IL1	Eielson Array	83.56	18	*e*P	P	10 06 32.0	+0.7
ILAR	Eielson Array	83.56	18	P	P	10 06 32.0	+0.6
	comp=Z,2.5nm,0.8s,baz=229,slow=6.4,SNR=11						
ILB	Eielson Array	83.56	18	*e*P	P	10 06 31.1	-0.3
SCRK	Sand Creek	83.96	20	*e*P	P	10 06 35.1	+1.6
	comp=Z,11nm,1.1s						
NV01	Mina Array Sit	85.96	50	*e*P	P	10 06 44.6	+0.2
NVAR	Mina Array Bea	85.96	50	P	P	10 06 45.3	+0.9
	comp=Z,2.3nm,1.0s,baz=228,slow=7.5,SNR=5.6						
CCUT	Cedar City	89.48	52	*e*P	P	10 07 00.5	-0.8
	comp=Z,2.7nm,1.1s						
HVU	Hansel Valley	90.95	48	*e*P	P	10 07 08.5	+0.5
	comp=Z,5.8nm,1.1s						
MK01	Makanchi Array	93.70	317	*e*P	P	10 07 20.8	+0.4
MK31	Makanchi Array	93.71	317	*e*P	P	10 07 20.3	-0.2
MK32	Makanchi Array	93.71	317	*e*P	P	10 07 20.6	+0.1
MKAR	Makanchi Array	93.71	317	*e*P	P	10 07 20.4	0.0
	comp=Z,16nm,0.8s						
MKAR	Makanchi Array	93.71	317	P	P	10 07 20.6	+0.1
	comp=Z,3.0nm,0.8s,baz=97,slow=6.5,SNR=16						
ZALV	Zalesovo Beam	93.73	324	*e*P	P	10 07 19.4	-1.0
ZALV	Zalesovo Beam	93.73	324	P	P	10 07 19.7	-0.6
	comp=Z,1.8nm,0.8s,baz=92,slow=4.5,SNR=6.9						
ZAA1	Zalesovo Array	93.74	324	*e*P	P	10 07 19.7	-0.6
MAKZ	Makanchi	93.92	317	*e*P	P	10 07 21.0	-0.4
	comp=Z,3.8nm,0.9s						
YKA	Yellowknife Ar	94.99	27	P	P	10 07 24.4	-1.4
	comp=Z,0.2nm,0.5s,baz=256,slow=4.6,SNR=5.4						
YKB5	Yellowknife Ar	94.99	27	*e*P	P	10 07 25.8	0.0
ARA0	ARCESS Array S	116.47	345	*e*PKPdf	PKPdf	10 12 45.5	-1.5
ARCES	ARCESS Array B	116.47	345	PKP	PKPdf	10 12 45.5	-1.5
	comp=Z,1.8nm,0.9s,baz=78,slow=1.4,SNR=9.5						
CLL	Collm	134.26	336	*e*PKPdf	PKiKP	10 13 22.0	-0.8
GERES	GERESS Array B	135.87	334	PKP	PKiKP	10 13 24.9	-1.4
	comp=Z,0.4nm,0.6s,baz=10,slow=3.0,SNR=4.3						
KEST	Kesra	147.60	323	*e*PKPbc	PKiKP	10 13 48.9	-1.9
KEST	Kesra	147.60	323	PKPbc	PKiKP	10 13 49.4	-1.3
	comp=Z,5.2nm,0.7s,baz=23,slow=1.0,SNR=3.6						
ESDC	Sonseca Array	150.20	344	PKPbc	PKPbc	10 13 53.6	-1.5
	comp=Z,0.2nm,0.4s,baz=2.6,slow=2.8,SNR=3.4						
TOA0	Torodi Ar. Sit	164.44	279	*e*PKPdf	PKPdf	10 14 08.2	-0.2
TOA0				*e*PKPab	pPKPab	10 15 04.7	-0.7
TORD	Torodi Ar. Bea	164.44	279	PKP	PKPdf	10 14 08.4	0.0
	comp=Z,1.3nm,0.9s,baz=338,slow=3.1,SNR=6.2						
TOA1	Torodi Ar. Sit	164.44	279	*e*PKPdf	PKPdf	10 14 08.4	0.0

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*ISCJB **06** 09:55:39.8±0.5, 11°.69S±0°.06×165°.77E±0°.06, h10^{km}, mb4.3/15, Error ellipse: s-maj=10.2km s-min=7.2km az=39.9*

*IDC **06** 09:55:39.9±1.4, 11°.65S×165°.81E, h0^{km}, mb4.1/9, mb1 4.3/10, mb1mx4.0/38, mbtmp4.1/10, Error ellipse: s-maj=43.9km s-min=23.7km az=113.0*

*NEIC **06** 09:55:41.5±0.3, 11°.62S×165°.80E, h10^{km}, mb4.2/6, Error ellipse: s-maj=7.1km s-min=6.1km az=65.0*

ISC 06 09:55:41.4±0.6**, 11°.62S**±0°.09×**165°.82E**±0°.08**, h10**^{km}**, n34, σ0**^{s}**68**/36**, mb4.1**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.17	290	*e*Pn	Pn	09 57 12.5	-0.1
HNR				*e*Sn	Sn	09 58 23.7	+0.4
MARNC	Mare, Loyalty	10.03	168	*e*Pn	Pn	09 58 06.6	+1.0
DZM	Mont Dzumac	10.41	177	*e*Pn	Pn	09 58 11.4	+0.5
DZM	Mont Dzumac	10.41	177	Pn	Pn	09 58 10.8	-0.1
	baz=315,slow=17,SNR=1.8						
MSVF	Nonsavu	13.30	119	*e*Pn	Pn	09 58 50.6	+0.1
EIDS	Eidsvold	19.52	224	*e*P	Pn	10 00 10.1	-0.2
	20nm,1.2s						
CTAO	Charters Tower	20.60	243	*e*P	Pn	10 00 20.9	-2.3
	14nm,1.2s						
ARMA	Armidale	22.87	213	*e*P	P	10 00 45.3	0.0
	47nm,1.6s						
NIUE	Niue	24.52	111	*e*P	P	10 01 00.6	-0.7
	151nm,1.3s						
STKA	Stephens Creek	30.07	224	*e*P	P	10 01 50.9	-0.1
	1.1nm,1.0s						
STKA	Stephens Creek	30.07	224	P	P	10 01 51.0	-0.1
	2.1nm,0.7s,baz=54,slow=14,SNR=2.3						
WB2	Warramunga Arr	31.34	251	*e*P	P	10 02 02.2	-0.2
	16nm,1.6s						
WR1	Warramunga Arr	31.35	251	*e*P	P	10 02 01.9	-0.6
	18nm,1.5s						
WRA	Warramunga Arr	31.35	251	P	P	10 02 01.9	-0.6
	1.1nm,0.6s,baz=82,slow=8.8,SNR=4.7						
KHZ	Kahutara	31.41	169	*e*P	P	10 02 02.5	-0.1
	62nm,1.3s						
AS01	Alice Springs	32.56	244	*e*P	P	10 02 12.6	-0.5
AS31	Alice Springs	32.60	244	*e*P	P	10 02 12.4	-1.0
	1.3nm,1.1s						
AS31				*e*PcP	PcP	10 04 60.0	+0.1
ASAR	Alice Springs	32.60	244	P	P	10 02 12.4	-1.0
	1.5nm,0.7s,baz=73,slow=9.0,SNR=5.5						
ASAR				PcP	PcP	10 04 60.0	+0.1
	0.8nm,0.7s,baz=54,slow=1.6,SNR=4.2						
MJAR	Matsushiro Arr	54.51	333	P	P	10 05 08.6	-1.0
	1.7nm,0.8s,baz=166,slow=7.9,SNR=4.1						
MAJO	Matsushiro	54.51	333	*e*P	P	10 05 08.6	-1.0
CM31	Chiang Mai Arr	72.40	294	*e*P	P	10 07 07.9	-0.5
CMAR	Chiang Mai Arr	72.40	294	P	P	10 07 10.1	+1.7
	1.4nm,0.8s,baz=126,slow=4.7,SNR=4.1						
SONA0	Songino Array	79.17	324	*e*P	P	10 07 47.4	+0.7
SONM	Songino Array	79.17	324	P	P	10 07 47.4	+0.7
	1.5nm,0.8s,baz=134,slow=6.4,SNR=5.7						
ILAR	Eielson Array	84.03	18	P	P	10 08 11.6	-0.3
	0.5nm,0.7s,baz=238,slow=5.3,SNR=5.8						
ILB	Eielson Array	84.03	18	*e*P	P	10 08 11.4	-0.5
MK31	Makanchi Array	93.99	317	*e*P	P	10 09 00.7	+0.9
MK32	Makanchi Array	93.99	317	*e*P	P	10 08 59.7	-0.1
MKAR	Makanchi Array	93.99	317	*e*P	P	10 09 00.7	+0.9
	10nm,1.0s						
MKAR	Makanchi Array	93.99	317	P	P	10 08 59.7	-0.1
	1.5nm,0.8s,baz=90,slow=6.4,SNR=6.0						
ZALV	Zalesovo Beam	94.06	324	P	P	10 09 00.8	+0.9
	0.8nm,0.7s,baz=97,slow=3.5,SNR=3.8						
ZAA1	Zalesovo Array	94.06	324	*e*P	P	10 09 00.8	+0.9
ARA0	ARCESS Array S	116.91	345	*e*PKPdf	PKiKP	10 14 25.9	+0.1
ARCES	ARCESS Array B	116.91	345	PKP	PKiKP	10 14 25.9	+0.1
	1.3nm,0.7s,baz=83,slow=2.8,SNR=6.7						

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*IDC **06** 10:00:12.2±0.6, 12°.05S×166°.09E, h0^{km}, mb4.4/17, mb1 4.5/19, mb1mx4.3/38, mbtmp4.4/19, ML4.8/2, Error ellipse: s-maj=19.9km s-min=14.8km az=94.0*

*NEIC **06** 10:00:14.3±0.3, 12°.00S×165°.96E, h10^{km}, mb4.9/15, Error ellipse: s-maj=9.0km s-min=5.4km az=79.0*

*ISCJB **06** 10:00:16.1±0.3, 12°.15S±0°.04×165°.79E±0°.07, h30^{km}, mb4.7/45, Error ellipse: s-maj=10.4km s-min=5.6km az=160.5*

ISC 06 10:00:17.6±0.5**, 12°.05S**±0°.07×**165°.90E**±0°.08**, h30**^{km}**, n86, σ1**^{s}**42**/93**, mb4.8**/45**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.40	293	*e*Pn	Pn	10 01 49.5	-0.4
HNR				*e*Sn	Sn	10 02 56.8	-5.2
HNR	Honiara	6.40	293	Pn	Pn	10 01 49.8	-0.1
	53nm,0.3s,baz=142,slow=7.3,SNR=12						
HNR				Sn	Sn	10 03 01.0	-1.1
	24nm,0.3s,baz=253,slow=19,SNR=5.0						
MARNC	Mare, Loyalty	9.60	168	*e*Pn	Pn	10 02 34.3	+0.5
DZM	Mont Dzumac	9.98	177	*e*Pn	Pn	10 02 39.1	-0.1
DZM	Mont Dzumac	9.98	177	Pn	Pn	10 02 38.6	-0.6
	2.4nm,0.3s,baz=340,slow=11,SNR=11						
ONTNC	Ouen Toro	10.22	177	*e*Pn	Pn	10 02 43.1	+0.8
PINNC	Pines Island,	10.61	172	*e*Pn	Pn	10 02 46.5	-1.2
CTA	Charters Tower	20.49	245	P	P	10 04 54.0	+0.8
	7.3nm,0.8s,baz=89,slow=12,SNR=8.2						
CTAO	Charters Tower	20.49	245	*e*P	P	10 04 53.2	-0.1
URZ	Urewera	27.96	161	P	P	10 06 04.9	-0.6
	6.7nm,0.9s,baz=155,slow=16,SNR=3.8						
STKA	Stephens Creek	29.83	225	*e*P	P	10 06 23.7	+1.5
	1.5nm,0.9s						
STKA	Stephens Creek	29.83	225	P	P	10 06 21.5	-0.7
	4.0nm,0.7s,baz=40,slow=10,SNR=7.4						
WB2	Warramunga Arr	31.28	251	*e*P	P	10 06 33.9	-1.4
WB2				*e*PcP	PcP	10 09 31.4	+2.1
WRAB	Tennant Creek	31.28	251	*e*P	P	10 06 34.4	-0.8
	6.6nm,1.0s						
WRA	Warramunga Arr	31.30	251	P	P	10 06 34.1	-1.2
	1.6nm,0.5s,baz=81,slow=6.9,SNR=30						
RPZ	Rata Peaks	31.87	173	P	P	10 06 39.0	-1.0
	12nm,0.7s,baz=294,slow=8.5,SNR=9.0						
LBZ	Lake Benmore	32.44	174	*e*P	P	10 06 46.0	+1.0
	16nm,0.9s						
AS01	Alice Springs	32.45	245	*e*P	P	10 06 44.6	-0.9
AS31	Alice Springs	32.49	245	*e*P	P	10 06 44.2	-1.7
	1.9nm,0.6s						
ASAR	Alice Springs	32.49	245	P	P	10 06 44.7	-1.2
	6.8nm,0.7s,baz=70,slow=9.1,SNR=48						
ASAR				PcP	PcP	10 09 32.7	+0.2
	2.6nm,1.1s,baz=72,slow=3.8,SNR=4.3						
GUMO	Guam	32.92	320	*e*P	P	10 06 49.7	+0.2
	178nm,1.4s						
ODZ	Otahua Downs	33.13	174	*e*P	P	10 06 51.5	+0.4
	39nm,1.5s						
MLZ	Mavora Lakes	33.26	177	*e*P	P	10 06 52.1	-0.1
	14nm,1.0s						
WHZ	Wether Hill Ro	33.78	177	*e*P	P	10 06 56.9	+0.2
	31nm,1.5s						
MJAR	Matsushiro Arr	54.92	333	P	P	10 09 44.4	-1.3
	5.5nm,1.0s,baz=172,slow=8.6,SNR=8.7						
ASAJ	Asahikawa	59.78	341	P	P	10 10 20.1	+0.2
	6.9nm,0.8s,baz=49,slow=20,SNR=7.0						
KSRS	Korea Array	60.78	326	P	P	10 10 27.4	+0.5
	1.7nm,0.9s,baz=130,slow=12,SNR=3.9						
KSAR	Wonju Array Be	60.80	326	P	P	10 10 27.4	+0.4
NJ2	Nanjing	62.84	316	*e*P	P	10 10 40.4	-0.4
NJ2				pmax	pmax		
	comp=Z,19nm,0.9s						
USA0B	Ussuriysk Arra	63.90	333	*e*P	P	10 10 48.2	+0.6
	comp=Z,24nm,1.4s						
USRK	Ussuriysk Ar.	63.90	333	P	P	10 10 48.2	+0.6
	comp=Z,5.5nm,0.8s,baz=139,slow=7.4,SNR=12						
MDJ	Mudanjiang	65.30	332	P	P	10 10 57.2	+0.5
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,100nm,3.2s						
CASY	Casey	65.51	201	*e*P	P	10 10 57.8	0.0
	comp=Z,8.9nm,1.0s						
IPM	Ipoh	66.54	280	*e*P	P	10 11 05.0	-0.4
	comp=Z,22nm,1.0s						
CN2	Changchun	66.67	329	*e*P	P	10 11 08.0	+2.4
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
SKNT	Sakolnakorn	67.63	294	P	P	10 11 15.4	+3.2
	comp=Z,6.0nm,1.0s						
ENH	Enshi	68.64	309	*e*P	P	10 11 18.3	-0.1
	comp=Z,10nm,0.9s						
GYA	Guiyang	69.10	304	P	P	10 11 22.3	+0.9
GYA				PP	PP	10 13 58.4	+3.9
GYA				S	S	10 20 27.3	+2.0
GYA				SKS	SKSac	10 21 19.0	-0.7
GYA	Guiyang	69.10	304	SS	SS	10 24 54.6	+2.5
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,490nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,460nm,18.0s						
XAN	Xi'an	70.90	313	P	P	10 11 34.8	+2.6

XAN				pP	pwP	10 11 48.5	-1.5
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN	Xi'an	70.90	313	eP	P	10 11 31.3	-0.9
	comp=Z,11nm,1.0s						
UTTA	Uttaradit	70.97	294	P	P	10 11 38.1	+5.3
	comp=Z,1.9nm,0.9s,comp=Z,91nm						
KMI	Kunming	71.77	302	P	P	10 11 35.4	-2.5
KMI				pP	pP	10 11 40.0	-4.6
KMI				sP	sP	10 11 42.4	-4.8
KMI				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,73nm,3.6s						
CM01	Chiang Mai Arr	72.62	294	eP	P	10 11 43.8	+1.0
CM01				eS	S	10 21 03.4	-2.8
CMAR	Chiang Mai Arr	72.65	294	P	P	10 11 44.2	+1.3
	comp=Z,3.6nm,0.6s,baz=120,slow=4.7,SNR=15						
HHC	Hu-ho-hao-te	72.69	320	eP	P	10 11 44.8	+1.9
HHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CD2	Chengdu	73.33	308	eP	P	10 11 49.0	+2.2
LZH	Lanzhou	75.54	312	eP	P	10 12 01.0	+1.3
LZH				pP	pP	10 12 06.8	+0.3
LZH				sP	sP	10 12 10.0	+1.1
LZH				PP	PP	10 14 48.6	-0.8
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,86nm,4.3s						
LZH				LR	LR		
	comp=N,340nm,17.5s						
LZH				LR	LR		
	comp=E,350nm,17.9s						
LZH				LR	LR		
	comp=Z,430nm,19.3s						
QSPA	South Pole Qui	77.96	180	eP	P	10 12 12.5	-0.4
	comp=Z,10nm,0.9s						
ULN	Ulaanbaatar	79.19	324	eP	P	10 12 20.7	+0.8
	comp=Z,12nm,1.0s						
SONM	Songino Array	79.56	324	P	P	10 12 22.5	+0.6
	comp=Z,2.3nm,0.6s,baz=140,slow=4.7,SNR=15						
SONA1	Songino Array	79.56	324	eP	P	10 12 23.0	+1.1
GTA	Gaotai	79.86	314	⇑P	P	10 12 27.1	+3.4
GTA				pP	sP	10 12 33.6	-0.3
GTA				sP	pwP	10 12 38.3	-1.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,220nm,5.6s						
GTA				LR	LR		
	comp=N,2µm,16.5s						
GTA				LR	LR		
	comp=E,990nm,17.5s						
GTA				LR	LR		
	comp=Z,410nm,18.7s						
TLY	Talaya	83.03	326	eP	P	10 12 41.1	+1.1
	comp=Z,22nm,0.8s						
ILAR	Eielson Array	84.41	18	P	P	10 12 45.2	-1.6
	comp=Z,0.5nm,0.7s,baz=201,slow=5.6,SNR=7.8						
IL1	Eielson Array	84.41	18	eP	P	10 12 48.5	+1.7
NVAR	Mina Array Bea	86.55	50	P	P	10 12 55.4	-3.0
	comp=Z,0.2nm,0.4s,baz=232,slow=4.4,SNR=2.6						
WMQ	Urumqi	89.90	315	eP	P	10 13 15.8	+1.8
WMQ				pmax	pmax		
	comp=Z,17nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1µm,7.5s						
WMQ				LR	LR		
	comp=N,4µm,33.1s						
WMQ				LR	LR		
	comp=E,2µm,37.3s						
WMQ				LR	LR		
	comp=Z,2µm,28.9s						
LKWY	Lake	93.92	45	eP	P	10 13 31.9	-0.9
	comp=Z,3.4nm,0.6s						
MK01	Makanchi Array	94.34	317	eP	P	10 13 34.6	+0.2
MK31	Makanchi Array	94.35	317	eP	P	10 13 34.2	-0.2
MKAR	Makanchi Array	94.35	317	eP	P	10 13 34.7	+0.2
	comp=Z,37nm,0.8s						
MKAR	Makanchi Array	94.35	317	P	P	10 13 34.4	-0.1
	comp=Z,3.7nm,0.7s,baz=95,slow=5.7,SNR=11						
ZAA0	Zalesovo Array	94.45	324	eP	P	10 13 33.7	-1.0
	comp=Z,6.0nm,1.0s						
ZALV	Zalesovo Beam	94.45	324	eP	P	10 13 34.8	+0.1
ZALV	Zalesovo Beam	94.45	324	P	P	10 13 34.7	0.0
	comp=Z,1.9nm,0.7s,baz=104,slow=3.1,SNR=11						
MAKZ	Makanchi	94.56	317	eP	P	10 13 36.0	+0.6
	comp=Z,12nm,1.1s						
YKA	Yellowknife Ar	95.79	27	P	P	10 13 37.6	-3.0
	comp=Z,0.1nm,0.5s,baz=258,slow=4.8,SNR=4.0						
VNA2	Neumayer--Watz	97.10	182	P	Pdif	10 13 48.9	+2.3
ARCES	ARCESS Array B	117.33	345	PKP	PKPdf	10 18 59.0	-0.7
	comp=Z,3.0nm,0.5s,baz=72,slow=1.8,SNR=36						
FINES	FINESS Array B	122.75	338	PKP	PKPdf	10 19 09.7	-0.6
	comp=Z,1.8nm,0.5s,baz=50,slow=3.9,SNR=10						
NB2	NORSAR Subarra	127.70	345	PKPdf	PKPdf	10 19 19.1	-0.7
	comp=Z,12nm,1.2s,baz=28,slow=1.9						
NB2	NORSAR Subarra	127.70	345	PKPdf	PKPdf	10 19 19.1	-0.7
	baz=28,slow=1.9						
NOA	NORSAR Array B	127.70	345	PKP	PKPdf	10 19 19.2	-0.6
	comp=Z,1.8nm,0.8s,baz=31,slow=1.9,SNR=5.3						
AKASG	Malin Array Be	127.78	326	PKP	PKPdf	10 19 19.5	-0.7
	comp=Z,0.3nm,0.3s,baz=65,slow=1.9,SNR=7.6						
AK11	Malin Array Si	127.82	326	ePKPdf	PKPdf	10 19 19.6	-0.6
BRTR	Keskin Array B	129.75	312	PKP	PKPdf	10 19 24.2	-0.2
	comp=Z,0.7nm,0.7s,baz=96,slow=1.2,SNR=4.6						
BUR04	Bucovina Ar. S	131.66	325	ePKPdf	PKiKP	10 19 28.6	-0.3
CLL	Collm	135.08	336	⇑iPKPdf	PKiKP	10 19 35.5	0.0
CLL				e		10 19 44.0	
KHC	Kasperske Hory	136.50	334	ePKPDF	PKPdf	10 19 37.5	+0.7
GERES	GERESS Array B	136.66	333	PKP	PKPdf	10 19 36.9	-0.3
	comp=Z,1.0nm,0.7s,baz=46,slow=5.8,SNR=7.1						
KEST	Kesra	148.30	322	PKPbc	PKPbc	10 20 01.9	+0.4
	comp=Z,11nm,0.9s,baz=342,slow=4.0,SNR=4.8						
ES19	SONSECA Array	151.01	344	ePKPbc	PKPbc	10 20 08.2	+0.1
ESDC	Sonseca Array	151.06	344	PKPbc	PKPbc	10 20 08.0	-0.2
	comp=Z,2.6nm,0.8s,baz=20,slow=2.0,SNR=7.2						
TOA0	Torodi Ar. Sit	164.54	276	ePKPdf	PKPdf	10 20 18.8	-0.7
TORD	Torodi Ar. Bea	164.54	276	PKP	PKPdf	10 20 17.9	-1.6
	comp=Z,3.2nm,1.1s,baz=353,slow=3.3,SNR=13						
TORD				PKPab	PKPab	10 21 16.7	+2.1
	comp=Z,0.7nm,1.0s,baz=106,slow=5.2,SNR=4.0						

MEX 06 10:01:22.8±0.6**,17°.87N×100°.16W,h69^{km}**±17^{km}**,MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARIG	Puente Sto Nin	0.44	337	eP	Pn	10 01 33.8	-1.2
ARIG				i S	Sn	10 01 42.0	-2.0
MEIG	Mezcala	0.52	84	eP	Pn	10 01 34.6	-1.2
MEIG				i S	Sn	10 01 43.6	-1.8
PLIG	Platanillo	0.81	50	eP	Pn	10 01 36.0	-3.1
PLIG				eS	Sn	10 01 50.4	-0.7
CAIG	El Cayaco	0.83	187	i P	Pn	10 01 37.6	-1.5
CAIG				i S	Sn	10 01 49.1	-2.1

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*IDC **06** 10:01:30.9±1.2,10°.62S×165°.33E,h0^{km},mb4.0/6, mb1 4.3/7,mb1mx4.0/42,mbtmp4.1/7,ML3.8/1,Error ellipse: s-maj=50.5km s-min=22.6km az=138.0*

*ISCJB **06** 10:01:33.8±0.9,10°.8S±0°.1×165°.3E±0°.2,h31^{km},mb4.0/5, Error ellipse: s-maj=25.7km s-min=17.1km az=34.1*

ISC 06 10:01:35.6±0.9**,10°.7S**±0°.1×**165°.3E**±0°.2**,h31^{km},n7, σ0^{s}.89**/7**,mb4.0**/5**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.39	175	Pn	Pn	10 04 16.2	0.0
	0.6nm,0.3s,baz=270,slow=20,SNR=5.6						
CTA	Charters Tower	20.63	241	P	P	10 06 13.8	+1.1
	6.9nm,0.7s,baz=61,slow=16,SNR=3.0						
WRA	Warramunga Arr	31.24	249	P	P	10 07 52.3	-0.5
	0.8nm,0.5s,baz=79,slow=9.1,SNR=3.0						
ASAR	Alice Springs	32.61	243	P	P	10 08 04.0	-0.8
	1.7nm,0.7s,baz=74,slow=9.6,SNR=2.5						
ILAR	Eielson Array	83.28	19	P	P	10 13 59.3	+0.4
	0.8nm,0.7s,baz=240,slow=4.7,SNR=4.1						
NVAR	Mina Array Bea	86.08	50	P	P	10 14 14.4	+0.5
	1.1nm,0.9s,baz=222,slow=9.0,SNR=3.8						
YKA	Yellowknife Ar	94.82	27	P	P	10 14 53.2	-0.8
	0.5nm,0.9s,baz=248,slow=4.6,SNR=4.5						

IDC 06 10:06:16.1±3.4**,11°.71S×165°.60E,h0^{km},mb4.0**/4**, mb1 4.2**/4**,mb1mx3.7**/44**,mbtmp3.9**/4**,Error ellipse: s-maj=153.9km s-min=34.2km az=144.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.13	251	P	P	10 12 36.8	0.0
	1.7nm,0.8s,baz=81,slow=9.2,SNR=7.1						
ILAR	Eielson Array	84.18	19	P	P	10 18 50.0	+1.0
	0.7nm,0.6s,baz=233,slow=5.3,SNR=12						
MKAR	Makanchi Array	93.90	317	P	P	10 19 35.5	-0.3
	0.4nm,0.8s,baz=113,slow=3.3,SNR=3.6						
YKA	Yellowknife Ar	95.62	27	P	P	10 19 41.8	-1.5
	0.2nm,0.6s,baz=252,slow=5.1,SNR=4.5						

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*IDC **06** 10:09:44.6±1.2,11°.61S×165°.15E,h0^{km},mb3.8/7, mb1 4.0/8,mb1mx3.7/43,mbtmp3.8/8,ML3.8/1,Error ellipse: s-maj=41.6km s-min=24.6km az=134.0*

*ISCJB **06** 10:09:48.0±0.8,11°.8S±0°.1×165°.1E±0°.2,h34^{km},mb3.7/7, Error ellipse: s-maj=24.1km s-min=16.9km az=13.1*

ISC 06 10:09:49.7±0.9**,11°.7S**±0°.1×**165°.2E**±0°.2**,h34^{km},n11, σ0^{s}.68**/8**,mb3.8**/7**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.41	173	Pn	Pn	10 12 16.8	+0.1
	0.8nm,0.3s,baz=319,slow=18,SNR=5.5						
H11S2	WAKE ISLAND Hy	30.01	3	T	T	10 46 57.6	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	30.02	3	T	T	10 46 57.6	
	baz=184,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	30.03	3	T	T	10 46 56.2	
	baz=184,slow=76,SNR=12						
WRA	Warramunga Arr	30.73	251	P	P	10 16 01.3	-0.6
	1.9nm,0.9s,baz=80,slow=9.5,SNR=9.3						
ASAR	Alice Springs	31.99	244	P	P	10 16 13.1	0.0
	0.5nm,0.8s,baz=69,slow=9.3,SNR=5.8						
SONM	Songino Array	78.83	324	P	P	10 21 49.8	+0.4
	0.3nm,0.5s,baz=145,slow=5.3,SNR=2.9						
ILAR	Eielson Array	84.29	19	P	P	10 22 17.4	-0.3
	0.5nm,0.7s,baz=233,slow=4.8,SNR=5.9						
NVAR	Mina Array Bea	86.87	50	P	P	10 22 32.0	+0.6
	0.6nm,0.7s,baz=232,slow=7.3,SNR=3.6						
MKAR	Makanchi Array	93.58	317	P	P	10 23 03.1	+0.6
	0.3nm,0.7s,baz=100,slow=6.0,SNR=3.0						
YKA	Yellowknife Ar	95.80	27	P	P	10 23 11.2	-1.0
	0.1nm,0.4s,baz=242,slow=3.8,SNR=3.3						

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*NNC **06** 10:10:52.0±1.6,39°.48N×73°.26E,h0^{km},mb3.6,mpv3.2, Error ellipse: s-maj=28.4km s-min=8.8km az=111.0*

*KRNET **06** 10:10:52.4±0.1,39°.47N×73°.51E,h12^{km},mb2.6*

*ISCJB **06** 10:10:55.3±1.0,39°.45N±0°.05×73°.53E±0°.06,h10^{km},Error ellipse: s-maj=8.0km s-min=6.1km az=12.6*

ISC 06 10:10:51.9±1.4**,39°.49N**±0°.06×**73°.47E**±0°.04**,h10^{km},n13, σ1^{s}.35**/23**,9C-11D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.53	3	⇓P	Pg	10 11 02.9	+0.7
	3.2nm,0.1s						
SFK				⇑S	Sg	10 11 11.2	+1.9
	68nm,0.2s						
SFK	Sufi-Kurgan	0.53	3	Pg	Pg	10 11 02.9	+0.7
	17nm,0.1s						
SFK				Lg	Lg	10 11 11.4	
	159nm,0.2s						
SFK	Sufi-Kurgan	0.53	3	⇑iP	Pg	10 11 03.0	+0.7
	baz=59						
SFK				⇑iS	Sb	10 11 11.3	+0.1
	baz=59						
ARSB	Arslanbob	1.87	349	⇓iP	Pg	10 11 28.0	+0.1
	baz=48						
ARSB				⇓iS	Sg	10 11 53.8	+1.6
	baz=48						
KSH	Kashi	1.94	88	⇑iP	Pb	10 11 27.5	+0.1
	baz=88						
KSH				⇑iS	Sb	10 11 52.7	+1.1
	baz=88						
BTK	Batken	2.12	286	⇓iP	Pg	10 11 32.0	-0.6
	baz=87						
BTK				⇓iS	Sg	10 12 00.8	+0.6
	baz=87						
ARK	Arkit	2.58	334	⇓iP	Pb	10 11 37.4	-0.9
	baz=34						
ARK				⇓iS	Sb	10 12 11.0	+0.9
	baz=34						
AML	Almayashu	2.65	4	⇓iP	Pb	10 11 38.8	-0.9
	baz=3.0						
AML				⇓iS	Sb	10 12 12.8	+0.4
	baz=3.0						
UCH	Uchtor	2.85	16	⇓eP	Pb	10 11 41.6	-1.6
	baz=15						
UCH				⇓iS	Sb	10 12 17.8	-0.5
	baz=15						
KZA	Kyzart	2.92	27	⇑iP	Pb	10 11 42.6	-1.7
	baz=26						
KZA				⇑iS	Sb	10 12 19.9	-0.3
	baz=26						
AAK	Ala-Archa	3.24	13	⇑iP	Pb	10 11 47.0	-2.7
	baz=13						
AAK				⇑iS	Sb	10 12 26.8	-2.5
	baz=13						
MRKS	Merke	3.26	357	Pg	Pb	10 11 52.1	+2.1
	3.2nm,0.3s						
MRKS				Lg	Lg	10 12 35.6	
	5.1nm,0.3s						
DGS	Degeres	4.13	24	Pg	Pg	10 12 10.1	-1.0
	2.1nm,0.4s						
DGS				Lg	Lg	10 13 06.8	
	5.0nm,0.6s						

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*ISCJB **06** 10:11:08.7±0.3,11°.57S±0°.06×165°.16E±0°.05,h10^{km}, mb4.3/25,Error ellipse: s-maj=8.3km s-min=6.8km az=28.6*

*IDC **06** 10:11:08.5±0.9,11°.46S×165°.27E,h0^{km},mb4.2/13, mb1 4.4/14,mb1mx4.1/43,mbtmp4.1/14,ML4.0/1,Error ellipse: s-maj=32.4km s-min=19.1km az=142.0*

*NEIC **06** 10:11:10.2±0.2,11°.46S×165°.20E,h10^{km},mb4.2/5,Error ellipse: s-maj=6.7km s-min=6.3km az=105.0*

ISC 06 10:11:10.2±0.5**,11°.49S**±0°.09×**165°.23E**±0°.08**,h10^{km},n43, σ1^{s}.10**/43**,mb4.4**/25**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.58	291	ePn	Pn	10 12 33.8	+0.4
HNR				eSn	Sn	10 13 38.2	+0.5
MARNC	Mare, Loyalty	10.29	165	ePn	Pn	10 13 39.5	+1.4
DZM	Mont Dzumac	10.59	174	ePn	Pn	10 13 43.5	+1.3
DZM	Mont Dzumac	10.59	174	Pn	Pn	10 13 42.3	+0.1
	1.2nm,0.3s,baz=336,slow=20,SNR=2.5						
MSVF	Nonsavu	13.87	118	Pn	Pn	10 14 27.6	+0.5
CTA	Charters Tower	20.15	243	P	Pn	10 15 45.8	-0.9
	7.3nm,0.9s,baz=75,slow=9.0,SNR=4.2						
CAN	Canberra	27.93	209	eP	P	10 17 00.5	-0.4
	33nm,1.5s						
BKZ	Black Stump Fm	29.33	162	eP	P	10 17 13.5	+0.3
	34nm,1.4s						
WRAB	Tennant Creek	30.85	250	eP	P	10 17 26.5	-0.4
	8.0nm,1.1s						
WB2	Warramunga Arr	30.85	250	eP	P	10 17 26.2	-0.7
	12nm,1.1s						
WR1	Warramunga Arr	30.86	250	eP	P	10 17 27.0	0.0
	14nm,1.0s						
WRA	Warramunga Arr	30.86	250	P	P	10 17 27.0	0.0
	6.0nm,0.9s,baz=80,slow=9.4,SNR=22						
TOO	Toolangi	31.44	211	eP	P	10 17 30.7	-1.2
	5.8nm,1.1s						
AS01	Alice Springs	32.11	244	eP	P	10 17 37.8	-0.2
AS31	Alice Springs	32.15	244	eP	P	10 17 36.0	-2.3
	1.0nm,1.0s						
ASAR	Alice Springs	32.15	244	P	P	10 17 37.6	-0.7
	2.4nm,0.9s,baz=76,slow=9.7,SNR=12						
MQZ	McQueen’s Vall	32.74	170	eP	P	10 17 42.6	-0.5
	104nm,1.6s						
KLR	Kul'dur	67.26	337	P	P	10 22 05.3	+0.5
	2.0nm,1.0s,baz=147,slow=3.4,SNR=6.4						
XAN	Xi'an	70.05	313	eP	P	10 22 22.9	+0.2
	6.5nm,1.0s						
CM31	Chiang Mai Arr	71.83	294	eP	P	10 22 35.7	+1.9
CMAR	Chiang Mai Arr	71.83	294	P	P	10 22 35.7	+1.9
	1.5nm,0.9s,baz=122,slow=4.1,SNR=6.2						
QSPA	South Pole Qui	78.52	180	eP	P	10 23 11.8	+0.1
	9.4nm,1.1s						
SONA0	Songino Array	78.72	324	eP	P	10 23 13.5	+0.4
SONM	Songino Array	78.72	324	P	P	10 23 13.5	+0.4
	1.0nm,0.8s,baz=141,slow=7.6,SNR=6.5						
SONA1	Songino Array	78.72	324	eP	P	10 23 14.7	+1.7
HDA	Harding Lake	83.82	19	eP	P	10 23 40.3	+0.7
	4.6nm,0.8s						
ILAR	Eielson Array	84.09	19	P	P	10 23 39.6	-1.3
	1.1nm,0.5s,baz=238,slow=4.9,SNR=19						
ILB	Eielson Array	84.09	19	eP	P	10 23 40.4	-0.5
MDPB	Devils Postpil	85.86	50	eP	P	10 23 51.2	+0.3
	4.9nm,1.0s						
NV01	Mina Array Sit	86.69	50	eP	P	10 23 55.9	+1.1
NVAR	Mina Array Bea	86.69	50	P	P	10 23 55.3	+0.4
	2.1nm,0.9s,baz=239,slow=8.7,SNR=9.1						
NV11	Mina Array Sit	86.80	50	eP	P	10 23 56.0	+0.8
	0.3nm,1.1s						
MK32	Makanchi Array	93.50	317	eP	P	10 24 25.1	-1.3
MKAR	Makanchi Array	93.50	317	P	P	10 24 25.1	-1.3
	0.7nm,0.6s,baz=262,slow=2.5,SNR=6.7						
ZALV	Zalesovo Beam	93.62	324	P	P	10 24 25.0	-1.6
	0.3nm,0.3s,baz=150,slow=6.0,SNR=2.8						
ZAA1	Zalesovo Array	93.62	324	eP	P	10 24 25.0	-1.6
PD31	Pinedale Array	94.22	47	eP	P	10 24 29.5	-0.5
PDAR	Pinedale Array	94.22	47	P	P	10 24 30.1	+0.1
	0.2nm,0.7s,baz=242,slow=3.2,SNR=4.1						
YKA	Yellowknife Ar	95.59	27	P	P	10 24 34.6	-0.9
	0.3nm,0.6s,baz=251,slow=4.6,SNR=6.5						
YKB5	Yellowknife Ar	95.59	27	eP	P	10 24 34.6	-0.9
LTX	Lajitas	96.48	61	eP	P	10 24 41.0	+0.6
TXAR	Lajitas Array	96.48	61	P	P	10 24 41.0	+0.6
	0.4nm,0.9s,baz=214,slow=5.3,SNR=4.4						
OTAV	Otavalo	115.81	95	ePKPdf	PKPdf	10 29 51.8	-3.0

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*IDC **06** 10:12:28.3±0.4,11°.12S×165°.43E,h0^{km},mb4.9/29, mb1 5.0/31,mb1mx4.9/43,mbtmp4.9/31,ML4.9/2,Error ellipse: s-maj=14.9km s-min=11.9km az=111.0*

*BJI **06** 10:12:28.5,10°.74S×165°.48E,h5^{km},mB5.5/31,mb5.1/57, Ms5.5/15,Ms7 5.2/14*

*NEIC **06** 10:12:30.3±0.1,11°.09S×165°.34E,h10^{km},mb5.3/170, Error ellipse: s-maj=3.0km s-min=2.5km az=123.0*

*ISCJB **06** 10:12:31.8±0.1,11°.10S±0°.02×165°.29E±0°.02,h30^{km}, mb5.1/209,Error ellipse: s-maj=3.6km s-min=3.1km az=39.7*

*MOS **06** 10:12:32.7±0.9,11°.00S×165°.21E,h33^{km},mb5.3/57,Error ellipse: s-maj=8.4km s-min=7.0km az=70.3*

ISC 06 10:12:33.0±0.3**,11°.17S**±0°.05×**165°.42E**±0°.05**,h30^{km},n515, σ0^{s}.99**/527**,mb5.2**/209**,5C-15D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.66	287	ePn	Pn	10 13 52.0	-3.1
HNR				eSn	Sn	10 14 59.8	+0.6
HNR	Honiara	5.66	287	eP	Pn	10 13 52.0	-3.1
HNR				e		10 14 59.8	
HNR	Honiara	5.66	287	Pn	Pn	10 13 54.5	-0.6
	12nm,0.3s,baz=294,slow=8.7,SNR=4.0						
HNR				Sn	Sn	10 14 57.9	-1.2
	119nm,0.3s,baz=163,slow=23,SNR=6.7						
MARNC	Mare, Loyalty	10.55	167	ePn	Pn	10 15 02.6	+0.3
DZM	Mont Dzumac	10.88	175	ePn	Pn	10 15 07.5	+0.6
DZM				Sn	Sn	10 17 05.6	-2.3
DZM	Mont Dzumac	10.88	175	Pn	Pn	10 15 06.8	-0.1
	21nm,0.3s,baz=30,slow=10,SNR=49						
DZM				Sn	Sn	10 17 05.6	-2.3
	0.8nm,0.3s,baz=139,slow=19,SNR=2.0						
PINNC	Pines Island,	11.54	171	ePn	Pn	10 15 16.6	+0.7
MSVF	Nonsavu	13.86	120	ePn	Pn	10 15 48.2	+0.6
MSVF	Nonsavu	13.86	120	eP	Pn	10 15 48.2	+0.6
TARA	Tarawa	14.51	31	ePn	Pn	10 15 56.3	-0.1
EIDS	Eidsvold	19.59	222	P	Pn	10 17 01.5	+1.2
	baz=20,SNR=4.1						
KWAJ	Kwajalein Atol	19.96	6	eP	P	10 17 02.5	-0.4
	773nm,1.5s						
KWAJ	Kwajalein Atol	19.96	6	eP	P	10 17 02.5	-0.4
KWAJ				pmax	pmax		
	comp=Z,773nm,1.5s						
CTA	Charters Tower	20.46	242	P	P	10 17 09.4	+1.0
	comp=Z,62nm,1.1s,baz=73,slow=12,SNR=13						
CTAO	Charters Tower	20.46	242	eP	P	10 17 08.9	+0.5
	comp=Z,118nm,1.1s						
CTAO	Charters Tower	20.46	242	eP	P	10 17 08.9	+0.5
CTAO				pmax	pmax		
	comp=Z,118nm,1.1s						
MTSU	Mount Surprise	21.55	249	P	P	10 17 21.5	+1.4
	baz=22,SNR=17						
COEN	Coen	21.89	260	P	P	10 17 24.3	+0.4
	baz=22,SNR=32						
RMQ	Roma	21.89	224	P	P	10 17 25.5	+1.8
	baz=22,SNR=15						
ARMA	Armidale	23.05	212	P	P	10 17 37.3	+1.3
	baz=23,SNR=10						
OUZ	Omahuta	25.07	164	eP	P	10 17 56.5	+1.6
	comp=Z,222nm,1.6s						
QLP	Quilpie	25.18	230	P	P	10 17 56.8	+0.8
	baz=25,SNR=12						
QIS	Mount Isa	26.50	246	P	P	10 18 08.4	+0.3
	baz=27,SNR=9.3						
CMSA	Cobar Meteorol	27.27	219	P	P	10 18 15.6	+0.7
	baz=27,SNR=9.0						
YNG	Young	27.78	211	P	P	10 18 24.5	+5.0
	baz=28,SNR=4.7						
CAN	Canberra	28.30	209	eP	P	10 18 24.5	+0.4
	comp=Z,18nm,1.1s						
CAN	Canberra	28.30	209	eP	P	10 18 24.5	+0.4
CAN				pmax	pmax		
	comp=Z,18nm,1.1s						
HIZ	Hauiti	28.51	164	eP	P	10 18 30.4	+4.6
	comp=Z,145nm,1.2s						
OMRZ	Omania	28.56	162	P	P	10 18 30.2	+3.9
HAZ	Te Kaha	28.70	159	P	P	10 18 30.2	+2.7
RUGZ	Raukumara Rang	28.86	160	P	P	10 18 31.6	+2.5
URZ	Urewera	28.93	161	eP	P	10 18 30.4	+0.8
	comp=Z,97nm,1.2s						
URZ	Urewera	28.93	161	P	P	10 18 30.2	+0.6
	comp=Z,34nm,0.9s,baz=245,slow=5.3,SNR=11						
URZ	Urewera	28.93	161	P	P	10 18 31.7	+2.1
WMGZ	Waiomatatini S	28.98	158	P	P	10 18 32.8	+2.7
MWZ	Matawai	29.14	160	P	P	10 18 33.4	+1.9
TWGZ	Tauwhareparae	29.15	159	P	P	10 18 34.2	+2.6
PUZ	Puketiti	29.15	159	P	P	10 18 33.2	+1.6
RTZ	Ruatahuna	29.22	161	P	P	10 18 34.5	+2.3
MTHZ	Maungataniwha	29.39	162	P	P	10 18 36.7	+3.0
SNGZ	Shannon Statio	29.48	161	P	P	10 18 36.2	+1.6
CNGZ	Carnagh Statio	29.50	159	P	P	10 18 36.6	+1.9
RAHZ	Arahi	29.52	161	P	P	10 18 37.0	+2.2
RIGZ	Rimuhau	29.55	160	P	P	10 18 36.5	+1.4
BKZ	Black Stump Fm	29.57	162	eP	P	10 18 36.1	+0.7
	comp=Z,75nm,0.9s						
BKZ	Black Stump Fm	29.57	162	P	P	10 18 37.2	+1.9
NMHZ	Naumai	29.61	162	P	P	10 18 37.9	+2.3
KWHZ	Kaweka Forest	29.79	163	P	P	10 18 39.7	+2.4
STKA	Stephens Creek	30.14	223	P	P	10 18 41.4	+1.0
	baz=30,SNR=14						
STKA	Stephens Creek	30.14	223	eP	P	10 18 40.7	+0.4
	comp=Z,9.8nm,1.3s						
STKA	Stephens Creek	30.14	223	eP	P	10 18 40.7	+0.4
STKA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
STKA	Stephens Creek	30.14	223	P	P	10 18 40.8	+0.4
	comp=Z,15nm,0.9s,baz=43,slow=9.2,SNR=14						
KAHZ	Kahuranaki	30.27	162	P	P	10 18 43.7	+2.3
BFZ	Birch Farm	30.91	164	eP	P	10 18 48.1	+1.0
	comp=Z,79nm,1.0s						
SNZO	South Karori	31.11	166	eP	P	10 18 51.1	+2.2
	comp=Z,56nm,0.9s						
WRAB	Tennant Creek	31.13	250	eP	P	10 18 48.3	-1.0
	comp=Z,84nm,1.3s						
WRAB	Tennant Creek	31.13	250	eP	P	10 18 48.3	-1.0
WRAB				pmax	pmax		
	comp=Z,84nm,1.3s						
WRA	Warramunga Arr	31.14	250	P	P	10 18 48.6	-0.8
	comp=Z,37nm,1.0s,baz=80,slow=9.0,SNR=46						
WRA				PcP	PcP	10 21 45.3	+1.0
	comp=Z,4.1nm,0.8s,baz=80,slow=2.6,SNR=6.9						
THZ	Tophouse	31.17	169	eP	P	10 18 51.6	+2.1
	comp=Z,48nm,0.9s						
TOO	Toolangi	31.80	211	P	P	10 18 56.5	+1.5
	baz=32,SNR=5.8						
KHZ	Kahutara	31.93	169	eP	P	10 18 57.0	+1.0
	comp=Z,43nm,1.1s						

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LTZ   Lake Taylor       32.05 170  eP     P       10 18 58.1 +0.9
      comp=Z,41nm,0.8s
KDU   Kakadu            32.26 264   P     P       10 18 57.9 -1.4
      baz=32,SNR=13
AS01  Alice Springs     32.41 243  eP     P       10 18 59.9 -0.7
AS01                               ePcP   PcP     10 21 47.7 -0.1
AS31  Alice Springs     32.45 243  eP     P       10 19 00.7 -0.3
      comp=Z,4.5nm,0.8s
ASAR  Alice Springs     32.45 243   P     P       10 19 00.1 -0.9
      comp=Z,4.7nm,0.4s,baz=64,slow=10,SNR=60
ASAR                                PcP   PcP     10 21 48.5 +0.6
      comp=Z,6.6nm,0.8s,baz=88,slow=2.7,SNR=12
OXZ   Oxford            32.55 171  eP     P       10 19 02.3 +0.8
      comp=Z,37nm,0.8s
RPZ   Rata Peaks        32.79 172  eP     P       10 19 03.9 +0.3
      comp=Z,36nm,0.9s
RPZ   Rata Peaks        32.79 172   P     P       10 19 03.7 +0.2
      comp=Z,17nm,0.8s,baz=198,slow=2.3,SNR=7.8
HTT   Hallett           32.87 223   P     P       10 19 05.1 +0.7
      baz=33,SNR=7.7
MQZ   McQueen's Vall    33.02 170  eP     P       10 19 11.5 +5.9
      comp=Z,41nm,0.8s
WKZ   Wanaka            33.68 175  eP     P       10 19 12.7 +1.3
FAKI  Fak Fak           33.90 282  eP     P       10 19 12.2 -1.4
      comp=Z,17nm,1.2s
BBOO  Buckleboo         34.51 227   P     P       10 19 19.0 +0.2
      baz=35,SNR=5.4
WHZ   Wether Hill Ro    34.67 177  eP     P       10 19 21.1 +1.2
      comp=Z,46nm,1.5s
KNRA  Kununurra         35.91 259   P     P       10 19 30.2 -0.7
      baz=36,SNR=10
WRKA  Warakurna         37.75 243   P     P       10 19 46.2 -0.4
      baz=38,SNR=18
FITZ  Fitzroy Crossi    39.04 255   P     P       10 19 56.9 -0.6
      baz=39,SNR=19
FITZ  Fitzroy Crossi    39.04 255   P     P       10 19 56.4 -1.0
      comp=Z,14nm,0.7s,baz=104,slow=6.4,SNR=24
BATI  Baumata           41.02 267   P     P       10 20 13.7 -0.3
      comp=Z,50nm,0.9s,baz=130,slow=8.1,SNR=4.4
EDFI  Ende, Flores      43.11 269   P     P       10 20 29.1 -2.1
      comp=Z,11nm,1.9s
MBWA  Marble Bar        44.86 251  eP     P       10 20 44.4 -0.6
      comp=Z,49nm,1.0s
MEEK  Meekatharra       46.61 244   P     P       10 20 59.5 +0.7
      baz=47,SNR=14
KLBR  Kellerberrin      48.37 238   P     P       10 21 12.2 -0.2
      baz=48,SNR=6.0
OPA   Opana             48.52  48  eP     P       10 21 13.7 +0.1
      comp=Z,121nm,0.9s
OPA   Opana             48.52  48  eP     P       10 21 13.7 +0.1
OPA                                 pmax  pmax
      comp=Z,121nm,0.9s
NWAO  Narrogin (SRO)    49.13 236  eP     P       10 21 19.0 +0.8
NWAO  Narrogin (SRO)    49.13 236   P     P       10 21 16.9 -1.3
      comp=Z,9.3nm,0.8s,baz=329,slow=6.0,SNR=3.7
MORW  Morawa            49.29 241   P     P       10 21 20.2 +0.7
      baz=49,SNR=3.2
KKM   Kota Kinabalu     51.87 287  eP     P       10 21 39.5 +0.2
      comp=Z,96nm,1.3s
INU   Inuyama           53.50 331  eP     P       10 21 50.9 +0.1
      comp=Z,56nm,1.5s
MJAR  Matsushiro Arr    53.94 333   P     P       10 21 53.2 -0.8
      comp=Z,10nm,1.0s,baz=170,slow=8.0,SNR=15
MAJO  Matsushiro        53.94 333  eP     P       10 21 53.5 -0.5
      comp=Z,39nm,1.3s
MAJO  Matsushiro        53.94 333⇓eP     P       10 21 52.8 -1.2
MAJO                                pmax  pmax
      comp=Z,39nm,1.3s
MAT   Matsushiro        53.94 333   P     P       10 21 52.8 -1.2
MJB9  Matsu-Tunnel      53.94 333  eP     P       10 21 53.5 -0.5
      comp=Z,40nm,1.3s
UGM   Wanagama          54.18 268  eP     P       10 21 56.2  0.0
      comp=Z,68nm,1.0s
JNU   Nakatsue          55.00 324  eP     P       10 22 02.0 +0.2
      comp=Z,44nm,0.9s
JNU   Nakatsue          55.00 324   P     P       10 22 01.5 -0.3
      comp=Z,44nm,1.0s,baz=71,slow=3.3,SNR=11
YULB  Yu-li             55.17 309  eP     P       10 22 04.2 +1.0
      comp=Z,30nm,1.2s
TPUB  Ta-pu             55.63 308  eP     P       10 22 06.0 -0.5
      comp=Z,58nm,1.1s
KSM   Kuching           56.21 279  eP     P       10 22 10.8 -0.1
      comp=Z,32nm,1.1s
CISI  Cisompet, Garu    56.88 268  eP     P       10 22 14.7 -1.1
      comp=Z,86nm,1.0s
ASAJ  Asahikawa         58.81 341   P     P       10 22 28.6  0.0
      comp=Z,18nm,0.9s,baz=220,slow=11,SNR=14
SSE   Sheshan           59.72 316  eP     P       10 22 34.9 -0.2
      comp=Z,11nm,0.8s
KSRS  Korea Array       59.80 326   P     P       10 22 35.4 -0.1
      comp=Z,6.1nm,1.0s,baz=142,slow=7.1,SNR=12
KSAR  Wonju Array Be    59.81 326   P     P       10 22 35.4 -0.2
KSAR  Wonju Array Be    59.81 326   P     P       10 22 35.4 -0.2
KS01  Wonju Array Si    59.83 326  eP     P       10 22 35.6 -0.2
YSS   Yuzh-Sakhalins    61.31 342  eP     P       10 22 46.3 +0.7
      comp=Z,79nm,1.4s
YSS   Yuzh-Sakhalins    61.31 342  eP     P       10 22 46.6 +1.0
YSS                                e              10 22 55.9
YSS                                 pmax  pmax
      comp=Z,10.0nm,1.1s
NJ2   Nanjing           61.89 316  eP     P       10 22 48.9 -0.9
NJ2                                 pmax  pmax
      comp=Z,34nm,0.9s
VLA   Vladivostok       62.11 333deP     P       10 22 51.8 +0.7
VLA                                 pmax  pmax
      comp=Z,62nm,1.8s
USA0B Ussuriysk Arra    62.92 334  eP     P       10 22 56.8 +0.3
      comp=Z,48nm,1.4s
USRK  Ussuriysk Ar.     62.92 334   P     P       10 22 56.4 -0.1
      comp=Z,12nm,1.1s,baz=134,slow=5.5,SNR=16
MDJ   Mudanjiang        64.31 332   P     P       10 23 06.1 +0.4
MDJ                                 pmax  pmax
      comp=Z,21nm,1.3s
MDJ   Mudanjiang        64.31 332  eP     P       10 23 05.8 +0.1
      comp=Z,106nm,1.9s
PETK  Petropavlovsk-    64.36 355   P     P       10 23 06.0 +0.1
PETK  Petropavlovsk-    64.36 355   P     P       10 23 06.0 +0.1
      comp=Z,8.5nm,0.8s,baz=170,slow=9.0,SNR=7.3
TYV   Tymovskoe         64.88 344  eP     P       10 23 07.3 -1.9
TYV                                 pmax  pmax
      comp=Z,11nm,2.9s
CN2   Changchun         65.69 329  eP     P       10 23 14.6 -0.1
CN2                                 pmax  pmax
      comp=Z,30nm,0.9s
IPM   Ipoh              65.93 280  eP     P       10 23 15.8 -1.1
      comp=Z,66nm,1.1s
CASY  Casey             66.15 201  eP     P       10 23 18.1 +0.8
      comp=Z,26nm,1.3s
GRNR  Gornyy            66.65 340  eP     P       10 23 22.4 +1.7
GRNR                                pmax  pmax
      comp=Z,16nm,1.0s
KLR   Kul'dur           67.04 337d iP     P       10 23 23.3 +0.1
KLR   Kul'dur           67.04 337   P     P       10 23 23.1 -0.1
      comp=Z,7.6nm,0.9s,baz=137,slow=3.3,SNR=18
ENH   Enshi             67.73 309  eP     P       10 23 27.5 -0.6
      comp=Z,21nm,1.0s
GYA   Guiyang           68.23 304   P     P       10 23 31.3 -0.1
GYA                                 PP    PP      10 26 05.4 +3.1
GYA                                 S     S       10 32 32.0 +1.7
GYA                                 SKS   SKSac   10 33 27.2 -1.3
GYA                                 SS    SS      10 36 57.8 +3.9
GYA                                 pmax  pmax
      comp=Z,30nm,0.9s
GYA                                 pmax  pmax
      comp=Z,130nm,6.7s
GYA                                 LR    LR
      comp=Z,490nm,18.2s
GYA                                 LR    LR
      comp=Z,520nm,18.6s
BJT   Baijiatuau        68.37 321  eP     P       10 23 30.4 -1.4
      comp=Z,32nm,1.4s
BJT   Baijiatuau        68.37 321  eP     P       10 23 30.4 -1.4
BJT                                 pmax  pmax
      comp=Z,32nm,1.4s
GSI   Gunungsitoli      68.56 276  eP     P       10 23 34.1 +0.5
      comp=Z,56nm,0.8s
PBKT  Sadao Pong        69.43 292  eP     P       10 23 40.1 +1.3
XAN   Xi'an             69.97 313   P     P       10 23 41.6 -0.3
XAN                                 pmax  pmax
      comp=Z,14nm,1.1s
XAN   Xi'an             69.97 313  eP     P       10 23 41.4 -0.5
      comp=Z,82nm,1.0s
XAN   Xi'an             69.97 313  eP     P       10 23 41.4 -0.5
XAN                                 pmax  pmax
      comp=Z,82nm,1.0s
KMI   Kunming           70.92 302   P     P       10 23 49.6 +1.5
KMI                                 pP    pP      10 23 57.1 +0.9
KMI                                 pmax  pmax
      comp=Z,27nm,1.9s
HHC   Hu-ho-hao-te      71.72 320  eP     P       10 23 53.4 +0.9
HHC                                 pmax  pmax
      comp=Z,21nm,1.1s
HHC                                 pmax  pmax
      comp=Z,260nm,5.5s
CM01  Chiang Mai Arr    71.84 294  eP     P       10 23 53.7 +0.2
CMAR  Chiang Mai Arr    71.87 294   P     P       10 23 54.7 +1.0
      comp=Z,4.4nm,0.7s,baz=116,slow=4.3,SNR=22
CHTO  Chiang Mai        71.98 294  eP     P       10 23 55.1 +0.7
      comp=Z,47nm,1.6s
CHTO  Chiang Mai        71.98 294  eP     P       10 23 55.1 +0.7
CHTO                                pmax  pmax
      comp=Z,47nm,1.6s
CHTO  Chiang Mai        71.98 294   P     P       10 23 55.4 +1.0
      comp=Z,52nm,1.3s
HIA   Hailar            72.32 331  eP     P       10 23 56.0 +0.2
      comp=Z,25nm,1.0s
HIA   Hailar            72.32 331d iP     P       10 23 55.9 +0.1
HIA                                 pmax  pmax
      comp=Z,19nm,0.9s
ZEA   Zeya              72.33 337  eP     P       10 23 56.2 +0.5
ZEA                                 pmax  pmax
      comp=N,46nm,1.4s
ZEA                                 pmax  pmax
      comp=E,37nm,1.4s
ZEA                                 pmax  pmax
      comp=Z,110nm,1.8s
CD2   Chengdu           72.43 307 ⇓P     P       10 23 56.7 -0.2
CD2                                 pmax  pmax
      comp=Z,60nm,1.4s
CD2                                 pmax  pmax
      comp=Z,830nm,9.8s
CD2                                 LR    LR
      comp=Z,4µm,16.1s
SEY   Seymchan          74.56 354⇑iP     P       10 24 08.7  0.0
SEY   Seymchan          74.56 354   P     P       10 24 08.5 -0.2
      comp=Z,4.9nm,1.0s,baz=116,slow=4.9,SNR=7.6
LZH   Lanzhou           74.61 312 ⇑P     P       10 24 11.4 +1.6
LZH                                 pP    pP      10 24 16.3 -1.5
LZH                                 sP    sP      10 24 18.3 -2.5
LZH                                 PP    PP      10 26 56.8 -0.2
LZH                                 pmax  pmax
      comp=Z,45nm,1.5s
LZH                                 pmax  pmax
      comp=Z,190nm,4.3s
LZH                                 LR    LR
      comp=Z,690nm,16.3s
LZH                                 LR    LR
      comp=Z,640nm,16.4s
LZH                                 LR    LR
      comp=Z,750nm,17.5s
GAMB  Gambell           76.75  10  eP     P       10 24 21.8 +0.7
      comp=Z,22nm,1.0s
KDAK  Kodiak Island     76.81  22   P     P       10 24 21.1 -0.5
      comp=Z,13nm,1.0s,baz=104,slow=1.1,SNR=3.6
ULN   Ulaanbaatar       78.22 324  eP     P       10 24 30.5 +0.5
      comp=Z,17nm,0.9s
ULN   Ulaanbaatar       78.22 324d iP     P       10 24 30.1 +0.2
ULN                                 pmax  pmax
      comp=Z,20nm,1.0s
SONM  Songino Array     78.58 324   P     P       10 24 32.0 +0.1
SONM  Songino Array     78.58 324   P     P       10 24 32.0 +0.1
      comp=Z,5.4nm,0.9s,baz=138,slow=6.1,SNR=19
SONA1 Songino Array     78.58 324  eP     P       10 24 31.7 -0.2
ANM   Nome              78.68  12  eP     P       10 24 32.7 +0.8
      comp=Z,31nm,1.5s
ANM   Nome              78.68  12  eP     P       10 24 32.7 +0.8
ANM                                 pmax  pmax
      comp=Z,31nm,1.5s
RSO   Redoubt South     78.74  20  eP     P       10 24 31.9 -0.7
QSPA  South Pole Qui    78.84 180  eP     P       10 24 34.0 +0.9
      comp=Z,38nm,1.0s
GTA   Gaotai            78.92 314 ⇓P     P       10 24 34.7 +0.7
GTA                                 pP    pP      10 24 40.2 -1.9
GTA                                 sP    PcP     10 24 43.6 +1.1
GTA                                 pmax  pmax
      comp=Z,18nm,1.5s
GTA                                 pmax  pmax
      comp=Z,190nm,5.7s
GTA                                 LR    LR
      comp=Z,890nm,21.9s
GTA                                 LR    LR
      comp=Z,750nm,20.9s
GTA                                 LR    LR
      comp=Z,990nm,20.3s
BILL  Bilibino          79.00   0  eP     P       10 24 33.5 -0.2
      comp=Z,30nm,0.9s
BILL  Bilibino          79.00   0d iP     P       10 24 33.4 -0.2
BILL                                pmax  pmax
      comp=Z,49nm,1.3s
SUA   Susitna One       80.15  20  eP     P       10 24 39.6 -0.6
      comp=Z,48nm,1.6s
RC01  Rabbit Creek A    80.22  20  eP     P       10 24 40.2 -0.2
      comp=Z,49nm,1.6s
BOD   Bodaibo           80.51 335  eP     P       10 24 35.8 -6.2
BOD                                 pmax  pmax
      comp=Z,18nm,2.1s
PMR   Palmer            80.78  20  eP     P       10 24 43.1 -0.2
      comp=Z,27nm,1.3s
PMR   Palmer            80.78  20  eP     P       10 24 43.1 -0.2
PMR                                 pmax  pmax
      comp=Z,27nm,1.3s
KNK   Knik Glacier      80.88  21  eP     P       10 24 44.1 +0.1
      comp=Z,54nm,1.6s
GLI   Glacier Island    80.99  21  eP     P       10 24 44.4 -0.2
      comp=Z,80nm,1.4s
CAST  Castle Rocks      81.16  18  eP     P       10 24 44.6 -0.8
      comp=Z,13nm,1.0s
SML   Sawmill           81.20  20  eP     P       10 24 45.9 +0.2
      comp=Z,66nm,1.5s
SML   Sawmill           81.20  20  eP     P       10 24 45.9 +0.2
SML                                 pmax  pmax
      comp=Z,66nm,1.5s
ZAK   Zakamensk         81.62 325  eP     P       10 24 47.5 -0.8
ZAK                                 pmax  pmax
      comp=Z,10.0nm,1.2s
DIV   Divide            81.64  22  eP     P       10 24 48.2 +0.2
      comp=Z,38nm,1.0s
HMT   Hamilton          81.68  23  eP     P       10 24 48.7 +0.4
      comp=Z,32nm,1.0s
TRF   Thorofare Moun    81.73  18  eP     P       10 24 49.2 +0.6
      comp=Z,38nm,1.6s
KLU   Klutina           81.83  21  eP     P       10 24 48.8 -0.2
      comp=Z,25nm,1.1s
TLY   Talaya            82.05 326d iP     P       10 24 50.0 -0.4
RND   Reindeer          82.16  19  eP     P       10 24 50.3 -0.4
      comp=Z,20nm,1.1s
RND   Reindeer          82.16  19  eP     P       10 24 50.3 -0.4
RND                                 pmax  pmax
      comp=Z,20nm,1.1s
RDOG  Red Dog Mine      82.21  11  eP     P       10 24 51.7 +0.9
      comp=Z,18nm,1.0s
MCK   McKinley          82.36  19  eP     P       10 24 51.2 -0.6
      comp=Z,29nm,1.2s
MCK   McKinley          82.36  19  eP     P       10 24 51.2 -0.6
MCK                                 pmax  pmax
      comp=Z,29nm,1.2s
DHY   Denali Highway    82.41  20  eP     P       10 24 51.6 -0.6
      comp=Z,13nm,1.2s
IM3   Indian Mountai    82.63  16  eP     P       10 24 52.6 -0.5
HARP  HAARP             82.71  21  eP     P       10 24 54.1 +0.5
      comp=Z,40nm,1.0s
MLY   Manley            82.75  17  eP     P       10 24 53.6 -0.2
      comp=Z,31nm,1.6s
KCPM  Cahto Peak        82.87  47  eP     P       10 24 56.4 +1.3
      comp=Z,44nm,1.0s
KMRM  Mail Ridge        82.97  47  eP     P       10 24 57.1 +1.6
      comp=Z,44nm,1.0s
GDXM  Geysers           83.13  48  eP     P       10 24 57.4 +1.0
      comp=Z,22nm,1.1s
WRH   Wood River Hil    83.15  18  eP     P       10 24 55.1 -0.7
      comp=Z,14nm,1.0s
MDM   Murphy Dome       83.45  18  eP     P       10 24 56.6 -0.8
      comp=Z,15nm,1.1s
HDA   Harding Lake      83.46  19  eP     P       10 24 57.1 -0.3
HDA   Harding Lake      83.46  19   P     P       10 24 56.7 -0.7
      baz=227
TCOL  CIGO, UAF Yank    83.50  18   P     P       10 24 56.4 -1.2
      baz=226
COLA  College           83.50  18  eP     P       10 24 56.9 -0.6
      comp=Z,16nm,0.9s
COLA  College           83.50  18d iP     P       10 24 56.3 -1.2
COLA                                pmax  pmax
      comp=Z,14nm,0.9s
O02D  Mt. Diablo Mer    83.61  47   P     P       10 24 59.5 +0.7
      baz=250,SNR=12
RIDG  Independ'e Rid    83.70  20  eP     P       10 24 58.9 +0.2
      comp=Z,51nm,1.3s
IL1   Eielson Array     83.73  19  eP     P       10 24 57.3 -1.4
ILAR  Eielson Array     83.73  19   P     P       10 24 57.9 -0.9
      comp=Z,3.8nm,0.7s,baz=229,slow=6.1,SNR=27
ILB   Eielson Array     83.73  19  eP     P       10 24 58.1 -0.7
POKR  Poker Plat Res    83.80  18   P     P       10 24 57.8 -1.4
      baz=226
J01E  Myrtle Point      83.87  44   P     P       10 24 59.7 -0.2
      baz=249
K02D  Willamette Mer    83.88  44   P     P       10 25 00.3 +0.1
      baz=249
WDC   Whiskeytown Da    83.93  47  eP     P       10 25 01.0 +0.7
      comp=Z,36nm,1.5s
WDC   Whiskeytown Da    83.93  47  eP     P       10 25 01.0 +0.7
WDC                                 pmax  pmax
      comp=Z,36nm,1.5s
N02D  Trinity Center    83.94  46   P     P       10 25 01.3 +0.7
      baz=250
M02C  Callahan          83.99  46   P     P       10 25 01.5 +0.7
      baz=250,SNR=5.3
SCZ2  Santa Cruz Isl    83.99  54   P     P       10 25 01.1 +0.2
      baz=252
PAGB  Antelope Grade    84.04  52  eP     P       10 25 02.4 +1.4
      comp=Z,17nm,1.2s
SCRK  Sand Creek        84.14  20  eP     P       10 25 01.0  0.0
      comp=Z,57nm,1.3s
YBH   Yreka Blue Hor    84.20  46  eP     P       10 25 02.7 +0.9
      comp=Z,28nm,1.0s
ORV   Oroville          84.33  48  eP     P       10 25 02.6 +0.2
      comp=Z,17nm,1.0s
ORV   Oroville          84.33  48  eP     P       10 25 02.6 +0.2
ORV                                 pmax  pmax
      comp=Z,17nm,1.0s
HUMO  Hull Mountain     84.34  45  eP     P       10 25 03.2 +0.8
      comp=Z,21nm,0.9s
O03E  Paynes Creek      84.36  47   P     P       10 25 02.7  0.0
      baz=250,SNR=13
I03D  Drain, OR         84.46  44   P     P       10 25 03.4 +0.5
      baz=249
COLD  Coldfoot          84.50  16  eP     P       10 25 05.0 +2.4
      comp=Z,3.7nm,1.0s
AFDM  Forest Hills D    84.52  49  eP     P       10 25 03.8 +0.3
      comp=Z,27nm,1.0s
ODAN  Odare             84.53 299  eP     P       10 25 04.3 +0.3
SCI2  San Clemente I    84.56  55   P     P       10 25 03.0 -0.7
      baz=253
WRAK  Wrangell Islan    84.60  30  eP     P       10 25 03.9 +0.6
HYT   Haines Junctio    84.63  24  eP     P       10 25 04.0 +0.4
      comp=Z,20nm,1.0s
L04D  Klamath Falls     84.66  45   P     P       10 25 04.5 +0.3
      baz=250
PRP   Porcupine Dome    84.66  18  eP     P       10 25 04.7 +1.0
      comp=Z,11nm,1.4s
CMB   Columbia Colle    84.66  50  eP     P       10 25 04.4 +0.2
      comp=Z,16nm,1.0s
CMB   Columbia Colle    84.66  50  eP     P       10 25 04.4 +0.2
CMB                                 pmax  pmax
      comp=Z,16nm,1.0s
SKAG  Skagway           84.79  26  eP     P       10 25 05.1 +0.9
      comp=Z,35nm,1.3s
M04C  Macdoel           84.83  46   P     P       10 25 05.3 +0.2
      baz=250,SNR=8.4
OSI   Osito Audit: C    84.89  53   P     P       10 25 05.3 -0.1
      baz=253
ARVC  Arvin             84.96  53   P     P       10 25 05.8 +0.1
      baz=253
VES   Vestal, Richgr    84.98  52   P     P       10 25 05.4 -0.4
      baz=252
KNGR  Kungurtug, Tuv    85.02 324d iP     P       10 25 05.2 -0.6
G03D  McMinnville, O    85.06  42   P     P       10 25 06.4 +0.5
      baz=249
I04A  Tendick Farm,     85.13  44   P     P       10 25 06.0 -0.4
      baz=250
J04D  Umpqua Nationa    85.14  44   P     P       10 25 06.9 +0.3
      baz=250,SNR=6.0
RUBR  Rubicon Trail     85.16  49  eP     P       10 25 07.5 +0.6
      comp=Z,25nm,0.9s
H04D  Lebanon           85.16  43   P     P       10 25 06.9 +0.5
      baz=249
BEKR  Beckworth         85.27  48  eP     P       10 25 07.6 +0.3
      comp=Z,15nm,0.9s
MWC   Mount Wilson      85.31  54  eP     P       10 25 07.9 +0.2
      comp=Z,29nm,1.3s
MWC   Mount Wilson      85.31  54  eP     P       10 25 07.9 +0.2
MWC                                 pmax  pmax
      comp=Z,29nm,1.3s
ISA   Isabella, Lake    85.40  52  eP     P       10 25 08.5 +0.5
      comp=Z,18nm,1.1s
ISA   Isabella, Lake    85.40  52  eP     P       10 25 08.5 +0.5
ISA                                 pmax  pmax
      comp=Z,18nm,1.1s
ISA   Isabella, Lake    85.40  52   P     P       10 25 08.1 +0.1
      baz=253,SNR=7.2
WAKR  Walker            85.52  50  eP     P       10 25 09.0 +0.3
      comp=Z,33nm,1.3s
MDPB  Devils Postpil    85.52  50  eP     P       10 25 09.2 +0.5
      comp=Z,23nm,1.0s
F04D  Rainier, OR       85.54  41   P     P       10 25 08.7 +0.4
      baz=249
EDW2  Edwards Air Fo    85.55  53   P     P       10 25 08.8 +0.1
      baz=253,SNR=8.8
PNTR  Pine Nut          85.58  49  eP     P       10 25 09.6 +0.6
      comp=Z,22nm,1.1s
VCNR  Virginia City     85.61  49  eP     P       10 25 09.7 +0.6
      comp=Z,26nm,1.6s
BFSC  Mount Baldy Ra    85.63  54   P     P       10 25 08.7 -0.5
      baz=254,SNR=8.0
109C  Camp Elliot, M    85.69  55   P     P       10 25 09.4  0.0
      baz=254
MLAC  Mammoth, Mammo85.70  51   P     P       10 25 09.1 -0.5
      baz=253
J05D  Fort Rock, OR     85.76  45   P     P       10 25 09.9 +0.2
      baz=251
JIRN  Jiri              85.77 299  eP     P       10 25 10.6 +0.2
      comp=Z,82nm,1.1s
DAWY  Dawson            85.78  21  eP     P       10 25 09.3 +0.1
      comp=Z,15nm,1.0s
YERR  Yerington         85.81  49  eP     P       10 25 10.5 +0.3
      comp=Z,12nm,1.1s
MURC  Murrieta          85.82  55   P     P       10 25 09.8 -0.3
      baz=254
PAHR  Pah Rah Range     85.93  48  eP     P       10 25 11.1 +0.4
      comp=Z,18nm,1.1s
CWC   Cottonwood Cre    85.93  52   P     P       10 25 10.8 +0.1
      baz=253
LRMC  Laurel Mtn Rad    85.96  53   P     P       10 25 10.8  0.0
      baz=253,SNR=5.2
E04D  Cinebar           85.99  41   P     P       10 25 10.8 +0.3
      baz=249
TIN   Tinemaha, Big     86.00  51   P     P       10 25 11.3 +0.4
      baz=253
D03D  Eldon             86.01  40   P     P       10 25 11.2 +0.6
      baz=249
I05D  Terrebonne, OR    86.04  44   P     P       10 25 11.2 +0.2
      baz=250
GUN   Gumba             86.10 299  eP     P       10 25 12.2 +0.2
      comp=Z,63nm,1.1s
PINE  Pine Mountain     86.13  44  eP     P       10 25 12.3 +0.7
      comp=Z,22nm,0.9s
TIXI  Tiksi             86.15 349  eP     P       10 25 10.0 -0.8
      comp=Z,25nm,1.4s
TIXI  Tiksi             86.15 349deP     P       10 25 10.1 -0.7
TIXI                                pmax  pmax
      comp=Z,26nm,1.7s
BBRC  Big Bear Solar    86.22  54   P     P       10 25 12.0 -0.3
      baz=254
RYN   Ryan              86.24  50  eP     P       10 25 12.6 +0.4
      comp=Z,19nm,1.1s
MONP2 Monument Peak     86.25  56   P     P       10 25 12.8 +0.4
      baz=254,SNR=12
PALK  Pallekele         86.25 278  eP     P       10 25 14.4 +1.8
      comp=Z,105nm,1.6s
DAC   Darwin (Calif)    86.26  52  eP     P       10 25 12.9 +0.5
      comp=Z,16nm,1.1s
DAC   Darwin (Calif)    86.26  52  eP     P       10 25 12.9 +0.5
DAC                                 pmax  pmax
      comp=Z,16nm,1.1s
MPMC  Manual Prospec    86.28  52   P     P       10 25 12.4 -0.1
      baz=254,SNR=9.3
RRX   Edison Barstow    86.33  54   P     P       10 25 12.3 -0.2
      baz=254
NV01  Mina Array Sit    86.34  50  eP     P       10 25 12.1 -0.7
NVAR  Mina Array Bea    86.34  50   P     P       10 25 13.1 +0.3
      comp=Z,14nm,1.0s,baz=233,slow=7.8,SNR=39
G05D  Wamic, OR         86.36  43   P     P       10 25 12.5  0.0
      baz=250
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PFO	Pinyon Flats O	86.41	55	eP	P	10 25 13.4	+0.3
	comp=Z,12nm,1.1s						
PFO	Pinyon Flats O	86.41	55	eP	P	10 25 13.4	+0.3
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
PFO	Pinyon Flats O	86.41	55	P	P	10 25 12.8	-0.3
	baz=254,SNR=5.6						
XPFO	Pion Flat	86.42	55	eP	P	10 25 13.4	+0.3
	comp=Z,12nm,1.0s						
PKI	Pulchoki	86.42	299	eP	P	10 25 13.3	-0.2
	comp=Z,92nm,1.3s						
PKIN	Phulchoki	86.43	299	eP	P	10 25 13.2	-0.3
	comp=Z,62nm,1.2s						
IKP	In-Ko-Pah, Jac	86.44	56	P	P	10 25 13.4	+0.2
	baz=254						
NV11	Mina Array Sit	86.46	50	eP	P	10 25 13.3	+0.1
	comp=Z,1.8nm,1.1s						
F05D	White Salmon	86.48	42	P	P	10 25 12.9	-0.1
	baz=250						
D05A	Enumclaw	86.59	41	eP	P	10 25 14.9	+1.5
	comp=Z,55nm,1.3s						
GSC	Goldstone, Bar	86.60	53	eP	P	10 25 14.4	+0.4
	comp=Z,23nm,1.4s						
GSC	Goldstone, Bar	86.60	53	eP	P	10 25 14.4	+0.4
GSC				pmax	pmax		
	comp=Z,23nm,1.4s						
GSC	Goldstone, Bar	86.60	53	P	P	10 25 14.0	0.0
	baz=254,SNR=7.2						
GRAC	Grapevine Rang	86.64	51	P	P	10 25 14.3	+0.2
	baz=254						
DLBC	Dease Lake	86.67	28	eP	P	10 25 14.0	+0.3
	comp=Z,11nm,1.1s						
A04D	Lummi Island	86.67	39	P	P	10 25 13.8	0.0
	baz=249						
KVN	Kaiserville	86.68	49	eP	P	10 25 14.7	+0.3
	comp=Z,16nm,1.1s						
KVN	Kaiserville	86.68	49	eP	P	10 25 14.7	+0.3
KVN				pmax	pmax		
	comp=Z,16nm,1.1s						
DMN	Daman	86.69	299	eP	P	10 25 14.9	+0.1
	comp=Z,134nm,1.2s						
SWSC	Sam W. Stewart	86.77	56	P	P	10 25 14.4	-0.3
	baz=255,SNR=8.7						
HEC	Hector,Ludlow	86.84	54	P	P	10 25 14.9	-0.2
	baz=254						
FURC	Furnace Creek,	86.88	52	P	P	10 25 15.4	+0.3
	baz=254,SNR=9.2						
BELC	Belle Mtn. Jos	86.89	55	P	P	10 25 15.7	+0.2
	baz=254,SNR=8.8						
B05A	Bryant	86.89	40	P	P	10 25 15.2	+0.3
	baz=250						
SHOC	Shoshone, Teco	87.18	53	P	P	10 25 16.5	-0.1
	baz=254						
I07A	Izee	87.21	44	eP	P	10 25 17.3	+0.5
	comp=Z,17nm,1.0s						
BC3	Big Chuckawall	87.23	55	P	P	10 25 17.1	0.0
	baz=255,SNR=12						
WVOR	Wild Horse Val	87.30	46	eP	P	10 25 17.7	+0.5
	comp=Z,19nm,1.1s						
WVOR	Wild Horse Val	87.30	46	eP	P	10 25 17.7	+0.5
WVOR				pmax	pmax		
	comp=Z,19nm,1.1s						
TUQ	Turquoise Moun	87.33	53	P	P	10 25 17.7	+0.2
	baz=254						
GMRC	Granite Mounta	87.36	54	P	P	10 25 18.0	+0.3
	baz=255,SNR=7.4						
TPNV	Topopah Spring	87.49	52	eP	P	10 25 18.8	+0.5
	comp=Z,23nm,1.6s						
TPNV	Topopah Spring	87.49	52	eP	P	10 25 18.8	+0.5
TPNV				pmax	pmax		
	comp=Z,23nm,1.6s						
TPNV	Topopah Spring	87.49	52	P	P	10 25 18.4	0.0
	baz=254						
GLA	Glamis	87.58	56	eP	P	10 25 19.9	+1.2
	comp=Z,27nm,1.0s						
GLA	Glamis	87.58	56	eP	P	10 25 19.9	+1.2
GLA				pmax	pmax		
	comp=Z,27nm,1.0s						
GLA	Glamis	87.58	56	P	P	10 25 19.5	+0.8
	baz=255,SNR=5.4						
IRM	Iron Mountain	87.61	55	P	P	10 25 19.2	+0.4
	baz=255,SNR=21						
J08A	Circle Bar Ran	87.69	45	eP	P	10 25 19.6	+0.5
	comp=Z,18nm,1.0s						
LDFC	Landfair	87.88	54	eP	P	10 25 20.7	+0.5
	comp=Z,53nm,1.1s						
HAWA	Hanford	87.92	42	eP	P	10 25 20.5	+0.6
G08A	Pilot Rock	87.95	43	eP	P	10 25 20.6	+0.3
	comp=Z,23nm,1.0s						
Y12C	Blythe	88.01	55	eP	P	10 25 21.1	+0.4
	comp=Z,26nm,1.0s						
Y12C	Blythe	88.01	55	P	P	10 25 20.9	+0.3
	baz=255,SNR=14						
DANN	Dangsing	88.02	299	eP	P	10 25 20.3	-0.9
	comp=Z,48nm,1.1s						
KOLN	Koldanda	88.02	299	eP	P	10 25 20.2	-0.9
	comp=Z,38nm,1.2s						
NEE2	Needles Airpor	88.19	54	P	P	10 25 21.8	+0.3
	baz=255						
SHPR	Sheep Range	88.21	52	eP	P	10 25 22.6	+0.8
	comp=Z,37nm,1.5s						
E08A	Dider Farm, El	88.26	42	eP	P	10 25 22.1	+0.6
	comp=Z,29nm,1.1s						
R11A	Troy Canyon, C	88.37	51	eP	P	10 25 22.8	+0.3
	comp=Z,14nm,1.3s						
R11A	Troy Canyon, C	88.37	51	P	P	10 25 22.6	0.0
	baz=255,SNR=16						
PDMCI	Parker Dam,Lak	88.45	55	P	P	10 25 23.0	+0.3
	baz=256,SNR=9.7						
D08A	Wollman Farm,	88.52	42	eP	P	10 25 23.1	+0.3
	comp=Z,13nm,1.0s						
PYUN	Piuthan	88.62	299	eP	P	10 25 23.1	-0.9
	comp=Z,46nm,1.1s						
B08A	Colville Reser	88.66	40	eP	P	10 25 23.4	-0.1
	comp=Z,11nm,1.1s						
BMO	Blue Mountains	88.94	44	eP	P	10 25 24.8	-0.2
	comp=Z,9.8nm,1.1s						
BMO	Blue Mountains	88.94	44	eP	P	10 25 24.8	-0.2
BMO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ	Urumqi	88.96	315	P	P	10 25 25.4	+0.4
WMQ				pP	PcP	10 25 27.8	+1.3
WMQ				pmax	pmax		
	comp=Z,610nm,5.3s						
WMQ				LR	LR		
	comp=Z,3µm,21.3s						
WMQ				LR	LR		
	comp=Z,3µm,24.5s						
WMQ	Urumqi	88.96	315	eP	P	10 25 25.1	+0.1
	comp=Z,11nm,0.8s						
214A	Organ Pipe Nat	88.96	57	P	P	10 25 26.0	+0.7
	baz=256,SNR=20						
ELK	Elko	89.27	48	eP	P	10 25 26.9	+0.1
	comp=Z,7.4nm,1.3s						
ELK	Elko	89.27	48	eP	P	10 25 26.9	+0.1
ELK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
F10A	Beach Ranch, E	89.31	43	eP	P	10 25 26.8	+0.1
	comp=Z,17nm,1.2s						
MFID	Camas Ranch	89.56	46	eP	P	10 25 28.4	+0.4
	comp=Z,8.1nm,1.0s						
PSUT	Pine Spring	89.73	51	eP	P	10 25 29.1	+0.1
	comp=Z,13nm,1.1s						
LCMT	Little Creek M	89.83	52	eP	P	10 25 30.1	+0.8
	comp=Z,20nm,1.1s						
CCUT	Cedar City	89.87	52	eP	P	10 25 30.5	+0.9
	comp=Z,20nm,1.1s						
NEW	Newport	90.04	41	P	P	10 25 29.9	0.0
	baz=253						
INK	Inuvik	90.12	19	P	P	10 25 28.2	-1.5
	comp=Z,1.5nm,1.0s,baz=249,slow=4.7,SNR=3.1						
KNB	Kanab	90.16	52	eP	P	10 25 32.0	+1.1
	comp=Z,36nm,1.3s						
KNB	Kanab	90.16	52	eP	P	10 25 32.0	+1.1
KNB				pmax	pmax		
	comp=Z,36nm,1.3s						
HLID	Hailey	90.59	46	eP	P	10 25 33.2	+0.5
	comp=Z,10nm,1.1s						
HLID	Hailey	90.59	46	P	P	10 25 32.8	0.0
	baz=255						
PKCU	Pink Cliffs	90.65	52	eP	P	10 25 35.2	+1.8
	comp=Z,43nm,1.2s						
TUC	Tucson	90.72	57	eP	P	10 25 34.7	+1.2
	comp=Z,13nm,1.0s						
TUC	Tucson	90.72	57	eP	P	10 25 34.7	+1.2
TUC				pmax	pmax		
	comp=Z,13nm,1.0s						
TUC	Tucson	90.72	57	P	P	10 25 34.5	+1.0
	baz=257						
DGZ	Jazzator, Alta	90.79	321d	iP	P	10 25 33.1	-0.4
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MTPU	Mount Pierson	90.89	52	eP	P	10 25 36.1	+1.6
	comp=Z,19nm,1.0s						
DUG	Dugway, Tooele	90.92	49	eP	P	10 25 35.0	+0.6
	comp=Z,7.2nm,1.0s						
DUG	Dugway, Tooele	90.92	49	eP	P	10 25 35.0	+0.6
DUG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DUG	Dugway, Tooele	90.92	49	P	P	10 25 34.8	+0.4
	baz=256						
BGU	Big Grassy Mou	90.93	49	eP	P	10 25 34.9	+0.5
	comp=Z,18nm,1.3s						
WUAZ	Wupatki	90.95	54	eP	P	10 25 35.3	+0.7
	comp=Z,19nm,1.0s						
WUAZ	Wupatki	90.95	54	P	P	10 25 35.1	+0.5
	baz=257						
MSU	Marysvale	91.00	51	eP	P	10 25 36.3	+1.4
MSU	Marysvale	91.00	51	eP	P	10 25 36.3	+1.4
HVU	Hansel Valley	91.32	48	eP	P	10 25 37.0	+0.8
	comp=Z,28nm,1.2s						
HVU	Hansel Valley	91.32	48	eP	P	10 25 37.0	+0.8
HVU				pmax	pmax		
	comp=Z,28nm,1.2s						
NLU	North Lily Min	91.41	50	eP	P	10 25 37.6	+0.8
	comp=Z,15nm,1.0s						
SPUT	South Promonto	91.45	48	eP	P	10 25 37.5	+0.6
	comp=Z,9.2nm,1.2s						
SYO	Syowa Base	91.57	197⇑	eX	P	10 25 33.0	-3.6
MSO	Missoula	91.74	43	P	P	10 25 37.6	-0.3
	baz=256						
MPU	Maple Canyon	91.76	50	eP	P	10 25 39.1	+0.8
	comp=Z,18nm,1.3s						
CTU	Camp Tracy	91.82	49	eP	P	10 25 39.2	+0.6
	comp=Z,10.0nm,1.0s						
Q16A	Castle Valley	91.86	51	eP	P	10 25 40.1	+1.2
	comp=Z,21nm,1.3s						
JLU	Jordanelle	92.03	49	eP	P	10 25 40.4	+0.7
	comp=Z,12nm,1.2s						
TCUT	Toone Canyon	92.17	49	eP	P	10 25 41.1	+0.8
	comp=Z,15nm,1.1s						
W18A	Petrified Fore	92.17	55	P	P	10 25 40.8	+0.4
	baz=258						
DLMT	Dillon	92.29	44	eP	P	10 25 41.3	+0.7
	comp=Z,23nm,1.0s						
SRU	San Rafael Swe	92.40	51	eP	P	10 25 42.3	+1.0
	comp=Z,8.9nm,1.4s						
SRU	San Rafael Swe	92.40	51	eP	P	10 25 42.3	+1.0
SRU				pmax	pmax		
	comp=Z,9.0nm,1.4s						
LRM	Limekiln Ridge	92.50	44	eP	P	10 25 41.9	+0.2
FXWY	Fox Creek	93.00	46	eP	P	10 25 44.6	+0.5
	comp=Z,4.6nm,0.9s						
BOZ	Bozeman (W)	93.01	44	eP	P	10 25 44.6	+0.7
	comp=Z,13nm,1.1s						
BOZ	Bozeman (W)	93.01	44	eP	P	10 25 44.6	+0.7
BOZ				pmax	pmax		
	comp=Z,13nm,1.1s						
BOZ	Bozeman (W)	93.01	44	P	P	10 25 44.2	+0.3
	baz=257						
REDW	Red Top Meadow	93.06	47	eP	P	10 25 44.8	+0.5
	comp=Z,4.9nm,1.1s						
IMW	Indian Meadow	93.12	46	eP	P	10 25 45.4	+0.8
	comp=Z,5.7nm,0.9s						
HRY	Holter Researc	93.12	43	eP	P	10 25 44.7	+0.4
YHB	Horse Butte	93.12	45	eP	P	10 25 46.1	+1.6
	comp=Z,7.8nm,1.0s						
MOOW	Moose Ponds	93.22	46	eP	P	10 25 45.5	+0.4
	comp=Z,3.2nm,1.0s						
121A	Cookes Peak, D	93.25	58	P	P	10 25 44.7	-0.7
	baz=259						
YMR	Madison River	93.26	45	eP	P	10 25 46.5	+1.3
	comp=Z,9.2nm,1.2s						
LOHW	Long Hollow	93.29	46	eP	P	10 25 45.2	-0.2
	comp=Z,12nm,1.5s						
PV09	Paradox Valley	93.33	52	eP	P	10 25 47.0	+1.3
PV14	Lion Creek, Pa	93.39	52	eP	P	10 25 47.1	+1.2
	comp=Z,11nm,1.2s						
MKAR	Makanchi Array	93.39	317	P	P	10 25 45.3	-0.2
	comp=Z,16nm,1.0s,baz=101,slow=6.4,SNR=42						
MKAR				PKKPbc	PKKPdf	10 42 52.4	-0.5
	comp=Z,3.8nm,0.8s,baz=282,slow=2.3,SNR=11						
PV19	Morning Glory	93.41	52	eP	P	10 25 48.6	+2.6
	comp=Z,6.5nm,1.0s						
PV23	Carpenter Ridg	93.42	52	eP	P	10 25 48.0	+1.8
	comp=Z,11nm,1.0s						
PV17	East Wray Mesa	93.42	52	eP	P	10 25 47.8	+1.7
	comp=Z,5.8nm,1.0s						
PV21	Cone Mtn., Par	93.47	52	eP	P	10 25 47.8	+1.5
	comp=Z,5.6nm,1.0s						
ZALV	Zalesovo Beam	93.47	324	P	P	10 25 44.6	-1.0
	comp=Z,11nm,1.0s,baz=108,slow=4.8,SNR=32						
H17A	Grant Village	93.48	46	P	P	10 25 47.3	+1.1
	baz=258						
PV04	Paradox Valley	93.49	52	eP	P	10 25 47.7	+1.3
	comp=Z,11nm,1.2s						
PV12	Saucer Basin,	93.55	52	eP	P	10 25 47.7	+1.0
	comp=Z,14nm,1.1s						
MVCO	Mesa Verde	93.57	53	P	P	10 25 46.4	-0.4
	baz=259						
MAKZ	Makanchi	93.61	317	eP	P	10 25 46.1	-0.4
	comp=Z,36nm,1.2s						
MAKZ	Makanchi	93.61	317	eP	P	10 25 46.1	-0.4
MAKZ				pmax	pmax		
	comp=Z,36nm,1.2s						
PV01	Paradox Valley	93.70	52	eP	P	10 25 47.7	+0.3
	comp=Z,6.8nm,1.1s						
BW06	Boulder Array	93.87	47	eP	P	10 25 47.7	-0.4
	comp=Z,5.2nm,1.1s						
BW06	Boulder Array	93.87	47	P	P	10 25 47.9	-0.2
	baz=258						
PD31	Pinedale Array	93.87	47	eP	P	10 25 47.8	-0.3
PDAR	Pinedale Array	93.87	47	eP	P	10 25 47.0	-1.1
PDAR	Pinedale Array	93.87	47	P	P	10 25 47.5	-0.5
	comp=Z,3.3nm,1.0s,baz=245,slow=2.8,SNR=16						
NVS	Novosibirsk	94.58	325	i P	P	10 25 50.1	-0.6
EGMT	Eagleton	94.77	42	eP	P	10 25 52.1	+0.3
	comp=Z,12nm,1.1s						
EGMT	Eagleton	94.77	42	P	P	10 25 52.2	+0.3
	baz=259						
ANMO	Albuquerque	94.78	55	eP	P	10 25 52.5	+0.2
	comp=Z,6.0nm,1.2s						
ANMO	Albuquerque	94.78	55⇓	eP	P	10 25 52.0	-0.4
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANMO	Albuquerque	94.78	55	P	P	10 25 52.6	+0.2
	baz=260						
S22A	4UR Ranch, Cre	94.98	53	eP	P	10 25 54.1	+0.8
	comp=Z,5.5nm,1.4s						
S22A	4UR Ranch, Cre	94.98	53	P	P	10 25 53.8	+0.5
	baz=260						
MNTX	Cornudas Mount	95.10	59	eP	P	10 25 53.7	0.0
	comp=Z,4.6nm,1.1s						
MNTX	Cornudas Mount	95.10	59	P	P	10 25 54.0	+0.3
	baz=260						
YKA	Yellowknife Ar	95.23	27	P	P	10 25 51.9	-1.5
	comp=Z,2.4nm,0.9s,baz=255,slow=4.6,SNR=23						
SDCO	Great Sand Dun	96.01	53	P	P	10 25 57.4	-0.7
	baz=261						
NRIK	Noril'sk	96.13	340	P	P	10 25 56.1	-1.3
	comp=Z,2.8nm,0.6s,baz=108,slow=4.3,SNR=7.6						
TXAR	Lajitas Array	96.17	61	P	P	10 25 58.5	-0.2
	comp=Z,0.9nm,0.9s,baz=220,slow=7.1,SNR=8.7						
KURK	Kurchatov	96.53	320	eP	P	10 25 58.9	-0.8
	comp=Z,21nm,1.6s						
KURK				PKKPbc	PKKPbc	10 42 45.2	-0.6
KURK	Kurchatov	96.53	320⇑	iP	P	10 25 58.8	-0.9
KURK				pmax	pmax		
	comp=Z,16nm,1.8s						
KURBB	Kurchatov Arra	96.57	320	PKKPbc	PKKPbc	10 42 45.2	-0.5
	comp=Z,1.7nm,1.0s,baz=265,slow=3.5,SNR=8.4						
KSH	Kashi	96.58	309	P	P	10 26 01.3	+0.9
KSH				sP	pP	10 26 08.0	-0.7
KSH				PP	PP	10 29 57.5	+2.4
KSH				S	S	10 37 19.4	-0.4
KSH				sS	pS	10 37 29.8	-1.0
KSH				SS	SS	10 44 00.4	+5.9
KSH				LR	LR		
	comp=Z,370nm,6.4s						
KSH				LR	LR		
	comp=Z,360nm,5.2s						
KSH				LR	LR		
	comp=Z,830nm,11.4s						
LAO	LASA Array	96.90	44	Pdiff	P	10 26 01.2	-0.4
	baz=261						
SNAA	Sanae	96.97	184	P	P	10 26 01.3	-0.2
SNAA	Sanae	96.97	184	eP	P	10 26 01.2	-0.2
	comp=Z,16nm,1.2s						
SNAA	Sanae	96.97	184⇑	eP	P	10 26 01.3	-0.2
VNA2	Neumayer--Watz	97.95	182	P	Pdif	10 26 06.3	+0.4
AMTX	Amarillo	98.65	56	Pdiff	P	10 26 09.1	-0.7
	baz=262						
FFC	Flin Flon	100.52	36	i P	Pdif	10 26 17.8	+0.3
BRVK	Borovoye	101.92	322⇓	eP	Pdif	10 26 22.4	-1.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ARCES	ARCESS Array B	116.37	345	PKP	PKPdf	10 31 12.6	-0.7
	comp=Z,4.2nm,0.7s,baz=68,slow=1.4,SNR=18						
VRH	Novokhopyorsk	119.48	323	ePKIKP	PKPdf	10 31 18.8	-0.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR	Galich'ya Gora	120.56	325	ePKIKP	PKiKP	10 31 21.9	+0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	Obninsk	120.74	329	i PKIKP	PKPdf	10 31 21.6	-0.3
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VSR	Storozhevoye	120.97	324	ePKIKP	PKPpre	10 31 18.2	
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KBZ	Khabaz	121.00	315	PKP	PKiKP	10 31 24.1	+1.2
	comp=Z,2.2nm,0.9s,baz=154,slow=3.0,SNR=4.2						
KIV	Kislovodsk	121.09	315	ePKIKP	PKiKP	10 31 23.5	+0.2
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FINES	FINESS Array B	121.77	338	PKP	PKPdf	10 31 23.5	-0.2
	comp=Z,7.7nm,0.9s,baz=115,slow=2.7,SNR=10						
CPUP	Villa Florida	124.18	133	PKP	PKPdf	10 31 29.4	-0.2
	comp=Z,3.7nm,0.8s,baz=179,slow=2.0,SNR=7.2						
BOSA	Boshof	124.81	223	PKP	PKPdf	10 31 30.0	-0.8
	comp=Z,4.8nm,0.9s,baz=179,slow=3.0,SNR=5.2						
SDV	Santo Domingo	124.82	87	ePKPdf	PKPdf	10 31 30.4	-0.8
NACGM	Naroch	125.63	332	e	PKPdf	10 31 30.0	-1.4
NB2	NORSAR Subarra	126.74	345	PKPdf	PKPdf	10 31 33.1	-0.3
	comp=Z,15nm,1.0s,baz=34,slow=2.1						
NB2	NORSAR Subarra	126.74	345	PKPdf	PKPdf	10 31 33.1	-0.3
	baz=34,slow=2.1						
NOA	NORSAR Array B	126.74	345	PKP	PKPdf	10 31 32.9	-0.5
	comp=Z,3.7nm,0.8s,baz=31,slow=2.0,SNR=9.2						
AKASG	Malin Array Be	126.79	327	PKP	PKPdf	10 31 33.2	-0.5
	comp=Z,6.3nm,0.9s,baz=58,slow=2.3,SNR=26						
KMBO	Kilima Mbogo	127.06	260	PKP	PKPdf	10 31 35.7	0.0
	comp=Z,1.3nm,0.6s,baz=52,slow=3.7,SNR=4.9						
SUW	Suwalki	127.83	333	ePKP	PKiKP	10 31 36.5	+0.3
SUW	Suwalki	127.83	333	ePKIKP	PKiKP	10 31 36.4	+0.3
BRTR	Keskin Array B	128.81	312	PKP	PKPdf	10 31 38.2	+0.1
	comp=Z,4.3nm,1.0s,baz=116,slow=2.9,SNR=13						
KIS	Kishinev	128.93	323	e		10 41 39.0	
KIS				LRM	MLR	11 35 52.0	
	comp=Z,700nm,23.0s						
SJG	San Juan	129.76	76	ePKPdf	PKPdf	10 31 40.3	0.0
SJG	San Juan	129.76	76	ePKIKP	PKPdf	10 31 40.3	0.0
UZH	Uzhgorod	131.67	328	ePKIKP	PKPpre	10 31 38.9	
UZH				e		10 31 48.7	
OJC	Ojcow	131.90	331	ePKP	PKiKP	10 31 44.3	-0.2
OJC	Ojcow	131.90	331	ePKIKP	PKiKP	10 31 44.3	-0.2
NIE	Niedzica	132.18	330	ePKP	PKiKP	10 31 45.7	+0.5
LANS	Liptovska Anna	132.77	330	ePKP	PKiKP	10 31 46.5	+0.1
MORC	Moravsky Berou	133.26	332	ePKP	PKiKP	10 31 47.0	-0.3
VYHS	Vyhne	133.52	330	ePKIKP	PKiKP	10 31 47.4	-0.5
VYHS	Vyhne	133.52	330	ePKP	PKiKP	10 31 47.4	-0.5
BRG	Berggiesshubel	134.04	335	ePKP	PKPdf	10 31 47.3	-0.2
	comp=Z,29nm,1.6s						
BRG				eSKP		10 35 18.5	
	comp=Z,31nm,1.9s						
BRG	Berggiesshubel	134.04	335	ePKIKP	PKPdf	10 31 47.3	-0.2
BRG				pmax	pmax		
	comp=Z,31nm,1.6s						
BRG				pmax	pmax		
	comp=N,29nm,2.0s						
CLL	Collm	134.09	336	ePKPdf	PKPdf	10 31 48.0	+0.5
	comp=Z,16nm,1.2s						
CLL				e		10 31 58.0	
CLL	Collm	134.09	336	ePKIKP	PKPdf	10 31 48.0	+0.5
CLL				e		10 31 58.0	
CLL				pmax	pmax		
	comp=Z,11nm,1.2s						
KRUC	Moravsky	134.30	332	ePKP	PKiKP	10 31 48.7	-0.7
MODS	Modra-Piesok	134.36	331	ePKIKP	PKiKP	10 31 49.2	-0.4
MODS	Modra-Piesok	134.36	331	ePKP	PKiKP	10 31 49.2	-0.4
CONA	Conrad Observa	135.35	331	ePKiKP	PKiKP	10 31 52.0	+0.3
	comp=Z,5.4nm,0.7s						
KHC	Kasperske Hory	135.51	334	ePKPDF	PKiKP	10 31 52.6	+0.7
KHC				ex	x	10 31 59.8	
KHC	Kasperske Hory	135.51	334	ePKIKP	PKiKP	10 31 52.6	+0.7
KHC				e		10 31 59.8	
GERES	GERESS Array B	135.67	333	PKP	PKPdf	10 31 51.3	+0.6
	comp=Z,5.2nm,0.9s,baz=90,slow=1.3,SNR=20						
MOA	Molln	136.16	332	ePKiKP	PKiKP	10 31 53.3	+0.1
	comp=Z,4.4nm,1.1s						
SOKA	Soboth	136.63	330	ePKiKP	PKiKP	10 31 54.2	-0.1
	comp=Z,11nm,1.1s						
KBA	Koelnbreinsper	137.15	332	ePKPdf	PKPdf	10 31 53.3	-0.3
	comp=Z,5.6nm,1.1s						
MYKA	Terra Mystica	137.34	331	ePKiKP	PKPdf	10 31 54.5	+0.6
	comp=Z,1.2nm,0.4s						
VISS	Visnje	137.35	330	i PKPdf	PKiKP	10 31 56.5	+0.8
BOJS	Bojanci	137.35	329	i PKPdf	PKiKP	10 31 54.7	-1.0
BDFB	Brasilia	137.51	128	PKP	PKiKP	10 31 56.5	-0.5
	comp=Z,3.7nm,0.8s,baz=161,slow=1.8,SNR=5.8						
JAVS	Javornik	137.66	330	i PKPdf	PKPdf	10 31 53.0	-1.6
WATA	Walderalm	137.75	334	ePKiKP	PKiKP	10 31 56.0	-0.7
	comp=Z,3.6nm,0.6s						
ABTA	Abfaltersbach	137.77	332	ePKPdf	PKPdf	10 31 54.8	+0.1
	comp=Z,9.5nm,1.0s						
MOTA	Moosalm	137.95	334	ePKiKP	PKiKP	10 31 56.1	-1.0
	comp=Z,4.0nm,0.7s						
SQTA	Sankt Quirin	138.00	334	ePKPdf	PKPdf	10 31 55.4	+0.3
	comp=Z,11nm,1.2s						
FETA	Feichten	138.36	334	ePKPdf	PKPdf	10 31 55.9	+0.1
	comp=Z,9.0nm,1.1s						
KEST	Kesra	147.32	322	PKPbc	PKPbc	10 32 15.0	+0.7
	comp=Z,55nm,0.9s,baz=284,slow=1.9,SNR=24						
POLO	Lamas de Olo	149.33	350	ePKPdf	PKiKP	10 32 20.3	-0.3
MVO	Moncorvo	149.39	349	ePKPdf	PKiKP	10 32 20.1	-0.6
PVRL	Vila Real	149.41	350	ePKPdf	PKiKP	10 32 20.5	-0.2
PVIS	Viseu	149.99	350	ePKPdf	PKiKP	10 32 21.9	0.0
ESDC	Sonseca Array	150.09	343	PKP	PKPdf	10 32 15.9	-0.4
	comp=Z,8.6nm,1.0s,baz=111,slow=3.3,SNR=4.9						
ESDC				PKPbc	PKiKP	10 32 22.0	-0.1
	comp=Z,9.2nm,1.0s,baz=26,slow=2.0,SNR=17						
MTE	Manteigas	150.23	349	ePKPdf	PKPdf	10 32 18.1	+1.6
PCAS	Casmilo, Conde	150.73	350	ePKPdf	PKPbc	10 32 21.8	-0.9
PCBR	Castelo Branco	150.76	349	ePKPdf	PKiKP	10 32 23.1	-0.3
PMRV	Marv??o	151.14	348	ePKPdf	PKiKP	10 32 24.4	+0.1
PTOM	Tomar	151.14	350	ePKPdf	PKiKP	10 32 24.7	+0.5
PMTG	Montargil	151.64	350	ePKPdf	PKiKP	10 32 25.1	-0.2
MESJ	Messejana	152.84	349	ePKPdf	PKiKP	10 32 28.6	+0.8
TORD	Torodi Ar. Bea	163.97	279	PKP	PKPdf	10 32 33.8	-0.6
	comp=Z,9.1nm,1.0s,baz=28,slow=1.3,SNR=32						
TORD				PKPab	PKPab	10 33 26.5	-1.0
	comp=Z,5.8nm,1.0s,baz=83,slow=4.8,SNR=6.9						
KIC	Kosan Boka	169.17	245	ePKIKP	PKPdf	10 32 37.6	-0.9
	comp=Z,70nm,1.4s						
LIC	Lamto	169.36	243	ePKIKP	PKPdf	10 32 38.1	-0.5
	comp=Z,124nm,1.9s						
TIC	Toumodi	169.54	245	ePKIKP	PKPdf	10 32 38.3	-0.4

JMA 06 10:13:04.1±0.1, 38.°74N×142.°29E, h38km±1km, M3.5,
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.59	305	P	Pn	10 13 16.1	0.0
OFUJ				S	Sn	10 13 24.4	-0.1
JKMT	Kesennumamotoy	0.64	277	P	Pn	10 13 16.8	0.0
JKMT				S	Sn	10 13 25.4	-0.3
JIKH	Ishinomakikobu	0.78	237	P	Pn	10 13 18.6	+0.1
JIKH				S	Sn	10 13 28.6	-0.3
JIO	Ouri	0.79	249	P	Pn	10 13 18.7	0.0
JIO				S	Sn	10 13 28.8	-0.5
JMK	Ichinoseki	0.86	285	P	Pn	10 13 20.1	+0.4
JMK				eS	Sn	10 13 31.1	0.0
JOM	Ohasama	1.07	314	P	Pn	10 13 23.1	+0.6
JOM				S	Sn	10 13 37.0	+0.9
JTH	Tanohata	1.24	345	P	Pn	10 13 25.1	+0.2
JTH				eS	Sn	10 13 40.9	+0.5
JOU	Okura	1.33	254	P	Pn	10 13 26.8	+0.7
JOU				S	Sn	10 13 44.1	+1.5

JRG	Rokugo	1.45	297	P	Pn	10 13 28.7	+1.0
JYK	Kaneyama	1.52	277	P	Pn	10 13 29.6	+0.9
JYK				eS	Sn	10 13 49.1	+1.9
MAT	Matsushiro	3.91	237	P	Pn	10 14 04.3	+2.7
MAT				eS	Sn	10 14 52.7	+6.4

IDC 06 10:13:17.3±2.2**, 11°.95S**×**165°.44E, h0^{km}, mb4.5**/5**, mb1 4.8**/5**, mb1mx4.2**/40**, mbtmp4.4**/5**, Error ellipse: s-maj=111.1km s-min=31.4km az=151.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.90	251	P	P	10 19 35.9	-0.1
	7.3nm,0.9s,baz=82,slow=9.5,SNR=2.2						
ILAR	Eielson Array	84.46	19	P	P	10 25 51.8	+0.2
	2.2nm,0.7s,baz=236,slow=5.3,SNR=4.9						
NVAR	Mina Array Bea	86.84	50	P	P	10 26 04.7	+0.4
	3.5nm,0.9s,baz=236,slow=6.9,SNR=2.2						
MKAR	Makanchi Array	93.97	317	P	P	10 26 37.5	+0.1
	1.6nm,0.7s,baz=85,slow=6.7,SNR=2.6						
YKA	Yellowknife Ar	95.91	27	P	P	10 26 44.8	-0.9
	0.4nm,0.6s,baz=253,slow=4.4,SNR=2.2						

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*DDA **06** 10:16:37.8, 40°.68N×39°.88E, h28^{km}±1^{km}, ML2.7*
*ISCJB **06** 10:16:38.8±0.7, 40°.64N±0°.04×39°.95E±0°.05, h8^{km}, Error ellipse: s-maj=5.9km s-min=5.7km az=17.4*
*TIF **06** 10:16:38.5, 40°.70N×39°.91E, h27^{km}*
*ISK **06** 10:16:38.1, 40°.64N×39°.93E, h14^{km}, ML2.5/5*
ISC 06 10:16:35.6±1.1**, 40°.65N**±0°.05×**39°.85E**±0°.06**, h8^{km}, n15, σ1^{s}.23**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACK	Trabzon	0.30	349	i P	Pn	10 16 45.9	-0.5
BAYT	Aydıntepe-Bayb	0.34	138	PG	Pb	10 16 44.7	+0.7
KTUT	Trabzon	0.35	350	PG	Pn	10 16 46.1	-0.9
KTUT				SG	Sb	10 16 51.8	+2.1
BAYB	BAYBURT	0.50	141	i P	Pn	10 16 48.3	-1.0
BAYB				IAML_P			
	comp=Z,694nm,0.1s						
KELT	Kelkit	0.67	222	i P	Pn	10 16 52.9	+1.3
CHAY	Cayeli-Rize	0.80	56	PG	Pn	10 16 52.9	-0.3
CHOM	Cayeli-Rize	0.83	57	PG	Pn	10 16 53.4	-0.2
CHOM				SG	Sn	10 17 04.9	-1.1
DBAD	Bademkaya	1.45	75	i P	Pg	10 17 04.6	+1.1
DDEM	Demirkent	1.47	80	i P	Pg	10 17 04.7	+0.9
REFA	Refahiye_ERZN	1.50	214	i P	Pn	10 17 00.2	-2.8
REFA				IAML_P			
	comp=Z,360nm,0.2s						
BCA	Borcka	1.56	59	PN	Pg	10 17 05.1	-0.5
BCA				SN	Sg	10 17 25.3	-0.6
DAGI	Agillar	1.63	74	i P	Pg	10 17 07.6	+0.7
DAGI				IAML_P			
	comp=Z,464nm,0.1s						
ARTV	Artvin	1.67	70	i P	Pg	10 17 08.7	+1.1
ARTV				IAML_P			
	comp=Z,1µm,0.2s						
BATM	Batumi	1.69	55	PN	Pg	10 17 07.3	-0.8
BATM	Batumi	1.69	55	P	Pg	10 17 07.1	-1.0
BATM				S	Sg	10 17 29.5	-0.5

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*IDC **06** 10:17:12.2±1.0, 11°.00S×165°.45E, h0^{km}, mb4.1/8, mb1 4.3/10, mb1mx4.0/38, mbtmp4.1/10, ML4.2/2, Error ellipse: s-maj=31.2km s-min=21.7km az=146.0*
*ISCJB **06** 10:17:14.9±0.4, 11°.10S±0°.06×165°.37E±0°.06, h30^{km}, mb4.3/15, Error ellipse: s-maj=10.0km s-min=7.4km az=135.8*
*NEIC **06** 10:17:14.0±0.3, 11°.00S×165°.38E, h10^{km}, mb4.4/3, Error ellipse: s-maj=8.4km s-min=6.0km az=75.0*
ISC 06 10:17:16.8±0.6**, 11°.00S**±0°.09×**165°.45E**±0°.08**, h30^{km}, n30, σ1^{s}.03**/32**, mb4.5**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.64	286	ePn	Pn	10 18 37.5	-1.1
HNR				eSn	Sn	10 19 41.9	-0.5
HNR	Honiara	5.64	286	Pn	Pn	10 18 38.4	-0.2
	7.1nm,0.3s,baz=343,slow=11,SNR=2.2						
HNR				Sn	Sn	10 19 41.9	-0.5
	10nm,0.3s,baz=194,slow=19,SNR=3.6						
MARNC	Mare, Loyalty	10.71	167	ePn	Pn	10 19 48.9	+0.7
DZM	Mont Dzumac	11.05	175	ePn	Pn	10 19 53.0	+0.1
DZM	Mont Dzumac	11.05	175	Pn	Pn	10 19 52.4	-0.5
	1.8nm,0.3s,baz=58,slow=18,SNR=6.2						
PINNC	Pines Island,	11.70	171	ePn	Pn	10 20 02.3	+0.5
COEN	Coen	21.94	260	eP	P	10 22 11.3	+3.1
	23nm,1.1s						
MXZ	Matakaoa Point	28.86	159	eP	P	10 23 11.3	-1.4
	40nm,1.0s						
BKZ	Black Stump Fm	29.72	163	eP	P	10 23 20.3	-0.2
	79nm,1.7s						
BFZ	Birch Farm	31.06	164	eP	P	10 23 31.9	-0.3
	38nm,1.2s						
WB2	Warramunga Arr	31.21	250	eP	P	10 23 32.5	-1.3
	20nm,1.4s						
WR1	Warramunga Arr	31.22	250	eP	P	10 23 33.5	-0.5
	14nm,1.3s						
WRA	Warramunga Arr	31.23	250	P	P	10 23 33.5	-0.5
	2.3nm,0.8s,baz=78,slow=9.0,SNR=4.5						
AS01	Alice Springs	32.51	243	eP	P	10 23 44.6	-0.7
AS31	Alice Springs	32.55	243	eP	P	10 23 44.8	-0.8
	1.9nm,1.3s						
ASAR	Alice Springs	32.55	243	P	P	10 23 45.1	-0.4
	1.8nm,0.8s,baz=64,slow=10.0,SNR=6.8						
PETK	Petropavlovsk-	64.20	355	P	P	10 27 48.5	-0.1
	5.3nm,1.0s,baz=126,slow=7.3,SNR=3.0						
PEA1	Petropavlovsk-	64.20	355	eP	P	10 27 48.5	-0.2
SONA0	Songino Array	78.46	324	eP	P	10 29 16.2	+1.1
SONM	Songino Array	78.46	324	P	P	10 29 16.2	+1.1
	0.5nm,0.7s,baz=142,slow=5.3,SNR=2.8						
ILAR	Eielson Array	83.57	19	P	P	10 29 42.1	+0.4
	0.7nm,0.6s,baz=236,slow=5.4,SNR=8.7						
ILB	Eielson Array	83.57	19	eP	P	10 29 42.1	+0.4
NV01	Mina Array Sit	86.22	50	eP	P	10 29 56.9	+1.0
NVAR	Mina Array Bea	86.22	50	P	P	10 29 56.9	+1.0
	0.6nm,0.7s,baz=233,slow=7.5,SNR=3.5						
MK32	Makanchi Array	93.29	317	eP	P	10 30 29.2	+0.3
MKAR	Makanchi Array	93.29	317	P	P	10 30 29.2	+0.3
	2.0nm,1.1s,baz=89,slow=6.2,SNR=3.6						
YKA	Yellowknife Ar	95.07	27	P	P	10 30 34.8	-1.7
	0.2nm,0.8s,baz=256,slow=4.1,SNR=3.3						
YKB5	Yellowknife Ar	95.07	27	eP	P	10 30 34.5	-2.1
ARA0	ARCESS Array S	116.22	345	ePKPdf	PKiKP	10 35 56.5	-0.2
ARCES	ARCESS Array B	116.22	345	PKP	PKiKP	10 35 56.5	-0.2
	2.1nm,0.7s,baz=52,slow=2.0,SNR=7.0						

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*IDC **06** 10:20:32.5±0.4, 10°.82S×165°.37E, h0^{km}, mb5.2/27, mb1 5.3/29, mb1mx5.2/37, mbtmp5.2/29, ML6.1/2, MS5.8/12, Ms1 5.8/12, ms1mx5.2/47, Error ellipse: s-maj=15.5km s-min=11.4km az=94.0*
*BJI **06** 10:20:33.4, 10°.44S×165°.27E, h6^{km}, mB5.8/64, mb5.3/75, Ms5.7/78, Ms7 5.5/71*
*ISCJB **06** 10:20:33.6±0.1, 10°.84S±0°.02×165°.26E±0°.02, h15^{km}, mb5.3/265, MS5.8/167, Error ellipse: s-maj=2.9km s-min=2.6km az=37.5*
*NEIC **06** 10:20:34.3±0.1, 10°.85S×165°.27E, h10^{km}, mb5.5/205, MS5.9/137, MW5.9, Error ellipse: s-maj=3.0km s-min=2.5km az=109.0, Moment Tensor Solution. s48 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.32; $M_{\theta\theta}$-2.33; $M_{\phi\phi}$4.65; $M_{r\theta}$2.87; $M_{\theta\phi}$3.90; $M_{\phi r}$-4.46; Best double couple: $M_0$7.70000×10^{17} NP1:ϕ_s345.00000°, δ77.00000°, λ-134.00000°. NP2:ϕ_s242.00000°, δ46.00000°, λ-18.00000°. Principal axes: T 7.4300, Plg20.0000°, Azm106.0000°; N 0.5300, Plg43.0000°, Azm357.0000°; P -7.9600, Plg41.0000°, Azm214.0000°;*
*MOS **06** 10:20:35.8±0.8, 10°.79S×165°.25E, h30^{km}, mb5.5/52, MS5.8/13 Error ellipse: s-maj=8.0km s-min=6.6km az=96.4*
*GCMT **06** 10:20:38.3±0.2, 10°.76S±0°.02×165°.21E±0°.01, h20^{km}±1^{km}, MW5.9/120, Moment Tensor Solution. s50,c64; s120,c194; Duration: 2^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.55±.19; $M_{\theta\theta}$-2.85±.15; $M_{\phi\phi}$2.30±.14; $M_{r\theta}$3.19±.52; $M_{\theta\phi}$3.10±.13; $M_{\phi r}$-6.33±.84; Best double couple: $M_0$8.14800×10^{17} NP1:ϕ_s155.00000°, δ87.00000°, λ119.00000°. NP2:ϕ_s250.00000°, δ29.00000°, λ5.00000°. Principal axes: T 7.8210, Plg41.0000°, Azm92.0000°; N 0.6530, Plg29.0000°, Azm334.0000°; P -8.4750, Plg36.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 10:20:35.1±0.5**, 10°.82S**±0°.04×**165°.30E**±0°.04**, h14^{km}**±2^{km}**, n738, σ1^{s}.24**/706**, mb5.4**/265**, MS5.8**/168**, 14C-17D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.45	284	i P	Pn	10 21 59.0	+3.1
HNR				i S	Sn	10 23 01.0	+2.5
HNR	Honiara	5.45	284	ePn	Pn	10 21 57.2	+1.3
HNR				eSn	Sn	10 23 01.4	+2.9
HNR	Honiara	5.45	284	eP	Pn	10 21 57.2	+1.3
HNR				e		10 23 01.4	
HNR	Honiara	5.45	284	Pn	Pn	10 21 57.9	+2.0
	1µm,0.3s,baz=142,slow=5.0,SNR=118						
HNR				Sn	Sn	10 23 00.3	+1.9
	231nm,0.3s,baz=229,slow=23,SNR=5.7						
HNR				LR	LR	10 24 14.1	
	comp=Z,171µm,18.3s,baz=107,slow=40						
MARNC	Mare, Loyalty	10.92	166	ePn	Pn	10 23 10.8	-0.2
DZM	Mont Dzumac	11.24	175	ePn	Pn	10 23 16.0	+0.5
	2µm,1.4s						
DZM				eLR	LR	10 25 53.2	
	comp=Z,46µm,25.2s						
DZM	Mont Dzumac	11.24	175	Pn	Pn	10 23 16.3	+0.8
	64nm,0.3s,baz=109,slow=16,SNR=229						
DZM				Sn	Sn	10 25 18.5	-2.6
	3.9nm,0.3s,baz=323,slow=20,SNR=3.0						
DZM				LR	LR	10 26 54.3	
	comp=Z,40µm,19.7s,baz=21,slow=34						
PINNC	Pines Island,	11.91	170	ePn	Pn	10 23 25.0	+0.5
MSVF	Nonsavu	14.13	121	ePn	Pn	10 23 56.0	+0.9
MSVF	Nonsavu	14.13	121	eP	Pn	10 23 56.0	+0.9
TARA	Tarawa	14.27	33	ePn	Pn	10 23 58.1	+1.2
PATS	Pohnpei	18.87	338	eP	Pn	10 24 56.3	+0.7
	400nm,1.2s						
KWAJ	Kwajalein Atol	19.63	7	eP	Pn	10 25 05.4	+0.7
	329nm,0.7s						
KWAJ	Kwajalein Atol	19.63	7	eP	Pn	10 25 05.4	+0.7
KWAJ				pmax	pmax		
	comp=Z,329nm,0.7s						
EIDS	Eidsvold	19.77	221	P	Pn	10 25 07.1	+0.6
	baz=20,SNR=16						
CTA	Charters Tower	20.52	241	P	P	10 25 14.2	+1.0
	comp=Z,104nm,0.7s,baz=66,slow=13,SNR=82						
CTA				LR	LR	10 32 32.2	
	comp=Z,32µm,18.0s,baz=60,slow=35						
CTAO	Charters Tower	20.52	241	eP	Pn	10 25 14.5	-0.9
	comp=Z,2µm,1.6s						
CTAO				LR	LR		
	comp=Z,46µm,19.0s						
CTAO	Charters Tower	20.52	241	eP	Pn	10 25 14.5	-0.9
CTAO				pmax	pmax		
	comp=Z,2µm,1.6s						
CTAO				MLR	MLR		
	comp=Z,46µm,19.0s						
LHI	Lord Howe Isla	21.40	195	P	P	10 25 24.1	+1.7
	baz=22,SNR=15						
MTSU	Mount Surprise	21.57	248	P	P	10 25 25.3	+0.8
	baz=22,SNR=36						
COEN	Coen	21.83	260	P	P	10 25 27.9	+0.6
	baz=22,SNR=25						
ARMA	Armidale	23.28	211	P	P	10 25 43.3	+0.7
	baz=23,SNR=44						
RAO	Raoul Island	24.13	142	PFAKE		10 26 00.0	+9.4
RAO				LR	LR		
	comp=Z,11µm,19.0s						
RAO	Raoul Island	24.13	142	LR	LR	10 33 13.1	
	comp=Z,10µm,18.7s,baz=312,slow=32						
KNTN	Kanton	24.16	72	eP	P	10 25 51.3	+0.2
	comp=Z,415nm,1.3s						
QLP	Quilpie	25.32	229	P	P	10 26 02.2	+0.8
	baz=25,SNR=60						
OUZ	Omahuta	25.44	164	eP	P	10 26 02.2	-0.2
	comp=Z,315nm,1.4s						
JAY	Jayapura	25.77	287	P	P	10 26 05.2	-0.5
	comp=Z,980nm,1.1s,comp=Z,24µm						
MGCD	Mangrove Creek	25.82	208	P	P	10 26 07.3	+1.3
	baz=26,SNR=35						
GENI	Genyem	26.25	286	P	P	10 26 10.5	+0.5
RIV	Riverview	26.32	207	P	P	10 26 12.4	+1.9
	baz=26,SNR=28						
WCZ	Waipu Caves	26.32	163	P	P	10 26 12.1	+1.6
QIS	Mount Isa	26.53	245	P	P	10 26 12.5	-0.1
	baz=27,SNR=20						
CMSA	Cobar Meteorol	27.47	218	P	P	10 26 20.9	+0.1
	baz=28,SNR=42						
YNG	Young	28.02	211	P	P	10 26 26.7	+0.9
	baz=28,SNR=7.9						
CNB	Canberra Magne	28.37	208	P	P	10 26 29.8	+0.8
	baz=28,SNR=9.7						
CAN	Canberra	28.55	209	eP	P	10 26 31.1	+0.6
	comp=Z,192nm,1.4s						
CAN	Canberra	28.55	209	eP	P	10 26 31.1	+0.6
CAN				pmax	pmax		
	comp=Z,192nm,1.4s						
HIZ	Hauiti	28.87	164	eP	P	10 26 33.6	+0.3
	comp=Z,315nm,1.5s						
HAZ	Te Kaha	29.07	159	P	P	10 26 36.2	+1.2
MXZ	Matakaoa Point	29.08	158	eP	P	10 26 35.1	-0.1
	comp=Z,172nm,1.1s						
MXZ	Matakaoa Point	29.08	158	P	P	10 26 35.8	+0.6
RUGZ	Raukumara Rang	29.22	160	P	P	10 26 37.9	+1.3
PKGZ	Pakihiroa	29.29	159	P	P	10 26 37.0	-0.2
URZ	Urewera	29.30	161	eP	P	10 26 37.4	+0.3
	comp=Z,141nm,0.9s						
URZ				eS	S	10 31 30.6	+0.7
URZ	Urewera	29.30	161	P	P	10 26 37.5	+0.4
	comp=Z,126nm,0.9s,baz=0.5,slow=5.7,SNR=16						
URZ				S	S	10 31 26.4	-3.5
	comp=Z,24nm,0.9s,baz=175,slow=21,SNR=9.8						
URZ	Urewera	29.30	161	P	P	10 26 37.6	+0.4
WMGZ	Waiomatatini S	29.35	158	P	P	10 26 37.9	+0.3
MUGZ	Murupara	29.39	161	P	P	10 26 39.4	+1.5
MWZ	Matawai	29.51	160	P	P	10 26 39.4	+0.4
TWGZ	Tauwhareparae	29.52	159	P	P	10 26 39.4	+0.3
PUZ	Puketiti	29.52	159	P	P	10 26 37.9	-1.2
CNGZ	Carnagh Statio	29.87	159	P	P	10 26 40.8	-1.3
MILA	Mila	29.91	207	P	P	10 26 43.7	+1.1
	baz=30						
RIGZ	Rimuhau	29.92	160	P	P	10 26 43.0	+0.3
BKZ	Black Stump Fm	29.94	162	eP	P	10 26 43.1	+0.2
	comp=Z,138nm,1.1s						
BKZ				eS	S	10 31 36.2	-3.8
BKZ	Black Stump Fm	29.94	162	P	P	10 26 43.7	+0.9
WAKE	Wake Island	29.94	3	PFAKE		10 27 00.0	+17
WAKE				LR	LR		
	comp=Z,10µm,20.0s						
NMHZ	Naumai	29.97	162	P	P	10 26 44.3	+1.2
KWHZ	Kaweka Forest	30.16	163	P	P	10 26 45.5	+0.7
STKA	Stephens Creek	30.31	223	P	P	10 26 46.7	+0.5
	baz=30,SNR=33						
STKA	Stephens Creek	30.31	223	eP	P	10 26 42.1	-4.1
	comp=Z,26nm,1.2s						
STKA				PcP	PcP	10 29 47.0	+0.5
STKA	Stephens Creek	30.31	223	eP	P	10 26 42.1	-4.1
STKA						10 29 47.0	
STKA				pmax	pmax		
	comp=Z,26nm,1.2s						
STKA	Stephens Creek	30.31	223	P	P	10 26 46.5	+0.3
	comp=Z,75nm,1.1s,baz=34,slow=7.5,SNR=51						
STKA				PcP	PcP	10 29 47.0	+0.5
	comp=Z,15nm,0.7s,baz=34,slow=4.8,SNR=5.6						
STKA				ScP	ScP	10 33 29.4	+0.7
	comp=Z,13nm,1.1s,baz=71,slow=4.3,SNR=6.1						
STKA				LR	LR	10 38 31.2	
	comp=Z,36µm,18.0s,baz=41,slow=36						
WRAB	Tennant Creek	31.14	249	eP	P	10 26 52.3	-1.4
	comp=Z,160nm,1.1s						
WRAB				LR	LR		
	comp=Z,9µm,22.0s						
WRAB	Tennant Creek	31.14	249	d iP	P	10 26 52.3	-1.4
WRAB				pmax	pmax		
	comp=Z,154nm,1.1s						
WB2	Warramunga Arr	31.14	249	eP	P	10 26 52.1	-1.6
WB2	Warramunga Arr	31.14	249	eP	ScP	10 33 32.6	+1.0
WRA	Warramunga Arr	31.15	249	P	P	10 26 52.7	-1.1
	comp=Z,66nm,0.8s,baz=81,slow=9.0,SNR=88						
WRA				PcP	PcP	10 29 49.2	+0.2
	comp=Z,11nm,0.8s,baz=74,slow=3.2,SNR=7.5						
WRA				ScP	ScP	10 33 32.5	+0.9
	comp=Z,9.0nm,1.2s,baz=68,slow=4.1,SNR=6.1						
BFZ	Birch Farm	31.28	164	eP	P	10 26 53.9	-0.7
	comp=Z,166nm,1.2s						
BFZ				eS	S	10 32 01.8	+0.9
DSZ	Denniston Nort	31.33	171	P	P	10 26 59.6	+4.6
SNZO	South Karori	31.48	166	eP	P	10 26 55.1	-1.2
	comp=Z,198nm,1.3s						
SNZO				LR	LR		
	comp=Z,10µm,19.0s						
THZ	Tophouse	31.54	169	eP	P	10 26 57.6	+0.7
	comp=Z,130nm,0.9s						
GUMO	Guam	31.61	320	PFAKE		10 27 10.0	+12
GUMO				LR	LR		
	comp=Z,6µm,19.0s						
TOO	Toolangi	32.04	211	P	P	10 27 02.3	+0.9
	baz=32,SNR=18						
KDU	Kakadu	32.18	263	P	P	10 27 01.2	-1.6
	baz=32,SNR=32						
INZ	Inchbonnie	32.23	172	P	P	10 27 04.6	+1.6
KHZ	Kahutara	32.29	169	eP	P	10 27 03.0	-0.4
	comp=Z,93nm,1.2s						
LTZ	Lake Taylor	32.42	170	eP	P	10 27 04.4	-0.2
	comp=Z,71nm,0.7s						
LTZ	Lake Taylor	32.42	170	P	P	10 27 06.3	+1.7
LTZ	Lake Taylor	32.42	170	P	P	10 27 07.0	+2.4
AS01	Alice Springs	32.47	243	eP	P	10 27 04.1	-1.2
WVZ	Waitaha Valley	32.48	173	P	P	10 27 08.4	+3.3
AS31	Alice Springs	32.51	243	eP	P	10 27 04.7	-0.9
	comp=Z,46nm,1.4s						
ASAR	Alice Springs	32.51	243	P	P	10 27 04.5	-1.1
	comp=Z,39nm,0.6s,baz=64,slow=10,SNR=155						
ASAR				PcP	PcP	10 29 52.0	-0.5
	comp=Z,14nm,0.8s,baz=69,slow=2.6,SNR=8.9						
ASAR				ScP	ScP	10 33 36.8	+0.5
	comp=Z,3.0nm,1.0s,baz=67,slow=3.7,SNR=5.2						
ASAR				LR	LR	10 39 10.4	
	comp=Z,20µm,19.7s,baz=71,slow=34						
FOZ	Fox Glacier	32.83	174	eP	P	10 27 08.1	0.0
	comp=Z,66nm,0.8s						
FOZ	Fox Glacier	32.83	174	P	P	10 27 10.1	+1.9
OXZ	Oxford	32.91	171	eP	P	10 27 08.4	-0.5
	comp=Z,61nm,0.8s						
OXZ	Oxford	32.91	171	P	P	10 27 10.4	+1.5
HTT	Hallett	33.04	223	P	P	10 27 10.6	+0.3
	baz=33,SNR=29						
RPZ	Rata Peaks	33.15	172	eP	P	10 27 10.3	-0.8
	comp=Z,65nm,0.9s						
RPZ	Rata Peaks	33.15	172	P	P	10 27 10.1	-0.9
	comp=Z,39nm,0.9s,baz=230,slow=2.2,SNR=14						
RPZ	Rata Peaks	33.15	172	P	P	10 27 11.4	+0.3
CRLZ	Canterbury Las	33.25	170	eP	P	10 27 11.7	-0.2
	comp=Z,106nm,1.0s						
CRLZ	Canterbury Las	33.25	170	P	P	10 27 14.2	+2.4
JCZ	Jackson Bay	33.27	175	P	P	10 27 16.8	+4.7
MQZ	McQueen's Vall	33.38	170	eP	P	10 27 12.3	-0.7
	comp=Z,85nm,1.0s						
ARPS	Mount Arapiles	33.41	216	P	P	10 27 14.1	+0.8
	baz=34,SNR=20						
OKCZ	Okains Bay	33.47	170	P	P	10 27 16.4	+2.6
SAUI	Saumlaki	33.65	272	eP	P	10 27 13.9	-1.8
	comp=Z,84nm,0.8s						
LBZ	Lake Benmore	33.71	174	eP	P	10 27 14.2	-1.7
	comp=Z,30nm,0.9s						
LBZ	Lake Benmore	33.71	174	P	P	10 27 16.7	+0.8
FAKI	Fak Fak	33.71	281	eP	P	10 27 14.1	-2.1
	comp=Z,24nm,1.2s						
WKZ	Wanaka	34.04	175	eP	P	10 27 18.2	-0.5
	comp=Z,178nm,1.4s						
WKZ	Wanaka	34.04	175	P	P	10 27 22.0	+3.3
ODZ	Otahua Downs	34.41	173	eP	P	10 27 21.1	-0.9
	comp=Z,28nm,1.0s						
ODZ	Otahua Downs	34.41	173	P	P	10 27 22.2	+0.3
EAZ	Earnscleugh	34.46	175	P	P	10 27 26.8	+4.4
MLZ	Mavora Lakes	34.51	176	eP	P	10 27 22.1	-0.8
	comp=Z,66nm,1.3s						
DCZ	Deep Cove	34.56	178	eP	P	10 27 21.7	-1.5
	comp=Z,75nm,1.2s						
BBOO	Buckleboo	34.67	226	P	P	10 27 24.4	+0.1
	baz=35,SNR=42						
WHZ	Wether Hill Ro	35.02	177	eP	P	10 27 25.8	-1.4
	comp=Z,98nm,1.5s						
RAR	Rarotonga	35.05	112	PFAKE		10 27 40.0	+12
RAR				LR	LR		
	comp=Z,15µm,21.0s						
SWI	Sorong	35.24	284	P	P	10 27 29.7	+0.2
	comp=Z,57nm,1.3s,comp=Z,1µm						
MOO	Moorlands	35.26	203	P	P	10 27 30.7	+1.4
	baz=35,SNR=4.5						
PALU	Palau	35.60	299	P	P	10 27 33.9	+1.3
	baz=36,SNR=5.9						
TAU	Tasmania Unive	35.60	203	eP	P	10 27 32.6	+0.4
	comp=Z,207nm,1.4s						
TAU				LR	LR		
	comp=Z,7µm,20.0s						
TAU	Tasmania Unive	35.60	203	eP	P	10 27 32.6	+0.4
TAU				pmax	pmax		
	comp=Z,207nm,1.4s						
TAU				MLR	MLR		
	comp=Z,7µm,20.0s						
BNDI	Bandanaira	35.61	277	P	P	10 27 33.0	+0.3
KNRA	Kununurra	35.86	258	P	P	10 27 34.0	-0.8
	baz=36,SNR=15						
JOHN	Johnston Islan	37.00	43	PFAKE		10 28 00.0	+16
JOHN				LR	LR		
	comp=Z,1µm,21.0s						
WRKA	Warakurna	37.80	243	P	P	10 27 50.6	-0.7
	baz=38,SNR=59						
NLAI	Namlea	38.62	278	P	P	10 27 58.6	+0.3
FITZ	Fitzroy Crossi	39.02	255	P	P	10 28 00.3	-1.3
	baz=39,SNR=37						
FORT	Forrest	39.82	234	P	P	10 28 08.3	+0.2
	baz=40,SNR=30						
SANI	Sanana	39.98	280	P	P	10 28 08.1	-1.6
	comp=Z,76nm,1.2s,comp=Z,3µm						
SOEI	Soe	40.37	268	eP	P	10 28 12.5	-0.5
	comp=Z,71nm,1.4s						
SOEI	Soe	40.37	268	P	P	10 28 13.1	+0.1
BATI	Baumata	40.92	267	P	P	10 28 17.6	+0.1
	comp=Z,42nm,0.8s,comp=Z,1µm						
MIDW	Midway	42.27	23	PFAKE		10 28 40.0	+12
MIDW				LR	LR		
	comp=Z,9µm,22.0s						
MMRI	Maumere	42.48	269	eP	P	10 28 28.0	-2.2
	comp=Z,134nm,1.2s						
MMRI	Maumere	42.48	269	P	P	10 28 28.3	-1.9
	comp=Z,98nm,1.2s,comp=Z,3µm						
EDFI	Ende, Flores	43.00	269	P	P	10 28 32.3	-2.3
	comp=Z,37nm,1.1s						
LUWI	Luwuk	43.34	280	eP	P	10 28 36.4	-0.8
	comp=Z,189nm,1.2s						
DAV	Davao City (W)	43.35	292	PFAKE		10 28 50.0	+13
DAV				LR	LR		
	comp=Z,3µm,19.0s						
DAV	Davao City (W)	43.35	292	⇓eP	P	10 28 36.6	-0.7
PPT	Papeete	44.17	104	LR	LR	10 44 21.7	
	comp=Z,12µm,18.0s,baz=253,slow=32						
PPT2	Papeete2	44.17	104	eS	S	10 35 21.9	+4.8
	comp=Z,3µm,25.5s						
PPT2				eLQ	LQ	10 39 15.6	
	comp=Z,13µm,26.5s						
PPT2				eLR	LR	10 41 12.0	
	comp=Z,18µm,22.0s,baz=278						
WSI	Waingapu	44.27	267	P	P	10 28 44.9	+0.2
APSI	Ampana	44.46	280	P	P	10 28 45.3	-0.9
MRSI	Marisa	44.54	282	P	P	10 28 46.4	-0.5
TBI	Tubuai	44.82	112	eS	S	10 35 31.3	+5.1
	comp=Z,3µm,29.0s						
TBI				eLQ	LQ	10 39 34.0	
	comp=Z,11µm,26.5s						
TBI				eLR	LR	10 41 29.5	
	comp=Z,27µm,27.0s,baz=281						
MBWA	Marble Bar	44.86	251	eP	P	10 28 49.1	-0.3
	comp=Z,142nm,1.4s						
MBWA				LR	LR		
	comp=Z,9µm,20.0s						
MBWA	Marble Bar	44.86	251	P	P	10 28 48.1	-1.2
	SNR=14						
MBWA				P	P	10 28 48.1	-1.2
	SNR=14						
BKSI	Bulukumba	45.03	273	P	P	10 28 51.0	+0.3
BNSI	Bone	45.21	275	P	P	10 28 51.9	-0.3
	comp=Z,104nm,1.2s,comp=Z,2µm						
KAPI	Kappang	45.45	274	PFAKE		10 29 10.0	+16
KAPI				LR	LR		
	comp=Z,3µm,19.0s						
TTSI	Tana Toraja	45.76	276	P	P	10 28 56.2	-0.3

	comp=Z,50nm,1.1s,comp=Z,1µm						
MEEK	**Meekatharra**	**46.66**	**244**	P	**P**	**10 29 03.5**	**0.0**
	baz=47,SNR=108						
PLAI	**Plampang**	**46.84**	**268**	P	**P**	**10 29 05.3**	**+0.3**
RCP	**Roxas**	**47.77**	**296**	⇑*e*P	**P**	**10 29 13.1**	**+0.8**
KIP	**Kipapa**	**48.21**	**48**	PFAKE		10 29 30.0	+14
KIP				LR	LR		
	comp=Z,17µm,21.0s						
KLBR	**Kellerberrin**	**48.46**	**237**	P	**P**	**10 29 16.9**	**-0.5**
	baz=49,SNR=41						
KHLU	**Kahalu`u**	**48.73**	**52**	*e*P	**P**	**10 29 19.5**	**-0.1**
	comp=Z,352nm,1.6s						
KHU	**Kahuku**	**48.74**	**52**	*e*P	**P**	**10 29 20.0**	**0.0**
	comp=Z,300nm,1.2s						
KHU	**Kahuku**	**48.74**	**52**	*e*P	**P**	**10 29 20.0**	**0.0**
KHU				pmax	pmax		
	comp=Z,300nm,1.2s						
POHA	**Pohakuloa**	**49.10**	**52**	PFAKE		10 29 30.0	+7.3
POHA				LR	LR		
	comp=Z,10µm,20.0s						
BLDU	**Ballidu**	**49.10**	**239**	P	**P**	**10 29 22.3**	**-0.1**
	baz=49,SNR=18						
NWAO	**Narrogin (SRO)**	**49.23**	**236**	P	**P**	**10 29 23.4**	**+0.1**
	baz=49,SNR=37						
NWAO	**Narrogin (SRO)**	**49.23**	**236**	*e*P	**P**	**10 29 23.7**	**+0.4**
	comp=Z,758nm,1.4s						
NWAO				LR	LR		
	comp=Z,33µm,19.0s						
NWAO	**Narrogin (SRO)**	**49.23**	**236**	*e*P	**P**	**10 29 23.7**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,758nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,33µm,19.0s						
NWAO	**Narrogin (SRO)**	**49.23**	**236**	P	**P**	**10 29 23.3**	**0.0**
	SNR=21						
NWAO				P	**P**	**10 29 23.3**	**0.0**
	SNR=21						
NWAO	**Narrogin (SRO)**	**49.23**	**236**	LR	LR	10 50 21.7	
	comp=Z,38µm,18.5s,baz=318,slow=36						
MORW	**Morawa**	**49.35**	**241**	P	**P**	**10 29 24.6**	**+0.3**
	baz=49,SNR=18						
SRBI	**Singaraja**	**49.44**	**269**	P	**P**	**10 29 25.5**	**+0.3**
MUN	**Mundaring**	**49.83**	**237**	P	**P**	**10 29 28.1**	**+0.2**
	baz=50,SNR=22						
RKGY	**Rocky Gully**	**49.89**	**234**	P	**P**	**10 29 29.2**	**+0.8**
	baz=50,SNR=15						
JAGI	**Jajag, Banyuwa**	**50.44**	**268**	*e*P	**P**	**10 29 29.9**	**-2.9**
	comp=Z,63nm,1.1s						
JAGI	**Jajag, Banyuwa**	**50.44**	**268**	P	**P**	**10 29 33.8**	**+1.0**
	comp=Z,54nm,0.9s,comp=Z,2µm						
KKM	**Kota Kinabalu**	**51.66**	**287**	*e*P	**P**	**10 29 42.3**	**+0.2**
	comp=Z,277nm,1.2s						
INU	**Inuyama**	**53.14**	**331**	*e*P	**P**	**10 29 53.1**	**+0.6**
	comp=Z,78nm,1.5s						
PCJI	**Pacitan**	**53.39**	**268**	P	**P**	**10 29 55.1**	**+0.3**
MJAR	**Matsushiro Arr**	**53.57**	**333**	P	**P**	**10 29 55.2**	**-0.5**
	comp=Z,22nm,0.7s,baz=170,slow=8.9,SNR=41						
MAJO	**Matsushiro**	**53.57**	**333**	*e*P	**P**	**10 29 55.4**	**-0.3**
	comp=Z,59nm,1.2s						
MAJO				LR	LR		
	comp=Z,5µm,21.0s						
MAJO	**Matsushiro**	**53.57**	**333**	*de*P	**P**	**10 29 55.6**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,31nm,0.8s						
MAT	**Matsushiro**	**53.57**	**333**	P	**P**	**10 29 55.2**	**-0.5**
MAT				S	**S**	**10 37 28.8**	**+0.2**
MJB9	**Matsu-Tunnel**	**53.58**	**333**	*e*P	**P**	**10 29 56.0**	**+0.2**
	comp=Z,61nm,1.2s						
TAOE	**Nuku Hiva Isla**	**53.73**	**93**	*e*S	**S**	**10 37 36.2**	**+4.5**
	comp=Z,3µm,25.9s						
TAOE				*e*LQ	LQ	10 43 24.6	
	comp=Z,7µm,23.1s						
TAOE				*e*LR	LR	10 45 41.0	
	comp=Z,11µm,25.3s,baz=271						
UGM	**Wanagama**	**54.07**	**268**	*e*P	**P**	**10 29 59.0**	**-0.8**
	comp=Z,115nm,1.1s						
SBUM	**Sibu**	**54.43**	**281**	*e*P	**P**	**10 30 03.0**	**+0.5**
JNU	**Nakatsue**	**54.64**	**324**	*e*P	**P**	**10 30 04.0**	**+0.4**
	comp=Z,92nm,0.8s						
JNU	**Nakatsue**	**54.64**	**324**	P	**P**	**10 30 03.9**	**+0.3**
	comp=Z,90nm,0.8s,baz=86,slow=3.8,SNR=50						
YULB	**Yu-li**	**54.86**	**309**	*e*P	**P**	**10 30 05.8**	**+0.4**
	comp=Z,60nm,1.0s						
NACB	**Ninganchiao**	**55.06**	**310**	*e*P	**P**	**10 30 06.9**	**+0.1**
	comp=Z,80nm,1.1s						
TPUB	**Ta-pu**	**55.32**	**308**	*e*P	**P**	**10 30 08.5**	**-0.2**
	comp=Z,89nm,0.9s						
SSLB	**Suanglung**	**55.34**	**309**	*e*P	**P**	**10 30 08.3**	**-0.5**
	comp=Z,29nm,0.8s						
YHNB	**Yeheng**	**55.50**	**310**	*e*P	**P**	**10 30 10.5**	**+0.4**
	comp=Z,126nm,1.2s						
TATO	**Taipei**	**55.59**	**310**	PFAKE		10 30 20.0	+9.4
TATO				LR	LR		
	comp=Z,5µm,20.0s						
ERM	**Erimo**	**56.37**	**340**	PFAKE		10 30 30.0	+14
ERM				LR	LR		
	comp=Z,4µm,22.0s						
CISI	**Cisompet, Garu**	**56.78**	**268**	*e*P	**P**	**10 30 17.8**	**-1.6**
	comp=Z,117nm,1.1s						
CISI	**Cisompet, Garu**	**56.78**	**268**	P	**P**	**10 30 19.1**	**-0.3**
	comp=Z,108nm,1.6s						
YUK	**Yuzh-Kuril'sk**	**57.38**	**343**	*e*P	**P**	**10 30 20.4**	**-2.5**
YUK				*e*		10 31 15.4	
YUK				*e*		10 32 25.0	
YUK				*e*S	**S**	**10 38 18.9**	**-0.3**
YUK				*e*		10 40 13.0	
YUK				MLR	MLR		
	comp=Z,2µm,18.0s						
YUK				MLR	MLR		
	comp=N,2µm,15.0s						
CBJI	**Citeko**	**57.89**	**269**	P	**P**	**10 30 26.7**	**-0.4**
RKT	**Rikitea**	**58.07**	**110**	*e*S	**S**	**10 38 33.2**	**+4.0**
	comp=N,3µm,29.2s						
RKT				*e*LQ	LQ	10 45 07.4	
	comp=N,2µm,29.0s						
RKT				*e*LR	LR	10 47 35.8	
	comp=N,15µm,25.8s,baz=276						
ASAJ	**Asahikawa**	**58.44**	**341**	P	**P**	**10 30 30.8**	**+0.4**
	comp=N,33nm,0.8s,baz=212,slow=7.0,SNR=46						
PPBI	**Pangkal Pinang**	**59.32**	**274**	P	**P**	**10 30 38.5**	**+1.3**
SSE	**Sheshan**	**59.39**	**316**	P	**P**	**10 30 37.0**	**-0.2**
SSE				S	**S**	**10 38 47.0**	**+1.1**
SSE				pmax	pmax		
	comp=N,10.0nm,0.8s						
SSE				pmax	pmax		
	comp=N,210nm,4.5s						
SSE				LR	LR		
	comp=N,1µm,21.5s						
SSE				LR	LR		
	comp=N,1µm,22.6s						
SSE	**Sheshan**	**59.39**	**316**	*e*P	**P**	**10 30 37.3**	**+0.1**
	comp=N,56nm,0.8s						
SSE				LR	LR		
	comp=Z,4µm,19.0s						
KSRS	**Korea Array**	**59.45**	**326**	P	**P**	**10 30 37.9**	**+0.4**
	comp=Z,14nm,0.8s,baz=138,slow=6.9,SNR=32						
KS15	**Wonju Array Si**	**59.46**	**326**	*e*P	**P**	**10 30 38.0**	**+0.4**
KSAR	**Wonju Array Be**	**59.46**	**326**	P	**P**	**10 30 37.9**	**+0.3**
KSAR	**Wonju Array Be**	**59.46**	**326**	P	**P**	**10 30 37.9**	**+0.3**
KS01	**Wonju Array Si**	**59.48**	**326**	*e*P	**P**	**10 30 37.4**	**-0.3**
HKC	**Hong Kong Obse**	**59.96**	**304**	⇑P	**P**	**10 30 43.0**	**+1.7**
YSS	**Yuzh-Sakhalins**	**60.94**	**343**	*e*P	**P**	**10 30 48.4**	**+0.9**
	comp=Z,97nm,1.1s						
YSS				LR	LR		
	comp=Z,3µm,20.0s						
YSS	**Yuzh-Sakhalins**	**60.94**	**343**	*e*P	**P**	**10 30 48.5**	**+0.9**
YSS				*e*		10 30 56.3	
YSS				*e*		10 33 09.0	
YSS				*e*S	**S**	**10 39 06.9**	**+1.7**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				pmax	pmax		
	comp=N,10.0nm,1.1s						
NJ2	**Nanjing**	**61.55**	**316**	*e*P	**P**	**10 30 52.5**	**+0.5**
NJ2				sP	**pwP**	**10 30 58.6**	**+0.3**
NJ2				S	**S**	**10 39 15.3**	**+1.7**
NJ2				pmax	pmax		
	comp=N,74nm,1.1s						
NJ2				pmax	pmax		
	comp=N,1µm,6.4s						
NJ2				LR	LR		
	comp=N,3µm,18.6s						
NJ2				LR	LR		
	comp=N,3µm,18.1s						
NJ2				LR	LR		
	comp=N,4µm,19.1s						
MSHR	**Mys Shultsa**	**61.65**	**332**	⇑*e*P	**P**	**10 30 53.2**	**+0.7**
SKR	**Severo-Kuril’s**	**61.76**	**353**	*e*P	**P**	**10 30 53.8**	**+0.8**
SKR				*e*S	**S**	**10 39 13.4**	**-2.1**
QIZ	**Qiongzhong**	**62.19**	**298**	P	**P**	**10 30 57.4**	**+0.8**
QIZ				pP	**pP**	**10 30 59.0**	**-1.7**
QIZ				S	**S**	**10 39 23.4**	**+1.3**
QIZ				sS	**sS**	**10 39 29.3**	**+0.8**
QIZ				pmax	pmax		
	comp=N,500nm,2.9s						
QIZ				LR	LR		
	comp=N,2µm,21.6s						
QIZ				LR	LR		
	comp=N,3µm,21.6s						
QIZ				LR	LR		
	comp=N,5µm,26.0s						
QIZ	**Qiongzhong**	**62.19**	**298**	*e*P	**P**	**10 30 57.3**	**+0.7**
	comp=N,13nm,1.0s						
QIZ				LR	LR		
	comp=Z,668nm,22.0s						
USA0B	**Ussuriysk Arra**	**62.55**	**334**	*e*P	**P**	**10 30 59.3**	**+0.8**
	comp=Z,55nm,1.1s						
USRK	**Ussuriysk Ar.**	**62.55**	**334**	P	**P**	**10 30 59.2**	**+0.8**
	comp=Z,24nm,0.8s,baz=123,slow=7.0,SNR=38						
PTCN	**Pitcairn Islan**	**62.57**	**113**	PFAKE		10 31 10.0	+11
PTCN				LR	LR		
	comp=Z,9µm,20.0s						
PET	**Petropavlovsk**	**63.84**	**356**	PFAKE		10 31 20.0	+13
PET				LR	LR		
	comp=Z,6µm,21.0s						
PET	**Petropavlovsk**	**63.84**	**356**	*e*P	**P**	**10 31 06.2**	**-0.6**
PET				*e*S	**S**	**10 39 39.3**	**-2.2**
PET				*e*SS	**SS**	**10 43 53.5**	**+3.3**
WHN	**Wuhan**	**63.92**	**312**	⇓P	**P**	**10 31 07.3**	**-0.5**
WHN				LR	LR		
	comp=Z,4µm,20.3s						
WHN				LR	LR		
	comp=Z,9µm,19.6s						
MDJ	**Mudanjiang**	**63.95**	**332**	P	**P**	**10 31 08.5**	**+0.8**
MDJ				pP	pP	10 31 11.8	0.0
MDJ				sP	sP	10 31 13.0	-0.3
MDJ				PP	**PP**	**10 33 28.8**	**+0.2**
MDJ				S	**S**	**10 39 45.8**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,36nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,250nm,4.6s						
MDJ				LR	LR		
	comp=Z,2µm,10.3s						
MDJ				LR	LR		
	comp=Z,2µm,16.1s						
MDJ				LR	LR		
	comp=Z,2µm,13.0s						
MDJ	**Mudanjiang**	**63.95**	**332**	*e*P	**P**	**10 31 08.1**	**+0.4**
	comp=Z,83nm,1.4s						
MDJ				LR	LR		
	comp=Z,3µm,20.0s						
PETK	**Petropavlovsk-**	**64.00**	**355**	*e*P	**P**	**10 31 08.5**	**+0.6**
PETK	**Petropavlovsk-**	**64.00**	**355**	*e*P	**P**	**10 31 08.5**	**+0.6**
PETK	**Petropavlovsk-**	**64.00**	**355**	P	**P**	**10 31 08.9**	**+1.0**
	comp=Z,12nm,0.8s,baz=163,slow=8.9,SNR=10						
DL2	**Dalian**	**64.04**	**323**	P	**P**	**10 31 09.3**	**+0.9**
DL2				S	**S**	**10 39 46.0**	**+1.5**
DL2				pmax	pmax		
	comp=Z,61nm,1.4s						
DL2				pmax	pmax		
	comp=Z,180nm,4.1s						
DL2				LR	LR		
	comp=Z,2µm,17.5s						
DL2				LR	LR		
	comp=Z,2µm,13.3s						
DL2				LR	LR		
	comp=Z,2µm,21.1s						
ADK	**Adak**	**64.36**	**12**	PFAKE		10 31 20.0	+10
ADK				LR	LR		
	comp=Z,9µm,21.0s						
TYV	**Tymovskoe**	**64.51**	**344**	*e*P	**P**	**10 31 08.8**	**-2.5**
TYV				pmax	pmax		
	comp=Z,300nm,4.6s						
TYV				pmax	pmax		
	comp=Z,18nm,1.6s						
SNY	**Shenyang**	**64.91**	**327**	⇑P	**P**	**10 31 15.0**	**+1.0**
SNY				pmax	pmax		
	comp=Z,27nm,0.9s						
TIA	**Tai'an**	**65.16**	**318**	P	**P**	**10 31 15.4**	**-0.5**
TIA				S	**S**	**10 39 56.8**	**-1.7**
TIA				SS	**SS**	**10 44 07.9**	**-3.5**
TIA				pmax	pmax		
	comp=Z,330nm,6.9s						
TIA				LR	LR		
	comp=Z,1µm,17.0s						
TIA				LR	LR		
	comp=Z,1µm,19.9s						
TIA				LR	LR		
	comp=Z,2µm,19.9s						
CN2	**Changchun**	**65.33**	**329**	*e*P	**P**	**10 31 16.8**	**0.0**
CN2				*e*S	**S**	**10 40 00.1**	**-0.2**
CN2				SS	**SS**	**10 44 14.9**	**+1.2**
CN2				pmax	pmax		
	comp=Z,50nm,0.9s						
CN2				pmax	pmax		
	comp=Z,700nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
GRNR	**Gornyy**	**66.28**	**340**	*e*P	**P**	**10 31 24.9**	**+2.1**
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
CASY	**Casey**	**66.43**	**201**	*e*P	**P**	**10 31 23.7**	**+0.2**
	comp=Z,243nm,1.3s						
CASY				LR	LR		
	comp=Z,768nm,19.0s						
SKNT	**Sakolnakorn**	**66.60**	**294**	P	**P**	**10 31 25.7**	**+0.2**
	comp=Z,32nm,1.4s,comp=Z,626nm						
KLR	**Kul'dur**	**66.68**	**337**	*ce*P	**P**	**10 31 25.4**	**+0.1**
KLR	**Kul'dur**	**66.68**	**337**	PKPPKP	**P'P'bc**	**10 59 55.3**	**-1.1**
	comp=Z,12nm,1.2s,baz=319,slow=4.3,SNR=10.0						
VNDA	**Vanda**	**66.71**	**181**	*e*P	**P**	**10 31 26.4**	**+1.2**
	comp=Z,188nm,1.5s						
VNDA	**Vanda**	**66.71**	**181**	P	**P**	**10 31 25.9**	**+0.6**
	comp=Z,79nm,1.3s,baz=358,slow=6.6,SNR=8.7						
COCO	**West Island**	**66.94**	**261**	PFAKE		10 31 40.0	+12
COCO				LR	LR		
	comp=Z,4µm,19.0s						
SBA	**Scott Base**	**67.03**	**180**	PFAKE		10 31 40.0	+13
SBA				LR	LR		
	comp=Z,4µm,19.0s						
NKL	**Nikolayevsk**	**67.10**	**344**	*e*P	**P**	**10 31 27.8**	**-0.1**
NKL				*e*		10 40 25.0	
NKL				pmax	pmax		
	comp=Z,34nm,1.0s						
NKL				pmax	pmax		
	comp=Z,1µm,8.0s						
SRAK	**Srakaew**	**67.41**	**290**	P	**P**	**10 31 30.8**	**+0.1**
	comp=Z,33nm,1.6s,comp=Z,510nm						
PSI	**Prapat**	**67.41**	**278**	LR	LR	11 01 56.4	
	comp=Z,251nm,21.8s,baz=91,slow=37						
ENH	**Enshi**	**67.42**	**309**	*e*P	**P**	**10 31 29.8**	**-0.7**
	comp=Z,83nm,0.9s						
ENH				LR	LR		
	comp=Z,2µm,20.0s						
NONG	**Nongkai**	**67.72**	**295**	P	**P**	**10 31 33.0**	**+0.4**
	comp=Z,1.2nm,1.3s						
GYA	**Guiyang**	**67.93**	**304**	⇑*i*P	**P**	**10 31 33.7**	**-0.2**
GYA				PP	**PP**	**10 34 07.0**	**+3.0**
GYA				S	**S**	**10 40 33.2**	**+0.4**
GYA				SKS	**SKiKP**	**10 41 30.3**	**-0.2**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,6.7s						
GYA				LR	LR		
	comp=Z,890nm,18.2s						
GYA				LR	LR		
	comp=Z,920nm,18.6s						
GYA				LR	LR		
	comp=Z,860nm,18.0s						
BJT	**Baijiatuau**	**68.03**	**321**	*e*P	**P**	**10 31 34.4**	**+0.3**
	comp=Z,47nm,1.0s						
BJT				LR	LR		
	comp=Z,6µm,20.0s						
BJT	**Baijiatuau**	**68.03**	**321**	*e*P	**P**	**10 31 34.4**	**+0.3**
BJT				pmax	pmax		
	comp=Z,47nm,1.0s						
BJT				MLR	MLR		
	comp=Z,6µm,20.0s						
BJI	**Beijing**	**68.03**	**321**	P	**P**	**10 31 34.5**	**+0.4**
BJI				S	**S**	**10 40 35.0**	**+1.8**
BJI				SS	**SS**	**10 44 49.1**	**-6.8**
BJI				pmax	pmax		
	comp=Z,31nm,1.4s						
BJI				LR	LR		
	comp=Z,2µm,25.0s						
BJI				LR	LR		
	comp=Z,3µm,27.9s						
BJI				LR	LR		
	comp=Z,5µm,28.9s						
CHAI	**Chaiyaphum**	**68.05**	**292**	P	**P**	**10 31 35.7**	**+1.0**
	comp=Z,7.5nm,1.2s,comp=Z,86nm						
PATY	**Pattaya**	**68.17**	**289**	P	**P**	**10 31 38.4**	**+2.9**
	comp=Z,7.6nm,0.9s,comp=Z,984nm						
GSI	**Gunungsitoli**	**68.40**	**276**	*e*P	**P**	**10 31 37.1**	**0.0**
	comp=Z,77nm,0.8s						
TIY	**Taiyuan**	**69.10**	**317**	*e*P	**P**	**10 31 42.3**	**+1.3**
TIY				S	**S**	**10 40 46.5**	**+0.3**
TIY				ScS	**ScS**	**10 41 42.2**	**+0.6**
TIY				pmax	pmax		
	comp=Z,29nm,0.6s						
TIY				pmax	pmax		
	comp=Z,970nm,6.9s						
TIY				LR	LR		
	comp=Z,2µm,14.8s						
TIY				LR	LR		
	comp=Z,710nm,13.3s						
TIY				LR	LR		
	comp=Z,3µm,20.4s						
PBKT	**Sadao Pong**	**69.19**	**292**	*e*P	**P**	**10 31 42.5**	**+0.7**
	comp=Z,29nm,1.0s						
PBKT	**Sadao Pong**	**69.19**	**292**	P	**P**	**10 31 42.5**	**+0.7**
	comp=Z,41nm,2.2s,comp=Z,1µm						
PHET	**Kaeng Krachan**	**69.31**	**288**	P	**P**	**10 31 44.7**	**+2.1**
	comp=Z,6.9nm,1.0s						
XAN	**Xi'an**	**69.65**	**312**	P	**P**	**10 31 44.3**	**-0.1**
XAN				S	**S**	**10 40 50.9**	**-1.8**
XAN				pmax	pmax		
	comp=Z,44nm,0.9s						
XAN				pmax	pmax		
	comp=Z,1µm,5.5s						
XAN				LR	LR		
	comp=Z,2µm,19.5s						
XAN				LR	LR		
	comp=Z,2µm,19.5s						
XAN				LR	LR		
	comp=Z,4µm,19.6s						
XAN	**Xi'an**	**69.65**	**312**	*e*P	**P**	**10 31 44.1**	**-0.3**
	comp=Z,247nm,0.9s						
XAN	**Xi'an**	**69.65**	**312**	*e*P	**P**	**10 31 44.1**	**-0.3**
XAN				pmax	pmax		
	comp=Z,247nm,0.9s						
UTTA	**Uttaradit**	**69.94**	**293**	P	**P**	**10 31 48.0**	**+1.6**
	comp=Z,7.6nm,0.9s,comp=Z,81nm						
SRDT	**SRDT**	**70.21**	**290**	P	**P**	**10 31 49.7**	**+1.6**
	comp=Z,30nm,1.0s,comp=Z,6µm						
UTHA	**Uthaitani**	**70.27**	**291**	P	**P**	**10 31 50.2**	**+1.7**
	comp=Z,9.2nm,1.3s,comp=Z,101nm						
KMI	**Kunming**	**70.63**	**301**	P	**P**	**10 31 51.9**	**+1.1**
KMI				pP	pwP	10 31 58.9	+1.7
KMI				sP	sP	10 32 01.8	+5.3
KMI				S	**S**	**10 41 07.6**	**+2.6**
KMI				pmax	pmax		
	comp=Z,85nm,1.4s						
KMI				pmax	pmax		
	comp=Z,640nm,4.6s						
KMI				LR	LR		
	comp=Z,2µm,17.8s						
KMI				LR	LR		
	comp=Z,3µm,18.6s						
KMI				LR	LR		
	comp=Z,3µm,20.2s						
SUKH	**Sukhothai**	**70.69**	**293**	P	**P**	**10 31 53.3**	**+2.3**
	comp=Z,6.0nm,1.1s						
UMPA	**Umpang Tak**	**71.00**	**291**	P	**P**	**10 31 55.6**	**+2.6**
	comp=Z,5.6nm,1.3s						
MA2	**Magadan**	**71.13**	**352**	PFAKE		10 32 00.0	+7.2
MA2				LR	LR		
	comp=Z,9µm,22.0s						
MA2	**Magadan**	**71.13**	**352**	⇓*e*P	**P**	**10 31 52.2**	**-0.6**
MA2				pmax	pmax		
	comp=Z,15nm,1.2s						
HHC	**Hu-ho-hao-te**	**71.38**	**320**	⇓*i*P	**P**	**10 31 55.8**	**+0.9**
HHC				S	**S**	**10 41 16.6**	**+3.8**
HHC				sS	sS	10 41 24.4	+5.4
HHC				pmax	pmax		
	comp=Z,37nm,1.4s						
HHC				pmax	pmax		
	comp=Z,660nm,5.6s						
HHC				LR	LR		
	comp=Z,3µm,20.8s						
HHC				LR	LR		
	comp=Z,3µm,19.8s						
HHC				LR	LR		
	comp=Z,6µm,22.2s						
CM01	**Chiang Mai Arr**	**71.60**	**294**	*e*P	**P**	**10 31 56.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**71.62**	**294**	P	**P**	**10 31 57.4**	**+0.7**
	comp=Z,7.7nm,0.7s,baz=116,slow=4.3,SNR=44						
CMMT	**Chiang Mai**	**71.73**	**294**	P	**P**	**10 31 58.3**	**+0.9**
	comp=Z,30nm,1.2s,comp=Z,1µm						
CHTO	**Chiang Mai**	**71.74**	**294**	*e*P	**P**	**10 31 57.7**	**+0.3**
	comp=Z,62nm,1.4s						
CHTO				LR	LR		
	comp=Z,3µm,22.0s						
CHTO	**Chiang Mai**	**71.74**	**294**	*e*P	**P**	**10 31 57.7**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,62nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,3µm,22.0s						
CHTO	**Chiang Mai**	**71.74**	**294**	P	**P**	**10 31 57.6**	**+0.2**
	SNR=16						
CHTO				P	**P**	**10 31 57.6**	**+0.2**
	SNR=16						
CHTO	**Chiang Mai**	**71.74**	**294**	P	**P**	**10 31 58.4**	**+1.0**
	comp=Z,136nm,1.3s,comp=Z,5µm						
HIA	**Hailar**	**71.96**	**331**	*e*P	**P**	**10 31 58.1**	**0.0**
	comp=Z,60nm,1.1s						
HIA				LR	LR		
	comp=Z,3µm,19.0s						
HIA	**Hailar**	**71.96**	**331**	*e*P	**P**	**10 31 58.1**	**0.0**
HIA				pmax	pmax		
	comp=Z,60nm,1.1s						
HIA				MLR	MLR		
	comp=Z,3µm,19.0s						
ZEA	**Zeya**	**71.97**	**337**	*e*P	**P**	**10 31 58.4**	**+0.4**
ZEA				*e*S	**S**	**10 41 20.5**	**+1.7**
ZEA				pmax	pmax		
	comp=N,94nm,1.2s						
ZEA				pmax	pmax		
	comp=E,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.2s						
ZEA				pmax	pmax		
	comp=N,500nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,6.0s						
ZEA				smax	smax		
	comp=N,1µm,13.0s						
ZEA				smax	smax		
	comp=E,2µm,13.0s						
ZEA				MLR	MLR		
	comp=E,1µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
CD2	**Chengdu**	**72.12**	**307**	⇓P	**P**	**10 31 59.8**	**+0.3**
CD2				sP	pP	10 32 04.3	+0.6
CD2				S	**S**	**10 41 20.0**	**-1.6**
CD2				SS	**SS**	**10 46 00.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,110nm,1.0s						
CD2				pmax	pmax		
	comp=Z,880nm,5.3s						
CD2				LR	LR		
	comp=Z,8µm,17.6s						
CD2				LR	LR		
	comp=Z,4µm,25.1s						
CD2				LR	LR		
	comp=Z,6µm,22.6s						
BTO	**Baotou**	**72.23**	**319**	*e*P	**P**	**10 32 01.6**	**+1.5**
BTO				S	**S**	**10 41 20.6**	**-2.1**
SEY	**Seymchan**	**74.20**	**354**	⇓*e*P	**P**	**10 32 10.7**	**-0.3**
SEY	**Seymchan**	**74.20**	**354**	P	**P**	**10 32 11.4**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=176,slow=5.4,SNR=8.2						
LZH	**Lanzhou**	**74.28**	**312**	⇑P	**P**	**10 32 13.4**	**+1.1**

LZH				pP	sP	10 32 17.6	-0.4
LZH				sP	pwP	10 32 21.4	+2.7
LZH				S	**S**	**10 41 47.0**	**+0.8**
LZH				sS	sS	10 41 55.7	+3.2
LZH				SS	**SS**	**10 46 30.1**	**-2.3**
LZH				pmax	pmax		
	comp=Z,120nm,1.5s						
LZH				pmax	pmax		
	comp=Z,590nm,4.3s						
LZH				LR	LR		
	comp=Z,3µm,17.4s						
LZH				LR	LR		
	comp=Z,2µm,18.1s						
LZH				LR	LR		
	comp=Z,3µm,18.4s						
OHAK	**Old Harbor**	**75.86**	**22**	*e*P	**P**	**10 32 20.5**	**-0.1**
	comp=Z,66nm,1.2s						
GAMB	**Gambell**	**76.42**	**10**	*e*P	**P**	**10 32 24.9**	**+1.2**
	comp=Z,66nm,1.0s						
KDAK	**Kodiak Island**	**76.53**	**22**	*e*P	**P**	**10 32 25.8**	**+1.3**
	comp=Z,54nm,1.3s						
KDAK				LR	LR		
	comp=Z,2µm,19.0s						
KDAK	**Kodiak Island**	**76.53**	**22**	P	**P**	**10 32 24.6**	**+0.1**
	comp=Z,20nm,1.0s,baz=152,slow=2.0,SNR=4.9						
CIT	**Chita**	**76.75**	**330**	*e*P	**P**	**10 32 26.1**	**+0.1**
CIT				*e*		10 32 30.6	
CIT				*e*		10 32 44.2	
CIT				pmax	pmax		
	comp=Z,126nm,1.4s						
YAK	**Yakutsk**	**77.76**	**344**	*e*P	**P**	**10 32 30.5**	**-0.8**
YAK				*e**PP	**sP**	**10 32 36.6**	**-0.4**
YAK				*e*		10 32 39.4	
YAK				*e*S	**S**	**10 42 21.7**	**-1.3**
YAK				*e**SS	**ScS**	**10 42 48.2**	**-1.3**
YAK				*e*		10 43 02.1	
YAK				*e*SS	**SS**	**10 47 16.5**	**-7.1**
YAK				*e*SSS	SSS	10 50 47.4	
YAK				pmax	pmax		
	comp=Z,27nm,1.2s						
YAK				pmax	pmax		
	comp=N,11nm,1.4s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,235nm,3.1s						
YAK				pmax	pmax		
	comp=E,113nm,3.2s						
YAK				pmax	pmax		
	comp=N,106nm,3.2s						
YAK				smax	smax		
	comp=N,273nm,5.8s						
YAK				smax	smax		
	comp=E,388nm,6.9s						
ULN	**Ulaanbaatar**	**77.86**	**324**	*e*P	**P**	**10 32 33.0**	**+0.5**
	comp=E,43nm,1.0s						
ULN				LR	LR		
	comp=Z,2µm,19.0s						
ULN	**Ulaanbaatar**	**77.86**	**324**	*c* *i*P	**P**	**10 32 32.7**	**+0.2**
ULN				pmax	pmax		
	comp=Z,44nm,1.0s						
ULN	**Ulaanbaatar**	**77.86**	**324**	P	**P**	**10 32 33.0**	**+0.5**
	SNR=22						
ULN				P	**P**	**10 32 33.0**	**+0.5**
	SNR=22						
SVW2	**Sparrevohn**	**78.03**	**18**	*e*P	**P**	**10 32 33.4**	**+0.4**
	comp=Z,78nm,1.4s						
SONM	**Songino Array**	**78.23**	**324**	P	**P**	**10 32 34.8**	**+0.3**
	comp=Z,14nm,1.0s,baz=140,slow=4.5,SNR=50						
SONM				PKPPKP		10 59 36.4	
	comp=Z,0.6nm,0.9s,baz=325,slow=2.3,SNR=3.2						
SONA1	**Songino Array**	**78.23**	**324**	*e*P	**P**	**10 32 34.2**	**-0.3**
HOM	**Homer**	**78.24**	**21**	*e*P	**P**	**10 32 35.3**	**+1.2**
	comp=Z,136nm,1.0s						
ANM	**Nome**	**78.36**	**12**	*e*P	**P**	**10 32 35.5**	**+0.8**
	comp=Z,104nm,1.6s						
ANM	**Nome**	**78.36**	**12**	*e*P	**P**	**10 32 35.5**	**+0.8**
ANM				pmax	pmax		
	comp=Z,104nm,1.6s						
RSO	**Redoubt South**	**78.46**	**20**	*e*P	**P**	**10 32 35.6**	**0.0**
BRLK	**Bradley Lake**	**78.58**	**21**	*e*P	**P**	**10 32 36.4**	**+0.3**
	comp=Z,59nm,1.2s						
GTA	**Gaotai**	**78.59**	**314**	⇓P	**P**	**10 32 37.6**	**+0.9**
GTA				pP	pwP	10 32 43.0	-0.1
GTA				sP	PcP	10 32 45.6	-0.1
GTA				S	**S**	**10 42 33.8**	**+0.5**
GTA				sS	sS	10 42 43.4	+3.9
GTA				SKS	**SKSac**	**10 42 46.5**	**-5.1**
GTA				pmax	pmax		
	comp=Z,42nm,1.5s						
GTA				pmax	pmax		
	comp=Z,380nm,6.7s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						
GTA				LR	LR		
	comp=Z,2µm,20.9s						
GTA				LR	LR		
	comp=Z,3µm,20.0s						
BILL	**Bilibino**	**78.66**	**0**	*e*P	**P**	**10 32 35.8**	**-0.3**
	comp=Z,128nm,1.6s						
BILL				LR	LR		
	comp=Z,4µm,19.0s						
BILL	**Bilibino**	**78.66**	**0**	*c* *i*P	**P**	**10 32 35.9**	**-0.3**
BILL				pmax	pmax		
	comp=Z,21nm,1.0s						
QSPA	**South Pole Qui**	**79.18**	**180**	*e*P	**P**	**10 32 39.7**	**+0.2**
	comp=Z,186nm,1.2s						
QSPA				LR	LR		
	comp=Z,7µm,19.0s						
SEW	**Seward**	**79.33**	**21**	*e*P	**P**	**10 32 40.8**	**+0.8**
	comp=Z,40nm,0.9s						
SUA	**Susitna One**	**79.86**	**20**	*e*P	**P**	**10 32 42.2**	**-0.9**
	comp=Z,41nm,1.1s						
RC01	**Rabbit Creek A**	**79.93**	**20**	*e*P	**P**	**10 32 43.8**	**+0.4**
	comp=Z,53nm,1.3s						
SHL	**Shillong**	**80.03**	**298**	*e*P	**P**	**10 32 45.3**	**+0.5**
	comp=Z,62nm,1.2s						
SHL	**Shillong**	**80.03**	**298**	*e*P	**P**	**10 32 45.3**	**+0.5**
SHL				pmax	pmax		
	comp=Z,62nm,1.2s						
BOD	**Bodaibo**	**80.14**	**335**	*e*P	**P**	**10 32 43.6**	**-0.9**
BOD				pmax	pmax		
	comp=Z,28nm,1.8s						
PMR	**Palmer**	**80.50**	**20**	*e*P	**P**	**10 32 46.0**	**-0.3**
	comp=Z,27nm,1.0s						
PMR	**Palmer**	**80.50**	**20**	*e*P	**P**	**10 32 46.0**	**-0.3**
PMR				pmax	pmax		
	comp=Z,27nm,1.0s						
KNK	**Knik Glacier**	**80.60**	**21**	*e*P	**P**	**10 32 48.0**	**+1.0**
	comp=Z,77nm,1.7s						
CAST	**Castle Rocks**	**80.87**	**18**	*e*P	**P**	**10 32 47.3**	**-1.1**
	comp=Z,15nm,0.7s						
EYAK	**Cordova Ski Ar**	**80.98**	**22**	*e*P	**P**	**10 32 49.9**	**+1.0**
	comp=Z,55nm,1.1s						
RPN	**Rapa Nui**	**81.06**	**116**	PFAKE		10 33 00.0	+10
RPN				LR	LR		
	comp=Z,3µm,20.0s						
ZAK	**Zakamensk**	**81.27**	**325**	*e*P	**P**	**10 32 50.1**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,17nm,1.3s						
DIV	**Divide**	**81.36**	**22**	*e*P	**P**	**10 32 51.2**	**+0.1**
	comp=Z,58nm,1.1s						
HMT	**Hamilton**	**81.40**	**23**	*e*P	**P**	**10 32 51.9**	**+0.7**
	comp=Z,52nm,1.1s						
TRF	**Thorofare Moun**	**81.44**	**19**	*e*P	**P**	**10 32 51.5**	**-0.1**
	comp=Z,9.8nm,0.8s						
KLU	**Klutina**	**81.55**	**21**	*e*P	**P**	**10 32 52.7**	**+0.6**
	comp=Z,49nm,1.1s						
IRK	**Irkutsk**	**81.63**	**327**	*e*P	**P**	**10 32 51.5**	**-1.1**
IRK				pmax	pmax		
	comp=Z,98nm,3.7s						
TLY	**Talaya**	**81.69**	**326**	*e*P	**P**	**10 32 52.9**	**-0.2**
	comp=Z,43nm,0.9s						
TLY				LR	LR		
	comp=Z,1µm,21.0s						
TLY	**Talaya**	**81.69**	**326**	*c* *i*P	**P**	**10 32 52.8**	**-0.2**
TLY	**Talaya**	**81.69**	**326**	P	**P**	**10 32 52.8**	**-0.2**
	SNR=15						
TLY				P	**P**	**10 32 52.8**	**-0.2**
	SNR=15						
LSA	**Lhasa**	**81.87**	**302**	*e*P	**P**	**10 32 55.6**	**+0.6**
	comp=Z,7.0nm,0.5s						
LSA				LR	LR		
	comp=Z,3µm,21.0s						
RND	**Reindeer**	**81.87**	**19**	*e*P	**P**	**10 32 53.6**	**-0.1**
	comp=Z,56nm,1.4s						
RND	**Reindeer**	**81.87**	**19**	*e*P	**P**	**10 32 53.6**	**-0.1**
RND				pmax	pmax		
	comp=Z,56nm,1.4s						
RDOG	**Red Dog Mine**	**81.89**	**12**	*e*P	**P**	**10 32 54.4**	**+0.8**
	comp=Z,32nm,0.9s						
MCK	**McKinley**	**82.07**	**19**	*e*P	**P**	**10 32 55.4**	**+0.7**
	comp=Z,52nm,1.3s						
MCK	**McKinley**	**82.07**	**19**	*e*P	**P**	**10 32 55.4**	**+0.7**
MCK				pmax	pmax		
	comp=Z,53nm,1.3s						
DHY	**Denali Highway**	**82.12**	**20**	*e*P	**P**	**10 32 55.6**	**+0.5**
	comp=Z,25nm,1.1s						
IM3	**Indian Mountai**	**82.33**	**16**	*e*P	**P**	**10 32 55.6**	**-0.3**
HARP	**HAARP**	**82.43**	**21**	*e*P	**P**	**10 32 57.8**	**+1.2**
	comp=Z,42nm,0.9s						
MLY	**Manley**	**82.45**	**17**	*e*P	**P**	**10 32 56.4**	**-0.3**
	comp=Z,19nm,1.3s						
KCPM	**Cahto Peak**	**82.72**	**47**	*e*P	**P**	**10 32 59.7**	**+1.0**
	comp=Z,30nm,1.0s						
KMRM	**Mail Ridge**	**82.81**	**47**	*e*P	**P**	**10 32 60.0**	**+0.8**
	comp=Z,36nm,0.9s						
HOPS	**Hopland Field**	**82.85**	**48**	*e*P	**P**	**10 32 59.6**	**+0.3**
	comp=Z,52nm,1.2s						
WRH	**Wood River Hil**	**82.85**	**19**	*e*P	**P**	**10 32 57.9**	**-0.9**
	comp=Z,20nm,0.9s						
GDXM	**Geysers**	**82.99**	**48**	*e*P	**P**	**10 33 01.2**	**+1.1**
	comp=Z,38nm,1.4s						
MOY	**Mondy**	**83.14**	**326**	*e*P	**P**	**10 33 00.7**	**0.0**
MOY				pmax	pmax		
	comp=Z,49nm,3.1s						
MDM	**Murphy Dome**	**83.15**	**18**	*e*P	**P**	**10 32 59.9**	**-0.4**
	comp=Z,51nm,1.4s						
HDA	**Harding Lake**	**83.17**	**19**	*e*P	**P**	**10 32 59.9**	**-0.5**
	comp=Z,37nm,0.8s						
HDA	**Harding Lake**	**83.17**	**19**	P	**P**	**10 32 58.9**	**-1.5**
	baz=227,SNR=28						
TCOL	**CIGO, UAF Yank**	**83.20**	**18**	P	**P**	**10 32 59.6**	**-0.9**
	baz=226,SNR=6.2						
COLA	**College**	**83.21**	**18**	*e*P	**P**	**10 32 59.6**	**-0.9**
	comp=Z,32nm,0.9s						
COLA				LR	LR		
	comp=Z,3µm,20.0s						
COLA	**College**	**83.21**	**18**	⇓*i*P	**P**	**10 33 00.6**	**+0.1**
COLA				pmax	pmax		
	comp=Z,21nm,1.0s						
RIDG	**Independ'e Rid**	**83.41**	**20**	*e*P	**P**	**10 33 01.6**	**-0.1**
	comp=Z,38nm,1.0s						
IL1	**Eielson Array**	**83.44**	**19**	*e*P	**P**	**10 33 00.3**	**-1.5**
ILAR	**Eielson Array**	**83.44**	**19**	P	**P**	**10 33 00.8**	**-0.9**
	comp=Z,6.7nm,0.5s,baz=226,slow=3.5,SNR=96						
O02D	**Mt. Diablo Mer**	**83.46**	**47**	P	**P**	**10 33 02.5**	**-0.1**
	baz=250						
POKR	**Poker Plat Res**	**83.50**	**18**	P	**P**	**10 33 01.7**	**-0.4**
	baz=227,SNR=9.4						
L02E	**Cave Junction**	**83.57**	**45**	P	**P**	**10 33 02.4**	**-0.6**
	baz=249						
J01E	**Myrtle Point**	**83.70**	**44**	P	**P**	**10 33 02.8**	**-0.7**
	baz=249						
K02D	**Willamette Mer**	**83.72**	**45**	P	**P**	**10 33 02.8**	**-1.0**
	baz=249						
WDC	**Whiskeytown Da**	**83.77**	**47**	*e*P	**P**	**10 33 04.2**	**+0.2**
	comp=Z,60nm,1.6s						
WDC	**Whiskeytown Da**	**83.77**	**47**	*e*P	**P**	**10 33 04.2**	**+0.2**
WDC				pmax	pmax		
	comp=Z,60nm,1.6s						
N02D	**Trinity Center**	**83.79**	**46**	P	**P**	**10 33 03.6**	**-0.6**
	baz=250						
M02C	**Callahan**	**83.83**	**46**	P	**P**	**10 33 03.9**	**-0.5**
	baz=250						
SCRK	**Sand Creek**	**83.85**	**20**	*e*P	**P**	**10 33 04.2**	**+0.1**
	comp=Z,60nm,1.2s						
SMMC	**Simmler**	**83.99**	**52**	P	**P**	**10 33 04.6**	**-0.7**
	baz=252						
PKM	**Mcpherson Peak**	**84.01**	**53**	P	**P**	**10 33 05.5**	**-0.1**
	baz=252						
YBH	**Yreka Blue Hor**	**84.05**	**46**	*e*P	**P**	**10 33 06.0**	**+0.5**
	comp=Z,30nm,1.1s						
HUMO	**Hull Mountain**	**84.18**	**45**	*e*P	**P**	**10 33 06.7**	**+0.6**
	comp=Z,41nm,1.4s						
ORV	**Oroville**	**84.19**	**48**	*e*P	**P**	**10 33 05.9**	**-0.3**
	comp=Z,17nm,1.0s						
ORV	**Oroville**	**84.19**	**48**	*e*P	**P**	**10 33 05.9**	**-0.3**
ORV				pmax	pmax		
	comp=Z,17nm,1.0s						
COLD	**Coldfoot**	**84.20**	**16**	*e*P	**P**	**10 33 07.0**	**+1.4**
	comp=Z,14nm,1.3s						
O03E	**Paynes Creek**	**84.21**	**47**	P	**P**	**10 33 05.4**	**-1.0**
	baz=251						
ODAN	**Odare**	**84.26**	**299**	*e*P	**P**	**10 33 07.2**	**+0.1**
	comp=Z,94nm,0.7s						
WRAK	**Wrangell Islan**	**84.36**	**30**	PFAKE		10 33 20.0	+13
WRAK				LR	LR		
	comp=Z,7µm,20.0s						
HYT	**Haines Junctio**	**84.36**	**24**	*e*P	**P**	**10 33 07.0**	**+0.2**
	comp=Z,38nm,1.3s						
BLG	**Laguna Peak, P**	**84.36**	**54**	P	**P**	**10 33 06.1**	**-1.2**
	baz=253						
PRP	**Porcupine Dome**	**84.37**	**18**	*e*P	**P**	**10 33 05.6**	**-1.1**
	comp=Z,25nm,1.7s						
AFDM	**Forest Hills D**	**84.38**	**49**	*e*P	**P**	**10 33 07.1**	**-0.1**
	comp=Z,36nm,1.1s						
SCI2	**San Clemente I**	**84.45**	**55**	P	**P**	**10 33 06.9**	**-0.7**
	baz=253						
L04D	**Klamath Falls**	**84.50**	**45**	P	**P**	**10 33 07.3**	**-0.6**
	baz=250						
SKAG	**Skagway**	**84.53**	**26**	*e*P	**P**	**10 33 08.3**	**+0.9**
	comp=Z,57nm,1.1s						
KNGR	**Kungurtug, Tuv**	**84.67**	**324**	⇓*i*P	**P**	**10 33 07.8**	**-0.7**
M04C	**Macdoel**	**84.68**	**46**	P	**P**	**10 33 08.5**	**-0.3**
	baz=250						
CIS	**Catalina Islan**	**84.68**	**55**	P	**P**	**10 33 08.2**	**-0.7**
	baz=253						
MAW	**Mawson**	**84.77**	**202**	P	**P**	**10 33 08.8**	**+0.3**
	comp=Z,74nm,1.1s,baz=98,slow=5.5,SNR=5.1						
OSI	**Osito Audit: C**	**84.78**	**53**	P	**P**	**10 33 08.7**	**-0.7**
	baz=253						
ARVC	**Arvin**	**84.85**	**53**	P	**P**	**10 33 09.1**	**-0.6**
	baz=253						
VES	**Vestal, Richgr**	**84.86**	**52**	P	**P**	**10 33 08.6**	**-1.1**
	baz=253						
G03D	**McMinnville, O**	**84.88**	**42**	P	**P**	**10 33 09.4**	**-0.2**
	baz=249						
I04A	**Tendick Farm,**	**84.96**	**44**	P	**P**	**10 33 09.5**	**-0.5**
	baz=250						
RAMN	**Ramite**	**84.97**	**299**	*e*P	**P**	**10 33 10.5**	**-0.2**
	comp=Z,33nm,0.8s						
J04D	**Umpqua Nationa**	**84.98**	**44**	P	**P**	**10 33 09.8**	**-0.5**
	baz=250						
DECC	**Green Verdugo**	**84.99**	**54**	P	**P**	**10 33 09.6**	**-0.8**
	baz=253						
H04D	**Lebanon**	**84.99**	**43**	P	**P**	**10 33 09.6**	**-0.5**
	baz=250						
RUBR	**Rubicon Trail**	**85.02**	**49**	*e*P	**P**	**10 33 11.5**	**+0.8**
	comp=Z,31nm,0.9s						
K04D	**Chiloquin, OR**	**85.02**	**45**	P	**P**	**10 33 10.0**	**-0.5**
	baz=250						
PASC	**Pasadena Art C**	**85.08**	**54**	*e*P	**P**	**10 33 10.5**	**-0.3**
	comp=Z,24nm,1.1s						
BEKR	**Beckworth**	**85.12**	**48**	*e*P	**P**	**10 33 11.0**	**-0.2**
	comp=Z,14nm,0.9s						
MWC	**Mount Wilson**	**85.20**	**54**	*e*P	**P**	**10 33 11.5**	**-0.2**
MWC	**Mount Wilson**	**85.20**	**54**	*e*P	**P**	**10 33 11.5**	**-0.2**
NLWA	**Neilton Lookou**	**85.27**	**40**	PFAKE		10 33 20.0	+8.5
NLWA				LR	LR		
	comp=Z,7µm,20.0s						
ISA	**Isabella, Lake**	**85.28**	**53**	*e*P	**P**	**10 33 11.9**	**0.0**
	comp=Z,23nm,1.1s						
ISA	**Isabella, Lake**	**85.28**	**53**	*e*P	**P**	**10 33 11.9**	**0.0**
ISA				pmax	pmax		
	comp=Z,23nm,1.1s						
ISA	**Isabella, Lake**	**85.28**	**53**	P	**P**	**10 33 11.0**	**-0.9**
	baz=253						
WHY	**Whitehorse**	**85.36**	**25**	*e*P	**P**	**10 33 11.3**	**-0.5**
	comp=Z,23nm,1.5s						
WAKR	**Walker**	**85.38**	**50**	*e*P	**P**	**10 33 12.8**	**+0.3**
	comp=Z,83nm,1.5s						
MDPB	**Devils Postpil**	**85.39**	**50**	*e*P	**P**	**10 33 12.6**	**0.0**
	comp=Z,21nm,0.9s						
EDW2	**Edwards Air Fo**	**85.43**	**53**	P	**P**	**10 33 12.1**	**-0.6**
	baz=254,SNR=7.4						
PNTR	**Pine Nut**	**85.44**	**49**	*e*P	**P**	**10 33 12.4**	**-0.4**
	comp=Z,70nm,1.5s						
VCNR	**Virginia City**	**85.46**	**49**	*e*P	**P**	**10 33 13.0**	**+0.1**
	comp=Z,16nm,0.9s						
JIRN	**Jiri**	**85.50**	**299**	*e*P	**P**	**10 33 13.4**	**-0.1**
	comp=Z,70nm,0.9s						
DAWY	**Dawson**	**85.50**	**21**	*e*P	**P**	**10 33 11.7**	**-0.6**
	comp=Z,64nm,1.4s						
BFSC	**Mount Baldy Ra**	**85.52**	**54**	P	**P**	**10 33 12.5**	**-0.7**
	baz=254,SNR=7.8						
MLAC	**Mammoth, Mammo**	**85.58**	**51**	P	**P**	**10 33 12.8**	**-0.7**
	baz=253						
109C	**Camp Elliot, M**	**85.59**	**56**	P	**P**	**10 33 13.1**	**-0.3**
	baz=254						
CPE	**Camp Elliot**	**85.59**	**56**	*e*P	**P**	**10 33 13.5**	**+0.1**
	comp=Z,51nm,1.5s						
J05D	**Fort Rock, OR**	**85.59**	**45**	P	**P**	**10 33 12.7**	**-0.7**
	baz=251						
YERR	**Yerington**	**85.67**	**49**	*e*P	**P**	**10 33 13.8**	**-0.1**
	comp=Z,12nm,1.1s						
MURC	**Murrieta**	**85.71**	**55**	P	**P**	**10 33 13.2**	**-0.8**
	baz=254						
PAHR	**Pah Rah Range**	**85.78**	**48**	*e*P	**P**	**10 33 14.4**	**0.0**
	comp=Z,20nm,1.0s						
TIXI	**Tiksi**	**85.79**	**349**	*e*P	**P**	**10 33 12.9**	**-0.6**
	comp=Z,27nm,1.1s						
TIXI				LR	LR		
	comp=Z,4µm,21.0s						
TIXI	**Tiksi**	**85.79**	**349**	⇓*i*P	**P**	**10 33 12.7**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CWC	**Cottonwood Cre**	**85.81**	**52**	P	**P**	**10 33 13.9**	**-0.8**
	baz=253						
E04D	**Cinebar**	**85.81**	**41**	P	**P**	**10 33 14.1**	**0.0**
	baz=250						
GUN	**Gumba**	**85.83**	**299**	*e*P	**P**	**10 33 14.9**	**-0.2**
TIN	**Tinemaha, Big**	**85.87**	**51**	P	**P**	**10 33 14.4**	**-0.5**
	baz=253						
I05D	**Terrebonne, OR**	**85.87**	**44**	P	**P**	**10 33 14.4**	**-0.2**
	baz=251						
BAR	**Barrett**	**85.89**	**56**	*e*P	**P**	**10 33 14.8**	**-0.2**
	comp=Z,11nm,1.1s						
D04E	**Lakebay**	**85.90**	**41**	P	**P**	**10 33 14.4**	**-0.1**
	baz=249						
PINE	**Pine Mountain**	**85.96**	**44**	*e*P	**P**	**10 33 15.6**	**+0.3**
	comp=Z,36nm,1.3s						
PALK	**Pallekele**	**86.09**	**278**	*e*P	**P**	**10 33 17.1**	**+0.8**
	comp=Z,35nm,1.2s						
PALK	**Pallekele**	**86.09**	**278**	P	**P**	**10 33 16.4**	**+0.1**
PALK				P	**P**	**10 33 16.4**	**+0.1**
RYN	**Ryan**	**86.10**	**50**	*e*P	**P**	**10 33 16.0**	**0.0**
	comp=Z,22nm,1.2s						
BBRC	**Big Bear Solar**	**86.11**	**54**	P	**P**	**10 33 15.4**	**-0.8**
	baz=254						
DAC	**Darwin (Calif)**	**86.14**	**52**	*e*P	**P**	**10 33 16.2**	**0.0**
	comp=Z,22nm,1.1s						
DAC	**Darwin (Calif)**	**86.14**	**52**	*e*P	**P**	**10 33 16.3**	**0.0**
DAC				pmax	pmax		
	comp=Z,22nm,1.1s						
MONP2	**Monument Peak**	**86.15**	**56**	P	**P**	**10 33 16.1**	**-0.3**
	baz=254,SNR=10						
PKI	**Pulchoki**	**86.15**	**299**	*e*P	**P**	**10 33 16.1**	**-0.6**
MPMC	**Manual Prospec**	**86.16**	**52**	P	**P**	**10 33 15.8**	**-0.6**
	baz=254,SNR=6.4						
PKIN	**Phulchoki**	**86.16**	**299**	*e*P	**P**	**10 33 16.1**	**-0.6**
G05D	**Wamic, OR**	**86.19**	**43**	P	**P**	**10 33 16.0**	**-0.1**
	baz=251						
NV01	**Mina Array Sit**	**86.21**	**50**	*e*P	**P**	**10 33 15.2**	**-1.4**
NVAR	**Mina Array Bea**	**86.21**	**50**	P	**P**	**10 33 16.5**	**-0.1**
	comp=Z,6.7nm,0.9s,baz=234,slow=8.3,SNR=26						
NVAR				LR	LR	11 06 12.9	
	comp=Z,10µm,19.1s,baz=266,slow=32						
RRX	**Edison Barstow**	**86.22**	**54**	P	**P**	**10 33 15.9**	**-0.7**
	baz=254						
F05D	**White Salmon**	**86.30**	**42**	P	**P**	**10 33 16.4**	**-0.2**
	baz=250						
PFO	**Pinyon Flats O**	**86.31**	**55**	*e*P	**P**	**10 33 17.0**	**-0.1**
	comp=Z,34nm,1.4s						
PFO				LR	LR		
	comp=Z,11µm,19.0s						
PFO	**Pinyon Flats O**	**86.31**	**55**	*e*P	**P**	**10 33 17.0**	**-0.1**
PFO				pmax	pmax		
	comp=Z,34nm,1.4s						
PFO				MLR	MLR		
	comp=Z,11µm,19.0s						
PFO	**Pinyon Flats O**	**86.31**	**55**	P	**P**	**10 33 16.0**	**-1.1**
	baz=254						
XPFO	**Pion Flat**	**86.31**	**55**	*e*P	**P**	**10 33 17.0**	**-0.2**
	comp=Z,36nm,1.4s						
NV11	**Mina Array Sit**	**86.32**	**50**	*e*P	**P**	**10 33 16.9**	**-0.2**
	comp=Z,3.3nm,1.3s						
IKP	**In-Ko-Pah, Jac**	**86.34**	**56**	P	**P**	**10 33 16.5**	**-0.7**
	baz=255						
DLBC	**Dease Lake**	**86.42**	**28**	*e*P	**P**	**10 33 17.6**	**+0.6**
	comp=Z,18nm,1.3s						
DLBC	**Dease Lake**	**86.42**	**28**	LR	LR	11 08 13.7	
	comp=Z,6µm,18.1s,baz=256,slow=33						
DMN	**Daman**	**86.42**	**299**	*e*P	**P**	**10 33 17.8**	**-0.1**
	comp=Z,139nm,1.2s						
A04D	**Lummi Island**	**86.48**	**39**	P	**P**	**10 33 16.9**	**-0.4**
	baz=249						
GSC	**Goldstone, Bar**	**86.49**	**53**	*e*P	**P**	**10 33 18.0**	**+0.1**
	comp=Z,18nm,1.3s						
GSC	**Goldstone, Bar**	**86.49**	**53**	P	**P**	**10 33 17.3**	**-0.6**
	baz=254						
GRAC	**Grapevine Rang**	**86.52**	**51**	P	**P**	**10 33 17.2**	**-0.7**
	baz=254						
KVN	**Kaiserville**	**86.54**	**49**	*e*P	**P**	**10 33 17.7**	**-0.5**
	comp=Z,17nm,1.0s						
KVN	**Kaiserville**	**86.54**	**49**	*e*P	**P**	**10 33 17.7**	**-0.5**
KVN				pmax	pmax		
	comp=Z,17nm,1.0s						
SWSC	**Sam W. Stewart**	**86.67**	**56**	P	**P**	**10 33 18.2**	**-0.5**
	baz=255,SNR=5.9						
B05A	**Bryant**	**86.70**	**40**	P	**P**	**10 33 18.1**	**-0.3**
	baz=250						
HEC	**Hector,Ludlow**	**86.73**	**54**	P	**P**	**10 33 18.3**	**-0.8**
	baz=254						
FURC	**Furnace Creek,**	**86.76**	**52**	P	**P**	**10 33 18.5**	**-0.5**
	baz=254						
BELC	**Belle Mtn. Jos**	**86.78**	**55**	P	**P**	**10 33 19.1**	**-0.3**
	baz=255,SNR=6.4						
I07A	**Izee**	**87.04**	**44**	*e*P	**P**	**10 33 20.4**	**0.0**
	comp=Z,30nm,1.1s						
SHOC	**Shoshone, Teco**	**87.06**	**53**	P	**P**	**10 33 20.1**	**-0.5**
	baz=254						
BC3	**Big Chuckawall**	**87.13**	**55**	P	**P**	**10 33 21.1**	**-0.1**
	baz=255,SNR=13						
WVOR	**Wild Horse Val**	**87.14**	**46**	*e*P	**P**	**10 33 20.9**	**-0.1**
	comp=Z,42nm,1.3s						
WVOR				LR	LR		
	comp=Z,6µm,20.0s						
WVOR	**Wild Horse Val**	**87.14**	**46**	*e*P	**P**	**10 33 20.9**	**-0.1**
WVOR				pmax	pmax		
	comp=Z,42nm,1.3s						
WVOR				MLR	MLR		
	comp=Z,6µm,20.0s						
TUQ	**Turquoise Moun**	**87.22**	**53**	P	**P**	**10 33 20.8**	**-0.7**
	baz=255						
GMRC	**Granite Mounta**	**87.26**	**54**	P	**P**	**10 33 21.3**	**-0.4**
	baz=255,SNR=7.7						
TPNV	**Topopah Spring**	**87.36**	**52**	*e*P	**P**	**10 33 22.1**	**-0.1**
	comp=Z,40nm,1.6s						
TPNV	**Topopah Spring**	**87.36**	**52**	*e*P	**P**	**10 33 22.1**	**-0.1**
TPNV				pmax	pmax		
	comp=Z,40nm,1.6s						
TPNV	**Topopah Spring**	**87.36**	**52**	P	**P**	**10 33 21.9**	**-0.4**
	baz=254,SNR=8.2						
GLA	**Glamis**	**87.48**	**56**	*e*P	**P**	**10 33 23.5**	**+0.8**
	comp=Z,44nm,1.1s						
GLA	**Glamis**	**87.48**	**56**	P	**P**	**10 33 22.9**	**+0.1**
	baz=255						
IRM	**Iron Mountain**	**87.51**	**55**	P	**P**	**10 33 22.6**	**-0.2**
	baz=255,SNR=14						
J08A	**Circle Bar Ran**	**87.53**	**45**	*e*P	**P**	**10 33 22.8**	**0.0**
	comp=Z,31nm,1.1s						
BMN	**Battle Mountai**	**87.58**	**48**	*e*P	**P**	**10 33 22.7**	**-0.5**
	comp=Z,191nm,2.4s						
BMN	**Battle Mountai**	**87.58**	**48**	*e*P	**P**	**10 33 22.7**	**-0.5**
BMN				pmax	pmax		
	comp=Z,191nm,2.4s						
HAWA	**Hanford**	**87.74**	**42**	*e*P	**P**	**10 33 23.9**	**+0.3**
	comp=Z,16nm,1.0s						
HAWA				LR	LR		
	comp=Z,5µm,22.0s						
DANN	**Dangsing**	**87.75**	**299**	*e*P	**P**	**10 33 23.1**	**-1.3**
	comp=Z,36nm,0.8s						
KOLN	**Koldanda**	**87.75**	**299**	*e*P	**P**	**10 33 23.1**	**-1.3**
	comp=Z,19nm,0.9s						
LDFC	**Landfair**	**87.77**	**54**	*e*P	**P**	**10 33 24.5**	**+0.4**
	comp=Z,28nm,0.8s						
G08A	**Pilot Rock**	**87.78**	**43**	*e*P	**P**	**10 33 23.9**	**-0.1**
	comp=Z,32nm,1.1s						
Y12C	**Blythe**	**87.90**	**55**	*e*P	**P**	**10 33 25.1**	**+0.4**
	comp=Z,37nm,1.3s						
Y12C	**Blythe**	**87.90**	**55**	P	**P**	**10 33 24.4**	**-0.3**

	baz=256,SNR=7.5						
E08A	**Dider Farm, El**	88.08	42	*e*P	P	10 33 25.1	-0.1
	comp=Z,35nm,1.1s						
NEE2	**Needles Airpor**	88.08	54	P	P	10 33 25.2	-0.3
	baz=256						
SHPR	**Sheep Range**	88.09	52	*e*P	P	10 33 26.0	+0.3
	comp=Z,22nm,1.3s						
R11A	**Troy Canyon, C**	88.24	51	*e*P	P	10 33 26.2	-0.3
	comp=Z,29nm,1.5s						
R11A	**Troy Canyon, C**	88.24	51	P	P	10 33 25.7	-0.7
	baz=255,SNR=9.1						
D08A	**Wollman Farm,**	88.34	42	*e*P	P	10 33 26.5	+0.1
PDMCI	**Parker Dam,Lak**	88.35	55	P	P	10 33 26.6	-0.2
	baz=256,SNR=6.1						
PYUN	**Piuthan**	88.35	299	*e*P	P	10 33 25.8	-1.4
	comp=Z,46nm,0.9s						
B08A	**Colville Reser**	88.47	40	*e*P	P	10 33 26.6	-0.5
	comp=Z,20nm,1.2s						
WMQ	**Urumqi**	88.63	315	P	P	10 33 27.7	-0.3
WMQ				sP	pwP	10 33 35.2	+0.8
WMQ				PP	PP	10 36 54.4	-2.3
WMQ				SKS	SKSac	10 43 53.3	-3.7
WMQ				S	S	10 44 11.6	-2.7
WMQ				SS	SS	10 50 05.8	+0.1
WMQ				pmax	pmax		
	comp=Z,39nm,1.1s						
WMQ				LR	LR		
	comp=Z,4µm,13.3s						
WMQ				LR	LR		
	comp=Z,4µm,21.3s						
WMQ	**Urumqi**	88.63	315	*e*P	P	10 33 28.1	+0.1
	comp=Z,39nm,1.2s						
WMQ	**Urumqi**	88.63	315	*e*P	P	10 33 28.1	+0.1
WMQ				pmax	pmax		
	comp=Z,39nm,1.2s						
E09A	**Wood Farm, Sta**	88.69	42	*e*P	P	10 33 28.1	0.0
	comp=Z,54nm,1.6s						
214A	**Organ Pipe Nat**	88.87	57	P	P	10 33 29.2	-0.2
	baz=256						
ELK	**Elko**	89.12	48	*e*P	P	10 33 30.5	-0.1
	comp=Z,27nm,1.6s						
ELK	**Elko**	89.12	48	*e*P	P	10 33 30.5	-0.1
ELK				pmax	pmax		
	comp=Z,27nm,1.6s						
F10A	**Beach Ranch, E**	89.14	43	*e*P	P	10 33 29.9	-0.5
	comp=Z,44nm,1.4s						
MFID	**Camas Ranch**	89.40	46	*e*P	P	10 33 31.6	-0.1
	comp=Z,47nm,1.5s						
PSUT	**Pine Spring**	89.60	51	*e*P	P	10 33 33.0	+0.1
	comp=Z,14nm,1.0s						
LCMT	**Little Creek M**	89.71	52	*e*P	P	10 33 33.6	+0.3
	comp=Z,32nm,1.2s						
CCUT	**Cedar City**	89.74	52	*e*P	P	10 33 33.9	+0.3
	comp=Z,38nm,1.3s						
INK	**Inuvik**	89.83	19	P	P	10 33 31.9	-1.0
	comp=Z,3.1nm,1.2s,baz=232,slow=4.8,SNR=3.9						
NEW	**Newport**	89.86	41	*e*P	P	10 33 37.4	+3.8
	comp=Z,33nm,1.6s						
NEW				LR	LR		
	comp=Z,4µm,20.0s						
NEW	**Newport**	89.86	41	P	P	10 33 32.9	-0.7
	baz=254						
SZCU	**Shurtz Canyon**	89.97	52	*e*P	P	10 33 35.2	+0.6
	comp=Z,35nm,1.3s						
KNB	**Kanab**	90.04	52	*e*P	P	10 33 32.5	-2.3
	comp=Z,84nm,1.6s						
KNB	**Kanab**	90.04	52	*e*P	P	10 33 32.6	-2.3
KNB				pmax	pmax		
	comp=Z,84nm,1.6s						
HLID	**Hailey**	90.43	46	*e*P	P	10 33 36.9	+0.3
	comp=Z,21nm,1.2s						
HLID				LR	LR		
	comp=Z,4µm,22.0s						
HLID	**Hailey**	90.43	46	P	P	10 33 36.7	+0.1
	baz=256,SNR=16						
DGZ	**Jazzator, Alta**	90.45	321	*d* *i*P	P	10 33 35.7	-0.8
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PKCU	**Pink Cliffs**	90.53	52	*e*P	P	10 33 38.5	+1.1
	comp=Z,77nm,1.3s						
TUC	**Tucson**	90.63	57	PFAKE		10 33 50.0	+12
TUC				LR	LR		
	comp=Z,9µm,21.0s						
TUC	**Tucson**	90.63	57	P	P	10 33 37.4	-0.2
	baz=258						
MTPU	**Mount Pierson**	90.77	52	*e*P	P	10 33 39.6	+1.1
	comp=Z,26nm,1.0s						
DUG	**Dugway, Tooele**	90.78	49	*e*P	P	10 33 38.2	0.0
	comp=Z,32nm,1.5s						
DUG				LR	LR		
	comp=Z,5µm,19.0s						
DUG	**Dugway, Tooele**	90.78	49	*e*P	P	10 33 38.2	0.0
DUG				pmax	pmax		
	comp=Z,31nm,1.5s						
DUG				MLR	MLR		
	comp=Z,5µm,19.0s						
DUG	**Dugway, Tooele**	90.78	49	P	P	10 33 37.7	-0.6
	baz=256,SNR=8.7						
BGU	**Big Grassy Mou**	90.79	49	*e*P	P	10 33 38.0	-0.3
	comp=Z,52nm,1.7s						
WUAZ	**Wupatki**	90.84	54	*e*P	P	10 33 39.1	+0.5
	comp=Z,28nm,1.3s						
WUAZ				LR	LR		
	comp=Z,6µm,20.0s						
WUAZ	**Wupatki**	90.84	54	P	P	10 33 38.6	-0.1
	baz=257,SNR=6.4						
MSU	**Marysvale**	90.88	51	*e*P	P	10 33 38.9	0.0
MSU	**Marysvale**	90.88	51	*e*P	P	10 33 38.9	0.0
HVU	**Hansel Valley**	91.18	48	*e*P	P	10 33 40.2	+0.2
	comp=Z,28nm,1.1s						
HVU	**Hansel Valley**	91.18	48	*e*P	P	10 33 40.3	+0.2
HVU				pmax	pmax		
	comp=Z,28nm,1.1s						
NLU	**North Lily Min**	91.28	50	*e*P	P	10 33 40.9	+0.3
	comp=Z,19nm,1.0s						
SPUT	**South Promonto**	91.31	48	*e*P	P	10 33 40.8	+0.1
	comp=Z,35nm,1.7s						
DGAR	**Diego Garcia**	91.41	262	PFAKE		10 33 50.0	+8.5
DGAR				LR	LR		
	comp=Z,2µm,20.0s						
MSO	**Missoula**	91.56	43	P	P	10 33 40.1	-1.6
	baz=256						
MPU	**Maple Canyon**	91.62	50	*e*P	P	10 33 42.7	+0.5
	comp=Z,30nm,1.4s						
CTU	**Camp Tracy**	91.68	49	*e*P	P	10 33 42.5	+0.1
	comp=Z,46nm,1.5s						
Q16A	**Castle Valley**	91.73	51	*e*P	P	10 33 43.4	+0.6
	comp=Z,33nm,1.4s						
TMUT	**Trail Mountain**	91.79	50	*e*P	P	10 33 43.6	+0.5
	comp=Z,18nm,1.1s						
SYO	**Syowa Base**	91.87	197	⇓*e*P	P	10 33 40.0	-2.5
JLU	**Jordanelle**	91.89	49	*e*P	P	10 33 43.7	+0.2
	comp=Z,16nm,1.2s						
DLMT	**Dillon**	92.12	44	*e*P	P	10 33 44.4	+0.1
	comp=Z,40nm,1.0s						
LRM	**Limekiln Ridge**	92.33	44	*e*P	P	10 33 45.2	-0.2
AHID	**Auburn Hatcher**	92.61	47	PFAKE		10 34 00.0	+13
AHID				LR	LR		
	comp=Z,3µm,20.0s						
QLMT	**Earthquake Lak**	92.81	45	*e*P	P	10 33 48.2	+0.6
BOZ	**Bozeman (W)**	92.84	44	*e*P	P	10 33 47.8	+0.1
	comp=Z,18nm,1.0s						
BOZ				LR	LR		
	comp=Z,7µm,20.0s						
BOZ	**Bozeman (W)**	92.84	44	P	P	10 33 47.4	-0.3
	baz=258,SNR=18						
FXWY	**Fox Creek**	92.84	46	*e*P	P	10 33 47.9	0.0
	comp=Z,8.2nm,0.9s						
TPAW	**Teton Pass**	92.87	46	*e*P	P	10 33 47.6	-0.4
	comp=Z,9.3nm,1.1s						
REDW	**Red Top Meadow**	92.91	47	*e*P	P	10 33 48.1	-0.1
	comp=Z,19nm,1.5s						
HRY	**Holter Researc**	92.94	43	*e*P	P	10 33 48.1	+0.1
YHB	**Horse Butte**	92.96	45	*e*P	P	10 33 49.1	+0.7
	comp=Z,24nm,1.4s						
IMW	**Indian Meadow**	92.96	46	*e*P	P	10 33 48.7	+0.2
	comp=Z,7.4nm,0.8s						
MK01	**Makanchi Array**	93.05	317	*e*P	P	10 33 47.2	-1.2
MK31	**Makanchi Array**	93.06	317	*e*P	P	10 33 47.9	-0.6
MKAR	**Makanchi Array**	93.06	317	*e*P	P	10 33 47.9	-0.6
	comp=Z,75nm,0.8s						
MKAR				PKKPbc	PKKPdf	10 50 57.8	-0.3
MKAR	**Makanchi Array**	93.06	317	P	P	10 33 48.0	-0.5
MKAR				pmax	pmax		
	comp=Z,11nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	93.06	317	P	P	10 33 48.0	-0.5
	comp=Z,11nm,0.8s,baz=94,slow=5.8,SNR=70						
MKAR				PKKPbc	PKKPdf	10 50 57.8	-0.3
	comp=Z,4.5nm,0.9s,baz=289,slow=3.7,SNR=8.2						
MOOW	**Moose Ponds**	93.07	46	*e*P	P	10 33 48.7	-0.2
	comp=Z,5.5nm,0.9s						
YMR	**Madison River**	93.10	45	*e*P	P	10 33 49.8	+0.8
	comp=Z,8.8nm,0.8s						
ZALV	**Zalesovo Beam**	93.12	324	P	P	10 33 47.0	-1.5
	comp=Z,8.6nm,0.7s,baz=124,slow=4.5,SNR=33						
LOHW	**Long Hollow**	93.14	46	*e*P	P	10 33 49.1	-0.1
	comp=Z,9.6nm,1.3s						
YFT	**Old Faithful**	93.15	45	*e*P	P	10 33 51.4	+2.2
	comp=Z,8.3nm,0.9s						
121A	**Cookes Peak, D**	93.16	58	P	P	10 33 49.4	0.0
	baz=259						
FLWY	**Flagg Ranch**	93.17	46	*e*P	P	10 33 50.1	+0.8
	comp=Z,9.4nm,1.0s						
PV09	**Paradox Valley**	93.21	52	*e*P	P	10 33 51.3	+1.6
PV14	**Lion Creek, Pa**	93.27	52	*e*P	P	10 33 51.3	+1.3
	comp=Z,19nm,1.4s						
MAKZ	**Makanchi**	93.27	317	*e*P	P	10 33 48.8	-0.7
	comp=Z,35nm,1.3s						
MAKZ	**Makanchi**	93.27	317	*e*P	P	10 33 48.8	-0.7
MAKZ				pmax	pmax		
	comp=Z,35nm,1.3s						
PV19	**Morning Glory**	93.29	52	*e*P	P	10 33 52.0	+2.0
	comp=Z,28nm,1.6s						
PV23	**Carpenter Ridg**	93.29	52	*e*P	P	10 33 51.5	+1.4
	comp=Z,14nm,0.7s						
PV17	**East Wray Mesa**	93.30	52	*e*P	P	10 33 52.0	+1.9
	comp=Z,7.6nm,0.9s						
H17A	**Grant Village**	93.32	46	P	P	10 33 51.2	+1.2
	baz=258						
PV04	**Paradox Valley**	93.36	52	*e*P	P	10 33 51.6	+1.3
	comp=Z,9.8nm,1.2s						
PV12	**Saucer Basin,**	93.43	52	*e*P	P	10 33 51.3	+0.6
	comp=Z,9.1nm,1.0s						
MVCO	**Mesa Verde**	93.46	53	PFAKE		10 34 00.0	+9.2
MVCO				LR	LR		
	comp=Z,5µm,19.0s						
MVCO	**Mesa Verde**	93.46	53	P	P	10 33 50.3	-0.5
	baz=259						
LKWY	**Lake**	93.48	45	PFAKE		10 34 00.0	+9.2
LKWY				LR	LR		
	comp=Z,10µm,20.0s						
PV01	**Paradox Valley**	93.58	52	*e*P	P	10 33 52.7	+1.4
	comp=Z,12nm,1.3s						
BW06	**Boulder Array**	93.72	47	*e*P	P	10 33 51.3	-0.6
	comp=Z,25nm,1.6s						
BW06				LR	LR		
	comp=Z,3µm,22.0s						
BW06	**Boulder Array**	93.72	47	P	P	10 33 50.8	-1.0
	baz=259						
PD31	**Pinedale Array**	93.72	47	*e*P	P	10 33 51.6	-0.3
PDAR	**Pinedale Array**	93.72	47	*e*P	P	10 33 50.3	-1.6
PDAR				PKKPbc	PKKPdf	10 50 56.0	-1.0
PDAR	**Pinedale Array**	93.72	47	P	P	10 33 50.9	-1.0
	comp=Z,2.2nm,0.9s,baz=241,slow=2.5,SNR=14						
PDAR				PKKPbc	PKKPdf	10 50 56.0	-1.0
	comp=Z,0.7nm,0.6s,baz=94,slow=4.2,SNR=4.4						
PDAR				LR	LR	11 09 01.8	
	comp=Z,3µm,21.5s,baz=256,slow=31						
HPIG		93.97	63	*e*P	P	10 33 54.5	+1.1
	comp=Z,6.3nm,1.2s						
O20A	**White River Ci**	94.20	50	P	P	10 33 52.9	-1.2
	baz=259						
NVS	**Novosibirsk**	94.23	325	⇓*i*P	P	10 33 53.1	-0.5
NVS				pmax	pmax		
	comp=Z,18nm,1.1s						
NVS				pmax	pmax		
	comp=N,1.0nm,0.4s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.4s						
RLMT	**Red Lodge**	94.38	45	PFAKE		10 34 10.0	+15
RLMT				LR	LR		
	comp=Z,6µm,21.0s						
EGMT	**Eagleton**	94.59	42	*e*P	P	10 33 56.0	+0.4
	comp=Z,13nm,1.0s						
EGMT				LR	LR		
	comp=Z,3µm,20.0s						
EGMT	**Eagleton**	94.59	42	P	P	10 33 55.5	0.0
	baz=259						
ANMO	**Albuquerque**	94.68	55	*e*P	P	10 33 56.0	-0.4
	comp=Z,7.4nm,1.1s						
ANMO				LR	LR		
	comp=Z,4µm,19.0s						
ANMO	**Albuquerque**	94.68	55	⇓*e*P	P	10 33 55.3	-1.1
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ANMO	**Albuquerque**	94.68	55	P	P	10 33 55.5	-0.9
	baz=260						
S22A	**4UR Ranch, Cre**	94.86	53	P	P	10 33 56.4	-0.9
	baz=260						
YKA	**Yellowknife Ar**	94.97	27	P	P	10 33 55.0	-1.8
YKA	**Yellowknife Ar**	94.97	27	P	P	10 33 55.0	-1.8
	comp=Z,3.2nm,0.8s,baz=255,slow=4.6,SNR=32						
YKA				PKKPbc	PKKPbc	10 50 52.2	-2.8
	comp=Z,0.4nm,0.5s,baz=80,slow=2.6,SNR=8.7						
YKA				LR	LR	11 14 17.4	
	comp=Z,568nm,18.1s,baz=260,slow=34						
MNTX	**Cornudas Mount**	95.02	59	*e*P	P	10 33 57.2	-0.6
	comp=Z,5.2nm,1.1s						
MNTX				LR	LR		
	comp=Z,7µm,20.0s						
MNTX	**Cornudas Mount**	95.02	59	P	P	10 33 56.8	-1.1
	baz=260						
NRIK	**Noril'sk**	95.76	340	P	P	10 33 59.2	-1.0
	comp=Z,3.2nm,0.5s,baz=106,slow=6.8,SNR=5.9						
SDCO	**Great Sand Dun**	95.90	53	PFAKE		10 34 10.0	+7.9
SDCO				LR	LR		
	comp=Z,4µm,19.0s						
K22A	**Casper**	95.90	48	P	P	10 34 00.5	-1.3
	baz=261						
N23A	**Red Feather La**	96.05	50	P	P	10 34 00.8	-1.8
	baz=261						
PMSA	**Palmer Station**	96.07	161	PFAKE		10 34 10.0	+8.1
PMSA				LR	LR		
	comp=Z,5µm,20.0s						
TX31	**Lajitas Ar. Si**	96.10	61	*e*P	P	10 34 04.9	+2.0
TXAR	**Lajitas Array**	96.10	61	P	P	10 34 02.3	-0.7
	comp=Z,0.8nm,0.8s,baz=224,slow=5.7,SNR=8.9						
TXAR				PP	PP	10 37 54.6	-1.3
	comp=Z,4.8nm,1.2s,baz=243,slow=5.5,SNR=14						
TXAR				PKKPbc	PKKPdf	10 50 51.9	-0.3
	comp=Z,0.7nm,0.6s,baz=106,slow=3.7,SNR=9.0						
ISCO	**Idaho Springs**	96.13	51	PFAKE		10 34 10.0	+6.9
ISCO				LR	LR		
	comp=Z,11µm,20.0s						
KURK	**Kurchatov**	96.19	320	*e*P	P	10 34 02.0	-0.7
	comp=Z,9.9nm,1.0s						
KURK				LR	LR		
	comp=Z,4µm,20.0s						
KURK	**Kurchatov**	96.19	320	⇑*e*P	P	10 34 02.0	-0.7
KURK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KSH	**Kashi**	96.28	309	P	P	10 34 06.9	+3.4
KSH				sP	pwP	10 34 11.0	+1.0
KSH				PP	PP	10 38 02.0	+4.9
KSH				SKS	SKSac	10 44 41.9	+1.8
KSH				S	ScS	10 45 25.2	+1.4
KSH				SS	SS	10 52 00.0	+4.1
KSH				LR	LR		
	comp=Z,460nm,5.8s						
KSH				LR	LR		
	comp=Z,490nm,7.1s						
KSH				LR	LR		
	comp=Z,3µm,16.6s						
LAO	**LASA Array**	96.73	44	PFAKE		10 34 20.0	+15
LAO				LR	LR		
	comp=Z,4µm,20.0s						
SNAA	**Sanae**	97.31	184	P	P	10 34 06.8	-0.8
SNAA	**Sanae**	97.31	184	*e*P	P	10 34 06.8	-0.8
	comp=Z,29nm,1.2s						
SNAA	**Sanae**	97.31	184	⇓*i*P	P	10 34 06.7	-0.8
NIL	**Nilore**	97.60	303	PFAKE		10 34 20.0	+10
NIL				LR	LR		
	comp=Z,774nm,19.0s						
AAK	**Ala-Archa**	97.82	312	PFAKE		10 34 20.0	+9.5
AAK				LR	LR		
	comp=Z,1µm,20.0s						
VNA2	**Neumayer--Watz**	98.29	182	P	P	10 34 11.1	-0.8
DGMT	**Dagmar**	98.33	42	PFAKE		10 34 20.0	+7.5
DGMT				LR	LR		
	comp=Z,3µm,20.0s						
OGNE	**Ogallala**	98.99	50	PFAKE		10 34 30.0	+14
OGNE				LR	LR		
	comp=Z,7µm,19.0s						
JCT	**Junction City**	99.58	61	PFAKE		10 34 30.0	+11
JCT				LR	LR		
	comp=Z,10µm,19.0s						
FFC	**Flin Flon**	100.31	36	PFAKE		10 34 30.0	+8.9
FFC				LR	LR		
	comp=Z,9µm,19.0s						
CBKS	**Cedar Bluff**	100.53	52	PFAKE		10 34 30.0	+7.5
CBKS				LR	LR		
	comp=Z,4µm,19.0s						
KVTX	**Kingsville**	100.90	64	PFAKE		10 34 40.0	+16
KVTX				LR	LR		
	comp=Z,4µm,19.0s						
WMOK	**Wichita Mounta**	100.91	57	PFAKE		10 34 40.0	+16
WMOK				LR	LR		
	comp=Z,6µm,20.0s						
BRVK	**Borovoye**	101.57	322	*e*Pdif	Pdif	10 34 27.4	+0.7
BRVK				LR	LR		
	comp=Z,3µm,21.0s						
BRVK	**Borovoye**	101.57	322	⇑*i*P	Pdif	10 34 25.8	-0.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSU1	**Kansas State U**	102.98	52	PFAKE		10 34 40.0	+6.6
KSU1				LR	LR		
	comp=Z,7µm,19.0s						
ECSD	**EROS Data Cent**	103.22	47	PFAKE		10 34 50.0	+16
ECSD				LR	LR		
	comp=Z,5µm,20.0s						
PAYG	**Puerto Ayora**	104.02	93	PFAKE		10 34 50.0	+11
PAYG				LR	LR		
	comp=Z,3µm,19.0s						
NATX	**Nacogdoches**	104.09	60	PFAKE		10 34 50.0	+12
NATX				LR	LR		
	comp=Z,7µm,20.0s						
MIAR	**Mount Ida**	105.17	57	PFAKE		10 39 10.0	+12
MIAR				LR	LR		
	comp=Z,8µm,20.0s						
SCIA	**State Center**	105.67	49	PFAKE		10 39 10.0	+12
SCIA				LR	LR		
	comp=Z,7µm,20.0s						
EYMN	**Ely**	106.79	43	PFAKE		10 39 10.0	+10
EYMN				LR	LR		
	comp=Z,6µm,20.0s						
EFI	**East Falkland**	107.39	153	PFAKE		10 39 10.0	+8.7
EFI				LR	LR		
	comp=Z,4µm,20.0s						
JFWS	**Jewell Farm**	107.86	48	PFAKE		10 39 10.0	+7.6
JFWS				LR	LR		
	comp=Z,5µm,19.0s						
ARU	**Arti**	108.20	326	PFAKE		10 39 10.0	+7.4
ARU				LR	LR		
	comp=Z,2µm,21.0s						
COWI	**Conover**	108.50	45	PFAKE		10 39 20.0	+16
COWI				LR	LR		
	comp=Z,5µm,21.0s						
HDIL	**Hopedale**	108.64	51	PFAKE		10 39 20.0	+16
HDIL				LR	LR		
	comp=Z,8µm,22.0s						
BRAL	**Brewton**	110.57	61	PFAKE		10 39 20.0	+12
BRAL				LR	LR		
	comp=Z,6µm,19.0s						
KBS	**Kingsbay**	110.66	355	PFAKE		10 39 20.0	+13
KBS				LR	LR		
	comp=Z,2µm,20.0s						
JTS	**JuntasAbangare**	111.08	83	PFAKE		10 39 20.0	+11
JTS				LR	LR		
	comp=Z,4µm,20.0s						
GLMI	**Grayling**	111.78	46	PFAKE		10 39 20.0	+10
GLMI				LR	LR		
	comp=Z,8µm,19.0s						
ABPO	**Ambohimpanom**	112.15	244	PFAKE		10 39 20.0	+8.6
ABPO				LR	LR		
	comp=Z,1µm,20.0s						
HOPE	**Hope Point**	112.57	166	PFAKE		10 39 20.0	+9.0
HOPE				LR	LR		
	comp=Z,2µm,19.0s						
AAM	**Ann Arbor**	112.75	49	PFAKE		10 39 20.0	+8.4
AAM				LR	LR		
	comp=Z,9µm,19.0s						
LCO	**Las Campanas**	113.03	128	PFAKE		10 39 20.0	+7.0
LCO				LR	LR		
	comp=Z,3µm,19.0s						
ACSO	**Alum Creek Sta**	113.47	51	PFAKE		10 39 20.0	+6.9
ACSO				LR	LR		
	comp=Z,5µm,19.0s						
GOGA	**Godfrey**	113.56	58	PFAKE		10 39 30.0	+17
GOGA				LR	LR		
	comp=Z,7µm,20.0s						
NNA	**Nana**	114.25	108	PFAKE		10 39 30.0	+15
NNA				LR	LR		
	comp=Z,2µm,19.0s						
TRQA	**Tornquist**	114.31	140	PFAKE		10 39 30.0	+15
TRQA				LR	LR		
	comp=Z,3µm,19.0s						
LVZ	**Lovozero**	114.51	342	PFAKE		10 39 30.0	+16
LVZ				LR	LR		
	comp=Z,2µm,22.0s						
APA	**Apatity**	115.09	342	⇑*i*PKIKP	PKPdf	10 39 15.9	+0.6
APA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KEV	**Kevo**	115.48	345	PFAKE		10 39 30.0	+14
KEV				LR	LR		
	comp=Z,6µm,20.0s						
BLA	**Blacksburg**	115.77	54	PFAKE		10 39 30.0	+12
BLA				LR	LR		
	comp=Z,5µm,20.0s						
OTAV	**Otavalo**	115.80	95	PFAKE		10 39 30.0	+11
OTAV				LR	LR		
	comp=Z,3µm,20.0s						
BCIP	**Isla Barro Col**	115.93	85	PFAKE		10 39 30.0	+11
BCIP				LR	LR		
	comp=Z,3µm,19.0s						
ARCES	**ARCESS Array B**	116.01	345	PKP	PKiKP	10 39 16.9	-0.2
	comp=Z,3.2nm,0.7s,baz=76,slow=2.0,SNR=21						
ARCES				PKKPbc	PKKPbc	10 49 47.3	-3.1
	comp=Z,5.0nm,0.8s,baz=212,slow=2.1,SNR=15						
NHSC	**New Hope**	116.33	58	PFAKE		10 39 30.0	+11
NHSC				LR	LR		
	comp=Z,7µm,19.0s						
LVC	**Limon Verde**	117.36	122	PFAKE		10 39 30.0	+8.4
LVC				LR	LR		
	comp=Z,2µm,20.0s						
MAK	**Makhachkala**	117.58	313	*i* PKIKP	PKPpre	10 39 15.6	
MAK				pmax	pmax		
	comp=Z,201nm,1.4s						
SOTA	**Rioblanco**	117.98	93	*e*P	PKKPdf	10 50 11.6	+0.1
SOTA	**Rioblanco**	117.98	93	*e*P	PKKPdf	10 50 11.6	+0.1
CNNC	**Cliffs of the**	118.02	56	PFAKE		10 39 30.0	+8.0
CNNC				LR	LR		
	comp=Z,6µm,20.0s						
CBN	**Corbin Frederi**	118.04	52	PFAKE		10 39 30.0	+8.1
CBN				LR	LR		
	comp=Z,9µm,20.0s						
BINY	**Binghamton**	118.39	48	PFAKE		10 39 30.0	+7.5
BINY				LR	LR		
	comp=Z,6µm,20.0s						
LONY	**Lake Ozonia**	118.85	45	PFAKE		10 39 30.0	+6.6
LONY				LR	LR		
	comp=Z,3µm,19.0s						
SFJD	**Kangerlussuaq**	118.96	15	PFAKE		10 39 30.0	+7.2
SFJD				LR	LR		
	comp=Z,6µm,19.0s						
MTDJ	**Mount Denham**	118.96	75	PFAKE		10 39 40.0	+16
MTDJ				LR	LR		
	comp=Z,3µm,20.0s						
GNI	**Garni**	120.18	310	PFAKE		10 39 40.0	+14
GNI				LR	LR		
	comp=Z,2µm,22.0s						
OBN	**Obninsk**	120.39	329	PFAKE		10 39 40.0	+14
OBN				LR	LR		
	comp=Z,1µm,20.0s						
OBN	**Obninsk**	120.39	329	*i* PKIKP	PKPdf	10 39 24.4	-1.4
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	**Kislovodsk**	120.76	315	PFAKE		10 39 40.0	+13
KIV				LR	LR		
	comp=Z,2µm,21.0s						
KIV	**Kislovodsk**	120.76	315	*e*PKIKP	PKPdf	10 39 24.5	-2.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTBY	**Guantanamo Bay**	121.30	73	PFAKE		10 39 40.0	+11
GTBY				LR	LR		
	comp=Z,1µm,19.0s						
FINES	**FINESS Array B**	121.40	338	PKP	PKPdf	10 39 27.1	-0.6
	comp=Z,3.6nm,0.8s,baz=49,slow=1.5,SNR=8.5						

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PKME  Peaks-Kenny Pk   122.28  43  PFAKE              10 39 40.0 +10
PKME                               LR       LR
      comp=Z,6µm,19.0s
CPUP  Villa Florida    124.50 132  PKP      PKPdf     10 39 34.3 -0.4
      comp=Z,5.5nm,0.9s,baz=261,slow=2.9,SNR=9.3
SDDR  Presa de Saban   124.90  74  PFAKE              10 39 50.0 +14
SDDR                               LR       LR
      comp=Z,5µm,19.0s
SDV   Santo Domingo    124.92  87  ePKPdf   PKPdf     10 39 35.0 -1.1
SDV                                LR       LR
      comp=Z,2µm,20.0s
BOSA  Boshof           124.98 224  PKP      PKiKP     10 39 36.2 +0.1
      comp=Z,14nm,0.6s,baz=147,slow=2.3,SNR=44
GRTK  Grand Turk       125.01  71  PFAKE              10 39 50.0 +14
GRTK                               LR       LR
      comp=Z,4µm,21.0s
SUR   Sutherland       125.26 217  PFAKE              10 39 50.0 +13
SUR                                LR       LR
      comp=Z,4µm,19.0s
NACGM Naroch           125.26 332  e        PKPdf     10 39 35.0 -0.2
NACGM                              eLQ      LQ        11 27 18.0
NACGM                              eLR      LR        11 33 14.0
NB2   NORSAR Subarra   126.37 345  PKPdf    PKPdf     10 39 37.0 -0.3
      comp=Z,2.8nm,1.0s,baz=34,slow=1.8
NOA   NORSAR Array B   126.37 345  PKP      PKPdf     10 39 37.1 -0.1
      comp=Z,1.1nm,0.7s,baz=40,slow=1.8,SNR=5.1
AKASG Malin Array Be   126.44 327  PKP      PKPdf     10 39 36.9 -0.8
      comp=Z,2.1nm,0.8s,baz=60,slow=2.1,SNR=8.6
KIEV  Kiev             126.45 327  PFAKE              10 39 50.0 +12
KIEV                               LR       LR
      comp=Z,3µm,20.0s
KMBO  Kilima Mbogo     127.00 260  PKP      PKPdf     10 39 40.2  0.0
KMBO                               LR       LR
      comp=Z,3µm,20.0s
KMBO  Kilima Mbogo     127.00 260  PKIKP    PKPdf     10 39 40.2  0.0
KMBO                               MLR      MLR
      comp=Z,3µm,20.0s
KMBO  Kilima Mbogo     127.00 260  PKP      PKPdf     10 39 40.2  0.0
      comp=Z,2.9nm,0.8s,baz=46,slow=2.7,SNR=9.0
BRTR  Keskin Array B   128.49 313  PKP      PKPdf     10 39 41.2 -0.9
      comp=Z,2.0nm,0.9s,baz=75,slow=1.4,SNR=7.1
BRTR                               PP       PP        10 41 46.3 -0.8
      comp=Z,2.1nm,1.0s,baz=90,slow=4.9,SNR=4.7
ANTO  Ankara           129.05 313  PFAKE              10 39 50.0 +6.2
ANTO                               LR       LR
      comp=Z,2µm,20.0s
SJG   San Juan         129.78  75  PFAKE              10 40 00.0 +14
SJG                                LR       LR
      comp=Z,2µm,21.0s
LSZ   Lusaka           130.24 239  ePKPdf   PKPdf     10 39 46.0  0.0
LSZ                                LR       LR
      comp=Z,4µm,20.0s
LSZ   Lusaka           130.24 239  ePKIKP   PKPdf     10 39 46.1  0.0
LSZ                                MLR      MLR
      comp=Z,4µm,20.0s
UZH   Uzhgorod         131.31 328  ePKHKP   PKPpre    10 39 31.4
TRIS  Tristan da Cun   132.32 183  PFAKE              10 40 00.0 +10
TRIS                               LR       LR
      comp=Z,3µm,21.0s
MORC  Moravsky Berou   132.90 332  ePKP     PKPdf     10 39 50.6 +0.6
PTGA  Pitinga          133.55 101  PFAKE              10 40 00.0 +6.5
PTGA                               LR       LR
      comp=Z,11µm,20.0s
VRAC  Vranov           133.67 332  ePKP     PKPdf     10 39 51.5  0.0
BRG   Berggiesshubel   133.68 335  ePKP     PKiKP     10 39 52.6 -0.1
      comp=Z,36nm,1.9s
BRG                                ePP      PP        10 42 29.3 +10
      comp=Z,25nm,1.9s
BRG                                eSKP               10 43 22.6
      comp=Z,26nm,2.4s
BRG   Berggiesshubel   133.68 335  ePKIKP   PKiKP     10 39 52.6 -0.1
BRG                                e                  10 42 29.3
BRG                                pmax     pmax
      comp=Z,31nm,1.9s
BRG                                pmax     pmax
      comp=Z,36nm,1.9s
BRG                                pmax     pmax
      comp=N,25nm,2.4s
CLL   Collm            133.72 336  ePKPdf   PKiKP     10 39 53.0 +0.3
CLL                                eSS      SS        11 00 09.0 +3.5
CLL                                e                  11 02 27.0
CLL                                eSSS     SSS       11 05 07.0
CLL                                eSSSS              11 08 24.0
CLL                                LmV                11 51 00.0
      comp=Z,3µm,21.6s
CLL   Collm            133.72 336  ePKIKP   PKiKP     10 39 53.0 +0.3
CLL                                MLR      MLR
      comp=Z,3µm,21.6s
KRUC  Moravsky         133.94 332  ePKP     PKPdf     10 39 51.7 -0.2
ANWB  Willy Bob        133.95  76  PFAKE              10 40 00.0 +5.9
ANWB                               LR       LR
      comp=Z,2µm,20.0s
GRGR  Grenville        134.01  84  PFAKE              10 40 00.0 +5.6
GRGR                               LR       LR
      comp=Z,2µm,19.0s
ESK   Eskdalemuir      134.70 351  PFAKE              10 40 00.0 +5.4
ESK                                LR       LR
      comp=Z,3µm,20.0s
CONA  Conrad Observa   134.99 331  epPKPdf  PKiKP     10 39 56.5 +0.9
      comp=Z,5.1nm,1.1s
GERES GERESS Array B   135.31 333  PKhKP    PKPpre    10 39 51.1
      comp=Z,2.2nm,0.8s,baz=33,slow=3.2,SNR=8.7
ARSA  Arzberg          135.63 331  ePKPdf   PKPdf     10 39 54.5 -0.7
      comp=Z,6.8nm,1.1s
BBGH  Gun Hill         136.10  82  PFAKE              10 40 10.0 +11
BBGH                               LR       LR
      comp=Z,4µm,20.0s
TSUM  Tsumeb           136.38 227  PFAKE              10 40 10.0 +11
TSUM                               LR       LR
      comp=Z,6µm,21.0s
KBA   Koelnbreinsper   136.78 332  ePKPdf   PKPdf     10 39 57.1 -0.4
      comp=Z,8.5nm,1.3s
MEM   Membach          136.83 341  ⇑PKiKP   PKiKP     10 39 59.9 +0.9
ABTA  Abfaltersbach    137.41 332  PKiKP    PKiKP     10 40 00.2 -0.3
      comp=Z,7.0nm,1.0s
MOTA  Moosalm          137.58 334  epPKPdf  PKiKP     10 40 01.6 +0.6
      comp=Z,2.1nm,0.5s
SQTA  Sankt Quirin     137.63 334  epPKPdf  PKiKP     10 40 01.1 +0.1
      comp=Z,7.0nm,1.1s
BDFB  Brasilia         137.82 128  PKP      PKPdf     10 39 57.4 -2.8
      comp=Z,7.0nm,0.8s,baz=149,slow=3.1,SNR=6.4
BFO   Black Forest     137.93 337  PFAKE              10 40 10.0 +8.6
BFO                                LR       LR
      comp=Z,133nm,22.0s
FETA  Feichten         137.99 334  ePKiKP   PKPdf     10 40 00.1 +0.3
      comp=Z,7.5nm,1.4s
KEST  Kesra            146.97 323  PKPbc    PKPbc     10 40 17.8 -0.1
      comp=Z,26nm,0.8s,baz=360,slow=5.4,SNR=16
PBRG  Braganca         148.35 349  ePKPdf   PKPab     10 40 25.5 +1.0
POLO  Lamas de Olo     148.96 350  ePKPdf   PKPab     10 40 28.7 +1.7
PVRL  Vila Real        149.05 350  ePKPdf   PKiKP     10 40 24.2 -0.3
PVIS  Viseu            149.62 350  ePKPdf   PKPbc     10 40 25.1 +0.4
ESDC  Sonseca Array    149.72 343  PKPbc    PKPbc     10 40 25.1 +0.1
      comp=Z,2.0nm,0.6s,baz=12,slow=4.5,SNR=7.2
MTE   Manteigas        149.87 349  ePKPdf   PKPdf     10 40 19.2 -1.3
PAB   San Pablo        149.94 344  PFAKE              10 40 30.0 -1.0
PAB                                LR       LR
      comp=Z,3µm,20.0s
PMRV  Marv??o          150.78 348  ePKPdf   PKiKP     10 40 28.5 +0.4
PMTG  Montargil        151.28 349  ePKPdf   PKiKP     10 40 29.2 +0.1
CMLA  Cha da Macela    151.46  18  PFAKE              10 40 30.0 +0.5
CMLA                               LR       LR
      comp=Z,4µm,22.0s
SHEL  Horse Pasture    151.96 199  PFAKE              10 40 40.0 +0.1
SHEL                               LR       LR
      comp=Z,2µm,19.0s
MESJ  Messejana        152.47 349  ePKPdf   PKiKP     10 40 32.6 +1.0
RCBR  Riachuelo        153.19 127  PFAKE              10 40 40.0 -5.2
RCBR                               LR       LR
      comp=Z,19µm,20.0s
ASCN  Ascension        161.37 181  PFAKE              10 40 50.0 +14
ASCN                               LR       LR
      comp=Z,23µm,19.0s
TORD  Torodi Ar. Bea   163.80 280  PKP      PKPdf     10 40 37.1 -1.8
      comp=Z,6.5nm,1.1s,baz=104,slow=2.1,SNR=21
TORD                               PKPab    PKPab     10 41 30.0 -1.2
      comp=Z,6.7nm,0.9s,baz=93,slow=5.0,SNR=8.0
KIC   Kosan Boka       169.21 247  ePKP1    PKPab     10 41 55.4 +0.3
      comp=Z,104nm,1.8s
KIC   Kosan Boka       169.21 247  eP       PKPdf     10 40 41.7 -1.4
      comp=Z,103nm,1.5s
LIC   Lamto            169.41 245  ePKP1    PKPab     10 41 56.0 +0.1
      comp=Z,68nm,1.3s
LIC   Lamto            169.41 245  eP       PKPdf     10 40 40.9 -2.3
      comp=Z,58nm,1.5s
DBIC  Dimbokro         169.44 248  PKP      PKPdf     10 40 40.9 -2.3
      comp=Z,8.7nm,1.0s,baz=47,slow=2.5,SNR=5.6
TIC   Toumodi          169.57 247  ePKP1    PKPab     10 41 56.3 -0.4
TIC   Toumodi          169.57 247  eP       PKPdf     10 40 42.9 -0.4
SACV  Santiago Islan   170.38  64  PFAKE              10 40 50.0 +6.3
SACV                               LR       LR
      comp=Z,2µm,22.0s
```

IDC ***06*** *10:27:24.6±1.0, 10°.84S×164°.75E, h0^{km}, mb4.2/20, mb1 4.4/21, mb1mx4.3/41, mbtmp4.3/21, ML4.9/1, Error ellipse: s-maj=28.0km s-min=16.6km az=135.0*

NEIC ***06*** *10:27:26.9±0.2, 10°.81S×164°.68E, h10^{km}, mb4.9/31, Error ellipse: s-maj=5.7km s-min=4.5km az=85.0*

ISCJB ***06*** *10:27:27.9±0.2, 10°.93S±0°.04×164°.65E±0°.05, h29^{km}, mb4.6/55, Error ellipse: s-maj=6.9km s-min=5.8km az=146.3*

ISC 06 10:27:29.8±0.4**, 10°.86S**±0°.07×**164°.72E**±0°.06**, h29**^{km}**, n81, σ1^{s}33**/87**, mb4.8**/55**, 1C, Santa Cruz Islands region**

```
Code  Station Name        Δ°  AZ°    Phase ID             Time     Res
                                     Op       ISC       h  m  s    ISC
HNR   Honiara           4.91 286   eP       Pn        10 28 42.0 +0.3
HNR                                eS       Sn        10 29 35.0 -2.5
HNR   Honiara           4.91 286   ePn      Pn        10 28 40.1 -1.6
HNR                                eSn      Sn        10 29 35.9 -1.7
HNR   Honiara           4.91 286   Pn       Pn        10 28 41.4 -0.3
      45nm,0.3s,baz=183,slow=1.5,SNR=9.4
HNR                                Sn       Sn        10 29 39.0 +1.5
      40nm,0.3s,baz=172,slow=14,SNR=2.3
MARNC Mare, Loyalty    11.03 164   ePn      Pn        10 30 05.8 +0.1
DZM   Mont Dzumac      11.27 172   ePn      Pn        10 30 09.2 +0.1
OUENC Ouen Island, N   11.67 170   ePn      Pn        10 30 14.7 +0.2
PINNC Pines Island,    11.97 168   ePn      Pn        10 30 18.5 -0.2
MSVF  Nonsavu          14.61 119   ePn      Pn        10 30 55.0 +0.2
CTA   Charters Tower   20.00 240   P        P         10 32 00.9 +0.6
      27nm,0.8s,baz=69,slow=13,SNR=14
CTAO  Charters Tower   20.00 240   eP       P         10 31 60.0 -0.4
      58nm,1.0s
KNTN  Kanton           24.72  73   eP       P         10 32 48.1 -0.7
      216nm,1.6s
CAN   Canberra         28.23 208   eP       P         10 33 20.3 -0.1
      6.8nm,0.9s
URZ   Urewera          29.45 160   eP       P         10 33 30.7 -0.5
      22nm,1.1s
STKA  Stephens Creek   29.89 222   P        P         10 33 35.5 +0.3
      12nm,1.4s
STKA  Stephens Creek   29.89 222   P        P         10 33 35.5 +0.3
      8.6nm,0.8s,baz=34,slow=11,SNR=7.7
WRAB  Tennant Creek    30.59 249   eP       P         10 33 37.4 -4.1
WRA   Warramunga Arr   30.60 249   P        P         10 33 39.5 -2.1
      3.1nm,0.7s,baz=80,slow=8.9,SNR=7.5
GUMO  Guam             31.27 321   eP       P         10 33 47.4 -0.1
      199nm,1.3s
AS31  Alice Springs    31.97 242   eP       P         10 33 53.2 -0.5
      3.7nm,1.2s
ASAR  Alice Springs    31.98 242   P        P         10 33 52.2 -1.5
      2.5nm,0.9s,baz=64,slow=9.9,SNR=6.1
MJAR  Matsushiro Arr   53.35 333   P        P         10 36 43.9 -2.8
      1.4nm,0.7s,baz=173,slow=8.6,SNR=5.0
ASAJ  Asahikawa        58.29 341   P        P         10 37 21.1 -0.9
      7.5nm,0.8s,baz=213,slow=12,SNR=5.8
KSRS  Korea Array      59.16 326   P        P         10 37 28.1 +0.1
      1.1nm,0.7s,baz=149,slow=5.2,SNR=3.7
KSAR  Wonju Array Be   59.17 326   P        P         10 37 28.1  0.0
KS01  Wonju Array Si   59.19 326   eP       P         10 37 28.3  0.0
NJ2   Nanjing          61.18 316   eP       P         10 37 41.7 -0.4
NJ2                                pmax     pmax
      comp=Z,9.0nm,0.8s
USA0B Ussuriysk Arra   62.34 334   eP       P         10 37 50.0 +0.4
      comp=Z,34nm,1.4s
USRK  Ussuriysk Ar.    62.34 334   P        P         10 37 50.2 +0.7
      comp=Z,1.7nm,0.7s,baz=141,slow=7.3,SNR=7.5
PETK  Petropavlovsk-   64.00 355   P        P         10 37 59.5 -0.9
      comp=Z,4.3nm,1.0s,baz=185,slow=8.1,SNR=2.3
CN2   Changchun        65.07 330   eP       P         10 38 10.8 +3.2
CN2                                pmax     pmax
      comp=Z,20nm,0.8s
CASY  Casey            66.18 201   eP       P         10 38 15.4 +0.9
      comp=Z,7.5nm,1.0s
KLR   Kul'dur          66.49 337   P        P         10 38 15.6 -1.1
      comp=Z,1.6nm,0.8s,baz=148,slow=3.7,SNR=4.1
GYA   Guiyang          67.48 305   P        P         10 38 26.1 +2.5
GYA                                PP       PP        10 40 56.5 +3.7
GYA                                S        S         10 47 21.2 +2.7
GYA                                SKS      SKSac     10 48 19.2 -0.7
GYA   Guiyang          67.48 305   SS       SS        10 51 43.4 +4.0
GYA                                pmax     pmax
      comp=Z,20nm,0.9s
GYA                                pmax     pmax
      comp=Z,120nm,6.7s
GYA                                LR       LR
      comp=N,490nm,18.2s
GYA                                LR       LR
      comp=E,520nm,18.6s
GYA                                LR       LR
      comp=Z,480nm,18.4s
PBKT  Sadao Pong       68.68 293   eP       P         10 38 31.5 +0.4
      comp=Z,6.8nm,0.9s
XAN   Xi'an            69.25 313   P        P         10 38 40.0 +5.5
XAN                                pP       pwP       10 38 52.9 +3.3
XAN                                sP       PcP       10 38 58.6 +0.5
XAN                                PP       PP        10 41 19.8  +12
XAN                                S        S         10 47 42.4 +3.2
XAN                                pmax     pmax
      comp=Z,6.0nm,2.0s
XAN                                LR       LR
      comp=N,2µm,17.4s
XAN                                LR       LR
      comp=E,2µm,22.8s
XAN                                LR       LR
      comp=Z,2µm,21.7s
HHC   Hu-ho-hao-te     71.04 320   eP       P         10 38 47.3 +1.9
HHC                                pmax     pmax
      comp=Z,8.0nm,1.2s
CM01  Chiang Mai Arr   71.09 294   eP       P         10 38 46.0  0.0
CMAR  Chiang Mai Arr   71.11 294   P        P         10 38 45.9 -0.2
      comp=Z,0.6nm,0.3s,baz=118,slow=4.6,SNR=5.6
CD2   Chengdu          71.69 308   eP       P         10 38 51.7 +2.3
LZH   Lanzhou          73.89 313   eP       P         10 39 04.1 +1.6
LZH                                pP       pP        10 39 08.8 -1.0
LZH                                sP       sP        10 39 12.2 -0.2
LZH                                PP       PP        10 41 45.2 -2.6
LZH                                pmax     pmax
      comp=Z,23nm,1.2s
LZH                                pmax     pmax
      comp=Z,180nm,6.5s
LZH                                LR       LR
      comp=N,230nm,16.3s
LZH                                LR       LR
      comp=E,210nm,16.4s
LZH                                LR       LR
      comp=Z,270nm,17.5s
SEY   Seymchan         74.19 354   P        P         10 39 03.5  0.0
      comp=Z,4.3nm,1.0s,baz=193,slow=7.9,SNR=5.2
ULN   Ulaanbaatar      77.56 324   eP       P         10 39 23.9 +0.6
SONM  Songino Array    77.92 324   P        P         10 39 25.4 +0.1
      comp=Z,1.6nm,1.0s,baz=126,slow=7.3,SNR=4.0
SONA1 Songino Array    77.93 324   eP       P         10 39 25.5 +0.2
GTA   Gaotai           78.21 314   ⇑P       P         10 39 28.0 +1.0
GTA                                pP       pP        10 39 31.7 -2.6
GTA                                sP       PcP       10 39 34.1 -2.3
GTA                                pmax     pmax
      comp=Z,4.0nm,1.2s
GTA                                LR       LR
      comp=N,2µm,20.0s
GTA                                LR       LR
      comp=E,2µm,18.7s
GTA                                LR       LR
      comp=Z,3µm,19.0s
ANM   Nome             78.53  13   eP       P         10 39 26.7 -1.4
      comp=Z,17nm,1.4s
BILL  Bilibino         78.70   1   eP       P         10 39 28.2 -0.8
      comp=Z,2.6nm,0.6s
QSPA  South Pole Qui   79.14 180   eP       P         10 39 32.8 +1.1
      comp=Z,23nm,1.1s
CAST  Castle Rocks     81.09  18   eP       P         10 39 42.1 +0.1
      comp=Z,9.4nm,1.1s
RDOG  Red Dog Mine     82.05  12   eP       P         10 39 47.4 +0.4
      comp=Z,13nm,0.9s
MCK   McKinley         82.30  19   eP       P         10 39 49.7 +1.3
      comp=Z,24nm,1.5s
IM3   Indian Mountai   82.52  16   eP       P         10 39 48.9 -0.5
MLY   Manley           82.67  17   eP       P         10 39 50.6 +0.3
      comp=Z,9.2nm,1.3s
RIDG  Independ'e Rid   83.65  20   eP       P         10 39 56.7 +1.2
      comp=Z,13nm,1.1s
ILAR  Eielson Array    83.66  19   P        P         10 39 54.5 -0.9
      comp=Z,2.8nm,0.9s,baz=232,slow=5.6,SNR=6.1
SCRK  Sand Creek       84.09  20   eP       P         10 39 58.5 +0.8
      comp=Z,8.0nm,1.0s
PRP   Porcupine Dome   84.59  19   eP       P         10 39 59.6 -0.7
      comp=Z,4.1nm,0.5s
AFDM  Forest Hills D   84.84  49   eP       P         10 40 01.7 -0.3
      comp=Z,6.3nm,1.2s
TIXI  Tiksi            85.72 349   eP       P         10 40 07.2 +1.6
      comp=Z,16nm,1.5s
DAWY  Dawson           85.75  21   eP       P         10 40 06.2 +0.2
      comp=Z,8.3nm,1.1s
NV01  Mina Array Sit   86.68  50   eP       P         10 40 11.2 -0.2
NVAR  Mina Array Bea   86.68  50   P        P         10 40 11.0 -0.4
      comp=Z,1.8nm,0.8s,baz=240,slow=7.1,SNR=6.0
WVOR  Wild Horse Val   87.59  46   eP       P         10 40 16.6 +1.0
      comp=Z,10nm,1.3s
WMQ   Urumqi           88.25 315   eP       P         10 40 18.6 -0.1
WMQ                                pP       PcP       10 40 21.6 +1.2
WMQ                                sP       pP        10 40 25.1 -0.9
WMQ                                pmax     pmax
      comp=Z,30nm,1.3s
WMQ                                LR       LR
      comp=N,4µm,14.3s
WMQ                                LR       LR
      comp=E,3µm,20.7s
WMQ                                LR       LR
      comp=Z,3µm,22.3s
W13A  Hualapai Mount   89.24  54   eP       P         10 40 23.9 +0.2
      comp=Z,5.8nm,1.0s
KNB   Kanab            90.52  53   eP       P         10 40 29.0 -0.6
      comp=Z,15nm,1.5s
HVU   Hansel Valley    91.63  48   eP       P         10 40 34.3 -0.3
      comp=Z,3.9nm,1.0s
DLMT  Dillon           92.56  44   eP       P         10 40 38.9 +0.1
      comp=Z,7.7nm,1.2s
MK01  Makanchi Array   92.69 317   eP       P         10 40 38.6 -0.6
MK31  Makanchi Array   92.70 317   eP       P         10 40 38.5 -0.8
MKAR  Makanchi Array   92.70 317   eP       P         10 40 38.5 -0.8
      comp=Z,42nm,1.1s
MKAR  Makanchi Array   92.70 317   P        P         10 40 37.9 -1.3
      comp=Z,1.9nm,0.7s,baz=100,slow=5.3,SNR=9.8
ZAA0  Zalesovo Array   92.82 324   eP       P         10 40 39.2 -0.4
      comp=Z,16nm,1.5s
ZALV  Zalesovo Beam    92.82 324   eP       P         10 40 38.1 -1.5
ZALV  Zalesovo Beam    92.82 324   P        P         10 40 37.5 -2.0
      comp=Z,1.2nm,0.7s,baz=103,slow=4.6,SNR=4.5
MAKZ  Makanchi         92.91 317   eP       P         10 40 39.0 -1.3
      comp=Z,13nm,1.1s
PDAR  Pinedale Array   94.17  47   P        P         10 40 45.9 -0.5
      comp=Z,0.7nm,0.8s,baz=238,slow=5.0,SNR=3.2
YKA   Yellowknife Ar   95.28  27   P        P         10 40 49.4 -1.3
      comp=Z,0.2nm,0.7s,baz=261,slow=4.7,SNR=3.0
KURK  Kurchatov        95.86 320   P        P         10 40 53.0 -0.6
KURBB Kurchatov Arra   95.90 320   P        P         10 40 53.0 -0.8
      comp=Z,0.3nm,0.6s,baz=92,slow=4.9,SNR=3.5
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BJI ***06*** *10:33:14.8, 10°.45S×165°.21E, h6^{km}, mB5.9/50, mb5.3/75, Ms5.8/65, Ms7 5.6/62*

IDC ***06*** *10:33:15.2±0.4, 10°.68S×164°.86E, h0^{km}, mb5.2/33, mb1 5.3/35, mb1mx5.2/45, mbtmp5.2/35, ML5.8/2, MS5.6/31, Ms1 5.6/31, ms1mx5.4/51, Error ellipse: s-maj=14.8km s-min=11.0km az=93.0*

ISCJB ***06*** *10:33:16.0±0.1, 10°.66S±0°.02×164°.80E±0°.02, h10^{km}, mb5.5/294, MS5.8/167, Error ellipse: s-maj=3.2km s-min=2.9km az=11.2*

NEIC ***06*** *10:33:17.5±0.1, 10°.64S×164°.77E, h10^{km}, mb5.7/229, MS5.8/117, MW6.0, Error ellipse: s-maj=3.6km s-min=3.2km az=110.0, Moment Tensor Solution. s8 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.31; M$_{\theta\theta}$0.89; M$_{\phi\phi}$-1.20; M$_{r\theta}$0.01; M$_{\theta\phi}$-0.02; M$_{\phi r}$-0.62; Best double couple: M$_{0}$1.20000×10^{18} NP1:φ$_{s}$314.00000°, δ78.00000°, λ-16.00000°. NP2:φ$_{s}$48.00000°, δ74.00000°, λ-168.00000°. Principal axes: T 0.8900, Plg3.0000°, Azm1.0000°; N 0.5300, Plg70.0000°, Azm99.0000°; P -1.4200, Plg20.0000°, Azm270.0000°;*

MOS ***06*** *10:33:19.6±1.1, 10°.61S×164°.72E, h33^{km}, mb5.7/69, MS5.7/19 Error ellipse: s-maj=7.3km s-min=6.3km az=102.4*

GCMT ***06*** *10:33:20.5±0.1, 10°.60S±0°.01×164°.79E±0°.01, h12^{km}, MW5.9/143, Moment Tensor Solution. s60,c85; s143,c283; Duration: 2^{s}1 Moment tensor: Scale 10^{18} Nm; M$_{rr}$0.20±.01; M$_{\theta\theta}$0.66±.01; M$_{\phi\phi}$-0.85±.01; M$_{r\theta}$-0.11±.04; M$_{\theta\phi}$0.11±.01; M$_{\phi r}$-0.26±.04; Best double couple: M$_{0}$0.81600×10^{18} NP1:φ$_{s}$220.00000°, δ88.00000°, λ160.00000°. NP2:φ$_{s}$310.00000°, δ70.00000°, λ2.00000°. Principal axes: T 0.7090, Plg16.0000°, Azm173.0000°; N 0.2150, Plg70.0000°, Azm35.0000°; P -0.9240, Plg13.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 10:33:17.3±0.2**, 10°.66S**±0°.04×**164°.93E**±0°.04**, h10**^{km}**, n785, σ1^{s}60**/719**, mb5.6**/298**, MS5.8**/168**, 24C-27D, Santa Cruz Islands region**

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Code  Station Name        Δ°  AZ°    Phase ID             Time     Res
                                     Op       ISC       h  m  s    ISC
HNR   Honiara           5.06 284   eP       Pn        10 34 34.0 +0.8
HNR   Honiara           5.06 284   ePn      Pn        10 34 32.7 -0.6
HNR                                eSn      Sn        10 35 30.2 -1.6
HNR   Honiara           5.06 284   Pn       Pn        10 34 32.4 -0.9
      451nm,0.3s,baz=153,slow=5.8,SNR=24
HNR                                Sn       Sn        10 35 33.0 +1.2
      600nm,0.3s,baz=3.9,slow=19,SNR=6.6
HNR                                LR       LR        10 36 40.8
      comp=Z,147µm,21.5s,baz=132,slow=41
MARNC Mare, Loyalty    11.16 165   ePn      Pn        10 35 56.9  0.0
DZM   Mont Dzumac      11.44 173   ePn      Pn        10 36 00.2 -0.7
      2µm,1.4s
DZM                                eLR      LR        10 38 35.7
      comp=Z,93µm,23.2s
DZM   Mont Dzumac      11.44 173   ePn      Pn        10 36 00.8  0.0
DZM                                Sn       Sn        10 38 09.2 +0.4
DZM   Mont Dzumac      11.44 173   Pn       Pn        10 36 00.4 -0.5
      60nm,0.3s,baz=16,slow=11,SNR=91
DZM                                Sn       Sn        10 38 09.2 +0.4
      baz=315,slow=16,SNR=3.4
DZM                                LR       LR        10 39 48.4
      comp=Z,68µm,19.7s,baz=16,slow=34
OUENC Ouen Island, N   11.83 171   ePn      Pn        10 36 07.1 +0.9
PINNC Pines Island,    12.12 169   ePn      Pn        10 36 10.3 +0.2
FUNA  Funafuti         14.23  83   ePn      Pn        10 36 39.5 +0.6
TARA  Tarawa           14.35  34   ePn      Pn        10 36 41.0 +0.4
MSVF  Nonsavu          14.53 120   ePn      P         10 36 46.1 -3.6
MSVF  Nonsavu          14.53 120   eP       P         10 36 46.2 -3.6
PATS  Pohnpei          18.59 339   eP       P         10 37 31.8 -3.0
      2µm,2.0s
KWAJ  Kwajalein Atol   19.52   8   eP       P         10 37 43.8 -1.2
      439nm,0.8s
KWAJ  Kwajalein Atol   19.52   8   eP       P         10 37 43.8 -1.2
KWAJ                               pmax     pmax
      comp=Z,439nm,0.8s
CTA   Charters Tower   20.28 240   P        P         10 37 52.2 -1.1
      comp=Z,121nm,1.2s,baz=70,slow=11,SNR=29
CTA                                LR       LR        10 44 26.5
      comp=Z,14µm,21.4s,baz=60,slow=33
CTAO  Charters Tower   20.28 240   eP       P         10 37 52.7 -0.6
      comp=Z,347nm,1.1s
CTAO                               LR       LR
      comp=Z,26µm,22.0s
CTAO  Charters Tower   20.28 240   eP       P         10 37 52.7 -0.6
CTAO                               pmax     pmax
      comp=Z,347nm,1.1s
CTAO                               MLR      MLR
      comp=Z,26µm,22.0s
KNTN  Kanton           24.46  73   eP       P         10 38 36.9 +0.2
      comp=Z,503nm,1.5s
RAO   Raoul Island     24.47 142   PFAKE              10 38 50.0 +13
RAO                                LR       LR
      comp=Z,12µm,21.0s
JAY   Jayapura         25.37 287   P        P         10 38 46.7 +1.7
      comp=Z,2µm,1.1s
OUZ   Omahuta          25.69 163   eP       P         10 38 49.2 +1.6
      comp=Z,274nm,1.3s
GENI  Genyem           25.85 286   P        P         10 38 51.0 +1.7
CAN   Canberra         28.51 208   eP       P         10 39 12.6 -0.4
      comp=Z,64nm,0.9s
CAN   Canberra         28.51 208   eP       P         10 39 12.6 -0.4
CAN                                pmax     pmax
```

	comp=Z,64nm,0.9s						
OPRZ	**Ohinepanea**	**29.01**	**161**	P	P	10 39 22.4	+5.0
H11S2	**WAKE ISLAND Hy**	**29.02**	**3**	T	T	11 09 37.0	
	baz=184,slow=76,SNR=300						
H11S3	**WAKE ISLAND Hy**	**29.03**	**3**	T	T	11 09 37.3	
	baz=184,slow=76,SNR=410						
H11S1	**WAKE ISLAND Hy**	**29.04**	**3**	T	T	11 09 39.8	
	baz=184,slow=76,SNR=382						
OMRZ	**Omania**	**29.19**	**161**	P	P	10 39 25.1	+6.0
HAZ	**Te Kaha**	**29.34**	**159**	P	**P**	**10 39 22.8**	**+2.5**
MXZ	**Matakaoa Point**	**29.36**	**158**	*e*P	**P**	**10 39 21.2**	**+0.7**
	comp=Z,101nm,0.9s						
MXZ	**Matakaoa Point**	**29.36**	**158**	P	**P**	**10 39 22.8**	**+2.3**
PRRZ	**Plateau Road**	**29.56**	**162**	P	**P**	**10 39 25.6**	**+3.4**
URZ	**Urewera**	**29.57**	**160**	*e*P	**P**	**10 39 23.0**	**+0.7**
	comp=Z,108nm,1.1s						
URZ	**Urewera**	**29.57**	**160**	P	**P**	**10 39 23.2**	**+0.9**
	comp=Z,55nm,0.8s,baz=12,slow=5.5,SNR=16						
URZ				LR	LR	10 50 16.5	
	comp=Z,29µm,19.3s,baz=348,slow=34						
URZ	**Urewera**	**29.57**	**160**	P	**P**	**10 39 24.5**	**+2.2**
WMGZ	**Waiomatatini S**	**29.63**	**158**	P	**P**	**10 39 23.3**	**+0.4**
MWZ	**Matawai**	**29.77**	**160**	P	**P**	**10 39 25.3**	**+1.1**
TWGZ	**Tauwhareparae**	**29.79**	**159**	P	**P**	**10 39 25.5**	**+1.1**
PUZ	**Puketiti**	**29.80**	**159**	P	**P**	**10 39 26.7**	**+2.3**
WAKE	**Wake Island**	**29.81**	**3**	*e*P	**P**	**10 39 24.8**	**+0.2**
	comp=Z,273nm,1.3s						
HATZ	**Hinemaiaia**	**29.82**	**162**	P	**P**	**10 39 28.2**	**+3.5**
RTZ	**Ruatahuna**	**29.85**	**161**	P	**P**	**10 39 26.6**	**+1.7**
TKGZ	**Te Karaka**	**29.98**	**159**	P	**P**	**10 39 28.3**	**+2.4**
SNGZ	**Shannon Statio**	**30.12**	**160**	P	**P**	**10 39 28.6**	**+1.3**
RAHZ	**Arahi**	**30.16**	**161**	P	**P**	**10 39 28.8**	**+1.2**
STKA	**Stephens Creek**	**30.18**	**222**	*e*P	**P**	**10 39 27.5**	**-0.3**
	comp=Z,25nm,0.8s						
STKA	**Stephens Creek**	**30.18**	**222**	*e*P	**P**	**10 39 27.5**	**-0.3**
STKA				pmax	pmax		
	comp=Z,25nm,0.8s						
STKA	**Stephens Creek**	**30.18**	**222**	P	**P**	**10 39 27.5**	**-0.3**
	comp=Z,87nm,0.7s,baz=31,slow=8.8,SNR=52						
STKA				LR	LR	10 51 46.1	
	comp=Z,11µm,18.4s,baz=40,slow=37						
RIGZ	**Rimuhau**	**30.19**	**160**	P	**P**	**10 39 28.8**	**+0.9**
BKZ	**Black Stump Fm**	**30.20**	**162**	*e*P	**P**	**10 39 29.4**	**+1.4**
	comp=Z,130nm,1.1s						
BKZ				*e*S	**S**	**10 44 31.8**	**+4.4**
BKZ	**Black Stump Fm**	**30.20**	**162**	P	**P**	**10 39 28.9**	**+0.9**
NMHZ	**Naumai**	**30.23**	**161**	P	**P**	**10 39 30.5**	**+2.2**
H11N1	**WAKE ISLAND Hy**	**30.25**	**4**	T	T	11 11 08.5	
	baz=184,slow=76,SNR=188						
H11N3	**WAKE ISLAND Hy**	**30.25**	**4**	T	T	11 11 07.1	
	baz=184,slow=76,SNR=249						
H11N2	**WAKE ISLAND Hy**	**30.27**	**4**	T	T	11 11 07.3	
	baz=184,slow=76,SNR=206						
WRAB	**Tennant Creek**	**30.85**	**249**	*e*P	**P**	**10 39 31.9**	**-2.1**
	comp=Z,90nm,1.3s						
WRAB				LR	LR		
	comp=Z,25µm,19.0s						
WRAB	**Tennant Creek**	**30.85**	**249**	⇑*e*P	**P**	**10 39 31.4**	**-2.6**
WRAB				pmax	pmax		
	comp=Z,65nm,1.5s						
WB2	**Warramunga Arr**	**30.86**	**249**	*e*P	**P**	**10 39 31.4**	**-2.6**
	comp=Z,98nm,1.2s						
WB2				*e*PcP	**PcP**	**10 42 32.5**	**+1.5**
WRA	**Warramunga Arr**	**30.87**	**249**	P	**P**	**10 39 31.8**	**-2.4**
	comp=Z,11nm,0.6s,baz=79,slow=9.2,SNR=62						
WRA				PcP	**PcP**	**10 42 31.3**	**+0.2**
	comp=Z,6.5nm,0.9s,baz=76,slow=2.8,SNR=4.6						
WRA				LR	LR	10 52 00.7	
	comp=Z,26µm,18.2s,baz=70,slow=36						
GUMO	**Guam**	**31.25**	**320**	PFAKE		10 39 50.0	+13
GUMO				LR	LR		
	comp=Z,15µm,22.0s						
GUMO	**Guam**	**31.25**	**320**	LR	LR	10 51 45.7	
	comp=Z,9µm,18.8s,baz=142,slow=36						
BFZ	**Birch Farm**	**31.53**	**163**	*e*P	**P**	**10 39 40.9**	**+1.3**
	comp=Z,82nm,0.8s						
SNZO	**South Karori**	**31.72**	**166**	*e*P	**P**	**10 39 43.1**	**+1.8**
	comp=Z,101nm,1.0s						
THZ	**Tophouse**	**31.76**	**169**	*e*P	**P**	**10 39 43.5**	**+1.7**
	comp=Z,98nm,1.0s						
AS01	**Alice Springs**	**32.21**	**242**	*e*P	**P**	**10 39 43.3**	**-2.6**
AS31	**Alice Springs**	**32.25**	**242**	*e*P	**P**	**10 39 42.4**	**-3.9**
	comp=Z,7.4nm,0.9s						
ASAR	**Alice Springs**	**32.25**	**242**	P	**P**	**10 39 43.1**	**-3.2**
	comp=Z,8.0nm,0.6s,baz=63,slow=9.9,SNR=69						
ASAR				PcP	**PcP**	**10 42 33.6**	**-1.2**
	comp=Z,6.0nm,0.8s,baz=73,slow=2.7,SNR=6.2						
ASAR				LR	LR	10 51 20.6	
	comp=Z,11µm,20.0s,baz=70,slow=34						
KHZ	**Kahutara**	**32.52**	**168**	*e*P	**P**	**10 39 48.8**	**+0.6**
	comp=Z,109nm,1.2s						
LTZ	**Lake Taylor**	**32.63**	**170**	*e*P	**P**	**10 39 50.7**	**+1.3**
	comp=Z,73nm,0.9s						
ANA2	**Anatahan**	**32.89**	**324**	*e*P	**P**	**10 39 53.0**	**+1.2**
	comp=Z,301nm,1.3s						
FOZ	**Fox Glacier**	**33.02**	**173**	*e*P	**P**	**10 39 54.2**	**+1.5**
	comp=Z,110nm,1.0s						
OXZ	**Oxford**	**33.12**	**170**	*e*P	**P**	**10 39 55.0**	**+1.4**
	comp=Z,70nm,0.7s						
FAKI	**Fak Fak**	**33.32**	**281**	P	**P**	**10 39 57.1**	**+1.4**
RPZ	**Rata Peaks**	**33.35**	**172**	*e*P	**P**	**10 39 55.9**	**+0.3**
	comp=Z,70nm,0.7s						
RPZ	**Rata Peaks**	**33.35**	**172**	P	**P**	**10 39 55.2**	**-0.5**
	comp=Z,50nm,0.8s,baz=49,slow=5.0,SNR=17						
RPZ				LR	LR	10 52 09.3	
	comp=Z,21µm,20.2s,baz=338,slow=34						
CRLZ	**Canterbury Las**	**33.46**	**170**	*e*P	**P**	**10 39 56.0**	**-0.5**
	comp=Z,396nm,1.7s						
MQZ	**McQueen's Vall**	**33.59**	**170**	*e*P	**P**	**10 39 58.8**	**+1.2**
	comp=Z,73nm,1.0s						
WKZ	**Wanaka**	**34.22**	**175**	*e*P	**P**	**10 40 05.3**	**+2.1**
	comp=Z,305nm,1.8s						
ODZ	**Otahua Downs**	**34.61**	**173**	*e*P	**P**	**10 40 07.0**	**+0.6**
	comp=Z,36nm,0.9s						
DCZ	**Deep Cove**	**34.73**	**177**	*e*P	**P**	**10 40 07.1**	**-0.4**
	comp=Z,84nm,1.2s						
BNDI	**Bandanaira**	**35.23**	**277**	P	**P**	**10 40 13.6**	**+1.4**
RAR	**Rarotonga**	**35.44**	**112**	PFAKE		10 40 30.0	+16
RAR				LR	LR		
	comp=Z,11µm,20.0s						
RAR	**Rarotonga**	**35.44**	**112**	LR	LR	10 51 43.0	
	comp=Z,8µm,20.8s,baz=279,slow=31						
TAU	**Tasmania Unive**	**35.60**	**202**	*e*P	**P**	**10 40 15.6**	**+0.5**
	comp=Z,159nm,1.4s						
TAU				LR	LR		
	comp=Z,6µm,20.0s						
TAU	**Tasmania Unive**	**35.60**	**202**	*e*P	**P**	**10 40 15.6**	**+0.5**
TAU				pmax	pmax		
	comp=Z,159nm,1.4s						
TAU				MLR	MLR		
	comp=Z,6µm,20.0s						
JOHN	**Johnston Islan**	**37.14**	**43**	PFAKE		10 40 40.0	+12
JOHN				LR	LR		
	comp=Z,458nm,19.0s						
NLAI	**Namlea**	**38.24**	**278**	P	**P**	**10 40 39.2**	**+1.3**
FITZ	**Fitzroy Crossi**	**38.71**	**254**	LR	LR	10 56 05.3	
	comp=Z,13µm,19.6s,baz=78,slow=36						
SANI	**Sanana**	**39.59**	**280**	P	**P**	**10 40 49.8**	**+0.5**
	comp=Z,80nm,1.1s,comp=Z,2µm						
SOEI	**Soe**	**40.01**	**268**	P	**P**	**10 40 53.8**	**+0.9**
BATI	**Baumata**	**40.57**	**267**	LR	LR	10 58 02.0	
	comp=Z,9µm,20.7s,baz=116,slow=37						
MMRI	**Maumere**	**42.11**	**269**	P	**P**	**10 41 10.1**	**0.0**
	comp=Z,93nm,1.1s						
MIDW	**Midway**	**42.28**	**24**	PFAKE		10 41 20.0	+8.9
MIDW				LR	LR		
	comp=Z,6µm,19.0s						
EDFI	**Ende, Flores**	**42.64**	**269**	P	**P**	**10 41 14.0**	**-0.5**
	comp=Z,33nm,1.5s,comp=Z,3µm						
DAV	**Davao City (W)**	**42.95**	**293**	PFAKE		10 41 30.0	+13
DAV				LR	LR		
	comp=Z,2µm,20.0s						
LUWI	**Luwuk**	**42.96**	**280**	*e*P	**P**	**10 41 15.9**	**-1.1**
	comp=Z,419nm,1.5s						
LUWI	**Luwuk**	**42.96**	**280**	P	**P**	**10 41 18.2**	**+1.2**
JCJ	**Chichijima**	**43.54**	**330**	LR	LR	10 58 20.9	
	comp=Z,3µm,21.1s,baz=144,slow=35						
MBWA	**Marble Bar**	**44.56**	**251**	*e*P	**P**	**10 41 29.5**	**-0.4**
	comp=Z,41nm,1.1s						
MBWA				LR	LR		
	comp=Z,14µm,21.0s						
PPT	**Papeete**	**44.56**	**104**	LR	LR	10 55 53.8	
	comp=Z,8µm,19.6s,baz=249,slow=30						
PPT2	**Papeete2**	**44.56**	**104**	*e*LR	LR	10 53 59.3	
	comp=Z,15µm,22.5s,baz=277						
BNSI	**Bone**	**44.83**	**274**	P	**P**	**10 41 32.1**	**+0.1**
	comp=Z,72nm,1.0s						
KAPI	**Kappang**	**45.07**	**274**	PFAKE		10 41 40.0	+6.1
KAPI				LR	LR		
	comp=Z,7µm,21.0s						
TBI	**Tubuai**	**45.22**	**112**	*e*LQ	LQ	10 52 26.4	
	comp=Z,26µm,30.5s						
TBI				*e*LR	LR	10 54 20.7	
	comp=Z,28µm,27.5s,baz=284						
PCI	**Palu**	**45.84**	**279**	P	**P**	**10 41 41.1**	**+1.1**
	comp=Z,154nm,1.1s						
PLAI	**Plampang**	**46.48**	**268**	P	**P**	**10 41 46.0**	**+0.9**
RCP	**Roxas**	**47.38**	**297**	⇑*e*P	**P**	**10 41 54.1**	**+2.0**
KIP	**Kipapa**	**48.38**	**49**	*e*P	**P**	**10 42 00.5**	**+0.8**
KIP				LR	LR		
	comp=Z,6µm,19.0s						
KIP	**Kipapa**	**48.38**	**49**	⇑*e*P	**P**	**10 42 01.1**	**+1.4**
SMKI	**Samarinda**	**48.50**	**279**	P	**P**	**10 42 01.9**	**+1.1**
OPA	**Opana**	**48.55**	**48**	*e*P	**P**	**10 42 00.8**	**-0.2**
	comp=Z,279nm,0.9s						
OPA	**Opana**	**48.55**	**48**	*e*P	**P**	**10 42 00.8**	**-0.2**
OPA				pmax	pmax		
	comp=Z,279nm,0.9s						
KHLU	**Kahalu`u**	**48.92**	**52**	*e*P	**P**	**10 42 04.1**	**+0.1**
	comp=Z,500nm,1.6s						
KHU	**Kahuku**	**48.94**	**53**	*e*P	**P**	**10 42 05.2**	**+0.8**
	comp=Z,997nm,1.6s						
KHU	**Kahuku**	**48.94**	**53**	*e*P	**P**	**10 42 05.2**	**+0.8**
KHU				pmax	pmax		
	comp=Z,997nm,1.6s						
NWAO	**Narrogin (SRO)**	**49.01**	**235**	*e*P	**P**	**10 42 03.8**	**-0.7**
	comp=Z,126nm,1.4s						
NWAO				LR	LR		
	comp=Z,17µm,19.0s						
NWAO	**Narrogin (SRO)**	**49.01**	**235**	*e*P	**P**	**10 42 03.8**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,126nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,17µm,19.0s						
NWAO	**Narrogin (SRO)**	**49.01**	**235**	P	**P**	**10 42 05.1**	**+0.5**
NWAO	**Narrogin (SRO)**	**49.01**	**235**	P	**P**	**10 42 02.2**	**-2.4**
	comp=Z,64nm,1.2s,baz=45,slow=5.7,SNR=3.2						
SRBI	**Singaraja**	**49.08**	**269**	P	**P**	**10 42 06.2**	**+0.9**
MWH	**Moku'aweowe**	**49.09**	**53**	*e*P	**P**	**10 42 03.8**	**-2.1**
	comp=Z,637nm,1.7s						
HMH	**Humu'ula Sheep**	**49.24**	**52**	*e*P	**P**	**10 42 06.7**	**0.0**
	comp=Z,376nm,1.1s						
POHA	**Pohakuloa**	**49.29**	**52**	*e*P	**P**	**10 42 07.3**	**+0.3**
	comp=Z,370nm,1.4s						
POHA				LR	LR		
	comp=Z,5µm,19.0s						
JAGI	**Jajag, Banyuwa**	**50.08**	**268**	*e*P	**P**	**10 42 11.2**	**-1.7**
	comp=Z,48nm,0.8s						
TGY	**Tagaytay City**	**50.09**	**299**	LR	LR	11 00 35.9	
	comp=Z,9µm,21.8s,baz=124,slow=33						
KKM	**Kota Kinabalu**	**51.26**	**287**	*e*P	**P**	**10 42 21.4**	**-0.5**
	comp=Z,184nm,1.2s						
INU	**Inuyama**	**52.83**	**331**	*e*P	**P**	**10 42 33.1**	**0.0**
	comp=Z,101nm,1.3s						
PCJI	**Pacitan**	**53.03**	**268**	P	**P**	**10 42 35.1**	**+0.1**
	comp=Z,108nm,0.8s						
MJAR	**Matsushiro Arr**	**53.27**	**333**	P	**P**	**10 42 34.6**	**-1.7**
	comp=Z,55nm,1.3s,baz=168,slow=6.3,SNR=17						
MAJO	**Matsushiro**	**53.27**	**333**	*e*P	**P**	**10 42 34.6**	**-1.7**
	comp=Z,133nm,1.5s						
MAJO				LR	LR		
	comp=Z,5µm,21.0s						
MAJO	**Matsushiro**	**53.27**	**333**	⇓*e*P	**P**	**10 42 35.2**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,96nm,1.5s						
MAT	**Matsushiro**	**53.27**	**333**	P	**P**	**10 42 35.2**	**-1.2**
MJB9	**Matsu-Tunnel**	**53.27**	**333**	*e*P	**P**	**10 42 34.5**	**-1.9**
	comp=Z,142nm,1.6s						
UGM	**Wanagama**	**53.71**	**268**	*e*P	**P**	**10 42 38.6**	**-1.4**
	comp=Z,146nm,1.0s						
YOJ	**Yonaguni jima**	**53.79**	**311**	*e*P	**P**	**10 42 39.0**	**-1.3**
	comp=Z,290nm,1.2s						
YOJ	**Yonaguni jima**	**53.79**	**311**	*e*P	**P**	**10 42 39.0**	**-1.3**
YOJ				pmax	pmax		
	comp=Z,291nm,1.2s						
SBUM	**Sibu**	**54.04**	**281**	*e*P	**P**	**10 42 42.5**	**+0.1**
	comp=Z,20nm,1.1s						
TAOE	**Nuku Hiva Isla**	**54.10**	**93**	*e*S	**S**	**10 50 21.4**	**+1.3**
	comp=Z,3µm,27.3s						
TAOE				*e*LR	LR	10 58 27.0	
	comp=Z,10µm,26.8s,baz=271						
JNU	**Nakatsue**	**54.31**	**325**	*e*P	**P**	**10 42 43.6**	**-0.5**
	comp=Z,150nm,0.9s						
JNU	**Nakatsue**	**54.31**	**325**	P	**P**	**10 42 43.8**	**-0.3**
	comp=Z,132nm,0.9s,baz=110,slow=3.9,SNR=25						
JNU				LR	LR	11 03 18.1	
	comp=Z,3µm,20.1s,baz=134,slow=33						
TWG	**Pinlang**	**54.34**	**308**	*e*P	**P**	**10 42 43.6**	**-0.8**
	comp=Z,375nm,1.5s						
YULB	**Yu-li**	**54.47**	**309**	*e*P	**P**	**10 42 43.8**	**-1.7**
	comp=Z,88nm,1.0s						
NACB	**Ninganchiao**	**54.68**	**310**	*e*P	**P**	**10 42 45.4**	**-1.5**
	comp=Z,84nm,0.9s						
TPUB	**Ta-pu**	**54.94**	**308**	*e*P	**P**	**10 42 48.6**	**-0.2**
	comp=Z,171nm,1.1s						
SSLB	**Suanglung**	**54.95**	**309**	*e*P	**P**	**10 42 47.9**	**-1.0**
	comp=Z,75nm,1.1s						
YHNB	**Yeheng**	**55.12**	**310**	*e*P	**P**	**10 42 50.8**	**+0.6**
	comp=Z,527nm,1.7s						
KSM	**Kuching**	**55.65**	**279**	*e*P	**P**	**10 42 52.4**	**-1.7**
	comp=Z,81nm,1.1s						
ERM	**Erimo**	**56.11**	**341**	*e*P	**P**	**10 42 57.6**	**+0.8**
	comp=Z,152nm,1.4s						
ERM				LR	LR		
	comp=Z,4µm,22.0s						
ERM	**Erimo**	**56.11**	**341**	*e*P	**P**	**10 42 57.6**	**+0.8**
ERM				pmax	pmax		
	comp=Z,152nm,1.4s						
ERM				MLR	MLR		
	comp=Z,4µm,22.0s						
CISI	**Cisompet, Garu**	**56.42**	**268**	*e*P	**P**	**10 42 58.1**	**-1.6**
	comp=Z,113nm,1.1s						
CISI	**Cisompet, Garu**	**56.42**	**268**	P	**P**	**10 43 00.0**	**+0.3**
	comp=Z,103nm,1.2s,comp=Z,4µm						
ASAJ	**Asahikawa**	**58.17**	**341**	P	**P**	**10 43 11.4**	**0.0**
	comp=Z,60nm,0.8s,baz=217,slow=10,SNR=28						
ASAJ				LR	LR	11 04 30.7	
	comp=Z,7µm,20.7s,baz=160,slow=32						
RKT	**Rikitea**	**58.47**	**111**	*e*LQ	LQ	10 58 00.5	
	comp=Z,8µm,30.5s						
RKT				*e*LR	LR	11 00 25.2	
	comp=Z,13µm,30.2s,baz=273						
SSE	**Sheshan**	**59.02**	**316**	P	**P**	**10 43 19.2**	**+1.6**
SSE				pmax	pmax		
	comp=Z,28nm,0.9s						
SSE				pmax	pmax		
	comp=Z,320nm,5.6s						
SSE	**Sheshan**	**59.02**	**316**	*e*P	**P**	**10 43 16.7**	**-0.9**
	comp=Z,63nm,0.9s						
KSRS	**Korea Array**	**59.11**	**326**	P	**P**	**10 43 17.8**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,18nm,0.9s						
KSRS	**Korea Array**	**59.11**	**326**	P	**P**	**10 43 17.8**	**-0.3**
	comp=Z,16nm,0.9s,baz=142,slow=6.7,SNR=36						
KS15	**Wonju Array Si**	**59.13**	**326**	*e*P	**P**	**10 43 18.4**	**+0.2**
KSAR	**Wonju Array Be**	**59.13**	**326**	P	**P**	**10 43 17.8**	**-0.4**
KSAR	**Wonju Array Be**	**59.13**	**326**	P	**P**	**10 43 17.8**	**-0.4**
KS01	**Wonju Array Si**	**59.15**	**326**	*e*P	**P**	**10 43 17.5**	**-0.8**
HKC	**Hong Kong Obse**	**59.57**	**304**	⇓P	**P**	**10 43 24.0**	**+2.5**
MDSI	**Maura Dua**	**60.46**	**271**	P	**P**	**10 43 28.6**	**+0.8**
GZH	**Guangzhou**	**60.61**	**304**	P	**P**	**10 43 27.9**	**-0.8**
GZH				PcS	**PcS**	**10 48 14.2**	**-1.6**
GZH				S	**S**	**10 51 42.8**	**-2.4**
GZH				LR	LR		
	comp=Z,2µm,19.4s						
GZH				LR	LR		
	comp=Z,3µm,17.5s						
YSS	**Yuzh-Sakhalins**	**60.69**	**343**	*e*P	**P**	**10 43 28.6**	**0.0**
	comp=Z,138nm,1.2s						
YSS	**Yuzh-Sakhalins**	**60.69**	**343**	⇓*e*P	**P**	**10 43 28.8**	**+0.1**
YSS				*e*		10 43 37.9	
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				MLR	MLR		
	comp=Z,3µm,21.0s						
NJ2	**Nanjing**	**61.19**	**316**	*e*P	**P**	**10 43 34.8**	**+2.4**
NJ2				pP	**pwP**	**10 43 39.6**	**+0.6**
NJ2				S	**S**	**10 51 54.8**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,70nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,1µm,6.9s						
NJ2				LR	LR		
	comp=Z,3µm,17.7s						
NJ2				LR	LR		
	comp=Z,5µm,15.2s						
NJ2				LR	LR		
	comp=Z,3µm,19.1s						
VLA	**Vladivostok**	**61.44**	**333**	⇓*e*P	**P**	**10 43 34.7**	**+0.8**
VLA				pmax	pmax		
	comp=Z,126nm,1.8s						
QIZ	**Qiongzhong**	**61.80**	**298**	P	**P**	**10 43 39.6**	**+2.8**
QIZ				S	**S**	**10 52 03.4**	**+2.9**
QIZ				pmax	pmax		
	comp=Z,60nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,570nm,4.0s						
QIZ				LR	LR		
	comp=Z,2µm,18.1s						
QIZ				LR	LR		
	comp=Z,4µm,23.5s						
QIZ				LR	LR		
	comp=Z,6µm,24.5s						
QIZ	**Qiongzhong**	**61.80**	**298**	*e*P	**P**	**10 43 38.1**	**+1.3**
	comp=Z,72nm,1.4s						
QIZ				LR	LR		
	comp=Z,668nm,22.0s						
MYKOM	**Kota Tinggi**	**62.00**	**278**	*e*P	**P**	**10 43 37.5**	**-0.8**
	comp=Z,37nm,1.1s						
USA0B	**Ussuriysk Arra**	**62.25**	**334**	*e*P	**P**	**10 43 39.6**	**+0.2**
	comp=Z,144nm,1.4s						
USRK	**Ussuriysk Ar.**	**62.25**	**334**	P	**P**	**10 43 39.4**	**+0.1**
	comp=Z,13nm,0.8s,baz=134,slow=5.5,SNR=29						
USRK				LR	LR	11 07 54.5	
	comp=Z,2µm,20.8s,baz=137,slow=33						
MASI	**Maura Aman, Be**	**62.59**	**272**	P	**P**	**10 43 42.8**	**+0.5**
	comp=Z,138nm,0.9s,comp=Z,4µm						
PTCN	**Pitcairn Islan**	**62.96**	**113**	PFAKE		10 44 00.0	+15
PTCN				LR	LR		
	comp=Z,9µm,20.0s						
WHN	**Wuhan**	**63.54**	**312**	⇑P	**P**	**10 43 50.1**	**+1.9**
MDJ	**Mudanjiang**	**63.64**	**333**	P	**P**	**10 43 51.5**	**+2.9**
MDJ				pmax	pmax		
	comp=Z,62nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,690nm,3.0s						
MDJ	**Mudanjiang**	**63.64**	**333**	*e*P	**P**	**10 43 48.8**	**+0.2**
	comp=Z,106nm,1.4s						
MDJ				LR	LR		
	comp=Z,3µm,20.0s						
PET	**Petropavlovsk**	**63.66**	**356**	PFAKE		10 44 00.0	+11
PET				LR	LR		
	comp=Z,6µm,21.0s						
PET	**Petropavlovsk**	**63.66**	**356**	*e*P	**P**	**10 43 48.5**	**0.0**
PET				*e*S	**S**	**10 52 17.3**	**-5.3**
DL2	**Dalian**	**63.70**	**323**	P	**P**	**10 43 47.2**	**-1.9**
DL2				S	**S**	**10 52 18.8**	**-4.8**
DL2				pmax	pmax		
	comp=Z,74nm,1.2s						
DL2				pmax	pmax		
	comp=Z,510nm,6.5s						
DL2				LR	LR		
	comp=Z,2µm,15.6s						
DL2				LR	LR		
	comp=Z,2µm,25.6s						
DL2				LR	LR		
	comp=Z,4µm,23.3s						
PEA0B	**Petropavlovsk-**	**63.82**	**355**	*e*P	**P**	**10 43 49.4**	**-0.2**
	comp=Z,209nm,1.5s						
PETK	**Petropavlovsk-**	**63.82**	**355**	P	**P**	**10 43 49.6**	**0.0**
	comp=Z,14nm,0.7s,baz=174,slow=6.1,SNR=8.2						
PETK				LR	LR	11 06 07.1	
	comp=Z,6µm,20.9s,baz=183,slow=31						
TYV	**Tymovskoe**	**64.27**	**345**	*e*P	**P**	**10 43 52.9**	**+0.4**
TYV				pmax	pmax		
	comp=Z,500nm,4.2s						
TYV				pmax	pmax		
	comp=Z,31nm,1.7s						
ADK	**Adak**	**64.29**	**13**	PFAKE		10 44 10.0	+17
ADK				LR	LR		
	comp=Z,9µm,21.0s						
BKNI	**Bangkinang**	**64.44**	**276**	P	**P**	**10 43 55.3**	**+0.8**
SNY	**Shenyang**	**64.58**	**327**	⇑P	**P**	**10 43 56.9**	**+2.1**
SNY				pmax	pmax		
	comp=Z,27nm,1.5s						
TIA	**Tai'an**	**64.80**	**319**	P	**P**	**10 43 57.9**	**+1.5**
TIA				S	**S**	**10 52 41.5**	**+4.0**
TIA				pmax	pmax		
	comp=Z,13nm,1.5s						
TIA				pmax	pmax		
	comp=Z,340nm,6.7s						
TIA				LR	LR		
	comp=Z,1µm,17.0s						
TIA				LR	LR		
	comp=Z,2µm,17.1s						
TIA				LR	LR		
	comp=Z,3µm,18.9s						
CN2	**Changchun**	**65.01**	**329**	*e*P	**P**	**10 43 57.2**	**-0.4**
CN2				*e*sP	pwP	10 44 03.9	-0.3
CN2				pmax	pmax		
	comp=Z,50nm,0.9s						
CN2				pmax	pmax		
	comp=Z,700nm,7.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,3µm,18.0s						
IPM	**Ipoh**	**65.37**	**280**	*e*P	**P**	**10 43 59.1**	**-1.4**
	comp=Z,144nm,1.2s						
KULM	**Kulim**	**65.92**	**281**	*e*P	**P**	**10 44 03.0**	**-1.1**
	comp=Z,106nm,1.5s						
GRNR	**Gornyy**	**66.02**	**341**	*e*P	**P**	**10 44 04.0**	**0.0**
GRNR				pmax	pmax		
	comp=Z,25nm,1.2s						
SKNT	**Sakolnakorn**	**66.21**	**294**	P	**P**	**10 44 06.1**	**+0.2**
	comp=Z,57nm,1.4s,comp=Z,961nm						
KLR	**Kul'dur**	**66.39**	**337**	*ce*P	**P**	**10 44 05.8**	**-0.6**
KLR	**Kul'dur**	**66.39**	**337**	P	**P**	**10 44 06.3**	**-0.1**
	comp=Z,18nm,0.9s,baz=131,slow=6.1,SNR=20						
CASY	**Casey**	**66.44**	**201**	*e*P	**P**	**10 44 06.2**	**-0.3**
	comp=Z,95nm,1.2s						
CASY				LR	LR		
	comp=Z,650nm,19.0s						
COCO	**West Island**	**66.60**	**261**	PFAKE		10 44 20.0	+12
COCO				LR	LR		
	comp=Z,4µm,19.0s						
NKL	**Nikolayevsk**	**66.86**	**344**	*e*P	**P**	**10 44 09.0**	**-0.2**
NKL				pmax	pmax		
	comp=Z,25nm,1.0s						
VNDA	**Vanda**	**66.86**	**181**	*e*P	**P**	**10 44 09.4**	**+0.3**
	comp=Z,99nm,1.1s						
VNDA	**Vanda**	**66.86**	**181**	*e*P	**P**	**10 44 09.4**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,99nm,1.1s						
VNDA	**Vanda**	**66.86**	**181**	P	**P**	**10 44 08.8**	**-0.2**
	comp=Z,36nm,1.2s,baz=9.4,slow=9.8,SNR=6.8						
VNDA				LR	LR	11 10 44.3	
	comp=Z,4µm,18.1s,baz=3.5,slow=34						
SRAK	**Srakaew**	**67.01**	**290**	P	**P**	**10 44 09.7**	**-1.3**
	comp=Z,79nm,1.3s,comp=Z,815nm						
PSI	**Prapat**	**67.03**	**278**	P	**P**	**10 44 09.3**	**-2.0**
	comp=Z,25nm,1.1s,baz=180,slow=4.7,SNR=15						
ENH	**Enshi**	**67.04**	**309**	*e*P	**P**	**10 44 10.6**	**-0.4**
	comp=Z,146nm,1.2s						
ENH				LR	LR		
	comp=Z,2µm,20.0s						
SBA	**Scott Base**	**67.18**	**180**	PFAKE		10 44 20.0	+8.9
SBA				LR	LR		
	comp=Z,4µm,19.0s						
NIKH	**Nikolski High**	**67.24**	**17**	*e*P	**P**	**10 44 11.1**	**-0.6**
	comp=Z,413nm,1.2s						
GYA	**Guiyang**	**67.54**	**304**	⇑*i*P	**P**	**10 44 14.4**	**0.0**
GYA				PP	**PP**	**10 46 47.0**	**+3.5**
GYA				S	**S**	**10 53 11.2**	**-0.2**
GYA				SKS	**SKSac**	**10 54 10.8**	**-2.1**
GYA				SS	**SS**	**10 57 33.3**	**+1.0**
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,6.7s						
GYA				LR	LR		
	comp=Z,890nm,18.0s						
GYA				LR	LR		
	comp=Z,920nm,18.6s						
GYA				LR	LR		
	comp=Z,860nm,18.4s						
CHAI	**Chaiyaphum**	**67.66**	**292**	P	**P**	**10 44 15.4**	**+0.3**
	comp=Z,12nm,0.9s,comp=Z,172nm						
BJT	**Baijiatuau**	**67.68**	**321**	*e*P	**P**	**10 44 13.6**	**-1.2**

	comp=Z,156nm,1.6s						
BJT				LR	LR		
	comp=Z,6µm,20.0s						
BJT	**Baijiatuau**	67.68	321	*e*P	**P**	10 44 13.6	-1.2
BJT				pmax	pmax		
	comp=Z,156nm,1.6s						
BJT				MLR	MLR		
	comp=Z,6µm,20.0s						
BJI	**Beijing**	67.69	321	P	**P**	10 44 17.1	+2.3
BJI				S	**S**	10 53 16.8	+4.5
BJI				pmax	pmax		
	comp=Z,32nm,1.6s						
BJI				LR	LR		
	comp=Z,3µm,24.2s						
BJI				LR	LR		
	comp=Z,2µm,22.6s						
BJI				LR	LR		
	comp=Z,5µm,27.9s						
PATY	**Pattaya**	67.77	289	P	**P**	10 44 17.7	+1.8
	comp=Z,34nm,0.8s						
GSI	**Gunungsitoli**	68.03	276	*e*P	**P**	10 44 16.7	-0.9
	comp=Z,118nm,1.2s						
UNV	**Unalaska Valle**	68.69	18	*e*P	**P**	10 44 21.4	+0.6
	comp=Z,95nm,1.2s						
TIY	**Taiyuan**	68.74	318	*e*P	**P**	10 44 24.5	+2.9
TIY				pmax	pmax		
	comp=Z,25nm,0.5s						
TIY				LR	LR		
	comp=Z,2µm,15.7s						
TIY				LR	LR		
	comp=Z,2µm,15.8s						
TIY				LR	LR		
	comp=Z,6µm,22.5s						
PKDT	**Phuket**	68.79	283	P	P	10 44 35.6	+13
PBKT	**Sadao Pong**	68.80	292	*e*P	**P**	10 44 21.8	-0.4
	comp=Z,264nm,1.8s						
PBKT	**Sadao Pong**	68.80	292	P	**P**	10 44 22.8	+0.6
	comp=Z,56nm,1.1s,comp=Z,1µm						
PHET	**Kaeng Krachan**	68.92	288	P	**P**	10 44 24.5	+1.4
	comp=Z,15nm,1.0s,comp=Z,251nm						
XAN	**Xi'an**	69.28	313	P	**P**	10 44 24.9	-0.1
XAN				PcP	**PcP**	10 44 48.3	-0.3
XAN				pmax	pmax		
	comp=Z,47nm,1.5s						
XAN				pmax	pmax		
	comp=Z,630nm,3.6s						
XAN				LR	LR		
	comp=Z,1µm,19.5s						
XAN				LR	LR		
	comp=Z,2µm,18.4s						
XAN				LR	LR		
	comp=Z,3µm,18.4s						
XAN	**Xi'an**	69.28	313	*e*P	**P**	10 44 24.0	-1.0
	comp=Z,649nm,1.5s						
XAN	**Xi'an**	69.28	313	*e*P	**P**	10 44 24.0	-1.0
XAN				pmax	pmax		
	comp=Z,649nm,1.5s						
UTTA	**Uttaradit**	69.55	293	P	**P**	10 44 28.0	+1.1
	comp=Z,11nm,1.3s,comp=Z,122nm						
SRDT	**SRDT**	69.81	290	P	**P**	10 44 29.7	+1.1
	comp=Z,69nm,1.3s,comp=Z,2µm						
KMI	**Kunming**	70.24	302	P	**P**	10 44 32.3	+1.0
KMI				pP	pwP	10 44 38.6	+0.8
KMI				sP	sP	10 44 41.0	+6.6
KMI				S	**S**	10 53 46.7	+3.0
KMI				pmax	pmax		
	comp=Z,120nm,1.4s						
KMI				pmax	pmax		
	comp=Z,600nm,3.6s						
KMI				LR	LR		
	comp=Z,2µm,23.6s						
KMI				LR	LR		
	comp=Z,2µm,19.2s						
KMI				LR	LR		
	comp=Z,4µm,20.2s						
FALS	**False Pass**	70.50	19	*e*P	**P**	10 44 32.5	+0.5
	comp=Z,129nm,1.0s						
UMPA	**Umpang Tak**	70.61	291	P	**P**	10 44 35.2	+1.7
	comp=Z,9.3nm,1.3s						
SPIA	**Saint Paul Isl**	70.63	14	*e*P	**P**	10 44 32.1	-0.6
	comp=Z,162nm,1.0s						
MA2	**Magadan**	70.93	352	*e*P	**P**	10 44 32.9	-1.6
	comp=Z,143nm,2.0s						
MA2				LR	LR		
	comp=Z,9µm,22.0s						
MA2	**Magadan**	70.93	352⇓	*e*P	**P**	10 44 35.3	+0.8
MA2				pmax	pmax		
	comp=Z,63nm,1.9s						
MA2	**Magadan**	70.93	352	P	**P**	10 44 33.8	-0.7
	comp=Z,2.8nm,0.3s,baz=342,slow=2.8,SNR=5.6						
MA2				LR	LR	11 10 14.5	
	comp=Z,7µm,21.8s,baz=176,slow=31						
HHC	**Hu-ho-hao-te**	71.03	320	*e*P	**P**	10 44 38.4	+2.7
HHC				pP	pwP	10 44 43.1	+0.9
HHC				sP	sP	10 44 45.4	+6.7
HHC				S	**S**	10 53 53.2	+1.2
HHC				pmax	pmax		
	comp=Z,43nm,1.2s						
HHC				pmax	pmax		
	comp=Z,610nm,6.0s						
HHC				LR	LR		
	comp=Z,2µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,18.2s						
HHC				LR	LR		
	comp=Z,3µm,17.7s						
CM01	**Chiang Mai Arr**	71.20	294	*e*P	**P**	10 44 36.8	-0.2
CM31	**Chiang Mai Arr**	71.23	294	*e*P	**P**	10 44 37.8	+0.6
CM31	**Chiang Mai Arr**	71.23	294	P	**P**	10 44 38.2	+1.0
	SNR=28						
CMAR	**Chiang Mai Arr**	71.23	294	P	**P**	10 44 37.9	+0.7
	comp=Z,24nm,0.9s,baz=119,slow=4.1,SNR=54						
CMMT	**Chiang Mai**	71.33	294	P	**P**	10 44 38.5	+0.6
	comp=Z,61nm,1.4s,comp=Z,1µm						
CHTO	**Chiang Mai**	71.34	294	*e*P	**P**	10 44 38.0	+0.1
	comp=Z,139nm,1.5s						
CHTO				LR	LR		
	comp=Z,3µm,22.0s						
CHTO	**Chiang Mai**	71.34	294	*e*P	**P**	10 44 38.0	+0.1
CHTO				pmax	pmax		
	comp=Z,139nm,1.5s						
CHTO				MLR	MLR		
	comp=Z,3µm,22.0s						
CHTO	**Chiang Mai**	71.34	294	P	**P**	10 44 38.5	+0.6
	SNR=26						
CHTO				P	**P**	10 44 38.5	+0.6
	SNR=26						
CHTO	**Chiang Mai**	71.34	294	P	**P**	10 44 38.6	+0.7
	comp=Z,274nm,1.4s,comp=Z,5µm						
HIA	**Hailar**	71.65	331	*e*P	**P**	10 44 38.7	-0.4
	comp=Z,114nm,1.4s						
HIA				LR	LR		
	comp=Z,3µm,19.0s						
HIA	**Hailar**	71.65	331⇑	*i*P	**P**	10 44 39.7	+0.6
HIA				pmax	pmax		
	comp=Z,99nm,1.5s						
ZEA	**Zeya**	71.69	338	*e*P	**P**	10 44 38.6	-0.6
ZEA				pmax	pmax		
	comp=N,150nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,220nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,900nm,6.0s						
CD2	**Chengdu**	71.74	308	P	**P**	10 44 40.4	+0.3
CD2				pP	sP	10 44 43.7	+0.6
CD2				PP	**PP**	10 47 19.3	-0.3
CD2				S	**S**	10 54 01.0	+0.5
CD2				SKS	**SKSac**	10 54 43.8	-0.5
CD2				SS	**SS**	10 58 37.7	+1.0
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				pmax	pmax		
	comp=Z,940nm,4.6s						
CD2				LR	LR		
	comp=Z,3µm,23.5s						
CD2				LR	LR		
	comp=Z,5µm,16.7s						
CD2				LR	LR		
	comp=Z,5µm,19.4s						
CMBY	**CAMPBELL BAY**	72.82	281	*e*P	**P**	10 44 44.9	-2.0
LZH	**Lanzhou**	73.91	312	⇑P	**P**	10 44 54.4	+1.3
LZH				pP	pwP	10 44 58.0	-1.6
LZH				sP	PcP	10 45 02.5	-6.0
LZH				PP	**PP**	10 47 41.0	+2.8
LZH				S	**S**	10 54 31.6	+6.2
LZH				sS	sS	10 54 36.9	+8.2
LZH				SS	**SS**	10 59 09.0	-1.0
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
LZH				pmax	pmax		
	comp=Z,150nm,4.3s						
LZH				LR	LR		
	comp=Z,3µm,17.0s						
LZH				LR	LR		
	comp=Z,2µm,17.1s						
LZH				LR	LR		
	comp=Z,3µm,19.5s						
SEY	**Seymchan**	74.01	354	P	**P**	10 44 52.2	-0.6
	comp=Z,18nm,0.9s,baz=158,slow=6.8,SNR=24						
SEY				LR	LR	11 12 60.0	
	comp=Z,7µm,21.8s,baz=151,slow=32						
OHAK	**Old Harbor**	75.85	22	*e*P	**P**	10 45 02.2	-1.3
	comp=Z,293nm,1.7s						
GAMB	**Gambell**	76.34	10	*e*P	**P**	10 45 06.7	+0.5
	comp=Z,146nm,1.2s						
CIT	**Chita**	76.43	330	*e*P	**P**	10 45 06.1	-1.0
CIT				*e*		10 45 14.6	
CIT				pmax	pmax		
	comp=Z,260nm,1.5s						
KDAK	**Kodiak Island**	76.52	22	PFAKE		10 45 20.0	+13
KDAK				LR	LR		
	comp=Z,2µm,19.0s						
YAK	**Yakutsk**	77.51	344	*e*P	**P**	10 45 11.8	-1.0
YAK				*e**PP	**pwP**	10 45 18.0	-1.6
YAK				*e*		10 45 21.3	
YAK				*e*		10 48 07.3	
YAK				*e*S	**S**	10 55 01.5	-2.2
YAK				*e**SS	**SKSac**	10 55 17.4	-8.4
YAK				pmax	pmax		
	comp=Z,95nm,1.6s						
YAK				pmax	pmax		
	comp=N,28nm,1.7s						
YAK				pmax	pmax		
	comp=E,29nm,1.6s						
YAK				pmax	pmax		
	comp=Z,181nm,3.8s						
YAK				pmax	pmax		
	comp=N,171nm,3.8s						
YAK				pmax	pmax		
	comp=E,202nm,3.8s						
YAK				smax	smax		
	comp=N,95nm,4.1s						
YAK				smax	smax		
	comp=E,290nm,5.7s						
YAK				MLR	MLR		
	comp=Z,5µm,21.0s						
YAK				MLR	MLR		
	comp=N,2µm,18.0s						
YAK				MLR	MLR		
	comp=E,3µm,23.0s						
ULN	**Ulaanbaatar**	77.53	324	*e*P	**P**	10 45 13.9	+0.4
	comp=E,101nm,1.2s						
ULN	**Ulaanbaatar**	77.53	324*d*	*i*P	**P**	10 45 13.7	+0.2
ULN				pmax	pmax		
	comp=Z,106nm,1.3s						
ULN	**Ulaanbaatar**	77.53	324	P	**P**	10 45 14.5	+1.0
	SNR=36						
ULN				P	**P**	10 45 14.5	+1.0
	SNR=36						
SONM	**Songino Array**	77.89	324	P	**P**	10 45 15.5	0.0
	comp=Z,40nm,1.0s,baz=139,slow=6.5,SNR=47						
SONM				LR	LR	11 15 37.9	
	comp=Z,2µm,22.0s,baz=118,slow=33						
SONA1	**Songino Array**	77.89	324	*e*P	**P**	10 45 15.2	-0.3
SVW2	**Sparrevohn**	78.00	18	*e*P	**P**	10 45 16.1	+0.4
	comp=Z,186nm,1.4s						
GTA	**Gaotai**	78.22	314	⇓P	**P**	10 45 18.3	+0.8
GTA				pP	pwP	10 45 24.4	+0.4
GTA				sP	PcP	10 45 28.4	+1.4
GTA				S	**S**	10 55 13.1	+0.4
GTA				pmax	pmax		
	comp=Z,22nm,1.3s						
GTA				pmax	pmax		
	comp=Z,570nm,5.9s						
GTA				LR	LR		
	comp=Z,1µm,19.4s						
GTA				LR	LR		
	comp=Z,3µm,19.4s						
GTA				LR	LR		
	comp=Z,3µm,19.4s						
HOM	**Homer**	78.23	21	*e*P	**P**	10 45 15.7	-1.2
	comp=Z,261nm,1.1s						
ANM	**Nome**	78.29	13	*e*P	**P**	10 45 17.2	+0.1
	comp=Z,108nm,1.4s						
ANM	**Nome**	78.29	13	*e*P	**P**	10 45 17.2	+0.1
ANM				pmax	pmax		
	comp=Z,108nm,1.4s						
RSO	**Redoubt South**	78.44	20	*e*P	**P**	10 45 18.1	-0.2
BILL	**Bilibino**	78.51	1	*e*P	**P**	10 45 17.6	-0.6
	comp=Z,132nm,1.1s						
BILL				LR	LR		
	comp=Z,4µm,19.0s						
BILL	**Bilibino**	78.51	1*d*	*i*P	**P**	10 45 17.8	-0.5
BILL				pmax	pmax		
	comp=Z,165nm,1.7s						
BRLK	**Bradley Lake**	78.57	21	*e*P	**P**	10 45 18.8	0.0
	comp=Z,282nm,1.8s						
BRDH	**Bariadhala**	79.01	296	P	**P**	10 45 22.1	+0.1
	comp=Z,63nm,0.3s,baz=99,slow=8.9,SNR=11						
SEW	**Seward**	79.32	21	*e*P	**P**	10 45 27.0	+4.1
	comp=Z,100nm,1.5s						
QSPA	**South Pole Qui**	79.34	180	PFAKE		10 45 30.0	+6.8
QSPA				LR	LR		
	comp=Z,4µm,20.0s						
QSPA	**South Pole Qui**	79.34	180	LR	LR	11 16 49.6	
	comp=Z,3µm,19.3s,baz=20,slow=33						
SHL	**Shillong**	79.63	299	*e*P	**P**	10 45 24.7	-0.9
	comp=Z,252nm,1.5s						
SHL	**Shillong**	79.63	299	*e*P	**P**	10 45 24.7	-0.9
SHL				pmax	pmax		
	comp=Z,252nm,1.5s						
SHL	**Shillong**	79.63	299	*e*P	**P**	10 45 25.0	-0.6
SHL				IAmb	IAmb	10 45 28.4	
SUA	**Susitna One**	79.84	20	*e*P	**P**	10 45 25.4	-0.5
	comp=Z,254nm,1.9s						
BOD	**Bodaibo**	79.85	335	*e*P	**P**	10 45 24.4	-1.4
BOD				pmax	pmax		
	comp=Z,52nm,1.5s						
RC01	**Rabbit Creek A**	79.92	21	*e*P	**P**	10 45 26.1	-0.1
	comp=Z,115nm,1.6s						
PPLA	**Purkeypile**	80.42	18	*e*P	**P**	10 45 29.4	+0.4
	comp=Z,28nm,0.7s						
PMR	**Palmer**	80.48	20	*e*P	**P**	10 45 28.6	-0.5
	comp=Z,82nm,1.4s						
PMR	**Palmer**	80.48	20	*e*P	**P**	10 45 28.6	-0.5
PMR				pmax	pmax		
	comp=Z,83nm,1.4s						
KNK	**Knik Glacier**	80.59	21	*e*P	**P**	10 45 29.9	+0.1
	comp=Z,86nm,1.4s						
GLI	**Glacier Island**	80.70	22	*e*P	**P**	10 45 33.3	+2.9
	comp=Z,339nm,1.8s						
CAST	**Castle Rocks**	80.83	18	*e*P	**P**	10 45 30.2	-0.9
	comp=Z,208nm,2.0s						
SML	**Sawmill**	80.90	21	*e*P	**P**	10 45 32.3	+0.8
	comp=Z,293nm,2.0s						
SML	**Sawmill**	80.90	21	*e*P	**P**	10 45 32.3	+0.8
SML				pmax	pmax		
	comp=Z,293nm,2.0s						
ZAK	**Zakamensk**	80.93	325	*e*P	**P**	10 45 31.5	-0.5
ZAK				pmax	pmax		
	comp=Z,47nm,1.4s						
EYAK	**Cordova Ski Ar**	80.98	22	*e*P	**P**	10 45 34.9	+3.1
	comp=Z,103nm,1.2s						
IRK	**Irkutsk**	81.31	327	*e*P	**P**	10 45 33.5	-0.3
IRK				pmax	pmax		
	comp=Z,105nm,2.8s						
DIV	**Divide**	81.35	22	*e*P	**P**	10 45 34.6	+0.6
	comp=Z,111nm,1.4s						
TLY	**Talaya**	81.36	326	*e*P	**P**	10 45 33.6	-0.6
	comp=Z,182nm,1.4s						
TLY				LR	LR		
	comp=Z,1µm,21.0s						
TLY	**Talaya**	81.36	326*d*	*i*P	**P**	10 45 35.8	+1.6
TLY	**Talaya**	81.36	326	P	**P**	10 45 34.7	+0.6
	SNR=20						
TLY				P	**P**	10 45 34.7	+0.6
	SNR=20						
HMT	**Hamilton**	81.40	23	*e*P	**P**	10 45 35.7	+1.5
	comp=Z,130nm,1.4s						
TRF	**Thorofare Moun**	81.41	19	*e*P	**P**	10 45 34.2	-0.1
	comp=Z,100nm,1.7s						
RPN	**Rapa Nui**	81.46	116	*e*P	**P**	10 45 36.6	+1.4
RPN				LR	LR		
	comp=Z,2µm,20.0s						
RPN	**Rapa Nui**	81.46	116	LR	LR	11 13 32.4	
	comp=Z,2µm,20.6s,baz=262,slow=30						
LSA	**Lhasa**	81.47	302	*e*P	**P**	10 45 36.1	+0.3
	comp=Z,39nm,1.1s						
LSA				LR	LR		
	comp=Z,3µm,21.0s						
LSA	**Lhasa**	81.47	302	*e*P	**P**	10 45 36.1	+0.3
LSA				pmax	pmax		
	comp=Z,39nm,1.1s						
LSA				MLR	MLR		
	comp=Z,3µm,21.0s						
KLU	**Klutina**	81.54	22	*e*P	**P**	10 45 35.7	+0.8
	comp=Z,79nm,1.4s						
BPAW	**Bear Paw Mtn.**	81.67	18	*e*P	**P**	10 45 37.2	+1.7
	comp=Z,108nm,2.0s						
RDOG	**Red Dog Mine**	81.81	12	*e*P	**P**	10 45 36.3	+0.2
	comp=Z,204nm,1.4s						
RND	**Reindeer**	81.84	19	*e*P	**P**	10 45 36.1	-0.4
	comp=Z,82nm,1.4s						
RND	**Reindeer**	81.84	19	*e*P	**P**	10 45 36.1	-0.4
RND				pmax	pmax		
	comp=Z,82nm,1.4s						
MCK	**McKinley**	82.04	19	*e*P	**P**	10 45 37.4	-0.1
	comp=Z,142nm,1.5s						
MCK	**McKinley**	82.04	19	*e*P	**P**	10 45 37.4	-0.1
MCK				pmax	pmax		
	comp=Z,142nm,1.5s						
DHY	**Denali Highway**	82.10	20	*e*P	**P**	10 45 40.1	+2.2
	comp=Z,45nm,1.2s						
IM3	**Indian Mountai**	82.28	16	*e*P	**P**	10 45 37.7	-0.9
HARP	**HAARP**	82.42	21	*e*P	**P**	10 45 42.0	+2.6
	comp=Z,67nm,1.2s						
MLY	**Manley**	82.42	17	*e*P	**P**	10 45 39.3	-0.1
	comp=Z,75nm,1.4s						
MOY	**Mondy**	82.81	326	*e*P	**P**	10 45 44.2	+2.3
MOY				pmax	pmax		
	comp=Z,109nm,2.9s						
WRH	**Wood River Hil**	82.83	19	*e*P	**P**	10 45 40.5	-1.0
	comp=Z,35nm,1.1s						
KMRM	**Mail Ridge**	82.98	47	*e*P	**P**	10 45 44.5	+1.5
	comp=Z,70nm,1.2s						
HOPS	**Hopland Field**	83.02	48	*e*P	**P**	10 45 47.1	+4.0
	comp=Z,120nm,1.6s						
MDM	**Murphy Dome**	83.12	18	*e*P	**P**	10 45 42.0	-1.0
	comp=Z,76nm,1.3s						
HDA	**Harding Lake**	83.14	19	P	**P**	10 45 42.2	-1.0
	baz=228						
TCOL	**CIGO, UAF Yank**	83.17	18	P	**P**	10 45 41.9	-1.4
	baz=227						
COLA	**College**	83.18	18	*e*P	**P**	10 45 45.6	+2.3
	comp=Z,42nm,0.8s						
COLA				LR	LR		
	comp=Z,3µm,19.0s						
COLA	**College**	83.18	18⇓	*e*P	**P**	10 45 42.5	-0.8
COLA				pmax	pmax		
	comp=Z,23nm,0.9s						
RIDG	**Independ'e Rid**	83.39	20	*e*P	**P**	10 45 45.4	+0.9
	comp=Z,228nm,1.8s						
IL1	**Eielson Array**	83.41	19	*e*P	**P**	10 45 42.3	-2.2
ILAR	**Eielson Array**	83.41	19	P	**P**	10 45 43.5	-1.1
	comp=Z,6.9nm,0.8s,baz=237,slow=4.9,SNR=42						
ILAR				LR	LR	11 17 49.3	
	comp=Z,2µm,20.5s,baz=250,slow=32						
ILB	**Eielson Array**	83.41	19	*e*P	**P**	10 45 43.5	-1.1
POKR	**Poker Plat Res**	83.47	18	P	**P**	10 45 44.0	-0.9
	baz=227						
SAO	**San Andreas Ge**	83.51	51	P	**P**	10 45 48.3	+2.6
	comp=Z,42nm,1.2s						
SAO	**San Andreas Ge**	83.51	51	P	**P**	10 45 48.3	+2.6
SAO				pmax	pmax		
	comp=Z,42nm,1.2s						
O02D	**Mt. Diablo Mer**	83.62	47	P	**P**	10 45 45.4	-0.9
	baz=250						
L02E	**Cave Junction**	83.72	45	P	**P**	10 45 45.2	-1.4
	baz=250						
SCRK	**Sand Creek**	83.84	20	*e*P	**P**	10 45 46.5	-0.4
	comp=Z,315nm,2.0s						
J01E	**Myrtle Point**	83.85	44	P	**P**	10 45 45.9	-1.3
	baz=249						
ODAN	**Odare**	83.87	299	*e*P	**P**	10 45 48.2	+0.2
	comp=Z,234nm,1.1s						
WDC	**Whiskeytown Da**	83.94	47	*e*P	**P**	10 45 48.7	+0.9
	comp=Z,63nm,1.4s						
WDC	**Whiskeytown Da**	83.94	47	*e*P	**P**	10 45 48.7	+0.9
WDC				pmax	pmax		
	comp=Z,63nm,1.4s						
N02D	**Trinity Center**	83.95	47	P	**P**	10 45 48.1	+0.2
	baz=250						
M02C	**Callahan**	83.99	46	P	**P**	10 45 47.8	-0.3
	baz=250						
SBC	**Santa Barbara**	84.15	53	P	**P**	10 45 48.2	-0.8
	baz=253						
YBH	**Yreka Blue Hor**	84.20	46	*e*P	**P**	10 45 50.5	+1.2
	comp=Z,37nm,1.1s						
PKM	**Mcpherson Peak**	84.21	53	P	**P**	10 45 49.1	-0.4
	baz=253						
BESE	**Bessie Mountai**	84.31	27	*e*P	**P**	10 45 52.1	+2.8
	comp=Z,259nm,1.8s						
KNGR	**Kungurtug, Tuv**	84.33	324⇓	*e*P	**P**	10 45 49.0	-0.7
PRP	**Porcupine Dome**	84.34	19	*e*P	**P**	10 45 51.3	+1.9
	comp=Z,58nm,1.9s						
ORV	**Oroville**	84.36	48	*e*P	**P**	10 45 50.4	+0.4
	comp=Z,38nm,1.3s						
ORV	**Oroville**	84.36	48	*e*P	**P**	10 45 50.4	+0.4
ORV				pmax	pmax		
	comp=Z,38nm,1.3s						
HYT	**Haines Junctio**	84.37	25	*e*P	**P**	10 45 50.9	+1.2
	comp=Z,40nm,1.1s						
O03E	**Paynes Creek**	84.38	47	P	**P**	10 45 49.9	-0.2
	baz=251,SNR=26						
WRAK	**Wrangell Islan**	84.41	30	*e*P	**P**	10 45 51.9	+2.1
	comp=Z,84nm,1.5s						
BOK	**Bokaro**	84.41	295	*e*P	**P**	10 45 50.1	-0.4
BOK				IAmb	IAmb	10 45 53.7	
	comp=Z,123nm,1.7s						
I03D	**Drain, OR**	84.43	44	P	**P**	10 45 49.8	-0.4
	baz=250						
AFDM	**Forest Hills D**	84.55	49	*e*P	**P**	10 45 51.0	0.0
	comp=Z,37nm,1.1s						
SKAG	**Skagway**	84.56	26	*e*P	**P**	10 45 51.4	+1.0
	comp=Z,111nm,1.4s						
RAMN	**Ramite**	84.57	299	*e*P	**P**	10 45 51.5	-0.1
	comp=Z,181nm,1.4s						
L04D	**Klamath Falls**	84.65	45	P	**P**	10 45 51.6	+0.1
	baz=251						
CMB	**Columbia Colle**	84.71	50	*e*P	**P**	10 45 52.3	+0.5
	comp=Z,22nm,1.1s						
CMB	**Columbia Colle**	84.71	50	*e*P	**P**	10 45 52.3	+0.5
CMB				pmax	pmax		
	comp=Z,22nm,1.1s						
MAW	**Mawson**	84.77	202	LR	LR	11 19 50.0	
	comp=Z,2µm,19.4s,baz=98,slow=33						
M04C	**Macdoel**	84.83	46	P	**P**	10 45 52.3	-0.2
	baz=251						
CIS	**Catalina Islan**	84.89	55	P	**P**	10 45 53.0	+0.2
	baz=254						
VOG	**Valley Oaks Go**	84.96	52	P	**P**	10 45 52.4	-0.6
	baz=253						
G03D	**McMinnville, O**	85.02	42	P	**P**	10 45 52.7	-0.4
	baz=250						
ARVC	**Arvin**	85.05	53	P	**P**	10 45 53.7	+0.2
	baz=253						
VES	**Vestal, Richgr**	85.05	52	P	**P**	10 45 53.6	+0.1
	baz=253,SNR=6.1						
I04A	**Tendick Farm,**	85.10	44	P	**P**	10 45 51.5	-2.2
	baz=250						
JIRN	**Jiri**	85.11	299	*e*P	**P**	10 45 54.4	-0.1
	comp=Z,395nm,1.5s						
J04D	**Umpqua Nationa**	85.12	45	P	**P**	10 45 54.3	+0.3
	baz=251						
PASC	**Pasadena Art C**	85.29	54	*e*P	**P**	10 45 58.3	+3.5
	comp=Z,24nm,1.3s						
BEKR	**Beckworth**	85.29	48	*e*P	**P**	10 45 54.8	0.0
	comp=Z,44nm,1.4s						
NLWA	**Neilton Lookou**	85.39	40	PFAKE		10 46 10.0	+15
NLWA				LR	LR		
	comp=Z,5µm,19.0s						
MWC	**Mount Wilson**	85.41	54	*e*P	**P**	10 45 56.0	+0.4
	comp=Z,84nm,1.5s						
MWC	**Mount Wilson**	85.41	54	*e*P	**P**	10 45 56.0	+0.4
MWC				pmax	pmax		
	comp=Z,84nm,1.5s						
GUN	**Gumba**	85.43	299	*e*P	**P**	10 45 56.0	-0.1
	comp=Z,250nm,1.3s						
ISA	**Isabella, Lake**	85.48	53	*e*P	**P**	10 45 59.5	+3.7
	comp=Z,24nm,1.1s						
ISA	**Isabella, Lake**	85.48	53	*e*P	**P**	10 45 59.5	+3.7

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ISA                               pmax     pmax
       comp=Z,24nm,1.1s
ISA    Isabella, Lake    85.48  53  P        P        10 45 55.5 -0.2
       baz=254
DAWY   Dawson            85.49  21  eP       P        10 45 55.5 +0.3
       comp=Z,113nm,1.6s
H04A   Detroit Lake      85.55  43  eP       P        10 45 59.8 +3.9
       comp=Z,138nm,1.9s
WAKR   Walker            85.56  50  eP       P        10 45 57.1 +0.8
       comp=Z,102nm,1.6s
TIXI   Tiksi             85.57 349  eP       P        10 45 56.8 +1.5
       comp=Z,73nm,1.2s
TIXI   Tiksi             85.57 349⇓ eP       P        10 45 54.2 -1.1
TIXI                                pmax     pmax
       comp=Z,62nm,1.3s
TIXI   Tiksi             85.57 349  P        P        10 45 55.0 -0.3
       comp=Z,38nm,1.2s,baz=119,slow=5.4,SNR=11
MDPB   Devils Postpil    85.58  51  eP       P        10 45 56.5  0.0
       comp=Z,39nm,1.1s
PNTR   Pine Nut          85.61  49  eP       P        10 45 57.9 +1.3
       comp=Z,28nm,1.1s
EDW2   Edwards Air Fo    85.64  53  P        P        10 45 56.9 +0.3
       baz=254,SNR=6.8
VCNR   Virginia City     85.64  49  eP       P        10 45 57.9 +1.2
       comp=Z,22nm,1.2s
PALK   Pallekele         85.70 278  eP       P        10 45 59.3 +2.0
       comp=Z,192nm,1.8s
PALK   Pallekele         85.70 278  P        P        10 45 57.3  0.0
       comp=Z,26nm,1.1s,baz=114,slow=10,SNR=6.1
BFSC   Mount Baldy Ra    85.73  54  P        P        10 45 56.6 -0.5
       baz=254,SNR=7.8
J05D   Fort Rock, OR     85.74  45  P        P        10 45 57.3 +0.3
       baz=251,SNR=6.6
PKI    Pulchoki          85.75 299  eP       P        10 45 57.3 -0.3
       comp=Z,308nm,1.5s
MLAC   Mammoth, Mammo85.76  51  P        P        10 45 57.5 +0.1
       baz=253,SNR=9.9
PKIN   Phulchoki         85.77 299  eP       P        10 45 57.2 -0.4
       comp=Z,255nm,1.6s
109C   Camp Elliot, M    85.81  56  P        P        10 45 57.9 +0.5
       baz=255
YERR   Yerington         85.85  49  eP       P        10 45 59.1 +1.4
       comp=Z,30nm,1.3s
MURC   Murrieta          85.92  55  P        P        10 45 59.0 +1.0
       baz=254
E04D   Cinebar           85.94  41  P        P        10 45 58.9 +1.3
       baz=250
D03D   Eldon             85.94  40  P        P        10 45 57.3 -0.4
       baz=250
PAHR   Pah Rah Range     85.96  49  eP       P        10 45 58.9 +0.7
       comp=Z,42nm,1.2s
MOD    Modoc Plateau     85.96  46  eP       P        10 45 58.8 +0.7
       comp=Z,33nm,1.1s
CWC    Cottonwood Cre    86.00  52  P        P        10 45 58.1 -0.3
       baz=254
I05D   Terrebonne, OR    86.01  44  P        P        10 45 58.9 +0.7
       baz=251
D04E   Lakebay           86.02  41  P        P        10 45 58.6 +0.6
       baz=250
DMN    Daman             86.02 299  eP       P        10 45 58.7 -0.2
       comp=Z,402nm,1.3s
LRMC   Laurel Mtn Rad    86.05  53  P        P        10 45 59.3 +0.6
       baz=254
TIN    Tinemaha, Big     86.06  51  P        P        10 45 59.5 +0.8
       baz=254
BAR    Barrett           86.11  56  eP       P        10 46 02.6 +3.7
       comp=Z,45nm,1.7s
PINE   Pine Mountain     86.11  44  eP       P        10 46 00.0 +1.1
       comp=Z,113nm,1.6s
RYN    Ryan              86.28  50  eP       P        10 46 01.2 +1.4
       comp=Z,24nm,1.1s
G05D   Wamic, OR         86.32  43  P        P        10 45 59.9 +0.2
       baz=251
BBRC   Big Bear Solar    86.32  54  P        P        10 46 00.1 -0.1
       baz=255
DAC    Darwin (Calif)    86.33  52  eP       P        10 46 00.7 +0.5
       comp=Z,40nm,1.4s
DAC    Darwin (Calif)    86.33  52  eP       P        10 46 00.7 +0.5
DAC                                 pmax     pmax
       comp=Z,39nm,1.4s
MPMC   Manual Prospec    86.36  52  P        P        10 46 00.4 +0.1
       baz=254,SNR=9.7
MONP2  Monument Peak     86.36  56  P        P        10 46 00.1 -0.3
       baz=255,SNR=10
NV01   Mina Array Sit    86.39  50  eP       P        10 45 58.8 -1.7
NVAR   Mina Array Bea    86.39  50  P        P        10 46 00.5 +0.1
       comp=Z,20nm,1.0s,baz=238,slow=5.5,SNR=20
F05D   White Salmon      86.44  42  P        P        10 46 00.6 +0.4
       baz=251
NV11   Mina Array Sit    86.50  50  eP       P        10 46 01.6 +0.7
       comp=Z,4.6nm,1.3s
PFO    Pinyon Flats O    86.52  55  eP       P        10 46 02.7 +1.7
       comp=Z,17nm,1.1s
PFO                                 LR       LR
       comp=Z,6µm,19.0s
PFO    Pinyon Flats O    86.52  55  P        P        10 46 01.8 +0.7
       baz=255
D05A   Enumclaw          86.52  41  eP       P        10 46 02.4 +1.9
       comp=Z,172nm,1.3s
XPFO   Pion Flat         86.52  55  eP       P        10 46 01.2 +0.1
       comp=Z,18nm,1.1s
IKP    In-Ko-Pah, Jac    86.56  56  P        P        10 46 01.2  0.0
       baz=255
A04D   Lummi Island      86.59  39  P        P        10 46 02.1 +1.3
       baz=250
GSC    Goldstone, Bar    86.69  53  eP       P        10 46 05.5 +3.7
       comp=Z,21nm,1.3s
GSC    Goldstone, Bar    86.69  53  P        P        10 46 00.2 -1.6
       baz=255
GRAC   Grapevine Rang    86.71  52  P        P        10 46 00.9 -0.9
       baz=254
KVN    Kaiserville       86.72  49  eP       P        10 46 01.9 -0.1
       comp=Z,32nm,1.3s
KVN    Kaiserville       86.72  49  eP       P        10 46 01.9 -0.1
KVN                                 pmax     pmax
       comp=Z,32nm,1.3s
B05A   Bryant            86.82  40  P        P        10 46 02.5 +0.5
       baz=250
SWSC   Sam W. Stewart    86.88  56  P        P        10 46 02.4 -0.2
       baz=255
HEC    Hector,Ludlow     86.94  54  P        P        10 46 03.4 +0.4
       baz=255
FURC   Furnace Creek,    86.95  52  P        P        10 46 03.1 +0.2
       baz=254,SNR=6.6
BELC   Belle Mtn. Jos    86.99  55  P        P        10 46 03.1 -0.2
       baz=255,SNR=18
I07A   Izee              87.19  44  eP       P        10 46 04.0  0.0
       comp=Z,70nm,1.5s
SHOC   Shoshone, Teco    87.26  53  P        P        10 46 05.9 +1.4
       baz=255,SNR=6.9
MDRS   Chennai           87.28 284  eP       P        10 46 03.5 -1.5
MDRS                                IAmb     IAmb     10 46 07.4
       comp=Z,57nm,1.3s
WVOR   Wild Horse Val    87.30  46  eP       P        10 46 05.5 +0.8
       comp=Z,44nm,1.2s
WVOR   Wild Horse Val    87.30  46  eP       P        10 46 05.5 +0.8
WVOR                                pmax     pmax
       comp=Z,44nm,1.2s
BC3    Big Chuckawall    87.34  55  P        P        10 46 05.2 +0.1
       baz=256
DANN   Dangsing          87.36 299  eP       P        10 46 04.2 -1.2
       comp=Z,136nm,1.2s
KOLN   Koldanda          87.36 299  eP       P        10 46 04.3 -1.1
       comp=Z,146nm,1.5s
LTY    Liberty           87.39  41  eP       P        10 46 07.7 +2.8
       comp=Z,47nm,1.5s
TUQ    Turquoise Moun    87.42  53  P        P        10 46 05.2 -0.2
       baz=255
F07A   Phinny Hill Vi    87.45  43  eP       P        10 46 09.2 +4.1
       comp=Z,42nm,1.1s
GMRC   Granite Mounta    87.46  54  P        P        10 46 05.7 +0.1
       baz=255,SNR=9.4
TPNV   Topopah Spring    87.56  52  eP       P        10 46 07.3 +1.2
       comp=Z,27nm,1.4s
TPNV   Topopah Spring    87.56  52  eP       P        10 46 07.3 +1.2
TPNV                                pmax     pmax
       comp=Z,27nm,1.4s
TPNV   Topopah Spring    87.56  52  P        P        10 46 06.8 +0.7
       baz=255
J08A   Circle Bar Ran    87.68  45  eP       P        10 46 07.0 +0.5
       comp=Z,75nm,1.3s
GLA    Glamis            87.70  56  P        P        10 46 06.7  0.0
       baz=256
IRM    Iron Mountain     87.72  55  P        P        10 46 07.1 +0.3
       baz=256,SNR=28
HAWA   Hanford           87.87  42  eP       P        10 46 08.1 +1.0
       comp=Z,29nm,1.1s
HAWA                                LR       LR
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       comp=Z,3µm,21.0s
G08A   Pilot Rock        87.92  43  eP       P        10 46 08.2 +0.7
       comp=Z,36nm,1.1s
PYUN   Piuthan           87.96 299  eP       P        10 46 06.9 -1.3
       comp=Z,66nm,0.9s
Y12C   Blythe            88.12  55  eP       P        10 46 09.7 +1.1
       comp=Z,41nm,1.3s
Y12C   Blythe            88.12  55  P        P        10 46 09.2 +0.6
       baz=256,SNR=9.2
E08A   Dider Farm, El    88.21  42  eP       P        10 46 09.9 +1.2
       comp=Z,57nm,1.3s
WMQ    Urumqi            88.26 315  P        P        10 46 10.4 +1.3
WMQ                                 pP       pwP      10 46 15.0 -0.6
WMQ                                 PP       PP       10 49 36.4 -0.2
WMQ                                 SKS      SKSac    10 56 35.3 -2.9
WMQ                                 S        SKKSac   10 56 46.1 -2.6
WMQ                                 pmax     pmax
       comp=Z,120nm,1.3s
WMQ                                 LR       LR
       comp=Z,4µm,17.1s
WMQ                                 LR       LR
       comp=Z,4µm,21.7s
WMQ                                 LR       LR
       comp=Z,4µm,23.3s
WMQ    Urumqi            88.26 315  eP       P        10 46 08.3 -0.8
       comp=Z,129nm,1.4s
WMQ    Urumqi            88.26 315  eP       P        10 46 08.3 -0.8
WMQ                                 pmax     pmax
       comp=Z,129nm,1.4s
SHPR   Sheep Range       88.29  53  eP       P        10 46 10.5 +1.0
       comp=Z,39nm,1.4s
R11A   Troy Canyon, C    88.43  51  eP       P        10 46 10.7 +0.5
       comp=Z,33nm,1.4s
R11A   Troy Canyon, C    88.43  51  P        P        10 46 10.3 +0.1
       baz=255,SNR=12
D08A   Wollman Farm,     88.47  42  eP       P        10 46 11.3 +1.4
       comp=Z,50nm,1.5s
113A   Mohawk Valley,    88.50  56  eP       P        10 46 11.4 +1.0
       comp=Z,26nm,1.3s
PDMCI  Parker Dam,Lak    88.56  55  P        P        10 46 11.3 +0.6
       baz=256,SNR=7.1
B08A   Colville Reser    88.59  40  eP       P        10 46 10.8 +0.2
       comp=Z,44nm,1.5s
E09A   Wood Farm, Sta    88.82  42  eP       P        10 46 15.4 +3.8
       comp=Z,47nm,1.5s
BMO    Blue Mountains    88.91  44  eP       P        10 46 12.6 +0.4
       comp=Z,55nm,1.5s
BMO    Blue Mountains    88.91  44  eP       P        10 46 12.6 +0.4
BMO                                 pmax     pmax
       comp=Z,55nm,1.5s
W13A   Hualapai Mount    88.95  54  eP       P        10 46 14.4 +1.6
       comp=Z,29nm,1.3s
214A   Organ Pipe Nat    89.10  57  P        P        10 46 13.5 +0.1
       baz=257
F10A   Beach Ranch, E    89.28  43  eP       P        10 46 14.3 +0.4
       comp=Z,116nm,1.8s
ELK    Elko              89.29  48  eP       P        10 46 15.1 +0.8
       comp=Z,30nm,1.4s
ELK    Elko              89.29  48  eP       P        10 46 15.1 +0.8
ELK                                 pmax     pmax
       comp=Z,30nm,1.4s
Y14A   Wickenburg        89.39  55  eP       P        10 46 14.9 +0.2
MFID   Camas Ranch       89.55  46  eP       P        10 46 16.1 +0.8
       comp=Z,41nm,1.3s
HYB    Hyderabad         89.74 288  i P      P        10 46 15.0 -1.6
HYB    Hyderabad         89.74 288  eP       P        10 46 15.1 -1.5
HYB                                 IAmb     IAmb     10 46 17.1
       comp=Z,360nm,3.3s
PSUT   Pine Spring       89.79  51  eP       P        10 46 17.6 +0.9
       comp=Z,37nm,1.3s
INK    Inuvik            89.80  19  eP       P        10 46 16.3 +0.6
       comp=Z,40nm,1.4s
INK    Inuvik            89.80  19  eP       P        10 46 16.3 +0.6
INK                                 pmax     pmax
       comp=Z,40nm,1.4s
LCMT   Little Creek M    89.91  52  eP       P        10 46 17.1 -0.1
       comp=Z,28nm,1.2s
CCUT   Cedar City        89.94  52  eP       P        10 46 17.3  0.0
       comp=Z,34nm,1.2s
NEW    Newport           89.98  41  eP       P        10 46 17.4 +0.4
       comp=Z,38nm,1.4s
NEW                                 LR       LR
       comp=Z,3µm,19.0s
NEW    Newport           89.98  41  eP       P        10 46 17.5 +0.4
NEW                                 pmax     pmax
       comp=Z,38nm,1.4s
NEW                                 MLR      MLR
       comp=Z,3µm,19.0s
NEW    Newport           89.98  41  P        P        10 46 17.2 +0.1
       baz=254
NGP    Nagpur            90.00 291  eP       P        10 46 15.9 -1.9
NGP                                 IAmb     IAmb     10 46 17.6
       comp=Z,340nm,3.1s
DGZ    Jazzator, Alta    90.10 321c iP       P        10 46 17.2 -0.5
DGZ                                 pmax     pmax
       comp=Z,18nm,0.9s
SZCU   Shurtz Canyon     90.16  52  eP       P        10 46 22.7 +4.3
       comp=Z,27nm,1.1s
KNB    Kanab             90.23  52  eP       P        10 46 20.0 +1.3
       comp=Z,74nm,1.5s
KNB    Kanab             90.23  52  eP       P        10 46 20.0 +1.3
KNB                                 pmax     pmax
       comp=Z,74nm,1.5s
U15A   North Rim         90.52  53  eP       P        10 46 21.2 +1.0
HLID   Hailey            90.59  46  eP       P        10 46 19.6 -0.6
       comp=Z,82nm,1.8s
HLID                                LR       LR
       comp=Z,3µm,19.0s
HLID   Hailey            90.59  46  P        P        10 46 19.5 -0.7
       baz=256
PKCU   Pink Cliffs       90.73  52  eP       P        10 46 23.2 +2.0
       comp=Z,42nm,1.1s
X16A   Lo Mia Camp, P    90.76  55  eP       P        10 46 22.6 +1.3
       comp=Z,19nm,1.2s
TUC    Tucson            90.86  57  eP       P        10 46 23.0 +1.4
       comp=Z,12nm,1.3s
TUC    Tucson            90.86  57  P        P        10 46 21.3 -0.3
       baz=258
MTPU   Mount Pierson     90.96  52  eP       P        10 46 23.3 +1.0
       comp=Z,36nm,1.2s
DUG    Dugway, Tooele    90.96  49  PFAKE             10 46 30.0 +8.0
DUG                                 LR       LR
       comp=Z,5µm,19.0s
DUG    Dugway, Tooele    90.96  49  P        P        10 46 21.6 -0.4
       baz=257
BGU    Big Grassy Mou    90.97  49  eP       P        10 46 22.9 +0.9
       comp=Z,40nm,1.2s
WUAZ   Wupatki           91.05  54  P        P        10 46 22.2 -0.4
       baz=258
DGAR   Diego Garcia      91.06 262  PFAKE             10 46 30.0 +7.2
DGAR                                LR       LR
       comp=Z,2µm,20.0s
MSU    Marysvale         91.07  51  eP       P        10 46 22.8 +0.2
MSU    Marysvale         91.07  51  eP       P        10 46 22.8 +0.2
HVU    Hansel Valley     91.34  48  eP       P        10 46 24.1 +0.4
       comp=Z,44nm,1.1s
HVU    Hansel Valley     91.34  48  eP       P        10 46 24.1 +0.4
HVU                                 pmax     pmax
       comp=Z,44nm,1.1s
NLU    North Lily Min    91.46  50  eP       P        10 46 25.4 +1.0
       comp=Z,30nm,1.1s
SPUT   South Promonto    91.48  48  eP       P        10 46 25.3 +0.9
       comp=Z,78nm,2.0s
MSO    Missoula          91.70  43  eP       P        10 46 28.1 +2.9
       comp=Z,41nm,1.6s
MSO    Missoula          91.70  43  P        P        10 46 25.1 -0.1
       baz=256
MPU    Maple Canyon      91.80  50  eP       P        10 46 28.3 +2.3
       comp=Z,32nm,1.3s
CTU    Camp Tracy        91.86  49  eP       P        10 46 27.2 +1.0
       comp=Z,28nm,1.1s
BHPL   Bhopal            91.88 293  eP       P        10 46 25.0 -1.4
BHPL                                IAmb     IAmb     10 46 28.0
       comp=Z,31nm,1.3s
SYO    Syowa Base        91.91 197⇑ eP       P        10 46 24.0 -1.6
SYO    Syowa Base        91.91 197⇑ eP       P        10 46 39.0  +13
Q16A   Castle Valley     91.92  51  eP       P        10 46 28.6 +2.0
       comp=Z,48nm,1.3s
TMUT   Trail Mountain    91.97  51  eP       P        10 46 28.7 +1.8
       comp=Z,20nm,1.1s
MCMT   McKenzie Canyo    91.98  45  eP       P        10 46 30.5 +3.8
X18A   Snowflake         91.99  55  eP       P        10 46 27.4 +0.5
       comp=Z,46nm,1.9s
JLU    Jordanelle        92.06  49  eP       P        10 46 28.1 +0.9
       comp=Z,35nm,1.3s
TCUT   Toone Canyon      92.20  49  eP       P        10 46 29.4 +1.5
       comp=Z,42nm,1.1s
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DLMT   Dillon            92.27  44  eP       P        10 46 28.3 +0.3
       comp=Z,65nm,1.3s
W18A   Petrified Fore    92.28  55  P        P        10 46 28.2 -0.1
       baz=259
SRU    San Rafael Swe    92.45  51  eP       P        10 46 32.5 +3.5
       comp=Z,24nm,1.6s
LRM    Limekiln Ridge    92.47  44  eP       P        10 46 29.6 +0.6
DDI    Dehra Dun         92.64 300  eP       P        10 46 28.4 -1.4
DDI                                 IAmb     IAmb     10 46 31.0
       comp=Z,4µm,4.6s
MK01   Makanchi Array    92.69 317  eP       P        10 46 29.0 -0.6
MK31   Makanchi Array    92.70 317  eP       P        10 46 29.1 -0.6
MKAR   Makanchi Array    92.70 317  eP       P        10 46 29.1 -0.6
       comp=Z,184nm,0.8s
MKAR                                PKKPbc   PKKPdf   11 03 40.9 -0.8
MKAR   Makanchi Array    92.70 317  P        P        10 46 29.1 -0.6
       comp=Z,39nm,0.8s,baz=100,slow=6.0,SNR=62
MKAR                                PKKPbc   PKKPdf   11 03 40.9 -0.8
       comp=Z,2.1nm,0.7s,baz=289,slow=0.8,SNR=15
AHID   Auburn Hatcher    92.77  47  PFAKE             10 46 40.0  +10
AHID                                LR       LR
       comp=Z,2µm,19.0s
ZAA0   Zalesovo Array    92.78 324  eP       P        10 46 28.6 -1.2
ZALV   Zalesovo Beam     92.78 324  eP       P        10 46 28.1 -1.8
ZALV   Zalesovo Beam     92.78 324  P        P        10 46 28.8 -1.1
       comp=Z,31nm,1.1s,baz=106,slow=3.2,SNR=32
ZALV                                LR       LR       11 25 41.1
       comp=Z,2µm,22.0s,baz=106,slow=34
MAKZ   Makanchi          92.91 317  eP       P        10 46 30.5 -0.2
       comp=Z,77nm,1.2s
MAKZ   Makanchi          92.91 317  eP       P        10 46 30.5 -0.2
MAKZ                                pmax     pmax
       comp=Z,77nm,1.2s
QLMT   Earthquake Lak    92.96  45  eP       P        10 46 35.9 +4.6
BOZ    Bozeman (W)       92.98  44  eP       P        10 46 32.2 +1.0
       comp=Z,36nm,1.2s
BOZ                                 LR       LR
       comp=Z,3µm,20.0s
BOZ    Bozeman (W)       92.98  44  eP       P        10 46 32.3 +1.0
BOZ                                 pmax     pmax
       comp=Z,36nm,1.2s
BOZ                                 MLR      MLR
       comp=Z,3µm,20.0s
BOZ    Bozeman (W)       92.98  44  P        P        10 46 31.5 +0.2
       baz=258
FXWY   Fox Creek         93.00  46  eP       P        10 46 32.1 +0.6
       comp=Z,13nm,1.0s
TPAW   Teton Pass        93.03  46  eP       P        10 46 34.6 +3.0
       comp=Z,29nm,1.4s
NDI    New Delhi         93.06 298  eP       P        10 46 31.0 -0.8
REDW   Red Top Meadow    93.07  47  eP       P        10 46 35.7 +3.9
       comp=Z,24nm,1.2s
HRY    Holter Researc    93.08  43  eP       P        10 46 35.0 +3.3
YHB    Horse Butte       93.11  45  eP       P        10 46 33.4 +1.5
       comp=Z,43nm,1.4s
IMW    Indian Meadow     93.12  46  eP       P        10 46 33.1 +1.1
       comp=Z,17nm,1.1s
SNOW   Snow King Moun    93.16  47  eP       P        10 46 36.8 +4.6
       comp=Z,14nm,0.9s
MOOW   Moose Ponds       93.22  46  eP       P        10 46 32.8 +0.3
       comp=Z,12nm,1.1s
YMR    Madison River     93.25  45  eP       P        10 46 34.2 +1.6
       comp=Z,75nm,1.5s
LOHW   Long Hollow       93.30  46  eP       P        10 46 34.6 +1.8
       comp=Z,40nm,1.8s
FLWY   Flagg Ranch       93.32  46  eP       P        10 46 36.5 +3.5
       comp=Z,28nm,1.4s
121A   Cookes Peak, D    93.39  58  P        P        10 46 32.7 -0.7
       baz=260
PV14   Lion Creek, Pa    93.46  52  eP       P        10 46 38.2 +4.5
       comp=Z,21nm,1.3s
H17A   Grant Village     93.47  46  eP       P        10 46 37.2 +3.5
       comp=Z,12nm,0.9s
H17A   Grant Village     93.47  46  P        P        10 46 34.9 +1.3
       baz=259
PV21   Cone Mtn., Par    93.53  52  eP       P        10 46 37.8 +3.7
       comp=Z,20nm,1.2s
SMLA   Simla             93.54 301  eP       P        10 46 32.3 -1.6
SMLA                                IAmb     IAmb     10 46 35.6
       comp=Z,72nm,1.2s
PV04   Paradox Valley    93.56  52  eP       P        10 46 36.1 +2.0
       comp=Z,19nm,1.3s
PV12   Saucer Basin,     93.62  52  eP       P        10 46 35.8 +1.4
       comp=Z,16nm,1.0s
LKWY   Lake              93.63  45  eP       P        10 46 35.7 +1.3
       comp=Z,15nm,1.3s
LKWY                                LR       LR
       comp=Z,4µm,19.0s
LKWY   Lake              93.63  45  eP       P        10 46 35.7 +1.3
LKWY                                pmax     pmax
       comp=Z,15nm,1.3s
LKWY                                MLR      MLR
       comp=Z,4µm,19.0s
MVCO   Mesa Verde        93.66  53  PFAKE             10 46 50.0  +15
MVCO                                LR       LR
       comp=Z,5µm,19.0s
PV07   Paradox Valley    93.77  52  eP       P        10 46 39.5 +4.4
       comp=Z,8.1nm,0.9s
PV01   Paradox Valley    93.77  52  eP       P        10 46 38.7 +3.5
       comp=Z,14nm,1.4s
GOA    Goa               93.85 285  eP       P        10 46 34.1 -1.5
BW06   Boulder Array     93.89  47  eP       P        10 46 36.2 +0.6
       comp=Z,15nm,1.3s
BW06                                LR       LR
       comp=Z,2µm,19.0s
BW06   Boulder Array     93.89  47  P        P        10 46 35.4 -0.2
       baz=259
PD31   Pinedale Array    93.89  47  eP       P        10 46 36.2 +0.6
PDAR   Pinedale Array    93.89  47  P        P        10 46 35.2 -0.4
       comp=Z,4.5nm,0.9s,baz=235,slow=3.0,SNR=21
PDAR                                PKKPbc   PKKPdf   11 03 36.9 -2.8
       comp=Z,0.6nm,0.9s,baz=94,slow=4.5,SNR=4.2
NVS    Novosibirsk       93.89 325⇓ iP       P        10 46 36.4 +1.5
NVS                                 pmax     pmax
       comp=Z,90nm,1.7s
NVS                                 pmax     pmax
       comp=N,11nm,1.2s
NVS                                 pmax     pmax
       comp=E,14nm,0.7s
POO    Poona             94.34 288  eP       P        10 46 35.9 -2.0
POO                                 IAmb     IAmb     10 46 39.2
       comp=Z,24nm,0.9s
O20A   White River Ci    94.38  50  P        P        10 46 38.0 +0.1
       baz=260
DHRM   DHARAMSHALA       94.46 302  eP       P        10 46 37.0 -1.4
DHRM                                IAmb     IAmb     10 46 39.2
       comp=Z,899nm,3.6s
RLMT   Red Lodge         94.53  45  PFAKE             10 46 50.0  +12
RLMT                                LR       LR
       comp=Z,5µm,19.0s
RLMT   Red Lodge         94.53  45  P        P        10 46 38.5  0.0
       baz=260
EGMT   Eagleton          94.72  42  eP       P        10 46 43.3 +4.2
       comp=Z,22nm,1.0s
EGMT                                LR       LR
       comp=Z,2µm,19.0s
EGMT   Eagleton          94.72  42  P        P        10 46 39.2 +0.1
       baz=260
ANMO   Albuquerque       94.89  56  PFAKE             10 46 50.0  +10
ANMO                                LR       LR
       comp=Z,4µm,19.0s
ANMO   Albuquerque       94.89  56⇓ eP       P        10 46 40.7 +0.4
ANMO                                pmax     pmax
       comp=Z,8.0nm,1.6s
ANMO   Albuquerque       94.89  56  P        P        10 46 40.1 -0.2
       baz=261
ANMO   Albuquerque       94.89  56  LR       LR       11 25 42.2
       comp=Z,2µm,18.0s,baz=217,slow=33
YKA    Yellowknife Ar    95.00  27  P        P        10 46 37.7 -2.2
       comp=Z,1.1nm,0.9s,baz=262,slow=4.7,SNR=11
YKB5   Yellowknife Ar    95.00  27  eP       P        10 46 37.7 -2.2
YKW3   Yellowknife Ar    95.02  27  eP       P        10 46 45.3 +5.4
S22A   4UR Ranch, Cre    95.06  53  eP       P        10 46 45.0 +3.8
       comp=Z,23nm,1.7s
S22A   4UR Ranch, Cre    95.06  53  P        P        10 46 40.5 -0.6
       baz=261
MNTX   Cornudas Mount    95.25  59  eP       P        10 46 42.3 +0.5
       comp=Z,9.5nm,1.4s
MNTX                                LR       LR
       comp=Z,7µm,20.0s
MNTX   Cornudas Mount    95.25  59  P        P        10 46 41.4 -0.4
       baz=261
NRIK   Noril'sk          95.49 340  P        P        10 46 40.9 -1.1
NRIK                                pmax     pmax
       comp=Z,5.0nm,0.5s
NRIK   Noril'sk          95.49 340  P        P        10 46 40.9 -1.1
       comp=Z,12nm,1.1s,baz=109,slow=4.4,SNR=16
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NRIK				LR	LR	11 27 00.6	
	comp=Z,4µm,21.9s,baz=112,slow=34						
KURK	**Kurchatov**	**95.84**	**320**	*e*P	**P**	**10 46 44.4**	**+0.5**
	comp=Z,58nm,1.5s						
KURK				PP	**PP**	**10 50 34.9**	**-1.2**
KURK				LR	LR		
	comp=Z,4µm,20.0s						
KURK	**Kurchatov**	**95.84**	**320**	*d i*P	**P**	**10 46 44.3**	**+0.3**
KURK				pmax	pmax		
	comp=Z,33nm,1.4s						
KURK	**Kurchatov**	**95.84**	**320**	P	**P**	**10 46 45.2**	**+1.2**
	SNR=12						
KURK				P	**P**	**10 46 45.2**	**+1.2**
	SNR=12						
KURBB	**Kurchatov Arra**	**95.88**	**320**	P	**P**	**10 46 42.7**	**-1.5**
	comp=Z,4.7nm,1.0s,baz=105,slow=3.2,SNR=17						
KURBB				PP	**PP**	**10 50 34.9**	**-1.5**
	comp=Z,4.8nm,1.1s,baz=95,slow=8.0,SNR=4.6						
KSH	**Kashi**	**95.89**	**309**	P	P	10 46 50.1	+5.4
KSH				pP	pwP	10 46 52.4	+1.3
KSH				PP	**PP**	**10 50 40.2**	**+3.2**
KSH				SKS	**SKSac**	**10 57 23.1**	**+1.6**
KSH				SS	**SS**	**11 04 37.2**	**+3.4**
KSH				LR	LR		
	comp=Z,550nm,6.2s						
KSH				LR	LR		
	comp=Z,480nm,5.9s						
KSH				LR	LR		
	comp=Z,1µm,10.5s						
K22A	**Casper**	**96.07**	**48**	P	**P**	**10 46 44.7**	**-0.8**
	baz=261						
SDCO	**Great Sand Dun**	**96.10**	**53**	PFAKE		10 47 00.0	+14
SDCO				LR	LR		
	comp=Z,4µm,19.0s						
ISCO	**Idaho Springs**	**96.32**	**51**	PFAKE		10 47 00.0	+13
ISCO				LR	LR		
	comp=Z,5µm,22.0s						
PMSA	**Palmer Station**	**96.33**	**161**	PFAKE		10 47 00.0	+14
PMSA				LR	LR		
	comp=Z,5µm,20.0s						
TX31	**Lajitas Ar. Si**	**96.35**	**61**	*e*P	**P**	**10 46 49.6**	**+2.7**
TXAR	**Lajitas Array**	**96.35**	**61**	P	**P**	**10 46 46.4**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=213,slow=4.3,SNR=9.9						
TXAR				PP	**PP**	**10 50 41.8**	**+1.0**
	comp=Z,1.0nm,1.0s,baz=252,slow=7.2,SNR=5.1						
TXAR				PKKPbc	**PKKPdf**	**11 03 35.5**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=105,slow=4.5,SNR=4.0						
Q24A	**Divide**	**96.55**	**52**	P	**P**	**10 46 47.4**	**-0.5**
	baz=262						
NVL	**N'lazarevskaya**	**96.72**	**189**	*e*P	P	10 46 41.0	-6.7
NVL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LAO	**LASA Array**	**96.88**	**44**	*e*P	**P**	**10 46 53.0**	**+4.1**
	comp=Z,105nm,1.9s						
LAO				LR	LR		
	comp=Z,3µm,19.0s						
LAO	**LASA Array**	**96.88**	**44**	P	**P**	**10 46 48.7**	**-0.2**
	baz=262						
NIL	**Nilore**	**97.20**	**303**	*e*P	Pdif	10 46 50.8	0.0
	comp=Z,39nm,0.9s						
NIL				LR	LR		
	comp=Z,774nm,19.0s						
SNAA	**Sanae**	**97.44**	**184**	P	**P**	**10 46 50.2**	**-0.8**
SNAA	**Sanae**	**97.44**	**184**	*e*P	**P**	**10 46 49.5**	**-1.6**
	comp=Z,19nm,1.1s						
SNAA	**Sanae**	**97.44**	**184**	*d i*P	Pdif	10 46 51.9	+0.8
AAK	**Ala-Archa**	**97.45**	**312**	P	**P**	**10 46 50.8**	**-0.9**
AAK				LR	LR		
	comp=Z,2µm,19.0s						
AAK	**Ala-Archa**	**97.45**	**312**	⇑*e*P	Pdif	10 46 52.5	+0.7
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	**Ala-Archa**	**97.45**	**312**	P	**P**	**10 46 50.8**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=23,slow=7.6,SNR=4.5						
AAK				LR	LR	11 32 41.7	
	comp=Z,616nm,19.3s,baz=82,slow=37						
MSTX	**Muleshoe**	**97.76**	**57**	P	**P**	**10 46 53.0**	**-0.2**
	baz=262						
VNA2	**Neumayer--Watz**	**98.43**	**183**	P	Pdif	10 46 55.9	+0.4
DGMT	**Dagmar**	**98.47**	**42**	PFAKE		10 47 10.0	+14
DGMT				LR	LR		
	comp=Z,3µm,19.0s						
OGNE	**Ogallala**	**99.18**	**50**	PFAKE		10 47 10.0	+11
OGNE				LR	LR		
	comp=Z,5µm,20.0s						
JCT	**Junction City**	**99.83**	**61**	PFAKE		10 47 10.0	+7.5
JCT				LR	LR		
	comp=Z,6µm,19.0s						
FFC	**Flin Flon**	**100.40**	**36**	PFAKE		10 47 20.0	+16
FFC				LR	LR		
	comp=Z,3µm,19.0s						
KK31	**Karatay Array**	**100.41**	**312**	*e*Pdif	**Pdif**	**10 47 05.8**	**+1.1**
KK31	**Karatay Array**	**100.41**	**312**	*e*P	**Pdif**	**10 47 05.8**	**+1.1**
KKAR	**Karatay Array**	**100.41**	**312**	*e*Pdif	**Pdif**	**10 47 05.8**	**+1.1**
KKAR	**Karatay Array**	**100.41**	**312**	*e*P	**Pdif**	**10 47 05.8**	**+1.1**
CBKS	**Cedar Bluff**	**100.73**	**52**	PFAKE		10 47 20.0	+14
CBKS				LR	LR		
	comp=Z,3µm,22.0s						
BVAR	**Borovoye Array**	**101.16**	**322**	P	**Pdif**	**10 47 06.7**	**-1.1**
	comp=Z,6.3nm,0.9s,baz=100,slow=6.2,SNR=15						
BVAR				PP	**PP**	**10 51 16.7**	**0.0**
	comp=Z,1.6nm,0.8s,baz=74,slow=6.3,SNR=4.5						
KVTX	**Kingsville**	**101.16**	**64**	PFAKE		10 47 20.0	+12
KVTX				LR	LR		
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**101.22**	**322**	PFAKE		10 47 20.0	+12
BRVK				LR	LR		
	comp=Z,3µm,21.0s						
BRVK	**Borovoye**	**101.22**	**322**	⇑*i*P	**Pdif**	**10 47 09.2**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s						
KSU1	**Kansas State U**	**103.18**	**52**	PFAKE		10 47 30.0	+13
KSU1				LR	LR		
	comp=Z,4µm,22.0s						
ECSD	**EROS Data Cent**	**103.38**	**47**	PFAKE		10 47 30.0	+12
ECSD				LR	LR		
	comp=Z,3µm,20.0s						
NATX	**Nacogdoches**	**104.33**	**60**	PFAKE		10 47 30.0	+7.6
NATX				LR	LR		
	comp=Z,2µm,19.0s						
MIAR	**Mount Ida**	**105.39**	**57**	PFAKE		10 51 50.0	+9.0
MIAR				LR	LR		
	comp=Z,7µm,19.0s						
SCIA	**State Center**	**105.85**	**49**	PFAKE		10 51 50.0	+8.4
SCIA				LR	LR		
	comp=Z,4µm,19.0s						
EYMN	**Ely**	**106.93**	**43**	PFAKE		10 52 00.0	+17
EYMN				LR	LR		
	comp=Z,3µm,19.0s						
EFI	**East Falkland**	**107.69**	**154**	PFAKE		10 52 00.0	+15
EFI				LR	LR		
	comp=Z,4µm,20.0s						
ARU	**Arti**	**107.86**	**326**	PFAKE		10 52 00.0	+15
ARU				LR	LR		
	comp=Z,2µm,21.0s						
JFWS	**Jewell Farm**	**108.03**	**48**	PFAKE		10 52 00.0	+14
JFWS				LR	LR		
	comp=Z,5µm,19.0s						
COWI	**Conover**	**108.65**	**45**	PFAKE		10 52 00.0	+13
COWI				LR	LR		
	comp=Z,4µm,19.0s						
HDIL	**Hopedale**	**108.83**	**51**	PFAKE		10 52 00.0	+13
HDIL				LR	LR		
	comp=Z,6µm,19.0s						
KBS	**Kingsbay**	**110.47**	**355**	PFAKE		10 52 00.0	+11
KBS				LR	LR		
	comp=Z,2µm,20.0s						
BRAL	**Brewton**	**110.81**	**61**	PFAKE		10 52 00.0	+8.8
BRAL				LR	LR		
	comp=Z,6µm,19.0s						
JTS	**JuntasAbangare**	**111.43**	**83**	PFAKE		10 52 00.0	+7.2
JTS				LR	LR		
	comp=Z,3µm,21.0s						
ABPO	**Ambohimpanom**	**111.89**	**245**	PFAKE		10 52 10.0	+16
ABPO				LR	LR		
	comp=Z,1µm,20.0s						
GLMI	**Grayling**	**111.94**	**46**	PFAKE		10 52 00.0	+7.1
GLMI				LR	LR		
	comp=Z,6µm,19.0s						
HOPE	**Hope Point**	**112.81**	**167**	PFAKE		10 52 10.0	+16
HOPE				LR	LR		
	comp=Z,2µm,19.0s						
AAM	**Ann Arbor**	**112.92**	**49**	PFAKE		10 52 10.0	+15
AAM				LR	LR		
	comp=Z,5µm,19.0s						
PRGR	**Permogore**	**113.03**	**333**	*i* PKIKP	**PKiKP**	**10 51 56.6**	**+2.1**
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LCO	**Las Campanas**	**113.41**	**128**	PFAKE		10 52 10.0	+13
LCO				LR	LR		
	comp=Z,3µm,19.0s						
ACSO	**Alum Creek Sta**	**113.66**	**51**	PFAKE		10 52 10.0	+14
ACSO				LR	LR		
	comp=Z,5µm,19.0s						
GOGA	**Godfrey**	**113.80**	**58**	PFAKE		10 52 10.0	+13
GOGA				LR	LR		
	comp=Z,6µm,19.0s						
LVZ	**Lovozero**	**114.25**	**342**	PFAKE		10 52 10.0	+13
LVZ				LR	LR		
	comp=Z,2µm,22.0s						
NNA	**Nana**	**114.64**	**108**	PFAKE		10 52 10.0	+11
NNA				LR	LR		
	comp=Z,2µm,19.0s						
APA	**Apatity**	**114.83**	**342**	⇓*i*PKIKP	PKPdf	10 51 58.4	+0.6
APA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,6µm,21.0s						
KEV	**Kevo**	**115.23**	**345**	PFAKE		10 52 10.0	+12
KEV				LR	LR		
	comp=Z,6µm,20.0s						
ARCES	**ARCESS Array B**	**115.77**	**345**	PKP	**PKiKP**	**10 51 58.1**	**-1.4**
	comp=Z,4.0nm,0.9s,baz=48,slow=1.8,SNR=7.3						
ARCES				PKKPbc	**PKKPab**	**11 02 35.3**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=191,slow=2.5,SNR=6.4						
BLA	**Blacksburg**	**115.98**	**54**	PFAKE		10 52 10.0	+9.0
BLA				LR	LR		
	comp=Z,5µm,19.0s						
KLMR	**Klimovskoe**	**116.05**	**334**	*e*PKIKP	**PKiKP**	**10 51 57.5**	**-2.8**
KLMR				*e*		10 53 05.2	
KLMR				*e*		11 02 36.8	
KLMR				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	**Klimovskoe**	**116.05**	**334**	*e*PKPdf	**PKiKP**	**10 51 57.5**	**-2.8**
KLMR				AMP		10 52 16.9	
	comp=Z,12nm,1.4s						
KLMR				*e*PP	**PP**	**10 53 05.3**	**+0.7**
KLMR				*e*PKKPab	**PKKPab**	**11 02 36.8**	**+1.6**
OTAV	**Otavalo**	**116.18**	**95**	PFAKE		10 52 10.0	+7.4
OTAV				LR	LR		
	comp=Z,2µm,19.0s						
BCIP	**Isla Barro Col**	**116.28**	**85**	PFAKE		10 52 10.0	+7.9
BCIP				LR	LR		
	comp=Z,3µm,19.0s						
NHSC	**New Hope**	**116.56**	**58**	PFAKE		10 52 10.0	+7.9
NHSC				LR	LR		
	comp=Z,2µm,19.0s						
LVC	**Limon Verde**	**117.75**	**123**	PFAKE		10 52 20.0	+15
LVC				LR	LR		
	comp=Z,2µm,20.0s						
CNNC	**Cliffs of the**	**118.24**	**56**	PFAKE		10 52 20.0	+15
CNNC				LR	LR		
	comp=Z,4µm,19.0s						
CBN	**Corbin Frederi**	**118.24**	**52**	PFAKE		10 52 20.0	+15
CBN				LR	LR		
	comp=Z,5µm,19.0s						
BINY	**Binghamton**	**118.56**	**48**	PFAKE		10 52 20.0	+14
BINY				LR	LR		
	comp=Z,4µm,20.0s						
LONY	**Lake Ozonia**	**119.00**	**45**	PFAKE		10 52 20.0	+13
LONY				LR	LR		
	comp=Z,3µm,19.0s						
MTDJ	**Mount Denham**	**119.28**	**75**	PFAKE		10 52 20.0	+12
MTDJ				LR	LR		
	comp=Z,2µm,19.0s						
GNI	**Garni**	**119.80**	**310**	PFAKE		10 52 20.0	+12
GNI				LR	LR		
	comp=Z,2µm,19.0s						
ZEI	**Tsey**	**119.83**	**313**	*i* PKIKP	**PKiKP**	**10 52 12.7**	**+4.2**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBN	**Obninsk**	**120.06**	**329**	PFAKE		10 52 20.0	+12
OBN				LR	LR		
	comp=Z,1µm,20.0s						
OBN	**Obninsk**	**120.06**	**329**	*e*PKIKP	**PKiKP**	**10 52 09.4**	**+1.2**
OBN				*e*		10 53 31.9	
OBN				*e*PPP	PPP	10 56 01.2	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	**Kislovodsk**	**120.39**	**315**	PFAKE		10 52 20.0	+11
KIV				LR	LR		
	comp=Z,2µm,21.0s						
KIV	**Kislovodsk**	**120.39**	**315**	*i* PKIKP	**PKPdf**	**10 52 07.5**	**-1.8**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,2µm,23.0s						
FINES	**FINESS Array B**	**121.12**	**338**	PKP	**PKPdf**	**10 52 09.1**	**-0.9**
	comp=Z,4.1nm,0.8s,baz=118,slow=12,SNR=7.6						
PKME	**Peaks-Kenny Pk**	**122.41**	**43**	PFAKE		10 52 20.0	+6.8
PKME				LR	LR		
	comp=Z,6µm,19.0s						
BOSA	**Boshof**	**124.84**	**224**	PKP	**PKPdf**	**10 52 17.6**	**-0.9**
	comp=Z,3.2nm,0.8s,baz=177,slow=1.3,SNR=5.6						
CPUP	**Villa Florida**	**124.87**	**133**	PKP	**PKPdf**	**10 52 17.4**	**-1.0**
	comp=Z,6.1nm,0.9s,baz=269,slow=2.9,SNR=11						
NACGM	**Naroch**	**124.96**	**332**	*e*	**PKiKP**	**10 52 20.0**	**+2.1**
SUR	**Sutherland**	**125.16**	**217**	PFAKE		10 52 30.0	+11
SUR				LR	LR		
	comp=Z,4µm,19.0s						
SDDR	**Presa de Saban**	**125.22**	**74**	PFAKE		10 52 30.0	+10
SDDR				LR	LR		
	comp=Z,3µm,19.0s						
SDV	**Santo Domingo**	**125.27**	**87**	*e*PKPdf	**PKPdf**	**10 52 18.6**	**-1.1**
GRTK	**Grand Turk**	**125.31**	**71**	PFAKE		10 52 30.0	+10
GRTK				LR	LR		
	comp=Z,2µm,19.0s						
AKASG	**Malin Array Be**	**126.11**	**327**	PKP	**PKPdf**	**10 52 18.5**	**-1.4**
	comp=Z,10.0nm,1.1s,baz=59,slow=2.3,SNR=9.9						
KIEV	**Kiev**	**126.12**	**327**	PFAKE		10 52 30.0	+10
KIEV				LR	LR		
	comp=Z,3µm,20.0s						
KIEV	**Kiev**	**126.12**	**327**	⇓*i*P	**PKiKP**	**10 52 21.3**	**+0.9**
KIEV	**Kiev**	**126.12**	**327**	⇓PKIKP	**PKiKP**	**10 52 21.3**	**+0.9**
NB2	**NORSAR Subarra**	**126.12**	**345**	PKPdf	**PKPdf**	**10 52 19.0**	**-0.7**
	comp=Z,5.6nm,0.9s,baz=33,slow=1.9						
NB2	**NORSAR Subarra**	**126.12**	**345**	PKPdf	**PKPdf**	**10 52 19.0**	**-0.7**
	baz=33,slow=1.9						
NOA	**NORSAR Array B**	**126.12**	**345**	PKP	**PKPdf**	**10 52 18.8**	**-0.9**
	comp=Z,3.2nm,0.9s,baz=35,slow=1.9,SNR=7.2						
KMBO	**Kilima Mbogo**	**126.66**	**261**	PFAKE		10 52 30.0	+7.1
KMBO				LR	LR		
	comp=Z,3µm,20.0s						
MATP	**Matopo**	**127.17**	**234**	PKP	**PKPdf**	**10 52 22.8**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=132,slow=5.4,SNR=3.8						
BRTR	**Keskin Array B**	**128.12**	**313**	PKP	**PKPdf**	**10 52 24.2**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=169,slow=2.5,SNR=5.6						
BRTR				PP	**PP**	**10 54 28.4**	**+0.8**
	comp=Z,4.0nm,1.1s,baz=57,slow=4.6,SNR=4.5						
ANTO	**Ankara**	**128.68**	**313**	*e*PKPdf	**PKPdf**	**10 52 25.0**	**-0.3**
ANTO				LR	LR		
	comp=Z,2µm,20.0s						
ANTO	**Ankara**	**128.68**	**313**	*e*PKIKP	**PKPdf**	**10 52 25.0**	**-0.3**
ANTO				MLR	MLR		
	comp=Z,2µm,20.0s						
CFR	**Carcaliu**	**129.55**	**321**	⇓*i*P	**PKPdf**	**10 52 26.1**	**-0.5**
CFR	**Carcaliu**	**129.55**	**321**	⇓PKIKP	**PKPdf**	**10 52 26.1**	**-0.5**
BIZ	**Bicaz**	**129.86**	**324**	⇓*i*P	**PKiKP**	**10 52 28.3**	**+0.3**
BURAR	**Bucovina Array**	**129.99**	**325**	⇑*i*P	**PKiKP**	**10 52 31.5**	**+3.1**
BURAR	**Bucovina Array**	**129.99**	**325**	⇑PKIKP	**PKiKP**	**10 52 31.5**	**+3.1**
LSZ	**Lusaka**	**130.00**	**240**	PFAKE		10 52 40.0	+11
LSZ				LR	LR		
	comp=Z,4µm,20.0s						
VRI	**Vrincioaia**	**130.06**	**323**	⇓*i*P	**PKiKP**	**10 52 31.4**	**+2.9**
VRI	**Vrincioaia**	**130.06**	**323**	⇓PKIKP	**PKiKP**	**10 52 31.4**	**+2.9**
DOPR	**Dopca**	**130.80**	**323**	⇓*i*P	**PKiKP**	**10 52 32.7**	**+2.7**
UZH	**Uzhgorod**	**130.99**	**328**	*e*PKIKP	**PKPdf**	**10 52 22.8**	**-6.5**
ARR	**Arges**	**131.57**	**323**	⇑*i*P	**PKPdf**	**10 52 30.7**	**+0.1**
DRGR		**131.87**	**326**	⇑*i*P	**PKiKP**	**10 52 37.3**	**+5.1**
DRGR		**131.87**	**326**	⇑PKIKP	**PKiKP**	**10 52 37.3**	**+5.1**
LANS	**Liptovska Anna**	**132.09**	**330**	*e*PKP	**PKiKP**	**10 52 32.6**	**+0.1**
MORC	**Moravsky Berou**	**132.59**	**332**	*e*PKPdf	**PKiKP**	**10 52 33.9**	**+0.4**
MORC	**Moravsky Berou**	**132.59**	**332**	⇑*i*P	**PKiKP**	**10 52 33.5**	**0.0**
MORC	**Moravsky Berou**	**132.59**	**332**	⇑PKIKP	**PKiKP**	**10 52 33.5**	**0.0**
MORC	**Moravsky Berou**	**132.59**	**332**	*e*PKP	**PKiKP**	**10 52 33.7**	**+0.2**
GZR	**Gura Zlata**	**132.64**	**324**	⇑*i*P	**PKPdf**	**10 52 32.9**	**+0.3**
GZR	**Gura Zlata**	**132.64**	**324**	⇑PKIKP	**PKPdf**	**10 52 32.9**	**+0.3**
DPC	**Dobruska-Polom**	**132.74**	**333**	*e*PKPdf	**PKiKP**	**10 52 35.4**	**+1.6**
DPC				AMS	AMS	11 50 50.0	
	comp=Z,3µm,25.7s						
DPC	**Dobruska-Polom**	**132.74**	**333**	*e*PKIKP	**PKiKP**	**10 52 35.4**	**+1.6**
DPC				MLR	MLR		
	comp=Z,3µm,25.7s						
UPC	**Upice**	**132.77**	**333**	AMS	AMS	11 50 30.0	
	comp=Z,4µm,23.5s						
MBAR	**Mbarara**	**133.10**	**259**	PFAKE		10 52 50.0	+14
MBAR				LR	LR		
	comp=Z,925nm,22.0s						
BZS	**Buzias**	**133.17**	**325**	⇓*i*P	**PKiKP**	**10 52 34.5**	**-0.2**
BZS	**Buzias**	**133.17**	**325**	⇓PKIKP	**PKiKP**	**10 52 34.5**	**-0.2**
PVCC	**Panska Ves**	**133.38**	**334**	AMS	AMS	11 46 10.0	
	comp=Z,4µm,22.8s						
BRG	**Berggiesshubel**	**133.38**	**335**	*e*PKP	**PKiKP**	**10 52 35.3**	**+0.3**
	comp=Z,9.9nm,1.0s						
BRG				*e*PP	**PP**	**10 55 03.7**	**+3.1**
	comp=Z,22nm,1.8s						
	comp=N,4µm,25.2s						
	comp=E,2µm,23.9s						
	comp=Z,4µm,25.5s						
BRG	**Berggiesshubel**	**133.38**	**335**	*e*PKIKP	**PKiKP**	**10 52 35.3**	**+0.3**
BRG				*e*		10 55 03.7	
BRG				pmax	pmax		
	comp=Z,26nm,1.0s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.8s						
BRG				MLR	MLR		
	comp=N,22µm,25.2s						
BRG				MLR	MLR		
	comp=E,4µm,23.9s						
BRG				MLR	MLR		
	comp=Z,2µm,25.5s						
CLL	**Collm**	**133.44**	**336**	*e*PKPdf	**PKPdf**	**10 52 34.0**	**+0.2**
CLL				*i* pPKiKP	**pPKiKP**	**10 52 38.5**	**+1.1**
	comp=Z,9.0nm,0.9s						
CLL				*e*		10 52 51.0	
CLL	**Collm**	**133.44**	**336**	*e*PKIKP	**PKPdf**	**10 52 34.0**	**+0.2**
CLL				*i*		10 52 38.5	
KRUC	**Moravsky**	**133.63**	**332**	*e*PKP	**PKPdf**	**10 52 34.4**	**+0.1**
MODS	**Modra-Piesok**	**133.69**	**330**	*e*PKIKP	**PKiKP**	**10 52 39.7**	**+4.0**
MODS	**Modra-Piesok**	**133.69**	**330**	*e*PKP	**PKiKP**	**10 52 39.7**	**+4.0**
PRA	**Prague**	**133.78**	**334**	AMS	AMS	11 49 20.0	
	comp=Z,5µm,21.9s						
PRU	**Pruhonice**	**133.79**	**334**	*e*PKPdf	**PKiKP**	**10 52 36.1**	**+0.3**
PRU				AMS	AMS	11 48 40.0	
	comp=Z,5µm,23.8s						
PRU	**Pruhonice**	**133.79**	**334**	*e*PKIKP	**PKiKP**	**10 52 36.1**	**+0.3**
PRU				MLR	MLR		
	comp=Z,5µm,23.8s						
PTGA	**Pitinga**	**133.94**	**101**	PFAKE		10 52 50.0	+13
PTGA				LR	LR		
	comp=Z,11µm,20.0s						
ANWB	**Willy Bob**	**134.27**	**76**	PFAKE		10 52 50.0	+12
ANWB				LR	LR		
	comp=Z,2µm,21.0s						
ESK	**Eskdalemuir**	**134.49**	**351**	PFAKE		10 52 50.0	+13
ESK				LR	LR		
	comp=Z,3µm,20.0s						
CONA	**Conrad Observa**	**134.68**	**331**	P	**PKiKP**	**10 52 41.4**	**+3.5**
	comp=Z,4.2nm,1.0s						
KHC	**Kasperske Hory**	**134.85**	**334**	*e*PKPdf	**PKiKP**	**10 52 37.7**	**-0.4**
KHC				*e*x	x	10 52 51.7	
KHC				AMS	AMS	11 49 00.0	
	comp=Z,4µm,23.7s						
KHC	**Kasperske Hory**	**134.85**	**334**	*e*PKIKP	**PKiKP**	**10 52 37.7**	**-0.4**
KHC				*e*		10 52 51.7	
KHC				MLR	MLR		
	comp=Z,4µm,23.7s						
GERES	**GERESS Array B**	**135.01**	**333**	PKP	**PKPdf**	**10 52 36.4**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=120,slow=5.9,SNR=4.5						
SOKA	**Soboth**	**135.96**	**330**	*e*P	**PKiKP**	**10 52 42.2**	**+1.7**
	comp=Z,6.8nm,1.0s						
BBGH	**Gun Hill**	**136.44**	**82**	PFAKE		10 52 50.0	+7.8
BBGH				LR	LR		
	comp=Z,4µm,20.0s						
KBA	**Koelnbreinsper**	**136.48**	**332**	pPKPdf	pPKPdf	10 52 42.5	+0.2
	comp=Z,6.6nm,0.8s						
MEM	**Membach**	**136.56**	**341**	⇑PKiKP	**PKiKP**	**10 52 42.7**	**+1.2**
BOJS	**Bojanci**	**136.67**	**329**	*i* PKPdf	**PKiKP**	**10 52 43.7**	**+1.9**
VISS	**Visnje**	**136.67**	**329**	*i* PKPdf	**PKiKP**	**10 52 43.6**	**+1.8**
WATA	**Walderalm**	**137.08**	**333**	*e*P	**PKiKP**	**10 52 44.2**	**+1.4**
	comp=Z,5.2nm,0.7s						
ABTA	**Abfaltersbach**	**137.10**	**332**	PKPdf	**PKPdf**	**10 52 40.1**	**-0.9**
	comp=Z,4.6nm,0.6s						
MOTA	**Moosalm**	**137.28**	**334**	*e*PKiKP	**PKPdf**	**10 52 41.8**	**+0.4**
	comp=Z,12nm,1.0s						
SQTA	**Sankt Quirin**	**137.33**	**334**	pPKPdf	pPKPdf	10 52 43.6	-0.2
	comp=Z,7.8nm,0.8s						
BFO	**Black Forest**	**137.64**	**337**	PFAKE		10 52 50.0	+6.2
BFO				LR	LR		
	comp=Z,133nm,22.0s						
FETA	**Feichten**	**137.69**	**334**	*e*PKPdf	**PKPdf**	**10 52 41.8**	**-0.4**
	comp=Z,8.8nm,0.9s						
BDFB	**Brasilia**	**138.20**	**128**	PKPpre	PKPpre	10 52 39.1	
BDFB				*e*PKPdf	**PKPdf**	**10 52 47.4**	**+3.5**
BDFB	**Brasilia**	**138.20**	**128**	PKhKP	PKPpre	10 52 39.1	
	comp=Z,2.9nm,0.6s,baz=166,slow=4.3,SNR=4.6						
DAVOX	**Davos/Dischmat**	**138.25**	**334**	PKP	**PKiKP**	**10 52 44.7**	**-0.6**
	comp=Z,9.1nm,0.8s,baz=57,slow=8.5,SNR=8.7						
KEST	**Kesra**	**146.63**	**322**	PKPbc	**PKPdf**	**10 52 58.8**	**+0.5**
	comp=Z,36nm,1.0s,baz=337,slow=1.0,SNR=4.9						
PBRG	**Braganca**	**148.13**	**348**	*e*PKPdf	**PKiKP**	**10 53 04.5**	**-1.0**
PCAB	**Cabril**	**148.46**	**350**	*e*PKPdf	**PKPab**	**10 53 09.2**	**+1.4**
POLO	**Lamas de Olo**	**148.75**	**349**	*e*PKPdf	**PKPab**	**10 53 09.5**	**+0.5**
MVO	**Moncorvo**	**148.80**	**348**	*e*PKPdf	**PKPab**	**10 53 08.9**	**-0.3**
PVRL	**Vila Real**	**148.83**	**349**	*e*PKPdf	**PKPab**	**10 53 09.6**	**+0.3**
PVIS	**Viseu**	**149.40**	**349**	*e*PKPdf	**PKiKP**	**10 53 09.0**	**+0.8**
ESDC	**Sonseca Array**	**149.47**	**343**	PKPbc	**PKPbc**	**10 53 07.0**	**-0.3**
	comp=Z,6.7nm,1.0s,baz=5.6,slow=3.7,SNR=6.1						
MTE	**Manteigas**	**149.64**	**349**	*e*PKPdf	**PKPab**	**10 53 11.4**	**-1.3**
PAB	**San Pablo**	**149.69**	**343**	PFAKE		10 53 10.0	+1.1
PAB				LR	LR		
	comp=Z,3µm,20.0s						
PCAS	**Casmilo, Conde**	**150.16**	**350**	*e*PKPab	**PKPab**	**10 53 19.4**	**+4.7**
PCBR	**Castelo Branco**	**150.17**	**348**	*e*PKPdf	**PKPdf**	**10 53 03.7**	**-0.1**
PMRV	**Marv??o**	**150.55**	**348**	*e*PKPdf	**PKiKP**	**10 53 10.4**	**-0.1**
PTOM	**Tomar**	**150.56**	**349**	*e*PKPdf	**PKPbc**	**10 53 09.8**	**0.0**
PMTG	**Montargil**	**151.06**	**349**	*e*PKPab	**PKPab**	**10 53 21.3**	**+2.9**
PESTR	**Estremoz**	**151.13**	**348**	*e*PKPab	**PKPab**	**10 53 22.1**	**+3.3**
PMAFR	**Mafra**	**151.36**	**351**	*e*PKPab	**PKPab**	**10 53 24.3**	**+4.6**
CMLA	**Cha da Macela**	**151.43**	**17**	PFAKE		10 53 20.0	0.0
CMLA				LR	LR		
	comp=Z,4µm,22.0s						
SHEL	**Horse Pasture**	**151.98**	**199**	PFAKE		10 53 20.0	-2.9
SHEL				LR	LR		
	comp=Z,2µm,19.0s						
PBEJ	**Beja**	**152.00**	**348**	*e*PKPab	**PKPab**	**10 53 21.1**	**-1.3**
PNCL	**Nicolau / Gran**	**152.05**	**349**	*e*PKPdf	**PKPdf**	**10 53 07.6**	**+0.9**
MESJ	**Messejana**	**152.25**	**348**	*e*PKPab	**PKPab**	**10 53 25.2**	**+1.8**
PVAQ	**Vaqueiros**	**152.56**	**347**	*e*PKPab	**PKPab**	**10 53 24.3**	**-0.4**
RCBR	**Riachuelo**	**153.57**	**127**	PFAKE		10 53 20.0	+2.5
RCBR				LR	LR		
	comp=Z,19µm,20.0s						
ASCN	**Ascension**	**161.51**	**182**	PFAKE		10 53 30.0	+10
ASCN				LR	LR		
	comp=Z,21µm,21.0s						
TORD	**Torodi Ar. Bea**	**163.41**	**280**	PKP	**PKPdf**	**10 53 19.6**	**-1.8**
	comp=Z,4.4nm,1.1s,baz=142,slow=4.7,SNR=9.7						
TORD				PKPab	**PKPab**	**10 54 10.7**	**-1.7**
	comp=Z,6.9nm,1.2s,baz=144,slow=5.5,SNR=5.9						
TORD				PP	**PP**	**10 58 00.6**	**+2.7**
	comp=Z,3.6nm,1.2s,baz=129,slow=4.0,SNR=4.8						
DBIC	**Dimbokro**	**169.15**	**249**	PKP	**PKPdf**	**10 53 24.9**	**-1.0**
	comp=Z,6.8nm,0.9s,baz=127,slow=1.4,SNR=4.1						
SACV	**Santiago Islan**	**170.64**	**62**	PFAKE		10 53 40.0	+13
SACV				LR	LR		
	comp=Z,2µm,20.0s						

IDC 06 10:36:17.6±3.4, 9.°97S×165.°70E, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/43, mbtmp4.1/4, Error ellipse: s-maj=157.1km s-min=33.7km az=142.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.83**	**248**	P	P	10 42 44.7	+0.3
	4.0nm,0.9s,baz=80,slow=9.0,SNR=3.4						
ILAR	**Eielson Array**	**82.52**	**19**	P	P	10 48 43.2	+1.3
	1.1nm,0.6s,baz=239,slow=5.2,SNR=5.8						
MKAR	**Makanchi Array**	**92.72**	**317**	P	P	10 49 30.8	-0.9
	1.2nm,0.9s,baz=92,slow=5.6,SNR=2.0						
YKA	**Yellowknife Ar**	**94.05**	**27**	P	P	10 49 36.1	-1.3
	0.2nm,0.6s,baz=258,slow=4.5,SNR=3.3						

IDC ***06*** *10:39:34.0±1.7, 10.°60S×165.°54E, h0km, mb4.0/5,* *mb1 4.3/6, mb1mx3.8/49, mbtmp4.1/6, ML4.0/1, Error ellipse: s-maj=50.3km s-min=27.6km az=134.0*

*ISCJB **06** 10:39:36.7±1.5, 10°.8S±0°.2×165°.6E±0°.2, h31^{km}, mb4.0/4, Error ellipse: s-maj=28.0km s-min=23.3km az=176.9*

ISC 06 10:39:38.7±1.5, 10°.7S±0°.2×165°.6E±0°.2, h31^{km}, n6, σ1^{s}22/6, mb4.0/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.34	176	Pn	Pn	10 42 18.7	0.0
	1.1nm,0.3s,baz=97,slow=16,SNR=3.9						
CTA	Charters Tower	20.83	241	P	P	10 44 17.8	-0.2
	4.4nm,0.8s,baz=72,slow=16,SNR=3.0						
WRA	Warramunga Arr	31.46	249	P	P	10 45 56.0	-1.8
	1.5nm,0.7s,baz=79,slow=9.0,SNR=4.6						
ASAR	Alice Springs	32.82	243	P	P	10 46 09.2	-0.4
	4.1nm,0.8s,baz=65,slow=10,SNR=13						
FITZ	Fitzroy Crossi	39.33	255	P	P	10 47 06.3	+0.9
	2.4nm,0.6s,baz=109,slow=4.5,SNR=4.2						
ILAR	Eielson Array	83.24	19	P	P	10 52 01.6	-0.1
	0.4nm,0.6s,baz=231,slow=4.9,SNR=4.4						

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*ISCJB **06** 10:42:20.8±0.4, 10°.76S±0°.04×164°.84E±0°.06, h10^{km}, mb4.2/20, Error ellipse: s-maj=8.0km s-min=6.0km az=164.1*

*IDC **06** 10:42:21.0±0.8, 10°.74S×164°.82E, h0^{km}, mb4.2/15, mb1 4.3/17, mb1mx4.1/50, mbtmp4.2/17, ML4.9/2, Error ellipse: s-maj=21.6km s-min=15.3km az=117.0*

*NEIC **06** 10:42:22.6±0.3, 10°.68S×164°.82E, h10^{km}, mb4.4/9, Error ellipse: s-maj=7.5km s-min=5.3km az=102.0*

ISC 06 10:42:22.5±0.6, 10°.69S±0°.06×164°.88E±0°.08, h10^{km}, n49, σ0^{s}87/50, mb4.2/20, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.02	284	*e*Pn	Pn	10 43 36.3	-1.7
HNR				*e*Sn	Sn	10 44 35.5	-0.5
HNR				*e*Sn	Sn	10 44 36.8	+0.8
HNR	Honiara	5.02	284	Pn	Pn	10 43 38.4	+0.5
	62nm,0.3s,baz=11,slow=7.6,SNR=8.1						
HNR				Sn	Sn	10 44 36.8	+0.8
	15nm,0.3s,baz=53,slow=20,SNR=2.3						
MARNC	Mare, Loyalty	11.14	165	*e*Pn	Pn	10 45 02.0	-0.1
DZM	Mont Dzumac	11.41	173	*e*Pn	Pn	10 45 06.5	+0.7
DZM				*e*Sn	Sn	10 47 13.5	0.0
DZM	Mont Dzumac	11.41	173	Pn	Pn	10 45 06.9	+1.1
	7.3nm,0.3s,baz=33,slow=13,SNR=14						
DZM				Sn	Sn	10 47 13.5	0.0
	1.2nm,0.3s,baz=148,slow=15,SNR=2.3						
OUENC	Ouen Island, N	11.81	171	*e*Pn	Pn	10 45 12.0	+0.9
MANU	Manus Island	19.40	295	*e*P	Pn	10 46 52.0	+1.9
	158nm,1.1s						
EIDS	Eidsvold	19.60	220	*e*P	P	10 46 51.4	+0.3
	29nm,0.9s						
CTA	Charters Tower	20.22	240	P	Pn	10 46 59.0	-0.9
	11nm,1.0s,baz=116,slow=17,SNR=3.8						
CTAO	Charters Tower	20.22	240	*e*P	P	10 46 58.3	+0.3
	23nm,1.3s						
LHI	Lord Howe Isla	21.41	194	*e*P	P	10 47 10.6	-0.1
	103nm,1.1s						
COEN	Coen	21.45	259	*e*P	P	10 47 11.5	+0.3
	17nm,1.4s						
ARMA	Armidale	23.18	210	*e*P	P	10 47 29.9	+0.4
	24nm,0.9s						
H11S2	WAKE ISLAND Hy	29.05	4	T	T	11 18 36.4	
	baz=184,slow=76,SNR=6.9						
H11S3	WAKE ISLAND Hy	29.06	4	T	T	11 18 37.0	
	baz=184,slow=76,SNR=6.1						
H11S1	WAKE ISLAND Hy	29.07	4	T	T	11 18 38.2	
	baz=184,slow=76,SNR=6.8						
STKA	Stephens Creek	30.12	222	*e*P	P	10 48 33.4	+0.8
	1.4nm,0.8s						
STKA	Stephens Creek	30.12	222	P	P	10 48 32.3	-0.3
	5.3nm,0.8s,baz=40,slow=9.4,SNR=9.1						
WR1	Warramunga Arr	30.81	249	*e*P	P	10 48 37.3	-1.5
	13nm,1.4s						
WRA	Warramunga Arr	30.81	249	P	P	10 48 37.3	-1.5
	1.0nm,0.6s,baz=80,slow=9.2,SNR=9.7						
AS01	Alice Springs	32.16	242	*e*P	P	10 48 49.7	-1.0
AS31	Alice Springs	32.19	242	*e*P	P	10 48 49.3	-1.8
	3.4nm,1.6s						
ASAR	Alice Springs	32.20	242	P	P	10 48 49.2	-1.8
	0.8nm,0.6s,baz=63,slow=10,SNR=9.4						
FITZ	Fitzroy Crossi	38.65	254	*e*P	P	10 49 45.4	-1.2
	9.3nm,1.1s						
FITZ	Fitzroy Crossi	38.65	254	P	P	10 49 44.8	-1.8
	1.5nm,0.5s,baz=62,slow=7.3,SNR=8.3						
ASAJ	Asahikawa	58.19	341	P	P	10 52 17.1	+0.4
	6.7nm,0.8s,baz=202,slow=10,SNR=6.9						
USRK	Ussuriysk Ar.	62.26	334	P	P	10 52 45.4	+0.8
	1.3nm,0.7s,baz=180,slow=5.8,SNR=3.5						
PETK	Petropavlovsk-	63.84	355	P	P	10 52 56.1	+1.1
	2.0nm,0.9s,baz=150,slow=12,SNR=2.4						
PEA1	Petropavlovsk-	63.85	355	*e*P	P	10 52 56.1	+1.0
CM01	Chiang Mai Arr	71.17	294	*e*P	P	10 53 41.7	-0.4
CM31	Chiang Mai Arr	71.19	294	*e*P	P	10 53 42.5	+0.2
CMAR	Chiang Mai Arr	71.19	294	P	P	10 53 42.4	+0.2
	0.6nm,0.3s,baz=130,slow=4.0,SNR=6.0						
SONA0	Songino Array	77.88	324	*e*P	P	10 54 20.6	-0.1
SONM	Songino Array	77.88	324	P	P	10 54 20.6	-0.1
	2.3nm,1.2s,baz=135,slow=6.9,SNR=6.3						
SONA1	Songino Array	77.89	324	*e*P	P	10 54 20.7	0.0
BILL	Bilibino	78.54	1	*e*P	P	10 54 22.8	-0.9
	4.9nm,0.9s						
QSPA	South Pole Qui	79.31	180	P	P	10 54 28.9	+0.6
	4.6nm,0.9s,baz=341,slow=2.0,SNR=8.9						
IL1	Eielson Array	83.45	19	*e*P	P	10 54 49.9	-0.2
ILAR	Eielson Array	83.45	19	P	P	10 54 50.5	+0.5
	1.9nm,0.9s,baz=231,slow=5.7,SNR=7.6						
ILB	Eielson Array	83.45	19	*e*P	P	10 54 50.3	+0.2
NV01	Mina Array Sit	86.45	50	*e*P	P	10 55 05.4	-0.6
NVAR	Mina Array Bea	86.45	50	P	P	10 55 05.8	-0.1
	1.2nm,1.0s,baz=244,slow=5.9,SNR=3.6						
MK01	Makanchi Array	92.67	317	*e*P	P	10 55 35.0	+0.1
MK31	Makanchi Array	92.69	317	*e*P	P	10 55 35.1	+0.2
MK32	Makanchi Array	92.69	317	*e*P	P	10 55 34.8	-0.1
MKAR	Makanchi Array	92.69	317	*e*P	P	10 55 35.3	+0.3
	8.8nm,0.8s						
MKAR	Makanchi Array	92.69	317	P	P	10 55 34.8	-0.1
	1.3nm,0.7s,baz=92,slow=6.5,SNR=8.2						
YKA	Yellowknife Ar	95.05	27	P	P	10 55 44.8	-0.6
	0.2nm,0.8s,baz=240,slow=4.9,SNR=2.9						
YKB5	Yellowknife Ar	95.05	27	*e*P	P	10 55 44.3	-1.1

IDC 06 10:45:15.9±2.6, 11°.72S×166°.24E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.7/46, mbtmp3.8/6, Error ellipse: s-maj=103.0km s-min=27.5km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.72	251	P	P	10 51 42.0	+0.2
	1.6nm,0.7s,baz=82,slow=9.0,SNR=6.7						
ASAR	Alice Springs	32.94	244	P	P	10 51 52.3	-0.2
	0.5nm,0.7s,baz=78,slow=9.7,SNR=3.7						
SONM	Songino Array	79.50	324	P	P	10 57 24.6	0.0
	0.5nm,0.7s,baz=124,slow=2.6,SNR=3.0						
ILAR	Eielson Array	83.99	18	P	P	10 57 48.4	+0.6
	1.0nm,0.7s,baz=233,slow=6.0,SNR=7.2						
MKAR	Makanchi Array	94.34	317	P	P	10 58 37.3	-0.3
	0.8nm,0.7s,baz=94,slow=6.3,SNR=5.4						
YKA	Yellowknife Ar	95.34	27	P	P	10 58 41.1	-0.7
	0.2nm,0.6s,baz=263,slow=4.3,SNR=3.6						

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*IDC **06** 10:48:24.6±1.3, 10°.60S×165°.49E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.7/49, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=50.1km s-min=23.1km az=132.0*

*ISCJB **06** 10:48:27.2±1.0, 10°.8S±0°.1×165°.6E±0°.2, h31^{km}, mb3.8/5, Error ellipse: s-maj=26.4km s-min=18.1km az=20.5*

ISC 06 10:48:29.0±1.1, 10°.7S±0°.1×165°.6E±0°.2, h31^{km}, n7, σ0^{s}73/7, mb3.8/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.31	176	Pn	Pn	10 51 08.9	+0.2
	0.5nm,0.3s,baz=24,slow=20,SNR=8.1						
CTA	Charters Tower	20.79	241	P	P	10 53 07.5	-0.4
	3.5nm,1.0s,baz=150,slow=20,SNR=2.4						
WRA	Warramunga Arr	31.43	249	P	P	10 54 47.7	-0.1
	0.9nm,0.8s,baz=69,slow=8.8,SNR=4.4						
ASAR	Alice Springs	32.78	243	P	P	10 54 59.4	-0.3
	1.8nm,0.8s,baz=67,slow=10,SNR=13						
ILAR	Eielson Array	83.27	19	P	P	11 00 52.5	+0.3
	0.9nm,0.7s,baz=235,slow=5.0,SNR=10.0						
MKAR	Makanchi Array	93.17	317	P	P	11 01 41.2	+1.0
	0.2nm,0.6s,baz=94,slow=5.3,SNR=2.5						
YKA	Yellowknife Ar	94.77	27	P	P	11 01 46.3	-0.9
	0.2nm,0.6s,baz=257,slow=4.8,SNR=3.4						

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*IDC **06** 10:48:53.0±1.3, 10°.65S×164°.75E, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.8/48, mbtmp4.1/9, ML4.5/2, MS4.2/2, Ms1 4.2/2, ms1mx3.8/45, Error ellipse: s-maj=32.6km s-min=23.6km az=118.0*

*ISCJB **06** 10:48:54.7±0.6, 10°.81S±0°.07×164°.71E±0°.08, h24^{km}, mb4.2/14, MS4.5/1, Error ellipse: s-maj=12.3km s-min=7.1km az=141.6*

*NEIC **06** 10:48:54.5±0.3, 10°.72S×164°.67E, h10^{km}, mb4.0/5, Error ellipse: s-maj=7.8km s-min=4.6km az=70.0*

ISC 06 10:48:56.4±0.8, 10°.73S±0°.10×164°.74E±0°.10, h24^{km}, n30, σ0^{s}75/31, mb4.1/14, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.90	285	Pn	Pn	10 50 06.8	-1.8
HNR				*e*Sn	Sn	10 51 05.5	+0.9
HNR	Honiara	4.90	285	Pn	Pn	10 50 07.9	-0.6
	11nm,0.3s,baz=123,slow=17,SNR=2.6						
HNR				Sn	Sn	10 51 06.4	+1.9
	20nm,0.3s,baz=191,slow=19,SNR=2.3						
HNR				LR	LR	10 51 49.1	
	comp=Z,1μm,20.9s,baz=73,slow=36						
MARNC	Mare, Loyalty	11.14	164	*e*Pn	Pn	10 51 34.2	-0.1
DZM	Mont Dzumac	11.39	172	*e*Pn	Pn	10 51 38.0	+0.3
DZM	Mont Dzumac	11.39	172	Pn	Pn	10 51 38.2	+0.4
	4.9nm,0.3s,baz=43,slow=8.3,SNR=27						
OUENC	Ouen Island, N	11.79	170	*e*Pn	Pn	10 51 43.4	+0.2
PINNC	Pines Island,	12.09	168	*e*Pn	Pn	10 51 47.6	+0.3
COEN	Coen	21.31	259	*e*P	P	10 53 40.1	-1.6
	11nm,1.4s						
ARMA	Armidale	23.07	210	*e*P	P	10 54 00.8	+0.3
	8.1nm,0.9s						
RAO	Raoul Island	24.53	141	LR	LR	11 02 39.0	
	comp=Z,1μm,18.4s,baz=8.5,slow=34						
CAN	Canberra	28.36	208	*e*P	P	10 54 48.4	-0.4
	11nm,1.1s						
STKA	Stephens Creek	30.00	222	*e*P	P	10 55 03.7	+0.4
	0.7nm,0.8s						
STKA	Stephens Creek	30.00	222	P	P	10 55 04.7	+1.4
	3.9nm,0.8s,baz=16,slow=8.7,SNR=7.8						
WR1	Warramunga Arr	30.67	249	*e*P	P	10 55 09.7	+0.3
WRA	Warramunga Arr	30.67	249	P	P	10 55 09.7	+0.3
	1.0nm,0.9s,baz=80,slow=9.2,SNR=6.0						
SNZO	South Karori	31.69	166	*e*P	P	10 55 18.0	-0.1
	52nm,1.1s						
AS01	Alice Springs	32.02	242	*e*P	P	10 55 20.7	-0.6
AS31	Alice Springs	32.06	242	*e*P	P	10 55 20.6	-1.0
	1.0nm,1.0s						
ASAR	Alice Springs	32.06	242	P	P	10 55 21.7	+0.1
	0.4nm,0.5s,baz=62,slow=10,SNR=4.9						
ANA2	Anatahan	32.84	325	*e*P	P	10 55 28.0	-0.4
	83nm,0.5s						
SONA0	Songino Array	77.84	324	*e*P	P	11 00 52.6	+0.5
SONM	Songino Array	77.84	324	P	P	11 00 52.6	+0.5
	0.8nm,0.9s,baz=142,slow=5.6,SNR=3.0						
QSPA	South Pole Qui	79.27	180	*e*P	P	11 00 59.9	+0.2
	11nm,1.1s						
ILAR	Eielson Array	83.53	19	P	P	11 01 22.2	+0.2
	0.5nm,0.8s,baz=248,slow=4.9,SNR=3.5						
ILB	Eielson Array	83.53	19	*e*P	P	11 01 22.4	+0.4
MK32	Makanchi Array	92.62	317	*e*P	P	11 02 06.6	+0.4
MKAR	Makanchi Array	92.62	317	P	P	11 02 06.6	+0.4
	0.7nm,0.8s,baz=102,slow=5.1,SNR=5.5						
ZALV	Zalesovo Beam	92.73	324	P	P	11 02 06.3	-0.2
	0.3nm,0.3s,baz=79,slow=7.5,SNR=2.7						
ZAA1	Zalesovo Array	92.73	324	*e*P	P	11 02 06.3	-0.2
ARU	Arti	107.82	326	*e*Pdif	Pdif	11 03 14.1	-0.1

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*ISCJB **06** 10:49:06.0±0.2, 1°.35S±0°.01×78°.42W±0°.02, h7^{km}±2^{km}, Error ellipse: s-maj=4.0km s-min=2.2km az=13.0*

*IGQ **06** 10:49:06.0±0.2, 1°S±1°×7°8W±°, h5^{km}, M3.7/30*

ISC 06 10:49:05.8±0.8, 1°.36S±0°.02×78°.44W±0°.02, h8^{km}±5^{km}, n101, σ1^{s}01/132, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUN5	Runtun	0.06	167	P	Pg	10 49 08.1	+0.1
RUN5	Runtun	0.06	167	P	Pg	10 49 08.0	0.0
POND	Pondoa	0.06	194	P	Pg	10 49 07.3	-0.7
POND	Pondoa	0.06	194	P	Pg	10 49 08.0	0.0
POND				S	Sg	10 49 09.9	+0.3
BRUN	Tungurahua Vol	0.07	158	P	Pg	10 49 07.9	-0.1
BRUN	Tungurahua Vol	0.07	158	P	Pg	10 49 08.0	-0.1
BRUN				S	Sg	10 49 09.7	0.0
JUI6	Juive	0.07	206	P	Pg	10 49 07.9	-0.2
JUI6	Juive	0.07	206	P	Pg	10 49 07.9	-0.2
BULB	Ulba Tungurahu	0.08	161	P	Pg	10 49 08.3	+0.1
BULB	Ulba Tungurahu	0.08	161	P	Pg	10 49 08.4	+0.1
BULB				S	Sg	10 49 09.9	-0.1
BBIL	Ulba Tungurahu	0.10	209	P	Pg	10 49 08.4	-0.1
BBIL	Ulba Tungurahu	0.10	209	P	Pg	10 49 08.5	-0.1
BBIL				S	Sg	10 49 10.5	+0.1
BIL2	Estacion Bilba	0.12	214	P	Pg	10 49 08.0	-0.7
BIL2	Estacion Bilba	0.12	214	P	Pg	10 49 08.0	-0.7
BPAT	Tungurahua Vol	0.14	178	P	Pg	10 49 09.3	+0.2
BPAT	Tungurahua Vol	0.14	178	P	Pg	10 49 09.4	+0.2
BPAT				S	Sg	10 49 12.3	+0.7
PAT1	Patacocha	0.15	180	P	Pg	10 49 09.4	+0.2
PAT1	Patacocha	0.15	180	P	Pg	10 49 09.4	+0.2
ARRY	Arrayan	0.15	187	P	Pg	10 49 08.9	-0.3
ARRY	Arrayan	0.15	187	P	Pg	10 49 09.1	-0.1
BMAS	Trigal station	0.15	196	P	Pg	10 49 08.9	-0.3
BMAS	Trigal station	0.15	196	P	Pg	10 49 09.0	-0.2
BMAS				S	Sg	10 49 11.5	0.0
IGUA	Igualata	0.24	237	P	Pg	10 49 11.0	+0.1
IGUA	Igualata	0.24	237	P	Pg	10 49 11.4	+0.6
PIS1	Pisayambo	0.30	10	P	Pg	10 49 12.1	0.0
PISA	Pisayambo	0.30	10	P	Pg	10 49 11.6	-0.4
PISA	Pisayambo	0.30	10	P	Pg	10 49 12.1	0.0
SAGO	Sagoatoa	0.31	312	P	Pg	10 49 12.7	+0.5
PUYO	Puyo, Santa Ro	0.43	108	P	Pg	10 49 14.9	+0.6
PUYO	Puyo, Santa Ro	0.43	108	P	Pg	10 49 14.9	+0.6
PUYO				S	Sg	10 49 18.9	-1.1
APUY	Puyo	0.45	103	P	Pg	10 49 15.5	+0.8
APUY	Puyo	0.45	103	P	Pg	10 49 15.4	+0.7
APUY				S	Sg	10 49 21.1	+0.5
BMOR	Cotopaxi Volca	0.62	358	P	Pg	10 49 17.9	-0.1
BMOR	Cotopaxi Volca	0.62	358	P	Pg	10 49 17.9	-0.1
BMOR				S	Sg	10 49 26.9	+0.6
BTAM	Cotopaxi Volca	0.68	3	P	Pg	10 49 18.8	-0.3
BTAM	Cotopaxi Volca	0.68	3	P	Pg	10 49 18.8	-0.3
BTAM				S	Sg	10 49 28.9	+0.9
BNAS	Cotopaxi Volca	0.68	356	P	Pg	10 49 19.2	+0.1
BNAS	Cotopaxi Volca	0.68	356	P	Pg	10 49 19.2	+0.1
BNAS				S	Sb	10 49 29.9	-0.4
BREF	Cotopaxi Volca	0.68	360	P	Pg	10 49 19.2	+0.1
BREF	Cotopaxi Volca	0.68	360	P	Pg	10 49 19.3	+0.1
BREF				S	Sg	10 49 29.1	+0.9
PAST	Pastocalle	0.69	343	P	Pg	10 49 19.6	+0.3
BVC2	Cotopaxi Volca	0.70	2	P	Pg	10 49 19.1	-0.3
BVC2	Cotopaxi Volca	0.70	2	P	Pg	10 49 19.1	-0.3
BVC2				S	Sg	10 49 29.6	+1.0
ILLI	Illinizas Sur	0.70	336	P	Pg	10 49 19.2	-0.3
ILLI				S	Sg	10 49 29.6	+0.9
NAS2	Nasa	0.71	357	P	Pg	10 49 20.2	+0.6
NAS2	Nasa	0.71	357	P	Pg	10 49 19.9	+0.3
VC1	Cotopaxi 1	0.71	3	P	Pg	10 49 19.3	-0.4
VC1	Cotopaxi 1	0.71	3	P	Pg	10 49 19.5	-0.2
ARDO	Archidona, Ten	0.73	60	P	Pg	10 49 19.2	-0.8
ARDO	Archidona, Ten	0.73	60	P	Pg	10 49 19.8	-0.1
ARDO				S	Sg	10 49 29.8	+0.3
PITA	Cotopaxi Volc	0.80	0	P	Pg	10 49 21.1	-0.1
PITA	Cotopaxi Volc	0.80	0	P	Pg	10 49 21.0	-0.2
ANTM	Antisana-La Mi	0.84	15	P	Pg	10 49 20.7	-1.5
ANTM	Antisana-La Mi	0.84	15	P	Pg	10 49 21.1	-1.1
ANTM				S	Sg	10 49 32.7	-0.5
ANTG	Antisana-Guama	0.87	12	P	Pg	10 49 21.4	-1.3
ANTG	Antisana-Guama	0.87	12	P	Pg	10 49 21.6	-1.0
ANTG				S	Sg	10 49 33.4	-0.6
ANTS	Antisana-Sarah	0.90	17	P	Pg	10 49 21.8	-1.4
ANTS	Antisana-Sarah	0.90	17	P	Pg	10 49 22.2	-1.0
ANTS				S	Sg	10 49 34.7	-0.2
ANTI	Antisana	0.94	17	P	Pg	10 49 22.9	-1.2
NINA	Atacazo Ninahu	0.98	349	P	Pg	10 49 24.9	+0.2
NINA	Atacazo Ninahu	0.98	349	P	Pg	10 49 24.6	-0.1
NINA				S	Sb	10 49 39.1	+0.3
GGPC	Guagua Pichinc	1.18	352	P	Pg	10 49 27.6	-1.0
GGPC	Guagua Pichinc	1.18	352	P	Pg	10 49 27.8	-0.9
GGPC				S	Sg	10 49 40.7	-3.3
YANA	Yana	1.24	354	P	Pg	10 49 28.8	-0.9
YANA	Yana	1.24	354	P	Pg	10 49 28.7	-0.9
YANA				S	Sg	10 49 46.2	+0.3
COHC	Cochancay	1.37	217	P	Pn	10 49 30.2	-1.1
COHC	Cochancay	1.37	217	P	Pn	10 49 30.7	-0.7
COHC				S	Sb	10 49 48.6	-0.9
MILO	Milagro-Astudi	1.44	231	P	Pn	10 49 31.3	-1.1
MILO	Milagro-Astudi	1.44	231	P	Pn	10 49 31.7	-0.7
MILO				S	Sb	10 49 51.2	-0.4
CAYA	Cayambe	1.49	17	P	Pg	10 49 36.9	+2.4
CAYA	Cayambe	1.49	17	P	Pn	10 49 34.0	+0.6
CAYA				S	Sb	10 49 53.8	+0.4
CONE	Cono NE Rev Vo	1.51	32	P	Pg	10 49 35.9	+1.1
CONE	Cono NE Rev Vo	1.51	32	P	Pn	10 49 33.6	+0.1
OTAV	Otavalo	1.59	360	*e*P	Pn	10 49 34.4	-0.3
OTAV				*e*S	Sn	10 49 52.3	-3.4
OTAV	Otavalo	1.59	360	*e*P	Pn	10 49 34.4	-0.3
OTAV				*e*S	Sn	10 49 52.3	-3.4
OTAV	Otavalo	1.59	360	P	Pn	10 49 34.7	0.0
IMBA	Imbabura, San	1.64	8	P	Pg	10 49 38.4	+1.0
IMBA	Imbabura, San	1.64	8	P	Pb	10 49 37.4	+0.7
IMBA				S	Sg	10 50 01.6	+2.9
PAC1	Pacto, Paraso	1.65	348	P	Pn	10 49 35.6	+0.2
CUIC	Cuicocha-Domo	1.65	3	P	Pn	10 49 36.1	+0.5
CUIC	Cuicocha-Domo	1.65	3	P	Pn	10 49 35.9	+0.3
CUIC				S	Sg	10 50 00.3	+1.2
COTA	Cotacachi	1.69	3	P	Pg	10 49 41.7	+3.5
YAHU	Yahuarcocha	1.75	12	P	Pg	10 49 40.2	+0.6
YAHU	Yahuarcocha	1.75	12	P	Pb	10 49 38.9	+0.3
URCU	Urcuqui	1.79	6	P	Pb	10 49 40.0	+0.7
URCU	Urcuqui	1.79	6	P	Pn	10 49 39.0	+1.4
URCU				S	Sg	10 50 05.5	+1.8
MAG1	Magdalena	1.85	314	P	Pb	10 49 39.4	-0.6
MAG1	Magdalena	1.85	314	P	Pn	10 49 39.3	+1.3
LITE1	Lita	2.14	2	P	Pn	10 49 43.9	+1.8
TULM	Tulcn-Chalpat	2.16	18	P	Pb	10 49 46.7	+1.1
TULM	Tulcn-Chalpat	2.16	18	P	Pb	10 49 45.1	-0.4
MORR	Playas El Morr	2.29	236	P	Pb	10 49 48.2	+0.8
MORR	Playas El Morr	2.29	236	P	Pn	10 49 45.4	+1.4
MORR				S	Sb	10 50 17.4	+1.6
CMBC	Cumbal	2.37	15	*e*P	Pb	10 49 50.5	+1.4
CMBC	Cumbal	2.37	15	*e*P	Pb	10 49 50.5	+1.4
SALI	Salinas	2.68	252	P	Pn	10 49 50.1	+0.7
GCUF	Volcan Galeras	2.79	23	*e*P	Pb	10 49 56.2	-0.1
GCUF	Volcan Galeras	2.79	23	*e*P	Pb	10 49 56.2	-0.1
CRUC	La Cruz	3.27	27	*e*P	Pb	10 50 02.9	-1.5
CRUC	La Cruz	3.27	27	*e*P	Pb	10 50 02.9	-1.5
MCRA	Macar, Loja	3.35	207	P	Pn	10 50 01.2	+2.5
MCRA				S	Sb	10 50 47.7	+1.0

ISK 06 10:51:13.9, 40°.66N×26°.57E, h15^{km}±2^{km}, ML1.2/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERIK	Erikli-Kesan	0.04	292	PG	Pg	10 51 17.0	+0.3
ERIK				SG	Sg	10 51 19.0	+0.5
GELI	Tayfur-Gelibol	0.27	195	PG	Pg	10 51 19.9	+0.3
GELI				SG	Sb	10 51 24.3	-0.4
LPK	Lapseki	0.32	152	PG	Pg	10 51 20.9	+0.4
ENEZ	Enez	0.32	285	PG	Pb	10 51 21.7	+0.3
ALN	Alexandroupoli	0.46	302	PG	Pg	10 51 22.8	-0.3

IDC 06 10:52:10.0±3.0, 11°.51S×164°.95E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.6/44, mbtmp3.6/5, Error ellipse: s-maj=145.4km s-min=27.4km az=140.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.59	250	P	P	10 58 26.1	+0.2
	1.0nm,1.1s,baz=79,slow=9.3,SNR=3.3						
ASAR	Alice Springs	31.89	244	P	P	10 58 36.7	-0.6
	0.4nm,0.8s,baz=66,slow=9.4,SNR=3.5						
ILAR	Eielson Array	84.20	19	P	P	11 04 42.2	-0.7
	0.6nm,0.7s,baz=238,slow=5.2,SNR=7.2						
MKAR	Makanchi Array	93.33	317	P	P	11 05 27.8	+0.9
	0.2nm,0.7s,baz=108,slow=4.7,SNR=2.0						
YKA	Yellowknife Ar	95.75	27	P	P	11 05 37.7	+0.1
	0.1nm,0.5s,baz=254,slow=4.2,SNR=2.7						

IDC 06 10:53:08.7±1.7, 11°.28S×164°.96E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.6/46, mbtmp3.8/4, ML4.1/1, Error ellipse: s-maj=50.9km s-min=32.0km az=128.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.82	173	Pn	Pn	10 55 45.0	0.0
	1.4nm,0.3s,baz=320,slow=12,SNR=14						
WRA	Warramunga Arr	30.68	250	P	P	10 59 25.5	+0.1
	0.3nm,0.5s,baz=82,slow=9.0,SNR=3.4						
ASAR	Alice Springs	32.00	243	P	P	10 59 36.9	-0.1
	0.6nm,0.6s,baz=64,slow=11,SNR=5.3						
ILAR	Eielson Array	83.98	19	P	P	11 05 40.5	0.0
	0.4nm,0.6s,baz=227,slow=4.8,SNR=6.4						

IDC 06 10:54:15.7±1.3, 10°.97S×165°.71E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.6/45, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=49.9km s-min=25.8km az=130.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.07	176	Pn	Pn	10 56 55.3	-0.1
	0.5nm,0.3s,baz=233,slow=20,SNR=2.9						
WRA	Warramunga Arr	31.48	250	P	P	11 00 39.3	-0.1
	0.3nm,0.6s,baz=80,slow=9.1,SNR=3.1						
ASAR	Alice Springs	32.80	243	P	P	11 00 51.0	0.0
	0.4nm,0.5s,baz=63,slow=11,SNR=6.1						
ILAR	Eielson Array	83.45	19	P	P	11 06 45.4	+0.6
	0.7nm,0.6s,baz=234,slow=5.1,SNR=12						
MKAR	Makanchi Array	93.44	317	P	P	11 07 33.3	+0.1
	0.2nm,0.6s,baz=94,slow=6.3,SNR=2.4						
YKA	Yellowknife Ar	94.92	27	P	P	11 07 38.5	-1.1
	0.2nm,0.7s,baz=256,slow=4.4,SNR=2.9						

IDC 06 10:55:24.3±2.0, 11°.60S×165°.66E, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.6/43, mbtmp3.7/5, Error ellipse: s-maj=101.0km s-min=27.0km az=144.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.22	251	P	P	11 01 45.1	-0.7
	1.0nm,0.7s,baz=81,slow=9.1,SNR=7.0						
ASAR	Alice Springs	32.47	244	P	P	11 01 57.2	+0.4
	0.4nm,0.8s,baz=67,slow=8.9,SNR=2.8						
ILAR	Eielson Array	84.06	19	P	P	11 07 56.9	+0.3
	0.6nm,0.7s,baz=236,slow=5.1,SNR=8.3						
NVAR	Mina Array Bea	86.44	50	P	P	11 08 08.7	-0.7
	0.2nm,0.5s,baz=252,slow=4.5,SNR=3.6						
MKAR	Makanchi Array	93.87	317	P	P	11 08 44.3	+0.4
	0.3nm,0.7s,baz=102,slow=6.1,SNR=2.6						

IDC 06 10:55:38.1±3.5, 10°.93S×164°.92E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.5/42, mbtmp3.7/3, Error ellipse: s-maj=170.3km s-min=32.0km az=139.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.76	249	P	P	11 01 55.9	+0.3
	1.0nm,0.5s,baz=80,slow=8.9,SNR=10						
ASAR	Alice Springs	32.12	243	P	P	11 02 07.0	-0.5
	0.3nm,0.7s,baz=71,slow=10,SNR=4.2						
ILAR	Eielson Array	83.66	19	P	P	11 08 08.3	0.0
	0.5nm,0.9s,baz=229,slow=6.3,SNR=4.4						

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*IDC **06** 10:56:33.3±0.9, 10°.73S×164°.52E, h0^{km}, mb4.0/8,* *mb1 4.2/11, mb1mx4.0/44, mbtmp4.1/11, ML4.4/3, Error ellipse: s-maj=25.4km s-min=21.4km az=133.0*

*NEIC **06** 10:56:34.9±0.3, 10°.75S×164°.48E, h10km, mb4.1/6, Error ellipse: s-maj=7.2km s-min=5.2km az=70.0*

*ISCJB **06** 10:56:35.3±0.5, 10°.88S±0°.06×164°.52E±0°.07, h24km, mb4.2/14, Error ellipse: s-maj=10.9km s-min=7.3km az=139.1*

ISC 06 10:56:37.0±0.7**, 10°.75S**±0°.09×**164°.62E**±0°.08**, h24km, n38, σ1s.12**/35**, mb4.0**/14**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.78	285	ePn	Pn	10 57 45.6	-1.9
HNR				eSn	Sn	10 58 43.1	+0.9
HNR				eSn	Sn	10 58 44.8	+2.6
HNR	Honiara	4.78	285	Pn	Pn	10 57 46.9	-0.7
	53nm,0.3s,baz=153,slow=7.4,SNR=7.6						
HNR				Sn	Sn	10 58 43.1	+0.9
	baz=96,slow=19,SNR=1.9						
MARNC	Mare, Loyalty	11.16	163	ePn	Pn	10 59 14.1	-1.0
DZM	Mont Dzumac	11.39	171	ePn	Pn	10 59 18.1	-0.3
DZM	Mont Dzumac	11.39	171	Pn	Pn	10 59 17.8	-0.6
	3.4nm,0.3s,baz=303,slow=14,SNR=26						
OUENC	Ouen Island, N	11.80	170	ePn	Pn	10 59 24.3	+0.5
PINNC	Pines Island,	12.10	167	ePn	Pn	10 59 28.7	+0.7
EIDS	Eidsvold	19.39	220	eP	Pn	11 01 04.5	+2.0
	19nm,1.0s						
CTA	Charters Tower	19.97	240	P	P	11 01 06.5	-1.2
	0.3nm,0.3s,baz=90,slow=5.1,SNR=3.2						
CTAO	Charters Tower	19.97	240	eP	P	11 01 06.3	-1.4
	13nm,0.9s						
COEN	Coen	21.18	259	eP	P	11 01 22.1	+1.2
	7.7nm,1.0s						
H11S2	WAKE ISLAND Hy	29.13	4	T	T	11 33 05.1	
	baz=184,slow=76,SNR=8.4						
H11S3	WAKE ISLAND Hy	29.13	4	T	T	11 33 09.8	
	baz=184,slow=76,SNR=4.5						
H11S1	WAKE ISLAND Hy	29.14	4	T	T	11 33 03.7	
	baz=184,slow=76,SNR=8.2						
STKA	Stephens Creek	29.91	222	eP	P	11 02 42.0	-1.1
	1.2nm,1.0s						
STKA	Stephens Creek	29.91	222	P	P	11 02 44.2	+1.2
	3.2nm,0.7s,baz=31,slow=10,SNR=6.4						
H11N1	WAKE ISLAND Hy	30.35	4	T	T	11 34 40.2	
	baz=184,slow=76,SNR=9.7						
H11N3	WAKE ISLAND Hy	30.36	4	T	T	11 34 32.5	
	baz=184,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	30.37	4	T	T	11 34 34.5	
	baz=184,slow=76,SNR=12						
WRAB	Tennant Creek	30.54	249	eP	P	11 02 48.1	-0.7
	16nm,1.5s						
WR1	Warramunga Arr	30.55	249	eP	P	11 02 46.8	-2.1
	32nm,2.0s						
WRA	Warramunga Arr	30.55	249	P	P	11 02 46.8	-2.1
	0.7nm,0.6s,baz=80,slow=9.5,SNR=5.0						
AS31	Alice Springs	31.94	242	eP	P	11 03 00.6	-0.6
	1.2nm,1.2s						
ASAR	Alice Springs	31.94	242	P	P	11 02 59.3	-1.9
	0.3nm,0.4s,baz=64,slow=9.9,SNR=4.1						
KHZ	Kahutara	32.50	168	eP	P	11 03 06.3	+0.6
	98nm,1.8s						
ANA2	Anatahan	32.78	325	eP	P	11 03 08.4	-0.1
	217nm,0.3s						
SONA0	Songino Array	77.78	324	eP	P	11 08 32.1	-0.2
SONM	Songino Array	77.78	324	P	P	11 08 32.1	-0.2
	0.7nm,0.9s,baz=132,slow=8.4,SNR=3.9						
QSPA	South Pole Qui	79.25	180	P	P	11 08 40.8	+0.6
	4.9nm,1.0s,baz=324,slow=4.1,SNR=8.2						
ILAR	Eielson Array	83.59	19	P	P	11 09 03.1	+0.3
	0.7nm,1.1s,baz=239,slow=5.3,SNR=3.1						
ILB	Eielson Array	83.59	19	eP	P	11 09 02.6	-0.3
MK01	Makanchi Array	92.54	317	eP	P	11 09 46.7	+0.3
MK31	Makanchi Array	92.55	317	eP	P	11 09 46.5	0.0
MK32	Makanchi Array	92.55	317	eP	P	11 09 46.7	+0.3
MKAR	Makanchi Array	92.55	317	eP	P	11 09 46.6	+0.2
	9.4nm,0.8s						
MKAR	Makanchi Array	92.55	317	P	P	11 09 46.7	+0.3
	1.0nm,0.8s,baz=104,slow=5.7,SNR=11						
LTX	Lajitas	96.66	61	eP	P	11 10 06.3	+0.5
TXAR	Lajitas Array	96.66	61	P	P	11 10 06.3	+0.5
	0.1nm,0.7s,baz=242,slow=1.9,SNR=3.2						

JMA 06 11:02:44.1±0.1**, 37°.67N×141°.96E, h29km**±3km**, M3.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.75	329	P	Pb	11 02 58.5	-0.1
JIKH				S	Sb	11 03 07.7	-0.8
JFK	Kawauchi	0.92	251	eS	Sb	11 03 12.8	-0.4
JIO	Ouri	0.92	329	P	Pn	11 03 01.0	-0.1
JIO				S	Sn	11 03 12.6	-0.7
JMM	Marumori	0.94	282	eS	Sb	11 03 14.0	-0.1
ONAJ	Iwakimizuishiy	1.08	239	eS	Sn	11 03 16.9	-0.6
JKMT	Kesennumamotoy	1.20	342	S	Sn	11 03 19.3	-1.0
JOU	Okura	1.24	305	S	Sb	11 03 22.5	+0.1
JFT	Otama	1.30	264	S	Sb	11 03 24.4	+0.2
JMK	Ichinoseki	1.41	336	eS	Sn	11 03 25.6	+0.3
JYS	Shirataka	1.60	291	eS	Sb	11 03 33.8	+1.1
JFY	Yanaizu	1.81	262	eS	Sb	11 03 38.2	-0.7

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*ISCJB **06** 11:03:44.3±0.1, 10°.72S±0°.02×165°.15E±0°.02, h10km, mb5.5/305, MS5.6/187, Error ellipse: s-maj=3.0km s-min=2.7km az=10.4*

*BJI **06** 11:03:45.3, 10°.25S×165°.24E, h8km, mB5.9/46, mb5.7/81, Ms5.7/71, Ms7 5.6/66*

*NEIC **06** 11:03:45.7±0.1, 10°.72S×165°.18E, h10km, mb5.6/245, MS5.6/136, Error ellipse: s-maj=3.0km s-min=2.6km az=109.0*

*MOS **06** 11:03:46.1±0.9, 10°.68S×165°.17E, h21km, mb5.8/65, MS5.6/25, Error ellipse: s-maj=7.2km s-min=6.1km az=92.8*

*IDC **06** 11:03:47.2±3.9, 10°.65S×165°.28E, h20km±23km, mb5.2/36, mb1 5.3/38, mb1mx5.2/43, mbtmp5.3/38, ML6.0/2, MS5.4/31, Ms1 5.4/31, ms1mx5.3/39, Error ellipse: s-maj=13.0km s-min=9.6km az=89.0*

*GCMT **06** 11:03:50.7±0.2, 10°.63S±0°.01×165°.14E±0°.01, h23km±1km, MW5.8/126, Moment Tensor Solution. s78,c104; s126,c242; Duration: 2s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}1.20±.18; $M_{\theta\theta}$4.61±.12; $M_{\phi\phi}$-5.81±.14; $M_{r\theta}$-1.40±.23; $M_{\theta\phi}$1.70±.10; $M_{\phi r}$-4.40±.34; Best double couple: $M_0$7.05300×10^{17} NP1:ϕ_s211.00000°, δ87.00000°, λ139.00000°. NP2:ϕ_s304.00000°, δ49.00000°, λ4.00000°. Principal axes: T 6.1060, Plg30.0000°, Azm160.0000°; N 1.8940, Plg49.0000°, Azm28.0000°; P -8.0000, Plg25.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 11:03:45.9±0.2**, 10°.68S**±0°.04×**165°.29E**±0°.04**, h10km, n862, σ1s.30**/799**, mb5.6**/314**, MS5.6**/187**, 35C-27D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.41	283	eP	Pn	11 05 09.0	+2.3
HNR	Honiara	5.41	283	ePn	Pn	11 05 08.6	+1.9
HNR				eSn	Sn	11 06 09.3	+0.3
HNR	Honiara	5.41	283	Pn	Pn	11 05 08.5	+1.9
	1μm,0.3s,baz=157,slow=5.2,SNR=134						
HNR				Sn	Sn	11 06 11.3	+2.2
	458nm,0.3s,baz=0.0,slow=20,SNR=7.2						
HNR				LR	LR	11 07 24.5	
	comp=Z,161μm,18.8s,baz=106,slow=40						
MARNC	Mare, Loyalty	11.06	167	ePn	Pn	11 06 25.6	+1.4
DZM	Mont Dzumac	11.38	175	ePn	Pn	11 06 30.0	+1.2
	3μm,1.5s						
DZM				eLR	LR	11 09 03.7	
	comp=Z,39μm,23.1s						
DZM	Mont Dzumac	11.38	175	ePn	Pn	11 06 30.1	+1.4
DZM				Sn	Sn	11 08 33.6	-2.5
DZM	Mont Dzumac	11.38	175	Pn	Pn	11 06 29.7	+1.0
	50nm,0.3s,baz=309,slow=13,SNR=87						
DZM				Sn	Sn	11 08 33.6	-2.5
	1.6nm,0.3s,baz=162,slow=19,SNR=2.3						
OUENC	Ouen Island, N	11.77	173	ePn	Pn	11 06 35.7	+1.8
PINNC	Pines Island,	12.05	170	ePn	Pn	11 06 39.3	+1.6
TARA	Tarawa	14.16	33	ePn	Pn	11 07 06.8	+0.1
TARA				eSn	Sn	11 09 39.6	-4.3
MSVF	Nonsavu	14.21	121	ePn	Pn	11 07 11.4	+3.9
MSVF	Nonsavu	14.21	121	eP	Pn	11 07 11.4	+3.9
PATS	Pohnpei	18.74	338	eP	P	11 08 05.6	+0.6
	1μm,1.4s						
KWAJ	Kwajalein Atol	19.49	7	eP	Pn	11 08 15.1	+0.6
	2μm,1.6s						
KWAJ	Kwajalein Atol	19.49	7	eP	Pn	11 08 15.1	+0.6
KWAJ				pmax	pmax		
	comp=Z,2μm,1.6s						
CTA	Charters Tower	20.59	241	P	P	11 08 25.7	+0.5
	comp=Z,130nm,0.9s,baz=68,slow=12,SNR=57						
CTA				LR	LR	11 15 57.4	
	comp=Z,8μm,18.3s,baz=58,slow=36						
CTAO	Charters Tower	20.59	241	eP	P	11 08 25.0	-0.2
	comp=Z,1μm,1.6s						
CTAO				LR	LR		
	comp=Z,13μm,21.0s						
CTAO	Charters Tower	20.59	241	eP	P	11 08 25.0	-0.2
CTAO				pmax	pmax		
	comp=Z,1μm,1.6s						
CTAO				MLR	MLR		
	comp=Z,13μm,21.0s						
KNTN	Kanton	24.12	73	eP	P	11 09 02.2	0.0
	comp=Z,599nm,1.5s						
RAO	Raoul Island	24.24	142	PFAKE		11 09 10.0	+6.9
RAO				LR	LR		
	comp=Z,16μm,19.0s						
RAO	Raoul Island	24.24	142	LR	LR	11 17 09.6	
	comp=Z,15μm,19.3s,baz=317,slow=33						
OUZ	Omahuta	25.57	164	eP	P	11 09 15.0	-0.1
	comp=Z,708nm,1.1s						
JAY	Jayapura	25.72	287	P	P	11 09 15.8	-0.9
GENI	Genyem	26.20	286	P	P	11 09 20.1	-1.0
KUZ	Kuaotunu	27.61	162	P	P	11 09 34.9	+1.4
CAN	Canberra	28.66	209	eP	P	11 09 41.5	-1.6
	comp=Z,92nm,1.3s						
CAN	Canberra	28.66	209	eP	P	11 09 41.5	-1.6
CAN				pmax	pmax		
	comp=Z,92nm,1.3s						
TGRZ	Tauranga	28.68	162	P	P	11 09 44.9	+1.8
OPRZ	Ohinepanea	28.88	161	P	P	11 09 46.1	+1.3
HIZ	Hauiti	29.01	164	eP	P	11 09 44.4	-1.6
	comp=Z,319nm,1.0s						
H11S2	WAKE ISLAND Hy	29.02	3	T	T	11 40 23.6	
	baz=184,slow=76,SNR=598						
H11S3	WAKE ISLAND Hy	29.02	3	T	T	11 40 20.7	
	baz=184,slow=76,SNR=688						
TLZ	Tolley Road	29.02	163	P	P	11 09 49.5	+3.3
H11S1	WAKE ISLAND Hy	29.03	3	T	T	11 40 21.7	
	baz=184,slow=76,SNR=698						
OMRZ	Omania	29.06	162	P	P	11 09 49.5	+3.0
HAZ	Te Kaha	29.21	159	P	P	11 09 49.2	+1.5
MXZ	Matakaoa Point	29.22	158	eP	P	11 09 47.9	+0.1
	comp=Z,550nm,1.3s						
MXZ	Matakaoa Point	29.22	158	P	P	11 09 48.5	+0.7
HRRZ	Handcock Road	29.30	162	P	P	11 09 52.0	+3.4
RRRZ	Republican Roa	29.32	162	P	P	11 09 52.7	+3.9
RUGZ	Raukumara Rang	29.36	160	P	P	11 09 50.8	+1.5
PKGZ	Pakihiroa	29.43	159	P	P	11 09 51.1	+1.3
PRRZ	Plateau Road	29.43	162	P	P	11 09 52.6	+2.9
URZ	Urewera	29.44	161	eP	P	11 09 49.9	+0.2
	comp=Z,207nm,1.0s						
URZ				S	S	11 14 44.5	+0.7
URZ	Urewera	29.44	161	P	P	11 09 50.0	+0.2
	comp=Z,204nm,1.0s,baz=268,slow=2.9,SNR=30						
URZ				S	S	11 14 44.5	+0.7
	comp=Z,9.4nm,0.9s,baz=180,slow=20,SNR=3.4						
URZ				LR	LR	11 20 45.3	
	comp=Z,18μm,19.2s,baz=348,slow=35						
URZ	Urewera	29.44	161	P	P	11 09 51.1	+1.3
WMGZ	Waiomatatini S	29.48	159	P	P	11 09 50.9	+0.7
MWZ	Matawai	29.64	160	P	P	11 09 52.8	+1.1
PUZ	Puketiti	29.65	159	P	P	11 09 52.2	+0.5
WAKE	Wake Island	29.80	3	PFAKE		11 10 10.0	+17
WAKE				LR	LR		
	comp=Z,8μm,21.0s						
BKZ	Black Stump Fm	30.08	162	eP	P	11 09 54.2	-1.3
	comp=Z,189nm,0.4s						
BKZ				eS	S	11 14 55.3	+1.2
H11N1	WAKE ISLAND Hy	30.24	3	T	T	11 41 49.6	
	baz=183,slow=76,SNR=345						
H11N3	WAKE ISLAND Hy	30.25	3	T	T	11 41 55.8	
	baz=183,slow=76,SNR=298						
H11N2	WAKE ISLAND Hy	30.26	3	T	T	11 41 50.9	
	baz=183,slow=76,SNR=266						
STKA	Stephens Creek	30.41	223	eP	P	11 10 00.0	+1.5
	comp=Z,43nm,1.5s						
STKA	Stephens Creek	30.41	223	P	P	11 09 59.5	+1.0
	comp=Z,22nm,0.7s,baz=40,slow=11,SNR=39						
STKA				LR	LR	11 20 48.3	
	comp=Z,8μm,18.4s,baz=45,slow=34						
BAKI	Biak	30.49	286	P	P	11 09 58.6	-0.8
WRAB	Tennant Creek	31.18	249	eP	P	11 10 03.4	-2.1
	comp=Z,70nm,1.0s						
WRAB				LR	LR		
	comp=Z,9μm,19.0s						
WRAB	Tennant Creek	31.18	249	⇓iP	P	11 10 03.1	-2.4
WRAB				pmax	pmax		
	comp=Z,76nm,1.0s						
WB2	Warramunga Arr	31.18	249	eP	P	11 10 02.9	-2.6
WB2				epP	P	11 10 03.5	-2.1
WRA	Warramunga Arr	31.20	249	P	P	11 10 03.5	-2.1
	comp=Z,44nm,0.9s,baz=78,slow=9.0,SNR=62						
WRA				PcP	PcP	11 13 00.6	0.0
	comp=Z,4.8nm,0.9s,baz=76,slow=2.8,SNR=3.4						
WRA				LR	LR	11 22 57.1	
	comp=Z,14μm,18.1s,baz=80,slow=37						
BFZ	Birch Farm	31.41	164	eP	P	11 10 06.1	-1.2
	comp=Z,214nm,0.7s						
GUMO	Guam	31.50	319	PFAKE		11 10 20.0	+12
GUMO				LR	LR		
	comp=Z,10μm,22.0s						
GUMO	Guam	31.50	319	LR	LR	11 21 54.5	
	comp=Z,7μm,20.1s,baz=134,slow=34						
SNZO	South Karori	31.62	166	eP	P	11 10 08.5	-0.5
	comp=Z,480nm,1.3s						
SNZO				LR	LR		
	comp=Z,11μm,19.0s						
THZ	Tophouse	31.68	169	eP	P	11 10 10.0	+0.4
	comp=Z,184nm,0.8s						
KHZ	Kahutara	32.43	169	eP	P	11 10 16.0	-0.1
	comp=Z,194nm,1.2s						
AS01	Alice Springs	32.52	243	eP	P	11 10 15.2	-2.1
LTZ	Lake Taylor	32.56	170	eP	P	11 10 15.7	-1.6
	comp=Z,170nm,1.1s						
AS31	Alice Springs	32.56	243	eP	P	11 10 15.1	-2.5
	comp=Z,12nm,1.0s						
ASAR	Alice Springs	32.56	243	P	P	11 10 15.8	-1.8
	comp=Z,32nm,0.9s,baz=73,slow=9.4,SNR=121						
ASAR				PcP	PcP	11 13 03.7	-0.6
	comp=Z,3.9nm,0.9s,baz=65,slow=3.9,SNR=5.4						
ASAR				LR	LR	11 23 04.0	
	comp=Z,5μm,18.7s,baz=68,slow=36						
FOZ	Fox Glacier	32.97	174	eP	P	11 10 20.0	-0.8
	comp=Z,132nm,0.9s						
OXZ	Oxford	33.05	171	eP	P	11 10 20.7	-0.9
	comp=Z,281nm,1.3s						
ANA2	Anatahan	33.11	324	eP	P	11 10 21.9	-0.4
	comp=Z,109nm,0.7s						
RPZ	Rata Peaks	33.29	172	eP	P	11 10 23.6	-0.1
	comp=Z,94nm,0.8s						
RPZ	Rata Peaks	33.29	172	P	P	11 10 23.4	-0.3
	comp=Z,56nm,0.8s,baz=17,slow=4.0,SNR=16						
RPZ				LR	LR	11 22 47.1	
	comp=Z,10μm,18.9s,baz=338,slow=34						
SARN	Sarigan	33.35	324	eP	P	11 10 22.5	-2.0
	comp=Z,92nm,1.1s						
CRLZ	Canterbury Las	33.39	170	eP	P	11 10 24.7	+0.3
	comp=Z,489nm,1.4s						
MQZ	McQueen’s Vall	33.52	170	eP	P	11 10 24.9	-0.7
	comp=Z,206nm,1.2s						
SAUI	Saumlaki	33.64	272	eP	P	11 10 26.2	-0.8
	comp=Z,160nm,1.1s						
FAKI	Fak Fak	33.68	281	eP	P	11 10 25.9	-1.5
	comp=Z,20nm,0.9s						
LBZ	Lake Benmore	33.85	174	eP	P	11 10 28.2	-0.4
	comp=Z,53nm,0.9s						
WKZ	Wanaka	34.18	175	eP	P	11 10 30.7	-0.7
	comp=Z,187nm,1.4s						
ODZ	Otahua Downs	34.55	173	eP	P	11 10 34.2	-0.4
	comp=Z,34nm,0.9s						
MLZ	Mavora Lakes	34.65	176	eP	P	11 10 34.5	-1.0
	comp=Z,122nm,1.7s						
DCZ	Deep Cove	34.70	178	eP	P	11 10 34.4	-1.5
	comp=Z,56nm,1.0s						
RAR	Rarotonga	35.11	112	PFAKE		11 10 50.0	+10
RAR				LR	LR		
	comp=Z,9μm,19.0s						
RAR	Rarotonga	35.11	112	LR	LR	11 22 04.6	
	comp=Z,6μm,21.1s,baz=276,slow=31						
WHZ	Wether Hill Ro	35.17	177	eP	P	11 10 38.8	-1.1
	comp=Z,65nm,1.3s						
SWI	Sorong	35.19	284	P	P	11 10 39.3	-1.3
	comp=Z,66nm,0.6s						
BNDI	Bandanaira	35.59	277	P	P	11 10 42.0	-1.9
	comp=Z,578nm,0.9s,comp=Z,6μm						
TAU	Tasmania Unive	35.73	203	eP	P	11 10 44.0	-0.8
	comp=Z,79nm,1.1s						
TAU				LR	LR		
	comp=Z,4μm,19.0s						
TAU	Tasmania Unive	35.73	203	eP	P	11 10 44.0	-0.8
TAU				pmax	pmax		
	comp=Z,79nm,1.1s						
TAU				MLR	MLR		
	comp=Z,4μm,19.0s						
JOHN	Johnston Islan	36.90	43	PFAKE		11 11 10.0	+15
JOHN				LR	LR		
	comp=Z,407nm,20.0s						
NLAI	Namlea	38.59	278	P	P	11 11 08.4	-1.1
TNTI	Ternate	39.40	284	eP	P	11 11 15.1	-1.1
	comp=Z,125nm,1.0s						
TNTI	Ternate	39.40	284	P	P	11 11 15.5	-0.7
SANI	Sanana	39.95	280	P	P	11 11 19.7	-1.2
	comp=Z,110nm,1.0s,comp=Z,3μm						
SOEI	Soe	40.37	267	eP	P	11 11 23.4	-1.0
	comp=Z,32nm,0.8s						
SOEI	Soe	40.37	267	P	P	11 11 22.9	-1.6
BATI	Baumata	40.92	267	P	P	11 11 27.4	-1.6
BATI	Baumata	40.92	267	LR	LR	11 29 31.0	
	comp=Z,7μm,18.1s,baz=118,slow=38						
MIDW	Midway	42.15	23	PFAKE		11 11 50.0	+11
MIDW				LR	LR		
	comp=Z,4μm,19.0s						
MMRI	Maumere	42.47	269	eP	P	11 11 38.9	-2.7
	comp=Z,112nm,0.9s						
MMRI	Maumere	42.47	269	P	P	11 11 39.5	-2.1
	comp=Z,132nm,1.0s,comp=Z,3μm						
EDFI	Ende, Flores	43.00	269	P	P	11 11 43.2	-2.8
	comp=Z,57nm,1.2s,comp=Z,3μm						
DAV	Davao City (W)	43.29	292	PFAKE		11 12 00.0	+12
DAV				LR	LR		
	comp=Z,3μm,20.0s						
LUWI	Luwuk	43.31	280	eP	P	11 11 47.0	-1.4
	comp=Z,351nm,1.1s						
LUWI	Luwuk	43.31	280	P	P	11 11 47.6	-0.8
JCJ	Chichijima	43.74	330	LR	LR	11 28 13.5	
	comp=Z,4μm,21.8s,baz=160,slow=34						
SKMP	Bagumbayan, Su	44.02	291	eP	P	11 11 53.8	-0.3
BUTP	Butuan	44.04	295	eP	P	11 11 54.6	+0.4
BUKP	Musuan	44.08	293	eP	P	11 11 54.7	0.0
PPT	Papeete	44.22	104	P	P	11 11 55.7	0.0
	comp=Z,44nm,0.8s,baz=72,slow=20,SNR=3.1						
PPT				LR	LR	11 26 26.6	
	comp=Z,7μm,20.0s,baz=257,slow=31						
PPT2	Papeete2	44.22	104	eS	S	11 18 29.6	0.0
	comp=Z,4μm,25.2s						
PPT2				eLQ	LQ	11 22 32.9	
	comp=Z,4μm,26.8s						
PPT2				eLR	LR	11 24 22.6	
	comp=Z,11μm,22.2s,baz=274						
CTBH	Cotabato--PC H	44.56	292	⇑iP	P	11 11 58.7	+0.2
CGP	Cagayan de Oro	44.65	294	⇓eP	P	11 12 00.1	+1.0
TBI	Tubuai	44.88	112	eS	S	11 18 40.4	+1.4
	comp=Z,3μm,26.8s						
TBI				eLQ	LQ	11 22 49.2	
	comp=Z,15μm,32.2s						
TBI				eLR	LR	11 24 39.7	
	comp=Z,16μm,27.0s,baz=280						
MBWA	Marble Bar	44.90	251	eP	P	11 11 59.6	-1.5
	comp=Z,48nm,1.3s						
MBWA				LR	LR		
	comp=Z,6μm,21.0s						
MBWA	Marble Bar	44.90	251	P	P	11 12 00.4	-0.7
BKSI	Bulukumba	45.01	273	P	P	11 12 01.0	-1.1
BNSI	Bone	45.19	274	P	P	11 12 02.5	-1.0
MSLP	Maasin	45.22	296	eP	P	11 12 03.7	0.0
BESP	Borongan	45.37	298	eP	P	11 12 05.6	+0.8
KAPI	Kappang	45.43	273	PFAKE		11 12 20.0	+15
KAPI				LR	LR		
	comp=Z,2μm,19.0s						
PAGZ	Pagadian	45.60	292	eP	P	11 12 07.3	+0.6
SPSI	Sidrap Palu	45.60	275	P	P	11 12 05.8	-1.0
TTSI	Tana Toraja	45.73	276	P	P	11 12 06.9	-0.9
OCLP	Ormoc	45.84	297	eP	P	11 12 08.9	+0.3
PCI	Palu	46.19	279	P	P	11 12 10.6	-0.8
IPIL	Ipil	46.31	292	eP	P	11 12 12.4	+0.1
PLAI	Plampang	46.83	268	P	P	11 12 14.7	-1.8
	comp=Z,78nm,1.1s						
PVCP	Virac	47.41	300	eP	P	11 12 20.8	-0.1
GUIM	Jordan	47.44	295	eP	P	11 12 20.5	-0.7
RCP	Roxas	47.70	296	⇓eP	P	11 12 23.3	+0.1
OPA	Opana	48.29	48	eP	P	11 12 28.1	+0.5
	comp=Z,300nm,1.3s						
OPA	Opana	48.29	48	eP	P	11 12 28.1	+0.5
OPA				pmax	pmax		
	comp=Z,300nm,1.3s						
OTRP	Odiongan	48.69	297	eP	P	11 12 30.9	+0.1
SMKI	Samarinda	48.85	279	P	P	11 12 31.5	-0.7
CUYO	Cuyo Island	48.94	295	eP	P	11 12 33.3	+0.6
BKB	Balikpapan	48.97	278	P	P	11 12 32.5	-0.5
HMH	Humu‘ula Sheep	48.97	52	eP	P	11 12 34.5	+1.2
	comp=Z,420nm,1.4s						
POHA	Pohakuloa	49.02	52	PFAKE		11 12 50.0	+16
POHA				LR	LR		
	comp=Z,5μm,19.0s						
KBKI	Kotabaru	49.26	275	P	P	11 12 34.4	-0.8
NWAO	Narrogin (SRO)	49.30	236	eP	P	11 12 34.5	-0.8
	comp=Z,95nm,0.9s						
NWAO				LR	LR		
	comp=Z,14μm,19.0s						
NWAO	Narrogin (SRO)	49.30	236	eP	P	11 12 34.5	-0.8
NWAO				pmax	pmax		
	comp=Z,95nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,14μm,19.0s						
NWAO	Narrogin (SRO)	49.30	236	P	P	11 12 35.3	0.0
SRBI	Singaraja	49.44	268	P	P	11 12 35.3	-1.3
	comp=Z,50nm,1.1s						
SJMP	San Jose	49.53	297	eP	P	11 12 37.5	+0.3
POLP	Polilio Island	49.84	300	eP	P	11 12 39.5	-0.1
JAGI	Jajag, Banyuwa	50.43	268	eP	P	11 12 41.1	-3.1
	comp=Z,60nm,0.8s						
JAGI	Jajag, Banyuwa	50.43	268	P	P	11 12 41.9	-2.3
	comp=Z,80nm,0.8s,comp=Z,2μm						
ENPP	El Nido	50.51	294	eP	P	11 12 43.8	-0.9
PALP	Palanan	50.55	303	eP	P	11 12 45.4	+0.5
MTKI	Muara Teweh, K	50.99	277	P	P	11 12 47.8	-0.6
CAUP	Cauayan	50.99	302	eP	P	11 12 48.9	+0.6
BATP	Bataraza	51.06	290	eP	P	11 12 49.4	+0.5
SMPP	San Manuel, Pa	51.57	301	eP	P	11 12 52.6	-0.1
JOW	Kunigami	51.79	317	eP	P	11 12 53.1	-1.0
	comp=Z,210nm,1.6s						
JOW	Kunigami	51.79	317	LR	LR	11 34 13.7	
	comp=Z,532nm,19.7s,baz=71,slow=35						
BOLP	Bolinao	52.33	300	eP	P	11 12 56.8	-1.6
INU	Inuyama	53.02	331	eP	P	11 13 03.4	+0.3
	comp=Z,113nm,1.3s						
PCJI	Pacitan	53.39	268	P	P	11 13 05.3	-1.0
	comp=Z,319nm,1.0s,comp=Z,3μm						
MJAR	Matsushiro Arr	53.44	333	P	P	11 13 05.5	-0.8
	comp=Z,53nm,1.1s,baz=164,slow=7.0,SNR=37						
MJAR				LR	LR	11 33 47.3	
	comp=Z,2μm,21.7s,baz=140,slow=34						
MAJO	Matsushiro	53.44	333	eP	P	11 13 06.3	0.0
	comp=Z,70nm,1.1s						
MAJO				LR	LR		
	comp=Z,3μm,21.0s						
MAJO	Matsushiro	53.44	333	d iP	P	11 13 05.6	-0.7
MAJO				pmax	pmax		
	comp=Z,87nm,1.2s						
MAT	Matsushiro	53.44	333	P	P	11 13 05.2	-1.1
MJB9	Matsu-Tunnel	53.45	333	eP	P	11 13 06.3	0.0
	comp=Z,79nm,1.1s						
TAOE	Nuku Hiva Isla	53.74	93	eS	S	11 20 42.5	-1.3
	comp=Z,4μm,25.1s						
TAOE				eLR	LR	11 28 40.8	
	comp=Z,4μm,24.1s,baz=260						
UGM	Wanagama	54.07	268	eP	P	11 13 09.8	-1.5
	comp=Z,175nm,1.1s						
UGM	Wanagama	54.07	268	P	P	11 13 10.5	-0.8
SMRI	Semarang	54.26	269	eP	P	11 13 11.6	-1.1
	comp=Z,174nm,0.9s						
JNU	Nakatsue	54.52	324	eP	P	11 13 14.4	+0.2
	comp=Z,242nm,1.2s						

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JNU    Nakatsue          54.52 324   LR       LR        11 33 19.3
       comp=Z,2µm,21.2s,baz=130,slow=32
TWG    Pinlang           54.63 308  eP        P         11 13 14.8  -0.4
       comp=Z,308nm,1.3s
YULB   Yu-li             54.76 309  eP        P         11 13 15.3  -0.8
       comp=Z,93nm,1.1s
NACB   Ninganchiao       54.97 310  eP        P         11 13 17.3  -0.3
       comp=Z,119nm,1.1s
TPUB   Ta-pu             55.23 308  eP        P         11 13 19.1  -0.4
       comp=Z,208nm,1.1s
SSLB   Suanglung         55.24 309  eP        P         11 13 17.7  -1.9
       comp=Z,66nm,1.1s
YHNB   Yeheng            55.41 310  eP        P         11 13 20.6  -0.3
       comp=Z,163nm,1.1s
TATO   Taipei            55.49 310   PFAKE              11 13 30.0  +8.7
TATO                                 LR       LR
       comp=Z,7µm,22.0s
ERM    Erimo             56.24 340   PFAKE              11 13 40.0   +14
ERM                                  LR       LR
       comp=Z,3µm,21.0s
CISI   Cisompet, Garu    56.77 268  eP        P         11 13 28.7  -2.1
       comp=Z,119nm,0.8s
CISI   Cisompet, Garu    56.77 268   P        P         11 13 29.3  -1.5
RKT    Rikitea           58.13 111  eS        S         11 21 41.9   0.0
       comp=Z,3µm,30.2s
RKT                                 eLQ       LQ        11 28 20.9
       comp=Z,5µm,32.2s
RKT                                 eLR       LR        11 30 52.0
       comp=Z,8µm,29.0s,baz=279
ASAJ   Asahikawa         58.30 341   LR       LR        11 34 29.1
       comp=Z,5µm,21.8s,baz=170,slow=32
SSE    Sheshan           59.28 316   P        P         11 13 47.7  -0.3
SSE                                  pmax     pmax
       comp=Z,38nm,1.0s
SSE                                  pmax     pmax
       comp=Z,420nm,7.8s
SSE    Sheshan           59.28 316  eP        P         11 13 47.5  -0.5
       comp=Z,130nm,1.1s
SSE                                  LR       LR
       comp=Z,3µm,19.0s
KSRS   Korea Array       59.33 326   P        P         11 13 48.5  +0.4
       comp=Z,44nm,1.1s,baz=147,slow=6.8,SNR=51
KSRS                                 LR       LR        11 38 02.4
       comp=Z,1µm,18.7s,baz=136,slow=35
KS15   Wonju Array Si    59.34 326  eP        P         11 13 47.6  -0.6
KSAR   Wonju Array Be    59.34 326   P        P         11 13 48.5  +0.3
KSAR   Wonju Array Be    59.34 326   P        P         11 13 48.6  +0.3
KS01   Wonju Array Si    59.36 326  eP        P         11 13 48.3  -0.1
YSS    Yuzh-Sakhalins    60.80 342  eP        P         11 13 58.4  +0.3
       comp=Z,196nm,1.2s
YSS                                  LR       LR
       comp=Z,3µm,19.0s
YSS    Yuzh-Sakhalins    60.80 342⇓eP        P         11 13 59.0  +0.9
YSS                                  pmax     pmax
       comp=N,30nm,1.3s
YSS                                  pmax     pmax
       comp=E,50nm,1.3s
YSS                                  pmax     pmax
       comp=Z,110nm,1.3s
YSS                                  MLR      MLR
       comp=Z,2µm,14.0s
YSS                                  MLR      MLR
       comp=N,2µm,17.0s
TEY    Ternei            61.21 337⇓eP        P         11 14 00.8  -0.1
TEY                                  pmax     pmax
       comp=N,30nm,1.2s
TEY                                  pmax     pmax
       comp=Z,80nm,1.1s
TEY                                  pmax     pmax
       comp=E,30nm,1.0s
NJ2    Nanjing           61.45 316  eP        P         11 14 03.3  +0.5
NJ2                                  pP       sP        11 14 07.8  +2.2
NJ2                                  S        S         11 22 26.4  +2.2
NJ2                                  pmax     pmax
       comp=E,150nm,1.0s
NJ2                                  pmax     pmax
       comp=E,1µm,7.3s
NJ2                                  LR       LR
       comp=E,3µm,18.6s
NJ2                                  LR       LR
       comp=E,3µm,19.6s
NJ2                                  LR       LR
       comp=E,4µm,22.6s
MSHR   Mys Shultsa       61.52 332⇑eP        P         11 14 04.1  +1.0
VLA    Vladivostok       61.61 333⇑eP        P         11 14 03.1  -0.6
VLA                                  pmax     pmax
       comp=Z,114nm,1.3s
SKR    Severo-Kuril's    61.62 353ceP        P         11 14 05.3  +1.7
QIZ    Qiongzhong        62.12 298   P        P         11 14 08.2  +0.6
QIZ                                  S        S         11 22 35.8  +2.6
QIZ                                  pmax     pmax
       comp=Z,80nm,1.3s
QIZ                                  LR       LR
       comp=Z,2µm,19.6s
QIZ                                  LR       LR
       comp=Z,3µm,20.6s
QIZ                                  LR       LR
       comp=Z,5µm,22.1s
QIZ    Qiongzhong        62.12 298  eP        P         11 14 08.4  +0.8
       comp=Z,69nm,1.3s
QIZ                                  LR       LR
       comp=Z,727nm,22.0s
USA0B  Ussuriysk Arra    62.42 334  eP        P         11 14 08.6  -0.5
       comp=Z,185nm,1.4s
USRK   Ussuriysk Ar.     62.42 334   P        P         11 14 10.0  +0.9
       comp=Z,129nm,1.2s,baz=142,slow=6.5,SNR=66
USRK                                 LR       LR        11 39 02.9
       comp=Z,2µm,20.7s,baz=133,slow=34
PTCN   Pitcairn Islan    62.63 113   PFAKE              11 14 20.0  +9.0
PTCN                                 LR       LR
       comp=Z,6µm,19.0s
PET    Petropavlovsk     63.70 356  eP        P         11 14 17.3  -0.1
       comp=Z,124nm,1.2s
PET                                  LR       LR
       comp=Z,4µm,19.0s
PET    Petropavlovsk     63.70 356  eP        P         11 14 17.3  -0.1
PET                                  pmax     pmax
       comp=Z,125nm,1.2s
PET                                  MLR      MLR
       comp=Z,4µm,19.0s
WHN    Wuhan             63.82 312 ⇑P         P         11 14 18.8  +0.1
WHN                                  S        S         11 22 46.2  -7.9
WHN                                  LR       LR
       comp=Z,6µm,15.3s
WHN                                  LR       LR
       comp=Z,3µm,13.8s
WHN                                  LR       LR
       comp=Z,13µm,22.8s
MDJ    Mudanjiang        63.82 332   P        P         11 14 18.9  +0.5
MDJ                                  S        S         11 22 58.3  +4.7
MDJ                                  pmax     pmax
       comp=Z,97nm,1.1s
MDJ                                  pmax     pmax
       comp=Z,2µm,6.3s
MDJ                                  LR       LR
       comp=Z,1µm,16.9s
MDJ                                  LR       LR
       comp=Z,1µm,12.9s
MDJ                                  LR       LR
       comp=Z,3µm,17.1s
MDJ    Mudanjiang        63.82 332  eP        P         11 14 18.5  +0.1
       comp=Z,104nm,1.2s
MDJ                                  LR       LR
       comp=Z,2µm,20.0s
PEA0B  Petropavlovsk-    63.86 355  eP        P         11 14 18.4  -0.1
       comp=Z,175nm,1.3s
PETK   Petropavlovsk-    63.86 355  eP        P         11 14 19.0  +0.5
PETK   Petropavlovsk-    63.86 355   P        P         11 14 18.9  +0.4
PETK                                 pmax     pmax
       comp=Z,50nm,0.9s
PETK                                 pmax     pmax
       comp=Z,11nm,1.2s
PETK   Petropavlovsk-    63.86 355   P        P         11 14 18.9  +0.4
       comp=Z,50nm,0.9s,baz=147,slow=7.6,SNR=28
PETK                                 LR       LR        11 36 35.5
       comp=Z,3µm,21.8s,baz=187,slow=31
DL2    Dalian            63.92 323   P        P         11 14 19.5  +0.3
DL2                                  S        S         11 22 56.8  +1.8
DL2                                  pmax     pmax
       comp=Z,170nm,1.1s
DL2                                  LR       LR
       comp=Z,1µm,24.2s
DL2                                  LR       LR
       comp=Z,1µm,20.9s
DL2                                  LR       LR
       comp=Z,2µm,26.5s
ADK    Adak              64.22  12  eP        P         11 14 22.6  +1.8
       comp=Z,224nm,1.2s
ADK                                  LR       LR
       comp=Z,3µm,20.0s
ADK    Adak              64.22  12  eP        P         11 14 22.6  +1.8
ADK                                  pmax     pmax
       comp=Z,224nm,1.2s
ADK                                  MLR      MLR
       comp=Z,3µm,20.0s
TYV    Tymovskoe         64.37 344  eP        P         11 14 22.5  +0.6
TYV                                  pmax     pmax
       comp=Z,52nm,1.5s
SNY    Shenyang          64.78 327 ⇓P         P         11 14 24.4  -0.3
SNY                                  pmax     pmax
       comp=Z,35nm,1.4s
TIA    Tai'an            65.05 318   P        P         11 14 26.1  -0.5
TIA                                  S        S         11 23 05.6  -3.5
TIA                                  pmax     pmax
       comp=Z,26nm,1.2s
TIA                                  LR       LR
       comp=Z,2µm,18.2s
TIA                                  LR       LR
       comp=Z,1µm,16.6s
TIA                                  LR       LR
       comp=Z,3µm,23.2s
CN2    Changchun         65.20 329  eP        P         11 14 27.6  +0.2
CN2                                 esP       pwP       11 14 34.7  +0.3
CN2                                 eS        S         11 23 10.8  +0.1
CN2                                  pmax     pmax
       comp=Z,110nm,1.1s
CN2                                  LR       LR
       comp=Z,3µm,17.0s
CN2                                  LR       LR
       comp=Z,2µm,17.0s
CN2                                  LR       LR
       comp=Z,3µm,18.0s
GRNR   Gornyy            66.15 340  eP        P         11 14 35.2  +1.8
GRNR                                 pmax     pmax
       comp=Z,91nm,1.0s
SKNT   Sakolnakorn       66.54 294   P        P         11 14 36.7  +0.1
       comp=Z,62nm,1.2s,comp=Z,715nm
KLR    Kul'dur           66.55 337d iP        P         11 14 36.5  +0.5
KLR    Kul'dur           66.55 337   LR       LR        11 39 48.3
       comp=Z,3µm,21.9s,baz=157,slow=32
KLR                                  PKPPKP             11 43 06.7
       comp=Z,11nm,1.2s,baz=286,slow=7.9,SNR=6.9
CASY   Casey             66.56 201   PFAKE              11 14 50.0   +14
CASY                                 LR       LR
       comp=Z,543nm,20.0s
SKLT   Songkhla          66.77 283   P        P         11 14 38.7  +0.5
       comp=Z,58nm,1.3s
VNDA   Vanda             66.85 181  eP        P         11 14 37.1  -0.5
       comp=Z,151nm,1.4s
VNDA   Vanda             66.85 181  eP        P         11 14 37.1  -0.5
VNDA                                 pmax     pmax
       comp=Z,151nm,1.4s
VNDA   Vanda             66.85 181   P        P         11 14 38.6  +1.0
       comp=Z,69nm,1.2s,baz=352,slow=7.6,SNR=9.6
VNDA                                 LR       LR        11 41 39.5
       comp=Z,3µm,18.0s,baz=1.0,slow=34
COCO   West Island       66.95 261   PFAKE              11 14 50.0   +11
COCO                                 LR       LR
       comp=Z,2µm,20.0s
NKL    Nikolayevsk       66.97 344  eP        P         11 14 39.0  +0.5
NKL                                  pmax     pmax
       comp=N,25nm,1.3s
NKL                                  pmax     pmax
       comp=E,31nm,1.3s
NKL                                  pmax     pmax
       comp=Z,220nm,1.3s
NIKH   Nikolski High     67.15  17  eP        P         11 14 40.0  +0.3
       comp=Z,194nm,0.8s
SBA    Scott Base        67.17 180  eP        P         11 14 42.9  +3.3
SBA                                  LR       LR
       comp=Z,2µm,19.0s
SBA    Scott Base        67.17 180  eP        P         11 14 42.9  +3.3
SBA                                  MLR      MLR
       comp=Z,2µm,19.0s
ENH    Enshi             67.32 309  eP        P         11 14 40.8  -0.6
       comp=Z,225nm,1.0s
ENH                                  LR       LR
       comp=Z,2µm,20.0s
SRAK   Srakaew           67.35 290   P        P         11 14 39.4  -2.4
       comp=Z,46nm,1.0s,comp=Z,555nm
PSI    Prapat            67.38 278   LR       LR        11 46 15.0
       comp=Z,1µm,21.9s,baz=90,slow=38
NONG   Nongkai           67.66 295   P        P         11 14 43.9  +0.2
       comp=Z,3.4nm,1.1s
GYA    Guiyang           67.85 304⇓iP        P         11 14 45.0  +0.1
GYA                                  PP       PP        11 17 18.2  +3.5
GYA                                  S        S         11 23 43.8  +0.1
GYA                                  SKS      SKiKP     11 24 40.6  -1.8
GYA                                  SS       SS        11 28 06.5  +0.9
GYA                                  pmax     pmax
       comp=Z,100nm,1.0s
GYA                                  pmax     pmax
       comp=Z,160nm,6.8s
GYA                                  LR       LR
       comp=Z,830nm,18.2s
GYA                                  LR       LR
       comp=Z,820nm,18.6s
GYA                                  LR       LR
       comp=Z,860nm,18.4s
BJT    Baijiatuau        67.91 321  eP        P         11 14 45.0  +0.1
       comp=Z,156nm,1.3s
BJT                                  LR       LR
       comp=Z,5µm,22.0s
BJT    Baijiatuau        67.91 321  eP        P         11 14 45.0  +0.1
BJT                                  pmax     pmax
       comp=Z,156nm,1.3s
BJT                                  MLR      MLR
       comp=Z,5µm,22.0s
BJI    Beijing           67.92 321   P        P         11 14 45.1  +0.2
BJI                                  pmax     pmax
       comp=Z,68nm,1.2s
CHAI   Chaiyaphum        67.99 292   P        P         11 14 45.8  -0.1
       comp=Z,18nm,0.9s,comp=Z,248nm
PATY   Pattaya           68.11 289   P        P         11 14 48.0  +1.4
       comp=Z,30nm,1.2s,comp=Z,3µm
GSI    Gunungsitoli      68.38 276  eP        P         11 14 46.5  -1.9
       comp=Z,109nm,0.9s
UNV    Unalaska Valle    68.59  18  eP        P         11 14 48.9   0.0
       comp=Z,95nm,1.2s
TIY    Taiyuan           68.99 317  eP        P         11 14 52.9  +1.1
TIY                                  pmax     pmax
       comp=Z,39nm,0.5s
TIY                                  LR       LR
       comp=Z,3µm,20.3s
TIY                                  LR       LR
       comp=Z,1µm,14.5s
TIY                                  LR       LR
       comp=Z,4µm,22.8s
PBKT   Sadao Pong        69.13 292  eP        P         11 14 53.1  +0.2
       comp=Z,51nm,0.9s
PBKT   Sadao Pong        69.13 292   P        P         11 14 53.5  +0.6
       comp=Z,69nm,1.2s
PKDT   Phuket            69.15 283   P        P         11 14 54.8  +1.7
PHET   Kaeng Krachan     69.26 288   P        P         11 14 55.2  +1.4
       comp=Z,14nm,1.2s,comp=Z,241nm
XAN    Xi'an             69.55 312   P        P         11 14 55.0  -0.3
XAN                                  pmax     pmax
       comp=Z,100nm,1.2s
XAN                                  pmax     pmax
       comp=Z,1µm,7.4s
XAN                                  LR       LR
       comp=Z,2µm,21.7s
XAN                                  LR       LR
       comp=Z,2µm,24.9s
XAN                                  LR       LR
       comp=Z,5µm,24.9s
XAN    Xi'an             69.55 312  eP        P         11 14 55.0  -0.3
       comp=Z,770nm,1.2s
XAN    Xi'an             69.55 312  eP        P         11 14 55.0  -0.3
XAN                                  pmax     pmax
       comp=Z,770nm,1.2s
SRDT   SRDT              70.15 290   P        P         11 15 00.0  +0.7
       comp=Z,52nm,1.2s
UTHA   Uthaitani         70.21 291   P        P         11 15 00.4  +0.8
       comp=Z,16nm,1.1s,comp=Z,136nm
FALS   False Pass        70.40  19  eP        P         11 14 59.7  -0.2
       comp=Z,88nm,1.1s
KMI    Kunming           70.55 301   P        P         11 15 02.8  +0.9
KMI                                  pP       pwP       11 15 10.4  +1.4
KMI                                  sP       sP        11 15 14.4   +10
KMI                                  S        S         11 24 18.6  +2.6
KMI                                  pmax     pmax
       comp=Z,170nm,1.4s
KMI                                  pmax     pmax
       comp=Z,1µm,5.8s
KMI                                  LR       LR
       comp=Z,600nm,18.0s
KMI                                  LR       LR
       comp=Z,2µm,16.2s
KMI                                  LR       LR
       comp=Z,3µm,18.0s
SPIA   Saint Paul Isl    70.56  14  eP        P         11 15 01.1  +0.2
UMPA   Umpang Tak        70.94 291   P        P         11 15 04.6  +0.5
       comp=Z,10nm,1.0s,comp=Z,1µm
MA2    Magadan           70.99 352  eP        P         11 15 03.2  -0.3
       comp=Z,38nm,1.0s
MA2                                  LR       LR
       comp=Z,5µm,22.0s
MA2    Magadan           70.99 352⇓eP        P         11 15 02.8  -0.7
MA2                                  pmax     pmax
       comp=Z,72nm,1.7s
MA2    Magadan           70.99 352   P        P         11 15 02.8  -0.7
       comp=Z,26nm,1.0s,baz=148,slow=5.0,SNR=11
MA2                                  LR       LR        11 40 53.7
       comp=Z,4µm,21.7s,baz=174,slow=31
HHC    Hu-ho-hao-te      71.27 320  eP        P         11 15 06.4  +0.7
HHC                                  pP       sP        11 15 11.1  +2.6
HHC                                  sP       pwP       11 15 13.4  +0.6
HHC                                  S        S         11 24 22.8  -0.7
HHC                                  pmax     pmax
       comp=Z,89nm,1.1s
HHC                                  pmax     pmax
       comp=Z,780nm,6.0s
HHC                                  LR       LR
       comp=Z,3µm,18.8s
HHC                                  LR       LR
       comp=Z,3µm,21.6s
HHC                                  LR       LR
       comp=Z,4µm,23.5s
CM01   Chiang Mai Arr    71.53 294  eP        P         11 15 07.9  +0.2
CM31   Chiang Mai Arr    71.56 294  eP        P         11 15 08.6  +0.7
CM31   Chiang Mai Arr    71.56 294   P        P         11 15 09.2  +1.4
       SNR=36
CMAR   Chiang Mai Arr    71.56 294   P        P         11 15 08.3  +0.5
       comp=Z,34nm,0.9s,baz=115,slow=4.2,SNR=138
CMAR                                 PKPPKP             11 42 56.9
       comp=Z,0.4nm,0.3s,baz=296,slow=2.9,SNR=3.3
CMAR                                 LR       LR        11 48 10.9
       comp=Z,1µm,18.3s,baz=109,slow=37
CMMT   Chiang Mai        71.67 294   P        P         11 15 08.6  +0.1
       comp=Z,60nm,1.2s
CHTO   Chiang Mai        71.67 294  eP        P         11 15 08.7  +0.2
       comp=Z,107nm,1.3s
CHTO                                 LR       LR
       comp=Z,2µm,22.0s
CHTO   Chiang Mai        71.67 294  eP        P         11 15 08.7  +0.2
CHTO                                 pmax     pmax
       comp=Z,107nm,1.3s
CHTO                                 MLR      MLR
       comp=Z,2µm,22.0s
CHTO   Chiang Mai        71.67 294   P        P         11 15 09.1  +0.6
       SNR=32
CHTO   Chiang Mai        71.67 294   P        P         11 15 08.7  +0.2
       comp=Z,271nm,1.2s
SDPT   Sand Point        71.76  20  eP        P         11 15 07.2  -1.0
       comp=Z,197nm,1.4s
HIA    Hailar            71.83 331  eP        P         11 15 09.2  +0.4
       comp=Z,152nm,1.1s
HIA                                  LR       LR
       comp=Z,3µm,19.0s
HIA    Hailar            71.83 331d iP        P         11 15 09.2  +0.4
HIA                                  pmax     pmax
       comp=Z,186nm,1.2s
ZEA    Zeya              71.83 337  eP        P         11 15 09.2  +0.5
ZEA                                  pmax     pmax
       comp=N,140nm,1.2s
ZEA                                  pmax     pmax
       comp=E,36nm,1.2s
ZEA                                  pmax     pmax
       comp=Z,260nm,1.2s
CD2    Chengdu           72.03 307   P        P         11 15 10.4  -0.1
CD2                                  pmax     pmax
       comp=Z,260nm,0.8s
CD2                                  LR       LR
       comp=Z,3µm,23.5s
CD2                                  LR       LR
       comp=Z,5µm,19.2s
CD2                                  LR       LR
       comp=Z,7µm,21.0s
SEY    Seymchan          74.06 354⇑iP        P         11 15 22.1  +0.4
SEY    Seymchan          74.06 354   P        P         11 15 21.5  -0.2
       comp=Z,34nm,1.1s,baz=159,slow=7.0,SNR=35
LZH    Lanzhou           74.18 312 ⇑P         P         11 15 24.3  +1.0
LZH                                  pP       sP        11 15 29.1  +3.1
LZH                                  sP       pwP       11 15 31.9  +1.5
LZH                                  PP       PP        11 18 14.2  +5.1
LZH                                  pmax     pmax
       comp=Z,260nm,1.3s
LZH                                  pmax     pmax
       comp=Z,980nm,4.3s
LZH                                  LR       LR
       comp=Z,2µm,16.8s
LZH                                  LR       LR
       comp=Z,2µm,16.8s
LZH                                  LR       LR
       comp=Z,3µm,19.0s
OHAK   Old Harbor        75.73  22  eP        P         11 15 31.4   0.0
       comp=Z,219nm,1.5s
GAMB   Gambell           76.29  10  eP        P         11 15 35.5  +1.0
       comp=Z,168nm,1.2s
KDAK   Kodiak Island     76.40  22  eP        P         11 15 35.1  -0.2
       comp=Z,50nm,1.0s
KDAK                                 LR       LR
       comp=Z,1µm,19.0s
KDAK   Kodiak Island     76.40  22   P        P         11 15 35.7  +0.4
       comp=Z,45nm,1.1s,baz=260,slow=6.3,SNR=8.8
CIT    Chita             76.62 330  eP        P         11 15 37.0  +0.2
CIT                                 e                   11 15 44.8
CIT                                  pmax     pmax
       comp=Z,394nm,1.3s
YAK    Yakutsk           77.62 344  eP        P         11 15 39.7  -2.3
YAK                                  pmax     pmax
       comp=Z,199nm,1.4s
YAK                                  pmax     pmax
       comp=N,61nm,1.3s
YAK                                  pmax     pmax
       comp=E,38nm,1.5s
ULN    Ulaanbaatar       77.75 324  eP        P         11 15 42.9  -0.4
       comp=E,182nm,1.2s
ULN                                  LR       LR
       comp=Z,2µm,20.0s
ULN    Ulaanbaatar       77.75 324d iP        P         11 15 43.8  +0.5
ULN                                  pmax     pmax
       comp=Z,192nm,1.3s
ULN    Ulaanbaatar       77.75 324   P        P         11 15 44.2  +0.9
       SNR=62
SVW2   Sparrevohn        77.91  18  eP        P         11 15 44.4  +0.6
       comp=Z,130nm,1.3s
SONM   Songino Array     78.11 324   P        P         11 15 45.4  +0.1
       comp=Z,50nm,1.0s,baz=138,slow=5.6,SNR=164
SONM                                 PKPPKP   P'P'df    11 42 49.9  +3.8
       comp=Z,0.5nm,0.8s,baz=306,slow=5.0,SNR=3.4
SONM                                 LR       LR        11 48 31.7
       comp=Z,908nm,21.7s,baz=125,slow=34
SONA1  Songino Array     78.11 324  eP        P         11 15 44.7  -0.6
HOM    Homer             78.11  21  eP        P         11 15 46.5  +1.6
       comp=Z,266nm,1.1s
ANM    Nome              78.23  12  eP        P         11 15 46.4  +1.0
       comp=Z,118nm,1.4s
RSO    Redoubt South     78.33  20  eP        P         11 15 46.2  -0.1
BRLK   Bradley Lake      78.45  21  eP        P         11 15 47.4  +0.6
       comp=Z,157nm,1.4s
GTA    Gaotai            78.49 314 ⇓P         P         11 15 48.4  +0.8
GTA                                  pP       sP        11 15 52.7  +2.3
GTA                                  sP       pwP       11 15 55.5  +0.7
GTA                                  S        S         11 25 46.7  +2.6
GTA                                  sS       sS        11 25 55.3  +7.9
GTA                                  pmax     pmax
       comp=Z,120nm,1.3s
GTA                                  pmax     pmax
       comp=Z,840nm,6.4s
GTA                                  LR       LR
       comp=Z,2µm,20.3s
GTA                                  LR       LR
       comp=Z,3µm,20.9s
GTA                                  LR       LR
       comp=Z,5µm,21.9s
BILL   Bilibino          78.52   0  eP        P         11 15 46.2  -0.7
       comp=Z,265nm,1.4s
BILL                                 LR       LR
       comp=Z,2µm,21.0s
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BILL  Bilibino          78.52   0c iP      P        11 15 47.4 +0.5
BILL                               pmax    pmax
      comp=Z,171nm,1.3s
SEW   Seward            79.20  21  eP      P        11 15 52.1 +1.2
      comp=Z,123nm,1.4s
QSPA  South Pole Qui    79.32 180  eP      P        11 15 52.1 +0.4
      comp=Z,213nm,1.1s
QSPA                               LR      LR
      comp=Z,2µm,19.0s
QSPA  South Pole Qui    79.32 180   P      P        11 15 52.1 +0.4
      comp=Z,118nm,1.1s,baz=15,slow=2.1,SNR=82
SUA   Susitna One       79.73  20  eP      P        11 15 54.0 +0.1
      comp=Z,97nm,1.4s
RC01  Rabbit Creek A    79.80  20  eP      P        11 15 54.6 +0.5
      comp=Z,92nm,1.5s
SHL   Shillong          79.95 298  eP      P        11 15 55.5 -0.5
BOD   Bodaibo           80.01 335  eP      P        11 15 54.6 -0.7
BOD                                pmax    pmax
      comp=Z,68nm,1.8s
PPLA  Purkeypile        80.32  18  eP      P        11 15 58.2 +1.1
      comp=Z,32nm,1.2s
KNK   Knik Glacier      80.47  21  eP      P        11 15 58.5 +0.7
      comp=Z,116nm,1.4s
GLI   Glacier Island    80.58  21  eP      P        11 15 59.0 +0.6
      comp=Z,103nm,1.3s
CAST  Castle Rocks      80.74  18  eP      P        11 15 59.0 -0.2
      comp=Z,44nm,1.2s
SML   Sawmill           80.79  20  eP      P        11 16 00.2 +0.7
      comp=Z,117nm,1.4s
SML   Sawmill           80.79  20  eP      P        11 16 00.2 +0.7
SML                                pmax    pmax
      comp=Z,117nm,1.4s
EYAK  Cordova Ski Ar    80.86  22  eP      P        11 16 00.6 +0.8
      comp=Z,130nm,1.4s
RPN   Rapa Nui          81.13 116   P      P        11 16 02.3 +0.2
RPN                                LR      LR
      comp=Z,3µm,22.0s
RPN   Rapa Nui          81.13 116   P      P        11 16 02.3 +0.2
RPN                                MLR     MLR
      comp=Z,3µm,22.0s
RPN   Rapa Nui          81.13 116   P      P        11 16 02.3 +0.2
      comp=Z,60nm,0.8s,baz=338,slow=4.4,SNR=5.9
ZAK   Zakamensk         81.15 325  eP      P        11 16 01.4 -0.3
ZAK                                pmax    pmax
      comp=Z,59nm,1.2s
DIV   Divide            81.23  22  eP      P        11 16 02.6 +0.7
      comp=Z,80nm,1.2s
HMT   Hamilton          81.28  23  eP      P        11 16 03.1 +1.0
      comp=Z,150nm,1.6s
TRF   Thorofare Moun    81.31  19  eP      P        11 16 02.1 -0.3
      comp=Z,22nm,1.0s
KLU   Klutina           81.42  21  eP      P        11 16 03.7 +0.8
      comp=Z,64nm,1.2s
IRK   Irkutsk           81.51 327  eP      P        11 16 02.8 -0.7
IRK                                pmax    pmax
      comp=Z,71nm,3.4s
BPAW  Bear Paw Mtn.     81.57  18  eP      P        11 16 03.2 -0.4
      comp=Z,57nm,1.7s
TLY   Talaya            81.57 326  eP      P        11 16 03.8 -0.1
      comp=Z,169nm,1.2s
TLY                                LR      LR
      comp=Z,1µm,21.0s
TLY   Talaya            81.57 326d iP      P        11 16 03.5 -0.4
TLY   Talaya            81.57 326   P      P        11 16 04.4 +0.6
      SNR=22
RND   Reindeer          81.74  19  eP      P        11 16 04.7 +0.2
      comp=Z,58nm,1.2s
RND   Reindeer          81.74  19  eP      P        11 16 04.7 +0.2
RND                                pmax    pmax
      comp=Z,58nm,1.2s
RDOG  Red Dog Mine      81.75  12  eP      P        11 16 02.1 -2.4
      comp=Z,136nm,1.2s
LSA   Lhasa             81.78 302  eP      P        11 16 06.5 +0.5
      comp=Z,43nm,1.3s
LSA                                LR      LR
      comp=Z,2µm,20.0s
MCK   McKinley          81.94  19  eP      P        11 16 05.6 +0.1
      comp=Z,64nm,1.2s
MCK   McKinley          81.94  19  eP      P        11 16 05.6 +0.1
MCK                                pmax    pmax
      comp=Z,64nm,1.2s
DHY   Denali Highway    81.99  20  eP      P        11 16 06.5 +0.5
      comp=Z,48nm,1.3s
IM3   Indian Mountai    82.19  16  eP      P        11 16 06.5 -0.3
HARP  HAARP             82.30  21  eP      P        11 16 08.4 +0.9
      comp=Z,45nm,0.9s
MLY   Manley            82.32  17  eP      P        11 16 07.9 +0.4
      comp=Z,33nm,1.2s
KMRM  Mail Ridge        82.72  47  eP      P        11 16 11.5 +1.3
      comp=Z,108nm,1.3s
WRH   Wood River Hil    82.72  19  eP      P        11 16 09.4 -0.2
      comp=Z,45nm,1.3s
HOPS  Hopland Field     82.76  48  eP      P        11 16 11.6 +1.3
      comp=Z,82nm,1.4s
GDXM  Geysers           82.90  48  eP      P        11 16 12.4 +1.2
      comp=Z,24nm,1.1s
MDM   Murphy Dome       83.02  18  eP      P        11 16 10.9 -0.3
      comp=Z,44nm,1.2s
MOY   Mondy             83.03 326  eP      P        11 16 11.5 -0.1
MOY                                pmax    pmax
      comp=Z,68nm,3.9s
HDA   Harding Lake      83.04  19  eP      P        11 16 10.9 -0.4
      comp=Z,81nm,1.2s
HDA   Harding Lake      83.04  19   P      P        11 16 10.6 -0.7
      baz=227
TCOL  CIGO, UAF Yank    83.07  18   P      P        11 16 11.0 -0.4
      baz=226
COLA  College           83.08  18  eP      P        11 16 11.4  0.0
      comp=Z,45nm,1.0s
COLA                               LR      LR
      comp=Z,1µm,20.0s
COLA  College           83.08  18deP      P        11 16 10.0 -1.4
COLA                               pmax    pmax
      comp=Z,26nm,1.1s
RIDG  Independ'e Rid    83.28  20  eP      P        11 16 13.3 +0.7
      comp=Z,74nm,1.1s
IL1   Eielson Array     83.31  19  eP      P        11 16 10.4 -2.2
ILAR  Eielson Array     83.31  19   P      P        11 16 12.6 -0.1
      comp=Z,12nm,0.6s,baz=239,slow=5.3,SNR=99
ILAR                               LR      LR       11 50 25.2
      comp=Z,1µm,18.8s,baz=250,slow=34
ILB   Eielson Array     83.31  19  eP      P        11 16 12.2 -0.4
O02D  Mt. Diablo Mer    83.37  47   P      P        11 16 14.3 +0.7
      baz=250,SNR=13
POKR  Poker Plat Res    83.38  18   P      P        11 16 12.3 -0.7
      baz=227
J01E  Myrtle Point      83.61  44   P      P        11 16 15.1 +0.5
      baz=249
K02D  Willamette Mer    83.62  45   P      P        11 16 15.1 +0.3
      baz=249
SNCC  San Nicolas Is    83.67  55   P      P        11 16 15.3 +0.1
      baz=253
WDC   Whiskeytown Da    83.68  47  eP      P        11 16 15.8 +0.7
      comp=Z,65nm,1.4s
WDC   Whiskeytown Da    83.68  47  eP      P        11 16 15.8 +0.7
WDC                                pmax    pmax
      comp=Z,65nm,1.4s
N02D  Trinity Center    83.70  46   P      P        11 16 15.9 +0.7
      baz=250,SNR=10
SCRK  Sand Creek        83.72  20  eP      P        11 16 15.3 +0.3
      comp=Z,159nm,1.4s
M02C  Callahan          83.74  46   P      P        11 16 16.0 +0.6
      baz=250,SNR=6.9
SCZ2  Santa Cruz Isl    83.80  54   P      P        11 16 15.8  0.0
      baz=253
SBC   Santa Barbara     83.87  53   P      P        11 16 16.3 +0.1
      baz=253
SMMC  Simmler           83.91  52   P      P        11 16 16.6 +0.2
      baz=252
PKM   Mcpherson Peak    83.93  53   P      P        11 16 16.6 -0.1
      baz=253
YBH   Yreka Blue Hor    83.95  46  eP      P        11 16 17.5 +1.0
      comp=Z,52nm,1.2s
I02D  Swisshome         84.00  43   P      P        11 16 17.2 +0.5
      baz=249
COLD  Coldfoot          84.07  16  eP      P        11 16 18.0 +1.5
      comp=Z,13nm,1.2s
HUMO  Hull Mountain     84.08  45  eP      P        11 16 18.1 +0.9
      comp=Z,44nm,1.1s
ORV   Oroville          84.10  48  eP      P        11 16 16.2 -1.1
      comp=Z,33nm,1.2s
ORV   Oroville          84.10  48  eP      P        11 16 16.2 -1.1
ORV                                pmax    pmax
      comp=Z,33nm,1.2s
O03E  Paynes Creek      84.12  47   P      P        11 16 17.2 -0.3
      baz=251,SNR=20
ODAN  Odare             84.19 299  eP      P        11 16 18.2 -0.1
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HYT   Haines Junctio    84.24  24  eP      P        11 16 18.4 +0.8
      comp=Z,34nm,1.1s
PRP   Porcupine Dome    84.24  18  eP      P        11 16 18.0 +0.5
      comp=Z,24nm,1.4s
WRAK  Wrangell Islan    84.24  30  eP      P        11 16 18.1 +0.5
      comp=Z,74nm,1.3s
WRAK                               LR      LR
      comp=Z,2µm,20.0s
BLG   Laguna Peak, P    84.29  54   P      P        11 16 18.1 -0.3
      baz=253
AFDM  Forest Hills D    84.29  49  eP      P        11 16 18.4 +0.1
      comp=Z,50nm,1.1s
SCI2  San Clemente I    84.38  55   P      P        11 16 19.0 +0.2
      baz=254
L04D  Klamath Falls     84.40  45   P      P        11 16 18.9  0.0
      baz=250,SNR=5.2
SKAG  Skagway           84.41  26  eP      P        11 16 19.4 +1.0
      comp=Z,92nm,1.4s
CMB   Columbia Colle    84.44  50  eP      P        11 16 18.9 -0.2
      comp=Z,24nm,1.1s
CMB   Columbia Colle    84.44  50  eP      P        11 16 18.9 -0.2
CMB                                pmax    pmax
      comp=Z,24nm,1.1s
KNGR  Kungurtug, Tuv    84.55 324⇓iP      P        11 16 18.7 -0.7
M04C  Macdoel           84.58  46   P      P        11 16 20.0 +0.1
      baz=251,SNR=12
CIS   Catalina Islan    84.61  55   P      P        11 16 19.8 -0.2
      baz=254
VOG   Valley Oaks Go    84.69  52   P      P        11 16 19.8 -0.5
      baz=253
OSI   Osito Audit: C    84.71  53   P      P        11 16 20.7 +0.2
      baz=253
ARVC  Arvin             84.77  53   P      P        11 16 20.9 +0.2
      baz=253,SNR=7.3
VES   Vestal, Richgr    84.78  52   P      P        11 16 20.7 -0.1
      baz=253,SNR=8.6
G03D  McMinnville, O    84.78  42   P      P        11 16 20.9 +0.3
      baz=249
FMP   Fort Macarthur    84.79  54   P      P        11 16 20.8  0.0
      baz=254
I04A  Tendick Farm,     84.86  44   P      P        11 16 20.9 -0.2
      baz=250
J04D  Umpqua Nationa    84.88  44   P      P        11 16 21.7 +0.3
      baz=250
RAMN  Ramite            84.89 299  eP      P        11 16 21.5 -0.4
      comp=Z,156nm,1.5s
H04D  Lebanon           84.89  43   P      P        11 16 21.7 +0.6
      baz=250
MAW   Mawson            84.89 202  eP      P        11 16 22.7 +2.0
      comp=Z,22nm,1.0s
MAW   Mawson            84.89 202   P      P        11 16 21.5 +0.8
      comp=Z,74nm,0.9s,baz=83,slow=4.4,SNR=6.1
DECC  Green Verdugo     84.91  54   P      P        11 16 21.2 -0.3
      baz=254
K04D  Chiloquin, OR     84.92  45   P      P        11 16 21.4 -0.1
      baz=251
RUBR  Rubicon Trail     84.93  49  eP      P        11 16 23.1 +1.3
      comp=Z,56nm,1.1s
PASC  Pasadena Art C    85.01  54  eP      P        11 16 22.2 +0.2
      comp=Z,29nm,1.3s
BEKR  Beckworth         85.03  48  eP      P        11 16 20.9 -1.3
      comp=Z,75nm,1.6s
MWC   Mount Wilson      85.12  54  eP      P        11 16 22.7 -0.1
      comp=Z,69nm,1.4s
MWC   Mount Wilson      85.12  54  eP      P        11 16 22.7 -0.1
MWC                                pmax    pmax
      comp=Z,69nm,1.4s
NLWA  Neilton Lookou    85.17  40   PFAKE           11 16 30.0 +7.5
NLWA                                LR     LR
      comp=Z,3µm,20.0s
ISA   Isabella, Lake    85.20  53  eP      P        11 16 23.5 +0.5
      comp=Z,27nm,1.1s
ISA   Isabella, Lake    85.20  53  eP      P        11 16 23.5 +0.5
ISA                                pmax    pmax
      comp=Z,27nm,1.1s
ISA   Isabella, Lake    85.20  53   P      P        11 16 23.1 +0.1
      baz=253
WHY   Whitehorse        85.23  25  eP      P        11 16 22.7 +0.1
      comp=Z,10.0nm,0.9s
WAKR  Walker            85.30  50  eP      P        11 16 24.4 +0.8
      comp=Z,134nm,1.7s
MDPB  Devils Postpil    85.31  51  eP      P        11 16 24.2 +0.4
      comp=Z,43nm,1.1s
PNTR  Pine Nut          85.35  49  eP      P        11 16 24.5 +0.6
      comp=Z,67nm,1.4s
EDW2  Edwards Air Fo    85.36  53   P      P        11 16 23.9 +0.1
      baz=254,SNR=16
DAWY  Dawson            85.38  21  eP      P        11 16 22.9 -0.3
      comp=Z,59nm,1.3s
VCNR  Virginia City     85.38  49  eP      P        11 16 24.6 +0.6
      comp=Z,29nm,1.3s
JIRN  Jiri              85.42 299  eP      P        11 16 24.4 -0.3
      comp=Z,258nm,1.3s
BFSC  Mount Baldy Ra    85.44  54   P      P        11 16 23.8 -0.5
      baz=254,SNR=16
MLAC  Mammoth, Mammo85.49  51   P      P        11 16 24.9 +0.3
      baz=253
J05D  Fort Rock, OR     85.50  45   P      P        11 16 24.9 +0.4
      baz=251
109C  Camp Elliot, M    85.52  56   P      P        11 16 24.4 -0.1
      baz=254,SNR=6.9
CPE   Camp Elliot       85.52  56  eP      P        11 16 25.0 +0.5
      comp=Z,50nm,1.4s
YERR  Yerington         85.59  49  eP      P        11 16 25.4 +0.3
      comp=Z,70nm,1.7s
MURC  Murrieta          85.64  55   P      P        11 16 25.0 -0.2
      baz=254,SNR=8.2
TIXI  Tiksi             85.65 349  eP      P        11 16 23.8 -0.5
      comp=Z,95nm,1.5s
TIXI                               LR      LR
      comp=Z,2µm,21.0s
TIXI  Tiksi             85.65 349c iP      P        11 16 24.2 -0.1
TIXI                               pmax    pmax
      comp=Z,73nm,1.7s
TIXI  Tiksi             85.65 349   P      P        11 16 24.2 -0.1
      comp=Z,14nm,0.9s,baz=131,slow=6.5,SNR=34
PAHR  Pah Rah Range     85.70  48  eP      P        11 16 25.6 +0.1
      comp=Z,47nm,1.2s
E04D  Cinebar           85.71  41   P      P        11 16 25.8 +0.6
      baz=250
MOD   Modoc Plateau     85.71  46  eP      P        11 16 26.0 +0.5
      comp=Z,81nm,1.6s
D03D  Eldon             85.72  40   P      P        11 16 25.5 +0.3
      baz=249
CWC   Cottonwood Cre    85.73  52   P      P        11 16 25.8 +0.1
      baz=254
GUN   Gumba             85.75 299  eP      P        11 16 25.8 -0.5
      comp=Z,112nm,1.1s
LRMC  Laurel Mtn Rad    85.77  53   P      P        11 16 26.0 +0.1
      baz=254,SNR=10
I05D  Terrebonne, OR    85.78  44   P      P        11 16 25.9 +0.2
      baz=251
TIN   Tinemaha, Big     85.79  51   P      P        11 16 26.2 +0.3
      baz=253
BAR   Barrett           85.82  56  eP      P        11 16 26.4 +0.4
      comp=Z,30nm,1.4s
PINE  Pine Mountain     85.87  44  eP      P        11 16 26.6 +0.3
      comp=Z,42nm,1.1s
RYN   Ryan              86.02  50  eP      P        11 16 27.1  0.0
      comp=Z,32nm,1.2s
BBRC  Big Bear Solar    86.04  54   P      P        11 16 27.0 -0.4
      baz=254,SNR=6.3
PALK  Pallekele         86.06 278  eP      P        11 16 28.4 +0.7
      comp=Z,31nm,0.9s
DAC   Darwin (Calif)    86.06  52  eP      P        11 16 27.4 +0.1
      comp=Z,26nm,1.1s
DAC   Darwin (Calif)    86.06  52  eP      P        11 16 27.5 +0.1
DAC                                pmax    pmax
      comp=Z,26nm,1.1s
PKI   Pulchoki          86.07 299  eP      P        11 16 27.1 -0.7
      comp=Z,174nm,1.3s
MONP2 Monument Peak     86.08  56   P      P        11 16 28.0 +0.4
      baz=255,SNR=19
MPMC  Manual Prospec    86.08  52   P      P        11 16 27.3 -0.2
      baz=254,SNR=17
PKIN  Phulchoki         86.08 299  eP      P        11 16 27.3 -0.5
      comp=Z,109nm,1.2s
G05D  Wamic, OR         86.09  43   P      P        11 16 27.4 +0.3
      baz=251
NV01  Mina Array Sit    86.13  50  eP      P        11 16 26.9 -0.8
NVAR  Mina Array Bea    86.13  50   P      P        11 16 27.7  0.0
      comp=Z,26nm,1.1s,baz=234,slow=7.4,SNR=69
RRX   Edison Barstow    86.14  54   P      P        11 16 27.7 +0.1
      baz=254
F05D  White Salmon      86.20  42   P      P        11 16 28.0 +0.3
      baz=251
PFO   Pinyon Flats O    86.23  55  eP      P        11 16 27.9 -0.3
      comp=Z,15nm,0.9s
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PFO                                LR      LR
      comp=Z,3µm,19.0s
PFO   Pinyon Flats O    86.23  55  eP      P        11 16 27.9 -0.3
PFO                                pmax    pmax
      comp=Z,15nm,0.9s
PFO                                MLR     MLR
      comp=Z,3µm,19.0s
PFO   Pinyon Flats O    86.23  55   P      P        11 16 27.8 -0.3
      baz=255,SNR=6.2
PFO   Pinyon Flats O    86.23  55   P      P        11 16 28.0 -0.3
      comp=Z,14nm,1.1s,baz=258,slow=3.3,SNR=13
XPFO  Pion Flat         86.24  55  eP      P        11 16 28.0 -0.3
      comp=Z,17nm,1.0s
NV11  Mina Array Sit    86.24  50  eP      P        11 16 28.1 -0.1
      comp=Z,3.3nm,1.1s
LON   Longmire          86.27  41  eP      P        11 16 29.6 +1.6
      comp=Z,17nm,1.2s
IKP   In-Ko-Pah, Jac    86.27  56   P      P        11 16 28.8 +0.4
      baz=255,SNR=6.6
D05A  Enumclaw          86.30  41  eP      P        11 16 29.1 +1.0
      comp=Z,149nm,1.4s
DLBC  Dease Lake        86.30  28   P      P        11 16 27.6 -0.3
      comp=Z,10.0nm,1.1s,baz=223,slow=6.9,SNR=7.6
DMN   Daman             86.34 299  eP      P        11 16 28.7 -0.4
      comp=Z,166nm,1.1s
A04D  Lummi Island      86.38  39   P      P        11 16 28.7 +0.4
      baz=250
GSC   Goldstone, Bar    86.41  53  eP      P        11 16 28.9 -0.1
      comp=Z,25nm,1.3s
GSC   Goldstone, Bar    86.41  53  eP      P        11 16 28.9 -0.1
GSC                                pmax    pmax
      comp=Z,25nm,1.3s
GSC   Goldstone, Bar    86.41  53   P      P        11 16 28.9 -0.1
      baz=254,SNR=10.0
GRAC  Grapevine Rang    86.44  52   P      P        11 16 29.4 +0.3
      baz=254,SNR=5.3
KVN   Kaiserville       86.46  49  eP      P        11 16 29.2 -0.1
      comp=Z,30nm,1.2s
KVN   Kaiserville       86.46  49  eP      P        11 16 29.2 -0.1
KVN                                pmax    pmax
      comp=Z,30nm,1.2s
SWSC  Sam W. Stewart    86.59  56   P      P        11 16 29.9 +0.1
      baz=255,SNR=13
B05A  Bryant            86.60  40   P      P        11 16 29.5  0.0
      baz=250
HEC   Hector,Ludlow     86.66  54   P      P        11 16 30.0 -0.2
      baz=255
FURC  Furnace Creek,    86.68  52   P      P        11 16 30.1  0.0
      baz=254,SNR=9.3
BELC  Belle Mtn. Jos    86.71  55   P      P        11 16 30.7 +0.1
      baz=255,SNR=29
I07A  Izee              86.94  44  eP      P        11 16 31.6 +0.1
      comp=Z,82nm,1.5s
SHOC  Shoshone, Teco    86.99  53   P      P        11 16 31.7  0.0
      baz=255,SNR=6.5
WVOR  Wild Horse Val    87.05  46  eP      P        11 16 31.9 -0.2
      comp=Z,74nm,1.4s
WVOR                               LR      LR
      comp=Z,2µm,19.0s
WVOR  Wild Horse Val    87.05  46  eP      P        11 16 31.9 -0.2
WVOR                               pmax    pmax
      comp=Z,74nm,1.4s
WVOR                               MLR     MLR
      comp=Z,2µm,19.0s
BC3   Big Chuckawall    87.06  55   P      P        11 16 32.4 +0.1
      baz=255,SNR=18
TUQ   Turquoise Moun    87.14  53   P      P        11 16 32.5 -0.2
      baz=255
LTY   Liberty           87.17  41  eP      P        11 16 32.6 +0.1
      comp=Z,31nm,1.3s
GMRC  Granite Mounta    87.18  54   P      P        11 16 32.8 -0.1
      baz=255,SNR=13
F07A  Phinny Hill Vi    87.22  42  eP      P        11 16 33.2 +0.6
      comp=Z,40nm,1.3s
C06D  Leavenworth       87.24  40   P      P        11 16 32.6 -0.1
      baz=251
TPNV  Topopah Spring    87.28  52  eP      P        11 16 33.7 +0.3
      comp=Z,37nm,1.5s
TPNV  Topopah Spring    87.28  52  eP      P        11 16 33.7 +0.3
TPNV                               pmax    pmax
      comp=Z,37nm,1.5s
TPNV  Topopah Spring    87.28  52   P      P        11 16 33.3 -0.1
      baz=255,SNR=9.6
GLA   Glamis            87.41  56  eP      P        11 16 34.6 +0.7
      comp=Z,57nm,1.1s
GLA   Glamis            87.41  56  eP      P        11 16 34.6 +0.7
GLA                                pmax    pmax
      comp=Z,57nm,1.1s
GLA   Glamis            87.41  56   P      P        11 16 34.4 +0.5
      baz=256,SNR=17
IRM   Iron Mountain     87.43  55   P      P        11 16 34.2 +0.2
      baz=255,SNR=32
J08A  Circle Bar Ran    87.44  45  eP      P        11 16 32.9 -1.0
      comp=Z,42nm,1.1s
LLLB  Lillooet          87.53  38  eP      P        11 16 34.5 +0.4
      comp=Z,19nm,1.3s
HAWA  Hanford           87.64  42  eP      P        11 16 35.3 +0.6
      comp=Z,62nm,1.4s
HAWA                               LR      LR
      comp=Z,2µm,21.0s
DANN  Dangsing          87.67 299  eP      P        11 16 34.0 -1.6
      comp=Z,83nm,1.1s
KOLN  Koldanda          87.68 299  eP      P        11 16 34.1 -1.4
      comp=Z,118nm,1.6s
G08A  Pilot Rock        87.68  43  eP      P        11 16 35.1  0.0
      comp=Z,51nm,1.3s
Y12C  Blythe            87.83  55  eP      P        11 16 36.4 +0.5
      comp=Z,46nm,1.1s
Y12C  Blythe            87.83  55   P      P        11 16 36.2 +0.4
      baz=256,SNR=16
E08A  Dider Farm, El    87.98  42  eP      P        11 16 36.9 +0.6
      comp=Z,51nm,1.2s
NEE2  Needles Airpor    88.00  54   P      P        11 16 37.0 +0.4
      baz=256,SNR=5.8
SHPR  Sheep Range       88.01  52  eP      P        11 16 37.2 +0.3
      comp=Z,76nm,1.6s
R11A  Troy Canyon, C    88.16  51  eP      P        11 16 37.3 -0.2
      comp=Z,27nm,1.4s
R11A  Troy Canyon, C    88.16  51   P      P        11 16 37.5  0.0
      baz=255,SNR=19
113A  Mohawk Valley,    88.21  56  eP      P        11 16 37.9 +0.2
D08A  Wollman Farm,     88.24  42  eP      P        11 16 38.0 +0.5
      comp=Z,29nm,1.3s
PDMCI Parker Dam,Lak    88.27  55   P      P        11 16 38.4 +0.5
      baz=256,SNR=17
PYUN  Piuthan           88.28 299  eP      P        11 16 36.8 -1.6
      comp=Z,88nm,1.1s
B08A  Colville Reser    88.37  40  eP      P        11 16 38.0 -0.1
      comp=Z,33nm,1.4s
WMQ   Urumqi            88.52 315   P      P        11 16 39.0  0.0
WMQ                                sP      pwP      11 16 50.8 +4.6
WMQ                                PP      PP       11 20 03.5 -3.8
WMQ                                pmax    pmax
      comp=Z,100nm,1.3s
WMQ                                pmax    pmax
      comp=Z,390nm,3.9s
WMQ                                LR      LR
      comp=Z,3µm,17.9s
WMQ                                LR      LR
      comp=Z,3µm,19.9s
WMQ                                LR      LR
      comp=Z,5µm,33.9s
WMQ   Urumqi            88.52 315  eP      P        11 16 38.8 -0.2
      comp=Z,92nm,1.4s
WMQ   Urumqi            88.52 315  eP      P        11 16 38.8 -0.2
WMQ                                pmax    pmax
      comp=Z,92nm,1.4s
E09A  Wood Farm, Sta    88.59  42  eP      P        11 16 39.5 +0.4
      comp=Z,43nm,1.4s
BMO   Blue Mountains    88.67  44  eP      P        11 16 39.4 -0.3
      comp=Z,51nm,1.6s
BMO   Blue Mountains    88.67  44  eP      P        11 16 39.4 -0.3
BMO                                pmax    pmax
      comp=Z,51nm,1.6s
214A  Organ Pipe Nat    88.81  57   P      P        11 16 41.2 +0.7
      baz=257,SNR=30
C09A  Chrisman Ranch    88.88  41  eP      P        11 16 40.7 +0.2
      comp=Z,29nm,1.5s
ELK   Elko              89.03  48  eP      P        11 16 41.6 -0.1
      comp=Z,38nm,1.5s
ELK   Elko              89.03  48  eP      P        11 16 41.6 -0.1
ELK                                pmax    pmax
      comp=Z,38nm,1.5s
F10A  Beach Ranch, E    89.04  43  eP      P        11 16 41.1 -0.3
      comp=Z,34nm,1.3s
MFID  Camas Ranch       89.31  46  eP      P        11 16 43.3 +0.5
      comp=Z,34nm,1.3s
PSUT  Pine Spring       89.52  51  eP      P        11 16 44.6 +0.6
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      comp=Z,25nm,1.2s
LCMT  Little Creek M     89.63  52  eP      P        11 16 44.9 +0.4
      comp=Z,38nm,1.2s
CCUT  Cedar City         89.66  52  eP      P        11 16 45.4 +0.7
      comp=Z,30nm,1.1s
INK   Inuvik             89.70  19  eP      P        11 16 43.4 -0.4
      comp=Z,25nm,1.4s
INK   Inuvik             89.70  19   P      P        11 16 43.0 -0.8
      comp=Z,5.9nm,1.2s,baz=215,slow=6.0,SNR=6.4
NEW   Newport            89.76  41  eP      P        11 16 44.6  0.0
      comp=Z,48nm,1.6s
NEW                                  LR     LR
      comp=Z,2µm,19.0s
NEW   Newport            89.76  41   P      P        11 16 44.6  0.0
      baz=254
NEW   Newport            89.76  41   P      P        11 16 44.2 -0.5
      comp=Z,8.2nm,1.1s,baz=222,slow=3.4,SNR=8.8
SZCU  Shurtz Canyon      89.89  52  eP      P        11 16 46.3 +0.6
      comp=Z,37nm,1.2s
KNB   Kanab              89.96  52  eP      P        11 16 46.6 +0.5
      comp=Z,76nm,1.4s
KNB   Kanab              89.96  52  eP      P        11 16 46.6 +0.5
KNB                                  pmax   pmax
      comp=Z,76nm,1.4s
DGZ   Jazzator, Alta     90.33 321⇓iP       P        11 16 47.6 +0.2
HLID  Hailey             90.34  46  eP      P        11 16 48.0 +0.4
      comp=Z,30nm,1.2s
HLID                                 LR     LR
      comp=Z,2µm,19.0s
HLID  Hailey             90.34  46   P      P        11 16 47.9 +0.2
      baz=256
PKCU  Pink Cliffs        90.45  52  eP      P        11 16 50.2 +1.6
      comp=Z,64nm,1.2s
TUC   Tucson             90.56  57  eP      P        11 16 49.6 +0.8
      comp=Z,20nm,1.2s
TUC                                  LR     LR
      comp=Z,4µm,19.0s
TUC   Tucson             90.56  57   P      P        11 16 49.5 +0.7
      baz=258
MTPU  Mount Pierson      90.69  52  eP      P        11 16 50.8 +1.2
      comp=Z,34nm,1.1s
DUG   Dugway, Tooele     90.70  49  eP      P        11 16 49.5 +0.1
      comp=Z,34nm,1.4s
DUG                                  LR     LR
      comp=Z,2µm,19.0s
DUG   Dugway, Tooele     90.70  49  eP      P        11 16 49.5 +0.1
DUG                                  pmax   pmax
      comp=Z,34nm,1.4s
DUG                                  MLR    MLR
      comp=Z,2µm,19.0s
DUG   Dugway, Tooele     90.70  49   P      P        11 16 49.6 +0.2
      baz=257
BGU   Big Grassy Mou     90.70  49  eP      P        11 16 50.0 +0.6
      comp=Z,24nm,1.1s
WUAZ  Wupatki            90.77  54  eP      P        11 16 50.4 +0.6
      comp=Z,33nm,1.1s
WUAZ                                 LR     LR
      comp=Z,2µm,19.0s
WUAZ  Wupatki            90.77  54   P      P        11 16 50.0 +0.2
      baz=258
MSU   Marysvale          90.80  51  eP      P        11 16 50.9 +0.9
MSU   Marysvale          90.80  51  eP      P        11 16 50.9 +0.9
HVU   Hansel Valley      91.09  48  eP      P        11 16 51.5 +0.3
      comp=Z,52nm,1.1s
HVU   Hansel Valley      91.09  48  eP      P        11 16 51.5 +0.3
HVU                                  pmax   pmax
      comp=Z,52nm,1.1s
NLU   North Lily Min     91.19  50  eP      P        11 16 52.5 +0.7
      comp=Z,29nm,1.2s
SPUT  South Promonto     91.22  48  eP      P        11 16 51.4 -0.4
      comp=Z,40nm,1.4s
DGAR  Diego Garcia       91.42 262   PFAKE           11 17 00.0 +6.9
DGAR                                 LR     LR
      comp=Z,1µm,19.0s
MSO   Missoula           91.46  43  eP      P        11 16 52.4 -0.3
      comp=Z,22nm,1.4s
MSO   Missoula           91.46  43   P      P        11 16 52.0 -0.7
      baz=256
MPU   Maple Canyon       91.54  50  eP      P        11 16 54.0 +0.7
      comp=Z,48nm,1.4s
CTU   Camp Tracy         91.60  49  eP      P        11 16 54.1 +0.5
      comp=Z,30nm,1.2s
Q16A  Castle Valley      91.65  51  eP      P        11 16 54.6 +0.7
      comp=Z,53nm,1.4s
TMUT  Trail Mountain     91.70  50  eP      P        11 16 54.8 +0.5
      comp=Z,14nm,1.0s
MCMT  McKenzie Canyo     91.73  45  eP      P        11 16 54.4 +0.2
JLU   Jordanelle         91.80  49  eP      P        11 16 54.8 +0.2
      comp=Z,27nm,1.2s
TCUT  Toone Canyon       91.94  49  eP      P        11 16 55.7 +0.4
      comp=Z,33nm,1.0s
W18A  Petrified Fore     91.99  55  eP      P        11 16 55.9 +0.3
      comp=Z,22nm,1.2s
W18A  Petrified Fore     91.99  55   P      P        11 16 55.6  0.0
      baz=258
SYO   Syowa Base         92.00 197⇓iP       P        11 16 53.0 -1.7
SYO   Syowa Base         92.00 197⇓epP      P        11 16 57.0 +2.3
DLMT  Dillon             92.03  44  eP      P        11 16 55.7 +0.3
      comp=Z,58nm,1.1s
P17A  Butcher Ranch,     92.10  50  eP      P        11 16 56.6 +0.7
      comp=Z,22nm,1.3s
LRM   Limekiln Ridge     92.23  44  eP      P        11 16 56.8 +0.3
AHID  Auburn Hatcher     92.52  47   PFAKE           11 17 10.0  +12
AHID                                 LR     LR
      comp=Z,2µm,19.0s
QLMT  Earthquake Lak     92.72  45  eP      P        11 16 59.9 +1.1
BOZ   Bozeman (W)        92.75  44  eP      P        11 16 58.8  0.0
      comp=Z,43nm,1.3s
BOZ                                  LR     LR
      comp=Z,3µm,19.0s
BOZ   Bozeman (W)        92.75  44   P      P        11 16 58.8  0.0
      baz=258
FXWY  Fox Creek          92.75  46  eP      P        11 16 58.9  0.0
      comp=Z,8.9nm,1.0s
TPAW  Teton Pass         92.78  46  eP      P        11 16 58.7 -0.4
      comp=Z,8.8nm,0.9s
REDW  Red Top Meadow     92.82  47  eP      P        11 16 59.7 +0.4
      comp=Z,26nm,1.4s
HRY   Holter Researc     92.85  43  eP      P        11 16 59.7 +0.5
YHB   Horse Butte        92.87  45  eP      P        11 17 00.6 +1.2
      comp=Z,22nm,1.2s
IMW   Indian Meadow      92.87  46  eP      P        11 16 59.9 +0.3
      comp=Z,12nm,1.0s
SNOW  Snow King Moun     92.91  46  eP      P        11 17 00.4 +0.7
      comp=Z,15nm,1.1s
MK01  Makanchi Array     92.94 317  eP      P        11 16 58.6 -0.8
MK31  Makanchi Array     92.95 317  eP      P        11 16 59.0 -0.6
MKAR  Makanchi Array     92.95 317  eP      P        11 16 59.0 -0.5
      comp=Z,223nm,1.0s
MKAR                                 PKKP   PKKPdf   11 34 08.4 -1.4
MKAR  Makanchi Array     92.95 317   P      P        11 16 59.0 -0.5
MKAR                                 pmax   pmax
      comp=Z,30nm,1.0s
MKAR                                 pmax   pmax
      comp=Z,3.0nm,0.9s
MKAR                                 MLR    MLR
      comp=Z,1µm,21.9s
MKAR  Makanchi Array     92.95 317   P      P        11 16 59.0 -0.5
      comp=Z,30nm,1.0s,baz=100,slow=6.3,SNR=120
MKAR                                 PKKP   PKKPdf   11 34 08.4 -1.4
      comp=Z,2.6nm,0.9s,baz=292,slow=2.6,SNR=11
MKAR                                 LR     LR       11 57 40.0
      comp=Z,1µm,21.9s,baz=98,slow=35
MOOW  Moose Ponds        92.97  46  eP      P        11 17 00.2 +0.3
      comp=Z,20nm,1.5s
ZALV  Zalesovo Beam      93.00 324   P      P        11 16 58.1 -1.4
      comp=Z,33nm,1.1s,baz=108,slow=4.8,SNR=70
ZALV                                 PKKP   PKKPdf   11 34 10.1 +0.1
      comp=Z,0.4nm,0.4s,baz=318,slow=6.4,SNR=3.5
ZALV                                 LR     LR       11 56 45.5
      comp=Z,2µm,21.8s,baz=90,slow=34
YMR   Madison River      93.01  45  eP      P        11 17 01.2 +1.2
      comp=Z,39nm,1.5s
LOHW  Long Hollow        93.05  46  eP      P        11 17 00.3  0.0
      comp=Z,10nm,1.1s
YFT   Old Faithful       93.06  45  eP      P        11 17 02.4 +2.1
      comp=Z,11nm,1.0s
FLWY  Flagg Ranch        93.08  46  eP      P        11 17 01.2 +0.8
      comp=Z,16nm,1.1s
121A  Cookes Peak, D     93.09  58   P      P        11 17 00.5 -0.2
      baz=259
PV09  Paradox Valley     93.13  52  eP      P        11 17 01.7 +0.8
MAKZ  Makanchi           93.17 317  eP      P        11 16 59.8 -0.7
      comp=Z,75nm,1.1s
MAKZ  Makanchi           93.17 317  eP      P        11 16 59.8 -0.7
MAKZ                                 pmax   pmax
      comp=Z,75nm,1.1s
PV14  Lion Creek, Pa     93.19  52  eP      P        11 17 01.4 +0.3
      comp=Z,47nm,1.6s
PV19  Morning Glory      93.21  52  eP      P        11 17 02.3 +1.1
      comp=Z,20nm,1.1s
PV23  Carpenter Ridg     93.21  52  eP      P        11 17 02.4 +1.1
      comp=Z,10nm,0.7s
YNR   Norris Junctio     93.22  45  eP      P        11 17 03.4 +2.3
      comp=Z,26nm,1.5s
PV17  East Wray Mesa     93.22  52  eP      P        11 17 01.7 +0.5
      comp=Z,11nm,1.0s
H17A  Grant Village      93.23  46  eP      P        11 17 02.9 +1.7
      comp=Z,12nm,1.0s
H17A  Grant Village      93.23  46   P      P        11 17 00.6 -0.6
      baz=258
PV21  Cone Mtn., Par     93.26  52  eP      P        11 17 02.2 +0.8
      comp=Z,34nm,1.6s
PV04  Paradox Valley     93.28  52  eP      P        11 17 02.1 +0.6
      comp=Z,19nm,1.2s
PV11  David Mesa, Pa     93.29  52  eP      P        11 17 02.6 +1.1
      comp=Z,13nm,1.0s
PV12  Saucer Basin,      93.35  52  eP      P        11 17 02.6 +0.8
      comp=Z,16nm,1.0s
MVCO  Mesa Verde         93.38  53   PFAKE           11 17 10.0 +8.0
MVCO                                 LR     LR
      comp=Z,2µm,19.0s
MVCO  Mesa Verde         93.38  53   P      P        11 17 02.2 +0.2
      baz=259
LKWY  Lake               93.38  45  eP      P        11 17 02.6 +0.7
      comp=Z,9.4nm,1.1s
LKWY                                 LR     LR
      comp=Z,4µm,19.0s
LKWY  Lake               93.38  45  eP      P        11 17 02.6 +0.7
LKWY                                 pmax   pmax
      comp=Z,9.0nm,1.1s
LKWY                                 MLR    MLR
      comp=Z,4µm,19.0s
PV01  Paradox Valley     93.50  52  eP      P        11 17 03.3 +0.8
      comp=Z,20nm,1.7s
BW06  Boulder Array      93.63  47  eP      P        11 17 02.4 -0.5
      comp=Z,8.7nm,1.1s
BW06                                 LR     LR
      comp=Z,2µm,19.0s
BW06  Boulder Array      93.63  47   P      P        11 17 02.5 -0.5
      baz=259
PD31  Pinedale Array     93.63  47  eP      P        11 17 02.7 -0.3
PDAR  Pinedale Array     93.63  47  eP      P        11 17 01.5 -1.5
PDAR                                 PKKPbc PKKPbc   11 34 16.7 +7.1
PDAR  Pinedale Array     93.63  47   P      P        11 17 02.1 -0.9
      comp=Z,6.2nm,1.0s,baz=247,slow=3.1,SNR=26
PDAR                                 PKKPbc PKKPbc   11 34 16.7 +7.1
      comp=Z,0.4nm,0.7s,baz=81,slow=5.8,SNR=4.3
HPIG                     93.91  63  eP      P        11 17 04.9 +0.3
      comp=Z,11nm,1.4s
O20A  White River Ci     94.11  50   P      P        11 17 05.3 +0.1
      baz=260
RLMT  Red Lodge          94.28  45  eP      P        11 17 06.7 +0.8
      comp=Z,16nm,1.4s
RLMT                                 LR     LR
      comp=Z,3µm,19.0s
RLMT  Red Lodge          94.28  45   P      P        11 17 06.1 +0.1
      baz=259
EGMT  Eagleton           94.50  42  eP      P        11 17 07.1 +0.4
      comp=Z,35nm,1.3s
EGMT                                 LR     LR
      comp=Z,1µm,20.0s
EGMT  Eagleton           94.50  42   P      P        11 17 06.7  0.0
      baz=259
ANMO  Albuquerque        94.61  55  eP      P        11 17 07.6  0.0
      comp=Z,5.1nm,1.1s
ANMO                                 LR     LR
      comp=Z,1µm,19.0s
ANMO  Albuquerque        94.61  55⇑iP       P        11 17 07.0 -0.6
ANMO                                 pmax   pmax
      comp=Z,6.0nm,1.3s
ANMO  Albuquerque        94.61  55   P      P        11 17 07.3 -0.3
      baz=260
ANMO  Albuquerque        94.61  55   P      P        11 17 07.2 -0.4
      comp=Z,5.7nm,1.1s,baz=230,slow=4.5,SNR=11
POO   Poona              94.68 288  eP      P        11 17 05.0 -3.1
S22A  4UR Ranch, Cre     94.78  53  eP      P        11 17 09.9 +1.4
      comp=Z,16nm,1.5s
S22A  4UR Ranch, Cre     94.78  53   P      P        11 17 08.6 +0.1
      baz=260
YKA   Yellowknife Ar     94.85  27   P      P        11 17 05.9 -1.8
      comp=Z,3.4nm,0.8s,baz=256,slow=4.6,SNR=50
YKA                                  PKKPbc PKKPbc   11 34 13.1 +6.3
      comp=Z,0.3nm,0.9s,baz=80,slow=2.5,SNR=4.3
YKA                                  PKP2bc          11 41 24.0
      comp=Z,0.5nm,1.0s,baz=113,slow=4.9,SNR=4.1
SMCO  Snowmass           94.91  51  eP      P        11 17 11.1 +1.9
      comp=Z,9.8nm,1.4s
MNTX  Cornudas Mount     94.95  59   PFAKE           11 17 20.0  +11
MNTX                                 LR     LR
      comp=Z,2µm,20.0s
MNTX  Cornudas Mount     94.95  59   P      P        11 17 08.5 -0.5
      baz=261
NRIK  Noril'sk           95.62 340   P      P        11 17 10.4 -0.8
      comp=Z,14nm,1.1s,baz=107,slow=5.3,SNR=15
NRIK                                 LR     LR       11 57 09.2
      comp=Z,2µm,21.9s,baz=112,slow=34
K22A  Casper             95.81  48   P      P        11 17 12.6 -0.3
      baz=261
SDCO  Great Sand Dun     95.82  53   PFAKE           11 17 20.0 +6.8
SDCO                                 LR     LR
      comp=Z,2µm,19.0s
SDCO  Great Sand Dun     95.82  53   P      P        11 17 13.0 -0.2
      baz=261
N23A  Red Feather La     95.97  50   P      P        11 17 14.3 +0.5
      baz=261
TX31  Lajitas Ar. Si     96.04  61  eP      P        11 17 14.7 +0.5
TXAR  Lajitas Array      96.04  61   P      P        11 17 13.5 -0.7
      comp=Z,1.2nm,0.9s,baz=213,slow=3.9,SNR=13
TXAR                                 PKKP   PKKPbc   11 34 00.7 -1.8
      comp=Z,0.2nm,0.6s,baz=104,slow=4.0,SNR=3.6
TXAR                                 LR     LR       11 54 35.5
      comp=Z,2µm,18.9s,baz=0.0,slow=32
ISCO  Idaho Springs      96.05  51   PFAKE           11 17 30.0  +16
ISCO                                 LR     LR
      comp=Z,4µm,19.0s
ISCO  Idaho Springs      96.05  51   P      P        11 17 14.1 -0.2
      baz=261
KURK  Kurchatov          96.08 320  eP      P        11 17 12.6 -1.1
      comp=Z,53nm,1.6s
KURK                                 PKKP   PKKPbc   11 34 00.7 -2.3
KURK                                 LR     LR
      comp=Z,6µm,21.0s
KURK  Kurchatov          96.08 320c iP      P        11 17 12.2 -1.5
KURK                                 pmax   pmax
      comp=Z,39nm,1.7s
KURK  Kurchatov          96.08 320   P      P        11 17 12.7 -1.0
      SNR=9.8
KURK                                 P      P        11 17 12.7 -1.0
      SNR=9.8
KURBB Kurchatov Arra     96.12 320   P      P        11 17 12.2 -1.6
      comp=Z,2.6nm,0.9s,baz=101,slow=3.7,SNR=17
KURBB                                PKKP   PKKPbc   11 34 00.7 -2.2
      comp=Z,3.0nm,1.1s,baz=282,slow=3.1,SNR=6.7
KSH   Kashi              96.18 309   P      P        11 17 13.3 -1.3
KSH                                  pP     pwP      11 17 21.1 -0.8
KSH                                  PP     PP       11 21 10.8 +3.0
KSH                                  S      S        11 28 26.9 -7.5
KSH                                  sS     sS       11 28 40.4 +2.4
KSH                                  SS     SS       11 35 10.4 +3.9
KSH                                  pmax   pmax
      comp=Z,290nm,4.2s
KSH                                  LR     LR
      comp=Z,310nm,4.7s
KSH                                  LR     LR
      comp=Z,550nm,7.5s
KSH                                  LR     LR
      comp=Z,4µm,21.3s
PMSA  Palmer Station     96.21 161   PFAKE           11 17 30.0  +16
PMSA                                 LR     LR
      comp=Z,2µm,20.0s
T25A  Trinidad           96.59  54   P      P        11 17 16.0 -0.6
      baz=262
LAO   LASA Array         96.64  44  eP      P        11 17 17.3 +0.8
      comp=Z,29nm,1.4s
LAO                                  LR     LR
      comp=Z,2µm,19.0s
LAO   LASA Array         96.64  44   P      P        11 17 16.8 +0.4
      baz=262
NVL   N'lazarevskaya     96.76 189  eP      P        11 17 14.5 -2.0
NVL                                  pmax   pmax
      comp=Z,1µm,13.5s
SNAA  Sanae              97.45 184   P      P        11 17 19.5 -0.2
SNAA  Sanae              97.45 184  eP      P        11 17 19.6 -0.1
      comp=Z,58nm,1.2s
SNAA  Sanae              97.45 184c iP      P        11 17 18.9 -0.8
MSTX  Muleshoe           97.47  57   P      P        11 17 19.6 -1.0
      baz=262
NIL   Nilore             97.51 303   PFAKE           11 17 30.0 +9.3
NIL                                  LR     LR
      comp=Z,886nm,19.0s
AAK   Ala-Archa          97.72 312   P      P        11 17 20.0 -1.6
AAK                                  LR     LR
      comp=Z,2µm,22.0s
AAK   Ala-Archa          97.72 312   P      P        11 17 20.0 -1.6
AAK                                  MLR    MLR
      comp=Z,2µm,22.0s
AAK   Ala-Archa          97.72 312   P      P        11 17 20.0 -1.6
      comp=Z,1.2nm,0.8s,baz=216,slow=8.7,SNR=3.1
RSSD  Black Hills        97.82  47   Pdiff  P        11 17 21.6 -0.4
      baz=263
VNA3  Neumayer Olymp     98.20 182   P      P        11 17 22.7 -0.3
DGMT  Dagmar             98.23  42   PFAKE           11 17 30.0 +6.4
DGMT                                 LR     LR
      comp=Z,2µm,19.0s
DGMT  Dagmar             98.23  42   Pdiff  P        11 17 23.7 +0.1
      baz=263
VNA2  Neumayer--Watz     98.43 182   P      P        11 17 23.5 -0.5
AMTX  Amarillo           98.48  56  eP      P        11 17 24.9 -0.2
      comp=Z,20nm,1.5s
AMTX  Amarillo           98.48  56   Pdiff  P        11 17 24.7 -0.4
      baz=263
OGNE  Ogallala           98.91  50   PFAKE           11 17 40.0  +13
OGNE                                 LR     LR
      comp=Z,2µm,22.0s
JCT   Junction City      99.52  61   PFAKE           11 17 40.0  +10
JCT                                  LR     LR
      comp=Z,3µm,20.0s
FFC   Flin Flon         100.20  36   PFAKE           11 17 40.0 +7.9
FFC                                  LR     LR
      comp=Z,2µm,21.0s
FFC   Flin Flon         100.20  36 i P      Pdif     11 17 32.1  0.0
CBKS  Cedar Bluff       100.45  52   PFAKE           11 17 50.0  +16
CBKS                                 LR     LR
      comp=Z,2µm,19.0s
WMOK  Wichita Mounta    100.83  57   PFAKE           11 17 50.0  +15
WMOK                                 LR     LR
      comp=Z,2µm,20.0s
KVTX  Kingsville        100.85  64   PFAKE           11 17 50.0  +14
KVTX                                 LR     LR
      comp=Z,2µm,19.0s
BVAR  Borovoye Array    101.39 322   Pdiff  Pdif     11 17 35.7 -1.7
      comp=Z,4.6nm,0.9s,baz=98,slow=4.5,SNR=22
BRVK  Borovoye          101.45 322  ePdif   Pdif     11 17 37.2 -0.6
BRVK                                 LR     LR
      comp=Z,3µm,21.0s
BRVK  Borovoye          101.45 322⇑iP       Pdif     11 17 36.5 -1.2
BRVK                                 pmax   pmax
      comp=Z,11nm,1.3s
KSU1  Kansas State U    102.91  52   PFAKE           11 18 00.0  +15
KSU1                                 LR     LR
      comp=Z,2µm,19.0s
ECSD  EROS Data Cent    103.13  47   PFAKE           11 18 00.0  +15
ECSD                                 LR     LR
      comp=Z,2µm,20.0s
NATX  Nacogdoches       104.03  60   PFAKE           11 18 00.0  +10
NATX                                 LR     LR
      comp=Z,2µm,19.0s
PAYG  Puerto Ayora      104.04  93   PFAKE           11 18 00.0  +10
PAYG                                 LR     LR
      comp=Z,2µm,19.0s
MIAR  Mount Ida         105.10  57   PFAKE           11 22 20.0  +11
MIAR                                 LR     LR
      comp=Z,3µm,20.0s
SCIA  State Center      105.58  49   PFAKE           11 22 20.0  +10
SCIA                                 LR     LR
      comp=Z,2µm,20.0s
EYMN  Ely               106.70  43   PFAKE           11 22 20.0 +8.4
EYMN                                 LR     LR
      comp=Z,1µm,20.0s
EFI   East Falkland     107.52 153   PFAKE           11 22 20.0 +7.0
EFI                                  LR     LR
      comp=Z,3µm,21.0s
JFWS  Jewell Farm       107.77  48   PFAKE           11 22 30.0  +16
JFWS                                 LR     LR
      comp=Z,2µm,19.0s
ARU   Arti              108.08 326   PFAKE           11 22 30.0  +16
ARU                                  LR     LR
      comp=Z,1µm,20.0s
COWI  Conover           108.41  45   PFAKE           11 22 30.0  +15
COWI                                 LR     LR
      comp=Z,2µm,20.0s
HDIL  Hopedale          108.56  51   PFAKE           11 22 30.0  +15
HDIL                                 LR     LR
      comp=Z,3µm,20.0s
AKTO  Aktyubinsk        109.16 320   PKKPbc PKKPbc   11 33 22.1 -2.3
      comp=Z,1.1nm,0.9s,baz=166,slow=3.8,SNR=3.5
BRAL  Brewton           110.51  61   PFAKE           11 22 30.0  +11
BRAL                                 LR     LR
      comp=Z,2µm,20.0s
KBS   Kingsbay          110.52 355   PFAKE           11 22 30.0  +12
KBS                                  LR     LR
      comp=Z,2µm,19.0s
JTS   JuntasAbangare    111.08  83   PFAKE           11 22 30.0 +9.2
JTS                                  LR     LR
      comp=Z,2µm,20.0s
GLMI  Grayling          111.69  46   PFAKE           11 22 30.0 +8.9
GLMI                                 LR     LR
      comp=Z,3µm,20.0s
ABPO  Ambohimpanom      112.20 244   PFAKE           11 22 30.0 +7.0
ABPO                                 LR     LR
      comp=Z,834nm,22.0s
AAM   Ann Arbor         112.67  49   PFAKE           11 22 30.0 +7.0
AAM                                  LR     LR
      comp=Z,3µm,19.0s
LCO   Las Campanas      113.12 128   PFAKE           11 22 40.0  +15
LCO                                  LR     LR
      comp=Z,2µm,19.0s
PRGR  Permogore         113.21 333 i PKIKP  PKiKP    11 22 22.0 -1.4
ACSO  Alum Creek Sta    113.39  51   PFAKE           11 22 40.0  +16
ACSO                                 LR     LR
      comp=Z,3µm,19.0s
GOGA  Godfrey           113.50  58   PFAKE           11 22 40.0  +15
GOGA                                 LR     LR
      comp=Z,3µm,19.0s
NNA   Nana              114.30 108   PFAKE           11 22 40.0  +13
NNA                                  LR     LR
      comp=Z,891nm,20.0s
LVZ   Lovozero          114.37 342   PFAKE           11 22 40.0  +14
LVZ                                  LR     LR
      comp=Z,2µm,21.0s
TRQA  Tornquist         114.42 140   PFAKE           11 22 40.0  +13
TRQA                                 LR     LR
      comp=Z,2µm,19.0s
APA   Apatity           114.95 342⇓iPKIKP   PKiKP    11 22 26.3 -0.3
APA                                  pmax   pmax
      comp=Z,7.0nm,0.8s
APA                                  MLR    MLR
      comp=Z,3µm,21.0s
KEV   Kevo              115.34 345   PFAKE           11 22 40.0  +13
KEV                                  LR     LR
      comp=Z,4µm,20.0s
BLA   Blacksburg        115.70  54   PFAKE           11 22 40.0  +11
BLA                                  LR     LR
      comp=Z,2µm,19.0s
OTAV  Otavalo           115.82  95   PFAKE           11 22 40.0  +10
OTAV                                 LR     LR
      comp=Z,2µm,19.0s
ARCES ARCESS Array B    115.87 345   PKP    PKiKP    11 22 26.9 -1.4
      comp=Z,3.2nm,0.5s,baz=86,slow=1.2,SNR=28
ARCES                                PKKPbc PKKPbc   11 32 58.4 -4.0
      comp=Z,4.5nm,0.9s,baz=192,slow=2.7,SNR=7.7
BCIP  Isla Barro Col    115.93  85   PFAKE           11 22 40.0  +10
BCIP                                 LR     LR
      comp=Z,1µm,19.0s
KLMR  Klimovskoe        116.22 334  ePKIKP  PKiKP    11 22 26.3 -2.9
KLMR                                 pmax   pmax
      comp=Z,10.0nm,1.0s
KLMR  Klimovskoe        116.22 334  ePKPdf  PKiKP    11 22 26.4 -2.8
KLMR                                 AMP             11 22 29.1
      comp=Z,10.0nm,1.0s
KLMR                                ePP     PP       11 23 26.0 -8.4
KLMR                                ePKKPab PKKPbc   11 32 57.8 -3.1
NHSC  New Hope          116.27  58   PFAKE           11 22 40.0  +10
NHSC                                 LR     LR
      comp=Z,2µm,20.0s
LVC   Limon Verde       117.44 122   PFAKE           11 22 40.0 +6.7
LVC                                  LR     LR
      comp=Z,1µm,19.0s
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CNNC	**Cliffs of the**	**117.95**	**56**	PFAKE		11 22 40.0	+6.6
CNNC				LR	LR		
	comp=Z,2µm,19.0s						
CBN	**Corbin Frederi**	**117.97**	**52**	PFAKE		11 22 40.0	+6.7
CBN				LR	LR		
	comp=Z,2µm,19.0s						
BINY	**Binghamton**	**118.30**	**48**	PFAKE		11 22 50.0	+16
BINY				LR	LR		
	comp=Z,3µm,19.0s						
LONY	**Lake Ozonia**	**118.76**	**45**	PFAKE		11 22 50.0	+15
LONY				LR	LR		
	comp=Z,2µm,20.0s						
SFJD	**Kangerlussuaq**	**118.83**	**15**	PFAKE		11 22 50.0	+16
SFJD				LR	LR		
	comp=Z,2µm,19.0s						
MTDJ	**Mount Denham**	**118.94**	**75**	PFAKE		11 22 50.0	+14
MTDJ				LR	LR		
	comp=Z,2µm,21.0s						
VRH	**Novokhopyorsk**	**119.02**	**323**	*e*PKIKP	**PKPdf**	**11 22 33.7**	**-1.2**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GNI	**Garni**	**120.08**	**310**	PFAKE		11 22 50.0	+12
GNI				LR	LR		
	comp=Z,2µm,19.0s						
LPSR	**Galich'ya Gora**	**120.09**	**325**	*e*PKIKP	**PKPdf**	**11 22 36.0**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,20nm,1.3s						
OBN	**Obninsk**	**120.26**	**329**	PFAKE		11 22 50.0	+13
OBN				LR	LR		
	comp=Z,1µm,20.0s						
OBN	**Obninsk**	**120.26**	**329**	⇑*i*PKIKP	**PKPdf**	**11 22 35.7**	**-1.4**
OBN				*e*		11 24 02.2	
OBN				pmax	pmax		
	comp=Z,12nm,1.2s						
VSR	**Storozhevoye**	**120.50**	**324**	*e*PKIKP	**PKPdf**	**11 22 35.8**	**-2.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KBZ	**Khabaz**	**120.57**	**315**	PKP	**PKPdf**	**11 22 38.2**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=117,slow=2.0,SNR=5.6						
KIV	**Kislovodsk**	**120.66**	**315**	PFAKE		11 22 50.0	+11
KIV				LR	LR		
	comp=Z,2µm,19.0s						
KIV	**Kislovodsk**	**120.66**	**315**	*i* PKIKP	**PKPdf**	**11 22 38.0**	**-0.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FINES	**FINESS Array B**	**121.27**	**338**	PKP	**PKPdf**	**11 22 37.7**	**-1.2**
	comp=Z,5.6nm,0.8s,baz=38,slow=3.1,SNR=11						
FINES				PKKPbc	**PKKPab**	**11 32 39.8**	**-1.1**
	comp=Z,5.5nm,1.0s,baz=247,slow=3.9,SNR=5.7						
GTBY	**Guantanamo Bay**	**121.27**	**73**	PFAKE		11 22 50.0	+10
GTBY				LR	LR		
	comp=Z,990nm,20.0s						
PKME	**Peaks-Kenny Pk**	**122.18**	**43**	PFAKE		11 22 50.0	+8.7
PKME				LR	LR		
	comp=Z,2µm,19.0s						
ANN	**Anapa**	**123.97**	**317**	*i* PKIKP	**PKPdf**	**11 22 42.6**	**-2.0**
ANN				*e*		11 22 45.8	
ANN				*e*		11 24 27.4	
ANN				*e*SS	SS	11 41 18.2	+0.1
ANN				pmax	pmax		
	comp=Z,34nm,1.4s						
CPUP	**Villa Florida**	**124.60**	**132**	PKP	**PKPdf**	**11 22 45.2**	**-1.2**
	comp=Z,4.2nm,0.9s,baz=14,slow=2.6,SNR=6.7						
SDDR	**Presa de Saban**	**124.87**	**74**	PFAKE		11 23 00.0	+12
SDDR				LR	LR		
	comp=Z,2µm,22.0s						
SDV	**Santo Domingo**	**124.92**	**87**	*e*PKPdf	**PKPdf**	**11 22 45.3**	**-2.3**
SDV				LR	LR		
	comp=Z,1µm,20.0s						
GRTK	**Grand Turk**	**124.98**	**71**	PFAKE		11 23 00.0	+12
GRTK				LR	LR		
	comp=Z,2µm,20.0s						
BOSA	**Boshof**	**125.08**	**224**	PKP	**PKPdf**	**11 22 47.1**	**-0.4**
	comp=Z,10nm,1.0s,baz=82,slow=3.5,SNR=9.6						
NACGM	**Naroch**	**125.14**	**332**	*e*	**PKPdf**	**11 22 45.0**	**-1.5**
SUR	**Sutherland**	**125.37**	**217**	PFAKE		11 23 00.0	+12
SUR				LR	LR		
	comp=Z,3µm,19.0s						
NB2	**NORSAR Subarra**	**126.23**	**345**	PKPdf	**PKPdf**	**11 22 47.2**	**-1.3**
	comp=Z,14nm,1.2s,baz=28,slow=1.9						
NB2	**NORSAR Subarra**	**126.23**	**345**	PKPdf	**PKPdf**	**11 22 47.2**	**-1.3**
	baz=28,slow=1.9						
NOA	**NORSAR Array B**	**126.23**	**345**	PKP	**PKPdf**	**11 22 47.3**	**-1.3**
	comp=Z,3.8nm,0.9s,baz=30,slow=2.0,SNR=6.2						
AKASG	**Malin Array Be**	**126.31**	**327**	PKP	**PKPdf**	**11 22 47.7**	**-1.3**
	comp=Z,6.7nm,0.9s,baz=59,slow=2.1,SNR=21						
KIEV	**Kiev**	**126.33**	**327**	PFAKE		11 23 00.0	+11
KIEV				LR	LR		
	comp=Z,2µm,21.0s						
KIEV	**Kiev**	**126.33**	**327**	⇓*i*P	**PKPdf**	**11 22 48.6**	**-0.3**
KIEV	**Kiev**	**126.33**	**327**	⇓PKIKP	**PKPdf**	**11 22 48.6**	**-0.3**
KMBO	**Kilima Mbogo**	**127.01**	**260**	PKP	**PKPdf**	**11 22 50.9**	**-0.8**
KMBO				LR	LR		
	comp=Z,2µm,19.0s						
KMBO	**Kilima Mbogo**	**127.01**	**260**	PKIKP	**PKPdf**	**11 22 50.9**	**-0.8**
KMBO				MLR	MLR		
	comp=Z,2µm,19.0s						
KMBO	**Kilima Mbogo**	**127.01**	**260**	PKP	**PKPdf**	**11 22 50.9**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=135,slow=2.9,SNR=5.7						
BRTR	**Keskin Array B**	**128.39**	**313**	PKP	**PKPdf**	**11 22 52.0**	**-1.5**
	comp=Z,5.3nm,1.1s,baz=132,slow=1.8,SNR=12						
ANTO	**Ankara**	**128.95**	**313**	PFAKE		11 23 10.0	+15
ANTO				LR	LR		
	comp=Z,1µm,20.0s						
SJG	**San Juan**	**129.76**	**75**	*e*PKPdf	**PKPdf**	**11 22 54.3**	**-2.1**
SJG				LR	LR		
	comp=Z,2µm,20.0s						
SJG	**San Juan**	**129.76**	**75**	*e*PKIKP	**PKPdf**	**11 22 54.3**	**-2.1**
SJG				MLR	MLR		
	comp=Z,2µm,20.0s						
BIZ	**Bicaz**	**130.08**	**324**	⇑*i*P	**PKPdf**	**11 22 57.7**	**+1.4**
TLB	**Topalu**	**130.13**	**321**	⇑*i*P	**PKPdf**	**11 22 57.6**	**+1.2**
TLB	**Topalu**	**130.13**	**321**	⇑PKIKP	**PKPdf**	**11 22 57.6**	**+1.2**
BURAR	**Bucovina Array**	**130.21**	**325**	⇑*i*P	**PKiKP**	**11 22 58.8**	**+1.4**
BURAR	**Bucovina Array**	**130.21**	**325**	⇑PKIKP	**PKiKP**	**11 22 58.8**	**+1.4**
LSZ	**Lusaka**	**130.30**	**239**	*e*PKPdf	**PKPdf**	**11 22 57.8**	**+0.1**
LSZ				LR	LR		
	comp=Z,2µm,19.0s						
LSZ	**Lusaka**	**130.30**	**239**	*e*PKIKP	**PKPdf**	**11 22 57.8**	**+0.1**
LSZ				MLR	MLR		
	comp=Z,2µm,19.0s						
MLR	**Muntele Rosu**	**130.95**	**323**	⇑*i*P	**PKPdf**	**11 22 58.7**	**+0.6**
MLR	**Muntele Rosu**	**130.95**	**323**	⇑PKIKP	**PKPdf**	**11 22 58.7**	**+0.6**
DOPR	**Dopca**	**131.02**	**323**	⇑*i*P	**PKPdf**	**11 22 59.6**	**+1.5**
UZH	**Uzhgorod**	**131.19**	**328**	*e*PKIKP	**PKPdf**	**11 22 59.5**	**+1.2**
UZH				*e*		11 23 03.0	
TRPA	**Tarpa**	**131.37**	**327**	⇑*i*P	**PKPdf**	**11 22 59.8**	**+1.2**
VOIR		**131.51**	**323**	⇓*i*P	**PKPdf**	**11 23 00.9**	**+1.8**
VOIR		**131.51**	**323**	⇓PKIKP	**PKPdf**	**11 23 00.9**	**+1.8**
ARR	**Arges**	**131.79**	**323**	⇑*i*P	**PKPdf**	**11 22 59.9**	**+0.2**
DRGR		**132.08**	**326**	⇑*i*P	**PKPdf**	**11 23 01.2**	**+1.0**
DRGR		**132.08**	**326**	⇑PKIKP	**PKPdf**	**11 23 01.2**	**+1.0**
LANS	**Liptovska Anna**	**132.28**	**330**	*e*PKP	**PKiKP**	**11 23 02.4**	**+0.9**
TRIS	**Tristan da Cun**	**132.46**	**183**	PFAKE		11 23 10.0	+7.8
TRIS				LR	LR		
	comp=Z,2µm,20.0s						
KSP	**Ksiaz**	**132.57**	**334**	*e*PKP	**PKPdf**	**11 23 01.6**	**+0.7**
KSP	**Ksiaz**	**132.57**	**334**	*e*PKIKP	**PKPdf**	**11 23 01.6**	**+0.7**
MORC	**Moravsky Berou**	**132.77**	**332**	⇑*i*P	**PKPdf**	**11 23 01.4**	**+0.1**
MORC	**Moravsky Berou**	**132.77**	**332**	⇑PKIKP	**PKPdf**	**11 23 01.4**	**+0.1**
MORC	**Moravsky Berou**	**132.77**	**332**	*e*PKP	**PKPdf**	**11 23 01.0**	**-0.3**
GZR	**Gura Zlata**	**132.86**	**324**	⇑*i*P	**PKPdf**	**11 23 02.6**	**+0.9**
GZR	**Gura Zlata**	**132.86**	**324**	⇑PKIKP	**PKPdf**	**11 23 02.6**	**+0.9**
DPC	**Dobruska-Polom**	**132.92**	**333**	AMS	AMS	12 21 30.0	
	comp=Z,3µm,25.0s						
UPC	**Upice**	**132.94**	**334**	AMS	AMS	12 27 50.0	
	comp=Z,3µm,17.3s						
BZS	**Buzias**	**133.39**	**325**	⇓*i*P	**PKPdf**	**11 23 02.3**	**-0.2**
BZS	**Buzias**	**133.39**	**325**	⇓PKIKP	**PKPdf**	**11 23 02.3**	**-0.2**
MBAR	**Mbarara**	**133.44**	**259**	PFAKE		11 23 20.0	+15
MBAR				LR	LR		
	comp=Z,925nm,22.0s						
PVCC	**Panska Ves**	**133.54**	**334**	AMS	AMS	12 16 40.0	
	comp=Z,3µm,17.2s						
BRG	**Berggiesshubel**	**133.55**	**335**	*e*PKP	**PKPdf**	**11 23 02.2**	**-0.5**
	comp=Z,12nm,1.3s						
BRG				*e*SKP		11 26 31.6	
	comp=Z,11nm,1.3s comp=N,2µm,24.0s comp=E,2µm,24.9s comp=Z,3µm,25.5s						
BRG	**Berggiesshubel**	**133.55**	**335**	*e*PKIKP	**PKPdf**	**11 23 02.2**	**-0.5**
BRG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BRG				pmax	pmax		
	comp=N,13nm,1.3s						
BRG				MLR	MLR		
	comp=N,11µm,24.0s						
BRG				MLR	MLR		
	comp=E,2µm,24.9s						
BRG				MLR	MLR		
	comp=Z,2µm,25.5s						
CLL	**Collm**	**133.59**	**336**	*e*PKPdf	**PKPdf**	**11 23 03.0**	**+0.3**
CLL				*e*		11 23 15.0	
CLL				*e*(PP)		11 25 25.0	
CLL	**Collm**	**133.59**	**336**	*e*PKIKP	**PKPdf**	**11 23 03.0**	**+0.3**
CLL				*e*		11 23 15.0	
KRUC	**Moravsky**	**133.81**	**332**	*e*PKP	**PKPdf**	**11 23 03.3**	**+0.1**
MDVR	**Moldovita**	**133.83**	**324**	⇓*i*P	**PKPdf**	**11 23 04.5**	**+1.0**
MODS	**Modra-Piesok**	**133.87**	**331**	*e*PKIKP	**PKPdf**	**11 23 03.5**	**+0.1**
MODS	**Modra-Piesok**	**133.87**	**331**	*e*PKP	**PKPdf**	**11 23 03.5**	**+0.1**
ANWB	**Willy Bob**	**133.92**	**76**	PFAKE		11 23 20.0	+14
ANWB				LR	LR		
	comp=Z,2µm,21.0s						
PRA	**Prague**	**133.95**	**334**	AMS	AMS	12 20 50.0	
	comp=Z,3µm,26.5s						
PRU	**Pruhonice**	**133.96**	**334**	AMS	AMS	12 17 40.0	
	comp=Z,3µm,18.9s						
GRGR	**Grenville**	**134.00**	**83**	PFAKE		11 23 20.0	+14
GRGR				LR	LR		
	comp=Z,1µm,21.0s						
VTS	**Vitosha**	**134.14**	**321**	⇑*i*P	**PKPdf**	**11 23 04.4**	**+0.1**
VTS	**Vitosha**	**134.14**	**321**	⇑PKIKP	**PKPdf**	**11 23 04.4**	**+0.1**
ESK	**Eskdalemuir**	**134.56**	**351**	PFAKE		11 23 20.0	+14
ESK				LR	LR		
	comp=Z,3µm,20.0s						
NKC	**Novy Kostel**	**134.65**	**336**	AMS	AMS	12 28 00.0	
	comp=Z,2µm,23.2s						
CONA	**Conrad Observa**	**134.86**	**331**	*e*PKiKP	**PKPdf**	**11 23 05.9**	**+0.5**
	comp=Z,3.1nm,0.6s						
CONA				*e*PP	**PP**	**11 25 41.0**	**+2.1**
	comp=Z,12nm,1.3s						
KHC	**Kasperske Hory**	**135.02**	**334**	*e*PKPdf	**PKPdf**	**11 23 06.0**	**+0.4**
KHC				AMS	AMS	12 22 10.0	
	comp=Z,4µm,21.2s						
KHC	**Kasperske Hory**	**135.02**	**334**	*e*PKIKP	**PKPdf**	**11 23 06.0**	**+0.4**
KHC				MLR	MLR		
	comp=Z,4µm,21.2s						
GERES	**GERESS Array B**	**135.18**	**334**	PKP	**PKPdf**	**11 23 03.9**	**-2.1**
	comp=Z,3.2nm,0.9s,baz=48,slow=2.0,SNR=16						
ARSA	**Arzberg**	**135.50**	**331**	*e*PP	PP	11 25 44.4	+1.5
	comp=Z,7.3nm,1.2s						
MOA	**Molln**	**135.66**	**332**	*e*PKiKP	**PKPdf**	**11 23 08.4**	**+1.6**
	comp=Z,11nm,1.5s						
BBGH	**Gun Hill**	**136.09**	**82**	PFAKE		11 23 20.0	+10
BBGH				LR	LR		
	comp=Z,2µm,20.0s						
PERS	**Pernice**	**136.14**	**330**	*i* PKPdf	**PKPdf**	**11 23 08.9**	**+1.2**
SOKA	**Soboth**	**136.15**	**330**	*e*PKPdf	**PKPdf**	**11 23 06.5**	**-1.3**
	comp=Z,13nm,1.2s						
TSUM	**Tsumeb**	**136.47**	**227**	PFAKE		11 23 20.0	+9.0
TSUM				LR	LR		
	comp=Z,3µm,19.0s						
OBKA	**Obir**	**136.50**	**331**	*e*PKPdf	**PKPdf**	**11 23 06.5**	**-1.9**
	comp=Z,14nm,1.3s						
KBA	**Koelnbreinsper**	**136.66**	**332**	*e*PKiKP	**PKPdf**	**11 23 09.7**	**+0.9**
	comp=Z,7.7nm,0.9s						
MEM	**Membach**	**136.69**	**341**	⇑PKiKP	**PKPdf**	**11 23 09.1**	**+0.6**
MYKA	**Terra Mystica**	**136.85**	**331**	*e*PKPdf	**PKPdf**	**11 23 09.0**	**-0.1**
	comp=Z,8.0nm,1.0s						
VISS	**Visnje**	**136.86**	**330**	*i* PKPdf	**PKPdf**	**11 23 09.1**	**0.0**
BOJS	**Bojanci**	**136.87**	**329**	*e*PKPdf	**PKPdf**	**11 23 08.7**	**-0.3**
WATA	**Walderalm**	**137.25**	**334**	*e*PKiKP	**PKPdf**	**11 23 10.9**	**+1.0**
	comp=Z,3.8nm,0.6s						
ABTA	**Abfaltersbach**	**137.28**	**332**	*e*PKiKP	**PKPdf**	**11 23 10.4**	**+0.5**
	comp=Z,11nm,0.7s						
MOTA	**Moosalm**	**137.45**	**334**	*e*PKiKP	**PKPdf**	**11 23 10.7**	**+0.4**
	comp=Z,4.5nm,0.8s						
MOTA				*e*PP	**PP**	**11 25 55.3**	**+0.1**
	comp=Z,14nm,1.3s						
WLF	**Walferdange**	**137.46**	**340**	⇑PKiKP	**PKPdf**	**11 23 12.0**	**+2.0**
RETA	**Reutte**	**137.49**	**334**	*e*PP	PP	11 25 56.7	+1.4
	comp=Z,14nm,1.3s						
SQTA	**Sankt Quirin**	**137.50**	**334**	*e*PKPdf	**PKPdf**	**11 23 08.4**	**-2.0**
	comp=Z,15nm,1.5s						
DOU	**Dourbes**	**137.59**	**342**	⇑PKiKP	**PKPdf**	**11 23 12.3**	**+2.1**
BFO	**Black Forest**	**137.79**	**337**	PFAKE		11 23 20.0	+7.3
BFO				LR	LR		
	comp=Z,105nm,19.0s						
FETA	**Feichten**	**137.86**	**334**	*e*PKPdf	**PKPdf**	**11 23 10.6**	**-0.4**
	comp=Z,14nm,1.1s						
BDFB	**Brasilia**	**137.91**	**128**	PKP	**PKPdf**	**11 23 09.8**	**-2.2**
	comp=Z,2.1nm,0.5s,baz=170,slow=3.3,SNR=2.9						
DAVA	**Damuels**	**138.01**	**335**	*e*pPKPdf	**PKPdf**	**11 23 13.2**	**+1.8**
	comp=Z,14nm,1.2s						
KEST	**Kesra**	**146.86**	**323**	PKPbc	**PKPdf**	**11 23 29.2**	**+2.0**
	comp=Z,56nm,0.9s,baz=307,slow=2.3,SNR=27						
PBRG	**Braganca**	**148.22**	**349**	*e*PKPdf	**PKPdf**	**11 23 31.9**	**+2.6**
PGAV	**Gavieira, Arco**	**148.33**	**351**	*e*PKPdf	**PKPbc**	**11 23 34.4**	**+1.5**
POLO	**Lamas de Olo**	**148.82**	**350**	*e*PKPdf	**PKPbc**	**11 23 34.8**	**+0.6**
MVO	**Moncorvo**	**148.89**	**349**	*e*PKPdf	**PKPbc**	**11 23 33.9**	**-0.5**
PVRL	**Vila Real**	**148.91**	**350**	*e*PKPdf	**PKPdf**	**11 23 32.5**	**+2.1**
PVIS	**Viseu**	**149.48**	**350**	*e*PKPdf	**PKPbc**	**11 23 35.9**	**+0.1**
ESDC	**Sonseca Array**	**149.58**	**343**	PKPbc	**PKPdf**	**11 23 35.0**	**+3.4**
	comp=Z,11nm,1.1s,baz=15,slow=2.9,SNR=17						
ESDC				SKP		11 27 06.2	
	comp=Z,0.2nm,0.3s,baz=15,slow=5.3,SNR=5.1						
MTE	**Manteigas**	**149.73**	**349**	*e*PKPdf	**PKPbc**	**11 23 36.3**	**-0.2**
PAB	**San Pablo**	**149.81**	**344**	*e*PKPdf	**PKPdf**	**11 23 32.4**	**+0.4**
PAB				*e*PKPbc	**PKPbc**	**11 23 37.2**	**+0.5**
PAB				LR	LR		
	comp=Z,3µm,19.0s						
PCBR	**Castelo Branco**	**150.25**	**349**	*e*PKPdf	**PKPbc**	**11 23 37.2**	**-0.5**
PMRV	**Marv??o**	**150.64**	**348**	*e*PKPdf	**PKPbc**	**11 23 38.3**	**-0.3**
PMRV	**Marv??o**	**150.64**	**348**	*e*PKPab	**PKPab**	**11 23 50.7**	**+5.4**
PTOM	**Tomar**	**150.64**	**350**	*e*PKPdf	**PKPbc**	**11 23 39.2**	**+0.6**
PMTG	**Montargil**	**151.14**	**350**	*e*PKPdf	**PKPbc**	**11 23 39.6**	**-0.2**
PESTR	**Estremoz**	**151.22**	**348**	*e*PKPdf	**PKPbc**	**11 23 40.0**	**0.0**
CMLA	**Cha da Macela**	**151.33**	**18**	PFAKE		11 23 50.0	+1.8
CMLA				LR	LR		
	comp=Z,2µm,21.0s						
PMAFR	**Mafra**	**151.43**	**351**	*e*PKPdf	**PKPbc**	**11 23 40.7**	**+0.2**
PBEJ	**Beja**	**152.08**	**348**	*e*PKPdf	**PKiKP**	**11 23 43.7**	**+1.4**
PBEJ	**Beja**	**152.08**	**348**	*e*PKPab	**PKPab**	**11 23 54.1**	**+2.8**
SHEL	**Horse Pasture**	**152.09**	**199**	PFAKE		11 23 50.0	-1.9
SHEL				LR	LR		
	comp=Z,912nm,19.0s						
PNCL	**Nicolau / Gran**	**152.13**	**350**	*e*PKPdf	**PKPdf**	**11 23 39.8**	**+4.3**
PNCL	**Nicolau / Gran**	**152.13**	**350**	*e*PKPab	**PKPab**	**11 23 52.6**	**+1.1**
MESJ	**Messejana**	**152.33**	**349**	*e*PKPdf	**PKPdf**	**11 23 34.6**	**-1.2**
MESJ	**Messejana**	**152.33**	**349**	*e*PKPdf	**PKPbc**	**11 23 43.0**	**+0.4**
ASCN	**Ascension**	**161.51**	**181**	PFAKE		11 24 00.0	+12
ASCN				LR	LR		
	comp=Z,10µm,20.0s						
TORD	**Torodi Ar. Bea**	**163.76**	**280**	PKP	**PKPdf**	**11 23 48.2**	**-2.1**
	comp=Z,6.2nm,1.1s,baz=87,slow=1.4,SNR=24						
TORD				PKPab	**PKPab**	**11 24 41.2**	**-1.3**
	comp=Z,9.8nm,1.0s,baz=56,slow=4.9,SNR=11						
TORD				PP	**PP**	**11 28 31.9**	**+3.6**
	comp=Z,3.2nm,1.2s,baz=139,slow=7.0,SNR=3.9						
KIC	**Kosan Boka**	**169.25**	**247**	*e*PKIKP	**PKPdf**	**11 23 53.5**	**-1.1**
	comp=Z,106nm,1.5s						
LIC	**Lamto**	**169.46**	**246**	*e*PKIKP	**PKPdf**	**11 23 53.6**	**-1.2**
	comp=Z,103nm,2.0s						
DBIC	**Dimbokro**	**169.48**	**249**	PKP	**PKPdf**	**11 23 53.1**	**-1.7**
	comp=Z,18nm,1.2s,baz=247,slow=3.2,SNR=5.2						
TIC	**Toumodi**	**169.62**	**248**	*e*PKIKP	**PKPdf**	**11 23 53.7**	**-1.2**
SACV	**Santiago Islan**	**170.33**	**63**	PFAKE		11 24 10.0	+15
SACV				LR	LR		
	comp=Z,1µm,22.0s						

IDC ***06*** *11:12:53.6±1.3, 11°.07S×165°.61E, h0^{km}, mb4.0/6, mb1 4.3/8, mb1mx3.9/47, mbtmp4.2/8, ML4.6/2, Error ellipse: s-maj=39.3km s-min=22.6km az=135.0*

ISCJB ***06*** *11:12:56.2±1.1, 11°.2S±0°.1×165°.6E±0°.1, h30^{km}, mb3.9/5, Error ellipse: s-maj=19.5km s-min=17.7km az=166.0*

ISC 06 11:12:58.1±1.1**, 11°.1S**±0°.1×**165°.6E**±0°.1**, h30^{km}, n8, σ1^{s}.18**/8**, mb4.0**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.81**	**286**	Pn	**Pn**	**11 14 22.2**	**0.0**
	23nm,0.3s,baz=203,slow=13,SNR=3.8						
DZM	**Mont Dzumac**	**10.97**	**176**	Pn	**Pn**	**11 15 33.1**	**0.0**
	2.7nm,0.3s,baz=39,slow=8.0,SNR=11						
CTA	**Charters Tower**	**20.67**	**242**	P	**P**	**11 17 36.8**	**+1.1**
	4.9nm,0.9s,baz=50,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**30.33**	**223**	P	**P**	**11 19 07.6**	**+0.4**
	2.0nm,0.7s,baz=3.7,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	**31.35**	**250**	P	**P**	**11 19 15.4**	**-0.9**
	2.7nm,0.7s,baz=83,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**32.66**	**243**	P	**P**	**11 19 26.8**	**-1.0**
	1.3nm,0.6s,baz=64,slow=10,SNR=16						
ILAR	**Eielson Array**	**83.58**	**19**	P	**P**	**11 25 24.5**	**+1.4**
	0.5nm,0.6s,baz=236,slow=4.5,SNR=8.3						
YKA	**Yellowknife Ar**	**95.06**	**27**	P	**P**	**11 26 16.4**	**-1.3**
	0.2nm,0.8s,baz=255,slow=3.8,SNR=3.1						

ISCJB ***06*** *11:14:59.5±0.4, 10°.67S±0°.05×165°.22E±0°.07, h10^{km}, mb4.4/29, Error ellipse: s-maj=9.3km s-min=6.8km az=1.6*

NEIC ***06*** *11:15:01.5±0.4, 10°.61S×165°.19E, h10^{km}, mb4.6/19, Error ellipse: s-maj=9.7km s-min=6.6km az=98.0*

IDC ***06*** *11:15:07.8±3.3, 10°.74S×165°.19E, h59^{km}±28^{km}, mb3.9/14, mb1 4.1/16, mb1mx3.9/48, mbtmp4.2/16, ML4.7/2, Error ellipse: s-maj=21.4km s-min=18.0km az=100.0*

ISC 06 11:15:01.3±0.5**, 10°.61S**±0°.07×**165°.34E**±0°.08**, h10^{km}, n58, σ1^{s}.35**/57**, mb4.3**/29**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.44**	**282**	*e*Pn	**Pn**	**11 16 23.5**	**+1.0**
HNR				*e*Sn	**Sn**	**11 17 26.6**	**+1.4**
HNR				*e*Sn	**Sn**	**11 17 27.1**	**+1.9**
HNR	**Honiara**	**5.44**	**282**	P	**Pn**	**11 16 24.5**	**+2.0**
	48nm,0.3s,baz=358,slow=5.4,SNR=8.8						
HNR				S	**Sn**	**11 17 26.6**	**+1.4**
	53nm,0.3s,baz=64,slow=23,SNR=6.5						
DZM	**Mont Dzumac**	**11.45**	**175**	*e*Pn	**Pn**	**11 17 47.3**	**+2.2**
DZM	**Mont Dzumac**	**11.45**	**175**	P	**Pn**	**11 17 46.4**	**+1.4**
	2.7nm,0.3s,baz=299,slow=15,SNR=8.4						
OUENC	**Ouen Island, N**	**11.83**	**173**	*e*Pn	**Pn**	**11 17 52.2**	**+2.0**
PINNC	**Pines Island,**	**12.11**	**171**	*e*Pn	**Pn**	**11 17 54.0**	**0.0**
EIDS	**Eidsvold**	**19.96**	**221**	*e*P	**P**	**11 19 32.9**	**-0.8**
	18nm,0.8s						
CTA	**Charters Tower**	**20.66**	**241**	P	Pn	11 19 41.6	-2.1
	4.7nm,0.6s,baz=67,slow=12,SNR=7.1						
CTAO	**Charters Tower**	**20.66**	**241**	*e*P	**P**	**11 19 41.3**	**-0.2**
	29nm,1.3s						
LHI	**Lord Howe Isla**	**21.61**	**195**	*e*P	**P**	**11 19 51.2**	**-0.3**
	242nm,1.4s						
COEN	**Coen**	**21.91**	**259**	*e*P	**P**	**11 19 52.8**	**-2.1**
	8.8nm,0.7s						
ARMA	**Armidale**	**23.48**	**211**	*e*P	**P**	**11 20 08.4**	**-3.0**
	15nm,1.3s						
CAN	**Canberra**	**28.75**	**209**	*e*P	P	11 20 53.4	-5.8
	27nm,1.3s						
H11S2	**WAKE ISLAND Hy**	**28.95**	**3**	T	T	11 51 27.2	
	baz=184,slow=76,SNR=8.9						
H11S3	**WAKE ISLAND Hy**	**28.95**	**3**	T	T	11 51 18.3	
	baz=184,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**28.96**	**3**	T	T	11 51 18.4	
	baz=184,slow=76,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**30.17**	**3**	T	T	11 52 59.7	
	baz=182,slow=76,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	**30.17**	**3**	T	T	11 52 50.7	
	baz=182,slow=76,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**30.19**	**3**	T	T	11 53 01.7	
	baz=182,slow=76,SNR=4.4						
STKA	**Stephens Creek**	**30.49**	**222**	*e*P	**P**	**11 21 12.9**	**-1.7**
	4.4nm,1.4s						
STKA	**Stephens Creek**	**30.49**	**222**	P	**P**	**11 21 15.2**	**+0.6**
	5.3nm,0.9s,baz=67,slow=12,SNR=8.0						
WRAB	**Tennant Creek**	**31.25**	**249**	*e*P	**P**	**11 21 20.6**	**-0.9**
	7.7nm,1.3s						
WB2	**Warramunga Arr**	**31.25**	**249**	*e*P	**P**	**11 21 20.3**	**-1.2**
	3.8nm,0.9s						
WR1	**Warramunga Arr**	**31.26**	**249**	*e*P	**P**	**11 21 19.3**	**-2.3**
	4.0nm,0.9s						
WR1				*e*PcP	**PcP**	**11 24 15.5**	**-0.7**
WRA	**Warramunga Arr**	**31.26**	**249**	P	**P**	**11 21 19.3**	**-2.4**
	2.0nm,0.8s,baz=75,slow=7.3,SNR=9.5						
WRA				PcP	**PcP**	**11 24 15.5**	**-0.7**
	0.5nm,0.8s,baz=61,slow=1.4,SNR=3.3						
BFZ	**Birch Farm**	**31.47**	**164**	*e*P	**P**	**11 21 24.2**	**+1.1**
	73nm,1.3s						
TOO	**Toolangi**	**32.24**	**210**	*e*P	**P**	**11 21 30.5**	**+0.5**
	9.9nm,1.4s						
AS01	**Alice Springs**	**32.59**	**242**	*e*P	**P**	**11 21 32.2**	**-1.1**
AS31	**Alice Springs**	**32.63**	**242**	*e*P	**P**	**11 21 31.8**	**-1.9**
	0.9nm,0.7s						
AS31				*e*PcP	**PcP**	**11 24 19.0**	**-0.9**
ASAR	**Alice Springs**	**32.64**	**242**	P	**P**	**11 21 30.9**	**-2.8**
	2.0nm,0.6s,baz=63,slow=10,SNR=11						
ASAR				PcP	**PcP**	**11 24 19.0**	**-0.9**
	0.6nm,0.7s,baz=57,slow=2.1,SNR=4.6						
RPZ	**Rata Peaks**	**33.35**	**172**	*e*P	**P**	**11 21 39.3**	**-0.4**
	19nm,1.1s						
MTN	**Manton Dam**	**33.55**	**263**	*e*P	**P**	**11 21 39.8**	**-2.0**
	31nm,1.3s						
BBOO	**Buckleboo**	**34.84**	**226**	*e*P	**P**	**11 21 52.3**	**-0.4**
	20nm,0.6s						
MJAR	**Matsushiro Arr**	**53.40**	**333**	P	**P**	**11 24 21.3**	**0.0**
	1.0nm,0.6s,baz=181,slow=7.6,SNR=3.7						
MAJO	**Matsushiro**	**53.40**	**333**	*e*P	**P**	**11 24 21.3**	**0.0**
PETK	**Petropavlovsk-**	**63.80**	**355**	P	**P**	**11 25 33.6**	**+0.1**
	6.9nm,1.2s,baz=188,slow=9.0,SNR=4.2						
PEA1	**Petropavlovsk-**	**63.80**	**355**	*e*P	**P**	**11 25 33.6**	**+0.1**
KLR	**Kul'dur**	**66.50**	**337**	P	**P**	**11 25 51.5**	**+0.3**
	3.6nm,1.1s,baz=90,slow=5.9,SNR=3.9						
ENH	**Enshi**	**67.31**	**309**	*e*P	**P**	**11 25 55.4**	**-1.4**
	7.4nm,0.8s						
CM01	**Chiang Mai Arr**	**71.55**	**294**	*e*P	**P**	**11 26 23.6**	**+0.5**
CM31	**Chiang Mai Arr**	**71.57**	**294**	*e*P	**P**	**11 26 23.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**71.57**	**294**	P	**P**	**11 26 23.8**	**+0.4**
	1.8nm,0.6s,baz=124,slow=4.8,SNR=10.0						
ULN	**Ulaanbaatar**	**77.72**	**324**	*e*P	**P**	**11 26 58.9**	**+0.4**
	5.0nm,0.8s						
SONA0	**Songino Array**	**78.08**	**324**	*e*P	**P**	**11 27 01.3**	**+0.8**
SONM	**Songino Array**	**78.08**	**324**	P	**P**	**11 27 01.3**	**+0.8**
	2.0nm,0.7s,baz=136,slow=6.5,SNR=11						
SONA1	**Songino Array**	**78.08**	**324**	*e*P	**P**	**11 27 00.4**	**-0.2**
BILL	**Bilibino**	**78.45**	**0**	*e*P	**P**	**11 27 02.9**	**+0.9**
	10nm,1.3s						
ILAR	**Eielson Array**	**83.23**	**19**	P	**P**	**11 27 28.8**	**+1.1**
	0.9nm,0.6s,baz=246,slow=4.9,SNR=10						
ILB	**Eielson Array**	**83.23**	**19**	*e*P	**P**	**11 27 28.5**	**+0.9**
NV01	**Mina Array Sit**	**86.05**	**50**	*e*P	**P**	**11 27 42.6**	**-0.1**
NVAR	**Mina Array Bea**	**86.05**	**50**	P	**P**	**11 27 45.1**	**+2.3**
	0.3nm,0.5s,baz=238,slow=5.1,SNR=2.9						
MK32	**Makanchi Array**	**92.93**	**317**	*e*P	**P**	**11 28 13.8**	**-1.0**
MKAR	**Makanchi Array**	**92.93**	**317**	P	**P**	**11 28 13.8**	**-1.0**
	0.9nm,0.7s,baz=96,slow=2.9,SNR=3.7						
ZALV	**Zalesovo Beam**	**92.97**	**324**	*e*P	**P**	**11 28 13.2**	**-1.6**
ZALV	**Zalesovo Beam**	**92.97**	**324**	P	**P**	**11 28 13.6**	**-1.2**
	0.3nm,0.4s,baz=130,slow=2.3,SNR=4.1						
ZAA1	**Zalesovo Array**	**92.97**	**324**	*e*P	**P**	**11 28 13.6**	**-1.2**
YKA	**Yellowknife Ar**	**94.77**	**27**	P	**P**	**11 28 21.5**	**-1.3**
	0.2nm,0.7s,baz=260,slow=4.6,SNR=3.9						
YKB5	**Yellowknife Ar**	**94.77**	**27**	*e*P	**P**	**11 28 21.3**	**-1.5**

SOME ***06*** *11:18:33.1, 42°.60N×79°.60E, h15^{km}*

KRNET ***06*** *11:18:33.5±0.1, 42°.61N×79°.65E, h19^{km}, mb3.6*

NNC ***06*** *11:18:33.3±1.4, 42°.61N×79°.62E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=9.1km s-min=5.2km az=142.0*

ISCJB ***06*** *11:18:35.2±0.8, 42°.65N±0°.04×79°.69E±0°.06, h10^{km}, Error ellipse: s-maj=7.1km s-min=4.3km az=44.7*

ISC 06 11:18:33.7±1.3**, 42°.63N**±0°.05×**79°.66E**±0°.05**, h10^{km}, n46, σ1^{s}.47**/86**, 26C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.70**	**318**	P	**Pg**	**11 18 46.9**	**-0.3**
	104nm,0.1s						
UZB				S	**Sb**	**11 18 56.8**	**-1.0**
	292nm,0.3s						
UZB	**Uzynbulak**	**0.70**	**318**	*e*P	**Pg**	**11 18 46.9**	**-0.3**
	baz=19						
UZB				*e*S	**Sb**	**11 18 56.8**	**-1.0**
	baz=19						
UZB	**Uzynbulak**	**0.70**	**318**	*e*P	**Pg**	**11 18 46.9**	**-0.3**
	104nm,0.1s						
UZB				*e*S	**Sb**	**11 18 56.9**	**-1.0**
	292nm,0.3s						
PDGK	**Podgornoye**	**0.71**	**350**	P	**Pg**	**11 18 47.2**	**-0.2**
	10nm,0.1s						
PDGK				S	**Sb**	**11 18 57.5**	**-0.6**
	108nm,0.2s						
PDGK	**Podgornoye**	**0.71**	**350**	⇑P	**Pg**	**11 18 47.2**	**-0.2**
	7.0nm,0.4s						
PDGK				⇑S	**Sb**	**11 18 57.2**	**-0.8**
	46nm,0.3s						
PDGK	**Podgornoye**	**0.71**	**350**	⇑*i*P	**Pg**	**11 18 47.2**	**-0.2**

	baz=51						
PDGK				⇑*i*S	**Sb**	**11 18 57.5**	**-0.6**
	baz=51						
PRZ	**Przheval'sk**	**0.95**	**261**	⇑*i*P	**Pg**	**11 18 51.0**	**-0.9**
	baz=62						
PRZ				⇑*i*S	**Sg**	**11 19 03.6**	**-0.7**
	baz=62						
SATY	**Saty**	**1.02**	**295**	P	**Pg**	**11 18 52.6**	**-0.7**
	40nm,0.2s						
SATY				S	**Sb**	**11 19 06.3**	**-0.7**
	119nm,0.1s						
SATY	**Saty**	**1.02**	**295**	*e*P	**Pg**	**11 18 52.6**	**-0.7**
	40nm,0.2s						
SATY				*e*S	**Sb**	**11 19 06.3**	**-0.7**
	119nm,0.1s						
DJR	**Jarkent**	**1.70**	**3**	P	**Pg**	**11 19 05.3**	**-1.0**
	15nm,0.3s						
DJR				S	**Sg**	**11 19 28.6**	**+0.3**
	59nm,0.3s						
DJR	**Jarkent**	**1.70**	**3**	*e*P	**Pg**	**11 19 05.3**	**-1.0**
	15nm,0.3s						
DJR				*e*S	**Sg**	**11 19 28.6**	**+0.3**
	59nm,0.3s						
KDJ	**Kajisay**	**1.91**	**256**	⇑*i*P	**Pb**	**11 19 08.3**	**-0.4**
	baz=56						
KDJ				⇑*i*S	**Sb**	**11 19 33.3**	**+0.6**
	baz=56						
KOTS	**Kotyrbulak**	**1.97**	**289**	Pg	**Pb**	**11 19 08.9**	**-0.8**
	31nm,0.1s						
KOTS				Lg	Lg	11 19 34.8	
	134nm,0.4s						
KOTS	**Kotyrbulak**	**1.97**	**289**	*e*P	**Pb**	**11 19 08.9**	**-0.8**
	baz=89						
KOTS				*e*S	**Sb**	**11 19 34.8**	**+0.4**
	baz=89						
KOTS	**Kotyrbulak**	**1.97**	**289**	*e*P	**Pb**	**11 19 08.9**	**-0.8**
	31nm,0.1s						
KOTS				*e*S	**Sb**	**11 19 34.8**	**+0.4**
	134nm,0.4s						
MDOK	**Medeo**	**1.99**	**286**	Pg	**Pb**	**11 19 09.4**	**-0.7**
	27nm,0.5s						
MDOK				⇑Lg	Lg	11 19 36.2	
	31nm,0.6s						
MDOK	**Medeo**	**1.99**	**286**	*e*P	**Pb**	**11 19 09.0**	**-1.2**
	baz=87						
MDOK				*e*S	**Sb**	**11 19 35.4**	**+0.3**
	baz=87						
MDOK	**Medeo**	**1.99**	**286**	*e*P	**Pb**	**11 19 09.0**	**-1.2**
	29nm,0.3s						
MDOK				*e*S	**Sb**	**11 19 35.4**	**+0.3**
	50nm,0.5s						
TNSS	**Tian-Shan**	**2.04**	**282**	*e*P	**Pb**	**11 19 09.6**	**-1.5**
	baz=83						
TNSS				*e*S	**Sb**	**11 19 36.2**	**-0.5**
	baz=83						
TNSS	**Tian-Shan**	**2.04**	**282**	*e*P	**Pb**	**11 19 09.6**	**-1.5**
	34nm,0.3s						
TNSS				*e*S	**Sb**	**11 19 36.2**	**-0.5**
	60nm,0.3s						
KNDC	**Almaty**	**2.07**	**287**	⇓Pg	**Pb**	**11 19 11.3**	**-0.1**
	13nm,0.2s						
KNDC				⇓Lg	Lg	11 19 41.2	
	59nm,0.4s						
CHKK	**Chushkaly**	**2.31**	**303**	*e*P	**Pb**	**11 19 14.4**	**-1.0**
	baz=4.0						
CHKK				*e*S	**Sb**	**11 19 44.1**	**+0.2**
	baz=4.0						
CHKK	**Chushkaly**	**2.31**	**303**	*e*P	**Pb**	**11 19 14.4**	**-1.0**
	7.5nm,0.3s						
CHKK				*e*S	**Sb**	**11 19 44.1**	**+0.2**
	75nm,0.4s						
MTBS	**Maitube**	**2.43**	**283**	*e*P	**Pb**	**11 19 16.8**	**-0.7**
	baz=83						
MTBS				*e*S	**Sb**	**11 19 48.2**	**+0.6**
	baz=83						
MTBS	**Maitube**	**2.43**	**283**	*e*P	**Pb**	**11 19 16.8**	**-0.7**
	57nm,0.3s						
MTBS				*e*S	**Sb**	**11 19 48.2**	**+0.6**
	67nm,0.6s						
KTBS	**Karatobe**	**2.43**	**297**	Pg	**Pb**	**11 19 16.4**	**-1.2**
	18nm,0.3s						
KTBS				Lg	Lg	11 19 47.5	
	78nm,0.3s						
KTBS	**Karatobe**	**2.43**	**297**	*e*P	**Pb**	**11 19 16.4**	**-1.2**
	baz=97						
KTBS				*e*S	**Sb**	**11 19 47.5**	**-0.2**
	baz=97						
KTBS	**Karatobe**	**2.43**	**297**	*e*P	**Pb**	**11 19 16.4**	**-1.2**
	18nm,0.3s						
KTBS				*e*S	**Sb**	**11 19 47.5**	**-0.2**
	78nm,0.3s						
ULHL	**Ulahol**	**2.56**	**262**	⇑*i*P	**Pb**	**11 19 17.8**	**-2.1**
	baz=63						
ULHL				⇑*i*S	**Sb**	**11 19 50.2**	**-1.3**
	baz=63						
KAPS	**Kapalarasan**	**2.66**	**355**	Pg	**Pb**	**11 19 21.8**	**+0.4**
	5.2nm,0.2s						
KAPS				Lg	Lg	11 19 56.6	
	77nm,0.5s						
KAPS	**Kapalarasan**	**2.66**	**355**	*e*P	**Pb**	**11 19 21.8**	**+0.4**
	5.2nm,0.2s						
KAPS				*e*S	**Sg**	**11 19 56.6**	**-2.5**
	77nm,0.5s						
KUU	**Kurty**	**2.74**	**299**	*e*P	**Pb**	**11 19 22.3**	**-0.4**
	baz=99						
KUU				*e*S	**Sg**	**11 19 58.2**	**-3.3**
	baz=99						
KUU	**Kurty**	**2.74**	**299**	*e*P	**Pb**	**11 19 22.3**	**-0.4**
	6.6nm,0.5s						
KUU				*e*S	**Sg**	**11 19 58.3**	**-3.3**
	36nm,0.5s						
KST	**Kastek**	**2.75**	**280**	*e*P	**Pb**	**11 19 22.1**	**-1.0**
	baz=80						
KST				*e*S	**Sb**	**11 19 57.7**	**+0.8**
	baz=80						
KST	**Kastek**	**2.75**	**280**	*e*P	**Pb**	**11 19 22.1**	**-1.0**
	33nm,0.2s						
KST				*e*S	**Sb**	**11 19 57.7**	**+0.8**
	37nm,0.6s						
BOOM	**Boomskoye usch**	**2.75**	**268**	⇑*i*P	**Pb**	**11 19 20.5**	**-2.6**
	baz=69						
BOOM				⇑*i*S	**Sb**	**11 19 54.5**	**-2.5**
	baz=69						
DGS	**Degeres**	**2.92**	**283**	Pg	**Pb**	**11 19 25.1**	**-0.8**
	25nm,0.5s						
DGS				Lg	Lg	11 20 02.2	
	85nm,0.5s						
DGS	**Degeres**	**2.92**	**283**	*e*P	**Pb**	**11 19 25.1**	**-0.8**
	baz=84						
DGS				*e*S	**Sb**	**11 20 02.1**	**+0.4**
	baz=84						
DGS	**Degeres**	**2.92**	**283**	*e*P	**Pb**	**11 19 25.1**	**-0.8**
	25nm,0.5s						
DGS				*e*S	**Sb**	**11 20 02.2**	**+0.4**
	85nm,0.5s						
NRN	**Naryn**	**2.98**	**248**	⇑*i*P	**Pn**	**11 19 23.7**	**+2.4**
	baz=48						
NRN				⇑*i*S	**Sb**	**11 20 00.5**	**-3.2**
	baz=48						
TKM2	**Tokmak 2**	**3.01**	**277**	⇑*i*P	**Pn**	**11 19 24.1**	**+2.5**
	baz=77						
TKM2				⇑*i*S	**Sb**	**11 20 00.9**	**-3.5**
	baz=77						
KZA	**Kyzart**	**3.32**	**262**	⇑*i*P	**Pn**	**11 19 28.1**	**+2.0**
	baz=62						
KZA				⇑*i*S	**Sn**	**11 20 08.4**	**+2.6**
	baz=62						
KBK	**Karagaybulak**	**3.48**	**272**	⇑*i*P	**Pn**	**11 19 30.3**	**+2.2**
	baz=72						
KBK				⇑*i*S	**Sn**	**11 20 12.0**	**+2.6**
	baz=72						
CHMS	**Chumysh**	**3.63**	**277**	⇑*i*P	**Pn**	**11 19 32.5**	**+2.5**
	baz=78						
CHMS				⇑*i*S	**Sn**	**11 20 15.4**	**+2.4**
	baz=78						
AAK	**Ala-Archa**	**3.81**	**272**	⇑*e*P	**Pn**	**11 19 35.3**	**+2.7**
	baz=72						
AAK				⇑*i*S	**Sn**	**11 20 20.2**	**+2.6**
	baz=72						
MK31	**Makanchi Array**	**4.56**	**23**	⇓Pn	**Pn**	**11 19 44.6**	**+1.8**
	0.6nm,0.2s,baz=196,slow=15,SNR=43						
MK31				⇑Sn	**Sn**	**11 20 32.8**	**-3.0**
	1.1nm,0.4s,baz=194,slow=29,SNR=4.9						

IDC 06 11:20:06.9±2.3, 10°.85S×165°.38E, h0^{km}, mb3.8/4, mb1 4.1/5, mb1mx3.7/44, mbtmp4.0/5, ML4.9/1, Error ellipse: s-maj=70.4km s-min=32.0km az=141.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.53**	**284**	Pn	Pn	11 21 32.2	+1.6
	38nm,0.3s,baz=132,slow=7.3,SNR=5.9						
DZM	**Mont Dzumac**	**11.21**	**175**	Pn	Pn	11 22 51.6	+3.0
	1.2nm,0.3s,baz=307,slow=18,SNR=6.4						
CTA	**Charters Tower**	**20.57**	**241**	P	Pn	11 24 49.0	-0.7
	6.4nm,1.0s,baz=60,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**31.21**	**249**	P	P	11 26 27.9	-0.4
	1.7nm,1.0s,baz=78,slow=8.6,SNR=4.2						
ASAR	**Alice Springs**	**32.56**	**243**	P	P	11 26 39.1	-1.0
	0.7nm,0.5s,baz=64,slow=10,SNR=17						
ILAR	**Eielson Array**	**83.44**	**19**	P	P	11 32 36.3	+0.3
	0.3nm,0.7s,baz=237,slow=5.0,SNR=3.6						

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*ISCJB **06** 11:22:12.0±0.3, 11°.43S±0°.05×165°.00E±0°.06, h10^{km}, mb4.4/29, Error ellipse: s-maj=8.1km s-min=7.1km az=151.8*

*IDC **06** 11:22:12.2±0.9, 11°.39S×165°.06E, h0^{km}, mb4.3/17, mb1 4.4/19, mb1mx4.3/43, mbtmp4.3/19, ML4.6/2, Error ellipse: s-maj=25.6km s-min=16.8km az=125.0*

*NEIC **06** 11:22:13.6±0.3, 11°.36S×165°.05E, h10^{km}, mb4.7/10, Error ellipse: s-maj=7.3km s-min=5.8km az=100.0*

ISC 06 11:22:13.7±0.5, 11°.36S±0°.09×165°.06E±0°.08, h10^{km}, n61, σ0ˢ.95/64, mb4.5/29, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.38**	**290**	*e*Pn	**Pn**	**11 23 34.7**	**+0.7**
HNR				*e*Sn	**Sn**	**11 24 35.8**	**-0.3**
HNR				*e*Sn	**Sn**	**11 24 35.9**	**-0.2**
HNR	**Honiara**	**5.38**	**290**	Pn	**Pn**	**11 23 34.9**	**+0.8**
	39nm,0.3s,baz=156,slow=6.5,SNR=6.1						
HNR				Sn	**Sn**	**11 24 35.8**	**-0.3**
	26nm,0.3s,baz=225,slow=20,SNR=3.4						
MARNC	**Mare, Loyalty**	**10.46**	**165**	*e*Pn	**Pn**	**11 24 44.1**	**+0.4**
DZM	**Mont Dzumac**	**10.73**	**173**	*e*Pn	**Pn**	**11 24 47.2**	**-0.4**
DZM	**Mont Dzumac**	**10.73**	**173**	Pn	**Pn**	**11 24 47.5**	**-0.1**
	2.3nm,0.3s,baz=286,slow=11,SNR=13						
PINNC	**Pines Island,**	**11.42**	**169**	*e*Pn	**Pn**	**11 24 57.3**	**+0.3**
CTA	**Charters Tower**	**20.05**	**242**	P	Pn	11 26 48.8	-0.3
	15nm,1.0s,baz=67,slow=15,SNR=6.5						
CTAO	**Charters Tower**	**20.05**	**242**	*e*P	Pn	11 26 47.7	-1.4
	22nm,1.0s						
COEN	**Coen**	**21.50**	**261**	*e*P	**P**	**11 27 03.5**	**+0.5**
	20nm,0.8s						
CAN	**Canberra**	**27.95**	**209**	*e*P	**P**	**11 28 04.6**	**+0.1**
	25nm,1.3s						
STKA	**Stephens Creek**	**29.75**	**223**	*e*P	**P**	**11 28 20.6**	**+0.2**
	1.0nm,0.9s						
STKA	**Stephens Creek**	**29.75**	**223**	P	**P**	**11 28 20.8**	**+0.3**
	3.0nm,0.7s,baz=26,slow=5.9,SNR=6.8						
WRAB	**Tennant Creek**	**30.73**	**250**	*e*P	**P**	**11 28 29.3**	**+0.1**
	8.7nm,0.8s						
WB2	**Warramunga Arr**	**30.73**	**250**	*e*P	**P**	**11 28 29.3**	**0.0**
WR1	**Warramunga Arr**	**30.74**	**250**	*e*P	**P**	**11 28 28.4**	**-1.0**
	47nm,1.6s						
WRA	**Warramunga Arr**	**30.74**	**250**	P	**P**	**11 28 28.4**	**-1.0**
	5.1nm,0.7s,baz=81,slow=9.0,SNR=35						
AS01	**Alice Springs**	**32.00**	**243**	*e*P	**P**	**11 28 39.3**	**-1.2**
AS31	**Alice Springs**	**32.04**	**243**	*e*P	**P**	**11 28 39.0**	**-1.9**
	1.7nm,0.8s						
ASAR	**Alice Springs**	**32.05**	**243**	P	**P**	**11 28 39.6**	**-1.3**
	4.4nm,0.8s,baz=70,slow=9.6,SNR=28						
MJAR	**Matsushiro Arr**	**53.94**	**333**	P	**P**	**11 31 36.3**	**-1.4**
	1.8nm,0.7s,baz=170,slow=7.8,SNR=5.3						
MAJO	**Matsushiro**	**53.95**	**333**	*e*P	**P**	**11 31 36.3**	**-1.4**
ASAJ	**Asahikawa**	**58.87**	**341**	P	**P**	**11 32 12.9**	**+0.2**
	4.4nm,0.8s,baz=180,slow=8.1,SNR=5.1						
KSRS	**Korea Array**	**59.76**	**326**	P	**P**	**11 32 19.4**	**+0.5**
	1.9nm,0.8s,baz=141,slow=7.2,SNR=5.6						
KS15	**Wonju Array Si**	**59.77**	**326**	*e*P	**P**	**11 32 18.9**	**-0.2**
KSAR	**Wonju Array Be**	**59.77**	**326**	P	**P**	**11 32 19.4**	**+0.4**
USRK	**Ussuriysk Ar.**	**62.93**	**334**	P	**P**	**11 32 41.6**	**+1.3**
	3.0nm,0.9s,baz=123,slow=7.0,SNR=6.2						
KLR	**Kul'dur**	**67.08**	**337**	P	**P**	**11 33 08.1**	**+0.9**
	1.5nm,0.6s,baz=75,slow=4.1,SNR=5.4						
ENH	**Enshi**	**67.57**	**309**	*e*P	**P**	**11 33 10.0**	**-0.8**
	14nm,0.9s						
NONG	**Nongkai**	**67.73**	**295**	P	**P**	**11 33 13.0**	**+1.0**
	0.2nm,1.3s						
PBKT	**Sadao Pong**	**69.17**	**293**	*e*P	**P**	**11 33 20.9**	**-0.1**
	2.8nm,0.7s						
PBKT	**Sadao Pong**	**69.17**	**293**	P	**P**	**11 33 23.3**	**+2.3**
CM01	**Chiang Mai Arr**	**71.59**	**294**	*e*P	**P**	**11 33 35.0**	**-0.8**
CM31	**Chiang Mai Arr**	**71.62**	**294**	*e*P	**P**	**11 33 36.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**71.62**	**294**	P	**P**	**11 33 36.8**	**+0.8**
	1.3nm,0.4s,baz=118,slow=4.5,SNR=13						
CMMT	**Chiang Mai**	**71.73**	**294**	P	**P**	**11 33 38.9**	**+2.2**
	4.7nm,1.4s						
CHTO	**Chiang Mai**	**71.73**	**294**	*e*P	**P**	**11 33 36.4**	**-0.3**
	13nm,1.6s						
CHTO	**Chiang Mai**	**71.73**	**294**	P	**P**	**11 33 39.0**	**+2.3**
	20nm,1.4s						
SONA0	**Songino Array**	**78.52**	**324**	*e*P	**P**	**11 34 16.1**	**+0.7**
SONM	**Songino Array**	**78.52**	**324**	P	**P**	**11 34 16.1**	**+0.7**
	1.8nm,0.8s,baz=142,slow=6.7,SNR=12						
QSPA	**South Pole Qui**	**78.64**	**180**	*e*P	**P**	**11 34 16.1**	**+0.3**
	15nm,1.1s						
HDA	**Harding Lake**	**83.76**	**19**	*e*P	**P**	**11 34 42.6**	**-0.1**
	13nm,1.4s						
ILAR	**Eielson Array**	**84.03**	**19**	P	**P**	**11 34 44.0**	**-0.1**
	1.8nm,0.8s,baz=231,slow=5.0,SNR=21						
ILB	**Eielson Array**	**84.03**	**19**	*e*P	**P**	**11 34 42.9**	**-1.2**
NV01	**Mina Array Sit**	**86.75**	**50**	*e*P	**P**	**11 34 57.9**	**-0.7**
NVAR	**Mina Array Bea**	**86.75**	**50**	P	**P**	**11 34 58.4**	**-0.2**
	1.0nm,0.9s,baz=227,slow=4.8,SNR=4.1						
MK01	**Makanchi Array**	**93.28**	**317**	*e*P	**P**	**11 35 28.8**	**0.0**
MK31	**Makanchi Array**	**93.29**	**317**	*e*P	**P**	**11 35 28.9**	**0.0**
MK32	**Makanchi Array**	**93.29**	**317**	*e*P	**P**	**11 35 29.1**	**+0.3**
MKAR	**Makanchi Array**	**93.29**	**317**	P	**P**	**11 35 29.1**	**+0.3**
	4.0nm,0.8s,baz=98,slow=6.1,SNR=18						
ZALV	**Zalesovo Beam**	**93.42**	**324**	*e*P	**P**	**11 35 28.2**	**-1.0**
ZALV	**Zalesovo Beam**	**93.42**	**324**	P	**P**	**11 35 28.9**	**-0.3**
	2.3nm,0.7s,baz=114,slow=3.6,SNR=10						
ZAA1	**Zalesovo Array**	**93.42**	**324**	*e*P	**P**	**11 35 28.9**	**-0.3**
MAKZ	**Makanchi**	**93.50**	**317**	*e*P	**P**	**11 35 29.9**	**0.0**
	9.1nm,1.0s						
YKA	**Yellowknife Ar**	**95.56**	**27**	P	**P**	**11 35 37.4**	**-1.5**
	0.4nm,0.7s,baz=260,slow=4.6,SNR=6.1						
YKB5	**Yellowknife Ar**	**95.56**	**27**	*e*P	**P**	**11 35 37.4**	**-1.5**
LTX	**Lajitas**	**96.58**	**61**	*e*P	**P**	**11 35 46.2**	**+1.8**
TXAR	**Lajitas Array**	**96.58**	**61**	P	**P**	**11 35 46.2**	**+1.8**
	0.2nm,0.8s,baz=248,slow=4.8,SNR=2.6						
ESDC	**Sonseca Array**	**150.17**	**343**	PKPab	**PKPab**	**11 42 11.4**	**+0.2**
	1.1nm,0.5s,baz=16,slow=4.3,SNR=6.4						
TOA0	**Torodi Ar. Sit**	**163.64**	**278**	*e*PKPdf	**PKPdf**	**11 42 17.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**163.64**	**278**	PKP	**PKPdf**	**11 42 18.2**	**+0.1**
	0.4nm,0.7s,baz=105,slow=2.3,SNR=4.2						
TORD				PKPab	**PKPab**	**11 43 09.1**	**-0.7**
	0.8nm,0.9s,baz=57,slow=5.3,SNR=4.0						
TOA1	**Torodi Ar. Sit**	**163.64**	**278**	*e*PKPdf	**PKPdf**	**11 42 18.2**	**+0.1**
TOA1				*e*PKPab	**PKPab**	**11 43 09.1**	**-0.8**

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*IDC **06** 11:24:00.4±0.6, 10°.85S×164°.63E, h0^{km}, mb4.6/24, mb1 4.7/27, mb1mx4.6/44, mbtmp4.6/27, ML4.8/3, MS4.8/9, Ms1 4.8/9, ms1mx4.3/47, Error ellipse: s-maj=19.6km s-min=14.3km az=113.0*

*NEIC **06** 11:24:02.6±0.1, 10°.82S×164°.56E, h10^{km}, mb5.1/79, Error ellipse: s-maj=4.7km s-min=3.7km az=98.0*

*ISCJB **06** 11:24:03.8±0.1, 10°.87S±0°.03×164°.52E±0°.03, h29^{km}, mb4.9/115, MS4.9/13, Error ellipse: s-maj=4.9km s-min=3.8km az=19.7*

*GCMT **06** 11:24:04.6±0.4, 10°.64S±0°.03×164°.49E±0°.04, h31^{km}, MW5.7/75, Moment Tensor Solution. s15,c15; s75,c98; Duration: 1ˢ.6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.27±.35; M$_{\theta\theta}$-2.09±.19; M$_{\phi\phi}$-2.18±.19; M$_{r\theta}$-0.17±.21; M$_{\theta\phi}$1.28±.08; M$_{\phi r}$-0.19±.22; Best double couple: M$_0$3.84900×10^{17} NP1:φ$_s$139.00000°,δ45.00000°, λ94.00000°. NP2:φ$_s$313.00000°,δ45.00000°,λ86.00000°. Principal axes: T 4.2830, Plg87.0000°, Azm134.0000°; N -0.8670, Plg3.0000°, Azm316.0000°; P -3.4160, Plg0.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **06** 11:24:04.8±0.9, 10°.83S×164°.45E, h35^{km}, mb5.2/33 Error ellipse: s-maj=9.4km s-min=7.8km az=99.9*

ISC 06 11:24:05.6±0.3, 10°.85S±0°.05×164°.62E±0°.06, h29^{km}, n262, σ1ˢ.18/260, mb5.0/115, MS4.8/13, 5C-14D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.81**	**287**	*e*Pn	**Pn**	**11 25 14.8**	**-1.4**
HNR				*e*Sn	**Sn**	**11 26 12.6**	**+1.5**
HNR	**Honiara**	**4.81**	**287**	*e*P	**Pn**	**11 25 14.8**	**-1.4**
HNR				*e*		11 26 12.6	
HNR	**Honiara**	**4.81**	**287**	Pn	**Pn**	**11 25 15.4**	**-0.8**
	144nm,0.3s,baz=140,slow=5.3,SNR=15						
HNR				Sn	**Sn**	**11 26 14.2**	**+3.1**
	81nm,0.3s,baz=89,slow=22,SNR=7.9						
MARNC	**Mare, Loyalty**	**11.06**	**163**	*e*Pn	**Pn**	**11 26 42.0**	**0.0**
DZM	**Mont Dzumac**	**11.29**	**171**	*e*Pn	**Pn**	**11 26 45.5**	**+0.3**
	478nm,1.2s						
DZM				*e*LR	LR	11 29 25.0	
	comp=Z,6μm,23.9s						
DZM	**Mont Dzumac**	**11.29**	**171**	Pn	**Pn**	**11 26 44.8**	**-0.5**
	6.5nm,0.3s,baz=286,slow=14,SNR=45						
DZM				Sn	**Sn**	**11 28 50.3**	**-0.2**
	1.3nm,0.3s,baz=143,slow=20,SNR=3.1						
DZM				LR	LR	11 30 22.9	
	comp=Z,7μm,18.6s,baz=16,slow=34						
OUENC	**Ouen Island, N**	**11.70**	**170**	*e*Pn	**Pn**	**11 26 50.5**	**-0.2**
PINNC	**Pines Island,**	**12.00**	**167**	*e*Pn	**Pn**	**11 26 54.8**	**0.0**
TARA	**Tarawa**	**14.67**	**35**	*e*Pn	**Pn**	**11 27 31.3**	**-0.1**
PATS	**Pohnpei**	**18.66**	**340**	*e*P	**Pn**	**11 28 22.1**	**+0.1**
	422nm,1.4s						
EIDS	**Eidsvold**	**19.31**	**220**	P	**Pn**	**11 28 30.7**	**+0.9**
	baz=19,SNR=17						
KWAJ	**Kwajalein Atol**	**19.75**	**9**	*e*P	**P**	**11 28 33.8**	**+0.4**
	695nm,0.5s						
KWAJ	**Kwajalein Atol**	**19.75**	**9**	*e*P	**P**	**11 28 33.8**	**+0.4**
KWAJ				pmax	pmax		
	comp=Z,695nm,0.5s						
CTA	**Charters Tower**	**19.92**	**240**	P	**P**	**11 28 35.3**	**0.0**
	comp=Z,1.0nm,0.3s,baz=72,slow=12,SNR=13						
CTA				LR	LR	11 34 52.1	
	comp=Z,4μm,21.4s,baz=37,slow=33						
CTAO	**Charters Tower**	**19.92**	**240**	*e*P	**P**	**11 28 34.4**	**-0.9**
	comp=Z,116nm,1.0s						
CTAO	**Charters Tower**	**19.92**	**240**	*e*P	**P**	**11 28 34.4**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,116nm,1.0s						
MTSU	**Mount Surprise**	**20.93**	**247**	P	**P**	**11 28 46.0**	**-0.3**
	baz=21,SNR=6.1						
COEN	**Coen**	**21.17**	**259**	P	**P**	**11 28 47.8**	**-1.0**
	baz=21,SNR=12						
RMQ	**Roma**	**21.59**	**222**	P	**P**	**11 28 55.0**	**+1.8**
	baz=22,SNR=16						
ARMA	**Armidale**	**22.91**	**210**	P	**P**	**11 29 09.5**	**+2.0**
	baz=23,SNR=7.0						
QLP	**Quilpie**	**24.79**	**228**	P	**P**	**11 29 25.6**	**+0.4**
	baz=25,SNR=18						
MGCD	**Mangrove Creek**	**25.48**	**207**	P	**P**	**11 29 33.7**	**+2.3**
	baz=26,SNR=4.1						
RIV	**Riverview**	**25.98**	**206**	P	**P**	**11 29 39.4**	**+3.4**
	baz=26,SNR=4.4						
CMSA	**Cobar Meteorol**	**27.03**	**218**	P	**P**	**11 29 45.5**	**+0.1**
	baz=27,SNR=16						
YNG	**Young**	**27.65**	**210**	P	**P**	**11 29 52.5**	**+1.5**
	baz=28,SNR=7.6						
H11S2	**WAKE ISLAND Hy**	**29.23**	**4**	T	T	12 00 37.6	
	baz=184,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**29.23**	**4**	T	T	12 00 36.0	
	baz=184,slow=76,SNR=31						
H11S1	**WAKE ISLAND Hy**	**29.25**	**4**	T	T	12 00 40.6	
	baz=184,slow=76,SNR=11						
MXZ	**Matakaoa Point**	**29.30**	**157**	*e*P	**P**	**11 30 07.1**	**+1.4**
	comp=Z,59nm,1.1s						
URZ	**Urewera**	**29.50**	**160**	*e*P	**P**	**11 30 07.9**	**+0.6**
	comp=Z,63nm,1.5s						
URZ	**Urewera**	**29.50**	**160**	P	**P**	**11 30 09.0**	**+1.6**
	comp=Z,10nm,0.9s,baz=359,slow=3.0,SNR=4.2						
URZ				LR	LR	11 38 53.6	
	comp=Z,521nm,20.4s,baz=5.0,slow=30						
STKA	**Stephens Creek**	**29.83**	**222**	P	**P**	**11 30 11.3**	**+0.8**
	baz=30,SNR=14						
STKA	**Stephens Creek**	**29.83**	**222**	*e*P	**P**	**11 30 10.7**	**+0.3**
	comp=Z,9.4nm,1.1s						
STKA	**Stephens Creek**	**29.83**	**222**	P	**P**	**11 30 10.3**	**-0.1**
	comp=Z,22nm,1.0s,baz=16,slow=9.0,SNR=14						
STKA				LR	LR	11 42 22.7	
	comp=Z,2μm,18.4s,baz=24,slow=37						
BKZ	**Black Stump Fm**	**30.12**	**161**	*e*P	**P**	**11 30 12.2**	**-0.8**
	comp=Z,17nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**30.46**	**4**	T	T	12 02 08.5	
	baz=184,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**30.46**	**4**	T	T	12 02 10.5	
	baz=184,slow=76,SNR=32						
H11N2	**WAKE ISLAND Hy**	**30.47**	**4**	T	T	12 02 10.2	
	baz=184,slow=76,SNR=17						
WRAB	**Tennant Creek**	**30.50**	**249**	*e*P	**P**	**11 30 14.3**	**-2.3**
	comp=Z,32nm,1.2s						
WRAB	**Tennant Creek**	**30.50**	**249**	⇓*e*P	**P**	**11 30 14.5**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,20nm,1.6s						
WB2	**Warramunga Arr**	**30.50**	**249**	*e*P	**P**	**11 30 14.4**	**-2.2**
	comp=Z,31nm,1.1s						
WRA	**Warramunga Arr**	**30.52**	**249**	P	**P**	**11 30 13.8**	**-2.9**
	comp=Z,5.4nm,0.9s,baz=79,slow=9.3,SNR=12						
WRA				PcP	**PcP**	**11 33 15.2**	**-0.3**
	comp=Z,1.9nm,1.1s,baz=80,slow=2.9,SNR=3.9						
WRA				LR	LR	11 41 22.9	
	comp=Z,2μm,21.2s,baz=65,slow=34						
KDU	**Kakadu**	**31.52**	**263**	P	**P**	**11 30 22.2**	**-3.3**
	baz=31,SNR=3.6						
TOO	**Toolangi**	**31.68**	**210**	P	**P**	**11 30 27.6**	**+0.9**
	baz=32,SNR=7.2						
AS01	**Alice Springs**	**31.86**	**242**	*e*P	**P**	**11 30 28.4**	**-0.1**
AS31	**Alice Springs**	**31.89**	**242**	*e*P	**P**	**11 30 25.5**	**-3.3**
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**31.90**	**242**	P	**P**	**11 30 25.9**	**-2.9**
	comp=Z,2.2nm,0.9s,baz=64,slow=10,SNR=6.5						
ASAR				PcP	**PcP**	**11 33 18.8**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=93,slow=2.6,SNR=3.4						
ASAR				LR	LR	11 42 19.5	
	comp=Z,2μm,19.5s,baz=61,slow=34						
HTT	**Hallett**	**32.56**	**222**	P	**P**	**11 30 35.0**	**+0.5**
	baz=33,SNR=6.8						
OXZ	**Oxford**	**32.99**	**170**	*e*P	**P**	**11 30 39.0**	**+1.0**
	comp=Z,34nm,1.0s						
ARPS	**Mount Arapiles**	**32.99**	**215**	P	**P**	**11 30 39.6**	**+1.4**
	baz=33,SNR=6.3						
RPZ	**Rata Peaks**	**33.21**	**171**	*e*P	**P**	**11 30 40.7**	**+0.7**
	comp=Z,20nm,0.9s						
RPZ	**Rata Peaks**	**33.21**	**171**	P	**P**	**11 30 39.6**	**-0.4**
	comp=Z,15nm,0.9s,baz=146,slow=10,SNR=4.5						
RPZ				LR	LR	11 42 43.5	
	comp=Z,2μm,18.7s,baz=340,slow=34						
BBOO	**Buckleboo**	**34.16**	**226**	P	**P**	**11 30 48.1**	**-0.4**
	baz=34,SNR=7.3						
MLZ	**Mavora Lakes**	**34.52**	**176**	*e*P	**P**	**11 30 51.8**	**+0.3**
	comp=Z,78nm,1.9s						
DCZ	**Deep Cove**	**34.56**	**177**	*e*P	**P**	**11 30 51.7**	**+0.1**
	comp=Z,79nm,1.6s						
KNRA	**Kununurra**	**35.20**	**258**	P	**P**	**11 30 54.8**	**-2.7**
	baz=35,SNR=6.0						
WRKA	**Warakurna**	**37.19**	**243**	P	**P**	**11 31 12.4**	**-2.1**
	baz=37,SNR=7.1						
FITZ	**Fitzroy Crossi**	**38.36**	**255**	P	**P**	**11 31 21.8**	**-2.7**
	baz=38,SNR=10						
PPT	**Papeete**	**44.81**	**104**	LR	LR	11 46 12.4	
	comp=Z,772nm,20.0s,baz=289,slow=30						
PPT2	**Papeete2**	**44.81**	**104**	*e*S	**S**	**11 38 56.7**	**+3.2**
	comp=Z,638nm,22.2s						
PPT2				*e*LQ	LQ	11 43 01.6	
	comp=Z,3μm,26.0s						
PPT2				*e*LR	LR	11 44 49.7	
	comp=Z,2μm,22.8s,baz=278						
TBI	**Tubuai**	**45.43**	**112**	*e*LQ	LQ	11 43 13.3	
	comp=Z,2μm,30.0s						
TBI				*e*LR	LR	11 45 11.5	
	comp=Z,1μm,23.0s,baz=294						
MEEK	**Meekatharra**	**46.04**	**243**	P	**P**	**11 32 25.8**	**-1.3**
	baz=46,SNR=3.7						
MJAR	**Matsushiro Arr**	**53.30**	**333**	P	**P**	**11 33 20.5**	**-1.6**
	comp=Z,6.9nm,1.0s,baz=171,slow=7.6,SNR=9.3						
MAJO	**Matsushiro**	**53.30**	**333**	⇓*e*P	**P**	**11 33 21.4**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,26nm,1.4s						
MAT	**Matsushiro**	**53.30**	**333**	P	**P**	**11 33 20.9**	**-1.2**
JNU	**Nakatsue**	**54.28**	**325**	P	**P**	**11 33 28.7**	**-0.7**
	comp=Z,11nm,1.0s,baz=19,slow=13,SNR=5.6						
ASAJ	**Asahikawa**	**58.26**	**341**	P	**P**	**11 33 57.3**	**-0.2**
	comp=Z,8.5nm,0.7s,baz=234,slow=6.6,SNR=7.1						
BLSI	**Bandar Lampung**	**58.96**	**270**	P	P	11 34 09.6	+6.6

KSRS	Korea Array	59.10	326	P	P	11 34 03.2	-0.3
	comp=Z,1.9nm,0.8s,baz=139,slow=7.8,SNR=5.0						
KSAR	Wonju Array Be	59.11	326	P	P	11 34 03.2	-0.4
KSAR	Wonju Array Be	59.11	326	P	P	11 34 03.2	-0.4
KS01	Wonju Array Si	59.13	326	eP	P	11 34 04.0	+0.2
KLI	Kotabumi	59.42	271	P	P	11 34 09.3	+3.1
KASI	Kota Agung	59.67	270	P	P	11 34 04.5	-3.4
MDSI	Maura Dua	60.16	271	P	P	11 34 12.5	+1.2
LWLI	Liwa	60.18	270	P	P	11 34 08.2	-3.4
YSS	Yuzh-Sakhalins	60.77	343	eP	P	11 34 15.4	+0.6
	comp=Z,43nm,1.2s						
YSS	Yuzh-Sakhalins	60.77	343	eP	P	11 34 15.1	+0.3
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
NJ2	Nanjing	61.11	316	eP	P	11 34 17.7	+0.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TEY	Ternei	61.12	338	⇓eP	P	11 34 17.2	0.0
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
MSHR	Mys Shultsa	61.37	332	⇑eP	P	11 34 19.7	+0.8
MNAI	Manna	61.38	271	P	P	11 34 24.1	+4.5
MNAI				S	S	11 34 46.5	-473
VLA	Vladivostok	61.47	333	⇑eP	P	11 34 21.2	+1.6
VLA				pmax	pmax		
	comp=Z,24nm,0.9s						
USA0B	Ussuriysk Arra	62.29	334	eP	P	11 34 25.8	+0.7
	comp=Z,71nm,1.5s						
USRK	Ussuriysk Ar.	62.29	334	P	P	11 34 24.5	-0.6
	comp=Z,13nm,1.1s,baz=134,slow=6.2,SNR=17						
MDJ	Mudanjiang	63.67	333	P	P	11 34 35.5	+1.2
MDJ				pmax	pmax		
	comp=Z,22nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,1µm,27.7s						
MDJ	Mudanjiang	63.67	333	eP	P	11 34 34.4	+0.1
	comp=Z,46nm,1.5s						
PETK	Petropavlovsk-	63.98	355	eP	P	11 34 37.1	+1.0
PETK	Petropavlovsk-	63.98	355	eP	P	11 34 37.2	+1.0
PETK	Petropavlovsk-	63.98	355	P	P	11 34 35.3	-0.8
	comp=Z,11nm,0.9s,baz=148,slow=8.7,SNR=7.4						
TYV	Tymovskoe	64.36	345	eP	P	11 34 37.5	-1.2
TYV				eS	S	11 43 16.1	+1.1
TYV				pmax	pmax		
	comp=Z,12nm,1.9s						
TYV				smax	smax		
	comp=E,6.0nm,1.3s						
CN2	Changchun	65.02	330	eP	P	11 34 43.3	+0.2
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CASY	Casey	66.16	201	eP	P	11 34 51.3	+1.2
	comp=Z,46nm,1.5s						
KLR	Kul'dur	66.45	337	P	P	11 34 51.9	-0.3
	comp=Z,4.8nm,0.8s,baz=144,slow=2.0,SNR=12						
ENH	Enshi	66.92	310	eP	P	11 34 55.3	-0.4
	comp=Z,24nm,1.1s						
GYA	Guiyang	67.40	305	P	P	11 34 58.0	-0.9
GYA				PP	PP	11 37 31.2	+3.3
GYA				S	S	11 43 55.0	+1.7
GYA				SKS	SKSac	11 44 54.6	-0.5
GYA	Guiyang	67.40	305	SS	SS	11 48 17.9	+3.9
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,490nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,480nm,18.4s						
PBKT	Sadao Pong	68.59	293	eP	P	11 35 05.7	-0.7
	comp=Z,8.2nm,1.0s						
XAN	Xi'an	69.18	313	P	P	11 35 09.1	-0.7
XAN				pP	pwP	11 35 24.5	-0.6
XAN				sP	PcP	11 35 32.2	-1.4
XAN				pmax	pmax		
	comp=Z,11nm,1.6s						
XAN				LR	LR		
	comp=N,700nm,18.4s						
XAN				LR	LR		
	comp=Z,1µm,18.4s						
XAN	Xi'an	69.18	313	eP	P	11 35 10.0	+0.1
	comp=Z,80nm,1.1s						
XAN	Xi'an	69.18	313	eP	P	11 35 10.0	+0.1
XAN				pmax	pmax		
	comp=Z,80nm,1.1s						
KMI	Kunming	70.08	302	P	P	11 35 17.4	+1.6
KMI				sP	sP	11 35 27.8	+2.2
KMI				pmax	pmax		
	comp=Z,13nm,1.6s						
HHC	Hu-ho-hao-te	70.97	320	eP	P	11 35 22.7	+1.9
HHC				pmax	pmax		
	comp=Z,13nm,1.2s						
CM01	Chiang Mai Arr	71.00	294	eP	P	11 35 20.6	-0.6
CMAR	Chiang Mai Arr	71.02	294	P	P	11 35 20.6	-0.9
	comp=Z,1.1nm,0.5s,baz=119,slow=4.4,SNR=7.3						
MA2	Magadan	71.07	353	⇓eP	P	11 35 20.7	-0.1
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	Chiang Mai	71.14	294	eP	P	11 35 23.7	+1.6
	comp=Z,15nm,1.3s						
CHTO	Chiang Mai	71.14	294	eP	P	11 35 23.7	+1.6
CHTO				pmax	pmax		
	comp=Z,15nm,1.3s						
CHTO	Chiang Mai	71.14	294	P	P	11 35 27.5	+5.4
	comp=Z,39nm,1.4s						
CD2	Chengdu	71.61	308	P	P	11 35 24.9	+0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
CD2				LR	LR		
	comp=N,1µm,12.0s						
CD2				LR	LR		
	comp=E,1µm,16.7s						
CD2				LR	LR		
	comp=Z,800nm,11.4s						
HIA	Hailar	71.66	331	eP	P	11 35 24.9	+0.3
	comp=Z,20nm,1.0s						
HIA	Hailar	71.66	331	d iP	P	11 35 24.8	+0.1
HIA				pmax	pmax		
	comp=Z,32nm,1.6s						
ZEA	Zeya	71.74	338	eP	P	11 35 25.1	+0.1
ZEA				pmax	pmax		
	comp=N,80nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,96nm,1.8s						
LZH	Lanzhou	73.81	313	eP	P	11 35 36.9	-1.0
LZH				pP	pP	11 35 44.5	-0.6
LZH				sP	sP	11 35 46.1	-1.7
LZH				PP	PP	11 38 33.8	+11
LZH				pmax	pmax		
	comp=Z,30nm,1.6s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
LZH				LR	LR		
	comp=N,490nm,16.3s						
LZH				LR	LR		
	comp=E,440nm,16.4s						
LZH				LR	LR		
	comp=Z,550nm,17.5s						
SEY	Seymchan	74.17	354	⇓iP	P	11 35 39.1	0.0
SEY	Seymchan	74.17	354	P	P	11 35 38.5	-0.7
	comp=Z,3.2nm,0.9s,baz=200,slow=7.0,SNR=8.6						
CIT	Chita	76.45	330	eP	P	11 35 51.5	-1.1
CIT				e		11 36 08.3	
GAMB	Gambell	76.58	11	eP	P	11 35 53.5	+0.6
	comp=Z,23nm,1.0s						
ULN	Ulaanbaatar	77.50	324	eP	P	11 35 59.0	+0.2
	comp=Z,30nm,1.4s						
ULN	Ulaanbaatar	77.50	324	d iP	P	11 35 59.3	+0.6
ULN				pmax	pmax		
	comp=Z,30nm,1.7s						
SONM	Songino Array	77.86	324	P	P	11 36 01.0	+0.3
	comp=Z,12nm,1.3s,baz=139,slow=5.3,SNR=15						
SONA1	Songino Array	77.86	324	eP	P	11 35 59.4	-1.3
GTA	Gaotai	78.13	314	⇓P	P	11 36 03.6	+1.2
GTA				pP	pP	11 36 09.0	-0.6
GTA				sP	PcP	11 36 12.0	+0.1
GTA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,290nm,6.5s						
GTA				LR	LR		
	comp=N,490nm,18.1s						
GTA				LR	LR		
	comp=E,900nm,17.5s						
GTA				LR	LR		
	comp=Z,970nm,17.1s						
SVW2	Sparrevohn	78.28	19	eP	P	11 36 03.6	+1.0
	comp=Z,36nm,1.4s						
ANM	Nome	78.54	13	eP	P	11 36 04.7	+0.7
	comp=Z,29nm,1.4s						
BILL	Bilibino	78.70	1	eP	P	11 36 04.0	-0.7
	comp=Z,42nm,1.2s						
BILL	Bilibino	78.70	1	d iP	P	11 36 04.9	+0.2
BILL				pmax	pmax		
	comp=Z,56nm,1.7s						
RSO	Redoubt South	78.72	20	eP	P	11 36 06.1	+0.8
QSPA	South Pole Qui	79.15	180	eP	P	11 36 08.2	+0.7
	comp=Z,63nm,1.4s						
BOD	Bodaibo	79.89	335	eP	P	11 36 10.5	-0.9
BOD				pmax	pmax		
	comp=Z,15nm,1.7s						
PMR	Palmer	80.76	20	eP	P	11 36 15.6	-0.4
	comp=Z,27nm,1.5s						
PMR	Palmer	80.76	20	eP	P	11 36 15.6	-0.4
PMR				pmax	pmax		
	comp=Z,27nm,1.5s						
ZAK	Zakamensk	80.91	325	eP	P	11 36 17.3	0.0
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CAST	Castle Rocks	81.11	18	eP	P	11 36 17.5	-0.4
	comp=Z,16nm,1.0s						
TLY	Talaya	81.35	327	eP	P	11 36 19.6	+0.1
	comp=Z,52nm,1.5s						
TLY	Talaya	81.35	327	d iP	P	11 36 19.4	-0.1
RDOG	Red Dog Mine	82.06	12	eP	P	11 36 22.8	-0.1
	comp=Z,25nm,0.9s						
RND	Reindeer	82.12	19	eP	P	11 36 23.3	0.0
	comp=Z,29nm,1.4s						
RND	Reindeer	82.12	19	eP	P	11 36 23.3	0.0
RND				pmax	pmax		
	comp=Z,29nm,1.4s						
MCK	McKinley	82.32	19	eP	P	11 36 24.2	-0.1
	comp=Z,21nm,1.3s						
MCK	McKinley	82.32	19	eP	P	11 36 24.2	-0.1
MCK				pmax	pmax		
	comp=Z,21nm,1.3s						
IM3	Indian Mountai	82.54	16	eP	P	11 36 24.4	-1.0
MLY	Manley	82.69	18	eP	P	11 36 28.7	+2.5
	comp=Z,16nm,1.4s						
WRH	Wood River Hil	83.10	19	eP	P	11 36 27.5	-0.8
	comp=Z,22nm,1.3s						
MDM	Murphy Dome	83.39	18	eP	P	11 36 29.1	-0.8
	comp=Z,17nm,1.0s						
HDA	Harding Lake	83.42	19	eP	P	11 36 29.1	-0.9
	comp=Z,27nm,1.0s						
HDA	Harding Lake	83.42	19	P	P	11 36 29.2	-0.9
	baz=228						
TCOL	CIGO, UAF Yank	83.45	18	P	P	11 36 29.7	-0.3
	baz=227						
COLA	College	83.45	18	eP	P	11 36 29.4	-0.7
	comp=Z,26nm,1.0s						
COLA	College	83.45	18	⇓iP	P	11 36 28.6	-1.5
COLA				pmax	pmax		
	comp=Z,19nm,1.0s						
RIDG	Independ'e Rid	83.67	20	eP	P	11 36 31.6	+0.2
	comp=Z,16nm,1.0s						
IL1	Eielson Array	83.69	19	eP	P	11 36 29.7	-1.6
ILAR	Eielson Array	83.69	19	P	P	11 36 29.9	-1.4
	comp=Z,9.4nm,0.9s,baz=229,slow=5.8,SNR=27						
ILB	Eielson Array	83.69	19	eP	P	11 36 30.4	-0.9
POKR	Poker Plat Res	83.75	18	P	P	11 36 29.8	-1.9
	baz=227						
SCRK	Sand Creek	84.12	20	eP	P	11 36 33.6	-0.1
	comp=Z,11nm,1.0s						
KNGR	Kungurtug, Tuv	84.30	324	⇓eP	P	11 36 34.6	-0.3
COLD	Coldfoot	84.42	16	eP	P	11 36 36.0	+1.0
	comp=Z,4.4nm,1.0s						
ORV	Oroville	84.71	48	eP	P	11 36 36.6	-0.5
	comp=Z,8.1nm,1.3s						
ORV	Oroville	84.71	48	eP	P	11 36 36.6	-0.5
ORV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
O03E	Paynes Creek	84.73	47	P	P	11 36 36.7	-0.6
	baz=251						
AFDM	Forest Hills D	84.91	49	eP	P	11 36 37.7	-0.4
	comp=Z,8.2nm,1.1s						
CMB	Columbia Colle	85.06	50	eP	P	11 36 39.0	0.0
	comp=Z,5.7nm,0.9s						
CMB	Columbia Colle	85.06	50	eP	P	11 36 39.0	0.0
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BEKR	Beckworth	85.64	48	eP	P	11 36 42.0	0.0
	comp=Z,8.9nm,0.9s						
TIXI	Tiksi	85.69	349	eP	P	11 36 40.1	-1.1
	comp=Z,20nm,1.2s						
TIXI	Tiksi	85.69	349	d iP	P	11 36 40.8	-0.5
TIXI				pmax	pmax		
	comp=Z,28nm,1.7s						
TIXI	Tiksi	85.69	349	P	P	11 36 40.3	-1.0
	comp=Z,8.1nm,1.0s,baz=163,slow=5.0,SNR=12						
DAWY	Dawson	85.78	21	eP	P	11 36 43.6	+1.6
	comp=Z,31nm,1.6s						
ISA	Isabella, Lake	85.83	53	P	P	11 36 43.2	+0.3
	baz=254						
MDPB	Devils Postpil	85.93	51	eP	P	11 36 43.7	+0.1
	comp=Z,8.7nm,1.0s						
EDW2	Edwards Air Fo	85.99	54	P	P	11 36 43.1	-0.6
	baz=254						
BFSC	Mount Baldy Ra	86.08	54	P	P	11 36 44.0	-0.2
	baz=254						
J05D	Fort Rock, OR	86.09	45	P	P	11 36 43.8	-0.3
	baz=251						
PAHR	Pah Rah Range	86.31	49	eP	P	11 36 45.0	-0.3
	comp=Z,7.7nm,1.2s						
CWC	Cottonwood Cre	86.36	52	P	P	11 36 44.7	-0.9
	baz=254						
RYN	Ryan	86.64	50	eP	P	11 36 47.1	+0.1
	comp=Z,6.9nm,1.1s						
MPMC	Manual Prospec	86.71	53	P	P	11 36 46.5	-0.9
	baz=254						
NV01	Mina Array Sit	86.75	50	eP	P	11 36 46.3	-1.2
NVAR	Mina Array Bea	86.75	50	P	P	11 36 46.6	-0.9
	comp=Z,6.6nm,1.0s,baz=231,slow=6.3,SNR=15						
NV11	Mina Array Sit	86.86	50	eP	P	11 36 47.8	-0.2
	comp=Z,0.8nm,1.1s						
KVN	Kaiserville	87.07	50	eP	P	11 36 48.7	-0.4
	comp=Z,6.4nm,1.1s						
KVN	Kaiserville	87.07	50	eP	P	11 36 48.7	-0.4
KVN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BELC	Belle Mtn. Jos	87.35	55	P	P	11 36 49.7	-0.7
	baz=255						
WVOR	Wild Horse Val	87.65	46	eP	P	11 36 52.0	+0.4
	comp=Z,17nm,1.4s						
WVOR	Wild Horse Val	87.65	46	eP	P	11 36 52.1	+0.4
WVOR				pmax	pmax		
	comp=Z,17nm,1.4s						
J08A	Circle Bar Ran	88.03	45	eP	P	11 36 52.9	-0.6
	comp=Z,10.0nm,1.1s						
IRM	Iron Mountain	88.07	55	P	P	11 36 53.4	-0.4
	baz=256						
WMQ	Urumqi	88.18	315	eP	P	11 36 54.4	+0.3
WMQ				sP	sP	11 37 03.5	-0.6
WMQ				PP	PP	11 40 26.4	+4.9
WMQ				pmax	pmax		
	comp=Z,17nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,570nm,7.7s						
WMQ				LR	LR		
	comp=N,720nm,19.1s						
WMQ				LR	LR		
	comp=E,610nm,16.9s						
WMQ				LR	LR		
	comp=Z,560nm,18.1s						
G08A	Pilot Rock	88.26	43	eP	P	11 36 54.2	-0.3
	comp=Z,33nm,1.9s						
Y12C	Blythe	88.47	55	eP	P	11 36 56.0	+0.3
	comp=Z,7.3nm,1.0s						
SHPR	Sheep Range	88.64	53	eP	P	11 36 57.7	+1.0
	comp=Z,9.7nm,1.5s						
R11A	Troy Canyon, C	88.78	51	P	P	11 36 56.5	-0.7
	baz=255						
PDMCI	Parker Dam,Lak	88.92	55	P	P	11 36 57.3	-0.4
	baz=256						
214A	Organ Pipe Nat	89.46	57	P	P	11 36 59.8	-0.6
	baz=257						
ELK	Elko	89.65	48	eP	P	11 37 01.8	+0.5
	comp=Z,14nm,1.8s						
ELK	Elko	89.65	48	eP	P	11 37 01.8	+0.5
ELK				pmax	pmax		
	comp=Z,14nm,1.8s						
MFID	Camas Ranch	89.90	46	eP	P	11 37 02.5	+0.2
LPIG	La Paz	89.93	66	LR	LR	12 09 57.8	
	comp=Z,459nm,18.1s,baz=288,slow=31						
INK	Inuvik	90.08	19	P	P	11 37 02.1	-0.2
	comp=Z,1.4nm,1.1s,baz=232,slow=2.2,SNR=3.1						
PSUT	Pine Spring	90.14	51	eP	P	11 37 04.1	+0.5
	comp=Z,6.3nm,1.1s						
LCMT	Little Creek M	90.26	52	eP	P	11 37 03.8	-0.3
	comp=Z,7.1nm,1.1s						
CCUT	Cedar City	90.29	52	eP	P	11 37 04.3	-0.1
	comp=Z,6.9nm,1.1s						
SZCU	Shurtz Canyon	90.52	52	eP	P	11 37 05.3	-0.2
	comp=Z,8.0nm,1.2s						
KNB	Kanab	90.59	53	eP	P	11 37 06.1	+0.4
	comp=Z,35nm,1.8s						
KNB	Kanab	90.59	53	eP	P	11 37 06.1	+0.4
KNB				pmax	pmax		
	comp=Z,35nm,1.8s						
HLID	Hailey	90.94	46	eP	P	11 37 06.5	-0.7
	comp=Z,9.5nm,1.4s						
HLID	Hailey	90.94	46	P	P	11 37 06.7	-0.5
	baz=256						
PKCU	Pink Cliffs	91.08	52	eP	P	11 37 09.7	+1.4
	comp=Z,62nm,2.0s						
X16A	Lo Mia Camp, P	91.12	55	eP	P	11 37 08.2	-0.1
	comp=Z,3.3nm,0.9s						
MTPU	Mount Pierson	91.31	52	eP	P	11 37 10.1	+0.8
	comp=Z,7.7nm,1.1s						
WUAZ	Wupatki	91.40	54	eP	P	11 37 09.9	+0.4
WUAZ	Wupatki	91.40	54	P	P	11 37 09.1	-0.5
	baz=258						
MSU	Marysvale	91.42	51	eP	P	11 37 10.3	+0.7
MSU	Marysvale	91.42	51	eP	P	11 37 10.3	+0.7
HVU	Hansel Valley	91.70	48	eP	P	11 37 10.4	-0.3
	comp=Z,12nm,1.1s						
HVU	Hansel Valley	91.70	48	eP	P	11 37 10.4	-0.3
HVU				pmax	pmax		
	comp=Z,12nm,1.1s						
NLU	North Lily Min	91.81	50	eP	P	11 37 11.0	-0.4
	comp=Z,8.7nm,1.2s						
CTU	Camp Tracy	92.21	49	eP	P	11 37 13.6	+0.4
	comp=Z,6.6nm,1.1s						
MCMT	McKenzie Canyo	92.33	45	eP	P	11 37 13.7	0.0
JLU	Jordanelle	92.42	49	eP	P	11 37 15.0	+0.8
	comp=Z,17nm,1.8s						
MK01	Makanchi Array	92.62	317	eP	P	11 37 13.4	-1.3
DLMT	Dillon	92.62	44	eP	P	11 37 14.9	0.0
	comp=Z,11nm,1.1s						
MK31	Makanchi Array	92.63	317	eP	P	11 37 14.4	-0.4
MKAR	Makanchi Array	92.63	317	eP	P	11 37 14.4	-0.4
	comp=Z,36nm,0.8s						
MKAR	Makanchi Array	92.63	317	P	P	11 37 13.7	-1.1
	comp=Z,5.5nm,0.7s,baz=95,slow=6.4,SNR=26						
ZAA0	Zalesovo Array	92.76	324	eP	P	11 37 14.1	-1.0
	comp=Z,15nm,1.4s						
ZALV	Zalesovo Beam	92.76	324	eP	P	11 37 13.6	-1.5
ZALV	Zalesovo Beam	92.76	324	eP	P	11 37 13.6	-1.5
ZALV	Zalesovo Beam	92.76	324	P	P	11 37 14.0	-1.1
	comp=Z,4.9nm,1.0s,baz=109,slow=3.6,SNR=12						
MAKZ	Makanchi	92.84	317	eP	P	11 37 15.7	0.0
	comp=Z,16nm,1.1s						
MAKZ	Makanchi	92.84	317	eP	P	11 37 15.7	0.0
MAKZ				pmax	pmax		
	comp=Z,16nm,1.1s						
BOZ	Bozeman (W)	93.33	44	P	P	11 37 17.7	-0.5
	baz=258						
FXWY	Fox Creek	93.35	46	eP	P	11 37 17.9	-0.6
	comp=Z,4.4nm,1.1s						
H17A	Grant Village	93.82	46	eP	P	11 37 22.2	+1.6
	comp=Z,10nm,1.4s						
NVS	Novosibirsk	93.87	325	i P	P	11 37 20.7	+0.5
BW06	Boulder Array	94.23	47	eP	P	11 37 22.1	-0.4
	comp=Z,3.8nm,1.1s						
BW06	Boulder Array	94.23	47	P	P	11 37 21.9	-0.6
	baz=259						
PD31	Pinedale Array	94.24	47	eP	P	11 37 22.5	-0.1
PDAR	Pinedale Array	94.24	47	eP	P	11 37 21.2	-1.3
PDAR	Pinedale Array	94.24	47	P	P	11 37 20.9	-1.7
	comp=Z,2.0nm,1.0s,baz=247,slow=1.9,SNR=8.5						
ANMO	Albuquerque	95.25	56	⇓iP	P	11 37 27.7	+0.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKA	Yellowknife Ar	95.31	27	P	P	11 37 25.2	-1.4
	comp=Z,0.5nm,0.8s,baz=254,slow=4.7,SNR=4.0						
KSH	Kashi	95.78	309	P	P	11 37 30.6	+1.1
KSH				pP	pP	11 37 36.1	-0.8
KSH				pmax	pmax		
	comp=Z,740nm,7.0s						
KURK	Kurchatov	95.79	320	eP	P	11 37 28.4	-0.6
	comp=Z,11nm,1.4s						
KURK	Kurchatov	95.79	320	c eP	P	11 37 28.5	-0.6
KURK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KURBB	Kurchatov Arra	95.83	320	P	P	11 37 27.8	-1.5
	comp=Z,0.8nm,0.6s,baz=98,slow=4.7,SNR=5.3						
TXAR	Lajitas Array	96.71	61	P	P	11 37 32.3	-1.7
	comp=Z,0.2nm,0.7s,baz=238,slow=5.2,SNR=2.6						
SNAA	Sanae	97.23	184	⇑eP	Pdif	11 37 37.0	+1.5
VNA2	Neumayer--Watz	98.23	183	P	P	11 37 39.6	-0.3
BRVK	Borovoye	101.19	322	⇑eP	Pdif	11 37 52.9	-0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,2.0s						
ARCES	ARCESS Array B	115.87	345	PKP	PKiKP	11 42 43.6	-1.4
	comp=Z,1.5nm,0.7s,baz=46,slow=2.6,SNR=7.8						
OBN	Obninsk	120.07	328	i PKIKP	PKiKP	11 42 54.5	+1.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	121.19	338	PKP	PKPdf	11 42 55.3	-0.2
	comp=Z,7.8nm,1.2s,baz=79,slow=7.2,SNR=4.2						
SPB	Sao Paulo	133.58	138	ePKPdf	PKPdf	11 43 20.7	+0.4
GERES	GERESS Array B	135.04	333	PKP	PKiKP	11 43 23.2	-0.6
	comp=Z,0.4nm,0.6s,baz=62,slow=2.3,SNR=3.3						
KEST	Kesra	146.59	322	ePKPdf	PKPab	11 43 45.6	-0.4
KEST	Kesra	146.59	322	PKPbc	PKPdf	11 43 44.1	+0.6
	comp=Z,27nm,1.0s,baz=292,slow=2.1,SNR=7.0						
ES19	SONSECA Array	149.51	342	ePKPbc	PKPbc	11 43 53.0	+0.3
ESDC	Sonseca Array	149.56	342	PKPbc	PKPbc	11 43 52.9	+0.1
	comp=Z,6.0nm,1.0s,baz=2.7,slow=1.1,SNR=5.9						
MDT	Midelt	156.00	337	PKPab	PKPab	11 44 25.1	+0.1
	comp=Z,5.0nm,0.9s,baz=3.3,slow=6.2,SNR=4.9						
TORD	Torodi Ar. Bea	163.14	279	PKP	PKPdf	11 44 05.5	-0.9
	comp=Z,2.3nm,1.0s,baz=1.8,slow=1.0,SNR=7.6						
TORD				PKPab	PKPab	11 44 55.4	-1.2
	comp=Z,0.9nm,1.0s,baz=94,slow=3.3,SNR=2.6						

IDC ***06*** *11:33:36.3±1.2, 11°.56S×165°.07E, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.7/41, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=45.9km s-min=26.1km az=136.0*

ISCJB ***06*** *11:33:39.6±0.9, 11°.8S±0°.1×165°.1E±0°.2, h34^{km}, mb3.8/5, Error ellipse: s-maj=25.1km s-min=18.5km az=11.8*

ISC 06 11:33:41.2±1.0**, 11°.7S**±0°.1×**165°.1E**±0°.2**, h34^{km}, n12, σ0^{s}.60**/6**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.42	173	Pn	Pn	11 36 08.2	-0.2
	0.6nm,0.3s,baz=331,slow=17,SNR=5.0						
H11S2	WAKE ISLAND Hy	30.01	3	T	T	12 10 05.8	
	baz=182,slow=74						
H11S3	WAKE ISLAND Hy	30.02	3	T	T	12 10 06.1	
	baz=182						
H11S1	WAKE ISLAND Hy	30.03	3	T	T	12 10 07.1	
	baz=182,slow=74						
WRA	Warramunga Arr	30.67	251	P	P	11 39 53.2	+0.3
	1.6nm,0.9s,baz=80,slow=9.1,SNR=7.5						
H11N1	WAKE ISLAND Hy	31.24	3	T	T	12 11 36.5	
	baz=182,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	31.24	3	T	T	12 11 36.9	
	baz=182,slow=76,SNR=28						
H11N2	WAKE ISLAND Hy	31.26	3	T	T	12 11 37.8	
	baz=182,slow=76,SNR=20						
ASAR	Alice Springs	31.94	244	P	P	11 40 04.6	+0.4
	0.6nm,0.8s,baz=75,slow=9.3,SNR=5.6						
ILAR	Eielson Array	84.31	19	P	P	11 46 09.6	+0.3
	0.5nm,0.7s,baz=234,slow=4.8,SNR=8.1						
NVAR	Mina Array Bea	86.91	50	P	P	11 46 23.4	+0.2
	0.9nm,0.8s,baz=243,slow=5.6,SNR=5.7						
MKAR	Makanchi Array	93.54	317	P	P	11 46 53.0	-0.8
	0.3nm,0.7s,baz=101,slow=5.4,SNR=3.5						

IDC ***06*** *11:35:20.7±1.1, 11°.51S×165°.20E, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.7/42, mbtmp3.8/6, ML3.6/1, Error*

ellipse: s-maj=48.5km s-min=24.2km az=136.0

*ISCJB **06** 11:35:24.1±0.9, 11°.7S±0°.1×165°.2E±0°.2, h34km, mb3.8/5, Error ellipse: s-maj=27.7km s-min=19.0km az=22.7*

ISC 06 11:35:25.7±1.0, 11°.6S±0°.1×165°.2E±0°.2, h34km, n6, σ1ˢ04/6, mb3.9/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.48	174	Pn	Pn	11 37 53.8	+0.1
	0.4nm,0.3s,baz=126,slow=19,SNR=3.5						
WRA	Warramunga Arr	30.81	250	P	P	11 41 38.9	+0.3
	2.0nm,0.8s,baz=81,slow=8.6,SNR=11						
ASAR	Alice Springs	32.09	244	P	P	11 41 49.5	-0.3
	0.6nm,0.7s,baz=70,slow=10,SNR=4.8						
ILAR	Eielson Array	84.19	19	P	P	11 47 54.2	+1.0
	0.6nm,0.5s,baz=236,slow=5.0,SNR=15						
NVAR	Mina Array Bea	86.77	50	P	P	11 48 07.2	+0.3
	0.5nm,0.7s,baz=246,slow=5.8,SNR=4.1						
YKA	Yellowknife Ar	95.69	27	P	P	11 48 46.3	-1.4
	0.2nm,0.6s,baz=256,slow=4.4,SNR=3.7						

*ISCJB **06** 11:38:06.5±0.8, 10°.9S±0°.1×165°.6E±0°.1, h30km, mb4.1/6, Error ellipse: s-maj=16.6km s-min=15.2km az=139.2*

*IDC **06** 11:38:10.9±3.8, 10°.90S×165°.52E, h56km±36km, mb3.9/6, mb1 4.3/8, mb1mx3.7/40, mbtmp4.3/8, ML4.6/2, Error ellipse: s-maj=25.9km s-min=25.7km az=59.0*

ISC 06 11:38:08.3±0.9, 10°.8S±0°.1×165°.7E±0°.1, h30km, n16, σ1ˢ69/10, mb4.2/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.85	283	eP	Pn	11 39 34.0	+0.9
HNR	Honiara	5.85	283	P	Pn	11 39 33.2	+0.1
	32nm,0.3s,baz=140,slow=3.6,SNR=9.5						
DZM	Mont Dzumac	11.22	177	P	Pn	11 40 46.8	0.0
	2.2nm,0.3s,baz=50,slow=6.2,SNR=23						
CTA	Charters Tower	20.89	241	P	P	11 42 50.7	+2.4
	12nm,1.1s,baz=70,slow=13,SNR=4.0						
H11S2	WAKE ISLAND Hy	29.13	2	T	T	12 15 13.0	
	baz=184,slow=76,SNR=45						
H11S3	WAKE ISLAND Hy	29.13	2	T	T	12 15 12.5	
	baz=184,slow=76,SNR=23						
H11S1	WAKE ISLAND Hy	29.15	2	T	T	12 15 19.2	
	baz=184,slow=76,SNR=36						
URZ	Urewera	29.18	161	P	P	11 44 07.3	+0.3
	4.7nm,0.6s,baz=265,slow=5.1,SNR=5.8						
H11N1	WAKE ISLAND Hy	30.35	2	T	T	12 16 43.9	
	baz=184,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	30.36	2	T	T	12 16 50.7	
	baz=184,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.37	2	T	T	12 16 51.7	
	baz=184,slow=76,SNR=12						
WRA	Warramunga Arr	31.55	249	P	P	11 44 26.3	-2.0
	2.2nm,0.8s,baz=81,slow=9.1,SNR=11						
ASAR	Alice Springs	32.88	243	P	P	11 44 37.9	-2.1
	2.1nm,0.7s,baz=64,slow=10,SNR=19						
ILAR	Eielson Array	83.30	19	P	P	11 50 32.6	+0.8
	1.1nm,0.6s,baz=236,slow=5.5,SNR=17						
NVAR	Mina Array Bea	85.89	50	P	P	11 50 46.9	+1.1
	1.5nm,0.9s,baz=233,slow=8.4,SNR=6.0						
YKA	Yellowknife Ar	94.77	27	P	P	11 51 24.9	-1.8
	0.4nm,0.8s,baz=254,slow=4.6,SNR=4.3						

*ISCJB **06** 11:39:01.5±0.4, 10°.77S±0°.05×164°.86E±0°.05, h10km, mb4.3/21, Error ellipse: s-maj=8.1km s-min=6.9km az=150.0*

*IDC **06** 11:39:01.7±0.9, 10°.69S×164°.86E, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.1/38, mbtmp4.1/13, ML5.3/2, Error ellipse: s-maj=26.3km s-min=18.5km az=136.0*

*NEIC **06** 11:39:03.2±0.3, 10°.68S×164°.88E, h10km, mb4.6/12, Error ellipse: s-maj=7.2km s-min=5.5km az=94.0*

ISC 06 11:39:03.1±0.6, 10°.72S±0°.08×164°.93E±0°.07, h10km, n45, σ1ˢ13/48, mb4.3/21, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.07	284	eP	Pn	11 40 20.0	+0.7
HNR				eS	Sn	11 41 19.0	+1.0
HNR	Honiara	5.07	284	ePn	Pn	11 40 19.4	+0.1
HNR				eSn	Sn	11 41 18.3	+0.3
HNR				eSn	Sn	11 41 18.4	+0.5
HNR				eSg	Sn	11 41 21.8	+3.9
HNR	Honiara	5.07	284	Pn	Pn	11 40 20.0	+0.7
	144nm,0.3s,baz=154,slow=4.9,SNR=16						
HNR				Sn	Sn	11 41 18.3	+0.3
	14nm,0.3s,baz=252,slow=20,SNR=3.7						
MARNC	Mare, Loyalty	11.10	165	ePn	Pn	11 41 42.3	+0.3
DZM	Mont Dzumac	11.38	173	ePn	Pn	11 41 46.7	+0.8
DZM	Mont Dzumac	11.38	173	Pn	Pn	11 41 46.8	+0.9
	17nm,0.3s,baz=309,slow=19,SNR=30						
OUENC	Ouen Island, N	11.77	171	ePn	Pn	11 41 52.4	+1.2
PINNC	Pines Island,	12.06	169	ePn	Pn	11 41 56.7	+1.5
MANU	Manus Island	19.45	295	eP	Pn	11 43 30.0	-1.3
	306nm,1.3s						
EIDS	Eidsvold	19.61	220	eP	Pn	11 43 31.2	-1.8
	24nm,0.9s						
CTA	Charters Tower	20.25	240	P	Pn	11 43 40.0	-0.8
	4.3nm,0.8s,baz=58,slow=16,SNR=2.6						
CTAO	Charters Tower	20.25	240	eP	Pn	11 43 40.0	-0.8
	17nm,1.0s						
COEN	Coen	21.49	259	eP	P	11 43 52.5	+0.2
	11nm,1.1s						
ARMA	Armidale	23.18	210	eP	P	11 44 09.4	-0.7
	26nm,0.9s						
STKA	Stephens Creek	30.13	222	eP	P	11 45 14.8	+1.6
	1.5nm,0.8s						
STKA	Stephens Creek	30.13	222	P	P	11 45 14.4	+1.1
	6.7nm,0.7s,baz=35,slow=11,SNR=13						
WRAB	Tennant Creek	30.83	249	eP	P	11 45 18.5	-1.2
	16nm,1.6s						
WB2	Warramunga Arr	30.83	249	eP	P	11 45 19.6	0.0
	5.1nm,1.0s						
WR1	Warramunga Arr	30.84	249	eP	P	11 45 17.8	-1.9
	6.8nm,1.1s						
WRA	Warramunga Arr	30.84	249	P	P	11 45 17.8	-2.0
	0.9nm,0.6s,baz=79,slow=9.4,SNR=7.2						
TOO	Toolangi	31.94	210	eP	P	11 45 30.4	+1.2
	20nm,1.4s						
ASAR	Alice Springs	32.23	242	P	P	11 45 29.6	-2.3
	0.6nm,0.5s,baz=63,slow=10.0,SNR=5.8						
BBOO	Buckleboo	34.47	226	eP	P	11 45 50.7	-0.6
	21nm,1.3s						
USRK	Ussuriysk Ar.	62.30	334	P	P	11 49 25.7	+0.2
	1.8nm,0.9s,baz=101,slow=6.6,SNR=2.9						
CM31	Chiang Mai Arr	71.25	294	eP	P	11 50 23.4	+0.2
CMAR	Chiang Mai Arr	71.25	294	P	P	11 50 23.4	+0.2
	0.6nm,0.3s,baz=119,slow=4.9,SNR=4.6						
SONA0	Songino Array	77.94	324	eP	P	11 51 01.9	+0.3
SONM	Songino Array	77.94	324	P	P	11 51 01.9	+0.3
	1.6nm,0.9s,baz=145,slow=5.7,SNR=6.4						
SONA1	Songino Array	77.94	324	eP	P	11 51 01.9	+0.3
BILL	Bilibino	78.56	1	eP	P	11 51 04.6	+0.2
	8.2nm,1.3s						
QSPA	South Pole Qui	79.28	180	eP	P	11 51 08.7	-0.1
	12nm,0.9s						
HDA	Harding Lake	83.20	19	eP	P	11 51 29.1	-0.2
	5.8nm,1.0s						
ILAR	Eielson Array	83.47	19	P	P	11 51 30.8	+0.1
	1.2nm,0.8s,baz=235,slow=5.6,SNR=7.0						
ILB	Eielson Array	83.47	19	eP	P	11 51 30.6	-0.1
IL1	Eielson Array	83.47	19	eP	P	11 51 30.6	-0.1
NV01	Mina Array Sit	86.43	50	eP	P	11 51 46.0	-0.5
NVAR	Mina Array Bea	86.43	50	P	P	11 51 46.5	0.0
	1.2nm,0.9s,baz=234,slow=7.7,SNR=4.3						
MK01	Makanchi Array	92.73	317	eP	P	11 52 14.7	-1.0
MK32	Makanchi Array	92.74	317	eP	P	11 52 14.9	-0.8
MKAR	Makanchi Array	92.74	317	P	P	11 52 14.9	-0.8
	1.4nm,0.8s,baz=102,slow=5.4,SNR=6.6						
ZALV	Zalesovo Beam	92.83	324	eP	P	11 52 14.8	-1.2
ZALV	Zalesovo Beam	92.83	324	P	P	11 52 14.6	-1.3
	0.9nm,0.8s,baz=120,slow=5.2,SNR=3.1						
ZAA1	Zalesovo Array	92.83	324	eP	P	11 52 14.6	-1.3
LTX	Lajitas	96.38	61	eP	P	11 52 34.0	+1.0
TXAR	Lajitas Array	96.38	61	P	P	11 52 34.0	+1.0
	0.1nm,0.7s,baz=256,slow=3.6,SNR=2.7						

*IDC **06** 11:44:33.6±1.1, 11°.61S×165°.66E, h0km, mb3.9/10, mb1 4.2/11, mb1mx3.9/37, mbtmp4.0/11, ML4.3/1, Error ellipse: s-maj=33.9km s-min=20.5km az=134.0*

*ISCJB **06** 11:44:35.6±0.5, 11°.65S±0°.06×165°.52E±0°.08, h24km, mb4.1/16, Error ellipse: s-maj=11.5km s-min=8.8km az=179.2*

*NEIC **06** 11:44:35.3±0.3, 11°.55S×165°.59E, h10km, mb4.4/5, Error ellipse: s-maj=9.8km s-min=7.3km az=91.0*

ISC 06 11:44:37.6±0.7, 11°.57S±0°.09×165°.5E±0°.1, h24km, n30, σ1ˢ00/30, mb4.1/16, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.90	291	ePn	Pn	11 46 03.1	-0.4
DZM	Mont Dzumac	10.48	175	ePn	Pn	11 47 05.2	-1.3
DZM	Mont Dzumac	10.48	175	Pn	Pn	11 47 06.6	+0.1
	2.5nm,0.3s,baz=29,slow=7.9,SNR=15						
OUENC	Ouen Island, N	10.86	174	ePn	Pn	11 47 10.4	-1.2
PINNC	Pines Island,	11.13	171	ePn	Pn	11 47 16.7	+1.3
EIDS	Eidsvold	19.38	223	eP	P	11 49 01.3	-0.5
	25nm,1.5s						
BKZ	Black Stump Fm	29.16	162	eP	P	11 50 38.6	+1.6
	19nm,1.2s						
WB2	Warramunga Arr	31.11	251	eP	P	11 50 54.6	+0.2
	8.2nm,1.1s						
WR1	Warramunga Arr	31.12	251	eP	P	11 50 55.0	+0.4
	8.7nm,1.2s						
WRA	Warramunga Arr	31.12	251	P	P	11 50 55.0	+0.4
	1.6nm,0.8s,baz=79,slow=9.1,SNR=8.0						
AS31	Alice Springs	32.38	244	eP	P	11 51 03.7	-1.9
	1.2nm,1.1s						
ASAR	Alice Springs	32.38	244	P	P	11 51 05.8	+0.2
	1.0nm,0.9s,baz=83,slow=9.4,SNR=5.2						
BBOO	Buckleboo	34.33	227	eP	P	11 51 21.7	-0.8
	7.4nm,1.0s						
FITZ	Fitzroy Crossi	39.05	256	eP	P	11 52 02.5	-0.5
	4.3nm,0.9s						
FITZ	Fitzroy Crossi	39.05	256	P	P	11 52 02.3	-0.6
	1.6nm,0.8s,baz=108,slow=12,SNR=3.2						
ASAJ	Asahikawa	59.22	341	P	P	11 54 37.4	+0.6
	7.1nm,1.1s,baz=185,slow=13,SNR=5.2						
USRK	Ussuriysk Ar.	63.32	334	P	P	11 55 05.5	+0.9
	1.6nm,0.8s,baz=156,slow=7.3,SNR=3.6						
CM31	Chiang Mai Arr	72.14	294	eP	P	11 56 02.2	+1.4
CMAR	Chiang Mai Arr	72.14	294	P	P	11 56 02.2	+1.4
	0.4nm,0.4s,baz=131,slow=5.1,SNR=5.4						
SONA0	Songino Array	78.97	324	eP	P	11 56 40.4	+0.9
SONM	Songino Array	78.97	324	P	P	11 56 40.4	+0.9
	0.3nm,0.5s,baz=133,slow=4.0,SNR=3.8						
HDA	Harding Lake	83.80	19	eP	P	11 57 04.4	-0.2
	5.4nm,0.9s						
ILAR	Eielson Array	84.07	19	P	P	11 57 05.5	-0.4
	1.4nm,0.8s,baz=240,slow=4.9,SNR=15						
ILB	Eielson Array	84.07	19	eP	P	11 57 05.2	-0.8
NV01	Mina Array Sit	86.51	50	eP	P	11 57 18.5	-0.6
NVAR	Mina Array Bea	86.51	50	P	P	11 57 19.1	0.0
	0.4nm,0.7s,baz=262,slow=4.5,SNR=3.5						
YKA	Yellowknife Ar	95.53	27	P	P	11 57 58.4	-1.9
	0.3nm,0.6s,baz=256,slow=4.6,SNR=5.2						
YKB5	Yellowknife Ar	95.53	27	eP	P	11 57 58.9	-1.4
ARA0	ARCESS Array S	116.79	345	ePKPdf	PKiKP	12 03 19.2	-0.3
ARCES	ARCESS Array B	116.79	345	PKP	PKiKP	12 03 19.2	-0.3
	1.5nm,0.8s,baz=64,slow=2.1,SNR=4.8						

*ISCJB **06** 11:45:49.8±0.3, 11°.77S±0°.04×165°.86E±0°.05, h10km, mb4.5/35, Error ellipse: s-maj=7.4km s-min=5.9km az=161.9*

*IDC **06** 11:45:50.2±0.6, 11°.75S×165°.89E, h0km, mb4.4/20, mb1 4.5/22, mb1mx4.4/38, mbtmp4.4/22, ML4.4/2, MS4.1/1, Ms1 4.1/1, ms1mx3.6/43, Error ellipse: s-maj=17.6km s-min=14.3km az=109.0*

*NEIC **06** 11:45:51.3±0.3, 11°.71S×165°.95E, h10km, mb4.7/18, Error ellipse: s-maj=7.0km s-min=5.8km az=101.0*

ISC 06 11:45:51.1±0.4, 11°.78S±0°.06×165°.96E±0°.06, h10km, n73, σ1ˢ37/76, mb4.6/35, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.35	291	ePn	Pn	11 47 23.0	-1.9
HNR				eSn	Sn	11 48 36.6	-1.0
HNR	Honiara	6.35	291	Pn	Pn	11 47 26.1	+1.2
	14nm,0.3s,baz=356,slow=12,SNR=9.2						
HNR				Sn	Sn	11 48 36.6	-1.0
	12nm,0.3s,baz=161,slow=18,SNR=2.0						
HNR				LR	LR	11 49 59.2	
	comp=Z,2µm,18.5s,baz=82,slow=40						
MARNC	Mare, Loyalty	9.85	169	ePn	Pn	11 48 14.1	+1.2
DZM	Mont Dzumac	10.24	177	Pn	Pn	11 48 19.6	+1.3
	2.0nm,0.3s,baz=29,slow=18,SNR=10						
DZM				Sn	Sn	11 50 08.6	-4.8
	baz=330,slow=20,SNR=1.7						
OUENC	Ouen Island, N	10.61	176	ePn	Pn	11 48 25.6	+2.2
PINNC	Pines Island,	10.86	173	ePn	Pn	11 48 28.7	+1.9
FUNA	Funafuti	13.43	77	ePn	Pn	11 48 59.4	-2.5
TARA	Tarawa	14.77	28	ePn	Pn	11 49 18.8	-1.5
EIDS	Eidsvold	19.50	224	eP	Pn	11 50 19.8	-0.1
	27nm,0.9s						
CTA	Charters Tower	20.65	244	P	Pn	11 50 32.5	-1.1
	16nm,0.8s,baz=75,slow=13,SNR=11						
CTAO	Charters Tower	20.65	244	eP	Pn	11 50 32.2	-1.3
	24nm,1.0s						
MANU	Manus Island	20.82	296	eP	Pn	11 50 34.2	-1.3
	90nm,1.1s						
COEN	Coen	22.31	262	eP	P	11 50 50.3	+1.1
	20nm,0.9s						
ARMA	Armidale	22.81	213	eP	P	11 50 56.0	+1.5
	28nm,0.8s						
STKA	Stephens Creek	30.06	224	eP	P	11 52 01.5	+0.9
	1.2nm,1.1s						
STKA	Stephens Creek	30.06	224	P	P	11 52 01.2	+0.5
	3.0nm,0.8s,baz=57,slow=9.3,SNR=7.7						
SNZO	South Karori	30.40	167	eP	P	11 52 02.4	-1.1
	90nm,1.3s						
THZ	Tophouse	30.48	170	eP	P	11 52 04.8	+0.5
	18nm,0.8s						
WRAB	Tennant Creek	31.42	251	eP	P	11 52 12.9	0.0
	8.0nm,0.8s						
WB2	Warramunga Arr	31.42	251	eP	P	11 52 12.6	-0.3
WR1	Warramunga Arr	31.43	251	eP	P	11 52 12.8	-0.1
	9.5nm,0.8s						
WR1				ePcP	PcP	11 55 06.9	+0.5
WRA	Warramunga Arr	31.43	251	P	P	11 52 12.8	-0.1
	4.8nm,0.6s,baz=84,slow=8.9,SNR=45						
WRA				PcP	PcP	11 55 06.9	+0.5
	1.3nm,0.8s,baz=79,slow=3.1,SNR=6.3						
RPZ	Rata Peaks	32.12	173	P	P	11 52 19.6	+0.9
	24nm,0.6s,baz=321,slow=1.6,SNR=19						
AS01	Alice Springs	32.61	244	eP	P	11 52 22.6	-0.7
AS31	Alice Springs	32.65	244	eP	P	11 52 23.2	-0.5
	2.7nm,0.7s						
AS31				ePcP	PcP	11 55 09.8	+0.1
ASAR	Alice Springs	32.66	244	P	P	11 52 23.1	-0.6
	8.8nm,0.7s,baz=69,slow=9.5,SNR=64						
ASAR				PcP	PcP	11 55 09.8	+0.1
	1.4nm,0.6s,baz=67,slow=2.6,SNR=10.0						
MTN	Manton Dam	34.02	264	eP	P	11 52 36.6	+0.9
	50nm,1.5s						
FITZ	Fitzroy Crossi	39.40	256	eP	P	11 53 21.0	-0.4
	7.1nm,0.8s						
FITZ	Fitzroy Crossi	39.40	256	P	P	11 53 21.5	+0.1
	6.6nm,0.8s,baz=78,slow=10.0,SNR=10						
KKM	Kota Kinabalu	52.55	287	eP	P	11 55 04.1	-1.3
	26nm,0.8s						
MJAR	Matsushiro Arr	54.72	333	P	P	11 55 19.6	-1.2
	1.5nm,0.7s,baz=172,slow=8.5,SNR=5.2						
MAJO	Matsushiro	54.72	333	eP	P	11 55 19.6	-1.2
ASAJ	Asahikawa	59.55	341	P	P	11 55 55.0	+0.1
	2.0nm,0.6s,baz=162,slow=9.6,SNR=5.3						
KSRS	Korea Array	60.60	326	P	P	11 56 02.3	+0.2
	1.2nm,0.7s,baz=137,slow=8.0,SNR=4.5						
KS15	Wonju Array Si	60.61	326	eP	P	11 56 00.3	-2.0
KSAR	Wonju Array Be	60.61	326	P	P	11 56 02.3	0.0
USRK	Ussuriysk Ar.	63.70	333	P	P	11 56 23.3	+0.5
	3.0nm,1.0s,baz=120,slow=8.5,SNR=3.7						
VNDA	Vanda	65.76	181	eP	P	11 56 35.0	-0.9
VNDA	Vanda	65.76	181	P	P	11 56 36.2	+0.3
	2.2nm,0.6s,baz=9.9,slow=9.2,SNR=4.0						
ENH	Enshi	68.52	309	eP	P	11 56 54.2	0.0
	9.9nm,0.9s						
PBKT	Sadao Pong	70.15	292	P	P	11 57 17.9	+13
CM01	Chiang Mai Arr	72.57	294	eP	P	11 57 18.4	-0.7
CM31	Chiang Mai Arr	72.60	294	eP	P	11 57 20.8	+1.5
CMAR	Chiang Mai Arr	72.60	294	P	P	11 57 20.8	+1.5
	2.6nm,0.8s,baz=122,slow=4.7,SNR=13						
QSPA	South Pole Qui	78.23	180	eP	P	11 57 50.5	-0.5
	8.1nm,1.0s						
ULN	Ulaanbaatar	79.02	324	eP	P	11 57 55.5	-0.1
	8.3nm,1.0s						
SONA0	Songino Array	79.38	324	eP	P	11 57 58.0	+0.5
SONM	Songino Array	79.38	324	P	P	11 57 58.0	+0.5
	2.8nm,0.9s,baz=138,slow=5.8,SNR=13						
SONA1	Songino Array	79.38	324	eP	P	11 57 57.8	+0.2
TLY	Talaya	82.85	326	eP	P	11 58 14.8	-1.0
	4.3nm,0.8s						
HDA	Harding Lake	83.87	19	eP	P	11 58 19.7	-1.1
	5.4nm,0.8s						
ILAR	Eielson Array	84.14	18	P	P	11 58 21.1	-1.0
	0.7nm,0.7s,baz=236,slow=6.4,SNR=6.0						
ILB	Eielson Array	84.14	18	eP	P	11 58 21.0	-1.2
NV01	Mina Array Sit	86.34	50	eP	P	11 58 37.5	+3.5
NVAR	Mina Array Bea	86.34	50	P	P	11 58 35.3	+1.3
	1.0nm,0.7s,baz=233,slow=8.0,SNR=9.2						
ELK	Elko	89.28	48	P	P	11 58 51.9	+3.8
	0.4nm,0.5s,baz=277,slow=5.3,SNR=3.8						
PD31	Pinedale Array	93.90	47	eP	P	11 59 09.7	+0.3
PDAR	Pinedale Array	93.90	47	P	P	11 59 11.2	+1.7
	0.3nm,0.7s,baz=222,slow=1.2,SNR=2.8						
MK01	Makanchi Array	94.19	317	eP	P	11 59 10.8	+0.3
MK32	Makanchi Array	94.20	317	eP	P	11 59 10.8	+0.4
MKAR	Makanchi Array	94.20	317	P	P	11 59 10.8	+0.4
	7.4nm,0.7s,baz=100,slow=6.4,SNR=10						
ZAA0	Zalesovo Array	94.27	324	eP	P	11 59 09.6	-1.0
	2.4nm,0.8s						
ZALV	Zalesovo Beam	94.27	324	eP	P	11 59 09.2	-1.4
ZALV	Zalesovo Beam	94.27	324	P	P	11 59 09.9	-0.7
	1.8nm,0.6s,baz=124,slow=4.0,SNR=12						
ZAA1	Zalesovo Array	94.27	324	eP	P	11 59 09.9	-0.7
YKA	Yellowknife Ar	95.53	27	P	P	11 59 18.3	+2.2
	0.2nm,0.5s,baz=258,slow=4.6,SNR=6.7						
YKB5	Yellowknife Ar	95.53	27	eP	P	11 59 18.3	+2.2
LTX	Lajitas	96.00	61	eP	P	11 59 21.4	+2.1
TXAR	Lajitas Array	96.00	61	P	P	11 59 21.4	+2.1
	0.1nm,0.5s,baz=227,slow=4.8,SNR=3.3						
ARA0	ARCESS Array S	117.10	345	ePKPdf	PKPdf	12 04 34.7	-1.3
ARCES	ARCESS Array B	117.10	345	PKP	PKPdf	12 04 34.7	-1.3
	1.7nm,0.9s,baz=77,slow=1.9,SNR=4.0						
BOSA	Boshof	124.72	223	PKP	PKiKP	12 04 51.7	-0.7
	1.7nm,0.6s,baz=133,slow=4.1,SNR=5.9						
CLL	Collm	134.86	336	ePKPdf	PKiKP	12 05 12.0	+0.2

IDC 06 11:49:41.5±4.7, 10°.96S×164°.63E, h66km±32km, mb3.4/3, mb1 3.8/5, mb1mx3.3/47, mbtmp3.9/5, ML4.3/2, Error ellipse: s-maj=54.6km s-min=23.0km az=44.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.85	288	P	Pn	11 50 51.8	-0.3
	25nm,0.3s,baz=127,slow=8.6,SNR=5.5						
HNR				S	Sn	11 51 47.9	+0.9
	10.0nm,0.3s,baz=229,slow=16,SNR=1.9						
DZM	Mont Dzumac	11.19	171	P	Pn	11 52 18.6	-0.1
	0.9nm,0.3s,baz=136,slow=21,SNR=8.8						
WRA	Warramunga Arr	30.49	249	P	P	11 55 48.2	-0.3
	0.6nm,0.6s,baz=80,slow=9.1,SNR=5.4						
ASAR	Alice Springs	31.86	243	P	P	11 56 00.7	+0.1
	0.3nm,0.4s,baz=63,slow=9.8,SNR=4.5						
MKAR	Makanchi Array	92.71	317	P	P	12 02 46.6	+0.1
	0.4nm,0.6s,baz=103,slow=4.4,SNR=4.6						

*IDC **06** 11:53:52.7±0.3, 11°.23S×165°.84E, h0km, mb5.2/36, mb1 5.3/38, mb1mx5.2/49, mbtmp5.2/38, ML5.4/2, MS5.7/37, Ms1 5.7/37, ms1mx5.6/43, Error ellipse: s-maj=12.1km s-min=9.7km az=90.0*

*BJI **06** 11:53:53.5, 11°.20S×165°.70E, h10km, mB5.9/56, mb5.5/71, Ms5.9/83, Ms7 5.7/77*

*ISCJB **06** 11:53:53.1±0.1, 11°.25S±0°.02×165°.72E±0°.02, h11km, mb5.5/135, MS5.9/189, Error ellipse: s-maj=3.2km s-min=2.8km az=177.8*

*NEIC **06** 11:53:54.0±0.0, 11°.05S×165°.84E, h13km Best double couple: NP1:φs107.00000°, δ78.00000°, λ-112.00000°. NP2:φs351.00000°, δ25.00000°, λ-28.00000°. Principal axes: T 1.1100, Plg29.0000°, Azm215.0000°; N -0.0200, Plg21.0000°, Azm111.0000°; P -1.0900, Plg51.0000°, Azm351.0000°;*

*NEIC **06** 11:53:55.2±0.1, 11°.24S×165°.73E, h14km, mb5.8/59, ME5.9, MS5.9/127, MW6.1, MW6.0 Error ellipse: s-maj=3.2km s-min=2.7km az=120.0, Moment Tensor Solution. s52 Moment tensor: Scale 10^18Nm; Mrr-0.36; Mθθ0.02; Mφφ0.34; Mrθ-1.37; Mθφ-0.18; Mφr0.26; Best double couple: M0 1.50000×10^18 NP1:φs347.00000°, δ11.00000°, λ-28.00000°. NP2:φs104.00000°, δ85.00000°, λ-100.00000°. Principal axes: T 1.3100, Plg39.0000°, Azm203.0000°; N 0.2400, Plg10.0000°, Azm105.0000°; P -1.5600, Plg49.0000°, Azm4.0000°; Broadband fault plane solution: P waves. NP1:φs300.00000°, δ10.00000°, λ-90.00000°. NP2:φs120.00000°, δ80.00000°, λ-90.00000°. Principal axes: T Plg35.0000°, Azm210.0000°; N Plg0.0000°, Azm0.0000°; P Plg55.0000°, Azm30.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*MOS **06** 11:53:57.7±0.9, 10°.94S×165°.63E, h34km, mb5.6/46, MS5.9/23 Error ellipse: s-maj=7.9km s-min=6.4km az=101.9*

*GCMT **06** 11:54:00.2±0.1, 11°.34S±0°.01×165°.54E±0°.01, h16km, MW6.1/144, Moment Tensor Solution. s120,c216; s144,c307; Duration: 2ˢ6 Moment tensor: Scale 10^18 Nm; Mrr-0.49±.01; Mθθ0.30±.01; Mφφ0.18±.01; Mrθ-1.33±.03; Mθφ-0.61±.01; Mφr0.40±.03; Best double couple: M0 1.56800×10^18 NP1:φs107.00000°, δ79.00000°, λ-107.00000°. NP2:φs346.00000°, δ20.00000°, λ-33.00000°. Principal axes: T 1.6540, Plg32.0000°, Azm212.0000°; N -0.1720, Plg17.0000°, Azm111.0000°; P -1.4820, Plg53.0000°, Azm357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 11:53:54.8±0.6, 11°.23S±0°.04×165°.87E±0°.04, h15km±3km, n839, σ1ˢ38/809, mb5.5/134, MS5.9/190, 23C-29D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.10	287	ePn	Pn	11 55 23.9	-0.5
HNR				eSn	Sn	11 56 28.9	-5.1
HNR	Honiara	6.10	287	eP	Pn	11 55 24.0	-0.5
HNR				e		11 56 28.9	
HNR	Honiara	6.10	287	Pn	Pn	11 55 24.1	-0.4
	57nm,0.3s,baz=149,slow=6.0,SNR=15						
HNR				Sn	Sn	11 56 33.6	-0.4
	92nm,0.3s,baz=194,slow=19,SNR=5.6						
MARNC	Mare, Loyalty	10.40	169	ePn	Pn	11 56 23.8	+0.3
DZM	Mont Dzumac	10.79	177	ePn	Pn	11 56 28.5	-0.5
	1µm,1.2s						
DZM				eLR	LR	11 58 51.0	
	comp=Z,72µm,25.9s						
DZM	Mont Dzumac	10.79	177	ePn	Pn	11 56 29.2	+0.2
DZM				Sn	Sn	11 58 26.3	-3.4
DZM	Mont Dzumac	10.79	177	Pn	Pn	11 56 28.6	-0.4
	40nm,0.3s,baz=25,slow=11,SNR=125						
DZM				Sn	Sn	11 58 26.3	-3.4
	11nm,0.3s,baz=75,slow=13,SNR=3.1						
DZM				LR	LR	12 00 02.9	
	comp=Z,44µm,21.9s,baz=5.0,slow=34						
PINNC	Pines Island,	11.42	173	ePn	Pn	11 56 38.4	+1.0
FUNA	Funafuti	13.40	80	ePn	P	11 57 11.0	-3.0
MSVF	Nonsavu	13.44	120	ePn	P	11 57 14.8	+0.2
MSVF	Nonsavu	13.44	120	eP	P	11 57 14.8	+0.2
TARA	Tarawa	14.34	30	ePn	P	11 57 22.4	-2.1
PATS	Pohnpei	19.46	337	eP	Pn	11 58 22.5	+0.1
	618nm,1.1s						
KWAJ	Kwajalein Atol	19.98	5	eP	P	11 58 26.7	-0.1
KWAJ	Kwajalein Atol	19.98	5	eP	P	11 58 26.7	-0.1
CTA	Charters Tower	20.82	243	P	P	11 58 36.2	+0.2
	201nm,1.1s,baz=67,slow=15,SNR=32						
CTA				LR	LR	12 05 49.4	
	comp=Z,33µm,18.6s,baz=63,slow=34						
CTAO	Charters Tower	20.82	243	eP	P	11 58 36.3	+0.2
	454nm,1.3s						
CTAO				LR	LR		
	comp=Z,43µm,20.0s						
CTAO	Charters Tower	20.82	243	eP	P	11 58 36.3	+0.2
CTAO				pmax	pmax		
	comp=Z,454nm,1.3s						
CTAO				MLR	MLR		

	comp=Z,43µm,20.0s						
RAO	**Raoul Island**	23.46	142	PFAKE		11 59 20.0	+16
RAO				LR	LR		
	comp=Z,23µm,19.0s						
RAO	**Raoul Island**	23.46	142	LR	LR	12 06 17.6	
	comp=Z,21µm,18.5s,baz=308,slow=32						
KNTN	**Kanton**	23.76	71	*e*P	P	11 59 08.2	+1.2
	comp=Z,2µm,1.8s						
OUZ	**Omahuta**	24.89	165	*e*P	P	11 59 19.3	+2.2
	comp=Z,182nm,1.1s						
JAY	**Jayapura**	26.42	287	P	P	11 59 31.3	0.0
GENI	**Genyem**	26.90	287	P	P	11 59 35.7	+0.1
KUZ	**Kuaotunu**	26.91	162	P	P	11 59 36.6	+1.1
TOZ	**Tahuroa Road**	27.77	163	P	P	11 59 44.7	+1.6
OPRZ	**Ohinepanea**	28.18	162	P	P	11 59 48.0	+1.2
HIZ	**Hauiti**	28.33	165	*e*P	P	11 59 50.0	+1.9
HIZ	**Hauiti**	28.33	165	P	P	11 59 50.1	+1.9
TLZ	**Tolley Road**	28.34	164	P	P	11 59 49.8	+1.5
OMRZ	**Omania**	28.37	162	P	P	11 59 51.0	+2.5
CAN	**Canberra**	28.46	210	*e*P	P	11 59 48.4	-1.0
	comp=Z,78nm,1.2s						
CAN	**Canberra**	28.46	210	*e*P	P	11 59 48.4	-1.0
CAN				pmax	pmax		
	comp=Z,78nm,1.2s						
HAZ	**Te Kaha**	28.49	160	P	P	11 59 51.3	+1.8
MXZ	**Matakaoa Point**	28.50	159	*e*P	P	11 59 48.9	-0.7
	comp=Z,82nm,1.0s						
MXZ	**Matakaoa Point**	28.50	159	P	P	11 59 51.2	+1.6
HRRZ	**Handcock Road**	28.60	163	P	P	11 59 53.1	+2.4
RUGZ	**Raukumara Rang**	28.65	160	P	P	11 59 53.8	+2.7
URZ	**Urewera**	28.73	161	*e*P	P	11 59 52.5	+0.9
	comp=Z,72nm,0.9s						
URZ				S	S	12 04 43.0	+2.5
URZ	**Urewera**	28.73	161	P	P	11 59 52.3	+0.6
	comp=Z,20nm,0.5s,baz=5.1,slow=6.1,SNR=26						
URZ				S	S	12 04 43.0	+2.5
	comp=Z,12nm,0.9s,baz=18,slow=20,SNR=2.9						
URZ	**Urewera**	28.73	161	P	P	11 59 53.0	+1.3
PRRZ	**Plateau Road**	28.74	163	P	P	11 59 50.2	-1.6
WMGZ	**Waiomatatini S**	28.77	159	P	P	11 59 53.1	+1.1
MWZ	**Matawai**	28.93	161	P	P	11 59 54.7	+1.1
PUZ	**Puketiti**	28.94	160	P	P	11 59 54.5	+1.0
BKZ	**Black Stump Fm**	29.38	163	*e*P	P	11 59 58.1	+0.5
BKZ				*e*pP	P	11 59 58.7	+1.1
BKZ				*e*S	S	12 04 55.0	+4.2
STKA	**Stephens Creek**	30.39	224	*e*P	P	12 00 06.2	-0.3
STKA				*e*pP	pP	12 00 06.4	-3.4
STKA	**Stephens Creek**	30.39	224	P	P	12 00 06.1	-0.4
STKA				pmax	pmax		
	comp=Z,21nm,0.5s						
STKA				pmax	pmax		
	comp=N,10.0nm,0.9s						
STKA				MLR	MLR		
	comp=Z,25µm,19.0s						
STKA	**Stephens Creek**	30.39	224	P	P	12 00 06.1	-0.4
	comp=Z,21nm,0.5s,baz=47,slow=9.2,SNR=39						
STKA				LR	LR	12 11 31.4	
	comp=Z,25µm,19.0s,baz=45,slow=35						
BFZ	**Birch Farm**	30.73	164	*e*P	P	12 00 09.4	+0.1
BFZ				*e*pP	P	12 00 10.5	+1.1
H11N1	**WAKE ISLAND Hy**	30.77	2	T	T	12 32 01.4	
	baz=181						
H11N3	**WAKE ISLAND Hy**	30.77	2	T	T	12 32 12.4	
	baz=181						
H11N2	**WAKE ISLAND Hy**	30.78	2	T	T	12 32 07.1	
	baz=181						
SNZO	**South Karori**	30.95	167	*e*P	P	12 00 15.0	+3.7
	comp=Z,654nm,1.9s						
SNZO				LR	LR		
	comp=Z,23µm,19.0s						
THZ	**Tophouse**	31.03	170	*e*P	P	12 00 13.1	+1.0
THZ				*e*pP	P	12 00 13.2	+1.1
WRAB	**Tennant Creek**	31.52	250	*e*P	P	12 00 15.3	-1.4
WRAB				*e*pP	P	12 00 15.6	-1.1
WRAB				LR	LR		
	comp=Z,23µm,19.0s						
WRAB	**Tennant Creek**	31.52	250	*de*P	P	12 00 15.6	-1.1
WRAB				pmax	pmax		
	comp=Z,115nm,1.7s						
WB2	**Warramunga Arr**	31.53	250	*e*pP	P	12 00 15.6	-1.1
WRA	**Warramunga Arr**	31.54	250	P	P	12 00 14.7	-2.1
	comp=Z,38nm,0.7s,baz=81,slow=9.0,SNR=176						
WRA				PcP	PcP	12 03 10.8	+1.3
	comp=Z,6.5nm,0.8s,baz=76,slow=3.5,SNR=4.7						
WRA				ScP	ScP	12 06 54.9	+2.4
	comp=Z,14nm,1.2s,baz=78,slow=2.7,SNR=6.7						
WRA				PKiKP	PKiKP	12 10 39.5	+0.4
	comp=Z,1.0nm,0.8s,baz=6.6,slow=0.8,SNR=5.2						
WRA				LR	LR	12 12 11.1	
	comp=Z,15µm,18.2s,baz=75,slow=35						
KHZ	**Kahutara**	31.78	169	*e*P	P	12 00 19.0	+0.5
	comp=Z,443nm,1.9s						
LTZ	**Lake Taylor**	31.92	171	*e*P	P	12 00 20.2	+0.3
	comp=Z,630nm,1.7s						
LTZ				*e*S	S	12 05 36.8	+6.3
GUMO	**Guam**	32.28	319	PFAKE		12 00 40.0	+17
GUMO				LR	LR		
	comp=Z,14µm,21.0s						
GUMO	**Guam**	32.28	319	LR	LR	12 12 41.0	
	comp=Z,6µm,21.6s,baz=137,slow=35						
FOZ	**Fox Glacier**	32.36	175	*e*P	P	12 00 25.2	+1.5
	comp=Z,134nm,0.9s						
OXZ	**Oxford**	32.42	172	*e*P	P	12 00 24.8	+0.6
	comp=Z,345nm,1.3s						
RPZ	**Rata Peaks**	32.67	173	*e*P	P	12 00 27.0	+0.6
	comp=Z,132nm,0.9s						
RPZ	**Rata Peaks**	32.67	173	P	P	12 00 26.1	-0.4
	comp=Z,80nm,0.9s,baz=342,slow=3.2,SNR=22						
RPZ				LR	LR	12 13 02.4	
	comp=Z,28µm,18.5s,baz=346,slow=35						
CRLZ	**Canterbury Las**	32.75	171	*e*P	P	12 00 27.8	+0.7
	comp=Z,1µm,1.6s						
AS01	**Alice Springs**	32.78	244	*e*P	P	12 00 25.4	-2.3
AS31	**Alice Springs**	32.82	244	*e*P	P	12 00 26.3	-1.8
	comp=Z,9.0nm,0.8s						
ASAR	**Alice Springs**	32.82	244	P	P	12 00 26.1	-2.0
	comp=Z,14nm,0.9s,baz=73,slow=9.5,SNR=80						
ASAR				PcP	PcP	12 03 14.4	+1.3
	comp=Z,4.9nm,0.8s,baz=64,slow=4.2,SNR=3.1						
ASAR				PKiKP	PKiKP	12 10 39.8	-0.1
	comp=Z,0.8nm,0.9s,baz=115,slow=1.6,SNR=4.1						
ASAR				LR	LR	12 12 55.7	
	comp=Z,23µm,19.3s,baz=72,slow=35						
MQZ	**McQueen's Vall**	32.88	171	*e*P	P	12 00 28.4	+0.2
	comp=Z,1µm,2.0s						
LBZ	**Lake Benmore**	33.24	174	*e*P	P	12 00 31.9	+0.5
	comp=Z,93nm,1.1s						
WKZ	**Wanaka**	33.59	176	*e*P	P	12 00 35.0	+0.5
	comp=Z,446nm,1.6s						
ANA2	**Anatahan**	33.89	324	*e*P	P	12 00 38.4	+1.1
	comp=Z,231nm,1.2s						
ODZ	**Otahua Downs**	33.94	174	*e*P	P	12 00 38.2	+0.7
	comp=Z,293nm,1.7s						
MLZ	**Mavora Lakes**	34.07	177	*e*P	P	12 00 40.0	+1.3
	comp=Z,131nm,1.5s						
DCZ	**Deep Cove**	34.13	178	*e*P	P	12 00 38.9	-0.2
	comp=Z,112nm,1.1s						
SAUI	**Saumlaki**	34.23	272	*e*P	P	12 00 38.4	-2.0
	comp=Z,141nm,1.0s						
RAR	**Rarotonga**	34.38	111	PFAKE		12 01 00.0	+18
RAR				LR	LR		
	comp=Z,6µm,19.0s						
RAR	**Rarotonga**	34.38	111	LR	LR	12 10 47.7	
	comp=Z,4µm,21.6s,baz=280,slow=30						
WHZ	**Wether Hill Ro**	34.59	177	*e*P	P	12 00 43.3	+0.3
	comp=Z,221nm,1.8s						
TAU	**Tasmania Unive**	35.45	204	PFAKE		12 01 00.0	+9.5
TAU				LR	LR		
	comp=Z,7µm,19.0s						
JOHN	**Johnston Islan**	36.93	42	PFAKE		12 01 20.0	+17
JOHN				LR	LR		
	comp=Z,1µm,21.0s						
FITZ	**Fitzroy Crossi**	39.45	255	P	P	12 01 23.9	-1.0
	comp=Z,27nm,0.7s,baz=84,slow=8.6,SNR=44						
FITZ				LR	LR	12 17 20.1	
	comp=Z,10µm,18.1s,baz=80,slow=36						
TNTI	**Ternate**	40.08	285	P	P	12 01 30.1	0.0
SANI	**Sanana**	40.60	280	P	P	12 01 34.1	-0.3
SOEI	**Soe**	40.91	268	*e*P	P	12 01 35.2	-1.9
	comp=Z,116nm,1.0s						
BATI	**Baumata**	41.46	267	P	P	12 01 41.5	0.0
	comp=Z,67nm,0.7s,baz=63,slow=2.5,SNR=12						
BATI				LR	LR	12 18 04.0	
	comp=Z,10µm,21.9s,baz=129,slow=35						
MIDW	**Midway**	42.44	22	PFAKE		12 02 00.0	+11
MIDW				LR	LR		
	comp=Z,23µm,19.0s						
MMRI	**Maumere**	43.03	269	*e*P	P	12 01 52.2	-2.2
	comp=Z,149nm,1.1s						
MMRI	**Maumere**	43.03	269	P	P	12 01 53.4	-0.9
MATI	**Mati**	43.36	293	*e*P	P	12 01 55.7	-1.3
PPT	**Papeete**	43.53	104	LR	LR	12 18 05.0	
	comp=Z,7µm,18.0s,baz=274,slow=33						
PPT2	**Papeete2**	43.53	104	*e*S	S	12 08 24.8	-2.4
	comp=Z,1µm,25.2s						
PPT2				*e*LQ	LQ	12 12 08.6	
	comp=Z,46µm,27.0s						
PPT2				*e*LR	LR	12 13 58.0	
	comp=Z,9µm,26.5s						
EDFI	**Ende, Flores**	43.55	269	P	P	12 01 57.4	-1.3
LUWI	**Luwuk**	43.97	280	P	P	12 02 01.6	-0.3
DAV	**Davao City (W)**	44.02	293	PFAKE		12 02 10.0	+7.7
DAV				LR	LR		
	comp=Z,4µm,20.0s						
DAV	**Davao City (W)**	44.02	293	LR	LR	12 17 24.6	
	comp=Z,4µm,22.0s,baz=162,slow=32						
TBI	**Tubuai**	44.15	112	*e*S	S	12 08 32.7	-3.2
	comp=Z,4µm,27.0s						
TBI				*e*LQ	LQ	12 12 24.9	
	comp=Z,30µm,30.5s						
TBI				*e*LR	LR	12 14 15.2	
	comp=Z,7µm,30.0s						
JCJ	**Chichijima**	44.50	329	LR	LR	12 17 37.1	
	comp=Z,8µm,21.7s,baz=152,slow=32						
SKMP	**Bagumbayan, Su**	44.75	291	*e*P	P	12 02 06.4	-1.7
BUTP	**Butuan**	44.78	295	*e*P	P	12 02 09.6	+1.2
BUKP	**Musuan**	44.82	293	*e*P	P	12 02 09.7	+1.0
MBWA	**Marble Bar**	45.26	251	*e*P	P	12 02 11.8	-0.3
	comp=Z,92nm,1.1s						
MBWA				LR	LR		
	comp=Z,11µm,22.0s						
MBWA	**Marble Bar**	45.26	251	P	P	12 02 12.6	+0.5
	SNR=8.8						
CTBH	**Cotabato--PC H**	45.30	292	⇑*i*P	P	12 02 12.2	-0.3
BKSI	**Bulukumba**	45.61	274	P	P	12 02 14.4	-0.6
BNSI	**Bone**	45.80	275	P	P	12 02 16.0	-0.5
MSLP	**Maasin**	45.97	296	*e*P	P	12 02 17.6	-0.2
KAPI	**Kappang**	46.03	274	PFAKE		12 02 30.0	+12
KAPI				LR	LR		
	comp=Z,5µm,22.0s						
SPSI	**Sidrap Palu**	46.22	275	P	P	12 02 19.3	-0.5
PAGZ	**Pagadian**	46.33	292	*e*P	P	12 02 20.3	-0.3
TTSI	**Tana Toraja**	46.36	277	P	P	12 02 20.5	-0.4
PCI	**Palu**	46.84	279	P	P	12 02 24.4	-0.3
IPIL	**Ipil**	47.04	292	*e*P	P	12 02 27.1	+0.9
PLAI	**Plampang**	47.38	268	P	P	12 02 28.1	-0.8
KIP	**Kipapa**	48.07	48	PFAKE		12 02 50.0	+16
KIP				LR	LR		
	comp=Z,13µm,20.0s						
KIP	**Kipapa**	48.07	48	⇑*e*P	P	12 02 35.5	+1.4
KIP				pmax	pmax		
	comp=Z,150nm,1.7s						
PVCP	**Virac**	48.17	300	*e*P	P	12 02 32.9	-2.1
GUIM	**Jordan**	48.19	295	*e*P	P	12 02 34.6	-0.5
OPA	**Opana**	48.24	47	*e*P	P	12 02 37.0	+1.6
	comp=Z,345nm,1.1s						
OPA	**Opana**	48.24	47	*e*P	P	12 02 37.0	+1.6
OPA				pmax	pmax		
	comp=Z,345nm,1.1s						
RCP	**Roxas**	48.46	296	⇑*e*P	P	12 02 37.4	+0.2
MWH	**Moku'aweowe**	48.71	51	*e*P	P	12 02 41.6	+1.9
	comp=Z,260nm,1.1s						
AIN	**Ainahou**	48.75	52	*e*P	P	12 02 43.1	+3.6
	comp=Z,260nm,1.0s						
POHA	**Pohakuloa**	48.91	51	*e*P	P	12 02 43.6	+2.7
	comp=Z,722nm,0.9s						
POHA				LR	LR		
	comp=Z,11µm,20.0s						
HPAH	**Hawaii Prepara**	48.95	51	*e*P	P	12 02 44.5	+3.6
	comp=Z,141nm,0.9s						
OTRP	**Odiongan**	49.45	297	*e*P	P	12 02 45.3	+0.5
NWAO	**Narrogin (SRO)**	49.46	236	*e*P	P	12 02 44.7	0.0
	comp=Z,138nm,1.4s						
NWAO				LR	LR		
	comp=Z,19µm,20.0s						
NWAO	**Narrogin (SRO)**	49.46	236	*e*P	P	12 02 44.7	0.0
NWAO				pmax	pmax		
	comp=Z,138nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,19µm,20.0s						
NWAO	**Narrogin (SRO)**	49.46	236	P	P	12 02 45.9	+1.2
	SNR=5.4						
NWAO	**Narrogin (SRO)**	49.46	236	LR	LR	12 23 55.1	
	comp=Z,23µm,18.2s,baz=308,slow=36						
KBKI	**Kotabaru**	49.87	275	P	P	12 02 47.7	-0.4
SRBI	**Singaraja**	49.99	269	P	P	12 02 48.3	-0.7
SJMP	**San Jose**	50.28	297	*e*P	P	12 02 52.2	+1.1
JHJ	**Hachijo jima 2**	50.64	331	LR	LR	12 23 15.5	
	comp=Z,4µm,19.6s,baz=148,slow=35						
JAGI	**Jajag, Banyuwa**	50.98	268	P	P	12 02 47.7	-8.8
TGY	**Tagaytay City**	51.17	298	LR	LR	12 23 04.6	
	comp=Z,3µm,20.0s,baz=120,slow=34						
ENPP	**El Nido**	51.25	294	*e*P	P	12 02 57.2	-1.2
PALP	**Palanan**	51.33	303	*e*P	P	12 02 58.6	-0.3
KMMI	**Kalianget**	51.36	270	P	P	12 02 59.2	-0.2
GMJI	**Gumukmas**	51.70	268	P	P	12 03 01.3	-0.6
CAUP	**Cauayan**	51.77	302	*e*P	P	12 03 03.1	+0.8
KKM	**Kota Kinabalu**	52.31	287	*e*P	P	12 03 06.7	+0.2
SMPP	**San Manuel, Pa**	52.34	301	*e*P	P	12 03 05.6	-0.9
JOW	**Kunigami**	52.58	317	P	P	12 03 07.5	-0.6
	comp=Z,6.4nm,0.9s,baz=117,slow=11,SNR=6.1						
TAOE	**Nuku Hiva Isla**	53.15	93	*e*S	S	12 10 39.5	-3.9
	comp=Z,2µm,26.5s						
TAOE				*e*LQ	LQ	12 16 10.8	
	comp=Z,12µm,23.3s						
TAOE				*e*LR	LR	12 18 22.2	
	comp=Z,5µm,22.1s						
INU	**Inuyama**	53.77	331	*e*P	P	12 03 17.2	+0.4
	comp=Z,146nm,1.7s						
NGJI	**Ngawi**	53.77	269	P	P	12 03 16.7	-0.5
PCJI	**Pacitan**	53.94	268	P	P	12 03 17.2	-1.2
MJAR	**Matsushiro Arr**	54.19	333	P	P	12 03 18.8	-1.0
	comp=Z,18nm,0.8s,baz=171,slow=8.1,SNR=23						
MJAR				LR	LR	12 25 39.7	
	comp=Z,3µm,19.9s,baz=155,slow=35						
MAJO	**Matsushiro**	54.19	333	*e*P	P	12 03 19.5	-0.4
	comp=Z,38nm,0.9s						
MAJO				LR	LR		
	comp=Z,7µm,20.0s						
MAJO	**Matsushiro**	54.19	333	⇑*i*P	P	12 03 19.6	-0.3
MAJO				pmax	pmax		
	comp=Z,32nm,1.0s						
MAT	**Matsushiro**	54.19	333	P	P	12 03 19.0	-0.9
MJB9	**Matsu-Tunnel**	54.20	333	*e*P	P	12 03 19.8	-0.1
	comp=Z,38nm,0.9s						
WOJI	**Wonogiri, Jawa**	54.23	268	P	P	12 03 20.1	-0.5
UGM	**Wanagama**	54.62	268	*e*P	P	12 03 22.1	-1.4
	comp=Z,358nm,1.2s						
UGM	**Wanagama**	54.62	268	P	P	12 03 21.9	-1.5
SBUM	**Sibu**	55.06	281	*e*P	P	12 03 26.6	0.0
JNU	**Nakatsue**	55.30	324	*e*P	P	12 03 28.9	+0.9
	comp=Z,72nm,1.0s						
JNU	**Nakatsue**	55.30	324	P	P	12 03 28.4	+0.3
	comp=Z,33nm,0.9s,baz=102,slow=4.6,SNR=9.8						
JNU				LR	LR	12 24 59.8	
	comp=Z,2µm,20.1s,baz=130,slow=34						
YULB	**Yu-li**	55.55	309	*e*P	P	12 03 31.4	+1.5
	comp=Z,73nm,1.3s						
TPUB	**Ta-pu**	56.01	308	*e*P	P	12 03 33.4	+0.1
	comp=Z,345nm,1.8s						
YHNB	**Yeheng**	56.20	310	*e*P	P	12 03 34.8	+0.1
	comp=Z,140nm,1.2s						
TATO	**Taipei**	56.28	310	PFAKE		12 03 50.0	+15
TATO				LR	LR		
	comp=Z,7µm,19.0s						
KSM	**Kuching**	56.66	279	*e*P	P	12 03 38.0	-0.1
ERM	**Erimo**	56.95	340	*e*P	P	12 03 40.1	+0.5
ERM				LR	LR		
	comp=Z,5µm,19.0s						
ERM	**Erimo**	56.95	340	⇑*e*P	P	12 03 40.5	+1.0
ERM				pmax	pmax		
	comp=Z,41nm,1.5s						
CISI	**Cisompet, Garu**	57.32	268	*e*P	P	12 03 42.9	0.0
	comp=Z,491nm,1.5s						
CISI	**Cisompet, Garu**	57.32	268	P	P	12 03 42.4	-0.5
RKT	**Rikitea**	57.41	110	*e*S	S	12 11 36.9	-3.1
	comp=Z,3µm,28.0s						
RKT				*e*LQ	LQ	12 17 59.4	
	comp=Z,11µm,29.2s						
RKT				*e*LR	LR	12 20 22.1	
	comp=Z,5µm,24.5s						
YUK	**Yuzh-Kuril'sk**	57.94	343	⇓*e*P	P	12 03 44.1	-2.4
ASAJ	**Asahikawa**	59.01	341	LR	LR	12 27 11.7	
	comp=Z,7µm,19.8s,baz=180,slow=34						
SSE	**Sheshan**	60.07	316	P	P	12 04 01.1	-0.5
SSE				S	S	12 12 15.4	+1.2
SSE				pmax	pmax		
	comp=Z,310nm,4.1s						
SSE				LR	LR		
	comp=Z,2µm,17.1s						
SSE				LR	LR		
	comp=Z,2µm,19.8s						
SSE	**Sheshan**	60.07	316	*e*P	P	12 03 59.3	-2.3
	comp=Z,83nm,1.2s						
SSE				LR	LR		
	comp=Z,5µm,19.0s						
KSRS	**Korea Array**	60.10	326	P	P	12 04 01.8	+0.2
	comp=Z,8.8nm,1.0s,baz=143,slow=6.0,SNR=18						
KSRS				LR	LR	12 28 37.5	
	comp=Z,4µm,19.3s,baz=134,slow=35						
KSAR	**Wonju Array Be**	60.11	326	P	P	12 04 01.8	+0.1
KSAR	**Wonju Array Be**	60.11	326	P	P	12 04 01.8	+0.1
KS01	**Wonju Array Si**	60.13	326	*e*P	P	12 04 01.1	-0.7
HKC	**Hong Kong Obse**	60.65	304	⇓P	P	12 04 07.0	+1.3
YSS	**Yuzh-Sakhalins**	61.50	342	*e*P	P	12 04 11.7	+0.8
	comp=Z,183nm,1.4s						
YSS	**Yuzh-Sakhalins**	61.50	342	⇓*e*P	P	12 04 11.3	+0.3
YSS				*e*		12 04 21.4	
YSS				*e*S	S	12 12 33.1	+1.2
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				smax	smax		
	comp=E,2µm,12.1s						
GZH	**Guangzhou**	61.69	304	P	P	12 04 11.7	-1.1
GZH				PcP	PcP	12 04 51.6	-2.5
GZH				PcS	PcS	12 08 55.7	-1.6
GZH				S	S	12 12 35.6	+0.4
GZH				ScS	SKKSac	12 14 02.5	-1.9
GZH				LR	LR		
	comp=E,2µm,18.6s						
GZH				LR	LR		
	comp=E,4µm,17.5s						
TEY	**Ternei**	61.94	337	⇓*e*P	P	12 04 13.5	-0.5
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.3s						
TEY				pmax	pmax		
	comp=Z,20nm,1.3s						
SKR	**Severo-Kuril's**	62.24	353	*e*P	P	12 04 08.9	-6.9
SKR				*e*		12 04 55.3	
SKR				*e*S	S	12 12 40.6	-0.5
SKR				MLR	MLR		
	comp=Z,6µm,17.0s						
SKR				MLR	MLR		
	comp=Z,7µm,17.0s						
NJ2	**Nanjing**	62.24	315	*e*P	P	12 04 16.6	+0.4
NJ2				pP	pwP	12 04 25.1	+0.6
NJ2				sP	sP	12 04 29.3	+7.9
NJ2				S	S	12 12 43.2	+1.4
NJ2				SS	SS	12 16 46.2	+0.7
NJ2				pmax	pmax		
	comp=Z,46nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,970nm,4.9s						
NJ2				LR	LR		
	comp=Z,3µm,16.2s						
NJ2				LR	LR		
	comp=Z,4µm,18.1s						
NJ2				LR	LR		
	comp=Z,7µm,17.7s						
MSHR	**Mys Shultsa**	62.28	332	⇓*e*P	P	12 04 18.1	+1.8
VLA	**Vladivostok**	62.36	332	*d* *i*P	P	12 04 17.5	+0.7
VLA				pmax	pmax		
	comp=Z,55nm,1.2s						
QIZ	**Qiongzhong**	62.88	298	P	P	12 04 21.2	+0.4
QIZ				S	S	12 12 52.8	+2.5
QIZ				pmax	pmax		
	comp=Z,35nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,610nm,4.3s						
QIZ				LR	LR		
	comp=Z,2µm,14.7s						
QIZ				LR	LR		
	comp=Z,2µm,15.7s						
QIZ				LR	LR		
	comp=Z,3µm,18.6s						
QIZ	**Qiongzhong**	62.88	298	*e*P	P	12 04 22.1	+1.3
	comp=Z,36nm,1.2s						
QIZ				LR	LR		
	comp=Z,464nm,21.0s						
MYKOM	**Kota Tinggi**	63.00	278	*e*P	P	12 04 23.1	+1.4
USA0B	**Ussuriysk Arra**	63.17	333	*e*P	P	12 04 23.2	+1.0
	comp=Z,98nm,1.3s						
USRK	**Ussuriysk Ar.**	63.17	333	P	P	12 04 22.9	+0.7
	comp=Z,30nm,1.0s,baz=133,slow=8.1,SNR=28						
USRK				LR	LR	12 28 43.4	
	comp=Z,3µm,21.9s,baz=134,slow=33						
PET	**Petropavlovsk**	64.30	355	PFAKE		12 04 40.0	+11
PET				LR	LR		
	comp=Z,8µm,20.0s						
PET	**Petropavlovsk**	64.30	355	*e*P	P	12 04 28.9	-0.5
PET				*e*S	S	12 13 02.3	-4.4
PET				pmax	pmax		
	comp=Z,68nm,1.2s						
PET				MLR	MLR		
	comp=Z,9µm,16.0s						
PET				MLR	MLR		
	comp=Z,8µm,17.0s						
PETK	**Petropavlovsk-**	64.46	355	*e*P	P	12 04 31.3	+0.7
PETK	**Petropavlovsk-**	64.46	355	P	P	12 04 31.2	+0.6
	comp=Z,23nm,0.9s,baz=142,slow=7.5,SNR=13						
PETK				LR	LR	12 27 12.6	
	comp=Z,7µm,21.6s,baz=175,slow=31						
MDJ	**Mudanjiang**	64.57	332	P	P	12 04 31.8	+0.3
MDJ				pP	pP	12 04 34.8	-0.4
MDJ				S	S	12 13 15.8	+5.3
MDJ				SS	SS	12 17 21.6	+0.1
MDJ				pmax	pmax		
	comp=Z,30nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,2µm,12.5s						
MDJ				LR	LR		
	comp=Z,3µm,16.3s						
MDJ				LR	LR		
	comp=Z,4µm,15.1s						
MDJ				LR	LR		
	comp=Z,4µm,20.7s						
MDJ	**Mudanjiang**	64.57	332	*e*P	P	12 04 31.8	+0.3
	comp=Z,80nm,1.4s						
MDJ				LR	LR		
	comp=Z,3µm,20.0s						
ADK	**Adak**	64.64	12	PFAKE		12 04 40.0	+8.3
ADK				LR	LR		
	comp=Z,14µm,20.0s						
DL2	**Dalian**	64.70	323	P	P	12 04 35.2	+2.8
DL2				S	S	12 13 17.9	+5.6
DL2				pmax	pmax		
	comp=Z,100nm,1.1s						
DL2				LR	LR		
	comp=Z,3µm,17.7s						
DL2				LR	LR		
	comp=Z,2µm,19.2s						
DL2				LR	LR		
	comp=Z,4µm,16.7s						
TYV	**Tymovskoe**	65.06	344	*e*P	P	12 04 34.4	-0.1
TYV				*e*S	S	12 13 17.1	+0.9
TYV				pmax	pmax		
	comp=Z,16nm,1.5s						
TYV				smax	smax		
	comp=E,600nm,4.2s						
BKNI	**Bangkinang**	65.41	276	*e*P	P	12 04 39.6	+2.0
	comp=E,450nm,1.0s						
TIA	**Tai'an**	65.84	318	P	P	12 04 39.4	-0.5
TIA				S	S	12 13 27.5	+1.1
TIA				pmax	pmax		
	comp=E,470nm,14.2s						
TIA				LR	LR		
	comp=E,3µm,16.7s						
TIA				LR	LR		
	comp=E,2µm,17.2s						
TIA				LR	LR		
	comp=E,4µm,18.6s						
CN2	**Changchun**	65.96	329	*e*P	P	12 04 40.3	-0.2
CN2				*e*S	S	12 13 25.2	-2.4
CN2				pmax	pmax		
	comp=E,30nm,1.3s						
CN2				pmax	pmax		

	comp=E,400nm,5.0s						
CN2				LR	LR		
	comp=E,4µm,17.0s						
CN2				LR	LR		
	comp=E,3µm,17.0s						
CN2				LR	LR		
	comp=E,4µm,21.0s						
CASY	**Casey**	**66.25**	**201**	eP	**P**	**12 04 42.2**	**+0.2**
	comp=E,270nm,1.6s						
CASY				LR	LR		
	comp=Z,1µm,19.0s						
VNDA	**Vanda**	**66.31**	**181**	P	**P**	**12 04 43.5**	**+1.2**
	comp=Z,20nm,1.1s,baz=8.8,slow=5.2,SNR=4.9						
VNDA				LR	LR	12 30 12.1	
	comp=Z,9µm,19.9s,baz=0.5,slow=33						
SBA	**Scott Base**	**66.61**	**180**	PFAKE		12 05 00.0	+16
SBA				LR	LR		
	comp=Z,8µm,19.0s						
GRNR	**Gornyy**	**66.86**	**340**	eP	**P**	**12 04 47.2**	**+1.1**
GRNR				pmax	pmax		
	comp=Z,33nm,1.1s						
KLR	**Kul'dur**	**67.28**	**337**	d iP	**P**	**12 04 48.9**	**+0.1**
KLR	**Kul'dur**	**67.28**	**337**	P	**P**	**12 04 49.6**	**+0.8**
	comp=Z,29nm,1.1s,baz=129,slow=8.5,SNR=18						
KLR				LR	LR	12 31 01.0	
	comp=Z,4µm,21.5s,baz=142,slow=33						
SKNT	**Sakolnakorn**	**67.28**	**294**	P	**P**	**12 04 49.7**	**+0.2**
	comp=Z,61nm,1.2s,comp=Z,936nm						
COCO	**West Island**	**67.43**	**261**	PFAKE		12 05 00.0	+10
COCO				LR	LR		
	comp=Z,4µm,22.0s						
SKLT	**Songkhla**	**67.45**	**283**	P	**P**	**12 04 52.4**	**+1.8**
	comp=Z,52nm,2.3s,comp=Z,2µm						
NKL	**Nikolayevsk**	**67.65**	**344**	eP	**P**	**12 04 50.6**	**-0.4**
NKL				pmax	pmax		
	comp=Z,65nm,1.5s						
NKL				MLR	MLR		
	comp=N,3µm,16.0s						
NKL				MLR	MLR		
	comp=Z,5µm,16.0s						
ENH	**Enshi**	**68.11**	**309**	eP	**P**	**12 04 54.2**	**-0.3**
	comp=Z,188nm,1.3s						
ENH				LR	LR		
	comp=Z,4µm,20.0s						
NONG	**Nongkai**	**68.40**	**295**	P	**P**	**12 04 56.9**	**+0.4**
	comp=Z,2.7nm,0.9s						
GYA	**Guiyang**	**68.62**	**304**	⇓iP	**P**	**12 04 57.5**	**-0.4**
GYA				PP	**PP**	**12 07 32.8**	**+3.1**
GYA				S	**S**	**12 14 00.2**	**-0.4**
GYA				SKS	**SKSac**	**12 14 54.8**	**-2.4**
GYA				SS	**SS**	**12 18 26.0**	**+0.6**
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
GYA				pmax	pmax		
	comp=Z,190nm,6.8s						
GYA				LR	LR		
	comp=Z,5µm,18.2s						
GYA				LR	LR		
	comp=Z,4µm,18.6s						
GYA				LR	LR		
	comp=Z,5µm,18.4s						
BJT	**Baijiatuau**	**68.69**	**321**	eP	**P**	**12 04 57.6**	**-0.3**
	comp=Z,80nm,1.3s						
BJT				LR	LR		
	comp=Z,7µm,22.0s						
BJT	**Baijiatuau**	**68.69**	**321**	eP	**P**	**12 04 57.6**	**-0.3**
BJT				pmax	pmax		
	comp=Z,80nm,1.3s						
BJT				MLR	MLR		
	comp=Z,7µm,22.0s						
BJI	**Beijing**	**68.70**	**321**	P	**P**	**12 04 57.5**	**-0.4**
BJI				S	**S**	**12 14 02.6**	**+1.9**
BJI				pmax	pmax		
	comp=Z,35nm,1.4s						
BJI				LR	LR		
	comp=Z,4µm,20.8s						
BJI				LR	LR		
	comp=Z,3µm,22.8s						
BJI				LR	LR		
	comp=Z,5µm,27.0s						
CHAI	**Chaiyaphum**	**68.73**	**292**	P	**P**	**12 04 59.5**	**+0.9**
	comp=Z,15nm,0.9s,comp=Z,137nm						
PATY	**Pattaya**	**68.83**	**289**	P	**P**	**12 05 01.7**	**+2.5**
	comp=Z,32nm,1.1s,comp=Z,5µm						
UNV	**Unalaska Valle**	**68.95**	**17**	eP	**P**	**12 04 59.6**	**+0.4**
GSI	**Gunungsitoli**	**69.00**	**276**	eP	**P**	**12 05 00.2**	**-0.2**
	comp=Z,178nm,0.9s						
TIY	**Taiyuan**	**69.78**	**317**	eP	**P**	**12 05 04.1**	**-0.7**
TIY				S	**S**	**12 14 13.3**	**-0.4**
TIY				SS	**SS**	**12 18 41.6**	**-1.1**
TIY				pmax	pmax		
	comp=Z,20nm,0.5s						
TIY				pmax	pmax		
	comp=Z,600nm,4.1s						
TIY				LR	LR		
	comp=Z,1µm,16.5s						
TIY				LR	LR		
	comp=Z,3µm,15.8s						
TIY				LR	LR		
	comp=Z,4µm,19.0s						
PKDT	**Phuket**	**69.82**	**283**	P	**P**	**12 05 07.9**	**+2.5**
	comp=Z,18nm,0.7s						
PBKT	**Sadao Pong**	**69.86**	**292**	eP	**P**	**12 05 06.2**	**+0.7**
	comp=Z,47nm,0.9s						
PBKT	**Sadao Pong**	**69.86**	**292**	P	**P**	**12 05 06.4**	**+0.8**
	comp=Z,63nm,1.0s,comp=Z,1µm						
PHET	**Kaeng Krachan**	**69.97**	**288**	P	**P**	**12 05 08.6**	**+2.3**
	comp=Z,17nm,1.0s,comp=Z,215nm						
XAN	**Xi'an**	**70.34**	**312**	P	**P**	**12 05 08.0**	**-0.3**
XAN				pP	pwP	12 05 20.9	+4.4
XAN				PP	**PP**	**12 07 46.0**	**+1.8**
XAN				S	**S**	**12 14 20.9**	**+0.5**
XAN				SS	**SS**	**12 18 49.7**	**-1.7**
XAN				pmax	pmax		
	comp=Z,58nm,1.3s						
XAN				pmax	pmax		
	comp=Z,1µm,5.7s						
XAN				LR	LR		
	comp=Z,3µm,18.4s						
XAN				LR	LR		
	comp=Z,3µm,20.6s						
XAN				LR	LR		
	comp=Z,3µm,17.3s						
XAN	**Xi'an**	**70.34**	**312**	eP	**P**	**12 05 07.6**	**-0.6**
	comp=Z,396nm,1.1s						
XAN	**Xi'an**	**70.34**	**312**	eP	**P**	**12 05 07.6**	**-0.6**
XAN				pmax	pmax		
	comp=Z,396nm,1.1s						
UTTA	**Uttaradit**	**70.62**	**293**	P	**P**	**12 05 11.2**	**+1.0**
	comp=Z,15nm,0.9s,comp=Z,127nm						
SRDT	**SRDT**	**70.87**	**290**	P	**P**	**12 05 14.1**	**+2.3**
	comp=Z,60nm,1.3s,comp=Z,4µm						
UTHA	**Uthaitani**	**70.94**	**291**	P	**P**	**12 05 13.3**	**+1.1**
	comp=Z,21nm,1.0s,comp=Z,172nm						
KMI	**Kunming**	**71.32**	**301**	P	**P**	**12 05 15.4**	**+0.7**
KMI				pP	pwP	12 05 24.8	+1.9
KMI				sP	PcP	12 05 28.5	-5.9
KMI				PP	**PP**	**12 07 58.0**	**+4.9**
KMI				S	**S**	**12 14 34.6**	**+2.1**
KMI				SKS	**SKSac**	**12 15 13.5**	**-4.4**
KMI				SS	**SS**	**12 19 04.1**	**-3.1**
KMI				pmax	pmax		
	comp=Z,130nm,1.4s						
KMI				pmax	pmax		
	comp=Z,1µm,8.6s						
KMI				LR	LR		
	comp=Z,3µm,22.7s						
KMI				LR	LR		
	comp=Z,2µm,21.0s						
KMI				LR	LR		
	comp=Z,2µm,20.6s						
SUKH	**Sukhothai**	**71.37**	**293**	P	**P**	**12 05 16.6**	**+1.8**
	comp=Z,14nm,1.0s						
MA2	**Magadan**	**71.61**	**352**	eP	**P**	**12 05 15.1**	**-0.3**
	comp=Z,37nm,1.1s						
MA2				LR	LR		
	comp=Z,11µm,22.0s						
MA2	**Magadan**	**71.61**	**352**	⇓eP	**P**	**12 05 14.7**	**-0.7**
MA2				pmax	pmax		
	comp=Z,26nm,1.4s						
MA2	**Magadan**	**71.61**	**352**	P	**P**	**12 05 15.8**	**+0.5**
	comp=Z,7.2nm,0.7s,baz=150,slow=8.9,SNR=5.4						
MA2				LR	LR	12 31 54.8	
	comp=Z,9µm,21.4s,baz=165,slow=32						
UMPA	**Umpang Tak**	**71.67**	**291**	P	**P**	**12 05 18.3**	**+1.6**
	comp=Z,10.0nm,1.0s,comp=Z,742nm						
HHC	**Hu-ho-hao-te**	**72.05**	**320**	eP	**P**	**12 05 19.3**	**+0.7**
HHC				pP	sP	12 05 24.0	+0.2
HHC				S	**S**	**12 14 39.7**	**-0.4**
HHC				sS	sS	12 14 46.8	+0.1
HHC				pmax	pmax		
	comp=Z,33nm,1.6s						
HHC				pmax	pmax		
	comp=Z,410nm,5.6s						
HHC				LR	LR		
	comp=Z,4µm,18.0s						
HHC				LR	LR		
	comp=Z,4µm,19.0s						
HHC				LR	LR		
	comp=Z,6µm,20.6s						
CM01	**Chiang Mai Arr**	**72.27**	**294**	eP	**P**	**12 05 19.9**	**-0.3**
CM31	**Chiang Mai Arr**	**72.30**	**294**	eP	**P**	**12 05 21.8**	**+1.3**
CM31	**Chiang Mai Arr**	**72.30**	**294**	P	**P**	**12 05 21.7**	**+1.3**
	SNR=40						
CMAR	**Chiang Mai Arr**	**72.30**	**294**	P	**P**	**12 05 21.2**	**+0.8**
	comp=Z,43nm,0.9s,baz=121,slow=4.5,SNR=79						
CMMT	**Chiang Mai**	**72.41**	**294**	P	**P**	**12 05 21.6**	**+0.6**
	comp=Z,58nm,1.2s,comp=Z,1µm						
CHTO	**Chiang Mai**	**72.41**	**294**	eP	**P**	**12 05 21.7**	**+0.6**
	comp=Z,77nm,1.1s						
CHTO				LR	LR		
	comp=Z,2µm,19.0s						
CHTO	**Chiang Mai**	**72.41**	**294**	eP	**P**	**12 05 21.7**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,77nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,2µm,19.0s						
CHTO	**Chiang Mai**	**72.41**	**294**	P	**P**	**12 05 21.1**	**+0.1**
	SNR=41						
CHTO	**Chiang Mai**	**72.41**	**294**	P	**P**	**12 05 21.7**	**+0.6**
	comp=Z,265nm,1.2s,comp=Z,6µm						
ZEA	**Zeya**	**72.56**	**337**	eP	**P**	**12 05 22.0**	**+0.8**
ZEA				eS	**S**	**12 14 50.0**	**+4.9**
ZEA				pmax	pmax		
	comp=Z,1µm,10.0s						
ZEA				pmax	pmax		
	comp=E,500nm,11.0s						
ZEA				pmax	pmax		
	comp=N,1µm,10.0s						
ZEA				pmax	pmax		
	comp=N,72nm,1.2s						
ZEA				pmax	pmax		
	comp=E,36nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,250nm,1.6s						
ZEA				smax	smax		
	comp=E,3µm,14.0s						
HIA	**Hailar**	**72.59**	**330**	eP	**P**	**12 05 22.1**	**+0.6**
	comp=E,61nm,1.3s						
HIA				LR	LR		
	comp=Z,3µm,20.0s						
HIA	**Hailar**	**72.59**	**330**	d iP	**P**	**12 05 21.5**	**0.0**
HIA				pmax	pmax		
	comp=Z,58nm,1.3s						
CD2	**Chengdu**	**72.81**	**307**	⇓P	**P**	**12 05 23.4**	**+0.1**
CD2				pP	sP	12 05 27.8	-0.7
CD2				PP	**PP**	**12 08 05.0**	**-0.6**
CD2				S	**S**	**12 14 49.8**	**+0.7**
CD2				SKS	**SKSac**	**12 15 28.0**	**-0.6**
CD2				SS	**SS**	**12 19 30.8**	**+1.3**
CD2				pmax	pmax		
	comp=Z,190nm,1.4s						
CD2				pmax	pmax		
	comp=Z,2µm,4.8s						
CD2				LR	LR		
	comp=Z,8µm,17.0s						
CD2				LR	LR		
	comp=Z,9µm,20.4s						
CD2				LR	LR		
	comp=Z,7µm,18.8s						
BTO	**Baotou**	**72.91**	**319**	eP	**P**	**12 05 23.5**	**-0.2**
SEY	**Seymchan**	**74.67**	**354**	P	**P**	**12 05 33.9**	**+0.5**
	comp=Z,28nm,1.2s,baz=208,slow=4.4						
LZH	**Lanzhou**	**74.97**	**312**	⇓P	**P**	**12 05 37.1**	**+1.1**
LZH				pP	sP	12 05 42.2	+1.0
LZH				sP	pwP	12 05 43.7	-0.5
LZH				S	**S**	**12 15 16.5**	**+3.0**
LZH				sS	sS	12 15 20.3	+0.2
LZH				pmax	pmax		
	comp=Z,130nm,1.4s						
LZH				pmax	pmax		
	comp=Z,1µm,4.8s						
LZH				LR	LR		
	comp=Z,3µm,17.9s						
LZH				LR	LR		
	comp=Z,5µm,17.9s						
LZH				LR	LR		
	comp=Z,7µm,17.9s						
OHAK	**Old Harbor**	**76.03**	**22**	eP	**P**	**12 05 41.9**	**+0.6**
KDAK	**Kodiak Island**	**76.71**	**21**	P	**P**	**12 05 45.8**	**+0.7**
KDAK				LR	LR		
	comp=Z,4µm,19.0s						
KDAK	**Kodiak Island**	**76.71**	**21**	i P	**P**	**12 05 46.5**	**+1.4**
KDAK	**Kodiak Island**	**76.71**	**21**	P	**P**	**12 05 45.8**	**+0.7**
	comp=Z,17nm,0.9s,baz=265,slow=3.1,SNR=5.8						
KDAK				LR	LR	12 38 05.2	
	comp=Z,7µm,18.0s,baz=228,slow=35						
GAMB	**Gambell**	**76.73**	**10**	eP	**P**	**12 05 45.5**	**+0.4**
CIT	**Chita**	**77.38**	**330**	eP	**P**	**12 05 49.8**	**+0.6**
CIT				e		12 06 01.1	
CIT				pmax	pmax		
	comp=Z,168nm,1.5s						
YAK	**Yakutsk**	**78.31**	**343**	eP	**P**	**12 05 51.6**	**-2.4**
YAK				e*PP	**sP**	**12 05 59.2**	**0.0**
YAK				e		12 06 04.1	
YAK				e		12 08 58.8	
YAK				eS	**S**	**12 15 43.7**	**-4.8**
YAK				e*SS	ScS	12 16 30.8	+17
YAK				eSS	**SS**	**12 20 52.8**	**+1.3**
YAK				eSSS	SSS	12 24 08.9	
YAK				pmax	pmax		
	comp=Z,52nm,1.7s						
YAK				pmax	pmax		
	comp=N,30nm,2.0s						
YAK				pmax	pmax		
	comp=E,19nm,1.6s						
YAK				pmax	pmax		
	comp=E,478nm,6.6s						
YAK				pmax	pmax		
	comp=Z,794nm,7.7s						
YAK				pmax	pmax		
	comp=N,326nm,6.1s						
YAK				smax	smax		
	comp=N,1µm,12.0s						
YAK				smax	smax		
	comp=E,1µm,10.6s						
HOM	**Homer**	**78.43**	**20**	eP	**P**	**12 05 56.1**	**+1.4**
ULN	**Ulaanbaatar**	**78.52**	**324**	eP	**P**	**12 05 56.5**	**+0.7**
ULN	**Ulaanbaatar**	**78.52**	**324**	d iP	**P**	**12 05 56.0**	**+0.3**
ULN				pmax	pmax		
	comp=Z,61nm,1.3s						
ULN	**Ulaanbaatar**	**78.52**	**324**	P	**P**	**12 05 56.4**	**+0.7**
	SNR=29						
ANM	**Nome**	**78.64**	**12**	eP	**P**	**12 05 56.8**	**+1.0**
ANM	**Nome**	**78.64**	**12**	eP	**P**	**12 05 56.8**	**+1.0**
RSO	**Redoubt South**	**78.66**	**20**	eP	**P**	**12 05 56.0**	**-0.2**
BRLK	**Bradley Lake**	**78.77**	**21**	eP	**P**	**12 05 57.1**	**+0.5**
QSPA	**South Pole Qui**	**78.77**	**180**	PFAKE		12 06 10.0	+13
QSPA				LR	LR		
	comp=Z,4µm,20.0s						
QSPA	**South Pole Qui**	**78.77**	**180**	P	**P**	**12 05 57.5**	**+0.7**
	comp=Z,28nm,0.9s,baz=359,slow=1.4,SNR=41						
SONM	**Songino Array**	**78.89**	**324**	P	**P**	**12 05 58.1**	**+0.4**
	comp=Z,16nm,1.0s,baz=134,slow=4.5,SNR=40						
SONM				PKP2ab		12 32 39.3	
	comp=Z,0.3nm,0.7s,baz=186,slow=2.1,SNR=3.8						
SONM				LR	LR	12 38 06.4	
	comp=Z,2µm,20.5s,baz=117,slow=34						
SONA1	**Songino Array**	**78.89**	**324**	eP	**P**	**12 05 57.1**	**-0.7**
BILL	**Bilibino**	**79.06**	**0**	eP	**P**	**12 05 58.5**	**+0.5**
BILL				LR	LR		
	comp=Z,4µm,20.0s						
BILL	**Bilibino**	**79.06**	**0**	d iP	**P**	**12 05 57.9**	**-0.2**
BILL				pmax	pmax		
	comp=Z,99nm,1.3s						
GTA	**Gaotai**	**79.28**	**314**	⇓P	**P**	**12 06 00.5**	**+0.5**
GTA				pP	sP	12 06 05.9	+0.6
GTA				sP	PcP	12 06 09.2	+0.9
GTA				S	**S**	**12 15 55.1**	**-5.0**
GTA				sS	sS	12 16 07.2	+1.0
GTA				SKS	**SKSac**	**12 16 09.2**	**-6.8**
GTA				SS	**SS**	**12 21 02.8**	**-4.5**
GTA				pmax	pmax		
	comp=Z,68nm,1.5s						
GTA				pmax	pmax		
	comp=Z,730nm,6.2s						
GTA				LR	LR		
	comp=Z,3µm,18.1s						
GTA				LR	LR		
	comp=Z,2µm,20.6s						
GTA				LR	LR		
	comp=Z,4µm,21.3s						
SEW	**Seward**	**79.51**	**21**	eP	**P**	**12 06 01.2**	**+0.6**
SUA	**Susitna One**	**80.06**	**20**	eP	**P**	**12 06 03.8**	**0.0**
BRDH	**Bariadhala**	**80.09**	**296**	P	**P**	**12 06 05.6**	**+1.0**
	comp=Z,65nm,0.3s,baz=88,slow=9.7,SNR=13						
RC01	**Rabbit Creek A**	**80.12**	**20**	eP	**P**	**12 06 04.5**	**+0.5**
RPN	**Rapa Nui**	**80.38**	**116**	PFAKE		12 06 20.0	+14
RPN				LR	LR		
	comp=Z,2µm,21.0s						
PPLA	**Purkeypile**	**80.66**	**18**	eP	**P**	**12 06 10.2**	**+3.2**
PMR	**Palmer**	**80.69**	**20**	eP	**P**	**12 06 07.3**	**+0.4**
PMR	**Palmer**	**80.69**	**20**	eP	**P**	**12 06 07.3**	**+0.4**
SHL	**Shillong**	**80.71**	**298**	eP	**P**	**12 06 08.8**	**+0.7**
BOD	**Bodaibo**	**80.75**	**335**	eP	**P**	**12 06 06.5**	**-0.9**
BOD				pmax	pmax		
	comp=Z,55nm,1.6s						
KNK	**Knik Glacier**	**80.79**	**20**	eP	**P**	**12 06 08.2**	**+0.6**
GLI	**Glacier Island**	**80.89**	**21**	eP	**P**	**12 06 08.6**	**+0.5**
CAST	**Castle Rocks**	**81.09**	**18**	eP	**P**	**12 06 08.7**	**-0.4**
SML	**Sawmill**	**81.11**	**20**	eP	**P**	**12 06 09.9**	**+0.6**
SML	**Sawmill**	**81.11**	**20**	eP	**P**	**12 06 09.9**	**+0.6**
EYAK	**Cordova Ski Ar**	**81.15**	**22**	eP	**P**	**12 06 10.1**	**+0.6**
DIV	**Divide**	**81.53**	**22**	eP	**P**	**12 06 12.3**	**+0.7**
HMT	**Hamilton**	**81.56**	**23**	eP	**P**	**12 06 12.6**	**+0.9**
TRF	**Thorofare Moun**	**81.66**	**18**	eP	**P**	**12 06 11.8**	**-0.5**
KLU	**Klutina**	**81.73**	**21**	eP	**P**	**12 06 13.5**	**+0.8**
BPAW	**Bear Paw Mtn.**	**81.92**	**18**	eP	**P**	**12 06 15.0**	**+1.4**
ZAK	**Zakamensk**	**81.92**	**325**	eP	**P**	**12 06 14.0**	**0.0**
ZAK				pmax	pmax		
	comp=Z,38nm,1.2s						
RND	**Reindeer**	**82.07**	**19**	eP	**P**	**12 06 14.5**	**+0.1**
RND	**Reindeer**	**82.07**	**19**	eP	**P**	**12 06 14.5**	**+0.1**
RDOG	**Red Dog Mine**	**82.18**	**11**	eP	**P**	**12 06 16.2**	**+1.4**
MCK	**McKinley**	**82.28**	**19**	eP	**P**	**12 06 15.4**	**0.0**
MCK	**McKinley**	**82.28**	**19**	eP	**P**	**12 06 15.4**	**0.0**
IRK	**Irkutsk**	**82.28**	**327**	eP	**P**	**12 06 14.1**	**-1.6**
IRK				pmax	pmax		
	comp=Z,90nm,3.2s						
DHY	**Denali Highway**	**82.32**	**20**	eP	**P**	**12 06 16.4**	**+0.6**
TLY	**Talaya**	**82.35**	**326**	eP	**P**	**12 06 16.0**	**0.0**
TLY				LR	LR		
	comp=Z,2µm,21.0s						
TLY	**Talaya**	**82.35**	**326**	d iP	**P**	**12 06 15.7**	**-0.3**
TLY	**Talaya**	**82.35**	**326**	P	**P**	**12 06 15.8**	**-0.3**
	SNR=19						
LSA	**Lhasa**	**82.56**	**302**	P	**P**	**12 06 19.1**	**+0.9**
LSA	**Lhasa**	**82.56**	**302**	eP	**P**	**12 06 18.6**	**+0.4**
	comp=Z,50nm,1.4s						
LSA				LR	LR		
	comp=Z,2µm,19.0s						
LSA	**Lhasa**	**82.56**	**302**	eP	**P**	**12 06 18.6**	**+0.4**
LSA				pmax	pmax		
	comp=Z,50nm,1.4s						
LSA				MLR	MLR		
	comp=Z,2µm,19.0s						
IM3	**Indian Mountai**	**82.57**	**16**	eP	**P**	**12 06 17.4**	**+0.5**
KCPM	**Cahto Peak**	**82.58**	**47**	eP	**P**	**12 06 19.6**	**+1.9**
HARP	**HAARP**	**82.61**	**21**	eP	**P**	**12 06 18.2**	**+1.0**
MLY	**Manley**	**82.68**	**17**	eP	**P**	**12 06 17.7**	**+0.2**
KMRM	**Mail Ridge**	**82.69**	**47**	eP	**P**	**12 06 20.4**	**+2.2**
HOPS	**Hopland Field**	**82.71**	**48**	eP	**P**	**12 06 19.9**	**+1.7**
GDXM	**Geysers**	**82.84**	**48**	eP	**P**	**12 06 20.6**	**+1.6**
WRH	**Wood River Hil**	**83.07**	**18**	eP	**P**	**12 06 19.4**	**-0.1**
O02D	**Mt. Diablo Mer**	**83.33**	**47**	P	**P**	**12 06 22.2**	**+0.7**
	baz=249,SNR=7.4						
MDM	**Murphy Dome**	**83.37**	**18**	eP	**P**	**12 06 20.8**	**-0.3**
HDA	**Harding Lake**	**83.38**	**19**	eP	**P**	**12 06 21.4**	**+0.3**
HDA	**Harding Lake**	**83.38**	**19**	P	**P**	**12 06 20.9**	**-0.2**
	baz=226						
TCOL	**CIGO, UAF Yank**	**83.42**	**18**	P	**P**	**12 06 20.2**	**-1.0**
	baz=226						
COLA	**College**	**83.42**	**18**	eP	**P**	**12 06 21.1**	**-0.1**
COLA				LR	LR		
	comp=Z,8µm,20.0s						
COLA	**College**	**83.42**	**18**	d iP	**P**	**12 06 20.5**	**-0.8**
COLA				pmax	pmax		
	comp=Z,54nm,0.9s						
RIDG	**Independ'e Rid**	**83.61**	**20**	eP	**P**	**12 06 23.1**	**+0.7**
K02D	**Willamette Mer**	**83.62**	**44**	P	**P**	**12 06 23.3**	**+0.3**
	baz=248						
WDC	**Whiskeytown Da**	**83.65**	**47**	eP	**P**	**12 06 24.2**	**+1.2**
WDC	**Whiskeytown Da**	**83.65**	**47**	eP	**P**	**12 06 24.2**	**+1.2**
IL1	**Eielson Array**	**83.65**	**18**	eP	**P**	**12 06 21.6**	**-0.9**
ILAR	**Eielson Array**	**83.65**	**18**	P	**P**	**12 06 22.2**	**-0.2**
	comp=Z,17nm,0.9s,baz=226,slow=6.6,SNR=95						
ILAR				ScS	**ScS**	**12 16 56.5**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=239,slow=4.7,SNR=5.8						
ILAR				LR	LR	12 43 02.7	
	comp=Z,3µm,18.0s,baz=243,slow=35						
ILB	**Eielson Array**	**83.65**	**18**	eP	**P**	**12 06 22.3**	**-0.2**
N02D	**Trinity Center**	**83.67**	**46**	P	**P**	**12 06 24.1**	**+0.9**
	baz=249,SNR=13						
SCZ2	**Santa Cruz Isl**	**83.67**	**54**	P	**P**	**12 06 23.4**	**0.0**
	baz=252						
M02C	**Callahan**	**83.71**	**46**	P	**P**	**12 06 23.4**	**0.0**
	baz=249,SNR=7.1						
POKR	**Poker Plat Res**	**83.72**	**18**	P	**P**	**12 06 22.0**	**-0.9**
	baz=226						
SBC	**Santa Barbara**	**83.75**	**53**	P	**P**	**12 06 22.3**	**-1.4**
	baz=252						
SMMC	**Simmler**	**83.80**	**52**	P	**P**	**12 06 22.9**	**-1.1**
	baz=252						
MOY	**Mondy**	**83.80**	**325**	eP	**P**	**12 06 24.2**	**+0.5**
MOY				pmax	pmax		
	comp=Z,85nm,3.6s						
PKM	**Mcpherson Peak**	**83.81**	**53**	P	**P**	**12 06 22.9**	**-1.3**
	baz=252						
YBH	**Yreka Blue Hor**	**83.93**	**46**	eP	**P**	**12 06 26.0**	**+1.4**
I02D	**Swisshome**	**84.02**	**43**	P	**P**	**12 06 23.7**	**-1.1**
	baz=248						
ORV	**Oroville**	**84.05**	**48**	eP	**P**	**12 06 25.8**	**+0.7**
ORV	**Oroville**	**84.05**	**48**	eP	**P**	**12 06 25.8**	**+0.7**
SCRK	**Sand Creek**	**84.05**	**20**	eP	**P**	**12 06 25.4**	**+0.7**
HUMO	**Hull Mountain**	**84.07**	**45**	eP	**P**	**12 06 27.1**	**+2.0**
O03E	**Paynes Creek**	**84.08**	**47**	P	**P**	**12 06 25.6**	**+0.2**
	baz=250,SNR=17						
BLG	**Laguna Peak, P**	**84.16**	**54**	P	**P**	**12 06 25.2**	**-0.5**
	baz=252						
I03D	**Drain, OR**	**84.20**	**44**	P	**P**	**12 06 25.5**	**-0.2**
	baz=249						
AFDM	**Forest Hills D**	**84.23**	**49**	eP	**P**	**12 06 27.0**	**+0.9**
SCI2	**San Clemente I**	**84.23**	**55**	P	**P**	**12 06 26.0**	**-0.2**
	baz=253						
CMB	**Columbia Colle**	**84.37**	**50**	eP	**P**	**12 06 27.6**	**+0.8**
CMB	**Columbia Colle**	**84.37**	**50**	eP	**P**	**12 06 27.6**	**+0.8**
L04D	**Klamath Falls**	**84.39**	**45**	P	**P**	**12 06 25.8**	**-1.2**
	baz=250						
BESE	**Bessie Mountai**	**84.39**	**27**	eP	**P**	**12 06 28.0**	**+1.5**
JIS	**Juneau Island**	**84.44**	**27**	eP	**P**	**12 06 28.1**	**+1.5**
WRAK	**Wrangell Islan**	**84.44**	**29**	eP	**P**	**12 06 27.9**	**+1.3**
COLD	**Coldfoot**	**84.44**	**16**	eP	**P**	**12 06 28.1**	**+1.7**
CIS	**Catalina Islan**	**84.46**	**55**	P	**P**	**12 06 26.2**	**-1.2**
	baz=253						
HYT	**Haines Junctio**	**84.50**	**24**	eP	**P**	**12 06 28.1**	**+1.0**
M04C	**Macdoel**	**84.56**	**46**	P	**P**	**12 06 28.3**	**+0.4**
	baz=250,SNR=7.1						
OSI	**Osito Audit: C**	**84.58**	**53**	P	**P**	**12 06 27.5**	**-0.5**
	baz=252						
PRP	**Porcupine Dome**	**84.58**	**18**	eP	**P**	**12 06 26.4**	**-1.0**
MAW	**Mawson**	**84.60**	**202**	P	**P**	**12 06 28.6**	**+1.2**
	comp=Z,27nm,1.0s,baz=63,slow=9.0,SNR=2.2						
ARVC	**Arvin**	**84.65**	**53**	P	**P**	**12 06 28.3**	**+0.1**
	baz=252						
FMP	**Fort Macarthur**	**84.65**	**54**	P	**P**	**12 06 27.6**	**-0.6**
	baz=253						
SKAG	**Skagway**	**84.65**	**26**	eP	**P**	**12 06 28.1**	**+0.4**
VES	**Vestal, Richgr**	**84.67**	**52**	P	**P**	**12 06 28.3**	**0.0**
	baz=252,SNR=8.4						
G03D	**McMinnville, O**	**84.81**	**42**	P	**P**	**12 06 29.2**	**+0.4**
	baz=249						
RUBR	**Rubicon Trail**	**84.87**	**49**	eP	**P**	**12 06 30.8**	**+1.3**
I04A	**Tendick Farm,**	**84.87**	**44**	P	**P**	**12 06 29.3**	**+0.1**
	baz=249						
J04D	**Umpqua Nationa**	**84.88**	**44**	P	**P**	**12 06 30.1**	**+0.6**
	baz=250						
H04D	**Lebanon**	**84.91**	**43**	P	**P**	**12 06 29.4**	**+0.1**

	baz=249						
K04D	Chiloquin, OR	84.91	45	P	P	12 06 29.2	-0.3
	baz=250						
ODAN	Odare	84.95	299	*e*P	P	12 06 30.5	+0.3
	comp=Z,168nm,0.9s						
BEKR	Beckworth	84.98	48	*e*P	P	12 06 31.0	+0.9
MWC	Mount Wilson	84.99	54	*e*P	P	12 06 30.8	+0.6
MWC	Mount Wilson	84.99	54	*e*P	P	12 06 30.8	+0.6
ISA	Isabella, Lake	85.09	52	*e*P	P	12 06 31.4	+0.9
ISA	Isabella, Lake	85.09	52	*e*P	P	12 06 31.4	+0.9
ISA	Isabella, Lake	85.09	52	P	P	12 06 30.9	+0.4
	baz=253,SNR=7.8						
MDPB	Devils Postpil	85.22	50	*e*P	P	12 06 32.3	+0.9
WAKR	Walker	85.22	49	*e*P	P	12 06 32.6	+1.3
NLWA	Neilton Lookou	85.23	40	PFAKE		12 06 40.0	+9.1
NLWA				LR	LR		
	comp=Z,6μm,19.0s						
EDW2	Edwards Air Fo	85.23	53	P	P	12 06 32.1	+0.9
	baz=253,SNR=8.3						
PNTR	Pine Nut	85.29	49	*e*P	P	12 06 32.8	+1.1
BFSC	Mount Baldy Ra	85.31	54	P	P	12 06 31.8	+0.1
	baz=253,SNR=13						
VCNR	Virginia City	85.31	49	*e*P	P	12 06 32.8	+1.1
KNGR	Kungurtug, Tuv	85.33	324	*d i*P	P	12 06 31.0	-0.4
109C	Camp Elliot, M	85.37	55	P	P	12 06 32.1	+0.2
	baz=254						
CPE	Camp Elliot	85.37	55	*e*P	P	12 06 33.0	+1.2
FYU	Fort Yukon	85.38	18	*e*P	P	12 06 32.5	+1.4
MLAC	Mammoth, Mammo	85.41	50	P	P	12 06 32.8	+0.5
	baz=252						
J05D	Fort Rock, OR	85.50	44	P	P	12 06 32.3	-0.2
	baz=250						
MURC	Murrieta	85.50	55	P	P	12 06 32.4	-0.2
	baz=254						
YERR	Yerington	85.52	49	*e*P	P	12 06 33.6	+0.8
CWC	Cottonwood Cre	85.62	52	P	P	12 06 33.3	0.0
	baz=253						
PAHR	Pah Rah Range	85.64	48	*e*P	P	12 06 34.3	+1.0
LRMC	Laurel Mtn Rad	85.65	53	P	P	12 06 33.9	+0.4
	baz=253,SNR=13						
RAMN	Ramite	85.65	298	*e*P	P	12 06 33.8	0.0
	comp=Z,184nm,1.4s						
BAR	Barrett	85.66	56	*e*P	P	12 06 34.8	+1.4
DAWY	Dawson	85.68	21	*e*P	P	12 06 33.0	+0.2
MOD	Modoc Plateau	85.68	46	*e*P	P	12 06 33.9	+0.4
TIN	Tinemaha, Big	85.69	51	P	P	12 06 33.7	+0.2
	baz=253						
E04D	Cinebar	85.75	41	P	P	12 06 33.7	+0.3
	baz=249						
I05D	Terrebonne, OR	85.78	43	P	P	12 06 34.6	+0.8
	baz=250						
PINE	Pine Mountain	85.87	44	*e*P	P	12 06 35.7	+1.3
BBRC	Big Bear Solar	85.90	54	P	P	12 06 34.7	-0.1
	baz=254						
MONP2	Monument Peak	85.92	56	P	P	12 06 35.2	+0.2
	baz=254,SNR=14						
RYN	Ryan	85.94	50	*e*P	P	12 06 35.8	+1.0
DAC	Darwin (Calif)	85.95	52	*e*P	P	12 06 35.9	+0.9
MPMC	Manual Prospec	85.97	52	P	P	12 06 35.4	+0.3
	baz=253,SNR=13						
RRX	Edison Barstow	86.01	53	P	P	12 06 34.5	-0.6
	baz=254						
NV01	Mina Array Sit	86.05	50	*e*P	P	12 06 35.7	+0.2
NVAR	Mina Array Bea	86.05	50	P	P	12 06 36.0	+0.6
	comp=Z,17nm,1.1s,baz=234,slow=7.2,SNR=49						
NVAR				LR	LR	12 39 45.0	
	comp=Z,10μm,18.8s,baz=275,slow=32						
PFO	Pinyon Flats O	86.09	55	*e*P	P	12 06 36.4	+0.8
PFO				LR	LR		
	comp=Z,8μm,20.0s						
PFO	Pinyon Flats O	86.09	55	P	P	12 06 35.9	+0.2
	baz=254,SNR=8.6						
PFO	Pinyon Flats O	86.09	55	P	P	12 06 35.4	-0.2
	comp=Z,4.6nm,0.8s,baz=253,slow=3.8,SNR=7.1						
XPFO	Pion Flat	86.09	55	*e*P	P	12 06 36.4	+0.8
IKP	In-Ko-Pah, Jac	86.11	56	P	P	12 06 36.3	+0.6
	baz=254						
G05D	Wamic, OR	86.11	43	P	P	12 06 35.8	+0.5
	baz=250						
NV11	Mina Array Sit	86.16	50	*e*P	P	12 06 36.8	+0.9
JIRN	Jiri	86.19	299	*e*P	P	12 06 36.8	+0.2
	comp=Z,477nm,1.5s						
F05D	White Salmon	86.23	42	P	P	12 06 36.0	+0.1
	baz=250						
GSC	Goldstone, Bar	86.28	53	*e*P	P	12 06 37.4	+0.9
GSC	Goldstone, Bar	86.28	53	*e*P	P	12 06 37.4	+0.9
GSC	Goldstone, Bar	86.28	53	P	P	12 06 36.9	+0.3
	baz=254,SNR=6.9						
TIXI	Tiksi	86.30	349	*e*P	P	12 06 34.8	-0.8
TIXI				LR	LR		
	comp=Z,5μm,19.0s						
TIXI	Tiksi	86.30	349	*d i*P	P	12 06 34.9	-0.7
TIXI				pmax	pmax		
	comp=Z,48nm,1.7s						
LON	Longmire	86.31	41	*e*P	P	12 06 39.2	+2.9
GRAC	Grapevine Rang	86.33	51	P	P	12 06 37.0	+0.3
	baz=253,SNR=16						
D05A	Enumclaw	86.35	41	*e*P	P	12 06 37.8	+1.4
KVN	Kaiserville	86.39	49	*e*P	P	12 06 37.9	+0.8
KVN	Kaiserville	86.39	49	*e*P	P	12 06 37.9	+0.8
SWSC	Sam W. Stewart	86.44	56	P	P	12 06 37.7	+0.5
	baz=254,SNR=8.2						
A04D	Lummi Island	86.44	39	P	P	12 06 37.2	+0.4
	baz=249						
DLBC	Dease Lake	86.51	28	*e*P	P	12 06 38.0	+0.9
DLBC	Dease Lake	86.51	28	P	P	12 06 37.6	+0.6
	comp=Z,9.0nm,1.1s,baz=250,slow=9.1,SNR=7.6						
GUN	Gumba	86.52	299	*e*P	P	12 06 38.0	-0.1
	comp=Z,259nm,1.5s						
HEC	Hector,Ludlow	86.52	54	P	P	12 06 37.6	-0.1
	baz=254						
BELC	Belle Mtn. Jos	86.56	55	P	P	12 06 38.7	+0.7
	baz=254,SNR=19						
FURC	Furnace Creek,	86.57	52	P	P	12 06 38.0	+0.3
	baz=254,SNR=9.4						
B05A	Bryant	86.66	40	P	P	12 06 38.5	+0.6
	baz=249						
PKI	Pulchoki	86.84	299	*e*P	P	12 06 39.3	-0.4
	comp=Z,260nm,1.5s						
PKIN	Phulchoki	86.85	299	*e*P	P	12 06 39.2	-0.5
	comp=Z,184nm,1.5s						
SHOC	Shoshone, Teco	86.87	53	P	P	12 06 39.7	+0.4
	baz=254,SNR=7.0						
BC3	Big Chuckawall	86.91	55	P	P	12 06 40.3	+0.7
	baz=254,SNR=11						
I07A	Izee	86.94	44	*e*P	P	12 06 40.4	+0.8
TUQ	Turquoise Moun	87.01	53	P	P	12 06 40.2	0.0
	baz=254						
WVOR	Wild Horse Val	87.03	46	*e*P	P	12 06 41.0	+0.9
WVOR	Wild Horse Val	87.03	46	*e*P	P	12 06 41.0	+0.9
GMRC	Granite Mounta	87.05	54	P	P	12 06 40.8	+0.5
	baz=254,SNR=17						
DMN	Daman	87.11	299	*e*P	P	12 06 40.9	0.0
	comp=Z,309nm,1.3s						
TPNV	Topopah Spring	87.18	52	*e*P	P	12 06 41.9	+0.9
TPNV	Topopah Spring	87.18	52	*e*P	P	12 06 41.9	+0.9
TPNV	Topopah Spring	87.18	52	P	P	12 06 40.9	-0.1
	baz=254						
LTY	Liberty	87.21	41	*e*P	P	12 06 41.3	+0.5
F07A	Phinny Hill Vi	87.25	42	*e*P	P	12 06 41.8	+1.0
GLA	Glamis	87.25	56	*e*P	P	12 06 42.9	+1.7
GLA	Glamis	87.25	56	*e*P	P	12 06 42.9	+1.7
GLA	Glamis	87.25	56	P	P	12 06 42.4	+1.2
	baz=255,SNR=6.4						
IRM	Iron Mountain	87.29	55	P	P	12 06 41.7	+0.3
	baz=255,SNR=21						
C06D	Leavenworth	87.30	40	P	P	12 06 41.4	+0.3
	baz=250						
J08A	Circle Bar Ran	87.42	45	*e*P	P	12 06 42.9	+1.0
LDFC	Landfair	87.56	54	*e*P	P	12 06 44.2	+1.4
HAWA	Hanford	87.67	42	*e*P	P	12 06 43.9	+1.0
HAWA				LR	LR		
	comp=Z,6μm,20.0s						
Y12C	Blythe	87.68	55	*e*P	P	12 06 44.6	+1.4
Y12C	Blythe	87.68	55	P	P	12 06 43.0	-0.2
	baz=255,SNR=16						
G08A	Pilot Rock	87.69	43	*e*P	P	12 06 43.9	+0.7
NEE2	Needles Airpor	87.87	54	P	P	12 06 43.5	-0.6
	baz=255						
SHPR	Sheep Range	87.90	52	*e*P	P	12 06 45.7	+1.3
E08A	Dider Farm, El	88.01	42	*e*P	P	12 06 45.5	+1.0
R11A	Troy Canyon, C	88.07	50	*e*P	P	12 06 45.9	+0.6
R11A	Troy Canyon, C	88.07	50	P	P	12 06 45.3	+0.1
	baz=254,SNR=28						
PDMCI	Parker Dam,Lak	88.13	55	P	P	12 06 45.3	0.0
	baz=255,SNR=11						
D08A	Wollman Farm,	88.28	41	*e*P	P	12 06 46.7	+0.9
B08A	Colville Reser	88.43	40	*e*P	P	12 06 45.9	-0.6
DANN	Dangsing	88.44	299	*e*P	P	12 06 46.5	-0.8
	comp=Z,133nm,1.3s						
KOLN	Koldanda	88.44	299	*e*P	P	12 06 46.5	-0.7
	comp=Z,170nm,1.6s						
E09A	Wood Farm, Sta	88.61	42	*e*P	P	12 06 48.2	+0.9
214A	Organ Pipe Nat	88.62	57	P	P	12 06 48.8	+1.0
	baz=256						
BMO	Blue Mountains	88.68	44	*e*P	P	12 06 48.0	+0.2
BMO	Blue Mountains	88.68	44	*e*P	P	12 06 48.0	+0.2
ELK	Elko	88.98	48	*e*P	P	12 06 50.5	+0.9
ELK	Elko	88.98	48	*e*P	P	12 06 50.5	+0.9
ELK	Elko	88.98	48	P	P	12 06 50.0	+0.4
	comp=Z,21nm,1.4s,baz=217,slow=3.6,SNR=11						
PYUN	Piuthan	89.04	299	*e*P	P	12 06 49.0	-1.1
	comp=Z,74nm,1.0s						
F10A	Beach Ranch, E	89.06	43	*e*P	P	12 06 50.1	+0.5
WMQ	Urumqi	89.31	315	P	P	12 06 51.2	+0.4
WMQ				sP	pwP	12 07 03.5	+4.4
WMQ				PP	PP	12 10 21.5	-0.3
WMQ				SKS	SKSac	12 17 18.6	-2.0
WMQ				S	S	12 17 38.5	-1.8
WMQ				ScS	ScS	12 17 43.5	-1.6
WMQ				SS	SS	12 23 37.7	+2.4
WMQ				pmax	pmax		
	comp=Z,84nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,1μm,4.5s						
WMQ				LR	LR		
	comp=Z,5μm,18.3s						
WMQ				LR	LR		
	comp=Z,5μm,19.9s						
WMQ				LR	LR		
	comp=Z,5μm,19.9s						
WMQ	Urumqi	89.31	315	*e*P	P	12 06 50.5	-0.3
	comp=Z,94nm,1.4s						
WMQ	Urumqi	89.31	315	*e*P	P	12 06 50.5	-0.3
WMQ				pmax	pmax		
	comp=Z,94nm,1.4s						
PSUT	Pine Spring	89.43	51	*e*P	P	12 06 52.8	+1.1
HSIG		89.50	60	*e*P	P	12 06 53.6	+1.7
LCMT	Little Creek M	89.52	52	*e*P	P	12 06 53.3	+1.3
CCUT	Cedar City	89.56	52	*e*P	P	12 06 53.6	+1.3
SZCU	Shurtz Canyon	89.78	52	*e*P	P	12 06 54.9	+1.6
NEW	Newport	89.80	41	*e*P	P	12 06 53.6	+0.6
NEW				LR	LR		
	comp=Z,7μm,19.0s						
NEW	Newport	89.80	41	*e*P	P	12 06 53.6	+0.6
NEW				MLR	MLR		
	comp=Z,7μm,19.0s						
NEW	Newport	89.80	41	P	P	12 06 53.0	0.0
	baz=253						
NEW	Newport	89.80	41	P	P	12 06 53.1	+0.2
	comp=Z,3.5nm,0.7s,baz=247,slow=2.3,SNR=6.7						
KNB	Kanab	89.85	52	*e*P	P	12 06 55.1	+1.5
KNB	Kanab	89.85	52	*e*P	P	12 06 55.1	+1.5
INK	Inuvik	90.04	19	P	P	12 06 53.4	-0.1
	comp=Z,15nm,1.3s,baz=220,slow=4.3,SNR=9.9						
INK				LR	LR	12 41 09.8	
	comp=Z,7μm,21.8s,baz=226,slow=32						
HLID	Hailey	90.32	46	*e*P	P	12 06 56.6	+1.0
HLID				LR	LR		
	comp=Z,7μm,20.0s						
HLID	Hailey	90.32	46	P	P	12 06 56.3	+0.6
	baz=255						
PKCU	Pink Cliffs	90.34	52	*e*P	P	12 06 58.2	+2.1
TUC	Tucson	90.38	57	*e*P	P	12 06 57.7	+1.6
TUC	Tucson	90.38	57	*e*P	P	12 06 57.7	+1.6
TUC	Tucson	90.38	57	P	P	12 06 56.6	+0.6
	baz=257						
MTPU	Mount Pierson	90.58	51	*e*P	P	12 06 59.3	+2.0
DUG	Dugway, Tooele	90.63	49	PFAKE		12 07 10.0	+13
DUG				LR	LR		
	comp=Z,7μm,19.0s						
DUG	Dugway, Tooele	90.63	49	P	P	12 06 57.1	0.0
	baz=256						
WUAZ	Wupatki	90.63	54	P	P	12 06 57.7	+0.4
	baz=257						
BGU	Big Grassy Mou	90.64	48	*e*P	P	12 06 58.2	+1.0
MSU	Marysvale	90.70	51	*e*P	P	12 06 59.5	+1.8
MSU	Marysvale	90.70	51	*e*P	P	12 06 59.5	+1.8
HYB	Hyderabad	90.79	287	*i* P	P	12 06 58.0	-0.2
HYB				*e*SKS	SKSac	12 17 32.0	+1.8
HYB				*e*S	S	12 17 52.0	-2.9
HVU	Hansel Valley	91.04	48	*e*P	P	12 07 00.2	+1.2
HVU	Hansel Valley	91.04	48	*e*P	P	12 07 00.2	+1.2
DGZ	Jazzator, Alta	91.12	320	⇓*e*P	P	12 07 00.4	+1.2
NLU	North Lily Min	91.12	50	*e*P	P	12 07 00.7	+1.2
SPUT	South Promonto	91.16	48	*e*P	P	12 07 00.7	+1.1
MPU	Maple Canyon	91.46	50	*e*P	P	12 07 02.8	+1.7
MSO	Missoula	91.48	43	*e*P	P	12 07 00.9	0.0
MSO	Missoula	91.48	43	P	P	12 07 00.8	-0.1
	baz=255						
CTU	Camp Tracy	91.53	49	*e*P	P	12 07 02.4	+1.0
Q16A	Castle Valley	91.56	51	*e*P	P	12 07 03.8	+2.3
TMUT	Trail Mountain	91.62	50	*e*P	P	12 07 03.5	+1.6
SYO	Syowa Base	91.64	197	⇑*e*P	P	12 06 56.0	-5.1
SYO	Syowa Base	91.64	197	⇑*i*P	P	12 07 00.6	-0.5
SYO	Syowa Base	91.64	197	⇑*i*X	P	12 07 13.4	+12
MCMT	McKenzie Canyo	91.72	45	*e*P	P	12 07 03.4	+1.1
JLU	Jordanelle	91.73	49	*e*P	P	12 07 03.5	+1.1
W18A	Petrified Fore	91.85	55	P	P	12 07 02.6	-0.3
	baz=258						
TCUT	Toone Canyon	91.88	49	*e*P	P	12 07 04.7	+1.6
DGAR	Diego Garcia	91.91	262	PFAKE		12 07 10.0	+6.5
DGAR				LR	LR		
	comp=Z,1μm,20.0s						
P17A	Butcher Ranch,	92.01	50	*e*P	P	12 07 06.2	+2.6
DLMT	Dillon	92.03	44	*e*P	P	12 07 04.2	+0.7
SRU	San Rafael Swe	92.09	51	*e*P	P	12 07 05.0	+1.0
SRU	San Rafael Swe	92.09	51	*e*P	P	12 07 05.0	+1.0
LRM	Limekiln Ridge	92.24	44	*e*P	P	12 07 05.3	+0.7
AHID	Auburn Hatcher	92.48	47	PFAKE		12 07 20.0	+14
AHID				LR	LR		
	comp=Z,3μm,21.0s						
QLMT	Earthquake Lak	92.71	45	*e*P	P	12 07 08.4	+1.7
FXWY	Fox Creek	92.72	46	*e*P	P	12 07 07.9	+1.0
BOZ	Bozeman (W)	92.74	44	*e*P	P	12 07 07.8	+1.0
BOZ				LR	LR		
	comp=Z,5μm,20.0s						
BOZ	Bozeman (W)	92.74	44	*e*P	P	12 07 07.9	+1.0
BOZ				MLR	MLR		
	comp=Z,5μm,20.0s						
BOZ	Bozeman (W)	92.74	44	P	P	12 07 07.4	+0.6
	baz=257						
TPAW	Teton Pass	92.74	46	*e*P	P	12 07 07.1	0.0
REDW	Red Top Meadow	92.79	46	*e*P	P	12 07 08.1	+1.0
IMW	Indian Meadow	92.84	46	*e*P	P	12 07 08.5	+1.0
YHB	Horse Butte	92.85	45	*e*P	P	12 07 08.9	+1.4
HRY	Holter Researc	92.86	43	*e*P	P	12 07 08.2	+0.9
SNOW	Snow King Moun	92.88	46	*e*P	P	12 07 09.2	+1.6
121A	Cookes Peak, D	92.91	58	P	P	12 07 07.8	-0.1
	baz=259						
MOOW	Moose Ponds	92.95	46	*e*P	P	12 07 08.6	+0.7
YMR	Madison River	92.99	45	*e*P	P	12 07 09.7	+1.6
LOHW	Long Hollow	93.02	46	*e*P	P	12 07 09.0	+0.7
YPP	Pitchstone Pla	93.02	46	*e*P	P	12 07 13.0	+4.7
PV09	Paradox Valley	93.03	52	*e*P	P	12 07 09.7	+1.2
YFT	Old Faithful	93.04	45	*e*P	P	12 07 11.3	+2.9
FLWY	Flagg Ranch	93.05	46	*e*P	P	12 07 09.7	+1.3
PV17	East Wray Mesa	93.12	52	*e*P	P	12 07 11.8	+3.0
PV21	Cone Mtn., Par	93.16	51	*e*P	P	12 07 11.8	+2.7
PV04	Paradox Valley	93.18	52	*e*P	P	12 07 10.0	+1.0
H17A	Grant Village	93.21	46	*e*P	P	12 07 11.4	+2.3
H17A	Grant Village	93.21	46	P	P	12 07 09.3	+0.2
	baz=258						
PV12	Saucer Basin,	93.24	52	*e*P	P	12 07 10.2	+0.8
MVCO	Mesa Verde	93.26	53	PFAKE		12 07 20.0	+10
MVCO				LR	LR		
	comp=Z,6μm,19.0s						
MVCO	Mesa Verde	93.26	53	P	P	12 07 10.4	+0.9
	baz=258						
PV02	Paradox Valley	93.27	52	*e*P	P	12 07 13.4	+3.8
LKWY	Lake	93.37	45	PFAKE		12 07 20.0	+10
LKWY				LR	LR		
	comp=Z,11μm,19.0s						
PV01	Paradox Valley	93.39	52	*e*P	P	12 07 10.9	+0.8
BW06	Boulder Array	93.59	47	*e*P	P	12 07 11.1	+0.2
BW06				LR	LR		
	comp=Z,4μm,19.0s						
BW06	Boulder Array	93.59	47	P	P	12 07 10.2	-0.7
	baz=258						
PD31	Pinedale Array	93.59	47	*e*P	P	12 07 11.5	+0.6
PDAR	Pinedale Array	93.59	47	*e*P	P	12 07 10.4	-0.5
PDAR	Pinedale Array	93.59	47	P	P	12 07 10.9	0.0
	comp=Z,3.8nm,1.0s,baz=247,slow=3.1,SNR=19						
PDAR				LR	LR	12 42 27.2	
	comp=Z,2μm,20.6s,baz=286,slow=31						
MK01	Makanchi Array	93.73	317	*e*P	P	12 07 10.2	-0.9
MK31	Makanchi Array	93.74	317	*e*P	P	12 07 11.2	0.0
MKAR	Makanchi Array	93.74	317	*e*P	P	12 07 11.2	0.0
MKAR				PKKP	PKKPdf	12 24 15.2	-1.3
MKAR	Makanchi Array	93.74	317	P	P	12 07 10.8	-0.5
	comp=Z,20nm,0.8s,baz=97,slow=5.0,SNR=40						
MKAR				PKKP	PKKPdf	12 24 15.2	-1.3
	comp=Z,4.2nm,0.9s,baz=282,slow=2.7,SNR=21						
MKAR				LR	LR	12 51 00.1	
	comp=Z,2μm,18.8s,baz=86,slow=37						
ZALV	Zalesovo Beam	93.78	324	P	P	12 07 10.1	-1.0
	comp=Z,16nm,1.0s,baz=113,slow=3.4,SNR=24						
ZALV				PKKP	PKKPdf	12 24 16.6	0.0
	comp=Z,0.5nm,0.5s,baz=297,slow=2.5,SNR=3.5						
ZALV				LR	LR	12 48 28.8	
	comp=Z,2μm,20.0s,baz=96,slow=35						
LAZ	Ladron	93.80	56	*e*P	P	12 07 13.0	+1.0
MAKZ	Makanchi	93.95	317	*e*P	P	12 07 12.1	-0.1
MAKZ	Makanchi	93.95	317	*e*P	P	12 07 12.1	-0.1
O20A	White River Ci	94.03	50	*e*P	P	12 07 17.1	+4.2
O20A	White River Ci	94.03	50	P	P	12 07 13.5	+0.5
	baz=259						
BNM	Barren Site	94.17	56	*e*P	P	12 07 15.9	+2.1
RLMT	Red Lodge	94.27	45	*e*P	P	12 07 14.7	+0.8
RLMT				LR	LR		
	comp=Z,7μm,19.0s						
RLMT	Red Lodge	94.27	45	P	P	12 07 14.4	+0.5
	baz=258						
ANMO	Albuquerque	94.45	55	*e*P	P	12 07 15.3	+0.3
ANMO				LR	LR		
	comp=Z,6μm,21.0s						
ANMO	Albuquerque	94.45	55	⇑*e*P	P	12 07 15.5	+0.5
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.7s						
ANMO	Albuquerque	94.45	55	P	P	12 07 14.7	-0.3
	baz=260						
ANMO	Albuquerque	94.45	55	P	P	12 07 14.3	-0.7
	comp=Z,0.4nm,0.4s,baz=286,slow=7.4,SNR=3.5						
EGMT	Eagleton	94.52	42	*e*P	P	12 07 15.6	+0.7
EGMT				LR	LR		
	comp=Z,3μm,20.0s						
EGMT	Eagleton	94.52	42	P	P	12 07 15.1	+0.3
	baz=258						
S22A	4UR Ranch, Cre	94.66	53	P	P	12 07 15.0	-1.1
	baz=260						
MNTX	Cornudas Mount	94.75	59	*e*P	P	12 07 17.3	+1.1
MNTX				LR	LR		
	comp=Z,9μm,19.0s						
MNTX	Cornudas Mount	94.75	59	P	P	12 07 15.6	-0.6
	baz=260						
SMCO	Snowmass	94.81	51	*e*P	P	12 07 19.7	+2.9
NVS	Novosibirsk	94.88	325	⇓*i*P	P	12 07 15.6	-0.6
NVS				*i* S	SKSac	12 17 52.5	+1.3
NVS				pmax	pmax		
	comp=Z,44nm,1.5s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,24nm,1.5s						
NVS				smax	smax		
	comp=N,1.0nm,0.4s						
NVS				smax	smax		
	comp=E,23nm,1.8s						
YKA	Yellowknife Ar	95.08	27	P	P	12 07 15.6	-1.3
	comp=E,2.5nm,0.6s,baz=255,slow=4.7,SNR=43						
YKA				LR	LR	12 44 31.5	
	comp=E,766nm,19.7s,baz=260,slow=32						
PMSA	Palmer Station	95.50	161	PFAKE		12 07 30.0	+11
PMSA				LR	LR		
	comp=Z,5μm,19.0s						
SDCO	Great Sand Dun	95.70	53	PFAKE		12 07 30.0	+9.2
SDCO				LR	LR		
	comp=Z,6μm,20.0s						
K22A	Casper	95.76	48	P	P	12 07 20.5	-0.3
	baz=260						
TX31	Lajitas Ar. Si	95.81	61	*e*P	P	12 07 19.4	-1.8
TXAR	Lajitas Array	95.81	61	P	P	12 07 21.5	+0.2
	comp=Z,1.6nm,1.1s,baz=235,slow=4.1,SNR=7.8						
TXAR				PKKP	PKKPdf	12 24 13.1	+0.8
	comp=Z,0.2nm,0.7s,baz=106,slow=2.9,SNR=2.9						
TXAR				LR	LR	12 45 22.0	
	comp=Z,8μm,18.7s,baz=0.0,slow=32						
N23A	Red Feather La	95.89	50	P	P	12 07 21.0	-0.6
	baz=260						
ISCO	Idaho Springs	95.96	51	PFAKE		12 07 30.0	+8.1
ISCO				LR	LR		
	comp=Z,12μm,20.0s						
NVL	N'lazarevskaya	96.30	188	*e*P	P	12 07 12.1	-10
NVL				pmax	pmax		
	comp=Z,6μm,15.6s						
NRIK	Noril'sk	96.34	340	P	P	12 07 22.0	-0.5
	comp=Z,3.9nm,0.5s,baz=102,slow=4.6,SNR=9.9						
NRIK				LR	LR	12 53 26.1	
	comp=Z,4μm,18.0s,baz=104,slow=37						
T25A	Trinidad	96.46	54	P	P	12 07 23.7	-0.4
	baz=261						
LAO	LASA Array	96.64	44	*e*P	P	12 07 26.4	+1.9
LAO				LR	LR		
	comp=Z,5μm,19.0s						
LAO	LASA Array	96.64	44	P	P	12 07 24.9	+0.4
	baz=261						
KURK	Kurchatov	96.86	320	*e*P	P	12 07 24.6	-0.7
KURK				LR	LR		
	comp=Z,6μm,21.0s						
KURK	Kurchatov	96.86	320	*d i*P	P	12 07 23.8	-1.5
KURK				pmax	pmax		
	comp=Z,24nm,1.4s						
KURK	Kurchatov	96.86	320	P	P	12 07 24.2	-1.1
	SNR=8.6						
SNAA	Sanae	96.94	184	⇑*e*P	P	12 07 28.3	+2.8
KSH	Kashi	96.97	309	P	P	12 07 30.6	+4.3
KSH				pP	pwP	12 07 36.2	+1.6
KSH				PP	PP	12 11 25.4	+3.3
KSH				SKS	SKSac	12 18 03.1	-0.1
KSH				S	ScS	12 18 50.4	+1.3
KSH				sS	sS	12 18 55.1	+0.1
KSH				SS	SS	12 25 27.1	+1.9
KSH				LR	LR		
	comp=Z,410nm,7.2s						
KSH				LR	LR		
	comp=Z,890nm,7.7s						
KSH				LR	LR		
	comp=Z,4μm,18.7s						
MSTX	Muleshoe	97.29	57	P	P	12 07 27.6	-0.3
	baz=261						
VNA2	Neumayer--Watz	97.91	182	P	Pdif	12 07 35.2	+5.4
DGMT	Dagmar	98.26	42	*e*P	Pdif	12 07 32.3	+0.5
	comp=Z,20nm,1.0s						
DGMT				LR	LR		
	comp=Z,5μm,20.0s						
NIL	Nilore	98.29	303	PFAKE		12 07 40.0	+7.7
NIL				LR	LR		
	comp=Z,825nm,22.0s						
AMTX	Amarillo	98.31	56	*e*P	Pdif	12 07 35.3	+2.8
AAK	Ala-Archa	98.51	312	PFAKE		12 07 40.0	+6.8
AAK				LR	LR		
	comp=Z,2μm,21.0s						
OGNE	Ogallala	98.83	50	PFAKE		12 07 50.0	+15
OGNE				LR	LR		
	comp=Z,10μm,20.0s						
JCT	Junction City	99.30	61	PFAKE		12 07 50.0	+13
JCT				LR	LR		
	comp=Z,12μm,20.0s						
FFC	Flin Flon	100.31	36	PFAKE		12 07 50.0	+9.3
FFC				LR	LR		
	comp=Z,11μm,20.0s						
FFC	Flin Flon	100.31	36	*i* P	Pdif	12 07 41.0	+0.3
CBKS	Cedar Bluff	100.34	52	PFAKE		12 07 50.0	+8.7
CBKS				LR	LR		
	comp=Z,5μm,20.0s						
KVTX	Kingsville	100.58	64	PFAKE		12 07 50.0	+7.5
KVTX				LR	LR		
	comp=Z,3μm,22.0s						
BRVK	Borovoye	102.24	322	*e*Pdif	Pdif	12 07 48.9	-0.4
BRVK				LR	LR		
	comp=Z,2μm,20.0s						
BRVK	Borovoye	102.24	322	⇑*e*P	Pdif	12 07 48.7	-0.6
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KSU1	Kansas State U	102.79	52	PFAKE		12 08 00.0	+7.9

KSU1				LR	LR		
	comp=Z,7µm,19.0s						
ECSD	**EROS Data Cent**	**103.08**	**48**	PFAKE		12 08 10.0	+17
ECSD				LR	LR		
	comp=Z,6µm,19.0s						
RES	**Resolute Bay**	**103.20**	**16**	Pdiff	**Pdif**	**12 07 53.6**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=333,slow=2.3,SNR=3.5						
PAYG	**Puerto Ayora**	**103.44**	**93**	PFAKE		12 08 10.0	+14
PAYG				LR	LR		
	comp=Z,3µm,19.0s						
NATX	**Nacogdoches**	**103.82**	**60**	PFAKE		12 08 10.0	+13
NATX				LR	LR		
	comp=Z,10µm,19.0s						
MIAR	**Mount Ida**	**104.92**	**57**	PFAKE		12 12 30.0	+13
MIAR				LR	LR		
	comp=Z,12µm,20.0s						
SCIA	**State Center**	**105.51**	**50**	PFAKE		12 12 30.0	+12
SCIA				LR	LR		
	comp=Z,9µm,20.0s						
EYMN	**Ely**	**106.71**	**43**	PFAKE		12 12 30.0	+10
EYMN				LR	LR		
	comp=Z,7µm,21.0s						
EFI	**East Falkland**	**106.77**	**153**	PFAKE		12 12 30.0	+10
EFI				LR	LR		
	comp=Z,2µm,20.0s						
JFWS	**Jewell Farm**	**107.71**	**48**	PFAKE		12 12 30.0	+8.3
JFWS				LR	LR		
	comp=Z,6µm,19.0s						
COWI	**Conover**	**108.39**	**45**	PFAKE		12 12 40.0	+17
COWI				LR	LR		
	comp=Z,5µm,20.0s						
HDIL	**Hopedale**	**108.46**	**51**	PFAKE		12 12 40.0	+17
HDIL				LR	LR		
	comp=Z,8µm,22.0s						
ARU	**Arti**	**108.85**	**326**	PFAKE		12 12 40.0	+17
ARU				LR	LR		
	comp=Z,2µm,19.0s						
BRAL	**Brewton**	**110.28**	**61**	PFAKE		12 12 40.0	+13
BRAL				LR	LR		
	comp=Z,5µm,19.0s						
JTS	**JuntasAbangare**	**110.58**	**83**	PFAKE		12 12 40.0	+12
JTS				LR	LR		
	comp=Z,3µm,19.0s						
KBS	**Kingsbay**	**111.11**	**355**	PFAKE		12 12 40.0	+13
KBS				LR	LR		
	comp=Z,4µm,20.0s						
GLMI	**Grayling**	**111.66**	**46**	PFAKE		12 12 40.0	+11
GLMI				LR	LR		
	comp=Z,6µm,20.0s						
HOPE	**Hope Point**	**112.04**	**166**	PFAKE		12 12 40.0	+10
HOPE				LR	LR		
	comp=Z,3µm,20.0s						
LCO	**Las Campanas**	**112.33**	**128**	PFAKE		12 12 40.0	+8.7
LCO				LR	LR		
	comp=Z,2µm,22.0s						
ABPO	**Ambohimpanom**	**112.47**	**244**	PFAKE		12 12 40.0	+8.4
ABPO				LR	LR		
	comp=Z,2µm,22.0s						
AAM	**Ann Arbor**	**112.60**	**49**	PFAKE		12 12 40.0	+9.1
AAM				LR	LR		
	comp=Z,10µm,19.0s						
ACSO	**Alum Creek Sta**	**113.29**	**51**	PFAKE		12 12 40.0	+7.7
ACSO				LR	LR		
	comp=Z,7µm,20.0s						
GOGA	**Godfrey**	**113.30**	**58**	PFAKE		12 12 40.0	+7.4
GOGA				LR	LR		
	comp=Z,9µm,20.0s						
NNA	**Nana**	**113.59**	**108**	PFAKE		12 12 50.0	+16
NNA				LR	LR		
	comp=Z,995nm,20.0s						
PRGR	**Permogore**	**113.95**	**333**	*i* PKIKP	PKiKP	12 12 20.9	-12
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LVZ	**Lovozero**	**115.07**	**342**	PFAKE		12 12 50.0	+15
LVZ				LR	LR		
	comp=Z,3µm,21.0s						
OTAV	**Otavalo**	**115.21**	**95**	PFAKE		12 12 50.0	+13
OTAV				LR	LR		
	comp=Z,1µm,20.0s						
BCIP	**Isla Barro Col**	**115.41**	**85**	PFAKE		12 12 50.0	+13
BCIP				LR	LR		
	comp=Z,1µm,19.0s						
BLA	**Blacksburg**	**115.56**	**54**	PFAKE		12 12 50.0	+13
BLA				LR	LR		
	comp=Z,7µm,19.0s						
APA	**Apatity**	**115.65**	**342**	⇓*i*PKIKP	PKiKP	12 12 25.5	-11
APA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,7µm,22.0s						
KEV	**Kevo**	**116.02**	**345**	PFAKE		12 12 50.0	+13
KEV				LR	LR		
	comp=Z,7µm,20.0s						
NHSC	**New Hope**	**116.07**	**59**	PFAKE		12 12 50.0	+12
NHSC				LR	LR		
	comp=Z,8µm,20.0s						
ARCES	**ARCESS Array B**	**116.54**	**345**	PKP	**PKPdf**	**12 12 37.4**	**-0.4**
	comp=Z,3.2nm,0.4s,baz=66,slow=2.2,SNR=22						
LVC	**Limon Verde**	**116.67**	**122**	PFAKE		12 12 50.0	+10
LVC				LR	LR		
	comp=Z,2µm,19.0s						
KLMR	**Klimovskoe**	**116.96**	**334**	*e*PKIKP	**PKPdf**	**12 12 36.8**	**-1.9**
KLMR				*e*		12 13 43.7	
KLMR				pmax	pmax		
	comp=Z,15nm,1.4s						
KLMR	**Klimovskoe**	**116.96**	**334**	*e*PKPdf	**PKPdf**	**12 12 36.8**	**-1.9**
KLMR				AMP		12 12 50.8	
	comp=Z,15nm,1.4s						
KLMR				*e*PP	**PP**	**12 13 43.7**	**-4.1**
CNNC	**Cliffs of the**	**117.79**	**56**	PFAKE		12 12 50.0	+8.9
CNNC				LR	LR		
	comp=Z,7µm,20.0s						
CBN	**Corbin Frederi**	**117.85**	**53**	PFAKE		12 12 50.0	+8.8
CBN				LR	LR		
	comp=Z,12µm,20.0s						
BINY	**Binghamton**	**118.25**	**48**	PFAKE		12 12 50.0	+8.1
BINY				LR	LR		
	comp=Z,6µm,19.0s						
MAK	**Makhachkala**	**118.27**	**313**	*i* P	**Pdif**	**12 08 53.8**	**-7.0**
MAK				pmax	pmax		
	comp=Z,104nm,0.6s						
MTDJ	**Mount Denham**	**118.53**	**75**	PFAKE		12 13 00.0	+17
MTDJ				LR	LR		
	comp=Z,1µm,20.0s						
LONY	**Lake Ozonia**	**118.75**	**45**	PFAKE		12 12 50.0	+7.2
LONY				LR	LR		
	comp=Z,5µm,20.0s						
SFJD	**Kangerlussuaq**	**119.20**	**16**	PFAKE		12 12 50.0	+7.1
SFJD				LR	LR		
	comp=Z,9µm,20.0s						
VRH	**Novokhopyorsk**	**119.80**	**323**	*e*PKIKP	**PKPdf**	**12 12 43.0**	**-1.5**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.4s						
LPSR	**Galich'ya Gora**	**120.86**	**325**	*e*PKIKP	**PKiKP**	**12 12 46.6**	**0.0**
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
GNI	**Garni**	**120.87**	**310**	PFAKE		12 13 00.0	+13
GNI				LR	LR		
	comp=Z,3µm,19.0s						
GTBY	**Guantanamo Bay**	**120.89**	**73**	PFAKE		12 13 00.0	+12
GTBY				LR	LR		
	comp=Z,1µm,19.0s						
ZEI	**Tsey**	**120.89**	**313**	*i* PKIKP	**PKPdf**	**12 12 47.1**	**-0.1**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OBN	**Obninsk**	**121.03**	**329**	PFAKE		12 13 00.0	+13
OBN				LR	LR		
	comp=Z,2µm,21.0s						
OBN	**Obninsk**	**121.03**	**329**	*i* PKIKP	**PKPdf**	**12 12 45.8**	**-0.9**
OBN				*e*		12 14 16.2	
OBN				*e*PPP	PPP	12 16 54.5	
OBN				pmax	pmax		
	comp=Z,12nm,1.1s						
VSR	**Storozhevoye**	**121.28**	**324**	*e*PKIKP	**PKPdf**	**12 12 44.0**	**-3.3**
VSR				pmax	pmax		
	comp=Z,30nm,1.3s						
KBZ	**Khabaz**	**121.36**	**315**	PKIKP	**PKiKP**	**12 12 48.3**	**+0.5**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KBZ	**Khabaz**	**121.36**	**315**	PKP	**PKiKP**	**12 12 48.3**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=69,slow=5.3,SNR=4.2						
KIV	**Kislovodsk**	**121.44**	**315**	PFAKE		12 13 00.0	+12
KIV				LR	LR		
	comp=Z,3µm,19.0s						
KIV	**Kislovodsk**	**121.44**	**315**	*i* PKIKP	**PKiKP**	**12 12 48.9**	**+0.7**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FINES	**FINESS Array B**	**121.99**	**339**	PKP	**PKPdf**	**12 12 48.2**	**-0.2**
	comp=Z,11nm,1.1s,baz=58,slow=3.4,SNR=8.5						
PKME	**Peaks-Kenny Pk**	**122.19**	**43**	PFAKE		12 13 00.0	+11
PKME				LR	LR		
	comp=Z,5µm,20.0s						
SOC	**Sochi**	**123.61**	**315**	*e*PKIKP	**PKiKP**	**12 12 52.6**	**+0.3**
SOC				pmax	pmax		
	comp=Z,11nm,0.4s						
CPUP	**Villa Florida**	**123.81**	**132**	PKP	**PKPdf**	**12 12 52.7**	**-0.3**
	comp=Z,17nm,1.1s,baz=271,slow=1.3,SNR=17						
SDV	**Santo Domingo**	**124.38**	**87**	*e*PKPdf	**PKPdf**	**12 12 54.0**	**-0.6**
SDV				LR	LR		
	comp=Z,1µm,20.0s						
SDDR	**Presa de Saban**	**124.47**	**75**	PFAKE		12 13 10.0	+15
SDDR				LR	LR		
	comp=Z,3µm,19.0s						
GRTK	**Grand Turk**	**124.61**	**72**	PFAKE		12 13 10.0	+15
GRTK				LR	LR		
	comp=Z,3µm,20.0s						
ANN	**Anapa**	**124.76**	**317**	*i* PKIKP	PKPpre	12 12 49.0	
ANN				*e*		12 12 55.0	
ANN				*e*SSS	SSS	12 36 07.3	
ANN				pmax	pmax		
	comp=Z,55nm,1.7s						
BOSA	**Boshof**	**125.07**	**223**	PKP	**PKiKP**	**12 12 56.0**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=133,slow=3.3,SNR=6.7						
SUR	**Sutherland**	**125.27**	**216**	PFAKE		12 13 10.0	+14
SUR				LR	LR		
	comp=Z,4µm,19.0s						
IZAR	**Zarasai**	**125.61**	**333**	*e*P	**PKPdf**	**12 12 55.6**	**+0.1**
IDID	**Didziasalis**	**125.66**	**333**	*e*P	**PKiKP**	**12 12 56.7**	**+0.8**
ISAL	**Salakas**	**125.77**	**333**	*e*P	**PKPdf**	**12 12 55.6**	**-0.2**
IIGN	**Ignalina**	**125.87**	**333**	*e*P	**PKPdf**	**12 12 56.0**	**0.0**
NACGM	**Naroch**	**125.89**	**332**	*e*	**PKPdf**	**12 12 56.0**	**-0.1**
NACGM				*e*LQ	LQ	12 59 30.0	
NACGM				*e*LR	LR	13 03 34.0	
NACGM				LRM	MLR	13 09 15.0	
	comp=Z,9.5nm,20.0s						
SIV	**San Ignacio**	**126.24**	**119**	PKP	**PKPdf**	**12 12 58.1**	**+0.1**
	comp=Z,6.8nm,1.0s,baz=276,slow=4.0,SNR=12						
NB2	**NORSAR Subarra**	**126.91**	**345**	PKPdf	**PKPdf**	**12 12 57.5**	**-0.4**
	comp=Z,52nm,1.7s,baz=33,slow=2.0						
NB2	**NORSAR Subarra**	**126.91**	**345**	PKPdf	**PKPdf**	**12 12 57.5**	**-0.4**
	baz=33,slow=2.0						
NOA	**NORSAR Array B**	**126.91**	**345**	PKIKP	**PKPdf**	**12 12 58.0**	**+0.1**
NOA	**NORSAR Array B**	**126.91**	**345**	PKP	**PKPdf**	**12 12 58.0**	**+0.1**
	comp=Z,5.7nm,1.0s,baz=32,slow=2.0,SNR=6.3						
AKASG	**Malin Array Be**	**127.09**	**327**	PKP	**PKPdf**	**12 12 58.3**	**-0.2**
	comp=Z,12nm,1.1s,baz=57,slow=1.8,SNR=22						
KIEV	**Kiev**	**127.10**	**327**	*e*PKPdf	**PKPdf**	**12 12 58.7**	**+0.2**
KIEV				LR	LR		
	comp=Z,4µm,19.0s						
KIEV	**Kiev**	**127.10**	**327**	⇑*i*P	**PKPdf**	**12 12 57.7**	**-0.8**
KIEV	**Kiev**	**127.10**	**327**	*e*PKIKP	**PKPdf**	**12 12 58.7**	**+0.2**
KIEV				MLR	MLR		
	comp=Z,4µm,19.0s						
LBTB	**Lobatse**	**127.10**	**227**	PKP	**PKiKP**	**12 12 59.8**	**-0.2**
	comp=Z,7.4nm,1.0s,baz=98,slow=2.8,SNR=2.9						
KMBO	**Kilima Mbogo**	**127.48**	**260**	PKP	**PKiKP**	**12 13 01.1**	**0.0**
KMBO				LR	LR		
	comp=Z,2µm,19.0s						
KMBO	**Kilima Mbogo**	**127.48**	**260**	PKIKP	**PKiKP**	**12 13 01.2**	**0.0**
KMBO				MLR	MLR		
	comp=Z,2µm,19.0s						
KMBO	**Kilima Mbogo**	**127.48**	**260**	PKP	**PKiKP**	**12 13 01.1**	**0.0**
	comp=Z,1.4nm,0.3s,baz=66,slow=4.0,SNR=6.0						
MATP	**Matopo**	**127.58**	**233**	PKP	**PKiKP**	**12 13 01.9**	**+0.8**
	comp=Z,7.8nm,1.0s,baz=112,slow=3.1,SNR=9.5						
BRTR	**Keskin Array B**	**129.18**	**313**	PKP	**PKPdf**	**12 13 02.4**	**-0.7**
	comp=Z,6.1nm,1.1s,baz=132,slow=2.1,SNR=14						
KIS	**Kishinev**	**129.25**	**323**	*e*PKP	**PKiKP**	**12 13 06.0**	**+2.6**
KIS				LRM	MLR	13 10 10.0	
	comp=Z,4µm,22.0s						
KIS	**Kishinev**	**129.25**	**323**	*e*PKIKP	**PKiKP**	**12 13 06.0**	**+2.6**
KIS				MLR	MLR		
	comp=Z,4µm,22.0s						
KIS				MLR	MLR		
	comp=N,2µm,20.0s						
SJG	**San Juan**	**129.34**	**76**	*e*PKPdf	**PKPdf**	**12 13 03.4**	**-0.3**
SJG				LR	LR		
	comp=Z,2µm,19.0s						
SJG	**San Juan**	**129.34**	**76**	*e*PKIKP	**PKPdf**	**12 13 03.4**	**-0.3**
SJG				MLR	MLR		
	comp=Z,2µm,19.0s						
ANTO	**Ankara**	**129.74**	**313**	*e*PKPdf	**PKiKP**	**12 13 04.9**	**+0.1**
ANTO				LR	LR		
	comp=Z,2µm,19.0s						
ANTO	**Ankara**	**129.74**	**313**	*e*PKIKP	**PKiKP**	**12 13 04.9**	**+0.1**
ANTO				MLR	MLR		
	comp=Z,2µm,19.0s						
LVV	**L'vov**	**130.32**	**328**	*e*PKIKP	**PKiKP**	**12 13 05.8**	**+0.3**
LSZ	**Lusaka**	**130.50**	**239**	*e*PKPdf	**PKiKP**	**12 13 07.3**	**+0.3**
LSZ				LR	LR		
	comp=Z,3µm,21.0s						
LSZ	**Lusaka**	**130.50**	**239**	*e*PKIKP	**PKiKP**	**12 13 07.3**	**+0.3**
LSZ				MLR	MLR		
	comp=Z,3µm,21.0s						
LSZ	**Lusaka**	**130.50**	**239**	PKP	**PKiKP**	**12 13 07.5**	**+0.5**
	comp=Z,2.2nm,0.3s,baz=113,slow=1.3,SNR=6.9						
CFR	**Carcaliu**	**130.57**	**321**	⇑*i*P	**PKPdf**	**12 13 04.3**	**-1.0**
BIZ	**Bicaz**	**130.86**	**324**	⇑*i*P	**PKiKP**	**12 13 08.3**	**+1.6**
BURAR	**Bucovina Array**	**130.98**	**325**	⇓*i*P	**PKPdf**	**12 13 06.1**	**-0.1**
VRI	**Vrincioaia**	**131.07**	**323**	⇑*i*P	**PKiKP**	**12 13 07.0**	**-0.2**
PLOR	**Plostina**	**131.12**	**323**	⇑*i*P	**PKiKP**	**12 13 07.8**	**+0.5**
MLR	**Muntele Rosu**	**131.73**	**323**	⇑*i*P	**PKPdf**	**12 13 08.1**	**+0.4**
TRIS	**Tristan da Cun**	**131.93**	**182**	PFAKE		12 13 20.0	+11
TRIS				LR	LR		
	comp=Z,5µm,21.0s						
UZH	**Uzhgorod**	**131.95**	**328**	*e*PKIKP	**PKPdf**	**12 13 08.3**	**+0.5**
UZH				*i*		12 13 13.9	
UZH				*i*		12 13 24.6	
TRPA	**Tarpa**	**132.13**	**327**	⇑*i*P	**PKPdf**	**12 13 07.9**	**-0.3**
OJC	**Ojcow**	**132.16**	**331**	*e*PKP	**PKiKP**	**12 13 09.2**	**0.0**
OJC	**Ojcow**	**132.16**	**331**	*e*PKIKP	**PKiKP**	**12 13 09.2**	**0.0**
VOIR		**132.29**	**323**	⇑*i*P	**PKiKP**	**12 13 11.0**	**+1.2**
NIE	**Niedzica**	**132.46**	**330**	*e*PKP	**PKiKP**	**12 13 10.4**	**+0.5**
ARR	**Arges**	**132.57**	**323**	⇓*i*P	**PKiKP**	**12 13 10.6**	**+0.3**
DRGR		**132.85**	**326**	⇓*i*P	**PKPdf**	**12 13 09.6**	**-0.1**
PTGA	**Pitinga**	**132.92**	**102**	PKP	**PKPdf**	**12 13 11.2**	**+0.4**
PTGA				LR	LR		
	comp=Z,12µm,20.0s						
PTGA	**Pitinga**	**132.92**	**102**	PKP	**PKPdf**	**12 13 11.1**	**+0.4**
	comp=Z,13nm,1.1s,baz=259,slow=1.7,SNR=5.7						
GRGR	**Grenville**	**133.50**	**84**	PFAKE		12 13 20.0	+7.1
GRGR				LR	LR		
	comp=Z,2µm,20.0s						
ANWB	**Willy Bob**	**133.50**	**76**	PFAKE		12 13 20.0	+7.2
ANWB				LR	LR		
	comp=Z,2µm,20.0s						
MORC	**Moravsky Berou**	**133.52**	**332**	*e*PKP	**PKiKP**	**12 13 11.8**	**-0.3**
GZR	**Gura Zlata**	**133.64**	**324**	⇑*i*P	**PKPdf**	**12 13 10.5**	**-0.7**
DPC	**Dobruska-Polom**	**133.66**	**333**	AMS	AMS	13 18 30.0	
	comp=Z,4µm,20.2s						
UPC	**Upice**	**133.68**	**334**	AMS	AMS	13 19 10.0	
	comp=Z,4µm,20.9s						
VYHS	**Vyhne**	**133.79**	**330**	*e*PKIKP	**PKiKP**	**12 13 12.1**	**-0.5**
VYHS				*e*		12 15 46.0	
VYHS	**Vyhne**	**133.79**	**330**	*e*PKP	**PKiKP**	**12 13 12.1**	**-0.5**
VYHS				*e*PP	**PP**	**12 15 46.0**	**+5.8**
MBAR	**Mbarara**	**133.89**	**258**	PFAKE		12 13 20.0	+6.0
MBAR				LR	LR		
	comp=Z,664nm,20.0s						
BZS	**Buzias**	**134.16**	**325**	⇓*i*P	**PKPdf**	**12 13 12.3**	**+0.2**
BRG	**Berggiesshubel**	**134.28**	**335**	*e*PKP	**PKPdf**	**12 13 12.2**	**+0.1**
	comp=Z,23nm,1.7s						
BRG				*e*SKP		12 16 43.1	
	comp=Z,35nm,1.8s						
	comp=N,4µm,20.5s						
	comp=E,1µm,23.3s						
	comp=Z,6µm,18.1s						
BRG	**Berggiesshubel**	**134.28**	**335**	*e*PKIKP	**PKPdf**	**12 13 12.2**	**+0.1**
BRG				pmax	pmax		
	comp=Z,3.0nm,1.7s						
BRG				pmax	pmax		
	comp=N,23nm,1.8s						
BRG				MLR	MLR		
	comp=N,35µm,20.5s						
BRG				MLR	MLR		
	comp=E,4µm,23.3s						
BRG				MLR	MLR		
	comp=Z,1µm,18.1s						
PVCC	**Panska Ves**	**134.29**	**335**	AMS	AMS	13 20 40.0	
	comp=Z,4µm,20.3s						
CLL	**Collm**	**134.32**	**336**	*e*PKPdf	**PKiKP**	**12 13 13.0**	**-0.6**
CLL				*e*		12 13 26.0	
	comp=Z,17nm,1.3s						
CLL				*e*		12 16 12.0	
CLL				*e*PKSbc	PKSbc	12 16 45.0	+2.1
CLL				*i* PKSdf	PKSdf	12 16 47.4	-0.9
	comp=Z,35nm,1.6s						
CLL				*e*		12 18 27.0	
CLL				*e*SS	SS	12 33 54.0	+22
CLL				*e*SSS	SSS	12 38 36.0	
CLL				Lmax		13 16 00.0	
CLL				Lm	MLR	13 16 00.0	
	comp=N,3µm,18.7s						
CLL				Lm	MLR	13 16 00.0	
	comp=E,1µm,20.9s						
CLL				Lm	MLR	13 16 00.0	
	comp=Z,4µm,18.5s						
CLL	**Collm**	**134.32**	**336**	*e*PKIKP	**PKiKP**	**12 13 13.0**	**-0.6**
CLL				*e*		12 13 26.0	
CLL				MLR	MLR		
	comp=Z,4µm,18.5s						
KRUC	**Moravsky**	**134.56**	**332**	*e*PKP	**PKiKP**	**12 13 13.5**	**-0.6**
MDVR	**Moldovita**	**134.61**	**324**	⇑*i*P	**PKPdf**	**12 13 13.4**	**+0.4**
MODS	**Modra-Piesok**	**134.63**	**331**	*e*PKIKP	**PKPdf**	**12 13 13.6**	**+0.7**
MODS	**Modra-Piesok**	**134.63**	**331**	*e*PKP	**PKPdf**	**12 13 13.6**	**+0.7**
PRA	**Prague**	**134.69**	**334**	AMS	AMS	13 18 20.0	
	comp=Z,5µm,20.7s						
PRU	**Pruhonice**	**134.70**	**334**	AMS	AMS	13 18 10.0	
	comp=Z,5µm,18.2s						
TREC	**Trest**	**134.80**	**333**	AMS	AMS	13 19 20.0	
	comp=Z,8µm,23.0s						
VTS	**Vitosha**	**134.92**	**321**	⇑*i*P	**PKPdf**	**12 13 14.3**	**+0.5**
ESK	**Eskdalemuir**	**135.19**	**351**	PFAKE		12 13 30.0	+15
ESK				LR	LR		
	comp=Z,5µm,19.0s						
NKC	**Novy Kostel**	**135.38**	**336**	AMS	AMS	13 17 20.0	
	comp=Z,3µm,20.6s						
BBGH	**Gun Hill**	**135.60**	**83**	PFAKE		12 13 30.0	+13
BBGH				LR	LR		
	comp=Z,3µm,20.0s						
CONA	**Conrad Observa**	**135.62**	**331**	*e*PKiKP	**PKiKP**	**12 13 15.7**	**-0.7**
	comp=Z,15nm,1.3s						
CONA				SKPab	**SKiKP**	**12 16 53.3**	**+1.1**
	comp=Z,14nm,1.7s						
KHC	**Kasperske Hory**	**135.76**	**334**	*e*PKPdf	**PKiKP**	**12 13 17.9**	**+1.3**
KHC				*e*x	x	12 13 26.1	
KHC				AMS	AMS	13 22 20.0	
	comp=Z,5µm,19.4s						
KHC	**Kasperske Hory**	**135.76**	**334**	*e*PKIKP	**PKiKP**	**12 13 17.9**	**+1.3**
KHC				*e*		12 13 26.1	
KHC				MLR	MLR		
	comp=Z,5µm,19.4s						
GERES	**GERESS Array B**	**135.93**	**334**	PKP	**PKPdf**	**12 13 15.6**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=50,slow=1.7,SNR=16						
ARSA	**Arzberg**	**136.26**	**331**	*e*PKPdf	**PKPdf**	**12 13 16.2**	**+0.2**
	comp=Z,4.6nm,1.1s						
ARSA				*e*SKPab	**SKiKP**	**12 16 53.6**	**+0.1**
	comp=Z,14nm,1.8s						
MOA	**Molln**	**136.42**	**332**	*e*PKiKP	**PKiKP**	**12 13 18.0**	**0.0**
	comp=Z,8.2nm,1.2s						
MOA				SKPdf	**SKPbc**	**12 16 50.7**	**+2.5**
	comp=Z,15nm,1.3s						
PERS	**Pernice**	**136.90**	**330**	*i* PKPdf	**PKiKP**	**12 13 21.1**	**+2.1**
SOKA	**Soboth**	**136.91**	**331**	*e*PKPdf	**PKPdf**	**12 13 17.4**	**+0.1**
	comp=Z,28nm,1.4s						
BDFB	**Brasilia**	**137.12**	**128**	PKP	**PKiKP**	**12 13 19.7**	**-0.8**
	comp=Z,9.1nm,0.9s,baz=142,slow=2.1,SNR=3.3						
OBKA	**Obir**	**137.26**	**331**	*e*SKPab	**SKiKP**	**12 16 54.4**	**-1.3**
	comp=Z,16nm,1.4s						
MEM	**Membach**	**137.40**	**341**	⇓PKiKP	**PKiKP**	**12 13 20.2**	**+0.4**
KBA	**Koelnbreinsper**	**137.41**	**332**	*e*PKPdf	**PKPdf**	**12 13 18.2**	**-0.1**
	comp=Z,6.6nm,0.8s						
MYKA	**Terra Mystica**	**137.60**	**332**	*e*PKiKP	**PKiKP**	**12 13 20.7**	**+0.2**
	comp=Z,4.3nm,0.5s						
VISS	**Visnje**	**137.62**	**330**	*i* PKPdf	**PKiKP**	**12 13 21.2**	**+0.7**
BOJS	**Bojanci**	**137.63**	**329**	*i* PKPdf	**PKiKP**	**12 13 20.0**	**-0.4**
WATA	**Walderalm**	**138.00**	**334**	*e*PKiKP	**PKiKP**	**12 13 21.8**	**+0.4**
	comp=Z,7.6nm,0.9s						
ABTA	**Abfaltersbach**	**138.03**	**333**	*e*PKPdf	**PKPdf**	**12 13 19.8**	**+0.4**
	comp=Z,23nm,1.5s						
ABTA				*e*SKPdf	**SKPdf**	**12 16 55.3**	**+1.3**
	comp=Z,16nm,1.2s						
WLF	**Walferdange**	**138.16**	**340**	⇑PKiKP	**PKiKP**	**12 13 22.8**	**+1.4**
MOTA	**Moosalm**	**138.19**	**334**	*e*PKiKP	**PKiKP**	**12 13 20.8**	**-1.0**
	comp=Z,4.9nm,0.9s						
SQTA	**Sankt Quirin**	**138.25**	**334**	*e*PKiKP	**PKiKP**	**12 13 21.3**	**-0.5**
	comp=Z,18nm,1.0s						
BFO	**Black Forest**	**138.52**	**337**	PFAKE		12 13 30.0	+7.7
BFO				LR	LR		
	comp=Z,129nm,19.0s						
FETA	**Feichten**	**138.61**	**334**	*e*pPKPdf	**pPKPdf**	**12 13 23.6**	**-0.9**
	comp=Z,23nm,1.3s						
FETA				SKPdf	**SKPbc**	**12 16 54.1**	**-0.8**
	comp=Z,13nm,1.1s						
DAVA	**Damuels**	**138.75**	**335**	*e*PKiKP	**PKiKP**	**12 13 23.6**	**+0.6**
	comp=Z,6.8nm,0.8s						
KEST	**Kesra**	**147.64**	**323**	PKPbc	**PKiKP**	**12 13 40.5**	**-1.0**
	comp=Z,43nm,0.9s,baz=14,slow=1.7,SNR=15						
CMAH	**Djebel Manchou**	**148.11**	**326**	P	**PKiKP**	**12 13 42.2**	**-0.2**
ABSA	**Djebel Ababsia**	**148.33**	**325**	P	**PKiKP**	**12 13 42.1**	**-0.8**
CASM	**Ain Smara**	**148.88**	**327**	P	**PKPbc**	**12 13 43.2**	**+0.6**
DFRA	**Djebel Bou Aff**	**149.00**	**328**	P	**PKiKP**	**12 13 44.2**	**-0.1**
CTEI	**Djebel Teioual**	**149.07**	**326**	P	**PKiKP**	**12 13 43.9**	**-0.6**
POLO	**Lamas de Olo**	**149.46**	**351**	*e*PKPdf	**PKPdf**	**12 13 40.7**	**+1.2**
POLO	**Lamas de Olo**	**149.46**	**351**	*e*PKPdf	**PKiKP**	**12 13 44.5**	**-0.5**
MVO	**Moncorvo**	**149.54**	**349**	*e*PKPdf	**PKPdf**	**12 13 38.4**	**-1.2**
PVRL	**Vila Real**	**149.55**	**350**	*e*PKPdf	**PKiKP**	**12 13 45.2**	**+0.1**
CKHR	**Kef el Ahmar**	**149.59**	**327**	P	**PKiKP**	**12 13 45.6**	**+0.1**
PTO	**Porto**	**149.81**	**352**	*e*PKPdf	**PKiKP**	**12 13 46.0**	**+0.4**
PVIS	**Viseu**	**150.12**	**350**	*e*PKPdf	**PKiKP**	**12 13 46.4**	**0.0**
ESDC	**Sonseca Array**	**150.27**	**344**	PKPbc	**PKiKP**	**12 13 46.3**	**-0.4**
	comp=Z,9.1nm,0.9s,baz=3.1,slow=2.4,SNR=20						
MTE	**Manteigas**	**150.37**	**350**	*e*PKPdf	**PKPdf**	**12 13 40.5**	**-0.4**
PAB	**San Pablo**	**150.49**	**345**	*e*PKPdf	**PKPdf**	**12 13 42.0**	**+0.9**
PAB				LR	LR		
	comp=Z,5µm,21.0s						
PAB	**San Pablo**	**150.49**	**345**	*e*PKIKP	**PKPdf**	**12 13 42.0**	**+0.9**
PAB				MLR	MLR		
	comp=Z,5µm,21.0s						
ADJB	**Djebel Djouab**	**150.53**	**330**	P	**PKiKP**	**12 13 48.2**	**+0.8**
PCAS	**Casmilo, Conde**	**150.86**	**351**	*e*PKPdf	**PKPdf**	**12 13 41.7**	**+0.1**
PCBR	**Castelo Branco**	**150.90**	**349**	*e*PKPdf	**PKPdf**	**12 13 42.9**	**+1.3**
PTOM	**Tomar**	**151.28**	**351**	*e*PKPdf	**PKiKP**	**12 13 49.3**	**+0.6**
PMRV	**Marv??o**	**151.29**	**349**	*e*PKPdf	**PKPdf**	**12 13 38.0**	**-4.3**
CMLA	**Cha da Macela**	**151.67**	**19**	PFAKE		12 13 50.0	+0.4
CMLA				LR	LR		
	comp=Z,6µm,19.0s						
SHEL	**Horse Pasture**	**151.74**	**197**	PFAKE		12 14 00.0	+1.4
SHEL				LR	LR		
	comp=Z,2µm,19.0s						
PMTG	**Montargil**	**151.78**	**350**	*e*PKPdf	**PKPdf**	**12 13 44.6**	**+1.6**
PESTR	**Estremoz**	**151.87**	**349**	*e*PKPdf	**PKPbc**	**12 13 49.6**	**0.0**
RCBR	**Riachuelo**	**152.49**	**127**	PFAKE		12 14 00.0	-1.9
RCBR				LR	LR		
	comp=Z,42µm,21.0s						
PBEJ	**Beja**	**152.73**	**349**	*e*PKPdf	**PKPdf**	**12 13 43.6**	**-0.9**
MESJ	**Messejana**	**152.98**	**350**	*e*PKPdf	**PKPdf**	**12 13 42.4**	**-2.4**
MORF	**Marmelete**	**153.57**	**350**	*e*PKPdf	**PKiKP**	**12 13 54.4**	**+0.8**
PFVI	**Vila Bisbo**	**153.77**	**350**	*e*PKPdf	**PKPdf**	**12 13 44.5**	**-1.5**
ASCN	**Ascension**	**160.96**	**179**	PFAKE		12 14 10.0	+14
ASCN				LR	LR		
	comp=Z,22µm,22.0s						
TORD	**Torodi Ar. Bea**	**164.42**	**279**	PKP	**PKPdf**	**12 13 59.1**	**+0.1**
	comp=Z,25nm,1.3s,baz=69,slow=0.8,SNR=26						
TORD				PKPab	**PKPab**	**12 14 54.1**	**+0.6**
	comp=Z,4.8nm,0.9s,baz=62,slow=3.5,SNR=4.4						
KIC	**Kosan Boka**	**169.54**	**243**	*e*PKP1	**PKPdf**	**12 14 02.6**	**-0.3**
	comp=Z,168nm,1.3s						
LIC	**Lamto**	**169.72**	**242**	*e*PKP1	**PKPdf**	**12 14 02.7**	**-0.3**
	comp=Z,155nm,1.4s						
DBIC	**Dimbokro**	**169.78**	**244**	PKP	**PKPdf**	**12 14 03.0**	**0.0**
	comp=Z,53nm,1.3s,baz=330,slow=2.3,SNR=7.0						
DBIC				PKPab	**PKPab**	**12 15 17.8**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=120,slow=3.7,SNR=2.3						
TIC	**Toumodi**	**169.92**	**244**	*e*PKP1	**PKPdf**	**12 14 01.7**	**-1.4**
SACV	**Santiago Islan**	**170.05**	**67**	PFAKE		12 14 10.0	+6.9
SACV				LR	LR		
	comp=Z,2µm,19.0s						

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*IGIL **06** 11:56:26.6, 38.°05N×3.°29W, h2^{km}, ML2.6*
*SFS **06** 11:56:27.0, 38.°00N×3.°20W, h2^{km}, ML2.8,*
TORREPEROGIL (JAEN)
*MDD **06** 11:56:27.9±0.1, 38.°05N×3.°29W, h2^{km}±1^{km}, mbLg2.7/22,*

Error ellipse: s-maj=1.6km s-min=1.1km az=55.0, PRXIMO MDD EMS: III-IV INTENSIDAD MAXIMA.

*INMG **06** 11:56:27.9±1.6, 38°.05N×3°.32W, h2^{km}±3^{km}, ML2.8, Error ellipse: s-maj=1.9km s-min=1.6km az=25.0*

*CNRM **06** 11:56:28.4, 37°.88N×3°.14W, h30^{km}, ml3.7*

ISC 06 11:56:26.6±1.1**, 38°.05N**±0°.02×**3°.31W**±0°.02**, h12**^{km}±9^{km}**, n53, σ1^{s}32**/89**, 3C-2D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQES	**Quesada**	**0.31**	**143**	⇓Pg	**Pg**	**11 56 33.3**	**+0.4**
	58nm,0.2s,SNR=18						
EQES				Lg	Lg	11 56 37.8	
	98nm,0.2s						
SESP	**Santiago Espad**	**0.60**	**83**	⇑Pg	**Pb**	**11 56 38.9**	**-0.2**
	27nm,0.2s,SNR=18						
SESP				Lg	Lg	11 56 46.8	
	594nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**0.60**	**83**	P	**Pg**	**11 56 38.2**	**-0.2**
SESP				S	**Sb**	**11 56 47.1**	**-0.6**
GORA	**Gorafe**	**0.61**	**160**	Pg	**Pb**	**11 56 39.2**	**0.0**
	9.5nm,0.1s,SNR=7.9						
GORA				Lg	Lg	11 56 47.2	
	290nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**0.85**	**187**	Pg	**Pn**	**11 56 43.9**	**-0.6**
	5.3nm,0.1s,SNR=26						
EQUE				Lg	Lg	11 56 55.6	
	122nm,0.3s						
EADA	**Adamuz**	**1.01**	**277**	⇑Pg	**Pb**	**11 56 46.4**	**+0.4**
	11nm,0.1s,SNR=18						
EADA				Lg	Lg	11 57 00.2	
	114nm,0.1s						
EGOR	**Sierra Gorda,**	**1.14**	**214**	Pg	**Pn**	**11 56 49.0**	**+0.6**
	4.5nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	11 57 05.5	
	44nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.20**	**164**	Pg	**Pg**	**11 56 50.0**	**+0.4**
	11nm,0.2s,SNR=42						
EBER				Lg	Lg	11 57 07.3	
	50nm,0.3s						
ELGU	**Los Guajares,**	**1.21**	**192**	Pg	**Pg**	**11 56 50.3**	**+0.4**
	5.2nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	11 57 06.8	
	18nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**1.50**	**66**	Pn	**Pb**	**11 56 54.5**	**0.0**
	1.1nm,0.2s,SNR=7.9						
ETOB				Pg	**Pg**	**11 56 55.3**	**-0.1**
	14nm,0.2s,SNR=34						
ETOB				Lg	Lg	11 57 14.9	
	31nm,0.2s						
HORN	**Hornachuelos**	**1.56**	**263**	P	**Pg**	**11 56 56.2**	**-0.2**
HORN				S	**Sb**	**11 57 15.5**	**+0.5**
EMAL	**Malaga-Limoner**	**1.57**	**215**	⇑*i*P	**Pg**	**11 56 57.3**	**+0.7**
EMAL				*e*S	**Sg**	**11 57 17.7**	**+0.7**
EMUR	**La Murta**	**1.65**	**97**	Pn	**Pb**	**11 56 56.4**	**-0.5**
	1.0nm,0.2s,SNR=12						
EMUR				Pg	**Pg**	**11 56 57.9**	**-0.3**
	3.8nm,0.3s,SNR=7.9						
EMUR				Lg	Lg	11 57 20.2	
	142nm,0.4s						
ECAB	**El Cabril**	**1.67**	**271**	Pn	**Pn**	**11 56 56.1**	**+0.5**
	4.6nm,0.3s,SNR=27						
ECAB				Pg	**Pg**	**11 56 58.4**	**-0.1**
	3.4nm,0.1s,SNR=7.9						
ECAB				Sn	**Sn**	**11 57 17.4**	**+0.4**
	6.1nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	11 57 20.4	
	28nm,0.2s						
ESDC	**Sonseca Array**	**1.70**	**343**	Pn	**Pn**	**11 56 56.6**	**+0.5**
	266µm,0.1s,baz=161,slow=17,SNR=33						
ESDC				Pg	**Pg**	**11 56 59.3**	**+0.1**
	4.2nm,0.1s,baz=163,slow=17,SNR=4.1						
ESDC				Sn	**Sn**	**11 57 17.9**	**+0.1**
	247µm,0.1s,baz=163,slow=31,SNR=7.4						
ESDC				Lg	Lg	11 57 21.4	
	SNR=7.9						
PAB	**San Pablo**	**1.70**	**332**	Pg	**Pg**	**11 56 59.5**	**+0.3**
	1.7nm,0.1s,SNR=7.9						
PAB				Lg	Lg	11 57 21.6	
	25nm,0.2s,SNR=7.9						
CART	**Cartagena**	**1.88**	**104**	Pn	**Pg**	**11 57 02.2**	**-0.5**
CART				Sn	**Sb**	**11 57 23.7**	**-0.6**
CART	**Cartagena**	**1.88**	**104**	*e*P	**Pg**	**11 57 02.2**	**-0.5**
CART				*e*S	**Sb**	**11 57 23.7**	**-0.6**
EMIJ	**Mijas**	**1.89**	**219**	Pn	**Pb**	**11 57 00.4**	**-0.6**
	0.1nm,0.1s,SNR=7.9						
EMIJ				Pg	**Pg**	**11 57 02.6**	**-0.2**
	1.1nm,0.1s,SNR=7.6						
EMIJ				Sn	**Sb**	**11 57 25.2**	**+0.6**
	8.1nm,0.2s,SNR=7.9						
EMIJ				Lg	Lg	11 57 29.9	
	14nm,0.2s,SNR=7.9						
ETRV	**Los Montesinos**	**2.01**	**90**	Pn	**Pn**	**11 57 00.9**	**+0.6**
	26nm,0.1s,SNR=7.9						
ETRV				Sn	**Sb**	**11 57 27.0**	**-0.9**
	75nm,0.1s,SNR=7.9						
LIJA	**Lijar**	**2.02**	**236**	Pn	**Pg**	**11 57 05.0**	**-0.4**
LIJA				Sn	**Sg**	**11 57 35.0**	**+3.4**
LIJA	**Lijar**	**2.02**	**236**	*e*P	**Pg**	**11 57 05.0**	**-0.4**
LIJA				*i* S	**Sg**	**11 57 35.0**	**+3.4**
UCM	**Universidad Co**	**2.25**	**1**	⇓*i*P	**Pg**	**11 57 09.9**	**+0.1**
UCM				*e*S	**Sb**	**11 57 37.4**	**+2.3**
ESPR	**Espera**	**2.35**	**241**	Lg	Lg	11 57 43.8	
	9.8nm,0.2s,SNR=7.9						
ECHE	**Chera**	**2.39**	**49**	Pg	**Pg**	**11 57 12.7**	**+0.4**
	3.5nm,0.1s,SNR=7.9						
ECHE				Lg	Lg	11 57 43.6	
	5.6nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**2.67**	**346**	Pg	**Pg**	**11 57 17.4**	**-0.4**
	1.2nm,0.2s,SNR=7.9						
GUD				Lg	Lg	11 57 50.0	
	4.8nm,0.1s,SNR=12						
EMIN	**Mina Concepcio**	**2.68**	**265**	Pn	**Pn**	**11 57 09.4**	**-0.1**
	1.8nm,0.2s,SNR=7.9						
EMIN				Pg	**Pb**	**11 57 14.4**	**0.0**
	2.3nm,0.2s,SNR=9.0						
EMIN				Sn	**Sn**	**11 57 41.5**	**-0.3**
	2.1nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	11 57 50.2	
	9.7nm,0.2s,SNR=5.0						
PBAR	**Barrancos**	**2.95**	**274**	*e*Sn	**Sn**	**11 57 48.6**	**+0.1**
PBAR				*e*Sg	**Sg**	**11 58 00.5**	**-0.7**
PBAR				A	A	11 58 05.7	
	42nm,0.7s						
PBAR	**Barrancos**	**2.95**	**274**	Sn	**Sn**	**11 57 48.6**	**+0.1**
PBAR				Lg	Lg	11 58 00.5	
	42nm,0.7s						
EPLA	**Plasencia**	**2.95**	**314**	Pn	**Pn**	**11 57 15.5**	**+2.2**
	0.2nm,0.1s,SNR=7.9						
EPLA				Pg	**Pg**	**11 57 21.5**	**-1.6**
	1.3nm,0.2s,SNR=6.7						
EPLA				Sn	**Sn**	**11 57 49.7**	**+1.1**
	1.3nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	11 57 57.6	
	5.6nm,0.2s,SNR=5.9						
EBAD	**Badajoz**	**3.00**	**285**	Pn	**Pn**	**11 57 13.0**	**-0.9**
	1.4nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**11 57 50.5**	**+0.8**
	3.6nm,0.1s,SNR=4.8						
EBAD				Lg	Lg	11 58 00.4	
	15nm,0.1s,SNR=4.8						
EMOS	**Mosqueruela**	**3.19**	**43**	Pn	**Pn**	**11 57 18.2**	**+1.5**
	0.1nm,0.1s,SNR=7.9						
EMOS				Pg	**Pg**	**11 57 26.4**	**-1.3**
	3.3nm,0.3s,SNR=7.9						
EMOS				Sn	**Sn**	**11 57 54.8**	**+0.1**
	0.4nm,0.1s,SNR=7.9						
EMOS				Lg	Lg	11 58 07.5	
	0.9nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.35**	**262**	Pn	**Pn**	**11 57 18.4**	**-0.3**
	0.3nm,0.1s,SNR=7.9						
EGRO				Lg	Lg	11 58 10.6	
	8.7nm,0.3s,SNR=7.9						
PESTR	**Estremoz**	**3.46**	**285**	*e*Pn	**Pn**	**11 57 22.8**	**+2.5**
PESTR				*e*Sn	**Sn**	**11 58 01.5**	**+0.3**
PESTR				*e*Sg	**Sg**	**11 58 16.6**	**-1.1**
PESTR				A	A	11 58 24.4	
	21nm,0.4s						
PESTR	**Estremoz**	**3.46**	**285**	P	**Pb**	**11 57 26.7**	**-1.1**
PESTR				S	**Sn**	**11 58 04.1**	**+2.9**
PMRV	**Marv??o**	**3.48**	**295**	*e*Pg	**Pg**	**11 57 32.7**	**-0.5**
PMRV				*e*Sn	**Sn**	**11 58 02.6**	**+1.0**
PMRV				*e*Sg	**Sg**	**11 58 18.5**	**+0.3**
PMRV				A	A	11 58 20.9	
	24nm,0.5s						
PMRV	**Marv??o**	**3.48**	**295**	Pg	**Pg**	**11 57 32.7**	**-0.5**
PMRV				Sn	**Sn**	**11 58 02.6**	**+1.0**
PMRV				Lg	Lg	11 58 18.5	
	24nm,0.5s						
PVAQ	**Vaqueiros**	**3.56**	**261**	*e*Pn	**Pn**	**11 57 21.7**	**+0.1**
PVAQ				*e*Sn	**Sn**	**11 58 02.8**	**-0.7**
PVAQ				*e*Sg	**Sg**	**11 58 17.4**	**-3.4**
PVAQ				A	A	11 58 25.2	
	13nm,0.6s						
PVAQ	**Vaqueiros**	**3.56**	**261**	Pn	**Pn**	**11 57 21.7**	**+0.1**
PVAQ				Sn	**Sn**	**11 58 02.8**	**-0.7**
PVAQ				Lg	Lg	11 58 17.4	
	13nm,0.6s						
PVAQ	**Vaqueiros**	**3.56**	**261**	P	**Pn**	**11 57 23.9**	**+2.4**
PVAQ				S	**Sn**	**11 58 03.7**	**+0.1**
PBEJ	**Beja**	**3.60**	**271**	*e*Sg	**Sg**	**11 58 22.7**	**+0.5**
PBEJ				A	A	11 58 28.8	
	18nm,0.5s						
PBEJ	**Beja**	**3.60**	**271**	Lg	Lg	11 58 22.7	
	8.8nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.76**	**259**	*e*Pn	**Pn**	**11 57 25.3**	**+0.9**
PBDV				*e*Sg	**Sg**	**11 58 25.5**	**-1.7**
PBDV				A	A	11 58 38.6	
	14nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.76**	**259**	Pn	**Pn**	**11 57 25.3**	**+0.9**
PBDV				Lg	Lg	11 58 25.5	
	14nm,0.5s						
MESJ	**Messejana**	**3.89**	**268**	*e*S	**Sn**	**11 58 08.9**	**-2.8**
MESJ				*e*Sg	**Sg**	**11 58 27.7**	**-3.8**
MESJ				AML	AML	11 58 36.3	
	comp=E,13nm,0.8s						
MESJ	**Messejana**	**3.89**	**268**	*e*Sg	**Sg**	**11 58 29.9**	**-1.6**
MESJ				A	A	11 58 33.2	
	comp=E,15nm,1.0s						
MESJ	**Messejana**	**3.89**	**268**	Sn	**Sn**	**11 58 08.9**	**-2.8**
MESJ				Lg	Lg	11 58 29.9	
	comp=E,15nm,1.0s						
PMTG	**Montargil**	**3.99**	**286**	*e*Pn	**Pn**	**11 57 29.5**	**+2.0**
PMTG				*e*Sn	**Sn**	**11 58 13.1**	**-1.0**
PMTG				*e*Sg	**Sg**	**11 58 32.7**	**-1.9**
PMTG				A	A	11 58 42.6	
	comp=E,22nm,0.8s						
PMTG	**Montargil**	**3.99**	**286**	Pn	**Pn**	**11 57 29.5**	**+2.0**
PMTG				Sn	**Sn**	**11 58 13.1**	**-1.0**
PMTG				Lg	Lg	11 58 32.7	
	comp=E,22nm,0.8s						
PNCL	**Nicolau / Gran**	**4.12**	**272**	*e*Sg	**Sg**	**11 58 36.2**	**-2.7**
PNCL				A	A	11 58 45.3	
	comp=E,13nm,0.6s						
PNCL	**Nicolau / Gran**	**4.12**	**272**	Lg	Lg	11 58 36.2	
	comp=E,13nm,0.6s						
PTEO	**Sao Teotonio**	**4.32**	**265**	*e*Sg	**Sg**	**11 58 45.8**	**+0.5**
PTEO				A	A	11 58 49.0	
	comp=E,22nm,0.7s						
PTEO	**Sao Teotonio**	**4.32**	**265**	Lg	Lg	11 58 45.8	
	comp=E,11nm,0.7s						

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*JMA **06** 11:58:17.6±0.1, 24°.03N×121°.51E, h19^{km}±2^{km}, M4.0*

*BJI **06** 11:58:17.0, 24°.13N×121°.56E, h8^{km}, mb4.2/17, ML4.2/4*

*ASIES **06** 11:58:18.5, 24°.09N×121°.53E, h21^{km}, MW3.9*

*TAP **06** 11:58:19.0, 24°.10N×121°.53E, h21^{km}, ML4.5, B*

*NEIC **06** 11:58:18.5±0.0, 24°.09N×121°.53E, h24^{km}, mb4.1/3, ML4.5(TAP), After TAP.*

NEIC Recorded [5 TAP] in Hualien; [3 TAP] in Nantou and Yilan; [2 TAP] in Taichung; [1 TAP] in Hsinchu and Yunlin.

*ISCJB **06** 11:58:19.1±0.2, 24°.086N±0°.010×121°.59E±0°.01, h23^{km}±1^{km}, mb4.0/18, Error ellipse: s-maj=2.1km s-min=1.3km az=33.5*

*IDC **06** 11:58:26.7±4.7, 24°.01N×121°.65E, h100^{km}±45^{km}, mb3.7/13, mb1 3.9/14, mb1mx3.7/53, mbtmp4.0/14, Error ellipse: s-maj=18.1km s-min=15.1km az=93.0*

ISC 06 11:58:18.8±0.5**, 24°.09N**±0°.01×**121°.57E**±0°.02**, h19**^{km}±1^{km}**, n165, σ1^{s}05**/259**, mb4.0**/18**, 13C-32D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.03**	**121**	⇓*i*P	**Pg**	**11 58 23.1**	**+0.9**
	baz=106						
TWD				*i* S	**Sg**	**11 58 25.7**	**+1.2**
	baz=106						
NACB	**Ninganchiao**	**0.08**	**15**	⇑P	**Pg**	**11 58 23.1**	**+0.5**
	baz=41						
NACB				S	**Sg**	**11 58 25.9**	**+0.8**
	baz=41						
HWA	**Hwalien**	**0.12**	**165**	⇓*i*P	**Pg**	**11 58 24.0**	**+1.1**
	baz=155						
HWA				S	**Sg**	**11 58 27.6**	**+2.0**
	baz=155						
ETLH	**Xiulin Townshi**	**0.14**	**324**	⇑P	**Pg**	**11 58 23.6**	**+0.4**
	baz=339						
ETLH				S	**Sg**	**11 58 26.6**	**+0.5**
	baz=339						
ENLB	**Shoufeng**	**0.19**	**172**	⇓P	**Pg**	**11 58 24.6**	**+0.9**
	baz=166						
ENLB				S	**Sg**	**11 58 28.7**	**+1.5**
	baz=166						
WHF	**Hehuan Shan**	**0.28**	**280**	⇑*i*P	**Pb**	**11 58 25.4**	**0.0**
	baz=286						
WHF				*i* S	**Sb**	**11 58 29.8**	**-0.1**
	baz=286						
ESL	**Shilin**	**0.31**	**204**	⇓*i*P	**Pg**	**11 58 25.2**	**-0.3**
	baz=200						
ESL				*e*S	**Sg**	**11 58 30.1**	**-0.1**
	baz=200						
CHGB	**Renai**	**0.36**	**265**	⇑P	**Pg**	**11 58 26.7**	**0.0**
	baz=258						
CHGB				S	**Sg**	**11 58 31.6**	**-0.4**
	baz=258						
ENA	**Nanau**	**0.37**	**25**	P	**Pb**	**11 58 26.9**	**+0.1**
	baz=39						
ENA				S	**Sb**	**11 58 32.5**	**+0.2**
	baz=39						
NNSB	**Datong**	**0.38**	**333**	⇓P	**Pg**	**11 58 26.8**	**-0.1**
	baz=338						
NNSB				S	**Sg**	**11 58 32.0**	**-0.3**
	baz=338						
OWD	**Renai**	**0.39**	**249**	⇑*i*P	**Pg**	**11 58 27.0**	**-0.1**
	baz=245						
OWD				S	**Sg**	**11 58 32.0**	**-0.6**
	baz=245						
NNS	**Nan Shan**	**0.39**	**332**	⇓*i*P	**Pg**	**11 58 27.1**	**0.0**
	baz=338						
NNS				S	**Sg**	**11 58 32.7**	**+0.1**
	baz=338						
TWT	**Tachien**	**0.39**	**294**	⇓*i*P	**Pb**	**11 58 27.4**	**+0.1**
	baz=297						
TWT				S	**Sg**	**11 58 32.5**	**-0.3**
	baz=297						
TDCB	**Techi**	**0.41**	**293**	⇓P	**Pg**	**11 58 27.5**	**+0.1**
	baz=298						
TDCB				S	**Sg**	**11 58 32.7**	**-0.5**
	baz=298						
EGFH	**Guangfu**	**0.44**	**197**	*e*P	**Pg**	**11 58 27.6**	**-0.3**
	baz=192						
EGFH				S	**Sg**	**11 58 33.9**	**-0.2**
	baz=192						
NDT	**Datong Townshi**	**0.51**	**354**	⇓*i*P	**Pg**	**11 58 29.2**	**0.0**
	baz=359						
NDT				*e*S	**Sb**	**11 58 36.1**	**0.0**
	baz=359						
VWDT	**VWDT**	**0.52**	**229**	⇑P	**Pg**	**11 58 29.3**	**0.0**
	baz=222						
VWDT				S	**Sb**	**11 58 36.2**	**-0.2**
	baz=222						
ENTT	**Nioudou**	**0.54**	**360**	⇓*i*P	**Pg**	**11 58 29.9**	**+0.1**
	baz=5.0						
ENTT				*e*S	**Sg**	**11 58 37.8**	**+0.6**
	baz=5.0						
TWC	**Suao**	**0.57**	**26**	⇑*e*P	**Pb**	**11 58 30.2**	**+0.1**
	baz=26						
TWC				S	**Sg**	**11 58 38.4**	**+0.4**
	baz=26						
WHP	**Taichung City**	**0.60**	**288**	⇓*i*P	**Pb**	**11 58 30.6**	**-0.1**
	baz=294						
WHP				*e*S	**Sb**	**11 58 37.8**	**-0.9**
	baz=294						
YHNB	**Yeheng**	**0.60**	**343**	⇓P	**Pb**	**11 58 30.5**	**-0.1**
	baz=346						
YHNB				*e*S	**Sb**	**11 58 37.7**	**-1.1**
	baz=346						
NSK	**Sanguang**	**0.61**	**342**	⇓*i*P	**Pb**	**11 58 30.7**	**-0.1**
	baz=346						
NSK				*e*S	**Sb**	**11 58 38.3**	**-0.8**
	baz=346						
HGSD	**Ruisui**	**0.61**	**193**	*e*P	**Pb**	**11 58 30.8**	**-0.1**
	baz=198						
EHY	**Hungye**	**0.63**	**201**	*e*P	**Pb**	**11 58 30.6**	**-0.5**
	baz=190						
EHY				*e*S	**Sb**	**11 58 38.5**	**-0.9**
	baz=190						
TWE	**Neicheng**	**0.63**	**8**	⇑*i*P	**Pb**	**11 58 31.2**	**+0.1**
	baz=13						
TWE				S	**Sg**	**11 58 40.4**	**+0.5**
	baz=13						
SSLB	**Suanglung**	**0.64**	**242**	⇑P	**Pb**	**11 58 30.9**	**-0.4**
	baz=244						
SSLB				S	**Sb**	**11 58 38.6**	**-1.3**
	baz=244						
SMLT	**Sun Moon Lake**	**0.65**	**251**	⇑*i*P	**Pb**	**11 58 31.4**	**-0.1**
	baz=243						
SMLT				S	**Sb**	**11 58 39.0**	**-1.2**
	baz=243						
TYC	**Yuchr**	**0.68**	**254**	⇓*i*P	**Pb**	**11 58 31.6**	**-0.4**
	baz=247						
TYC				S	**Sb**	**11 58 39.6**	**-1.3**
	baz=247						
EOS1	**EOS1**	**0.68**	**48**	*e*P	**Pn**	**11 58 33.4**	**0.0**
	baz=43						
NWLT	**Wulai**	**0.68**	**355**	⇓P	**Pg**	**11 58 32.2**	**-0.1**
	baz=358						
ILA	**Ilan**	**0.69**	**14**	*e*P	**Pg**	**11 58 32.3**	**-0.1**
	baz=18						
YULB	**Yu-li**	**0.74**	**200**	*e*P	**Pb**	**11 58 32.3**	**-0.8**
	baz=190						
YULB				*e*S	**Sb**	**11 58 42.3**	**-0.6**
	baz=190						
NSTT	**Nanjuang**	**0.75**	**316**	⇓*i*P	**Pg**	**11 58 33.5**	**0.0**
	baz=318						
NSTT				S	**Sb**	**11 58 42.4**	**-0.6**
	baz=318						
LIOB	**Emei**	**0.75**	**317**	⇓*i*P	**Pb**	**11 58 33.1**	**-0.2**
	baz=319						
LIOB				*e*S	**Sb**	**11 58 42.9**	**-0.2**
	baz=319						
WHYT	**Xinyi Township**	**0.77**	**239**	*e*P	**Pb**	**11 58 33.7**	**+0.1**
	baz=238						
WHYT				*e*S	**Sg**	**11 58 43.9**	**-0.2**
	baz=238						
TWQ1	**Liyutan**	**0.77**	**289**	⇓*i*P	**Pg**	**11 58 34.3**	**+0.3**
	baz=297						
TWQ1				S	**Sg**	**11 58 44.2**	**-0.1**
	baz=297						
TWF1	**Yuli**	**0.78**	**199**	⇑P	**Pb**	**11 58 33.7**	**-0.1**
	baz=195						
TWF1				S	**Sb**	**11 58 44.0**	**+0.1**
	baz=195						
NTC	**Toucheng**	**0.79**	**17**	*e*P	**Pb**	**11 58 34.1**	**+0.1**
	baz=20						
NSY	**Sanyi**	**0.81**	**294**	⇓*i*P	**Pn**	**11 58 35.2**	**0.0**
	baz=300						
NSY				S	**Sg**	**11 58 45.4**	**0.0**
	baz=300						
WLTB	**Daxi**	**0.81**	**339**	⇓*i*P	**Pn**	**11 58 35.1**	**-0.1**
	baz=347						
WLTB				S	**Sg**	**11 58 45.2**	**-0.3**
	baz=347						
WJS	**Zhushan**	**0.82**	**251**	*e*P	**Pg**	**11 58 35.0**	**+0.1**
	baz=249						
WJS				*e*S	**Sg**	**11 58 45.7**	**0.0**
	baz=249						
TCU	**Taichung**	**0.82**	**274**	⇓P	**Pn**	**11 58 35.4**	**+0.1**
	baz=273						
TCU				S	**Sn**	**11 58 46.8**	**-0.1**
	baz=273						
NMLH	**Miaoli**	**0.84**	**302**	⇓*i*P	**Pn**	**11 58 35.8**	**+0.2**
	baz=302						
NMLH				*e*S	**Sn**	**11 58 47.1**	**-0.2**
	baz=302						
WNT	**Mingjian**	**0.84**	**255**	*e*P	**Pg**	**11 58 35.4**	**+0.1**
	baz=253						
WNT				S	**Sn**	**11 58 47.0**	**-0.4**
	baz=253						
PTSB	**Yuanli**	**0.86**	**294**	⇓P	**Pn**	**11 58 36.2**	**+0.2**
	baz=294						
PTSB				S	**Sg**	**11 58 47.5**	**+0.3**
	baz=294						
NHDH	**Xindian Distri**	**0.87**	**357**	*e*P	**Pn**	**11 58 35.9**	**0.0**
NHDH				*e*S	**Sg**	**11 58 47.1**	**-0.2**
SBCB	**Hsinchu**	**0.88**	**323**	⇓P	**Pn**	**11 58 36.4**	**+0.3**
	baz=324						
SBCB				*e*S	**Sn**	**11 58 48.5**	**+0.2**
	baz=324						
TATO	**Taipei**	**0.88**	**355**	*e*Pn	**Pg**	**11 58 36.1**	**0.0**
TATO	**Taipei**	**0.88**	**355**	P	**Pg**	**11 58 35.8**	**-0.2**
	baz=358						
TATO				S	**Sn**	**11 58 48.1**	**-0.3**
	baz=358						
TWA	**Mucha**	**0.88**	**1**	P	**Pg**	**11 58 35.9**	**-0.2**
	baz=359						
TWA				S	**Sg**	**11 58 47.9**	**+0.1**
	baz=359						
WDJ	**Dajia District**	**0.89**	**287**	*e*P	**Pn**	**11 58 36.2**	**0.0**
	baz=286						
WDJ				*e*S	**Sn**	**11 58 48.4**	**-0.2**
	baz=286						
HSN	**Hsinchu**	**0.89**	**322**	*e*P	**Pn**	**11 58 36.8**	**+0.5**
	baz=332						
HSN				*e*S	**Sn**	**11 58 49.1**	**+0.3**
	baz=332						
TIPB	**Shuangxi**	**0.90**	**15**	*e*P	**Pn**	**11 58 36.5**	**0.0**
	baz=18						
TIPB				S	**Sb**	**11 58 47.7**	**+0.1**
	baz=18						
WCHH	**Zhanghua**	**0.93**	**269**	*e*P	**Pn**	**11 58 36.8**	**0.0**
	baz=267						
WCHH				*e*S	**Sn**	**11 58 50.5**	**+1.0**
	baz=267						
NCUH	**Zhongli**	**0.94**	**338**	*e*P	**Pg**	**11 58 37.6**	**+0.4**
	baz=341						
NCU	**National Centr**	**0.94**	**338**	P	**Pg**	**11 58 37.7**	**+0.5**
	baz=340						
NCU				S	**Sn**	**11 58 51.4**	**+1.5**
	baz=340						
CHN5	**Tsauling**	**0.96**	**239**	P	**Pg**	**11 58 37.6**	**+0.2**
	baz=236						
CHN5				*e*S	**Sg**	**11 58 50.0**	**-0.1**
	baz=236						
TWB1	**Santiao Chiao**	**0.99**	**23**	*e*P	**Pb**	**11 58 37.5**	**+0.2**
	baz=26						
TWB1				*e*S	**Sb**	**11 58 50.0**	**+0.1**
	baz=26						
NWF	**Wu-fen Shan**	**0.99**	**11**	*e*P	**Pb**	**11 58 37.6**	**+0.2**
	baz=20						
NWF				S	**Sn**	**11 58 51.5**	**+0.2**
	baz=20						
WFSB	**Wu-fen Shan**	**0.99**	**11**	*e*P	**Pb**	**11 58 37.3**	**-0.1**
	baz=20						
WFSB				*e*S	**Sg**	**11 58 51.5**	**+0.2**
	baz=20						
CHKT	**Chengkung**	**1.01**	**191**	*e*P	**Pb**	**11 58 35.5**	**-2.1**
	baz=188						
WGK	**Gukeng**	**1.01**	**246**	*e*P	**Pg**	**11 58 38.2**	**-0.2**
	baz=244						
WGK				*e*S	**Sg**	**11 58 52.0**	**+0.2**
	baz=244						
TWS1	**Kuangyinshan**	**1.01**	**352**	*e*P	**Pg**	**11 58 38.7**	**+0.2**
	baz=7.0						
TWS1				*e*S	**Sg**	**11 58 52.9**	**+1.0**
	baz=7.0						
WDLH	**Douliu**	**1.03**	**247**	*e*P	**Pg**	**11 58 38.6**	**-0.2**
	baz=245						
WDLH				*e*S	**Sg**	**11 58 53.1**	**+0.8**
	baz=245						
ELDTW	**Lidau**	**1.03**	**210**	⇓*e*P	**Pb**	**11 58 35.9**	**-2.2**
	baz=206						
ELDTW				*e*S	**Sb**	**11 58 50.2**	**-1.1**
	baz=206						
YM01	**YM01**	**1.05**	**360**	*e*P	**Pn**	**11 58 38.5**	**0.0**
	baz=3.0						
YM01				*e*S	**Sg**	**11 58 53.0**	**0.0**
	baz=3.0						
YM04	**YM04**	**1.06**	**358**	*e*P	**Pn**	**11 58 38.8**	**+0.2**
	baz=1.0						
YM04				*e*S	**Sg**	**11 58 53.0**	**-0.2**
	baz=1.0						
YM05	**YM05**	**1.06**	**360**	*e*P	**Pb**	**11 58 38.4**	**-0.3**
	baz=2.0						
YM05				*e*S	**Sn**	**11 58 53.0**	**-0.1**
	baz=2.0						
YM11	**YM11**	**1.07**	**0**	*e*P	**Pb**	**11 58 38.7**	**0.0**
	baz=3.0						
YM11				*e*S	**Sg**	**11 58 53.6**	**-0.1**
	baz=3.0						

```
NTST  Danshui            1.07 354  eP      Pg      11 58 39.4 -0.3
      baz=8.0
NTST                               eS      Sg      11 58 53.6 -0.2
      baz=8.0
YM08  YM08               1.09   1  eP      Pn      11 58 39.3 +0.3
      baz=3.0
YM08                               eS      Sb      11 58 53.1 +0.2
      baz=3.0
RLNB  Erlin              1.13 260⇓eP      Pb      11 58 39.8 +0.1
      baz=258
RLNB                               eS      Sn      11 58 54.8 +0.4
      baz=258
CHN2  Minshiung          1.15 241  eP      Pg      11 58 41.0 -0.1
      baz=238
CHN2                               eS      Sg      11 58 56.6 +0.4
      baz=238
CHN4  Tsaushan           1.16 231 ⇓P       Pg      11 58 40.9 -0.5
      baz=228
CHN4                               eS      Sg      11 58 56.8 +0.2
      baz=228
TPUB  Ta-pu              1.17 228 ⇓P       Pb      11 58 40.5 +0.1
      baz=213
TPUB                                S      Sg      11 58 56.3 -0.6
      baz=213
TWY   Chenhua            1.18   1  eP      Pg      11 58 41.2 -0.4
      baz=4.0
STYT  Tauyuan            1.19 219 ⇓P       Pn      11 58 40.1 -0.4
      baz=207
STYT                               eS      Sn      11 58 56.0 -0.1
      baz=207
WTCT  Ta-ch'eng          1.20 259  eP      Pb      11 58 40.8 -0.1
      baz=257
WTCT                               eS      Sn      11 58 57.0 +0.6
      baz=257
CHY   Chiayi             1.21 241  eP      Pb      11 58 41.3 +0.3
      baz=238
CHY                                eS      Sg      11 58 58.0 -0.1
      baz=238
WTP   Ta-pu              1.22 226 ⇓P       Pb      11 58 41.3  0.0
      baz=223
WTP                                eS      Sg      11 58 57.9 -0.5
      baz=223
WMLT  Mailiao            1.27 257  eP      Pb      11 58 42.0  0.0
      baz=253
TWK   Hsinying           1.29 231 ⇑P       Pb      11 58 43.0 +0.5
      baz=237
JYNG  Yonagunijimaku     1.30  74   P      Pn      11 58 42.3 +0.3
JYNG                               eS      Sb      11 58 59.8 +0.8
SNST  Tainan City        1.31 229  eP      Pb      11 58 43.3 +0.4
      baz=213
SNST                               eS      Sg      11 59 01.1 -0.3
      baz=213
WLGB  Puzi               1.32 242  eP      Pb      11 58 43.4 +0.5
      baz=240
WLGB                               eS      Sg      11 59 01.6  0.0
      baz=240
WSF   Szhu               1.32 250  eP      Pb      11 58 42.8 -0.1
      baz=237
WSF                                 S      Sb      11 59 00.2 +0.8
      baz=237
CHN1  Nanshi             1.32 227  eP      Pb      11 58 43.1 +0.2
      baz=224
CHN1                               eS      Sg      11 59 01.3 -0.3
      baz=224
TWG   Pinlang            1.35 200  eP      Pn      11 58 39.8 -2.8
      baz=182
TWGBT Beinan             1.35 200⇓eP      Pn      11 58 39.8 -2.8
      baz=182
YOJ   Yonaguni jima      1.36  74  eP      Pn      11 58 42.7  0.0
      baz=76
YOJ   Yonaguni jima      1.36  74   P      Pn      11 58 42.8  0.0
YOJ                                 S      Sb      11 59 00.7 -0.1
SLGT  Liugui             1.39 218  eP      Pn      11 58 43.6 +0.5
      baz=203
TTN   Taitung            1.39 196  eP      Pn      11 58 43.3 +0.1
      baz=179
CHN8  Yiju               1.45 239  eP      Pb      11 58 45.4 +0.1
      baz=222
CHN8                               eS      Sb      11 59 04.0 +0.8
      baz=222
CHN3  Shinhua            1.50 228  eP      Pb      11 58 46.5 +0.5
      baz=224
CHN3                               eS      Sg      11 59 07.7 +0.3
      baz=224
SCLT  Jiali              1.56 234  eP      Pb      11 58 47.6 +0.6
      baz=216
SCLT                               eS      Sg      11 59 07.8 -1.4
      baz=216
ECL   Taimali            1.59 201  eP      Pb      11 58 47.2 -0.5
      baz=186
PCYT  Pengchaiyu         1.59  16  eP      Pn      11 58 45.9 -0.1
      baz=19
SSD   Sandimen           1.59 213  eP      Pn      11 58 46.3 +0.3
      baz=210
TWM1  Shoushan           1.65 220  eP      Pg      11 58 50.1 -0.5
      baz=215
SGLT  Jiouru             1.69 216  eP      Pb      11 58 48.5 -0.7
      baz=212
MASBT Mashibuluo         1.71 210  eP      Pn      11 58 47.0 -0.6
      baz=207
SNJT  Kaohsiung City     1.75 221  eP      Pb      11 58 50.7 +0.4
      baz=215
EAST  Anshuo             1.83 201  eP      Pn      11 58 47.4 -1.8
      baz=189
TAW   Tawu               1.84 200  eP      Pn      11 58 49.8 +0.5
      baz=188
SSPT  Xinbi              1.85 210  eP      Pn      11 58 50.5 +1.1
      baz=207
PNG   Penghu             1.92 255  eP      Pn      11 58 50.7 +0.3
      baz=251
PNG                                eS      Sn      11 59 14.6 +0.6
      baz=251
PHUB  P'eng-hu           1.92 253  eP      Pn      11 58 50.9 +0.4
      baz=250
PHUB                               eS      Sn      11 59 15.0 +1.0
      baz=250
SCZT  Fangliau           1.92 207  eP      Pn      11 58 51.0 +0.4
      baz=188
WDGT  Dungji             1.94 245  eP      Pn      11 58 51.2 +0.5
      baz=241
WDGT                               eS      Sn      11 59 15.0 +0.5
      baz=241
IRIF  Iriomote-Funau     1.99  83   P      Pn      11 58 51.3 -0.1
IRIF                                S      Sn      11 59 16.6 +0.9
HATJ  Hateruma jima      2.04  91   P      Pn      11 58 52.6 +0.5
HATJ                                S      Sn      11 59 17.8 +0.7
LAY   Lan-yu             2.05 181  eP      Pn      11 58 49.8 -2.4
      baz=170
WLCH  Liuqiu             2.05 213  eP      Pb      11 58 56.4 +1.0
      baz=222
TWP   Hsiaoliuchiu       2.06 213  eP      Pg      11 58 57.3 -1.2
      baz=221
VWUC  VWUC               2.13 295  eP      Pn      11 58 52.2 -1.1
      baz=294
VCHM  Qimei              2.15 246  eP      Pn      11 58 53.8 +0.1
      baz=227
VCHM                               eS      Sn      11 59 19.8  0.0
      baz=227
PTTC  Pingtan            2.15 311  eP      Pn      11 58 53.4 -0.3
      baz=298
HEN   Hengchun           2.22 200  eP      Pb      11 58 57.4 -0.8
      baz=183
JKRS  Kuro-shima         2.23  86   P      Pn      11 58 55.7 +1.0
JKRS                                S      Sn      11 59 23.5 +1.7
TWK1  Hengchun           2.25 198  eP      Pn      11 58 55.1 +0.1
      baz=183
TWKBT Hengchun           2.25 198  eP      Pn      11 58 55.7 +0.6
      baz=183
TSEB  Hengchuen, Pin     2.27 196  eP      Pb      11 58 58.0 -1.2
      baz=183
JIJ   Ishigaki jima      2.36  83   P      Pn      11 58 56.5 -0.1
JIJ                                eS      Sn      11 59 25.1 +0.1
PTMZ  Houxiangcun        2.42 293  eP      Pn      11 58 56.5 -0.9
      baz=292
MATB  Ma-tsu             2.52 325  eP      Pn      11 58 58.4 -0.4
      baz=328
JISG  Ishigakijimahi     2.55  78   P      Pn      11 58 59.2 +0.1
JISG                               eS      Sn      11 59 29.6 +0.1
KNM   Kinmen             2.88 277  eP      Pn      11 59 05.0 +1.3
      baz=272
JTJ   Tarama             2.91  79   P      Pn      11 59 04.6 +0.6
JTJ                                 S      Sn      11 59 40.3 +1.9
KNMB  Chin-men Tao       2.93 278  eP      Pn      11 59 03.8 -0.6
      baz=274
LYJJ  Jianjiangzhen      2.94 327  eP      Pn      11 59 04.3 -0.2
      baz=331
MHZQ  Yeshan             3.05 311  eP      Pn      11 59 05.7 -0.3
      baz=313
XPSS  Dashiqiu           3.09 336  eP      Pn      11 59 05.9 -0.6
      baz=343
JIRB  Irabujima          3.36  77   P      Pn      11 59 11.5 +1.2
JIRB                                S      Sn      11 59 50.2 +0.5
AXDP  Jialang            3.38 284  eP      Pn      11 59 10.0 -0.5
      baz=281
ZPLA  Ao Xicun           3.50 268  eP      Pn      11 59 12.2  0.0
      baz=262
ZZJH  Jiuhuzhen          3.62 277  eP      Pn      11 59 13.9 +0.2
      baz=273
SSE   Sheshan            6.98 357  ePn     Pn      11 59 57.2 -2.9
      25nm,0.7s
SSE                                eSn     Sn      12 01 12.9 -6.0
NJ2   Nanjing            8.28 344  eP      Pn      12 00 17.5 -0.4
WHN   Wuhan              9.08 317 ⇑P       Pn      12 00 24.5 -4.3
WHN                                 S      Sn      12 02 03.9 -6.6
WHN                                 LR     LR
      comp=N,1μm,5.3s
WHN                                 LR     LR
      comp=E,920nm,5.6s
WHN                                 LR     LR
      comp=Z,3μm,14.1s
KSRS  Korea Array       14.39  21   P      P       12 01 47.6 -0.6
      comp=Z,0.3nm,0.3s,baz=201,slow=11,SNR=19
XAN   Xi'an             14.84 315   P      Pn      12 01 47.8 +0.2
XAN                                 pP     P       12 01 56.6 +3.2
XAN                                 pmax   pmax
      comp=Z,6.0nm,0.9s
XAN   Xi'an             14.84 315  ePn     Pn      12 01 47.3 -0.3
      comp=Z,31nm,0.8s
HHC   Hu-ho-hao-te      18.70 336  eP      Pn      12 02 38.7 +2.2
HHC                                 S      Sn      12 06 05.4 +0.3
HHC                                 pmax   pmax
      comp=Z,8.0nm,0.9s
CMMT  Chiang Mai        21.69 260   P      P       12 03 12.4 +3.7
CHTO  Chiang Mai        21.70 260  eP      P       12 03 06.7 -2.1
      comp=Z,5.3nm,0.8s
CHTO  Chiang Mai        21.70 260   P      P       12 03 12.5 +3.8
USRK  Ussuriysk Ar.     21.80  21   P      P       12 03 10.5 +0.9
      comp=Z,1.2nm,0.7s,baz=195,slow=8.4,SNR=4.2
CMAR  Chiang Mai Arr    21.81 259   P      P       12 03 12.3 +2.4
      comp=Z,2.4nm,0.8s,baz=62,slow=8.6,SNR=15
GTA   Gaotai            23.90 315 ⇓P       P       12 03 32.2 +0.7
GTA                                 pP     pP      12 03 37.2 -0.9
GTA                                 sP     sP      12 03 39.7 -0.2
GTA                                 pmax   pmax
      comp=Z,5.0nm,1.4s
KLR   Kul'dur           26.33  15   P      P       12 03 53.4  0.0
      comp=Z,1.1nm,0.5s,baz=218,slow=6.5,SNR=4.8
ASAJ  Asahikawa         26.36  36   P      P       12 03 54.6 +0.9
      comp=Z,31nm,0.9s,baz=227,slow=8.8,SNR=18
ULN   Ulaanbaatar       26.38 338  eP      P       12 03 53.7 -0.3
      comp=Z,3.0nm,0.8s
SONM  Songino Array     26.59 337   P      P       12 03 55.7 -0.2
      comp=Z,1.7nm,0.8s,baz=154,slow=9.4,SNR=11
LSA   Lhasa             27.65 288  eP      P       12 04 07.3 +1.3
      comp=Z,9.5nm,0.6s
WMQ   Urumqi            33.97 314  eP      P       12 05 03.5 +2.3
MKAR  Makanchi Array    38.65 316   P      P       12 05 40.7 -0.3
      comp=Z,5.4nm,0.7s,baz=105,slow=9.5,SNR=45
ZALV  Zalesovo Beam     40.51 327   P      P       12 05 55.2 -1.2
      comp=Z,1.7nm,0.6s,baz=119,slow=7.6,SNR=10.0
WRA   Warramunga Arr    45.50 163   P      P       12 06 34.3 -2.8
      comp=Z,1.5nm,0.6s,baz=344,slow=8.5,SNR=6.8
ASAR  Alice Springs     48.96 165   P      P       12 07 02.2 -1.9
      comp=Z,1.9nm,0.8s,baz=334,slow=6.7,SNR=10
GEYT  Alibeck           55.15 300   P      P       12 07 51.3 +1.2
      comp=Z,2.5nm,0.7s,baz=90,slow=2.9,SNR=3.7
ILAR  Eielson Array     69.13  27   P      P       12 09 22.0 -1.5
      comp=Z,0.9nm,0.8s,baz=297,slow=8.0,SNR=6.2
BRTR  Keskin Array B    73.51 307   P      P       12 09 49.9 -0.7
      comp=Z,0.7nm,0.7s,baz=104,slow=4.9,SNR=4.0
YKA   Yellowknife Ar    82.91  23   P      P       12 10 40.1 -1.9
      comp=Z,0.5nm,0.6s,baz=308,slow=5.0,SNR=12
NVAR  Mina Array Bea    96.26  43   P      P       12 11 45.3 -1.1
      comp=Z,0.4nm,0.6s,baz=297,slow=5.9,SNR=3.1
```

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*ISCJB **06** 12:00:41.5±0.5, 11.°30S±0.°06×165.°75E±0.°08, h10km, mb4.4/11, Error ellipse: s-maj=12.0km s-min=9.2km az=167.5*

*IDC **06** 12:00:41.6±0.9, 11.°21S×165.°76E, h0km, mb4.2/8, mb1 4.5/9, mb1mx4.0/51, mbtmp4.3/9, ML4.9/1, Error ellipse: s-maj=27.2km s-min=22.4km az=137.0*

*NEIC **06** 12:00:43.2±0.4, 11.°21S×165.°79E, h10km, mb4.3/1, Error ellipse: s-maj=10.7km s-min=8.2km az=85.0*

ISC 06 12:00:43.2±0.7**, 11.°21S**±0.°10×**165.°75E**±0.°08**, h10**km**, n26,** σ**1.s04**/27**, mb4.4**/11**, Santa Cruz Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
HNR   Honiara            5.98 287  ePn     Pn      12 02 13.2 +1.4
HNR                                eSg     Sg      12 03 54.2 -1.1
MARNC Mare, Loyalty     10.45 168  ePn     Pn      12 03 13.8 +0.6
DZM   Mont Dzumac       10.82 177  ePn     Pn      12 03 18.8 +0.4
DZM   Mont Dzumac       10.82 177   Pn     Pn      12 03 18.4  0.0
      8.0nm,0.3s,baz=6.1,slow=12,SNR=11
ONTNC Ouen Toro         11.06 177  ePn     Pn      12 03 20.8 -0.7
PINNC Pines Island,     11.46 172  ePn     Pn      12 03 27.8 +0.8
CTA   Charters Tower    20.73 242   P      P       12 05 24.8 +0.7
      2.3nm,0.2s,baz=76,slow=8.9,SNR=3.6
URZ   Urewera           28.79 161   P      P       12 06 41.6 +0.2
      7.7nm,0.9s,baz=275,slow=3.9,SNR=3.7
STKA  Stephens Creek    30.32 224  eP      P       12 06 54.5 -0.6
      5.0nm,1.1s
STKA  Stephens Creek    30.32 224          P       12 06 54.1 -1.0
STKA  Stephens Creek    30.32 224   ScP    P       12 06 54.0 -1.0
STKA  Stephens Creek    30.32 224   ScP    P       12 06 54.0 -1.0
      10nm,0.9s,baz=2.0,slow=6.9,SNR=5.0
WR1   Warramunga Arr    31.43 250  eP      P       12 07 04.1 -0.9
      53nm,1.4s
WRA   Warramunga Arr    31.43 250   P      P       12 07 04.1 -0.9
      4.2nm,0.9s,baz=81,slow=9.3,SNR=7.4
BBOO  Buckleboo         34.72 227  eP      P       12 07 33.0 -0.6
      67nm,1.9s
FITZ  Fitzroy Crossi    39.34 255  eP      P       12 08 13.2 +0.2
      49nm,2.0s
FITZ  Fitzroy Crossi    39.34 255   P      P       12 08 11.8 -1.3
      3.4nm,1.0s,baz=94,slow=13,SNR=2.9
CM31  Chiang Mai Arr    72.18 294  eP      P       12 12 10.8 +1.9
CMAR  Chiang Mai Arr    72.18 294   P      P       12 12 10.7 +1.9
      0.4nm,0.3s,baz=122,slow=3.4,SNR=3.8
HDA   Harding Lake      83.40  19  eP      P       12 13 10.6 +0.2
      8.8nm,1.0s
ILAR  Eielson Array     83.67  18   P      P       12 13 11.8  0.0
      1.0nm,0.7s,baz=240,slow=5.7,SNR=5.9
ILB   Eielson Array     83.67  18  eP      P       12 13 12.1 +0.3
NV01  Mina Array Sit    86.13  50  eP      P       12 13 24.8 -0.3
NVAR  Mina Array Bea    86.13  50   P      P       12 13 25.5 +0.5
      1.4nm,0.9s,baz=236,slow=4.9,SNR=4.1
YKA   Yellowknife Ar    95.12  27   P      P       12 14 04.6 -1.8
      0.2nm,0.5s,baz=259,slow=4.8,SNR=3.1
YKB5  Yellowknife Ar    95.12  27  eP      P       12 14 04.6 -1.7
```

IDC 06 12:02:10.3±1.2**, 11.°30S**×**165.°64E, h0**km**, mb3.6**/4**, mb1 4.0**/5**, mb1mx3.6**/52**, mbtmp3.7**/5**, ML4.0**/1**, Error ellipse: s-maj=49.9km s-min=25.3km az=138.0, Santa Cruz Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
DZM   Mont Dzumac       10.74 176   Pn     Pn      12 04 45.8 +0.2
      1.1nm,0.3s,baz=280,slow=6.8,SNR=2.6
WRA   Warramunga Arr    31.30 250   P      P       12 08 32.9 +0.3
      2.0nm,0.8s,baz=82,slow=9.0,SNR=3.9
ASAR  Alice Springs     32.59 244   P      P       12 08 43.4 -0.4
      0.3nm,0.6s,baz=74,slow=9.1,SNR=3.1
ILAR  Eielson Array     83.79  19   P      P       12 14 40.9 -0.3
      0.3nm,0.8s,baz=235,slow=5.2,SNR=2.3
NVAR  Mina Array Bea    86.27  50   P      P       12 14 54.8 +0.2
      0.1nm,0.4s,baz=224,slow=8.8,SNR=2.3
```

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*ISCJB **06** 12:04:38.8±0.3, 10.°82S±0.°06×166.°04E±0.°06, h10km, mb4.6/41, Error ellipse: s-maj=8.9km s-min=6.9km az=44.5*

*IDC **06** 12:04:41.0±1.1, 11.°50S×165.°97E, h34km±4km, mb3.9/12, mb1 4.0/13, mb1mx3.9/48, mbtmp4.1/13, ML4.6/1, Error ellipse: s-maj=31.0km s-min=17.4km az=123.0*

*NEIC **06** 12:04:40.5±0.2, 10.°75S×165.°98E, h10km, mb4.8/5, Error ellipse: s-maj=6.7km s-min=5.3km az=74.0*

ISC 06 12:04:39.7±0.5**, 11.°28S**±0.°09×**165.°95E**±0.°08**, h10**km**, n63,** σ**2.s30**/50**, mb4.7**/44**, Santa Cruz Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
HNR   Honiara            6.19 287  ePn     Pn      12 06 10.1 -1.1
HNR                                eSn     Sn      12 07 24.6 +2.6
HNR   Honiara            6.19 287   Pn     Pn      12 06 10.6 -0.5
      14nm,0.3s,baz=58,slow=19,SNR=3.1
MARNC Mare, Loyalty     10.33 169  ePn     Pn      12 07 15.1 +7.0
DZM   Mont Dzumac       10.74 178  ePn     Pn      12 07 14.9 +1.2
ONTNC Ouen Toro         10.97 178  ePn     Pn      12 07 17.9 +1.1
PINNC Pines Island,     11.36 173  ePn     Pn      12 07 23.3 +1.2
FUNA  Funafuti          13.34  79  ePn     Pn      12 07 47.7 -1.5
CTAO  Charters Tower    20.87 243  eP      Pn      12 09 26.7 +2.2
      40nm,1.3s
OUZ   Omahuta           24.82 165  eP      P       12 10 07.9 +5.8
      66nm,1.2s
STKA  Stephens Creek    30.41 224   P      P       12 10 47.7 -4.6
      2.2nm,0.6s,baz=68,slow=19,SNR=4.1
SNZO  South Karori      30.88 167  eP      P       12 11 02.2 +5.9
      40nm,1.0s
WRA   Warramunga Arr    31.59 250   P      P       12 11 00.5 -2.4
      2.1nm,0.8s,baz=82,slow=9.2,SNR=7.1
WRA                                 pP     pwP     12 11 09.7 -0.1
      7.8nm,0.9s,baz=78,slow=9.0,SNR=9.1
KHZ   Kahutara          31.71 169  eP      P       12 11 09.6 +5.9
      34nm,1.2s
FOZ   Fox Glacier       32.30 175  eP      P       12 11 13.8 +5.1
      75nm,1.4s
OXZ   Oxford            32.36 172  eP      P       12 11 14.9 +5.6
      71nm,1.4s
RPZ   Rata Peaks        32.61 173  eP      P       12 11 17.5 +6.0
      39nm,0.9s
AS01  Alice Springs     32.82 244  eP      P       12 11 16.5 +2.8
AS31  Alice Springs     32.86 244  eP      P       12 11 17.3 +3.2
      1.0nm,0.6s
ASAR  Alice Springs     32.87 244   P      P       12 11 11.4 -2.6
      0.6nm,0.7s,baz=65,slow=9.8,SNR=4.1
ASAR                                pP     pwP     12 11 20.9 -0.1
      2.1nm,0.7s,baz=66,slow=9.9,SNR=5.5
LBZ   Lake Benmore      33.18 174  eP      P       12 11 20.8 +4.3
      63nm,1.5s
FITZ  Fitzroy Crossi    39.51 255   P      P       12 12 07.3 -3.6
      1.8nm,0.8s,baz=94,slow=8.3,SNR=4.0
MJAR  Matsushiro Arr    54.27 332   P      P       12 14 03.4 -2.7
      1.0nm,0.8s,baz=171,slow=9.6,SNR=3.7
KSRS  Korea Array       60.19 326   pP     pP      12 14 56.9 +6.9
      2.6nm,1.0s,baz=133,slow=9.1,SNR=3.4
NJ2   Nanjing           62.33 315  eP      P       12 15 02.1 -0.4
NJ2                                 pmax   pmax
      comp=Z,6.0nm,0.5s
USRK  Ussuriysk Ar.     63.25 333   P      P       12 15 06.0 -2.3
      comp=Z,1.0nm,0.8s,baz=132,slow=6.4,SNR=2.3
USRK                                pP     pwP     12 15 17.3 +2.2
      comp=Z,2.7nm,0.8s,baz=113,slow=6.2,SNR=6.0
KLR   Kul'dur           67.36 336   pP     pP      12 15 42.6 +5.5
      comp=Z,2.6nm,0.8s,baz=120,slow=12,SNR=4.6
SKNT  Sakolnakorn       67.37 294   P      P       12 15 45.7  +10
ENH   Enshi             68.20 309  eP      P       12 15 39.0 -1.7
      comp=Z,20nm,1.2s
NONG  Nongkai           68.50 295   P      P       12 15 42.8 +0.1
      comp=Z,0.4nm,1.3s
GYA   Guiyang           68.72 304   P      P       12 15 45.0 +0.9
GYA                                 PP     PP      12 18 19.5 +3.4
GYA                                 S      S       12 24 46.6 -1.3
GYA                                 SKS    SKiKP   12 25 40.0 +2.6
GYA   Guiyang           68.72 304   SS     SS      12 29 12.7 -0.2
GYA                                 pmax   pmax
      comp=Z,20nm,0.8s
GYA                                 pmax   pmax
      comp=Z,120nm,6.7s
GYA                                 LR     LR
      comp=N,490nm,18.2s
GYA                                 LR     LR
      comp=E,520nm,18.6s
GYA                                 LR     LR
      comp=Z,480nm,18.4s
PBKT  Sadao Pong        69.95 292   P      P       12 16 02.3  +10
      comp=Z,9.5nm,0.9s
XAN   Xi'an             70.43 312   P      P       12 16 03.6 +9.1
XAN                                 pP     PcP     12 16 17.1 +1.2
XAN                                 sP     pwP     12 16 24.0  +23
XAN                                 pmax   pmax
      comp=Z,7.0nm,1.3s
XAN   Xi'an             70.43 312  eP      P       12 15 53.2 -1.3
UTTA  Uttaradit         70.71 293   P      P       12 16 07.6  +11
      comp=Z,2.4nm,1.0s
UTHA  Uthaitani         71.03 291   P      P       12 16 09.7  +11
      comp=Z,2.8nm,1.0s
KMI   Kunming           71.42 301   P      P       12 16 01.0 +0.1
KMI                                 pmax   pmax
      comp=Z,8.0nm,1.1s
HHC   Hu-ho-hao-te      72.14 320  eP      P       12 16 05.5 +0.7
HHC                                 pmax   pmax
      comp=Z,8.0nm,1.1s
CM01  Chiang Mai Arr    72.36 294  eP      P       12 16 06.4 -0.1
CMAR  Chiang Mai Arr    72.39 294   P      P       12 16 06.7 +0.1
      comp=Z,1.9nm,0.8s,baz=127,slow=4.7,SNR=11
CMAR                                pP     pwP     12 16 16.2 +3.0
      comp=Z,5.8nm,0.9s,baz=114,slow=4.4,SNR=14
CMMT  Chiang Mai        72.50 294   P      P       12 16 17.5  +10
      comp=Z,7.7nm,1.3s
CHTO  Chiang Mai        72.50 294  eP      P       12 16 06.0 -1.3
      comp=Z,13nm,1.3s
CHTO  Chiang Mai        72.50 294   P      P       12 16 17.6  +10
      comp=Z,35nm,1.3s
CD2   Chengdu           72.91 307   P      P       12 16 09.2 -0.3
CD2                                 pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                                 pmax   pmax
      comp=Z,3μm,10.5s
CD2                                 LR     LR
      comp=N,4μm,16.8s
CD2                                 LR     LR
      comp=Z,5μm,15.0s
LZH   Lanzhou           75.06 312  eP      P       12 16 21.8 -0.4
LZH                                 pP     sP      12 16 28.0 +2.9
LZH                                 sP     pwP     12 16 31.4 +2.6
LZH                                 PP     PP      12 19 08.9 -1.5
LZH                                 pmax   pmax
      comp=Z,25nm,1.1s
LZH                                 pmax   pmax
      comp=Z,98nm,4.3s
LZH                                 LR     LR
      comp=N,230nm,16.3s
LZH                                 LR     LR
      comp=E,210nm,16.4s
LZH                                 LR     LR
      comp=Z,270nm,17.5s
QSPA  South Pole Qui    78.72 180   P      P       12 16 39.3 -2.9
      comp=Z,10nm,1.4s,baz=100,slow=6.1,SNR=3.8
SONM  Songino Array     78.98 324   P      P       12 16 43.5 -0.4
      comp=Z,1.4nm,1.1s,baz=133,slow=6.1,SNR=3.7
SONM                                pP     PcP     12 16 54.2 +1.7
      comp=Z,2.0nm,0.8s,baz=131,slow=5.5,SNR=6.7
BILL  Bilibino          79.12   0  eP      P       12 16 42.7 -1.3
      comp=Z,12nm,0.9s
GTA   Gaotai            79.37 314  eP      P       12 16 55.7 +9.5
GTA                                 pP     PcP     12 17 02.1 +7.8
GTA                                 sP     pwP     12 17 04.5  +12
GTA                                 pmax   pmax
      comp=Z,9.0nm,1.4s
IM3   Indian Mountai    82.60  15  eP      P       12 17 01.6 -1.1
WRH   Wood River Hil    83.09  18  eP      P       12 17 02.7 -2.6
      comp=Z,8.2nm,0.9s
MDM   Murphy Dome       83.39  18  eP      P       12 17 05.7 -1.1
      comp=Z,13nm,1.1s
HDA   Harding Lake      83.40  19  eP      P       12 17 05.4 -1.5
      comp=Z,18nm,0.8s
ILAR  Eielson Array     83.67  18   P      P       12 17 06.6 -1.7
      comp=Z,1.1nm,0.9s,baz=219,slow=6.1,SNR=5.8
ILAR                                pP     pwP     12 17 17.5 +2.4
      comp=Z,2.9nm,0.8s,baz=235,slow=4.8,SNR=10
IL1   Eielson Array     83.67  18  eP      P       12 17 06.8 -1.5
NVAR  Mina Array Bea    86.02  50   pP     pP      12 17 28.1 +4.9
      comp=Z,1.4nm,1.1s,baz=256,slow=7.3,SNR=2.9
WMQ   Urumqi            89.41 315  eP      P       12 17 37.8 +0.9
WMQ                                 sP     pwP     12 17 45.1 +1.5
WMQ                                 pmax   pmax
      comp=Z,22nm,1.5s
WMQ                                 pmax   pmax
      comp=Z,1μm,8.1s
WMQ                                 LR     LR
      comp=N,4μm,19.3s
WMQ                                 LR     LR
      comp=E,4μm,26.1s
WMQ                                 LR     LR
```

	comp=Z,5µm,21.9s						
PDAR	Pinedale Array	93.57	47	pP	pP	12 18 05.7	+7.0
	comp=Z,0.4nm,0.7s,baz=285,slow=3.5,SNR=2.4						
MK01	Makanchi Array	93.82	317	*e*P	P	12 17 56.5	-0.8
MKAR	Makanchi Array	93.83	317	P	P	12 17 55.9	-1.4
	comp=Z,1.0nm,0.7s,baz=94,slow=6.5,SNR=6.3						
MKAR				pP	pwP	12 18 05.8	+1.8
	comp=Z,3.5nm,0.8s,baz=93,slow=6.6,SNR=15						
ZALV	Zalesovo Beam	93.87	324	P	P	12 17 55.0	-2.2
	comp=Z,0.3nm,0.4s,baz=64,slow=3.4,SNR=3.6						
ZALV				pP	pwP	12 18 05.9	+2.0
	comp=Z,1.6nm,0.7s,baz=94,slow=4.5,SNR=4.8						
ARCES	ARCESS Array B	116.61	345	pPKP	pPKPdf	12 23 31.9	+6.0
	comp=Z,3.1nm,0.8s,baz=39,slow=0.9,SNR=3.2						
KEST	Kesra	147.73	323	pPKPbc	PKPab	12 24 34.8	+7.2
	comp=Z,7.2nm,0.8s,baz=344,slow=7.4,SNR=3.3						

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*ISCJB **06** 12:06:19.3±0.7, 38°.59N±0°.03×27°.95E±0°.04, h3^{km}±9^{km}, Error ellipse: s-maj=6.1km s-min=4.8km az=26.8*

*DDA **06** 12:06:19.3, 38°.62N×27°.98E, h7^{km}±4^{km}, ML2.6*

*ISK **06** 12:06:19.1, 38°.56N×27°.99E, h5^{km}, ML1.9/3*

ISC 06 12:06:19.4±1.1**, 38°.59N**±0°.03×**27°.98E**±0°.03**, h9**^{km}±12^{km}**, n8, σ0^s.30**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	Akhisar	0.32	337	*i* P	Pg	12 06 25.5	-0.3
AKHS				*i* S	Sg	12 06 30.3	+0.3
AKHS				IAML_P			
	comp=Z,9µm,0.2s						
MANT	Manisa	0.47	102	*i* P	Pb	12 06 29.9	0.0
MANT				*i* S	Sb	12 06 36.8	-0.2
MANT				IAML_P			
	comp=Z,2µm,0.1s						
KULA	Kula-Manisa	0.54	97	PG	Pg	12 06 29.7	-0.2
KULA				SG	Sg	12 06 37.7	+0.7
AYDB	Zeytinkoy-Aydi	0.64	186	PG	Pg	12 06 31.6	-0.2
AYDB				SG	Sg	12 06 40.5	+0.3
DEMI	Demirci	0.74	51	*i* P	Pb	12 06 34.5	+0.1
DEMI				*i* S	Sg	12 06 43.0	-0.2
DEMI				IAML_P			
	comp=Z,2µm,0.2s						
DGB	zmir	1.01	239	*i* P	Pn	12 06 39.7	0.0
DGB				*i* S	Sg	12 06 51.9	-0.1
DGB				IAML_P			
	comp=Z,587nm,0.2s						
DURS	Dursunbey	1.09	21	*i* P	Pn	12 06 40.7	-0.1
DURS				*i* S	Sb	12 06 55.0	+0.4
DURS				IAML_P			
	comp=Z,440nm,0.2s						
URLA	Izmir	1.11	259	PN	Pb	12 06 40.8	+0.1

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*IDC **06** 12:07:21.7±1.0, 11°.91S×164°.94E, h0^{km}, mb4.1/13, mb1 4.2/14, mb1mx4.0/47, mbtmp4.0/14, ML4.0/1, Error ellipse: s-maj=34.0km s-min=18.9km az=144.0*

*NEIC **06** 12:07:23.3±0.3, 11°.95S×164°.92E, h10^{km}, mb4.4/4, Error ellipse: s-maj=8.0km s-min=6.7km az=108.0*

*ISCJB **06** 12:07:25.1±0.4, 12°.10S±0°.07×164°.86E±0°.08, h33^{km}, mb4.1/17, Error ellipse: s-maj=11.4km s-min=9.9km az=13.0*

ISC 06 12:07:27.0±0.6**, 11°.99S**±0°.10×**164°.9E**±0°.1**, h35**^{km}**, n33, σ0^s.78**/34**, mb4.2**/17**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.48	297	Pn	Pn	12 08 45.3	-0.9
	4.5nm,0.3s,baz=73,slow=19,SNR=2.3						
DZM	Mont Dzumac	10.14	172	*e*Pn	Pn	12 09 49.5	-0.7
PINNC	Pines Island,	10.85	167	*e*Pn	Pn	12 09 59.6	-0.2
CAN	Canberra	27.34	209	*e*P	P	12 13 07.7	-1.1
	15nm,1.3s						
STKA	Stephens Creek	29.19	224	*e*P	P	12 13 25.6	+0.3
	0.9nm,0.9s						
STKA	Stephens Creek	29.19	224	P	P	12 13 24.9	-0.4
	2.7nm,0.8s,baz=16,slow=20,SNR=3.0						
WRAB	Tennant Creek	30.37	251	*e*P	P	12 13 36.5	+0.6
	9.0nm,1.0s						
WB2	Warramunga Arr	30.37	251	*e*P	P	12 13 35.4	-0.5
	15nm,1.0s						
WR1	Warramunga Arr	30.38	251	*e*P	P	12 13 35.9	-0.2
	18nm,1.0s						
WRA	Warramunga Arr	30.38	251	P	P	12 13 35.9	-0.2
	3.9nm,0.9s,baz=80,slow=9.3,SNR=5.2						
ASAR	Alice Springs	31.63	244	P	P	12 13 47.1	+0.1
	0.7nm,0.8s,baz=68,slow=10,SNR=2.6						
ASAR				PcP	PcP	12 16 40.2	+1.4
	0.3nm,0.7s,baz=78,slow=1.9,SNR=3.0						
FITZ	Fitzroy Crossi	38.34	256	*e*P	P	12 14 45.1	+0.2
	7.7nm,1.3s						
FITZ	Fitzroy Crossi	38.34	256	P	P	12 14 44.9	0.0
	2.9nm,0.8s,baz=90,slow=8.1,SNR=4.1						
ASAJ	Asahikawa	59.41	341	P	P	12 17 24.3	-1.7
	1.8nm,0.6s,baz=230,slow=16,SNR=3.8						
CM31	Chiang Mai Arr	71.73	294	*e*P	P	12 18 47.8	+1.7
CMAR	Chiang Mai Arr	71.73	294	P	P	12 18 47.8	+1.7
	0.6nm,0.6s,baz=124,slow=4.5,SNR=3.0						
SONA0	Songino Array	78.93	324	*e*P	P	12 19 27.5	+0.4
SONM	Songino Array	78.93	324	P	P	12 19 27.5	+0.4
	0.3nm,0.5s,baz=134,slow=8.2,SNR=2.7						
ILAR	Eielson Array	84.67	19	P	P	12 19 56.5	-0.2
	1.3nm,0.5s,baz=238,slow=5.0,SNR=22						
ILB	Eielson Array	84.67	19	*e*P	P	12 19 57.0	+0.2
NV01	Mina Array Sit	87.27	50	*e*P	P	12 20 10.6	+0.1
NVAR	Mina Array Bea	87.27	50	P	P	12 20 10.8	+0.3
	1.0nm,0.7s,baz=234,slow=8.0,SNR=4.9						
MK01	Makanchi Array	93.62	317	*e*P	P	12 20 39.0	-0.7
MK32	Makanchi Array	93.63	317	*e*P	P	12 20 40.5	+0.6
MKAR	Makanchi Array	93.63	317	P	P	12 20 40.5	+0.7
	0.8nm,0.9s,baz=92,slow=6.8,SNR=3.5						
ZALV	Zalesovo Beam	93.83	324	P	P	12 20 39.8	-0.7
	0.4nm,0.6s,baz=117,slow=5.2,SNR=2.2						
ZAA1	Zalesovo Array	93.83	324	*e*P	P	12 20 39.8	-0.7
YKA	Yellowknife Ar	96.19	27	P	P	12 20 50.0	-1.1
	0.2nm,0.7s,baz=254,slow=4.4,SNR=2.8						
YKB5	Yellowknife Ar	96.19	27	*e*P	P	12 20 51.7	+0.6
LTX	Lajitas	97.01	62	*e*P	P	12 20 55.8	0.0
TXAR	Lajitas Array	97.01	62	P	P	12 20 55.8	0.0
	0.2nm,0.6s,baz=218,slow=5.7,SNR=3.2						
ARA0	ARCESS Array S	117.03	345	*e*PKPdf	PKiKP	12 26 08.2	+0.5
ARCES	ARCESS Array B	117.03	345	PKP	PKiKP	12 26 08.2	+0.5
	3.1nm,0.9s,baz=350,slow=2.7,SNR=3.0						

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*IDC **06** 12:07:49.7±1.2, 11°.05S×165°.48E, h0^{km}, mb4.1/8, mb1 4.5/9, mb1mx4.1/47, mbtmp4.2/9, ML5.3/1, Error ellipse: s-maj=42.7km s-min=22.0km az=154.0*

*ISCJB **06** 12:07:52.9±1.0, 11°.0S±0°.2×165°.4E±0°.1, h30^{km}, mb4.1/8, Error ellipse: s-maj=32.2km s-min=16.2km az=165.3*

ISC 06 12:07:54.4±1.2**, 11°.0S**±0°.3×**165°.4E**±0°.1**, h30**^{km}**, n9, σ0^s.62**/9**, mb4.0**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.63	286	Pn	Pn	12 09 16.0	0.0
	86nm,0.3s,baz=142,slow=7.7,SNR=7.5						
WRA	Warramunga Arr	31.20	250	P	P	12 14 11.1	-0.2
	1.0nm,0.4s,baz=82,slow=8.9,SNR=7.6						
ASAR	Alice Springs	32.52	243	P	P	12 14 22.9	0.0
	8.3nm,0.8s,baz=66,slow=10.0,SNR=13						
MJAR	Matsushiro Arr	53.82	333	P	P	12 17 14.1	-0.4
	1.5nm,0.7s,baz=174,slow=8.2,SNR=3.4						
SONM	Songino Array	78.48	324	P	P	12 19 53.5	+0.8
	1.3nm,1.0s,baz=142,slow=4.2,SNR=3.6						
ILAR	Eielson Array	83.60	19	P	P	12 20 19.0	-0.5
	1.2nm,0.6s,baz=232,slow=5.3,SNR=4.2						
NVAR	Mina Array Bea	86.25	50	P	P	12 20 34.5	+0.9
	1.5nm,0.8s,baz=233,slow=9.0,SNR=4.8						
PDAR	Pinedale Array	93.77	47	P	P	12 21 09.2	+0.3
	0.4nm,0.7s,baz=260,slow=4.3,SNR=3.0						
TXAR	Lajitas Array	96.09	61	P	P	12 21 19.2	-0.6
	0.3nm,0.9s,baz=217,slow=4.1,SNR=2.8						

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*IDC **06** 12:13:57.8±1.1, 11°.50S×165°.19E, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx3.8/41, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=45.9km s-min=24.6km az=137.0*

*ISCJB **06** 12:14:01.3±0.8, 11°.7S±0°.1×165°.2E±0°.2, h34^{km}, mb3.9/6, Error ellipse: s-maj=26.1km s-min=18.2km az=18.4*

ISC 06 12:14:02.9±0.9**, 11°.6S**±0°.1×**165°.2E**±0°.2**, h34**^{km}**, n7, σ0^s.85**/7**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.52	174	Pn	Pn	12 16 31.6	+0.2
	0.5nm,0.3s,baz=278,slow=15,SNR=2.3						
WRA	Warramunga Arr	30.80	250	P	P	12 20 15.3	-0.5
	1.1nm,0.5s,baz=78,slow=9.5,SNR=5.6						
ASAR	Alice Springs	32.08	244	P	P	12 20 26.8	-0.2
	1.2nm,0.9s,baz=75,slow=9.6,SNR=4.9						
ILAR	Eielson Array	84.17	19	P	P	12 26 30.6	+0.4
	0.6nm,0.5s,baz=237,slow=5.1,SNR=9.1						
NVAR	Mina Array Bea	86.76	50	P	P	12 26 44.3	+0.1
	0.4nm,0.6s,baz=237,slow=6.3,SNR=3.5						
MKAR	Makanchi Array	93.53	317	P	P	12 27 16.4	+1.0
	0.5nm,0.8s,baz=93,slow=5.4,SNR=2.1						
YKA	Yellowknife Ar	95.67	27	P	P	12 27 23.6	-1.2
	0.4nm,0.9s,baz=257,slow=4.7,SNR=3.3						

IDC 06 12:14:20.9±2.2**, 6°.65S**×**130°.15E, h0**^{km}**, mb3.8**/1**, mb1 3.7**/5**, mb1mx3.5**/48**, mbtmp3.6**/5**, ML3.5**/4**, Error ellipse: s-maj=52.6km s-min=28.9km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	7.33	241	Pn	Pn	12 16 11.3	+2.0
	2.5nm,0.3s,baz=69,slow=6.4,SNR=2.0						
BATI				Sn	Sn	12 17 31.6	-1.7
	4.0nm,0.3s,baz=87,slow=18,SNR=3.5						
FITZ	Fitzroy Crossi	12.20	201	Pn	Pn	12 17 14.3	-1.8
	0.1nm,0.3s,baz=20,slow=12,SNR=3.9						
FITZ				Sn	Sn	12 19 17.0	-16
	0.7nm,0.3s,baz=60,slow=20,SNR=11						
WRA	Warramunga Arr	13.83	163	Pn	Pn	12 17 38.6	+0.3
	0.2nm,0.3s,baz=343,slow=14,SNR=17						
WRA				Sn	Sn	12 19 57.6	-15
	0.5nm,0.3s,baz=340,slow=21,SNR=9.2						
ASAR	Alice Springs	17.30	168	P	Pn	12 18 24.4	+0.3
	0.1nm,0.3s,baz=343,slow=8.8,SNR=12						
MKAR	Makanchi Array	68.01	327	P	P	12 25 21.9	-0.2
	0.6nm,0.6s,baz=120,slow=7.7,SNR=4.5						

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*IDC **06** 12:14:51.1±1.4, 11°.82S×165°.12E, h0^{km}, mb4.1/15, mb1 4.1/16, mb1mx4.0/39, mbtmp4.0/16, ML4.6/1, Error ellipse: s-maj=41.0km s-min=23.7km az=130.0*

*NEIC **06** 12:14:54.3±0.2, 11°.54S×164°.82E, h10^{km}, mb4.4/10, Error ellipse: s-maj=7.6km s-min=5.5km az=72.0*

*ISCJB **06** 12:14:55.8±0.3, 11°.65S±0°.05×164°.78E±0°.07, h34^{km}, mb4.2/27, Error ellipse: s-maj=9.7km s-min=7.0km az=163.4*

ISC 06 12:14:57.6±0.5**, 11°.62S**±0°.08×**164°.84E**±0°.10**, h34**^{km}**, n50, σ0^s.99**/46**, mb4.2**/27**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.28	294	*e*Pn	Pn	12 16 13.3	-0.8
HNR	Honiara	5.28	294	Pn	Pn	12 16 16.0	+1.9
	18nm,0.3s,baz=175,slow=5.6,SNR=5.6						
DZM	Mont Dzumac	10.50	172	*e*Pn	Pn	12 17 27.1	+1.1
ONTNC	Ouen Toro	10.74	172	*e*Pn	Pn	12 17 31.2	+2.2
PINNC	Pines Island,	11.21	167	*e*Pn	Pn	12 17 36.6	+1.1
MSVF	Nonsavu	14.15	117	Pn	Pn	12 18 15.3	-0.5
MXZ	Matakaoa Point	28.52	157	*e*P	P	12 20 49.5	-0.4
	98nm,1.3s						
STKA	Stephens Creek	29.41	223	*e*P	P	12 20 55.5	-2.5
	3.6nm,1.6s						
H11S2	WAKE ISLAND Hy	29.98	4	T	T	12 52 18.4	
	baz=184,slow=76,SNR=3.0						
H11S3	WAKE ISLAND Hy	29.98	4	T	T	12 52 15.9	
	baz=184,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	30.00	4	T	T	12 52 16.5	
	baz=184,slow=76,SNR=11						
WRAB	Tennant Creek	30.44	250	*e*P	P	12 21 05.6	-1.7
	3.1nm,0.8s						
WB2	Warramunga Arr	30.44	250	*e*P	P	12 21 07.0	-0.2
WR1	Warramunga Arr	30.45	250	*e*P	P	12 21 07.2	-0.2
	7.5nm,1.2s						
WRA	Warramunga Arr	30.45	250	P	P	12 21 07.2	-0.2
	1.3nm,0.7s,baz=83,slow=9.0,SNR=3.5						
WRA				PcP	PcP	12 24 06.2	-0.3
	0.8nm,0.9s,baz=109,slow=4.1,SNR=4.4						
H11N1	WAKE ISLAND Hy	31.20	4	T	T	12 53 49.2	
	baz=182,slow=76,SNR=3.4						
H11N3	WAKE ISLAND Hy	31.21	4	T	T	12 53 49.5	
	baz=182,slow=76,SNR=3.0						
H11N2	WAKE ISLAND Hy	31.22	4	T	T	12 53 50.2	
	baz=182,slow=76,SNR=3.5						
LTZ	Lake Taylor	31.71	170	*e*P	P	12 21 18.9	+0.7
	50nm,1.7s						
AS31	Alice Springs	31.74	244	*e*P	P	12 21 18.8	+0.1
	0.7nm,0.8s						
ASAR	Alice Springs	31.74	244	P	P	12 21 18.4	-0.4
	0.7nm,0.7s,baz=70,slow=9.3,SNR=5.7						
ASAR				PcP	PcP	12 24 07.7	-2.2
	0.5nm,0.8s,baz=108,slow=3.0,SNR=3.4						
MJAR	Matsushiro Arr	54.08	334	P	P	12 24 18.4	-0.6
	1.1nm,0.7s,baz=157,slow=11,SNR=3.4						
MAJO	Matsushiro	54.08	334	*e*P	P	12 24 18.4	-0.7
ASAJ	Asahikawa	59.05	341	P	P	12 24 54.8	+0.5
	2.8nm,0.9s,baz=107,slow=17,SNR=4.3						
KSRS	Korea Array	59.85	326	P	P	12 24 59.7	-0.2
	1.2nm,0.9s,baz=123,slow=13,SNR=3.3						
KS15	Wonju Array Si	59.87	326	*e*P	P	12 24 58.7	-1.3
KSAR	Wonju Array Be	59.87	326	P	P	12 24 59.7	-0.3
USRK	Ussuriysk Ar.	63.07	334	P	P	12 25 22.3	+0.8
	1.0nm,0.7s,baz=127,slow=11,SNR=3.5						
PETK	Petropavlovsk-	64.76	355	P	P	12 25 32.4	-0.1
	5.1nm,1.0s,baz=163,slow=10,SNR=3.2						
PEA1	Petropavlovsk-	64.77	355	*e*P	P	12 25 32.4	-0.2
KLR	Kul'dur	67.23	337	P	P	12 25 49.1	+0.6
	1.1nm,0.8s,baz=135,slow=16,SNR=2.8						
CM31	Chiang Mai Arr	71.53	294	*e*P	P	12 26 15.1	-0.6
CMAR	Chiang Mai Arr	71.53	294	P	P	12 26 17.3	+1.6
	0.4nm,0.5s,baz=110,slow=5.2,SNR=4.2						
SEY	Seymchan	74.95	354	P	P	12 26 35.3	+0.4
	1.7nm,0.9s,baz=253,slow=6.1,SNR=3.5						
QSPA	South Pole Qui	78.39	180	*e*P	P	12 26 54.9	+0.3
	2.5nm,0.9s						
SONA0	Songino Array	78.61	324	*e*P	P	12 26 57.3	+1.2
SONM	Songino Array	78.61	324	P	P	12 26 57.3	+1.2
	1.1nm,0.9s,baz=150,slow=7.0,SNR=5.1						
BILL	Bilibino	79.46	1	*e*P	P	12 27 00.5	+0.4
	5.5nm,0.9s						
ILAR	Eielson Array	84.34	19	P	P	12 27 25.4	-0.5
	1.1nm,0.8s,baz=235,slow=5.3,SNR=7.4						
ILB	Eielson Array	84.34	19	*e*P	P	12 27 25.4	-0.5
W13A	Hualapai Mount	89.58	54	*e*P	P	12 27 52.8	+0.4
	2.5nm,1.0s						
LCMT	Little Creek M	90.56	52	*e*P	P	12 27 57.5	+0.7
	4.0nm,1.2s						
HVU	Hansel Valley	92.05	48	*e*P	P	12 28 03.8	+0.2
	6.2nm,1.3s						
DLMT	Dillon	93.02	44	*e*P	P	12 28 07.7	-0.3
	5.7nm,1.3s						
MK32	Makanchi Array	93.33	317	*e*P	P	12 28 09.9	+0.7
MKAR	Makanchi Array	93.33	317	P	P	12 28 09.9	+0.7
	1.2nm,0.6s,baz=96,slow=5.9,SNR=7.4						
ZALV	Zalesovo Beam	93.50	324	P	P	12 28 10.1	+0.3
	0.7nm,0.5s,baz=108,slow=3.1,SNR=3.8						
ZAA1	Zalesovo Array	93.50	324	*e*P	P	12 28 10.1	+0.3
YKA	Yellowknife Ar	95.89	27	P	P	12 28 19.2	-1.3
	0.3nm,0.8s,baz=293,slow=5.9,SNR=3.7						
YKB5	Yellowknife Ar	95.89	27	*e*P	P	12 28 19.3	-1.2

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*IDC **06** 12:15:31.3±1.0, 11°.74S×166°.08E, h0^{km}, mb4.1/17, mb1 4.3/17, mb1mx4.2/37, mbtmp4.1/17, Error ellipse: s-maj=32.6km s-min=19.6km az=141.0*

*NEIC **06** 12:15:32.0±0.3, 11°.84S×166°.05E, h10^{km}, mb4.6/6, Error ellipse: s-maj=9.5km s-min=6.5km az=130.0*

*ISCJB **06** 12:15:33.2±0.4, 11°.87S±0°.06×165°.99E±0°.06, h30^{km}, mb4.3/23, Error ellipse: s-maj=9.1km s-min=8.0km az=148.4*

ISC 06 12:15:35.0±0.6**, 11°.87S**±0°.09×**166°.03E**±0°.09**, h30**^{km}**, n44, σ1^s.10**/49**, mb4.3**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.45	291	*e*Pn	Pn	12 17 06.8	-1.2
HNR				*e*Sn	Sn	12 18 21.3	+0.6
MARNC	Mare, Loyalty	9.75	169	*e*Pn	Pn	12 17 52.6	-0.6
EIDS	Eidsvold	19.49	224	*e*P	P	12 20 00.5	+0.7
	37nm,1.4s						
CTA	Charters Tower	20.68	244	P	P	12 20 13.6	+0.8
	15nm,1.0s,baz=65,slow=7.0,SNR=5.7						
CTAO	Charters Tower	20.68	244	*e*P	P	12 20 11.0	-1.8
	44nm,1.2s						
COEN	Coen	22.37	262	*e*P	P	12 20 31.2	+0.1
	37nm,1.5s						
ARMA	Armidale	22.78	214	*e*P	P	12 20 34.7	-0.7
	34nm,1.5s						
STKA	Stephens Creek	30.05	225	*e*P	P	12 21 40.6	-1.0
	0.9nm,1.2s						
WB2	Warramunga Arr	31.46	251	*e*P	P	12 21 53.9	-0.4
WRAB	Tennant Creek	31.46	251	*e*P	P	12 21 54.1	-0.2
	18nm,1.4s						
WR1	Warramunga Arr	31.47	251	*e*P	P	12 21 55.1	+0.8
	42nm,1.6s						
WR1				*e*PcP	PcP	12 24 49.3	+2.0
WRA	Warramunga Arr	31.47	251	P	P	12 21 55.1	+0.8
	11nm,1.4s,baz=78,slow=9.5,SNR=4.8						
WRA				PcP	PcP	12 24 49.3	+2.0
	0.4nm,0.5s,baz=74,slow=3.3,SNR=4.7						
AS01	Alice Springs	32.64	245	*e*P	P	12 22 04.2	-0.4
AS31	Alice Springs	32.68	245	*e*P	P	12 22 05.0	0.0
	2.2nm,0.8s						
AS31				*e*PcP	PcP	12 24 52.4	+1.9
ASAR	Alice Springs	32.68	245	P	P	12 22 06.2	+1.3
	4.4nm,0.6s,baz=65,slow=10,SNR=19						
ASAR				PcP	PcP	12 24 52.4	+1.9
	0.5nm,0.7s,baz=65,slow=2.2,SNR=3.3						
SARN	Sarigan	34.74	324	*e*P	P	12 22 21.9	-1.0
	113nm,1.4s						
MJAR	Matsushiro Arr	54.83	333	P	P	12 25 01.8	-0.7
	8.7nm,1.2s,baz=154,slow=5.5,SNR=6.7						
MAJO	Matsushiro	54.83	333	*e*P	P	12 25 01.8	-0.7
ASAJ	Asahikawa	59.66	341	P	P	12 25 36.1	-0.4
	9.2nm,1.0s,baz=154,slow=9.9,SNR=3.1						
KSRS	Korea Array	60.71	326	P	P	12 25 44.0	+0.3
	2.7nm,1.0s,baz=157,slow=6.8,SNR=5.5						
KS15	Wonju Array Si	60.72	326	*e*P	P	12 25 43.3	-0.6
KSAR	Wonju Array Be	60.72	326	P	P	12 25 44.0	+0.2
KS01	Wonju Array Si	60.74	326	*e*P	P	12 25 42.6	-1.5
USRK	Ussuriysk Ar.	63.81	333	P	P	12 26 05.9	+1.5
	4.2nm,0.9s,baz=102,slow=4.7,SNR=5.8						
KLR	Kul'dur	67.92	337	P	P	12 26 32.2	+1.4
	5.6nm,1.1s,baz=135,slow=5.5,SNR=7.6						
CM31	Chiang Mai Arr	72.70	294	*e*P	P	12 27 00.7	0.0
CMAR	Chiang Mai Arr	72.70	294	P	P	12 27 02.3	+1.6
	0.4nm,0.4s,baz=114,slow=4.2,SNR=3.0						
SONA0	Songino Array	79.49	324	*e*P	P	12 27 38.9	-0.1
SONM	Songino Array	79.49	324	P	P	12 27 38.9	-0.1
	0.5nm,0.8s,baz=114,slow=7.0,SNR=3.2						
ILAR	Eielson Array	84.20	18	P	P	12 28 03.0	-0.2
	0.7nm,0.6s,baz=242,slow=4.7,SNR=11						
ILB	Eielson Array	84.20	18	*e*P	P	12 28 03.0	-0.2
NV01	Mina Array Sit	86.34	50	*e*P	P	12 28 13.8	-1.0
NVAR	Mina Array Bea	86.34	50	P	P	12 28 14.4	-0.4
	0.7nm,0.8s,baz=256,slow=6.4,SNR=4.3						
PD31	Pinedale Array	93.90	47	*e*P	P	12 28 49.5	-0.7
PDAR	Pinedale Array	93.90	47	P	P	12 28 52.4	+2.1
	0.2nm,0.6s,baz=241,slow=1.9,SNR=2.8						
MK32	Makanchi Array	94.31	317	*e*P	P	12 28 51.6	-0.1
MKAR	Makanchi Array	94.31	317	P	P	12 28 51.6	-0.1
	0.9nm,0.9s,baz=101,slow=6.2,SNR=3.3						
ZALV	Zalesovo Beam	94.38	324	P	P	12 28 52.7	+0.9
	1.0nm,0.9s,baz=121,slow=2.5,SNR=4.4						
ZAA1	Zalesovo Array	94.39	324	*e*P	P	12 28 52.7	+0.9
YKA	Yellowknife Ar	95.57	27	P	P	12 28 55.6	-1.5
	0.2nm,0.6s,baz=259,slow=4.6,SNR=3.3						
YKB5	Yellowknife Ar	95.57	27	*e*P	P	12 28 54.9	-2.2
LTX	Lajitas	95.98	61	*e*P	P	12 29 00.8	+0.9
TXAR	Lajitas Array	95.98	61	P	P	12 29 00.8	+0.9
	0.1nm,0.6s,baz=238,slow=5.1,SNR=2.8						
OJC	Ojcow	132.79	331	*e*PKPdf	PKiKP	12 34 47.9	-0.4

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*IDC **06** 12:17:00.0±1.4, 29°.65N×143°.81E, h0^{km}, mb4.0/9, mb1 4.0/14, mb1mx3.8/49, mbtmp3.9/14, ML3.2/5, Error ellipse: s-maj=53.4km s-min=15.3km az=80.0*

*ISCJB **06** 12:17:05.2±0.6, 29°.41N±0°.04×142°.6E±0°.1, h22^{km}, mb4.3/18, Error ellipse: s-maj=16.5km s-min=4.6km az=170.4*

*NEIC **06** 12:17:07.0±0.8, 29°.52N×143°.30E, h35^{km}, mb4.5/6, Error ellipse: s-maj=24.5km s-min=6.4km az=76.0*

ISC 06 12:17:06.1±0.7**, 29°.47N**±0°.05×**142°.8E**±0°.1**, h22**^{km}**, n40, σ1^s.74**/48**, mb4.4**/18**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.43	194	*e*Pn	Pn	12 17 46.9	+2.3
CBIJ				*e*Sn	Sn	12 18 10.8	-2.8
JCJ	Chichijima	2.43	194	Pn	Pn	12 17 46.9	+2.3
	20nm,0.3s,baz=0.0,slow=20,SNR=5.8						
JCJ				Sn	Sn	12 18 10.8	-2.8
	32nm,0.3s,baz=292,slow=21,SNR=5.9						
MJAR	Matsushiro Arr	8.05	332	Pn	Pn	12 19 03.3	+1.7
	0.4nm,0.3s,baz=166,slow=14,SNR=20						
MJAR				Sn	Sn	12 20 32.5	+0.4
	0.1nm,0.3s,baz=113,slow=15,SNR=7.0						
MAJO	Matsushiro	8.05	332	*e*Pn	Pn	12 19 04.7	+3.0
MAJO				*e*Sn	Sn	12 20 32.5	+0.4
MAT	Matsushiro	8.05	332	P	Pn	12 19 03.5	+1.8
MJB9	Matsu-Tunnel	8.05	332	*e*Pn	Pn	12 19 05.0	+3.2
ASAJ	Asahikawa	14.62	359	Pn	Pn	12 20 25.4	-6.1
	0.1nm,0.3s,baz=158,slow=19,SNR=2.4						
ASAJ				Sn	Sn	12 23 07.3	-5.5
	0.1nm,0.3s,baz=252,slow=20,SNR=3.1						
KSRS	Korea Array	14.76	307	Pn	P	12 20 38.3	-1.0
	0.1nm,0.3s,baz=121,slow=11,SNR=6.8						
KS15	Wonju Array Si	14.78	306	*e*Pn	P	12 20 38.3	-1.3
KSAR	Wonju Array Be	14.78	306	Pn	P	12 20 38.3	-1.3
USRK	Ussuriysk Ar.	17.05	333	Pn	P	12 21 04.5	-0.1
	0.2nm,0.3s,baz=116,slow=9.8,SNR=3.6						
KLR	Kul'dur	21.47	340	P	P	12 21 52.6	-0.3
	0.5nm,0.5s,baz=165,slow=20,SNR=2.0						
SONA0	Songino Array	33.45	313	*e*P	P	12 23 44.5	+1.0
SONM	Songino Array	33.45	313	P	P	12 23 44.5	+1.0
	1.3nm,0.7s,baz=120,slow=7.1,SNR=6.1						
TARA	Tarawa	40.02	129	*e*P	P	12 24 41.5	+1.9
	189nm,0.4s						
PBKT	Sadao Pong	40.40	261	*e*P	P	12 24 41.3	-1.5
CHTO	Chiang Mai	41.22	265	*e*P	P	12 24 47.6	-2.0
	4.4nm,0.8s						
ZAA0	Zalesovo Array	48.10	318	*e*P	P	12 25 45.3	+1.4
	6.9nm,1.1s						
ZAA1	Zalesovo Array	48.10	318	*e*P	P	12 25 44.7	+0.8
ZAA1				*e*PcP	PcP	12 27 10.6	-0.8
ZALV	Zalesovo Beam	48.10	318	P	P	12 25 44.7	+0.8
	3.9nm,0.9s,baz=114,slow=6.6,SNR=13						
ZALV				PcP	PcP	12 27 10.6	-0.8
	0.3nm,0.5s,baz=64,slow=3.4,SNR=2.7						
MK31	Makanchi Array	49.44	308	*e*P	P	12 25 55.0	+0.6
MK32	Makanchi Array	49.44	308	*e*P	P	12 25 54.6	+0.2
MKAR	Makanchi Array	49.44	308	P	P	12 25 54.6	+0.2
	1.6nm,0.7s,baz=92,slow=9.1,SNR=6.3						
WR1	Warramunga Arr	49.80	190	*e*P	P	12 25 57.8	+0.5
	8.6nm,1.2s						
WR1				*e*PcP	PcP	12 27 15.9	-2.0
WRA	Warramunga Arr	49.80	190	P	P	12 25 57.8	+0.5
	1.8nm,0.7s,baz=9.3,slow=8.1,SNR=12						
WRA				PcP	PcP	12 27 15.9	-2.1
	0.7nm,0.9s,baz=6.1,slow=3.8,SNR=2.4						
KURK	Kurchatov	51.76	313	*e*P	P	12 26 12.6	+0.9
	6.1nm,0.8s						
AS31	Alice Springs	53.52	190	*e*P	P	12 26 25.4	+0.3
	1.8nm,1.4s						
ASAR	Alice Springs	53.52	190	P	P	12 26 25.1	-0.1
	0.2nm,0.4s,baz=63,slow=10,SNR=9.7						
RC01	Rabbit Creek A	53.81	34	*e*P	P	12 26 27.2	+0.4
	6.1nm,0.6s						
BRVK	Borovoye	56.76	316	*e*P	P	12 26 47.8	-0.4
	5.0nm,0.9s						
KK31	Karatay Array	58.18	305	*e*P	P	12 26 58.7	+0.3
KKAR	Karatay Array	58.18	305	*e*P	P	12 26 58.7	+0.3
CHGR	Chuyangaron	60.24	300	*e*P	P	12 27 12.9	0.0
	10.0nm,0.7s						
ABKAR	Akbulak array	63.86	314	*e*P	P	12 27 38.0	+1.1
FIA0	FINESS Array S	76.08	334	*e*P	P	12 28 48.9	-2.7
FINES	FINESS Array B	76.08	334	P	P	12 28 48.9	-2.7
	1.3nm,0.8s,baz=111,slow=3.4,SNR=2.3						
KBZ	Khabaz	76.81	313	P	P	12 28 57.3	+1.2
	3.5nm,0.8s,baz=130,slow=2.1,SNR=10						
BR101	Keskin Array S	84.81	313	*e*P	P	12 29 40.9	+1.7
BR131	Keskin Array S	84.81	313	*e*P	P	12 29 39.9	+0.7
BRTR	Keskin Array B	84.81	313	P	P	12 29 40.9	+1.7
	2.4nm,0.9s,baz=98,slow=3.6,SNR=6.9						

*IDC **06** 12:18:06.1±1.0, 16°.68N×60°.94W, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.7/43, mbtmp3.6/8, ML3.7/1, MS4.4/1, Ms1 4.4/1, ms1mx3.8/43, Error ellipse: s-maj=25.3km s-min=10.2km az=90.0*

*TRN **06** 12:18:08.4, 16°.77N×60°.83W, h31km, MD3.8*

ISC 06 12:18:06.6±1.6**, 16°.77N**±0°.04×**60°.80W**±0°.06**, h6**km±10km**, n40, σ0s.64**/56**, mb3.7**/7**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H05N1	Guadeloupe/Mar	0.51	209	Pn	Pn	12 18 19.4	-1.1
	SNR=8632						
H05N1				Sn	Sb	12 18 26.0	+0.3
DEG	La Desirade	0.52	209	eP	Pn	12 18 20.0	-0.6
DEG	La Desirade	0.52	209	e	Pn	12 18 29.2	+8.6
DEG				eS	Sn	12 18 30.0	+0.3
ABD	La Joyeuse, An	0.72	246	eP	Pb	12 18 22.0	+0.4
MAGL	Barre de l'ile	0.94	210	eP	Pn	12 18 26.1	-0.3
MGG	Marie-Galante	0.98	211	i P	Pn	12 18 27.0	+0.1
MGG				eS	Sn	12 18 40.4	-0.7
CBE	Ff, Capester	1.04	228	eP	Pn	12 18 28.0	+0.2
BPA	Boggy Peak	1.05	285	eP	Pn	12 18 27.5	-0.4
BPA				eS	Sn	12 18 43.2	+0.2
TDBA	Terre de Bas,	1.22	222	eP	Pg	12 18 30.6	+0.6
TBG	Guadaloupe-3	1.22	222	eP	Pg	12 18 30.9	+0.9
TBG				eS	Sn	12 18 47.2	+0.2
MDPV	Dominica, Penn	1.28	208	eP	Pg	12 18 31.9	+0.7
MDPV				eS	Sn	12 18 48.8	+0.2
DWS	Wesley	1.29	203	eP	Pg	12 18 31.2	-0.2
DWS				eS	Sn	12 18 48.6	-0.2
ANWB	Willy Bob	1.30	314	eP	Pn	12 18 30.6	-0.7
ANWB				eS	Sg	12 18 48.3	-0.2
MLYT	Lee's Yard	1.34	268	eP	Pg	12 18 32.5	+0.2
MLYT				eS	Sn	12 18 49.7	-0.3
MDPO	Dominica; Chan	1.34	208	eP	Pg	12 18 32.3	0.0
MDPO				eS	Sg	12 18 49.8	0.0
BBL	Barber's Block	1.39	208	eP	Pg	12 18 33.3	-0.1
BBL				eS	Sb	12 18 50.8	-0.3
DLPL	La Plaine	1.49	197	eP	Pb	12 18 34.1	-0.6
DLPL				eS	Sn	12 18 53.0	-0.7
MDN	Morne-Daniel	1.55	202	eP	Pb	12 18 35.3	-0.4
MDN				eS	Sn	12 18 54.5	-0.7
DBCT	Belle View Cho	1.58	200	eP	Pb	12 18 35.4	-0.9
DBCT				eS	Sn	12 18 55.7	-0.3
NEV	Hard Times	1.74	282	eP	Pb	12 18 38.3	-0.6
BAMF	Morne Balai	1.97	190	eP	Pb	12 18 42.9	-0.1
CXM	Morne La Croix	1.98	190	eP	Pb	12 18 41.8	-1.3
PCM	Pelee Case Pet	1.98	192	eP	Pb	12 18 42.4	-0.7
PCM	Pelee Case Pet	1.98	192	eP	Pb	12 18 43.1	0.0
ILAM	Ilet Lapin Mar	1.98	182	eP	Pb	12 18 41.9	-1.2
GBMF	Grand Be	1.99	190	eP	Pn	12 18 41.4	+0.5
FDF	Fort de France	2.05	190	eP	Pn	12 18 41.9	+0.2
FDF				eS	Sn	12 19 07.0	-0.7
LPMF	Morne Lapointe	2.19	184	eP	Pn	12 18 44.0	+0.4
ZAM	Aeronautique	2.19	186	eP	Pn	12 18 44.2	+0.6
H05S1	Guadeloupe/Mar	2.33	181	Pn	Pn	12 18 45.9	+0.5
H05S1				Sn	Sn	12 19 12.8	-1.6
	SNR=76						
MCLT	Moule a Chique	3.04	183	eP	Pn	12 18 56.2	+0.9
MCLT				eS	Sn	12 19 31.9	-0.2
SJG	San Juan	5.28	285	Pn	Pn	12 19 26.2	+0.1
	2.8nm,0.3s,baz=106,slow=11,SNR=3.6						
SJG				Sn	Sn	12 20 27.2	-0.2
	baz=17,slow=17,SNR=1.7						
APG	El Apazote	28.58	271	LR	LR	12 37 12.8	
	comp=Z,704nm,19.0s,baz=39,slow=40						
TXAR	Lajitas Array	41.16	296	P	P	12 25 51.9	-0.3
	0.2nm,0.7s,baz=112,slow=9.8,SNR=2.8						
ULM	Lac du Bonnet	43.69	328	P	P	12 26 11.4	-0.9
	1.4nm,0.7s,baz=112,slow=9.8,SNR=3.6						
PDAR	Pinedale Array	48.77	313	P	P	12 26 52.2	-0.5
	0.8nm,0.7s,baz=111,slow=7.8,SNR=5.6						
NVAR	Mina Array Bea	54.43	305	P	P	12 27 36.2	+1.0
	0.4nm,0.6s,baz=90,slow=6.3,SNR=3.0						
YKA	Yellowknife Ar	58.90	334	P	P	12 28 06.4	+0.2
	0.5nm,0.7s,baz=106,slow=7.4,SNR=7.5						
TORD	Torodi Ar. Bea	60.27	84	P	P	12 28 17.9	+1.3
	0.3nm,0.7s,baz=308,slow=7.1,SNR=2.1						
ILAR	Eielson Array	73.32	333	P	P	12 29 39.2	+0.3
	0.6nm,0.9s,baz=116,slow=4.8,SNR=4.1						

IDC 06 12:19:42.9±2.1**, 11°.45S**×**166°.04E, h0**km**, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.7**/37**, mbtmp4.0**/5**, ML4.5**/1**, Error ellipse: s-maj=57.9km s-min=33.9km az=132.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.32	288	Pn	Pn	12 21 16.5	-0.9
	9.7nm,0.3s,baz=177,slow=10,SNR=2.5						
STKA	Stephens Creek	30.35	224	P	P	12 25 56.6	+0.1
	1.3nm,0.3s,baz=63,slow=6.6,SNR=3.4						
ASAR	Alice Springs	32.87	244	P	P	12 26 18.6	-0.3
	0.8nm,0.9s,baz=83,slow=8.5,SNR=4.1						
CMAR	Chiang Mai Arr	72.54	294	P	P	12 31 12.8	+0.5
	0.8nm,0.8s,baz=112,slow=4.8,SNR=6.1						
ILAR	Eielson Array	83.81	18	P	P	12 32 13.6	-0.2
	0.3nm,0.6s,baz=237,slow=6.1,SNR=4.6						

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*IDC **06** 12:22:59.1±0.9, 11°.15S×165°.73E, h0km, mb4.0/11, mb1 4.2/13, mb1mx4.0/35, mbtmp4.1/13, ML4.4/2, MS4.7/1, Ms1 4.7/1, ms1mx3.8/44, Error ellipse: s-maj=25.1km s-min=20.3km az=114.0*

*NEIC **06** 12:23:00.6±0.4, 11°.18S×165°.70E, h10km, mb4.5/4, Error ellipse: s-maj=10.1km s-min=6.8km az=83.0*

*ISCJB **06** 12:23:01.9±0.4, 11°.30S±0°.05×165°.62E±0°.07, h30km, mb4.3/17, MS4.7/1, Error ellipse: s-maj=10.0km s-min=7.0km az=149.5*

ISC 06 12:23:03.3±0.7**, 11°.21S**±0°.09×**165°.73E**±0°.08**, h30**km**, n38, σ1s.26**/40**, mb4.4**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.96	287	ePn	Pn	12 24 29.1	-0.5
HNR				eSn	Sn	12 25 35.9	-1.0
HNR				eSg	Sb	12 26 00.9	+3.4
HNR	Honiara	5.96	287	Pn	Pn	12 24 29.1	-0.5
	7.2nm,0.3s,baz=124,slow=1.5,SNR=7.1						
HNR				Sn	Sn	12 25 35.9	-1.0
	5.4nm,0.3s,baz=159,slow=17,SNR=2.6						
MARNC	Mare, Loyalty	10.45	168	ePn	Pn	12 25 31.3	+0.2
DZM	Mont Dzumac	10.82	176	ePn	Pn	12 25 36.3	-0.1
DZM	Mont Dzumac	10.82	176	Pn	Pn	12 25 35.9	-0.4
	3.8nm,0.3s,baz=352,slow=12,SNR=13						
ONTNC	Ouen Toro	11.05	177	ePn	Pn	12 25 39.9	+0.4
OUENC	Ouen Island, N	11.19	175	ePn	Pn	12 25 41.4	0.0
CTA	Charters Tower	20.71	242	P	P	12 27 42.5	+1.2
	3.6nm,0.7s,baz=105,slow=12,SNR=3.1						
CTAO	Charters Tower	20.71	242	eP	P	12 27 40.2	-1.1
	25nm,1.4s						
ARMA	Armidale	23.17	212	eP	P	12 28 06.0	-1.6
	21nm,1.4s						
THZ	Tophouse	31.08	170	eP	P	12 29 20.0	+1.1
	78nm,1.7s						
WRAB	Tennant Creek	31.40	250	eP	P	12 29 21.9	-0.1
	6.9nm,1.0s						
WB2	Warramunga Arr	31.40	250	eP	P	12 29 21.8	-0.3
WR1	Warramunga Arr	31.41	250	eP	P	12 29 22.2	+0.1
	5.3nm,0.9s						
WRA	Warramunga Arr	31.41	250	P	P	12 29 22.2	+0.1
	3.0nm,0.9s,baz=80,slow=9.1,SNR=12						
AS31	Alice Springs	32.70	243	eP	P	12 29 33.4	-0.1
	0.7nm,0.8s						
ASAR	Alice Springs	32.70	243	P	P	12 29 33.0	-0.5
	0.6nm,0.7s,baz=70,slow=9.3,SNR=7.1						
RPZ	Rata Peaks	32.71	173	P	P	12 29 33.7	+0.5
	9.1nm,0.8s,baz=37,slow=5.1,SNR=4.0						
JHJ	Hachijo jima 2	50.56	332	LR	LR	12 54 24.6	
	comp=Z,715nm,18.4s,baz=263,slow=37						
YHNB	Yeheng	56.08	310	eP	P	12 32 36.9	-3.2
	94nm,1.4s						
ASAJ	Asahikawa	58.95	341	P	P	12 32 59.1	-0.7
	3.7nm,0.9s,baz=98,slow=11,SNR=3.5						
CM01	Chiang Mai Arr	72.14	294	eP	P	12 34 27.2	+1.6
CM31	Chiang Mai Arr	72.17	294	eP	P	12 34 27.4	+1.6
CMAR	Chiang Mai Arr	72.17	294	P	P	12 34 27.8	+2.0
	2.0nm,0.7s,baz=123,slow=4.6,SNR=13						
SONA0	Songino Array	78.79	324	eP	P	12 35 04.0	+0.6
SONM	Songino Array	78.79	324	P	P	12 35 04.0	+0.6
	0.4nm,0.7s,baz=125,slow=6.9,SNR=3.2						
HDA	Harding Lake	83.41	19	eP	P	12 35 27.5	0.0
	8.8nm,0.9s						
ILAR	Eielson Array	83.67	19	P	P	12 35 28.5	-0.3
	0.4nm,0.6s,baz=244,slow=4.9,SNR=8.5						
ILB	Eielson Array	83.67	19	eP	P	12 35 28.4	-0.3
MK01	Makanchi Array	93.62	317	eP	P	12 36 17.2	+0.3
MK31	Makanchi Array	93.63	317	eP	P	12 36 16.3	-0.6
MK32	Makanchi Array	93.63	317	eP	P	12 36 15.5	-1.4
MKAR	Makanchi Array	93.63	317	eP	P	12 36 16.4	-0.5
	6.2nm,0.6s						
MKAR	Makanchi Array	93.63	317	P	P	12 36 15.5	-1.4
	1.0nm,0.8s,baz=98,slow=6.4,SNR=10						
ZALV	Zalesovo Beam	93.68	324	P	P	12 36 15.6	-1.3
	0.2nm,0.3s,baz=127,slow=3.8,SNR=2.7						
ZAA1	Zalesovo Array	93.68	324	eP	P	12 36 15.6	-1.3
YKA	Yellowknife Ar	95.13	27	P	P	12 36 25.3	+2.0
	0.1nm,0.6s,baz=253,slow=4.3,SNR=3.4						
YKB5	Yellowknife Ar	95.13	27	eP	P	12 36 25.3	+2.0

IDC 06 12:26:45.8±2.3**, 12°.70S**×**165°.38E, h0**km**, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/40**, mbtmp3.7**/5**, ML4.5**/1**, Error ellipse: s-maj=67.5km s-min=33.7km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.24	301	Pn	Pn	12 28 19.2	-0.1
	10nm,0.3s,baz=136,slow=12,SNR=2.8						
HNR				Sn	Sn	12 29 22.3	-9.0
	10nm,0.3s,baz=253,slow=10,SNR=2.7						
WRA	Warramunga Arr	30.61	252	P	P	12 33 00.4	-1.5
	0.7nm,0.9s,baz=81,slow=9.0,SNR=4.6						
ASAR	Alice Springs	31.75	245	P	P	12 33 12.9	+0.9
	0.6nm,0.9s,baz=70,slow=8.1,SNR=3.1						
ILAR	Eielson Array	85.19	19	P	P	12 39 22.9	-0.8
	0.3nm,0.6s,baz=226,slow=4.8,SNR=4.0						
MKAR	Makanchi Array	94.47	317	P	P	12 40 09.7	+1.6
	0.2nm,0.7s,baz=83,slow=5.0,SNR=3.1						

IDC 06 12:27:58.8±1.7**, 11°.34S**×**164°.78E, h0**km**, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.6**/44**, mbtmp3.7**/5**, ML4.1**/1**, Error ellipse: s-maj=49.0km s-min=31.7km az=121.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.79	172	Pn	Pn	12 30 34.9	+0.2
	1.4nm,0.3s,baz=294,slow=20,SNR=5.5						
WRA	Warramunga Arr	30.50	250	P	P	12 34 14.0	+0.2
	0.2nm,0.5s,baz=80,slow=9.0,SNR=2.9						
ASAR	Alice Springs	31.82	243	P	P	12 34 24.7	-0.8
	0.7nm,0.8s,baz=68,slow=9.9,SNR=4.2						
ILAR	Eielson Array	84.09	19	P	P	12 40 30.6	-0.6
	0.4nm,0.7s,baz=237,slow=6.5,SNR=4.3						
MKAR	Makanchi Array	93.09	317	P	P	12 41 15.5	+0.9
	0.5nm,0.9s,baz=104,slow=6.1,SNR=3.5						

IDC 06 12:29:04.6±1.8**, 11°.22S**×**165°.67E, h0**km**, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.5**/44**, mbtmp3.8**/4**, Error ellipse: s-maj=55.5km s-min=32.3km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.81	176	Pn	Pn	12 31 40.9	+0.1
	baz=342,slow=19,SNR=3.1						
WRA	Warramunga Arr	31.36	250	P	P	12 35 27.4	+0.2
	0.9nm,0.7s,baz=81,slow=9.1,SNR=6.8						
ASAR	Alice Springs	32.65	243	P	P	12 35 38.3	-0.3
	0.7nm,1.0s,baz=72,slow=8.9,SNR=4.3						
ILAR	Eielson Array	83.70	19	P	P	12 41 35.0	0.0
	0.8nm,1.0s,baz=240,slow=5.4,SNR=6.0						

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*IDC **06** 12:31:50.9±0.4, 0°.96S×146°.98E, h0km, mb4.6/26, mb1 4.8/27, mb1mx4.6/44, mbtmp4.6/27, ML4.0/1, MS4.6/2, Ms1 4.6/2, ms1mx3.8/45, Error ellipse: s-maj=18.0km s-min=10.4km az=91.0*

*ISCJB **06** 12:31:54.3±0.2, 1°.01S±0°.04×147°.01E±0°.04, h33km, mb4.8/84, Error ellipse: s-maj=6.1km s-min=4.6km az=38.7*

*MOS **06** 12:31:54.1±1.0, 1°.00S×146°.92E, h31km, mb5.1/27, Error ellipse: s-maj=12.6km s-min=6.3km az=96.0*

*NEIC **06** 12:31:56.3±1.3, 0°.99S×146°.92E, h36km±12km, mb5.0/38, Error ellipse: s-maj=5.1km s-min=4.6km az=68.0*

*DJA **06** 12:31:58.1±1.7, 1°S±8°×14°7E±1°0, h40km±12km, M5.3/23, mb4.9/23, mB5.4/2, MLv5.5/2, Mw(mB)4.8/2*

ISC 06 12:31:56.3±0.3**, 1°.03S**±0°.06×**146°.99E**±0°.07**, h35**km**, n194, σ1s.26**/185**, mb4.9**/89**, 12C-9D, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	6.46	257	P	Pn	12 33 30.9	+2.0
GENI	Genyem	7.00	257	P	Pn	12 33 37.6	+1.3
FAKI	Fak Fak	14.85	263	ePn	Pn	12 35 22.2	-1.7
FAKI	Fak Fak	14.85	263	P	Pn	12 35 23.4	-0.5
	77nm,1.5s						
SAUI	Saumlaki	17.09	246	ePn	Pn	12 35 51.6	-1.1
	456nm,1.3s						
SAUI	Saumlaki	17.09	246	P	P	12 35 55.0	+0.9
BNDI	Bandanaira	17.41	258	P	P	12 35 59.1	+1.5
CTA	Charters Tower	18.96	182	P	P	12 36 14.6	0.0
	0.3nm,0.3s,baz=347,slow=14,SNR=6.6						
CTAO	Charters Tower	18.96	182	eP	Pn	12 36 17.4	+1.9
	79nm,1.4s						
CTAO	Charters Tower	18.96	182	eP	Pn	12 36 17.4	+1.9
CTAO				pmax	pmax		
	comp=Z,79nm,1.4s						
TNTI	Ternate	19.70	275	eP	P	12 36 21.7	-1.1
	comp=Z,73nm,1.6s						
NLAI	Namlea	20.00	263	P	Pn	12 36 28.5	+0.6
	comp=Z,48nm,0.9s						
SANI	Sanana	21.02	267	P	P	12 36 39.7	+2.6
WRAB	Tennant Creek	22.50	213	eP	P	12 36 52.1	-0.8
	comp=Z,122nm,1.1s						
WRAB	Tennant Creek	22.50	213	c iP	P	12 36 52.2	-0.8
WRAB				pmax	pmax		
	comp=Z,182nm,1.7s						
WB2	Warramunga Arr	22.50	213	eP	P	12 36 52.8	-0.2
WRA	Warramunga Arr	22.51	213	P	P	12 36 52.8	-0.4
	comp=Z,66nm,0.9s,baz=37,slow=9.2,SNR=84						
WRA				PcP	PcP	12 40 47.3	+0.8
	comp=Z,2.6nm,1.0s,baz=33,slow=2.8,SNR=3.6						
WRA				LR	LR	12 46 52.8	
	comp=Z,2µm,18.2s,baz=80,slow=40						
KWAJ	Kwajalein Atol	22.75	64	eP	P	12 36 56.4	+0.7
	comp=Z,334nm,1.0s						
KWAJ	Kwajalein Atol	22.75	64	eP	P	12 36 56.4	+0.7
KWAJ				pmax	pmax		
	comp=Z,334nm,1.0s						
SOEI	Soe	24.21	248	eP	P	12 37 09.7	-0.3
	comp=Z,132nm,1.1s						
SOEI	Soe	24.21	248	P	P	12 37 11.2	+1.2
	comp=Z,106nm,1.3s						
LUWI	Luwuk	24.21	270	eP	P	12 37 09.4	-0.6
	comp=Z,122nm,1.2s						
LUWI	Luwuk	24.21	270	P	P	12 37 11.4	+1.4
BATI	Baumata	24.92	248	P	P	12 37 17.4	+1.0
BATI	Baumata	24.92	248	P	P	12 37 16.9	+0.6
	comp=Z,72nm,0.8s,baz=124,slow=12,SNR=8.4						
MRSI	Marisa	25.09	273	P	P	12 37 18.6	+0.7
APSI	Ampana	25.34	270	P	P	12 37 21.2	+1.0
	comp=Z,38nm,1.4s						
MMRI	Maumere	25.78	252	eP	P	12 37 24.0	-0.1
	comp=Z,18nm,0.7s						
AS01	Alice Springs	25.82	208	eP	P	12 37 24.9	+0.5
AS31	Alice Springs	25.84	208	eP	P	12 37 24.8	+0.2
	comp=Z,11nm,0.8s						
ASAR	Alice Springs	25.84	208	P	P	12 37 25.2	+0.6
	comp=Z,20nm,0.8s,baz=38,slow=7.2,SNR=157						
ASAR				PcP	PcP	12 40 54.6	+1.0
	comp=Z,1.6nm,0.7s,baz=45,slow=2.0,SNR=4.7						
EDFI	Ende, Flores	26.33	252	P	P	12 37 29.4	+0.1
FITZ	Fitzroy Crossi	26.97	230	P	P	12 37 34.3	-0.6
	comp=Z,41nm,0.9s,baz=54,slow=8.2,SNR=47						
BNSI	Bone	27.06	262	P	P	12 37 37.0	+1.3
H11S3	WAKE ISLAND Hy	27.41	44	T	T	13 06 21.1	
	baz=225						
H11S2	WAKE ISLAND Hy	27.42	44	T	T	13 06 22.3	
	baz=225,slow=74,SNR=22						
H11S1	WAKE ISLAND Hy	27.43	44	T	T	13 06 19.0	
	baz=225,slow=74,SNR=33						
DZM	Mont Dzumac	28.22	139	P	P	12 37 47.0	+0.8
	comp=Z,7.3nm,0.6s,baz=320,slow=19,SNR=3.6						
JCJ	Chichijima	28.34	351	LR	LR	12 48 02.6	
	comp=Z,790nm,19.5s,baz=142,slow=34						
H11N1	WAKE ISLAND Hy	28.39	42	T	T	13 07 35.0	
	baz=226,slow=76,SNR=55						
H11N2	WAKE ISLAND Hy	28.40	42	T	T	13 07 36.1	
	baz=226,slow=76,SNR=56						
H11N3	WAKE ISLAND Hy	28.40	42	T	T	13 07 35.5	
	baz=226,slow=76,SNR=40						
STKA	Stephens Creek	31.11	189	eP	P	12 38 11.4	-0.1
	comp=Z,7.4nm,1.5s						
STKA	Stephens Creek	31.11	189	eP	P	12 38 11.4	-0.1
STKA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
STKA	Stephens Creek	31.11	189	P	P	12 38 11.2	-0.3
	comp=Z,5.5nm,0.9s,baz=7.0,slow=10,SNR=8.1						
FUNA	Funafuti	32.92	104	eP	P	12 38 26.7	-1.0
	comp=Z,167nm,1.2s						
MBWA	Marble Bar	33.28	231	eP	P	12 38 29.5	-1.2
	comp=Z,11nm,1.1s						
CAN	Canberra	34.17	177	eP	P	12 38 39.1	+0.8
	comp=Z,32nm,1.4s						
CAN	Canberra	34.17	177	eP	P	12 38 39.1	+0.8
CAN				pmax	pmax		
	comp=Z,32nm,1.4s						
SBUM	Sibu	34.93	276	eP	P	12 38 44.9	-0.3
	comp=Z,11nm,1.4s						
MJAR	Matsushiro Arr	38.26	349	P	P	12 39 11.9	-1.3
	comp=Z,3.5nm,1.0s,baz=176,slow=10,SNR=4.5						
MAJO	Matsushiro	38.26	349⇓	eP	P	12 39 14.7	+1.5
MAJO				pmax	pmax		
	comp=Z,16nm,1.4s						
KSRS	Korea Array	42.16	337	P	P	12 39 45.8	+0.3
	comp=Z,3.6nm,1.1s,baz=154,slow=12,SNR=6.2						
KSAR	Wonju Array Be	42.17	337	P	P	12 39 45.8	+0.3
KSAR	Wonju Array Be	42.17	337	P	P	12 39 45.8	+0.3
NJ2	Nanjing	42.33	324	eP	P	12 39 47.4	+0.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ERM	Erimo	42.98	356⇑	eP	P	12 39 51.3	-0.8
ERM				pmax	pmax		
	comp=Z,31nm,1.4s						
VLA	Vladivostok	46.00	345⇑	eP	P	12 40 17.9	+1.7
VLA				pmax	pmax		
	comp=Z,31nm,0.9s						
URZ	Urewera	46.23	147	P	P	12 40 18.0	0.0
	comp=Z,8.5nm,0.9s,baz=20,slow=4.2,SNR=3.6						
IPM	Ipoh	46.25	277	eP	P	12 40 17.2	-1.5
	comp=Z,36nm,1.5s						
USRK	Ussuriysk Ar.	46.98	345	P	P	12 40 23.1	-0.7
	comp=Z,3.9nm,0.9s,baz=182,slow=7.5,SNR=6.1						
NONG	Nongkai	47.12	296	P	P	12 40 25.7	+0.3
	comp=Z,0.4nm,1.1s						
RPZ	Rata Peaks	47.60	156	P	P	12 40 29.1	+0.3
	comp=Z,24nm,0.9s,baz=329,slow=12,SNR=7.4						
YSS	Yuzh-Sakhalins	47.92	356	eP	P	12 40 32.0	+0.9
PBKT	Sadao Pong	48.64	293	P	P	12 40 43.3	+6.1
	comp=Z,7.0nm,1.1s						
GSI	Gunungsitoli	49.47	273	eP	P	12 40 41.8	-1.8
	comp=Z,45nm,1.1s						
XAN	Xi'an	49.93	318	P	P	12 40 48.4	+1.5
XAN				pP	sP	12 41 02.2	+1.7
XAN				sP	pwP	12 41 08.1	+8.4
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
XAN				LR	LR		
	comp=N,1µm,17.4s						
XAN				LR	LR		
	comp=E,810nm,15.2s						
XAN				LR	LR		
	comp=Z,670nm,17.4s						
XAN	Xi'an	49.93	318	eP	P	12 40 47.3	+0.5
	comp=Z,40nm,1.5s						
XAN	Xi'an	49.93	318	eP	P	12 40 47.3	+0.5
XAN				pmax	pmax		
	comp=Z,40nm,1.5s						
KMI	Kunming	50.08	304	P	P	12 40 54.1	+5.7
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CM01	Chiang Mai Arr	51.01	295	eP	P	12 40 55.6	+0.4
CMAR	Chiang Mai Arr	51.03	295	P	P	12 40 54.8	-0.6
	comp=Z,3.1nm,0.9s,baz=114,slow=5.7,SNR=19						
CMMT	Chiang Mai	51.13	295	P	P	12 40 58.8	+2.6
	comp=Z,6.2nm,1.3s						
CHTO	Chiang Mai	51.14	295	eP	P	12 40 55.4	-0.8
	comp=Z,9.2nm,1.2s						
CHTO	Chiang Mai	51.14	295	eP	P	12 40 55.4	-0.8
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CHTO	Chiang Mai	51.14	295	P	P	12 40 59.4	+3.2
	comp=Z,28nm,1.3s						
KLR	Kul'dur	51.76	347⇓	iP	P	12 40 59.4	-0.9
KLR	Kul'dur	51.76	347	P	P	12 40 59.6	-0.7
	comp=Z,5.8nm,1.1s,baz=165,slow=5.3,SNR=7.3						
HHC	Hu-ho-hao-te	52.67	326	eP	P	12 41 10.2	+2.9
HHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NKL	Nikolayevsk	54.24	355	eP	P	12 41 18.0	-0.5
LZH	Lanzhou	54.52	317	eP	P	12 41 23.7	+2.6
LZH				pP	pP	12 41 28.8	-2.1
LZH				sP	pwP	12 41 30.5	-3.3
LZH				PP	PP	12 43 17.0	-6.7
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=N,230nm,16.3s						
LZH				LR	LR		
	comp=E,210nm,16.4s						
LZH				LR	LR		
	comp=Z,270nm,17.5s						
PETK	Petropavlovsk-	54.68	8	eP	P	12 41 21.9	+0.2
PETK	Petropavlovsk-	54.68	8	eP	P	12 41 21.9	+0.2
PETK	Petropavlovsk-	54.68	8	P	P	12 41 21.6	-0.1
	comp=Z,25nm,1.1s,baz=170,slow=8.2,SNR=18						
HIA	Hailar	55.33	339⇓	eP	P	12 41 27.0	+0.5
HIA				pmax	pmax		
	comp=Z,13nm,1.0s						
ZEA	Zeya	56.99	346	eP	P	12 41 45.0	+6.7
GTA	Gaotai	58.98	318	⇑P	P	12 41 55.1	+2.4
GTA				pP	pP	12 42 00.4	-2.3
GTA				sP	pwP	12 42 03.3	-2.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				LR	LR		
	comp=N,1µm,17.5s						
GTA				LR	LR		
	comp=E,2µm,17.5s						
GTA				LR	LR		
	comp=Z,2µm,16.8s						
ULN	Ulaanbaatar	59.80	330	eP	P	12 41 59.4	+1.2
	comp=Z,13nm,1.2s						
ULN	Ulaanbaatar	59.80	330⇑	iP	P	12 41 59.9	+1.7
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
SONM	Songino Array	60.11	330	P	P	12 41 59.4	-0.9
	comp=Z,1.6nm,0.7s,baz=142,slow=6.7,SNR=12						
SONA1	Songino Array	60.11	330	eP	P	12 42 00.2	-0.1
MA2	Magadan	60.50	2⇑	iP	P	12 42 02.1	-0.4
MA2				pmax	pmax		
	comp=Z,13nm,1.1s						
MA2	Magadan	60.50	2	P	P	12 42 02.0	-0.6
	comp=Z,5.8nm,0.8s,baz=191,slow=10,SNR=2.9						
ZAK	Zakamensk	63.32	330	eP	P	12 42 23.1	+1.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ODAN	Odare	63.64	301	eP	P	12 42 24.5	-0.1
SEY	Seymchan	63.92	3	P	P	12 42 25.4	0.0
	comp=Z,6.6nm,0.8s,baz=174,slow=6.3,SNR=16						
TLY	Talaya	63.97	332⇑	eP	P	12 42 26.4	+0.4
YAK	Yakutsk	64.26	351	eP	P	12 42 26.1	-1.5
YAK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BOD	Bodaibo	64.29	341	eP	P	12 42 26.3	-1.6
BOD				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RAMN	Ramite	64.35	301	eP	P	12 42 28.9	-0.3
JIRN	Jiri	64.89	301	eP	P	12 42 32.9	0.0
GUN	Gumba	65.22	301	eP	P	12 42 35.1	+0.1
MOY	Mondy	65.25	330	eP	P	12 42 37.0	+2.5
MOY				pmax	pmax		
	comp=Z,28nm,3.6s						
DMN	Daman	65.80	301	eP	P	12 42 38.8	+0.1
	comp=Z,85nm,1.0s						
KNGR	Kungurtug, Tuv	66.40	328⇓	eP	P	12 42 43.6	+1.7

KOLN	Koldanda	67.13	301	eP	P	12 42 46.9	-0.3
	comp=Z,71nm,1.2s						
DANN	Dangsing	67.14	301	eP	P	12 42 47.0	-0.3
	comp=Z,68nm,1.2s						
PYUN	Piuthan	67.74	301	eP	P	12 42 50.5	-0.5
	comp=Z,96nm,1.1s						
WMQ	Urumqi	69.07	318	eP	P	12 42 59.5	+0.7
WMQ				pP	pP	12 43 08.8	-0.1
WMQ				pmax	pmax		
	comp=Z,17nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,760nm,10.1s						
WMQ				LR	LR		
	comp=N,2µm,21.3s						
WMQ				LR	LR		
	comp=E,2µm,23.5s						
WMQ				LR	LR		
	comp=Z,2µm,17.1s						
BILL	Bilibino	70.21	8	eP	P	12 43 05.4	+0.2
	comp=Z,6.8nm,1.0s						
BILL	Bilibino	70.21	8⇑	eP	P	12 43 05.7	+0.4
BILL				pmax	pmax		
	comp=Z,12nm,1.3s						
TIXI	Tiksi	73.49	354	eP	P	12 43 25.2	+0.3
	comp=Z,4.8nm,1.0s						
TIXI	Tiksi	73.49	354⇓	eP	P	12 43 25.5	+0.6
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MK01	Makanchi Array	73.69	320	eP	P	12 43 25.9	-0.7
MK31	Makanchi Array	73.70	320	eP	P	12 43 25.9	-0.8
MK31	Makanchi Array	73.70	320	eP	P	12 43 25.9	-0.8
MKAR	Makanchi Array	73.70	320	eP	P	12 43 25.9	-0.8
	comp=Z,28nm,1.1s						
MKAR	Makanchi Array	73.70	320	eP	P	12 43 25.9	-0.8
MKAR				pmax	pmax		
	comp=Z,28nm,1.1s						
MKAR	Makanchi Array	73.70	320	P	P	12 43 26.4	-0.3
	comp=Z,1.8nm,0.7s,baz=97,slow=6.8,SNR=13						
MAKZ	Makanchi	73.91	320	eP	P	12 43 27.5	-0.4
	comp=Z,27nm,1.6s						
MAKZ	Makanchi	73.91	320	eP	P	12 43 27.5	-0.4
MAKZ				pmax	pmax		
	comp=Z,27nm,1.6s						
ANM	Nome	74.04	19	eP	P	12 43 29.3	+1.0
	comp=Z,12nm,1.2s						
ANM	Nome	74.04	19	eP	P	12 43 29.3	+1.0
ANM				pmax	pmax		
	comp=Z,12nm,1.2s						
ZAA0	Zalesovo Array	74.84	327	eP	P	12 43 33.1	0.0
	comp=Z,5.7nm,0.9s						
ZALV	Zalesovo Beam	74.84	327	eP	P	12 43 31.5	-1.6
ZALV	Zalesovo Beam	74.84	327	eP	P	12 43 31.5	-1.6
ZALV	Zalesovo Beam	74.84	327	P	P	12 43 31.8	-1.3
	comp=Z,1.1nm,0.4s,baz=106,slow=6.1,SNR=9.4						
NVS	Novosibirsk	76.04	328	eP	P	12 43 41.1	+1.2
VNDA	Vanda	76.84	177	P	P	12 43 44.0	-0.1
VNDA	Vanda	76.84	177	P	P	12 43 44.0	-0.1
	comp=Z,11nm,0.8s,baz=323,slow=7.2,SNR=10						
NIL	Nilore	77.07	305	eP	P	12 43 46.3	0.0
	comp=Z,20nm,0.7s						
KURK	Kurchatov	77.26	323	eP	P	12 43 46.3	-0.6
	comp=Z,24nm,1.4s						
KURK	Kurchatov	77.26	323⇓	eP	P	12 43 46.7	-0.2
AAK	Ala-Archa	77.88	314⇓	eP	P	12 43 52.3	+1.4
AAK				pmax	pmax		
	comp=Z,14nm,3.0s						
RC01	Rabbit Creek A	78.29	26	eP	P	12 43 51.5	-1.0
	comp=Z,27nm,1.2s						
PMR	Palmer	78.76	26	eP	P	12 43 55.6	+0.6
	comp=Z,24nm,1.2s						
PMR	Palmer	78.76	26	eP	P	12 43 55.6	+0.6
PMR				pmax	pmax		
	comp=Z,24nm,1.2s						
IM3	Indian Mountai	78.88	21	eP	P	12 43 56.4	+0.8
KNK	Knik Glacier	78.98	26	eP	P	12 43 56.6	+0.2
	comp=Z,33nm,1.2s						
TRF	Thorofare Moun	79.04	24	eP	P	12 43 56.8	-0.1
	comp=Z,14nm,1.3s						
SML	Sawmill	79.20	26	eP	P	12 43 57.5	0.0
	comp=Z,46nm,1.1s						
SML	Sawmill	79.20	26	eP	P	12 43 57.5	0.0
SML				pmax	pmax		
	comp=Z,46nm,1.1s						
MLY	Manley	79.55	22	eP	P	12 44 00.2	+0.8
	comp=Z,15nm,1.2s						
RND	Reindeer	79.61	24	eP	P	12 43 59.7	-0.1
	comp=Z,20nm,1.0s						
RND	Reindeer	79.61	24	eP	P	12 43 59.7	-0.1
RND				pmax	pmax		
	comp=Z,21nm,1.0s						
MCK	McKinley	79.71	24	eP	P	12 44 00.2	0.0
	comp=Z,23nm,1.1s						
MCK	McKinley	79.71	24	eP	P	12 44 00.3	0.0
MCK				pmax	pmax		
	comp=Z,23nm,1.1s						
DHY	Denali Highway	80.10	25	eP	P	12 44 03.0	+0.5
	comp=Z,19nm,1.0s						
KLU	Klutina	80.14	27	eP	P	12 44 02.7	0.0
	comp=Z,46nm,1.6s						
GAR	Garm	80.30	310	eP	P	12 44 03.4	-0.7
	comp=Z,56nm,1.7s						
GAR	Garm	80.30	310	eP	P	12 44 03.4	-0.7
GAR				pmax	pmax		
	comp=Z,56nm,1.7s						
WRH	Wood River Hil	80.35	23	eP	P	12 44 02.7	-0.9
	comp=Z,24nm,1.3s						
NRIK	Noril'sk	80.57	342	P	P	12 44 04.3	-0.4
	comp=Z,3.2nm,0.5s,baz=133,slow=6.2,SNR=5.1						
COLA	College	80.60	23⇑	eP	P	12 44 04.7	-0.3
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	80.85	314	eP	P	12 44 06.0	-0.8
KKAR	Karatay Array	80.85	314	eP	P	12 44 06.0	-0.8
IL1	Eielson Array	80.94	23	eP	P	12 44 06.1	-0.8
ILAR	Eielson Array	80.94	23	P	P	12 44 05.8	-1.0
	comp=Z,2.6nm,0.6s,baz=249,slow=5.7,SNR=29						
ILB	Eielson Array	80.94	23	eP	P	12 44 05.1	-1.7
CHGR	Chuyangaron	81.14	309	eP	P	12 44 08.1	-0.5
	comp=Z,18nm,0.9s						
RIDG	Independ'e Rid	81.40	25	eP	P	12 44 09.4	+0.1
	comp=Z,14nm,1.0s						
BRVK	Borovoye	82.84	324	eP	P	12 44 16.6	-0.5
	comp=Z,20nm,1.4s						
BRVK	Borovoye	82.84	324⇓	eP	P	12 44 17.2	+0.1
BRVK				pmax	pmax		
	comp=Z,19nm,1.4s						
DAWY	Dawson	83.80	25	eP	P	12 44 21.9	+0.1
	comp=Z,20nm,1.5s						
INK	Inuvik	87.06	21	eP	P	12 44 38.0	+0.1
	comp=Z,17nm,1.3s						
INK	Inuvik	87.06	21	eP	P	12 44 38.0	+0.1
INK				pmax	pmax		
	comp=Z,17nm,1.3s						
INK	Inuvik	87.06	21	P	P	12 44 37.0	-0.8
	comp=Z,8.4nm,1.1s,baz=244,slow=5.6,SNR=13						
ABKAR	Akbulak array	88.84	319	eP	P	12 44 45.4	-1.4
QSPA	South Pole Qui	88.91	180	eP	P	12 44 46.6	-0.3
	comp=Z,18nm,0.9s						
ARU	Arti	89.97	326d	iP	P	12 44 50.4	-1.6
ARU						12 48 24.4	
ARU				S	SKSac	12 55 18.4	-1.7
ARU				SP	SP	12 56 50.1	+2.4
ARU				SS	SS	13 01 48.5	+7.9
ARU				pmax	pmax		
	comp=Z,36nm,4.7s						
AFDM	Forest Hills D	92.23	51	eP	P	12 45 02.2	-0.7
	comp=Z,6.5nm,1.3s						
NVAR	Mina Array Bea	94.33	52	P	P	12 45 14.2	+1.3
	comp=Z,0.8nm,0.7s,baz=256,slow=6.7,SNR=5.6						
NEW	Newport	94.69	42	P	P	12 45 12.9	-1.2
	comp=Z,2.0nm,0.8s,baz=329,slow=12,SNR=2.8						
BMO	Blue Mountains	94.77	45	eP	P	12 45 15.6	+1.0
	comp=Z,14nm,1.5s						
BMO	Blue Mountains	94.77	45	eP	P	12 45 15.6	+1.0
BMO				pmax	pmax		
	comp=Z,14nm,1.5s						
YKA	Yellowknife Ar	94.80	27	P	P	12 45 14.1	0.0
	comp=Z,0.7nm,0.7s,baz=280,slow=4.3,SNR=11						
YKB5	Yellowknife Ar	94.80	27	eP	P	12 45 14.1	0.0
SYO	Syowa Base	95.23	200⇑	eP	P	12 45 14.3	-1.7
SYO	Syowa Base	95.23	200⇑	eX	P	12 45 22.0	+6.0
PDAR	Pinedale Array	100.56	47	P	Pdif	12 45 41.5	+0.7
	comp=Z,0.2nm,0.7s,baz=262,slow=0.6,SNR=2.6						
NEY	Neytrino	101.08	314⇑	eP	Pdif	12 45 43.6	+0.5
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
OBN	Obninsk	102.42	327	i P	Pdif	12 45 48.3	-0.2
OBN				e		12 50 03.1	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MDT	Midelt	138.61	323	PKhKP	PKPpre	12 51 09.1	
	comp=Z,6.2nm,0.7s,baz=307,slow=20,SNR=7.8						
TOA0	Torodi Ar. Sit	143.58	291	ePKPpre	PKPpre	12 51 24.9	
TORD	Torodi Ar. Bea	143.58	291	PKhKP	PKPpre	12 51 24.7	
	comp=Z,2.4nm,0.8s,baz=44,slow=3.3,SNR=9.6						
CPUP	Villa Florida	144.08	141	ePKPdf	PKPdf	12 51 28.1	-1.0
CPUP	Villa Florida	144.08	141	ePKIKP	PKPdf	12 51 28.1	-1.0
CPUP	Villa Florida	144.08	141	PKP	PKPdf	12 51 28.4	-0.7
	comp=Z,2.9nm,0.8s,baz=237,slow=2.5,SNR=6.6						
KIC	Kosan Boka	151.31	281	ePKIKP	PKPbc	12 51 47.6	+0.2
	comp=Z,22nm,0.9s						
DBIC	Dimbokro	151.37	282	ePKPbc	PKiKP	12 51 48.1	+0.1
DBIC	Dimbokro	151.37	282	ePKIKP	PKiKP	12 51 48.1	+0.1
DBIC	Dimbokro	151.37	282	PKPbc	PKPbc	12 51 47.4	-0.1
	comp=Z,6.6nm,0.7s,baz=72,slow=3.3,SNR=9.4						
TIC	Toumodi	151.53	282	ePKIKP	PKPbc	12 51 48.1	+0.2
LIC	Lamto	151.61	281	ePKIKP	PKPbc	12 51 48.2	+0.1
	comp=Z,60nm,1.3s						

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*IDC **06** 12:35:32.6±0.9, 11°.48S×164°.93E, h0^{km}, mb4.1/14, mb1 4.2/16, mb1mx4.1/47, mbtmp4.0/16, ML4.1/1, Error ellipse: s-maj=29.6km s-min=19.0km az=153.0*

*NEIC **06** 12:35:34.0±0.3, 11°.44S×164°.92E, h10^{km}, mb4.6/4, Error ellipse: s-maj=8.7km s-min=6.6km az=149.0*

*ISCJB **06** 12:35:35.9±0.4, 11°.56S±0°.08×164°.86E±0°.06, h34^{km}, mb4.3/22, Error ellipse: s-maj=10.9km s-min=8.1km az=179.2*

ISC 06 12:35:37.4±0.6, **11°.5S**±0°.1×**164°.92E**±0°.09, **h34**^{km}, **n39**, σ**0^{s}.84**/44, **mb4.2**/22, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.31	292	Pn	Pn	12 36 52.5	-1.8
	6.7nm,0.3s,baz=155,slow=19,SNR=2.4						
HNR				Sn	Sn	12 37 55.9	+1.5
	2.2nm,0.3s,baz=195,slow=20,SNR=2.9						
ONTNC	Ouen Toro	10.84	172	ePn	Pn	12 38 09.5	-0.8
CTA	Charters Tower	19.87	242	P	P	12 40 06.5	+0.6
	baz=70,slow=15,SNR=3.7						
WB2	Warramunga Arr	30.56	250	eP	P	12 41 49.7	+1.6
	27nm,1.6s						
WR1	Warramunga Arr	30.57	250	eP	P	12 41 48.4	+0.2
	27nm,1.5s						
WR1				ePcP	PcP	12 44 46.8	+0.2
WRA	Warramunga Arr	30.57	250	P	P	12 41 48.3	+0.1
	3.3nm,0.9s,baz=82,slow=8.7,SNR=4.9						
WRA				PcP	PcP	12 44 46.8	+0.2
	1.2nm,1.0s,baz=71,slow=3.1,SNR=3.2						
AS31	Alice Springs	31.86	244	eP	P	12 41 59.5	-0.2
	1.4nm,1.0s						
AS31				ePcP	PcP	12 44 50.7	+0.7
ASAR	Alice Springs	31.86	244	P	P	12 41 59.5	-0.1
	2.4nm,0.8s,baz=78,slow=9.2,SNR=5.9						
ASAR				PcP	PcP	12 44 50.7	+0.7
	0.6nm,0.9s,baz=90,slow=2.8,SNR=3.0						
SARN	Sarigan	33.82	326	eP	P	12 42 14.7	-2.0
	68nm,1.1s						
MJAR	Matsushiro Arr	54.01	333	P	P	12 44 58.3	-0.1
	1.4nm,0.7s,baz=171,slow=8.2,SNR=4.0						
MAJO	Matsushiro	54.01	333	eP	P	12 44 58.3	-0.1
USRK	Ussuriysk Ar.	63.00	334	P	P	12 46 01.8	+1.0
	1.5nm,0.7s,baz=149,slow=6.1,SNR=4.1						
CM01	Chiang Mai Arr	71.53	294	eP	P	12 46 54.4	-1.1
CM31	Chiang Mai Arr	71.56	294	eP	P	12 46 55.8	+0.2
CMAR	Chiang Mai Arr	71.56	294	P	P	12 46 56.7	+1.0
	0.3nm,0.4s,baz=113,slow=4.3,SNR=4.4						
SEY	Seymchan	74.84	354	P	P	12 47 14.7	+0.6
	2.1nm,0.9s,baz=162,slow=20,SNR=3.5						
SONA0	Songino Array	78.56	324	eP	P	12 47 36.2	+0.6
SONM	Songino Array	78.56	324	P	P	12 47 36.2	+0.6
	1.1nm,0.8s,baz=149,slow=8.6,SNR=6.8						
BILL	Bilibino	79.34	1	eP	P	12 47 39.6	+0.3
	4.1nm,0.8s						
ILAR	Eielson Array	84.20	19	P	P	12 48 05.0	0.0
	0.9nm,0.7s,baz=237,slow=5.0,SNR=6.3						
ILB	Eielson Array	84.20	19	eP	P	12 48 04.0	-1.0
NV01	Mina Array Sit	86.94	50	eP	P	12 48 20.1	+0.6
NVAR	Mina Array Bea	86.94	50	P	P	12 48 19.7	+0.2
	1.5nm,1.0s,baz=233,slow=8.2,SNR=4.6						
SZCU	Shurtz Canyon	90.68	52	eP	P	12 48 37.2	0.0
	9.5nm,1.6s						
U15A	North Rim	91.03	53	eP	P	12 48 38.8	-0.1
	4.6nm,1.3s						
HVU	Hansel Valley	91.91	48	eP	P	12 48 43.3	+0.6
	7.7nm,1.4s						
MK01	Makanchi Array	93.29	317	eP	P	12 48 49.7	+0.9
MK31	Makanchi Array	93.30	317	eP	P	12 48 49.0	+0.1
MK32	Makanchi Array	93.30	317	eP	P	12 48 49.3	+0.4
MKAR	Makanchi Array	93.30	317	eP	P	12 48 49.0	+0.1
	9.3nm,0.8s						
MKAR	Makanchi Array	93.30	317	P	P	12 48 49.3	+0.4
	1.4nm,0.7s,baz=92,slow=6.7,SNR=11						
ZALV	Zalesovo Beam	93.46	324	P	P	12 48 49.2	-0.1
	0.4nm,0.4s,baz=131,slow=4.5,SNR=3.9						
ZAA1	Zalesovo Array	93.46	324	eP	P	12 48 49.2	-0.2
PD31	Pinedale Array	94.46	47	eP	P	12 48 54.5	0.0
PDAR	Pinedale Array	94.46	47	P	P	12 48 55.5	+1.0
	0.3nm,0.8s,baz=234,slow=4.3,SNR=2.6						
YKA	Yellowknife Ar	95.75	27	P	P	12 48 58.5	-1.1
	0.2nm,0.7s,baz=253,slow=4.7,SNR=3.7						
YKB5	Yellowknife Ar	95.75	27	eP	P	12 48 58.1	-1.5
LTX	Lajitas	96.76	62	eP	P	12 49 06.3	+1.2
TXAR	Lajitas Array	96.76	62	P	P	12 49 06.3	+1.2
	0.3nm,0.9s,baz=251,slow=4.7,SNR=2.6						

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*ISCJB **06** 12:35:59.8±0.8, 22°.26N±0°.08×143°.1E±0°.3, h150^{km}, mb3.5/5, Error ellipse: s-maj=41.9km s-min=10.4km az=174.6*

*IDC **06** 12:36:02.3±3.1, 22°.34N×143°.03E, h160^{km}±30^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.2/55, mbtmp3.8/7, Error ellipse: s-maj=58.9km s-min=16.6km az=101.0*

ISC 06 12:36:01.1±0.9, **22°.28N**±0°.10×**143°.1E**±0°.3, **h150**^{km}, **n7**, σ**1^{s}.13**/9, **mb3.4**/5, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	4.87	350	P	Pn	12 37 14.7	+1.9
	16nm,0.3s,baz=275,slow=22,SNR=8.7						
JCJ				S	Sn	12 38 08.5	-0.3
	39nm,0.3s,baz=269,slow=23,SNR=8.4						
MJAR	Matsushiro Arr	14.84	344	P	Pn	12 39 22.1	-1.4
	0.1nm,0.3s,baz=172,slow=9.2,SNR=4.3						
WRA	Warramunga Arr	42.83	192	P	P	12 43 44.6	+0.2
	0.4nm,0.4s,baz=17,slow=8.9,SNR=20						
WRA				PcP	PcP	12 45 32.9	0.0
	0.2nm,0.5s,baz=7.6,slow=3.6,SNR=3.7						
ASAR	Alice Springs	46.54	192	P	P	12 44 14.2	+0.4
	0.3nm,0.4s,baz=10,slow=7.5,SNR=4.4						
YKA	Yellowknife Ar	75.98	28	P	P	12 47 32.1	+0.8
	0.4nm,0.5s,baz=292,slow=5.8,SNR=6.8						
FINES	FINESS Array B	82.63	334	P	P	12 48 06.8	-0.6
	2.5nm,1.0s,baz=86,slow=2.7,SNR=3.8						
NVAR	Mina Array Bea	82.84	52	P	P	12 48 08.3	-1.0
	0.7nm,0.7s,baz=271,slow=5.1,SNR=4.8						

IDC 06 12:36:42.9±1.2, **10°.95S**×**165°.40E**, **h0**^{km}, **mb3.9**/4, **mb1 4.3**/5, **mb1mx3.7**/47, **mbtmp4.0**/5, **ML4.2**/1, **Error ellipse: s-maj=49.3km s-min=24.9km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.10	175	Pn	Pn	12 39 23.5	+0.4
	1.6nm,0.3s,baz=18,slow=20,SNR=4.4						
WRA	Warramunga Arr	31.20	250	P	P	12 43 04.3	+0.1
	1.4nm,0.6s,baz=81,slow=8.6,SNR=7.3						
ASAR	Alice Springs	32.53	243	P	P	12 43 15.6	-0.3
	4.3nm,0.9s,baz=65,slow=10,SNR=14						
ILAR	Eielson Array	83.53	19	P	P	12 49 12.7	+0.2
	0.2nm,0.5s,baz=228,slow=5.3,SNR=3.0						
NVAR	Mina Array Bea	86.22	50	P	P	12 49 26.6	-0.2
	0.4nm,0.8s,baz=224,slow=6.2,SNR=3.1						

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*NEIC **06** 12:39:59.2±0.3, 11°.29S×165°.94E, h10^{km}, mb4.6/8, Error ellipse: s-maj=7.1km s-min=6.5km az=73.0*

*IDC **06** 12:40:02.8±1.4, 11°.48S×165°.98E, h36^{km}±4^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.6/40, mbtmp3.9/10, ML4.3/1, Error ellipse: s-maj=44.5km s-min=18.5km az=140.0*

ISC 06 12:40:02.3±0.5, **11°.32S**±0°.08×**165°.97E**±0°.06, **h32**^{km}±3^{km}, **h32**^{km}**:pP-P**, **n37**, σ**1^{s}.12**/49, **mb4.1**/18, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.22	287	ePn	Pn	12 41 30.2	-1.7
HNR				eSn	Sn	12 42 40.3	-1.7
HNR				eSn	Sn	12 42 43.7	+1.8
HNR	Honiara	6.22	287	Pn	Pn	12 41 34.0	+2.1
	7.5nm,0.3s,baz=190,slow=17,SNR=2.9						
HNR				Sn	Sn	12 42 40.3	-1.7
	18nm,0.3s,baz=175,slow=22,SNR=6.6						
MARNC	Mare, Loyalty	10.29	169	ePn	Pn	12 42 28.6	+0.9
DZM	Mont Dzumac	10.70	178	ePn	Pn	12 42 34.4	+1.0
ONTNC	Ouen Toro	10.93	178	ePn	Pn	12 42 36.8	+0.3
PINNC	Pines Island,	11.31	173	ePn	Pn	12 42 40.2	-1.6
MSVF	Nonsavu	13.31	120	ePn	Pn	12 43 08.1	-1.1
FUNA	Funafuti	13.32	79	ePn	Pn	12 43 08.8	-0.5
EIDS	Eidsvold	19.84	223	eP	P	12 44 29.9	-0.7
	48nm,1.5s						
COEN	Coen	22.39	261	eP	P	12 44 57.4	-0.9
	50nm,1.5s						
ARMA	Armidale	23.20	213	eP	P	12 45 07.1	+0.4
	13nm,1.0s						
CAN	Canberra	28.43	210	eP	P	12 45 54.2	-0.1
	22nm,1.5s						
STKA	Stephens Creek	30.39	224	eP	P	12 46 12.8	+1.2
	4.0nm,1.6s						
WC3	Warramunga Arr	31.57	250	eP	P	12 46 21.8	-0.4
	14nm,1.1s						
WB2	Warramunga Arr	31.59	250	eP	P	12 46 21.8	-0.5
WRAB	Tennant Creek	31.59	250	eP	P	12 46 22.0	-0.3
	11nm,1.1s						
WR1	Warramunga Arr	31.60	250	eP	P	12 46 22.0	-0.4
WRA	Warramunga Arr	31.60	250	P	P	12 46 22.0	-0.4
	2.5nm,0.9s,baz=80,slow=9.3,SNR=7.5						
WRA				pP	pP	12 46 31.8	+1.4
	6.8nm,0.9s,baz=80,slow=9.4,SNR=18						
WRA				pPcP		12 49 26.0	
	0.6nm,0.7s,baz=80,slow=3.5,SNR=3.4						
AS31	Alice Springs	32.87	244	eP	P	12 46 32.5	-1.0
	1.3nm,1.1s						
ASAR	Alice Springs	32.87	244	P	P	12 46 33.2	-0.3
	0.6nm,0.9s,baz=80,slow=10,SNR=3.6						
ASAR				pP	pP	12 46 43.1	+1.6
	1.2nm,0.5s,baz=63,slow=10.0,SNR=7.4						
ASAR				pPcP		12 49 31.5	
	0.9nm,0.7s,baz=76,slow=4.6,SNR=5.5						
FITZ	Fitzroy Crossi	39.52	255	pP	pP	12 47 39.1	+0.6
	2.3nm,0.7s,baz=113,slow=6.2,SNR=3.7						
JNU	Nakatsue	55.43	324	eP	P	12 49 31.9	-2.0
	44nm,1.5s						
JNU	Nakatsue	55.43	324	P	P	12 49 33.2	-0.7
	8.7nm,1.0s,baz=141,slow=13,SNR=2.4						
CM31	Chiang Mai Arr	72.43	294	eP	P	12 51 27.8	+1.8
CM31				ePcP	sP	12 51 37.0	-1.2
CMAR	Chiang Mai Arr	72.43	294	P	P	12 51 27.8	+1.8
	1.1nm,0.9s,baz=125,slow=4.9,SNR=8.2						
CMAR				pP	sP	12 51 37.0	-1.2
	0.5nm,0.4s,baz=117,slow=3.2,SNR=2.6						
SONA0	Songino Array	79.02	324	eP	P	12 52 04.9	+1.6
SONA0				ePcP	sP	12 52 15.4	-0.3
SONM	Songino Array	79.02	324	P	P	12 52 04.9	+1.6
	0.2nm,0.5s,baz=128,slow=8.1,SNR=2.8						
SONM				pP	sP	12 52 15.4	-0.3
	0.7nm,0.8s,baz=144,slow=9.9,SNR=4.3						
ILAR	Eielson Array	83.70	18	P	P	12 52 28.3	+0.7
	0.4nm,0.8s,baz=248,slow=4.5,SNR=4.6						
ILAR				pP	sP	12 52 41.0	+1.0
	0.7nm,0.6s,baz=232,slow=5.0,SNR=4.7						
ILB	Eielson Array	83.70	18	eP	P	12 52 27.9	+0.3
ILB				ePcP	sP	12 52 41.0	+1.0
NVAR	Mina Array Bea	86.03	50	pP	pP	12 52 53.9	+4.4
	0.7nm,0.8s,baz=237,slow=8.0,SNR=3.9						
MK32	Makanchi Array	93.88	317	eP	P	12 53 16.9	+0.2
MK32				epwP	sP	12 53 28.8	-0.4
MKAR	Makanchi Array	93.88	317	P	P	12 53 16.9	+0.2
	0.6nm,0.8s,baz=114,slow=3.5,SNR=4.0						
MKAR				pP	sP	12 53 28.8	-0.4
	1.4nm,0.8s,baz=99,slow=5.6,SNR=7.7						
ZAA1	Zalesovo Array	93.91	324	eP	P	12 53 16.7	+0.1
ZALV	Zalesovo Beam	93.91	324	P	P	12 53 16.7	+0.1
	0.2nm,0.3s,baz=131,slow=4.0,SNR=2.3						
ZALV				pP	pP	12 53 27.5	+1.7
	0.4nm,0.4s,baz=116,slow=3.4,SNR=3.2						
YKA	Yellowknife Ar	95.12	27	P	P	12 53 21.6	-0.3
	0.1nm,0.6s,baz=255,slow=4.5,SNR=3.2						
YKA				pP	pwP	12 53 33.8	-1.1
	0.3nm,0.8s,baz=255,slow=4.4,SNR=3.6						
YKB5	Yellowknife Ar	95.12	27	eP	P	12 53 21.6	-0.3
YKB5				epP	pwP	12 53 33.9	-1.1
ARCES	ARCESS Array B	116.66	345	pPKP	pPKPdf	12 58 56.3	+4.2
	1.9nm,0.7s,baz=84,slow=2.2,SNR=2.6						

IDC 06 12:41:57.1±2.9, **11°.97S**×**165°.49E**, **h0**^{km}, **mb3.7**/3, **mb1 4.1**/3, **mb1mx3.5**/42, **mbtmp3.7**/3, **Error ellipse: s-maj=174.3km s-min=37.6km az=148.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.94	251	P	P	12 48 16.2	+0.1
	0.7nm,0.8s,baz=84,slow=9.1,SNR=3.4						
ILAR	Eielson Array	84.46	19	P	P	12 54 30.9	-0.5
	0.4nm,0.5s,baz=236,slow=5.0,SNR=4.7						
NVAR	Mina Array Bea	86.81	50	P	P	12 54 44.4	+0.5
	0.4nm,0.6s,baz=236,slow=6.4,SNR=3.3						

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*IDC **06** 12:42:11.7±1.0, 11°.92S×165°.27E, h0^{km}, mb4.1/13, mb1 4.3/15, mb1mx4.0/45, mbtmp4.1/15, ML4.6/1, Error ellipse: s-maj=28.3km s-min=19.7km az=134.0*

*NEIC **06** 12:42:15.7±0.2, 11°.62S×164°.77E, h10^{km}, mb4.3/6, Error ellipse: s-maj=6.3km s-min=5.3km az=71.0*

*ISCJB **06** 12:42:17.5±0.3, 11°.74S±0°.05×164°.81E±0°.05, h34^{km}, mb4.4/29, Error ellipse: s-maj=7.5km s-min=6.1km az=138.6*

ISC 06 12:42:19.2±0.5, **11°.67S**±0°.08×**164°.86E**±0°.07, **h34**^{km}, **n50**, σ**1^{s}.17**/52, **mb4.3**/29, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.32	294	ePn	Pn	12 43 34.4	-1.9
HNR				eSn	Sn	12 44 37.9	+1.5
HNR				eSn	Sn	12 44 39.4	+3.1
HNR	Honiara	5.32	294	Pn	Pn	12 43 37.2	+1.0
	17nm,0.3s,baz=186,slow=6.4,SNR=4.2						
HNR				Sn	Sn	12 44 37.9	+1.5
	5.8nm,0.3s,baz=156,slow=20,SNR=2.8						
MARNC	Mare, Loyalty	10.22	163	ePn	Pn	12 44 42.6	-0.9
DZM	Mont Dzumac	10.45	172	ePn	Pn	12 44 46.3	-0.5
ONTNC	Ouen Toro	10.69	172	ePn	Pn	12 44 51.4	+1.5
PINNC	Pines Island,	11.16	168	ePn	Pn	12 44 56.1	-0.3
MSVF	Nonsavu	14.11	117	ePn	Pn	12 45 38.5	+1.7
CTA	Charters Tower	19.74	243	P	Pn	12 46 47.8	-0.1
	baz=110,slow=12,SNR=4.8						
COEN	Coen	21.26	262	eP	P	12 47 00.1	-2.6
	11nm,1.1s						
ARMA	Armidale	22.33	211	eP	P	12 47 13.1	-1.2
	15nm,1.2s						
KNTN	Kanton	24.84	71	eP	P	12 47 38.8	+0.1
	277nm,1.6s						
WRAB	Tennant Creek	30.44	251	eP	P	12 48 28.5	-0.4
	16nm,1.5s						
WB2	Warramunga Arr	30.44	250	eP	P	12 48 28.7	-0.2
WR1	Warramunga Arr	30.45	250	eP	P	12 48 29.3	+0.3
	20nm,1.5s						
WRA	Warramunga Arr	30.45	250	P	P	12 48 29.3	+0.3
	2.2nm,0.6s,baz=80,slow=8.7,SNR=9.2						
SNZO	South Karori	30.77	165	eP	P	12 48 30.7	-0.7
	96nm,1.4s						
TOO	Toolangi	31.09	211	eP	P	12 48 34.4	-0.1
	9.8nm,1.1s						
KHZ	Kahutara	31.55	168	eP	P	12 48 39.8	+1.5
	79nm,1.7s						
AS01	Alice Springs	31.69	244	eP	P	12 48 39.3	-0.7
AS31	Alice Springs	31.73	244	eP	P	12 48 39.2	-1.1
	0.9nm,0.8s						
ASAR	Alice Springs	31.74	244	P	P	12 48 40.0	-0.3
	2.7nm,0.8s,baz=74,slow=9.2,SNR=12						
RPZ	Rata Peaks	32.38	172	P	P	12 48 38.4	-7.2
	4.9nm,0.8s,baz=259,slow=5.2,SNR=2.4						

SARN	**Sarigan**	**33.92**	**326**	*e*P	**P**	**12 48 59.5**	**+0.1**
	132nm,1.6s						
FITZ	**Fitzroy Crossi**	**38.38**	**256**	*e*P	**P**	**12 49 35.7**	**-1.8**
	3.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.38**	**256**	P	**P**	**12 49 37.4**	**-0.2**
	1.2nm,0.7s,baz=94,slow=11,SNR=3.7						
MJAR	**Matsushiro Arr**	**54.13**	**334**	P	**P**	**12 51 40.8**	**-0.3**
	1.1nm,0.6s,baz=171,slow=9.9,SNR=4.2						
MAJO	**Matsushiro**	**54.13**	**334**	*e*P	**P**	**12 51 40.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**63.12**	**334**	P	**P**	**12 52 42.8**	**-0.7**
	0.8nm,0.6s,baz=139,slow=4.7,SNR=4.7						
CM31	**Chiang Mai Arr**	**71.57**	**294**	*e*P	**P**	**12 53 39.3**	**+1.8**
CMAR	**Chiang Mai Arr**	**71.57**	**294**	P	**P**	**12 53 39.3**	**+1.8**
	0.5nm,0.4s,baz=114,slow=4.6,SNR=4.8						
ULN	**Ulaanbaatar**	**78.30**	**324**	*e*P	**P**	**12 54 16.2**	**+0.2**
	2.5nm,0.8s						
QSPA	**South Pole Qui**	**78.34**	**180**	*e*P	**P**	**12 54 16.4**	**+0.5**
	8.9nm,0.9s						
SONA0	**Songino Array**	**78.66**	**324**	*e*P	**P**	**12 54 17.4**	**-0.6**
SONM	**Songino Array**	**78.66**	**324**	P	**P**	**12 54 17.4**	**-0.6**
	1.0nm,0.7s,baz=147,slow=5.8,SNR=6.4						
SONA1	**Songino Array**	**78.66**	**324**	*e*P	**P**	**12 54 17.9**	**0.0**
ILAR	**Eielson Array**	**84.38**	**19**	P	**P**	**12 54 46.2**	**-1.5**
	1.2nm,0.7s,baz=237,slow=5.9,SNR=9.7						
ILB	**Eielson Array**	**84.38**	**19**	*e*P	**P**	**12 54 47.8**	**+0.1**
NV01	**Mina Array Sit**	**87.09**	**50**	*e*P	**P**	**12 55 02.0**	**0.0**
NVAR	**Mina Array Bea**	**87.09**	**50**	P	**P**	**12 55 00.8**	**-1.3**
	0.6nm,0.8s,baz=232,slow=11,SNR=4.3						
SHPR	**Sheep Range**	**88.95**	**53**	*e*P	**P**	**12 55 11.9**	**+1.0**
	11nm,1.7s						
SZCU	**Shurtz Canyon**	**90.83**	**52**	*e*P	**P**	**12 55 19.9**	**+0.3**
	6.6nm,1.3s						
U15A	**North Rim**	**91.17**	**53**	*e*P	**P**	**12 55 22.2**	**+0.8**
	8.5nm,1.4s						
MTPU	**Mount Pierson**	**91.63**	**52**	*e*P	**P**	**12 55 25.7**	**+2.1**
	12nm,1.6s						
MK01	**Makanchi Array**	**93.37**	**317**	*e*P	**P**	**12 55 29.6**	**-1.4**
MK32	**Makanchi Array**	**93.38**	**317**	*e*P	**P**	**12 55 31.6**	**+0.6**
MKAR	**Makanchi Array**	**93.38**	**317**	P	**P**	**12 55 31.6**	**+0.6**
	1.3nm,0.7s,baz=101,slow=5.6,SNR=10						
ZALV	**Zalesovo Beam**	**93.55**	**324**	P	**P**	**12 55 31.3**	**-0.3**
	0.7nm,0.7s,baz=87,slow=6.1,SNR=4.4						
ZAA1	**Zalesovo Array**	**93.55**	**324**	*e*P	**P**	**12 55 31.3**	**-0.3**
YKA	**Yellowknife Ar**	**95.92**	**27**	P	**P**	**12 55 40.1**	**-2.1**
	0.4nm,0.8s,baz=252,slow=4.8,SNR=5.9						
YKB5	**Yellowknife Ar**	**95.92**	**27**	*e*P	**P**	**12 55 41.5**	**-0.8**

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*IDC **06** 12:44:28.0±0.3, 11.°57S×165.°67E, h0^{km}, mb5.1/33, mb1 5.2/35, mb1mx5.2/45, mbtmp5.1/35, ML5.3/2, MS5.4/17, Ms1 5.4/17, ms1mx5.2/28, Error ellipse: s-maj=14.1km s-min=11.2km az=97.0*

*NEIC **06** 12:44:29.6±0.1, 11.°59S×165.°53E, h10^{km}, mb5.5/208, MS5.7/136, Error ellipse: s-maj=2.8km s-min=2.3km az=105.0*

*BJI **06** 12:44:30.1, 11.°02S×165.°41E, h6^{km}, mB5.9/44, mb5.3/72, Ms5.8/68, Ms7 5.6/57*

*MOS **06** 12:44:31.6±0.8, 11.°61S×165.°49E, h33^{km}, mb5.6/61, MS5.6/16, Error ellipse: s-maj=7.5km s-min=6.3km az=101.7*

*ISCJB **06** 12:44:32.5±0.1, 11.°60S±0.°02×165.°51E±0.°02, h40^{km}, mb5.4/300, MS5.6/174, Error ellipse: s-maj=2.9km s-min=2.6km az=33.0*

*GCMT **06** 12:44:34.6±0.1, 11.°73S±0.°01×165.°42E±0.°01, h12^{km}, MW5.9/139, Moment Tensor Solution. s109,c162; s139,c311; Duration: 2^{s}1 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.77±.01; $M_{\theta\theta}$0.17±.01; $M_{\phi\phi}$0.59±.01; $M_{r\theta}$-0.37±.03; $M_{\theta\phi}$-0.20±.01; $M_{\phi r}$0.27±.02; Best double couple: $M_0$0.84700×10^{18} NP1:ϕ_s143.00000°,δ61.00000°, λ-103.00000°. NP2:ϕ_s349.00000°,δ32.00000°, λ-68.00000°. Principal axes: T 0.7790, Plg15.0000°, Azm243.0000°; N 0.1360, Plg12.0000°, Azm150.0000°; P -0.9160, Plg71.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 12:44:32.9±0.4, **11.°65S**±0.°04×**165.°55E**±0.°04, **h31**^{km}±2^{km}, **h31**^{km}**:pP-P, n861,** σ1^s**40**/836, **mb5.5**/300, **MS5.7**/174, **9C-20D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.93**	**291**	*e*P	**Pn**	**12 45 59.0**	**+0.3**
HNR				*e*S	**Sn**	**12 47 02.0**	**-3.7**
HNR	**Honiara**	**5.93**	**291**	*e*Pn	**Pn**	**12 45 57.9**	**-0.8**
HNR				*e*Sn	**Sn**	**12 47 02.9**	**-2.8**
HNR	**Honiara**	**5.93**	**291**	Pn	**Pn**	**12 45 57.9**	**-0.8**
	89nm,0.3s,baz=131,slow=11,SNR=18						
HNR				Sn	**Sn**	**12 47 03.5**	**-2.1**
	29nm,0.3s,baz=168,slow=19,SNR=3.1						
HNR				LR	LR	12 48 15.9	
	comp=Z,95µm,22.0s,baz=125,slow=38						
MARNC	**Mare, Loyalty**	**10.06**	**167**	*e*Pn	**Pn**	**12 46 54.7**	**-0.7**
DZM	**Mont Dzumac**	**10.40**	**175**	*e*Pn	**Pn**	**12 47 00.3**	**+0.2**
	640nm,1.4s						
DZM				*e*LR	LR	12 49 22.5	
	comp=Z,24µm,20.2s						
DZM	**Mont Dzumac**	**10.40**	**175**	*e*Pn	**Pn**	**12 46 59.3**	**-0.9**
DZM				Sn	**Sn**	**12 48 53.5**	**-2.3**
DZM	**Mont Dzumac**	**10.40**	**175**	Pn	**Pn**	**12 47 00.1**	**0.0**
	21nm,0.3s,baz=8.2,slow=9.9,SNR=55						
DZM				Sn	**Sn**	**12 48 53.5**	**-2.3**
	2.0nm,0.3s,baz=358,slow=15,SNR=2.2						
ONTNC	**Ouen Toro**	**10.64**	**175**	*e*Pn	**Pn**	**12 47 01.6**	**-1.6**
PINNC	**Pines Island,**	**11.05**	**171**	*e*Pn	**Pn**	**12 47 08.4**	**-0.6**
MSVF	**Nonsavu**	**13.52**	**118**	*e*Pn	**Pn**	**12 47 43.0**	**+0.2**
MSVF	**Nonsavu**	**13.52**	**118**	*e*P	**Pn**	**12 47 43.0**	**+0.2**
FUNA	**Funafuti**	**13.79**	**78**	*e*Pn	**Pn**	**12 47 48.8**	**+2.4**
TARA	**Tarawa**	**14.85**	**30**	*e*Pn	**Pn**	**12 47 59.5**	**-1.4**
EIDS	**Eidsvold**	**19.33**	**223**	P	**Pn**	**12 48 57.7**	**+0.7**
	baz=20,SNR=15						
PATS	**Pohnpei**	**19.72**	**338**	*e*P	**P**	**12 49 00.6**	**+0.4**
	365nm,1.0s						
CTA	**Charters Tower**	**20.35**	**243**	P	**P**	**12 49 07.7**	**+0.7**
	94nm,1.0s,baz=67,slow=12,SNR=28						
CTA				LR	LR	12 55 58.9	
	comp=Z,24µm,18.3s,baz=72,slow=34						
CTAO	**Charters Tower**	**20.35**	**243**	*e*P	**P**	**12 49 06.4**	**-0.7**
	290nm,1.4s						
CTAO				LR	LR		
	comp=Z,30µm,20.0s						
CTAO	**Charters Tower**	**20.35**	**243**	*e*P	**P**	**12 49 06.4**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,290nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,30µm,20.0s						
MTSU	**Mount Surprise**	**21.50**	**250**	P	**P**	**12 49 20.4**	**+1.0**
	baz=22,SNR=95						
RMQ	**Roma**	**21.63**	**225**	P	**P**	**12 49 22.0**	**+1.2**
	baz=22,SNR=40						
COEN	**Coen**	**21.94**	**262**	P	**P**	**12 49 24.7**	**+0.6**
	baz=22,SNR=22						
ARMA	**Armidale**	**22.71**	**213**	P	**P**	**12 49 33.0**	**+0.6**
	baz=23,SNR=26						
RAO	**Raoul Island**	**23.33**	**141**	PFAKE		12 49 50.0	+11
RAO				LR	LR		
	comp=Z,28µm,20.0s						
KNTN	**Kanton**	**24.19**	**70**	*e*P	**P**	**12 49 46.0**	**-0.9**
	comp=Z,190nm,1.0s						
OUZ	**Omahuta**	**24.58**	**164**	*e*P	**P**	**12 49 51.3**	**+1.0**
	comp=Z,873nm,1.4s						
QLP	**Quilpie**	**24.97**	**230**	P	**P**	**12 49 54.1**	**+0.3**
	baz=25,SNR=13						
MGCD	**Mangrove Creek**	**25.22**	**209**	P	**P**	**12 49 58.3**	**+2.3**
	baz=25,SNR=10.0						
RIV	**Riverview**	**25.70**	**208**	P	**P**	**12 50 03.0**	**+2.6**
	baz=26,SNR=13						
QIS	**Mount Isa**	**26.42**	**247**	P	**P**	**12 50 07.3**	**+0.1**
	baz=26,SNR=25						
CMSA	**Cobar Meteorol**	**26.98**	**220**	P	**P**	**12 50 13.0**	**+1.0**
	baz=27,SNR=51						
YNG	**Young**	**27.44**	**212**	P	**P**	**12 50 17.2**	**+1.0**
	baz=28,SNR=7.0						
CNB	**Canberra Magne**	**27.77**	**209**	P	**P**	**12 50 20.8**	**+1.7**
	baz=28,SNR=7.9						
CAN	**Canberra**	**27.95**	**210**	*e*P	**P**	**12 50 22.0**	**+1.3**
	comp=Z,68nm,1.3s						
CAN	**Canberra**	**27.95**	**210**	*e*P	**P**	**12 50 22.0**	**+1.3**
CAN				pmax	pmax		
	comp=Z,68nm,1.3s						
HIZ	**Hauiti**	**28.02**	**164**	*e*P	**P**	**12 50 20.9**	**-0.3**
	comp=Z,690nm,1.7s						
OMRZ	**Omania**	**28.07**	**162**	P	**P**	**12 50 25.1**	**+3.4**
OMRZ	**Omania**	**28.07**	**162**	P	**P**	**12 50 25.1**	**+3.4**
HAZ	**Te Kaha**	**28.22**	**159**	P	**P**	**12 50 24.1**	**+1.2**
HAZ	**Te Kaha**	**28.22**	**159**	P	**P**	**12 50 24.1**	**+1.2**
MXZ	**Matakaoa Point**	**28.23**	**158**	*e*P	**P**	**12 50 24.6**	**+1.5**
	comp=Z,64nm,0.7s						
MXZ	**Matakaoa Point**	**28.23**	**158**	P	**P**	**12 50 24.3**	**+1.2**
MXZ	**Matakaoa Point**	**28.23**	**158**	P	**P**	**12 50 24.3**	**+1.2**
HRRZ	**Handcock Road**	**28.31**	**162**	P	**P**	**12 50 27.3**	**+3.4**
HRRZ	**Handcock Road**	**28.31**	**162**	P	**P**	**12 50 27.3**	**+3.4**
RUGZ	**Raukumara Rang**	**28.37**	**160**	P	**P**	**12 50 25.7**	**+1.2**
RUGZ	**Raukumara Rang**	**28.37**	**160**	P	**P**	**12 50 25.9**	**+1.4**
PRRZ	**Plateau Road**	**28.44**	**162**	P	**P**	**12 50 27.8**	**+2.8**
PRRZ	**Plateau Road**	**28.44**	**162**	P	**P**	**12 50 27.8**	**+2.8**
URZ	**Urewera**	**28.45**	**161**	*e*P	**P**	**12 50 25.9**	**+0.8**
	comp=Z,217nm,1.6s						
URZ	**Urewera**	**28.45**	**161**	P	**P**	**12 50 25.4**	**+0.4**
	comp=Z,20nm,0.6s,baz=353,slow=2.7,SNR=17						
URZ	**Urewera**	**28.45**	**161**	P	**P**	**12 50 26.2**	**+1.1**
URZ	**Urewera**	**28.45**	**161**	P	**P**	**12 50 26.2**	**+1.1**
WMGZ	**Waiomatatini S**	**28.50**	**158**	P	**P**	**12 50 25.2**	**-0.3**
WMGZ	**Waiomatatini S**	**28.50**	**158**	P	**P**	**12 50 25.2**	**-0.3**
MWZ	**Matawai**	**28.65**	**160**	P	**P**	**12 50 27.4**	**+0.5**
MWZ	**Matawai**	**28.65**	**160**	P	**P**	**12 50 27.4**	**+0.5**
TWGZ	**Tauwhareparae**	**28.66**	**159**	P	**P**	**12 50 27.2**	**+0.1**
TWGZ	**Tauwhareparae**	**28.66**	**159**	P	**P**	**12 50 28.5**	**+1.4**
PUZ	**Puketiti**	**28.67**	**159**	P	**P**	**12 50 26.6**	**-0.5**
PUZ	**Puketiti**	**28.67**	**159**	P	**P**	**12 50 27.8**	**+0.7**
KATZ	**Kakaramea**	**28.68**	**163**	P	**P**	**12 50 31.1**	**+3.8**
KATZ	**Kakaramea**	**28.68**	**163**	P	P	12 50 35.0	+7.7
HATZ	**Hinemaiaia**	**28.71**	**163**	P	**P**	**12 50 30.5**	**+3.1**
HATZ	**Hinemaiaia**	**28.71**	**163**	P	**P**	**12 50 30.5**	**+3.1**
RAGZ	**Rawiri**	**28.76**	**160**	P	**P**	**12 50 28.3**	**+0.3**
RAGZ	**Rawiri**	**28.76**	**160**	P	**P**	**12 50 30.3**	**+2.4**
WTVZ	**West Tongariro**	**28.78**	**164**	P	**P**	**12 50 30.9**	**+2.7**
WTVZ	**West Tongariro**	**28.78**	**164**	P	P	12 50 33.7	+5.6
NGZ	**Ngauruhoe**	**28.84**	**164**	P	**P**	**12 50 31.6**	**+2.9**
NGZ	**Ngauruhoe**	**28.84**	**164**	P	**P**	**12 50 33.0**	**+4.3**
COVZ	**Chateau Observ**	**28.84**	**164**	P	**P**	**12 50 30.4**	**+1.7**
COVZ	**Chateau Observ**	**28.84**	**164**	P	**P**	**12 50 32.0**	**+3.3**
TKGZ	**Te Karaka**	**28.85**	**160**	P	**P**	**12 50 28.7**	**+0.1**
TKGZ	**Te Karaka**	**28.85**	**160**	P	**P**	**12 50 30.5**	**+1.8**
PKVZ	**Pokaka**	**28.88**	**164**	P	**P**	**12 50 31.6**	**+2.7**
PKVZ	**Pokaka**	**28.88**	**164**	P	**P**	**12 50 33.4**	**+4.4**
FWVZ	**Far West T-bar**	**28.90**	**164**	P	**P**	**12 50 32.3**	**+2.9**
FWVZ	**Far West T-bar**	**28.90**	**164**	P	**P**	**12 50 33.3**	**+3.9**
MTHZ	**Maungataniwha**	**28.90**	**162**	P	**P**	**12 50 30.8**	**+1.7**
MTHZ	**Maungataniwha**	**28.90**	**162**	P	**P**	**12 50 30.8**	**+1.7**
SNGZ	**Shannon Statio**	**29.00**	**161**	P	**P**	**12 50 29.9**	**-0.1**
SNGZ	**Shannon Statio**	**29.00**	**161**	P	**P**	**12 50 30.7**	**+0.7**
CNGZ	**Carnagh Statio**	**29.02**	**159**	P	**P**	**12 50 31.9**	**+1.7**
CNGZ	**Carnagh Statio**	**29.02**	**159**	P	**P**	**12 50 31.9**	**+1.7**
RAHZ	**Arahi**	**29.04**	**161**	P	**P**	**12 50 31.0**	**+0.7**
RAHZ	**Arahi**	**29.04**	**161**	P	**P**	**12 50 31.0**	**+0.7**
RIGZ	**Rimuhau**	**29.07**	**160**	P	**P**	**12 50 30.9**	**+0.3**
RIGZ	**Rimuhau**	**29.07**	**160**	P	**P**	**12 50 30.9**	**+0.3**
RIGZ	**Rimuhau**	**29.07**	**160**	P	**P**	**12 50 33.0**	**+2.4**
BKZ	**Black Stump Fm**	**29.08**	**162**	*e*P	**P**	**12 50 31.4**	**+0.5**
	comp=Z,342nm,1.7s						
BKZ	**Black Stump Fm**	**29.08**	**162**	P	**P**	**12 50 31.3**	**+0.5**
BKZ	**Black Stump Fm**	**29.08**	**162**	P	**P**	**12 50 31.3**	**+0.5**
MOVZ	**Moawhango**	**29.09**	**164**	P	**P**	**12 50 32.5**	**+1.6**
MOVZ	**Moawhango**	**29.09**	**164**	P	**P**	**12 50 33.8**	**+2.9**
NMHZ	**Naumai**	**29.11**	**162**	P	**P**	**12 50 32.2**	**+1.1**
NMHZ	**Naumai**	**29.11**	**162**	P	**P**	**12 50 32.2**	**+1.1**
WHHZ	**Waihua**	**29.23**	**161**	P	**P**	**12 50 32.6**	**+0.6**
WHHZ	**Waihua**	**29.23**	**161**	P	**P**	**12 50 35.8**	**+3.8**
BHHZ	**Black Hill Sta**	**29.26**	**163**	P	**P**	**12 50 34.0**	**+1.6**
BHHZ	**Black Hill Sta**	**29.26**	**163**	P	**P**	**12 50 34.0**	**+1.6**
KWHZ	**Kaweka Forest**	**29.30**	**163**	P	**P**	**12 50 33.6**	**+0.8**
KWHZ	**Kaweka Forest**	**29.30**	**163**	P	**P**	**12 50 34.4**	**+1.7**
MCHZ	**McNeill Hill**	**29.40**	**162**	P	**P**	**12 50 37.0**	**+3.5**
MCHZ	**McNeill Hill**	**29.40**	**162**	P	**P**	**12 50 37.0**	**+3.5**
TSZ	**Takapari Road**	**29.76**	**164**	P	**P**	**12 50 37.3**	**+0.5**
TSZ	**Takapari Road**	**29.76**	**164**	P	**P**	**12 50 37.9**	**+1.1**
KAHZ	**Kahuranaki**	**29.78**	**162**	P	**P**	**12 50 37.3**	**+0.3**
KAHZ	**Kahuranaki**	**29.78**	**162**	P	**P**	**12 50 37.8**	**+0.8**
STKA	**Stephens Creek**	**29.88**	**224**	P	**P**	**12 50 38.7**	**+0.9**
	baz=30,SNR=32						
STKA	**Stephens Creek**	**29.88**	**224**	*e*P	**P**	**12 50 37.9**	**0.0**
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**29.88**	**224**	*e*P	**P**	**12 50 37.9**	**0.0**
STKA				pmax	pmax		
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**29.88**	**224**	P	**P**	**12 50 38.9**	**+1.0**
	comp=Z,27nm,0.9s,baz=30,slow=9.4,SNR=40						
STKA				LR	LR	13 01 42.2	
	comp=Z,16µm,19.9s,baz=62,slow=34						
PXZ	**Pawanui**	**29.99**	**162**	P	**P**	**12 50 38.9**	**+0.2**
PXZ	**Pawanui**	**29.99**	**162**	P	**P**	**12 50 38.9**	**+0.2**
POWZ	**Post Office Ro**	**30.02**	**164**	P	**P**	**12 50 39.4**	**+0.4**
POWZ	**Post Office Ro**	**30.02**	**164**	P	**P**	**12 50 42.5**	**+3.4**
DVHZ	**Dannevirke**	**30.04**	**164**	P	**P**	**12 50 39.9**	**+0.7**
DVHZ	**Dannevirke**	**30.04**	**164**	P	**P**	**12 50 39.9**	**+0.7**
ANWZ	**Angora Road**	**30.28**	**163**	P	**P**	**12 50 42.4**	**+1.1**
ANWZ	**Angora Road**	**30.28**	**163**	P	**P**	**12 50 43.0**	**+1.7**
BFZ	**Birch Farm**	**30.42**	**164**	*e*P	**P**	**12 50 42.4**	**-0.2**
	comp=Z,174nm,1.0s						
SNZO	**South Karori**	**30.62**	**166**	*e*P	**P**	**12 50 44.7**	**+0.4**
	comp=Z,522nm,1.6s						
SNZO				LR	LR		
	comp=Z,32µm,19.0s						
THZ	**Tophouse**	**30.68**	**169**	*e*P	**P**	**12 50 45.2**	**+0.3**
	comp=Z,114nm,0.8s						
WAKE	**Wake Island**	**30.75**	**2**	PFAKE		12 51 00.0	+14
WAKE				LR	LR		
	comp=Z,8µm,19.0s						
WRAB	**Tennant Creek**	**31.09**	**251**	*e*P	**P**	**12 50 48.2**	**-0.5**
	comp=Z,168nm,1.3s						
WRAB				LR	LR		
	comp=Z,9µm,22.0s						
WRAB	**Tennant Creek**	**31.09**	**251**⇑	*e*P	**P**	**12 50 48.2**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,210nm,1.7s						
WB2	**Warramunga Arr**	**31.09**	**251**	*e*P	**P**	**12 50 48.6**	**-0.1**
WRA	**Warramunga Arr**	**31.10**	**251**	P	**P**	**12 50 48.5**	**-0.4**
	comp=Z,50nm,0.9s,baz=79,slow=9.2,SNR=68						
WRA				PcP	**PcP**	**12 53 43.8**	**-0.2**
	comp=Z,4.8nm,0.9s,baz=83,slow=2.9,SNR=5.1						
WRA				LR	LR	13 02 03.3	
	comp=Z,8µm,21.0s,baz=75,slow=34						
KHZ	**Kahutara**	**31.44**	**169**	*e*P	**P**	**12 50 51.4**	**0.0**
TOO	**Toolangi**	**31.46**	**211**	P	**P**	**12 50 52.6**	**+0.8**
	baz=32,SNR=9.4						
LTZ	**Lake Taylor**	**31.57**	**171**	*e*P	**P**	**12 50 54.3**	**+1.6**
	comp=Z,110nm,1.1s						
FOZ	**Fox Glacier**	**31.98**	**174**	*e*P	**P**	**12 50 57.3**	**+1.1**
	comp=Z,121nm,1.1s						
OXZ	**Oxford**	**32.06**	**171**	*e*P	**P**	**12 50 57.3**	**+0.3**
	comp=Z,101nm,1.0s						
RPZ	**Rata Peaks**	**32.30**	**173**	*e*P	**P**	**12 50 59.2**	**+0.1**
	comp=Z,125nm,0.8s						
RPZ	**Rata Peaks**	**32.30**	**173**	P	**P**	**12 50 59.8**	**+0.7**
	comp=Z,127nm,0.9s,baz=351,slow=1.6,SNR=29						
AS01	**Alice Springs**	**32.31**	**244**	*e*P	**P**	**12 50 57.6**	**-1.9**
KDU	**Kakadu**	**32.34**	**265**	P	**P**	**12 50 58.8**	**-0.9**
	baz=32,SNR=11						
AS31	**Alice Springs**	**32.35**	**244**	*e*P	**P**	**12 50 58.5**	**-1.4**
AS31				*e*pP	**P**	**12 50 58.9**	**-0.9**
ASAR	**Alice Springs**	**32.35**	**244**	P	**P**	**12 50 58.7**	**-1.2**
	comp=Z,27nm,0.9s,baz=75,slow=9.4,SNR=77						
ASAR				PcP	**PcP**	**12 53 46.1**	**-1.2**
	comp=Z,6.5nm,0.9s,baz=81,slow=3.5,SNR=6.7						
ASAR				LR	LR	13 02 56.3	
	comp=Z,16µm,20.2s,baz=76,slow=34						
GUMO	**Guam**	**32.39**	**320**	PFAKE		12 51 10.0	+10
GUMO				LR	LR		
	comp=Z,8µm,19.0s						
GUMO	**Guam**	**32.39**	**320**	LR	LR	13 03 21.6	
	comp=Z,7µm,21.4s,baz=144,slow=35						
CRLZ	**Canterbury Las**	**32.40**	**170**	*e*P	**P**	**12 51 01.4**	**+1.5**
	comp=Z,730nm,1.6s						
MQZ	**McQueen's Vall**	**32.53**	**170**	*e*P	**P**	**12 51 01.6**	**+0.5**
	comp=Z,387nm,1.6s						
HTT	**Hallett**	**32.61**	**224**	P	**P**	**12 51 02.4**	**+0.4**
	baz=33,SNR=14						
LBZ	**Lake Benmore**	**32.87**	**174**	*e*P	**P**	**12 51 03.3**	**-0.8**
	comp=Z,39nm,0.9s						
ARPS	**Mount Arapiles**	**32.88**	**216**	P	**P**	**12 51 05.6**	**+1.3**
	baz=33,SNR=6.2						
WKZ	**Wanaka**	**33.20**	**175**	*e*P	**P**	**12 51 07.9**	**+1.0**
	comp=Z,260nm,1.5s						
MLZ	**Mavora Lakes**	**33.67**	**177**	*e*P	**P**	**12 51 10.4**	**-0.7**
	comp=Z,94nm,1.5s						
DCZ	**Deep Cove**	**33.73**	**178**	*e*P	**P**	**12 51 11.8**	**+0.4**
	comp=Z,150nm,1.5s						
SAUI	**Saumlaki**	**33.93**	**273**	*e*P	**P**	**12 51 13.1**	**-0.6**
	comp=Z,127nm,1.0s						
WHZ	**Wether Hill Ro**	**34.19**	**177**	*e*P	**P**	**12 51 15.9**	**+0.3**
	comp=Z,82nm,1.5s						
BBOO	**Buckleboo**	**34.28**	**227**	P	**P**	**12 51 17.2**	**+0.7**
	baz=34,SNR=19						
RAR	**Rarotonga**	**34.53**	**111**	PFAKE		12 51 30.0	+11
RAR				LR	LR		
	comp=Z,4µm,19.0s						
RAR	**Rarotonga**	**34.53**	**111**	LR	LR	13 03 29.3	
	comp=Z,4µm,20.0s,baz=271,slow=33						
TAU	**Tasmania Unive**	**34.94**	**204**	*e*P	**P**	**12 51 21.5**	**-0.6**
	comp=Z,196nm,1.6s						
TAU				LR	LR		
	comp=Z,6µm,19.0s						
TAU	**Tasmania Unive**	**34.94**	**204**	*e*P	**P**	**12 51 21.5**	**-0.6**
TAU				pmax	pmax		
	comp=Z,196nm,1.6s						
TAU				MLR	MLR		
	comp=Z,6µm,19.0s						
KNRA	**Kununurra**	**35.94**	**259**	P	**P**	**12 51 31.0**	**0.0**
	baz=36,SNR=19						
BNDI	**Bandanaira**	**35.96**	**278**	P	**P**	**12 51 32.4**	**+1.2**
	comp=Z,488nm,1.6s,comp=Z,6µm						
BNDI				pP	**sP**	**12 51 42.6**	**+1.3**
	comp=Z,488nm,1.6s,comp=Z,6µm						
JOHN	**Johnston Islan**	**37.45**	**42**	PFAKE		12 51 50.0	+6.3
JOHN				LR	LR		
	comp=Z,666nm,20.0s						
WRKA	**Warakurna**	**37.65**	**244**	P	**P**	**12 51 45.0**	**-0.5**
	baz=38,SNR=22						
NLAI	**Namlea**	**38.99**	**279**	P	**P**	**12 51 58.8**	**+2.0**
	comp=Z,117nm,1.3s,comp=Z,3µm						
NLAI				pP	**sP**	**12 52 08.7**	**+1.7**
	comp=Z,117nm,1.3s,comp=Z,3µm						
FITZ	**Fitzroy Crossi**	**39.04**	**256**	P	**P**	**12 51 56.5**	**-0.8**
	baz=39,SNR=54						
FORT	**Forrest**	**39.54**	**235**	P	**P**	**12 52 01.3**	**0.0**
	baz=40,SNR=7.2						
SANI	**Sanana**	**40.37**	**281**	P	**P**	**12 52 11.0**	**+2.7**
	comp=Z,79nm,2.0s,comp=Z,3µm						
SANI				pP	**pwP**	**12 52 22.4**	**-0.3**
	comp=Z,79nm,2.0s,comp=Z,3µm						
SOEI	**Soe**	**40.58**	**269**	*e*P	**P**	**12 52 09.2**	**-1.1**
	comp=Z,196nm,1.5s						
SOEI	**Soe**	**40.58**	**269**	P	**P**	**12 52 11.0**	**+0.7**
BATI	**Baumata**	**41.12**	**268**	P	**P**	**12 52 15.1**	**+0.5**
MMRI	**Maumere**	**42.71**	**270**	*e*P	**P**	**12 52 27.1**	**-0.5**
	comp=Z,477nm,1.6s						
MMRI	**Maumere**	**42.71**	**270**	P	**P**	**12 52 27.5**	**-0.1**
	comp=Z,201nm,2.0s,comp=Z,5µm						
MIDW	**Midway**	**42.94**	**22**	PFAKE		12 52 40.0	+11
MIDW				LR	LR		
	comp=Z,7µm,19.0s						
EDFI	**Ende, Flores**	**43.23**	**270**	P	**P**	**12 52 30.6**	**-1.3**
	comp=Z,66nm,2.0s						
EDFI				pP	**pwP**	**12 52 44.6**	**-1.8**
	comp=Z,66nm,2.0s						
PPT	**Papeete**	**43.74**	**103**	LR	LR	13 08 38.6	
	comp=Z,4µm,18.1s,baz=276,slow=33						
PPT2	**Papeete2**	**43.74**	**103**	*e*S	**S**	**12 59 06.7**	**+2.0**
	comp=Z,5µm,25.2s						
PPT2				*e*LQ	LQ	13 02 52.3	
	comp=Z,15µm,27.0s						
PPT2				*e*LR	LR	13 04 41.2	
	comp=Z,25µm,31.0s,baz=279						
DAV	**Davao City (W)**	**43.89**	**293**	PFAKE		12 52 50.0	+13
DAV				LR	LR		
	comp=Z,3µm,20.0s						
TBI	**Tubuai**	**44.29**	**111**	*e*S	**S**	**12 59 15.9**	**+3.5**
	comp=Z,4µm,25.8s						
TBI				*e*LQ	LQ	13 03 05.6	
	comp=Z,12µm,30.0s						
TBI				*e*LR	LR	13 04 56.8	
	comp=Z,16µm,30.8s,baz=283						
MBWA	**Marble Bar**	**44.82**	**252**	*e*P	**P**	**12 52 44.5**	**0.0**
	comp=Z,180nm,1.3s						
MBWA				LR	LR		
	comp=Z,9µm,19.0s						
MBWA	**Marble Bar**	**44.82**	**252**	P	**P**	**12 52 45.0**	**+0.5**
	SNR=20						
BKSI	**Bulukumba**	**45.32**	**274**	P	**P**	**12 52 50.1**	**+1.6**
	comp=Z,35nm,2.1s,comp=Z,1µm						
BKSI				pP	**pwP**	**12 53 01.7**	**-1.3**
	comp=Z,35nm,2.1s,comp=Z,1µm						
BNSI	**Bone**	**45.52**	**275**	P	**P**	**12 52 50.9**	**+0.8**
	comp=Z,138nm,1.5s,comp=Z,3µm						
BNSI				pP	**pwP**	**12 53 02.8**	**-1.8**
	comp=Z,138nm,1.5s,comp=Z,3µm						
KAPI	**Kappang**	**45.74**	**274**	PFAKE		12 53 00.0	+8.1
KAPI				LR	LR		
	comp=Z,2µm,20.0s						
SPSI	**Sidrap Palu**	**45.94**	**276**	P	**P**	**12 52 52.7**	**-0.7**
	comp=Z,38nm,1.8s,comp=Z,2µm						
TTSI	**Tana Toraja**	**46.09**	**277**	P	**P**	**12 52 55.8**	**+1.2**
	comp=Z,39nm,1.8s						
TTSI				pP	**pwP**	**12 53 08.0**	**-1.1**
	comp=Z,39nm,1.8s						
MEEK	**Meekatharra**	**46.51**	**244**	P	**P**	**12 52 58.0**	**+0.2**
	baz=47,SNR=24						
PCI	**Palu**	**46.60**	**280**	P	**P**	**12 52 58.2**	**-0.4**
	comp=Z,113nm,1.1s,comp=Z,5µm						
PCI				pP	**pwP**	**12 53 12.4**	**-1.9**
	comp=Z,113nm,1.1s,comp=Z,5µm						
PLAI	**Plampang**	**47.05**	**269**	P	**P**	**12 53 01.1**	**-1.1**
	comp=Z,223nm,2.0s,comp=Z,5µm						
PLAI				pP	**sP**	**12 53 14.2**	**+1.7**
	comp=Z,223nm,2.0s,comp=Z,5µm						
KLBR	**Kellerberrin**	**48.23**	**238**	P	**P**	**12 53 11.1**	**+0.1**
	baz=48,SNR=8.1						
RCP	**Roxas**	**48.36**	**297**⇑	*e*P	**P**	**12 53 12.6**	**+0.3**
KIP	**Kipapa**	**48.58**	**48**	*e*P	P	12 53 19.5	+5.7
KIP				LR	LR		
	comp=Z,4µm,20.0s						
BLDU	**Ballidu**	**48.89**	**239**	P	**P**	**12 53 16.1**	**-0.1**
	baz=49,SNR=5.3						
NWAO	**Narrogin (SRO)**	**48.97**	**236**	P	**P**	**12 53 16.8**	**0.0**
	baz=49,SNR=12						
NWAO	**Narrogin (SRO)**	**48.97**	**236**	*e*P	**P**	**12 53 15.3**	**-1.5**
	comp=Z,118nm,1.3s						
NWAO				LR	LR		
	comp=Z,19µm,20.0s						
NWAO	**Narrogin (SRO)**	**48.97**	**236**	*e*P	**P**	**12 53 15.3**	**-1.5**
NWAO				pmax	pmax		
	comp=Z,118nm,1.3s						
NWAO				MLR	MLR		
	comp=Z,19µm,20.0s						
MORW	**Morawa**	**49.17**	**242**	P	**P**	**12 53 18.5**	**+0.2**
	baz=49,SNR=17						
POHA	**Pohakuloa**	**49.42**	**51**	PFAKE		12 53 30.0	+9.4
POHA				LR	LR		
	comp=Z,5µm,20.0s						
KBKI	**Kotabaru**	**49.59**	**276**	P	**P**	**12 53 21.8**	**0.0**
	comp=Z,9.9nm,1.6s,comp=Z,831nm						
KBKI				pP	**sP**	**12 53 33.7**	**+1.6**
	comp=Z,9.9nm,1.6s,comp=Z,831nm						
MUN	**Mundaring**	**49.59**	**238**	P	**P**	**12 53 22.9**	**+1.3**
	baz=50,SNR=5.8						
RKGY	**Rocky Gully**	**49.60**	**234**	P	**P**	**12 53 23.6**	**+2.1**
	baz=50,SNR=6.2						
SRBI	**Singaraja**	**49.67**	**269**	P	**P**	**12 53 22.8**	**+0.5**
	comp=Z,68nm,1.7s,comp=Z,2µm						
SRBI				pP	**sP**	**12 53 32.0**	**-0.7**
	comp=Z,68nm,1.7s,comp=Z,2µm						
JAGI	**Jajag, Banyuwa**	**50.65**	**269**	*e*P	**P**	**12 53 28.4**	**-1.5**
	comp=Z,351nm,1.4s						
JAGI	**Jajag, Banyuwa**	**50.65**	**269**	P	**P**	**12 53 30.8**	**+1.0**
	comp=Z,182nm,1.9s,comp=Z,4µm						
JAGI				pP	**sP**	**12 53 39.0**	**-1.2**
	comp=Z,182nm,1.9s,comp=Z,4µm						
KMMI	**Kalianget**	**51.05**	**270**	P	**P**	**12 53 35.1**	**+2.3**
	comp=Z,28nm,1.4s						
KMMI				pP	**sP**	**12 53 45.7**	**+2.6**
	comp=Z,28nm,1.4s						
GMJI	**Gumukmas**	**51.37**	**269**	P	**P**	**12 53 33.5**	**-1.7**
	comp=Z,92nm,2.1s,comp=Z,2µm						
GMJI				pP	**sP**	**12 53 46.4**	**+0.8**
	comp=Z,92nm,2.1s,comp=Z,2µm						
JOW	**Kunigami**	**52.66**	**317**	P	**P**	**12 53 44.0**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=93,slow=18,SNR=3.6						
TAOE	**Nuku Hiva Isla**	**53.45**	**92**	*e*S	**S**	**13 01 23.7**	**+2.0**
	comp=Z,4µm,26.0s						
TAOE				*e*LR	LR	13 08 56.9	
	comp=Z,10µm,30.2s						
NGJI	**Ngawi**	**53.45**	**269**	P	**P**	**12 53 53.7**	**+3.1**
	comp=Z,148nm,1.5s						

PCJI	**Pacitan**	**53.61 268**	P	**P**	**12 53 54.6 +2.8**
	comp=Z,573nm,1.5s,comp=Z,6µm				
PCJI			pP	**sP**	**12 54 05.1 +2.9**
	comp=Z,573nm,1.5s,comp=Z,6µm				
WOJI	**Wonogiri, Jawa**	**53.91 269**	P	**P**	**12 53 54.8 +0.8**
	comp=Z,183nm,1.8s,comp=Z,5µm				
WOJI			pP	**sP**	**12 54 07.0 +2.6**
	comp=Z,183nm,1.8s,comp=Z,5µm				
INU	**Inuyama**	**53.98 331**	*e*P	**P**	**12 53 53.4 -0.7**
	comp=Z,93nm,1.1s				
UGM	**Wanagama**	**54.29 269**	*e*P	**P**	**12 53 56.3 -0.5**
	comp=Z,209nm,1.0s				
UGM	**Wanagama**	**54.29 269**	P	**P**	**12 53 58.4 +1.6**
	comp=Z,217nm,0.9s,comp=Z,5µm				
MJAR	**Matsushiro Arr**	**54.41 333**	P	**P**	**12 53 56.1 -1.2**
	comp=Z,29nm,0.8s,baz=172,slow=8.6,SNR=61				
MJAR			PcP	**PcP**	**12 55 01.1 +0.3**
	comp=Z,6.9nm,0.9s,baz=163,slow=3.8,SNR=2.7				
MAJO	**Matsushiro**	**54.41 333**	*e*P	**P**	**12 53 55.3 -2.0**
	comp=Z,47nm,1.0s				
MAJO			LR	LR	
	comp=Z,3µm,19.0s				
MAJO	**Matsushiro**	**54.41 333**	*d i*P	**P**	**12 53 56.2 -1.1**
MAJO			pmax	pmax	
	comp=Z,37nm,0.8s				
MAT	**Matsushiro**	**54.41 333**	P	**P**	**12 53 56.2 -1.1**
MJB9	**Matsu-Tunnel**	**54.42 333**	*e*P	**P**	**12 53 56.0 -1.4**
	comp=Z,45nm,1.0s				
JNU	**Nakatsue**	**55.45 325**	*e*P	**P**	**12 54 03.9 -1.0**
	comp=Z,135nm,1.0s				
JNU	**Nakatsue**	**55.45 325**	P	**P**	**12 54 04.7 -0.2**
	comp=Z,52nm,0.8s,baz=79,slow=2.1,SNR=31				
YULB	**Yu-li**	**55.56 309**	*e*P	**P**	**12 54 05.1 -0.7**
	comp=Z,66nm,1.0s				
TPUB	**Ta-pu**	**56.02 308**	*e*P	**P**	**12 54 07.6 -1.5**
	comp=Z,158nm,1.0s				
SSLB	**Suanglung**	**56.04 309**	*e*P	**P**	**12 54 08.0 -1.2**
	comp=Z,93nm,1.4s				
YHNB	**Yeheng**	**56.22 310**	*e*P	**P**	**12 54 10.4 -0.2**
	comp=Z,196nm,1.3s				
TATO	**Taipei**	**56.31 311**	PFAKE		12 54 20.0 +8.9
TATO			LR	LR	
	comp=Z,6µm,21.0s				
CMJI	**Cimerak**	**56.34 268**	P	**P**	**12 54 10.6 -1.0**
	comp=Z,155nm,1.0s,comp=Z,6µmcomp=Z,383µm				
CMJI			pP	**pwP**	**12 54 25.9 -1.4**
	comp=Z,155nm,1.0s,comp=Z,6µmcomp=Z,383µm				
CISI	**Cisompet, Garu**	**56.99 269**	*e*P	**P**	**12 54 15.4 -0.9**
	comp=Z,196nm,0.9s				
CISI	**Cisompet, Garu**	**56.99 269**	P	**P**	**12 54 17.8 +1.5**
	comp=Z,284nm,1.9s,comp=Z,5µm				
CISI			pP	**sP**	**12 54 29.2 +2.5**
	comp=Z,284nm,1.9s,comp=Z,5µm				
ERM	**Erimo**	**57.23 340**	*e*P	**P**	**12 54 16.6 -0.6**
	comp=Z,23nm,0.6s				
ERM			LR	LR	
	comp=Z,2µm,19.0s				
ERM	**Erimo**	**57.23 340**	⇑*e*P	**P**	**12 54 18.1 +0.8**
ERM			pmax	pmax	
	comp=Z,23nm,0.7s				
RKT	**Rikitea**	**57.56 110**	*e*S	**S**	**13 02 18.5 +2.2**
	comp=Z,3µm,36.8s				
RKT			*e*LQ	LQ	13 08 40.5
	comp=Z,3µm,32.8s				
RKT			*e*LR	LR	13 11 06.4
	comp=Z,12µm,30.2s,baz=278				
SHO	**Shikotan**	**57.82 344**	P	**P**	**12 54 23.1 +1.7**
TPI	**Tanjungpandan**	**58.02 274**	P	**P**	**12 54 22.4 -1.0**
	comp=Z,115nm,1.9s				
TPI			pP	**pwP**	**12 54 37.1 -2.1**
	comp=Z,115nm,1.9s				
CBJI	**Citeko**	**58.12 270**	P	**P**	**12 54 25.2 +1.0**
	comp=Z,260nm,2.1s,comp=Z,6µm				
CBJI			pP	**sP**	**12 54 36.3 +1.7**
	comp=Z,260nm,2.1s,comp=Z,6µm				
DBJI	**Dramaga**	**58.20 269**	P	**P**	**12 54 24.7 0.0**
	comp=Z,152nm,1.8s,comp=Z,5µm				
DBJI			pP	**sP**	**12 54 37.8 +2.6**
	comp=Z,152nm,1.8s,comp=Z,5µm				
SKJI	**Sukabumi**	**58.31 269**	P	**P**	**12 54 27.7 +2.2**
	comp=Z,211nm,0.7s,comp=Z,5µm				
SKJI			pP	**sP**	**12 54 37.8 +1.8**
	comp=Z,211nm,0.7s,comp=Z,5µm				
TNG	**Tangerang**	**58.36 270**	P	**P**	**12 54 24.4 -1.5**
	comp=Z,2µm,0.5s				
ASAJ	**Asahikawa**	**59.30 341**	P	**P**	**12 54 32.2 +0.5**
	comp=Z,65nm,0.8s,baz=215,slow=8.8,SNR=81				
ASAJ			LR	LR	13 17 50.3
	comp=Z,2µm,19.9s,baz=174,slow=34				
PPBI	**Pangkal Pinang**	**59.62 274**	P	**P**	**12 54 34.7 +0.1**
	comp=Z,40nm,1.8s,comp=Z,11µm				
PPBI			pP	**sP**	**12 54 47.4 +2.3**
	comp=Z,40nm,1.8s,comp=Z,11µm				
SSE	**Sheshan**	**60.15 316**	P	**P**	**12 54 37.8 -0.1**
SSE			S	**S**	**13 02 52.2 +2.8**
SSE			pmax	pmax	
	comp=Z,18nm,0.6s				
SSE			pmax	pmax	
	comp=Z,540nm,7.7s				
SSE			LR	LR	
	comp=Z,1µm,16.6s				
SSE			LR	LR	
	comp=Z,940nm,19.8s				
SSE	**Sheshan**	**60.15 316**	*e*P	**P**	**12 54 37.7 -0.1**
	comp=Z,35nm,0.7s				
SSE			LR	LR	
	comp=Z,2µm,20.0s				
KSRS	**Korea Array**	**60.26 326**	P	**P**	**12 54 38.6 +0.2**
	comp=Z,14nm,0.9s,baz=139,slow=7.2,SNR=28				
KSRS			PcP	**PcP**	**12 55 25.0 +1.3**
	comp=Z,5.9nm,1.0s,baz=147,slow=4.7,SNR=2.8				
KSRS			LR	LR	13 21 10.9
	comp=Z,2µm,18.1s,baz=138,slow=36				
KS15	**Wonju Array Si**	**60.27 326**	*e*P	**P**	**12 54 38.0 -0.6**
KSAR	**Wonju Array Be**	**60.27 326**	P	**P**	**12 54 38.6 +0.1**
KSAR			PcP	**PcP**	**12 55 25.0 +1.3**
KSAR	**Wonju Array Be**	**60.27 326**	P	**P**	**12 54 38.7 +0.1**
KSAR					12 55 25.0
KS01	**Wonju Array Si**	**60.30 326**	*e*P	**P**	**12 54 38.2 -0.6**
KASI	**Kota Agung**	**60.58 270**	P	**P**	**12 54 40.8 -0.4**
	comp=Z,61nm,1.6s,comp=Z,1µm				
KASI			pP	**sP**	**12 54 51.9 +0.2**
	comp=Z,61nm,1.6s,comp=Z,1µm				
MDSI	**Maura Dua**	**61.08 271**	P	**P**	**12 54 43.6 -1.0**
	comp=Z,63nm,2.0s,comp=Z,2µm				
MDSI			pP	**sP**	**12 54 56.3 +1.2**
	comp=Z,63nm,2.0s,comp=Z,2µm				
GZH	**Guangzhou**	**61.66 304**	P	**P**	**12 54 47.8 -0.5**
GZH			PcP	**PcP**	**12 55 28.5 -1.1**
GZH			PP	**PP**	**12 56 59.7 -4.7**
GZH			S	**S**	**13 03 11.0 +2.0**
GZH			SS	**SS**	**13 07 06.9 -4.3**
GZH			LR	LR	
	comp=Z,2µm,22.6s				
GZH			LR	LR	
	comp=Z,2µm,19.0s				
YSS	**Yuzh-Sakhalins**	**61.80 342**	*e*P	**P**	**12 54 47.6 -1.1**
	comp=Z,143nm,1.2s				
YSS			LR	LR	
	comp=Z,2µm,19.0s				
YSS	**Yuzh-Sakhalins**	**61.80 342**	⇓*e*P	**P**	**12 54 49.0 +0.3**
YSS			*e*		12 55 01.8
YSS			pmax	pmax	
	comp=Z,60nm,1.0s				
TEY	**Ternei**	**62.20 337**	⇓*e*P	**P**	**12 54 50.1 -1.3**
TEY			*e*		12 54 59.2
TEY			pmax	pmax	
	comp=Z,40nm,1.2s				
TEY			MLR	MLR	
	comp=Z,200nm,18.0s				
NJ2	**Nanjing**	**62.31 316**	*e*P	**P**	**12 54 52.7 +0.2**
NJ2			S	**S**	**13 03 22.1 +5.2**
NJ2			pmax	pmax	
	comp=Z,46nm,1.1s				
NJ2			pmax	pmax	
	comp=Z,2µm,8.3s				
NJ2			LR	LR	
	comp=Z,4µm,17.7s				
NJ2			LR	LR	
	comp=Z,3µm,15.7s				
NJ2			LR	LR	
	comp=Z,3µm,17.6s				
MSHR	**Mys Shultsa**	**62.49 332**	⇓*i*P	**P**	**12 54 53.3 -0.2**
VLA	**Vladivostok**	**62.59 333**	*d i*P	**P**	**12 54 54.4 +0.3**
VLA			pmax	pmax	
	comp=Z,82nm,1.5s				
QIZ	**Qiongzhong**	**62.79 299**	P	**P**	**12 54 56.0 0.0**
QIZ			S	**S**	**13 03 26.0 +2.5**
QIZ			pmax	pmax	
	comp=Z,28nm,1.9s				
QIZ			LR	LR	
	comp=Z,2µm,19.6s				
QIZ			LR	LR	
	comp=Z,2µm,22.6s				
QIZ			LR	LR	
	comp=Z,4µm,22.1s				
QIZ	**Qiongzhong**	**62.79 299**	*e*P	**P**	**12 54 56.6 +0.6**
	comp=Z,36nm,1.4s				
QIZ			*e*PP	**PP**	**12 57 14.1 -0.4**
QIZ			LR	LR	
	comp=Z,529nm,21.0s				
USA0B	**Ussuriysk Arra**	**63.40 334**	*e*P	**P**	**12 54 59.6 +0.1**
	comp=Z,252nm,1.4s				
USRK	**Ussuriysk Ar.**	**63.40 334**	P	**P**	**12 55 00.1 +0.7**
	comp=Z,32nm,0.9s,baz=140,slow=6.3,SNR=52				
USRK			LR	LR	13 21 13.3
	comp=Z,1µm,20.4s,baz=141,slow=35				
RGRI	**Rengat**	**63.72 275**	P	**P**	**12 55 01.6 -0.7**
WHN	**Wuhan**	**64.65 312**	P	**P**	**12 55 07.4 -0.6**
WHN			LR	LR	
	comp=Z,5µm,15.9s				
WHN			LR	LR	
	comp=Z,5µm,14.8s				
WHN			LR	LR	
	comp=Z,10µm,20.1s				
PET	**Petropavlovsk**	**64.68 355**	PFAKE		12 55 20.0 +12
PET			LR	LR	
	comp=Z,3µm,19.0s				
MDJ	**Mudanjiang**	**64.79 332**	P	**P**	**12 55 09.6 +1.0**
MDJ			pP	pP	12 55 12.8 -3.5
MDJ			sP	sP	12 55 14.1 -4.8
MDJ			PP	**PP**	**12 57 32.7 +1.1**
MDJ			S	**S**	**13 03 53.2 +5.8**
MDJ			pmax	pmax	
	comp=Z,45nm,0.8s				
MDJ			pmax	pmax	
	comp=Z,2µm,10.5s				
MDJ			LR	LR	
	comp=Z,3µm,14.2s				
MDJ			LR	LR	
	comp=Z,3µm,15.6s				
MDJ			LR	LR	
	comp=Z,4µm,16.1s				
MDJ	**Mudanjiang**	**64.79 332**	*e*P	**P**	**12 55 09.0 +0.4**
	comp=Z,58nm,1.0s				
MDJ			LR	LR	
	comp=Z,3µm,21.0s				
DL2	**Dalian**	**64.84 323**	P	**P**	**12 55 06.4 -2.6**
DL2			*e*S	**S**	**13 03 46.6 -1.6**
DL2			pmax	pmax	
	comp=Z,120nm,1.2s				
DL2			LR	LR	
	comp=Z,2µm,17.9s				
DL2			LR	LR	
	comp=Z,2µm,18.8s				
DL2			LR	LR	
	comp=Z,3µm,14.9s				
PETK	**Petropavlovsk-**	**64.84 355**	*e*P	**P**	**12 55 08.5 -0.3**
PETK	**Petropavlovsk-**	**64.84 355**	*e*P	**P**	**12 55 08.5 -0.3**
PETK	**Petropavlovsk-**	**64.84 355**	P	**P**	**12 55 08.9 +0.1**
	comp=Z,15nm,0.9s,baz=135,slow=5.0,SNR=9.8				
PETK			LR	LR	13 18 09.3
	comp=Z,1µm,22.0s,baz=164,slow=31				
ADK	**Adak**	**65.11 12**	PFAKE		12 55 20.0 +9.5
ADK			LR	LR	
	comp=Z,5µm,21.0s				
BKNI	**Bangkinang**	**65.14 276**	P	**P**	**12 55 11.6 +0.1**
	comp=Z,312nm,1.8s,comp=Z,7µm				
BKNI			pP	**pwP**	**12 55 26.3 -1.0**
	comp=Z,312nm,1.8s,comp=Z,7µm				
TYV	**Tymovskoe**	**65.37 344**	*e*P	**P**	**12 55 12.5 +0.3**
TYV			pmax	pmax	
	comp=Z,16nm,1.8s				
TYV			pmax	pmax	
	comp=Z,2µm,5.9s				
PDSI	**Padang**	**65.43 274**	P	**P**	**12 55 13.3 -0.2**
	comp=Z,14nm,1.7s				
PDSI			pP	**sP**	**12 55 26.0 +2.0**
	comp=Z,14nm,1.7s				
CASY	**Casey**	**65.75 201**	*e*P	**P**	**12 55 14.5 0.0**
	comp=Z,78nm,1.5s				
CASY			LR	LR	
	comp=Z,1µm,19.0s				
VNDA	**Vanda**	**65.89 181**	P	**P**	**12 55 15.6 +0.3**
	comp=Z,7.8nm,0.9s,baz=351,slow=7.4,SNR=7.1				
VNDA			LR	LR	13 21 31.5
	comp=Z,5µm,18.8s,baz=6.5,slow=34				
TIA	**Tai'an**	**65.93 319**	P	**P**	**12 55 15.2 -1.0**
TIA			S	**S**	**13 03 59.1 -2.7**
TIA			pmax	pmax	
	comp=Z,780nm,12.3s				
TIA			LR	LR	
	comp=Z,1µm,18.9s				
TIA			LR	LR	
	comp=Z,2µm,20.8s				
TIA			LR	LR	
	comp=Z,3µm,17.7s				
CN2	**Changchun**	**66.16 329**	⇓*i*P	**P**	**12 55 17.4 -0.1**
CN2			*e*pP	pP	12 55 21.9 -3.3
CN2			*e*S	**S**	**13 03 59.1 -5.0**
CN2			pmax	pmax	
	comp=Z,30nm,0.9s				
CN2			pmax	pmax	
	comp=Z,400nm,6.0s				
CN2			LR	LR	
	comp=Z,2µm,16.0s				
CN2			LR	LR	
	comp=Z,2µm,16.0s				
CN2			LR	LR	
	comp=Z,3µm,16.0s				
SBA	**Scott Base**	**66.20 180**	PFAKE		12 55 30.0 +13
SBA			LR	LR	
	comp=Z,3µm,19.0s				
MNSI	**Mandailing Nat**	**66.66 276**	P	**P**	**12 55 21.8 +0.5**
	comp=Z,75nm,0.8s,comp=Z,2µm				
MNSI			pP	**sP**	**12 55 34.1 +2.2**
	comp=Z,75nm,0.8s,comp=Z,2µm				
COCO	**West Island**	**67.06 262**	PFAKE		12 55 40.0 +16
COCO			LR	LR	
	comp=Z,4µm,20.0s				
GRNR	**Gornyy**	**67.14 340**	*e*P	**P**	**12 55 25.2 +1.6**
GRNR			pmax	pmax	
	comp=Z,52nm,1.0s				
SKNT	**Sakolnakorn**	**67.16 294**	P	**P**	**12 55 24.9 +0.5**
	comp=Z,65nm,1.9s,comp=Z,1µm				
SKLT	**Songkhla**	**67.23 283**	P	P	12 55 30.2 +5.3
	comp=Z,72nm,2.0s,comp=Z,2µm				
KLR	**Kul'dur**	**67.53 337**	P	**P**	**12 55 26.4 +0.3**
	comp=Z,19nm,0.7s,baz=129,slow=3.9,SNR=46				
SRAK	**Srakaew**	**67.92 290**	P	**P**	**12 55 28.3 -0.9**
	comp=Z,54nm,0.9s,comp=Z,841nm				
NKL	**Nikolayevsk**	**67.96 344**	*e*P	**P**	**12 55 28.0 -0.7**
NKL			pmax	pmax	
	comp=Z,30nm,1.0s				
ENH	**Enshi**	**68.13 309**	*e*P	**P**	**12 55 29.9 -0.4**
	comp=Z,240nm,1.4s				
ENH			LR	LR	
	comp=Z,2µm,19.0s				
NONG	**Nongkai**	**68.29 295**	P	**P**	**12 55 32.0 +0.5**
	comp=Z,2.0nm,1.4s,comp=Z,62nm				
CHAI	**Chaiyaphum**	**68.59 292**	P	**P**	**12 55 33.8 +0.4**
	comp=Z,12nm,0.7s,comp=Z,208nm				
GYA	**Guiyang**	**68.60 304**	⇓*i*P	**P**	**12 55 33.6 +0.1**
GYA			SKS	**SKiKP**	**13 05 29.2 +4.5**
GYA			SS	**SS**	**13 09 01.0 +1.6**
GYA			pmax	pmax	
	comp=Z,40nm,1.0s				
GYA			pmax	pmax	
	comp=Z,160nm,6.9s				
GYA			LR	LR	
	comp=Z,890nm,18.2s				
GYA			LR	LR	
	comp=Z,720nm,18.6s				
GYA			LR	LR	
	comp=Z,870nm,18.4s				
PATY	**Pattaya**	**68.66 289**	P	**P**	**12 55 36.2 +2.3**
	comp=Z,30nm,1.2s,comp=Z,2µm				
GSI	**Gunungsitoli**	**68.73 276**	*e*P	**P**	**12 55 33.8 -0.6**
	comp=Z,95nm,1.0s				
GSI	**Gunungsitoli**	**68.73 276**	P	**P**	**12 55 37.7 +3.3**
	comp=Z,96nm,1.0s,comp=Z,3µm				
GSI			pP	**sP**	**12 55 47.3 +2.3**
	comp=Z,96nm,1.0s,comp=Z,3µm				
BJT	**Baijiatuau**	**68.82 321**	*e*P	**P**	**12 55 34.6 +0.2**
	comp=Z,96nm,1.3s				
BJT			LR	LR	
	comp=Z,2µm,20.0s				
BJT	**Baijiatuau**	**68.82 321**	*e*P	**P**	**12 55 34.6 +0.2**
BJT			pmax	pmax	
	comp=Z,96nm,1.3s				
BJT			MLR	MLR	
	comp=Z,2µm,20.0s				
BJI	**Beijing**	**68.83 321**	P	**P**	**12 55 34.5 +0.1**
BJI			pmax	pmax	
	comp=Z,20nm,1.4s				
PKDT	**Phuket**	**69.60 283**	P	**P**	**12 55 44.2 +4.4**
	comp=Z,28nm,2.0s,comp=Z,795nm				
PBKT	**Sadao Pong**	**69.73 293**	P	**P**	**12 55 41.5 +1.0**
	comp=Z,58nm,2.2s,comp=Z,2µm				
PHET	**Kaeng Krachan**	**69.80 288**	P	**P**	**12 55 42.9 +1.9**
	comp=Z,16nm,1.2s,comp=Z,246nm				
TIY	**Taiyuan**	**69.87 318**	*e*P	**P**	**12 55 42.1 +1.0**
XAN	**Xi'an**	**70.38 313**	P	**P**	**12 55 44.3 +0.1**
XAN			S	**S**	**13 04 51.6 -3.4**
XAN			pmax	pmax	
	comp=Z,28nm,1.6s				
XAN			pmax	pmax	
	comp=Z,750nm,3.6s				
XAN			LR	LR	
	comp=Z,3µm,20.6s				
XAN			LR	LR	
	comp=Z,2µm,20.6s				
XAN			LR	LR	
	comp=Z,4µm,20.6s				
XAN	**Xi'an**	**70.38 313**	*e*P	**P**	**12 55 44.1 -0.2**
	comp=Z,792nm,1.5s				
XAN	**Xi'an**	**70.38 313**	*e*P	**P**	**12 55 44.1 -0.2**
XAN			pmax	pmax	
	comp=Z,793nm,1.5s				
UTTA	**Uttaradit**	**70.49 294**	P	**P**	**12 55 46.4 +1.2**
	comp=Z,9.4nm,1.2s,comp=Z,137nm				
SRDT	**SRDT**	**70.71 290**	P	**P**	**12 55 48.9 +2.4**
	comp=Z,91nm,2.0s,comp=Z,4µm				
UTHA	**Uthaitani**	**70.79 291**	P	**P**	**12 55 48.3 +1.3**
	comp=Z,16nm,1.2s,comp=Z,217nm				
SUKH	**Sukhothai**	**71.24 293**	P	**P**	**12 55 51.0 +1.3**
	comp=Z,7.8nm,0.9s				
KMI	**Kunming**	**71.27 302**	P	**P**	**12 55 51.3 +1.3**
KMI			pP	sP	12 55 59.8 -0.9
KMI			S	**S**	**13 05 10.2 +4.2**
KMI			pmax	pmax	
	comp=Z,43nm,1.3s				
KMI			pmax	pmax	
	comp=Z,1µm,11.7s				
KMI			LR	LR	
	comp=Z,2µm,21.1s				
KMI			LR	LR	
	comp=Z,2µm,23.7s				
KMI			LR	LR	
	comp=Z,3µm,25.6s				
UMPA	**Umpang Tak**	**71.53 292**	P	**P**	**12 55 55.2 +3.7**
	comp=Z,11nm,1.8s,comp=Z,692nm				
MA2	**Magadan**	**71.97 352**	*e*P	**P**	**12 55 52.2 -1.0**
	comp=Z,132nm,1.3s				
MA2			LR	LR	
	comp=Z,4µm,19.0s				
MA2	**Magadan**	**71.97 352**	⇓*i*P	**P**	**12 55 51.6 -1.6**
MA2			pmax	pmax	
	comp=Z,34nm,1.7s				
MA2	**Magadan**	**71.97 352**	P	**P**	**12 55 52.1 -1.1**
	comp=Z,6.4nm,0.6s,baz=147,slow=6.5,SNR=6.0				
CM01	**Chiang Mai Arr**	**72.15 294**	*e*P	**P**	**12 55 54.4 -0.7**
HHC	**Hu-ho-hao-te**	**72.16 320**	*e*P	**P**	**12 55 55.8 +0.8**
HHC			S	**S**	**13 05 16.7 +1.2**
HHC			pmax	pmax	
	comp=Z,31nm,1.1s				
HHC			pmax	pmax	
	comp=Z,1µm,5.6s				
HHC			LR	LR	
	comp=Z,5µm,16.8s				
HHC			LR	LR	
	comp=Z,2µm,17.6s				
HHC			LR	LR	
	comp=Z,6µm,17.9s				
CM31	**Chiang Mai Arr**	**72.17 294**	*e*P	**P**	**12 55 56.9 +1.5**
CM31	**Chiang Mai Arr**	**72.17 294**	P	**P**	**12 55 57.2 +1.9**
	SNR=28				
CMAR	**Chiang Mai Arr**	**72.17 294**	P	**P**	**12 55 56.5 +1.1**
	comp=Z,20nm,0.8s,baz=119,slow=4.5,SNR=63				
CMAR			PKP2ab		13 23 35.2
	comp=Z,0.6nm,0.4s,baz=293,slow=2.0,SNR=4.8				
CMMT	**Chiang Mai**	**72.29 294**	P	**P**	**12 55 56.7 +0.7**
	comp=Z,62nm,1.9s,comp=Z,1µm				
CHTO	**Chiang Mai**	**72.29 294**	*e*P	**P**	**12 55 56.2 +0.1**
	comp=Z,193nm,1.6s				
CHTO			LR	LR	
	comp=Z,2µm,20.0s				
CHTO	**Chiang Mai**	**72.29 294**	*e*P	**P**	**12 55 56.2 +0.1**
CHTO			pmax	pmax	
	comp=Z,193nm,1.6s				
CHTO			MLR	MLR	
	comp=Z,2µm,20.0s				
CHTO	**Chiang Mai**	**72.29 294**	P	**P**	**12 55 57.2 +1.1**
	SNR=34				
CHTO	**Chiang Mai**	**72.29 294**	P	**P**	**12 55 56.8 +0.8**
	comp=Z,277nm,1.9s,comp=Z,6µm				
HIA	**Hailar**	**72.80 331**	*e*P	**P**	**12 55 58.5 +0.2**
	comp=Z,66nm,1.1s				
HIA			LR	LR	
	comp=Z,2µm,22.0s				
HIA	**Hailar**	**72.80 331**	*d i*P	**P**	**12 55 58.6 +0.2**
HIA			pmax	pmax	
	comp=Z,73nm,1.2s				
CD2	**Chengdu**	**72.81 308**	⇓*i*P	**P**	**12 55 59.4 +0.4**
CD2			pP	pP	12 56 02.7 -4.1
CD2			PP	**PP**	**12 58 41.3 -0.1**
CD2			S	**S**	**13 05 26.4 +3.2**
CD2			pmax	pmax	
	comp=Z,80nm,0.8s				
CD2			pmax	pmax	
	comp=Z,3µm,9.9s				
CD2			LR	LR	
	comp=Z,3µm,15.7s				
CD2			LR	LR	
	comp=Z,3µm,17.7s				
CD2			LR	LR	
	comp=Z,5µm,18.1s				
ZEA	**Zeya**	**72.82 337**	*e*P	**P**	**12 55 58.8 +0.4**
ZEA			pmax	pmax	
	comp=N,190nm,1.8s				
ZEA			pmax	pmax	
	comp=E,130nm,1.8s				
ZEA			pmax	pmax	
	comp=Z,420nm,1.8s				
BTO	**Baotou**	**73.01 319**	*e*P	**P**	**12 56 01.0 +1.0**
LZH	**Lanzhou**	**75.02 312**	⇓P	**P**	**12 56 13.0 +1.1**
LZH			pP	pP	12 56 17.0 -2.7
LZH			sP	sP	12 56 19.8 -2.9
LZH			pmax	pmax	
	comp=Z,59nm,1.4s				
LZH			pmax	pmax	
	comp=Z,300nm,5.4s				
LZH			LR	LR	
	comp=Z,2µm,16.8s				
LZH			LR	LR	
	comp=Z,2µm,16.8s				
LZH			LR	LR	
	comp=Z,3µm,19.0s				
SEY	**Seymchan**	**75.05 354**	P	**P**	**12 56 10.7 -0.5**
	comp=Z,13nm,1.0s,baz=163,slow=6.8,SNR=24				
OHAK	**Old Harbor**	**76.53 22**	*e*P	**P**	**12 56 19.3 -0.6**
	comp=Z,56nm,1.0s				
GAMB	**Gambell**	**77.19 10**	*e*P	**P**	**12 56 22.8 -0.6**
	comp=Z,47nm,0.8s				
KDAK	**Kodiak Island**	**77.21 22**	P	**P**	**12 56 22.1 -1.5**
KDAK			LR	LR	
	comp=Z,1µm,20.0s				
KDAK	**Kodiak Island**	**77.21 22**	*i* P	**P**	**12 56 23.1 -0.5**
KDAK	**Kodiak Island**	**77.21 22**	P	**P**	**12 56 22.1 -1.5**
	comp=Z,25nm,0.9s,baz=139,slow=1.0,SNR=6.9				
CIT	**Chita**	**77.58 330**	*e*P	**P**	**12 56 26.7 +0.7**
CIT			*e*		12 56 33.0
CIT			*e*		12 56 38.9
CIT			pmax	pmax	
	comp=Z,183nm,1.5s				
QSPA	**South Pole Qui**	**78.36 180**	*e*P	**P**	**12 56 30.1 -0.2**
	comp=Z,72nm,1.0s				
QSPA			LR	LR	
	comp=Z,4µm,19.0s				
QSPA	**South Pole Qui**	**78.36 180**	LR	LR	13 28 00.5
	comp=Z,1µm,18.2s,baz=28,slow=33				

YAK	**Yakutsk**	**78.61**	**344**	eP	**P**	**12 56 30.2**	**-1.2**
YAK				pmax	pmax		
	comp=Z,57nm,1.1s						
YAK				pmax	pmax		
	comp=N,20nm,1.4s						
YAK				pmax	pmax		
	comp=E,13nm,1.8s						
ULN	**Ulaanbaatar**	**78.67**	**324**	eP	**P**	**12 56 32.8**	**+0.5**
	comp=E,130nm,1.3s						
ULN				LR	LR		
	comp=Z,2µm,19.0s						
ULN	**Ulaanbaatar**	**78.67**	**324**	d iP	**P**	**12 56 32.7**	**+0.5**
ULN				pmax	pmax		
	comp=Z,76nm,1.7s						
ULN	**Ulaanbaatar**	**78.67**	**324**	P	**P**	**12 56 33.2**	**+1.0**
	SNR=35						
SVW2	**Sparrevohn**	**78.74**	**18**	eP	**P**	**12 56 31.5**	**-0.6**
	comp=Z,105nm,1.4s						
HOM	**Homer**	**78.93**	**21**	eP	**P**	**12 56 33.1**	**0.0**
	comp=Z,158nm,0.9s						
SONM	**Songino Array**	**79.03**	**324**	P	**P**	**12 56 34.6**	**+0.4**
	comp=Z,11nm,0.8s,baz=135,slow=5.9,SNR=50						
SONM				LR	LR	13 29 32.2	
	comp=Z,1µm,21.7s,baz=130,slow=34						
SONA1	**Songino Array**	**79.04**	**324**	eP	**P**	**12 56 33.9**	**-0.4**
ANM	**Nome**	**79.11**	**12**	eP	**P**	**12 56 33.7**	**-0.4**
	comp=Z,54nm,1.4s						
ANM	**Nome**	**79.11**	**12**	eP	**P**	**12 56 33.7**	**-0.4**
ANM				pmax	pmax		
	comp=Z,54nm,1.4s						
RSO	**Redoubt South**	**79.15**	**20**	eP	**P**	**12 56 33.4**	**-1.2**
BRLK	**Bradley Lake**	**79.27**	**21**	eP	**P**	**12 56 34.7**	**-0.4**
	comp=Z,71nm,0.9s						
GTA	**Gaotai**	**79.33**	**314**	⇓P	**P**	**12 56 37.0**	**+1.0**
GTA				pP	sP	12 56 46.8	-0.1
GTA				pmax	pmax		
	comp=Z,29nm,1.2s						
GTA				pmax	pmax		
	comp=Z,380nm,6.2s						
GTA				LR	LR		
	comp=Z,2µm,19.7s						
GTA				LR	LR		
	comp=Z,3µm,18.1s						
GTA				LR	LR		
	comp=Z,4µm,19.4s						
BILL	**Bilibino**	**79.48**	**0**	eP	**P**	**12 56 35.7**	**-0.4**
	comp=Z,54nm,0.9s						
BILL				LR	LR		
	comp=Z,2µm,19.0s						
BILL	**Bilibino**	**79.48**	**0**	d iP	**P**	**12 56 35.6**	**-0.4**
BILL				pmax	pmax		
	comp=Z,65nm,1.0s						
SEW	**Seward**	**80.01**	**21**	eP	**P**	**12 56 38.6**	**-0.4**
	comp=Z,122nm,1.6s						
RPN	**Rapa Nui**	**80.49**	**116**	PFAKE		12 56 50.0	+7.6
RPN				LR	LR		
	comp=Z,3µm,19.0s						
SUA	**Susitna One**	**80.55**	**20**	eP	**P**	**12 56 40.9**	**-1.2**
	comp=Z,85nm,1.3s						
RC01	**Rabbit Creek A**	**80.62**	**20**	eP	**P**	**12 56 41.9**	**-0.4**
	comp=Z,73nm,1.3s						
SHL	**Shillong**	**80.63**	**299**	eP	**P**	**12 56 42.2**	**-1.2**
	comp=Z,138nm,1.5s						
SHL	**Shillong**	**80.63**	**299**	eP	**P**	**12 56 42.2**	**-1.2**
SHL				pmax	pmax		
	comp=Z,139nm,1.5s						
BOD	**Bodaibo**	**80.99**	**335**	eP	**P**	**12 56 43.5**	**-0.8**
BOD				pmax	pmax		
	comp=Z,92nm,2.0s						
PPLA	**Purkeypile**	**81.15**	**18**	eP	**P**	**12 56 44.4**	**-0.9**
	comp=Z,30nm,1.1s						
PMR	**Palmer**	**81.18**	**20**	eP	**P**	**12 56 44.2**	**-1.1**
	comp=Z,32nm,1.1s						
PMR	**Palmer**	**81.18**	**20**	eP	**P**	**12 56 44.2**	**-1.1**
PMR				pmax	pmax		
	comp=Z,32nm,1.1s						
KNK	**Knik Glacier**	**81.28**	**20**	eP	**P**	**12 56 45.7**	**-0.2**
	comp=Z,36nm,0.7s						
GLI	**Glacier Island**	**81.39**	**21**	eP	**P**	**12 56 46.1**	**-0.4**
	comp=Z,56nm,1.0s						
CAST	**Castle Rocks**	**81.58**	**18**	eP	**P**	**12 56 45.9**	**-1.5**
	comp=Z,54nm,0.8s						
SML	**Sawmill**	**81.61**	**20**	eP	**P**	**12 56 47.5**	**-0.1**
	comp=Z,53nm,1.0s						
SML	**Sawmill**	**81.61**	**20**	eP	**P**	**12 56 47.5**	**-0.1**
SML				pmax	pmax		
	comp=Z,53nm,1.0s						
EYAK	**Cordova Ski Ar**	**81.65**	**22**	eP	**P**	**12 56 47.6**	**-0.2**
	comp=Z,56nm,1.0s						
DIV	**Divide**	**82.03**	**22**	eP	**P**	**12 56 49.5**	**-0.5**
	comp=Z,66nm,0.9s						
HMT	**Hamilton**	**82.07**	**23**	eP	**P**	**12 56 50.1**	**0.0**
	comp=Z,64nm,1.0s						
ZAK	**Zakamensk**	**82.08**	**325**	eP	**P**	**12 56 50.3**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,46nm,1.4s						
TRF	**Thorofare Moun**	**82.15**	**18**	eP	**P**	**12 56 49.3**	**-1.3**
	comp=Z,22nm,0.8s						
KLU	**Klutina**	**82.23**	**21**	eP	**P**	**12 56 50.9**	**0.0**
	comp=Z,41nm,0.9s						
BPAW	**Bear Paw Mtn.**	**82.41**	**18**	eP	**P**	**12 56 52.0**	**+0.2**
	comp=Z,62nm,1.6s						
IRK	**Irkutsk**	**82.45**	**327**	eP	**P**	**12 56 51.6**	**-0.6**
IRK				pmax	pmax		
	comp=Z,162nm,2.2s						
LSA	**Lhasa**	**82.51**	**302**	eP	**P**	**12 56 54.5**	**+0.8**
	comp=Z,311nm,2.1s						
LSA				LR	LR		
	comp=Z,3µm,22.0s						
TLY	**Talaya**	**82.51**	**326**	eP	**P**	**12 56 51.2**	**-1.4**
	comp=Z,109nm,1.1s						
TLY				LR	LR		
	comp=Z,902nm,22.0s						
TLY	**Talaya**	**82.51**	**326**	d iP	**P**	**12 56 52.5**	**-0.1**
TLY	**Talaya**	**82.51**	**326**	P	**P**	**12 56 53.2**	**+0.7**
	SNR=27						
RND	**Reindeer**	**82.56**	**19**	eP	**P**	**12 56 52.0**	**-0.7**
	comp=Z,66nm,1.0s						
RND	**Reindeer**	**82.56**	**19**	eP	**P**	**12 56 52.0**	**-0.7**
RND				pmax	pmax		
	comp=Z,66nm,1.0s						
RDOG	**Red Dog Mine**	**82.65**	**11**	eP	**P**	**12 56 53.7**	**+0.8**
	comp=Z,57nm,0.9s						
MCK	**McKinley**	**82.77**	**19**	eP	**P**	**12 56 52.6**	**-1.1**
	comp=Z,162nm,1.4s						
MCK	**McKinley**	**82.77**	**19**	eP	**P**	**12 56 52.6**	**-1.1**
MCK				pmax	pmax		
	comp=Z,162nm,1.4s						
DHY	**Denali Highway**	**82.81**	**20**	eP	**P**	**12 56 53.2**	**-0.8**
	comp=Z,48nm,1.3s						
IM3	**Indian Mountai**	**83.05**	**16**	eP	**P**	**12 56 53.9**	**-1.1**
HARP	**HAARP**	**83.11**	**21**	eP	**P**	**12 56 55.3**	**-0.1**
	comp=Z,55nm,0.8s						
MLY	**Manley**	**83.17**	**17**	eP	**P**	**12 56 55.1**	**-0.6**
	comp=Z,58nm,1.3s						
KMRM	**Mail Ridge**	**83.20**	**47**	eP	**P**	**12 56 57.0**	**+0.5**
	comp=Z,72nm,1.3s						
WRH	**Wood River Hil**	**83.56**	**18**	eP	**P**	**12 56 56.8**	**-0.9**
	comp=Z,62nm,0.9s						
O02D	**Mt. Diablo Mer**	**83.84**	**47**	P	**P**	**12 56 59.8**	**0.0**
	baz=249,SNR=8.3						
MDM	**Murphy Dome**	**83.86**	**18**	eP	**P**	**12 56 58.3**	**-1.0**
	comp=Z,48nm,0.8s						
HDA	**Harding Lake**	**83.87**	**19**	eP	**P**	**12 56 58.3**	**-1.0**
	comp=Z,111nm,0.8s						
HDA	**Harding Lake**	**83.87**	**19**	P	**P**	**12 56 58.2**	**-1.0**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.91**	**18**	P	**P**	**12 56 58.1**	**-1.3**
	baz=226						
COLA	**College**	**83.91**	**18**	eP	**P**	**12 56 58.7**	**-0.8**
	comp=Z,98nm,0.8s						
COLA				LR	LR		
	comp=Z,2µm,21.0s						
COLA	**College**	**83.91**	**18**	d iP	**P**	**12 56 58.1**	**-1.3**
COLA				pmax	pmax		
	comp=Z,89nm,0.8s						
MOY	**Mondy**	**83.96**	**326**	eP	**P**	**12 56 59.6**	**-0.6**
MOY				pmax	pmax		
	comp=Z,164nm,2.5s						
MAW	**Mawson**	**84.09**	**202**	LR	LR	13 32 30.6	
	comp=Z,2µm,18.8s,baz=92,slow=34						
RIDG	**Independ'e Rid**	**84.10**	**20**	eP	**P**	**12 57 00.1**	**-0.5**
	comp=Z,162nm,1.2s						
J01E	**Myrtle Point**	**84.13**	**44**	P	**P**	**12 56 59.5**	**-1.6**
	baz=248						
K02D	**Willamette Mer**	**84.14**	**44**	P	**P**	**12 56 59.7**	**-1.5**
	baz=248						
IL1	**Eielson Array**	**84.14**	**19**	eP	**P**	**12 56 57.2**	**-3.4**
ILAR	**Eielson Array**	**84.14**	**19**	P	**P**	**12 56 59.9**	**-0.8**
	comp=Z,31nm,0.8s,baz=243,slow=5.2,SNR=130						
ILAR				PKiKP	**PKiKP**	**13 02 15.1**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=279,slow=3.0,SNR=5.5						
ILAR				PKKPbc	**PKKPbc**	**13 15 16.6**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=19,slow=2.2,SNR=5.7						
ILB	**Eielson Array**	**84.14**	**19**	eP	**P**	**12 56 59.6**	**-1.0**
WDC	**Whiskeytown Da**	**84.16**	**47**	eP	**P**	**12 57 01.2**	**-0.1**
	comp=Z,44nm,1.4s						
WDC	**Whiskeytown Da**	**84.16**	**47**	eP	**P**	**12 57 01.2**	**-0.1**
WDC				pmax	pmax		
	comp=Z,44nm,1.4s						
N02D	**Trinity Center**	**84.18**	**46**	P	**P**	**12 57 01.3**	**-0.2**
	baz=249,SNR=5.6						
POKR	**Poker Plat Res**	**84.21**	**18**	P	**P**	**12 56 59.5**	**-1.5**
	baz=226						
M02C	**Callahan**	**84.23**	**46**	P	**P**	**12 57 01.2**	**-0.5**
	baz=249,SNR=5.2						
SBC	**Santa Barbara**	**84.25**	**53**	P	**P**	**12 57 01.1**	**-0.7**
	baz=252						
SMMC	**Simmler**	**84.30**	**52**	P	**P**	**12 57 00.3**	**-1.9**
	baz=252						
YBH	**Yreka Blue Hor**	**84.45**	**46**	eP	**P**	**12 57 03.1**	**+0.2**
	comp=Z,47nm,1.3s						
SCRK	**Sand Creek**	**84.54**	**20**	eP	**P**	**12 57 02.5**	**-0.3**
	comp=Z,112nm,1.0s						
ORV	**Oroville**	**84.56**	**48**	eP	**P**	**12 57 02.9**	**-0.4**
	comp=Z,10nm,0.9s						
ORV	**Oroville**	**84.56**	**48**	eP	**P**	**12 57 02.9**	**-0.4**
ORV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
O03E	**Paynes Creek**	**84.59**	**47**	P	**P**	**12 57 02.5**	**-1.1**
	baz=250,SNR=7.0						
I03D	**Drain, OR**	**84.72**	**44**	P	**P**	**12 57 03.7**	**-0.3**
	baz=249						
SCI2	**San Clemente I**	**84.73**	**55**	P	**P**	**12 57 02.0**	**-2.4**
	baz=253						
AFDM	**Forest Hills D**	**84.74**	**49**	eP	**P**	**12 57 03.8**	**-0.6**
	comp=Z,34nm,1.4s						
ODAN	**Odare**	**84.87**	**299**	eP	**P**	**12 57 05.9**	**+0.4**
	comp=Z,155nm,0.8s						
CMB	**Columbia Colle**	**84.88**	**50**	eP	**P**	**12 57 04.5**	**-0.5**
	comp=Z,14nm,0.9s						
CMB	**Columbia Colle**	**84.88**	**50**	eP	**P**	**12 57 04.5**	**-0.5**
CMB				pmax	pmax		
	comp=Z,14nm,0.9s						
BESE	**Bessie Mountai**	**84.90**	**27**	eP	**P**	**12 57 04.8**	**+0.1**
	comp=Z,51nm,1.1s						
L04D	**Klamath Falls**	**84.90**	**45**	P	**P**	**12 57 04.4**	**-0.8**
	baz=249						
COLD	**Coldfoot**	**84.93**	**16**	eP	**P**	**12 57 05.4**	**+0.9**
	comp=Z,12nm,0.9s						
JIS	**Juneau Island**	**84.95**	**27**	eP	**P**	**12 57 04.8**	**0.0**
	comp=Z,22nm,0.9s						
WRAK	**Wrangell Islan**	**84.95**	**30**	PFAKE		12 57 20.0	+15
WRAK				LR	LR		
	comp=Z,3µm,19.0s						
HYT	**Haines Junctio**	**85.01**	**24**	eP	**P**	**12 57 04.7**	**-0.5**
	comp=Z,24nm,0.8s						
PRP	**Porcupine Dome**	**85.07**	**18**	eP	**P**	**12 57 04.1**	**-1.4**
	comp=Z,43nm,1.4s						
M04C	**Macdoel**	**85.08**	**46**	P	**P**	**12 57 05.7**	**-0.4**
	baz=250,SNR=5.5						
ARVC	**Arvin**	**85.15**	**53**	P	**P**	**12 57 05.1**	**-1.3**
	baz=252						
SKAG	**Skagway**	**85.16**	**26**	eP	**P**	**12 57 06.1**	**+0.2**
	comp=Z,38nm,1.2s						
VES	**Vestal, Richgr**	**85.17**	**52**	P	**P**	**12 57 05.7**	**-0.8**
	baz=252						
RUBR	**Rubicon Trail**	**85.38**	**49**	eP	**P**	**12 57 08.0**	**+0.3**
	comp=Z,26nm,0.9s						
I04A	**Tendick Farm,**	**85.39**	**44**	P	**P**	**12 57 06.7**	**-0.8**
	baz=249						
J04D	**Umpqua Nationa**	**85.40**	**44**	P	**P**	**12 57 07.2**	**-0.6**
	baz=250						
H04D	**Lebanon**	**85.43**	**43**	P	**P**	**12 57 06.5**	**-1.0**
	baz=249						
KNGR	**Kungurtug, Tuv**	**85.47**	**324**	d iP	**P**	**12 57 07.5**	**-0.3**
MWC	**Mount Wilson**	**85.49**	**54**	eP	**P**	**12 57 07.8**	**-0.6**
	comp=Z,29nm,1.1s						
MWC	**Mount Wilson**	**85.49**	**54**	eP	**P**	**12 57 07.8**	**-0.6**
MWC				pmax	pmax		
	comp=Z,29nm,1.1s						
BEKR	**Beckworth**	**85.49**	**48**	eP	**P**	**12 57 08.0**	**-0.3**
	comp=Z,32nm,1.3s						
RAMN	**Ramite**	**85.57**	**299**	eP	**P**	**12 57 09.0**	**0.0**
ISA	**Isabella, Lake**	**85.59**	**52**	eP	**P**	**12 57 08.5**	**-0.2**
	comp=Z,26nm,1.2s						
ISA	**Isabella, Lake**	**85.59**	**52**	eP	**P**	**12 57 08.5**	**-0.2**
ISA				pmax	pmax		
	comp=Z,26nm,1.2s						
ISA	**Isabella, Lake**	**85.59**	**52**	P	**P**	**12 57 08.0**	**-0.7**
	baz=252,SNR=5.9						
MDPB	**Devils Postpil**	**85.73**	**50**	eP	**P**	**12 57 09.4**	**-0.2**
	comp=Z,19nm,1.0s						
EDW2	**Edwards Air Fo**	**85.73**	**53**	P	**P**	**12 57 08.0**	**-1.4**
	baz=253,SNR=6.0						
WAKR	**Walker**	**85.73**	**49**	eP	**P**	**12 57 09.6**	**+0.1**
	comp=Z,33nm,1.3s						
NLWA	**Neilton Lookou**	**85.75**	**40**	PFAKE		12 57 20.0	+11
NLWA				LR	LR		
	comp=Z,4µm,22.0s						
PNTR	**Pine Nut**	**85.80**	**49**	eP	**P**	**12 57 09.8**	**-0.1**
	comp=Z,66nm,1.6s						
BFSC	**Mount Baldy Ra**	**85.81**	**54**	P	**P**	**12 57 08.6**	**-1.3**
	baz=253						
F04D	**Rainier, OR**	**85.81**	**41**	P	**P**	**12 57 09.0**	**-0.4**
	baz=249						
VCNR	**Virginia City**	**85.83**	**49**	eP	**P**	**12 57 09.8**	**-0.2**
	comp=Z,9.5nm,1.0s						
H04A	**Detroit Lake**	**85.85**	**43**	eP	**P**	**12 57 11.8**	**+2.1**
	comp=Z,40nm,1.3s						
FYU	**Fort Yukon**	**85.87**	**18**	eP	**P**	**12 57 08.7**	**-0.5**
	comp=Z,139nm,1.7s						
MLAC	**Mammoth, Mammo**	**85.91**	**50**	P	**P**	**12 57 09.0**	**-1.5**
	baz=252						
MURC	**Murrieta**	**85.99**	**55**	P	**P**	**12 57 09.3**	**-1.4**
	baz=253						
WHY	**Whitehorse**	**86.00**	**25**	eP	**P**	**12 57 09.1**	**-1.1**
	comp=Z,12nm,1.0s						
J05D	**Fort Rock, OR**	**86.01**	**44**	P	**P**	**12 57 10.3**	**-0.4**
	baz=250						
YERR	**Yerington**	**86.03**	**49**	eP	**P**	**12 57 10.6**	**-0.4**
	comp=Z,23nm,1.5s						
JIRN	**Jiri**	**86.11**	**299**	eP	**P**	**12 57 12.2**	**+0.4**
	comp=Z,872nm,2.0s						
CWC	**Cottonwood Cre**	**86.13**	**52**	P	**P**	**12 57 10.8**	**-0.7**
	baz=253						
PAHR	**Pah Rah Range**	**86.15**	**48**	eP	**P**	**12 57 11.3**	**-0.2**
	comp=Z,43nm,1.3s						
BAR	**Barrett**	**86.15**	**56**	eP	**P**	**12 57 07.4**	**-4.1**
	comp=Z,13nm,1.1s						
LRMC	**Laurel Mtn Rad**	**86.15**	**53**	P	**P**	**12 57 10.8**	**-0.8**
	baz=253						
DAWY	**Dawson**	**86.18**	**21**	eP	**P**	**12 57 10.7**	**-0.3**
	comp=Z,24nm,0.8s						
MOD	**Modoc Plateau**	**86.20**	**46**	eP	**P**	**12 57 11.5**	**-0.2**
	comp=Z,20nm,1.1s						
E04D	**Cinebar**	**86.27**	**41**	P	**P**	**12 57 11.5**	**-0.2**
	baz=249						
D03D	**Eldon**	**86.29**	**40**	P	**P**	**12 57 11.5**	**-0.3**
	baz=248						
I05D	**Terrebonne, OR**	**86.30**	**43**	P	**P**	**12 57 11.5**	**-0.5**
	baz=250						
PINE	**Pine Mountain**	**86.39**	**44**	eP	**P**	**12 57 12.8**	**+0.2**
	comp=Z,18nm,0.9s						
BBRC	**Big Bear Solar**	**86.40**	**54**	P	**P**	**12 57 11.4**	**-1.6**
	baz=253						
MONP2	**Monument Peak**	**86.41**	**56**	P	**P**	**12 57 12.0**	**-1.0**
	baz=254,SNR=5.9						
GUN	**Gumba**	**86.44**	**299**	eP	**P**	**12 57 13.6**	**+0.2**
	comp=Z,51nm,0.9s						
PALK	**Pallekele**	**86.44**	**278**	eP	**P**	**12 57 14.6**	**+1.3**
	comp=Z,36nm,0.9s						
RYN	**Ryan**	**86.45**	**50**	eP	**P**	**12 57 12.5**	**-0.5**
	comp=Z,25nm,1.3s						
DAC	**Darwin (Calif)**	**86.45**	**52**	eP	**P**	**12 57 12.9**	**-0.2**
	comp=Z,7.7nm,0.9s						
MPMC	**Manual Prospec**	**86.47**	**52**	P	**P**	**12 57 11.1**	**-2.1**
	baz=253,SNR=8.8						
NVAR	**Mina Array Bea**	**86.56**	**50**	P	**P**	**12 57 12.9**	**-0.7**
	comp=Z,4.8nm,0.7s,baz=232,slow=8.2,SNR=42						
NVAR				PKiKP	**PKiKP**	**13 02 26.5**	**+6.0**
	comp=Z,0.3nm,0.6s,baz=224,slow=2.5,SNR=2.6						
NVAR				LR	LR	13 27 37.5	
	comp=Z,4µm,21.9s,baz=268,slow=30						
NV01	**Mina Array Sit**	**86.56**	**50**	eP	**P**	**12 57 12.2**	**-1.4**
PFO	**Pinyon Flats O**	**86.58**	**55**	eP	**P**	**12 57 13.3**	**-0.4**
	comp=Z,6.9nm,1.0s						
PFO				LR	LR		
	comp=Z,3µm,21.0s						
PFO	**Pinyon Flats O**	**86.58**	**55**	P	**P**	**12 57 12.4**	**-1.3**
	baz=254						
PFO	**Pinyon Flats O**	**86.58**	**55**	P	**P**	**12 57 12.8**	**-1.0**
	comp=Z,2.8nm,0.5s,baz=290,slow=5.2,SNR=6.6						
XPFO	**Pion Flat**	**86.59**	**55**	eP	**P**	**12 57 13.3**	**-0.4**
	comp=Z,18nm,1.2s						
IKP	**In-Ko-Pah, Jac**	**86.60**	**56**	P	**P**	**12 57 12.4**	**-1.4**
	baz=254						
G05D	**Wamic, OR**	**86.63**	**43**	P	**P**	**12 57 12.2**	**-1.3**
	baz=250						
TIXI	**Tiksi**	**86.64**	**349**	eP	**P**	**12 57 12.2**	**-0.7**
	comp=Z,82nm,1.4s						
TIXI				LR	LR		
	comp=Z,3µm,19.0s						
TIXI	**Tiksi**	**86.64**	**349**	d iP	**P**	**12 57 12.4**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,46nm,1.7s						
NV11	**Mina Array Sit**	**86.67**	**50**	eP	**P**	**12 57 13.8**	**-0.2**
	comp=Z,2.3nm,1.3s						
F05D	**White Salmon**	**86.75**	**42**	P	**P**	**12 57 13.3**	**-0.8**
	baz=250						
PKIN	**Phulchoki**	**86.77**	**299**	eP	**P**	**12 57 14.8**	**-0.1**
	comp=Z,68nm,1.3s						
GSC	**Goldstone, Bar**	**86.79**	**53**	eP	**P**	**12 57 14.4**	**-0.3**
	comp=Z,51nm,1.6s						
GSC	**Goldstone, Bar**	**86.79**	**53**	eP	**P**	**12 57 14.4**	**-0.3**
GSC				pmax	pmax		
	comp=Z,51nm,1.6s						
GSC	**Goldstone, Bar**	**86.79**	**53**	P	**P**	**12 57 13.7**	**-0.9**
	baz=253						
GRAC	**Grapevine Rang**	**86.84**	**51**	P	**P**	**12 57 14.2**	**-0.6**
	baz=253						
D05A	**Enumclaw**	**86.87**	**41**	eP	**P**	**12 57 15.1**	**+0.5**
	comp=Z,135nm,1.6s						
KVN	**Kaiserville**	**86.90**	**49**	eP	**P**	**12 57 14.5**	**-0.7**
	comp=Z,11nm,1.0s						
KVN	**Kaiserville**	**86.90**	**49**	eP	**P**	**12 57 14.5**	**-0.7**
KVN				pmax	pmax		
	comp=Z,11nm,1.0s						
SWSC	**Sam W. Stewart**	**86.93**	**56**	P	**P**	**12 57 13.6**	**-1.6**
	baz=254						
HEC	**Hector,Ludlow**	**87.02**	**54**	P	**P**	**12 57 14.0**	**-1.8**
	baz=254						
DMN	**Daman**	**87.03**	**299**	eP	**P**	**12 57 16.3**	**+0.1**
	comp=Z,115nm,1.1s						
DLBC	**Dease Lake**	**87.03**	**28**	P	**P**	**12 57 15.2**	**0.0**
	comp=Z,9.4nm,0.9s,baz=236,slow=5.9,SNR=13						
BELC	**Belle Mtn. Jos**	**87.06**	**55**	P	**P**	**12 57 14.7**	**-1.4**
	baz=254,SNR=11						
FURC	**Furnace Creek,**	**87.07**	**52**	P	**P**	**12 57 14.6**	**-1.3**
	baz=253,SNR=8.3						
B05A	**Bryant**	**87.18**	**40**	P	**P**	**12 57 14.6**	**-1.5**
	baz=249						
SHOC	**Shoshone, Teco**	**87.37**	**53**	P	**P**	**12 57 16.1**	**-1.3**
	baz=254						
BC3	**Big Chuckawall**	**87.40**	**55**	P	**P**	**12 57 16.9**	**-0.8**
	baz=254,SNR=7.0						
I07A	**Izee**	**87.46**	**44**	eP	**P**	**12 57 17.7**	**0.0**
	comp=Z,21nm,1.2s						
TUQ	**Turquoise Moun**	**87.52**	**53**	P	**P**	**12 57 17.4**	**-0.9**
	baz=254,SNR=8.8						
WVOR	**Wild Horse Val**	**87.54**	**46**	eP	**P**	**12 57 17.5**	**-0.7**
	comp=Z,37nm,1.3s						
WVOR				LR	LR		
	comp=Z,2µm,19.0s						
WVOR	**Wild Horse Val**	**87.54**	**46**	eP	**P**	**12 57 17.5**	**-0.7**
WVOR				pmax	pmax		
	comp=Z,37nm,1.3s						
WVOR				MLR	MLR		
	comp=Z,2µm,19.0s						
GMRC	**Granite Mounta**	**87.55**	**54**	P	**P**	**12 57 17.5**	**-0.9**
	baz=254,SNR=8.1						
TPNV	**Topopah Spring**	**87.68**	**52**	eP	**P**	**12 57 18.8**	**-0.2**
	comp=Z,33nm,1.5s						
TPNV	**Topopah Spring**	**87.68**	**52**	eP	**P**	**12 57 18.8**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,33nm,1.5s						
TPNV	**Topopah Spring**	**87.68**	**52**	P	**P**	**12 57 18.4**	**-0.6**
	baz=254,SNR=8.0						
LTY	**Liberty**	**87.73**	**41**	eP	**P**	**12 57 18.1**	**-0.9**
	comp=Z,37nm,1.4s						
GLA	**Glamis**	**87.75**	**56**	eP	**P**	**12 57 19.7**	**+0.4**
	comp=Z,34nm,1.0s						
GLA	**Glamis**	**87.75**	**56**	eP	**P**	**12 57 19.7**	**+0.4**
GLA				pmax	pmax		
	comp=Z,34nm,1.0s						
GLA	**Glamis**	**87.75**	**56**	P	**P**	**12 57 18.2**	**-1.1**
	baz=255						
IRM	**Iron Mountain**	**87.78**	**55**	P	**P**	**12 57 18.9**	**-0.6**
	baz=254,SNR=13						
C06D	**Leavenworth**	**87.82**	**40**	P	**P**	**12 57 18.4**	**-0.8**
	baz=250						
J08A	**Circle Bar Ran**	**87.94**	**45**	eP	**P**	**12 57 19.4**	**-0.6**
	comp=Z,45nm,1.5s						
LDFC	**Landfair**	**88.06**	**54**	eP	**P**	**12 57 20.9**	**+0.1**
	comp=Z,25nm,0.9s						
Y12C	**Blythe**	**88.17**	**55**	eP	**P**	**12 57 21.3**	**+0.1**
	comp=Z,29nm,1.1s						
Y12C	**Blythe**	**88.17**	**55**	P	**P**	**12 57 20.4**	**-0.9**
	baz=255,SNR=8.9						
HAWA	**Hanford**	**88.19**	**42**	eP	**P**	**12 57 21.1**	**+0.1**
	comp=Z,37nm,1.3s						
HAWA				LR	LR		
	comp=Z,3µm,20.0s						
G08A	**Pilot Rock**	**88.21**	**43**	eP	**P**	**12 57 20.6**	**-0.7**
	comp=Z,30nm,1.3s						
KOLN	**Koldanda**	**88.36**	**299**	eP	**P**	**12 57 21.7**	**-0.8**
	comp=Z,40nm,0.8s						
DANN	**Dangsing**	**88.36**	**299**	eP	**P**	**12 57 21.8**	**-0.8**
	comp=Z,62nm,0.7s						
NEE2	**Needles Airpor**	**88.37**	**54**	P	**P**	**12 57 21.5**	**-0.6**
	baz=255						
SHPR	**Sheep Range**	**88.40**	**52**	eP	**P**	**12 57 22.4**	**-0.1**
	comp=Z,31nm,1.4s						
E08A	**Dider Farm, El**	**88.53**	**42**	eP	**P**	**12 57 22.8**	**+0.2**
	comp=Z,69nm,1.5s						
R11A	**Troy Canyon, C**	**88.58**	**51**	eP	**P**	**12 57 22.9**	**-0.3**
	comp=Z,42nm,1.6s						
R11A	**Troy Canyon, C**	**88.58**	**51**	P	**P**	**12 57 22.4**	**-0.9**
	baz=254,SNR=14						
PDMCI	**Parker Dam,Lak**	**88.63**	**55**	P	**P**	**12 57 22.6**	**-0.7**
	baz=255,SNR=5.6						
D08A	**Wollman Farm,**	**88.80**	**41**	eP	**P**	**12 57 23.7**	**-0.1**
	comp=Z,13nm,1.1s						
B08A	**Colville Reser**	**88.95**	**40**	eP	**P**	**12 57 24.0**	**-0.6**
	comp=Z,22nm,1.3s						
PYUN	**Piuthan**	**88.96**	**299**	eP	**P**	**12 57 24.4**	**-0.9**
	comp=Z,66nm,0.9s						
214A	**Organ Pipe Nat**	**89.11**	**57**	P	**P**	**12 57 25.7**	**-0.1**
	baz=256,SNR=7.3						
E09A	**Wood Farm, Sta**	**89.13**	**42**	eP	**P**	**12 57 25.2**	**-0.3**
	comp=Z,29nm,1.3s						
BMO	**Blue Mountains**	**89.19**	**44**	eP	**P**	**12 57 24.9**	**-0.9**
	comp=Z,42nm,1.5s						
BMO	**Blue Mountains**	**89.19**	**44**	eP	**P**	**12 57 25.0**	**-0.9**
BMO				pmax	pmax		
	comp=Z,42nm,1.5s						
WMQ	**Urumqi**	**89.38**	**315**	P	**P**	**12 57 27.1**	**+0.3**
WMQ				pP	PcP	12 57 29.6	+1.4
WMQ				sP	sP	12 57 39.4	+2.6
WMQ				pmax	pmax		
	comp=Z,42nm,1.1s						
WMQ				LR	LR		
	comp=Z,4µm,18.3s						
WMQ				LR	LR		
	comp=Z,3µm,15.3s						
WMQ				LR	LR		
	comp=Z,3µm,28.9s						
WMQ	**Urumqi**	**89.38**	**315**	eP	**P**	**12 57 26.4**	**-0.4**
	comp=Z,35nm,1.0s						
WMQ	**Urumqi**	**89.38**	**315**	eP	**P**	**12 57 26.4**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,35nm,1.0s						
C09A	**Chrisman Ranch**	**89.45**	**41**	eP	**P**	**12 57 26.6**	**-0.3**
	comp=Z,31nm,1.4s						
ELK	**Elko**	**89.49**	**48**	eP	**P**	**12 57 27.5**	**-0.1**
	comp=Z,32nm,1.4s						
ELK	**Elko**	**89.49**	**48**	P	**P**	**12 57 26.7**	**-0.9**
	comp=Z,2.5nm,0.6s,baz=212,slow=4.1,SNR=12						
F10A	**Beach Ranch, E**	**89.58**	**43**	eP	**P**	**12 57 27.3**	**-0.4**
	comp=Z,43nm,1.6s						
PSUT	**Pine Spring**	**89.94**	**51**	eP	**P**	**12 57 29.7**	**0.0**
	comp=Z,11nm,0.7s						
LCMT	**Little Creek M**	**90.02**	**52**	eP	**P**	**12 57 29.9**	**-0.1**

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      comp=Z,18nm,1.1s
CCUT  Cedar City          90.06  52  eP        P         12 57 30.4 +0.1
      comp=Z,19nm,1.1s
SZCU  Shurtz Canyon       90.29  52  eP        P         12 57 31.4  0.0
      comp=Z,17nm,1.1s
NEW   Newport             90.32  41  eP        P         12 57 30.6 -0.4
      comp=Z,31nm,1.6s
NEW                                   LR        LR
      comp=Z,3µm,19.0s
NEW   Newport             90.32  41   P        P         12 57 30.3 -0.7
      baz=253
NEW   Newport             90.32  41   P        P         12 57 30.1 -1.0
      comp=Z,5.2nm,0.9s,baz=176,slow=3.0,SNR=6.9
KNB   Kanab               90.35  52  eP        P         12 57 31.6  0.0
      comp=Z,49nm,1.5s
INK   Inuvik              90.53  19  eP        P         12 57 30.4 -1.0
      comp=Z,23nm,1.4s
INK                                   PKiKP     PKiKP     13 02 25.8 -0.1
INK                                   PKKPbc    PKKPdf    13 14 59.1 +0.7
INK   Inuvik              90.53  19   P        P         12 57 30.1 -1.4
      comp=Z,4.8nm,0.9s,baz=212,slow=4.1,SNR=11
INK                                   PKiKP     PKiKP     13 02 25.8 -0.1
      comp=Z,1.1nm,0.8s,baz=343,slow=3.9,SNR=4.2
INK                                   PKKPbc    PKKPdf    13 14 59.1 +0.7
      comp=Z,2.4nm,1.1s,baz=46,slow=5.7,SNR=7.1
HLID  Hailey              90.83  46  eP        P         12 57 33.5 -0.2
      comp=Z,27nm,1.5s
HLID                                  LR        LR
      comp=Z,3µm,19.0s
HLID  Hailey              90.83  46   P        P         12 57 33.6 -0.1
      baz=255
PKCU  Pink Cliffs         90.85  52  eP        P         12 57 35.2 +1.1
      comp=Z,21nm,1.0s
TUC   Tucson              90.87  57  eP        P         12 57 34.4 +0.4
      comp=Z,4.6nm,0.9s
TUC                                   LR        LR
      comp=Z,5µm,19.0s
TUC   Tucson              90.87  57  eP        P         12 57 34.4 +0.4
TUC                                   pmax      pmax
      comp=Z,5.0nm,0.9s
TUC                                   MLR       MLR
      comp=Z,5µm,19.0s
TUC   Tucson              90.87  57   P        P         12 57 33.2 -0.9
      baz=257
MTPU  Mount Pierson       91.09  51  eP        P         12 57 36.1 +0.9
      comp=Z,16nm,0.9s
WUAZ  Wupatki             91.13  54  eP        P         12 57 35.2  0.0
      comp=Z,20nm,1.2s
WUAZ                                  LR        LR
      comp=Z,2µm,20.0s
WUAZ  Wupatki             91.13  54   P        P         12 57 34.6 -0.7
      baz=257
DUG   Dugway, Tooele      91.14  49  eP        P         12 57 35.1  0.0
      comp=Z,17nm,1.1s
DUG                                   LR        LR
      comp=Z,2µm,19.0s
DUG   Dugway, Tooele      91.14  49  eP        P         12 57 35.1  0.0
DUG                                   pmax      pmax
      comp=Z,17nm,1.1s
DUG                                   MLR       MLR
      comp=Z,2µm,19.0s
DUG   Dugway, Tooele      91.14  49   P        P         12 57 34.6 -0.5
      baz=256
BGU   Big Grassy Mou      91.16  49  eP        P         12 57 34.9 -0.3
      comp=Z,11nm,1.0s
SYO   Syowa Base          91.16 197⇑eP        P         12 57 32.1 -2.4
SYO   Syowa Base          91.16 197⇓epP       pP        12 57 38.4 -3.6
MSU   Marysvale           91.21  51  eP        P         12 57 36.0 +0.4
MSU   Marysvale           91.21  51  eP        P         12 57 36.0 +0.4
DGZ   Jazzator, Alta      91.23 321⇑eP        P         12 57 35.5 +0.1
DGAR  Diego Garcia        91.53 262   PFAKE               12 57 50.0  +13
DGAR                                  LR        LR
      comp=Z,1µm,22.0s
HVU   Hansel Valley       91.55  48  eP        P         12 57 36.8 -0.2
      comp=Z,39nm,1.3s
HVU   Hansel Valley       91.55  48  eP        P         12 57 36.8 -0.2
HVU                                   pmax      pmax
      comp=Z,39nm,1.3s
NLU   North Lily Min      91.63  50  eP        P         12 57 37.2 -0.3
      comp=Z,19nm,1.2s
SPUT  South Promonto      91.67  48  eP        P         12 57 37.7  0.0
      comp=Z,10nm,1.0s
MPU   Maple Canyon        91.97  50  eP        P         12 57 39.2 +0.1
      comp=Z,31nm,1.5s
MSO   Missoula            92.00  43  eP        P         12 57 37.9 -1.1
      comp=Z,23nm,1.5s
MSO   Missoula            92.00  43   P        P         12 57 37.7 -1.2
      baz=255
CTU   Camp Tracy          92.04  49  eP        P         12 57 39.4  0.0
      comp=Z,9.9nm,0.9s
X18A  Snowflake           92.04  55  eP        P         12 57 39.8 +0.3
      comp=Z,17nm,1.5s
Q16A  Castle Valley       92.07  51  eP        P         12 57 40.1 +0.5
      comp=Z,23nm,1.3s
TMUT  Trail Mountain      92.12  50  eP        P         12 57 40.2 +0.3
      comp=Z,44nm,1.7s
MCMT  McKenzie Canyo      92.24  45  eP        P         12 57 40.4 +0.1
JLU   Jordanelle          92.24  49  eP        P         12 57 40.0 -0.4
      comp=Z,23nm,1.4s
W18A  Petrified Fore      92.34  55   P        P         12 57 40.2 -0.7
      baz=258
DLMT  Dillon              92.54  44  eP        P         12 57 40.9 -0.7
      comp=Z,36nm,1.4s
SRU   San Rafael Swe      92.60  51  eP        P         12 57 42.7 +0.7
      comp=Z,3.6nm,0.8s
SRU   San Rafael Swe      92.60  51  eP        P         12 57 42.7 +0.7
SRU                                   pmax      pmax
      comp=Z,4.0nm,0.8s
AHID  Auburn Hatcher      92.99  47   PFAKE               12 57 50.0 +6.3
AHID                                  LR        LR
      comp=Z,2µm,19.0s
FXWY  Fox Creek           93.24  46  eP        P         12 57 44.9 -0.1
      comp=Z,20nm,1.6s
TPAW  Teton Pass          93.26  46  eP        P         12 57 44.1 -0.9
      comp=Z,14nm,1.4s
BOZ   Bozeman (W)         93.26  44  eP        P         12 57 44.5 -0.4
      comp=Z,22nm,1.4s
BOZ                                   LR        LR
      comp=Z,3µm,21.0s
BOZ   Bozeman (W)         93.26  44  eP        P         12 57 44.5 -0.4
BOZ                                   pmax      pmax
      comp=Z,22nm,1.4s
BOZ                                   MLR       MLR
      comp=Z,3µm,21.0s
BOZ   Bozeman (W)         93.26  44   P        P         12 57 44.5 -0.4
      baz=257
REDW  Red Top Meadow      93.30  47  eP        P         12 57 44.6 -0.6
      comp=Z,26nm,1.6s
IMW   Indian Meadow       93.36  46  eP        P         12 57 45.6 +0.1
      comp=Z,15nm,1.3s
YHB   Horse Butte         93.37  45  eP        P         12 57 46.2 +0.8
      comp=Z,21nm,1.5s
HRY   Holter Researc      93.38  43  eP        P         12 57 45.2 -0.1
121A  Cookes Peak, D      93.39  58   P        P         12 57 45.3 -0.5
      baz=258
MOOW  Moose Ponds         93.46  46  eP        P         12 57 45.7 -0.2
      comp=Z,13nm,1.5s
YMR   Madison River       93.51  45  eP        P         12 57 46.8 +0.7
      comp=Z,22nm,1.5s
LOHW  Long Hollow         93.53  46  eP        P         12 57 46.0 -0.3
      comp=Z,15nm,1.4s
PV09  Paradox Valley      93.53  52  eP        P         12 57 46.8 +0.3
PV14  Lion Creek, Pa      93.59  52  eP        P         12 57 46.4 -0.2
      comp=Z,7.4nm,0.8s
PV19  Morning Glory       93.61  52  eP        P         12 57 47.8 +1.0
      comp=Z,6.8nm,0.6s
PV23  Carpenter Ridg      93.62  52  eP        P         12 57 47.1 +0.3
      comp=Z,13nm,0.6s
PV17  East Wray Mesa      93.62  52  eP        P         12 57 47.4 +0.6
      comp=Z,14nm,1.3s
PV16  Nyswonger Mesa      93.66  52  eP        P         12 57 47.5 +0.6
      comp=Z,21nm,1.6s
PV21  Cone Mtn., Par      93.67  52  eP        P         12 57 47.2 +0.2
      comp=Z,6.0nm,0.6s
PV04  Paradox Valley      93.69  52  eP        P         12 57 46.9 -0.2
      comp=Z,8.5nm,0.9s
PV03  Paradox Valley      93.70  52  eP        P         12 57 48.9 +1.8
      comp=Z,12nm,1.5s
H17A  Grant Village       93.72  46  eP        P         12 57 48.4 +1.2
      comp=Z,5.9nm,0.9s
H17A  Grant Village       93.72  46   P        P         12 57 47.8 +0.6
      baz=258
PV12  Saucer Basin,       93.75  52  eP        P         12 57 47.2 -0.2
      comp=Z,6.0nm,0.7s
MVCO  Mesa Verde          93.76  53   PFAKE               12 58 00.0  +13
MVCO                                  LR        LR
      comp=Z,2µm,19.0s
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MVCO  Mesa Verde          93.76  53   P        P         12 57 46.0 -1.5
      baz=258
MK01  Makanchi Array      93.81 317  eP        P         12 57 46.3 -0.9
MK31  Makanchi Array      93.83 317  eP        P         12 57 47.4 +0.1
MK31  Makanchi Array      93.83 317  i P       P         12 57 47.1 -0.2
MK31                                  pmax      pmax
      comp=Z,28nm,0.8s
MKAR  Makanchi Array      93.83 317  eP        P         12 57 47.4 +0.1
      comp=Z,145nm,0.8s
MKAR                                  PP        PP        13 01 31.7 -1.4
MKAR                                  PKKPbc    PKKPdf    13 14 49.2 -2.6
MKAR  Makanchi Array      93.83 317   P        P         12 57 47.5 +0.3
      comp=Z,19nm,0.7s,baz=97,slow=6.3,SNR=114
MKAR                                  PP        PP        13 01 31.7 -1.4
      comp=Z,2.1nm,1.0s,baz=98,slow=10,SNR=3.6
MKAR                                  PKKPbc    PKKPdf    13 14 49.2 -2.6
      comp=Z,1.8nm,0.7s,baz=295,slow=2.7,SNR=9.4
LKWY  Lake                93.88  45  eP        P         12 57 49.4 +1.5
LKWY                                  LR        LR
      comp=Z,3µm,19.0s
PV01  Paradox Valley      93.89  52  eP        P         12 57 47.6 -0.4
      comp=Z,5.5nm,1.1s
ZALV  Zalesovo Beam       93.93 324   P        P         12 57 46.3 -1.2
      comp=Z,18nm,0.9s,baz=115,slow=4.3,SNR=71
MAKZ  Makanchi            94.04 317  eP        P         12 57 48.0 -0.2
      comp=Z,55nm,1.3s
MAKZ  Makanchi            94.04 317   P        P         12 57 47.7 -0.5
MAKZ                                  pmax      pmax
      comp=Z,29nm,1.1s
BW06  Boulder Array       94.10  47  eP        P         12 57 48.1 -0.8
      comp=Z,14nm,1.6s
BW06                                  LR        LR
      comp=Z,2µm,20.0s
BW06  Boulder Array       94.10  47   P        P         12 57 47.8 -1.1
      baz=258
PD31  Pinedale Array      94.10  47  eP        P         12 57 48.0 -0.9
PDAR  Pinedale Array      94.10  47  eP        P         12 57 47.4 -1.5
PDAR  Pinedale Array      94.10  47   P        P         12 57 47.6 -1.2
      comp=Z,1.9nm,0.9s,baz=176,slow=2.2,SNR=9.6
O20A  White River Ci      94.54  50   P        P         12 57 49.6 -1.4
      baz=259
RLMT  Red Lodge           94.78  45   PFAKE               12 58 00.0 +8.0
RLMT                                  LR        LR
      comp=Z,3µm,22.0s
RLMT  Red Lodge           94.78  45   P        P         12 57 50.8 -1.2
      baz=258
ANMO  Albuquerque         94.94  55  eP        P         12 57 51.6 -1.3
      comp=Z,6.4nm,1.5s
ANMO                                  LR        LR
      comp=Z,2µm,20.0s
ANMO  Albuquerque         94.94  55⇑iP        P         12 57 52.3 -0.6
ANMO                                  pmax      pmax
      comp=Z,6.0nm,1.7s
ANMO  Albuquerque         94.94  55   P        P         12 57 51.6 -1.3
      baz=259
NVS   Novosibirsk         95.04 325⇑iP        P         12 57 52.0 -0.6
NVS                                   pmax      pmax
      comp=Z,68nm,1.8s
NVS                                   pmax      pmax
      comp=N,10.0nm,1.1s
NVS                                   pmax      pmax
      comp=E,37nm,1.8s
EGMT  Eagleton            95.04  42  eP        P         12 57 52.6 -0.3
      comp=E,19nm,1.1s
EGMT                                  LR        LR
      comp=Z,1µm,19.0s
EGMT  Eagleton            95.04  42   P        P         12 57 52.1 -0.8
      baz=258
S22A  4UR Ranch, Cre      95.17  53  eP        P         12 57 54.0  0.0
      comp=Z,9.2nm,1.4s
S22A  4UR Ranch, Cre      95.17  53   P        P         12 57 53.5 -0.4
      baz=259
PMSA  Palmer Station      95.21 161   PFAKE               12 58 00.0 +6.7
PMSA                                  LR        LR
      comp=Z,6µm,20.0s
MNTX  Cornudas Mount      95.24  59  eP        P         12 57 53.5 -0.5
      comp=Z,3.2nm,1.0s
MNTX                                  LR        LR
      comp=Z,3µm,22.0s
MNTX  Cornudas Mount      95.24  59   P        P         12 57 53.1 -1.0
      baz=260
YKA   Yellowknife Ar      95.59  27   P        P         12 57 53.0 -1.9
      comp=Z,4.3nm,0.6s,baz=256,slow=4.6,SNR=78
YKA                                   PP        PP        13 01 41.3 -5.1
      comp=Z,0.9nm,1.1s,baz=261,slow=7.0,SNR=4.2
YKA                                   PKiKP     PKiKP     13 02 34.5 -0.2
      comp=Z,0.4nm,0.6s,baz=249,slow=1.2,SNR=8.1
YKA                                   PKKPbc    PKKPbc    13 14 42.1 -6.4
      comp=Z,0.2nm,0.6s,baz=80,slow=2.5,SNR=5.6
SDCO  Great Sand Dun      96.20  53   PFAKE               12 58 10.0  +11
SDCO                                  LR        LR
      comp=Z,2µm,19.0s
SDCO  Great Sand Dun      96.20  53   P        P         12 57 57.2 -1.5
      baz=260
K22A  Casper              96.27  48   P        P         12 57 57.6 -1.1
      baz=260
TX31  Lajitas Ar. Si      96.28  61  eP        P         12 58 00.1 +1.1
TXAR  Lajitas Array       96.28  61   P        P         12 57 58.4 -0.6
      comp=Z,1.2nm,0.7s,baz=207,slow=5.3,SNR=17
N23A  Red Feather La      96.40  50   P        P         12 57 58.6 -0.9
      baz=260
ISCO  Idaho Springs       96.46  51   PFAKE               12 58 10.0  +10
ISCO                                  LR        LR
      comp=Z,5µm,22.0s
ISCO  Idaho Springs       96.46  51   P        P         12 57 59.0 -0.8
      baz=260
SNAA  Sanae               96.51 184   P        P         12 57 57.8 -1.3
SNAA  Sanae               96.51 184  eP        P         12 57 57.6 -1.6
      comp=Z,15nm,1.2s
SNAA  Sanae               96.51 184  eP        P         12 57 57.6 -1.6
SNAA                                  pmax      pmax
      comp=Z,15nm,1.2s
NRIK  Noril'sk            96.61 340   P        P         12 57 58.9 -0.5
      comp=Z,10.0nm,0.8s,baz=100,slow=5.1,SNR=14
KURK  Kurchatov           96.98 320  eP        P         12 58 00.7 -0.8
      comp=Z,15nm,1.4s
KURK                                  PP        PP        13 01 53.2 -4.2
KURK                                  PKiKP     PKiKP     13 02 37.3 -0.2
KURK                                  LR        LR
      comp=Z,3µm,19.0s
KURK  Kurchatov           96.98 320deP        P         12 58 00.3 -1.2
KURK                                  pmax      pmax
      comp=Z,14nm,1.7s
KURK  Kurchatov           96.98 320   P        P         12 58 00.7 -0.8
      SNR=7.1
KSH   Kashi               96.98 309   P        P         12 58 07.1 +5.1
KSH                                   pP        sP        12 58 13.2 +0.2
KSH                                   PP        PP        13 02 01.9 +3.9
KSH                                   S         S         13 09 28.8 +6.0
KSH                                   sS        sS        13 09 37.5 +1.4
KSH                                   LR        LR
      comp=Z,510nm,7.9s
KSH                                   LR        LR
      comp=Z,530nm,7.7s
KURBB Kurchatov Arra      97.02 320   P        P         12 58 00.9 -0.7
      comp=Z,3.5nm,0.9s,baz=97,slow=4.2,SNR=18
KURBB                                 PP        PP        13 01 53.2 -4.5
      comp=Z,2.0nm,1.0s,baz=99,slow=7.4,SNR=4.9
KURBB                                 PKiKP     PKiKP     13 02 37.3 -0.3
      comp=Z,0.9nm,0.9s,baz=96,slow=7.5,SNR=3.1
LAO   LASA Array          97.16  44   PFAKE               12 58 10.0 +7.4
LAO                                   LR        LR
      comp=Z,2µm,21.0s
LAO   LASA Array          97.16  44   P        P         12 58 02.0 -0.5
      baz=261
VNA3  Neumayer Olymp      97.24 182   P        Pdif      12 58 05.7 +3.2
VNA2  Neumayer--Watz      97.48 182   P        P         12 58 02.1 -1.4
NIL   Nilore              98.24 303   PFAKE               12 58 20.0  +12
NIL                                   LR        LR
      comp=Z,977nm,21.0s
AAK   Ala-Archa           98.55 312   PFAKE               12 58 20.0  +11
AAK                                   LR        LR
      comp=Z,1µm,19.0s
AAK   Ala-Archa           98.55 312⇑eP        Pdif      12 58 09.0  0.0
AAK                                   pmax      pmax
      comp=Z,14nm,2.8s
DGMT  Dagmar              98.78  42   PFAKE               12 58 20.0  +10
DGMT                                  LR        LR
      comp=Z,2µm,19.0s
DGMT  Dagmar              98.78  42   Pdiff     P         12 58 08.5 -1.2
      baz=262
AMTX  Amarillo            98.81  56   Pdiff     P         12 58 08.7 -1.6
      baz=262
OGNE  Ogallala            99.34  50   PFAKE               12 58 20.0 +7.5
OGNE                                  LR        LR
      comp=Z,4µm,21.0s
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JCT   Junction City       99.78  61   PFAKE               12 58 30.0  +15
JCT                                   LR        LR
      comp=Z,4µm,22.0s
FFC   Flin Flon          100.83  36   PFAKE               12 58 30.0  +11
FFC                                   LR        LR
      comp=Z,5µm,21.0s
FFC   Flin Flon          100.83  36  i P       Pdif      12 58 18.1 -0.6
CBKS  Cedar Bluff        100.84  52   PFAKE               12 58 30.0  +11
CBKS                                  LR        LR
      comp=Z,2µm,19.0s
KVTX  Kingsville         101.05  64   PFAKE               12 58 30.0  +10
KVTX                                  LR        LR
      comp=Z,2µm,21.0s
WMOK  Wichita Mounta     101.16  57   PFAKE               12 58 30.0 +9.4
WMOK                                  LR        LR
      comp=Z,4µm,21.0s
BVA0  Borovoye Array     102.30 322  i P       Pdif      12 58 24.2 -1.1
BVA0                                  pmax      pmax
      comp=Z,5.0nm,1.1s
BVAR  Borovoye Array     102.30 322   PP        PP        13 02 42.6 +4.8
      comp=Z,3.6nm,1.2s,baz=92,slow=12,SNR=3.8
BRVK  Borovoye           102.37 322  ePdif     Pdif      12 58 25.0 -0.5
BRVK                                  LR        LR
      comp=Z,1µm,21.0s
BRVK  Borovoye           102.37 322⇑iP        Pdif      12 58 25.0 -0.5
BRVK                                  pmax      pmax
      comp=Z,21nm,2.8s
BRVK  Borovoye           102.37 322   P        Pdif      12 58 24.8 -0.7
      SNR=5.1
KSU1  Kansas State U     103.30  52   PFAKE               12 58 40.0  +10
KSU1                                  LR        LR
      comp=Z,2µm,19.0s
ECSD  EROS Data Cent     103.59  48   PFAKE               12 58 40.0 +8.8
ECSD                                  LR        LR
      comp=Z,2µm,19.0s
RES   Resolute Bay       103.68  16   PKiKP     PKiKP     13 02 48.8 -0.1
      comp=Z,3.4nm,0.3s,baz=273,slow=4.5,SNR=19
PAYG  Puerto Ayora       103.73  94   PFAKE               12 58 40.0 +7.5
PAYG                                  LR        LR
      comp=Z,2µm,19.0s
NATX  Nacogdoches        104.30  60   PFAKE               12 58 50.0  +15
NATX                                  LR        LR
      comp=Z,4µm,22.0s
ULM   Lac du Bonnet      104.33  41   PKiKP     PKiKP     13 02 50.1 -0.7
      comp=Z,2.1nm,0.9s,baz=312,slow=3.1,SNR=4.0
MIAR  Mount Ida          105.41  57   PFAKE               13 03 00.0 +6.7
MIAR                                  LR        LR
      comp=Z,5µm,21.0s
SCIA  State Center       106.02  50   PFAKE               13 03 10.0  +16
SCIA                                  LR        LR
      comp=Z,3µm,20.0s
EFI   East Falkland      106.54 153   PFAKE               13 03 10.0  +15
EFI                                   LR        LR
      comp=Z,3µm,20.0s
EYMN  Ely                107.23  43   PFAKE               13 03 10.0  +14
EYMN                                  LR        LR
      comp=Z,2µm,19.0s
JFWS  Jewell Farm        108.22  49   PFAKE               13 03 10.0  +12
JFWS                                  LR        LR
      comp=Z,3µm,19.0s
COWI  Conover            108.91  45   PFAKE               13 03 10.0  +11
COWI                                  LR        LR
      comp=Z,4µm,21.0s
HDIL  Hopedale           108.97  51   PFAKE               13 03 10.0  +10
HDIL                                  LR        LR
      comp=Z,3µm,20.0s
ARU   Arti               109.01 326   PFAKE               13 03 10.0  +11
ARU                                   LR        LR
      comp=Z,1µm,19.0s
BRAL  Brewton            110.76  61   PFAKE               13 03 10.0 +6.7
BRAL                                  LR        LR
      comp=Z,2µm,22.0s
JTS   JuntasAbangare     110.94  83   PFAKE               13 03 20.0  +16
JTS                                   LR        LR
      comp=Z,1µm,20.0s
KBS   Kingsbay           111.50 355   PFAKE               13 03 10.0 +6.6
KBS                                   LR        LR
      comp=Z,1µm,20.0s
HOPE  Hope Point         111.72 166   PFAKE               13 03 20.0  +15
HOPE                                  LR        LR
      comp=Z,4µm,19.0s
ABPO  Ambohimpanom       112.01 244   PFAKE               13 03 20.0  +14
ABPO                                  LR        LR
      comp=Z,1µm,20.0s
GLMI  Grayling           112.18  46   PFAKE               13 03 20.0  +14
GLMI                                  LR        LR
      comp=Z,3µm,19.0s
LCO   Las Campanas       112.33 128   PFAKE               13 03 20.0  +13
LCO                                   LR        LR
      comp=Z,1µm,19.0s
AAM   Ann Arbor          113.11  49   PFAKE               13 03 20.0  +13
AAM                                   LR        LR
      comp=Z,4µm,19.0s
TRQA  Tornquist          113.52 141   PFAKE               13 03 20.0  +11
TRQA                                  LR        LR
      comp=Z,2µm,19.0s
NNA   Nana               113.76 109   PFAKE               13 03 20.0  +10
NNA                                   LR        LR
      comp=Z,1µm,19.0s
GOGA  Godfrey            113.79  59   PFAKE               13 03 20.0  +11
GOGA                                  LR        LR
      comp=Z,2µm,20.0s
ACSO  Alum Creek Sta     113.80  51   PFAKE               13 03 20.0  +11
ACSO                                  LR        LR
      comp=Z,3µm,20.0s
PRGR  Permogore          114.18 333  i PKIKP   PKPdf     13 03 08.6 -0.3
PRGR                                  pmax      pmax
      comp=Z,10.0nm,1.0s
LVZ   Lovozero           115.36 342   PFAKE               13 03 20.0 +8.9
LVZ                                   LR        LR
      comp=Z,967nm,19.0s
OTAV  Otavalo            115.49  95  ePKPdf    PKiKP     13 03 15.4 +1.9
OTAV                                  LR        LR
      comp=Z,1µm,20.0s
BCIP  Isla Barro Col     115.76  85   PFAKE               13 03 30.0  +17
BCIP                                  LR        LR
      comp=Z,1µm,19.0s
BLA   Blacksburg         116.06  54   PFAKE               13 03 30.0  +17
BLA                                   LR        LR
      comp=Z,3µm,19.0s
KEV   Kevo               116.33 345   PFAKE               13 03 20.0 +7.2
KEV                                   LR        LR
      comp=Z,3µm,20.0s
NHSC  New Hope           116.56  59   PFAKE               13 03 30.0  +16
NHSC                                  LR        LR
      comp=Z,3µm,19.0s
LVC   Limon Verde        116.72 123   PFAKE               13 03 30.0  +14
LVC                                   LR        LR
      comp=Z,2µm,19.0s
ARCES ARCESS Array B     116.86 345   PKP       PKPdf     13 03 13.8 -0.1
      comp=Z,4.8nm,0.6s,baz=69,slow=1.7,SNR=28
KLMR  Klimovskoe         117.19 334  ePKIKP    PKPdf     13 03 13.2 -1.5
KLMR                                  pmax      pmax
      comp=Z,20nm,1.5s
KLMR  Klimovskoe         117.19 334  ePKPdf    PKPdf     13 03 13.3 -1.5
KLMR                                  AMP                 13 03 31.1
      comp=Z,20nm,1.4s
CNNC  Cliffs of the      118.28  56   PFAKE               13 03 30.0  +12
CNNC                                  LR        LR
      comp=Z,3µm,20.0s
CBN   Corbin Frederi     118.35  53   PFAKE               13 03 30.0  +12
CBN                                   LR        LR
      comp=Z,3µm,20.0s
BINY  Binghamton         118.76  48   PFAKE               13 03 30.0  +12
BINY                                  LR        LR
      comp=Z,3µm,19.0s
MTDJ  Mount Denham       118.94  76   PFAKE               13 03 30.0  +10
MTDJ                                  LR        LR
      comp=Z,1µm,19.0s
LONY  Lake Ozonia        119.26  45   PFAKE               13 03 30.0  +11
LONY                                  LR        LR
      comp=Z,2µm,19.0s
SFJD  Kangerlussuaq      119.69  15   PKP       PKPdf     13 03 18.8 -0.6
SFJD                                  LR        LR
      comp=Z,4µm,19.0s
SFJD  Kangerlussuaq      119.69  15   PKIKP     PKPdf     13 03 18.8 -0.6
SFJD                                  MLR       MLR
      comp=Z,4µm,19.0s
SFJD  Kangerlussuaq      119.69  15   PKP       PKPdf     13 03 18.8 -0.6
      comp=Z,12nm,1.0s,baz=17,slow=14,SNR=2.8
VRH   Novokhopyorsk      119.94 323  ePKIKP    PKPdf     13 03 19.2 -1.1
VRH                                   pmax      pmax
      comp=Z,10.0nm,1.0s
MOS   Moscow             120.39 329  ePKIKP    PKiKP     13 03 32.3  +11
MOS                                  e                    13 04 56.1
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SCHQ	Schefferville	120.64	32	PKP	PKiKP	13 03 21.7	0.0
	comp=Z,7.8nm,0.8s,baz=346,slow=1.6,SNR=5.9						
GNI	Garni	120.89	310	PKP	PKiKP	13 03 23.3	+0.5
GNI				LR	LR		
	comp=Z,2μm,21.0s						
GNI	Garni	120.89	310	PKP	PKiKP	13 03 23.3	+0.5
	comp=Z,5.7nm,0.7s,baz=261,slow=7.6,SNR=3.5						
SCO	Scoresbysund	121.02	3	*i* P	PKPdf	13 03 20.7	-1.1
SCO	Scoresbysund	121.02	3	*i* PKIKP	PKPdf	13 03 20.7	-1.1
OBN	Obninsk	121.21	329	PFAKE		13 03 30.0	+7.3
OBN				LR	LR		
	comp=Z,1μm,21.0s						
OBN	Obninsk	121.21	329	*i* PKIKP	PKPdf	13 03 20.9	-1.7
OBN				*e*		13 04 51.2	
OBN				*e*PPP	PPP	13 07 25.3	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTBY	Guantanamo Bay	121.31	74	PFAKE		13 03 40.0	+16
GTBY				LR	LR		
	comp=Z,1μm,21.0s						
KBZ	Khabaz	121.42	314	PKP	PKiKP	13 03 24.9	+1.3
	comp=Z,1.8nm,0.8s,baz=130,slow=3.0,SNR=5.0						
VSR	Storozhevoye	121.43	324	*e*PKIKP	PKiKP	13 03 23.4	+0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KIV	Kislovodsk	121.51	315	PFAKE		13 03 40.0	+16
KIV				LR	LR		
	comp=Z,1μm,20.0s						
KIV	Kislovodsk	121.51	315	*i* PKIKP	PKPdf	13 03 22.5	-1.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1μm,23.0s						
FINES	FINESS Array B	122.26	338	PKP	PKPdf	13 03 22.7	-1.8
	comp=Z,3.9nm,0.9s,baz=64,slow=3.2,SNR=6.7						
PKME	Peaks-Kenny Pk	122.71	43	*e*PKPdf	PKPdf	13 03 25.8	-0.1
PKME				LR	LR		
	comp=Z,2μm,19.0s						
CPUP	Villa Florida	123.77	133	PKP	PKPdf	13 03 28.1	-0.4
	comp=Z,4.0nm,0.8s,baz=288,slow=2.3,SNR=8.3						
BOSA	Boshof	124.55	223	PKP	PKiKP	13 03 30.5	+0.1
	comp=Z,6.1nm,0.7s,baz=143,slow=2.0,SNR=11						
SDV	Santo Domingo	124.72	87	*e*PKPdf	PKPdf	13 03 30.3	-0.6
SDV				*e*SKPdf	SKPdf	13 07 04.2	-0.1
SDV				LR	LR		
	comp=Z,2μm,19.0s						
SUR	Sutherland	124.75	216	PFAKE		13 03 40.0	+9.2
SUR				LR	LR		
	comp=Z,4μm,19.0s						
SDDR	Presa de Saban	124.89	75	PFAKE		13 03 40.0	+8.8
SDDR				LR	LR		
	comp=Z,2μm,20.0s						
GRTK	Grand Turk	125.05	72	PFAKE		13 03 40.0	+8.7
GRTK				LR	LR		
	comp=Z,2μm,20.0s						
MICGM	Minsk	125.83	331	*e*LR	LR	13 04 08.0	
KMBO	Kilima Mbogo	127.09	260	PKP	PKiKP	13 03 36.4	+0.4
KMBO				LR	LR		
	comp=Z,3μm,19.0s						
KMBO	Kilima Mbogo	127.09	260	PKP	PKiKP	13 03 36.4	+0.4
	comp=Z,2.6nm,1.0s,baz=54,slow=18,SNR=3.9						
NB2	NORSAR Subarra	127.23	345	PKPdf	PKiKP	13 03 46.2	+12
	comp=Z,1.5nm,0.8s,baz=33,slow=1.7						
NOA	NORSAR Array B	127.23	345	PKP	PKPdf	13 03 34.0	0.0
	comp=Z,3.4nm,0.7s,baz=34,slow=2.0,SNR=8.5						
AKASG	Malin Array Be	127.26	327	PKP	PKPdf	13 03 34.0	-0.3
	comp=Z,1.2nm,0.6s,baz=57,slow=2.2,SNR=9.1						
KIEV	Kiev	127.27	327	*e*PKPdf	PKPdf	13 03 34.2	-0.2
KIEV				LR	LR		
	comp=Z,2μm,19.0s						
HFS	Hagfors	127.30	343	PKP	PKPdf	13 03 32.5	-1.6
	comp=Z,4.1nm,0.7s,baz=56,slow=1.5,SNR=3.3						
BRTR	Keskin Array B	129.22	312	PKP	PKPdf	13 03 38.2	-0.5
	comp=Z,2.0nm,0.9s,baz=48,slow=1.8,SNR=5.5						
MMAI	Mount Meron Ar	129.75	303	PKP	PKiKP	13 03 41.2	+0.7
	comp=Z,3.5nm,0.7s,baz=61,slow=9.0,SNR=3.7						
SJG	San Juan	129.75	76	*e*PKPdf	PKPdf	13 03 39.9	-0.1
SJG				LR	LR		
	comp=Z,1μm,22.0s						
ANTO	Ankara	129.79	313	PFAKE		13 03 50.0	+10
ANTO				LR	LR		
	comp=Z,839nm,20.0s						
LSZ	Lusaka	130.02	239	*e*PKPdf	PKPdf	13 03 40.0	-0.9
LSZ				LR	LR		
	comp=Z,4μm,19.0s						
EIL	Elat	130.81	299	PKP	PKiKP	13 03 42.6	-0.1
	comp=Z,4.4nm,0.7s,baz=141,slow=6.5,SNR=3.1						
TRIS	Tristan da Cun	131.50	182	PFAKE		13 03 50.0	+6.1
TRIS				LR	LR		
	comp=Z,4μm,19.0s						
MLR	Muntele Rosu	131.87	322	PKP	PKiKP	13 03 45.3	+0.8
	comp=Z,1.3nm,0.8s,baz=326,slow=3.3,SNR=3.6						
UZH	Uzhgorod	132.13	328	*e*PKHKP	PKPpre	13 03 28.5	
UZH				*i*		13 03 43.8	
UZH				*i*		13 03 51.6	
PTGA	Pitinga	133.15	102	PFAKE		13 04 00.0	+12
PTGA				LR	LR		
	comp=Z,21μm,22.0s						
MBAR	Mbarara	133.50	258	PFAKE		13 04 00.0	+11
MBAR				LR	LR		
	comp=Z,590nm,22.0s						
MORC	Moravsky Berou	133.74	332	*e*PKP	PKPdf	13 03 47.4	+0.6
MORC				*e*		13 04 01.7	
GRGR	Grenville	133.85	84	PFAKE		13 04 00.0	+11
GRGR				LR	LR		
	comp=Z,1μm,20.0s						
DPC	Dobruska-Polom	133.89	333	AMS	AMS	14 10 10.0	
	comp=Z,2μm,24.3s						
ANWB	Willy Bob	133.91	77	PFAKE		13 04 00.0	+11
ANWB				LR	LR		
	comp=Z,1μm,19.0s						
UPC	Upice	133.91	333	AMS	AMS	14 06 50.0	
	comp=Z,2μm,20.1s						
VYHS	Vyhne	133.99	330	*e*PKIKP	PKiKP	13 03 50.4	+1.8
VYHS				*e*		13 06 15.6	
VYHS	Vyhne	133.99	330	*e*PKP	PKiKP	13 03 50.4	+1.8
VYHS				*e*PP	PP	13 06 15.6	-1.6
VRAC	Vranov	134.51	332	*e*PKP	PKPdf	13 03 48.8	+0.6
VRAC				*e*		13 04 03.3	
PVCC	Panska Ves	134.52	334	AMS	AMS	14 07 30.0	
	comp=Z,2μm,22.3s						
BRG	Berggiesshubel	134.53	335	*e*PKP	PKiKP	13 03 50.4	+0.8
	comp=Z,5.2nm,1.0s						
BRG				*e*		13 04 02.1	
	comp=Z,171nm,2.6s						
	comp=N,1μm,20.7s						
	comp=E,1μm,18.4s						
	comp=Z,3μm,22.6s						
BRG	Berggiesshubel	134.53	335	*e*PKP	PKiKP	13 03 50.2	+0.7
	comp=Z,5.2nm,1.0s						
BRG	Berggiesshubel	134.53	335	*e*PKIKP	PKiKP	13 03 50.2	+0.7
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	Collm	134.57	336	*e*PKPdf	PKiKP	13 03 50.0	+0.4
CLL				*e*pPKiKP	pPKPdf	13 03 54.0	-2.0
CLL				*e*		13 04 02.0	
CLL				*e*		13 06 31.0	
CLL				LmV		14 15 00.0	
	comp=Z,2μm,18.1s						
CLL	Collm	134.57	336	*e*PKIKP	PKiKP	13 03 50.0	+0.4
CLL				*e*		13 04 02.0	
CLL				MLR	MLR		
	comp=Z,2μm,18.1s						
KRUC	Moravsky	134.77	332	*e*PKP	PKPdf	13 03 49.3	+0.6
MODS	Modra-Piesok	134.84	330	*e*PKIKP	PKiKP	13 03 50.7	+0.4
MODS	Modra-Piesok	134.84	330	*e*PKP	PKiKP	13 03 50.7	+0.4
PRA	Prague	134.92	334	AMS	AMS	14 13 40.0	
	comp=Z,2μm,21.9s						
PRU	Pruhonice	134.94	334	AMS	AMS	14 09 40.0	
	comp=Z,2μm,14.1s						
TREC	Trest	135.03	332	AMS	AMS	14 04 20.0	
	comp=Z,3μm,21.3s						
EKA	Eskdalemuir Ar	135.52	351	PKP	PKPdf	13 03 50.6	+0.7
	comp=Z,3.3nm,0.8s,baz=18,slow=1.4,SNR=5.1						
CONA	Conrad Observa	135.83	331	pPKPdf	PKiKP	13 03 53.6	+1.2
	comp=Z,17nm,1.5s						
BBGH	Gun Hill	135.96	83	PFAKE		13 04 00.0	+6.5
BBGH				LR	LR		
	comp=Z,2μm,19.0s						
KHC	Kasperske Hory	135.99	334	*e*PKPdf	PKiKP	13 03 55.4	+2.7
KHC				AMS	AMS	14 15 50.0	
	comp=Z,2μm,21.0s						
KHC	Kasperske Hory	135.99	334	*e*PKIKP	PKiKP	13 03 55.4	+2.7
KHC				MLR	MLR		
	comp=Z,2μm,21.0s						
KHC				MLR	MLR		
	comp=Z,2μm,19.3s						
TSUM	Tsumeb	136.00	226	PFAKE		13 04 00.0	+6.3
TSUM				LR	LR		
	comp=Z,4μm,20.0s						
GERES	GERESS Array B	136.15	333	PKhKP	PKPpre	13 03 39.4	
	comp=Z,0.9nm,0.6s,baz=349,slow=2.7,SNR=6.1						
GERES				PKP	PKPdf	13 03 51.0	-0.4
	comp=Z,1.4nm,0.7s,baz=48,slow=2.0,SNR=5.2						
ARSA	Arzberg	136.47	330	*e*PKPdf	PKPdf	13 03 50.5	-1.4
	comp=Z,8.6nm,1.6s						
MOA	Molln	136.63	332	*e*PKiKP	PKiKP	13 03 53.6	-0.4
	comp=Z,13nm,1.2s						
SOKA	Soboth	137.11	330	*i* P	PKiKP	13 03 56.8	+1.7
	comp=Z,12nm,1.2s						
BDFB	Brasilia	137.12	128	PKhKP	PKPpre	13 03 46.6	
	comp=Z,1.8nm,0.5s,baz=142,slow=18,SNR=2.8						
BDFB				PKP	PKPdf	13 03 54.6	+0.4
	comp=Z,9.5nm,0.8s,baz=208,slow=4.5,SNR=8.6						
OBKA	Obir	137.46	330	*i* PKiKP	PKiKP	13 03 55.0	-0.9
	comp=Z,15nm,1.5s						
KBA	Koelnbreinsper	137.62	332	PKiKP	PKiKP	13 03 55.5	-0.7
	comp=Z,7.9nm,1.1s						
WATA	Walderalm	138.23	333	*i* PKiKP	PKiKP	13 03 57.2	-0.2
	comp=Z,2.7nm,0.4s						
ABTA	Abfaltersbach	138.25	332	*i* PKPdf	PKPdf	13 03 52.5	-2.8
	comp=Z,12nm,1.0s						
MOTA	Moosalm	138.43	334	*i* PKiKP	PKPdf	13 03 56.4	+0.6
	comp=Z,7.2nm,0.9s						
RETA	Reutte	138.46	334	*i* PKPdf	PKPdf	13 03 53.3	-2.4
	comp=Z,17nm,1.1s						
SQTA	Sankt Quirin	138.48	334	*i* PKiKP	PKiKP	13 03 57.6	-0.3
	comp=Z,15nm,1.4s						
BFO	Black Forest	138.78	337	PFAKE		13 04 10.0	+12
BFO				LR	LR		
	comp=Z,60nm,20.0s						
FETA	Feichten	138.84	334	*i* PKPdf	PKPdf	13 03 55.0	-1.6
	comp=Z,11nm,0.9s						
DAVA	Damuels	138.99	335	*i* PKPdf	PKPdf	13 03 52.8	-3.9
	comp=Z,15nm,1.2s						
KEST	Kesra	147.77	322	PKPbc	PKPbc	13 04 15.6	+0.3
	comp=Z,73nm,0.9s,baz=277,slow=2.2,SNR=14						
H07N1	FLORES T-PHASE	148.40	25	*e*PKP	PKiKP	13 04 17.8	-0.6
H07S1	FLORES T-PHASE	148.63	25	*e*PKP	PKPbc	13 04 17.4	0.0
PBRG	Braganca	149.21	349	*e*PKPdf	PKPab	13 04 22.0	-1.2
PGAV	Gavieira, Arco	149.32	351	*e*PKPdf	PKiKP	13 04 20.0	-0.3
POLO	Lamas de Olo	149.82	350	*e*PKPdf	PKiKP	13 04 21.5	+0.2
MVO	Moncorvo	149.88	349	*e*PKPdf	PKiKP	13 04 21.8	+0.4
PVRL	Vila Real	149.90	350	*e*PKPdf	PKiKP	13 04 21.0	-0.4
SRBC	Serra Branca	150.16	22	*e*PKP	PKiKP	13 04 22.4	+0.4
PGRA	Graciosa	150.19	22	*e*PKP	PKiKP	13 04 24.3	+2.3
ROSA	Rosais	150.37	22	*e*PKP	PKiKP	13 04 22.3	-0.1
PVIS	Viseu	150.47	350	*e*PKPdf	PKiKP	13 04 22.9	+0.2
PICO	Pico	150.49	23	*e*PKP	PKPbc	13 04 19.5	-2.5
PMAN	Manadas	150.50	22	*e*PKP	PKiKP	13 04 23.6	+0.9
PCAN	Candelaria	150.50	23	*e*PKP	PKiKP	13 04 24.2	+1.5
ESDC	Sonseca Array	150.58	343	PKPbc	PKiKP	13 04 23.1	+0.2
	comp=Z,9.4nm,0.8s,baz=16,slow=2.2,SNR=27						
MTE	Manteigas	150.72	349	*e*PKPdf	PKPdf	13 04 19.4	+2.4
ADH	Angra Heroismo	150.79	21	*e*PKP	PKiKP	13 04 23.8	+0.5
PAB	San Pablo	150.80	344	*e*PKPbc	PKiKP	13 04 23.6	+0.2
PAB				LR	LR		
	comp=Z,2μm,20.0s						
PAB	San Pablo	150.80	344	*e*PKIKP	PKiKP	13 04 23.6	+0.2
PAB				MLR	MLR		
	comp=Z,2μm,20.0s						
PCAS	Casmilo, Conde	151.22	350	*e*PKPdf	PKiKP	13 04 24.2	0.0
PCBR	Castelo Branco	151.25	349	*e*PKPdf	PKiKP	13 04 24.5	+0.3
SHEL	Horse Pasture	151.25	198	*e*PKPbc	PKiKP	13 04 25.7	+0.8
SHEL				LR	LR		
	comp=Z,1μm,19.0s						
SHEL	Horse Pasture	151.25	198	*e*PKIKP	PKiKP	13 04 25.7	+0.8
SHEL				MLR	MLR		
	comp=Z,1μm,19.0s						
PMRV	Marv??o	151.63	348	*e*PKPdf	PKiKP	13 04 25.4	+0.4
PTOM	Tomar	151.63	350	*e*PKPdf	PKiKP	13 04 25.3	+0.3
PMTG	Montargil	152.13	350	*e*PKPdf	PKiKP	13 04 26.1	+0.1
PMTG	Montargil	152.13	350	*e*PKPab	PKPab	13 04 36.1	+0.9
CMLA	Cha da Macela	152.16	19	*e*PKP	PKiKP	13 04 26.9	+0.7
CMLA	Cha da Macela	152.16	19	PFAKE		13 04 30.0	+3.8
CMLA				LR	LR		
	comp=Z,2μm,19.0s						
PESTR	Estremoz	152.21	348	*e*PKPdf	PKPbc	13 04 25.9	0.0
PMAFR	Mafra	152.42	351	*e*PKPab	PKPab	13 04 36.8	+0.4
PSMN	Pico do Norte,	153.01	19	*e*PKP	PKPbc	13 04 27.6	-0.2
PBEJ	Beja	153.08	348	*e*PKPab	PKPab	13 04 41.0	+1.8
PNCL	Nicolau / Gran	153.12	350	*e*PKPab	PKPab	13 04 40.1	+0.7
MESJ	Messejana	153.33	349	*e*PKPdf	PKPdf	13 04 22.5	+1.6
PFVI	Vila Bisbo	154.12	350	*e*PKPdf	PKiKP	13 04 32.1	+1.9
MDT	Midelt	157.07	338	PKP	PKPdf	13 04 26.5	+0.2
	comp=Z,6.7nm,1.1s,baz=307,slow=5.1,SNR=3.3						
ASCN	Ascension	160.55	180	PFAKE		13 04 40.0	+9.2
ASCN				LR	LR		
	comp=Z,10μm,20.0s						
TORD	Torodi Ar. Bea	164.16	277	PKP	PKPdf	13 04 34.0	-0.3
	comp=Z,4.4nm,0.9s,baz=355,slow=4.3,SNR=16						
TORD				PKPab	PKPab	13 05 28.2	+0.2
	comp=Z,5.0nm,0.9s,baz=87,slow=6.4,SNR=5.4						
TORD				PP	PP	13 09 18.0	+3.7
	comp=Z,2.3nm,1.2s,baz=57,slow=5.3,SNR=4.5						
KIC	Kosan Boka	169.07	242	*e*PKP1	PKPab	13 05 49.8	+0.1
	comp=Z,202nm,1.6s						
LIC	Lamto	169.25	241	*e*PKP1	PKPab	13 05 50.7	+0.2
	comp=Z,170nm,1.6s						
DBIC	Dimbokro	169.32	243	PKP	PKPdf	13 04 40.0	+1.7
	comp=Z,6.2nm,0.9s,baz=250,slow=3.0,SNR=5.9						
DBIC				PKPab	PKPab	13 05 51.4	+0.6
	comp=Z,4.5nm,0.7s,baz=109,slow=5.8,SNR=7.1						
TIC	Toumodi	169.45	243	*e*PKP1	PKPab	13 05 50.2	-1.2
SACV	Santiago Islan	170.50	69	PFAKE		13 04 50.0	+11
SACV				LR	LR		
	comp=Z,2μm,19.0s						

NNC 06 12:49:37.9±7.5, 37°.04N×70°.37E, h0^{km}, mb3.6, mpv3.3, 1C-3D, Error ellipse: s-maj=74.2km s-min=40.4km az=163.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.86	39	⇓Pn	Pn	12 50 39.3	+0.6
	4.0nm,0.4s						
SFK				⇓Sn	Sn	12 51 25.5	+0.6
	21nm,0.5s						
KK31	Karatay Array	6.06	1	Pn	Pn	12 51 11.3	+2.6
	0.7nm,0.3s,baz=177,slow=12,SNR=9.1						
KK31				⇓Sn	Sn	12 52 20.9	+2.1
	0.8nm,0.3s,baz=180,slow=24,SNR=7.1						
AB31	Akbulak array	14.37	331	P	Pn	12 53 02.4	-0.1
	0.4nm,0.6s,baz=143,slow=11,SNR=8.3						
AKTO	Aktyubinsk	16.06	330	⇑P	Pn	12 53 19.1	-5.9
	1.3nm,0.7s						

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*IDC **06** 12:51:15.0±1.3, 11°.52S×165°.30E, h0^{km}, mb4.0/5, mb1 4.2/6, mb1mx3.7/53, mbtmp3.9/6, Error ellipse: s-maj=47.5km s-min=32.8km az=127.0*

*ISCJB **06** 12:51:16.9±0.9, 11°.7S±0°.1×165°.3E±0°.2, h24^{km}, mb4.0/5, Error ellipse: s-maj=31.9km s-min=19.6km az=0.3*

ISC 06 12:51:18.6±1.0**, 11°.6S**±0°.1×**165°.3E**±0°.2**, h24^{km}, n6, σ1^s.00**/6**, mb4.0**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.46	174	Pn	Pn	12 53 47.0	-0.3
	baz=292,slow=18,SNR=2.8						
WRA	Warramunga Arr	30.90	251	P	P	12 57 34.3	+0.6
	2.0nm,0.9s,baz=83,slow=9.1,SNR=4.9						
ILAR	Eielson Array	84.17	19	P	P	13 03 47.1	-0.4
	0.4nm,0.7s,baz=234,slow=5.6,SNR=6.3						
NVAR	Mina Array Bea	86.70	50	P	P	13 04 02.0	+1.0
	1.1nm,1.0s,baz=243,slow=8.0,SNR=3.1						
MKAR	Makanchi Array	93.64	317	P	P	13 04 32.9	-0.3
	0.5nm,0.7s,baz=107,slow=3.5,SNR=2.7						
ZALV	Zalesovo Beam	93.76	324	P	P	13 04 32.3	-1.1
	0.7nm,0.6s,baz=72,slow=4.7,SNR=2.8						

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*IDC **06** 12:51:32.1±0.8, 11°.30S×165°.30E, h0^{km}, mb4.2/16, mb1 4.4/18, mb1mx4.1/53, mbtmp4.2/18, ML4.1/2, Error ellipse: s-maj=23.9km s-min=15.7km az=133.0*

*ISCJB **06** 12:51:33.8±0.3, 11°.40S±0°.05×165°.21E±0°.05, h24^{km}, mb4.5/30, Error ellipse: s-maj=6.8km s-min=6.8km az=34.5*

*NEIC **06** 12:51:33.5±0.2, 11°.33S×165°.24E, h10^{km}, mb4.6/13, Error ellipse: s-maj=6.3km s-min=4.9km az=118.0*

ISC 06 12:51:35.6±0.5**, 11°.36S**±0°.07×**165°.27E**±0°.07**, h24^{km}, n56, σ0^s.82**/59**, mb4.5**/30**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.58	290	*e*Pn	Pn	12 52 56.5	-0.6
HNR				*e*Sn	Sn	12 54 01.4	+0.9
HNR	Honiara	5.58	290	Pn	Pn	12 52 57.6	+0.5
	7.9nm,0.3s,baz=180,slow=2.0,SNR=5.9						
HNR				Sn	Sn	12 54 01.4	+0.9
	5.2nm,0.3s,baz=66,slow=20,SNR=3.9						
DZM	Mont Dzumac	10.71	174	Pn	Pn	12 54 07.4	-0.2
	1.1nm,0.3s,baz=323,slow=14,SNR=6.6						
ONTNC	Ouen Toro	10.94	174	*e*Pn	Pn	12 54 11.1	+0.4
KWAJ	Kwajalein Atol	20.17	7	*e*P	P	12 56 08.1	-0.3
	498nm,1.3s						
CTA	Charters Tower	20.24	242	P	Pn	12 56 11.1	-0.3
	21nm,1.1s,baz=90,slow=11,SNR=4.9						
CTAO	Charters Tower	20.24	242	*e*P	P	12 56 08.5	-0.8
	28nm,1.1s						
ARMA	Armidale	22.81	212	*e*P	P	12 56 35.9	-1.0
	19nm,1.2s						
RAO	Raoul Island	23.72	141	*e*P	P	12 56 46.4	+0.5
	248nm,0.6s						
KNTN	Kanton	24.35	71	*e*P	P	12 56 51.9	-0.1
	197nm,1.5s						
CAN	Canberra	28.06	209	*e*P	P	12 57 26.4	+1.1
	29nm,1.4s						
URZ	Urewera	28.80	160	*e*P	P	12 57 30.9	-0.8
	18nm,1.2s						
STKA	Stephens Creek	29.89	223	*e*P	P	12 57 40.8	-0.8
	3.4nm,1.4s						
STKA	Stephens Creek	29.89	223	P	P	12 57 41.7	+0.1
	2.9nm,0.8s,baz=58,slow=9.5,SNR=2.7						
BFZ	Birch Farm	30.77	164	*e*P	P	12 57 50.0	+0.8
	70nm,1.4s						
WRAB	Tennant Creek	30.93	250	*e*P	P	12 57 51.0	+0.2
	40nm,1.6s						
WB2	Warramunga Arr	30.93	250	*e*P	P	12 57 50.6	-0.3
WR1	Warramunga Arr	30.94	250	*e*P	P	12 57 51.0	+0.1
	18nm,1.0s						
WR1				*e*PcP	PcP	13 00 48.0	+0.7
WRA	Warramunga Arr	30.94	250	P	P	12 57 51.0	+0.1
	7.4nm,0.9s,baz=81,slow=9.0,SNR=11						
WRA				PcP	PcP	13 00 48.0	+0.7
	0.8nm,0.9s,baz=56,slow=3.7,SNR=4.9						
TOO	Toolangi	31.56	211	*e*P	P	12 57 55.7	-0.6
	11nm,1.3s						
AS01	Alice Springs	32.20	243	*e*P	P	12 58 01.8	-0.3
AS31	Alice Springs	32.24	243	*e*P	P	12 58 00.5	-1.9
	1.3nm,0.9s						
ASAR	Alice Springs	32.24	243	P	P	12 58 02.4	0.0
	3.8nm,1.0s,baz=76,slow=8.4,SNR=6.9						
FITZ	Fitzroy Crossi	38.85	255	*e*P	P	12 58 59.2	0.0
	13nm,1.4s						
FITZ	Fitzroy Crossi	38.85	255	P	P	12 59 00.3	+1.1
	2.9nm,0.9s,baz=126,slow=14,SNR=3.6						
JHJ	Hachijo jima 2	50.47	332	P	P	13 00 33.1	+1.4
	256nm,0.9s,baz=78,slow=20,SNR=3.5						
MJAR	Matsushiro Arr	54.04	333	P	P	13 00 56.6	-1.6
	0.9nm,0.9s,baz=174,slow=9.1,SNR=2.8						
MAJO	Matsushiro	54.04	333	*e*P	P	13 00 56.6	-1.6
ASAJ	Asahikawa	58.94	341	P	P	13 01 31.9	-0.9
	3.8nm,1.0s,baz=204,slow=19,SNR=3.0						
PETK	Petropavlovsk-	64.54	355	P	P	13 02 10.7	+0.3
	1.7nm,0.8s,baz=140,slow=7.0,SNR=2.7						
PEA1	Petropavlovsk-	64.54	355	*e*P	P	13 02 10.7	+0.3
CM01	Chiang Mai Arr	71.79	294	*e*P	P	13 02 56.5	-0.1
CM31	Chiang Mai Arr	71.81	294	*e*P	P	13 02 56.1	-0.7
CMAR	Chiang Mai Arr	71.81	294	P	P	13 02 56.1	-0.7
	0.9nm,0.7s,baz=121,slow=4.4,SNR=5.5						
SONA0	Songino Array	78.65	324	*e*P	P	13 03 36.5	+0.8
SONM	Songino Array	78.65	324	P	P	13 03 36.5	+0.8
	0.8nm,0.8s,baz=124,slow=5.5,SNR=3.6						
HDA	Harding Lake	83.69	19	*e*P	P	13 04 02.0	0.0
	6.5nm,0.8s						
ILAR	Eielson Array	83.96	19	P	P	13 04 02.8	-0.5
	2.1nm,0.6s,baz=233,slow=5.2,SNR=25						
ILB	Eielson Array	83.96	19	*e*P	P	13 04 03.7	+0.3
IL1	Eielson Array	83.96	19	*e*P	P	13 04 03.3	-0.1
NV01	Mina Array Sit	86.58	50	*e*P	P	13 04 18.1	+0.7
NVAR	Mina Array Bea	86.58	50	P	P	13 04 18.3	+0.9
	2.2nm,0.9s,baz=227,slow=9.3,SNR=7.3						
NV11	Mina Array Sit	86.69	50	*e*P	P	13 04 18.1	+0.3
	0.9nm,1.4s						
U15A	North Rim	90.66	53	*e*P	P	13 04 37.4	+0.5
	5.4nm,0.9s						
HVU	Hansel Valley	91.56	48	*e*P	P	13 04 42.2	+1.4
	5.0nm,1.1s						
MK01	Makanchi Array	93.42	317	*e*P	P	13 04 47.5	-1.6
MK32	Makanchi Array	93.44	317	*e*P	P	13 04 50.2	+1.1
MKAR	Makanchi Array	93.44	317	P	P	13 04 50.2	+1.1
	1.2nm,0.7s,baz=95,slow=6.8,SNR=5.9						
ZALV	Zalesovo Beam	93.54	324	P	P	13 04 49.3	0.0
	0.9nm,0.6s,baz=113,slow=3.9,SNR=4.2						
ZAA1	Zalesovo Array	93.54	324	*e*P	P	13 04 49.3	0.0
YKA	Yellowknife Ar	95.47	27	P	P	13 04 56.6	-1.3
	0.5nm,0.8s,baz=257,slow=4.8,SNR=4.1						
YKB5	Yellowknife Ar	95.47	27	*e*P	P	13 04 56.6	-1.3
LTX	Lajitas	96.39	61	*e*P	P	13 05 03.6	+0.4
TXAR	Lajitas Array	96.39	61	P	P	13 05 03.6	+0.4
	0.6nm,1.1s,baz=218,slow=5.7,SNR=2.5						
MNMC	Minye Minye	118.02	119	*e*PKPdf	PKiKP	13 10 22.0	+0.3
ESDC	Sonseca Array	150.23	343	PKPbc	PKiKP	13 11 25.7	-0.2
	0.2nm,0.3s,baz=16,slow=4.2,SNR=2.9						

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*IDC **06** 12:54:00.4±1.2, 11°.55S×165°.58E, h0^{km}, mb4.1/13, mb1 4.2/15, mb1mx4.0/53, mbtmp4.1/15, ML4.0/2, Error ellipse: s-maj=33.1km s-min=19.1km az=119.0*

*NEIC **06** 12:54:01.6±0.4, 11°.59S×165°.57E, h10^{km}, mb4.4/6, Error ellipse: s-maj=10.7km s-min=7.6km az=109.0*

*ISCJB **06** 12:54:02.3±0.5, 11°.62S±0°.06×165°.51E±0°.08, h24^{km}, mb4.2/21, Error ellipse: s-maj=11.9km s-min=9.1km az=173.4*

ISC 06 12:54:04.3±0.7**, 11°.55S**±0°.09×**165°.48E**±0°.09**, h24^{km}, n35, σ1^s.26**/38**, mb4.2**/21**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.83	291	*e*Pn	Pn	12 55 30.1	+0.7
HNR				*e*Sn	Sn	12 56 33.5	-2.1
HNR				*e*Sn	Sn	12 56 35.4	-0.2
HNR	Honiara	5.83	291	Pn	Pn	12 55 31.4	+2.0
	4.1nm,0.3s,baz=158,slow=19,SNR=2.3						
HNR				Sn	Sn	12 56 33.5	-2.1
	7.1nm,0.3s,baz=91,slow=13,SNR=2.1						
DZM	Mont Dzumac	10.51	175	*e*Pn	Pn	12 56 35.4	+1.8
DZM	Mont Dzumac	10.51	175	Pn	Pn	12 56 33.0	-0.6
	1.1nm,0.3s,baz=18,slow=14,SNR=4.6						
ARMA	Armidale	22.76	212	*e*P	P	12 59 04.6	-0.5
	36nm,1.4s						
BKZ	Black Stump Fm	29.20	162	*e*P	P	13 00 03.4	-0.7
	23nm,1.4s						
STKA	Stephens Creek	29.90	224	*e*P	P	13 00 09.4	-1.0
	0.7nm,1.1s						
STKA	Stephens Creek	29.90	224	P	P	13 00 10.9	+0.6
	1.8nm,0.7s,baz=34,slow=14,SNR=3.7						
SNZO	South Karori	30.73	166	*e*P	P	13 00 16.4	-1.1
	72nm,1.4s						
WRAB	Tennant Creek	31.06	251	*e*P	P	13 00 20.6	-0.2
	13nm,1.4s						
WB2	Warramunga Arr	31.06	251	*e*P	P	13 00 20.8	0.0
	4.6nm,0.9s						
WR1	Warramunga Arr	31.07	251	*e*P	P	13 00 21.5	+0.6
	5.8nm,0.9s						
WRA	Warramunga Arr	31.07	251	P	P	13 00 21.5	+0.6
	3.8nm,0.8s,baz=79,slow=9.2,SNR=11						
TOO	Toolangi	31.51	211	*e*P	P	13 00 23.5	-1.1
	11nm,1.3s						
AS31	Alice Springs	32.34	244	*e*P	P	13 00 31.2	-0.8
	2.4nm,1.5s						
ASAR	Alice Springs	32.34	244	P	P	13 00 31.2	-0.8
	1.1nm,0.7s,baz=76,slow=8.1,SNR=4.9						
FITZ	Fitzroy Crossi	39.00	256	*e*P	P	13 01 29.5	+0.3
	4.7nm,0.8s						
FITZ	Fitzroy Crossi	39.00	256	P	P	13 01 28.2	-1.0
	4.1nm,0.8s,baz=99,slow=3.8,SNR=5.5						
MJAR	Matsushiro Arr	54.30	333	P	P	13 03 27.2	-1.5
	1.6nm,0.8s,baz=172,slow=9.4,SNR=3.6						
MAJO	Matsushiro	54.30	333	*e*P	P	13 03 27.2	-1.6
ASAJ	Asahikawa	59.18	341	P	P	13 04 03.4	+0.2
	4.6nm,1.0s,baz=151,slow=19,SNR=3.5						
USRK	Ussuriysk Ar.	63.28	334	P	P	13 04 30.3	-0.7
	1.5nm,0.7s,baz=184,slow=8.1,SNR=3.6						

CM01	Chiang Mai Arr	72.05	294	*e*P	P	13 05 29.4	+2.5
CM31	Chiang Mai Arr	72.08	294	*e*P	P	13 05 29.6	+2.4
CMAR	Chiang Mai Arr	72.08	294	P	P	13 05 29.6	+2.4
	1.7nm,0.8s,baz=125,slow=4.4,SNR=8.5						
SONA0	Songino Array	78.92	324	*e*P	P	13 06 06.6	+0.6
SONM	Songino Array	78.92	324	P	P	13 06 06.6	+0.6
	0.7nm,0.8s,baz=122,slow=6.3,SNR=4.0						
ILAR	Eielson Array	84.07	19	P	P	13 06 33.3	+0.6
	0.5nm,0.7s,baz=235,slow=5.3,SNR=6.5						
ILB	Eielson Array	84.07	19	*e*P	P	13 06 33.3	+0.6
MK32	Makanchi Array	93.71	317	*e*P	P	13 07 19.2	+0.1
MKAR	Makanchi Array	93.71	317	P	P	13 07 19.2	+0.1
	1.1nm,0.7s,baz=101,slow=5.1,SNR=5.7						
ZALV	Zalesovo Beam	93.81	324	P	P	13 07 20.3	+1.0
	0.3nm,0.5s,baz=94,slow=4.6,SNR=3.2						
ZAA1	Zalesovo Array	93.81	324	*e*P	P	13 07 20.3	+1.0
YKA	Yellowknife Ar	95.54	27	P	P	13 07 25.9	-1.1
	0.1nm,0.7s,baz=251,slow=3.5,SNR=2.7						
YKB5	Yellowknife Ar	95.54	27	*e*P	P	13 07 25.4	-1.6

IDC 06 12:56:05.2±1.7**, 2°.72N×127°.27E, h0km, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.4**/61**, mbtmp3.6**/5**, Error ellipse: s-maj=111.8km s-min=19.3km az=70.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.75	184	P	P	13 00 47.2	-0.5
	1.4nm,0.7s,baz=356,slow=9.0,SNR=7.0						
WRA	Warramunga Arr	23.57	163	P	P	13 01 17.1	-0.5
	0.4nm,0.4s,baz=343,slow=11,SNR=26						
ASAR	Alice Springs	27.01	167	P	P	13 01 50.1	+0.9
	0.2nm,0.3s,baz=349,slow=7.5,SNR=4.0						
MKAR	Makanchi Array	58.68	325	P	P	13 06 04.5	-0.2
	0.5nm,0.4s,baz=117,slow=8.3,SNR=14						
KURBB	Kurchatov Arra	62.87	327	P	P	13 06 33.1	+0.1
	0.5nm,0.4s,baz=129,slow=5.9,SNR=6.6						

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*ISCJB **06** 12:56:16.0±0.7, 10°.8S±0°.1×166°.10E±0°.07, h10km, mb4.0/13, Error ellipse: s-maj=18.1km s-min=9.9km az=168.0*

*IDC **06** 12:56:15.4±1.3, 10°.94S×166°.28E, h0km, mb3.9/12, mb1 4.1/13, mb1mx4.0/49, mbtmp4.0/13, ML4.3/1, Error ellipse: s-maj=37.8km s-min=18.4km az=142.0*

*NEIC **06** 12:56:17.0±0.6, 10°.91S×166°.21E, h10km, mb4.3/3, Error ellipse: s-maj=18.9km s-min=9.0km az=146.0*

ISC 06 12:56:17.6±1.0**, 10°.9S**±0°.2×**166°.15E**±0°.09**, h10km, n30, σ1ˢ20**/26**, mb4.0**/13**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.27	282	*e*Pn	Pn	12 57 50.3	0.0
HNR				*e*Sn	Sn	12 59 00.2	-1.9
HNR				*e*Sn	Sn	12 59 02.2	+0.2
HNR	Honiara	6.27	282	Pn	Pn	12 57 52.2	+2.0
	6.2nm,0.3s,baz=165,slow=20,SNR=5.5						
HNR				Sn	Sn	12 59 00.2	-1.9
	3.7nm,0.3s,baz=90,slow=20,SNR=1.3						
MANU	Manus Island	20.60	294	*e*P	Pn	13 01 03.5	+4.1
	57nm,0.8s						
CTA	Charters Tower	21.24	242	P	P	13 01 03.5	-0.5
	6.0nm,1.0s,baz=119,slow=19,SNR=2.4						
CTAO	Charters Tower	21.24	242	*e*P	P	13 01 03.6	-0.4
	13nm,0.9s						
H11S2	WAKE ISLAND Hy	29.16	1	T	T	13 32 44.5	
	baz=182						
H11S3	WAKE ISLAND Hy	29.16	1	T	T	13 32 44.8	
	baz=182						
H11S1	WAKE ISLAND Hy	29.18	1	T	T	13 32 46.1	
	baz=182						
H11N1	WAKE ISLAND Hy	30.38	1	T	T	13 34 15.9	
	baz=188						
H11N3	WAKE ISLAND Hy	30.38	1	T	T	13 34 16.9	
	baz=188						
H11N2	WAKE ISLAND Hy	30.40	1	T	T	13 34 17.6	
	baz=188						
WR1	Warramunga Arr	31.93	250	*e*P	P	13 02 43.6	-0.1
	9.8nm,1.3s						
WRA	Warramunga Arr	31.93	250	P	P	13 02 43.6	-0.2
	3.8nm,0.9s,baz=80,slow=8.8,SNR=2.7						
ASAR	Alice Springs	33.24	243	P	P	13 02 55.1	-0.1
	1.8nm,0.8s,baz=73,slow=9.3,SNR=5.7						
FITZ	Fitzroy Crossi	39.82	255	*e*P	P	13 03 50.1	-1.3
	4.1nm,1.0s						
FITZ	Fitzroy Crossi	39.82	255	P	P	13 03 50.6	-0.8
	1.5nm,0.8s,baz=90,slow=10,SNR=2.5						
MJAR	Matsushiro Arr	53.98	332	P	P	13 05 41.6	-0.4
	1.5nm,0.9s,baz=187,slow=8.6,SNR=3.7						
MAJO	Matsushiro	53.99	332	*e*P	P	13 05 41.6	-0.4
ASAJ	Asahikawa	58.74	340	P	P	13 06 15.2	-0.5
	2.6nm,0.9s,baz=217,slow=20,SNR=2.5						
KLR	Kul'dur	67.04	336	P	P	13 07 10.3	-0.6
	0.7nm,0.8s,baz=186,slow=9.2,SNR=2.7						
CM31	Chiang Mai Arr	72.40	293	*e*P	P	13 07 46.4	+1.8
CMAR	Chiang Mai Arr	72.40	293	P	P	13 07 46.4	+1.8
	1.0nm,0.9s,baz=110,slow=4.1,SNR=2.7						
SONA0	Songino Array	78.75	324	*e*P	P	13 08 22.1	+1.5
SONM	Songino Array	78.75	324	P	P	13 08 22.1	+1.5
	0.9nm,1.0s,baz=124,slow=4.1,SNR=2.0						
ILAR	Eielson Array	83.20	18	P	P	13 08 43.2	-0.5
	0.8nm,0.8s,baz=236,slow=5.3,SNR=7.0						
ILB	Eielson Array	83.20	18	*e*P	P	13 08 42.9	-0.9
NV01	Mina Array Sit	85.59	50	*e*P	P	13 08 54.6	-2.2
NVAR	Mina Array Bea	85.59	50	P	P	13 08 55.7	-1.1
	0.5nm,0.7s,baz=242,slow=9.1,SNR=3.1						
PD31	Pinedale Array	93.13	47	*e*P	P	13 09 32.8	+0.4
PDAR	Pinedale Array	93.13	47	P	P	13 09 32.8	+0.4
	0.2nm,0.6s,baz=272,slow=6.0,SNR=2.8						

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*IDC **06** 12:58:44.0±0.6, 11°.26S×165°.92E, h0km, mb4.5/18, mb1 4.6/20, mb1mx4.4/42, mbtmp4.6/20, ML4.8/2, MS5.0/1, Ms1 5.0/1, ms1mx4.1/31, Error ellipse: s-maj=20.0km s-min=13.9km az=103.0*

*ISCJB **06** 12:58:44.5±0.2, 11°.31S±0°.04×165°.78E±0°.05, h10km, mb4.8/59, Error ellipse: s-maj=7.6km s-min=5.6km az=179.3*

*NEIC **06** 12:58:46.1±0.2, 11°.24S×165°.79E, h10km, mb4.9/30, Error ellipse: s-maj=5.6km s-min=4.0km az=98.0*

ISC 06 12:58:46.3±0.4**, 11°.30S**±0°.06×**165°.69E**±0°.06**, h10km, n92, σ1ˢ55**/100**, mb4.9**/59**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.95	288	*e*P	Pn	13 00 18.0	+3.4
HNR				*e*S	Sb	13 01 35.0	-6.6
HNR	Honiara	5.95	288	*e*Pn	Pn	13 00 15.3	+0.7
HNR				*e*Sn	Sn	13 01 21.8	-1.1
HNR	Honiara	5.95	288	Pn	Pn	13 00 16.9	+2.3
	11nm,0.3s,baz=180,slow=8.1,SNR=3.2						
HNR				Sn	Sn	13 01 18.9	-4.0
	3.1nm,0.3s,baz=36,slow=8.7,SNR=1.8						
DZM	Mont Dzumac	10.73	176	Pn	Pn	13 01 21.3	+1.1
	15nm,0.3s,baz=355,slow=12,SNR=51						
DZM				Sn	Sn	13 03 15.0	-5.5
	0.4nm,0.3s,baz=336,slow=20,SNR=2.2						
ONTNC	Ouen Toro	10.97	176	*e*Pn	Pn	13 01 24.8	+1.4
PINNC	Pines Island,	11.37	172	*e*Pn	Pn	13 01 30.6	+1.7
CTA	Charters Tower	20.64	243	P	Pn	13 03 28.6	+0.1
	30nm,0.9s,baz=70,slow=12,SNR=16						
CTAO	Charters Tower	20.64	243	*e*P	P	13 03 27.3	+1.1
	37nm,0.9s						
KNTN	Kanton	23.95	71	*e*P	P	13 03 58.9	-2.0
	199nm,1.4s						
OUZ	Omahuta	24.87	164	*e*P	P	13 04 09.6	+0.5
	58nm,1.2s						
HIZ	Hauiti	28.30	165	*e*P	P	13 04 39.8	-0.3
	49nm,1.1s						
URZ	Urewera	28.72	161	P	P	13 04 41.7	-2.1
	6.6nm,0.8s,baz=0.0,slow=1.0,SNR=2.4						
STKA	Stephens Creek	30.22	224	*e*P	P	13 04 58.3	+1.1
	2.7nm,0.8s						
STKA	Stephens Creek	30.22	224	P	P	13 04 58.0	+0.8
	15nm,0.8s,baz=32,slow=8.9,SNR=23						
THZ	Tophouse	30.99	169	*e*P	P	13 05 04.8	+0.8
	27nm,1.0s						
WB2	Warramunga Arr	31.34	250	*e*P	P	13 05 07.7	+0.5
WRAB	Tennant Creek	31.34	250	*e*P	P	13 05 07.8	+0.5
	17nm,1.0s						
WRA	Warramunga Arr	31.35	250	P	P	13 05 07.8	+0.4
	12nm,0.8s,baz=81,slow=9.2,SNR=44						
OXZ	Oxford	32.38	171	*e*P	P	13 05 16.9	+0.9
	21nm,1.0s						
AS01	Alice Springs	32.59	244	*e*P	P	13 05 17.9	-0.4
RPZ	Rata Peaks	32.62	173	*e*P	P	13 05 18.9	+0.6
	30nm,0.9s						
RPZ	Rata Peaks	32.62	173	P	P	13 05 18.3	+0.1
	26nm,0.8s,baz=88,slow=2.9,SNR=8.8						
AS31	Alice Springs	32.63	244	*e*P	P	13 05 17.9	-0.8
	1.2nm,0.6s						
ASAR	Alice Springs	32.63	244	P	P	13 05 18.4	-0.2
	3.0nm,0.7s,baz=71,slow=9.5,SNR=17						
ASAR				PcP	PcP	13 08 04.7	-0.1
	0.4nm,0.5s,baz=58,slow=2.3,SNR=3.4						
MQZ	McQueen's Vall	32.84	171	*e*P	P	13 05 20.5	+0.4
	99nm,1.7s						
ODZ	Otahua Downs	33.89	174	*e*P	P	13 05 29.0	-0.3
	48nm,1.4s						
SAUI	Saumlaki	34.05	272	*e*P	P	13 05 31.1	0.0
	93nm,1.0s						
NWAO	Narrogin (SRO)	49.28	236	P	P	13 07 36.0	+0.4
	13nm,1.0s,baz=21,slow=18,SNR=3.3						
MJAR	Matsushiro Arr	54.18	333	P	P	13 08 10.9	-1.1
	1.3nm,0.7s,baz=172,slow=8.6,SNR=4.9						
ASAJ	Asahikawa	59.02	341	P	P	13 08 45.6	-0.7
	5.3nm,0.8s,baz=276,slow=18,SNR=4.3						
ASAJ				LR	LR	13 30 39.4	
	comp=Z,1μm,20.6s,baz=222,slow=32						
NJ2	Nanjing	62.17	316	*e*P	P	13 09 08.3	+0.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Ar.	63.16	333	P	P	13 09 12.9	-1.5
	comp=Z,2.8nm,0.9s,baz=198,slow=4.2,SNR=3.9						
CN2	Changchun	65.94	329	*e*P	P	13 09 33.1	+0.5
CASY	Casey	66.12	201	*e*P	P	13 09 34.2	+0.7
	comp=Z,17nm,1.1s						
KLR	Kul'dur	67.27	337	P	P	13 09 41.0	0.0
	baz=126,slow=8.7						
ENH	Enshi	68.02	309	*e*P	P	13 09 46.5	+0.3
	comp=Z,16nm,1.0s						
GYA	Guiyang	68.52	304	⇑*i*P	P	13 09 50.7	+1.2
GYA				PP	PP	13 12 25.0	+4.0
GYA				S	S	13 18 53.2	+1.0
GYA				SKS	SKiKP	13 19 46.4	+2.7
GYA	Guiyang	68.52	304	SS	SS	13 23 19.0	+2.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,490nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,480nm,18.4s						
PBKT	Sadao Pong	69.73	292	P	P	13 09 59.3	+2.3
	comp=Z,6.4nm,0.9s						
XAN	Xi'an	70.26	312	P	P	13 10 00.8	+0.8
XAN				pP	PcP	13 10 15.7	-6.1
XAN				sP	pwP	13 10 23.1	+15
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				LR	LR		
	comp=N,330nm,14.1s						
XAN				LR	LR		
	comp=E,710nm,15.2s						
XAN				LR	LR		
	comp=Z,770nm,15.2s						
XAN	Xi'an	70.26	312	*e*P	P	13 10 00.9	+0.9
	comp=Z,9.1nm,1.0s						
UTHA	Uthaitani	70.80	291	P	P	13 10 16.7	+13
	comp=Z,2.9nm,1.1s						
KMI	Kunming	71.21	301	P	P	13 10 07.7	+1.4
KMI				sP	pwP	13 10 17.2	+3.3
KMI				pmax	pmax		
	comp=Z,12nm,1.5s						
HHC	Hu-ho-hao-te	72.00	320	*e*P	P	13 10 12.3	+1.8
HHC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CM01	Chiang Mai Arr	72.14	294	*e*P	P	13 10 13.1	+1.4
CMAR	Chiang Mai Arr	72.17	294	P	P	13 10 14.2	+2.3
	comp=Z,5.0nm,1.0s,baz=116,slow=4.5,SNR=22						
CMMT	Chiang Mai	72.28	294	P	P	13 10 14.6	+2.1
	comp=Z,6.4nm,1.2s						
CHTO	Chiang Mai	72.28	294	*e*P	P	13 10 13.7	+1.1
	comp=Z,7.7nm,1.1s						
CHTO	Chiang Mai	72.28	294	P	P	13 10 14.7	+2.1
	comp=Z,29nm,1.2s						
CD2	Chengdu	72.72	307	*e*P	P	13 10 15.1	+0.1
SEY	Seymchan	74.72	354	P	P	13 10 25.8	-0.1
	comp=Z,1.8nm,0.9s,baz=124,slow=7.5,SNR=4.2						
LZH	Lanzhou	74.89	312	*e*P	P	13 10 29.8	+2.0
LZH				pP	pwP	13 10 34.0	-1.5
LZH				sP	PcP	13 10 37.6	-4.1
LZH				PP	PP	13 13 19.0	+3.5
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,94nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,16.3s						
LZH				LR	LR		
	comp=E,210nm,16.4s						
LZH				LR	LR		
	comp=Z,270nm,17.5s						
GAMB	Gambell	76.83	10	*e*P	P	13 10 37.9	-0.1
	comp=Z,8.7nm,0.8s						
QSPA	South Pole Qui	78.70	180	*e*P	P	13 10 49.0	+0.2
	comp=Z,12nm,1.0s						
ANM	Nome	78.75	12	*e*P	P	13 10 48.8	+0.1
	comp=Z,9.5nm,1.2s						
SONM	Songino Array	78.84	324	P	P	13 10 49.3	-0.4
	comp=Z,2.2nm,0.9s,baz=137,slow=7.0,SNR=11						
SONA1	Songino Array	78.85	324	*e*P	P	13 10 50.3	+0.5
BILL	Bilibino	79.14	0	*e*P	P	13 10 50.8	0.0
	comp=Z,11nm,0.9s						
GTA	Gaotai	79.20	314	⇓P	P	13 10 52.9	+1.0
GTA				pP	PcP	13 11 02.8	+2.6
GTA				sP	pwP	13 11 06.9	+7.3
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				LR	LR		
	comp=N,1μm,16.5s						
GTA				LR	LR		
	comp=E,1μm,16.5s						
GTA				LR	LR		
	comp=Z,2μm,17.1s						
CAST	Castle Rocks	81.21	18	*e*P	P	13 11 00.7	-1.4
	comp=Z,6.8nm,0.8s						
RND	Reindeer	82.20	19	*e*P	P	13 11 06.8	-0.5
	comp=Z,9.1nm,1.0s						
MCK	McKinley	82.40	19	*e*P	P	13 11 08.2	-0.2
	comp=Z,22nm,1.4s						
IM3	Indian Mountai	82.69	16	*e*P	P	13 11 09.4	-0.3
HARP	HAARP	82.74	21	*e*P	P	13 11 09.4	-0.8
	comp=Z,21nm,1.1s						
WRH	Wood River Hil	83.19	18	*e*P	P	13 11 11.4	-1.0
	comp=Z,9.9nm,1.0s						
MDM	Murphy Dome	83.49	18	*e*P	P	13 11 13.6	-0.4
	comp=Z,9.9nm,0.9s						
HDA	Harding Lake	83.50	19	*e*P	P	13 11 13.2	-0.8
	comp=Z,18nm,0.8s						
COLA	College	83.55	18	*e*P	P	13 11 13.0	-1.1
	comp=Z,15nm,0.5s						
RIDG	Independ'e Rid	83.73	20	*e*P	P	13 11 15.1	-0.2
	comp=Z,19nm,1.2s						
IL1	Eielson Array	83.77	19	*e*P	P	13 11 14.3	-1.0
ILAR	Eielson Array	83.77	19	P	P	13 11 14.3	-1.1
	comp=Z,1.9nm,0.8s,baz=235,slow=4.8,SNR=20						
ILB	Eielson Array	83.77	19	*e*P	P	13 11 14.6	-0.8
SCRK	Sand Creek	84.18	20	*e*P	P	13 11 17.6	0.0
	comp=Z,12nm,1.0s						
AFDM	Forest Hills D	84.41	49	*e*P	P	13 11 19.2	-0.1
	comp=Z,4.3nm,1.0s						
DAWY	Dawson	85.81	21	*e*P	P	13 11 25.7	-0.1
	comp=Z,5.5nm,1.0s						
NV01	Mina Array Sit	86.23	50	*e*P	P	13 11 27.9	-0.8
NVAR	Mina Array Bea	86.23	50	P	P	13 11 27.5	-1.2
	comp=Z,2.1nm,1.1s,baz=231,slow=9.1,SNR=4.9						
WMQ	Urumqi	89.24	315	*e*P	P	13 11 43.5	+0.7
WMQ				sP	pwP	13 11 52.2	+1.7
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
WMQ				LR	LR		
	comp=N,1μm,22.9s						
WMQ				LR	LR		
	comp=E,1μm,16.1s						
WMQ				LR	LR		
	comp=Z,2μm,17.9s						
HVU	Hansel Valley	91.22	48	*e*P	P	13 11 51.8	-0.3
	comp=Z,7.0nm,1.3s						
MK01	Makanchi Array	93.66	317	*e*P	P	13 12 03.2	0.0
MKAR	Makanchi Array	93.67	317	P	P	13 12 03.2	-0.1
	comp=Z,3.0nm,0.7s,baz=96,slow=6.1,SNR=7.3						
ZALV	Zalesovo Beam	93.73	324	*e*P	P	13 12 02.3	-1.0
ZALV	Zalesovo Beam	93.73	324	P	P	13 12 02.5	-0.8
	comp=Z,3.6nm,1.0s,baz=134,slow=4.3,SNR=3.7						
MAKZ	Makanchi	93.89	317	*e*P	P	13 12 03.8	-0.4
	comp=Z,7.6nm,1.2s						
YKA	Yellowknife Ar	95.22	27	P	P	13 12 07.6	-2.2
	comp=Z,0.3nm,0.5s,baz=255,slow=4.6,SNR=7.0						
ARCES	ARCESS Array B	116.57	345	PKP	PKPdf	13 17 29.6	-0.5
	comp=Z,1.3nm,0.7s,baz=87,slow=2.5,SNR=7.9						
CLL	Collm	134.32	336	*e*PKPdf	PKiKP	13 18 05.0	-0.9
KEST	Kesra	147.59	322	PKPbc	PKPbc	13 18 31.0	-0.5
	comp=Z,5.9nm,0.9s,baz=310,slow=2.0,SNR=4.4						
ES19	SONSECA Array	150.25	344	*e*PKPbc	PKiKP	13 18 38.5	-0.5
ESDC	Sonseca Array	150.29	344	PKP	PKPdf	13 18 31.1	-2.0
	comp=Z,0.2nm,0.4s,baz=35,slow=2.3,SNR=3.0						
ESDC				PKPbc	PKPbc	13 18 37.5	-0.8
	comp=Z,0.5nm,0.6s,baz=53,slow=2.3,SNR=5.2						
TOA0	Torodi Ar. Sit	164.25	278	*e*PKPdf	PKPdf	13 18 51.4	+0.2
TORD	Torodi Ar. Bea	164.25	278	PKP	PKPdf	13 18 50.2	-1.0
	comp=Z,0.7nm,0.9s,baz=142,slow=4.9,SNR=3.3						
TORD				PKPab	PKPab	13 19 45.1	0.0
	comp=Z,1.3nm,1.1s,baz=70,slow=4.7,SNR=2.7						

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*IDC **06** 13:02:06.5±1.1, 10°.85S×164°.57E, h0km, mb4.1/12, mb1 4.2/15, mb1mx4.1/36, mbtmp4.1/15, ML4.2/3, Error ellipse: s-maj=30.8km s-min=17.1km az=122.0*

*NEIC **06** 13:02:08.5±0.3, 10°.79S×164°.56E, h10km, mb4.5/4, Error ellipse: s-maj=7.8km s-min=5.1km az=85.0*

*ISCJB **06** 13:02:09.0±0.4, 10°.88S±0°.05×164°.55E±0°.06, h29km, mb4.1/14, Error ellipse: s-maj=9.0km s-min=6.8km az=156.7*

ISC 06 13:02:11.2±0.7**, 10°.84S**±0°.08×**164°.57E**±0°.08**, h29km, n41, σ0ˢ61**/37**, mb4.2**/14**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.76	287	*e*P	Pn	13 03 21.0	-0.1
HNR				*e*S	Sn	13 04 16.0	+0.6
HNR	Honiara	4.76	287	Pn	Pn	13 03 20.7	-0.4
	55nm,0.3s,baz=140,slow=7.2,SNR=11						
HNR				Sn	Sn	13 04 15.8	+0.5
	18nm,0.3s,baz=151,slow=19,SNR=3.2						
MARNC	Mare, Loyalty	11.09	163	*e*Pn	Pn	13 04 48.6	+0.8
DZM	Mont Dzumac	11.31	171	*e*Pn	Pn	13 04 51.1	+0.1
DZM	Mont Dzumac	11.31	171	Pn	Pn	13 04 51.5	+0.5
	1.4nm,0.3s,baz=338,slow=19,SNR=4.3						
ONTNC	Ouen Toro	11.54	171	*e*Pn	Pn	13 04 54.6	+0.5
PINNC	Pines Island,	12.03	167	*e*Pn	Pn	13 05 01.2	+0.5
RABL	Rabaul	13.96	297	*e*Pn	Pn	13 05 27.9	+0.8
PATS	Pohnpei	18.63	340	*e*P	P	13 06 26.0	-0.7
	248nm,1.4s						
KWAJ	Kwajalein Atol	19.75	9	*e*P	P	13 06 39.1	+0.3
	306nm,1.0s						
CTA	Charters Tower	19.89	240	P	P	13 06 41.3	+0.9
	0.2nm,0.3s,baz=60,slow=14,SNR=4.3						
CTAO	Charters Tower	19.89	240	*e*P	P	13 06 40.7	+0.3
	38nm,1.4s						
H11S2	WAKE ISLAND Hy	29.22	4	T	T	13 38 35.2	
	baz=184,slow=76,SNR=4.0						
H11S3	WAKE ISLAND Hy	29.22	4	T	T	13 38 33.0	
	baz=184,slow=76,SNR=3.2						
H11S1	WAKE ISLAND Hy	29.24	4	T	T	13 38 42.1	
	baz=184,slow=76,SNR=5.3						
STKA	Stephens Creek	29.81	222	*e*P	P	13 08 16.5	+0.8
	1.4nm,1.0s						
STKA	Stephens Creek	29.81	222	P	P	13 08 14.6	-1.1
	1.6nm,0.6s,baz=23,slow=7.7,SNR=1.8						
H11N1	WAKE ISLAND Hy	30.45	4	T	T	13 40 07.4	
	baz=184,slow=76,SNR=3.9						
H11N3	WAKE ISLAND Hy	30.45	4	T	T	13 40 08.0	
	baz=184,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.46	4	T	T	13 40 11.8	
	baz=184,slow=76,SNR=4.1						
WR1	Warramunga Arr	30.48	249	*e*P	P	13 08 20.5	-1.3
	9.5nm,1.3s						
WRA	Warramunga Arr	30.48	249	P	P	13 08 20.5	-1.3
	0.6nm,0.5s,baz=73,slow=9.2,SNR=4.6						
ASAR	Alice Springs	31.86	242	P	P	13 08 32.7	-1.3
	0.7nm,0.8s,baz=68,slow=10,SNR=3.0						
ASAJ	Asahikawa	58.23	342	P	P	13 12 02.8	0.0
	3.0nm,0.9s,baz=250,slow=12,SNR=3.3						
PETK	Petropavlovsk-	63.97	355	P	P	13 12 41.7	+0.2
	3.8nm,0.9s,baz=179,slow=12,SNR=3.7						
PEA1	Petropavlovsk-	63.97	355	*e*P	P	13 12 41.7	+0.1
CMAR	Chiang Mai Arr	70.98	294	P	P	13 13 27.0	+0.4
	0.5nm,0.3s,baz=115,slow=4.3,SNR=2.9						
MA2	Magadan	71.05	353	P	P	13 13 26.3	+0.1
	1.5nm,0.2s,baz=162,slow=20,SNR=2.2						
SEY	Seymchan	74.15	354	P	P	13 13 44.7	+0.1
	0.7nm,0.6s,baz=73,slow=19,SNR=2.9						
SONA0	Songino Array	77.82	324	*e*P	P	13 14 05.7	-0.3
SONM	Songino Array	77.82	324	P	P	13 14 05.7	-0.3
	1.1nm,1.0s,baz=131,slow=4.0,SNR=4.1						
SONA1	Songino Array	77.83	324	*e*P	P	13 14 05.9	-0.2
IM3	Indian Mountai	82.54	16	*e*P	P	13 14 31.1	+0.2
HDA	Harding Lake	83.42	19	*e*P	P	13 14 35.4	-0.1
	11nm,1.1s						
IL1	Eielson Array	83.69	19	*e*P	P	13 14 36.3	-0.5
ILAR	Eielson Array	83.69	19	P	P	13 14 36.2	-0.7
	2.2nm,0.7s,baz=237,slow=5.4,SNR=18						
ILB	Eielson Array	83.69	19	*e*P	P	13 14 37.2	+0.4
MK32	Makanchi Array	92.59	317	*e*P	P	13 15 20.0	-0.1
MKAR	Makanchi Array	92.59	317	P	P	13 15 20.0	-0.1
	1.2nm,0.9s,baz=93,slow=3.4,SNR=3.1						
ZALV	Zalesovo Beam	92.72	324	P	P	13 15 20.4	0.0
	0.3nm,0.4s,baz=100,slow=8.1,SNR=3.4						
ZAA1	Zalesovo Array	92.72	324	*e*P	P	13 15 20.4	0.0

IDC 06 13:04:49.7±1.9**, 11°.41S×165°.48E, h0km, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.7**/34**, mbtmp3.8**/5**, ML3.8**/1**, Error ellipse: s-maj=54.2km s-min=33.7km az=121.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.64	175	Pn	Pn	13 07 23.3	-0.4
	0.8nm,0.3s,baz=151,slow=19,SNR=1.6						
WRA	Warramunga Arr	31.12	250	P	P	13 11 10.0	-0.3
	1.8nm,0.9s,baz=78,slow=9.0,SNR=6.3						
ASAR	Alice Springs	32.40	244	P	P	13 11 21.5	-0.1
	0.2nm,0.3s,baz=68,slow=11,SNR=2.8						
ILAR	Eielson Array	83.94	19	P	P	13 17 20.9	-0.5
	0.3nm,0.8s,baz=238,slow=6.2,SNR=2.3						
MKAR	Makanchi Array	93.61	317	P	P	13 18 08.9	+0.9
	0.4nm,0.6s,baz=101,slow=5.1,SNR=3.7						

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*IDC **06** 13:05:29.4±1.5, 11°.54S×165°.60E, h0km, mb4.0/6, mb1 4.3/7, mb1mx3.9/33, mbtmp4.1/7, ML4.5/1, Error ellipse: s-maj=64.0km s-min=22.4km az=148.0*

*ISCJB **06** 13:05:31.5±0.6, 11°.4S±0°.1×165°.45E±0°.08, h24km, mb4.2/9, Error ellipse: s-maj=19.8km s-min=10.6km az=168.2*

*NEIC **06** 13:05:31.2±0.5, 11°.24S×165°.47E, h10km, mb4.6/3, Error ellipse: s-maj=21.4km s-min=10.6km az=159.0*

ISC 06 13:05:33.3±0.8**, 11°.3S**±0°.2×**165°.5E**±0°.1**, h24km, n18, σ1ˢ52**/14**, mb4.2**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.73	288	Pn	Pn	13 06 56.7	-0.2
	12nm,0.3s,baz=163,slow=11,SNR=3.5						
MSVF	Nonsavu	13.76	119	*e*Pn	Pn	13 08 47.3	+0.2
CTA	Charters Tower	20.44	242	P	Pn	13 10 10.5	-0.9
	3.3nm,0.7s,baz=39,slow=14,SNR=1.9						
H11N1	WAKE ISLAND Hy	30.84	3	T	T	13 43 27.5	
	baz=190						
H11N3	WAKE ISLAND Hy	30.85	3	T	T	13 43 44.3	
	baz=190						
H11N2	WAKE ISLAND Hy	30.86	3	T	T	13 43 22.1	
	baz=190						
WR1	Warramunga Arr	31.14	250	*e*P	P	13 11 50.6	+0.2
	18nm,1.8s						
WRA	Warramunga Arr	31.14	250	P	P	13 11 50.6	+0.2
	1.3nm,0.8s,baz=82,slow=9.2,SNR=6.1						
AS01	Alice Springs	32.39	243	*e*P	P	13 12 01.6	+0.2
AS31	Alice Springs	32.43	243	*e*P	P	13 12 01.8	0.0
	1.5nm,0.8s						

ASAR	**Alice Springs**	**32.44**	**243**	P	**P**	**13 12 01.2**	**-0.6**
	4.5nm,0.8s,baz=72,slow=9.6,SNR=23						
ILAR	**Eielson Array**	**83.83**	**19**	P	**P**	**13 18 02.9**	**+2.4**
	1.0nm,0.7s,baz=240,slow=5.1,SNR=10						
BEKR	**Beckworth**	**85.32**	**48**	*e*P	**P**	**13 18 04.8**	**-4.0**
	8.7nm,1.4s						
NVAR	**Mina Array Bea**	**86.39**	**50**	P	**P**	**13 18 13.1**	**-1.1**
	0.5nm,0.8s,baz=227,slow=6.1,SNR=3.6						
NV01	**Mina Array Sit**	**86.39**	**50**	*e*P	**P**	**13 18 12.9**	**-1.3**
PV14	**Lion Creek, Pa**	**93.44**	**52**	*e*P	**P**	**13 18 47.7**	**+0.4**
	9.3nm,1.1s						
YKA	**Yellowknife Ar**	**95.32**	**27**	P	**P**	**13 18 55.2**	**+0.2**
	0.5nm,1.1s,baz=254,slow=4.4,SNR=2.3						
YKB5	**Yellowknife Ar**	**95.32**	**27**	*e*P	**P**	**13 18 54.5**	**-0.5**

IDC 06 13:07:05.3±2.0**, 11°.57S**×**165°.46E, h0^{km}, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/33**, mbtmp3.5**/4**, ML3.7**/1**, Error ellipse: s-maj=56.0km s-min=36.6km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.49**	**175**	Pn	Pn	13 09 36.7	-0.5
	0.6nm,0.3s,baz=287,slow=20,SNR=1.3						
WRA	**Warramunga Arr**	**31.04**	**251**	P	P	13 13 25.1	-0.1
	0.6nm,0.8s,baz=80,slow=9.6,SNR=2.4						
H11N1	**WAKE ISLAND Hy**	**31.11**	**3**	T	T	13 45 42.2	
	baz=185						
H11N3	**WAKE ISLAND Hy**	**31.12**	**3**	T	T	13 45 48.6	
	baz=185						
H11N2	**WAKE ISLAND Hy**	**31.13**	**3**	T	T	13 45 48.2	
	baz=185						
ASAR	**Alice Springs**	**32.31**	**244**	P	P	13 13 36.6	+0.2
	0.2nm,0.8s,baz=66,slow=10,SNR=1.2						
ILAR	**Eielson Array**	**84.09**	**19**	P	P	13 19 37.8	0.0
	0.3nm,0.8s,baz=234,slow=6.4,SNR=1.5						

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*NNC **06** 13:07:24.6±0.5, 47°.41N×81°.62E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=5.3km s-min=2.7km az=49.0*

*SOME **06** 13:07:25.3, 47°.37N×81°.33E, h0^{km}*

ISC 06 13:07:26.6±0.8**, 47°.45N**±0°.03×**81°.92E**±0°.04**, h12^{km}, n29, σ1ˢ.60**/43**, 10C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKZ	**Makanchi**	**0.64**	**177**	⇑P	**Pg**	**13 07 37.5**	**-1.6**
	14nm,0.3s						
MAKZ				⇑S	**Sg**	**13 07 46.7**	**-0.9**
	48nm,0.2s						
MK31	**Makanchi Array**	**0.70**	**159**	⇑P	**Pg**	**13 07 39.5**	**-0.7**
	4.6nm,0.2s,baz=333,slow=16,SNR=5.3						
MK31				⇓S	**Sb**	**13 07 50.2**	**-0.2**
	113nm,0.3s,baz=339,slow=26,SNR=5.5						
ZSN	**Zaisan**	**2.00**	**89**	Pg	**Pg**	**13 08 04.5**	**-0.4**
	4.9nm,0.1s						
ZSN				Lg	Lg	13 08 33.7	
	27nm,0.4s						
ZSN	**Zaisan**	**2.00**	**89**	*e*P	**Pg**	**13 08 04.5**	**-0.4**
	4.9nm,0.1s						
ZSN				*e*S	**Sg**	**13 08 33.7**	**+2.8**
	27nm,0.4s						
KAPS	**Kapalarasan**	**2.80**	**220**	Pg	**Pn**	**13 08 12.5**	**+1.2**
	2.4nm,0.1s						
KAPS				Lg	Lg	13 08 46.1	
	30nm,0.3s						
KAPS	**Kapalarasan**	**2.80**	**220**	*e*P	**Pn**	**13 08 12.5**	**+1.2**
	2.4nm,0.1s						
KAPS				*e*S	**Sn**	**13 08 46.1**	**+1.1**
	30nm,0.3s						
SEM	**Semipalatinsk**	**3.16**	**340**	Pg	**Pb**	**13 08 21.5**	**-1.4**
	27nm,0.2s						
SEM				Lg	Lg	13 09 01.7	
	28nm,0.2s						
SEM	**Semipalatinsk**	**3.16**	**340**	*e*P	**Pb**	**13 08 21.5**	**-1.4**
	27nm,0.2s						
SEM				*e*S	**Sb**	**13 09 01.7**	**+0.3**
	28nm,0.2s						
DJR	**Jarkent**	**3.45**	**206**	Pg	**Pb**	**13 08 24.7**	**-3.0**
	2.9nm,0.4s						
DJR				Lg	Lg	13 09 07.7	
	4.8nm,0.3s						
DJR	**Jarkent**	**3.45**	**206**	*e*P	**Pb**	**13 08 24.7**	**-3.0**
	2.9nm,0.4s						
DJR				*e*S	**Sb**	**13 09 07.7**	**-2.0**
	4.8nm,0.3s						
KURBB	**Kurchatov Arra**	**3.88**	**326**	⇑Pg	**Pb**	**13 08 34.7**	**-0.3**
	2.4nm,0.2s						
KURBB				⇑Lg	Lg	13 09 25.5	
	16nm,0.3s						
KURK	**Kurchatov**	**3.92**	**328**	⇓Pg	**Pb**	**13 08 34.6**	**-1.1**
	1.6nm,0.4s						
KURK				⇑Lg	Lg	13 09 24.0	
	23nm,0.4s						
KURK				⇑Lg	Lg	13 09 25.5	
	17nm,0.4s						
MNBS	**Baschi**	**4.17**	**217**	Pg	**Pb**	**13 08 39.8**	**-0.3**
	1.7nm,0.2s						
MNBS				Lg	Lg	13 09 33.2	
	26nm,0.4s						
MNBS	**Baschi**	**4.17**	**217**	*e*P	**Pb**	**13 08 39.8**	**-0.3**
	1.7nm,0.2s						
MNBS				*e*S	**Sb**	**13 09 33.2**	**+2.8**
	26nm,0.4s						
ARXS	**Arharly**	**4.32**	**223**	Pg	**Pb**	**13 08 41.0**	**-1.5**
	2.0nm,0.3s						
ARXS				Lg	Lg	13 09 35.0	
	39nm,0.4s						
ARXS	**Arharly**	**4.32**	**223**	*e*P	**Pb**	**13 08 41.0**	**-1.5**
	2.0nm,0.3s						
ARXS				*e*S	**Sb**	**13 09 35.0**	**+0.4**
	39nm,0.4s						
PDGK	**Podgornoye**	**4.46**	**203**	⇑Pg	**Pb**	**13 08 47.6**	**+2.7**
	1.9nm,0.5s						
PDGK				⇓Lg	Lg	13 09 41.9	
	13nm,0.5s						
KURS	**Kuram**	**4.76**	**215**	Pg	**Pb**	**13 08 48.4**	**-1.5**
	2.8nm,0.4s						
KURS				Lg	Lg	13 09 48.8	
	8.8nm,0.5s						
KURS	**Kuram**	**4.76**	**215**	*e*P	**Pb**	**13 08 48.5**	**-1.5**
	2.8nm,0.4s						
KURS				*e*S	**Sb**	**13 09 48.8**	**+1.6**
	8.8nm,0.5s						
CHKK	**Chushkaly**	**4.99**	**226**	Pg	**Pb**	**13 08 52.4**	**-1.4**
	1.5nm,0.1s						
CHKK				Lg	Lg	13 09 55.2	
	27nm,0.3s						
CHKK	**Chushkaly**	**4.99**	**226**	*e*P	**Pb**	**13 08 52.4**	**-1.4**
	1.5nm,0.1s						
CHKK				*e*S	**Sb**	**13 09 55.2**	**+1.5**
	27nm,0.3s						
KTBS	**Karatobe**	**5.24**	**226**	Pg	**Pb**	**13 08 56.6**	**-1.6**
	0.8nm,0.2s						
KTBS				Lg	Lg	13 10 01.7	
	22nm,0.5s						
KTBS	**Karatobe**	**5.24**	**226**	*e*P	**Pb**	**13 08 56.6**	**-1.6**
	0.8nm,0.2s						
KTBS				*e*S	**Sb**	**13 10 01.7**	**+0.6**
	22nm,0.5s						
KUU	**Kurty**	**5.29**	**230**	Pg	**Pb**	**13 08 57.8**	**-1.1**
	1.4nm,0.1s						
KUU				Lg	Lg	13 10 03.9	
	24nm,0.3s						
KUU	**Kurty**	**5.29**	**230**	*e*P	**Pb**	**13 08 57.8**	**-1.1**
	1.4nm,0.1s						
KUU				*e*S	**Sb**	**13 10 03.9**	**+1.5**
	24nm,0.3s						
TNSS	**Tian-Shan**	**5.64**	**220**	Pg	**Pb**	**13 09 04.1**	**-1.0**
	1.7nm,0.3s						
TNSS				Lg	Lg	13 10 15.1	
	8.3nm,0.5s						
TNSS	**Tian-Shan**	**5.64**	**220**	*e*P	**Pb**	**13 09 04.1**	**-1.0**
	1.7nm,0.3s						
TNSS				*e*S	**Sb**	**13 10 15.1**	**+2.3**
	8.3nm,0.5s						
OTUK	**Ortayu**	**6.50**	**281**	Sn	**Sn**	**13 10 17.7**	**+1.5**
	7.2nm,0.7s						
OTUK				⇓Lg	Lg	13 10 48.7	
	7.2nm,0.7s						
ZAA0	**Zalesovo Array**	**6.76**	**15**	⇑Pn	**Pn**	**13 09 05.5**	**-0.2**
	0.5nm,0.3s						
ZAA0				⇓Sn	**Sn**	**13 10 20.2**	**-2.3**
	0.7nm,0.3s						
ZAA0				⇑Lg	Lg	13 11 01.8	
	1.3nm,0.5s						

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*IDC **06** 13:08:16.4±1.5, 12°.17S×165°.62E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.7/33, mbtmp3.7/7, ML3.3/1, Error ellipse: s-maj=49.1km s-min=28.4km az=126.0*

*ISCJB **06** 13:08:19.4±0.9, 12°.4S±0°.1×165°.7E±0°.2, h33^{km}, mb3.6/6, Error ellipse: s-maj=27.0km s-min=17.2km az=6.8*

ISC 06 13:08:21.3±1.0**, 12°.3S**±0°.1×**165°.7E**±0°.2**, h35^{km}, n13, σ0ˢ.80**/7**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.76**	**176**	Pn	**Pn**	**13 10 39.0**	**-0.3**
	0.2nm,0.3s,baz=330,slow=20,SNR=1.6						
H11S2	**WAKE ISLAND Hy**	**30.60**	**2**	T	T	13 46 45.9	
	baz=183,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**30.61**	**2**	T	T	13 46 51.0	
	baz=183,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**30.62**	**2**	T	T	13 46 47.2	
	baz=183,slow=76,SNR=9.3						
WRA	**Warramunga Arr**	**31.00**	**252**	P	**P**	**13 14 35.5**	**-0.3**
	1.8nm,1.1s,baz=79,slow=8.6,SNR=5.8						
H11N1	**WAKE ISLAND Hy**	**31.82**	**2**	T	T	13 48 18.7	
	baz=182,slow=76,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**31.83**	**2**	T	T	13 48 25.5	
	baz=182,slow=76,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**31.84**	**2**	T	T	13 48 19.7	
	baz=182,slow=76,SNR=6.3						
ASAR	**Alice Springs**	**32.18**	**245**	P	**P**	**13 14 47.3**	**+1.1**
	0.9nm,0.9s,baz=68,slow=10.0,SNR=4.7						
SONM	**Songino Array**	**79.62**	**324**	P	**P**	**13 20 24.5**	**-0.7**
	0.1nm,0.3s,baz=134,slow=9.2,SNR=1.1						
ILAR	**Eielson Array**	**84.71**	**18**	P	**P**	**13 20 52.0**	**+0.7**
	0.4nm,0.7s,baz=234,slow=5.3,SNR=4.2						
MKAR	**Makanchi Array**	**94.37**	**317**	P	**P**	**13 21 37.1**	**-0.4**
	0.2nm,0.6s,baz=93,slow=7.3,SNR=2.6						
YKA	**Yellowknife Ar**	**96.11**	**27**	P	**P**	**13 21 45.0**	**0.0**
	0.2nm,0.7s,baz=262,slow=5.5,SNR=2.7						

IDC 06 13:10:02.8±1.8**, 11°.44S**×**164°.95E, h0^{km}, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/32**, mbtmp3.8**/4**, ML3.3**/1**, Error ellipse: s-maj=51.3km s-min=32.8km az=128.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.67**	**172**	Pn	Pn	13 12 37.5	+0.4
	0.3nm,0.3s,baz=163,slow=19,SNR=6.1						
WRA	**Warramunga Arr**	**30.61**	**250**	P	P	13 16 18.4	-0.5
	0.9nm,0.7s,baz=84,slow=8.8,SNR=5.4						
ASAR	**Alice Springs**	**31.92**	**243**	P	P	13 16 30.7	+0.3
	1.1nm,0.8s,baz=65,slow=11,SNR=9.6						
ILAR	**Eielson Array**	**84.13**	**19**	P	P	13 22 35.3	-0.1
	0.3nm,0.6s,baz=250,slow=4.7,SNR=5.1						

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*IDC **06** 13:10:14.0±1.4, 11°.20S×165°.55E, h0^{km}, mb4.0/11, mb1 4.2/12, mb1mx4.1/32, mbtmp4.0/12, ML4.7/1, Error ellipse: s-maj=40.8km s-min=20.5km az=140.0*

*NEIC **06** 13:10:16.7±0.5, 11°.00S×165°.38E, h10^{km}, mb4.5/5, Error ellipse: s-maj=13.5km s-min=9.0km az=116.0*

*ISCJB **06** 13:10:17.3±0.6, 11°.12S±0°.07×165°.41E±0°.07, h30^{km}, mb4.0/13, Error ellipse: s-maj=10.4km s-min=10.2km az=149.5*

ISC 06 13:10:19.5±0.7**, 11°.05S**±0°.09×**165°.42E**±0°.09**, h30^{km}, n26, σ1ˢ.21**/27**, mb3.9**/13**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.62**	**286**	*e*P	**Pn**	**13 11 40.0**	**-1.1**
HNR	**Honiara**	**5.62**	**286**	Pn	**Pn**	**13 11 39.6**	**-1.4**
	20nm,0.3s,baz=141,slow=3.9,SNR=11						
HNR				Sn	**Sn**	**13 12 46.7**	**+2.0**
	4.5nm,0.3s,baz=172,slow=14,SNR=2.4						
DZM	**Mont Dzumac**	**11.00**	**175**	*e*Pn	**Pn**	**13 12 54.7**	**-0.3**
DZM	**Mont Dzumac**	**11.00**	**175**	Pn	**Pn**	**13 12 55.1**	**+0.1**
	1.6nm,0.3s,baz=307,slow=16,SNR=6.7						
PATS	**Pohnpei**	**19.12**	**338**	*e*P	**P**	**13 14 38.7**	**-1.6**
	211nm,1.2s						
EIDS	**Eidsvold**	**19.68**	**222**	*e*P	**P**	**13 14 46.2**	**-0.1**
	19nm,1.1s						
CTA	**Charters Tower**	**20.52**	**242**	P	**P**	**13 14 55.9**	**+0.5**
	13nm,0.8s,baz=54,slow=8.3,SNR=7.7						
CTAO	**Charters Tower**	**20.52**	**242**	*e*P	**P**	**13 14 56.6**	**+1.2**
	23nm,1.1s						
WR1	**Warramunga Arr**	**31.18**	**250**	*e*P	**P**	**13 16 35.5**	**-0.7**
	13nm,1.4s						
WRA	**Warramunga Arr**	**31.18**	**250**	P	**P**	**13 16 35.6**	**-0.7**
	1.8nm,0.8s,baz=80,slow=9.1,SNR=6.5						
AS01	**Alice Springs**	**32.46**	**243**	*e*P	**P**	**13 16 47.6**	**+0.2**
AS31	**Alice Springs**	**32.50**	**243**	*e*P	**P**	**13 16 46.8**	**-1.1**
	0.9nm,0.7s						
ASAR	**Alice Springs**	**32.51**	**243**	P	**P**	**13 16 46.5**	**-1.3**
	2.7nm,0.8s,baz=66,slow=9.8,SNR=12						
MJAR	**Matsushiro Arr**	**53.83**	**333**	P	**P**	**13 19 39.3**	**-0.4**
	1.5nm,0.8s,baz=171,slow=9.3,SNR=5.5						
MAJO	**Matsushiro**	**53.83**	**333**	*e*P	**P**	**13 19 39.3**	**-0.4**
ASAJ	**Asahikawa**	**58.69**	**341**	P	**P**	**13 20 15.9**	**+1.8**
	baz=326,slow=6.8						
USRK	**Ussuriysk Ar.**	**62.81**	**334**	P	**P**	**13 20 43.2**	**+1.0**
	2.4nm,0.8s,baz=130,slow=9.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	**71.82**	**294**	P	**P**	**13 21 40.9**	**+0.9**
	0.4nm,0.4s,baz=104,slow=3.8,SNR=2.8						
SONA0	**Songino Array**	**78.48**	**324**	*e*P	**P**	**13 22 16.9**	**-0.9**
SONM	**Songino Array**	**78.48**	**324**	P	**P**	**13 22 16.9**	**-0.9**
	0.2nm,0.3s,baz=131,slow=5.9,SNR=2.9						
ILAR	**Eielson Array**	**83.62**	**19**	P	**P**	**13 22 43.9**	**-0.8**
	1.1nm,1.1s,baz=230,slow=5.0,SNR=5.4						
NVAR	**Mina Array Bea**	**86.27**	**50**	P	**P**	**13 22 57.9**	**-1.0**
	0.6nm,0.8s,baz=232,slow=9.2,SNR=3.7						
MK32	**Makanchi Array**	**93.31**	**317**	*e*P	**P**	**13 23 32.4**	**+0.9**
MKAR	**Makanchi Array**	**93.31**	**317**	P	**P**	**13 23 32.4**	**+0.9**
	0.7nm,0.7s,baz=102,slow=5.6,SNR=6.1						
PDAR	**Pinedale Array**	**93.79**	**47**	P	**P**	**13 23 37.2**	**+3.1**
	1.0nm,1.0s,baz=228,slow=1.8,SNR=3.7						
YKA	**Yellowknife Ar**	**95.12**	**27**	P	**P**	**13 23 39.6**	**+0.1**
	0.1nm,0.7s,baz=270,slow=4.9,SNR=2.6						

IDC 06 13:11:51.3±3.8**, 12°.03S**×**165°.48E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/32**, mbtmp3.8**/4**, Error ellipse: s-maj=163.0km s-min=33.8km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**30.91**	**251**	P	P	13 18 10.0	-0.1
	1.2nm,0.8s,baz=82,slow=8.6,SNR=2.5						
ASAR	**Alice Springs**	**32.13**	**245**	P	P	13 18 20.9	+0.2
	0.8nm,0.7s,baz=74,slow=9.9,SNR=3.0						
ILAR	**Eielson Array**	**84.52**	**19**	P	P	13 24 26.1	+0.2
	0.4nm,0.5s,baz=240,slow=5.0,SNR=8.5						
MKAR	**Makanchi Array**	**94.06**	**317**	P	P	13 25 11.1	-0.5
	0.5nm,0.8s,baz=96,slow=9.4,SNR=2.7						

IDC 06 13:18:04.7±1.4**, 10°.95S**×**164°.90E, h0^{km}, mb3.5**/4**, mb1 3.9**/5**, mb1mx3.6**/38**, mbtmp3.6**/5**, ML4.2**/1**, Error ellipse: s-maj=50.2km s-min=29.2km az=135.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.16**	**173**	Pn	Pn	13 20 45.6	-0.2
	1.5nm,0.3s,baz=247,slow=17,SNR=16						
H11S2	**WAKE ISLAND Hy**	**29.30**	**3**	T	T	13 54 33.2	
	baz=184,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	**29.31**	**3**	T	T	13 54 33.3	
	baz=184,slow=76,SNR=18						
H11S1	**WAKE ISLAND Hy**	**29.32**	**3**	T	T	13 54 34.6	
	baz=184,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**30.53**	**4**	T	T	13 56 04.8	
	baz=182,slow=76,SNR=25						
H11N3	**WAKE ISLAND Hy**	**30.53**	**4**	T	T	13 56 04.3	
	baz=182,slow=76,SNR=16						
H11N2	**WAKE ISLAND Hy**	**30.55**	**4**	T	T	13 56 06.2	
	baz=182,slow=76,SNR=16						
WRA	**Warramunga Arr**	**30.74**	**249**	P	P	13 24 21.8	-0.2
	0.6nm,1.0s,baz=82,slow=8.9,SNR=2.4						
ASAR	**Alice Springs**	**32.10**	**243**	P	P	13 24 34.1	+0.2
	0.3nm,0.6s,baz=64,slow=10,SNR=5.1						
ILAR	**Eielson Array**	**83.68**	**19**	P	P	13 30 34.6	-0.4
	0.3nm,0.7s,baz=229,slow=6.0,SNR=2.3						
NVAR	**Mina Array Bea**	**86.59**	**50**	P	P	13 30 51.0	+0.4
	0.4nm,0.8s,baz=258,slow=8.9,SNR=1.7						

IDC 06 13:20:12.8±3.0**, 11°.24S**×**165°.28E, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.6**/40**, mbtmp3.8**/4**, ML4.3**/1**, Error ellipse: s-maj=64.5km s-min=41.8km az=84.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.83**	**174**	Pn	Pn	13 22 49.4	+0.1
	2.3nm,0.3s,baz=354,slow=9.5,SNR=13						
WRA	**Warramunga Arr**	**30.99**	**250**	P	P	13 26 32.4	+0.1
	0.9nm,0.6s,baz=82,slow=9.1,SNR=7.3						
ASAR	**Alice Springs**	**32.30**	**243**	P	P	13 26 43.6	-0.2
	0.3nm,0.7s,baz=63,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**93.35**	**317**	P	P	13 33 29.8	-0.1
	0.1nm,0.5s,baz=108,slow=3.3,SNR=3.0						

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*IDC **06** 13:22:27.3±1.8, 11°.54S×164°.83E, h0^{km}, mb3.9/6, mb1 4.1/9, mb1mx3.8/41, mbtmp4.0/9, ML4.1/3, Error ellipse: s-maj=36.9km s-min=28.0km az=95.0*

*ISCJB **06** 13:22:30.5±0.9, 11°.70S±0°.10×164°.8E±0°.1, h34^{km}, mb3.9/9, Error ellipse: s-maj=17.1km s-min=10.6km az=136.6*

*NEIC **06** 13:22:30.4±3.4, 11°.60S×164°.88E, h23^{km}±23^{km}, mb4.4/4, Error ellipse: s-maj=15.1km s-min=10.8km az=60.0*

ISC 06 13:22:32.1±1.3**, 11°.6S**±0°.1×**164°.9E**±0°.2**, h34^{km}, n24, σ0ˢ.54**/19**, mb4.1**/9**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.30**	**294**	Pn	**Pn**	**13 23 48.0**	**-0.9**
	13nm,0.3s,baz=150,slow=7.0,SNR=5.3						
HNR				Sn	**Sn**	**13 24 49.3**	**+0.6**
	4.0nm,0.3s,baz=0.0,slow=20,SNR=2.2						
DZM	**Mont Dzumac**	**10.51**	**172**	*e*Pn	**Pn**	**13 24 60.0**	**-0.4**
DZM	**Mont Dzumac**	**10.51**	**172**	Pn	**Pn**	**13 25 01.1**	**+0.7**
	1.3nm,0.3s,baz=263,slow=6.9,SNR=6.7						
CTA	**Charters Tower**	**19.77**	**242**	P	**P**	**13 26 59.3**	**-0.1**
	0.3nm,0.3s,baz=65,slow=14,SNR=2.6						
CTAO	**Charters Tower**	**19.77**	**242**	*e*P	**P**	**13 26 59.3**	**-0.1**
	20nm,1.1s						
COEN	**Coen**	**21.27**	**261**	*e*P	**P**	**13 27 16.7**	**+0.9**
	9.1nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.97**	**4**	T	T	14 00 16.3	
	baz=184,slow=76,SNR=9.8						
H11S3	**WAKE ISLAND Hy**	**29.98**	**3**	T	T	14 00 17.6	
	baz=184,slow=76,SNR=9.2						
H11S1	**WAKE ISLAND Hy**	**29.99**	**3**	T	T	14 00 16.5	
	baz=184,slow=76,SNR=12						
WR1	**Warramunga Arr**	**30.47**	**250**	*e*P	**P**	**13 28 41.8**	**-0.2**
	8.0nm,1.3s						
WRA	**Warramunga Arr**	**30.47**	**250**	P	**P**	**13 28 41.8**	**-0.2**
	1.1nm,0.8s,baz=78,slow=8.9,SNR=7.6						
H11N1	**WAKE ISLAND Hy**	**31.20**	**4**	T	T	14 01 48.0	
	baz=182,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**31.20**	**4**	T	T	14 01 46.6	
	baz=182,slow=76,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**31.21**	**4**	T	T	14 01 49.2	
	baz=182,slow=76,SNR=9.6						
AS31	**Alice Springs**	**31.76**	**244**	*e*P	**P**	**13 28 52.9**	**-0.5**
	1.1nm,0.9s						
ASAR	**Alice Springs**	**31.76**	**244**	P	**P**	**13 28 52.9**	**-0.5**
	2.1nm,0.8s,baz=72,slow=9.2,SNR=18						
FITZ	**Fitzroy Crossi**	**38.40**	**256**	*e*P	**P**	**13 29 50.5**	**-0.1**
	20nm,1.8s						
FITZ	**Fitzroy Crossi**	**38.40**	**256**	P	**P**	**13 29 50.7**	**+0.2**
	1.8nm,0.8s,baz=68,slow=11,SNR=4.8						
CMAR	**Chiang Mai Arr**	**71.55**	**294**	P	**P**	**13 33 51.3**	**+1.0**
	0.4nm,0.5s,baz=118,slow=4.8,SNR=4.7						
SONA0	**Songino Array**	**78.61**	**324**	*e*P	**P**	**13 34 30.5**	**-0.1**
SONM	**Songino Array**	**78.61**	**324**	P	**P**	**13 34 30.5**	**-0.1**
	0.2nm,0.6s,baz=160,slow=4.6,SNR=2.7						
MK01	**Makanchi Array**	**93.33**	**317**	*e*P	**P**	**13 35 43.0**	**-0.7**
MK32	**Makanchi Array**	**93.34**	**317**	*e*P	**P**	**13 35 43.7**	**-0.1**
MKAR	**Makanchi Array**	**93.34**	**317**	P	**P**	**13 35 43.7**	**0.0**
	1.1nm,0.8s,baz=100,slow=6.4,SNR=12						

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*IDC **06** 13:23:42.2±1.1, 10°.74S×165°.16E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.8/40, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=47.6km s-min=24.9km az=136.0*

*NEIC **06** 13:23:42.9±0.6, 10°.81S×165°.38E, h10^{km}, mb4.2/2, Error ellipse: s-maj=15.9km s-min=14.3km az=93.0*

*ISCJB **06** 13:23:44.5±0.7, 11°.0S±0°.1×165°.3E±0°.1, h30^{km}, mb3.8/8, Error ellipse: s-maj=17.7km s-min=16.1km az=38.7*

ISC 06 13:23:45.8±0.8**, 10°.9S**±0°.1×**165°.4E**±0°.1**, h30^{km}, n13, σ1ˢ.90**/13**, mb3.8**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.21**	**175**	*e*Pn	**Pn**	**13 26 25.1**	**+1.0**
DZM	**Mont Dzumac**	**11.21**	**175**	Pn	**Pn**	**13 26 25.8**	**+1.7**
	0.8nm,0.3s,baz=328,slow=15,SNR=6.0						
MSVF	**Nonsavu**	**14.04**	**121**	*e*Pn	**Pn**	**13 27 00.9**	**-2.0**
KWAJ	**Kwajalein Atol**	**19.64**	**7**	*e*P	**P**	**13 28 10.0**	**-2.3**
	379nm,1.1s						
WR1	**Warramunga Arr**	**31.23**	**249**	*e*P	**P**	**13 30 02.6**	**-0.4**
	15nm,1.6s						
WRA	**Warramunga Arr**	**31.23**	**249**	P	**P**	**13 30 02.6**	**-0.4**
	1.0nm,0.7s,baz=79,slow=9.5,SNR=4.7						
AS31	**Alice Springs**	**32.58**	**243**	*e*P	**P**	**13 30 11.1**	**-3.7**
	1.2nm,1.3s						
ASAR	**Alice Springs**	**32.58**	**243**	P	**P**	**13 30 13.8**	**-1.1**
	1.5nm,0.9s,baz=67,slow=9.5,SNR=8.1						
ILAR	**Eielson Array**	**83.43**	**19**	P	**P**	**13 36 11.5**	**+1.4**
	0.3nm,0.7s,baz=240,slow=4.8,SNR=4.5						
NVAR	**Mina Array Bea**	**86.16**	**50**	P	**P**	**13 36 26.8**	**+2.2**
	0.5nm,0.8s,baz=242,slow=3.9,SNR=3.3						
MK32	**Makanchi Array**	**93.14**	**317**	*e*P	**P**	**13 36 57.8**	**+0.7**
MKAR	**Makanchi Array**	**93.14**	**317**	P	**P**	**13 36 57.8**	**+0.7**
	0.4nm,0.7s,baz=91,slow=6.3,SNR=3.6						
YKA	**Yellowknife Ar**	**94.95**	**27**	P	**P**	**13 37 04.7**	**-0.3**
	0.1nm,0.6s,baz=262,slow=4.2,SNR=2.1						

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*ISCJB **06** 13:24:46.3±0.6, 10°.90S±0°.07×165°.81E±0°.09, h10^{km}, mb4.0/7, Error ellipse: s-maj=13.0km s-min=9.4km az=157.8*

*IDC **06** 13:24:46.6±1.5, 10°.78S×165°.79E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.7/39, mbtmp3.9/7, ML3.7/1, Error ellipse: s-maj=37.5km s-min=30.7km az=99.0*

*NEIC **06** 13:24:48.3±0.6, 10°.84S×165°.77E, h10^{km}, mb4.5/2, Error ellipse: s-maj=12.3km s-min=9.0km az=63.0*

ISC 06 13:24:48.1±0.8**, 10°.8S**±0°.1×**165°.8E**±0°.1**, h10^{km}, n17, σ1ˢ.09**/17**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.89**	**283**	*e*Pn	**Pn**	**13 26 14.0**	**-1.4**
MARNC	**Mare, Loyalty**	**10.82**	**169**	*e*Pn	**Pn**	**13 27 21.2**	**-2.0**
DZM	**Mont Dzumac**	**11.21**	**177**	*e*Pn	**Pn**	**13 27 29.4**	**+0.8**
DZM	**Mont Dzumac**	**11.21**	**177**	Pn	**Pn**	**13 27 29.2**	**+0.6**
	0.5nm,0.3s,baz=233,slow=20,SNR=1.1						
OUENC	**Ouen Island, N**	**11.58**	**175**	*e*Pn	**Pn**	**13 27 33.4**	**-0.2**
PINNC	**Pines Island,**	**11.84**	**172**	*e*Pn	**Pn**	**13 27 38.0**	**+0.9**
FUNA	**Funafuti**	**13.44**	**81**	*e*Pn	**Pn**	**13 27 58.8**	**-0.3**
PATS	**Pohnpei**	**19.04**	**337**	*e*P	**Pn**	**13 29 12.3**	**+1.0**
	294nm,1.4s						
WR1	**Warramunga Arr**	**31.57**	**249**	*e*P	**P**	**13 31 12.4**	**+1.3**
	22nm,1.9s						
WRA	**Warramunga Arr**	**31.57**	**249**	P	**P**	**13 31 12.4**	**+1.3**
	1.3nm,0.8s,baz=80,slow=9.3,SNR=4.9						
ASAR	**Alice Springs**	**32.91**	**243**	P	**P**	**13 31 23.7**	**+0.9**
	0.5nm,0.8s,baz=71,slow=9.1,SNR=2.3						
RPZ	**Rata Peaks**	**33.09**	**173**	P	**P**	**13 31 24.2**	**0.0**
	11nm,0.9s,baz=31,slow=12,SNR=3.5						
FITZ	**Fitzroy Crossi**	**39.45**	**255**	*e*P	**P**	**13 32 17.4**	**-1.4**
	7.6nm,1.3s						
FITZ	**Fitzroy Crossi**	**39.45**	**255**	P	**P**	**13 32 17.6**	**-1.2**
	1.1nm,0.7s,baz=97,slow=8.1,SNR=1.8						
ILAR	**Eielson Array**	**83.30**	**19**	P	**P**	**13 37 14.8**	**0.0**
	0.2nm,0.5s,baz=224,slow=2.5,SNR=2.5						
MK32	**Makanchi Array**	**93.37**	**317**	*e*P	**P**	**13 38 04.0**	**+0.4**
MKAR	**Makanchi Array**	**93.37**	**317**	P	**P**	**13 38 04.0**	**+0.4**
	0.5nm,0.9s,baz=107,slow=5.0,SNR=3.1						

IDC 06 13:25:49.6±1.8**, 11°.06S**×**165°.75E, h0^{km}, mb3.5**/3**, mb1 3.9**/5**, mb1mx3.6**/40**, mbtmp3.8**/5**, ML4.3**/2**, Error ellipse: s-maj=42.6km s-min=33.8km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.94	285	Pn	Pn	13 27 21.0	+2.1
	13nm,0.3s,baz=155,slow=9.7,SNR=2.2						
DZM	Mont Dzumac	10.97	177	Pn	Pn	13 28 29.4	+1.3
	1.5nm,0.3s,baz=336,slow=12,SNR=6.4						
H11S2	WAKE ISLAND Hy	29.38	2	T	T	14 03 14.9	
	baz=184,slow=76,SNR=8.7						
H11S3	WAKE ISLAND Hy	29.38	2	T	T	14 03 28.8	
	baz=184,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.39	2	T	T	14 03 32.4	
	baz=184,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.60	2	T	T	14 04 48.5	
	baz=184						
H11N3	WAKE ISLAND Hy	30.60	2	T	T	14 04 57.7	
	baz=184						
H11N2	WAKE ISLAND Hy	30.62	2	T	T	14 04 45.0	
	baz=184						
WRA	Warramunga Arr	31.48	250	P	P	13 32 12.5	-0.9
	0.7nm,0.9s,baz=81,slow=9.3,SNR=1.9						
ASAR	Alice Springs	32.79	243	P	P	13 32 24.6	-0.4
	0.2nm,0.5s,baz=64,slow=10,SNR=1.0						
ILAR	Eielson Array	83.52	18	P	P	13 38 19.1	0.0
	0.4nm,0.6s,baz=232,slow=4.9,SNR=4.6						

*ISCJB **06** 13:26:57.8±0.8, 10°.9S±0°.1×164°.80E±0°.09, h31km, mb3.6/7, Error ellipse: s-maj=17.8km s-min=10.2km az=29.9*

*IDC **06** 13:27:01.8±3.8, 10°.88S×164°.76E, h53km±34km, mb3.5/7, mb1 3.8/9, mb1mx3.5/40, mbtmp3.9/9, ML4.4/2, Error ellipse: s-maj=32.0km s-min=18.7km az=46.0*

ISC 06 13:26:59.5±0.9**, 10°.8S**±0°.1×**164°.9E**±0°.1**, h31km, n9, σ1s.16**/10**, mb3.6**/7**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.02	285	P	Pn	13 28 13.2	+0.4
	12nm,0.3s,baz=196,slow=11,SNR=4.8						
HNR				S	Sn	13 29 10.7	+0.9
	8.9nm,0.3s,baz=60,slow=20,SNR=1.7						
DZM	Mont Dzumac	11.31	172	P	Pn	13 29 40.2	+1.0
	2.8nm,0.3s,baz=315,slow=22,SNR=7.5						
URZ	Urewera	29.47	160	P	P	13 33 00.2	-0.5
	1.7nm,0.3s,baz=213,slow=3.6,SNR=6.4						
WRA	Warramunga Arr	30.75	249	P	P	13 33 10.9	-1.4
	0.4nm,0.8s,baz=80,slow=9.1,SNR=1.4						
ASAR	Alice Springs	32.12	242	P	P	13 33 23.3	-1.1
	0.2nm,0.6s,baz=64,slow=10,SNR=1.7						
SONM	Songino Array	77.95	324	P	P	13 38 55.3	+0.4
	0.2nm,0.4s,baz=139,slow=6.8,SNR=2.2						
ILAR	Eielson Array	83.56	19	P	P	13 39 23.1	-1.2
	0.8nm,0.8s,baz=227,slow=6.1,SNR=6.5						
NVAR	Mina Array Bea	86.54	50	P	P	13 39 41.6	+1.5
	0.2nm,0.5s,baz=245,slow=5.7,SNR=2.0						
MKAR	Makanchi Array	92.75	317	P	P	13 40 08.3	-0.5
	0.4nm,0.7s,baz=101,slow=5.3,SNR=3.8						

*IDC **06** 13:28:59.6±1.5, 4°.42N×126°.98E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/46, mbtmp3.5/5, Error ellipse: s-maj=101.6km s-min=20.1km az=73.0*

*ISCJB **06** 13:29:04.5±1.0, 4°.34N±0°.10×126°.99E±0°.09, h50km, mb3.4/5, Error ellipse: s-maj=14.3km s-min=12.2km az=154.3*

*DJA **06** 13:29:09.9±1.0, 4°N±8°×12°7E±°, h72km±6km, M4.2/5, mb4.3/2, mB5.5/1, MLv4.2/5, Mw(mB)4.9/1*

ISC 06 13:29:06.7±1.2**, 4°.4N**±0°.1×**126°.9E**±0°.1**, h50km, n10, σ1s.58**/11**, mb3.4**/5**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.51	243	P	Pn	13 29 32.6	+1.2
SGSI				S	Sn	13 29 49.9	-0.1
TNTI	Ternate	3.61	172	P	Pn	13 30 03.0	+2.8
MRSI	Marisa	6.27	232	P	Pn	13 30 37.2	+0.5
SANI	Sanana	6.44	188	P	Pn	13 30 37.2	-1.8
LUWI	Luwuk	6.77	217	P	Pn	13 30 44.7	+1.2
FITZ	Fitzroy Crossi	22.36	183	P	P	13 34 01.4	+0.7
	0.7nm,0.3s,baz=8.7,slow=7.6,SNR=7.8						
WRA	Warramunga Arr	25.25	163	P	P	13 34 27.4	-0.9
	0.8nm,0.6s,baz=343,slow=10,SNR=9.8						
ASAR	Alice Springs	28.70	167	P	P	13 34 57.8	-1.5
	0.3nm,0.9s,baz=343,slow=7.2,SNR=1.8						
SONM	Songino Array	46.74	341	P	P	13 37 32.1	+0.9
	0.3nm,0.7s,baz=116,slow=6.6,SNR=1.5						
MKAR	Makanchi Array	57.12	325	P	P	13 38 47.2	-1.1
	0.3nm,0.4s,baz=122,slow=7.6,SNR=11						

*IDC **06** 13:31:41.9±0.9, 11°.81S×165°.31E, h0km, mb3.9/13, mb1 4.2/14, mb1mx4.1/37, mbtmp3.9/14, ML4.6/1, Error ellipse: s-maj=31.3km s-min=19.8km az=142.0*

*NEIC **06** 13:31:43.2±0.3, 11°.85S×165°.28E, h10km, mb4.6/4, Error ellipse: s-maj=9.4km s-min=6.8km az=60.0*

*ISCJB **06** 13:31:45.0±0.4, 11°.94S±0°.06×165°.21E±0°.07, h33km, mb4.0/16, Error ellipse: s-maj=10.8km s-min=8.4km az=146.1*

ISC 06 13:31:46.8±0.6**, 11°.88S**±0°.10×**165°.3E**±0°.1**, h35km, n29, σ1s.24**/29**, mb4.1**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.82	294	Sn	Sn	13 34 14.0	-2.2
	4.9nm,0.3s,baz=237,slow=22,SNR=2.8						
MARNC	Mare, Loyalty	9.89	165	*e*Pn	Pn	13 34 03.6	-2.9
DZM	Mont Dzumac	10.19	174	*e*Pn	Pn	13 34 11.9	+1.2
DZM	Mont Dzumac	10.19	174	Pn	Pn	13 34 12.5	+1.8
	5.2nm,0.3s,baz=313,slow=10.0,SNR=26						
OUENC	Ouen Island, N	10.58	172	*e*Pn	Pn	13 34 16.1	+0.1
PINNC	Pines Island,	10.86	170	*e*Pn	Pn	13 34 19.1	-0.7
WR1	Warramunga Arr	30.82	251	*e*P	P	13 37 60.0	+0.4
	23nm,1.9s						
WRA	Warramunga Arr	30.82	251	P	P	13 37 60.0	+0.3
	1.5nm,0.9s,baz=77,slow=10,SNR=6.5						
ASAR	Alice Springs	32.05	244	P	P	13 38 10.1	-0.4
	0.9nm,0.8s,baz=72,slow=9.4,SNR=8.4						
FITZ	Fitzroy Crossi	38.77	256	*e*P	P	13 39 06.6	-1.7
	6.0nm,1.0s						
FITZ	Fitzroy Crossi	38.77	256	P	P	13 39 08.1	-0.1
	3.7nm,0.8s,baz=101,slow=6.2,SNR=6.8						
MJAR	Matsushiro Arr	54.52	333	P	P	13 41 11.2	-0.1
	2.0nm,0.7s,baz=70,slow=3.4,SNR=4.0						
MAJO	Matsushiro	54.52	333	*e*P	P	13 41 11.2	-0.1
USRK	Ussuriysk Ar.	63.51	334	P	P	13 42 13.7	+0.3
	1.0nm,0.7s,baz=126,slow=7.3,SNR=3.4						
CMAR	Chiang Mai Arr	72.07	294	P	P	13 43 08.4	+0.4
	0.7nm,0.7s,baz=110,slow=3.6,SNR=4.9						
SONA0	Songino Array	79.09	324	*e*P	P	13 43 49.4	+1.6
SONM	Songino Array	79.09	324	P	P	13 43 49.4	+1.6
	0.2nm,0.4s,baz=144,slow=8.1,SNR=3.1						
BILL	Bilibino	79.71	0	*e*P	P	13 43 50.3	-0.2
	6.6nm,1.1s						
ILAR	Eielson Array	84.43	19	P	P	13 44 15.3	0.0
	1.1nm,0.6s,baz=238,slow=5.1,SNR=22						
ILB	Eielson Array	84.43	19	*e*P	P	13 44 14.3	-1.1
SCRK	Sand Creek	84.84	20	*e*P	P	13 44 17.8	+0.2
	6.1nm,1.1s						
NV01	Mina Array Sit	86.88	50	*e*P	P	13 44 25.4	-3.0
NVAR	Mina Array Bea	86.88	50	P	P	13 44 28.7	+0.3
	1.0nm,0.8s,baz=236,slow=8.3,SNR=6.3						
MK32	Makanchi Array	93.84	317	*e*P	P	13 45 01.3	+0.7
MKAR	Makanchi Array	93.84	317	P	P	13 45 01.3	+0.7
	0.7nm,0.7s,baz=91,slow=6.6,SNR=7.3						
PDAR	Pinedale Array	94.42	47	P	P	13 45 04.4	+0.8
	0.4nm,0.8s,baz=256,slow=3.6,SNR=3.1						
YKA	Yellowknife Ar	95.90	27	P	P	13 45 09.1	-0.5
	0.2nm,0.6s,baz=257,slow=4.1,SNR=3.9						
LTX	Lajitas	96.59	62	*e*P	P	13 45 13.9	+0.3
TXAR	Lajitas Array	96.59	62	P	P	13 45 13.9	+0.3
	0.2nm,0.7s,baz=210,slow=4.3,SNR=3.4						

*IDC **06** 13:34:14.0±0.8, 11°.72S×165°.27E, h0km, mb4.0/14, mb1 4.2/16, mb1mx4.1/38, mbtmp4.0/16, ML4.1/2, Error ellipse: s-maj=28.0km s-min=16.5km az=142.0*

*ISCJB **06** 13:34:16.1±0.3, 11°.85S±0°.06×165°.20E±0°.06, h24km, mb4.2/23, Error ellipse: s-maj=9.4km s-min=8.3km az=137.6*

*NEIC **06** 13:34:17.8±3.0, 11°.74S×165°.24E, h24km±22km, mb4.6/11, Error ellipse: s-maj=10.8km s-min=6.8km az=193.0*

ISC 06 13:34:17.9±0.6**, 11°.72S**±0°.10×**165°.17E**±0°.09**, h24km, n46, σ1s.02**/40**, mb4.3**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.62	293	Pn	Pn	13 35 41.0	+1.0
	7.6nm,0.3s,baz=189,slow=13,SNR=3.3						
HNR				Sn	Sn	13 36 40.5	-3.3
	8.2nm,0.3s,baz=133,slow=19,SNR=2.4						
MARNC	Mare, Loyalty	10.09	165	*e*Pn	Pn	13 36 39.9	-1.4
DZM	Mont Dzumac	10.37	173	*e*Pn	Pn	13 36 45.3	0.0
DZM	Mont Dzumac	10.37	173	Pn	Pn	13 36 43.4	-1.9
	1.1nm,0.3s,baz=334,slow=16,SNR=5.6						
PINNC	Pines Island,	11.05	169	*e*Pn	Pn	13 36 54.2	-0.3
CTA	Charters Tower	19.99	243	P	Pn	13 38 50.1	-0.5
	4.9nm,0.8s,baz=45,slow=4.3,SNR=2.9						
STKA	Stephens Creek	29.57	224	P	P	13 40 22.3	+1.3
	1.3nm,0.7s,baz=28,slow=15,SNR=2.8						
H11S2	WAKE ISLAND Hy	30.05	3	T	T	14 10 47.3	
	baz=184,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	30.06	3	T	T	14 11 10.8	
	baz=184,slow=76,SNR=6.6						
H11S1	WAKE ISLAND Hy	30.07	3	T	T	14 10 48.7	
	baz=184,slow=76,SNR=12						
WB2	Warramunga Arr	30.72	251	*e*P	P	13 40 31.5	+0.2
WR1	Warramunga Arr	30.73	251	*e*P	P	13 40 31.4	0.0
	14nm,1.3s						
WRA	Warramunga Arr	30.73	251	P	P	13 40 31.4	0.0
	5.7nm,1.1s,baz=80,slow=9.3,SNR=13						
H11N1	WAKE ISLAND Hy	31.28	3	T	T	14 12 39.5	
	baz=182,slow=76,SNR=7.3						
H11N3	WAKE ISLAND Hy	31.28	3	T	T	14 12 25.5	
	baz=182,slow=76,SNR=8.1						
H11N2	WAKE ISLAND Hy	31.30	3	T	T	14 12 41.9	
	baz=182,slow=76,SNR=7.6						
ASAR	Alice Springs	31.99	244	P	P	13 40 41.6	-0.9
	1.4nm,0.8s,baz=74,slow=9.2,SNR=8.6						
FITZ	Fitzroy Crossi	38.67	256	*e*P	P	13 41 39.5	-0.5
	7.5nm,1.3s						
FITZ	Fitzroy Crossi	38.67	256	P	P	13 41 40.6	+0.6
	1.5nm,0.8s,baz=108,slow=3.2,SNR=2.3						
USRK	Ussuriysk Ar.	63.29	334	P	P	13 44 45.2	+0.5
	2.1nm,0.8s,baz=108,slow=4.7,SNR=2.8						
CM01	Chiang Mai Arr	71.84	294	*e*P	P	13 45 39.1	-0.2
CM31	Chiang Mai Arr	71.86	294	*e*P	P	13 45 41.5	+2.1
CMAR	Chiang Mai Arr	71.86	294	P	P	13 45 40.8	+1.4
	0.5nm,0.7s,baz=129,slow=4.4,SNR=4.8						
SONA0	Songino Array	78.87	324	*e*P	P	13 46 19.3	+0.1
SONM	Songino Array	78.87	324	P	P	13 46 19.3	+0.1
	0.6nm,0.7s,baz=149,slow=6.7,SNR=4.0						
ILAR	Eielson Array	84.32	19	P	P	13 46 46.9	-0.7
	0.8nm,0.6s,baz=233,slow=5.2,SNR=9.9						
ILB	Eielson Array	84.32	19	*e*P	P	13 46 48.7	+1.1
AFDM	Forest Hills D	85.06	49	*e*P	P	13 46 50.5	-1.4
	4.6nm,1.0s						
MDPB	Devils Postpil	86.06	50	*e*P	P	13 46 56.6	-0.5
	3.8nm,0.9s						
NV01	Mina Array Sit	86.88	50	*e*P	P	13 47 00.2	-1.0
NVAR	Mina Array Bea	86.88	50	P	P	13 47 01.4	+0.2
	3.3nm,0.9s,baz=231,slow=8.3,SNR=13						
NV11	Mina Array Sit	87.00	50	*e*P	P	13 47 00.4	-1.2
	1.4nm,1.8s						
KVN	Kaiserville	87.22	49	*e*P	P	13 47 02.4	-0.4
	3.8nm,1.0s						
PSUT	Pine Spring	90.27	51	*e*P	P	13 47 16.7	-0.5
	3.2nm,0.9s						
LCMT	Little Creek M	90.36	52	*e*P	P	13 47 17.7	+0.1
	4.3nm,1.1s						
U15A	North Rim	90.96	53	*e*P	P	13 47 20.5	-0.1
	4.9nm,0.9s						
MTPU	Mount Pierson	91.42	52	*e*P	P	13 47 23.0	+0.2
	3.6nm,0.9s						
MSU	Marysvale	91.54	51	*e*P	P	13 47 23.5	+0.4
HVU	Hansel Valley	91.87	48	*e*P	P	13 47 24.2	-0.3
	3.9nm,1.0s						
MK32	Makanchi Array	93.62	317	*e*P	P	13 47 32.7	+0.4
MKAR	Makanchi Array	93.62	317	P	P	13 47 32.7	+0.4
	0.5nm,0.7s,baz=102,slow=5.6,SNR=5.6						
PD31	Pinedale Array	94.42	47	*e*P	P	13 47 35.6	-0.7
PDAR	Pinedale Array	94.42	47	P	P	13 47 36.4	+0.1
	0.6nm,0.9s,baz=208,slow=2.9,SNR=4.3						
YKA	Yellowknife Ar	95.82	27	P	P	13 47 40.2	-1.7
	0.4nm,0.9s,baz=257,slow=4.5,SNR=4.9						
LTX	Lajitas	96.64	62	*e*P	P	13 47 47.0	+0.4
TXAR	Lajitas Array	96.64	62	P	P	13 47 47.0	+0.4
	0.5nm,0.8s,baz=202,slow=5.1,SNR=6.1						

*IDC **06** 13:35:50.5±1.7, 10°.80S×165°.42E, h0km, mb3.7/6, mb1 4.0/7, mb1mx3.7/35, mbtmp3.8/7, ML3.5/1, Error ellipse: s-maj=51.4km s-min=27.3km az=123.0*

*ISCJB **06** 13:35:53.3±1.1, 10°.9S±0°.1×165°.4E±0°.2, h30km, mb3.6/5, Error ellipse: s-maj=28.1km s-min=18.5km az=5.4*

ISC 06 13:35:55.1±1.2**, 10°.8S**±0°.1×**165°.4E**±0°.2**, h30km, n7, σ0s.99**/7**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.22	175	Pn	Pn	13 38 33.7	+0.1
	0.4nm,0.3s,baz=66,slow=20,SNR=1.5						
CTA	Charters Tower	20.63	241	P	P	13 40 33.6	+1.3
	5.2nm,0.7s,baz=63,slow=14,SNR=2.7						
WRA	Warramunga Arr	31.27	249	P	P	13 42 12.4	-0.3
	0.6nm,0.5s,baz=83,slow=8.6,SNR=5.6						
ASAR	Alice Springs	32.61	243	P	P	13 42 23.0	-1.5
	1.8nm,0.8s,baz=68,slow=10,SNR=9.6						
SONM	Songino Array	78.31	324	P	P	13 47 52.5	0.0
	0.2nm,0.5s,baz=108,slow=4.7,SNR=1.5						
ILAR	Eielson Array	83.41	19	P	P	13 48 19.3	+0.1
	0.3nm,0.6s,baz=239,slow=5.0,SNR=4.2						
MKAR	Makanchi Array	93.15	317	P	P	13 49 06.7	+0.2
	0.2nm,0.8s,baz=101,slow=5.3,SNR=1.5						

*IDC **06** 13:37:04.2±0.5, 11°.05S×165°.17E, h0km, mb4.5/22, mb1 4.6/24, mb1mx4.6/36, mbtmp4.5/24, ML4.8/2, MS4.5/3, Ms1 4.5/3, ms1mx3.8/39, Error ellipse: s-maj=16.3km s-min=13.8km az=110.0*

*NEIC **06** 13:37:05.6±0.2, 11°.08S×165°.12E, h10km, mb4.9/18, Error ellipse: s-maj=6.7km s-min=4.8km az=84.0*

*ISCJB **06** 13:37:06.9±0.3, 11°.17S±0°.04×165°.08E±0°.05, h31km, mb4.6/42, Error ellipse: s-maj=7.5km s-min=5.5km az=156.5*

ISC 06 13:37:08.8±0.4**, 11°.17S**±0°.06×**165°.16E**±0°.07**, h31km, n87, σ1s.14**/90**, mb4.7**/42**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.42	288	*e*Pn	Pn	13 38 26.4	-1.1
HNR				Sn	Sn	13 39 28.2	-0.7
HNR	Honiara	5.42	288	Pn	Pn	13 38 26.8	-0.7
	30nm,0.3s,baz=202,slow=5.3,SNR=9.2						
HNR				Sn	Sn	13 39 28.2	-0.7
	11nm,0.3s,baz=288,slow=20,SNR=3.3						
HNR				LR	LR	13 40 36.1	
	comp=Z,3μm,18.6s,baz=143,slow=39						
MARNC	Mare, Loyalty	10.61	165	*e*Pn	Pn	13 39 39.3	+0.5
DZM	Mont Dzumac	10.91	174	*e*Pn	Pn	13 39 43.0	+0.1
DZM				Sn	Sn	13 41 41.7	-2.3
DZM	Mont Dzumac	10.91	174	Pn	Pn	13 39 44.0	+1.1
	5.7nm,0.3s,baz=288,slow=13,SNR=26						
DZM				Sn	Sn	13 41 41.7	-2.3
	0.8nm,0.3s,baz=24,slow=19,SNR=2.2						
OUENC	Ouen Island, N	11.30	172	*e*Pn	Pn	13 39 48.6	+0.4
PINNC	Pines Island,	11.58	169	*e*Pn	Pn	13 39 53.0	+0.9
PATS	Pohnpei	19.15	339	*e*P	P	13 41 29.4	-0.3
	181nm,1.2s						
KWAJ	Kwajalein Atol	19.99	7	*e*P	P	13 41 39.5	+0.5
	438nm,1.3s						
CTA	Charters Tower	20.23	242	P	Pn	13 41 43.6	-0.1
	36nm,0.8s,baz=71,slow=14,SNR=12						
CTAO	Charters Tower	20.23	242	*e*P	P	13 41 42.2	+0.6
	49nm,0.9s						
URZ	Urewera	29.02	160	P	P	13 43 07.3	+1.4
	12nm,0.7s,baz=234,slow=5.3,SNR=8.4						
H11S2	WAKE ISLAND Hy	29.52	3	T	T	14 13 46.2	
	baz=190,slow=74						
H11S3	WAKE ISLAND Hy	29.52	3	T	T	14 13 46.2	
	baz=190,slow=74						
H11S1	WAKE ISLAND Hy	29.53	3	T	T	14 13 47.1	
	baz=190						
STKA	Stephens Creek	29.96	223	*e*P	P	13 43 15.3	+0.9
	2.8nm,0.8s						
STKA	Stephens Creek	29.96	223	P	P	13 43 15.3	+0.9
	11nm,0.8s,baz=26,slow=8.2,SNR=20						
H11N1	WAKE ISLAND Hy	30.74	3	T	T	14 15 18.3	
	baz=182,slow=76,SNR=6.3						
H11N3	WAKE ISLAND Hy	30.75	3	T	T	14 15 17.4	
	baz=182,slow=76,SNR=5.8						
H11N2	WAKE ISLAND Hy	30.76	3	T	T	14 15 19.6	
	baz=182,slow=76,SNR=5.8						
WRAB	Tennant Creek	30.89	250	*e*P	P	13 43 21.9	-1.0
	18nm,0.9s						
WB2	Warramunga Arr	30.89	250	*e*P	P	13 43 21.8	-1.1
WB2				*e*PcP	PcP	13 46 19.6	+0.3
WRA	Warramunga Arr	30.90	250	P	P	13 43 22.6	-0.3
	14nm,0.8s,baz=78,slow=9.4,SNR=55						
WRA				PcP	PcP	13 46 20.3	+1.0
	2.1nm,0.7s,baz=76,slow=3.0,SNR=11						
SNZO	South Karori	31.17	166	*e*P	P	13 43 25.1	+0.1
THZ	Tophouse	31.22	169	*e*P	P	13 43 26.2	+0.7
	114nm,1.8s						
LTZ	Lake Taylor	32.09	170	*e*P	P	13 43 34.6	+1.5
	17nm,0.8s						
AS01	Alice Springs	32.18	243	*e*P	P	13 43 32.2	-2.0
AS01				*e*PcP	PcP	13 46 22.3	-0.5
AS31	Alice Springs	32.22	243	*e*P	P	13 43 32.6	-2.0
	8.0nm,0.8s						
ASAR	Alice Springs	32.22	243	P	P	13 43 34.1	-0.5
	26nm,0.8s,baz=73,slow=9.5,SNR=116						
ASAR				PcP	PcP	13 46 23.4	+0.5
	3.3nm,0.7s,baz=60,slow=2.6,SNR=15						
RPZ	Rata Peaks	32.82	172	*e*P	P	13 43 39.9	+0.4
	16nm,0.9s						
RPZ	Rata Peaks	32.82	172	P	P	13 43 39.7	+0.2
	6.6nm,0.9s,baz=63,slow=6.8,SNR=3.3						
FITZ	Fitzroy Crossi	38.79	255	P	P	13 44 30.5	-0.5
	9.2nm,0.8s,baz=96,slow=7.9,SNR=15						
BATI	Baumata	40.77	267	P	P	13 44 47.8	+0.3
	18nm,0.8s,baz=333,slow=7.6,SNR=3.8						
MJAR	Matsushiro Arr	53.82	333	P	P	13 46 27.9	-0.9
	4.5nm,0.7s,baz=168,slow=9.1,SNR=12						
MAT	Matsushiro	53.83	333	P	P	13 46 27.8	-1.0
JNU	Nakatsue	54.85	325	P	P	13 46 35.6	-0.8
	12nm,0.8s,baz=64,slow=3.9,SNR=8.9						
KSRS	Korea Array	59.66	326	P	P	13 47 10.2	-0.1
	1.6nm,0.8s,baz=134,slow=8.2,SNR=5.6						
KSAR	Wonju Array Be	59.67	326	P	P	13 47 10.2	-0.2
NJ2	Nanjing	61.71	316	*e*P	P	13 47 23.7	-0.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	Ussuriysk Ar.	62.81	334	P	P	13 47 30.6	-0.8
	comp=Z,2.2nm,0.8s,baz=145,slow=6.9,SNR=5.3						
PETK	Petropavlovsk-	64.34	355	P	P	13 47 41.5	+0.1
	comp=Z,3.2nm,1.0s,baz=188,slow=7.4,SNR=7.8						
ENH	Enshi	67.53	309	*e*P	P	13 48 01.0	-1.4
	comp=Z,21nm,1.4s						
GYA	Guiyang	68.02	304⇑	*i*P	P	13 48 07.6	+1.9
GYA				PP	PP	13 50 39.4	+3.3
GYA				S	S	13 57 05.2	+1.8
GYA				SKS	SKSac	13 58 01.2	-1.2
GYA	Guiyang	68.02	304	SS	SS	14 01 29.3	+3.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,490nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,480nm,18.4s						
XAN	Xi'an	69.79	313	P	P	13 48 19.0	+2.5
XAN				pP	pwP	13 48 33.7	+1.9
XAN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KMI	Kunming	70.70	302	P	P	13 48 26.5	+4.0
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC	Hu-ho-hao-te	71.56	320	*e*P	P	13 48 28.7	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CM01	Chiang Mai Arr	71.61	294	*e*P	P	13 48 27.2	-0.7
CMAR	Chiang Mai Arr	71.64	294	P	P	13 48 28.9	+0.9
	comp=Z,1.1nm,0.8s,baz=115,slow=4.1,SNR=7.6						
CD2	Chengdu	72.23	308	*e*P	P	13 48 31.3	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
LZH	Lanzhou	74.42	312	*e*P	P	13 48 43.2	-1.1
LZH				pP	pP	13 48 49.4	-2.8
LZH				sP	sP	13 48 54.3	-0.9
LZH				PP	PP	13 51 39.3	+8.3
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,87nm,4.9s						
LZH				LR	LR		
	comp=N,230nm,16.3s						
LZH				LR	LR		
	comp=E,210nm,16.4s						
LZH				LR	LR		
	comp=Z,270nm,17.5s						
ULN	Ulaanbaatar	78.07	324	*e*P	P	13 49 05.0	+0.2
	comp=Z,4.6nm,1.0s						
SONM	Songino Array	78.43	324	P	P	13 49 06.7	0.0
	comp=Z,0.8nm,0.7s,baz=149,slow=8.3,SNR=6.7						
GTA	Gaotai	78.73	314	*e*P	P	13 49 09.5	+0.9
GTA				pP	pP	13 49 13.9	-2.7
GTA				sP	PcP	13 49 16.5	-0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
QSPA	South Pole Qui	78.83	180	*e*P	P	13 49 09.8	+1.1
	comp=Z,11nm,1.0s						
BILL	Bilibino	79.01	0	*e*P	P	13 49 08.7	-0.6
	comp=Z,4.6nm,0.8s						
RPN	Rapa Nui	81.03	116	LR	LR	14 18 44.4	
	comp=Z,290nm,21.9s,baz=264,slow=31						
HDA	Harding Lake	83.55	19	*e*P	P	13 49 33.2	-0.3
	comp=Z,5.8nm,1.0s						
ILAR	Eielson Array	83.82	19	P	P	13 49 34.8	-0.1
	comp=Z,1.2nm,0.5s,baz=240,slow=4.8,SNR=27						
ILB	Eielson Array	83.82	19	*e*P	P	13 49 34.8	-0.1
NV01	Mina Array Sit	86.54	50	*e*P	P	13 49 48.5	-0.9
NVAR	Mina Array Bea	86.54	50	P	P	13 49 49.0	-0.5
	comp=Z,1.6nm,0.9s,baz=205,slow=1.9,SNR=6.1						
WMQ	Urumqi	88.78	315	*e*P	P	13 49 59.7	-0.1
WMQ				pP	pP	13 50 06.6	-1.3
WMQ				sP	sP	13 50 09.9	-0.9
WMQ				pmax	pmax		
	comp=Z,21nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.3s						
WMQ				LR	LR		
	comp=N,2μm,20.9s						
WMQ				LR	LR		
	comp=E,2μm,20.9s						
WMQ				LR	LR		
	comp=Z,3μm,31.3s						
LPIG	La Paz	89.58	65	LR	LR	14 19 45.4	
	comp=Z,305nm,21.5s,baz=56,slow=29						
U15A	North Rim	90.64	53	*e*P	P	13 50 09.8	+0.9
	comp=Z,17nm,2.0s						
SYO	Syowa Base	91.49	197⇑	*e*P	P	13 50 12.6	+0.7
DLMT	Dillon	92.47	44	*e*P	P	13 50 16.5	-0.6
	comp=Z,4.4nm,1.0s						
MK01	Makanchi Array	93.21	317	*e*P	P	13 50 18.9	-1.4
MK31	Makanchi Array	93.22	317	*e*P	P	13 50 19.4	-1.0
MKAR	Makanchi Array	93.22	317	*e*P	P	13 50 19.3	-1.1
	comp=Z,12nm,0.8s						
MKAR				PKKPbc	PKKPbc	14 07 29.6	-0.5
MKAR	Makanchi Array	93.22	317	P	P	13 50 20.0	-0.3
	comp=Z,2.4nm,0.7s,baz=97,slow=6.0,SNR=24						
MKAR				PKKPbc	PKKPbc	14 07 29.6	-0.5
	comp=Z,0.4nm,0.6s,baz=252,slow=4.7,SNR=6.6						
ZALV	Zalesovo Beam	93.33	324	*e*P	P	13 50 18.1	-2.4
ZALV	Zalesovo Beam	93.33	324	P	P	13 50 19.0	-1.6
	comp=Z,1.0nm,0.6s,baz=113,slow=3.4,SNR=5.7						
MAKZ	Makanchi	93.44	317	*e*P	P	13 50 20.8	-0.6
	comp=Z,2.6nm,1.0s						
PDAR	Pinedale Array	94.06	47	P	P	13 50 24.8	+0.2
	comp=Z,0.7nm,0.9s,baz=315,slow=0.2,SNR=4.9						
YKA	Yellowknife Ar	95.35	27	P	P	13 50 27.6	-2.0
	comp=Z,0.6nm,0.9s,baz=260,slow=4.4,SNR=6.5						
TXAR	Lajitas Array	96.39	61	P	P	13 50 36.2	+0.8
	comp=Z,0.2nm,0.8s,baz=226,slow=3.6,SNR=2.5						
ARCES	ARCESS Array B	116.31	345	PKP	PKPdf	13 55 48.2	-0.6
	comp=Z,0.8nm,0.7s,baz=88,slow=2.3,SNR=13						
CPUP	Villa Florida	124.36	133	PKP	PKPdf	13 56 05.6	+0.1
	comp=Z,1.6nm,0.8s,baz=234,slow=7.7,SNR=5.0						
BOSA	Boshof	124.63	223	PKP	PKiKP	13 56 06.8	+0.3
	comp=Z,1.2nm,0.7s,baz=124,slow=3.6,SNR=2.8						

SDV	Santo Domingo	125.07	87	ePKPdf	PKiKP	13 56 07.8	0.0
MATP	Matopo	127.06	234	PKP	PKiKP	13 56 11.8	+0.4
	comp=Z,1.9nm,0.8s,baz=63,slow=4.8,SNR=4.8						
GERES	GERESS Array B	135.56	333	PKP	PKPdf	13 56 25.3	-0.8
	comp=Z,0.5nm,0.6s,baz=9.6,slow=9.6,SNR=3.8						
BDFB	Brasilia	137.71	128	PKP	PKPdf	13 56 31.7	+0.6
	comp=Z,1.0nm,0.3s,baz=210,slow=7.1,SNR=3.2						
ESDC	Sonseca Array	150.02	343	PKPbc	PKPbc	13 56 56.8	+0.1
	comp=Z,0.2nm,0.3s,baz=64,slow=3.0,SNR=3.4						
TOA0	Torodi Ar. Sit	163.72	279	ePKPdf	PKPdf	13 57 08.5	-1.3
TORD	Torodi Ar. Bea	163.72	279	PKP	PKPdf	13 57 09.2	-0.6
	comp=Z,1.7nm,0.9s,baz=331,slow=2.7,SNR=5.9						

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*IDC **06** 13:40:28.1±1.1, 11°.29S×165°.63E, h0^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.9/30, mbtmp3.9/11, ML4.7/2, Error ellipse: s-maj=35.7km s-min=22.3km az=141.0*

*NEIC **06** 13:40:29.7±0.5, 11°.25S×165°.60E, h10^{km}, mb4.4/1, Error ellipse: s-maj=12.4km s-min=8.4km az=76.0*

*ISCJB **06** 13:40:30.1±0.6, 11°.40S±0°.07×165°.56E±0°.10, h24^{km}, mb3.7/10, Error ellipse: s-maj=13.6km s-min=9.4km az=165.5*

ISC 06 13:40:31.8±0.8**, 11°.3S**±0°.1×**165°.6E**±0°.1**, h24^{km}, n21, σ1^{s}.05**/21**, mb3.8**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.84	288	Pn	Pn	13 41 55.1	-1.9
	34nm,0.3s,baz=155,slow=6.2,SNR=6.9						
HNR				Sn	Sn	13 42 52.3	-11
	9.5nm,0.3s,baz=239,slow=22,SNR=2.7						
MARNC	Mare, Loyalty	10.42	167	ePn	Pn	13 42 59.3	-0.4
DZM	Mont Dzumac	10.77	176	ePn	Pn	13 43 04.3	-0.4
DZM	Mont Dzumac	10.77	176	Pn	Pn	13 43 04.4	-0.2
	3.5nm,0.3s,baz=303,slow=19,SNR=13						
OUENC	Ouen Island, N	11.15	174	ePn	Pn	13 43 09.3	-0.4
PINNC	Pines Island,	11.41	171	ePn	Pn	13 43 14.0	+0.6
CTA	Charters Tower	20.55	242	P	P	13 45 09.2	+0.4
	6.3nm,1.0s,baz=59,slow=12,SNR=3.0						
WR1	Warramunga Arr	31.26	250	eP	P	13 46 49.7	-0.3
	5.1nm,0.9s						
WRA	Warramunga Arr	31.26	250	P	P	13 46 49.7	-0.3
	1.2nm,0.7s,baz=82,slow=8.8,SNR=6.4						
AS31	Alice Springs	32.55	244	eP	P	13 47 02.0	+0.6
	1.0nm,1.1s						
ASAR	Alice Springs	32.55	244	P	P	13 47 00.5	-0.8
	0.6nm,0.7s,baz=68,slow=10,SNR=4.1						
CMAR	Chiang Mai Arr	72.06	294	P	P	13 51 56.6	+2.1
	0.4nm,0.3s,baz=126,slow=5.7,SNR=2.7						
SONA0	Songino Array	78.76	324	eP	P	13 52 34.0	+1.4
SONM	Songino Array	78.76	324	P	P	13 52 34.0	+1.4
	0.2nm,0.5s,baz=162,slow=6.1,SNR=3.0						
ILAR	Eielson Array	83.78	19	P	P	13 52 58.5	-0.2
	0.4nm,0.5s,baz=230,slow=5.2,SNR=12						
ILB	Eielson Array	83.78	19	eP	P	13 52 57.7	-0.9
NVAR	Mina Array Bea	86.29	50	P	P	13 53 12.8	+0.6
	0.1nm,0.4s,baz=204,slow=2.0,SNR=2.9						
NV01	Mina Array Sit	86.29	50	eP	P	13 53 11.3	-0.8
MK32	Makanchi Array	93.58	317	eP	P	13 53 46.6	+0.6
MKAR	Makanchi Array	93.58	317	P	P	13 53 46.6	+0.6
	0.5nm,0.7s,baz=87,slow=6.1,SNR=3.6						
YKA	Yellowknife Ar	95.25	27	P	P	13 53 51.6	-1.6
	0.2nm,0.7s,baz=252,slow=4.8,SNR=3.3						

IDC 06 13:42:57.8±5.1**, 11°.96S×165°.43E, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/31**, mbtmp3.6**/3**, Error ellipse: s-maj=263.3km s-min=33.3km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.89	251	P	P	13 49 17.4	+1.0
	0.6nm,0.8s,baz=81,slow=9.2,SNR=3.7						
ASAR	Alice Springs	32.12	244	P	P	13 49 26.2	-1.0
	0.8nm,0.9s,baz=68,slow=10,SNR=3.7						
ILAR	Eielson Array	84.47	19	P	P	13 55 32.1	0.0
	0.2nm,0.5s,baz=236,slow=6.4,SNR=5.8						

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*IDC **06** 13:43:53.4±0.9, 38°.29N×22°.14E, h0^{km}, mb3.7/10, mb1 3.9/13, mb1mx3.7/48, mbtmp3.8/13, ML3.6/3, Error ellipse: s-maj=18.3km s-min=17.8km az=102.0*

*BEO **06** 13:43:53.7±1.4, 38°.34N×22°.71E, h0^{km}, ML3.5/2*

*ISCJB **06** 13:43:54.8±0.2, 38°.33N±0°.01×22°.15E±0°.02, h11^{km}±1^{km}, mb3.7/9, Error ellipse: s-maj=2.2km s-min=2.0km az=163.8*

*ATH **06** 13:43:54.7, 38°.32N×22°.15E, h11^{km}±1^{km}, ML3.5/34, Error ellipse: s-maj=1.7km s-min=0.5km az=302.0*

*THE **06** 13:43:55.0, 38°.32N×22°.17E, h5^{km}±1^{km}, ML3.6/19, Error ellipse: s-maj=1.0km s-min=0.4km az=283.0*

ISC 06 13:43:54.9±0.7**, 38°.32N**±0°.01×**22°.17E**±0°.01**, h8^{km}**±4^{km}**, n141, σ1^{s}.11**/191**, mb3.9**/9**, 16C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALIK	Aliki, Aigiali	0.07	220	P	Pg	13 43 57.0	+0.1
ALIK				S	Sg	13 43 58.9	+0.5
KALE	Kalithea	0.08	341	P	Pg	13 43 57.0	-0.1
KALE				S	Sg	13 43 58.6	-0.1
KALE				AML	AML	13 43 58.8	
KALE				AML	AML	13 43 58.9	
KALE	Kalithea	0.08	341	P	Pg	13 43 57.0	-0.1
KALE				S	Sg	13 43 58.5	-0.1
TRIZ	Trizonia	0.09	302	P	Pg	13 43 56.9	-0.3
TRIZ				S	Sg	13 43 58.5	-0.3
TRIZ	Trizonia	0.09	302	P	Pg	13 43 56.9	-0.3
TRIZ				S	Sg	13 43 58.5	-0.3
SERG	Sergoula	0.13	317	P	Pg	13 43 57.7	-0.2
SERG				S	Sg	13 44 00.1	+0.1
SERG				AML	AML	13 44 00.3	
SERG				AML	AML	13 44 02.0	
SERG	Sergoula	0.13	317	P	Pg	13 43 57.6	-0.2
SERG				S	Sg	13 44 00.0	+0.1
LAKA	Lakka	0.17	243	P	Pg	13 43 58.4	-0.2
LAKA				S	Sg	13 44 01.3	+0.3
LAKA				AML	AML	13 44 05.2	
	comp=N,53230µm,0.6s						
LAKA				AML	AML	13 44 05.6	
	comp=E,59697µm,0.4s						
LAKA	Lakka	0.17	243	P	Pg	13 43 58.3	-0.2
LAKA				S	Sg	13 44 01.2	+0.3
EFP	Efpalio	0.24	298	P	Pg	13 43 59.4	-0.3
EFP				S	Sg	13 44 03.4	+0.5
EFP				AML	AML	13 44 03.4	
EFP				AML	AML	13 44 07.1	
	comp=E,49017µm,0.5s						
EFP	Efpalio	0.24	298	P	Pg	13 43 59.3	-0.3
EFP				S	Sg	13 44 03.1	+0.2
KLV	Kalavryta, Ach	0.27	184	P	Pg	13 44 00.2	-0.2
KLV				S	Sg	13 44 04.5	+0.4
KLV				AML	AML	13 44 07.8	
	comp=E,14157µm,0.3s						
KLV				AML	AML	13 44 10.4	
	comp=N,14059µm,0.7s						
KLV	Kalavryta, Ach	0.27	184	P	Pg	13 44 00.2	-0.2
KLV				S	Sg	13 44 04.8	+0.8
DSF	Desfina	0.29	71	P	Pg	13 44 00.8	0.0
DSF				S	Sg	13 44 06.1	+1.3
DSF				AML	AML	13 44 06.3	
	comp=N,41008µm,0.2s						
DSF				AML	AML	13 44 06.8	
	comp=E,22560µm,0.2s						
DSF	Desfina	0.29	71	P	Pg	13 44 00.8	0.0
DSF				S	Sg	13 44 05.8	+1.1
UPR	University Cam	0.30	264	P	Pg	13 44 00.9	0.0
UPR				S	Sg	13 44 04.8	-0.2
UPR	University Cam	0.30	264	P	Pg	13 44 00.9	0.0
UPR				S	Sg	13 44 05.7	+0.7
ANX	Ano Chora	0.34	325	P	Pg	13 44 01.2	-0.4
ANX				S	Sg	13 44 06.7	+0.5
ANX				AML	AML	13 44 07.0	
ANX				AML	AML	13 44 10.4	
	comp=E,66999µm,0.7s						
ANX	Ano Chora	0.34	325	P	Pg	13 44 01.2	-0.4
ANX				S	Sg	13 44 06.9	+0.7
GUR	Goura	0.40	160	P	Pg	13 44 02.5	-0.3
GUR				S	Sg	13 44 08.8	+0.7
GUR				AML	AML	13 44 09.3	
	comp=E,32700µm,0.5s						
GUR				AML	AML	13 44 10.1	
	comp=N,30946µm,0.4s						
GUR	Goura	0.40	160	P	Pg	13 44 02.5	-0.3
GUR				S	Sg	13 44 08.5	+0.4
DRO	Drossia	0.52	225	P	Pg	13 44 04.4	-0.5
DRO				S	Sg	13 44 11.5	-0.1
DRO				AML	AML	13 44 14.5	
	comp=E,36081µm,0.3s						
DRO				AML	AML	13 44 16.1	
	comp=N,27247µm,0.2s						
DRO	Drossia	0.52	225	P	Pg	13 44 04.4	-0.5
DRO				S	Sg	13 44 12.6	+1.0
PROD	Prodromos	0.58	96	P	Pg	13 44 06.2	+0.1
PROD				S	Sb	13 44 15.6	0.0
PVO	Paravola	0.59	301	P	Pg	13 44 05.7	-0.6
PVO				AML	AML	13 44 21.3	
	comp=E,8540µm,0.5s						
PVO				AML	AML	13 44 23.4	
	comp=N,9500µm,0.4s						
PVO	Paravola	0.59	301	P	Pg	13 44 05.7	-0.6
PVO				S	Sb	13 44 15.1	-0.8
RLS	Riolos of Patr	0.61	245	P	Pg	13 44 06.1	-0.6
RLS				S	Sg	13 44 15.0	+0.2
RLS				AML	AML	13 44 17.6	
	comp=E,9182µm,0.2s						
RLS				AML	AML	13 44 18.0	
	comp=N,9304µm,0.6s						
RLS	Riolos of Patr	0.61	245	P	Pg	13 44 06.1	-0.6
RLS				S	Sg	13 44 15.3	+0.5
AXS	Araxos	0.64	259	P	Pg	13 44 06.9	-0.3
AXS				AML	AML	13 44 18.6	
	comp=E,6916µm,0.3s						
AXS				AML	AML	13 44 18.8	
	comp=N,7511µm,0.3s						
EVR	Evrytania	0.66	335	P	Pg	13 44 07.0	-0.7
EVR				S	Sg	13 44 15.7	-0.7
EVR				AML	AML	13 44 18.1	
	comp=E,17286µm,0.6s						
EVR				AML	AML	13 44 18.6	
	comp=N,40209µm,0.6s						
EVR	Evrytania	0.66	335	P	Pg	13 44 07.0	-0.7
EVR				S	Sg	13 44 16.9	+0.5
LTK	Loutraki	0.69	115	P	Pg	13 44 08.5	+0.2
LOUT	Loutraki	0.71	117	P	Pg	13 44 08.9	+0.2
LOUT				AML	AML	13 44 26.8	
	comp=E,945µm,0.5s						
LOUT				AML	AML	13 44 30.9	
	comp=N,746µm,0.6s						
LOUT	Loutraki	0.71	117	P	Pg	13 44 08.7	0.0
AGG	Agios Georgios	0.71	10	P	Pg	13 44 07.6	-1.1
AGG				S	Sb	13 44 19.2	-0.4
LKR	Lokris	0.73	63	P	Pg	13 44 06.8	-2.2
LKR				S	Sg	13 44 18.2	-0.3
ATAL	Atalanti	0.77	60	P	Pg	13 44 09.1	-0.5
ATAL				S	Sb	13 44 20.8	-0.2
ATAL	Atalanti	0.77	60	P	Pg	13 44 08.5	-1.2
TRIP	Tripoli	0.79	174	P	Pg	13 44 09.5	-0.7
TRIP				S	Sg	13 44 21.0	+0.6
TRIP				AML	AML	13 44 26.4	
	comp=N,10054µm,0.6s						
TRIP				AML	AML	13 44 30.1	
	comp=E,6632µm,0.5s						
TRIP	Tripoli	0.79	174	P	Pg	13 44 09.5	-0.7
AMT	Artemida-Makis	0.86	205	P	Pg	13 44 10.9	-0.7
AMT				S	Sg	13 44 23.1	+0.4
AMT				AML	AML	13 44 27.0	
	comp=E,13102µm,0.7s						
AMT				AML	AML	13 44 28.6	
	comp=N,20063µm,0.5s						
AMT	Artemida-Makis	0.86	205	P	Pg	13 44 10.9	-0.7
VIL2	Platees	0.87	97	P	Pb	13 44 12.3	0.0
VIL2				AML	AML	13 44 28.8	
	comp=N,6979µm,0.6s						
VIL2				AML	AML	13 44 29.2	
	comp=E,17262µm,0.7s						
VTN	Vitineika	0.87	243	P	Pg	13 44 11.4	-0.3
VLX	Vlachokerasia	0.96	170	P	Pg	13 44 12.3	-1.0
VLX				S	Sb	13 44 26.4	-0.2
VLX				AML	AML	13 44 30.9	
	comp=E,10998µm,0.5s						
VLX				AML	AML	13 44 34.6	
	comp=N,11971µm,0.7s						
VLX	Vlachokerasia	0.96	170	P	Pg	13 44 12.4	-1.0
VLX				S	Sb	13 44 27.4	+0.7
SMIA	Simia	0.99	55	P	Pb	13 44 14.3	0.0
SMIA				S	Sb	13 44 27.2	-0.2
SMIA				AML	AML	13 44 31.4	
	comp=N,20228µm,0.5s						
SMIA				AML	AML	13 44 37.3	
	comp=E,16675µm,0.7s						
MES3	Kyparissia	1.14	201	P	Pg	13 44 16.0	-0.8
MES3				S	Sg	13 44 31.6	+0.1
ITM	Ithomi	1.15	190	P	Pg	13 44 15.8	-1.2
ITM				AML	AML	13 44 36.5	
	comp=E,3372µm,0.4s						
ITM				AML	AML	13 44 38.0	
	comp=N,4017µm,0.5s						
ITM	Ithomi	1.15	190	P	Pg	13 44 15.8	-1.2
DID	Didima	1.17	134	P	Pg	13 44 16.6	-0.7
DID				AML	AML	13 44 36.9	
	comp=E,5792µm,0.7s						
DID				AML	AML	13 44 41.5	
	comp=N,3474µm,0.8s						
DID	Didima	1.17	134	P	Pg	13 44 16.6	-0.7
DSL	Palaion Diasel	1.17	314	P	Pb	13 44 17.1	-0.3
MRKA	Markates	1.18	70	P	Pn	13 44 17.6	-0.1
MRKA				S	Sn	13 44 33.5	-0.3
MRKA				AML	AML	13 44 40.1	
	comp=N,2495µm,0.9s						
MRKA				AML	AML	13 44 43.9	
	comp=E,3171µm,0.9s						
MRKA	Markates	1.18	70	P	Pn	13 44 17.6	-0.1
KRND	KRANIDI	1.21	140	P	Pb	13 44 17.7	-0.4
FYTO	Fytoko, Volos	1.24	29	P	Pn	13 44 18.0	-0.6
FYTO				AML	AML	13 44 42.3	
	comp=N,1154µm,0.5s						
FYTO				AML	AML	13 44 47.2	
	comp=E,1037µm,1.0s						
THL	Klokotos Trika	1.25	354	P	Pn	13 44 18.1	-0.5
THL				S	Sb	13 44 34.8	-0.3
THL				AML	AML	13 44 43.2	
	comp=E,2828µm,1.0s						
THL				AML	AML	13 44 44.4	
	comp=N,2016µm,0.7s						
THL	Klokotos Trika	1.25	354	P	Pn	13 44 18.2	-0.5
VLS	Valsamata	1.25	264	P	Pn	13 44 17.3	-1.4
VLS				AML	AML	13 44 37.5	
	comp=E,4249µm,0.2s						
VLS				AML	AML	13 44 45.5	
	comp=N,3528µm,0.6s						
VLS	Valsamata	1.25	264	P	Pn	13 44 17.3	-1.4
VLS				S	Sn	13 44 37.1	+1.3
ATH	Athens Observa	1.27	105	P	Pg	13 44 19.2	0.0
ATH				S	Sn	13 44 36.4	+0.4
ATH				AML	AML	13 44 41.8	
	comp=E,3866µm,0.6s						
ATH				AML	AML	13 44 42.1	
	comp=N,2826µm,0.4s						
ATH	Athens Observa	1.27	105	P	Pn	13 44 18.9	0.0
LKD2	Lefkada island	1.28	292	P	Pn	13 44 18.3	-0.8
NEO	Neokhori	1.28	39	P	Pn	13 44 19.1	-0.1
NEO				AML	AML	13 44 42.1	
	comp=N,2665µm,0.4s						
NEO				AML	AML	13 44 43.7	
	comp=E,2845µm,0.5s						
NEO	Neokhori	1.28	39	P	Pn	13 44 19.1	-0.1
XOR	Xorichti	1.32	37	P	Pn	13 44 18.6	-1.0
SKIA	Skiathos	1.32	50	P	Pn	13 44 19.4	-0.2
SKIA				S	Sn	13 44 37.4	0.0
SKIA				AML	AML	13 44 44.3	
	comp=E,1573µm,0.9s						
SKIA				AML	AML	13 44 45.9	
	comp=N,1618µm,0.7s						
PTL	Penteli	1.36	101	P	Pb	13 44 20.5	-0.1
PTL				S	Sg	13 44 39.1	+0.4
PTL				AML	AML	13 44 44.1	
	comp=N,1593µm,0.6s						
PTL				AML	AML	13 44 46.2	
	comp=E,1820µm,0.5s						
PTL	Penteli	1.36	101	P	Pb	13 44 20.5	-0.1
PTL				S	Sg	13 44 38.7	0.0
VLY	Voula,Athens	1.36	109	P	Pb	13 44 20.4	-0.2
VLY				AML	AML	13 44 50.9	
	comp=N,1655µm,0.8s						
VLY				AML	AML	13 44 54.9	
	comp=E,1678µm,0.6s						
VLY	Voula,Athens	1.36	109	P	Pb	13 44 20.4	-0.2
EREA	Eretria	1.39	85	P	Pb	13 44 20.9	-0.2
EREA				AML	AML	13 44 45.1	
	comp=E,2790µm,0.7s						
EREA				AML	AML	13 44 48.3	
	comp=N,1912µm,0.8s						
EREA	Eretria	1.39	85	P	Pn	13 44 20.8	+0.2
DION	Dionisos Attik	1.41	99	P	Pb	13 44 21.2	-0.2
DION				S	Sg	13 44 40.1	-0.1
DION				AML	AML	13 44 50.0	
	comp=N,2131µm,0.5s						
DION				AML	AML	13 44 50.6	
	comp=E,2202µm,0.7s						
PYL	PYLOS	1.46	194	P	Pn	13 44 21.4	-0.1
PYL				AML	AML	13 44 50.8	
	comp=N,2820µm,0.6s						
PYL				AML	AML	13 44 52.5	
	comp=E,2838µm,0.6s						
PYL	PYLOS	1.46	194	P	Pn	13 44 21.3	-0.2
PYL				S	Sg	13 44 42.5	+0.7
MES2	Methoni	1.54	194	P	Pb	13 44 23.2	-0.4
AOS	Alonnisos	1.58	57	P	Pn	13 44 22.7	-0.6
VLI	Veliai	1.71	159	P	Pn	13 44 25.0	+0.1
LIT	Litokhoron	1.80	8	P	Pn	13 44 26.0	-0.2
IGT	Igoumenitsa	1.88	311	ePn	Pb	13 44 29.7	+0.2
IGT				eSn	Sg	13 45 00.4	+5.1
KZN	Kozani	2.01	351	P	Pn	13 44 30.2	+1.0
KZN				AML	AML	13 45 07.6	
	comp=N,1811µm,0.6s						
KZN				AML	AML	13 45 08.1	
	comp=E,1433µm,0.6s						
KZN	Kozani	2.01	351	P	Pn	13 44 30.1	+0.9
PENT	Pentalofos	2.04	337	P	Pb	13 44 31.7	-0.5
KYTH	Kithira	2.16	161	P	Pb	13 44 33.2	-1.1
SERI	Serifos	2.17	121	P	Pb	13 44 33.0	-1.4
BIA	Bitola	2.78	347	iPn	Pn	13 44 42.1	+2.4
APE	Apeiranthos	2.94	114	⇑iP	Pn	13 44 43.0	+1.0
OHR	Ohrid	2.98	340	iPn	Pn	13 44 41.6	-0.9
SRS	Serrai	3.00	21	ePn	Pn	13 44 41.6	-1.2
VAY	Valandovo	3.02	6	iPn	Pn	13 44 43.9	+0.9
KRUS	Krusevo	3.13	347	iPn	Pn	13 44 45.3	+0.7
STIP	Stip	3.37	0	iPn	Pn	13 44 49.1	+1.3
SKO	Skopje	3.69	351	ePn	Pn	13 44 53.1	+0.8
IDI	Anoyia	3.73	143	⇑iP	Pn	13 44 53.0	+0.2
IDI	Anoyia	3.73	143	S	Sn	13 45 37.5	+0.6
IDI	Anoyia	3.73	143	Pn	Pn	13 44 53.4	+0.6
	comp=E,2.1nm,0.3s,baz=336,slow=14,SNR=9.7						
IDI				Sn	Sn	13 45 36.9	0.0
	comp=E,4.1nm,0.3s,baz=288,slow=20,SNR=3.4						
TIP	Timpagrande	4.32	283	⇑iP	Pn	13 45 02.6	+1.7
TIP	Timpagrande	4.32	283	S	Sn	13 45 53.0	+1.5
VTS	Vitosha	4.37	10	ePn	Pn	13 44 58.9	-2.8
VTS				eSn	Sn	13 45 48.1	-4.8
VTS	Vitosha	4.37	10	⇑iP	Pn	13 45 03.3	+1.6
VTS	Vitosha	4.37	10	S	Sn	13 45 53.8	+0.9
BARS	Barje	4.50	357	ePn	Pn	13 45 04.1	+0.7
PDG	Podgorica	4.67	332	⇑iP	Pn	13 45 08.3	+2.6
PDG	Podgorica	4.67	332	S	Sn	13 46 02.8	+2.7
MATE	Matera	4.83	301	⇓iP	Pn	13 45 09.7	+1.9
MATE	Matera	4.83	301	S	Sn	13 46 01.5	-2.4
SELS	Selova	4.96	351	ePn	Pn	13 45 09.0	-0.7
ZAPS	Zavoj	4.96	4	ePn	Pn	13 45 09.4	-0.4
SJES	Sjenica	5.21	342	ePn	Pn	13 45 13.7	+0.5
BOVS	Bovan	5.33	356	ePn	Pn	13 45 13.9	-0.8
IVAS	Ivanjica	5.47	344	ePn	Pn	13 45 16.2	-0.5
GRUS	Gruza	5.67	349	ePn	Pn	13 45 19.8	+0.3
BBLS	Lazići	5.92	340	ePn	Pn	13 45 24.1	+1.1
DIVS	Divibare	6.00	345	ePn	Pn	13 45 25.3	+1.2
HERR	Herculane	6.56	2	⇑iP	Pn	13 45 33.0	+1.4
GZR	Gura Zlata	7.09	3	⇑iP	Pn	13 45 41.0	+2.1
ARR	Arges	7.28	14	⇑iP	Pn	13 45 42.7	+1.1
BZS	Buzias	7.31	357	⇑iP	Pn	13 45 43.4	+1.5
VOIR		7.43	16	⇑iP	Pn	13 45 44.7	+1.0
BLY	Banja Luka	7.43	331	⇑iP	Pn	13 45 45.2	+1.6
ISR	Istrita	7.54	24	⇑iP	Pn	13 45 47.0	+1.9
MLR	Muntele Rosu	7.70	20	⇑iP	Pn	13 45 49.3	+1.9
MLR	Muntele Rosu	7.70	20	Pn	Pn	13 45 48.7	+1.3
	comp=E,0.5nm,0.3s,baz=190,slow=6.4,SNR=7.6						
DOPR	Dopca	8.01	16	⇑iP	Pn	13 45 54.1	+2.6
PLOR	Plostina	8.23	22	⇑iP	Pn	13 45 57.0	+2.4
VRI	Vrincioaia	8.27	23	⇑iP	Pn	13 45 57.9	+2.8
BRTR	Keskin Array B	9.04	77	Pn	Pn	13 46 08.7	+2.9
	comp=E,0.4nm,0.3s,baz=260,slow=12,SNR=13						
PSZ	Piszkesteto	9.74	351	⇓iP	Pn	13 46 17.3	+2.0
VYHS	Vyhne	10.46	348	ePN	Pn	13 46 29.0	+3.9
ESDC	Sonseca Array	20.34	282	P	P	13 48 31.5	-0.1
	comp=E,0.6nm,0.4s,baz=75,slow=10,SNR=6.2						
HFS	Hagfors	22.49	349	P	P	13 48 53.8	-0.7
	comp=E,1.9nm,0.7s,baz=168,slow=10,SNR=5.3						
NOA	NORSAR Array B	23.76	347	P	P	13 49 07.2	-0.3
	comp=E,0.9nm,0.8s,baz=143,slow=10,SNR=3.1						
EKA	Eskdalemuir Ar	24.08	323	P	P	13 49 11.2	+0.6
	comp=E,4.8nm,0.8s,baz=117,slow=10,SNR=4.6						
TORD	Torodi Ar. Bea	30.98	221	P	P	13 50 11.6	-1.1
	comp=E,0.8nm,0.5s,baz=29,slow=9.8,SNR=12						
ARCES	ARCESS Array B	31.33	2	P	P	13 50 14.9	-0.5
	comp=E,1.8nm,1.0s,baz=184,slow=9.9,SNR=3.7						
MKAR	Makanchi Array	44.12	59	P	P	13 52 03.8	+0.1
	comp=E,1.0nm,0.4s,baz=274,slow=7.4,SNR=54						
ZALV	Zalesovo Beam	44.63	48	P	P	13 52 07.0	-0.6
	comp=E,1.0nm,0.4s,baz=276,slow=8.9,SNR=7.4						
SONM	Songino Array	59.36	51	P	P	13 53 57.5	0.0
	comp=E,0.4nm,0.5s,baz=260,slow=8.5,SNR=4.5						
YKA	Yellowknife Ar	73.70	341	P	P	13 55 29.3	+0.6
	comp=E,0.3nm,0.8s,baz=36,slow=5.4,SNR=6.6						

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*NEIC **06** 13:44:27.9±0.4, 10°.68S×165°.15E, h10^{km}, mb4.7/7, Error ellipse: s-maj=10.6km s-min=7.7km az=87.0*

*ISCJB **06** 13:44:29.3±0.4, 10°.83S±0°.05×165°.18E±0°.07, h31^{km}, mb4.2/17, Error ellipse: s-maj=9.7km s-min=7.6km az=160.9*

*IDC **06** 13:44:34.1±3.3, 10°.87S×165°.17E, h61^{km}±28^{km}, mb3.8/12, mb1 4.0/14, mb1mx3.9/33, mbtmp4.1/14, ML4.6/2, Error ellipse: s-maj=21.3km s-min=20.4km az=46.0*

ISC 06 13:44:30.9±0.6**, 10°.76S**±0°.09×**165°.26E**±0°.09**, h31^{km}, n47, σ1^{s}.17**/42**, mb4.0**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.39	284	eP	Pn	13 45 50.0	+0.7
HNR	Honiara	5.39	284	P	Pn	13 45 49.6	+0.3
	48nm,0.3s,baz=138,slow=6.5,SNR=13						
HNR				S	Sn	13 46 53.2	+2.8
	28nm,0.3s,baz=0.0,slow=20,SNR=3.0						
MARNC	Mare, Loyalty	10.98	166	ePn	Pn	13 47 08.1	+2.1
DZM	Mont Dzumac	11.30	174	ePn	Pn	13 47 11.2	+0.8
DZM	Mont Dzumac	11.30	174	P	Pn	13 47 12.1	+1.7
	1.4nm,0.3s,baz=335,slow=6.8,SNR=14						
OUENC	Ouen Island, N	11.69	173	ePn	Pn	13 47 16.4	+0.7
PINNC	Pines Island,	11.97	170	ePn	Pn	13 47 19.9	+0.4
EIDS	Eidsvold	19.79	221	eP	Pn	13 48 59.7	-0.8
	62nm,1.4s						
CTA	Charters Tower	20.51	241	P	P	13 49 06.0	-0.8
	4.1nm,0.7s,baz=72,slow=12,SNR=4.4						
H11S2	WAKE ISLAND Hy	29.10	3	T	T	14 20 39.7	
	baz=184,slow=76,SNR=160						
H11S3	WAKE ISLAND Hy	29.11	3	T	T	14 20 41.9	
	baz=184,slow=76,SNR=162						
H11S1	WAKE ISLAND Hy	29.12	3	T	T	14 20 40.9	
	baz=184,slow=76,SNR=168						
STKA	Stephens Creek	30.32	223	eP	P	13 50 40.0	+0.2
STKA	Stephens Creek	30.32	223	P	P	13 50 40.6	+0.8
	5.9nm,0.8s,baz=26,slow=12,SNR=13						
H11N1	WAKE ISLAND Hy	30.33	3	T	T	14 22 13.7	
	baz=182,slow=76,SNR=146						
H11N3	WAKE ISLAND Hy	30.33	3	T	T	14 22 27.0	
	baz=182,slow=76,SNR=101						
H11N2	WAKE ISLAND Hy	30.34	3	T	T	14 22 33.9	
	baz=182,slow=76,SNR=79						
WR1	Warramunga Arr	31.13	249	eP	P	13 50 45.1	-2.0
	17nm,1.6s						
WRA	Warramunga Arr	31.13	249	P	P	13 50 45.1	-2.0
	1.1nm,0.7s,baz=78,slow=8.7,SNR=8.9						
AS31	Alice Springs	32.49	243	eP	P	13 50 56.0	-3.0
	1.0nm,1.0s						
ASAR	Alice Springs	32.49	243	P	P	13 50 56.4	-2.7
	1.1nm,0.6s,baz=65,slow=10.0,SNR=16						
FORT	Forrest	39.81	234	eP	P	13 52 01.6	+0.1
	23nm,0.9s						
CM01	Chiang Mai Arr	71.53	294	eP	P	13 55 49.5	0.0
CM31	Chiang Mai Arr	71.56	294	eP	P	13 55 49.7	0.0
CMAR	Chiang Mai Arr	71.56	294	P	P	13 55 50.5	+0.8

	1.7nm,0.8s,baz=120,slow=4.5,SNR=14						
ULN	Ulaanbaatar	77.79	324	*e*P	P	13 56 25.9	+0.5
	6.6nm,1.1s						
SONA0	Songino Array	78.16	324	*e*P	P	13 56 27.4	0.0
SONM	Songino Array	78.16	324	P	P	13 56 27.4	0.0
	1.4nm,0.8s,baz=127,slow=6.5,SNR=6.5						
SONA1	Songino Array	78.16	324	*e*P	P	13 56 27.2	-0.2
QSPA	South Pole Qui	79.24	180	*e*P	P	13 56 33.3	+0.3
	8.0nm,1.0s						
ILAR	Eielson Array	83.40	19	P	P	13 56 55.6	+0.7
	0.6nm,0.7s,baz=234,slow=5.1,SNR=8.4						
ILB	Eielson Array	83.40	19	*e*P	P	13 56 55.1	+0.3
MK01	Makanchi Array	92.98	317	*e*P	P	13 57 40.9	-0.5
MK31	Makanchi Array	92.99	317	*e*P	P	13 57 41.0	-0.4
MK32	Makanchi Array	92.99	317	*e*P	P	13 57 40.7	-0.7
MKAR	Makanchi Array	92.99	317	*e*P	P	13 57 41.4	0.0
	10nm,0.8s						
MKAR	Makanchi Array	92.99	317	P	P	13 57 40.7	-0.7
	1.4nm,0.8s,baz=98,slow=5.8,SNR=14						
ZALV	Zalesovo Beam	93.05	324	*e*P	P	13 57 40.6	-0.8
ZALV	Zalesovo Beam	93.05	324	P	P	13 57 41.0	-0.4
	0.2nm,0.3s,baz=104,slow=3.1,SNR=5.6						
ZAA1	Zalesovo Array	93.05	324	*e*P	P	13 57 41.0	-0.4
MAKZ	Makanchi	93.20	317	*e*P	P	13 57 41.7	-0.6
	3.3nm,1.1s						
PDAR	Pinedale Array	93.71	47	P	P	13 57 44.6	-0.6
	0.2nm,0.8s,baz=263,slow=7.2,SNR=2.4						
YKA	Yellowknife Ar	94.94	27	P	P	13 57 48.8	-1.1
	0.2nm,0.7s,baz=257,slow=4.7,SNR=4.0						
YKB5	Yellowknife Ar	94.94	27	*e*P	P	13 57 49.5	-0.4
LTX	Lajitas	96.11	61	*e*P	P	13 57 57.5	+1.2
TXAR	Lajitas Array	96.11	61	P	P	13 57 57.5	+1.2
	0.4nm,1.0s,baz=298,slow=1.9,SNR=2.4						
KEST	Kesra	146.90	323	PKPbc	PKPdf	14 04 08.4	-0.6
	5.3nm,0.8s,baz=38,slow=5.8,SNR=4.4						

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*IDC **06** 13:46:30.1±1.1, 11°.56S×165°.62E, h0^{km}, mb3.9/9, mb1 4.1/11, mb1mx3.9/39, mbtmp3.9/11, ML4.4/2, Error ellipse: s-maj=35.7km s-min=22.2km az=143.0*

*ISCJB **06** 13:46:32.3±0.5, 11°.61S±0°.06×165°.52E±0°.08, h24^{km}, mb4.0/12, Error ellipse: s-maj=12.0km s-min=8.3km az=165.6*

*NEIC **06** 13:46:32.0±0.4, 11°.47S×165°.55E, h10^{km}, mb4.6/4, Error ellipse: s-maj=11.0km s-min=7.6km az=80.0*

ISC 06 13:46:34.1±0.7**, 11°.5S**±0°.1×**165°.6E**±0°.1**, h24^{km}, n31, σ1^{s}02**/25**, mb3.9**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.91	290	Pn	Pn	13 47 59.9	-0.4
	11nm,0.3s,baz=176,slow=16,SNR=1.9						
MARNC	Mare, Loyalty	10.19	167	*e*Pn	Pn	13 48 58.4	-0.5
DZM	Mont Dzumac	10.53	176	Pn	Pn	13 49 03.6	-0.1
	2.8nm,0.3s,baz=84,slow=18,SNR=8.8						
ONTNC	Ouen Toro	10.77	176	*e*Pn	Pn	13 49 07.4	+0.5
OUENC	Ouen Island, N	10.91	174	*e*Pn	Pn	13 49 09.4	+0.5
PINNC	Pines Island,	11.18	171	*e*Pn	Pn	13 49 14.0	+1.5
H11S2	WAKE ISLAND Hy	29.83	2	T	T	14 23 28.4	
	baz=190						
H11S3	WAKE ISLAND Hy	29.84	2	T	T	14 23 37.0	
	baz=190						
H11S1	WAKE ISLAND Hy	29.85	2	T	T	14 23 23.3	
	baz=190						
H11N1	WAKE ISLAND Hy	31.06	2	T	T	14 25 08.7	
	baz=181						
H11N3	WAKE ISLAND Hy	31.06	2	T	T	14 24 58.9	
	baz=181						
H11N2	WAKE ISLAND Hy	31.07	2	T	T	14 25 03.1	
	baz=181						
WB2	Warramunga Arr	31.16	250	*e*P	P	13 52 50.4	-1.1
WR1	Warramunga Arr	31.17	250	*e*P	P	13 52 51.2	-0.4
	9.1nm,1.0s						
WRA	Warramunga Arr	31.17	250	P	P	13 52 51.2	-0.4
	2.8nm,0.8s,baz=79,slow=9.3,SNR=9.6						
AS31	Alice Springs	32.44	244	*e*P	P	13 53 01.6	-1.1
	2.2nm,1.6s						
ASAR	Alice Springs	32.44	244	P	P	13 53 01.5	-1.2
	1.0nm,0.9s,baz=69,slow=9.4,SNR=4.6						
FITZ	Fitzroy Crossi	39.10	255	*e*P	P	13 53 59.0	-0.9
	24nm,2.0s						
FITZ	Fitzroy Crossi	39.10	255	P	P	13 53 59.2	-0.6
	1.6nm,0.7s,baz=125,slow=8.6,SNR=4.0						
CMAR	Chiang Mai Arr	72.15	294	P	P	13 57 57.9	+0.6
	0.6nm,0.6s,baz=122,slow=4.6,SNR=5.1						
SONA0	Songino Array	78.94	324	*e*P	P	13 58 38.1	+2.2
SONM	Songino Array	78.94	324	P	P	13 58 38.1	+2.2
	0.6nm,1.0s,baz=124,slow=2.6,SNR=2.7						
HDA	Harding Lake	83.74	19	*e*P	P	13 59 00.6	-0.1
	3.8nm,0.8s						
ILAR	Eielson Array	84.01	19	P	P	13 59 02.1	-0.1
	1.0nm,0.9s,baz=235,slow=5.0,SNR=11						
ILB	Eielson Array	84.01	19	*e*P	P	13 59 02.0	-0.1
NV01	Mina Array Sit	86.45	50	*e*P	P	13 59 15.1	-0.2
NVAR	Mina Array Bea	86.45	50	P	P	13 59 15.2	-0.1
	0.3nm,0.6s,baz=240,slow=7.2,SNR=2.8						
MK32	Makanchi Array	93.75	317	*e*P	P	13 59 49.2	0.0
MKAR	Makanchi Array	93.75	317	P	P	13 59 49.2	0.0
	0.3nm,0.7s,baz=83,slow=6.0,SNR=3.7						
YKA	Yellowknife Ar	95.46	27	P	P	13 59 55.2	-1.3
	0.2nm,0.5s,baz=259,slow=4.5,SNR=7.5						
YKB5	Yellowknife Ar	95.46	27	*e*P	P	13 59 54.9	-1.6

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*ISCJB **06** 13:47:14.1±0.7, 10°.7S±0°.1×165°.3E±0°.1, h31^{km}, mb3.8/10, Error ellipse: s-maj=16.6km s-min=15.8km az=43.2*

*IDC **06** 13:47:18.3±4.0, 10°.74S×165°.30E, h54^{km}±37^{km}, mb3.6/10, mb1 3.9/12, mb1mx3.7/39, mbtmp4.0/12, ML4.4/2, Error ellipse: s-maj=35.8km s-min=26.4km az=167.0*

ISC 06 13:47:15.8±0.8**, 10°.6S**±0°.1×**165°.4E**±0°.1**, h31^{km}, n12, σ1^{s}03**/12**, mb3.8**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.48	282	P	Pn	13 48 36.5	+1.1
	47nm,0.3s,baz=98,slow=2.2,SNR=4.9						
DZM	Mont Dzumac	11.44	175	P	Pn	13 49 57.9	+0.7
	0.7nm,0.3s,baz=342,slow=6.4,SNR=2.4						
WRA	Warramunga Arr	31.30	249	P	P	13 53 32.0	-1.4
	1.0nm,1.0s,baz=81,slow=8.7,SNR=1.3						
ASAR	Alice Springs	32.67	242	P	P	13 53 44.5	-1.0
	0.8nm,0.7s,baz=65,slow=10,SNR=4.6						
CMAR	Chiang Mai Arr	71.61	294	P	P	13 58 34.8	0.0
	0.8nm,0.8s,baz=102,slow=3.8,SNR=3.7						
SONM	Songino Array	78.11	324	P	P	13 59 12.4	+0.5
	0.6nm,0.6s,baz=134,slow=4.2,SNR=4.6						
ILAR	Eielson Array	83.22	19	P	P	13 59 39.8	+1.0
	0.6nm,0.5s,baz=244,slow=4.9,SNR=8.5						
NVAR	Mina Array Bea	86.02	50	P	P	13 59 54.2	+0.4
	1.5nm,1.0s,baz=224,slow=8.6,SNR=5.5						
MKAR	Makanchi Array	92.96	317	P	P	14 00 25.6	-0.6
	0.4nm,0.7s,baz=99,slow=5.3,SNR=3.6						
ZALV	Zalesovo Beam	93.00	324	P	P	14 00 25.9	-0.2
	0.3nm,0.3s,baz=116,slow=3.4,SNR=3.0						
PDAR	Pinedale Array	93.52	47	P	P	14 00 29.7	+0.6
	0.1nm,0.4s,baz=292,slow=2.4,SNR=3.5						
YKA	Yellowknife Ar	94.75	27	P	P	14 00 32.3	-1.7
	0.2nm,0.7s,baz=255,slow=4.3,SNR=3.8						

IDC 06 13:48:11.7±3.2**, 11°.14S**×**163°.95E, h0^{km}, mb3.9**/4**, mb1 4.2**/4**, mb1mx3.7**/37**, mbtmp3.9**/4**, Error ellipse: s-maj=112.2km s-min=36.1km az=136.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	29.80	249	P	P	13 54 20.9	+0.2
	5.8nm,0.9s,baz=79,slow=9.2,SNR=11						
ASAR	Alice Springs	31.18	242	P	P	13 54 32.2	-0.6
	0.9nm,0.9s,baz=68,slow=10,SNR=2.7						
CMAR	Chiang Mai Arr	70.54	294	P	P	13 59 29.4	+0.3
	0.3nm,0.3s,baz=102,slow=4.2,SNR=4.3						
ILAR	Eielson Array	84.17	19	P	P	14 00 44.4	-0.1
	0.3nm,0.8s,baz=252,slow=5.7,SNR=1.5						

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*ISCJB **06** 13:50:31.4±0.2, 10°.72S±0°.04×166°.38E±0°.04, h10^{km}, mb5.0/123, MS5.5/220, Error ellipse: s-maj=5.9km s-min=5.1km az=146.7*

*BJI **06** 13:50:31.6, 10°.57S×166°.61E, h13^{km}, mB5.6/22, mb4.8/32, Ms5.4/13, Ms7 5.1/13*

*GCMT **06** 13:50:32.8±0.4, 10°.84S±0°.04×166°.65E±0°.03, h12^{km}, MW5.4/65, Moment Tensor Solution. s19,c22; s65,c96; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.32±.06; $M_{\theta\theta}$0.33±.06; $M_{\phi\phi}$0.99±.05; $M_{r\theta}$-1.10±.24; $M_{\theta\phi}$-0.28±.06; $M_{\phi r}$0.74±.20; Best double couple: $M_0$1.77100×10^{17} NP1:ϕ_s136.00000°, δ69.00000°, λ-103.00000°. NP2:ϕ_s349.00000°, δ24.00000°, λ-59.00000°. Principal axes: T 1.5680, Plg23.0000°, Azm236.0000°; N 0.4090, Plg12.0000°, Azm140.0000°; P -1.9740, Plg63.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **06** 13:50:32.8±0.1, 10°.64S×166°.46E, h10^{km}, mb5.3/87, MS5.6/217 Error ellipse: s-maj=5.6km s-min=4.4km az=134.0*

*MOS **06** 13:50:34.8±0.9, 10°.77S×166°.45E, h33^{km}, mb5.3/29, MS5.7/12, Error ellipse: s-maj=9.8km s-min=8.8km az=157.2*

*IDC **06** 13:50:39.7±3.4, 10°.80S×166°.48E, h60^{km}±30^{km}, mb4.1/25, mb1 4.2/27, mb1mx4.2/40, mbtmp4.4/27, ML4.3/2, Error ellipse: s-maj=18.2km s-min=15.2km az=99.0*

ISC 06 13:50:32.9±0.4**, 10°.63S**±0°.07×**166°.52E**±0°.08**, h10^{km}, n413, σ1^{s}21**/248**, mb5.2**/123**, MS5.6**/220**, 7C-8D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.58	280	*e*Pn	Pn	13 52 11.0	+1.2
HNR	Honiara	6.58	280	*e*P	Pn	13 52 11.0	+1.2
HNR	Honiara	6.58	280	P	Pn	13 52 14.8	+5.0
	13nm,0.3s,baz=75,slow=0.3,SNR=4.4						
MARNC	Mare, Loyalty	10.89	173	*e*Pn	Pn	13 53 11.1	+2.2
DZM	Mont Dzumac	11.38	180	*e*Pn	Pn	13 53 16.9	+1.3
DZM	Mont Dzumac	11.38	180	P	Pn	13 53 18.2	+2.5
	0.8nm,0.3s,baz=356,slow=19,SNR=3.4						
ONTNC	Ouen Toro	11.61	180	*e*Pn	Pn	13 53 18.8	0.0
OUENC	Ouen Island, N	11.73	179	*e*Pn	Pn	13 53 20.1	-0.2
PINNC	Pines Island,	11.95	176	*e*Pn	Pn	13 53 22.6	-0.7
MSVF	Nonsavu	13.22	124	*e*Pn	Pn	13 53 41.0	+0.1
MSVF	Nonsavu	13.22	124	*e*P	Pn	13 53 41.0	+0.1
TARA	Tarawa	13.51	29	*e*Pn	Pn	13 53 42.1	-2.6
CTA	Charters Tower	21.66	242	P	P	13 55 24.1	+0.2
	6.9nm,0.8s,baz=87,slow=8.7,SNR=6.2						
CTAO	Charters Tower	21.66	242	*e*P	P	13 55 23.3	-0.5
	125nm,1.8s						
CTAO				LR	LR		
	comp=Z,6µm,20.0s						
CTAO	Charters Tower	21.66	242	*e*P	P	13 55 23.3	-0.5
CTAO				pmax	pmax		
	comp=Z,125nm,1.8s						
CTAO				MLR	MLR		
	comp=Z,6µm,20.0s						
KNTN	Kanton	22.96	72	PFAKE		13 55 50.0	+12
KNTN				LR	LR		
	comp=Z,18µm,22.0s						
HIZ	Hauiti	28.75	166	PFAKE		13 56 40.0	+9.3
HIZ				LR	LR		
	comp=Z,3µm,18.0s						
MXZ	Matakaoa Point	28.84	160	PFAKE		13 56 40.0	+8.6
MXZ				LR	LR		
	comp=Z,4µm,20.0s						
H11S2	WAKE ISLAND Hy	28.94	0	T	T	14 26 54.6	
	baz=181						
H11S3	WAKE ISLAND Hy	28.94	0	T	T	14 26 55.2	
	baz=181						
H11S1	WAKE ISLAND Hy	28.95	0	T	T	14 26 56.2	
	baz=181						
URZ	Urewera	29.11	163	PFAKE		13 56 50.0	+16
URZ				LR	LR		
	comp=Z,5µm,20.0s						
CAN	Canberra	29.30	210	PFAKE		13 56 50.0	+14
CAN				LR	LR		
	comp=Z,5µm,21.0s						
BKZ	Black Stump Fm	29.78	164	PFAKE		13 56 50.0	+10
BKZ				LR	LR		
	comp=Z,7µm,21.0s						
H11N1	WAKE ISLAND Hy	30.16	1	T	T	14 28 24.1	
	baz=180						
H11N3	WAKE ISLAND Hy	30.16	1	T	T	14 28 25.7	
	baz=180						
H11N2	WAKE ISLAND Hy	30.17	1	T	T	14 28 27.6	
	baz=180						
BFZ	Birch Farm	31.14	166	PFAKE		13 57 00.0	+8.2
BFZ				LR	LR		
	comp=Z,12µm,22.0s						
STKA	Stephens Creek	31.26	224	*e*P	P	13 56 52.2	-0.8
	comp=Z,12nm,1.8s						
STKA				LR	LR		
	comp=Z,800nm,20.0s						
STKA	Stephens Creek	31.26	224	*e*P	P	13 56 52.2	-0.8
STKA				pmax	pmax		
	comp=Z,12nm,1.8s						
STKA				MLR	MLR		
	comp=Z,800nm,20.0s						
STKA	Stephens Creek	31.26	224	P	P	13 56 53.6	+0.6
	comp=Z,2.0nm,0.8s,baz=69,slow=4.8,SNR=3.7						
SNZO	South Karori	31.40	168	PFAKE		13 57 10.0	+16
SNZO				LR	LR		
	comp=Z,10µm,22.0s						
WR0	Warramunga Arr	32.16	249	PFAKE		13 57 10.0	+9.0
WR0				LR	LR		
	comp=Z,4µm,18.0s						
WR9	Warramunga Arr	32.18	249	PFAKE		13 57 10.0	+8.8
WR9				LR	LR		
	comp=Z,4µm,18.0s						
WR7	Warramunga Arr	32.21	249	PFAKE		13 57 10.0	+8.4
WR7				LR	LR		
	comp=Z,5µm,18.0s						
WR6	Warramunga Arr	32.23	249	PFAKE		13 57 10.0	+8.3
WR6				LR	LR		
	comp=Z,4µm,19.0s						
WB0	Warramunga Arr	32.25	250	PFAKE		13 57 10.0	+8.1
WB0				LR	LR		
	comp=Z,5µm,18.0s						
WR5	Warramunga Arr	32.26	249	PFAKE		13 57 10.0	+8.1
WR5				LR	LR		
	comp=Z,4µm,20.0s						
WB9	Warramunga Arr	32.27	250	PFAKE		13 57 10.0	+8.0
WB9				LR	LR		
	comp=Z,10µm,18.0s						
WB8	Warramunga Arr	32.27	250	PFAKE		13 57 10.0	+7.9
WB8				LR	LR		
	comp=Z,5µm,18.0s						
WR4	Warramunga Arr	32.28	249	PFAKE		13 57 10.0	+7.9
WR4				LR	LR		
	comp=Z,4µm,20.0s						
WB6	Warramunga Arr	32.29	250	PFAKE		13 57 10.0	+7.7
WB6				LR	LR		
	comp=Z,4µm,18.0s						
WR3	Warramunga Arr	32.30	249	PFAKE		13 57 10.0	+7.7
WR3				LR	LR		
	comp=Z,4µm,20.0s						
WB5	Warramunga Arr	32.30	250	PFAKE		13 57 10.0	+7.7
WB5				LR	LR		
	comp=Z,4µm,18.0s						
WC2	Warramunga Arr	32.31	250	PFAKE		13 57 10.0	+7.6
WC2				LR	LR		
	comp=Z,5µm,20.0s						
WC3	Warramunga Arr	32.31	249	PFAKE		13 57 10.0	+7.6
WC3				LR	LR		
	comp=Z,5µm,20.0s						
WB4	Warramunga Arr	32.31	250	PFAKE		13 57 10.0	+7.6
WB4				LR	LR		
	comp=Z,4µm,20.0s						
WR2	Warramunga Arr	32.32	249	PFAKE		13 57 10.0	+7.5
WR2				LR	LR		
	comp=Z,4µm,20.0s						
WB3	Warramunga Arr	32.32	250	PFAKE		13 57 10.0	+7.5
WB3				LR	LR		
	comp=Z,5µm,20.0s						
WRAB	Tennant Creek	32.33	250	*e*P	P	13 57 00.7	-1.9
	comp=Z,22nm,1.0s						
WRAB				LR	LR		
	comp=Z,5µm,19.0s						
WRAB	Tennant Creek	32.33	250	c*e*P	P	13 57 02.7	+0.2
WRAB				pmax	pmax		
	comp=Z,23nm,1.0s						
WB2	Warramunga Arr	32.33	249	*e*P	P	13 57 00.4	-2.1
WB2				LR	LR		
	comp=Z,6µm,19.0s						
WRA	Warramunga Arr	32.34	249	P	P	13 57 01.8	-0.9
	comp=Z,6.0nm,0.6s,baz=82,slow=9.2,SNR=31						
LTZ	Lake Taylor	32.42	172	PFAKE		13 57 20.0	+17
LTZ				LR	LR		
	comp=Z,4µm,22.0s						
FOZ	Fox Glacier	32.90	176	PFAKE		13 57 20.0	+13
FOZ				LR	LR		
	comp=Z,4µm,21.0s						
OXZ	Oxford	32.92	173	PFAKE		13 57 20.0	+13
OXZ				LR	LR		
	comp=Z,5µm,21.0s						
RPZ	Rata Peaks	33.20	174	P	P	13 57 09.7	-0.2
RPZ				LR	LR		
	comp=Z,8µm,22.0s						
RPZ	Rata Peaks	33.20	174	P	P	13 57 09.6	-0.2
	comp=Z,6.8nm,0.6s,baz=297,slow=2.5,SNR=9.1						
CRLZ	Canterbury Las	33.25	172	PFAKE		13 57 20.0	+10
CRLZ				LR	LR		
	comp=Z,5µm,22.0s						
MQZ	McQueen's Vall	33.38	172	PFAKE		13 57 20.0	+8.6
MQZ				LR	LR		
	comp=Z,4µm,22.0s						
AS01	Alice Springs	33.61	243	*e*P	P	13 57 13.4	-0.4
AS31	Alice Springs	33.65	243	*e*P	P	13 57 12.4	-1.7
	comp=Z,2.4nm,0.8s						
ASAR	Alice Springs	33.66	243	P	P	13 57 13.0	-1.2
ASAR	Alice Springs	33.66	243	P	P	13 57 13.0	-1.2
	comp=Z,5.6nm,0.8s,baz=73,slow=9.3,SNR=19						
LBZ	Lake Benmore	33.78	175	PFAKE		13 57 30.0	+15
LBZ				LR	LR		
	comp=Z,5µm,20.0s						
WKZ	Wanaka	34.14	177	PFAKE		13 57 30.0	+12
WKZ				LR	LR		
	comp=Z,4µm,19.0s						
ODZ	Otahua Downs	34.47	175	PFAKE		13 57 30.0	+9.1
ODZ				LR	LR		
	comp=Z,5µm,22.0s						
SAUI	Saumlaki	34.84	271	PFAKE		13 57 40.0	+16
SAUI				LR	LR		
	comp=Z,9µm,19.0s						
FAKI	Fak Fak	34.85	280	PFAKE		13 57 40.0	+15
FAKI				LR	LR		
	comp=Z,3µm,22.0s						
WHZ	Wether Hill Ro	35.16	178	PFAKE		13 57 40.0	+13
WHZ				LR	LR		
	comp=Z,4µm,19.0s						
TAU	Tasmania Unive	36.25	204	PFAKE		13 57 50.0	+14
TAU				LR	LR		
	comp=Z,6µm,21.0s						
XMAS	Kiritimati	38.01	73	PFAKE		13 58 00.0	+8.5
XMAS				LR	LR		
	comp=Z,9µm,20.0s						
FITZ	Fitzroy Crossi	40.22	255	P	P	13 58 09.3	-0.7
	comp=Z,3.6nm,0.5s,baz=97,slow=8.3,SNR=14						
TNTI	Ternate	40.55	284	PFAKE		13 58 20.0	+7.2
TNTI				LR	LR		
	comp=Z,2µm,21.0s						
SOEI	Soe	41.57	267	PFAKE		13 58 30.0	+8.6
SOEI				LR	LR		
	comp=Z,4µm,21.0s						
MMRI	Maumere	43.67	269	PFAKE		13 58 50.0	+12
MMRI				LR	LR		
	comp=Z,2µm,20.0s						
DAV	Davao City (W)	44.39	292	PFAKE		13 59 00.0	+16
DAV				LR	LR		
	comp=Z,5µm,21.0s						
LUWI	Luwuk	44.49	279	PFAKE		13 59 00.0	+15
LUWI				LR	LR		
	comp=Z,2µm,20.0s						
MBWA	Marble Bar	46.05	251	*e*P	P	13 58 56.0	-1.1
	comp=Z,101nm,1.8s						
MBWA				LR	LR		
	comp=Z,7µm,20.0s						
MWH	Moku'aweowe	47.84	51	PFAKE		13 59 20.0	+8.2
MWH				LR	LR		
	comp=Z,5µm,20.0s						
WRMHI	West Rim	48.02	52	PFAKE		13 59 20.0	+7.3
WRMHI				LR	LR		
	comp=Z,6µm,20.0s						
SBLHI	Steaming Bluff	48.06	52	PFAKE		13 59 30.0	+17
SBLHI				LR	LR		
	comp=Z,7µm,22.0s						
JCUZ	Jacuzzi	48.16	52	PFAKE		13 59 30.0	+16
JCUZ				LR	LR		
	comp=Z,6µm,19.0s						
NWAO	Narrogin (SRO)	50.32	236	PFAKE		13 59 40.0	+10
NWAO				LR	LR		
	comp=Z,28µm,19.0s						
JAGI	Jajag, Banyuwa	51.64	268	PFAKE		13 59 50.0	+10
JAGI				LR	LR		
	comp=Z,2µm,21.0s						
INU	Inuyama	53.57	330	PFAKE		14 00 10.0	+16
INU				LR	LR		
	comp=Z,3µm,19.0s						
MJAR	Matsushiro Arr	53.96	332	P	P	13 59 58.5	+1.5
	comp=Z,3.3nm,0.9s,baz=164,slow=8.5,SNR=5.4						
YOJ	Yonaguni jima	54.95	310	PFAKE		14 00 20.0	+16
YOJ				LR	LR		
	comp=Z,3µm,20.0s						
JNU	Nakatsue	55.20	323	P	P	14 00 08.6	+2.5
	comp=Z,19nm,0.9s,baz=22,slow=20,SNR=5.5						
TWG	Pinlang	55.55	307	PFAKE		14 00 20.0	+11
TWG				LR	LR		
	comp=Z,8µm,22.0s						
SBUM	Sibu	55.57	280	PFAKE		14 00 20.0	+11
SBUM				LR	LR		
	comp=Z,900nm,22.0s						
YULB	Yu-li	55.68	308	PFAKE		14 00 20.0	+10
YULB				LR	LR		
	comp=Z,2µm,21.0s						
NACB	Ninganchiao	55.87	309	PFAKE		14 00 20.0	+9.0
NACB				LR	LR		
	comp=Z,3µm,20.0s						
TPUB	Ta-pu	56.15	307	PFAKE		14 00 20.0	+6.9
TPUB				LR	LR		
	comp=Z,3µm,21.0s						
SSLB	Suanglung	56.15	308	PFAKE		14 00 30.0	+17
SSLB				LR	LR		
	comp=Z,5µm,22.0s						
YHNB	Yeheng	56.30	309	PFAKE		14 00 30.0	+16
YHNB				LR	LR		
	comp=Z,5µm,21.0s						
TATO	Taipei	56.39	310	PFAKE		14 00 30.0	+15
TATO				LR	LR		
	comp=Z,5µm,21.0s						
KSM	Kuching	57.19	279	PFAKE		14 00 30.0	+9.3
KSM				LR	LR		
	comp=Z,2µm,21.0s						
CISI	Cisompet, Garu	57.98	268	PFAKE		14 00 40.0	+14
CISI				LR	LR		
	comp=Z,2µm,22.0s						
KUR	Kuril'sk	58.10	345	⇓*e*P	P	14 00 25.0	-1.4
ASAJ	Asahikawa	58.66	340	P	P	14 00 33.4	+3.0
	comp=Z,5.8nm,0.9s,baz=198,slow=10,SNR=5.9						
KSRS	Korea Array	59.97	325	P	P	14 00 41.0	+1.4
	comp=Z,1.4nm,0.7s,baz=138,slow=7.5,SNR=3.6						
KSAR	Wonju Array Be	59.98	325	P	P	14 00 41.0	+1.3
KSAR	Wonju Array Be	59.98	325	P	P	14 00 41.0	+1.3
SSE	Sheshan	60.09	315	PFAKE		14 00 50.0	+9.5
SSE				LR	LR		
	comp=Z,3µm,18.0s						
YSS	Yuzh-Sakhalins	61.13	342	*e*P	P	14 00 50.4	+3.1
	comp=Z,41nm,1.5s						
YSS				LR	LR		
	comp=Z,2µm,19.0s						
YSS	Yuzh-Sakhalins	61.13	342	*e*P	P	14 00 48.4	+1.1
YSS				*e*		14 01 04.2	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NJ2	Nanjing	62.26	315	*e*P	P	14 00 54.1	-1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USA0B	Ussuriysk Arra	62.92	333	*e*P	P	14 00 59.2	-0.2
	comp=Z,86nm,1.8s						
USRK	Ussuriysk Ar.	62.92	333	P	P	14 00 58.8	-0.6
	comp=Z,6.2nm,1.0s,baz=123,slow=5.3,SNR=6.4						
QIZ	Qiongzhong	63.16	298	PFAKE		14 01 10.0	+8.5
QIZ				LR	LR		
	comp=Z,5µm,22.0s						
MNAI	Manna	63.24	270	PFAKE		14 01 10.0	+7.8
MNAI				LR	LR		
	comp=Z,2µm,21.0s						
MYKOM	Kota Tinggi	63.55	277	PFAKE		14 01 20.0	+16
MYKOM				LR	LR		
	comp=Z,1µm,22.0s						
PETK	Petropavlovsk-	63.93	354	P	P	14 01 07.0	+1.0
PETK	Petropavlovsk-	63.93	354	P	P	14 01 07.0	+1.0
	comp=Z,3.2nm,0.9s,baz=169,slow=8.5,SNR=4.6						
MDJ	Mudanjiang	64.34	332	P	P	14 01 08.9	+0.1
MDJ				pmax	pmax		
	comp=Z,22nm,2.5s						

MDJ	Mudanjiang	64.34	332	eP	P	14 01 07.5	-1.4
	comp=Z,39nm,1.4s						
CN2	Changchun	65.78	329	eP	P	14 01 20.4	+2.2
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
GRNR	Gornyy	66.52	340	eP	P	14 01 25.2	+2.4
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
KLR	Kul'dur	66.98	336⇓	eP	P	14 01 26.4	+0.6
KLR	Kul'dur	66.98	336	P	P	14 01 27.5	+1.7
	comp=Z,5.2nm,0.8s,baz=133,slow=5.2,SNR=15						
CASY	Casey	67.04	201	PFAKE		14 01 40.0	+14
CASY				LR	LR		
	comp=Z,3µm,18.0s						
SBA	Scott Base	67.21	180	PFAKE		14 01 40.0	+13
SBA				LR	LR		
	comp=Z,3µm,18.0s						
KULM	Kulim	67.45	280	PFAKE		14 01 40.0	+11
KULM				LR	LR		
	comp=Z,2µm,22.0s						
SKNT	Sakolnakorn	67.62	293	P	P	14 01 39.5	+9.0
	comp=Z,4.9nm,1.7s,comp=Z,0.0nm						
SPIA	Saint Paul Isl	70.23	13	PFAKE		14 02 00.0	+14
SPIA				LR	LR		
	comp=Z,3µm,20.0s						
XAN	Xi'an	70.41	312	P	P	14 01 47.6	0.0
XAN				LR	LR		
	comp=Z,1µm,20.6s						
XAN				LR	LR		
	comp=Z,740nm,18.4s						
XAN				LR	LR		
	comp=Z,2µm,27.1s						
XAN	Xi'an	70.41	312	P	P	14 01 47.6	0.0
	comp=Z,83nm,1.3s						
XAN	Xi'an	70.41	312	P	P	14 01 47.6	0.0
XAN				pmax	pmax		
	comp=Z,83nm,1.3s						
MA2	Magadan	71.11	352	PFAKE		14 02 00.0	+8.8
MA2				LR	LR		
	comp=Z,2µm,20.0s						
KMI	Kunming	71.56	301	P	P	14 01 53.8	-1.1
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HHC	Hu-ho-hao-te	72.01	319	eP	P	14 01 58.1	+0.9
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ZEA	Zeya	72.26	337	eP	P	14 02 00.5	+2.3
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,80nm,1.8s						
HIA	Hailar	72.39	330	deP	P	14 01 59.9	+0.7
HIA				pmax	pmax		
	comp=Z,46nm,3.4s						
CM01	Chiang Mai Arr	72.62	293	eP	P	14 01 59.8	-1.3
CMAR	Chiang Mai Arr	72.64	293	P	P	14 02 02.2	+0.9
	comp=Z,1.0nm,0.8s,baz=121,slow=4.3,SNR=4.8						
CD2	Chengdu	72.96	307	eP	P	14 02 04.2	+1.2
SEY	Seymchan	74.15	353	P	P	14 02 10.1	+0.8
	comp=Z,2.3nm,0.7s,baz=134,slow=7.5,SNR=7.5						
LZH	Lanzhou	75.05	312	eP	P	14 02 14.2	-1.0
LZH				pP	sP	14 02 19.2	+0.5
LZH				sP	pwP	14 02 23.5	+2.7
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,83nm,4.3s						
LZH				LR	LR		
	comp=Z,490nm,16.3s						
LZH				LR	LR		
	comp=Z,440nm,16.4s						
LZH				LR	LR		
	comp=Z,550nm,17.5s						
OHAK	Old Harbor	75.25	21	PFAKE		14 02 30.0	+14
OHAK				LR	LR		
	comp=Z,2µm,20.0s						
KDAK	Kodiak Island	75.92	21	PFAKE		14 02 30.0	+10
KDAK				LR	LR		
	comp=Z,2µm,18.0s						
SVW2	Sparrevohn	77.49	18	PFAKE		14 02 40.0	+12
SVW2				LR	LR		
	comp=Z,2µm,20.0s						
HOM	Homer	77.65	20	PFAKE		14 02 40.0	+11
HOM				LR	LR		
	comp=Z,3µm,19.0s						
ANM	Nome	77.93	12	PFAKE		14 02 40.0	+9.3
ANM				LR	LR		
	comp=Z,2µm,19.0s						
BRLK	Bradley Lake	77.98	20	PFAKE		14 02 40.0	+8.8
BRLK				LR	LR		
	comp=Z,3µm,22.0s						
ULN	Ulaanbaatar	78.42	324	eP	P	14 02 33.2	-0.8
	comp=Z,12nm,1.2s						
ULN				LR	LR		
	comp=Z,1µm,20.0s						
ULN	Ulaanbaatar	78.42	324	d iP	P	14 02 34.2	+0.2
ULN				pmax	pmax		
	comp=Z,17nm,1.7s						
BILL	Bilibino	78.47	360	eP	P	14 02 33.7	0.0
	comp=Z,11nm,0.9s						
BILL	Bilibino	78.47	360⇑	iP	P	14 02 34.5	+0.9
BILL				pmax	pmax		
	comp=Z,26nm,1.7s						
SONM	Songino Array	78.78	323	P	P	14 02 37.1	+1.1
	comp=Z,0.6nm,0.5s,baz=154,slow=6.0,SNR=5.8						
SONA1	Songino Array	78.79	323	eP	P	14 02 35.1	-0.9
SUA	Susitna One	79.28	19	PFAKE		14 02 50.0	+12
SUA				LR	LR		
	comp=Z,2µm,19.0s						
GTA	Gaotai	79.32	314	⇑P	P	14 02 40.5	+1.3
GTA				pP	pwP	14 02 45.4	+0.7
GTA				sP	PcP	14 02 47.9	+0.6
GTA				LR	LR		
	comp=Z,860nm,19.0s						
GTA				LR	LR		
	comp=Z,710nm,17.5s						
GTA				LR	LR		
	comp=Z,790nm,18.4s						
RC01	Rabbit Creek A	79.34	20	PFAKE		14 02 50.0	+11
RC01				LR	LR		
	comp=Z,3µm,22.0s						
PMR	Palmer	79.91	20	PFAKE		14 02 50.0	+8.4
PMR				LR	LR		
	comp=Z,3µm,21.0s						
KNK	Knik Glacier	80.01	20	PFAKE		14 02 50.0	+7.8
KNK				LR	LR		
	comp=Z,2µm,20.0s						
RPN	Rapa Nui	80.07	116	PFAKE		14 02 50.0	+6.6
RPN				LR	LR		
	comp=Z,4µm,19.0s						
GHO	Glory Hole Cre	80.11	20	PFAKE		14 02 50.0	+7.1
GHO				LR	LR		
	comp=Z,3µm,22.0s						
CAST	Castle Rocks	80.33	18	PFAKE		14 03 00.0	+16
CAST				LR	LR		
	comp=Z,2µm,19.0s						
SML	Sawmill	80.33	20	PFAKE		14 03 00.0	+16
SML				LR	LR		
	comp=Z,2µm,19.0s						
EYAK	Cordova Ski Ar	80.36	22	PFAKE		14 03 00.0	+16
EYAK				LR	LR		
	comp=Z,5µm,21.0s						
BOD	Bodaibo	80.48	334	eP	P	14 02 44.0	-0.8
BOD				pmax	pmax		
	comp=Z,15nm,1.8s						
SCM	Sheep Creek Mo	80.69	20	PFAKE		14 03 00.0	+14
SCM				LR	LR		
	comp=Z,2µm,19.0s						
DIV	Divide	80.75	21	PFAKE		14 03 00.0	+14
DIV				LR	LR		
	comp=Z,4µm,22.0s						
TRF	Thorofare Moun	80.89	18	PFAKE		14 03 00.0	+13
TRF				LR	LR		
	comp=Z,2µm,21.0s						
KLU	Klutina	80.94	21	PFAKE		14 03 00.0	+13
KLU				LR	LR		
	comp=Z,3µm,21.0s						
MCK	McKinley	81.51	18	PFAKE		14 03 00.0	+10
MCK				LR	LR		
	comp=Z,2µm,21.0s						
DHY	Denali Highway	81.54	19	PFAKE		14 03 00.0	+9.4
DHY				LR	LR		
	comp=Z,3µm,19.0s						
MCCM	Marconi Confer	81.68	49	PFAKE		14 03 00.0	+8.4
MCCM				LR	LR		
	comp=Z,3µm,20.0s						
ZAK	Zakamensk	81.80	325	eP	P	14 02 49.9	-2.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
IM3	Indian Mountai	81.83	15	eP	P	14 02 51.7	-0.1
MLY	Manley	81.92	17	PFAKE		14 03 00.0	+7.6
MLY				LR	LR		
	comp=Z,2µm,18.0s						
TLY	Talaya	82.20	326	eP	P	14 02 53.5	-0.7
	comp=Z,20nm,1.2s						
TLY	Talaya	82.20	326⇑	eP	P	14 02 53.1	-1.1
SAO	San Andreas Ge	82.28	50	PFAKE		14 03 10.0	+15
SAO				LR	LR		
	comp=Z,6µm,20.0s						
WRH	Wood River Hil	82.30	18	eP	P	14 02 54.0	-0.4
	comp=Z,27nm,1.7s						
MDM	Murphy Dome	82.61	18	eP	P	14 02 56.0	0.0
	comp=Z,9.9nm,1.0s						
MDM				LR	LR		
	comp=Z,2µm,20.0s						
HDA	Harding Lake	82.61	19	eP	P	14 02 56.0	0.0
	comp=Z,20nm,1.0s						
HDA	Harding Lake	82.61	19	P	P	14 02 56.8	+0.9
	baz=226						
TCOL	CIGO, UAF Yank	82.66	18	P	P	14 02 56.9	+0.7
	baz=225						
COLA	College	82.66	18	eP	P	14 02 55.9	-0.3
	comp=Z,17nm,1.3s						
COLA				LR	LR		
	comp=Z,2µm,20.0s						
COLA	College	82.66	18⇑	eP	P	14 02 56.4	+0.2
COLA				pmax	pmax		
	comp=Z,28nm,2.3s						
SNCC	San Nicolas Is	82.67	54	PFAKE		14 03 10.0	+13
SNCC				LR	LR		
	comp=Z,4µm,19.0s						
RIDG	Independ'e Rid	82.83	20	PFAKE		14 03 10.0	+13
RIDG				LR	LR		
	comp=Z,2µm,21.0s						
M02C	Callahan	82.84	46	P	P	14 02 58.9	+1.1
	baz=249						
PAGB	Antelope Grade	82.87	52	PFAKE		14 03 10.0	+12
PAGB				LR	LR		
	comp=Z,3µm,19.0s						
ILAR	Eielson Array	82.88	18	P	P	14 02 57.9	+0.5
	comp=Z,4.3nm,0.8s,baz=227,slow=5.8,SNR=29						
ILB	Eielson Array	82.88	18	eP	P	14 02 57.3	0.0
IL1	Eielson Array	82.88	18	eP	P	14 02 57.0	-0.4
POKR	Poker Plat Res	82.96	18	P	P	14 02 58.3	+0.5
	baz=226						
DOT	Dot Lake	83.03	20	PFAKE		14 03 10.0	+12
DOT				LR	LR		
	comp=Z,1µm,22.0s						
ORV	Oroville	83.17	48	eP	P	14 03 00.1	+0.6
	comp=Z,13nm,1.4s						
ORV	Oroville	83.17	48	eP	P	14 03 00.1	+0.6
ORV				pmax	pmax		
	comp=Z,13nm,1.4s						
HUMO	Hull Mountain	83.20	45	PFAKE		14 03 10.0	+10
HUMO				LR	LR		
	comp=Z,3µm,20.0s						
O03E	Paynes Creek	83.21	47	P	P	14 03 00.7	+0.9
	baz=250						
SCRK	Sand Creek	83.27	20	eP	P	14 03 00.2	+0.6
	comp=Z,68nm,2.0s						
AFDM	Forest Hills D	83.36	48	eP	P	14 03 01.1	+0.6
	comp=Z,16nm,1.3s						
CMB	Columbia Colle	83.50	50	eP	P	14 03 01.6	+0.3
	comp=Z,16nm,1.4s						
CMB				LR	LR		
	comp=Z,5µm,21.0s						
CMB	Columbia Colle	83.50	50	eP	P	14 03 01.6	+0.3
CMB				pmax	pmax		
	comp=Z,16nm,1.4s						
CMB				MLR	MLR		
	comp=Z,5µm,21.0s						
HYT	Haines Junctio	83.70	24	PFAKE		14 03 10.0	+8.1
HYT				LR	LR		
	comp=Z,4µm,21.0s						
OSI	Osito Audit: C	83.71	53	PFAKE		14 03 10.0	+7.6
OSI				LR	LR		
	comp=Z,4µm,19.0s						
VES	Vestal, Richgr	83.80	52	P	P	14 03 03.4	+0.7
	baz=252						
BBB	Bella Bella	83.81	34	PFAKE		14 03 10.0	+7.6
BBB				LR	LR		
	comp=Z,4µm,20.0s						
PRP	Porcupine Dome	83.82	18	PFAKE		14 03 10.0	+7.6
PRP				LR	LR		
	comp=Z,2µm,19.0s						
SKAG	Skagway	83.84	26	PFAKE		14 03 10.0	+7.6
SKAG				LR	LR		
	comp=Z,2µm,20.0s						
RUBR	Rubicon Trail	84.00	49	PFAKE		14 03 20.0	+16
RUBR				LR	LR		
	comp=Z,3µm,21.0s						
PASC	Pasadena Art C	84.01	54	PFAKE		14 03 20.0	+16
PASC				LR	LR		
	comp=Z,4µm,19.0s						
BEKR	Beckworth	84.11	48	eP	P	14 03 05.2	+0.7
	comp=Z,20nm,1.6s						
BEKR				LR	LR		
	comp=Z,2µm,21.0s						
MWC	Mount Wilson	84.12	54	PFAKE		14 03 20.0	+15
MWC				LR	LR		
	comp=Z,5µm,19.0s						
ISA	Isabella, Lake	84.22	52	eP	P	14 03 05.4	+0.3
	comp=Z,38nm,1.8s						
ISA				LR	LR		
	comp=Z,4µm,20.0s						
ISA	Isabella, Lake	84.22	52	eP	P	14 03 05.4	+0.3
ISA				pmax	pmax		
	comp=Z,38nm,1.8s						
ISA				MLR	MLR		
	comp=Z,4µm,20.0s						
ISA	Isabella, Lake	84.22	52	P	P	14 03 06.3	+1.2
	baz=253						
MDPB	Devils Postpil	84.35	50	eP	P	14 03 06.3	+0.4
	comp=Z,31nm,1.6s						
MDPB				LR	LR		
	comp=Z,6µm,22.0s						
WAKR	Walker	84.35	49	eP	P	14 03 07.3	+1.5
	comp=Z,87nm,2.0s						
WAKR				LR	LR		
	comp=Z,6µm,20.0s						
EDW2	Edwards Air Fo	84.37	53	P	P	14 03 07.0	+1.2
	baz=253						
PNTR	Pine Nut	84.42	49	eP	P	14 03 06.4	+0.3
	comp=Z,46nm,1.7s						
PNTR				LR	LR		
	comp=Z,3µm,22.0s						
BFSC	Mount Baldy Ra	84.44	54	P	P	14 03 06.8	+0.5
	baz=253						
VCNR	Virginia City	84.44	48	PFAKE		14 03 20.0	+14
VCNR				LR	LR		
	comp=Z,2µm,20.0s						
H04A	Detroit Lake	84.47	43	PFAKE		14 03 20.0	+14
H04A				LR	LR		
	comp=Z,3µm,19.0s						
CPE	Camp Elliot	84.50	55	PFAKE		14 03 20.0	+14
CPE				LR	LR		
	comp=Z,4µm,20.0s						
J05D	Fort Rock, OR	84.62	44	P	P	14 03 09.5	+2.5
	baz=250						
YERR	Yerington	84.65	49	eP	P	14 03 08.0	+0.7
	comp=Z,55nm,2.0s						
YERR				LR	LR		
	comp=Z,3µm,20.0s						
WHY	Whitehorse	84.68	25	PFAKE		14 03 20.0	+13
WHY				LR	LR		
	comp=Z,3µm,21.0s						
CWC	Cottonwood Cre	84.76	52	P	P	14 03 09.0	+1.1
	baz=253						
PAHR	Pah Rah Range	84.77	48	eP	P	14 03 08.2	+0.3
	comp=Z,18nm,1.2s						
PAHR				LR	LR		
	comp=Z,2µm,18.0s						
DAWY	Dawson	84.90	21	eP	P	14 03 08.0	+0.2
	comp=Z,28nm,1.7s						
DAWY				LR	LR		
	comp=Z,4µm,21.0s						
MONP2	Monument Peak	85.06	55	P	P	14 03 10.7	+1.2
	baz=254						
RYN	Ryan	85.07	49	eP	P	14 03 08.9	-0.5
	comp=Z,29nm,1.6s						
RYN				LR	LR		
	comp=Z,5µm,19.0s						
DAC	Darwin (Calif)	85.08	52	eP	P	14 03 09.4	-0.1
	comp=Z,17nm,1.4s						
DAC				LR	LR		
	comp=Z,5µm,22.0s						
DAC	Darwin (Calif)	85.08	52	eP	P	14 03 09.4	-0.1
DAC				pmax	pmax		
	comp=Z,17nm,1.4s						
DAC				MLR	MLR		
	comp=Z,5µm,22.0s						
MPMC	Manual Prospec	85.10	52	P	P	14 03 10.8	+1.1
	baz=253						
NV01	Mina Array Sit	85.18	50	eP	P	14 03 09.8	-0.2
NVAR	Mina Array Bea	85.18	50	P	P	14 03 11.1	+1.1
	comp=Z,2.4nm,0.7s,baz=233,slow=9.0,SNR=16						
PFO	Pinyon Flats O	85.22	55	PFAKE		14 03 20.0	+10
PFO				LR	LR		
	comp=Z,4µm,20.0s						
KNGR	Kungurtug, Tuv	85.23	323⇑	iP	P	14 03 09.6	-0.2
XPFO	Pion Flat	85.23	55	PFAKE		14 03 20.0	+10
XPFO				LR	LR		
	comp=Z,4µm,20.0s						
NV11	Mina Array Sit	85.29	50	eP	P	14 03 10.7	+0.2
	comp=Z,3.7nm,1.8s						
NV11				LR	LR		
	comp=Z,400nm,19.0s						
GSC	Goldstone, Bar	85.42	53	eP	P	14 03 11.3	+0.2
	comp=Z,44nm,1.9s						
GSC				LR	LR		
	comp=Z,4µm,19.0s						
GSC	Goldstone, Bar	85.42	53	eP	P	14 03 11.3	+0.2
GSC				pmax	pmax		
	comp=Z,44nm,1.9s						
GSC				MLR	MLR		
	comp=Z,4µm,19.0s						
GSC	Goldstone, Bar	85.42	53	P	P	14 03 12.5	+1.4
	baz=254						
KVN	Kaiserville	85.52	49	eP	P	14 03 11.9	+0.3
	comp=Z,49nm,1.9s						
KVN				LR	LR		
	comp=Z,4µm,19.0s						
BELC	Belle Mtn. Jos	85.70	54	P	P	14 03 13.4	+0.8
	baz=254						
FURC	Furnace Creek,	85.70	52	P	P	14 03 13.5	+1.2
	baz=254						
TIXI	Tiksi	85.83	349	eP	P	14 03 11.8	-0.4
	comp=Z,23nm,1.5s						
TIXI				LR	LR		
	comp=Z,1µm,19.0s						
TIXI	Tiksi	85.83	349	d iP	P	14 03 12.0	-0.2
TIXI				pmax	pmax		
	comp=Z,32nm,2.5s						
SHOC	Shoshone, Teco	86.00	53	P	P	14 03 15.1	+1.2
	baz=254						
TUQ	Turquoise Moun	86.15	53	P	P	14 03 14.2	-0.6
	baz=254						
WVOR	Wild Horse Val	86.16	46	eP	P	14 03 15.1	+0.5
	comp=Z,32nm,1.5s						
WVOR	Wild Horse Val	86.16	46	eP	P	14 03 15.1	+0.5
WVOR				pmax	pmax		
	comp=Z,32nm,1.5s						
GMRC	Granite Mounta	86.18	54	P	P	14 03 16.1	+1.1
	baz=254						
B06A	Marblemount	86.27	39	PFAKE		14 03 30.0	+15
B06A				LR	LR		
	comp=Z,3µm,20.0s						
TPNV	Topopah Spring	86.31	52	eP	P	14 03 15.4	-0.2
	comp=Z,33nm,1.8s						
TPNV				LR	LR		
	comp=Z,4µm,21.0s						
TPNV	Topopah Spring	86.31	52	eP	P	14 03 15.4	-0.2
TPNV				pmax	pmax		
	comp=Z,33nm,1.8s						
TPNV				MLR	MLR		
	comp=Z,4µm,21.0s						
TPNV	Topopah Spring	86.31	52	P	P	14 03 16.1	+0.5
	baz=254						
GLA	Glamis	86.39	56	eP	P	14 03 15.6	-0.3
	comp=Z,48nm,1.7s						
GLA				LR	LR		
	comp=Z,3µm,21.0s						
GLA	Glamis	86.39	56	eP	P	14 03 15.6	-0.3
GLA				pmax	pmax		
	comp=Z,48nm,1.7s						
GLA				MLR	MLR		
	comp=Z,3µm,21.0s						
GLA	Glamis	86.39	56	P	P	14 03 17.8	+1.8
	baz=255						
IRM	Iron Mountain	86.42	54	P	P	14 03 17.3	+1.3
	baz=255						
J08A	Circle Bar Ran	86.56	45	eP	P	14 03 16.4	-0.2
	comp=Z,7.4nm,1.0s						
J08A				LR	LR		
	comp=Z,2µm,19.0s						
LDFC	Landfair	86.69	54	PFAKE		14 03 30.0	+13
LDFC				LR	LR		
	comp=Z,5µm,19.0s						
Y12C	Blythe	86.82	55	eP	P	14 03 17.7	-0.2
	comp=Z,37nm,1.6s						
Y12C				LR	LR		
	comp=Z,3µm,20.0s						
Y12C	Blythe	86.82	55	P	P	14 03 19.8	+1.8
	baz=255						
G08A	Pilot Rock	86.83	43	eP	P	14 03 16.4	-1.5
	comp=Z,34nm,1.8s						
SHPR	Sheep Range	87.03	52	eP	P	14 03 19.5	+0.4
	comp=Z,22nm,1.6s						
SHPR				LR	LR		
	comp=Z,4µm,19.0s						
SRIG	Santa Rosalia	87.16	62	PFAKE		14 03 30.0	+10
SRIG				LR	LR		
	comp=Z,5µm,20.0s						
113A	Mohawk Valley,	87.18	56	PFAKE		14 03 30.0	+10
113A				LR	LR		
	comp=Z,3µm,20.0s						
R11A	Troy Canyon, C	87.20	50	eP	P	14 03 20.1	+0.1
R11A				LR	LR		
	comp=Z,5µm,20.0s						
R11A	Troy Canyon, C	87.20	50	P	P	14 03 21.1	+1.1
	baz=254						
PALK	Pallekele	87.24	278	PFAKE		14 03 30.0	+10
PALK				LR	LR		
	comp=Z,1µm,20.0s						
PDMCI	Parker Dam,Lak	87.27	55	P	P	14 03 21.0	+0.9
	baz=255						
D08A	Wollman Farm,	87.41	41	eP	P	14 03 20.9	+0.4
	comp=Z,29nm,1.6s						
W13A	Hualapai Mount	87.67	54	eP	P	14 03 22.2	-0.1
	comp=Z,39nm,1.9s						
W13A				LR	LR		
	comp=Z,5µm,18.0s						
214A	Organ Pipe Nat	87.77	57	P	P	14 03 24.6	+2.0
	baz=256						
BMO	Blue Mountains	87.81	44	eP	P	14 03 23.1	+0.5
	comp=Z,27nm,1.9s						
BMO	Blue Mountains	87.81	44	eP	P	14 03 23.1	+0.5
BMO				pmax	pmax		
	comp=Z,27nm,1.9s						
Y14A	Wickenburg	88.09	55	eP	P	14 03 24.6	+0.5
	comp=Z,18nm,1.4s						
ELK	Elko	88.11	48	eP	P	14 03 24.6	+0.3
	comp=Z,7.1nm,1.3s						
ELK	Elko	88.11	48	eP	P	14 03 24.6	+0.3
ELK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PSUT	Pine Spring	88.56	51	eP	P	14 03 26.3	-0.2
	comp=Z,48nm,1.8s						
PSUT				LR	LR		
	comp=Z,4µm,19.0s						
LCMT	Little Creek M	88.65	52	eP	P	14 03 26.7	-0.2
	comp=Z,50nm,1.7s						
LCMT				LR	LR		
	comp=Z,4µm,22.0s						
CCUT	Cedar City	88.69	52	eP	P	14 03 27.9	+0.8
	comp=Z,65nm,1.8s						
CCUT				LR	LR		
	comp=Z,5µm,20.0s						
SZCU	Shurtz Canyon	88.91	52	eP	P	14 03 28.8	+0.6
	comp=Z,58nm,1.7s						
KNB	Kanab	88.98	52	eP	P	14 03 29.0	+0.6
	comp=Z,105nm,1.9s						
KNB				LR	LR		
	comp=Z,4µm,21.0s						
KNB	Kanab	88.98	52	eP	P	14 03 29.0	+0.6
KNB				pmax	pmax		
	comp=Z,105nm,1.9s						
KNB				MLR	MLR		
	comp=Z,4µm,21.0s						
U15A	North Rim	89.25	53	eP	P	14 03 30.4	+0.6

	comp=Z,61nm,1.7s						
U15A				LR	LR		
	comp=Z,4µm,19.0s						
INK	Inuvik	89.27	19	P	P	14 03 29.4	+0.6
INK				LR	LR		
	comp=Z,2µm,19.0s						
INK	Inuvik	89.27	19	P	P	14 03 29.4	+0.6
INK				MLR	MLR		
	comp=Z,2µm,19.0s						
INK	Inuvik	89.27	19	P	P	14 03 29.4	+0.6
	comp=Z,0.7nm,0.8s,baz=265,slow=4.1,SNR=3.0						
WMQ	Urumqi	89.34	315	*e*P	P	14 03 30.4	+0.6
WMQ				pP	pwP	14 03 34.4	-1.2
WMQ				sP	sP	14 03 36.7	+3.4
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.7s						
WMQ				LR	LR		
	comp=Z,3µm,20.3s						
WMQ				LR	LR		
	comp=Z,1µm,22.5s						
WMQ				LR	LR		
	comp=Z,3µm,29.3s						
HLID	Hailey	89.45	46	*e*P	P	14 03 30.9	+0.5
	comp=Z,46nm,2.0s						
HLID	Hailey	89.45	46	P	P	14 03 31.8	+1.3
	baz=255						
X16A	Lo Mia Camp, P	89.46	55	*e*P	P	14 03 31.3	+0.5
	comp=Z,32nm,1.8s						
X16A				LR	LR		
	comp=Z,3µm,20.0s						
PKCU	Pink Cliffs	89.48	52	*e*P	P	14 03 31.8	+0.8
	comp=Z,165nm,1.9s						
PKCU				LR	LR		
	comp=Z,4µm,19.0s						
TUC	Tucson	89.52	57	*e*P	P	14 03 31.2	+0.2
	comp=Z,31nm,1.7s						
TUC				LR	LR		
	comp=Z,5µm,20.0s						
TUC	Tucson	89.52	57	*e*P	P	14 03 31.2	+0.2
TUC				pmax	pmax		
	comp=Z,31nm,1.7s						
TUC				MLR	MLR		
	comp=Z,5µm,20.0s						
TUC	Tucson	89.52	57	P	P	14 03 32.6	+1.7
	baz=257						
TCRU	Three Creeks R	89.65	51	PFAKE		14 03 40.0	+8.4
TCRU				LR	LR		
	comp=Z,5µm,20.0s						
MTPU	Mount Pierson	89.72	51	*e*P	P	14 03 32.7	+0.6
	comp=Z,56nm,1.8s						
MTPU				LR	LR		
	comp=Z,6µm,21.0s						
DUG	Dugway, Tooele	89.76	49	*e*P	P	14 03 32.4	+0.4
	comp=Z,32nm,1.6s						
DUG				LR	LR		
	comp=Z,3µm,21.0s						
DUG	Dugway, Tooele	89.76	49	*e*P	P	14 03 32.4	+0.4
DUG				pmax	pmax		
	comp=Z,32nm,1.6s						
DUG				MLR	MLR		
	comp=Z,3µm,21.0s						
DUG	Dugway, Tooele	89.76	49	P	P	14 03 33.1	+1.2
	baz=256						
WUAZ	Wupatki	89.77	54	*e*P	P	14 03 31.9	-0.2
	comp=Z,45nm,1.5s						
WUAZ				LR	LR		
	comp=Z,2µm,18.0s						
WUAZ	Wupatki	89.77	54	P	P	14 03 34.0	+1.9
	baz=257						
BGU	Big Grassy Mou	89.77	48	*e*P	P	14 03 32.5	+0.5
	comp=Z,44nm,1.8s						
MSU	Marysvale	89.83	51	*e*P	P	14 03 32.8	+0.3
MSU	Marysvale	89.83	51	*e*P	P	14 03 32.8	+0.3
HVU	Hansel Valley	90.17	48	*e*P	P	14 03 34.3	+0.5
	comp=Z,71nm,1.7s						
HVU	Hansel Valley	90.17	48	*e*P	P	14 03 34.3	+0.5
HVU				pmax	pmax		
	comp=Z,71nm,1.7s						
NLU	North Lily Min	90.25	49	*e*P	P	14 03 34.2	-0.2
	comp=Z,56nm,2.0s						
NLU				LR	LR		
	comp=Z,5µm,20.0s						
319A	Douglas	90.57	58	*e*P	P	14 03 37.5	+1.6
	comp=Z,28nm,1.4s						
319A				LR	LR		
	comp=Z,5µm,20.0s						
MPU	Maple Canyon	90.59	49	*e*P	P	14 03 35.7	-0.2
	comp=Z,41nm,1.6s						
MPU				LR	LR		
	comp=Z,5µm,20.0s						
CTU	Camp Tracy	90.66	49	*e*P	P	14 03 38.0	+1.8
	comp=Z,27nm,1.6s						
CTU				LR	LR		
	comp=Z,2µm,18.0s						
X18A	Snowflake	90.69	55	*e*P	P	14 03 35.3	-1.2
	comp=Z,21nm,1.3s						
X18A				LR	LR		
	comp=Z,2µm,20.0s						
Q16A	Castle Valley	90.69	51	*e*P	P	14 03 35.0	-1.4
	comp=Z,56nm,1.7s						
Q16A				LR	LR		
	comp=Z,4µm,20.0s						
TMUT	Trail Mountain	90.75	50	*e*P	P	14 03 36.8	-0.1
	comp=Z,15nm,1.3s						
TMUT				LR	LR		
	comp=Z,3µm,22.0s						
MCMT	McKenzie Canyo	90.86	45	*e*P	P	14 03 36.2	-0.9
JLU	Jordanelle	90.86	49	*e*P	P	14 03 36.3	-1.0
	comp=Z,28nm,1.5s						
JLU				LR	LR		
	comp=Z,2µm,20.0s						
W18A	Petrified Fore	90.98	55	PFAKE		14 03 50.0	+12
W18A				LR	LR		
	comp=Z,2µm,21.0s						
W18A	Petrified Fore	90.98	55	P	P	14 03 40.0	+2.1
	baz=258						
TCUT	Toone Canyon	91.01	48	*e*P	P	14 03 36.7	-1.3
	comp=Z,43nm,1.5s						
TCUT				LR	LR		
	comp=Z,4µm,18.0s						
P17A	Butcher Ranch,	91.14	50	*e*P	P	14 03 38.7	+0.2
	comp=Z,25nm,1.6s						
P17A				LR	LR		
	comp=Z,3µm,18.0s						
DLMT	Dillon	91.16	44	*e*P	P	14 03 38.8	+0.4
	comp=Z,60nm,1.9s						
DLMT				LR	LR		
	comp=Z,2µm,22.0s						
SRU	San Rafael Swe	91.23	51	*e*P	P	14 03 40.6	+1.7
	comp=Z,19nm,1.8s						
SRU				LR	LR		
	comp=Z,4µm,20.0s						
SRU	San Rafael Swe	91.23	51	*e*P	P	14 03 40.6	+1.7
SRU				pmax	pmax		
	comp=Z,19nm,1.8s						
SRU				MLR	MLR		
	comp=Z,4µm,20.0s						
FXWY	Fox Creek	91.85	46	*e*P	P	14 03 41.7	-0.1
	comp=Z,22nm,1.9s						
BOZ	Bozeman (W)	91.87	44	*e*P	P	14 03 41.5	-0.2
	comp=Z,31nm,1.7s						
BOZ				LR	LR		
	comp=Z,2µm,21.0s						
BOZ	Bozeman (W)	91.87	44	*e*P	P	14 03 41.5	-0.2
BOZ				pmax	pmax		
	comp=Z,31nm,1.7s						
BOZ				MLR	MLR		
	comp=Z,2µm,21.0s						
BOZ	Bozeman (W)	91.87	44	P	P	14 03 42.9	+1.2
	baz=257						
TPAW	Teton Pass	91.87	46	*e*P	P	14 03 41.6	-0.3
	comp=Z,35nm,1.9s						
IMW	Indian Meadow	91.97	46	*e*P	P	14 03 41.5	-0.9
	comp=Z,39nm,1.8s						
YHB	Horse Butte	91.98	45	*e*P	P	14 03 42.8	+0.5
	comp=Z,26nm,1.7s						
YHB				LR	LR		
	comp=Z,3µm,19.0s						
HRY	Holter Researc	91.99	43	*e*P	P	14 03 41.5	-0.7
YMR	Madison River	92.12	45	*e*P	P	14 03 42.1	-0.8
	comp=Z,30nm,1.7s						
LOHW	Long Hollow	92.15	46	*e*P	P	14 03 43.2	+0.2
	comp=Z,18nm,1.8s						
PV09	Paradox Valley	92.16	51	*e*P	P	14 03 42.1	-1.2
YFT	Old Faithful	92.17	45	PFAKE		14 03 50.0	+6.8
YFT				LR	LR		
	comp=Z,3µm,19.0s						
PV14	Lion Creek, Pa	92.22	52	PFAKE		14 03 50.0	+6.4
PV14				LR	LR		
	comp=Z,4µm,19.0s						
PV23	Carpenter Ridg	92.24	51	PFAKE		14 04 00.0	+16
PV23				LR	LR		
	comp=Z,4µm,21.0s						
PV20	West Nyswonger	92.25	52	PFAKE		14 03 50.0	+6.3
PV20				LR	LR		
	comp=Z,3µm,19.0s						
PV16	Nyswonger Mesa	92.29	52	PFAKE		14 04 00.0	+16
PV16				LR	LR		
	comp=Z,3µm,20.0s						
PV04	Paradox Valley	92.31	52	*e*P	P	14 03 47.6	+3.7
	comp=Z,41nm,1.8s						
PV03	Paradox Valley	92.33	52	*e*P	P	14 03 43.6	-0.4
	comp=Z,26nm,1.8s						
H17A	Grant Village	92.34	45	P	P	14 03 46.3	+2.3
	baz=258						
PV12	Saucer Basin,	92.38	52	*e*P	P	14 03 44.0	-0.3
	comp=Z,22nm,1.5s						
PV12				LR	LR		
	comp=Z,4µm,20.0s						
MVCO	Mesa Verde	92.39	53	PFAKE		14 04 00.0	+16
MVCO				LR	LR		
	comp=Z,3µm,18.0s						
SYO	Syowa Base	92.40	197⇓	*e*X	P	14 03 38.0	-5.5
SYO	Syowa Base	92.40	197⇑	*e*PP	PP	14 07 23.0	-0.8
PV02	Paradox Valley	92.41	52	*e*P	P	14 03 47.5	+3.0
	comp=Z,8.9nm,1.1s						
DGAR	Diego Garcia	92.61	262	PFAKE		14 04 00.0	+14
DGAR				LR	LR		
	comp=Z,3µm,21.0s						
BW06	Boulder Array	92.72	47	*e*P	P	14 03 45.8	0.0
	comp=Z,16nm,1.6s						
PD31	Pinedale Array	92.72	47	*e*P	P	14 03 45.9	+0.1
PDAR	Pinedale Array	92.72	47	*e*P	P	14 03 45.3	-0.5
PDAR	Pinedale Array	92.72	47	P	P	14 03 46.2	+0.5
	comp=Z,1.4nm,1.0s,baz=252,slow=3.0,SNR=8.6						
HPIG		92.82	63	PFAKE		14 04 00.0	+13
HPIG				LR	LR		
	comp=Z,4µm,20.0s						
O20A	White River Ci	93.16	50	PFAKE		14 04 00.0	+12
O20A				LR	LR		
	comp=Z,4µm,18.0s						
RLMT	Red Lodge	93.40	45	P	P	14 03 51.2	+2.4
	baz=258						
ANMO	Albuquerque	93.59	55	PFAKE		14 04 00.0	+10
ANMO				LR	LR		
	comp=Z,2µm,20.0s						
ANMO	Albuquerque	93.59	55⇓	*e*P	P	14 03 49.0	-0.9
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.5s						
ANMO	Albuquerque	93.59	55	P	P	14 03 51.5	+1.6
	baz=260						
EGMT	Eagleton	93.66	42	*e*P	P	14 03 53.1	+3.4
	comp=Z,22nm,1.4s						
ZAA0	Zalesovo Array	93.67	324	*e*P	P	14 03 46.9	-2.7
	comp=Z,7.0nm,1.3s						
ZAA0				LR	LR		
	comp=Z,2µm,22.0s						
ZALV	Zalesovo Beam	93.67	324	*e*P	P	14 03 45.8	-3.7
ZALV	Zalesovo Beam	93.67	324	*e*P	P	14 03 45.8	-3.7
ZALV	Zalesovo Beam	93.67	324	P	P	14 03 49.5	0.0
	comp=Z,1.9nm,1.0s,baz=126,slow=2.5,SNR=7.9						
MK01	Makanchi Array	93.73	317	*e*P	P	14 03 49.8	-0.3
MK31	Makanchi Array	93.74	317	*e*P	P	14 03 47.1	-3.0
MK31	Makanchi Array	93.74	317	*e*P	P	14 03 47.1	-3.0
MKAR	Makanchi Array	93.74	317	*e*P	P	14 03 47.1	-3.0
	comp=Z,24nm,1.1s						
MKAR	Makanchi Array	93.74	317	*e*P	P	14 03 47.1	-3.0
MKAR				pmax	pmax		
	comp=Z,24nm,1.1s						
MKAR	Makanchi Array	93.74	317	P	P	14 03 50.1	0.0
	comp=Z,0.6nm,0.6s,baz=96,slow=6.4,SNR=7.2						
S22A	4UR Ranch, Cre	93.80	52	PFAKE		14 04 00.0	+9.1
S22A				LR	LR		
	comp=Z,3µm,19.0s						
S22A	4UR Ranch, Cre	93.80	52	P	P	14 03 52.3	+1.3
	baz=260						
MNTX	Cornudas Mount	93.90	59	PFAKE		14 04 00.0	+8.8
MNTX				LR	LR		
	comp=Z,4µm,20.0s						
MNTX	Cornudas Mount	93.90	59	P	P	14 03 51.7	+0.5
	baz=260						
SMCO	Snowmass	93.94	51	PFAKE		14 04 00.0	+8.3
SMCO				LR	LR		
	comp=Z,4µm,22.0s						
MAKZ	Makanchi	93.95	317	*e*P	P	14 03 51.9	+0.9
	comp=Z,15nm,1.5s						
MAKZ				LR	LR		
	comp=Z,1µm,21.0s						
YKA	Yellowknife Ar	94.26	27	P	P	14 03 51.2	-0.9
	comp=Z,0.4nm,0.6s,baz=258,slow=4.5,SNR=9.5						
SDCO	Great Sand Dun	94.83	53	PFAKE		14 04 10.0	+14
SDCO				LR	LR		
	comp=Z,3µm,19.0s						
K22A	Casper	94.89	48	PFAKE		14 04 10.0	+14
K22A				LR	LR		
	comp=Z,2µm,19.0s						
TXAR	Lajitas Array	94.97	61	P	P	14 03 56.0	-0.2
	comp=Z,0.1nm,0.5s,baz=257,slow=3.6,SNR=3.2						
N23A	Red Feather La	95.02	49	PFAKE		14 04 10.0	+14
N23A				LR	LR		
	comp=Z,2µm,18.0s						
ISCO	Idaho Springs	95.09	51	PFAKE		14 04 10.0	+13
ISCO				LR	LR		
	comp=Z,5µm,20.0s						
Q24A	Divide	95.31	52	PFAKE		14 04 10.0	+12
Q24A				LR	LR		
	comp=Z,2µm,18.0s						
T25A	Trinidad	95.59	53	PFAKE		14 04 10.0	+11
T25A				LR	LR		
	comp=Z,3µm,19.0s						
LAO	LASA Array	95.77	44	PFAKE		14 04 10.0	+11
LAO				LR	LR		
	comp=Z,2µm,21.0s						
NRIK	Noril'sk	96.00	339	P	P	14 04 00.3	+0.5
	comp=Z,1.6nm,0.3s,baz=106,slow=5.5,SNR=3.7						
MSTX	Muleshoe	96.43	57	PFAKE		14 04 10.0	+7.1
MSTX				LR	LR		
	comp=Z,4µm,22.0s						
KURK	Kurchatov	96.81	320	PFAKE		14 04 10.0	+6.0
KURK				LR	LR		
	comp=Z,1µm,19.0s						
KURK	Kurchatov	96.81	320⇓	*e*P	P	14 04 02.4	-1.6
KURK				pmax	pmax		
	comp=Z,8.0nm,1.9s						
RSSD	Black Hills	96.91	47	PFAKE		14 04 20.0	+15
RSSD				LR	LR		
	comp=Z,2µm,20.0s						
KSH	Kashi	97.09	309	P	Pdif	14 04 08.4	+2.6
KSCO	Kaye Shedlock'	97.26	52	PFAKE		14 04 20.0	+13
KSCO				LR	LR		
	comp=Z,2µm,18.0s						
AMTX	Amarillo	97.46	56	PFAKE		14 04 20.0	+12
AMTX				LR	LR		
	comp=Z,3µm,20.0s						
UNM	Universidad Na	97.47	72	PFAKE		14 04 20.0	+12
UNM				LR	LR		
	comp=Z,2µm,19.0s						
SNAA	Sanae	97.57	183	PFAKE		14 04 20.0	+13
SNAA				LR	LR		
	comp=Z,2µm,19.0s						
OGNE	Ogallala	97.96	50	PFAKE		14 04 20.0	+10
OGNE				LR	LR		
	comp=Z,4µm,20.0s						
LNIG	Linares	98.01	66	PFAKE		14 04 20.0	+10
LNIG				LR	LR		
	comp=Z,4µm,20.0s						
JCT	Junction City	98.45	61	PFAKE		14 04 20.0	+8.0
JCT				LR	LR		
	comp=Z,5µm,20.0s						
833A	Chaparral WMA,	98.53	63	PFAKE		14 04 20.0	+7.7
833A				LR	LR		
	comp=Z,3µm,20.0s						
ABTX	Abilene, Hawle	98.85	58	PFAKE		14 04 20.0	+6.3
ABTX				LR	LR		
	comp=Z,5µm,20.0s						
FFC	Flin Flon	99.45	36	PFAKE		14 04 30.0	+14
FFC				LR	LR		
	comp=Z,3µm,20.0s						
CBKS	Cedar Bluff	99.47	52	PFAKE		14 04 30.0	+14
CBKS				LR	LR		
	comp=Z,2µm,20.0s						
WMOK	Wichita Mounta	99.81	56	PFAKE		14 04 30.0	+12
WMOK				LR	LR		
	comp=Z,4µm,20.0s						
ARCES	ARCESS Array B	116.12	346	PKP	PKiKP	14 09 15.5	-0.3
	comp=Z,1.2nm,0.7s,baz=336,slow=2.0,SNR=6.0						
OBN	Obninsk	120.84	329	*e*PKIKP	PKPdf	14 09 25.0	-0.2
OBN				*e*		14 10 50.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CPUP	Villa Florida	123.74	132	PKP	PKPdf	14 09 31.2	-0.5
	comp=Z,1.4nm,0.8s,baz=169,slow=5.2,SNR=3.3						
NOA	NORSAR Array B	126.50	345	PKP	PKiKP	14 09 37.0	+0.5
	comp=Z,0.4nm,0.7s,baz=33,slow=1.6,SNR=3.0						
AKASG	Malin Array Be	126.93	327	PKIKP	PKiKP	14 09 38.0	+0.4
AKASG	Malin Array Be	126.93	327	PKP	PKiKP	14 09 38.0	+0.4
	comp=Z,0.2nm,0.3s,baz=64,slow=2.5,SNR=3.1						
CLL	Collm	134.03	337	*e*PKIKP	PKPdf	14 09 48.0	-2.5
ES19	SONSECA Array	149.82	345	*e*PKPbc	PKiKP	14 10 26.2	+1.6
ESDC	Sonseca Array	149.86	345	PKPbc	PKPbc	14 10 23.8	0.0
	comp=Z,1.0nm,0.7s,baz=26,slow=3.1,SNR=3.9						
TORD	Torodi Ar. Bea	164.94	281	PKP	PKPdf	14 10 37.5	-0.9
	comp=Z,0.5nm,0.8s,baz=29,slow=3.3,SNR=3.9						
TORD				PKPab	pPKPab	14 11 35.9	-1.4
	comp=Z,0.7nm,1.0s,baz=124,slow=4.2,SNR=3.2						

IDC ***06*** *13:53:14.4±1.4, 11°.54S×165°.66E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/39, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=53.5km s-min=29.3km az=128.0*

ISCJB ***06*** *13:53:16.1±1.0, 11°.7S±0°.1×165°.7E±0°.2, h24^{km}, mb3.7/5, Error ellipse: s-maj=29.3km s-min=19.0km az=10.5*

ISC 06 13:53:18.0±1.0**, 11°.6S**±0°.1×**165°.7E**±0°.2**, h24**^{km}**, n7, σ0^{s}.87**/7**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.45	176	Pn	Pn	13 55 46.6	+0.1
	0.6nm,0.3s,baz=331,slow=19,SNR=1.4						
WRA	Warramunga Arr	31.25	251	P	P	13 59 35.5	-0.7
	1.0nm,0.7s,baz=78,slow=8.6,SNR=1.8						
ASAR	Alice Springs	32.50	244	P	P	13 59 47.1	0.0
	0.4nm,0.8s,baz=67,slow=10,SNR=1.0						
ILAR	Eielson Array	84.04	19	P	P	14 05 46.6	+0.4
	1.0nm,0.8s,baz=232,slow=5.0,SNR=5.6						
MKAR	Makanchi Array	93.88	317	P	P	14 06 34.2	+0.6
	0.6nm,0.7s,baz=93,slow=6.8,SNR=3.8						
YKA	Yellowknife Ar	95.48	27	P	P	14 06 39.3	-1.2
	0.1nm,0.5s,baz=263,slow=8.0,SNR=2.6						
ARCES	ARCESS Array B	116.84	345	PKP	PKiKP	14 12 00.8	+0.8
	2.5nm,0.9s,baz=39,slow=1.7,SNR=4.0						

IDC 06 13:54:19.3±4.5**, 12°.09S**×**164°.00E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.5**/37**, mbtmp3.7**/3**, Error ellipse: s-maj=233.9km s-min=32.1km az=140.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	29.52	251	P	P	14 00 25.5	-0.2
	0.4nm,0.6s,baz=81,slow=8.1,SNR=3.0						
ASAR	Alice Springs	30.80	244	P	P	14 00 37.2	+0.1
	0.9nm,0.8s,baz=71,slow=9.5,SNR=3.4						
ILAR	Eielson Array	85.05	19	P	P	14 06 56.5	0.0
	0.3nm,0.6s,baz=234,slow=4.7,SNR=4.6						

BJI ***06*** *13:54:53.2, 10°.49S×166°.71E, h12^{km}, mB6.0/63, mb5.3/52, Ms5.7/83, Ms7 5.5/80*

ISCJB ***06*** *13:54:53.6±0.1, 10°.81S±0°.02×166°.48E±0°.02, h17^{km}, mb5.7/338, MS5.7/407, Error ellipse: s-maj=3.4km s-min=2.6km az=149.4*

MOS ***06*** *13:54:54.6±0.8, 10°.79S×166°.49E, h24^{km}, mb6.0/66, MS5.6/30, Error ellipse: s-maj=7.1km s-min=5.8km az=84.7*

NEIC ***06*** *13:54:54.1±0.6, 10°.81S×166°.53E, h14^{km}±3^{km}, mb6.0/269, MS5.7/299, MW5.8, Error ellipse: s-maj=2.9km s-min=2.3km az=119.0, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M_{rr}-5.61; $M_{\theta\theta}$0.01; $M_{\phi\phi}$5.60; $M_{r\theta}$-1.60; $M_{\theta\phi}$-0.78; $M_{\phi r}$0.13; Best double couple: $M_0$5.90000×10^{17} NP1:ϕ_s158.00000°, δ49.00000°, λ-110.00000°. NP2:ϕ_s6.00000°, δ45.00000°, λ-69.00000°. Principal axes: T 5.7200, Plg2.0000°, Azm262.0000°; N 0.3100, Plg15.0000°, Azm171.0000°; P -6.0300, Plg75.0000°, Azm359.0000°;*

GCMT ***06*** *13:54:58.2±0.1, 10°.72S±0°.01×166°.61E±0°.01, h12^{km}, MW5.8/127, Moment Tensor Solution. s94,c155; s127,c276; Duration: 1^{s}.9 Moment tensor: Scale 10^{17} Nm; M_{rr}-5.17±.08; $M_{\theta\theta}$-1.25±.07; $M_{\phi\phi}$6.42±.06; $M_{r\theta}$-1.58±.26; $M_{\theta\phi}$-1.24±.06; $M_{\phi r}$0.04±.19; Best double couple: $M_0$6.18100×10^{17} NP1:ϕ_s152.00000°, δ50.00000°, λ-117.00000°. NP2:ϕ_s10.00000°, δ47.00000°, λ-62.00000°. Principal axes: T 6.6220, Plg1.0000°, Azm261.0000°; N -0.8830, Plg20.0000°, Azm170.0000°; P -5.7390, Plg70.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***06*** *13:55:00.5±2.9, 10°.85S×166°.56E, h58^{km}±25^{km}, mb4.8/31, mb1 4.8/33, mb1mx4.8/40, mbtmp5.0/33, ML4.9/2, MS5.5/7, Ms1 5.5/7, ms1mx5.2/12 Error ellipse: s-maj=15.4km s-min=11.1km az=88.0*

ISC 06 13:54:56.2±0.5**, 10°.81S**±0°.04×**166°.50E**±0°.04**, h24**^{km}±2^{km}**, h24**^{km}**:pP-P, n1055, σ1^{s}.50**/861**, mb5.9**/341**, MS5.8**/408**, 6C-25D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.60	281	*e*P	Pn	13 56 38.0	+6.2
HNR	Honiara	6.60	281	*e*Pn	Pn	13 56 31.6	-0.2
HNR				S	Sn	13 57 39.2	-7.1
HNR	Honiara	6.60	281	*e*P	Pn	13 56 31.6	-0.2
HNR				S	Sn	13 57 39.2	-7.1
HNR	Honiara	6.60	281	P	Pn	13 56 36.5	+4.7
	74nm,0.3s,baz=129,slow=0.2,SNR=15						
HNR				S	Sn	13 57 39.2	-7.1
	13nm,0.3s,baz=238,slow=16,SNR=1.6						
HNR				LR	LR	13 59 17.7	
	comp=Z,139µm,19.0s,baz=114,slow=39						
MARNC	Mare, Loyalty	10.71	172	*e*Pn	Pn	13 57 29.5	+1.3
DZM	Mont Dzumac	11.20	180	*e*Pn	Pn	13 57 35.0	+0.1
	464nm,1.3s						
DZM				*e*LR	LR	14 00 25.0	
	comp=Z,27µm,22.8s						
DZM	Mont Dzumac	11.20	180	*e*Pn	Pn	13 57 32.9	-2.1
DZM	Mont Dzumac	11.20	180	P	Pn	13 57 37.4	+2.4
	2.6nm,0.3s,baz=24,slow=14,SNR=7.0						
DZM				LR	LR	14 01 34.3	
	comp=Z,31µm,19.2s,baz=16,slow=35						
ONTNC	Ouen Toro	11.43	180	*e*Pn	Pn	13 57 37.6	-0.5
OUENC	Ouen Island, N	11.54	178	*e*Pn	Pn	13 57 40.0	+0.3
PINNC	Pines Island,	11.77	176	*e*Pn	Pn	13 57 42.8	+0.1
MSVF	Nonsavu	13.13	123	*e*Pn	Pn	13 58 03.5	+2.0
MSVF	Nonsavu	13.13	123	*e*P	Pn	13 58 03.5	+2.0
TARA	Tarawa	13.67	28	*e*Pn	Pn	13 58 05.6	-3.2
PATS	Pohnpei	19.34	335	*e*P	P	13 59 19.9	-0.2
	299nm,1.1s						
KWAJ	Kwajalein Atol	19.52	3	*e*P	P	13 59 22.5	+0.5
	3µm,1.9s						
KWAJ	Kwajalein Atol	19.52	3	*e*P	P	13 59 22.5	+0.5
KWAJ				pmax	pmax		
	comp=Z,3µm,1.9s						
EIDS	Eidsvold	20.57	223	P	Pn	13 59 36.5	+0.7
	baz=21,SNR=74						
CTA	Charters Tower	21.56	242	P	P	13 59 46.3	+2.1
	comp=Z,39nm,0.9s,baz=66,slow=12,SNR=13						
CTAO	Charters Tower	21.56	242	*e*P	P	13 59 43.6	-0.6
	comp=Z,700nm,1.6s						
CTAO				LR	LR		
	comp=Z,28µm,20.0s						
CTAO	Charters Tower	21.56	242	*e*P	P	13 59 43.6	-0.6
CTAO				pmax	pmax		
	comp=Z,700nm,1.6s						
CTAO				MLR	MLR		
	comp=Z,28µm,20.0s						
MTSU	Mount Surprise	22.66	249	P	P	13 59 57.8	+1.8
	baz=23,SNR=41						
RMQ	Roma	22.88	225	P	P	14 00 00.5	+2.3
	baz=23,SNR=58						
COEN	Coen	23.00	260	P	P	14 00 01.1	+1.5
	baz=23,SNR=11						

KNTN	Kanton	23.04	71	*e*P	P	14 00 00.2	+0.3
	comp=Z,1µm,1.9s						
KNTN				LR	LR		
	comp=Z,20µm,20.0s						
RAO	Raoul Island	23.42	144	LR	LR	14 07 11.8	
	comp=Z,11µm,20.6s,baz=307,slow=31						
ARMA	Armidale	23.91	213	P	P	14 00 10.3	+1.7
	baz=24,SNR=16						
NIUE	Niue	24.19	113	P	P	14 00 07.7	-3.3
	baz=24						
OUZ	Omahuta	25.14	166	*e*P	P	14 00 19.8	+0.3
	comp=Z,170nm,1.5s						
OUZ				LR	LR		
	comp=Z,17µm,21.0s						
QLP	Quilpie	26.21	230	P	P	14 00 30.9	+1.5
	baz=26,SNR=13						
MGCD	Mangrove Creek	26.40	210	P	P	14 00 32.6	+1.6
	baz=27,SNR=8.5						
JAY	Jayapura	26.89	286	P	P	14 00 35.2	-0.5
QIS	Mount Isa	27.61	246	P	P	14 00 43.2	+1.1
	baz=28,SNR=13						
CMSA	Cobar Meteorol	28.21	220	P	P	14 00 48.3	+1.0
	baz=28,SNR=16						
HIZ	Hauiti	28.58	166	*e*P	P	14 00 49.0	-1.4
	comp=Z,192nm,1.3s						
HIZ				LR	LR		
	comp=Z,15µm,20.0s						
YNG	Young	28.64	212	P	P	14 00 52.3	+1.2
	baz=29,SNR=7.4						
MXZ	Matakaoa Point	28.67	160	PFAKE		14 01 00.0	+8.7
MXZ				LR	LR		
	comp=Z,4µm,19.0s						
URZ	Urewera	28.94	163	*e*P	P	14 00 52.9	-0.7
	comp=Z,90nm,1.1s						
URZ				LR	LR		
	comp=Z,6µm,20.0s						
URZ	Urewera	28.94	163	P	P	14 00 54.0	+0.4
	comp=Z,25nm,1.0s,baz=38,slow=11,SNR=6.1						
H11S2	WAKE ISLAND Hy	29.12	0	T	T	14 31 17.6	
	baz=181,slow=76,SNR=213						
H11S3	WAKE ISLAND Hy	29.12	0	T	T	14 31 17.8	
	baz=181,slow=76,SNR=151						
CAN	Canberra	29.13	210	P	P	14 00 56.6	+1.1
	baz=29						
CAN	Canberra	29.13	210	*e*P	P	14 00 54.8	-0.7
	comp=Z,111nm,1.1s						
CAN				LR	LR		
	comp=Z,5µm,21.0s						
CAN	Canberra	29.13	210	*e*P	P	14 00 54.8	-0.7
CAN				pmax	pmax		
	comp=Z,111nm,1.1s						
CAN				MLR	MLR		
	comp=Z,5µm,21.0s						
H11S1	WAKE ISLAND Hy	29.14	0	T	T	14 31 18.8	
	baz=181,slow=76,SNR=216						
BKZ	Black Stump Fm	29.61	164	*e*P	P	14 00 58.6	-1.1
	comp=Z,71nm,0.9s						
BKZ				LR	LR		
	comp=Z,7µm,21.0s						
H11N1	WAKE ISLAND Hy	30.34	1	T	T	14 32 49.2	
	baz=182,slow=76,SNR=86						
H11N3	WAKE ISLAND Hy	30.34	1	T	T	14 32 49.5	
	baz=182,slow=76,SNR=65						
H11N2	WAKE ISLAND Hy	30.35	1	T	T	14 32 50.5	
	baz=182,slow=76,SNR=65						
BFZ	Birch Farm	30.97	166	*e*P	P	14 01 11.0	-0.6
	comp=Z,54nm,0.9s						
BFZ				LR	LR		
	comp=Z,13µm,20.0s						
STKA	Stephens Creek	31.12	224	P	P	14 01 14.3	+1.2
	baz=31,SNR=16						
STKA	Stephens Creek	31.12	224	*e*P	P	14 01 13.9	+0.8
	comp=Z,37nm,1.1s						
STKA				LR	LR		
	comp=Z,3µm,20.0s						
STKA	Stephens Creek	31.12	224	*e*P	P	14 01 13.9	+0.8
STKA				pmax	pmax		
	comp=Z,37nm,1.1s						
STKA				MLR	MLR		
	comp=Z,3µm,20.0s						
STKA	Stephens Creek	31.12	224	P	P	14 01 14.1	+1.0
	comp=Z,19nm,0.8s,baz=51,slow=9.7,SNR=3.4						
SNZO	South Karori	31.22	168	PFAKE		14 01 30.0	+16
SNZO				LR	LR		
	comp=Z,10µm,22.0s						
THZ	Tophouse	31.34	171	*e*P	P	14 01 14.8	-0.1
	comp=Z,130nm,0.8s						
THZ				LR	LR		
	comp=Z,5µm,21.0s						
KHZ	Kahutara	32.08	170	*e*P	P	14 01 22.4	+1.1
	comp=Z,109nm,1.1s						
KHZ				LR	LR		
	comp=Z,4µm,19.0s						
WR0	Warramunga Arr	32.08	250	PFAKE		14 01 30.0	+8.3
WR0				LR	LR		
	comp=Z,21µm,18.0s						
WR9	Warramunga Arr	32.10	250	PFAKE		14 01 30.0	+8.1
WR9				LR	LR		
	comp=Z,20µm,19.0s						
WR8	Warramunga Arr	32.12	250	PFAKE		14 01 30.0	+8.0
WR8				LR	LR		
	comp=Z,21µm,18.0s						
WR7	Warramunga Arr	32.14	250	PFAKE		14 01 30.0	+7.8
WR7				LR	LR		
	comp=Z,21µm,18.0s						
WR6	Warramunga Arr	32.16	250	PFAKE		14 01 30.0	+7.6
WR6				LR	LR		
	comp=Z,21µm,19.0s						
WB0	Warramunga Arr	32.18	250	PFAKE		14 01 30.0	+7.5
WB0				LR	LR		
	comp=Z,24µm,18.0s						
WR5	Warramunga Arr	32.18	250	PFAKE		14 01 30.0	+7.5
WR5				LR	LR		
	comp=Z,21µm,18.0s						
WB9	Warramunga Arr	32.19	250	PFAKE		14 01 30.0	+7.4
WB9				LR	LR		
	comp=Z,49µm,19.0s						
WB8	Warramunga Arr	32.20	250	PFAKE		14 01 30.0	+7.3
WB8				LR	LR		
	comp=Z,23µm,19.0s						
WR4	Warramunga Arr	32.20	250	PFAKE		14 01 30.0	+7.3
WR4				LR	LR		
	comp=Z,21µm,18.0s						
WB6	Warramunga Arr	32.22	250	PFAKE		14 01 30.0	+7.1
WB6				LR	LR		
	comp=Z,23µm,19.0s						
WR3	Warramunga Arr	32.22	250	PFAKE		14 01 30.0	+7.1
WR3				LR	LR		
	comp=Z,22µm,19.0s						
WB5	Warramunga Arr	32.22	250	PFAKE		14 01 30.0	+7.1
WB5				LR	LR		
	comp=Z,22µm,19.0s						
LTZ	Lake Taylor	32.24	172	*e*P	P	14 01 22.3	-0.6
	comp=Z,138nm,0.8s						
LTZ				LR	LR		
	comp=Z,5µm,20.0s						
WRAB	Tennant Creek	32.25	250	*e*P	P	14 01 23.2	0.0
	comp=Z,247nm,1.1s						
WRAB				LR	LR		
	comp=Z,23µm,19.0s						
WRAB	Tennant Creek	32.25	250	*ce*P	P	14 01 22.7	-0.5
WRAB				pmax	pmax		
	comp=Z,126nm,1.7s						
WB2	Warramunga Arr	32.25	250	*e*P	P	14 01 22.2	-0.9
WB2				LR	LR		
	comp=Z,24µm,18.0s						
WR1	Warramunga Arr	32.26	250	PFAKE		14 01 30.0	+6.7
WR1				LR	LR		
	comp=Z,23µm,18.0s						
WRA	Warramunga Arr	32.26	250	P	P	14 01 23.7	+0.4
	comp=Z,37nm,1.0s,baz=82,slow=9.0,SNR=59						
WC4	Warramunga Arr	32.26	250	PFAKE		14 01 30.0	+6.7
WC4				LR	LR		
	comp=Z,22µm,19.0s						
GUMO	Guam	32.38	318	PFAKE		14 01 40.0	+16
GUMO				LR	LR		
	comp=Z,7µm,20.0s						
TOO	Toolangi	32.66	212	P	P	14 01 27.8	+1.3
	baz=33,SNR=18						
FOZ	Fox Glacier	32.72	176	*e*P	P	14 01 26.7	-0.3
	comp=Z,156nm,0.9s						
FOZ				LR	LR		
	comp=Z,5µm,18.0s						
OXZ	Oxford	32.75	173	*e*P	P	14 01 26.5	-0.7
	comp=Z,140nm,0.8s						
OXZ				LR	LR		
	comp=Z,7µm,20.0s						
RPZ	Rata Peaks	33.02	174	*e*P	P	14 01 29.0	-0.6
	comp=Z,203nm,0.8s						
RPZ				LR	LR		
	comp=Z,12µm,18.0s						
RPZ	Rata Peaks	33.02	174	P	P	14 01 29.6	+0.1
	comp=Z,40nm,0.8s,baz=282,slow=3.4,SNR=23						
CRLZ	Canterbury Las	33.07	172	*e*P	P	14 01 27.1	-2.9
	comp=Z,227nm,1.2s						
CRLZ				LR	LR		
	comp=Z,5µm,18.0s						
MQZ	McQueen's Vall	33.20	172	*e*P	P	14 01 28.4	-2.7
	comp=Z,125nm,1.0s						
MQZ				LR	LR		
	comp=Z,6µm,19.0s						
KDU	Kakadu	33.36	263	P	P	14 01 32.9	0.0
	baz=34,SNR=21						
AS01	Alice Springs	33.52	243	*e*P	P	14 01 32.6	-1.7
AS31	Alice Springs	33.56	243	*e*P	P	14 01 33.6	-1.0
	comp=Z,32nm,0.9s						
AS31				LR	LR		
	comp=Z,300nm,20.0s						
ASAR	Alice Springs	33.56	243	P	P	14 01 34.5	-0.2
	comp=Z,27nm,0.9s,baz=73,slow=9.3,SNR=34						
ASAR				PcP	PcP	14 04 14.9	-0.1
	comp=Z,4.9nm,0.8s,baz=83,slow=2.9,SNR=4.1						
LBZ	Lake Benmore	33.60	175	PFAKE		14 01 50.0	+15
LBZ				LR	LR		
	comp=Z,7µm,19.0s						
HTT	Hallett	33.86	224	P	P	14 01 38.4	+1.3
	baz=34,SNR=17						
RAR	Rarotonga	33.95	112	LR	LR	14 13 36.5	
	comp=Z,3µm,18.1s,baz=286,slow=33						
WKZ	Wanaka	33.96	177	*e*P	P	14 01 38.4	+0.5
WKZ				LR	LR		
	comp=Z,5µm,19.0s						
ARPS	Mount Arapiles	34.10	217	P	P	14 01 40.6	+1.4
	baz=34,SNR=9.6						
ODZ	Otahua Downs	34.29	175	*e*P	P	14 01 40.8	+0.1
	comp=Z,138nm,1.4s						
ODZ				LR	LR		
	comp=Z,5µm,19.0s						
MLZ	Mavora Lakes	34.46	178	*e*P	P	14 01 41.7	-0.4
	comp=Z,80nm,1.0s						
MLZ				LR	LR		
	comp=Z,5µm,20.0s						
DCZ	Deep Cove	34.53	179	*e*P	P	14 01 42.4	-0.3
	comp=Z,187nm,1.0s						
DCZ				LR	LR		
	comp=Z,3µm,21.0s						
SAUI	Saumlaki	34.83	272	PFAKE		14 02 00.0	+14
SAUI				LR	LR		
	comp=Z,10µm,20.0s						
FAKI	Fak Fak	34.87	280	PFAKE		14 02 00.0	+14
FAKI				LR	LR		
	comp=Z,7µm,18.0s						
WHZ	Wether Hill Ro	34.98	178	*e*P	P	14 01 44.8	-1.8
	comp=Z,81nm,0.9s						
WHZ				LR	LR		
	comp=Z,4µm,19.0s						
PYZ	Puysegur Point	35.23	180	PFAKE		14 02 00.0	+11
PYZ				LR	LR		
	comp=Z,4µm,18.0s						
BBOO	Buckleboo	35.53	227	P	P	14 01 52.6	+1.1
	baz=36,SNR=18						
TAU	Tasmania Unive	36.08	204	*e*P	P	14 01 56.1	+0.1
	comp=Z,136nm,1.4s						
TAU				LR	LR		
	comp=Z,6µm,21.0s						
TAU	Tasmania Unive	36.08	204	*e*P	P	14 01 56.1	+0.1
TAU				pmax	pmax		
	comp=Z,136nm,1.4s						
TAU				MLR	MLR		
	comp=Z,6µm,21.0s						
BNDI	Bandanaira	36.78	277	P	P	14 02 02.7	+0.3
	comp=Z,824nm,1.8s,comp=Z,13µm						
BNDI				pP	sP	14 02 14.2	+1.9
	comp=Z,824nm,1.8s,comp=Z,13µm						
KNRA	Kununurra	37.02	258	P	P	14 02 05.4	+1.0
	baz=37,SNR=19						
XMAS	Kiritimati	38.07	73	PFAKE		14 02 20.0	+6.6
XMAS				LR	LR		
	comp=Z,9µm,20.0s						
WRKA	Warakurna	38.85	243	P	P	14 02 20.4	+0.5
	baz=39,SNR=14						
NLAI	Namlea	39.79	278	P	P	14 02 29.9	+2.1
	comp=Z,210nm,1.5s,comp=Z,3µm						
NLAI				pP	sP	14 02 38.0	+0.3
	comp=Z,210nm,1.5s,comp=Z,3µm						
FITZ	Fitzroy Crossi	40.16	255	P	P	14 02 31.3	+0.5
	baz=40,SNR=42						
FITZ	Fitzroy Crossi	40.16	255	P	P	14 02 31.3	+0.5
	comp=Z,29nm,0.9s,baz=80,slow=10.0,SNR=26						
TNTI	Ternate	40.58	284	PFAKE		14 02 50.0	+16
TNTI				LR	LR		
	comp=Z,4µm,22.0s						
FORT	Forrest	40.78	235	P	P	14 02 37.1	+1.3
	baz=41,SNR=7.3						
SANI	Sanana	41.14	279	P	P	14 02 38.7	-0.3
	comp=Z,62nm,1.6s,comp=Z,3µm						
SOEI	Soe	41.55	267	*e*P	P	14 02 41.9	-0.5
	comp=Z,158nm,1.2s						
SOEI				LR	LR		
	comp=Z,7µm,20.0s						
SOEI	Soe	41.55	267	P	P	14 02 44.7	+2.2
	comp=Z,81nm,1.9s,comp=Z,3µm						
SOEI				pP	sP	14 02 57.2	+4.7
	comp=Z,81nm,1.9s,comp=Z,3µm						
BATI	Baumata	42.10	267	P	P	14 02 48.4	+1.6
	comp=Z,77nm,1.5s,comp=Z,2µm						
BATI				pP	sP	14 02 59.1	+2.2
	comp=Z,77nm,1.5s,comp=Z,2µm						
BATI	Baumata	42.10	267	P	P	14 02 48.5	+1.6
	comp=Z,40nm,0.8s,baz=334,slow=2.7,SNR=7.7						
PPT	Papeete	43.03	104	LR	LR	14 17 25.5	
	comp=Z,9µm,18.4s,baz=251,slow=31						
PPT2	Papeete2	43.03	104	*e*S	S	14 09 22.7	+3.6
	comp=Z,4µm,25.0s						
PPT2				*e*LQ	LQ	14 13 20.7	
	comp=Z,5µm,25.0s						
PPT2				*e*LR	LR	14 15 00.1	
	comp=Z,22µm,26.2s,baz=279						
PPTF	Pamatai, Papee	43.04	104	PFAKE		14 03 10.0	+15
PPTF				LR	LR		
	comp=Z,12µm,21.0s						
MMRI	Maumere	43.66	269	*e*P	P	14 02 58.8	-0.6
	comp=Z,271nm,1.1s						
MMRI				LR	LR		
	comp=Z,3µm,22.0s						
MMRI	Maumere	43.66	269	P	P	14 03 00.2	+0.7
	comp=Z,225nm,1.2s,comp=Z,4µm						
TBI	Tubuai	43.73	112	*e*S	S	14 09 33.0	+3.9
	comp=Z,4µm,26.5s						
TBI				*e*LQ	LQ	14 13 37.6	
	comp=Z,12µm,32.0s						
TBI				*e*LR	LR	14 15 31.3	
	comp=Z,24µm,29.8s,baz=288						
BBSI	Bau Bau	43.78	273	P	P	14 03 02.5	+2.1
	comp=Z,18nm,1.2s,comp=Z,1µm						
EDFI	Ende, Flores	44.18	269	P	P	14 03 02.5	-1.3
	comp=Z,68nm,1.3s,comp=Z,3µm						
DAV	Davao City (W)	44.44	292	PFAKE		14 03 20.0	+14
DAV				LR	LR		
	comp=Z,5µm,21.0s						
JCJ	Chichijima	44.46	328	P	P	14 03 05.6	-0.1
	comp=Z,46nm,0.6s,baz=302,slow=17,SNR=3.7						
CBIJ	Chichi jima	44.46	328	P	P	14 03 05.6	-0.1
LUWI	Luwuk	44.51	280	*e*P	P	14 03 04.8	-1.5
	comp=Z,160nm,1.1s						
LUWI	Luwuk	44.51	280	P	P	14 03 06.6	+0.3
	comp=Z,141nm,1.5s,comp=Z,3µm						
LUWI				pP	sP	14 03 18.0	+2.4
	comp=Z,141nm,1.5s,comp=Z,3µm						
MBWA	Marble Bar	45.98	251	*e*P	P	14 03 18.6	+0.7
	comp=Z,310nm,1.1s						
MBWA				LR	LR		
	comp=Z,11µm,18.0s						
MBWA	Marble Bar	45.98	251	P	P	14 03 19.1	+1.2
	SNR=26						
MBWA				P	P	14 03 19.1	+1.2
	SNR=26						
BKSI	Bulukumba	46.21	273	P	P	14 03 17.9	-1.9
	comp=Z,14nm,1.5s,comp=Z,691nm						
BKSI				pP	sP	14 03 33.0	+3.9
	comp=Z,14nm,1.5s,comp=Z,691nm						
BNSI	Bone	46.38	274	P	P	14 03 21.4	+0.2
	comp=Z,143nm,1.5s,comp=Z,3µm						
SPSI	Sidrap Palu	46.80	275	P	P	14 03 24.5	+0.1
	comp=Z,24nm,1.5s,comp=Z,762nm						
TTSI	Tana Toraja	46.93	276	P	P	14 03 24.2	-1.2
	comp=Z,40nm,1.4s,comp=Z,1µm						
TTSI				pP	sP	14 03 36.1	+1.3
	comp=Z,40nm,1.4s,comp=Z,1µm						
KIP	Kipapa	47.34	47⇑	*e*P	P	14 03 28.9	+0.5
KIP				pmax	pmax		
	comp=Z,165nm,1.7s						
PCI	Palu	47.38	279	P	P	14 03 30.8	+1.8
	comp=Z,310nm,1.1s,comp=Z,3µm						
OPA	Opana	47.50	47	*e*P	P	14 03 29.4	-0.3
	comp=Z,935nm,1.8s						
OPA	Opana	47.50	47	*e*P	P	14 03 29.4	-0.3
OPA				pmax	pmax		
	comp=Z,935nm,1.8s						
MEEK	Meekatharra	47.72	244	P	P	14 03 32.4	+0.9
	baz=48,SNR=19						
PLAI	Plampang	48.02	268	P	P	14 03 34.2	+0.3
	comp=Z,114nm,1.6s,comp=Z,3µm						
PLAI				pP	sP	14 03 49.0	+5.7
	comp=Z,114nm,1.6s,comp=Z,3µm						
HMH	Humu'ula Sheep	48.12	51	*e*P	P	14 03 35.3	+0.4
	comp=Z,543nm,1.7s						
SDHHI	Sand Hill	48.14	52	PFAKE		14 03 50.0	+15
SDHHI				LR	LR		
	comp=Z,6µm,21.0s						
WRMHI	West Rim	48.15	52	PFAKE		14 03 50.0	+15
WRMHI				LR	LR		
	comp=Z,6µm,20.0s						
RIM	Rim	48.16	52	PFAKE		14 03 50.0	+15
RIM				LR	LR		
	comp=Z,6µm,21.0s						
UWE	Uwekahuna	48.16	52	PFAKE		14 03 50.0	+15
UWE				LR	LR		
	comp=Z,6µm,21.0s						
NPH	North Pit	48.16	52	PFAKE		14 03 50.0	+15
NPH				LR	LR		
	comp=Z,6µm,22.0s						
KKO	Keanakako`i	48.17	52	PFAKE		14 03 50.0	+15
KKO				LR	LR		
	comp=Z,6µm,22.0s						
POHA	Pohakuloa	48.17	51	PFAKE		14 03 50.0	+15
POHA				LR	LR		
	comp=Z,7µm,20.0s						
BYL	Byron's Ledge	48.18	52	PFAKE		14 03 50.0	+15
BYL				LR	LR		
	comp=Z,6µm,22.0s						
SBLHI	Steaming Bluff	48.18	52	PFAKE		14 03 50.0	+15
SBLHI				LR	LR		
	comp=Z,7µm,22.0s						
PUH	Pauahi	48.19	52	PFAKE		14 03 50.0	+15
PUH				LR	LR		
	comp=Z,6µm,21.0s						
HPAH	Hawaii Prepara	48.21	51	PFAKE		14 03 50.0	+15
HPAH				LR	LR		
	comp=Z,6µm,21.0s						
NPOC	North of Pu'u	48.29	52	PFAKE		14 03 50.0	+14
NPOC				LR	LR		
	comp=Z,5µm,21.0s						
JCUZ	Jacuzzi	48.29	52	PFAKE		14 03 50.0	+14
JCUZ				LR	LR		
	comp=Z,6µm,19.0s						
KLBR	Kellerberrin	49.46	238	P	P	14 03 45.5	+0.7
	baz=50,SNR=6.8						
NWAO	Narrogin (SRO)	50.21	236	P	P	14 03 52.9	+2.4
	baz=50,SNR=12						
NWAO	Narrogin (SRO)	50.21	236	*e*P	P	14 03 50.3	-0.1
	comp=Z,237nm,1.0s						
NWAO				LR	LR		
	comp=Z,30µm,18.0s						
NWAO	Narrogin (SRO)	50.21	236	*e*P	P	14 03 50.3	-0.1
NWAO				pmax	pmax		
	comp=Z,237nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,30µm,18.0s						
NWAO	Narrogin (SRO)	50.21	236	P	P	14 03 49.9	-0.5
	SNR=8.5						
NWAO				P	P	14 03 49.9	-0.5
	SNR=8.5						
MORW	Morawa	50.39	241	P	P	14 03 53.8	+1.9
	baz=51,SNR=5.9						
KBKI	Kotabaru	50.45	275	P	P	14 03 49.6	-2.9
	comp=Z,11nm,0.9s						
SRBI	Singaraja	50.62	268	P	P	14 03 53.4	-0.4
	comp=Z,54nm,1.7s,comp=Z,1µm						
MUN	Mundaring	50.83	237	P	P	14 03 57.7	+2.6
	baz=51,SNR=19						
JAGI	Jajag, Banyuwa	51.62	268	*e*P	P	14 04 00.6	-0.7
	comp=Z,95nm,1.0s						
JAGI				LR	LR		
	comp=Z,3µm,21.0s						
JAGI	Jajag, Banyuwa	51.62	268	P	P	14 03 59.7	-1.6
	comp=Z,113nm,1.2s,comp=Z,2µm						
KMMI	Kalianget	51.98	269	P	P	14 04 06.0	+1.9
	comp=Z,24nm,0.9s,comp=Z,1µm						
GMJI	Gumukmas	52.34	268	P	P	14 04 10.7	+4.0
	comp=Z,57nm,1.0s,comp=Z,1µm						
TAOE	Nuku Hiva Isla	52.55	93	*e*S	S	14 11 35.3	+0.9
	comp=Z,4µm,25.1s						
TAOE				*e*LR	LR	14 18 58.5	
	comp=Z,11µm,29.0s,baz=270						
INU	Inuyama	53.72	330	*e*P	P	14 04 17.1	+0.7
	comp=Z,309nm,1.7s						
INU				LR	LR		
	comp=Z,3µm,19.0s						
MJAR	Matsushiro Arr	54.11	332	P	P	14 04 19.1	-0.3
	comp=Z,8.1nm,0.8s,baz=166,slow=7.5,SNR=17						
MAJO	Matsushiro	54.12	332	*e*P	P	14 04 19.1	-0.3
	comp=Z,81nm,1.2s						
MAJO				LR	LR		
	comp=Z,2µm,21.0s						
MAJO	Matsushiro	54.12	332	*d i*P	P	14 04 19.1	-0.3
MAJO				pmax	pmax		
	comp=Z,90nm,1.6s						
MAT	Matsushiro	54.12	332	P	P	14 04 19.1	-0.3
MAT				S	S	14 11 58.8	+4.1
MJB9	Matsu-Tunnel	54.12	332	*e*P	P	14 04 19.1	-0.3
	comp=Z,79nm,1.2s						
MJB9				LR	LR		
	comp=Z,3µm,21.0s						
PCJI	Pacitan	54.57	268	P	P	14 04 24.6	+1.5
	comp=Z,200nm,1.5s,comp=Z,2µm						
YOJ	Yonaguni jima	55.06	310	PFAKE		14 04 40.0	+14
YOJ				LR	LR		
	comp=Z,3µm,20.0s						
JNU	Nakatsue	55.33	324	*e*P	P	14 04 28.2	-0.1
	comp=Z,167nm,1.0s						
JNU	Nakatsue	55.33	324	P	P	14 04 28.9	+0.6
	comp=Z,28nm,0.9s,baz=114,slow=2.9,SNR=10						
SBUM	Sibu	55.59	281	*e*P	P	14 04 30.4	-0.1
	comp=Z,12nm,1.0s						
SBUM				LR	LR		
	comp=Z,900nm,22.0s						
TWG	Pinlang	55.65	307	PFAKE		14 04 40.0	+9.3
TWG				LR	LR		
	comp=Z,8µm,22.0s						
YULB	Yu-li	55.78	308	PFAKE		14 04 40.0	+8.4
YULB				LR	LR		
	comp=Z,2µm,21.0s						
NACB	Ninganchiao	55.97	309	PFAKE		14 04 40.0	+7.0
NACB				LR	LR		
	comp=Z,3µm,20.0s						
TPUB	Ta-pu	56.25	307	PFAKE		14 04 50.0	+15
TPUB				LR	LR		
	comp=Z,3µm,21.0s						
SSLB	Suanglung	56.26	308	PFAKE		14 04 50.0	+15
SSLB				LR	LR		
	comp=Z,5µm,22.0s						
YHNB	Yeheng	56.41	309	PFAKE		14 04 50.0	+14
YHNB				LR	LR		
	comp=Z,5µm,21.0s						
TATO	Taipei	56.49	310	PFAKE		14 04 50.0	+13
TATO				LR	LR		
	comp=Z,5µm,21.0s						
ERM	Erimo	56.78	339	*e*P	P	14 04 38.6	+0.3
	comp=Z,194nm,1.8s						
ERM	Erimo	56.78	339	*d i*P	P	14 04 38.6	+0.3
ERM				pmax	pmax		
	comp=Z,114nm,1.8s						
RKT	Rikitea	56.97	111	*e*S	S	14 12 37.2	+3.8
	comp=Z,4µm,31.8s						
RKT				*e*LQ	LQ	14 18 53.0	
	comp=Z,4µm,30.0s						
RKT				*e*LR	LR	14 21 39.0	
	comp=Z,10µm,30.5s,baz=287						
KSM	Kuching	57.20	279	*e*P	P	14 04 41.1	-0.8
	comp=Z,41nm,1.2s						
YUK	Yuzh-Kuril'sk	57.72	342	*c i*P	P	14 04 43.9	-1.1

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YUK                                  e               14 05 41.6
YUK                                  e               14 06 51.3
YUK                                   S      S       14 12 41.2  -1.2
YUK                                   SS     SS      14 16 39.4  +6.0
YUK                                   pmax   pmax
       comp=Z,298nm,4.0s
YUK                                   pmax   pmax
       comp=Z,111nm,1.4s
YUK                                   pmax   pmax
       comp=E,58nm,0.9s
YUK                                   pmax   pmax
       comp=N,89nm,1.3s
CISI   Cisompet, Garu      57.96 268 eP      P       14 04 46.5  -0.9
       comp=N,528nm,2.0s
CISI                                  LR     LR
       comp=Z,2µm,22.0s
CISI   Cisompet, Garu      57.96 268  P      P       14 04 54.3  +6.9
KUR    Kuril'sk            58.27 345deP      P       14 04 49.5  +0.7
ASAJ   Asahikawa           58.83 340  P      P       14 04 53.5  +0.7
       comp=Z,17nm,0.9s,baz=199,slow=6.4,SNR=17
CBJI   Citeko              59.07 269  P      P       14 05 01.6  +6.6
KSRS   Korea Array         60.11 325  P      P       14 05 02.6  +0.8
       comp=Z,18nm,0.9s,baz=146,slow=6.2,SNR=11
KS15   Wonju Array Si      60.12 325 eP      P       14 05 02.1  +0.3
KSAR   Wonju Array Be      60.12 325  P      P       14 05 02.6  +0.8
KSAR   Wonju Array Be      60.12 325  P      P       14 05 02.6  +0.8
KS01   Wonju Array Si      60.14 325 eP      P       14 05 02.0  +0.1
SSE    Sheshan             60.21 315  P      P       14 05 02.4  -0.1
SSE                                   S      S       14 13 18.8  +3.7
SSE                                   pmax   pmax
       comp=Z,410nm,3.8s
SSE                                   LR     LR
       comp=Z,700nm,18.7s
SSE                                   LR     LR
       comp=Z,980nm,19.3s
SSE    Sheshan             60.21 315 eP      P       14 05 01.1  -1.4
       comp=Z,172nm,1.3s
SSE                                   LR     LR
       comp=Z,3µm,18.0s
PPBI   Pangkal Pinang      60.50 274  P      P       14 05 07.6  +2.7
       comp=Z,29nm,1.6s,comp=Z,5µm
YSS    Yuzh-Sakhalins      61.30 342 eP      P       14 05 10.3  +0.7
       comp=Z,682nm,1.8s
YSS                                   LR     LR
       comp=Z,2µm,19.0s
YSS    Yuzh-Sakhalins      61.30 342⇓eP      P       14 05 10.9  +1.3
YSS                                  e               14 05 18.1
YSS                                  eS      S       14 13 31.9  +3.4
YSS                                   pmax   pmax
       comp=N,60nm,1.7s
YSS                                   pmax   pmax
       comp=Z,120nm,1.7s
YSS                                   pmax   pmax
       comp=E,60nm,1.6s
YSS                                   pmax   pmax
       comp=Z,3µm,5.2s
YSS                                   MLR    MLR
       comp=Z,2µm,18.0s
YSS                                   MLR    MLR
       comp=N,2µm,15.0s
YSS                                   MLR    MLR
       comp=E,1µm,18.0s
KASI   Kota Agung          61.52 270  P      P       14 05 14.9  +3.1
       comp=E,45nm,1.4s
TEY    Ternei              61.81 336⇓eP      P       14 05 13.7  +0.6
TEY                                   pmax   pmax
       comp=Z,40nm,1.9s
TEY                                   pmax   pmax
       comp=N,30nm,1.8s
TEY                                   pmax   pmax
       comp=E,20nm,1.8s
GZH    Guangzhou           61.98 303  P      P       14 05 13.8  -0.9
GZH                                   S      S       14 13 34.4  -3.6
GZH                                   ScS    SKKSac  14 15 03.2  -2.4
GZH                                   LR     LR
       comp=E,2µm,21.3s
GZH                                   LR     LR
       comp=E,2µm,21.8s
MDSI   Maura Dua           62.00 271  P      P       14 05 15.2  +0.1
       comp=E,30nm,2.3s,comp=E,960nm
LWLI   Liwa                62.03 270  P      P       14 05 26.1  +11
MSHR   Mys Shultsa         62.21 331d iP     P       14 05 17.0  +1.1
VLA    Vladivostok         62.28 332d iP     P       14 05 17.5  +1.2
VLA                                   pmax   pmax
       comp=Z,150nm,1.2s
NJ2    Nanjing             62.38 315 eP      P       14 05 17.8  +0.6
NJ2                                   pP     pP      14 05 21.6  -2.7
NJ2                                   sP     pwP     14 05 25.4  -1.2
NJ2                                   S      S       14 13 48.6  +5.8
NJ2                                   sS     pS      14 13 51.4  +0.4
NJ2                                   LR     LR
       comp=Z,2µm,20.6s
NJ2                                   LR     LR
       comp=Z,2µm,17.2s
NJ2                                   LR     LR
       comp=Z,2µm,20.6s
USA0B  Ussuriysk Arra      63.08 333 eP      P       14 05 22.2  +0.5
       comp=Z,326nm,1.4s
USRK   Ussuriysk Ar.       63.08 333  P      P       14 05 23.2  +1.6
       comp=Z,8.8nm,0.7s,baz=134,slow=5.5,SNR=47
MNAI   Manna               63.23 271  PFAKE              14 05 40.0  +17
MNAI                                  LR     LR
       comp=Z,2µm,20.0s
QIZ    Qiongzhong          63.23 298  P      P       14 05 22.8  -0.4
QIZ                                   S      S       14 13 56.2  +2.3
QIZ                                   sS     pS      14 14 00.5  -2.5
QIZ                                   pmax   pmax
       comp=Z,570nm,5.1s
QIZ                                   LR     LR
       comp=Z,1µm,24.5s
QIZ                                   LR     LR
       comp=Z,3µm,19.6s
QIZ                                   LR     LR
       comp=Z,5µm,26.0s
QIZ    Qiongzhong          63.23 298  PFAKE              14 05 30.0  +6.8
QIZ                                   LR     LR
       comp=Z,5µm,22.0s
MYKOM  Kota Tinggi         63.56 277 eP      P       14 05 25.0  -0.4
       comp=Z,38nm,1.2s
MYKOM                                 LR     LR
       comp=Z,2µm,20.0s
PET    Petropavlovsk       63.94 355 eP      P       14 05 27.6  +0.5
PET                                  eS      S       14 13 58.7  -2.7
PET                                   pmax   pmax
       comp=Z,67nm,1.4s
PEA0B  Petropavlovsk-      64.11 354 eP      P       14 05 28.6  +0.3
       comp=Z,259nm,1.4s
PETK   Petropavlovsk-      64.11 354 eP      P       14 05 28.5  +0.2
PETK   Petropavlovsk-      64.11 354 eP      P       14 05 28.5  +0.2
PETK   Petropavlovsk-      64.11 354  P      P       14 05 29.0  +0.7
       comp=Z,15nm,1.0s,baz=141,slow=7.3,SNR=9.4
MASI   Maura Aman, Be      64.14 272  P      P       14 05 43.5  +14
MDJ    Mudanjiang          64.50 332  P      P       14 05 32.1  +1.1
MDJ                                   pP     pP      14 05 35.3  -2.6
MDJ                                   sP     sP      14 05 36.6  -4.2
MDJ                                   PP     PP      14 07 53.7  +0.5
MDJ                                   S      S       14 14 16.6  +7.9
MDJ                                   pmax   pmax
       comp=Z,100nm,1.8s
MDJ                                   pmax   pmax
       comp=Z,2µm,3.5s
MDJ                                   LR     LR
       comp=Z,890nm,7.8s
MDJ                                   LR     LR
       comp=Z,1µm,16.1s
MDJ                                   LR     LR
       comp=Z,1µm,15.1s
MDJ    Mudanjiang          64.50 332 eP      P       14 05 30.3  -0.7
       comp=Z,185nm,1.3s
MDJ                                   LR     LR
       comp=Z,2µm,22.0s
DL2    Dalian              64.75 323  P      P       14 05 32.9  +0.2
DL2                                   S      S       14 14 11.3  -0.7
DL2                                   pmax   pmax
       comp=Z,150nm,1.0s
DL2                                   pmax   pmax
       comp=Z,1µm,3.6s
DL2                                   LR     LR
       comp=Z,1µm,15.4s
DL2                                   LR     LR
       comp=Z,1µm,12.6s
DL2                                   LR     LR
       comp=Z,1µm,19.6s
WHN    Wuhan               64.80 311 ⇓P      P       14 05 33.3  +0.1
WHN                                   LR     LR
       comp=Z,3µm,13.3s
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WHN                                   LR     LR
       comp=Z,4µm,21.7s
WHN                                   LR     LR
       comp=Z,9µm,35.8s
TYV    Tymovskoe           64.83 344 eP      P       14 05 33.7  +0.7
TYV                                  eS      S       14 14 16.5  +3.9
TYV                                   pmax   pmax
       comp=Z,2µm,4.5s
TYV                                   pmax   pmax
       comp=Z,62nm,1.9s
TYV                                   smax   smax
       comp=E,1µm,7.8s
KRJI   Kerinci             65.10 273  P      P       14 05 25.5  -10
SNY    Shenyang            65.56 326 ⇓P      P       14 05 38.0  +0.1
SNY                                   S      S       14 14 26.2  +4.4
SNY                                   pmax   pmax
       comp=E,49nm,2.2s
SNY                                   LR     LR
       comp=E,2µm,21.2s
SNY                                   LR     LR
       comp=E,1µm,19.0s
SNY                                   LR     LR
       comp=E,2µm,18.3s
CN2    Changchun           65.93 329 eP      P       14 05 40.8  +0.5
CN2                                  epP     pP      14 05 45.4  -1.8
CN2                                  esP     sP      14 05 48.1  -2.0
CN2                                  eS      S       14 14 22.6  -3.7
CN2                                   SS     SS      14 18 35.8  -6.2
CN2                                   pmax   pmax
       comp=E,40nm,1.2s
CN2                                   pmax   pmax
       comp=E,1µm,5.0s
CN2                                   LR     LR
       comp=E,2µm,17.0s
CN2                                   LR     LR
       comp=E,2µm,17.0s
CN2                                   LR     LR
       comp=E,2µm,19.0s
TIA    Tai'an              65.94 318  P      P       14 05 41.0  +0.4
TIA                                   S      S       14 14 29.5  +2.7
TIA                                   pmax   pmax
       comp=E,8.0nm,2.9s
TIA                                   LR     LR
       comp=E,520nm,22.7s
TIA                                   LR     LR
       comp=E,600nm,17.1s
TIA                                   LR     LR
       comp=E,890nm,20.8s
BKNI   Bangkinang          65.99 275  P      P       14 05 44.2  +2.9
       comp=E,127nm,1.1s
PDSI   Padang              66.31 274  P      P       14 05 52.7  +9.3
GRNR   Gornyy              66.68 340 eP      P       14 05 48.0  +3.0
GRNR                                  pmax   pmax
       comp=Z,390nm,1.8s
VNDA   Vanda               66.74 181 eP      P       14 05 45.1  +0.1
       comp=Z,90nm,1.1s
VNDA   Vanda               66.74 181 eP      P       14 05 45.1  +0.1
VNDA                                  pmax   pmax
       comp=Z,90nm,1.1s
VNDA   Vanda               66.74 181  P      P       14 05 45.5  +0.5
       comp=Z,20nm,1.0s,baz=352,slow=8.3,SNR=4.5
VNDA                                  LR     LR      14 30 23.9
       comp=Z,2µm,21.6s,baz=333,slow=32
CASY   Casey               66.86 201 eP      P       14 05 44.5  -1.4
       comp=Z,34nm,0.9s
IPM    Ipoh                66.92 280 eP      P       14 05 45.9  -1.4
       comp=Z,143nm,1.5s
IPM                                   LR     LR
       comp=Z,1µm,20.0s
SBA    Scott Base          67.03 180 eP      P       14 05 46.8   0.0
       comp=Z,180nm,1.1s
SBA                                   LR     LR
       comp=Z,3µm,18.0s
SBA    Scott Base          67.03 180 eP      P       14 05 46.8   0.0
SBA                                   pmax   pmax
       comp=Z,180nm,1.1s
SBA                                   MLR    MLR
       comp=Z,3µm,18.0s
KLR    Kul'dur             67.14 336d iP     P       14 05 48.4  +0.4
KLR    Kul'dur             67.14 336  P      P       14 05 48.8  +0.8
       comp=Z,63nm,1.3s,baz=138,slow=6.5,SNR=40
NKL    Nikolayevsk         67.43 343 eP      P       14 05 50.0  +0.4
NKL                                  e               14 14 50.0
NKL                                   pmax   pmax
       comp=N,77nm,1.6s
NKL                                   pmax   pmax
       comp=Z,290nm,1.6s
NKL                                   pmax   pmax
       comp=Z,2µm,7.0s
NKL                                   MLR    MLR
       comp=N,1µm,16.0s
NKL                                   MLR    MLR
       comp=E,1µm,16.0s
NKL                                   MLR    MLR
       comp=Z,2µm,16.0s
KULM   Kulim               67.47 280  PFAKE              14 06 00.0  +9.2
KULM                                  LR     LR
       comp=Z,2µm,22.0s
MNSI   Mandailing Nat      67.51 275  P      P       14 05 50.6  -0.4
       comp=Z,46nm,1.1s,comp=Z,1µm
SKNT   Sakolnakorn         67.68 293  P      P       14 05 52.8  +0.8
       comp=Z,24nm,1.3s,comp=Z,537nm
ENH    Enshi               68.33 309 eP      P       14 05 54.8  -1.2
       comp=Z,149nm,1.7s
ENH                                   LR     LR
       comp=Z,2µm,21.0s
SRAK   Srakaew             68.51 290  P      P       14 06 04.3  +7.0
BJT    Baijiatuau          68.76 321  PFAKE              14 06 10.0  +12
BJT                                   LR     LR
       comp=Z,3µm,20.0s
BJI    Beijing             68.77 321  P      P       14 05 58.8  +0.4
BJI                                   S      S       14 15 05.0  +4.4
BJI                                   pmax   pmax
       comp=Z,41nm,1.9s
BJI                                   LR     LR
       comp=Z,1µm,22.6s
BJI                                   LR     LR
       comp=Z,1µm,23.5s
BJI                                   LR     LR
       comp=Z,2µm,23.5s
NONG   Nongkai             68.80 294  P      P       14 05 59.7  +0.7
       comp=Z,0.7nm,1.0s
CHAI   Chaiyaphum          69.15 292  P      P       14 06 08.6  +7.4
PATY   Pattaya             69.28 288  P      P       14 06 11.2  +9.1
GSI    Gunungsitoli        69.58 275 eP      P       14 06 03.1  -0.9
       comp=Z,86nm,1.1s
GSI    Gunungsitoli        69.58 275  P      P       14 06 07.6  +3.6
       comp=Z,76nm,1.5s
KCSI   Kotacane, Aceh      69.86 278  P      P       14 06 13.8  +8.1
TIY    Taiyuan             69.90 317 eP      P       14 06 06.9  +1.4
TIY                                   pmax   pmax
       comp=Z,38nm,0.9s
PBKT   Sadao Pong          70.28 292  P      P       14 06 09.4  +1.2
       comp=Z,21nm,1.1s,comp=Z,1µm
PKDT   Phuket              70.33 282  P      P       14 06 20.6  +12
PHET   Kaeng Krachan       70.44 288  P      P       14 06 12.2  +3.0
       comp=Z,5.3nm,0.9s,comp=Z,225nm
XAN    Xi'an               70.52 312  P      P       14 06 09.3  -0.1
XAN                                   pP     sP      14 06 21.1  +1.9
XAN                                   S      S       14 15 14.6  -7.0
XAN                                   SS     SS      14 19 47.7  -5.7
XAN                                   pmax   pmax
       comp=Z,44nm,1.6s
XAN                                   pmax   pmax
       comp=Z,1µm,5.1s
XAN                                   LR     LR
       comp=Z,1µm,19.5s
XAN                                   LR     LR
       comp=Z,2µm,18.4s
XAN                                   LR     LR
       comp=Z,3µm,20.6s
XAN    Xi'an               70.52 312 eP      P       14 06 09.0  -0.4
       comp=Z,81nm,1.2s
XAN                                   LR     LR
       comp=Z,3µm,20.0s
XAN    Xi'an               70.52 312 eP      P       14 06 09.0  -0.4
XAN                                   pmax   pmax
       comp=Z,81nm,1.2s
XAN                                   MLR    MLR
       comp=Z,3µm,20.0s
UTTA   Uttaradit           71.03 293  P      P       14 06 15.5  +2.8
       comp=Z,4.7nm,1.0s,comp=Z,61nm
MA2    Magadan             71.29 352 eP      P       14 06 12.3  -1.1
       comp=Z,66nm,1.3s
MA2                                   LR     LR
       comp=Z,2µm,20.0s
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MA2    Magadan             71.29 352d iP     P       14 06 13.1  -0.3
MA2                                   pmax   pmax
       comp=Z,59nm,1.7s
MA2    Magadan             71.29 352  P      P       14 06 13.1  -0.3
       comp=Z,6.3nm,0.7s,baz=173,slow=7.5,SNR=11
UTHA   Uthaitani           71.37 291  P      P       14 06 17.1  +2.3
       comp=Z,5.7nm,1.2s,comp=Z,61nm
KMI    Kunming             71.64 301  P      P       14 06 18.0  +1.4
KMI                                   pP     pP      14 06 22.0  -1.7
KMI                                   sP     pwP     14 06 25.6  -0.5
KMI                                   sS     sS      14 15 47.7  +0.4
KMI                                   SKS    ScS     14 16 20.4  -0.6
KMI                                   pmax   pmax
       comp=Z,660nm,4.5s
KMI                                   LR     LR
       comp=Z,550nm,24.9s
KMI                                   LR     LR
       comp=Z,3µm,19.3s
KMI                                   LR     LR
       comp=Z,4µm,20.5s
KMI    Kunming             71.64 301 eP      P       14 06 16.1  -0.5
       comp=Z,92nm,1.5s
KMI                                   LR     LR
       comp=Z,4µm,20.0s
KMI    Kunming             71.64 301 eP      P       14 06 16.1  -0.5
KMI                                   pmax   pmax
       comp=Z,92nm,1.5s
KMI                                   MLR    MLR
       comp=Z,4µm,20.0s
SUKH   Sukhothai           71.78 292  P      P       14 06 26.2  +8.9
UMPA   Umpang Tak          72.10 291  P      P       14 06 25.2  +6.0
HHC    Hu-ho-hao-te        72.14 319 eP      P       14 06 20.0  +0.9
HHC                                   S      S       14 15 41.4  +1.2
HHC                                   sS     pS      14 15 48.8  -0.7
HHC                                   pmax   pmax
       comp=Z,960nm,5.7s
HHC                                   LR     LR
       comp=Z,1µm,17.0s
HHC                                   LR     LR
       comp=Z,1µm,16.7s
HHC                                   LR     LR
       comp=Z,2µm,19.8s
ZEA    Zeya                72.42 337 eP      P       14 06 21.4  +1.0
ZEA                                  eS      SKiKP   14 15 50.0  -4.4
ZEA                                   pmax   pmax
       comp=Z,2µm,4.0s
ZEA                                   pmax   pmax
       comp=E,1µm,3.0s
ZEA                                   pmax   pmax
       comp=N,600nm,2.0s
ZEA                                   pmax   pmax
       comp=E,290nm,2.0s
ZEA                                   pmax   pmax
       comp=N,180nm,1.2s
ZEA                                   pmax   pmax
       comp=Z,690nm,1.8s
ZEA                                   smax   smax
       comp=N,1µm,6.0s
ZEA                                   smax   smax
       comp=E,1µm,6.0s
HIA    Hailar              72.54 330 eP      P       14 06 20.9  -0.3
       comp=E,75nm,1.2s
HIA    Hailar              72.54 330d iP     P       14 06 21.7  +0.5
HIA                                   pmax   pmax
       comp=Z,101nm,1.8s
CM01   Chiang Mai Arr      72.68 293 eP      P       14 06 21.4  -1.2
CM31   Chiang Mai Arr      72.70 293 eP      P       14 06 21.6  -1.3
CM31   Chiang Mai Arr      72.70 293  P      P       14 06 23.6  +0.8
       SNR=18
CMAR   Chiang Mai Arr      72.70 293  P      P       14 06 23.8  +0.9
       comp=Z,7.5nm,1.0s,baz=120,slow=4.2,SNR=24
CMMT   Chiang Mai          72.81 294  P      P       14 06 24.6  +1.2
       comp=Z,19nm,1.6s,comp=Z,717nm
CHTO   Chiang Mai          72.81 294 eP      P       14 06 23.0  -0.4
       comp=Z,42nm,1.4s
CHTO                                  LR     LR
       comp=Z,1µm,19.0s
CHTO   Chiang Mai          72.81 294 eP      P       14 06 23.0  -0.4
CHTO                                  pmax   pmax
       comp=Z,42nm,1.4s
CHTO                                  MLR    MLR
       comp=Z,1µm,19.0s
CHTO   Chiang Mai          72.81 294  P      P       14 06 24.2  +0.7
       SNR=20
CHTO   Chiang Mai          72.81 294  P      P       14 06 24.6  +1.2
       comp=Z,84nm,1.7s,comp=Z,3µm
BTO    Baotou              73.01 318 eP      P       14 06 25.0  +0.7
BTO                                   S      SKiKP   14 15 55.0  -0.9
CD2    Chengdu             73.06 307 ⇓P      P       14 06 25.0  +0.3
CD2                                   PP     PP      14 09 07.7   0.0
CD2                                   S      S       14 15 52.7  +1.7
CD2                                   SS     SS      14 20 36.0  +3.5
CD2                                   pmax   pmax
       comp=Z,50nm,1.2s
CD2                                   pmax   pmax
       comp=Z,1µm,4.6s
CD2                                   LR     LR
       comp=Z,4µm,17.9s
CD2                                   LR     LR
       comp=Z,6µm,18.5s
CD2                                   LR     LR
       comp=Z,4µm,25.7s
SEY    Seymchan            74.33 353  P      P       14 06 31.8  +0.4
       comp=Z,32nm,1.3s,baz=160,slow=5.4,SNR=31
CMBY   CAMPBELL BAY        74.37 280 eP      P       14 06 32.3  -0.4
CMBY                                  IAmb   IAmb    14 06 42.7
       comp=Z,3µm,3.7s
LZH    Lanzhou             75.16 312 ⇓P      P       14 06 38.6  +1.6
LZH                                   pP     pP      14 06 42.5  -1.7
LZH                                   sP     pwP     14 06 44.4  -2.1
LZH                                   S      S       14 16 20.3  +5.7
LZH                                   sS     sS      14 16 26.8  -0.1
LZH                                   SS     SS      14 21 09.2  +4.7
LZH                                   pmax   pmax
       comp=Z,80nm,1.4s
LZH                                   pmax   pmax
       comp=Z,850nm,4.9s
LZH                                   LR     LR
       comp=Z,2µm,18.4s
LZH                                   LR     LR
       comp=Z,3µm,19.0s
LZH                                   LR     LR
       comp=Z,5µm,19.1s
OHAK   Old Harbor          75.42  21 eP      P       14 06 37.9  +0.1
       comp=Z,363nm,1.8s
KDAK   Kodiak Island       76.09  21  P      P       14 06 42.0  +0.4
       comp=Z,22nm,1.1s,baz=198,slow=4.8,SNR=2.7
GAMB   Gambell             76.21  10 eP      P       14 06 42.3  +0.1
       comp=Z,237nm,2.0s
GAMB                                  LR     LR
       comp=Z,1µm,18.0s
PBA    Port Blair          76.60 285  PFAKE              14 07 00.0  +15
PBA                                   LR     LR
       comp=Z,2µm,20.0s
PBA    Port Blair          76.60 285  IAmb   IAmb    14 06 40.8
       comp=Z,82nm,1.2s
PBA                                  eP      P       14 06 44.4  -1.1
CIT    Chita               77.34 330 eP      P       14 06 51.0  +2.1
CIT                                   pmax   pmax
       comp=Z,398nm,2.0s
SVW2   Sparrevohn          77.67  18 eP      P       14 06 50.9  +0.4
       comp=Z,294nm,1.8s
RSO    Redoubt South       78.06  19 eP      P       14 06 52.2  -0.7
YAK    Yakutsk             78.09 343 eP      P       14 06 52.5  -0.3
YAK                                   pmax   pmax
       comp=Z,193nm,1.2s
YAK                                   pmax   pmax
       comp=N,72nm,1.4s
YAK                                   pmax   pmax
       comp=E,63nm,1.5s
ANM    Nome                78.11  12 eP      P       14 06 52.6  -0.2
       comp=E,174nm,1.8s
ANM    Nome                78.11  12 eP      P       14 06 52.6  -0.2
ANM                                   pmax   pmax
       comp=Z,174nm,1.8s
BRLK   Bradley Lake        78.16  20 eP      P       14 06 53.1  -0.2
       comp=Z,284nm,1.9s
ULN    Ulaanbaatar         78.55 324 eP      P       14 06 55.9   0.0
       comp=Z,63nm,1.0s
ULN                                   LR     LR
       comp=Z,1µm,20.0s
ULN    Ulaanbaatar         78.55 324d iP     P       14 06 56.8  +0.9
ULN                                   pmax   pmax
       comp=Z,56nm,1.7s
ULN    Ulaanbaatar         78.55 324  P      P       14 06 56.8  +0.9
       SNR=50
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ULN                                 P        P        14 06 56.8 +0.9
       SNR=50
BILL   Bilibino          78.65 360  eP       P        14 06 55.5 -0.3
       comp=Z,240nm,1.4s
BILL   Bilibino          78.65 360d iP       P        14 06 56.1 +0.3
BILL                                pmax     pmax
       comp=Z,246nm,1.7s
SEW    Seward            78.91  21  eP       P        14 06 57.2 -0.1
       comp=Z,54nm,1.2s
SONM   Songino Array     78.92 323  P        P        14 06 59.0 +1.1
       comp=Z,4.8nm,0.8s,baz=133,slow=5.6,SNR=21
SONM                                PP       PP       14 09 57.9 +0.9
       comp=Z,1.9nm,1.0s,baz=108,slow=4.7,SNR=3.3
SONA1  Songino Array     78.92 323  eP       P        14 06 57.3 -0.7
QSPA   South Pole Qui    79.19 180  eP       P        14 06 58.0 -1.1
       comp=Z,91nm,1.2s
QSPA                                LR       LR
       comp=Z,2µm,18.0s
GTA    Gaotai            79.44 314 ⇓P        P        14 07 02.0 +1.1
GTA                                 pP       pP       14 07 06.0 -2.1
GTA                                 sP       PcP      14 07 09.4 +0.5
GTA                                 S        S        14 17 06.7 +5.8
GTA                                 sS       SKSac    14 17 16.5 +0.3
GTA                                 pmax     pmax
       comp=Z,720nm,4.9s
GTA                                 LR       LR
       comp=Z,1µm,19.7s
GTA                                 LR       LR
       comp=Z,1µm,20.6s
GTA                                 LR       LR
       comp=Z,2µm,21.3s
SUA    Susitna One       79.46  19  eP       P        14 06 59.7 -0.8
       comp=Z,263nm,2.0s
RC01   Rabbit Creek A    79.52  20  eP       P        14 06 59.6 -1.1
       comp=Z,84nm,1.2s
PPLA   Purkeypile        80.08  18  eP       P        14 07 02.9 -1.0
       comp=Z,140nm,1.8s
PMR    Palmer            80.09  20  eP       P        14 07 03.3 -0.4
       comp=Z,123nm,1.4s
PMR    Palmer            80.09  20  eP       P        14 07 03.3 -0.4
PMR                                 pmax     pmax
       comp=Z,123nm,1.4s
KNK    Knik Glacier      80.18  20  eP       P        14 07 03.9 -0.4
       comp=Z,238nm,1.8s
GLI    Glacier Island    80.28  21  eP       P        14 07 04.5 -0.3
       comp=Z,252nm,1.8s
CAST   Castle Rocks      80.50  18  eP       P        14 07 05.1 -0.9
       comp=Z,105nm,1.4s
CAST                                LR       LR
       comp=Z,2µm,19.0s
SML    Sawmill           80.51  20  eP       P        14 07 05.7 -0.4
       comp=Z,259nm,1.7s
SML    Sawmill           80.51  20  eP       P        14 07 05.7 -0.4
SML                                 pmax     pmax
       comp=Z,259nm,1.7s
EYAK   Cordova Ski Ar    80.54  22  eP       P        14 07 05.8 -0.4
       comp=Z,309nm,1.7s
BOD    Bodaibo           80.64 335  eP       P        14 07 06.4 -0.4
BOD                                 pmax     pmax
       comp=Z,113nm,1.8s
DIV    Divide            80.92  21  eP       P        14 07 07.5 -0.9
       comp=Z,145nm,1.5s
HMT    Hamilton          80.94  22  eP       P        14 07 08.2 -0.2
       comp=Z,178nm,1.5s
SHL    Shillong          81.06 298  eP       P        14 07 08.8 -1.2
       comp=Z,98nm,1.6s
SHL    Shillong          81.06 298  eP       P        14 07 08.8 -1.2
SHL                                 pmax     pmax
       comp=Z,98nm,1.6s
SHL    Shillong          81.06 298  eP       P        14 07 08.9 -1.2
SHL                                 IAmb     IAmb     14 07 16.0
       comp=Z,327nm,2.7s
TRF    Thorofare Moun    81.07  18  eP       P        14 07 08.0 -1.2
       comp=Z,128nm,1.8s
KLU    Klutina           81.12  21  eP       P        14 07 08.5 -0.9
       comp=Z,105nm,1.5s
KLU                                 LR       LR
       comp=Z,2µm,20.0s
BPAW   Bear Paw Mtn.     81.34  17  eP       P        14 07 09.5 -0.9
       comp=Z,78nm,1.6s
RND    Reindeer          81.48  19  eP       P        14 07 10.6 -0.7
       comp=Z,319nm,1.9s
RND                                 LR       LR
       comp=Z,2µm,18.0s
RND    Reindeer          81.48  19  eP       P        14 07 10.6 -0.7
RND                                 pmax     pmax
       comp=Z,319nm,1.9s
RND                                 MLR      MLR
       comp=Z,2µm,18.0s
RDOG   Red Dog Mine      81.65  11  eP       P        14 07 12.1 +0.1
       comp=Z,303nm,1.9s
MCK    McKinley          81.69  18  eP       P        14 07 11.3 -1.0
       comp=Z,235nm,1.7s
MCK    McKinley          81.69  18  eP       P        14 07 11.3 -1.0
MCK                                 pmax     pmax
       comp=Z,235nm,1.7s
DHY    Denali Highway    81.72  19  eP       P        14 07 12.0 -0.7
       comp=Z,198nm,1.7s
DHY                                 LR       LR
       comp=Z,3µm,19.0s
KCPM   Cahto Peak        81.85  47  eP       P        14 07 12.8 -1.0
       comp=Z,237nm,1.5s
ZAK    Zakamensk         81.94 325  eP       P        14 07 13.8 -0.2
ZAK                                 pmax     pmax
       comp=Z,30nm,1.6s
KMRM   Mail Ridge        81.95  47  eP       P        14 07 14.2 -0.1
       comp=Z,175nm,1.4s
HOPS   Hopland Field     81.97  48  eP       P        14 07 13.8 -0.6
       comp=Z,194nm,1.5s
HARP   HAARP             82.00  21  eP       P        14 07 13.9 -0.1
       comp=Z,98nm,1.0s
IM3    Indian Mountai    82.00  15  eP       P        14 07 13.4 -0.5
MLY    Manley            82.10  17  eP       P        14 07 13.7 -0.8
       comp=Z,160nm,1.8s
KHMM   Horse Mountain    82.17  46  eP       P        14 07 15.8 +0.2
       comp=Z,400nm,1.8s
IRK    Irkutsk           82.27 327  eP       P        14 07 15.4 -0.2
IRK                                 pmax     pmax
       comp=Z,167nm,3.4s
TLY    Talaya            82.35 326  eP       P        14 07 15.5 -0.5
       comp=Z,98nm,1.0s
TLY                                 LR       LR
       comp=Z,4µm,22.0s
TLY    Talaya            82.35 326d iP       P        14 07 16.3 +0.3
TLY    Talaya            82.35 326  P        P        14 07 16.5 +0.5
       SNR=21
TLY                                 P        P        14 07 16.5 +0.5
       SNR=21
SAO    San Andreas Ge    82.41  50  eP       P        14 07 16.9 +0.2
       comp=Z,100nm,1.3s
SAO                                 LR       LR
       comp=Z,6µm,20.0s
SAO    San Andreas Ge    82.41  50  eP       P        14 07 16.9 +0.2
SAO                                 pmax     pmax
       comp=Z,100nm,1.3s
SAO                                 MLR      MLR
       comp=Z,6µm,20.0s
WRH    Wood River Hil    82.48  18  eP       P        14 07 15.6 -0.8
       comp=Z,213nm,1.8s
O02D   Mt. Diablo Mer    82.59  47  P        P        14 07 19.0 +1.3
       baz=249,SNR=16
L02E   Cave Junction     82.73  45  P        P        14 07 19.6 +1.3
       baz=248
MDM    Murphy Dome       82.78  18  eP       P        14 07 16.7 -1.3
       comp=Z,360nm,2.0s
MDM                                 LR       LR
       comp=Z,2µm,20.0s
SNCC   San Nicolas Is    82.78  54  PFAKE             14 07 30.0  +11
SNCC                                LR       LR
       comp=Z,4µm,19.0s
SNCC   San Nicolas Is    82.78  54  P        P        14 07 18.6 -0.1
       baz=252
HDA    Harding Lake      82.79  19  eP       P        14 07 16.8 -1.3
       comp=Z,135nm,1.1s
HDA    Harding Lake      82.79  19  P        P        14 07 17.9 -0.1
       baz=226,SNR=50
TCOL   CIGO, UAF Yank    82.83  18  P        P        14 07 17.6 -0.6
       baz=225,SNR=11
COLA   College           82.84  18  eP       P        14 07 17.3 -0.9
       comp=Z,59nm,0.9s
COLA                                LR       LR
       comp=Z,2µm,20.0s
COLA   College           82.84  18d iP       P        14 07 17.2 -1.0
COLA                                pmax     pmax
       comp=Z,119nm,1.8s
LSA    Lhasa             82.86 302  eP       P        14 07 19.7 -0.1
       comp=Z,68nm,1.8s
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LSA                                 LR       LR
       comp=Z,3µm,22.0s
J01E   Myrtle Point      82.88  44  P        P        14 07 19.1 +0.2
       baz=248
K02D   Willamette Mer    82.89  44  P        P        14 07 19.4 +0.2
       baz=248
WDC    Whiskeytown Da    82.91  47  eP       P        14 07 18.8 -0.4
       comp=Z,302nm,1.9s
WDC                                 LR       LR
       comp=Z,3µm,18.0s
WDC    Whiskeytown Da    82.91  47  eP       P        14 07 18.8 -0.4
WDC                                 pmax     pmax
       comp=Z,302nm,1.9s
WDC                                 MLR      MLR
       comp=Z,3µm,18.0s
SCZ2   Santa Cruz Isl    82.93  54  P        P        14 07 19.1 -0.3
       baz=252
N02D   Trinity Center    82.94  46  P        P        14 07 20.6 +1.2
       baz=249,SNR=17
M02C   Callahan          82.98  46  P        P        14 07 21.0 +1.3
       baz=249,SNR=17
PAGB   Antelope Grade    82.99  52  eP       P        14 07 18.9 -0.8
       comp=Z,305nm,2.0s
PAGB                                LR       LR
       comp=Z,3µm,19.0s
SBC    Santa Barbara     83.00  53  P        P        14 07 19.8  0.0
       baz=252
RIDG   Independ'e Rid    83.01  20  eP       P        14 07 18.7 -0.6
       comp=Z,151nm,1.3s
SMMC   Simmler           83.06  52  P        P        14 07 20.8 +0.7
       baz=252
ILAR   Eielson Array     83.06  18  P        P        14 07 19.2 -0.2
       comp=Z,12nm,0.8s,baz=248,slow=4.3,SNR=52
ILB    Eielson Array     83.06  18  eP       P        14 07 17.8 -1.6
IL1    Eielson Array     83.06  18  eP       P        14 07 17.3 -2.1
PKM    Mcpherson Peak    83.06  53  P        P        14 07 21.0 +0.6
       baz=252
POKR   Poker Plat Res    83.14  18  P        P        14 07 19.1 -0.7
       baz=225,SNR=13
YBH    Yreka Blue Hor    83.20  45  eP       P        14 07 19.6 -1.1
       comp=Z,226nm,1.8s
YBH    Yreka Blue Hor    83.20  45  eP       P        14 07 19.7 -1.1
YBH                                 pmax     pmax
       comp=Z,226nm,1.8s
I02D   Swisshome         83.29  43  P        P        14 07 22.2 +1.1
       baz=248
ORV    Oroville          83.31  48  eP       P        14 07 20.4 -0.9
       comp=Z,127nm,1.5s
ORV    Oroville          83.31  48  eP       P        14 07 20.4 -0.9
ORV                                 pmax     pmax
       comp=Z,127nm,1.5s
O03E   Paynes Creek      83.34  47  P        P        14 07 21.8 +0.3
       baz=250,SNR=22
HUMO   Hull Mountain     83.34  44  eP       P        14 07 20.6 -0.8
       comp=Z,128nm,1.5s
BLG    Laguna Peak, P    83.41  54  P        P        14 07 22.0  0.0
       baz=252
SCRK   Sand Creek        83.45  20  eP       P        14 07 21.3 -0.3
       comp=Z,575nm,1.9s
I03D   Drain, OR         83.47  43  P        P        14 07 23.0 +1.0
       baz=248
SCI2   San Clemente I    83.49  55  P        P        14 07 22.7 +0.3
       baz=253
AFDM   Forest Hills D    83.49  48  eP       P        14 07 21.7 -0.6
       comp=Z,112nm,1.3s
CMB    Columbia Colle    83.63  49  eP       P        14 07 22.1 -0.9
       comp=Z,99nm,1.4s
CMB                                 LR       LR
       comp=Z,5µm,21.0s
CMB    Columbia Colle    83.63  49  eP       P        14 07 22.1 -0.9
CMB                                 pmax     pmax
       comp=Z,99nm,1.4s
CMB                                 MLR      MLR
       comp=Z,5µm,21.0s
L04D   Klamath Falls     83.66  45  P        P        14 07 23.3 +0.1
       baz=249,SNR=11
CIS    Catalina Islan    83.72  54  P        P        14 07 23.6 +0.1
       baz=253
BESE   Bessie Mountai    83.74  27  eP       P        14 07 22.8 -0.3
       comp=Z,208nm,1.4s
WRAK   Wrangell Islan    83.77  29  eP       P        14 07 23.1 -0.2
       comp=Z,184nm,1.4s
JIS    Juneau Island     83.79  27  eP       P        14 07 22.8 -0.5
       comp=Z,248nm,1.8s
MOY    Mondy             83.81 325  eP       P        14 07 23.7  0.0
MOY                                 pmax     pmax
       comp=Z,219nm,3.7s
M04C   Macdoel           83.83  46  P        P        14 07 24.8 +0.7
       baz=250,SNR=13
OSI    Osito Audit: C    83.83  53  PFAKE             14 07 30.0 +5.8
OSI                                 LR       LR
       comp=Z,4µm,19.0s
OSI    Osito Audit: C    83.83  53  P        P        14 07 24.3 +0.2
       baz=252
VOG    Valley Oaks Go    83.84  51  P        P        14 07 24.3 +0.2
       baz=252
HYT    Haines Junctio    83.87  24  eP       P        14 07 22.7 -1.1
       comp=Z,95nm,1.4s
COLD   Coldfoot          83.88  16  eP       P        14 07 22.6 -0.9
       comp=Z,30nm,1.3s
ARVC   Arvin             83.91  53  P        P        14 07 24.7 +0.3
       baz=252
FMP    Fort Macarthur    83.91  54  P        P        14 07 24.8 +0.4
       baz=253
VES    Vestal, Richgr    83.92  52  P        P        14 07 24.7 +0.2
       baz=252
PRP    Porcupine Dome    83.99  18  eP       P        14 07 23.1 -1.3
       comp=Z,103nm,1.7s
SKAG   Skagway           84.01  26  eP       P        14 07 23.5 -0.9
       comp=Z,228nm,1.5s
DECC   Green Verdugo     84.03  54  P        P        14 07 25.2 +0.1
       baz=253
G03D   McMinnville, O    84.09  42  P        P        14 07 26.0 +0.9
       baz=248
PASC   Pasadena Art C    84.13  54  eP       P        14 07 25.4 -0.2
       comp=Z,141nm,1.6s
PASC                                LR       LR
       comp=Z,4µm,19.0s
RUBR   Rubicon Trail     84.13  49  eP       P        14 07 25.3 -0.5
       comp=Z,191nm,1.2s
RUBR                                LR       LR
       comp=Z,3µm,21.0s
I04A   Tendick Farm,     84.14  44  P        P        14 07 25.4 -0.1
       baz=249,SNR=6.6
J04D   Umpqua Nationa    84.15  44  P        P        14 07 26.3 +0.5
       baz=249,SNR=7.0
K04D   Chiloquin, OR     84.18  45  P        P        14 07 26.5 +0.7
       baz=250
H04D   Lebanon           84.18  43  P        P        14 07 25.6 -0.1
       baz=249
BEKR   Beckworth         84.24  48  eP       P        14 07 26.3  0.0
       comp=Z,163nm,1.5s
MWC    Mount Wilson      84.24  54  eP       P        14 07 26.0 -0.5
       comp=Z,247nm,1.6s
MWC                                 LR       LR
       comp=Z,5µm,19.0s
MWC    Mount Wilson      84.24  54  eP       P        14 07 26.0 -0.5
MWC                                 pmax     pmax
       comp=Z,247nm,1.6s
MWC                                 MLR      MLR
       comp=Z,5µm,19.0s
ISA    Isabella, Lake    84.34  52  eP       P        14 07 26.2 -0.6
       comp=Z,197nm,1.6s
ISA                                 LR       LR
       comp=Z,4µm,20.0s
ISA    Isabella, Lake    84.34  52  eP       P        14 07 26.2 -0.6
ISA                                 pmax     pmax
       comp=Z,197nm,1.6s
ISA                                 MLR      MLR
       comp=Z,4µm,20.0s
ISA    Isabella, Lake    84.34  52  P        P        14 07 27.1 +0.3
       baz=252,SNR=25
MDPB   Devils Postpil    84.48  50  eP       P        14 07 27.2 -0.5
       comp=Z,140nm,1.4s
MDPB                                LR       LR
       comp=Z,6µm,22.0s
WAKR   Walker            84.48  49  eP       P        14 07 28.0 +0.4
       comp=Z,359nm,1.7s
WAKR                                LR       LR
       comp=Z,6µm,20.0s
EDW2   Edwards Air Fo    84.49  53  P        P        14 07 27.9 +0.4
       baz=253,SNR=19
PNTR   Pine Nut          84.55  49  eP       P        14 07 27.9 -0.1
       comp=Z,126nm,1.3s
BFSC   Mount Baldy Ra    84.56  54  P        P        14 07 28.0  0.0
       baz=253,SNR=14
F04D   Rainier, OR       84.57  41  P        P        14 07 28.3 +0.8
       baz=248
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VCNR   Virginia City     84.58  48  eP       P        14 07 28.1  0.0
       comp=Z,220nm,2.0s
H04A   Detroit Lake      84.61  43  eP       P        14 07 26.8 -1.1
       comp=Z,275nm,1.9s
109C   Camp Elliot, M    84.62  55  P        P        14 07 28.3 +0.2
       baz=254
CPE    Camp Elliot       84.62  55  eP       P        14 07 27.4 -0.7
       comp=Z,154nm,1.6s
CPE                                 LR       LR
       comp=Z,4µm,20.0s
MLAC   Mammoth, Mammo84.66  50  P        P        14 07 29.0 +0.5
       baz=252,SNR=9.6
MURC   Murrieta          84.75  55  P        P        14 07 28.9 +0.1
       baz=253,SNR=6.5
J05D   Fort Rock, OR     84.77  44  P        P        14 07 29.6 +0.8
       baz=250,SNR=20
YERR   Yerington         84.78  49  eP       P        14 07 28.6 -0.5
       comp=Z,304nm,1.9s
FYU    Fort Yukon        84.79  17  eP       P        14 07 28.1 -0.1
       comp=Z,228nm,1.9s
WHY    Whitehorse        84.85  25  eP       P        14 07 28.5 -0.3
       comp=Z,133nm,1.8s
CWC    Cottonwood Cre    84.88  52  P        P        14 07 29.9 +0.3
       baz=253
PAHR   Pah Rah Range     84.90  48  eP       P        14 07 29.4 -0.2
       comp=Z,188nm,1.5s
PAHR                                LR       LR
       comp=Z,2µm,18.0s
LRMC   Laurel Mtn Rad    84.91  53  P        P        14 07 30.2 +0.5
       baz=253
BAR    Barrett           84.91  56  eP       P        14 07 28.1 -1.6
       comp=Z,99nm,1.8s
TIN    Tinemaha, Big     84.95  51  P        P        14 07 30.7 +0.8
       baz=252
MOD    Modoc Plateau     84.95  46  eP       P        14 07 29.2 -0.6
       comp=Z,149nm,1.7s
E04D   Cinebar           85.03  41  P        P        14 07 30.7 +0.9
       baz=249
I05D   Terrebonne, OR    85.06  43  P        P        14 07 30.6 +0.5
       baz=250
D03D   Eldon             85.06  40  P        P        14 07 31.3 +1.3
       baz=248
DAWY   Dawson            85.07  21  eP       P        14 07 29.2 -0.5
       comp=Z,191nm,1.7s
D04E   Lakebay           85.13  40  P        P        14 07 31.8 +1.5
       baz=248
PINE   Pine Mountain     85.14  44  eP       P        14 07 28.9 -1.8
       comp=Z,134nm,1.4s
BBRC   Big Bear Solar    85.16  54  P        P        14 07 31.2 +0.1
       baz=254
MONP2  Monument Peak     85.17  55  P        P        14 07 31.7 +0.6
       baz=254,SNR=21
RYN    Ryan              85.20  49  eP       P        14 07 30.6 -0.5
       comp=Z,169nm,1.6s
RYN                                 LR       LR
       comp=Z,5µm,19.0s
DAC    Darwin (Calif)    85.21  52  eP       P        14 07 30.4 -0.9
       comp=Z,206nm,1.8s
DAC    Darwin (Calif)    85.21  52  eP       P        14 07 30.4 -0.9
DAC                                 pmax     pmax
       comp=Z,206nm,1.8s
MPMC   Manual Prospec    85.22  52  P        P        14 07 31.9 +0.6
       baz=253,SNR=26
PGC    Sidney            85.25  39  eP       P        14 07 30.2 -0.7
       comp=Z,182nm,1.5s
RRX    Edison Barstow    85.27  53  P        P        14 07 31.9 +0.5
       baz=253
ODAN   Odare             85.30 298  eP       P        14 07 32.1 +0.1
NV01   Mina Array Sit    85.31  50  eP       P        14 07 30.6 -1.1
NVAR   Mina Array Bea    85.31  50  P        P        14 07 32.7 +0.9
       comp=Z,16nm,0.7s,baz=231,slow=8.2,SNR=82
NVAR                                PP       PP       14 10 48.3 -1.7
       comp=Z,0.1nm,0.3s,baz=281,slow=11,SNR=2.4
PFO    Pinyon Flats O    85.34  55  eP       P        14 07 31.1 -0.8
       comp=Z,84nm,1.6s
PFO                                 LR       LR
       comp=Z,4µm,20.0s
PFO    Pinyon Flats O    85.34  55  eP       P        14 07 31.1 -0.8
PFO                                 pmax     pmax
       comp=Z,83nm,1.6s
PFO                                 MLR      MLR
       comp=Z,4µm,20.0s
PFO    Pinyon Flats O    85.34  55  P        P        14 07 32.2 +0.3
       baz=254,SNR=15
XPFO   Pion Flat         85.34  55  eP       P        14 07 30.9 -1.0
       comp=Z,82nm,1.5s
XPFO                                LR       LR
       comp=Z,4µm,20.0s
IKP    In-Ko-Pah, Jac    85.36  56  P        P        14 07 32.7 +0.7
       baz=254,SNR=12
KNGR   Kungurtug, Tuv    85.36 323d iP       P        14 07 31.5 -0.1
G05D   Wamic, OR         85.38  42  P        P        14 07 31.8 +0.1
       baz=250
NV11   Mina Array Sit    85.42  50  eP       P        14 07 30.3 -1.9
       comp=Z,19nm,1.5s
NV11                                LR       LR
       comp=Z,400nm,19.0s
F05D   White Salmon      85.51  42  P        P        14 07 33.0 +0.7
       baz=250
GSC    Goldstone, Bar    85.54  53  eP       P        14 07 32.3 -0.5
       comp=Z,234nm,1.9s
GSC                                 LR       LR
       comp=Z,4µm,19.0s
GSC    Goldstone, Bar    85.54  53  P        P        14 07 33.2 +0.4
       baz=254,SNR=19
LON    Longmire          85.59  41  eP       P        14 07 32.1 -0.6
       comp=Z,136nm,1.9s
LON    Longmire          85.59  41  eP       P        14 07 32.2 -0.6
LON                                 pmax     pmax
       comp=Z,136nm,1.9s
GRAC   Grapevine Rang    85.59  51  P        P        14 07 33.7 +0.8
       baz=253,SNR=8.2
D05A   Enumclaw          85.63  40  eP       P        14 07 33.3 +0.5
       comp=Z,595nm,1.9s
KVN    Kaiserville       85.65  49  eP       P        14 07 32.3 -1.1
       comp=Z,154nm,1.5s
KVN                                 LR       LR
       comp=Z,4µm,19.0s
KVN    Kaiserville       85.65  49  eP       P        14 07 32.3 -1.1
KVN                                 pmax     pmax
       comp=Z,154nm,1.5s
KVN                                 MLR      MLR
       comp=Z,4µm,19.0s
SWSC   Sam W. Stewart    85.69  55  P        P        14 07 34.0 +0.5
       baz=254,SNR=14
A04D   Lummi Island      85.73  39  P        P        14 07 34.0 +0.7
       baz=248
HEC    Hector,Ludlow     85.78  54  P        P        14 07 34.4 +0.4
       baz=254,SNR=6.1
BELC   Belle Mtn. Jos    85.82  54  P        P        14 07 34.4 +0.1
       baz=254,SNR=43
FURC   Furnace Creek,    85.83  52  P        P        14 07 34.7 +0.6
       baz=253,SNR=31
DLBC   Dease Lake        85.85  28  eP       P        14 07 32.7 -1.1
       comp=Z,54nm,1.3s
BOK    Bokaro            85.88 295  eP       P        14 07 34.1 -0.5
BOK                                 IAmb     IAmb     14 07 39.5
       comp=Z,609nm,3.6s
B05A   Bryant            85.95  39  P        P        14 07 34.8 +0.4
       baz=249,SNR=11
RAMN   Ramite            86.00 298  eP       P        14 07 35.6 +0.1
TIXI   Tiksi             86.01 349  eP       P        14 07 33.0 -1.1
       comp=Z,197nm,1.5s
TIXI   Tiksi             86.01 349d iP       P        14 07 33.5 -0.7
TIXI                                pmax     pmax
       comp=Z,166nm,1.7s
SHOC   Shoshone, Teco    86.12  53  P        P        14 07 35.8 +0.2
       baz=254,SNR=15
BC3    Big Chuckawall    86.16  55  P        P        14 07 36.7 +0.8
       baz=254,SNR=20
I07A   Izee              86.21  44  PFAKE             14 07 50.0  +14
I07A                                LR       LR
       comp=Z,3µm,20.0s
TUQ    Turquoise Moun    86.27  53  P        P        14 07 36.8 +0.3
       baz=254,SNR=29
WVOR   Wild Horse Val    86.29  46  eP       P        14 07 34.6 -1.8
       comp=Z,226nm,1.6s
WVOR   Wild Horse Val    86.29  46  eP       P        14 07 34.6 -1.8
WVOR                                pmax     pmax
       comp=Z,226nm,1.6s
GMRC   Granite Mounta    86.30  54  P        P        14 07 37.0 +0.3
       baz=254,SNR=24
B06A   Marblemount       86.42  39  eP       P        14 07 35.6 -1.1
       comp=Z,185nm,1.9s
B06A                                LR       LR
       comp=Z,3µm,20.0s
TPNV   Topopah Spring    86.44  52  eP       P        14 07 36.3 -1.0
       comp=Z,209nm,1.8s
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TPNV				LR	LR		
	comp=Z,4µm,21.0s						
TPNV	Topopah Spring	86.44	52	eP	P	14 07 36.3	-1.0
TPNV				pmax	pmax		
	comp=Z,209nm,1.8s						
TPNV				MLR	MLR		
	comp=Z,4µm,21.0s						
TPNV	Topopah Spring	86.44	52	P	P	14 07 37.7	+0.4
	baz=254,SNR=20						
H06S1	SOCORRO T	86.48	70	T	T	15 42 56.5	
	SNR=9.7						
LTY	Liberty	86.50	41	eP	P	14 07 36.1	-1.2
	comp=Z,246nm,1.9s						
LTY				LR	LR		
	comp=Z,3µm,22.0s						
GLA	Glamis	86.51	56	eP	P	14 07 37.2	-0.4
	comp=Z,383nm,1.9s						
GLA				LR	LR		
	comp=Z,3µm,21.0s						
GLA	Glamis	86.51	56	eP	P	14 07 37.2	-0.4
GLA				pmax	pmax		
	comp=Z,383nm,1.9s						
GLA				MLR	MLR		
	comp=Z,3µm,21.0s						
GLA	Glamis	86.51	56	P	P	14 07 38.5	+0.9
	baz=255,SNR=24						
F07A	Phinny Hill Vi	86.52	42	eP	P	14 07 36.8	-0.5
	comp=Z,76nm,1.3s						
JIRN	Jiri	86.53	299	eP	P	14 07 38.2	0.0
	comp=Z,310nm,1.8s						
IRM	Iron Mountain	86.54	54	P	P	14 07 38.1	+0.4
	baz=254,SNR=41						
C06D	Leavenworth	86.58	40	P	P	14 07 37.4	-0.1
	baz=250						
J08A	Circle Bar Ran	86.69	45	eP	P	14 07 37.9	-0.5
	comp=Z,82nm,1.3s						
LDFC	Landfair	86.81	54	eP	P	14 07 38.6	-0.5
	comp=Z,409nm,1.6s						
LDFC				LR	LR		
	comp=Z,5µm,19.0s						
GUN	Gumba	86.86	299	eP	P	14 07 39.8	0.0
	comp=Z,237nm,1.8s						
LLLB	Lillooet	86.92	37	eP	P	14 07 38.8	-0.4
	comp=Z,247nm,1.9s						
Y12C	Blythe	86.93	55	eP	P	14 07 39.2	-0.3
	comp=Z,190nm,1.5s						
Y12C				LR	LR		
	comp=Z,3µm,20.0s						
Y12C	Blythe	86.93	55	P	P	14 07 40.3	+0.7
	baz=255,SNR=27						
HAWA	Hanford	86.94	42	eP	P	14 07 39.0	-0.4
	comp=Z,216nm,1.8s						
G08A	Pilot Rock	86.97	43	eP	P	14 07 39.4	-0.3
	comp=Z,110nm,1.4s						
NEE2	Needles Airpor	87.12	54	P	P	14 07 41.4	+0.9
	baz=255						
SHPR	Sheep Range	87.16	52	eP	P	14 07 40.5	-0.3
	comp=Z,342nm,1.9s						
SHPR				LR	LR		
	comp=Z,4µm,19.0s						
PKIN	Phulchoki	87.19	299	eP	P	14 07 41.1	-0.2
	comp=Z,108nm,1.7s						
PALK	Pallekele	87.25	278	PFAKE		14 07 50.0	+8.4
PALK				LR	LR		
	comp=Z,1µm,20.0s						
SRIG	Santa Rosalia	87.26	62	PFAKE		14 07 50.0	+8.7
SRIG				LR	LR		
	comp=Z,5µm,20.0s						
E08A	Dider Farm, El	87.29	42	eP	P	14 07 41.3	+0.3
	comp=Z,204nm,1.5s						
113A	Mohawk Valley,	87.30	56	eP	P	14 07 41.1	-0.3
	comp=Z,331nm,2.0s						
113A				LR	LR		
	comp=Z,3µm,20.0s						
R11A	Troy Canyon, C	87.33	50	eP	P	14 07 41.2	-0.5
	comp=Z,138nm,1.8s						
R11A				LR	LR		
	comp=Z,5µm,20.0s						
R11A	Troy Canyon, C	87.33	50	P	P	14 07 42.1	+0.4
	baz=254,SNR=33						
PDMCI	Parker Dam,Lak	87.38	55	P	P	14 07 42.5	+0.8
	baz=255,SNR=12						
DMN	Daman	87.45	299	eP	P	14 07 42.6	0.0
	comp=Z,127nm,1.2s						
D08A	Wollman Farm,	87.56	41	eP	P	14 07 42.3	0.0
	comp=Z,203nm,1.8s						
B08A	Colville Reser	87.71	40	eP	P	14 07 43.0	-0.1
	comp=Z,133nm,1.6s						
W13A	Hualapai Mount	87.79	54	eP	P	14 07 43.6	-0.4
	comp=Z,220nm,1.8s						
W13A				LR	LR		
	comp=Z,5µm,18.0s						
214A	Organ Pipe Nat	87.88	57	P	P	14 07 45.2	+1.0
	baz=256,SNR=28						
E09A	Wood Farm, Sta	87.89	42	eP	P	14 07 43.8	-0.1
	comp=Z,200nm,1.7s						
BMO	Blue Mountains	87.95	44	eP	P	14 07 44.0	-0.4
	comp=Z,180nm,1.7s						
BMO	Blue Mountains	87.95	44	eP	P	14 07 44.0	-0.4
BMO				pmax	pmax		
	comp=Z,180nm,1.7s						
Y14A	Wickenburg	88.20	55	eP	P	14 07 45.4	-0.4
	comp=Z,205nm,1.9s						
Y14A				LR	LR		
	comp=Z,3µm,22.0s						
C09A	Chrisman Ranch	88.21	41	eP	P	14 07 45.1	-0.3
	comp=Z,124nm,1.9s						
ELK	Elko	88.24	48	eP	P	14 07 45.6	-0.4
	comp=Z,175nm,1.8s						
ELK	Elko	88.24	48	eP	P	14 07 45.6	-0.4
ELK				pmax	pmax		
	comp=Z,175nm,1.8s						
F10A	Beach Ranch, E	88.34	43	eP	P	14 07 45.7	-0.5
	comp=Z,396nm,1.9s						
PSUT	Pine Spring	88.69	51	eP	P	14 07 47.8	-0.4
	comp=Z,283nm,1.9s						
PSUT				LR	LR		
	comp=Z,4µm,19.0s						
HSIG		88.76	60	eP	P	14 07 47.9	-0.5
	comp=Z,357nm,2.0s						
HSIG				LR	LR		
	comp=Z,6µm,20.0s						
LCMT	Little Creek M	88.77	52	eP	P	14 07 48.7	+0.2
	comp=Z,392nm,2.0s						
LCMT				LR	LR		
	comp=Z,4µm,22.0s						
DANN	Dangsing	88.78	299	eP	P	14 07 48.2	-0.7
	comp=Z,30nm,0.8s						
KOLN	Koldanda	88.79	298	eP	P	14 07 48.1	-0.8
	comp=Z,123nm,1.7s						
CCUT	Cedar City	88.82	52	eP	P	14 07 49.0	+0.2
	comp=Z,333nm,1.8s						
CCUT				LR	LR		
	comp=Z,5µm,20.0s						
MDRS	Chennai	88.82	283	eP	P	14 07 47.6	-1.4
MDRS				IAmb	IAmb	14 07 56.0	
	comp=Z,92nm,1.4s						
SZCU	Shurtz Canyon	89.04	52	eP	P	14 07 49.7	-0.2
	comp=Z,424nm,1.8s						
NEW	Newport	89.08	41	eP	P	14 07 49.4	-0.2
	comp=Z,125nm,1.6s						
NEW	Newport	89.08	41	eP	P	14 07 49.4	-0.2
NEW				pmax	pmax		
	comp=Z,125nm,1.6s						
NEW	Newport	89.08	41	P	P	14 07 49.8	+0.2
	baz=253,SNR=11						
KNB	Kanab	89.10	52	eP	P	14 07 49.8	-0.3
	comp=Z,540nm,1.8s						
KNB				LR	LR		
	comp=Z,4µm,22.0s						
KNB	Kanab	89.10	52	eP	P	14 07 49.8	-0.3
KNB				pmax	pmax		
	comp=Z,540nm,1.8s						
KNB				MLR	MLR		
	comp=Z,4µm,22.0s						
U15A	North Rim	89.37	53	eP	P	14 07 51.9	+0.4
	comp=Z,516nm,1.9s						
U15A				LR	LR		
	comp=Z,4µm,19.0s						
PYUN	Piuthan	89.39	299	eP	P	14 07 50.2	-1.5
	comp=Z,34nm,0.9s						
INK	Inuvik	89.44	19	eP	P	14 07 50.1	-0.5
	comp=Z,65nm,1.9s						
INK	Inuvik	89.44	19	P	P	14 07 50.2	-0.5
	comp=Z,9.9nm,1.3s,baz=254,slow=6.4,SNR=7.4						
INK				LR	LR	14 45 01.8	
	comp=Z,1µm,18.7s,baz=219,slow=34						
WMQ	Urumqi	89.46	315	P	P	14 07 52.1	+0.6
WMQ				sP	pP	14 07 59.3	+0.5
WMQ				PP	PP	14 11 24.7	+1.6
WMQ				S	S	14 18 39.6	-1.1
WMQ				SS	SS	14 24 39.4	+2.8
WMQ				pmax	pmax		
	comp=Z,65nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,2µm,4.9s						
WMQ				LR	LR		
	comp=Z,3µm,22.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.7s						
WMQ				LR	LR		
	comp=Z,3µm,27.9s						
X16A	Lo Mia Camp, P	89.58	55	eP	P	14 07 52.0	-0.4
	comp=Z,157nm,1.7s						
X16A				LR	LR		
	comp=Z,3µm,20.0s						
HLID	Hailey	89.58	46	eP	P	14 07 52.0	-0.3
	comp=Z,135nm,1.5s						
HLID				LR	LR		
	comp=Z,3µm,18.0s						
HLID	Hailey	89.58	46	P	P	14 07 52.7	+0.5
	baz=255						
PKCU	Pink Cliffs	89.60	52	eP	P	14 07 52.4	-0.2
	comp=Z,908nm,2.0s						
PKCU				LR	LR		
	comp=Z,4µm,19.0s						
TUC	Tucson	89.63	57	eP	P	14 07 51.5	-1.1
	comp=Z,169nm,1.7s						
TUC				LR	LR		
	comp=Z,5µm,20.0s						
TUC	Tucson	89.63	57	eP	P	14 07 51.5	-1.1
TUC				pmax	pmax		
	comp=Z,169nm,1.7s						
TUC				MLR	MLR		
	comp=Z,5µm,20.0s						
TUC	Tucson	89.63	57	P	P	14 07 53.3	+0.8
	baz=257						
TCRU	Three Creeks R	89.78	51	PFAKE		14 08 00.0	+6.7
TCRU				LR	LR		
	comp=Z,5µm,20.0s						
MTPU	Mount Pierson	89.84	51	eP	P	14 07 53.3	-0.4
	comp=Z,232nm,1.4s						
MTPU				LR	LR		
	comp=Z,6µm,21.0s						
WUAZ	Wupatki	89.88	54	eP	P	14 07 53.6	-0.2
	comp=Z,350nm,1.8s						
WUAZ	Wupatki	89.88	54	P	P	14 07 54.6	+0.9
	baz=257,SNR=47						
DUG	Dugway, Tooele	89.89	49	eP	P	14 07 53.6	-0.1
	comp=Z,221nm,1.7s						
DUG				LR	LR		
	comp=Z,3µm,21.0s						
DUG	Dugway, Tooele	89.89	49	eP	P	14 07 53.6	-0.1
DUG				pmax	pmax		
	comp=Z,221nm,1.7s						
DUG				MLR	MLR		
	comp=Z,3µm,21.0s						
DUG	Dugway, Tooele	89.89	49	P	P	14 07 54.3	+0.7
	baz=256						
BGU	Big Grassy Mou	89.91	48	eP	P	14 07 53.5	-0.2
	comp=Z,242nm,1.7s						
BGU				LR	LR		
	comp=Z,2µm,20.0s						
MSU	Marysvale	89.96	51	eP	P	14 07 54.6	+0.5
MSU	Marysvale	89.96	51	eP	P	14 07 54.6	+0.5
HVU	Hansel Valley	90.30	48	eP	P	14 07 55.8	+0.2
	comp=Z,361nm,1.6s						
HVU	Hansel Valley	90.30	48	eP	P	14 07 55.8	+0.2
HVU				pmax	pmax		
	comp=Z,361nm,1.6s						
NLU	North Lily Min	90.38	49	eP	P	14 07 55.5	-0.5
	comp=Z,222nm,1.6s						
NLU				LR	LR		
	comp=Z,5µm,20.0s						
SPUT	South Promonto	90.42	48	eP	P	14 07 56.2	0.0
	comp=Z,311nm,1.8s						
319A	Douglas	90.68	58	eP	P	14 07 57.6	+0.1
	comp=Z,301nm,1.8s						
319A				LR	LR		
	comp=Z,5µm,20.0s						
MPU	Maple Canyon	90.72	49	eP	P	14 07 57.7	0.0
	comp=Z,201nm,1.6s						
MPU				LR	LR		
	comp=Z,5µm,20.0s						
MSO	Missoula	90.76	42	eP	P	14 07 55.8	-1.7
	comp=Z,82nm,1.5s						
MSO	Missoula	90.76	42	P	P	14 07 57.1	-0.5
	baz=255,SNR=14						
CTU	Camp Tracy	90.79	49	eP	P	14 07 57.0	-0.9
	comp=Z,120nm,1.3s						
CTU				LR	LR		
	comp=Z,2µm,18.0s						
X18A	Snowflake	90.80	55	eP	P	14 07 57.1	-1.0
	comp=Z,167nm,1.5s						
X18A				LR	LR		
	comp=Z,2µm,20.0s						
Q16A	Castle Valley	90.82	51	eP	P	14 07 57.3	-0.8
	comp=Z,469nm,1.9s						
Q16A				LR	LR		
	comp=Z,4µm,20.0s						
TMUT	Trail Mountain	90.88	50	eP	P	14 07 58.8	+0.3
	comp=Z,256nm,1.8s						
TMUT				LR	LR		
	comp=Z,3µm,22.0s						
JLU	Jordanelle	90.99	49	eP	P	14 07 58.6	-0.4
	comp=Z,231nm,1.6s						
MCMT	McKenzie Canyo	91.00	45	eP	P	14 07 58.3	-0.6
W18A	Petrified Fore	91.10	55	eP	P	14 07 59.9	+0.4
	comp=Z,298nm,1.8s						
W18A				LR	LR		
	comp=Z,2µm,21.0s						
W18A	Petrified Fore	91.10	55	P	P	14 08 00.4	+0.9
	baz=258,SNR=19						
TRD	Trivandrum	91.13	278	eP	P	14 07 58.5	-1.3
TCUT	Toone Canyon	91.14	48	eP	P	14 07 59.5	-0.1
	comp=Z,250nm,1.4s						
DGZ	Jazzator, Alta	91.19	320⇓	eP	P	14 08 00.6	+1.1
HYB	Hyderabad	91.25	287	iP	P	14 07 59.0	-1.4
HYB				eSKS	SKSac	14 18 32.0	+0.2
HYB	Hyderabad	91.25	287	eP	P	14 07 59.7	-0.7
HYB				IAmb	IAmb	14 08 00.8	
	comp=Z,6µm,9.0s						
P17A	Butcher Ranch,	91.27	50	eP	P	14 07 59.4	-0.7
	comp=Z,176nm,1.8s						
P17A				LR	LR		
	comp=Z,3µm,18.0s						
DLMT	Dillon	91.30	44	eP	P	14 07 58.0	-2.1
	comp=Z,188nm,1.4s						
DLMT				LR	LR		
	comp=Z,2µm,22.0s						
SRU	San Rafael Swe	91.35	51	eP	P	14 08 00.0	-0.6
	comp=Z,182nm,2.0s						
SRU				LR	LR		
	comp=Z,4µm,20.0s						
SRU	San Rafael Swe	91.35	51	eP	P	14 08 00.0	-0.6
SRU				pmax	pmax		
	comp=Z,182nm,2.0s						
SRU				MLR	MLR		
	comp=Z,4µm,20.0s						
NGP	Nagpur	91.50	291	eP	P	14 07 59.6	-1.8
LRM	Limekiln Ridge	91.51	44	eP	P	14 08 01.7	+0.5
AHID	Auburn Hatcher	91.74	47	eP	P	14 08 01.8	-0.6
	comp=Z,168nm,1.9s						
QLMT	Earthquake Lak	91.98	45	eP	P	14 08 03.4	0.0
FXWY	Fox Creek	91.99	46	eP	P	14 08 03.0	-0.5
	comp=Z,37nm,1.3s						
TPAW	Teton Pass	92.01	46	eP	P	14 08 02.9	-0.7
	comp=Z,210nm,1.9s						
BOZ	Bozeman (W)	92.01	44	eP	P	14 08 02.5	-0.9
	comp=Z,222nm,1.7s						
BOZ				LR	LR		
	comp=Z,2µm,21.0s						
BOZ	Bozeman (W)	92.01	44	eP	P	14 08 02.5	-0.9
BOZ				pmax	pmax		
	comp=Z,222nm,1.7s						
BOZ				MLR	MLR		
	comp=Z,2µm,21.0s						
BOZ	Bozeman (W)	92.01	44	P	P	14 08 03.9	+0.5
	baz=257,SNR=51						
REDW	Red Top Meadow	92.05	46	eP	P	14 08 03.2	-0.5
	comp=Z,281nm,1.8s						
IMW	Indian Meadow	92.11	46	eP	P	14 08 03.5	-0.6
	comp=Z,151nm,1.8s						
YHB	Horse Butte	92.12	45	eP	P	14 08 03.7	-0.4
	comp=Z,131nm,1.5s						
YHB				LR	LR		
	comp=Z,3µm,19.0s						
HRY	Holter Researc	92.14	43	eP	P	14 08 04.0	+0.1
SNOW	Snow King Moun	92.14	46	eP	P	14 08 04.1	-0.1
	comp=Z,152nm,1.7s						
121A	Cookes Peak, D	92.16	57	P	P	14 08 05.0	+0.6
	baz=259,SNR=12						
MOOW	Moose Ponds	92.21	46	eP	P	14 08 04.5	0.0
	comp=Z,131nm,1.9s						
SYO	Syowa Base	92.22	197⇓	eP	P	14 08 02.2	-1.5
SYO	Syowa Base	92.22	197⇑	epP	pP	14 08 08.8	-2.3
PV05	Paradox Valley	92.22	52	eP	P	14 08 04.9	+0.2
	comp=Z,201nm,2.0s						
YMR	Madison River	92.26	45	eP	P	14 08 04.8	0.0
	comp=Z,195nm,1.5s						
YMR				LR	LR		
	comp=Z,2µm,21.0s						
LOHW	Long Hollow	92.28	46	eP	P	14 08 04.5	-0.3
	comp=Z,81nm,1.5s						
PV09	Paradox Valley	92.28	51	eP	P	14 08 04.0	-1.1
YPP	Pitchstone Pla	92.29	45	eP	P	14 08 04.8	-0.1
	comp=Z,92nm,1.8s						
YFT	Old Faithful	92.30	45	eP	P	14 08 05.5	+0.5
	comp=Z,187nm,1.9s						
FLWY	Flagg Ranch	92.32	46	eP	P	14 08 04.5	-0.4
	comp=Z,189nm,2.0s						
PV10	Paradox Valley	92.33	52	eP	P	14 08 04.5	-0.7
	comp=Z,134nm,1.6s						
PV14	Lion Creek, Pa	92.34	52	eP	P	14 08 04.7	-0.5
	comp=Z,172nm,1.6s						
PV19	Morning Glory	92.36	52	eP	P	14 08 04.7	-0.6
	comp=Z,210nm,2.0s						
PV23	Carpenter Ridg	92.37	51	eP	P	14 08 05.1	-0.3
	comp=Z,297nm,1.9s						
PV17	East Wray Mesa	92.37	52	eP	P	14 08 04.9	-0.5
	comp=Z,196nm,1.7s						
PV20	West Nyswonger	92.38	52	eP	P	14 08 05.0	-0.4
	comp=Z,134nm,1.6s						
PV16	Nyswonger Mesa	92.41	52	eP	P	14 08 05.3	-0.3
	comp=Z,210nm,1.8s						
PV21	Cone Mtn., Par	92.42	51	eP	P	14 08 05.2	-0.4
	comp=Z,255nm,1.9s						
PV04	Paradox Valley	92.44	52	eP	P	14 08 05.6	0.0
	comp=Z,282nm,2.0s						
PV11	David Mesa, Pa	92.44	52	eP	P	14 08 05.7	0.0
	comp=Z,168nm,1.7s						
PV03	Paradox Valley	92.45	52	eP	P	14 08 05.5	-0.2
	comp=Z,140nm,1.8s						
PV13	Radium Mtn., P	92.45	52	eP	P	14 08 05.6	-0.2
	comp=Z,80nm,1.7s						
YNR	Norris Junctio	92.47	45	eP	P	14 08 05.6	-0.1
	comp=Z,133nm,1.7s						
YNR				LR	LR		
	comp=Z,2µm,19.0s						
H17A	Grant Village	92.47	45	eP	P	14 08 05.7	-0.1
	comp=Z,39nm,1.3s						
H17A	Grant Village	92.47	45	P	P	14 08 06.4	+0.7
	baz=257,SNR=14						
PV12	Saucer Basin,	92.50	52	eP	P	14 08 05.4	-0.6
	comp=Z,237nm,2.0s						
PV12				LR	LR		
	comp=Z,4µm,20.0s						
MVCO	Mesa Verde	92.51	53	eP	P	14 08 04.9	-1.2
	comp=Z,59nm,1.7s						
MVCO				LR	LR		
	comp=Z,3µm,18.0s						
MVCO	Mesa Verde	92.51	53	P	P	14 08 06.1	+0.1
	baz=258						
PV02	Paradox Valley	92.53	52	eP	P	14 08 05.5	-0.6
	comp=Z,137nm,1.9s						
DGAR	Diego Garcia	92.58	262	PFAKE		14 08 20.0	+13
DGAR				LR	LR		
	comp=Z,2µm,18.0s						
LKWY	Lake	92.63	45	eP	P	14 08 07.3	+0.8
	comp=Z,78nm,1.6s						
LKWY	Lake	92.63	45	eP	P	14 08 07.3	+0.8
LKWY				pmax	pmax		
	comp=Z,78nm,1.6s						
PV01	Paradox Valley	92.64	52	eP	P	14 08 05.5	-1.1
	comp=Z,91nm,1.8s						
PV07	Paradox Valley	92.64	52	eP	P	14 08 06.2	-0.4
	comp=Z,164nm,2.0s						
PV15	Paradox Valley	92.75	52	eP	P	14 08 06.3	-0.9
	comp=Z,64nm,1.3s						
BW06	Boulder Array	92.85	47	eP	P	14 08 06.5	-1.0
	comp=Z,107nm,1.7s						
BW06	Boulder Array	92.85	47	P	P	14 08 07.5	0.0
	baz=258,SNR=20						
PD31	Pinedale Array	92.85	47	eP	P	14 08 06.5	-1.0
PDAR	Pinedale Array	92.85	47	eP	P	14 08 06.6	-0.9
PDAR				PKKPbc	PKKPdf	14 25 17.6	-0.6
PDAR	Pinedale Array	92.85	47	P	P	14 08 07.5	0.0
	comp=Z,8.8nm,1.0s,baz=254,slow=2.6,SNR=31						
PDAR				PKKPbc	PKKPdf	14 25 17.6	-0.6
	comp=Z,0.4nm,0.7s,baz=94,slow=4.9,SNR=4.0						
HPIG		92.91	63	eP	P	14 08 06.2	-1.9
	comp=Z,11nm,1.1s						
HPIG				LR	LR		
	comp=Z,4µm,20.0s						
LAZ	Ladron	93.05	56	eP	P	14 08 08.5	0.0
LENM	Lemitar	93.14	56	eP	P	14 08 08.7	-0.2
O20A	White River Ci	93.29	50	eP	P	14 08 09.7	+0.2
	comp=Z,234nm,2.0s						
O20A				LR	LR		
	comp=Z,4µm,18.0s						
O20A	White River Ci	93.29	50	P	P	14 08 10.1	+0.6
	baz=259,SNR=10						
BHPL	Bhopal	93.36	293	eP	P	14 08 08.6	-1.4
GCMT	Greycliff	93.40	44	eP	P	14 08 10.2	+0.4
BNM	Barren Site	93.42	56	eP	P	14 08 09.6	-0.7
RLMT	Red Lodge	93.54	45	eP	P	14 08 10.6	+0.1
	comp=Z,66nm,1.5s						
RLMT				LR	LR		
	comp=Z,2µm,20.0s						
RLMT	Red Lodge	93.54	45	P	P	14 08 11.2	+0.6
	baz=258,SNR=16						
ANMO	Albuquerque	93.70	55	eP	P	14 08 11.2	-0.3
	comp=Z,54nm,1.9s						
ANMO				LR	LR		
	comp=Z,2µm,20.0s						
ANMO	Albuquerque	93.70	55⇑	eP	P	14 08 11.9	+0.4
ANMO				pmax	pmax		
	comp=Z,15nm,1.7s						
ANMO	Albuquerque	93.70	55	P	P	14 08 11.5	0.0
	baz=259						
EGMT	Eagleton	93.80	42	eP	P	14 08 11.2	-0.3
	comp=Z,108nm,1.3s						
EGMT	Eagleton	93.80	42	P	P	14 08 11.8	+0.3
	baz=258						
ZAA0	Zalesovo Array	93.81	324	eP	P	14 08 10.0	-1.3
	comp=Z,46nm,1.4s						
ZAA0				LR	LR		
	comp=Z,2µm,22.0s						
ZALV	Zalesovo Beam	93.81	324	eP	P	14 08 09.9	-1.4
ZALV				PP	PP	14 11 56.0	-0.9
ZALV				PKKPbc	PKKPdf	14 25 14.8	-1.7
ZALV	Zalesovo Beam	93.81	324	P	P	14 08 10.2	-1.0
	comp=Z,4.5nm,0.8s,baz=123,slow=4.0,SNR=18						
ZALV				PP	PP	14 11 56.0	-0.9
	comp=Z,1.1nm,0.8s,baz=67,slow=11,SNR=4.5						
ZALV				PKKPbc	PKKPdf	14 25 14.8	-1.7
	comp=Z,0.7nm,0.6s,baz=314,slow=3.8,SNR=4.6						
MK01	Makanchi Array	93.85	317	eP	P	14 08 10.3	-1.4
MK31	Makanchi Array	93.86	317	eP	P	14 08 10.8	-1.0
MK31	Makanchi Array	93.86	317	eP	P	14 08 10.8	-1.0
MKAR	Makanchi Array	93.86	317	eP	P	14 08 10.9	-0.9
	comp=Z,207nm,1.2s						
MKAR				PP	PP	14 11 59.1	+1.4
MKAR				PKKPbc	PKKPdf	14 25 14.1	-2.1
MKAR	Makanchi Array	93.86	317	P	P	14 08 11.9	+0.1
	comp=Z,5.9nm,0.7s,baz=92,slow=6.4,SNR=28						
MKAR				PP	PP	14 11 59.1	+1.4
	comp=Z,1.0nm,0.8s,baz=108,slow=7.7,SNR=3.5						
MKAR				PKKPbc	PKKPdf	14 25 14.1	-2.1
	comp=Z,2.2nm,0.7s,baz=281,slow=3.0,SNR=23						
S22A	4UR Ranch, Cre	93.92	52	eP	P	14 08 12.5	-0.1
	comp=Z,56nm,1.6s						
S22A				LR	LR		
	comp=Z,3µm,19.0s						
S22A	4UR Ranch, Cre	93.92	52	P	P	14 08 13.3	+0.7
	baz=259,SNR=15						
MNTX	Cornudas Mount	94.01	59	eP	P	14 08 12.2	-0.6
	comp=Z,75nm,2.0s						
MNTX	Cornudas Mount	94.01	59	P	P	14 08 12.9	+0.1
	baz=260,SNR=11						
DDI	Dehra Dun	94.05	300	eP	P	14 08 12.5	-0.5
DDI				IAmb	IAmb	14 08 26.2	

	comp=Z,12µm,7.8s						
SMCO	**Snowmass**	**94.07**	**51**	*e*P	**P**	**14 08 12.0**	**-1.4**
	comp=Z,90nm,2.0s						
SMCO				LR	LR		
	comp=Z,4µm,22.0s						
MAKZ	**Makanchi**	**94.08**	**317**	*e*P	**P**	**14 08 12.0**	**-0.8**
	comp=Z,93nm,1.4s						
MAKZ	**Makanchi**	**94.08**	**317**	*e*P	**P**	**14 08 12.0**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,93nm,1.4s						
RWWY	**Rawlins**	**94.35**	**49**	*e*P	**P**	**14 08 14.0**	**-0.5**
	comp=Z,91nm,1.6s						
YKA	**Yellowknife Ar**	**94.43**	**27**	P	**P**	**14 08 12.4**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=254,slow=4.5,SNR=26						
YKA				PP	PP	14 11 50.6	-11
	comp=Z,0.4nm,0.9s,baz=250,slow=8.6,SNR=3.9						
YKA				PKKPbc	**PKKPdf**	**14 25 15.4**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=75,slow=2.4,SNR=4.0						
YKB5	**Yellowknife Ar**	**94.43**	**27**	*e*P	**P**	**14 08 11.7**	**-2.2**
YKW3	**Yellowknife Ar**	**94.44**	**27**	*e*P	**P**	**14 08 12.7**	**-1.3**
	comp=Z,40nm,1.6s						
NVS	**Novosibirsk**	**94.90**	**325**	*i* P	**P**	**14 08 16.0**	**-0.3**
SMLA	**Simla**	**94.94**	**301**	*e*P	**P**	**14 08 15.9**	**-1.1**
SDCO	**Great Sand Dun**	**94.96**	**53**	*e*P	**P**	**14 08 16.9**	**-0.5**
	comp=Z,18nm,1.6s						
SDCO				LR	LR		
	comp=Z,3µm,19.0s						
SDCO	**Great Sand Dun**	**94.96**	**53**	P	**P**	**14 08 17.3**	**-0.1**
	baz=260,SNR=7.8						
ZAIG	**Zacatecas**	**94.96**	**68**	PFAKE		14 08 30.0	+12
ZAIG				LR	LR		
	comp=Z,3µm,20.0s						
K22A	**Casper**	**95.02**	**48**	*e*P	**P**	**14 08 16.3**	**-1.1**
	comp=Z,138nm,1.9s						
K22A				LR	LR		
	comp=Z,2µm,19.0s						
K22A	**Casper**	**95.02**	**48**	P	**P**	**14 08 17.1**	**-0.3**
	baz=260,SNR=6.8						
TX31	**Lajitas Ar. Si**	**95.07**	**61**	*e*P	**P**	**14 08 16.9**	**-0.9**
TXAR	**Lajitas Array**	**95.07**	**61**	P	**P**	**14 08 18.1**	**+0.3**
	comp=Z,2.1nm,1.1s,baz=249,slow=3.5,SNR=7.9						
TXAR				PP	**PP**	**14 12 09.0**	**+1.4**
	comp=Z,1.2nm,1.1s,baz=260,slow=5.1,SNR=4.5						
N23A	**Red Feather La**	**95.15**	**50**	*e*P	**P**	**14 08 17.6**	**-0.5**
	comp=Z,173nm,2.0s						
N23A				LR	LR		
	comp=Z,2µm,18.0s						
N23A	**Red Feather La**	**95.15**	**50**	P	**P**	**14 08 18.9**	**+0.8**
	baz=260,SNR=7.2						
ISCO	**Idaho Springs**	**95.22**	**51**	*e*P	**P**	**14 08 18.2**	**-0.3**
	comp=Z,36nm,1.8s						
ISCO				LR	LR		
	comp=Z,5µm,20.0s						
ISCO	**Idaho Springs**	**95.22**	**51**	*e*P	**P**	**14 08 18.2**	**-0.3**
ISCO				pmax	pmax		
	comp=Z,36nm,1.8s						
ISCO				MLR	MLR		
	comp=Z,5µm,20.0s						
ISCO	**Idaho Springs**	**95.22**	**51**	P	**P**	**14 08 19.1**	**+0.6**
	baz=260						
Q24A	**Divide**	**95.43**	**52**	PFAKE		14 08 30.0	+10
Q24A				LR	LR		
	comp=Z,2µm,18.0s						
Q24A	**Divide**	**95.43**	**52**	P	**P**	**14 08 19.9**	**+0.3**
	baz=260						
PHWY	**Pilot Hill**	**95.58**	**49**	*e*P	**P**	**14 08 19.8**	**-0.4**
	comp=Z,27nm,1.5s						
PHWY				LR	LR		
	comp=Z,3µm,18.0s						
T25A	**Trinidad**	**95.71**	**53**	*e*P	**P**	**14 08 19.3**	**-1.4**
	comp=Z,16nm,1.3s						
T25A				LR	LR		
	comp=Z,3µm,19.0s						
T25A	**Trinidad**	**95.71**	**53**	P	**P**	**14 08 20.7**	**-0.1**
	baz=261						
DHRM	**DHARAMSHALA**	**95.85**	**302**	*e*P	**P**	**14 08 20.3**	**-1.2**
DHRM				IAmb	IAmb	14 08 33.9	
POO	**Poona**	**95.86**	**288**	*e*P	**P**	**14 08 20.3**	**-1.2**
POO				IAmb	IAmb	14 08 29.2	
	comp=Z,247nm,2.6s						
LAO	**LASA Array**	**95.91**	**44**	*e*P	**P**	**14 08 21.3**	**0.0**
	comp=Z,269nm,1.9s						
LAO	**LASA Array**	**95.91**	**44**	P	**P**	**14 08 22.0**	**+0.7**
	baz=261						
NRIK	**Noril'sk**	**96.17**	**339**	P	**P**	**14 08 21.6**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=114,slow=4.5,SNR=11						
NRIK				PP	**PP**	**14 12 13.0**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=140,slow=4.6,SNR=4.1						
MSTX	**Muleshoe**	**96.55**	**57**	*e*P	**P**	**14 08 22.4**	**-2.0**
	comp=Z,29nm,1.5s						
MSTX				LR	LR		
	comp=Z,4µm,22.0s						
MSTX	**Muleshoe**	**96.55**	**57**	P	**P**	**14 08 23.8**	**-0.6**
	baz=261						
JRQG	**Juriquilla Cam**	**96.57**	**70**	PFAKE		14 08 40.0	+15
JRQG				LR	LR		
	comp=Z,6µm,19.0s						
KURK	**Kurchatov**	**96.94**	**320**	*e*P	**P**	**14 08 23.6**	**-2.1**
	comp=Z,49nm,1.6s						
KURK	**Kurchatov**	**96.94**	**320**	*d* *i*P	**P**	**14 08 24.3**	**-1.3**
KURK				pmax	pmax		
	comp=Z,40nm,2.5s						
KURK	**Kurchatov**	**96.94**	**320**	P	**P**	**14 08 24.6**	**-1.0**
	SNR=9.4						
RSSD	**Black Hills**	**97.05**	**47**	*e*P	**P**	**14 08 25.8**	**-0.8**
	comp=Z,65nm,1.8s						
RSSD	**Black Hills**	**97.05**	**47**	*e*P	**P**	**14 08 25.8**	**-0.8**
RSSD				pmax	pmax		
	comp=Z,65nm,1.8s						
RSSD	**Black Hills**	**97.05**	**47**	P	**P**	**14 08 26.6**	**0.0**
	baz=262						
KSH	**Kashi**	**97.19**	**309**	P	Pdif	14 08 29.0	+1.6
KSH				pP	pP	14 08 34.3	-0.3
KSH				PP	**PP**	**14 12 28.2**	**+4.4**
KSH				SKS	**SKSac**	**14 19 08.0**	**+4.7**
KSH				S	**ScS**	**14 19 50.4**	**+0.4**
KSH				sS	pS	14 19 59.2	-0.3
KSH				SS	**SS**	**14 26 33.2**	**+5.6**
KSH				LR	LR		
	comp=Z,820nm,6.3s						
KSH				LR	LR		
	comp=Z,720nm,7.9s						
KSH				LR	LR		
	comp=Z,1µm,13.4s						
KSCO	**Kaye Shedlock'**	**97.38**	**52**	PFAKE		14 08 40.0	+12
KSCO				LR	LR		
	comp=Z,2µm,18.0s						
KSCO	**Kaye Shedlock'**	**97.38**	**52**	P	Pdif	14 08 28.4	+0.2
	baz=262						
SNAA	**Sanae**	**97.39**	**183**	PFAKE		14 08 40.0	+12
SNAA				LR	LR		
	comp=Z,2µm,19.0s						
NRN	**Naryn**	**97.43**	**311**	PFAKE		14 08 40.0	+11
NRN				LR	LR		
	comp=Z,1µm,22.0s						
DGMT	**Dagmar**	**97.54**	**42**	*e*P	**P**	**14 08 28.4**	**-0.1**
	comp=Z,46nm,1.4s						
DGMT	**Dagmar**	**97.54**	**42**	P	Pdif	14 08 28.7	+0.1
	baz=262						
UNM	**Universidad Na**	**97.54**	**72**	PFAKE		14 08 40.0	+10
UNM				LR	LR		
	comp=Z,2µm,19.0s						
AMTX	**Amarillo**	**97.57**	**56**	*e*P	**P**	**14 08 26.2**	**-2.8**
	comp=Z,17nm,1.1s						
AMTX				LR	LR		
	comp=Z,3µm,20.0s						
AMTX	**Amarillo**	**97.57**	**56**	P	**P**	**14 08 28.4**	**-0.6**
	baz=262						
OGNE	**Ogallala**	**98.09**	**50**	PFAKE		14 08 40.0	+8.7
OGNE				LR	LR		
	comp=Z,4µm,20.0s						
OGNE	**Ogallala**	**98.09**	**50**	P	**P**	**14 08 31.0**	**-0.3**
	baz=263						
LNIG	**Linares**	**98.09**	**66**	PFAKE		14 08 40.0	+8.5
LNIG				LR	LR		
	comp=Z,4µm,20.0s						
JCT	**Junction City**	**98.55**	**61**	PFAKE		14 08 40.0	+6.5
JCT				LR	LR		
	comp=Z,5µm,20.0s						
JCT	**Junction City**	**98.55**	**61**	Pdiff	**P**	**14 08 32.9**	**-0.6**
	baz=262						
NIL	**Nilore**	**98.58**	**303**	PFAKE		14 08 40.0	+6.4
NIL				LR	LR		
	comp=Z,2µm,22.0s						
FRU1	**Bishkek**	**98.62**	**312**	PFAKE		14 08 40.0	+6.4
FRU1				LR	LR		
	comp=Z,1µm,20.0s						
833A	**Chaparral WMA,**	**98.62**	**63**	PFAKE		14 08 40.0	+6.2
833A				LR	LR		
	comp=Z,3µm,20.0s						
833A	**Chaparral WMA,**	**98.62**	**63**	Pdiff	**P**	**14 08 33.6**	**-0.2**
	baz=262						
AAK	**Ala-Archa**	**98.70**	**312**	PFAKE		14 08 40.0	+6.0
AAK				LR	LR		
	comp=Z,1µm,20.0s						
ABTX	**Abilene, Hawle**	**98.96**	**58**	PFAKE		14 08 50.0	+15
ABTX				LR	LR		
	comp=Z,5µm,20.0s						
ABTX	**Abilene, Hawle**	**98.96**	**58**	Pdiff	**P**	**14 08 34.6**	**-0.7**
	baz=263						
CBKS	**Cedar Bluff**	**99.59**	**52**	PFAKE		14 08 50.0	+12
CBKS				LR	LR		
	comp=Z,2µm,20.0s						
CBKS	**Cedar Bluff**	**99.59**	**52**	Pdiff	**Pdif**	**14 08 38.1**	**+0.1**
	baz=264						
FFC	**Flin Flon**	**99.61**	**36**	*e*P	**Pdif**	**14 08 36.9**	**-0.6**
	comp=Z,80nm,1.8s						
FFC				LR	LR		
	comp=Z,3µm,20.0s						
FFC	**Flin Flon**	**99.61**	**36**	*e*P	**Pdif**	**14 08 36.9**	**-0.6**
FFC				pmax	pmax		
	comp=Z,80nm,1.8s						
FFC				MLR	MLR		
	comp=Z,3µm,20.0s						
U32A	**Winter Ranch,**	**99.92**	**55**	PFAKE		14 08 50.0	+11
U32A				LR	LR		
	comp=Z,3µm,21.0s						
WMOK	**Wichita Mounta**	**99.92**	**56**	PFAKE		14 08 50.0	+11
WMOK				LR	LR		
	comp=Z,4µm,20.0s						
WMOK	**Wichita Mounta**	**99.92**	**56**	Pdiff	**Pdif**	**14 08 39.1**	**-0.4**
	baz=264						
LVIG	**Laguna Verde**	**100.17**	**72**	PFAKE		14 08 50.0	+9.2
LVIG				LR	LR		
	comp=Z,3µm,22.0s						
435B	**Jarrell**	**100.49**	**61**	PFAKE		14 08 50.0	+7.9
435B				LR	LR		
	comp=Z,5µm,19.0s						
435B	**Jarrell**	**100.49**	**61**	Pdiff	**Pdif**	**14 08 41.9**	**-0.2**
	baz=264						
MDND	**Maddock**	**100.53**	**43**	PFAKE		14 08 50.0	+8.2
MDND				LR	LR		
	comp=Z,2µm,20.0s						
MDND	**Maddock**	**100.53**	**43**	Pdiff	**Pdif**	**14 08 41.8**	**-0.1**
	baz=266						
SUSD	**Miller**	**100.71**	**47**	Pdiff	**Pdif**	**14 08 42.2**	**-0.5**
	baz=265						
WHTX	**Lake Whitney,**	**100.73**	**59**	Pdiff	**Pdif**	**14 08 42.6**	**-0.5**
	baz=264						
BGNE	**Belgrade**	**101.05**	**50**	PFAKE		14 09 00.0	+16
BGNE				LR	LR		
	comp=Z,4µm,20.0s						
BGNE	**Belgrade**	**101.05**	**50**	Pdiff	**Pdif**	**14 08 44.3**	**0.0**
	baz=265						
BTK	**Batken**	**101.20**	**309**	PFAKE		14 09 00.0	+15
BTK				LR	LR		
	comp=Z,1µm,21.0s						
KSU1	**Kansas State U**	**102.05**	**52**	PFAKE		14 09 00.0	+11
KSU1				LR	LR		
	comp=Z,3µm,20.0s						
KSU1	**Kansas State U**	**102.05**	**52**	Pdiff	**Pdif**	**14 08 49.0**	**+0.1**
	baz=266						
BRVK	**Borovoye**	**102.29**	**322**	*e*Pdif	**Pdif**	**14 08 48.5**	**-1.0**
	comp=Z,25nm,1.2s						
BRVK				LR	LR		
	comp=Z,1µm,20.0s						
BRVK	**Borovoye**	**102.29**	**322**	⇑ *e*P	**Pdif**	**14 08 49.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,14nm,1.9s						
ECSD	**EROS Data Cent**	**102.34**	**47**	PFAKE		14 09 00.0	+10
ECSD				LR	LR		
	comp=Z,2µm,18.0s						
ECSD	**EROS Data Cent**	**102.34**	**47**	Pdiff	**Pdif**	**14 08 49.4**	**-0.7**
	baz=267						
TUL1	**Leonard**	**102.46**	**55**	PFAKE		14 09 00.0	+9.3
TUL1				LR	LR		
	comp=Z,4µm,21.0s						
TUL1	**Leonard**	**102.46**	**55**	Pdiff	**Pdif**	**14 08 47.5**	**-3.2**
	baz=266						
RES	**Resolute Bay**	**102.63**	**16**	*e*Pdif	**Pdif**	**14 08 48.9**	**-1.7**
	comp=Z,8.0nm,1.6s						
RES	**Resolute Bay**	**102.63**	**16**	Pdiff	**Pdif**	**14 08 51.2**	**+0.6**
	comp=Z,1.3nm,1.0s,baz=230,slow=1.5,SNR=5.3						
NATX	**Nacogdoches**	**103.07**	**60**	PFAKE		14 09 00.0	+6.5
NATX				LR	LR		
	comp=Z,4µm,19.0s						
NATX	**Nacogdoches**	**103.07**	**60**	Pdiff	**Pdif**	**14 08 53.4**	**-0.2**
	baz=265						
ULM	**Lac du Bonnet**	**103.10**	**41**	*e*Pdif	**Pdif**	**14 08 52.6**	**-0.6**
ULM	**Lac du Bonnet**	**103.10**	**41**	*e*P	**Pdif**	**14 08 52.6**	**-0.6**
ULM	**Lac du Bonnet**	**103.10**	**41**	Pdiff	**Pdif**	**14 08 53.4**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=243,slow=6.3,SNR=5.4						
W39A	**Magazine**	**104.05**	**56**	PFAKE		14 09 10.0	+12
W39A				LR	LR		
	comp=Z,3µm,20.0s						
W39A	**Magazine**	**104.05**	**56**	Pdiff	**Pdif**	**14 08 54.6**	**-3.2**
	baz=267						
FCC	**Fort Churchill**	**104.05**	**32**	*e*Pdif	**Pdif**	**14 08 56.5**	**-0.7**
FCC				LR	LR		
	comp=Z,3µm,21.0s						
FCC	**Fort Churchill**	**104.05**	**32**	*e*P	**Pdif**	**14 08 56.5**	**-0.7**
FCC				MLR	MLR		
	comp=Z,3µm,21.0s						
MIAR	**Mount Ida**	**104.18**	**57**	PFAKE		14 09 10.0	+12
MIAR				LR	LR		
	comp=Z,5µm,20.0s						
MIAR	**Mount Ida**	**104.18**	**57**	Pdiff	**Pdif**	**14 08 56.1**	**-2.2**
	baz=266						
Z41A	**Richland Creek**	**104.74**	**58**	PFAKE		14 09 10.0	+9.1
Z41A				LR	LR		
	comp=Z,5µm,19.0s						
Z41A	**Richland Creek**	**104.74**	**58**	Pdiff	**Pdif**	**14 09 00.9**	**0.0**
	baz=267						
SCIA	**State Center**	**104.77**	**49**	PFAKE		14 09 10.0	+9.2
SCIA				LR	LR		
	comp=Z,4µm,20.0s						
SCIA	**State Center**	**104.77**	**49**	Pdiff	**Pdif**	**14 09 02.2**	**+1.4**
	baz=269						
X40A	**Basin Creek Fa**	**104.79**	**57**	PFAKE		14 09 10.0	+8.9
X40A				LR	LR		
	comp=Z,4µm,20.0s						
X40A	**Basin Creek Fa**	**104.79**	**57**	Pdiff	**Pdif**	**14 09 02.8**	**+1.7**
	baz=267						
U40A	**Yellville**	**104.86**	**55**	Pdiff	**Pdif**	**14 09 02.6**	**+1.3**
	baz=267						
SPMN	**Marine on St.**	**105.11**	**46**	PFAKE		14 13 30.0	+13
SPMN				LR	LR		
	comp=Z,3µm,20.0s						
UALR	**University of**	**105.21**	**57**	PFAKE		14 13 30.0	+13
UALR				LR	LR		
	comp=Z,5µm,20.0s						
W41B	**Gary Mavity, V**	**105.30**	**56**	PFAKE		14 13 30.0	+13
W41B				LR	LR		
	comp=Z,6µm,20.0s						
E38A	**The Farm, Brul**	**105.97**	**45**	PFAKE		14 13 30.0	+12
E38A				LR	LR		
	comp=Z,3µm,20.0s						
EYMN	**Ely**	**105.98**	**43**	PFAKE		14 13 30.0	+12
EYMN				LR	LR		
	comp=Z,2µm,21.0s						
CCM	**Cathedral Cave**	**106.20**	**53**	PFAKE		14 13 30.0	+11
CCM				LR	LR		
	comp=Z,2µm,21.0s						
L40A	**Anamosa**	**106.26**	**49**	PFAKE		14 13 30.0	+11
L40A				LR	LR		
	comp=Z,5µm,19.0s						
T42A	**Van Buren**	**106.30**	**55**	PFAKE		14 13 30.0	+11
T42A				LR	LR		
	comp=Z,4µm,20.0s						
X43A	**Marvell**	**106.40**	**57**	PFAKE		14 13 30.0	+11
X43A				LR	LR		
	comp=Z,2µm,18.0s						
N41A	**Harden Midland**	**106.53**	**51**	PFAKE		14 13 30.0	+10
N41A				LR	LR		
	comp=Z,3µm,22.0s						
MYIG	**Mrida**	**106.54**	**71**	PFAKE		14 13 30.0	+10
MYIG				LR	LR		
	comp=Z,2µm,20.0s						
P42A	**Winchester**	**106.92**	**52**	PFAKE		14 13 30.0	+10
P42A				LR	LR		
	comp=Z,2µm,18.0s						
G40A	**Rib Lake**	**106.95**	**46**	PFAKE		14 13 30.0	+10
G40A				LR	LR		
	comp=Z,2µm,20.0s						
SLM	**Saint Louis**	**107.00**	**53**	PFAKE		14 13 30.0	+10
SLM				LR	LR		
	comp=Z,2µm,22.0s						
MET	**Memphis--Engin**	**107.19**	**57**	PFAKE		14 13 30.0	+9.1
MET				LR	LR		
	comp=Z,5µm,18.0s						
I41A	**Arkdale**	**107.22**	**47**	PFAKE		14 13 30.0	+9.3
I41A				LR	LR		
	comp=Z,3µm,19.0s						
H41A	**Junction City**	**107.36**	**47**	PFAKE		14 13 30.0	+9.1
H41A				LR	LR		
	comp=Z,2µm,18.0s						
PVMO	**Portageville**	**107.41**	**55**	PFAKE		14 13 30.0	+8.7
PVMO				LR	LR		
	comp=Z,3µm,21.0s						
L42A	**Oliver, Polo**	**107.42**	**49**	PFAKE		14 13 30.0	+8.9
L42A				LR	LR		
	comp=Z,4µm,20.0s						
C40A	**Isle Royale Na**	**107.56**	**43**	PFAKE		14 13 30.0	+8.8
C40A				LR	LR		
	comp=Z,2µm,19.0s						
OXF	**Oxford**	**107.61**	**57**	PFAKE		14 13 30.0	+8.3
OXF				LR	LR		
	comp=Z,3µm,20.0s						
COWI	**Conover**	**107.66**	**45**	PFAKE		14 13 30.0	+8.5
COWI				LR	LR		
	comp=Z,3µm,22.0s						
F41A	**Three Lakes**	**107.70**	**45**	PFAKE		14 13 30.0	+8.4
F41A				LR	LR		
	comp=Z,4µm,21.0s						
HDIL	**Hopedale**	**107.72**	**51**	PFAKE		14 13 30.0	+8.3
HDIL				LR	LR		
	comp=Z,4µm,22.0s						
SIUC	**Southern Illin**	**107.80**	**54**	PFAKE		14 13 30.0	+8.0
SIUC				LR	LR		
	comp=Z,4µm,20.0s						
TEIG	**Tepich**	**107.84**	**72**	PFAKE		14 13 30.0	+7.5
TEIG				LR	LR		
	comp=Z,2µm,21.0s						
Q44A	**Meyer Farm, Va**	**107.95**	**53**	PFAKE		14 13 30.0	+7.8
Q44A				LR	LR		
	comp=Z,3µm,20.0s						
D41A	**Chassel**	**108.00**	**44**	PFAKE		14 13 30.0	+7.9
D41A				LR	LR		
	comp=Z,4µm,20.0s						
H42A	**Shiocton**	**108.17**	**47**	PFAKE		14 13 30.0	+7.6
H42A				LR	LR		
	comp=Z,3µm,20.0s						
G42A	**Mountain**	**108.20**	**46**	PFAKE		14 13 30.0	+7.5
G42A				LR	LR		
	comp=Z,3µm,20.0s						
T45A	**Paducah**	**108.26**	**55**	PFAKE		14 13 30.0	+7.2
T45A				LR	LR		
	comp=Z,4µm,19.0s						
K43A	**Burlington**	**108.39**	**49**	PFAKE		14 13 30.0	+7.1
K43A				LR	LR		
	comp=Z,3µm,18.0s						
147A	**Livingston**	**108.53**	**59**	PFAKE		14 13 30.0	+6.5
147A				LR	LR		
	comp=Z,4µm,20.0s						
M44A	**Midewin, Midew**	**108.65**	**50**	PFAKE		14 13 30.0	+6.6
M44A				LR	LR		
	comp=Z,3µm,19.0s						
H43A	**Windswept, Lux**	**108.71**	**47**	PFAKE		14 13 30.0	+6.5
H43A				LR	LR		
	comp=Z,2µm,20.0s						
PLAL	**Pickwick Lake**	**108.72**	**57**	PFAKE		14 13 30.0	+6.2
PLAL				LR	LR		
	comp=Z,3µm,20.0s						
G43A	**Wallace**	**108.72**	**46**	PFAKE		14 13 30.0	+6.5
G43A				LR	LR		
	comp=Z,2µm,19.0s						
ARU	**Arti**	**108.85**	**326**	PFAKE		14 13 30.0	+6.7
ARU				LR	LR		
	comp=Z,2µm,18.0s						
ESTN	**Estel**	**108.90**	**80**	PFAKE		14 13 40.0	+15
ESTN				LR	LR		
	comp=Z,6µm,21.0s						
WVT	**Waverly**	**108.92**	**55**	*e*Pdif	**Pdif**	**14 09 17.7**	**-1.7**
WVT				LR	LR		
	comp=Z,4µm,22.0s						
WVT	**Waverly**	**108.92**	**55**	*e*P	**Pdif**	**14 09 17.7**	**-1.7**
WVT				MLR	MLR		
	comp=Z,4µm,22.0s						
P45A	**Graceland, Par**	**108.93**	**52**	PFAKE		14 13 40.0	+16
P45A				LR	LR		
	comp=Z,3µm,19.0s						
USIN	**University of**	**109.03**	**54**	PFAKE		14 13 40.0	+16
USIN				LR	LR		
	comp=Z,5µm,19.0s						
E43A	**Lone Tree Farm**	**109.13**	**45**	PFAKE		14 13 40.0	+16
E43A				LR	LR		
	comp=Z,2µm,20.0s						
SFIN	**Lafayette**	**109.40**	**51**	PFAKE		14 13 40.0	+15
SFIN				LR	LR		
	comp=Z,4µm,18.0s						
BOAB	**BOACO BROADBAN**	**109.50**	**81**	PFAKE		14 13 40.0	+14
BOAB				LR	LR		
	comp=Z,4µm,22.0s						
BRAL	**Brewton**	**109.54**	**61**	PFAKE		14 13 40.0	+15
BRAL				LR	LR		
	comp=Z,3µm,20.0s						
X48A	**Hartselle**	**109.57**	**57**	PFAKE		14 13 40.0	+15
X48A				LR	LR		
	comp=Z,3µm,22.0s						
LRAL	**Lakeview Retre**	**109.60**	**59**	PFAKE		14 13 40.0	+15
LRAL				LR	LR		
	comp=Z,5µm,19.0s						
V48A	**Smith Brothers**	**109.74**	**56**	PFAKE		14 13 40.0	+14
V48A				LR	LR		
	comp=Z,3µm,20.0s						
BLO	**Bloomington**	**109.89**	**52**	PFAKE		14 13 40.0	+14
BLO				LR	LR		
	comp=Z,3µm,20.0s						
JTS	**JuntasAbangare**	**109.91**	**83**	PFAKE		14 13 40.0	+13
JTS				LR	LR		
	comp=Z,2µm,21.0s						
M46A	**Old House Fiel**	**109.92**	**50**	PFAKE		14 13 40.0	+14
M46A				LR	LR		
	comp=Z,3µm,19.0s						
Y49A	**Blount Mountai**	**110.09**	**58**	PFAKE		14 13 40.0	+14
Y49A				LR	LR		
	comp=Z,4µm,20.0s						
WCI	**Wyandotte Cave**	**110.10**	**53**	PFAKE		14 13 40.0	+14
WCI				LR	LR		
	comp=Z,5µm,20.0s						
PEL	**Peldehue**	**110.20**	**131**	PFAKE		14 13 40.0	+13
PEL				LR	LR		
	comp=Z,2µm,18.0s						
250A	**Grady**	**110.22**	**60**	PFAKE		14 13 40.0	+13
250A				LR	LR		
	comp=Z,2µm,20.0s						
Z50A	**Ashland**	**110.51**	**59**	PFAKE		14 13 40.0	+13
Z50A				LR	LR		
	comp=Z,4µm,20.0s						
451A	**Vernon**	**110.65**	**61**	PFAKE		14 13 40.0	+12
451A				LR	LR		
	comp=Z,3µm,20.0s						
HDC	**Heredia**	**110.69**	**83**	PFAKE		14 13 40.0	+12
HDC				LR	LR		
	comp=Z,2µm,19.0s						
T49A	**Edmonton**	**110.75**	**54**	PFAKE		14 13 40.0	+12
T49A				LR	LR		
	comp=Z,3µm,20.0s						
ESPN	**Las Esperanzas**	**110.79**	**81**	PFAKE		14 13 40.0	+12
ESPN				LR	LR		
	comp=Z,2µm,20.0s						
GLMI	**Grayling**	**110.93**	**46**	PFAKE		14 13 40.0	+12
GLMI				LR	LR		
	comp=Z,2µm,20.0s						
W50A	**Signal Mountai**	**110.98**	**56**	PFAKE		14 13 40.0	+12
W50A				LR	LR		
	comp=Z,4µm,20.0s						
GYA0B	**ALIBECK ARRAY**	**111.05**	**306**	PFAKE		14 13 40.0	+12
GYA0B				LR	LR		
	comp=Z,900nm,22.0s						
M48A	**Edgerton**	**111.14**	**50**	PFAKE		14 13 40.0	+12
M48A				LR	LR		
	comp=Z,4µm,21.0s						
X51A	**Calhoun**	**111.37**	**57**	PFAKE		14 13 40.0	+11
X51A				LR	LR		
	comp=Z,3µm,19.0s						
O49A	**Covington**	**111.52**	**51**	PFAKE		14 13 40.0	+11
O49A				LR	LR		

	comp=Z,2µm,19.0s						
152A	**Waverly Hall**	111.52	59	PFAKE		14 13 40.0	+11
152A				LR	LR		
	comp=Z,4µm,20.0s						
N49A	**Columbus Grove**	111.58	50	PFAKE		14 13 40.0	+11
N49A				LR	LR		
	comp=Z,4µm,22.0s						
V51A	**Loudon**	111.75	56	PFAKE		14 13 40.0	+11
V51A				LR	LR		
	comp=Z,3µm,20.0s						
AAM	**Ann Arbor**	111.86	49	PFAKE		14 13 40.0	+11
AAM				LR	LR		
	comp=Z,5µm,19.0s						
453A	**Whigham**	111.88	61	PFAKE		14 13 40.0	+10
453A				LR	LR		
	comp=Z,3µm,19.0s						
253A	**Americus**	112.03	60	PFAKE		14 13 40.0	+10
253A				LR	LR		
	comp=Z,2µm,20.0s						
Y52A	**Lilburn**	112.05	58	PFAKE		14 13 40.0	+10
Y52A				LR	LR		
	comp=Z,4µm,20.0s						
LCO	**Las Campanas**	112.10	127	PFAKE		14 13 40.0	+9.3
LCO				LR	LR		
	comp=Z,2µm,19.0s						
W52A	**Murphy**	112.12	57	PFAKE		14 13 40.0	+10
W52A				LR	LR		
	comp=Z,3µm,20.0s						
TKL	**Tuckaleechee C**	112.22	56	PFAKE		14 13 40.0	+10
TKL				LR	LR		
	comp=Z,4µm,20.0s						
S51A	**Beattyville**	112.26	54	PFAKE		14 13 40.0	+10
S51A				LR	LR		
	comp=Z,4µm,21.0s						
V52A	**Sevierville**	112.36	56	PFAKE		14 13 40.0	+9.4
V52A				LR	LR		
	comp=Z,4µm,20.0s						
TZTN	**Tazewell**	112.36	55	PFAKE		14 13 40.0	+9.4
TZTN				LR	LR		
	comp=Z,2µm,20.0s						
Q51A	**Peebles**	112.37	52	PFAKE		14 13 40.0	+9.4
Q51A				LR	LR		
	comp=Z,5µm,19.0s						
M50A	**Fremont**	112.40	50	PFAKE		14 13 40.0	+9.5
M50A				LR	LR		
	comp=Z,3µm,20.0s						
TIGA	**Tifton**	112.50	60	PFAKE		14 13 40.0	+9.0
TIGA				LR	LR		
	comp=Z,2µm,18.0s						
ACSO	**Alum Creek Sta**	112.55	51	PFAKE		14 13 40.0	+9.1
ACSO				LR	LR		
	comp=Z,3µm,19.0s						
P51A	**Williamsport**	112.55	52	PFAKE		14 13 40.0	+9.1
P51A				LR	LR		
	comp=Z,2µm,22.0s						
GOGA	**Godfrey**	112.56	58	PFAKE		14 13 40.0	+8.9
GOGA				LR	LR		
	comp=Z,4µm,20.0s						
UOSS	**Minazif**	112.80	293	PFAKE		14 13 40.0	+8.2
UOSS				LR	LR		
	comp=Z,700nm,19.0s						
154A	**Montrose**	112.89	59	PFAKE		14 13 40.0	+8.3
154A				LR	LR		
	comp=Z,4µm,20.0s						
V53A	**Saluda**	113.00	56	PFAKE		14 13 40.0	+8.1
V53A				LR	LR		
	comp=Z,4µm,20.0s						
555A	**McAlpin**	113.05	62	PFAKE		14 13 40.0	+7.9
555A				LR	LR		
	comp=Z,2µm,20.0s						
NNA	**Nana**	113.13	108	PFAKE		14 13 40.0	+7.2
NNA				LR	LR		
	comp=Z,1µm,20.0s						
ABPO	**Ambohimpanom**	113.21	244	PFAKE		14 13 40.0	+7.0
ABPO				LR	LR		
	comp=Z,4µm,22.0s						
O52A	**Adamsville**	113.44	51	PFAKE		14 13 40.0	+7.4
O52A				LR	LR		
	comp=Z,4µm,20.0s						
656A	**Willston**	113.44	63	PFAKE		14 13 40.0	+7.2
656A				LR	LR		
	comp=Z,2µm,20.0s						
255A	**Hazlehurst**	113.44	60	PFAKE		14 13 40.0	+7.2
255A				LR	LR		
	comp=Z,3µm,20.0s						
957A	**Wimauma**	113.71	65	PFAKE		14 13 40.0	+6.6
957A				LR	LR		
	comp=Z,2µm,20.0s						
P53A	**Whipple**	113.84	52	PFAKE		14 13 40.0	+6.6
P53A				LR	LR		
	comp=Z,3µm,18.0s						
456A	**Hilliard**	113.86	61	PFAKE		14 13 40.0	+6.4
456A				LR	LR		
	comp=Z,2µm,20.0s						
KMSC	**Kings Mountain**	114.24	56	PFAKE		14 13 50.0	+16
KMSC				LR	LR		
	comp=Z,3µm,20.0s						
DWPF	**Disney Wildern**	114.42	64	PFAKE		14 13 50.0	+15
DWPF				LR	LR		
	comp=Z,2µm,21.0s						
658A	**Bunnell**	114.55	63	PFAKE		14 13 50.0	+15
658A				LR	LR		
	comp=Z,2µm,19.0s						
ERPA	**Erie**	114.59	49	PFAKE		14 13 50.0	+15
ERPA				LR	LR		
	comp=Z,4µm,18.0s						
OTAV	**Otavalo**	114.63	95	PFAKE		14 13 50.0	+14
OTAV				LR	LR		
	comp=Z,2µm,20.0s						
257A	**Skidaway Islan**	114.67	60	PFAKE		14 13 50.0	+15
257A				LR	LR		
	comp=Z,2µm,20.0s						
059A	**Moore Haven**	114.68	65	PFAKE		14 13 50.0	+15
059A				LR	LR		
	comp=Z,2µm,20.0s						
GO02	**Mina Guanaco**	114.70	124	PFAKE		14 13 50.0	+14
GO02				LR	LR		
	comp=Z,2µm,19.0s						
N54A	**Moraine State**	114.74	50	PFAKE		14 13 50.0	+15
N54A				LR	LR		
	comp=Z,2µm,20.0s						
BCIP	**Isla Barro Col**	114.76	85	PFAKE		14 13 50.0	+14
BCIP				LR	LR		
	comp=Z,2µm,20.0s						
SADO	**Sadowa**	114.80	46	PFAKE		14 13 50.0	+15
SADO				LR	LR		
	comp=Z,2µm,20.0s						
BLA	**Blacksburg**	114.81	54	PFAKE		14 13 50.0	+15
BLA				LR	LR		
	comp=Z,3µm,18.0s						
061Z	**Ochoppi**	114.89	66	PFAKE		14 13 50.0	+14
061Z				LR	LR		
	comp=Z,2µm,20.0s						
M54A	**Oil Creek Stat**	114.91	49	PFAKE		14 13 50.0	+15
M54A				LR	LR		
	comp=Z,5µm,20.0s						
MCWV	**Mont Chateau**	115.01	51	PFAKE		14 13 50.0	+14
MCWV				LR	LR		
	comp=Z,2µm,18.0s						
VLDQ	**Val d'Or**	115.30	42	PFAKE		14 13 50.0	+14
VLDQ				LR	LR		
	comp=Z,2µm,20.0s						
NHSC	**New Hope**	115.33	59	PFAKE		14 13 50.0	+14
NHSC				LR	LR		
	comp=Z,4µm,21.0s						
060A	**Indiantown**	115.38	65	PFAKE		14 13 50.0	+13
060A				LR	LR		
	comp=Z,2µm,20.0s						
APA	**Apatity**	115.45	342	⇓*i*PKIKP	PKPdf	14 13 36.0	+0.4
APA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
O56A	**Blue Knob Stat**	115.91	50	PFAKE		14 13 50.0	+13
O56A				LR	LR		
	comp=Z,4µm,20.0s						
MMNY	**Mt. Morris Dam**	116.02	48	PFAKE		14 13 50.0	+13
MMNY				LR	LR		
	comp=Z,2µm,20.0s						
ARCES	**ARCESS Array B**	116.30	346	PKP	PKiKP	14 13 36.7	-0.5
	comp=Z,3.3nm,0.7s,baz=70,slow=1.4,SNR=9.3						
SSPA	**Standing Stone**	116.37	50	PFAKE		14 13 50.0	+12
SSPA				LR	LR		
	comp=Z,4µm,20.0s						
PB01	**IPOC Station P**	116.54	120	PFAKE		14 13 50.0	+11
PB01				LR	LR		
	comp=Z,2µm,20.0s						
R58B	**Mineral**	116.74	53	PFAKE		14 13 50.0	+11
R58B				LR	LR		
	comp=Z,5µm,20.0s						
KLMR	**Klimovskoe**	116.86	334	*e*PKIKP	PKiKP	14 13 42.2	+3.8
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
KLMR	**Klimovskoe**	116.86	334	*e*PKPdf	PKiKP	14 13 42.3	+3.8
KLMR				AMP		14 13 57.0	
	comp=Z,16nm,1.6s						
PB11	**IPOC Station P**	116.92	119	PFAKE		14 13 50.0	+10
PB11				LR	LR		
	comp=Z,2µm,22.0s						
CBN	**Corbin Frederi**	117.10	53	PFAKE		14 13 50.0	+10
CBN				LR	LR		
	comp=Z,4µm,20.0s						
MNMC	**Minye Minye**	117.22	118	PFAKE		14 13 50.0	+9.2
MNMC				LR	LR		
	comp=Z,2µm,22.0s						
PAGS	**Pennsylvania G**	117.31	50	PFAKE		14 13 50.0	+10
PAGS				LR	LR		
	comp=Z,5µm,18.0s						
SDMD	**Soldier’s Deli**	117.34	51	PFAKE		14 13 50.0	+10
SDMD				LR	LR		
	comp=Z,1µm,19.0s						
BINY	**Binghamton**	117.51	48	PFAKE		14 13 50.0	+10
BINY				LR	LR		
	comp=Z,3µm,20.0s						
KSPA	**Keystone Colle**	117.79	49	PFAKE		14 13 50.0	+9.1
KSPA				LR	LR		
	comp=Z,5µm,19.0s						
N59A	**State Game Lan**	117.91	49	PFAKE		14 13 50.0	+8.8
N59A				LR	LR		
	comp=Z,4µm,21.0s						
LONY	**Lake Ozonia**	118.02	45	PFAKE		14 13 50.0	+8.7
LONY				LR	LR		
	comp=Z,2µm,19.0s						
MAK	**Makhachkala**	118.44	313	*i* P	Pdif	14 09 55.9	-5.6
MAK				*e*		14 20 27.9	
MAK				pmax	pmax		
	comp=Z,199nm,0.9s						
FRNY	**Flat Rock**	118.66	45	PFAKE		14 13 50.0	+7.5
FRNY				LR	LR		
	comp=Z,3µm,18.0s						
PAL	**Palisades**	119.27	49	PFAKE		14 13 50.0	+6.2
PAL				LR	LR		
	comp=Z,3µm,21.0s						
SCHQ	**Schefferville**	119.44	32	PFAKE		14 13 50.0	+6.3
SCHQ				LR	LR		
	comp=Z,2µm,20.0s						
VRH	**Novokhopyorsk**	119.83	323	*e*PKIKP	PKPdf	14 13 43.5	-1.0
VRH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MOS	**Moscow**	120.16	329	*e*PKIKP	PKPpre	14 13 39.0	
HRV	**Adam Dziewonsk**	120.65	47	PFAKE		14 14 00.0	+14
HRV				LR	LR		
	comp=Z,4µm,21.0s						
LPSR	**Galich'ya Gora**	120.87	326	*e*PKIKP	PKPdf	14 13 46.3	-0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	**Obninsk**	120.99	329	*i* PKIKP	PKiKP	14 13 47.1	+0.4
OBN				*e*		14 15 15.5	
OBN				*e*PPP	PPP	14 17 51.7	
OBN				pmax	pmax		
	comp=Z,11nm,1.1s						
OBN				MLR	MLR		
	comp=Z,965nm,21.0s						
VSR	**Storozhevoye**	121.31	324	*e*PKIKP	PKPdf	14 13 47.2	-0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KBZ	**Khabaz**	121.51	315	PP	PP	14 15 18.2	-1.6
	comp=Z,3.4nm,1.1s,baz=102,slow=7.0,SNR=4.5						
KIV	**Kislovodsk**	121.59	315	*i* PKIKP	PKiKP	14 13 50.9	+2.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,721nm,24.0s						
FINES	**FINESS Array B**	121.83	339	PKP	PKPdf	14 13 46.8	-1.2
	comp=Z,3.2nm,0.9s,baz=339,slow=4.7,SNR=5.1						
CPUP	**Villa Florida**	123.63	132	*e*PKPdf	PKPdf	14 13 51.7	-0.9
CPUP	**Villa Florida**	123.63	132	PKP	PKPdf	14 13 51.4	-1.2
	comp=Z,3.5nm,0.7s,baz=326,slow=2.0,SNR=9.3						
SDV	**Santo Domingo**	123.74	86	*e*PKPdf	PKPdf	14 13 51.9	-1.4
ATD	**Arta Tunnel**	124.80	277	PFAKE		14 14 10.0	+15
ATD				LR	LR		
	comp=Z,2µm,19.0s						
ANN	**Anapa**	124.87	318	*i* PKIKP	PKPdf	14 13 52.3	-2.0
ANN				*e*		14 15 38.7	
ANN				*e*PPP	PPP	14 18 17.8	
ANN				*e*		14 20 54.8	
ANN				*e*SS	SS	14 32 35.1	-1.1
ANN				pmax	pmax		
	comp=Z,27nm,1.0s						
SDD	**Santo Domingo**	125.06	75	PFAKE		14 14 10.0	+14
SDD				LR	LR		
	comp=Z,2µm,19.0s						
MICGM	**Minsk**	125.55	332	*e*	PKiKP	14 14 01.0	+5.3
MICGM				*e*		14 15 40.0	
MNK	**Minsk**	125.55	332	*e*PKIKP	PKiKP	14 14 01.0	+5.3
BOSA	**Boshof**	125.79	223	*e*PKPdf	PKPdf	14 13 55.2	-1.6
BOSA	**Boshof**	125.79	223	*e*PKIKP	PKPdf	14 13 55.3	-1.6
BOSA	**Boshof**	125.79	223	PKP	PKPdf	14 13 56.5	-0.3
	comp=Z,4.3nm,0.7s,baz=83,slow=1.5,SNR=9.1						
NACGM	**Naroch**	125.81	333	*e*	PKiKP	14 14 02.0	+5.8
NACGM				*e*LR	LR	15 04 46.0	
GBN	**Guysborough**	126.53	41	PFAKE		14 14 10.0	+12
GBN				LR	LR		
	comp=Z,3µm,20.0s						
NB2	**NORSAR Subarra**	126.67	345	PKPdf	PKPdf	14 13 56.8	-0.6
	comp=Z,6.6nm,1.0s,baz=35,slow=2.0						
NOA	**NORSAR Array B**	126.67	345	PKP	PKPdf	14 13 56.5	-0.9
	comp=Z,2.2nm,0.8s,baz=34,slow=2.0,SNR=6.9						
AKASG	**Malin Array Be**	127.07	327	PKP	PKPdf	14 13 58.2	-0.2
	comp=Z,0.2nm,0.3s,baz=48,slow=2.7,SNR=9.4						
AKASG				PP	PP	14 15 54.7	-2.0
	comp=Z,0.1nm,0.3s,baz=36,slow=6.2,SNR=4.6						
AK11	**Malin Array Si**	127.12	327	*e*PKPdf	PKPdf	14 13 57.1	-1.3
AGP	**Aguadilla**	127.70	75	PFAKE		14 14 10.0	+8.9
AGP				LR	LR		
	comp=Z,2µm,21.0s						
MPR	**Mayaguez**	127.70	75	PFAKE		14 14 10.0	+8.9
MPR				LR	LR		
	comp=Z,2µm,21.0s						
LBTB	**Lobatse**	127.84	226	*e*PKPdf	PKPdf	14 13 59.2	-1.6
LBTB	**Lobatse**	127.84	226	*e*PKIKP	PKPdf	14 13 59.2	-1.6
KMBO	**Kilima Mbogo**	128.16	260	PKP	PKPdf	14 14 01.7	-0.2
	comp=Z,0.8nm,0.4s,baz=31,slow=4.5,SNR=3.9						
KMBO				PP	PP	14 16 05.4	-0.2
	comp=Z,0.5nm,0.3s,baz=60,slow=20,SNR=2.7						
ICMP	**Isla Caja de M**	128.28	76	PFAKE		14 14 10.0	+7.8
ICMP				LR	LR		
	comp=Z,3µm,21.0s						
SJG	**San Juan**	128.64	75	*e*PKPdf	PKPdf	14 14 01.3	-1.0
SJG				LR	LR		
	comp=Z,1µm,20.0s						
SJG	**San Juan**	128.64	75	*e*PKIKP	PKPdf	14 14 01.3	-1.0
SJG				MLR	MLR		
	comp=Z,1µm,20.0s						
CBYP	**Canovanas**	128.92	75	PFAKE		14 14 10.0	+6.4
CBYP				LR	LR		
	comp=Z,2µm,22.0s						
HUMP	**Col San Antoni**	128.93	75	PFAKE		14 14 10.0	+6.5
HUMP				LR	LR		
	comp=Z,2µm,21.0s						
MTP	**Monte Pirata**	129.21	75	PFAKE		14 14 10.0	+5.9
MTP				LR	LR		
	comp=Z,2µm,22.0s						
CUPR	**Culebra, Puert**	129.46	75	PFAKE		14 14 10.0	+5.4
CUPR				LR	LR		
	comp=Z,2µm,22.0s						
STVI	**Saint Thomas**	129.78	75	PFAKE		14 14 20.0	+15
STVI				LR	LR		
	comp=Z,2µm,22.0s						
BUR04	**Bucovina Ar. S**	130.99	326	*e*PKPdf	PKPdf	14 14 05.5	-0.6
LSZ	**Lusaka**	131.25	239	PFAKE		14 14 20.0	+12
LSZ				LR	LR		
	comp=Z,3µm,22.0s						
SMRT	**St. Maarten**	131.57	75	PFAKE		14 14 20.0	+11
SMRT				LR	LR		
	comp=Z,2µm,20.0s						
SEUS	**St. Eustatius**	131.67	76	PFAKE		14 14 20.0	+11
SEUS				LR	LR		
	comp=Z,2µm,20.0s						
UZH	**Uzhgorod**	131.93	329	*e*PKHKP	PKPpre	14 13 53.4	
UZH				*i*		14 14 06.4	
UZH				*e*		14 14 16.5	
FDF	**Fort de France**	133.43	80	PFAKE		14 14 20.0	+7.2
FDF				LR	LR		
	comp=Z,2µm,20.0s						
MORC	**Moravsky Berou**	133.44	333	*e*PKP	PKiKP	14 14 13.3	+1.5
UPC	**Upice**	133.58	334	AMS	AMS	15 18 00.0	
	comp=Z,2µm,18.3s						
VYHS	**Vyhne**	133.74	330	*e*PKIKP	PKPdf	14 14 09.8	-1.4
VYHS				*e*		14 16 38.9	
VYHS	**Vyhne**	133.74	330	*e*PKP	PKPdf	14 14 09.8	-1.4
VYHS				*e*PP	PP	14 16 38.9	-0.9
BRG	**Berggiesshubel**	134.16	336	*e*PKP	PKPdf	14 14 12.0	+0.1
	comp=Z,193nm,2.8s						
BRG				*e*PP	PP	14 16 41.0	-1.2
	comp=Z,58nm,2.1s						
BRG				*e*SKP		14 17 47.0	
	comp=Z,125nm,2.8s						
	comp=N,2µm,21.8s						
	comp=E,806nm,17.6s						
	comp=Z,2µm,21.3s						
BRG	**Berggiesshubel**	134.16	336	*e*PKIKP	PKPdf	14 14 12.0	+0.1
BRG				*e*		14 16 41.0	
BRG				pmax	pmax		
	comp=Z,3.0nm,2.8s						
BRG				pmax	pmax		
	comp=Z,193nm,2.1s						
BRG				pmax	pmax		
	comp=N,58nm,2.8s						
BRG				MLR	MLR		
	comp=N,125µm,21.8s						
BRG				MLR	MLR		
	comp=E,2µm,17.6s						
BRG				MLR	MLR		
	comp=Z,806nm,21.3s						
PVCC	**Panska Ves**	134.17	335	AMS	AMS	15 13 20.0	
	comp=Z,2µm,20.9s						
CLL	**Collm**	134.19	337	*e*PKPdf	PKiKP	14 14 13.0	-0.2
CLL				*e*		14 14 20.0	
	comp=Z,48nm,1.7s						
CLL				*e*PP	PP	14 16 41.0	-1.4
CLL				*e*		14 17 23.0	
CLL				LmV		15 17 00.0	
	comp=N,600nm,20.4s						
CLL				LmV		15 17 00.0	
	comp=E,500nm,21.0s						
CLL				LmV		15 17 00.0	
	comp=Z,1µm,19.2s						
CLL	**Collm**	134.19	337	*e*PKIKP	PKiKP	14 14 13.0	-0.2
CLL				*e*		14 14 20.0	
CLL				MLR	MLR		
	comp=Z,1µm,19.2s						
VRAC	**Vranov**	134.21	333	*e*PKP	PKiKP	14 14 15.2	+1.8
KRUC	**Moravsky**	134.48	333	*e*PKP	PKiKP	14 14 15.7	+1.8
KRUC				*e*PP	PP	14 16 36.7	-7.7
MODS	**Modra-Piesok**	134.57	331	*e*PKIKP	PKiKP	14 14 15.8	+1.7
MODS	**Modra-Piesok**	134.57	331	*e*PKP	PKiKP	14 14 15.8	+1.7
PRA	**Prague**	134.58	335	AMS	AMS	15 18 50.0	
	comp=Z,2µm,13.8s						
MBAR	**Mbarara**	134.58	258	PFAKE		14 14 30.0	+15
MBAR				LR	LR		
	comp=Z,3µm,19.0s						
PRU	**Pruhonice**	134.60	335	AMS	AMS	15 18 50.0	
	comp=Z,1µm,13.6s						
TREC	**Trest**	134.71	333	AMS	AMS	15 13 50.0	
	comp=Z,1µm,16.5s						
CONA	**Conrad Observa**	135.55	332	*e*PKPdf	PKPdf	14 14 14.0	-0.6
	comp=Z,18nm,1.5s						
KHC	**Kasperske Hory**	135.66	335	*e*pPKP	pPKPdf	14 14 24.1	+1.7
KHC				AMS	AMS	15 19 20.0	
	comp=Z,2µm,19.3s						
GERES	**GERESS Array B**	135.82	334	PKhKP	PKPpre	14 14 10.1	
	comp=Z,0.4nm,0.2s,baz=57,slow=3.6,SNR=4.0						
GERES				PKP	PKPdf	14 14 15.4	+0.2
	comp=Z,1.3nm,0.8s,baz=90,slow=1.1,SNR=6.4						
GERES				PP	PP	14 16 51.4	-1.6
	comp=Z,0.4nm,0.6s,baz=51,slow=7.0,SNR=4.0						
GEA0	**GERESS Array S**	135.83	334	*e*PKPdf	PKPdf	14 14 13.8	-1.4
ARSA	**Arzberg**	136.20	331	*i* PKPdf	PKPdf	14 14 14.0	-1.8
	comp=Z,6.1nm,1.1s						
MOA	**Molln**	136.33	333	*i* PKPdf	PKPdf	14 14 15.3	-0.7
	comp=Z,18nm,1.9s						
SOKA	**Soboth**	136.84	331	*i* PKPdf	PKPdf	14 14 16.6	-0.5
	comp=Z,15nm,1.5s						
BDFB	**Brasilia**	136.88	127	PKhKP	PKPpre	14 14 13.9	
	comp=Z,2.4nm,0.6s,baz=162,slow=20,SNR=2.6						
OBKA	**Obir**	137.20	331	*i* PKPdf	PKPdf	14 14 16.6	-1.2
	comp=Z,18nm,1.6s						
TSUM	**Tsumeb**	137.24	226	PFAKE		14 14 30.0	+9.4
TSUM				LR	LR		
	comp=Z,4µm,20.0s						
KBA	**Koelnbreinsper**	137.32	333	*i* PKPdf	PKPdf	14 14 17.5	-0.6
	comp=Z,14nm,1.8s						
MYKA	**Terra Mystica**	137.53	332	*i* PKiKP	PKPdf	14 14 19.3	+0.9
	comp=Z,16nm,1.5s						
WATA	**Walderalm**	137.89	335	*e*PKiKP	PKiKP	14 14 21.0	-0.1
	comp=Z,18nm,1.2s						
ABTA	**Abfaltersbach**	137.95	333	*i* PKiKP	PKPdf	14 14 19.7	+0.5
	comp=Z,16nm,1.5s						
MOTA	**Moosalm**	138.09	335	*i* PKiKP	PKiKP	14 14 20.8	-0.7
	comp=Z,8.0nm,0.8s						
RETA	**Reutte**	138.11	335	*i* PKiKP	PKPdf	14 14 19.7	+0.3
	comp=Z,19nm,1.5s						
SQTA	**Sankt Quirin**	138.14	335	*i* pPKPdf	PKiKP	14 14 21.7	+0.1
	comp=Z,13nm,1.1s						
FETA	**Feichten**	138.50	335	*i* PKiKP	PKiKP	14 14 21.9	-0.5
	comp=Z,16nm,1.2s						
DAVA	**Damuels**	138.63	336	*i* PKiKP	PKiKP	14 14 22.2	-0.4
	comp=Z,14nm,1.3s						
KEST	**Kesra**	147.68	324	*e*PKPbc	PKPbc	14 14 38.5	-0.9
KEST	**Kesra**	147.68	324	PKPbc	PKPbc	14 14 39.9	+0.5
	comp=Z,13nm,0.9s,baz=308,slow=5.8,SNR=5.6						
PBRG	**Braganca**	148.56	350	*e*PKPdf	PKPab	14 14 45.6	+0.7
PGAV	**Gavieira, Arco**	148.63	352	*e*PKPdf	PKPab	14 14 45.4	+0.2
PCAB	**Cabril**	148.85	352	*e*PKPdf	PKiKP	14 14 44.0	+0.4
POLO	**Lamas de Olo**	149.15	352	*e*PKPdf	PKPbc	14 14 43.5	+0.4
PVRL	**Vila Real**	149.23	351	*e*PKPdf	PKiKP	14 14 44.0	-0.4
MVO	**Moncorvo**	149.24	350	*e*PKPdf	PKPbc	14 14 43.4	+0.1
PVIS	**Viseu**	149.81	352	*e*PKPdf	PKiKP	14 14 46.7	+1.0
ES19	**SONSECA Array**	149.99	345	*e*PKPbc	PKPbc	14 14 44.7	-0.5
ESDC	**Sonseca Array**	150.03	345	PKPbc	PKPbc	14 14 45.6	+0.4
	comp=Z,8.0nm,1.0s,baz=13,slow=2.7,SNR=9.6						
ESDC				PP	PP	14 18 19.2	+0.9
	comp=Z,0.1nm,0.3s,baz=4.3,slow=5.1,SNR=4.0						
MTE	**Manteigas**	150.06	351	*e*PKPab	PKPab	14 14 53.2	+2.1
PAB	**San Pablo**	150.25	346	*e*pPKPdf	PKPbc	14 14 43.9	-1.9
PAB	**San Pablo**	150.25	346	*e*PKIKP	PKPbc	14 14 43.9	-1.9
PCAS	**Casmilo, Conde**	150.54	352	*e*PKPab	PKPab	14 14 53.9	+1.0
PCBR	**Castelo Branco**	150.60	351	*e*PKPdf	PKiKP	14 14 47.3	+0.1
PTOM	**Tomar**	150.96	352	*e*PKPbc	PKiKP	14 14 48.0	0.0
PMRV	**Marv??o**	150.99	350	*e*PKPdf	PKPbc	14 14 45.5	-2.0
PMTG	**Montargil**	151.47	351	*e*PKPab	PKPab	14 14 58.4	+1.6
PESTR	**Estremoz**	151.57	350	*e*PKPdf	PKPdf	14 14 43.6	+0.9
PMAFR	**Mafra**	151.72	353	*e*PKPab	PKPab	14 14 58.7	+0.8
PBEJ	**Beja**	152.44	350	*e*PKPab	PKiKP	14 14 54.1	+3.0
PNCL	**Nicolau / Gran**	152.46	352	*e*PKPdf	PKPdf	14 14 43.6	-0.4
MESJ	**Messejana**	152.68	351	*e*PKPdf	PKPdf	14 14 44.8	+0.5
PVAQ	**Vaqueiros**	153.02	350	*e*PKPab	PKPab	14 15 04.0	+0.7
PTEO	**Sao Teotonio**	153.04	352	*e*PKPab	PKPab	14 15 05.2	+1.8
PBDV	**Barranco-do-Ve**	153.21	350	*e*PKPdf	PKPbc	14 14 50.6	-2.0
PFVI	**Vila Bisbo**	153.46	352	*e*PKPdf	PKiKP	14 14 53.4	+0.2
TOA0	**Torodi Ar. Sit**	164.96	280	*e*PKPdf	PKPdf	14 14 57.3	-2.1
TORD	**Torodi Ar. Bea**	164.96	280	PKP	PKPdf	14 14 57.9	-1.5
	comp=Z,3.3nm,1.1s,baz=346,slow=2.4,SNR=12						
TORD				PKPab	PKPab	14 15 55.5	-0.4
	comp=Z,1.8nm,0.9s,baz=61,slow=4.0,SNR=2.6						
TORD				PP	PP	14 19 41.9	-0.8
	comp=Z,1.4nm,1.0s,baz=116,slow=6.6,SNR=3.5						
DBIC	**Dimbokro**	170.52	245	*e*PKPdf	PKPdf	14 15 01.3	-2.1
DBIC				PKPab	PKPab	14 16 20.4	-0.1
DBIC	**Dimbokro**	170.52	245	*e*PKIKP	PKPdf	14 15 01.3	-2.1
DBIC						14 16 20.4	
DBIC	**Dimbokro**	170.52	245	PKP	PKPdf	14 15 02.0	-1.3
	comp=Z,12nm,1.2s,baz=146,slow=2.0,SNR=3.0						
DBIC				PKPab	PKPab	14 16 20.4	-0.1
	comp=Z,2.2nm,0.8s,baz=180,slow=3.0,SNR=2.6						

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*IDC **06** 13:56:11.6±0.8, 10°.82S×165°.30E, h0km, mb4.5/8, mb1 4.7/9, mb1mx4.4/38, mbtmp4.4/9, ML4.6/1, MS4.9/2, Ms1 4.9/2, ms1mx4.6/10, Error ellipse: s-maj=44.5km s-min=22.4km az=140.0*

*NEIC **06** 13:56:13.0±0.4, 10°.89S×165°.41E, h10km, mb4.6/1, Error ellipse: s-maj=10.5km s-min=8.0km az=92.0*

*ISCJB **06** 13:56:14.3±0.5, 11°.05S±0°.07×165°.35E±0°.09, h30km, mb4.5/10, MS4.9/2, Error ellipse: s-maj=12.0km*

s-min=9.4km az=177.0

ISC 06 13:56:16.5±0.7**, 10°.9S**±0°.1×**165°.4E**±0°.1**, h30**^{km}**, n26, σ1ˢ75**/27**, mb4.6**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.59	285	ePn	Pn	13 57 38.3	+0.6
MARNC	Mare, Loyalty	10.77	167	ePn	Pn	13 58 48.7	-0.1
DZM	Mont Dzumac	11.11	175	ePn	Pn	13 58 52.4	-1.0
DZM	Mont Dzumac	11.11	175	Pn	Pn	13 58 53.7	+0.2
	4.5nm,0.3s,baz=122,slow=13,SNR=6.7						
ONTNC	Ouen Toro	11.34	175	ePn	Pn	13 58 56.4	-0.2
OUENC	Ouen Island, N	11.49	173	ePn	Pn	13 58 58.5	-0.1
WR1	Warramunga Arr	31.22	250	eP	P	14 02 32.5	-1.0
	48nm,1.0s						
WR1				ePcP	PcP	14 05 28.1	+0.1
WRA	Warramunga Arr	31.22	250	P	P	14 02 32.5	-1.0
	8.3nm,0.7s,baz=80,slow=8.6,SNR=0.7						
WRA				PcP	PcP	14 05 28.1	+0.1
	1.7nm,0.6s,baz=74,slow=3.3,SNR=5.0						
AS31	Alice Springs	32.55	243	eP	P	14 02 43.8	-1.5
	4.7nm,0.6s						
ASAR	Alice Springs	32.55	243	P	P	14 02 43.8	-1.5
	14nm,0.7s,baz=62,slow=10,SNR=7.6						
ASAR				PcP	PcP	14 05 31.3	-0.3
	2.9nm,0.7s,baz=59,slow=2.3,SNR=4.5						
JCJ	Chichijima	44.02	330	LR	LR	14 19 55.8	
	comp=Z,1μm,21.0s,baz=154,slow=32						
MJAR	Matsushiro Arr	53.73	333	LR	LR	14 26 39.6	
	comp=Z,1μm,21.8s,baz=135,slow=34						
ILAR	Eielson Array	83.52	19	P	P	14 08 40.9	-0.3
	1.5nm,0.5s,baz=242,slow=4.8,SNR=4.3						
ILB	Eielson Array	83.52	19	eP	P	14 08 40.8	-0.3
NV01	Mina Array Sit	86.20	50	eP	P	14 08 54.9	-0.7
NVAR	Mina Array Bea	86.20	50	P	P	14 08 55.4	-0.2
	3.2nm,0.8s,baz=249,slow=7.6,SNR=1.9						
ZAA1	Zalesovo Array	93.29	324	eP	P	14 09 27.9	-0.3
ZALV	Zalesovo Beam	93.29	324	P	P	14 09 27.9	-0.3
	2.1nm,0.9s,baz=101,slow=6.2,SNR=2.6						
PDAR	Pinedale Array	93.72	47	P	P	14 09 31.4	+0.5
	0.7nm,0.7s,baz=229,slow=4.2,SNR=2.1						
YKA	Yellowknife Ar	95.03	27	P	P	14 09 34.3	-1.7
	0.5nm,0.6s,baz=256,slow=4.5,SNR=2.1						
YKB5	Yellowknife Ar	95.03	27	eP	P	14 09 33.7	-2.4
LTX	Lajitas	96.06	61	eP	P	14 09 41.9	+0.2
TXAR	Lajitas Array	96.06	61	P	P	14 09 41.9	+0.2
	0.2nm,0.6s,baz=223,slow=4.9,SNR=2.3						
KIC	Kosan Boka	169.26	246	ePKIKP	PKPdf	14 16 26.1	+4.1
	133nm,1.5s						
LIC	Lamto	169.45	244	ePKIKP	PKPdf	14 16 26.6	+4.5
	135nm,1.4s						
TIC	Toumodi	169.63	246	ePKIKP	PKPdf	14 16 26.5	+4.3

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*IDC **06** 14:03:49.4±0.7, 11°.43S×165°.24E, h0^{km}, mb4.5/18, mb1 4.7/20, mb1mx4.5/38, mbtmp4.5/20, ML4.4/2, Error ellipse: s-maj=21.1km s-min=15.4km az=136.0*

*NEIC **06** 14:03:50.9±0.1, 11°.36S×165°.11E, h10^{km}, mb5.0/64, Error ellipse: s-maj=4.8km s-min=3.6km az=139.0*

*ISCJB **06** 14:03:53.0±0.2, 11°.53S±0°.04×165°.05E±0°.04, h34^{km}, mb4.8/89, Error ellipse: s-maj=6.3km s-min=4.9km az=167.8*

ISC 06 14:03:54.5±0.5**, 11°.48S**±0°.07×**165°.16E**±0°.07**, h34**^{km}**, n165, σ1ˢ11**/170**, mb4.9**/89**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.52	291	ePn	Pn	14 05 12.9	-1.4
HNR				Sn	Sn	14 06 14.9	-1.7
HNR	Honiara	5.52	291	Pn	Pn	14 05 14.0	-0.4
	20nm,0.3s,baz=358,slow=13,SNR=7.9						
HNR				Sn	Sn	14 06 14.9	-1.7
	2.6nm,0.3s,baz=178,slow=16,SNR=3.4						
MARNC	Mare, Loyalty	10.32	165	ePn	Pn	14 06 21.0	+0.7
DZM	Mont Dzumac	10.61	174	ePn	Pn	14 06 25.5	+1.2
DZM	Mont Dzumac	10.61	174	Pn	Pn	14 06 23.8	-0.5
	1.9nm,0.3s,baz=335,slow=3.8,SNR=11						
ONTNC	Ouen Toro	10.84	174	ePn	Pn	14 06 27.4	0.0
PINNC	Pines Island,	11.29	169	ePn	Pn	14 06 33.9	+0.4
CTA	Charters Tower	20.09	242	P	P	14 08 26.5	+1.1
	34nm,1.1s,baz=69,slow=16,SNR=6.2						
CTAO	Charters Tower	20.09	242	eP	P	14 08 25.8	+0.3
	35nm,1.0s						
URZ	Urewera	28.73	160	P	P	14 09 49.3	+0.5
	8.9nm,1.1s,baz=333,slow=6.8,SNR=2.4						
STKA	Stephens Creek	29.74	223	eP	P	14 09 58.5	+0.7
	6.8nm,1.5s						
STKA	Stephens Creek	29.74	223	P	P	14 09 58.6	+0.7
	8.5nm,0.9s,baz=13,slow=11,SNR=8.5						
H11S2	WAKE ISLAND Hy	29.82	3	T	T	14 41 14.8	
	baz=189						
H11S3	WAKE ISLAND Hy	29.82	3	T	T	14 41 14.0	
	baz=189						
H11S1	WAKE ISLAND Hy	29.83	3	T	T	14 41 19.0	
	baz=189						
WRAB	Tennant Creek	30.79	250	eP	P	14 10 06.5	-0.8
	29nm,1.1s						
WB2	Warramunga Arr	30.79	250	eP	P	14 10 06.2	-1.1
WRA	Warramunga Arr	30.80	250	P	P	14 10 06.6	-0.8
	23nm,1.1s,baz=80,slow=9.2,SNR=24						
WRA				PcP	PcP	14 13 05.6	+1.3
	1.8nm,1.2s,baz=82,slow=2.7,SNR=4.7						
AS01	Alice Springs	32.05	244	eP	P	14 10 16.9	-1.5
AS31	Alice Springs	32.09	244	eP	P	14 10 17.1	-1.6
	4.9nm,0.9s						
ASAR	Alice Springs	32.09	244	P	P	14 10 17.6	-1.2
	15nm,1.0s,baz=75,slow=9.1,SNR=30						
ASAR				PcP	PcP	14 13 08.6	+0.9
	1.1nm,0.9s,baz=74,slow=2.3,SNR=4.3						
FITZ	Fitzroy Crossi	38.72	255	P	P	14 11 15.6	-0.1
	8.9nm,0.8s,baz=76,slow=12,SNR=2.4						
BATI	Baumata	40.75	268	P	P	14 11 34.8	+2.1
	26nm,0.7s,baz=105,slow=1.7,SNR=6.8						
MMRI	Maumere	42.33	270	eP	P	14 11 43.8	-1.9
	73nm,1.3s						
MBWA	Marble Bar	44.52	252	eP	P	14 12 02.7	-0.5
	16nm,1.0s						
MJAR	Matsushiro Arr	54.09	333	P	P	14 13 14.9	-1.2
	1.4nm,0.9s,baz=165,slow=5.0,SNR=4.1						
ASAJ	Asahikawa	59.01	341	P	P	14 13 51.6	+0.7
	3.4nm,0.8s,baz=216,slow=4.7,SNR=4.1						
NJ2	Nanjing	61.92	316	eP	P	14 14 10.5	-0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SKNT	Sakolnakorn	66.74	294	P	P	14 14 45.5	+2.6
	comp=Z,4.5nm,1.2s,comp=Z,0.1nm						
ENH	Enshi	67.72	309	eP	P	14 14 48.2	-0.8
	comp=Z,14nm,1.0s						
NONG	Nongkai	67.87	295	P	P	14 14 53.2	+3.1
GYA	Guiyang	68.19	305	⇑iP	P	14 14 53.7	+1.6
GYA				PP	PP	14 17 25.0	+2.1
GYA				S	S	14 23 51.8	+1.4
GYA				SKS	SKSac	14 24 47.2	-1.5
GYA	Guiyang	68.19	305	SS	SS	14 28 16.6	+2.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,490nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,480nm,18.4s						
PBKT	Sadao Pong	69.31	293	P	P	14 15 01.6	+2.5
XAN	Xi'an	69.99	313	P	P	14 15 04.6	+1.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI	Kunming	70.86	302	P	P	14 15 08.5	-0.2
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CM01	Chiang Mai Arr	71.73	294	eP	P	14 15 13.3	-0.6
CMAR	Chiang Mai Arr	71.76	294	P	P	14 15 15.4	+1.4
	comp=Z,1.8nm,0.8s,baz=120,slow=4.1,SNR=12						
HHC	Hu-ho-hao-te	71.79	320	eP	P	14 15 14.9	+1.0
HHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CMMT	Chiang Mai	71.87	294	P	P	14 15 17.8	+3.1
	comp=Z,4.7nm,1.2s						
CHTO	Chiang Mai	71.88	294	eP	P	14 15 13.6	-1.1
	comp=Z,12nm,1.6s						
CHTO	Chiang Mai	71.88	294	P	P	14 15 17.9	+3.2
	comp=Z,21nm,1.2s						
CD2	Chengdu	72.41	308	eP	P	14 15 19.2	+1.5
LZH	Lanzhou	74.62	313	eP	P	14 15 31.8	+1.0
LZH				pP	pP	14 15 35.7	-4.1
LZH				sP	sP	14 15 38.3	-4.7
LZH				PP	PP	14 18 23.6	+5.5
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,99nm,4.8s						
LZH				LR	LR		
	comp=N,430nm,16.3s						
LZH				LR	LR		
	comp=E,410nm,16.4s						
LZH				LR	LR		
	comp=Z,470nm,17.5s						
ULN	Ulaanbaatar	78.31	324	eP	P	14 15 50.2	-1.2
	comp=Z,3.7nm,0.9s						
QSPA	South Pole Qui	78.53	180	eP	P	14 15 53.1	+0.8
	comp=Z,24nm,1.4s						
SONM	Songino Array	78.67	324	P	P	14 15 54.1	+0.7
	comp=Z,1.6nm,0.9s,baz=143,slow=8.3,SNR=6.6						
SONA1	Songino Array	78.67	324	eP	P	14 15 51.8	-1.6
SVW2	Sparrevohn	78.70	18	eP	P	14 15 52.3	-0.8
	comp=Z,16nm,1.3s						
GTA	Gaotai	78.94	314	P	P	14 15 56.3	+1.2
GTA				pP	pP	14 16 05.3	+1.4
GTA				sP	pwP	14 16 09.3	-2.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				LR	LR		
	comp=N,710nm,19.7s						
GTA				LR	LR		
	comp=E,1μm,18.7s						
GTA				LR	LR		
	comp=Z,2μm,20.6s						
BILL	Bilibino	79.31	0	eP	P	14 15 55.8	-0.4
	comp=Z,18nm,1.2s						
CAST	Castle Rocks	81.53	18	eP	P	14 16 08.2	-0.1
	comp=Z,6.1nm,1.0s						
DIV	Divide	82.02	22	eP	P	14 16 09.4	-1.6
	comp=Z,15nm,1.0s						
KLU	Klutina	82.21	21	eP	P	14 16 10.9	-1.0
	comp=Z,16nm,1.1s						
RND	Reindeer	82.53	19	eP	P	14 16 12.8	-0.8
	comp=Z,13nm,1.3s						
MCK	McKinley	82.73	19	eP	P	14 16 13.8	-0.8
	comp=Z,11nm,1.2s						
IM3	Indian Mountai	82.99	16	eP	P	14 16 15.2	-0.7
MLY	Manley	83.12	17	eP	P	14 16 16.4	-0.2
	comp=Z,7.1nm,1.3s						
WRH	Wood River Hil	83.52	19	eP	P	14 16 17.5	-1.1
	comp=Z,15nm,1.4s						
HDA	Harding Lake	83.83	19	eP	P	14 16 19.6	-0.6
	comp=Z,8.8nm,0.9s						
HDA	Harding Lake	83.83	19	P	P	14 16 20.1	-0.1
	baz=227						
TCOL	CIGO, UAF Yank	83.87	18	P	P	14 16 20.5	+0.1
	baz=226						
COLA	College	83.87	18	eP	P	14 16 19.8	-0.6
	comp=Z,6.6nm,0.7s						
O02D	Mt. Diablo Mer	84.00	47	P	P	14 16 22.8	+1.0
	baz=250						
RIDG	Independ'e Rid	84.07	20	eP	P	14 16 20.7	-0.8
	comp=Z,16nm,1.2s						
IL1	Eielson Array	84.10	19	eP	P	14 16 20.5	-1.1
ILAR	Eielson Array	84.10	19	P	P	14 16 21.3	-0.3
	comp=Z,2.2nm,0.8s,baz=237,slow=4.9,SNR=24						
ILB	Eielson Array	84.10	19	eP	P	14 16 20.3	-1.3
POKR	Poker Plat Res	84.17	18	P	P	14 16 21.6	-0.3
	baz=227						
SCRK	Sand Creek	84.52	20	eP	P	14 16 23.3	-0.6
	comp=Z,14nm,1.2s						
ORV	Oroville	84.73	48	eP	P	14 16 24.6	-0.7
	comp=Z,12nm,1.5s						
O03E	Paynes Creek	84.75	47	P	P	14 16 23.9	-1.7
	baz=250						
AFDM	Forest Hills D	84.91	49	eP	P	14 16 25.7	-0.7
	comp=Z,11nm,1.2s						
CMB	Columbia Colle	85.06	50	eP	P	14 16 26.6	-0.4
	comp=Z,5.8nm,1.0s						
M04C	Macdoel	85.23	46	P	P	14 16 28.4	+0.4
	baz=250						
BEKR	Beckworth	85.66	48	eP	P	14 16 30.0	-0.2
	comp=Z,9.4nm,1.4s						
MWC	Mount Wilson	85.69	54	eP	P	14 16 29.7	-0.9
	comp=Z,33nm,1.6s						
ISA	Isabella, Lake	85.79	53	eP	P	14 16 30.5	-0.3
	comp=Z,6.5nm,1.1s						
ISA	Isabella, Lake	85.79	53	P	P	14 16 31.2	+0.4
	baz=253						
WAKR	Walker	85.91	50	eP	P	14 16 31.8	+0.2
	comp=Z,19nm,1.4s						
MDPB	Devils Postpil	85.91	50	eP	P	14 16 31.8	+0.2
	comp=Z,7.8nm,1.0s						
EDW2	Edwards Air Fo	85.94	53	P	P	14 16 32.2	+0.6
	baz=253						
BFSC	Mount Baldy Ra	86.02	54	P	P	14 16 32.4	+0.3
	baz=253						
J05D	Fort Rock, OR	86.16	45	P	P	14 16 32.9	+0.4
	baz=250						
DAWY	Dawson	86.16	21	eP	P	14 16 32.3	+0.3
	comp=Z,4.9nm,1.0s						
MURC	Murrieta	86.20	55	P	P	14 16 33.3	+0.4
	baz=254						
CWC	Cottonwood Cre	86.32	52	P	P	14 16 34.0	+0.5
	baz=253						
PAHR	Pah Rah Range	86.32	48	eP	P	14 16 33.4	0.0
	comp=Z,13nm,1.4s						
LRMC	Laurel Mtn Rad	86.35	53	P	P	14 16 34.4	+0.7
	baz=253						
MONP2	Monument Peak	86.63	56	P	P	14 16 35.6	+0.3
	baz=254						
RYN	Ryan	86.63	50	eP	P	14 16 34.4	-0.7
	comp=Z,8.1nm,1.2s						
MPMC	Manual Prospec	86.67	52	P	P	14 16 35.7	+0.3
	baz=253						
NV01	Mina Array Sit	86.74	50	eP	P	14 16 35.3	-0.3
NVAR	Mina Array Bea	86.74	50	P	P	14 16 35.5	-0.1
	comp=Z,4.7nm,0.9s,baz=235,slow=7.0,SNR=16						
PFO	Pinyon Flats O	86.80	55	eP	P	14 16 36.0	+0.1
	comp=Z,13nm,1.3s						
PFO	Pinyon Flats O	86.80	55	P	P	14 16 36.2	+0.3
	baz=254						
TPFO	Pinon Flats	86.80	55	P	P	14 16 36.5	+0.6
	baz=254						
XPFO	Pion Flat	86.80	55	eP	P	14 16 36.0	0.0
	comp=Z,15nm,1.4s						
IKP	In-Ko-Pah, Jac	86.82	56	P	P	14 16 36.8	+0.8
	baz=254						
NV11	Mina Array Sit	86.85	50	eP	P	14 16 36.0	-0.1
	comp=Z,0.9nm,1.2s						
GSC	Goldstone, Bar	86.99	53	eP	P	14 16 36.9	+0.2
	comp=Z,6.7nm,1.1s						
GSC	Goldstone, Bar	86.99	53	P	P	14 16 37.4	+0.6
	baz=254						
KVN	Kaiserville	87.07	49	eP	P	14 16 37.2	-0.1
	comp=Z,9.5nm,1.4s						
SWSC	Sam W. Stewart	87.15	56	P	P	14 16 38.4	+0.9
	baz=254						
HEC	Hector,Ludlow	87.23	54	P	P	14 16 38.1	+0.2
	baz=254						
FURC	Furnace Creek,	87.27	52	P	P	14 16 38.5	+0.6
	baz=254						
BELC	Belle Mtn. Jos	87.27	55	P	P	14 16 38.9	+0.6
	baz=254						
SHOC	Shoshone, Teco	87.57	53	P	P	14 16 40.4	+0.9
	baz=254						
BC3	Big Chuckawall	87.62	55	P	P	14 16 40.4	+0.5
	baz=255						
WVOR	Wild Horse Val	87.70	46	eP	P	14 16 40.3	+0.2
	comp=Z,11nm,1.3s						
TUQ	Turquoise Moun	87.72	53	P	P	14 16 40.4	+0.1
	baz=254						
GMRC	Granite Mounta	87.75	54	P	P	14 16 40.9	+0.4
	baz=255						
GLA	Glamis	87.97	56	eP	P	14 16 42.1	+0.6
	comp=Z,22nm,1.3s						
GLA	Glamis	87.97	56	P	P	14 16 42.5	+1.0
	baz=255						
IRM	Iron Mountain	88.00	55	P	P	14 16 42.2	+0.6
	baz=255						
J08A	Circle Bar Ran	88.09	45	eP	P	14 16 42.2	+0.3
	comp=Z,16nm,1.5s						
G08A	Pilot Rock	88.35	43	eP	P	14 16 43.3	+0.2
Y12C	Blythe	88.39	55	eP	P	14 16 43.3	-0.1
	comp=Z,13nm,1.1s						
Y12C	Blythe	88.39	55	P	P	14 16 44.0	+0.6
	baz=255						
SHPR	Sheep Range	88.60	52	eP	P	14 16 44.5	-0.1
	comp=Z,10nm,1.4s						
113A	Mohawk Valley,	88.76	56	eP	P	14 16 45.4	+0.3
	comp=Z,15nm,1.5s						
R11A	Troy Canyon, C	88.76	51	eP	P	14 16 45.3	0.0
	comp=Z,8.1nm,1.4s						
R11A	Troy Canyon, C	88.76	51	P	P	14 16 46.2	+0.9
	baz=254						
PDMCI	Parker Dam,Lak	88.84	55	P	P	14 16 46.6	+1.1
	baz=255						
WMQ	Urumqi	88.99	315	eP	P	14 16 46.4	+0.3
WMQ				pP	PcP	14 16 50.5	+2.9
WMQ				sP	pP	14 16 55.0	-0.1
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,400nm,5.5s						
WMQ				LR	LR		
	comp=N,760nm,25.1s						
WMQ				LR	LR		
	comp=E,430nm,24.3s						
WMQ				LR	LR		
	comp=Z,1μm,15.9s						
214A	Organ Pipe Nat	89.34	57	P	P	14 16 49.4	+1.4
	baz=256						
PSUT	Pine Spring	90.12	51	eP	P	14 16 51.8	+0.1
	comp=Z,27nm,2.0s						
LCMT	Little Creek M	90.22	52	eP	P	14 16 52.3	+0.2
	comp=Z,9.3nm,1.1s						
CCUT	Cedar City	90.26	52	eP	P	14 16 52.9	+0.5
	comp=Z,8.6nm,1.1s						
SZCU	Shurtz Canyon	90.48	52	eP	P	14 16 54.0	+0.6
	comp=Z,7.7nm,1.1s						
KNB	Kanab	90.55	52	eP	P	14 16 54.2	+0.5
	comp=Z,14nm,1.2s						
U15A	North Rim	90.82	53	eP	P	14 16 55.7	+0.6
	comp=Z,9.9nm,1.0s						
HLID	Hailey	90.99	46	eP	P	14 16 55.9	+0.3
	comp=Z,15nm,1.8s						
HLID	Hailey	90.99	46	P	P	14 16 56.1	+0.6
	baz=255						
X16A	Lo Mia Camp, P	91.03	55	eP	P	14 16 56.7	+0.7
	comp=Z,6.6nm,1.0s						
TUC	Tucson	91.10	57	P	P	14 16 57.5	+1.2
	baz=257						
SYO	Syowa Base	91.21	197	⇑eX	P	14 16 52.0	-3.9
MTPU	Mount Pierson	91.28	52	eP	P	14 16 58.2	+1.0
	comp=Z,7.6nm,1.0s						
BGU	Big Grassy Mou	91.33	49	eP	P	14 16 57.4	+0.3
	comp=Z,5.0nm,1.2s						
WUAZ	Wupatki	91.34	54	eP	P	14 16 58.0	+0.6
	comp=Z,16nm,1.4s						
WUAZ	Wupatki	91.34	54	P	P	14 16 58.6	+1.2
	baz=257						
MSU	Marysvale	91.39	51	eP	P	14 16 58.1	+0.5
HVU	Hansel Valley	91.72	48	eP	P	14 16 59.0	0.0
NLU	North Lily Min	91.81	50	eP	P	14 16 59.7	+0.2
	comp=Z,4.2nm,1.0s						
319A	Douglas	92.15	59	eP	P	14 17 01.4	+0.2
	comp=Z,13nm,1.4s						
X18A	Snowflake	92.26	55	eP	P	14 17 02.4	+0.7
	comp=Z,6.0nm,1.2s						
W18A	Petrified Fore	92.56	55	eP	P	14 17 02.7	-0.3
	comp=Z,4.7nm,0.8s						
DLMT	Dillon	92.69	44	eP	P	14 17 03.2	-0.2
	comp=Z,10.0nm,1.2s						
BOZ	Bozeman (W)	93.40	44	eP	P	14 17 06.9	+0.2
	comp=Z,18nm,1.8s						
BOZ	Bozeman (W)	93.40	44	P	P	14 17 07.2	+0.5
	baz=257						
MK01	Makanchi Array	93.43	317	eP	P	14 17 06.3	-0.3
MK31	Makanchi Array	93.44	317	eP	P	14 17 06.2	-0.4
MKAR	Makanchi Array	93.44	317	eP	P	14 17 06.2	-0.4
	comp=Z,30nm,1.1s						
MKAR	Makanchi Array	93.44	317	P	P	14 17 07.0	+0.4
	comp=Z,2.6nm,0.9s,baz=101,slow=5.4,SNR=12						
ZALV	Zalesovo Beam	93.57	324	eP	P	14 17 05.2	-1.8
ZALV	Zalesovo Beam	93.57	324	P	P	14 17 05.6	-1.4
	comp=Z,1.5nm,0.8s,baz=96,slow=4.5,SNR=4.9						
121A	Cookes Peak, D	93.62	58	P	P	14 17 08.8	+0.8
	baz=259						
BW06	Boulder Array	94.26	47	P	P	14 17 11.3	+0.5
	baz=258						
PDAR	Pinedale Array	94.26	47	P	P	14 17 10.7	-0.1
	comp=Z,1.2nm,1.0s,baz=158,slow=1.6,SNR=4.3						
ANMO	Albuquerque	95.16	56	eP	P	14 17 14.9	-0.1
	comp=Z,7.4nm,1.5s						
YKA	Yellowknife Ar	95.62	27	P	P	14 17 15.0	-1.2
	comp=Z,1.0nm,0.9s,baz=256,slow=4.7,SNR=8.7						
YKB5	Yellowknife Ar	95.62	27	eP	P	14 17 14.0	-2.2
TXAR	Lajitas Array	96.54	61	P	P	14 17 21.0	-0.3
	comp=Z,0.6nm,0.8s,baz=229,slow=4.8,SNR=5.7						
KSH	Kashi	96.58	309	P	P	14 17 21.9	+0.6
KSH				pP	pP	14 17 26.5	-4.0
KSH				pmax	pmax		
	comp=Z,1μm,12.0s						
ESDC	Sonseca Array	150.30	343	PKPbc	PKPbc	14 23 42.2	-0.5
	comp=Z,0.3nm,0.4s,baz=275,slow=4.5,SNR=1.9						
ESDC				PKPab	sPKPdf	14 23 49.7	-0.5
	comp=Z,0.8nm,0.5s,baz=349,slow=4.5,SNR=2.8						

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*IDC **06** 14:07:15.3±0.8, 10°.85S×164°.73E, h0^{km}, mb4.0/12, mb1 4.2/14, mb1mx4.1/34, mbtmp4.1/14, ML4.5/2, Error ellipse: s-maj=21.3km s-min=18.4km az=123.0*

*ISCJB **06** 14:07:17.8±0.4, 10°.95S±0°.06×164°.69E±0°.07, h29^{km}, mb4.0/13, Error ellipse: s-maj=9.3km s-min=8.3km az=160.5*

*NEIC **06** 14:07:17.0±0.3, 10°.83S×164°.67E, h10^{km}, mb4.6/3, Error ellipse: s-maj=8.8km s-min=6.9km az=105.0*

ISC 06 14:07:19.7±0.6**, 10°.91S**±0°.08×**164°.75E**±0°.08**, h29**^{km}**, n33, σ1ˢ13**/29**, mb4.0**/13**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.95	287	eP	Pn	14 08 32.0	-0.2
HNR				eS	Sn	14 09 32.0	+3.5
HNR	Honiara	4.95	287	Pn	Pn	14 08 31.3	-0.9
	36nm,0.3s,baz=139,slow=6.6,SNR=7.3						
HNR				Sn	Sn	14 09 30.0	+1.5
	21nm,0.3s,baz=38,slow=21,SNR=4.5						
MARNC	Mare, Loyalty	10.97	164	ePn	Pn	14 09 55.9	+1.1
DZM	Mont Dzumac	11.22	172	Pn	Pn	14 09 59.8	+1.6
	2.1nm,0.3s,baz=122,slow=15,SNR=8.1						
PINNC	Pines Island,	11.92	168	ePn	Pn	14 10 09.1	+1.4
TARA	Tarawa	14.64	34	ePn	Pn	14 10 45.7	+0.7
CTA	Charters Tower	20.01	241	P	Pn	14 11 51.8	-0.3
	8.1nm,0.8s,baz=77,slow=11,SNR=5.2						
CTAO	Charters Tower	20.01	241	eP	P	14 11 48.5	-1.7
	22nm,1.3s						
H11S2	WAKE ISLAND Hy	29.28	4	T	T	14 43 51.6	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.28	4	T	T	14 43 51.2	
	baz=184,slow=76,SNR=10.0						
H11S1	WAKE ISLAND Hy	29.29	4	T	T	14 43 49.7	
	baz=184,slow=76,SNR=12						
URZ	Urewera	29.40	160	P	P	14 13 20.6	+0.1
	4.8nm,0.9s,baz=136,slow=13,SNR=2.2						
STKA	Stephens Creek	29.88	222	P	P	14 13 25.0	+0.1
	1.2nm,0.7s,baz=46,slow=7.7,SNR=2.0						
H11N1	WAKE ISLAND Hy	30.50	4	T	T	14 45 08.2	
	baz=184,slow=76,SNR=8.8						
H11N3	WAKE ISLAND Hy	30.51	4	T	T	14 45 10.4	
	baz=184,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.52	4	T	T	14 45 11.8	
	baz=184,slow=76,SNR=8.9						
WR1	Warramunga Arr	30.62	249	eP	P	14 13 30.2	-1.4
	8.8nm,1.1s						
WRA	Warramunga Arr	30.62	249	P	P	14 13 30.2	-1.4
	0.7nm,0.6s,baz=80,slow=9.4,SNR=5.6						
ASAR	Alice Springs	31.99	243	P	P	14 13 42.8	-0.9
	0.6nm,0.7s,baz=69,slow=10,SNR=4.0						
ASAJ	Asahikawa	58.35	341	P	P	14 17 12.0	-0.2
	4.2nm,1.0s,baz=283,slow=5.5,SNR=5.5						
CMAR	Chiang Mai Arr	71.17	294	P	P	14 18 36.5	+0.2
	0.5nm,0.3s,baz=106,slow=5.7,SNR=3.8						
SONA0	Songino Array	77.98	324	eP	P	14 19 15.6	+0.2
SONM	Songino Array	77.98	324	P	P	14 19 15.6	+0.2
	0.6nm,0.6s,baz=142,slow=4.7,SNR=3.9						
HDA	Harding Lake	83.43	19	eP	P	14 19 44.2	+0.2
	12nm,1.4s						
ILAR	Eielson Array	83.70	19	P	P	14 19 44.8	-0.6
	2.0nm,0.9s,baz=226,slow=6.5,SNR=13						
ILB	Eielson Array	83.70	19	eP	P	14 19 45.0	-0.4
IL1	Eielson Array	83.70	19	eP	P	14 19 45.0	-0.4
NV01	Mina Array Sit	86.68	50	eP	P	14 20 00.3	-1.0
NVAR	Mina Array Bea	86.68	50	P	P	14 20 01.4	+0.1
	0.8nm,0.8s,baz=230,slow=9.4,SNR=3.9						
MK32	Makanchi Array	92.76	317	eP	P	14 20 28.7	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MKAR	Makanchi Array	92.76	317	P	P	14 20 28.7	-0.7
	0.9nm,0.8s,baz=96,slow=5.7,SNR=6.4						
PD31	Pinedale Array	94.18	47	*e*P	P	14 20 36.0	-0.3
PDAR	Pinedale Array	94.18	47	P	P	14 20 37.4	+1.2
	0.2nm,0.5s,baz=235,slow=3.2,SNR=3.2						

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*IDC **06** 14:09:04.0±1.0, 10.°83S×164.°59E, h0^{km}, mb4.0/11, mb1 4.2/14, mb1mx4.1/35, mbtmp4.1/14, ML4.3/3, Error ellipse: s-maj=30.1km s-min=19.5km az=123.0*

*NEIC **06** 14:09:05.5±3.4, 10.°79S×164.°63E, h12^{km}±22^{km}, mb4.5/4, Error ellipse: s-maj=9.2km s-min=7.3km az=168.0*

*ISCJB **06** 14:09:06.0±0.4, 10.°93S±0.°06×164.°67E±0.°06, h29^{km}, mb4.1/14, Error ellipse: s-maj=9.6km s-min=7.7km az=35.4*

ISC 06 14:09:08.0±0.6**, 10.°83S**±0.°09×**164.°71E**±0.°08**, h29^{km}, n35, σ0.^{s}97**/32**, mb4.0**/14**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.89	286	Pn	Pn	14 10 18.1	-1.5
	38nm,0.3s,baz=2.3,slow=2.2,SNR=4.4						
HNR				Sn	Sn	14 11 17.9	+2.6
	11nm,0.3s,baz=197,slow=22,SNR=2.6						
MARNC	Mare, Loyalty	11.06	164	*e*Pn	Pn	14 11 44.1	-0.2
DZM	Mont Dzumac	11.30	172	*e*Pn	Pn	14 11 48.0	+0.3
DZM	Mont Dzumac	11.30	172	Pn	Pn	14 11 48.3	+0.6
	2.2nm,0.3s,baz=340,slow=10,SNR=8.0						
PINNC	Pines Island,	12.01	168	*e*Pn	Pn	14 11 58.0	+0.8
FUNA	Funafuti	14.47	82	*e*Pn	Pn	14 12 30.5	-0.4
CTA	Charters Tower	20.01	240	P	P	14 13 39.0	+0.4
	0.2nm,0.3s,baz=74,slow=11,SNR=6.1						
CTAO	Charters Tower	20.01	240	*e*P	P	14 13 38.6	0.0
	19nm,1.0s						
H11S2	WAKE ISLAND Hy	29.20	4	T	T	14 45 38.0	
	baz=184,slow=76,SNR=6.7						
H11S3	WAKE ISLAND Hy	29.21	4	T	T	14 45 40.5	
	baz=184,slow=76,SNR=6.6						
H11S1	WAKE ISLAND Hy	29.22	4	T	T	14 45 42.7	
	baz=184,slow=76,SNR=5.6						
STKA	Stephens Creek	29.91	222	*e*P	P	14 15 13.4	-0.1
	1.4nm,1.1s						
STKA	Stephens Creek	29.91	222	P	P	14 15 13.4	-0.1
	2.5nm,0.8s,baz=74,slow=10,SNR=3.2						
H11N1	WAKE ISLAND Hy	30.43	4	T	T	14 47 10.1	
	baz=184,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.43	4	T	T	14 47 10.5	
	baz=184,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.45	4	T	T	14 47 11.4	
	baz=184,slow=76,SNR=13						
WR1	Warramunga Arr	30.60	249	*e*P	P	14 15 18.0	-1.8
	11nm,1.2s						
WR1				*e*PcP	PcP	14 18 18.4	+0.3
WRA	Warramunga Arr	30.60	249	P	P	14 15 18.0	-1.8
	1.4nm,0.7s,baz=79,slow=8.9,SNR=6.0						
WRA				PcP	PcP	14 18 18.4	+0.3
	0.3nm,0.8s,baz=85,slow=3.8,SNR=3.2						
AS31	Alice Springs	31.98	242	*e*P	P	14 15 31.2	-0.7
	1.0nm,0.8s						
ASAR	Alice Springs	31.98	242	P	P	14 15 30.1	-1.8
	1.2nm,0.7s,baz=63,slow=10,SNR=4.9						
ASAJ	Asahikawa	58.26	341	P	P	14 19 00.2	+0.3
	5.9nm,0.9s,baz=217,slow=10.0,SNR=3.7						
USRK	Ussuriysk Ar.	62.30	334	P	P	14 19 28.1	+0.6
	2.7nm,0.9s,baz=154,slow=10,SNR=3.9						
CM01	Chiang Mai Arr	71.07	294	*e*P	P	14 20 23.0	-1.0
CMAR	Chiang Mai Arr	71.09	294	P	P	14 20 24.8	+0.6
	0.4nm,0.4s,baz=126,slow=4.6,SNR=4.1						
SONA0	Songino Array	77.89	324	*e*P	P	14 21 03.2	-0.1
SONM	Songino Array	77.89	324	P	P	14 21 03.2	-0.1
	1.4nm,1.0s,baz=126,slow=5.7,SNR=5.0						
QSPA	South Pole Qui	79.17	180	*e*P	P	14 21 11.4	+1.3
	9.7nm,1.1s						
ILAR	Eielson Array	83.64	19	P	P	14 21 33.8	+0.3
	1.0nm,0.8s,baz=234,slow=5.9,SNR=5.8						
ILB	Eielson Array	83.64	19	*e*P	P	14 21 33.3	-0.2
NV01	Mina Array Sit	86.67	50	*e*P	P	14 21 48.9	-0.6
NVAR	Mina Array Bea	86.67	50	P	P	14 21 50.7	+1.2
	0.4nm,0.8s,baz=248,slow=4.8,SNR=2.1						
MK32	Makanchi Array	92.67	317	*e*P	P	14 22 16.7	-0.6
MKAR	Makanchi Array	92.67	317	P	P	14 22 16.7	-0.6
	1.0nm,0.7s,baz=97,slow=6.2,SNR=6.7						
ZALV	Zalesovo Beam	92.79	324	P	P	14 22 18.1	+0.5
	0.3nm,0.3s,baz=116,slow=3.4,SNR=2.8						
ZAA1	Zalesovo Array	92.79	324	*e*P	P	14 22 18.1	+0.5

IDC 06 14:13:25.6±1.7**, 11.°43S×165.°05E, h0^{km}, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/34**, mbtmp3.8**/4**, ML4.0**/1**, Error ellipse: s-maj=54.8km s-min=36.4km az=109.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.67	173	Pn	Pn	14 15 59.0	-0.9
	1.2nm,0.3s,baz=342,slow=19,SNR=9.5						
WRA	Warramunga Arr	30.71	250	P	P	14 19 43.2	+0.7
	0.4nm,0.7s,baz=79,slow=8.9,SNR=2.0						
ILAR	Eielson Array	84.09	19	P	P	14 25 58.7	+0.6
	0.3nm,0.5s,baz=219,slow=7.0,SNR=5.5						
MKAR	Makanchi Array	93.33	317	P	P	14 26 41.2	-1.4
	0.7nm,0.8s,baz=96,slow=2.9,SNR=2.5						

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*IDC **06** 14:13:54.0±0.8, 10.°96S×164.°70E, h0^{km}, mb4.1/15, mb1 4.3/18, mb1mx4.2/35, mbtmp4.2/18, ML4.6/3, Error ellipse: s-maj=23.8km s-min=16.1km az=128.0*

*ISCJB **06** 14:13:56.7±0.5, 11.°03S±0.°08×164.°64E±0.°07, h29^{km}, mb4.1/16, Error ellipse: s-maj=11.6km s-min=9.7km az=13.6*

ISC 06 14:13:58.8±0.6**, 10.°98S**±0.°10×**164.°69E**±0.°09**, h29^{km}, n29, σ1.^{s}28**/26**, mb4.2**/16**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.91	288	*e*P	Pn	14 15 10.0	-0.7
HNR	Honiara	4.91	288	Pn	Pn	14 15 10.0	-0.7
	122nm,0.3s,baz=133,slow=5.9,SNR=24						
HNR				Sn	Sn	14 16 06.8	+0.2
	35nm,0.3s,baz=132,slow=21,SNR=4.0						
DZM	Mont Dzumac	11.16	172	Pn	Pn	14 16 37.2	+0.7
	2.6nm,0.3s,baz=320,slow=12,SNR=21						
CTA	Charters Tower	19.92	241	P	P	14 18 28.4	0.0
	0.5nm,0.3s,baz=72,slow=12,SNR=11						
H11S2	WAKE ISLAND Hy	29.35	4	T	T	14 50 35.8	
	baz=184,slow=76,SNR=56						
H11S3	WAKE ISLAND Hy	29.35	4	T	T	14 50 35.8	
	baz=184,slow=76,SNR=92						
H11S1	WAKE ISLAND Hy	29.36	4	T	T	14 50 35.8	
	baz=184,slow=76,SNR=103						
STKA	Stephens Creek	29.79	222	P	P	14 20 03.7	+0.5
	0.6nm,0.2s,baz=54,slow=14,SNR=2.7						
WRA	Warramunga Arr	30.53	249	P	P	14 20 08.1	-1.9
	1.5nm,0.7s,baz=78,slow=9.5,SNR=20						
WRA				PcP	PcP	14 23 08.9	+0.3
	0.7nm,0.9s,baz=76,slow=3.6,SNR=3.4						
H11N1	WAKE ISLAND Hy	30.57	4	T	T	14 52 08.5	
	baz=182,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	30.58	4	T	T	14 52 08.5	
	baz=182,slow=76,SNR=32						
H11N2	WAKE ISLAND Hy	30.59	4	T	T	14 52 10.4	
	baz=182,slow=76,SNR=33						
ASAR	Alice Springs	31.90	243	P	P	14 20 20.4	-1.6
	0.8nm,0.6s,baz=63,slow=10,SNR=14						
ASAR				PcP	PcP	14 23 12.3	+0.1
	0.3nm,0.5s,baz=66,slow=3.2,SNR=4.6						
ASAJ	Asahikawa	58.39	341	P	P	14 23 50.9	-0.7
	2.7nm,0.6s,baz=176,slow=5.4,SNR=6.4						
KSRS	Korea Array	59.24	326	P	P	14 23 57.1	-0.4
	2.8nm,0.9s,baz=144,slow=7.6,SNR=4.0						
USRK	Ussuriysk Ar.	62.42	334	P	P	14 24 19.3	+0.2
	1.4nm,0.6s,baz=141,slow=5.5,SNR=6.3						
PETK	Petropavlovsk-	64.11	355	P	P	14 24 29.6	-0.5
	2.2nm,0.8s,baz=164,slow=2.1,SNR=2.5						
CN2	Changchun	65.15	330	*e*P	P	14 24 39.9	+2.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	71.13	294	P	P	14 25 15.5	+0.3
	comp=Z,1.0nm,0.6s,baz=123,slow=4.9,SNR=8.6						
SONM	Songino Array	78.00	324	P	P	14 25 55.8	+1.2
	comp=Z,2.1nm,0.9s,baz=144,slow=6.5,SNR=10						
GTA	Gaotai	78.26	314	*e*P	P	14 26 00.1	+3.8
GTA				pP	PcP	14 26 05.6	0.0
GTA				sP	sP	14 26 08.7	+2.2
ILAR	Eielson Array	83.78	19	P	P	14 26 24.7	-0.2
	comp=Z,2.2nm,0.7s,baz=235,slow=4.7,SNR=11						
NVAR	Mina Array Bea	86.78	50	P	P	14 26 40.5	-0.3
	comp=Z,0.3nm,0.6s,baz=241,slow=4.9,SNR=3.7						
MKAR	Makanchi Array	92.76	317	P	P	14 27 07.9	-0.6
	comp=Z,3.5nm,0.9s,baz=95,slow=6.2,SNR=8.5						
ZALV	Zalesovo Beam	92.89	324	P	P	14 27 09.0	+0.1
	comp=Z,0.7nm,0.7s,baz=132,slow=2.2,SNR=4.5						
PDAR	Pinedale Array	94.27	47	P	P	14 27 14.9	-0.9
	comp=Z,0.1nm,0.5s,baz=258,slow=4.5,SNR=2.0						
YKA	Yellowknife Ar	95.39	27	P	P	14 27 19.2	-0.9
	comp=Z,0.1nm,0.6s,baz=262,slow=4.7,SNR=2.4						
ARCES	ARCESS Array B	116.00	345	PKP	PKiKP	14 32 37.2	-1.2
	comp=Z,1.1nm,0.6s,baz=67,slow=1.8,SNR=11						
ESDC	Sonseca Array	149.69	342	PKPab	PKPab	14 33 50.1	-1.3
	comp=Z,0.8nm,0.5s,baz=8.7,slow=3.2,SNR=5.7						

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*IDC **06** 14:14:23.0±0.6, 10.°75S×165.°04E, h0^{km}, mb4.4/19, mb1 4.6/21, mb1mx4.5/35, mbtmp4.5/21, ML4.8/2, MS4.2/1, Ms1 4.2/1, ms1mx3.7/34, Error ellipse: s-maj=20.1km s-min=15.5km az=115.0*

*ISCJB **06** 14:14:23.2±0.2, 10.°78S±0.°05×164.°98E±0.°05, h10^{km}, mb4.6/39, Error ellipse: s-maj=7.5km s-min=5.9km az=137.1*

*NEIC **06** 14:14:24.6±0.2, 10.°73S×165.°03E, h10^{km}, mb5.0/21, Error ellipse: s-maj=6.8km s-min=5.1km az=121.0*

ISC 06 14:14:24.8±0.4**, 10.°74S**±0.°07×**165.°06E**±0.°08**, h10^{km}, n92, σ0.^{s}90**/92**, mb4.7**/39**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.20	284	Pn	Pn	14 15 43.3	+0.6
	29nm,0.3s,baz=219,slow=2.4,SNR=4.5						
HNR				LR	LR	14 17 05.0	
	comp=Z,2μm,20.4s,baz=115,slow=31						
MARNC	Mare, Loyalty	11.05	165	*e*Pn	Pn	14 17 04.4	+1.4
DZM	Mont Dzumac	11.34	173	*e*Pn	Pn	14 17 07.9	+0.9
DZM	Mont Dzumac	11.34	173	Pn	Pn	14 17 08.2	+1.1
	6.3nm,0.3s,baz=310,slow=12,SNR=12						
TARA	Tarawa	14.34	34	*e*Pn	Pn	14 17 48.4	+0.4
MANU	Manus Island	19.58	295	*e*P	Pn	14 18 54.0	-0.5
	282nm,1.1s						
EIDS	Eidsvold	19.67	220	*e*P	Pn	14 18 55.0	-0.5
	129nm,1.4s						
CTA	Charters Tower	20.35	241	P	P	14 19 01.5	-0.1
	27nm,0.9s,baz=65,slow=12,SNR=6.4						
ARMA	Armidale	23.22	211	*e*P	P	14 19 32.2	-0.1
	70nm,1.2s						
URZ	Urewera	29.45	160	P	P	14 20 28.8	0.0
	9.7nm,0.9s,baz=325,slow=17,SNR=3.6						
STKA	Stephens Creek	30.20	222	*e*P	P	14 20 35.8	+0.2
	8.6nm,1.0s						
STKA	Stephens Creek	30.20	222	P	P	14 20 35.2	-0.3
	20nm,0.8s,baz=32,slow=10,SNR=24						
WB2	Warramunga Arr	30.94	249	*e*P	P	14 20 42.0	-0.3
WR1	Warramunga Arr	30.95	249	*e*P	P	14 20 40.5	-1.9
	21nm,1.1s						
WRA	Warramunga Arr	30.95	249	P	P	14 20 40.4	-1.9
	6.5nm,1.1s,baz=76,slow=9.1,SNR=7.3						
AS01	Alice Springs	32.29	242	*e*P	P	14 20 53.4	-0.7
AS31	Alice Springs	32.33	243	*e*P	P	14 20 53.0	-1.5
	3.0nm,1.1s						
ASAR	Alice Springs	32.33	243	P	P	14 20 53.1	-1.4
	4.6nm,0.8s,baz=76,slow=9.7,SNR=12						
BBOO	Buckleboo	34.55	226	*e*P	P	14 21 12.9	-0.7
	58nm,0.9s						
MJAR	Matsushiro Arr	53.40	333	P	P	14 23 43.9	-0.9
	1.2nm,0.7s,baz=150,slow=12,SNR=3.6						
MAJO	Matsushiro	53.40	333	*e*P	P	14 23 43.9	-0.9
ASAJ	Asahikawa	58.29	341	P	P	14 24 18.8	-0.9
	5.3nm,0.8s,baz=179,slow=8.4,SNR=3.2						
KSRS	Korea Array	59.25	326	P	P	14 24 26.4	-0.1
	0.7nm,0.7s,baz=137,slow=31,SNR=3.3						
KSAR	Wonju Array Be	59.26	326	P	P	14 24 26.4	-0.2
PETK	Petropavlovsk-	63.91	355	P	P	14 24 58.3	+0.6
	5.9nm,0.9s,baz=153,slow=10.0,SNR=4.8						
PEA1	Petropavlovsk-	63.91	355	*e*P	P	14 24 58.3	+0.6
SKNT	Sakolnakorn	66.35	294	P	P	14 25 15.2	+0.9
VNDA	Vanda	66.78	181	P	P	14 25 16.6	+0.5
	7.8nm,1.1s,baz=0.0,slow=6.1,SNR=3.3						
NONG	Nongkai	67.47	295	P	P	14 25 22.0	+0.6
XAN	Xi'an	69.42	313	P	P	14 25 36.2	+2.8
XAN				pP	pwP	14 25 43.5	+2.5
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN	Xi'an	69.42	313	*e*P	P	14 25 33.1	-0.3
	comp=Z,13nm,0.9s						
CM01	Chiang Mai Arr	71.35	294	*e*P	P	14 25 44.6	-0.8
CM31	Chiang Mai Arr	71.37	294	*e*P	P	14 25 44.9	-0.7
CMAR	Chiang Mai Arr	71.37	294	P	P	14 25 45.9	+0.3
	comp=Z,3.0nm,0.8s,baz=118,slow=4.4,SNR=10						
CMMT	Chiang Mai	71.48	294	P	P	14 25 47.9	+1.6
	comp=Z,6.9nm,1.6s,comp=Z,0.0nm						
CHTO	Chiang Mai	71.48	294	*e*P	P	14 25 46.0	-0.3
	comp=Z,14nm,1.4s						
CHTO	Chiang Mai	71.48	294	P	P	14 25 47.9	+1.6
	comp=Z,31nm,1.7s,comp=Z,0.2nm						
GAMB	Gambell	76.39	10	*e*P	P	14 26 14.4	+0.5
	comp=Z,17nm,1.1s						
ULN	Ulaanbaatar	77.66	324	*e*P	P	14 26 22.0	+0.2
	comp=Z,19nm,1.3s						
SONA0	Songino Array	78.03	324	*e*P	P	14 26 25.0	+1.3
SONM	Songino Array	78.03	324	P	P	14 26 25.0	+1.3
SONM	Songino Array	78.03	324	P	P	14 26 25.0	+1.3
	comp=Z,3.0nm,1.0s,baz=131,slow=4.4,SNR=5.4						
SONA1	Songino Array	78.03	324	*e*P	P	14 26 24.1	+0.4
ANM	Nome	78.34	13	*e*P	P	14 26 25.5	+0.6
	comp=Z,18nm,1.5s						
GTA	Gaotai	78.36	314	*e*P	P	14 26 27.3	+1.5
GTA				pP	pwP	14 26 30.6	-2.8
GTA				sP	PcP	14 26 33.8	-1.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
QSPA	South Pole Qui	79.26	180	*e*P	P	14 26 30.5	+0.2
	comp=Z,18nm,1.1s						
ILAR	Eielson Array	83.44	19	P	P	14 26 52.5	+0.3
	comp=Z,2.2nm,0.8s,baz=239,slow=5.2,SNR=7.2						
ILB	Eielson Array	83.44	19	*e*P	P	14 26 52.8	+0.6
O02D	Mt. Diablo Mer	83.58	47	P	P	14 26 54.5	+0.9
	baz=250						
M02C	Callahan	83.95	46	P	P	14 26 56.1	+0.7
	baz=250						
O03E	Paynes Creek	84.34	47	P	P	14 26 57.4	0.0
	baz=251						
EGAK	Eagle	85.33	20	P	P	14 27 03.0	+1.3
	comp=Z,17nm,1.3s						
EDW2	Edwards Air Fo	85.58	53	P	P	14 27 04.1	+0.3
	baz=254						
J05D	Fort Rock, OR	85.71	45	P	P	14 27 05.0	+0.6
	baz=251						
CWC	Cottonwood Cre	85.95	52	P	P	14 27 05.7	-0.1
	baz=254						
LRMC	Laurel Mtn Rad	86.00	53	P	P	14 27 06.0	0.0
	baz=254						
MONP2	Monument Peak	86.31	56	P	P	14 27 08.1	+0.5
	baz=255						
MPMC	Manual Prospec	86.31	52	P	P	14 27 07.4	-0.1
	baz=254						
NVAR	Mina Array Bea	86.35	50	P	P	14 27 07.5	-0.2
	comp=Z,3.9nm,1.0s,baz=237,slow=7.2,SNR=14						
PFO	Pinyon Flats O	86.46	55	P	P	14 27 07.8	-0.5
	baz=255						
SWSC	Sam W. Stewart	86.82	56	P	P	14 27 10.7	+0.9
	baz=255						
BELC	Belle Mtn. Jos	86.94	55	P	P	14 27 10.7	+0.1
	baz=255						
TUQ	Turquoise Moun	87.37	53	P	P	14 27 12.4	-0.2
	baz=255						
G08A	Pilot Rock	87.89	43	*e*P	P	14 27 15.0	+0.1
	comp=Z,6.8nm,1.1s						
Y12C	Blythe	88.06	55	P	P	14 27 16.4	+0.6
	baz=256						
R11A	Troy Canyon, C	88.38	51	P	P	14 27 17.2	-0.3
	baz=255						
PDMCI	Parker Dam,Lak	88.50	55	P	P	14 27 18.0	+0.1
	baz=256						
CCUT	Cedar City	89.89	52	*e*P	P	14 27 24.3	-0.4
	comp=Z,4.7nm,1.1s						
KNB	Kanab	90.18	52	*e*P	P	14 27 26.1	+0.1
	comp=Z,32nm,1.8s						
HLID	Hailey	90.55	46	*e*P	P	14 27 27.8	+0.2
	comp=Z,4.2nm,0.9s						
HLID	Hailey	90.55	46	P	P	14 27 28.0	+0.4
	baz=256						
MTPU	Mount Pierson	90.91	52	*e*P	P	14 27 30.1	+0.6
	comp=Z,4.0nm,0.9s						
DLMT	Dillon	92.24	44	*e*P	P	14 27 35.5	+0.2
	comp=Z,8.2nm,1.0s						
MK01	Makanchi Array	92.83	317	*e*P	P	14 27 36.8	-1.0
MK31	Makanchi Array	92.84	317	*e*P	P	14 27 37.2	-0.6
MK32	Makanchi Array	92.84	317	*e*P	P	14 27 37.8	-0.1
MKAR	Makanchi Array	92.84	317	*e*P	P	14 27 37.3	-0.6
	comp=Z,20nm,0.9s						
MKAR	Makanchi Array	92.84	317	P	P	14 27 37.8	-0.1
	comp=Z,3.6nm,0.9s,baz=97,slow=6.1,SNR=4.4						
ZAA0	Zalesovo Array	92.92	324	*e*P	P	14 27 37.2	-0.8
	comp=Z,5.8nm,1.1s						
ZALV	Zalesovo Beam	92.92	324	P	P	14 27 37.4	-0.6
	comp=Z,2.5nm,1.0s,baz=70,slow=1.7,SNR=6.4						
ZAA1	Zalesovo Array	92.92	324	*e*P	P	14 27 37.4	-0.6
BOZ	Bozeman (W)	92.95	44	*e*P	P	14 27 37.6	-1.0
	comp=Z,9.2nm,1.4s						
BOZ	Bozeman (W)	92.95	44	P	P	14 27 38.8	+0.2
	baz=258						
PD31	Pinedale Array	93.85	47	*e*P	P	14 27 42.5	-0.4
PDAR	Pinedale Array	93.85	47	P	P	14 27 43.5	+0.6
	comp=Z,0.9nm,0.8s,baz=241,slow=1.5,SNR=8.0						
YKA	Yellowknife Ar	95.02	27	P	P	14 27 45.3	-2.1
	comp=Z,0.9nm,0.8s,baz=255,slow=4.6,SNR=8.9						
YKB5	Yellowknife Ar	95.02	27	*e*P	P	14 27 45.4	-2.0
LTX	Lajitas	96.28	61	*e*P	P	14 27 52.3	-1.8
TXAR	Lajitas Array	96.28	61	P	P	14 27 52.3	-1.8
	comp=Z,0.2nm,0.5s,baz=238,slow=3.1,SNR=3.1						
ARA0	ARCESS Array S	115.87	345	*e*PKPdf	PKiKP	14 33 06.6	-0.6
ARCES	ARCESS Array B	115.87	345	PKP	PKiKP	14 33 06.6	-0.6
	comp=Z,1.2nm,0.8s,baz=13,slow=2.0,SNR=3.2						
GERES	GERESS Array B	135.13	333	PKP	PKiKP	14 33 45.9	-0.3
	comp=Z,0.2nm,0.3s,baz=31,slow=2.3,SNR=2.8						

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*IDC **06** 14:17:28.8±1.1, 10.°66S×165.°38E, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.9/35, mbtmp3.9/9, ML4.3/2, Error ellipse: s-maj=37.1km s-min=23.4km az=140.0*

*ISCJB **06** 14:17:31.9±0.8, 10.°8S±0.°1×165.°3E±0.°1, h31^{km}, mb3.7/7, Error ellipse: s-maj=17.8km s-min=17.0km az=11.5*

ISC 06 14:17:33.6±0.9**, 10.°7S**±0.°1×**165.°4E**±0.°1**, h31^{km}, n9, σ0.^{s}88**/9**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.48	282	Pn	Pn	14 18 53.7	+0.6
	37nm,0.3s,baz=136,slow=7.2,SNR=4.4						
DZM	Mont Dzumac	11.40	175	Pn	Pn	14 20 15.1	+0.6
	0.6nm,0.3s,baz=297,slow=19,SNR=14						
WRA	Warramunga Arr	31.28	249	P	P	14 23 50.5	-0.6
	0.3nm,0.8s,baz=76,slow=7.2,SNR=2.9						
ASAR	Alice Springs	32.65	243	P	P	14 24 01.7	-1.4
	0.3nm,0.5s,baz=64,slow=10,SNR=2.7						
SONM	Songino Array	78.14	324	P	P	14 29 30.6	+0.7
	1.1nm,0.8s,baz=137,slow=5.9,SNR=4.3						
ILAR	Eielson Array	83.26	19	P	P	14 29 57.3	+0.5
	1.2nm,0.8s,baz=237,slow=5.6,SNR=8.0						
NVAR	Mina Array Bea	86.05	50	P	P	14 30 11.8	0.0
	0.5nm,0.6s,baz=233,slow=8.5,SNR=3.7						
MKAR	Makanchi Array	92.99	317	P	P	14 30 44.1	0.0
	0.5nm,0.7s,baz=96,slow=8.1,SNR=3.9						
YKA	Yellowknife Ar	94.79	27	P	P	14 30 50.9	-1.0
	0.1nm,0.5s,baz=255,slow=4.9,SNR=4.2						

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*IDC **06** 14:18:14.6±1.3, 10.°98S×165.°59E, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx3.9/35, mbtmp4.1/8, ML4.4/2, MS4.7/1, Ms1 4.7/1, ms1mx3.9/28, Error ellipse: s-maj=40.3km s-min=25.0km az=129.0*

*NEIC **06** 14:18:16.5±0.6, 10.°92S×165.°53E, h10^{km}, mb4.3/4, Error ellipse: s-maj=12.9km s-min=9.6km az=83.0*

*ISCJB **06** 14:18:17.5±0.7, 11.°06S±0.°08×165.°5E±0.°1, h30^{km}, mb4.0/8, MS4.6/1, Error ellipse: s-maj=14.8km s-min=10.8km az=164.6*

ISC 06 14:18:19.4±0.9**, 11.°0S**±0.°1×**165.°6E**±0.°1**, h30^{km}, n18, σ0.^{s}81**/17**, mb4.0**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.72	285	Pn	Pn	14 19 43.7	+1.2
	11nm,0.3s,baz=302,slow=18,SNR=1.3						
MARNC	Mare, Loyalty	10.71	167	*e*Pn	Pn	14 20 51.6	+0.8
DZM	Mont Dzumac	11.06	176	Pn	Pn	14 20 55.9	+0.2
	2.5nm,0.3s,baz=353,slow=10.0,SNR=9.4						
PINNC	Pines Island,	11.71	171	*e*Pn	Pn	14 21 05.7	+1.2
EIDS	Eidsvold	19.81	222	*e*P	P	14 22 47.2	-0.5
	33nm,1.4s						
STKA	Stephens Creek	30.35	223	*e*P	P	14 24 28.1	-0.6
	6.4nm,2.0s						
STKA	Stephens Creek	30.35	223	P	P	14 24 28.4	-0.4
	1.1nm,0.6s,baz=27,slow=14,SNR=3.0						
WR1	Warramunga Arr	31.32	250	*e*P	P	14 24 37.0	-0.5
	8.3nm,1.0s						
WRA	Warramunga Arr	31.32	250	P	P	14 24 37.0	-0.5
	3.5nm,0.9s,baz=79,slow=9.1,SNR=7.1						
AS31	Alice Springs	32.65	243	*e*P	P	14 24 48.1	-1.0
	0.9nm,0.8s						
ASAR	Alice Springs	32.65	243	P	P	14 24 48.5	-0.6
	1.2nm,0.8s,baz=64,slow=10,SNR=4.7						
RAR	Rarotonga	34.76	111	LR	LR	14 36 05.5	
	comp=Z,1μm,21.3s,baz=331,slow=31						
ILAR	Eielson Array	83.52	19	P	P	14 30 44.7	+0.6
	0.6nm,0.6s,baz=232,slow=5.3,SNR=6.4						
ILB	Eielson Array	83.52	19	*e*P	P	14 30 45.0	+0.9
MK32	Makanchi Array	93.34	317	*e*P	P	14 31 31.6	-0.1
MKAR	Makanchi Array	93.34	317	P	P	14 31 31.5	-0.1
	0.7nm,0.9s,baz=125,slow=7.8,SNR=3.6						
YKA	Yellowknife Ar	95.01	27	P	P	14 31 37.7	-1.1
	0.2nm,0.6s,baz=252,slow=4.3,SNR=3.6						
YKB5	Yellowknife Ar	95.01	27	*e*P	P	14 31 38.0	-0.8

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*BJI **06** 14:20:51.9, 11.°69S×165.°87E, h10^{km}, mB5.6/25, mb4.8/39, Ms5.2/16, Ms7 4.9/16*

*IDC **06** 14:20:56.5±0.4, 10.°91S×165.°53E, h0^{km}, mb4.7/27, mb1 4.8/29, mb1mx4.8/36, mbtmp4.7/29, ML5.5/2, MS4.6/10, Ms1 4.6/10, ms1mx4.3/33, Error ellipse: s-maj=16.1km s-min=12.0km az=94.0*

*NEIC **06** 14:20:57.5±0.1, 10.°91S×165.°48E, h10^{km}, mb5.3/142, MS5.4/13, Error ellipse: s-maj=3.7km s-min=3.0km az=117.0*

*ISCJB **06** 14:20:59.3±0.1, 10.°94S±0.°02×165.°42E±0.°03, h30^{km}, mb5.1/179, MS5.1/27, Error ellipse: s-maj=3.7km s-min=3.1km az=36.0*

*GCMT **06** 14:21:00.5±0.4, 10.°86S±0.°03×165.°46E±0.°04, h30^{km}, MW5.4/62, Moment Tensor Solution. s34,c38; s62,c85; Duration: 1.^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.23±.12; M$_{\theta\theta}$1.33±.07; M$_{\phi\phi}$0.90±.07; M$_{r\theta}$0.08±.09; M$_{\theta\phi}$-0.23±.04; M$_{\phi r}$-0.22±.12; Best double couple: M$_{0}$1.84200×10^{17} NP1:φ$_{s}$297.00000°,δ48.00000°, λ-86.00000°. NP2:φ$_{s}$111.00000°,δ43.00000°, λ-95.00000°. Principal axes: T 1.4380, Plg2.0000°, Azm24.0000°; N 0.8090, Plg3.0000°, Azm114.0000°; P -2.2460, Plg86.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **06** 14:21:00.1±0.9, 10.°90S×165.°42E, h34^{km}, mb5.3/40 Error ellipse: s-maj=8.8km s-min=8.1km az=63.7*

ISC 06 14:21:00.8±0.3**, 10.°96S**±0.°05×**165.°51E**±0.°06**, h30^{km}, n439, σ1.^{s}02**/438**, mb5.2**/179**, MS5.1**/27**, 8C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.68	285	*e*P	Pn	14 22 22.0	-1.3
HNR	Honiara	5.68	285	Pn	Pn	14 22 23.8	+0.5
	146nm,0.3s,baz=140,slow=4.6,SNR=40						
HNR				Sn	Sn	14 23 27.8	+0.3
	baz=5.0,slow=23,SNR=1.8						
MARNC	Mare, Loyalty	10.74	167	*e*Pn	Pn	14 23 32.6	0.0
DZM	Mont Dzumac	11.09	175	*e*Pn	Pn	14 23 37.0	-0.5
	154nm,0.8s						
DZM				*e*LR	LR	14 26 10.8	
	comp=Z,4μm,24.6s						
DZM	Mont Dzumac	11.09	175	*e*Pn	Pn	14 23 37.1	-0.5
DZM				Sn	Sn	14 25 39.3	-1.3
DZM	Mont Dzumac	11.09	175	Pn	Pn	14 23 37.5	-0.1
	37nm,0.3s,baz=10,slow=10,SNR=140						
DZM				Sn	Sn	14 25 39.3	-1.3
	0.9nm,0.3s,baz=310,slow=23,SNR=1.7						

DZM				LR	LR	14 27 15.1	
	comp=Z,2µm,18.4s,baz=342,slow=34						
PINNC	**Pines Island,**	**11.74**	**171**	*e*Pn	**Pn**	**14 23 46.9**	**+0.6**
MSVF	**Nonsavu**	**13.89**	**120**	*e*Pn	**Pn**	**14 24 17.4**	**+1.6**
MSVF	**Nonsavu**	**13.89**	**120**	*e*P	**Pn**	**14 24 17.4**	**+1.6**
TARA	**Tarawa**	**14.28**	**32**	*e*Pn	**Pn**	**14 24 21.2**	**+0.1**
EIDS	**Eidsvold**	**19.80**	**222**	P	**Pn**	**14 25 31.4**	**+0.7**
	baz=20,SNR=7.5						
CTA	**Charters Tower**	**20.64**	**242**	P	**P**	**14 25 38.9**	**+0.8**
	78nm,1.0s,baz=71,slow=13,SNR=26						
CTA				LR	LR	14 32 38.4	
	comp=Z,2µm,19.2s,baz=54,slow=34						
CTAO	**Charters Tower**	**20.64**	**242**	*e*P	**P**	**14 25 37.5**	**-0.6**
	456nm,1.7s						
CTAO	**Charters Tower**	**20.64**	**242**	*e*P	**P**	**14 25 37.5**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,456nm,1.7s						
MTSU	**Mount Surprise**	**21.70**	**248**	P	**P**	**14 25 50.4**	**+0.7**
	baz=22,SNR=52						
COEN	**Coen**	**22.01**	**260**	P	**P**	**14 25 53.2**	**+0.3**
	baz=22,SNR=12						
RMQ	**Roma**	**22.10**	**223**	P	**P**	**14 25 55.3**	**+1.5**
	baz=22,SNR=40						
ARMA	**Armidale**	**23.27**	**212**	P	**P**	**14 26 07.7**	**+1.5**
	baz=23,SNR=11						
OUZ	**Omahuta**	**25.25**	**164**	*e*P	**P**	**14 26 24.9**	**+0.5**
	comp=Z,122nm,1.4s						
QLP	**Quilpie**	**25.38**	**229**	P	**P**	**14 26 26.4**	**+0.8**
	baz=26,SNR=12						
MGCD	**Mangrove Creek**	**25.80**	**209**	P	**P**	**14 26 31.2**	**+1.9**
	baz=26,SNR=6.8						
RIV	**Riverview**	**26.29**	**208**	P	**P**	**14 26 37.0**	**+3.3**
	baz=26,SNR=3.9						
QIS	**Mount Isa**	**26.66**	**246**	P	**P**	**14 26 37.5**	**+0.1**
	baz=27,SNR=4.9						
CMSA	**Cobar Meteorol**	**27.48**	**219**	P	**P**	**14 26 44.7**	**+0.1**
	baz=28,SNR=16						
CNB	**Canberra Magne**	**28.34**	**209**	P	**P**	**14 26 53.8**	**+1.5**
	baz=28,SNR=5.3						
TGRZ	**Tauranga**	**28.35**	**162**	P	**P**	**14 26 55.3**	**+3.0**
OPRZ	**Ohinepanea**	**28.55**	**161**	P	**P**	**14 26 55.5**	**+1.5**
OMRZ	**Omania**	**28.73**	**162**	P	**P**	**14 26 57.4**	**+1.7**
HAZ	**Te Kaha**	**28.87**	**160**	P	**P**	**14 26 58.3**	**+1.4**
MXZ	**Matakaoa Point**	**28.88**	**159**	P	**P**	**14 26 58.6**	**+1.7**
HRRZ	**Handcock Road**	**28.97**	**162**	P	**P**	**14 27 01.3**	**+3.5**
RRRZ	**Republican Roa**	**28.99**	**162**	P	**P**	**14 27 01.4**	**+3.4**
RUGZ	**Raukumara Rang**	**29.02**	**160**	P	**P**	**14 26 58.4**	**0.0**
PRRZ	**Plateau Road**	**29.10**	**162**	P	**P**	**14 27 01.6**	**+2.7**
URZ	**Urewera**	**29.10**	**161**	*e*P	**P**	**14 26 59.0**	**0.0**
	comp=Z,37nm,0.8s						
URZ	**Urewera**	**29.10**	**161**	P	**P**	**14 26 59.3**	**+0.4**
	comp=Z,33nm,0.8s,baz=278,slow=2.5,SNR=30						
URZ	**Urewera**	**29.10**	**161**	P	**P**	**14 26 59.9**	**+0.9**
WMGZ	**Waiomatatini S**	**29.15**	**159**	P	**P**	**14 26 59.1**	**-0.2**
MUGZ	**Murupara**	**29.20**	**162**	P	**P**	**14 27 01.7**	**+1.9**
H11S2	**WAKE ISLAND Hy**	**29.29**	**2**	T	T	14 57 37.1	
	baz=182,slow=76,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**29.29**	**2**	T	T	14 57 36.1	
	baz=182,slow=76,SNR=9.5						
H11S1	**WAKE ISLAND Hy**	**29.30**	**2**	T	T	14 57 37.7	
	baz=182,slow=76,SNR=11						
MWZ	**Matawai**	**29.31**	**160**	P	**P**	**14 27 01.4**	**+0.6**
TWGZ	**Tauwhareparae**	**29.32**	**160**	P	**P**	**14 27 01.6**	**+0.7**
PUZ	**Puketiti**	**29.32**	**159**	P	**P**	**14 27 00.7**	**-0.2**
RTZ	**Ruatahuna**	**29.39**	**161**	P	**P**	**14 27 02.7**	**+1.2**
TKGZ	**Te Karaka**	**29.51**	**160**	P	**P**	**14 27 02.7**	**+0.2**
COVZ	**Chateau Observ**	**29.51**	**164**	P	**P**	**14 27 04.8**	**+2.2**
RIGZ	**Rimuhau**	**29.72**	**160**	P	**P**	**14 27 04.8**	**+0.3**
BKZ	**Black Stump Fm**	**29.75**	**163**	*e*P	**P**	**14 27 04.8**	**0.0**
	comp=Z,61nm,0.8s						
STKA	**Stephens Creek**	**30.34**	**223**	P	**P**	**14 27 11.1**	**+1.1**
	baz=30,SNR=8.9						
STKA	**Stephens Creek**	**30.34**	**223**	*e*P	**P**	**14 27 09.9**	**-0.2**
	comp=Z,4.5nm,0.9s						
STKA	**Stephens Creek**	**30.34**	**223**	*e*P	**P**	**14 27 09.9**	**-0.2**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	**Stephens Creek**	**30.34**	**223**	P	**P**	**14 27 10.7**	**+0.6**
	comp=Z,12nm,0.7s,baz=27,slow=10,SNR=23						
STKA				LR	LR	14 38 54.9	
	comp=Z,3µm,18.3s,baz=31,slow=36						
H11N1	**WAKE ISLAND Hy**	**30.51**	**3**	T	T	14 59 11.2	
	baz=182,slow=76,SNR=9.6						
H11N3	**WAKE ISLAND Hy**	**30.51**	**3**	T	T	14 59 11.1	
	baz=182,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	**30.53**	**3**	T	T	14 59 16.6	
	baz=182,slow=76,SNR=11						
BFZ	**Birch Farm**	**31.09**	**164**	*e*P	**P**	**14 27 16.2**	**-0.3**
	comp=Z,78nm,0.9s						
WRAB	**Tennant Creek**	**31.28**	**250**	*e*P	**P**	**14 27 17.1**	**-1.4**
	comp=Z,231nm,1.9s						
WRAB	**Tennant Creek**	**31.28**	**250**⇓	*e*P	**P**	**14 27 17.6**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,109nm,1.9s						
WB2	**Warramunga Arr**	**31.28**	**250**	*e*P	**P**	**14 27 17.1**	**-1.4**
WB2				*e*PcP	**PcP**	**14 30 13.0**	**+0.5**
WRA	**Warramunga Arr**	**31.30**	**250**	P	**P**	**14 27 18.1**	**-0.5**
	comp=Z,18nm,0.7s,baz=81,slow=9.0,SNR=119						
WRA				PcP	**PcP**	**14 30 13.3**	**+0.7**
	comp=Z,3.4nm,0.6s,baz=75,slow=3.4,SNR=12						
THZ	**Tophouse**	**31.36**	**169**	*e*P	**P**	**14 27 19.9**	**+0.9**
	comp=Z,40nm,0.9s						
TOO	**Toolangi**	**32.03**	**211**	P	**P**	**14 27 26.2**	**+1.4**
	baz=32,SNR=7.9						
KHZ	**Kahutara**	**32.11**	**169**	*e*P	**P**	**14 27 25.9**	**+0.4**
	comp=Z,35nm,1.0s						
LTZ	**Lake Taylor**	**32.25**	**171**	*e*P	**P**	**14 27 26.5**	**-0.2**
	comp=Z,31nm,0.8s						
KDU	**Kakadu**	**32.37**	**264**	P	**P**	**14 27 26.3**	**-1.7**
	baz=32,SNR=7.7						
AS01	**Alice Springs**	**32.58**	**243**	*e*P	**P**	**14 27 28.3**	**-1.6**
AS31	**Alice Springs**	**32.62**	**243**	*e*P	**P**	**14 27 28.8**	**-1.5**
	comp=Z,11nm,0.8s						
ASAR	**Alice Springs**	**32.62**	**243**	P	**P**	**14 27 29.4**	**-0.9**
	comp=Z,33nm,0.7s,baz=66,slow=9.9,SNR=239						
ASAR				PcP	**PcP**	**14 30 17.0**	**+0.8**
	comp=Z,4.5nm,0.6s,baz=67,slow=2.4,SNR=11						
FOZ	**Fox Glacier**	**32.67**	**174**	*e*P	**P**	**14 27 30.9**	**+0.6**
	comp=Z,50nm,1.0s						
OXZ	**Oxford**	**32.74**	**171**	*e*P	**P**	**14 27 30.7**	**-0.3**
	comp=Z,26nm,0.6s						
RPZ	**Rata Peaks**	**32.99**	**173**	*e*P	**P**	**14 27 32.5**	**-0.6**
	comp=Z,34nm,0.9s						
RPZ	**Rata Peaks**	**32.99**	**173**	P	**P**	**14 27 33.2**	**0.0**
	comp=Z,14nm,0.7s,baz=350,slow=2.8,SNR=15						
HTT	**Hallett**	**33.08**	**223**	P	**P**	**14 27 34.6**	**+0.4**
	baz=33,SNR=7.8						
ARPS	**Mount Arapiles**	**33.41**	**216**	P	**P**	**14 27 38.0**	**+1.0**
	baz=34,SNR=5.1						
BBOO	**Buckleboo**	**34.72**	**227**	P	**P**	**14 27 48.3**	**0.0**
	baz=35,SNR=11						
KNRA	**Kununurra**	**36.03**	**258**	P	**P**	**14 27 58.9**	**-0.9**
	baz=36,SNR=6.5						
WRKA	**Warakurna**	**37.92**	**243**	P	**P**	**14 28 15.2**	**-0.6**
	baz=38,SNR=39						
FITZ	**Fitzroy Crossi**	**39.18**	**255**	P	**P**	**14 28 25.4**	**-1.0**
	baz=39,SNR=14						
FORT	**Forrest**	**39.90**	**235**	P	**P**	**14 28 33.6**	**+1.3**
	baz=40,SNR=6.3						
BATI	**Baumata**	**41.12**	**267**	P	**P**	**14 28 42.7**	**+0.1**
EDFI	**Ende, Flores**	**43.20**	**269**	P	**P**	**14 28 57.4**	**-2.3**
PPT	**Papeete**	**43.94**	**104**	LR	LR	14 46 06.5	
	comp=Z,1µm,18.5s,baz=266,slow=34						
PPT2	**Papeete2**	**43.94**	**104**	*e*LQ	LQ	14 39 35.9	
	comp=Z,2µm,28.5s						
PPT2				*e*LR	LR	14 41 36.3	
	comp=Z,807nm,22.2s						
TBI	**Tubuai**	**44.58**	**112**	*e*LQ	LQ	14 39 56.8	
	comp=Z,2µm,26.0s						
TBI				*e*LR	LR	14 41 55.7	
	comp=Z,737nm,24.2s						
MBWA	**Marble Bar**	**45.01**	**251**	*e*P	**P**	**14 29 13.1**	**-0.8**
	comp=Z,26nm,1.3s						
BNSI	**Bone**	**45.42**	**275**	P	**P**	**14 29 17.9**	**+0.5**
PCI	**Palu**	**46.44**	**279**	P	**P**	**14 29 26.1**	**+0.6**
	comp=Z,60nm,1.1s						
MEEK	**Meekatharra**	**46.78**	**244**	P	**P**	**14 29 28.4**	**+0.5**
	baz=47,SNR=44						
KLBR	**Kellerberrin**	**48.56**	**237**	P	**P**	**14 29 41.0**	**-0.6**
	baz=49,SNR=5.9						
KKO	**Keanakako`i**	**49.03**	**52**	PFAKE		14 30 00.0	+15
KKO				LR	LR		
	comp=Z,2µm,20.0s						
BYL	**Byron's Ledge**	**49.04**	**52**	PFAKE		14 30 00.0	+14
BYL				LR	LR		
	comp=Z,3µm,19.0s						
NWAO	**Narrogin (SRO)**	**49.32**	**236**	P	**P**	**14 29 48.7**	**+1.2**
	baz=49						
MORW	**Morawa**	**49.46**	**241**	P	**P**	**14 29 49.3**	**+0.6**
	baz=50,SNR=7.9						
SRBI	**Singaraja**	**49.64**	**269**	P	**P**	**14 29 49.0**	**-1.2**
PCJI	**Pacitan**	**53.59**	**268**	P	**P**	**14 30 18.7**	**-1.0**
MJAR	**Matsushiro Arr**	**53.79**	**333**	P	**P**	**14 30 20.0**	**-0.8**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	**Matsushiro Arr**	**53.79**	**333**	P	**P**	**14 30 19.9**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=171,slow=8.3,SNR=13						
MAJO	**Matsushiro**	**53.79**	**333**	*e*P	**P**	**14 30 19.8**	**-1.0**
	comp=Z,17nm,0.8s						
MAJO	**Matsushiro**	**53.79**	**333**⇓	*e*P	**P**	**14 30 20.3**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,34nm,1.9s						
MAT	**Matsushiro**	**53.79**	**333**	P	**P**	**14 30 20.0**	**-0.8**
MJB9	**Matsu-Tunnel**	**53.79**	**333**	*e*P	**P**	**14 30 19.6**	**-1.2**
	comp=Z,18nm,0.8s						
JNU	**Nakatsue**	**54.88**	**324**	*e*P	**P**	**14 30 28.1**	**-0.7**
	comp=Z,37nm,0.9s						
JNU	**Nakatsue**	**54.88**	**324**	P	**P**	**14 30 27.9**	**-0.8**
	comp=Z,14nm,0.7s,baz=142,slow=1.5,SNR=12						
JNU				LR	LR	14 53 47.9	
	comp=Z,465nm,18.3s,baz=118,slow=36						
ASAJ	**Asahikawa**	**58.64**	**341**	P	**P**	**14 30 55.7**	**+0.5**
	comp=Z,9.0nm,0.7s,baz=228,slow=11,SNR=13						
KSRS	**Korea Array**	**59.67**	**326**	P	**P**	**14 31 02.4**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSRS	**Korea Array**	**59.67**	**326**	P	**P**	**14 31 02.4**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=145,slow=6.5,SNR=5.8						
KSRS				LR	LR	14 54 25.1	
	comp=Z,324nm,19.1s,baz=132,slow=34						
KSAR	**Wonju Array Be**	**59.69**	**326**	P	**P**	**14 31 02.5**	**-0.1**
KSAR	**Wonju Array Be**	**59.69**	**326**	P	**P**	**14 31 02.5**	**-0.1**
KS01	**Wonju Array Si**	**59.71**	**326**	*e*P	**P**	**14 31 02.2**	**-0.5**
YSS	**Yuzh-Sakhalins**	**61.13**	**342**	*e*P	**P**	**14 31 11.8**	**-0.5**
YSS	**Yuzh-Sakhalins**	**61.13**	**342**	*e*P	**P**	**14 31 16.6**	**+4.3**
YSS				*e*		14 31 26.8	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NJ2	**Nanjing**	**61.80**	**316**	*e*P	**P**	**14 31 15.2**	**-1.9**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**62.77**	**333**	P	**P**	**14 31 24.5**	**+1.2**
	comp=Z,1.9nm,0.6s,baz=160,slow=10,SNR=4.3						
PETK	**Petropavlovsk-**	**64.16**	**355**	P	**P**	**14 31 33.1**	**+0.7**
	comp=Z,4.1nm,0.7s,baz=164,slow=7.2,SNR=9.3						
PETK				LR	LR	14 54 23.9	
	comp=Z,258nm,21.2s,baz=181,slow=31						
MDJ	**Mudanjiang**	**64.17**	**332**	P	**P**	**14 31 33.2**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,19nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,380nm,8.7s						
TYV	**Tymovskoe**	**64.70**	**344**	*e*P	P	14 31 43.3	+7.4
TYV				pmax	pmax		
	comp=Z,16nm,1.6s						
CN2	**Changchun**	**65.55**	**329**	*e*P	**P**	**14 31 45.3**	**+3.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
IPM	**Ipoh**	**65.98**	**280**	*e*P	**P**	**14 31 43.8**	**-1.2**
	comp=Z,39nm,1.1s						
CASY	**Casey**	**66.38**	**201**	*e*P	**P**	**14 31 46.0**	**-0.6**
	comp=Z,9.5nm,0.8s						
MNSI	**Mandailing Nat**	**66.55**	**276**	P	**P**	**14 31 49.0**	**+0.3**
	comp=Z,37nm,1.0s						
VNDA	**Vanda**	**66.58**	**181**	P	**P**	**14 31 48.1**	**+0.4**
	comp=Z,8.4nm,1.1s,baz=0.0,slow=8.1,SNR=4.2						
KLR	**Kul'dur**	**66.89**	**337**⇑	*e*P	**P**	**14 31 51.1**	**+1.0**
KLR	**Kul'dur**	**66.89**	**337**	P	**P**	**14 31 50.1**	**0.0**
	comp=Z,2.0nm,0.7s						
NKL	**Nikolayevsk**	**67.29**	**344**	*e*P	**P**	**14 31 53.0**	**+0.5**
ENH	**Enshi**	**67.66**	**309**	*e*P	**P**	**14 31 54.7**	**-0.7**
	comp=Z,142nm,1.6s						
GYA	**Guiyang**	**68.18**	**304**⇑	*i*P	**P**	**14 31 59.3**	**+0.4**
GYA				PP	**PP**	**14 34 32.0**	**+2.3**
GYA				S	**S**	**14 40 59.8**	**+2.2**
GYA				SKS	**SKSac**	**14 41 54.8**	**-1.1**
GYA				SS	**SS**	**14 45 23.0**	**+2.0**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,6.7s						
GYA				LR	LR		
	comp=Z,590nm,18.2s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
GYA				LR	LR		
	comp=Z,580nm,18.4s						
GSI	**Gunungsitoli**	**68.62**	**276**	*e*P	**P**	**14 32 00.0**	**-1.8**
	comp=Z,120nm,1.6s						
GSI	**Gunungsitoli**	**68.62**	**276**	P	**P**	**14 32 01.6**	**-0.2**
PBKT	**Sadao Pong**	**69.43**	**292**	*e*P	**P**	**14 32 06.4**	**-0.3**
XAN	**Xi'an**	**69.89**	**312**	P	**P**	**14 32 09.2**	**-0.1**
XAN				pP	pwP	14 32 20.0	-0.5
XAN				PcP	**PcP**	**14 32 32.0**	**+0.4**
XAN				LR	LR		
	comp=Z,490nm,18.4s						
XAN				LR	LR		
	comp=Z,510nm,18.4s						
XAN	**Xi'an**	**69.89**	**312**	*e*P	**P**	**14 32 08.8**	**-0.5**
	comp=Z,36nm,1.6s						
XAN	**Xi'an**	**69.89**	**312**	*e*P	**P**	**14 32 08.8**	**-0.5**
XAN				pmax	pmax		
	comp=Z,36nm,1.6s						
KMI	**Kunming**	**70.88**	**301**	P	**P**	**14 32 17.9**	**+2.2**
KMI				sP	pwP	14 32 26.8	-0.1
KMI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MA2	**Magadan**	**71.29**	**352**	P	**P**	**14 32 17.2**	**0.0**
	comp=Z,4.2nm,0.8s,baz=321,slow=23,SNR=2.3						
HHC	**Hu-ho-hao-te**	**71.62**	**320**	*e*P	**P**	**14 32 20.3**	**+0.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CM01	**Chiang Mai Arr**	**71.84**	**294**	*e*P	**P**	**14 32 20.5**	**-0.9**
CM31	**Chiang Mai Arr**	**71.86**	**294**	*e*P	**P**	**14 32 20.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**71.86**	**294**	P	**P**	**14 32 21.8**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=124,slow=5.0,SNR=20						
ZEA	**Zeya**	**72.17**	**337**	*e*P	**P**	**14 32 26.0**	**+3.4**
ZEA				pmax	pmax		
	comp=Z,25nm,0.7s						
HIA	**Hailar**	**72.18**	**330**⇑	*e*P	**P**	**14 32 23.8**	**+1.0**
HIA				pmax	pmax		
	comp=Z,14nm,1.4s						
CD2	**Chengdu**	**72.37**	**307**	*e*P	**P**	**14 32 23.5**	**-0.9**
SEY	**Seymchan**	**74.36**	**354**⇑	*e*P	**P**	**14 32 35.0**	**-0.3**
SEY	**Seymchan**	**74.36**	**354**	P	**P**	**14 32 35.6**	**+0.3**
	comp=Z,2.3nm,0.6s						
LZH	**Lanzhou**	**74.53**	**312**	*e*P	**P**	**14 32 37.6**	**+0.5**
LZH				pP	pP	14 32 42.3	-3.7
LZH				sP	pwP	14 32 45.5	-2.9
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
LZH				pmax	pmax		
	comp=Z,1µm,5.4s						
LZH				LR	LR		
	comp=Z,490nm,16.3s						
LZH				LR	LR		
	comp=Z,440nm,16.4s						
LZH				LR	LR		
	comp=Z,550nm,17.5s						
GAMB	**Gambell**	**76.53**	**10**	*e*P	**P**	**14 32 48.0**	**+0.3**
	comp=Z,24nm,0.8s						
GAMB				LR	LR		
	comp=Z,700nm,19.0s						
ULN	**Ulaanbaatar**	**78.09**	**324**	*e*P	**P**	**14 32 57.0**	**-0.2**
	comp=Z,13nm,0.9s						
ULN	**Ulaanbaatar**	**78.09**	**324**	*de*P	**P**	**14 32 57.8**	**+0.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANM	**Nome**	**78.45**	**12**	*e*P	**P**	**14 32 58.8**	**+0.3**
	comp=Z,15nm,1.3s						
ANM	**Nome**	**78.45**	**12**	*e*P	**P**	**14 32 58.8**	**+0.3**
ANM				pmax	pmax		
	comp=Z,15nm,1.3s						
SONM	**Songino Array**	**78.46**	**324**	P	**P**	**14 32 59.6**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=147,slow=7.7,SNR=16						
SONA1	**Songino Array**	**78.46**	**324**	*e*P	**P**	**14 32 59.0**	**-0.1**
RSO	**Redoubt South**	**78.52**	**20**	*e*P	**P**	**14 32 58.5**	**-0.7**
BRLK	**Bradley Lake**	**78.64**	**21**	*e*P	**P**	**14 32 59.2**	**-0.5**
	comp=Z,44nm,0.8s						
BILL	**Bilibino**	**78.79**	**0**	*e*P	**P**	**14 33 00.0**	**-0.3**
	comp=Z,33nm,0.9s						
BILL	**Bilibino**	**78.79**	**0**	*de*P	**P**	**14 33 00.6**	**+0.3**
GTA	**Gaotai**	**78.83**	**314**	⇑P	**P**	**14 33 02.7**	**+1.4**
GTA				pP	PcP	14 33 07.9	-2.1
GTA				sP	pwP	14 33 11.6	-1.1
GTA				pmax	pmax		
	comp=Z,79nm,4.5s						
GTA				LR	LR		
	comp=Z,540nm,17.5s						
GTA				LR	LR		
	comp=Z,380nm,18.4s						
GTA				LR	LR		
	comp=Z,530nm,19.7s						
QSPA	**South Pole Qui**	**79.05**	**180**	*e*P	**P**	**14 33 01.3**	**-0.8**
	comp=Z,17nm,1.0s						
SUA	**Susitna One**	**79.92**	**20**	*e*P	**P**	**14 33 06.4**	**-0.4**
	comp=Z,13nm,0.8s						
RC01	**Rabbit Creek A**	**79.99**	**20**	*e*P	**P**	**14 33 06.8**	**-0.2**
	comp=Z,45nm,1.6s						
BOD	**Bodaibo**	**80.35**	**335**	*e*P	**P**	**14 33 08.0**	**-1.0**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.7s						
PMR	**Palmer**	**80.56**	**20**	*e*P	**P**	**14 33 09.7**	**-0.3**
	comp=Z,18nm,0.9s						
PMR	**Palmer**	**80.56**	**20**	*e*P	**P**	**14 33 09.7**	**-0.3**
PMR				pmax	pmax		
	comp=Z,18nm,0.9s						
KNK	**Knik Glacier**	**80.66**	**21**	*e*P	**P**	**14 33 10.5**	**-0.1**
	comp=Z,13nm,0.7s						
SML	**Sawmill**	**80.98**	**20**	*e*P	**P**	**14 33 13.6**	**+1.3**
	comp=Z,16nm,1.0s						
SML	**Sawmill**	**80.98**	**20**	*e*P	**P**	**14 33 13.6**	**+1.3**
SML				pmax	pmax		
	comp=Z,16nm,1.0s						
DIV	**Divide**	**81.41**	**22**	*e*P	**P**	**14 33 13.3**	**-1.4**
	comp=Z,41nm,0.8s						
HMT	**Hamilton**	**81.45**	**23**	*e*P	**P**	**14 33 14.3**	**-0.5**
	comp=Z,44nm,0.8s						
ZAK	**Zakamensk**	**81.50**	**325**	*e*P	**P**	**14 33 14.5**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TRF	**Thorofare Moun**	**81.51**	**18**	*e*P	**P**	**14 33 14.5**	**-0.8**
	comp=Z,9.9nm,0.8s						
KLU	**Klutina**	**81.60**	**21**	*e*P	**P**	**14 33 15.2**	**-0.5**
	comp=Z,22nm,0.8s						
RND	**Reindeer**	**81.93**	**19**	*e*P	**P**	**14 33 17.2**	**-0.2**
	comp=Z,40nm,1.4s						
RND	**Reindeer**	**81.93**	**19**	*e*P	**P**	**14 33 17.2**	**-0.2**
RND				pmax	pmax		
	comp=Z,40nm,1.4s						
MCK	**McKinley**	**82.14**	**19**	*e*P	**P**	**14 33 17.9**	**-0.5**
	comp=Z,20nm,1.0s						
MCK	**McKinley**	**82.14**	**19**	*e*P	**P**	**14 33 17.9**	**-0.5**
MCK				pmax	pmax		
	comp=Z,20nm,1.0s						
DHY	**Denali Highway**	**82.18**	**20**	*e*P	**P**	**14 33 18.4**	**-0.4**
	comp=Z,11nm,0.9s						
IM3	**Indian Mountai**	**82.40**	**16**	*e*P	**P**	**14 33 19.6**	**-0.1**
HARP	**HAARP**	**82.48**	**21**	*e*P	**P**	**14 33 20.4**	**+0.1**
	comp=Z,52nm,0.9s						
MLY	**Manley**	**82.53**	**17**	*e*P	**P**	**14 33 19.8**	**-0.6**
	comp=Z,7.8nm,0.8s						
KCPM	**Cahto Peak**	**82.66**	**47**	*e*P	**P**	**14 33 21.0**	**-0.8**
	comp=Z,38nm,0.7s						
KMRM	**Mail Ridge**	**82.76**	**47**	*e*P	**P**	**14 33 22.2**	**-0.1**
	comp=Z,41nm,0.8s						
WRH	**Wood River Hil**	**82.92**	**18**	*e*P	**P**	**14 33 21.7**	**-0.7**
	comp=Z,15nm,0.7s						
MDM	**Murphy Dome**	**83.22**	**18**	*e*P	**P**	**14 33 23.8**	**-0.2**
	comp=Z,21nm,1.0s						
HDA	**Harding Lake**	**83.24**	**19**	*e*P	**P**	**14 33 24.4**	**+0.4**
	comp=Z,39nm,0.7s						
HDA	**Harding Lake**	**83.24**	**19**	P	**P**	**14 33 24.6**	**+0.5**
	baz=227,SNR=27						
TCOL	**CIGO, UAF Yank**	**83.27**	**18**	P	**P**	**14 33 24.9**	**+0.7**
	baz=226,SNR=5.2						
COLA	**College**	**83.28**	**18**	*e*P	**P**	**14 33 23.8**	**-0.4**
	comp=Z,30nm,0.8s						
COLA	**College**	**83.28**	**18**	*e*P	**P**	**14 33 23.8**	**-0.4**
COLA				pmax	pmax		
	comp=Z,30nm,0.8s						
O02D	**Mt. Diablo Mer**	**83.41**	**47**	P	**P**	**14 33 26.5**	**+0.9**
	baz=250,SNR=17						
RIDG	**Independ'e Rid**	**83.47**	**20**	*e*P	**P**	**14 33 25.6**	**+0.2**
	comp=Z,28nm,0.9s						
IL1	**Eielson Array**	**83.50**	**19**	*e*P	**P**	**14 33 24.8**	**-0.7**
ILAR	**Eielson Array**	**83.50**	**19**	P	**P**	**14 33 25.7**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=236,slow=5.0,SNR=70						
ILAR				PKKPbc	**PKKPbc**	**14 51 44.4**	**-2.8**
	comp=Z,0.1nm,0.5s,baz=8.1,slow=1.7,SNR=5.0						
ILAR				LR	LR	15 04 20.9	
	comp=Z,254nm,21.8s,baz=277,slow=31						
ILB	**Eielson Array**	**83.50**	**19**	*e*P	**P**	**14 33 24.8**	**-0.7**
L02E	**Cave Junction**	**83.53**	**45**	P	**P**	**14 33 25.9**	**-0.2**
	baz=249						
POKR	**Poker Plat Res**	**83.57**	**18**	P	**P**	**14 33 25.5**	**-0.3**
	baz=226,SNR=7.5						
K02D	**Willamette Mer**	**83.67**	**44**	P	**P**	**14 33 28.0**	**+1.1**
	baz=249						
WDC	**Whiskeytown Da**	**83.72**	**47**	*e*P	**P**	**14 33 27.3**	**+0.2**
	comp=Z,10.0nm,0.8s						
WDC	**Whiskeytown Da**	**83.72**	**47**	*e*P	**P**	**14 33 27.3**	**+0.2**
WDC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
N02D	**Trinity Center**	**83.74**	**46**	P	**P**	**14 33 28.1**	**+0.8**
	baz=250						
M02C	**Callahan**	**83.78**	**46**	P	**P**	**14 33 28.2**	**+0.7**
	baz=250						
SCRK	**Sand Creek**	**83.92**	**20**	*e*P	**P**	**14 33 27.9**	**+0.1**
	comp=Z,63nm,1.4s						
YBH	**Yreka Blue Hor**	**84.00**	**46**	*e*P	**P**	**14 33 29.3**	**+0.7**
	comp=Z,24nm,0.9s						
ORV	**Oroville**	**84.13**	**48**	*e*P	**P**	**14 33 28.9**	**-0.3**
	comp=Z,15nm,0.8s						
ORV	**Oroville**	**84.13**	**48**	*e*P	**P**	**14 33 28.9**	**-0.3**
ORV				pmax	pmax		
	comp=Z,15nm,0.8s						
HUMO	**Hull Mountain**	**84.13**	**45**	*e*P	**P**	**14 33 29.2**	**0.0**
	comp=Z,23nm,0.8s						
O03E	**Paynes Creek**	**84.16**	**47**	P	**P**	**14 33 29.1**	**-0.4**
	baz=250						
AFDM	**Forest Hills D**	**84.32**	**49**	*e*P	**P**	**14 33 29.2**	**-1.0**
	comp=Z,31nm,1.1s						
HYT	**Haines Junctio**	**84.41**	**24**	*e*P	**P**	**14 33 30.2**	**-0.1**
	comp=Z,21nm,0.8s						
PRP	**Porcupine Dome**	**84.44**	**18**	*e*P	**P**	**14 33 28.9**	**-1.5**
	comp=Z,7.6nm,1.2s						
L04D	**Klamath Falls**	**84.45**	**45**	P	**P**	**14 33 31.3**	**+0.3**
	baz=250						
CMB	**Columbia Colle**	**84.46**	**50**	*e*P	**P**	**14 33 30.8**	**-0.2**
	comp=Z,16nm,0.8s						
CMB	**Columbia Colle**	**84.46**	**50**	*e*P	**P**	**14 33 30.8**	**-0.2**
CMB				pmax	pmax		
	comp=Z,16nm,0.8s						
SKAG	**Skagway**	**84.57**	**26**	*e*P	**P**	**14 33 30.9**	**0.0**
	comp=Z,18nm,0.9s						
M04C	**Macdoel**	**84.63**	**46**	P	**P**	**14 33 32.4**	**+0.5**
	baz=250						
KNGR	**Kungurtug, Tuv**	**84.90**	**324**⇓	*e*P	**P**	**14 33 32.9**	**-0.1**
I04A	**Tendick Farm,**	**84.92**	**44**	P	**P**	**14 33 33.4**	**+0.2**
	baz=250						
J04D	**Umpqua Nationa**	**84.94**	**44**	P	**P**	**14 33 33.2**	**-0.3**
	baz=250						
RUBR	**Rubicon Trail**	**84.95**	**49**	*e*P	**P**	**14 33 32.4**	**-1.4**
	comp=Z,34nm,0.7s						
K04D	**Chiloquin, OR**	**84.97**	**45**	P	**P**	**14 33 34.2**	**+0.7**
	baz=250						
BEKR	**Beckworth**	**85.06**	**48**	*e*P	**P**	**14 33 33.8**	**-0.4**
	comp=Z,21nm,0.7s						
MWC	**Mount Wilson**	**85.12**	**54**	*e*P	**P**	**14 33 34.8**	**+0.2**
	comp=Z,108nm,2.0s						
ISA	**Isabella, Lake**	**85.20**	**52**	*e*P	**P**	**14 33 34.7**	**-0.1**
	comp=Z,14nm,0.9s						
ISA	**Isabella, Lake**	**85.20**	**52**	*e*P	**P**	**14 33 34.7**	**-0.1**
ISA				pmax	pmax		
	comp=Z,14nm,0.9s						
ISA	**Isabella, Lake**	**85.20**	**52**	P	**P**	**14 33 35.6**	**+0.7**
	baz=253,SNR=5.1						
WAKR	**Walker**	**85.32**	**50**	*e*P	**P**	**14 33 35.2**	**-0.3**
	comp=Z,14nm,0.8s						
MDPB	**Devils Postpil**	**85.32**	**50**	*e*P	**P**	**14 33 35.4**	**-0.2**
	comp=Z,18nm,0.8s						
EDW2	**Edwards Air Fo**	**85.36**	**53**	P	**P**	**14 33 36.2**	**+0.6**
	baz=253						
PNTR	**Pine Nut**	**85.38**	**49**	*e*P	**P**	**14 33 36.2**	**+0.3**
	comp=Z,16nm,0.8s						
WHY	**Whitehorse**	**85.39**	**25**	*e*P	**P**	**14 33 34.6**	**-0.6**
	comp=Z,6.3nm,0.8s						
VCNR	**Virginia City**	**85.40**	**49**	*e*P	**P**	**14 33 35.6**	**-0.3**

	comp=Z,9.7nm,0.8s						
BFSC	Mount Baldy Ra	85.44	54	P	P	14 33 36.2	+0.1
	baz=254						
J05D	Fort Rock, OR	85.55	45	P	P	14 33 37.2	+0.7
	baz=251						
DAWY	Dawson	85.56	21	eP	P	14 33 36.0	+0.1
	comp=Z,20nm,0.8s						
YERR	Yerington	85.61	49	eP	P	14 33 36.8	-0.2
	comp=Z,8.3nm,0.8s						
PAHR	Pah Rah Range	85.73	48	eP	P	14 33 37.1	-0.4
	comp=Z,15nm,0.8s						
CWC	Cottonwood Cre	85.74	52	P	P	14 33 38.0	+0.4
	baz=253						
MOD	Modoc Plateau	85.75	46	eP	P	14 33 37.0	-0.6
	comp=Z,14nm,0.8s						
LRMC	Laurel Mtn Rad	85.77	53	P	P	14 33 38.0	+0.3
	baz=254,SNR=8.5						
D03D	Eldon	85.80	40	P	P	14 33 38.1	+0.7
	baz=249						
I05D	Terrebonne, OR	85.83	44	P	P	14 33 38.3	+0.5
	baz=250						
PINE	Pine Mountain	85.92	44	eP	P	14 33 38.2	-0.1
	comp=Z,24nm,0.8s						
TIXI	Tiksi	85.96	349	eP	P	14 33 37.4	-0.3
	comp=Z,7.0nm,0.9s						
TIXI	Tiksi	85.96	349⇓	eP	P	14 33 38.0	+0.3
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RYN	Ryan	86.04	50	eP	P	14 33 38.6	-0.5
	comp=Z,13nm,0.9s						
MONP2	Monument Peak	86.06	56	P	P	14 33 39.9	+0.5
	baz=254						
DAC	Darwin (Calif)	86.06	52	eP	P	14 33 39.4	+0.1
	comp=Z,10.0nm,0.9s						
DAC	Darwin (Calif)	86.06	52	eP	P	14 33 39.4	+0.1
DAC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MPMC	Manual Prospec	86.08	52	P	P	14 33 39.7	+0.3
	baz=254,SNR=9.0						
NV01	Mina Array Sit	86.14	50	eP	P	14 33 38.8	-0.9
NVAR	Mina Array Bea	86.14	50	P	P	14 33 39.9	+0.2
	comp=Z,6.8nm,0.8s,baz=233,slow=7.7,SNR=35						
G05D	Wamic, OR	86.15	43	P	P	14 33 39.4	+0.1
	baz=250						
PFO	Pinyon Flats O	86.22	55	eP	P	14 33 39.8	-0.2
	comp=Z,8.8nm,0.9s						
PFO				LR	LR		
	comp=Z,2µm,18.0s						
PFO	Pinyon Flats O	86.22	55	eP	P	14 33 39.8	-0.2
PFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PFO				MLR	MLR		
	comp=Z,2µm,18.0s						
PFO	Pinyon Flats O	86.22	55	P	P	14 33 40.5	+0.4
	baz=254						
XPFO	Pion Flat	86.23	55	eP	P	14 33 39.8	-0.2
	comp=Z,8.8nm,0.8s						
XPFO				LR	LR		
	comp=Z,2µm,18.0s						
IKP	In-Ko-Pah, Jac	86.25	56	P	P	14 33 40.3	+0.2
	baz=255						
NV11	Mina Array Sit	86.26	50	eP	P	14 33 39.7	-0.4
	comp=Z,1.6nm,0.9s						
F05D	White Salmon	86.27	42	P	P	14 33 39.2	-0.6
	baz=250						
GSC	Goldstone, Bar	86.41	53	eP	P	14 33 40.7	-0.1
	comp=Z,12nm,1.1s						
GSC	Goldstone, Bar	86.41	53	eP	P	14 33 40.7	-0.1
GSC				pmax	pmax		
	comp=Z,12nm,1.1s						
GSC	Goldstone, Bar	86.41	53	P	P	14 33 41.7	+0.9
	baz=254						
GRAC	Grapevine Rang	86.44	51	P	P	14 33 41.3	+0.4
	baz=254						
A04D	Lummi Island	86.46	39	P	P	14 33 42.1	+1.5
	baz=249						
KVN	Kaiserville	86.48	49	eP	P	14 33 40.8	-0.5
	comp=Z,16nm,0.9s						
KVN	Kaiserville	86.48	49	eP	P	14 33 40.8	-0.5
KVN				pmax	pmax		
	comp=Z,16nm,0.9s						
SWSC	Sam W. Stewart	86.58	56	P	P	14 33 42.0	+0.4
	baz=255						
HEC	Hector,Ludlow	86.65	54	P	P	14 33 42.4	+0.4
	baz=254						
B05A	Bryant	86.68	40	P	P	14 33 41.8	+0.1
	baz=250						
FURC	Furnace Creek,	86.68	52	P	P	14 33 42.3	+0.3
	baz=254						
BELC	Belle Mtn. Jos	86.70	55	P	P	14 33 42.1	-0.3
	baz=254,SNR=16						
SHOC	Shoshone, Teco	86.99	53	P	P	14 33 44.1	+0.5
	baz=254						
I07A	Izee	87.00	44	eP	P	14 33 43.6	0.0
	comp=Z,18nm,0.8s						
BC3	Big Chuckawall	87.04	55	P	P	14 33 44.1	+0.1
	baz=255,SNR=8.8						
WVOR	Wild Horse Val	87.09	46	eP	P	14 33 44.1	0.0
	comp=Z,18nm,1.1s						
WVOR	Wild Horse Val	87.09	46	eP	P	14 33 44.1	0.0
WVOR				pmax	pmax		
	comp=Z,18nm,1.1s						
TUQ	Turquoise Moun	87.14	53	P	P	14 33 45.1	+0.7
	baz=254						
GMRC	Granite Mounta	87.17	54	P	P	14 33 45.0	+0.3
	baz=255,SNR=9.4						
LTY	Liberty	87.24	41	eP	P	14 33 44.6	-0.1
	comp=Z,9.6nm,0.7s						
F07A	Phinny Hill Vi	87.28	42	eP	P	14 33 45.1	+0.4
	comp=Z,14nm,0.9s						
TPNV	Topopah Spring	87.29	52	eP	P	14 33 45.0	-0.2
	comp=Z,42nm,1.8s						
TPNV	Topopah Spring	87.29	52	eP	P	14 33 45.0	-0.2
TPNV				pmax	pmax		
	comp=Z,42nm,1.8s						
TPNV	Topopah Spring	87.29	52	P	P	14 33 45.3	+0.1
	baz=254						
GLA	Glamis	87.39	56	eP	P	14 33 45.8	+0.2
	comp=Z,22nm,0.8s						
GLA	Glamis	87.39	56	eP	P	14 33 45.8	+0.2
GLA				pmax	pmax		
	comp=Z,23nm,0.8s						
GLA	Glamis	87.39	56	P	P	14 33 46.2	+0.6
	baz=255						
IRM	Iron Mountain	87.42	55	P	P	14 33 46.3	+0.5
	baz=255						
J08A	Circle Bar Ran	87.49	45	eP	P	14 33 45.9	-0.1
	comp=Z,16nm,0.8s						
HAWA	Hanford	87.70	42	eP	P	14 33 47.1	+0.4
	comp=Z,12nm,0.8s						
G08A	Pilot Rock	87.74	43	eP	P	14 33 47.1	0.0
	comp=Z,21nm,1.0s						
Y12C	Blythe	87.82	55	eP	P	14 33 48.0	+0.5
	comp=Z,22nm,1.0s						
Y12C	Blythe	87.82	55	P	P	14 33 48.5	+0.9
	baz=255						
SHPR	Sheep Range	88.02	52	eP	P	14 33 48.8	+0.1
	comp=Z,18nm,1.3s						
E08A	Dider Farm, El	88.05	42	eP	P	14 33 47.8	-0.5
	comp=Z,15nm,0.8s						
R11A	Troy Canyon, C	88.17	51	eP	P	14 33 49.3	-0.1
	comp=Z,6.6nm,1.0s						
R11A	Troy Canyon, C	88.17	51	P	P	14 33 49.9	+0.4
	baz=255						
113A	Mohawk Valley,	88.19	56	eP	P	14 33 48.9	-0.5
	comp=Z,17nm,1.1s						
PDMCI	Parker Dam,Lak	88.26	55	P	P	14 33 50.0	+0.3
	baz=256						
D08A	Wollman Farm,	88.31	41	eP	P	14 33 49.8	+0.2
	comp=Z,7.2nm,0.8s						
B08A	Colville Reser	88.45	40	eP	P	14 33 50.0	-0.3
	comp=Z,7.7nm,1.0s						
W13A	Hualapai Mount	88.66	54	eP	P	14 33 50.3	-1.5
	comp=Z,17nm,1.2s						
BMO	Blue Mountains	88.73	44	eP	P	14 33 51.6	-0.2
	comp=Z,6.6nm,0.9s						
BMO	Blue Mountains	88.73	44	eP	P	14 33 51.6	-0.2
BMO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
214A	Organ Pipe Nat	88.78	57	P	P	14 33 53.1	+0.9
	baz=256,SNR=5.2						
WMQ	Urumqi	88.87	315	P	P	14 33 50.7	-1.7
WMQ				pP	PcP	14 33 54.3	+0.3
WMQ				sP	pP	14 33 58.2	-3.3
WMQ				pmax	pmax		
	comp=Z,11nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.1s						
WMQ				LR	LR		
	comp=Z,580nm,19.9s						
WMQ				LR	LR		
	comp=Z,470nm,17.5s						
WMQ				LR	LR		
	comp=Z,700nm,17.5s						
ELK	Elko	89.06	48	eP	P	14 33 53.6	0.0
	comp=Z,18nm,1.6s						
ELK	Elko	89.06	48	eP	P	14 33 53.6	0.0
ELK				pmax	pmax		
	comp=Z,18nm,1.6s						
F10A	Beach Ranch, E	89.10	43	eP	P	14 33 53.0	-0.5
	comp=Z,17nm,0.8s						
PSUT	Pine Spring	89.53	51	eP	P	14 33 55.4	-0.5
	comp=Z,9.9nm,0.8s						
LCMT	Little Creek M	89.63	52	eP	P	14 33 56.2	-0.1
	comp=Z,15nm,0.9s						
CCUT	Cedar City	89.67	52	eP	P	14 33 56.5	0.0
	comp=Z,14nm,0.8s						
NEW	Newport	89.83	41	P	P	14 33 57.4	+0.6
	baz=253						
SZCU	Shurtz Canyon	89.89	52	eP	P	14 33 57.6	0.0
INK	Inuvik	89.89	19	P	P	14 33 56.5	0.0
	comp=Z,2.8nm,1.0s,baz=243,slow=1.6,SNR=6.5						
KNB	Kanab	89.96	52	eP	P	14 33 58.1	+0.2
	comp=Z,20nm,1.2s						
KNB	Kanab	89.96	52	eP	P	14 33 58.1	+0.2
KNB				pmax	pmax		
	comp=Z,20nm,1.2s						
U15A	North Rim	90.24	53	eP	P	14 33 59.6	+0.4
	comp=Z,22nm,0.8s						
HLID	Hailey	90.38	46	eP	P	14 33 59.6	-0.1
	comp=Z,11nm,0.8s						
HLID	Hailey	90.38	46	P	P	14 34 00.4	+0.8
	baz=255						
PKCU	Pink Cliffs	90.46	52	eP	P	14 34 00.7	+0.3
	comp=Z,34nm,1.1s						
X16A	Lo Mia Camp, P	90.46	55	eP	P	14 34 00.4	+0.1
	comp=Z,10nm,0.8s						
TUC	Tucson	90.53	57	P	P	14 34 00.6	+0.1
	baz=257						
TCRU	Three Creeks R	90.62	51	PFAKE		14 34 10.0	+9.0
TCRU				LR	LR		
	comp=Z,3µm,18.0s						
MTPU	Mount Pierson	90.69	51	eP	P	14 34 02.1	+0.6
	comp=Z,17nm,0.8s						
DUG	Dugway, Tooele	90.72	49	eP	P	14 34 00.8	-0.5
	comp=Z,8.9nm,0.8s						
DUG	Dugway, Tooele	90.72	49	eP	P	14 34 00.8	-0.5
DUG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DUG	Dugway, Tooele	90.72	49	P	P	14 34 02.0	+0.7
	baz=256						
BGU	Big Grassy Mou	90.73	49	eP	P	14 34 01.1	-0.2
	comp=Z,10nm,0.8s						
WUAZ	Wupatki	90.76	54	eP	P	14 34 00.7	-0.9
	comp=Z,13nm,0.9s						
WUAZ	Wupatki	90.76	54	P	P	14 34 02.3	+0.8
	baz=257						
MSU	Marysvale	90.81	51	eP	P	14 34 01.3	-0.5
MSU	Marysvale	90.81	51	eP	P	14 34 01.3	-0.5
HVU	Hansel Valley	91.12	48	eP	P	14 34 03.1	0.0
	comp=Z,22nm,0.8s						
HVU	Hansel Valley	91.12	48	eP	P	14 34 03.1	0.0
HVU				pmax	pmax		
	comp=Z,22nm,0.8s						
NLU	North Lily Min	91.21	50	eP	P	14 34 04.0	+0.4
	comp=Z,14nm,0.9s						
MSO	Missoula	91.53	43	P	P	14 34 04.7	-0.1
	baz=256						
319A	Douglas	91.59	59	eP	P	14 34 05.1	-0.4
	comp=Z,13nm,1.0s						
CTU	Camp Tracy	91.62	49	eP	P	14 34 05.3	-0.2
	comp=Z,12nm,0.9s						
X18A	Snowflake	91.69	55	eP	P	14 34 05.2	-0.8
	comp=Z,8.9nm,0.8s						
TMUT	Trail Mountain	91.72	50	eP	P	14 34 06.8	+0.7
	comp=Z,8.0nm,0.8s						
MCMT	McKenzie Canyo	91.78	45	eP	P	14 34 06.4	+0.1
SYO	Syowa Base	91.80	197⇑	eX	P	14 34 18.4	+13
TCUT	Toone Canyon	91.97	49	eP	P	14 34 06.3	-0.9
	comp=Z,16nm,0.8s						
DLMT	Dillon	92.08	44	eP	P	14 34 06.9	-0.6
	comp=Z,20nm,0.8s						
LRM	Limekiln Ridge	92.29	44	eP	P	14 34 09.2	+0.7
FXWY	Fox Creek	92.79	46	eP	P	14 34 10.3	-0.6
	comp=Z,9.2nm,0.8s						
BOZ	Bozeman (W)	92.80	44	eP	P	14 34 10.7	-0.1
	comp=Z,14nm,1.0s						
BOZ	Bozeman (W)	92.80	44	eP	P	14 34 10.7	-0.1
BOZ				pmax	pmax		
	comp=Z,14nm,1.0s						
BOZ	Bozeman (W)	92.80	44	P	P	14 34 11.5	+0.7
	baz=257						
TPAW	Teton Pass	92.81	46	eP	P	14 34 09.3	-1.8
	comp=Z,6.3nm,0.8s						
HRY	Holter Researc	92.91	43	eP	P	14 34 10.9	-0.3
IMW	Indian Meadow	92.91	46	eP	P	14 34 09.9	-1.7
	comp=Z,7.3nm,0.8s						
YHB	Horse Butte	92.91	45	eP	P	14 34 09.6	-1.8
	comp=Z,9.2nm,0.8s						
MOOW	Moose Ponds	93.02	46	eP	P	14 34 11.8	-0.1
	comp=Z,2.9nm,0.8s						
YMR	Madison River	93.06	45	eP	P	14 34 11.0	-1.1
	comp=Z,11nm,0.7s						
121A	Cookes Peak, D	93.06	58	P	P	14 34 12.9	+0.6
	baz=259						
LOHW	Long Hollow	93.09	46	eP	P	14 34 11.7	-0.6
	comp=Z,3.2nm,0.6s						
FLWY	Flagg Ranch	93.12	46	eP	P	14 34 11.8	-0.6
	comp=Z,7.7nm,0.8s						
PV09	Paradox Valley	93.14	52	eP	P	14 34 12.0	-0.7
PV14	Lion Creek, Pa	93.20	52	eP	P	14 34 11.5	-1.4
	comp=Z,8.8nm,0.8s						
PV23	Carpenter Ridg	93.22	52	eP	P	14 34 12.8	-0.3
	comp=Z,17nm,0.7s						
PV16	Nyswonger Mesa	93.27	52	eP	P	14 34 10.9	-2.3
	comp=Z,36nm,2.0s						
H17A	Grant Village	93.27	46	P	P	14 34 15.0	+1.8
	baz=258						
PV21	Cone Mtn., Par	93.27	52	eP	P	14 34 13.3	+0.1
	comp=Z,9.8nm,1.2s						
MK01	Makanchi Array	93.29	317	eP	P	14 34 11.7	-1.1
PV04	Paradox Valley	93.29	52	eP	P	14 34 12.9	-0.4
	comp=Z,26nm,1.6s						
MK31	Makanchi Array	93.30	317	eP	P	14 34 11.8	-1.1
MKAR	Makanchi Array	93.30	317	eP	P	14 34 11.9	-1.0
	comp=Z,36nm,0.8s						
MKAR				PKKPbc	PKKPdf	14 51 19.8	-1.1
MKAR	Makanchi Array	93.30	317	P	P	14 34 13.1	+0.1
	comp=Z,1.7nm,0.6s,baz=89,slow=6.5,SNR=15						
MKAR				PKKPbc	PKKPdf	14 51 19.8	-1.1
	comp=Z,0.9nm,0.8s,baz=279,slow=3.5,SNR=8.8						
ZAA0	Zalesovo Array	93.35	324	eP	P	14 34 11.7	-1.2
	comp=Z,7.4nm,1.0s						
ZALV	Zalesovo Beam	93.35	324	eP	P	14 34 11.3	-1.6
ZALV				PKKPbc	PKKPbc	14 51 22.7	+0.4
ZALV	Zalesovo Beam	93.35	324	eP	P	14 34 11.3	-1.6
ZALV	Zalesovo Beam	93.35	324	P	P	14 34 12.6	-0.3
	comp=Z,1.6nm,0.7s,baz=103,slow=3.3,SNR=7.3						
ZALV				PKKPbc	PKKPbc	14 51 22.7	+0.4
	comp=Z,0.5nm,0.4s,baz=309,slow=5.0,SNR=4.1						
PV12	Saucer Basin,	93.36	52	eP	P	14 34 13.5	-0.1
	comp=Z,10nm,0.8s						
MAKZ	Makanchi	93.51	317	eP	P	14 34 13.4	-0.5
	comp=Z,11nm,1.1s						
MAKZ	Makanchi	93.51	317	eP	P	14 34 13.4	-0.5
MAKZ				pmax	pmax		
	comp=Z,11nm,1.1s						
BW06	Boulder Array	93.66	47	eP	P	14 34 13.5	-1.5
	comp=Z,21nm,1.4s						
BW06	Boulder Array	93.66	47	P	P	14 34 14.7	-0.2
	baz=259						
PD31	Pinedale Array	93.67	47	eP	P	14 34 13.2	-1.7
PDAR	Pinedale Array	93.67	47	eP	P	14 34 12.9	-2.0
PDAR				PKKPbc	PKKPbc	14 51 26.0	+4.6
PDAR	Pinedale Array	93.67	47	P	P	14 34 15.3	+0.3
	comp=Z,2.0nm,0.8s,baz=245,slow=2.6,SNR=15						
PDAR				PKKPbc	PKKPbc	14 51 26.0	+4.6
	comp=Z,0.5nm,0.7s,baz=99,slow=4.8,SNR=4.7						
PDAR				LR	LR	15 11 20.9	
	comp=Z,816nm,19.4s,baz=74,slow=32						
O20A	White River Ci	94.13	50	P	P	14 34 17.1	-0.1
	baz=259						
EGMT	Eagleton	94.56	42	eP	P	14 34 17.7	-1.1
	comp=Z,12nm,0.7s						
EGMT	Eagleton	94.56	42	P	P	14 34 18.9	+0.2
	baz=259						
ANMO	Albuquerque	94.59	55	eP	P	14 34 20.0	+0.7
	comp=Z,3.4nm,0.8s						
ANMO	Albuquerque	94.59	55⇓	eP	P	14 34 18.3	-1.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ANMO	Albuquerque	94.59	55	P	P	14 34 19.6	+0.2
	baz=260						
S22A	4UR Ranch, Cre	94.78	53	P	P	14 34 20.9	+0.6
	baz=260						
MNTX	Cornudas Mount	94.92	59	P	P	14 34 20.0	-0.7
	baz=260						
YKA	Yellowknife Ar	95.00	27	P	P	14 34 18.9	-1.4
	comp=Z,1.6nm,0.7s,baz=256,slow=4.7,SNR=32						
YKA				PKKPbc	PKKPbc	14 51 16.3	-1.8
	comp=Z,0.2nm,0.7s,baz=57,slow=2.6,SNR=3.9						
YKA				LR	LR	15 14 25.2	
	comp=Z,92nm,18.1s,baz=312,slow=34						
YKB5	Yellowknife Ar	95.00	27	eP	P	14 34 18.5	-1.8
SDCO	Great Sand Dun	95.82	53	P	P	14 34 24.7	-0.3
	baz=261						
NRIK	Noril'sk	95.96	340	P	P	14 34 23.7	-0.9
	comp=Z,0.8nm,0.3s,baz=131,slow=0.9,SNR=2.7						
TXAR	Lajitas Array	95.99	61	P	P	14 34 24.9	-0.8
	comp=Z,0.6nm,0.6s,baz=243,slow=5.5,SNR=4.9						
TXAR				PKKPbc	PKKPdf	14 51 16.0	+0.4
	comp=Z,0.3nm,0.6s,baz=72,slow=2.9,SNR=3.5						
KURK	Kurchatov	96.43	320⇑	eP	P	14 34 28.7	+1.7
KURK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
KSH	Kashi	96.52	309	P	P	14 34 28.6	+0.7
KSH				pP	pP	14 34 35.9	-1.1
KSH				pmax	pmax		
	comp=Z,300nm,7.8s						
T25A	Trinidad	96.58	54	P	P	14 34 28.1	-0.3
	baz=261						
SNAA	Sanae	97.19	184⇑	eP	Pdif	14 34 32.1	+1.7
JRQG	Juriquilla Cam	97.54	70	PFAKE		14 34 40.0	+6.8
JRQG				LR	LR		
	comp=Z,800nm,20.0s						
AMTX	Amarillo	98.46	56	Pdiff	Pdif	14 34 37.1	+0.3
	baz=263						
HDIL	Hopedale	108.57	51	PFAKE		14 39 40.0	+13
HDIL				LR	LR		
	comp=Z,1µm,19.0s						
M44A	Midewin, Midew	109.49	50	PFAKE		14 39 40.0	+11
M44A				LR	LR		
	comp=Z,2µm,18.0s						
ESPN	Las Esperanzas	111.78	81	PFAKE		14 39 50.0	+16
ESPN				LR	LR		
	comp=Z,500nm,18.0s						
ARCES	ARCESS Array B	116.19	345	PKP	PKiKP	14 39 39.9	-0.8
	comp=Z,1.7nm,0.7s,baz=81,slow=2.2,SNR=11						
ARCES				PKKPbc	PKKPbc	14 50 10.7	-2.4
	comp=Z,2.0nm,0.8s,baz=335,slow=3.2,SNR=6.8						
OBN	Obninsk	120.61	329	ePKIKP	PKiKP	14 39 50.8	+1.2
OBN				e		14 41 14.9	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	FINESS Array B	121.61	338	PKP	PKPdf	14 39 51.3	0.0
	comp=Z,1.2nm,0.7s,baz=90,slow=1.9,SNR=4.9						
CPUP	Villa Florida	124.26	132	PKP	PKiKP	14 39 58.9	+1.1
	comp=Z,1.6nm,0.7s,baz=342,slow=3.1,SNR=4.4						
SDV	Santo Domingo	124.72	87	ePKPdf	PKPdf	14 39 57.4	-1.5
BOSA	Boshof	125.02	223	PKP	PKiKP	14 39 59.9	+0.5
	comp=Z,4.1nm,0.6s,baz=129,slow=2.7,SNR=11						
NB2	NORSAR Subarra	126.56	345	PKP	PKiKP	14 40 01.3	0.0
	comp=Z,0.8nm,0.7s,baz=44,slow=2.6						
NOA	NORSAR Array B	126.56	345	PKP	PKPdf	14 40 00.8	-0.1
	comp=Z,1.3nm,0.7s,baz=36,slow=1.9,SNR=3.2						
HFS	Hagfors	126.64	343	PKP	PKPdf	14 40 00.9	-0.1
	comp=Z,1.8nm,0.8s,baz=243,slow=20,SNR=2.3						
AKASG	Malin Array Be	126.66	327	PKP	PKiKP	14 40 02.2	+0.4
	comp=Z,0.5nm,0.5s,baz=38,slow=2.1,SNR=3.4						
KMBO	Kilima Mbogo	127.17	260	PKP	PKiKP	14 40 06.3	+2.1
	comp=Z,1.8nm,0.8s,baz=82,slow=1.8,SNR=3.7						
GBN	Guysborough	127.28	40	PFAKE		14 40 10.0	+6.9
GBN				LR	LR		
	comp=Z,2µm,19.0s						
BRTR	Keskin Array B	128.74	313	PKP	PKiKP	14 40 07.2	+0.7
	comp=Z,0.7nm,0.9s,baz=211,slow=2.5,SNR=2.5						
MTP	Monte Pirata	130.19	76	PFAKE		14 40 20.0	+10
MTP				LR	LR		
	comp=Z,400nm,20.0s						
LSZ	Lusaka	130.34	239	ePKPdf	PKPdf	14 40 08.0	-1.5
LSZ	Lusaka	130.34	239	ePKIKP	PKPdf	14 40 08.0	-1.5
BUR04	Bucovina Ar. S	130.56	325	ePKPdf	PKPdf	14 40 08.2	-0.8
MBAR	Mbarara	133.60	259	PFAKE		14 40 30.0	+13
MBAR				LR	LR		
	comp=Z,500nm,21.0s						
KHC	Kasperske Hory	135.36	334	epPKP	pPKPdf	14 40 24.8	-2.0
GERES	GERESS Array B	135.52	334	PKP	PKiKP	14 40 19.4	-0.4
	comp=Z,1.3nm,0.8s,baz=48,slow=2.0,SNR=4.2						
KEST	Kesra	147.21	323	PKPbc	PKPab	14 40 42.9	-0.6
	comp=Z,4.0nm,0.6s,baz=75,slow=1.4,SNR=2.3						
PBRG	Braganca	148.53	349	ePKPab	PKPab	14 40 50.9	+2.4
POLO	Lamas de Olo	149.14	350	ePKPab	PKPab	14 40 52.6	+1.6
MVO	Moncorvo	149.20	349	ePKPbc	PKiKP	14 40 47.6	-0.5
PVRL	Vila Real	149.22	350	ePKPab	PKPab	14 40 53.5	+2.2
PVIS	Viseu	149.79	350	ePKPab	PKPab	14 40 55.8	+2.2
ESDC	Sonseca Array	149.91	344	PKPbc	PKiKP	14 40 49.6	0.0
	comp=Z,2.1nm,0.7s,baz=22,slow=3.4,SNR=2.9						
ESDC				PKPab	PKPab	14 40 55.1	+1.0
	comp=Z,2.1nm,0.6s,baz=19,slow=4.1,SNR=6.6						
MTE	Manteigas	150.04	349	ePKPab	PKPab	14 40 55.7	+1.0
PCBR	Castelo Branco	150.57	349	ePKPbc	PKiKP	14 40 51.2	+0.3
PTOM	Tomar	150.95	350	ePKPab	PKPab	14 40 57.3	-1.0
PMRV	Marv??o	150.95	349	ePKPdf	PKPdf	14 40 44.7	-0.7
PMRV	Marv??o	150.95	349	ePKPab	PKPab	14 40 57.3	-1.1
PMTG	Montargil	151.45	350	ePKPab	PKPab	14 40 58.1	-2.3
TOA0	Torodi Ar. Sit	164.02	279	ePKPdf	PKPdf	14 41 00.7	-1.6
TORD	Torodi Ar. Bea	164.02	279	PKP	PKPdf	14 41 02.2	-0.1
	comp=Z,1.0nm,0.9s,baz=359,slow=1.4,SNR=5.2						
TORD				PKPab	PKPab	14 41 56.1	+0.6
	comp=Z,0.6nm,0.8s,baz=65,slow=3.7,SNR=3.4						
DBIC	Dimbokro	169.57	247	PKP	PKPdf	14 41 06.3	-0.2
	comp=Z,3.2nm,1.0s,baz=124,slow=3.4,SNR=2.2						

IDC ***06*** *14:24:03.0±0.6, 11°.43S×165°.16E, h0^{km}, mb4.6/24, mb1 4.7/26, mb1mx4.7/37, mbtmp4.6/26, ML4.7/2, MS4.6/2, Ms1 4.6/2, ms1mx3.9/36, Error ellipse: s-maj=18.7km s-min=14.9km az=114.0*

NEIC ***06*** *14:24:04.5±0.1, 11°.33S×165°.14E, h10^{km}, mb5.1/78, Error ellipse: s-maj=4.5km s-min=3.8km az=135.0*

ISCJB ***06*** *14:24:06.6±0.2, 11°.44S±0°.05×165°.06E±0°.04, h34^{km}, mb4.9/107, MS4.6/2, Error ellipse: s-maj=6.7km s-min=5.0km az=179.2*

ISC 06 14:24:08.3±0.4**, 11°.39S**±0°.07×**165°.10E**±0°.07**, h34**^{km}**, n223,** σ**0^{s}.75**/222**, mb5.0**/113**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.43	291	ePn	Pn	14 25 26.8	0.0
HNR				Sn	Sn	14 26 28.2	0.0
HNR	Honiara	5.43	291	Pn	Pn	14 25 27.3	+0.5
	53nm,0.3s,baz=144,slow=3.8,SNR=7.1						
HNR				Sn	Sn	14 26 28.2	0.0
	21nm,0.3s,baz=6.7,slow=23,SNR=3.4						
DZM	Mont Dzumac	10.70	173	ePn	Pn	14 26 39.3	0.0
DZM	Mont Dzumac	10.70	173	Pn	Pn	14 26 38.6	-0.8
	2.1nm,0.3s,baz=313,slow=11,SNR=8.3						
OUENC	Ouen Island, N	11.10	172	ePn	Pn	14 26 45.8	+1.1
PINNC	Pines Island,	11.39	169	ePn	Pn	14 26 48.8	+0.2
MSVF	Nonsavu	14.03	118	ePn	P	14 27 31.5	-0.8
TARA	Tarawa	14.86	32	ePn	Pn	14 27 38.2	+2.1
CTA	Charters Tower	20.08	242	P	P	14 28 39.1	+0.1
	34nm,1.0s,baz=69,slow=14,SNR=6.2						
CTAO	Charters Tower	20.08	242	P	P	14 28 38.3	-0.7
URZ	Urewera	28.84	160	P	P	14 30 02.3	-1.2
	9.6nm,1.0s,baz=328,slow=13,SNR=2.8						
H11S2	WAKE ISLAND Hy	29.73	3	T	T	15 01 45.8	
	baz=193,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.73	3	T	T	15 01 47.4	
	baz=193,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.75	3	T	T	15 01 47.6	
	baz=193,slow=76,SNR=7.9						
STKA	Stephens Creek	29.76	223	P	P	14 30 11.4	-0.4
	7.5nm,0.7s,baz=51,slow=8.1,SNR=7.0						
WRAB	Tennant Creek	30.76	250	eP	P	14 30 18.8	-2.0
WB2	Warramunga Arr	30.76	250	ePcP	PcP	14 33 18.3	+0.4
WRA	Warramunga Arr	30.77	250	P	P	14 30 19.3	-1.5
	16nm,1.0s,baz=81,slow=9.2,SNR=13						
WRA				PcP	PcP	14 33 18.9	+0.9
	1.8nm,0.9s,baz=80,slow=3.0,SNR=5.4						

H11N1	**WAKE ISLAND Hy**	**30.96**	**3**	T	T	15 03 19.3	
	baz=192,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**30.96**	**3**	T	T	15 03 21.4	
	baz=192,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**30.97**	**3**	T	T	15 03 19.5	
	baz=192,slow=76,SNR=20						
THZ	**Tophouse**	**31.02**	**169**	*e*P	**P**	**14 30 26.5**	**+3.7**
	27nm,1.0s						
ASAR	**Alice Springs**	**32.07**	**243**	P	**P**	**14 30 31.4**	**-0.9**
	17nm,1.0s,baz=76,slow=9.4,SNR=10						
ASAR				PcP	**PcP**	**14 33 22.1**	**+0.6**
	1.8nm,0.8s,baz=74,slow=2.7,SNR=6.2						
FITZ	**Fitzroy Crossi**	**38.68**	**255**	LR	LR	14 45 38.8	
	comp=Z,1µm,18.1s,baz=288,slow=34						
DAV	**Davao City (W)**	**43.38**	**293**	LR	LR	14 50 55.6	
	comp=Z,453nm,18.1s,baz=190,slow=37						
MJAR	**Matsushiro Arr**	**53.98**	**333**	P	**P**	**14 33 28.5**	**-0.6**
	5.2nm,0.9s,baz=172,slow=8.3,SNR=7.2						
JNU	**Nakatsue**	**54.99**	**325**	P	**P**	**14 33 36.9**	**+0.5**
	7.4nm,0.8s,baz=19,slow=22,SNR=6.5						
ASAJ	**Asahikawa**	**58.91**	**341**	P	**P**	**14 34 04.4**	**+0.4**
	6.7nm,0.8s,baz=202,slow=12,SNR=6.2						
KSRS	**Korea Array**	**59.80**	**326**	P	**P**	**14 34 10.8**	**+0.6**
	2.1nm,0.9s,baz=148,slow=5.9,SNR=4.1						
KSAR	**Wonju Array Be**	**59.81**	**326**	P	**P**	**14 34 10.8**	**+0.5**
NJ2	**Nanjing**	**61.82**	**316**	*e*P	**P**	**14 34 23.3**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**62.97**	**334**	P	**P**	**14 34 32.3**	**+0.8**
	comp=Z,4.1nm,1.0s,baz=156,slow=9.8,SNR=4.4						
KLR	**Kul'dur**	**67.12**	**337**	P	**P**	**14 34 59.1**	**+0.7**
	comp=Z,3.1nm,1.1s,baz=139,slow=1.7,SNR=3.2						
XAN	**Xi'an**	**69.88**	**313**	P	**P**	**14 35 16.8**	**+0.7**
XAN				pP	pwP	14 35 30.5	-1.9
XAN				sP	PcP	14 35 37.0	-1.4
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				LR	LR		
	comp=E,520nm,17.3s						
XAN				LR	LR		
	comp=Z,460nm,19.5s						
XAN	**Xi'an**	**69.88**	**313**	*e*P	**P**	**14 35 16.3**	**+0.2**
	comp=Z,6.9nm,0.8s						
KMI	**Kunming**	**70.76**	**302**	P	**P**	**14 35 24.2**	**+2.3**
KMI				sP	sP	14 35 32.5	-1.5
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CM01	**Chiang Mai Arr**	**71.64**	**294**	*e*P	**P**	**14 35 27.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**71.67**	**294**	P	**P**	**14 35 27.8**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=120,slow=4.3,SNR=9.5						
HHC	**Hu-ho-hao-te**	**71.68**	**320**	*e*P	**P**	**14 35 28.3**	**+1.3**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CD2	**Chengdu**	**72.31**	**308**	*e*P	**P**	**14 35 31.1**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,1µm,4.6s						
CD2				LR	LR		
	comp=N,1µm,14.7s						
CD2				LR	LR		
	comp=E,1µm,19.0s						
CD2				LR	LR		
	comp=Z,970nm,14.1s						
LZH	**Lanzhou**	**74.52**	**313**	*e*P	**P**	**14 35 45.9**	**+2.0**
LZH				pP	pP	14 35 49.3	-3.4
LZH				sP	sP	14 35 52.2	-3.8
LZH				PP	**PP**	**14 38 28.0**	**-2.9**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,230nm,5.4s						
LZH				LR	LR		
	comp=N,390nm,16.3s						
LZH				LR	LR		
	comp=E,340nm,16.4s						
LZH				LR	LR		
	comp=Z,450nm,17.5s						
SEY	**Seymchan**	**74.74**	**354**	P	**P**	**14 35 44.7**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=166,slow=6.2,SNR=4.0						
GAMB	**Gambell**	**77.02**	**10**	*e*P	**P**	**14 35 57.0**	**-0.3**
	comp=Z,22nm,1.2s						
ULN	**Ulaanbaatar**	**78.20**	**324**	*e*P	**P**	**14 36 04.9**	**+0.4**
	comp=Z,11nm,1.0s						
SONM	**Songino Array**	**78.57**	**324**	P	**P**	**14 36 07.3**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=146,slow=6.6,SNR=8.6						
SONA1	**Songino Array**	**78.57**	**324**	*e*P	**P**	**14 36 06.7**	**+0.2**
QSPA	**South Pole Qui**	**78.62**	**180**	*e*P	**P**	**14 36 07.6**	**+1.0**
	comp=Z,17nm,1.1s						
SVW2	**Sparrevohn**	**78.64**	**18**	*e*P	**P**	**14 36 05.6**	**-0.9**
	comp=Z,24nm,1.3s						
GTA	**Gaotai**	**78.84**	**314**	⇓P	**P**	**14 36 09.7**	**+1.5**
GTA				pP	PcP	14 36 14.6	-2.3
GTA				sP	pP	14 36 16.9	-0.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,69nm,5.2s						
GTA				LR	LR		
	comp=N,540nm,17.1s						
GTA				LR	LR		
	comp=E,550nm,17.8s						
GTA				LR	LR		
	comp=Z,760nm,18.4s						
ANM	**Nome**	**78.96**	**13**	*e*P	**P**	**14 36 07.3**	**-0.8**
	comp=Z,10nm,1.3s						
RSO	**Redoubt South**	**79.06**	**20**	*e*P	**P**	**14 36 08.1**	**-0.9**
BILL	**Bilibino**	**79.22**	**0**	*e*P	**P**	**14 36 09.0**	**-0.6**
	comp=Z,25nm,1.1s						
SUA	**Susitna One**	**80.46**	**20**	*e*P	**P**	**14 36 15.5**	**-1.0**
	comp=Z,27nm,1.5s						
CAST	**Castle Rocks**	**81.47**	**18**	*e*P	**P**	**14 36 20.4**	**-1.4**
	comp=Z,17nm,1.2s						
HMT	**Hamilton**	**82.00**	**23**	*e*P	**P**	**14 36 23.9**	**-0.7**
	comp=Z,29nm,1.0s						
KLU	**Klutina**	**82.15**	**21**	*e*P	**P**	**14 36 25.0**	**-0.4**
	comp=Z,26nm,1.2s						
RND	**Reindeer**	**82.47**	**19**	*e*P	**P**	**14 36 26.3**	**-0.8**
	comp=Z,15nm,1.2s						
MCK	**McKinley**	**82.67**	**19**	*e*P	**P**	**14 36 27.0**	**-1.0**
	comp=Z,25nm,1.4s						
DHY	**Denali Highway**	**82.72**	**20**	*e*P	**P**	**14 36 28.1**	**-0.4**
	comp=Z,9.3nm,1.2s						
IM3	**Indian Mountai**	**82.92**	**16**	*e*P	**P**	**14 36 28.6**	**-0.7**
HARP	**HAARP**	**83.03**	**21**	*e*P	**P**	**14 36 29.2**	**-0.7**
	comp=Z,21nm,0.9s						
MDM	**Murphy Dome**	**83.75**	**18**	*e*P	**P**	**14 36 32.6**	**-1.0**
	comp=Z,8.8nm,0.9s						
HDA	**Harding Lake**	**83.77**	**19**	*e*P	**P**	**14 36 33.1**	**-0.5**
	comp=Z,18nm,1.0s						
HDA	**Harding Lake**	**83.77**	**19**	P	**P**	**14 36 32.9**	**-0.8**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.81**	**18**	P	**P**	**14 36 32.6**	**-1.2**
	baz=226						
COLA	**College**	**83.81**	**18**	*e*P	**P**	**14 36 32.6**	**-1.1**
	comp=Z,13nm,0.8s						
O02D	**Mt. Diablo Mer**	**83.99**	**47**	P	**P**	**14 36 34.9**	**-0.6**
	baz=250						
RIDG	**Independ'e Rid**	**84.01**	**20**	*e*P	**P**	**14 36 34.5**	**-0.4**
	comp=Z,20nm,1.1s						
IL1	**Eielson Array**	**84.04**	**19**	*e*P	**P**	**14 36 34.0**	**-1.1**
ILAR	**Eielson Array**	**84.04**	**19**	P	**P**	**14 36 35.1**	**+0.1**
	comp=Z,3.2nm,0.6s,baz=236,slow=5.1,SNR=15						
ILB	**Eielson Array**	**84.04**	**19**	*e*P	**P**	**14 36 34.0**	**-1.0**
POKR	**Poker Plat Res**	**84.11**	**18**	P	**P**	**14 36 34.6**	**-0.8**
	baz=226						
SNCC	**San Nicolas Is**	**84.24**	**55**	P	**P**	**14 36 36.2**	**-0.6**
	baz=252						
J01E	**Myrtle Point**	**84.25**	**44**	P	**P**	**14 36 36.3**	**-0.2**
	baz=249						
K02D	**Willamette Mer**	**84.26**	**45**	P	**P**	**14 36 36.3**	**-0.5**
	baz=249						
N02D	**Trinity Center**	**84.33**	**46**	P	**P**	**14 36 36.9**	**-0.2**
	baz=250						
ODAN	**Odare**	**84.36**	**299**	*e*P	**P**	**14 36 38.7**	**+0.9**
	comp=Z,48nm,0.9s						
M02C	**Callahan**	**84.37**	**46**	P	**P**	**14 36 37.6**	**+0.3**
	baz=250						
SCRK	**Sand Creek**	**84.45**	**20**	*e*P	**P**	**14 36 36.6**	**-0.7**
	comp=Z,34nm,1.2s						
YBH	**Yreka Blue Hor**	**84.59**	**46**	*e*P	**P**	**14 36 38.1**	**-0.4**
	comp=Z,12nm,1.0s						
ORV	**Oroville**	**84.71**	**48**	*e*P	**P**	**14 36 38.4**	**-0.6**
	comp=Z,8.4nm,1.1s						
HUMO	**Hull Mountain**	**84.72**	**45**	*e*P	**P**	**14 36 39.0**	**0.0**
	comp=Z,29nm,1.4s						
O03E	**Paynes Creek**	**84.74**	**47**	P	**P**	**14 36 39.4**	**+0.1**
	baz=250						
AFDM	**Forest Hills D**	**84.90**	**49**	*e*P	**P**	**14 36 39.8**	**-0.3**
	comp=Z,15nm,1.0s						
HYT	**Haines Junctio**	**84.96**	**24**	*e*P	**P**	**14 36 39.5**	**-0.5**
L04D	**Klamath Falls**	**85.04**	**45**	P	**P**	**14 36 40.5**	**-0.3**
	baz=250						
CMB	**Columbia Colle**	**85.05**	**50**	*e*P	**P**	**14 36 40.3**	**-0.5**
	comp=Z,12nm,1.1s						
RAMN	**Ramite**	**85.06**	**299**	*e*P	**P**	**14 36 42.0**	**+0.6**
SKAG	**Skagway**	**85.13**	**26**	*e*P	**P**	**14 36 40.3**	**-0.3**
	comp=Z,15nm,1.1s						
M04C	**Macdoel**	**85.22**	**46**	P	**P**	**14 36 41.3**	**-0.4**
	baz=250						
ARVC	**Arvin**	**85.35**	**53**	P	**P**	**14 36 42.5**	**+0.2**
	baz=253						
I04A	**Tendick Farm,**	**85.51**	**44**	P	**P**	**14 36 42.9**	**-0.1**
	baz=250						
J04D	**Umpqua Nationa**	**85.52**	**44**	P	**P**	**14 36 43.3**	**0.0**
	baz=250						
JIRN	**Jiri**	**85.60**	**299**	*e*P	**P**	**14 36 45.0**	**+0.8**
BEKR	**Beckworth**	**85.65**	**48**	*e*P	**P**	**14 36 43.5**	**-0.5**
	comp=Z,5.8nm,0.9s						
ISA	**Isabella, Lake**	**85.78**	**53**	*e*P	**P**	**14 36 44.0**	**-0.5**
	comp=Z,15nm,1.1s						
ISA	**Isabella, Lake**	**85.78**	**53**	P	**P**	**14 36 43.9**	**-0.7**
	baz=253,SNR=7.2						
WAKR	**Walker**	**85.90**	**50**	*e*P	**P**	**14 36 44.3**	**-1.0**
	comp=Z,21nm,1.2s						
MDPB	**Devils Postpil**	**85.91**	**51**	*e*P	**P**	**14 36 44.6**	**-0.7**
	comp=Z,16nm,1.1s						
GUN	**Gumba**	**85.93**	**299**	*e*P	**P**	**14 36 46.5**	**+0.7**
	comp=Z,20nm,1.0s						
EDW2	**Edwards Air Fo**	**85.93**	**53**	P	**P**	**14 36 45.5**	**+0.2**
	baz=253,SNR=9.4						
BFSC	**Mount Baldy Ra**	**86.02**	**54**	P	**P**	**14 36 45.7**	**-0.2**
	baz=253,SNR=7.0						
MLAC	**Mammoth, Mammo**	**86.09**	**51**	P	**P**	**14 36 45.7**	**-0.5**
	baz=252						
DAWY	**Dawson**	**86.10**	**21**	*e*P	**P**	**14 36 45.0**	**-0.4**
	comp=Z,11nm,1.0s						
J05D	**Fort Rock, OR**	**86.14**	**45**	P	**P**	**14 36 46.4**	**+0.2**
	baz=250						
MURC	**Murrieta**	**86.20**	**55**	P	**P**	**14 36 46.5**	**-0.2**
	baz=254						
PKI	**Pulchoki**	**86.25**	**299**	*e*P	**P**	**14 36 47.6**	**+0.2**
PKIN	**Phulchoki**	**86.26**	**299**	*e*P	**P**	**14 36 47.5**	**+0.2**
TIXI	**Tiksi**	**86.30**	**349**	*e*P	**P**	**14 36 45.6**	**-0.6**
	comp=Z,9.8nm,1.2s						
TIXI	**Tiksi**	**86.30**	**349**	P	**P**	**14 36 45.9**	**-0.3**
	comp=Z,5.0nm,1.0s,baz=130,slow=6.8,SNR=5.6						
PAHR	**Pah Rah Range**	**86.31**	**48**	*e*P	**P**	**14 36 46.7**	**-0.5**
	comp=Z,13nm,1.2s						
CWC	**Cottonwood Cre**	**86.32**	**52**	P	**P**	**14 36 47.4**	**+0.1**
	baz=253						
LRMC	**Laurel Mtn Rad**	**86.35**	**53**	P	**P**	**14 36 47.5**	**+0.1**
	baz=253						
BAR	**Barrett**	**86.37**	**56**	*e*P	**P**	**14 36 46.9**	**-0.6**
	comp=Z,14nm,1.2s						
I05D	**Terrebonne, OR**	**86.42**	**44**	P	**P**	**14 36 47.7**	**+0.2**
	baz=250						
PINE	**Pine Mountain**	**86.51**	**44**	*e*P	**P**	**14 36 47.8**	**-0.3**
	comp=Z,25nm,1.3s						
DMN	**Daman**	**86.52**	**299**	*e*P	**P**	**14 36 49.0**	**+0.4**
	comp=Z,28nm,1.0s						
BBRC	**Big Bear Solar**	**86.61**	**54**	P	**P**	**14 36 48.3**	**-0.5**
	baz=254						
RYN	**Ryan**	**86.62**	**50**	*e*P	**P**	**14 36 48.5**	**-0.2**
	comp=Z,8.8nm,1.1s						
MONP2	**Monument Peak**	**86.63**	**56**	P	**P**	**14 36 48.8**	**-0.2**
	baz=254,SNR=11						
DAC	**Darwin (Calif)**	**86.65**	**52**	*e*P	**P**	**14 36 49.1**	**+0.2**
	comp=Z,12nm,1.1s						
MPMC	**Manual Prospec**	**86.67**	**52**	P	**P**	**14 36 49.1**	**0.0**
	baz=253,SNR=9.2						
NV01	**Mina Array Sit**	**86.73**	**50**	*e*P	**P**	**14 36 48.6**	**-0.8**
NVAR	**Mina Array Bea**	**86.73**	**50**	P	**P**	**14 36 49.7**	**+0.3**
	comp=Z,9.8nm,1.0s,baz=234,slow=7.6,SNR=19						
PFO	**Pinyon Flats O**	**86.80**	**55**	*e*P	**P**	**14 36 48.9**	**-0.8**
	comp=Z,14nm,1.3s						
PFO	**Pinyon Flats O**	**86.80**	**55**	P	**P**	**14 36 49.5**	**-0.2**
	baz=254,SNR=7.1						
XPFO	**Pion Flat**	**86.80**	**55**	*e*P	**P**	**14 36 48.8**	**-0.9**
	comp=Z,15nm,1.3s						
IKP	**In-Ko-Pah, Jac**	**86.82**	**56**	P	**P**	**14 36 49.6**	**-0.2**
	baz=254						
NV11	**Mina Array Sit**	**86.84**	**50**	*e*P	**P**	**14 36 49.4**	**-0.5**
	comp=Z,0.9nm,1.0s						
GSC	**Goldstone, Bar**	**86.99**	**53**	*e*P	**P**	**14 36 50.0**	**-0.5**
	comp=Z,11nm,1.1s						
GSC	**Goldstone, Bar**	**86.99**	**53**	P	**P**	**14 36 50.8**	**+0.2**
	baz=254						
GRAC	**Grapevine Rang**	**87.03**	**52**	P	**P**	**14 36 50.7**	**+0.1**
	baz=253,SNR=5.9						
A04D	**Lummi Island**	**87.05**	**39**	P	**P**	**14 36 50.4**	**+0.1**
	baz=249						
KVN	**Kaiserville**	**87.06**	**49**	*e*P	**P**	**14 36 50.1**	**-0.8**
	comp=Z,9.4nm,1.1s						
SWSC	**Sam W. Stewart**	**87.15**	**56**	P	**P**	**14 36 51.2**	**0.0**
	baz=255,SNR=6.2						
HEC	**Hector,Ludlow**	**87.23**	**54**	P	**P**	**14 36 51.6**	**-0.1**
	baz=254						
B05A	**Bryant**	**87.27**	**40**	P	**P**	**14 36 51.6**	**+0.2**
	baz=250						
FURC	**Furnace Creek,**	**87.27**	**52**	P	**P**	**14 36 51.9**	**+0.2**
	baz=254,SNR=7.0						
BELC	**Belle Mtn. Jos**	**87.27**	**55**	P	**P**	**14 36 51.9**	**-0.1**
	baz=254,SNR=20						
SHOC	**Shoshone, Teco**	**87.57**	**53**	P	**P**	**14 36 53.1**	**-0.1**
	baz=254						
I07A	**Izee**	**87.58**	**44**	*e*P	**P**	**14 36 53.1**	**-0.1**
	comp=Z,12nm,1.1s						
BC3	**Big Chuckawall**	**87.62**	**55**	P	**P**	**14 36 53.6**	**-0.1**
	baz=255,SNR=9.9						
WVOR	**Wild Horse Val**	**87.68**	**46**	*e*P	**P**	**14 36 53.2**	**-0.5**
	comp=Z,8.6nm,1.1s						
TUQ	**Turquoise Moun**	**87.72**	**53**	P	**P**	**14 36 53.7**	**-0.4**
	baz=254,SNR=7.4						
GMRC	**Granite Mounta**	**87.75**	**54**	P	**P**	**14 36 54.3**	**0.0**
	baz=255,SNR=8.8						
KOLN	**Koldanda**	**87.85**	**299**	*e*P	**P**	**14 36 54.6**	**-0.4**
	comp=Z,16nm,1.0s						
DANN	**Dangsing**	**87.85**	**299**	*e*P	**P**	**14 36 55.0**	**-0.1**
	comp=Z,18nm,0.9s						
TPNV	**Topopah Spring**	**87.87**	**52**	P	**P**	**14 36 54.8**	**-0.1**
	baz=254						
GLA	**Glamis**	**87.97**	**56**	*e*P	**P**	**14 36 55.6**	**+0.3**
	comp=Z,26nm,1.0s						
GLA	**Glamis**	**87.97**	**56**	P	**P**	**14 36 56.0**	**+0.8**
	baz=255,SNR=7.3						
IRM	**Iron Mountain**	**88.00**	**55**	P	**P**	**14 36 55.3**	**-0.1**
	baz=255,SNR=18						
J08A	**Circle Bar Ran**	**88.07**	**45**	*e*P	**P**	**14 36 55.1**	**-0.4**
	comp=Z,8.8nm,1.0s						
LDFC	**Landfair**	**88.27**	**54**	*e*P	**P**	**14 36 56.2**	**-0.5**
	comp=Z,32nm,1.0s						
G08A	**Pilot Rock**	**88.33**	**43**	*e*P	**P**	**14 36 56.4**	**-0.3**
	comp=Z,21nm,1.3s						
Y12C	**Blythe**	**88.39**	**55**	*e*P	**P**	**14 36 56.0**	**-1.1**
	comp=Z,22nm,1.0s						
Y12C	**Blythe**	**88.39**	**55**	P	**P**	**14 36 57.6**	**+0.4**
	baz=255,SNR=7.5						
PYUN	**Piuthan**	**88.45**	**299**	*e*P	**P**	**14 36 57.4**	**-0.4**
	comp=Z,19nm,0.9s						
NEE2	**Needles Airpor**	**88.58**	**54**	P	**P**	**14 36 58.5**	**+0.5**
	baz=255						
SHPR	**Sheep Range**	**88.60**	**52**	*e*P	**P**	**14 36 57.6**	**-0.7**
	comp=Z,12nm,1.2s						
R11A	**Troy Canyon, C**	**88.76**	**51**	*e*P	**P**	**14 36 58.2**	**-0.8**
	comp=Z,6.3nm,1.3s						
R11A	**Troy Canyon, C**	**88.76**	**51**	P	**P**	**14 36 59.0**	**-0.1**
	baz=254						
113A	**Mohawk Valley,**	**88.76**	**56**	*e*P	**P**	**14 36 58.0**	**-0.9**
	comp=Z,14nm,1.1s						
PDMCI	**Parker Dam,Lak**	**88.84**	**55**	P	**P**	**14 36 59.3**	**+0.1**
	baz=255,SNR=9.3						
WMQ	**Urumqi**	**88.89**	**315**	P	**P**	**14 36 59.9**	**+0.6**
WMQ				pP	PcP	14 37 04.1	+3.2
WMQ				sP	pP	14 37 08.4	+0.1
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,860nm,6.9s						
WMQ				LR	LR		
	comp=N,460nm,15.9s						
WMQ				LR	LR		
	comp=E,500nm,18.7s						
WMQ				LR	LR		
	comp=Z,510nm,17.3s						
W13A	**Hualapai Mount**	**89.24**	**54**	*e*P	**P**	**14 37 00.9**	**-0.5**
	comp=Z,13nm,1.1s						
214A	**Organ Pipe Nat**	**89.35**	**57**	P	**P**	**14 37 02.4**	**+0.6**
	baz=256,SNR=14						
PSUT	**Pine Spring**	**90.12**	**51**	*e*P	**P**	**14 37 03.8**	**-1.6**
	comp=Z,4.4nm,0.9s						
LCMT	**Little Creek M**	**90.21**	**52**	*e*P	**P**	**14 37 05.3**	**-0.5**
	comp=Z,13nm,1.1s						
CCUT	**Cedar City**	**90.25**	**52**	*e*P	**P**	**14 37 06.3**	**+0.2**
	comp=Z,12nm,1.1s						
INK	**Inuvik**	**90.43**	**19**	P	**P**	**14 37 06.0**	**+0.1**
	comp=Z,2.0nm,1.0s,baz=2.1,slow=6.8,SNR=4.0						
KNB	**Kanab**	**90.54**	**52**	*e*P	**P**	**14 37 07.5**	**+0.1**
	comp=Z,14nm,1.1s						
U15A	**North Rim**	**90.82**	**53**	*e*P	**P**	**14 37 08.8**	**0.0**
	comp=Z,18nm,1.0s						
HLID	**Hailey**	**90.97**	**46**	*e*P	**P**	**14 37 09.1**	**-0.2**
	comp=Z,6.7nm,1.1s						
HLID	**Hailey**	**90.97**	**46**	P	**P**	**14 37 09.6**	**+0.4**
	baz=255						
X16A	**Lo Mia Camp, P**	**91.03**	**55**	*e*P	**P**	**14 37 09.9**	**+0.1**
	comp=Z,9.3nm,0.9s						
PKCU	**Pink Cliffs**	**91.04**	**52**	*e*P	**P**	**14 37 10.2**	**+0.3**
	comp=Z,27nm,1.1s						
TUC	**Tucson**	**91.10**	**57**	*e*P	**P**	**14 37 10.8**	**+0.8**
	comp=Z,9.0nm,1.1s						
TUC	**Tucson**	**91.10**	**57**	P	**P**	**14 37 10.8**	**+0.8**
	baz=257						
MTPU	**Mount Pierson**	**91.28**	**52**	*e*P	**P**	**14 37 11.7**	**+0.7**
	comp=Z,18nm,1.1s						
DUG	**Dugway, Tooele**	**91.30**	**49**	*e*P	**P**	**14 37 10.9**	**+0.1**
	comp=Z,1.3nm,0.8s						
DUG	**Dugway, Tooele**	**91.30**	**49**	P	**P**	**14 37 11.1**	**+0.3**
	baz=256						
BGU	**Big Grassy Mou**	**91.32**	**49**	*e*P	**P**	**14 37 10.9**	**0.0**
	comp=Z,9.4nm,1.3s						
WUAZ	**Wupatki**	**91.33**	**54**	*e*P	**P**	**14 37 10.7**	**-0.4**
	comp=Z,16nm,1.1s						
WUAZ	**Wupatki**	**91.33**	**54**	P	**P**	**14 37 11.4**	**+0.3**
	baz=257						
MSU	**Marysvale**	**91.39**	**51**	*e*P	**P**	**14 37 11.6**	**+0.2**
HVU	**Hansel Valley**	**91.71**	**48**	*e*P	**P**	**14 37 12.4**	**-0.2**
	comp=Z,18nm,1.3s						
NLU	**North Lily Min**	**91.80**	**50**	*e*P	**P**	**14 37 12.9**	**-0.3**
	comp=Z,14nm,1.3s						
MPU	**Maple Canyon**	**92.14**	**50**	*e*P	**P**	**14 37 15.0**	**+0.2**
	comp=Z,8.8nm,1.1s						
CTU	**Camp Tracy**	**92.21**	**49**	*e*P	**P**	**14 37 15.0**	**-0.1**
	comp=Z,13nm,1.3s						
TMUT	**Trail Mountain**	**92.30**	**51**	*e*P	**P**	**14 37 15.8**	**+0.1**
	comp=Z,9.6nm,1.4s						
MCMT	**McKenzie Canyo**	**92.37**	**45**	*e*P	**P**	**14 37 15.7**	**-0.1**
DLMT	**Dillon**	**92.67**	**44**	*e*P	**P**	**14 37 16.4**	**-0.7**
	comp=Z,14nm,1.1s						
SRU	**San Rafael Swe**	**92.78**	**51**	*e*P	**P**	**14 37 17.2**	**-0.5**
	comp=Z,5.0nm,0.9s						
LRM	**Limekiln Ridge**	**92.88**	**44**	*e*P	**P**	**14 37 17.9**	**-0.2**
MK01	**Makanchi Array**	**93.32**	**317**	*e*P	**P**	**14 37 19.3**	**-0.6**
MK31	**Makanchi Array**	**93.34**	**317**	*e*P	**P**	**14 37 19.7**	**-0.2**
MKAR	**Makanchi Array**	**93.34**	**317**	*e*P	**P**	**14 37 19.9**	**-0.1**
	comp=Z,36nm,0.8s						
MKAR	**Makanchi Array**	**93.34**	**317**	P	**P**	**14 37 20.6**	**+0.6**
	comp=Z,6.4nm,0.8s,baz=101,slow=6.3,SNR=23						
BOZ	**Bozeman (W)**	**93.39**	**44**	P	**P**	**14 37 20.8**	**+0.4**
	baz=257						
ZAA0	**Zalesovo Array**	**93.46**	**324**	*e*P	**P**	**14 37 19.3**	**-1.0**
	comp=Z,7.4nm,1.0s						
ZALV	**Zalesovo Beam**	**93.46**	**324**	*e*P	**P**	**14 37 19.4**	**-0.9**
ZALV	**Zalesovo Beam**	**93.46**	**324**	P	**P**	**14 37 19.7**	**-0.5**
	comp=Z,4.8nm,0.9s,baz=123,slow=5.5,SNR=13						
MAKZ	**Makanchi**	**93.55**	**317**	*e*P	**P**	**14 37 20.7**	**-0.2**
	comp=Z,11nm,1.1s						
121A	**Cookes Peak, D**	**93.63**	**58**	P	**P**	**14 37 22.6**	**+0.8**
	baz=259						
PV09	**Paradox Valley**	**93.72**	**52**	*e*P	**P**	**14 37 22.6**	**+0.4**
H17A	**Grant Village**	**93.86**	**46**	P	**P**	**14 37 23.6**	**+0.9**
	baz=258						
PDAR	**Pinedale Array**	**94.25**	**47**	*e*P	**P**	**14 37 23.8**	**-0.7**
PDAR	**Pinedale Array**	**94.25**	**47**	P	**P**	**14 37 24.6**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=231,slow=4.2,SNR=4.4						
ANMO	**Albuquerque**	**95.16**	**56**	*e*P	**P**	**14 37 28.0**	**-0.8**
	comp=Z,4.2nm,1.1s						
ANMO	**Albuquerque**	**95.16**	**56**	P	**P**	**14 37 29.0**	**+0.2**
	baz=260						
S22A	**4UR Ranch, Cre**	**95.36**	**53**	P	**P**	**14 37 29.7**	**-0.1**
	baz=260						
MNTX	**Cornudas Mount**	**95.48**	**59**	*e*P	**P**	**14 37 28.7**	**-1.5**
	comp=Z,2.9nm,1.0s						
MNTX	**Cornudas Mount**	**95.48**	**59**	P	**P**	**14 37 29.7**	**-0.4**
	baz=260						
YKA	**Yellowknife Ar**	**95.57**	**27**	P	**P**	**14 37 28.0**	**-1.7**
	comp=Z,2.0nm,0.9s,baz=253,slow=4.5,SNR=15						
YKB5	**Yellowknife Ar**	**95.57**	**27**	*e*P	**P**	**14 37 27.3**	**-2.4**
NRIK	**Noril'sk**	**96.22**	**340**	P	**P**	**14 37 32.0**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=74,slow=2.9,SNR=4.5						
TXAR	**Lajitas Array**	**96.55**	**61**	P	**P**	**14 37 34.6**	**-0.5**
	comp=Z,1.4nm,1.0s,baz=216,slow=1.1,SNR=5.7						
ARCES	**ARCESS Array B**	**116.50**	**345**	PKP	**PKiKP**	**14 42 48.3**	**+0.1**
	comp=Z,3.2nm,1.0s,baz=328,slow=3.2,SNR=2.9						
SDV	**Santo Domingo**	**125.15**	**87**	*e*PKPdf	**PKPdf**	**14 43 05.9**	**-0.6**
ES19	**SONSECA Array**	**150.16**	**343**	*e*PKPbc	**PKPbc**	**14 43 55.4**	**-0.7**
ESDC	**Sonseca Array**	**150.20**	**343**	PKPbc	**PKiKP**	**14 43 57.3**	**+0.3**
	comp=Z,0.2nm,0.2s,baz=48,slow=2.2,SNR=4.3						
ESDC				PKPab	**sPKPdf**	**14 44 03.5**	**0.0**
	comp=Z,0.3nm,0.3s,baz=17,slow=4.5,SNR=4.3						
TOA0	**Torodi Ar. Sit**	**163.69**	**278**	*e*PKPdf	**PKPdf**	**14 44 08.4**	**-0.4**
TORD	**Torodi Ar. Bea**	**163.69**	**278**	PKP	**PKPdf**	**14 44 09.2**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=336,slow=3.1,SNR=4.0						
TORD				PKPab	**PKPab**	**14 45 01.6**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=77,slow=5.8,SNR=4.6						

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*KRNET **06** 14:28:34.1±0.1, 39°.18N×75°.88E, mb3.5*
*NNC **06** 14:28:34.7±1.8, 39°.31N×75°.83E, h0^{km}, mb4.1, mpv3.7,*
Error ellipse: s-maj=13.9km s-min=9.8km az=136.0
ISC 06 14:28:39.0±1.6, **39°.43N**±0°.05×**75°.84E**±0°.05, **h2**^{km}±12^{km},
n39, σ**1**^{s}**.52**/54, **24C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.14**	**51**	⇑*i*P	**Pg**	**14 28 40.9**	**-0.8**
	baz=6.0						
KSH				⇑*i*S	**Sg**	**14 28 46.1**	**+2.6**
	baz=6.0						
SFK	**Sufi-Kurgan**	**1.89**	**289**	⇑*i*P	**Pn**	**14 29 11.7**	**-0.8**
	baz=95						
SFK				⇑*i*S	**Sb**	**14 29 38.6**	**+0.1**
	baz=95						
NRN	**Naryn**	**2.01**	**4**	⇑*i*P	**Pn**	**14 29 14.5**	**+0.3**
	baz=2.0						
NRN				⇑*i*S	**Sg**	**14 29 44.2**	**+0.8**
	baz=2.0						
KZA	**Kyzart**	**2.68**	**351**	P	**Pb**	**14 29 27.0**	**-1.0**
	SNR=13						
KZA	**Kyzart**	**2.68**	**351**	⇑*i*P	**Pn**	**14 29 24.7**	**+1.1**
	baz=51						
KZA				⇑*i*S	**Sb**	**14 30 01.2**	**-0.3**
	baz=51						
TARG	**Taragay, Kyrgy**	**2.74**	**33**	⇑*i*P	**Pn**	**14 29 24.9**	**+0.5**
	baz=29						
TARG				⇑*i*S	**Sb**	**14 30 01.7**	**-1.6**
	baz=29						
ULHL	**Ulahol**	**2.83**	**6**	P	**Pb**	**14 29 29.4**	**-1.0**
	SNR=41						
ULHL	**Ulahol**	**2.83**	**6**	⇑*i*P	**Pn**	**14 29 26.3**	**+0.9**
	baz=5.0						
ULHL				⇑*i*S	**Sb**	**14 30 04.2**	**-1.4**
	baz=5.0						
KDJ	**Kajisay**	**2.88**	**20**	⇑*i*P	**Pn**	**14 29 27.0**	**+0.9**
	baz=18						
KDJ				⇑*i*S	**Sb**	**14 30 05.4**	**-1.7**
	baz=18						
ARSB	**Arslanbob**	**2.89**	**312**	⇑*i*P	**Pn**	**14 29 26.4**	**+0.3**
	baz=15						
ARSB				⇑*i*S	**Sn**	**14 30 04.2**	**+2.7**
	baz=15						
UCH	**Uchtor**	**2.97**	**341**	P	**Pn**	**14 29 27.8**	**+0.2**
	SNR=18						
UCH	**Uchtor**	**2.97**	**341**	⇑*i*P	**Pn**	**14 29 28.0**	**+0.4**
	baz=42						
UCH				⇑*i*S	**Sb**	**14 30 07.8**	**-2.0**
	baz=42						
BOOM	**Boomskoye usch**	**3.06**	**1**	⇑*i*P	**Pn**	**14 29 29.7**	**+1.2**
	baz=1.0						
BOOM				⇑*i*S	**Sb**	**14 30 09.8**	**-2.3**
	baz=1.0						
AML	**Almayashu**	**3.15**	**330**	P	**Pn**	**14 29 30.1**	**+0.1**

	SNR=5.4						
KBK	Karagaybulak	3.29	349	P	Pb	14 29 39.0	+0.7
	SNR=14						
AAK	Ala-Archa	3.36	343	P	Pn	14 29 33.6	+0.9
	SNR=11						
TKM2	Tokmak 2	3.49	357	P	Pb	14 29 39.0	-2.7
	SNR=6.5						
TKM2	Tokmak 2	3.49	357	⇓eP	Pn	14 29 35.5	+1.0
	baz=57						
TKM2				⇓iS	Sn	14 30 20.0	+3.4
	baz=57						
KST	Kastek	3.61	1	Pg	Pb	14 29 41.5	-2.2
	22nm,0.5s						
KST				Lg	Lg	14 30 31.7	
	8.0nm,0.6s						
IZV	Izvestkoviy	3.65	9	Pg	Pb	14 29 43.3	-1.0
	10.0nm,0.5s						
IZV				Lg	Lg	14 30 35.5	
	17nm,0.6s						
TNSS	Tian-Shan	3.70	13	Pg	Pb	14 29 43.6	-1.7
	16nm,0.5s						
TNSS				Lg	Lg	14 30 35.6	
	11nm,0.6s						
MTBS	Maitube	3.73	7	Pg	Pb	14 29 45.0	-0.6
	6.9nm,0.3s						
MTBS				Lg	Lg	14 30 37.7	
	14nm,0.4s						
ARK	Arkit	3.78	310	⇑iP	Pn	14 29 38.1	-0.3
	baz=12						
ARK				⇑eS	Sn	14 30 25.2	+1.7
	baz=12						
DGS	Degeres	3.81	359	Pg	Pb	14 29 47.1	+0.1
	9.2nm,0.4s						
DGS				Lg	Lg	14 30 41.2	
	12nm,0.6s						
MDOK	Medeo	3.84	13	⇓Pg	Pb	14 29 47.7	+0.2
	8.1nm,0.6s						
MDOK				Lg	Lg	14 30 40.6	
	19nm,0.7s						
KOTS	Kotyrbulak	3.92	14	Pg	Pb	14 29 47.1	-1.8
	9.0nm,0.4s						
KOTS				Lg	Lg	14 30 41.2	
	18nm,0.5s						
USP	Ospenovka	3.96	346	P	Pn	14 29 41.5	+0.6
	SNR=10						
SATY	Saty	4.11	27	Pg	Pb	14 29 53.1	+1.0
	26nm,0.5s						
SATY				Lg	Lg	14 30 51.8	
	46nm,1.1s						
SGDS	Sogindy	4.12	348	Pg	Pb	14 29 53.1	+0.9
	11nm,0.4s						
SGDS				Lg	Lg	14 30 51.8	
	8.5nm,0.7s						
KTBS	Karatobe	4.33	8	Pg	Pb	14 29 55.5	-0.3
	8.4nm,0.2s						
KTBS				Lg	Lg	14 30 55.9	
	14nm,0.8s						
KURS	Kuram	4.42	23	Pg	Pb	14 29 56.6	-0.7
	9.8nm,1.1s						
KURS				Lg	Lg	14 30 57.8	
	22nm,1.2s						
UZB	Uzynbulak	4.42	32	Pg	Pb	14 29 57.5	0.0
	2.6nm,0.4s						
UZB				Lg	Lg	14 31 00.2	
	15nm,1.0s						
KUU	Kurty	4.48	5	Pg	Pb	14 29 58.0	-0.2
	5.6nm,0.3s						
KUU				Lg	Lg	14 31 00.2	
	20nm,0.6s						
CHKK	Chushkaly	4.50	11	Pg	Pb	14 29 58.9	+0.1
	6.9nm,0.3s						
CHKK				Lg	Lg	14 31 01.3	
	5.8nm,0.3s						
ARXS	Arharly	5.01	17	Pg	Pb	14 30 07.7	+0.4
	4.8nm,0.5s						
ARXS				Lg	Lg	14 31 16.6	
	13nm,0.6s						
KK31	Karatay Array	5.44	314	Pn	Pn	14 29 59.1	-1.9
	0.4nm,0.2s,baz=128,slow=14,SNR=9.0						
KK31				⇑Pg	Pb	14 30 17.5	+2.8
	0.9nm,0.4s,baz=138,slow=16,SNR=4.7						
KK31				⇑Sn	Sn	14 31 00.7	-3.5
	0.5nm,0.3s,baz=330,slow=40,SNR=3.0						
KK31				⇓Lg	Lg	14 31 29.2	
	4.2nm,0.6s,baz=130,slow=26						
CHCP	Chirah Chowk	6.12	201	P	Pn	14 30 09.7	-0.8
CEP	Cherat	6.42	211	P	Pn	14 30 12.9	-1.8
CEP				S	Sn	14 31 31.0	+2.3
THW	Thamme Wali	7.40	208	P	Pn	14 30 25.9	-2.2

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*IDC **06** 14:31:02.7±1.7, 12°.08S×164°.26E, h0^{km}, mb3.7/4, mb1 3.9/7, mb1mx3.7/33, mbtmp3.9/7, ML3.7/3, Error ellipse: s-maj=38.1km s-min=30.4km az=122.0*

*ISCJB **06** 14:31:05.7±1.2, 12°.3S±0°.1×164°.3E±0°.1, h33^{km}, mb3.5/4, Error ellipse: s-maj=22.3km s-min=11.3km az=138.9*

ISC 06 14:31:07.6±1.3**, 12°.2S**±0°.1×**164°.3E**±0°.1**, h35^{km}, n7, σ1^s.78**/8**, mb3.6**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.10	302	Pn	Pn	14 32 19.4	-2.2
	5.6nm,0.3s,baz=12,slow=20,SNR=2.3						
HNR				Sn	Sn	14 33 22.3	+3.0
	1.5nm,0.3s,baz=192,slow=21,SNR=2.1						
DZM	Mont Dzumac	10.04	169	Pn	Pn	14 33 30.2	+0.8
	0.6nm,0.3s,baz=60,slow=20,SNR=6.3						
CTA	Charters Tower	19.05	243	P	Pn	14 35 27.8	-0.1
	0.1nm,0.3s,baz=72,slow=20,SNR=2.2						
WRA	Warramunga Arr	29.80	251	P	P	14 37 10.8	-0.6
	0.6nm,0.9s,baz=80,slow=9.7,SNR=3.5						
ASAR	Alice Springs	31.05	244	P	P	14 37 21.8	-0.7
	0.5nm,0.7s,baz=65,slow=10,SNR=5.6						
ILAR	Eielson Array	85.03	19	P	P	14 43 39.2	0.0
	0.4nm,0.7s,baz=238,slow=4.1,SNR=4.6						
MKAR	Makanchi Array	93.40	317	P	P	14 44 20.0	+0.7
	0.2nm,0.6s,baz=94,slow=1.9,SNR=2.6						

IDC 06 14:31:23.0±4.8**, 10°.93S**×**163°.67E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/29**, mbtmp3.7**/5**, ML4.0**/1**, Error ellipse: s-maj=207.4km s-min=32.2km az=135.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	19.08	239	P	Pn	14 35 48.5	+0.5
	0.3nm,0.3s,baz=81,slow=14,SNR=3.0						
WRA	Warramunga Arr	29.62	249	P	P	14 37 30.6	+0.4
	0.5nm,0.7s,baz=78,slow=7.9,SNR=2.7						
ASAR	Alice Springs	31.03	242	P	P	14 37 42.0	-0.9
	0.6nm,0.8s,baz=74,slow=10.0,SNR=4.4						
ILAR	Eielson Array	84.06	19	P	P	14 43 55.5	+0.3
	0.3nm,0.7s,baz=234,slow=5.7,SNR=2.1						
MKAR	Makanchi Array	92.05	317	P	P	14 44 33.7	-0.4
	0.4nm,0.8s,baz=90,slow=4.3,SNR=2.5						

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*SOME **06** 14:32:22.5, 42°.62N×79°.62E, h5^{km}*

*KRNET **06** 14:32:22.0±0.1, 42°.62N×79°.64E, h14^{km}, mb2.5*

*NNC **06** 14:32:23.1±1.7, 42°.72N×79°.65E, h0^{km}, mb2.7, mpv2.5, Error ellipse: s-maj=12.8km s-min=9.9km az=38.0*

ISC 06 14:32:21.1±2.2**, 42°.58N**±0°.07×**79°.66E**±0°.08**, h14^{km}**±15^{km}**, n20, σ1^s.03**/36**, 6C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.74	320	P	Pg	14 32 35.4	0.0
	0.9nm,0.1s						
UZB				S	Sg	14 32 45.0	-0.2
	11nm,0.2s						
UZB	Uzynbulak	0.74	320	eP	Pg	14 32 35.4	0.0
	baz=20						
UZB				eS	Sg	14 32 45.0	-0.2
	baz=20						
UZB	Uzynbulak	0.74	320	eP	Pg	14 32 35.4	0.0
	0.9nm,0.1s						
UZB				eS	Sg	14 32 45.0	-0.2
	11nm,0.2s						
PDGK	Podgornoye	0.76	350	⇑iP	Pg	14 32 35.5	-0.3
	baz=51						
PDGK				⇑iS	Sg	14 32 45.9	+0.1
	baz=51						
PRZ	Przheval'sk	0.94	264	⇑iP	Pg	14 32 39.2	-0.1
	baz=62						
PRZ				⇑iS	Sg	14 32 52.1	+0.5
	baz=62						
SATY	Saty	1.04	298	P	Pb	14 32 41.3	+0.5
	3.6nm,0.3s						
SATY				S	Sg	14 32 55.0	+0.2
	5.2nm,0.1s						
SATY	Saty	1.04	298	eP	Pb	14 32 41.4	+0.5
	3.6nm,0.3s						
SATY				eS	Sg	14 32 55.0	+0.2
	5.2nm,0.1s						
DJR	Jarkent	1.75	3	eP	Pg	14 32 54.3	-0.4
	0.8nm,0.3s						
DJR				eS	Sg	14 33 17.1	-0.3
	1.0nm,0.3s						
KDJ	Kajisay	1.90	257	⇑iP	Pb	14 32 56.5	+1.0
	baz=56						
KDJ				⇑iS	Sg	14 33 22.1	+0.1
	baz=56						
KOTS	Kotyrbulak	1.98	290	Pg	Pg	14 32 60.0	+0.8
	1.6nm,0.4s						
KOTS				Lg	Lg	14 33 26.8	
	7.9nm,0.5s						
TNSS	Tian-Shan	2.05	284	Pg	Pb	14 32 59.7	+1.5
	1.9nm,0.2s						
TNSS				Lg	Lg	14 33 26.5	
	1.9nm,0.4s						
TNSS	Tian-Shan	2.05	284	eP	Pb	14 32 59.7	+1.5
	baz=83						
TNSS				eS	Sg	14 33 26.5	-0.5
	baz=83						
TNSS	Tian-Shan	2.05	284	eP	Pb	14 32 59.7	+1.5
	1.9nm,0.2s						
TNSS				eS	Sg	14 33 26.5	-0.5
	1.9nm,0.4s						
ARXS	Arharly	2.11	321	Pg	Pb	14 33 00.1	+1.0
	1.0nm,0.4s						
ARXS				Lg	Lg	14 33 27.0	
	5.2nm,0.4s						
ARXS	Arharly	2.11	321	eP	Pb	14 33 00.1	+1.0
	1.0nm,0.4s						
ARXS				eS	Sg	14 33 27.0	-1.9
	5.2nm,0.4s						
KTBS	Karatobe	2.46	298	Pg	Pb	14 33 06.5	+1.5
	0.7nm,0.3s						
KTBS				Lg	Lg	14 33 38.0	
	1.4nm,0.3s						
KTBS	Karatobe	2.46	298	eP	Pb	14 33 06.5	+1.5
	baz=97						
KTBS				eS	Sg	14 33 38.0	-2.0
	baz=97						
KTBS	Karatobe	2.46	298	eP	Pb	14 33 06.5	+1.5
	0.7nm,0.3s						
KTBS				eS	Sg	14 33 38.0	-2.0
	1.4nm,0.3s						
ULHL	Ulahol	2.56	264	⇓eP	Pb	14 33 05.8	-1.0
	baz=63						
ULHL				⇓iS	Sb	14 33 37.8	-0.3
	baz=63						
BOOM	Boomskoye usch	2.75	269	⇓iP	Pb	14 33 08.8	-1.3
	baz=69						
BOOM				⇓iS	Sb	14 33 43.2	-0.6
	baz=69						

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*JMA **06** 14:34:09.8±0.4, 45°.48N×151°.17E, h30^{km}, M4.1*

*ISCJB **06** 14:34:10.2±0.6, 45°.11N±0°.08×151°.17E±0°.07, h35^{km}, mb3.6/15, Error ellipse: s-maj=13.6km s-min=4.2km az=151.5*

*SKHL **06** 14:34:11.8±0.3, 45°.07N×151°.24E, h55^{km}±4^{km}, mb4.2/3*

*MOS **06** 14:34:12.1±0.9, 45°.35N×150°.98E, h46^{km}, mb4.1/8, Error ellipse: s-maj=15.2km s-min=10.5km az=138.3*

*IDC **06** 14:34:14.8±3.0, 45°.36N×150°.97E, h51^{km}±26^{km}, mb3.4/15, mb1 3.6/18, mb1mx3.4/61, mbtmp3.6/18, ML2.9/3, Error ellipse: s-maj=25.0km s-min=16.7km az=131.0*

ISC 06 14:34:11.9±0.8**, 45°.07N**±0°.09×**151°.20E**±0°.08**, h35^{km}, n46, σ1^s.29**/64**, mb3.7**/15**, 1C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.36	275	i P	Pn	14 34 48.5	+0.3
KUR				AMB	AMB	14 34 49.0	
	20nm,0.2s						
KUR				AMB	AMB	14 34 49.0	
	30nm,0.2s						
KUR				eS	Sn	14 35 15.8	-0.1
KUR				A	A	14 35 20.7	
	250nm,0.3s						
KUR				A	A	14 35 20.7	
	240nm,0.3s						
KUR	Kuril'sk	2.36	275	d iPN	Pn	14 34 48.4	+0.3
KUR				eS	Sn	14 35 16.0	+0.1
KUR				pmax	pmax		
	comp=Z,28nm,0.2s						
KUR				pmax	pmax		
	comp=N,19nm,0.1s						
KUR				pmax	pmax		
	comp=E,9.0nm,0.3s						
KUR				smax	smax		
	comp=N,68nm,0.2s						
KUR				smax	smax		
	comp=E,95nm,0.3s						
SHO	Shikotan	3.35	251	i P	Pn	14 35 02.1	+0.5
SHO				AMB	AMB	14 35 02.9	
	comp=E,10.0nm,0.2s						
SHO				eS	Sn	14 35 40.1	-0.1
SHO				A	A	14 35 48.8	
	comp=E,90nm,0.3s						
SHO				A	A	14 35 48.8	
	comp=E,130nm,0.3s						
SHO	Shikotan	3.35	251	⇑iPN	Pn	14 35 01.3	-0.3
SHO				eS	Sn	14 35 40.2	0.0
SHO				pmax	pmax		
	comp=Z,9.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.3s						
SHO				pmax	pmax		
	comp=N,5.0nm,0.2s						
SHO				smax	smax		
	comp=N,65nm,0.4s						
SHO				smax	smax		
	comp=E,40nm,0.4s						
YUK	Yuzh-Kuril'sk	3.95	257	i P	Pn	14 35 11.2	+1.3
YUK				AMB	AMB	14 35 11.9	
	comp=E,4.0nm,0.4s						
YUK				AMB	AMB	14 35 11.9	
	comp=E,10.0nm,0.4s						
YUK				AMB	AMB	14 35 11.9	
	comp=E,40nm,0.4s						
YUK				eS	Sn	14 35 54.7	-0.3
YUK				A	A	14 36 04.8	
	comp=E,90nm,0.4s						
YUK	Yuzh-Kuril'sk	3.95	257	d iPN	Pn	14 35 11.4	+1.5
YUK				eS	Sn	14 35 56.3	+1.3
YUK				pmax	pmax		
	comp=Z,37nm,0.2s						
YUK				pmax	pmax		
	comp=N,4.0nm,0.1s						
YUK				pmax	pmax		
	comp=E,11nm,0.2s						
YUK				smax	smax		
	comp=E,91nm,0.5s						
YUK				smax	smax		
	comp=N,94nm,0.4s						
GRPR	Tuman	4.03	256	eP	Pn	14 35 12.0	+1.0
GRPR				eS	Sn	14 35 59.0	+2.1
GRPR				A	A	14 36 00.0	
	comp=N,60nm,0.4s						
GRPR				A	A	14 36 00.0	
	comp=N,90nm,0.4s						
GRPR	Tuman	4.03	256	ePN	Pn	14 35 12.4	+1.4
GRPR				S	Sn	14 35 59.0	+2.1
GRPR				smax	smax		
	comp=N,62nm,0.4s						
GRPR				smax	smax		
	comp=E,88nm,0.4s						
NEM2	Nemuro 2	4.28	248	P	Pn	14 35 14.2	-0.2
NEM2				eS	Sn	14 36 01.2	-1.8
GLVR	Golovnino	4.28	254	eP	Pn	14 35 15.0	+0.6
GLVR				eS	Sn	14 36 04.0	+0.9
GLVR				A	A	14 36 09.0	
	comp=E,70nm,0.4s						
GLVR				A	A	14 36 09.0	
	comp=E,130nm,0.4s						
GLVR	Golovnino	4.28	254	PN	Pn	14 35 15.5	+1.1
GLVR				S	Sn	14 36 04.1	+0.9
GLVR				smax	smax		
	comp=E,127nm,0.4s						
GLVR				smax	smax		
	comp=N,74nm,0.3s						
JRA	Rausu	4.49	258	P	Pn	14 35 18.9	+1.6
JNK	Nakash	4.88	255	P	Pn	14 35 23.6	+0.9
JNK				eS	Sn	14 36 18.6	+0.7
JAK	Akkeshi	5.12	248	P	Pn	14 35 25.6	-0.4
JAK				eS	Sn	14 36 22.1	-1.8
JTKR	Abashiri--Toko	5.33	261	P	Pn	14 35 30.3	+1.5
JAR	Ashorobuto	5.63	254	P	Pn	14 35 34.4	+1.4
JAR				eS	Sn	14 36 36.8	+0.4
JMP	Maruseppu	5.70	262	P	Pn	14 35 35.9	+1.9
JKK2	Kamakawa 2	6.17	262	P	Pn	14 35 42.5	+2.1
JCH	Churui	6.17	249	P	Pn	14 35 40.6	+0.1
JCH				eS	Sn	14 36 49.0	-0.8
YSS	Yuzh-Sakhalins	6.18	291	eP	Pn	14 35 41.6	+1.1
JKA	Kamikawa-asahi	6.21	264	eP	Pn	14 35 41.8	+0.8
ASAJ	Asahikawa	6.22	264	P	Pn	14 35 41.8	+0.8
	comp=N,1.3nm,0.3s,baz=72,slow=23,SNR=14						
JNBK	Urakawa-nobuka	6.73	249	P	Pn	14 35 47.9	-0.2
JNBK				eS	Sn	14 37 02.0	-1.4
JBT2	Biratori 2	6.78	253	P	Pn	14 35 49.0	+0.2
JKB	Kayabe	8.05	250	P	Pn	14 36 05.7	-0.4
JKB				eS	Sn	14 37 31.2	-4.6
JYM2	Yakumo 2	8.39	253	P	Pn	14 36 10.9	0.0
JOSM	Okushiri--Mats	9.02	255	P	Pn	14 36 19.8	+0.3
PETK	Petropavlovsk-	9.11	26	P	Pn	14 36 20.6	0.0
	comp=N,0.2nm,0.3s,baz=210,slow=14,SNR=4.4						
USRK	Ussuriysk Ar.	13.71	273	P	Pn	14 37 25.3	+1.7
	comp=N,0.1nm,0.3s,baz=172,slow=29,SNR=3.1						
SONM	Songino Array	30.67	291	P	P	14 40 21.2	-1.9
	comp=N,0.1nm,0.4s,baz=64,slow=6.7,SNR=1.9						
ILAR	Eielson Array	38.70	37	P	P	14 41 31.7	-0.2
	comp=N,0.2nm,0.8s,baz=259,slow=6.8,SNR=4.4						
ZALV	Zalesovo Beam	42.53	307	PcP	PcP	14 43 56.3	+0.6
	comp=N,0.2nm,0.3s,baz=38,slow=2.6,SNR=2.5						
INK	Inuvik	43.79	31	P	P	14 42 13.9	+0.3
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	Inuvik	43.79	31	P	P	14 42 13.9	+0.3
	comp=Z,0.4nm,0.5s,baz=309,slow=12,SNR=3.5						
MKAR	Makanchi Array	46.54	298	P	P	14 42 35.3	-0.5
	comp=Z,0.9nm,0.8s,baz=72,slow=8.3,SNR=6.1						
MKAR				PcP	PcP	14 44 09.9	+0.3
	comp=Z,0.4nm,0.8s,baz=56,slow=3.5,SNR=3.2						
CMAR	Chiang Mai Arr	50.67	256	P	P	14 43 09.2	+1.4
	comp=Z,0.2nm,0.7s,baz=39,slow=5.8,SNR=3.3						
YKA	Yellowknife Ar	53.07	35	P	P	14 43 25.9	+0.7
	comp=Z,0.2nm,0.7s,baz=292,slow=6.6,SNR=2.9						
FINES	FINESS Array B	64.99	334	P	P	14 44 45.9	-1.7
	comp=Z,4.2nm,1.1s,baz=60,slow=9.1,SNR=3.4						
WRA	Warramunga Arr	66.50	197	P	P	14 44 59.7	+1.8
	comp=Z,0.6nm,0.8s,baz=15,slow=6.7,SNR=4.3						
NOA	NORSAR Array B	69.38	340	P	P	14 45 14.6	-1.0
	comp=Z,0.6nm,0.5s,baz=28,slow=6.5,SNR=3.0						
HFS	Hagfors	69.56	339	P	P	14 45 15.0	-1.6
	comp=Z,1.6nm,0.6s,baz=64,slow=10,SNR=3.3						
ASAR	Alice Springs	70.20	197	P	P	14 45 23.9	+2.9
	comp=Z,0.5nm,0.7s,baz=15,slow=5.4,SNR=5.6						
KBZ	Khabaz	71.06	313	P	P	14 45 26.0	0.0
	comp=Z,1.3nm,0.8s,baz=340,slow=2.8,SNR=5.1						
AKASG	Malin Array Be	72.19	325	P	P	14 45 31.3	-1.4
	comp=Z,0.3nm,0.4s,baz=36,slow=5.5,SNR=3.9						
BRTR	Keskin Array B	78.68	316	P	P	14 46 10.4	0.0
	comp=Z,0.4nm,0.7s,baz=68,slow=5.4,SNR=2.8						
GERES	GERESS Array B	79.37	333	P	P	14 46 13.2	-0.7
	comp=Z,0.5nm,0.6s,baz=34,slow=7.3,SNR=3.6						

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*IDC **06** 14:41:04.8±0.6, 11°.74S×165°.23E, h0^{km}, mb4.3/17, mb1 4.5/19, mb1mx4.4/39, mbtmp4.3/19, ML4.4/2, Error ellipse: s-maj=21.4km s-min=15.6km az=134.0*

*ISCJB **06** 14:41:08.3±0.2, 11°.79S±0°.04×165°.09E±0°.04, h34^{km}, mb4.7/61, Error ellipse: s-maj=6.3km s-min=5.6km az=148.1*

*NEIC **06** 14:41:09.3±1.9, 11°.71S×165°.17E, h30^{km}±13^{km}, mb4.9/48, Error ellipse: s-maj=5.9km s-min=4.3km az=184.0*

ISC 06 14:41:09.8±0.5**, 11°.71S**±0°.07×**165°.18E**±0°.08**, h34^{km}, n101, σ0^s.62**/104**, mb4.8**/61**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.62	293	Pn	Pn	14 42 31.0	-0.1
	13nm,0.3s,baz=204,slow=2.9,SNR=4.3						
HNR				Sn	Sn	14 43 34.0	-0.5
	10nm,0.3s,baz=33,slow=23,SNR=6.5						
MARNC	Mare, Loyalty	10.09	165	ePn	Pn	14 43 32.6	+0.2
DZM	Mont Dzumac	10.37	173	ePn	Pn	14 43 35.4	-1.0
DZM	Mont Dzumac	10.37	173	Pn	Pn	14 43 35.9	-0.5
	2.8nm,0.3s,baz=343,slow=16,SNR=13						
ONTNC	Ouen Toro	10.61	174	ePn	Pn	14 43 39.4	-0.1
PINNC	Pines Island,	11.06	169	ePn	Pn	14 43 45.6	0.0
EIDS	Eidsvold	19.03	223	eP	Pn	14 45 31.2	+1.1
	24nm,1.3s						
CTA	Charters Tower	20.00	243	P	P	14 45 39.9	+0.2
	4.3nm,0.8s,baz=61,slow=12,SNR=4.0						
CTAO	Charters Tower	20.00	243	eP	P	14 45 39.8	+0.1
	36nm,1.5s						
ARMA	Armidale	22.46	212	eP	P	14 46 06.9	+0.6
	23nm,1.0s						
STKA	Stephens Creek	29.58	224	P	P	14 47 11.5	-0.3
	0.9nm,0.5s,baz=16,slow=15,SNR=4.4						
H11S2	WAKE ISLAND Hy	30.05	3	T	T	15 18 51.7	
	baz=179,slow=74						
H11S3	WAKE ISLAND Hy	30.05	3	T	T	15 18 54.6	
	baz=179						
H11S1	WAKE ISLAND Hy	30.06	3	T	T	15 18 55.5	
	baz=179,slow=74						
WRAB	Tennant Creek	30.72	251	eP	P	14 47 21.2	-0.8
	14nm,1.0s						
WB2	Warramunga Arr	30.73	251	eP	P	14 47 21.6	-0.5
WR1	Warramunga Arr	30.74	251	eP	P	14 47 21.9	-0.2
	12nm,0.9s						
WR1				ePcP	PcP	14 50 19.3	-0.2
WRA	Warramunga Arr	30.74	251	P	P	14 47 21.9	-0.2
	7.1nm,0.8s,baz=79,slow=9.0,SNR=42						
WRA				PcP	PcP	14 50 19.3	-0.2
	1.6nm,0.9s,baz=78,slow=3.1,SNR=9.1						
AS01	Alice Springs	31.96	244	eP	P	14 47 32.1	-0.8
AS31	Alice Springs	32.00	244	eP	P	14 47 32.5	-0.8
	0.9nm,0.8s						
ASAR	Alice Springs	32.00	244	P	P	14 47 32.8	-0.5
	4.8nm,1.0s,baz=76,slow=9.6,SNR=30						
ASAR				PcP	PcP	14 50 23.0	+0.2
	1.4nm,0.9s,baz=83,slow=2.9,SNR=8.9						
RPZ	Rata Peaks	32.29	172	P	P	14 47 35.1	-0.4
	6.8nm,0.8s,baz=145,slow=12,SNR=3.6						
FITZ	Fitzroy Crossi	38.67	256	eP	P	14 48 30.0	-0.7
	6.9nm,0.9s						
FITZ	Fitzroy Crossi	38.67	256	P	P	14 48 30.4	-0.3
	7.1nm,0.9s,baz=67,slow=8.8,SNR=11						
MJAR	Matsushiro Arr	54.31	333	P	P	14 50 32.5	-0.5
	2.8nm,0.8s,baz=164,slow=8.5,SNR=4.6						
MAJO	Matsushiro	54.31	333	eP	P	14 50 32.5	-0.5
USRK	Ussuriysk Ar.	63.29	334	P	P	14 51 36.5	+1.2
	2.4nm,0.8s,baz=116,slow=8.6,SNR=5.7						
ENH	Enshi	67.89	310	eP	P	14 52 04.1	-1.2
	6.3nm,0.9s						
XAN	Xi'an	70.16	313	eP	P	14 52 18.9	-0.4
	5.8nm,1.0s						
CM01	Chiang Mai Arr	71.84	294	eP	P	14 52 30.1	+0.2
CM31	Chiang Mai Arr	71.87	294	eP	P	14 52 30.8	+0.8
CMAR	Chiang Mai Arr	71.87	294	P	P	14 52 31.5	+1.5
	1.9nm,0.9s,baz=122,slow=4.8,SNR=15						
QSPA	South Pole Qui	78.30	180	eP	P	14 53 06.4	+0.1
	8.5nm,1.0s						
ULN	Ulaanbaatar	78.51	324	eP	P	14 53 08.6	+0.7
	4.6nm,1.0s						
SONA0	Songino Array	78.87	324	eP	P	14 53 10.8	+1.0
SONM	Songino Array	78.87	324	P	P	14 53 10.8	+1.0
	1.3nm,0.9s,baz=142,slow=6.3,SNR=7.6						
SONA1	Songino Array	78.87	324	eP	P	14 53 10.0	+0.2
ANM	Nome	79.26	12	eP	P	14 53 12.4	+1.1
	23nm,1.8s						
BILL	Bilibino	79.54	0	eP	P	14 53 12.7	-0.1
	13nm,1.1s						
DIV	Divide	82.23	22	eP	P	14 53 26.9	-0.5
	13nm,1.1s						
MCK	McKinley	82.95	19	eP	P	14 53 31.0	0.0
	11nm,1.1s						
IM3	Indian Mountai	83.21	16	eP	P	14 53 32.5	+0.2
MDM	Murphy Dome	84.03	18	eP	P	14 53 36.0	-0.6
	8.7nm,1.0s						
HDA	Harding Lake	84.05	19	eP	P	14 53 36.4	-0.2
	13nm,1.0s						
COLA	College	84.09	18	eP	P	14 53 36.9	+0.2
	10.0nm,0.8s						

RIDG	Independ'e Rid	84.29	20	eP	P	14 53 38.4	+0.4
	26nm,1.3s						
ILAR	Eielson Array	84.32	19	P	P	14 53 38.2	+0.2
	3.4nm,0.8s,baz=240,slow=5.3,SNR=43						
ILB	Eielson Array	84.32	19	eP	P	14 53 37.4	-0.6
IL1	Eielson Array	84.32	19	eP	P	14 53 37.5	-0.5
SCRK	Sand Creek	84.73	20	eP	P	14 53 40.0	-0.3
	21nm,1.2s						
ORV	Oroville	84.87	48	eP	P	14 53 41.3	0.0
	5.4nm,1.0s						
BEKR	Beckworth	85.80	48	eP	P	14 53 45.7	-0.5
	4.0nm,0.9s						
ISA	Isabella, Lake	85.92	52	eP	P	14 53 45.6	-1.2
	7.5nm,1.2s						
MDPB	Devils Postpil	86.05	50	eP	P	14 53 47.7	+0.1
	7.1nm,0.9s						
WAKR	Walker	86.05	50	eP	P	14 53 47.2	-0.3
	11nm,1.3s						
DAWY	Dawson	86.37	21	eP	P	14 53 48.6	+0.3
	16nm,1.7s						
PAHR	Pah Rah Range	86.47	48	eP	P	14 53 49.5	0.0
	15nm,1.3s						
RYN	Ryan	86.77	50	eP	P	14 53 50.7	-0.3
	5.4nm,1.2s						
DAC	Darwin (Calif)	86.78	52	eP	P	14 53 52.3	+1.1
	11nm,1.4s						
NV01	Mina Array Sit	86.88	50	eP	P	14 53 51.7	+0.1
NVAR	Mina Array Bea	86.88	50	P	P	14 53 52.2	+0.6
	4.2nm,0.9s,baz=234,slow=7.3,SNR=17						
KVN	Kaiserville	87.21	49	eP	P	14 53 53.1	-0.1
	16nm,1.6s						
WVOR	Wild Horse Val	87.85	46	eP	P	14 53 55.6	-0.5
	11nm,1.4s						
G08A	Pilot Rock	88.51	43	eP	P	14 53 59.6	+0.4
	10.0nm,1.4s						
R11A	Troy Canyon, C	88.90	51	eP	P	14 54 01.3	+0.1
	7.8nm,1.3s						
W13A	Hualapai Mount	89.36	54	eP	P	14 54 04.1	+0.5
	5.2nm,1.2s						
ELK	Elko	89.80	48	eP	P	14 54 05.9	+0.4
	9.3nm,1.6s						
PSUT	Pine Spring	90.26	51	eP	P	14 54 07.3	-0.4
	4.5nm,1.0s						
LCMT	Little Creek M	90.35	52	eP	P	14 54 08.6	+0.6
	6.8nm,1.0s						
CCUT	Cedar City	90.39	52	eP	P	14 54 09.2	+0.9
	5.7nm,1.0s						
SZCU	Shurtz Canyon	90.61	52	eP	P	14 54 10.1	+0.8
	8.5nm,1.3s						
KNB	Kanab	90.67	52	eP	P	14 54 09.7	+0.2
	8.9nm,1.2s						
X16A	Lo Mia Camp, P	91.15	55	eP	P	14 54 12.9	+1.0
	3.7nm,0.9s						
MTPU	Mount Pierson	91.41	52	eP	P	14 54 14.7	+1.5
	9.9nm,1.1s						
WUAZ	Wupatki	91.46	54	eP	P	14 54 14.0	+0.8
	9.1nm,1.3s						
MSU	Marysvale	91.53	51	eP	P	14 54 14.3	+0.8
HVU	Hansel Valley	91.86	48	eP	P	14 54 15.6	+0.7
	12nm,1.2s						
NLU	North Lily Min	91.94	50	eP	P	14 54 15.8	+0.3
	3.9nm,0.9s						
DLMT	Dillon	92.84	44	eP	P	14 54 20.0	+0.6
	14nm,1.6s						
BOZ	Bozeman (W)	93.56	44	eP	P	14 54 23.3	+0.6
	7.4nm,1.4s						
MK01	Makanchi Array	93.61	317	eP	P	14 54 22.6	-0.1
MK31	Makanchi Array	93.62	317	eP	P	14 54 23.0	+0.2
MK32	Makanchi Array	93.62	317	eP	P	14 54 23.2	+0.5
MKAR	Makanchi Array	93.62	317	eP	P	14 54 23.1	+0.3
	9.4nm,0.8s						
MKAR	Makanchi Array	93.62	317	P	P	14 54 23.2	+0.5
	1.4nm,0.8s,baz=103,slow=5.2,SNR=14						
ZALV	Zalesovo Beam	93.77	324	P	P	14 54 23.0	-0.2
	0.7nm,0.7s,baz=104,slow=6.3,SNR=4.5						
ZAA1	Zalesovo Array	93.77	324	eP	P	14 54 23.0	-0.2
MAKZ	Makanchi	93.84	317	eP	P	14 54 23.9	+0.1
	4.7nm,1.3s						
PDAR	Pinedale Array	94.41	47	P	P	14 54 27.1	+0.3
	0.9nm,1.0s,baz=259,slow=3.0,SNR=4.7						
YKA	Yellowknife Ar	95.82	27	P	P	14 54 31.4	-1.0
	1.3nm,0.8s,baz=257,slow=4.6,SNR=18						
YKB5	Yellowknife Ar	95.82	27	eP	P	14 54 31.1	-1.3
LTX	Lajitas	96.63	62	eP	P	14 54 37.2	+0.2
TXAR	Lajitas Array	96.63	62	P	P	14 54 37.2	+0.2
	0.4nm,0.8s,baz=224,slow=5.0,SNR=2.9						
ARA0	ARCESS Array S	116.83	345	ePKPdf	PKiKP	14 59 50.1	-0.2
ARCES	ARCESS Array B	116.83	345	PKP	PKiKP	14 59 50.1	-0.3
	2.1nm,0.9s,baz=31,slow=2.1,SNR=3.5						
BR101	Keskin Array S	129.00	312	ePKPdf	PKiKP	15 00 15.4	0.0
BRTR	Keskin Array B	129.00	312	PKP	PKiKP	15 00 15.4	0.0
	0.5nm,0.7s,baz=64,slow=4.3,SNR=3.7						
ES19	SONSECA Array	150.49	343	ePKPbc	PKPbc	15 00 56.9	-1.5
ESDC	Sonseca Array	150.53	343	PKPbc	PKiKP	15 00 59.2	0.0
	0.5nm,0.5s,baz=40,slow=2.2,SNR=3.5						
TORD	Torodi Ar. Bea	163.81	277	PKP	PKPdf	15 01 10.7	+0.2
	0.4nm,0.8s,baz=100,slow=1.8,SNR=2.9						
TORD				PKPab	PKPab	15 02 03.8	+0.9
	0.8nm,1.0s,baz=54,slow=3.7,SNR=4.2						
TOA1	Torodi Ar. Sit	163.81	277	ePKPdf	PKPdf	15 01 10.7	+0.2
TOA1				ePKPab	PKPab	15 02 03.8	+0.8

IDC 06 14:45:46.7±2.0,**5°.70S**×**130°.62E,h0**km**,mb3.7**/1,**mb1 3.7**/4**,mb1mx3.4**/39**,mbtmp3.5**/4**,ML3.1**/3**,Error ellipse: s-maj=74.0km s-min=27.3km az=77.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.25	201	Pn	Pn	14 48 55.4	-1.0
	0.1nm,0.3s,baz=26,slow=9.9,SNR=5.9						
FITZ				Sn	Sn	14 51 06.7	-18
	0.1nm,0.3s,baz=344,slow=23,SNR=3.8						
WRA	Warramunga Arr	14.62	166	Pn	Pn	14 49 16.5	+1.5
	0.1nm,0.3s,baz=347,slow=11,SNR=5.4						
WRA				Sn	Sn	14 51 43.3	-15
	0.3nm,0.3s,baz=350,slow=23,SNR=8.4						
ASAR	Alice Springs	18.14	170	P	Pn	14 50 00.0	-0.4
	0.2nm,0.3s,baz=347,slow=9.9,SNR=19						
ASAR				S	Sn	14 53 10.2	-13
	0.1nm,0.3s,baz=346,slow=26,SNR=3.5						
MKAR	Makanchi Array	67.49	326	P	P	14 56 44.6	0.0
	0.4nm,0.4s,baz=116,slow=7.8,SNR=13						

*IDC **06** 14:48:14.8±0.8, 11°.07S×165°.02E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.9/37, mbtmp3.9/13, ML4.1/2, Error ellipse: s-maj=21.6km s-min=19.5km az=111.0*
*NEIC **06** 14:48:15.9±4.9, 11°.10S×165°.02E, h8km±30km, mb4.3/3, Error ellipse: s-maj=12.2km s-min=8.6km az=213.0*
*ISCJB **06** 14:48:17.7±0.5, 11°.23S±0°.07×164°.93E±0°.07, h31km, mb3.9/12, Error ellipse: s-maj=11.5km s-min=8.3km az=35.7*
ISC 06 14:48:19.3±0.7**,11°.1S**±0°.1×**164°.99E**±0°.10**,h31**km**,n28,** σ**0s.78**/23**,mb3.7**/12**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.24	288	Pn	Pn	14 49 35.5	0.0
	14nm,0.3s,baz=158,slow=7.2,SNR=4.6						
HNR				Sn	Sn	14 50 34.8	-0.2
	12nm,0.3s,baz=239,slow=11,SNR=4.5						
DZM	Mont Dzumac	10.96	173	Pn	Pn	14 50 52.4	-1.6
	0.7nm,0.3s,baz=27,slow=16,SNR=4.8						
ONTNC	Ouen Toro	11.19	173	ePn	Pn	14 50 57.3	+0.1
CTA	Charters Tower	20.10	241	P	P	14 52 50.0	-0.6
	4.4nm,1.0s,baz=60,slow=14,SNR=2.2						
URZ	Urewera	29.10	160	P	P	14 54 18.5	+1.3
	4.5nm,0.8s,baz=228,slow=5.8,SNR=2.2						
H11S2	WAKE ISLAND Hy	29.49	3	T	T	15 25 09.6	
	baz=188						
H11S3	WAKE ISLAND Hy	29.50	3	T	T	15 25 03.1	
	baz=188						
H11S1	WAKE ISLAND Hy	29.51	3	T	T	15 25 09.8	
	baz=188						
H11N1	WAKE ISLAND Hy	30.72	4	T	T	15 26 38.6	
	baz=184						
H11N3	WAKE ISLAND Hy	30.72	4	T	T	15 26 37.7	
	baz=184						
H11N2	WAKE ISLAND Hy	30.74	4	T	T	15 26 42.8	
	baz=184						
WB2	Warramunga Arr	30.74	250	eP	P	14 54 31.2	-0.7
WR1	Warramunga Arr	30.75	250	eP	P	14 54 32.9	+0.8
	14nm,1.1s						
WRA	Warramunga Arr	30.75	250	P	P	14 54 32.9	+0.8
	1.5nm,1.1s,baz=79,slow=9.1,SNR=4.2						
AS31	Alice Springs	32.08	243	eP	P	14 54 43.8	0.0
	0.8nm,0.8s						
ASAR	Alice Springs	32.08	243	P	P	14 54 44.7	+0.9
	0.4nm,0.5s,baz=66,slow=10,SNR=6.8						
RPZ	Rata Peaks	32.88	172	P	P	14 54 51.0	+0.5
	4.5nm,1.0s,baz=349,slow=19,SNR=1.6						
FITZ	Fitzroy Crossi	38.63	255	eP	P	14 55 40.7	+0.6
	5.5nm,0.8s						
FITZ	Fitzroy Crossi	38.63	255	P	P	14 55 40.5	+0.4
	2.2nm,0.8s,baz=50,slow=7.9,SNR=3.9						
SONA0	Songino Array	78.31	324	eP	P	15 00 17.1	+0.6
SONM	Songino Array	78.31	324	P	P	15 00 17.1	+0.6
	0.2nm,0.3s,baz=131,slow=4.0,SNR=2.9						
ILAR	Eielson Array	83.84	19	P	P	15 00 45.8	+0.3
	0.6nm,0.9s,baz=224,slow=7.5,SNR=5.0						
ILB	Eielson Array	83.84	19	eP	P	15 00 45.1	-0.3
NV01	Mina Array Sit	86.66	50	eP	P	15 01 00.1	-0.3
NVAR	Mina Array Bea	86.66	50	P	P	15 01 01.2	+0.8
	0.2nm,0.6s,baz=243,slow=8.0,SNR=2.3						
MK32	Makanchi Array	93.08	317	eP	P	15 01 30.1	0.0
MKAR	Makanchi Array	93.08	317	P	P	15 01 30.1	0.0
	0.4nm,0.7s,baz=95,slow=6.7,SNR=5.4						
YKA	Yellowknife Ar	95.40	27	P	P	15 01 38.9	-1.4
	0.1nm,0.7s,baz=256,slow=5.0,SNR=3.5						

*IDC **06** 14:50:12.4±0.9, 11°.92S×165°.48E, h0km, mb4.2/14, mb1 4.4/15, mb1mx4.2/34, mbtmp4.2/15, ML2.9/1, Error ellipse: s-maj=31.6km s-min=17.6km az=131.0*
*NEIC **06** 14:50:13.4±0.3, 11°.96S×165°.50E, h10km, mb4.6/4, Error ellipse: s-maj=8.6km s-min=6.4km az=96.0*
*ISCJB **06** 14:50:15.1±0.4, 12°.12S±0°.06×165°.48E±0°.09, h33km, mb4.2/17, Error ellipse: s-maj=12.2km s-min=9.0km az=1.9*
ISC 06 14:50:17.3±0.7**,12°.0S**±0°.1×**165°.5E**±0°.1**,h35**km**,n42,** σ**0s.89**/41**,mb4.2**/17**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.03	295	Pn	Pn	14 51 38.0	-6.1
	14nm,0.3s,baz=80,slow=6.1,SNR=3.0						
MARNC	Mare, Loyalty	9.71	166	ePn	Pn	14 52 33.6	-0.9
DZM	Mont Dzumac	10.03	175	Pn	Pn	14 52 37.6	-1.5
	0.1nm,0.3s,baz=317,slow=19,SNR=3.4						
PINNC	Pines Island,	10.70	170	ePn	Pn	14 52 48.6	+0.5
CTA	Charters Tower	20.14	244	P	P	14 54 47.6	-1.0
	5.8nm,0.9s,baz=76,slow=8.3,SNR=2.8						
STKA	Stephens Creek	29.57	224	eP	P	14 56 19.4	+0.4
	1.5nm,1.2s						
STKA	Stephens Creek	29.57	224	P	P	14 56 19.7	+0.7
	1.6nm,0.6s,baz=59,slow=4.3,SNR=2.4						
WB2	Warramunga Arr	30.92	251	eP	P	14 56 30.7	-0.3
WR1	Warramunga Arr	30.93	251	eP	P	14 56 31.6	+0.4
	15nm,1.3s						
WR1				ePcP	PcP	14 59 28.9	+1.7
WRA	Warramunga Arr	30.93	251	P	P	14 56 31.6	+0.4
	3.8nm,1.0s,baz=83,slow=9.1,SNR=8.6						
WRA				PcP	PcP	14 59 29.0	+1.7
	0.6nm,0.9s,baz=66,slow=3.3,SNR=5.0						
H11N1	WAKE ISLAND Hy	31.57	3	T	T	15 29 24.3	
	baz=181						
H11N3	WAKE ISLAND Hy	31.57	3	T	T	15 29 29.1	
	baz=181						
H11N2	WAKE ISLAND Hy	31.58	3	T	T	15 29 29.2	
	baz=181						
AS31	Alice Springs	32.15	245	eP	P	14 56 41.3	-0.6
	2.2nm,1.4s						
ASAR	Alice Springs	32.15	245	P	P	14 56 41.3	-0.6
	2.2nm,0.8s,baz=66,slow=9.9,SNR=9.5						
ASAR				PcP	PcP	14 59 31.8	+1.3
	0.4nm,0.7s,baz=64,slow=3.3,SNR=4.9						
FITZ	Fitzroy Crossi	38.90	256	eP	P	14 57 40.3	+0.4
	5.4nm,1.0s						
FITZ	Fitzroy Crossi	38.90	256	P	P	14 57 40.1	+0.2
	2.6nm,0.8s,baz=81,slow=3.6,SNR=3.8						
BATI	Baumata	41.06	268	P	P	14 57 58.8	+0.9
	6.9nm,0.4s,baz=90,slow=6.1,SNR=3.4						
USRK	Ussuriysk Ar.	63.71	334	P	P	15 00 44.9	-0.4
	1.2nm,0.7s,baz=143,slow=43,SNR=4.8						
CM01	Chiang Mai Arr	72.25	294	eP	P	15 01 39.4	-0.2
CM31	Chiang Mai Arr	72.28	294	eP	P	15 01 39.7	0.0
CMAR	Chiang Mai Arr	72.28	294	P	P	15 01 40.3	+0.6
	0.8nm,0.4s,baz=113,slow=5.5,SNR=6.6						
ULN	Ulaanbaatar	78.95	324	eP	P	15 02 16.4	-1.1
	3.4nm,0.8s						
SONA0	Songino Array	79.31	324	eP	P	15 02 19.0	-0.5
SONM	Songino Array	79.31	324	P	P	15 02 19.0	-0.5
	1.0nm,0.7s,baz=145,slow=7.0,SNR=7.5						
ILAR	Eielson Array	84.51	19	P	P	15 02 46.5	+0.3
	0.9nm,0.6s,baz=238,slow=4.7,SNR=16						
ILB	Eielson Array	84.51	19	eP	P	15 02 46.2	-0.1
NV01	Mina Array Sit	86.83	50	eP	P	15 02 59.4	+0.7
NVAR	Mina Array Bea	86.83	50	P	P	15 02 59.5	+0.8
	1.5nm,1.0s,baz=245,slow=5.2,SNR=4.6						
MK01	Makanchi Array	94.05	317	eP	P	15 03 31.3	-0.8
MK31	Makanchi Array	94.06	317	eP	P	15 03 31.4	-0.7
MK32	Makanchi Array	94.06	317	eP	P	15 03 31.9	-0.3
MKAR	Makanchi Array	94.06	317	eP	P	15 03 31.5	-0.6
	15nm,0.8s						
MKAR	Makanchi Array	94.06	317	P	P	15 03 31.9	-0.3
	2.4nm,0.8s,baz=98,slow=6.2,SNR=21						
ZALV	Zalesovo Beam	94.20	324	eP	P	15 03 30.8	-1.7
ZALV	Zalesovo Beam	94.20	324	P	P	15 03 31.1	-1.4
	1.2nm,0.6s,baz=122,slow=5.4,SNR=8.3						
ZAA1	Zalesovo Array	94.20	324	eP	P	15 03 31.1	-1.4
MAKZ	Makanchi	94.28	317	eP	P	15 03 32.1	-1.0
	4.9nm,1.1s						
YKA	Yellowknife Ar	95.95	27	P	P	15 03 40.2	-0.1
	0.5nm,0.8s,baz=257,slow=4.6,SNR=7.1						
YKB5	Yellowknife Ar	95.95	27	eP	P	15 03 39.8	-0.5
TORD	Torodi Ar. Bea	164.15	276	PKPab	PKPab	15 11 13.0	+1.2
	0.6nm,1.0s,baz=90,slow=4.3,SNR=2.9						
TOA1	Torodi Ar. Sit	164.15	276	ePKPab	PKPab	15 11 12.9	+1.2

*IDC **06** 14:50:26.5±3.0, 12°.96S×166°.19E, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.0/33, mbtmp4.0/6, Error ellipse: s-maj=125.2km s-min=29.5km az=142.0*
*ISCJB **06** 14:50:27.7±2.5, 13°.1S±0°.6×166°.2E±0°.5, h20km, mb3.9/6, Error ellipse: s-maj=102.5km s-min=24.5km az=141.1*
ISC 06 14:50:29.8±2.6**,13°.0S**±0°.6×**166°.2E**±0°.5**,h20**km**,n6,** σ**0s.65**/6**,mb4.0**/6**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.28	253	P	P	14 56 47.9	-0.7
	3.1nm,0.9s,baz=79,slow=9.0,SNR=5.4						
ASAR	Alice Springs	32.36	246	P	P	14 56 58.7	+0.4
	0.8nm,0.7s,baz=68,slow=9.7,SNR=2.6						
SONM	Songino Array	80.45	324	P	P	15 02 40.2	-0.1
	0.3nm,0.3s,baz=134,slow=4.2,SNR=2.3						
ILAR	Eielson Array	85.18	18	P	P	15 03 04.5	+0.2
	1.5nm,0.7s,baz=241,slow=5.2,SNR=10						
MKAR	Makanchi Array	95.19	317	P	P	15 03 52.5	+0.6
	0.4nm,0.7s,baz=95,slow=6.7,SNR=1.8						
YKA	Yellowknife Ar	96.47	27	P	P	15 03 56.9	-0.4
	0.4nm,0.8s,baz=259,slow=4.7,SNR=5.3						

*IDC **06** 14:51:05.7±2.7, 10°.89S×164°.64E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/32, mbtmp3.7/5, Error ellipse: s-maj=112.5km s-min=31.0km az=138.0*
*NEIC **06** 14:51:07.2±0.8, 10°.98S×164°.65E, h10km, mb4.2/2, Error ellipse: s-maj=19.9km s-min=13.3km az=84.0*
*ISCJB **06** 14:51:08.2±0.8, 11°.13S±0°.10×164°.7E±0°.1, h29km, mb3.8/7, Error ellipse: s-maj=21.2km s-min=14.1km az=172.5*
ISC 06 14:51:09.9±1.0**,11°.0S**±0°.1×**164°.7E**±0°.2**,h29**km**,n10,** σ**1s.18**/10**,mb3.7**/7**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.13	172	ePn	Pn	14 53 46.3	-0.9
ONTNC	Ouen Toro	11.36	172	ePn	Pn	14 53 51.4	+1.1
WR1	Warramunga Arr	30.53	249	eP	P	14 57 20.1	-0.9
	19nm,1.8s						
WRA	Warramunga Arr	30.53	249	P	P	14 57 20.1	-0.9
	1.3nm,0.9s,baz=80,slow=9.4,SNR=1.7						
AS31	Alice Springs	31.89	243	eP	P	14 57 32.8	-0.2
	1.2nm,1.1s						
ASAR	Alice Springs	31.89	243	P	P	14 57 33.4	+0.4
	0.8nm,0.5s,baz=65,slow=10.0,SNR=4.6						
SONA0	Songino Array	78.03	324	eP	P	15 03 07.0	+1.1
SONM	Songino Array	78.03	324	P	P	15 03 07.0	+1.1
	0.2nm,0.3s,baz=140,slow=7.5,SNR=1.2						
ILAR	Eielson Array	83.81	19	P	P	15 03 34.5	-1.7
	0.6nm,0.8s,baz=234,slow=5.9,SNR=1.8						
YKA	Yellowknife Ar	95.42	27	P	P	15 04 32.2	+0.8
	0.2nm,0.6s,baz=268,slow=3.6,SNR=1.9						

IDC 06 14:57:08.9±2.4**,5°.80S**×**130°.76E,h0**km**,mb3.5**/1**,mb1 3.5**/4**,mb1mx3.3**/31**,mbtmp3.4**/4**,ML2.8**/3**,Error ellipse: s-maj=99.5km s-min=28.9km az=78.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.20	202	Pn	Pn	15 00 18.2	+0.4
	0.1nm,0.3s,baz=19,slow=12,SNR=5.8						
FITZ				Sn	Sn	15 02 31.5	-14
	0.2nm,0.3s,baz=61,slow=19,SNR=4.9						
WRA	Warramunga Arr	14.48	166	Pn	Pn	15 00 35.1	-0.3
	0.0nm,0.3s,baz=349,slow=13,SNR=3.5						
WRA				Sn	Sn	15 03 03.9	-13
	0.2nm,0.3s,baz=348,slow=24,SNR=8.1						
ASAR	Alice Springs	18.02	171	P	Pn	15 01 20.8	-0.2
	0.1nm,0.3s,baz=351,slow=11,SNR=6.9						
MKAR	Makanchi Array	67.65	326	P	P	15 08 07.8	0.0
	0.2nm,0.3s,baz=141,slow=7.1,SNR=6.0						

IDC 06 14:59:31.9±5.3**,11°.48S**×**164°.94E,h0**km**,mb3.4**/3**,mb1 3.7**/3**,mb1mx3.4**/29**,mbtmp3.4**/3**,Error ellipse: s-maj=270.8km s-min=38.2km az=139.0,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.59	250	P	P	15 05 47.7	-0.1
	0.4nm,0.8s,baz=82,slow=8.5,SNR=2.2						
ASAR	Alice Springs	31.89	243	P	P	15 05 59.2	0.0
	0.5nm,1.0s,baz=63,slow=11,SNR=2.5						
ILAR	Eielson Array	84.18	19	P	P	15 12 04.7	0.0
	0.3nm,0.8s,baz=228,slow=6.8,SNR=2.3						

*ISCJB **06** 15:01:44.7±0.3, 24°.43N±0°.02×122°.01E±0°.02, h0km±3km, Error ellipse: s-maj=2.8km s-min=2.2km az=142.2*
*JMA **06** 15:01:44.5±0.1, 24°.41N×121°.98E, h0km, M2.7*
*TAP **06** 15:01:45.3, 24°.46N×121°.96E, h13km, ML3.0, B*
ISC 06 15:01:44.9±0.9**,24°.43N**±0°.02×**122°.00E**±0°.02**,h13**km±6km**,n89,** σ**0s.67**/134**,4C-17D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.17	45	⇓P	Pb	15 01 49.8	-0.1
	baz=51						
EOS1				S	Sg	15 01 53.4	+1.9
	baz=51						
TWC	Suao	0.22	323	⇑iP	Pg	15 01 49.7	-0.1
	baz=336						
TWC				i S	Sg	15 01 52.1	-0.9
	baz=336						
ENA	Nanau	0.23	269	⇓iP	Pg	15 01 49.9	-0.1
	baz=268						
ENA				S	Sg	15 01 53.0	-0.3
	baz=268						
ILA	Ilan	0.40	326	⇑iP	Pb	15 01 53.4	-0.5
	baz=328						
ILA				i S	Sg	15 01 58.6	+0.2
	baz=328						
EGS		0.42	352	eP	Pg	15 01 53.5	+0.2
	baz=350						
TWE	Neicheng	0.42	314	⇑iP	Pg	15 01 53.3	0.0
	baz=319						
TWE				S	Sg	15 01 57.4	-1.4
	baz=319						
ENTT	Nioudou	0.45	298	⇓iP	Pg	15 01 53.9	+0.1
	baz=297						
ENTT				S	Sg	15 01 59.2	-0.5
	baz=297						
NACB	Ninganchiao	0.45	235	⇓P	Pg	15 01 53.8	0.0
	baz=230						
NACB				S	Sg	15 01 59.6	-0.2
	baz=230						
NTC	Toucheng	0.45	340	eP	Pg	15 01 53.9	+0.1
	baz=352						
NDT	Datong Townshi	0.47	291	⇓iP	Pg	15 01 54.5	+0.2
	baz=290						
NDT				S	Sg	15 02 00.3	-0.3
	baz=290						
TWD	Chiawan	0.51	226	⇓P	Pg	15 01 54.9	+0.1
	baz=221						
TWD				S	Sg	15 02 01.4	-0.2
	baz=221						
ETLH	Xiulin Townshi	0.52	245	eP	Pg	15 01 55.1	0.0
	baz=241						
ETLH				eS	Sg	15 02 02.4	+0.3
	baz=241						
NNSB	Datong	0.56	270	⇓P	Pg	15 01 55.9	0.0
	baz=267						
NNSB				S	Sg	15 02 02.7	-0.7
	baz=267						
TIPB	Shuangxi	0.56	344	eP	Pg	15 01 56.1	+0.1
	baz=351						
NWLT	Wulai	0.57	308	eP	Pb	15 01 56.5	-0.3
	baz=299						
NWLT				eS	Sg	15 02 03.3	-0.3
	baz=299						
NNS	Nan Shan	0.57	271	⇓iP	Pg	15 01 56.0	-0.1
	baz=268						
NNS				S	Sg	15 02 03.0	-0.7
	baz=268						
TWB1	Santiao Chiao	0.57	359	eP	Pb	15 01 56.5	-0.3
	baz=354						
TWB1				eS	Sg	15 02 04.2	+0.3
	baz=354						
HWA	Hwalien	0.58	219	eP	Pb	15 01 57.1	+0.2
	baz=222						
YHNB	Yeheng	0.61	293	⇓P	Pb	15 01 57.2	-0.4
	baz=297						
YHNB				S	Sg	15 02 04.3	-0.8
	baz=297						
NSK	Sanguang	0.63	293	⇓iP	Pg	15 01 57.4	+0.1
	baz=297						
NSK				i S	Sg	15 02 04.6	-1.0
	baz=297						
ENLB	Shoufeng	0.64	215	eP	Pn	15 01 59.6	0.0
	baz=221						
TWA	Mucha	0.66	326	P	Pb	15 01 58.1	-0.3
	baz=326						
TWA				S	Sg	15 02 06.7	+0.1
	baz=326						
NWF	Wu-fen Shan	0.67	343	eP	Pb	15 01 58.4	-0.1
	baz=333						
NWF				eS	Sg	15 02 07.1	+0.3
	baz=333						
WFSB	Wu-fen Shan	0.67	343	eP	Pb	15 01 58.3	-0.1
	baz=333						
WFSB				eS	Sb	15 02 07.2	-0.4
	baz=333						
NHDH	Xindian Distri	0.68	321	eP	Pb	15 01 59.0	+0.3
	baz=310						
NHDH				eS	Sg	15 02 07.1	-0.1
	baz=310						
TATO	Taipei	0.71	320	eP	Pb	15 01 59.4	+0.1
	baz=309						
TATO				S	Sg	15 02 07.6	-0.6
	baz=309						
WHF	Hehuan Shan	0.73	247	⇓P	Pg	15 01 59.0	-0.1
	baz=254						
WHF				eS	Sg	15 02 08.7	0.0
	baz=254						
TAP	Taipei	0.75	324	eP	Pn	15 02 01.2	-0.1
	baz=324						
TWT	Tachien	0.77	257	eP	Pb	15 02 00.4	+0.1
	baz=249						
TDCB	Techi	0.79	257	eP	Pb	15 02 00.4	-0.1
	baz=255						
TDCB				eS	Sg	15 02 09.8	-0.7
	baz=255						
WLTB	Daxi	0.80	302	P	Pn	15 02 01.5	-0.4
	baz=301						
WLTB				eS	Sb	15 02 11.4	0.0
	baz=301						
ESL	Shilin	0.80	220	eP	Pb	15 02 00.5	-0.3
	baz=225						
YM01	YM01	0.81	331	eP	Pb	15 02 01.4	+0.5
	baz=332						
YM01				eS	Sg	15 02 11.1	-0.3

	baz=332						
YM11	YM11	0.83	332	⇑eP	Pn	15 02 01.9	-0.5
	baz=333						
YM05	YM05	0.83	332	eP	Pb	15 02 01.7	+0.5
	baz=342						
YM04	YM04	0.83	330	eP	Pb	15 02 01.7	+0.4
	baz=330						
CHGB	Renai	0.84	244	⇓P	Pb	15 02 01.2	-0.3
	baz=251						
CHGB				eS	Sg	15 02 11.9	-0.2
	baz=251						
YM08	YM08	0.84	334	eP	Pb	15 02 01.5	+0.1
	baz=334						
YM08				eS	Sn	15 02 13.8	-0.9
	baz=334						
TWS1	Kuangyinshan	0.85	322	eP	Pn	15 02 02.4	-0.2
	baz=317						
JYNG	Yonagunijimaku	0.86	88	P	Pb	15 02 02.0	+0.2
NTST	Danshui	0.88	326	eP	Pn	15 02 03.6	+0.6
	baz=326						
OWD	Renai	0.89	238	⇓eP	Pg	15 02 02.0	-0.1
	baz=230						
NCU	National Centr	0.91	306	eP	Pn	15 02 04.0	+0.5
	baz=295						
NCUH	Zhongli	0.91	306	eP	Pn	15 02 04.0	+0.5
	baz=305						
NCUH				eS	Sn	15 02 17.0	+0.5
	baz=305						
TWY	Chenhua	0.92	337	eP	Pn	15 02 03.5	0.0
	baz=338						
LIOB	Emei	0.92	284	⇓P	Pb	15 02 02.8	+0.1
	baz=282						
LIOB				eS	Sg	15 02 14.4	-0.3
	baz=282						
EGFH	Guangfu	0.92	215	eP	Pb	15 02 02.7	-0.1
	baz=226						
YOJ	Yonaguni jima	0.92	88	⇓eP	Pb	15 02 02.8	0.0
	baz=89						
YOJ				S	Sn	15 02 16.4	-0.4
	baz=89						
YOJ	Yonaguni jima	0.92	88	P	Pb	15 02 03.0	+0.2
YOJ				eS	Sn	15 02 16.6	-0.2
NSTT	Nanjuang	0.93	283	⇓P	Pn	15 02 03.4	-0.3
	baz=281						
NSTT				S	Sg	15 02 14.5	-0.6
	baz=281						
WHP	Taichung City	0.97	261	eP	Pn	15 02 04.0	-0.3
	baz=260						
WHP				eS	Sg	15 02 16.0	-0.3
	baz=260						
SBCB	Hsinchu	0.99	292	eP	Pn	15 02 04.9	+0.4
	baz=284						
SBCB				eS	Sn	15 02 19.9	+1.5
	baz=284						
VWDT	VWDT	1.03	229	eP	Pn	15 02 04.9	-0.2
	baz=232						
VWDT				eS	Sn	15 02 18.9	-0.5
	baz=232						
HGSD	Ruisui	1.07	209	eP	Pn	15 02 05.9	+0.3
	baz=208						
NMLH	Miaoli	1.10	276	eP	Pn	15 02 07.8	+1.7
	baz=274						
EHY	Hungye	1.11	214	eP	Pn	15 02 06.1	-0.1
	baz=225						
TWQ1	Liyutan	1.12	266	eP	Pn	15 02 07.3	+1.0
	baz=264						
NSY	Sanyi	1.13	270	eP	Pg	15 02 08.3	+1.7
	baz=268						
SMLT	Sun Moon Lake	1.14	242	P	Pg	15 02 07.0	+0.1
	baz=240						
SSLB	Suanglung	1.15	236	⇓iP	Pg	15 02 06.9	-0.2
	baz=243						
SSLB				eS	Sb	15 02 21.0	-0.5
	baz=243						
TYC	Yuchr	1.17	244	eP	Pn	15 02 06.9	-0.1
	baz=242						
TYC				eS	Sn	15 02 23.3	+0.5
	baz=242						
PTSB	Yuanli	1.18	271	eP	Pg	15 02 08.6	+1.0
	baz=270						
YULB	Yu-li	1.22	212	eP	Pn	15 02 07.6	0.0
	baz=212						
WDJ	Dajia District	1.24	266	eP	Pg	15 02 10.2	+1.5
	baz=265						
TWF1	Yuli	1.25	211	eP	Pn	15 02 07.9	-0.2
	baz=226						
WHYT	Xinyi Township	1.28	235	eP	Pg	15 02 09.2	-0.3
	baz=234						
WJS	Zhushan	1.31	243	eP	Pg	15 02 10.4	+0.3
	baz=234						
WNT	Mingjian	1.32	246	eP	Pg	15 02 10.9	+0.6
	baz=245						
ALS	Alishan	1.43	230	eP	Pg	15 02 12.6	+0.2
	baz=216						
CHN5	Tsauling	1.47	236	eP	Pg	15 02 13.5	+0.4
	baz=237						
CHN5				eS	Sg	15 02 34.4	+2.3
	baz=237						
ELDTW	Lidau	1.53	216	eP	Pg	15 02 13.8	-0.4
	baz=203						
IRIF	Iriomote-Funau	1.58	93	P	Pn	15 02 12.3	-0.4
IRIF				S	Sn	15 02 32.5	-0.5
RLNB	Erlin	1.59	251	eP	Pb	15 02 14.1	-0.1
	baz=250						
CHN4	Tsaushan	1.68	230	eP	Pg	15 02 17.2	+0.1
	baz=232						
CHN4				eS	Sg	15 02 41.1	+2.3
	baz=232						
TPUB	Ta-pu	1.68	228	eP	Pb	15 02 16.1	+0.4
	baz=230						
TPUB				eS	Sg	15 02 40.3	+1.2
	baz=230						
STYT	Tauyuan	1.70	222	eP	Pb	15 02 15.9	-0.1
	baz=223						
WTP	Ta-pu	1.73	227	eP	Pg	15 02 17.3	-0.9
	baz=229						
WTP				eS	Sg	15 02 42.4	+1.7
	baz=229						
TWK	Hsinying	1.80	230	eP	Pb	15 02 18.5	+0.7
	baz=231						
CHN1	Nanshi	1.83	228	eP	Pg	15 02 19.3	-0.8
	baz=229						
JKRS	Kuro-shima	1.84	96	P	Pn	15 02 16.7	+0.4
JKRS				S	Sn	15 02 39.5	0.0
JIJ	Ishigaki jima	1.96	92	P	Pn	15 02 17.4	-0.4
JIJ				S	Sn	15 02 41.2	-1.1
SSD	Sandimen	2.09	217	eP	Pg	15 02 24.0	-1.1
	baz=229						
JISG	Ishigakijimahi	2.11	85	P	Pn	15 02 19.5	-0.5
JISG				S	Sn	15 02 46.4	+0.3
MASBT	Mashibuluo	2.20	215	eP	Pb	15 02 23.4	-1.2
	baz=217						
EAST	Anshuo	2.30	208	eP	Pn	15 02 23.5	+0.9
	baz=197						
PHUB	P'eng-hu	2.40	248	eP	Pb	15 02 26.0	-1.9
	baz=249						
SCZT	Fangliau	2.41	212	eP	Pb	15 02 27.9	-0.2
	baz=215						
JTJ	Tarama	2.47	85	P	Pn	15 02 25.6	+0.7
MATB	Ma-tsu	2.53	313	eP	Pn	15 02 26.7	+1.1
	baz=311						

IDC 06 15:07:13.7±1.8, 11°.19S×165°.54E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.5/31, mbtmp3.6/4, ML4.0/1, MS4.2/1, Ms1 4.2/1, ms1mx3.3/24, Error ellipse: s-maj=52.6km s-min=32.9km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.85	176	Pn	Pn	15 09 50.9	+0.4
	1.2nm,0.3s,baz=317,slow=14,SNR=13						
WRA	Warramunga Arr	31.24	250	P	P	15 13 35.5	+0.1
	1.5nm,1.1s,baz=83,slow=9.2,SNR=7.3						
ASAR	Alice Springs	32.54	243	P	P	15 13 46.5	-0.3
	0.2nm,0.8s,baz=64,slow=10,SNR=3.3						
ASAJ	Asahikawa	58.87	341	LR	LR	15 42 45.0	
	comp=Z,164nm,18.1s,baz=207,slow=36						
ILAR	Eielson Array	83.72	19	P	P	15 19 44.1	0.0
	0.3nm,0.7s,baz=220,slow=5.4,SNR=4.6						

IDC 06 15:08:54.8±1.7, 11°.28S×165°.03E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.6/31, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=51.4km s-min=30.7km az=129.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.82	173	Pn	Pn	15 11 31.3	+0.1
	0.7nm,0.3s,baz=330,slow=18,SNR=4.0						
WRA	Warramunga Arr	30.75	250	P	P	15 15 12.5	+0.4
	0.3nm,0.5s,baz=82,slow=9.2,SNR=4.1						
ASAR	Alice Springs	32.06	243	P	P	15 15 23.3	-0.4
	0.7nm,0.6s,baz=66,slow=10,SNR=11						
ILAR	Eielson Array	83.95	19	P	P	15 21 26.6	0.0
	0.5nm,1.0s,baz=229,slow=7.7,SNR=3.3						

MEX 06 15:09:11.7±0.4, 16°.43N×95°.72W, h68^{km}±22^{km}, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.76	210	eP	Pn	15 09 25.8	-1.4
HUIG				eS	Sn	15 09 36.8	-1.8
CMIG	Matias Romero	1.03	50	eP	Pn	15 09 30.2	-0.4
CMIG				i S	Sn	15 09 42.7	-1.9
VHO	Vista Hermosa	1.17	303	eP	Pn	15 09 29.8	-2.7
PNIG	Pinotepa	2.31	269	eP	Pn	15 09 46.4	-1.2

IDC 06 15:11:46.7±1.6, 11°.76S×165°.09E, h0^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.8/30, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=44.6km s-min=29.5km az=125.0

NEIC 06 15:11:48.2±0.7, 11°.81S×165°.11E, h10^{km}, mb4.1/2, Error ellipse: s-maj=15.3km s-min=10.1km az=65.0

ISCJB 06 15:11:49.8±1.2, 12°.0S±0°.1×165°.0E±0°.2, h33^{km}, mb3.9/6, Error ellipse: s-maj=24.9km s-min=13.0km az=148.6

ISC 06 15:11:51.9±1.3, 11°.9S±0°.1×165°.1E±0°.2, h35^{km}, n11, σ0^{s}.58/11, mb3.9/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.60	295	ePn	Pn	15 13 12.3	-0.4
DZM	Mont Dzumac	10.23	173	ePn	Pn	15 14 16.2	-0.2
DZM	Mont Dzumac	10.23	173	Pn	Pn	15 14 16.6	+0.2
	0.8nm,0.3s,baz=305,slow=15,SNR=11						
ONTNC	Ouen Toro	10.47	173	ePn	Pn	15 14 19.6	+0.1
WR1	Warramunga Arr	30.60	251	eP	P	15 18 02.8	0.0
	7.7nm,1.1s						
WRA	Warramunga Arr	30.60	251	P	P	15 18 02.8	-0.1
	2.5nm,0.7s,baz=79,slow=9.1,SNR=25						
AS31	Alice Springs	31.85	244	eP	P	15 18 13.3	-0.6
	1.0nm,1.1s						
ASAR	Alice Springs	31.85	244	P	P	15 18 13.5	-0.4
	1.5nm,0.7s,baz=73,slow=9.1,SNR=21						
CMAR	Chiang Mai Arr	71.85	294	P	P	15 23 13.0	+1.3
	0.3nm,0.4s,baz=115,slow=3.1,SNR=4.3						
ILAR	Eielson Array	84.49	19	P	P	15 24 20.2	-0.5
	0.5nm,0.7s,baz=241,slow=5.3,SNR=9.4						
ILB	Eielson Array	84.49	19	eP	P	15 24 20.4	-0.3

IDC 06 15:14:32.9±2.0, 10°.93S×165°.36E, h0^{km}, mb3.8/3, mb1 4.1/4, mb1mx3.6/30, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=54.2km s-min=34.7km az=128.0

NEIC 06 15:14:34.5±1.1, 10°.91S×165°.32E, h10^{km}, mb4.2/2, Error ellipse: s-maj=22.8km s-min=15.2km az=65.0

ISCJB 06 15:14:35.6±1.4, 11°.1S±0°.1×165°.3E±0°.2, h30^{km}, mb3.9/5, Error ellipse: s-maj=26.7km s-min=17.7km az=155.3

ISC 06 15:14:37.4±1.5, 11°.0S±0°.2×165°.3E±0°.2, h30^{km}, n8, σ0^{s}.79/8, mb3.9/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.09	175	ePn	Pn	15 17 14.1	-0.1
DZM	Mont Dzumac	11.09	175	Pn	Pn	15 17 14.5	+0.3
	0.5nm,0.3s,baz=350,slow=19,SNR=2.4						
ONTNC	Ouen Toro	11.33	175	ePn	Pn	15 17 17.6	+0.2
WR1	Warramunga Arr	31.14	250	eP	P	15 20 54.5	+0.7
	12nm,1.5s						
WRA	Warramunga Arr	31.14	250	P	P	15 20 54.5	+0.7
	0.6nm,0.5s,baz=82,slow=8.8,SNR=7.9						
AS31	Alice Springs	32.47	243	eP	P	15 21 04.2	-1.3
	0.9nm,0.6s						
ASAR	Alice Springs	32.47	243	P	P	15 21 05.0	-0.5
	2.1nm,0.6s,baz=65,slow=10,SNR=40						
ILAR	Eielson Array	83.57	19	P	P	15 27 02.3	-0.1
	0.3nm,0.9s,baz=206,slow=6.0,SNR=1.7						

IDC 06 15:15:54.8±3.2, 10°.85S×164°.71E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.5/29, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=69.3km s-min=45.6km az=81.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.28	172	Pn	Pn	15 18 37.2	-0.3
	0.6nm,0.3s,baz=70,slow=23,SNR=1.5						
WRA	Warramunga Arr	30.60	249	P	P	15 22 10.3	-0.5
	0.3nm,0.8s,baz=78,slow=8.9,SNR=1.4						
ASAR	Alice Springs	31.97	242	P	P	15 22 23.4	+0.5
	0.4nm,0.8s,baz=84,slow=9.6,SNR=3.0						
MKAR	Makanchi Array	92.68	317	P	P	15 29 08.9	0.0
	0.6nm,0.9s,baz=96,slow=5.9,SNR=4.0						

IDC 06 15:18:00.9±1.2, 11°.75S×165°.19E, h0^{km}, mb3.9/5, mb1 4.1/7, mb1mx3.8/31, mbtmp3.9/7, ML3.9/2, Error ellipse: s-maj=37.8km s-min=24.8km az=143.0

NEIC 06 15:18:02.4±0.5, 11°.80S×165°.17E, h10^{km}, mb4.1/2, Error ellipse: s-maj=11.6km s-min=10.7km az=107.0

ISCJB 06 15:18:04.4±0.8, 11°.9S±0°.1×165°.1E±0°.1, h33^{km}, mb3.9/7, Error ellipse: s-maj=18.0km s-min=16.2km az=162.6

ISC 06 15:18:06.0±0.9, 11°.8S±0°.1×165°.1E±0°.2, h35^{km}, n12, σ0^{s}.72/12, mb3.8/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.61	295	Pn	Pn	15 19 26.1	-0.9
	6.6nm,0.3s,baz=190,slow=22,SNR=3.4						
DZM	Mont Dzumac	10.27	173	ePn	Pn	15 20 30.2	-0.8
DZM	Mont Dzumac	10.27	173	Pn	Pn	15 20 31.3	+0.3
	0.6nm,0.3s,baz=300,slow=18,SNR=6.4						
WR1	Warramunga Arr	30.64	251	eP	P	15 24 17.9	+0.5
	12nm,1.6s						
WRA	Warramunga Arr	30.64	251	P	P	15 24 17.9	+0.5
	1.2nm,0.9s,baz=68,slow=10,SNR=7.7						
AS31	Alice Springs	31.89	244	eP	P	15 24 28.3	-0.1
	1.0nm,0.9s						
ASAR	Alice Springs	31.89	244	P	P	15 24 28.9	+0.5
	0.7nm,0.6s,baz=72,slow=8.7,SNR=12						
ILAR	Eielson Array	84.45	19	P	P	15 30 34.6	-0.1
	0.7nm,0.6s,baz=241,slow=5.7,SNR=13						
ILB	Eielson Array	84.45	19	eP	P	15 30 34.5	-0.1
NVAR	Mina Array Bea	87.00	50	P	P	15 30 47.8	-0.5
	1.0nm,0.8s,baz=224,slow=5.0,SNR=5.5						
MK32	Makanchi Array	93.67	317	eP	P	15 31 20.0	+1.0
MKAR	Makanchi Array	93.67	317	P	P	15 31 20.0	+1.0
	0.2nm,0.5s,baz=98,slow=5.7,SNR=2.3						

IDC 06 15:18:26.1±1.2, 11°.02S×165°.31E, h0^{km}, mb3.9/6, mb1 4.2/8, mb1mx3.9/34, mbtmp4.0/8, ML4.2/2, Error ellipse: s-maj=37.6km s-min=24.0km az=136.0

ISCJB 06 15:18:29.1±0.9, 11°.2S±0°.1×165°.3E±0°.1, h30^{km}, mb3.8/6, Error ellipse: s-maj=19.4km s-min=17.1km az=160.3

ISC 06 15:18:30.8±1.0, 11°.1S±0°.1×165°.3E±0°.1, h30^{km}, n8, σ0^{s}.85/8, mb4.0/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.53	287	Pn	Pn	15 19 51.6	+0.5
	13nm,0.3s,baz=149,slow=9.8,SNR=5.1						
DZM	Mont Dzumac	10.98	174	Pn	Pn	15 21 05.9	-0.1
	1.2nm,0.3s,baz=299,slow=8.9,SNR=11						
STKA	Stephens Creek	30.12	223	P	P	15 24 38.6	+0.6
	1.9nm,0.7s,baz=67,slow=7.7,SNR=3.6						
WRA	Warramunga Arr	31.07	250	P	P	15 24 45.7	-0.9
	1.3nm,0.5s,baz=81,slow=9.3,SNR=10						
ASAR	Alice Springs	32.40	243	P	P	15 24 57.8	-0.5
	2.7nm,1.0s,baz=62,slow=9.8,SNR=10						
ILAR	Eielson Array	83.68	19	P	P	15 30 55.4	-1.0
	0.7nm,0.6s,baz=238,slow=4.8,SNR=6.3						
NVAR	Mina Array Bea	86.37	50	P	P	15 31 11.8	+1.0
	0.1nm,0.4s,baz=224,slow=6.3,SNR=1.8						
MKAR	Makanchi Array	93.26	317	P	P	15 31 42.5	-0.2
	0.1nm,0.6s,baz=102,slow=6.1,SNR=1.6						

IDC 06 15:20:42.1±1.9, 10°.80S×165°.30E, h0^{km}, mb3.6/3, mb1 4.0/5, mb1mx3.6/36, mbtmp3.9/5, ML4.2/2, Error ellipse: s-maj=42.3km s-min=35.3km az=131.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.45	284	Pn	Pn	15 22 06.3	+1.8
	18nm,0.3s,baz=141,slow=6.7,SNR=5.3						
DZM	Mont Dzumac	11.26	175	Pn	Pn	15 23 25.7	+1.3
	0.8nm,0.3s,baz=294,slow=24,SNR=7.3						
WRA	Warramunga Arr	31.16	249	P	P	15 27 03.0	0.0
	0.6nm,0.8s,baz=77,slow=7.3,SNR=3.5						
ASAR	Alice Springs	32.52	243	P	P	15 27 14.1	-0.9
	0.7nm,0.7s,baz=68,slow=10,SNR=7.8						
ILAR	Eielson Array	83.42	19	P	P	15 33 11.0	0.0
	0.5nm,0.8s,baz=231,slow=5.7,SNR=1.7						

IDC 06 15:25:39.9±1.5, 10°.86S×165°.25E, h0^{km}, mb3.6/7, mb1 3.9/9, mb1mx3.7/39, mbtmp3.8/9, ML4.6/2, Error ellipse: s-maj=38.7km s-min=25.2km az=122.0

ISCJB 06 15:25:42.9±1.0, 11°.0S±0°.1×165°.2E±0°.1, h31^{km}, mb3.5/6, Error ellipse: s-maj=20.7km s-min=15.9km az=162.6

ISC 06 15:25:44.7±1.1, 10°.9S±0°.1×165°.2E±0°.2, h31^{km}, n15, σ0^{s}.77/9, mb3.6/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.41	285	Pn	Pn	15 27 03.9	+0.6
	52nm,0.3s,baz=141,slow=7.7,SNR=15						
DZM	Mont Dzumac	11.16	174	Pn	Pn	15 28 22.5	+0.2
	1.6nm,0.3s,baz=302,slow=12,SNR=17						
CTA	Charters Tower	20.43	241	P	P	15 30 19.9	+0.3
	2.4nm,0.6s,baz=74,slow=13,SNR=4.8						
H11S2	WAKE ISLAND Hy	29.25	3	T	T	16 02 15.8	
	baz=184,slow=76,SNR=8.4						
H11S3	WAKE ISLAND Hy	29.25	3	T	T	16 02 17.2	
	baz=184,slow=76,SNR=7.3						
H11S1	WAKE ISLAND Hy	29.26	3	T	T	16 02 18.8	
	baz=184,slow=76,SNR=7.7						
H11N1	WAKE ISLAND Hy	30.47	3	T	T	16 03 46.6	
	baz=182,slow=76,SNR=7.5						
H11N3	WAKE ISLAND Hy	30.48	3	T	T	16 03 47.7	
	baz=182,slow=76,SNR=8.8						
H11N2	WAKE ISLAND Hy	30.49	3	T	T	16 03 50.8	
	baz=182,slow=76,SNR=8.0						
WRA	Warramunga Arr	31.07	249	P	P	15 31 59.9	-0.4
	0.8nm,0.7s,baz=80,slow=9.2,SNR=8.9						
ASAR	Alice Springs	32.41	243	P	P	15 32 11.4	-0.7
	0.7nm,0.5s,baz=65,slow=10,SNR=30						
CMAR	Chiang Mai Arr	71.60	294	P	P	15 37 04.1	+0.5
	0.2nm,0.5s,baz=134,slow=3.9,SNR=3.3						
SONM	Songino Array	78.26	324	P	P	15 37 41.3	-0.4
	0.2nm,0.4s,baz=99,slow=4.7,SNR=2.8						
ILAR	Eielson Array	83.54	19	P	P	15 38 10.1	+0.8
	0.4nm,0.8s,baz=236,slow=5.5,SNR=4.4						
MKAR	Makanchi Array	93.08	317	P	P	15 38 54.4	-1.2
	0.1nm,0.5s,baz=96,slow=5.9,SNR=3.0						

UCR 06 15:29:27.8±1.3, 13°.99N×91°.53W, h30^{km}±13^{km}, MD3.3, ML3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	0.81	56	eP	Pn	15 29 43.2	-0.1
PCG	Pacaya	0.98	66	eP	Pn	15 29 45.9	+0.2
PCG				eS	Sb	15 30 00.3	+1.2
IXG	Ixpaco	1.07	80	eP	Pn	15 29 46.7	-0.2
IXG				eS	Sb	15 30 01.4	-0.2
NBG	Las Nubes	1.29	62	eP	Pn	15 29 50.7	+0.6
NBG				eS	Sb	15 30 07.5	-0.5
RTR	El Retiro	1.83	93	eP	Pn	15 29 57.8	+0.4
RTR				eS	Sn	15 30 21.2	+1.5
CEVE	Cerro Verde	1.86	95	eP	Pn	15 29 58.0	+0.2
CEVE				eS	Sn	15 30 21.7	+1.3
CEVE				IAML		15 30 29.8	
	comp=Z,2μm,0.2s						
SBLS	San Blas	1.86	94	eP	Pn	15 29 57.8	0.0
SBLS				eS	Sn	15 30 21.9	+1.5
SNJE	San Jose	1.87	93	eP	Pn	15 29 58.3	+0.3
MTO3	Montecristo	2.14	79	eP	Pn	15 30 00.6	-1.1
BOQS	Boqueron	2.20	96	eP	Pn	15 30 03.1	+0.6
BOQS				eS	Sn	15 30 30.2	+1.4
LFRS	El Faro	2.42	98	eP	Pn	15 30 05.8	+0.3
PACA	Pacayal	3.16	99	eP	Pn	15 30 16.6	+1.0

NEIC 06 15:30:26.0±2.3, 10°.83S×164°.45E, h13^{km}±14^{km}, mb5.0/51, Error ellipse: s-maj=5.7km s-min=5.1km az=124.0

IDC 06 15:30:25.0±0.6, 10°.77S×164°.35E, h0^{km}, mb4.6/22, mb1 4.7/24, mb1mx4.6/38, mbtmp4.6/24, ML4.7/2, MS4.3/15, Ms1 4.3/15, ms1mx4.1/35, Error ellipse: s-maj=18.7km s-min=13.4km az=109.0

ISCJB 06 15:30:27.0±0.2, 10°.84S±0°.04×164°.48E±0°.04, h29^{km}, mb4.8/79, MS4.4/18, Error ellipse: s-maj=5.8km s-min=4.6km az=34.5

GCMT 06 15:30:27.0±0.4, 10°.85S±0°.02×164°.59E±0°.02, h17^{km}±2^{km}, MW5.2/70, Moment Tensor Solution. s14,c19; s70,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.72±.36; M$_{\theta\theta}$2.53±.28; M$_{\phi\phi}$-3.25±.33; M$_{r\theta}$-2.50±.88; M$_{\theta\phi}$5.70±.35; M$_{\phi r}$-1.36±.83; Best double couple: M$_0$7.01000×10^{16} NP1:φ$_s$286.00000°,δ75.00000°,λ18.00000°. NP2: φ$_s$191.00000°,δ73.00000°,λ164.00000°. Principal axes: T 7.2660, Plg23.0000°, Azm149.0000°; N -0.5080, Plg66.0000°, Azm325.0000°; P -6.7540, Plg1.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 06 15:30:28.8±0.4, 10°.82S±0°.06×164°.53E±0°.06, h29^{km}, n167, σ1^{s}.29/156, mb4.9/81, MS4.4/18, 1C-1D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.72	287	ePn	Pn	15 31 36.5	-1.6
HNR				Sn	Sn	15 32 31.9	+0.1
HNR	Honiara	4.72	287	Pn	Pn	15 31 38.6	+0.5
	77nm,0.3s,baz=132,slow=3.3,SNR=34						
HNR				Sn	Sn	15 32 31.9	+0.1
	9.0nm,0.3s,baz=133,slow=9.2,SNR=4.0						
MARNC	Mare, Loyalty	11.12	163	ePn	Pn	15 33 03.9	-2.0
DZM	Mont Dzumac	11.34	171	ePn	Pn	15 33 08.5	-0.5
	193nm,1.2s						
DZM				eLR	LR	15 35 45.8	
	comp=Z,4μm,23.5s						
DZM	Mont Dzumac	11.34	171	ePn	Pn	15 33 07.9	-1.1
DZM	Mont Dzumac	11.34	171	Pn	Pn	15 33 08.6	-0.4
	8.4nm,0.3s,baz=12,slow=9.3,SNR=32						
DZM				LR	LR	15 36 41.0	
	comp=Z,3μm,19.9s,baz=18,slow=33						
ONTNC	Ouen Toro	11.57	171	ePn	Pn	15 33 10.8	-1.3
OUENC	Ouen Island, N	11.74	169	ePn	Pn	15 33 13.4	-1.0
PINNC	Pines Island,	12.05	167	ePn	Pn	15 33 18.3	-0.4
TARA	Tarawa	14.70	35	ePn	Pn	15 33 54.0	-0.8
PATS	Pohnpei	18.60	340	P	Pn	15 34 45.1	+0.8
	baz=18,SNR=3.9						
PATS	Pohnpei	18.60	340	eP	Pn	15 34 43.4	-1.0
	374nm,1.4s						
EIDS	Eidsvold	19.28	220	P	Pn	15 34 54.2	+1.7
	baz=19						
KWAJ	Kwajalein Atol	19.73	9	eP	P	15 34 55.3	-1.0
	238nm,0.8s						
CTA	Charters Tower	19.86	240	P	Pn	15 34 58.3	-1.2
	0.9nm,0.3s,baz=66,slow=13,SNR=18						
CTA				LR	LR	15 41 34.4	
	comp=Z,665nm,19.5s,baz=73,slow=34						
CTAO	Charters Tower	19.86	240	eP	P	15 34 55.9	-1.9
	59nm,0.9s						
MTSU	Mount Surprise	20.87	247	P	Pn	15 35 09.1	-2.2
	baz=21,SNR=24						
COEN	Coen	21.09	259	P	P	15 35 11.1	0.0
	baz=21,SNR=23						
RMQ	Roma	21.55	222	P	P	15 35 18.1	+2.1
	baz=22,SNR=10						
ARMA	Armidale	22.90	210	P	P	15 35 32.8	+2.4
	baz=23						
QLP	Quilpie	24.75	228	P	P	15 35 48.9	+0.9
	baz=25,SNR=12						
QIS	Mount Isa	25.84	245	P	P	15 35 58.0	0.0
	baz=26,SNR=4.6						

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CMSA  Cobar Meteorol   27.00 217  P       P       15 36 09.1 +0.8
      baz=27,SNR=11
H11S2 WAKE ISLAND Hy   29.20   4  T       T       16 07 03.6
      baz=184,slow=76,SNR=5.5
H11S3 WAKE ISLAND Hy   29.20   4  T       T       16 07 15.3
      baz=184,slow=76,SNR=6.9
H11S1 WAKE ISLAND Hy   29.22   4  T       T       16 06 51.1
      baz=184,slow=76,SNR=6.9
URZ   Urewera          29.56 160  P       P       15 36 34.1 +3.0
      5.0nm,0.8s,baz=94,slow=12,SNR=2.5
URZ                               LR      LR      15 47 19.1
      comp=Z,942nm,18.3s,baz=20,slow=34
STKA  Stephens Creek   29.80 222  eP      P       15 36 33.2 -0.1
      4.7nm,1.3s
STKA  Stephens Creek   29.80 222  P       P       15 36 34.5 +1.3
      2.9nm,0.7s,baz=53,slow=11,SNR=6.8
STKA                              LR      LR      15 48 36.9
      comp=Z,908nm,18.1s,baz=38,slow=37
H11N1 WAKE ISLAND Hy   30.43   4  T       T       16 08 31.1
      baz=184,slow=76,SNR=4.0
WRAB  Tennant Creek    30.43 249  eP      P       15 36 36.1 -2.9
      18nm,1.0s
H11N3 WAKE ISLAND Hy   30.43   4  T       T       16 08 27.8
      baz=184,slow=76,SNR=5.3
WB2   Warramunga Arr   30.43 249  eP      P       15 36 37.3 -1.7
WRA   Warramunga Arr   30.45 249  P       P       15 36 37.1 -2.0
      9.0nm,0.9s,baz=76,slow=9.0,SNR=29
WRA                               LR      LR      15 48 03.3
      comp=Z,682nm,20.6s,baz=75,slow=35
H11N2 WAKE ISLAND Hy   30.45   4  T       T       16 08 32.6
      baz=184,slow=76,SNR=5.9
GUMO  Guam             31.12 321  LR      LR      15 50 24.1
      comp=Z,515nm,18.0s,baz=154,slow=39
TOO   Toolangi         31.66 210  P       P       15 36 51.0 +1.3
      baz=32,SNR=5.2
AS31  Alice Springs    31.83 242  eP      P       15 36 49.1 -2.3
      1.9nm,0.9s
ASAR  Alice Springs    31.84 242  P       P       15 36 49.0 -2.4
      1.6nm,0.7s,baz=62,slow=10.0,SNR=25
ASAR                              LR      LR      15 48 27.3
      comp=Z,934nm,19.5s,baz=71,slow=34
HTT   Hallett          32.53 222  P       P       15 36 58.4 +1.1
      baz=32,SNR=4.2
RPZ   Rata Peaks       33.26 171  P       P       15 37 04.3 +0.7
      8.6nm,0.8s,baz=175,slow=7.1,SNR=4.4
RPZ                               LR      LR      15 48 40.6
      comp=Z,1µm,21.3s,baz=1.5,slow=33
BBOO  Buckleboo        34.12 226  P       P       15 37 11.7 +0.4
      baz=34,SNR=9.6
KNRA  Kununurra        35.12 258  P       P       15 37 18.2 -1.8
      baz=35,SNR=8.6
RAR   Rarotonga        35.75 111  LR      LR      15 48 49.0
      comp=Z,291nm,21.4s,baz=272,slow=31
WRKA  Warakurna        37.12 243  P       P       15 37 35.3 -1.8
      baz=37,SNR=9.0
FITZ  Fitzroy Crossi   38.29 255  P       P       15 37 45.0 -2.1
      baz=38,SNR=27
FITZ  Fitzroy Crossi   38.29 255  P       P       15 37 45.0 -2.1
      18nm,0.7s,baz=78,slow=6.9,SNR=32
BATI  Baumata          40.17 267  P       P       15 38 01.3 -1.5
      21nm,0.8s,baz=217,slow=3.3,SNR=5.7
JCJ   Chichijima       43.48 330  LR      LR      15 56 40.1
      comp=Z,190nm,18.5s,baz=134,slow=36
PPT   Papeete          44.91 104  LR      LR      15 53 02.2
      comp=Z,379nm,21.0s,baz=257,slow=30
PPT2  Papeete2         44.91 104  eLR     LR      15 51 22.5
      comp=Z,799nm,23.8s,baz=271
TBI   Tubuai           45.52 112  eLQ     LQ      15 49 39.4
      2µm,29.5s
TBI                               eLR     LR      15 51 38.0
      comp=Z,488nm,27.2s,baz=298
MEEK  Meekatharra      45.98 243  P       P       15 38 49.1 -0.7
      baz=46,SNR=3.3
MJAR  Matsushiro Arr   53.23 334  P       P       15 39 44.5 -0.2
      6.5nm,0.8s,baz=172,slow=9.4,SNR=16
MJAR                              LR      LR      16 00 55.3
      comp=Z,135nm,21.8s,baz=150,slow=34
MAT   Matsushiro       53.23 334  P       P       15 39 43.9 -0.8
TAOE  Nuku Hiva Isla   54.48  93  eLR     LR      15 55 48.8
      comp=Z,370nm,24.3s
ASAJ  Asahikawa        58.20 342  P       P       15 40 21.5 +1.3
      22nm,0.8s,baz=215,slow=9.8,SNR=21
RKT   Rikitea          58.78 110  eLQ     LQ      15 55 17.5
      665nm,33.0s
RKT                               eLR     LR      15 57 43.0
      comp=Z,707nm,25.0s
SSE   Sheshan          58.87 317  eP      P       15 40 24.3 -0.8
      25nm,0.7s
KSRS  Korea Array      59.02 326  P       P       15 40 26.9 +0.9
      4.1nm,0.8s,baz=144,slow=7.5,SNR=11
KSRS                              LR      LR      16 03 36.0
      comp=Z,160nm,20.0s,baz=132,slow=34
KSAR  Wonju Array Be   59.04 326  P       P       15 40 26.9 +0.8
KS01  Wonju Array Si   59.06 326  eP      P       15 40 26.0 -0.4
YSS   Yuzh-Sakhalins   60.72 343  eP      P       15 40 37.0 -0.5
      20nm,1.0s
NJ2   Nanjing          61.03 316  eP      P       15 40 37.9 -2.0
NJ2                               pmax    pmax
      comp=Z,12nm,0.9s
USRK  Ussuriysk Ar.    62.22 334  P       P       15 40 48.0 +0.2
      comp=Z,4.6nm,0.8s,baz=147,slow=7.4,SNR=11
USRK                              LR      LR      16 05 45.4
      comp=Z,133nm,20.9s,baz=134,slow=34
PETK  Petropavlovsk-   63.94 355  P       P       15 40 59.1 +0.1
      comp=Z,9.6nm,0.8s,baz=153,slow=7.8,SNR=9.0
CN2   Changchun        64.94 330  eP      P       15 41 06.5 +0.8
CN2                               pmax    pmax
      comp=Z,20nm,0.9s
CASY  Casey            66.16 201  eP      P       15 41 13.1 -0.2
      comp=Z,24nm,1.0s
ENH   Enshi            66.83 310  eP      P       15 41 16.9 -1.4
      comp=Z,24nm,1.1s
GYA   Guiyang          67.31 305⇑iP      P       15 41 22.0 +0.5
GYA                               PP      PP      15 43 53.2 +3.0
GYA                               S       S       15 50 16.5 +1.2
GYA                               SKS     ScS     15 51 16.8 -1.2
GYA   Guiyang          67.31 305  SS      SS      15 54 38.4 +2.7
GYA                               pmax    pmax
      comp=Z,20nm,1.0s
GYA                               pmax    pmax
      comp=Z,120nm,6.7s
GYA                               LR      LR
      comp=N,490nm,18.2s
GYA                               LR      LR
      comp=E,520nm,18.6s
GYA                               LR      LR
      comp=Z,480nm,18.4s
CHAI  Chaiyaphum       67.35 292  P       P       15 41 23.3 +1.5
      comp=Z,3.7nm,0.7s
PBKT  Sadao Pong       68.49 293  eP      P       15 41 27.9 -1.0
      comp=Z,8.0nm,0.7s
PBKT  Sadao Pong       68.49 293  P       P       15 41 30.9 +2.0
      comp=Z,12nm,0.7s
XAN   Xi'an            69.09 313  P       P       15 41 32.2 -0.2
XAN                               pP      sP      15 41 43.4 +1.4
XAN                               sP      pwP     15 41 49.1 +1.0
XAN                               pmax    pmax
      comp=Z,6.0nm,0.8s
XAN                               LR      LR
      comp=N,310nm,17.3s
XAN                               LR      LR
      comp=Z,290nm,18.4s
XAN   Xi'an            69.09 313  eP      P       15 41 31.9 -0.5
      comp=Z,8.2nm,0.9s
UTTA  Uttaradit        69.25 294  P       P       15 41 49.1  +15
KMI   Kunming          69.99 302  P       P       15 41 40.8 +2.4
KMI                               pP      pP      15 41 43.7 -1.7
KMI                               sP      sP      15 41 45.5 -2.6
KMI                               pmax    pmax
      comp=Z,9.0nm,1.0s
HHC   Hu-ho-hao-te     70.89 320  eP      P       15 41 44.1 +0.7
HHC                               pmax    pmax
      comp=Z,4.0nm,1.1s
CM01  Chiang Mai Arr   70.91 294  eP      P       15 41 43.5 -0.4
CM31  Chiang Mai Arr   70.93 294  eP      P       15 41 43.5 -0.5
CMAR  Chiang Mai Arr   70.93 294  P       P       15 41 44.5 +0.6
      comp=Z,3.4nm,0.7s,baz=122,slow=4.7,SNR=30
MA2   Magadan          71.03 353  P       P       15 41 43.5 -0.2
      comp=Z,3.6nm,0.6s,baz=153,slow=9.2,SNR=4.4
CMMT  Chiang Mai       71.04 294  P       P       15 41 46.7 +2.1
CHTO  Chiang Mai       71.05 294  eP      P       15 41 43.3 -1.3
      comp=Z,4.5nm,0.9s
CHTO  Chiang Mai       71.05 294  P       P       15 41 46.7 +2.0
      comp=Z,26nm,1.2s
CD2   Chengdu          71.52 308  eP      P       15 41 46.6 -0.8
CD2                               pmax    pmax
      comp=Z,10.0nm,0.5s
CD2                               pmax    pmax
      comp=Z,140nm,5.0s
HIA   Hailar           71.59 331  eP      P       15 41 46.8 -0.6
      comp=Z,13nm,1.1s
LZH   Lanzhou          73.73 313  eP      P       15 41 59.6 -0.9
LZH                               pP      pP      15 42 06.3 -1.3
LZH                               sP      sP      15 42 09.7 -0.5
LZH                               PP      PP      15 44 43.0 -2.4
LZH                               pmax    pmax
      comp=Z,29nm,1.2s
LZH                               pmax    pmax
      comp=Z,87nm,5.0s
LZH                               LR      LR
      comp=N,390nm,16.3s
LZH                               LR      LR
      comp=E,340nm,16.4s
LZH                               LR      LR
      comp=Z,450nm,17.5s
GAMB  Gambell          76.56  11  eP      P       15 42 16.3 +0.4
      comp=Z,15nm,1.2s
ULN   Ulaanbaatar      77.42 324  eP      P       15 42 21.2 -0.2
      comp=Z,13nm,1.1s
SONM  Songino Array    77.78 324  P       P       15 42 23.0 -0.4
      comp=Z,3.0nm,0.8s,baz=123,slow=5.5,SNR=20
SONM                              LR      LR      16 15 21.7
      comp=Z,163nm,20.8s,baz=46,slow=35
SONA1 Songino Array    77.78 324  eP      P       15 42 22.9 -0.5
GTA   Gaotai           78.05 314 ⇓P      P       15 42 26.0 +0.9
GTA                               pP      pP      15 42 31.5 -0.7
GTA                               sP      sP      15 42 34.8  0.0
GTA                               S       S       15 52 21.8 +4.4
GTA                               pmax    pmax
      comp=Z,4.0nm,1.3s
GTA                               pmax    pmax
      comp=Z,120nm,5.2s
GTA                               LR      LR
      comp=N,200nm,18.4s
GTA                               LR      LR
      comp=E,350nm,17.8s
GTA                               LR      LR
      comp=Z,300nm,18.1s
SVW2  Sparrevohn       78.28  19  eP      P       15 42 26.5 +0.8
      comp=Z,14nm,1.0s
ANM   Nome             78.53  13  eP      P       15 42 27.1  0.0
      comp=Z,17nm,1.4s
BILL  Bilibino         78.66   1  eP      P       15 42 28.0 +0.3
      comp=Z,12nm,0.8s
RSO   Redoubt South    78.72  20  eP      P       15 42 28.1 -0.2
QSPA  South Pole Qui   79.18 180  eP      P       15 42 31.2 +0.4
      comp=Z,52nm,1.5s
SUA   Susitna One      80.12  20  eP      P       15 42 36.6 +0.7
      comp=Z,11nm,0.8s
CAST  Castle Rocks     81.10  18  eP      P       15 42 40.2 -0.8
      comp=Z,10nm,0.9s
TLY   Talaya           81.28 327  eP      P       15 42 40.2 -2.0
      comp=Z,18nm,1.1s
DIV   Divide           81.64  22  eP      P       15 42 46.0 +2.0
      comp=Z,67nm,1.9s
TRF   Thorofare Moun   81.69  19  eP      P       15 42 44.2 -0.1
      comp=Z,43nm,1.9s
KLU   Klutina          81.83  22  eP      P       15 42 45.6 +0.6
      comp=Z,12nm,0.9s
RDOG  Red Dog Mine     82.04  12  eP      P       15 42 45.2 -0.7
      comp=Z,16nm,0.7s
RND   Reindeer         82.11  19  eP      P       15 42 46.4  0.0
      comp=Z,8.2nm,0.8s
MCK   McKinley         82.32  19  eP      P       15 42 47.0 -0.4
      comp=Z,18nm,1.1s
IM3   Indian Mountai   82.53  16  eP      P       15 42 47.7 -0.8
MLY   Manley           82.68  18  eP      P       15 42 49.2 -0.2
      comp=Z,10nm,1.2s
WRH   Wood River Hil   83.10  19  eP      P       15 42 51.0 -0.4
      comp=Z,8.8nm,0.9s
MDM   Murphy Dome      83.39  18  eP      P       15 42 52.6 -0.3
      comp=Z,12nm,0.8s
COLA  College          83.45  19  eP      P       15 42 52.7 -0.5
      comp=Z,17nm,0.8s
RIDG  Independ'e Rid   83.67  20  eP      P       15 42 55.1 +0.6
      comp=Z,20nm,1.0s
IL1   Eielson Array    83.68  19  eP      P       15 42 53.8 -0.7
ILAR  Eielson Array    83.68  19  P       P       15 42 54.8 +0.3
      comp=Z,10nm,0.7s,baz=242,slow=4.3,SNR=91
ILB   Eielson Array    83.68  19  eP      P       15 42 54.0 -0.5
SCRK  Sand Creek       84.12  20  eP      P       15 42 57.1 +0.2
      comp=Z,15nm,0.8s
COLD  Coldfoot         84.41  16  eP      P       15 42 58.1  0.0
      comp=Z,3.3nm,0.8s
PRP   Porcupine Dome   84.61  19  eP      P       15 42 59.1 -0.3
      comp=Z,17nm,1.7s
GUN   Gumba            85.17 299  eP      P       15 43 05.0 +1.7
PKI   Pulchoki         85.49 299  eP      P       15 43 06.0 +1.2
PKIN  Phulchoki        85.50 299  eP      P       15 43 06.1 +1.3
      comp=Z,9.6nm,0.7s
TIXI  Tiksi            85.64 349  eP      P       15 43 03.7 -0.4
      comp=Z,9.5nm,1.1s
DMN   Daman            85.75 299  eP      P       15 43 07.6 +1.5
      comp=Z,37nm,1.1s
DAWY  Dawson           85.78  21  eP      P       15 43 05.7 +0.6
      comp=Z,8.7nm,0.8s
MDPB  Devils Postpil   85.98  51  eP      P       15 43 07.0  0.0
      comp=Z,8.0nm,1.1s
PAHR  Pah Rah Range    86.35  49  eP      P       15 43 08.0 -0.6
      comp=Z,9.2nm,1.2s
NV01  Mina Array Sit   86.79  50  eP      P       15 43 10.4 -0.5
NVAR  Mina Array Bea   86.79  50  P       P       15 43 11.3 +0.4
      comp=Z,2.1nm,0.9s,baz=235,slow=8.1,SNR=8.3
NV11  Mina Array Sit   86.90  50  eP      P       15 43 09.8 -1.6
      comp=Z,0.7nm,1.1s
DANN  Dangsing         87.09 299  eP      P       15 43 13.1 +0.4
KOLN  Koldanda         87.09 299  eP      P       15 43 13.1 +0.5
PYUN  Piuthan          87.69 299  eP      P       15 43 15.9 +0.4
J08A  Circle Bar Ran   88.07  45  eP      P       15 43 16.6 -0.2
      comp=Z,9.2nm,1.1s
WMQ   Urumqi           88.09 315  P       P       15 43 16.9 +0.1
WMQ                               pP      pP      15 43 21.6 -2.4
WMQ                               sP      pwP     15 43 28.2 -4.4
WMQ                               pmax    pmax
      comp=Z,21nm,2.3s
WMQ                               pmax    pmax
      comp=Z,240nm,4.7s
WMQ                               LR      LR
      comp=N,360nm,24.3s
WMQ                               LR      LR
      comp=E,300nm,21.3s
WMQ                               LR      LR
      comp=Z,410nm,23.3s
G08A  Pilot Rock       88.30  43  eP      P       15 43 17.0 -0.8
      comp=Z,11nm,1.3s
U15A  North Rim        90.92  53  eP      P       15 43 30.3 -0.2
      comp=Z,8.5nm,1.3s
HLID  Hailey           90.97  46  eP      P       15 43 30.1 -0.4
      comp=Z,6.8nm,0.4s
MSU   Marysvale        91.47  51  eP      P       15 43 33.1 +0.1
HVU   Hansel Valley    91.74  48  eP      P       15 43 36.0 +1.9
      comp=Z,6.9nm,0.9s
MK01  Makanchi Array   92.53 317  eP      P       15 43 35.9 -1.6
MK31  Makanchi Array   92.54 317  eP      P       15 43 36.1 -1.3
MKAR  Makanchi Array   92.54 317  eP      P       15 43 36.3 -1.2
      comp=Z,27nm,0.9s
MKAR  Makanchi Array   92.54 317  P       P       15 43 37.2 -0.3
      comp=Z,2.0nm,0.6s,baz=99,slow=5.7,SNR=24
DLMT  Dillon           92.66  44  eP      P       15 43 37.7 -0.5
      comp=Z,32nm,0.5s
ZAA0  Zalesovo Array   92.68 324  eP      P       15 43 35.5 -2.4
      comp=Z,9.8nm,1.5s
ZALV  Zalesovo Beam    92.68 324  eP      P       15 43 35.5 -2.3
ZALV  Zalesovo Beam    92.68 324  P       P       15 43 36.7 -1.2
      comp=Z,2.3nm,1.0s,baz=101,slow=6.2,SNR=6.9
MAKZ  Makanchi         92.76 317  eP      P       15 43 36.3 -2.2
      comp=Z,7.6nm,1.0s
BOZ   Bozeman (W)      93.37  44  P       P       15 43 40.5 -1.0
      comp=Z,2.9nm,1.0s
PDAR  Pinedale Array   94.28  47  eP      P       15 43 45.2 -0.6
PDAR  Pinedale Array   94.28  47  P       P       15 43 46.5 +0.6
      comp=Z,0.8nm,0.9s,baz=288,slow=1.4,SNR=5.9
YKA   Yellowknife Ar   95.32  27  P       P       15 43 50.0 +0.2
      comp=Z,0.8nm,0.8s,baz=257,slow=4.7,SNR=12
YKB5  Yellowknife Ar   95.32  27  eP      P       15 43 48.9 -0.9
NRIK  Noril'sk         95.50 340  P       P       15 43 51.5 +1.1
      comp=Z,1.6nm,0.5s,baz=126,slow=6.4,SNR=4.6
KSH   Kashi            95.69 309  P       P       15 43 54.3 +2.1
KSH                               pP      pP      15 43 58.8 -0.7
KSH                               PP      PP      15 47 47.1 +3.0
KSH   Kashi            95.69 309  S       S       15 55 09.2 +1.2
KSH   Kashi            95.69 309  sS      sS      15 55 16.2 -4.7
KSH   Kashi            95.69 309  SS      SS      16 01 42.3 +4.6
KSH                               pmax    pmax
      comp=Z,600nm,6.8s
KSH                               LR      LR
      comp=N,220nm,6.0s
KSH                               LR      LR
      comp=E,230nm,5.1s
KSH                               LR      LR
      comp=Z,390nm,6.8s
ARCES ARCESS Array B  115.81 345  PKP     PKPdf   15 49 09.2 +1.1
      comp=Z,0.9nm,0.6s,baz=11,slow=1.2,SNR=5.7
CLL   Collm           133.41 336  ePKPdf  PKiKP   15 49 44.0 +0.6
KEST  Kesra           146.51 322  PKPbc   PKPab   15 50 07.1 -1.8
      comp=Z,3.4nm,0.6s,baz=206,slow=2.2,SNR=3.5
ES19  SONSECA Array   149.45 342  ePKPbc  PKiKP   15 50 15.5 -1.2
ESDC  Sonseca Array   149.50 342  PKPbc   PKiKP   15 50 17.4 +0.5
      comp=Z,1.1nm,0.7s,baz=4.0,slow=2.4,SNR=5.0
TORD  Torodi Ar. Bea  163.05 280  PKP     PKPdf   15 50 31.0 +1.6
TORD  Torodi Ar. Bea  163.05 280  PKP     PKPdf   15 50 31.0 +1.6
      comp=Z,0.6nm,0.9s,baz=149,slow=3.4,SNR=3.2
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*IDC **06** 15:52:18.2±0.7, 11°.40S×165°.31E, h0km, mb4.3/14, mb1 4.5/16, mb1mx4.3/35, mbtmp4.3/16, ML4.2/2, Error ellipse: s-maj=21.9km s-min=16.5km az=137.0*

*ISCJB **06** 15:52:21.0±0.3, 11°.47S±0°.05×165°.10E±0°.05, h24km, mb4.7/33, Error ellipse: s-maj=7.2km s-min=6.9km az=167.4*

*NEIC **06** 15:52:22.3±2.7, 11°.39S×165°.20E, h22km±19km, mb4.9/16, Error ellipse: s-maj=8.5km s-min=6.6km az=200.0*

ISC 06 15:52:22.4±0.5**, 11°.40S**±0°.08×**165°.18E**±0°.08**, h24km, n67, σ0ˢ98**/70**, mb4.8**/33**, Santa Cruz Islands**

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Code  Station Name       Δ°   AZ°   Phase ID         Time      Res
                                  Op      ISC      h  m  s    ISC
HNR   Honiara           5.51 290  ePn     Pn      15 53 43.2 +0.2
HNR                               eSn     Sn      15 54 44.4 -1.3
HNR   Honiara           5.51 290  Pn      Pn      15 53 43.5 +0.5
      13nm,0.3s,baz=188,slow=1.0,SNR=8.6
HNR                               Sn      Sn      15 54 44.3 -1.3
      12nm,0.3s,baz=290,slow=20,SNR=4.6
DZM   Mont Dzumac      10.69 174  Pn      Pn      15 54 54.4 +0.2
      1.2nm,0.3s,baz=138,slow=23,SNR=12
ONTNC Ouen Toro        10.92 174  ePn     Pn      15 54 56.9 -0.4
PINNC Pines Island,    11.36 169  ePn     Pn      15 55 03.1 -0.3
EIDS  Eidsvold         19.27 222  eP      P       15 56 45.5  0.0
      42nm,1.7s
MANU  Manus Island     19.97 296  eP      P       15 56 53.5 +0.4
      80nm,1.2s
CTA   Charters Tower   20.15 242  P       Pn      15 56 57.3 +0.2
      11nm,0.8s,baz=81,slow=14,SNR=6.3
COEN  Coen             21.62 261  eP      P       15 57 11.9 +0.8
      19nm,1.0s
URZ   Urewera          28.80 160  P       P       15 58 16.5 -2.2
      3.2nm,0.5s,baz=280,slow=4.4,SNR=9.6
STKA  Stephens Creek   29.81 223  eP      P       15 58 29.1 +1.4
      1.6nm,0.9s
STKA  Stephens Creek   29.81 223  P       P       15 58 27.9 +0.2
      6.8nm,0.9s,baz=34,slow=9.1,SNR=11
WRAB  Tennant Creek    30.83 250  eP      P       15 58 37.6 +0.7
      15nm,1.1s
WB2   Warramunga Arr   30.83 250  eP      P       15 58 37.1 +0.2
WR1   Warramunga Arr   30.84 250  eP      P       15 58 36.4 -0.6
      20nm,1.1s
WRA   Warramunga Arr   30.84 250  P       P       15 58 36.4 -0.6
      8.8nm,0.9s,baz=80,slow=9.2,SNR=42
AS01  Alice Springs    32.10 243  eP      P       15 58 48.6 +0.6
AS31  Alice Springs    32.14 243  eP      P       15 58 48.2 -0.2
      2.0nm,0.9s
ASAR  Alice Springs    32.14 243  P       P       15 58 47.9 -0.5
      5.9nm,0.9s,baz=69,slow=9.7,SNR=45
BBOO  Buckleboo        34.19 227  eP      P       15 59 06.3 +0.2
      19nm,1.0s
FITZ  Fitzroy Crossi   38.76 255  eP      P       15 59 45.9 +0.6
      22nm,1.8s
FITZ  Fitzroy Crossi   38.76 255  P       P       15 59 45.6 +0.4
      2.4nm,0.7s,baz=90,slow=8.0,SNR=7.3
EDFI  Ende, Flores     42.87 269  P       P       16 00 17.8 -1.7
ENH   Enshi            67.69 309  eP      P       16 03 17.3 -0.8
      20nm,1.0s
CM01  Chiang Mai Arr   71.72 294  eP      P       16 03 42.5 -0.6
CM31  Chiang Mai Arr   71.75 294  eP      P       16 03 42.1 -1.2
CMAR  Chiang Mai Arr   71.75 294  P       P       16 03 43.9 +0.6
      1.1nm,0.9s,baz=123,slow=4.1,SNR=9.0
CMMT  Chiang Mai       71.86 294  P       P       16 03 46.8 +2.8
      2.8nm,1.2s
CHTO  Chiang Mai       71.86 294  P       P       16 03 46.8 +2.8
      12nm,1.3s
ULN   Ulaanbaatar      78.26 324  eP      P       16 04 21.5 +1.0
      19nm,1.2s
QSPA  South Pole Qui   78.61 180  eP      P       16 04 23.6 +1.5
      21nm,1.0s
SONA0 Songino Array    78.62 324  eP      P       16 04 22.0 -0.5
SONM  Songino Array    78.62 324  P       P       16 04 22.0 -0.5
      1.4nm,0.8s,baz=139,slow=5.3,SNR=8.5
SONA1 Songino Array    78.62 324  eP      P       16 04 22.3 -0.2
BILL  Bilibino         79.23   0  eP      P       16 04 25.5 +0.3
      20nm,1.0s
HDA   Harding Lake     83.75  19  eP      P       16 04 49.5 +0.3
      25nm,0.7s
ILAR  Eielson Array    84.02  19  P       P       16 04 49.6 -1.0
      1.4nm,0.7s,baz=234,slow=5.3,SNR=29
ILB   Eielson Array    84.02  19  eP      P       16 04 50.5  0.0
IL1   Eielson Array    84.02  19  eP      P       16 04 50.2 -0.4
WAKR  Walker           85.84  50  eP      P       16 04 59.5 -1.1
      23nm,0.5s
TIXI  Tiksi            86.33 349  eP      P       16 05 02.3 +0.3
      11nm,1.1s
NV01  Mina Array Sit   86.67  50  eP      P       16 05 05.1 +0.4
NVAR  Mina Array Bea   86.67  50  P       P       16 05 05.0 +0.3
      1.9nm,0.9s,baz=236,slow=7.2,SNR=9.1
SHPR  Sheep Range      88.54  52  eP      P       16 05 15.0 +1.3
      14nm,1.2s
CCUT  Cedar City       90.19  52  eP      P       16 05 23.1 +1.7
      17nm,0.9s
KNB   Kanab            90.48  52  eP      P       16 05 24.5 +1.7
      19nm,1.1s
U15A  North Rim        90.76  53  eP      P       16 05 25.5 +1.3
      25nm,0.9s
MSU   Marysvale        91.33  51  eP      P       16 05 28.1 +1.4
MK01  Makanchi Array   93.39 317  eP      P       16 05 36.0 +0.2
MK31  Makanchi Array   93.40 317  eP      P       16 05 36.5 +0.7
MK32  Makanchi Array   93.40 317  eP      P       16 05 36.0 +0.2
MKAR  Makanchi Array   93.40 317  eP      P       16 05 36.5 +0.6
      28nm,0.9s
MKAR  Makanchi Array   93.40 317  P       P       16 05 36.0 +0.2
      2.5nm,0.7s,baz=95,slow=6.3,SNR=31
ZAA0  Zalesovo Array   93.51 324  eP      P       16 05 35.9 -0.2
      5.4nm,1.0s
ZALV  Zalesovo Beam    93.51 324  eP      P       16 05 35.7 -0.4
ZALV  Zalesovo Beam    93.51 324  P       P       16 05 35.5 -0.6
      1.4nm,0.6s,baz=94,slow=6.1,SNR=9.4
ZAA1  Zalesovo Array   93.52 324  eP      P       16 05 35.5 -0.6
MAKZ  Makanchi         93.61 317  eP      P       16 05 37.3 +0.5
      8.3nm,1.1s
PDAR  Pinedale Array   94.19  47  P       P       16 05 39.6 -0.2
      0.4nm,0.7s,baz=203,slow=3.1,SNR=3.5
YKA   Yellowknife Ar   95.54  27  P       P       16 05 44.5 -0.7
      0.7nm,0.8s,baz=253,slow=4.8,SNR=9.4
YKB5  Yellowknife Ar   95.54  27  eP      P       16 05 43.7 -1.5
ARA0  ARCESS Array S  116.53 345  ePKPdf  PKiKP   16 11 04.4 +0.6
ARCES ARCESS Array B  116.53 345  PKP     PKiKP   16 11 04.4 +0.6
      1.2nm,0.8s,baz=56,slow=1.6,SNR=1.2
SCHQ  Schefferville   120.61  32  PKP     PKPdf   16 11 10.4 -1.7
      1.8nm,0.3s,baz=260,slow=10,SNR=6.7
ES19  SONSECA Array   150.19 343  ePKPdf  PKPdf   16 12 06.5 -0.3
TORD  Torodi Ar. Bea  163.77 278  PKP     PKPdf   16 12 24.6 +0.1
      0.9nm,1.0s,baz=102,slow=2.7,SNR=3.6
TORD                              PKPab   PKPab   16 13 18.2 +1.4
      0.4nm,0.8s,baz=76,slow=6.1,SNR=3.8
TOA1  Torodi Ar. Sit  163.77 278  ePKPdf  PKPdf   16 12 24.6 +0.1
TOA1                              ePKPab  PKPab   16 13 18.2 +1.3
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*IDC **06** 15:54:14.4±0.5, 10°.93S×165°.50E, h0km, mb4.7/25, mb1 4.8/27, mb1mx4.7/37, mbtmp4.7/27, ML5.2/2, MS4.7/9, Ms1 4.7/9, ms1mx4.4/25, Error ellipse: s-maj=16.2km s-min=13.2km az=108.0*

*NEIC **06** 15:54:15.1±0.1, 10°.93S×165°.46E, h10km, mb5.3/70, Error ellipse: s-maj=5.3km s-min=3.9km az=96.0*

*BJI **06** 15:54:15.0, 11°.06S×165°.55E, h17km, mB5.4/31, mb4.8/50, Ms5.1/26, Ms7 4.8/20*

*ISCJB **06** 15:54:16.7±0.1, 10°.99S±0°.02×165°.44E±0°.03, h30km, mb5.0/111, MS4.7/15, Error ellipse: s-maj=4.1km*

s-min=3.3km az=14.6

*MOS **06** 15:54:17.3±1.1, 10°.96S×165°.42E, h33km, mb5.2/26, Error ellipse: s-maj=9.5km s-min=7.9km az=107.0*

ISC 06 15:54:19.0±0.3**, 11°.03S**±0°.05×**165°.52E**±0°.05**, h30km, n301, σ1s.58**/303**, mb5.2**/111**, MS4.7**/15**, 9C-6D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.71**	**286**	*e*P	**Pn**	**15 55 40.0**	**-1.8**
HNR				*e*S	**Sn**	**15 56 45.0**	**-1.4**
HNR	**Honiara**	**5.71**	**286**	*e*Pn	**Pn**	**15 55 39.2**	**-2.6**
HNR				Sn	**Sn**	**15 56 44.7**	**-1.7**
HNR	**Honiara**	**5.71**	**286**	P	**Pn**	**15 55 40.6**	**-1.2**
HNR						15 56 44.7	
HNR				pmax	pmax		
	comp=Z,95nm,0.3s						
HNR				smax	smax		
	comp=N,29nm,0.3s						
HNR				MLR	MLR		
	comp=Z,5µm,19.4s						
HNR	**Honiara**	**5.71**	**286**	Pn	**Pn**	**15 55 40.6**	**-1.2**
	comp=Z,95nm,0.3s,baz=160,slow=9.3,SNR=10						
HNR				Sn	**Sn**	**15 56 44.7**	**-1.7**
	comp=Z,29nm,0.3s,baz=1.3,slow=23,SNR=3.5						
HNR				LR	LR	15 57 45.8	
	comp=Z,5µm,19.4s,baz=122,slow=37						
MARNC	**Mare, Loyalty**	**10.67**	**167**	*e*Pn	**Pn**	**15 56 49.9**	**+0.1**
DZM	**Mont Dzumac**	**11.02**	**176**	*e*Pn	**Pn**	**15 56 54.8**	**+0.1**
	comp=Z,350nm,1.4s						
DZM				*e*LR	LR	15 59 28.2	
	comp=Z,3µm,24.2s						
DZM	**Mont Dzumac**	**11.02**	**176**	*e*Pn	**Pn**	**15 56 54.1**	**-0.6**
DZM	**Mont Dzumac**	**11.02**	**176**	Pn	**Pn**	**15 56 54.8**	**+0.1**
	comp=Z,14nm,0.3s,baz=2.0,slow=12,SNR=36						
DZM				LR	LR	16 00 40.5	
	comp=Z,3µm,18.6s,baz=8.5,slow=35						
ONTNC	**Ouen Toro**	**11.25**	**176**	*e*Pn	**Pn**	**15 56 57.4**	**-0.5**
PINNC	**Pines Island,**	**11.67**	**171**	*e*Pn	**Pn**	**15 57 03.7**	**+0.2**
MSVF	**Nonsavu**	**13.84**	**120**	*e*Pn	**Pn**	**15 57 35.1**	**+1.8**
MSVF	**Nonsavu**	**13.84**	**120**	*e*P	**Pn**	**15 57 35.1**	**+1.8**
TARA	**Tarawa**	**14.34**	**31**	*e*Pn	**Pn**	**15 57 38.0**	**-2.0**
PATS	**Pohnpei**	**19.14**	**338**	P	**Pn**	**15 58 42.4**	**+1.4**
	baz=19						
PATS	**Pohnpei**	**19.14**	**338**	*e*P	**P**	**15 58 38.4**	**-1.5**
	comp=Z,338nm,1.5s						
EIDS	**Eidsvold**	**19.76**	**222**	P	**Pn**	**15 58 47.8**	**-0.6**
	baz=20,SNR=3.8						
KWAJ	**Kwajalein Atol**	**19.81**	**6**	*e*P	**P**	**15 58 45.4**	**-1.8**
	comp=Z,427nm,1.0s						
KWAJ	**Kwajalein Atol**	**19.81**	**6**	*e*P	**P**	**15 58 45.4**	**-1.8**
KWAJ				pmax	pmax		
	comp=Z,427nm,1.0s						
CTA	**Charters Tower**	**20.61**	**242**	P	**P**	**15 58 56.5**	**+0.5**
	comp=Z,98nm,1.1s,baz=65,slow=12,SNR=16						
CTA				LR	LR	16 06 04.0	
	comp=Z,3µm,18.2s,baz=63,slow=34						
CTAO	**Charters Tower**	**20.61**	**242**	*e*P	**P**	**15 58 54.2**	**-1.8**
	comp=Z,176nm,1.1s						
CTAO	**Charters Tower**	**20.61**	**242**	*e*P	**P**	**15 58 54.2**	**-1.8**
CTAO				pmax	pmax		
	comp=Z,175nm,1.1s						
MTSU	**Mount Surprise**	**21.69**	**249**	P	**P**	**15 59 07.1**	**-0.5**
	baz=22,SNR=16						
COEN	**Coen**	**22.01**	**260**	P	**P**	**15 59 10.2**	**-0.9**
	baz=22,SNR=9.8						
RMQ	**Roma**	**22.06**	**224**	P	**P**	**15 59 11.9**	**+0.4**
	baz=22,SNR=41						
ARMA	**Armidale**	**23.22**	**212**	P	**P**	**15 59 24.1**	**+0.4**
	baz=23,SNR=8.6						
OUZ	**Omahuta**	**25.18**	**164**	*e*P	**P**	**15 59 42.7**	**+0.9**
	comp=Z,106nm,1.2s						
QLP	**Quilpie**	**25.34**	**229**	P	**P**	**15 59 42.9**	**-0.5**
	baz=25,SNR=7.0						
MGCD	**Mangrove Creek**	**25.74**	**209**	P	**P**	**15 59 48.1**	**+1.2**
	baz=26,SNR=6.2						
QIS	**Mount Isa**	**26.64**	**246**	P	**P**	**15 59 54.5**	**-0.8**
	baz=27,SNR=13						
CMSA	**Cobar Meteorol**	**27.44**	**219**	P	**P**	**16 00 02.2**	**-0.1**
	baz=28,SNR=14						
YNG	**Young**	**27.95**	**211**	P	**P**	**16 00 07.9**	**+1.0**
	baz=28,SNR=5.7						
TOZ	**Tahuroa Road**	**28.06**	**163**	P	**P**	**16 00 07.4**	**-0.4**
CNB	**Canberra Magne**	**28.29**	**209**	P	**P**	**16 00 10.9**	**+0.9**
	baz=28						
CAN	**Canberra**	**28.47**	**209**	*e*P	**P**	**16 00 11.1**	**-0.5**
	comp=Z,26nm,1.1s						
CAN	**Canberra**	**28.47**	**209**	*e*P	**P**	**16 00 11.1**	**-0.5**
CAN				pmax	pmax		
	comp=Z,26nm,1.1s						
HIZ	**Hauiti**	**28.61**	**165**	*e*P	**P**	**16 00 12.7**	**0.0**
	comp=Z,224nm,1.4s						
OMRZ	**Omania**	**28.66**	**162**	P	**P**	**16 00 15.7**	**+2.5**
HAZ	**Te Kaha**	**28.80**	**160**	P	**P**	**16 00 15.7**	**+1.3**
URZ	**Urewera**	**29.04**	**161**	*e*P	**P**	**16 00 16.2**	**-0.2**
	comp=Z,117nm,1.2s						
URZ	**Urewera**	**29.04**	**161**	P	**P**	**16 00 17.0**	**+0.6**
	comp=Z,52nm,1.0s,baz=44,slow=4.2,SNR=12						
URZ	**Urewera**	**29.04**	**161**	P	**P**	**16 00 16.6**	**+0.1**
MUGZ	**Murupara**	**29.13**	**162**	P	**P**	**16 00 19.4**	**+2.1**
VRZ	**Vera Road**	**29.17**	**165**	P	P	16 00 23.3	+5.7
MWZ	**Matawai**	**29.24**	**160**	P	**P**	**16 00 19.6**	**+1.3**
TWGZ	**Tauwhareparae**	**29.25**	**160**	P	**P**	**16 00 18.6**	**+0.1**
PUZ	**Puketiti**	**29.25**	**159**	P	**P**	**16 00 17.5**	**-0.9**
H11S2	**WAKE ISLAND Hy**	**29.35**	**2**	T	T	16 30 41.3	
	baz=184,slow=76,SNR=104						
H11S3	**WAKE ISLAND Hy**	**29.36**	**2**	T	T	16 30 41.6	
	baz=184,slow=76,SNR=117						
H11S1	**WAKE ISLAND Hy**	**29.37**	**2**	T	T	16 30 41.4	
	baz=184,slow=76,SNR=98						
WTVZ	**West Tongariro**	**29.38**	**164**	P	**P**	**16 00 22.0**	**+2.4**
TKGZ	**Te Karaka**	**29.44**	**160**	P	**P**	**16 00 19.7**	**-0.3**
SNGZ	**Shannon Statio**	**29.58**	**161**	P	**P**	**16 00 21.3**	**-0.1**
CNGZ	**Carnagh Statio**	**29.60**	**160**	P	**P**	**16 00 20.6**	**-0.9**
RAHZ	**Arahi**	**29.63**	**162**	P	**P**	**16 00 21.8**	**0.0**
BKZ	**Black Stump Fm**	**29.68**	**163**	*e*P	**P**	**16 00 22.4**	**+0.2**
	comp=Z,161nm,1.2s						
BKZ	**Black Stump Fm**	**29.68**	**163**	P	**P**	**16 00 22.8**	**+0.5**
BHHZ	**Black Hill Sta**	**29.86**	**163**	P	**P**	**16 00 25.4**	**+1.6**
STKA	**Stephens Creek**	**30.30**	**223**	P	**P**	**16 00 27.6**	**-0.2**
	baz=30,SNR=17						
STKA	**Stephens Creek**	**30.30**	**223**	*e*P	**P**	**16 00 25.9**	**-1.9**
	comp=Z,6.2nm,1.0s						
STKA	**Stephens Creek**	**30.30**	**223**	P	**P**	**16 00 27.7**	**-0.2**
	comp=Z,19nm,1.0s,baz=36,slow=8.1,SNR=20						
STKA				LR	LR	16 12 11.2	
	comp=Z,4µm,18.3s,baz=44,slow=36						
H11N1	**WAKE ISLAND Hy**	**30.58**	**3**	T	T	16 32 29.0	
H11N3	**WAKE ISLAND Hy**	**30.58**	**3**	T	T	16 32 18.2	
H11N2	**WAKE ISLAND Hy**	**30.59**	**3**	T	T	16 32 15.8	
BFZ	**Birch Farm**	**31.02**	**164**	*e*P	**P**	**16 00 32.9**	**-1.1**
	comp=Z,129nm,1.2s						
WRAB	**Tennant Creek**	**31.27**	**250**	*e*P	**P**	**16 00 34.3**	**-2.3**
	comp=Z,81nm,1.5s						
WRAB	**Tennant Creek**	**31.27**	**250**	*d i*P	**P**	**16 00 34.5**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,56nm,1.5s						
WB2	**Warramunga Arr**	**31.27**	**250**	*e*P	**P**	**16 00 32.4**	**-4.1**
	comp=Z,61nm,1.4s						
WRA	**Warramunga Arr**	**31.28**	**250**	P	**P**	**16 00 35.5**	**-1.1**
	comp=Z,29nm,1.2s,baz=79,slow=8.7,SNR=23						
WRA				PcP	**PcP**	**16 03 32.1**	**+1.4**
	comp=Z,2.6nm,0.8s,baz=84,slow=2.9,SNR=7.4						
WRA				LR	LR	16 12 07.0	
	comp=Z,1µm,20.3s,baz=70,slow=34						
THZ	**Tophouse**	**31.29**	**169**	*e*P	**P**	**16 00 36.1**	**-0.4**
	comp=Z,50nm,1.0s						
TOO	**Toolangi**	**31.97**	**211**	P	**P**	**16 00 43.4**	**+0.9**
	baz=32,SNR=7.3						
KHZ	**Kahutara**	**32.04**	**169**	*e*P	**P**	**16 00 43.3**	**+0.3**
	comp=Z,40nm,1.0s						
LTZ	**Lake Taylor**	**32.18**	**171**	*e*P	**P**	**16 00 44.9**	**+0.6**
	comp=Z,32nm,0.9s						
AS01	**Alice Springs**	**32.56**	**243**	*e*P	**P**	**16 00 45.6**	**-2.3**
AS31	**Alice Springs**	**32.60**	**243**	*e*P	**P**	**16 00 45.7**	**-2.5**
	comp=Z,9.3nm,0.8s						
ASAR	**Alice Springs**	**32.60**	**243**	P	**P**	**16 00 46.8**	**-1.5**
	comp=Z,33nm,0.9s,baz=72,slow=9.4,SNR=62						
ASAR				PcP	**PcP**	**16 03 37.0**	**+2.7**
	comp=Z,3.4nm,0.8s,baz=72,slow=2.3,SNR=8.4						
ASAR				LR	LR	16 13 19.3	
	comp=Z,1µm,18.2s,baz=70,slow=35						
OXZ	**Oxford**	**32.67**	**171**	*e*P	**P**	**16 00 48.1**	**-0.4**
	comp=Z,70nm,1.4s						
RPZ	**Rata Peaks**	**32.92**	**173**	P	**P**	**16 00 51.1**	**+0.4**
	comp=Z,6.8nm,0.6s,baz=34,slow=0.8,SNR=6.4						
RPZ				LR	LR	16 13 39.6	
	comp=Z,2µm,18.1s,baz=344,slow=35						
CRLZ	**Canterbury Las**	**33.01**	**171**	*e*P	**P**	**16 00 51.9**	**+0.5**
	comp=Z,121nm,1.4s						
HTT	**Hallett**	**33.04**	**223**	P	**P**	**16 00 51.3**	**-0.6**
	baz=33,SNR=5.2						
MQZ	**McQueen's Vall**	**33.14**	**171**	*e*P	**P**	**16 00 53.0**	**+0.5**
	comp=Z,76nm,1.3s						
ARPS	**Mount Arapiles**	**33.36**	**216**	P	**P**	**16 00 55.4**	**+0.8**
	baz=33,SNR=6.2						
BBOO	**Buckleboo**	**34.68**	**227**	P	**P**	**16 01 05.7**	**-0.4**
	baz=35,SNR=6.7						
WRKA	**Warakurna**	**37.90**	**243**	P	**P**	**16 01 32.0**	**-1.8**
	baz=38,SNR=24						
FITZ	**Fitzroy Crossi**	**39.17**	**255**	P	**P**	**16 01 44.2**	**-0.3**
	baz=39,SNR=6.2						
FITZ	**Fitzroy Crossi**	**39.17**	**255**	P	**P**	**16 01 44.5**	**0.0**
	comp=Z,8.9nm,1.0s,baz=99,slow=5.0,SNR=6.4						
FORT	**Forrest**	**39.87**	**235**	P	**P**	**16 01 50.0**	**-0.2**
	baz=40						
BATI	**Baumata**	**41.13**	**267**	P	**P**	**16 02 00.6**	**-0.2**
	comp=Z,11nm,0.7s,baz=119,slow=10,SNR=3.5						
PPT2	**Papeete2**	**43.91**	**104**	*e*LQ	LQ	16 13 02.4	
	comp=Z,2µm,27.2s						
PPT2				*e*LR	LR	16 14 51.8	
	comp=Z,704nm,22.8s						
TBI	**Tubuai**	**44.54**	**112**	*e*LQ	LQ	16 13 18.0	
	comp=Z,2µm,26.8s						
TBI				*e*LR	LR	16 15 00.3	
	comp=Z,567nm,27.2s						
BNSI	**Bone**	**45.44**	**275**	P	**P**	**16 02 35.3**	**-0.4**
PCI	**Palu**	**46.47**	**279**	P	**P**	**16 02 45.2**	**+1.4**
MEEK	**Meekatharra**	**46.76**	**244**	P	**P**	**16 02 45.3**	**-0.7**
	baz=47,SNR=16						
MORW	**Morawa**	**49.44**	**241**	P	**P**	**16 03 06.0**	**-0.6**
	baz=49,SNR=4.0						
PWJI	**Pagerwojo**	**53.01**	**268**	P	**P**	**16 03 34.8**	**+1.2**
TAOE	**Nuku Hiva Isla**	**53.50**	**93**	*e*LR	LR	16 19 19.5	
	comp=Z,480nm,23.4s						
PCJI	**Pacitan**	**53.60**	**268**	P	**P**	**16 03 41.1**	**+3.2**
MJAR	**Matsushiro Arr**	**53.85**	**333**	P	**P**	**16 03 37.5**	**-1.9**
	comp=Z,7.4nm,1.1s,baz=164,slow=7.7,SNR=8.2						
MAJO	**Matsushiro**	**53.86**	**333**⇓	*e*P	**P**	**16 03 38.2**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,37nm,1.6s						
MAT	**Matsushiro**	**53.86**	**333**	P	**P**	**16 03 37.2**	**-2.2**
JNU	**Nakatsue**	**54.94**	**324**	*e*P	**P**	**16 03 45.8**	**-1.5**
	comp=Z,95nm,1.3s						
JNU	**Nakatsue**	**54.94**	**324**	P	**P**	**16 03 46.2**	**-1.2**
	comp=Z,54nm,1.1s,baz=92,slow=5.7,SNR=6.5						
ERM	**Erimo**	**56.64**	**340**⇑	*e*P	**P**	**16 03 56.7**	**-2.6**
ERM				pmax	pmax		
	comp=Z,42nm,1.5s						
RKT	**Rikitea**	**57.80**	**110**	*e*LQ	LQ	16 18 46.6	
	comp=Z,590nm,29.0s						
RKT				*e*LR	LR	16 20 59.0	
	comp=Z,457nm,27.2s						
ASAJ	**Asahikawa**	**58.70**	**341**	P	**P**	**16 04 13.3**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,13nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,632nm,20.2s						
ASAJ	**Asahikawa**	**58.70**	**341**	P	**P**	**16 04 13.3**	**-0.5**
	comp=Z,31nm,1.0s,baz=244,slow=16,SNR=11						
ASAJ				LR	LR	16 26 58.1	
	comp=Z,632nm,20.2s,baz=190,slow=34						
KSRS	**Korea Array**	**59.74**	**326**	P	**P**	**16 04 20.9**	**-0.2**
KSRS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSRS	**Korea Array**	**59.74**	**326**	P	**P**	**16 04 20.9**	**-0.2**
	comp=Z,3.9nm,1.0s,baz=151,slow=6.6,SNR=6.5						
KSAR	**Wonju Array Be**	**59.75**	**326**	P	**P**	**16 04 20.9**	**-0.3**
KSAR	**Wonju Array Be**	**59.75**	**326**	P	**P**	**16 04 20.9**	**-0.3**
KS01	**Wonju Array Si**	**59.77**	**326**	*e*P	**P**	**16 04 19.4**	**-1.9**
YSS	**Yuzh-Sakhalins**	**61.20**	**342**	*e*P	**P**	**16 04 29.3**	**-1.6**
	comp=Z,62nm,1.2s						
YSS	**Yuzh-Sakhalins**	**61.20**	**342**	*e*P	**P**	**16 04 29.6**	**-1.3**
YSS				*e*		16 04 34.7	
YSS				*e*		16 04 46.6	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TEY	**Ternei**	**61.62**	**337**⇓	*e*P	P	16 04 27.4	-6.3
TEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NJ2	**Nanjing**	**61.85**	**316**	*e*P	**P**	**16 04 32.4**	**-3.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
QIZ	**Qiongzhong**	**62.48**	**298**	P	**P**	**16 04 38.6**	**-1.5**
QIZ				S	**S**	**16 13 07.4**	**+1.6**
QIZ				LR	LR		
	comp=Z,250nm,13.1s						
QIZ				LR	LR		
	comp=Z,250nm,17.8s						
USRK	**Ussuriysk Ar.**	**62.83**	**333**	P	**P**	**16 04 42.0**	**+0.1**
	comp=Z,23nm,1.1s,baz=69,slow=10,SNR=7.5						
USRK				LR	LR	16 28 39.4	
	comp=Z,207nm,21.1s,baz=131,slow=33						
PETK	**Petropavlovsk-**	**64.23**	**355**	*e*P	**P**	**16 04 50.4**	**-0.6**
PETK	**Petropavlovsk-**	**64.23**	**355**	*e*P	**P**	**16 04 50.4**	**-0.6**
PETK	**Petropavlovsk-**	**64.23**	**355**	P	**P**	**16 04 52.3**	**+1.4**
	comp=Z,16nm,1.1s,baz=153,slow=10.0,SNR=5.9						
MDJ	**Mudanjiang**	**64.23**	**332**	P	P	16 04 56.2	+5.0
MDJ				pmax	pmax		
	comp=Z,29nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,390nm,3.9s						
TYV	**Tymovskoe**	**64.77**	**344**	*e*P	**P**	**16 04 56.1**	**+1.6**
TYV				*e*S	**S**	**16 13 39.5**	**+6.4**
TYV				pmax	pmax		
	comp=Z,200nm,3.4s						
TYV				pmax	pmax		
	comp=Z,15nm,1.7s						
TYV				smax	smax		
	comp=N,400nm,9.1s						
CN2	**Changchun**	**65.61**	**329**	*e*P	P	16 05 04.9	+4.7
CN2				pmax	pmax		
	comp=N,20nm,1.1s						
CN2				LR	LR		
	comp=N,450nm,16.0s						
CN2				LR	LR		
	comp=N,440nm,16.0s						
CN2				LR	LR		
	comp=N,470nm,17.0s						
IPM	**Ipoh**	**66.00**	**280**	*e*P	**P**	**16 04 59.6**	**-3.7**
	comp=N,14nm,1.0s						
CASY	**Casey**	**66.32**	**201**	*e*P	**P**	**16 05 04.2**	**-0.1**
	comp=N,54nm,0.6s						
GRNR	**Gornyy**	**66.55**	**340**	*e*P	**P**	**16 05 06.7**	**+0.6**
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
MNSI	**Mandailing Nat**	**66.57**	**276**	P	**P**	**16 05 05.1**	**-1.9**
SKNT	**Sakolnakorn**	**66.89**	**294**	P	P	16 05 18.5	+10
KLR	**Kul'dur**	**66.95**	**337**⇑	*e*P	**P**	**16 05 07.8**	**-0.8**
NKL	**Nikolayevsk**	**67.36**	**344**	*e*P	**P**	**16 05 10.5**	**-0.6**
ENH	**Enshi**	**67.72**	**309**	*e*P	**P**	**16 05 12.0**	**-1.9**
	comp=Z,20nm,1.0s						
NONG	**Nongkai**	**68.01**	**295**	P	P	16 05 21.6	+5.7
	comp=Z,0.3nm,1.1s						
GYA	**Guiyang**	**68.23**	**304**⇑	*i*P	**P**	**16 05 20.0**	**+2.7**
GYA				PP	**PP**	**16 07 50.5**	**+2.2**
GYA				S	**S**	**16 14 16.8**	**+0.5**
GYA				SKS	**SKiKP**	**16 15 12.0**	**+1.5**
GYA				SS	**SS**	**16 18 41.4**	**+1.5**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.7s						
GYA				LR	LR		
	comp=Z,590nm,18.2s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
GYA				LR	LR		
	comp=Z,580nm,18.4s						
KCSI	**Kotacane, Aceh**	**68.93**	**278**	P	**P**	**16 05 24.5**	**+2.6**
PBKT	**Sadao Pong**	**69.47**	**292**	P	P	16 05 34.8	+10
	comp=Z,8.8nm,1.7s,comp=Z,614nm						
XAN	**Xi'an**	**69.95**	**312**	P	**P**	**16 05 30.6**	**+2.8**
XAN				pmax	pmax		
	comp=Z,11nm,1.6s						
XAN				LR	LR		
	comp=Z,400nm,16.3s						
XAN				LR	LR		
	comp=Z,370nm,20.6s						
XAN	**Xi'an**	**69.95**	**312**	*e*P	**P**	**16 05 26.1**	**-1.7**
	comp=Z,18nm,1.3s						
XAN	**Xi'an**	**69.95**	**312**	*e*P	**P**	**16 05 26.1**	**-1.7**
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
KMI	**Kunming**	**70.92**	**301**	P	**P**	**16 05 38.3**	**+4.2**
KMI				pP	pP	16 05 41.8	-1.0
KMI				sP	sP	16 05 43.8	-2.3
KMI				S	**S**	**16 14 52.7**	**+4.4**
KMI				sS	sS	16 15 00.4	-2.5
KMI				SKS	**SKSac**	**16 15 34.4**	**-0.7**
KMI				SS	**SS**	**16 19 26.7**	**+4.9**
KMI				pmax	pmax		
	comp=Z,13nm,1.3s						
KMI				pmax	pmax		
	comp=Z,200nm,4.0s						
KMI				LR	LR		
	comp=Z,160nm,20.0s						
KMI				LR	LR		
	comp=Z,250nm,18.5s						
HHC	**Hu-ho-hao-te**	**71.68**	**320**	*e*P	**P**	**16 05 38.3**	**+0.1**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CM01	**Chiang Mai Arr**	**71.88**	**294**	*e*P	**P**	**16 05 38.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**71.90**	**294**	P	**P**	**16 05 39.8**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=122,slow=4.8,SNR=7.7						
CMMT	**Chiang Mai**	**72.01**	**294**	P	P	16 05 47.1	+6.5
	comp=Z,7.0nm,1.6s						
CHTO	**Chiang Mai**	**72.02**	**294**	P	P	16 05 47.1	+6.5
	comp=Z,32nm,1.6s						
ZEA	**Zeya**	**72.24**	**337**	*e*P	**P**	**16 05 40.7**	**-0.5**
ZEA				pmax	pmax		
	comp=Z,38nm,1.0s						
SEY	**Seymchan**	**74.43**	**354**⇑	*e*P	**P**	**16 05 52.7**	**-1.2**
LZH	**Lanzhou**	**74.58**	**312**	*e*P	**P**	**16 05 54.4**	**-1.2**
LZH				pP	pP	16 06 00.8	-3.5
LZH				sP	sP	16 06 03.2	-4.3
LZH				PP	**PP**	**16 08 45.2**	**+2.5**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,95nm,4.9s						
LZH				LR	LR		
	comp=Z,490nm,16.3s						
LZH				LR	LR		
	comp=Z,440nm,16.4s						
LZH				LR	LR		
	comp=Z,550nm,17.5s						
GAMB	**Gambell**	**76.59**	**10**	*e*P	**P**	**16 06 05.3**	**-0.9**
	comp=Z,21nm,1.0s						
CIT	**Chita**	**77.04**	**330**	*e*P	**P**	**16 06 10.7**	**+1.6**
ULN	**Ulaanbaatar**	**78.16**	**324**	*e*P	**P**	**16 06 14.0**	**-1.6**
	comp=Z,19nm,1.2s						
ULN	**Ulaanbaatar**	**78.16**	**324**⇓	*e*P	**P**	**16 06 15.6**	**0.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**78.52**	**324**	P	**P**	**16 06 16.8**	**-0.8**
	comp=Z,4.5nm,1.0s,baz=150,slow=7.8,SNR=5.9						
SONA1	**Songino Array**	**78.52**	**324**	*e*P	**P**	**16 06 16.1**	**-1.6**
BILL	**Bilibino**	**78.86**	**0**	*e*P	**P**	**16 06 16.6**	**-2.3**
	comp=Z,20nm,1.0s						
BILL	**Bilibino**	**78.86**	**0**⇑	*e*P	**P**	**16 06 18.0**	**-0.8**
BILL				pmax	pmax		
	comp=Z,17nm,1.0s						
GTA	**Gaotai**	**78.89**	**314**	⇑P	**P**	**16 06 22.4**	**+2.6**
GTA				pP	pP	16 06 27.7	-0.8
GTA				sP	sP	16 06 30.5	-1.2
GTA				S	**S**	**16 16 22.7**	**+6.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,170nm,6.0s						
GTA				LR	LR		
	comp=Z,320nm,18.7s						
GTA				LR	LR		
	comp=Z,390nm,17.1s						
GTA				LR	LR		
	comp=Z,320nm,18.7s						
QSPA	**South Pole Qui**	**78.98**	**180**	*e*P	**P**	**16 06 19.0**	**-0.8**
	comp=Z,21nm,1.0s						
BOD	**Bodaibo**	**80.42**	**335**	*e*P	**P**	**16 06 25.3**	**-2.2**
BOD				pmax	pmax		
	comp=Z,12nm,1.7s						
CAST	**Castle Rocks**	**81.00**	**18**	*e*P	**P**	**16 06 30.9**	**+0.3**
	comp=Z,11nm,0.8s						
SML	**Sawmill**	**81.04**	**20**	*e*P	**P**	**16 06 30.2**	**-0.6**
	comp=Z,75nm,1.8s						
SML	**Sawmill**	**81.04**	**20**	*e*P	**P**	**16 06 30.2**	**-0.6**
SML				pmax	pmax		
	comp=Z,75nm,1.8s						
DIV	**Divide**	**81.47**	**22**	*e*P	**P**	**16 06 32.9**	**-0.3**
	comp=Z,26nm,0.9s						
ZAK	**Zakamensk**	**81.56**	**325**	*e*P	**P**	**16 06 34.4**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KLU	**Klutina**	**81.66**	**21**	*e*P	**P**	**16 06 33.2**	**-1.0**
	comp=Z,20nm,1.0s						
RND	**Reindeer**	**81.99**	**19**	*e*P	**P**	**16 06 35.4**	**-0.4**
	comp=Z,28nm,1.2s						
RND	**Reindeer**	**81.99**	**19**	*e*P	**P**	**16 06 35.4**	**-0.4**
RND				pmax	pmax		
	comp=Z,28nm,1.2s						
RDOG	**Red Dog Mine**	**82.05**	**11**	*e*P	**P**	**16 06 34.3**	**-1.7**
	comp=Z,21nm,1.0s						
MCK	**McKinley**	**82.20**	**19**	*e*P	**P**	**16 06 35.7**	**-1.1**
	comp=Z,32nm,1.2s						
MCK	**McKinley**	**82.20**	**19**	*e*P	**P**	**16 06 35.7**	**-1.1**
MCK				pmax	pmax		
	comp=Z,32nm,1.2s						
IM3	**Indian Mountai**	**82.47**	**16**	*e*P	**P**	**16 06 36.9**	**-1.3**
HARP	**HAARP**	**82.54**	**21**	*e*P	**P**	**16 06 37.5**	**-1.1**
	comp=Z,31nm,0.9s						
MLY	**Manley**	**82.59**	**17**	*e*P	**P**	**16 06 37.7**	**-1.2**
	comp=Z,20nm,0.5s						
WRH	**Wood River Hil**	**82.98**	**18**	*e*P	**P**	**16 06 39.6**	**-1.3**
	comp=Z,41nm,0.4s						
MDM	**Murphy Dome**	**83.28**	**18**	*e*P	**P**	**16 06 40.7**	**-1.8**
	comp=Z,67nm,0.4s						
HDA	**Harding Lake**	**83.30**	**19**	P	**P**	**16 06 41.6**	**-0.9**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.33**	**18**	P	**P**	**16 06 41.9**	**-0.8**
	baz=226						
COLA	**College**	**83.34**	**18**⇑	*e*P	**P**	**16 06 41.9**	**-0.8**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
O02D	**Mt. Diablo Mer**	**83.44**	**47**	P	**P**	**16 06 43.2**	**-0.8**
	baz=250,SNR=6.3						
RIDG	**Independ'e Rid**	**83.53**	**20**	*e*P	**P**	**16 06 42.4**	**-1.4**
	comp=Z,61nm,1.6s						
IL1	**Eielson Array**	**83.57**	**19**	*e*P	**P**	**16 06 41.4**	**-2.5**
ILAR	**Eielson Array**	**83.57**	**19**	P	**P**	**16 06 42.9**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=237,slow=4.9,SNR=22						
ILB	**Eielson Array**	**83.57**	**19**	*e*P	**P**	**16 06 42.4**	**-1.5**
POKR	**Poker Plat Res**	**83.64**	**18**	P	**P**	**16 06 43.4**	**-0.8**
	baz=226						
K02D	**Willamette Mer**	**83.72**	**44**	P	**P**	**16 06 44.9**	**-0.4**
	baz=249						
N02D	**Trinity Center**	**83.78**	**46**	P	**P**	**16 06 45.4**	**-0.3**
	baz=250,SNR=5.5						
M02C	**Callahan**	**83.82**	**46**	P	**P**	**16 06 45.8**	**-0.1**
	baz=250,SNR=5.3						
SCRK	**Sand Creek**	**83.97**	**20**	*e*P	**P**	**16 06 44.7**	**-1.5**
	comp=Z,40nm,1.3s						
ORV	**Oroville**	**84.17**	**48**	*e*P	**P**	**16 06 44.9**	**-2.7**
	comp=Z,16nm,0.9s						
ORV	**Oroville**	**84.17**	**48**	*e*P	**P**	**16 06 44.9**	**-2.7**
ORV				pmax	pmax		
	comp=Z,16nm,0.9s						
O03E	**Paynes Creek**	**84.19**	**47**	P	**P**	**16 06 46.7**	**-1.1**
	baz=250,SNR=8.5						
HYT	**Haines Junctio**	**84.46**	**24**	*e*P	**P**	**16 06 47.7**	**-1.0**
	comp=Z,19nm,1.0s						
PRP	**Porcupine Dome**	**84.50**	**18**	*e*P	**P**	**16 06 48.0**	**-0.8**
	comp=Z,81nm,0.4s						
M04C	**Macdoel**	**84.67**	**46**	P	**P**	**16 06 50.3**	**+0.1**
	baz=250,SNR=7.6						
G03D	**McMinnville, O**	**84.89**	**42**	P	**P**	**16 06 50.7**	**-0.3**
	baz=249						
I04A	**Tendick Farm,**	**84.96**	**44**	P	**P**	**16 06 51.4**	**-0.1**
	baz=250						
KNGR	**Kungurtug, Tuv**	**84.96**	**324**⇑	*e*P	**P**	**16 06 51.5**	**0.0**
J04D	**Umpqua Nationa**	**84.98**	**44**	P	**P**	**16 06 52.0**	**+0.1**
	baz=250						
RUBR	**Rubicon Trail**	**84.99**	**49**	*e*P	**P**	**16 06 51.5**	**-0.5**
	comp=Z,58nm,0.7s						
EDW2	**Edwards Air Fo**	**85.39**	**53**	P	**P**	**16 06 53.3**	**-0.6**
	baz=253,SNR=8.6						
WHY	**Whitehorse**	**85.45**	**25**	*e*P	**P**	**16 06 52.3**	**-1.4**
	comp=Z,13nm,1.4s						

BFSC	Mount Baldy Ra	85.47	54	P	P	16 06 53.9	-0.5
	baz=254,SNR=6.5						
MLAC	Mammoth, Mammo	85.54	50	P	P	16 06 54.4	-0.4
	baz=253						
J05D	Fort Rock, OR	85.59	45	P	P	16 06 54.6	-0.3
	baz=251						
DAWY	Dawson	85.62	21	eP	P	16 06 53.0	-1.4
	comp=Z,19nm,1.0s						
PAHR	Pah Rah Range	85.76	48	eP	P	16 06 53.2	-2.5
	comp=Z,17nm,0.8s						
CWC	Cottonwood Cre	85.77	52	P	P	16 06 54.2	-1.7
	baz=253						
MOD	Modoc Plateau	85.79	46	eP	P	16 06 53.8	-2.0
	comp=Z,12nm,0.8s						
LRMC	Laurel Mtn Rad	85.80	53	P	P	16 06 55.9	-0.1
	baz=254,SNR=7.2						
D03D	Eldon	85.84	40	P	P	16 06 55.6	-0.2
	baz=249						
I05D	Terrebonne, OR	85.87	44	P	P	16 06 55.9	-0.1
	baz=250						
TIXI	Tiksi	86.03	349	eP	P	16 06 54.1	-2.0
	comp=Z,11nm,1.1s						
TIXI	Tiksi	86.03	349⇓	eP	P	16 06 55.1	-1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MONP2	Monument Peak	86.09	56	P	P	16 06 57.1	-0.5
	baz=254,SNR=7.6						
NVAR	Mina Array Bea	86.18	50	P	P	16 06 56.8	-1.1
	comp=Z,0.7nm,0.3s,baz=229,slow=11,SNR=5.0						
G05D	Wamic, OR	86.19	43	P	P	16 06 57.6	0.0
	baz=250						
PFO	Pinyon Flats O	86.25	55	P	P	16 06 58.2	-0.1
	baz=254,SNR=5.3						
IKP	In-Ko-Pah, Jac	86.28	56	P	P	16 06 58.3	-0.1
	baz=255						
NV11	Mina Array Sit	86.29	50	eP	P	16 06 57.2	-1.2
	comp=Z,1.4nm,1.0s						
GSC	Goldstone, Bar	86.44	53	P	P	16 06 57.6	-1.5
	baz=254						
SWSC	Sam W. Stewart	86.61	56	P	P	16 06 59.0	-0.9
	baz=255						
HEC	Hector,Ludlow	86.68	54	P	P	16 07 00.7	+0.4
	baz=254,SNR=5.6						
FURC	Furnace Creek,	86.72	52	P	P	16 07 00.4	+0.1
	baz=254						
B05A	Bryant	86.72	40	P	P	16 07 00.3	+0.3
	baz=250						
BELC	Belle Mtn. Jos	86.73	55	P	P	16 07 00.0	-0.6
	baz=254						
I07A	Izee	87.04	44	eP	P	16 07 01.1	-0.7
	comp=Z,14nm,0.8s						
BC3	Big Chuckawall	87.07	55	P	P	16 07 02.4	+0.1
	baz=255,SNR=8.0						
TUQ	Turquoise Moun	87.17	53	P	P	16 07 03.0	+0.2
	baz=254,SNR=5.8						
GMRC	Granite Mounta	87.20	54	P	P	16 07 02.9	0.0
	baz=255,SNR=11						
TPNV	Topopah Spring	87.32	52	P	P	16 07 01.5	-2.0
	baz=254						
GLA	Glamis	87.42	56	P	P	16 07 04.4	+0.5
	baz=255,SNR=7.1						
IRM	Iron Mountain	87.45	55	P	P	16 07 04.4	+0.4
	baz=255,SNR=14						
J08A	Circle Bar Ran	87.53	45	eP	P	16 07 02.6	-1.7
	comp=Z,17nm,0.8s						
G08A	Pilot Rock	87.78	43	eP	P	16 07 04.1	-1.3
	comp=Z,20nm,1.1s						
Y12C	Blythe	87.85	55	P	P	16 07 06.7	+0.9
	baz=255,SNR=6.6						
R11A	Troy Canyon, C	88.21	51	P	P	16 07 08.1	+0.4
	baz=255,SNR=8.8						
PDMCI	Parker Dam,Lak	88.29	55	P	P	16 07 08.3	+0.3
	baz=256,SNR=6.3						
214A	Organ Pipe Nat	88.81	57	P	P	16 07 10.7	+0.2
	baz=256,SNR=8.8						
WMQ	Urumqi	88.93	315	P	P	16 07 11.5	+0.7
WMQ				pP	PcP	16 07 14.6	+2.3
WMQ				sP	pP	16 07 19.2	-0.5
WMQ				pmax	pmax		
	comp=Z,22nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,470nm,5.1s						
WMQ				LR	LR		
	comp=Z,260nm,23.5s						
WMQ				LR	LR		
	comp=Z,240nm,15.3s						
WMQ				LR	LR		
	comp=Z,280nm,20.7s						
ELK	Elko	89.10	48	eP	P	16 07 11.0	-1.0
	comp=Z,20nm,1.6s						
ELK	Elko	89.10	48	eP	P	16 07 11.0	-1.0
ELK				pmax	pmax		
	comp=Z,20nm,1.6s						
F10A	Beach Ranch, E	89.15	43	eP	P	16 07 10.6	-1.2
	comp=Z,12nm,0.8s						
LCMT	Little Creek M	89.67	52	eP	P	16 07 14.0	-0.6
	comp=Z,18nm,1.0s						
CCUT	Cedar City	89.70	52	eP	P	16 07 13.3	-1.6
	comp=Z,17nm,0.9s						
SZCU	Shurtz Canyon	89.93	52	eP	P	16 07 15.0	-0.8
	comp=Z,17nm,0.9s						
U15A	North Rim	90.27	53	eP	P	16 07 16.1	-1.5
	comp=Z,25nm,0.9s						
HLID	Hailey	90.42	46	eP	P	16 07 16.9	-1.1
	comp=Z,9.4nm,0.8s						
HLID	Hailey	90.42	46	P	P	16 07 17.8	-0.2
	baz=255						
TUC	Tucson	90.56	57	P	P	16 07 18.4	-0.3
	baz=257						
MTPU	Mount Pierson	90.73	51	eP	P	16 07 17.5	-2.2
	comp=Z,18nm,0.9s						
WUAZ	Wupatki	90.79	54	P	P	16 07 19.2	-0.6
	baz=257						
MSU	Marysvale	90.84	51	eP	P	16 07 19.6	-0.5
MSU	Marysvale	90.84	51	eP	P	16 07 19.6	-0.5
HVU	Hansel Valley	91.16	48	eP	P	16 07 20.3	-1.1
	comp=Z,19nm,0.9s						
HVU	Hansel Valley	91.16	48	eP	P	16 07 20.3	-1.1
HVU				pmax	pmax		
	comp=Z,19nm,0.9s						
NLU	North Lily Min	91.25	50	eP	P	16 07 21.6	-0.4
	comp=Z,16nm,1.0s						
SPUT	South Promonto	91.28	48	eP	P	16 07 21.1	-1.0
	comp=Z,10nm,0.9s						
SYO	Syowa Base	91.74	197⇑	esP	sP	16 07 30.0	-4.9
DLMT	Dillon	92.12	44	eP	P	16 07 24.0	-1.8
	comp=Z,23nm,0.9s						
LRM	Limekiln Ridge	92.33	44	eP	P	16 07 26.0	-0.9
FXWY	Fox Creek	92.83	46	eP	P	16 07 27.7	-1.5
	comp=Z,6.3nm,0.8s						
BOZ	Bozeman (W)	92.84	44	eP	P	16 07 28.6	-0.4
	comp=Z,12nm,0.9s						
BOZ	Bozeman (W)	92.84	44	eP	P	16 07 28.7	-0.4
BOZ				pmax	pmax		
	comp=Z,12nm,0.9s						
BOZ	Bozeman (W)	92.84	44	P	P	16 07 28.9	-0.2
	baz=257						
HRY	Holter Researc	92.95	43	eP	P	16 07 27.8	-1.7
MK01	Makanchi Array	93.35	317	eP	P	16 07 28.8	-2.5
MK31	Makanchi Array	93.36	317	eP	P	16 07 29.1	-2.3
MKAR	Makanchi Array	93.36	317	eP	P	16 07 29.3	-2.0
	comp=Z,28nm,0.9s						
MKAR				PKKP	PKKPbc	16 24 44.2	+4.1
MKAR	Makanchi Array	93.36	317	P	P	16 07 30.4	-0.9
	comp=Z,5.0nm,1.0s,baz=103,slow=5.5,SNR=12						
MKAR				PKKP	PKKPbc	16 24 44.2	+4.1
	comp=Z,0.5nm,0.6s,baz=277,slow=3.3,SNR=5.9						
ZAA0	Zalesovo Array	93.41	324	eP	P	16 07 29.5	-1.8
	comp=Z,5.4nm,1.0s						
ZALV	Zalesovo Beam	93.41	324	eP	P	16 07 29.0	-2.3
ZALV	Zalesovo Beam	93.41	324	P	P	16 07 30.0	-1.3
ZALV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZALV	Zalesovo Beam	93.41	324	P	P	16 07 29.9	-1.3
	comp=Z,7.3nm,1.1s,baz=108,slow=4.8,SNR=5.3						
MAKZ	Makanchi	93.57	317	eP	P	16 07 29.8	-2.5
	comp=Z,8.3nm,1.1s						
MAKZ	Makanchi	93.57	317	eP	P	16 07 29.8	-2.5
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BW06	Boulder Array	93.70	47	P	P	16 07 32.7	-0.5
	baz=259						
PDAR	Pinedale Array	93.70	47	eP	P	16 07 32.0	-1.3
PDAR	Pinedale Array	93.70	47	P	P	16 07 33.0	-0.3
	comp=Z,0.6nm,0.7s,baz=222,slow=2.0,SNR=6.7						
NVS	Novosibirsk	94.52	325	i P	P	16 07 39.8	+3.4
EGMT	Eagleton	94.60	42	P	P	16 07 36.9	-0.1
	baz=259						
S22A	4UR Ranch, Cre	94.81	53	P	P	16 07 37.7	-0.9
	baz=260						
MNTX	Cornudas Mount	94.94	59	P	P	16 07 38.3	-0.6
	baz=260						
YKA	Yellowknife Ar	95.06	27	P	P	16 07 36.6	-2.0
	comp=Z,0.5nm,0.7s,baz=257,slow=4.6,SNR=9.0						
YKB5	Yellowknife Ar	95.06	27	eP	P	16 07 36.0	-2.6
TXAR	Lajitas Array	96.01	61	P	P	16 07 43.4	-0.6
	comp=Z,0.1nm,0.3s,baz=301,slow=34,SNR=2.3						
TXAR				PP	PP	16 11 42.3	+5.4
	comp=Z,1.9nm,1.2s,baz=233,slow=6.0,SNR=7.2						
NRIK	Noril'sk	96.03	340	P	P	16 07 41.7	-1.2
	comp=Z,0.8nm,0.3s,baz=292,slow=3.3,SNR=3.3						
KURK	Kurchatov	96.49	320	P	P	16 07 46.2	+0.7
KURK	Kurchatov	96.49	320	P	P	16 07 46.2	+0.7
KURBB	Kurchatov Arra	96.53	320	P	P	16 07 46.2	+0.5
	comp=Z,0.7nm,0.9s,baz=82,slow=4.5,SNR=4.0						
KSH	Kashi	96.57	309	P	P	16 07 47.0	+0.7
KSH				pP	pP	16 07 51.1	-4.1
KSH				PP	PP	16 11 44.3	+3.3
KSH				S	S	16 19 07.0	+1.4
KSH				sS	pS	16 19 15.1	-1.7
KSH				SS	SS	16 25 44.1	+3.8
KSH				LR	LR		
	comp=Z,240nm,6.0s						
KSH				LR	LR		
	comp=Z,170nm,4.4s						
KSH				LR	LR		
	comp=Z,500nm,9.1s						
SNAA	Sanae	97.12	184⇓	eP	P	16 07 47.3	-0.8
BVAR	Borovoye Array	101.80	322	P	Pdif	16 08 08.4	-0.8
	comp=Z,1.2nm,0.8s,baz=110,slow=7.8,SNR=4.0						
ARCES	ARCESS Array B	116.26	345	PKP	PKPdf	16 12 59.2	+0.2
	comp=Z,1.7nm,0.7s,baz=101,slow=2.4,SNR=6.4						
OBN	Obninsk	120.67	329	ePKIKP	PKiKP	16 13 09.6	+1.7
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BOSA	Boshof	124.98	223	PKP	PKPdf	16 13 17.0	-0.1
	comp=Z,3.9nm,1.0s,baz=327,slow=4.2,SNR=3.7						
AKASG	Malin Array Be	126.73	327	PKP	PKiKP	16 13 21.2	+1.2
	comp=Z,0.1nm,0.3s,baz=58,slow=2.4,SNR=4.7						
BRTR	Keskin Array B	128.79	313	PKP	PKiKP	16 13 25.3	+0.5
	comp=Z,0.4nm,0.7s,baz=38,slow=2.6,SNR=3.7						
UZH	Uzhgorod	131.60	328	ePKHKP	PKPpre	16 13 12.1	
CLL	Collm	134.00	336	ePKPdf	PKPdf	16 13 31.0	-2.4
CLL				e		16 13 58.0	
CLL				e		16 16 46.0	
CLL				ePKSdf	PKSdf	16 17 09.0	-0.5
CLL				LmH		17 13 00.0	
	comp=N,300nm,20.7s						
CLL				LmH		17 13 00.0	
	comp=E,200nm,19.9s						
CLL	Collm	134.00	336	ePKIKP	PKPdf	16 13 31.0	-2.4
KEST	Kesra	147.27	323	PKPbc	PKiKP	16 14 01.9	-0.6
	comp=E,16nm,1.1s,baz=352,slow=13,SNR=4.4						
ESDC	Sonseca Array	149.98	344	PKPbc	PKiKP	16 14 07.2	-0.7
	comp=E,0.2nm,0.3s,baz=336,slow=2.8,SNR=3.2						
ESDC				PKPab	PKPab	16 14 12.2	-0.4
	comp=E,0.5nm,0.4s,baz=341,slow=4.0,SNR=5.4						
TORD	Torodi Ar. Bea	164.04	279	PKP	PKPdf	16 14 21.7	+1.3
	comp=E,1.6nm,1.0s,baz=111,slow=2.6,SNR=5.1						

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*NEIC **06** 15:56:51.7±0.6, 11°.12S×165°.77E, h10^{km}, mb4.3/3, Error ellipse: s-maj=14.2km s-min=11.3km az=126.0*

*IDC **06** 15:56:51.7±1.1, 11°.06S×165°.59E, h0^{km}, mb4.1/7, mb1 4.4/9, mb1mx4.0/37, mbtmp4.2/9, ML4.3/2, MS4.6/4, Ms1 4.6/4, ms1mx3.9/32, Error ellipse: s-maj=34.9km s-min=21.1km az=139.0*

ISC 06 15:56:51.9±0.7, **11°.07S**±0°.10×**165°.80E**±0°.09, **h10^{km}, n23,** σ**1^{s}81**/19, **mb4.1**/9, **MS4.6**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.99	285	Pn	Pn	15 58 20.2	-0.4
	10nm,0.3s,baz=175,slow=19,SNR=2.6						
DZM	Mont Dzumac	10.96	177	ePn	Pn	15 59 30.2	+1.2
DZM	Mont Dzumac	10.96	177	Pn	Pn	15 59 32.2	+3.3
	1.7nm,0.3s,baz=15,slow=18,SNR=7.3						
ONTNC	Ouen Toro	11.19	177	ePn	Pn	15 59 29.6	-2.4
PINNC	Pines Island,	11.59	172	ePn	Pn	15 59 35.6	-1.8
FUNA	Funafuti	13.44	80	ePn	Pn	16 00 02.2	-0.6
TARA	Tarawa	14.23	30	ePn	Pn	16 00 11.4	-2.2
RAO	Raoul Island	23.63	142	LR	LR	16 09 40.7	
	comp=Z,3µm,20.8s,baz=180,slow=32						
STKA	Stephens Creek	30.46	223	eP	P	16 03 04.9	-0.1
	8.8nm,2.0s						
STKA	Stephens Creek	30.46	223	P	P	16 03 05.5	+0.5
	4.0nm,0.8s,baz=312,slow=23,SNR=3.0						
WR1	Warramunga Arr	31.53	250	eP	P	16 03 13.3	-1.2
	7.6nm,0.8s						
WRA	Warramunga Arr	31.53	250	P	P	16 03 13.3	-1.2
	1.5nm,0.6s,baz=81,slow=9.2,SNR=5.8						
AS31	Alice Springs	32.83	243	eP	P	16 03 23.9	-2.1
	2.1nm,0.8s						
ASAR	Alice Springs	32.83	243	P	P	16 03 24.2	-1.7
	4.4nm,0.7s,baz=66,slow=10,SNR=8.8						
LEM	Lembang	57.56	269	LR	LR	16 36 01.3	
	comp=Z,270nm,18.1s,baz=216,slow=41						
MA2	Magadan	71.44	352	LR	LR	16 32 12.5	
	comp=Z,618nm,21.4s,baz=178,slow=30						
CMAR	Chiang Mai Arr	72.17	294	P	P	16 08 18.9	+1.4
	0.3nm,0.3s,baz=111,slow=5.0,SNR=4.0						
ILAR	Eielson Array	83.52	18	P	P	16 09 21.1	+1.4
	0.7nm,0.8s,baz=239,slow=6.2,SNR=2.7						
NV01	Mina Array Sit	86.00	50	eP	P	16 09 35.0	+1.9
NVAR	Mina Array Bea	86.00	50	P	P	16 09 35.6	+2.6
	1.1nm,0.8s,baz=243,slow=6.0,SNR=4.5						
ZALV	Zalesovo Beam	93.61	324	LR	LR	16 52 38.9	
	comp=Z,142nm,18.6s,baz=70,slow=36						
YKA	Yellowknife Ar	94.97	27	P	P	16 10 14.9	+0.5
	0.2nm,0.6s,baz=264,slow=4.3,SNR=3.8						
YKB5	Yellowknife Ar	94.97	27	eP	P	16 10 13.8	-0.5

IDC 06 15:57:15.1±3.4, **11°.33S**×**165°.43E, h0^{km}, mb4.1**/5, **mb1 4.2**/5, **mb1mx3.9**/35, **mbtmp4.0**/5, **Error ellipse: s-maj=137.2km s-min=38.6km az=143.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.09	250	P	P	16 03 34.7	-0.7
	2.4nm,0.9s,baz=79,slow=8.2,SNR=4.2						
ILAR	Eielson Array	83.88	19	P	P	16 09 46.5	0.0
	0.9nm,0.8s,baz=236,slow=6.3,SNR=3.2						
MKAR	Makanchi Array	93.52	317	P	P	16 10 33.9	+0.9
	1.0nm,0.8s,baz=97,slow=6.2,SNR=4.4						
ZALV	Zalesovo Beam	93.61	324	P	P	16 10 33.4	+0.3
	0.9nm,0.7s,baz=103,slow=6.7,SNR=4.0						
YKA	Yellowknife Ar	95.37	27	P	P	16 10 40.1	-1.0
	0.2nm,0.8s,baz=255,slow=4.7,SNR=2.0						

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*IDC **06** 15:58:40.4±1.1, 11°.72S×165°.28E, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.9/37, mbtmp3.9/8, ML3.9/1, Error ellipse: s-maj=38.8km s-min=24.2km az=138.0*

*NEIC **06** 15:58:41.8±0.5, 11°.69S×165°.28E, h10^{km}, mb4.5/2, Error ellipse: s-maj=15.3km s-min=10.8km az=104.0*

*ISCJB **06** 15:58:42.1±0.6, 11°.83S±0°.08×165°.3E±0°.1, h24^{km}, mb3.9/8, Error ellipse: s-maj=16.4km s-min=11.9km az=12.8*

ISC 06 15:58:43.9±0.8, **11°.7S**±0°.1×**165°.3E**±0°.2, **h24^{km}, n15,** σ**1^{s}11**/15, **mb3.9**/8, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	10.04	165	ePn	Pn	16 01 06.4	-0.2
DZM	Mont Dzumac	10.34	174	Pn	Pn	16 01 12.3	+1.4
	0.9nm,0.3s,baz=349,slow=19,SNR=2.5						
EIDS	Eidsvold	19.11	223	eP	P	16 03 04.6	-0.7
	47nm,1.6s						
WR1	Warramunga Arr	30.86	251	eP	P	16 04 58.0	-0.7
	7.2nm,0.9s						
WRA	Warramunga Arr	30.86	251	P	P	16 04 58.0	-0.7
	3.9nm,1.0s,baz=80,slow=8.8,SNR=6.0						
ASAR	Alice Springs	32.12	244	P	P	16 05 08.1	-1.6
	0.9nm,0.7s,baz=68,slow=9.7,SNR=5.6						
CMAR	Chiang Mai Arr	72.00	294	P	P	16 10 08.2	+1.9
	0.2nm,0.4s,baz=115,slow=4.3,SNR=2.4						
SONA0	Songino Array	78.97	324	eP	P	16 10 46.4	+0.5
SONM	Songino Array	78.97	324	P	P	16 10 46.4	+0.5
	0.2nm,0.4s,baz=16,slow=21,SNR=2.5						
ILAR	Eielson Array	84.29	19	P	P	16 11 13.0	-0.4
	0.6nm,0.7s,baz=235,slow=5.1,SNR=6.3						
ILB	Eielson Array	84.29	19	eP	P	16 11 13.1	-0.4
NV01	Mina Array Sit	86.78	50	eP	P	16 11 26.7	-0.1
NVAR	Mina Array Bea	86.78	50	P	P	16 11 27.9	+1.1
	1.7nm,0.9s,baz=226,slow=7.2,SNR=5.4						
YKA	Yellowknife Ar	95.77	27	P	P	16 12 07.1	-0.6
	0.2nm,0.7s,baz=254,slow=5.3,SNR=2.9						
YKB5	Yellowknife Ar	95.77	27	eP	P	16 12 06.0	-1.7

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*IDC **06** 15:59:03.2±1.3, 11°.56S×165°.02E, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx3.9/36, mbtmp4.1/6, ML3.8/1, Error ellipse: s-maj=47.3km s-min=27.7km az=138.0*

*ISCJB **06** 15:59:06.6±1.0, 11°.8S±0°.1×165°.1E±0°.2, h34^{km}, mb4.1/5, Error ellipse: s-maj=26.9km s-min=19.9km az=11.4*

ISC 06 15:59:08.2±1.0, **11°.7S**±0°.1×**165°.1E**±0°.2, **h34^{km}, n6,** σ**0^{s}30**/6, **mb4.1**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.38	173	Pn	Pn	16 01 35.0	+0.1
	0.8nm,0.3s,baz=75,slow=23,SNR=1.4						
WRA	Warramunga Arr	30.65	251	P	P	16 05 19.5	-0.2
	4.2nm,0.9s,baz=79,slow=9.5,SNR=6.7						
ASAR	Alice Springs	31.91	244	P	P	16 05 30.8	-0.1
	1.3nm,0.9s,baz=64,slow=9.8,SNR=3.9						
ILAR	Eielson Array	84.35	19	P	P	16 11 36.7	+0.2
	0.6nm,0.7s,baz=231,slow=6.4,SNR=3.1						
NVAR	Mina Array Bea	86.95	50	P	P	16 11 50.0	-0.3
	2.0nm,0.9s,baz=235,slow=6.3,SNR=6.0						
MKAR	Makanchi Array	93.56	317	P	P	16 12 21.2	+0.3
	0.7nm,0.9s,baz=98,slow=6.5,SNR=2.5						

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*IDC **06** 16:01:36.3±0.9, 11°.34S×165°.16E, h0^{km}, mb4.0/11, mb1 4.3/13, mb1mx4.1/36, mbtmp4.1/13, ML4.3/2, Error ellipse: s-maj=28.4km s-min=21.1km az=157.0*

*NEIC **06** 16:01:38.9±3.8, 11°.40S×165°.19E, h19^{km}±24^{km}, mb4.6/8, Error ellipse: s-maj=10.2km s-min=8.0km az=222.0*

*ISCJB **06** 16:01:39.4±0.4, 11°.47S±0°.07×165°.10E±0°.06, h34^{km}, mb4.2/18, Error ellipse: s-maj=10.0km s-min=8.3km az=23.8*

ISC 06 16:01:41.1±0.6, **11°.42S**±0°.10×**165°.16E**±0°.09, **h34^{km}, n45,** σ**0^{s}81**/41, **mb4.1**/18, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.50	291	ePn	Pn	16 03 00.1	-0.6
HNR				eSn	Sn	16 04 02.7	-0.1
HNR	Honiara	5.50	291	Pn	Pn	16 03 01.0	+0.3
	24nm,0.3s,baz=17,slow=2.4,SNR=9.9						
HNR				Sn	Sn	16 04 02.7	-0.1
	24nm,0.3s,baz=256,slow=15,SNR=5.6						
DZM	Mont Dzumac	10.66	174	ePn	Pn	16 04 11.0	-0.5
DZM	Mont Dzumac	10.66	174	Pn	Pn	16 04 12.3	+0.7
	0.8nm,0.3s,baz=282,slow=20,SNR=5.9						
PINNC	Pines Island,	11.34	169	ePn	Pn	16 04 19.4	-1.3
PATS	Pohnpei	19.38	339	eP	P	16 06 04.2	0.0
	590nm,1.8s						
MANU	Manus Island	19.96	297	eP	P	16 06 10.7	0.0
	159nm,1.7s						
H11S2	WAKE ISLAND Hy	29.76	3	T	T	16 38 10.8	
H11S3	WAKE ISLAND Hy	29.77	3	T	T	16 38 17.8	
H11S1	WAKE ISLAND Hy	29.78	3	T	T	16 38 20.7	
WB2	Warramunga Arr	30.81	250	eP	P	16 07 55.3	+1.3
WR1	Warramunga Arr	30.82	250	eP	P	16 07 53.9	-0.2
	6.0nm,1.1s						
WRA	Warramunga Arr	30.82	250	P	P	16 07 53.9	-0.2
	2.2nm,0.9s,baz=81,slow=8.6,SNR=5.7						
H11N1	WAKE ISLAND Hy	30.99	3	T	T	16 39 47.1	
	baz=190						
H11N3	WAKE ISLAND Hy	30.99	3	T	T	16 39 50.5	
	baz=190						
H11N2	WAKE ISLAND Hy	31.00	3	T	T	16 39 45.8	
	baz=190						
AS31	Alice Springs	32.11	244	eP	P	16 08 06.2	+0.7
	1.0nm,0.9s						
ASAR	Alice Springs	32.11	244	P	P	16 08 05.3	-0.2
	0.5nm,0.7s,baz=63,slow=9.8,SNR=4.5						
MJAR	Matsushiro Arr	54.05	333	P	P	16 11 01.6	-0.7
	0.8nm,0.7s,baz=169,slow=8.3,SNR=5.0						
MAJO	Matsushiro	54.05	333	eP	P	16 11 01.6	-0.7
ENH	Enshi	67.69	309	eP	P	16 12 35.0	-0.3
	8.2nm,1.0s						
CM01	Chiang Mai Arr	71.71	294	eP	P	16 13 01.0	+0.7
CM31	Chiang Mai Arr	71.74	294	eP	P	16 13 01.2	+0.7
CMAR	Chiang Mai Arr	71.74	294	P	P	16 13 01.6	+1.2
	1.1nm,1.0s,baz=111,slow=3.8,SNR=6.4						
ULN	Ulaanbaatar	78.27	324	eP	P	16 13 38.6	+0.9
	3.5nm,0.8s						
SONA0	Songino Array	78.63	324	eP	P	16 13 40.2	+0.5
SONM	Songino Array	78.63	324	P	P	16 13 40.2	+0.5
	1.4nm,0.8s,baz=144,slow=8.6,SNR=7.2						
BILL	Bilibino	79.26	0	eP	P	16 13 42.7	+0.2
	9.6nm,1.1s						
HDA	Harding Lake	83.78	19	eP	P	16 14 06.2	-0.3
	4.6nm,0.9s						
ILAR	Eielson Array	84.05	19	P	P	16 14 07.8	-0.1
	1.2nm,0.7s,baz=236,slow=4.9,SNR=15						
ILB	Eielson Array	84.05	19	eP	P	16 14 07.0	-0.9
NV01	Mina Array Sit	86.70	50	eP	P	16 14 21.7	-0.3
NVAR	Mina Array Bea	86.70	50	P	P	16 14 22.4	+0.3
	0.7nm,0.8s,baz=216,slow=7.0,SNR=3.5						
MK01	Makanchi Array	93.39	317	eP	P	16 14 52.8	-0.2
MK31	Makanchi Array	93.41	317	eP	P	16 14 51.9	-1.2
MK32	Makanchi Array	93.41	317	eP	P	16 14 53.4	+0.3
MKAR	Makanchi Array	93.41	317	eP	P	16 14 51.9	-1.1
	16nm,0.6s						
MKAR	Makanchi Array	93.41	317	P	P	16 14 53.4	+0.3
	1.3nm,0.9s,baz=94,slow=6.6,SNR=9.0						
ZALV	Zalesovo Beam	93.53	324	P	P	16 14 52.6	-0.7
	0.3nm,0.4s,baz=36,slow=5.5,SNR=4.3						
ZAA1	Zalesovo Array	93.53	324	eP	P	16 14 52.6	-0.7
MAKZ	Makanchi	93.62	317	eP	P	16 14 53.0	-1.1
	3.2nm,1.1s						
YKA	Yellowknife Ar	95.57	27	P	P	16 15 01.4	-1.1
	0.1nm,0.3s,baz=257,slow=4.6,SNR=3.6						
YKB5	Yellowknife Ar	95.57	27	eP	P	16 15 01.6	-0.9
LTX	Lajitas	96.51	61	eP	P	16 15 09.6	+1.8
TXAR	Lajitas Array	96.51	61	P	P	16 15 09.6	+1.8
	0.2nm,0.4s,baz=224,slow=3.8,SNR=4.1						

IDC 06 16:06:19.2±468.0, **45°.32N**×**64°.96E, h0^{km}, Error ellipse: s-maj=203.5km s-min=131.1km az=161.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	6.90	320	i		16 48 10.0	
	baz=134,slow=333,SNR=0.2						
I46RU	ZALESOVO INFRA	15.45	49	i		17 42 40.0	
	baz=243,slow=368,SNR=2.0						
I34MN	SONGINO INFRAS	28.37	70	i		19 01 00.0	
	baz=279,slow=378,SNR=0.7						

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*ISCJB **06** 16:10:10.2±0.2, 30°.91N±0°.02×50°.07E±0°.03, h10^{km}, mb4.1/32, MS4.3/1, Error ellipse: s-maj=3.6km s-min=3.3km az=32.8*

*IDC **06** 16:10:10.3±1.0, 31°.03N×50°.04E, h0^{km}, mb4.0/22, mb1 4.1/26, mb1mx4.0/55, mbtmp4.0/26, ML3.7/4, Error ellipse: s-maj=22.4km s-min=12.7km az=174.0*

*TEH **06** 16:10:11.7, 30°.94N×50°.07E, h8^{km}, ML4.0*

*NEIC **06** 16:10:11.0±0.0, 30°.94N×50°.07E, h9^{km}, mb4.3/17, ML4.2(THR), MN4.0(TEH), After TEH.*

NEIC Felt at Ahvaz.

*THR **06** 16:10:12.9, 30°.94N×50°.10E, h14^{km}, ML4.2*

*SGS **06** 16:10:15, 30°.87N×49°.94E, h1^{km}, Ml4.4*

*OMAN **06** 16:10:19.6±4.8, 30°.64N×50°.46E, h22^{km}±220^{km}, Error ellipse: s-maj=288.2km s-min=8.4km az=327.0*

ISC 06 16:10:11.4±0.4, **30°.93N**±0°.04×**50°.07E**±0°.04, **h10^{km}, n131,** σ**1^{s}60**/135, **mb4.2**/32, **15C-1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLNJ	Kolanjah	1.31	86	ePn	Pb	16 10 36.7	+0.4
ZNGN	Zangian	1.36	29	ePg	Pb	16 10 37.2	+0.1
SHGR	Shooshtar-Gavs	1.60	318	ePg	Pg	16 10 42.5	+0.5
SHGR	Shooshtar-Gavs	1.60	318	eAML	AML	16 11 08.0	
	comp=N,5µm,0.4s						
SHGR				eAML	AML	16 11 09.8	
	comp=E,3µm,0.2s						

SHGR	Shooshtar-Gavs	1.60	318	ePg	Pg	16 10 42.5	+0.5
ROKH	ROKH	1.63	30	ePn	Pb	16 10 42.0	+0.3
ROKH				IAMB	IAmb	16 11 13.6	
	comp=Z,0.0nm,0.8s						
IPIR	Pirpir	1.88	22	ePn	Pg	16 10 47.1	-0.4
IPIR				IAMB	IAmb	16 11 16.4	
	comp=Z,16µm,0.5s						
IKAZ	Kazeroun	1.91	127	ePn	Pb	16 10 46.8	+0.2
IKAZ				IAMB	IAmb	16 11 26.2	
	comp=Z,12µm,0.4s						
IRAM	Ramesheh	2.16	66	ePn	Pb	16 10 50.6	-0.1
IRAM				IAMB	IAmb	16 10 54.8	
	comp=Z,6µm,0.4s						
IGAR	Gharneh	2.23	48	ePn	Pb	16 10 51.7	-0.2
IGAR				IAMB	IAmb	16 10 56.6	
	comp=Z,5µm,0.3s						
IKLH	Kolahrood	2.70	28	ePn	Pb	16 10 58.0	-2.0
IKLH				IAMB	IAmb	16 11 42.8	
	comp=Z,7µm,0.6s						
IZEF	Zefreh	2.74	44	ePn	Pn	16 10 58.3	+2.6
IZEF				IAMB	IAmb	16 11 15.9	
	comp=Z,3µm,0.6s						
IPAR	Pars	2.79	112	ePn	Pn	16 10 59.2	+2.8
IPAR				IAMB	IAmb	16 11 48.8	
	comp=Z,3µm,0.8s						
KHMZ	Khomeyn	2.80	358	ePn	Pb	16 10 59.5	-2.1
KHMZ	Khomeyn	2.80	358	ePn	Pb	16 10 59.5	-2.1
KHMZ				eSg	Sg	16 11 40.5	-0.8
IKMR	Kamar-syah	2.95	331	ePn	Pn	16 11 00.3	+2.0
IKMR				IAMB	IAmb	16 12 00.4	
	comp=Z,0.0nm,0.5s						
ISRV	Sarvestan	3.06	120	ePn	Pn	16 11 03.4	+3.4
IKFM	Kafar-mosalman	3.20	324	ePn	Pn	16 11 03.9	+2.2
IKFM				IAMB	IAmb	16 12 10.2	
	comp=Z,0.0nm,0.7s						
KFJS		3.31	215	P	Pn	16 11 03.7	+0.5
HSAM	Samen	3.50	340	ePn	Pn	16 11 08.4	+2.3
HSAM				IAMB	IAmb	16 12 00.8	
	comp=Z,0.0nm,0.4s						
GHIR	Ghir-Karzin	3.66	135	ePn	Pn	16 11 11.0	+2.8
GHIR	Ghir-Karzin	3.66	135	ePn	Pn	16 11 11.0	+2.8
ANAR	Anarak	3.83	53	ePn	Pn	16 11 13.3	+2.7
IKOM	Komasi	3.89	327	ePn	Pn	16 11 13.7	+2.3
IKOM				IAMB	IAmb	16 12 35.6	
	comp=Z,0.0nm,0.8s						
NRYS	Al Jubail	3.92	192	P	Pn	16 11 14.5	+2.8
HAGD	Aghdareh	3.96	349	ePn	Pn	16 11 14.8	+2.4
HAGD				IAMB	IAmb	16 12 04.2	
	comp=Z,0.0nm,0.3s						
IBZA	Bozab	3.99	333	ePn	Pn	16 11 14.7	+1.9
IBZA				IAMB	IAmb	16 12 18.3	
	comp=Z,0.0nm,0.6s						
HBTS	Hafar Al Batin	4.12	239	P	Pn	16 11 16.6	+2.1
HSRG	Sareghieh	4.55	341	ePn	Pn	16 11 22.8	+2.2
HSRG				IAMB	IAmb	16 12 27.4	
	comp=N,0.0nm,0.6s						
SNGE	Sanandaj	4.74	332	eAML	AML	16 12 22.5	
	comp=E,116nm,0.5s						
SNGE				eAML	AML	16 12 24.1	
	comp=N,126nm,0.4s						
MQLS	MQLS	4.87	209	P	Pn	16 11 26.5	+1.9
SMAN	Sihmah	5.06	201	P	Pn	16 11 29.1	+1.8
RQBS	RQBS	5.07	226	P	Pn	16 11 28.9	+1.3
BOQSS		5.08	187	P	Pn	16 11 29.9	+2.2
BOQSS				S	Sn	16 12 25.8	-0.7
IFIR	Firoozkooh	5.21	25	ePn	Pn	16 11 31.9	+2.3
IFIR				IAMB	IAmb	16 11 37.6	
	comp=Z,1µm,0.3s						
KHGB	Koh Gabri	5.55	94	ePn	Pn	16 11 35.9	+1.7
KHGB				IAMB	IAmb	16 13 31.2	
	comp=Z,0.0nm,1.0s						
NGRK	Negar Kerman	5.90	101	ePn	Pn	16 11 41.3	+2.1
NGRK				IAMB	IAmb	16 13 37.1	
	comp=Z,0.0nm,0.1s						
TPRV	Parvadeh(Tabas	6.00	68	ePn	Pn	16 11 42.8	+2.5
IKIA	Kiasar	6.06	29	ePn	Pn	16 11 44.7	+3.4
IKIA				IAMB	IAmb	16 11 52.1	
	comp=Z,637nm,0.5s						
TNSJ	Nastanj	6.30	60	ePn	Pn	16 11 46.6	+2.2
CHMN	Cheshme madani	6.54	98	ePn	Pn	16 11 49.9	+1.9
TKDS	Koohdasht(Taba	6.54	64	ePn	Pn	16 11 49.7	+1.9
MDH	Madha	7.86	134	P	Pn	16 12 07.2	+1.4
	SNR=6.4						
MDH				S	Sn	16 13 30.1	-4.6
UOSS	Minazif	8.06	136	ePn	Pn	16 12 07.8	-0.7
UOSS	Minazif	8.06	136	P	Pn	16 12 08.3	-0.3
	SNR=5.8						
UOSS				S	Sn	16 13 35.4	-4.4
HATD	Hatta, Dubai	8.11	137	P	Pn	16 12 10.0	+0.8
	SNR=5.5						
HATD				S	Sn	16 13 37.6	-3.4
ASHO	Ashiyiah	8.18	138	P	Pn	16 12 11.8	+1.6
	SNR=13						
ASHO				S	Sn	16 13 39.0	-3.7
SBZV	Sabzevar	8.31	47	ePn	Pn	16 12 14.4	+2.2
MZR	Muzera	8.46	158	P	Pn	16 12 15.4	+1.3
	SNR=8.9						
SOHO	SOHO	8.87	138	P	Pn	16 12 19.4	-0.3
SIRT	Sirnak	9.10	318	ePn	Pn	16 12 16.0	-6.9
GEYT	Alibeck	9.63	41	Pn	Pn	16 12 31.5	+1.4
	comp=Z,1.6nm,0.3s,baz=237,slow=14,SNR=16						
GYA0B	ALIBECK ARRAY	9.63	41	ePn	Pn	16 12 29.9	-0.2
ASF	Jabal al Asfar	11.31	280	Pn	Pn	16 12 52.6	-0.5
	comp=Z,0.9nm,0.3s,baz=16,slow=6.4,SNR=5.4						
MHTO	MHTO	12.18	143	P	Pn	16 13 06.5	+1.5
KBZ	Khabaz	13.98	338	Pn	Pn	16 13 33.6	+4.2
	comp=Z,0.1nm,0.3s,baz=142,slow=8.7,SNR=5.2						
CSS	Mathiatis	14.62	290	ePn	P	16 13 42.4	-2.3
BR131	Keskin Array S	16.01	308	ePn	Pn	16 13 57.7	+0.9
BRTR	Keskin Array B	16.01	308	Pn	Pn	16 13 58.0	+1.3
	comp=Z,0.3nm,0.3s,baz=135,slow=12,SNR=12						
CHGR	Chuyangaron	17.45	59	ePn	P	16 14 15.9	-0.3
	comp=Z,23nm,0.7s						
GAR	Garm	18.42	59	eP	Pn	16 14 27.6	+0.7
	comp=Z,11nm,0.7s						
BTK	Batken	19.16	56	eP	Pn	16 14 36.3	+0.5
	comp=Z,5.9nm,0.9s						
MANT	Manisa	19.20	299	eP	Pn	16 14 36.8	+0.2
	comp=Z,43nm,0.3s						
KARP	Karpathos	19.70	290	eP	P	16 14 41.3	+0.4
	comp=Z,340nm,2.0s						
ABKAR	Akbulak array	19.77	19	eP	P	16 14 41.2	-0.2
NIL	Nilore	19.78	76	eP	P	16 14 41.1	-0.7
	comp=Z,4.2nm,0.6s						
KK31	Karatay Array	20.28	48	eP	P	16 14 47.6	+0.4
KKAR	Karatay Array	20.28	48	eP	P	16 14 47.7	+0.5
AKTO	Aktyubinsk	20.37	15	P	P	16 14 48.3	+0.3
	comp=Z,3.1nm,0.4s,baz=199,slow=7.8,SNR=10						
IDI	Anoyia	21.52	288	P	P	16 15 01.8	+1.2
	comp=Z,9.2nm,0.4s,baz=105,slow=9.4,SNR=10						
ALN	Alexandroupoli	21.79	304	eP	P	16 15 04.5	+1.1
	comp=Z,3.6nm,1.1s						
CFR	Carcaliu	22.28	316	⇑iP	P	16 15 07.8	-0.8
AAK	Ala-Archa	22.70	52	eP	P	16 15 14.2	+0.9
	comp=Z,11nm,1.3s						
AAK	Ala-Archa	22.70	52	P	P	16 15 14.7	+1.4
	comp=Z,1.6nm,0.5s,baz=186,slow=2.5,SNR=7.4						
NRN	Naryn	23.32	56	eP	P	16 15 20.9	+0.9
	comp=Z,9.9nm,0.8s						
VRI	Vrincioaia	23.48	316	⇑iP	P	16 15 20.8	-0.4
PLOR	Plostina	23.52	316	⇑iP	P	16 15 21.8	+0.2
MLR	Muntele Rosu	23.77	314	eP	P	16 15 25.4	+1.3
	comp=Z,26nm,1.6s						
MLR	Muntele Rosu	23.77	314	⇑iP	P	16 15 23.9	-0.2
MLR	Muntele Rosu	23.77	314	P	P	16 15 23.6	-0.5
	comp=Z,3.6nm,0.7s,baz=214,slow=6.8,SNR=5.2						
VOIR		24.29	314	⇓iP	P	16 15 30.0	+1.0
DOPR	Dopca	24.34	315	⇑iP	P	16 15 29.6	+0.2
ARR	Arges	24.52	313	⇑iP	P	16 15 31.7	+0.6
AKASG	Malin Array Be	25.12	328	P	P	16 15 35.4	-0.9
	comp=Z,0.8nm,0.3s,baz=123,slow=7.3,SNR=17						
AKBB	Malin Array Si	25.12	328	eP	P	16 15 35.1	-1.2
KIEV	Kiev	25.12	328	eP	P	16 15 34.6	-1.7
	comp=Z,3.8nm,0.6s						
KIEV	Kiev	25.12	328	⇑iP	P	16 15 35.3	-1.0
AK11	Malin Array Si	25.13	328	eP	P	16 15 35.1	-1.3
BURAR	Bucovina Array	25.29	318	⇑iP	P	16 15 39.1	+1.1
BUR04	Bucovina Ar. S	25.29	318	eP	P	16 15 36.2	-1.8
BUR08	Bucovina Ar. S	25.31	318	eP	P	16 15 37.8	-0.5
ARCR	ARCALIA	25.52	316	⇑iP	P	16 15 40.5	+0.6
GZR	Gura Zlata	25.71	312	⇑iP	P	16 15 42.4	+0.6
CJR	Cluj-Napoca	25.79	315	⇑iP	P	16 15 43.2	+0.7
OBN	Obninsk	26.01	342	P	P	16 15 42.9	-1.4
	comp=Z,4.3nm,0.6s,baz=72,slow=7.0,SNR=4.5						
DRGR		26.36	315	⇑iP	P	16 15 49.0	+1.3
BZS	Buzias	26.55	312	⇑iP	P	16 15 49.4	+0.1
BVAR	Borovoye Array	26.57	28	P	P	16 15 49.4	-0.1
	comp=Z,2.1nm,0.6s,baz=216,slow=10.0,SNR=14						
TRPA	Tarpa	27.10	317	⇑iP	P	16 15 55.4	+1.2
KURBB	Kurchatov Arra	28.89	39	P	P	16 16 10.9	+0.7
	comp=Z,1.8nm,0.6s,baz=240,slow=9.5,SNR=12						
KURK	Kurchatov	28.99	39	eP	P	16 16 09.9	-1.2
	comp=Z,4.1nm,0.8s						
MK01	Makanchi Array	29.41	48	eP	P	16 16 15.2	+0.3
MK31	Makanchi Array	29.41	48	eP	P	16 16 15.4	+0.4
MKAR	Makanchi Array	29.41	48	eP	P	16 16 15.3	+0.4
	comp=Z,16nm,0.6s						
MKAR	Makanchi Array	29.41	48	P	P	16 16 16.1	+1.1
	comp=Z,1.3nm,0.6s,baz=239,slow=10,SNR=21						
WMQ	Urumqi	32.27	56	eP	P	16 16 41.8	+1.6
GERES	GERESS Array B	32.75	314	P	P	16 16 45.5	+1.1
	comp=Z,0.4nm,0.5s,baz=111,slow=7.3,SNR=3.7						
ZAA0	Zalesovo Array	33.91	37	eP	P	16 16 54.5	+0.2
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	33.91	37	eP	P	16 16 54.1	-0.2
ZALV	Zalesovo Beam	33.91	37	P	P	16 16 54.6	+0.3
	comp=Z,1.8nm,0.5s,baz=249,slow=9.5,SNR=14						
FINES	FINESS Array B	34.33	340	P	P	16 16 57.0	-0.9
	comp=Z,1.6nm,0.5s,baz=149,slow=9.3,SNR=18						
NB2	NORSAR Subarra	39.42	331	P	P	16 17 40.1	-1.2
	comp=Z,0.4nm,0.5s,baz=124,slow=8.6						
NOA	NORSAR Array B	39.42	331	P	P	16 17 40.5	-0.8
	comp=Z,0.5nm,0.5s,baz=124,slow=8.4,SNR=3.6						
ARCES	ARCESS Array B	41.09	347	P	P	16 17 53.0	-1.9
	comp=Z,4.8nm,1.1s,baz=134,slow=8.7,SNR=6.2						
GTA	Gaotai	41.09	64	⇑P	P	16 17 57.0	+1.4
GTA				pP	sP	16 18 04.4	+4.0
GTA				sP	pP	16 18 07.6	+8.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LZH	Lanzhou	44.66	68	eP	P	16 18 22.2	-2.3
LZH				pP	sP	16 18 32.3	+2.9
LZH				sP	pP	16 18 38.0	+10
LZH				ePP	PcP	16 20 07.6	+0.4
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.8s						
CHTO	Chiang Mai	45.63	93	eP	P	16 18 31.5	-0.7
	comp=Z,5.7nm,1.3s						
SONM	Songino Array	45.65	52	P	P	16 18 32.7	+0.5
	comp=Z,0.7nm,0.5s,baz=272,slow=8.4,SNR=5.1						
CMAR	Chiang Mai Arr	45.78	94	P	P	16 18 32.9	-0.5
	comp=Z,1.1nm,0.8s,baz=291,slow=8.0,SNR=12						
ULN	Ulaanbaatar	46.10	52	eP	P	16 18 35.0	-0.8
	comp=Z,3.0nm,0.9s						
TOA0	Torodi Ar. Sit	47.81	259	eP	P	16 18 48.3	-1.1
TORD	Torodi Ar. Bea	47.81	259	P	P	16 18 48.8	-0.6
	comp=Z,0.7nm,0.5s,baz=80,slow=8.0,SNR=6.9						
XAN	Xi'an	49.15	70	P	P	16 18 59.7	+0.1
XAN				pP	sP	16 19 18.7	+14
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN				LR	LR		
	comp=N,400nm,17.3s						
XAN				LR	LR		
	comp=Z,370nm,21.7s						
XAN	Xi'an	49.15	70	eP	P	16 18 59.0	-0.5
	comp=Z,7.4nm,0.8s						
HHC	Hu-ho-hao-te	49.88	61	eP	P	16 19 05.6	+0.5
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DBIC	Dimbokro	56.67	257	P	P	16 19 57.5	+2.3
	comp=Z,2.5nm,0.7s,baz=97,slow=8.1,SNR=3.3						
KSAR	Wonju Array Be	63.00	61	P	P	16 20 38.5	0.0
KSRS	Korea Array	63.02	61	P	P	16 20 38.5	-0.2
	comp=Z,1.8nm,0.5s,baz=284,slow=6.4,SNR=7.9						
RES	Resolute Bay	72.17	351	P	P	16 21 34.3	-1.5
	comp=Z,1.2nm,0.8s,baz=49,slow=8.9,SNR=3.7						
ILAR	Eielson Array	83.69	7	P	P	16 22 39.4	-0.7
	comp=Z,0.4nm,0.6s,baz=333,slow=7.9,SNR=5.5						
YKA	Yellowknife Ar	86.09	353	P	P	16 22 51.5	-0.6
	comp=Z,0.7nm,0.7s,baz=16,slow=5.6,SNR=11						

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*IDC **06** 16:15:56.1±1.5, 11°05S×165°66E, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.9/44, mbtmp4.0/9, ML4.4/2, Error ellipse: s-maj=37.5km s-min=27.2km az=123.0*

*NEIC **06** 16:15:57.5±0.7, 11°09S×165°68E, h10^{km}, mb4.4/6, Error ellipse: s-maj=13.6km s-min=11.5km az=71.0*

*ISCJB **06** 16:15:59.3±1.0, 11°19S±0°10×165°5E±0°1, h30^{km}, mb4.0/10, Error ellipse: s-maj=18.6km s-min=13.1km az=157.1*

ISC 06 16:16:00.8±1.1, **11°1S**±0°1×**165°6E**±0°1, **h30**^{km}, **n27, σ0^{s}86**/21, **mb4.0**/10, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.83	286	ePn	Pn	16 17 25.3	+0.1
HNR	Honiara	5.83	286	Pn	Pn	16 17 23.8	-1.4
	13nm,0.3s,baz=141,slow=5.7,SNR=5.4						
DZM	Mont Dzumac	10.96	176	ePn	Pn	16 18 36.1	+0.3
DZM	Mont Dzumac	10.96	176	Pn	Pn	16 18 36.3	+0.5
	2.1nm,0.3s,baz=326,slow=10.0,SNR=21						
RABL	Rabaul	14.99	296	ePn	Pn	16 19 31.0	+0.2
MANU	Manus Island	20.23	295	eP	P	16 20 34.3	+0.6
	35nm,0.9s						
CTA	Charters Tower	20.69	242	P	P	16 20 39.5	+0.8
	4.5nm,0.9s,baz=70,slow=12,SNR=3.7						
H11S2	WAKE ISLAND Hy	29.39	2	T	T	16 53 33.3	
	baz=184,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.40	2	T	T	16 53 33.6	
	baz=184,slow=76,SNR=48						
H11S1	WAKE ISLAND Hy	29.41	2	T	T	16 53 34.6	
	baz=184,slow=76,SNR=39						
STKA	Stephens Creek	30.34	223	eP	P	16 22 09.3	-0.7
	4.8nm,2.0s						
STKA	Stephens Creek	30.34	223	P	P	16 22 09.9	-0.1
	0.7nm,0.3s,baz=12,slow=9.4,SNR=3.9						
H11N1	WAKE ISLAND Hy	30.62	2	T	T	16 55 02.0	
	baz=183,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	30.62	2	T	T	16 54 59.5	
	baz=183,slow=76,SNR=24						
H11N2	WAKE ISLAND Hy	30.64	2	T	T	16 55 03.1	
	baz=183,slow=76,SNR=25						
WRAB	Tennant Creek	31.36	250	eP	P	16 22 18.2	-0.9
	4.5nm,1.0s						
WB2	Warramunga Arr	31.36	250	eP	P	16 22 18.4	-0.7
	4.7nm,0.8s						
WR1	Warramunga Arr	31.37	250	eP	P	16 22 18.7	-0.5
	7.7nm,0.9s						
WRA	Warramunga Arr	31.37	250	P	P	16 22 18.7	-0.5
	4.9nm,0.8s,baz=80,slow=9.2,SNR=25						
AS31	Alice Springs	32.68	243	eP	P	16 22 29.3	-1.4
	3.8nm,1.9s						
ASAR	Alice Springs	32.68	243	P	P	16 22 29.6	-1.1
	0.6nm,0.5s,baz=64,slow=10,SNR=30						
CMAR	Chiang Mai Arr	72.02	294	P	P	16 27 23.9	+1.5
	0.3nm,0.8s,baz=139,slow=4.4,SNR=4.5						
MK32	Makanchi Array	93.47	317	eP	P	16 29 14.4	+0.7
MKAR	Makanchi Array	93.47	317	P	P	16 29 14.4	+0.7
	0.2nm,0.6s,baz=108,slow=3.8,SNR=2.5						
YKA	Yellowknife Ar	95.05	27	P	P	16 29 19.3	-1.1
	0.1nm,0.5s,baz=256,slow=4.6,SNR=2.3						
ARA0	ARCESS Array S	116.33	345	ePKPdf	PKPdf	16 34 40.6	-0.4
ARCES	ARCESS Array B	116.33	345	PKP	PKPdf	16 34 40.6	-0.4
	2.6nm,1.0s,baz=66,slow=3.1,SNR=1.8						

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*IDC **06** 16:17:25.8±1.4, 10°88S×164°61E, h0^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.8/44, mbtmp3.9/8, ML4.6/2, MS3.9/2, Ms1 3.9/2, ms1mx3.2/38, Error ellipse: s-maj=31.9km s-min=27.6km az=117.0*

*ISCJB **06** 16:17:28.5±1.0, 11°0S±0°1×164°6E±0°1, h29^{km}, mb3.6/6, MS3.9/2, Error ellipse: s-maj=20.6km s-min=11.2km az=36.7*

ISC 06 16:17:30.3±1.2, **10°9S**±0°1×**164°6E**±0°1, **h29**^{km}, **n10, σ1^{s}20**/9, **mb3.8**/6, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.83	287	Pn	Pn	16 18 41.0	-0.1
	48nm,0.3s,baz=148,slow=11,SNR=12						
HNR				Sn	Sn	16 19 37.2	+1.0
	baz=93,slow=21,SNR=1.5						
DZM	Mont Dzumac	11.26	171	Pn	Pn	16 20 10.3	+0.9
	2.5nm,0.3s,baz=7.2,slow=14,SNR=17						
STKA	Stephens Creek	29.82	222	P	P	16 23 34.9	0.0
	1.4nm,0.7s,baz=20,slow=12,SNR=2.9						
WRA	Warramunga Arr	30.51	249	P	P	16 23 39.9	-1.5
	0.4nm,0.7s,baz=79,slow=10.0,SNR=2.9						
ASAR	Alice Springs	31.89	242	P	P	16 23 51.8	-1.7
	0.4nm,0.7s,baz=67,slow=10,SNR=3.1						
RPZ	Rata Peaks	33.18	171	LR	LR	16 36 35.6	
	comp=Z,224nm,18.8s,baz=37,slow=35						
KLR	Kul'dur	66.48	337	LR	LR	16 54 38.3	
	comp=Z,77nm,20.1s,baz=1.0,slow=34						
CMAR	Chiang Mai Arr	71.05	294	P	P	16 28 46.9	+0.6
	0.6nm,0.8s,baz=108,slow=4.3,SNR=4.8						
ILAR	Eielson Array	83.71	19	P	P	16 29 55.4	-0.8
	0.5nm,0.7s,baz=242,slow=5.3,SNR=5.4						
MKAR	Makanchi Array	92.66	317	P	P	16 30 40.5	+0.9
	0.5nm,0.7s,baz=100,slow=4.1,SNR=4.4						

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*SOME **06** 16:19:54.0, 42°05N×79°92E, h5^{km}*

*NNC **06** 16:19:54.2±3.0, 42°07N×79°90E, h0^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=21.0km s-min=11.0km az=156.0*

ISC 06 16:19:54.9±3.4, **42°1N**±0°1×**79°92E**±0°08, **h10**^{km}±20^{km}, **n13, σ1^{s}20**/20, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.39	13	P	Pb	16 20 20.7	-0.3
	7.1nm,0.1s						
KTMS				S	Sg	16 20 40.1	+0.5
	4.3nm,0.1s						
KTMS	Ketmen	1.39	13	eP	Pb	16 20 20.7	-0.3
	7.1nm,0.1s						
KTMS				eS	Sg	16 20 40.1	+0.5
	4.3nm,0.1s						
SATY	Saty	1.47	311	P	Pg	16 20 23.2	0.0
	3.1nm,0.1s						
SATY				S	Sg	16 20 44.3	+1.9
	8.4nm,0.1s						
SATY	Saty	1.47	311	eP	Pb	16 20 22.3	-0.2
	3.1nm,0.1s						
SATY				eS	Sg	16 20 43.2	+0.8
	8.4nm,0.1s						
DJR	Jarkent	2.24	358	Pg	Pb	16 20 36.0	+0.5
	0.3nm,0.1s						
DJR				Lg	Lg	16 21 06.0	
	2.0nm,0.2s						
DJR	Jarkent	2.24	358	eP	Pb	16 20 36.0	+0.5
	0.3nm,0.1s						
DJR				eS	Sg	16 21 06.0	-0.8
	2.0nm,0.2s						
MNBS	Baschi	2.27	331	Pg	Pb	16 20 35.2	-0.9
	2.3nm,0.2s						
MNBS				Lg	Lg	16 21 05.2	
	14nm,0.2s						
MNBS	Baschi	2.27	331	eP	Pb	16 20 35.2	-0.9
	2.3nm,0.2s						
MNBS				eS	Sb	16 21 05.2	+0.9
	14nm,0.2s						
TNSS	Tian-Shan	2.39	294	Pg	Pb	16 20 37.0	-1.3
	2.4nm,0.4s						
TNSS				Lg	Lg	16 21 07.8	
	1.5nm,0.2s						
ARXS	Arharly	2.61	325	Pg	Pb	16 20 41.0	-0.9
	2.5nm,0.3s						
ARXS				Lg	Lg	16 21 14.4	
	14nm,0.4s						
KAPS	Kapalarasan	3.21	353	Pg	Pb	16 20 52.8	+0.7
	0.4nm,0.3s						
KAPS				Lg	Lg	16 21 34.8	
	3.2nm,0.4s						
KAPS	Kapalarasan	3.21	353	eP	Pb	16 20 52.8	+0.7
	0.4nm,0.3s						
KAPS				eS	Sg	16 21 34.8	-3.3
	3.2nm,0.4s						
DGS	Degeres	3.26	292	Pg	Pb	16 20 53.1	+0.1
	1.2nm,0.9s						
DGS				Lg	Lg	16 21 35.2	
	1.4nm,0.4s						

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*ISCJB **06** 16:23:18.7±0.3, 44°41N±0°02×6°93E±0°03, h24^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=2.4km az=146.9*

*ROM **06** 16:23:18.6±0.2, 44°398N±0°006×6°97E±0°01, h7^{km}, ML2.3/11*

*GEN **06** 16:23:19.1, 44°40N×6°93E, h4^{km}±2^{km}, Ml2.2*

*LDG **06** 16:23:19.2±0.1, 44°41N×6°94E, h2^{km}, Md2.8/2, Ml2.7/23, Error ellipse: s-maj=1.2km s-min=0.9km az=53.0*

ISC 06 16:23:18.1±0.9, **44°42N**±0°02×**6°94E**±0°02, **h18**^{km}±4^{km}, **n53, σ0^{s}74**/104, **France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PZZ	Stroppo	0.15	54	P	Pb	16 23 22.7	+0.4
PZZ				S	Sg	16 23 25.1	-0.5
PZZ	Stroppo	0.15	54	P	Pb	16 23 22.7	+0.4
PZZ				S	Sg	16 23 25.1	-0.5
PZZ				AML	AML		
	comp=E,4915µm,0.4s						
PZZ				AML	AML		
	comp=N,5475µm,0.4s						
PZZ				AML	AML		
	comp=E,4915µm,0.4s						
PZZ				AML	AML		
	comp=N,5475µm,0.4s						
PZZ				AML	AML		
	comp=N,5475µm,0.4s						
PZZ				AML	AML		
	comp=E,4915µm,0.4s						
DOI	San Damiano	0.24	68	P	Pb	16 23 24.0	+0.2
DOI				S	Sg	16 23 27.5	0.0
STV	Sant Anna di V	0.32	122	P	Pb	16 23 25.5	0.0
STV				S	Sg	16 23 29.7	-0.2
STV	Sant Anna di V	0.32	122	P	Pb	16 23 25.4	-0.1
STV				S	Sg	16 23 29.6	-0.2
STV				AML	AML		
	comp=E,564µm,0.4s						
STV				AML	AML		
	comp=N,662µm,0.4s						
STV				AML	AML		
	comp=E,564µm,0.4s						
STV				AML	AML		
	comp=N,662µm,0.4s						
STV				AML	AML		
	comp=E,564µm,0.4s						
STV				AML	AML		
	comp=N,662µm,0.4s						
MBDF	Montbardon	0.33	339	ePg	Pg	16 23 25.6	+0.3
	SNR=1.0						
MBDF				eSg	Sg	16 23 29.9	-0.3
	comp=N,72nm,0.2s						
ENR	Entracque	0.39	119	P	Pb	16 23 26.5	-0.1
ENR				S	Sb	16 23 31.9	-0.5
ENR	Entracque	0.39	119	P	Pb	16 23 26.6	0.0
ENR				S	Sb	16 23 32.0	-0.4
ENR				AML	AML		
	comp=E,1177µm,0.2s						
ENR				AML	AML		
	comp=N,913µm,0.8s						
ENR				AML	AML		
	comp=E,1177µm,0.2s						
ENR				AML	AML		
	comp=N,912µm,0.8s						
ENR				AML	AML		
	comp=N,912µm,0.8s						
ENR				AML	AML		
	comp=E,1177µm,0.2s						
BHB	Bricherasio	0.48	28	P	Pb	16 23 28.5	+0.3
BHB				S	Sb	16 23 35.5	+0.5
BHB	Bricherasio	0.48	28	P	Pb	16 23 28.5	+0.3
BHB				S	Sb	16 23 35.7	+0.7
BHB				AML	AML		
	comp=E,581µm,0.3s						
BHB				AML	AML		
	comp=N,394µm,0.2s						
BHB				AML	AML		
	comp=E,581µm,0.3s						
BHB				AML	AML		
	comp=N,394µm,0.2s						
BHB				AML	AML		
	comp=E,581µm,0.3s						
BHB				AML	AML		
	comp=N,394µm,0.2s						
RRL	Rocca Remolon	0.52	348	P	Pb	16 23 29.1	+0.3
RRL				S	Sb	16 23 36.9	+0.8
RRL	Rocca Remolon	0.52	348	P	Pb	16 23 29.2	+0.4
RRL				S	Sb	16 23 37.2	+1.1
RRL				AML	AML		
	comp=E,236µm,0.2s						

RRL				AML	AML		
	comp=N,210µm,1.3s						
RRL				AML	AML		
	comp=E,236µm,0.2s						
RRL				AML	AML		
	comp=N,210µm,1.3s						
SAOF	**Saorge**	0.62	134	P	Pb	16 23 31.0	+0.6
SAOF				S	Sb	16 23 38.7	0.0
SAOF				AML	AML		
	comp=E,496µm,0.2s						
SAOF				AML	AML		
	comp=N,506µm,1.0s						
SAOF				AML	AML		
	comp=E,496µm,0.2s						
SAOF				AML	AML		
	comp=N,506µm,1.0s						
SAOF				AML	AML		
	comp=N,506µm,1.0s						
SAOF				AML	AML		
	comp=E,496µm,0.2s						
SBF	**Sospel**	0.66	147	*e*Pg	Pb	16 23 31.5	+0.4
	SNR=1.0						
SBF				*e*Sg	Sg	16 23 39.2	-0.7
	comp=E,513nm,0.5s,SNR=1.0						
BNI	**Bardonecchia**	0.66	344	P	Pb	16 23 32.2	+0.9
BNI				S	Sn	16 23 42.4	-0.5
GBOS	**Grotte di Boss**	0.67	105	P	Pb	16 23 31.7	+0.4
GBOS				S	Sb	16 23 40.6	+0.3
MGRO	**Montegrosso**	0.73	121	P	Pb	16 23 32.8	+0.5
MGRO				S	Sb	16 23 42.8	+0.7
RSP	**Reno Superiore**	0.77	17	P	Pb	16 23 33.8	+0.7
RSP				S	Sb	16 23 44.4	+1.2
RSP	**Reno Superiore**	0.77	17	P	Pb	16 23 33.8	+0.7
RSP				S	Sn	16 23 45.4	0.0
RSP				AML	AML		
	comp=E,167µm,1.2s						
RSP				AML	AML		
	comp=N,168µm,0.7s						
RSP				AML	AML		
	comp=N,168µm,0.7s						
RSP				AML	AML		
	comp=E,167µm,1.2s						
NEGI	**Seborga**	0.79	136	P	Pn	16 23 34.2	-0.2
NEGI				S	Sb	16 23 44.6	+0.9
IMI	**Imperia**	0.85	126	P	Pn	16 23 35.1	-0.2
IMI				S	Sb	16 23 46.1	+0.6
IMI	**Imperia**	0.85	126	P	Pn	16 23 35.1	-0.2
IMI				S	Sb	16 23 46.1	+0.6
RORO	**Rocca Rossa**	0.86	110	P	Pn	16 23 35.2	-0.2
RORO				S	Sn	16 23 46.9	-0.7
RORO	**Rocca Rossa**	0.86	110	P	Pn	16 23 35.4	0.0
RORO				S	Sn	16 23 47.2	-0.4
ORIF	**Oris-en-Rattie**	0.91	304	*e*Pg	Pn	16 23 36.3	+0.2
	SNR=1.0						
ORIF				*e*Sg	Sg	16 23 48.4	+0.5
	comp=E,35nm,0.2s,SNR=1.0						
MONC	**Moncucco Torin**	0.96	47	P	Pn	16 23 37.2	+0.4
MONC				S	Sn	16 23 50.3	+0.2
LSD	**Lago del Serru**	1.05	7	P	Pg	16 23 38.8	+0.2
LSD				S	Sb	16 23 51.9	+0.4
LSD	**Lago del Serru**	1.05	7	P	Pg	16 23 38.9	+0.2
LSD				AML	AML		
	comp=E,160µm,0.2s						
LSD				AML	AML		
	comp=N,118µm,1.2s						
LSD				AML	AML		
	comp=E,160µm,0.2s						
LSD				AML	AML		
	comp=N,118µm,1.2s						
SMRF	**Simiane la Rot**	1.08	246	*e*Pg	Pg	16 23 40.3	+1.3
	SNR=1.0						
SMRF				*e*Sg	Sn	16 23 53.6	+0.7
	comp=N,120nm,0.3s,SNR=1.0						
LPG	**La Plagne**	1.09	353	*e*Pg	Pg	16 23 39.6	+0.3
	SNR=1.0						
LPG				*e*Sg	Sg	16 23 53.9	+0.2
	comp=N,30nm,0.3s						
ROTM	**Rocchetta Tana**	1.10	66	P	Pg	16 23 39.4	+0.1
LPL	**La Plagne**	1.11	352	*e*Pn	Pg	16 23 39.8	+0.1
	SNR=1.0						
LPL				*e*Sg	Sb	16 23 53.9	+0.7
	comp=N,20nm,0.2s,SNR=1.0						
LMR	**La Mourre**	1.13	196	*e*Pn	Pg	16 23 39.8	-0.1
	SNR=1.0						
LMR				*e*Sg	Sn	16 23 54.3	+0.3
	comp=N,51nm,0.2s,SNR=1.0						
PCP	**Piancastagn**	1.16	83	P	Pg	16 23 40.8	+0.3
PCP				S	Sg	16 23 56.2	+0.6
PCP				AML	AML		
	comp=E,128µm,1.6s						
PCP				AML	AML		
	comp=N,136µm,0.7s						
PCP				AML	AML		
	comp=N,136µm,0.7s						
PCP				AML	AML		
	comp=E,128µm,1.6s						
VIVF	**Saint-Julien-l**	1.68	286	*e*Pn	Pb	16 23 48.6	+0.1
	SNR=1.0						
VIVF				*e*Sn	Sn	16 24 08.9	+1.2
	comp=E,12nm,0.3s,SNR=1.0						
VIVF				*e*Sg	Sg	16 24 12.6	+0.3
	comp=E,14nm,0.3s						
LASF	**Ste Croix**	2.24	262	*e*Pn	Pn	16 23 55.6	+1.2
	SNR=1.0						
LASF	**Ste Croix**	2.24	262	*e*Pg	Pg	16 24 00.9	-0.3
LASF				*e*Sn	Sn	16 24 22.1	+0.5
	comp=E,4.9nm,0.3s,SNR=1.0						
CABF	**La Chapelle**	2.28	345	*e*Pn	Pn	16 23 55.9	+1.0
CABF	**La Chapelle**	2.28	345	*e*Pg	Pg	16 24 01.5	-0.3
	SNR=1.0						
CABF				*e*Sn	Sn	16 24 22.5	-0.1
CABF				*e*Sg	Sg	16 24 30.8	-0.6
	comp=E,2.1nm,0.3s						
PGF	**Pioggiola**	2.39	141	*e*Pn	Pn	16 23 58.1	+1.6
	SNR=1.0						
PGF				*e*Sn	Sn	16 24 25.0	-0.5
	comp=E,11nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	3.12	317	*e*Pn	Pn	16 24 07.4	+1.0
SMF	**Signal de Mont**	3.12	317	*e*Pg	Pg	16 24 16.5	-1.4
SMF				*e*Sg	Sg	16 24 57.0	-1.2
	comp=E,3.7nm,0.3s						
AVF	**Avril sur Loir**	3.46	315	*e*Pn	Pn	16 24 11.4	+0.3
AVF				*e*Sg	Sg	16 25 07.4	-1.9
	comp=E,3.2nm,0.4s						
CAF	**Calviac**	3.52	280	*e*Pn	Pn	16 24 12.5	+0.6
CAF				*e*Sn	Sn	16 24 53.3	+0.2
	comp=E,1.7nm,0.2s						
LOR	**Lormes**	3.58	324	*e*Pn	Pn	16 24 13.7	+1.0
	baz=140						
LOR	**Lormes**	3.58	324	*e*Pg	Pg	16 24 24.9	-1.7
	baz=149						
LOR				*e*Sn	Sn	16 24 53.6	-0.9
LOR				*e*Sg	Sg	16 25 11.5	-1.4
	comp=E,1.2nm,0.2s,baz=147						
SSF	**Saint Saulge**	3.58	319	*e*Pn	Pn	16 24 13.0	+0.3
SSF	**Saint Saulge**	3.58	319	*e*Pg	Pg	16 24 25.5	-1.1
SSF				*e*Sg	Sg	16 25 11.7	-1.2
	comp=E,2.4nm,0.4s						
MTLF	**Montolieu**	3.58	254	*e*Pn	Pn	16 24 13.3	+0.5
MTLF				*e*Sn	Sn	16 24 53.7	-0.9
MTLF				*e*Sg	Sg	16 25 11.6	-1.5
	comp=E,1.6nm,0.3s						
BGF	**Bois d'Agland**	3.59	308	*e*Pn	Pn	16 24 14.0	+1.1
	SNR=1.0						
BGF				*e*Sg	Sg	16 25 12.6	-0.8
	comp=E,5.7nm,0.3s						
HAU	**Haudompre**	3.61	354	*e*Pn	Pn	16 24 13.7	+0.4
HAU				*e*Sn	Sn	16 24 55.0	-0.5
HAU				*e*Sg	Sg	16 25 11.7	-2.5
	comp=E,1.6nm,0.2s						
RJF	**Les Rejaudoux**	3.96	285	*e*Pn	Pn	16 24 18.3	+0.3
RJF				*e*Sn	Sn	16 25 02.9	-1.0
SFTF	**Sexfontaines**	4.01	341	*e*Pn	Pn	16 24 18.9	+0.2
	baz=158						
SFTF				*e*Sn	Sn	16 25 04.4	-0.9
	comp=E,1.4nm,0.2s						

DJA 06 16:23:31.6±0.4**, 6°S**±2°×**13°1E**±°**, h108^{km}, M4.1**/6**, mb4.4**/2**,**
mB5.0/2**, MLv3.9**/6**, Mw(mB)4.3**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	1.87	320	P	Pn	16 24 03.4	+0.5
BNDI				S	Sn	16 24 27.8	+1.0
SAUI	**Saumlaki**	2.02	175	P	Pn	16 24 05.3	+0.5
SAUI				S	Sn	16 24 29.2	-0.9
FAKI	**Fak Fak**	3.22	20	P	Pn	16 24 21.0	+0.4
FAKI				S	Sn	16 24 58.2	-0.2
SWI	**Sorong**	5.07	2	P	Pn	16 24 45.9	+0.6
SWI				S	Sn	16 25 41.6	-1.1
RKPI	**Ransiki, Papua**	5.37	35	P	Pn	16 24 51.7	+2.2
RKPI				S	Sn	16 25 50.7	+0.6

ISCJB ***06*** *16:24:18.5±0.3, 24°.25N±0°.01×121°.85E±0°.02, h6^{km}±2^{km},*
Error ellipse: s-maj=2.6km s-min=1.9km az=29.5
JMA ***06*** *16:24:18.6±0.1, 24°.21N×121°.77E, h19^{km}±3^{km}, M2.6*
TAP ***06*** *16:24:18.8, 24°.26N×121°.80E, h16^{km}, ML3.3, B*
ISC 06 16:24:18.6±0.9**, 24°.24N**±0°.02×**121°.81E**±0°.02**, h14**^{km}±6^{km}**,**
n101, σ0^{s}.83/146**, 3C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	**Nanao**	0.20	345	⇓P	Pg	16 24 23.2	+0.1
	baz=342						
NANB				S	Sg	16 24 26.2	+0.1
	baz=342						
ENA	**Nanau**	0.20	343	⇓*i*P	Pg	16 24 23.2	+0.1
	baz=342						
ENA				S	Sg	16 24 26.4	+0.2
	baz=342						
NACB	**Ninganchiao**	0.20	252	⇓P	Pb	16 24 23.5	-0.6
	baz=242						
NACB				S	Sb	16 24 27.2	-0.6
	baz=242						
TWD	**Chiawan**	0.25	231	⇓*i*P	Pb	16 24 24.7	-0.2
	baz=232						
TWD				*i* S	Sb	16 24 29.0	-0.1
	baz=232						
ETLH	**Xiulin Townshi**	0.30	264	⇓*e*P	Pg	16 24 25.1	+0.3
	baz=261						
ETLH				*e*S	Sb	16 24 29.8	-0.9
	baz=261						
HWA	**Hwalien**	0.32	215	*e*P	Pg	16 24 24.6	-0.5
	baz=220						
TWC	**Suao**	0.37	6	⇓*i*P	Pg	16 24 26.2	+0.1
	baz=7.0						
TWC				S	Sg	16 24 31.3	+0.1
	baz=7.0						
ENLB	**Shoufeng**	0.38	209	*e*P	Pn	16 24 28.1	-1.6
	baz=216						
ENLB				*e*S	Sn	16 24 35.6	-1.2
	baz=216						
EOS1	**EOS1**	0.43	43	*e*P	Pb	16 24 28.1	+0.2
	baz=35						
NNSB	**Datong**	0.43	296	⇓P	Pb	16 24 27.6	-0.5
	baz=294						
NNSB				S	Sg	16 24 33.4	+0.3
	baz=294						
NNS	**Nan Shan**	0.44	297	⇓*i*P	Pb	16 24 27.9	-0.5
	baz=295						
NNS				S	Sb	16 24 34.0	-0.9
	baz=295						
NDT	**Datong Townshi**	0.45	324	⇓*i*P	Pb	16 24 27.9	-0.5
	baz=321						
NDT				S	Sb	16 24 34.2	-0.8
	baz=321						
ENTT	**Nioudou**	0.46	331	⇓*i*P	Pg	16 24 27.9	+0.2
	baz=329						
ENTT				S	Sg	16 24 34.1	+0.2
	baz=329						
TWE	**Neicheng**	0.50	345	⇓*i*P	Pg	16 24 28.6	+0.1
	baz=345						
TWE				*e*S	Sg	16 24 34.8	-0.3
	baz=345						
WHF	**Hehuan Shan**	0.50	260	⇓P	Pb	16 24 28.9	-0.6
	baz=258						
WHF				S	Sb	16 24 36.3	-0.5
	baz=258						
ILA	**Ilan**	0.53	354	*e*P	Pg	16 24 29.1	0.0
	baz=346						
ESL	**Shilin**	0.54	219	P	Pb	16 24 29.8	-0.1
	baz=223						
ESL				*e*S	Sn	16 24 38.6	-2.2
	baz=223						
TWT	**Tachien**	0.58	272	*e*P	Pb	16 24 30.6	0.0
	baz=270						
TWT				*e*S	Sb	16 24 38.6	-0.1
	baz=270						
YHNB	**Yeheng**	0.58	318	⇓P	Pb	16 24 30.2	-0.4
	baz=316						
YHNB				S	Sb	16 24 38.1	-0.8
	baz=316						
TDCB	**Techi**	0.59	272	⇓P	Pb	16 24 30.8	0.0
	baz=270						
TDCB				S	Sb	16 24 38.5	-0.6
	baz=270						
NSK	**Sanguang**	0.60	317	⇓P	Pg	16 24 30.4	+0.1
	baz=315						
NSK				S	Sg	16 24 38.0	-0.3
	baz=315						
CHGB	**Renai**	0.60	253	⇓P	Pb	16 24 30.9	-0.2
	baz=247						
CHGB				S	Sb	16 24 39.2	-0.4
	baz=247						
NWLT	**Wulai**	0.60	333	*e*P	Pg	16 24 30.5	0.0
	baz=331						
NTC	**Toucheng**	0.61	2	*e*P	Pg	16 24 30.1	-0.6
	baz=1.0						
EGS		0.62	11	*e*P	Pb	16 24 31.0	-0.1
	baz=17						
OWD	**Renai**	0.64	244	*e*P	Pb	16 24 31.5	-0.2
	baz=243						
EGFH	**Guangfu**	0.66	212	*e*P	Pb	16 24 32.1	+0.1
	baz=226						
TIPB	**Shuangxi**	0.73	1	⇓*i*P	Pb	16 24 32.8	-0.3
	baz=360						
TIPB				*e*S	Sb	16 24 41.5	-1.6
	baz=360						
NHDH	**Xindian Distri**	0.77	341	*e*P	Pn	16 24 34.6	-0.4
	baz=333						
TWA	**Mucha**	0.77	345	⇑P	Pg	16 24 33.7	+0.2
	baz=333						
TWA				*e*S	Sg	16 24 44.1	+0.5
	baz=333						
VWDT	**VWDT**	0.78	232	P	Pg	16 24 34.1	+0.4
	baz=238						
VWDT				S	Sn	16 24 45.3	-1.3
	baz=238						
TWB1	**Santiao Chiao**	0.79	12	*e*P	Pb	16 24 33.8	-0.3
	baz=12						
WHP	**Taichung City**	0.79	273	*e*P	Pn	16 24 34.6	-0.7
	baz=271						
TATO	**Taipei**	0.79	339	*e*P	Pb	16 24 34.0	-0.2
	baz=331						
WLTB	**Daxi**	0.79	321	*e*P	Pn	16 24 35.1	-0.3
	baz=319						
WLTB				*e*S	Sg	16 24 45.0	+0.5
	baz=319						
HGSD	**Ruisui**	0.82	205	*e*P	Pn	16 24 35.4	-0.4
	baz=197						
HGSD				*e*S	Sn	16 24 49.7	+2.0
	baz=197						
LIOB	**Emei**	0.83	300	*e*P	Pn	16 24 35.0	-0.9
	baz=298						
LIOB				S	Sg	16 24 46.0	+0.5
	baz=298						
NWF	**Wu-fen Shan**	0.83	358	*e*P	Pb	16 24 34.8	-0.1
	baz=349						
NWF				*e*S	Sb	16 24 45.2	-0.8
	baz=349						
WFSB	**Wu-fen Shan**	0.83	358	*e*P	Pb	16 24 34.6	-0.2
	baz=349						
WFSB				*e*S	Sb	16 24 45.4	-0.5
	baz=349						
NSTT	**Nanjuang**	0.83	298	⇑P	Pn	16 24 35.1	-0.8
	baz=297						
NSTT				*e*S	Sg	16 24 46.1	+0.4
	baz=297						
TAP	**Taipei**	0.84	341	*e*P	Pn	16 24 35.6	-0.5
	baz=331						
EHY	**Hungye**	0.85	211	*e*P	Pn	16 24 35.5	-0.7
	baz=224						
SSLB	**Suanglung**	0.90	240	⇓P	Pg	16 24 36.1	+0.1
	baz=250						
SSLB				*e*S	Sg	16 24 47.8	0.0
	baz=250						
SMLT	**Sun Moon Lake**	0.90	247	*e*P	Pn	16 24 36.4	-0.6
	baz=241						
SMLT				*e*S	Sn	16 24 49.8	-0.1
	baz=241						
NCU	**National Centr**	0.92	322	*e*P	Pn	16 24 36.8	-0.3
	baz=321						
NCU				*e*S	Sn	16 24 50.9	+0.6
	baz=321						
NCUH	**Zhongli**	0.92	322	*e*P	Pn	16 24 37.1	-0.1
	baz=321						
TYC	**Yuchr**	0.93	249	*e*P	Pn	16 24 36.9	-0.4
	baz=249						
SBCB	**Hsinchu**	0.93	307	*e*P	Pn	16 24 37.4	+0.1
	baz=306						
TWS1	**Kuangyinshan**	0.93	338	*e*P	Pn	16 24 37.1	-0.2
	baz=336						
TWS1				*e*S	Sn	16 24 50.3	-0.1
	baz=336						
YM01	**YM01**	0.93	347	*e*P	Pg	16 24 36.8	+0.2
	baz=345						
YM04	**YM04**	0.94	345	*e*P	Pg	16 24 36.9	0.0
	baz=344						
YM11	**YM11**	0.95	347	⇓*e*P	Pg	16 24 37.0	0.0
	baz=346						
YM05	**YM05**	0.95	347	*e*P	Pg	16 24 37.2	+0.2
	baz=345						
TWQ1	**Liyutan**	0.95	277	⇑*e*P	Pn	16 24 37.9	+0.3
	baz=277						
TWQ1				S	Sn	16 24 50.9	-0.1
	baz=277						
YULB	**Yu-li**	0.96	209	*e*P	Pb	16 24 36.4	-0.7
	baz=212						
YM08	**YM08**	0.97	348	*e*P	Pg	16 24 37.4	0.0
	baz=347						
NSY	**Sanyi**	0.97	281	*e*P	Pn	16 24 38.4	+0.6
	baz=280						
NSY				*e*S	Sn	16 24 52.6	+1.1
	baz=280						
NMLH	**Miaoli**	0.97	288	*e*P	Pn	16 24 39.0	+1.2
	baz=287						
NTST	**Danshui**	0.98	341	*e*P	Pg	16 24 37.8	+0.2
	baz=339						
TWF1	**Yuli**	1.00	208	*e*P	Pb	16 24 36.6	-1.1
	baz=223						
WHYT	**Xinyi Township**	1.02	238	*e*P	Pg	16 24 38.4	0.0
	baz=239						
PTSB	**Yuanli**	1.03	282	*e*P	Pg	16 24 39.4	+1.0
	baz=282						
TCU	**Taichung**	1.04	265	*e*P	Pg	16 24 40.0	+1.5
	baz=265						
TWY	**Chenhua**	1.05	350	*e*P	Pg	16 24 40.3	+1.4
	baz=333						
JYNG	**Yonagunijimaku**	1.06	78	P	Pn	16 24 39.2	+0.1
JYNG				*e*S	Sg	16 24 55.0	+2.1
WJS	**Zhushan**	1.07	247	*e*P	Pg	16 24 40.4	+1.2
	baz=241						
WDJ	**Dajia District**	1.07	276	*e*P	Pg	16 24 40.5	+1.3
	baz=276						
WDJ				*e*S	Sg	16 24 55.8	+2.6
	baz=276						
WNT	**Mingjian**	1.09	251	*e*P	Pg	16 24 41.1	+1.5
	baz=249						
WNT				*e*S	Sg	16 24 56.8	+3.1
	baz=249						
YOJ	**Yonaguni jima**	1.12	78	*e*P	Pb	16 24 39.9	+0.1
	baz=68						
YOJ				*e*S	Sg	16 24 55.4	+0.6
	baz=68						
YOJ	**Yonaguni jima**	1.12	78	P	Pb	16 24 39.9	+0.1
YOJ				S	Sg	16 24 56.3	+1.5
CHKT	**Chengkung**	1.20	200	*e*P	Pn	16 24 39.4	-1.6
	baz=186						
CHN5	**Tsauling**	1.21	239	*e*P	Pg	16 24 42.6	+0.6
	baz=242						
CHN5				S	Sg	16 25 01.3	+3.5
	baz=242						
WGK	**Gukeng**	1.26	245	*e*P	Pg	16 24 43.6	+0.7
	baz=246						
ELDTW	**Lidau**	1.27	215	*e*P	Pn	16 24 41.3	-0.8
	baz=204						
WDLH	**Douliu**	1.28	245	*e*P	Pg	16 24 44.0	+0.7
	baz=247						
RLNB	**Erlin**	1.37	256	*e*P	Pg	16 24 44.5	-0.4
	baz=257						
CHN4	**Tsaushan**	1.42	232	*e*P	Pg	16 24 46.0	+0.1
	baz=235						
TPUB	**Ta-pu**	1.43	229	*e*P	Pb	16 24 45.2	+0.2
	baz=232						
STYT	**Tauyuan**	1.44	222	*e*P	Pb	16 24 45.2	0.0
	baz=227						
STYT				*e*S	Sg	16 25 05.3	+0.4
	baz=227						
WTP	**Ta-pu**	1.47	228	*e*P	Pg	16 24 46.3	-0.6
	baz=231						
TWK	**Hsinying**	1.55	232	*e*P	Pb	16 24 47.3	+0.2
	baz=234						
TWGBT	**Beinan**	1.56	205	*e*P	Pb	16 24 46.8	-0.6
	baz=195						
TWG	**Pinlang**	1.56	206	*e*P	Pb	16 24 46.3	-1.0
	baz=195						
WSF	**Szhu**	1.57	248	*e*P	Pg	16 24 48.6	-0.1
	baz=260						
WSF				*e*S	Sg	16 25 09.5	+0.4
	baz=260						
SNST	**Tainan City**	1.57	230	*e*P	Pg	16 24 49.9	+1.1
	baz=233						
CHN1	**Nanshi**	1.57	228	*e*P	Pb	16 24 47.7	+0.2
	baz=231						
SLGT	**Liugui**	1.63	221	*e*P	Pb	16 24 48.5	-0.1
	baz=224						
IRIF	**Iriomote-Funau**	1.76	86	P	Pn	16 24 48.6	-0.1
IRIF				S	Sb	16 25 11.8	-0.8
ECL	**Taimali**	1.81	206	*e*P	Pb	16 24 50.6	-1.0
	baz=197						
SSD	**Sandimen**	1.83	216	*e*P	Pb	16 24 51.1	-0.9
	baz=232						
MASBT	**Mashibuluo**	1.94	214	*e*P	Pb	16 24 52.8	-1.0
	baz=217						
JKRS	**Kuro-shima**	2.01	90	P	Pn	16 24 52.7	+0.6
EAST	**Anshuo**	2.04	206	*e*P	Pn	16 24 53.5	+0.8
	baz=199						
JIJ	**Ishigaki jima**	2.13	86	P	Pn	16 24 53.9	0.0
JIJ				*e*S	Sn	16 25 20.4	+0.2
SCZT	**Fangliau**	2.15	211	*e*P	Pb	16 24 55.7	-1.7
	baz=199						
PNG	**Penghu**	2.17	253	*e*P	Pn	16 24 54.0	-0.3
	baz=255						
PHUB	**P'eng-hu**	2.17	251	*e*P	Pn	16 24 55.1	+0.8
	baz=253						
VWUC	**VWUC**	2.27	290	*e*P	Pn	16 24 55.3	-0.4
	baz=289						
JISG	**Ishigakijimahi**	2.31	81	P	Pn	16 24 56.6	+0.4
JISG				*e*S	Sn	16 25 24.5	0.0
MATB	**Ma-tsu**	2.54	319	*e*P	Pn	16 24 59.5	0.0
	baz=315						
KNMB	**Chin-men Tao**	3.13	275	*e*P	Pn	16 25 07.3	-0.2
	baz=274						

IDC ***06*** *16:26:34.5±1.3, 6°.43S×111°.25E, h0^{km}, mb3.8/4,*
mb1 4.0/6, mb1mx3.6/39, mbtmp3.8/6, ML3.9/2, MS4.2/2,
Ms1 4.2/2, ms1mx3.4/44, Error ellipse: s-maj=51.9km
s-min=22.3km az=37.0
ISCJB ***06*** *16:26:46.9±0.4, 7°.98S±0°.09×110°.14E±0°.03, h131^{km}±6^{km},*
mb3.7/6, Error ellipse: s-maj=15.7km s-min=4.9km az=4.5
NEIC ***06*** *16:26:46.8±0.7, 7°.60S×110°.10E, h138^{km}±7^{km}, mb4.1/3,*
Error ellipse: s-maj=19.2km s-min=10.3km az=188.0
DJA ***06*** *16:26:48.6±0.5, 8°S±8°×11°0E±°, h111^{km}±8^{km}, M3.7/13,*
MLv3.7/13
ISC 06 16:26:46.9±0.8**, 7°.89S**±0°.08×**110°.16E**±0°.03**, h136**^{km}±7^{km}**,**
n35, σ2^{s}.05/42**, mb3.7**/6**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	**Wanagama**	0.36	94	*e*Pn	Pn	16 27 06.3	+0.3
UGM				*e*Sn	Sn	16 27 20.8	+0.3
UGM	**Wanagama**	0.36	94	P	Pn	16 27 06.4	+0.4
WOJI	**Wonogiri, Jawa**	0.76	86	P	Pn	16 27 08.4	+0.1
SMRI	**Semarang**	0.88	19	*e*Pn	Pn	16 27 09.8	+0.4
SMRI				*e*Sn	Sn	16 27 24.4	-2.0
SMRI	**Semarang**	0.88	19	P	Pn	16 27 09.7	+0.4
PCJI	**Pacitan**	1.05	107	P	Pn	16 27 11.4	+0.6
KPJI	**Karang Pucung**	1.33	294	P	Pn	16 27 14.2	+0.5
NGJI	**Ngawi**	1.39	68	P	Pn	16 27 15.7	+1.5
NGJI				S	Sn	16 27 35.5	+0.5
PWJI	**Pagerwojo**	1.64	95	P	Pn	16 27 17.5	+0.6
CMJI	**Cimerak**	1.70	273	P	Pn	16 27 17.5	-0.1
CMJI				S	Sn	16 27 39.9	-1.2
CISI	**Cisompet, Garu**	2.34	278	*e*Pn	Pn	16 27 26.1	+0.6
CISI				*e*Sn	Sn	16 27 53.6	-1.5
CISI	**Cisompet, Garu**	2.34	278	P	Pn	16 27 26.1	+0.6

CISI				S	Sn	16 27 54.6	-0.5
GRJI	**Gresik**	2.50	67	P	Pn	16 27 28.4	+1.1
LEM	**Lembang**	2.73	293	P	Pn	16 27 31.1	+0.6
LEM	**Lembang**	2.73	293	Pn	Pn	16 27 33.6	+3.1
	4.5nm,0.3s,baz=147,slow=20,SNR=5.7						
LEM				Sn	Sn	16 28 06.0	+2.0
	4.0nm,0.3s,baz=156,slow=18,SNR=4.1						
GMJI	**Gumukmas**	3.28	97	P	Pn	16 27 38.2	+0.9
DBJI	**Dramaga**	3.63	291	P	Pn	16 27 43.3	+1.3
KMMI	**Kalianget**	3.87	78	P	Pn	16 27 46.0	+0.9
JAGI	**Jajag, Banyuwa**	4.00	99	*e*Pn	Pn	16 27 46.0	-0.8
JAGI	**Jajag, Banyuwa**	4.00	99	P	Pn	16 27 48.4	+1.6
XMIS	**Christmas Isla**	5.14	240	*e*Pn	Pn	16 28 01.3	-0.7
COCO	**West Island**	13.80	251	*e*Pn	Pn	16 29 57.4	+0.5
SOEI	**Soe**	14.07	99	*e*Pn	Pn	16 30 00.4	-0.1
FITZ	**Fitzroy Crossi**	18.17	125	*e*P	Pn	16 30 52.3	+1.7
	27nm,1.9s						
FITZ				S	S	16 34 04.7	-5.6
FITZ	**Fitzroy Crossi**	18.17	125	P	Pn	16 30 50.2	-0.4
	0.5nm,0.3s,baz=300,slow=8.1,SNR=9.2						
FITZ				S	S	16 34 04.7	-5.6
	0.1nm,0.3s,baz=360,slow=23,SNR=3.5						
WR1	**Warramunga Arr**	26.31	120	*e*P	P	16 32 11.9	+1.8
	11nm,1.5s						
WRA	**Warramunga Arr**	26.31	120	P	P	16 32 11.9	+1.8
	0.7nm,0.3s,baz=295,slow=11,SNR=6.8						
ASAR	**Alice Springs**	27.64	127	P	P	16 32 24.6	+2.4
	1.1nm,0.7s,baz=304,slow=8.2,SNR=12						
AS31	**Alice Springs**	27.65	127	*e*P	P	16 32 24.2	+2.1
	0.6nm,0.9s						
STKA	**Stephens Creek**	37.74	134	*e*P	P	16 33 52.8	+3.0
	1.0nm,0.6s						
STKA	**Stephens Creek**	37.74	134	P	P	16 33 53.2	+3.5
	3.6nm,0.5s,baz=315,slow=8.7,SNR=15						
JNU	**Nakatsue**	45.30	25	LR	LR	16 53 47.7	
	comp=Z,198nm,18.1s,baz=284,slow=38						
MK32	**Makanchi Array**	59.82	338	*e*P	P	16 36 34.7	-3.2
MKAR	**Makanchi Array**	59.82	338	P	P	16 36 34.7	-3.2
	0.1nm,0.4s,baz=130,slow=6.8,SNR=3.9						
SEY	**Seymchan**	77.62	18	LR	LR	17 13 00.4	
	comp=Z,252nm,20.8s,baz=160,slow=37						

IDC 06 16:28:21.9±1.8**,11°.71S×165°.48E,h0**^{km}**,mb3.8**/3**, mb1 4.1**/5**,mb1mx3.6**/36**,mbtmp4.0**/5**,ML3.7**/2**,Error ellipse: s-maj=40.9km s-min=32.2km az=132.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.89	292	Pn	Pn	16 29 50.8	+0.3
	4.2nm,0.3s,baz=288,slow=6.7,SNR=2.6						
DZM	**Mont Dzumac**	10.35	175	Pn	Pn	16 30 52.7	+0.9
	0.3nm,0.3s,baz=101,slow=14,SNR=2.1						
H11S2	**WAKE ISLAND Hy**	30.03	2	T	T	17 05 14.9	
	baz=184,slow=76,SNR=7.0						
H11S3	**WAKE ISLAND Hy**	30.04	2	T	T	17 05 18.8	
	baz=184,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	30.05	2	T	T	17 05 16.3	
	baz=184,slow=76,SNR=7.3						
WRA	**Warramunga Arr**	31.01	251	P	P	16 34 41.5	0.0
	2.6nm,0.9s,baz=83,slow=9.0,SNR=11						
H11N1	**WAKE ISLAND Hy**	31.25	3	T	T	17 06 48.1	
	baz=183,slow=74,SNR=2.9						
H11N3	**WAKE ISLAND Hy**	31.26	3	T	T	17 06 44.7	
	baz=330,slow=74,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	31.27	3	T	T	17 06 49.1	
ASAR	**Alice Springs**	32.26	244	P	P	16 34 52.2	-0.3
	0.6nm,0.8s,baz=78,slow=9.6,SNR=5.7						
ILAR	**Eielson Array**	84.22	19	P	P	16 40 54.9	-0.1
	0.2nm,0.5s,baz=235,slow=5.7,SNR=6.0						

IDC 06 16:28:38.0±2.2**,11°.44S×165°.25E,h0**^{km}**,mb3.8**/3**, mb1 4.1**/4**,mb1mx3.6**/35**,mbtmp4.0**/4**,ML4.3**/1**,Error ellipse: s-maj=69.0km s-min=32.9km az=144.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.58	290	Pn	Pn	16 30 03.5	+1.1
	8.9nm,0.3s,baz=224,slow=18,SNR=4.9						
WRA	**Warramunga Arr**	30.89	250	P	P	16 34 55.9	-0.7
	1.1nm,0.9s,baz=80,slow=9.0,SNR=3.4						
ASAR	**Alice Springs**	32.18	244	P	P	16 35 08.2	+0.2
	2.1nm,0.9s,baz=64,slow=10,SNR=10						
ILAR	**Eielson Array**	84.04	19	P	P	16 41 10.2	0.0
	0.4nm,0.6s,baz=241,slow=4.8,SNR=5.2						

TAP 06 16:30:43.8,24°.33N×121°.45E,h5^{km}**,ML1.1,C,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNSB	**Datong**	0.11	328	P	Pg	16 30 46.5	+0.3
	baz=328						
NNSB				S	Sg	16 30 48.3	+0.5
	baz=328						
NNS	**Nan Shan**	0.13	328	*e*S	Sg	16 30 48.8	+0.6
	baz=330						
ETLH	**Xiulin Townshi**	0.13	166	S	Sg	16 30 49.1	+0.9
	baz=172						
NACB	**Ninganchiao**	0.21	140	P	Pg	16 30 48.4	+0.5
	baz=140						
YHNB	**Yeheng**	0.34	349	*e*P	Pg	16 30 51.1	+0.6
	baz=350						
CHGB	**Renai**	0.37	223	*e*P	Pg	16 30 50.9	-0.1
	baz=222						
CHGB				S	Sg	16 30 57.4	+1.5
	baz=222						

TAP 06 16:30:46.0,24°.41N×121°.78E,h11^{km}**,ML1.5,C,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NANB	**Nanao**	0.04	307	*e*P	Pg	16 30 48.4	+0.2
	baz=306						
NANB				S	Sg	16 30 49.7	0.0
	baz=306						
ENA	**Nanau**	0.04	301	*i* P	Pg	16 30 48.4	+0.2
	baz=304						
ENA				*i* S	Sg	16 30 49.8	0.0
	baz=304						
TWC	**Suao**	0.21	16	*i* P	Pg	16 30 50.9	+0.3
	baz=13						
TWC				S	Sg	16 30 54.2	+0.5
	baz=13						
NACB	**Ninganchiao**	0.29	217	*e*P	Pg	16 30 51.5	-0.4
	baz=207						
NACB				S	Sg	16 30 56.2	+0.4
	baz=207						
NACB	**Ninganchiao**	0.29	217	S	Pg	16 30 51.5	-0.4
	baz=140						
ENTT	**Nioudou**	0.31	320	*i* P	Pg	16 30 52.9	+0.6
	baz=321						
ENTT				S	Sg	16 30 57.0	+0.5
	baz=321						
NDT	**Datong Townshi**	0.32	309	*e*P	Pg	16 30 53.0	+0.6
	baz=309						
NDT				S	Sg	16 30 57.5	+0.8
	baz=309						
TWE	**Neicheng**	0.33	341	P	Pg	16 30 53.0	+0.3
	baz=344						
TWE				S	Sg	16 30 58.0	+0.7
	baz=344						
ETLH	**Xiulin Townshi**	0.34	234	*e*P	Pb	16 30 53.9	-0.2
	baz=234						
ETLH				*e*S	Sb	16 30 58.6	-0.9
	baz=234						
EOS1	**EOS1**	0.35	65	*e*S	Sb	16 30 59.5	-0.2
	baz=57						
NNSB	**Datong**	0.37	274	*e*P	Pg	16 30 53.9	+0.5
	baz=274						
NNSB				S	Sg	16 30 58.3	0.0
	baz=274						
TWD	**Chiawan**	0.37	208	*e*P	Pg	16 30 53.4	+0.1
	baz=207						
TWD				*e*S	Sb	16 30 59.5	-0.7
	baz=207						
YHNB	**Yeheng**	0.46	305	P	Pb	16 30 55.7	-0.4
	baz=306						
YHNB				*e*S	Sg	16 31 01.9	+0.8
	baz=306						
YHNB	**Yeheng**	0.46	305	S	Pg	16 30 55.6	+0.6
	baz=350						
NSK	**Sanguang**	0.47	305	P	Pg	16 30 55.7	+0.4
	baz=305						
NSK				S	Sg	16 31 02.4	+0.7
	baz=305						
WHF	**Hehuan Shan**	0.54	241	*e*S	Sg	16 31 04.1	+0.2
	baz=241						
CHGB	**Renai**	0.65	238	*e*P	Pb	16 30 59.4	-0.2
	baz=238						
CHGB				S	Sb	16 31 08.4	-0.3
	baz=238						

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*IDC **06** 16:32:53.9±1.3, 10°.81S×165°.00E, h0^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.7/43, mbtmp3.8/9, ML4.1/1, Error ellipse: s-maj=45.4km s-min=21.4km az=132.0*

*ISCJB **06** 16:32:56.7±0.8, 10°.96S±0°.08×165°.0E±0°.1, h31^{km}, mb3.8/9, Error ellipse: s-maj=16.3km s-min=9.9km az=155.3*

*NEIC **06** 16:32:56.4±4.8, 10°.82S×165°.00E, h16^{km}±30^{km}, mb4.6/1, Error ellipse: s-maj=13.7km s-min=10.1km az=219.0*

ISC 06 16:32:58.4±0.9**,10°.8S**±0°.1**×165°.0E**±0°.1**,h31**^{km}**,n24, σ0**^{s}**.85**/18**,mb3.7**/9**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	11.25	173	*e*Pn	Pn	16 35 36.6	-0.7
DZM	**Mont Dzumac**	11.25	173	Pn	Pn	16 35 36.8	-0.5
	1.2nm,0.3s,baz=181,slow=18,SNR=9.0						
ONTNC	**Ouen Toro**	11.49	173	*e*Pn	Pn	16 35 41.5	+1.1
OUENC	**Ouen Island, N**	11.65	172	*e*Pn	Pn	16 35 41.9	-0.7
PINNC	**Pines Island,**	11.94	169	*e*Pn	Pn	16 35 45.7	-0.9
RABL	**Rabaul**	14.34	296	*e*Pn	Pn	16 36 18.5	-1.0
CTA	**Charters Tower**	20.26	241	P	P	16 37 32.6	+1.1
	5.6nm,0.8s,baz=66,slow=13,SNR=7.6						
H11S2	**WAKE ISLAND Hy**	29.19	3	T	T	17 09 34.6	
	baz=184,slow=76,SNR=8.5						
H11S3	**WAKE ISLAND Hy**	29.19	3	T	T	17 09 30.5	
	baz=184,slow=76,SNR=7.2						
H11S1	**WAKE ISLAND Hy**	29.21	3	T	T	17 09 31.0	
	baz=184,slow=76,SNR=8.2						
STKA	**Stephens Creek**	30.10	222	P	P	16 39 05.9	+0.6
	1.3nm,0.7s,baz=162,slow=5.6,SNR=3.9						
H11N1	**WAKE ISLAND Hy**	30.41	4	T	T	17 11 11.2	
	baz=182,slow=76,SNR=9.3						
H11N3	**WAKE ISLAND Hy**	30.42	4	T	T	17 11 04.9	
	baz=182,slow=76,SNR=9.6						
H11N2	**WAKE ISLAND Hy**	30.43	4	T	T	17 11 05.3	
	baz=182,slow=76,SNR=7.3						
WR1	**Warramunga Arr**	30.88	249	*e*P	P	16 39 12.2	-0.1
	18nm,1.8s						
WRA	**Warramunga Arr**	30.88	249	P	P	16 39 12.2	-0.1
	0.5nm,0.6s,baz=78,slow=9.1,SNR=7.0						
AS31	**Alice Springs**	32.24	243	*e*P	P	16 39 23.2	-1.1
	0.6nm,0.8s						
ASAR	**Alice Springs**	32.24	243	P	P	16 39 23.3	-1.1
	0.7nm,0.7s,baz=63,slow=9.7,SNR=10						
FITZ	**Fitzroy Crossi**	38.74	255	P	P	16 40 19.9	-0.2
	1.1nm,0.8s,baz=50,slow=8.4,SNR=3.8						
ILAR	**Eielson Array**	83.55	19	P	P	16 45 23.9	+0.8
	0.4nm,0.6s,baz=242,slow=5.2,SNR=9.3						
ILB	**Eielson Array**	83.55	19	*e*P	P	16 45 23.0	-0.1
MK32	**Makanchi Array**	92.88	317	*e*P	P	16 46 09.4	+1.0
MKAR	**Makanchi Array**	92.88	317	P	P	16 46 09.4	+1.0
	0.2nm,0.5s,baz=82,slow=6.2,SNR=5.4						
YKA	**Yellowknife Ar**	95.12	27	P	P	16 46 17.6	-0.7
	0.2nm,0.6s,baz=257,slow=5.4,SNR=3.6						

IDC 06 16:35:28.2±10.0**,10°.10S×164°.32E,h0**^{km}**,mb3.6**/4**, mb1 3.8**/4**,mb1mx3.5**/44**,mbtmp3.6**/4**,MS3.8**/1**,Ms1 3.8**/1**, ms1mx3.2**/41**,Error ellipse: s-maj=301.2km s-min=38.6km az=121.0,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	30.51	248	P	P	16 41 45.0	+1.5
	1.0nm,1.0s,baz=82,slow=8.6,SNR=4.7						
ASAR	**Alice Springs**	31.99	241	P	P	16 41 54.9	-1.6
	0.4nm,0.6s,baz=64,slow=10.0,SNR=7.6						
DAV	**Davao City (W)**	42.18	292	LR	LR	17 01 10.2	
	comp=Z,108nm,19.8s,baz=130,slow=37						
SONM	**Songino Array**	77.08	324	P	P	16 47 23.0	-0.6
	0.7nm,0.9s,baz=117,slow=5.0,SNR=4.0						
MKAR	**Makanchi Array**	91.88	317	P	P	16 48 39.1	+0.6
	0.2nm,0.8s,baz=97,slow=4.5,SNR=2.3						

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*ISCJB **06** 16:35:52.1±0.2, 11°.34S±0°.04×165°.79E±0°.04, h10^{km}, mb4.9/81, Error ellipse: s-maj=6.0km s-min=4.9km az=19.6*

*IDC **06** 16:35:52.3±0.7, 11°.33S×165°.83E, h0^{km}, mb4.5/20, mb1 4.7/22, mb1mx4.5/45, mbtmp4.5/22, ML4.9/2, Error ellipse: s-maj=20.1km s-min=14.4km az=121.0*

*NEIC **06** 16:35:53.8±0.3, 11°.29S×165°.66E, h10^{km}, mb5.0/40, Error ellipse: s-maj=7.8km s-min=6.2km az=102.0*

ISC 06 16:35:53.3±0.4**,11°.32S**±0°.05×**165°.87E**±0°.06**,h10**^{km}**,n159, σ1**^{s}**.32**/152**,mb5.0**/81**,3C,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	6.12	287	*e*P	Pn	16 37 25.0	+1.1
HNR				*e*S	Sn	16 38 30.0	-4.1
HNR	**Honiara**	6.12	287	Pn	Pn	16 37 24.5	+0.6
	31nm,0.3s,baz=153,slow=3.5,SNR=20						
HNR				Sn	Sn	16 38 32.6	-1.4
	22nm,0.3s,baz=155,slow=17,SNR=2.3						
MARNC	**Mare, Loyalty**	10.31	169	*e*Pn	Pn	16 38 22.3	+0.9
DZM	**Mont Dzumac**	10.70	177	*e*Pn	Pn	16 38 27.5	+0.6
	49nm,0.4s						
DZM				*e*LR	LR	16 40 57.7	
	comp=Z,1μm,22.4s						
DZM	**Mont Dzumac**	10.70	177	*e*Pn	Pn	16 38 27.5	+0.6
DZM				Sn	Sn	16 40 25.2	-1.7
DZM	**Mont Dzumac**	10.70	177	Pn	Pn	16 38 27.9	+1.0
	8.4nm,0.3s,baz=342,slow=14,SNR=30						
DZM				Sn	Sn	16 40 25.2	-1.7
	1.5nm,0.3s,baz=337,slow=22,SNR=4.2						
ONTNC	**Ouen Toro**	10.94	177	*e*Pn	Pn	16 38 31.8	+1.8
PINNC	**Pines Island,**	11.33	173	*e*Pn	Pn	16 38 36.4	+1.1
MSVF	**Nonsavu**	13.40	120	*e*Pn	P	16 39 12.4	-1.0
TARA	**Tarawa**	14.42	30	*e*Pn	P	16 39 21.6	-2.9
EIDS	**Eidsvold**	19.77	223	P	Pn	16 40 23.9	-1.4
	baz=20,SNR=9.9						
CTA	**Charters Tower**	20.78	243	P	Pn	16 40 35.6	-1.5
	73nm,0.9s,baz=70,slow=12,SNR=34						
CTAO	**Charters Tower**	20.78	243	*e*P	Pn	16 40 35.5	-1.7
	118nm,1.0s						
MTSU	**Mount Surprise**	21.90	249	P	P	16 40 47.8	+0.9
	baz=22,SNR=52						
RMQ	**Roma**	22.08	225	P	P	16 40 49.8	+1.1
	baz=22,SNR=51						
COEN	**Coen**	22.30	261	P	P	16 40 51.5	+0.4
	baz=22,SNR=7.9						
ARMA	**Armidale**	23.15	213	P	P	16 41 00.9	+0.8
	baz=23,SNR=11						
QLP	**Quilpie**	25.41	230	P	P	16 41 21.5	+0.2
	baz=25,SNR=13						
MGCD	**Mangrove Creek**	25.65	210	P	P	16 41 23.9	+0.6
	baz=26,SNR=4.2						
QIS	**Mount Isa**	26.84	247	P	P	16 41 34.3	0.0
	baz=27,SNR=11						
CMSA	**Cobar Meteorol**	27.43	220	P	P	16 41 39.9	+0.5
	baz=28,SNR=17						
URZ	**Urewera**	28.65	161	P	P	16 41 54.3	+4.1
	6.9nm,0.7s,baz=50,slow=7.9,SNR=5.1						
BKZ	**Black Stump Fm**	29.30	163	*e*P	P	16 41 56.9	+0.8
	51nm,1.3s						
H11S2	**WAKE ISLAND Hy**	29.64	2	T	T	17 12 57.5	
	baz=185						
H11S3	**WAKE ISLAND Hy**	29.64	2	T	T	17 12 49.7	
	baz=185						
H11S1	**WAKE ISLAND Hy**	29.65	2	T	T	17 12 55.2	
	baz=185						
STKA	**Stephens Creek**	30.32	224	P	P	16 42 05.5	+0.3
	baz=30,SNR=19						
STKA	**Stephens Creek**	30.32	224	*e*P	P	16 42 05.0	-0.2
	5.4nm,0.9s						
STKA	**Stephens Creek**	30.32	224	P	P	16 42 06.0	+0.8
	16nm,0.8s,baz=36,slow=8.1,SNR=27						
H11N1	**WAKE ISLAND Hy**	30.86	2	T	T	17 14 28.5	
	baz=180						
H11N3	**WAKE ISLAND Hy**	30.86	2	T	T	17 14 30.4	
	baz=180						
H11N2	**WAKE ISLAND Hy**	30.88	2	T	T	17 14 36.2	
	baz=180						
WRAB	**Tennant Creek**	31.49	250	*e*P	P	16 42 13.2	-2.5
	33nm,0.9s						
WB2	**Warramunga Arr**	31.49	250	*e*P	P	16 42 13.2	-2.4
WRA	**Warramunga Arr**	31.50	250	P	P	16 42 15.0	-0.8
	27nm,0.9s,baz=81,slow=9.0,SNR=39						
FOZ	**Fox Glacier**	32.27	175	*e*P	P	16 42 24.3	+2.2
	43nm,0.9s						
OXZ	**Oxford**	32.33	172	*e*P	P	16 42 24.3	+1.6
	28nm,0.9s						
RPZ	**Rata Peaks**	32.59	173	*e*P	P	16 42 26.0	+1.1
	35nm,0.8s						
RPZ	**Rata Peaks**	32.59	173	P	P	16 42 25.1	+0.1
	28nm,0.9s,baz=46,slow=6.5,SNR=10						
KDU	**Kakadu**	32.68	264	P	P	16 42 25.7	-0.4
	baz=33,SNR=3.2						
AS01	**Alice Springs**	32.74	244	*e*P	P	16 42 24.4	-2.1
AS31	**Alice Springs**	32.78	244	*e*P	P	16 42 25.1	-1.8
	5.0nm,1.1s						
ASAR	**Alice Springs**	32.78	244	P	P	16 42 25.6	-1.4
	18nm,1.1s,baz=75,slow=9.3,SNR=45						
HTT	**Hallett**	33.06	224	P	P	16 42 29.6	+0.3
	baz=33,SNR=16						
BBOO	**Buckleboo**	34.73	227	P	P	16 42 43.6	-0.1
	baz=35,SNR=7.5						
BNDI	**Bandanaira**	36.23	278	P	P	16 42 57.4	+0.5
	104nm,1.2s						
KNRA	**Kununurra**	36.31	259	P	P	16 42 57.4	-0.2
	baz=36,SNR=6.3						
WRKA	**Warakurna**	38.07	244	P	P	16 43 11.8	-0.7
	baz=38,SNR=10.0						
FITZ	**Fitzroy Crossi**	39.43	255	P	P	16 43 23.1	-0.7
	baz=39,SNR=23						
FITZ	**Fitzroy Crossi**	39.43	255	P	P	16 43 23.3	-0.6
	30nm,0.8s,baz=95,slow=6.7,SNR=46						
BATI	**Baumata**	41.45	267	P	P	16 43 41.8	+1.0
	16nm,0.9s						
BATI	**Baumata**	41.45	267	P	P	16 43 41.5	+0.7
	23nm,0.7s,baz=120,slow=3.5,SNR=8.6						
MMRI	**Maumere**	43.03	269	*e*P	P	16 43 50.3	-3.2
	31nm,1.0s						
MMRI	**Maumere**	43.03	269	P	P	16 43 54.7	+1.1
	35nm,1.6s						
BBSI	**Bau Bau**	43.19	274	P	P	16 43 56.0	+1.1
	9.0nm,1.2s						
PPT2	**Papeete2**	43.51	104	*e*LR	LR	16 56 25.2	
	comp=Z,391nm,22.5s						
EDFI	**Ende, Flores**	43.55	269	P	P	16 43 58.6	+0.7
	16nm,1.4s,7μm						
TBI	**Tubuai**	44.12	112	*e*LR	LR	16 56 40.0	
	comp=Z,583nm,26.2s						
MBWA	**Marble Bar**	45.22	251	*e*P	P	16 44 09.1	-2.0
	29nm,1.1s						
BKSI	**Bulukumba**	45.61	274	P	P	16 44 15.5	+1.2
	9.1nm,1.3s						
BNSI	**Bone**	45.80	275	P	P	16 44 17.0	+1.2
	55nm,1.4s						
SPSI	**Sidrap Palu**	46.22	275	P	P	16 44 20.3	+1.2
	13nm,1.4s						
PCI	**Palu**	46.85	279	P	P	16 44 25.4	+1.3
	76nm,1.1s						
MEEK	**Meekatharra**	46.94	244	P	P	16 44 24.8	+0.2
	baz=47,SNR=13						
PLAI	**Plampang**	47.38	268	P	P	16 44 27.9	-0.3
	51nm,1.4s,695nm						
KLBR	**Kellerberrin**	48.66	238	P	P	16 44 37.8	-0.1
	baz=49,SNR=4.6						
NWAO	**Narrogin (SRO)**	49.41	236	P	P	16 44 43.8	+0.1
	baz=49,SNR=4.1						
MORW	**Morawa**	49.60	241	P	P	16 44 45.4	+0.3
	baz=50,SNR=4.2						
SRBI	**Singaraja**	49.99	269	P	P	16 44 48.7	+0.5
	26nm,1.1s,370nm						
MUN	**Mundaring**	50.03	238	P	P	16 44 48.8	+0.4
	baz=50,SNR=5.1						
JAGI	**Jajag, Banyuwa**	50.98	268	*e*P	P	16 44 53.5	-2.3
	78nm,0.9s						
JAGI	**Jajag, Banyuwa**	50.98	268	P	P	16 44 55.6	-0.1
	95nm,1.1s						
NGJI	**Ngawi**	53.77	269	P	P	16 45 17.9	+1.4
	47nm,1.2s						
PCJI	**Pacitan**	53.93	268	P	P	16 45 18.4	+0.7
	223nm,1.1s,2μm						
MJAR	**Matsushiro Arr**	54.27	333	P	P	16 45 19.4	-0.4
	1.5nm,0.8s,baz=168,slow=7.9,SNR=3.9						
UGM	**Wanagama**	54.61	268	*e*P	P	16 45 21.1	-1.6
	124nm,1.1s						
UGM	**Wanagama**	54.61	268	P	P	16 45 24.1	+1.4
	111nm,1.1s						
CISI	**Cisompet, Garu**	57.32	268	*e*P	P	16 45 39.5	-2.6
	140nm,1.5s						
CISI	**Cisompet, Garu**	57.32	268	P	P	16 45 42.6	+0.5
	42nm,1.0s,933nm						
CBJI	**Citeko**	58.44	269	P	P	16 45 50.6	+0.7
DBJI	**Dramaga**	58.52	269	P	P	16 45 52.0	+1.5
	30nm,1.4s						
ASAJ	**Asahikawa**	59.09	341	P	P	16 45 53.9	0.0
	1.3nm,0.5s,baz=204,slow=5.5,SNR=5.0						
KASI	**Kota Agung**	60.90	270	P	P	16 46 08.5	+1.6
	18nm,1.0s						
MDSI	**Maura Dua**	61.39	271	P	P	16 46 11.2	+1.0
	9.9nm,1.6s						
LWLI	**Liwa**	61.41	270	P	P	16 46 11.2	+0.7
NJ2	**Nanjing**	62.30	315	*e*P	P	16 46 15.4	-0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
USRK	**Ussuriysk Ar.**	63.25	333	P	P	16 46 23.5	+1.5
	comp=Z,1.1nm,0.6s,baz=114,slow=5.4,SNR=2.5						
BKNI	**Bangkinang**	65.42	276	P	P	16 46 38.8	+1.9
	comp=Z,116nm,0.5s						
CN2	**Changchun**	66.04	329	*e*P	P	16 46 46.2	+5.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
IPM	**Ipoh**	66.39	280	*e*P	P	16 46 42.8	-0.4
	comp=Z,53nm,1.1s						
MNSI	**Mandailing Nat**	66.94	276	P	P	16 46 47.4	+0.7
	comp=Z,33nm,0.4s						
KLR	**Kul'dur**	67.36	337	P	P	16 46 50.2	+1.6
	comp=Z,1.7nm,0.7s,baz=146,slow=8.1,SNR=3.7						
ENH	**Enshi**	68.17	309	*e*P	P	16 46 52.8	-1.4
	comp=Z,31nm,1.4s						
GYA	**Guiyang**	68.67	304	⇑ *i*P	P	16 46 59.0	+1.5
GYA				PP	PP	16 49 32.8	+3.5
GYA				S	S	16 56 00.8	-0.2
GYA				SKS	SKSac	16 56 54.2	-3.3
GYA	**Guiyang**	68.67	304	SS	SS	17 00 25.6	-0.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,490nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,480nm,18.4s						
BJT	**Baijiatuau**	68.76	321	*e*P	P	16 46 56.5	-1.1
	comp=Z,14nm,1.1s						
GSI	**Gunungsitoli**	69.01	276	*e*P	P	16 46 58.5	-1.2
	comp=Z,60nm,1.2s						
GSI	**Gunungsitoli**	69.01	276	P	P	16 47 01.4	+1.7
PBKT	**Sadao Pong**	69.90	292	*e*P	P	16 47 03.8	-1.3
	comp=Z,8.4nm,1.0s						
XAN	**Xi'an**	70.40	312	P	P	16 47 08.7	+0.8
XAN				pP	PcP	16 47 23.1	-6.3
XAN				sP	pwP	16 47 30.3	+15
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				LR	LR		
	comp=N,200nm,18.4s						
XAN				LR	LR		
	comp=Z,250nm,20.6s						
XAN	**Xi'an**	70.40	312	*e*P	P	16 47 07.0	-0.9
	comp=Z,14nm,1.0s						
KMI	**Kunming**	71.37	301	P	P	16 47 15.2	+0.9
KMI				pP	pwP	16 47 20.8	-0.3
KMI				sP	PcP	16 47 24.7	-9.3
KMI				pmax	pmax		
	comp=Z,13nm,1.5s						
KMI				pmax	pmax		
	comp=Z,99nm,3.5s						
KMI	**Kunming**	71.37	301	*e*P	P	16 47 14.0	-0.2
	comp=Z,48nm,1.4s						
HHC	**Hu-ho-hao-te**	72.12	320	*e*P	P	16 47 19.7	+1.4
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CM01	**Chiang Mai Arr**	72.31	294	*e*P	P	16 47 19.6	-0.1
CM31	**Chiang Mai Arr**	72.33	294	*e*P	P	16 47 19.1	-0.8
CMAR	**Chiang Mai Arr**	72.33	294	P	P	16 47 21.2	+1.3
	comp=Z,3.9nm,0.9s,baz=112,slow=4.2,SNR=30						

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CHTO  Chiang Mai        72.45 294  eP      P        16 47 17.9  -2.7
      comp=Z,13nm,1.3s
CHTO  Chiang Mai        72.45 294  P       P        16 47 22.2  +1.6
      comp=Z,38nm,1.3s
CD2   Chengdu           72.87 307  P       P        16 47 22.6  -0.3
CD2                                pmax    pmax
      comp=Z,30nm,0.9s
CD2                                pmax    pmax
      comp=Z,130nm,3.7s
SEY   Seymchan          74.76 354  P       P        16 47 33.3  +0.1
      comp=Z,1.3nm,0.8s,baz=73,slow=19,SNR=4.1
LZH   Lanzhou           75.03 312  eP      P        16 47 35.4  -0.2
LZH                                pP      pwP      16 47 40.4  -2.1
LZH                                sP      PcP      16 47 43.6  -5.7
LZH                                PP      PP       16 50 26.7  +2.9
LZH                                pmax    pmax
      comp=Z,21nm,1.2s
LZH                                pmax    pmax
      comp=Z,82nm,4.9s
LZH                                LR      LR
      comp=N,390nm,16.3s
LZH                                LR      LR
      comp=E,340nm,16.4s
LZH                                LR      LR
      comp=Z,450nm,17.5s
ULN   Ulaanbaatar       78.59 324  eP      P        16 47 55.1  -0.3
      comp=Z,11nm,1.0s
QSPA  South Pole Qui    78.68 180  eP      P        16 47 55.1  -0.5
      comp=Z,17nm,1.0s
ANM   Nome              78.73  12  eP      P        16 47 56.9  +1.2
      comp=Z,16nm,1.5s
SONM  Songino Array     78.96 324  P       P        16 47 58.2  +0.8
      comp=Z,2.5nm,0.9s,baz=139,slow=6.0,SNR=9.4
SONA1 Songino Array     78.96 324  eP      P        16 47 56.8  -0.7
BILL  Bilibino          79.15   0  eP      P        16 47 58.2  +0.3
      comp=Z,10nm,1.0s
GTA   Gaotai            79.34 314 ⇑P      P        16 48 01.3  +1.6
GTA                                pP      PcP      16 48 06.9  -1.0
GTA                                sP      pwP      16 48 10.4  +3.8
GTA                                pmax    pmax
      comp=Z,2.0nm,1.5s
GTA                                pmax    pmax
      comp=Z,8.0nm,1.5s
GTA                                pmax    pmax
      comp=Z,100nm,6.2s
GTA                                LR      LR
      comp=N,210nm,16.8s
GTA                                LR      LR
      comp=E,160nm,17.5s
GTA                                LR      LR
      comp=Z,180nm,17.1s
RDOG  Red Dog Mine      82.27  11  eP      P        16 48 16.0  +1.4
      comp=Z,13nm,1.1s
MCK   McKinley          82.37  19  eP      P        16 48 15.7  +0.5
      comp=Z,26nm,1.4s
IM3   Indian Mountai    82.66  16  eP      P        16 48 16.8  +0.2
WRH   Wood River Hil    83.15  18  eP      P        16 48 19.1  -0.1
      comp=Z,13nm,1.2s
MDM   Murphy Dome       83.46  18  eP      P        16 48 20.2  -0.6
      comp=Z,7.7nm,1.0s
IL1   Eielson Array     83.74  18  eP      P        16 48 20.9  -1.3
ILAR  Eielson Array     83.74  18  P       P        16 48 21.8  -0.5
      comp=Z,1.1nm,0.5s,baz=239,slow=5.0,SNR=22
ILB   Eielson Array     83.74  18  eP      P        16 48 21.3  -0.9
SCRK  Sand Creek        84.14  20  eP      P        16 48 24.8  +0.3
      comp=Z,16nm,1.1s
AFDM  Forest Hills D    84.29  49  eP      P        16 48 24.0  -1.7
      comp=Z,16nm,1.5s
NV01  Mina Array Sit    86.11  50  eP      P        16 48 36.1  +1.0
NVAR  Mina Array Bea    86.11  50  P       P        16 48 37.2  +2.2
      comp=Z,1.0nm,0.7s,baz=236,slow=6.4,SNR=7.9
NV11  Mina Array Sit    86.22  50  eP      P        16 48 36.7  +1.2
      comp=Z,1.1nm,1.4s
TIXI  Tiksi             86.38 349  eP      P        16 48 35.6  +0.2
      comp=Z,5.4nm,0.9s
KVN   Kaiserville       86.45  49  eP      P        16 48 36.0  -0.7
      comp=Z,5.4nm,1.1s
WMQ   Urumqi            89.38 315  P       P        16 48 51.0  +0.6
WMQ                                pP      pwP      16 48 55.3  -2.1
WMQ                                sP      sP       16 49 02.4  +9.1
WMQ                                pmax    pmax
      comp=Z,16nm,1.1s
WMQ                                pmax    pmax
      comp=Z,930nm,6.7s
WMQ                                LR      LR
      comp=N,130nm,17.7s
WMQ                                LR      LR
      comp=E,150nm,22.3s
WMQ                                LR      LR
      comp=Z,160nm,21.1s
PSUT  Pine Spring       89.49  51  eP      P        16 48 52.3  +1.0
      comp=Z,5.9nm,1.2s
CCUT  Cedar City        89.62  52  eP      P        16 48 55.7  +3.8
      comp=Z,5.4nm,1.1s
U15A  North Rim         90.17  53  eP      P        16 48 54.8  +0.2
      comp=Z,8.6nm,1.1s
MTPU  Mount Pierson     90.64  51  eP      P        16 49 00.9  +4.1
      comp=Z,16nm,1.5s
SYO   Syowa Base        91.56 197⇑esP     sP       16 49 05.4  +2.6
MK01  Makanchi Array    93.79 317  eP      P        16 49 10.5  -0.3
MK31  Makanchi Array    93.81 317  eP      P        16 49 10.3  -0.6
MKAR  Makanchi Array    93.81 317  eP      P        16 49 10.3  -0.5
      comp=Z,24nm,0.8s
MKAR  Makanchi Array    93.81 317  P       P        16 49 11.8  +0.9
      comp=Z,3.3nm,0.8s,baz=88,slow=6.9,SNR=20
ZAA0  Zalesovo Array    93.85 324  eP      P        16 49 09.0  -1.8
      comp=Z,4.3nm,1.0s
ZALV  Zalesovo Beam     93.85 324  eP      P        16 49 09.2  -1.6
ZALV  Zalesovo Beam     93.85 324  P       P        16 49 11.3  +0.4
      comp=Z,1.9nm,0.9s,baz=134,slow=4.1,SNR=5.5
MAKZ  Makanchi          94.02 317  eP      P        16 49 11.4  -0.5
      comp=Z,6.5nm,1.0s
YKA   Yellowknife Ar    95.16  27  P       P        16 49 15.3  -1.3
      comp=Z,0.2nm,0.4s,baz=260,slow=4.6,SNR=3.9
KURK  Kurchatov         96.93 320  P       P        16 49 24.5  -0.5
KURBB Kurchatov Arra    96.97 320  P       P        16 49 24.5  -0.7
      comp=Z,0.3nm,0.5s,baz=102,slow=3.7,SNR=3.6
KSH   Kashi             97.02 309  P       P        16 49 27.1  +1.2
KSH                                sP      pwP      16 49 34.7  +1.9
KSH                                pmax    pmax
      comp=Z,430nm,6.3s
BVAR  Borovoye Array   102.24 322  P       Pdif     16 49 49.9  +1.2
      comp=Z,0.4nm,0.6s,baz=104,slow=6.1,SNR=3.1
ARCES ARCESS Array B   116.63 345  PKP     PKiKP    16 54 37.5  +0.3
      comp=Z,1.9nm,0.7s,baz=64,slow=2.2,SNR=16
KEST  Kesra            147.71 323  PKPbc   PKiKP    16 55 39.5  -1.4
      comp=Z,5.7nm,0.7s,baz=117,slow=2.5,SNR=5.0
ES19  SONSECA Array    150.31 344  ePKPbc  PKiKP    16 55 45.2  -1.0
ESDC  Sonseca Array    150.36 344  PKPbc   PKiKP    16 55 46.2   0.0
      comp=Z,1.3nm,0.7s,baz=43,slow=2.7,SNR=3.9
TOA0  Torodi Ar. Sit   164.43 278  ePKPdf  PKPdf    16 55 57.4  -1.0
TORD  Torodi Ar. Bea   164.43 278  PKP     PKPdf    16 55 59.5  +1.1
      comp=Z,1.0nm,0.9s,baz=350,slow=3.1,SNR=4.2
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*ISCJB **06** 16:38:16.4±0.5, 44°.19N±0°.02×8°.54E±0°.03, h14^{km}±2^{km}, Error ellipse: s-maj=3.9km s-min=3.1km az=155.6*

*ROM **06** 16:38:16.8±0.2, 44°.161N±0°.010×8°.572E±0°.009, h9^{km}±1^{km}, ML2.4/14*

*GEN **06** 16:38:17.3, 44°.16N×8°.58E, h8^{km}±2^{km}, Ml2.1*

*LDG **06** 16:38:17.1±0.1, 44°.15N×8°.58E, h8^{km}, Md2.7/1, Ml2.5/18, Error ellipse: s-maj=1.6km s-min=1.3km az=140.0*

ISC 06 16:38:16.5±0.9**, 44°.13N**±0°.02×**8°.58E**±0°.02**, h18**^{km}±2^{km}**, n50, σ1^{s}.45**/89**, Northern Italy**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op      ISC       h  m  s     ISC
FINB  Finale Ligure      0.19 283  P       Pb       16 38 21.1  +0.2
FINB                               S       Sb       16 38 24.1  +0.3
FINB                               AML     AML
      comp=E,666µm,0.3s
FINB                               AML     AML
      comp=N,670µm,0.7s
FINB                               AML     AML
      comp=E,666µm,0.3s
FINB                               AML     AML
      comp=N,670µm,0.7s
FINB                               AML     AML
      comp=E,666µm,0.3s
FINB                               AML     AML
      comp=N,670µm,0.7s
RORO  Rocca Rossa        0.37 267  P       Pg       16 38 24.4  +0.1
RORO                               S       Sg       16 38 29.7  +0.1
RORO  Rocca Rossa        0.37 267  P       Pg       16 38 24.4  +0.1
RORO                               S       Sg       16 38 29.7  +0.1
RORO                               AML     AML
      comp=E,1026µm,0.1s
RORO                               AML     AML
      comp=N,908µm,0.7s
RORO                               AML     AML
      comp=E,1026µm,0.1s
RORO                               AML     AML
      comp=N,908µm,0.7s
RORO                               AML     AML
      comp=E,1026µm,0.1s
RORO                               AML     AML
      comp=N,908µm,0.7s
PCP   Piancastagn        0.41 356  P       Pg       16 38 24.5  -0.5
PCP                                S       Sg       16 38 29.9  -0.8
PCP   Piancastagn        0.41 356  P       Pg       16 38 24.5  -0.5
PCP                                S       Sg       16 38 30.2  -0.5
PCP                                AML     AML
      comp=E,333µm,1.4s
PCP                                AML     AML
      comp=N,340µm,0.6s
PCP                                AML     AML
      comp=E,333µm,1.4s
PCP                                AML     AML
      comp=N,341µm,0.6s
PCP                                AML     AML
      comp=N,341µm,0.6s
PCP                                AML     AML
      comp=E,333µm,1.4s
GBOS  Grotte di Boss     0.55 282  P       Pb       16 38 27.6  +0.1
GBOS                               S       Sb       16 38 34.7  -0.3
IMI   Imperia            0.55 246  P       Pb       16 38 27.8  +0.3
IMI                                S       Sb       16 38 35.5  +0.5
IMI   Imperia            0.55 246  P       Pb       16 38 27.9  +0.4
IMI                                S       Sb       16 38 35.7  +0.7
MGRO  Montegrosso        0.57 261  P       Pb       16 38 28.0  +0.1
MGRO                               S       Sb       16 38 36.1  +0.5
GORR  Gorreto            0.69  47  P       Pg       16 38 30.7  +0.5
GORR                               S       Sg       16 38 40.1  +0.7
GORR  Gorreto            0.69  47  P       Pg       16 38 30.6  +0.5
GORR                               AML     AML
      comp=E,399µm,0.2s
GORR                               AML     AML
      comp=N,360µm,0.3s
GORR                               AML     AML
      comp=N,360µm,0.3s
GORR                               AML     AML
      comp=E,399µm,0.2s
MSSA  Maissana           0.70  74  P       Pg       16 38 30.3  +0.1
MSSA                               AML     AML
      comp=E,234µm,1.2s
MSSA                               AML     AML
      comp=N,308µm,1.1s
MSSA                               AML     AML
      comp=E,234µm,1.2s
MSSA                               AML     AML
      comp=N,308µm,1.1s
NEGI  Seborga            0.70 246  P       Pb       16 38 31.0  +1.0
NEGI                               S       Sb       16 38 40.1  +0.7
NEGI  Seborga            0.70 246  P       Pg       16 38 31.1  +0.9
NEGI                               S       Sb       16 38 40.5  +1.2
NEGI                               AML     AML
      comp=E,352µm,0.8s
NEGI                               AML     AML
      comp=N,374µm,0.5s
NEGI                               AML     AML
      comp=E,352µm,0.8s
NEGI                               AML     AML
      comp=N,374µm,0.5s
NEGI                               AML     AML
      comp=E,352µm,0.8s
NEGI                               AML     AML
      comp=N,374µm,0.5s
SAOF  Saorge             0.76 259  P       Pb       16 38 32.2  +1.1
SAOF                               S       Sg       16 38 42.8  +1.4
SAOF                               AML     AML
      comp=E,184µm,0.7s
SAOF                               AML     AML
      comp=N,296µm,0.3s
SAOF                               AML     AML
      comp=E,184µm,0.7s
SAOF                               AML     AML
      comp=N,296µm,0.3s
SAOF                               AML     AML
      comp=N,296µm,0.3s
SAOF                               AML     AML
      comp=E,184µm,0.7s
ENR   Entracque          0.84 277  P       Pb       16 38 32.8  +0.2
ENR                                S       Sb       16 38 44.6  +1.0
ENR                                AML     AML
      comp=E,372µm,0.8s
ENR                                AML     AML
      comp=N,483µm,0.4s
ENR                                AML     AML
      comp=N,483µm,0.4s
ENR                                AML     AML
      comp=E,372µm,0.8s
SBF   Sospel             0.87 252  ePg     Pb       16 38 33.8  +0.7
SBF                                eSn     Sg       16 38 46.5  +1.5
      comp=E,184nm,0.3s
PLMA  Palmaria, Port     0.92  95  P       Pb       16 38 33.9  +0.1
DOI   San Damiano        1.03 292  P       Pb       16 38 36.3  +0.6
DOI                                S       Sb       16 38 50.2  +1.2
DOI                                AML     AML
      comp=E,410µm,0.7s
DOI                                AML     AML
      comp=N,378µm,0.2s
DOI                                AML     AML
      comp=E,410µm,0.7s
DOI                                AML     AML
      comp=N,378µm,0.2s
PZZ   Stroppo            1.12 290  P       Pn       16 38 37.8  +0.4
PZZ                                S       Sb       16 38 52.6  +1.0
PZZ                                AML     AML
      comp=E,378µm,0.4s
PZZ                                AML     AML
      comp=N,372µm,0.3s
PZZ                                AML     AML
      comp=E,378µm,0.4s
PZZ                                AML     AML
      comp=N,372µm,0.3s
GRAM  Graiana            1.12  71  P       Pn       16 38 37.9  +0.6
GRAM                               AML     AML
      comp=E,196µm,0.4s
GRAM                               AML     AML
      comp=N,212µm,1.5s
GRAM                               AML     AML
      comp=N,212µm,1.5s
GRAM                               AML     AML
      comp=E,196µm,0.4s
BHB   Bricherasio        1.18 307  P       Pn       16 38 38.3  +0.2
BHB                                S       Sb       16 38 54.2  +0.9
BHB                                AML     AML
      comp=E,202µm,0.2s
BHB                                AML     AML
      comp=N,158µm,0.5s
BHB                                AML     AML
      comp=N,158µm,0.5s
BHB                                AML     AML
      comp=E,202µm,0.2s
SARO  Sassorosso         1.31  87  P       Pb       16 38 40.6   0.0
RSP   Reno Superiore     1.38 318  P       Pn       16 38 42.2  +1.2
MBDF  Montbardon         1.43 295  ePn     Pn       16 38 42.2  +0.6
MBDF  Montbardon         1.43 295  ePg     Pb       16 38 43.3  +0.7
MBDF                               eSn     Sn       16 38 59.5  -0.5
      comp=E,34nm,0.4s
MBDF                               eSg     Sb       16 39 02.6  +2.1
      comp=E,32nm,0.3s
PGF   Pioggiola          1.61 169  ePn     Pn       16 38 43.5  -0.6
PGF                                eSn     Sn       16 39 04.1  -0.4
      comp=E,11nm,0.3s
LSD   Lago del Serru     1.68 323  P       Pn       16 38 47.0  +1.8
LMR   La Mourre          1.70 243  ePn     Pn       16 38 45.2   0.0
LMR   La Mourre          1.70 243  ePg     Pg       16 38 49.2   0.0
LMR                                eSn     Sn       16 39 05.6  -0.9
LMR                                eSg     Sg       16 39 11.2  -0.2
      comp=E,13nm,0.2s
LPG   La Plagne          1.89 317  ePn     Pn       16 38 48.8  +0.8
LPG   La Plagne          1.89 317  ePg     Pb       16 38 52.1  +1.6
LPG                                eSn     Sn       16 39 10.0  -1.5
LPG                                eSg     Sb       16 39 16.9  +3.0
      comp=E,13nm,0.4s
LPL   La Plagne          1.91 317  ePn     Pn       16 38 48.5  +0.2
LPL   La Plagne          1.91 317  ePg     Pb       16 38 52.6  +1.7
LPL                                eSn     Sn       16 39 10.0  -2.0
LPL                                eSg     Sb       16 39 17.0  +2.5
      comp=E,11nm,0.4s
ORIF  Oris-en-Rattie     2.09 293  eP      Pn       16 38 53.1  +2.5
ORIF  Oris-en-Rattie     2.09 293  ePg     Pb       16 38 55.6  +1.8
ORIF                               eSn     Sn       16 39 14.9  -1.3
ORIF                               eSg     Sb       16 39 22.5  +3.1
      comp=E,12nm,0.3s
SMRF  Simiane la Rot     2.17 267  ePn     Pn       16 38 51.8   0.0
SMRF  Simiane la Rot     2.17 267  ePg     Pb       16 38 56.9  +1.6
SMRF                               eSn     Sn       16 39 17.2  -1.1
SMRF                               eSg     Sb       16 39 25.6  +3.7
      comp=E,21nm,0.3s
VIVF  Saint-Julien-l     2.89 286  ePn     Pn       16 39 02.0  +0.4
VIVF  Saint-Julien-l     2.89 286  ePg     Pb       16 39 10.6  +3.1
VIVF                               eSn     Sn       16 39 35.0  -0.9
      comp=E,1.0nm,0.2s
CABF  La Chapelle        3.04 325  ePn     Pn       16 39 03.4  -0.3
CABF                               eSn     Sn       16 39 37.8  -1.8
CABF                               eSg     Sg       16 39 52.2  -1.9
      comp=E,0.7nm,0.2s
LASF  Ste Croix          3.41 271  ePn     Pn       16 39 08.1  -0.6
LASF  Ste Croix          3.41 271  ePg     Pb       16 39 18.9  +2.7
LASF                               eSn     Sn       16 39 46.1  -2.5
      comp=E,0.7nm,0.2s
HINF  Hinteralfeld       3.88 342  ePn     Pn       16 39 14.6  -0.6
HINF                               eSg     Sg       16 40 18.1  -2.8
      comp=E,0.3nm,0.2s
HAU   Haudompre          4.17 339  ePn     Pn       16 39 19.5  +0.3
HAU                                eSn     Sn       16 40 04.8  -2.7
      comp=E,2.7nm,0.3s
SMF   Signal de Mont     4.18 309  ePn     Pn       16 39 18.9  -0.4
AVF   Avril sur Loir     4.54 308  ePn     Pn       16 39 24.3  +0.1
MTLF  Montolieu          4.68 262  ePn     Pn       16 39 26.3  +0.1
MTLF  Montolieu          4.68 262  ePg     Pg       16 39 43.5  -2.6
MTLF                               eSn     Sn       16 40 17.1  -2.9
MTLF                               eSg     Sg       16 40 42.4  -4.3
      comp=E,0.4nm,0.2s
BGF   Bois d'Agland      4.71 303  ePn     Pn       16 39 27.9  +1.3
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*IDC **06** 16:39:28.8±0.7, 10°.75S×164°.80E, h0^{km}, mb4.3/20, mb1 4.4/21, mb1mx4.3/44, mbtmp4.3/21, ML5.1/2, Error ellipse: s-maj=20.3km s-min=15.0km az=125.0*

*NEIC **06** 16:39:30.5±0.2, 10°.70S×164°.81E, h10^{km}, mb5.0/21, Error ellipse: s-maj=7.2km s-min=5.7km az=90.0*

*ISCJB **06** 16:39:31.6±0.3, 10°.79S±0°.04×164°.80E±0°.05, h31^{km}, mb4.6/44, Error ellipse: s-maj=7.1km s-min=6.1km az=151.3*

ISC 06 16:39:33.6±0.4**, 10°.76S**±0°.07×**164°.85E**±0°.07**, h31**^{km}**, n85, σ1^{s}.27**/80**, mb4.7**/44**, 1C, Santa Cruz Islands region**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op      ISC       h  m  s     ISC
HNR   Honiara            5.00 285  eP      Pn       16 40 48.0  +1.4
HNR   Honiara            5.00 285  ePn     Pn       16 40 46.6   0.0
HNR   Honiara            5.00 285  Pn      Pn       16 40 46.3  -0.3
      47nm,0.3s,baz=151,slow=6.7,SNR=9.7
HNR                                Sn      Sn       16 41 42.5  -0.9
      2.3nm,0.3s,baz=214,slow=4.9,SNR=2.1
MARNC Mare, Loyalty     11.09 164  ePn     Pn       16 42 09.5  -0.7
DZM   Mont Dzumac       11.35 172  ePn     Pn       16 42 14.1  +0.2
      201nm,1.7s
DZM   Mont Dzumac       11.35 172  ePn     Pn       16 42 13.6  -0.2
DZM   Mont Dzumac       11.35 172  Pn      Pn       16 42 14.6  +0.7
      22nm,0.3s,baz=12,slow=9.1,SNR=29
ONTNC Ouen Toro         11.59 173  ePn     Pn       16 42 17.7  +0.7
PINNC Pines Island,     12.05 168  ePn     Pn       16 42 23.9  +0.7
TARA  Tarawa            14.47  34  ePn     Pn       16 42 55.6  -0.8
MSVF  Nonsavu           14.55 120  ePn     Pn       16 42 60.0  +2.4
KWAJ  Kwajalein Atol    19.63   8  eP      P        16 43 59.6  -0.2
      256nm,0.9s
CTA   Charters Tower    20.16 240  P       P        16 44 06.5  +0.8
      7.5nm,0.6s,baz=64,slow=12,SNR=8.1
CTAO  Charters Tower    20.16 240  eP      P        16 44 05.8  +0.1
      117nm,0.9s
H11S2 WAKE ISLAND Hy    29.12   4  T       T        17 15 48.8
      baz=184,slow=76,SNR=43
H11S3 WAKE ISLAND Hy    29.13   4  T       T        17 15 55.3
      baz=184,slow=76,SNR=61
H11S1 WAKE ISLAND Hy    29.14   4  T       T        17 16 07.0
      baz=184,slow=76,SNR=65
URZ   Urewera           29.51 160  P       P        16 45 34.2  -0.9
      6.7nm,0.8s,baz=43,slow=9.7,SNR=3.1
STKA  Stephens Creek    30.05 222  eP      P        16 45 38.8  -1.2
      2.4nm,0.9s
STKA  Stephens Creek    30.05 222  P       P        16 45 38.9  -1.2
      10.0nm,0.9s,baz=15,slow=9.8,SNR=7.2
H11N1 WAKE ISLAND Hy    30.35   4  T       T        17 17 21.5
      baz=183,slow=76,SNR=18
H11N3 WAKE ISLAND Hy    30.35   4  T       T        17 17 27.1
      baz=183,slow=76,SNR=20
H11N2 WAKE ISLAND Hy    30.37   4  T       T        17 17 22.1
      baz=183,slow=76,SNR=21
WRA   Warramunga Arr    30.75 249  P       P        16 45 45.3  -1.2
      1.0nm,0.6s,baz=72,slow=9.3,SNR=6.0
ASAR  Alice Springs     32.13 242  P       P        16 45 56.6  -2.0
      1.9nm,0.5s,baz=65,slow=9.8,SNR=14
FITZ  Fitzroy Crossi    38.60 255  P       P        16 46 54.0  -0.2
      1.4nm,0.5s,baz=64,slow=8.1,SNR=6.6
PPT2  Papeete2          44.62 104  eLR     LR       17 00 14.0
      comp=Z,614nm,23.0s
TBI   Tubuai            45.26 112  eLR     LR       17 00 30.2
      comp=Z,953nm,29.2s
NWAO  Narrogin (SRO)    48.89 236  P       P        16 48 17.2  +0.3
      16nm,1.0s,baz=192,slow=1.7,SNR=3.5
MJAR  Matsushiro Arr    53.32 333  P       P        16 48 49.4  -0.6
      1.7nm,0.8s,baz=172,slow=9.3,SNR=4.0
RKT   Rikitea           58.52 111  eLR     LR       17 06 38.8
      comp=Z,586nm,26.8s
KSRS  Korea Array       59.15 326  P       P        16 49 31.1  -0.4
      2.0nm,0.7s,baz=143,slow=6.4,SNR=5.8
KSAR  Wonju Array Be    59.16 326  P       P        16 49 31.1  -0.5
NJ2   Nanjing           61.20 316  eP      P        16 49 44.3  -1.4
NJ2                                pmax    pmax
      comp=Z,6.0nm,0.7s
USRK  Ussuriysk Ar.     62.30 334  P       P        16 49 53.0  +0.1
      comp=Z,1.8nm,0.8s,baz=128,slow=9.3,SNR=4.5
IPM   Ipoh              65.30 280  eP      P        16 50 12.4  -0.9
      comp=Z,15nm,1.1s
ENH   Enshi             67.03 309  eP      P        16 50 24.4  +0.3
      comp=Z,22nm,1.4s
GYA   Guiyang           67.53 304⇑iP      P        16 50 29.0  +1.5
GYA                                PP      PP       16 52 59.6  +2.9
GYA                                S       S        16 59 24.2  +1.8
GYA                                SKS     SKSac    17 00 22.8  -0.8
GYA   Guiyang           67.53 304  SS      SS       17 03 46.6  +3.1
GYA                                pmax    pmax
      comp=Z,20nm,1.0s
GYA                                pmax    pmax
      comp=Z,120nm,6.7s
GYA                                LR      LR
      comp=N,490nm,18.2s
GYA                                LR      LR
      comp=E,520nm,18.6s
GYA                                LR      LR
      comp=Z,480nm,18.4s
PBKT  Sadao Pong        68.75 293  eP      P        16 50 35.2  +0.1
      comp=Z,5.9nm,1.0s
XAN   Xi'an             69.28 313  P       P        16 50 39.4  +1.2
XAN                                pP      pwP      16 50 53.3  +0.8
XAN                                sP      PcP      16 50 58.6  -3.1
XAN                                pmax    pmax
      comp=Z,6.0nm,1.1s
XAN                                LR      LR
      comp=E,190nm,18.4s
XAN                                LR      LR
      comp=Z,170nm,18.4s
XAN   Xi'an             69.28 313  eP      P        16 50 38.2   0.0
      comp=Z,8.2nm,1.1s
KMI   Kunming           70.22 302  P       P        16 50 46.7  +2.3
KMI                                pP      pP       16 50 52.2  -0.4
KMI                                sP      sP       16 50 55.2  -0.4
KMI                                pmax    pmax
      comp=Z,10.0nm,1.3s
KMI                                pmax    pmax
      comp=Z,110nm,3.1s
HHC   Hu-ho-hao-te      71.05 320  eP      P        16 50 49.7  +0.8
HHC                                pmax    pmax
      comp=Z,11nm,1.1s
CM01  Chiang Mai Arr    71.16 294  eP      P        16 50 49.1  -0.8
CM31  Chiang Mai Arr    71.19 294  eP      P        16 50 50.4  +0.3
CMAR  Chiang Mai Arr    71.19 294  P       P        16 50 50.4  +0.2
      comp=Z,2.2nm,0.9s,baz=121,slow=4.5,SNR=11
CHTO  Chiang Mai        71.30 294  eP      P        16 50 51.8  +1.0
      comp=Z,15nm,1.7s
CD2   Chengdu           71.73 308  eP      P        16 50 52.5  -0.7
LZH   Lanzhou           73.91 312  eP      P        16 51 09.7  +3.5
LZH                                pP      pP       16 51 15.6  +1.1
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LZH				sP	sP	16 51 18.4	+0.9
LZH				PP	PP	16 53 56.5	+4.9
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,90nm,4.3s						
LZH				LR	LR		
	comp=N,390nm,16.3s						
LZH				LR	LR		
	comp=E,340nm,16.4s						
LZH				LR	LR		
	comp=Z,450nm,17.5s						
SEY	Seymchan	74.10	354	P	P	16 51 07.3	+0.9
	comp=Z,1.0nm,0.6s,baz=234,slow=4.1,SNR=4.7						
GAMB	Gambell	76.45	10	*e*P	P	16 51 18.2	-1.7
	comp=Z,5.2nm,0.9s						
ULN	Ulaanbaatar	77.55	324	*e*P	P	16 51 25.1	-1.6
	comp=Z,7.8nm,1.0s						
SONM	Songino Array	77.92	324	P	P	16 51 28.1	-0.6
	comp=Z,2.3nm,0.8s,baz=145,slow=6.7,SNR=9.5						
SONA1	Songino Array	77.92	324	*e*P	P	16 51 27.0	-1.8
GTA	Gaotai	78.23	314	P	P	16 51 32.4	+1.7
GTA				pP	pP	16 51 37.2	-1.8
GTA				sP	PcP	16 51 39.8	-0.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ANM	Nome	78.41	13	*e*P	P	16 51 30.6	-0.3
	comp=Z,22nm,1.8s						
BILL	Bilibino	78.60	1	*e*P	P	16 51 31.5	-0.4
	comp=Z,8.2nm,0.9s						
QSPA	South Pole Qui	79.24	180	*e*P	P	16 51 36.5	+0.7
	comp=Z,42nm,1.5s						
CAST	Castle Rocks	80.95	18	*e*P	P	16 51 45.4	+0.6
	comp=Z,29nm,1.8s						
RDOG	Red Dog Mine	81.92	12	*e*P	P	16 51 51.0	+1.1
	comp=Z,48nm,2.0s						
ILAR	Eielson Array	83.53	19	P	P	16 51 57.8	-0.4
	comp=Z,2.3nm,0.7s,baz=239,slow=5.2,SNR=4.8						
ILB	Eielson Array	83.53	19	*e*P	P	16 51 57.8	-0.4
IL1	Eielson Array	83.53	19	*e*P	P	16 51 57.3	-0.9
SCRK	Sand Creek	83.95	20	*e*P	P	16 51 59.4	-1.2
	comp=Z,8.8nm,1.1s						
BEKR	Beckworth	85.42	48	*e*P	P	16 52 07.4	-1.2
	comp=Z,16nm,0.8s						
TIXI	Tiksi	85.64	349	*e*P	P	16 52 07.7	-1.1
	comp=Z,12nm,1.4s						
NVAR	Mina Array Bea	86.52	50	P	P	16 52 15.1	+1.0
	comp=Z,0.5nm,0.6s,baz=241,slow=7.1,SNR=4.0						
WMQ	Urumqi	88.27	315	P	P	16 52 23.9	+1.6
WMQ				pP	PcP	16 52 27.0	+3.1
WMQ				sP	pP	16 52 30.7	0.0
WMQ				pmax	pmax		
	comp=Z,26nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,540nm,5.9s						
WMQ				LR	LR		
	comp=N,120nm,14.3s						
WMQ				LR	LR		
	comp=E,230nm,21.9s						
WMQ				LR	LR		
	comp=Z,140nm,23.3s						
MK01	Makanchi Array	92.70	317	*e*P	P	16 52 42.4	-0.4
MK31	Makanchi Array	92.71	317	*e*P	P	16 52 42.9	+0.1
MKAR	Makanchi Array	92.71	317	*e*P	P	16 52 42.9	0.0
	comp=Z,24nm,0.8s						
MKAR	Makanchi Array	92.71	317	P	P	16 52 41.3	-1.5
	comp=Z,3.7nm,0.8s,baz=98,slow=6.0,SNR=21						
ZAA0	Zalesovo Array	92.81	324	*e*P	P	16 52 42.4	-0.6
	comp=Z,16nm,1.9s						
ZALV	Zalesovo Beam	92.81	324	*e*P	P	16 52 41.9	-1.2
ZALV	Zalesovo Beam	92.81	324	P	P	16 52 42.1	-0.9
	comp=Z,1.5nm,0.8s,baz=119,slow=5.2,SNR=6.6						
MAKZ	Makanchi	92.92	317	*e*P	P	16 52 43.5	-0.3
	comp=Z,6.5nm,1.0s						
PV01	Paradox Valley	93.89	52	*e*P	P	16 52 46.9	-1.9
	comp=Z,24nm,1.9s						
PDAR	Pinedale Array	94.01	47	P	P	16 52 50.4	+1.2
	comp=Z,0.5nm,0.8s,baz=248,slow=1.0,SNR=3.3						
YKA	Yellowknife Ar	95.13	27	P	P	16 52 52.2	-1.3
	comp=Z,0.2nm,0.5s,baz=256,slow=4.9,SNR=4.3						
NRIK	Noril'sk	95.55	340	P	P	16 52 55.6	+0.3
	comp=Z,1.0nm,0.2s,baz=149,slow=2.9,SNR=4.0						
KSH	Kashi	95.89	309	P	P	16 52 59.0	+1.3
KSH				sP	pP	16 53 06.0	-0.2
KSH				pmax	pmax		
	comp=Z,340nm,5.9s						
ARCES	ARCESS Array B	115.84	345	PKP	PKiKP	16 58 12.4	-0.3
	comp=Z,0.7nm,0.6s,baz=104,slow=2.9,SNR=4.4						
GERES	GERESS Array B	135.06	333	PKP	PKiKP	16 58 52.0	+0.4
	comp=Z,0.5nm,0.6s,baz=17,slow=1.0,SNR=3.9						
TORD	Torodi Ar. Bea	163.34	280	PKPab	PKPab	17 00 24.3	-0.8
	comp=Z,0.5nm,0.9s,baz=236,slow=0.5,SNR=3.1						

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*IDC **06** 16:40:05.6±1.6, 11°.31S×165°.16E, h0^{km}, mb4.3/7, mb1 4.5/8, mb1mx4.1/43, mbtmp4.3/8, ML4.4/1, Error ellipse: s-maj=54.0km s-min=26.2km az=143.0*

*NEIC **06** 16:40:06.6±0.8, 11°.34S×165°.22E, h10^{km}, mb4.3/2, Error ellipse: s-maj=23.0km s-min=12.6km az=144.0*

*ISCJB **06** 16:40:09.2±1.1, 11°.3S±0°.2×165°.1E±0°.2, h34^{km}, mb4.2/9, Error ellipse: s-maj=29.0km s-min=16.3km az=137.9*

ISC 06 16:40:10.7±1.3**, 11°.3S**±0°.2×**165°.1E**±0°.2**, h34**^{km}**, n16, σ0ˢ.85**/16**, mb4.3**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.44	290	Pn	Pn	16 41 30.0	+0.6
	13nm,0.3s,baz=139,slow=9.3,SNR=2.3						
WR1	Warramunga Arr	30.82	250	*e*P	P	16 46 24.2	+0.5
	11nm,1.0s						
WRA	Warramunga Arr	30.82	250	P	P	16 46 24.2	+0.5
	5.5nm,1.0s,baz=80,slow=9.0,SNR=4.5						
AS31	Alice Springs	32.13	243	*e*P	P	16 46 34.6	-0.6
	1.7nm,0.9s						
ASAR	Alice Springs	32.13	243	P	P	16 46 35.0	-0.2
	3.8nm,0.8s,baz=79,slow=9.0,SNR=5.7						
MJAR	Matsushiro Arr	53.95	333	P	P	16 49 30.4	-0.8
	2.7nm,0.8s,baz=150,slow=9.0,SNR=4.1						
MAJO	Matsushiro	53.95	333	*e*P	P	16 49 30.4	-0.8
ILAR	Eielson Array	83.97	19	P	P	16 52 37.2	+0.1
	0.8nm,0.6s,baz=239,slow=4.8,SNR=5.9						
ILB	Eielson Array	83.97	19	*e*P	P	16 52 36.9	-0.2
MK32	Makanchi Array	93.31	317	*e*P	P	16 53 22.0	-0.2
MKAR	Makanchi Array	93.31	317	P	P	16 53 22.0	-0.2
	1.3nm,0.7s,baz=94,slow=6.4,SNR=5.5						
ZALV	Zalesovo Beam	93.43	324	P	P	16 53 21.5	-1.0
	1.4nm,0.7s,baz=132,slow=4.4,SNR=3.5						
ZAA1	Zalesovo Array	93.43	324	*e*P	P	16 53 21.5	-1.0
YKA	Yellowknife Ar	95.50	27	P	P	16 53 33.7	+1.9
	0.3nm,0.6s,baz=258,slow=4.4,SNR=2.7						
ARA0	ARCESS Array S	116.45	345	*e*PKPdf	PKPdf	16 58 49.7	-0.8
ARCES	ARCESS Array B	116.45	345	PKP	PKPdf	16 58 49.7	-0.7
	1.4nm,0.8s,baz=56,slow=2.2,SNR=4.3						

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*IDC **06** 16:41:09.8±1.2, 11°.76S×165°.12E, h0^{km}, mb4.2/9, mb1 4.5/10, mb1mx4.1/43, mbtmp4.2/10, ML4.2/1, Error ellipse: s-maj=49.6km s-min=20.6km az=152.0*

*ISCJB **06** 16:41:13.8±0.5, 11°.68S±0°.10×164°.93E±0°.09, h34^{km}, mb4.2/14, Error ellipse: s-maj=14.9km s-min=11.0km az=151.6*

*NEIC **06** 16:41:14.5±4.7, 11°.60S×164°.98E, h27^{km}±33^{km}, mb4.6/6, Error ellipse: s-maj=16.1km s-min=12.8km az=189.0*

ISC 06 16:41:15.5±0.7**, 11°.6S**±0°.1×**165°.0E**±0°.1**, h34**^{km}**, n23, σ1ˢ.05**/23**, mb4.3**/14**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.37	293	Pn	Pn	16 42 32.4	-1.0
	7.9nm,0.3s,baz=16,slow=12,SNR=2.0						
DZM	Mont Dzumac	10.53	172	*e*Pn	Pn	16 43 44.5	+0.4
WR1	Warramunga Arr	30.58	250	*e*P	P	16 47 27.0	+0.6
	17nm,1.4s						
WRA	Warramunga Arr	30.58	250	P	P	16 47 27.0	+0.6
	6.4nm,1.1s,baz=79,slow=8.7,SNR=6.8						
AS31	Alice Springs	31.87	244	*e*P	P	16 47 35.9	-1.8
	0.9nm,0.8s						
ASAR	Alice Springs	31.87	244	P	P	16 47 37.5	-0.3
	1.6nm,0.8s,baz=60,slow=9.2,SNR=3.0						
FITZ	Fitzroy Crossi	38.50	256	*e*P	P	16 48 34.0	-0.8
	10nm,1.4s						
FITZ	Fitzroy Crossi	38.50	256	P	P	16 48 34.8	-0.1
	3.0nm,0.8s,baz=106,slow=9.5,SNR=2.2						
SONA0	Songino Array	78.64	324	*e*P	P	16 53 16.5	+2.3
SONM	Songino Array	78.64	324	P	P	16 53 16.5	+2.3
	0.8nm,0.8s,baz=137,slow=6.3,SNR=2.7						
ILAR	Eielson Array	84.26	19	P	P	16 53 44.0	+0.7
	1.7nm,0.6s,baz=237,slow=5.2,SNR=10						
ILB	Eielson Array	84.26	19	*e*P	P	16 53 44.1	+0.7
SCRK	Sand Creek	84.68	20	*e*P	P	16 53 45.8	+0.1
	8.8nm,1.1s						
AFDM	Forest Hills D	85.13	49	*e*P	P	16 53 48.7	+0.3
	4.0nm,1.0s						
NV01	Mina Array Sit	86.95	50	*e*P	P	16 53 57.1	-0.5
NVAR	Mina Array Bea	86.95	50	P	P	16 53 57.4	-0.3
	2.2nm,0.9s,baz=228,slow=7.9,SNR=5.7						
U15A	North Rim	91.04	53	*e*P	P	16 54 17.0	-0.1
	4.0nm,0.8s						
MK32	Makanchi Array	93.38	317	*e*P	P	16 54 27.3	0.0
MKAR	Makanchi Array	93.38	317	P	P	16 54 27.3	0.0
	0.9nm,0.8s,baz=83,slow=6.2,SNR=3.1						
YKA	Yellowknife Ar	95.80	27	P	P	16 54 37.1	-0.8
	0.5nm,0.8s,baz=257,slow=4.5,SNR=5.9						
YKB5	Yellowknife Ar	95.80	27	*e*P	P	16 54 37.0	-0.9
LTX	Lajitas	96.76	62	*e*P	P	16 54 42.2	-1.1
TXAR	Lajitas Array	96.76	62	P	P	16 54 42.2	-1.1
	0.4nm,0.7s,baz=235,slow=4.4,SNR=3.9						

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*ISCJB **06** 16:42:14.0±0.7, 11°.45S±0°.10×165°.48E±0°.09, h10^{km}, mb4.2/11, Error ellipse: s-maj=15.3km s-min=11.4km az=30.7*

*IDC **06** 16:42:13.7±1.2, 11°.44S×165°.70E, h0^{km}, mb4.2/9, mb1 4.4/11, mb1mx4.0/43, mbtmp4.3/11, ML4.3/2, Error ellipse: s-maj=35.1km s-min=24.8km az=128.0*

*NEIC **06** 16:42:13.9±1.3, 11°.71S×165°.91E, h10^{km}, mb4.6/2, Error ellipse: s-maj=52.2km s-min=16.2km az=140.0*

ISC 06 16:42:15.4±0.8**, 11°.4S**±0°.1×**165°.6E**±0°.1**, h10**^{km}**, n16, σ1ˢ.19**/16**, mb4.3**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.87	289	Pn	Pn	16 43 42.9	+0.4
	7.1nm,0.3s,baz=177,slow=18,SNR=1.4						
HNR	Honiara	5.87	289	*e*S	Sn	16 44 48.0	-1.9
DZM	Mont Dzumac	10.66	176	Pn	Pn	16 44 48.3	0.0
	2.4nm,0.3s,baz=128,slow=22,SNR=6.3						
WRAB	Tennant Creek	31.20	250	*e*P	P	16 48 35.1	-0.1
	7.7nm,1.0s						
WRA	Warramunga Arr	31.21	250	P	P	16 48 35.2	-0.1
	4.2nm,0.9s,baz=82,slow=9.2,SNR=6.0						
ASAR	Alice Springs	32.49	244	P	P	16 48 46.5	-0.1
	1.3nm,1.0s,baz=76,slow=5.3,SNR=4.5						
ASAJ	Asahikawa	59.06	341	P	P	16 52 16.8	+1.1
	6.4nm,0.8s,baz=148,slow=2.8,SNR=5.3						
CMAR	Chiang Mai Arr	72.09	294	P	P	16 53 42.2	+1.7
	1.1nm,0.8s,baz=124,slow=4.6,SNR=6.0						
ULN	Ulaanbaatar	78.48	324	*e*P	P	16 54 17.9	+1.0
	4.9nm,0.8s						
SONM	Songino Array	78.84	324	P	P	16 54 20.4	+1.5
	1.6nm,0.8s,baz=144,slow=7.9,SNR=6.8						
ILAR	Eielson Array	83.88	19	P	P	16 54 45.0	-0.1
	1.6nm,0.8s,baz=238,slow=5.5,SNR=7.4						
MKAR	Makanchi Array	93.65	317	P	P	16 55 32.1	-0.1
	1.2nm,0.7s,baz=96,slow=6.3,SNR=6.2						
ZALV	Zalesovo Beam	93.73	324	P	P	16 55 31.3	-1.1
	0.6nm,0.5s,baz=74,slow=5.4,SNR=3.8						
YKA	Yellowknife Ar	95.35	27	P	P	16 55 37.6	-1.9
	0.4nm,0.7s,baz=254,slow=4.7,SNR=4.1						
ARCES	ARCESS Array B	116.62	345	PKP	PKiKP	17 00 59.4	+0.1
	2.8nm,1.0s,baz=72,slow=1.5,SNR=4.9						
KEST	Kesra	147.58	322	PKPbc	PKiKP	17 02 01.2	-1.5
	6.6nm,0.8s,baz=315,slow=4.3,SNR=3.9						

IDC 06 16:47:12.2±1.6**, 11°.50S**×**165°.79E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.6**/39**, mbtmp3.7**/5**, ML3.4**/1**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx3.1**/45**, Error ellipse: s-maj=51.4km s-min=29.2km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.54	177	Pn	Pn	16 49 44.7	+0.1
	0.3nm,0.3s,baz=305,slow=19,SNR=6.6						
RAO	Raoul Island	23.30	142	LR	LR	17 00 26.9	
	comp=Z,443nm,18.6s,baz=114,slow=34						
WRA	Warramunga Arr	31.37	251	P	P	16 53 34.5	-0.5
	1.0nm,0.7s,baz=80,slow=9.0,SNR=7.5						
ASAR	Alice Springs	32.63	244	P	P	16 53 45.7	-0.4
	1.2nm,0.8s,baz=65,slow=10.0,SNR=11						
ILAR	Eielson Array	83.92	18	P	P	16 59 42.9	-0.9
	0.2nm,0.7s,baz=240,slow=5.8,SNR=3.9						
MKAR	Makanchi Array	93.88	317	P	P	17 00 33.5	+1.8
	0.3nm,0.9s,baz=108,slow=4.7,SNR=3.3						

IDC 06 16:47:32.2±1.9**, 10°.85S**×**165°.34E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/39**, mbtmp3.8**/4**, ML4.1**/1**, Error ellipse: s-maj=53.3km s-min=32.9km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.21	175	Pn	Pn	16 50 13.2	-0.7
	1.3nm,0.3s,baz=232,slow=19,SNR=4.9						
WRA	Warramunga Arr	31.18	249	P	P	16 53 53.5	+0.2
	0.8nm,0.8s,baz=79,slow=9.1,SNR=4.4						
ASAR	Alice Springs	32.52	243	P	P	16 54 05.0	-0.1
	0.8nm,0.6s,baz=62,slow=10,SNR=12						
ILAR	Eielson Array	83.46	19	P	P	17 00 01.4	0.0
	0.3nm,0.7s,baz=242,slow=5.2,SNR=4.3						

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*ISCJB **06** 16:47:55.9±0.9, 11°.25S±0°.08×165°.7E±0°.1, h10^{km}, mb3.9/7, Error ellipse: s-maj=21.4km s-min=10.4km az=161.8*

*IDC **06** 16:47:55.9±1.6, 11°.21S×165°.79E, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx3.8/39, mbtmp4.0/7, ML4.3/1, Error ellipse: s-maj=46.9km s-min=26.7km az=117.0*

*NEIC **06** 16:47:57.4±0.6, 11°.14S×165°.74E, h10^{km}, mb4.4/2, Error ellipse: s-maj=15.6km s-min=8.3km az=77.0*

ISC 06 16:47:57.4±1.1**, 11°.2S**±0°.1×**165°.7E**±0°.2**, h10**^{km}**, n16, σ0ˢ.90**/16**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	10.51	168	*e*Pn	Pn	16 50 28.0	-0.2
DZM	Mont Dzumac	10.88	176	Pn	Pn	16 50 33.5	+0.1
	2.2nm,0.3s,baz=8.6,slow=23,SNR=6.9						
ONTNC	Ouen Toro	11.12	176	*e*Pn	Pn	16 50 37.1	+0.6
PINNC	Pines Island,	11.52	172	*e*Pn	Pn	16 50 42.4	+0.4
EIDS	Eidsvold	19.81	222	*e*P	Pn	16 52 28.9	-0.8
	24nm,1.4s						
STKA	Stephens Creek	30.35	223	P	P	16 54 10.4	+0.8
	0.7nm,0.4s,baz=2.4,slow=6.6,SNR=3.4						
WR1	Warramunga Arr	31.43	250	*e*P	P	16 54 18.6	-0.6
	4.1nm,0.8s						
WRA	Warramunga Arr	31.43	250	P	P	16 54 18.6	-0.6
	1.9nm,0.9s,baz=81,slow=9.4,SNR=7.4						
ASAR	Alice Springs	32.73	243	P	P	16 54 29.3	-1.3
	0.4nm,0.7s,baz=67,slow=10,SNR=3.1						
CM01	Chiang Mai Arr	72.11	294	*e*P	P	16 59 22.8	+0.2
CM31	Chiang Mai Arr	72.14	294	*e*P	P	16 59 22.6	-0.2
CMAR	Chiang Mai Arr	72.14	294	P	P	16 59 24.9	+2.0
	0.8nm,0.4s,baz=120,slow=4.5,SNR=13						
ILAR	Eielson Array	83.62	19	P	P	17 00 25.1	-0.6
	0.9nm,0.8s,baz=236,slow=5.4,SNR=7.1						
ILB	Eielson Array	83.62	19	*e*P	P	17 00 24.8	-0.9
MK32	Makanchi Array	93.58	317	*e*P	P	17 01 14.5	+0.6
MKAR	Makanchi Array	93.58	317	P	P	17 01 14.5	+0.6
	0.7nm,0.7s,baz=97,slow=5.6,SNR=6.9						

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*IDC **06** 16:49:02.7±1.5, 11°.43S×165°.31E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.8/38, mbtmp3.9/8, ML4.5/1, Error ellipse: s-maj=48.1km s-min=23.6km az=136.0*

*NEIC **06** 16:49:04.5±0.6, 11°.29S×165°.19E, h10^{km}, mb4.0/3, Error ellipse: s-maj=13.3km s-min=10.7km az=88.0*

*ISCJB **06** 16:49:06.2±0.7, 11°.36S±0°.09×165°.1E±0°.1, h34^{km}, mb3.8/9, Error ellipse: s-maj=15.2km s-min=12.5km az=176.7*

ISC 06 16:49:08.0±0.9**, 11°.3S**±0°.1×**165°.1E**±0°.1**, h34**^{km}**, n23, σ1ˢ.06**/17**, mb3.9**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.43	290	*e*Pn	Pn	16 50 26.0	-0.7
HNR	Honiara	5.43	290	Pn	Pn	16 50 26.6	-0.1
	12nm,0.3s,baz=222,slow=18,SNR=2.7						
DZM	Mont Dzumac	10.78	173	*e*Pn	Pn	16 51 39.5	-0.6
RABL	Rabaul	14.66	298	*e*Pn	Pn	16 52 32.2	-1.0
PATS	Pohnpei	19.26	339	*e*P	P	16 53 28.7	-1.1
	192nm,1.3s						
H11S2	WAKE ISLAND Hy	29.65	3	T	T	17 25 31.5	
	baz=181,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	29.66	3	T	T	17 25 37.4	
	baz=181,slow=76,SNR=3.3						
H11S1	WAKE ISLAND Hy	29.67	3	T	T	17 25 37.6	
	baz=181,slow=76,SNR=3.4						
STKA	Stephens Creek	29.84	223	*e*P	P	16 55 12.0	-0.2
	3.5nm,1.8s						
STKA	Stephens Creek	29.84	223	P	P	16 55 12.6	+0.3
	1.9nm,0.7s,baz=68,slow=7.9,SNR=4.4						
WR1	Warramunga Arr	30.83	250	*e*P	P	16 55 21.7	+0.6
	4.1nm,0.8s						
WRA	Warramunga Arr	30.83	250	P	P	16 55 21.7	+0.6
	1.4nm,0.7s,baz=82,slow=9.2,SNR=9.1						
H11N1	WAKE ISLAND Hy	30.88	3	T	T	17 27 03.1	
	baz=182,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy	30.88	3	T	T	17 27 05.2	
	baz=182,slow=76,SNR=4.5						
H11N2	WAKE ISLAND Hy	30.89	3	T	T	17 27 09.0	
	baz=182,slow=76,SNR=4.5						
AS31	Alice Springs	32.14	243	*e*P	P	16 55 32.3	-0.3
	1.0nm,0.6s						
ASAR	Alice Springs	32.14	243	P	P	16 55 32.6	-0.1
	1.2nm,0.6s,baz=64,slow=10,SNR=12						
CMAR	Chiang Mai Arr	71.67	294	P	P	17 00 28.2	+1.2
	0.4nm,0.3s,baz=130,slow=3.6,SNR=2.9						
SONA0	Songino Array	78.53	324	*e*P	P	17 01 08.1	+2.0
SONM	Songino Array	78.53	324	P	P	17 01 08.1	+2.0
	0.4nm,0.9s,baz=123,slow=5.3,SNR=2.5						
ILAR	Eielson Array	83.95	19	P	P	17 01 34.4	0.0
	0.6nm,0.6s,baz=240,slow=5.0,SNR=7.8						
YKA	Yellowknife Ar	95.48	27	P	P	17 02 28.5	-0.5
	0.1nm,0.5s,baz=258,slow=4.4,SNR=2.8						
YKB5	Yellowknife Ar	95.48	27	*e*P	P	17 02 27.6	-1.4

IDC 06 16:51:59.2±1.6**, 10°.70S**×**165°.38E, h0**^{km}**, mb3.6**/5**, mb1 3.9**/7**, mb1mx3.6**/41**, mbtmp3.8**/7**, ML4.0**/2**, Error ellipse: s-maj=39.9km s-min=29.1km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.50	283	Pn	Pn	16 53 24.2	+1.9
	13nm,0.3s,baz=350,slow=5.5,SNR=4.7						
DZM	Mont Dzumac	11.35	175	Pn	Pn	16 54 44.7	+1.8
	0.5nm,0.3s,baz=302,slow=19,SNR=4.3						
WRA	Warramunga Arr	31.27	249	P	P	16 58 20.4	-0.7
	0.5nm,0.7s,baz=82,slow=10.0,SNR=3.7						
ASAR	Alice Springs	32.63	243	P	P	16 58 32.1	-0.9
	0.5nm,0.9s,baz=66,slow=9.8,SNR=3.7						
CMAR	Chiang Mai Arr	71.65	294	P	P	17 03 24.3	+1.0
	0.2nm,0.4s,baz=117,slow=5.4,SNR=4.2						
ILAR	Eielson Array	83.30	19	P	P	17 04 27.3	-0.2
	0.4nm,0.5s,baz=240,slow=4.7,SNR=7.0						
MKAR	Makanchi Array	93.03	317	P	P	17 05 14.2	-0.7
	0.2nm,0.7s,baz=87,slow=3.0,SNR=3.3						

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*IDC **06** 16:52:34.4±1.5, 10°.94S×164°.78E, h0^{km}, mb4.0/7, mb1 4.1/9, mb1mx3.8/42, mbtmp4.0/9, ML4.0/2, Error ellipse: s-maj=38.5km s-min=24.7km az=118.0*

*NEIC **06** 16:52:35.8±0.6, 11°.00S×164°.82E, h10^{km}, mb4.3/2, Error ellipse: s-maj=14.1km s-min=10.8km az=105.0*

*ISCJB **06** 16:52:37.4±0.8, 11°.11S±0°.09×164°.7E±0°.1, h31^{km}, mb3.9/8, Error ellipse: s-maj=17.9km s-min=13.6km az=1.6*

ISC 06 16:52:39.1±1.0**, 11°.0S**±0°.1×**164°.8E**±0°.1**, h31**^{km}**, n30, σ0ˢ.78**/24**, mb3.8**/8**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.02	287	*e*Pn	Pn	16 53 52.8	+0.4
HNR	Honiara	5.02	287	Pn	Pn	16 53 52.8	+0.4
	6.4nm,0.3s,baz=169,slow=12,SNR=2.8						
DZM	Mont Dzumac	11.13	172	*e*Pn	Pn	16 55 15.7	-0.7
DZM	Mont Dzumac	11.13	172	Pn	Pn	16 55 17.1	+0.8
	0.8nm,0.3s,baz=342,slow=20,SNR=3.6						
CTA	Charters Tower	20.01	241	*e*P	P	16 57 10.1	+0.5
CTA	Charters Tower	20.01	241	P	P	16 57 10.1	+0.5
	7.5nm,0.9s,baz=66,slow=14,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.35	4	T	T	17 28 28.5	
	baz=184,slow=76,SNR=4.3						
H11S3	WAKE ISLAND Hy	29.36	4	T	T	17 28 44.2	
	baz=184,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	29.37	4	T	T	17 28 26.8	
	baz=184,slow=76,SNR=4.8						
STKA	Stephens Creek	29.85	222	P	P	16 58 44.4	+0.6
STKA	Stephens Creek	29.85	222	P	P	16 58 44.4	+0.6
	1.3nm,0.7s,baz=32,slow=9.8,SNR=2.9						
H11N1	WAKE ISLAND Hy	30.58	4	T	T	17 31 27.1	
	baz=184,slow=77,SNR=5.7						
H11N3	WAKE ISLAND Hy	30.58	4	T	T	17 31 33.7	
	baz=184,slow=77,SNR=5.1						
H11N2	WAKE ISLAND Hy	30.59	4	T	T	17 31 32.3	
	baz=184,slow=77,SNR=6.7						
WR1	Warramunga Arr	30.64	249	*e*P	P	16 58 49.4	-1.5
	11nm,1.1s						
WRA	Warramunga Arr	30.64	249	P	P	16 58 49.4	-1.5
WRA	Warramunga Arr	30.64	249	P	P	16 58 49.4	-1.5
	0.8nm,0.6s,baz=80,slow=9.1,SNR=6.3						
AS31	Alice Springs	31.99	243	*e*P	P	16 59 01.9	-1.0
	0.8nm,0.6s						
ASAR	Alice Springs	31.99	243	P	P	16 59 01.9	-0.9
ASAR	Alice Springs	31.99	243	P	P	16 59 01.9	-0.9
	1.6nm,0.5s,baz=64,slow=10,SNR=19						
SONA0	Songino Array	78.08	324	*e*P	P	17 04 35.5	+0.4
SONM	Songino Array	78.08	324	P	P	17 04 35.5	+0.4
SONM	Songino Array	78.08	324	P	P	17 04 35.5	+0.4
	0.5nm,0.7s,baz=145,slow=7.9,SNR=4.6						
ILAR	Eielson Array	83.75	19	P	P	17 05 04.8	-0.1
ILAR	Eielson Array	83.75	19	P	P	17 05 04.8	-0.1
	0.5nm,0.8s,baz=232,slow=6.1,SNR=4.1						
ILB	Eielson Array	83.75	19	*e*P	P	17 05 04.7	-0.1
MK01	Makanchi Array	92.84	317	*e*P	P	17 05 48.9	0.0
MK32	Makanchi Array	92.85	317	*e*P	P	17 05 48.8	-0.2
MKAR	Makanchi Array	92.85	317	P	P	17 05 48.8	-0.2
MKAR	Makanchi Array	92.85	317	P	P	17 05 48.8	-0.2
	0.9nm,0.8s,baz=100,slow=5.4,SNR=7.9						

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*IDC **06** 16:53:05.2±1.6, 11°.46S×165°.61E, h0^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.8/42, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=47.8km s-min=26.2km az=114.0*

ISC 06 16:53:09.5±1.1**, 11°.4S**±0°.1×**165°.4E**±0°.2**, h24**^{km}**, n9, σ1ˢ.49**/9**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.72	290	*e*P	Pb	16 54 47.0	-1.6
DZM	Mont Dzumac	10.62	175	Pn	Pn	16 55 39.5	-0.9
	1.4nm,0.3s,baz=322,slow=23,SNR=3.8						
STKA	Stephens Creek	29.92	223	P	P	16 59 16.6	+0.8
	1.0nm,0.5s,baz=18,slow=9.6,SNR=3.0						
WRA	Warramunga Arr	31.02	250	P	P	16 59 26.8	+1.1
	3.2nm,0.9s,baz=80,slow=9.1,SNR=8.2						
ASAR	Alice Springs	32.31	244	P	P	16 59 36.3	-0.6
	0.5nm,0.8s,baz=72,slow=9.8,SNR=2.9						
CMAR	Chiang Mai Arr	71.95	294	P	P	17 04 33.0	+1.4
	0.8nm,1.0s,baz=111,slow=3.3,SNR=4.6						
SONM	Songino Array	78.78	324	P	P	17 05 12.1	+1.7
	0.6nm,0.7s,baz=141,slow=7.1,SNR=4.1						
ILAR	Eielson Array	83.99	19	P	P	17 05 35.8	-1.7
	0.3nm,0.6s,baz=243,slow=5.5,SNR=4.1						
MKAR	Makanchi Array	93.57	317	P	P	17 06 23.5	-0.2
	0.8nm,0.7s,baz=76,slow=5.1,SNR=5.7						

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*IDC **06** 16:53:08.7±1.7, 17°.37S×177°.91W, h0^{km}, mb3.9/7, mb1 4.2/7, mb1mx3.8/39, mbtmp3.9/7, Error ellipse: s-maj=117.9km s-min=21.1km az=150.0*

*ISCJB **06** 16:53:12.0±0.6, 17°.6S±0°.2×177°.9W±0°.2, h33^{km}, mb3.9/9, Error ellipse: s-maj=33.1km s-min=12.9km az=143.9*

*NEIC **06** 16:53:13.8±0.5, 17°.46S×177°.92W, h35^{km}, mb4.3/4, Error ellipse: s-maj=24.3km s-min=9.4km az=144.0*

ISC 06 16:53:13.9±0.9**, 17°.5S**±0°.3×**177°.9W**±0°.2**, h35**^{km}**, n13, σ0ˢ.69**/13**, mb3.8**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUZ	Omahuta	19.24	202	*e*P	P	16 57 35.1	-0.1

	121nm,1.7s						
STKA	Stephens Creek	39.28	241	eP	P	17 00 40.1	+0.6
	6.7nm,2.0s						
STKA	Stephens Creek	39.28	241	P	P	17 00 40.5	+1.0
	1.1nm,0.5s,baz=100,slow=6.1,SNR=2.9						
WR1	Warramunga Arr	45.20	259	eP	P	17 01 27.4	-0.6
	13nm,1.6s						
WRA	Warramunga Arr	45.20	259	P	P	17 01 27.4	-0.6
	0.7nm,0.6s,baz=96,slow=7.0,SNR=9.7						
AS31	Alice Springs	45.39	254	eP	P	17 01 29.1	-0.4
	1.5nm,0.6s						
ASAR	Alice Springs	45.39	254	P	P	17 01 28.9	-0.6
	4.4nm,0.5s,baz=89,slow=8.8,SNR=58						
NV01	Mina Array Sit	78.76	44	eP	P	17 05 13.3	-0.1
NVAR	Mina Array Bea	78.76	44	P	P	17 05 14.2	+0.8
	0.6nm,0.7s,baz=216,slow=7.0,SNR=3.8						
LTX	Lajitas	85.34	57	eP	P	17 05 47.9	0.0
TXAR	Lajitas Array	85.34	57	P	P	17 05 47.9	0.0
	0.2nm,0.3s,baz=204,slow=5.4,SNR=3.6						
ILAR	Eielson Array	85.35	13	P	P	17 05 47.5	+0.5
	0.4nm,0.6s,baz=234,slow=5.3,SNR=5.1						
PDAR	Pinedale Array	86.69	43	P	P	17 05 53.4	-1.1
	0.2nm,0.5s,baz=257,slow=3.6,SNR=2.6						

*NIED **06** 16:53:00, 37°.00N×142°.60E, h23km, Mw3.9 Best double couple: M0 7.06000×10^14 NP1:φs192.00000°, δ20.00000°, λ81.00000°. NP2:φs21.00000°, δ71.00000°, λ93.00000°.*

*IDC **06** 16:53:31.8±1.5, 36°.90N×142°.59E, h0km, mb3.6/5, mb1 3.7/8, mb1mx3.5/48, mbtmp3.7/8, ML3.5/3, MS3.0/2, Ms1 3.2/2, ms1mx2.8/56, Error ellipse: s-maj=33.0km s-min=22.0km az=106.0*

*ISCJB **06** 16:53:32.6±0.8, 37°.03N±0°.05×142°.56E±0°.06, h9km, mb3.6/5, MS3.4/1, Error ellipse: s-maj=8.3km s-min=6.3km az=148.2*

*JMA **06** 16:53:35.0±0.2, 37°.03N×142°.56E, h37km, M3.5*

ISC 06 16:53:32.4±1.0, **36°.98N**±0°.05×**142°.59E**±0°.06, **h9km, n24, σ1s.49**/31, **mb3.7**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.43	286	P	Pn	16 53 58.5	0.0
JFK				eS	Sb	16 54 15.4	-2.1
ONAJ	Iwakimizuishiy	1.44	275	P	Pn	16 53 58.7	-0.1
JIKH	Ishinomakikobu	1.60	326	P	Pn	16 54 00.5	-0.4
JFFD	Fukushimafurud	1.63	274	P	Pn	16 54 01.5	+0.2
JFFD				eS	Sn	16 54 21.0	-1.4
JMM	Marumori	1.68	302	P	Pn	16 54 02.0	0.0
JMM				eS	Sn	16 54 22.4	-1.3
JIO	Ouri	1.77	326	P	Pn	16 54 03.2	0.0
JFT	Otama	1.88	287	P	Pb	16 54 05.9	-1.0
JOU	Okura	2.06	313	P	Pn	16 54 07.5	+0.2
JMK	Ichinoseki	2.25	331	P	Pn	16 54 10.4	+0.6
JAG	Ashikaga	2.58	258	P	Pn	16 54 15.9	+1.5
JYK	Kaneyama	2.62	318	P	Pn	16 54 16.0	+1.1
BSO1	Boso 1	2.67	210	P	Pb	16 54 17.6	-2.5
JOM	Ohasama	2.69	338	P	Pn	16 54 16.4	+0.5
JRY	Ryogami san	3.13	253	P	Pn	16 54 23.4	+1.5
JRY				eS	Sn	16 54 59.1	-0.3
MJAR	Matsushiro Arr	3.55	264	Pn	Pn	16 54 29.4	+1.6
	0.6nm,0.3s,baz=86,slow=15,SNR=28						
MJAR				Sn	Sb	16 55 18.3	-0.3
	0.3nm,0.3s,baz=247,slow=13,SNR=4.5						
MJAR				LR	LR	16 55 19.9	
	comp=Z,84nm,20.9s,baz=40,slow=31						
MAT	Matsushiro	3.55	264	P	Pn	16 54 30.1	+2.4
MAT				S	Sn	16 55 11.4	+1.6
JHJ	Hachijo jima 2	4.49	212	Pn	Pn	16 54 38.4	-2.3
	20nm,0.3s,baz=41,slow=19,SNR=2.6						
JHJ				Sn	Sn	16 55 31.1	-2.0
	72nm,0.3s,baz=270,slow=23,SNR=6.9						
ASAJ	Asahikawa	7.13	0	Pn	Pn	16 55 17.6	+0.8
	1.3nm,0.3s,baz=216,slow=10,SNR=22						
ASAJ				Sn	Sn	16 56 34.0	-3.8
	1.0nm,0.3s,baz=97,slow=33,SNR=4.6						
SONM	Songino Array	28.60	304	P	P	16 59 30.0	+1.0
	1.3nm,0.8s,baz=110,slow=9.6,SNR=7.1						
CMAR	Chiang Mai Arr	42.40	256	LR	LR	17 21 46.0	
	comp=Z,49nm,18.1s,baz=120,slow=40						
ZALV	Zalesovo Beam	42.65	312	P	P	17 01 29.9	+0.9
	1.2nm,0.8s,baz=87,slow=6.2,SNR=4.4						
MKAR	Makanchi Array	44.95	302	P	P	17 01 48.4	+0.8
	0.7nm,0.7s,baz=87,slow=9.7,SNR=7.5						
ILAR	Eielson Array	49.03	32	P	P	17 02 20.8	+1.5
	0.2nm,0.7s,baz=266,slow=6.3,SNR=1.7						
WRA	Warramunga Arr	57.15	189	P	P	17 03 20.2	+0.7
	0.4nm,0.8s,baz=4.4,slow=7.3,SNR=1.5						

*IDC **06** 16:53:31.1±1.2, 10°.78S×164°.35E, h0km, mb3.9/8, mb1 4.2/11, mb1mx3.9/44, mbtmp4.0/11, ML4.2/3, MS4.1/1, Ms1 4.1/1, ms1mx3.0/45, Error ellipse: s-maj=31.0km s-min=22.8km az=131.0*

*ISCJB **06** 16:53:32.8±0.6, 10°.86S±0°.07×164°.40E±0°.07, h24km, mb3.9/10, Error ellipse: s-maj=11.7km s-min=8.6km az=137.1*

*NEIC **06** 16:53:32.9±0.7, 10°.71S×164°.35E, h10km, mb4.5/5, Error ellipse: s-maj=14.6km s-min=11.1km az=87.0*

ISC 06 16:53:34.8±0.8, **10°.81S**±0°.10×**164°.41E**±0°.10, **h24km, n24, σ1s.25**/25, **mb4.0**/10, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.60	287	ePn	Pn	16 54 41.6	-1.3
HNR	Honiara	4.60	287	Pn	Pn	16 54 42.6	-0.3
	39nm,0.3s,baz=232,slow=3.1,SNR=8.1						
HNR				Sn	Sn	16 55 37.7	+2.1
	11nm,0.3s,baz=123,slow=23,SNR=3.0						
DZM	Mont Dzumac	11.37	170	ePn	Pn	16 56 16.3	+0.4
DZM	Mont Dzumac	11.37	170	Pn	Pn	16 56 16.4	+0.5
	1.3nm,0.3s,baz=121,slow=17,SNR=5.0						
DZM				LR	LR	16 59 40.6	
	comp=Z,861nm,18.8s,baz=308,slow=32						
ONTNC	Ouen Toro	11.60	171	ePn	Pn	16 56 21.0	+2.0
RABL	Rabaul	13.80	298	ePn	Pn	16 56 51.2	+2.1
MANU	Manus Island	19.02	296	eP	Pn	16 57 56.1	0.0
	101nm,1.6s						
EIDS	Eidsvold	19.21	219	eP	Pn	16 57 59.2	+0.9
	14nm,0.9s						
CTA	Charters Tower	19.76	240	P	Pn	16 58 04.6	-0.3
	0.3nm,0.3s,baz=63,slow=17,SNR=3.1						
CTAO	Charters Tower	19.76	240	eP	Pn	16 58 05.2	+0.3
	21nm,0.9s						
STKA	Stephens Creek	29.72	222	P	P	16 59 39.1	-0.2
	2.3nm,0.8s,baz=32,slow=12,SNR=3.5						
WR1	Warramunga Arr	30.33	249	eP	P	16 59 43.4	-1.5
	11nm,1.1s						
WRA	Warramunga Arr	30.33	249	P	P	16 59 43.4	-1.5
	1.8nm,0.9s,baz=79,slow=9.1,SNR=3.2						
ASAR	Alice Springs	31.73	242	P	P	16 59 55.4	-1.8
	1.1nm,0.9s,baz=64,slow=10,SNR=2.9						
FITZ	Fitzroy Crossi	38.17	254	eP	P	17 00 50.7	-2.1
	8.3nm,1.0s						
CM31	Chiang Mai Arr	70.81	294	eP	P	17 04 48.9	-1.1
CMAR	Chiang Mai Arr	70.81	294	P	P	17 04 49.5	-0.5
	0.5nm,0.8s,baz=128,slow=5.0,SNR=3.7						
SONA0	Songino Array	77.70	324	eP	P	17 05 29.6	-0.1
SONM	Songino Array	77.70	324	P	P	17 05 29.6	-0.1
	0.5nm,0.8s,baz=145,slow=5.3,SNR=3.2						
IM3	Indian Mountai	82.56	16	eP	P	17 05 55.0	-0.3
ILAR	Eielson Array	83.71	19	P	P	17 06 00.5	-0.9
	1.0nm,0.8s,baz=225,slow=6.7,SNR=5.3						
MK32	Makanchi Array	92.45	317	eP	P	17 06 43.3	-0.6
MKAR	Makanchi Array	92.45	317	P	P	17 06 43.3	-0.6
	0.8nm,0.8s,baz=92,slow=6.1,SNR=4.1						
YKA	Yellowknife Ar	95.37	27	P	P	17 06 58.7	+1.9
	0.4nm,0.9s,baz=260,slow=4.0,SNR=2.9						

*IDC **06** 16:55:53.2±1.4, 10°.83S×164°.54E, h0km, mb3.9/6, mb1 4.2/9, mb1mx3.9/44, mbtmp4.0/9, ML4.2/3, Error ellipse: s-maj=36.7km s-min=25.0km az=135.0*

*ISCJB **06** 16:55:56.0±1.1, 11°.0S±0°.1×164°.5E±0°.1, h29km, mb3.8/6, Error ellipse: s-maj=20.0km s-min=14.9km az=140.1*

ISC 06 16:55:57.5±1.1, **10°.9S**±0°.1×**164°.6E**±0°.1, **h29km, n16, σ1s.59**/11, **mb3.9**/6, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.81	287	Pn	Pn	16 57 07.0	-1.1
	52nm,0.3s,baz=163,slow=4.5,SNR=11						
HNR				Sn	Sn	16 58 06.2	+3.3
	14nm,0.3s,baz=300,slow=22,SNR=2.9						
DZM	Mont Dzumac	11.26	171	Pn	Pn	16 58 38.3	+1.7
	0.7nm,0.3s,baz=303,slow=16,SNR=11						
CTA	Charters Tower	19.90	240	P	Pn	17 00 27.9	-0.7
	0.3nm,0.3s,baz=63,slow=14,SNR=3.8						
H11S2	WAKE ISLAND Hy	29.26	4	T	T	17 32 39.4	
	baz=184,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.26	4	T	T	17 32 38.1	
	baz=184,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.28	4	T	T	17 32 39.3	
	baz=184,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	30.49	4	T	T	17 34 05.1	
H11N3	WAKE ISLAND Hy	30.49	4	T	T	17 33 55.4	
WRA	Warramunga Arr	30.50	249	P	P	17 02 07.1	-1.2
	0.7nm,0.6s,baz=79,slow=9.4,SNR=7.6						
H11N2	WAKE ISLAND Hy	30.50	4	T	T	17 34 02.5	
ASAR	Alice Springs	31.88	242	P	P	17 02 19.4	-1.0
	0.4nm,0.6s,baz=65,slow=10.0,SNR=4.0						
FITZ	Fitzroy Crossi	38.35	255	P	P	17 03 14.9	-1.3
	1.7nm,0.5s,baz=70,slow=8.7,SNR=7.9						
CMAR	Chiang Mai Arr	71.03	294	P	P	17 07 14.0	+0.8
	0.8nm,0.8s,baz=129,slow=4.1,SNR=6.2						
ILAR	Eielson Array	83.72	19	P	P	17 08 23.6	+0.3
	0.8nm,0.8s,baz=246,slow=5.5,SNR=6.2						
MKAR	Makanchi Array	92.64	317	P	P	17 09 06.8	+0.2
	0.5nm,0.6s,baz=101,slow=6.3,SNR=5.3						
ARCES	ARCESS Array B	115.90	345	PKP	PKiKP	17 14 36.4	-0.5
	3.7nm,1.0s,baz=45,slow=2.6,SNR=6.8						

*IDC **06** 16:56:34.0±1.5, 11°.02S×164°.65E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.7/42, mbtmp3.9/6, ML3.9/1, Error ellipse: s-maj=46.7km s-min=27.5km az=119.0*

*NEIC **06** 16:56:35.4±0.6, 11°.09S×164°.63E, h10km, mb4.3/3, Error ellipse: s-maj=16.9km s-min=10.4km az=106.0*

*ISCJB **06** 16:56:36.6±0.9, 11°.2S±0°.1×164°.6E±0°.2, h29km, mb3.9/7, Error ellipse: s-maj=24.0km s-min=14.6km az=9.7*

ISC 06 16:56:38.3±1.1, **11°.1S**±0°.1×**164°.6E**±0°.2, **h29km, n13, σ0s.62**/13, **mb3.8**/7, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.02	171	ePn	Pn	16 59 14.4	+0.3
DZM	Mont Dzumac	11.02	171	Pn	Pn	16 59 14.6	+0.4
	0.8nm,0.3s,baz=306,slow=18,SNR=3.5						
EIDS	Eidsvold	19.11	220	eP	P	17 00 58.3	-0.7
	64nm,1.8s						
WR1	Warramunga Arr	30.43	250	eP	P	17 02 48.8	+0.3
	7.8nm,1.3s						
WRA	Warramunga Arr	30.43	250	P	P	17 02 48.8	+0.3
	1.0nm,0.8s,baz=79,slow=9.5,SNR=3.1						
AS31	Alice Springs	31.78	243	eP	P	17 02 59.4	-1.0
	0.8nm,0.6s						
ASAR	Alice Springs	31.78	243	P	P	17 03 00.7	+0.3
	1.4nm,0.5s,baz=64,slow=10,SNR=11						
SONA0	Songino Array	78.08	324	eP	P	17 08 35.3	+0.7
SONM	Songino Array	78.08	324	P	P	17 08 35.3	+0.7
	0.6nm,0.8s,baz=141,slow=6.4,SNR=3.3						
ILAR	Eielson Array	83.94	19	P	P	17 09 04.5	-0.7
	0.5nm,0.7s,baz=237,slow=6.0,SNR=3.2						
ILB	Eielson Array	83.94	19	eP	P	17 09 04.7	-0.6
MK32	Makanchi Array	92.83	317	eP	P	17 09 48.3	0.0
MKAR	Makanchi Array	92.83	317	P	P	17 09 48.3	0.0
	0.7nm,0.8s,baz=92,slow=6.3,SNR=3.9						

*IDC **06** 16:58:15.8±1.5, 11°.56S×164°.92E, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.7/42, mbtmp3.9/7, ML4.2/2, Error ellipse: s-maj=37.8km s-min=28.5km az=131.0*

*NEIC **06** 16:58:18.2±1.7, 11°.57S×164°.79E, h10km, mb4.3/3, Error ellipse: s-maj=36.2km s-min=10.0km az=53.0*

*ISCJB **06** 16:58:19.5±1.0, 11°.69S±0°.10×164°.8E±0°.1, h34km, mb3.8/7, Error ellipse: s-maj=21.0km s-min=11.0km az=149.0*

ISC 06 16:58:21.1±1.2, **11°.6S**±0°.1×**164°.9E**±0°.2, **h34km, n15, σ0s.58**/15, **mb3.7**/7, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.28	293	ePn	Pn	16 59 37.3	-0.4
HNR	Honiara	5.28	293	Pn	Pn	16 59 38.1	+0.4
	14nm,0.3s,baz=27,slow=6.8,SNR=2.9						
DZM	Mont Dzumac	10.54	172	ePn	Pn	17 00 49.3	-0.6
DZM	Mont Dzumac	10.54	172	Pn	Pn	17 00 49.9	0.0
	1.0nm,0.3s,baz=312,slow=17,SNR=9.7						
ONTNC	Ouen Toro	10.77	172	ePn	Pn	17 00 54.3	+1.3
PINNC	Pines Island,	11.24	168	ePn	Pn	17 00 59.1	-0.3
WR1	Warramunga Arr	30.48	250	eP	P	17 04 30.8	-0.3
	8.1nm,1.3s						
WRA	Warramunga Arr	30.48	250	P	P	17 04 30.8	-0.3
	0.9nm,0.7s,baz=81,slow=8.6,SNR=5.1						
AS31	Alice Springs	31.77	244	eP	P	17 04 42.0	-0.5
	1.0nm,1.3s						
ASAR	Alice Springs	31.77	244	P	P	17 04 42.0	-0.6
	0.9nm,0.7s,baz=70,slow=9.8,SNR=5.4						
FITZ	Fitzroy Crossi	38.40	256	eP	P	17 05 39.5	-0.1
	21nm,1.9s						
FITZ	Fitzroy Crossi	38.40	256	P	P	17 05 40.3	+0.7
	1.3nm,0.8s,baz=63,slow=9.0,SNR=3.1						
ILAR	Eielson Array	84.30	19	P	P	17 10 48.9	-0.3
	0.3nm,0.6s,baz=228,slow=5.7,SNR=4.0						
MK32	Makanchi Array	93.32	317	eP	P	17 11 33.0	+0.4
MKAR	Makanchi Array	93.32	317	P	P	17 11 33.0	+0.4
	0.3nm,0.6s,baz=84,slow=5.2,SNR=4.1						

IDC 06 16:59:43.0±1.7, **11°.68S**×**164°.97E, h0km, mb3.6**/4, **mb1 3.9**/5, **mb1mx3.6**/41, **mbtmp3.7**/5, **ML3.8**/1, **Error ellipse: s-maj=51.0km s-min=31.7km az=124.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.43	172	Pn	Pn	17 02 14.2	+0.2
	0.7nm,0.3s,baz=197,slow=14,SNR=3.1						
WRA	Warramunga Arr	30.56	251	P	P	17 05 58.5	-0.1
	0.3nm,0.8s,baz=82,slow=8.2,SNR=3.3						
ASAR	Alice Springs	31.83	244	P	P	17 06 09.3	-0.6
	0.3nm,0.5s,baz=67,slow=9.2,SNR=6.2						
ILAR	Eielson Array	84.35	19	P	P	17 12 15.8	-0.9
	0.3nm,0.6s,baz=241,slow=5.1,SNR=4.2						
MKAR	Makanchi Array	93.47	317	P	P	17 13 02.0	+1.4
	0.5nm,0.7s,baz=102,slow=5.1,SNR=2.7						

*ISCJB **06** 17:02:53.1±0.4, 6°.06N±0°.03×126°.06E±0°.06, h149km±4km, mb3.9/11, Error ellipse: s-maj=10.0km s-min=5.6km az=3.9*

*MAN **06** 17:02:53.1, 5°.99N×126°.01E, h146km, MS3.6*

*IDC **06** 17:02:54.6±0.7, 6°.09N×125°.91E, h149km±5km, mb3.6/11, mb1 3.8/12, mb1mx3.5/48, mbtmp4.2/12, Error ellipse: s-maj=29.1km s-min=11.3km az=83.0*

*DJA **06** 17:02:55.7±1.5, 6°N±6°×12°6E±°, h23km±18km, M4.4/7, mb4.5/6, mB5.4/2, MLv4.4/7, Mw(mB)4.8/2*

ISC 06 17:02:54.3±0.8, **6°.05N**±0°.05×**126°.06E**±0°.07, **h144km**±6km, **n36, σ1s.52**/48, **mb4.0**/11, **1C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.91	13	eP	Pn	17 03 17.6	-0.1
MATI				eS	Sn	17 03 36.5	+0.9
GSPH	General Santos	1.10	272	eP	Pn	17 03 19.4	-0.1
GSPH				eS	Sn	17 03 37.5	-1.2
DAV	Davao City (W)	1.12	335	P	Pn	17 03 19.6	+0.1
	49nm,0.3s,baz=244,slow=3.3,SNR=6.4						
DAV				S	Sn	17 03 38.9	+0.2
	242nm,0.3s,baz=82,slow=22,SNR=22						
DMPH	Davao City--Mi	1.16	332⇑	eP	Pn	17 03 20.3	+0.4
DMPH				eS	Sn	17 03 41.3	+1.8
KCP	Kidapawan	1.35	315⇓	iP	Pn	17 03 21.3	-0.6
KCP				i S	Sn	17 03 43.4	+0.5
SKMP	Bagumbayan, Su	1.57	287	eP	Pn	17 03 23.5	-0.7
SKMP				eS	Sn	17 03 45.5	-1.5
BUKP	Musuan	2.06	331	eP	Pn	17 03 30.5	+0.6
BUKP				eS	Sn	17 03 57.8	+0.6
BIPH	Bislig	2.14	8⇓	eP	Pn	17 03 29.9	-0.7
BIPH				i S	Sn	17 03 57.4	-1.3
CTBH	Cotabato--PC H	2.14	303⇓	iP	Pn	17 03 30.2	-0.5
CTBH				i S	Sn	17 03 57.3	-1.4
SGSI	Sangihe	2.41	193	P	Pn	17 03 31.1	-2.9
CGP	Cagayan de Oro	2.74	331⇓	eP	Pn	17 03 41.8	+3.7
CGP				eS	Sn	17 04 11.6	-0.4
BUTP	Butuan	2.93	352	eP	Pn	17 03 41.0	+0.6
BUTP				eS	Sn	17 04 14.1	-2.1
PAGZ	Pagadian	3.20	304	eP	Pn	17 03 43.6	-0.3
DCPH	Dipolog City	3.68	313	eP	Pn	17 03 52.6	+2.5
MSLP	Maasin	4.22	344	eP	Pn	17 03 56.8	-0.5
MSLP				eS	Sn	17 04 46.4	+0.1
OCLP	Ormoc	5.17	344	eP	Pn	17 04 10.5	+0.6
TNTI	Ternate	5.41	166	P	Pn	17 04 11.7	-1.3
	103nm,0.8s,2µm0.5nm						
SANI	Sanana	8.05	180	P	Pn	17 04 45.8	-2.6
SANI				S	Sn	17 06 07.6	-10
TTSI	Tana Toraja	10.98	215	P	Pn	17 05 29.0	+1.6
BNSI	Bone	11.96	210	P	Pn	17 05 42.1	+1.8
EDFI	Ende, Flores	15.34	197	P	P	17 06 27.9	+3.1
	8.9nm,0.8s,3µm						
BATI	Baumata	16.33	188	P	P	17 06 39.3	+3.6
BATI	Baumata	16.33	188	P	Pn	17 06 34.6	-0.9
	7.7nm,0.3s,baz=264,slow=1.8,SNR=9.8						
PLAI	Plampang	16.93	209	P	Pn	17 06 44.0	+1.2
LEM	Lembang	22.41	235	P	P	17 07 41.6	+0.2
	10nm,0.4s,baz=50,slow=14,SNR=4.7						
FITZ	Fitzroy Crossi	24.00	181	P	P	17 07 56.0	+0.2
	3.2nm,0.5s,baz=355,slow=4.5,SNR=23						
WRA	Warramunga Arr	27.09	163	P	P	17 08 23.8	+0.1
	1.1nm,0.5s,baz=341,slow=9.7,SNR=12						
CMAR	Chiang Mai Arr	29.17	297	ScP	ScP	17 15 14.7	-0.2
	0.3nm,0.4s,baz=147,slow=1.9,SNR=5.5						
ASAR	Alice Springs	30.52	166	P	P	17 08 54.8	+0.7
	2.9nm,0.5s,baz=338,slow=6.9,SNR=91						
KSRS	Korea Array	31.30	3	P	P	17 09 01.4	+0.6
	1.0nm,0.5s,baz=185,slow=9.0,SNR=4.6						
ASAJ	Asahikawa	40.59	18	P	P	17 10 19.9	+0.1
	3.7nm,1.0s,baz=244,slow=15,SNR=6.0						
SONM	Songino Array	44.90	341	P	P	17 10 53.5	-1.0
	0.3nm,0.7s,baz=142,slow=7.3,SNR=2.3						
MKAR	Makanchi Array	55.28	325	P	P	17 12 11.4	-1.4
	1.0nm,0.6s,baz=120,slow=7.5,SNR=32						
ILAR	Eielson Array	83.31	26	P	P	17 15 05.0	+0.3
	0.3nm,0.6s,baz=249,slow=6.6,SNR=2.9						
ARCES	ARCESS Array B	88.05	340	P	P	17 15 26.2	-1.8
	2.7nm,1.0s,baz=80,slow=6.5,SNR=1.4						
FINES	FINESS Array B	89.48	332	P	P	17 15 32.2	-2.7
	1.1nm,0.7s,baz=73,slow=1.9,SNR=4.0						

*IDC **06** 17:04:05.7±0.4, 10°.74S×164°.93E, h0km, mb4.6/30, mb1 4.7/32, mb1mx4.7/46, mbtmp4.6/32, ML5.2/2, MS4.1/12, Ms1 4.2/12, ms1mx3.7/38, Error ellipse: s-maj=14.0km s-min=12.0km az=122.0*

*ISCJB **06** 17:04:06.5±0.1, 10°.71S±0°.03×164°.84E±0°.03, h10km, mb4.8/104, MS4.3/14, Error ellipse: s-maj=4.8km s-min=3.9km az=151.2*

*NEIC **06** 17:04:07.5±0.2, 10°.69S×164°.90E, h10km, mb5.0/73, Error ellipse: s-maj=5.3km s-min=4.5km az=131.0*

ISC 06 17:04:07.4±0.3, **10°.71S**±0°.06×**164°.98E**±0°.05, **h10km, n249, σ1s.19**/247, **mb4.9**/104, **MS4.3**/14, **2C, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.12	284	eP	Pn	17 05 25.0	+0.8
HNR				eS	Sn	17 06 20.0	-3.4
HNR	Honiara	5.12	284	ePn	Pn	17 05 24.3	+0.1
HNR	Honiara	5.12	284	Pn	Pn	17 05 24.9	+0.7
	60nm,0.3s,baz=170,slow=3.4,SNR=33						
HNR				Sn	Sn	17 06 21.4	-1.9
	80nm,0.3s,baz=39,slow=21,SNR=7.9						
HNR				LR	LR	17 06 45.5	
	comp=Z,1µm,19.1s,baz=147,slow=32						
MARNC	Mare, Loyalty	11.10	165	ePn	Pn	17 06 47.6	+1.3
DZM	Mont Dzumac	11.38	173	ePn	Pn	17 06 51.7	+1.4
	333nm,1.2s						
DZM				eLR	LR	17 09 25.6	
	comp=Z,747nm,21.8s						
DZM	Mont Dzumac	11.38	173	ePn	Pn	17 06 50.8	+0.5
DZM	Mont Dzumac	11.38	173	Pn	Pn	17 06 51.4	+1.1
	26nm,0.3s,baz=20,slow=11,SNR=144						
ONTNC	Ouen Toro	11.62	173	ePn	Pn	17 06 55.8	+2.4
PINNC	Pines Island,	12.07	169	ePn	Pn	17 07 01.1	+1.6
RABL	Rabaul	14.26	296	ePn	Pn	17 07 28.6	-1.0
TARA	Tarawa	14.36	34	ePn	Pn	17 07 31.6	+0.6
MSVF	Nonsavu	14.46	120	ePn	P	17 07 35.9	-3.4
MANU	Manus Island	19.49	295	eP	P	17 08 35.3	+0.4
	1µm,1.8s						
EIDS	Eidsvold	19.65	220	P	Pn	17 08 38.8	+1.0
	baz=20,SNR=6.7						
EIDS	Eidsvold	19.65	220	eP	Pn	17 08 38.4	+0.6
	127nm,1.5s						
CTA	Charters Tower	20.30	240	P	P	17 08 44.1	+0.5
	14nm,0.9s,baz=68,slow=12,SNR=8.9						
CTA				LR	LR	17 15 03.9	
	comp=Z,664nm,19.7s,baz=76,slow=32						
CTAO	Charters Tower	20.30	240	eP	Pn	17 08 45.2	-0.5
	49nm,1.1s						
MTSU	Mount Surprise	21.31	247	P	P	17 08 55.0	+0.3
	baz=21,SNR=7.2						
COEN	Coen	21.54	259	P	P	17 08 57.4	+0.3
	baz=22,SNR=4.3						
COEN	Coen	21.54	259	eP	P	17 08 58.5	+1.3
	30nm,1.1s						
RMQ	Roma	21.92	222	P	P	17 09 03.5	+2.4
	baz=22,SNR=18						
ARMA	Armidale	23.21	210	P	P	17 09 16.5	+1.7
	baz=23,SNR=12						
ARMA	Armidale	23.21	210	eP	P	17 09 16.5	+1.7
	49nm,1.0s						
QLP	Quilpie	25.15	228	P	P	17 09 33.8	+0.9
	baz=25,SNR=17						
MGCD	Mangrove Creek	25.77	208	P	P	17 09 40.8	+2.3
	baz=26,SNR=6.9						
RIV	Riverview	26.27	207	P	P	17 09 44.6	+1.6
	baz=26,SNR=3.1						
CMSA	Cobar Meteorol	27.35	218	P	P	17 09 52.9	+0.1
	baz=28,SNR=9.4						
H11S2	WAKE ISLAND Hy	29.07	3	T	T	17 40 24.3	
	baz=184,slow=76,SNR=119						
H11S3	WAKE ISLAND Hy	29.07	3	T	T	17 40 25.1	
	baz=184,slow=76,SNR=143						
H11S1	WAKE ISLAND Hy	29.09	3	T	T	17 40 26.0	
	baz=184,slow=76,SNR=126						
URZ	Urewera	29.51	160	P	P	17 10 12.4	+0.5
	5.3nm,0.5s,baz=306,slow=4.5,SNR=4.4						
BKZ	Black Stump Fm	30.14	162	eP	P	17 10 19.0	+1.4
	63nm,1.5s						
STKA	Stephens Creek	30.17	222	P	P	17 10 19.2	+1.2
	baz=30,SNR=27						
STKA	Stephens Creek	30.17	222	eP	P	17 10 18.7	+0.7
	4.7nm,0.8s						
STKA				PcP	PcP	17 13 19.4	+0.2
STKA	Stephens Creek	30.17	222	P	P	17 10 19.1	+1.2
	18nm,0.8s,baz=33,slow=10,SNR=37						
STKA				PcP	PcP	17 13 19.4	+0.2
	1.8nm,0.7s,baz=14,slow=8.3,SNR=2.5						
STKA				LR	LR	17 21 25.2	
	comp=Z,608nm,18.0s,baz=38,slow=34						
H11N1	WAKE ISLAND Hy	30.29	4	T	T	17 41 58.5	
	baz=184,slow=76,SNR=105						
H11N3	WAKE ISLAND Hy	30.30	4	T	T	17 42 04.7	
	baz=184,slow=76,SNR=79						
H11N2	WAKE ISLAND Hy	30.31	4	T	T	17 41 56.7	
	baz=184,slow=76,SNR=73						
WRAB	Tennant Creek	30.88	249	eP	P	17 10 22.4	-2.0
	16nm,1.4s						
WB2	Warramunga Arr	30.88	249	eP	P	17 10 21.9	-2.5
WR1	Warramunga Arr	30.89	249	eP	P	17 10 22.5	-2.0
	14nm,1.1s						
WR1				ePcP	PcP	17 13 21.1	-0.2
WRA	Warramunga Arr	30.89	249	P	P	17 10 22.5	-2.0
	2.2nm,0.6s,baz=79,slow=9.1,SNR=12						
WRA				PcP	PcP	17 13 21.1	-0.2
	2.3nm,0.8s,baz=79,slow=2.9,SNR=7.9						
WRA				LR	LR	17 21 46.0	
	comp=Z,965nm,20.6s,baz=60,slow=34						
GUMO	Guam	31.32	320	LR	LR	17 22 53.1	
	comp=Z,202nm,18.0s,baz=145,slow=36						
KDU	Kakadu	31.88	263	P	P	17 10 31.6	-1.5
	baz=32,SNR=4.0						
TOO	Toolangi	31.97	210	P	P	17 10 35.8	+2.0
	baz=32,SNR=10						
AS01	Alice Springs	32.23	242	eP	P	17 10 35.7	-0.5
AS31	Alice Springs	32.27	242	eP	P	17 10 34.2	-2.4
	1.5nm,0.8s						
ASAR	Alice Springs	32.27	242	P	P	17 10 34.6	-2.0
	1.4nm,0.5s,baz=64,slow=10,SNR=15						
ASAR				PcP	PcP	17 13 24.2	-0.8
	2.2nm,0.7s,baz=65,slow=2.7,SNR=10						
ASAR				LR	LR	17 23 09.5	

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            comp=Z,534nm,18.2s,baz=73,slow=36
HTT   Hallett           32.90 223  P       P        17 10 42.9 +0.8
            baz=33,SNR=14
RPZ   Rata Peaks        33.30 172  P       P        17 10 44.9 -0.4
            13nm,0.8s,baz=353,slow=3.0,SNR=3.6
BBOO  Buckleboo         34.51 226  P       P        17 10 56.7 +0.7
            baz=35,SNR=14
BBOO  Buckleboo         34.51 226  eP      P        17 10 56.0  0.0
            17nm,0.7s
RAR   Rarotonga         35.38 112  LR      LR       17 22 32.1
            comp=Z,282nm,20.6s,baz=262,slow=31
KNRA  Kununurra         35.57 258  P       P        17 11 03.9 -1.4
            baz=36,SNR=4.1
FITZ  Fitzroy Crossi    38.74 254  P       P        17 11 30.2 -2.1
            baz=39,SNR=5.8
FITZ  Fitzroy Crossi    38.74 254  eP      P        17 11 30.1 -2.1
            9.2nm,0.8s
FITZ  Fitzroy Crossi    38.74 254  P       P        17 11 30.1 -2.1
            4.3nm,0.7s,baz=101,slow=6.6,SNR=12
FORT  Forrest           39.62 234  eP      P        17 11 38.9 -0.6
            31nm,1.0s
BATI  Baumata           40.61 267  P       P        17 11 46.0 -2.0
            6.3nm,0.6s,baz=321,slow=6.5,SNR=3.1
BATI                               LR      LR       17 28 50.3
            comp=Z,382nm,18.7s,baz=118,slow=37
PPT   Papeete           44.51 104  LR      LR       17 26 22.1
            comp=Z,382nm,20.7s,baz=326,slow=30
PPT2  Papeete2          44.51 104  eLR     LR       17 24 51.2
            comp=Z,616nm,22.2s,baz=278
TBI   Tubuai            45.15 112  eLQ     LQ       17 23 15.3
            840nm,30.8s
TBI                                eLR     LR       17 25 05.0
            comp=Z,991nm,27.5s,baz=281
MEEK  Meekatharra       46.42 243  P       P        17 12 34.6 -0.1
            baz=46,SNR=4.1
MJAR  Matsushiro Arr    53.33 333  P       P        17 13 26.2 -0.8
            4.1nm,0.9s,baz=173,slow=9.0,SNR=9.9
MAJO  Matsushiro        53.33 333  eP      P        17 13 26.2 -0.8
MAT   Matsushiro        53.33 333  P       P        17 13 26.7 -0.3
TAOE  Nuku Hiva Isla    54.05  93  eLR     LR       17 29 16.7
            comp=Z,472nm,25.9s
JNU   Nakatsue          54.37 325  eP      P        17 13 35.4 +0.7
            32nm,1.0s
JNU   Nakatsue          54.37 325  P       P        17 13 34.8 +0.1
            22nm,0.8s,baz=100,slow=4.2,SNR=10.0
LEM   Lembang           56.76 269  P       P        17 13 52.3 -0.1
            19nm,0.7s,baz=61,slow=5.7,SNR=7.8
ASAJ  Asahikawa         58.23 341  P       P        17 14 03.1 +1.1
            16nm,0.9s,baz=218,slow=14,SNR=14
RKT   Rikitea           58.41 111  eLR     LR       17 31 12.3
            comp=Z,788nm,27.5s
KSRS  Korea Array       59.18 326  P       P        17 14 09.5 +0.8
            3.6nm,0.8s,baz=134,slow=7.1,SNR=9.1
KS15  Wonju Array Si    59.19 326  eP      P        17 14 08.8  0.0
            88nm,1.7s
KSAR  Wonju Array Be    59.19 326  P       P        17 14 09.5 +0.7
YSS   Yuzh-Sakhalins    60.74 343  eP      P        17 14 20.3 +1.1
            28nm,1.3s
NJ2   Nanjing           61.26 316  eP      P        17 14 23.9 +0.9
NJ2                                pmax    pmax
            comp=Z,6.0nm,0.5s
USRK  Ussuriysk Ar.     62.32 334  P       P        17 14 31.5 +1.5
            comp=Z,3.2nm,0.7s,baz=122,slow=7.1,SNR=7.9
USRK                               LR      LR       17 38 34.7
            comp=Z,64nm,20.4s,baz=181,slow=33
MDJ   Mudanjiang        63.71 333  P       P        17 14 40.3 +1.1
MDJ                                pmax    pmax
            comp=Z,16nm,1.0s
MDJ                                pmax    pmax
            comp=Z,420nm,3.0s
PETK  Petropavlovsk-    63.87 355  P       P        17 14 40.8 +0.7
            comp=Z,5.0nm,0.8s,baz=145,slow=8.1,SNR=6.1
PEA1  Petropavlovsk-    63.88 355  eP      P        17 14 40.8 +0.6
CN2   Changchun         65.07 329  eP      P        17 14 49.0 +0.8
CN2                                pmax    pmax
            comp=Z,10.0nm,0.7s
IPM   Ipoh              65.42 280  eP      P        17 14 50.1 -1.0
            comp=Z,14nm,0.8s
VNDA  Vanda             66.81 181  eP      P        17 14 59.9 +1.0
VNDA  Vanda             66.81 181  P       P        17 15 00.2 +1.4
            comp=Z,14nm,0.9s,baz=344,slow=7.0,SNR=5.2
PSI   Prapat            67.08 278  P       P        17 15 00.9 -1.0
            comp=Z,4.2nm,0.8s,baz=360,slow=19,SNR=2.8
ENH   Enshi             67.11 309  eP      P        17 15 01.2 -0.3
            comp=Z,14nm,0.9s
GYA   Guiyang           67.61 304⇑iP      P        17 15 05.2 +0.2
GYA                                PP      PP       17 17 38.4 +4.2
GYA                                S       S        17 24 02.0 -0.4
GYA                                SKS     SKSac    17 25 01.9 -1.6
GYA   Guiyang           67.61 304  SS      SS       17 28 25.5 +2.0
GYA                                pmax    pmax
            comp=Z,20nm,1.0s
GYA                                pmax    pmax
            comp=Z,120nm,6.7s
GYA                                LR      LR
            comp=N,540nm,18.2s
GYA                                LR      LR
            comp=E,520nm,18.6s
GYA                                LR      LR
            comp=Z,510nm,18.4s
PBKT  Sadao Pong        68.86 292  eP      P        17 15 13.0 +0.2
            comp=Z,6.3nm,0.8s
XAN   Xi'an             69.34 313  P       P        17 15 15.9 +0.3
XAN                                pP      PcP      17 15 33.4 -5.7
XAN                                sP      pwP      17 15 40.1  +17
XAN                                pmax    pmax
            comp=Z,9.0nm,0.8s
XAN   Xi'an             69.34 313  eP      P        17 15 15.6  0.0
            comp=Z,6.6nm,0.7s
KMI   Kunming           70.31 302  P       P        17 15 22.9 +1.0
KMI                                pP      sP       17 15 26.5 +2.2
KMI                                pmax    pmax
            comp=Z,11nm,1.4s
KMI                                pmax    pmax
            comp=Z,120nm,3.8s
HHC   Hu-ho-hao-te      71.09 320  eP      P        17 15 28.3 +2.1
HHC                                pmax    pmax
            comp=Z,8.0nm,1.2s
CM31  Chiang Mai Arr    71.29 294  eP      P        17 15 28.0 +0.3
            comp=Z,8.3nm,0.9s
CMAR  Chiang Mai Arr    71.29 294  P       P        17 15 28.2 +0.5
            comp=Z,5.0nm,0.8s,baz=122,slow=4.5,SNR=32
CMMT  Chiang Mai        71.40 294  P       P        17 15 29.2 +0.8
CHTO  Chiang Mai        71.40 294  eP      P        17 15 28.8 +0.4
            comp=Z,27nm,1.8s
CHTO  Chiang Mai        71.40 294  P       P        17 15 29.3 +0.9
            comp=Z,39nm,1.5s
CD2   Chengdu           71.80 308  P       P        17 15 30.9 +0.2
CD2                                pmax    pmax
            comp=Z,40nm,0.8s
CD2                                pmax    pmax
            comp=Z,160nm,5.0s
LZH   Lanzhou           73.98 312  eP      P        17 15 45.4 +1.8
LZH                                pP      pwP      17 15 54.8 +3.3
LZH                                sP      PcP      17 15 59.1 +0.2
LZH                                PP      PP       17 18 35.0 +6.1
LZH                                pmax    pmax
            comp=Z,28nm,1.4s
LZH                                pmax    pmax
            comp=Z,98nm,4.8s
LZH                                LR      LR
            comp=N,560nm,16.5s
LZH                                LR      LR
            comp=E,550nm,16.9s
LZH                                LR      LR
            comp=Z,650nm,18.8s
GAMB  Gambell           76.38  10  eP      P        17 15 57.7 +1.1
            comp=Z,15nm,0.8s
ULN   Ulaanbaatar       77.59 324  eP      P        17 16 05.0 +1.0
            comp=Z,16nm,0.9s
SONA0 Songino Array     77.95 324  eP      P        17 16 06.7 +0.7
SONM  Songino Array     77.95 324  P       P        17 16 06.7 +0.7
            comp=Z,6.6nm,1.0s,baz=144,slow=7.2,SNR=38
SONA1 Songino Array     77.96 324  eP      P        17 16 06.5 +0.4
SVW2  Sparrevohn        78.03  18  eP      P        17 16 06.8 +0.8
            comp=Z,34nm,1.5s
GTA   Gaotai            78.29 314 ⇑P       P        17 16 09.4 +1.4
GTA                                pP      pwP      17 16 13.9 -2.0
GTA                                sP      PcP      17 16 16.5 -0.9
GTA                                pmax    pmax
            comp=Z,15nm,1.0s
GTA                                pmax    pmax
            comp=Z,160nm,5.2s
GTA                                LR      LR
            comp=N,140nm,17.8s
GTA                                LR      LR
            comp=E,190nm,17.5s
GTA                                LR      LR
            comp=Z,170nm,19.0s
ANM   Nome              78.33  13  eP      P        17 16 08.7 +1.1
            comp=Z,14nm,1.4s
BILL  Bilibino          78.55   0  eP      P        17 16 09.1 +0.4
            comp=Z,22nm,0.8s
QSPA  South Pole Qui    79.29 180  eP      P        17 16 14.3 +1.2
            comp=Z,58nm,1.0s
CAST  Castle Rocks      80.87  18  eP      P        17 16 22.0 +0.6
            comp=Z,38nm,1.9s
LSA   Lhasa             81.54 302  eP      P        17 16 27.1 +0.8
            comp=Z,9.9nm,1.4s
RDOG  Red Dog Mine      81.85  12  eP      P        17 16 26.8 +0.3
            comp=Z,22nm,0.9s
IM3   Indian Mountai    82.31  16  eP      P        17 16 29.9 +1.0
WRH   Wood River Hil    82.86  19  eP      P        17 16 31.5 -0.3
            comp=Z,13nm,1.3s
MDM   Murphy Dome       83.15  18  eP      P        17 16 32.1 -1.3
            comp=Z,11nm,1.0s
HDA   Harding Lake      83.17  19  eP      P        17 16 33.5  0.0
            comp=Z,8.1nm,0.7s
HDA   Harding Lake      83.17  19  P       P        17 16 34.3 +0.8
            baz=228
RIDG  Independ’e Rid    83.42  20  eP      P        17 16 36.3 +1.4
            comp=Z,13nm,1.0s
IL1   Eielson Array     83.44  19  eP      P        17 16 34.7 -0.1
ILAR  Eielson Array     83.44  19  P       P        17 16 34.5 -0.4
            comp=Z,3.5nm,0.6s,baz=244,slow=5.0,SNR=52
ILAR                               LR      LR       17 47 54.2
            comp=Z,75nm,19.6s,baz=242,slow=32
ILB   Eielson Array     83.44  19  eP      P        17 16 35.0 +0.2
            comp=Z,22nm,1.7s
POKR  Poker Plat Res    83.50  18  P       P        17 16 35.0 -0.2
            baz=227
SCRK  Sand Creek        83.86  20  eP      P        17 16 38.0 +0.8
            comp=Z,69nm,2.0s
AFDM  Forest Hills D    84.55  49  eP      P        17 16 41.1  0.0
            comp=Z,8.7nm,1.1s
RAMN  Ramite            84.64 299  eP      P        17 16 42.4 +0.3
M04C  Macdoel           84.83  46  P       P        17 16 43.9 +1.2
            baz=251
JIRN  Jiri              85.17 299  eP      P        17 16 45.3 +0.4
ISA   Isabella, Lake    85.47  53  eP      P        17 16 46.3 +0.4
            comp=Z,4.4nm,0.9s
ISA   Isabella, Lake    85.47  53  P       P        17 16 46.9 +1.0
            baz=254
GUN   Gumba             85.50 299  eP      P        17 16 47.1 +0.5
            comp=Z,40nm,1.1s
DAWY  Dawson            85.52  21  eP      P        17 16 47.3 +1.9
            comp=Z,13nm,1.4s
WAKR  Walker            85.56  50  eP      P        17 16 47.4 +1.0
            comp=Z,15nm,1.5s
MDPB  Devils Postpil    85.57  51  eP      P        17 16 46.7 +0.1
            comp=Z,5.0nm,0.9s
TIXI  Tiksi             85.62 349  eP      P        17 16 45.6 -0.1
            comp=Z,11nm,1.1s
OMMB  Old Mammoth Mi    85.62  51  eP      P        17 16 48.0 +1.1
            comp=Z,6.7nm,1.3s
EDW2  Edwards Air Fo    85.63  53  P       P        17 16 47.6 +0.9
            baz=254
BFSC  Mount Baldy Ra    85.72  54  P       P        17 16 48.1 +0.9
            baz=254
J05D  Fort Rock, OR     85.74  45  P       P        17 16 48.6 +1.4
            baz=251
PKI   Pulchoki          85.82 299  eP      P        17 16 48.2 +0.1
PKIN  Phulchoki         85.83 299  eP      P        17 16 48.0 -0.1
PAHR  Pah Rah Range     85.95  49  eP      P        17 16 47.6 -0.7
            comp=Z,4.7nm,1.0s
CWC   Cottonwood Cre    86.00  52  P       P        17 16 49.3 +0.7
            baz=254
LRMC  Laurel Mtn Rad    86.04  53  P       P        17 16 49.6 +0.8
            baz=254
DMN   Daman             86.09 299  eP      P        17 16 49.7 +0.3
            comp=Z,44nm,1.1s
MPMC  Manual Prospec    86.35  52  P       P        17 16 51.2 +0.8
            baz=254
MONP2 Monument Peak     86.35  56  P       P        17 16 51.6 +1.1
            baz=255
NV01  Mina Array Sit    86.39  50  eP      P        17 16 50.4 -0.1
NVAR  Mina Array Bea    86.39  50  P       P        17 16 50.6  0.0
            comp=Z,4.0nm,0.9s,baz=232,slow=8.1,SNR=18
DLBC  Dease Lake        86.48  29  eP      P        17 16 50.5 +0.1
            comp=Z,41nm,1.9s
DLBC  Dease Lake        86.48  29  P       P        17 16 50.4 +0.1
            comp=Z,1.3nm,0.4s,baz=193,slow=23,SNR=3.4
NV11  Mina Array Sit    86.50  50  eP      P        17 16 51.5 +0.5
            comp=Z,0.5nm,1.0s
PFO   Pinyon Flats O    86.51  55  P       P        17 16 51.9 +0.8
            baz=255
PFO   Pinyon Flats O    86.51  55  P       P        17 16 51.7 +0.5
            comp=Z,3.6nm,0.8s,baz=335,slow=3.2,SNR=4.0
TPFO  Pinon Flats       86.51  55  P       P        17 16 52.0 +0.8
            baz=255
KVN   Kaiserville       86.72  49  eP      P        17 16 52.4 +0.3
            comp=Z,4.6nm,1.0s
HEC   Hector,Ludlow     86.93  54  P       P        17 16 54.0 +0.8
            baz=255
BELC  Belle Mtn. Jos    86.98  55  P       P        17 16 54.4 +0.9
            baz=255
BC3   Big Chuckawall    87.33  55  P       P        17 16 56.0 +0.8
            baz=255
DANN  Dangsing          87.42 299  eP      P        17 16 55.2 -0.7
GMRC  Granite Mounta    87.45  54  P       P        17 16 56.4 +0.7
            baz=255
TPNV  Topopah Spring    87.55  52  P       P        17 16 57.2 +1.0
            baz=255
J08A  Circle Bar Ran    87.68  45  eP      P        17 16 56.7 +0.1
            comp=Z,12nm,1.3s
GLA   Glamis            87.69  56  P       P        17 16 58.5 +1.7
            baz=256
G08A  Pilot Rock        87.92  43  eP      P        17 16 57.5 -0.2
            comp=Z,8.1nm,1.1s
PYUN  Piuthan           88.02 299  eP      P        17 16 58.0 -0.7
            comp=Z,19nm,0.9s
Y12C  Blythe            88.11  55  P       P        17 16 60.0 +1.3
            baz=256
WMQ   Urumqi            88.33 315  P       P        17 17 00.3 +0.7
WMQ                                pP      pwP      17 17 06.5 -1.0
WMQ                                sP      sP       17 17 10.9 +8.8
WMQ                                pmax    pmax
            comp=Z,27nm,0.7s
WMQ                                pmax    pmax
            comp=Z,540nm,5.7s
WMQ                                LR      LR
            comp=N,110nm,14.7s
WMQ                                LR      LR
            comp=E,190nm,17.7s
WMQ                                LR      LR
            comp=Z,180nm,14.7s
WMQ   Urumqi            88.33 315  eP      P        17 16 60.0 +0.4
            comp=Z,49nm,1.8s
R11A  Troy Canyon, C    88.42  51  P       P        17 17 01.3 +1.0
            baz=255
PDMCI Parker Dam,Lak    88.55  55  P       P        17 17 01.7 +1.0
            baz=256
W13A  Hualapai Mount    88.94  54  eP      P        17 17 03.2 +0.3
            comp=Z,11nm,1.6s
214A  Organ Pipe Nat    89.08  57  P       P        17 17 04.6 +1.1
            baz=257
ELK   Elko              89.29  48  P       P        17 17 04.8 +0.3
            comp=Z,1.0nm,0.8s,baz=233,slow=10,SNR=3.8
PSUT  Pine Spring       89.78  51  eP      P        17 17 07.7 +0.9
            comp=Z,3.6nm,1.0s
INK   Inuvik            89.83  19  P       P        17 17 06.5 +0.5
            comp=Z,0.9nm,0.9s,baz=247,slow=4.6,SNR=3.4
LCMT  Little Creek M    89.90  52  eP      P        17 17 07.8 +0.6
            comp=Z,3.4nm,0.8s
CCUT  Cedar City        89.93  52  eP      P        17 17 08.7 +1.2
            comp=Z,5.8nm,1.0s
KNB   Kanab             90.23  52  eP      P        17 17 09.8 +0.9
            comp=Z,6.4nm,1.1s
U15A  North Rim         90.51  53  eP      P        17 17 11.4 +1.1
            comp=Z,6.1nm,0.8s
HLID  Hailey            90.59  46  eP      P        17 17 11.0 +0.6
            comp=Z,4.2nm,0.9s
HLID  Hailey            90.59  46  P       P        17 17 11.7 +1.3
            baz=256
PKCU  Pink Cliffs       90.72  52  eP      P        17 17 10.0 -1.3
            comp=Z,11nm,1.0s
X16A  Lo Mia Camp, P    90.75  55  eP      P        17 17 11.8 +0.5
            comp=Z,17nm,1.9s
MTPU  Mount Pierson     90.95  52  eP      P        17 17 14.0 +1.5
BGU   Big Grassy Mou    90.96  49  eP      P        17 17 13.2 +1.0
            comp=Z,3.9nm,1.0s
WUAZ  Wupatki           91.04  54  P       P        17 17 14.1 +1.5
            baz=258
MSU   Marysvale         91.06  51  eP      P        17 17 14.5 +1.7
HVU   Hansel Valley     91.34  48  eP      P        17 17 14.8 +0.9
            comp=Z,8.8nm,0.9s
NLU   North Lily Min    91.45  50  eP      P        17 17 15.5 +0.9
            comp=Z,4.6nm,0.9s
SPUT  South Promonto    91.47  48  eP      P        17 17 14.9 +0.4
            comp=Z,2.5nm,0.9s
JLU   Jordanelle        92.06  49  eP      P        17 17 18.1 +0.8
            comp=Z,4.3nm,0.9s
TCUT  Toone Canyon      92.20  49  eP      P        17 17 18.2 +0.2
            comp=Z,5.5nm,0.8s
DLMT  Dillon            92.27  44  eP      P        17 17 19.1 +1.0
            comp=Z,9.3nm,1.0s
MK01  Makanchi Array    92.75 317  eP      P        17 17 20.0 -0.2
MK31  Makanchi Array    92.77 317  eP      P        17 17 20.3 +0.1
            comp=Z,8.8nm,0.8s
MK32  Makanchi Array    92.77 317  eP      P        17 17 20.0 -0.2
MKAR  Makanchi Array    92.77 317  eP      P        17 17 20.3 +0.1
            comp=Z,53nm,0.8s
MKAR  Makanchi Array    92.77 317  P       P        17 17 20.0 -0.2
            comp=Z,10.0nm,0.7s,baz=99,slow=6.0,SNR=101
ZAA0  Zalesovo Array    92.85 324  eP      P        17 17 19.6 -0.7
            comp=Z,8.2nm,1.0s
ZALV  Zalesovo Beam     92.85 324  eP      P        17 17 19.1 -1.2
ZALV  Zalesovo Beam     92.85 324  P       P        17 17 19.4 -0.9
            comp=Z,5.0nm,0.9s,baz=108,slow=4.8,SNR=22
ZAA1  Zalesovo Array    92.85 324  eP      P        17 17 19.4 -0.9
MAKZ  Makanchi          92.98 317  eP      P        17 17 20.9 -0.3
            comp=Z,13nm,0.9s
BOZ   Bozeman (W)       92.99  44  eP      P        17 17 21.9 +0.5
            comp=Z,8.7nm,1.3s
BOZ   Bozeman (W)       92.99  44  P       P        17 17 22.5 +1.1
            baz=258
FXWY  Fox Creek         93.00  46  eP      P        17 17 22.3 +0.7
            comp=Z,2.9nm,0.8s
H17A  Grant Village     93.47  46  eP      P        17 17 24.1 +0.3
            comp=Z,16nm,1.9s
H17A  Grant Village     93.47  46  P       P        17 17 25.7 +1.9
            baz=259
BW06  Boulder Array     93.88  47  eP      P        17 17 25.7  0.0
BW06  Boulder Array     93.88  47  P       P        17 17 26.3 +0.6
            baz=259
PD31  Pinedale Array    93.88  47  eP      P        17 17 25.2 -0.5
            comp=Z,8.3nm,1.6s
PDAR  Pinedale Array    93.88  47  eP      P        17 17 24.2 -1.5
PDAR  Pinedale Array    93.88  47  P       P        17 17 25.0 -0.7
            comp=Z,1.6nm,0.9s,baz=251,slow=3.3,SNR=12
EGMT  Eagleton          94.73  42  P       P        17 17 29.9 +0.6
            baz=259
YKA   Yellowknife Ar    95.03  27  P       P        17 17 28.8 -1.3
            comp=Z,0.6nm,0.8s,baz=256,slow=4.7,SNR=6.9
YKB5  Yellowknife Ar    95.03  27  eP      P        17 17 28.7 -1.5
KURK  Kurchatov         95.91 320  eP      P        17 17 33.6 -0.8
            comp=Z,6.9nm,1.3s
KSH   Kashi             95.96 309  P       P        17 17 36.8 +1.6
KSH                                pP      pwP      17 17 41.6 -1.5
KSH                                pmax    pmax
            comp=Z,380nm,5.8s
LTX   Lajitas           96.33  61  eP      P        17 17 36.4 -0.6
TXAR  Lajitas Array     96.33  61  P       P        17 17 36.4 -0.6
            comp=Z,0.2nm,0.7s,baz=226,slow=5.0,SNR=3.5
ARA0  ARCESS Array S   115.82 345  ePKPdf  PKiKP    17 22 48.0 -1.8
ARCES ARCESS Array B   115.82 345  PKP     PKiKP    17 22 48.0 -1.8
            comp=Z,1.5nm,0.6s,baz=76,slow=1.5,SNR=10
MNMC  Minye Minye      118.58 119  ePKPdf  PKPdf    17 22 54.9 -2.0
LPAZ  La Paz           121.00 116  ePKPdf  PKPdf    17 23 00.3 -1.8
FIA0  FINESS Array S   121.19 338  ePKPdf  PKPdf    17 22 59.7 -0.6
FINES FINESS Array B   121.19 338  PKP     PKPdf    17 22 59.7 -0.6
            comp=Z,1.8nm,0.8s,baz=101,slow=1.9,SNR=4.6
CPUP  Villa Florida    124.81 133  ePKPdf  PKPdf    17 23 07.8 -0.6
CPUP  Villa Florida    124.81 133  PKP     PKPdf    17 23 08.1 -0.3
            comp=Z,2.8nm,0.9s,baz=319,slow=2.3,SNR=5.4
BOSA  Boshof           124.84 224  PKP     PKPdf    17 23 07.6 -1.0
            comp=Z,2.2nm,0.9s,baz=205,slow=1.7,SNR=4.3
SDV   Santo Domingo    125.23  87  ePKPdf  PKPdf    17 23 09.0 -0.7
AKASG Malin Array Be   126.17 327  PKP     PKPdf    17 23 09.0 -1.2
            comp=Z,2.7nm,0.9s,baz=61,slow=2.5,SNR=6.8
NB200 NORSAR Array S   126.18 345  ePKPdf  PKPdf    17 23 08.7 -1.3
NOA   NORSAR Array B   126.18 345  PKP     PKPdf    17 23 08.7 -1.3
            comp=Z,0.9nm,0.8s,baz=31,slow=2.0,SNR=2.7
AK11  Malin Array Si   126.22 327  ePKPdf  PKPdf    17 23 10.0 -0.3
BR101 Keskin Array S   128.19 313  ePKPdf  PKPdf    17 23 12.5 -2.2
BRTR  Keskin Array B   128.19 313  PKP     PKPdf    17 23 12.5 -2.2
            comp=Z,0.7nm,0.8s,baz=16,slow=5.1,SNR=3.3
VYHS  Vyhne            132.91 330  ePKP    PKPdf    17 23 23.5 +0.4
CLL   Collm            133.50 336  ePKPdf  PKiKP    17 23 25.0 -0.4
            comp=Z,4.0nm,0.9s
MODS  Modra-Piesok     133.75 330  ePKP    PKiKP    17 23 25.9 -0.1
GEC2  GERESS Array S   135.07 333  ePKPdf  PKPdf    17 23 26.1 -1.3
GERES GERESS Array B   135.07 333  PKP     PKPdf    17 23 26.1 -1.3
            comp=Z,0.8nm,0.6s,baz=96,slow=1.0,SNR=7.6
KEST  Kesra            146.69 322  ePKPdf  PKPdf    17 23 47.9 -0.6
KEST  Kesra            146.69 322  PKPbc   PKPdf    17 23 48.2 -0.3
            comp=Z,12nm,1.1s,baz=291,slow=9.0,SNR=4.9
ESDC  Sonseca Array    149.53 343  PKPbc   PKPbc    17 23 57.4 -0.2
            comp=Z,1.4nm,0.8s,baz=354,slow=3.9,SNR=2.8
TOA0  Torodi Ar. Sit   163.47 280  ePKPdf  PKPdf    17 24 10.5 -1.1
TORD  Torodi Ar. Bea   163.47 280  PKP     PKPdf    17 24 10.8 -0.8
            comp=Z,1.0nm,0.9s,baz=353,slow=3.5,SNR=5.9
TORD                               PKPab   PKPab    17 25 01.6 -1.2
            comp=Z,0.5nm,0.8s,baz=93,slow=7.2,SNR=3.7
TOA1  Torodi Ar. Sit   163.47 280  ePKPdf  PKPdf    17 24 10.8 -0.8
TOA1                               ePKPab  PKPab    17 25 01.6 -1.2
```

IDC ***06*** *17:05:50.9±1.4, 10°.99S×164°.68E, h0km, mb4.1/6, mb1 4.3/9, mb1mx4.0/50, mbtmp4.2/9, ML3.7/2, Error ellipse: s-maj=34.3km s-min=26.1km az=136.0*

ISCJB ***06*** *17:05:53.6±1.0, 11°.2S±0°.1×164°.6E±0°.1, h29km, mb4.0/6, Error ellipse: s-maj=18.6km s-min=11.3km az=36.5*

ISC 06 17:05:55.2±1.0**, 11°.0S**±0°.1×**164°.7E**±0°.1**, h29km, n10, σ0s.96**/11**, mb4.0**/6**, Santa Cruz Islands region**

```
Code  Station Name         Δ°  AZ°  Phase ID          Time      Res
                                    Op      ISC     h  m  s    ISC
HNR   Honiara            4.93 289   Pn      Pn      17 07 06.3 -1.1
            baz=97,slow=8.1,SNR=1.6
HNR                                 Sn      Sn      17 08 05.1 +1.6
            baz=192,slow=20,SNR=2.5
DZM   Mont Dzumac       11.10 171   Pn      Pn      17 08 32.8 +0.6
            0.9nm,0.3s,baz=313,slow=19,SNR=2.6
CTA   Charters Tower    19.88 241   P       P       17 10 24.1 -0.4
            0.1nm,0.3s,baz=77,slow=16,SNR=1.7
WRA   Warramunga Arr    30.50 249   P       P       17 12 06.4 +0.3
            1.2nm,0.6s,baz=81,slow=9.4,SNR=4.9
ASAR  Alice Springs     31.86 243   P       P       17 12 18.4 +0.3
            2.7nm,0.5s,baz=63,slow=10,SNR=9.7
FITZ  Fitzroy Crossi    38.37 255   P       P       17 13 13.0 -1.2
            2.8nm,0.8s,baz=79,slow=8.9,SNR=3.1
SONM  Songino Array     78.05 324   P       P       17 17 52.2 +0.8
            0.7nm,0.7s,baz=140,slow=7.4,SNR=2.3
ILAR  Eielson Array     83.84  19   P       P       17 18 21.6 -0.1
            0.8nm,0.8s,baz=238,slow=5.1,SNR=3.1
MKAR  Makanchi Array    92.81 317   P       P       17 19 05.6 +0.4
            1.1nm,0.7s,baz=96,slow=6.3,SNR=3.2
ARCES ARCESS Array B   116.07 345   PKP     PKiKP   17 24 34.3 -0.7
            0.9nm,0.7s,baz=65,slow=4.3,SNR=1.1
```

IDC 06 17:10:00.0±1.6**, 11°.68S**×**165°.66E, h0km, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.6**/47**, mbtmp3.8**/5**, ML3.3**/1**, Error ellipse: s-maj=51.0km s-min=29.8km az=125.0, Santa Cruz Islands**

```
Code  Station Name         Δ°  AZ°  Phase ID          Time      Res
                                    Op      ISC     h  m  s    ISC
DZM   Mont Dzumac       10.36 176   Pn      Pn      17 12 30.2 +0.1
            0.2nm,0.3s,baz=343,slow=19,SNR=2.4
WRA   Warramunga Arr    31.19 251   P       P       17 16 22.6 +1.4
            0.9nm,0.9s,baz=80,slow=9.7,SNR=4.6
ASAR  Alice Springs     32.43 244   P       P       17 16 30.4 -1.8
            1.1nm,0.9s,baz=68,slow=10,SNR=6.1
ILAR  Eielson Array     84.14  19   P       P       17 22 32.5 -0.2
            0.4nm,0.6s,baz=229,slow=5.5,SNR=8.0
MKAR  Makanchi Array    93.92 317   P       P       17 23 20.2 +0.4
            0.5nm,0.7s,baz=94,slow=5.9,SNR=5.0
```

IDC ***06*** *17:11:48.5±0.8, 11°.76S×165°.12E, h0km, mb4.3/16, mb1 4.4/19, mb1mx4.2/46, mbtmp4.2/19, ML3.9/3, Error ellipse: s-maj=23.7km s-min=16.9km az=142.0*

NEIC ***06*** *17:11:50.2±4.3, 11°.79S×165°.08E, h12km±26km, mb4.7/12, Error ellipse: s-maj=9.7km s-min=8.3km az=192.0*

ISCJB ***06*** *17:11:51.9±0.4, 11°.85S±0°.07×164°.99E±0°.05, h33km, mb4.4/27, Error ellipse: s-maj=10.3km s-min=7.7km az=175.8*

ISC 06 17:11:53.6±0.6, 11°.8S±0°.1×165°.06E±0°.09, h35^{km}, n52, σ0^{s}.78/54, mb4.4/27, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.55**	**295**	Pn	**Pn**	**17 13 13.3**	**-0.6**
	16nm,0.3s,baz=153,slow=10,SNR=4.3						
HNR				Sn	**Sn**	**17 14 16.4**	**-0.1**
	20nm,0.3s,baz=166,slow=22,SNR=7.1						
DZM	**Mont Dzumac**	**10.30**	**173**	Pn	**Pn**	**17 14 18.6**	**-0.5**
	0.6nm,0.3s,baz=17,slow=8.3,SNR=11						
CTA	**Charters Tower**	**19.86**	**243**	P	**P**	**17 16 22.4**	**+0.5**
	0.1nm,0.3s,baz=75,slow=15,SNR=3.2						
URZ	**Urewera**	**28.46**	**160**	*e*PcP	**PcP**	**17 20 56.4**	**-0.5**
H11S2	**WAKE ISLAND Hy**	**30.14**	**3**	T	T	17 48 01.9	
	baz=184,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.15**	**3**	T	T	17 48 03.5	
	baz=184,slow=76						
H11S1	**WAKE ISLAND Hy**	**30.16**	**3**	T	T	17 48 04.7	
	baz=184,slow=76						
WB2	**Warramunga Arr**	**30.59**	**251**	*e*P	**P**	**17 18 04.8**	**+0.3**
WR1	**Warramunga Arr**	**30.60**	**251**	*e*P	**P**	**17 18 05.0**	**+0.4**
	7.0nm,0.9s						
WR1				*e*PcP	**PcP**	**17 21 03.4**	**+0.6**
WRA	**Warramunga Arr**	**30.60**	**251**	P	**P**	**17 18 05.0**	**+0.4**
	4.2nm,0.9s,baz=81,slow=9.1,SNR=13						
WRA				PcP	**PcP**	**17 21 03.4**	**+0.6**
	0.9nm,0.9s,baz=75,slow=3.1,SNR=5.6						
AS31	**Alice Springs**	**31.86**	**244**	*e*P	**P**	**17 18 14.7**	**-0.9**
	0.9nm,0.9s						
AS31				*e*PcP	**PcP**	**17 21 06.4**	**+0.3**
ASAR	**Alice Springs**	**31.86**	**244**	P	**P**	**17 18 15.3**	**-0.3**
	2.2nm,0.8s,baz=81,slow=8.5,SNR=13						
ASAR				PcP	**PcP**	**17 21 06.4**	**+0.3**
	0.6nm,0.8s,baz=72,slow=3.0,SNR=5.6						
FITZ	**Fitzroy Crossi**	**38.54**	**256**	*e*P	**P**	**17 19 11.9**	**-1.3**
	13nm,1.4s						
FITZ	**Fitzroy Crossi**	**38.54**	**256**	P	**P**	**17 19 13.2**	**-0.1**
	4.0nm,0.9s,baz=166,slow=2.8,SNR=4.0						
MJAR	**Matsushiro Arr**	**54.34**	**333**	P	**P**	**17 21 15.3**	**-1.5**
	2.6nm,0.8s,baz=172,slow=7.8,SNR=6.7						
MAJO	**Matsushiro**	**54.34**	**333**	*e*P	**P**	**17 21 15.3**	**-1.5**
ASAJ	**Asahikawa**	**59.29**	**341**	P	**P**	**17 21 52.0**	**+0.2**
	9.4nm,0.8s,baz=208,slow=9.9,SNR=9.1						
USRK	**Ussuriysk Ar.**	**63.32**	**334**	P	**P**	**17 22 19.5**	**+0.4**
	2.9nm,0.7s,baz=131,slow=5.0,SNR=5.5						
XAN	**Xi'an**	**70.14**	**313**	*e*P	**P**	**17 23 02.2**	**-0.6**
	5.6nm,0.9s						
CM01	**Chiang Mai Arr**	**71.78**	**294**	*e*P	**P**	**17 23 14.7**	**+1.6**
CMAR	**Chiang Mai Arr**	**71.80**	**294**	P	**P**	**17 23 15.0**	**+1.7**
	1.2nm,0.9s,baz=122,slow=4.6,SNR=8.0						
CHTO	**Chiang Mai**	**71.92**	**294**	*e*P	**P**	**17 23 13.9**	**0.0**
	5.9nm,1.4s						
SEY	**Seymchan**	**75.15**	**354**	P	**P**	**17 23 32.4**	**+0.5**
	0.5nm,0.3s,baz=168,slow=6.6,SNR=3.6						
ULN	**Ulaanbaatar**	**78.52**	**324**	*e*P	**P**	**17 23 51.6**	**+0.1**
	4.0nm,0.7s						
SONA0	**Songino Array**	**78.88**	**324**	*e*P	**P**	**17 23 54.5**	**+1.1**
SONM	**Songino Array**	**78.88**	**324**	P	**P**	**17 23 54.5**	**+1.1**
	1.2nm,0.7s,baz=142,slow=7.2,SNR=10						
SONA1	**Songino Array**	**78.88**	**324**	*e*P	**P**	**17 23 53.5**	**0.0**
BILL	**Bilibino**	**79.64**	**0**	*e*P	**P**	**17 23 57.6**	**+0.7**
	9.9nm,1.0s						
MDM	**Murphy Dome**	**84.15**	**18**	*e*P	**P**	**17 24 21.3**	**+0.5**
	21nm,1.8s						
HDA	**Harding Lake**	**84.17**	**19**	*e*P	**P**	**17 24 21.4**	**+0.5**
	8.6nm,1.0s						
ILAR	**Eielson Array**	**84.44**	**19**	P	**P**	**17 24 22.4**	**+0.2**
	2.2nm,0.7s,baz=234,slow=5.5,SNR=30						
ILB	**Eielson Array**	**84.44**	**19**	*e*P	**P**	**17 24 22.4**	**+0.2**
SCRK	**Sand Creek**	**84.85**	**20**	*e*P	**P**	**17 24 25.1**	**+0.6**
	7.5nm,1.0s						
AFDM	**Forest Hills D**	**85.20**	**49**	*e*P	**P**	**17 24 27.3**	**+0.5**
	5.1nm,1.1s						
NVAR	**Mina Array Bea**	**87.02**	**50**	P	**P**	**17 24 36.4**	**+0.5**
	2.1nm,0.8s,baz=231,slow=7.3,SNR=9.3						
NV01	**Mina Array Sit**	**87.02**	**50**	*e*P	**P**	**17 24 36.5**	**+0.5**
MTPU	**Mount Pierson**	**91.56**	**52**	*e*P	**P**	**17 24 59.0**	**+1.4**
	7.1nm,1.4s						
MSU	**Marysvale**	**91.67**	**51**	*e*P	**P**	**17 24 56.9**	**-1.0**
MK01	**Makanchi Array**	**93.60**	**317**	*e*P	**P**	**17 25 06.2**	**-0.1**
MK31	**Makanchi Array**	**93.61**	**317**	*e*P	**P**	**17 25 07.1**	**+0.7**
MK32	**Makanchi Array**	**93.61**	**317**	*e*P	**P**	**17 25 07.1**	**+0.7**
MKAR	**Makanchi Array**	**93.61**	**317**	*e*P	**P**	**17 25 07.1**	**+0.7**
	8.4nm,0.8s						
MKAR	**Makanchi Array**	**93.61**	**317**	P	**P**	**17 25 07.1**	**+0.7**
	1.1nm,0.7s,baz=96,slow=6.0,SNR=9.3						
ZALV	**Zalesovo Beam**	**93.78**	**324**	P	**P**	**17 25 06.3**	**-0.5**
	0.3nm,0.3s,baz=169,slow=2.9,SNR=3.9						
ZAA1	**Zalesovo Array**	**93.78**	**324**	*e*P	**P**	**17 25 06.3**	**-0.5**
PDAR	**Pinedale Array**	**94.55**	**47**	P	**P**	**17 25 10.8**	**-0.3**
	0.5nm,0.8s,baz=273,slow=5.1,SNR=3.0						
YKA	**Yellowknife Ar**	**95.95**	**27**	P	**P**	**17 25 15.6**	**-1.0**
	1.1nm,0.8s,baz=256,slow=4.6,SNR=14						
YKB5	**Yellowknife Ar**	**95.95**	**27**	*e*P	**P**	**17 25 15.6**	**-1.0**
LTX	**Lajitas**	**96.78**	**62**	*e*P	**P**	**17 25 20.7**	**-0.6**
TXAR	**Lajitas Array**	**96.78**	**62**	P	**P**	**17 25 20.7**	**-0.6**
	0.3nm,0.7s,baz=256,slow=7.1,SNR=4.2						
ARA0	**ARCESS Array S**	**116.89**	**345**	*e*PKPdf	**PKiKP**	**17 30 34.8**	**+0.8**
ARCES	**ARCESS Array B**	**116.89**	**345**	PKP	**PKiKP**	**17 30 34.8**	**+0.8**
	1.9nm,0.9s,baz=79,slow=1.4,SNR=1.4						

IDC 06 17:16:00.7±2.0, 0°.87N×126°.74E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.2/42, mbtmp3.2/3, Error ellipse: s-maj=169.3km s-min=25.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.98**	**161**	P	P	17 20 56.0	-0.6
	0.7nm,0.6s,baz=339,slow=12,SNR=7.4						
ASAR	**Alice Springs**	**25.36**	**165**	P	P	17 21 30.1	+0.4
	0.2nm,0.4s,baz=345,slow=12,SNR=6.6						
MKAR	**Makanchi Array**	**59.91**	**326**	P	P	17 26 08.6	-0.1
	0.1nm,0.4s,baz=119,slow=8.4,SNR=2.8						

IDC 06 17:18:39.0±3.5, 11°.41S×165°.86E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.5/40, mbtmp3.7/4, ML3.2/1, Error ellipse: s-maj=71.6km s-min=45.4km az=82.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.62**	**177**	Pn	Pn	17 21 12.3	-0.3
	0.2nm,0.3s,baz=350,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**31.47**	**250**	P	P	17 25 02.6	0.0
	0.5nm,0.6s,baz=81,slow=9.0,SNR=6.1						
ASAR	**Alice Springs**	**32.73**	**244**	P	P	17 25 13.7	-0.1
	0.6nm,0.9s,baz=75,slow=8.0,SNR=4.2						
MKAR	**Makanchi Array**	**93.86**	**317**	P	P	17 31 58.4	0.0
	0.1nm,0.7s,baz=94,slow=4.3,SNR=1.2						

IDC ***06*** *17:19:29.0±0.6, 11°.80S×165°.18E, h0^{km}, mb4.6/22, mb1 4.7/25, mb1mx4.6/41, mbtmp4.6/25, ML4.2/3, MS3.8/2, Ms1 3.9/2, ms1mx3.1/40, Error ellipse: s-maj=18.3km s-min=13.2km az=134.0*

ISCJB ***06*** *17:19:31.3±0.2, 11°.79S±0°.05×165°.02E±0°.03, h24^{km}, mb4.9/117, MS4.2/1, Error ellipse: s-maj=6.7km s-min=4.2km az=168.4*

NEIC ***06*** *17:19:31.0±2.6, 11°.74S×165°.10E, h13^{km}±16^{km}, mb5.0/89, Error ellipse: s-maj=5.7km s-min=3.9km az=177.0*

ISC 06 17:19:33.1±1.3, 11°.82S±0°.06×165°.12E±0°.06, h26^{km}±9^{km}, n225, σ0^{s}.89/232, mb5.0/117, 2C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.61**	**295**	*e*P	**Pn**	**17 20 54.0**	**-0.9**
HNR	**Honiara**	**5.61**	**295**	*e*Pn	**Pn**	**17 20 52.8**	**-2.1**
HNR				*e*Sn	**Sn**	**17 21 56.6**	**-1.9**
HNR	**Honiara**	**5.61**	**295**	Pn	**Pn**	**17 20 54.3**	**-0.5**
	18nm,0.3s,baz=181,slow=5.0,SNR=10						
HNR				Sn	**Sn**	**17 21 56.6**	**-1.9**
	6.2nm,0.3s,baz=90,slow=20,SNR=4.8						
HNR				LR	LR	17 23 19.5	
	comp=Z,634nm,21.3s,baz=90,slow=41						
DZM	**Mont Dzumac**	**10.27**	**173**	Pn	**Pn**	**17 21 59.7**	**+0.7**
	0.7nm,0.3s,baz=307,slow=12,SNR=16						
DZM				Sn	**Sn**	**17 23 50.9**	**-2.5**
	0.1nm,0.3s,baz=48,slow=14,SNR=2.0						
MSVF	**Nonsavu**	**13.82**	**117**	*e*Pn	**Pn**	**17 22 47.5**	**0.0**
EIDS	**Eidsvold**	**18.91**	**223**	*e*P	**P**	**17 23 51.0**	**-0.9**
	66nm,1.6s						
CTA	**Charters Tower**	**19.89**	**243**	P	**Pn**	**17 24 04.7**	**+0.2**
	0.4nm,0.3s,baz=68,slow=13,SNR=10						
CTAO	**Charters Tower**	**19.89**	**243**	*e*P	**P**	**17 24 02.2**	**-0.6**
	24nm,0.8s						
MANU	**Manus Island**	**20.10**	**298**	*e*P	**P**	**17 24 04.9**	**-0.2**
	57nm,1.1s						
COEN	**Coen**	**21.49**	**262**	*e*P	**P**	**17 24 20.9**	**+0.8**
	32nm,1.3s						
ARMA	**Armidale**	**22.34**	**212**	*e*P	**P**	**17 24 30.2**	**+1.0**
	27nm,1.0s						
STKA	**Stephens Creek**	**29.46**	**224**	*e*P	**P**	**17 25 35.9**	**+0.9**
	1.4nm,0.8s						
STKA	**Stephens Creek**	**29.46**	**224**	P	**P**	**17 25 34.3**	**-0.6**
	6.5nm,0.9s,baz=27,slow=9.1,SNR=11						
H11S2	**WAKE ISLAND Hy**	**30.16**	**3**	T	T	17 57 15.9	
	baz=184,slow=76,SNR=6.5						
H11S3	**WAKE ISLAND Hy**	**30.16**	**3**	T	T	17 57 16.8	
	baz=184,slow=76,SNR=8.4						
H11S1	**WAKE ISLAND Hy**	**30.18**	**3**	T	T	17 57 16.5	
	baz=184,slow=76,SNR=6.6						
WRAB	**Tennant Creek**	**30.63**	**251**	*e*P	**P**	**17 25 44.7**	**-0.8**
	25nm,1.1s						
WB2	**Warramunga Arr**	**30.63**	**251**	*e*P	**P**	**17 25 44.9**	**-0.6**
	30nm,1.1s						
WB2				*e*PcP	**PcP**	**17 28 44.5**	**+0.9**
WR1	**Warramunga Arr**	**30.64**	**251**	*e*P	**P**	**17 25 45.7**	**+0.1**
	33nm,1.1s						
WR1				*e*PcP	**PcP**	**17 28 44.5**	**+0.8**
WRA	**Warramunga Arr**	**30.64**	**251**	P	**P**	**17 25 45.7**	**+0.1**
	16nm,1.0s,baz=81,slow=9.2,SNR=42						
WRA				PcP	**PcP**	**17 28 44.5**	**+0.8**
	1.7nm,0.8s,baz=76,slow=3.0,SNR=6.8						
H11N1	**WAKE ISLAND Hy**	**31.39**	**3**	T	T	18 00 34.2	
	baz=182,slow=76,SNR=4.1						
H11N3	**WAKE ISLAND Hy**	**31.39**	**3**	T	T	18 00 31.8	
	baz=182,slow=76,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**31.40**	**3**	T	T	18 00 42.0	
	baz=182,slow=76,SNR=6.3						
AS01	**Alice Springs**	**31.85**	**244**	*e*P	**P**	**17 25 55.6**	**-0.7**
AS01				*e*PcP	**PcP**	**17 28 47.0**	**+0.1**
AS31	**Alice Springs**	**31.89**	**244**	*e*P	**P**	**17 25 56.1**	**-0.6**
	2.4nm,0.8s						
ASAR	**Alice Springs**	**31.90**	**244**	P	**P**	**17 25 56.1**	**-0.5**
	7.7nm,0.8s,baz=74,slow=9.3,SNR=41						
ASAR				PcP	**PcP**	**17 28 47.8**	**+0.7**
	1.2nm,0.8s,baz=87,slow=2.6,SNR=6.7						
RPZ	**Rata Peaks**	**32.19**	**172**	P	**P**	**17 25 57.7**	**-1.2**
	5.5nm,0.7s,baz=117,slow=2.3,SNR=3.3						
FITZ	**Fitzroy Crossi**	**38.59**	**256**	*e*P	**P**	**17 26 54.0**	**-0.3**
	9.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.59**	**256**	P	**P**	**17 26 54.1**	**-0.1**
	6.0nm,0.8s,baz=98,slow=6.9,SNR=14						
BATI	**Baumata**	**40.69**	**268**	P	**P**	**17 27 11.9**	**0.0**
	11nm,0.8s,baz=135,slow=2.9,SNR=2.9						
MBWA	**Marble Bar**	**44.37**	**252**	*e*P	**P**	**17 27 42.8**	**+1.2**
	29nm,1.1s						
NWAO	**Narrogin (SRO)**	**48.52**	**236**	P	**P**	**17 28 14.9**	**+0.8**
	19nm,1.1s,baz=256,slow=2.8,SNR=3.5						
MJAR	**Matsushiro Arr**	**54.38**	**333**	P	**P**	**17 28 56.6**	**-1.3**
	5.4nm,0.9s,baz=170,slow=8.6,SNR=11						
MAJO	**Matsushiro**	**54.38**	**333**	*e*P	**P**	**17 28 56.6**	**-1.3**
MAT	**Matsushiro**	**54.38**	**333**	P	**P**	**17 28 57.0**	**-0.9**
KSRS	**Korea Array**	**60.17**	**326**	P	**P**	**17 29 38.8**	**+0.1**
	1.6nm,0.8s,baz=136,slow=7.6,SNR=3.4						
KSAR	**Wonju Array Be**	**60.18**	**326**	P	**P**	**17 29 38.8**	**0.0**
KS01	**Wonju Array Si**	**60.20**	**326**	*e*P	**P**	**17 29 38.6**	**-0.4**
NJ2	**Nanjing**	**62.14**	**316**	*e*P	**P**	**17 29 52.4**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**63.36**	**334**	P	**P**	**17 30 00.3**	**+0.2**
	comp=Z,6.4nm,0.8s,baz=131,slow=6.1,SNR=9.1						
MDJ	**Mudanjiang**	**64.75**	**333**	P	**P**	**17 30 10.0**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,200nm,5.0s						
PETK	**Petropavlovsk-**	**64.98**	**355**	P	**P**	**17 30 10.3**	**-0.2**
	comp=Z,6.7nm,0.9s,baz=172,slow=12,SNR=4.3						
PEA1	**Petropavlovsk-**	**64.99**	**355**	*e*P	**P**	**17 30 10.3**	**-0.3**
IPM	**Ipoh**	**65.75**	**280**	*e*P	**P**	**17 30 14.7**	**-1.6**
	comp=Z,34nm,1.5s						
CN2	**Changchun**	**66.09**	**330**	*e*P	**P**	**17 30 18.1**	**+0.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
ENH	**Enshi**	**67.91**	**310**	*e*P	**P**	**17 30 28.6**	**-1.2**
	comp=Z,11nm,0.9s						
GYA	**Guiyang**	**68.34**	**305**	⇑*i*P	**P**	**17 30 35.0**	**+2.2**
GYA				PP	**PP**	**17 33 08.6**	**+4.7**
GYA				S	**S**	**17 39 34.2**	**+1.4**
GYA				SKS	**SKSac**	**17 40 30.1**	**-0.4**
GYA	**Guiyang**	**68.34**	**305**	SS	SS	17 43 59.6	+2.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
XAN	**Xi'an**	**70.19**	**313**	P	**P**	**17 30 44.4**	**+0.5**
XAN				pP	sP	17 30 53.0	-0.1
XAN				sP	pwP	17 30 57.0	+0.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				LR	LR		
	comp=Z,220nm,18.4s						
XAN	**Xi'an**	**70.19**	**313**	*e*P	**P**	**17 30 43.5**	**-0.4**
	comp=Z,8.2nm,0.8s						
SRDT	**SRDT**	**70.37**	**290**	P	P	17 30 50.4	+5.1
	comp=Z,6.7nm,1.2s,comp=Z,2μm						
KMI	**Kunming**	**71.00**	**302**	P	**P**	**17 30 51.5**	**+2.2**
KMI				pP	sP	17 31 00.5	+2.0
KMI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CM01	**Chiang Mai Arr**	**71.83**	**294**	*e*P	**P**	**17 30 54.8**	**+0.7**
CM31	**Chiang Mai Arr**	**71.86**	**294**	*e*P	**P**	**17 30 52.4**	**-1.9**
	comp=Z,22nm,2.0s						
CMAR	**Chiang Mai Arr**	**71.86**	**294**	P	**P**	**17 30 55.5**	**+1.2**
	comp=Z,1.9nm,0.9s,baz=120,slow=4.2,SNR=15						
CMMT	**Chiang Mai**	**71.97**	**294**	P	**P**	**17 30 57.8**	**+2.8**
	comp=Z,3.8nm,1.2s						
CHTO	**Chiang Mai**	**71.97**	**294**	*e*P	**P**	**17 30 55.7**	**+0.7**
	comp=Z,4.7nm,1.1s						
CHTO	**Chiang Mai**	**71.97**	**294**	P	**P**	**17 30 57.8**	**+2.8**
	comp=Z,20nm,1.3s						
HHC	**Hu-ho-hao-te**	**72.02**	**320**	*e*P	**P**	**17 30 57.1**	**+2.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CD2	**Chengdu**	**72.58**	**308**	P	**P**	**17 30 59.1**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH	**Lanzhou**	**74.82**	**313**	*e*P	**P**	**17 31 13.5**	**+1.8**
LZH				pP	sP	17 31 22.1	+1.2
LZH				sP	PcP	17 31 27.4	+1.8
LZH				PP	PP	17 33 04.5	-55
LZH				*e*S	**SKiKP**	**17 40 36.0**	**+0.8**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,68nm,5.2s						
LZH				LR	LR		
	comp=N,560nm,17.5s						
LZH				LR	LR		
	comp=E,650nm,18.5s						
LZH				LR	LR		
	comp=Z,850nm,18.8s						
GAMB	**Gambell**	**77.44**	**10**	*e*P	**P**	**17 31 25.7**	**+0.1**
	comp=Z,22nm,1.4s						
QSPA	**South Pole Qui**	**78.19**	**180**	*e*P	**P**	**17 31 31.3**	**+1.1**
	comp=Z,11nm,1.0s						
ULN	**Ulaanbaatar**	**78.56**	**324**	*e*P	**P**	**17 31 32.2**	**-0.3**
	comp=Z,8.9nm,0.8s						
SONA0	**Songino Array**	**78.93**	**324**	*e*P	**P**	**17 31 34.8**	**+0.3**
SONM	**Songino Array**	**78.93**	**324**	P	**P**	**17 31 34.8**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=142,slow=6.7,SNR=18						
GTA	**Gaotai**	**79.15**	**314**	⇓P	**P**	**17 31 37.2**	**+1.3**
GTA				pP	sP	17 31 46.4	+1.2
GTA				sP	pwP	17 31 50.4	+1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,80nm,6.0s						
GTA				LR	LR		
	comp=N,150nm,16.8s						
GTA				LR	LR		
	comp=E,190nm,17.1s						
GTA				LR	LR		
	comp=Z,140nm,18.1s						
BILL	**Bilibino**	**79.65**	**0**	*e*P	**P**	**17 31 37.0**	**-0.9**
	comp=Z,18nm,1.0s						
CAST	**Castle Rocks**	**81.87**	**18**	*e*P	**P**	**17 31 48.4**	**-1.4**
	comp=Z,12nm,0.9s						
DIV	**Divide**	**82.35**	**22**	*e*P	**P**	**17 31 52.3**	**-0.1**
	comp=Z,19nm,1.1s						
KLU	**Klutina**	**82.54**	**21**	*e*P	**P**	**17 31 53.6**	**+0.1**
	comp=Z,9.5nm,1.0s						
RND	**Reindeer**	**82.87**	**19**	*e*P	**P**	**17 31 54.7**	**-0.4**
	comp=Z,37nm,1.8s						
MCK	**McKinley**	**83.07**	**19**	*e*P	**P**	**17 31 55.4**	**-0.7**
	comp=Z,18nm,1.3s						
BWN	**Browne**	**83.22**	**18**	*e*P	**P**	**17 31 57.6**	**+0.8**
	comp=Z,27nm,1.0s						
IM3	**Indian Mountai**	**83.33**	**16**	*e*P	**P**	**17 31 57.0**	**-0.4**
MLY	**Manley**	**83.46**	**17**	*e*P	**P**	**17 31 57.4**	**-0.7**
	comp=Z,11nm,1.4s						
WRH	**Wood River Hil**	**83.86**	**19**	*e*P	**P**	**17 31 59.4**	**-0.7**
	comp=Z,9.5nm,0.9s						
MDM	**Murphy Dome**	**84.16**	**18**	*e*P	**P**	**17 32 00.7**	**-1.0**
	comp=Z,9.3nm,0.9s						
HDA	**Harding Lake**	**84.17**	**19**	*e*P	**P**	**17 32 01.0**	**-0.7**
	comp=Z,14nm,0.8s						
HDA	**Harding Lake**	**84.17**	**19**	P	**P**	**17 32 01.2**	**-0.5**
	baz=227						
TCOL	**CIGO, UAF Yank**	**84.21**	**18**	P	**P**	**17 32 01.2**	**-0.7**
	baz=226						
COLA	**College**	**84.21**	**18**	*e*P	**P**	**17 32 01.2**	**-0.6**
	comp=Z,17nm,0.9s						
O02D	**Mt. Diablo Mer**	**84.27**	**47**	P	**P**	**17 32 02.2**	**-0.7**
	baz=249						
RIDG	**Independ'e Rid**	**84.41**	**20**	*e*P	**P**	**17 32 03.1**	**+0.1**
	comp=Z,22nm,1.1s						
ILAR	**Eielson Array**	**84.44**	**19**	P	**P**	**17 32 02.3**	**-0.8**
	comp=Z,4.2nm,0.7s,baz=238,slow=5.2,SNR=52						
ILB	**Eielson Array**	**84.44**	**19**	*e*P	**P**	**17 32 02.4**	**-0.7**
IL1	**Eielson Array**	**84.44**	**19**	*e*P	**P**	**17 32 01.6**	**-1.5**
SNCC	**San Nicolas Is**	**84.47**	**55**	P	**P**	**17 32 04.2**	**+0.3**
	baz=252						
POKR	**Poker Plat Res**	**84.51**	**18**	P	**P**	**17 32 02.3**	**-1.1**
	baz=226						
J01E	**Myrtle Point**	**84.55**	**44**	P	**P**	**17 32 02.9**	**-1.2**
	baz=248						
N02D	**Trinity Center**	**84.61**	**46**	P	**P**	**17 32 04.4**	**-0.1**
	baz=249						
M02C	**Callahan**	**84.65**	**46**	P	**P**	**17 32 05.0**	**+0.2**
	baz=249						
SMMC	**Simmler**	**84.75**	**52**	P	**P**	**17 32 05.0**	**-0.3**
	baz=252						
PKM	**Mcpherson Peak**	**84.75**	**53**	P	**P**	**17 32 04.7**	**-0.9**
	baz=252						
SCRK	**Sand Creek**	**84.85**	**20**	*e*P	**P**	**17 32 05.6**	**+0.3**
	comp=Z,26nm,1.1s						
I02D	**Swisshome**	**84.95**	**43**	P	**P**	**17 32 05.4**	**-0.6**
	baz=248						
ORV	**Oroville**	**84.99**	**48**	*e*P	**P**	**17 32 06.3**	**-0.1**
	comp=Z,10nm,1.1s						
O03E	**Paynes Creek**	**85.02**	**47**	P	**P**	**17 32 06.2**	**-0.5**
	baz=250						
BLG	**Laguna Peak, P**	**85.10**	**54**	P	**P**	**17 32 06.8**	**-0.3**
	baz=252						
I03D	**Drain, OR**	**85.14**	**44**	P	**P**	**17 32 06.9**	**-0.1**
	baz=249						
AFDM	**Forest Hills D**	**85.17**	**49**	*e*P	**P**	**17 32 07.5**	**+0.1**
	comp=Z,13nm,1.0s						
CMB	**Columbia Colle**	**85.31**	**50**	*e*P	**P**	**17 32 08.4**	**+0.3**
	comp=Z,7.4nm,0.9s						
L04D	**Klamath Falls**	**85.33**	**45**	P	**P**	**17 32 08.1**	**-0.1**
	baz=250						
CIS	**Catalina Islan**	**85.41**	**55**	P	**P**	**17 32 08.7**	**0.0**
	baz=253						
M04C	**Macdoel**	**85.50**	**46**	P	**P**	**17 32 08.9**	**-0.2**
	baz=250						
BEKR	**Beckworth**	**85.92**	**48**	*e*P	**P**	**17 32 11.2**	**-0.1**
	comp=Z,12nm,1.2s						
ISA	**Isabella, Lake**	**86.03**	**53**	*e*P	**P**	**17 32 11.5**	**-0.3**
	comp=Z,8.0nm,0.9s						
ISA	**Isabella, Lake**	**86.03**	**53**	P	**P**	**17 32 11.8**	**0.0**
	baz=253,SNR=7.2						
MDPB	**Devils Postpil**	**86.17**	**50**	*e*P	**P**	**17 32 12.6**	**-0.1**
	comp=Z,12nm,0.9s						
WAKR	**Walker**	**86.17**	**50**	*e*P	**P**	**17 32 12.7**	**+0.2**
	comp=Z,19nm,1.2s						
EDW2	**Edwards Air Fo**	**86.18**	**53**	P	**P**	**17 32 12.7**	**+0.2**
	baz=253,SNR=9.8						
OMMB	**Old Mammoth Mi**	**86.22**	**51**	*e*P	**P**	**17 32 11.9**	**-1.1**
	comp=Z,8.8nm,1.1s						
BFSC	**Mount Baldy Ra**	**86.25**	**54**	P	**P**	**17 32 12.5**	**-0.5**
	baz=253						
J05D	**Fort Rock, OR**	**86.43**	**45**	P	**P**	**17 32 13.9**	**+0.2**
	baz=250						
YERR	**Yerington**	**86.47**	**49**	*e*P	**P**	**17 32 14.6**	**+0.6**
	comp=Z,10nm,1.3s						
DAWY	**Dawson**	**86.50**	**21**	*e*P	**P**	**17 32 12.7**	**-0.7**
	comp=Z,5.6nm,0.9s						
CWC	**Cottonwood Cre**	**86.57**	**52**	P	**P**	**17 32 14.7**	**+0.2**
	baz=253						
PAHR	**Pah Rah Range**	**86.58**	**48**	*e*P	**P**	**17 32 14.5**	**0.0**
	comp=Z,9.2nm,1.0s						
LRMC	**Laurel Mtn Rad**	**86.60**	**53**	P	**P**	**17 32 15.1**	**+0.4**
	baz=253,SNR=7.7						
TIXI	**Tiksi**	**86.73**	**349**	*e*P	**P**	**17 32 13.6**	**-0.7**
	comp=Z,12nm,1.7s						
MONP2	**Monument Peak**	**86.86**	**56**	P	**P**	**17 32 16.4**	**+0.3**
	baz=254,SNR=5.1						
RYN	**Ryan**	**86.89**	**50**	*e*P	**P**	**17 32 16.2**	**+0.2**
	comp=Z,8.8nm,1.0s						
DAC	**Darwin (Calif)**	**86.90**	**52**	*e*P	**P**	**17 32 16.2**	**0.0**
	comp=Z,10nm,1.1s						
MPMC	**Manual Prospec**	**86.92**	**52**	P	**P**	**17 32 16.3**	**0.0**
	baz=253,SNR=6.6						
NV01	**Mina Array Sit**	**86.99**	**50**	*e*P	**P**	**17 32 15.8**	**-0.8**
NVAR	**Mina Array Bea**	**86.99**	**50**	P	**P**	**17 32 16.7**	**+0.1**
	comp=Z,6.9nm,0.9s,baz=234,slow=8.2,SNR=30						
NVAR				LR	LR	18 03 15.6	
	comp=Z,93nm,21.4s,baz=320,slow=30						
PFO	**Pinyon Flats O**	**87.03**	**55**	*e*P	**P**	**17 32 15.5**	**-1.3**
	comp=Z,6.5nm,1.0s						
PFO	**Pinyon Flats O**	**87.03**	**55**	P	**P**	**17 32 16.8**	**-0.1**
	baz=254						
PFO	**Pinyon Flats O**	**87.03**	**55**	P	**P**	**17 32 17.0**	**+0.2**
	comp=Z,4.7nm,0.9s,baz=305,slow=5.7,SNR=5.3						
XPFO	**Pion Flat**	**87.03**	**55**	*e*P	**P**	**17 32 16.9**	**+0.1**
	comp=Z,7.0nm,1.0s						
IKP	**In-Ko-Pah, Jac**	**87.05**	**56**	P	**P**	**17 32 17.4**	**+0.6**
	baz=254						
NV11	**Mina Array Sit**	**87.11**	**50**	*e*P	**P**	**17 32 16.8**	**-0.3**
	comp=Z,0.9nm,1.0s						
GSC	**Goldstone, Bar**	**87.23**	**53**	*e*P	**P**	**17 32 17.1**	**-0.6**
	comp=Z,16nm,1.5s						
GSC	**Goldstone, Bar**	**87.23**	**53**	P	**P**	**17 32 18.1**	**+0.4**
	baz=254						
GRAC	**Grapevine Rang**	**87.28**	**51**	P	**P**	**17 32 18.2**	**+0.3**
	baz=253,SNR=5.2						
KVN	**Kaiserville**	**87.33**	**49**	*e*P	**P**	**17 32 18.2**	**0.0**
	comp=Z,6.9nm,0.9s						
SWSC	**Sam W. Stewart**	**87.38**	**56**	P	**P**	**17 32 18.8**	**+0.5**
	baz=254						
HEC	**Hector,Ludlow**	**87.47**	**54**	P	**P**	**17 32 18.9**	**0.0**
	baz=254,SNR=5.9						
BELC	**Belle Mtn. Jos**	**87.51**	**55**	P	**P**	**17 32 19.5**	**+0.4**
	baz=254,SNR=7.7						
FURC	**Furnace Creek,**	**87.52**	**52**	P	**P**	**17 32 19.2**	**+0.3**
	baz=254						
BC3	**Big Chuckawall**	**87.85**	**55**	P	**P**	**17 32 21.0**	**+0.3**
	baz=254,SNR=5.1						
GMRC	**Granite Mounta**	**87.99**	**54**	P	**P**	**17 32 21.7**	**+0.3**
	baz=254						
TPNV	**Topopah Spring**	**88.12**	**52**	*e*P	**P**	**17 32 22.4**	**+0.3**
	comp=Z,32nm,1.9s						
TPNV	**Topopah Spring**	**88.12**	**52**	P	**P**	**17 32 22.2**	**+0.1**
	baz=254						
GLA	**Glamis**	**88.20**	**56**	*e*P	**P**	**17 32 23.0**	**+0.7**
	comp=Z,15nm,0.9s						
GLA	**Glamis**	**88.20**	**56**	P	**P**	**17 32 23.2**	**+0.9**
	baz=255						
IRM	**Iron Mountain**	**88.23**	**55**	P	**P**	**17 32 23.0**	**+0.6**
	baz=255						
J08A	**Circle Bar Ran**	**88.36**	**45**	*e*P	**P**	**17 32 22.3**	**-0.6**
	comp=Z,16nm,1.3s						
Y12C	**Blythe**	**88.62**	**55**	*e*P	**P**	**17 32 24.9**	**+0.7**
	comp=Z,12nm,0.9s						
Y12C	**Blythe**	**88.62**	**55**	P	**P**	**17 32 24.8**	**+0.5**
	baz=255						

G08A	**Pilot Rock**	**88.63**	**43**	*e*P	**P**	**17 32 24.0**	**-0.2**
	comp=Z,16nm,1.3s						
SHPR	**Sheep Range**	**88.85**	**52**	*e*P	**P**	**17 32 25.0**	**-0.5**
	comp=Z,15nm,1.3s						
R11A	**Troy Canyon, C**	**89.02**	**51**	*e*P	**P**	**17 32 25.7**	**-0.5**
	comp=Z,8.8nm,1.3s						
R11A	**Troy Canyon, C**	**89.02**	**51**	P	**P**	**17 32 26.3**	**0.0**
	baz=254						
PDMCI	**Parker Dam,Lak**	**89.07**	**55**	P	**P**	**17 32 26.9**	**+0.5**
	baz=255						
WMQ	**Urumqi**	**89.20**	**315**	P	**P**	**17 32 27.7**	**+0.9**
WMQ				pP	pP	17 32 31.8	-1.9
WMQ				sP	sP	17 32 36.7	+0.5
WMQ				pmax	pmax		
	comp=Z,30nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.5s						
WMQ				LR	LR		
	comp=N,140nm,20.5s						
WMQ				LR	LR		
	comp=E,210nm,19.1s						
WMQ				LR	LR		
	comp=Z,140nm,23.5s						
W13A	**Hualapai Mount**	**89.48**	**54**	*e*P	**P**	**17 32 28.5**	**0.0**
	comp=Z,7.7nm,1.0s						
214A	**Organ Pipe Nat**	**89.57**	**57**	P	**P**	**17 32 29.9**	**+1.1**
	baz=256						
BMO	**Blue Mountains**	**89.62**	**44**	*e*P	**P**	**17 32 27.8**	**-1.0**
	comp=Z,22nm,1.6s						
ELK	**Elko**	**89.92**	**48**	*e*P	**P**	**17 32 30.4**	**-0.1**
	comp=Z,5.9nm,1.1s						
ELK	**Elko**	**89.92**	**48**	P	**P**	**17 32 30.6**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=249,slow=3.1,SNR=5.7						
PSUT	**Pine Spring**	**90.38**	**51**	*e*P	**P**	**17 32 31.8**	**-0.8**
	comp=Z,6.0nm,1.0s						
LCMT	**Little Creek M**	**90.46**	**52**	*e*P	**P**	**17 32 33.5**	**+0.5**
	comp=Z,11nm,1.0s						
CCUT	**Cedar City**	**90.50**	**52**	*e*P	**P**	**17 32 33.7**	**+0.4**
	comp=Z,16nm,1.3s						
SZCU	**Shurtz Canyon**	**90.73**	**52**	*e*P	**P**	**17 32 34.1**	**-0.2**
	comp=Z,11nm,1.2s						
NEW	**Newport**	**90.73**	**41**	P	**P**	**17 32 35.1**	**+1.3**
	baz=253						
KNB	**Kanab**	**90.79**	**52**	*e*P	**P**	**17 32 34.5**	**-0.1**
	comp=Z,15nm,1.2s						
SYO	**Syowa Base**	**90.86**	**197**	⇑*e*P	**P**	**17 32 34.6**	**+0.6**
U15A	**North Rim**	**91.06**	**53**	*e*P	**P**	**17 32 36.7**	**+0.7**
	comp=Z,15nm,1.0s						
HLID	**Hailey**	**91.26**	**46**	P	**P**	**17 32 37.4**	**+0.9**
	baz=255						
X16A	**Lo Mia Camp, P**	**91.27**	**55**	*e*P	**P**	**17 32 37.4**	**+0.5**
	comp=Z,8.5nm,1.0s						
PKCU	**Pink Cliffs**	**91.29**	**52**	*e*P	**P**	**17 32 38.3**	**+1.2**
	comp=Z,17nm,1.2s						
TUC	**Tucson**	**91.32**	**57**	*e*P	**P**	**17 32 37.6**	**+0.6**
	comp=Z,5.8nm,1.0s						
TUC	**Tucson**	**91.32**	**57**	P	**P**	**17 32 38.0**	**+1.0**
	baz=257						
MTPU	**Mount Pierson**	**91.53**	**52**	*e*P	**P**	**17 32 39.2**	**+1.0**
	comp=Z,13nm,1.1s						
DUG	**Dugway, Tooele**	**91.57**	**49**	*e*P	**P**	**17 32 38.0**	**0.0**
	comp=Z,7.8nm,1.1s						
DUG	**Dugway, Tooele**	**91.57**	**49**	P	**P**	**17 32 38.7**	**+0.6**
	baz=256						
WUAZ	**Wupatki**	**91.57**	**54**	*e*P	**P**	**17 32 38.6**	**+0.4**
	comp=Z,8.2nm,0.9s						
WUAZ	**Wupatki**	**91.57**	**54**	P	**P**	**17 32 38.6**	**+0.4**
	baz=257						
BGU	**Big Grassy Mou**	**91.59**	**49**	*e*P	**P**	**17 32 38.2**	**+0.1**
	comp=Z,6.1nm,1.0s						
MSU	**Marysvale**	**91.65**	**51**	*e*P	**P**	**17 32 39.4**	**+0.8**
HVU	**Hansel Valley**	**91.98**	**48**	*e*P	**P**	**17 32 40.1**	**+0.1**
	comp=Z,17nm,1.2s						
NLU	**North Lily Min**	**92.06**	**50**	*e*P	**P**	**17 32 40.9**	**+0.4**
	comp=Z,8.9nm,1.0s						
SPUT	**South Promonto**	**92.11**	**48**	*e*P	**P**	**17 32 40.5**	**0.0**
	comp=Z,8.1nm,1.2s						
319A	**Douglas**	**92.37**	**59**	*e*P	**P**	**17 32 42.9**	**+1.0**
	comp=Z,7.4nm,1.0s						
MPU	**Maple Canyon**	**92.41**	**50**	*e*P	**P**	**17 32 42.5**	**+0.4**
	comp=Z,15nm,1.4s						
CTU	**Camp Tracy**	**92.48**	**49**	*e*P	**P**	**17 32 41.0**	**-1.2**
	comp=Z,5.7nm,0.8s						
X18A	**Snowflake**	**92.49**	**55**	*e*P	**P**	**17 32 42.9**	**+0.4**
	comp=Z,6.0nm,1.0s						
TMUT	**Trail Mountain**	**92.56**	**51**	*e*P	**P**	**17 32 42.6**	**-0.2**
	comp=Z,4.1nm,1.0s						
W18A	**Petrified Fore**	**92.79**	**55**	P	**P**	**17 32 44.4**	**+0.6**
	baz=258						
DLMT	**Dillon**	**92.97**	**44**	*e*P	**P**	**17 32 43.8**	**-0.6**
	comp=Z,14nm,1.1s						
WALA	**Waterton Lakes**	**93.00**	**41**	*e*P	**P**	**17 32 44.3**	**-0.2**
	comp=Z,14nm,1.2s						
MK01	**Makanchi Array**	**93.65**	**317**	*e*P	**P**	**17 32 46.8**	**-0.6**
MK31	**Makanchi Array**	**93.66**	**317**	*e*P	**P**	**17 32 47.1**	**-0.3**
MK32	**Makanchi Array**	**93.66**	**317**	*e*P	**P**	**17 32 47.5**	**+0.1**
MKAR	**Makanchi Array**	**93.66**	**317**	*e*P	**P**	**17 32 47.0**	**-0.5**
	comp=Z,18nm,0.8s						
MKAR	**Makanchi Array**	**93.66**	**317**	P	**P**	**17 32 47.5**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=102,slow=5.9,SNR=20						
FXWY	**Fox Creek**	**93.67**	**46**	*e*P	**P**	**17 32 47.8**	**0.0**
	comp=Z,3.0nm,1.1s						
BOZ	**Bozeman (W)**	**93.68**	**44**	*e*P	**P**	**17 32 47.5**	**-0.2**
	comp=Z,31nm,1.8s						
BOZ	**Bozeman (W)**	**93.68**	**44**	P	**P**	**17 32 47.9**	**+0.2**
	baz=257						
IMW	**Indian Meadow**	**93.78**	**46**	*e*P	**P**	**17 32 47.8**	**-0.6**
	comp=Z,4.7nm,1.2s						
ZALV	**Zalesovo Beam**	**93.82**	**324**	*e*P	**P**	**17 32 46.4**	**-1.5**
ZALV	**Zalesovo Beam**	**93.82**	**324**	P	**P**	**17 32 47.2**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=126,slow=2.6,SNR=6.0						
ZAA1	**Zalesovo Array**	**93.82**	**324**	*e*P	**P**	**17 32 47.2**	**-0.7**
121A	**Cookes Peak, D**	**93.85**	**58**	P	**P**	**17 32 49.2**	**+0.4**
	baz=259						
MAKZ	**Makanchi**	**93.88**	**317**	*e*P	**P**	**17 32 48.5**	**+0.1**
	comp=Z,4.9nm,1.1s						
H17A	**Grant Village**	**94.15**	**46**	P	**P**	**17 32 51.5**	**+1.5**
	baz=258						
BW06	**Boulder Array**	**94.53**	**47**	P	**P**	**17 32 51.6**	**-0.1**
	baz=258						
PD31	**Pinedale Array**	**94.53**	**47**	*e*P	**P**	**17 32 50.6**	**-1.2**
PDAR	**Pinedale Array**	**94.53**	**47**	P	**P**	**17 32 50.9**	**-0.9**
	comp=Z,1.5nm,1.0s,baz=251,slow=4.5,SNR=8.0						
EGMT	**Eagleton**	**95.46**	**42**	P	**P**	**17 32 55.8**	**+0.1**
	baz=259						
S22A	**4UR Ranch, Cre**	**95.61**	**53**	P	**P**	**17 32 57.2**	**+0.2**
	baz=260						
MNTX	**Cornudas Mount**	**95.69**	**59**	P	**P**	**17 32 57.0**	**-0.1**
	baz=260						
YKA	**Yellowknife Ar**	**95.94**	**27**	P	**P**	**17 32 55.8**	**-1.6**
	comp=Z,2.3nm,0.8s,baz=255,slow=4.6,SNR=31						
YKB5	**Yellowknife Ar**	**95.94**	**27**	*e*P	**P**	**17 32 55.2**	**-2.2**
LTX	**Lajitas**	**96.74**	**62**	*e*P	**P**	**17 33 02.3**	**+0.3**
TX31	**Lajitas Ar. Si**	**96.74**	**62**	*e*P	**P**	**17 33 00.7**	**-1.3**
TXAR	**Lajitas Array**	**96.74**	**62**	P	**P**	**17 33 02.3**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=230,slow=4.2,SNR=14						
KSH	**Kashi**	**96.76**	**309**	P	**P**	**17 33 04.1**	**+2.2**
KSH				pP	pP	17 33 09.2	+0.5
KSH				pmax	pmax		
	comp=Z,350nm,4.8s						
CLL	**Collm**	**134.56**	**336**	*e*PKPdf	**PKiKP**	**17 38 52.0**	**+1.5**
KEST	**Kesra**	**147.65**	**321**	PKPbc	**PKPbc**	**17 39 16.3**	**+0.4**
	comp=Z,14nm,1.0s,baz=218,slow=1.3,SNR=5.8						
ES19	**SONSECA Array**	**150.58**	**343**	*e*PKPbc	**PKPbc**	**17 39 23.7**	**+0.6**
ESDC	**Sonseca Array**	**150.62**	**343**	PKPbc	**PKPbc**	**17 39 23.3**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=21,slow=2.2,SNR=7.2						
ESDC				PKPab	**pPKPbc**	**17 39 31.4**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=357,slow=3.6,SNR=7.4						
TORD	**Torodi Ar. Bea**	**163.76**	**276**	PKP	**PKPdf**	**17 39 34.5**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=58,slow=1.1,SNR=4.3						
TORD				PKPab	**PKPab**	**17 40 26.6**	**-0.6**
	comp=Z,0.7nm,1.0s,baz=40,slow=5.6,SNR=2.7						
TOA1	**Torodi Ar. Sit**	**163.76**	**276**	*e*PKPdf	**PKPdf**	**17 39 34.5**	**-0.4**
TOA1				*e*PKPab	**PKPab**	**17 40 26.6**	**-0.6**

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*CNRM **06** 17:20:39.1, 37°.48N×2°.99W, h30km, ml4.0*
*SFS **06** 17:20:43.0, 38°.00N×3°.20W, ML2.9, TORREPEROGIL (JAEN)*
*MDD **06** 17:20:43.9±0.2, 38°.05N×3°.29W, h2km±3km, mbLg2.9/20, Error ellipse: s-maj=2.0km s-min=1.7km az=48.0, PRXIMO*
MDD EMS: III INTENSIDAD MAXIMA.
*INMG **06** 17:20:44.0±1.5, 38°.05N×3°.30W, h5km±4km, ML2.9, Error ellipse: s-maj=1.9km s-min=1.9km az=123.0*
ISC 06 17:20:42.4±1.1**, 38°.06N**±0°.02×**3°.21W**±0°.02**, h10**km±10km**, n56, σ1.73**/68**, 3D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQES	**Quesada**	**0.28**	**157**	Pg	**Pg**	**17 20 49.3**	**+1.1**
	310nm,0.4s,SNR=262						
EQES				Lg	Lg	17 20 53.5	
	216nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**0.53**	**83**	Pg	**Pb**	**17 20 54.9**	**+1.0**
	53nm,0.2s,SNR=7.9						
SESP				Lg	Lg	17 21 02.9	
	283nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**0.53**	**83**	P	**Pb**	**17 20 54.1**	**+0.2**
SESP				S	**Sn**	**17 21 03.2**	**-2.0**
GORA	**Gorafe**	**0.59**	**167**	Pg	**Pb**	**17 20 55.2**	**+0.2**
	45nm,0.2s,SNR=7.9						
GORA				Lg	Lg	17 21 03.8	
	302nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**0.87**	**192**	Pg	**Pg**	**17 20 59.6**	**+0.3**
	27nm,0.3s,SNR=56						
EQUE				Lg	Lg	17 21 10.9	
	184nm,0.2s,SNR=26						
EADA	**Adamuz**	**1.08**	**276**	Pg	**Pb**	**17 21 02.3**	**-1.0**
	15nm,0.3s,SNR=7.9						
EADA				Lg	Lg	17 21 16.3	
	130nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.19**	**168**	Pg	**Pg**	**17 21 05.7**	**+0.5**
	48nm,0.3s,SNR=80						
EBER				Lg	Lg	17 21 24.3	
	208nm,0.3s,SNR=7.2						
EGOR	**Sierra Gorda,**	**1.19**	**217**	Pg	**Pn**	**17 21 05.3**	**+0.1**
	30nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	17 21 22.1	
	176nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**1.23**	**196**	Pg	**Pb**	**17 21 06.4**	**+0.5**
	9.0nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	17 21 23.9	
	315nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**1.43**	**65**	Pg	**Pg**	**17 21 11.4**	**+1.4**
	31nm,0.3s,SNR=7.9						
ETOB				Lg	Lg	17 21 31.0	
	106nm,0.3s,SNR=14						
EMUR	**La Murta**	**1.57**	**97**	Pn	**Pg**	**17 21 12.5**	**-0.1**
	31nm,0.3s,SNR=24						
EMUR				Lg	Lg	17 21 36.3	
	193nm,0.6s,SNR=9.1						
EMAL	**Malaga-Limoner**	**1.62**	**217**	*e*P	**Pb**	**17 21 12.6**	**+0.2**
EMAL				*e*S	**Sb**	**17 21 33.8**	**+1.0**
HORN	**Hornachuelos**	**1.63**	**263**	P	**Pn**	**17 21 09.6**	**-1.7**
HORN				S	**Sn**	**17 21 31.3**	**-1.0**
ESDC	**Sonseca Array**	**1.72**	**340**	Pg	**Pg**	**17 21 15.0**	**-0.4**
	4.2nm,0.4s,baz=162,slow=17,SNR=35						
ESDC				Lg	Lg	17 21 37.0	
	12nm,0.3s,baz=162,slow=31,SNR=24						
PAB	**San Pablo**	**1.73**	**329**	Pg	**Pg**	**17 21 15.6**	**0.0**
	4.2nm,0.6s,SNR=7.9						
PAB				Lg	Lg	17 21 37.3	
	15nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**1.74**	**271**	Pn	**Pn**	**17 21 12.0**	**-0.7**
	13nm,0.3s,SNR=79						
ECAB				Lg	Lg	17 21 37.0	
	87nm,0.3s,SNR=7.9						
CART	**Cartagena**	**1.81**	**104**	Pn	**Pb**	**17 21 15.7**	**+0.1**
CART				Sn	**Sg**	**17 21 39.8**	**-0.9**
CART	**Cartagena**	**1.81**	**104**	*i* P	**Pb**	**17 21 15.7**	**+0.1**
CART				*e*S	**Sg**	**17 21 39.8**	**-0.9**
EMIJ	**Mijas**	**1.94**	**220**	Pg	**Pb**	**17 21 18.5**	**+0.6**
	12nm,0.3s,SNR=8.6						
EMIJ				Sn	**Sb**	**17 21 41.9**	**-0.4**
	SNR=7.9						
EMIJ				Lg	Lg	17 21 44.8	
	54nm,0.4s,SNR=5.6						
LIJA	**Lijar**	**2.09**	**237**	⇓Pn	**Pb**	**17 21 21.0**	**+0.5**
LIJA				Sn	**Sg**	**17 21 49.2**	**-0.4**
LIJA	**Lijar**	**2.09**	**237**	⇓*i*P	**Pb**	**17 21 21.0**	**+0.5**
LIJA				*i* S	**Sg**	**17 21 49.2**	**-0.4**
UCM	**Universidad Co**	**2.25**	**359**	⇓*i*P	**Pg**	**17 21 25.8**	**+0.3**
UCM				*e*S	**Sg**	**17 21 53.2**	**-1.4**
ECHE	**Chera**	**2.33**	**48**	Pn	**Pb**	**17 21 23.4**	**-1.0**
	SNR=7.9						
ECHE				Pg	**Pg**	**17 21 28.2**	**+1.2**
	SNR=7.9						
ECHE				Lg	Lg	17 21 59.7	
	7.4nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.41**	**229**	Pg	**Pg**	**17 21 29.3**	**+0.6**
	SNR=7.9						
EJIF				Lg	Lg	17 22 00.3	
	10.0nm,0.3s,SNR=7.9						
ESPR	**Espera**	**2.42**	**241**	Pg	**Pg**	**17 21 30.5**	**+1.7**
	13nm,0.4s,SNR=8.0						
ESPR				Lg	Lg	17 22 00.6	
	30nm,0.3s,SNR=7.9						
EBEN2	**Beniarda presa**	**2.45**	**75**	Lg	Lg	17 22 04.2	
	54nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**2.68**	**344**	Lg	Lg	17 22 07.7	
	21nm,0.4s,SNR=13						
EMIN	**Mina Concepcio**	**2.75**	**265**	Pn	**Pn**	**17 21 26.2**	**-0.5**
	5.6nm,0.8s,SNR=7.7						
EMIN				Pg	**Pb**	**17 21 32.9**	**+1.1**
	7.3nm,0.4s,SNR=13						
EMIN				Lg	Lg	17 22 06.0	
	20nm,0.3s,SNR=11						
ETOR	**Torete**	**2.90**	**18**	Pg	**Pg**	**17 21 38.8**	**+0.8**
	12nm,0.4s,SNR=17						
ETOR				Lg	Lg	17 22 16.7	
	46nm,0.4s,SNR=9.1						
EPLA	**Plasencia**	**3.00**	**313**	Pn	**Pn**	**17 21 32.3**	**+2.3**
	SNR=7.9						
EPLA				Lg	Lg	17 22 15.8	
	SNR=7.9						
EBAD	**Badajoz**	**3.07**	**284**	Pn	**Pn**	**17 21 30.4**	**-0.5**
	2.1nm,0.3s,SNR=5.5						
EBAD				Pg	**Pb**	**17 21 38.9**	**+1.8**
	5.5nm,0.3s,SNR=13						
EBAD				Sn	**Sn**	**17 22 05.8**	**-1.9**
	13nm,0.3s,SNR=8.8						
EBAD				Lg	Lg	17 22 18.8	
	SNR=7.9						
EMOS	**Mosqueruela**	**3.13**	**42**	Pg	**Pg**	**17 21 43.8**	**+1.3**
	14nm,0.7s,SNR=10						
EMOS				Lg	Lg	17 22 24.5	
	SNR=7.9						
EGRO	**El Granado**	**3.43**	**263**	Pn	**Pn**	**17 21 34.9**	**-1.0**
	SNR=7.9						
EGRO				Lg	Lg	17 22 27.0	
	SNR=7.9						
PESTR	**Estremoz**	**3.53**	**285**	*e*Pg	**Pb**	**17 21 47.2**	**+2.2**
PESTR				*e*Sn	**Sn**	**17 22 17.6**	**-1.6**
PESTR				*e*Sg	**Sg**	**17 22 32.8**	**-3.1**
PESTR				A	A	17 22 40.4	
	24nm,0.5s						
PESTR	**Estremoz**	**3.53**	**285**	P	**Pn**	**17 21 36.7**	**-0.7**
PESTR				S	**Sn**	**17 22 20.7**	**+1.5**
PMRV	**Marv??o**	**3.54**	**294**	*e*Pg	**Pb**	**17 21 47.8**	**+2.6**
PMRV				*e*Sg	**Sg**	**17 22 33.2**	**-3.1**
PMRV				A	A	17 22 44.2	
	30nm,0.4s						
PMRV	**Marv??o**	**3.54**	**294**	Pg	**Pb**	**17 21 47.8**	**+2.6**
PMRV				Lg	Lg	17 22 33.2	
	30nm,0.4s						
PVAQ	**Vaqueiros**	**3.63**	**261**	*e*Pn	**Pn**	**17 21 37.9**	**-0.8**
PVAQ				*e*Sg	**Sb**	**17 22 33.4**	**+2.6**
PVAQ				A	A	17 22 40.5	
	19nm,0.6s						
PVAQ	**Vaqueiros**	**3.63**	**261**	Pn	**Pn**	**17 21 37.9**	**-0.8**
PVAQ				Lg	Lg	17 22 33.4	
	19nm,0.6s						
PVAQ	**Vaqueiros**	**3.63**	**261**	P	**Pn**	**17 21 35.1**	**-3.6**
PVAQ				S	**Sn**	**17 22 19.0**	**-2.6**
PBEJ	**Beja**	**3.68**	**271**	*e*Sg	**Sg**	**17 22 39.0**	**-1.5**
PBEJ				A	A	17 22 49.0	
	16nm,0.6s						
PBEJ	**Beja**	**3.68**	**271**	Lg	Lg	17 22 39.0	
	7.8nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.83**	**259**	*e*Pn	**Pn**	**17 21 41.3**	**-0.2**
PBDV				*e*Sg	**Sb**	**17 22 41.5**	**+4.8**
PBDV				A	A	17 22 54.6	
	24nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.83**	**259**	Pn	**Pn**	**17 21 41.3**	**-0.2**
PBDV				Lg	Lg	17 22 41.5	
	24nm,0.6s						
MESJ	**Messejana**	**3.97**	**268**	*e*Sg	**Sb**	**17 22 43.4**	**+3.0**
MESJ				A	A	17 22 48.9	
	20nm,0.5s						
MESJ	**Messejana**	**3.97**	**268**	Lg	Lg	17 22 43.4	
	20nm,0.5s						
PMTG	**Montargil**	**4.06**	**286**	*e*Sg	**Sg**	**17 22 50.1**	**-2.7**
PMTG				A	A	17 22 54.2	
	22nm,0.5s						
PMTG	**Montargil**	**4.06**	**286**	Lg	Lg	17 22 50.1	
	22nm,0.5s						
PNCL	**Nicolau / Gran**	**4.20**	**272**	*e*Pn	**Pn**	**17 21 47.2**	**+0.7**
PNCL				*e*Sg	**Sg**	**17 22 52.9**	**-4.3**
PNCL				A	A	17 23 01.0	
	16nm,0.5s						
PNCL	**Nicolau / Gran**	**4.20**	**272**	Pn	**Pn**	**17 21 47.2**	**+0.7**
PNCL				Lg	Lg	17 22 52.9	
	16nm,0.5s						
PTOM	**Tomar**	**4.35**	**293**	*e*Sg	**Sg**	**17 22 58.0**	**-4.1**
PTOM				A	A	17 23 09.7	
	27nm,0.4s						
PTOM	**Tomar**	**4.35**	**293**	Lg	Lg	17 22 58.0	
	14nm,0.4s						
PTEO	**Sao Teotonio**	**4.40**	**265**	*e*Sg	**Sg**	**17 23 02.4**	**-1.2**
PTEO				A	A	17 23 04.2	
	27nm,0.7s						
PTEO	**Sao Teotonio**	**4.40**	**265**	Lg	Lg	17 23 02.4	
	14nm,0.7s						
MD31	**MD31**	**5.33**	**194**	P	Pn	17 21 50.0	-12
MD31				S	Sn	17 22 45.1	-19
ZHG	**ZHG**	**5.38**	**212**	P	Pn	17 21 54.7	-8.2
ZHG				S	Sn	17 22 52.9	-12

IDC 06 17:24:18.8±3.0**, 12°.69S**×**165°.81E, h0**km**, mb3.8**/6**, mb1 4.0**/6**, mb1mx3.8**/35**, mbtmp3.8**/6**, Error ellipse: s-maj=119.8km s-min=28.7km az=143.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.01**	**252**	P	P	17 30 39.0	+0.6
	0.2nm,0.5s,baz=83,slow=9.7,SNR=4.2						
ASAR	**Alice Springs**	**32.14**	**246**	P	P	17 30 47.9	-0.5
	0.5nm,0.8s,baz=84,slow=9.4,SNR=4.3						
CMAR	**Chiang Mai Arr**	**72.83**	**294**	P	P	17 35 50.2	+0.2
	0.3nm,0.8s,baz=118,slow=4.7,SNR=3.8						
ILAR	**Eielson Array**	**85.05**	**18**	P	P	17 36 56.0	0.0
	0.8nm,0.6s,baz=238,slow=5.9,SNR=11						
INK	**Inuvik**	**91.43**	**19**	P	P	17 37 26.6	+0.2
	1.0nm,0.4s,baz=219,slow=6.5,SNR=7.4						
MKAR	**Makanchi Array**	**94.76**	**317**	P	P	17 37 41.4	-0.9
	0.3nm,0.6s,baz=104,slow=6.0,SNR=3.5						

IDC 06 17:26:32.6±1.6**, 11°.41S**×**164°.78E, h0**km**, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.6**/35**, mbtmp3.6**/5**, ML3.6**/1**, Error ellipse: s-maj=48.9km s-min=30.1km az=124.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.72**	**172**	Pn	Pn	17 29 07.5	-0.1
	0.5nm,0.3s,baz=338,slow=19,SNR=4.9						
WRA	**Warramunga Arr**	**30.46**	**250**	P	P	17 32 47.6	+0.2
	0.4nm,0.8s,baz=80,slow=9.2,SNR=3.6						
ASAR	**Alice Springs**	**31.78**	**243**	P	P	17 32 58.6	-0.4
	0.7nm,0.9s,baz=65,slow=10,SNR=5.0						
ILAR	**Eielson Array**	**84.16**	**19**	P	P	17 39 05.3	-0.1
	0.3nm,0.8s,baz=224,slow=5.0,SNR=3.0						
MKAR	**Makanchi Array**	**93.14**	**317**	P	P	17 39 48.9	+0.2
	0.2nm,0.7s,baz=88,slow=4.6,SNR=2.4						

IDC 06 17:26:59.8±7.8**, 18°.55S**×**169°.83W, h0**km**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/42**, mbtmp3.9**/4**, Error ellipse: s-maj=327.5km s-min=36.0km az=142.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**41.38**	**260**	P	P	17 34 47.7	-0.4
	4.0nm,0.8s,baz=90,slow=6.1,SNR=4.8						
ASAR	**Alice Springs**	**52.46**	**254**	P	P	17 36 13.9	-0.9
	0.6nm,0.8s,baz=93,slow=7.4,SNR=6.8						
WRA	**Warramunga Arr**	**52.52**	**259**	P	P	17 36 15.9	+0.7
	0.2nm,0.3s,baz=90,slow=5.9,SNR=16						
ILAR	**Eielson Array**	**84.91**	**10**	P	P	17 39 36.1	0.0
	0.5nm,0.8s,baz=224,slow=6.3,SNR=6.3						

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*IDC **06** 17:27:02.0±2.3, 12°.06S×164°.87E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.8/36, mbtmp3.9/6, ML3.4/1, Error ellipse: s-maj=56.3km s-min=32.9km az=95.0*
*ISCJB **06** 17:27:05.0±1.6, 12°.2S±0°.2×164°.9E±0°.3, h33km, mb3.6/5, Error ellipse: s-maj=41.0km s-min=19.8km az=162.2*
ISC 06 17:27:07.0±1.7**, 12°.1S**±0°.2×**164°.9E**±0°.3**, h35**km**, n6, σ0.81**/6**, mb3.5**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.98**	**172**	Pn	**Pn**	**17 29 28.1**	**0.0**
	0.3nm,0.3s,baz=343,slow=19,SNR=3.5						
WRA	**Warramunga Arr**	**30.36**	**251**	P	**P**	**17 33 15.0**	**-0.8**
	0.8nm,0.8s,baz=81,slow=8.9,SNR=3.2						
ASAR	**Alice Springs**	**31.58**	**244**	P	**P**	**17 33 26.9**	**+0.3**
	1.4nm,0.8s,baz=72,slow=9.7,SNR=9.9						
CMAR	**Chiang Mai Arr**	**71.81**	**294**	P	**P**	**17 38 27.6**	**+1.0**
	0.5nm,0.9s,baz=108,slow=5.8,SNR=3.7						
SONM	**Songino Array**	**79.07**	**324**	P	**P**	**17 39 07.3**	**-0.6**
	0.1nm,0.4s,baz=134,slow=4.2,SNR=3.6						
MKAR	**Makanchi Array**	**93.76**	**317**	P	**P**	**17 40 20.4**	**0.0**
	1.0nm,0.8s,baz=103,slow=4.9,SNR=8.4						

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*IDC **06** 17:27:48.3±1.4, 11°.04S×165°.10E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/37, mbtmp3.8/6, ML4.4/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/44, Error ellipse: s-maj=45.5km s-min=27.0km az=118.0*
*ISCJB **06** 17:27:51.0±1.1, 11°.2S±0°.1×165°.1E±0°.2, h31km, mb3.6/5, MS3.9/1, Error ellipse: s-maj=30.8km s-min=18.5km az=177.1*
ISC 06 17:27:52.8±1.1**, 11°.1S**±0°.1×**165°.1E**±0°.3**, h31**km**, n7, σ0.71**/8**, mb3.5**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.94**	**174**	Pn	**Pn**	**17 30 27.3**	**-0.1**
	2.6nm,0.3s,baz=356,slow=14,SNR=7.3						
WRA	**Warramunga Arr**	**30.89**	**250**	P	**P**	**17 34 07.5**	**+0.7**
	0.3nm,0.5s,baz=80,slow=8.7,SNR=3.4						
WRA				PcP	**PcP**	**17 37 03.2**	**-0.1**
	0.3nm,0.5s,baz=77,slow=3.4,SNR=5.0						
ASAR	**Alice Springs**	**32.21**	**243**	P	**P**	**17 34 18.6**	**+0.1**
	1.8nm,0.5s,baz=64,slow=10,SNR=26						
ASAR				PcP	**PcP**	**17 37 06.8**	**-0.1**
	0.4nm,1.0s,baz=57,slow=2.6,SNR=4.5						
JNU	**Nakatsue**	**54.81**	**325**	LR	LR	18 00 44.2	
	comp=Z,84nm,18.0s,baz=116,slow=36						
SONM	**Songino Array**	**78.39**	**324**	P	**P**	**17 39 50.6**	**+0.1**
	0.2nm,0.5s,baz=106,slow=3.1,SNR=2.6						
ILAR	**Eielson Array**	**83.79**	**19**	P	**P**	**17 40 19.5**	**+0.7**
	0.2nm,0.6s,baz=228,slow=5.9,SNR=2.8						
MKAR	**Makanchi Array**	**93.18**	**317**	P	**P**	**17 41 03.0**	**-1.2**
	0.5nm,1.0s,baz=89,slow=5.6,SNR=2.5						

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*IDC **06** 17:31:21.0±1.6, 11°.37S×165°.26E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.5/44, mbtmp3.8/6, ML3.9/2, MS3.5/1, Ms1 3.5/1, ms1mx2.8/38, Error ellipse: s-maj=40.5km s-min=30.5km az=124.0*
*ISCJB **06** 17:31:23.0±1.3, 11°.5S±0°.1×165°.2E±0°.2, h24km, mb3.6/4, MS3.5/1, Error ellipse: s-maj=26.2km s-min=17.5km az=150.2*
ISC 06 17:31:24.9±1.3**, 11°.4S**±0°.1×**165°.2E**±0°.2**, h24**km**, n7, σ1.69**/6**, mb3.5**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.54**	**290**	Pn	**Pn**	**17 32 45.9**	**-0.1**
	4.9nm,0.3s,baz=100,slow=12,SNR=3.5						
DZM	**Mont Dzumac**	**10.69**	**174**	Pn	**Pn**	**17 33 57.1**	**+0.3**
	0.6nm,0.3s,baz=302,slow=19,SNR=4.6						
WRA	**Warramunga Arr**	**30.89**	**250**	P	**P**	**17 37 40.7**	**+0.8**
	0.2nm,0.6s,baz=80,slow=8.3,SNR=2.9						
ASAR	**Alice Springs**	**32.19**	**243**	P	**P**	**17 37 49.4**	**-1.9**
	0.6nm,1.0s,baz=76,slow=7.8,SNR=4.6						
RPZ	**Rata Peaks**	**32.60**	**172**	LR	LR	17 50 49.5	
	comp=Z,88nm,19.8s,baz=357,slow=36						
ILAR	**Eielson Array**	**84.00**	**19**	P	**P**	**17 43 51.7**	**-1.2**
	0.2nm,0.5s,baz=232,slow=6.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**93.53**	**324**	P	**P**	**17 44 40.4**	**+1.7**

0.4nm,0.3s,baz=121,slow=7.4,SNR=2.9

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*IDC **06** 17:32:17.8±1.6, 11°.50S×164°.71E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.7/41, mbtmp3.7/7, ML3.5/1, Error ellipse: s-maj=45.0km s-min=29.1km az=116.0*

*ISCJB **06** 17:32:20.8±1.1, 11°.7S±0°.1×164°.7E±0°.2, h33^{km}, mb3.6/6, Error ellipse: s-maj=30.0km s-min=18.6km az=172.3*

ISC 06 17:32:22.8±1.2, 11°.6S±0°.1×164°.7E±0°.2, h35^{km}, n7, σ0^{s}.43/7, mb3.5/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.55	171	Pn	Pn	17 34 51.8	0.0
	0.4nm,0.3s,baz=313,slow=19,SNR=2.6						
WRA	Warramunga Arr	30.37	250	P	P	17 38 31.6	-0.2
	0.4nm,0.6s,baz=80,slow=9.2,SNR=4.1						
ASAR	Alice Springs	31.67	244	P	P	17 38 43.5	+0.2
	0.5nm,0.7s,baz=70,slow=11,SNR=4.3						
CMAR	Chiang Mai Arr	71.42	294	P	P	17 43 40.0	-0.1
	0.3nm,0.7s,baz=108,slow=5.8,SNR=3.4						
SONM	Songino Array	78.52	324	P	P	17 44 21.3	+0.6
	0.4nm,0.6s,baz=132,slow=4.3,SNR=3.3						
ILAR	Eielson Array	84.34	19	P	P	17 44 50.9	0.0
	0.5nm,0.7s,baz=227,slow=7.0,SNR=5.2						
MKAR	Makanchi Array	93.24	317	P	P	17 45 33.3	-0.5
	0.6nm,0.8s,baz=116,slow=4.2,SNR=6.7						

IDC 06 17:35:06.6±1.8, 10°.72S×165°.15E, h0^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.5/42, mbtmp3.5/5, ML3.5/1, MS3.7/1, Ms1 3.7/1, ms1mx2.8/20, Error ellipse: s-maj=53.0km s-min=31.4km az=118.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.36	174	Pn	Pn	17 37 51.6	+1.2
	0.3nm,0.3s,baz=315,slow=20,SNR=1.1						
WRA	Warramunga Arr	31.05	249	P	P	17 41 26.7	+0.1
	0.2nm,0.6s,baz=82,slow=9.1,SNR=3.4						
ASAR	Alice Springs	32.42	243	P	P	17 41 38.0	-0.6
	0.6nm,0.5s,baz=66,slow=10,SNR=13						
FITZ	Fitzroy Crossi	38.90	254	LR	LR	17 57 42.8	
	comp=Z,92nm,19.2s,baz=82,slow=35						
SONM	Songino Array	78.06	324	P	P	17 47 08.3	+0.9
	0.2nm,0.4s,baz=134,slow=4.2,SNR=2.4						
ILAR	Eielson Array	83.39	19	P	P	17 47 34.8	-0.7
	0.3nm,0.9s,baz=227,slow=7.3,SNR=1.7						

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*IDC **06** 17:35:22.2±1.6, 10°.90S×165°.24E, h0^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.8/43, mbtmp3.8/9, ML5.2/1, Error ellipse: s-maj=43.4km s-min=25.5km az=135.0*

*ISCJB **06** 17:35:25.4±0.9, 10°.9S±0°.1×165°.21E±0°.10, h31^{km}, mb3.5/7, Error ellipse: s-maj=17.3km s-min=11.4km az=34.0*

ISC 06 17:35:27.2±1.0, 10°.9S±0°.1×165°.3E±0°.1, h31^{km}, n14, σ1^{s}.28/13, mb3.6/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.42	285	*e*P	Pn	17 36 47.0	+1.0
HNR				*e*S	Sn	17 37 49.0	+1.6
HNR	Honiara	5.42	285	Pn	Pn	17 36 46.2	+0.2
	80nm,0.3s,baz=126,slow=19,SNR=24						
HNR				Sn	Sn	17 37 48.3	+0.9
	24nm,0.3s,baz=189,slow=19,SNR=2.6						
DZM	Mont Dzumac	11.22	174	Pn	Pn	17 38 07.2	+1.6
	3.5nm,0.3s,baz=316,slow=14,SNR=23						
CTA	Charters Tower	20.48	241	P	P	17 40 00.3	-2.4
	8.2nm,1.2s,baz=18,slow=13,SNR=2.0						
H11S2	WAKE ISLAND Hy	29.19	3	T	T	18 11 52.9	
	baz=183,slow=76						
H11S3	WAKE ISLAND Hy	29.19	3	T	T	18 12 08.0	
	baz=183,slow=76						
H11S1	WAKE ISLAND Hy	29.20	3	T	T	18 12 02.2	
	baz=183,slow=76						
STKA	Stephens Creek	30.26	223	P	P	17 41 35.6	+0.1
	0.5nm,0.2s,baz=52,slow=13,SNR=1.8						
WRA	Warramunga Arr	31.11	249	P	P	17 41 42.6	-0.5
	0.6nm,0.9s,baz=80,slow=9.1,SNR=2.0						
ASAR	Alice Springs	32.46	243	P	P	17 41 53.7	-1.4
	0.5nm,0.8s,baz=63,slow=9.6,SNR=4.9						
CMAR	Chiang Mai Arr	71.60	294	P	P	17 46 45.3	-0.8
	0.1nm,0.6s,baz=119,slow=5.1,SNR=2.9						
SONM	Songino Array	78.23	324	P	P	17 47 23.9	-0.1
	0.4nm,0.6s,baz=131,slow=3.9,SNR=3.1						
ILAR	Eielson Array	83.48	19	P	P	17 47 52.2	+0.7
	0.5nm,0.6s,baz=233,slow=5.3,SNR=6.7						
MKAR	Makanchi Array	93.06	317	P	P	17 48 37.6	-0.4
	0.2nm,0.7s,baz=120,slow=5.5,SNR=3.6						

IDC 06 17:37:39.8±1.8, 11°.52S×164°.96E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.6/43, mbtmp3.7/5, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/35, Error ellipse: s-maj=52.0km s-min=32.7km az=124.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.59	172	Pn	Pn	17 40 12.6	-0.4
	0.2nm,0.3s,baz=0.0,slow=20,SNR=2.9						
DZM				LR	LR	17 43 33.6	
	comp=Z,207nm,18.1s,baz=19,slow=33						
WRA	Warramunga Arr	30.60	250	P	P	17 43 56.5	+0.7
	1.0nm,0.7s,baz=81,slow=9.2,SNR=6.3						
ASAR	Alice Springs	31.89	244	P	P	17 44 06.8	-0.3
	0.5nm,0.8s,baz=85,slow=10,SNR=3.5						
ILAR	Eielson Array	84.20	19	P	P	17 50 13.3	+0.6
	0.4nm,0.8s,baz=236,slow=4.6,SNR=4.4						
MKAR	Makanchi Array	93.34	317	P	P	17 50 55.5	-1.3
	0.1nm,0.7s,baz=111,slow=3.2,SNR=1.4						

IDC 06 17:40:22.9±1.1, 17°.70N×120°.25E, h0^{km}, mb3.4/5, mb1 3.7/5, mb1mx3.4/45, mbtmp3.5/5, MS3.9/1, Ms1 3.9/1, ms1mx2.7/35, 1C, Error ellipse: s-maj=39.5km s-min=20.8km az=65.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVP	Callao Caves	1.50	90⇑	*i*P	Pg	17 40 55.3	+3.6
CVP				*i* S	Sn	17 41 19.7	+8.4
CMAR	Chiang Mai Arr	20.27	275	P	P	17 45 01.1	+0.9
	0.2nm,0.6s,baz=84,slow=9.2,SNR=4.2						
KSRS	Korea Array	20.80	17	P	P	17 45 06.0	+0.2
	1.9nm,0.8s,baz=214,slow=11,SNR=5.4						
WRA	Warramunga Arr	39.88	159	P	P	17 47 57.6	-1.0
	0.8nm,0.6s,baz=340,slow=9.2,SNR=10						
WRA				PcP	PcP	17 50 05.0	+0.4
	0.4nm,0.7s,baz=349,slow=3.6,SNR=3.4						
MKAR	Makanchi Array	42.61	321	P	P	17 48 20.0	-0.9
	0.8nm,0.9s,baz=122,slow=8.0,SNR=8.8						
ASAR	Alice Springs	43.22	162	P	P	17 48 26.4	+0.3
	0.9nm,0.6s,baz=340,slow=7.0,SNR=54						
TIXI	Tiksi	54.19	3	LR	LR	18 17 05.4	
	comp=Z,94nm,18.3s,baz=196,slow=41						

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*ISCJB **06** 17:44:26.1±1.2, 11°.8S±0°.1×166°.0E±0°.2, h10^{km}, mb3.8/6, Error ellipse: s-maj=25.5km s-min=17.2km az=156.9*

*IDC **06** 17:44:26.3±1.6, 11°.70S×166°.12E, h0^{km}, mb3.9/6, mb1 4.0/8, mb1mx3.8/46, mbtmp3.9/8, ML3.8/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/45, Error ellipse: s-maj=39.3km s-min=30.4km az=122.0*

ISC 06 17:44:27.7±1.3, 11°.8S±0°.1×166°.1E±0°.2, h10^{km}, n8, σ0^{s}.81/8, mb3.7/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.46	290	Pn	Pn	17 46 02.0	-1.0
	6.8nm,0.3s,baz=215,slow=11,SNR=2.7						
HNR				LR	LR	17 48 23.2	
	comp=Z,108nm,18.4s,baz=138,slow=37						
DZM	Mont Dzumac	10.26	178	Pn	Pn	17 46 54.6	-0.5
	0.3nm,0.3s,baz=319,slow=20,SNR=2.5						
WRA	Warramunga Arr	31.55	251	P	P	17 50 51.5	+0.8
	1.7nm,0.9s,baz=82,slow=8.9,SNR=8.6						
ASAR	Alice Springs	32.77	244	P	P	17 51 02.0	+0.7
	0.7nm,1.0s,baz=65,slow=10,SNR=4.7						
PSI	Prapat	68.29	278	P	P	17 55 29.9	0.0
	2.8nm,0.4s,baz=180,slow=10,SNR=3.7						
CMAR	Chiang Mai Arr	72.70	294	P	P	17 55 57.4	+0.9
	0.5nm,0.7s,baz=116,slow=4.6,SNR=4.3						
ILAR	Eielson Array	84.08	18	P	P	17 56 58.4	-0.1
	0.2nm,0.5s,baz=240,slow=5.5,SNR=5.3						
MKAR	Makanchi Array	94.27	317	P	P	17 57 47.1	-0.3
	0.2nm,0.7s,baz=113,slow=5.0,SNR=3.5						

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*IDC **06** 17:45:13.2±0.9, 10°.91S×165°.51E, h0^{km}, mb3.9/9, mb1 4.2/11, mb1mx4.0/46, mbtmp4.0/11, ML4.6/2, Error ellipse: s-maj=30.1km s-min=20.8km az=140.0*

*NEIC **06** 17:45:14.7±0.6, 10°.95S×165°.50E, h10^{km}, mb4.6/3, Error ellipse: s-maj=13.3km s-min=11.1km az=89.0*

*ISCJB **06** 17:45:15.9±0.6, 11°.10S±0°.06×165°.43E±0°.07, h30^{km}, mb3.9/11, Error ellipse: s-maj=10.6km s-min=7.4km az=149.6*

ISC 06 17:45:17.6±0.7, 10°.99S±0°.08×165°.53E±0°.10, h30^{km}, n20, σ1^{s}.03/26, mb3.8/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.71	285	Pn	Pn	17 46 39.8	-0.5
	18nm,0.3s,baz=151,slow=8.9,SNR=6.5						
HNR				Sn	Sn	17 47 44.8	-0.1
	4.2nm,0.3s,baz=197,slow=19,SNR=1.7						
DZM	Mont Dzumac	11.05	176	*e*Pn	Pn	17 47 54.2	+0.4
DZM				*e*Sn	Sn	17 49 55.6	-0.9
DZM	Mont Dzumac	11.05	176	Pn	Pn	17 47 54.8	+0.9
	3.6nm,0.3s,baz=312,slow=10.0,SNR=18						
DZM				Sn	Sn	17 49 55.6	-0.9
	0.3nm,0.3s,baz=126,slow=17,SNR=2.5						
ONTNC	Ouen Toro	11.29	176	*e*Pn	Pn	17 47 58.4	+1.4
MANU	Manus Island	20.10	295	*e*P	P	17 49 50.1	+1.1
	78nm,1.3s						
STKA	Stephens Creek	30.33	223	P	P	17 51 27.4	+0.7
	0.5nm,0.3s,baz=16,slow=14,SNR=3.0						
WR1	Warramunga Arr	31.30	250	*e*P	P	17 51 34.2	-1.2
	17nm,1.8s						
WR1				*e*PcP	PcP	17 54 30.1	+0.8
WRA	Warramunga Arr	31.30	250	P	P	17 51 34.2	-1.2
	2.2nm,0.6s,baz=81,slow=9.2,SNR=23						
WRA				PcP	PcP	17 54 30.1	+0.8
	0.3nm,0.5s,baz=75,slow=3.2,SNR=5.9						
AS01	Alice Springs	32.58	243	*e*P	P	17 51 43.9	-2.7
AS31	Alice Springs	32.62	243	*e*P	P	17 51 46.1	-0.9
	1.4nm,0.7s						
ASAR	Alice Springs	32.62	243	P	P	17 51 46.4	-0.6
	3.6nm,0.6s,baz=64,slow=10,SNR=48						
ASAR				PcP	PcP	17 54 33.8	+0.8
	0.6nm,0.7s,baz=54,slow=2.5,SNR=6.2						
CMAR	Chiang Mai Arr	71.89	294	P	P	17 56 39.4	+0.9
	0.2nm,0.3s,baz=122,slow=4.4,SNR=4.3						
SONA0	Songino Array	78.50	324	*e*P	P	17 57 16.4	+0.3
SONM	Songino Array	78.50	324	P	P	17 57 16.4	+0.3
	0.2nm,0.5s,baz=106,slow=5.1,SNR=2.0						
ILAR	Eielson Array	83.53	19	P	P	17 57 41.9	-0.5
	0.4nm,0.5s,baz=236,slow=4.9,SNR=8.2						
NV01	Mina Array Sit	86.15	50	*e*P	P	17 57 56.3	-0.2
NVAR	Mina Array Bea	86.15	50	P	P	17 57 57.0	+0.5
	0.7nm,0.7s,baz=232,slow=5.1,SNR=3.8						
MK32	Makanchi Array	93.34	317	*e*P	P	17 58 30.1	+0.2
MKAR	Makanchi Array	93.34	317	P	P	17 58 30.1	+0.2
	0.2nm,0.7s,baz=93,slow=6.9,SNR=2.1						
YKA	Yellowknife Ar	95.03	27	P	P	17 58 35.5	-1.6
	0.2nm,0.7s,baz=264,slow=4.3,SNR=3.6						

IDC 06 17:50:06.1±7.1, 18°.52S×174°.17W, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.5/41, mbtmp3.4/3, Error ellipse: s-maj=307.7km s-min=36.7km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	48.48	259	P	P	17 58 51.6	+0.7
	0.1nm,0.3s,baz=97,slow=7.4,SNR=12						
ASAR	Alice Springs	48.50	254	P	P	17 58 50.2	-0.9
	0.3nm,0.6s,baz=89,slow=8.4,SNR=10						
ILAR	Eielson Array	85.64	11	P	P	18 02 46.1	0.0
	0.3nm,0.7s,baz=224,slow=5.3,SNR=3.6						

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*ISCJB **06** 17:53:49.9±0.6, 10°.91S±0°.08×164°.5E±0°.1, h10^{km}, mb4.0/13, MS4.0/2, Error ellipse: s-maj=14.8km s-min=12.1km az=12.7*

*IDC **06** 17:53:49.5±1.0, 10°.89S×164°.63E, h0^{km}, mb3.9/10, mb1 4.1/13, mb1mx3.9/43, mbtmp4.0/13, ML4.1/3, MS3.9/4, Ms1 3.9/4, ms1mx3.2/44, Error ellipse: s-maj=27.6km s-min=18.4km az=132.0*

*NEIC **06** 17:53:50.4±5.3, 10°.81S×164°.51E, h2^{km}±32^{km}, mb4.4/5, Error ellipse: s-maj=13.6km s-min=11.2km az=61.0*

ISC 06 17:53:52.0±0.7, 10°.81S±0°.10×164°.35E±0°.09, h10^{km}, n31, σ1^{s}.39/25, mb3.9/13, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.55	287	*e*Pn	Pn	17 55 01.6	+0.7
HNR				*e*Sn	Sb	17 56 03.8	-3.0
HNR	Honiara	4.55	287	Pn	Pn	17 55 02.7	+1.8
	11nm,0.3s,baz=87,slow=3.0,SNR=4.3						
HNR				Sn	Sb	17 56 03.8	-3.0
	12nm,0.3s,baz=163,slow=20,SNR=1.9						
HNR				LR	LR	17 57 07.2	
	comp=Z,911nm,19.7s,baz=94,slow=41						
DZM	Mont Dzumac	11.38	170	*e*Pn	Pn	17 56 34.2	-0.6
DZM	Mont Dzumac	11.38	170	Pn	Pn	17 56 32.9	-1.9
	3.1nm,0.3s,baz=351,slow=13,SNR=21						
DZM				LR	LR	18 00 08.7	
	comp=Z,403nm,20.2s,baz=18,slow=34						
CTA	Charters Tower	19.72	240	P	Pn	17 58 24.1	+0.8
	0.2nm,0.3s,baz=68,slow=13,SNR=4.4						
H11S2	WAKE ISLAND Hy	29.20	5	T	T	18 30 29.0	
	baz=184						
H11S3	WAKE ISLAND Hy	29.20	5	T	T	18 30 30.6	
	baz=184						
H11S1	WAKE ISLAND Hy	29.22	5	T	T	18 30 30.4	
	baz=184						
STKA	Stephens Creek	29.69	222	*e*P	P	17 59 58.8	+0.6
	1.7nm,1.2s						
STKA	Stephens Creek	29.69	222	P	P	17 59 59.8	+1.5
	2.3nm,0.6s,baz=49,slow=11,SNR=5.6						
WR1	Warramunga Arr	30.29	249	*e*P	P	18 00 04.2	+0.6
	7.6nm,1.3s						
WRA	Warramunga Arr	30.29	249	P	P	18 00 04.2	+0.6
	0.8nm,0.7s,baz=80,slow=9.3,SNR=14						
H11N1	WAKE ISLAND Hy	30.43	5	T	T	18 31 59.2	
	baz=186						
H11N3	WAKE ISLAND Hy	30.43	5	T	T	18 32 00.3	
	baz=186						
H11N2	WAKE ISLAND Hy	30.45	5	T	T	18 32 01.8	
	baz=186						
AS31	Alice Springs	31.68	242	*e*P	P	18 00 16.3	+0.3
	0.8nm,0.6s						
ASAR	Alice Springs	31.68	242	P	P	18 00 16.1	0.0
	0.8nm,0.7s,baz=65,slow=10,SNR=8.3						
FITZ	Fitzroy Crossi	38.12	254	P	P	18 01 11.3	-0.2
	1.8nm,0.5s,baz=75,slow=7.9,SNR=10						
JNU	Nakatsue	54.09	325	LR	LR	18 24 10.6	
	comp=Z,284nm,21.5s,baz=119,slow=34						
ASAJ	Asahikawa	58.13	342	P	P	18 03 46.8	+1.1
	5.4nm,1.0s,baz=147,slow=17,SNR=3.7						
CMAR	Chiang Mai Arr	70.76	294	P	P	18 05 10.9	+1.8
	0.7nm,0.9s,baz=124,slow=4.5,SNR=3.0						
MA2	Magadan	70.99	353	LR	LR	18 29 02.8	
	comp=Z,54nm,21.7s,baz=142,slow=30						
SONA0	Songino Array	77.67	324	*e*P	P	18 05 49.6	+0.6
SONM	Songino Array	77.67	324	P	P	18 05 49.6	+0.6
	0.3nm,0.5s,baz=132,slow=5.5,SNR=2.6						
QSPA	South Pole Qui	79.20	180	*e*P	P	18 05 56.5	-0.6
	27nm,1.9s						
ILAR	Eielson Array	83.73	19	P	P	18 06 19.4	-1.4
	0.8nm,0.8s,baz=252,slow=5.5,SNR=7.7						
NVAR	Mina Array Bea	86.92	50	P	P	18 06 35.7	-2.0
	0.4nm,0.6s,baz=224,slow=5.0,SNR=3.1						
MK01	Makanchi Array	92.40	317	*e*P	P	18 07 03.2	+0.2
MK32	Makanchi Array	92.41	317	*e*P	P	18 07 03.6	+0.5
MKAR	Makanchi Array	92.41	317	*e*P	P	18 07 03.7	+0.6
	5.5nm,0.9s						
MKAR	Makanchi Array	92.41	317	P	P	18 07 03.6	+0.5
	0.6nm,0.7s,baz=92,slow=6.0,SNR=8.0						

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*IDC **06** 17:55:22.6±1.6, 11°.36S×166°.06E, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.7/44, mbtmp3.8/7, ML4.3/1, Error ellipse: s-maj=39.7km s-min=29.0km az=126.0*

*ISCJB **06** 17:55:23.0±0.9, 11°.35S±0°.09×165°.9E±0°.1, h10^{km}, mb3.7/6, Error ellipse: s-maj=22.3km s-min=9.8km az=154.6*

*NEIC **06** 17:55:24.8±0.8, 11°.26S×165°.82E, h10^{km}, mb4.4/1, Error ellipse: s-maj=22.4km s-min=9.6km az=71.0*

ISC 06 17:55:24.5±1.2, 11°.3S±0°.1×166°.0E±0°.2, h10^{km}, n13, σ1^{s}.44/12, mb3.6/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.27	286	Pn	Pn	17 56 58.4	+1.3
	baz=131,slow=20,SNR=2.8						
MARNC	Mare, Loyalty	10.33	170	*e*Pn	Pn	17 57 54.5	+1.7
DZM	Mont Dzumac	10.75	178	Pn	Pn	17 57 58.6	-0.1
	2.1nm,0.3s,baz=11,slow=16,SNR=4.4						
ONTNC	Ouen Toro	10.98	178	*e*Pn	Pn	17 58 02.6	+0.8
OUENC	Ouen Island, N	11.11	176	*e*Pn	Pn	17 58 04.6	+1.0
PINNC	Pines Island,	11.36	173	*e*Pn	Pn	17 58 07.6	+0.7
WR1	Warramunga Arr	31.68	250	*e*P	P	18 01 46.2	-2.3
	7.1nm,1.3s						
WRA	Warramunga Arr	31.68	250	P	P	18 01 46.2	-2.3
	0.8nm,0.6s,baz=80,slow=8.7,SNR=3.8						
ASAR	Alice Springs	32.95	244	P	P	18 01 58.7	-1.0
	0.5nm,0.8s,baz=67,slow=9.4,SNR=3.2						
CMAR	Chiang Mai Arr	72.47	294	P	P	18 06 53.5	+1.5
	0.3nm,0.8s,baz=93,slow=4.8,SNR=2.4						
ILAR	Eielson Array	83.63	18	P	P	18 07 52.6	-0.3
	0.3nm,0.7s,baz=224,slow=6.3,SNR=3.1						
MK32	Makanchi Array	93.88	317	*e*P	P	18 08 41.8	-0.7
MKAR	Makanchi Array	93.88	317	P	P	18 08 41.7	-0.7
	0.2nm,0.7s,baz=92,slow=5.2,SNR=2.8						

IDC 06 17:57:29.1±4.4, 10°.79S×167°.80E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.5/45, mbtmp3.8/3, MS4.0/2, Ms1 4.0/2, ms1mx3.1/42, Error ellipse: s-maj=217.8km s-min=34.8km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	33.47	250	P	P	18 04 10.1	-0.2
	0.8nm,0.5s,baz=82,slow=8.8,SNR=6.7						
ASAR	Alice Springs	34.72	244	P	P	18 04 21.1	-0.1
	0.9nm,0.8s,baz=68,slow=9.7,SNR=5.3						
TGY	Tagaytay City	52.64	297	LR	LR	18 25 26.6	
	comp=Z,217nm,21.1s,baz=182,slow=32						
VNDA	Vanda	66.79	181	LR	LR	18 34 39.1	
	comp=Z,74nm,18.6s,baz=76,slow=33						
ILAR	Eielson Array	82.64	18	P	P	18 09 54.0	+0.1
	0.7nm,1.0s,baz=228,slow=7.8,SNR=4.0						

IDC 06 18:02:53.8±1.7, 10°.88S×165°.17E, h0^{km}, mb3.5/3, mb1 3.9/5, mb1mx3.5/46, mbtmp3.8/5, ML3.9/2, Error ellipse: s-maj=40.7km s-min=30.3km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.34	285	Pn	Pn	18 04 15.4	+0.6
	4.9nm,0.3s,baz=151,slow=19,SNR=2.3						
DZM	Mont Dzumac	11.20	174	Pn	Pn	18 05 36.1	+0.8
	0.6nm,0.3s,baz=281,slow=10,SNR=2.5						
WRA	Warramunga Arr	31.01	249	P	P	18 09 13.5	+0.1
	2.5nm,1.3s,baz=81,slow=9.3,SNR=4.4						
ASAR	Alice Springs	32.36	243	P	P	18 09 24.9	-0.4
	0.5nm,0.5s,baz=69,slow=9.9,SNR=12						
ILAR	Eielson Array	83.54	19	P	P	18 15 23.3	0.0
	0.3nm,0.8s,baz=233,slow=3.6,SNR=2.7						

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*IDC **06** 18:03:17.5±0.5, 11°.17S×165°.75E, h0^{km}, mb4.4/21, mb1 4.6/23, mb1mx4.4/47, mbtmp4.5/23, ML4.6/2, Error ellipse: s-maj=17.7km s-min=13.7km az=121.0*

*NEIC **06** 18:03:19.1±0.6, 11°.16S×165°.66E, h10^{km}±3^{km}, mb5.0/58, Error ellipse: s-maj=4.2km s-min=3.6km az=102.0*

*ISCJB **06** 18:03:20.7±0.2, 11°.29S±0°.03×165°.66E±0°.04, h30^{km}, mb4.8/86, Error ellipse: s-maj=5.9km s-min=4.8km az=5.3*

ISC 06 18:03:22.1±0.4, 11°.25S±0°.07×165°.73E±0°.07, h30^{km}, n152, σ1^{s}.05/160, mb4.9/89, 3C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.97	287	*e*Pn	Pn	18 04 45.8	-2.7
HNR	Honiara	5.97	287	Pn	Pn	18 04 47.2	-1.3
	8.9nm,0.3s,baz=222,slow=3.8,SNR=9.9						
MARNC	Mare, Loyalty	10.41	168	*e*Pn	Pn	18 05 51.8	+2.4
DZM	Mont Dzumac	10.78	176	*e*Pn	Pn	18 05 55.9	+1.2
	139nm,1.2s						
DZM				*e*LQ	LQ	18 07 59.8	
	1μm,25.4s						
DZM				*e*LR	LR	18 08 26.8	
	comp=Z,2μm,30.2s						
DZM	Mont Dzumac	10.78	176	*e*Pn	Pn	18 05 55.5	+0.8
DZM	Mont Dzumac	10.78	176	Pn	Pn	18 05 55.0	+0.3
	8.7nm,0.3s,baz=346,slow=12,SNR=28						
ONTNC	Ouen Toro	11.02	176	*e*Pn	Pn	18 05 58.7	+0.9
OUENC	Ouen Island, N	11.16	175	*e*Pn	Pn	18 06 00.5	+0.8
PINNC	Pines Island,	11.42	172	*e*Pn	Pn	18 06 02.6	-0.6
MSVF	Nonsavu	13.55	120	*e*Pn	Pn	18 06 30.7	-1.8
MANU	Manus Island	20.39	295	*e*P	P	18 07 53.7	-3.1
	156nm,1.0s						
CTA	Charters Tower	20.69	242	P	P	18 08 00.4	+0.3
	41nm,1.0s,baz=69,slow=14,SNR=16						
CTAO	Charters Tower	20.69	242	*e*P	P	18 08 00.6	+0.6
	60nm,1.0s						
COEN	Coen	22.17	261	*e*P	P	18 08 15.9	-0.1
	48nm,1.1s						
ARMA	Armidale	23.14	212	*e*P	P	18 08 26.7	+0.6
	26nm,1.0s						
MXZ	Matakaoa Point	28.53	159	*e*P	P	18 09 16.1	+1.0
	55nm,1.0s						
URZ	Urewera	28.76	161	P	P	18 09 17.5	+0.3
	9.8nm,0.6s,baz=262,slow=2.6,SNR=7.1						
BKZ	Black Stump Fm	29.41	163	*e*P	P	18 09 24.1	+1.1
	55nm,1.2s						
STKA	Stephens Creek	30.29	224	*e*P	P	18 09 30.6	-0.2
	2.0nm,0.8s						
STKA	Stephens Creek	30.29	224	P	P	18 09 31.4	+0.6
	7.0nm,0.8s,baz=34,slow=9.1,SNR=14						
THZ	Tophouse	31.04	170	*e*P	P	18 09 39.0	+1.6
	26nm,0.9s						
WB2	Warramunga Arr	31.39	250	*e*P	P	18 09 39.4	-1.4
WRAB	Tennant Creek	31.39	250	*e*P	P	18 09 39.8	-0.9
	23nm,0.8s						
WR1	Warramunga Arr	31.40	250	*e*P	P	18 09 40.1	-0.7
	30nm,1.0s						
WR1				*e*PcP	PcP	18 12 34.9	+0.8
WRA	Warramunga Arr	31.40	250	P	P	18 09 40.1	-0.7
	19nm,0.9s,baz=82,slow=9.1,SNR=49						
WRA				PcP	PcP	18 12 34.9	+0.8
	0.2nm,0.3s,baz=15,slow=8.3,SNR=6.0						
KHZ	Kahutara	31.79	169	*e*P	P	18 09 43.9	0.0
	31nm,1.0s						
LTZ	Lake Taylor	31.93	171	*e*P	P	18 09 46.6	+1.4
	50nm,1.3s						
OXZ	Oxford	32.42	171	*e*P	P	18 09 50.9	+1.4
	251nm,0.4s						
AS01	Alice Springs	32.65	244	*e*P	P	18 09 49.9	-1.9
RPZ	Rata Peaks	32.67	173	P	P	18 09 52.8	+1.2
	23nm,0.8s,baz=52,slow=2.7,SNR=9.3						
AS31	Alice Springs	32.69	244	*e*P	P	18 09 50.7	-1.5
	2.1nm,0.9s						
AS31				*e*PcP	PcP	18 12 37.3	-0.3
ASAR	Alice Springs	32.69	244	P	P	18 09 51.2	-0.9
	4.9nm,0.8s,baz=74,slow=9.4,SNR=26						
ASAR				PcP	PcP	18 12 37.3	-0.3
	1.7nm,0.9s,baz=72,slow=2.6,SNR=4.1						
MQZ	McQueen's Vall	32.89	171	*e*P	P	18 09 55.1	+1.6
	136nm,0.3s						
DCZ	Deep Cove	34.12	178	*e*P	P	18 10 07.0	+2.8
	31nm,1.3s						
BBOO	Buckleboo	34.68	227	*e*P	P	18 10 08.0	-1.3
	97nm,1.9s						
FITZ	Fitzroy Crossi	39.31	255	*e*P	P	18 10 47.7	-1.1
	12nm,0.9s						
FITZ	Fitzroy Crossi	39.31	255	P	P	18 10 49.0	+0.2
	5.9nm,0.7s,baz=94,slow=6.1,SNR=15						
MMRI	Maumere	42.89	269	*e*P	P	18 11 17.5	-0.9
	25nm,0.8s						
PPT2	Papeete2	43.66	104	*e*LR	LR	18 23 56.6	
	comp=Z,153nm,22.2s						
TBI	Tubuai	44.27	112	*e*LQ	LQ	18 22 16.0	
	524nm,38.2s						
TBI				*e*LR	LR	18 24 12.6	
	comp=Z,408nm,28.8s						
MBWA	Marble Bar	45.12	251	*e*P	P	18 11 35.8	-0.4
	22nm,1.0s						
MPSI	Mapaga	46.97	281	P	P	18 11 51.6	+0.8

	10nm,0.9s						
CISI	Cisompet, Garu	57.18	268	*e*P	P	18 13 05.0	-2.0
	31nm,0.6s						
RKT	Rikitea	57.53	110	*e*LR	LR	18 30 24.1	
	comp=Z,574nm,30.5s						
ASAJ	Asahikawa	58.98	341	P	P	18 13 18.7	-0.1
	5.0nm,0.8s,baz=210,slow=8.6,SNR=4.6						
NJ2	Nanjing	62.15	315	*e*P	P	18 13 40.4	-0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IPM	Ipoh	66.24	280	*e*P	P	18 14 07.8	-0.3
	comp=Z,24nm,0.9s						
SKNT	Sakolnakorn	67.16	294	P	P	18 14 16.4	+2.6
	comp=Z,4.1nm,1.1s						
KLR	Kul'dur	67.24	337	P	P	18 14 13.4	-0.1
	comp=Z,2.4nm,0.8s,baz=126,slow=5.0,SNR=3.8						
ENH	Enshi	68.01	309	*e*P	P	18 14 18.5	-0.4
	comp=Z,9.8nm,1.0s						
GYA	Guiyang	68.52	304	⇑*i*P	P	18 14 24.3	+2.0
GYA				PP	PP	18 16 57.0	+3.1
GYA				S	S	18 23 25.2	+2.3
GYA				SKS	SKSac	18 24 19.8	0.0
GYA	Guiyang	68.52	304	SS	SS	18 27 50.1	+2.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
GSI	Gunungsitoli	68.86	276	*e*P	P	18 14 24.8	+0.2
	comp=Z,38nm,0.7s						
XAN	Xi'an	70.25	312	P	P	18 14 33.2	+0.5
XAN				pP	pP	18 14 42.0	+1.2
XAN				sP	pwP	18 14 47.6	+1.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
XAN				LR	LR		
	comp=N,160nm,16.3s						
XAN				LR	LR		
	comp=Z,160nm,19.5s						
KMI	Kunming	71.21	301	P	P	18 14 41.0	+2.0
KMI				sP	sP	18 14 49.0	-1.1
KMI				pmax	pmax		
	comp=Z,14nm,1.2s						
KMI				pmax	pmax		
	comp=Z,74nm,6.0s						
HHC	Hu-ho-hao-te	71.98	320	*e*P	P	18 14 45.1	+1.9
HHC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CM01	Chiang Mai Arr	72.15	294	*e*P	P	18 14 44.6	+0.1
CM31	Chiang Mai Arr	72.18	294	*e*P	P	18 14 44.9	+0.2
CMAR	Chiang Mai Arr	72.18	294	P	P	18 14 45.4	+0.6
	comp=Z,4.3nm,0.8s,baz=124,slow=4.6,SNR=41						
CMMT	Chiang Mai	72.29	294	P	P	18 14 46.6	+1.2
	comp=Z,5.5nm,1.5s						
CHTO	Chiang Mai	72.29	294	*e*P	P	18 14 45.4	+0.1
	comp=Z,6.0nm,1.1s						
CHTO	Chiang Mai	72.29	294	P	P	18 14 46.6	+1.2
	comp=Z,22nm,1.2s						
CD2	Chengdu	72.71	307	⇑P	P	18 14 50.0	+2.3
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
SEY	Seymchan	74.67	354	P	P	18 14 58.6	+0.2
	comp=Z,0.5nm,0.5s,baz=37,slow=22,SNR=4.0						
LZH	Lanzhou	74.88	312	*e*P	P	18 15 02.4	+1.9
LZH				pP	sP	18 15 11.1	-0.4
LZH				sP	PcP	18 15 15.5	+1.2
LZH				PP	PP	18 17 52.0	+3.6
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				LR	LR		
	comp=N,520nm,16.5s						
LZH				LR	LR		
	comp=E,550nm,16.9s						
LZH				LR	LR		
	comp=Z,650nm,18.8s						
GAMB	Gambell	76.77	10	*e*P	P	18 15 11.0	+0.7
	comp=Z,16nm,0.9s						
ULN	Ulaanbaatar	78.46	324	*e*P	P	18 15 20.8	+0.4
	comp=Z,7.3nm,1.2s						
ANM	Nome	78.69	12	*e*P	P	18 15 21.6	+0.5
	comp=Z,5.8nm,1.0s						
QSPA	South Pole Qui	78.76	180	*e*P	P	18 15 22.0	+0.3
	comp=Z,12nm,0.9s						
SONA0	Songino Array	78.82	324	*e*P	P	18 15 22.2	-0.2
SONM	Songino Array	78.82	324	P	P	18 15 22.2	-0.2
	comp=Z,2.3nm,1.1s,baz=125,slow=5.6,SNR=6.5						
BILL	Bilibino	79.08	0	*e*P	P	18 15 23.2	0.0
	comp=Z,16nm,1.0s						
GTA	Gaotai	79.19	314	⇑P	P	18 15 25.6	+1.0
GTA				pP	pP	18 15 31.2	-1.6
GTA				sP	PcP	18 15 34.0	+1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,5.2s						
GTA				LR	LR		
	comp=N,210nm,18.1s						
GTA				LR	LR		
	comp=E,190nm,18.1s						
GTA				LR	LR		
	comp=Z,170nm,18.4s						
SUA	Susitna One	80.12	20	*e*P	P	18 15 29.2	+0.1
	comp=Z,84nm,2.0s						
CAST	Castle Rocks	81.14	18	*e*P	P	18 15 34.3	-0.2
	comp=Z,7.6nm,0.8s						
TRF	Thorofare Moun	81.71	18	*e*P	P	18 15 36.9	-0.7
	comp=Z,29nm,1.6s						
RND	Reindeer	82.13	19	*e*P	P	18 15 40.9	+1.2
	comp=Z,7.8nm,0.8s						
MCK	McKinley	82.34	19	*e*P	P	18 15 41.3	+0.6
	comp=Z,28nm,1.4s						
IM3	Indian Mountai	82.62	16	*e*P	P	18 15 42.4	+0.2
MLY	Manley	82.74	17	*e*P	P	18 15 42.5	-0.3
	comp=Z,27nm,1.9s						
WRH	Wood River Hil	83.13	18	*e*P	P	18 15 44.5	-0.3
	comp=Z,13nm,1.0s						
MDM	Murphy Dome	83.43	18	*e*P	P	18 15 44.9	-1.5
	comp=Z,10nm,0.9s						
HDA	Harding Lake	83.44	19	*e*P	P	18 15 46.1	-0.3
	comp=Z,25nm,0.9s						
COLA	College	83.48	18	*e*P	P	18 15 46.8	+0.2
	comp=Z,22nm,1.0s						
RIDG	Independ'e Rid	83.67	20	*e*P	P	18 15 47.9	+0.3
	comp=Z,27nm,1.3s						
ILAR	Eielson Array	83.71	18	P	P	18 15 47.5	-0.3
	comp=Z,3.4nm,0.6s,baz=231,slow=5.2,SNR=64						
ILB	Eielson Array	83.71	18	*e*P	P	18 15 47.4	-0.3
	comp=Z,11nm,1.1s						
IL1	Eielson Array	83.71	18	*e*P	P	18 15 47.4	-0.4
SCRK	Sand Creek	84.11	20	*e*P	P	18 15 50.6	+0.6
	comp=Z,20nm,1.1s						
AFDM	Forest Hills D	84.34	49	*e*P	P	18 15 51.8	+0.1
	comp=Z,5.5nm,0.9s						
MDPB	Devils Postpil	85.34	50	*e*P	P	18 15 56.8	-0.2
	comp=Z,5.2nm,1.0s						
WAKR	Walker	85.34	49	*e*P	P	18 15 56.3	-0.6
	comp=Z,15nm,1.5s						
DAWY	Dawson	85.75	21	*e*P	P	18 15 57.8	-0.4
	comp=Z,5.8nm,0.9s						
JIRN	Jiri	86.07	299	*e*P	P	18 16 01.7	+0.7
NV01	Mina Array Sit	86.17	50	*e*P	P	18 16 00.9	-0.1
NVAR	Mina Array Bea	86.17	50	P	P	18 16 01.6	+0.5
	comp=Z,3.0nm,1.0s,baz=238,slow=8.1,SNR=8.4						
NV11	Mina Array Sit	86.28	50	*e*P	P	18 16 01.8	+0.3
	comp=Z,0.5nm,1.2s						
TIXI	Tiksi	86.28	349	P	P	18 16 00.4	-0.2
	comp=Z,0.4nm,0.5s,baz=148,slow=5.9,SNR=2.7						
GUN	Gumba	86.40	299	*e*P	P	18 16 03.5	+0.9
KVN	Kaiserville	86.50	49	*e*P	P	18 16 02.6	-0.1
	comp=Z,7.5nm,1.4s						
PKI	Pulchoki	86.72	299	*e*P	P	18 16 04.6	+0.5
PKIN	Phulchoki	86.73	299	*e*P	P	18 16 04.5	+0.4
DMN	Daman	86.99	299	*e*P	P	18 16 06.3	+0.9
	comp=Z,26nm,1.1s						
R11A	Troy Canyon, C	88.19	50	*e*P	P	18 16 11.3	+0.5
	comp=Z,6.2nm,1.5s						
DANN	Dangsing	88.33	299	*e*P	P	18 16 11.6	-0.2
	comp=Z,11nm,0.8s						
PYUN	Piuthan	88.93	299	*e*P	P	18 16 14.2	-0.3
	comp=Z,14nm,0.9s						
WMQ	Urumqi	89.23	315	P	P	18 16 17.3	+1.9
WMQ				pP	pP	18 16 21.4	-2.4
WMQ				sP	sP	18 16 25.6	-1.2
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,410nm,5.1s						
WMQ				LR	LR		
	comp=N,160nm,22.3s						
WMQ				LR	LR		
	comp=E,280nm,18.5s						
WMQ				LR	LR		
	comp=Z,220nm,22.3s						
PSUT	Pine Spring	89.55	51	*e*P	P	18 16 18.1	+0.9
	comp=Z,5.7nm,1.2s						
LCMT	Little Creek M	89.64	52	*e*P	P	18 16 18.0	+0.4
	comp=Z,13nm,0.4s						
CCUT	Cedar City	89.68	52	*e*P	P	18 16 18.2	+0.3
	comp=Z,8.2nm,1.2s						
INK	Inuvik	90.10	19	*e*P	P	18 16 18.9	+0.1
	comp=Z,5.5nm,1.2s						
INK	Inuvik	90.10	19	P	P	18 16 19.2	+0.4
	comp=Z,0.6nm,0.7s,baz=312,slow=12,SNR=1.5						
U15A	North Rim	90.24	53	*e*P	P	18 16 21.2	+0.6
	comp=Z,6.0nm,1.0s						
X16A	Lo Mia Camp, P	90.45	55	*e*P	P	18 16 22.3	+0.9
	comp=Z,3.6nm,1.0s						
MTPU	Mount Pierson	90.70	51	*e*P	P	18 16 23.6	+0.8
	comp=Z,7.2nm,1.1s						
MSU	Marysvale	90.82	51	*e*P	P	18 16 24.3	+1.1
HVU	Hansel Valley	91.15	48	*e*P	P	18 16 25.0	+0.5
	comp=Z,8.4nm,1.2s						
NLU	North Lily Min	91.23	50	*e*P	P	18 16 25.9	+0.9
	comp=Z,7.6nm,1.3s						
MK01	Makanchi Array	93.65	317	*e*P	P	18 16 35.1	-0.7
MK31	Makanchi Array	93.66	317	*e*P	P	18 16 35.6	-0.3
MK32	Makanchi Array	93.66	317	*e*P	P	18 16 36.2	+0.4
MK32				*e*PKKPdf	PKKPdf	18 33 40.8	-0.7
MKAR	Makanchi Array	93.66	317	*e*P	P	18 16 35.6	-0.3
	comp=Z,18nm,0.8s						
MKAR				PKKP	PKKPdf	18 33 40.8	-0.7
MKAR	Makanchi Array	93.66	317	P	P	18 16 36.2	+0.4
	comp=Z,2.5nm,0.8s,baz=98,slow=5.9,SNR=23						
MKAR				PKKP	PKKPdf	18 33 40.8	-0.7
	comp=Z,1.6nm,0.6s,baz=282,slow=2.7,SNR=16						
PD31	Pinedale Array	93.70	47	*e*P	P	18 16 34.9	-1.5
PDAR	Pinedale Array	93.70	47	P	P	18 16 35.4	-1.0
	comp=Z,1.1nm,1.0s,baz=203,slow=3.9,SNR=4.0						
ZALV	Zalesovo Beam	93.71	324	*e*P	P	18 16 34.7	-1.1
ZALV	Zalesovo Beam	93.71	324	P	P	18 16 35.6	-0.3
	comp=Z,1.3nm,0.8s,baz=108,slow=4.8,SNR=7.6						
ZAA1	Zalesovo Array	93.71	324	*e*P	P	18 16 35.6	-0.3
MAKZ	Makanchi	93.87	317	*e*P	P	18 16 37.0	+0.1
	comp=Z,5.0nm,1.0s						
YKA	Yellowknife Ar	95.16	27	P	P	18 16 40.6	-1.7
	comp=Z,0.5nm,0.7s,baz=258,slow=4.6,SNR=9.5						
YKB5	Yellowknife Ar	95.16	27	*e*P	P	18 16 41.0	-1.3
TXAR	Lajitas Array	95.94	61	P	P	18 16 46.1	-0.7
	comp=Z,0.3nm,0.9s,baz=284,slow=4.6,SNR=3.8						
LTX	Lajitas	95.94	61	*e*P	P	18 16 46.1	-0.7
KSH	Kashi	96.87	309	P	P	18 16 52.3	+1.5
KSH				sP	pP	18 16 59.3	+0.1
KSH				pmax	pmax		
	comp=Z,310nm,6.4s						
ARA0	ARCESS Array S	116.53	345	*e*PKPdf	PKPdf	18 22 02.3	-0.4
ARCES	ARCESS Array B	116.53	345	PKP	PKPdf	18 22 02.3	-0.4
	comp=Z,1.5nm,0.6s,baz=17,slow=1.3,SNR=9.3						
FIA0	FINESS Array S	121.95	338	*e*PKPdf	PKPdf	18 22 12.7	-0.6
FINES	FINESS Array B	121.95	338	PKP	PKPdf	18 22 12.7	-0.6
	comp=Z,0.7nm,0.5s,baz=190,slow=34,SNR=2.8						
CPUP	Villa Florida	123.90	132	PKP	PKPdf	18 22 18.2	+0.1
	comp=Z,3.0nm,1.0s,baz=251,slow=5.7,SNR=3.6						
SDV	Santo Domingo	124.52	87	*e*PKPdf	PKPdf	18 22 18.8	-1.0
SDV	Santo Domingo	124.52	87	PKP	PKPdf	18 22 19.9	+0.1
	comp=Z,3.3nm,0.6s,baz=288,slow=14,SNR=5.2						
NB200	NORSAR Array S	126.89	345	*e*PKPdf	PKPdf	18 22 22.9	+0.1
NOA	NORSAR Array B	126.89	345	PKP	PKPdf	18 22 22.9	+0.1
	comp=Z,0.7nm,0.7s,baz=31,slow=2.0,SNR=2.8						
AKASG	Malin Array Be	127.02	327	PKP	PKPdf	18 22 22.5	-0.8
	comp=Z,0.2nm,0.4s,baz=42,slow=2.2,SNR=3.1						
BR101	Keskin Array S	129.09	312	*e*PKPdf	PKiKP	18 22 28.9	+0.5
BRTR	Keskin Array B	129.09	312	PKP	PKiKP	18 22 29.0	+0.5
	comp=Z,0.6nm,0.8s,baz=92,slow=3.6,SNR=3.6						
CLL	Collm	134.28	336	*e*PKPdf	PKiKP	18 22 39.0	+0.6
GERES	GERESS Array B	135.88	334	PKP	PKiKP	18 22 41.8	-0.1
	comp=Z,0.2nm,0.3s,baz=66,slow=1.6,SNR=3.8						
ESDC	Sonseca Array	150.25	344	PKPbc	PKPbc	18 23 09.3	-1.5
	comp=Z,0.3nm,0.3s,baz=74,slow=3.6,SNR=3.6						
ESDC				PKPab	PKPab	18 23 16.4	-0.4
	comp=Z,0.2nm,0.3s,baz=20,slow=3.8,SNR=3.1						
TOA0	Torodi Ar. Sit	164.28	279	*e*PKPdf	PKPdf	18 23 23.8	0.0
TORD	Torodi Ar. Bea	164.28	279	PKP	PKPdf	18 23 24.0	+0.2
	comp=Z,1.2nm,0.9s,baz=344,slow=2.5,SNR=6.1						
TOA1	Torodi Ar. Sit	164.28	279	*e*PKPdf	PKPdf	18 23 24.0	+0.2

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*IDC **06** 18:03:48.6±0.7, 11.°21S×165.°76E, h0^{km}, mb4.5/13, mb1 4.8/15, mb1mx4.4/48, mbtmp4.6/15, ML4.8/2, MS3.8/1, Ms1 3.8/1, ms1mx3.2/29, Error ellipse: s-maj=24.0km s-min=18.2km az=121.0*

*ISCJB **06** 18:03:51.5±0.4, 11.°32S±0.°06×165.°61E±0.°06, h30^{km}, mb4.6/22, MS3.8/1, Error ellipse: s-maj=8.9km s-min=7.8km az=149.6*

*NEIC **06** 18:03:52.3±2.5, 11.°25S×165.°71E, h24^{km}±18^{km}, mb4.9/12, Error ellipse: s-maj=8.9km s-min=7.8km az=205.0*

ISC 06 18:03:53.1±0.6**, 11.°24S**±0.°09×**165.°66E**±0.°09**, h30^{km}, n46, σ0^{s}66**/45**, mb4.7**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.90	287	*e*Pn	Pn	18 05 18.8	+0.3
HNR	Honiara	5.90	287	Pn	Pn	18 05 18.2	-0.4
	19nm,0.3s,baz=252,slow=14,SNR=4.9						
HNR				Sn	Sn	18 06 24.4	-0.8
	baz=288,slow=20,SNR=1.9						
MARNC	Mare, Loyalty	10.43	168	*e*Pn	Pn	18 06 21.4	+0.7
DZM	Mont Dzumac	10.79	176	*e*Pn	Pn	18 06 23.8	-2.0
DZM	Mont Dzumac	10.79	176	Pn	Pn	18 06 25.4	-0.4
	10nm,0.3s,baz=304,slow=12,SNR=7.7						
ONTNC	Ouen Toro	11.03	176	*e*Pn	Pn	18 06 28.9	+0.1
CTA	Charters Tower	20.64	242	P	Pn	18 08 32.2	-0.6
	26nm,1.0s,baz=50,slow=16,SNR=4.1						
CTAO	Charters Tower	20.64	242	*e*P	Pn	18 08 31.9	-0.9
	46nm,0.8s						
URZ	Urewera	28.79	161	P	P	18 09 48.2	-0.2
	16nm,0.9s,baz=292,slow=2.0,SNR=3.6						
STKA	Stephens Creek	30.24	224	*e*P	P	18 10 01.1	-0.3
	1.7nm,0.8s						
STKA	Stephens Creek	30.24	224	P	P	18 10 01.9	+0.5
	6.8nm,0.7s,baz=51,slow=9.1,SNR=7.7						
WRAB	Tennant Creek	31.33	250	*e*P	P	18 10 10.8	-0.3
	8.7nm,0.8s						
WR1	Warramunga Arr	31.34	250	*e*P	P	18 10 11.2	0.0
	22nm,1.0s						
WRA	Warramunga Arr	31.34	250	P	P	18 10 11.2	0.0
	9.0nm,0.7s,baz=83,slow=9.1,SNR=8.7						
ASAR	Alice Springs	32.63	244	P	P	18 10 22.8	+0.3
	3.2nm,0.6s,baz=73,slow=9.5,SNR=5.3						
MBWA	Marble Bar	45.05	251	*e*P	P	18 12 07.1	+0.5
	21nm,0.7s						
MJAR	Matsushiro Arr	54.11	333	P	P	18 13 14.6	-0.7
	1.8nm,0.7s,baz=168,slow=8.5,SNR=5.5						
MAJO	Matsushiro	54.11	333	*e*P	P	18 13 14.6	-0.7
JNU	Nakatsue	55.19	324	LR	LR	18 33 26.4	
	comp=Z,86nm,21.6s,baz=120,slow=32						
CM31	Chiang Mai Arr	72.11	294	*e*P	P	18 15 15.2	0.0
	6.6nm,0.8s						
CMAR	Chiang Mai Arr	72.11	294	P	P	18 15 16.5	+1.2
	4.7nm,0.8s,baz=128,slow=4.7,SNR=9.7						
SONA0	Songino Array	78.78	324	*e*P	P	18 15 53.9	+0.9
SONM	Songino Array	78.78	324	P	P	18 15 53.9	+0.9
	1.2nm,0.9s,baz=138,slow=5.6,SNR=3.9						
CAST	Castle Rocks	81.16	18	*e*P	P	18 16 05.2	-0.3
	7.2nm,0.8s						
MCK	McKinley	82.36	19	*e*P	P	18 16 12.4	+0.6
	28nm,1.4s						
IM3	Indian Mountai	82.64	16	*e*P	P	18 16 13.8	+0.6
WRH	Wood River Hil	83.14	18	*e*P	P	18 16 16.1	+0.3
	9.2nm,0.8s						
COLA	College	83.50	18	*e*P	P	18 16 17.9	+0.3
	17nm,0.8s						
ILAR	Eielson Array	83.72	19	P	P	18 16 18.9	0.0
	5.0nm,0.6s,baz=230,slow=5.3,SNR=10						
ILB	Eielson Array	83.72	19	*e*P	P	18 16 18.7	-0.1
EGAK	Eagle	85.59	20	*e*P	P	18 16 28.8	+0.6
	4.4nm,0.7s						
NVAR	Mina Array Bea	86.21	50	P	P	18 16 32.3	+0.1
	2.2nm,0.8s,baz=230,slow=9.0,SNR=4.6						
MK32	Makanchi Array	93.61	317	*e*P	P	18 17 07.3	+0.8
MKAR	Makanchi Array	93.61	317	P	P	18 17 07.3	+0.8
	2.7nm,0.8s,baz=101,slow=6.1,SNR=7.4						
ZAA1	Zalesovo Array	93.67	324	*e*P	P	18 17 06.9	+0.3
ZALV	Zalesovo Beam	93.67	324	P	P	18 17 06.9	+0.3
	1.0nm,0.7s,baz=145,slow=3.6,SNR=3.9						
MAKZ	Makanchi	93.82	317	*e*P	P	18 17 08.5	+0.9
	5.0nm,1.0s						
YKA	Yellowknife Ar	95.19	27	P	P	18 17 11.7	-1.6
	0.4nm,0.6s,baz=260,slow=4.5,SNR=4.5						
ARA0	ARCESS Array S	116.50	345	*e*PKPdf	PKPdf	18 22 33.3	-0.2
ARCES	ARCESS Array B	116.50	345	PKP	PKPdf	18 22 33.3	-0.2
	1.8nm,0.7s,baz=79,slow=2.6,SNR=5.4						
BR101	Keskin Array S	129.03	312	*e*PKPdf	PKPdf	18 22 58.3	-0.3
BRTR	Keskin Array B	129.03	312	PKP	PKPdf	18 22 58.3	-0.3
	0.8nm,1.0s,baz=193,slow=5.1,SNR=3.5						
GERES	GERESS Array B	135.84	334	PKP	PKPdf	18 23 10.8	-0.3
	0.6nm,0.8s,baz=54,slow=2.3,SNR=3.5						
ESDC	Sonseca Array	150.22	344	PKPbc	PKPbc	18 23 41.7	+0.1
	0.6nm,0.5s,baz=352,slow=3.0,SNR=4.0						
ESDC				PKPab	pPKPbc	18 23 49.3	-0.8
	2.3nm,0.9s,baz=19,slow=3.6,SNR=4.3						
TORD	Torodi Ar. Bea	164.21	279	PKP	PKPdf	18 23 55.3	+0.6
	0.9nm,0.8s,baz=332,slow=3.1,SNR=4.3						
TOA1	Torodi Ar. Sit	164.22	279	*e*PKPdf	PKPdf	18 23 55.3	+0.6

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*IDC **06** 18:08:26.7±1.6, 11.°52S×165.°12E, h0^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.7/48, mbtmp4.0/7, ML3.5/2, Error ellipse: s-maj=38.5km s-min=30.3km az=123.0*

*ISCJB **06** 18:08:30.4±1.2, 11.°6S±0.°1×165.°0E±0.°2, h34^{km}, mb3.8/5, Error ellipse: s-maj=26.4km s-min=17.0km az=151.6*

ISC 06 18:08:32.1±1.3**, 11.°5S**±0.°1×**165.°1E**±0.°2**, h34^{km}, n7, σ1^{s}19**/7**, mb3.9**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.47	292	Pn	Pn	18 09 51.5	+0.3
	1.2nm,0.3s,baz=288,slow=16,SNR=1.7						
DZM	Mont Dzumac	10.55	173	Pn	Pn	18 11 01.6	+0.5
	0.4nm,0.3s,baz=197,slow=19,SNR=9.4						
WRA	Warramunga Arr	30.70	250	P	P	18 14 43.4	-0.8
	2.0nm,0.8s,baz=80,slow=9.0,SNR=4.8						
ASAR	Alice Springs	31.99	244	P	P	18 14 54.0	-1.5
	2.5nm,1.0s,baz=73,slow=10,SNR=6.2						
CMAR	Chiang Mai Arr	71.72	294	P	P	18 19 52.8	+1.5
	0.4nm,0.9s,baz=103,slow=3.9,SNR=3.9						
ILAR	Eielson Array	84.19	19	P	P	18 20 58.9	-0.7
	0.7nm,1.0s,baz=204,slow=5.9,SNR=3.0						
MKAR	Makanchi Array	93.44	317	P	P	18 21 44.1	-0.1
	0.4nm,0.8s,baz=95,slow=3.4,SNR=3.0						

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*SOME **06** 18:13:26.3, 42.°47N×79.°65E, h15^{km}*

*KRNET **06** 18:13:26.5±0.1, 42.°56N×79.°67E, h9^{km}, mb3.0*

*NNC **06** 18:13:26.8±2.0, 42.°58N×79.°63E, h0^{km}, mb3.0, mpv3.2, Error ellipse: s-maj=14.8km s-min=6.4km az=156.0*

ISC 06 18:13:24.6±1.6**, 42.°48N**±0.°05×**79.°69E**±0.°04**, h4^{km}**±14^{km}**, n33, σ0^{s}89**/64**, 10C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.70	346	P	Pb	18 13 39.4	-0.1
	16nm,0.1s						
SHLS				S	Sb	18 13 47.8	-1.8
	95nm,0.2s						
SHLS	Shalkode	0.70	346	*e*P	Pb	18 13 39.4	-0.1
	baz=15						
SHLS				*e*S	Sb	18 13 48.5	-1.1
	baz=15						
SHLS	Shalkode	0.70	346	*e*P	Pb	18 13 39.4	-0.1
	16nm,0.1s						
SHLS				*e*S	Sb	18 13 48.4	-1.1
	95nm,0.2s						
UZB	Uzynbulak	0.83	324	P	Pg	18 13 40.9	+0.3
	17nm,0.1s						
UZB				S	Sg	18 13 50.4	-0.9
	20nm,0.1s						
UZB	Uzynbulak	0.83	324	*e*P	Pg	18 13 40.9	+0.3
	baz=22						
UZB				*e*S	Sg	18 13 51.0	-0.4
	baz=22						
UZB	Uzynbulak	0.83	324	*e*P	Pg	18 13 40.9	+0.3
	17nm,0.1s						
UZB				*e*S	Sg	18 13 51.0	-0.4
	20nm,0.1s						
PDGK	Podgornoye	0.86	350	⇓*i*P	Pg	18 13 41.4	+0.2
	baz=50						
PDGK				⇓*i*S	Sg	18 13 52.1	-0.3
	baz=50						
PRZ	Przheval'sk	0.95	271	⇑*i*P	Pn	18 13 44.6	-0.4
	baz=66						
PRZ				⇑*i*S	Sb	18 13 56.9	0.0
	baz=66						
KTMS	Ketmen	1.08	26	P	Pg	18 13 45.7	+0.3
	2.4nm,0.1s						
KTMS				S	Sg	18 13 58.8	-0.7
	6.7nm,0.2s						
KTMS	Ketmen	1.08	26	*e*P	Pg	18 13 45.7	+0.3
	baz=28						
KTMS				*e*S	Sg	18 13 59.4	0.0
	baz=28						
KTMS	Ketmen	1.08	26	*e*P	Pg	18 13 45.7	+0.3
	2.4nm,0.1s						
KTMS				*e*S	Sg	18 13 59.4	0.0
	6.7nm,0.2s						
SATY	Saty	1.11	302	P	Pg	18 13 46.3	+0.4
	2.2nm,0.1s						
SATY				S	Sg	18 13 59.6	-0.7
	6.7nm,0.1s						
SATY	Saty	1.11	302	*e*P	Pg	18 13 45.7	-0.2
	2.2nm,0.1s						
SATY				*e*S	Sg	18 13 59.6	-0.7
	6.7nm,0.1s						
MNBS	Baschi	1.86	330	P	Pb	18 13 59.1	-0.1
	6.5nm,0.1s						
MNBS				S	Sb	18 14 22.0	-0.9
	7.3nm,0.2s						
MNBS	Baschi	1.86	330	*e*P	Pb	18 13 59.0	-0.2
	baz=29						
MNBS				*e*S	Sb	18 14 22.8	-0.1
	baz=29						
MNBS	Baschi	1.86	330	*e*P	Pb	18 13 59.0	-0.2
	6.5nm,0.1s						
MNBS				*e*S	Sb	18 14 22.8	-0.1
	7.3nm,0.2s						
KDJ	Kajisay	1.90	260	⇑*e*P	Pg	18 14 01.5	+0.6
	baz=58						
KDJ				⇑*i*S	Sg	18 14 26.3	+0.8
	baz=58						
KOTS	Kotyrbulak	2.04	293	P	Pb	18 14 02.8	+0.4
	4.8nm,0.2s						
KOTS				S	Sb	18 14 27.8	-0.4
	17nm,0.6s						
KOTS	Kotyrbulak	2.04	293	*e*P	Pg	18 14 03.7	-0.1
	baz=91						
KOTS				*e*S	Sg	18 14 30.8	+0.6
	baz=91						
KOTS	Kotyrbulak	2.04	293	*e*P	Pg	18 14 03.7	-0.1
	4.8nm,0.2s						
KOTS				*e*S	Sg	18 14 30.8	+0.6
	17nm,0.6s						
MDOK	Medeo	2.06	290	Pg	Pg	18 14 04.1	0.0
	2.9nm,0.1s						
MDOK				Lg	Lg	18 14 30.1	
	7.1nm,0.4s						
MDOK	Medeo	2.06	290	*e*P	Pb	18 14 03.5	+0.8
	baz=88						
MDOK				*e*S	Sg	18 14 30.7	-0.2
	baz=88						
MDOK	Medeo	2.06	290	*e*P	Pb	18 14 03.5	+0.8
	2.9nm,0.1s						
MDOK				*e*S	Sg	18 14 30.6	-0.2
	7.1nm,0.4s						
TNSS	Tian-Shan	2.10	286	P	Pb	18 14 03.2	-0.3
	3.7nm,0.4s						
TNSS				S	Sb	18 14 28.7	-1.4
	8.1nm,0.3s						
TNSS	Tian-Shan	2.10	286	*e*P	Pb	18 14 03.6	+0.1
	baz=84						
TNSS				*e*S	Sb	18 14 30.2	+0.1
	baz=84						
TNSS	Tian-Shan	2.10	286	*e*P	Pb	18 14 03.6	+0.1
	3.7nm,0.4s						

TNSS				eS	Sb	18 14 30.1	+0.1
	8.1nm,0.3s						
IZV	Izvestkoviy	2.33	285	Pg	Pb	18 14 07.4	0.0
	6.9nm,0.1s						
IZV				Lg	Lg	18 14 36.0	
	9.1nm,0.4s						
IZV	Izvestkoviy	2.33	285	eP	Pb	18 14 07.8	+0.4
	baz=83						
IZV				eS	Sb	18 14 37.3	+0.7
	baz=83						
IZV	Izvestkoviy	2.33	285	eP	Pb	18 14 07.8	+0.4
	6.9nm,0.1s						
IZV				eS	Sb	18 14 37.3	+0.7
	9.1nm,0.4s						
ULHL	Ulahol	2.57	266	⇑iP	Pb	18 14 10.8	-0.6
	baz=64						
ULHL				⇑iS	Sb	18 14 42.8	-0.6
	baz=64						
BOOM	Boomskoye usch	2.77	272	⇓iP	Pb	18 14 13.3	-1.6
	baz=70						
BOOM				⇓iS	Sb	18 14 47.3	-2.0
	baz=70						
NRN	Naryn	2.94	250	⇑iP	Pb	18 14 16.9	-1.0
	baz=49						
NRN				⇑iS	Sb	18 14 52.8	-1.5
	baz=49						
TKM2	Tokmak 2	3.05	280	⇑iP	Pn	18 14 16.7	+2.8
	baz=78						
TKM2				⇑iS	Sb	18 14 53.7	-3.6
	baz=78						

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*IDC **06** 18:17:31.4±0.5, 11°.09S×165°.11E, h0^{km}, mb4.4/17, mb1 4.5/19, mb1mx4.3/51, mbtmp4.4/19, ML4.8/2, MS3.5/2, Ms1 3.5/2, ms1mx3.0/41, Error ellipse: s-maj=17.8km s-min=15.1km az=105.0*

*ISCJB **06** 18:17:34.5±0.3, 11°.21S±0°.05×165°.00E±0°.06, h31^{km}, mb4.5/31, MS4.9/2, Error ellipse: s-maj=9.1km s-min=6.0km az=146.7*

*NEIC **06** 18:17:34.3±3.5, 11°.10S×165°.04E, h18^{km}±21^{km}, mb4.9/12, Error ellipse: s-maj=9.0km s-min=6.0km az=47.0*

ISC 06 18:17:36.2±0.4, 11°.21S±0°.06×165°.03E±0°.08, h31^{km}, n62, σ1^s.16/67, mb4.6/31, 1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.31	289	ePn	Pn	18 18 52.2	-1.3
HNR				Sn	Sn	18 19 54.1	+0.5
HNR	Honiara	5.31	289	Pn	Pn	18 18 54.4	+1.0
	21nm,0.3s,baz=329,slow=12,SNR=7.3						
HNR				Sn	Sn	18 19 54.1	+0.5
	22nm,0.3s,baz=234,slow=14,SNR=3.0						
HNR				LR	LR	18 21 01.3	
	comp=Z,787nm,18.1s,baz=158,slow=39						
DZM	Mont Dzumac	10.88	173	Pn	Pn	18 20 10.5	+0.5
	8.8nm,0.3s,baz=286,slow=14,SNR=99						
DZM				Sn	Sn	18 22 08.9	-2.0
	0.7nm,0.3s,baz=308,slow=18,SNR=3.6						
DZM				LR	LR	18 23 47.6	
	comp=Z,115nm,18.7s,baz=328,slow=34						
ONTNC	Ouen Toro	11.12	173	ePn	Pn	18 20 13.8	+0.7
PINNC	Pines Island,	11.57	169	ePn	Pn	18 20 20.1	+0.7
CTA	Charters Tower	20.10	242	P	Pn	18 22 09.8	+0.2
	16nm,0.8s,baz=75,slow=12,SNR=11						
CTAO	Charters Tower	20.10	242	eP	P	18 22 06.3	-1.3
	38nm,1.2s						
MXZ	Matakaoa Point	28.82	158	eP	P	18 23 33.3	+1.6
	52nm,1.0s						
URZ	Urewera	29.02	160	eP	P	18 23 35.4	+1.9
	21nm,1.0s						
URZ	Urewera	29.02	160	P	P	18 23 35.0	+1.5
	10.0nm,0.7s,baz=250,slow=2.2,SNR=4.3						
H11S2	WAKE ISLAND Hy	29.56	3	T	T	18 53 04.1	
	baz=183,slow=76,SNR=3.9						
H11S3	WAKE ISLAND Hy	29.56	3	T	T	18 53 07.7	
	baz=183,slow=76,SNR=3.8						
H11S1	WAKE ISLAND Hy	29.58	3	T	T	18 53 07.1	
	baz=183,slow=76,SNR=4.2						
BKZ	Black Stump Fm	29.65	162	eP	P	18 23 40.6	+1.5
	95nm,1.9s						
STKA	Stephens Creek	29.84	223	eP	P	18 23 42.4	+1.5
	2.5nm,0.8s						
STKA				PcP	PcP	18 26 44.2	+0.4
STKA	Stephens Creek	29.84	223	P	P	18 23 42.0	+1.1
	12nm,0.8s,baz=36,slow=8.7,SNR=24						
STKA				PcP	PcP	18 26 44.2	+0.4
	0.5nm,0.3s,baz=155,slow=4.4,SNR=3.1						
WRAB	Tennant Creek	30.76	250	eP	P	18 23 49.5	+0.4
	11nm,0.8s						
WB2	Warramunga Arr	30.76	250	eP	P	18 23 49.0	-0.1
WRA	Warramunga Arr	30.77	250	P	P	18 23 49.4	+0.2
	12nm,0.7s,baz=80,slow=8.9,SNR=82						
WRA				PcP	PcP	18 26 46.9	+0.4
	1.4nm,0.7s,baz=77,slow=3.3,SNR=9.3						
THZ	Tophouse	31.21	169	eP	P	18 23 57.8	+5.0
	35nm,1.3s						
AS01	Alice Springs	32.05	243	eP	P	18 24 00.3	-0.2
AS01				ePcP	PcP	18 26 50.6	+0.8
LTZ	Lake Taylor	32.08	170	eP	P	18 24 02.1	+1.6
	23nm,0.7s						
AS31	Alice Springs	32.09	243	eP	P	18 24 00.7	-0.2
	3.3nm,0.8s						
ASAR	Alice Springs	32.09	243	P	P	18 24 00.7	-0.2
	13nm,0.9s,baz=66,slow=9.8,SNR=111						
ASAR				PcP	PcP	18 26 50.4	+0.4
	1.7nm,0.7s,baz=60,slow=3.0,SNR=9.5						
OXZ	Oxford	32.57	170	eP	P	18 24 04.9	+0.2
	14nm,0.7s						
RPZ	Rata Peaks	32.80	172	P	P	18 24 06.8	0.0
	6.2nm,0.8s,baz=250,slow=15,SNR=3.5						
ODZ	Otahua Downs	34.06	173	eP	P	18 24 16.9	-0.7
	40nm,1.3s						
MJAR	Matsushiro Arr	53.80	333	P	P	18 26 54.6	-1.4
	1.3nm,0.7s,baz=166,slow=9.7,SNR=6.1						
LEM	Lembang	56.80	269	P	P	18 27 18.6	+0.2
	8.9nm,0.5s,baz=119,slow=5.1,SNR=5.0						
ASAJ	Asahikawa	58.72	341	P	P	18 27 30.6	-0.4
	5.1nm,0.8s,baz=192,slow=9.7,SNR=6.3						
NJ2	Nanjing	61.65	316	eP	P	18 27 50.0	-1.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KLR	Kul'dur	66.93	337	P	P	18 28 25.9	+0.3
	comp=Z,0.5nm,0.3s,baz=112,slow=4.0,SNR=3.8						
XAN	Xi'an	69.72	313	P	P	18 28 42.7	-0.8
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMI	Kunming	70.61	302	P	P	18 28 48.9	-0.5
KMI				pmax	pmax		
	comp=Z,4.0nm,1.5s						
HHC	Hu-ho-hao-te	71.51	320	eP	P	18 28 55.1	+0.8
HHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CM01	Chiang Mai Arr	71.51	294	eP	P	18 28 55.7	+1.0
CMAR	Chiang Mai Arr	71.54	294	P	P	18 28 55.5	+0.7
	comp=Z,1.1nm,0.8s,baz=129,slow=4.7,SNR=11						
CD2	Chengdu	72.15	308	eP	P	18 28 59.9	+1.6
LZH	Lanzhou	74.35	313	eP	P	18 29 12.4	+1.0
LZH				pP	sP	18 29 21.8	-0.5
LZH				sP	PcP	18 29 26.2	+0.2
LZH				PP	pwP	18 30 00.2	+34
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				LR	LR		
	comp=N,520nm,15.5s						
LZH				LR	LR		
	comp=E,460nm,15.9s						
LZH				LR	LR		
	comp=Z,550nm,17.8s						
SONM	Songino Array	78.39	324	P	P	18 29 34.1	+0.2
	comp=Z,0.3nm,0.4s,baz=141,slow=5.5,SNR=4.3						
QSPA	South Pole Qui	78.79	180	eP	P	18 29 37.2	+1.3
BILL	Bilibino	79.05	0	eP	P	18 29 36.7	-0.2
	comp=Z,3.0nm,0.8s						
BILL				eS	S	18 39 38.4	+4.8
ILAR	Eielson Array	83.89	19	P	P	18 30 02.3	-0.4
	comp=Z,1.9nm,0.6s,baz=234,slow=5.0,SNR=30						
ILB	Eielson Array	83.89	19	eP	P	18 30 02.7	0.0
IL1	Eielson Array	83.89	19	eP	P	18 30 01.9	-0.7
NVAR	Mina Array Bea	86.67	50	P	P	18 30 16.8	-0.7
	comp=Z,0.5nm,0.7s,baz=251,slow=4.7,SNR=3.1						
WMQ	Urumqi	88.72	315	P	P	18 30 26.4	-0.6
WMQ				pP	pP	18 30 32.6	-2.5
WMQ				sP	sP	18 30 36.8	-1.3
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,390nm,5.9s						
WMQ				LR	LR		
	comp=N,200nm,19.7s						
WMQ				LR	LR		
	comp=E,280nm,19.7s						
WMQ				LR	LR		
	comp=Z,220nm,26.1s						
LPIG	La Paz	89.71	65	PKKP	PKKPdf	18 47 58.4	-3.2
	comp=Z,52nm,0.4s,baz=56,slow=4.5,SNR=4.9						
SYO	Syowa Base	91.42	197	⇓iP	P	18 30 38.0	-1.0
MK01	Makanchi Array	93.15	317	eP	P	18 30 47.3	-0.2
MKAR	Makanchi Array	93.16	317	P	P	18 30 46.6	-0.9
	comp=Z,1.1nm,0.7s,baz=96,slow=6.2,SNR=9.2						
MKAR				PKKP	PKKPdf	18 47 56.6	+0.2
	comp=Z,0.4nm,0.6s,baz=319,slow=1.9,SNR=6.0						
YKA	Yellowknife Ar	95.44	27	P	P	18 30 55.5	-2.0
	comp=Z,0.3nm,0.6s,baz=255,slow=4.7,SNR=7.5						
TXAR	Lajitas Array	96.52	61	P	P	18 31 04.1	+0.7
	comp=Z,0.2nm,0.7s,baz=228,slow=5.9,SNR=3.5						
ARCES	ARCESS Array B	116.32	345	PKP	PKPdf	18 36 15.7	-0.5
	comp=Z,1.6nm,0.8s,baz=92,slow=2.1,SNR=9.1						
FINES	FINESS Array B	121.67	338	PKP	PKPdf	18 36 25.5	-1.1
	comp=Z,1.1nm,0.8s,baz=264,slow=1.9,SNR=3.7						
CPUP	Villa Florida	124.43	133	PKP	PKiKP	18 36 33.8	+0.4
	comp=Z,1.2nm,0.7s,baz=191,slow=3.3,SNR=3.3						
BOSA	Boshof	124.52	224	PKP	PKiKP	18 36 33.8	+0.1
	comp=Z,1.6nm,0.8s,baz=53,slow=2.7,SNR=4.4						
SDV	Santo Domingo	125.20	87	ePKPdf	PKPdf	18 36 35.2	+0.1
AKASG	Malin Array Be	126.62	326	PKP	PKPdf	18 36 35.7	-0.7
	comp=Z,0.2nm,0.3s,baz=72,slow=2.9,SNR=2.3						
KEST	Kesra	147.12	322	PKPbc	PKPbc	18 37 17.1	+0.4
	comp=Z,4.7nm,1.0s,baz=18,slow=3.2,SNR=3.8						
TOA0	Torodi Ar. Sit	163.60	278	ePKPdf	PKPdf	18 37 37.1	0.0
TORD	Torodi Ar. Bea	163.60	278	PKP	PKPdf	18 37 36.1	-1.0
	comp=Z,1.0nm,0.8s,baz=343,slow=4.4,SNR=5.5						

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*NNC **06** 18:24:51.7±11.0, 36°.70N×70°.14E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=101.0km s-min=68.6km az=169.0*

*IDC **06** 18:24:55.6±2.6, 36°.44N×71°.25E, h192^{km}±23^{km}, mb3.3/10, mb1 3.5/17, mb1mx3.2/64, mbtmp3.9/17, Error ellipse: s-maj=20.1km s-min=15.4km az=5.0*

*BJI **06** 18:24:55.5, 36°.49N×71°.11E, h223^{km}, mB4.5/1, mb4.0/10*

*ISCJB **06** 18:24:56.3±0.3, 36°.63N±0°.03×71°.14E±0°.04, h200^{km}, mb3.5/13, Error ellipse: s-maj=5.0km s-min=4.0km az=155.5*

*NEIC **06** 18:24:57.0±0.6, 36°.61N×71°.11E, h214^{km}±9^{km}, mb4.0/4, Error ellipse: s-maj=9.8km s-min=8.3km az=85.0*

ISC 06 18:24:56.9±0.6, 36°.67N±0°.06×71°.18E±0°.05, h200^{km}, n67, σ1^s.80/75, mb3.8/13, 3C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.42	344	ePn	Pn	18 25 42.5	+2.5
GAR				eSn	Sn	18 26 13.3	-0.5
CHGR	Chuyangaron	2.55	322	ePn	Pn	18 25 43.6	+2.2
CHGR				eSn	Sn	18 26 15.4	-0.8
KBL	Kabul	2.75	220	ePn	Pn	18 25 43.9	+0.1
CEP	Cherat	2.90	168	P	Pn	18 25 47.2	+1.6
BTK	Batken	3.39	355	ePn	Pn	18 25 53.9	+2.7
CHCP	Chirah Chowk	3.46	150	P	Pn	18 25 54.6	+2.5
NIL	Nilore	3.46	150	ePn	Pn	18 25 52.3	+0.2
THW	Thamme Wali	3.90	173	P	Pn	18 25 58.6	+1.2
KSH	Kashi	4.73	52	P	Pn	18 26 04.9	-3.0
KSH				S	Sn	18 26 53.7	-10
KSH				smax	smax		
	comp=N,280nm,0.5s						
KSH				smax	smax		
	comp=E,350nm,0.5s						
AML	Almayashu	5.79	19	P	Pn	18 26 23.4	+1.7
	SNR=29						
NRN	Naryn	6.06	37	ePn	Pn	18 26 25.2	+0.1
UCH	Uchtor	6.12	24	P	Pn	18 26 27.8	+1.8
	SNR=17						
EKS2	Erkin-Say	6.31	18	P	Pn	18 26 30.1	+2.0
	SNR=15						
KK31	Karatay Array	6.45	356	ePn	Pn	18 26 29.5	-0.3
KK31	Karatay Array	6.45	356	Pn	Pn	18 26 31.1	+1.4
	1.4nm,0.3s,baz=176,slow=13,SNR=31						
KK31				⇑Sn	Sn	18 27 39.7	-3.8
	9.7nm,0.3s,baz=182,slow=23,SNR=31						
KKAR	Karatay Array	6.45	356	ePn	Pn	18 26 29.5	-0.3
AAK	Ala-Archa	6.48	22	P	Pn	18 26 32.5	+2.1
	SNR=7.9						
AAK	Ala-Archa	6.48	22	ePn	Pn	18 26 32.3	+1.9
AAK	Ala-Archa	6.48	22	P	Pn	18 26 32.2	+1.7
	1.7nm,0.3s,baz=182,slow=6.3,SNR=26						
AAK				S	Sn	18 27 42.3	-2.3
	1.5nm,0.3s,baz=329,slow=22,SNR=16						
KBK	Karagaybulak	6.65	25	P	Pn	18 26 34.5	+1.9
	SNR=16						
ULHL	Ulahol	6.81	34	P	Pn	18 26 36.0	+1.3
	SNR=7.1						
CHMS	Chumysh	6.89	22	P	Pn	18 26 37.8	+2.2
	SNR=8.3						
USP	Ospenovka	7.06	20	P	Pn	18 26 39.5	+1.7
	SNR=11						
TKM2	Tokmak 2	7.11	27	P	Pn	18 26 40.2	+1.6
	SNR=26						
MDOK	Medeo	7.90	33	Pn	Pn	18 26 50.1	+1.3
	5.0nm,0.6s						
GEYT	Alibeck	10.48	281	P	Pn	18 27 22.6	+0.3
	0.9nm,0.3s,baz=105,slow=11,SNR=9.0						
GEYT				S	Sn	18 29 15.8	-3.5
	0.5nm,0.3s,baz=93,slow=21,SNR=3.5						
GYA0B	ALIBECK ARRAY	10.48	281	ePn	Pn	18 27 20.9	-1.4
MAKZ	Makanchi	12.93	35	ePn	Pn	18 27 53.7	+0.3
MK01	Makanchi Array	13.06	36	ePn	Pn	18 27 55.8	+0.9
MK31	Makanchi Array	13.07	36	ePn	Pn	18 27 55.8	+0.7
MKAR	Makanchi Array	13.07	36	ePn	Pn	18 27 55.8	+0.7
MKAR	Makanchi Array	13.07	36	P	Pn	18 27 56.2	+1.1
	0.3nm,0.3s,baz=212,slow=12,SNR=25						
MKAR				S	S	18 30 17.9	-2.8
	baz=218,slow=16,SNR=2.1						
PYUN	Piuthan	13.13	127	eP	Pn	18 27 54.3	-1.9
	27nm,0.7s						
DANN	Dangsing	13.46	124	eP	Pn	18 28 00.3	-0.2
	11nm,0.4s						
WMQ	Urumqi	14.48	55	eP	P	18 28 15.3	+1.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
KURBB	Kurchatov Arra	14.91	18	P	Pn	18 28 17.6	-0.2
	0.3nm,0.3s,baz=208,slow=12,SNR=4.5						
AB31	Akbulak array	15.01	330	⇑P	P	18 28 22.5	+2.9
	1.7nm,0.6s,baz=144,slow=11,SNR=24						
ABKAR	Akbulak array	15.01	330	ePn	Pn	18 28 18.5	-0.4
KURK	Kurchatov	15.02	19	ePn	Pn	18 28 16.6	-2.5
	8.8nm,1.5s						
PKIN	Phulchoki	15.06	123	eP	Pn	18 28 20.0	-0.1
	13nm,0.5s						
PKI	Pulchoki	15.07	123	eP	Pn	18 28 20.0	-0.4
	10nm,0.4s						
GUN	Gumba	15.18	121	eP	Pn	18 28 21.6	0.0
	15nm,0.5s						
JIRN	Jiri	15.55	121	eP	Pn	18 28 26.2	0.0
	39nm,0.5s						
RAMN	Ramite	16.28	122	eP	P	18 28 34.7	+0.5
BVA0	Borovoye Array	16.36	358	P	Pn	18 28 36.4	+1.1
	0.9nm,0.5s,baz=160,slow=11,SNR=25						
BVAR	Borovoye Array	16.36	358	P	Pn	18 28 36.0	+0.7
	0.9nm,0.3s,baz=154,slow=11,SNR=23						
BVAR				S	S	18 31 34.4	-1.1
	0.1nm,0.3s,baz=163,slow=22,SNR=4.3						
BRVK	Borovoye	16.40	358	eP	Pn	18 28 36.5	+0.8
	3.2nm,0.4s						
AKTO	Aktyubinsk	16.70	330	⇑P	Pn	18 28 40.8	+1.4
	0.8nm,0.4s						
AKTO	Aktyubinsk	16.70	330	P	Pn	18 28 40.1	+0.7
	0.3nm,0.3s,baz=162,slow=9.0,SNR=5.6						
LSA	Lhasa	18.09	107	eP	P	18 28 54.2	0.0
	3.2nm,0.7s						
ZAA0	Zalesovo Array	19.70	24	eP	P	18 29 11.0	+0.3
	4.4nm,0.8s						
ZALV	Zalesovo Beam	19.70	24	eP	P	18 29 11.0	+0.3
ZALV	Zalesovo Beam	19.70	24	P	P	18 29 11.8	+1.0
	1.6nm,0.3s,baz=221,slow=11,SNR=27						
GTA	Gaotai	22.68	74	eP	P	18 29 36.9	-4.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
LZH	Lanzhou	26.24	81	eP	P	18 30 16.8	+3.2
LZH				pP	pP	18 30 57.5	+2.3
LZH				PP	PnPn	18 31 10.7	+5.0
LZH				sP	sP	18 31 22.0	+3.1
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
SONM	Songino Array	28.12	56	P	P	18 30 30.6	+0.4
	0.3nm,0.3s,baz=257,slow=9.1,SNR=5.7						
HHC	Hu-ho-hao-te	31.57	70	eP	P	18 30 57.1	-3.5
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FINES	FINESS Array B	37.42	326	P	P	18 31 51.5	+1.1
	1.8nm,0.8s,baz=116,slow=4.4,SNR=5.4						
ARCES	ARCESS Array B	41.04	337	P	P	18 32 21.3	+1.1
	3.6nm,0.8s,baz=118,slow=8.7,SNR=13						
NB2	NORSAR Subarra	44.33	323	P	P	18 32 47.8	+1.0
	comp=Z,0.7nm,0.5s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.33	323	P	P	18 32 48.1	+1.3
	comp=Z,0.8nm,0.5s,baz=96,slow=7.7,SNR=5.2						
TORD	Torodi Ar. Bea	65.86	269	P	P	18 35 21.2	-0.1
	comp=Z,0.1nm,0.3s,baz=42,slow=5.5,SNR=3.1						
INK	Inuvik	73.71	9	P	P	18 36 09.8	+1.5
	comp=Z,1.6nm,0.5s,baz=332,slow=5.0,SNR=6.8						
ILAR	Eielson Array	74.58	16	P	P	18 36 13.4	0.0
	comp=Z,0.2nm,0.6s,baz=316,slow=5.0,SNR=4.4						
YKA	Yellowknife Ar	81.07	3	P	P	18 36 50.2	+1.1
	comp=Z,1.1nm,0.5s,baz=351,slow=5.4,SNR=19						
WRA	Warramunga Arr	81.96	122	P	P	18 36 53.1	-1.4
	comp=Z,0.4nm,0.7s,baz=326,slow=5.2,SNR=3.9						
ASAR	Alice Springs	84.23	125	P	P	18 37 04.8	-1.2
	comp=Z,0.4nm,0.9s,baz=308,slow=7.0,SNR=2.5						

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*ISCJB **06** 18:25:49.8±0.6, 11°.40S±0°.07×165°.81E±0°.07, h10^{km}, mb4.0/14, Error ellipse: s-maj=10.8km s-min=9.1km az=144.5*

*IDC **06** 18:25:50.0±1.0, 11°.23S×165°.84E, h0^{km}, mb3.9/10, mb1 4.1/12, mb1mx3.9/49, mbtmp3.9/12, ML4.4/2, Error ellipse: s-maj=30.6km s-min=21.1km az=135.0*

*NEIC **06** 18:25:52.9±3.2, 11°.31S×165°.89E, h21^{km}±22^{km}, mb4.4/3, Error ellipse: s-maj=11.4km s-min=10.4km az=51.0*

ISC 06 18:25:51.1±0.7, 11°.30S±0°.08×165°.86E±0°.10, h10^{km}, n26, σ1^s.30/28, mb3.9/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.10	287	Pn	Pn	18 27 22.0	+0.6
	6.8nm,0.3s,baz=43,slow=13,SNR=4.0						
HNR				Sn	Sn	18 28 31.5	+0.2
	6.6nm,0.3s,baz=233,slow=20,SNR=2.6						
DZM	Mont Dzumac	10.73	177	ePn	Pn	18 28 25.6	+0.6
DZM				Sn	Sn	18 30 23.1	-2.2
DZM	Mont Dzumac	10.73	177	Pn	Pn	18 28 27.7	+2.7
	3.5nm,0.3s,baz=345,slow=12,SNR=17						
DZM				Sn	Sn	18 30 23.1	-2.2
	0.4nm,0.3s,baz=270,slow=20,SNR=2.5						
RABL	Rabaul	15.29	296	ePn	Pn	18 29 23.3	-3.9
	64nm,0.6s						
STKA	Stephens Creek	30.34	224	P	P	18 32 03.9	+0.9
	1.2nm,0.5s,baz=60,slow=11,SNR=3.1						
WRAB	Tennant Creek	31.49	250	eP	P	18 32 14.1	+0.7
	0.9nm,0.7s						
WR1	Warramunga Arr	31.50	250	eP	P	18 32 13.6	+0.1
	4.9nm,0.9s						
WRA	Warramunga Arr	31.50	250	P	P	18 32 13.6	+0.1
	2.1nm,0.7s,baz=81,slow=8.9,SNR=11						
ASAR	Alice Springs	32.78	244	P	P	18 32 24.4	-0.3
	0.4nm,0.6s,baz=66,slow=10,SNR=6.2						
FITZ	Fitzroy Crossi	39.42	255	P	P	18 33 21.8	+0.2
	1.1nm,0.7s,baz=72,slow=4.1,SNR=3.6						
TBI	Tubuai	44.14	112	eLR	LR	18 33 02.7	
	comp=Z,741nm,29.0s						
CMAR	Chiang Mai Arr	72.31	294	P	P	18 37 18.4	+0.8
	0.5nm,0.7s,baz=129,slow=4.6,SNR=4.8						
SONA0	Songino Array	78.93	324	eP	P	18 37 55.2	+0.2
SONM	Songino Array	78.93	324	P	P	18 37 55.2	+0.2
	0.2nm,0.6s,baz=134,slow=6.4,SNR=4.1						
HDA	Harding Lake	83.44	19	eP	P	18 38 19.5	+1.0
	7.1nm,0.6s						
ILAR	Eielson Array	83.71	18	P	P	18 38 20.3	+0.4
	0.5nm,0.6s,baz=242,slow=5.0,SNR=9.0						
DLMT	Dillon	92.08	44	eP	P	18 38 59.5	-1.4
	8.1nm,0.8s						
MK32	Makanchi Array	93.78	317	eP	P	18 39 09.6	+1.1
MKAR	Makanchi Array	93.78	317	P	P	18 39 09.6	+1.1
	0.6nm,0.7s,baz=98,slow=6.0,SNR=3.7						
ZALV	Zalesovo Beam	93.82	324	P	P	18 39 08.9	+0.4
	0.4nm,0.7s,baz=123,slow=5.3,SNR=2.3						
ZAA1	Zalesovo Array	93.82	324	eP	P	18 39 08.9	+0.4
YKA	Yellowknife Ar	95.14	27	P	P	18 39 13.8	-0.5
	0.1nm,0.5s,baz=112,slow=1.1,SNR=4.0						
ARA0	ARCESS Array S	116.60	345	ePKPdf	PKiKP	18 44 34.6	-0.3
ARCES	ARCESS Array B	116.60	345	PKP	PKiKP	18 44 34.6	-0.3
	1.9nm,0.9s,baz=81,slow=2.8,SNR=6.7						
TORD	Torodi Ar. Bea	164.41	278	PKP	PKPdf	18 45 55.7	-0.4
	0.6nm,1.0s,baz=228,slow=1.7,SNR=2.4						
TOA1	Torodi Ar. Sit	164.41	278	ePKPdf	PKPdf	18 45 55.7	-0.4

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*ISCJB **06** 18:27:59.5±0.5, 42°.27N±0°.02×76°.11E±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=3.4km az=21.9*

*SOME **06** 18:27:59.8, 42°.28N×76°.13E, h10^{km}*

*KRNET **06** 18:27:59.4±0.1, 42°.26N×76°.12E, h18^{km}, mb2.4*

*NNC **06** 18:28:00.6±0.9, 42°.35N×76°.14E, h0^{km}, mb2.3, mpv2.6, Error ellipse: s-maj=6.2km s-min=4.8km az=101.0*

ISC 06 18:27:59.5±0.9, 42°.27N±0°.02×76°.13E±0°.02, h13^{km}±6^{km}, n31, σ0^s.51/57, 12C-11D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	0.08	104	⇑iP	Pg	18 28 02.4	-0.1
	baz=97						
ULHL				⇑iS	Sg	18 28 04.5	-0.2
	baz=97						
BOOM	Boomskoye usch	0.27	328	⇓iP	Pg	18 28 05.1	0.0
	baz=31						
BOOM				⇓iS	Sg	18 28 09.1	+0.1
	baz=31						
KZA	Kyzart	0.68	254	P	Pg	18 28 12.6	-0.3
	SNR=11						
KZA	Kyzart	0.68	254	⇑iP	Pg	18 28 12.4	-0.4
	baz=55						
KZA				⇑iS	Sg	18 28 21.9	0.0
	baz=55						
TKM2	Tokmak 2	0.76	329	⇑iP	Pg	18 28 14.1	-0.2
	baz=30						
TKM2				⇑iS	Sg	18 28 24.6	+0.2
	baz=30						
KST	Kastek	0.79	351	eP	Pg	18 28 14.7	0.0
	3.8nm,0.2s						
KST				eS	Sg	18 28 25.5	+0.4
	5.3nm,0.3s						
KDJ	Kajisay	0.79	100	⇓iP	Pg	18 28 14.8	0.0
	baz=99						
KDJ				⇓iS	Sb	18 28 26.0	+0.1
	baz=99						
NRN	Naryn	0.84	187	⇑iP	Pg	18 28 15.3	-0.5
	baz=88						
NRN				⇑iS	Sg	18 28 26.7	-0.1
	baz=88						
IZV	Izvestkoviy	0.85	25	P	Pg	18 28 15.6	-0.4
	3.2nm,0.2s						
IZV				S	Sg	18 28 26.7	-0.3
	8.2nm,0.2s						
IZV	Izvestkoviy	0.85	25	eP	Pg	18 28 15.6	-0.4
	3.2nm,0.2s						
IZV				eS	Sg	18 28 26.8	-0.3
	8.2nm,0.2s						
MTBS	Maitube	0.89	14	P	Pg	18 28 16.4	-0.3
	3.3nm,0.1s						
MTBS				S	Sg	18 28 28.1	-0.3
	6.1nm,0.2s						
MTBS	Maitube	0.89	14	eP	Pg	18 28 16.4	-0.3
	3.3nm,0.1s						
MTBS				eS	Sg	18 28 28.1	-0.3
	6.1nm,0.2s						
KBK	Karagaybulak	0.96	294	⇑iP	Pg	18 28 17.5	-0.5
	baz=95						
KBK				⇑iS	Sg	18 28 30.5	-0.1
	baz=95						
TNSS	Tian-Shan	0.98	38	P	Pg	18 28 18.0	-0.4
	2.2nm,0.4s						
TNSS				S	Sg	18 28 31.2	0.0
	7.6nm,0.2s						
TNSS	Tian-Shan	0.98	38	eP	Pg	18 28 18.1	-0.4
	1.6nm,0.1s						
TNSS				eS	Sg	18 28 31.3	0.0
	7.6nm,0.2s						
DGS	Degeres	1.01	345	eP	Pg	18 28 18.7	-0.3
	3.8nm,0.4s						
DGS				eS	Sg	18 28 31.8	-0.4

	5.9nm,0.3s						
MDOK	**Medeo**	**1.12**	**37**	⇑P	**Pb**	**18 28 20.5**	**-0.5**
	1.0nm,0.6s						
MDOK				⇓S	**Sb**	**18 28 35.5**	**+0.1**
	1.8nm,0.3s						
MDOK	**Medeo**	**1.12**	**37**	Pg	**Pb**	**18 28 20.4**	**-0.5**
	3.1nm,0.6s						
MDOK				Lg	Lg	18 28 35.1	
	7.0nm,0.4s						
MDOK	**Medeo**	**1.12**	**37**	*e*P	**Pb**	**18 28 20.4**	**-0.5**
	3.1nm,0.6s						
MDOK				*e*S	**Sb**	**18 28 35.1**	**-0.3**
	7.0nm,0.4s						
MDOK	**Medeo**	**1.12**	**37**	⇓Sn	**Sb**	**18 28 35.5**	**+0.1**
	1.8nm,0.3s						
KNDC	**Almaty**	**1.13**	**33**	⇑P	**Pb**	**18 28 21.1**	**+0.2**
	12nm,0.7s						
KNDC				⇓S	**Sg**	**18 28 36.4**	**+0.4**
	14nm,0.3s						
KOTS	**Kotyrbulak**	**1.21**	**36**	P	**Pn**	**18 28 22.1**	**-0.2**
	3.9nm,0.4s						
KOTS				S	**Sb**	**18 28 37.8**	**-0.1**
	13nm,0.4s						
KOTS	**Kotyrbulak**	**1.21**	**36**	*e*P	**Pn**	**18 28 22.1**	**-0.2**
	3.9nm,0.4s						
KOTS				*e*S	**Sb**	**18 28 37.8**	**-0.1**
	13nm,0.4s						
TARG	**Taragay, Kyrgy**	**1.36**	**113**	⇓*i*P	**Pn**	**18 28 24.6**	**+0.1**
	baz=12						
TARG				⇓*i*S	**Sn**	**18 28 42.8**	**+0.2**
	baz=12						
USP	**Ospenovka**	**1.56**	**310**	⇓*i*P	**Pb**	**18 28 28.0**	**-0.3**
	baz=11						
USP				⇓*i*S	**Sb**	**18 28 48.8**	**+0.8**
	baz=11						
SATY	**Saty**	**1.85**	**64**	P	**Pb**	**18 28 34.2**	**+0.9**
	1.5nm,0.1s						
SATY				S	**Sg**	**18 28 58.7**	**-0.5**
	9.7nm,0.2s						
SATY	**Saty**	**1.85**	**64**	*e*P	**Pb**	**18 28 34.2**	**+0.9**
	1.5nm,0.1s						
SATY				*e*S	**Sg**	**18 28 58.7**	**-0.5**
	9.7nm,0.2s						
UZB	**Uzynbulak**	**2.31**	**67**	Pg	**Pb**	**18 28 41.8**	**+0.7**
	0.7nm,0.2s						
UZB				Lg	Lg	18 29 11.8	
	2.6nm,0.4s						
UZB	**Uzynbulak**	**2.31**	**67**	*e*P	**Pb**	**18 28 41.8**	**+0.7**
	0.7nm,0.2s						
UZB				*e*S	**Sg**	**18 29 11.8**	**-1.8**
	2.6nm,0.4s						
ARXS	**Arharly**	**2.31**	**32**	Pg	**Pb**	**18 28 41.5**	**+0.5**
	0.9nm,0.4s						
ARXS				Lg	Lg	18 29 11.2	
	8.3nm,0.5s						
ARXS	**Arharly**	**2.31**	**32**	*e*P	**Pb**	**18 28 41.5**	**+0.5**
	0.9nm,0.4s						
ARXS				*e*S	**Sb**	**18 29 11.2**	**+1.8**
	8.3nm,0.5s						

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*IDC **06** 18:28:08.1±1.2,11.°95S×165.°43E,h0^{km},mb4.1/11, mb1 4.3/11,mb1mx4.0/45,mbtmp4.0/11,MS4.3/2, Ms1 4.3/2,ms1mx3.4/33,Error ellipse: s-maj=51.3km s-min=19.4km az=145.0*

*NEIC **06** 18:28:09.1±0.7,11.°98S×165.°42E,h10^{km},mb4.6/10,Error ellipse: s-maj=28.9km s-min=10.7km az=146.0*

*ISCJB **06** 18:28:11.3±0.8,12.°0S±0.°2×165.°3E±0.°1,h33^{km},mb4.2/17, MS4.2/2,Error ellipse: s-maj=31.4km s-min=11.6km az=144.9*

ISC 06 18:28:13.1±1.1,11.°9S±0.°3×165.°4E±0.°2,h35^{km},n37, σ1.^{s}10/28,mb4.2/17,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**29.57**	**224**	P	**P**	**18 34 15.9**	**+1.1**
	0.8nm,0.3s,baz=54,slow=11,SNR=3.0						
H11S2	**WAKE ISLAND Hy**	**30.27**	**2**	T	T	19 05 17.8	
	baz=184,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**30.27**	**2**	T	T	19 05 29.7	
	baz=184,slow=76,SNR=42						
H11S1	**WAKE ISLAND Hy**	**30.28**	**2**	T	T	19 05 23.7	
	baz=184,slow=76,SNR=53						
WR1	**Warramunga Arr**	**30.87**	**251**	*e*P	**P**	**18 34 25.2**	**-1.2**
	4.8nm,1.0s						
WRA	**Warramunga Arr**	**30.87**	**251**	P	**P**	**18 34 25.2**	**-1.2**
	2.2nm,0.7s,baz=82,slow=9.0,SNR=8.1						
H11N1	**WAKE ISLAND Hy**	**31.49**	**3**	T	T	19 06 49.5	
	baz=182,slow=76,SNR=72						
H11N3	**WAKE ISLAND Hy**	**31.49**	**3**	T	T	19 06 49.8	
	baz=182,slow=76,SNR=70						
H11N2	**WAKE ISLAND Hy**	**31.51**	**3**	T	T	19 06 50.7	
	baz=182,slow=76,SNR=46						
ASAR	**Alice Springs**	**32.10**	**244**	P	**P**	**18 34 37.6**	**+0.4**
	1.5nm,0.8s,baz=74,slow=9.9,SNR=6.2						
FITZ	**Fitzroy Crossi**	**38.84**	**256**	*e*P	**P**	**18 35 32.7**	**-2.4**
	12nm,1.4s						
FITZ	**Fitzroy Crossi**	**38.84**	**256**	P	**P**	**18 35 35.4**	**+0.3**
	1.9nm,0.8s,baz=90,slow=7.6,SNR=6.2						
BATI	**Baumata**	**40.98**	**268**	LR	LR	18 54 37.3	
	comp=Z,250nm,18.4s,baz=130,slow=39						
PPT2	**Papeete2**	**43.81**	**103**	*e*LR	LR	18 35 34.4	
	comp=Z,817nm,28.5s						
NWAO	**Narrogin (SRO)**	**48.69**	**237**	LR	LR	18 58 33.9	
	comp=Z,356nm,18.4s,baz=299,slow=38						
CM01	**Chiang Mai Arr**	**72.14**	**294**	*e*P	**P**	**18 39 33.9**	**-0.7**
CM31	**Chiang Mai Arr**	**72.17**	**294**	*e*P	**P**	**18 39 33.2**	**-1.6**
	2.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**72.17**	**294**	P	**P**	**18 39 36.1**	**+1.3**
	1.2nm,0.8s,baz=125,slow=4.5,SNR=9.0						
SONA0	**Songino Array**	**79.19**	**324**	*e*P	**P**	**18 40 15.4**	**+0.9**
SONM	**Songino Array**	**79.19**	**324**	P	**P**	**18 40 15.4**	**+0.9**
	0.7nm,0.8s,baz=134,slow=4.6,SNR=5.4						
BILL	**Bilibino**	**79.77**	**0**	*e*P	**P**	**18 40 17.2**	**+0.1**
	7.2nm,1.2s						
CAST	**Castle Rocks**	**81.90**	**18**	*e*P	**P**	**18 40 29.9**	**+1.3**
	5.7nm,0.8s						
RIDG	**Independ'e Rid**	**84.42**	**20**	*e*P	**P**	**18 40 42.1**	**+0.4**
	11nm,1.2s						
IL1	**Eielson Array**	**84.46**	**19**	*e*P	**P**	**18 40 41.7**	**-0.1**
ILAR	**Eielson Array**	**84.46**	**19**	P	**P**	**18 40 42.4**	**+0.6**
	2.6nm,0.7s,baz=248,slow=5.2,SNR=22						
ILB	**Eielson Array**	**84.46**	**19**	*e*P	**P**	**18 40 42.1**	**+0.3**
	2.9nm,1.1s						
SCRK	**Sand Creek**	**84.87**	**20**	*e*P	**P**	**18 40 44.0**	**0.0**
	9.2nm,1.0s						
NV01	**Mina Array Sit**	**86.85**	**50**	*e*P	**P**	**18 40 54.4**	**-0.2**
NVAR	**Mina Array Bea**	**86.85**	**50**	P	**P**	**18 40 55.1**	**+0.5**
	0.5nm,0.6s,baz=230,slow=5.6,SNR=3.1						
MK01	**Makanchi Array**	**93.93**	**317**	*e*P	**P**	**18 41 28.3**	**+1.0**
MK32	**Makanchi Array**	**93.94**	**317**	*e*P	**P**	**18 41 28.0**	**+0.6**
MKAR	**Makanchi Array**	**93.94**	**317**	*e*P	**P**	**18 41 27.2**	**-0.2**
	7.6nm,0.8s						
MKAR	**Makanchi Array**	**93.94**	**317**	P	**P**	**18 41 28.0**	**+0.7**
	1.3nm,0.8s,baz=96,slow=6.3,SNR=8.8						
PD31	**Pinedale Array**	**94.40**	**47**	*e*P	**P**	**18 41 27.5**	**-2.3**
	6.6nm,1.9s						
PDAR	**Pinedale Array**	**94.40**	**47**	P	**P**	**18 41 30.6**	**+0.8**
	0.3nm,0.7s,baz=299,slow=0.9,SNR=2.7						
YKA	**Yellowknife Ar**	**95.92**	**27**	P	**P**	**18 41 35.2**	**-0.7**
	0.4nm,0.8s,baz=257,slow=4.4,SNR=5.6						
YKB5	**Yellowknife Ar**	**95.92**	**27**	*e*P	**P**	**18 41 34.4**	**-1.5**

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*IDC **06** 18:28:48.3±0.6,10.°79S×165.°36E,h0^{km},mb4.3/23, mb1 4.4/24,mb1mx4.3/46,mbtmp4.3/24,ML5.2/1,MS4.2/5, Ms1 4.2/5,ms1mx3.7/32,Error ellipse: s-maj=20.3km s-min=14.5km az=141.0*

*NEIC **06** 18:28:50.1±0.2,10.°72S×165.°32E,h10^{km},mb4.9/26,Error ellipse: s-maj=7.4km s-min=5.8km az=159.0*

*ISCJB **06** 18:28:51.6±0.2,10.°76S±0.°05×165.°26E±0.°04,h30^{km}, mb4.5/47,MS4.1/4,Error ellipse: s-maj=6.6km s-min=6.3km az=151.3*

ISC 06 18:28:53.1±0.4,10.°71S±0.°06×165.°37E±0.°06,h30^{km},n89, σ1.^{s}15/92,mb4.6/47,MS4.1/4,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.49**	**283**	*e*P	**Pn**	**18 30 14.0**	**+1.2**
HNR				*e*S	**Sn**	**18 31 17.0**	**+2.0**
HNR	**Honiara**	**5.49**	**283**	*e*Pn	**Pn**	**18 30 13.1**	**+0.3**
HNR				*e*Sn	**Sn**	**18 31 17.1**	**+2.2**
HNR	**Honiara**	**5.49**	**283**	Pn	**Pn**	**18 30 13.7**	**+0.9**
	78nm,0.3s,baz=37,slow=1.0,SNR=23						
HNR				Sn	**Sn**	**18 31 17.1**	**+2.2**
	155nm,0.3s,baz=130,slow=9.6,SNR=8.5						
DZM	**Mont Dzumac**	**11.34**	**175**	*e*Pn	**Pn**	**18 31 35.9**	**+2.7**
	103nm,1.2s						
DZM				*e*LR	LR	18 34 06.5	
	comp=Z,1µm,22.1s						
DZM	**Mont Dzumac**	**11.34**	**175**	*e*Pn	**Pn**	**18 31 35.9**	**+2.7**
DZM				Sn	**Sn**	**18 33 37.2**	**-1.8**
DZM	**Mont Dzumac**	**11.34**	**175**	Pn	**Pn**	**18 31 35.0**	**+1.8**
	2.4nm,0.3s,baz=302,slow=15,SNR=16						
DZM				Sn	**Sn**	**18 33 37.2**	**-1.8**
	0.2nm,0.3s,baz=143,slow=20,SNR=1.7						
DZM				LR	LR	18 35 30.9	
	comp=Z,1µm,19.6s,baz=0.5,slow=36						
ONTNC	**Ouen Toro**	**11.57**	**175**	*e*Pn	**Pn**	**18 31 39.5**	**+3.1**
MSVF	**Nonsavu**	**14.13**	**121**	*e*Pn	**Pn**	**18 32 11.7**	**+0.3**
RABL	**Rabaul**	**14.60**	**295**	*e*Pn	**Pn**	**18 32 16.6**	**-1.2**
MANU	**Manus Island**	**19.84**	**295**	*e*P	**Pn**	**18 33 23.0**	**-0.5**
	53nm,0.9s						
EIDS	**Eidsvold**	**19.89**	**221**	*e*P	**Pn**	**18 33 23.6**	**-0.4**
	48nm,1.4s						
CTA	**Charters Tower**	**20.63**	**241**	P	**P**	**18 33 30.4**	**+0.1**
	4.8nm,0.7s,baz=34,slow=14,SNR=2.5						
RAO	**Raoul Island**	**24.17**	**142**	LR	LR	18 42 12.7	
	comp=Z,536nm,18.6s,baz=156,slow=33						
URZ	**Urewera**	**29.38**	**161**	P	**P**	**18 34 53.0**	**-0.6**
	3.1nm,0.6s,baz=270,slow=19,SNR=1.6						
URZ				LR	LR	18 45 47.7	
	comp=Z,568nm,18.9s,baz=342,slow=35						
BKZ	**Black Stump Fm**	**30.02**	**163**	*e*P	**P**	**18 35 01.5**	**+2.2**
	80nm,1.6s						
STKA	**Stephens Creek**	**30.43**	**223**	*e*P	**P**	**18 35 02.7**	**-0.3**
	1.3nm,0.9s						
STKA	**Stephens Creek**	**30.43**	**223**	P	**P**	**18 35 03.5**	**+0.5**
	3.4nm,0.7s,baz=46,slow=12,SNR=6.6						
WR1	**Warramunga Arr**	**31.25**	**249**	*e*P	**P**	**18 35 09.7**	**-0.8**
	11nm,1.2s						
WR1				*e*PcP	**PcP**	**18 38 05.1**	**+0.5**
WRA	**Warramunga Arr**	**31.25**	**249**	P	**P**	**18 35 09.7**	**-0.8**
	1.1nm,0.8s,baz=79,slow=9.4,SNR=4.7						
WRA				PcP	**PcP**	**18 38 05.1**	**+0.5**
	0.6nm,0.8s,baz=93,slow=3.3,SNR=3.2						
WRA				LR	LR	18 48 02.6	
	comp=Z,809nm,18.1s,baz=70,slow=37						
AS31	**Alice Springs**	**32.61**	**243**	*e*P	**P**	**18 35 20.2**	**-2.1**
	1.2nm,0.9s						
ASAR	**Alice Springs**	**32.61**	**243**	P	**P**	**18 35 21.2**	**-1.2**
	1.6nm,0.7s,baz=64,slow=10,SNR=10						
ASAR				PcP	**PcP**	**18 38 07.5**	**-0.9**
	0.5nm,0.7s,baz=59,slow=1.4,SNR=4.3						
BBOO	**Buckleboo**	**34.78**	**226**	*e*P	**P**	**18 35 41.1**	**0.0**
	37nm,1.4s						
FITZ	**Fitzroy Crossi**	**39.11**	**255**	P	**P**	**18 36 16.0**	**-2.0**
	2.9nm,0.9s,baz=219,slow=6.5,SNR=2.5						
BATI	**Baumata**	**40.99**	**267**	P	**P**	**18 36 31.6**	**-2.2**
	10.0nm,0.8s,baz=154,slow=4.0,SNR=4.6						
PPT2	**Papeete2**	**44.14**	**104**	*e*LR	LR	18 49 33.1	
	comp=Z,599nm,22.5s						
TBI	**Tubuai**	**44.80**	**112**	*e*LR	LR	18 49 49.3	
	comp=Z,563nm,27.0s						
MJAR	**Matsushiro Arr**	**53.51**	**333**	P	**P**	**18 38 09.9**	**-1.0**
	1.7nm,0.6s,baz=175,slow=8.5,SNR=4.9						
MJAR				LR	LR	18 58 32.1	
	comp=Z,73nm,21.8s,baz=215,slow=33						
MAJO	**Matsushiro**	**53.51**	**333**	*e*P	**P**	**18 38 09.9**	**-1.0**
TAOE	**Nuku Hiva Isla**	**53.67**	**93**	*e*LR	LR	18 53 58.7	
	comp=Z,236nm,23.5s						
JNU	**Nakatsue**	**54.60**	**324**	P	**P**	**18 38 18.7**	**-0.3**
	5.9nm,0.6s,baz=151,slow=2.7,SNR=6.3						
RKT	**Rikitea**	**58.05**	**111**	*e*LR	LR	18 55 58.5	
	comp=Z,495nm,25.5s						
ASAJ	**Asahikawa**	**58.36**	**341**	P	**P**	**18 38 45.9**	**+0.4**
	2.7nm,0.8s,baz=167,slow=4.7,SNR=7.1						
USRK	**Ussuriysk Ar.**	**62.49**	**334**	P	**P**	**18 39 14.0**	**+0.3**
	1.4nm,0.6s,baz=116,slow=7.4,SNR=4.7						
PETK	**Petropavlovsk-**	**63.91**	**355**	P	**P**	**18 39 24.1**	**+1.2**
	4.5nm,0.8s,baz=176,slow=5.6,SNR=8.1						
PEA1	**Petropavlovsk-**	**63.91**	**355**	*e*P	**P**	**18 39 24.1**	**+1.1**
XAN	**Xi'an**	**69.62**	**312**	*e*P	**P**	**18 39 59.7**	**-0.2**
	7.1nm,1.2s						
CM01	**Chiang Mai Arr**	**71.61**	**294**	*e*P	**P**	**18 40 12.6**	**+0.4**
CM31	**Chiang Mai Arr**	**71.64**	**294**	*e*P	**P**	**18 40 12.1**	**-0.3**
	18nm,1.7s						
CMAR	**Chiang Mai Arr**	**71.64**	**294**	P	**P**	**18 40 13.6**	**+1.2**
	1.6nm,0.7s,baz=125,slow=4.9,SNR=7.9						
CHTO	**Chiang Mai**	**71.75**	**294**	*e*P	**P**	**18 40 12.9**	**-0.2**
	10nm,1.5s						
GAMB	**Gambell**	**76.31**	**10**	*e*P	**P**	**18 40 39.9**	**+1.2**
	34nm,1.6s						
KDAK	**Kodiak Island**	**76.41**	**22**	P	**P**	**18 40 40.3**	**+0.9**
	8.1nm,1.0s,baz=239,slow=5.9,SNR=3.6						
ULN	**Ulaanbaatar**	**77.82**	**324**	*e*P	**P**	**18 40 48.1**	**+0.4**
	5.2nm,0.7s						
SVW2	**Sparrevohn**	**77.92**	**18**	*e*P	**P**	**18 40 48.4**	**+0.6**
	42nm,1.4s						
SONA0	**Songino Array**	**78.18**	**324**	*e*P	**P**	**18 40 50.9**	**+1.1**
SONM	**Songino Array**	**78.18**	**324**	P	**P**	**18 40 50.9**	**+1.1**
	2.3nm,0.6s,baz=142,slow=7.2,SNR=16						
SONA1	**Songino Array**	**78.18**	**324**	*e*P	**P**	**18 40 50.2**	**+0.4**
ANM	**Nome**	**78.25**	**12**	*e*P	**P**	**18 40 51.2**	**+1.6**
	12nm,1.4s						
BILL	**Bilibino**	**78.55**	**0**	*e*P	**P**	**18 40 50.9**	**-0.3**
	25nm,1.5s						
CAST	**Castle Rocks**	**80.75**	**18**	*e*P	**P**	**18 41 03.3**	**0.0**
	13nm,1.3s						
IM3	**Indian Mountai**	**82.21**	**16**	*e*P	**P**	**18 41 11.7**	**+0.8**
MDM	**Murphy Dome**	**83.03**	**18**	*e*P	**P**	**18 41 16.1**	**+0.8**
	14nm,1.4s						
HDA	**Harding Lake**	**83.05**	**19**	*e*P	**P**	**18 41 16.1**	**+0.7**
	7.1nm,0.6s						
ILAR	**Eielson Array**	**83.32**	**19**	P	**P**	**18 41 18.1**	**+1.4**
	2.9nm,0.5s,baz=245,slow=5.0,SNR=27						
ILB	**Eielson Array**	**83.32**	**19**	*e*P	**P**	**18 41 18.0**	**+1.3**
IL1	**Eielson Array**	**83.32**	**19**	*e*P	**P**	**18 41 15.7**	**-1.0**
SCRK	**Sand Creek**	**83.73**	**20**	*e*P	**P**	**18 41 19.9**	**+0.8**
	35nm,1.9s						
CMB	**Columbia Colle**	**84.41**	**50**	*e*P	**P**	**18 41 23.7**	**+0.7**
	7.6nm,1.4s						
WAKR	**Walker**	**85.27**	**50**	*e*P	**P**	**18 41 28.5**	**+1.0**
	8.2nm,1.2s						
NV01	**Mina Array Sit**	**86.10**	**50**	*e*P	**P**	**18 41 31.9**	**+0.3**
NVAR	**Mina Array Bea**	**86.10**	**50**	P	**P**	**18 41 32.2**	**+0.6**
	2.6nm,1.0s,baz=242,slow=7.3,SNR=8.7						
NV11	**Mina Array Sit**	**86.21**	**50**	*e*P	**P**	**18 41 32.9**	**+0.8**
	0.6nm,1.2s						
WVOR	**Wild Horse Val**	**87.03**	**46**	*e*P	**P**	**18 41 36.8**	**+0.8**
	15nm,1.4s						
ELK	**Elko**	**89.01**	**48**	P	**P**	**18 41 45.5**	**0.0**
	0.9nm,0.8s,baz=26,slow=7.7,SNR=3.5						
CCUT	**Cedar City**	**89.63**	**52**	*e*P	**P**	**18 41 49.5**	**+0.9**
	9.4nm,1.5s						
MTPU	**Mount Pierson**	**90.65**	**52**	*e*P	**P**	**18 41 55.2**	**+1.6**
	11nm,1.6s						
MSU	**Marysvale**	**90.76**	**51**	*e*P	**P**	**18 41 54.2**	**+0.3**
HVU	**Hansel Valley**	**91.06**	**48**	*e*P	**P**	**18 41 55.4**	**+0.3**
	10nm,1.5s						
DLMT	**Dillon**	**92.01**	**44**	*e*P	**P**	**18 42 00.1**	**+0.7**
	5.5nm,1.0s						
MK01	**Makanchi Array**	**93.02**	**317**	*e*P	**P**	**18 42 03.2**	**-0.6**
MK32	**Makanchi Array**	**93.03**	**317**	*e*P	**P**	**18 42 03.9**	**0.0**
MKAR	**Makanchi Array**	**93.03**	**317**	*e*P	**P**	**18 42 03.1**	**-0.7**
	16nm,1.2s						
MKAR	**Makanchi Array**	**93.03**	**317**	P	**P**	**18 42 03.9**	**0.0**
	0.9nm,0.7s,baz=92,slow=6.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**93.07**	**324**	*e*P	**P**	**18 42 02.4**	**-1.5**
ZALV	**Zalesovo Beam**	**93.07**	**324**	P	**P**	**18 42 02.8**	**-1.1**
	0.7nm,0.5s,baz=124,slow=4.1,SNR=4.6						
ZAA1	**Zalesovo Array**	**93.07**	**324**	*e*P	**P**	**18 42 02.8**	**-1.1**
MAKZ	**Makanchi**	**93.24**	**317**	*e*P	**P**	**18 42 03.4**	**-1.4**
	3.4nm,1.1s						
PDAR	**Pinedale Array**	**93.60**	**47**	P	**P**	**18 42 07.5**	**+0.6**
	0.5nm,0.9s,baz=268,slow=2.7,SNR=3.4						
YKA	**Yellowknife Ar**	**94.85**	**27**	P	**P**	**18 42 10.9**	**-0.9**
	0.6nm,0.7s,baz=257,slow=4.6,SNR=8.2						
YKB5	**Yellowknife Ar**	**94.85**	**27**	*e*P	**P**	**18 42 11.2**	**-0.6**
LTX	**Lajitas**	**96.00**	**61**	*e*P	**P**	**18 42 17.4**	**-0.6**
TXAR	**Lajitas Array**	**96.00**	**61**	P	**P**	**18 42 17.4**	**-0.6**
	0.3nm,0.7s,baz=215,slow=5.5,SNR=3.0						
ARA0	**ARCESS Array S**	**115.92**	**345**	*e*PKPdf	**PKiKP**	**18 47 31.5**	**-0.9**
ARCES	**ARCESS Array B**	**115.92**	**345**	PKP	**PKiKP**	**18 47 31.5**	**-0.9**
	1.4nm,0.6s,baz=5.7,slow=1.2,SNR=8.6						
FIA0	**FINESS Array S**	**121.33**	**338**	*e*PKPdf	**PKPdf**	**18 47 41.8**	**-1.1**
FINES	**FINESS Array B**	**121.33**	**338**	PKP	**PKPdf**	**18 47 41.8**	**-1.1**
	1.1nm,0.7s,baz=305,slow=4.0,SNR=3.5						
BR101	**Keskin Array S**	**128.47**	**313**	*e*PKPdf	**PKPdf**	**18 47 57.2**	**-0.3**
BRTR	**Keskin Array B**	**128.47**	**313**	PKP	**PKPdf**	**18 47 57.2**	**-0.3**
	0.3nm,0.6s,baz=82,slow=4.5,SNR=3.1						
KEST	**Kesra**	**146.93**	**323**	PKPbc	**PKPbc**	**18 48 32.7**	**-0.5**
	3.7nm,0.6s,baz=250,slow=1.9,SNR=7.0						

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*IDC **06** 18:35:31.0±2.2,41.°45N×110.°44W,h0^{km},mb2.4/1, mb1 3.1/2,mb1mx3.0/41,mbtmp2.7/2,ML2.4/1,Error ellipse: s-maj=35.2km s-min=6.5km az=139.0*

*ISCJB **06** 18:35:33.7±0.2,41.°77N±0.°02×110.°78W±0.°04,h0^{km},Error ellipse: s-maj=4.5km s-min=2.9km az=176.3*

*NEIC **06** 18:35:34.2±0.2,41.°80N×110.°78W,h0^{km},ML2.5,Error ellipse: s-maj=3.8km s-min=2.5km az=91.0,Suspected Mining explosion.*

NEIC 21 km [13 miles] W of Kemmerer.

ISC 06 18:35:31.8±0.9,41.°67N±0.°02×110.°51W±0.°03,h0^{km},n70, σ1.^{s}62/71,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWUT	**Hardware Ranch**	**0.79**	**266**	*e*Pg	**Pg**	**18 35 46.7**	**-0.2**
TCUT	**Toone Canyon**	**0.87**	**231**	*e*Pg	**Pb**	**18 35 49.1**	**-0.8**
AHID	**Auburn Hatcher**	**1.18**	**339**	*e*Pg	**Pg**	**18 35 54.0**	**-0.4**
JLU	**Jordanelle**	**1.28**	**214**	*e*Pg	**Pn**	**18 35 57.1**	**0.0**
BW06	**Boulder Array**	**1.31**	**33**	*e*Pg	**Pn**	**18 35 58.2**	**+0.7**
PD31	**Pinedale Array**	**1.31**	**33**	*e*Pg	**Pn**	**18 35 58.2**	**+0.7**
PDAR	**Pinedale Array**	**1.31**	**33**	*e*Pg	**Pn**	**18 35 57.9**	**+0.4**
PDAR				Lg	Lg	18 36 18.2	
PDAR	**Pinedale Array**	**1.31**	**33**	Pg	**Pn**	**18 35 58.5**	**+1.0**
	2.1nm,0.3s,baz=216,slow=17,SNR=90						
PDAR				Lg	Lg	18 36 18.2	
	2.0nm,0.3s,baz=211,slow=39,SNR=14						
CTU	**Camp Tracy**	**1.35**	**224**	*e*Pg	**Pn**	**18 35 58.7**	**+0.7**
SPUT	**South Promonto**	**1.50**	**257**	*e*Pn	**Pb**	**18 36 00.5**	**-0.1**
HVU	**Hansel Valley**	**1.70**	**275**	*e*Pn	**Pn**	**18 36 02.8**	**0.0**
REDW	**Red Top Meadow**	**1.71**	**352**	*e*Pn	**Pb**	**18 36 03.9**	**-0.4**
SNOW	**Snow King Moun**	**1.80**	**354**	*e*Pn	**Pb**	**18 36 06.1**	**+0.3**
TPAW	**Teton Pass**	**1.85**	**350**	*e*Pn	**Pn**	**18 36 05.4**	**+0.4**
LOHW	**Long Hollow**	**1.94**	**358**	*e*Pn	**Pn**	**18 36 07.3**	**+1.0**
FXWY	**Fox Creek**	**2.00**	**349**	*e*Pn	**Pn**	**18 36 07.7**	**+0.6**
BGU	**Big Grassy Mou**	**2.04**	**249**	*e*Pn	**Pn**	**18 36 07.7**	**+0.3**
P18A	**Preston Nutter**	**2.05**	**174**	*e*Pn	**Pg**	**18 36 12.6**	**+1.6**
NLU	**North Lily Min**	**2.08**	**215**	*e*Pn	**Pb**	**18 36 09.6**	**-0.9**
MOOW	**Moose Ponds**	**2.09**	**355**	*e*Pn	**Pn**	**18 36 09.0**	**+0.7**
P17A	**Butcher Ranch,**	**2.20**	**185**	*e*Pn	**Pg**	**18 36 13.4**	**-0.5**
IMW	**Indian Meadow**	**2.25**	**352**	*e*Pn	**Pn**	**18 36 11.6**	**+1.0**
DUG	**Dugway, Tooele**	**2.28**	**231**	*e*Pn	**Pb**	**18 36 12.3**	**-1.6**
O20A	**White River Ci**	**2.30**	**131**	*e*Pn	**Pg**	**18 36 16.6**	**+0.7**
FLWY	**Flagg Ranch**	**2.42**	**357**	*e*Pn	**Pn**	**18 36 14.7**	**+1.9**
TMUT	**Trail Mountain**	**2.43**	**193**	*e*Pn	**Pg**	**18 36 17.0**	**-1.3**
RWWY	**Rawlins**	**2.48**	**88**	*e*Pn	**Pg**	**18 36 19.4**	**+0.2**
SRU	**San Rafael Swe**	**2.55**	**180**	*e*Pn	**Pg**	**18 36 19.8**	**-1.0**
YPP	**Pitchstone Pla**	**2.61**	**355**	*e*Pn	**Pn**	**18 36 16.6**	**+1.1**
H17A	**Grant Village**	**2.73**	**359**	*e*Pn	**Pb**	**18 36 21.5**	**-0.1**
YFT	**Old Faithful**	**2.79**	**355**	*e*Pn	**Pn**	**18 36 18.8**	**+0.8**
Q16A	**Castle Valley**	**2.79**	**191**	*e*Pn	**Pb**	**18 36 22.7**	**+0.1**
LKWY	**Lake**	**2.90**	**2**	*e*Pn	**Pn**	**18 36 17.8**	**-1.6**
YMR	**Madison River**	**3.02**	**354**	*e*Pn	**Pn**	**18 36 21.3**	**+0.3**
YHB	**Horse Butte**	**3.12**	**351**	*e*Pn	**Pn**	**18 36 21.9**	**-0.5**
K22A	**Casper**	**3.12**	**70**	*e*Pn	**Pb**	**18 36 28.5**	**+0.2**
PV21	**Cone Mtn., Par**	**3.32**	**159**	*e*Pn	**Pb**	**18 36 29.0**	**-2.7**
PV09	**Paradox Valley**	**3.34**	**161**	*e*Pn	**Pb**	**18 36 30.4**	**-1.6**
TCRU	**Three Creeks R**	**3.40**	**207**	*e*Pn	**Pn**	**18 36 28.4**	**+2.2**
MSU	**Marysvale**	**3.40**	**203**	*e*Pn	**Pn**	**18 36 29.0**	**+2.7**
PV23	**Carpenter Ridg**	**3.41**	**160**	*e*Pn	**Pb**	**18 36 32.5**	**-0.7**
HLID	**Hailey**	**3.44**	**305**	*e*Pn	**Pn**	**18 36 26.6**	**-0.2**
PV14	**Lion Creek, Pa**	**3.48**	**160**	*e*Pn	**Pb**	**18 36 33.4**	**-1.1**
PV04	**Paradox Valley**	**3.50**	**159**	*e*Pn	**Pb**	**18 36 33.5**	**-1.2**
PV20	**West Nyswonger**	**3.53**	**160**	*e*Pn	**Pb**	**18 36 34.9**	**-0.3**
N23A	**Red Feather La**	**3.53**	**101**	*e*Pn	**Pb**	**18 36 32.7**	**-2.6**
PV07	**Paradox Valley**	**3.53**	**155**	*e*Pn	**Pb**	**18 36 32.7**	**-2.5**
PV19	**Morning Glory**	**3.55**	**160**	*e*Pn	**Pb**	**18 36 33.4**	**-2.3**
PV16	**Nyswonger Mesa**	**3.57**	**159**	*e*Pn	**Pb**	**18 36 33.9**	**-2.0**
PV17	**East Wray Mesa**	**3.59**	**160**	*e*Pn	**Pb**	**18 36 37.1**	**+0.9**
MCMT	**McKenzie Canyo**	**3.59**	**332**	*e*Pn	**Pn**	**18 36 27.9**	**-1.0**
PV11	**David Mesa, Pa**	**3.59**	**159**	*e*Pn	**Pb**	**18 36 33.4**	**-2.9**
PV12	**Saucer Basin,**	**3.59**	**158**	*e*Pn	**Pb**	**18 36 36.9**	**+0.5**
PV03	**Paradox Valley**	**3.64**	**159**	*e*Pn	**Pb**	**18 36 36.2**	**-0.9**
PV15	**Paradox Valley**	**3.67**	**154**	*e*Pn	**Pb**	**18 36 35.0**	**-2.6**
SMCO	**Snowmass**	**3.67**	**131**	*e*Pn	**Pb**	**18 36 35.8**	**-2.0**
ELK	**Elko**	**3.68**	**257**	*e*Pn	**Pn**	**18 36 29.9**	**-0.2**
ELK				Pg	**Pb**	**18 36 37.9**	**+0.1**
ELK				Lg	Lg	18 37 24.3	
ELK	**Elko**	**3.68**	**257**	Pg	**Pb**	**18 36 37.9**	**+0.1**
	0.1nm,0.3s,baz=75,slow=12,SNR=8.2						
ELK				Lg	Lg	18 37 24.3	
	0.1nm,0.3s,baz=354,slow=9.2,SNR=1.5						
PV02	**Paradox Valley**	**3.72**	**158**	*e*Pn	**Pb**	**18 36 36.2**	**-2.2**
PV13	**Radium Mtn., P**	**3.74**	**159**	*e*Pn	**Pb**	**18 36 34.7**	**-4.1**
PV05	**Paradox Valley**	**3.75**	**163**	*e*Pn	**Pb**	**18 36 37.8**	**-1.1**
PV01	**Paradox Valley**	**3.83**	**156**	*e*Pn	**Pb**	**18 36 36.6**	**-3.8**
MTPU	**Mount Pierson**	**3.84**	**200**	*e*Pn	**Pn**	**18 36 36.0**	**+3.5**
DLMT	**Dillon**	**3.99**	**338**	*e*Pn	**Pn**	**18 36 37.4**	**+3.1**
PSUT	**Pine Spring**	**4.04**	**220**	*e*Pn	**Pn**	**18 36 36.8**	**+1.7**
ISCO	**Idaho Springs**	**4.16**	**115**	*e*Pn	**Pn**	**18 36 38.1**	**+1.3**
MVCO	**Mesa Verde**	**4.72**	**160**	*e*Pn	**Pn**	**18 36 47.4**	**+3.1**
F10A	**Beach Ranch, E**	**6.49**	**314**	*e*Pn	**Pn**	**18 37 05.6**	**-3.0**
NVAR	**Mina Array Bea**	**6.79**	**244**	Pn	**Pn**	**18 37 14.3**	**+1.4**
	0.1nm,0.3s,baz=80,slow=10,SNR=4.4						
YKA	**Yellowknife Ar**	**21.00**	**355**	P	**P**	**18 40 16.7**	**+0.2**
	0.1nm,0.3s,baz=169,slow=11,SNR=2.7						

IDC 06 18:40:00.2±1.7,11.°22S×165.°00E,h0^{km},mb3.4/3, mb1 3.8/5,mb1mx3.5/42,mbtmp3.7/5,ML3.9/2,Error ellipse: s-maj=40.3km s-min=31.4km az=132.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.28**	**289**	Pn	Pn	18 41 19.4	-1.1
	12nm,0.3s,baz=90,slow=2.0,SNR=4.2						
DZM	**Mont Dzumac**	**10.88**	**173**	Pn	Pn	18 42 37.4	0.0
	0.2nm,0.3s,baz=351,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**30.74**	**250**	P	P	18 46 18.1	+0.7
	0.7nm,0.8s,baz=84,slow=9.6,SNR=5.4						
ASAR	**Alice Springs**	**32.06**	**243**	P	P	18 46 28.8	-0.3
	0.3nm,0.7s,baz=63,slow=10,SNR=4.7						
ILAR	**Eielson Array**	**83.91**	**19**	P	P	18 52 31.6	-0.1
	0.2nm,0.6s,baz=224,slow=5.2,SNR=3.5						

IDC 06 18:40:16.9±1.7,10.°84S×165.°43E,h0^{km},mb3.7/3, mb1 4.1/4,mb1mx3.6/42,mbtmp3.8/4,ML4.0/1,Error ellipse: s-maj=53.5km s-min=30.5km az=128.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.21**	**175**	Pn	Pn	18 42 58.0	-0.6
	1.0nm,0.3s,baz=102,slow=21,SNR=5.7						
WRA	**Warramunga Arr**	**31.26**	**249**	P	P	18 46 38.9	+0.1
	0.6nm,0.5s,baz=80,slow=9.1,SNR=6.6						
ASAR	**Alice Springs**	**32.61**	**243**	P	P	18 46 50.5	0.0
	1.2nm,0.8s,baz=65,slow=10.0,SNR=12						
ILAR	**Eielson Array**	**83.42**	**19**	P	P	18 52 45.9	0.0
	0.6nm,1.0s,baz=216,slow=4.0,SNR=3.9						

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*IDC **06** 18:44:33.5±0.8,11.°22S×164.°99E,h0^{km},mb4.4/18, mb1 4.5/19,mb1mx4.3/45,mbtmp4.4/19,ML5.0/1,MS3.6/3, Ms1 3.6/3,ms1mx3.2/30,Error ellipse: s-maj=25.9km s-min=15.6km az=131.0*

*NEIC **06** 18:44:33.9±5.5,11.°27S×165.°02E,h7^{km}±32^{km},mb4.8/15, Error ellipse: s-maj=12.7km s-min=8.1km az=113.0*

*ISCJB **06** 18:44:36.6±0.4,11.°22S±0.°06×164.°84E±0.°07,h31^{km}, mb4.5/31,Error ellipse: s-maj=10.2km s-min=8.3km az=136.6*

ISC 06 18:44:38.4±0.5,11.°14S±0.°09×164.°86E±0.°08,h31^{km},n73, σ1.^{s}16/74,mb4.6/31,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.12**	**289**	*e*P	**Pn**	**18 45 54.0**	**+0.9**
HNR				*e*S	**Sn**	**18 46 46.0**	**-5.2**
HNR	**Honiara**	**5.12**	**289**	Pn	**Pn**	**18 45 53.7**	**+0.7**
	52nm,0.3s,baz=139,slow=7.8,SNR=14						
HNR				Sn	**Sn**	**18 46 50.2**	**-1.0**
	11nm,0.3s,baz=30,slow=18,SNR=2.8						
DZM	**Mont Dzumac**	**10.98**	**172**	*e*Pn	**Pn**	**18 47 13.6**	**+0.1**
	19nm,0.5s						
DZM				*e*LR	LR	18 49 43.4	
	comp=Z,197nm,23.5s						
DZM	**Mont Dzumac**	**10.98**	**172**	*e*Pn	**Pn**	**18 47 12.7**	**-0.8**

DZM	Mont Dzumac	10.98	172	Pn	Pn	18 47 13.6	+0.1
	1.6nm,0.3s,baz=7.7,slow=19,SNR=12						
MANU	Manus Island	19.57	296	*e*P	P	18 49 03.6	-0.4
	35nm,0.9s						
CTA	Charters Tower	19.99	241	P	P	18 49 09.3	+0.7
	5.9nm,0.7s,baz=67,slow=16,SNR=4.0						
COEN	Coen	21.35	260	*e*P	P	18 49 23.9	+0.6
	20nm,1.1s						
H11S2	WAKE ISLAND Hy	29.50	4	T	T	19 21 38.5	
	baz=184,slow=76,SNR=4.1						
H11S3	WAKE ISLAND Hy	29.50	4	T	T	19 21 42.6	
	baz=184,slow=76,SNR=4.5						
H11S1	WAKE ISLAND Hy	29.52	4	T	T	19 21 42.6	
	baz=184,slow=76,SNR=4.5						
STKA	Stephens Creek	29.78	223	*e*P	P	18 50 41.4	-1.1
	2.2nm,1.4s						
STKA				PcP	PcP	18 53 46.8	+1.0
STKA	Stephens Creek	29.78	223	P	P	18 50 42.0	-0.5
	3.0nm,0.7s,baz=27,slow=9.0,SNR=7.1						
STKA				PcP	PcP	18 53 46.8	+1.0
	2.0nm,0.8s,baz=36,slow=2.6,SNR=3.7						
WRAB	Tennant Creek	30.62	250	*e*P	P	18 50 49.4	-0.7
	22nm,1.0s						
WB2	Warramunga Arr	30.62	250	*e*P	P	18 50 49.5	-0.6
WB2				*e*PcP	PcP	18 53 49.4	+1.2
WR1	Warramunga Arr	30.63	250	*e*P	P	18 50 50.1	-0.1
	28nm,1.1s						
WR1				*e*PcP	PcP	18 53 49.6	+1.4
WRA	Warramunga Arr	30.64	250	P	P	18 50 50.1	-0.1
	15nm,1.0s,baz=80,slow=9.1,SNR=34						
WRA				PcP	PcP	18 53 49.6	+1.4
	1.9nm,0.8s,baz=73,slow=3.0,SNR=8.8						
WRA				LR	LR	19 02 05.6	
	comp=Z,130nm,20.2s,baz=35,slow=34						
GUMO	Guam	31.57	321	LR	LR	19 03 26.7	
	comp=Z,69nm,19.8s,baz=149,slow=36						
AS01	Alice Springs	31.93	243	*e*P	P	18 51 01.2	-0.4
AS31	Alice Springs	31.97	243	*e*P	P	18 51 01.6	-0.4
	1.9nm,0.6s						
ASAR	Alice Springs	31.97	243	P	P	18 51 01.6	-0.4
	4.2nm,0.5s,baz=65,slow=9.7,SNR=57						
ASAR				PcP	PcP	18 53 53.1	+1.3
	2.7nm,0.7s,baz=66,slow=2.6,SNR=19						
ASAR				LR	LR	19 02 58.2	
	comp=Z,122nm,20.1s,baz=80,slow=34						
FITZ	Fitzroy Crossi	38.52	255	*e*P	P	18 51 57.0	-1.3
	21nm,0.8s						
FITZ	Fitzroy Crossi	38.52	255	P	P	18 51 58.2	-0.1
	21nm,0.8s,baz=81,slow=6.9,SNR=24						
BATI	Baumata	40.47	267	P	P	18 52 15.4	+0.7
	10.0nm,0.6s,baz=154,slow=4.0,SNR=6.6						
PPT2	Papeete2	44.52	104	*e*LR	LR	19 05 13.6	
	comp=Z,212nm,29.0s						
TBI	Tubuai	45.10	112	*e*LR	LR	19 05 28.0	
	comp=Z,242nm,29.8s						
MJAR	Matsushiro Arr	53.66	333	P	P	18 53 56.6	-0.6
	5.7nm,0.9s,baz=172,slow=8.4,SNR=8.3						
MAJO	Matsushiro	53.66	333	*e*P	P	18 53 56.6	-0.6
RKT	Rikitea	58.37	110	*e*LR	LR	19 11 39.4	
	comp=Z,280nm,28.8s						
ASAJ	Asahikawa	58.60	341	P	P	18 54 33.7	+1.3
	10nm,0.7s,baz=218,slow=8.1,SNR=18						
KSRS	Korea Array	59.47	326	P	P	18 54 39.0	+0.5
	2.6nm,0.9s,baz=134,slow=6.1,SNR=5.3						
KSAR	Wonju Array Be	59.48	326	P	P	18 54 39.0	+0.4
USRK	Ussuriysk Ar.	62.65	334	P	P	18 55 01.2	+1.3
	4.1nm,0.8s,baz=125,slow=7.6,SNR=7.7						
PETK	Petropavlovsk-	64.28	355	P	P	18 55 11.3	+0.7
	6.4nm,1.1s,baz=160,slow=6.0,SNR=2.7						
PEA1	Petropavlovsk-	64.29	355	*e*P	P	18 55 11.3	+0.6
CN2	Changchun	65.38	330	*e*P	P	18 55 18.6	+0.7
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
ENH	Enshi	67.28	309	*e*P	P	18 55 30.7	+0.2
	comp=Z,11nm,1.0s						
XAN	Xi'an	69.54	313	P	P	18 55 45.3	+0.7
XAN				pP	pP	18 55 53.4	+0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN	Xi'an	69.54	313	*e*P	P	18 55 45.3	+0.7
	comp=Z,4.6nm,0.8s						
CM01	Chiang Mai Arr	71.33	294	*e*P	P	18 55 56.0	+0.2
CM31	Chiang Mai Arr	71.35	294	*e*P	P	18 55 56.3	+0.4
CMAR	Chiang Mai Arr	71.35	294	P	P	18 55 56.5	+0.7
	comp=Z,1.1nm,0.8s,baz=128,slow=4.5,SNR=10						
CHTO	Chiang Mai	71.47	294	*e*P	P	18 55 57.5	+0.9
	comp=Z,3.0nm,1.1s						
LZH	Lanzhou	74.18	313	*e*P	P	18 56 15.9	+3.4
LZH				pP	sP	18 56 24.2	+0.2
LZH				sP	PcP	18 56 28.9	+1.5
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
ULN	Ulaanbaatar	77.87	324	*e*P	P	18 56 34.3	+1.0
	comp=Z,7.6nm,1.1s						
SONA0	Songino Array	78.23	324	*e*P	P	18 56 36.8	+1.5
SONM	Songino Array	78.23	324	P	P	18 56 36.8	+1.5
	comp=Z,4.1nm,1.1s,baz=142,slow=5.0,SNR=14						
SONA1	Songino Array	78.23	324	*e*P	P	18 56 36.5	+1.2
GTA	Gaotai	78.50	314	P	P	18 56 38.9	+2.0
GTA				pP	pP	18 56 45.5	+0.4
GTA				sP	sP	18 56 48.6	+0.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KLU	Klutina	82.00	22	*e*P	P	18 56 52.3	-2.9
	comp=Z,20nm,0.6s						
NV01	Mina Array Sit	86.75	50	*e*P	P	18 57 19.5	-0.5
NVAR	Mina Array Bea	86.75	50	P	P	18 57 19.5	-0.6
	comp=Z,1.3nm,0.9s,baz=235,slow=7.3,SNR=5.3						
MK01	Makanchi Array	92.98	317	*e*P	P	18 57 49.3	+0.5
MK31	Makanchi Array	93.00	317	*e*P	P	18 57 48.2	-0.8
	comp=Z,7.1nm,1.8s						
MK32	Makanchi Array	93.00	317	*e*P	P	18 57 49.5	+0.6
MKAR	Makanchi Array	93.00	317	*e*P	P	18 57 48.2	-0.8
	comp=Z,9.9nm,1.0s						
MKAR	Makanchi Array	93.00	317	P	P	18 57 49.5	+0.6
	comp=Z,0.9nm,0.8s,baz=90,slow=6.5,SNR=6.6						
ZALV	Zalesovo Beam	93.12	324	*e*P	P	18 57 48.3	-1.0
ZALV	Zalesovo Beam	93.12	324	P	P	18 57 49.1	-0.1
	comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=6.1						
ZAA1	Zalesovo Array	93.12	324	*e*P	P	18 57 49.1	-0.1
MAKZ	Makanchi	93.21	317	*e*P	P	18 57 50.5	+0.6
	comp=Z,6.1nm,1.4s						
YKA	Yellowknife Ar	95.46	27	P	P	18 57 58.8	-1.0
	comp=Z,0.1nm,0.3s,baz=240,slow=3.3,SNR=3.1						
LTX	Lajitas	96.64	61	*e*P	P	18 58 05.5	-0.6
TXAR	Lajitas Array	96.64	61	P	P	18 58 05.5	-0.6
	comp=Z,0.2nm,0.6s,baz=297,slow=17,SNR=4.2						
ARA0	ARCESS Array S	116.20	345	*e*PKPdf	PKiKP	19 03 17.3	-0.8
ARCES	ARCESS Array B	116.20	345	PKP	PKiKP	19 03 17.3	-0.8
	comp=Z,1.6nm,0.8s,baz=64,slow=2.8,SNR=7.5						
FIA0	FINESS Array S	121.54	338	*e*PKPdf	PKiKP	19 03 28.8	+0.1
FINES	FINESS Array B	121.54	338	PKP	PKiKP	19 03 28.8	+0.1
	comp=Z,0.3nm,0.3s,baz=132,slow=26,SNR=3.4						
SDV	Santo Domingo	125.37	87	*e*PKPdf	PKPdf	19 03 36.8	-0.8
AKASG	Malin Array Be	126.46	326	PKP	PKiKP	19 03 38.5	-0.3
	comp=Z,0.2nm,0.4s,baz=8.5,slow=1.9,SNR=3.4						
BR101	Keskin Array S	128.38	312	*e*PKPdf	PKPdf	19 03 42.4	-0.2
BRTR	Keskin Array B	128.38	312	PKP	PKPdf	19 03 42.4	-0.2
	comp=Z,0.6nm,0.9s,baz=236,slow=0.5,SNR=3.7						
MPR	Mayaguez	129.34	76	*e*PKPdf	PKPdf	19 03 43.0	-1.7

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*IDC **06** 18:47:43.1±2.5, 10°.33N×124°.06E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/58, mbtmp3.5/4, Error ellipse: s-maj=264.0km s-min=21.3km az=65.0*

*ISCJB **06** 18:47:48.3±0.8, 9°.72N±0°.03×122°.39E±0°.03, h25^{km}±7^{km}, mb3.5/4, Error ellipse: s-maj=6.1km s-min=4.5km az=138.9*

*MAN **06** 18:47:48.3, 9°.73N×122°.44E, h23^{km}, MS3.4*

ISC 06 18:47:48.4±0.8, **9°.74N**±0°.04×**122°.42E**±0°.04, **h22**^{km}±6^{km}, **n23**, σ**1^{s}16**/33, **mb3.5**/4, **6C-1D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIM	Jordan	0.90	11	*e*P	Pb	18 48 04.7	-0.6
GUIM				*e*S	Sb	18 48 17.3	+0.5
SNPH	Sibulan	0.90	116⇑	*i*P	Pb	18 48 04.1	-1.3
SNPH				*i* S	Sn	18 48 17.6	-0.6
JAP	San Jose, Anti	1.10	335⇓	*e*P	Pb	18 48 09.7	+0.9
TBP	Tagbilaran	1.43	92	*e*P	Pb	18 48 15.8	+1.4
LLP	Lapu-Lapu	1.63	69⇑	*e*P	Pn	18 48 15.9	0.0
LLP				*e*S	Sn	18 48 36.7	+0.5
CUYO	Cuyo Island	1.76	309	*e*P	Pn	18 48 18.4	+0.7
CUYO				*e*S	Sn	18 48 39.4	-0.1
RCP	Roxas	1.83	10⇑	*e*P	Pb	18 48 20.3	-1.0
RCP				*e*S	Sb	18 48 44.2	+0.4
IPIL	Ipil	1.95	175	*e*P	Pn	18 48 20.2	-0.1
IPIL				*e*S	Sn	18 48 44.2	+0.2
PAGZ	Pagadian	2.11	153	*e*P	Pn	18 48 23.0	+0.5
MSLP	Maasin	2.44	81	*e*P	Pn	18 48 27.7	+0.7
MSLP				*e*S	Sn	18 48 58.5	+2.3
OCLP	Ormoc	2.52	59	*e*P	Pn	18 48 28.5	+0.4
OCLP				*e*S	Sn	18 48 58.6	+0.4
CGP	Cagayan de Oro	2.59	119⇑	*e*P	Pn	18 48 28.6	-0.4
OTRP	Odiongan	2.63	352	*e*P	Pb	18 48 33.4	-1.5
PLP	Palo	2.89	60⇑	*e*P	Pn	18 48 33.1	-0.1
PLP				*e*S	Sn	18 49 05.4	-2.0
CTBH	Cotabato--PC H	3.09	144⇑	*i*P	Pn	18 48 37.6	+1.6
BUSP	Coron	3.13	316	*e*P	Pn	18 48 37.3	+0.8
BUSP				*e*S	Sn	18 49 12.4	-0.8
BUKP	Musuan	3.21	125	*e*P	Pn	18 48 39.1	+1.5
BUTP	Butuan	3.26	103	*e*P	Pn	18 48 38.8	+0.5
ENPP	El Nido	3.28	297	*e*P	Pn	18 48 39.3	+0.7
WRA	Warramunga Arr	31.75	158	P	P	18 54 08.7	-2.4
	0.3nm,0.9s,baz=342,slow=8.8,SNR=2.9						
ASAR	Alice Springs	35.05	161	P	P	18 54 38.8	-1.2
	0.3nm,0.6s,baz=341,slow=7.3,SNR=8.7						
MKAR	Makanchi Array	50.20	325	P	P	18 56 44.4	+1.6
	0.5nm,0.7s,baz=138,slow=7.5,SNR=7.7						
KURBB	Kurchatov Arra	54.40	327	P	P	18 57 14.8	+1.0
	0.7nm,0.7s,baz=121,slow=8.5,SNR=6.8						

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*IDC **06** 18:55:06.3±1.0, 11°.46S×165°.11E, h0^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.9/42, mbtmp3.9/11, ML4.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/39, Error ellipse: s-maj=34.2km s-min=19.0km az=142.0*

*NEIC **06** 18:55:07.7±0.7, 11°.48S×165°.07E, h10^{km}, mb4.2/5, Error ellipse: s-maj=15.8km s-min=12.9km az=141.0*

*ISCJB **06** 18:55:09.8±0.8, 11°.52S±0°.09×164°.94E±0°.08, h34^{km}, mb3.9/11, Error ellipse: s-maj=14.5km s-min=10.4km az=28.4*

ISC 06 18:55:11.4±0.8, **11°.5S**±0°.1×**165°.00E**±0°.09, **h34**^{km}, **n17**, σ**1^{s}05**/19, **mb3.8**/11, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.37	292	*e*Pn	Pn	18 56 28.9	-0.2
HNR				*e*Sn	Sn	18 57 28.9	-0.9
HNR	Honiara	5.37	292	Pn	Pn	18 56 29.4	+0.3
	30nm,0.3s,baz=140,slow=6.5,SNR=7.9						
HNR				Sn	Sn	18 57 28.9	-0.9
	6.0nm,0.3s,baz=81,slow=19,SNR=2.0						
HNR				LR	LR	18 58 39.3	
	comp=Z,199nm,21.9s,baz=331,slow=39						
DZM	Mont Dzumac	10.63	173	Pn	Pn	18 57 41.4	0.0
	0.6nm,0.3s,baz=353,slow=9.3,SNR=8.0						
CTA	Charters Tower	19.95	242	P	Pn	18 59 42.2	-0.5
	6.2nm,0.8s,baz=49,slow=11,SNR=2.3						
COEN	Coen	21.43	261	*e*P	P	18 59 58.2	+1.4
	8.2nm,0.8s						
STKA	Stephens Creek	29.63	223	*e*P	P	19 01 11.9	-1.8
	1.9nm,1.4s						
STKA	Stephens Creek	29.63	223	P	P	19 01 14.8	+1.1
	1.5nm,0.8s,baz=74,slow=6.6,SNR=3.7						
WR1	Warramunga Arr	30.65	250	*e*P	P	19 01 23.0	+0.1
	25nm,1.9s						
WRA	Warramunga Arr	30.65	250	P	P	19 01 23.0	+0.1
	0.5nm,0.4s,baz=80,slow=9.1,SNR=3.7						
AS31	Alice Springs	31.95	244	*e*P	P	19 01 32.6	-1.7
	0.8nm,0.9s						
ASAR	Alice Springs	31.95	243	P	P	19 01 34.1	-0.3
	1.6nm,0.8s,baz=69,slow=9.4,SNR=12						
FITZ	Fitzroy Crossi	38.56	255	P	P	19 02 31.7	+0.4
	1.1nm,0.5s,baz=111,slow=8.6,SNR=5.8						
CMAR	Chiang Mai Arr	71.61	294	P	P	19 06 32.0	+2.0
	0.4nm,0.8s,baz=136,slow=6.3,SNR=4.5						
ILAR	Eielson Array	84.15	19	P	P	19 07 39.5	+0.9
	0.5nm,0.6s,baz=241,slow=5.0,SNR=13						
ILB	Eielson Array	84.15	19	*e*P	P	19 07 38.6	0.0
	18nm,1.8s						
NVAR	Mina Array Bea	86.86	50	P	P	19 07 52.5	-0.6
	0.3nm,0.5s,baz=68,slow=33,SNR=2.3						
YKA	Yellowknife Ar	95.69	27	P	P	19 08 32.3	-1.1
	0.1nm,0.6s,baz=244,slow=4.6,SNR=3.2						

IDC 06 19:00:33.7±2.9, **11°.64S**×**165°.03E**, **h0**^{km}, **mb3.7**/3, **mb1 3.9**/4, **mb1mx3.6**/36, **mbtmp3.8**/4, **ML3.5**/1, **Error ellipse: s-maj=62.5km s-min=42.1km az=84.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.46	173	Pn	Pn	19 03 05.2	0.0
	0.4nm,0.3s,baz=337,slow=15,SNR=4.9						
WRA	Warramunga Arr	30.63	250	P	P	19 06 49.9	-0.1
	0.9nm,1.0s,baz=81,slow=8.7,SNR=4.0						
ASAR	Alice Springs	31.91	244	P	P	19 07 01.2	0.0
	0.5nm,0.7s,baz=70,slow=10.0,SNR=6.6						
MKAR	Makanchi Array	93.47	317	P	P	19 13 51.4	0.0
	0.4nm,0.7s,baz=99,slow=6.0,SNR=3.4						

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*IDC **06** 19:01:43.2±0.4, 34°.24N×80°.43E, h0^{km}, mb4.6/41, mb1 4.6/46, mb1mx4.6/58, mbtmp4.5/46, ML3.8/5, MS3.7/15, Ms1 3.8/15, ms1mx3.5/53, Error ellipse: s-maj=11.7km s-min=8.9km az=29.0*

*BJI **06** 19:01:43.6, 34°.34N×80°.40E, h6^{km}, mB4.7/27, mb4.6/42, ML4.3/2, Ms4.3/36, Ms7 4.2/35*

*ISCJB **06** 19:01:45.8±0.8, 34°.35N±0°.02×80°.46E±0°.02, h24^{km}±6^{km}, mb4.6/131, MS3.8/16, Error ellipse: s-maj=3.8km s-min=2.4km az=137.4*

*NEIC **06** 19:01:45.7±1.5, 34°.25N×80°.42E, h17^{km}±9^{km}, mb4.9/64, Error ellipse: s-maj=4.3km s-min=3.2km az=205.0*

*MOS **06** 19:01:46.8±1.1, 34°.36N×80°.46E, h32^{km}, mb4.9/35, Error ellipse: s-maj=6.7km s-min=3.8km az=116.6*

ISC 06 19:01:45.7±0.9, **34°.31N**±0°.04×**80°.38E**±0°.03, **h14**^{km}±5^{km}, **n400**, σ**1^{s}89**/441, **mb4.7**/136, **MS3.9**/16, **25C-13D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	Chirah Chowk	5.95	266	P	Pn	19 03 15.8	+2.4
NIL	Nilore	5.96	266	*e*Pn	Pn	19 03 15.4	+1.8
NIL	Nilore	5.96	266	*e*P	Pn	19 03 15.4	+1.8
NDI	New Delhi	6.22	207	*e*P	Pn	19 03 22.0	+4.8
NDI				*e*S	Sn	19 04 35.0	+6.8
KSH	Kashi	6.29	327	*i* Pn	Pn	19 03 20.5	+2.4
KSH				Sn	Sn	19 04 31.2	+1.4
KSH				LR	LR		
	comp=N,2µm,6.6s						
KSH				LR	LR		
	comp=E,4µm,4.7s						
KSH				LR	LR		
	comp=Z,5µm,7.2s						
PYUN	Piuthan	6.58	159	*e*Pn	Pn	19 03 24.2	+2.0
PYUN				*e*Sn	Sn	19 04 39.5	+2.3
	162nm,0.6s						
DANN	Dangsing	6.60	153	*e*Pn	Pn	19 03 24.3	+1.6
DANN				*e*Sn	Sn	19 04 39.2	+1.3
	128nm,0.9s						
CEP	Cherat	7.05	268	P	Pn	19 03 29.3	+0.7
THW	Thamme Wali	7.37	261	P	Pn	19 03 33.9	+1.0
TARG	Taragay, Kyrgy	7.68	345	*e*Pn	Pn	19 03 40.6	+3.1
DMN	Daman	7.81	147	*e*Pn	Pn	19 03 41.1	+1.9
DMN				*e*Sn	Sn	19 05 08.3	+0.7
	366nm,1.2s						
NRN	Naryn	7.91	335	*e*Pn	Pn	19 03 40.9	+0.3
NRN	Naryn	7.91	335	*e*P	Pn	19 03 40.9	+0.3
GUN	Gumba	7.93	142	*e*Pn	Pn	19 03 42.9	+2.0
GUN				*e*Sn	Sn	19 05 12.1	+1.5
	120nm,0.9s						
PKIN	Phulchoki	7.97	146	*e*Pn	Pn	19 03 43.2	+1.8
PKI	Pulchoki	7.98	146	*e*Pn	Pn	19 03 43.2	+1.6
PKI				*e*Sn	Sn	19 05 13.1	+1.2
	98nm,0.8s						
KDJ	Kajisay	8.21	343	*e*Pn	Pn	19 03 46.9	+2.4
KDJ	Kajisay	8.21	343	*e*P	Pn	19 03 46.9	+2.4
JIRN	Jiri	8.29	141	*e*Pn	Pn	19 03 48.6	+2.7
JIRN				*e*Sn	Sn	19 05 19.9	+0.4
	140nm,0.6s						
PRZ	Przheval'sk	8.31	350	*e*Pn	Pn	19 03 49.2	+3.2
PRZ	Przheval'sk	8.31	350	*e*P	Pn	19 03 49.2	+3.2
ULHL	Ulahol	8.57	339	P	Pn	19 03 53.9	+4.4
	SNR=12						
KZA	Kyzart	8.74	334	P	Pn	19 03 55.7	+3.5
	SNR=15						
RAMN	Ramite	9.08	142	*e*Pn	Pn	19 03 57.6	+1.0
RAMN				*e*Sn	Sn	19 05 38.2	-0.6
	202nm,0.8s						
UCH	Uchtor	9.15	331	P	Pn	19 04 00.9	+3.2
	SNR=35						
GAR	Garm	9.34	303	*e*Pn	Pn	19 03 59.1	-0.9
GAR	Garm	9.34	303	*e*P	Pn	19 03 59.2	-0.9
KBK	Karagaybulak	9.36	335	P	Pn	19 04 04.2	+3.9
	SNR=12						
KBL	Kabul	9.37	275	*e*Pn	Pn	19 04 00.5	0.0
KBL	Kabul	9.37	275	*e*P	Pn	19 04 00.5	0.0
TKM2	Tokmak 2	9.38	338	P	Pn	19 04 04.7	+4.1
	SNR=44						
AML	Almayashu	9.41	328	P	Pn	19 04 04.5	+3.2
	SNR=6.6						
AAK	Ala-Archa	9.51	333	P	Pn	19 04 05.5	+3.1
	SNR=8.0						
AAK	Ala-Archa	9.51	333	*e*Pn	Pn	19 04 03.2	+0.9
AAK				*e*Pn	Pn	19 04 05.6	+3.2
AAK				Lg	Lg	19 06 50.5	
AAK	Ala-Archa	9.51	333	*i* P	Pn	19 04 05.8	+3.4
	SNR=17						
AAK	Ala-Archa	9.51	333⇑	*i*P	Pn	19 04 06.0	+3.6
AAK				pmax	pmax		
	comp=Z,18nm,1.3s						
AAK	Ala-Archa	9.51	333	Pn	Pn	19 04 05.6	+3.2
	comp=Z,0.8nm,0.3s,baz=147,slow=8.0,SNR=17						
AAK				Lg	Lg	19 06 50.5	
	baz=270,slow=13,SNR=5.2						
AAK				LR	LR	19 08 07.0	
	comp=Z,375nm,21.8s,baz=136,slow=40						
BTK	Batken	9.55	310	*e*Pn	Pn	19 04 03.9	+1.1
FRU1	Bishkek	9.61	334	*e*Pn	Pn	19 04 03.5	-0.2
FRU1	Bishkek	9.61	334	*e*P	Pn	19 04 03.5	-0.2
FRU	Bishkek	9.63	334	*e*P	Pn	19 04 07.0	+3.0
FRU				*e*S	Sn	19 05 56.0	+4.0
FRU				pmax	pmax		
	comp=Z,100nm,2.0s						
FRU				pmax	pmax		
	comp=E,520nm,2.2s						
CHMS	Chumysh	9.73	335	P	Pn	19 04 08.8	+3.5
	SNR=13						
EKS2	Erkin-Say	9.81	330	P	Pn	19 04 10.6	+4.1
	SNR=16						
CHGR	Chuyangaron	10.02	299	*e*Pn	Pn	19 04 07.9	-1.5
LSA	Lhasa	10.23	114	P	Pn	19 04 15.7	+3.2
LSA				pmax	pmax		
	comp=E,15nm,0.9s						
LSA	Lhasa	10.23	114	*e*Pn	Pn	19 04 11.4	-1.1
LSA	Lhasa	10.23	114	P	Pn	19 04 16.1	+3.6
LSA	Lhasa	10.23	114	*e*P	Pn	19 04 11.4	-1.1
WMQ	Urumqi	11.06	29	P	Pn	19 04 25.4	+1.9
WMQ				pP		19 04 32.0	
WMQ				S	Sn	19 06 28.7	+1.5
WMQ				pmax	pmax		
	comp=E,38nm,0.9s						
WMQ				pmax	pmax		
	comp=E,680nm,7.1s						
WMQ				LR	LR		
	comp=E,2µm,11.1s						
WMQ				LR	LR		
	comp=E,2µm,16.9s						
WMQ				LR	LR		
	comp=E,2µm,14.9s						
WMQ	Urumqi	11.06	29	*e*Pn	Pn	19 04 25.5	+1.9
WMQ	Urumqi	11.06	29	*e*P	Pn	19 04 25.5	+1.9
KK31	Karatay Array	11.68	322	*e*Pn	Pn	19 04 33.0	+1.0
KK31	Karatay Array	11.68	322	*e*P	Pn	19 04 33.0	+1.0
KKAR	Karatay Array	11.68	322	*e*Pn	Pn	19 04 32.9	+1.0
KKAR	Karatay Array	11.68	322	*e*P	Pn	19 04 32.9	+1.0
MK01	Makanchi Array	12.54	6	*e*Pn	Pn	19 04 42.7	-1.0
MAKZ	Makanchi	12.55	5	*e*Pn	Pn	19 04 42.9	-0.9
MAKZ	Makanchi	12.55	5	P	Pn	19 04 43.4	-0.4
MAKZ				pmax	pmax		
	comp=Z,80nm,0.7s						
MK31	Makanchi Array	12.56	6	*e*Pn	Pn	19 04 43.2	-0.7
MK31	Makanchi Array	12.56	6	*e*P	Pn	19 04 43.2	-0.7
MK32	Makanchi Array	12.56	6	*e*Pn	Pn	19 04 43.0	-0.9
MK32				*e*Sn	Sn	19 06 59.3	-4.3
MKAR	Makanchi Array	12.56	6	Pn	Pn	19 04 43.0	-0.9
	comp=Z,3.8nm,0.3s,baz=180,slow=12,SNR=120						
MKAR				Sn	Sn	19 06 59.3	-4.3
	comp=Z,0.2nm,0.3s,baz=193,slow=16,SNR=3.4						
MKAR				LR	LR	19 10 26.3	
	comp=Z,177nm,21.0s,baz=152,slow=42						
SHL	Shillong	13.23	128	*e*Pn	Pn	19 04 49.8	-3.6
SHL	Shillong	13.23	128	*e*P	Pn	19 04 49.8	-3.6
SHL	Shillong	13.23	128	*e*P	Pn	19 04 51.0	-2.4
BRDH	Bariadhala	15.22	137	LR	LR	19 12 28.9	
	comp=Z,287nm,18.8s,baz=360,slow=43						
GTA	Gaotai	16.36	66	*e*P	Pn	19 05 36.0	+0.9
GTA				pP	P	19 05 39.7	+1.8
GTA				sP	pP	19 05 43.3	+0.1
GTA				S	Sn	19 08 37.0	+0.6
GTA				pmax	pmax		
	comp=Z,93nm,5.1s						
GTA				LR	LR		
	comp=Z,390nm,13.0s						
GTA				LR	LR		
	comp=Z,600nm,11.4s						
GTA				LR	LR		
	comp=Z,760nm,12.7s						
KURBB	Kurchatov Arra	16.36	356	Pn	Pn	19 05 32.6	-2.3
	comp=Z,0.1nm,0.3s,baz=179,slow=11,SNR=28						
KURBB				Lg	Lg	19 10 33.0	
	comp=Z,0.0nm,0.3s,baz=176,slow=28,SNR=3.1						
KURK	Kurchatov	16.45	356	*e*Pn	Pn	19 05 32.6	-3.4
KURK				Lg	Lg	19 10 33.0	
KURK	Kurchatov	16.45	356⇓	*i*P	Pn	19 05 34.7	-1.3
KURK	Kurchatov	16.45	356	P	Pn	19 05 34.9	-1.1
	SNR=8.6						
HYB	Hyderabad	16.90	186	*i* P	Pn	19 05 40.0	-1.9
HYB				*e*S	Sn	19 08 42.0	-7.6
GEYT	Alibeck	18.34	288	P	Pn	19 05 57.6	-2.1
	comp=Z,0.3nm,0.3s,baz=94,slow=15,SNR=11						
GEYT				S	Sn	19 09 18.0	-6.3
	comp=Z,0.2nm,0.3s,baz=111,slow=22,SNR=3.3						
GEYT				LR	LR	19 14 24.1	
	comp=Z,301nm,18.8s,baz=70,slow=41						
GYA0B	ALIBECK ARRAY	18.34	288	*e*P	Pn	19 05 59.0	-0.8
	comp=Z,9.9nm,0.8s						
LZH	Lanzhou	19.25	78	*e*P	Pn	19 06 10.9	0.0
LZH				pP	sP	19 06 19.1	+1.4
LZH				sP	pP	19 06 23.4	+8.1
LZH				*e*S	Sn	19 09 41.2	-5.4
LZH				sS	S	19 09 51.9	+4.2
LZH				SS		19 10 03.8	
LZH				pmax	pmax		
	comp=Z,30nm,1.6s						
LZH				pmax	pmax		
	comp=Z,130nm,5.7s						
LZH				LR	LR		
	comp=Z,630nm,11.4s						
LZH				LR	LR		
	comp=Z,460nm,13.5s						
LZH				LR	LR		
	comp=Z,830nm,14.9s						
ZAA0	Zalesovo Array	19.89	8	*e*P	P	19 06 15.4	-1.0
	comp=Z,11nm,0.7s						
ZALV	Zalesovo Beam	19.89	8	P	P	19 06 16.1	-0.4
	comp=Z,1.1nm,0.3s,baz=194,slow=11,SNR=18						
ZAA1	Zalesovo Array	19.89	8	*e*P	P	19 06 16.1	-0.4
CD2	Chengdu	19.97	93	⇑P	Pn	19 06 20.7	+1.3
CD2				pP	sP	19 06 29.9	+4.4
CD2				S	Sn	19 10 05.3	+1.4
CD2				SS	S	19 10 25.5	+23
CD2				pmax	pmax		
	comp=Z,30nm,1.3s						
CD2				pmax	pmax		
	comp=Z,160nm,8.0s						
CD2				LR	LR		
	comp=Z,740nm,9.0s						
CD2				LR	LR		
	comp=Z,980nm,10.4s						
CD2				LR	LR		
	comp=Z,1µm,10.6s						
BVA0	Borovoye Array	20.02	342	*i* P	P	19 06 18.2	+0.2
BVA0				pmax	pmax		
	comp=Z,20nm,0.7s						
BVAR	Borovoye Array	20.02	342	P	P	19 06 18.1	+0.1
	comp=Z,18nm,0.6s,baz=156,slow=12,SNR=191						
BRVK	Borovoye	20.08	342	*e*P	P	19 06 18.2	-0.4
	comp=Z,28nm,0.7s						
BRVK	Borovoye	20.08	342*c*	*i*P	P	19 06 19.2	+0.5
BRVK				pmax	pmax		

	comp=Z,28nm,0.7s						
BRVK	Borovoye	20.08	342	P	P	19 06 19.1	+0.5
	SNR=11						
NVS	Novosibirsk	20.63	5⇓	iP	P	19 06 24.5	0.0
NVS				eS	S	19 10 01.8	-13
NVS				pmax	pmax		
	comp=Z,9.0nm,0.4s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.8s						
AB31	Akbulak array	21.24	321	i P	P	19 06 31.9	+0.7
AB31				pmax	pmax		
	comp=Z,26nm,0.6s						
ABKAR	Akbulak array	21.24	321	eP	P	19 06 31.8	+0.6
KMI	Kunming	21.43	109	P	P	19 06 34.2	+0.5
KMI				pP	sP	19 06 42.8	+1.2
KMI				PP	PnPn	19 07 00.3	+6.6
KMI				S	S	19 10 27.4	-4.0
KMI				sS	pS	19 10 42.1	+0.6
KMI				SS	SnSn	19 11 03.8	+9.5
KMI				pmax	pmax		
	comp=Z,25nm,0.7s						
KMI				pmax	pmax		
	comp=Z,58nm,3.1s						
KMI				LR	LR		
	comp=Z,370nm,10.9s						
KMI				LR	LR		
	comp=Z,200nm,10.6s						
KMI				LR	LR		
	comp=Z,240nm,11.4s						
KMI	Kunming	21.43	109	eP	P	19 06 32.7	-1.0
	comp=Z,18nm,0.7s						
KMI	Kunming	21.43	109	eP	P	19 06 32.7	-1.0
KMI				pmax	pmax		
	comp=Z,18nm,0.7s						
WSAR	Wadi Sarin	21.98	246	P	P	19 06 41.0	+1.6
	comp=Z,15nm,0.9s,baz=57,slow=9.5,SNR=20						
WSAR				LR	LR	19 16 46.6	
	comp=Z,121nm,18.4s,baz=72,slow=41						
BANOM	Banah	22.41	255	i P	P	19 06 46.7	+2.8
	SNR=11						
BANOM	Banah	22.41	255	P	P	19 06 48.8	+4.8
	SNR=5.1						
SHME	Shamm	22.48	255	i P	P	19 06 47.9	+3.1
	SNR=5.2						
CHTO	Chiang Mai	22.61	128	eP	P	19 06 45.6	-0.5
	comp=Z,12nm,0.8s						
CHTO	Chiang Mai	22.61	128	eP	P	19 06 45.6	-0.5
CHTO				pmax	pmax		
	comp=Z,12nm,0.8s						
CHTO	Chiang Mai	22.61	128	P	P	19 06 47.4	+1.3
	SNR=7.5						
CHTO	Chiang Mai	22.61	128	P	P	19 06 47.1	+1.0
	comp=Z,68nm,1.0s						
CMMT	Chiang Mai	22.61	128	P	P	19 06 47.0	+0.8
	comp=Z,15nm,1.0s						
MSFE	Esma-Masafi	22.78	253	i P	P	19 06 51.6	+3.6
	SNR=7.4						
MOY	Mondy	22.85	34	eP	P	19 06 52.1	+3.5
CM31	Chiang Mai Arr	22.86	129	eP	P	19 06 47.8	-1.0
	comp=Z,15nm,0.9s						
CM31	Chiang Mai Arr	22.86	129	P	P	19 06 49.4	+0.5
	SNR=13						
CMAR	Chiang Mai Arr	22.86	129	P	P	19 06 48.9	+0.1
	comp=Z,5.7nm,0.8s,baz=305,slow=11,SNR=47						
CMAR				PcP	PcP	19 10 39.5	-0.2
	comp=Z,0.9nm,0.6s,baz=302,slow=3.4,SNR=7.3						
CMAR				LR	LR	19 15 28.1	
	comp=Z,93nm,21.1s,baz=315,slow=36						
CM01	Chiang Mai Arr	22.90	129	eP	P	19 06 47.7	-1.6
AKTO	Aktyubinsk	22.95	321	eP	P	19 06 49.4	-0.1
AKTO	Aktyubinsk	22.95	321	eP	P	19 06 49.4	-0.1
AKTO	Aktyubinsk	22.95	321	P	P	19 06 49.4	-0.1
	comp=Z,34nm,0.8s,baz=122,slow=10,SNR=83						
AKTO				LR	LR	19 17 06.7	
	comp=Z,113nm,18.9s,baz=128,slow=40						
UOSS	Minazif	22.95	252	eP	P	19 06 51.0	+1.3
	comp=Z,24nm,1.2s						
ZAK	Zakamensk	23.19	39	eP	P	19 06 51.6	-0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ASHO	Ashiyiah	23.19	252	i P	P	19 06 55.4	+3.1
	SNR=19						
ASHO	Ashiyiah	23.19	252	P	P	19 06 56.1	+3.9
	SNR=9.6						
NAZ	Nazwa, Dubai	23.36	253	P	P	19 06 57.3	+3.5
NAZ	Nazwa, Dubai	23.36	253	P	P	19 06 57.5	+3.7
	SNR=5.3						
FAQ	Al Faqa, Dubai	23.53	253	P	P	19 06 58.6	+3.1
XAN	Xi'an	23.59	83	P	P	19 06 56.9	+0.8
XAN				pP	sP	19 07 05.0	+0.9
XAN				S	S	19 11 13.3	+3.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
XAN				pmax	pmax		
	comp=Z,130nm,4.7s						
XAN				LR	LR		
	comp=Z,410nm,13.0s						
XAN				LR	LR		
	comp=Z,300nm,11.8s						
XAN	Xi'an	23.59	83	eP	P	19 06 55.1	-1.0
	comp=Z,27nm,1.5s						
XAN	Xi'an	23.59	83	eP	P	19 06 55.1	-1.0
XAN				pmax	pmax		
	comp=Z,27nm,1.5s						
SONA0	Songino Array	23.68	47	eP	P	19 06 57.9	+0.9
SONM	Songino Array	23.68	47	P	P	19 06 57.9	+0.9
	comp=Z,3.8nm,0.7s,baz=238,slow=10,SNR=32						
SONA1	Songino Array	23.69	47	eP	P	19 06 57.4	+0.3
ALNE	Al Ain	23.75	251	P	P	19 07 00.7	+3.0
MHTO	MHTO	23.81	242	P	P	19 07 01.6	+3.3
GYA	Guiyang	23.94	102⇑	iP	P	19 06 58.8	-0.8
GYA				pP	sP	19 07 09.2	+1.5
GYA				PP	pP	19 07 33.0	+28
GYA				S	S	19 11 10.0	-5.9
GYA				sS	sS	19 11 26.6	+1.2
GYA				SS	SnSn	19 12 01.8	+6.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=Z,540nm,16.2s						
GYA				LR	LR		
	comp=Z,520nm,16.6s						
GYA				LR	LR		
	comp=Z,510nm,16.4s						
SUKH	Sukhothai	24.02	129	P	P	19 07 05.2	+4.9
	comp=Z,4.3nm,1.0s						
ULN	Ulaanbaatar	24.09	48	eP	P	19 07 01.5	+0.5
	comp=Z,8.8nm,0.8s						
ULN	Ulaanbaatar	24.09	48d	iP	P	19 07 02.6	+1.7
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AJN	Ajban	24.10	253	P	P	19 07 03.9	+2.9
TLY	Talaya	24.14	37	eP	P	19 07 01.2	0.0
	comp=Z,7.7nm,1.4s						
TLY	Talaya	24.14	37⇓	iP	P	19 07 02.6	+1.4
UTTA	Uttaradit	24.43	127	P	P	19 07 04.7	+0.6
	comp=Z,9.2nm,0.9s,comp=Z,66nm						
UMPA	Umpang Tak	24.50	133	P	P	19 07 07.2	+2.4
	comp=Z,6.4nm,0.8s,comp=Z,76nm						
ENH	Enshi	24.89	91	eP	P	19 07 08.4	+0.1
	comp=Z,12nm,0.9s						
UTHA	Uthaitani	25.36	133	P	P	19 07 13.5	+1.0
	comp=Z,20nm,0.8s,comp=Z,182nm						
PBKT	Sadao Pong	25.56	129	eP	P	19 07 14.6	+0.4
PBKT	Sadao Pong	25.56	129	P	P	19 07 15.1	+0.9
	comp=Z,16nm,1.0s,comp=Z,1µm						
LKRN	Lenkeran, Azer	25.71	289	P	P	19 07 20.8	+5.3
NONG	Nongkai	25.96	123	P	P	19 07 22.2	+4.2
	comp=Z,0.3nm,0.7s,comp=Z,73nm						
TIY	Taiyuan	26.08	73	eP	P	19 07 22.4	+3.4
TIY				S	S	19 11 54.4	+4.5
TIY				pmax	pmax		
	comp=Z,11nm,0.5s						
TIY				LR	LR		
	comp=Z,150nm,9.0s						
TIY				LR	LR		
	comp=Z,340nm,9.9s						
TIY				LR	LR		
	comp=Z,620nm,15.0s						
SRDT	SRDT	26.11	135	P	P	19 07 20.3	+1.0
	comp=Z,42nm,0.9s						
SVE	Sverdlovsk	26.24	335⇓	eP	P	19 07 21.1	+1.0
SVE				pmax	pmax		
	comp=Z,28nm,1.5s						
ARU	Arti	26.69	333	eP	P	19 07 24.4	+0.2
	comp=Z,9.5nm,0.8s						
ARU	Arti	26.69	333d	iP	P	19 07 24.4	+0.2
ARU						19 10 47.4	
ARU				S	S	19 11 59.6	+0.6
ARU				SS	SnSn	19 13 01.8	-0.5
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CHAI	Chaiyaphum	26.71	128	P	P	19 07 27.2	+2.5
	comp=Z,5.5nm,0.8s,comp=Z,51nm						
PALK	Pallekele	26.91	179	P	P	19 07 24.0	-2.5
PALK	Pallekele	26.91	179	P	P	19 07 24.0	-2.5
	comp=Z,11nm,1.0s,baz=297,slow=6.8,SNR=2.0						
SEKA	Sheki	27.01	295	P	P	19 07 29.5	+2.1
MNGR	Mingechevir, A	27.07	294	P	P	19 07 31.0	+3.2
SKNT	Sakolnakorn	27.29	123	P	P	19 07 35.4	+5.5
	comp=Z,6.2nm,1.1s						
ZKTA	Zakatala	27.47	295	P	P	19 07 33.9	+2.4
GANJ	Ganja	27.64	293	P	P	19 07 36.2	+3.2
NAX	Nakhchivan	28.27	290	P	P	19 07 43.0	+4.4
GNI	Garni	28.84	292c	iP	P	19 07 47.2	+3.4
GNI				pmax	pmax		
	comp=Z,73nm,1.7s						
GNI	Garni	28.84	292	LR	LR	19 21 47.4	
	comp=Z,134nm,19.3s,baz=46,slow=42						
UBPT	Khong Chiam	29.49	124	P	P	19 07 58.1	+8.6
NCK	Nalchik	29.86	299⇑	eP	P	19 07 54.6	+1.9
NCK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KBZ	Khabaz	30.39	299	P	P	19 07 59.0	+1.8
	comp=Z,2.5nm,0.9s,baz=135,slow=20,SNR=4.3						
NEY	Neytrino	30.47	298⇑	eP	P	19 08 01.0	+2.7
NEY				pmax	pmax		
	comp=Z,3.0nm,1.5s						
KVAR	Kislovodsk Arr	30.55	300	P	P	19 07 58.9	0.0
	comp=Z,1.2nm,0.4s,baz=32,slow=15,SNR=2.8						
KIV	Kislovodsk	30.56	300	eP	P	19 07 58.4	-0.6
	comp=Z,12nm,1.2s						
KIV	Kislovodsk	30.56	300	eP	P	19 07 59.9	+1.0
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,94nm,15.0s						
TRTT	Trang	31.79	142	P	P	19 08 11.8	+2.0
	comp=Z,4.6nm,0.9s						
KIRV	Kirov	31.82	329	P	P	19 08 10.2	+0.6
	comp=Z,22nm,0.7s,baz=118,slow=2.3,SNR=13						
NJ2	Nanjing	32.15	83	eP	P	19 08 13.3	+0.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VRH	Novokhopyorsk	32.57	313	eP	P	19 08 16.2	-0.2
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
VSR	Storozhevoye	34.12	312	eP	P	19 08 29.2	-0.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ANN	Anapa	34.38	301	eP	P	19 08 32.3	+0.1
ANN				e*PP	pP	19 08 37.9	-0.2
ANN				eS	S	19 14 00.1	+0.6
ANN				pmax	pmax		
	comp=Z,26nm,1.1s						
LPSR	Galich'ya Gora	34.61	315	eP	P	19 08 34.4	+0.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
PRGR	Permogore	35.14	332	eP	P	19 08 36.9	-1.7
PRGR				pmax	pmax		
	comp=Z,21nm,0.4s						
NRIK	Noril'sk	35.31	4	P	P	19 08 40.5	+0.5
	comp=Z,11nm,0.9s,baz=183,slow=6.9,SNR=11						
CN2	Changchun	35.87	61	eP	P	19 08 45.9	+0.8
MOS	Moscow	36.25	320	eP	P	19 08 48.4	+0.2
MOS				pmax	pmax		
	comp=Z,49nm,1.0s						
GSI	Gunungsitoli	36.56	150	eP	P	19 08 51.7	+0.5
OBN	Obninsk	36.64	318	eP	P	19 08 51.8	+0.2
	comp=Z,48nm,1.4s						
OBN	Obninsk	36.64	318	eP	P	19 08 52.2	+0.7
OBN				e		19 10 14.6	
OBN				e		19 11 13.7	
OBN				pmax	pmax		
	comp=Z,34nm,1.7s						
OBN	Obninsk	36.64	318	P	P	19 08 51.1	-0.4
	comp=Z,2.4nm,0.5s,baz=112,slow=19,SNR=5.8						
MMAI	Mount Meron Ar	37.23	281	PcP	PcP	19 11 18.1	+1.5
	comp=Z,2.3nm,0.7s,baz=64,slow=6.6,SNR=3.7						
KLMR	Klimovskoe	37.28	328	eP	P	19 08 55.7	-1.1
KLMR				e		19 10 19.9	
KLMR				pmax	pmax		
	comp=Z,16nm,1.2s						
KLMR	Klimovskoe	37.28	328	eP	P	19 08 55.8	-1.1
KLMR				AMP		19 08 58.8	
	comp=Z,16nm,1.2s						
KLMR				ePP	PP	19 10 20.0	-1.8
BR101	Keskin Array S	37.38	292	eP	P	19 08 58.4	+0.2
BR101				ePcP	PcP	19 11 16.7	-0.4
BR131	Keskin Array S	37.38	292	eP	P	19 08 57.9	-0.3
	comp=Z,7.4nm,1.0s						
BRTR	Keskin Array B	37.38	292	P	P	19 08 58.4	+0.2
	comp=Z,2.3nm,0.8s,baz=127,slow=7.4,SNR=8.8						
BRTR				PcP	PcP	19 11 16.7	-0.4
	comp=Z,0.6nm,0.6s,baz=114,slow=5.0,SNR=2.7						
KS15	Wonju Array Si	38.30	71	eP	P	19 09 05.7	-0.1
KSAR	Wonju Array Be	38.30	71	P	P	19 09 06.0	+0.1
KSAR	Wonju Array Be	38.30	71	P	P	19 09 06.0	+0.1
KSRS	Korea Array	38.33	71	P	P	19 09 06.0	-0.1
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,200nm,18.4s						
KSRS	Korea Array	38.33	71	P	P	19 09 06.0	-0.1
	comp=Z,2.9nm,0.8s,baz=276,slow=8.5,SNR=5.3						
KSRS				LR	LR	19 26 42.6	
	comp=Z,200nm,18.4s,baz=294,slow=39						
EIL	Elat	38.57	276	P	P	19 09 09.2	+1.0
	comp=Z,8.9nm,0.9s,baz=341,slow=5.5,SNR=5.8						
TMCR	Tamitsa	39.43	332	eP	P	19 09 15.4	+0.5
TMCR				pmax	pmax		
	comp=Z,11nm,0.6s						
AKASG	Malin Array Be	40.26	310	P	P	19 09 22.4	+0.4
AKASG						19 11 25.3	
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	40.26	310	P	P	19 09 22.4	+0.4
	comp=Z,9.7nm,0.5s,baz=79,slow=8.1,SNR=61						
AKASG				PcP	PcP	19 11 25.3	-0.3
	comp=Z,2.4nm,0.6s,baz=74,slow=3.9,SNR=6.9						
AKBB	Malin Array Si	40.26	310	eP	P	19 09 22.2	+0.2
	comp=Z,12nm,0.6s						
AKBB				ePcP	PcP	19 11 25.3	-0.3
KIEV	Kiev	40.27	310	eP	P	19 09 22.0	0.0
	comp=Z,12nm,0.6s						
KIEV	Kiev	40.27	310⇓	iP	P	19 09 22.6	+0.5
KIEV	Kiev	40.27	310	i P	P	19 09 22.7	+0.6
	SNR=14						
KIEV	Kiev	40.27	310d	iP	P	19 09 22.4	+0.3
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AK11	Malin Array Si	40.29	310	eP	P	19 09 21.4	-0.9
KLR	Kul'dur	40.32	52⇑	eP	P	19 09 22.5	0.0
KLR	Kul'dur	40.32	52	P	P	19 09 22.7	+0.1
	comp=Z,1.0nm,0.6s,baz=254,slow=5.7,SNR=3.9						
KLR				PcP	PcP	19 11 25.2	-0.6
	comp=Z,1.8nm,0.8s,baz=259,slow=5.2,SNR=5.0						
KLR				LR	LR	19 26 39.8	
	comp=Z,181nm,19.6s,baz=356,slow=37						
USRK	Ussuriysk Ar.	40.58	60	P	P	19 09 24.8	+0.1
	comp=Z,1.3nm,0.8s,baz=216,slow=9.0,SNR=2.6						
CFR	Carcaliu	40.97	301⇑	iP	P	19 09 29.6	+1.7
JNU	Nakatsue	41.67	77	P	P	19 09 32.4	-1.5
	comp=Z,10nm,0.8s,baz=323,slow=3.8,SNR=4.3						
VRI	Vrincioaia	41.91	303⇑	iP	P	19 09 38.4	+2.6
PLOR	Plostina	41.97	303⇑	iP	P	19 09 39.1	+2.9
NACGM	Naroch	42.12	316	e	P	19 09 37.0	-0.3
PRAR	RASCA	42.18	305⇑	iP	P	19 09 39.6	+1.7
BIZ	Bicaz	42.29	304⇑	iP	P	19 09 40.7	+1.9
MLR	Muntele Rosu	42.49	302	eP	P	19 09 41.5	+0.9
	comp=Z,37nm,0.9s						
MLR				PcP	PcP	19 11 34.0	+0.8
MLR	Muntele Rosu	42.49	302	eP	P	19 09 41.5	+0.9
MLR						19 11 34.0	
MLR				pmax	pmax		
	comp=Z,37nm,0.9s						
MLR	Muntele Rosu	42.49	302	P	P	19 09 41.7	+1.1
	comp=Z,30nm,0.8s,baz=117,slow=7.6,SNR=45						
MLR				PcP	PcP	19 11 34.0	+0.8
	comp=Z,2.3nm,0.6s,baz=208,slow=5.5,SNR=4.1						
DOPR	Dopca	42.84	303⇑	iP	P	19 09 45.4	+2.1
BURAR	Bucovina Array	42.86	305⇓	iP	P	19 09 45.1	+1.6
BUR04	Bucovina Ar. S	42.86	305	eP	P	19 09 43.7	+0.1
BUR08	Bucovina Ar. S	42.87	305	eP	P	19 09 44.5	+0.9
VOIR		43.12	302⇑	iP	P	19 09 47.6	+2.0
MTUR	Matau	43.13	302⇑	iP	P	19 09 48.0	+2.3
ARR	Arges	43.42	302⇑	iP	P	19 09 49.2	+1.2
LVV	L'vov	43.57	309	eP	P	19 09 50.2	+1.1
FIA1	FINESS Array S	43.60	326	eP	P	19 09 49.2	+0.1
	comp=Z,73nm,1.7s						
FIA0	FINESS Array S	43.61	326	eP	P	19 09 49.7	+0.5
FIA0	FINESS Array S	43.61	326	eP	P	19 09 49.7	+0.5
FINES	FINESS Array B	43.61	326	P	P	19 09 49.7	+0.5
	comp=Z,12nm,0.7s,baz=106,slow=8.9,SNR=36						
SUW	Suwalki	44.15	315	eP	P	19 09 53.0	-0.7
	comp=Z,24nm,0.8s						
SUW	Suwalki	44.15	315	eP	P	19 09 53.0	-0.7
SUW				pmax	pmax		
	comp=Z,24nm,0.8s						
KWP	Kalwaria Pacla	44.43	308	eP	P	19 09 57.3	+1.3
KWP	Kalwaria Pacla	44.43	308	eP	P	19 09 56.9	+0.8
	comp=Z,107nm,0.9s						
KWP	Kalwaria Pacla	44.43	308	eP	P	19 09 56.9	+0.8
KWP				pmax	pmax		
	comp=Z,107nm,0.9s						
DRGR		44.62	304⇑	iP	P	19 09 59.5	+1.8
TRPA	Tarpa	44.63	306⇑	iP	P	19 09 59.9	+2.3
UZH	Uzhgorod	44.76	307	eP	P	19 09 59.5	+0.9
UZH				e		19 10 08.0	
TIXI	Tiksi	45.09	20	eP	P	19 10 00.4	-0.6
	comp=Z,3.7nm,0.5s						
TIXI	Tiksi	45.09	20⇑	eP	P	19 10 01.9	+0.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIXI	Tiksi	45.09	20	P	P	19 10 01.1	+0.1
	comp=Z,2.3nm,0.5s,baz=240,slow=2.2,SNR=7.1						
TIXI				PcP	PcP	19 11 40.4	-1.0
	comp=Z,1.7nm,0.7s,baz=307,slow=0.9,SNR=3.3						
BZS	Buzias	45.50	303⇓	iP	P	19 10 06.6	+2.0
NIE	Niedzica	46.01	308	eP	P	19 10 10.6	+1.9
ARA0	ARCESS Array S	46.16	336	eP	P	19 10 09.9	+0.4
ARA0				ePcP	PcP	19 11 45.8	+0.7
ARCES	ARCESS Array B	46.16	336	P	P	19 10 09.9	+0.4
	comp=Z,5.3nm,0.6s,baz=97,slow=7.8,SNR=52						
ARCES				PcP	PcP	19 11 45.8	+0.7
	comp=Z,2.3nm,1.0s,baz=113,slow=6.0,SNR=3.2						
ARE0	ARCESS Array S	46.16	336	eP	P	19 10 10.3	+0.9
OJC	Ojcow	46.28	309	eP	P	19 10 11.7	+1.1
OJC	Ojcow	46.28	309	eP	P	19 10 11.0	+0.3
	comp=Z,8.1nm,0.6s						
OJC	Ojcow	46.28	309	eP	P	19 10 10.6	-0.1
PSZ	Piszkesteto	46.41	306⇑	iP	P	19 10 14.0	+2.1
MAJO	Matsushiro	46.56	70	eP	P	19 10 13.1	0.0
MAJO	Matsushiro	46.56	70⇓	eP	P	19 10 13.1	0.0
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAT	Matsushiro	46.56	70	P	P	19 10 12.7	-0.4
MJAR	Matsushiro Arr	46.56	70	P	P	19 10 13.1	0.0
	comp=Z,4.4nm,0.8s,baz=285,slow=10,SNR=11						
MJAR				LR	LR	19 32 11.0	
	comp=Z,56nm,18.3s,baz=215,slow=39						
KTK1	Kautokeino	46.75	335	eP	P	19 10 14.8	+0.7
VYHS	Vyhne	47.06	307	eP	P	19 10 18.2	+1.4
VYHS	Vyhne	47.06	307	eP	P	19 10 18.2	+1.4
HAMF	Hammerfest	47.12	338	eP	P	19 10 17.1	+0.2
MORH	Mrgy, Hungar	47.48	304	eP	P	19 10 19.1	-1.0
MORC	Moravsky Berou	47.77	309	eP	P	19 10 21.4	-1.0
	comp=Z,16nm,1.2s						
MORC	Moravsky Berou	47.77	309⇑	iP	P	19 10 23.7	+1.4
MORC	Moravsky Berou	47.77	309	eP	P	19 10 21.4	-1.0
MORC				pmax	pmax		
	comp=Z,16nm,1.2s						
MORC	Moravsky Berou	47.77	309	eP	P	19 10 23.8	+1.4
KRLC	Kraliky	48.23	309	eP	P	19 10 27.4	+1.5
KRLC	Kraliky	48.23	309	eP	P	19 10 27.4	+1.5
TRO	Tromso	48.39	336	eP	P	19 10 27.3	+0.5
VRAC	Vranov	48.44	308⇑	iP	P	19 10 29.8	+2.3
VRAC	Vranov	48.44	308	eP	P	19 10 29.5	+2.0
VRAC	Vranov	48.44	308	P	P	19 10 28.5	+1.1
	comp=Z,9.7nm,0.9s,baz=109,slow=5.7,SNR=7.7						
KSP	Ksiaz	48.46	310	eP	P	19 10 29.1	+1.5
KSP	Ksiaz	48.46	310	eP	P	19 10 29.1	+1.5
DPC	Dobruska-Polom	48.49	310	eP	P	19 10 30.0	+2.1
DPC				ex	x	19 10 32.9	
DPC	Dobruska-Polom	48.49	310	eP	P	19 10 30.0	+2.1
KRUC	Moravsky	48.59	308	eP	P	19 10 30.6	+1.9
UPC	Upice	48.67	310	eP	P	19 10 31.1	+1.8
UPC	Upice	48.67	310	eP	P	19 10 31.1	+1.8
CONA	Conrad Observa	49.10	307	i pP	P	19 10 34.3	+1.5
	comp=Z,13nm,0.9s						
STEI	Steigen	49.39	333	eP	P	19 10 34.6	+0.2
ARSA	Arzberg	49.44	306	i pP	P	19 10 37.0	+1.8
	comp=Z,8.8nm,1.3s						
MOR8	Moi Rana	49.48	331	eP	P	19 10 35.2	0.0
BJO	Bjornoya	49.64	342	eP	P	19 10 37.0	+0.7
PRU	Pruhonice	49.67	309	eP	P	19 10 35.4	-1.5
PRU				ex	x	19 10 38.7	
PRU	Pruhonice	49.67	309	eP	P	19 10 35.4	-1.5
SOKA	Soboth	49.87	305	i pP	P	19 10 40.2	+1.6
	comp=Z,25nm,0.9s,SNR=14						
BRG	Berggiesshubel	49.93	311	i P	P	19 10 40.4	+1.4
	comp=Z,20nm,1.3s						
BRG				e		19 12 00.3	
	comp=Z,5.3nm,0.9s						
BRG	Berggiesshubel	49.93	311	i P	P	19 10 40.3	+1.4
BRG				e		19 12 00.3	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,20nm,0.9s						
KONS	Konsvik	50.04	331	eP	P	19 10 39.9	+0.5
LOF	Lofoten	50.05	333	eP	P	19 10 39.8	+0.3
MOA	Molln	50.18	307	i P	P	19 10 41.5	+0.7
	comp=Z,5.7nm,0.7s,SNR=5.4						
OBKA	Obir	50.22	305	i pP	P	19 10 43.2	+1.9
	comp=Z,14nm,1.1s						
GEC2	GERESS Array S	50.38	308	eP	P	19 10 44.0	+1.5
	comp=Z,11nm,1.1s						
GERES	GERESS Array B	50.38	308	P	P	19 10 42.6	+0.2
	comp=Z,4.5nm,0.9s,baz=79,slow=6.9,SNR=22						
GERES				PcP	PcP	19 12 01.9	+1.1
	comp=Z,0.2nm,0.5s,baz=108,slow=6.5,SNR=3.5						
GEA0	GERESS Array S	50.38	308	eP	P	19 10 43.1	+0.6
NSS	Namsos	50.39	329	eP	P	19 10 42.6	+0.5
KHC	Kasperske Hory	50.42	308	eP	P	19 10 43.5	+0.8
	comp=Z,2.1nm,0.8s						
KHC	Kasperske Hory	50.42	308	eP	P	19 10 44.4	+1.7
KHC				ex	x	19 10 47.5	
KHC	Kasperske Hory	50.42	308	eP	P	19 10 43.5	+0.8
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CLL	Collm	50.46	311	eP	P	19 10 44.0	+1.1
CLL				epP	pP	19 10 48.0	-0.9
CLL	Collm	50.46	311	eP	P	19 10 44.0	+1.1
NC602	NORSAR Array S	50.55	324	eP	P	19 10 43.7	+0.3
NB2	NORSAR Subarra	50.70	324	P	P	19 10 44.4	-0.2
	comp=Z,3.2nm,0.6s,baz=88,slow=7.4						
NB2	NORSAR Subarra	50.70	324	P	P	19 10 44.9	+0.3
NB2	NORSAR Subarra	50.70	324	P	P	19 10 44.4	-0.2
	baz=88,slow=7.4						
NB200	NORSAR Array S	50.70	324	eP	P	19 10 44.6	0.0
NB200				ePcP	PcP	19 12 02.0	+0.3
NOA	NORSAR Array B	50.70	324	P	P	19 10 44.6	0.0
	comp=Z,4.9nm,0.7s,baz=89,slow=7.5,SNR=22						
NOA				PcP	PcP	19 12 02.0	+0.3
	comp=Z,1.2nm,0.8s,baz=89,slow=4.0,SNR=2.2						
NOA				LR	LR	19 33 20.9	
	comp=Z,122nm,19.5s,baz=5.0,slow=37						
NC204	NORSAR Array S	50.91	324	eP	P	19 10 46.0	-0.2
	comp=Z,86nm,1.8s						
HSPB	Hornsund (broa	51.24	345	eP	P	19 10 49.2	+0.8
SPA0	Spitsbergen Ar	51.41	346	eP	P	19 10 50.1	+0.4
SPITS	Spitsbergen Ar	51.41	346	LR	LR	19 35 07.9	
	comp=Z,151nm,18.3s,baz=0.0,slow=39						
ABTA	Abfaltersbach	51.55	306	i pP	P	19 10 52.7	+1.4
	comp=Z,7.8nm,1.1s						
KONO	Kongsberg	51.56	322	eP	P	19 10 51.3	+0.3
DOMB	Dombas	51.70	325	eP	P	19 10 52.1	+0.1
SEY	Seymchan	51.98	34⇑	iP	P	19 10 54.6	+0.5

WATA	**Walderalm**	**52.06**	**306**	*i* P	**P**	**19 10 55.6**	**+0.5**
	comp=Z,1.8nm,0.5s						
SQTA	**Sankt Quirin**	**52.33**	**306**	*i* P	**P**	**19 10 57.4**	**+0.3**
	comp=Z,3.2nm,0.5s						
MOTA	**Moosalm**	**52.37**	**307**	*i* P	**P**	**19 10 57.4**	**0.0**
	comp=Z,3.1nm,0.6s						
KBS	**Kingsbay**	**52.46**	**347**	*e*P	**P**	**19 10 57.9**	**+0.4**
RETA	**Reutte**	**52.57**	**307**	*i* P	**P**	**19 10 59.0**	**+0.2**
	comp=Z,4.0nm,0.7s						
FETA	**Feichten**	**52.69**	**306**	*i* P	**P**	**19 11 00.2**	**+0.3**
	comp=Z,3.1nm,0.6s,SNR=5.6						
HYA	**Hoyanger**	**53.13**	**324**	*e*P	**P**	**19 11 02.8**	**+0.2**
BLS5	**Blasjo**	**53.18**	**322**	*e*P	**P**	**19 11 03.1**	**0.0**
DAVA	**Damuels**	**53.20**	**307**	*i* P	**P**	**19 11 04.2**	**+0.6**
	comp=Z,12nm,0.9s,SNR=5.1						
DAVOX	**Davos/Dischmat**	**53.31**	**306**	P	**P**	**19 11 04.8**	**+0.3**
	comp=Z,3.9nm,0.5s,baz=79,slow=5.2,SNR=9.8						
KMBO	**Kilima Mbogo**	**53.63**	**238**	*e*P	**P**	**19 11 07.8**	**+0.6**
	comp=Z,6.0nm,0.9s						
KMBO	**Kilima Mbogo**	**53.63**	**238**	P	**P**	**19 11 08.2**	**+1.0**
	comp=Z,5.8nm,0.9s,baz=34,slow=9.1,SNR=12						
BER	**Bergen**	**53.63**	**323**	*e*P	**P**	**19 11 06.6**	**+0.3**
ASK	**Askoy**	**53.69**	**324**	*e*P	**P**	**19 11 07.1**	**+0.4**
PEA1	**Petropavlovsk-**	**56.14**	**45**	*e*P	**P**	**19 11 24.2**	**-0.4**
PETK	**Petropavlovsk-**	**56.14**	**45**	P	**P**	**19 11 24.2**	**-0.4**
	comp=Z,3.6nm,0.8s,baz=232,slow=6.1,SNR=5.1						
BILL	**Bilibino**	**57.17**	**27**	*e*P	**P**	**19 11 32.6**	**+0.9**
	comp=Z,5.9nm,0.9s						
BILL	**Bilibino**	**57.17**	**27**⇑	*i*P	**P**	**19 11 32.8**	**+1.1**
BILL				pmax	pmax		
	comp=Z,14nm,2.5s						
MBAR	**Mbarara**	**57.98**	**244**	*e*P	**P**	**19 11 40.0**	**+1.6**
	comp=Z,15nm,0.9s						
MBAR	**Mbarara**	**57.98**	**244**	*e*P	**P**	**19 11 40.0**	**+1.6**
MBAR				pmax	pmax		
	comp=Z,15nm,0.9s						
EKA	**Eskdalemuir Ar**	**59.09**	**319**	P	**P**	**19 11 45.8**	**+0.4**
	comp=Z,4.1nm,0.6s,baz=78,slow=7.1,SNR=8.9						
BATI	**Baumata**	**60.37**	**129**	LR	LR	19 42 47.1	
	comp=Z,136nm,18.7s,baz=148,slow=41						
SOEI	**Soe**	**60.42**	**128**	*e*P	**P**	**19 11 52.4**	**-2.7**
	comp=Z,18nm,0.9s						
SOEI	**Soe**	**60.42**	**128**	P	**P**	**19 11 53.5**	**-1.6**
GUMO	**Guam**	**61.47**	**93**	LR	LR	19 39 44.1	
	comp=Z,95nm,21.9s,baz=139,slow=37						
ESDC	**Sonseca Array**	**65.18**	**302**	P	**P**	**19 12 25.8**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=57,slow=6.8,SNR=6.5						
SUMG	**Summit**	**65.50**	**343**	*e*P	**P**	**19 12 29.0**	**+0.5**
	comp=Z,14nm,1.2s						
SUMG	**Summit**	**65.50**	**343**	*e*P	**P**	**19 12 29.0**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,14nm,1.2s						
TULEG	**Thule**	**67.74**	**353**	*e*P	**P**	**19 12 41.5**	**-0.8**
	comp=Z,8.6nm,0.7s						
ANM	**Nome**	**68.95**	**25**	*e*P	**P**	**19 12 50.8**	**+0.8**
	comp=Z,6.9nm,0.8s						
ANM	**Nome**	**68.95**	**25**	*e*P	**P**	**19 12 50.8**	**+0.8**
ANM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
IM3	**Indian Mountai**	**71.74**	**20**	*e*P	**P**	**19 13 07.2**	**+0.2**
COLD	**Coldfoot**	**71.81**	**18**	*e*P	**P**	**19 13 08.1**	**+0.6**
	comp=Z,7.4nm,0.9s						
MLY	**Manley**	**73.30**	**20**	*e*P	**P**	**19 13 16.6**	**+0.2**
	comp=Z,13nm,0.8s						
TOA1	**Torodi Ar. Sit**	**73.44**	**275**	*e*P	**P**	**19 13 16.3**	**-1.7**
TOA1				*e*PP	**PP**	**19 15 57.5**	**-4.2**
TOA0	**Torodi Ar. Sit**	**73.44**	**275**	*e*P	**P**	**19 13 16.0**	**-2.0**
TORD	**Torodi Ar. Bea**	**73.44**	**275**	P	**P**	**19 13 16.3**	**-1.7**
	comp=Z,10nm,0.6s,baz=35,slow=4.3,SNR=87						
TORD				PP	**PP**	**19 15 57.5**	**-4.2**
	comp=Z,1.5nm,1.0s,baz=57,slow=7.0,SNR=3.5						
FYU	**Fort Yukon**	**73.58**	**17**	*e*P	**P**	**19 13 18.2**	**+0.2**
	comp=Z,23nm,1.0s						
BPAW	**Bear Paw Mtn.**	**73.91**	**21**	*e*P	**P**	**19 13 20.4**	**+0.4**
	comp=Z,14nm,1.0s						
MDM	**Murphy Dome**	**74.05**	**19**	*e*P	**P**	**19 13 20.8**	**0.0**
	comp=Z,13nm,1.0s						
CAST	**Castle Rocks**	**74.09**	**22**	*e*P	**P**	**19 13 21.4**	**+0.4**
	comp=Z,20nm,1.0s						
COLA	**College**	**74.22**	**19**	*e*P	**P**	**19 13 21.8**	**+0.1**
	comp=Z,30nm,0.8s						
COLA	**College**	**74.22**	**19**	*de*P	**P**	**19 13 21.9**	**+0.2**
COLA				pmax	pmax		
	comp=Z,31nm,0.9s						
BWN	**Browne**	**74.30**	**20**	*e*P	**P**	**19 13 21.8**	**-0.4**
	comp=Z,33nm,0.8s						
PRP	**Porcupine Dome**	**74.34**	**18**	*e*P	**P**	**19 13 22.9**	**+0.3**
	comp=Z,4.7nm,0.7s						
WR1	**Warramunga Arr**	**74.45**	**128**	*e*P	**P**	**19 13 23.0**	**-0.7**
	comp=Z,10nm,1.0s						
WRA	**Warramunga Arr**	**74.45**	**128**	P	**P**	**19 13 23.0**	**-0.7**
	comp=Z,4.0nm,0.9s,baz=320,slow=6.3,SNR=31						
WRAB	**Tennant Creek**	**74.46**	**128**⇓	*e*P	**P**	**19 13 23.2**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,15nm,2.5s						
WB2	**Warramunga Arr**	**74.46**	**128**	*e*P	**P**	**19 13 22.5**	**-1.3**
WRH	**Wood River Hil**	**74.47**	**20**	*e*P	**P**	**19 13 22.8**	**-0.4**
	comp=Z,9.1nm,0.8s						
IL1	**Eielson Array**	**74.56**	**19**	*e*P	**P**	**19 13 23.0**	**-0.8**
ILAR	**Eielson Array**	**74.56**	**19**	P	**P**	**19 13 23.1**	**-0.7**
	comp=Z,10nm,0.8s,baz=314,slow=4.8,SNR=92						
ILB	**Eielson Array**	**74.56**	**19**	*e*P	**P**	**19 13 23.0**	**-0.8**
INK	**Inuvik**	**74.61**	**12**	*e*P	**P**	**19 13 23.7**	**-0.2**
	comp=Z,7.8nm,0.8s						
INK	**Inuvik**	**74.61**	**12**	*e*P	**P**	**19 13 23.7**	**-0.2**
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
INK	**Inuvik**	**74.61**	**12**	P	**P**	**19 13 24.1**	**+0.2**
	comp=Z,5.5nm,0.7s,baz=355,slow=5.6,SNR=18						
HDA	**Harding Lake**	**74.83**	**19**	*e*P	**P**	**19 13 24.0**	**-1.4**
	comp=Z,7.5nm,0.9s						
DHY	**Denali Highway**	**75.75**	**20**	*e*P	**P**	**19 13 30.6**	**-0.2**
	comp=Z,10.0nm,0.8s						
RIDG	**Independ'e Rid**	**75.93**	**19**	*e*P	**P**	**19 13 30.8**	**-0.9**
	comp=Z,22nm,0.9s						
SUA	**Susitna One**	**75.96**	**23**	*e*P	**P**	**19 13 31.8**	**-0.2**
	comp=Z,15nm,0.8s						
SCRK	**Sand Creek**	**75.97**	**19**	*e*P	**P**	**19 13 31.5**	**-0.6**
	comp=Z,12nm,0.7s						
SML	**Sawmill**	**76.45**	**22**	*e*P	**P**	**19 13 34.3**	**-0.4**
	comp=Z,26nm,0.8s						
SML	**Sawmill**	**76.45**	**22**	*e*P	**P**	**19 13 34.3**	**-0.4**
SML				pmax	pmax		
	comp=Z,26nm,0.8s						
RC01	**Rabbit Creek A**	**76.56**	**23**	*e*P	**P**	**19 13 35.5**	**+0.2**
	comp=Z,13nm,0.8s						
AS31	**Alice Springs**	**76.86**	**131**	*e*P	**P**	**19 13 36.2**	**-1.3**
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**76.86**	**131**	P	**P**	**19 13 36.8**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=316,slow=5.7,SNR=23						
AS01	**Alice Springs**	**76.89**	**131**	*e*P	**P**	**19 13 35.2**	**-2.5**
HARP	**HAARP**	**76.91**	**20**	*e*P	**P**	**19 13 37.5**	**+0.3**
	comp=Z,50nm,1.0s						
DAWY	**Dawson**	**77.05**	**17**	*e*P	**P**	**19 13 37.6**	**-0.5**
	comp=Z,8.2nm,0.8s						
TSUM	**Tsumeb**	**79.97**	**239**	*e*P	**P**	**19 13 54.8**	**0.0**
	comp=Z,8.7nm,1.0s						
BOSA	**Boshof**	**81.44**	**227**	*e*P	**P**	**19 14 02.0**	**-0.6**
	comp=Z,15nm,0.7s						
BOSA	**Boshof**	**81.44**	**227**	*e*P	**P**	**19 14 02.0**	**-0.6**
BOSA				pmax	pmax		
	comp=Z,15nm,0.7s						
BOSA	**Boshof**	**81.44**	**227**	P	**P**	**19 14 02.5**	**0.0**
	comp=Z,14nm,0.6s,baz=34,slow=3.8,SNR=41						
SKAG	**Skagway**	**82.00**	**18**	*e*P	**P**	**19 14 04.9**	**0.0**
	comp=Z,16nm,1.0s						
DBIC	**Dimbokro**	**82.36**	**273**	*e*P	**P**	**19 14 07.2**	**-0.4**
	comp=Z,13nm,1.1s						
DBIC	**Dimbokro**	**82.36**	**273**	*e*P	**P**	**19 14 07.2**	**-0.4**
DBIC				pmax	pmax		
	comp=Z,13nm,1.1s						
DBIC	**Dimbokro**	**82.36**	**273**	P	**P**	**19 14 07.5**	**-0.1**
	comp=Z,7.7nm,0.8s,baz=27,slow=6.1,SNR=8.7						
KIC	**Kosan Boka**	**82.43**	**273**	*e*PKP2	**P**	**19 14 08.4**	**+0.4**
	comp=Z,46nm,1.4s						
TIC	**Toumodi**	**82.51**	**273**	*e*PKP2	**P**	**19 14 08.7**	**+0.3**
YKW3	**Yellowknife Ar**	**82.72**	**7**	*e*P	**P**	**19 14 07.8**	**-0.9**
	comp=Z,9.6nm,0.9s						
CTA	**Charters Tower**	**82.73**	**120**	P	**P**	**19 14 09.1**	**-0.3**
	comp=Z,7.6nm,0.6s,baz=329,slow=6.3,SNR=8.8						
LIC	**Lamto**	**82.75**	**273**	*e*PKP2	**P**	**19 14 09.7**	**0.0**
	comp=Z,48nm,1.3s						
YKA	**Yellowknife Ar**	**82.78**	**7**	P	**P**	**19 14 08.5**	**-0.5**
	comp=Z,6.1nm,0.7s,baz=342,slow=5.1,SNR=110						
YKB5	**Yellowknife Ar**	**82.78**	**7**	*e*P	**P**	**19 14 07.3**	**-1.7**
SCHQ	**Schefferville**	**86.85**	**342**	*e*P	**P**	**19 14 27.4**	**-2.3**
	comp=Z,33nm,1.6s						
SCHQ	**Schefferville**	**86.85**	**342**	P	**P**	**19 14 29.1**	**-0.6**
	comp=Z,4.8nm,0.5s,baz=39,slow=4.5,SNR=11						
STKA	**Stephens Creek**	**87.46**	**132**	*e*P	**P**	**19 14 30.7**	**-2.1**
	comp=Z,0.9nm,0.6s						
STKA	**Stephens Creek**	**87.46**	**132**	*e*P	**P**	**19 14 30.7**	**-2.1**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**87.46**	**132**	P	**P**	**19 14 31.7**	**-1.1**
	comp=Z,3.3nm,0.5s,baz=334,slow=4.4,SNR=12						
FFC	**Flin Flon**	**91.31**	**1**	*e*P	**P**	**19 14 49.8**	**-0.9**
	comp=Z,14nm,1.3s						
FFC	**Flin Flon**	**91.31**	**1**	*i* P	**P**	**19 14 50.9**	**+0.2**
ULM	**Lac du Bonnet**	**95.75**	**358**	P	**P**	**19 15 10.0**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=328,slow=9.5,SNR=5.3						
SDV	**Santo Domingo**	**129.01**	**322**	*e*PKPdf	**PKPdf**	**19 20 53.2**	**-0.8**
TRQA	**Tornquist**	**149.53**	**252**	*e*PKPdf	**PKPdf**	**19 21 30.1**	**0.0**
TRQA				*e*PKPbc	**PKPbc**	**19 21 34.8**	**+0.2**
GO06	**Curarrehue**	**156.95**	**249**	*e*PKPdf	**PKPdf**	**19 21 40.8**	**-0.1**

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*SJA **06** 19:04:20.6±0.6, 32°.22S×71°.36W, h10^{km}±7^{km}, ML3.3, MW3.7*

*GUC **06** 19:04:21.5±0.4, 32°.24S×71°.13W, h30^{km}±5^{km}, ML3.4*

ISC 06 19:04:16.2±3.5**, 32°.25S**±0°.04×**71°.6W**±0°.2**, h2**^{km}±15^{km}**, n18, σ1^{s}27**/27**, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.89**	**144**⇑	*e*P	**Pn**	**19 04 36.7**	**+0.7**
ROCH				*e*S	**Sb**	**19 04 48.2**	**+1.3**
ROCH				IAML		19 04 49.9	
	comp=N,4µm,0.2s						
ROC1	**El Roble**	**0.89**	**145**	*i* P	**Pn**	**19 04 36.8**	**+0.8**
ROC1				*i* S	**Sb**	**19 04 48.3**	**+1.3**
PEL	**Peldehue**	**1.19**	**139**	*i* P	**Pn**	**19 04 40.9**	**+0.9**
PEL				*i* S	**Sn**	**19 04 56.7**	**-0.3**
PEL	**Peldehue**	**1.19**	**139**⇓	*i*P	**Pn**	**19 04 40.8**	**+0.8**
PEL				*e*S	**Sg**	**19 04 55.2**	**+0.5**
PEL				IAML		19 04 56.0	
	comp=N,2µm,0.5s						
CMCH	**Combarbala**	**1.20**	**27**⇑	*e*P	**Pn**	**19 04 41.6**	**+1.5**
CMCH				*e*S	**Sn**	**19 04 56.8**	**-0.2**
CLCH	**Cerro Calan**	**1.47**	**142**	*e*P	**Pn**	**19 04 44.8**	**+1.0**
CLCH				*e*S	**Sb**	**19 05 01.9**	**-1.6**
CLCH				IAML		19 05 03.3	
	comp=N,1µm,0.4s						
FCH	**Farellones**	**1.56**	**134**⇓	*e*P	**Pn**	**19 04 45.9**	**+0.5**
FCH				*e*S	**Sn**	**19 05 04.4**	**-1.9**
FCH				IAML		19 05 06.6	
	comp=N,593nm,0.2s						
AUSP	**Uspallata**	**1.90**	**90**	*i* P	**Pg**	**19 04 52.4**	**-0.2**
LMEL	**Las Melosas**	**1.99**	**143**	*e*P	**Pn**	**19 04 52.8**	**+1.6**
LMEL				*e*S	**Sn**	**19 05 16.4**	**-0.4**
LMEL				IAML		19 05 21.4	
	comp=N,971nm,0.1s						
RTLS	**Leoncito**	**2.03**	**78**	*i* P	**Pb**	**19 04 54.2**	**+0.1**
RTLS				IAML		19 05 23.1	
	comp=Z,331nm,0.6s						
GO04	**Tololo Observa**	**2.19**	**19**⇑	*i*P	**Pn**	**19 04 55.4**	**+1.4**
GO04				*e*S	**Sb**	**19 05 23.7**	**-0.7**
ARCO	**CERRO ARCO**	**2.35**	**105**	*i* P	**Pb**	**19 04 59.0**	**-0.5**
ARCO				IAML		19 05 36.7	
	comp=Z,157nm,0.3s						
ASAL	**Salagasta**	**2.39**	**99**	*i* P	**Pb**	**19 04 59.2**	**-0.8**
AAGR	**Agrelo**	**2.50**	**110**	*i* P	**Pb**	**19 05 01.3**	**-0.7**
RTCV	**Cerro Valdivia**	**2.65**	**82**	*i* P	**Pb**	**19 05 03.0**	**-1.5**
ACCO	**Cerro Coronel**	**2.75**	**54**	*i* P	**Pb**	**19 05 05.1**	**-1.2**
AMOG	**MOGNA**	**2.98**	**65**	*i* P	**Pn**	**19 05 07.3**	**+2.7**
ACDV	**Cuesta del Vie**	**2.98**	**47**	*i* P	**Pb**	**19 05 08.4**	**-1.9**

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*ISCJB **06** 19:05:29.2±0.4, 34°.41N±0°.05×80°.58E±0°.07, h10^{km}, mb3.8/16, Error ellipse: s-maj=8.7km s-min=6.8km az=150.1*

*IDC **06** 19:05:29.1±0.8, 34°.32N×80°.56E, h0^{km}, mb3.8/13, mb1 3.9/17, mb1mx3.7/53, mbtmp3.7/17, ML3.5/3, Error ellipse: s-maj=25.9km s-min=16.5km az=56.0*

*NEIC **06** 19:05:30.7±0.3, 34°.35N×80°.61E, h10^{km}, mb4.2/5, Error ellipse: s-maj=6.3km s-min=4.8km az=57.0*

ISC 06 19:05:30.6±0.7**, 34°.34N**±0°.09×**80°.59E**±0°.09**, h10**^{km}**, n47, σ0^{s}72**/47**, mb3.9**/17**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIL	**Nilore**	**6.13**	**266**	*e*Pn	**Pn**	**19 07 02.3**	**+0.9**
TARG	**Taragay, Kyrgy**	**7.70**	**344**	*e*Pn	**Pn**	**19 07 23.5**	**+0.4**
NRN	**Naryn**	**7.95**	**334**	*e*Pn	**Pn**	**19 07 27.0**	**+0.4**
GAR	**Garm**	**9.47**	**302**	*e*Pn	**Pn**	**19 07 48.0**	**+0.8**
MAKZ	**Makanchi**	**12.50**	**4**	*e*Pn	**Pn**	**19 08 28.8**	**+0.3**
MK31	**Makanchi Array**	**12.51**	**5**	*e*Pn	**Pn**	**19 08 29.9**	**+1.3**
MK32	**Makanchi Array**	**12.51**	**5**	*e*Pn	**Pn**	**19 08 29.1**	**+0.4**
MKAR	**Makanchi Array**	**12.51**	**5**	*e*Pn	**Pn**	**19 08 29.9**	**+1.3**
MKAR	**Makanchi Array**	**12.51**	**5**	Pn	**Pn**	**19 08 29.1**	**+0.4**
	0.3nm,0.3s,baz=180,slow=12,SNR=4.2						
KURBB	**Kurchatov Arra**	**16.34**	**355**	Pn	**Pn**	**19 09 18.9**	**-1.1**
	baz=178,slow=13,SNR=2.7						
KURK	**Kurchatov**	**16.43**	**356**	*e*Pn	**Pn**	**19 09 18.9**	**-2.2**
GEYT	**Alibeck**	**18.49**	**288**	P	**Pn**	**19 09 47.3**	**+0.3**
	0.3nm,0.3s,baz=124,slow=21,SNR=3.8						
ZALV	**Zalesovo Beam**	**19.83**	**7**	P	**P**	**19 10 00.8**	**-0.5**
	0.3nm,0.3s,baz=204,slow=14,SNR=2.8						
ZAA1	**Zalesovo Array**	**19.83**	**7**	*e*P	**P**	**19 10 00.8**	**-0.6**
BVAR	**Borovoye Array**	**20.04**	**342**	P	**P**	**19 10 03.1**	**-0.6**
	2.5nm,0.6s,baz=156,slow=13,SNR=8.9						
BRVK	**Borovoye**	**20.10**	**342**	*e*P	**P**	**19 10 04.5**	**+0.2**
	15nm,1.6s						
ABKAR	**Akbulak array**	**21.32**	**321**	*e*P	**P**	**19 10 18.3**	**+0.7**
CM31	**Chiang Mai Arr**	**22.75**	**129**	*e*P	**P**	**19 10 33.0**	**-0.1**
	3.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**22.75**	**129**	P	**P**	**19 10 35.1**	**+2.0**
	0.4nm,0.5s,baz=320,slow=11,SNR=3.0						
CM01	**Chiang Mai Arr**	**22.79**	**129**	*e*P	**P**	**19 10 34.1**	**+0.6**
AKTO	**Aktyubinsk**	**23.03**	**321**	P	**P**	**19 10 35.9**	**+0.1**
	3.8nm,0.8s,baz=108,slow=9.4,SNR=5.3						
AKTO	**Aktyubinsk**	**23.03**	**321**	*e*	**P**	**19 10 35.9**	**+0.1**
AKTO	**Aktyubinsk**	**23.03**	**321**	*e*PcP	**P**	**19 10 35.9**	**+0.1**
SONA0	**Songino Array**	**23.53**	**47**	*e*PcP	**P**	**19 10 40.9**	**-0.1**
SONM	**Songino Array**	**23.53**	**47**	PcP	**P**	**19 10 40.9**	**-0.1**
	1.2nm,0.5s,baz=229,slow=2.6,SNR=8.0						
SONA1	**Songino Array**	**23.54**	**47**	*e*P	**P**	**19 10 40.6**	**-0.5**
ULN	**Ulaanbaatar**	**23.94**	**48**	*e*P	**P**	**19 10 44.6**	**-0.5**
	1.9nm,0.8s						
AKASG	**Malin Array Be**	**40.37**	**310**	P	**P**	**19 13 08.3**	**-0.1**
	0.9nm,0.5s,baz=80,slow=8.0,SNR=4.1						
AKBB	**Malin Array Si**	**40.37**	**310**	*e*P	**P**	**19 13 08.2**	**-0.3**
	26nm,2.0s						
FIA0	**FINESS Array S**	**43.67**	**325**	*e*P	**P**	**19 13 35.7**	**+0.4**
FINES	**FINESS Array B**	**43.67**	**325**	P	**P**	**19 13 35.7**	**+0.4**
	1.4nm,0.7s,baz=123,slow=10,SNR=3.7						
ARA0	**ARCESS Array S**	**46.19**	**336**	*e*P	**P**	**19 13 56.0**	**+0.8**
ARCES	**ARCESS Array B**	**46.19**	**336**	P	**P**	**19 13 56.0**	**+0.8**
	2.0nm,1.0s,baz=103,slow=7.9,SNR=4.2						
NB200	**NORSAR Array S**	**50.77**	**324**	*e*P	**P**	**19 14 30.9**	**+0.2**
NOA	**NORSAR Array B**	**50.77**	**324**	P	**P**	**19 14 30.9**	**+0.2**
	0.4nm,0.7s,baz=90,slow=7.5,SNR=2.9						
TOA1	**Torodi Ar. Sit**	**73.61**	**275**	*e*P	**P**	**19 17 04.1**	**-0.4**
TOA0	**Torodi Ar. Sit**	**73.61**	**275**	*e*P	**P**	**19 17 04.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**73.61**	**275**	P	**P**	**19 17 04.1**	**-0.5**
	1.0nm,0.6s,baz=52,slow=4.9,SNR=7.7						
WR1	**Warramunga Arr**	**74.34**	**128**	*e*P	**P**	**19 17 08.7**	**+0.1**
	12nm,0.9s						
WRA	**Warramunga Arr**	**74.34**	**128**	P	**P**	**19 17 08.7**	**+0.1**
	0.3nm,0.6s,baz=319,slow=6.4,SNR=3.5						
ILAR	**Eielson Array**	**74.47**	**19**	P	**P**	**19 17 09.0**	**+0.2**
	1.0nm,0.7s,baz=316,slow=4.8,SNR=7.1						
ILB	**Eielson Array**	**74.47**	**19**	*e*P	**P**	**19 17 08.6**	**-0.2**
ASAR	**Alice Springs**	**76.75**	**131**	P	**P**	**19 17 21.8**	**-0.7**
	0.4nm,0.8s,baz=323,slow=5.8,SNR=3.3						
BOSA	**Boshof**	**81.59**	**227**	P	**P**	**19 17 48.8**	**-0.1**
	2.4nm,0.8s,baz=66,slow=3.8,SNR=3.4						
YKA	**Yellowknife Ar**	**82.73**	**7**	P	**P**	**19 17 54.2**	**0.0**
	0.8nm,0.8s,baz=343,slow=5.2,SNR=6.2						
YKB5	**Yellowknife Ar**	**82.73**	**7**	*e*P	**P**	**19 17 54.6**	**+0.4**
ZAIG	**Zacatecas**	**123.13**	**3**	*e*PKPdf	**PKPdf**	**19 24 27.1**	**-1.3**

IDC 06 19:06:16.1±4.6**, 10°.92S**×**165°.21E, h0**^{km}**, mb3.9**/3**, mb1 4.2**/3**, mb1mx3.6**/32**, mbtmp3.9**/3**, Error ellipse: s-maj=235.8km s-min=34.2km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.03**	**249**	P	P	19 12 35.8	0.0
	1.3nm,0.9s,baz=81,slow=9.1,SNR=5.9						
ASAR	**Alice Springs**	**32.38**	**243**	P	P	19 12 47.7	0.0
	1.6nm,0.7s,baz=68,slow=9.6,SNR=18						
ILAR	**Eielson Array**	**83.57**	**19**	P	P	19 18 45.8	0.0
	0.5nm,1.0s,baz=236,slow=6.4,SNR=4.0						

MEX 06 19:09:32.0±0.8**, 16°.40N**×**98°.21W, h17**^{km}±8^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.08**	**92**	*e*P	Pg	19 09 34.1	-1.3
PNIG				*i* S	Sg	19 09 37.1	-0.6
VHO	**Vista Hermosa**	**1.57**	**64**	*e*P	Pb	19 10 00.6	-0.1
CAIG	**El Cayaco**	**2.07**	**289**	*i* P	Pn	19 10 05.5	-0.5

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*IDC **06** 19:12:45.8±0.7, 11°.14S×165°.75E, h0^{km}, mb4.3/16, mb1 4.4/18, mb1mx4.3/38, mbtmp4.3/18, ML4.1/2, Error ellipse: s-maj=20.1km s-min=16.2km az=128.0*

*NEIC **06** 19:12:47.2±0.2, 11°.18S×165°.71E, h10^{km}, mb4.9/19, Error ellipse: s-maj=7.2km s-min=5.9km az=127.0*

*ISCJB **06** 19:12:48.5±0.3, 11°.29S±0°.05×165°.67E±0°.05, h30^{km}, mb4.7/36, Error ellipse: s-maj=7.6km s-min=6.9km az=164.8*

ISC 06 19:12:50.2±0.5**, 11°.20S**±0°.08×**165°.71E**±0°.08**, h30**^{km}**, n64, σ1^{s}10**/73**, mb4.7**/36**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.94**	**287**	*e*Pn	**Pn**	**19 14 15.8**	**-0.5**
HNR				*e*Sn	**Sn**	**19 15 23.9**	**+0.6**
HNR	**Honiara**	**5.94**	**287**	Pn	**Pn**	**19 14 16.4**	**+0.2**
	3.3nm,0.3s,baz=124,slow=18,SNR=8.9						
HNR				Sn	**Sn**	**19 15 23.9**	**+0.6**
	4.7nm,0.3s,baz=108,slow=19,SNR=2.4						
DZM	**Mont Dzumac**	**10.83**	**176**	*e*Pn	**Pn**	**19 15 22.9**	**-0.5**
DZM	**Mont Dzumac**	**10.83**	**176**	Pn	**Pn**	**19 15 23.5**	**+0.1**
	2.5nm,0.3s,baz=3.8,slow=15,SNR=18						
ONTNC	**Ouen Toro**	**11.06**	**176**	*e*Pn	**Pn**	**19 15 25.1**	**-1.4**
MSVF	**Nonsavu**	**13.59**	**120**	*e*Pn	Pn	19 15 54.0	-7.2
MANU	**Manus Island**	**20.35**	**295**	*e*P	**P**	**19 17 21.4**	**-3.1**
	114nm,1.4s						
CTA	**Charters Tower**	**20.70**	**242**	P	**P**	**19 17 28.1**	**-0.1**
	14nm,0.9s,baz=60,slow=14,SNR=6.4						
COEN	**Coen**	**22.17**	**261**	*e*P	**P**	**19 17 42.4**	**-1.7**
	14nm,0.9s						
URZ	**Urewera**	**28.81**	**161**	P	**P**	**19 18 46.9**	**+1.2**
	6.7nm,0.8s,baz=16,slow=15,SNR=3.2						
STKA	**Stephens Creek**	**30.31**	**224**	*e*P	**P**	**19 18 60.0**	**+0.9**
	0.9nm,0.8s						
STKA	**Stephens Creek**	**30.31**	**224**	P	**P**	**19 18 59.7**	**+0.6**
	3.1nm,0.7s,baz=19,slow=9.5,SNR=7.6						
THZ	**Tophouse**	**31.09**	**170**	*e*P	**P**	**19 19 07.3**	**+1.4**
	94nm,1.9s						
WRAB	**Tennant Creek**	**31.39**	**250**	*e*P	**P**	**19 19 08.0**	**-0.8**
	11nm,0.9s						
WB2	**Warramunga Arr**	**31.39**	**250**	*e*P	**P**	**19 19 07.9**	**-0.9**
WR1	**Warramunga Arr**	**31.40**	**250**	*e*P	**P**	**19 19 08.7**	**-0.2**
	12nm,0.9s						
WR1				*e*PcP	**PcP**	**19 22 04.1**	**+1.8**
WRA	**Warramunga Arr**	**31.40**	**250**	P	**P**	**19 19 08.7**	**-0.2**
	8.1nm,0.8s,baz=80,slow=9.2,SNR=27						
WRA				PcP	**PcP**	**19 22 04.1**	**+1.8**
	0.3nm,0.7s,baz=79,slow=3.7,SNR=2.6						
AS31	**Alice Springs**	**32.69**	**243**	*e*P	**P**	**19 19 19.6**	**-0.7**
	1.0nm,1.1s						
AS31				*e*PcP	**PcP**	**19 22 06.2**	**+0.5**
ASAR	**Alice Springs**	**32.69**	**243**	P	**P**	**19 19 19.6**	**-0.7**
	2.1nm,0.8s,baz=74,slow=9.4,SNR=19						
ASAR				PcP	**PcP**	**19 22 06.2**	**+0.5**
	0.3nm,0.8s,baz=90,slow=2.8,SNR=2.9						
MQZ	**McQueen's Vall**	**32.94**	**171**	*e*P	**P**	**19 19 19.7**	**-2.3**
	48nm,1.4s						
FITZ	**Fitzroy Crossi**	**39.31**	**255**	*e*P	**P**	**19 20 18.3**	**+1.3**
	11nm,1.3s						
FITZ	**Fitzroy Crossi**	**39.31**	**255**	P	**P**	**19 20 17.5**	**+0.6**
	3.4nm,0.9s,baz=111,slow=8.6,SNR=4.1						
ASAJ	**Asahikawa**	**58.93**	**341**	P	**P**	**19 22 46.1**	**-0.6**
	4.8nm,1.0s,baz=72,slow=20						
IPM	**Ipoh**	**66.22**	**280**	*e*P	**P**	**19 23 36.6**	**+0.6**
	14nm,0.9s						
CM01	**Chiang Mai Arr**	**72.12**	**294**	*e*P	**P**	**19 24 11.8**	**-0.7**
CM31	**Chiang Mai Arr**	**72.15**	**294**	*e*P	**P**	**19 24 14.8**	**+2.1**
CMAR	**Chiang Mai Arr**	**72.15**	**294**	P	**P**	**19 24 14.4**	**+1.8**
	2.3nm,0.8s,baz=121,slow=4.7,SNR=15						
CMMT	**Chiang Mai**	**72.26**	**294**	P	**P**	**19 24 16.4**	**+3.1**
CHTO	**Chiang Mai**	**72.26**	**294**	*e*P	**P**	**19 24 12.6**	**-0.7**
	3.4nm,1.1s						
CHTO	**Chiang Mai**	**72.26**	**294**	P	**P**	**19 24 16.5**	**+3.2**
	15nm,1.5s						
GAMB	**Gambell**	**76.73**	**10**	*e*P	**P**	**19 24 38.9**	**+0.7**
	7.6nm,0.9s						
SONA0	**Songino Array**	**78.78**	**324**	*e*P	**P**	**19 24 49.8**	**-0.4**
SONM	**Songino Array**	**78.78**	**324**	P	**P**	**19 24 49.8**	**-0.4**
	0.8nm,0.8s,baz=147,slow=4.5,SNR=5.5						
QSPA	**South Pole Qui**	**78.80**	**180**	P	**P**	**19 24 49.9**	**-0.2**
	3.1nm,1.0s,baz=41,slow=6.5,SNR=4.9						
BILL	**Bilibino**	**79.04**	**0**	*e*P	**P**	**19 24 51.4**	**+0.3**
	7.2nm,1.0s						
CAST	**Castle Rocks**	**81.11**	**18**	*e*P	**P**	**19 25 01.8**	**-0.5**
	14nm,1.5s						
WRH	**Wood River Hil**	**83.09**	**18**	*e*P	**P**	**19 25 13.1**	**+0.4**
	6.7nm,0.9s						
MDM	**Murphy Dome**	**83.39**	**18**	*e*P	**P**	**19 25 14.7**	**+0.5**
	6.7nm,0.9s						
HDA	**Harding Lake**	**83.40**	**19**	*e*P	**P**	**19 25 14.1**	**-0.2**
	13nm,0.9s						
RIDG	**Independ'e Rid**	**83.63**	**20**	*e*P	**P**	**19 25 16.1**	**+0.5**
	14nm,1.2s						
ILAR	**Eielson Array**	**83.67**	**19**	P	**P**	**19 25 15.4**	**-0.3**
	2.2nm,0.8s,baz=227,slow=5.4,SNR=22						
ILB	**Eielson Array**	**83.67**	**19**	*e*P	**P**	**19 25 15.5**	**-0.2**
IL1	**Eielson Array**	**83.67**	**19**	*e*P	**P**	**19 25 15.2**	**-0.5**
SCRK	**Sand Creek**	**84.08**	**20**	*e*P	**P**	**19 25 17.8**	**-0.1**
	8.2nm,1.1s						
AFDM	**Forest Hills D**	**84.33**	**49**	*e*P	**P**	**19 25 19.4**	**-0.3**
	14nm,1.7s						
NV01	**Mina Array Sit**	**86.15**	**50**	*e*P	**P**	**19 25 28.7**	**-0.3**
NVAR	**Mina Array Bea**	**86.15**	**50**	P	**P**	**19 25 29.4**	**+0.4**
	2.5nm,1.0s,baz=237,slow=8.0,SNR=8.8						
PV11	**David Mesa, Pa**	**93.29**	**52**	*e*P	**P**	**19 26 03.4**	**+0.7**
	312nm,1.4s						
PV03	**Paradox Valley**	**93.30**	**52**	*e*P	**P**	**19 26 03.3**	**+0.5**
	73nm,0.4s						
PV13	**Radium Mtn., P**	**93.30**	**52**	*e*P	**P**	**19 26 02.0**	**-0.7**
	144nm,1.0s						
PV01	**Paradox Valley**	**93.49**	**52**	*e*P	**P**	**19 26 02.1**	**-1.5**
	155nm,0.6s						
MK01	**Makanchi Array**	**93.60**	**317**	*e*P	**P**	**19 26 03.4**	**-0.3**
MK31	**Makanchi Array**	**93.61**	**317**	*e*P	**P**	**19 26 04.3**	**+0.5**
MK32	**Makanchi Array**	**93.61**	**317**	*e*P	**P**	**19 26 03.7**	**-0.1**
MK32				*e*PKKPdf	**PKKPdf**	**19 43 08.7**	**-1.0**
MKAR	**Makanchi Array**	**93.61**	**317**	*e*P	**P**	**19 26 04.1**	**+0.4**
	15nm,0.6s						
MKAR				PKKPbc	**PKKPdf**	**19 43 08.7**	**-1.0**
MKAR	**Makanchi Array**	**93.61**	**317**	P	**P**	**19 26 03.7**	**-0.1**
	1.7nm,0.8s,baz=100,slow=6.5,SNR=17						
MKAR				PKKPbc	**PKKPdf**	**19 43 08.7**	**-1.0**
	0.6nm,0.8s,baz=287,slow=2.0,SNR=7.1						
ZALV	**Zalesovo Beam**	**93.67**	**324**	P	**P**	**19 26 04.0**	**+0.3**
	1.1nm,0.8s,baz=127,slow=4.4,SNR=4.7						
ZAA1	**Zalesovo Array**	**93.67**	**324**	*e*P	**P**	**19 26 04.0**	**+0.3**
PDAR	**Pinedale Array**	**93.68**	**47**	P	**P**	**19 26 04.5**	**+0.1**
	0.5nm,0.9s,baz=250,slow=4.3,SNR=3.5						
PDAR				PKPPKP	**P'P'df**	**19 51 21.0**	**+0.9**
	0.2nm,0.7s,baz=186,slow=1.5,SNR=3.7						
YKA	**Yellowknife Ar**	**95.13**	**27**	P	**P**	**19 26 08.9**	**-1.3**
	0.4nm,0.9s,baz=255,slow=5.2,SNR=5.4						
GERES	**GERESS Array B**	**135.83**	**334**	PKP	**PKPdf**	**19 32 08.6**	**+0.3**
	0.5nm,0.6s,baz=28,slow=2.5,SNR=3.3						
TOA0	**Torodi Ar. Sit**	**164.26**	**279**	*e*PKPdf	**PKPdf**	**19 32 52.2**	**+0.4**
TORD	**Torodi Ar. Bea**	**164.26**	**279**	PKP	**PKPdf**	**19 32 53.4**	**+1.5**
	0.9nm,0.8s,baz=360,slow=1.0,SNR=5.2						
TOA1	**Torodi Ar. Sit**	**164.26**	**279**	*e*PKPdf	**PKPdf**	**19 32 53.4**	**+1.5**

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*IDC **06** 19:18:23.9±0.8, 10°.87S×165°.57E, h0^{km}, mb4.0/13, mb1 4.3/15, mb1mx4.1/47, mbtmp4.1/15, ML4.7/2, MS3.7/1, Ms1 3.7/1, ms1mx3.0/47, Error ellipse: s-maj=27.0km s-min=16.8km az=140.0*

*NEIC **06** 19:18:24.3±0.5, 10°.96S×165°.66E, h10^{km}, mb4.8/10, Error*

ellipse: s-maj=15.3km s-min=11.0km az=140.0

*ISCJB **06** 19:18:25.4±0.4, 11°.04S±0°.06×165°.61E±0°.06, h30^{km}, mb4.2/17, MS3.6/1, Error ellipse: s-maj=8.6km s-min=7.8km az=149.1*

ISC 06 19:18:27.4±0.6**, 10°.93S**±0°.07×**165°.69E**±0°.08**, h30^{km}, n45, σ1^{s}42**/44**, mb4.1**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.84	284	*e*P	Pn	19 19 52.0	0.0
HNR				*e*S	Sn	19 20 58.0	-0.1
HNR	**Honiara**	5.84	284	*e*Pn	Pn	19 19 50.8	-1.2
HNR				*e*Sn	Sn	19 20 57.9	-0.1
HNR	**Honiara**	5.84	284	Pn	Pn	19 19 51.2	-0.8
	52nm,0.3s,baz=192,slow=2.7,SNR=14						
HNR				Sn	Sn	19 20 57.9	-0.1
	baz=180,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	11.11	176	*e*Pn	Pn	19 21 06.5	+2.2
	23nm,0.5s						
DZM				*e*LR	LR	19 23 40.8	
	comp=Z,457nm,24.6s						
DZM	**Mont Dzumac**	11.11	176	*e*Pn	Pn	19 21 04.0	-0.3
DZM				Sn	Sn	19 23 06.1	-1.5
DZM	**Mont Dzumac**	11.11	176	Pn	Pn	19 21 06.0	+1.7
	2.2nm,0.3s,baz=323,slow=8.5,SNR=21						
DZM				Sn	Sn	19 23 06.1	-1.5
	0.4nm,0.3s,baz=16,slow=18,SNR=5.1						
MANU	**Manus Island**	20.21	295	*e*P	P	19 23 00.6	+0.5
	259nm,1.4s						
CTA	**Charters Tower**	20.80	242	P	P	19 23 07.0	+0.5
	26nm,1.2s,baz=58,slow=15,SNR=5.4						
CTAO	**Charters Tower**	20.80	242	*e*P	P	19 23 07.5	+1.1
	60nm,1.4s						
URZ	**Urewera**	29.08	161	LR	LR	19 33 42.0	
	comp=Z,130nm,19.3s,baz=355,slow=32						
H11S2	**WAKE ISLAND Hy**	29.25	2	T	T	19 55 02.5	
	baz=183,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	29.25	2	T	T	19 55 08.9	
	baz=183,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	29.27	2	T	T	19 55 12.2	
	baz=183,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	30.47	2	T	T	19 56 42.3	
	baz=182,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy**	30.48	2	T	T	19 56 42.8	
	baz=182,slow=76,SNR=13						
H11N2	**WAKE ISLAND Hy**	30.49	2	T	T	19 56 38.9	
	baz=182,slow=76,SNR=9.3						
STKA	**Stephens Creek**	30.49	223	*e*P	P	19 24 38.1	+0.3
	2.3nm,1.4s						
STKA	**Stephens Creek**	30.49	223	P	P	19 24 38.6	+0.8
	1.3nm,0.6s,baz=46,slow=11,SNR=3.4						
WR1	**Warramunga Arr**	31.47	250	*e*P	P	19 24 45.2	-1.5
	26nm,1.8s						
WR1				*e*PcP	PcP	19 27 41.2	+1.6
WRA	**Warramunga Arr**	31.47	250	P	P	19 24 45.2	-1.5
	1.3nm,0.7s,baz=83,slow=9.0,SNR=17						
WRA				PcP	PcP	19 27 41.2	+1.6
	0.2nm,0.5s,baz=71,slow=3.2,SNR=5.0						
AS01	**Alice Springs**	32.75	243	*e*P	P	19 24 55.8	-2.1
AS31	**Alice Springs**	32.79	243	*e*P	P	19 24 56.7	-1.6
	6.6nm,1.8s						
ASAR	**Alice Springs**	32.80	243	P	P	19 24 57.0	-1.2
	4.1nm,0.8s,baz=67,slow=10,SNR=32						
ASAR				PcP	PcP	19 27 44.1	+1.0
	0.3nm,0.6s,baz=72,slow=1.8,SNR=4.8						
FITZ	**Fitzroy Crossi**	39.36	255	*e*P	P	19 25 52.7	-1.8
	17nm,1.7s						
FITZ	**Fitzroy Crossi**	39.36	255	P	P	19 25 56.0	+1.5
	1.7nm,0.8s,baz=60,slow=8.1,SNR=3.8						
PPT2	**Papeete2**	43.78	104	*e*LR	LR	19 39 05.0	
	comp=Z,251nm,21.8s						
TBI	**Tubuai**	44.43	112	*e*LR	LR	19 39 22.5	
	comp=Z,342nm,27.2s						
KLR	**Kul'dur**	66.93	337	P	P	19 29 16.1	-0.8
	0.9nm,0.7s,baz=102,slow=9.3,SNR=1.9						
CMAR	**Chiang Mai Arr**	72.01	294	P	P	19 29 50.0	+1.1
	0.2nm,0.4s,baz=116,slow=4.1,SNR=2.9						
ULN	**Ulaanbaatar**	78.17	324	*e*P	P	19 30 22.9	-1.1
	19nm,2.0s						
SONA0	**Songino Array**	78.54	324	*e*P	P	19 30 28.0	+1.9
SONM	**Songino Array**	78.54	324	P	P	19 30 28.0	+1.9
	0.7nm,0.7s,baz=111,slow=3.2,SNR=3.9						
ILAR	**Eielson Array**	83.42	19	P	P	19 30 53.9	+2.3
	1.2nm,0.6s,baz=240,slow=5.1,SNR=20						
ILB	**Eielson Array**	83.42	19	*e*P	P	19 30 49.0	-2.5
	22nm,1.8s						
AFDM	**Forest Hills D**	84.17	49	*e*P	P	19 30 53.3	-2.7
	17nm,1.7s						
NV01	**Mina Array Sit**	85.99	50	*e*P	P	19 31 03.5	-1.8
NVAR	**Mina Array Bea**	85.99	50	P	P	19 31 07.0	+1.6
	0.9nm,0.7s,baz=234,slow=9.2,SNR=6.8						
U15A	**North Rim**	90.08	53	*e*P	P	19 31 24.5	-0.6
	19nm,1.9s						
MK32	**Makanchi Array**	93.40	317	*e*P	P	19 31 39.7	-0.2
MKAR	**Makanchi Array**	93.40	317	P	P	19 31 39.7	-0.2
	0.4nm,0.7s,baz=104,slow=6.1,SNR=4.9						
PDAR	**Pinedale Array**	93.51	47	P	P	19 31 42.0	+1.2
	0.2nm,0.6s,baz=309,slow=5.7,SNR=3.6						
YKA	**Yellowknife Ar**	94.89	27	P	P	19 31 46.5	+0.2
	0.3nm,0.7s,baz=254,slow=4.5,SNR=4.4						
YKB5	**Yellowknife Ar**	94.89	27	*e*P	P	19 31 44.2	-2.1
ARA0	**ARCESS Array S**	116.21	345	*e*PKPdf	PKiKP	19 37 07.7	+0.5
ARCES	**ARCESS Array B**	116.21	345	PKP	PKiKP	19 37 07.7	+0.5
	3.4nm,1.0s,baz=74,slow=4.4,SNR=4.5						

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*ISCJB **06** 19:22:14.2±0.3, 10°.92S±0°.05×165°.67E±0°.05, h10^{km}, mb4.4/21, MS4.1/7, Error ellipse: s-maj=7.7km s-min=7.1km az=33.7*

*IDC **06** 19:22:14.4±0.8, 10°.79S×165°.68E, h0^{km}, mb4.2/14, mb1 4.4/16, mb1mx4.2/44, mbtmp4.3/16, ML4.6/2, MS4.1/8, Ms1 4.1/8, ms1mx3.5/47, Error ellipse: s-maj=27.3km s-min=15.9km az=140.0*

*NEIC **06** 19:22:18.3±3.0, 10°.83S×165°.66E, h26^{km}±21^{km}, mb4.7/13, Error ellipse: s-maj=11.2km s-min=7.2km az=164.0*

ISC 06 19:22:15.9±0.5**, 10°.80S**±0°.07×**165°.78E**±0°.07**, h10^{km}, n53, σ1^{s}27**/49**, mb4.5**/21**, MS4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.90	283	*e*P	Pn	19 23 45.0	+1.6
HNR				*e*S	Sn	19 24 55.0	+3.9
HNR	**Honiara**	5.90	283	*e*Pn	Pn	19 23 42.5	-0.9
HNR				*e*Sn	Sn	19 24 52.2	+1.1
HNR	**Honiara**	5.90	283	Pn	Pn	19 23 43.7	+0.2
	36nm,0.3s,baz=98,slow=1.2,SNR=9.7						
HNR				Sn	Sn	19 24 52.2	+1.1
	5.6nm,0.3s,baz=108,slow=20,SNR=1.8						
HNR				LR	LR	19 26 07.7	
	comp=Z,2μm,19.7s,baz=108,slow=40						
DZM	**Mont Dzumac**	11.22	177	*e*Pn	Pn	19 24 58.5	+1.9
	19nm,0.5s						
DZM				*e*LR	LR	19 27 25.5	
	comp=Z,677nm,23.7s						
DZM	**Mont Dzumac**	11.22	177	Pn	Pn	19 24 58.1	+1.6
	2.2nm,0.3s,baz=295,slow=21,SNR=9.2						
DZM				Sn	Sn	19 27 00.5	-1.7
	0.8nm,0.3s,baz=311,slow=19,SNR=3.9						
MSVF	**Nonsavu**	13.74	121	*e*Pn	Pn	19 25 32.3	+1.3
EIDS	**Eidsvold**	20.09	222	*e*P	P	19 26 50.8	+0.9
	27nm,1.0s						
MANU	**Manus Island**	20.24	294	*e*P	P	19 26 50.6	-0.9
	45nm,0.9s						
CTA	**Charters Tower**	20.94	242	P	P	19 26 59.8	+0.7
	24nm,0.9s,baz=77,slow=14,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	29.12	2	T	T	19 58 57.8	
	baz=194,slow=74						
H11S3	**WAKE ISLAND Hy**	29.13	2	T	T	19 59 14.9	
	baz=194						
H11S1	**WAKE ISLAND Hy**	29.14	2	T	T	19 58 47.6	
	baz=194,slow=74						
H11N1	**WAKE ISLAND Hy**	30.34	2	T	T	20 00 45.1	
	baz=185						
H11N3	**WAKE ISLAND Hy**	30.35	2	T	T	20 00 52.6	
	baz=185						
H11N2	**WAKE ISLAND Hy**	30.36	2	T	T	20 00 56.2	
	baz=185						
STKA	**Stephens Creek**	30.64	223	*e*P	P	19 28 29.9	-0.6
	7.4nm,1.9s						
STKA	**Stephens Creek**	30.64	223	P	P	19 28 30.5	0.0
	1.6nm,0.8s,baz=53,slow=6.2,SNR=3.8						
WB2	**Warramunga Arr**	31.58	249	*e*P	P	19 28 37.5	-1.5
WR1	**Warramunga Arr**	31.59	249	*e*P	P	19 28 37.4	-1.7
	9.1nm,1.2s						
WR1				*e*PcP	PcP	19 31 30.2	-1.4
WRA	**Warramunga Arr**	31.59	249	P	P	19 28 37.4	-1.7
	4.3nm,0.9s,baz=79,slow=9.1,SNR=16						
WRA				PcP	PcP	19 31 30.2	-1.4
	0.3nm,0.8s,baz=75,slow=3.2,SNR=3.0						
WRA				LR	LR	19 41 09.4	
	comp=Z,284nm,18.6s,baz=65,slow=36						
AS01	**Alice Springs**	32.89	243	*e*P	P	19 28 48.2	-2.3
AS31	**Alice Springs**	32.93	243	*e*P	P	19 28 49.0	-1.8
	1.8nm,0.8s						
ASAR	**Alice Springs**	32.93	243	P	P	19 28 49.0	-1.8
	8.3nm,0.9s,baz=66,slow=10,SNR=34						
ASAR				PcP	PcP	19 31 35.6	+0.3
	0.6nm,0.8s,baz=68,slow=2.8,SNR=4.3						
ASAR				LR	LR	19 41 30.1	
	comp=Z,229nm,18.0s,baz=100,slow=35						
RAR	**Rarotonga**	34.62	112	LR	LR	19 40 13.2	
	comp=Z,176nm,21.8s,baz=264,slow=31						
FITZ	**Fitzroy Crossi**	39.47	255	*e*P	P	19 29 46.1	-0.7
	6.2nm,1.0s						
FITZ	**Fitzroy Crossi**	39.47	255	P	P	19 29 46.1	-0.7
	2.8nm,0.8s,baz=89,slow=9.5,SNR=5.1						
FITZ				LR	LR	19 44 33.9	
	comp=Z,225nm,20.2s,baz=80,slow=34						
PPT2	**Papeete2**	43.73	104	*e*LR	LR	19 42 50.9	
	comp=Z,236nm,22.2s						
TBI	**Tubuai**	44.39	112	*e*LR	LR	19 43 07.6	
	comp=Z,310nm,28.2s						
NWAO	**Narrogin (SRO)**	49.62	236	P	P	19 31 07.8	+0.1
	13nm,0.9s,baz=38,slow=4.9,SNR=3.9						
NWAO				LR	LR	19 52 02.9	
	comp=Z,477nm,18.8s,baz=312,slow=36						
RKT	**Rikitea**	57.64	111	*e*LR	LR	19 49 17.9	
	comp=Z,342nm,28.8s						
ASAJ	**Asahikawa**	58.58	341	P	P	19 32 13.3	+0.5
	3.8nm,0.8s,baz=226,slow=18,SNR=4.0						
CMAR	**Chiang Mai Arr**	72.04	293	P	P	19 33 39.5	-1.3
	0.2nm,0.3s,baz=104,slow=6.1,SNR=3.3						
SONA0	**Songino Array**	78.49	324	*e*P	P	19 34 17.9	+0.5
SONM	**Songino Array**	78.49	324	P	P	19 34 17.9	+0.5
	0.4nm,0.7s,baz=131,slow=5.8,SNR=4.4						
MDM	**Murphy Dome**	82.99	18	*e*P	P	19 34 40.4	-0.6
	7.4nm,1.2s						
HDA	**Harding Lake**	83.01	19	*e*P	P	19 34 41.4	+0.4
	12nm,0.9s						
IL1	**Eielson Array**	83.28	19	*e*P	P	19 34 42.4	0.0
ILAR	**Eielson Array**	83.28	19	P	P	19 34 43.0	+0.5
	2.5nm,0.7s,baz=236,slow=5.4,SNR=23						
ILAR				LR	LR	20 06 33.1	
	comp=Z,63nm,19.8s,baz=146,slow=32						
ILB	**Eielson Array**	83.28	19	*e*P	P	19 34 42.7	+0.2
	12nm,1.4s						
SCRK	**Sand Creek**	83.68	20	*e*P	P	19 34 45.1	+0.3
	7.1nm,1.2s						
AFDM	**Forest Hills D**	84.02	49	*e*P	P	19 34 47.5	+0.6
	19nm,1.9s						
DAWY	**Dawson**	85.32	21	*e*P	P	19 34 54.3	+1.4
	4.3nm,0.9s						
NV01	**Mina Array Sit**	85.85	50	*e*P	P	19 34 56.9	+0.6
NVAR	**Mina Array Bea**	85.85	50	P	P	19 34 57.7	+1.3
	2.8nm,1.0s,baz=229,slow=6.6,SNR=8.8						
LPIG	**La Paz**	88.88	65	LR	LR	20 07 29.9	
	comp=Z,96nm,19.1s,baz=224,slow=30						
MTPU	**Mount Pierson**	90.39	51	*e*P	P	19 35 19.3	+1.0
	4.1nm,1.1s						
MK32	**Makanchi Array**	93.37	317	*e*P	P	19 35 31.0	-0.4
MKAR	**Makanchi Array**	93.37	317	P	P	19 35 31.0	-0.4
	0.6nm,0.7s,baz=97,slow=6.5,SNR=6.0						
PDAR	**Pinedale Array**	93.37	47	P	P	19 35 32.2	+0.5
	1.0nm,1.0s,baz=247,slow=1.9,SNR=5.5						
YKA	**Yellowknife Ar**	94.75	27	P	P	19 35 36.1	-1.2
	0.5nm,0.8s,baz=254,slow=4.6,SNR=8.5						
YKB5	**Yellowknife Ar**	94.75	27	*e*P	P	19 35 35.5	-1.8
ARA0	**ARCESS Array S**	116.11	346	*e*PKPdf	PKiKP	19 40 58.5	-0.4
ARCES	**ARCESS Array B**	116.11	346	PKP	PKiKP	19 40 58.5	-0.4
	3.6nm,1.1s,baz=75,slow=3.8,SNR=3.9						

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*SOME **06** 19:25:08.8, 42°.58N×79°.65E, h15^{km}*

*KRNET **06** 19:25:08.8±0.1, 42°.60N×79°.67E, h11^{km}, mb3.1*

*NNC **06** 19:25:08.2±1.5, 42°.58N×79°.65E, h0^{km}, mb3.4, mpv3.3, Error ellipse: s-maj=10.5km s-min=4.6km az=159.0*

ISC 06 19:25:09.2±1.4**, 42°.63N**±0°.04×**79°.63E**±0°.03**, h1^{km}**±10^{km}**, n43, σ0^{s}95**/78**, 17C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	0.54	347	P	Pg	19 25 20.5	+1.0
	42nm,0.1s						
SHLS				S	Sb	19 25 28.9	-0.9
	535nm,0.2s						
SHLS	**Shalkode**	0.54	347	*e*P	Pg	19 25 20.5	+1.0
	baz=16						
SHLS				*e*S	Sb	19 25 28.9	-0.9
	baz=16						
SHLS	**Shalkode**	0.54	347	*e*P	Pg	19 25 20.5	+1.0
	42nm,0.1s						
SHLS				*e*S	Sb	19 25 28.9	-0.9
	535nm,0.2s						
UZB	**Uzynbulak**	0.68	319	P	Pg	19 25 22.4	+0.1
	16nm,0.1s						
UZB				S	Sg	19 25 32.2	+1.1
	66nm,0.2s						
UZB	**Uzynbulak**	0.68	319	*e*P	Pg	19 25 22.4	+0.1
	baz=19						
UZB				*e*S	Sg	19 25 32.2	+1.1
	baz=19						
UZB	**Uzynbulak**	0.68	319	*e*P	Pg	19 25 22.4	+0.1
	16nm,0.1s						
UZB				*e*S	Sg	19 25 32.2	+1.1
	66nm,0.2s						
PDGK	**Podgornoye**	0.70	351	⇑*i*P	Pg	19 25 22.8	+0.1
	baz=50						
PDGK				⇑*i*S	Sg	19 25 33.1	+1.3
	baz=50						
PRZ	**Przheval'sk**	0.92	261	⇑*i*P	Pg	19 25 26.8	-0.1
	baz=63						
PRZ				⇑*i*S	Sg	19 25 39.4	+0.6
	baz=63						
KTMS	**Ketmen**	0.97	33	P	Pg	19 25 27.2	-0.5
	8.7nm,0.1s						
KTMS				S	Sg	19 25 40.2	-0.1
	24nm,0.1s						
KTMS	**Ketmen**	0.97	33	*e*P	Pg	19 25 27.3	-0.5
	baz=29						
KTMS				*e*S	Sg	19 25 40.3	-0.1
	baz=29						
KTMS	**Ketmen**	0.97	33	*e*P	Pg	19 25 27.2	-0.5
	8.7nm,0.1s						
KTMS				*e*S	Sg	19 25 40.2	-0.1
	24nm,0.1s						
SATY	**Saty**	1.00	296	P	Pg	19 25 27.9	-0.4
	8.5nm,0.1s						
SATY				S	Sg	19 25 41.5	+0.3
	45nm,0.2s						
SATY	**Saty**	1.00	296	*e*P	Pg	19 25 27.9	-0.4
	8.5nm,0.1s						
SATY				*e*S	Sg	19 25 41.5	+0.3
	45nm,0.2s						
KURS	**Kuram**	1.37	309	P	Pn	19 25 34.6	-0.9
	3.7nm,0.2s						
KURS				S	Sn	19 25 53.1	-1.3
	6.4nm,0.2s						
KURS	**Kuram**	1.37	309	*e*P	Pn	19 25 34.6	-0.9
	baz=9.0						
KURS				*e*S	Sn	19 25 53.0	-1.3
	baz=9.0						
KURS	**Kuram**	1.37	309	*e*P	Pn	19 25 34.6	-0.9
	3.7nm,0.2s						
KURS				*e*S	Sn	19 25 53.1	-1.3
	6.4nm,0.2s						
DJR	**Jarkent**	1.70	4	*e*P	Pb	19 25 40.6	-0.7
	4.8nm,0.2s						
DJR				*e*S	Sg	19 26 04.2	+0.3
	20nm,0.3s						
MNBS	**Baschi**	1.70	329	P	Pb	19 25 40.6	-0.7
	12nm,0.2s						
MNBS				S	Sb	19 26 03.9	+0.7
	37nm,0.2s						
MNBS	**Baschi**	1.70	329	*e*P	Pb	19 25 40.7	-0.7
	baz=29						
MNBS				*e*S	Sb	19 26 04.0	+0.7
	baz=29						
MNBS	**Baschi**	1.70	329	*e*P	Pb	19 25 40.6	-0.7
	12nm,0.2s						
MNBS				*e*S	Sb	19 26 03.9	+0.7
	37nm,0.2s						
KDJ	**Kajisay**	1.89	255	⇑*i*P	Pb	19 25 43.8	-0.7
	baz=56						
KDJ				⇑*i*S	Sg	19 26 08.8	-0.9
	baz=56						
MDOK	**Medeo**	1.97	286	Pg	Pb	19 25 44.7	-1.2
	8.3nm,0.4s						
MDOK				Lg	Lg	19 26 10.4	
	20nm,0.3s						
MDOK	**Medeo**	1.97	286	*e*P	Pb	19 25 44.7	-1.2
	baz=87						
MDOK				*e*S	Sb	19 26 10.4	-0.6
	baz=87						
MDOK	**Medeo**	1.97	286	*e*P	Pb	19 25 44.7	-1.2
	8.3nm,0.4s						
MDOK				*e*S	Sb	19 26 10.4	-0.6
	20nm,0.3s						
TNSS	**Tian-Shan**	2.02	282	Pg	Pb	19 25 45.2	-1.7
	8.3nm,0.4s						
TNSS				Lg	Lg	19 26 11.3	
	10nm,0.1s						
TNSS	**Tian-Shan**	2.02	282	*e*P	Pb	19 25 45.2	-1.7
	baz=83						
TNSS				*e*S	Sb	19 26 11.3	-1.3
	baz=83						
TNSS	**Tian-Shan**	2.02	282	*e*P	Pb	19 25 45.2	-1.7
	8.3nm,0.4s						
TNSS				*e*S	Sb	19 26 11.3	-1.3
	10nm,0.1s						
IZV	**Izvestkoviy**	2.26	281	Pg	Pb	19 25 49.3	-1.5
	9.2nm,0.1s						
IZV				Lg	Lg	19 26 18.8	
	25nm,0.5s						
IZV	**Izvestkoviy**	2.26	281	*e*P	Pb	19 25 49.3	-1.5
	baz=82						
IZV				*e*S	Sb	19 26 18.8	-0.5
	baz=82						
IZV	**Izvestkoviy**	2.26	281	*e*P	Pb	19 25 49.3	-1.5
	9.2nm,0.1s						
IZV				*e*S	Sb	19 26 18.8	-0.5
	25nm,0.5s						
MTBS	**Maitube**	2.41	283	Pg	Pb	19 25 52.6	-0.7
	17nm,0.3s						
MTBS				Lg	Lg	19 26 24.0	
	20nm,0.4s						
MTBS	**Maitube**	2.41	283	*e*P	Pb	19 25 52.6	-0.7
	baz=84						
MTBS				*e*S	Sb	19 26 24.0	+0.5
	baz=84						
MTBS	**Maitube**	2.41	283	*e*P	Pb	19 25 52.6	-0.7
	17nm,0.3s						
MTBS				*e*S	Sb	19 26 24.0	+0.5
	20nm,0.4s						
BOOM	**Boomskoye usch**	2.73	268	⇓*i*P	Pn	19 25 54.7	+0.4
	baz=69						
BOOM				⇓*i*S	Sn	19 26 29.0	+1.0
	baz=69						
NRN	**Naryn**	2.96	247	⇓*i*P	Pn	19 25 58.7	+1.2
	baz=48						
NRN				⇓*i*S	Sn	19 26 35.1	+1.3
	baz=48						
TKM2	**Tokmak 2**	2.99	277	⇑*i*P	Pn	19 25 59.2	+1.4
	baz=78						
TKM2				⇑*i*S	Sn	19 26 35.6	+1.3
	baz=78						
KZA	**Kyzart**	3.30	262	⇓*i*P	Pn	19 26 03.4	+1.2
	baz=62						
KZA				⇓*i*S	Sn	19 26 43.1	+0.8
	baz=62						
KBK	**Karagaybulak**	3.46	272	⇑*i*P	Pn	19 26 05.5	+1.3
	baz=73						
KBK				⇑*i*S	Sn	19 26 46.8	+0.9
	baz=73						
EKS2	**Erkin-Say**	4.32	272	⇑*i*P	Pn	19 26 17.4	+1.3
	baz=73						
EKS2				⇑*i*S	Sn	19 27 07.4	+0.3
	baz=73						
MAKZ	**Makanchi**	4.50	21	⇑Pn	Pn	19 26 19.3	+0.9
	0.5nm,0.2s						
MAKZ				⇓Sn	Sn	19 27 11.1	-0.2
	0.5nm,0.5s						
MAKZ				⇑Lg	Lg	19 27 30.1	
	0.4nm,0.5s						
MK31	**Makanchi Array**	4.57	24	Pn	Pn	19 26 20.1	+0.7
	0.1nm,0.2s,baz=206,slow=11,SNR=25						
MK31				⇑Sn	Sn	19 27 14.5	+1.3
	0.5nm,0.4s						
MK31				⇓Lg	Lg	19 27 34.1	
	0.2nm,0.3s,baz=205,slow=26,SNR=6.3						
KURBB	**Kurchatov Arra**	8.03	355	⇑Lg	Lg	19 29 21.5	
	2.2nm,0.7s						
KURK	**Kurchatov**	8.12	355	⇑Lg	Lg	19 29 23.1	
	2.3nm,0.9s						

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*IDC **06** 19:30:05.9±1.0, 11°.43S×165°.08E, h0^{km}, mb4.0/11, mb1 4.1/13, mb1mx3.9/49, mbtmp4.0/13, ML4.3/2, Error ellipse: s-maj=32.2km s-min=20.4km az=134.0*

*NEIC **06** 19:30:06.6±0.4, 11°.33S×165°.08E, h10^{km}, mb4.1/3, Error ellipse: s-maj=14.0km s-min=11.0km az=166.0*

*ISCJB **06** 19:30:08.9±0.4, 11°.49S±0°.08×165°.01E±0°.06, h34^{km}, mb3.9/14, Error ellipse: s-maj=11.7km s-min=7.8km az=177.4*

ISC 06 19:30:10.5±0.7**, 11°.4S**±0°.1×**165°.06E**±0°.09**, h34^{km}, n36, σ1^{s}07**/38**, mb3.9**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.40	291	*e*Pn	Pn	19 31 26.6	-2.1
HNR				*e*Sn	Sn	19 32 29.3	-0.5
HNR	**Honiara**	5.40	291	Pn	Pn	19 31 30.1	+1.4
	14nm,0.3s,baz=174,slow=9.2,SNR=3.2						
HNR				Sn	Sn	19 32 29.3	-0.5
	8.0nm,0.3s,baz=143,slow=20,SNR=5.7						
DZM	**Mont Dzumac**	10.68	173	*e*Pn	Pn	19 32 41.2	0.0
DZM	**Mont Dzumac**	10.68	173	Pn	Pn	19 32 40.8	-0.4
	1.8nm,0.3s,baz=326,slow=10,SNR=11						
STKA	**Stephens Creek**	29.71	223	P	P	19 36 13.9	+0.3
	1.7nm,0.8s,baz=135,slow=8.8,SNR=2.8						
WR1	**Warramunga Arr**	30.73	250	*e*P	P	19 36 23.1	+0.4
	3.8nm,1.1s						
WRA	**Warramunga Arr**	30.73	250	P	P	19 36 23.1	+0.4
	1.9nm,0.9s,baz=80,slow=9.2,SNR=10						
AS31	**Alice Springs**	32.03	243	*e*P	P	19 36 32.6	-1.5
	0.8nm,1.2s						
ASAR	**Alice Springs**	32.03	243	P	P	19 36 33.8	-0.4
	1.1nm,0.8s,baz=73,slow=9.6,SNR=11						
FITZ	**Fitzroy Crossi**	38.64	255	P	P	19 37 32.2	+1.2
	1.5nm,0.7s,baz=81,slow=10,SNR=2.9						
CMAR	**Chiang Mai Arr**	71.64	294	P	P	19 41 29.4	+0.2
	0.4nm,0.8s,baz=115,slow=4.3,SNR=3.1						
SONA0	**Songino Array**	78.57	324	*e*P	P	19 42 09.9	+1.1
SONM	**Songino Array**	78.57	324	P	P	19 42 09.9	+1.1
	0.9nm,0.8s,baz=147,slow=6.9,SNR=7.3						
ILAR	**Eielson Array**	84.07	19	P	P	19 42 38.3	+0.9
	0.7nm,0.6s,baz=240,slow=4.5,SNR=14						
IL1	**Eielson Array**	84.08	19	*e*P	P	19 42 35.3	-2.1
NVAR	**Mina Array Bea**	86.77	50	P	P	19 42 53.4	+1.6
	0.3nm,0.5s,baz=262,slow=6.3,SNR=3.5						
P18A	**Preston Nutter**	93.14	50	*e*P	P	19 43 20.4	-1.4
MK32	**Makanchi Array**	93.33	317	*e*P	P	19 43 23.4	+1.3
MKAR	**Makanchi Array**	93.33	317	*e*P	P	19 43 21.1	-1.0
	10nm,1.0s						
MKAR	**Makanchi Array**	93.33	317	P	P	19 43 23.4	+1.3
	1.4nm,0.9s,baz=96,slow=6.2,SNR=10						
ZALV	**Zalesovo Beam**	93.46	324	P	P	19 43 22.9	+0.5
	0.3nm,0.5s,baz=111,slow=8.4,SNR=3.9						
ZAA1	**Zalesovo Array**	93.46	324	*e*P	P	19 43 22.9	+0.5
MAKZ	**Makanchi**	93.54	317	*e*P	P	19 43 22.0	-1.1
	3.7nm,1.1s						
PV09	**Paradox Valley**	93.76	52	*e*P	P	19 43 22.9	-1.7
PV19	**Morning Glory**	93.84	52	*e*P	P	19 43 23.6	-1.4
	4.5nm,0.7s						
PV23	**Carpenter Ridg**	93.85	52	*e*P	P	19 43 24.1	-0.9
	8.9nm,0.6s						
PV16	**Nyswonger Mesa**	93.89	52	*e*P	P	19 43 26.0	+0.9
	6.8nm,0.4s						
PV21	**Cone Mtn., Par**	93.90	52	*e*P	P	19 43 24.5	-0.7
	23nm,1.9s						
PV04	**Paradox Valley**	93.92	52	*e*P	P	19 43 25.5	+0.3
	6.0nm,0.5s						
PV11	**David Mesa, Pa**	93.92	52	*e*P	P	19 43 24.9	-0.4
	13nm,0.6s						
PV03	**Paradox Valley**	93.93	52	*e*P	P	19 43 26.0	+0.7
	4.4nm,0.6s						
PV13	**Radium Mtn., P**	93.94	52	*e*P	P	19 43 25.2	-0.2
	3.8nm,0.6s						
PV12	**Saucer Basin,**	93.98	52	*e*P	P	19 43 25.7	+0.2
	30nm,1.7s						
PV02	**Paradox Valley**	94.01	52	*e*P	P	19 43 25.3	-0.4
	8.7nm,0.5s						

PV01	Paradox Valley	94.13	52	eP	P	19 43 24.7	-1.6
	3.6nm,0.7s						
YKA	Yellowknife Ar	95.61	27	P	P	19 43 31.7	-0.4
	0.2nm,0.5s,baz=247,slow=5.4,SNR=3.6						

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*IDC **06** 19:30:55.8±1.1, 11°.47S×165°.04E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.8/47, mbtmp3.8/8, ML3.7/1, Error ellipse: s-maj=41.0km s-min=24.5km az=134.0*

*ISCJB **06** 19:30:59.1±0.8, 11°.7S±0°.1×165°.1E±0°.2, h34km, mb3.8/7, Error ellipse: s-maj=24.8km s-min=17.4km az=13.8*

ISC 06 19:31:00.8±0.8, 11°.6S±0°.1×165°.1E±0°.2, h34km, n8, σ0ˢ.95/8, mb3.9/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.51	173	Pn	Pn	19 33 29.1	0.0
	0.5nm,0.3s,baz=342,slow=20,SNR=1.7						
WRA	Warramunga Arr	30.69	250	P	P	19 37 12.9	+0.3
	3.1nm,1.0s,baz=80,slow=9.1,SNR=7.4						
ASAR	Alice Springs	31.97	244	P	P	19 37 23.6	-0.2
	1.4nm,0.8s,baz=73,slow=9.4,SNR=5.9						
SONM	Songino Array	78.72	324	P	P	19 42 58.3	-1.5
	0.2nm,0.7s,baz=141,slow=4.8,SNR=2.3						
ILAR	Eielson Array	84.23	19	P	P	19 43 29.1	+0.7
	0.4nm,0.7s,baz=234,slow=6.0,SNR=3.7						
NVAR	Mina Array Bea	86.87	50	P	P	19 43 42.2	-0.3
	0.9nm,0.8s,baz=236,slow=4.9,SNR=4.3						
MKAR	Makanchi Array	93.47	317	P	P	19 44 14.2	+1.2
	0.4nm,0.7s,baz=89,slow=6.9,SNR=2.9						
YKA	Yellowknife Ar	95.75	27	P	P	19 44 22.9	-0.1
	0.2nm,0.6s,baz=267,slow=9.7,SNR=3.3						

KRSC 06 19:31:02.8±0.8, 54°.85N×162°.33E, h34km±7km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.45	230	eP	Pn	19 31 13.4	+0.5
MKZ				eS	Sn	19 31 20.5	+0.7
TUMD	Tumrok D	1.17	289	eP	Pn	19 31 23.5	+0.7
KZV	Kizimen	1.20	284	eP	Pn	19 31 24.0	+0.6
TUMR	Tumrok	1.33	290	eP	Pn	19 31 26.1	+1.0
KBTR	Krutoberegovo	1.39	11	eP	Pb	19 31 28.2	-0.1
BZGR	Bezymyannyi-Gr	1.44	320	eP	Pb	19 31 28.1	-1.0
ZLN	Zelenaya	1.46	324	eP	Pb	19 31 28.4	-1.1
ZLN				eS	Sb	19 31 48.0	+0.2
KLY	Klyuchi	1.75	328	eP	Pn	19 31 31.5	+0.7
BDR	Baidarnaya	1.84	340	eP	Pn	19 31 33.7	+1.6
KII	Karymskiy	1.87	245	eP	Pn	19 31 34.2	+1.8
SRKR	Sorokina	1.93	341	eP	Pn	19 31 35.1	+1.8
ESO	Esso	2.34	299	eP	Pb	19 31 42.0	-2.3
SDLR	Sedlovina	2.57	234	eP	Pn	19 31 44.9	+2.8
SMAR	Somma	2.62	234	eP	Pn	19 31 45.6	+2.8
UGLR	Uglovaya	2.64	233	eP	Pn	19 31 45.7	+2.6
AVH	Avacha	2.64	235	eP	Pb	19 31 46.4	-3.1
KOK	Koryaka	2.68	236	eP	Pn	19 31 46.5	+2.9
GNL	Ganaly	2.82	248	eP	Pn	19 31 48.4	+2.9
KRMR	Karymshinskiy	3.21	233	eP	Pn	19 31 54.4	+3.7
KRMR				eS	Sb	19 32 33.2	-4.3

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*IDC **06** 19:32:18.0±1.4, 11°.51S×165°.10E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.8/49, mbtmp3.9/10, ML4.0/2, Error ellipse: s-maj=33.8km s-min=24.4km az=109.0*

*NEIC **06** 19:32:18.4±5.3, 11°.47S×165°.15E, h6km±33km, mb4.6/5, Error ellipse: s-maj=16.9km s-min=11.2km az=224.0*

*ISCJB **06** 19:32:21.7±0.6, 11°.62S±0°.06×164°.91E±0°.09, h34km, mb4.1/11, Error ellipse: s-maj=14.2km s-min=7.2km az=151.2*

ISC 06 19:32:23.0±0.9, 11°.50S±0°.10×165°.0E±0°.1, h34km, n26, σ0ˢ.98/25, mb4.3/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.39	292	ePn	Pn	19 33 40.7	-0.3
HNR	Honiara	5.39	292	Pn	Pn	19 33 40.2	-0.8
	16nm,0.3s,baz=160,slow=16,SNR=3.2						
HNR				Sn	Sn	19 34 40.6	-1.3
	19nm,0.3s,baz=150,slow=20,SNR=6.0						
DZM	Mont Dzumac	10.60	173	Pn	Pn	19 34 51.6	-1.0
	0.4nm,0.3s,baz=0.0,slow=7.1,SNR=7.7						
DZM				Sn	Sn	19 36 51.2	+1.1
	0.2nm,0.3s,baz=342,slow=20,SNR=6.5						
PINNC	Pines Island,	11.29	168	ePn	Pn	19 35 00.5	-1.5
H11S2	WAKE ISLAND Hy	29.85	3	T	T	20 10 55.1	
	baz=184,slow=76,SNR=7.6						
H11S3	WAKE ISLAND Hy	29.86	3	T	T	20 10 56.7	
	baz=184,slow=76,SNR=8.4						
H11S1	WAKE ISLAND Hy	29.87	3	T	T	20 10 48.0	
	baz=184,slow=76,SNR=7.8						
WR1	Warramunga Arr	30.65	250	eP	P	19 38 34.8	+0.3
	7.6nm,1.3s						
WRA	Warramunga Arr	30.65	250	P	P	19 38 34.7	+0.2
	0.6nm,0.6s,baz=83,slow=9.1,SNR=4.6						
ASAR	Alice Springs	31.94	244	P	P	19 38 45.8	-0.1
	0.8nm,0.9s,baz=72,slow=9.1,SNR=4.2						
FITZ	Fitzroy Crossi	38.56	255	P	P	19 39 44.3	+1.4
	0.5nm,0.5s,baz=85,slow=12,SNR=4.4						
ENH	Enshi	67.63	310	eP	P	19 43 16.9	+0.1
CMAR	Chiang Mai Arr	71.64	294	P	P	19 43 43.4	+1.6
	0.5nm,0.6s,baz=113,slow=4.4,SNR=6.3						
SONA0	Songino Array	78.61	324	eP	P	19 44 22.5	+1.0
SONM	Songino Array	78.61	324	P	P	19 44 22.5	+1.0
	0.9nm,0.8s,baz=134,slow=6.2,SNR=7.7						
ILAR	Eielson Array	84.17	19	P	P	19 44 50.6	+0.2
	0.5nm,0.7s,baz=239,slow=5.3,SNR=5.1						
ILB	Eielson Array	84.17	19	eP	P	19 44 48.3	-2.1
	20nm,1.8s						
MK01	Makanchi Array	93.35	317	eP	P	19 45 34.6	-0.1
MK31	Makanchi Array	93.36	317	eP	P	19 45 35.0	+0.3
	1.8nm,1.1s						
MK32	Makanchi Array	93.36	317	eP	P	19 45 35.0	+0.2
MKAR	Makanchi Array	93.36	317	eP	P	19 45 34.9	+0.2
	7.6nm,0.8s						
MKAR	Makanchi Array	93.36	317	P	P	19 45 35.0	+0.2
	1.2nm,0.8s,baz=106,slow=5.2,SNR=10						
ZALV	Zalesovo Beam	93.50	324	eP	P	19 45 33.5	-1.6
ZALV	Zalesovo Beam	93.50	324	P	P	19 45 35.0	-0.1
	1.1nm,0.8s,baz=97,slow=6.0,SNR=4.8						
ZAA1	Zalesovo Array	93.51	324	eP	P	19 45 35.0	-0.1
MAKZ	Makanchi	93.58	317	eP	P	19 45 36.1	+0.5
	2.1nm,1.0s						

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*IDC **06** 19:39:20.0±1.4, 10°.58S×165°.64E, h0km, mb3.6/7, mb1 3.9/9, mb1mx3.7/43, mbtmp3.8/9, ML4.3/2, Error ellipse: s-maj=34.9km s-min=25.0km az=131.0*

*NEIC **06** 19:39:21.5±1.0, 10°.54S×165°.64E, h10km, mb4.6/2, Error ellipse: s-maj=20.1km s-min=16.0km az=86.0*

*ISCJB **06** 19:39:22.5±0.8, 10°.7S±0°.1×165°.63E±0°.09, h31km, mb3.6/7, Error ellipse: s-maj=15.3km s-min=11.3km az=24.5*

ISC 06 19:39:24.5±1.0, 10°.6S±0°.1×165°.7E±0°.1, h31km, n21, σ1ˢ.22/17, mb3.6/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.77	281	ePn	Pn	19 40 47.7	-0.3
HNR				eSn	Sn	19 41 54.3	+1.1
HNR	Honiara	5.77	281	Pn	Pn	19 40 48.0	0.0
	36nm,0.3s,baz=78,slow=20,SNR=8.6						
HNR				Sn	Sn	19 41 54.3	+1.1
	4.7nm,0.3s,baz=75,slow=19,SNR=2.0						
DZM	Mont Dzumac	11.45	176	ePn	Pn	19 42 07.2	+1.1
DZM	Mont Dzumac	11.45	176	Pn	Pn	19 42 07.0	+0.9
	0.5nm,0.3s,baz=315,slow=20,SNR=12						
MANU	Manus Island	20.07	294	eP	P	19 43 56.0	+0.5
	33nm,0.9s						
CTA	Charters Tower	20.97	241	P	P	19 44 03.5	-1.9
	3.6nm,0.6s,baz=48,slow=12,SNR=2.2						
H11S2	WAKE ISLAND Hy	28.90	2	T	T	20 15 30.1	
	baz=181,slow=76,SNR=57						
H11S3	WAKE ISLAND Hy	28.90	2	T	T	20 15 28.4	
	baz=181,slow=76,SNR=30						
H11S1	WAKE ISLAND Hy	28.92	2	T	T	20 15 32.2	
	baz=181,slow=76,SNR=45						
H11N1	WAKE ISLAND Hy	30.12	2	T	T	20 17 02.0	
	baz=182,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	30.13	2	T	T	20 17 00.1	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.14	2	T	T	20 17 01.2	
	baz=182,slow=76,SNR=14						
WR1	Warramunga Arr	31.59	249	eP	P	19 45 43.8	-1.0
	8.2nm,1.4s						
WRA	Warramunga Arr	31.59	249	P	P	19 45 43.8	-1.0
	0.4nm,0.7s,baz=81,slow=9.1,SNR=2.9						
ASAR	Alice Springs	32.95	243	P	P	19 45 55.6	-1.2
	0.4nm,0.9s,baz=70,slow=8.1,SNR=3.0						
CMAR	Chiang Mai Arr	71.87	293	P	P	19 50 47.1	+2.0
	0.3nm,0.6s,baz=84,slow=3.7,SNR=3.7						
SONA0	Songino Array	78.26	324	eP	P	19 51 19.9	-1.6
SONM	Songino Array	78.26	324	P	P	19 51 19.9	-1.6
	0.6nm,0.9s,baz=134,slow=6.4,SNR=3.7						
ILAR	Eielson Array	83.09	19	P	P	19 51 47.5	+0.6
	0.4nm,0.8s,baz=236,slow=7.5,SNR=5.7						
MK32	Makanchi Array	93.14	317	eP	P	19 52 35.7	0.0
MKAR	Makanchi Array	93.14	317	P	P	19 52 35.7	-0.1
	0.2nm,0.7s,baz=96,slow=4.5,SNR=4.0						

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*IDC **06** 19:42:09.2±1.5, 11°.57S×165°.35E, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.8/44, mbtmp4.0/9, ML4.2/2, Error ellipse: s-maj=38.1km s-min=25.2km az=112.0*

*ISCJB **06** 19:42:11.3±0.9, 11°.68S±0°.10×165°.2E±0°.1, h24km, mb4.0/9, Error ellipse: s-maj=19.3km s-min=14.0km az=173.6*

*NEIC **06** 19:42:11.3±6.2, 11°.58S×165°.27E, h13km±38km, mb4.6/2, Error ellipse: s-maj=19.5km s-min=14.3km az=64.0*

ISC 06 19:42:13.5±1.0, 11°.6S±0°.1×165°.1E±0°.1, h24km, n21, σ1ˢ.27/16, mb4.0/9, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.53	292	Pn	Pn	19 43 35.0	+0.7
	12nm,0.3s,baz=155,slow=6.6,SNR=2.1						
HNR				Sn	Sn	19 44 34.7	-2.5
	7.2nm,0.3s,baz=155,slow=23,SNR=6.0						
DZM	Mont Dzumac	10.53	173	Pn	Pn	19 44 42.0	-1.0
	1.1nm,0.3s,baz=118,slow=20,SNR=6.5						
STKA	Stephens Creek	29.66	223	P	P	19 48 18.1	+0.7
	2.4nm,0.9s,baz=310,slow=7.2,SNR=3.6						
H11S2	WAKE ISLAND Hy	29.90	3	T	T	20 20 09.7	
	baz=184						
H11S3	WAKE ISLAND Hy	29.90	3	T	T	20 20 16.1	
	baz=184						
H11S1	WAKE ISLAND Hy	29.92	3	T	T	20 20 13.1	
	baz=184						
WB2	Warramunga Arr	30.74	250	eP	P	19 48 26.1	-1.1
WRAB	Tennant Creek	30.74	250	eP	P	19 48 27.6	+0.5
	6.8nm,0.9s						
WR1	Warramunga Arr	30.75	250	eP	P	19 48 27.9	+0.7
	12nm,0.9s						
WRA	Warramunga Arr	30.75	250	P	P	19 48 27.9	+0.7
	7.1nm,0.8s,baz=80,slow=9.2,SNR=35						
H11N1	WAKE ISLAND Hy	31.12	3	T	T	20 21 42.3	
	baz=192,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	31.13	3	T	T	20 21 50.7	
	baz=192,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	31.14	3	T	T	20 21 49.6	
	baz=192,slow=76,SNR=28						
ASAR	Alice Springs	32.03	244	P	P	19 48 38.5	0.0
	1.2nm,0.8s,baz=72,slow=9.7,SNR=7.9						
CM01	Chiang Mai Arr	71.75	294	eP	P	19 53 36.1	+1.8
CMAR	Chiang Mai Arr	71.78	294	P	P	19 53 36.2	+1.8
	1.2nm,0.6s,baz=123,slow=4.6,SNR=13						
SONA0	Songino Array	78.73	324	eP	P	19 54 14.8	+0.8
SONM	Songino Array	78.73	324	P	P	19 54 14.8	+0.8
	0.3nm,0.7s,baz=114,slow=5.8,SNR=3.2						
ILAR	Eielson Array	84.19	19	P	P	19 54 41.1	-1.3
	0.4nm,0.8s,baz=230,slow=5.1,SNR=4.8						
MK32	Makanchi Array	93.49	317	eP	P	19 55 26.4	-0.9
MKAR	Makanchi Array	93.49	317	P	P	19 55 26.4	-0.9
	0.3nm,0.7s,baz=111,slow=5.7,SNR=4.6						

IDC 06 19:44:44.1±2.0, 10°.94S×165°.18E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.5/39, mbtmp3.7/4, ML4.0/1, MS3.7/1, Ms1 3.7/1, ms1mx2.8/22, Error ellipse: s-maj=53.1km s-min=35.1km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.13	174	Pn	Pn	19 47 23.1	-1.6
	1.0nm,0.3s,baz=1.3,slow=13,SNR=6.2						
WRA	Warramunga Arr	31.00	249	P	P	19 51 03.9	+0.3
	1.0nm,0.9s,baz=76,slow=8.0,SNR=6.2						
ASAR	Alice Springs	32.34	243	P	P	19 51 15.3	-0.1
	0.3nm,0.4s,baz=63,slow=9.9,SNR=7.9						
JNU	Nakatsue	54.67	325	LR	LR	20 13 46.4	
	comp=Z,71nm,21.4s,baz=302,slow=32						
ILAR	Eielson Array	83.59	19	P	P	19 57 14.2	+0.3
	0.2nm,0.8s,baz=240,slow=5.1,SNR=1.4						

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*YARS **06** 19:55:17.5±0.2, 61°.18N±0°.01×123°.89E±0°.01, h3km±7km*

*MOS **06** 19:55:18.4±1.1, 61°.33N×123°.75E, h10km, mb3.7/2, Error ellipse: s-maj=24.8km s-min=13.4km az=88.3*

*IDC **06** 19:55:19.4±1.3, 60°.96N×123°.64E, h0km, mb3.4/5, mb1 3.6/8, mb1mx3.4/65, mbtmp3.6/8, ML3.3/2, Error ellipse: s-maj=33.6km s-min=17.4km az=157.0*

ISC 06 19:55:17.9±2.1, 61°.31N±0°.03×123°.76E±0°.03, h4km±15km, n29, σ2ˢ.88/57, mb3.3/5, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OLMR	Olekminsk	1.86	241	i P	Pb	19 55 51.6	-0.9
OLMR				eS	Sn	19 56 15.0	+0.5
YVAM	Verhnyaya Amga	2.36	134	eP	Pn	19 55 58.9	+1.5
YVAM				eS	Sn	19 56 26.9	+0.1
ALDR	Aldan	2.83	162	i P	Pn	19 56 05.8	+1.9
ALDR				eS	Sn	19 56 40.7	+2.3
ALDR	Aldan	2.83	162	i P	Pn	19 56 05.8	+1.9
ALDR				eS	Sn	19 56 40.7	+2.3
TBGR	Tabaga	2.86	77	eP	Pb	19 56 08.0	-1.5
TBGR				eS	Sb	19 56 45.0	+0.2
YAK	Yakutsk	2.92	73	eP	Pn	19 56 06.9	+1.9
YAK				e		19 56 42.6	
YAK				pmax	pmax		
	comp=Z,17nm,0.4s						
YAK				pmax	pmax		
	comp=Z,130nm,0.4s						
YAK				pmax	pmax		
	comp=N,19nm,0.3s						
YAK				pmax	pmax		
	comp=E,38nm,0.3s						
YAK				smax	smax		
	comp=N,50nm,0.4s						
YAK				smax	smax		
	comp=E,18nm,0.3s						
YAK				smax	smax		
	comp=N,182nm,0.6s						
YAK				smax	smax		
	comp=E,173nm,0.3s						
YAK				smax	smax		
	comp=Z,73nm,5.9s						
YAK	Yakutsk	2.92	73	eP	Pb	19 56 09.4	-1.0
YAK				eS	Sn	19 56 37.9	-2.6
YAK				eS	Sb	19 56 46.8	+0.4
CGD	Chagda	4.29	124	eP	Pn	19 56 25.5	+1.6
CGD				eS	Sn	19 57 08.6	-5.7
CGD	Chagda	4.29	124	eP	Pn	19 56 25.5	+1.6
CGD				eP	Pb	19 56 32.5	-1.3
CGD				eS	Sn	19 57 08.6	-5.7
CGD				eS	Sb	19 57 26.3	+0.4
KHN	Khani	4.85	207	eP	Pn	19 56 29.5	-2.2
KHN				eP	Pb	19 56 42.8	-0.6
KHN				eS	Sn	19 57 22.2	-6.0
KHN				eS	Sb	19 57 43.5	+1.5
YKLR	Yuktali	4.85	194	eP	Pn	19 56 30.8	-0.9
YKLR				eP	Pb	19 56 43.2	-0.2
YKLR				eS	Sn	19 57 22.5	-5.7
YKLR				eS	Sb	19 57 44.5	+2.4
IENR	Iengra	5.13	173	eP	Pn	19 56 35.8	+0.3
IENR				eP	Pb	19 56 47.9	-0.3
IENR				eS	Sb	19 57 50.9	+0.8
USMR	Ust'-Maya	5.34	95	eP	Pb	19 56 50.8	-1.0
USMR	Ust'-Maya	5.34	95	eP	Pn	19 56 38.0	-0.4
USMR				eP	Pb	19 56 50.8	-1.0
USMR				eS	Sn	19 57 34.3	-6.0
USMR				eS	Sb	19 57 59.2	+3.0
YCRN	Chernyshevskiy	5.56	293	eP	Pn	19 56 40.9	-0.4
YCRN				eP	Pb	19 56 59.4	+4.0
YCRN				eS	Sn	19 57 44.1	-1.4
YCRN				eS	Sg	19 58 11.2	-5.0
TNDR	Tynda	6.20	175	eP	Pb	19 57 07.4	+1.1
TNDR	Tynda	6.20	175	eP	Pb	19 57 07.4	+1.1
TNDR				eS	Sn	19 57 54.3	-7.1
TNDR				eS	Sb	19 58 25.0	+4.2
ZEA	Zeya	7.82	165	eP	Pn	19 57 14.1	+1.8
ZEA				eS	Sn	19 58 35.6	-5.5
ZEA				pmax	pmax		
	comp=Z,8.0nm,0.2s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ZEA				smax	smax		
	comp=E,15nm,0.7s						
ZEA				smax	smax		
	comp=N,41nm,1.0s						
ZEA				smax	smax		
	comp=E,63nm,0.5s						
TIXI	Tiksi	10.58	9	Pn	Pn	19 57 51.9	+1.8
	comp=E,0.7nm,0.3s,baz=187,slow=8.1,SNR=8.4						
TIXI				Sn	Sn	19 59 46.4	-2.5
	comp=E,1.6nm,0.3s,baz=80,slow=12,SNR=7.5						
KLR	Kul'dur	12.91	156	Pn	Pn	19 58 18.5	-3.6
	comp=E,0.1nm,0.3s,baz=326,slow=18,SNR=2.9						
KLR				Lg	Lg	20 01 56.3	
	comp=E,0.2nm,0.3s,baz=338,slow=19,SNR=3.6						
SEY	Seymchan	13.44	71	Pn	Pn	19 58 31.9	+2.7
	comp=E,0.5nm,0.3s,baz=270,slow=15,SNR=10						
SEY				Lg	Lg	20 02 25.0	
	comp=E,0.1nm,0.3s,baz=300,slow=8.1,SNR=3.3						
SONM	Songino Array	16.75	224	Pn	P	19 59 15.7	0.0
	comp=E,0.0nm,0.3s,baz=30,slow=13,SNR=2.2						
SONM				Lg	Lg	20 03 58.2	
	comp=E,0.1nm,0.3s,baz=33,slow=27,SNR=8.7						
ZALV	Zalesovo Beam	21.82	268	P	P	20 00 13.3	+2.4
	comp=E,1.5nm,0.8s,baz=47,slow=11,SNR=7.6						
KURK	Kurchatov	26.81	267	P	P	20 01 00.2	+1.4
KURBB	Kurchatov Arra	26.92	267	P	P	20 01 00.2	+0.4
	comp=E,0.3nm,0.5s,baz=57,slow=10.0,SNR=2.9						
MKAR	Makanchi Array	27.77	258	P	P	20 01 08.1	+0.5
	comp=E,0.2nm,0.4s,baz=36,slow=7.9,SNR=5.6						
BVAR	Borovoye Array	29.32	278	P	P	20 01 24.0	+2.8
BVAR	Borovoye Array	29.32	278	P	P	20 01 24.0	+2.8
	comp=E,0.1nm,0.4s,baz=39,slow=9.3,SNR=1.9						
ILAR	Eielson Array	37.47	45	P	P	20 02 37.4	+5.4
	comp=E,0.6nm,0.7s,baz=298,slow=7.2,SNR=8.0						

IDC 06 19:59:04.4±491.0, 37°.99N×117°.77W, h0km, Error ellipse: s-maj=180.2km s-min=82.9km az=168.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	0.61	317	i		19 58 02.8	
	3.0nm,0.3s,baz=216,slow=10,SNR=33						
I57US	PINON FLAT INF	4.50	166	i		20 27 50.0	
	baz=345,slow=388,SNR=0.6						
I56US	NEWPORT INFRAS	10.28	2	i		21 02 40.0	
	baz=180,slow=378,SNR=0.6						
I10CA	LAC DU BONNET	19.74	45	i		22 13 20.0	
	baz=240,slow=248,SNR=0.7						

IDC 06 19:59:29.6±8.6, 11°.72S×165°.00E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/33, mbtmp3.4/3, Error ellipse: s-maj=236.1km s-min=41.2km az=120.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.57	251	P	P	20 05 45.3	+0.1
	0.3nm,0.6s,baz=82,slow=9.1,SNR=4.0						
ASAR	Alice Springs	31.84	244	P	P	20 05 56.4	-0.1
	0.8nm,0.8s,baz=67,slow=10,SNR=11						
SONM	Songino Array	78.78	324	P	P	20 11 34.4	+0.1
	0.1nm,0.5s,baz=121,slow=5.6,SNR=3.2						

IDC 06 20:11:04.0±1.9, 29°.71N×87°.47E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.3/69, mbtmp3.3/7, ML2.9/2, Error ellipse: s-maj=68.5km s-min=21.0km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.33	134	Pn	Pn	20 14 42.0	+0.3
	0.0nm,0.3s,baz=326,slow=11,SNR=2.5						
MKAR	Makanchi Array	17.52	348	P	Pn	20 15 09.7	0.0
	0.0nm,0.3s,baz=168,slow=11,SNR=2.9						
KURBB	Kurchatov Arra	21.94	345	P	P	20 15 59.2	+0.2
	0.8nm,0.8s,baz=159,slow=11,SNR=4.6						
SONM	Songino Array	23.24	34	P	P	20 16 13.0	0.0
	1.1nm,0.8s,baz=225,slow=11,SNR=11						
WRA	Warramunga Arr	66.90	132	P	P	20 21 58.2	-0.1
	0.4nm,0.7s,baz=325,slow=6.5,SNR=4.6						
ASAR	Alice Springs	69.34	135	P	P	20 22 13.8	+0.2
	0.3nm,0.9s,baz=292,slow=4.9,SNR=2.9						
YKA	Yellowknife Ar	86.42	10	P	P	20 23 47.9	-0.2
	0.2nm,0.6s,baz=326,slow=4.6,SNR=4.0						

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*IDC **06** 20:11:24.5±1.4, 10°.92S×165°.49E, h0km, mb3.9/6, mb1 4.2/8, mb1mx3.9/42, mbtmp4.0/8, ML4.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/25, Error ellipse: s-maj=33.3km s-min=26.5km az=136.0*

*NEIC **06** 20:11:26.2±0.7, 10°.91S×165°.47E, h10km, mb4.6/3, Error ellipse: s-maj=14.3km s-min=11.2km az=76.0*

*ISCJB **06** 20:11:27.3±0.9, 11°.0S±0°.1×165°.44E±0°.09, h30km, mb3.9/7, MS3.3/1, Error ellipse: s-maj=16.6km s-min=11.0km az=35.6*

ISC 06 20:11:29.1±1.1, 10°.9S±0°.1×165°.5E±0°.1, h30km, n19, σ0ˢ.57/15, mb3.8/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.67	285	Pn	Pn	20 12 51.4	+0.1
	30nm,0.3s,baz=154,slow=8.1,SNR=8.6						
HNR				Sn	Sn	20 13 56.2	+0.8
	6.5nm,0.3s,baz=336,slow=20,SNR=2.7						
DZM	Mont Dzumac	11.11	175	Pn	Pn	20 14 06.7	+0.6
	0.9nm,0.3s,baz=345,slow=20,SNR=10.0						
MANU	Manus Island	20.05	295	eP	P	20 15 59.9	-0.2
	80nm,1.4s						
CTA	Charters Tower	20.64	242	P	P	20 16 06.1	-0.3
	13nm,1.0s,baz=72,slow=12,SNR=4.1						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	20 48 02.5	
	baz=183,slow=74,SNR=14						
H11S3	WAKE ISLAND Hy	29.27	2	T	T	20 48 07.6	
	baz=183,slow=74,SNR=9.4						
H11S1	WAKE ISLAND Hy	29.28	2	T	T	20 48 00.5	
	baz=183						
H11N1	WAKE ISLAND Hy	30.49	3	T	T	20 49 38.2	
	baz=182,slow=74,SNR=3.0						
H11N3	WAKE ISLAND Hy	30.49	3	T	T	20 49 39.4	
	baz=182,slow=74,SNR=3.1						
H11N2	WAKE ISLAND Hy	30.50	3	T	T	20 49 33.6	
	baz=182						
WR1	Warramunga Arr	31.29	250	eP	P	20 17 46.4	-0.4
	20nm,1.8s						
WRA	Warramunga Arr	31.29	250	P	P	20 17 46.4	-0.4
	0.7nm,0.4s,baz=84,slow=9.7,SNR=20						
AS01	Alice Springs	32.58	243	eP	P	20 17 57.1	-1.1
AS31	Alice Springs	32.62	243	eP	P	20 17 57.6	-0.9
	1.2nm,0.8s						
ASAR	Alice Springs	32.63	243	P	P	20 17 57.9	-0.7
	3.8nm,0.8s,baz=67,slow=10,SNR=53						
ASAR				PcP	PcP	20 20 44.5	+0.1
	0.7nm,1.0s,baz=63,slow=3.5,SNR=4.4						
ASAR				LR	LR	20 30 40.1	
	comp=Z,58nm,18.2s,baz=94,slow=35						
CMAR	Chiang Mai Arr	71.85	294	P	P	20 22 49.8	+0.1
	0.4nm,0.6s,baz=122,slow=5.8,SNR=4.1						
ILAR	Eielson Array	83.49	19	P	P	20 23 53.7	+0.1
	0.4nm,0.6s,baz=236,slow=4.9,SNR=5.3						
MK32	Makanchi Array	93.28	317	eP	P	20 24 41.0	0.0
MKAR	Makanchi Array	93.28	317	P	P	20 24 41.0	0.0
	0.1nm,0.6s,baz=105,slow=3.9,SNR=2.9						

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*NNC **06** 20:16:17.0±2.1, 42°.58N×79°.65E, h0km, mb2.3, mpv3.0, Error ellipse: s-maj=14.7km s-min=6.3km az=161.0*

*SOME **06** 20:16:17.5, 42°.58N×79°.67E, h15km*

*KRNET **06** 20:16:17.7±0.1, 42°.60N×79°.64E, h12km, mb2.7*

ISC 06 20:16:17.0±1.4, 42°.59N±0°.04×79°.65E±0°.04, h1km±10km, n33, σ1ˢ.42/65, 20C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.58	346	P	Pb	20 16 29.4	-0.7

	31nm,0.1s						
SHLS				S	**Sb**	**20 16 37.9**	**-1.1**
	45nm,0.2s						
SHLS	**Shalkode**	**0.58**	**346**	*e*P	**Pb**	**20 16 29.4**	**-0.7**
	baz=18						
SHLS				*e*S	**Sb**	**20 16 38.1**	**-0.9**
	baz=18						
SHLS	**Shalkode**	**0.58**	**346**	*e*P	**Pb**	**20 16 29.4**	**-0.7**
	31nm,0.1s						
SHLS				*e*S	**Sb**	**20 16 38.1**	**-0.9**
	45nm,0.2s						
UZB	**Uzynbulak**	**0.72**	**321**	P	**Pg**	**20 16 31.3**	**+0.4**
	6.8nm,0.2s						
UZB				S	**Sg**	**20 16 41.2**	**+0.8**
	25nm,0.2s						
UZB	**Uzynbulak**	**0.72**	**321**	*e*P	**Pg**	**20 16 31.3**	**+0.4**
	baz=21						
UZB				*e*S	**Sg**	**20 16 41.1**	**+0.8**
	baz=21						
UZB	**Uzynbulak**	**0.72**	**321**	*e*P	**Pg**	**20 16 31.3**	**+0.4**
	6.8nm,0.2s						
UZB				*e*S	**Sg**	**20 16 41.2**	**+0.8**
	25nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**351**	⇑*i*P	**Pg**	**20 16 31.8**	**+0.4**
	baz=51						
PDGK				⇑*i*S	**Sg**	**20 16 42.2**	**+1.1**
	baz=51						
PRZ	**Przheval'sk**	**0.93**	**264**	⇑*i*P	**Pg**	**20 16 34.9**	**+0.1**
	baz=63						
PRZ				⇑*i*S	**Sg**	**20 16 47.5**	**+0.6**
	baz=63						
KTMS	**Ketmen**	**1.00**	**31**	P	**Pg**	**20 16 35.9**	**-0.3**
	2.1nm,0.1s						
KTMS				S	**Sg**	**20 16 49.3**	**+0.2**
	4.3nm,0.1s						
KTMS	**Ketmen**	**1.00**	**31**	*e*P	**Pg**	**20 16 35.9**	**-0.3**
	baz=30						
KTMS				*e*S	**Sg**	**20 16 49.4**	**+0.2**
	baz=30						
KTMS	**Ketmen**	**1.00**	**31**	*e*P	**Pg**	**20 16 35.9**	**-0.3**
	2.1nm,0.1s						
KTMS				*e*S	**Sg**	**20 16 49.3**	**+0.2**
	4.3nm,0.1s						
SATY	**Saty**	**1.03**	**298**	P	**Pg**	**20 16 37.1**	**+0.4**
	4.2nm,0.1s						
SATY				S	**Sb**	**20 16 51.0**	**-0.7**
	14nm,0.1s						
SATY	**Saty**	**1.03**	**298**	*e*P	**Pg**	**20 16 36.8**	**0.0**
	2.2nm,0.4s						
SATY				*e*S	**Sb**	**20 16 51.0**	**-0.7**
	14nm,0.1s						
KURS	**Kuram**	**1.41**	**310**	P	**Pn**	**20 16 42.8**	**-1.0**
	1.4nm,0.3s						
KURS				S	**Sn**	**20 17 00.8**	**-2.2**
	3.1nm,0.3s						
KURS	**Kuram**	**1.41**	**310**	*e*P	**Pn**	**20 16 42.8**	**-1.0**
	baz=10.0						
KURS				*e*S	**Sn**	**20 17 00.8**	**-2.2**
	baz=10.0						
KURS	**Kuram**	**1.41**	**310**	*e*P	**Pn**	**20 16 42.8**	**-1.0**
	1.4nm,0.3s						
KURS				*e*S	**Sn**	**20 17 00.8**	**-2.2**
	3.1nm,0.3s						
DJR	**Jarkent**	**1.75**	**3**	*e*P	**Pb**	**20 16 49.3**	**-0.6**
	2.0nm,0.3s						
DJR				*e*S	**Sb**	**20 17 12.5**	**+0.2**
	5.7nm,0.4s						
MNBS	**Baschi**	**1.75**	**329**	P	**Pb**	**20 16 49.3**	**-0.6**
	1.7nm,0.2s						
MNBS				S	**Sb**	**20 17 12.1**	**-0.2**
	32nm,0.3s						
MNBS	**Baschi**	**1.75**	**329**	*e*P	**Pb**	**20 16 49.3**	**-0.6**
	baz=29						
MNBS				*e*S	**Sb**	**20 17 12.1**	**-0.2**
	baz=29						
MNBS	**Baschi**	**1.75**	**329**	*e*P	**Pb**	**20 16 49.3**	**-0.6**
	1.7nm,0.2s						
MNBS				*e*S	**Sb**	**20 17 12.2**	**-0.2**
	32nm,0.3s						
KDJ	**Kajisay**	**1.89**	**257**	⇓*e*P	**Pb**	**20 16 52.5**	**+0.2**
	baz=56						
KDJ				⇓*i*S	**Sg**	**20 17 17.6**	**0.0**
	baz=56						
IZV	**Izvestkoviy**	**2.28**	**282**	Pg	**Pb**	**20 16 58.4**	**-0.6**
	3.4nm,0.2s						
IZV				Lg	Lg	20 17 27.6	
	6.1nm,0.3s						
IZV	**Izvestkoviy**	**2.28**	**282**	*e*P	**Pb**	**20 16 58.4**	**-0.6**
	baz=82						
IZV				*e*S	**Sb**	**20 17 27.6**	**-0.1**
	baz=82						
IZV	**Izvestkoviy**	**2.28**	**282**	*e*P	**Pb**	**20 16 58.4**	**-0.6**
	3.4nm,0.2s						
IZV				*e*S	**Sb**	**20 17 27.6**	**-0.1**
	6.1nm,0.3s						
ULHL	**Ulahol**	**2.55**	**263**	⇑*i*P	**Pb**	**20 17 02.0**	**-1.6**
	baz=63						
ULHL				⇑*i*S	**Sb**	**20 17 34.6**	**-0.9**
	baz=63						
BOOM	**Boomskoye usch**	**2.74**	**269**	⇑*i*P	**Pb**	**20 17 04.7**	**-2.2**
	baz=69						
BOOM				⇑*i*S	**Sb**	**20 17 38.9**	**-2.2**
	baz=69						
NRN	**Naryn**	**2.95**	**248**	⇑*i*P	**Pb**	**20 17 08.2**	**-2.4**
	baz=48						
NRN				⇑*i*S	**Sb**	**20 17 44.9**	**-2.4**
	baz=48						
TKM2	**Tokmak 2**	**3.00**	**278**	⇑*i*P	**Pb**	**20 17 08.4**	**-3.0**
	baz=78						
TKM2				⇑*i*S	**Sb**	**20 17 45.2**	**-3.4**
	baz=78						
KZA	**Kyzart**	**3.30**	**263**	⇑*i*P	**Pn**	**20 17 12.8**	**+2.6**
	baz=62						
KZA				⇑*i*S	**Sn**	**20 17 52.6**	**+2.4**
	baz=62						
KBK	**Karagaybulak**	**3.47**	**273**	⇑*i*P	**Pn**	**20 17 14.9**	**+2.6**
	baz=73						
KBK				⇑*i*S	**Sn**	**20 17 56.2**	**+2.1**
	baz=73						
CHMS	**Chumysh**	**3.63**	**278**	⇑*i*P	**Pn**	**20 17 16.8**	**+2.5**
	baz=78						
CHMS				⇑*i*S	**Sn**	**20 17 59.7**	**+1.9**
	baz=78						
USP	**Ospenovka**	**3.84**	**282**	⇑*i*P	**Pn**	**20 17 19.8**	**+2.5**
	baz=82						
USP				⇑*i*S	**Sn**	**20 18 04.9**	**+1.9**
	baz=82						
MK31	**Makanchi Array**	**4.61**	**23**	⇓Pn	**Pn**	**20 17 29.1**	**+1.4**
	baz=199,slow=13,SNR=5.0						
MK31				⇓Sn	**Sn**	**20 18 22.5**	**+0.6**
	0.2nm,0.4s						
MK31				⇓Lg	Lg	20 18 38.4	
	0.1nm,0.3s						

IDC 06 20:16:45.5±9.9**, 12°.27S**×**165°.93E, h0**^{km}**, mb3.7**/5**,**
mb1 3.9/5**, mb1mx3.7**/35**, mbtmp3.7**/5**, Error ellipse:**
s-maj=261.3km s-min=41.3km az=122.0, Santa Cruz
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**20.42**	**245**	P	Pn	20 21 26.1	-0.4
	2.2nm,0.7s,baz=86,slow=13,SNR=1.3						
WRA	**Warramunga Arr**	**31.25**	**252**	P	P	20 23 06.4	-0.9
	2.5nm,1.0s,baz=81,slow=9.1,SNR=6.8						
ASAR	**Alice Springs**	**32.42**	**245**	P	P	20 23 17.3	-0.2
	1.5nm,0.9s,baz=78,slow=9.3,SNR=9.5						
CMAR	**Chiang Mai Arr**	**72.77**	**294**	P	P	20 28 16.6	+0.3
	0.4nm,0.8s,baz=112,slow=7.2,SNR=2.7						
SONM	**Songino Array**	**79.76**	**324**	P	P	20 28 55.7	+0.1
	0.3nm,0.8s,baz=132,slow=6.4,SNR=2.3						

MOS ***06*** *20:18:36.9±0.9, 46°.43N×27°.45W, h10^{km}, mb5.0/78, MS4.6/19, Error ellipse: s-maj=6.5km s-min=4.7km az=51.2*
IDC ***06*** *20:18:37.2±0.5, 46°.49N×27°.47W, h0^{km}, mb4.5/44, mb1 4.6/46, mb1mx4.5/63, mbtmp4.5/46, ML4.8/2, MS4.6/41, Ms1 4.6/41, ms1mx4.5/46, Error ellipse: s-maj=14.1km s-min=8.6km az=13.0*
ISCJB ***06*** *20:18:37.9±0.1, 46°.43N±0°.02×27°.37W±0°.02, h16^{km}, mb4.8/239, MS4.6/56, Error ellipse: s-maj=3.6km s-min=1.6km az=4.3*
IGIL ***06*** *20:18:38.6, 46°.51N×27°.37W, h14^{km}, mb5.2*
NEIC ***06*** *20:18:38.6±0.1, 46°.48N×27°.41W, h10^{km}, mb5.0/172, Error ellipse: s-maj=3.9km s-min=1.8km az=181.0*
GCMT ***06*** *20:18:40.7±0.2, 46°.50N±0°.02×27°.24W±0°.01, h12^{km}, MW5.3/119, Moment Tensor Solution. s52,c65; s119,c209; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.96±.02; $M_{\theta\theta}$0.02±.02; $M_{\phi\phi}$0.94±.01; $M_{r\theta}$0.15±.06; $M_{\theta\phi}$0.31±.01; $M_{\phi r}$-0.00±.05; Best double couple: $M_0$1.01400×10^{17} NP1:ϕ_s206.00000°,δ47.00000°, λ-77.00000°. NP2:ϕ_s8.00000°,δ45.00000°,λ-103.00000°. Principal axes: T 1.0370, Plg1.0000°, Azm287.0000°; N -0.0470, Plg9.0000°, Azm17.0000°; P -0.9900, Plg81.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 20:18:39.7±0.3**, 46°.49N**±0°.06×**27°.34W**±0°.05**, h16**^{km}**, n763,**
σ**1^{s}04**/739**, mb4.9**/250**, MS4.6**/56**, 36C-18D, Northern**
Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGRA	**Graciosa**	**7.47**	**184**	*e*P	Pn	20 20 33.6	+5.7
ADH	**Angra Heroismo**	**7.83**	**179**	*e*P	**Pn**	**20 20 33.6**	**+0.8**
PSET	**Sete Cidades**	**8.74**	**172**	*e*P	**Pn**	**20 20 43.9**	**-1.5**
GRON	**Grota Negra**	**8.81**	**171**	*e*P	**Pn**	**20 20 45.7**	**-0.7**
CMLA	**Cha da Macela**	**8.82**	**171**	*e*P	**Pn**	**20 20 45.4**	**-1.1**
CMLA	**Cha da Macela**	**8.82**	**171**	*e*Pn	**Pn**	**20 20 45.3**	**-1.1**
CMLA	**Cha da Macela**	**8.82**	**171**	*e*P	**Pn**	**20 20 45.3**	**-1.1**
BART	**Pico Bartolome**	**8.85**	**169**	*e*P	**Pn**	**20 20 45.4**	**-1.6**
PSMA	**Santa Maria**	**9.63**	**169**	*e*P	**Pn**	**20 20 56.4**	**-1.1**
PSMN	**Pico do Norte,**	**9.63**	**169**	*e*P	**Pn**	**20 20 56.3**	**-1.2**
PGAV	**Gavieira, Arco**	**14.40**	**101**	*e*P	**Pn**	**20 22 01.2**	**-1.6**
	157nm,1.8s						
PGAV				*e*LR	LR	20 25 19.0	
	5µm,18.0s						
PTO	**Porto**	**14.54**	**105**	*e*P	**Pn**	**20 22 03.1**	**-1.5**
PCAB	**Cabril**	**14.67**	**102**	*e*P	**Pn**	**20 22 05.0**	**-1.5**
	105nm,0.6s						
POLO	**Lamas de Olo**	**14.97**	**103**	*e*P	**Pn**	**20 22 08.8**	**-1.8**
	56nm,1.4s						
PVRL	**Vila Real**	**15.07**	**103**	*e*P	**Pn**	**20 22 09.9**	**-2.0**
PCAS	**Casmilo, Conde**	**15.14**	**108**	*e*P	**Pn**	**20 22 12.8**	**0.0**
	102nm,2.3s						
PVIS	**Viseu**	**15.21**	**105**	*e*P	**Pn**	**20 22 12.2**	**-1.6**
	88nm,1.4s						
PMAFR	**Mafra**	**15.24**	**113**	*e*P	**Pn**	**20 22 11.6**	**-2.5**
	350nm,1.5s						
PMST	**Lisbon--Monsan**	**15.43**	**114**	*e*P	**Pn**	**20 22 14.7**	**-1.9**
PTOM	**Tomar**	**15.43**	**110**	*e*P	**Pn**	**20 22 13.7**	**-2.9**
	125nm,1.1s						
LIS	**Lisbon**	**15.46**	**114**	*e*P	**Pn**	**20 22 17.0**	**-0.1**
LIS				AMb	AMB	20 22 22.4	
	comp=Z,160nm,1.8s						
LIS	**Lisbon**	**15.46**	**114**	*e*P	**Pn**	**20 22 16.9**	**-0.1**
LIS				pmax	pmax		
	comp=Z,160nm,1.8s						
PBRG	**Braganca**	**15.50**	**100**	*e*P	**Pn**	**20 22 16.4**	**-1.1**
	comp=Z,98nm,1.5s						
MVO	**Moncorvo**	**15.58**	**103**	*e*P	**Pn**	**20 22 17.0**	**-1.6**
	comp=Z,69nm,1.4s						
MVO				*e*LR	LR	20 25 40.7	
	comp=Z,5µm,20.0s						
MTE	**Manteigas**	**15.60**	**106**	*e*P	**Pn**	**20 22 17.3**	**-1.5**
	comp=Z,79nm,1.6s						
MTE				*e*LR	LR	20 25 29.0	
	comp=Z,4µm,20.0s						
MTE	**Manteigas**	**15.60**	**106**	*e*Pn	**Pn**	**20 22 17.1**	**-1.7**
	comp=Z,123nm,1.7s						
PMOZ	**Porto Moniz, M**	**15.70**	**147**	*e*P	**Pn**	**20 22 20.3**	**0.0**
	comp=Z,261nm,1.5s						
PMOZ				*e*LR	LR	20 25 50.8	
	comp=Z,2µm,20.0s						
PMTG	**Montargil**	**15.85**	**111**	*e*P	**Pn**	**20 22 19.9**	**-2.1**
	comp=Z,104nm,1.4s						
PMAR	**Madeira**	**15.90**	**146**	*e*P	**Pn**	**20 22 22.2**	**-0.7**
	comp=Z,208nm,1.4s						
PCBR	**Castelo Branco**	**15.92**	**108**	*e*P	**Pn**	**20 22 22.5**	**-0.5**
PMRV	**Marv??o**	**16.20**	**109**	*e*P	**Pn**	**20 22 25.2**	**-1.3**
	comp=Z,79nm,2.0s						
PMRV				*e*LR	LR	20 26 14.1	
	comp=Z,3µm,18.0s						
PNCL	**Nicolau / Gran**	**16.21**	**114**	*e*P	**Pn**	**20 22 25.0**	**-1.7**
	comp=Z,91nm,1.6s						
PESTR	**Estremoz**	**16.38**	**111**	*e*P	**Pn**	**20 22 26.1**	**-2.7**
	comp=Z,62nm,2.0s						
PTEO	**Sao Teotonio**	**16.44**	**116**	*e*P	**Pn**	**20 22 29.5**	**-0.1**
	comp=Z,170nm,1.5s						
MESJ	**Messejana**	**16.57**	**115**	*e*P	**Pn**	**20 22 30.7**	**-0.5**
MESJ				AMb	AMB	20 22 46.1	
	comp=Z,75nm,1.4s						
MESJ	**Messejana**	**16.57**	**115**	*e*P	**Pn**	**20 22 30.9**	**-0.4**
	comp=Z,76nm,1.7s						
MESJ	**Messejana**	**16.57**	**115**	*e*P	**Pn**	**20 22 30.7**	**-0.5**
MESJ				pmax	pmax		
	comp=Z,75nm,1.4s						
MORF	**Marmelete**	**16.64**	**117**	*e*P	**Pn**	**20 22 31.5**	**-0.6**
MORF				AMb	AMB	20 22 37.4	
	comp=Z,116nm,2.0s						
MORF	**Marmelete**	**16.64**	**117**	*e*P	**Pn**	**20 22 31.5**	**-0.6**
MORF				pmax	pmax		
	comp=Z,116nm,2.0s						
PFVI	**Vila Bisbo**	**16.64**	**118**	*e*P	**Pn**	**20 22 30.6**	**-1.5**
	comp=Z,217nm,1.5s						
PVAQ	**Vaqueiros**	**17.16**	**115**	*e*P	**Pn**	**20 22 38.6**	**0.0**
	comp=Z,78nm,1.6s						
PVAQ				*e*LR	LR	20 26 25.7	
	comp=Z,2µm,20.0s						
EKA	**Eskdalemuir Ar**	**17.56**	**51**	P	**P**	**20 22 44.0**	**-0.5**
	baz=241,slow=12,SNR=6.8						
EKA				LR	LR	20 28 28.5	
	comp=Z,2µm,18.2s,baz=285,slow=34						
PAB	**San Pablo**	**18.15**	**104**	*e*Pn	**Pn**	**20 22 50.8**	**-0.3**
	comp=Z,18nm,0.6s						
PAB	**San Pablo**	**18.15**	**104**	*e*P	**Pn**	**20 22 50.8**	**-0.3**
PAB				pmax	pmax		
	comp=Z,18nm,0.6s						
ESDC	**Sonseca Array**	**18.35**	**103**	P	**Pn**	**20 22 54.4**	**+1.0**
	comp=Z,4.7nm,0.3s,baz=298,slow=13,SNR=48						
ESDC				LR	LR	20 28 39.3	
	comp=Z,3µm,18.6s,baz=295,slow=33						
ESLA	**Sonseca Array**	**18.35**	**103**	*e*P	**Pn**	**20 22 54.5**	**+1.1**
	comp=Z,76nm,1.6s						
ES19	**SONSECA Array**	**18.38**	**103**	*e*P	**P**	**20 22 52.6**	**-1.1**
BORG	**Borgarnes**	**18.60**	**8**	LR	LR	20 28 00.8	
	comp=Z,1µm,20.7s,baz=198,slow=30						
SNF	**Seneffe**	**21.25**	**67**	⇑P	**P**	**20 23 25.5**	**+0.7**
UCC	**Uccle**	**21.29**	**67**	*e*P	**P**	**20 23 25.1**	**-0.2**
	comp=Z,54nm,1.0s						
UCC	**Uccle**	**21.29**	**67**	*e*P	**P**	**20 23 25.1**	**-0.2**
UCC				pmax	pmax		
	comp=Z,54nm,1.0s						
UCC	**Uccle**	**21.29**	**67**	⇓P	**P**	**20 23 29.0**	**+3.7**
	comp=Z,30nm,1.3s						
DOU	**Dourbes**	**21.46**	**69**	⇑P	**P**	**20 23 29.7**	**+2.5**
MDT	**Midelt**	**22.10**	**120**	P	**P**	**20 23 34.9**	**+0.7**
	comp=Z,11nm,1.1s,baz=330,slow=10,SNR=8.0						
MDT				LR	LR	20 30 42.7	
	comp=Z,1µm,20.3s,baz=334,slow=33						
SSB	**Saint Sauveur**	**22.16**	**81**	*e*P	**P**	**20 23 34.5**	**-0.1**
	comp=Z,45nm,1.3s						
SSB	**Saint Sauveur**	**22.16**	**81**	*e*P	**P**	**20 23 34.6**	**-0.1**
SSB				pmax	pmax		
	comp=Z,45nm,1.3s						
MEM	**Membach**	**22.35**	**67**	⇑P	**P**	**20 23 39.6**	**+2.9**
	comp=Z,22nm,1.0s						
WLF	**Walferdange**	**22.50**	**70**	⇓P	**P**	**20 23 41.0**	**+2.8**
ECH	**Echery**	**23.33**	**73**	*e*P	**P**	**20 23 48.3**	**+1.4**
	comp=Z,145nm,1.8s						
ECH	**Echery**	**23.33**	**73**	*e*P	**P**	**20 23 48.3**	**+1.4**
ECH				pmax	pmax		
	comp=Z,145nm,1.8s						
SENIN	**Lac Senin/Sane**	**23.77**	**78**	*e*P	**P**	**20 23 50.2**	**-1.3**
	comp=Z,41nm,1.2s						
SFJD	**Kangerlussuaq**	**23.91**	**337**	*e*P	**P**	**20 23 51.4**	**-0.9**
	comp=Z,128nm,1.8s						
SFJD	**Kangerlussuaq**	**23.91**	**337**	*i* P	**P**	**20 23 51.9**	**-0.4**
SFJD	**Kangerlussuaq**	**23.91**	**337**	*e*P	**P**	**20 23 51.9**	**-0.4**
SFJD	**Kangerlussuaq**	**23.91**	**337**	P	**P**	**20 23 51.7**	**-0.6**
	comp=Z,8.2nm,0.9s,baz=72,slow=9.6,SNR=2.6						
SFJD				LR	LR	20 31 09.1	
	comp=Z,3µm,20.3s,baz=142,slow=32						
BFO	**Black Forest**	**24.08**	**72**	*e*P	**P**	**20 23 53.7**	**-0.5**
	comp=Z,65nm,1.8s						
BFO	**Black Forest**	**24.08**	**72**	*e*P	**P**	**20 23 53.7**	**-0.5**
BFO				pmax	pmax		
	comp=Z,65nm,1.8s						
SCO	**Scoresbysund**	**24.21**	**4**	*e*P	**P**	**20 23 56.2**	**+1.1**
	comp=Z,51nm,1.7s						
SCO	**Scoresbysund**	**24.21**	**4**	*i* P	**P**	**20 23 56.2**	**+1.1**
SCO	**Scoresbysund**	**24.21**	**4**	*e*P	**P**	**20 23 56.2**	**+1.1**
STU	**Stuttgart**	**24.58**	**71**	*e*P	**P**	**20 23 58.3**	**-0.5**
	comp=Z,20nm,0.8s						
STU	**Stuttgart**	**24.58**	**71**	*e*P	**P**	**20 23 58.3**	**-0.5**
STU				pmax	pmax		
	comp=Z,20nm,0.8s						
DAVA	**Damuels**	**25.30**	**74**	*i* P	**P**	**20 24 07.0**	**+1.5**
	comp=Z,39nm,1.2s						
DAVOX	**Davos/Dischmat**	**25.41**	**76**	P	**P**	**20 24 07.7**	**+1.3**
	comp=Z,11nm,0.8s,baz=291,slow=13,SNR=8.8						
DAVOX				LR	LR	20 33 11.5	
	comp=Z,2µm,19.5s,baz=282,slow=34						
KONO	**Kongsberg**	**25.42**	**45**	*e*P	**P**	**20 24 07.2**	**+1.0**
	comp=Z,50nm,1.1s						
KONO	**Kongsberg**	**25.42**	**45**	⇑*e*P	**P**	**20 24 07.0**	**+0.8**
KONO				pmax	pmax		
	comp=Z,117nm,2.5s						
GRFO	**Grafenberg**	**25.77**	**69**	*e*P	**P**	**20 24 09.0**	**-0.5**
	comp=Z,52nm,1.5s						
GRFO	**Grafenberg**	**25.77**	**69**	*e*P	**P**	**20 24 09.0**	**-0.5**
GRFO				pmax	pmax		
	comp=Z,52nm,1.5s						
GRA1	**Grafenberg Arr**	**25.77**	**69**	*e*P	**P**	**20 24 10.3**	**+0.8**
	comp=Z,46nm,1.4s						
GRF	**Grafenberg Arr**	**25.77**	**69**	*e*P	**P**	**20 24 10.3**	**+0.8**
GRF				pmax	pmax		
	comp=Z,47nm,1.4s						
RETA	**Reutte**	**25.85**	**74**	*i* pP	pP	20 24 17.9	+3.4
	comp=Z,16nm,1.7s						
FETA	**Feichten**	**25.93**	**75**	*i* P	**P**	**20 24 12.9**	**+1.8**
	comp=Z,12nm,1.0s,SNR=5.8						
SCHQ	**Schefferville**	**26.09**	**303**	*e*P	**P**	**20 24 11.7**	**-0.7**
	comp=Z,66nm,2.0s						
SCHQ	**Schefferville**	**26.09**	**303**	P	**P**	**20 24 11.8**	**-0.6**
	comp=Z,5.8nm,0.9s,baz=81,slow=11,SNR=6.8						
SCHQ				LR	LR	20 32 23.4	
	comp=Z,2µm,21.3s,baz=100,slow=32						
MOTA	**Moosalm**	**26.10**	**74**	*i* P	**P**	**20 24 13.3**	**+0.6**
	comp=Z,4.8nm,0.8s						
JMIC	**Jan Mayen**	**26.20**	**14**	LR	LR	20 32 10.7	
	comp=Z,683nm,20.9s,baz=248,slow=31						
SQTA	**Sankt Quirin**	**26.20**	**74**	*i* pP	**P**	**20 24 15.4**	**+1.8**
	comp=Z,7.8nm,1.0s						
BATG	**Bathurst New B**	**26.30**	**286**	*e*P	**P**	**20 24 13.4**	**-0.9**
	comp=Z,42nm,1.4s						
WATA	**Walderalm**	**26.42**	**74**	*i* pP	pP	20 24 17.5	-2.4
	comp=Z,3.8nm,0.5s						
NB2	**NORSAR Subarra**	**26.56**	**43**	P	**P**	**20 24 16.6**	**0.0**
	comp=Z,18nm,1.1s,baz=256,slow=10						
NB200	**NORSAR Array S**	**26.56**	**43**	*e*P	**P**	**20 24 16.9**	**+0.4**
NOA	**NORSAR Array B**	**26.56**	**43**	P	**P**	**20 24 17.0**	**+0.4**
NOA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NOA				MLR	MLR		
	comp=Z,588nm,21.3s						
NOA	**NORSAR Array B**	**26.56**	**43**	P	**P**	**20 24 16.9**	**+0.4**
	comp=Z,5.2nm,0.9s,baz=254,slow=9.7,SNR=7.4						
NOA				LR	LR	20 33 18.8	
	comp=Z,588nm,21.3s,baz=250,slow=33						
NC602	**NORSAR Array S**	**26.64**	**43**	*e*P	**P**	**20 24 17.5**	**+0.3**
SUMG	**Summit**	**26.67**	**353**	*e*P	**P**	**20 24 16.8**	**-1.1**
	comp=Z,24nm,1.0s						
SUMG	**Summit**	**26.67**	**353**	*i* P	**P**	**20 24 17.3**	**-0.6**
	comp=Z,56nm,0.9s						
SUMG	**Summit**	**26.67**	**353**	*e*P	**P**	**20 24 17.3**	**-0.6**
SUMG				pmax	pmax		
	comp=Z,56nm,0.9s						
CLL	**Collm**	**26.71**	**65**	*e*P	**P**	**20 24 17.6**	**-0.4**
	comp=Z,37nm,1.9s						
CLL	**Collm**	**26.71**	**65**	*e*P	**P**	**20 24 18.0**	**0.0**
CLL				*e*		20 24 36.0	
CLL				*e*S	**S**	**20 28 50.0**	**-2.6**
CLL				*e*		20 29 27.0	
CLL				*e*SSSS		20 30 36.0	
CLL				LmH		20 33 00.0	
	comp=Z,1µm,22.0s						
CLL	**Collm**	**26.71**	**65**	*e*P	**P**	**20 24 18.0**	**0.0**
CLL				*e*S	**S**	**20 28 50.0**	**-2.6**
CLL				MLR	MLR		
	comp=Z,1µm,22.0s						
ABTA	**Abfaltersbach**	**27.18**	**75**	*i* pP	**P**	**20 24 23.5**	**+1.2**
	comp=Z,6.8nm,0.9s						
BRG	**Berggiesshubel**	**27.35**	**66**	*e*P	**P**	**20 24 25.8**	**+2.1**
	comp=Z,54nm,2.0s						
BRG	**Berggiesshubel**	**27.35**	**66**	*e*P	**P**	**20 24 25.8**	**+2.1**
BRG				pmax	pmax		
	comp=Z,5.0nm,2.0s						
KHC	**Kasperske Hory**	**27.38**	**69**	*e*P	**P**	**20 24 24.7**	**+0.7**
KHC				AMS	AMS	20 34 40.0	
	comp=Z,3µm,20.0s						
KHC	**Kasperske Hory**	**27.38**	**69**	*e*P	**P**	**20 24 24.7**	**+0.7**
KHC				MLR	MLR		
	comp=Z,3µm,20.0s						
GEC2	**GERESS Array S**	**27.51**	**70**	*e*P	**P**	**20 24 24.6**	**-0.7**
	comp=Z,9.0nm,1.1s						
GEC2	**GERESS Array S**	**27.51**	**70**	*e*P	**P**	**20 24 24.6**	**-0.7**
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GERES	**GERESS Array B**	**27.51**	**70**	P	**P**	**20 24 26.1**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=282,slow=6.7,SNR=16						
GERES				LR	LR	20 35 05.9	
	comp=Z,2µm,18.3s,baz=265,slow=36						
GEA0	**GERESS Array S**	**27.51**	**70**	*e*P	**P**	**20 24 25.2**	**-0.1**
HFS	**Hagfors**	**27.54**	**45**	P	**P**	**20 24 26.3**	**+1.0**
	comp=Z,7.0nm,1.0s,baz=247,slow=10,SNR=3.4						
HFS				LR	LR	20 33 49.5	
	comp=Z,675nm,19.8s,baz=252,slow=33						
KBA	**Koelnbreinsper**	**27.65**	**74**	*i* P	**P**	**20 24 27.4**	**+0.7**
	comp=Z,15nm,1.5s						
PRA	**Prague**	**27.77**	**67**	AMS	AMS	20 34 30.0	
	comp=Z,3µm,23.3s						
PVCC	**Panska Ves**	**27.79**	**66**	AMS	AMS	20 39 10.0	
	comp=Z,1µm,13.7s						
PRU	**Pruhonice**	**27.85**	**67**	AMS	AMS	20 35 20.0	
	comp=Z,3µm,16.6s						
MYKA	**Terra Mystica**	**27.96**	**75**	*i* pP	**P**	**20 24 30.7**	**+1.4**
	comp=Z,15nm,1.4s						
JAVS	**Javornik**	**28.44**	**76**	*e*P	**P**	**20 24 35.2**	**+1.5**
FRB	**Frobisher Bay**	**28.52**	**322**	P	**P**	**20 24 33.1**	**-0.8**
	comp=Z,9.5nm,1.0s,baz=104,slow=7.0,SNR=8.6						
FRB				LR	LR	20 32 56.8	
	comp=Z,1µm,21.1s,baz=110,slow=30						
TREC	**Trest**	**28.58**	**69**	AMS	AMS	20 35 40.0	
	comp=Z,4µm,17.9s						
OBKA	**Obir**	**28.60**	**74**	*i* P	**P**	**20 24 35.6**	**+0.6**
	comp=Z,22nm,0.9s						
UPC	**Upice**	**28.70**	**66**	*e*P	**P**	**20 24 37.5**	**+1.7**
UPC				AMS	AMS	20 34 30.0	
	comp=Z,2µm,21.6s						
UPC	**Upice**	**28.70**	**66**	*e*P	**P**	**20 24 37.5**	**+1.7**
UPC				MLR	MLR		
	comp=Z,2µm,21.6s						
SOKA	**Soboth**	**28.87**	**74**	*i* P	**P**	**20 24 37.8**	**+0.3**
	comp=Z,9.4nm,0.9s,SNR=5.6						
DPC	**Dobruska-Polom**	**28.92**	**66**	AMS	AMS	20 35 20.0	
	comp=Z,2µm,21.8s						
PERS	**Pernice**	**28.94**	**74**	*i* P	**P**	**20 24 39.0**	**+1.0**
PKME	**Peaks-Kenny Pk**	**28.99**	**283**	P	**P**	**20 24 34.7**	**-3.6**
	baz=72						
VISS	**Visnje**	**28.99**	**76**	*i* P	**P**	**20 24 39.4**	**+1.0**
ARSA	**Arzberg**	**29.05**	**73**	*i* P	**P**	**20 24 39.6**	**+0.6**
	comp=Z,18nm,1.0s,SNR=11						
CONA	**Conrad Observa**	**29.11**	**71**	*i* pP	**P**	**20 24 40.5**	**+1.0**
	comp=Z,5.8nm,1.2s						
AQU	**L'Aquila**	**29.16**	**83**	*e*P	**P**	**20 24 40.5**	**+0.5**
	comp=Z,40nm,1.3s						
AQU	**L'Aquila**	**29.16**	**83**	*e*P	**P**	**20 24 40.5**	**+0.5**
AQU				pmax	pmax		
	comp=Z,40nm,1.3s						
VRAC	**Vranov**	**29.29**	**68**	P	**P**	**20 24 41.2**	**+0.2**
	comp=Z,2.6nm,0.4s,baz=236,slow=15,SNR=3.5						
VRAC				LR	LR	20 36 04.5	
	comp=Z,3µm,18.8s,baz=270,slow=36						
KEST	**Kesra**	**29.41**	**98**	*e*P	**P**	**20 24 43.2**	**+0.8**
	comp=Z,23nm,1.0s						
KEST	**Kesra**	**29.41**	**98**	P	**P**	**20 24 43.1**	**+0.8**
	comp=Z,11nm,0.9s,baz=300,slow=5.4,SNR=6.4						
KEST				LR	LR	20 35 32.4	
	comp=Z,3µm,18.8s,baz=258,slow=34						
MORC	**Moravsky Berou**	**29.80**	**67**	*e*P	**P**	**20 24 46.6**	**+1.0**
	comp=Z,8.1nm,1.1s						
MORC	**Moravsky Berou**	**29.80**	**67**	⇓*i*P	**P**	**20 24 46.9**	**+1.3**
MORC	**Moravsky Berou**	**29.80**	**67**	⇓P	**P**	**20 24 46.9**	**+1.3**
LATQ	**La Tuque**	**30.70**	**289**	P	**P**	**20 24 52.8**	**-0.7**
	baz=75						

VYHS	**Vyhne**	**30.91**	**69**	*e*P	**P**	**20 24 55.9**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,74nm,3.2s						
VYHS	**Vyhne**	**30.91**	**69**	*e*P	**P**	**20 24 55.9**	**+0.5**
LBNH	**Lisbon**	**31.09**	**282**	P	**P**	**20 24 57.0**	**0.0**
	baz=70						
CHGQ	**Chibougamau**	**31.13**	**294**	P	**P**	**20 24 54.5**	**-2.8**
	baz=78						
PSZ	**Piszkesteto**	**31.74**	**70**	*e*P	**P**	**20 25 03.6**	**+0.9**
	comp=Z,24nm,1.3s						
PSZ	**Piszkesteto**	**31.74**	**70**	*e*P	**P**	**20 25 03.6**	**+0.9**
PSZ				pmax	pmax		
	comp=Z,24nm,1.3s						
LONY	**Lake Ozonia**	**32.75**	**284**	P	**P**	**20 25 11.2**	**-0.4**
	baz=70						
LSQQ	**Lebel-sur-Quev**	**32.98**	**293**	P	**P**	**20 25 13.0**	**-0.5**
	baz=75						
UZH	**Uzhgorod**	**33.09**	**68**	*e*P	**P**	**20 25 13.1**	**-1.4**
UZH				*e*		20 25 20.4	
KWP	**Kalwaria Pacla**	**33.10**	**66**	*e*P	**P**	**20 25 14.3**	**-0.3**
	comp=Z,92nm,0.9s						
KWP	**Kalwaria Pacla**	**33.10**	**66**	*e*P	**P**	**20 25 14.3**	**-0.3**
KWP				pmax	pmax		
	comp=Z,92nm,0.9s						
MATQ	**Matagami**	**33.22**	**294**	P	**P**	**20 25 14.2**	**-1.5**
	baz=76						
D54A	**Lac Fusel, La**	**33.30**	**290**	P	**P**	**20 25 15.4**	**-1.0**
	baz=73						
TRPA	**Tarpa**	**33.39**	**69**	⇑*i*P	**P**	**20 25 18.7**	**+1.6**
BZS	**Buzias**	**33.56**	**73**	⇑*i*P	**P**	**20 25 19.6**	**+1.0**
BZS	**Buzias**	**33.56**	**73**	⇑P	**P**	**20 25 19.6**	**+1.0**
FIA0	**FINESS Array S**	**33.71**	**44**	*e*P	**P**	**20 25 20.2**	**+0.5**
FIA0	**FINESS Array S**	**33.71**	**44**	*e*P	**P**	**20 25 20.3**	**+0.5**
FINES	**FINESS Array B**	**33.71**	**44**	P	**P**	**20 25 20.2**	**+0.5**
	comp=Z,10nm,0.9s,baz=285,slow=5.3,SNR=14						
FINES				LR	LR	20 38 01.0	
	comp=Z,566nm,19.2s,baz=268,slow=34						
FIA1	**FINESS Array S**	**33.71**	**44**	*e*P	**P**	**20 25 20.0**	**+0.3**
E54A	**Lac Daplat, Po**	**33.87**	**288**	P	**P**	**20 25 20.4**	**-0.9**
	baz=71						
H56A	**Elgin**	**33.88**	**285**	P	**P**	**20 25 21.9**	**+0.5**
	baz=69						
LVV	**L'vov**	**33.89**	**65**	*e*P	**P**	**20 25 23.8**	**+2.4**
DRGR		**33.90**	**71**	⇑*i*P	**P**	**20 25 22.5**	**+0.9**
DRGR		**33.90**	**71**	⇑P	**P**	**20 25 22.6**	**+0.9**
G55A	**Calabogie**	**33.95**	**286**	P	**P**	**20 25 21.2**	**-0.8**
	baz=70						
D53A	**Lac Vacive, Po**	**34.00**	**290**	P	**P**	**20 25 22.1**	**-0.4**
	baz=72						
E53A	**Dumoine, Ponti**	**34.20**	**289**	P	**P**	**20 25 22.9**	**-1.3**
	baz=71						
HERR	**Herculane**	**34.34**	**74**	⇑*i*P	**P**	**20 25 26.2**	**+0.8**
GZR	**Gura Zlata**	**34.40**	**73**	⇑*i*P	**P**	**20 25 26.8**	**+0.8**
D52A	**ZEK Kipawa Sen**	**34.50**	**290**	P	**P**	**20 25 25.9**	**-0.8**
	baz=72						
TULEG	**Thule**	**34.51**	**344**	*e*P	**P**	**20 25 25.7**	**-0.8**
	comp=Z,36nm,1.1s						
ARA0	**ARCESS Array S**	**34.57**	**30**	*e*P	**P**	**20 25 26.7**	**-0.4**
ARCES	**ARCESS Array B**	**34.57**	**30**	*e*P	**P**	**20 25 26.5**	**-0.6**
ARCES	**ARCESS Array B**	**34.57**	**30**	P	**P**	**20 25 26.7**	**-0.4**
	comp=Z,11nm,1.0s,baz=273,slow=6.9,SNR=12						
ARCES				LR	LR	20 38 28.7	
	comp=Z,444nm,19.2s,baz=285,slow=34						
ALGO	**Algonquin Park**	**34.59**	**288**	P	**P**	**20 25 27.1**	**-0.5**
	baz=70						
BINY	**Binghamton**	**34.61**	**281**	P	**P**	**20 25 27.9**	**+0.1**
	baz=66						
KSPA	**Keystone Colle**	**34.73**	**280**	*e*P	**P**	**20 25 29.8**	**+0.9**
	comp=Z,22nm,1.1s						
BANO	**Bancroft**	**34.84**	**286**	P	**P**	**20 25 29.4**	**-0.3**
	baz=69						
ARCR	**ARCALIA**	**34.87**	**70**	⇓*i*P	**P**	**20 25 30.6**	**+0.6**
E52A	**Mattawa**	**34.88**	**289**	P	**P**	**20 25 30.9**	**+0.8**
	baz=71						
I55A	**Frankford**	**34.97**	**285**	P	**P**	**20 25 30.8**	**-0.1**
	baz=68						
N59A	**State Game Lan**	**35.00**	**279**	*e*P	**P**	**20 25 30.1**	**-1.1**
	comp=Z,130nm,2.0s						
N59A	**State Game Lan**	**35.00**	**279**	P	**P**	**20 25 31.5**	**+0.2**
	baz=64						
D51A	**Lot 18 Range I**	**35.09**	**290**	P	**P**	**20 25 31.4**	**-0.4**
	baz=71						
BUR08	**Bucovina Ar. S**	**35.24**	**68**	*e*P	**P**	**20 25 33.9**	**+0.6**
BUR04	**Bucovina Ar. S**	**35.26**	**69**	*e*P	**P**	**20 25 34.0**	**+0.6**
G53A	**Haliburton**	**35.26**	**287**	P	**P**	**20 25 33.5**	**+0.2**
	baz=69						
BURAR	**Bucovina Array**	**35.26**	**69**	⇑*i*P	**P**	**20 25 34.9**	**+1.4**
BURAR	**Bucovina Array**	**35.26**	**69**	⇑P	**P**	**20 25 34.9**	**+1.4**
D50A	**G1974 Best Tow**	**35.36**	**291**	P	**P**	**20 25 34.2**	**0.0**
	baz=71						
F52A	**Sundridge**	**35.48**	**288**	P	**P**	**20 25 36.4**	**+1.1**
	baz=70						
SADO	**Sadowa**	**35.73**	**287**	P	**P**	**20 25 37.1**	**-0.3**
	comp=Z,5.4nm,0.7s,baz=144,slow=8.7,SNR=3.9						
SADO				LR	LR	20 39 01.4	
	comp=Z,2µm,19.7s,baz=80,slow=34						
VTS	**Vitosha**	**35.74**	**77**	*e*P	**P**	**20 25 36.1**	**-1.6**
	comp=Z,6.4nm,0.9s						
VTS	**Vitosha**	**35.74**	**77**	⇑*i*P	**P**	**20 25 39.4**	**+1.7**
VTS	**Vitosha**	**35.74**	**77**	⇑P	**P**	**20 25 39.4**	**+1.7**
SPA0	**Spitsbergen Ar**	**35.87**	**14**	*e*P	**P**	**20 25 38.3**	**+0.1**
	comp=Z,44nm,1.2s						
SPITS	**Spitsbergen Ar**	**35.87**	**14**	P	**P**	**20 25 38.5**	**+0.3**
	comp=Z,23nm,1.0s,baz=239,slow=13,SNR=5.1						
SPITS				LR	LR	20 36 53.5	
	comp=Z,262nm,18.4s,baz=200,slow=30						
VOIR		**35.88**	**72**	⇑*i*P	**P**	**20 25 39.1**	**+0.3**
VOIR		**35.88**	**72**	⇑P	**P**	**20 25 39.1**	**+0.3**
DOPR	**Dopca**	**35.92**	**71**	⇑*i*P	**P**	**20 25 38.9**	**-0.1**
VLAD	**Vladila**	**35.99**	**75**	⇑*i*P	**P**	**20 25 40.8**	**+1.2**
BIZ	**Bicaz**	**36.05**	**69**	⇓*i*P	**P**	**20 25 41.5**	**+1.3**
E50A	**Wahnapitae**	**36.19**	**290**	P	**P**	**20 25 41.4**	**0.0**
	baz=70						
D49A	**Beulah Townshi**	**36.30**	**291**	P	**P**	**20 25 42.9**	**+0.6**
	baz=71						
MLR	**Muntele Rosu**	**36.45**	**72**	⇑*i*P	**P**	**20 25 45.5**	**+1.8**
MLR	**Muntele Rosu**	**36.45**	**72**	⇑P	**P**	**20 25 45.5**	**+1.8**
MLR	**Muntele Rosu**	**36.45**	**72**	P	**P**	**20 25 44.3**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=308,slow=15,SNR=5.7						
SSPA	**Standing Stone**	**36.57**	**280**	P	**P**	**20 25 44.5**	**-0.1**
	baz=64						
D48A	**Paudash Townsh**	**36.63**	**291**	P	**P**	**20 25 42.7**	**-2.3**
	baz=70						
PLOR	**Plostina**	**36.78**	**71**	⇑*i*P	**P**	**20 25 49.0**	**+2.6**
PLOR	**Plostina**	**36.78**	**71**	⇑P	**P**	**20 25 49.0**	**+2.6**
VRI	**Vrincioaia**	**36.83**	**71**	⇑*i*P	**P**	**20 25 48.3**	**+1.5**
VRI	**Vrincioaia**	**36.83**	**71**	⇑P	**P**	**20 25 48.3**	**+1.5**
KIEV	**Kiev**	**36.86**	**62**	*e*P	**P**	**20 25 46.2**	**-0.8**
	comp=Z,7.7nm,0.9s						
KIEV	**Kiev**	**36.86**	**62**	⇑*i*P	**P**	**20 25 47.1**	**+0.1**
KIEV	**Kiev**	**36.86**	**62**	⇑*e*P	**P**	**20 25 48.1**	**+1.1**
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AKASG	**Malin Array Be**	**36.87**	**62**	P	**P**	**20 25 46.8**	**-0.3**
	comp=Z,5.9nm,0.9s,baz=283,slow=8.4,SNR=13						
AKASG				LR	LR	20 41 46.5	
	comp=Z,1µm,18.2s,baz=290,slow=38						
AKBB	**Malin Array Si**	**36.87**	**62**	*e*P	**P**	**20 25 47.3**	**+0.2**
	comp=Z,8.4nm,0.9s						
AKBB	**Malin Array Si**	**36.87**	**62**	*e*P	**P**	**20 25 47.3**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
E48A	**Lockeyer**	**37.10**	**291**	P	**P**	**20 25 48.0**	**-1.0**
	baz=69						
APA	**Apatity**	**37.15**	**34**	⇓*i*P	**P**	**20 25 49.5**	**+0.3**
APA				pmax	pmax		
	comp=Z,17nm,0.9s						
J52A	**Paris**	**37.21**	**285**	P	**P**	**20 25 50.2**	**+0.2**
	baz=66						
K52A	**Tillsonburg**	**37.56**	**284**	P	**P**	**20 25 53.6**	**+0.7**
	baz=65						
LVZ	**Lovozero**	**37.64**	**33**	*e*P	**P**	**20 25 54.9**	**+1.5**
	comp=Z,24nm,1.0s						
LVZ	**Lovozero**	**37.64**	**33**	⇑*e*P	**P**	**20 25 53.6**	**+0.2**
LVZ				pmax	pmax		
	comp=Z,50nm,2.5s						
O55A	**Ligonier**	**37.73**	**280**	P	**P**	**20 25 55.5**	**+1.0**
	baz=63						
R58B	**Mineral**	**37.82**	**276**	P	**P**	**20 25 56.7**	**+1.5**
	baz=60						
E47A	**Iron Bridge**	**37.83**	**291**	P	**P**	**20 25 53.8**	**-1.4**
	baz=69						
N54A	**Moraine State**	**37.85**	**281**	P	**P**	**20 25 56.6**	**+1.1**
	baz=64						
M53A	**WI Miller and**	**38.11**	**282**	P	**P**	**20 25 58.4**	**+0.8**
	baz=64						
D46A	**Sault St. Mari**	**38.16**	**292**	P	**P**	**20 25 58.2**	**+0.2**
	baz=69						
ALN	**Alexandroupoli**	**38.39**	**78**	*e*P	**P**	**20 26 00.9**	**+0.9**
	comp=Z,19nm,1.3s						
ALN	**Alexandroupoli**	**38.39**	**78**	*e*P	**P**	**20 26 00.9**	**+0.9**
ALN				pmax	pmax		
	comp=Z,19nm,1.3s						
P55A	**Reedsville**	**38.41**	**279**	P	**P**	**20 26 02.1**	**+1.8**
	baz=62						
N53A	**Lisbon**	**38.50**	**281**	P	**P**	**20 26 00.5**	**-0.4**
	baz=63						
M52A	**Chesterland**	**38.52**	**283**	P	**P**	**20 26 01.1**	**-0.1**
	baz=64						
P54A	**Burton**	**38.81**	**280**	P	**P**	**20 26 03.8**	**+0.1**
	baz=62						
Q55A	**Buckhannon**	**38.83**	**278**	P	**P**	**20 26 03.7**	**-0.1**
	baz=61						
O53A	**New Philadelph**	**39.01**	**281**	P	**P**	**20 26 06.0**	**+0.8**
	baz=62						
TMCR	**Tamitsa**	**39.11**	**39**	*e*P	**P**	**20 26 06.0**	**+0.3**
TMCR				pmax	pmax		
	comp=Z,30nm,1.3s						
Q54A	**Coxs Mills**	**39.35**	**279**	P	**P**	**20 26 08.7**	**+0.6**
	baz=61						
P53A	**Whipple**	**39.48**	**280**	*e*P	**P**	**20 26 09.9**	**+0.7**
	comp=Z,61nm,1.7s						
P53A	**Whipple**	**39.48**	**280**	P	**P**	**20 26 10.6**	**+1.4**
	baz=62						
O52A	**Adamsville**	**39.49**	**281**	*e*P	**P**	**20 26 10.5**	**+1.2**
	comp=Z,91nm,1.8s						
O52A	**Adamsville**	**39.49**	**281**	P	**P**	**20 26 10.1**	**+0.8**
	baz=62						
M50A	**Fremont**	**39.72**	**283**	P	**P**	**20 26 12.6**	**+1.5**
	baz=63						
K48A	**Perry**	**39.82**	**286**	P	**P**	**20 26 12.5**	**+0.5**
	baz=64						
R54A	**Victor**	**39.84**	**278**	P	**P**	**20 26 15.0**	**+2.7**
	baz=60						
RES	**Resolute Bay**	**39.91**	**337**	*e*P	**P**	**20 26 10.3**	**-2.1**
	comp=Z,15nm,1.0s						
RES	**Resolute Bay**	**39.91**	**337**	P	**P**	**20 26 12.0**	**-0.4**
RES				pmax	pmax		
	comp=Z,11nm,1.0s						
RES	**Resolute Bay**	**39.91**	**337**	P	**P**	**20 26 11.9**	**-0.4**
	comp=Z,11nm,1.0s,baz=93,slow=7.9,SNR=20						
P52A	**Corning**	**39.92**	**281**	P	**P**	**20 26 15.3**	**+2.5**
	baz=62						
OBN	**Obninsk**	**39.98**	**53**	*e*P	**P**	**20 26 13.5**	**+0.4**
OBN				*e*		20 27 47.0	
OBN				*e*		20 28 15.7	
OBN				pmax	pmax		
	comp=Z,21nm,1.7s						
O51A	**Pataskala**	**40.00**	**281**	P	**P**	**20 26 15.0**	**+1.5**
	baz=62						
F44A	**Big Bay de Noc**	**40.03**	**292**	P	**P**	**20 26 16.2**	**+2.5**
	baz=67						
N50A	**Nevada**	**40.08**	**283**	P	**P**	**20 26 16.5**	**+2.3**
	baz=62						
ACSO	**Alum Creek Sta**	**40.21**	**282**	*e*P	**P**	**20 26 16.2**	**+0.9**
	comp=Z,56nm,1.5s						
ACSO	**Alum Creek Sta**	**40.21**	**282**	P	**P**	**20 26 16.0**	**+0.8**
	baz=62						
KLMR	**Klimovskoe**	**40.25**	**44**	*e*P	**P**	**20 26 12.6**	**-2.7**
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
KLMR	**Klimovskoe**	**40.25**	**44**	*e*P	**P**	**20 26 12.7**	**-2.6**
KLMR				AMP		20 26 30.7	
	comp=Z,13nm,1.4s						
KLMR				*e*PP	**PP**	**20 27 44.5**	**-3.2**
M49A	**Liberty Center**	**40.31**	**284**	P	**P**	**20 26 15.7**	**-0.3**
	baz=63						
R53A	**Hurricane**	**40.43**	**279**	P	**P**	**20 26 18.2**	**+1.1**
	baz=60						
F43A	**Flat Rock, Esc**	**40.57**	**292**	P	**P**	**20 26 17.2**	**-0.9**
	baz=67						
FCC	**Fort Churchill**	**40.61**	**313**	*e*P	**P**	**20 26 18.4**	**+0.1**
	comp=Z,23nm,1.2s						
FCC	**Fort Churchill**	**40.61**	**313**	*e*P	**P**	**20 26 18.4**	**+0.1**
FCC				pmax	pmax		
	comp=Z,23nm,1.2s						
O50A	**Cable**	**40.69**	**282**	P	**P**	**20 26 20.3**	**+1.1**
	baz=62						
N49A	**Columbus Grove**	**40.70**	**283**	P	**P**	**20 26 20.7**	**+1.4**
	baz=62						
M48A	**Edgerton**	**40.80**	**284**	P	**P**	**20 26 21.1**	**+1.0**
	baz=63						
E42A	**Champion**	**40.81**	**293**	P	**P**	**20 26 19.8**	**-0.3**
	baz=67						
T54A	**Tazewell**	**40.81**	**277**	P	**P**	**20 26 20.3**	**0.0**
	baz=59						
L47A	**Sherwood**	**40.91**	**285**	P	**P**	**20 26 20.6**	**-0.4**
	baz=63						
P50A	**Jamestown**	**41.06**	**281**	P	**P**	**20 26 22.8**	**+0.5**
	baz=61						
G43A	**Wallace**	**41.13**	**291**	P	**P**	**20 26 23.8**	**+1.1**
	baz=66						
O49A	**Covington**	**41.15**	**283**	*e*P	**P**	**20 26 23.8**	**+0.8**
	comp=Z,66nm,1.7s						
O49A	**Covington**	**41.15**	**283**	P	**P**	**20 26 22.7**	**-0.3**
	baz=62						
TOA1	**Torodi Ar. Sit**	**41.24**	**134**	*e*P	**P**	**20 26 24.2**	**+0.2**
TOA0	**Torodi Ar. Sit**	**41.25**	**134**	*e*P	**P**	**20 26 22.7**	**-1.3**
TORD	**Torodi Ar. Bea**	**41.25**	**134**	P	**P**	**20 26 24.2**	**+0.2**
	comp=Z,8.3nm,0.6s,baz=331,slow=8.2,SNR=56						
TORD				LR	LR	20 42 21.2	
	comp=Z,3µm,19.3s,baz=325,slow=34						
N48A	**Decatur**	**41.30**	**284**	P	**P**	**20 26 24.6**	**+0.4**
	baz=62						
E41A	**Kenton**	**41.46**	**293**	P	**P**	**20 26 23.7**	**-1.8**
	baz=67						
H43A	**Windswept, Lux**	**41.51**	**290**	P	**P**	**20 26 25.5**	**-0.4**
	baz=65						
R51A	**Hillsboro**	**41.56**	**280**	P	**P**	**20 26 25.9**	**-0.4**
	baz=60						
KMSC	**Kings Mountain**	**41.65**	**274**	P	**P**	**20 26 26.4**	**-0.8**
	baz=57						
O48A	**Farmland**	**41.67**	**283**	P	**P**	**20 26 26.3**	**-1.0**
	baz=62						
N47A	**Urbana**	**41.74**	**284**	P	**P**	**20 26 27.4**	**-0.4**
	baz=62						
U53A	**Fall Branch**	**41.86**	**276**	P	**P**	**20 26 28.9**	**0.0**
	baz=58						
LPSR	**Galich'ya Gora**	**42.06**	**56**	*e*P	**P**	**20 26 31.7**	**+1.4**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,1µm,21.0s						
R50A	**Paris**	**42.07**	**280**	P	**P**	**20 26 31.2**	**+0.6**
	baz=60						
Q49A	**Aurora**	**42.10**	**281**	P	**P**	**20 26 32.1**	**+1.3**
	baz=60						
O47A	**Sheridan**	**42.36**	**284**	P	**P**	**20 26 33.3**	**+0.4**
	baz=61						
V53A	**Saluda**	**42.39**	**276**	*e*P	**P**	**20 26 33.6**	**+0.3**
	comp=Z,17nm,1.4s						
V53A	**Saluda**	**42.39**	**276**	P	**P**	**20 26 34.4**	**+1.1**
	baz=58						
F40A	**Park Falls**	**42.42**	**293**	P	**P**	**20 26 33.9**	**+0.6**
	baz=66						
N46A	**Monticello**	**42.43**	**285**	P	**P**	**20 26 34.8**	**+1.3**
	baz=62						
S50A	**Richmond**	**42.43**	**279**	P	**P**	**20 26 33.4**	**-0.1**
	baz=59						
TZTN	**Tazewell**	**42.43**	**277**	P	**P**	**20 26 32.9**	**-0.6**
	baz=58						
EYMN	**Ely**	**42.47**	**296**	P	**P**	**20 26 34.5**	**+0.8**
	baz=67						
T51A	**Gray**	**42.48**	**278**	P	**P**	**20 26 34.6**	**+0.7**
	baz=59						
E39A	**Mellen**	**42.50**	**294**	P	**P**	**20 26 30.9**	**-3.1**
	baz=66						
R49A	**Shelbyville**	**42.64**	**281**	P	**P**	**20 26 35.4**	**+0.2**
	baz=60						
H41A	**Junction City**	**42.67**	**291**	P	**P**	**20 26 35.6**	**+0.2**
	baz=64						
VSR	**Storozhevoye**	**42.67**	**58**	⇑*e*P	**P**	**20 26 37.3**	**+2.0**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
Q48A	**North Vernon**	**42.70**	**282**	P	**P**	**20 26 35.5**	**-0.2**
	baz=60						
G40A	**Rib Lake**	**42.74**	**292**	P	**P**	**20 26 35.2**	**-0.7**
	baz=65						
BG3	**Lake Jocassee**	**42.84**	**275**	*e*P	**P**	**20 26 35.1**	**-1.7**
V52A	**Sevierville**	**42.84**	**276**	P	**P**	**20 26 37.6**	**+0.8**
	baz=58						
U51A	**La Follette**	**42.84**	**277**	P	**P**	**20 26 38.1**	**+1.2**
	baz=58						
W53A	**Cullowhee**	**42.90**	**275**	P	**P**	**20 26 38.6**	**+1.1**
	baz=57						
SFIN	**Lafayette**	**42.91**	**284**	P	**P**	**20 26 37.4**	**0.0**
	baz=61						
F39A	**Loretta**	**42.92**	**293**	P	**P**	**20 26 37.7**	**+0.3**
	baz=65						
PRGR	**Permogore**	**42.97**	**42**	*e*P	**P**	**20 26 38.3**	**+0.8**
PRGR				pmax	pmax		
	comp=Z,13nm,1.4s						
N45A	**Kentland**	**42.97**	**285**	P	**P**	**20 26 38.5**	**+0.7**
	baz=62						
S49A	**Springfield**	**42.98**	**280**	P	**P**	**20 26 38.9**	**+0.9**
	baz=59						
E38A	**The Farm, Brul**	**43.04**	**295**	P	**P**	**20 26 39.6**	**+1.3**
	baz=66						
R48A	**Northridge Ran**	**43.06**	**281**	P	**P**	**20 26 40.4**	**+1.7**
	baz=60						
M44A	**Midewin, Midew**	**43.06**	**286**	P	**P**	**20 26 38.9**	**+0.3**
	baz=62						
T50A	**Nancy**	**43.06**	**279**	P	**P**	**20 26 39.0**	**+0.3**
	baz=58						
H40A	**Chili**	**43.14**	**291**	P	**P**	**20 26 38.9**	**-0.3**
	baz=64						
L43A	**Garden Prairie**	**43.16**	**287**	P	**P**	**20 26 39.8**	**+0.4**
	baz=62						
K42A	**Prairie Point,**	**43.28**	**289**	P	**P**	**20 26 40.2**	**-0.2**
	baz=63						
Y54A	**Tignall**	**43.29**	**273**	P	**P**	**20 26 41.9**	**+1.4**
	baz=56						
G39A	**Holcombe**	**43.35**	**293**	P	**P**	**20 26 41.4**	**+0.6**
	baz=65						
P46A	**Rosedale**	**43.36**	**283**	P	**P**	**20 26 41.0**	**0.0**
	baz=60						
X53A	**Estanollee**	**43.36**	**275**	P	**P**	**20 26 41.7**	**+0.6**
	baz=56						
V51A	**Loudon**	**43.37**	**277**	P	**P**	**20 26 40.9**	**-0.2**
	baz=58						
O45A	**Potomac**	**43.40**	**284**	P	**P**	**20 26 41.7**	**+0.4**
	baz=61						
N44A	**Piper City**	**43.41**	**285**	P	**P**	**20 26 40.9**	**-0.5**
	baz=61						
J41A	**Loganville**	**43.45**	**290**	P	**P**	**20 26 41.8**	**+0.1**
	baz=63						
ILGA	**Ilgaz**	**43.46**	**74**	*e*P	**P**	**20 26 43.2**	**+1.1**
	comp=Z,20nm,1.1s						
T49A	**Edmonton**	**43.50**	**279**	*e*P	**P**	**20 26 42.5**	**+0.4**
	comp=Z,63nm,2.0s						
T49A	**Edmonton**	**43.50**	**279**	P	**P**	**20 26 43.5**	**+1.3**
	baz=58						
R47A	**Wooly Knot Far**	**43.56**	**281**	P	**P**	**20 26 43.8**	**+1.2**
	baz=59						
S48A	**Wiedeman Farm,**	**43.57**	**280**	P	**P**	**20 26 44.0**	**+1.3**
	baz=59						
M43A	**Waltham Townsh**	**43.65**	**287**	P	**P**	**20 26 43.9**	**+0.6**
	baz=62						
CPCT	**Cooper Cave**	**43.68**	**277**	*e*P	**P**	**20 26 43.1**	**-0.5**
	comp=Z,44nm,1.5s						
H39A	**Augusta**	**43.69**	**292**	P	**P**	**20 26 44.0**	**+0.4**
	baz=64						
X52A	**Dahlonega**	**43.71**	**275**	P	**P**	**20 26 42.7**	**-1.3**
	baz=56						
Z54A	**Sparta**	**43.75**	**273**	P	**P**	**20 26 45.0**	**+0.7**
	baz=55						
P45A	**Graceland, Par**	**43.76**	**284**	P	**P**	**20 26 43.5**	**-0.8**
	baz=60						
L42A	**Oliver, Polo**	**43.85**	**288**	P	**P**	**20 26 45.1**	**+0.2**
	baz=62						
Y53A	**Monroe**	**43.91**	**274**	P	**P**	**20 26 45.8**	**+0.3**
	baz=56						
V50A	**Pikevile**	**43.96**	**277**	P	**P**	**20 26 46.0**	**+0.1**
	baz=57						
U49A	**Red Boiling Sp**	**43.98**	**279**	P	**P**	**20 26 46.7**	**+0.7**
	baz=58						
W51A	**Cleveland**	**44.00**	**276**	P	**P**	**20 26 46.7**	**+0.5**
	baz=57						
BR101	**Keskin Array S**	**44.06**	**76**	*e*P	**P**	**20 26 47.8**	**+1.0**
BR101				*e*PP	**PcP**	**20 28 32.1**	**+0.1**
BR131	**Keskin Array S**	**44.06**	**76**	*e*P	**P**	**20 26 47.3**	**+0.5**
BRTR	**Keskin Array B**	**44.06**	**76**	P	**P**	**20 26 47.8**	**+1.0**
	comp=Z,5.0nm,0.9s,baz=297,slow=5.8,SNR=16						
BRTR				PcP	**PcP**	**20 28 32.1**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=245,slow=3.6,SNR=4.1						
BRTR				LR	LR	20 45 17.8	
	comp=Z,490nm,19.4s,baz=288,slow=36						
T48A	**Bowling Green**	**44.08**	**280**	P	**P**	**20 26 47.5**	**+0.6**
	baz=58						
TIC	**Toumodi**	**44.11**	**147**	*e*P	**P**	**20 26 47.7**	**+0.5**
DBIC	**Dimbokro**	**44.15**	**147**	*e*P	**P**	**20 26 47.7**	**+0.3**
	comp=Z,14nm,0.8s						
DBIC	**Dimbokro**	**44.15**	**147**	P	**P**	**20 26 47.8**	**+0.3**
	comp=Z,9.6nm,0.7s,baz=324,slow=9.1,SNR=13						
DBIC				LR	LR	20 43 58.9	
	comp=Z,1µm,18.8s,baz=320,slow=34						
S47A	**Hartford**	**44.16**	**281**	P	**P**	**20 26 48.7**	**+1.3**
	baz=59						
ANN	**Anapa**	**44.17**	**68**	*e*P	**P**	**20 26 45.9**	**-1.5**
ANN				*e**PP	**pP**	**20 26 48.3**	**-3.1**
ANN				*e*		20 28 32.3	
ANN				*e*PPP	PPP	20 29 02.7	
ANN				*e*S	**S**	**20 33 18.7**	**-1.0**
ANN				pmax	pmax		
	comp=Z,25nm,1.1s						
ANN				MLR	MLR		
	comp=E,178nm,18.0s						
ANN				MLR	MLR		
	comp=Z,1µm,18.0s						
VRH	**Novokhopyorsk**	**44.17**	**57**	*e*P	**P**	**20 26 48.5**	**+1.1**
VRH				pmax	pmax		
	comp=Z,20nm,1.6s						
VRH				MLR	MLR		
	comp=Z,1µm,19.0s						
I39A	**Houston**	**44.21**	**291**	*e*P	**P**	**20 26 48.4**	**+0.6**
	comp=Z,12nm,0.8s						
I39A	**Houston**	**44.21**	**291**	P	**P**	**20 26 48.5**	**+0.7**
	baz=63						
ULM	**Lac du Bonnet**	**44.23**	**301**	*e*P	**P**	**20 26 46.9**	**-0.9**
	comp=Z,15nm,1.3s						
ULM	**Lac du Bonnet**	**44.23**	**301**	P	**P**	**20 26 47.0**	**-0.9**
ULM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULM				MLR	MLR		
	comp=Z,1µm,19.0s						
ULM	**Lac du Bonnet**	**44.23**	**301**	P	**P**	**20 26 47.0**	**-0.9**
	comp=Z,3.6nm,0.8s,baz=80,slow=8.3,SNR=6.9						
ULM				LR	LR	20 43 22.3	
	comp=Z,1µm,19.0s,baz=72,slow=34						
H38A	**Maiden Rock**	**44.33**	**292**	P	**P**	**20 26 49.7**	**+1.0**
	baz=64						
Q45A	**Warren Harvey,**	**44.36**	**283**	P	**P**	**20 26 49.2**	**+0.1**
	baz=60						
W50A	**Signal Mountai**	**44.36**	**277**	*e*P	**P**	**20 26 49.3**	**+0.2**
	comp=Z,27nm,1.3s						
W50A	**Signal Mountai**	**44.36**	**277**	P	**P**	**20 26 49.6**	**+0.4**
	baz=57						
457A	**Yulee**	**44.38**	**269**	P	**P**	**20 26 50.3**	**+1.0**
	baz=53						
X51A	**Calhoun**	**44.40**	**276**	P	**P**	**20 26 51.0**	**+1.6**
	baz=56						
SPMN	**Marine on St.**	**44.42**	**293**	P	**P**	**20 26 50.4**	**+0.9**
	baz=64						
V49A	**McMinnville**	**44.46**	**278**	P	**P**	**20 26 51.0**	**+1.1**
	baz=57						
KIC	**Kosan Boka**	**44.47**	**147**	*e*P	**P**	**20 26 50.5**	**+0.3**
	comp=Z,78nm,1.0s						
K40A	**Colesburg**	**44.49**	**289**	P	**P**	**20 26 50.5**	**+0.5**
	baz=62						
LIC	**Lamto**	**44.49**	**147**	*e*P	**P**	**20 26 51.2**	**+0.9**
	comp=Z,98nm,2.0s						
U48A	**Cassie Pea, Po**	**44.49**	**279**	P	**P**	**20 26 50.8**	**+0.7**
	baz=58						
N42A	**Yates City**	**44.65**	**286**	P	**P**	**20 26 50.4**	**-0.9**
	baz=61						
R45A	**Skylar, Fairfi**	**44.75**	**282**	P	**P**	**20 26 53.0**	**+0.9**
	baz=59						
SWET	**Sewanee**	**44.78**	**277**	*e*P	**P**	**20 26 51.4**	**-1.0**
	comp=Z,50nm,1.8s						
254A	**Abbeville**	**44.80**	**272**	P	**P**	**20 26 54.2**	**+1.5**
	baz=54						
L40A	**Anamosa**	**44.84**	**289**	*e*P	**P**	**20 26 53.6**	**+0.7**
	comp=Z,60nm,1.6s						
L40A	**Anamosa**	**44.84**	**289**	P	**P**	**20 26 53.4**	**+0.5**
	baz=62						
Z52A	**Williamson**	**44.86**	**274**	P	**P**	**20 26 55.1**	**+2.0**
	baz=55						
P43A	**Skaggs, Pawnee**	**44.90**	**285**	P	**P**	**20 26 53.7**	**+0.4**
	baz=60						
Y51A	**Rockmart**	**44.91**	**275**	P	**P**	**20 26 54.8**	**+1.3**
	baz=56						
Q44A	**Meyer Farm, Va**	**44.93**	**283**	P	**P**	**20 26 54.4**	**+0.8**

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      baz=59
K39A  Oelwein           44.97 290   P       P       20 26 54.4 +0.5
      baz=62
X50B  Fort Payne        45.00 276   P       P       20 26 54.7 +0.5
      baz=56
U47A  Clarksville       45.04 279   P       P       20 26 56.2 +1.7
      baz=58
W49A  Belvidere         45.06 277   P       P       20 26 55.5 +0.8
      baz=57
V48A  Smith Brothers    45.10 278  eP       P       20 26 54.8 -0.2
      comp=Z,46nm,1.6s
V48A  Smith Brothers    45.10 278   P       P       20 26 56.8 +1.8
      baz=57
T46A  Princeton         45.14 281   P       P       20 26 55.5 +0.3
      baz=58
N41A  Harden Midland    45.26 287  eP       P       20 26 56.2  0.0
      comp=Z,31nm,1.1s
N41A  Harden Midland    45.26 287   P       P       20 26 56.8 +0.6
      baz=60
R44A  Waltonville       45.31 283   P       P       20 26 56.8 +0.2
      baz=59
Z51A  Franklin          45.31 274   P       P       20 26 57.1 +0.4
      baz=55
L39A  Vinton            45.32 289   P       P       20 26 56.2 -0.5
      baz=61
M40A  Post Highland     45.35 288   P       P       20 26 55.5 -1.4
      baz=61
152A  Waverly Hall      45.37 273  eP       P       20 26 58.0 +0.9
      comp=Z,38nm,1.8s
152A  Waverly Hall      45.37 273   P       P       20 26 58.6 +1.4
      baz=55
Q43A  New Douglas       45.37 284   P       P       20 26 57.2 +0.1
      baz=59
Y50A  Piedmont          45.37 276   P       P       20 26 58.1 +0.9
      baz=56
X49A  Woodville         45.43 277   P       P       20 26 58.5 +0.9
      baz=56
P42A  Winchester        45.48 285  eP       P       20 26 57.0 -0.9
      comp=Z,71nm,1.6s
P42A  Winchester        45.48 285   P       P       20 26 58.6 +0.7
      baz=60
W48A  Pulaski           45.50 278   P       P       20 26 59.3 +1.1
      baz=57
V47A  Nunnelly          45.53 279   P       P       20 26 58.8 +0.4
      baz=57
O41A  Passleys Farm,    45.57 286   P       P       20 26 59.3 +0.7
      baz=60
WVT   Waverly           45.58 279  eP       P       20 26 58.2 -0.6
      comp=Z,24nm,1.5s
WVT   Waverly           45.58 279  eP       P       20 26 58.2 -0.6
WVT                                 pmax    pmax
      comp=Z,24nm,1.5s
WVT   Waverly           45.58 279   P       P       20 27 00.2 +1.4
      baz=57
KIRV  Kirov             45.68  45   P       P       20 26 59.3 +0.1
      comp=Z,14nm,0.9s,baz=311,slow=9.3,SNR=6.4
M39A  Webster           45.75 288   P       P       20 27 00.5 +0.4
      baz=61
Z50A  Ashland           45.86 275  eP       P       20 27 00.9 -0.2
      comp=Z,6.2nm,0.8s
Z50A  Ashland           45.86 275   P       P       20 27 01.7 +0.6
      baz=55
W47A  Westpoint         45.90 278   P       P       20 27 01.4 +0.1
      baz=57
P41A  Barry, Barry      45.91 286   P       P       20 27 02.1 +0.7
      baz=60
Q42A  Golden Eagle      45.94 284   P       P       20 27 01.4 -0.2
      baz=59
V46A  Holladay          45.95 279   P       P       20 27 02.1 +0.4
      baz=57
X48A  Hartselle         45.96 277  eP       P       20 27 00.7 -1.1
      comp=Z,7.4nm,0.8s
X48A  Hartselle         45.96 277   P       P       20 27 02.0 +0.2
      baz=56
FFC   Flin Flon         45.97 309  eP       P       20 27 01.1 -0.5
      comp=Z,14nm,1.3s
FFC   Flin Flon         45.97 309  eP       P       20 27 01.1 -0.5
FFC                                 pmax    pmax
      comp=Z,14nm,1.3s
150A  Eclectic          46.30 274   P       P       20 27 05.2 +0.7
      baz=55
Z49A  Columbiana        46.32 275   P       P       20 27 05.3 +0.7
      baz=55
S43A  Fulton Ridge,     46.33 282   P       P       20 27 02.9 -1.8
      baz=58
Y48A  Jasper            46.35 276   P       P       20 27 05.9 +1.0
      baz=56
Q41A  Truxton           46.39 285   P       P       20 27 05.9 +0.8
      baz=59
R42A  Luebbering        46.45 284   P       P       20 27 06.4 +0.8
      baz=58
X47A  Russelville       46.48 278   P       P       20 27 07.1 +1.2
      baz=56
S42A  Caledonia         46.71 283   P       P       20 27 07.5 -0.2
      baz=58,SNR=9.8
LRAL  Lakeview Retre    46.73 275  eP       P       20 27 07.8  0.0
      comp=Z,8.5nm,0.7s
LRAL  Lakeview Retre    46.73 275   P       P       20 27 09.0 +1.1
      baz=55
R41A  Rosebud           46.83 284   P       P       20 27 08.3 -0.3
      baz=58,SNR=11
149A  Jones             46.84 275   P       P       20 27 10.2 +1.5
      baz=54
CCM   Cathedral Cave    46.87 284  eP       P       20 27 09.1 +0.2
      comp=Z,43nm,1.4s
CCM   Cathedral Cave    46.87 284  eP       P       20 27 09.1 +0.2
CCM                                 pmax    pmax
      comp=Z,43nm,1.4s
CCM   Cathedral Cave    46.87 284   P       P       20 27 09.4 +0.5
      baz=58
X46A  Booneville        46.96 278   P       P       20 27 09.8 +0.1
      baz=56
T42A  Van Buren         47.31 282  eP       P       20 27 11.8 -0.5
      comp=Z,11nm,0.9s
T42A  Van Buren         47.31 282   P       P       20 27 11.9 -0.5
      baz=57,SNR=8.1
S41A  Jillco Farms,     47.45 283   P       P       20 27 12.6 -0.8
      baz=58,SNR=9.9
ECSD  EROS Data Cent    47.52 293  eP       P       20 27 13.6 -0.4
      comp=Z,10nm,1.2s
ECSD  EROS Data Cent    47.52 293   P       P       20 27 14.0  0.0
      baz=61
OXF   Oxford            47.55 279   P       P       20 27 13.7 -0.5
      baz=56
T41A  Mountain View     47.75 283   P       P       20 27 14.8 -1.0
      baz=57,SNR=9.6
U42A  Revenden          47.77 282   P       P       20 27 16.6 +0.6
      baz=57
147A  Livingston        47.81 276   P       P       20 27 16.9 +0.6
      baz=54
KIV   Kislovodsk        47.90  66  eP       P       20 27 16.2 -0.8
KIV                                 pmax    pmax
      comp=Z,6.0nm,1.1s
KIV                                 MLR     MLR
      comp=Z,573nm,16.0s
KBZ   Khabaz            48.14  66   P       P       20 27 20.1 +1.4
      comp=Z,4.3nm,0.9s,baz=308,slow=6.9,SNR=6.2
KBZ                                 LR      LR      20 48 44.1
      comp=Z,605nm,18.6s,baz=296,slow=38
V42A  Cord              48.17 281   P       P       20 27 20.1 +1.0
      baz=56
U41A  Viola             48.24 282   P       P       20 27 19.2 -0.4
      baz=57
NEY   Neytrino          48.27  67⇑iP       P       20 27 23.9 +4.0
NEY                                 pmax    pmax
      comp=Z,2.0nm,0.8s
NCK   Nalchik           48.70  66⇓eP       P       20 27 26.0 +2.9
NCK                                 pmax    pmax
      comp=Z,16nm,1.0s
V41A  Mountainview      48.70 282   P       P       20 27 23.5 +0.3
      baz=56
U40A  Yellville         48.86 283   P       P       20 27 24.0 -0.4
      baz=56
YKW3  Yellowknife Ar    49.01 322  eP       P       20 27 24.7 -0.5
      comp=Z,16nm,1.6s
YKA   Yellowknife Ar    49.04 322   P       P       20 27 24.8 -0.5
      comp=Z,3.8nm,0.9s,baz=67,slow=7.4,SNR=28
YKA                                 PcP     PcP     20 28 48.4 -0.5
      comp=Z,0.8nm,0.8s,baz=66,slow=4.1,SNR=5.3
YKA                                 LR      LR      20 45 26.4
      comp=Z,65nm,18.5s,baz=60,slow=33
YKB5  Yellowknife Ar    49.04 322  eP       P       20 27 24.7 -0.6
W41B  Gary Mavity, V    49.11 281  eP       P       20 27 24.9 -1.4
      comp=Z,20nm,1.3s
W41B  Gary Mavity, V    49.11 281   P       P       20 27 26.0 -0.3
      baz=56
ZEI   Tsey              49.25  67  eP       P       20 27 28.7 +1.2
ZEI                                 pmax    pmax
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      comp=Z,8.0nm,0.7s
HHAR  Hobbs             49.63 283  eP       P       20 27 28.7 -1.6
      comp=Z,33nm,1.7s
KSU1  Kansas State U    49.88 288  eP       P       20 27 31.5 -0.6
      comp=Z,26nm,1.1s
KSU1  Kansas State U    49.88 288   P       P       20 27 31.5 -0.6
      baz=58
X40A  Basin Creek Fa    49.89 281  eP       P       20 27 32.0 -0.2
      comp=Z,47nm,1.9s
X40A  Basin Creek Fa    49.89 281   P       P       20 27 32.0 -0.2
      baz=55
W39A  Magazine          50.13 282  eP       P       20 27 33.9 -0.2
      comp=Z,25nm,1.2s
W39A  Magazine          50.13 282   P       P       20 27 33.4 -0.7
      baz=56
MIAR  Mount Ida         50.36 281  eP       P       20 27 34.8 -1.1
      comp=Z,80nm,1.8s
MIAR  Mount Ida         50.36 281  eP       P       20 27 34.8 -1.1
MIAR                                pmax    pmax
      comp=Z,80nm,1.8s
MIAR  Mount Ida         50.36 281   P       P       20 27 35.4 -0.4
      baz=55,SNR=11
ARU   Arti              51.06  45  eP       P       20 27 40.5 -0.3
      comp=Z,22nm,1.0s
ARU   Arti              51.06  45⇓eP       P       20 27 40.9 +0.1
ARU                                 pmax    pmax
      comp=Z,22nm,1.0s
TUL1  Leonard           51.08 284   P       P       20 27 41.5 +0.3
      baz=56
GNI   Garni             51.16  69⇓eP       P       20 27 44.2 +2.2
GNI                                 pmax    pmax
      comp=Z,38nm,1.0s
GNI   Garni             51.16  69   P       P       20 27 42.2 +0.3
      comp=Z,3.2nm,0.8s,baz=8.1,slow=7.1,SNR=3.5
MAK   Makhachkala       51.43  65  eP       P       20 27 40.0 -3.7
MAK                                eS       S       20 34 58.6 -4.1
MAK                                 pmax    pmax
      comp=Z,358nm,1.1s
MAK                                 MLR     MLR
      comp=Z,850nm,17.0s
SVE   Sverdlovsk        51.88  44  eP       P       20 27 47.8 +0.8
SDV   Santo Domingo     52.56 239  eP       P       20 27 53.4 +0.7
      comp=Z,14nm,1.3s
INK   Inuvik            53.16 334  eP       P       20 27 55.1 -1.1
      comp=Z,12nm,1.1s
INK   Inuvik            53.16 334   P       P       20 27 55.6 -0.6
      comp=Z,5.9nm,0.9s,baz=53,slow=8.1,SNR=12
EGMT  Eagleton          53.34 304  eP       P       20 27 56.4 -1.6
      comp=Z,64nm,1.9s
EGMT  Eagleton          53.34 304   P       P       20 27 57.1 -0.9
      baz=59
AKTO  Aktyubinsk        53.74  52   P       P       20 28 01.2 +0.5
      comp=Z,12nm,1.0s,baz=303,slow=7.5,SNR=26
WMOK  Wichita Mounta    53.76 285  eP       P       20 27 59.9 -1.2
      comp=Z,7.4nm,1.0s
WMOK  Wichita Mounta    53.76 285  eP       P       20 27 59.9 -1.2
WMOK                                pmax    pmax
      comp=Z,7.0nm,1.0s
WMOK  Wichita Mounta    53.76 285   P       P       20 27 59.7 -1.5
      baz=54,SNR=5.8
K22A  Casper            54.29 297  eP       P       20 28 04.5 -0.6
      comp=Z,62nm,1.8s
K22A  Casper            54.29 297   P       P       20 28 04.7 -0.4
      baz=57
WHTX  Lake Whitney,     54.49 281   P       P       20 28 07.4 +0.9
      baz=53
RLMT  Red Lodge         54.60 301  eP       P       20 28 06.8 -0.6
      comp=Z,66nm,2.0s
RLMT  Red Lodge         54.60 301   P       P       20 28 07.2 -0.2
      baz=57
N23A  Red Feather La    54.90 295  eP       P       20 28 10.2 +0.5
      comp=Z,14nm,0.9s
N23A  Red Feather La    54.90 295   P       P       20 28 09.1 -0.6
      baz=56,SNR=6.9
NRIK  Noril'sk          55.07  23   P       P       20 28 12.1 +1.9
      comp=Z,3.9nm,0.5s,baz=309,slow=7.8,SNR=6.7
WALA  Waterton Lakes    55.13 307  eP       P       20 28 10.6 -0.5
      comp=Z,22nm,1.0s
RWWY  Rawlins           55.25 296  eP       P       20 28 11.6 -0.5
      comp=Z,66nm,1.8s
H10N2 ASCENSION HYDR55.27 164       T       T       21 27 45.4
      baz=350,slow=75,SNR=36
H10N3 ASCENSION HYDR55.29 164       T       T       21 27 45.7
      baz=350,slow=75,SNR=35
H10N1 ASCENSION HYDR55.29 164       T       T       21 27 46.8
      baz=350,slow=75,SNR=48
ISCO  Idaho Springs     55.31 293   P       P       20 28 13.3 +0.6
      baz=55
ABKAR Akbulak array     55.42  53  eP       P       20 28 13.4 +0.5
Q24A  Divide            55.49 292   P       P       20 28 14.9 +0.9
      baz=55
ABTX  Abilene, Hawle    55.59 283   P       P       20 28 15.2 +0.8
      baz=53
AMTX  Amarillo          55.60 286  eP       P       20 28 14.9 +0.3
      comp=Z,28nm,1.1s
AMTX  Amarillo          55.60 286   P       P       20 28 14.8 +0.2
      baz=54
BOZ   Bozeman (W)       55.73 302  eP       P       20 28 15.1 -0.4
      comp=Z,10nm,1.3s
BOZ   Bozeman (W)       55.73 302  eP       P       20 28 15.1 -0.4
BOZ                                 pmax    pmax
      comp=Z,10.0nm,1.3s
BOZ   Bozeman (W)       55.73 302   P       P       20 28 13.5 -2.0
      baz=56,SNR=7.1
H17A  Grant Village     55.78 301   P       P       20 28 14.0 -1.9
      baz=56
YPP   Pitchstone Pla    55.98 301  eP       P       20 28 14.6 -2.9
      comp=Z,21nm,1.7s
T25A  Trinidad          56.07 290  eP       P       20 28 18.9 +0.7
      comp=Z,16nm,1.4s
T25A  Trinidad          56.07 290   P       P       20 28 18.0 -0.1
      baz=54
BW06  Boulder Array     56.08 298  eP       P       20 28 16.9 -1.3
      comp=Z,14nm,1.4s
BW06  Boulder Array     56.08 298   P       P       20 28 18.0 -0.1
      baz=56
PD31  Pinedale Array    56.08 298  eP       P       20 28 16.9 -1.2
      comp=Z,14nm,1.4s
PDAR  Pinedale Array    56.08 298  eP       P       20 28 16.8 -1.4
PDAR  Pinedale Array    56.08 298   P       P       20 28 17.1 -1.0
      comp=Z,2.8nm,1.0s,baz=58,slow=7.2,SNR=12
PDAR                                LR      LR      20 50 55.7
      comp=Z,1µm,18.2s,baz=62,slow=35
LOHW  Long Hollow       56.23 300  eP       P       20 28 17.9 -1.3
      comp=Z,26nm,1.8s
MOOW  Moose Ponds       56.24 300  eP       P       20 28 19.0 -0.3
      comp=Z,6.3nm,1.1s
IMW   Indian Meadow     56.27 300  eP       P       20 28 19.2 -0.3
      comp=Z,5.5nm,1.0s
H10S1 ASCENSION HYDR56.33 165       T       T       21 28 49.2
      baz=350,slow=75,SNR=78
H10S3 ASCENSION HYDR56.34 165       T       T       21 28 50.0
      baz=350,slow=75,SNR=77
H10S2 ASCENSION HYDR56.35 165       T       T       21 29 01.4
      baz=350,slow=75,SNR=74
MSO   Missoula          56.38 305  eP       P       20 28 19.1 -0.9
      comp=Z,33nm,1.9s
MSO   Missoula          56.38 305   P       P       20 28 19.6 -0.5
      baz=56
SDCO  Great Sand Dun    56.42 291  eP       P       20 28 20.7  0.0
      comp=Z,13nm,1.8s
SDCO  Great Sand Dun    56.42 291   P       P       20 28 20.8  0.0
      baz=54
FXWY  Fox Creek         56.47 300  eP       P       20 28 20.6 -0.3
      comp=Z,24nm,1.8s
TPAW  Teton Pass        56.51 300  eP       P       20 28 20.1 -1.1
      comp=Z,29nm,2.0s
REDW  Red Top Meadow    56.53 300  eP       P       20 28 20.2 -1.1
      comp=Z,20nm,1.4s
O20A  White River Ci    56.77 295   P       P       20 28 22.0 -1.0
      baz=55
MSTX  Muleshoe          56.87 286  eP       P       20 28 23.2 -0.5
      comp=Z,33nm,1.3s
MSTX  Muleshoe          56.87 286   P       P       20 28 23.3 -0.4
      baz=53,SNR=5.1
JCT   Junction City     57.00 281   P       P       20 28 25.1 +0.5
      baz=52
NEW   Newport           57.34 307  eP       P       20 28 26.3 -0.5
      comp=Z,42nm,1.7s
NEW   Newport           57.34 307  eP       P       20 28 26.3 -0.5
NEW                                 pmax    pmax
      comp=Z,42nm,1.7s
NEW   Newport           57.34 307   P       P       20 28 25.8 -0.9
      baz=55,SNR=6.2
NEW   Newport           57.34 307   P       P       20 28 25.9 -0.8
      comp=Z,9.4nm,1.0s,baz=18,slow=6.4,SNR=6.8
DAWY  Dawson            57.64 331  eP       P       20 28 28.7 +0.1
      comp=Z,13nm,1.1s
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DLBC  Dease Lake        57.65 323  eP       P       20 28 28.9 +0.1
      comp=Z,38nm,1.8s
DLBC  Dease Lake        57.65 323   P       P       20 28 28.5 -0.3
      comp=Z,4.2nm,0.8s,baz=12,slow=9.6,SNR=6.1
FYU   Fort Yukon        57.77 335  eP       P       20 28 30.6 +1.2
      comp=Z,106nm,1.8s
HWUT  Hardware Ranch    57.97 298  eP       P       20 28 31.3 -0.1
      comp=Z,9.6nm,1.3s
ROSC  El Rosal          57.97 239   LR      LR      20 49 38.9
      comp=Z,456nm,21.3s,baz=30,slow=32
PV21  Cone Mtn., Par    58.16 294  eP       P       20 28 32.5 -0.3
      comp=Z,17nm,1.3s
PV04  Paradox Valley    58.21 294  eP       P       20 28 33.5 +0.3
      comp=Z,76nm,2.0s
WHY   Whitehorse        58.22 326  eP       P       20 28 33.2 +0.3
      comp=Z,60nm,1.8s
PV23  Carpenter Ridg    58.24 294  eP       P       20 28 33.7 +0.2
      comp=Z,21nm,1.2s
PV11  David Mesa, Pa    58.25 294  eP       P       20 28 32.3 -1.1
      comp=Z,15nm,1.1s
PV03  Paradox Valley    58.26 294  eP       P       20 28 34.3 +0.8
      comp=Z,38nm,2.0s
PV16  Nyswonger Mesa    58.27 294  eP       P       20 28 34.1 +0.5
      comp=Z,13nm,1.2s
PV09  Paradox Valley    58.29 294  eP       P       20 28 34.0 +0.1
PV14  Lion Creek, Pa    58.30 294  eP       P       20 28 34.3 +0.5
      comp=Z,21nm,1.2s
PV10  Paradox Valley    58.31 294  eP       P       20 28 34.5 +0.5
      comp=Z,12nm,0.8s
PV19  Morning Glory     58.31 294  eP       P       20 28 34.1 +0.2
      comp=Z,15nm,1.2s
PV17  East Wray Mesa    58.31 294  eP       P       20 28 34.3 +0.4
      comp=Z,27nm,1.5s
B08A  Colville Reser    58.49 309  eP       P       20 28 34.0 -0.8
      comp=Z,12nm,0.9s
HLID  Hailey            58.53 302  eP       P       20 28 35.9 +0.6
      comp=Z,29nm,1.9s
HLID  Hailey            58.53 302   P       P       20 28 35.6 +0.3
      baz=54
PRP   Porcupine Dome    58.59 335  eP       P       20 28 35.9 +0.5
      comp=Z,23nm,1.6s
BRVK  Borovoye          58.60  44  eP       P       20 28 36.2 +0.8
      comp=Z,20nm,0.9s
BRVK  Borovoye          58.60  44d iP       P       20 28 35.8 +0.4
BRVK                                pmax    pmax
      comp=Z,19nm,0.9s
HVU   Hansel Valley     58.60 299  eP       P       20 28 35.5 -0.3
      comp=Z,12nm,1.5s
HVU   Hansel Valley     58.60 299  eP       P       20 28 35.5 -0.3
HVU                                 pmax    pmax
      comp=Z,12nm,1.5s
MVCO  Mesa Verde        58.66 293   P       P       20 28 36.6 +0.2
      baz=53
BVAR  Borovoye Array    58.67  44   P       P       20 28 36.6 +0.7
      comp=Z,13nm,0.9s,baz=308,slow=5.5,SNR=46
COLD  Coldfoot          58.67 337  eP       P       20 28 35.6 -0.1
      comp=Z,6.5nm,1.0s
SPUT  South Promonto    58.68 299  eP       P       20 28 35.1 -1.3
      comp=Z,22nm,1.6s
ANMO  Albuquerque       58.71 289⇑iP       P       20 28 37.9 +1.2
ANMO                                pmax    pmax
      comp=Z,16nm,2.7s
ANMO  Albuquerque       58.71 289   P       P       20 28 36.8 +0.1
      baz=52
P17A  Butcher Ranch,    58.72 296  eP       P       20 28 36.0 -0.7
      comp=Z,21nm,1.5s
F10A  Beach Ranch, E    58.73 305  eP       P       20 28 36.0 -0.6
      comp=Z,29nm,1.4s
SRU   San Rafael Swe    58.80 295  eP       P       20 28 37.3  0.0
      comp=Z,3.9nm,0.7s
SRU   San Rafael Swe    58.80 295  eP       P       20 28 37.3  0.0
SRU                                 pmax    pmax
      comp=Z,4.0nm,0.7s
HYT   Haines Junctio    59.10 328  eP       P       20 28 40.1 +1.1
      comp=Z,24nm,1.6s
TMUT  Trail Mountain    59.12 296  eP       P       20 28 39.2 -0.4
      comp=Z,38nm,1.6s
SCRK  Sand Creek        59.20 333  eP       P       20 28 39.6  0.0
      comp=Z,16nm,1.2s
NLU   North Lily Min    59.26 297  eP       P       20 28 40.5  0.0
      comp=Z,12nm,1.4s
BGU   Big Grassy Mou    59.26 298  eP       P       20 28 39.8 -0.6
      comp=Z,16nm,1.6s
Q16A  Castle Valley     59.32 296  eP       P       20 28 40.2 -0.7
      comp=Z,30nm,1.8s
POKR  Poker Plat Res    59.44 335   P       P       20 28 40.9 -0.2
      baz=44
IL1   Eielson Array     59.53 334  eP       P       20 28 41.7  0.0
ILAR  Eielson Array     59.53 334   P       P       20 28 41.6 -0.1
      comp=Z,2.2nm,1.0s,baz=43,slow=4.5,SNR=14
ILAR                                LR      LR      20 53 15.7
      comp=Z,398nm,18.4s,baz=55,slow=35
ILB   Eielson Array     59.53 334  eP       P       20 28 41.6 -0.1
DUG   Dugway, Tooele    59.57 298  eP       P       20 28 41.5 -1.0
DUG   Dugway, Tooele    59.57 298  eP       P       20 28 41.5 -1.0
DUG   Dugway, Tooele    59.57 298   P       P       20 28 43.0 +0.5
      baz=53
COLA  College           59.74 335⇓iP       P       20 28 45.2 +2.1
COLA                                pmax    pmax
      comp=Z,21nm,2.0s
MDM   Murphy Dome       59.79 335  eP       P       20 28 43.6 +0.1
      comp=Z,21nm,1.4s
HDA   Harding Lake      59.81 334  eP       P       20 28 43.8 +0.1
      comp=Z,19nm,1.3s
HDA   Harding Lake      59.81 334   P       P       20 28 43.4 -0.2
      baz=44
LTY   Liberty           59.87 308  eP       P       20 28 42.2 -2.2
      comp=Z,50nm,1.5s
MNTX  Cornudas Mount    59.99 286  eP       P       20 28 45.0 -0.5
      comp=Z,11nm,1.6s
MNTX  Cornudas Mount    59.99 286   P       P       20 28 44.9 -0.5
      baz=51
WRH   Wood River Hil    60.10 335  eP       P       20 28 45.3 -0.4
      comp=Z,15nm,1.2s
MSU   Marysvale         60.19 296  eP       P       20 28 47.2 +0.2
MSU   Marysvale         60.19 296  eP       P       20 28 47.2 +0.2
LTX   Lajitas           60.33 282  eP       P       20 28 47.8  0.0
LTX   Lajitas           60.33 282  eP       P       20 28 47.8  0.0
TXAR  Lajitas Array     60.33 282   P       P       20 28 47.8  0.0
      comp=Z,2.7nm,0.8s,baz=69,slow=6.9,SNR=18
TXAR                                LR      LR      20 54 39.1
      comp=Z,2µm,19.2s,baz=0.0,slow=36
TX31  Lajitas Ar. Si    60.33 282  eP       P       20 28 47.3 -0.6
      comp=Z,7.1nm,0.9s
MLY   Manley            60.45 336  eP       P       20 28 48.4 +0.2
      comp=Z,24nm,1.6s
MTPU  Mount Pierson     60.48 295  eP       P       20 28 49.3 +0.2
      comp=Z,48nm,2.0s
IM3   Indian Mountai    60.55 338  eP       P       20 28 47.9 -0.8
ELK   Elko              60.71 299  eP       P       20 28 49.7 -0.7
      comp=Z,16nm,1.5s
ELK   Elko              60.71 299   P       P       20 28 50.8 +0.4
      comp=Z,1.7nm,0.7s,baz=50,slow=5.4,SNR=6.3
MCK   McKinley          60.90 334  eP       P       20 28 51.0 -0.1
      comp=Z,18nm,1.3s
MCK   McKinley          60.90 334  eP       P       20 28 51.0 -0.1
MCK                                 pmax    pmax
      comp=Z,18nm,1.3s
GEYT  Alibeck           60.94  64   P       P       20 28 52.9 +1.0
      comp=Z,3.9nm,0.9s,baz=280,slow=8.6,SNR=6.7
GEYT                                LR      LR      20 57 08.1
      comp=Z,274nm,21.4s,baz=295,slow=38
GYA0B ALIBECK ARRAY     60.94  64  eP       P       20 28 53.2 +1.4
      comp=Z,11nm,1.3s
TIXI  Tiksi             60.96   8  eP       P       20 28 52.3 +0.9
      comp=Z,16nm,1.0s
TIXI  Tiksi             60.96   8c iP       P       20 28 52.8 +1.5
TIXI                                pmax    pmax
      comp=Z,13nm,0.8s
D03D  Eldon             61.00 310   P       P       20 28 51.5 -0.6
      baz=52
J08A  Circle Bar Ran    61.01 304  eP       P       20 28 52.2 -0.1
      comp=Z,17nm,1.3s
121A  Cookes Peak, D    61.06 288   P       P       20 28 53.5 +0.6
      baz=51
PSUT  Pine Spring       61.22 297  eP       P       20 28 52.4 -1.5
      comp=Z,12nm,1.1s
CCUT  Cedar City        61.52 296  eP       P       20 28 55.1 -0.9
      comp=Z,7.8nm,1.1s
WUAZ  Wupatki           61.53 293   P       P       20 28 55.7 -0.3
      baz=51
U15A  North Rim         61.54 294  eP       P       20 28 55.0 -1.2
      comp=Z,14nm,1.6s
WVOR  Wild Horse Val    61.68 303  eP       P       20 28 57.3 +0.4
      comp=Z,28nm,1.4s
WVOR  Wild Horse Val    61.68 303  eP       P       20 28 57.3 +0.4
WVOR                                pmax    pmax
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              comp=Z,28nm,1.4s
R11A  Troy Canyon, C    62.40 298  eP      P        20 29 01.4 -0.4
              comp=Z,16nm,1.7s
R11A  Troy Canyon, C    62.40 298   P      P        20 29 01.1 -0.7
              baz=51,SNR=5.8
G03D  McMinnville, O    62.55 308   P      P        20 29 00.7 -1.8
              baz=51
J05D  Fort Rock, OR     62.64 305   P      P        20 29 03.2 -0.1
              baz=51,SNR=5.6
I04A  Tendick Farm,     62.98 306   P      P        20 29 05.6 +0.1
              baz=50
J04D  Umpqua Nationa    63.16 305   P      P        20 29 06.9  0.0
              baz=50
TUC   Tucson            63.17 289   P      P        20 29 07.3 +0.4
              baz=50
KVN   Kaiserville       63.48 300  eP      P        20 29 08.5 -0.5
              comp=Z,76nm,2.0s
KVN   Kaiserville       63.48 300  eP      P        20 29 08.5 -0.5
KVN                                 pmax   pmax
              comp=Z,76nm,2.0s
TPNV  Topopah Spring    63.69 297  eP      P        20 29 10.7 +0.3
              comp=Z,26nm,1.8s
TPNV  Topopah Spring    63.69 297  eP      P        20 29 10.7 +0.3
TPNV                                pmax   pmax
              comp=Z,26nm,1.8s
TPNV  Topopah Spring    63.69 297   P      P        20 29 10.8 +0.3
              baz=50
PAHR  Pah Rah Range     63.83 301  eP      P        20 29 10.3 -1.0
              comp=Z,10nm,1.2s
NV11  Mina Array Sit    63.91 299  eP      P        20 29 12.1 +0.3
              comp=Z,0.8nm,1.4s
M04C  Macdoel           63.94 304   P      P        20 29 11.2 -0.7
              baz=50
NV01  Mina Array Sit    64.00 299  eP      P        20 29 11.9 -0.6
NVAR  Mina Array Bea    64.00 299   P      P        20 29 12.3 -0.2
              comp=Z,1.0nm,0.8s,baz=39,slow=5.8,SNR=2.4
NVAR                                LR     LR       20 55 50.6
              comp=Z,998nm,19.9s,baz=66,slow=35
KURK  Kurchatov         64.07  43  eP      P        20 29 13.0 +0.5
              comp=Z,12nm,1.0s
KURK  Kurchatov         64.07  43deP      P        20 29 12.6 +0.1
KURK                                pmax   pmax
              comp=Z,13nm,1.0s
OTAV  Otavalo           64.10 240  eP      P        20 29 13.9 +0.2
              comp=Z,20nm,1.5s
PNTR  Pine Nut          64.36 300  eP      P        20 29 15.2 +0.4
              comp=Z,70nm,2.0s
BDFB  Brasilia          64.59 202   P      P        20 29 16.4 +0.2
              comp=Z,3.4nm,0.8s,baz=34,slow=7.3,SNR=3.9
BDFB                                LR     LR       20 52 50.0
              comp=Z,570nm,21.0s,baz=69,slow=32
ZAA1  Zalesovo Array    64.59  37  eP      P        20 29 16.2 +0.4
ZAA0  Zalesovo Array    64.59  37  eP      P        20 29 16.0 +0.1
              comp=Z,5.7nm,1.1s
ZALV  Zalesovo Beam     64.59  37  eP      P        20 29 15.8  0.0
ZALV  Zalesovo Beam     64.59  37   P      P        20 29 16.2 +0.4
              comp=Z,2.1nm,0.8s,baz=312,slow=7.6,SNR=12
ZALV                                LR     LR       20 57 21.0
              comp=Z,376nm,20.9s,baz=259,slow=36
M02C  Callahan          64.77 304   P      P        20 29 16.6 -0.7
              baz=49
OMMB  Old Mammoth Mi    64.94 299  eP      P        20 29 19.2 +0.4
              comp=Z,13nm,1.4s
DAC   Darwin (Calif)    64.95 297  eP      P        20 29 18.9 +0.3
              comp=Z,18nm,1.5s
DAC   Darwin (Calif)    64.95 297  eP      P        20 29 19.0 +0.3
DAC                                 pmax   pmax
              comp=Z,18nm,1.5s
N02D  Trinity Center    64.96 304   P      P        20 29 19.2 +0.7
              baz=49
KK31  Karatay Array     64.97  53  eP      P        20 29 19.0 +0.5
KK31  Karatay Array     64.97  53  eP      P        20 29 19.0 +0.5
KKAR  Karatay Array     64.97  53  eP      P        20 29 19.6 +1.0
KKAR  Karatay Array     64.97  53  eP      P        20 29 19.6 +1.0
MPMC  Manual Prospec    65.03 297   P      P        20 29 18.6 -0.6
              baz=50,SNR=7.0
GSC   Goldstone, Bar    65.09 296  eP      P        20 29 19.9 +0.4
              comp=Z,30nm,1.7s
GSC   Goldstone, Bar    65.09 296  eP      P        20 29 19.9 +0.4
GSC                                 pmax   pmax
              comp=Z,30nm,1.7s
GSC   Goldstone, Bar    65.09 296   P      P        20 29 19.7 +0.2
              baz=50
HEC   Hector,Ludlow     65.10 295   P      P        20 29 19.5 -0.1
              baz=50
BC3   Big Chuckawall    65.31 293   P      P        20 29 20.9 -0.1
              baz=49
BILL  Bilibino          65.34 354  i P     P        20 29 19.9 -0.6
BILL                                pmax   pmax
              comp=Z,20nm,2.7s
LRMC  Laurel Mtn Rad    65.52 296   P      P        20 29 22.4 +0.1
              baz=49
O02D  Mt. Diablo Mer    65.52 303   P      P        20 29 21.9 -0.3
              baz=49
ISA   Isabella, Lake    65.89 297  eP      P        20 29 25.2 +0.5
              comp=Z,22nm,1.5s
ISA   Isabella, Lake    65.89 297  eP      P        20 29 25.2 +0.5
ISA                                 pmax   pmax
              comp=Z,22nm,1.5s
ISA   Isabella, Lake    65.89 297   P      P        20 29 24.9 +0.2
              baz=49
EKS2  Erkin-Say         67.06  52   P      P        20 29 33.8 +1.7
              SNR=25
CHGR  Chuyangaron       67.14  58  eP      P        20 29 32.7 +0.1
              comp=Z,54nm,0.3s
BTK   Batken            67.16  56  eP      P        20 29 34.0 +1.3
              comp=Z,15nm,1.0s
BTK   Batken            67.16  56  eP      P        20 29 34.1 +1.3
BTK                                 pmax   pmax
              comp=Z,15nm,1.0s
AML   Almayashu         67.37  52   P      P        20 29 36.3 +1.9
              SNR=18
FRU1  Bishkek           67.42  51  eP      P        20 29 35.5 +1.2
              comp=Z,26nm,1.3s
FRU1  Bishkek           67.42  51  eP      P        20 29 35.5 +1.2
FRU1                                pmax   pmax
              comp=Z,26nm,1.3s
AAK   Ala-Archa         67.46  51   P      P        20 29 36.6 +1.8
              SNR=8.6
AAK   Ala-Archa         67.46  51  eP      P        20 29 35.9 +1.2
              comp=Z,18nm,1.2s
AAK   Ala-Archa         67.46  51⇑eP      P        20 29 36.5 +1.8
AAK                                 pmax   pmax
              comp=Z,14nm,1.0s
SCZ2  Santa Cruz Isl    67.70 296   P      P        20 29 35.9 -0.3
              baz=48
UCH   Uchtor            67.75  52   P      P        20 29 38.8 +1.9
              SNR=17
TKM2  Tokmak 2          67.86  51   P      P        20 29 38.6 +1.3
              SNR=11
UOSS  Minazif           68.06  77  eP      P        20 29 37.8 -0.7
              comp=Z,15nm,0.9s
KZA   Kyzart            68.25  51   P      P        20 29 42.0 +2.0
              SNR=6.3
MAKZ  Makanchi          68.39  44  eP      P        20 29 40.1 -0.2
              comp=Z,15nm,1.2s
MAKZ  Makanchi          68.39  44  eP      P        20 29 40.1 -0.2
MAKZ                                pmax   pmax
              comp=Z,15nm,1.2s
MK31  Makanchi Array    68.55  44  eP      P        20 29 41.4 +0.1
MK31  Makanchi Array    68.55  44  eP      P        20 29 41.4 +0.1
MK32  Makanchi Array    68.55  44  eP      P        20 29 41.8 +0.6
MKAR  Makanchi Array    68.55  44  eP      P        20 29 41.4 +0.1
              comp=Z,67nm,1.2s
MKAR  Makanchi Array    68.55  44   P      P        20 29 41.8 +0.5
              comp=Z,10.0nm,1.0s,baz=316,slow=5.2,SNR=60
MKAR                                LR     LR       21 01 14.5
              comp=Z,508nm,18.5s,baz=298,slow=37
MK01  Makanchi Array    68.57  44  eP      P        20 29 41.4  0.0
NRN   Naryn             69.11  52  eP      P        20 29 46.2 +1.0
              comp=Z,11nm,1.0s
NRN   Naryn             69.11  52  eP      P        20 29 46.2 +1.0
NRN                                 pmax   pmax
              comp=Z,11nm,1.0s
KBL   Kabul             69.85  61  eP      P        20 29 50.0 +0.3
              comp=Z,5.7nm,0.9s
KBL   Kabul             69.85  61  eP      P        20 29 50.0 +0.3
KBL                                 pmax   pmax
              comp=Z,6.0nm,0.9s
TARG  Taragay, Kyrgy    69.87  50  eP      P        20 29 52.0 +2.0
              comp=Z,29nm,1.5s
YAK   Yakutsk           70.27  11  eP      P        20 29 50.9 -0.7
YAK                                 pmax   pmax
              comp=Z,25nm,1.3s
YAK                                 pmax   pmax
              comp=N,5.0nm,1.1s
YAK                                 pmax   pmax
              comp=E,5.0nm,1.4s
KSH   Kashi             70.43  53   SS     SS       20 43 39.0 +3.7
KSH                                 pmax   pmax
              comp=Z,41nm,1.0s
KSH                                 LR     LR
              comp=N,220nm,5.0s
KSH                                 LR     LR
              comp=E,170nm,4.0s
KSH                                 LR     LR
              comp=Z,850nm,10.3s
SEY   Seymchan          70.93   0⇑iP      P        20 29 56.4 +0.8
BOD   Bodaibo           71.22  21  eP      P        20 29 50.9 -6.6
BOD                                 pmax   pmax
              comp=Z,27nm,2.1s
LPAZ  La Paz            72.49 221  eP      P        20 30 06.1 -0.1
              comp=Z,21nm,1.8s
LPAZ  La Paz            72.49 221  eP      P        20 30 06.1 -0.1
LPAZ                                pmax   pmax
              comp=Z,21nm,1.8s
NIL   Nilore            72.98  59  eP      P        20 30 08.4  0.0
              comp=Z,16nm,1.0s
NIL   Nilore            72.98  59  eP      P        20 30 08.4  0.0
NIL                                 pmax   pmax
              comp=Z,16nm,1.0s
WMQ   Urumqi            73.31  43   P      P        20 30 11.4 +1.1
WMQ                                 pP     pwP      20 30 18.1 -0.2
WMQ                                 PcP    PcP      20 30 34.9 +8.2
WMQ                                 pmax   pmax
              comp=Z,18nm,1.9s
WMQ                                 pmax   pmax
              comp=Z,230nm,5.1s
WMQ                                 LR     LR
              comp=N,530nm,24.1s
WMQ                                 LR     LR
              comp=E,550nm,19.7s
WMQ                                 LR     LR
              comp=Z,550nm,37.1s
TLY   Talaya            73.53  29⇓iP      P        20 30 13.7 +2.3
KMBO  Kilima Mbogo      73.61 110  eP      P        20 30 13.1 +0.5
              comp=Z,24nm,1.8s
KMBO  Kilima Mbogo      73.61 110   P      P        20 30 13.5 +0.9
              comp=Z,0.7nm,0.4s,baz=2.0,slow=3.5,SNR=3.9
KMBO                                LR     LR       21 02 07.2
              comp=Z,756nm,21.9s,baz=282,slow=35
MA2   Magadan           74.29   1⇓iP      P        20 30 17.7 +2.1
MA2                                 pmax   pmax
              comp=Z,23nm,1.4s
MA2   Magadan           74.29   1   LR     LR       21 00 16.6
              comp=Z,113nm,20.7s,baz=36,slow=34
ZAK   Zakamensk         74.50  30  eP      P        20 30 17.0 -0.2
ZAK                                 pmax   pmax
              comp=Z,5.0nm,1.4s
MNMC  Minye Minye       75.64 221  eP      P        20 30 23.7 -0.5
              comp=Z,8.2nm,1.0s
PB11  IPOC Station P    76.22 221  eP      P        20 30 26.6 -0.8
              comp=Z,12nm,0.9s
CPUP  Villa Florida     77.40 207   LR     LR       21 01 26.3
              comp=Z,95nm,19.8s,baz=31,slow=33
SONA1 Songino Array     77.73  30  eP      P        20 30 35.4 -0.3
SONA0 Songino Array     77.74  30  eP      P        20 30 36.3 +0.6
SONM  Songino Array     77.74  30   P      P        20 30 36.3 +0.6
              comp=Z,5.4nm,1.0s,baz=326,slow=4.9,SNR=27
SONM                                LR     LR       21 07 43.7
              comp=Z,198nm,18.1s,baz=340,slow=38
ULN   Ulaanbaatar       77.94  29  eP      P        20 30 37.2 +0.3
              comp=Z,20nm,1.3s
ULN   Ulaanbaatar       77.94  29d iP     P        20 30 37.0 +0.1
ULN                                 pmax   pmax
              comp=Z,40nm,3.0s
GO02  Mina Guanaco      80.92 218  eP      P        20 30 53.7 +0.4
              comp=Z,45nm,1.8s
GTA   Gaotai            82.31  39 ⇑P      P        20 31 01.1 +0.5
GTA                                 pP     PcP      20 31 05.4 -0.4
GTA                                 sP     pwP      20 31 08.1 -0.4
GTA                                 pmax   pmax
              comp=Z,5.0nm,1.1s
GTA                                 pmax   pmax
              comp=Z,230nm,5.6s
GTA                                 LR     LR
              comp=N,320nm,18.1s
GTA                                 LR     LR
              comp=E,210nm,20.3s
GTA                                 LR     LR
              comp=Z,400nm,19.4s
PYUN  Piuthan           82.73  57  eP      P        20 31 03.2 +0.2
              comp=Z,25nm,1.3s
KLR   Kul'dur           82.95  14⇓eP      P        20 31 02.9 -0.6
DANN  Dangsing          82.98  56  eP      P        20 31 05.0 +0.6
              comp=Z,41nm,1.2s
KOLN  Koldanda          83.33  56  eP      P        20 31 06.2 +0.1
DMN   Daman             84.31  56  eP      P        20 31 11.9 +0.7
              comp=Z,23nm,1.1s
PKIN  Phulchoki         84.50  55  eP      P        20 31 12.3 +0.1
PKI   Pulchoki          84.51  55  eP      P        20 31 12.6 +0.3
GUN   Gumba             84.52  55  eP      P        20 31 13.1 +0.7
              comp=Z,48nm,1.0s
LCO   Las Campanas      84.76 217  eP      P        20 31 13.2  0.0
              comp=Z,97nm,2.0s
LCO   Las Campanas      84.76 217  eP      P        20 31 13.2  0.0
LCO                                 pmax   pmax
              comp=Z,97nm,2.0s
JIRN  Jiri              84.89  55  eP      P        20 31 14.8 +0.5
              comp=Z,44nm,1.2s
HHC   Hu-ho-hao-te      85.64  30  eP      P        20 31 17.6 +0.1
HHC                                 pmax   pmax
              comp=Z,10.0nm,1.2s
RAMN  Ramite            85.67  55  eP      P        20 31 18.0  0.0
LSA   Lhasa             86.01  50  eP      P        20 31 20.9 +0.9
              comp=Z,19nm,1.6s
LSA   Lhasa             86.01  50  eP      P        20 31 20.9 +0.9
LSA                                 pmax   pmax
              comp=Z,19nm,1.6s
YSS   Yuzh-Sakhalins    86.54   7  eP      P        20 31 18.9 -2.7
YSS                                 pmax   pmax
              comp=Z,10.0nm,1.2s
LZH   Lanzhou           86.83  38  eP      P        20 31 24.5 +1.0
LZH                                 pP     pwP      20 31 32.2 +0.8
LZH                                 sP     sP       20 31 36.5 +6.9
LZH                                 PP     PP       20 34 48.0 +2.7
LZH   Lanzhou           86.83  38   sS     S        20 42 04.0 +3.1
LZH   Lanzhou           86.83  38   SS     SS       20 47 50.0 +8.6
LZH                                 pmax   pmax
              comp=Z,28nm,1.3s
LZH                                 pmax   pmax
              comp=Z,130nm,5.0s
LZH                                 LR     LR
              comp=N,390nm,15.8s
LZH                                 LR     LR
              comp=E,350nm,15.3s
LZH                                 LR     LR
              comp=Z,390nm,18.0s
USRK  Ussuriysk Ar.     87.87  15   P      P        20 31 27.8 -0.3
              comp=Z,5.2nm,1.1s,baz=35,slow=7.0,SNR=4.4
BOSA  Boshof            88.59 136   LR     LR       21 09 39.2
              comp=Z,368nm,20.1s,baz=320,slow=34
CD2   Chengdu           91.20  40  eP      P        20 31 44.6 +0.5
KS01  Wonju Array Si    93.51  20  eP      P        20 31 53.0 -1.5
KSRS  Korea Array       93.54  19   P      P        20 31 53.7 -1.0
              comp=Z,1.7nm,0.8s,baz=351,slow=5.3,SNR=4.1
KSRS                                LR     LR       21 18 43.4
              comp=Z,79nm,18.4s,baz=105,slow=38
KS15  Wonju Array Si    93.54  20  eP      P        20 31 54.2 -0.5
KSAR  Wonju Array Be    93.54  20   P      P        20 31 53.7 -1.0
KSAR  Wonju Array Be    93.54  20   P      P        20 31 53.7 -1.0
KMI   Kunming           95.63  44   P      P        20 32 03.1 -1.7
KMI                                 pmax   pmax
              comp=Z,4.0nm,1.3s
KMI                                 LR     LR
              comp=Z,190nm,31.1s
NJ2   Nanjing           96.07  28  eP      P        20 32 08.2 +1.8
NJ2                                 pmax   pmax
              comp=Z,12nm,0.8s
CMAR  Chiang Mai Arr    99.25  51   LR     LR       21 20 47.4
              comp=Z,124nm,21.0s,baz=316,slow=38
TAOE  Nuku Hiva Isla   112.04 281  eLR     LR       21 10 31.0
              comp=Z,563nm,27.0s
RKT   Rikitea          118.35 266  eLR     LR       21 13 26.2
              comp=Z,454nm,29.2s
PPT2  Papeete2         124.66 281  eLR     LR       21 16 22.0
              comp=Z,575nm,24.5s
SYO   Syowa Base       125.23 156⇓epPdiff  pPdif    20 34 19.0 -0.6
SYO   Syowa Base       125.23 156⇑ePKPdf   PKiKP    20 37 40.4 +2.0
TBI   Tubuai           128.50 276  eLR     LR       21 18 08.6
              comp=Z,485nm,38.0s
WRAB  Tennant Creek    149.56  36  epPKPdf pPKPdf   20 38 27.1 -1.2
WRAB  Tennant Creek    149.56  36  ePKP2   pPKPdf   20 38 27.1 -1.2
WRA   Warramunga Arr   149.56  36   PKPbc  PKPbc    20 38 27.8 -0.6
              comp=Z,7.7nm,0.9s,baz=334,slow=3.2,SNR=33
WR1   Warramunga Arr   149.56  36  ePKPbc  PKPbc    20 38 27.8 -0.6
WB2   Warramunga Arr   149.57  36  epPKPdf pPKPdf   20 38 27.0 -1.3
CASY  Casey            150.28 147  ePKPbc  PKiKP    20 38 29.6 +0.2
AS31  Alice Springs    152.68  40  ePKPbc  PKPbc    20 38 35.3 -0.3
ASAR  Alice Springs    152.68  40   PKPbc  PKPbc    20 38 35.1 -0.5
              comp=Z,5.0nm,0.9s,baz=346,slow=1.9,SNR=29
AS01  Alice Springs    152.70  40  ePKPbc  PKPbc    20 38 34.8 -0.8
DZM   Mont Dzumac      153.19 331  eLR     LR       21 29 35.2
              comp=Z,353nm,26.2s
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IDC 06 20:20:16.1±7.8, 10°.53S×164°.02E, h0^{km}, mb3.6/3, mb1 3.7/3, mb1mx3.5/33, mbtmp3.5/3, Error ellipse: s-maj=229.1km s-min=56.7km az=122.0, Santa Cruz Islands region

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Code  Station Name        Δ°   AZ°   Phase ID         Time     Res
                                     Op     ISC       h  m  s  ISC
WRA   Warramunga Arr    30.08 248    P      P        20 26 27.9 +0.4
              0.7nm,1.1s,baz=79,slow=9.4,SNR=1.6
ASAR  Alice Springs     31.53 242    P      P        20 26 39.9 -0.4
              0.2nm,0.5s,baz=66,slow=8.6,SNR=1.0
MKAR  Makanchi Array    91.99 317    P      P        20 33 26.8 -0.1
              0.5nm,0.8s,baz=101,slow=6.4,SNR=3.7
```

IDC 06 20:26:36.3±2.3, 11°.49S×164°.89E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.6/23, mbtmp3.7/5, ML3.5/1, MS4.0/1, Ms1 4.0/1, ms1mx2.9/28, Error ellipse: s-maj=58.5km s-min=33.2km az=98.0, Santa Cruz Islands region

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Code  Station Name        Δ°   AZ°   Phase ID         Time     Res
                                     Op     ISC       h  m  s  ISC
DZM   Mont Dzumac       10.62 172    Pn     Pn       20 29 10.1 +0.1
              0.4nm,0.3s,baz=77,slow=18,SNR=2.9
RAO   Raoul Island      23.86 140    LR     LR       20 38 39.5
              comp=Z,424nm,21.9s,baz=112,slow=30
WRA   Warramunga Arr    30.55 250    P      P        20 32 51.9  0.0
              1.1nm,1.0s,baz=80,slow=9.2,SNR=4.1
ASAR  Alice Springs     31.85 243    P      P        20 33 03.2 -0.1
              1.3nm,1.1s,baz=78,slow=9.9,SNR=5.0
SONM  Songino Array     78.53 324    P      P        20 38 39.7  0.0
              0.4nm,0.9s,baz=108,slow=4.7,SNR=3.1
MKAR  Makanchi Array    93.27 317    P      P        20 39 53.1  0.0
              0.4nm,0.7s,baz=100,slow=6.5,SNR=5.3
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*ISCJB **06** 20:42:26.0±2.2, 23°.35S±0°.04×170°.99E±0°.05, h2^{km}±14^{km}, mb4.9/54, MS4.5/13, Error ellipse: s-maj=7.6km s-min=5.4km az=147.5*

*IDC **06** 20:42:27.2±0.7, 23°.35S×170°.98E, h0^{km}, mb4.5/16, mb1 4.6/18, mb1mx4.5/36, mbtmp4.5/18, ML4.3/2, MS4.0/7, Ms1 4.0/7, ms1mx3.8/22, Error ellipse: s-maj=20.1km s-min=17.0km az=87.0*

*NEIC **06** 20:42:30.1±2.1, 23°.32S×170°.98E, h18^{km}±12^{km}, mb5.1/40, Error ellipse: s-maj=6.5km s-min=4.2km az=55.0*

*GCMT **06** 20:42:33.1±0.3, 23°.39S±0°.02×170°.88E±0°.04, h18^{km}±1^{km}, MW5.1/73, Moment Tensor Solution. s24,c32; s73,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.19±.35; $M_{\theta\theta}$4.60±.21; $M_{\phi\phi}$0.59±.21; $M_{r\theta}$-0.96±.39; $M_{\theta\phi}$0.40±.12; $M_{\phi r}$-0.94±.62; Best double couple: $M_0$5.08500×10^{16} NP1:ϕ_s76.00000°,δ52.00000°,λ-100.00000°. NP2: ϕ_s272.00000°,δ39.00000°,λ-78.00000°. Principal axes: T 4.7510, Plg6.0000°, Azm173.0000°; N 0.6690, Plg8.0000°, Azm82.0000°; P -5.4190, Plg80.0000°, Azm301.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **06** 20:42:33.6±1.4, 23°.06S×170°.59E, h33^{km}, mb5.1/18 Error ellipse: s-maj=12.5km s-min=10.4km az=32.2*

ISC 06 20:42:29.8±0.7, 23°.39S±0°.05×170°.99E±0°.06, h16^{km}±3^{km}, h16^{km}:pP-P, n294, σ1°.22/294, mb5.0/54, MS4.5/13, 45C-11D, Southeast of Loyalty Islands

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Code  Station Name        Δ°   AZ°   Phase ID         Time     Res
                                     Op     ISC       h  m  s  ISC
MARNC Mare, Loyalty      3.33 304   ePn     Pn       20 43 19.4 -1.7
PINNC Pines Island,      3.35 283   ePn     Pn       20 43 20.9 -0.5
OUENC Ouen Island, N     3.94 283   ePn     Pn       20 43 29.0 -0.6
ONTNC Ouen Toro          4.32 284   ePn     Pn       20 43 33.9 -0.8
DZM   Mont Dzumac        4.39 286   ePn     Pn       20 43 36.0 +0.1
              384nm,0.5s
DZM                                 eSn     Sn       20 44 22.6 -4.2
              429nm,0.6s
DZM   Mont Dzumac        4.39 286   ePn     Pn       20 43 35.2 -0.7
DZM                                  Sn     Sn       20 44 24.6 -2.2
DZM   Mont Dzumac        4.39 286    Pn     Pn       20 43 35.7 -0.2
              47nm,0.3s,baz=131,slow=11,SNR=181
DZM                                  Sn     Sn       20 44 24.6 -2.2
              33nm,0.3s,baz=103,slow=21,SNR=7.2
NFK   Norfolk Island     6.26 205    P      Pn       20 44 00.4 -1.1
              baz=6.2,SNR=14
MSVF  Nonsavu            8.68  51   ePn     Pn       20 44 35.5 +0.7
MSVF  Nonsavu            8.68  51   eP      Pn       20 44 35.5 +0.7
RAO   Raoul Island      11.53 123    LR     LR       20 47 35.6
              comp=Z,292nm,20.3s,baz=152,slow=27
URZ   Urewera           15.72 162    Pn     Pn       20 46 11.4 +0.9
              0.5nm,0.3s,baz=315,slow=20,SNR=1.9
BKZ   Black Stump Fm    16.41 165   ePn     Pn       20 46 18.2 -1.2
              185nm,1.7s
HNR   Honiara           17.44 321    P      Pn       20 46 31.7 -0.8
              197nm,0.3s,baz=162,slow=16,SNR=3.8
BFZ   Birch Farm        17.80 167   ePn     P        20 46 38.0 +0.5
              222nm,1.8s
SNZO  South Karori      18.14 171   ePn     P        20 46 42.0 +0.8
              304nm,1.8s
EIDS  Eidsvold          18.24 260    P      Pn       20 46 42.5 +0.1
              baz=18,SNR=5.8
EIDS  Eidsvold          18.24 260   ePn     P        20 46 43.5 +1.1
              62nm,1.1s
THZ   Tophouse          18.39 175   eP      Pn       20 46 45.3 +1.2
              146nm,1.7s
ARMA  Armidale          18.62 244   eP      P        20 46 45.8 -0.9
              30nm,1.1s
KHZ   Kahutara          19.09 174   eP      P        20 46 51.9 +0.2
              213nm,1.6s
LTZ   Lake Taylor       19.37 177   eP      Pn       20 46 56.1 +0.2
              160nm,1.6s
OXZ   Oxford            19.91 178   eP      P        20 47 00.9 +0.3
              47nm,1.0s
MGCD  Mangrove Creek    20.02 236    P      P        20 47 02.6 +0.6
              baz=20,SNR=14
FOZ   Fox Glacier       20.12 182   eP      P        20 47 03.6 +0.8
              146nm,1.3s
RPZ   Rata Peaks        20.27 180    P      P        20 47 05.0 +0.5
              9.9nm,0.7s,baz=292,slow=3.0,SNR=6.3
RPZ                                  LR     LR       20 54 08.9
              comp=Z,579nm,18.6s,baz=9.5,slow=34
RMQ   Roma              20.39 257    P      P        20 47 06.0  0.0
              baz=20,SNR=50
LBZ   Lake Benmore      20.96 182   eP      P        20 47 12.7 +0.7
              92nm,1.5s
WKZ   Wanaka            21.45 184   eP      P        20 47 18.9 +1.7
              226nm,1.9s
ODZ   Otahua Downs      21.61 181   eP      P        20 47 21.9 +2.9
              91nm,1.6s
MLZ   Mavora Lakes      22.05 185   eP      P        20 47 25.5 +1.8
              93nm,1.6s
CNB   Canberra Magne    22.23 233    P      P        20 47 26.5 +0.7
              baz=22,SNR=4.7
DCZ   Deep Cove         22.25 187   eP      P        20 47 25.9 +0.2
              46nm,1.3s
CAN   Canberra          22.50 233   eP      P        20 47 30.7 +2.0
              74nm,1.4s
CAN   Canberra          22.50 233   eP      P        20 47 30.7 +2.0
CAN                                 pmax   pmax
              comp=Z,74nm,1.4s
YNG   Young             22.53 236    P      P        20 47 29.3 +0.3
              baz=22,SNR=8.2
WHZ   Wether Hill Ro    22.59 186   eP      P        20 47 30.4 +1.0
              comp=Z,114nm,1.6s
MILA  Mila              23.20 229    P      P        20 47 37.6 +1.6
              baz=23,SNR=5.3
CTA   Charters Tower    23.20 273   eP      P        20 47 36.0 -0.1
CTA   Charters Tower    23.20 273    P      P        20 47 36.0 -0.1
              comp=Z,21nm,0.8s,baz=96,slow=10,SNR=12
CTAO  Charters Tower    23.20 273   eP      P        20 47 37.8 +1.7
              comp=Z,52nm,1.0s
CTAO  Charters Tower    23.20 273   eP      P        20 47 37.8 +1.7
CTAO                                pmax   pmax
              comp=Z,52nm,1.0s
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CMSA	Cobar Meteorol	23.83	245	P	P	20 47 43.6	+1.4
	baz=24,SNR=42						
QLP	Quilpie	24.44	257	P	P	20 47 48.7	+0.8
	baz=24,SNR=55						
MTSU	Mount Surprise	25.46	277	P	P	20 47 58.8	+1.6
	baz=25,SNR=11						
TOO	Toolangi	26.02	231	P	P	20 48 03.4	+1.2
	baz=26,SNR=5.0						
TOO	Toolangi	26.02	231	eP	P	20 48 04.0	+1.8
	comp=Z,41nm,1.1s						
TOO	Toolangi	26.02	231	eP	P	20 48 04.0	+1.8
TOO				pmax	pmax		
	comp=Z,41nm,1.1s						
STKA	Stephens Creek	27.32	245	P	P	20 48 14.8	+1.0
	baz=27,SNR=12						
STKA	Stephens Creek	27.32	245	eP	P	20 48 13.5	-0.3
	comp=Z,15nm,1.4s						
STKA	Stephens Creek	27.32	245	eP	P	20 48 13.5	-0.3
STKA				pmax	pmax		
	comp=Z,15nm,1.4s						
STKA	Stephens Creek	27.32	245	P	P	20 48 14.2	+0.3
	comp=Z,20nm,1.1s,baz=89,slow=10,SNR=22						
COEN	Coen	27.92	285	P	P	20 48 20.9	+1.5
	baz=28,SNR=4.6						
COEN	Coen	27.92	285	eP	P	20 48 19.3	-0.1
	comp=Z,80nm,1.6s						
HTT	Hallett	29.82	243	P	P	20 48 37.2	+1.0
	baz=30,SNR=7.1						
MANU	Manus Island	31.21	309	eP	P	20 48 48.7	+0.1
	comp=Z,126nm,1.6s						
BBOO	Buckleboo	32.09	245	P	P	20 48 56.8	+0.6
	baz=32,SNR=6.0						
BBOO	Buckleboo	32.09	245	eP	P	20 48 56.4	+0.2
	comp=Z,46nm,1.0s						
AS01	Alice Springs	33.90	262	eP	P	20 49 11.3	-0.8
AS31	Alice Springs	33.94	262	eP	P	20 49 11.6	-1.0
	comp=Z,9.2nm,1.0s						
AS31				ePcP	PcP	20 51 50.9	+0.1
ASAR	Alice Springs	33.94	262	P	P	20 49 12.4	-0.1
	comp=Z,20nm,1.0s,baz=84,slow=8.7,SNR=107						
ASAR				PcP	PcP	20 51 50.9	+0.1
	comp=Z,1.8nm,0.9s,baz=127,slow=2.4,SNR=5.4						
WR1	Warramunga Arr	34.17	269	eP	P	20 49 13.3	-1.2
	comp=Z,9.6nm,1.0s						
WRA	Warramunga Arr	34.17	269	P	P	20 49 13.3	-1.2
	comp=Z,3.8nm,1.1s,baz=93,slow=8.4,SNR=19						
TBI	Tubuai	36.23	98	eLR	LR	20 59 24.6	
	comp=Z,252nm,29.2s						
PPT2	Papeete2	37.30	89	eLR	LR	20 59 59.4	
	comp=Z,230nm,26.5s						
PPT	Papeete	37.31	89	eP	P	20 49 40.4	-1.1
PPT	Papeete	37.31	89	eP	P	20 49 40.4	-1.1
FORT	Forrest	38.74	250	P	P	20 49 53.4	0.0
	baz=39,SNR=11						
FORT	Forrest	38.74	250	eP	P	20 49 53.0	-0.4
	comp=Z,86nm,0.8s						
WRKA	Warakurna	38.86	259	P	P	20 49 54.4	-0.1
	baz=39,SNR=12						
FITZ	Fitzroy Crossi	42.60	268	P	P	20 50 25.8	+0.4
	baz=42,SNR=18						
FITZ	Fitzroy Crossi	42.60	268	eP	P	20 50 25.8	+0.4
	comp=Z,37nm,1.1s						
H11N1	WAKE ISLAND Hy	43.02	354	T	T	21 36 37.1	
	baz=184,slow=76,SNR=5.2						
H11N3	WAKE ISLAND Hy	43.03	354	T	T	21 36 44.0	
	baz=184,slow=76,SNR=6.1						
H11N2	WAKE ISLAND Hy	43.04	354	T	T	21 36 41.0	
	baz=184,slow=76,SNR=5.3						
MBWA	Marble Bar	47.28	262	eP	P	20 51 02.5	-0.2
	comp=Z,26nm,1.0s						
MEEK	Meekatharra	47.31	255	P	P	20 51 02.4	-0.4
	baz=47,SNR=7.8						
KLBR	Kellerberrin	47.54	248	P	P	20 51 04.4	-0.2
	baz=47,SNR=8.0						
NWAO	Narrogin (SRO)	47.90	246	P	P	20 51 07.4	+0.1
	baz=48,SNR=6.6						
NWAO	Narrogin (SRO)	47.90	246	eP	P	20 51 07.2	-0.2
	comp=Z,50nm,0.9s						
NWAO	Narrogin (SRO)	47.90	246	eP	P	20 51 07.2	-0.2
NWAO				pmax	pmax		
	comp=Z,50nm,0.9s						
BLDU	Ballidu	48.51	249	P	P	20 51 11.8	-0.3
	baz=48,SNR=12						
MUN	Mundaring	48.83	247	P	P	20 51 14.6	+0.1
	baz=49,SNR=4.0						
MORW	Morawa	49.25	251	P	P	20 51 17.6	-0.3
	baz=49,SNR=5.8						
MORW	Morawa	49.25	251	eP	P	20 51 18.0	+0.2
	comp=Z,61nm,1.0s						
LUWI	Luwuk	51.74	288	eP	P	20 51 35.4	-1.3
	comp=Z,82nm,1.2s						
VNDA	Vanda	54.37	182	P	P	20 51 55.7	+0.5
	comp=Z,2.6nm,0.9s,baz=12,slow=9.3,SNR=2.5						
VNDA				LR	LR	21 11 58.4	
	comp=Z,277nm,18.7s,baz=8.5,slow=33						
CASY	Casey	57.02	205	eP	P	20 52 14.2	-0.2
	comp=Z,20nm,1.2s						
QSPA	South Pole Qui	66.69	180	P	P	20 53 20.2	+0.5
	comp=Z,2.6nm,0.4s,baz=28,slow=1.5,SNR=8.5						
MJAR	Matsushiro Arr	67.16	332	P	P	20 53 22.0	-0.8
	comp=Z,2.8nm,0.9s,baz=173,slow=7.7,SNR=5.6						
MJAR				LR	LR	21 22 47.7	
	comp=Z,37nm,18.9s,baz=85,slow=36						
MAJO	Matsushiro	67.16	332	eP	P	20 53 22.0	-0.8
MAJO	Matsushiro	67.16	332	⇓eP	P	20 53 22.2	-0.7
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ASAJ	Asahikawa	72.04	339	LR	LR	21 21 49.4	
	comp=Z,89nm,20.4s,baz=164,slow=33						
KSRS	Korea Array	72.83	325	P	P	20 53 58.3	+0.7
	comp=Z,2.7nm,1.0s,baz=134,slow=6.4,SNR=3.6						
KSAR	Wonju Array Be	72.84	325	P	P	20 53 58.3	+0.6
KSAR	Wonju Array Be	72.84	325	P	P	20 53 58.3	+0.6
QIZ	Qiongzhong	73.05	300	P	P	20 54 00.3	+0.9
QIZ				S	SKiKP	21 03 29.1	-2.6
QIZ				pmax	pmax		
	comp=Z,16nm,1.1s						
QIZ				LR	LR		
	comp=N,160nm,18.6s						
QIZ				LR	LR		
	comp=E,190nm,15.7s						
QIZ				LR	LR		
	comp=Z,220nm,21.6s						
IPM	Ipoh	73.55	282	eP	P	20 54 02.5	0.0
	comp=Z,19nm,1.0s						
NJ2	Nanjing	74.31	316	eP	P	20 54 07.1	+0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YSS	Yuzh-Sakhalins	74.52	340	⇑eP	P	20 54 08.5	+1.2
YSS				e		20 54 15.6	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
PETK	Petropavlovsk-	77.04	352	P	P	20 54 21.7	+0.1
	comp=Z,7.9nm,0.9s,baz=150,slow=10,SNR=5.9						
PETK				LR	LR	21 21 48.6	
	comp=Z,241nm,19.8s,baz=148,slow=31						
PEA1	Petropavlovsk-	77.05	352	eP	P	20 54 21.7	0.0
TYV	Tymovskoe	78.04	342	eP	P	20 54 28.1	+0.9
TYV				eS	S	21 04 26.9	+6.6
TYV				pmax	pmax		
	comp=Z,11nm,1.4s						
TYV				pmax	pmax		
	comp=Z,200nm,7.0s						
TYV				smax	smax		
	comp=N,200nm,7.4s						
GYA	Guiyang	79.52	305	⇑iP	P	20 54 36.9	+0.8
GYA				PP	PP	20 57 41.0	+4.1
GYA	Guiyang	79.52	305	S	S	21 04 39.4	+2.0
GYA	Guiyang	79.52	305	SKS	SKSac	21 04 50.2	-2.2
GYA	Guiyang	79.52	305	SS	SS	21 09 49.8	+4.0
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.8s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,17.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
ENH	Enshi	79.56	309	eP	P	20 54 37.0	+0.8
	comp=Z,45nm,1.1s						
KLR	Kul'dur	80.30	335	P	P	20 54 39.9	+0.2
	comp=Z,2.2nm,1.1s,baz=96,slow=9.2,SNR=2.1						
SYO	Syowa Base	81.42	196	⇓eP	P	20 54 47.8	+2.3
CM01	Chiang Mai Arr	81.65	294	eP	P	20 54 48.4	+0.7
CM31	Chiang Mai Arr	81.68	294	eP	P	20 54 49.6	+1.8
CMAR	Chiang Mai Arr	81.68	294	P	P	20 54 49.0	+1.2
CMAR	Chiang Mai Arr	81.68	294	P	P	20 54 49.0	+1.2
	comp=Z,6.4nm,0.9s,baz=136,slow=4.1,SNR=24						
KMI	Kunming	81.84	302	P	P	20 54 50.1	+1.4
KMI				pP	pwP	20 55 01.8	+3.8
KMI				sP	sP	20 55 07.8	+13
KMI	Kunming	81.84	302	S	S	21 05 02.2	+0.3
KMI	Kunming	81.84	302	SS	SS	21 10 23.7	+3.0
KMI				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,19nm,1.5s						
KMI				pmax	pmax		
	comp=Z,94nm,6.4s						
KMI				LR	LR		
	comp=N,200nm,20.2s						
KMI				LR	LR		
	comp=E,210nm,21.2s						
KMI				LR	LR		
	comp=Z,240nm,22.2s						
KMI	Kunming	81.84	302	eP	P	20 54 50.4	+1.6
	comp=Z,42nm,1.4s						
CHTO	Chiang Mai	81.85	294	eP	P	20 54 49.9	+1.3
	comp=Z,23nm,1.0s						
CHTO	Chiang Mai	81.85	294	eP	P	20 54 49.9	+1.3
CHTO				pmax	pmax		
	comp=Z,23nm,1.0s						
CHTO	Chiang Mai	81.85	294	P	P	20 54 50.3	+1.7
	comp=Z,101nm,1.1s,comp=Z,1µm						
XAN	Xi'an	82.10	312	P	P	20 54 50.4	+0.7
XAN				pP	pP	20 56 17.9	+84
XAN				sP	sP	20 56 55.4	
XAN				pmax	pmax		
	comp=Z,20nm,1.4s						
XAN				pmax	pmax		
	comp=Z,180nm,5.3s						
XAN				LR	LR		
	comp=N,270nm,19.5s						
XAN				LR	LR		
	comp=E,230nm,20.6s						
XAN				LR	LR		
	comp=Z,370nm,19.5s						
XAN	Xi'an	82.10	312	eP	P	20 54 50.3	+0.6
	comp=Z,33nm,1.3s						
XAN	Xi'an	82.10	312	eP	P	20 54 50.3	+0.6
XAN				pmax	pmax		
	comp=Z,33nm,1.3s						
CD2	Chengdu	84.04	307	P	P	20 55 01.2	+1.4
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,150nm,7.3s						
MA2	Magadan	84.32	350	⇓eP	P	20 55 00.4	0.0
MA2				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC	Hu-ho-hao-te	84.41	319	eP	P	20 55 01.3	-0.2
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
SNAA	Sanae	85.10	182	P	P	20 55 03.0	-1.6
SNAA	Sanae	85.10	182	eP	P	20 55 03.0	-1.6
	comp=Z,14nm,1.2s						
SNAA	Sanae	85.10	182	⇓iP	P	20 55 03.4	-1.2
ZEA	Zeya	85.59	336	eP	P	20 55 04.8	-2.2
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
VNA3	Neumayer Olymp	85.63	180	P	P	20 55 05.8	-1.3
VNA2	Neumayer--Watz	85.94	181	P	P	20 55 07.7	-1.0
LZH	Lanzhou	86.70	312	eP	P	20 55 14.8	+1.7
LZH				pP	pwP	20 55 24.9	+2.5
LZH				sP	sP	20 55 29.2	+10
LZH				PP	PP	20 58 39.0	+3.2
LZH	Lanzhou	86.70	312	S	SKSac	21 05 35.2	-4.3
LZH	Lanzhou	86.70	312	sS	S	21 05 42.3	-7.7
LZH	Lanzhou	86.70	312	SS	SS	21 11 35.4	+3.3
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,38nm,1.6s						
LZH				pmax	pmax		
	comp=Z,190nm,6.3s						
LZH				LR	LR		
	comp=N,470nm,15.7s						
LZH				LR	LR		
	comp=E,520nm,15.2s						
LZH				LR	LR		
	comp=Z,560nm,17.1s						
SEY	Seymchan	87.28	352	⇑iP	P	20 55 15.3	+0.2
SEY	Seymchan	87.28	352	P	P	20 55 15.0	-0.1
	comp=Z,4.6nm,0.9s,baz=173,slow=7.7,SNR=3.6						
NV01	Mina Array Sit	90.34	48	eP	P	20 55 27.9	-2.6
NVAR	Mina Array Bea	90.34	48	P	P	20 55 30.5	0.0
	comp=Z,1.1nm,0.8s,baz=228,slow=6.4,SNR=5.8						
SHL	Shillong	90.72	298	eP	P	20 55 32.8	+0.3
	comp=Z,22nm,1.0s						
SHL	Shillong	90.72	298	eP	P	20 55 32.8	+0.3
SHL				pmax	pmax		
	comp=Z,22nm,1.0s						
BILL	Bilibino	91.22	358	eP	P	20 55 33.4	-0.1
	comp=Z,18nm,0.9s						
BILL	Bilibino	91.22	358	⇑iP	P	20 55 33.7	+0.2
BILL				pmax	pmax		
	comp=Z,17nm,1.3s						
SONA0	Songino Array	91.49	322	eP	P	20 55 35.4	0.0
SONM	Songino Array	91.49	322	P	P	20 55 35.4	0.0
	comp=Z,1.0nm,0.8s,baz=151,slow=4.4,SNR=2.6						
SONM				LR	LR	21 38 01.9	
	comp=Z,92nm,18.1s,baz=191,slow=36						
COLA	College	93.53	16	⇓iP	P	20 55 43.3	-0.9
COLA				pmax	pmax		
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	93.70	17	P	P	20 55 44.3	-0.7
	comp=Z,1.2nm,0.9s,baz=232,slow=5.0,SNR=4.8						
WMQ	Urumqi	101.22	313	P	Pdif	20 56 22.3	+2.7
WMQ				pP	sPdif	20 56 26.9	+1.5
WMQ				pmax	pmax		
	comp=Z,22nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,580nm,4.3s						
WMQ				LR	LR		
	comp=N,170nm,14.9s						
WMQ				LR	LR		
	comp=E,150nm,17.3s						
WMQ				LR	LR		
	comp=Z,220nm,19.7s						
MKAR	Makanchi Array	105.81	314	PP	PP	21 01 01.9	-1.3
	comp=Z,0.8nm,1.0s,baz=98,slow=7.9,SNR=3.7						
R58B	Mineral	120.24	59	ePKPdf	PKPdf	21 01 19.4	-0.8
ARU	Arti	121.53	323	i PKIKP	PKPdf	21 01 21.2	-0.9
ARU						21 02 54.2	
ARU						21 08 32.9	
ARU				SS	SS	21 19 18.4	-11
PRGR	Permogore	126.92	331	ePKIKP	PKPdf	21 01 31.2	-1.0
PRGR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ARA0	ARCESS Array S	129.47	345	ePKPdf	PKPdf	21 01 37.1	+0.1
ARCES	ARCESS Array B	129.47	345	PKP	PKPdf	21 01 37.1	+0.1
	comp=Z,3.0nm,1.0s,baz=4.4,slow=1.2,SNR=3.7						
VRH	Novokhopyorsk	132.27	319	ePKIKP	PKPdf	21 01 43.2	+0.5
VRH				pmax	pmax		
	comp=N,10.0nm,0.5s						
NCK	Nalchik	132.59	308	⇓iPKIKP	PKPdf	21 01 43.7	0.0
LPSR	Galich'ya Gora	133.49	321	ePKIKP	PKPdf	21 01 42.3	-2.7
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR	Storozhevoye	133.80	320	ePKIKP	PKPdf	21 01 39.9	-5.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OBN	Obninsk	133.83	325	ePKIKP	PKPdf	21 01 45.0	-0.5
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FIA0	FINESS Array S	135.02	337	ePKPdf	PKPdf	21 01 47.4	-0.2
FIA0	FINESS Array S	135.02	337	ePKIKP	PKPdf	21 01 47.4	-0.2
FINES	FINESS Array B	135.02	337	PKP	PKPdf	21 01 47.4	-0.2
	comp=Z,7.1nm,1.1s,baz=64,slow=3.2,SNR=5.1						
BR101	Keskin Array S	140.57	305	ePKPpre	PKPpre	21 01 49.4	
BR101				ePKPdf	PKPdf	21 01 57.6	-1.1
BRTR	Keskin Array B	140.57	305	PKhKP	PKPpre	21 01 49.4	
	comp=Z,0.3nm,0.7s,baz=132,slow=2.1,SNR=2.8						
BRTR				PKP	PKPdf	21 01 57.7	-1.1
	comp=Z,1.4nm,1.0s,baz=11,slow=1.5,SNR=3.8						
BIZ	Bicaz	143.37	319	⇑iP	PKPbc	21 02 01.8	+1.3
VRI	Vrincioaia	143.46	317	⇑iP	PKPab	21 01 56.6	-3.2
PLOR	Plostina	143.52	317	⇑iP	PKPab	21 01 59.8	-0.2
BUR08	Bucovina Ar. S	143.57	320	ePKPdf	PKPdf	21 02 02.7	-1.1
BURAR	Bucovina Array	143.57	320	⇑iP	PKPdf	21 02 03.2	-0.6
BURAR	Bucovina Array	143.57	320	⇑PKIKP	PKPdf	21 02 03.2	-0.6
BUR04	Bucovina Ar. S	143.57	320	ePKPdf	PKPbc	21 02 01.8	+0.6
KWP	Kalwaria Pacla	143.91	325	ePKPdf	PKPdf	21 02 04.1	-0.1
MLR	Muntele Rosu	144.12	317	ePKPdf	PKPbc	21 02 03.2	+0.3
MLR	Muntele Rosu	144.12	317	⇑iP	PKPbc	21 02 03.6	+0.7
MLR	Muntele Rosu	144.12	317	⇑PKIKP	PKPbc	21 02 03.6	+0.7
SECR		144.24	316	⇑iP	PKPdf	21 02 04.6	-0.3
DOPR	Dopca	144.25	318	⇑iP	PKPdf	21 02 04.5	-0.4
SULR		144.27	315	⇑iP	PKPdf	21 02 04.5	-0.4
ARCR	ARCALIA	144.35	320	⇑iP	PKPdf	21 02 05.0	0.0
BMR	Baia Mare	144.55	321	⇑iP	PKPdf	21 02 05.6	+0.3
BMR	Baia Mare	144.55	321	⇑PKIKP	PKPdf	21 02 05.6	+0.3
MANT	Manisa	144.70	304	ePKPdf	PKPbc	21 02 05.6	+0.5
UZH	Uzhgorod	144.70	323	⇑iPKIKP	PKPdf	21 02 05.9	+0.3
UZH				i		21 02 11.7	
UZH				i		21 02 18.6	
VOIR		144.71	317	⇑iP	PKPdf	21 02 05.7	-0.1
VOIR		144.71	317	⇑PKIKP	PKPdf	21 02 05.7	-0.1
MTUR	Matau	144.79	317	⇑iP	PKPdf	21 02 06.4	+0.4
MTUR	Matau	144.79	317	⇑PKIKP	PKPdf	21 02 06.4	+0.4
TRPA	Tarpa	144.84	322	⇑iP	PKPdf	21 02 06.0	+0.2
CJR	Cluj-Napoca	144.98	320	⇑iP	PKPdf	21 02 07.0	+0.8
CJR	Cluj-Napoca	144.98	320	⇑PKIKP	PKPdf	21 02 07.0	+0.8
ARR	Arges	145.00	317	⇑iP	PKPdf	21 02 07.0	+0.7
OJC	Ojcow	145.05	327	ePKIKP	PKPdf	21 02 07.7	+1.6
SZH	Strazhica	145.06	313	eP	PKPdf	21 02 06.3	-0.1
HUMR	Humele	145.16	316	⇓iP	PKPdf	21 02 06.5	0.0
NIE	Niedzica	145.30	326	ePKP	PKPdf	21 02 07.7	+1.1
DRGR		145.46	320	⇑iP	PKPab	21 02 07.9	+0.6
DRGR		145.46	320	⇑PKIKP	PKPab	21 02 07.9	+0.6
PVL	Pavlikeni	145.48	313	eP	PKPab	21 02 08.4	+1.1
LTVH	Ltavrtes, Hu	145.61	322	eP	PKPdf	21 02 02.0	-5.2
VLAD	Vladila	145.76	315	⇑iP	PKPab	21 02 08.9	+0.5
ALN	Alexandroupoli	145.85	309	ePKPdf	PKPdf	21 02 08.1	+0.3
ALN	Alexandroupoli	145.85	309	ePKP2	PKPdf	21 02 08.1	+0.3
LANS	Liptovska Anna	145.89	326	ePKP	PKPab	21 02 09.7	+0.9
GZR	Gura Zlata	146.14	318	⇑iP	PKPbc	21 02 08.9	-0.3
KSP	Ksiaz	146.29	331	ePKP	PKPbc	21 02 09.8	+0.4
KSP	Ksiaz	146.29	331	ePKP2	PKPbc	21 02 09.8	+0.4
SIRR	Siria	146.36	320	⇑iP	PKPab	21 02 10.9	+0.3
PSZ	Piszkesteto	146.42	324	ePKPdf	PKPab	21 02 10.5	-0.3
PSZ	Piszkesteto	146.42	324	ePKPdf	PKPab	21 02 10.5	-0.3
PSZ	Piszkesteto	146.42	324	⇑iP	PKPbc	21 02 09.7	-0.3
PSZ	Piszkesteto	146.42	324	⇑PKP2	PKPbc	21 02 09.7	-0.3
KARP	Karpathos	146.44	299	ePKPdf	PKPdf	21 02 09.8	+0.7
MORC	Moravsky Berou	146.44	328	ePKPdf	PKPdf	21 02 09.3	+0.7
MORC	Moravsky Berou	146.44	328	⇓iP	PKPbc	21 02 09.9	-0.1
MORC	Moravsky Berou	146.44	328	⇓PKP2	PKPbc	21 02 09.9	-0.1
MORC	Moravsky Berou	146.44	328	ePKP	PKPab	21 02 10.8	-0.1
MORC				e		21 02 20.5	
PGB	Panagyurishte	146.53	313	eP	PKPbc	21 02 10.4	-0.1
HERR	Herculane	146.61	318	⇑iP	PKPbc	21 02 11.1	+0.6
DPC	Dobruska-Polom	146.62	330	ePKP	PKPbc	21 02 11.0	+0.5
DPC				epPKP	sPKPbc	21 02 18.0	+1.7
DPC	Dobruska-Polom	146.62	330	ePKP2	PKPbc	21 02 11.0	+0.5
VYHS	Vyhne	146.63	326	ePKP2	PKPbc	21 02 10.9	+0.4
VYHS	Vyhne	146.63	326	ePKP	PKPbc	21 02 10.9	+0.4
VYHS				e		21 02 23.3	
UPC	Upice	146.66	331	ePKP	PKPbc	21 02 11.1	+0.6
UPC	Upice	146.66	331	ePKP2	PKPbc	21 02 11.1	+0.6
BZS	Buzias	146.73	319	⇑iP	PKPbc	21 02 11.2	+0.4
BZS	Buzias	146.73	319	⇑PKP2	PKPbc	21 02 11.2	+0.4
MDVR	Moldovita	147.10	318	⇑iP	PKPbc	21 02 12.6	+0.6
VTS	Vitosha	147.13	313	ePKPdf	PKPbc	21 02 13.0	+0.8
VTS	Vitosha	147.13	313	ePKPdf	PKPbc	21 02 12.6	+0.3
VTS	Vitosha	147.13	313	⇑iP	PKPbc	21 02 12.4	+0.1
VTS	Vitosha	147.13	313	⇑PKP2	PKPbc	21 02 12.4	+0.1
VTS	Vitosha	147.13	313	eP	PKPbc	21 02 12.5	+0.3
VRAC	Vranov	147.22	329	⇑iP	PKPbc	21 02 11.4	-0.7
VRAC	Vranov	147.22	329	⇑PKIKP	PKPbc	21 02 11.4	-0.7
VRAC	Vranov	147.22	329	ePKP	PKPbc	21 02 13.0	+0.9
VRAC				e		21 02 22.6	
MMB	Musomiste	147.22	311	eP	PKPbc	21 02 11.9	-0.5
PVCC	Panska Ves	147.28	332	ePKP	PKPbc	21 02 13.2	+1.0
PVCC	Panska Ves	147.28	332	ePKP2	PKPbc	21 02 13.2	+1.0
BRG	Berggiesshubel	147.29	333	ePKP	PKPdf	21 02 10.1	+0.2
	comp=Z,32nm,1.4s						
BRG	Berggiesshubel	147.29	333	ePKP	PKPbc	21 02 12.5	+0.2
	comp=Z,32nm,1.4s						
BRG	Berggiesshubel	147.29	333	ePKP2	PKPbc	21 02 12.5	+0.2
BRG				pmax	pmax		
	comp=Z,32nm,1.4s						
SRO	Srobarova	147.33	325	ePKP2	PKPbc	21 02 13.0	+0.6
SRO	Srobarova	147.33	325	ePKP	PKPbc	21 02 13.0	+0.6
CLL	Collm	147.35	334	ePKPdf	PKPbc	21 02 12.8	+0.5
CLL	Collm	147.35	334	ePKPdf	PKPbc	21 02 12.4	0.0
CLL	Collm	147.35	334	i PKPbc	PKPbc	21 02 12.4	0.0
	comp=Z,35nm,1.5s						
CLL				e		21 02 23.0	
CLL				i		21 02 43.0	
CLL	Collm	147.35	334	i PKP2	PKPbc	21 02 12.4	0.0
CLL				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KRUC	Moravsky	147.48	328	ePKP	PKPbc	21 02 13.6	+0.8
KRUC				e		21 02 23.0	
MODS	Modra-Piesok	147.50	327	ePKP2	PKPbc	21 02 13.8	+0.8
MODS	Modra-Piesok	147.50	327	ePKP	PKPbc	21 02 13.8	+0.8
MODS				e		21 02 25.1	
PRU	Pruhonice	147.69	331	ePKP	PKPbc	21 02 13.1	-0.3
PRU				epPKP	pPKPab	21 02 21.4	+1.5
PRU	Pruhonice	147.69	331	ePKP2	PKPbc	21 02 13.1	-0.3
TREC	Trest	147.75	329	ePKP	PKPbc	21 02 14.0	+0.4
TREC				epPKP	sPKPab	21 02 23.4	+1.7
TREC	Trest	147.75	329	ePKP2	PKPbc	21 02 14.0	+0.4
MORH	Mrgy, Hungar	148.12	322	eP	PKPdf	21 02 12.0	+0.6
VAY	Valandovo	148.12	312	i P	PKPbc	21 02 13.5	-1.3
STIP	Stip	148.23	313	i P	PKPbc	21 02 15.0	-0.1
DIVS	Divibare	148.50	318	ePKPdf	PKPbc	21 02 16.5	+0.6
DIVS	Divibare	148.50	318	ePKPdf	PKPbc	21 02 16.2	+0.4
CONA	Conrad Observa	148.51	327	i pPKPdf	PKPbc	21 02 16.2	+0.5
	comp=Z,20nm,1.3s,SNR=7.4						
SKO	Skopje	148.61	313	i P	PKPbc	21 02 16.1	0.0
LIT	Litokhoron	148.66	310	ePKPdf	PKPbc	21 02 16.2	-0.1
LIT	Litokhoron	148.66	310	ePKPdf	PKPbc	21 02 15.6	-0.8
KHC	Kasperske Hory	148.74	331	ePKPdf	PKPdf	21 02 12.3	-0.1
KHC	Kasperske Hory	148.74	331	ePKP	PKPbc	21 02 16.8	+0.6
KHC				epPKP	pPKPbc	21 02 22.3	+1.7
KHC	Kasperske Hory	148.74	331	ePKP2	PKPbc	21 02 16.8	+0.6
GEC2	GERESS Array S	148.89	330	ePKPdf	PKPdf	21 02 12.3	-0.5
GERES	GERESS Array B	148.89	330	PKP	PKPdf	21 02 12.6	-0.1
	comp=Z,4.9nm,0.9s,baz=20,slow=3.2,SNR=4.8						
GERES				PKPbc	PKPbc	21 02 16.4	-0.3
	comp=Z,6.8nm,1.0s,baz=42,slow=1.6,SNR=5.3						
GEA0	GERESS Array S	148.90	330	ePKPdf	PKPdf	21 02 12.3	-0.4
KRUS	Krusevo	149.00	313	i P	PKPbc	21 02 15.8	-1.4
ARSA	Arzberg	149.13	327	i pPKPdf	PKPbc	21 02 17.7	+0.5
	comp=Z,14nm,1.4s						
AGG	Agios Georgios	149.18	308	ePKPdf	PKPdf	21 02 12.8	-0.7
MOA	Molln	149.34	329	i pPKPdf	PKPbc	21 02 17.7	0.0
	comp=Z,15nm,1.2s						
SOKA	Soboth	149.77	326	i pPKPdf	PKPbc	21 02 18.7	-0.2
	comp=Z,32nm,1.3s,SNR=6.7						
BLY	Banja Luka	149.81	321	⇑iP	PKiKP	21 02 19.6	-0.4
OBKA	Obir	150.13	326	i pPKPdf	PKPbc	21 02 20.0	+0.2
	comp=Z,17nm,1.5s						
KBA	Koelnbreinsper	150.33	328	i pPKPdf	PKPbc	21 02 19.7	-0.7
	comp=Z,27nm,1.2s,SNR=5.4						
MEM	Membach	150.42	340	⇑PKP	PKPbc	21 02 20.6	+0.3
MEM				⇑pPKP	pPKPab	21 02 30.6	-0.3
MYKA	Terra Mystica	150.50	327	i PKiKP	PKPbc	21 02 19.1	-1.6
	comp=Z,10nm,1.0s						
ABTA	Abfaltersbach	150.97	329	i pPKPdf	PKPbc	21 02 21.1	-0.7
	comp=Z,20nm,0.9s						
WATA	Walderalm	150.97	330	i P	PKPbc	21 02 22.2	+0.3
	comp=Z,26nm,1.2s,SNR=6.3						
MOTA	Moosalm	151.18	331	i pPKPdf	PKPbc	21 02 22.0	-0.3
	comp=Z,22nm,1.0s,SNR=11						
WLF	Walferdange	151.19	339	⇑PKP	PKPbc	21 02 22.4	+0.3
WLF				⇓pPKP	pPKPab	21 02 33.1	-1.1
RETA	Reutte	151.22	332	i P	PKPbc	21 02 22.5	+0.1
	comp=Z,12nm,0.9s						
SQTA	Sankt Quirin	151.22	331	i pPKPdf	PKPbc	21 02 22.3	-0.1
	comp=Z,20nm,0.9s						
DOU	Dourbes	151.29	342	⇓PKP	PKPbc	21 02 22.3	0.0
FETA	Feichten	151.59	331	i P	PKPbc	21 02 23.4	+0.1
	comp=Z,25nm,1.1s,SNR=6.0						
DAVA	Damuels	151.75	332	i P	PKPbc	21 02 23.9	+0.2
	comp=Z,17nm,1.5s						
FUORN	Ofenpass-Fuorn	152.10	331	ePKPbc	PKiKP	21 02 24.9	-0.1

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOA0	**Torodi Ar. Sit**	**165.62**	**227**	*e*PKPdf	**PKPdf**	**21 02 32.8**	**-1.7**
TOA0				*e*PKPdf	**pPKPdf**	**21 02 34.0**	**-4.9**
TOA0				*e*PKPab	**PKPab**	**21 03 31.6**	**-1.5**
TORD	**Torodi Ar. Bea**	**165.62**	**227**	PKP	**PKPdf**	**21 02 33.4**	**-1.1**
	comp=Z,1.6nm,1.0s,baz=320,slow=1.7,SNR=7.9						
TORD				PKPab	**PKPab**	**21 03 32.0**	**-1.1**
	comp=Z,2.1nm,1.0s,baz=143,slow=2.6,SNR=7.8						
TOA1	**Torodi Ar. Sit**	**165.62**	**227**	*e*PKPdf	**PKPdf**	**21 02 33.4**	**-1.1**
TOA1				*e*PKPab	**PKPab**	**21 03 32.0**	**-1.1**

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*NEIC **06** 20:42:53.7±0.3, 11°.36S×165°.47E, h10^{km}, mb4.7/15, Error ellipse: s-maj=9.8km s-min=8.0km az=174.0*

*ISCJB **06** 20:42:54.7±0.5, 11°.39S±0°.09×165°.33E±0°.07, h24^{km}, mb4.5/26, MS4.7/2, Error ellipse: s-maj=13.2km s-min=9.6km az=4.2*

*IDC **06** 20:42:54.9±3.1, 10°.79S×165°.38E, h0^{km}, mb4.2/8, mb1 4.3/9, mb1mx4.1/40, mbtmp4.3/9, ML5.3/1, Error ellipse: s-maj=95.1km s-min=30.7km az=175.0*

ISC 06 20:42:56.1±0.7**, 11°.4S**±0°.1×**165°.40E**±0°.09**, h24^{km}, n54, σ1^{s}.07**/49**, mb4.5**/26**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.69**	**289**	*e*P	**Pn**	**20 44 20.0**	**+0.8**
HNR	**Honiara**	**5.69**	**289**	Pn	**Pn**	**20 44 19.2**	**0.0**
	87nm,0.3s,baz=132,slow=4.3,SNR=18						
HNR				Sn	**Sn**	**20 45 21.9**	**-1.9**
	29nm,0.3s,baz=53,slow=22,SNR=7.1						
RABL	**Rabaul**	**14.91**	**297**	*e*Pn	**Pn**	**20 46 24.1**	**-1.5**
MANU	**Manus Island**	**20.14**	**296**	*e*P	**P**	**20 47 28.5**	**-0.2**
	236nm,1.5s						
CTAO	**Charters Tower**	**20.36**	**242**	*e*P	**P**	**20 47 30.0**	**-1.1**
	52nm,1.0s						
LHI	**Lord Howe Isla**	**20.91**	**195**	*e*P	**P**	**20 47 36.3**	**-0.7**
COEN	**Coen**	**21.84**	**261**	*e*P	**P**	**20 47 47.5**	**+0.4**
	14nm,1.1s						
NIUE	**Niue**	**25.00**	**111**	*e*P	**P**	**20 48 16.3**	**-2.1**
	920nm,2.0s						
H11S2	**WAKE ISLAND Hy**	**29.68**	**3**	T	T	21 19 28.8	
	baz=184,slow=76,SNR=178						
H11S3	**WAKE ISLAND Hy**	**29.68**	**2**	T	T	21 19 27.4	
	baz=184,slow=76,SNR=165						
H11S1	**WAKE ISLAND Hy**	**29.70**	**2**	T	T	21 19 28.5	
	baz=184,slow=76,SNR=167						
H11N1	**WAKE ISLAND Hy**	**30.90**	**3**	T	T	21 21 03.2	
	baz=182,slow=76,SNR=64						
H11N3	**WAKE ISLAND Hy**	**30.91**	**3**	T	T	21 21 03.4	
	baz=182,slow=76,SNR=75						
H11N2	**WAKE ISLAND Hy**	**30.92**	**3**	T	T	21 21 04.3	
	baz=182,slow=76,SNR=143						
WRAB	**Tennant Creek**	**31.05**	**250**	*e*P	**P**	**20 49 13.4**	**+0.9**
	10nm,1.3s						
WRAB	**Tennant Creek**	**31.05**	**250**	⇑*e*P	**P**	**20 49 13.8**	**+1.3**
WRAB				pmax	pmax		
	comp=Z,15nm,1.8s						
WB2	**Warramunga Arr**	**31.05**	**250**	*e*P	**P**	**20 49 12.2**	**-0.3**
WB2	**Warramunga Arr**	**31.05**	**250**	*e*P	**P**	**20 49 12.4**	**-0.1**
JNU	**Nakatsue**	**55.13**	**325**	P	**P**	**20 52 26.1**	**-0.6**
	comp=Z,13nm,1.1s,baz=194,slow=4.2,SNR=3.4						
CN2	**Changchun**	**65.83**	**329**	*e*P	**P**	**20 53 38.7**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IPM	**Ipoh**	**65.94**	**280**	*e*P	**P**	**20 53 42.3**	**+1.4**
	comp=Z,9.0nm,1.0s						
SKNT	**Sakolnakorn**	**66.90**	**294**	P	**P**	**20 53 48.1**	**+1.1**
	comp=Z,2.1nm,2.5s,comp=Z,892nm						
KLR	**Kul'dur**	**67.20**	**337**	P	**P**	**20 53 47.4**	**-0.9**
	comp=Z,3.1nm,1.1s,baz=130,slow=3.3,SNR=5.2						
ENH	**Enshi**	**67.82**	**309**	*e*P	**P**	**20 53 51.9**	**-0.7**
	comp=Z,13nm,1.0s						
NONG	**Nongkai**	**68.03**	**295**	P	**P**	**20 53 55.8**	**+1.7**
	comp=Z,0.2nm,1.8s,comp=Z,142nm						
XAN	**Xi'an**	**70.07**	**313**	P	**P**	**20 54 06.5**	**-0.1**
XAN				pP	pP	20 54 13.3	+0.7
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				LR	LR		
	comp=N,350nm,16.7s						
XAN				LR	LR		
	comp=E,290nm,17.3s						
XAN				LR	LR		
	comp=Z,530nm,17.4s						
XAN	**Xi'an**	**70.07**	**313**	*e*P	**P**	**20 54 05.6**	**-1.0**
	comp=Z,3.2nm,0.7s						
KMI	**Kunming**	**70.99**	**302**	P	**P**	**20 54 14.4**	**+1.9**
CM01	**Chiang Mai Arr**	**71.89**	**294**	*e*P	**P**	**20 54 19.0**	**+1.1**
CM31	**Chiang Mai Arr**	**71.92**	**294**	*e*P	**P**	**20 54 19.3**	**+1.2**
	comp=Z,3.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**71.92**	**294**	P	**P**	**20 54 19.5**	**+1.5**
	comp=Z,2.3nm,0.9s,baz=115,slow=4.3,SNR=14						
CMMT	**Chiang Mai**	**72.03**	**294**	P	**P**	**20 54 20.9**	**+2.2**
	comp=Z,22nm,1.1s						
CHTO	**Chiang Mai**	**72.03**	**294**	*e*P	**P**	**20 54 19.9**	**+1.2**
	comp=Z,11nm,1.5s						
CHTO	**Chiang Mai**	**72.03**	**294**	P	**P**	**20 54 20.9**	**+2.2**
	comp=Z,101nm,1.1s						
LZH	**Lanzhou**	**74.71**	**312**	*e*P	**P**	**20 54 35.9**	**+1.6**
LZH				pP	pwP	20 54 46.3	-1.0
LZH				sP	PcP	20 54 53.2	+4.7
ULN	**Ulaanbaatar**	**78.34**	**324**	*e*P	**P**	**20 54 55.0**	**+0.4**
	comp=Z,8.2nm,1.0s						
SONA0	**Songino Array**	**78.71**	**324**	*e*P	**P**	**20 54 56.9**	**+0.2**
SONM	**Songino Array**	**78.71**	**324**	P	**P**	**20 54 56.9**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=145,slow=6.2,SNR=15						
SONA1	**Songino Array**	**78.71**	**324**	*e*P	**P**	**20 54 57.4**	**+0.7**
GTA	**Gaotai**	**79.02**	**314**	⇓P	**P**	**20 54 59.8**	**+1.2**
GTA				pP	pP	20 55 04.5	-0.1
GTA				sP	sP	20 55 07.0	+0.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,39nm,5.7s						
GTA				LR	LR		
	comp=N,220nm,19.0s						
GTA				LR	LR		
	comp=E,240nm,19.7s						
GTA				LR	LR		
	comp=Z,160nm,17.1s						
BILL	**Bilibino**	**79.18**	**0**	*e*P	**P**	**20 54 58.4**	**-0.2**
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**83.91**	**19**	P	**P**	**20 55 24.6**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=236,slow=4.8,SNR=6.8						
MK01	**Makanchi Array**	**93.50**	**317**	*e*P	**P**	**20 56 10.3**	**+0.3**
MK31	**Makanchi Array**	**93.51**	**317**	*e*P	**P**	**20 56 10.5**	**+0.5**
	comp=Z,3.2nm,1.1s						
MK32	**Makanchi Array**	**93.51**	**317**	*e*P	**P**	**20 56 10.4**	**+0.4**
MKAR	**Makanchi Array**	**93.51**	**317**	*e*P	**P**	**20 56 10.5**	**+0.4**
	comp=Z,13nm,1.0s						
MKAR	**Makanchi Array**	**93.51**	**317**	P	**P**	**20 56 10.4**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=103,slow=5.4,SNR=13						
ZAA0	**Zalesovo Array**	**93.60**	**324**	*e*P	**P**	**20 56 09.3**	**-0.9**
	comp=Z,3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**93.60**	**324**	*e*P	**P**	**20 56 09.5**	**-0.7**
ZALV	**Zalesovo Beam**	**93.60**	**324**	P	**P**	**20 56 10.2**	**0.0**
	comp=Z,1.4nm,0.8s,baz=102,slow=6.2,SNR=6.1						
ZAA1	**Zalesovo Array**	**93.60**	**324**	*e*P	**P**	**20 56 10.2**	**0.0**
MAKZ	**Makanchi**	**93.72**	**317**	*e*P	**P**	**20 56 11.5**	**+0.5**
	comp=Z,3.7nm,1.1s						
YKA	**Yellowknife Ar**	**95.40**	**27**	P	**P**	**20 56 18.0**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=267,slow=4.3,SNR=3.5						
YKB5	**Yellowknife Ar**	**95.40**	**27**	*e*P	**P**	**20 56 17.3**	**-1.0**

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*IDC **06** 20:45:22.9±1.3, 9°.75S×161°.13E, h0^{km}, mb3.8/7, mb1 4.0/7, mb1mx3.8/40, mbtmp3.8/7, Error ellipse: s-maj=31.0km s-min=24.0km az=6.0*

*ISCJB **06** 20:45:23.0±0.9, 9°.8S±0°.1×161°.1E±0°.1, h10^{km}, mb4.0/10, Error ellipse: s-maj=21.6km s-min=17.8km az=137.3*

*NEIC **06** 20:45:24.6±0.6, 9°.76S×161°.11E, h10^{km}, mb4.4/2, Error ellipse: s-maj=15.3km s-min=10.7km az=138.0*

ISC 06 20:45:24.2±0.9**, 9°.7S**±0°.2×**161°.08E**±0°.08**, h10^{km}, n15, σ2^{s}.28**/16**, mb3.8**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.14**	**281**	*i* P	Pn	20 45 40.0	-6.2
HNR				*i* S	**Sb**	**20 45 55.0**	**-5.9**
HNR	**Honiara**	**1.14**	**281**	Pn	**Pg**	**20 45 47.1**	**+1.0**
	93nm,0.3s,baz=12,slow=4.7,SNR=10						
HNR				Sn	**Sn**	**20 46 05.0**	**+3.1**
	1µm,0.3s,baz=60,slow=20,SNR=28						
WRAB	**Tennant Creek**	**27.75**	**245**	P	**P**	**20 51 13.2**	**-0.1**
	1.5nm,0.8s						
WR1	**Warramunga Arr**	**27.76**	**245**	*e*P	**P**	**20 51 13.9**	**+0.5**
	41nm,1.6s						
WRA	**Warramunga Arr**	**27.76**	**245**	P	**P**	**20 51 13.9**	**+0.5**
	0.6nm,0.4s,baz=75,slow=9.3,SNR=7.3						
ASAR	**Alice Springs**	**29.45**	**238**	P	**P**	**20 51 28.2**	**-0.3**
	1.1nm,0.8s,baz=60,slow=9.8,SNR=4.5						
CMAR	**Chiang Mai Arr**	**67.36**	**295**	P	**P**	**20 56 20.9**	**+0.7**
	0.4nm,0.6s,baz=124,slow=5.1,SNR=1.1						
SONA0	**Songino Array**	**74.88**	**325**	*e*P	**P**	**20 57 06.7**	**+1.4**
SONM	**Songino Array**	**74.88**	**325**	P	**P**	**20 57 06.7**	**+1.4**
	0.5nm,0.8s,baz=134,slow=6.2,SNR=1.8						
QSPA	**South Pole Qui**	**80.33**	**180**	P	**P**	**20 57 35.7**	**+0.2**
	0.7nm,0.2s,baz=95,slow=5.0,SNR=3.2						
ILAR	**Eielson Array**	**83.72**	**20**	P	**P**	**20 57 53.4**	**+0.3**
	0.4nm,0.6s,baz=246,slow=5.5,SNR=4.1						
ILB	**Eielson Array**	**83.72**	**20**	*e*P	**P**	**20 57 53.4**	**+0.3**
	4.8nm,0.6s						
MK32	**Makanchi Array**	**89.39**	**318**	*e*P	**P**	**20 58 22.3**	**+1.0**
MKAR	**Makanchi Array**	**89.39**	**318**	P	**P**	**20 58 22.3**	**+1.0**
	0.4nm,0.9s,baz=111,slow=6.3,SNR=2.5						
X16A	**Lo Mia Camp, P**	**93.32**	**56**	*e*P	**P**	**20 58 36.2**	**-3.9**
	8.7nm,0.8s						

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*IDC **06** 20:45:42.1±0.6, 11°.44S×165°.00E, h0^{km}, mb4.5/23, mb1 4.6/26, mb1mx4.5/42, mbtmp4.5/26, ML4.3/2, MS4.1/4, Ms1 4.0/4, ms1mx3.5/26, Error ellipse: s-maj=18.5km s-min=14.0km az=109.0*

*NEIC **06** 20:45:44.4±3.4, 11°.46S×165°.00E, h14^{km}±21^{km}, mb4.7/4, Error ellipse: s-maj=8.5km s-min=6.2km az=70.0*

*ISCJB **06** 20:45:45.5±0.4, 11°.52S±0°.07×164°.90E±0°.07, h34^{km}, mb4.5/30, MS4.2/5, Error ellipse: s-maj=9.9km s-min=8.6km az=39.7*

ISC 06 20:45:47.2±0.5**, 11°.51S**±0°.08×**164°.97E**±0°.08**, h34^{km}, n40, σ1^{s}.07**/43**, mb4.5**/30**, MS4.2**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.36**	**292**	Pn	**Pn**	**20 47 04.0**	**-0.8**
	baz=124,slow=15,SNR=0.6						
HNR				Sn	**Sn**	**20 48 04.9**	**-0.4**
	5.0nm,0.3s,baz=195,slow=20,SNR=1.5						
DZM	**Mont Dzumac**	**10.59**	**173**	Pn	**Pn**	**20 48 16.5**	**-0.3**
	1.4nm,0.3s,baz=343,slow=19,SNR=11						
CTA	**Charters Tower**	**19.91**	**242**	P	**Pn**	**20 50 17.2**	**-0.8**
	0.8nm,0.3s,baz=69,slow=12,SNR=7.3						
CTAO	**Charters Tower**	**19.91**	**242**	*e*P	**P**	**20 50 16.1**	**-0.1**
	49nm,0.6s						
STKA	**Stephens Creek**	**29.58**	**223**	P	**P**	**20 51 49.6**	**+0.4**
	4.5nm,0.7s,baz=49,slow=11,SNR=7.2						
WRA	**Warramunga Arr**	**30.61**	**250**	P	**P**	**20 51 58.0**	**-0.4**
	3.4nm,0.6s,baz=79,slow=9.0,SNR=16						
ASAR	**Alice Springs**	**31.90**	**244**	P	**P**	**20 52 09.3**	**-0.5**
	7.8nm,0.7s,baz=72,slow=9.4,SNR=15						
ASAR				LR	LR	21 04 08.0	
	comp=Z,617nm,18.3s,baz=90,slow=35						
RPZ	**Rata Peaks**	**32.51**	**172**	P	**P**	**20 52 15.1**	**+0.3**
	4.6nm,0.8s,baz=0.0,slow=9.1,SNR=3.0						
MJAR	**Matsushiro Arr**	**54.04**	**333**	P	**P**	**20 55 07.5**	**-0.9**
	1.6nm,0.8s,baz=160,slow=8.6,SNR=4.2						
ASAJ	**Asahikawa**	**58.99**	**341**	P	**P**	**20 55 43.5**	**+0.1**
	9.6nm,0.8s,baz=246,slow=9.8,SNR=6.5						
KSRS	**Korea Array**	**59.84**	**326**	P	**P**	**20 55 49.6**	**+0.2**
	2.2nm,0.9s,baz=115,slow=8.2,SNR=3.3						
KSAR	**Wonju Array Be**	**59.85**	**326**	P	**P**	**20 55 49.6**	**+0.1**
USRK	**Ussuriysk Ar.**	**63.03**	**334**	P	**P**	**20 56 10.9**	**0.0**
	2.8nm,0.8s,baz=131,slow=6.1,SNR=4.1						
PETK	**Petropavlovsk-**	**64.66**	**355**	P	**P**	**20 56 21.5**	**0.0**
	2.8nm,0.8s,baz=147,slow=8.2,SNR=2.5						
KLR	**Kul'dur**	**67.19**	**337**	P	**P**	**20 56 38.0**	**+0.2**
	2.0nm,0.8s,baz=135,slow=7.1,SNR=5.1						
ENH	**Enshi**	**67.60**	**310**	*e*P	**P**	**20 56 40.6**	**-0.3**
	4.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**71.60**	**294**	P	**P**	**20 57 06.6**	**+0.9**
	0.7nm,0.6s,baz=126,slow=5.4,SNR=4.5						
HHC	**Hu-ho-hao-te**	**71.70**	**320**	*e*P	**P**	**20 57 10.1**	**+4.1**
HHC				S	**S**	**21 06 25.5**	**+1.8**
HHC	**Hu-ho-hao-te**	**71.70**	**320**	SS	SS	21 11 02.8	+2.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,76nm,4.2s						
HHC				LR	LR		
	comp=N,170nm,11.2s						
HHC				LR	LR		
	comp=E,170nm,10.4s						
HHC				LR	LR		
	comp=Z,290nm,10.4s						
MA2	**Magadan**	**71.77**	**352**	P	**P**	**20 57 05.3**	**-0.6**
	comp=Z,3.4nm,0.4s,baz=143,slow=11,SNR=3.3						
LZH	**Lanzhou**	**74.51**	**313**	*e*P	**P**	**20 57 26.3**	**+3.5**
LZH				pP	sP	20 57 33.9	-1.4
LZH				sP	PcP	20 57 36.9	-0.3
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
SEY	**Seymchan**	**74.86**	**354**	P	**P**	**20 57 22.9**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=159,slow=6.5,SNR=3.9						
ULN	**Ulaanbaatar**	**78.23**	**324**	*e*P	**P**	**20 57 44.0**	**+0.3**
	comp=Z,3.3nm,0.8s						
QSPA	**South Pole Qui**	**78.49**	**180**	P	**P**	**20 57 45.7**	**+0.9**
	comp=Z,10.0nm,1.0s,baz=344,slow=2.1,SNR=9.2						
SONM	**Songino Array**	**78.59**	**324**	P	**P**	**20 57 45.8**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=147,slow=6.9,SNR=5.3						
GTA	**Gaotai**	**78.83**	**314**	*e*P	**P**	**20 57 48.6**	**+1.4**
GTA				pP	PcP	20 57 53.1	-2.7
GTA				sP	pP	20 57 55.6	-0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL	**Bilibino**	**79.35**	**0**	*e*P	**P**	**20 57 49.2**	**0.0**
	comp=Z,9.2nm,1.0s						
ILAR	**Eielson Array**	**84.20**	**19**	P	**P**	**20 58 14.7**	**-0.1**
	comp=Z,4.8nm,0.7s,baz=236,slow=5.2,SNR=38						
TIXI	**Tiksi**	**86.40**	**349**	P	**P**	**20 58 25.5**	**-0.1**
	comp=Z,58nm,0.5s,baz=58,slow=3.1,SNR=178						
NVAR	**Mina Array Bea**	**86.91**	**50**	P	**P**	**20 58 29.5**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=231,slow=7.4,SNR=13						
MKAR	**Makanchi Array**	**93.34**	**317**	P	**P**	**20 58 59.1**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=100,slow=6.0,SNR=23						
MKAR				PKKPbc	**PKKPdf**	**21 16 05.6**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=283,slow=3.6,SNR=5.1						
MKAR				LR	LR	21 40 47.3	
	comp=Z,51nm,21.6s,baz=54,slow=35						
ZALV	**Zalesovo Beam**	**93.49**	**324**	P	**P**	**20 58 58.6**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=108,slow=4.8,SNR=15						
PDAR	**Pinedale Array**	**94.43**	**47**	P	**P**	**20 59 04.4**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=240,slow=2.9,SNR=5.8						
PDAR				LR	LR	21 41 01.6	
	comp=Z,44nm,18.1s,baz=314,slow=35						
YKA	**Yellowknife Ar**	**95.74**	**27**	P	**P**	**20 59 08.1**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=256,slow=4.6,SNR=16						
NRIK	**Noril'sk**	**96.29**	**340**	P	**P**	**20 59 10.5**	**-1.3**
	comp=Z,1.6nm,0.3s,baz=135,slow=8.6,SNR=3.3						
NRIK				LR	LR	21 42 04.2	
	comp=Z,94nm,21.3s,baz=73,slow=35						
TXAR	**Lajitas Array**	**96.72**	**62**	P	**P**	**20 59 14.7**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=221,slow=5.4,SNR=5.9						
ARCES	**ARCESS Array B**	**116.59**	**345**	PKP	**PKPdf**	**21 04 27.3**	**0.0**
	comp=Z,2.4nm,0.9s,baz=64,slow=2.8,SNR=3.9						
KEST	**Kesra**	**147.32**	**322**	PKPbc	**PKPbc**	**21 05 28.4**	**+0.5**
	comp=Z,13nm,1.0s,baz=342,slow=4.5,SNR=4.5						
ESDC	**Sonseca Array**	**150.28**	**343**	PKPbc	**PKPbc**	**21 05 35.7**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=62,slow=2.0,SNR=5.2						
ESDC				PKPab	**PKPab**	**21 05 42.0**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=16,slow=3.7,SNR=8.1						
TORD	**Torodi Ar. Bea**	**163.58**	**277**	PKP	**PKPdf**	**21 05 47.6**	**0.0**
	comp=Z,0.7nm,0.9s,baz=9.8,slow=1.8,SNR=3.5						

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*ISCJB **06** 20:46:19.7±0.6, 18°.93N±0°.06×145°.5E±0°.1, h214^{km}, mb3.4/14, Error ellipse: s-maj=19.0km s-min=8.1km az=1.4*

*IDC **06** 20:46:22.8±2.0, 18°.80N×145°.51E, h234^{km}±21^{km}, mb3.3/14, mb1 3.4/16, mb1mx3.3/42, mbtmp3.9/16, Error ellipse: s-maj=20.1km s-min=13.9km az=83.0*

ISC 06 20:46:21.2±0.7**, 18°.89N**±0°.08×**145°.5E**±0°.2**, h214^{km}, n16, σ0^{s}.90**/18**, mb3.5**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.30**	**187**	P	**Pn**	**20 47 41.0**	**+1.2**
	3.7nm,0.3s,baz=32,slow=13,SNR=5.6						
GUMO				S	**S**	**20 48 41.8**	**-0.1**
	8.5nm,0.3s,baz=50,slow=18,SNR=3.7						
JOW	**Kunigami**	**17.72**	**300**	P	**Pn**	**20 50 15.9**	**+0.7**
	0.5nm,0.3s,baz=126,slow=12,SNR=7.0						
ASAJ	**Asahikawa**	**25.27**	**355**	P	**P**	**20 51 28.9**	**+1.1**
	4.0nm,0.8s,baz=112,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**40.11**	**196**	P	**P**	**20 53 35.7**	**-0.6**
	1.9nm,0.5s,baz=5.9,slow=8.5,SNR=14						
SONM	**Songino Array**	**42.88**	**321**	P	**P**	**20 53 58.5**	**-0.1**
	0.2nm,0.5s,baz=131,slow=6.5,SNR=2.4						
SONM				PcP	**PP**	**20 55 43.6**	**+0.9**
	1.2nm,1.0s,baz=122,slow=4.4,SNR=2.5						
ASAR	**Alice Springs**	**43.78**	**195**	P	**P**	**20 54 05.0**	**-1.0**
	0.5nm,0.4s,baz=14,slow=5.9,SNR=6.3						
CMAR	**Chiang Mai Arr**	**44.01**	**277**	P	**P**	**20 54 07.8**	**-0.1**
	0.4nm,0.8s,baz=87,slow=5.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**57.75**	**322**	P	**P**	**20 55 50.0**	**+0.3**
	0.3nm,0.4s,baz=93,slow=7.3,SNR=2.6						
MKAR	**Makanchi Array**	**58.20**	**314**	P	**P**	**20 55 52.7**	**-0.3**
	0.5nm,0.7s,baz=94,slow=7.7,SNR=6.7						
KURBB	**Kurchatov Arra**	**61.05**	**318**	P	**P**	**20 56 11.7**	**-0.6**
	0.7nm,0.5s,baz=95,slow=7.3,SNR=6.0						
ILAR	**Eielson Array**	**63.56**	**26**	P	**P**	**20 56 27.9**	**-0.8**
	0.9nm,1.0s,baz=256,slow=5.1,SNR=2.9						
INK	**Inuvik**	**69.27**	**23**	P	**P**	**20 57 04.9**	**+0.1**
	0.5nm,0.5s,baz=243,slow=3.9,SNR=3.8						
YKA	**Yellowknife Ar**	**77.91**	**28**	P	**P**	**20 57 55.1**	**0.0**
	0.5nm,0.6s,baz=293,slow=5.4,SNR=7.3						
ARCES	**ARCESS Array B**	**82.26**	**342**	P	**P**	**20 58 18.0**	**-0.2**
	0.7nm,0.6s,baz=63,slow=8.3,SNR=4.0						
NVAR	**Mina Array Bea**	**83.17**	**52**	P	**P**	**20 58 24.6**	**+0.8**
	1.6nm,0.6s,baz=263,slow=6.2,SNR=10.0						
FINES	**FINESS Array B**	**86.64**	**335**	P	**P**	**20 58 38.0**	**-2.2**
	0.5nm,0.3s,baz=51,slow=4.3,SNR=9.6						

LJU 06 20:59:28.1, 46°.07N×15°.00E, h11^{km}, ML0.5, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDKS	**Podkum**	**0.01**	**190**	⇑*i*Pg	Pg	20 59 30.2	+0.2
PDKS				*i* Sg	Sg	20 59 31.6	+0.2
	comp=Z,9.0nm,0.1s						
VNDS	**Vrh nad Dolski**	**0.21**	**279**	⇑*i*Pg	Pg	20 59 32.7	+0.1
VNDS				*i* Sg	Sg	20 59 35.6	+0.1
	comp=Z,5.0nm,0.1s						
LEGS	**Legarje**	**0.25**	**119**	*i* Pg	Pg	20 59 33.5	+0.2
LEGS				*i* Sg	Sg	20 59 36.9	+0.2
VISS	**Visnje**	**0.29**	**203**	*i* Pg	Pg	20 59 34.2	+0.2
VISS				*i* Sg	Sg	20 59 38.4	+0.5

IDC 06 21:04:07.9±2.2**, 11°.93S**×**162°.56E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/32**, mbtmp3.6**/4**, ML4.1**/1**, Error ellipse: s-maj=43.3km s-min=35.6km az=115.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.57**	**314**	Pn	Pn	21 05 05.1	+0.5
	17nm,0.3s,baz=140,slow=7.9,SNR=2.4						
HNR				Sn	Sn	21 05 47.5	0.0
	29nm,0.3s,baz=103,slow=4.7,SNR=4.1						
WRA	**Warramunga Arr**	**28.24**	**250**	P	P	21 10 03.2	+0.2
	0.5nm,0.8s,baz=80,slow=9.2,SNR=3.6						
ASAR	**Alice Springs**	**29.61**	**243**	P	P	21 10 14.9	-0.2
	0.3nm,0.6s,baz=68,slow=9.8,SNR=6.0						
ILAR	**Eielson Array**	**85.36**	**19**	P	P	21 16 46.7	-0.1
	0.2nm,0.6s,baz=231,slow=5.7,SNR=1.7						

MEX 06 21:09:16.4±0.5**, 15°.29N**×**91°.87W, h207^{km}**±8^{km}**, MD3.9, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**1.02**	**345**	*i* P	Pn	21 09 46.0	-1.2
CCIG				*i* S	S	21 10 08.6	-2.7
PCIG		**1.36**	**288**	*i* P	Pn	21 09 48.4	-1.2
PCIG				*e*S	S	21 10 12.8	-2.3

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*IDC **06** 21:13:37.2±0.8, 11°.50S×164°.99E, h0^{km}, mb4.0/11, mb1 4.2/14, mb1mx4.0/33, mbtmp4.1/14, ML4.0/3, MS3.4/4, Ms1 3.4/4, ms1mx3.1/39, Error ellipse: s-maj=24.4km s-min=18.7km az=122.0*

*ISCJB **06** 21:13:40.9±0.4, 11°.69S±0°.07×164°.88E±0°.08, h34^{km}, mb4.1/19, MS3.6/2, Error ellipse: s-maj=11.3km s-min=9.4km az=0.5*

*NEIC **06** 21:13:40.8±2.7, 11°.56S×164°.95E, h22^{km}±19^{km}, mb4.3/10, Error ellipse: s-maj=9.1km s-min=7.1km az=214.0*

ISC 06 21:13:42.4±0.6**, 11°.56S**±0°.09×**165°.0E**±0°.1**, h34^{km}, n39, σ0^{s}.65**/35**, mb4.1**/19**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.36**	**293**	Pn	**Pn**	**21 14 60.0**	**0.0**
	12nm,0.3s,baz=176,slow=15,SNR=2.6						
HNR				Sn	Sn	21 15 44.9	-16
	26nm,0.3s,baz=166,slow=22,SNR=5.7						
HNR				LR	LR	21 17 07.7	
	comp=Z,207nm,19.7s,baz=139,slow=39						
DZM	**Mont Dzumac**	**10.55**	**172**	Pn	**Pn**	**21 16 11.6**	**+0.3**
	1.0nm,0.3s,baz=338,slow=19,SNR=6.1						
DZM				LR	LR	21 20 00.6	
	comp=Z,151nm,18.5s,baz=20,slow=36						
ONTNC	**Ouen Toro**	**10.78**	**173**	*e*Pn	**Pn**	**21 16 13.1**	**-1.4**
CTA	**Charters Tower**	**19.87**	**242**	P	**P**	**21 18 11.1**	**+0.1**
	0.2nm,0.3s,baz=47,slow=10,SNR=2.9						
CTAO	**Charters Tower**	**19.87**	**242**	*e*P	**P**	**21 18 11.0**	**+0.1**
	15nm,1.1s						
COEN	**Coen**	**21.37**	**261**	*e*P	**P**	**21 18 26.0**	**-1.1**
	12nm,1.1s						
STKA	**Stephens Creek**	**29.53**	**223**	P	**P**	**21 19 44.3**	**+0.4**
	0.9nm,0.6s,baz=84,slow=10,SNR=3.6						
STKA				LR	LR	21 30 40.0	
	comp=Z,173nm,19.1s,baz=21,slow=35						
H11S2	**WAKE ISLAND Hy**	**29.91**	**3**	T	T	21 51 05.0	
	baz=184,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.92**	**3**	T	T	21 51 09.5	
	baz=184,slow=76,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**29.93**	**3**	T	T	21 51 06.3	
	baz=184,slow=76,SNR=8.6						
WR1	**Warramunga Arr**	**30.57**	**250**	*e*P	**P**	**21 19 53.1**	**-0.1**
	2.0nm,0.8s						
WR1				*e*PcP	**PcP**	**21 22 51.8**	**+0.2**
WRA	**Warramunga Arr**	**30.57**	**250**	P	**P**	**21 19 53.1**	**-0.1**
	2.1nm,0.7s,baz=81,slow=9.0,SNR=14						
WRA				PcP	**PcP**	**21 22 51.8**	**+0.2**
	0.6nm,0.9s,baz=60,slow=2.0,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**31.14**	**4**	T	T	21 52 36.9	
	baz=183,slow=76,SNR=9.0						
H11N3	**WAKE ISLAND Hy**	**31.14**	**4**	T	T	21 52 41.6	
	baz=183,slow=76,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**31.16**	**4**	T	T	21 52 38.8	
	baz=183,slow=76,SNR=7.5						
AS01	**Alice Springs**	**31.82**	**244**	*e*P	**P**	**21 20 03.1**	**-1.2**
AS31	**Alice Springs**	**31.86**	**244**	*e*P	**P**	**21 20 03.2**	**-1.4**
	0.9nm,0.8s						
ASAR	**Alice Springs**	**31.86**	**244**	P	**P**	**21 20 04.2**	**-0.4**
	2.1nm,0.8s,baz=73,slow=9.4,SNR=19						
ASAR				PcP	**PcP**	**21 22 55.2**	**+0.1**
	0.5nm,0.7s,baz=66,slow=2.3,SNR=3.5						
RPZ	**Rata Peaks**	**32.47**	**172**	P	**P**	**21 20 09.9**	**+0.3**
	9.7nm,0.9s,baz=180,slow=4.0,SNR=3.5						
JNU	**Nakatsue**	**55.05**	**325**	LR	LR	21 45 38.6	
	comp=Z,36nm,19.4s,baz=298,slow=35						
CM31	**Chiang Mai Arr**	**71.60**	**294**	*e*P	**P**	**21 25 01.2**	**+0.2**
	1.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**71.60**	**294**	P	**P**	**21 25 01.2**	**+0.2**
	0.3nm,0.4s,baz=132,slow=4.7,SNR=4.6						
QSPA	**South Pole Qui**	**78.44**	**180**	*e*P	**P**	**21 25 40.8**	**+1.1**
	7.1nm,0.9s						
SONA0	**Songino Array**	**78.62**	**324**	*e*P	**P**	**21 25 41.7**	**+0.7**
SONM	**Songino Array**	**78.62**	**324**	P	**P**	**21 25 41.7**	**+0.7**
	0.8nm,0.8s,baz=143,slow=5.2,SNR=7.2						
SONA1	**Songino Array**	**78.62**	**324**	*e*P	**P**	**21 25 41.4**	**+0.4**
ILAR	**Eielson Array**	**84.25**	**19**	P	**P**	**21 26 09.7**	**-0.5**
	0.5nm,0.7s,baz=232,slow=4.9,SNR=7.4						
ILB	**Eielson Array**	**84.25**	**19**	*e*P	**P**	**21 26 09.7**	**-0.5**
	1.6nm,1.0s						
NV01	**Mina Array Sit**	**86.95**	**50**	*e*P	**P**	**21 26 24.4**	**-0.2**
NVAR	**Mina Array Bea**	**86.95**	**50**	P	**P**	**21 26 24.4**	**-0.2**
	0.2nm,0.6s,baz=230,slow=7.9,SNR=2.8						
MK01	**Makanchi Array**	**93.35**	**317**	*e*P	**P**	**21 26 54.7**	**+0.6**
MK31	**Makanchi Array**	**93.36**	**317**	*e*P	**P**	**21 26 54.9**	**+0.7**
	1.8nm,0.9s						
MK32	**Makanchi Array**	**93.36**	**317**	*e*P	**P**	**21 26 54.5**	**+0.3**
MKAR	**Makanchi Array**	**93.36**	**317**	P	**P**	**21 26 54.5**	**+0.3**

	1.7nm,0.8s,baz=98,slow=5.8,SNR=14						
ZALV	Zalesovo Beam	93.52	324	P	P	21 26 54.0	-0.6
	1.2nm,0.8s,baz=107,slow=3.7,SNR=6.9						
ZAA1	Zalesovo Array	93.52	324	*e*P	P	21 26 54.0	-0.6
MAKZ	Makanchi	93.58	317	*e*P	P	21 26 56.1	+1.0
	3.0nm,1.0s						
PV03	Paradox Valley	94.11	52	*e*P	P	21 26 58.1	0.0
	5.2nm,1.1s						
YKA	Yellowknife Ar	95.79	27	P	P	21 27 04.4	-0.5
	0.2nm,0.7s,baz=240,slow=4.5,SNR=3.1						

IDC ***06*** *21:17:11.4±1.4, 11°98S×165°95E, h0^{km}, mb4.1/6, mb1 4.1/8, mb1mx3.9/33, mbtmp4.1/8, ML4.3/2, Error ellipse: s-maj=37.0km s-min=23.2km az=66.0*

ISCJB ***06*** *21:17:14.6±1.1, 12°2S±0°1×165°8E±0°1, h30^{km}, mb4.0/6, Error ellipse: s-maj=24.7km s-min=10.5km az=135.6*

ISC 06 21:17:16.0±1.4**, 12°1S**±0°2×**165°9E**±0°2**, h30**^{km}**, n8, σ0ˢ40**/9**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.43	293	Pn	Pn	21 18 48.9	+0.2
	32nm,0.3s,baz=142,slow=5.5,SNR=4.3						
HNR				Sn	Sn	21 20 01.1	-0.1
	26nm,0.3s,baz=223,slow=19,SNR=3.9						
DZM	Mont Dzumac	9.98	177	Pn	Pn	21 19 37.4	-0.1
	0.5nm,0.3s,baz=293,slow=9.1,SNR=2.9						
WRA	Warramunga Arr	31.33	251	P	P	21 23 34.1	+0.1
	0.7nm,0.9s,baz=80,slow=8.5,SNR=3.1						
RPZ	Rata Peaks	31.86	173	P	P	21 23 38.7	+0.3
	5.5nm,0.9s,baz=55,slow=12,SNR=3.2						
ASAR	Alice Springs	32.52	245	P	P	21 23 44.2	-0.3
	0.7nm,0.8s,baz=69,slow=9.4,SNR=6.4						
SONM	Songino Array	79.58	324	P	P	21 29 20.6	+0.2
	0.9nm,0.8s,baz=141,slow=4.4,SNR=6.9						
MKAR	Makanchi Array	94.37	317	P	P	21 30 33.2	+0.2
	1.4nm,0.6s,baz=93,slow=6.0,SNR=19						
ZALV	Zalesovo Beam	94.47	324	P	P	21 30 32.4	-0.8
	0.8nm,0.7s,baz=90,slow=1.4,SNR=4.5						

IDC ***06*** *21:20:06.4±1.4, 10°90S×165°39E, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.8/33, mbtmp3.9/8, ML4.2/2, Error ellipse: s-maj=33.9km s-min=24.7km az=130.0*

ISCJB ***06*** *21:20:09.2±1.0, 11°0S±0°1×165°3E±0°1, h30^{km}, mb3.6/5, Error ellipse: s-maj=18.8km s-min=11.8km az=32.3*

ISC 06 21:20:10.9±1.1**, 10°9S**±0°1×**165°4E**±0°1**, h30**^{km}**, n8, σ0ˢ71**/9**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.55	285	Pn	Pn	21 21 30.3	-1.1
	8.8nm,0.3s,baz=117,slow=6.8,SNR=3.2						
HNR				Sn	Sn	21 22 34.9	+0.6
	15nm,0.3s,baz=117,slow=16,SNR=2.1						
DZM	Mont Dzumac	11.12	175	Pn	Pn	21 22 47.8	-0.2
	1.1nm,0.3s,baz=313,slow=19,SNR=5.8						
CTA	Charters Tower	20.53	241	P	P	21 24 48.0	+1.1
	5.5nm,0.8s,baz=82,slow=14,SNR=3.6						
WRA	Warramunga Arr	31.18	250	P	P	21 26 27.7	+0.1
	0.5nm,0.5s,baz=81,slow=8.8,SNR=5.8						
ASAR	Alice Springs	32.51	243	P	P	21 26 39.1	-0.3
	2.6nm,0.8s,baz=73,slow=9.3,SNR=18						
SONM	Songino Array	78.36	324	P	P	21 32 08.9	+0.3
	0.1nm,0.4s,baz=120,slow=5.2,SNR=3.0						
ILAR	Eielson Array	83.53	19	P	P	21 32 35.8	+0.2
	0.6nm,0.9s,baz=229,slow=5.3,SNR=3.4						
MKAR	Makanchi Array	93.19	317	P	P	21 33 22.4	-0.1
	0.3nm,0.8s,baz=90,slow=4.9,SNR=2.4						

SOME ***06*** *21:21:52.1, 42°53N×79°63E, h15^{km}*

NNC ***06*** *21:21:52.6±1.3, 42°59N×79°63E, h0^{km}, mb2.7, mpv3.0, Error ellipse: s-maj=8.7km s-min=3.8km az=156.0*

KRNET ***06*** *21:21:53.4±0.1, 42°63N×79°62E, h20^{km}, mb2.7*

ISC 06 21:21:52.4±1.9**, 42°57N**±0°07×**79°59E**±0°06**, h10**^{km}±10^{km}**, n21, σ0ˢ74**/40**, 4C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.59	351	P	Pb	21 22 04.5	-0.4
	32nm,0.1s						
SHLS				S	Sb	21 22 13.4	+0.1
	29nm,0.2s						
SHLS	Shalkode	0.59	351	*e*P	Pb	21 22 04.5	-0.4
	baz=20						
SHLS				*e*S	Sb	21 22 13.4	+0.1
	baz=20						
SHLS	Shalkode	0.59	351	*e*P	Pb	21 22 04.5	-0.4
	32nm,0.1s						
SHLS				*e*S	Sb	21 22 13.4	+0.1
	29nm,0.2s						
UZB	Uzynbulak	0.71	324	P	Pg	21 22 06.4	+0.3
	4.8nm,0.1s						
UZB				S	Sb	21 22 16.5	-0.2
	16nm,0.1s						
UZB	Uzynbulak	0.71	324	*e*P	Pg	21 22 06.4	+0.3
	baz=20						
UZB				*e*S	Sb	21 22 16.5	-0.2
	baz=20						
UZB	Uzynbulak	0.71	324	*e*P	Pg	21 22 06.4	+0.3
	4.8nm,0.1s						
UZB				*e*S	Sb	21 22 16.5	-0.2
	16nm,0.1s						
PDGK	Podgornoye	0.76	355	⇓*i*P	Pg	21 22 06.8	-0.3
	baz=52						
PDGK				⇓*i*S	Sb	21 22 17.3	-0.9
	baz=52						
PRZ	Przheval'sk	0.88	265	⇓*i*P	Pn	21 22 10.8	-0.2
	baz=61						
PRZ				⇓*i*S	Sn	21 22 24.2	+0.3
	baz=61						
SATY	Saty	1.00	300	P	Pb	21 22 11.9	+0.2
	2.7nm,0.1s						
SATY				S	Sn	21 22 26.4	-0.3
	11nm,0.1s						
SATY	Saty	1.00	300	*e*P	Pb	21 22 11.9	+0.2
	2.7nm,0.1s						
SATY				*e*S	Sn	21 22 26.4	-0.3
	11nm,0.1s						
DJR	Jarkent	1.77	5	P	Pb	21 22 24.7	-0.2
	1.1nm,0.1s						
DJR				S	Sg	21 22 48.0	-1.1
	4.0nm,0.3s						
DJR	Jarkent	1.77	5	*e*P	Pb	21 22 24.7	-0.2
	1.1nm,0.1s						
DJR				*e*S	Sg	21 22 48.0	-1.1
	4.0nm,0.3s						
KDJ	Kajisay	1.84	257	⇓*i*P	Pb	21 22 27.1	+0.9
	baz=55						
KDJ				⇓*i*S	Sg	21 22 52.5	+1.0
	baz=55						
TNSS	Tian-Shan	2.00	284	Pg	Pb	21 22 29.4	+0.4
	2.7nm,0.2s						
TNSS				Lg	Lg	21 22 57.0	
	2.3nm,0.3s						
TNSS	Tian-Shan	2.00	284	*e*P	Pb	21 22 29.4	+0.4
	baz=83						
TNSS				*e*S	Sg	21 22 57.0	+0.4
	baz=83						
TNSS	Tian-Shan	2.00	284	*e*P	Pb	21 22 29.4	+0.4
	2.7nm,0.2s						
TNSS				*e*S	Sg	21 22 57.0	+0.4
	2.3nm,0.3s						
ULHL	Ulahol	2.50	264	⇑*i*P	Pb	21 22 35.7	-1.7
	baz=62						
ULHL				⇑*i*S	Sb	21 23 07.7	-0.6
	baz=62						
BOOM	Boomskoye usch	2.70	269	⇓*i*P	Pb	21 22 38.8	-2.0
	baz=68						
BOOM				⇓*i*S	Sb	21 23 13.1	-0.9
	baz=68						
KAPS	Kapalarasan	2.72	357	Pg	Pb	21 22 41.1	0.0
	0.3nm,0.2s						
KAPS				Lg	Lg	21 23 16.1	
	4.9nm,0.5s						
KAPS	Kapalarasan	2.72	357	*e*P	Pb	21 22 41.1	0.0
	0.3nm,0.2s						
KAPS				*e*S	Sb	21 23 16.1	+1.7
	4.9nm,0.5s						
MK31	Makanchi Array	4.64	24	Pn	Pn	21 23 03.7	+1.2
	baz=200,slow=13,SNR=9.7						
MK31				⇑Sn	Sn	21 23 56.2	-0.2
	0.2nm,0.7s						
MK31				⇑Lg	Lg	21 24 17.5	

IDC ***06*** *21:22:47.0±0.9, 11°56S×164°83E, h0^{km}, mb4.0/9, mb1 4.2/12, mb1mx4.0/36, mbtmp4.1/12, ML3.9/3, MS3.6/1, Ms1 3.6/1, ms1mx2.9/36, Error ellipse: s-maj=22.6km s-min=20.0km az=114.0*

NEIC ***06*** *21:22:49.2±4.3, 11°52S×164°74E, h13^{km}±27^{km}, mb4.2/7, Error ellipse: s-maj=12.3km s-min=8.4km az=218.0*

ISCJB ***06*** *21:22:50.6±0.5, 11°68S±0°06×164°71E±0°08, h34^{km}, mb4.0/14, MS3.5/1, Error ellipse: s-maj=12.1km s-min=7.6km az=148.6*

ISC 06 21:22:51.8±0.6**, 11°54S**±0°09×**164°81E**±0°10**, h34**^{km}**, n30, σ1ˢ31**/31**, mb4.0**/14**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.22	293	Pn	Pn	21 24 06.0	-1.5
HNR				*e*Sn	Sn	21 24 54.5	-12
HNR	Honiara	5.22	293	Pn	Pn	21 24 06.0	-1.5
	20nm,0.3s,baz=167,slow=14,SNR=3.2						
HNR				Sn	Sn	21 25 08.6	+2.1
	7.0nm,0.3s,baz=139,slow=20,SNR=3.0						
MARNC	Mare, Loyalty	10.36	163	*e*Pn	Pn	21 25 15.1	-3.0
DZM	Mont Dzumac	10.59	172	Pn	Pn	21 25 19.5	-1.9
	1.0nm,0.3s,baz=43,slow=19,SNR=6.3						
ONTNC	Ouen Toro	10.83	172	*e*Pn	Pn	21 25 25.4	+1.0
OUENC	Ouen Island, N	11.00	170	*e*Pn	Pn	21 25 26.8	0.0
PINNC	Pines Island,	11.30	167	*e*Pn	Pn	21 25 31.6	+0.7
PATS	Pohnpei	19.36	340	*e*P	P	21 27 11.7	-3.0
	68nm,1.0s						
CTA	Charters Tower	19.76	242	P	P	21 27 18.6	-0.5
	0.1nm,0.3s,baz=51,slow=13,SNR=2.0						
STKA	Stephens Creek	29.46	223	P	P	21 28 52.5	-0.1
	1.8nm,0.7s,baz=76,slow=12,SNR=4.9						
WB2	Warramunga Arr	30.44	250	*e*P	P	21 28 58.8	-2.7
	2.6nm,0.9s						
WR1	Warramunga Arr	30.45	250	*e*P	P	21 29 02.1	+0.5
	4.3nm,0.9s						
WRA	Warramunga Arr	30.45	250	P	P	21 29 02.1	+0.5
	2.2nm,0.7s,baz=82,slow=9.0,SNR=14						
AS31	Alice Springs	31.75	243	*e*P	P	21 29 12.7	-0.3
	0.7nm,0.6s						
ASAR	Alice Springs	31.75	243	P	P	21 29 12.7	-0.3
	2.6nm,0.8s,baz=73,slow=9.3,SNR=18						
ASAR				PcP	PcP	21 32 05.0	+0.9
	0.5nm,0.7s,baz=75,slow=2.5,SNR=4.3						
RPZ	Rata Peaks	32.52	172	P	P	21 29 19.5	+0.1
	4.9nm,0.8s,baz=180,slow=1.0,SNR=4.2						
FITZ	Fitzroy Crossi	38.37	255	LR	LR	21 45 14.7	
	comp=Z,77nm,18.5s,baz=344,slow=35						
CM01	Chiang Mai Arr	71.44	294	*e*P	P	21 34 08.9	-0.5
CMAR	Chiang Mai Arr	71.47	294	P	P	21 34 10.5	+1.0
	1.0nm,0.9s,baz=120,slow=3.6,SNR=4.8						
QSPA	South Pole Qui	78.47	180	*e*P	P	21 34 50.7	+1.4
	9.6nm,1.0s						
SONA0	Songino Array	78.52	324	*e*P	P	21 34 50.6	+0.8
SONM	Songino Array	78.52	324	P	P	21 34 50.6	+0.8
	0.7nm,1.1s,baz=132,slow=6.8,SNR=3.2						
ILAR	Eielson Array	84.27	19	P	P	21 35 20.1	+0.4
	0.4nm,0.7s,baz=235,slow=5.1,SNR=7.5						
ILB	Eielson Array	84.27	19	*e*P	P	21 35 20.1	+0.4
	0.3nm,0.4s						
NVAR	Mina Array Bea	87.04	50	P	P	21 35 34.7	+0.3
	0.5nm,0.8s,baz=236,slow=6.4,SNR=3.8						
MK01	Makanchi Array	93.24	317	*e*P	P	21 36 02.8	-0.2
MK31	Makanchi Array	93.25	317	*e*P	P	21 36 03.1	+0.1
	1.4nm,0.9s						
MK32	Makanchi Array	93.25	317	*e*P	P	21 36 04.1	+1.1
MKAR	Makanchi Array	93.25	317	P	P	21 36 04.1	+1.1
	1.2nm,0.8s,baz=96,slow=6.4,SNR=11						
CLNB	Carlsbad	97.16	59	*e*P	P	21 36 21.6	+0.3

IDC 06 21:27:14.4±3.0**, 11°26S**×**165°03E, h0**^{km}**, mb3.7**/3**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.7**/4**, ML3.7**/1**, Error ellipse: s-maj=63.0km s-min=43.3km az=84.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.84	173	Pn	Pn	21 29 50.7	-0.4
	0.5nm,0.3s,baz=309,slow=14,SNR=4.3						
WRA	Warramunga Arr	30.75	250	P	P	21 33 31.8	0.0
	0.3nm,0.7s,baz=79,slow=8.9,SNR=2.9						
ASAR	Alice Springs	32.07	243	P	P	21 33 43.4	0.0
	0.7nm,0.9s,baz=66,slow=10,SNR=4.2						
ZALV	Zalesovo Beam	93.32	324	P	P	21 40 31.2	0.0
	0.5nm,0.5s,baz=116,slow=6.7,SNR=4.0						

GUC 06 21:30:57.4±0.6**, 24°03S**×**67°68W, h225**^{km}±12^{km}**, ML3.6, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	IPOC Station P	1.84	296	⇑*e*P	Pn	21 31 37.6	+1.0
PB15				*e*S	S	21 32 09.0	+2.0
PB09	IPOC Station P	2.65	327	*e*P	Pn	21 31 46.9	+2.2
PB09				*e*S	S	21 32 23.8	+2.1
PB09				IAML		21 32 29.0	
	comp=E,54nm,0.2s						
PB10	IPOC Station P	2.69	280	*e*P	Pn	21 31 46.8	+1.9
PB10				*e*S	S	21 32 23.9	+1.9
PB10				IAML		21 32 29.8	
	comp=N,90nm,0.3s						
PB07	IPOC Station P	3.06	318	*e*P	Pn	21 31 51.5	+2.1
PB07				*e*S	S	21 32 32.4	+2.5
PB07				IAML		21 32 36.3	
	comp=E,144nm,0.5s						

PRU 06 21:35:36.8±0.0**, 50°20N**×**19°31E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORC	Moravsky Berou	1.22	250	*e*PG	Pg	21 35 59.7	-0.4
MORC				*e*SG	Sg	21 36 16.1	+0.2
VYHS	Vyhne	1.74	190	*e*PG	Pn	21 36 06.7	-1.5

PRU 06 21:36:06.1±0.0**, 50°16N**×**19°08E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.47	82	*e*Pg	Pg	21 36 15.5	+0.5
OJC				*e*Sg	Sg	21 36 20.6	-0.4
MORC	Moravsky Berou	1.06	249	*e*PG	Pg	21 36 26.8	+0.3
MORC				*e*SG	Sb	21 36 41.5	-0.4
KRLC	Kraliky	1.48	268	*e*SG	Sb	21 36 53.9	0.0
	comp=Z,1.5nm,0.4s						
VYHS	Vyhne	1.68	186	*e*PN	Pn	21 36 35.4	-1.3
VYHS				*e*SN	Sn	21 36 57.1	-1.8
VYHS				*e*LG	Lg	21 37 02.4	
DPC	Dobruska-Polom	1.78	277	*e*SG	Pn	21 36 38.2	0.0
DPC	Dobruska-Polom	1.78	277	*e*PG	Pn	21 36 38.2	0.0
DPC				*e*SG	Sb	21 37 02.5	0.0
	comp=Z,4.6nm,0.6s						
UPC	Upice	2.00	281	*e*SG	Sg	21 37 09.7	-0.5
PRU	Pruhonice	2.93	268	*e*SG	Sg	21 37 39.7	-0.4
KHC	Kasperske Hory	3.72	256	*e*SG	Sg	21 38 04.7	-0.9

IDC ***06*** *21:37:34.2±0.5, 11°26S×165°77E, h0^{km}, mb4.3/20, mb1 4.5/22, mb1mx4.4/37, mbtmp4.3/22, ML4.5/2, MS4.0/9, Ms1 4.0/9, ms1mx3.6/40, Error ellipse: s-maj=17.9km s-min=14.3km az=117.0*

NEIC ***06*** *21:37:36.1±0.2, 11°21S×165°72E, h10^{km}, mb4.9/43, Error ellipse: s-maj=5.5km s-min=4.3km az=111.0*

ISCJB ***06*** *21:37:37.4±0.2, 11°32S±0°04×165°66E±0°04, h30^{km}, mb4.7/70, MS4.2/11, Error ellipse: s-maj=5.6km s-min=5.3km az=35.3*

ISC 06 21:37:39.2±0.4**, 11°31S**±0°06×**165°77E**±0°07**, h30**^{km}**, n143, σ1ˢ27**/148**, mb4.8**/74**, MS4.1**/12**, 2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.02	287	*e*P	Pn	21 39 05.0	-1.3
HNR				*e*S	Sn	21 40 11.0	-3.3
HNR	Honiara	6.02	287	*e*Pn	Pn	21 39 05.0	-1.3
HNR				*e*S	Sn	21 40 14.1	-0.3
HNR	Honiara	6.02	287	Pn	Pn	21 39 04.8	-1.5
	11nm,0.3s,baz=165,slow=6.3,SNR=10						
HNR				Sn	Sn	21 40 11.2	-3.1
	10nm,0.3s,baz=162,slow=19,SNR=3.2						
HNR				LR	LR	21 41 47.0	
	comp=Z,1µm,18.2s,baz=122,slow=42						
DZM	Mont Dzumac	10.72	177	*e*Pn	Pn	21 40 11.5	+0.6
	44nm,0.5s						
DZM				*e*LR	LR	21 42 42.4	
	comp=Z,445nm,23.6s						
DZM	Mont Dzumac	10.72	177	*e*Pn	Pn	21 40 12.7	+1.8
DZM				Sn	Sn	21 42 08.7	-1.3
DZM	Mont Dzumac	10.72	177	Pn	Pn	21 40 11.6	+0.6
	5.0nm,0.3s,baz=181,slow=22,SNR=25						
DZM				Sn	Sn	21 42 08.7	-1.3
	0.1nm,0.3s,baz=135,slow=20,SNR=1.7						
ONTNC	Ouen Toro	10.96	177	*e*Pn	Pn	21 40 15.4	+1.4
PINNC	Pines Island,	11.36	172	*e*Pn	Pn	21 40 20.8	+1.3
CTA	Charters Tower	20.70	243	P	P	21 42 16.9	-0.3
	18nm,1.0s,baz=50,slow=12,SNR=5.0						
CTAO	Charters Tower	20.70	243	*e*P	P	21 42 17.5	+0.3
	83nm,1.5s						
URZ	Urewera	28.69	161	P	P	21 43 33.9	+0.3
	8.1nm,0.6s,baz=0.0,slow=14,SNR=4.6						
BKZ	Black Stump Fm	29.34	163	*e*P	P	21 43 41.2	+1.8
	45nm,1.4s						
STKA	Stephens Creek	30.27	224	*e*P	P	21 43 47.9	+0.2
	4.9nm,1.6s						
STKA	Stephens Creek	30.27	224	P	P	21 43 47.5	-0.2
	4.3nm,0.8s,baz=46,slow=8.4,SNR=7.3						
STKA				LR	LR	21 54 49.4	
	comp=Z,407nm,21.7s,baz=44,slow=34						
BFZ	Birch Farm	30.68	164	*e*P	P	21 43 50.2	-1.0
	62nm,1.3s						
THZ	Tophouse	30.98	170	*e*P	P	21 43 55.3	+1.4
	18nm,0.7s						
WC3	Warramunga Arr	31.39	250	*e*P	P	21 43 56.2	-1.6
	33nm,1.4s						
WB2	Warramunga Arr	31.41	250	*e*P	P	21 43 56.9	-1.1
WRAB	Tennant Creek	31.41	250	*e*P	P	21 43 56.4	-1.5
	43nm,1.5s						
WRA	Warramunga Arr	31.42	250	P	P	21 43 56.6	-1.4
	11nm,0.9s,baz=83,slow=9.0,SNR=40						
WRA				PcP	PcP	21 46 51.1	-0.2
	0.7nm,0.9s,baz=80,slow=3.6,SNR=3.7						
WRA				LR	LR	21 56 41.8	
	comp=Z,332nm,18.6s,baz=75,slow=36						
LTZ	Lake Taylor	31.86	171	*e*P	P	21 44 02.8	+1.1
	15nm,0.7s						
OXZ	Oxford	32.36	171	*e*P	P	21 44 07.9	+1.9
	14nm,0.9s						
RPZ	Rata Peaks	32.61	173	P	P	21 44 07.9	-0.3
	3.1nm,0.6s,baz=350,slow=6.1,SNR=2.9						
AS31	Alice Springs	32.70	244	*e*P	P	21 44 08.1	-1.2
	1.6nm,1.0s						
ASAR	Alice Springs	32.70	244	P	P	21 44 07.8	-1.5
	2.9nm,0.8s,baz=72,slow=9.7,SNR=15						
ASAR				PcP	PcP	21 46 54.6	-0.1
	0.9nm,0.9s,baz=79,slow=4.8,SNR=3.6						
ASAR				ScP	ScP	21 50 40.0	+3.3
	1.6nm,1.0s,baz=92,slow=4.6,SNR=6.7						
ASAR				LR	LR	21 57 27.4	
	comp=Z,267nm,18.2s,baz=96,slow=36						
RAR	Rarotonga	34.44	111	LR	LR	21 55 47.9	
	comp=Z,170nm,20.1s,baz=300,slow=32						
FITZ	Fitzroy Crossi	39.34	255	P	P	21 45 04.7	-1.5
	4.5nm,0.8s,baz=103,slow=5.7,SNR=5.5						
PPT	Papeete	43.61	104	LR	LR	22 00 53.9	
	comp=Z,142nm,20.1s,baz=198,slow=32						
PPT2	Papeete2	43.61	104	*e*LR	LR	21 58 06.3	
	comp=Z,174nm,27.2s						
TBI	Tubuai	44.21	112	*e*LR	LR	21 58 27.0	
	comp=Z,186nm,28.5s						
MBWA	Marble Bar	45.14	251	*e*P	P	21 45 52.8	-0.6
	223nm,1.8s						
MJAR	Matsushiro Arr	54.21	333	P	P	21 47 01.8	-0.4
	0.8nm,0.6s,baz=165,slow=8.7,SNR=2.7						
RKT	Rikitea	57.48	110	*e*LR	LR	22 04 35.5	
	comp=Z,286nm,30.5s						
ASAJ	Asahikawa	59.05	341	P	P	21 47 35.8	-0.6
	2.8nm,0.7s,baz=180,slow=20,SNR=2.7						
NJ2	Nanjing	62.22	315	*e*P	P	21 47 57.2	-1.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
USRK	Ussuriysk Ar.	63.19	333	P	P	21 48 04.3	-0.2
	comp=Z,0.9nm,0.4s,baz=147,slow=8.2,SNR=5.1						
IPM	Ipoh	66.29	280	*e*P	P	21 48 25.6	+0.2
	comp=Z,26nm,0.9s						
SKNT	Sakolnakorn	67.22	294	P	P	21 48 34.9	+3.7
	comp=Z,6.4nm,1.4s						
ENH	Enshi	68.08	309	*e*P	P	21 48 35.9	-0.5
	comp=Z,13nm,1.1s						
TRTT	Trang	68.43	283	P	P	21 48 45.4	+6.5
GYA	Guiyang	68.58	304	⇑*i*P	P	21 48 41.0	+1.2
GYA				PP	PP	21 51 14.5	+2.9
GYA				S	S	21 57 47.3	+6.5
GYA				SKS	ScS	21 58 37.5	-0.6
GYA	Guiyang	68.58	304	SS	SS	22 02 08.8	+3.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
GSI	Gunungsitoli	68.91	276	*e*P	P	21 48 45.8	+3.8
PBKT	Sadao Pong	69.80	292	*e*P	P	21 48 48.8	+1.5
	comp=Z,3.7nm,0.8s						
XAN	Xi'an	70.31	312	P	P	21 48 49.6	-0.6
XAN				pP	pP	21 48 58.9	+0.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				LR	LR		
	comp=E,150nm,16.3s						
KMI	Kunming	71.28	301	P	P	21 48 57.7	+1.2
KMI				pP	pP	21 49 01.0	-3.4
KMI				sP	sP	21 49 03.1	-4.2
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,92nm,4.9s						
HHC	Hu-ho-hao-te	72.05	320	*e*P	P	21 48 58.8	-1.9
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CM01	Chiang Mai Arr	72.21	294	*e*P	P	21 49 02.6	+0.6
CM31	Chiang Mai Arr	72.24	294	*e*P	P	21 49 03.6	+1.5
CMAR	Chiang Mai Arr	72.24	294	P	P	21 49 02.8	+0.7
	comp=Z,2.9nm,0.7s,baz=124,slow=4.5,SNR=21						
CHTO	Chiang Mai	72.35	294	*e*P	P	21 49 03.4	+0.6
	comp=Z,15nm,1.5s						
CHTO	Chiang Mai	72.35	294	P	P	21 49 03.8	+1.0
	comp=Z,25nm,1.1s						
CD2	Chengdu	72.78	307	P	P	21 49 04.7	-0.5
LZH	Lanzhou	74.95	312	*e*P	P	21 49 18.8	+0.9
LZH				pP	pP	21 49 25.0	-1.3
LZH				sP	sP	21 49 27.7	-1.6
LZH				PP	PP	21 52 09.9	+3.8
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,88nm,5.7s						
LZH				LR	LR		
	comp=N,250nm,14.6s						
LZH				LR	LR		
	comp=E,280nm,15.0s						
LZH				LR	LR		
	comp=Z,250nm,17.8s						
KDAK	Kodiak Island	76.81	21	LR	LR	22 17 52.4	
	comp=Z,71nm,18.8s,baz=280,slow=32						
GAMB	Gambell	76.82	10	*e*P	P	21 49 27.8	0.0
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	78.70	180	*e*P	P	21 49 38.4	-0.1
	comp=Z,12nm,1.1s						
ANM	Nome	78.74	12	*e*P	P	21 49 38.7	+0.2
	comp=Z,10nm,1.2s						
SONM	Songino Array	78.89	324	P	P	21 49 39.6	-0.3
	comp=Z,1.2nm,0.8s,baz=141,slow=5.7,SNR=5.6						
SONA1	Songino Array	78.89	324	*e*P	P	21 49 39.5	-0.3
SONA1				*e*PcP	PcP	21 49 49.0	+0.6
BILL	Bilibino	79.14	0	*e*P	P	21 49 39.8	-0.7
	comp=Z,11nm,1.0s						
GTA	Gaotai	79.26	314	⇑P	P	21 49 42.6	+0.6
GTA				pP	pP	21 49 47.6	-2.8
GTA				sP	sP	21 49 51.4	-2.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PMR	Palmer	80.79	20	*e*P	P	21 49 51.4	+1.8
CAST	Castle Rocks	81.19	18	*e*P	P	21 49 50.3	-1.5

	comp=Z,9.0nm,0.8s						
RND	Reindeer	82.18	19	eP	P	21 49 57.4	+0.4
	comp=Z,6.9nm,0.9s						
MCK	McKinley	82.38	19	eP	P	21 49 58.3	+0.2
	comp=Z,20nm,1.5s						
IM3	Indian Mountai	82.67	16	eP	P	21 49 58.9	-0.6
HARP	HAARP	82.72	21	eP	P	21 50 00.1	+0.3
	comp=Z,20nm,0.9s						
WRH	Wood River Hil	83.17	18	eP	P	21 50 01.2	-0.8
	comp=Z,7.7nm,0.8s						
O02D	Mt. Diablo Mer	83.45	47	P	P	21 50 04.4	+0.2
	baz=249						
MDM	Murphy Dome	83.47	18	eP	P	21 50 02.4	-1.3
	comp=Z,6.8nm,0.8s						
HDA	Harding Lake	83.48	19	eP	P	21 50 02.9	-0.8
	comp=Z,18nm,0.8s						
HDA	Harding Lake	83.48	19	P	P	21 50 02.6	-1.1
	baz=226						
TCOL	CIGO, UAF Yank	83.52	18	P	P	21 50 03.3	-0.5
	baz=226						
COLA	College	83.53	18	eP	P	21 50 02.3	-1.5
	comp=Z,13nm,0.8s						
RIDG	Independ'e Rid	83.71	20	eP	P	21 50 04.6	-0.4
	comp=Z,10nm,0.9s						
IL1	Eielson Array	83.75	18	eP	P	21 50 03.7	-1.4
ILAR	Eielson Array	83.75	18	P	P	21 50 04.0	-1.0
	comp=Z,3.6nm,0.7s,baz=230,slow=5.3,SNR=60						
ILB	Eielson Array	83.75	18	eP	P	21 50 04.1	-1.0
N02D	Trinity Center	83.79	46	P	P	21 50 06.4	+0.5
	baz=249						
POKR	Poker Plat Res	83.82	18	P	P	21 50 04.1	-1.4
	baz=226						
SCRK	Sand Creek	84.15	20	eP	P	21 50 07.1	-0.2
	comp=Z,10.0nm,1.0s						
O03E	Paynes Creek	84.20	47	P	P	21 50 07.7	-0.3
	baz=250						
AFDM	Forest Hills D	84.36	49	eP	P	21 50 08.9	+0.1
	comp=Z,6.1nm,1.0s						
BBB	Bella Bella	84.78	34	LR	LR	22 23 15.2	
	comp=Z,81nm,18.3s,baz=240,slow=32						
EDW2	Edwards Air Fo	85.36	53	P	P	21 50 13.5	-0.5
	baz=253						
EGAK	Eagle	85.61	20	eP	P	21 50 14.2	-0.3
	comp=Z,16nm,0.8s						
J05D	Fort Rock, OR	85.62	44	P	P	21 50 15.1	-0.1
	baz=250						
TOLK	Toolik Lake Re	85.74	15	P	P	21 50 15.7	+0.6
	baz=224						
CWC	Cottonwood Cre	85.75	52	P	P	21 50 15.5	-0.5
	baz=253						
PAHR	Pah Rah Range	85.77	48	eP	P	21 50 16.0	0.0
	comp=Z,4.1nm,1.0s						
LRMC	Laurel Mtn Rad	85.78	53	P	P	21 50 16.1	0.0
	baz=253						
DAWY	Dawson	85.79	21	eP	P	21 50 15.3	-0.1
	comp=Z,4.7nm,0.8s						
MOD	Modoc Plateau	85.81	46	eP	P	21 50 15.6	-0.5
	comp=Z,10.0nm,0.6s						
MPMC	Manual Prospec	86.09	52	P	P	21 50 17.1	-0.7
	baz=253						
NV01	Mina Array Sit	86.17	50	eP	P	21 50 17.5	-0.6
NVAR	Mina Array Bea	86.17	50	P	P	21 50 17.6	-0.6
	comp=Z,3.6nm,1.0s,baz=226,slow=7.1,SNR=12						
PFO	Pinyon Flats O	86.21	55	LR	LR	22 21 32.8	
	comp=Z,78nm,20.9s,baz=306,slow=31						
NV11	Mina Array Sit	86.28	50	eP	P	21 50 18.5	-0.1
	comp=Z,0.4nm,1.1s						
GUN	Gumba	86.47	299	eP	P	21 50 19.9	-0.1
KVN	Kaiserville	86.51	49	eP	P	21 50 19.5	-0.3
	comp=Z,5.4nm,1.3s						
BELC	Belle Mtn. Jos	86.69	55	P	P	21 50 20.3	-0.4
	baz=254						
FURC	Furnace Creek,	86.70	52	P	P	21 50 19.9	-0.5
	baz=254						
PKI	Pulchoki	86.78	299	eP	P	21 50 21.5	0.0
	comp=Z,20nm,1.2s						
PKIN	Phulchoki	86.80	299	eP	P	21 50 21.3	-0.2
	comp=Z,16nm,1.2s						
DMN	Daman	87.05	299	eP	P	21 50 22.8	+0.1
	comp=Z,40nm,1.3s						
GMRC	Granite Mounta	87.17	54	P	P	21 50 22.6	-0.4
	baz=254						
R11A	Troy Canyon, C	88.20	50	P	P	21 50 27.6	-0.3
	baz=254						
PDMCI	Parker Dam,Lak	88.25	55	P	P	21 50 27.7	-0.3
	baz=255						
DANN	Dangsing	88.39	299	eP	P	21 50 27.9	-1.2
KOLN	Koldanda	88.39	299	eP	P	21 50 28.0	-1.1
PYUN	Piuthan	88.99	299	eP	P	21 50 30.9	-1.0
	comp=Z,11nm,1.0s						
WMQ	Urumqi	89.30	315	P	P	21 50 33.4	+0.6
WMQ				pP	PcP	21 50 36.6	+2.4
WMQ				sP	pP	21 50 41.3	+0.5
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,300nm,5.5s						
WMQ				LR	LR		
	comp=N,290nm,19.3s						
WMQ				LR	LR		
	comp=E,150nm,13.9s						
WMQ				LR	LR		
	comp=Z,180nm,17.5s						
PSUT	Pine Spring	89.56	51	eP	P	21 50 34.4	+0.1
	comp=Z,3.9nm,1.0s						
INK	Inuvik	90.14	19	P	P	21 50 36.1	+0.1
	comp=Z,0.9nm,0.9s,baz=135,slow=4.3,SNR=2.4						
U15A	North Rim	90.24	53	eP	P	21 50 38.1	+0.4
	comp=Z,5.2nm,0.8s						
HLID	Hailey	90.44	46	eP	P	21 50 37.9	-0.4
	comp=Z,2.9nm,0.9s						
HLID	Hailey	90.44	46	P	P	21 50 38.1	-0.2
	baz=255						
X16A	Lo Mia Camp, P	90.45	55	eP	P	21 50 39.2	+0.6
	comp=Z,3.6nm,1.0s						
MTPU	Mount Pierson	90.71	51	eP	P	21 50 40.8	+0.9
	comp=Z,3.5nm,0.9s						
MSU	Marysvale	90.83	51	eP	P	21 50 41.1	+0.8
HVU	Hansel Valley	91.16	48	eP	P	21 50 41.8	+0.2
	comp=Z,5.7nm,0.9s						
NLU	North Lily Min	91.24	50	eP	P	21 50 42.8	+0.6
	comp=Z,6.0nm,1.1s						
SYO	Syowa Base	91.54	197⇓	ePcP	PcP	21 50 44.0	+0.4
PDAR	Pinedale Array	93.71	47	P	P	21 50 53.0	-0.5
	comp=Z,0.5nm,0.7s,baz=208,slow=1.7,SNR=4.0						
MK01	Makanchi Array	93.72	317	eP	P	21 50 52.4	-0.8
MK31	Makanchi Array	93.73	317	eP	P	21 50 52.9	-0.4
MKAR	Makanchi Array	93.73	317	eP	P	21 50 52.9	-0.4
	comp=Z,16nm,0.9s						
MKAR				PKKPbc	PKKPdf	22 07 56.8	-1.7
MKAR	Makanchi Array	93.73	317	P	P	21 50 52.7	-0.6
	comp=Z,2.1nm,0.8s,baz=96,slow=6.7,SNR=22						
MKAR				PKKPbc	PKKPdf	22 07 56.8	-1.7
	comp=Z,1.5nm,0.7s,baz=280,slow=2.8,SNR=16						
ZALV	Zalesovo Beam	93.78	324	eP	P	21 50 51.7	-1.5
ZALV	Zalesovo Beam	93.78	324	P	P	21 50 52.1	-1.1
	comp=Z,1.0nm,0.7s,baz=116,slow=3.4,SNR=6.7						
MAKZ	Makanchi	93.94	317	eP	P	21 50 53.7	-0.5
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	95.19	27	P	P	21 50 57.3	-2.2
	comp=Z,0.7nm,0.6s,baz=255,slow=4.7,SNR=12						
TXAR	Lajitas Array	95.93	61	P	P	21 51 03.8	-0.1
	comp=Z,0.1nm,0.7s,baz=243,slow=4.0,SNR=2.4						
ARCES	ARCESS Array B	116.59	345	PKP	PKPdf	21 56 19.1	-0.7
	comp=Z,2.0nm,0.8s,baz=68,slow=4.2,SNR=6.5						
CPUP	Villa Florida	123.83	132	PKP	PKPdf	21 56 34.9	-0.1
	comp=Z,2.3nm,0.8s,baz=162,slow=3.2,SNR=4.6						
SDV	Santo Domingo	124.49	87	ePKPdf	PKPdf	21 56 36.2	-0.6
GERES	GERESS Array B	135.95	334	PKP	PKPdf	21 56 57.6	+0.2
	comp=Z,0.8nm,0.8s,baz=16,slow=1.9,SNR=5.7						
KEST	Kesra	147.64	323	PKPbc	PKPbc	21 57 21.6	+0.3
	comp=Z,3.4nm,0.7s,baz=270,slow=7.1,SNR=4.0						
ES19	SONSECA Array	150.27	344	ePKPbc	PKPbc	21 57 28.0	+0.1
ESDC	Sonseca Array	150.31	344	PKPbc	PKPbc	21 57 27.0	-1.0
	comp=Z,0.2nm,0.4s,baz=343,slow=3.1,SNR=4.4						
TOA0	Torodi Ar. Sit	164.33	278	ePKPdf	PKPdf	21 57 40.9	0.0
TORD	Torodi Ar. Bea	164.33	278	PKP	PKPdf	21 57 39.7	-1.2
	comp=Z,0.7nm,0.9s,baz=298,slow=1.7,SNR=4.8						

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*IDC **06** 21:50:15.9±1.5, 11°.24S×164°.77E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.8/38, mbtmp3.9/9, ML4.2/2, Error ellipse: s-maj=40.1km s-min=24.0km az=130.0*

*ISCJB **06** 21:50:19.0±1.0, 11°.4S±0°.1×164°.7E±0°.1, h31^{km}, mb3.7/7, Error ellipse: s-maj=19.0km s-min=13.3km az=23.8*

ISC 06 21:50:20.6±1.2**, 11°.3S**±0°.2×**164°.8E**±0°.1**, h31**^{km}**, n15, σ0^{s}50**/10**, mb3.8**/7**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.08	291	Pn	Pn	21 51 33.9	-0.8
	43nm,0.3s,baz=210,slow=5.9,SNR=6.8						
HNR				Sn	Sn	21 52 33.1	+0.8
	54nm,0.3s,baz=292,slow=19,SNR=3.8						
CTA	Charters Tower	19.83	242	P	P	21 54 48.7	-0.3
	0.1nm,0.3s,baz=76,slow=9.5,SNR=3.7						
STKA	Stephens Creek	29.61	223	P	P	21 56 23.4	+0.2
	0.7nm,0.4s,baz=0.0,slow=8.1,SNR=2.7						
H11S2	WAKE ISLAND Hy	29.65	4	T	T	22 26 37.6	
	baz=184,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	29.65	4	T	T	22 26 34.4	
	baz=184,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	29.67	4	T	T	22 26 36.7	
	baz=184,slow=76,SNR=18						
WRA	Warramunga Arr	30.49	250	P	P	21 56 31.2	0.0
	0.6nm,0.6s,baz=81,slow=8.9,SNR=8.5						
H11N1	WAKE ISLAND Hy	30.88	4	T	T	22 28 09.1	
	baz=184,slow=76,SNR=9.1						
H11N3	WAKE ISLAND Hy	30.88	4	T	T	22 28 10.0	
	baz=184,slow=76,SNR=9.4						
H11N2	WAKE ISLAND Hy	30.89	4	T	T	22 28 11.0	
	baz=184,slow=76,SNR=11						
ASAR	Alice Springs	31.82	243	P	P	21 56 42.9	+0.1
	0.5nm,0.6s,baz=63,slow=10.0,SNR=7.9						
CMAR	Chiang Mai Arr	71.32	294	P	P	22 01 38.3	+0.4
	0.6nm,0.7s,baz=126,slow=3.1,SNR=5.2						
SONM	Songino Array	78.29	324	P	P	22 02 17.9	+0.2
	0.9nm,1.0s,baz=119,slow=5.2,SNR=4.6						
ILAR	Eielson Array	84.05	19	P	P	22 02 48.0	+0.1
	0.5nm,0.9s,baz=224,slow=5.0,SNR=3.5						
MKAR	Makanchi Array	93.04	317	P	P	22 03 30.9	-0.4
	0.8nm,0.7s,baz=101,slow=6.6,SNR=12						

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*IDC **06** 21:54:55.9±1.5, 52°.25N×132°.61W, h0^{km}, mb3.2/2, mb1 3.4/8, mb1mx3.3/45, mbtmp3.1/8, ML3.2/6, MS3.4/2, Ms1 3.4/2, ms1mx2.8/20, Error ellipse: s-maj=20.3km s-min=11.7km az=26.0*

*PGC **06** 21:54:58.3±1.1, 52°.48N×132°.49W, h26^{km}, ML3.7/12, 96km southwest of Sandspit, Bc Haida Gwaii Region*

ISC 06 21:54:59.3±1.5**, 52°.55N**±0°.07×**132°.27W**±0°.07**, h20**^{km}±7^{km}**, n22, σ1^{s}04**/29**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNB	Barry Inlet	0.32	85	P	Pn	21 55 08.3	-0.6
BNB				S	Sn	21 55 14.8	-0.2
HG3B	Hotspring	0.51	87	P	Pn	21 55 11.0	-0.4
HG3B				S	Sn	21 55 19.3	-0.2
MOBC	Moresby Island	0.62	17	P	Pn	21 55 12.4	-0.7
MOBC				S	Sn	21 55 22.5	0.0
DIB	Dawson Inlet,	0.66	349	P	Pg	21 55 11.6	-0.8
DIB				S	Sb	21 55 21.2	+0.2
HG4B	Hotspring	0.71	111	P	Pg	21 55 13.1	-0.2
HG4B				S	Sg	21 55 23.6	+0.9
NDB	Naden	1.46	344	Pn	Pn	21 55 23.5	-1.1
NDB				Sn	Sn	21 55 41.9	-1.4
MASB	Masset	1.47	6	Pn	Pn	21 55 24.7	0.0
BBB	Bella Bella	2.58	97	Pn	Pn	21 55 40.1	+0.3
BBB				Sn	Sn	21 56 10.5	-0.1
BBB	Bella Bella	2.58	97	Pn	Pn	21 55 41.0	+1.1
	1.4nm,0.3s,baz=271,slow=6.4,SNR=7.7						
BBB				Pg	Pg	21 55 47.3	-1.4
	5.9nm,0.3s,baz=277,slow=16,SNR=16						
BBB				Sn	Sb	21 56 15.0	-1.0
	10nm,0.3s,baz=186,slow=21,SNR=4.8						
BBB				Lg	Lg	21 56 21.9	
	12nm,0.3s,baz=170,slow=18,SNR=7.4						
BBB				LR	LR	21 56 54.3	
	comp=Z,450nm,18.1s,baz=6.0,slow=43						
PHC	Port Hardy	3.54	120	Pn	Pn	21 55 52.9	-0.1
PACB	Port Alice, BC	3.66	123	Pn	Pn	21 55 55.5	+0.7
WOSB	Woss	4.30	122	Pn	Pn	21 56 05.6	+1.9
FSB	Fort Saint Jam	5.12	65	Pn	Pn	21 56 15.0	+0.2
DLBC	Dease Lake	6.04	11	Pn	Pn	21 56 32.0	+4.5
	0.4nm,0.3s,baz=184,slow=15,SNR=3.3						
DLBC				Lg	Lg	21 58 15.1	
	0.6nm,0.3s,baz=325,slow=25,SNR=4.5						
WHY	Whitehorse	8.26	351	Pn	Pn	21 56 58.2	+0.3
YKA	Yellowknife Ar	13.71	36	Pn	Pn	21 58 13.5	+1.3
	0.1nm,0.3s,baz=227,slow=12,SNR=4.0						
YKA				Lg	Lg	22 02 17.0	
	baz=218,slow=27,SNR=3.2						
ILAR	Eielson Array	14.37	334	Pn	Pn	21 58 22.9	+1.7
	0.0nm,0.3s,baz=146,slow=10,SNR=3.4						
NVAR	Mina Array Bea	17.14	140	P	Pn	21 58 55.8	-1.9
	0.4nm,0.3s,baz=319,slow=19,SNR=6.4						
PDAR	Pinedale Array	18.09	114	P	Pn	21 59 08.0	-1.5
	0.0nm,0.3s,baz=301,slow=7.3,SNR=2.6						
ULM	Lac du Bonnet	22.67	81	LR	LR	22 09 05.9	
	comp=Z,152nm,20.9s,baz=180,slow=37						
TXAR	Lajitas Array	31.34	127	P	P	22 01 17.1	-1.3
	0.1nm,0.8s,baz=336,slow=8.0,SNR=2.5						
MKAR	Makanchi Array	76.71	336	P	P	22 06 49.6	+1.0
	0.3nm,0.7s,baz=38,slow=5.1,SNR=4.4						

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*NEIC **06** 21:55:02.9±4.7, 11°.63S×164°.93E, h7^{km}±29^{km}, mb4.4/18, Error ellipse: s-maj=10.9km s-min=9.0km az=74.0*

*IDC **06** 21:55:02.0±0.8, 11°.63S×164°.96E, h0^{km}, mb4.2/12, mb1 4.4/15, mb1mx4.2/39, mbtmp4.2/15, ML4.0/3, Error ellipse: s-maj=24.2km s-min=18.7km az=116.0*

*ISCJB **06** 21:55:05.5±0.3, 11°.72S±0°.06×164°.82E±0°.06, h34^{km}, mb4.3/28, Error ellipse: s-maj=9.1km s-min=7.9km az=9.0*

ISC 06 21:55:06.8±0.5**, 11°.66S**±0°.08×**164°.89E**±0°.09**, h34**^{km}**, n50, σ1^{s}05**/56**, mb4.4**/28**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.35	294	Pn	Pn	21 56 24.7	+0.5
HNR				eSn	Sn	21 57 24.2	-0.5
HNR	Honiara	5.35	294	Pn	Pn	21 56 24.7	+0.5
	16nm,0.3s,baz=153,slow=5.4,SNR=6.5						
DZM	Mont Dzumac	10.46	172	Pn	Pn	21 57 34.2	-0.2
	1.0nm,0.3s,baz=38,slow=7.4,SNR=16						
PATS	Pohnpei	19.51	340	eP	P	21 59 28.2	-3.1
	58nm,0.8s						
CTA	Charters Tower	19.77	243	P	Pn	21 59 35.7	-0.2
	0.2nm,0.3s,baz=51,slow=13,SNR=3.9						
COEN	Coen	21.30	262	eP	P	21 59 51.0	+0.2
	16nm,1.1s						
WR1	Warramunga Arr	30.49	250	eP	P	22 01 17.3	+0.4
	3.0nm,0.7s						
WR1				ePcP	PcP	22 04 16.8	+1.1
WRA	Warramunga Arr	30.49	250	P	P	22 01 17.3	+0.4
	2.5nm,0.7s,baz=82,slow=9.0,SNR=22						
WRA				PcP	PcP	22 04 16.8	+1.1
	0.8nm,0.9s,baz=63,slow=2.7,SNR=4.9						
AS31	Alice Springs	31.77	244	eP	P	22 01 28.1	0.0
	0.8nm,0.8s						
ASAR	Alice Springs	31.77	244	P	P	22 01 28.1	-0.1
	2.2nm,0.8s,baz=73,slow=9.4,SNR=23						
ASAR				PcP	PcP	22 04 19.6	+0.5
	0.6nm,1.0s,baz=90,slow=2.8,SNR=3.7						
RPZ	Rata Peaks	32.38	172	P	P	22 01 33.5	+0.3
	6.0nm,0.7s,baz=312,slow=4.4,SNR=3.9						
TAU	Tasmania Unive	34.68	203	eP	P	22 01 51.0	-2.2
	4.3nm,0.8s						
MJAR	Matsushiro Arr	54.14	333	P	P	22 04 28.2	-0.5
	2.4nm,0.6s,baz=171,slow=8.5,SNR=6.1						
MAJO	Matsushiro	54.14	333	eP	P	22 04 28.2	-0.5
PETK	Petropavlovsk-	64.80	355	P	P	22 05 41.8	-0.2
	5.6nm,1.0s,baz=146,slow=10,SNR=2.7						
PEA1	Petropavlovsk-	64.81	355	eP	P	22 05 41.8	-0.2
XAN	Xi'an	69.92	313	eP	P	22 06 15.2	+0.4
	3.3nm,0.8s						
CMAR	Chiang Mai Arr	71.60	294	P	P	22 06 26.7	+1.4
	0.8nm,0.7s,baz=127,slow=4.7,SNR=7.1						
ULN	Ulaanbaatar	78.31	324	eP	P	22 07 04.9	+1.3
	3.7nm,0.8s						
QSPA	South Pole Qui	78.35	180	eP	P	22 07 02.8	-0.8
	5.5nm,0.8s						
SONA0	Songino Array	78.67	324	eP	P	22 07 06.7	+1.1
SONM	Songino Array	78.67	324	P	P	22 07 06.7	+1.1
	0.8nm,0.6s,baz=137,slow=5.1,SNR=7.7						
SONA1	Songino Array	78.67	324	eP	P	22 07 03.1	-2.5
BILL	Bilibino	79.50	1	eP	P	22 07 08.3	-1.2
	6.6nm,1.1s						
IL1	Eielson Array	84.36	19	eP	P	22 07 34.7	-0.5
ILAR	Eielson Array	84.36	19	P	P	22 07 35.6	+0.5
	1.6nm,0.7s,baz=236,slow=5.1,SNR=20						
ILB	Eielson Array	84.36	19	eP	P	22 07 34.2	-1.0
	2.5nm,0.8s						
NV01	Mina Array Sit	87.06	50	eP	P	22 07 50.5	+1.1
NVAR	Mina Array Bea	87.06	50	P	P	22 07 50.2	+0.8
	0.4nm,0.5s,baz=244,slow=7.6,SNR=4.4						
BMN	Battle Mountai	88.44	48	eP	P	22 07 54.7	-1.2
	5.6nm,0.6s						
SHPR	Sheep Range	88.92	53	eP	P	22 08 00.2	+1.9
	2.2nm,1.1s						
R11A	Troy Canyon, C	89.08	51	eP	P	22 07 59.0	0.0
	0.3nm,0.4s						
W13A	Hualapai Mount	89.56	54	eP	P	22 08 02.7	+1.3
	2.0nm,0.8s						
KNB	Kanab	90.87	52	eP	P	22 08 09.3	+1.9
	2.2nm,1.1s						
HVU	Hansel Valley	92.04	48	eP	P	22 08 14.6	+1.9
	1.5nm,1.0s						
MK01	Makanchi Array	93.39	317	eP	P	22 08 19.4	+0.7
MK31	Makanchi Array	93.40	317	eP	P	22 08 19.9	+1.2
	1.8nm,0.8s						
MK32	Makanchi Array	93.40	317	eP	P	22 08 19.5	+0.8
MKAR	Makanchi Array	93.40	317	P	P	22 08 19.5	+0.8
	1.8nm,0.7s,baz=90,slow=6.4,SNR=17						
ZALV	Zalesovo Beam	93.57	324	P	P	22 08 19.5	+0.2
	0.8nm,0.7s,baz=108,slow=4.8,SNR=4.8						
ZAA1	Zalesovo Array	93.57	324	eP	P	22 08 19.5	+0.2
MAKZ	Makanchi	93.61	317	eP	P	22 08 20.8	+1.1
	3.3nm,1.0s						
YKA	Yellowknife Ar	95.90	27	P	P	22 08 29.0	-0.7
	0.4nm,0.7s,baz=262,slow=4.2,SNR=3.0						
YKB5	Yellowknife Ar	95.90	27	eP	P	22 08 29.0	-0.7
X48A	Hartselle	111.35	58	ePdif	Pdif	22 09 40.4	+1.0
ARA0	ARCESS Array S	116.72	345	ePKPdf	PKiKP	22 13 47.5	+0.5
ARCES	ARCESS Array B	116.72	345	PKP	PKiKP	22 13 47.5	+0.5
	1.1nm,0.7s,baz=270,slow=0.9,SNR=3.9						
MNMC	Minye Minye	118.20	119	ePKPdf	PKiKP	22 13 52.3	+0.6
TORD	Torodi Ar. Bea	163.52	277	PKP	PKPdf	22 15 07.5	+0.4
	0.3nm,0.7s,baz=203,slow=2.0,SNR=3.1						
TORD				PKPab	PKPab	22 15 59.0	+0.4
	0.4nm,0.9s,baz=102,slow=5.0,SNR=3.0						
TOA1	Torodi Ar. Sit	163.53	277	ePKPdf	PKPdf	22 15 07.5	+0.4
TOA1				ePKPab	PKPab	22 15 59.0	+0.4

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*IDC **06** 22:00:38.5±1.0, 11°.20S×165°.07E, h0^{km}, mb3.9/10, mb1 4.2/12, mb1mx3.9/42, mbtmp4.0/12, ML4.4/2, Error ellipse: s-maj=31.7km s-min=19.2km az=134.0*

*NEIC **06** 22:00:39.9±0.6, 11°.22S×165°.08E, h10^{km}, mb4.2/3, Error ellipse: s-maj=11.9km s-min=10.6km az=115.0*

*ISCJB **06** 22:00:41.7±0.6, 11°.29S±0°.08×164°.92E±0°.07, h31^{km}, mb3.9/12, Error ellipse: s-maj=12.2km s-min=10.1km az=26.6*

ISC 06 22:00:43.2±0.8**, 11°.2S**±0°.1×**165°.0E**±0°.1**, h31**^{km}**, n28, σ1^{s}03**/23**, mb4.0**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.29	289	Pn	Pn	22 02 00.6	+0.5
HNR				eSn	Sn	22 02 57.9	-2.0
HNR	Honiara	5.29	289	Pn	Pn	22 02 00.6	+0.5
	23nm,0.3s,baz=148,slow=13,SNR=8.0						
DZM	Mont Dzumac	10.88	173	Pn	Pn	22 03 16.4	-0.5
	1.5nm,0.3s,baz=299,slow=13,SNR=12						
MANU	Manus Island	19.73	296	eP	P	22 05 09.0	-1.6
CTA	Charters Tower	20.08	242	P	P	22 05 15.7	+1.4
	8.8nm,0.9s,baz=77,slow=13,SNR=4.0						
COEN	Coen	21.48	260	eP	P	22 05 31.0	+1.6
	12nm,1.0s						
H11S2	WAKE ISLAND Hy	29.57	3	T	T	22 37 53.0	
	baz=184,slow=76,SNR=4.5						
H11S3	WAKE ISLAND Hy	29.57	3	T	T	22 37 51.7	
	baz=184,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	29.59	3	T	T	22 37 54.2	
	baz=184,slow=76,SNR=3.8						
STKA	Stephens Creek	29.82	223	P	P	22 06 48.9	+1.3
	3.7nm,0.8s,baz=34,slow=8.7,SNR=6.8						
WB2	Warramunga Arr	30.73	250	eP	P	22 06 55.0	-0.8
WRAB	Tennant Creek	30.73	250	eP	P	22 06 55.8	0.0
WR1	Warramunga Arr	30.74	250	eP	P	22 06 55.9	0.0
	7.9nm,1.0s						
WRA	Warramunga Arr	30.74	250	P	P	22 06 55.9	0.0
	2.9nm,0.7s,baz=80,slow=8.9,SNR=14						
H11N1	WAKE ISLAND Hy	30.80	3	T	T	22 39 37.2	
	baz=181						
H11N3	WAKE ISLAND Hy	30.80	4	T	T	22 39 30.2	
	baz=181						
H11N2	WAKE ISLAND Hy	30.81	3	T	T	22 39 32.6	
	baz=181						
AS31	Alice Springs	32.06	243	eP	P	22 07 07.2	-0.3
	0.9nm,0.8s						
ASAR	Alice Springs	32.06	243	P	P	22 07 06.6	-1.0
	1.6nm,0.7s,baz=72,slow=9.7,SNR=19						
CMAR	Chiang Mai Arr	71.52	294	P	P	22 12 02.6	+1.0
	0.4nm,0.8s,baz=104,slow=3.8,SNR=3.8						
SONA0	Songino Array	78.38	324	eP	P	22 12 41.1	+0.3
SONM	Songino Array	78.38	324	P	P	22 12 41.1	+0.3
	0.2nm,0.4s,baz=108,slow=4.7,SNR=2.7						
QSPA	South Pole Qui	78.78	180	eP	P	22 12 40.9	-1.9
ILAR	Eielson Array	83.91	19	P	P	22 13 09.5	-0.2
	0.4nm,0.9s,baz=237,slow=3.9,SNR=2.9						
NVAR	Mina Array Bea	86.69	50	P	P	22 13 24.1	-0.4
	0.2nm,0.5s,baz=254,slow=9.2,SNR=3.3						
INK	Inuvik	90.30	19	P	P	22 13 41.4	+0.8
	0.6nm,0.5s,baz=180,slow=3.0,SNR=4.7						
MK32	Makanchi Array	93.15	317	eP	P	22 13 54.6	+0.2
MKAR	Makanchi Array	93.15	317	P	P	22 13 54.7	+0.3
	0.3nm,0.4s,baz=107,slow=5.0,SNR=8.8						

IDC 06 22:05:01.4±1.7**, 11°.10S**×**165°.11E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.5**/49**, mbtmp3.5**/4**, ML3.7**/1**, Error ellipse: s-maj=52.0km s-min=30.8km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.98	173	Pn	Pn	22 07 40.2	+0.2
	0.6nm,0.3s,baz=324,slow=19,SNR=4.4						
WRA	Warramunga Arr	30.88	250	P	P	22 11 20.2	+0.4
	0.3nm,0.6s,baz=82,slow=9.1,SNR=4.0						
ASAR	Alice Springs	32.21	243	P	P	22 11 31.2	-0.4
	0.2nm,0.5s,baz=66,slow=9.9,SNR=3.3						
ILAR	Eielson Array	83.76	19	P	P	22 17 32.1	0.0
	0.3nm,0.9s,baz=238,slow=5.2,SNR=3.2						

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*IDC **06** 22:07:37.0±0.7, 12°.01S×166°.10E, h0^{km}, mb4.6/17, mb1 4.6/19, mb1mx4.4/48, mbtmp4.6/19, ML4.8/2, Error ellipse: s-maj=22.1km s-min=15.8km az=118.0*

*NEIC **06** 22:07:38.8±0.3, 12°.02S×166°.03E, h10^{km}, mb4.9/15, Error ellipse: s-maj=9.2km s-min=6.9km az=98.0*

*ISCJB **06** 22:07:40.2±0.4, 12°.13S±0°.05×165°.96E±0°.07, h30^{km}, mb4.6/36, Error ellipse: s-maj=9.9km s-min=7.3km az=167.6*

ISC 06 22:07:41.9±0.5**, 12°.07S**±0°.08×**166°.04E**±0°.08**, h30**^{km}**, n64, σ0^{s}99**/70**, mb4.6**/36**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.53	293	eP	Pn	22 09 17.0	+1.0
HNR				eS	Sn	22 10 17.0	-13
HNR	Honiara	6.53	293	ePn	Pn	22 09 16.5	+0.5
HNR				eS	Sn	22 10 29.7	+0.1
HNR	Honiara	6.53	293	Pn	Pn	22 09 16.5	+0.5
	67nm,0.3s,baz=131,slow=5.0,SNR=20						
HNR				Sn	Sn	22 10 27.2	-2.4
	38nm,0.3s,baz=18,slow=20,SNR=3.0						
DZM	Mont Dzumac	9.95	178	ePn	Pn	22 10 04.5	+1.5
DZM	Mont Dzumac	9.95	178	Pn	Pn	22 10 03.4	+0.3
	2.5nm,0.3s,baz=10,slow=18,SNR=14						
ONTNC	Ouen Toro	10.19	178	ePn	Pn	22 10 07.4	+1.3
MSVF	Nonsavu	12.90	117	ePn	P	22 10 49.3	-4.5
CTA	Charters Tower	20.60	245	P	P	22 12 18.6	-0.1
	20nm,0.9s,baz=68,slow=12,SNR=12						
CTAO	Charters Tower	20.60	245	eP	P	22 12 17.8	-0.9
	31nm,0.9s						
STKA	Stephens Creek	29.91	225	eP	P	22 13 48.7	+1.5
	1.5nm,0.9s						
STKA	Stephens Creek	29.91	225	P	P	22 13 47.6	+0.4
	4.6nm,0.8s,baz=36,slow=9.0,SNR=6.0						
LTZ	Lake Taylor	31.07	171	eP	P	22 13 56.2	-1.2
	19nm,1.2s						
WB2	Warramunga Arr	31.40	252	eP	P	22 13 59.9	-0.7
WB2				ePcP	PcP	22 16 54.3	+0.4
WRAB	Tennant Creek	31.40	252	eP	P	22 14 00.4	-0.2

	5.5nm,0.9s						
WRA	**Warramunga Arr**	**31.42**	**252**	P	**P**	**22 13 59.7**	**-1.0**
	3.6nm,0.8s,baz=79,slow=8.8,SNR=20						
WRA				PcP	**PcP**	**22 16 54.4**	**+0.5**
	1.4nm,0.8s,baz=77,slow=2.8,SNR=4.5						
RPZ	**Rata Peaks**	**31.83**	**173**	P	**P**	**22 14 04.4**	**+0.4**
	8.8nm,0.5s,baz=323,slow=4.9,SNR=6.3						
AS01	**Alice Springs**	**32.56**	**245**	*e*P	**P**	**22 14 09.5**	**-1.2**
AS01				*e*PcP	**PcP**	**22 16 56.7**	**-0.3**
AS31	**Alice Springs**	**32.60**	**245**	*e*P	**P**	**22 14 10.4**	**-0.7**
	1.4nm,0.8s						
ASAR	**Alice Springs**	**32.60**	**245**	P	**P**	**22 14 10.2**	**-1.0**
	4.8nm,0.8s,baz=74,slow=9.5,SNR=42						
ASAR				PcP	**PcP**	**22 16 56.9**	**-0.3**
	2.1nm,0.9s,baz=96,slow=3.7,SNR=6.8						
FITZ	**Fitzroy Crossi**	**39.40**	**256**	P	**P**	**22 15 09.4**	**0.0**
	4.7nm,0.9s,baz=73,slow=8.2,SNR=7.3						
BATI	**Baumata**	**41.59**	**268**	P	**P**	**22 15 28.1**	**+0.5**
	9.5nm,0.3s,baz=177,slow=1.3,SNR=6.6						
MBWA	**Marble Bar**	**45.15**	**252**	*e*P	**P**	**22 15 56.8**	**+0.6**
	37nm,0.8s						
MJAR	**Matsushiro Arr**	**55.01**	**333**	P	**P**	**22 17 08.7**	**-2.0**
	4.2nm,0.8s,baz=168,slow=9.6,SNR=7.5						
KSRS	**Korea Array**	**60.88**	**326**	P	**P**	**22 17 51.7**	**-0.1**
	3.0nm,0.8s,baz=129,slow=8.1,SNR=6.7						
KSAR	**Wonju Array Be**	**60.89**	**326**	P	**P**	**22 17 51.7**	**-0.2**
NJ2	**Nanjing**	**62.95**	**316**	*e*P	**P**	**22 18 05.5**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**63.99**	**333**	P	**P**	**22 18 12.7**	**+0.3**
	comp=Z,9.9nm,1.0s,baz=142,slow=5.9,SNR=6.9						
CASY	**Casey**	**65.53**	**201**	*e*P	**P**	**22 18 21.2**	**-1.0**
	comp=Z,0.8nm,0.5s						
CN2	**Changchun**	**66.76**	**329**	*e*P	**P**	**22 18 30.6**	**+0.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA	**Guiyang**	**69.23**	**304**	*e*P	**P**	**22 18 48.0**	**+1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	**Baijiatuau**	**69.45**	**321**	*e*P	**P**	**22 18 47.9**	**+0.6**
	comp=Z,5.8nm,0.9s						
XAN	**Xi'an**	**71.02**	**312**	P	**P**	**22 18 58.1**	**+0.9**
XAN				pP	sP	22 19 07.1	-0.3
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN	**Xi'an**	**71.02**	**312**	*e*P	**P**	**22 18 57.9**	**+0.7**
	comp=Z,4.0nm,0.8s						
KMI	**Kunming**	**71.90**	**302**	P	**P**	**22 19 04.8**	**+1.9**
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC	**Hu-ho-hao-te**	**72.80**	**320**	*e*P	**P**	**22 19 07.2**	**-0.6**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HIA	**Hailar**	**73.40**	**330**	*e*P	**P**	**22 19 10.6**	**-0.5**
	comp=Z,20nm,1.1s						
QSPA	**South Pole Qui**	**77.94**	**180**	*e*P	**P**	**22 19 36.8**	**-0.3**
	comp=Z,27nm,1.1s						
ULN	**Ulaanbaatar**	**79.30**	**324**	*e*P	**P**	**22 19 45.4**	**+0.7**
	comp=Z,17nm,0.9s						
SONM	**Songino Array**	**79.66**	**324**	P	**P**	**22 19 47.2**	**+0.5**
	comp=Z,5.5nm,0.8s,baz=139,slow=4.5,SNR=32						
SONA1	**Songino Array**	**79.66**	**324**	*e*P	**P**	**22 19 47.1**	**+0.4**
GTA	**Gaotai**	**79.97**	**314**	⇑P	**P**	**22 19 51.0**	**+2.4**
GTA				pP	PcP	22 19 55.4	-0.6
GTA				sP	sP	22 19 58.1	-0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY	**Talaya**	**83.13**	**326**	*e*P	**P**	**22 20 04.7**	**-0.2**
	comp=Z,27nm,0.8s						
HDA	**Harding Lake**	**84.12**	**19**	*e*P	**P**	**22 20 10.6**	**+0.9**
	comp=Z,4.4nm,1.0s						
ILAR	**Eielson Array**	**84.39**	**18**	P	**P**	**22 20 09.0**	**-2.0**
	comp=Z,1.1nm,0.9s,baz=241,slow=5.6,SNR=7.1						
ILB	**Eielson Array**	**84.39**	**18**	*e*P	**P**	**22 20 11.4**	**+0.4**
NVAR	**Mina Array Bea**	**86.46**	**50**	P	**P**	**22 20 21.0**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=235,slow=7.6,SNR=2.3						
SYO	**Syowa Base**	**90.89**	**197**	⇑*i*P	**P**	**22 20 40.2**	**-2.2**
MK01	**Makanchi Array**	**94.45**	**317**	*e*P	**P**	**22 20 59.2**	**0.0**
MK31	**Makanchi Array**	**94.46**	**317**	*e*P	**P**	**22 20 59.0**	**-0.3**
MKAR	**Makanchi Array**	**94.46**	**317**	*e*P	**P**	**22 20 59.0**	**-0.3**
	comp=Z,71nm,0.9s						
MKAR	**Makanchi Array**	**94.46**	**317**	P	**P**	**22 20 59.7**	**+0.4**
	comp=Z,12nm,0.8s,baz=98,slow=6.2,SNR=120						
ZAA0	**Zalesovo Array**	**94.55**	**324**	*e*P	**P**	**22 20 58.7**	**-0.8**
	comp=Z,6.3nm,0.9s						
ZALV	**Zalesovo Beam**	**94.55**	**324**	*e*P	**P**	**22 20 58.1**	**-1.3**
ZALV	**Zalesovo Beam**	**94.55**	**324**	P	**P**	**22 20 58.6**	**-0.9**
	comp=Z,6.1nm,0.8s,baz=118,slow=4.2,SNR=28						
MAKZ	**Makanchi**	**94.67**	**317**	*e*P	**P**	**22 21 00.5**	**+0.2**
	comp=Z,12nm,1.0s						
YKA	**Yellowknife Ar**	**95.75**	**27**	P	**P**	**22 21 05.8**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=254,slow=4.5,SNR=10						
KURK	**Kurchatov**	**97.61**	**320**	P	**P**	**22 21 12.7**	**-0.7**
KURBB	**Kurchatov Arra**	**97.65**	**320**	P	**P**	**22 21 12.7**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=104,slow=3.5,SNR=5.5						
BVAR	**Borovoye Array**	**102.93**	**322**	P	**Pdif**	**22 21 36.5**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=108,slow=4.7,SNR=6.4						
M54A	**Oil Creek Stat**	**116.07**	**50**	*e*PKPdf	**PKiKP**	**22 26 24.2**	**+1.9**
SSPA	**Standing Stone**	**117.52**	**50**	*e*PKPdf	**PKPdf**	**22 26 25.0**	**-0.1**
SDMD	**Soldier’s Deli**	**118.48**	**52**	*e*PKPdf	**PKiKP**	**22 26 27.4**	**+0.4**
TOA0	**Torodi Ar. Sit**	**164.68**	**276**	*e*PKPdf	**PKPdf**	**22 27 43.0**	**-0.9**
TORD	**Torodi Ar. Bea**	**164.68**	**276**	PKP	**PKPdf**	**22 27 42.8**	**-1.1**
	comp=Z,2.1nm,0.9s,baz=20,slow=2.5,SNR=6.4						
TORD				PKPab	**PKPab**	**22 28 39.8**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=83,slow=4.7,SNR=2.7						

NEIC ***06*** *22:12:17.6±0.1, 1°.54S×100°.28E, h10^{km}, mb5.5/110, MS5.4/105, Error ellipse: s-maj=4.7km s-min=3.5km az=47.0*

NEIC Felt [IV] at Padang and [III] at Padangpanjang, Painan and Pariaman.

BJI ***06*** *22:12:17.0, 1°.50S×100°.30E, h11^{km}, mB5.2/47, mb5.0/70, Ms5.4/70, Ms7 5.2/65*

DJA ***06*** *22:12:18.7±0.2, 2°S±2°×10°0E±°, h10^{km}, M5.3/42, mb5.5/42, mB5.7/31, MLv5.9/22, Mw(mB)5.2/31, Mwp5.3/1*

GCMT ***06*** *22:12:19.6±0.2, 1°.50S±0°.01×100°.19E±0°.01, h17^{km}±1^{km}, MW5.2/85, Moment Tensor Solution. s32,c40; s85,c131; Duration: 1^{s}.9 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.42±.03; M$_{\theta\theta}$0.65±.02; M$_{\phi\phi}$-1.07±.03; M$_{r\theta}$-0.09±.06; M$_{\theta\phi}$-0.20±.02; M$_{\phi r}$-0.14±.06; Best double couple: M$_{0}$0.90100×10^{17} NP1:φ$_{s}$230.00000°, δ83.00000°, λ165.00000°. NP2:φ$_{s}$322.00000°, δ75.00000°, λ7.00000°. Principal axes: T 0.6940, Plg15.0000°, Azm185.0000°; N 0.4120, Plg74.0000°, Azm27.0000°; P -1.1080, Plg6.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***06*** *22:12:19.7±1.7, 1°.44S×100°.39E, h24^{km}±11^{km}, mb5.2/51, mb1 5.2/54, mb1mx5.2/61, mbtmp5.3/54, ML4.7/3, MS4.6/16, Ms1 4.6/16, ms1mx4.3/39 Error ellipse: s-maj=10.4km s-min=7.8km az=52.0*

MOS ***06*** *22:12:19.2±1.1, 1°.33S×100°.44E, h31^{km}, mb5.8/61, MS4.7/20, Error ellipse: s-maj=8.1km s-min=3.9km az=114.3*

ISCJB ***06*** *22:12:19.5±0.5, 1°.48S±0°.02×100°.28E±0°.02, h32^{km}±3^{km}, mb5.5/230, MS5.2/148, Error ellipse: s-maj=3.8km s-min=2.4km az=138.6*

ISC 06 22:12:20.6±0.5**, 1°.54S**±0°.03×**100°.29E**±0°.03**, h29**^{km}±3^{km}**, n1157, σ1^{s}.49**/1203**, mb5.5**/235**, MS5.2**/149**, 54C-39D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**0.65**	**15**	P	**Pb**	**22 12 30.7**	**-2.7**
PPI	**Padang Panjang**	**1.08**	**6**	P	**Pn**	**22 12 38.4**	**-1.4**
SISI	**Saibi**	**1.22**	**280**	P	**Pn**	**22 12 38.3**	**-3.4**
PPSI	**Pulau Pagai**	**1.25**	**193**	P	**Pn**	**22 12 41.9**	**-0.2**
SDSI	**Sungai Dareh**	**1.29**	**62**	P	**Pn**	**22 12 42.9**	**+0.3**
KRJI	**Kerinci**	**1.29**	**115**	P	**Pb**	**22 12 43.9**	**-0.4**
BKNI	**Bangkinang**	**2.00**	**22**	*e*Pn	**Pn**	**22 12 54.0**	**+1.5**
BKNI	**Bangkinang**	**2.00**	**22**	P	**Pn**	**22 12 52.7**	**+0.3**
RGRI	**Rengat**	**2.36**	**60**	P	**Pn**	**22 12 58.2**	**+0.8**
MNSI	**Mandailing Nat**	**2.43**	**343**	P	**Pn**	**22 12 58.0**	**-0.3**
PBSI	**Pulau Batu**	**2.49**	**306**	P	**Pn**	**22 12 58.3**	**-0.9**
MASI	**Maura Aman, Be**	**2.51**	**129**	P	**Pn**	**22 13 00.4**	**+0.9**
JMBI	**JAMBI**	**3.35**	**92**	P	**Pn**	**22 13 12.2**	**+1.2**
MNAI	**Manna**	**3.86**	**137**	*e*Pn	**Pn**	**22 13 20.0**	**+1.9**
MNAI	**Manna**	**3.86**	**137**	P	**Pn**	**22 13 19.3**	**+1.2**
GSI	**Gunungsitoli**	**3.92**	**316**	*e*Pn	**Pn**	**22 13 17.8**	**-1.1**
GSI	**Gunungsitoli**	**3.92**	**316**	P	**Pn**	**22 13 17.6**	**-1.2**
LHSI	**Lahat**	**3.95**	**125**	P	**Pn**	**22 13 21.2**	**+2.0**
DSRI	**Dabo**	**4.41**	**76**	P	**Pn**	**22 13 29.3**	**+3.7**
PSI	**Prapat**	**4.52**	**342**	Pn	**Pn**	**22 13 25.4**	**-1.8**
	24nm,0.3s,baz=180,slow=12,SNR=83						
PSI				Lg	Lg	22 14 34.3	
	28nm,0.3s,baz=180,slow=19,SNR=2.4						
PMBI	**Palembang**	**4.69**	**107**	P	Pb	22 13 35.9	-6.2
MYKOM	**Kota Tinggi**	**4.86**	**47**	*e*Pn	**Pn**	**22 13 33.1**	**+1.4**
MDSI	**Maura Dua**	**4.86**	**127**	P	**Pn**	**22 13 33.7**	**+1.9**
TPRI	**Tanjung Pinang**	**4.89**	**60**	P	**Pn**	**22 13 33.5**	**+1.3**
LWLI	**Liwa**	**5.11**	**133**	P	**Pn**	**22 13 37.2**	**+1.9**
	1µm,0.6s,38µm7.7nm						
TSI	**Tuntungan**	**5.30**	**341**	P	**Pn**	**22 13 39.8**	**+2.0**
SNSI	**Sinabang, Aceh**	**5.58**	**315**	P	**Pn**	**22 13 40.4**	**-1.2**
	936nm,0.6s,11µm6.6nm						
KCSI	**Kotacane, Aceh**	**5.62**	**333**	P	**Pn**	**22 13 40.9**	**-1.4**
	1µm,1.1s,15µm16nm						
KLI	**Kotabumi**	**5.63**	**126**	P	Pn	22 13 47.6	+5.3
KASI	**Kota Agung**	**5.77**	**133**	P	**Pn**	**22 13 45.1**	**+0.8**
	874nm,1.0s,11µm5.4nm						
PPBI	**Pangkal Pinang**	**5.88**	**96**	P	**Pn**	**22 13 47.5**	**+1.8**
	444nm,0.8s,4µm5.5nm						
IPM	**Ipoh**	**6.02**	**7**	*e*Pn	**Pn**	**22 13 50.1**	**+2.2**
BLSI	**Bandar Lampung**	**6.24**	**128**	P	Pn	22 13 56.2	+5.5
KULM	**Kulim**	**6.79**	**3**	*e*Pn	**Pn**	**22 13 59.9**	**+1.5**
TPI	**Tanjungpandan**	**7.46**	**99**	P	**Pn**	**22 14 11.2**	**+3.7**
LHMI	**Lhok Sumawe**	**7.51**	**334**	*e*Pn	**Pn**	**22 14 09.3**	**+1.1**
LHMI	**Lhok Sumawe**	**7.51**	**334**	P	**Pn**	**22 14 10.4**	**+2.2**
SKLT	**Songkhla**	**8.66**	**2**	P	**Pn**	**22 14 26.9**	**+2.9**
	230nm,0.9s,4µm2.3nm						
LEM	**Lembang**	**9.00**	**126**	Pn	**Pn**	**22 14 29.1**	**+0.3**
	3.5nm,0.3s,baz=357,slow=18,SNR=12						
LEM				LR	LR	22 18 15.4	
	comp=Z,6µm,18.8s,baz=286,slow=40						
TRTT	**Trang**	**9.33**	**356**	P	**Pn**	**22 14 34.6**	**+1.4**
	216nm,1.0s,3µm						
JCJI	**Jatiwangi**	**9.35**	**122**	P	Pn	22 14 39.8	+6.3
PKDT	**Phuket**	**9.57**	**348**	P	**Pn**	**22 14 36.8**	**+0.3**
	101nm,0.6s,969nm						
CISI	**Cisompet, Garu**	**9.59**	**129**	*e*Pn	**Pn**	**22 14 35.9**	**-0.9**
CISI	**Cisompet, Garu**	**9.59**	**129**	P	**Pn**	**22 14 36.5**	**-0.3**
	354nm,0.7s,4µm						
CMJI	**Cimerak**	**10.22**	**128**	P	**Pn**	**22 14 46.6**	**+1.2**
	189nm,1.1s,3µm						
KPJI	**Karang Pucung**	**10.36**	**124**	P	**Pn**	**22 14 49.4**	**+2.1**
	177nm,0.8s,2µm						
KSM	**Kuching**	**10.45**	**73**	*e*Pn	**Pn**	**22 14 50.2**	**+1.5**
COCO	**West Island**	**11.12**	**198**	*e*Pn	**Pn**	**22 14 55.1**	**-2.6**
COCO				*e*S	Sn	22 16 51.5	-10
COCO	**West Island**	**11.12**	**198**	*e*P	**Pn**	**22 14 55.1**	**-2.6**
SMRI	**Semarang**	**11.50**	**119**	*e*Pn	**Pn**	**22 15 06.7**	**+3.7**
SMRI	**Semarang**	**11.50**	**119**	P	**Pn**	**22 15 07.5**	**+4.5**
UGM	**Wanagama**	**12.00**	**122**	*e*Pn	**Pn**	**22 15 09.6**	**-0.2**
UGM	**Wanagama**	**12.00**	**122**	P	**Pn**	**22 15 10.7**	**+0.9**
	400nm,1.4s,9µm						
WOJI	**Wonogiri, Jawa**	**12.30**	**121**	P	**Pn**	**22 15 15.7**	**+1.8**
	74nm,1.0s						
NGJI	**Ngawi**	**12.55**	**118**	P	**Pn**	**22 15 21.8**	**+4.5**
SBUM	**Sibu**	**12.57**	**72**	*e*Pn	**Pn**	**22 15 21.7**	**+4.2**
PCJI	**Pacitan**	**12.70**	**122**	P	**Pn**	**22 15 22.0**	**+2.7**
	135nm,1.2s,2µm						
PWJI	**Pagerwojo**	**13.15**	**120**	P	**Pn**	**22 15 26.8**	**+1.3**
	137nm,1.4s,2µm						
GRJI	**Gresik**	**13.27**	**114**	P	**P**	**22 15 32.2**	**-4.4**
PATY	**Pattaya**	**14.38**	**2**	P	P	22 15 55.0	+6.1
MTKI	**Muara Teweh, K**	**14.61**	**88**	P	**P**	**22 15 52.3**	**+0.7**
KMMI	**Kalianget**	**14.69**	**112**	P	**Pn**	**22 15 49.1**	**+2.6**
GMJI	**Gumukmas**	**14.71**	**117**	P	**Pn**	**22 15 49.0**	**+2.2**
	74nm,1.0s,2µm						
PBA	**Port Blair**	**15.10**	**330**	*e*Pn	Pn	22 15 52.1	+0.1
	97nm,0.7s						
JAGI	**Jajag, Banyuwa**	**15.42**	**117**	*e*Pn	**Pn**	**22 15 54.6**	**-1.7**
	143nm,1.0s						
JAGI	**Jajag, Banyuwa**	**15.42**	**117**	P	**P**	**22 16 00.2**	**-0.4**
SRAK	**Srakaew**	**15.55**	**6**	P	**P**	**22 16 02.2**	**+0.3**
	166nm,0.8s,2µm						
SRDT	**SRDT**	**15.83**	**356**	P	**P**	**22 16 07.4**	**+2.4**
KBKI	**Kotabaru**	**15.96**	**97**	P	**P**	**22 16 06.1**	**-0.4**
	70nm,1.0s,842nm						
SRBI	**Singaraja**	**16.22**	**114**	P	**Pn**	**22 16 07.9**	**+1.3**
	108nm,0.8s,2µm						
DNP	**Denpasar**	**16.46**	**116**	P	**P**	**22 16 17.2**	**+5.2**
BKB	**Balikpapan**	**16.60**	**89**	P	**P**	**22 16 19.9**	**+6.2**
SMKI	**Samarinda**	**16.95**	**86**	P	**P**	**22 16 22.1**	**+4.6**
UTHA	**Uthaitani**	**17.01**	**357**	P	**P**	**22 16 18.6**	**+0.5**
	18nm,0.8s,187nm						
CHAI	**Chaiyaphum**	**17.41**	**5**	P	**P**	**22 16 24.8**	**+2.2**
	23nm,0.9s,183nm						
KKM	**Kota Kinabalu**	**17.59**	**65**	*e*Pn	**P**	**22 16 26.8**	**+2.1**
	687nm,1.7s						
UMPA	**Umpang Tak**	**17.69**	**355**	P	**P**	**22 16 26.1**	**+0.4**
	39nm,0.9s,252nm						
PBKT	**Sadao Pong**	**18.01**	**2**	*e*Pn	**P**	**22 16 30.2**	**+1.0**
	79nm,1.0s						
PBKT	**Sadao Pong**	**18.01**	**2**	P	**P**	**22 16 30.1**	**+1.0**
	80nm,1.2s,1µm						
SKNT	**Sakolnakorn**	**18.75**	**11**	P	**Pn**	**22 16 38.0**	**0.0**
	14nm,1.4s,893nm						
PLAI	**Plampang**	**18.85**	**113**	P	**P**	**22 16 37.7**	**-0.8**
SUKH	**Sukhothai**	**18.91**	**358**	P	**Pn**	**22 16 41.5**	**+1.6**
	24nm,1.0s						
PCI	**Palu**	**19.55**	**88**	P	**Pn**	**22 16 51.4**	**+3.8**
TTSI	**Tana Toraja**	**19.57**	**95**	P	**Pn**	**22 16 48.6**	**+0.8**
	404nm,0.9s,4µm						
SPSI	**Sidrap Palu**	**19.60**	**97**	P	**Pn**	**22 16 47.7**	**-0.5**
	155nm,0.9s,1µm						
NONG	**Nongkai**	**19.68**	**8**	P	**P**	**22 16 47.0**	**-0.5**
	1.3nm,1.0s,250nm						
CM01	**Chiang Mai Arr**	**19.88**	**356**	*e*P	**P**	**22 16 47.4**	**-2.2**
CM31	**Chiang Mai Arr**	**19.92**	**356**	*e*P	**P**	**22 16 48.8**	**-1.4**
CM31	**Chiang Mai Arr**	**19.92**	**356**	P	**P**	**22 16 49.4**	**-0.7**
	SNR=77						
CMAR	**Chiang Mai Arr**	**19.92**	**356**	P	**P**	**22 16 48.9**	**-1.2**
	3.0nm,0.3s,baz=186,slow=10,SNR=91						
CMAR				PcP	**PcP**	**22 21 07.3**	**+0.7**
	0.1nm,0.3s,baz=213,slow=3.3,SNR=4.8						
CMAR				LR	LR	22 24 36.4	
	comp=Z,2µm,19.7s,baz=184,slow=37						
CMAR				ScP	**ScP**	**22 24 42.0**	**+0.9**
	0.1nm,0.3s,baz=202,slow=4.0,SNR=5.2						
BNSI	**Bone**	**19.99**	**99**	P	**Pn**	**22 16 53.0**	**+0.2**
	757nm,0.8s,10µm						
BKSI	**Bulukumba**	**20.15**	**101**	P	Pn	22 16 53.7	-0.9
	387nm,1.0s,4µm						
CMMT	**Chiang Mai**	**20.27**	**356**	P	**P**	**22 16 53.1**	**-0.8**
	122nm,0.9s,864nm						
CHTO	**Chiang Mai**	**20.27**	**356**	*e*P	**P**	**22 16 54.0**	**0.0**
	103nm,0.9s						
CHTO				LR	LR		
	comp=Z,2µm,21.0s						
CHTO	**Chiang Mai**	**20.27**	**356**	*e*P	**P**	**22 16 54.0**	**0.0**
CHTO				pmax	pmax		
	comp=Z,103nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,2µm,21.0s						
CHTO	**Chiang Mai**	**20.27**	**356**	P	**P**	**22 16 54.2**	**+0.3**
	SNR=54						
CHTO	**Chiang Mai**	**20.27**	**356**	P	**P**	**22 16 53.2**	**-0.8**
	comp=Z,551nm,0.9s,comp=Z,4µm						
PALK	**Pallekele**	**21.42**	**294**	*e*P	**P**	**22 17 07.5**	**+1.0**
	comp=Z,137nm,1.0s						
PALK	**Pallekele**	**21.42**	**294**	*i* P	**P**	**22 17 07.5**	**+1.0**
	SNR=23						
PALK	**Pallekele**	**21.42**	**294**	*e*P	**P**	**22 17 07.5**	**+1.0**
PALK				pmax	pmax		
	comp=Z,137nm,1.0s						
PALK	**Pallekele**	**21.42**	**294**	P	**P**	**22 17 07.1**	**+0.6**
	SNR=13						
PALK				P	**P**	**22 17 07.1**	**+0.6**
	SNR=13						
PALK	**Pallekele**	**21.42**	**294**	P	**P**	**22 17 07.5**	**+1.0**
	comp=Z,134nm,1.1s,baz=116,slow=10.0,SNR=27						
PALK				LR	LR	22 24 19.0	
	comp=Z,3µm,21.7s,baz=117,slow=34						
WSI	**Waingapu**	**21.47**	**113**	P	P	22 17 18.1	+11
BASI	**Baing, Sumba**	**21.93**	**114**	P	**P**	**22 17 13.0**	**+1.1**
	comp=Z,233nm,0.6s,comp=Z,3µm						
KDI	**Kendari**	**22.43**	**97**	P	**P**	**22 17 20.0**	**+2.7**
	comp=Z,127nm,1.1s,comp=Z,2µm						
EDFI	**Ende, Flores**	**22.47**	**109**	P	**P**	**22 17 21.7**	**+3.8**
LUWI	**Luwuk**	**22.48**	**89**	*e*P	**P**	**22 17 19.1**	**+1.2**
	comp=Z,549nm,1.1s						
LUWI	**Luwuk**	**22.48**	**89**	P	**P**	**22 17 19.4**	**+1.6**
	comp=Z,388nm,0.9s,comp=Z,5µm						
QIZ	**Qiongzhong**	**22.49**	**24**	P	**P**	**22 17 18.2**	**+0.3**
QIZ				S	**S**	**22 21 26.0**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,300nm,3.5s						
QIZ				LR	LR		
	comp=Z,5µm,10.8s						
QIZ				LR	LR		
	comp=Z,5µm,10.8s						
QIZ				LR	LR		
	comp=Z,4µm,10.3s						
QIZ	**Qiongzhong**	**22.49**	**24**	*e*P	**P**	**22 17 18.9**	**+1.0**
	comp=Z,30nm,0.8s						
QIZ				LR	LR		
	comp=Z,245nm,21.0s						
BBSI	**Bau Bau**	**22.58**	**101**	P	**P**	**22 17 21.9**	**+3.0**
	comp=Z,28nm,0.8s,comp=Z,1µm						
MMRI	**Maumere**	**22.95**	**109**	*e*P	**P**	**22 17 20.0**	**-2.9**
	comp=Z,79nm,1.0s						
MMRI	**Maumere**	**22.95**	**109**	P	**P**	**22 17 26.2**	**+3.4**
BATI	**Baumata**	**24.77**	**111**	P	**P**	**22 17 38.4**	**-1.7**
BATI	**Baumata**	**24.77**	**111**	P	**P**	**22 17 37.2**	**-2.9**
	comp=Z,21nm,0.4s,baz=346,slow=3.4,SNR=8.4						
BATI				S	**S**	**22 21 52.8**	**-8.2**
	comp=Z,9.0nm,0.5s,baz=29,slow=19,SNR=2.4						
GIRL	**Giralia**	**24.97**	**148**	P	**P**	**22 17 42.9**	**+1.1**
	baz=25,SNR=3.1						
SOEI	**Soe**	**25.20**	**110**	*e*P	**P**	**22 17 41.4**	**-2.7**
	comp=Z,99nm,0.8s						
SOEI	**Soe**	**25.20**	**110**	P	**P**	**22 17 44.9**	**+0.8**
	comp=Z,121nm,1.0s,comp=Z,1µm						
BRDH	**Bariadhala**	**25.50**	**341**	P	**P**	**22 17 46.4**	**-0.2**
	comp=Z,117nm,0.4s,baz=100,slow=4.5,SNR=16						
SANI	**Sanana**	**25.69**	**92**	P	**P**	**22 17 51.9**	**+3.5**
TGY	**Tagaytay City**	**25.69**	**52**	P	**P**	**22 17 49.1**	**+0.7**
	comp=Z,139nm,0.3s,baz=317,slow=4.3,SNR=4.7						
TGY				LR	LR	22 27 43.3	
	comp=Z,1µm,20.4s,baz=273,slow=36						
KMI	**Kunming**	**26.61**	**5**	P	**P**	**22 17 57.8**	**+0.9**
KMI				pP	pP	22 18 04.1	-1.2
KMI				sP	sP	22 18 06.6	-2.2
KMI				S	**S**	**22 22 29.1**	**-1.1**
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				pmax	pmax		
	comp=Z,65nm,3.3s						
KMI				LR	LR		
	comp=Z,1µm,14.3s						
KMI				LR	LR		
	comp=Z,5µm,12.7s						
KMI				LR	LR		
	comp=Z,4µm,13.4s						
DAV	**Davao City (W)**	**26.64**	**71**	*e*P	**P**	**22 17 58.0**	**+0.9**
DAV	**Davao City (W)**	**26.64**	**71**	P	**P**	**22 17 58.3**	**+1.3**
	comp=Z,98nm,0.4s,baz=252,slow=20,SNR=5.1						
DAV				LR	LR	22 29 46.0	
	comp=Z,1µm,21.0s,baz=245,slow=40						
NLAI	**Namlea**	**26.84**	**94**	P	**P**	**22 18 01.5**	**+2.7**
	comp=Z,62nm,0.6s						
TNTI	**Ternate**	**27.17**	**85**	*e*P	**P**	**22 18 04.5**	**+2.7**
	comp=Z,335nm,1.9s						
TNTI	**Ternate**	**27.17**	**85**	P	**P**	**22 18 07.1**	**+5.3**
MBWA	**Marble Bar**	**27.20**	**137**	*e*P	**P**	**22 18 02.3**	**+0.3**
	comp=Z,57nm,0.8s						
MBWA				LR	LR		
	comp=Z,2µm,20.0s						
SHL	**Shillong**	**28.15**	**344**	*e*P	**P**	**22 18 09.7**	**-0.9**
	comp=Z,139nm,0.9s						
SHL	**Shillong**	**28.15**	**344**	*e*P	**P**	**22 18 09.7**	**-0.9**
SHL				pmax	pmax		
	comp=Z,139nm,0.9s						
DGAR	**Diego Garcia**	**28.35**	**257**	PFAKE		22 18 20.0	+7.7
DGAR				LR	LR		
	comp=Z,759nm,19.0s						
H08S2	**Diego Garcia H**	**28.35**	**257**	T	T	22 47 11.8	
	baz=80,slow=75,SNR=119						
H08S3	**Diego Garcia H**	**28.36**	**257**	T	T	22 47 07.5	
	baz=80,slow=75,SNR=196						
H08S1	**Diego Carcia H**	**28.37**	**257**	T	T	22 47 00.8	
	baz=80,slow=75,SNR=65						
GYA	**Guiyang**	**28.51**	**12**	⇑*i*P	**P**	**22 18 13.2**	**-0.5**
GYA				PP	**PnPn**	**22 19 08.2**	**+4.3**
GYA				S	**S**	**22 23 03.0**	**+3.1**
GYA				SS	**SnSn**	**22 24 28.5**	**+8.2**
GYA				ScP	**ScP**	**22 25 05.5**	**+0.9**
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=Z,4µm,17.2s						
GYA				LR	LR		
	comp=Z,4µm,17.6s						
GYA				LR	LR		
	comp=Z,4µm,17.4s						
FITZ	**Fitzroy Crossi**	**29.83**	**125**	P	**P**	**22 18 23.9**	**-1.5**
	baz=30,SNR=24						
FITZ	**Fitzroy Crossi**	**29.83**	**125**	P	**P**	**22 18 24.1**	**-1.3**
	comp=Z,18nm,0.7s,baz=318,slow=7.2,SNR=28						
FITZ				LR	LR	22 31 26.3	
	comp=Z,1µm,19.8s,baz=297,slow=38						
MEEK	**Meekatharra**	**30.54**	**146**	P	**P**	**22 18 32.8**	**+1.1**
	baz=31,SNR=12						
SWI	**Sorong**	**30.97**	**89**	P	P	22 18 41.3	+5.7
MORW	**Morawa**	**31.22**	**153**	P	**P**	**22 18 39.6**	**+1.9**
	baz=31,SNR=5.8						
RAMN	**Ramite**	**31.25**	**336**	*e*P	**P**	**22 18 38.5**	**+0.3**
	comp=Z,224nm,0.9s						
TPUB	**Ta-pu**	**31.65**	**38**	*e*P	**P**	**22 18 42.1**	**+0.6**
	comp=Z,44nm,0.9s						
FAKI	**Fak Fak**	**31.96**	**93**	*e*P	**P**	**22 18 44.1**	**-0.3**
	comp=Z,64nm,1.0s						
FAKI	**Fak Fak**	**31.96**	**93**	P	**P**	**22 18 44.6**	**+0.2**
	comp=Z,61nm,0.8s,comp=Z,1µm						
JIRN	**Jiri**	**32.05**	**336**	*e*P	**P**	**22 18 45.3**	**0.0**
	comp=Z,548nm,0.7s						
YULB	**Yu-li**	**32.13**	**38**	*e*P	**P**	**22 18 46.9**	**+1.2**
	comp=Z,36nm,1.2s						
SSLB	**Suanglung**	**32.21**	**37**	*e*P	**P**	**22 18 47.7**	**+1.3**
	comp=Z,27nm,0.9s						
LSA	**Lhasa**	**32.27**	**345**	P	**P**	**22 18 47.6**	**+0.2**
LSA				pmax	pmax		
	comp=Z,55nm,1.1s						
LSA	**Lhasa**	**32.27**	**345**	*e*P	**P**	**22 18 47.3**	**-0.1**
LSA				*e*S	**S**	**22 23 58.1**	**-1.4**
LSA				LR	LR		
	comp=Z,1µm,21.0s						
LSA	**Lhasa**	**32.27**	**345**	*i* P	**P**	**22 18 46.9**	**-0.5**
	SNR=148						
LSA	**Lhasa**	**32.27**	**345**	*e*P	**P**	**22 18 47.3**	**-0.1**
LSA				*e*S	**S**	**22 23 58.1**	**-1.4**
LSA				MLR	MLR		
	comp=Z,1µm,21.0s						
PKI	**Pulchoki**	**32.29**	**335**	*e*P	**P**	**22 18 46.9**	**-0.5**
	comp=Z,118nm,0.9s						
PKIN	**Phulchoki**	**32.30**	**335**	*e*P	**P**	**22 18 46.8**	**-0.7**
	comp=Z,68nm,0.6s						
GUN	**Gumba**	**32.39**	**336**	*e*P	**P**	**22 18 48.3**	**0.0**
	comp=Z,303nm,0.5s						
CD2	**Chengdu**	**32.44**	**6**	P	**P**	**22 18 49.7**	**+1.4**
CD2				pP	pP	22 18 53.1	-3.7
CD2				S	**S**	**22 24 05.9**	**+4.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,240nm,5.6s						
CD2				LR	LR		
	comp=Z,6µm,11.1s						
CD2				LR	LR		
	comp=Z,5µm,11.5s						
CD2				LR	LR		
	comp=Z,6µm,11.7s						
DMN	**Daman**	**32.45**	**334**	*e*P	**P**	**22 18 48.4**	**-0.4**
	comp=Z,186nm,0.9s						
ENH	**Enshi**	**32.83**	**15**	*e*P	**P**	**22 18 48.9**	**-2.8**
	comp=Z,14nm,0.6s						
ENH				*e*S	**S**	**22 24 03.4**	**-4.0**
ENH				LR	LR		
	comp=Z,2µm,20.0s						
BLDU	**Ballidu**	**32.84**	**153**	P	**P**	**22 18 53.7**	**+1.9**
	baz=33,SNR=8.7						
NACB	**Ninganchiao**	**32.89**	**38**	*e*P	**P**	**22 18 54.2**	**+1.9**
	comp=Z,55nm,1.0s						
KOLN	**Koldanda**	**33.27**	**332**	*e*P	**P**	**22 18 55.8**	**-0.1**
	comp=Z,414nm,0.9s						
DANN	**Dangsing**	**33.69**	**333**	*e*P	**P**	**22 18 59.4**	**-0.2**
	comp=Z,518nm,1.0s						
KDU	**Kakadu**	**33.75**	**111**	P	**P**	**22 18 57.7**	**-2.3**
	baz=34,SNR=8.1						
MUN	**Mundaring**	**33.80**	**155**	P	**P**	**22 19 02.2**	**+2.1**

	baz=34,SNR=38						
PYUN	**Piuthan**	33.83	332	*e*P	**P**	22 19 00.5	-0.3
	comp=Z,368nm,1.1s						
KLBR	**Kellerberrin**	34.14	153	P	**P**	22 19 04.6	+1.4
	baz=34,SNR=12						
WHN	**Wuhan**	34.60	22	⇑P	**P**	22 19 09.1	+2.0
WHN				S	**S**	22 24 35.2	+0.5
WHN				LR	LR		
	comp=Z,4µm,10.0s						
WHN				LR	LR		
	comp=Z,8µm,13.0s						
WHN				LR	LR		
	comp=Z,11µm,13.4s						
NWAO	**Narrogin (SRO)**	35.05	155	P	**P**	22 19 12.8	+1.8
	baz=35,SNR=20						
NWAO	**Narrogin (SRO)**	35.05	155	*e*P	**P**	22 19 12.1	+1.1
	comp=Z,151nm,0.9s						
NWAO	**Narrogin (SRO)**	35.05	155	*e*P	**P**	22 19 12.1	+1.1
NWAO				pmax	pmax		
	comp=Z,151nm,0.9s						
NWAO	**Narrogin (SRO)**	35.05	155	P	**P**	22 19 12.8	+1.8
	SNR=6.7						
NWAO	**Narrogin (SRO)**	35.05	155	P	**P**	22 19 12.1	+1.1
	comp=Z,122nm,0.9s,baz=252,slow=13,SNR=31						
NWAO				LR	LR	22 31 44.1	
	comp=Z,1µm,21.8s,baz=204,slow=33						
H01W3	**Cape Leeuwin H**	35.60	160	T	T	22 57 29.4	
	baz=335,slow=76,SNR=28						
H01W2	**Cape Leeuwin H**	35.61	160	T	T	22 57 21.1	
	baz=335,slow=76,SNR=34						
H01W1	**Cape Leeuwin H**	35.61	160	T	T	22 57 30.1	
	baz=335,slow=76,SNR=9.1						
WRKA	**Warakurna**	35.72	133	P	**P**	22 19 17.0	+0.1
	baz=36,SNR=18						
XAN	**Xi'an**	36.31	12	P	**P**	22 19 20.2	-1.6
XAN				pP	pP	22 19 25.2	-5.2
XAN				PP	**PP**	22 20 46.2	+1.4
XAN				S	**S**	22 24 59.1	-1.9
XAN				SS	**SnSn**	22 27 28.3	-1.3
XAN				pmax	pmax		
	comp=Z,80nm,0.6s						
XAN				pmax	pmax		
	comp=Z,210nm,4.1s						
XAN				LR	LR		
	comp=Z,3µm,14.2s						
XAN				LR	LR		
	comp=Z,3µm,14.2s						
XAN				LR	LR		
	comp=Z,3µm,13.7s						
RKGY	**Rocky Gully**	36.40	156	P	**P**	22 19 25.0	+2.4
	baz=37,SNR=12						
LZH	**Lanzhou**	37.58	5	*e*P	P	22 19 26.9	-5.9
LZH				pP	pP	22 19 34.3	-7.0
LZH				sP	sP	22 19 38.2	-6.5
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH	**Lanzhou**	37.58	5	*e*P	**P**	22 19 34.3	+1.5
LZH				pP	pP	22 19 39.0	-2.3
LZH				sP	sP	22 19 41.4	-3.3
LZH				PP	**PnPn**	22 21 05.4	+5.5
LZH				S	**S**	22 25 21.4	+0.9
LZH				sS	sS	22 25 33.5	-1.2
LZH				SS	**SnSn**	22 27 58.2	-2.2
LZH				ScS	**ScS**	22 29 43.3	-1.1
LZH				pmax	pmax		
	comp=Z,32nm,1.4s						
LZH				pmax	pmax		
	comp=Z,330nm,7.8s						
LZH				LR	LR		
	comp=Z,3µm,15.0s						
LZH				LR	LR		
	comp=Z,3µm,15.0s						
LZH				LR	LR		
	comp=Z,5µm,18.5s						
NJ2	**Nanjing**	37.76	26	*e*P	**P**	22 19 33.5	-0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,2µm,14.7s						
NJ2				LR	LR		
	comp=Z,3µm,17.7s						
NJ2				LR	LR		
	comp=Z,3µm,13.2s						
WRA	**Warramunga Arr**	37.98	121	P	**P**	22 19 34.1	-2.1
	comp=Z,31nm,1.0s,baz=303,slow=9.0,SNR=106						
WRA				PcP	**PcP**	22 21 51.9	+0.1
	comp=Z,8.0nm,0.6s,baz=317,slow=2.6,SNR=9.7						
WRA				S	**S**	22 25 19.1	-7.7
	comp=Z,5.8nm,0.9s,baz=288,slow=16,SNR=8.2						
WRAB	**Tennant Creek**	37.98	121	*e*P	**P**	22 19 34.7	-1.5
	comp=Z,44nm,0.9s						
WRAB				*e*PcP	**PcP**	22 21 49.6	-2.1
WRAB				*e*S	**S**	22 25 23.6	-3.2
WRAB				LR	LR		
	comp=Z,5µm,21.0s						
WRAB	**Tennant Creek**	37.98	121	*e*P	**P**	22 19 34.7	-1.5
WRAB				*e*		22 21 49.6	
WRAB				*e*S	**S**	22 25 23.6	-3.2
WRAB				pmax	pmax		
	comp=Z,44nm,0.9s						
WRAB				MLR	MLR		
	comp=Z,5µm,21.0s						
WB2	**Warramunga Arr**	37.99	121	*e*P	**P**	22 19 34.8	-1.5
WB2				*e*S	**S**	22 25 23.6	-3.3
SSE	**Sheshan**	38.05	30	P	**P**	22 19 36.7	+0.1
SSE				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SSE				pmax	pmax		
	comp=Z,60nm,4.4s						
SSE				LR	LR		
	comp=Z,670nm,13.3s						
SSE				LR	LR		
	comp=Z,940nm,18.9s						
SSE	**Sheshan**	38.05	30	*e*P	**P**	22 19 35.4	-1.2
	comp=Z,46nm,1.3s						
SSE				LR	LR		
	comp=Z,772nm,20.0s						
FORT	**Forrest**	39.21	141	P	**P**	22 19 47.2	+0.9
	baz=39,SNR=26						
ASAR	**Alice Springs**	39.29	127	P	**P**	22 19 46.4	-0.8
	comp=Z,26nm,0.7s,baz=305,slow=7.8,SNR=181						
ASAR				PcP	**PcP**	22 21 56.0	+0.2
	comp=Z,17nm,0.6s,baz=302,slow=2.4,SNR=12						
ASAR				S	**S**	22 25 42.5	-4.0
	comp=Z,4.4nm,0.8s,baz=288,slow=15,SNR=7.5						
AS31	**Alice Springs**	39.29	127	*e*P	**P**	22 19 46.1	-1.1
AS31				*e*sP	**P**	22 19 46.5	-0.7
AS31				*e*S	**S**	22 25 46.1	-0.4
AS01	**Alice Springs**	39.33	127	*e*P	**P**	22 19 45.7	-1.8
AS01				*e*sP	**P**	22 19 46.4	-1.1
AS01				*e*S	**S**	22 25 42.1	-5.0
TIA	**Tai'an**	40.70	21	P	**P**	22 19 57.0	-1.7
TIA				S	**S**	22 26 05.6	-1.6
TIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIA				LR	LR		
	comp=Z,590nm,21.1s						
TIA				LR	LR		
	comp=Z,700nm,20.6s						
GTA	**Gaotai**	40.75	359	⇓P	**P**	22 20 00.6	+1.4
GTA				pP	pP	22 20 04.8	-3.0
GTA				sP	sP	22 20 07.7	-3.5
GTA				ScP	**ScP**	22 25 48.0	0.0
GTA				S	**S**	22 26 14.9	+6.8
GTA				ScS	**ScS**	22 30 04.9	+2.1
GTA				pmax	pmax		
	comp=Z,26nm,1.2s						
GTA				pmax	pmax		
	comp=Z,140nm,5.4s						
GTA				LR	LR		
	comp=Z,2µm,16.2s						
GTA				LR	LR		
	comp=Z,1µm,15.9s						
GTA				LR	LR		
	comp=Z,1µm,17.5s						
QIS	**Mount Isa**	42.77	119	P	**P**	22 20 14.5	-1.4
	baz=43,SNR=17						
BTO	**Baotou**	42.88	11	*e*P	**P**	22 20 15.5	-1.0
NIL	**Nilore**	43.28	326	*e*P	**P**	22 20 19.1	-0.8
	comp=Z,184nm,0.6s						
NIL				LR	LR		
	comp=Z,698nm,20.0s						
NIL	**Nilore**	43.28	326	*e*P	**P**	22 20 19.1	-0.8
NIL				pmax	pmax		
	comp=Z,184nm,0.6s						
NIL				MLR	MLR		
	comp=Z,698nm,20.0s						
HHC	**Hu-ho-hao-te**	43.42	12	*e*P	**P**	22 20 20.0	-0.9
HHC				pP	pP	22 20 24.5	-5.1
HHC				sP	sP	22 20 27.0	-6.0
HHC				S	**S**	22 26 46.5	-1.0
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,310nm,5.9s						
HHC				LR	LR		
	comp=Z,3µm,11.6s						
HHC				LR	LR		
	comp=Z,3µm,13.9s						
HHC				LR	LR		
	comp=Z,3µm,12.0s						
BJT	**Baijiatuau**	43.84	18	*e*P	**P**	22 20 24.1	-0.1
	comp=Z,74nm,0.8s						
BJT				LR	LR		
	comp=Z,2µm,19.0s						
BJT	**Baijiatuau**	43.84	18	*e*P	**P**	22 20 24.1	-0.1
BJT				pmax	pmax		
	comp=Z,74nm,0.8s						
BJT				MLR	MLR		
	comp=Z,2µm,19.0s						
BJI	**Beijing**	43.86	18	P	**P**	22 20 24.1	-0.2
BJI				pmax	pmax		
	comp=Z,70nm,1.1s						
BJI				LR	LR		
	comp=Z,2µm,13.4s						
BJI				LR	LR		
	comp=Z,2µm,12.4s						
BJI				LR	LR		
	comp=Z,940nm,19.6s						
JNU	**Nakatsue**	44.96	37	P	**P**	22 20 32.5	-0.7
	comp=Z,40nm,0.8s,baz=219,slow=2.3,SNR=15						
MRIV	**Mauritius Mete**	45.75	243	*e*P	**P**	22 20 41.4	+1.6
	comp=Z,15nm,0.9s						
BBOO	**Buckleboo**	45.78	137	P	**P**	22 20 39.8	0.0
	baz=46,SNR=26						
MTSU	**Mount Surprise**	46.23	114	P	**P**	22 20 42.6	-1.0
	baz=46,SNR=10						
JLN	**Jalan Bani Buh**	46.32	303	P	**P**	22 20 46.5	+2.4
	SNR=7.8						
KBL	**Kabul**	46.34	324	*e*P	**P**	22 20 45.2	+0.8
	comp=Z,35nm,0.8s						
KS15	**Wonju Array Si**	46.45	31	*e*P	**P**	22 20 45.3	+0.4
KSAR	**Wonju Array Be**	46.45	31	P	**P**	22 20 44.8	-0.1
KSAR	**Wonju Array Be**	46.45	31	P	**P**	22 20 44.8	-0.1
KSRS	**Korea Array**	46.48	31	P	**P**	22 20 44.8	-0.3
	comp=Z,27nm,0.8s,baz=225,slow=8.5,SNR=35						
KS01	**Wonju Array Si**	46.48	31	*e*P	**P**	22 20 44.2	-1.0
KSH	**Kashi**	46.55	334	P	**P**	22 20 44.0	-1.9
KSH				pP	pP	22 20 52.2	-2.2
KSH				PP	**PP**	22 22 36.0	+0.3
KSH				S	**S**	22 27 29.3	-3.6
KSH				sS	pS	22 27 41.6	-1.4
KSH				pmax	pmax		
	comp=Z,33nm,0.7s						
KSH				LR	LR		
	comp=Z,990nm,9.2s						
KSH				LR	LR		
	comp=Z,1µm,8.9s						
KSH				LR	LR		
	comp=Z,1µm,13.7s						
WMQ	**Urumqi**	46.55	347	P	**P**	22 20 46.1	+0.4
WMQ				pP	pP	22 20 48.3	-6.1
WMQ				ScP	**ScP**	22 26 09.7	-1.7
WMQ				S	**S**	22 27 33.7	+1.1
WMQ				ScS	**ScS**	22 30 35.7	-3.1
WMQ				LR	LR		
	comp=Z,2µm,15.1s						
WMQ				LR	LR		
	comp=Z,2µm,21.3s						
WMQ				LR	LR		
	comp=Z,730nm,27.7s						
GUMO	**Guam**	46.67	70	PFAKE		22 21 00.0	+13
GUMO				LR	LR		
	comp=Z,3µm,19.0s						
MHTO	**MHTO**	47.07	301	P	**P**	22 20 49.8	-0.2
	SNR=5.0						
MHTO				P	**P**	22 20 49.8	-0.2
	SNR=5.0						
WSAR	**Wadi Sarin**	47.43	304	P	**P**	22 20 55.5	+2.6
	SNR=8.7						
WSAR	**Wadi Sarin**	47.43	304	P	**P**	22 20 53.3	+0.4
	comp=Z,56nm,1.1s,baz=125,slow=7.5,SNR=15						
RER	**Riviere de l'E**	47.58	242	*e*P	**P**	22 20 56.6	+2.5
	comp=Z,49nm,1.0s						
SNY	**Shenyang**	48.05	23	⇓P	**P**	22 20 56.0	-1.3
SNY				S	**S**	22 27 55.8	+2.0
SNY				pmax	pmax		
	comp=Z,25nm,2.5s						
SNY				LR	LR		
	comp=Z,1µm,19.0s						
SNY				LR	LR		
	comp=Z,3µm,15.5s						
SNY				LR	LR		
	comp=Z,3µm,13.8s						
HTT	**Hallett**	48.11	135	P	**P**	22 20 58.6	+0.5
	baz=48,SNR=63						
NRN	**Naryn**	48.12	335	*e*P	**P**	22 20 58.2	-0.1
NRN	**Naryn**	48.12	335	*e*P	**P**	22 20 58.2	-0.1
KDJ	**Kajisay**	48.23	337	*e*P	**P**	22 21 00.4	+1.4
SHLS	**Shalkode**	48.28	340	*e*P	**P**	22 20 57.1	-2.2
SHLS				*e*S	**S**	22 27 56.2	-1.1
SHLS				pmax	pmax		
	comp=Z,774nm,0.7s						
SHLS				smax	smax		
	comp=N,335nm,3.6s						
SHLS				MLR	MLR		
	comp=Z,234nm,13.0s						
SHLS	**Shalkode**	48.28	340	*e*P	**P**	22 20 57.1	-2.2
	comp=Z,774nm,0.7s						
SHLS				⇓*e*S	**S**	22 27 56.2	-1.1
	comp=Z,335nm,3.6s						
SHLS				*e*LR	LR	22 43 12.8	
	comp=Z,234nm,12.8s						
UZB	**Uzynbulak**	48.42	339	*e*P	**P**	22 20 58.9	-1.5
UZB				*e*S	**S**	22 27 59.1	-0.4
UZB				pmax	pmax		
	comp=Z,462nm,0.8s						
UZB				smax	smax		
	comp=N,408nm,5.8s						
UZB				MLR	MLR		
	comp=Z,294nm,15.0s						
UZB	**Uzynbulak**	48.42	339	*e*P	**P**	22 20 59.0	-1.5
	comp=Z,462nm,0.8s						
UZB				⇓*e*S	**S**	22 27 59.1	-0.4
	comp=Z,408nm,5.8s						
UZB				*e*LR	LR	22 42 40.3	
	comp=Z,294nm,14.9s						
CTA	**Charters Tower**	48.53	116	P	**P**	22 20 59.9	-1.6
	comp=Z,19nm,0.9s,baz=277,slow=10,SNR=11						
CTAO	**Charters Tower**	48.53	116	*e*P	**P**	22 20 59.9	-1.6
	comp=Z,29nm,0.8s						
CTAO	**Charters Tower**	48.53	116	*e*P	**P**	22 20 59.9	-1.6
CTAO				pmax	pmax		
	comp=Z,29nm,0.8s						
SATY	**Saty**	48.57	339	*e*P	**P**	22 20 59.8	-1.7
SATY				*i* S	**S**	22 28 02.3	+0.8
SATY				pmax	pmax		
	comp=Z,830nm,1.0s						
SATY				smax	smax		
	comp=N,967nm,3.1s						
SATY	**Saty**	48.57	339	*e*P	**P**	22 20 59.8	-1.7
	comp=N,830nm,1.0s						
SATY				⇓*i*S	**S**	22 28 02.3	+0.8
	comp=N,967nm,3.1s						
ULHL	**Ulahol**	48.70	336	P	**P**	22 21 05.0	+2.3
	SNR=8.5						
KPKS	**Kokpek**	48.82	339	*e*P	**P**	22 21 00.8	-2.6
KPKS				*e*S	**S**	22 28 02.5	-2.4
KPKS				pmax	pmax		
	comp=Z,572nm,0.9s						
KPKS				smax	smax		
	comp=N,441nm,6.0s						
KPKS	**Kokpek**	48.82	339	*e*P	**P**	22 21 00.8	-2.6
	comp=N,572nm,0.9s						
KPKS				*e*S	**S**	22 28 02.6	-2.4
	comp=N,441nm,6.0s						
GAR	**Garm**	48.85	329	*e*P	**P**	22 21 03.3	-0.5
	comp=N,166nm,1.1s						
GAR	**Garm**	48.85	329	*e*P	**P**	22 21 03.3	-0.5
GAR				pmax	pmax		
	comp=Z,166nm,1.1s						
KZA	**Kyzart**	48.97	335	P	**P**	22 21 05.4	+0.5
	SNR=33						
QLP	**Quilpie**	48.97	125	P	**P**	22 21 04.6	-0.2
	baz=49,SNR=16						
TNSS	**Tian-Shan**	49.10	337	*e*P	**P**	22 21 05.1	-0.8
TNSS				*e*S	**S**	22 28 09.6	+0.2
TNSS				pmax	pmax		
	comp=Z,382nm,0.8s						
TNSS				smax	smax		
	comp=N,146nm,1.4s						
TNSS	**Tian-Shan**	49.10	337	*e*P	**P**	22 21 05.1	-0.8
	comp=N,382nm,0.8s						
TNSS				*e*S	**S**	22 28 09.6	+0.2
	comp=N,146nm,1.4s						
MDOK	**Medeo**	49.16	338	*e*P	**P**	22 21 04.6	-1.5
MDOK				*e*S	**S**	22 28 09.4	-0.5
MDOK				pmax	pmax		
	comp=Z,403nm,1.6s						
MDOK				smax	smax		
	comp=N,702nm,3.8s						
MDOK				MLR	MLR		
	comp=Z,243nm,16.0s						
MDOK	**Medeo**	49.16	338	*e*P	**P**	22 21 04.7	-1.5
	comp=Z,403nm,1.6s						
MDOK				⇓*e*S	**S**	22 28 09.4	-0.5
	comp=Z,702nm,3.8s						
MDOK				*e*LR	LR	22 42 55.5	
	comp=Z,243nm,15.7s						
CHGR	**Chuyangaron**	49.21	328	*e*P	**P**	22 21 05.0	-1.5
	comp=Z,149nm,0.9s						
STKA	**Stephens Creek**	49.24	132	P	**P**	22 21 06.8	+0.1
	baz=49,SNR=76						
STKA	**Stephens Creek**	49.24	132	*e*P	**P**	22 21 06.3	-0.4
	comp=Z,15nm,1.0s						
STKA	**Stephens Creek**	49.24	132	*e*P	**P**	22 21 06.3	-0.4
STKA				pmax	pmax		
	comp=Z,15nm,1.0s						
STKA	**Stephens Creek**	49.24	132	P	**P**	22 21 06.8	+0.1
	comp=Z,42nm,0.6s,baz=308,slow=8.0,SNR=111						
AAA	**Alma-Ata**	49.26	337	*e*P	**P**	22 21 05.8	-0.9
AAA				*e*		22 23 03.4	
AAA				*e*S	**S**	22 28 11.5	+0.5
AAA				pmax	pmax		
	comp=Z,80nm,0.7s						
AAA				smax	smax		
	comp=N,794nm,5.4s						
AAA				MLR	MLR		
	comp=Z,147nm,13.0s						
AAA	**Alma-Ata**	49.26	337	*e*P	**P**	22 21 05.8	-0.9
	comp=Z,80nm,0.7s						
AAA				*e*PP	**PP**	22 23 03.5	+2.6
AAA				*e*S	**S**	22 28 11.6	+0.5
	comp=Z,794nm,5.4s						
AAA				*e*LR	LR	22 44 35.0	
	comp=Z,147nm,12.7s						
MTBS	**Maitube**	49.38	337	*e*P	**P**	22 21 06.0	-1.6
MTBS				*e*S	**S**	22 28 13.9	+1.2
MTBS				pmax	pmax		
	comp=Z,160nm,0.8s						
MTBS				smax	smax		
	comp=N,368nm,3.2s						
MTBS	**Maitube**	49.38	337	*e*P	**P**	22 21 06.0	-1.6
	comp=N,160nm,0.8s						
MTBS				*e*S	**S**	22 28 14.0	+1.2
	comp=N,368nm,3.2s						
UCH	**Uchtor**	49.41	335	P	**P**	22 21 10.6	+2.2
	SNR=31						
SONM	**Songino Array**	49.46	5	P	**P**	22 21 07.4	-0.9
	comp=N,89nm,1.0s,baz=190,slow=9.6,SNR=38						
SONM				PcP	**PcP**	22 22 30.1	0.0
	comp=N,11nm,0.8s,baz=184,slow=4.2,SNR=3.7						
SONM				ScP	**ScP**	22 26 22.8	-0.8
	comp=N,5.1nm,1.1s,baz=182,slow=3.2,SNR=5.7						
SONA1	**Songino Array**	49.47	5	*e*P	**P**	22 21 07.5	-0.9
SONA1				*e*sP	**P**	22 21 07.8	-0.6
TKM2	**Tokmak 2**	49.53	336	P	**P**	22 21 09.1	+0.1
	SNR=67						
SOHO	**SOHO**	49.55	304	P	**P**	22 21 09.5	+0.3
	SNR=14						
ULN	**Ulaanbaatar**	49.56	6	*e*P	**P**	22 21 08.0	-1.0
	comp=N,67nm,0.9s						
ULN				LR	LR		
	comp=Z,1µm,19.0s						
ULN	**Ulaanbaatar**	49.56	6*c*	*i*P	**P**	22 21 08.0	-1.0
ULN				pmax	pmax		
	comp=Z,82nm,1.0s						
ULN	**Ulaanbaatar**	49.56	6	P	**P**	22 21 08.5	-0.6
	SNR=17						
KBK	**Karagaybulak**	49.58	335	P	**P**	22 21 09.9	+0.6
	SNR=53						
AML	**Almayashu**	49.68	334	P	**P**	22 21 10.3	0.0
	SNR=66						
AAK	**Ala-Archa**	49.75	335	P	**P**	22 21 10.9	+0.3
	SNR=22						
AAK	**Ala-Archa**	49.75	335	*e*P	**P**	22 21 10.8	+0.2
	comp=Z,80nm,1.0s						
AAK				LR	LR		
	comp=Z,1µm,22.0s						
AAK	**Ala-Archa**	49.75	335	*i* P	**P**	22 21 10.7	+0.2
	SNR=68						
AAK	**Ala-Archa**	49.75	335*c*	*i*P	**P**	22 21 10.8	+0.2
AAK				pmax	pmax		
	comp=Z,97nm,1.7s						
AAK	**Ala-Archa**	49.75	335	P	**P**	22 21 10.9	+0.3
	SNR=37						
AAK				P	**P**	22 21 10.9	+0.3
	SNR=37						
AAK	**Ala-Archa**	49.75	335	P	**P**	22 21 10.7	+0.2
	comp=Z,14nm,0.7s,baz=140,slow=6.2,SNR=35						
CHKK	**Chushkaly**	49.78	338	*e*P	**P**	22 21 09.5	-1.1
CHKK				*e*S	**S**	22 28 17.4	-0.8
CHKK				pmax	pmax		
	comp=Z,442nm,1.1s						
CHKK				smax	smax		
	comp=N,373nm,2.9s						
CHKK	**Chushkaly**	49.78	338	*e*P	**P**	22 21 09.6	-1.1
	comp=N,442nm,1.1s						
CHKK				*e*S	**S**	22 28 17.5	-0.8
	comp=N,373nm,2.9s						
FRU	**Bishkek**	49.86	335	*e*P	**P**	22 21 10.0	-1.3
FRU				*e*		22 22 34.0	
FRU				*e*		22 23 09.0	
FRU				*e*S	**S**	22 28 21.0	+1.6
FRU				pmax	pmax		
	comp=Z,260nm,2.0s						
CHMS	**Chumysh**	49.94	336	P	**P**	22 21 11.4	-0.5
	SNR=30						
KUU	**Kurty**	50.06	337	*e*P	**P**	22 21 10.0	-2.7
KUU				*i* S	**S**	22 28 22.0	-0.1
KUU				pmax	pmax		
	comp=Z,679nm,1.3s						
KUU				smax	smax		
	comp=N,809nm,4.5s						
KUU	**Kurty**	50.06	337	*e*P	**P**	22 21 10.0	-2.7
	comp=N,679nm,1.3s						
KUU				⇓*i*S	**S**	22 28 22.0	-0.1
	comp=N,809nm,4.5s						
EKS2	**Erkin-Say**	50.07	335	P	**P**	22 21 13.3	+0.3
	SNR=85						
UOSS	**Minazif**	50.16	305	*e*P	**P**	22 21 14.1	+0.3
	comp=N,25nm,0.9s						
UOSS	**Minazif**	50.16	305	*i* P	**P**	22 21 14.2	+0.3
	SNR=10						
UOSS	**Minazif**	50.16	305	P	**P**	22 21 15.6	+1.8
	SNR=8.9						
ALNE	**Al Ain**	50.17	303	*i* P	**P**	22 21 14.2	+0.2
	SNR=48						
HATD	**Hatta, Dubai**	50.17	304	*i* P	**P**	22 21 14.1	+0.2
	SNR=17						
HATD	**Hatta, Dubai**	50.17	304	P	**P**	22 21 15.5	+1.6
	SNR=15						
HATD				P	**P**	22 21 15.5	+1.6
	SNR=15						
ASHO	**Ashiyiah**	50.17	304	*i* P	**P**	22 21 13.9	-0.1
	SNR=28						
ASHO	**Ashiyiah**	50.17	304	P	**P**	22 21 14.4	+0.4
	SNR=11						
MDH	**Madha**	50.23	305	*i* P	**P**	22 21 15.1	+0.7
	SNR=8.8						
MDH	**Madha**	50.23	305	P	**P**	22 21 14.0	-0.4
	SNR=8.8						
TDK	**Taldyqorghan**	50.26	340	*e*P	**P**	22 21 12.4	-1.9
TDK				*e*S	**S**	22 28 25.3	+0.4
TDK				pmax	pmax		
	comp=Z,859nm,0.6s						
TDK				smax	smax		
	comp=N,668nm,4.9s						
TDK				MLR	MLR		

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       comp=Z,535nm,20.0s
TDK    Taldyqorghan    50.26 340   eP     P      22 21 12.4  -1.9
       comp=Z,859nm,0.6s
TDK                             ⇑eS     S      22 28 25.3  +0.4
       comp=Z,668nm,4.9s
TDK                              eLR    LR     22 42 52.7
       comp=Z,535nm,20.3s
USP    Ospenovka       50.27 336    P     P      22 21 14.3  -0.1
       SNR=59
MSFE   Esma-Masafi     50.37 305  i P     P      22 21 16.0  +0.5
       SNR=16
CN2    Changchun       50.45  24   eP     P      22 21 14.5  -1.2
CN2                                 PcP   PcP    22 22 37.3  +3.6
CN2                                 pmax  pmax
       comp=Z,30nm,0.9s
CN2                                 pmax  pmax
       comp=Z,300nm,5.0s
CN2                                 LR    LR
       comp=Z,2μm,15.0s
CN2                                 LR    LR
       comp=Z,1μm,15.0s
CN2                                 LR    LR
       comp=Z,1μm,15.0s
FAQ    Al Faqa, Dubai  50.58 304  i P     P      22 21 16.8  -0.2
       SNR=43
FAQ    Al Faqa, Dubai  50.58 304    P     P      22 21 18.0  +1.0
       SNR=21
FAQ                                 P     P      22 21 18.0  +1.0
       SNR=21
ZSN    Zaisan          50.62 346deP       P      22 21 15.7  -1.2
ZSN                                 pmax  pmax
       comp=Z,557nm,1.0s
ZSN                                 MLR   MLR
       comp=Z,74nm,11.0s
ZSN    Zaisan          50.62 346⇓eP       P      22 21 15.7  -1.2
       comp=Z,557nm,1.0s
ZSN                                eLR    LR     22 43 43.7
       comp=Z,74nm,10.5s
NAZ    Nazwa, Dubai    50.63 304  i P     P      22 21 17.4  +0.1
       SNR=6.3
NAZ    Nazwa, Dubai    50.63 304    P     P      22 21 19.8  +2.4
       SNR=17
MKAR   Makanchi Array  50.67 344    P     P      22 21 16.4  -0.9
       comp=Z,128nm,0.6s,baz=156,slow=8.5,SNR=74
MKAR                                S     S      22 28 29.4  -1.1
       comp=Z,5.3nm,1.0s,baz=156,slow=14,SNR=7.5
MKAR                                LR    LR     22 48 30.3
       comp=Z,481nm,18.2s,baz=159,slow=43
AJN    Ajban           51.01 304    P     P      22 21 20.2  -0.1
AJN    Ajban           51.01 304    P     P      22 21 24.3  +4.1
       SNR=6.7
AJN                                 P     P      22 21 24.3  +4.1
       SNR=6.7
DZA    Taraz           51.34 333   eP     P      22 21 20.8  -1.7
DZA                                eS     S      22 28 42.4  +2.5
DZA                                 pmax  pmax
       comp=Z,200nm,1.1s
DZA                                 smax  smax
       comp=N,147nm,4.9s
DZA    Taraz           51.34 333   eP     P      22 21 20.8  -1.7
       comp=N,200nm,1.1s
DZA                                eS     S      22 28 42.5  +2.5
       comp=N,147nm,4.9s
IUG    Iuzhnay         51.37 331   eP     P      22 21 21.2  -1.6
IUG                               i S     S      22 28 40.7  +0.2
IUG                                 pmax  pmax
       comp=Z,761nm,1.4s
IUG                                 smax  smax
       comp=N,1μm,4.0s
IUG    Iuzhnay         51.37 331   eP     P      22 21 21.2  -1.6
       comp=N,761nm,1.4s
IUG                              ⇓iS      S      22 28 40.8  +0.2
       comp=N,1μm,4.0s
CHM    Chimkent        51.71 331   eP     P      22 21 29.4  +4.2
CHM                                eS     S      22 28 48.1  +3.1
CHM                                 pmax  pmax
       comp=Z,427nm,1.1s
CHM                                 smax  smax
       comp=N,727nm,5.2s
CHM    Chimkent        51.71 331   eP     P      22 21 29.4  +4.2
       comp=N,427nm,1.1s
CHM                                eS     S      22 28 48.2  +3.1
       comp=N,727nm,5.2s
MAJO   Matsushiro      51.74  39   eP     P      22 21 24.7  -0.8
       comp=N,15nm,1.0s
MAJO                                LR    LR
       comp=Z,1μm,19.0s
MAJO   Matsushiro      51.74  39⇓eP       P      22 21 23.6  -1.9
MAJO                                pmax  pmax
       comp=Z,8.0nm,0.7s
MAT    Matsushiro      51.74  39    P     P      22 21 24.2  -1.3
MJAR   Matsushiro Arr  51.74  39    P     P      22 21 24.2  -1.3
       comp=Z,11nm,0.8s,baz=222,slow=7.3,SNR=14
MJAR                                PcP   PcP    22 22 38.6   0.0
       comp=Z,7.8nm,1.0s,baz=214,slow=4.3,SNR=4.7
MJAR                                ScP   ScP    22 26 33.0  -0.6
       comp=Z,3.0nm,0.8s,baz=209,slow=5.2,SNR=5.7
ZAK    Zakamensk       51.79   2   eP     P      22 21 24.2  -1.5
ZAK                                e             22 22 34.6
ZAK                                 pmax  pmax
       comp=Z,15nm,1.1s
ZAK                                 pmax  pmax
       comp=Z,9.0nm,0.8s
KK31   Karatay Array   51.88 332   eP     P      22 21 26.4  -0.1
KK31   Karatay Array   51.88 332   eP     P      22 21 26.4  -0.1
KKAR   Karatay Array   51.88 332   eP     P      22 21 26.4  -0.1
KKAR   Karatay Array   51.88 332   eP     P      22 21 26.4  -0.1
BTLS   Baital          51.91 337   eP     P      22 21 24.0  -2.6
BTLS                               eS     S      22 28 44.1  -3.6
BTLS                                pmax  pmax
       comp=Z,279nm,1.7s
BTLS                                smax  smax
       comp=N,237nm,4.3s
BTLS                                MLR   MLR
       comp=Z,92nm,10.0s
BTLS   Baital          51.91 337   eP     P      22 21 24.1  -2.6
       comp=Z,279nm,1.7s
BTLS                              ⇑eS     S      22 28 44.2  -3.6
       comp=Z,237nm,4.2s
BTLS                               eLR    LR     22 43 40.8
       comp=Z,92nm,10.2s
ARPS   Mount Arapiles  51.93 137    P     P      22 21 28.2  +1.2
       baz=52,SNR=14
CMSA   Cobar Meteorol  52.18 130    P     P      22 21 29.1  +0.2
       baz=52,SNR=113
DGZ    Jazzator, Alta  52.23 349d iP      P      22 21 29.0  -0.1
DGZ                                 pmax  pmax
       comp=Z,2.0nm,0.6s
RMQ    Roma            52.71 123    P     P      22 21 33.5  +0.5
       baz=53,SNR=5.8
MDJ    Mudanjiang      52.85  26    P     P      22 21 34.6  +1.0
MDJ                                 pmax  pmax
       comp=Z,12nm,0.9s
MDJ                                 pmax  pmax
       comp=Z,670nm,4.0s
MDJ    Mudanjiang      52.85  26   eP     P      22 21 33.0  -0.6
       comp=Z,22nm,0.9s
MDJ                                 LR    LR
       comp=Z,1μm,21.0s
TLY    Talaya          53.10   3   eP     P      22 21 35.0  -0.3
       comp=Z,50nm,0.8s
TLY                                 LR    LR
       comp=Z,499nm,21.0s
TLY    Talaya          53.10   3⇑eP       P      22 21 35.8  +0.5
TLY    Talaya          53.10   3    P     P      22 21 35.8  +0.5
       SNR=9.4
HIA    Hailar          53.32  16    PFAKE        22 21 50.0   +13
HIA                                 LR    LR
       comp=Z,993nm,20.0s
USA0B  Ussuriysk Arra  53.62  28   eP     P      22 21 39.0  -0.2
       comp=Z,63nm,0.8s
USRK   Ussuriysk Ar.   53.62  28    P     P      22 21 39.0  -0.2
       comp=Z,50nm,0.7s,baz=225,slow=5.7,SNR=101
IRK    Irkutsk         53.69   3   eP     P      22 21 38.8  -0.9
IRK                                 pmax  pmax
       comp=Z,64nm,2.2s
SEM    Semipalatinsk   54.52 344   eP     P      22 21 43.3  -2.7
SEM                                eS     S      22 29 21.6  -1.8
SEM                                 pmax  pmax
       comp=Z,547nm,0.6s
SEM                                 smax  smax
       comp=N,256nm,1.7s
SEM                                 MLR   MLR
       comp=Z,296nm,17.0s
SEM    Semipalatinsk   54.52 344   eP     P      22 21 43.4  -2.7
       comp=Z,547nm,0.6s
SEM                                eS     S      22 29 21.7  -1.8
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       comp=Z,256nm,1.7s
SEM                                eLR    LR     22 46 07.4
       comp=Z,296nm,16.7s
OPO    Ambohidratompo  54.71 248    P     P      22 21 49.3  +1.4
       comp=Z,17nm,0.9s,baz=80,slow=7.6,SNR=20
ABPO   Ambohimpanom    54.76 248   eP     P      22 21 49.1  +0.8
       comp=Z,17nm,0.9s
ABPO                                LR    LR
       comp=Z,480nm,19.0s
ABPO   Ambohimpanom    54.76 248   eP     P      22 21 49.1  +0.8
ABPO                                pmax  pmax
       comp=Z,17nm,0.9s
ABPO                                MLR   MLR
       comp=Z,480nm,19.0s
TOO    Toolangi        54.84 136    P     P      22 21 50.0  +1.7
       baz=55,SNR=6.5
KURBB  Kurchatov Arra  55.19 343    P     P      22 21 50.0  -0.6
       comp=Z,167nm,0.9s,baz=162,slow=6.8,SNR=125
KURBB                               S     S      22 29 31.7  -0.3
       comp=Z,3.6nm,1.1s,baz=158,slow=14,SNR=6.7
KURK   Kurchatov       55.25 343   eP     P      22 21 50.5  -0.5
       comp=Z,248nm,0.8s
KURK                                S     S      22 29 31.7  -1.0
KURK                                LR    LR
       comp=Z,1μm,20.0s
KURK   Kurchatov       55.25 343c iP      P      22 21 50.4  -0.5
KURK                                pmax  pmax
       comp=Z,327nm,1.0s
KURK   Kurchatov       55.25 343    P     P      22 21 50.5  -0.5
       SNR=92
GEYT   Alibeck         55.28 320    P     P      22 21 50.8  -0.7
       comp=Z,42nm,0.8s,baz=152,slow=6.7,SNR=30
GEYT                                LR    LR     22 47 30.0
       comp=Z,545nm,19.0s,baz=125,slow=38
GYA0B  ALIBECK ARRAY   55.28 320   eP     P      22 21 51.1  -0.5
       comp=Z,47nm,0.9s
YNG    Young           55.42 132    P     P      22 21 53.1  +0.6
       baz=56,SNR=9.0
CAN    Canberra        56.30 132   eP     P      22 21 60.0  +1.0
       comp=Z,73nm,1.1s
CAN    Canberra        56.30 132   eP     P      22 22 00.0  +1.0
CAN                                 pmax  pmax
       comp=Z,73nm,1.1s
ARMA   Armidale        56.43 126    P     P      22 22 01.1  +1.0
       baz=56,SNR=16
ZAA0   Zalesovo Array  56.77 349   eP     P      22 22 00.6  -1.3
       comp=Z,162nm,0.9s
ZALV   Zalesovo Beam   56.77 349    P     P      22 22 00.7  -1.2
       comp=Z,190nm,1.0s,baz=171,slow=5.7,SNR=80
ZALV                                S     S      22 29 48.9  -4.0
       comp=Z,2.5nm,0.9s,baz=161,slow=14,SNR=5.7
ZALV                                LR    LR     22 49 17.1
       comp=Z,344nm,19.0s,baz=170,slow=39
ZALV                                PKPPKP       22 51 56.6
       comp=Z,1.1nm,0.7s,baz=291,slow=2.1,SNR=4.1
MGCD   Mangrove Creek  57.04 129    P     P      22 22 05.1  +1.0
       baz=57,SNR=7.2
KLR    Kul'dur         57.40  24⇓iP       P      22 22 05.2  -1.1
KLR    Kul'dur         57.40  24    P     P      22 22 05.8  -0.5
       comp=Z,39nm,0.6s,baz=236,slow=6.3,SNR=87
DAMY   Dhamar          57.59 288   eP     P      22 22 10.7  +2.0
       comp=Z,86nm,1.0s
NVS    Novosibirsk     57.92 348⇓iP       P      22 22 08.6  -1.3
NVS                                eS     S      22 30 04.2  -3.8
NVS                                 pmax  pmax
       comp=Z,36nm,0.6s
NVS                                 pmax  pmax
       comp=N,13nm,0.4s
NVS                                 pmax  pmax
       comp=E,23nm,0.8s
NVS                                 smax  smax
       comp=N,16nm,1.2s
NVS                                 smax  smax
       comp=E,10.0nm,0.9s
ERM    Erimo           58.12  37    PFAKE        22 22 20.0  +8.5
ERM                                 LR    LR
       comp=Z,1μm,22.0s
MOO    Moorlands       58.43 141    P     P      22 22 14.4  +0.6
       baz=58,SNR=3.8
TAU    Tasmania Unive  58.75 141    PFAKE        22 22 30.0   +14
TAU                                 LR    LR
       comp=Z,3μm,19.0s
ZEA    Zeya            59.48  18   eP     P      22 22 19.8  -1.0
ZEA                                 pmax  pmax
       comp=E,46nm,1.4s
ZEA                                 pmax  pmax
       comp=N,43nm,1.2s
ZEA                                 pmax  pmax
       comp=Z,46nm,1.0s
HNR    Honiara         59.83 100    PFAKE        22 22 40.0   +16
HNR                                 LR    LR
       comp=Z,4μm,19.0s
BVAR   Borovoye Array  59.86 340    P     P      22 22 21.9  -1.6
       comp=Z,64nm,0.8s,baz=140,slow=7.8,SNR=72
BVAR                                S     S      22 30 29.8  -3.4
       comp=Z,0.9nm,0.7s,baz=82,slow=10,SNR=4.3
BRVK   Borovoye        59.92 340   eP     P      22 22 22.6  -1.3
       comp=Z,92nm,1.0s
BRVK                                LR    LR
       comp=Z,396nm,20.0s
BRVK   Borovoye        59.92 340c iP      P      22 22 22.4  -1.4
BRVK                                pmax  pmax
       comp=Z,91nm,1.0s
BRVK   Borovoye        59.92 340    P     P      22 22 22.6  -1.3
       SNR=39
BRVK                                P     P      22 22 22.6  -1.3
       SNR=39
BOD    Bodaibo         60.19   8   eP     P      22 22 23.8  -1.8
BOD                                 pmax  pmax
       comp=Z,52nm,1.2s
GRNR   Gornyy          60.52  25   eP     P      22 22 27.8  -0.2
GRNR                                pmax  pmax
       comp=Z,21nm,1.0s
YSS    Yuzh-Sakhalins  60.94  32   eP     P      22 22 30.7  -0.2
       comp=Z,66nm,0.8s
YSS                                 LR    LR
       comp=Z,983nm,19.0s
YSS    Yuzh-Sakhalins  60.94  32ceP       P      22 22 29.8  -1.1
YSS                                e*SP   pP     22 22 35.8  -4.1
YSS                                e             22 24 50.0
YSS                                eS     S      22 30 48.0  +0.8
YSS                                eSS    SS     22 34 48.0  +1.0
YSS                                 pmax  pmax
       comp=Z,50nm,0.9s
YSS                                 pmax  pmax
       comp=Z,400nm,4.8s
YSS                                 MLR   MLR
       comp=Z,2μm,16.0s
YSS                                 MLR   MLR
       comp=N,1μm,19.0s
YSS                                 MLR   MLR
       comp=E,600nm,13.0s
ABKAR  Akbulak array   61.38 331   eP     P      22 22 32.6  -1.2
KMBO   Kilima Mbogo    63.02 270    P     P      22 22 46.4  +0.5
       comp=E,3.7nm,0.8s,baz=50,slow=13,SNR=13
KMBO                                LR    LR     22 44 49.7
       comp=E,833nm,21.4s,baz=90,slow=31
AKTO   Aktyubinsk      63.10 331    P     P      22 22 43.9  -1.5
       comp=E,38nm,1.0s,baz=124,slow=7.5,SNR=34
AKTO                                S     S      22 31 10.6  -3.8
       comp=E,0.8nm,0.8s,baz=69,slow=16,SNR=2.6
TYV    Tymovskoe       63.42  29   eP     P      22 22 47.4  -0.1
TYV                                eS     S      22 31 12.3  -6.1
TYV                                 pmax  pmax
       comp=Z,300nm,5.3s
TYV                                 pmax  pmax
       comp=Z,24nm,1.3s
TYV                                 smax  smax
       comp=E,800nm,5.7s
TYV                                 MLR   MLR
       comp=N,2μm,16.0s
TYV                                 MLR   MLR
       comp=Z,2μm,16.0s
NKL    Nikolayevsk     64.07  26   eP     P      22 22 50.4  -1.3
NKL                                 pmax  pmax
       comp=N,12nm,0.9s
NKL                                 pmax  pmax
       comp=Z,36nm,0.9s
CASY   Casey           65.02 175   eP     P      22 22 58.6  +0.9
       comp=Z,60nm,0.6s
CASY                                LR    LR
       comp=Z,297nm,20.0s
GNI    Garni           65.40 316   eP     P      22 23 01.2  +0.3
       comp=Z,60nm,0.9s
GNI                                ePP    PP     22 25 25.8  +0.7
GNI                                 LR    LR
       comp=Z,546nm,20.0s
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GNI    Garni           65.40 316  i P     P      22 23 01.1  +0.3
       SNR=5.6
GNI    Garni           65.40 316deP       P      22 23 01.1  +0.3
GNI                                 pmax  pmax
       comp=Z,227nm,1.3s
GNI    Garni           65.40 316    P     P      22 23 01.3  +0.4
       SNR=8.7
GNI    Garni           65.40 316    P     P      22 23 01.3  +0.3
       comp=Z,28nm,0.9s,baz=164,slow=4.9,SNR=12
TBLG   Delisi          66.08 318   eP     P      22 23 05.3  +0.3
       comp=Z,138nm,1.1s
TBLG   Delisi          66.08 318   eP     P      22 23 05.3  +0.3
TBLG                                pmax  pmax
       comp=Z,138nm,1.1s
SVE    Sverdlovsk      66.37 337d iP      P      22 23 05.7  -0.9
SVE                                 pmax  pmax
       comp=Z,228nm,1.3s
SVE                                 MLR   MLR
       comp=Z,747nm,18.0s
TUTA   Tutak           66.45 315  i P     P      22 23 07.9  +0.2
TUTA                                IAML_P
       comp=Z,95nm,0.1s
ARU    Arti            66.91 336   eP     P      22 23 08.7  -1.3
       comp=Z,96nm,1.1s
ARU                                 LR    LR
       comp=Z,448nm,22.0s
ARU    Arti            66.91 336d iP      P      22 23 08.4  -1.6
ARU                                              22 23 38.8
ARU                                 S     S      22 32 00.2  -0.8
ARU                                 pmax  pmax
       comp=Z,74nm,1.4s
ARU                                 MLR   MLR
       comp=Z,697nm,20.0s
ZEI    Tsey            67.09 318   eP     P      22 23 10.8  -0.9
ZEI                                 pmax  pmax
       comp=Z,52nm,0.7s
YAK    Yakutsk         67.23  15   eP     P      22 23 09.4  -2.5
YAK                                e*PP   pP     22 23 18.0  -2.8
YAK                                e             22 23 37.5
YAK                                eS     S      22 31 59.2  -5.4
YAK                                e*SS   pS     22 32 16.7  +0.9
YAK                                e             22 33 02.3
YAK                                eSS    SS     22 36 27.0  +2.5
YAK                                 pmax  pmax
       comp=Z,56nm,1.0s
YAK                                 pmax  pmax
       comp=N,28nm,1.1s
YAK                                 pmax  pmax
       comp=E,24nm,1.1s
YAK                                 pmax  pmax
       comp=Z,167nm,4.6s
YAK                                 pmax  pmax
       comp=N,83nm,4.0s
YAK                                 pmax  pmax
       comp=E,120nm,4.0s
YAK                                 smax  smax
       comp=N,280nm,4.6s
YAK                                 smax  smax
       comp=E,188nm,4.6s
YAK                                 MLR   MLR
       comp=Z,1μm,20.0s
YAK                                 MLR   MLR
       comp=E,1μm,18.0s
HOMI   Horasan         67.35 315  i P     P      22 23 14.7  +1.3
HOMI                                IAML_P
       comp=Z,197nm,0.2s
NCK    Nalchik         67.60 319⇓iP       P      22 23 14.6  -0.1
NCK                                 pmax  pmax
       comp=Z,84nm,0.9s
DAGI   Agillar         67.74 316  i P     P      22 23 15.2  -0.6
DAGI                                IAML_P
       comp=Z,190nm,0.5s
DDEM   Demirkent       67.78 316  i P     P      22 23 16.4  +0.3
DDEM                                IAML_P
       comp=Z,44nm,0.2s
HANI   Diyarbakir_Han  67.83 313  i P     P      22 23 16.2  -0.1
HANI                                IAML_P
       comp=Z,296nm,0.7s
DBAD   Bademkaya       67.87 316  i P     P      22 23 16.6   0.0
DBAD                                IAML_P
       comp=Z,524nm,0.9s
NEY    Neytrino        68.07 318⇓eP       P      22 23 18.7  +0.8
NEY                                 pmax  pmax
       comp=Z,10.0nm,0.8s
KBZ    Khabaz          68.15 319    P     P      22 23 17.8  -0.3
       comp=Z,52nm,0.9s,baz=124,slow=4.5,SNR=35
KBZ                                 LR    LR     22 57 17.1
       comp=Z,187nm,18.7s,baz=103,slow=40
KOPT   Kop Dagi        68.34 314  i P     P      22 23 22.0  +2.3
KOPT                                IAML_P
       comp=Z,55nm,0.1s
KVAR   Kislovodsk Arr  68.38 319    P     P      22 23 21.4  +1.7
       comp=Z,19nm,0.9s,baz=72,slow=20,SNR=19
KIV    Kislovodsk      68.39 319   eP     P      22 23 19.1  -0.7
       comp=Z,114nm,1.0s
KIV                                 LR    LR
       comp=Z,279nm,19.0s
KIV    Kislovodsk      68.39 319⇑iP       P      22 23 19.3  -0.5
KIV    Kislovodsk      68.39 319  i P     P      22 23 19.1  -0.7
       SNR=39
KIV    Kislovodsk      68.39 319   eP     P      22 23 19.0  -0.7
KIV                                 pmax  pmax
       comp=Z,118nm,1.0s
KIV    Kislovodsk      68.39 319    P     P      22 23 19.2  -0.5
       SNR=29
ASF    Jabal al Asfar  68.56 305    P     P      22 23 21.3  +0.3
       comp=Z,25nm,0.9s,baz=34,slow=1.7,SNR=14
BAYB   BAYBURT         68.60 315  i P     P      22 23 21.7  +0.4
BAYB                                IAML_P
       comp=Z,19nm,0.1s
GOF    Gofitskoye      68.62 320⇓iP       P      22 23 22.4  +1.3
GOF                                 pmax  pmax
       comp=Z,120nm,1.3s
SURC   SANLIURFA_SURC68.63 311    i P     P      22 23 21.2  -0.2
SURC                                IAML_P
       comp=Z,16nm,0.2s
TNCL   Tunceli-Merkez  68.70 313  i P     P      22 23 24.9  +3.1
TNCL                                IAML_P
       comp=Z,5.9nm,0.3s
EUZM   Uzumlu          68.80 314  i P     P      22 23 25.6  +3.2
EUZM                                IAML_P
       comp=Z,117nm,0.1s
JDRJ   Daraweish       69.19 304    P     P      22 23 26.6  +1.5
KELT   Kelkit          69.27 314  i P     P      22 23 25.3  -0.2
KELT                                IAML_P
       comp=Z,238nm,0.9s
KEMA   Kemaliye        69.52 313  i P     P      22 23 27.2  +0.3
KEMA                                IAML_P
       comp=Z,424nm,0.9s
EIL    Elat            69.52 302    P     P      22 23 27.3  +0.3
EIL    Elat            69.52 302    P     P      22 23 27.3  +0.3
EIL    Elat            69.52 302    P     P      22 23 27.1  +0.1
       comp=Z,46nm,0.9s,baz=85,slow=2.5,SNR=16
MBAR   Mbarara         69.55 270   eP     P      22 23 29.2  +1.6
       comp=Z,16nm,1.0s
MBAR                                LR    LR
       comp=Z,484nm,22.0s
MBAR   Mbarara         69.55 270   eP     P      22 23 29.2  +1.6
MBAR                                pmax  pmax
       comp=Z,16nm,1.0s
MBAR                                MLR   MLR
       comp=Z,484nm,22.0s
GZT    Gaziantep       69.58 311  i P     P      22 23 27.9  +0.5
GZT                                 IAML_P
       comp=Z,88nm,0.2s
AKCD   Akcadag         69.61 312  i P     P      22 23 28.5  +0.9
AKCD                                IAML_P
       comp=Z,11nm,0.1s
KUZU   Kuzuini         69.77 310  i P     P      22 23 28.9  +0.5
KUZU                                IAML_P
       comp=Z,67nm,0.3s
MMAI   Mount Meron Ar  70.00 306    P     P      22 23 30.8  +0.8
       comp=Z,33nm,0.8s,baz=97,slow=7.1,SNR=16
SUSE   Susehri         70.05 314  i P     P      22 23 30.4  +0.2
SUSE                                IAML_P
       comp=Z,162nm,0.6s
SOC    Sochi           70.21 318   eP     P      22 23 27.8  -3.1
SOC                                e             22 26 08.9
SOC                                ePPP   PPP    22 27 54.6
SOC                                eS     S      22 32 37.6  -3.2
SOC                                 pmax  pmax
       comp=Z,143nm,0.8s
CUZAR  Zara_SIVAS      70.25 314  i P     P      22 23 32.2  +0.7
CUKAN  kangal_SIVAS    70.29 313  i P     P      22 23 31.3  -0.4
ANDN   Andirin         70.57 311  i P     P      22 23 33.2  -0.2
ANDN                                IAML_P
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      comp=Z,387nm,0.5s
MAW   Mawson            70.80 194    P         P        22 23 33.0 -1.0
MAW   Mawson            70.80 194    P         P        22 23 33.0 -1.0
      comp=Z,52nm,0.9s,baz=17,slow=11,SNR=3.9
SAIM  ADANA             70.89 311  i P         P        22 23 34.1 -1.2
SAIM                                 IAML_P
      comp=Z,37nm,0.1s
CUSAR Sarkisla-SIVAS    71.22 313  i P         P        22 23 37.4 +0.1
ERBA  Erbaa             71.25 314  i P         P        22 23 37.4  0.0
ERBA                                 IAML_P
      comp=Z,27nm,0.1s
NRIK  Noril'sk          71.27 355    P         P        22 23 35.1 -1.7
      comp=Z,29nm,0.6s,baz=165,slow=4.4,SNR=16
YAHY  KAYSERI_Yahyal    71.47 311  i P         P        22 23 39.1 +0.2
YAHY                                 IAML_P
      comp=Z,23nm,0.1s
GULE  Gulek             71.68 310  i P         P        22 23 38.5 -1.7
GULE                                 IAML_P
      comp=Z,34nm,0.1s
SIRC  Yozgat            72.00 312  i P         P        22 23 41.4 -0.6
SIRC                                 IAML_P
      comp=Z,6.6nm,0.3s
AVNS  Nevsehir-Avano    72.06 312  i P         P        22 23 42.0 -0.4
AVNS                                 IAML_P
      comp=Z,111nm,0.3s
KIRV  Kirov             72.08 335    P         P        22 23 41.3 -0.6
      comp=Z,89nm,0.8s,baz=130,slow=5.7,SNR=19
VRH   Novokhopyorsk     72.11 326  eP          P        22 23 41.1 -1.1
VRH                                eS          S        22 33 02.5 +0.1
VRH                                  pmax      pmax
      comp=Z,110nm,0.7s
VRH                                  smax      smax
      comp=N,50nm,1.5s
CSS   Mathiatis         72.18 307  eP          P        22 23 43.0  0.0
      comp=N,99nm,1.1s
ANN   Anapa             72.19 318  eP          P        22 23 41.0 -1.8
ANN                                ePPP        PPP      22 28 13.9
ANN                                eS          S        22 33 04.8 +1.2
ANN                                eSS         SS       22 37 44.9 +3.3
ANN                                  pmax      pmax
      comp=Z,50nm,1.3s
LSZ   Lusaka            72.33 255  eP          P        22 23 44.9 +0.5
      comp=Z,27nm,1.3s
LSZ                                  LR        LR
      comp=Z,516nm,20.0s
LSZ   Lusaka            72.33 255    P         P        22 23 45.2 +0.8
      SNR=5.7
LSZ   Lusaka            72.33 255    P         P        22 23 45.3 +0.8
      comp=Z,20nm,1.1s,baz=79,slow=4.9,SNR=22
PETK  Petropavlovsk-    72.34  32    P         P        22 23 42.7 -0.9
      comp=Z,9.7nm,0.8s,baz=197,slow=4.6,SNR=12
MATP  Matopo            72.41 249    P         P        22 23 45.9 +1.1
      comp=Z,53nm,0.8s,baz=90,slow=5.7,SNR=97
MA2   Magadan           72.50  24  eP          P        22 23 44.1 -0.2
      comp=Z,44nm,0.9s
MA2                                  LR        LR
      comp=Z,2µm,20.0s
MA2   Magadan           72.50  24c iP          P        22 23 44.0 -0.4
MA2                                  pmax      pmax
      comp=Z,74nm,1.7s
MA2   Magadan           72.50  24    P         P        22 23 43.8 -0.6
      comp=Z,17nm,0.7s,baz=233,slow=9.6,SNR=7.8
CDAG  Cicekdag          72.66 312  i P         P        22 23 45.0 -0.9
CDAG                                 IAML_P
      comp=Z,20nm,0.2s
SNOP  Sinop             72.78 315  eP          P        22 23 48.2 +1.8
      comp=Z,125nm,0.8s
PET   Petropavlovsk     72.81  33    PFAKE              22 24 00.0  +14
PET                                  LR        LR
      comp=Z,2µm,20.0s
PET   Petropavlovsk     72.81  33  eP          P        22 23 46.7 +0.3
PET                                  pmax      pmax
      comp=Z,33nm,1.7s
DCZ   Deep Cove         72.82 137  eP          P        22 23 45.9 -0.7
      comp=Z,36nm,1.1s
ERMK  Ermenek           72.94 309  i P         P        22 23 50.7 +2.9
ERMK                                 IAML_P
      comp=Z,1µm,0.7s
DELI  KIRIKKALE         73.10 313  i P         P        22 23 47.2 -1.3
BR131 Keskin Array S    73.23 312  eP          P        22 23 48.4 -1.0
BR131 Keskin Array S    73.23 312    P         P        22 23 48.1 -1.3
      SNR=19
BRTR  Keskin Array B    73.23 312    P         P        22 23 48.1 -1.3
      comp=Z,25nm,0.7s,baz=134,slow=6.3,SNR=34
BRTR                                 LR        LR       22 59 29.4
      comp=Z,202nm,18.4s,baz=106,slow=39
MLZ   Mavora Lakes      73.45 137  eP          P        22 23 51.5 +1.1
      comp=Z,18nm,1.0s
ILGA  Ilgaz             73.56 314  eP          P        22 23 51.3 -0.1
      comp=Z,100nm,1.0s
ILGA  Ilgaz             73.56 314  i P         P        22 23 51.7 +0.3
ILGA                                 IAML_P
      comp=Z,104nm,0.1s
BBAL  Bala              73.56 312  i P         P        22 23 50.7 -0.6
BBAL                                 IAML_P
      comp=Z,256nm,0.1s
VSR   Storozhevoye      73.57 325  eP          P        22 23 48.6 -2.3
VSR                                eS          SKiKP    22 33 20.2 +0.8
VSR                                  pmax      pmax
      comp=Z,90nm,0.8s
VSR                                  smax      smax
      comp=N,30nm,1.2s
KKUL  Konya-Kulu        73.61 312  i P         P        22 23 50.8 -0.8
KKUL                                 IAML_P
      comp=Z,123nm,0.6s
KMER  Konya-Meram       73.65 310  i P         P        22 23 52.0 +0.2
KMER                                 IAML_P
      comp=Z,18nm,0.3s
KONT  Konya--Tatoy      73.70 310  i P         P        22 23 54.5 +2.4
KONT                                 IAML_P
      comp=Z,20nm,0.3s
VORR  Voronezh          73.73 325  eP          P        22 23 52.0 +0.2
VORR                                 pmax      pmax
      comp=Z,250nm,1.0s
ANTO  Ankara            73.89 312  eP          P        22 23 52.4 -0.8
      comp=Z,60nm,0.9s
ANTO                                 LR        LR
      comp=Z,279nm,20.0s
ANTO  Ankara            73.89 312⇑ iP          P        22 23 53.2  0.0
ANTO  Ankara            73.89 312  eP          P        22 23 52.4 -0.8
ANTO                                 pmax      pmax
      comp=Z,60nm,0.9s
ANTO                                 MLR       MLR
      comp=Z,279nm,20.0s
ANTO  Ankara            73.89 312    P         P        22 23 52.5 -0.6
      SNR=11
BR231 Keskin MP Arra    73.90 312  eP          P        22 23 52.8 -0.5
KEPZ  Antalya-Kepez     74.02 309  i P         P        22 23 52.8 -1.1
KEPZ                                 IAML_P
      comp=Z,172nm,0.5s
KDHN  Kadinhani         74.04 311  i P         P        22 23 53.2 -0.9
KDHN                                 IAML_P
      comp=Z,0.6nm,0.3s
LPSR  Galich'ya Gora    74.27 326  eP          P        22 23 53.9 -1.1
LPSR                               eS          S        22 33 28.1 +1.2
LPSR                                 pmax      pmax
      comp=Z,60nm,0.9s
LPSR                                 smax      smax
      comp=E,20nm,1.7s
DOGA  KONYA_Doganhis    74.27 310  i P         P        22 23 54.9 -0.6
DOGA                                 IAML_P
      comp=Z,27nm,0.3s
CMDR  Camlidere-ANKA    74.30 313  i P         P        22 23 54.8 -0.8
CMDR                                 IAML_P
      comp=Z,85nm,0.2s
KBUK  KARABUK-Merkez    74.40 314  i P         P        22 23 55.5 -0.6
KBUK                                 IAML_P
      comp=Z,49nm,0.3s
LBZ   Lake Benmore      74.63 136  eP          P        22 23 57.6 +0.2
      comp=Z,39nm,1.2s
KIBS  BOLU              74.74 313  i P         P        22 23 56.5 -1.6
KIBS                                 IAML_P
      comp=Z,158nm,0.9s
AUMIH MIHALICIK         74.87 312  i P         P        22 23 59.0 +0.1
KORT  Korkueli          75.02 309  i P         P        22 23 59.9  0.0
KORT                                 IAML_P
      comp=Z,362nm,0.5s
SEY   Seymchan          75.09  22⇓ iP          P        22 23 59.5  0.0
SEY   Seymchan          75.09  22    P         P        22 23 58.9 -0.6
      comp=Z,20nm,1.0s,baz=328,slow=4.5,SNR=21
RPZ   Rata Peaks        75.10 135    P         P        22 24 00.1 +0.1
      comp=Z,22nm,0.5s,baz=263,slow=3.3,SNR=29
YIGI  Dzce              75.18 313  i P         P        22 23 59.4 -1.1
YIGI                                 IAML_P
      comp=Z,431nm,0.6s
TIXI  Tiksi             75.36   9  eP          P        22 23 59.0 -1.9
      comp=Z,128nm,1.5s
TIXI                                 LR        LR
      comp=Z,1µm,19.0s
TIXI  Tiksi             75.36   9⇑ eP          P        22 23 59.1 -1.8
TIXI                                 pmax      pmax
      comp=Z,90nm,1.7s
TIXI  Tiksi             75.36   9    P         P        22 23 59.0 -1.9
      comp=Z,19nm,0.5s,baz=170,slow=3.0,SNR=26
PRGR  Permogore         75.37 336⇑ iP          P        22 24 00.2 -0.9
PRGR                               eS          S        22 33 34.6 -4.2
PRGR                                 pmax      pmax
      comp=Z,146nm,0.8s
LBTB  Lobatse           75.48 245  eP          P        22 24 03.7 +1.0
      comp=Z,26nm,0.9s
LBTB  Lobatse           75.48 245  eP          P        22 24 03.7 +1.0
LBTB                                 pmax      pmax
      comp=Z,27nm,0.9s
QRZ   Quartz Range      75.59 132    P         P        22 24 03.5 +0.6
BORA  Eskisehir         75.64 312  i P         P        22 24 01.5 -1.8
BORA                                 IAML_P
      comp=Z,195nm,0.4s
OXZ   Oxford            75.72 134  eP          P        22 24 03.0 -0.5
      comp=Z,20nm,0.7s
GEYV  SAKARYA_Geyve     75.90 312  i P         P        22 24 03.6 -1.1
GEYV                                 IAML_P
      comp=Z,460nm,0.6s
THZ   Tophouse          76.04 133  eP          P        22 24 06.1 +0.6
      comp=Z,94nm,1.1s
BOSA  Boshof            76.13 241    P         P        22 24 07.0 +0.6
      comp=Z,24nm,0.8s,baz=88,slow=5.2,SNR=33
MOS   Moscow            76.26 329  eP          P        22 24 04.4 -1.9
MOS                                e                    22 24 19.7
MOS                                e                    22 26 57.6
MOS                                eS          S        22 33 51.8 +3.0
MOS                                  pmax      pmax
      comp=Z,144nm,0.9s
MOS                                  pmax      pmax
      comp=Z,300nm,1.3s
OBN   Obninsk           76.56 328  eP          P        22 24 07.3 -0.7
      comp=Z,167nm,1.2s
OBN                                  LR        LR
      comp=Z,360nm,21.0s
OBN   Obninsk           76.56 328⇓ iP          P        22 24 07.9 -0.1
OBN   Obninsk           76.56 328d iP          P        22 24 07.6 -0.4
OBN                                e                    22 24 19.9
OBN                                e                    22 26 58.8
OBN                                ePPP        PPP      22 28 46.2
OBN                                  pmax      pmax
      comp=Z,225nm,1.7s
OBN                                  MLR       MLR
      comp=Z,356nm,18.0s
DUWZ  D’Urville Isla    76.63 132    P         P        22 24 08.9 +0.1
KULA  Kula-Manisa       76.67 310    P         P        22 24 11.0 +1.8
KULA  Kula-Manisa       76.67 310    P         P        22 24 11.0 +1.8
MANT  Manisa            76.74 310  eP          P        22 24 12.0 +2.3
      comp=Z,90nm,0.8s
KARP  Karpathos         77.22 307  eP          P        22 24 12.3  0.0
      comp=Z,197nm,0.8s
KARP  Karpathos         77.22 307    P         P        22 24 14.7 +2.4
SNZO  South Karori      77.30 132    PFAKE              22 24 20.0 +7.5
SNZO                                 LR        LR
      comp=Z,2µm,21.0s
KIW   Kapiti Island     77.38 131    P         P        22 24 13.2 +0.1
KLMR  Klimovskoe        77.55 334  eP          P        22 24 11.4 -2.1
KLMR                                 pmax      pmax
      comp=Z,104nm,1.3s
KLMR  Klimovskoe        77.55 334  eP          P        22 24 11.4 -2.1
KLMR                                 AMP                22 24 19.1
      comp=Z,104nm,1.2s
OGWZ  Otaki Gorge       77.57 131    P         P        22 24 14.5 +0.4
FWVZ  Far West T-bar    77.63 130    P         P        22 24 15.3 +0.5
TRVZ  Turoa             77.63 130    P         P        22 24 14.7  0.0
WTVZ  West Tongariro    77.64 130    P         P        22 24 15.5 +0.8
KRVZ  Karewarewa        77.67 130    P         P        22 24 15.8 +0.9
MOVZ  Moawhango         77.80 130    P         P        22 24 15.1 -0.5
PAWZ  Paruwai Farm      77.84 132    P         P        22 24 16.3 +0.7
MTW   Mount Morrison    77.87 132    P         P        22 24 14.8 -0.9
MFTR  Murfatlar         78.15 316⇑ iP          P        22 24 19.8 +2.6
PSN   Preselentsi       78.20 315  eP          P        22 24 18.8 +1.3
TIRR  Tirgusor          78.23 316  eP          P        22 24 17.4 -0.2
      comp=Z,55nm,0.8s
TIRR  Tirgusor          78.23 316⇑ iP          P        22 24 17.0 -0.6
TIRR  Tirgusor          78.23 316  eP          P        22 24 17.4 -0.2
TIRR                                 pmax      pmax
      comp=Z,55nm,0.8s
BKZ   Black Stump Fm    78.34 130  eP          P        22 24 18.2 -0.3
      comp=Z,48nm,0.7s
BFZ   Birch Farm        78.36 131  eP          P        22 24 19.3 +0.9
      comp=Z,145nm,1.5s
BFZ   Birch Farm        78.36 131    P         P        22 24 18.5  0.0
SYO   Syowa Base        78.39 199⇓ eP          P        22 24 18.4 +0.4
SYO   Syowa Base        78.39 199⇓ ipP         P        22 24 21.0 +3.0
TLB   Topalu            78.52 316⇑ iP          P        22 24 19.5 +0.3
CFR   Carcaliu          78.59 317⇑ iP          P        22 24 19.2 -0.4
HARR  Harsova           78.62 316⇑ iP          P        22 24 19.5 -0.3
PRK   Paraskevi         78.64 310    P         P        22 24 22.3 +2.2
PRK   Paraskevi         78.64 310    P         P        22 24 22.3 +2.2
PRD   Provadia          78.65 315  eP          P        22 24 19.4 -0.6
URZ   Urewera           78.70 129    P         P        22 24 21.0 +0.6
      comp=Z,6.8nm,0.6s,baz=224,slow=4.3,SNR=3.3
EDRB  Edirne            78.83 313    P         P        22 24 23.8 +2.8
EDRB  Edirne            78.83 313    P         P        22 24 23.8 +2.8
IDI   Anoyia            79.00 306  eP          P        22 24 22.5 +0.3
      comp=Z,68nm,0.8s
IDI   Anoyia            79.00 306⇓ iP          P        22 24 22.7 +0.5
AMRR  Amara             79.01 316⇑ iP          P        22 24 22.8 +0.9
ALN   Alexandroupoli    79.14 312  eP          P        22 24 22.6 -0.2
      comp=Z,30nm,0.9s
ALN   Alexandroupoli    79.14 312    P         P        22 24 22.1 -0.7
AKASG Malin Array Be    79.30 322    P         P        22 24 21.7 -1.7
      comp=Z,13nm,0.7s,baz=87,slow=5.1,SNR=30
AKASG                                PP        PP       22 27 19.7 -3.8
      comp=Z,2.5nm,0.8s,baz=92,slow=6.9,SNR=4.2
AKASG                                LR        LR       23 04 30.2
      comp=Z,327nm,18.7s,baz=350,slow=40
KIEV  Kiev              79.31 322  eP          P        22 24 22.2 -1.3
      comp=Z,18nm,0.8s
KIEV                                 LR        LR
      comp=Z,457nm,19.0s
KIEV  Kiev              79.31 322⇑ iP          P        22 24 22.9 -0.5
KIEV  Kiev              79.31 322  i P         P        22 24 22.3 -1.1
      SNR=9.2
KIEV  Kiev              79.31 322⇑ eP          P        22 24 22.1 -1.3
KIEV                                 pmax      pmax
      comp=Z,14nm,1.0s
SMTH  Samothraki Isl    79.44 312    P         P        22 24 23.4 -1.1
SMTH  Samothraki Isl    79.44 312    P         P        22 24 23.4 -1.1
RDO   Rodhopi           79.57 312    P         P        22 24 22.8 -2.3
RDO   Rodhopi           79.57 312    P         P        22 24 22.8 -2.3
VAM   Vamos             79.58 306    P         P        22 24 25.6 +0.3
VAM   Vamos             79.58 306    P         P        22 24 25.6 +0.3
VAM   Vamos             79.58 306    P         P        22 24 25.6 +0.3
LIA   Limnos Island     79.60 311    P         P        22 24 24.3 -0.9
LIA   Limnos Island     79.60 311    P         P        22 24 24.3 -0.9
TMCR  Tamitsa           79.64 337  eP          P        22 24 25.0 +0.1
TMCR                               eS          S        22 34 30.0 +5.1
TMCR                                 pmax      pmax
      comp=Z,58nm,1.0s
ISR   Istrita           79.67 316⇑ iP          P        22 24 29.0 +3.3
SZH   Strazhica         79.71 314  eP          P        22 24 24.8 -1.0
VRI   Vrincioaia        79.72 317⇑ iP          P        22 24 26.1 +0.3
CHAN  Chania            79.72 306    P         P        22 24 28.3 +2.3
DIM   Dimitrovgrad      79.75 313  eP          P        22 24 25.4 -0.7
IMMV  Iera Moni Meta    79.76 306    P         P        22 24 26.1 -0.2
PLOR  Plostina          79.77 317⇑ iP          P        22 24 26.1  0.0
SULR                    79.78 316⇑ iP          P        22 24 26.6 +0.5
SECR                    79.99 316⇑ iP          P        22 24 28.4 +1.1
THAS  Thassos island    80.08 312    P         P        22 24 28.0 +0.2
PVL   Pavlikeni         80.13 314  eP          P        22 24 28.1  0.0
MLR   Muntele Rosu      80.17 317  eP          P        22 24 27.7 -0.7
      comp=Z,101nm,1.0s
MLR   Muntele Rosu      80.17 317⇑ iP          P        22 24 28.4  0.0
MLR   Muntele Rosu      80.17 317  eP          P        22 24 27.7 -0.7
MLR                                  pmax      pmax
      comp=Z,101nm,1.0s
ZIMR                    80.19 315⇓ iP          P        22 24 28.9 +0.5
PTL   Penteli           80.28 309    P         P        22 24 28.1 -1.0
PTL   Penteli           80.28 309    P         P        22 24 28.1 -1.0
RZN   Rozhen            80.28 313  eP          P        22 24 27.6 -1.6
SUR   Sutherland        80.29 238  eP          P        22 24 30.8 +1.4
      comp=Z,55nm,0.9s
SUR                                  LR        LR
      comp=Z,1µm,19.0s
KAVA  Kavala            80.30 312    P         P        22 24 27.5 -1.6
KAVA  Kavala            80.30 312    P         P        22 24 27.5 -1.6
VLY   Voula,Athens      80.30 309    P         P        22 24 26.6 -2.5
VLY   Voula,Athens      80.30 309    P         P        22 24 26.6 -2.5
ATHU  Athens Univers    80.33 309    P         P        22 24 30.5 +1.2
ATHU  Athens Univers    80.33 309    P         P        22 24 30.5 +1.2
ANKY  Antikythira Is    80.37 307    P         P        22 24 33.1 +3.5
ANKY  Antikythira Is    80.37 307    P         P        22 24 33.1 +3.5
BIZ   Bicaz             80.37 318⇑ iP          P        22 24 30.1 +0.8
PRAR  RASCA             80.39 318⇑ iP          P        22 24 29.8 +0.4
OZUR                    80.41 317⇓ iP          P        22 24 30.5 +0.9
OUR   Ouranopolis       80.58 311    P         P        22 24 31.5 +0.9
OUR   Ouranopolis       80.58 311    P         P        22 24 31.5 +0.9
HUMR  Humele            80.64 315⇑ iP          P        22 24 30.2 -0.6
DOPR  Dopca             80.65 317⇑ iP          P        22 24 31.4 +0.5
DID   Didima            80.68 308    P         P        22 24 30.5 -0.7
DID   Didima            80.68 308    P         P        22 24 30.5 -0.7
MTUR  Matau             80.72 316⇓ iP          P        22 24 31.0 -0.3
VILL  Villia            80.73 309    P         P        22 24 29.1 -2.4
PAIG  Paliouri          80.74 311    P         P        22 24 30.5 -0.9
PAIG  Paliouri          80.74 311    P         P        22 24 30.5 -0.9
PAIG  Paliouri          80.74 311    P         P        22 24 30.5 -0.9
VOIR                    80.77 316⇑ iP          P        22 24 31.3 -0.3
PGB   Panagyurishte     80.84 313  eP          P        22 24 30.4 -1.6
NVR   Nevrokopi         80.85 312    P         P        22 24 30.8 -1.3
NVR   Nevrokopi         80.85 312    P         P        22 24 30.8 -1.3
VLAD  Vladila           80.94 315⇑ iP          P        22 24 33.0 +0.6
MMB   Musomiste         80.99 312  eP          P        22 24 30.8 -2.0
SRS   Serrai            81.01 312    P         P        22 24 31.2 -1.7
SRS   Serrai            81.01 312    P         P        22 24 31.2 -1.7
SRS   Serrai            81.01 312    P         P        22 24 31.2 -1.7
XOR   Xorichti          81.02 310    P         P        22 24 32.2 -0.8
XOR   Xorichti          81.02 310    P         P        22 24 32.2 -0.8
ATAL  Atalanti          81.04 309    P         P        22 24 31.5 -1.6
ATAL  Atalanti          81.04 309    P         P        22 24 31.5 -1.6
ARR   Arges             81.05 316⇑ iP          P        22 24 33.0 -0.1
BURAR Bucovina Array    81.11 319⇑ iP          P        22 24 34.3 +0.9
MICGM Minsk             81.11 326  eP          P        22 24 33.0 -0.1
MNK   Minsk             81.11 326  eP          P        22 24 33.0 -0.1
BUR04 Bucovina Ar. S    81.11 319  eP          P        22 24 33.9 +0.4
BUR08 Bucovina Ar. S    81.13 319  eP          P        22 24 34.1 +0.7
SOH   Sokhos            81.14 312    P         P        22 24 32.3 -1.3
SOH   Sokhos            81.14 312    P         P        22 24 32.3 -1.3
SOH   Sokhos            81.14 312    P         P        22 24 32.3 -1.3
PUL   Pulkovo           81.36 331⇓ eP          P        22 24 35.7 +1.4
PUL                                  pmax      pmax
      comp=Z,76nm,0.9s
GUR   Goura             81.45 309    P         P        22 24 34.6 -0.8
GUR   Goura             81.45 309    P         P        22 24 34.6 -0.8
VTS   Vitosha           81.53 313  eP          P        22 24 34.9 -0.9
      comp=Z,51nm,0.9s
VTS   Vitosha           81.53 313⇑ iP          P        22 24 35.4 -0.4
VTS   Vitosha           81.53 313    P         P        22 24 34.9 -0.9
VTS   Vitosha           81.53 313  eP          P        22 24 34.8 -0.9
KNT   Kendrikon         81.53 312    P         P        22 24 33.9 -1.8
KNT   Kendrikon         81.53 312    P         P        22 24 33.9 -1.8
KLV   Kalavryta, Ach    81.61 309    P         P        22 24 35.1 -1.1
KLV   Kalavryta, Ach    81.61 309    P         P        22 24 35.1 -1.1
AGG   Agios Georgios    81.62 310  eP          P        22 24 34.8 -1.5
      comp=Z,42nm,1.2s
LOT   Lotru             81.66 316⇑ iP          P        22 24 36.6 +0.2
ITM   Ithomi            81.67 308  eP          P        22 24 38.2 +1.7
      comp=Z,72nm,0.9s
LIT   Litokhoron        81.67 311  eP          P        22 24 35.5 -0.9
      comp=Z,77nm,0.8s
LIT   Litokhoron        81.67 311    P         P        22 24 34.9 -1.5
VAY   Valandovo         81.80 312    P         P        22 24 34.6 -2.4
VAY   Valandovo         81.80 312    P         P        22 24 34.6 -2.4
VAY   Valandovo         81.80 312  i P         P        22 24 35.7 -1.3
NACGM Naroch            81.83 326  e           P        22 24 36.0 -0.9
GRG   Griva             81.87 312    P         P        22 24 33.9 -3.6
GRG   Griva             81.87 312    P         P        22 24 33.9 -3.6
GRG   Griva             81.87 312    P         P        22 24 33.9 -3.6
DRO   Drossia           81.95 309    P         P        22 24 40.6 +2.7
IDID  Didziasalis       81.96 326  eP          P        22 24 37.5  0.0
IDID                                 IAmb      IAmb     22 24 41.5
      comp=Z,29nm,0.8s
CJR   Cluj-Napoca       82.01 317⇓ iP          P        22 24 38.8 +0.7
STIP  Stip              82.15 312  i P         P        22 24 37.1 -1.8
PVO   Paravola          82.19 309    P         P        22 24 42.4 +3.3
IIGN  Ignalina          82.25 326  eP          P        22 24 39.1  0.0
IIGN                                 IAmb      IAmb     22 24 44.2
      comp=Z,47nm,0.8s
BMR   Baia Mare         82.26 318⇓ iP          P        22 24 40.0 +0.7
LVV   L'vov             82.33 321  eP          P        22 24 39.1 -0.5
DEV   Deva              82.34 317⇑ iP          P        22 24 41.3 +1.6
GZR   Gura Zlata        82.34 316⇑ iP          P        22 24 40.5 +0.6
ISAL  Salakas           82.36 327  eP          P        22 24 39.6 -0.1
ISAL                                 IAmb      IAmb     22 24 44.6
      comp=Z,25nm,0.8s
LVZ   Lovozero          82.45 340  eP          P        22 24 39.2 -0.7
      comp=Z,18nm,0.9s
LVZ                                  LR        LR
      comp=Z,473nm,22.0s
LVZ   Lovozero          82.45 340  eP          P        22 24 39.2 -0.7
LVZ                                  pmax      pmax
      comp=Z,19nm,0.9s
LVZ                                  MLR       MLR
      comp=Z,473nm,22.0s
HERR  Herculane         82.50 315⇑ iP          P        22 24 40.4 -0.2
VNDA  Vanda             82.55 169    P         P        22 24 41.2 +0.9
      comp=Z,23nm,0.9s,baz=309,slow=5.1,SNR=19
TSUM  Tsumeb            82.61 251  eP          P        22 24 43.2 +1.3
      comp=Z,23nm,1.0s
TSUM                                 LR        LR
      comp=Z,603nm,20.0s
BILL  Bilibino          82.63  20  eP          P        22 24 40.0 -0.8
      comp=Z,9.7nm,1.0s
BILL                                 LR        LR
      comp=Z,1µm,21.0s
BILL  Bilibino          82.63  20⇓ eP          P        22 24 40.0 -0.8
BILL                                 pmax      pmax
      comp=Z,19nm,1.7s
DRGR                    82.63 317⇑ iP          P        22 24 41.6 +0.2
BIA   Bitola            82.69 312  i P         P        22 24 41.0 -0.8
SKO   Skopje            82.74 312  i P         P        22 24 41.1 -0.9
VSU   Vasula            82.76 329c iP          P        22 24 41.0 -0.6
VSU                                  pmax      pmax
      comp=Z,241nm,1.3s
VSU   Vasula            82.76 329  eP          P        22 24 41.1 -0.6
VSU                                  IAmb      IAmb     22 24 46.4
      comp=Z,186nm,1.1s
APA   Apatity           82.76 339⇑ iP          P        22 24 42.5 +1.0
APA                                  pmax      pmax
      comp=Z,14nm,1.0s
APA                                  MLR       MLR
      comp=Z,800nm,17.0s
KRUS  Krusevo           82.79 312  i P         P        22 24 41.3 -1.1
LKD2  Lefkada island    82.88 309    P         P        22 24 44.0 +1.2
LKD2  Lefkada island    82.88 309    P         P        22 24 44.0 +1.2
TRPA  Tarpa             82.98 319⇑ iP          P        22 24 43.2 +0.2
OHR   Ohrid             83.09 312  i P         P        22 24 44.5 +0.7
KWP   Kalwaria Pacla    83.14 320  eP          P        22 24 43.8 -0.1
KWP   Kalwaria Pacla    83.14 320  eP          P        22 24 43.8 -0.1
BZS   Buzias            83.18 316⇑ iP          P        22 24 44.0 -0.1
UZH   Uzhgorod          83.23 319  eP          P        22 24 42.8 -1.5
UZH                                i                    22 24 50.1
UZH                                e                    22 24 55.7
LTVH  Ltavrtes, Hu      83.27 318  eP          P        22 24 44.0 -0.6
TIM   Timisoara         83.47 316⇓ iP          P        22 24 49.2 +3.6
SBA   Scott Base        83.65 169    PFAKE              22 25 00.0  +14
SBA                                  LR        LR
      comp=Z,2µm,19.0s
SUW   Suwalki           83.68 325  eP          P        22 24 45.9 -0.6
SUW   Suwalki           83.68 325  eP          P        22 24 46.0 -0.5
      comp=Z,220nm,0.8s
SUW   Suwalki           83.68 325  eP          P        22 24 45.9 -0.6
FIA1  FINESS Array S    83.84 332  eP          P        22 24 47.2  0.0
FINES FINESS Array B    83.84 332    P         P        22 24 46.9 -0.3
      comp=Z,21nm,0.6s,baz=104,slow=5.9,SNR=28
FINES                                PKKPbc    PKKPbc   22 43 08.0 +2.1
      comp=Z,1.0nm,0.6s,baz=264,slow=2.5,SNR=5.8
DIVS  Divibare          84.10 314  eP          P        22 24 49.1 +0.1
      comp=Z,36nm,1.1s
DIVS  Divibare          84.10 314  eP          P        22 24 48.5 -0.5
FRGS  Fruska Gora       84.37 315  eP          P        22 24 49.5 -0.8
PDG   Podgorica         84.41 313⇑ iP          P        22 24 49.5 -1.0
PDG   Podgorica         84.41 313  eP          P        22 24 49.2 -1.3
DRME  Dracevica, Mon    84.43 312  eP          P        22 24 51.8 +1.1
BBLS  Lazi&#263;i       84.49 314  eP          P        22 24 51.7 +0.7
NIE   Niedzica          84.65 320  eP          P        22 24 52.1 +0.5
PSZ   Piszkesteto       84.70 318  eP          P        22 24 51.7 -0.2
      comp=Z,33nm,1.1s
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PSZ   Piszkesteto       84.70 318⇑iP     P        22 24 51.9  0.0
PSZ   Piszkesteto       84.70 318 eP     P        22 24 51.7 -0.2
PSZ                                pmax   pmax
      comp=Z,33nm,1.1s
PBUR  Paburg            84.77 326 eP     P        22 24 51.5 -0.5
PBUR                               IAmb   IAmb     22 24 56.8
      comp=Z,139nm,0.9s
OJC   Ojcow             85.09 321 eP     P        22 24 53.4 -0.4
OJC   Ojcow             85.09 321 eP     P        22 24 53.4 -0.4
      comp=Z,30nm,1.1s
OJC   Ojcow             85.09 321 eP     P        22 24 53.4 -0.4
LANS  Liptovska Anna    85.15 319 eP     P        22 24 54.0 -0.2
MORH  Mrgy, Hungar      85.32 316 eP     P        22 24 54.6 -0.4
MORH  Mrgy, Hungar      85.32 316 eP     P        22 24 52.1 -2.9
VYHS  Vyhne             85.48 319 eP     P        22 24 55.4 -0.4
VYHS                               pmax   pmax
      comp=Z,21nm,1.4s
VYHS  Vyhne             85.48 319 eP     P        22 24 55.4 -0.4
KLNR  Kaliningrad       85.50 325⇓eP     P        22 24 55.8 +0.1
KLNR                               pmax   pmax
      comp=Z,176nm,0.8s
KEV   Kevo              85.69 340 eP     P        22 24 56.2 -0.1
      comp=Z,82nm,1.4s
KEV                                LR     LR
      comp=Z,835nm,19.0s
KEV   Kevo              85.69 340 eP     P        22 24 56.2 -0.1
KEV                                pmax   pmax
      comp=Z,82nm,1.4s
KEV                                MLR    MLR
      comp=Z,835nm,19.0s
SRO   Srobarova         85.74 318 eP     P        22 24 57.6 +0.6
SRO   Srobarova         85.74 318 eP     P        22 24 57.6 +0.6
KOLL  Kolacno           85.77 319 eP     P        22 24 57.0 -0.2
KOLL  Kolacno           85.77 319 eP     P        22 24 57.0 -0.2
TIP   Timpagrande       85.94 309 eP     P        22 24 59.0 +0.7
      comp=Z,64nm,1.2s
TIP   Timpagrande       85.94 309⇓iP     P        22 24 59.4 +1.0
ARCES ARCESS Array B    86.14 340 eP     P        22 24 58.6  0.0
ARCES ARCESS Array B    86.14 340  P     P        22 24 58.2 -0.4
      comp=Z,17nm,0.8s,baz=98,slow=5.0,SNR=52
ARE0  ARCESS Array S    86.14 340 eP     P        22 24 59.0 +0.4
      comp=Z,2.5nm,1.1s
ARE0  ARCESS Array S    86.14 340 eP     P        22 24 58.2 -0.4
BLY   Banja Luka        86.17 315 eP     P        22 24 59.1 -0.2
      comp=Z,40nm,0.8s
BLY   Banja Luka        86.17 315⇑iP     P        22 24 59.4 +0.1
BLY   Banja Luka        86.17 315 eP     P        22 24 58.7 -0.6
MORC  Moravsky Berou    86.47 320 eP     P        22 25 01.0 +0.2
      comp=Z,29nm,1.0s
MORC  Moravsky Berou    86.47 320⇑iP     P        22 25 00.9 +0.2
MORC  Moravsky Berou    86.47 320 eP     P        22 25 01.0 +0.2
MORC                               pmax   pmax
      comp=Z,29nm,1.0s
MORC  Moravsky Berou    86.47 320 eP     P        22 25 00.9 +0.2
MODS  Modra-Piesok      86.49 318 eP     P        22 25 00.8  0.0
MODS                               pmax   pmax
      comp=Z,47nm,1.3s
MODS  Modra-Piesok      86.49 318 eP     P        22 25 00.8  0.0
ZST   Bratislava        86.59 318 eP     P        22 25 00.3 -0.9
BEHE  Becsehely         86.63 317 eP     P        22 25 02.2 +0.7
BEHE  Becsehely         86.63 317 eP     P        22 24 59.0 -2.5
KTK1  Kautokeino        86.80 339 eP     P        22 25 01.4 -0.4
ADK   Adak              86.89  38  PFAKE           22 25 10.0 +7.4
ADK                                LR     LR
      comp=Z,4μm,21.0s
SOP   Sopron            86.90 318 eP     P        22 25 05.0 +2.3
KRLC  Kraliky           87.00 320 eP     P        22 25 04.4 +1.1
KRLC                              epP    PcP      22 25 06.8 +1.4
KRLC  Kraliky           87.00 320 eP     P        22 25 04.4 +1.1
HAMF  Hammerfest        87.02 341 eP     P        22 25 04.2 +1.3
VRAC  Vranov            87.04 319⇑iP     P        22 25 03.2 -0.2
VRAC  Vranov            87.04 319 eP     P        22 25 03.4  0.0
VRAC                              e               22 25 07.6
GKP   Gorka Klasztor    87.06 323 eP     P        22 25 03.4  0.0
GKP   Gorka Klasztor    87.06 323 eP     P        22 25 03.4  0.0
KRUC  Moravsky          87.14 319 eP     P        22 25 03.6 -0.3
KRUC                              e               22 25 08.0
DPC   Dobruska-Polom    87.32 320 eP     P        22 25 05.5 +0.7
DPC                               epP    PcP      22 25 08.6 +1.7
DPC                               ex     x        22 25 15.6
DPC   Dobruska-Polom    87.32 320 eP     P        22 25 05.5 +0.7
DPC                               e               22 25 15.6
KSP   Ksiaz             87.39 321 eP     P        22 25 06.1 +1.1
KSP   Ksiaz             87.39 321 eP     P        22 25 06.1 +1.1
CONA  Conrad Observa    87.39 318 i P    P        22 25 05.2 -0.1
      comp=Z,17nm,1.1s
CRES  Cresnjev          87.49 316 eP     P        22 25 05.4 -0.3
UPC   Upice             87.53 321 eP     P        22 25 06.7 +0.9
UPC   Upice             87.53 321 eP     P        22 25 06.7 +0.9
ARSA  Arzberg           87.56 317 i P    P        22 25 06.4 +0.3
      comp=Z,26nm,0.9s
BOJS  Bojanci           87.60 315 eP     P        22 25 06.4 +0.1
TREC  Trest             87.76 319 eP     P        22 25 07.5 +0.6
TREC                              epP    PcP      22 25 09.9 +1.1
TREC  Trest             87.76 319 eP     P        22 25 07.5 +0.6
PERS  Pernice           87.79 317 eP     P        22 25 07.3 +0.1
SOKA  Soboth            87.85 317 i PcP  P        22 25 08.1 +0.6
      comp=Z,38nm,1.1s,SNR=8.8
VISS  Visnje            87.92 316 i P    P        22 25 08.0 +0.2
NVL   N'lazarevskaya    88.05 199 eP     P        22 25 10.0 +2.2
NVL                                pmax   pmax
      comp=Z,40nm,1.2s
LJU   Ljubljana         88.15 316 eP     P        22 25 09.0 +0.2
OBKA  Obir              88.17 316 i P    P        22 25 09.1 +0.1
      comp=Z,22nm,1.0s
CEY   Cerknica          88.20 316 eP     P        22 25 08.3 -0.8
QSPA  South Pole Qui    88.42 180 eP     P        22 25 10.9 +1.0
      comp=Z,221nm,1.0s
QSPA                               LR     LR
      comp=Z,1μm,19.0s
TRO   Tromso            88.42 340 eP     P        22 25 10.1 +0.6
PRU   Pruhonice         88.43 320 eP     P        22 25 10.3 +0.3
PRU                               epP    PcP      22 25 12.8 +1.1
PRU   Pruhonice         88.43 320 eP     P        22 25 10.3 +0.3
PVCC  Panska Ves        88.45 320 eP     P        22 25 10.7 +0.6
PVCC                              ex     x        22 25 13.2
PVCC  Panska Ves        88.45 320 eP     P        22 25 10.7 +0.6
MOA   Molln             88.46 318 i P    P        22 25 10.5 +0.2
      comp=Z,10nm,0.9s
JAVS  Javornik          88.46 316 i P    P        22 25 10.0 -0.5
PRA   Prague            88.50 320 eP     P        22 25 11.9 +1.5
PRA   Prague            88.50 320 eP     P        22 25 11.9 +1.5
BSD   Bornholm Skovb    88.60 325 i P    P        22 25 12.4 +1.7
BSD   Bornholm Skovb    88.60 325 i P    P        22 25 12.4 +1.7
AQU   L'Aquila          88.72 312 eP     P        22 25 12.3 +0.6
      comp=Z,88nm,1.0s
AQU   L'Aquila          88.72 312 eP     P        22 25 12.3 +0.6
AQU                                pmax   pmax
      comp=Z,88nm,1.0s
AQU   L'Aquila          88.72 312 eP     P        22 25 12.2 +0.5
MYKA  Terra Mystica     88.80 317 i P    P        22 25 12.0  0.0
      comp=Z,22nm,1.7s
BRG   Berggiesshubel    88.87 321 i P    P        22 25 12.3 +0.2
      comp=Z,52nm,1.1s
BRG   Berggiesshubel    88.87 321 i P    P        22 25 12.3 +0.2
BRG                                pmax   pmax
      comp=Z,32nm,1.1s
GEA0  GERESS Array S    88.90 319 eP     P        22 25 12.4  0.0
GEC2  GERESS Array S    88.90 319 eP     P        22 25 13.1 +0.6
      comp=Z,65nm,1.4s
GERES GERESS Array B    88.90 319  P     P        22 25 12.5 +0.1
      comp=Z,13nm,0.9s,baz=98,slow=4.6,SNR=34
KHC   Kasperske Hory    89.00 319 eP     P        22 25 12.9 +0.1
      comp=Z,31nm,2.0s
KHC   Kasperske Hory    89.00 319 eP     P        22 25 12.9 +0.1
KHC                               epP    PcP      22 25 15.1 +0.8
KHC                               ex     x        22 25 32.1
KHC   Kasperske Hory    89.00 319 eP     P        22 25 12.9 +0.1
KBA   Koelnbreinsper    89.03 317 i P    P        22 25 12.5 -0.7
      comp=Z,14nm,1.0s
RUE   Ruedersdorf       89.08 322 eP     P        22 25 13.5 +0.5
RUE                                IAmb   IAmb     22 25 18.5
      comp=Z,162nm,1.1s
CLL   Collm             89.49 321 eP     P        22 25 14.9 -0.1
      comp=Z,28nm,1.0s
CLL   Collm             89.49 321⇑iP     P        22 25 14.8 -0.2
      comp=Z,33nm,1.4s
CLL                               i pP   PcP      22 25 19.0 +2.7
      comp=Z,39nm,1.2s
CLL                               i               22 25 25.1
CLL                               eS     S        22 36 04.0 +0.3
CLL                                LmV             23 09 00.0
      comp=Z,300nm,21.3s
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CLL   Collm             89.49 321⇑iP     P        22 25 14.8 -0.2
CLL                               eS     S        22 36 04.0 +0.3
CLL                                pmax   pmax
      comp=Z,35nm,1.4s
CLL                                MLR    MLR
      comp=Z,300nm,21.3s
STEI  Steigen           89.55 338 eP     P        22 25 14.8 -0.1
ABTA  Abfaltersbach     89.58 317 i P    P        22 25 15.3 -0.4
      comp=Z,19nm,1.0s
MOR8  Moi Rana          89.71 336 eP     P        22 25 14.5 -1.3
NKC   Novy Kostel       89.79 320 eP     P        22 25 20.0 +3.5
NKC   Novy Kostel       89.79 320 eP     P        22 25 20.0 +3.5
LOF   Lofoten           90.20 338 eP     P        22 25 18.3 +0.3
SPA0  Spitsbergen Ar    90.25 348 eP     P        22 25 17.7 -0.4
SPA0  Spitsbergen Ar    90.25 348 eP     P        22 25 16.9 -1.1
WATA  Walderalm         90.25 317 i P    P        22 25 18.1 -0.7
      comp=Z,18nm,0.8s
HSPB  Hornsund (broa    90.31 347 eP     P        22 25 18.0 -0.3
GAMB  Gambell           90.48  26 eP     P        22 25 19.5 +0.2
      comp=Z,15nm,1.1s
SQTA  Sankt Quirin      90.49 317 i P    P        22 25 19.6 -0.4
      comp=Z,24nm,1.0s
GRA1  Grafenberg Arr    90.56 320 eP     P        22 25 21.0 +1.0
      comp=Z,51nm,1.2s
GRFO  Grafenberg        90.56 320 eP     P        22 25 20.7 +0.6
      comp=Z,46nm,1.2s
MOTA  Moosalm           90.57 317 i P    P        22 25 20.2 -0.2
      comp=Z,32nm,1.0s,SNR=20
NSS   Namsos            90.66 334 eP     P        22 25 21.4 +1.3
NC602 NORSAR Array S    90.72 331 eP     P        22 25 20.3 -0.3
RETA  Reutte            90.80 317 i P    P        22 25 21.3  0.0
      comp=Z,36nm,0.9s
FETA  Feichten          90.82 317 i PcP  P        22 25 21.6 +0.1
      comp=Z,26nm,1.1s
NB2   NORSAR Subarra    90.89 331  P     P        22 25 20.8 -0.6
      comp=Z,2.5nm,0.7s,baz=95,slow=4.6
NB2   NORSAR Subarra    90.89 331  P     P        22 25 20.8 -0.6
      baz=95,slow=4.6
NOA   NORSAR Array B    90.89 331  P     P        22 25 20.4 -1.0
      comp=Z,9.4nm,1.1s,baz=93,slow=4.8,SNR=8.0
NOA                                PP     PP       22 28 54.5 -2.9
      comp=Z,1.1nm,0.8s,baz=98,slow=6.9,SNR=3.4
FUORN Ofenpass-Fuorn    91.13 316 eP     P        22 25 24.0 +0.9
      comp=Z,74nm,1.0s
KBS   Kingsbay          91.18 349  PFAKE           22 25 30.0 +7.7
KBS                                LR     LR
      comp=Z,637nm,19.0s
DAVA  Damuels           91.40 317 i PcP  P        22 25 24.5 +0.3
      comp=Z,50nm,1.1s,SNR=7.8
KEST  Kesra             91.66 306  P     P        22 25 26.2 +0.6
      comp=Z,54nm,1.0s,baz=16,slow=3.3,SNR=16
KEST                               LR     LR       23 14 57.1
      comp=Z,168nm,18.0s,baz=1.5,slow=41
KONO  Kongsberg         91.67 329 eP     P        22 25 25.1 +0.1
DOMB  Dombas            91.93 332 eP     P        22 25 25.4 -0.7
BFO   Black Forest      92.45 318 eP     P        22 25 28.4 -0.5
      comp=Z,17nm,1.1s
BFO   Black Forest      92.45 318 eP     P        22 25 28.4 -0.5
BFO                                pmax   pmax
      comp=Z,17nm,1.1s
SNAA  Sanae             92.67 198  P     P        22 25 31.2 +1.7
SNAA  Sanae             92.67 198 eP     P        22 25 31.6 +2.1
      comp=Z,9.5nm,1.0s
SNAA  Sanae             92.67 198⇓iP     P        22 25 31.5 +2.0
AKN   Aaknes            92.90 332 eP     P        22 25 30.8 +0.2
ECH   Echery            93.23 318 eP     P        22 25 35.6 +3.1
      comp=Z,27nm,1.3s
ANM   Nome              93.25  26 eP     P        22 25 32.4 +0.2
      comp=Z,26nm,1.6s
ANM   Nome              93.25  26 eP     P        22 25 32.4 +0.2
ANM                                pmax   pmax
      comp=Z,26nm,1.6s
BLS5  Blasjo            93.28 329 eP     P        22 25 32.9 +0.5
HYA   Hoyanger          93.33 331 eP     P        22 25 32.2 -0.3
RDOG  Red Dog Mine      93.97  22 eP     P        22 25 35.4 -0.1
      comp=Z,27nm,1.2s
VNA2  Neumayer--Watz    94.28 198  P     P        22 25 38.3 +1.5
TAM   Tamanrasset       94.99 293 eP     P        22 25 42.7 +1.4
      comp=Z,4.3nm,1.0s
TAM   Tamanrasset       94.99 293 eP     P        22 25 42.7 +1.4
TAM                                pmax   pmax
      comp=Z,4.0nm,1.0s
IM3   Indian Mountai    97.86  23 eP     P        22 25 52.9 -0.3
TOLK  Toolik Lake Re    98.68  20 eP     Pdif     22 25 56.9  0.0
      comp=Z,16nm,1.1s
TOLK  Toolik Lake Re    98.68  20  P     P        22 25 56.0 -0.8
      baz=288
TOA0  Torodi Ar. Sit    98.72 283 eP     Pdif     22 25 58.4 +0.3
TORD  Torodi Ar. Bea    98.72 283  P     P        22 25 56.5 -1.6
      comp=Z,3.3nm,0.9s,baz=24,slow=5.7,SNR=12
TORD                               PKiKP  PKiKP    22 30 29.6  0.0
      comp=Z,0.9nm,0.9s,baz=108,slow=2.2,SNR=3.9
TORD                               LR     LR       23 08 37.7
      comp=Z,200nm,20.6s,baz=340,slow=34
CAST  Castle Rocks      99.21  26 eP     Pdif     22 25 59.7 +0.4
      comp=Z,10nm,0.8s
MLY   Manley            99.33  24 eP     Pdif     22 25 59.8  0.0
      comp=Z,20nm,1.6s
BPAW  Bear Paw Mtn.     99.49  25 eP     Pdif     22 26 00.5 -0.1
SUA   Susitna One      100.34  27 ePdif  Pdif     22 26 04.0 -0.5
KDAK  Kodiak Island    100.38  31  PFAKE           22 26 20.0  +15
KDAK                               LR     LR
      comp=Z,754nm,19.0s
MCK   McKinley         100.47  25 ePdif  Pdif     22 26 04.2 -0.7
MCK   McKinley         100.47  25 eP     Pdif     22 26 04.2 -0.7
COLA  College          100.55  24  PFAKE           22 26 20.0  +15
COLA                               LR     LR
      comp=Z,1μm,20.0s
ILAR  Eielson Array    100.97  24  P     Pdif     22 26 05.0 -2.1
      comp=Z,0.6nm,0.6s,baz=285,slow=4.0,SNR=9.3
ILAR                               PP     PP       22 30 12.7 -2.5
      comp=Z,2.4nm,1.2s,baz=281,slow=6.3,SNR=5.3
ILAR                               PKKPbc PKKPbc   22 42 19.1 -2.4
      comp=Z,2.4nm,0.8s,baz=136,slow=2.2,SNR=20
HDA   Harding Lake     101.07  24  P     Pdif     22 26 06.6 -1.0
      baz=290
RIDG  Independ'e Rid   102.17  24 ePdif  Pdif     22 26 12.4 -0.2
SCRK  Sand Creek       102.44  24 ePdif  Pdif     22 26 14.5 +0.7
INK   Inuvik           104.14  18 ePdif  Pdif     22 26 20.8 -0.2
INK                                PKiKP  PP       22 30 38.4 -0.3
INK   Inuvik           104.14  18 eP     Pdif     22 26 20.8 -0.2
INK                               i               22 30 38.4
INK   Inuvik           104.14  18  Pdiff  Pdif     22 26 19.2 -1.8
      comp=Z,3.0nm,0.9s,baz=299,slow=5.0,SNR=8.3
INK                                PKiKP  PP       22 30 38.4 -0.3
      comp=Z,2.3nm,0.9s,baz=298,slow=3.3,SNR=3.9
TRIS  Tristan da Cun   106.94 231  PFAKE           22 31 00.0  +16
TRIS                               LR     LR
      comp=Z,2μm,21.0s
TBI   Tubuai           107.91 115 eLR    LR       23 02 15.1
      comp=Z,804nm,24.2s
PPT2  Papeete2         108.67 109 eLR    LR       23 02 37.6
      comp=Z,504nm,24.0s
WRAK  Wrangell Islan   111.06  28  PFAKE           22 31 00.0 +8.9
WRAK                               LR     LR
      comp=Z,2μm,20.0s
SFJD  Kangerlussuaq    111.58 348  PFAKE           22 31 00.0 +8.2
SFJD                               LR     LR
      comp=Z,2μm,20.0s
YKA   Yellowknife Ar   113.85  17  Pdiff  Pdif     22 27 02.7 -1.6
      comp=Z,0.1nm,0.4s,baz=320,slow=4.5,SNR=2.6
YKA                                PKiKP  PKiKP    22 30 55.0 -1.3
      comp=Z,0.2nm,0.5s,baz=324,slow=1.9,SNR=4.9
YKA                                PP     PP       22 31 47.5 -1.6
      comp=Z,0.4nm,0.7s,baz=331,slow=7.6,SNR=6.0
YKA                                PKKPbc PKKPbc   22 41 39.2 -1.8
      comp=Z,1.3nm,0.9s,baz=140,slow=3.3,SNR=15
TAOE  Nuku Hiva Isla   118.90 101 eLR    LR       23 07 21.7
      comp=Z,498nm,23.9s
NLWA  Neilton Lookou   120.45  33  PFAKE           22 31 20.0  +10
NLWA                               LR     LR
      comp=Z,1μm,20.0s
SACV  Santiago Islan   123.07 287  PFAKE           22 31 30.0  +14
SACV                               LR     LR
      comp=Z,388nm,20.0s
NEW   Newport          123.39  29  PFAKE           22 31 30.0  +15
NEW                                LR     LR
      comp=Z,1μm,19.0s
J04D  Umpqua Nationa   123.89  36  P     PKPdf    22 31 15.2 -1.3
      baz=306
FFC   Flin Flon        123.94  15 ePKPdf PKPdf    22 31 15.2 -0.8
FFC                                LR     LR
      comp=Z,2μm,19.0s
FFC   Flin Flon        123.94  15 ePKIKP PKPdf    22 31 15.2 -0.8
FFC                                MLR    MLR
      comp=Z,2μm,19.0s
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L04D  Klamath Falls    124.37  38  P     PKPdf    22 31 16.3 -1.1
      baz=305
J05D  Fort Rock, OR    124.38  36  P     PKPdf    22 31 16.1 -1.3
      baz=307
K04D  Chiloquin, OR    124.47  37  P     PKPdf    22 31 16.2 -1.3
      baz=306
M02C  Callahan         124.50  39  P     PKPdf    22 31 16.7 -0.9
      baz=304
N02D  Trinity Center   124.82  39  P     PKPdf    22 31 17.4 -0.8
      baz=304
M04C  Macdoel          124.90  38  P     PKPdf    22 31 17.9 -0.5
      baz=305
O02D  Mt. Diablo Mer   125.21  40  P     PKPdf    22 31 18.4 -0.6
      baz=303
O03E  Paynes Creek     125.77  39  P     PKPdf    22 31 19.3 -0.7
      baz=304
SCHQ  Schefferville    125.84 351  PKP   PKPdf    22 31 19.2 -0.4
      comp=Z,6.6nm,0.9s,baz=64,slow=5.2,SNR=6.2
SCHQ                               PP     PP       22 33 12.0 +0.6
      comp=Z,2.6nm,0.7s,baz=353,slow=6.2,SNR=4.0
MSO   Missoula         125.94  28  P     PKPdf    22 31 19.1 -1.1
      baz=316
WVOR  Wild Horse Val   126.42  35  PFAKE           22 31 30.0 +8.3
WVOR                               LR     LR
      comp=Z,947nm,19.0s
EGMT  Eagleton         126.92  25 ePKPdf PKiKP    22 31 22.3 -0.2
EGMT                               LR     LR
      comp=Z,921nm,20.0s
EGMT  Eagleton         126.92  25  P     PKPdf    22 31 21.1 -0.9
      baz=321
BOZ   Bozeman (W)      127.93  28  PFAKE           22 31 40.0  +15
BOZ                                LR     LR
      comp=Z,1μm,19.0s
BOZ   Bozeman (W)      127.93  28  P     PKPdf    22 31 23.3 -0.8
      baz=318
HLID  Hailey           128.00  32  PFAKE           22 31 40.0  +15
HLID                               LR     LR
      comp=Z,1μm,20.0s
HLID  Hailey           128.00  32  P     PKPdf    22 31 23.5 -0.8
      baz=314
DGMT  Dagmar           128.71  21  PFAKE           22 31 40.0  +14
DGMT                               LR     LR
      comp=Z,1μm,20.0s
DGMT  Dagmar           128.71  21  P     PKPdf    22 31 24.4 -0.9
      baz=328
NVAR  Mina Array Bea   129.06  39  PKP   PKPdf    22 31 26.7 +0.1
      comp=Z,2.6nm,0.8s,baz=287,slow=3.4,SNR=8.2
NVAR                               SKPbc  SKPbc    22 34 43.7 -2.1
      comp=Z,2.3nm,0.7s,baz=253,slow=2.7,SNR=3.5
LKWY  Lake             129.28  28  PFAKE           22 31 40.0  +12
LKWY                               LR     LR
      comp=Z,2μm,19.0s
RLMT  Red Lodge        129.38  27  PFAKE           22 31 40.0  +12
RLMT                               LR     LR
      comp=Z,1μm,20.0s
RLMT  Red Lodge        129.38  27  P     PKPdf    22 31 26.3 -0.7
      baz=320
LAO   LASA Array       129.43  23  PFAKE           22 31 40.0  +12
LAO                                LR     LR
      comp=Z,1μm,19.0s
LAO   LASA Array       129.43  23  P     PKPdf    22 31 26.4 -0.4
      baz=325
ULM   Lac du Bonnet    129.56  13  PKP   PKPdf    22 31 26.2 -0.6
      comp=Z,4.8nm,0.7s,baz=27,slow=2.3,SNR=11
AHID  Auburn Hatcher   130.27  30  PFAKE           22 31 40.0  +10
AHID                               LR     LR
      comp=Z,882nm,19.0s
CWC   Cottonwood Cre   130.37  41  P     PKPdf    22 31 28.2 -0.8
      baz=306
DAC   Darwin (Calif)   130.79  41 ePKPdf PKiKP    22 31 30.8  0.0
DAC   Darwin (Calif)   130.79  41 ePKIKP PKiKP    22 31 30.8  0.0
HWUT  Hardware Ranch   130.87  32  PFAKE           22 31 40.0 +9.2
HWUT                               LR     LR
      comp=Z,491nm,20.0s
MPMC  Manual Prospec   130.98  41  P     PKPdf    22 31 29.3 -1.0
      baz=306
BW06  Boulder Array    131.04  29  PFAKE           22 31 40.0 +8.9
BW06                               LR     LR
      comp=Z,877nm,20.0s
BW06  Boulder Array    131.04  29  P     PKPdf    22 31 29.3 -0.9
      baz=319
PDAR  Pinedale Array   131.04  29  PKP   PKPdf    22 31 30.1 -0.1
      comp=Z,1.3nm,0.6s,baz=170,slow=1.0,SNR=11
PDAR                               SKPbc  SKPbc    22 34 51.4 -1.4
      comp=Z,4.5nm,1.0s,baz=333,slow=0.4,SNR=7.3
DUG   Dugway, Tooele   131.19  34 ePKPdf PKiKP    22 31 31.5 +0.1
DUG                                LR     LR
      comp=Z,1μm,19.0s
DUG   Dugway, Tooele   131.19  34 ePKIKP PKiKP    22 31 31.5 +0.1
DUG                                MLR    MLR
      comp=Z,1μm,19.0s
CHGQ  Chibougamau      131.59 355  P     PKPdf    22 31 30.1 -0.6
      baz=7.1
FMP   Fort Macarthur   131.76  44  P     PKPdf    22 31 30.4 -1.1
      baz=303
CIS   Catalina Islan   131.85  45  P     PKPdf    22 31 30.7 -1.0
      baz=303
SHOC  Shoshone, Teco   131.87  41  P     PKPdf    22 31 30.8 -0.9
      baz=307
MATQ  Matagami         131.93 358  P     PKPdf    22 31 30.7 -0.6
      baz=2.8
EYMN  Ely              132.66  11  PFAKE           22 31 40.0 +6.1
EYMN                               LR     LR
      comp=Z,1μm,21.0s
PFO   Pinyon Flats O   133.09  43  PFAKE           22 31 50.0  +15
PFO                                LR     LR
      comp=Z,788nm,19.0s
COWI  Conover          134.86   9  PFAKE           22 31 50.0  +12
COWI                               LR     LR
      comp=Z,1μm,21.0s
WUAZ  Wupatki          135.20  37  PFAKE           22 31 50.0  +10
WUAZ                               LR     LR
      comp=Z,1μm,19.0s
ISCO  Idaho Springs    135.22  29  PFAKE           22 31 50.0  +10
ISCO                               LR     LR
      comp=Z,678nm,20.0s
ECSD  EROS Data Cent   135.37  17  PFAKE           22 31 50.0  +10
ECSD                               LR     LR
      comp=Z,1μm,20.0s
PKME  Peaks-Kenny Pk   135.50 350  PFAKE           22 31 50.0  +10
PKME                               LR     LR
      comp=Z,1μm,19.0s
MVCO  Mesa Verde       135.69  33  PFAKE           22 31 50.0 +9.3
MVCO                               LR     LR
      comp=Z,1μm,19.0s
OGNE  Ogallala         135.88  24  PFAKE           22 31 50.0 +9.2
OGNE                               LR     LR
      comp=Z,2μm,19.0s
GLMI  Grayling         136.68   5  PFAKE           22 31 50.0 +7.8
GLMI                               LR     LR
      comp=Z,1μm,20.0s
LONY  Lake Ozonia      136.86 355  PFAKE           22 31 50.0 +7.4
LONY                               LR     LR
      comp=Z,1μm,20.0s
SDCO  Great Sand Dun   136.87  30  PFAKE           22 31 50.0 +6.9
SDCO                               LR     LR
      comp=Z,654nm,20.0s
SADO  Sadowa           136.95 359  PKP   PKPdf    22 31 41.2 +0.3
      comp=Z,3.0nm,0.5s,baz=0.0,slow=1.0,SNR=3.8
TRQA  Tornquist        137.33 201  PFAKE           22 31 50.0 +6.3
TRQA                               LR     LR
      comp=Z,894nm,20.0s
TUC   Tucson           137.66  40  PFAKE           22 31 50.0 +5.3
TUC                                LR     LR
      comp=Z,959nm,20.0s
JFWS  Jewell Farm      137.74  12  PFAKE           22 31 50.0 +5.6
JFWS                               LR     LR
      comp=Z,931nm,20.0s
SCIA  State Center     138.01  15  PFAKE           22 31 50.0 +5.0
SCIA                               LR     LR
      comp=Z,2μm,20.0s
ANMO  Albuquerque      138.46  34  PFAKE           22 32 00.0  +14
ANMO                               LR     LR
      comp=Z,472nm,19.0s
CBKS  Cedar Bluff      138.62  24  PFAKE           22 32 00.0  +14
CBKS                               LR     LR
      comp=Z,1μm,19.0s
AAM   Ann Arbor        139.26   4  PFAKE           22 32 00.0  +13
AAM                                LR     LR
      comp=Z,2μm,20.0s
BINY  Binghamton       139.38 356  PFAKE           22 32 00.0  +12
BINY                               LR     LR
      comp=Z,1μm,20.0s
KSU1  Kansas State U   139.55  20 ePKPpre PKPpre  22 31 43.4
KSU1                              ePKPdf PKPdf    22 31 46.5 +0.6
KSU1                               LR     LR
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           comp=Z,2µm,19.0s
HDIL  Hopedale          140.20  11  PFAKE                22 32 00.0 +11
HDIL                                LR         LR
           comp=Z,2µm,22.0s
ACSO  Alum Creek Sta    141.37   4 ePKPdf      PKPdf     22 31 48.8 -0.3
ACSO                                LR         LR
           comp=Z,1µm,20.0s
MNTX  Cornudas Mount    141.44  36 ePKPpre     PKPpre    22 31 45.4
MNTX                               ePKPdf      PKPdf     22 31 50.0 +0.4
MNTX                                LR         LR
           comp=Z,460nm,20.0s
S41A  Jillco Farms,     142.45  16  P          PKPdf     22 31 48.8 -2.4
           baz=340
WMOK  Wichita Mounta    142.49  26 ePKPpre     PKPpre    22 31 45.3
WMOK                                LR         LR
           comp=Z,2µm,19.0s
WMOK  Wichita Mounta    142.49  26 ePKHKP      PKPpre    22 31 45.3
WMOK                                MLR        MLR
           comp=Z,2µm,19.0s
R45A  Skylar, Fairfi    142.59  11  P          PKPdf     22 31 49.9 -1.4
           baz=346
Q50A  Georgetown        142.67   6  P          PKPdf     22 31 50.2 -1.3
           baz=353
T41A  Mountain View     142.96  16  P          PKPdf     22 31 50.3 -1.8
           baz=340
T42A  Van Buren         143.15  15  P          PKPbc     22 31 50.7 +1.5
           baz=341
R50A  Paris             143.19   6  P          PKPbc     22 31 50.1 +0.8
           baz=352
T43A  Greenville        143.31  14  P          PKPbc     22 31 50.3 +0.6
           baz=342
CBN   Corbin Frederi    143.45 357  PFAKE                22 32 00.0 +3.8
CBN                                 LR         LR
           comp=Z,2µm,20.0s
U41A  Viola             143.57  17  P          PKPbc     22 31 50.2 -0.2
           baz=339
S48A  Wiedeman Farm,    143.59   9  P          PKPbc     22 31 50.1 -0.3
           baz=349
AVIZ  Vizcacheras       143.61 196 eP          PKPdf     22 31 52.8 -0.7
R58B  Mineral           143.71 358  P          PKPbc     22 31 50.4 -0.3
           baz=3.1
MRA   San Martin        143.72 200 eP          PKPdf     22 31 52.6 -1.0
MRA                                eP          PKPbc     22 31 52.8 +1.6
U42A  Revenden          143.75  16  P          PKPbc     22 31 51.0  0.0
           baz=340
S50A  Richmond          143.78   6  P          PKPbc     22 31 50.8 -0.2
           baz=352
ABTX  Abilene, Hawle    143.84  29  P          PKPab     22 31 51.0 +0.3
           baz=325
T46A  Princeton         143.87  11  P          PKPbc     22 31 51.0 -0.2
           baz=346
S51A  Beattyville       143.90   5  P          PKPbc     22 31 51.1 -0.3
           baz=353
V41A  Mountainview      144.02  17  P          PKPab     22 31 51.3  0.0
           baz=339,SNR=8.2
W39A  Magazine          144.04  20  P          PKPab     22 31 51.2 -0.1
           baz=336,SNR=5.2
AAGR  Agrelo            144.06 196 eP          PKPdf     22 31 54.1 -0.2
T48A  Bowling Green     144.07   9  P          PKPab     22 31 51.5 +0.1
           baz=349,SNR=14
TXAR  Lajitas Array     144.16  37  PKP        PKPbc     22 31 52.8 +0.2
           comp=Z,21nm,0.6s,baz=261,slow=0.8,SNR=121
TXAR                                SKPbc      SKPbc     22 35 31.9 +0.3
           comp=Z,1.4nm,0.6s,baz=278,slow=0.6,SNR=5.3
T49A  Edmonton          144.20   8  P          PKPab     22 31 51.5 -0.4
           baz=350
V42A  Cord              144.22  16  P          PKPab     22 31 51.7 -0.4
           baz=340,SNR=9.3
U44B  Burton Farm, H    144.24  13  P          PKPab     22 31 51.6 -0.5
           baz=343
TCA   Tanti             144.29 202 eP          PKPdf     22 31 55.1 +0.4
BDFB  Brasilia          144.32 240  PKP        PKPbc     22 31 54.1 +0.6
           comp=Z,28nm,0.8s,baz=112,slow=3.2,SNR=34
ACAN  Cantantal         144.34 198 eP          PKPdf     22 31 54.4 -0.3
T50A  Nancy             144.38   7  P          PKPab     22 31 51.7 -0.9
           baz=351
PEL   Peldehue          144.47 193 eP          PKPdf     22 31 54.1 -0.7
U46A  Springville       144.48  12  P          PKPab     22 31 52.4 -0.5
           baz=345
T52A  Hallie            144.48   5  P          PKPab     22 31 52.4 -0.5
           baz=354
BLA   Blacksburg        144.50   1  PFAKE                22 32 10.0 +12
BLA                                 LR         LR
           comp=Z,2µm,19.0s
BLA   Blacksburg        144.50   1  P          PKPab     22 31 52.5 -0.6
           baz=359
ASAL  Salagasta         144.53 196 eP          PKPdf     22 31 55.1 +0.1
T51A  Gray              144.53   6  P          PKPab     22 31 51.7 -1.4
           baz=353,SNR=11
W41B  Gary Mavity, V    144.56  18  P          PKPab     22 31 52.4 -0.9
           baz=338,SNR=16
U47A  Clarksville       144.57  11  P          PKPab     22 31 52.4 -0.9
           baz=347
T54A  Tazewell          144.61   3  P          PKPab     22 31 52.5 -1.0
           baz=357,SNR=12
U48A  Cassie Pea, Po    144.63  10  P          PKPab     22 31 52.7 -0.8
           baz=348,SNR=13
T53A  Wise              144.63   4  P          PKPab     22 31 52.8 -0.8
           baz=355,SNR=11
W42A  Bald Knob         144.68  17  P          PKPab     22 31 53.1 -0.6
           baz=339
ROC1  El Roble          144.70 193 eP          PKPdf     22 31 55.3 -0.3
MIAR  Mount Ida         144.70  20 ePKPpre     PKPab     22 31 53.6 -0.3
MIAR                                LR         LR
           comp=Z,1µm,19.0s
MIAR  Mount Ida         144.70  20  PKIKP      PKPab     22 31 53.6 -0.3
MIAR  Mount Ida         144.70  20  P          PKPab     22 31 53.5 -0.3
           baz=336,SNR=75
U49A  Red Boiling Sp    144.75   8  P          PKPab     22 31 52.7 -1.3
           baz=350,SNR=24
WVT   Waverly           144.77  11  P          PKPab     22 31 53.6 -0.4
           baz=346
CPUP  Villa Florida     144.86 216  PKPbc      PKPdf     22 31 55.5 -0.2
           comp=Z,135nm,0.9s,baz=128,slow=2.7,SNR=197
V45A  Humboldt          144.90  13  P          PKPab     22 31 52.6 -1.9
           baz=344
U50A  Jamestown         144.97   7  P          PKPab     22 31 53.5 -1.3
           baz=351,SNR=40
TZTN  Tazewell          144.99   5  P          PKPab     22 31 53.6 -1.3
           baz=353,SNR=30
X40A  Basin Creek Fa    145.00  19  P          PKPab     22 31 53.9 -1.0
           baz=337,SNR=15
V46A  Holladay          145.03  12  P          PKPbc     22 31 53.7 -1.3
           baz=345,SNR=11
W43A  Forest City       145.09  16  P          PKPbc     22 31 53.7 -1.5
           baz=341
X41A  Kaden, Bauxite    145.10  19  P          PKPbc     22 31 54.2 -1.0
           baz=337
U51A  La Follette       145.10   6  P          PKPbc     22 31 54.0 -1.3
           baz=352,SNR=8.6
V47A  Nunnelly          145.12  11  P          PKPbc     22 31 54.3 -1.0
           baz=346,SNR=13
RTCV  Cerro Valdivia    145.13 197 eP          PKPdf     22 31 56.7 +0.6
U52A  Thorn Hill        145.16   5  P          PKPbc     22 31 54.2 -1.2
           baz=354,SNR=26
U53A  Fall Branch       145.25   4  P          PKPbc     22 31 54.3 -1.4
           baz=355,SNR=15
CFA   Coronel Fontan    145.28 197 eP          PKPdf     22 31 57.0 +0.6
X42A  Stuttgart         145.32  17  P          PKPbc     22 31 54.8 -1.1
           baz=339
V48A  Smith Brothers    145.34  10  P          PKPbc     22 31 55.0 -1.0
           baz=348,SNR=27
WHTX  Lake Whitney,     145.39  27  P          PKPbc     22 31 55.6 -0.7
           baz=328
RTLS  Leoncito          145.40 196 eP          PKPab     22 31 58.2 +1.3
W45A  Hickory Valley    145.41  14  P          PKPbc     22 31 55.2 -1.0
           baz=343,SNR=8.4
V49A  McMinnville       145.46   9  P          PKPbc     22 31 55.1 -1.3
           baz=349,SNR=17
ZON   Zonda             145.47 197 eP          PKPab     22 31 57.3 +0.5
JCT   Junction City     145.48  32 ePKPbc      PKPdf     22 31 56.7  0.0
JCT                                 LR         LR
           comp=Z,461nm,19.0s
JCT   Junction City     145.48  32  P          PKPbc     22 31 56.5 -0.2
           baz=323
X43A  Marvell           145.57  16  P          PKPdf     22 31 56.0 -0.7
           baz=340
W46A  Michie            145.62  13  P          PKPdf     22 31 55.5 -1.2
           baz=345,SNR=9.8
Y41A  Eaglette Beard    145.63  19  P          PKPdf     22 31 56.2 -0.6
           baz=337
V51A  Loudon            145.64   7  P          PKPdf     22 31 55.7 -1.0
           baz=352,SNR=14
W47A  Westpoint         145.66  11  P          PKPdf     22 31 55.9 -0.9
           baz=346,SNR=31
V50A  Pikevile          145.67   8  P          PKPdf     22 31 55.9 -0.9
           baz=350,SNR=31
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V52A  Sevierville       145.68   6  P          PKPdf     22 31 56.3 -0.5
           baz=353,SNR=21
X44A  Crenshaw          145.79  15  P          PKPdf     22 31 56.7 -0.4
           baz=341
TKL   Tuckaleechee C    145.84   6  PKPbc      PKPdf     22 31 56.5 -0.7
           comp=Z,38nm,0.8s,baz=347,slow=6.6,SNR=14
W48A  Pulaski           145.90  11  P          PKPdf     22 31 56.6 -0.6
           baz=347,SNR=28
V53A  Saluda            145.92   5  P          PKPdf     22 31 56.8 -0.5
           baz=354,SNR=33
Y42A  Garnett, Star     145.94  18  P          PKPdf     22 31 57.1 -0.2
           baz=338
OXF   Oxford            145.97  14 ePKPbc      PKPdf     22 31 57.2 -0.1
OXF   Oxford            145.97  14  PKP2       PKPdf     22 31 57.2 -0.1
OXF   Oxford            145.97  14  P          PKPdf     22 31 56.9 -0.4
           baz=343,SNR=21
AMOG  MOGNA             145.98 197 eP          PKPab     22 31 59.2 +0.5
W49A  Belvidere         146.04  10  P          PKPdf     22 31 57.1 -0.3
           baz=348,SNR=36
X45A  UM Field Stati    146.06  14  P          PKPdf     22 31 56.7 -0.8
           baz=343
W50A  Signal Mountai    146.11   8  P          PKPdf     22 31 57.7 +0.1
           baz=350,SNR=8.4
X46A  Booneville        146.12  13  P          PKPdf     22 31 57.9 +0.3
           baz=344
Y43A  Makayla and Ka    146.12  17  P          PKPdf     22 31 58.0 +0.4
           baz=340,SNR=8.4
Z41A  Richland Creek    146.14  20  P          PKPdf     22 31 57.9 +0.3
           baz=336
W51A  Cleveland         146.22   7  P          PKPdf     22 31 58.0 +0.3
           baz=351,SNR=24
Y44A  Strider, Charl    146.28  16  P          PKPbc     22 31 58.7 -0.3
           baz=341,SNR=11
X47A  Russelville       146.32  12  P          PKPdf     22 31 58.3 +0.4
           baz=345
435B  Jarrell           146.34  28  P          PKPdf     22 31 58.6 +0.5
           baz=326
W52A  Murphy            146.39   6  P          PKPdf     22 31 58.1  0.0
           baz=352
W53A  Cullowhee         146.39   5  P          PKPdf     22 31 58.3 +0.1
           baz=354,SNR=22
CNNC  Cliffs of the     146.43 357 ePKPdf      PKPdf     22 31 57.4 -0.6
CNNC                               ePKPbc      PKPbc     22 31 59.1 -0.3
CNNC                                LR         LR
           comp=Z,1µm,21.0s
CNNC  Cliffs of the     146.43 357  P          PKPdf     22 31 57.7 -0.4
           baz=3.3
ACCO  Cerro Coronel     146.48 197 eP          PKPbc     22 31 59.9 -0.2
KMSC  Kings Mountain    146.53   2  P          PKPdf     22 31 58.5 +0.3
           baz=357
X48A  Hartselle         146.55  11  P          PKPdf     22 31 58.3  0.0
           baz=347,SNR=22
X49A  Woodville         146.62  10  P          PKPdf     22 31 59.0 +0.6
           baz=348,SNR=20
X50B  Fort Payne        146.78   9  P          PKPdf     22 31 59.2 +0.4
           baz=349
NATX  Nacogdoches       146.79  24 ePKPbc      PKPbc     22 32 00.5 -0.1
NATX                                LR         LR
           comp=Z,2µm,19.0s
NATX  Nacogdoches       146.79  24  P          PKPbc     22 31 59.9 -0.6
           baz=332
X51A  Calhoun           146.79   8  P          PKPdf     22 31 59.5 +0.8
           baz=351,SNR=14
X52A  Dahlonega         146.88   6  P          PKPdf     22 31 59.7 +0.8
           baz=352,SNR=14
ACDV  Cuesta del Vie    146.89 197 eP          PKPab     22 32 02.4  0.0
AROD  Rodeo             146.99 196 eP          PKPbc     22 32 00.9 -0.7
X53A  Estanollee        147.03   5  P          PKPbc     22 32 00.3 -0.9
           baz=353,SNR=10
Y48A  Jasper            147.04  11  P          PKPdf     22 31 60.0 +0.8
           baz=346
Y49A  Blount Mountai    147.24  10  P          PKPbc     22 32 00.7 -1.0
           baz=348,SNR=14
Y50A  Piedmont          147.32   9  P          PKPbc     22 32 01.1 -0.9
           baz=349
AGUA  GUANDACOL         147.34 198 eP          PKPdf     22 32 00.9 +1.0
CYA   Choya             147.34 203 eP          PKPdf     22 32 00.8 +0.9
GO04  Tololo Observa    147.34 194 eP          PKPbc     22 32 02.6 +0.2
833A  Chaparral WMA,    147.39  33  P          PKPbc     22 32 02.0 -0.4
           baz=322
Y51A  Rockmart          147.42   8  P          PKPbc     22 32 01.3 -1.0
           baz=350,SNR=11
Y52A  Lilburn           147.59   7  P          PKPbc     22 32 01.8 -0.9
           baz=352,SNR=18
145A  Houston Renfro    147.64  16  P          PKPbc     22 32 02.4 -0.4
           baz=341
Y53A  Monroe            147.65   6  P          PKPbc     22 32 02.1 -0.8
           baz=353
Y54A  Tignall           147.72   5  P          PKPbc     22 32 02.3 -0.7
           baz=354,SNR=17
Z49A  Columbiana        147.87  11  P          PKPbc     22 32 02.2 -1.2
           baz=347
Z50A  Ashland           147.92  10  P          PKPbc     22 32 02.3 -1.3
           baz=348
LRAL  Lakeview Retre    147.93  12 ePKPbc      PKPbc     22 32 02.4 -1.3
LRAL                               ePKPab      PKiKP     22 32 05.2 -0.4
LRAL  Lakeview Retre    147.93  12  P          PKPbc     22 32 02.3 -1.3
           baz=346
Z51A  Franklin          147.97   9  P          PKPbc     22 32 03.0 -0.8
           baz=350
147A  Livingston        148.00  14  P          PKPbc     22 32 03.3 -0.6
           baz=344,SNR=12
GOGA  Godfrey           148.10   6 ePKPdf      PKPdf     22 32 01.3 +0.4
GOGA                               ePKPbc      PKPbc     22 32 03.4 -0.7
GOGA                               ePKPab      PKiKP     22 32 06.1 +0.2
GOGA                                LR         LR
           comp=Z,2µm,20.0s
GOGA  Godfrey           148.10   6  PKIKP      PKPdf     22 32 01.3 +0.4
GOGA                               eP          PKPbc     22 32 03.4 -0.7
148A  Greensboro        148.19  13  P          PKPbc     22 32 03.7 -0.7
           baz=345
Z52A  Williamson        148.21   8  P          PKPbc     22 32 03.9 -0.5
           baz=351,SNR=12
Z53A  Monticello        148.22   6  P          PKPbc     22 32 03.7 -0.7
           baz=353,SNR=7.4
Z54A  Sparta            148.33   5  P          PKPbc     22 32 03.8 -0.9
           baz=354,SNR=12
149A  Jones             148.39  11  P          PKPbc     22 32 04.1 -0.8
           baz=346
LCO   Las Campanas      148.42 195 ePKPdf      PKPdf     22 32 02.8 +0.9
LCO                                ePKPbc      PKPbc     22 32 05.7 +0.2
LCO                                 LR         LR
           comp=Z,365nm,19.0s
LCO   Las Campanas      148.42 195 eP          PKPbc     22 32 06.0 +0.6
LCO   Las Campanas      148.42 195  PKIKP      PKPdf     22 32 02.8 +0.9
LCO                                eP          PKPbc     22 32 05.7 +0.2
150A  Eclectic          148.53  10  P          PKPbc     22 32 04.6 -0.7
           baz=348
NHSC  New Hope          148.59   1  PFAKE                22 32 10.0 +1.2
NHSC                                LR         LR
           comp=Z,2µm,19.0s
NHSC  New Hope          148.59   1  P          PKPbc     22 32 04.9 -0.5
           baz=359
AHML  Horco Molle       148.61 205 eP          PKPbc     22 32 05.7  0.0
152A  Waverly Hall      148.68   8  P          PKPbc     22 32 05.0 -0.6
           baz=350
151A  Opelika           148.73   9  P          PKPbc     22 32 05.1 -0.7
           baz=349
249A  Camden            148.93  12  P          PKPbc     22 32 06.0 -0.3
           baz=346
155A  Kite              148.97   5  P          PKPbc     22 32 06.2 -0.2
           baz=355,SNR=6.8
156A  Sylvania          149.00   3  P          PKPbc     22 32 06.4 -0.1
           baz=357
250A  Grady             149.10  11  P          PKPbc     22 32 06.4 -0.3
           baz=347
251A  Midway            149.14   9  P          PKPbc     22 32 06.5 -0.4
           baz=349,SNR=9.0
252A  Lumpkin           149.34   8  P          PKPbc     22 32 07.1 -0.2
           baz=350,SNR=8.8
253A  Americus          149.36   7  P          PKPbc     22 32 07.0 -0.3
           baz=351
349A  Repton            149.52  13  P          PKPbc     22 32 07.5 -0.3
           baz=345
254A  Abbeville         149.57   6  P          PKPbc     22 32 07.4 -0.5
           baz=353
350A  Dozier            149.63  11  P          PKPbc     22 32 07.6 -0.5
           baz=347
256A  Glennville        149.65   4  P          PKPbc     22 32 07.7 -0.4
           baz=356
255A  Hazlehurst        149.66   5  P          PKPbc     22 32 07.7 -0.4
           baz=355
BRAL  Brewton           149.72  13  PFAKE                22 32 20.0 +6.6
BRAL                                LR         LR
           comp=Z,1µm,19.0s
TIGA  Tifton            150.04   7  P          PKPbc     22 32 08.3 -0.7
           baz=352
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353A  Camilla           150.05   8  P          PKPbc     22 32 08.8 -0.3
           baz=351
355A  Pearson           150.21   5  P          PKPbc     22 32 09.2 -0.3
           baz=354
357A  Townsend          150.23   3  P          PKPbc     22 32 09.4 -0.1
           baz=356
356A  Blackshear        150.29   4  P          PKPbc     22 32 09.4 -0.2
           baz=355
452A  Marianna          150.39  10  P          PKPbc     22 32 09.8 -0.1
           baz=349
453A  Whigham           150.52   8  P          PKPbc     22 32 09.9 -0.3
           baz=351
451A  Vernon            150.52  11  P          PKPbc     22 32 10.0 -0.2
           baz=348
454A  Quitman           150.75   7  P          PKPbc     22 32 10.4 -0.4
           baz=352
455A  Stateville        150.79   6  P          PKPbc     22 32 10.4 -0.4
           baz=353
456A  Hilliard          150.89   4  P          PKPbc     22 32 11.4 +0.3
           baz=355
457A  Yulee             151.03   3  P          PKPbc     22 32 11.5 +0.1
           baz=356
553A  Crawfordville     151.16   8  P          PKPbc     22 32 11.9 +0.2
           baz=350
554A  Perry             151.36   7  P          PKiKP     22 32 12.7  0.0
           baz=352
555A  McAlpin           151.41   6  P          PKiKP     22 32 12.6 -0.2
           baz=353
556A  Lake Butler       151.58   5  P          PKPbc     22 32 12.8 +0.1
           baz=354
557A  Orange Park       151.62   4  P          PKPbc     22 32 12.8  0.0
           baz=356
HJA   Humahuaca         151.73 209 eP          PKPdf     22 32 09.7 +2.2
657A  Interlachen       152.03   4  P          PKPbc     22 32 13.7 -0.1
           baz=355
656A  Willston          152.19   5  P          PKPbc     22 32 13.9 -0.2
           baz=354
YJA   Yavi              152.66 210 eP          PKPdf     22 32 11.2 +2.3
859A  Kempfer Cattle    153.60   2  P          PKPbc     22 32 16.7 -0.6
           baz=357
LVC   Limon Verde       153.79 203 ePKPdf      PKPdf     22 32 11.9 +1.4
LVC                                ePKPbc      pPKPdf    22 32 19.5 -0.5
LVC                                 LR         LR
           comp=Z,299nm,19.0s
LVC   Limon Verde       153.79 203  PKIKP      PKPdf     22 32 11.9 +1.4
LVC                                eP          pPKPdf    22 32 19.5 -0.5
PB06  IPOC Station P    153.95 202 eP          PKPdf     22 32 11.7 +1.2
959A  Okeechobee        154.14   2  P          PKPbc     22 32 17.5 -1.0
           baz=357
PB03  IPOC Station P    154.62 202 eP          PKPdf     22 32 12.4 +1.0
PB07  IPOC Station P    154.96 202 eP          PKPdf     22 32 13.1 +1.2
PB08  IPOC Station P    156.10 205 eP          PKPdf     22 32 14.8 +1.1
ANWB  Willy Bob         156.19 313  PFAKE                22 32 20.0 +6.7
ANWB                                LR         LR
           comp=Z,579nm,20.0s
PB11  IPOC Station P    156.65 205 eP          PKPdf     22 32 15.2 +1.0
MNMCX Minye Minye       157.18 205 eP          PKPdf     22 32 15.5 +0.5
GRTK  Grand Turk        158.46 338  PFAKE                22 32 30.0 +14
GRTK                                LR         LR
           comp=Z,659nm,20.0s
SJG   San Juan          158.82 322  PFAKE                22 32 30.0 +13
SJG                                 LR         LR
           comp=Z,410nm,19.0s
LPAZ  La Paz            158.92 212 eP          PKPdf     22 32 18.7 +1.1
GRGR  Grenville         159.24 301  PFAKE                22 32 30.0 +13
GRGR                                LR         LR
           comp=Z,402nm,22.0s
SDDR  Presa de Saban    160.80 335  PFAKE                22 32 30.0 +11
SDDR                                LR         LR
           comp=Z,759nm,19.0s
GTBY  Guantanamo Bay    161.18 346  PFAKE                22 32 30.0 +11
GTBY                                LR         LR
           comp=Z,502nm,20.0s
MTDJ  Mount Denham      163.28 353  PFAKE                22 32 30.0 +8.5
MTDJ                                LR         LR
           comp=Z,472nm,19.0s
NNA   Nana              166.26 192  PFAKE                22 32 40.0 +16
NNA                                 LR         LR
           comp=Z,288nm,19.0s
SDV   Santo Domingo     168.39 309  PFAKE                22 32 40.0 +14
SDV                                 LR         LR
           comp=Z,394nm,20.0s
JTS   JuntasAbangare    169.86  31  PFAKE                22 32 40.0 +13
JTS                                 LR         LR
           comp=Z,542nm,21.0s
BARC  Barichara         171.78 308 eP          PKPdf     22 32 26.8 -1.1
BARC  Barichara         171.78 308 eP          PKPdf     22 32 26.8 -1.1
RUSC  La Rusia          172.10 303 eP          PKPdf     22 32 27.1 -1.4
RUSC  La Rusia          172.10 303 eP          PKPdf     22 32 27.1 -1.4
BCIP  Isla Barro Col    172.42   1  PFAKE                22 32 40.0 +12
BCIP                                LR         LR
           comp=Z,408nm,21.0s
PTBC  PUERTO BERRIO,    172.78 314 eP          PKPdf     22 32 26.8 -1.4
PTBC  PUERTO BERRIO,    172.78 314 eP          PKPdf     22 32 26.8 -1.4
CHIC  Chingaza          173.29 297 eP          PKPdf     22 32 27.4 -1.4
CHIC  Chingaza          173.29 297 eP          PKPdf     22 32 27.4 -1.4
ROSC  El Rosal          173.70 301  PKP        PKPdf     22 32 28.7 -0.3
           comp=Z,4.7nm,0.4s,baz=89,slow=16,SNR=6.5
NORC  Norcasia          173.73 310 eP          PKPdf     22 32 27.1 -1.5
NORC  Norcasia          173.73 310 eP          PKPdf     22 32 27.1 -1.5
ANIL  Santa Ana         174.80 304 eP          PKPdf     22 32 28.3 -0.9
ANIL  Santa Ana         174.80 304 eP          PKPdf     22 32 28.3 -0.9
PLMC  San Jos del P     175.22 314 eP          PKPdf     22 32 28.5 -0.5
PLMC  San Jos del P     175.22 314 eP          PKPdf     22 32 28.5 -0.5
YOTC  Yotoco, Valle     175.85 306 eP          PKPdf     22 32 27.9 -1.4
YOTC  Yotoco, Valle     175.85 306 eP          PKPdf     22 32 27.9 -1.4
SOTA  Rioblanco         176.84 281 eP          PKPdf     22 32 29.5 -0.4
SOTA  Rioblanco         176.84 281 eP          PKPdf     22 32 29.5 -0.4
GCUF  Volcan Galeras    177.62 263⇓eP          PKPdf     22 32 27.6 -2.4
GCUF  Volcan Galeras    177.62 263⇓eP          PKPdf     22 32 27.6 -2.4
OTAV  Otavalo           178.20 224  PFAKE                22 32 40.0 +10
OTAV                                LR         LR
           comp=Z,291nm,19.0s
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IDC 06 22:17:25.6±1.6, 11°.93S×165°.38E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.7/49, mbtmp3.9/4, ML3.6/1, Error ellipse: s-maj=56.3km s-min=40.0km az=85.0, Santa Cruz Islands

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Code  Station Name        Δ°   AZ°   Phase ID               Time     Res
                                     Op         ISC         h  m  s   ISC
DZM   Mont Dzumac        10.14 174   Pn         Pn          22 19 52.6  0.0
           0.5nm,0.3s,baz=308,slow=19,SNR=5.6
CMAR  Chiang Mai Arr     72.14 294   P          P           22 28 52.8 +0.2
           0.5nm,0.7s,baz=131,slow=4.2,SNR=4.2
ILAR  Eielson Array      84.45  19   P          P           22 29 59.9 +0.1
           0.8nm,0.6s,baz=238,slow=5.2,SNR=13
MKAR  Makanchi Array     93.92 317   P          P           22 30 44.8 -0.5
           0.6nm,0.8s,baz=88,slow=4.1,SNR=4.1
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*BJI **06** 22:20:16.3, 10°.89S×165°.83E, h8km, mB5.7/41, mb5.0/56, Ms5.6/40, Ms7 5.2/38*

*IDC **06** 22:20:16.1±0.4, 11°.12S×165°.75E, h0km, mb4.9/28, mb1 5.0/30, mb1mx5.0/42, mbtmp4.9/30, ML5.2/2, MS5.2/9, Ms1 5.1/9, ms1mx5.0/14, Error ellipse: s-maj=15.4km s-min=11.9km az=108.0*

*ISCJB **06** 22:20:19.5±0.1, 11°.16S±0°.02×165°.68E±0°.02, h30km, mb5.2/121, MS5.3/146, Error ellipse: s-maj=3.5km s-min=3.0km az=138.1*

*NEIC **06** 22:20:20.4±1.7, 11°.10S×165°.63E, h24km±12km, mb5.4/71, MS5.3/123, Error ellipse: s-maj=4.2km s-min=3.8km az=185.0*

*MOS **06** 22:20:21.9±0.7, 10°.70S×165°.66E, h33km, mb5.3/38, MS5.1/15, Error ellipse: s-maj=16.8km s-min=9.1km az=115.6*

*GCMT **06** 22:20:24.4±0.2, 11°.27S±0°.01×165°.35E±0°.02, h18km, MW5.6/91, Moment Tensor Solution. s71,c104; s91,c140; Duration: 1s6 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.44±.09; $M_{\theta\theta}$1.63±.06; $M_{\phi\phi}$0.80±.08; $M_{r\theta}$-0.70±.15; $M_{\theta\phi}$-2.41±.06; $M_{\phi r}$0.95±.20; Best double couple: $M_0$3.28500×10^{17} NP1:ϕ_s140.00000°, δ56.00000°, λ-78.00000°. NP2:ϕ_s298.00000°, δ36.00000°, λ-108.00000°. Principal axes: T 3.8720, Plg10.0000°, Azm221.0000°; N -1.1750, Plg10.0000°, Azm313.0000°; P -2.6990, Plg75.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 22:20:21.5±0.3, **11°.11S**±0°.05×**165°.64E**±0°.05, **h30km, n598,**

σ**1§42**/519**,mb5.2**/121**,MS5.3**/147**,10C-7D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.85**	**286**	*e*Pn	**Pn**	**22 21 46.2**	**0.0**
HNR				*e*S	**Sn**	**22 22 55.8**	**+3.5**
HNR	**Honiara**	**5.85**	**286**	*e*P	**Pn**	**22 21 46.2**	**0.0**
HNR				*e*S	**Sn**	**22 22 55.8**	**+3.5**
HNR	**Honiara**	**5.85**	**286**	Pn	**Pn**	**22 21 46.4**	**+0.2**
	56nm,0.3s,baz=191,slow=2.7,SNR=30						
HNR				Sn	**Sn**	**22 22 52.3**	**0.0**
	20nm,0.3s,baz=60,slow=20,SNR=3.5						
HNR				LR	LR	22 23 58.9	
	comp=Z,19µm,18.9s,baz=116,slow=37						
MARNC	**Mare, Loyalty**	**10.56**	**168**	*e*Pn	**Pn**	**22 22 49.8**	**-1.1**
DZM	**Mont Dzumac**	**10.92**	**176**	*e*Pn	**Pn**	**22 22 54.4**	**-1.5**
	130nm,0.5s						
DZM				*e*LR	LR	22 25 26.2	
	comp=Z,22µm,27.9s						
DZM	**Mont Dzumac**	**10.92**	**176**	*e*Pn	**Pn**	**22 22 54.9**	**-1.0**
DZM	**Mont Dzumac**	**10.92**	**176**	Pn	**Pn**	**22 22 54.6**	**-1.3**
	18nm,0.3s,baz=350,slow=19,SNR=84						
DZM				LR	LR	22 26 33.8	
	comp=Z,13µm,18.2s,baz=22,slow=35						
ONTNC	**Ouen Toro**	**11.16**	**176**	*e*Pn	**Pn**	**22 22 57.7**	**-1.4**
PINNC	**Pines Island,**	**11.56**	**172**	*e*Pn	**Pn**	**22 23 03.5**	**-1.1**
MSVF	**Nonsavu**	**13.70**	**120**	*e*Pn	**Pn**	**22 23 35.7**	**+1.8**
MSVF	**Nonsavu**	**13.70**	**120**	*e*P	**Pn**	**22 23 35.7**	**+1.8**
PATS	**Pohnpei**	**19.27**	**337**	P	**P**	**22 24 43.0**	**-0.8**
	baz=19,SNR=3.6						
EIDS	**Eidsvold**	**19.78**	**222**	P	**Pn**	**22 24 50.5**	**-0.5**
	baz=20,SNR=3.3						
KWAJ	**Kwajalein Atol**	**19.88**	**6**	*e*P	**P**	**22 24 48.2**	**-2.3**
KWAJ	**Kwajalein Atol**	**19.88**	**6**	*e*P	**P**	**22 24 48.2**	**-2.3**
CTA	**Charters Tower**	**20.68**	**242**	P	**P**	**22 24 59.5**	**+0.2**
	82nm,1.1s,baz=67,slow=13,SNR=18						
CTA				LR	LR	22 32 27.4	
	comp=Z,7µm,18.2s,baz=64,slow=35						
CTAO	**Charters Tower**	**20.68**	**242**	*e*P	**P**	**22 24 59.3**	**+0.1**
	401nm,1.4s						
CTAO				*e*PcP	**PcP**	**22 29 07.5**	**-1.3**
CTAO				LR	LR		
	comp=Z,7µm,22.0s						
CTAO	**Charters Tower**	**20.68**	**242**	*e*P	**P**	**22 24 59.3**	**+0.1**
CTAO				*e*		22 29 07.5	
CTAO				pmax	pmax		
	comp=Z,401nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,7µm,22.0s						
MTSU	**Mount Surprise**	**21.77**	**249**	P	**P**	**22 25 12.6**	**+1.6**
	baz=22,SNR=17						
RMQ	**Roma**	**22.08**	**224**	P	**P**	**22 25 14.2**	**0.0**
	baz=22,SNR=30						
COEN	**Coen**	**22.11**	**260**	P	**P**	**22 25 14.4**	**-0.2**
	baz=22,SNR=53						
ARMA	**Armidale**	**23.21**	**212**	P	**P**	**22 25 26.0**	**-0.2**
	baz=23,SNR=9.7						
OUZ	**Omahuta**	**25.07**	**164**	*e*P	**P**	**22 25 45.8**	**+2.5**
	comp=Z,122nm,1.2s						
QLP	**Quilpie**	**25.38**	**230**	P	**P**	**22 25 45.9**	**-0.3**
	baz=26,SNR=7.2						
RIV	**Riverview**	**26.21**	**208**	P	**P**	**22 25 53.2**	**-0.5**
	baz=26,SNR=4.1						
QIS	**Mount Isa**	**26.71**	**246**	P	**P**	**22 25 58.5**	**+0.1**
	baz=27,SNR=6.1						
CMSA	**Cobar Meteorol**	**27.45**	**219**	P	**P**	**22 26 04.7**	**-0.2**
	baz=28,SNR=5.9						
CNB	**Canberra Magne**	**28.27**	**209**	P	**P**	**22 26 12.1**	**-0.2**
	baz=28,SNR=4.1						
HLRZ	**Highlands Stat**	**28.68**	**162**	P	P	22 26 21.7	+5.9
HAZ	**Te Kaha**	**28.68**	**160**	P	**P**	**22 26 15.8**	**+0.1**
MXZ	**Matakaoa Point**	**28.69**	**159**	P	**P**	**22 26 15.8**	**0.0**
PKGZ	**Pakihiroa**	**28.90**	**159**	P	**P**	**22 26 17.0**	**-0.8**
URZ	**Urewera**	**28.92**	**161**	*e*P	**P**	**22 26 17.8**	**-0.1**
	comp=Z,47nm,1.0s						
URZ	**Urewera**	**28.92**	**161**	P	**P**	**22 26 16.5**	**-1.3**
	comp=Z,31nm,1.0s,baz=22,slow=7.6,SNR=6.6						
URZ				LR	LR	22 35 23.3	
	comp=Z,3µm,19.8s,baz=347,slow=31						
URZ	**Urewera**	**28.92**	**161**	P	**P**	**22 26 17.5**	**-0.4**
WMGZ	**Waiomatatini S**	**28.96**	**159**	P	**P**	**22 26 17.2**	**-1.0**
MWZ	**Matawai**	**29.12**	**161**	P	**P**	**22 26 18.5**	**-1.2**
TWGZ	**Tauwhareparae**	**29.13**	**160**	P	**P**	**22 26 18.7**	**-1.1**
RTZ	**Ruatahuna**	**29.20**	**162**	P	**P**	**22 26 19.9**	**-0.6**
TKGZ	**Te Karaka**	**29.32**	**160**	P	**P**	**22 26 23.4**	**+2.0**
MTHZ	**Maungataniwha**	**29.38**	**162**	P	**P**	**22 26 22.9**	**+0.9**
H11S2	**WAKE ISLAND Hy**	**29.43**	**2**	T	T	22 56 49.5	
	baz=181,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**29.44**	**2**	T	T	22 57 02.9	
	baz=181,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	**29.45**	**2**	T	T	22 56 50.1	
	baz=181,slow=76,SNR=31						
SNGZ	**Shannon Statio**	**29.47**	**161**	P	**P**	**22 26 21.9**	**-0.9**
RAHZ	**Arahi**	**29.51**	**162**	P	**P**	**22 26 22.4**	**-0.8**
BKZ	**Black Stump Fm**	**29.56**	**163**	*e*P	**P**	**22 26 24.3**	**+0.6**
	comp=Z,56nm,0.9s						
STKA	**Stephens Creek**	**30.32**	**223**	P	**P**	**22 26 30.1**	**-0.3**
	baz=30,SNR=9.0						
STKA	**Stephens Creek**	**30.32**	**223**	*e*P	**P**	**22 26 30.0**	**-0.5**
	comp=Z,9.3nm,1.0s						
STKA	**Stephens Creek**	**30.32**	**223**	P	**P**	**22 26 30.2**	**-0.3**
	comp=Z,14nm,0.7s,baz=48,slow=10.0,SNR=11						
STKA				LR	LR	22 37 51.3	
	comp=Z,8µm,18.9s,baz=33,slow=35						
H11N1	**WAKE ISLAND Hy**	**30.66**	**2**	T	T	22 58 28.3	
	baz=182,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**30.66**	**2**	T	T	22 58 28.4	
	baz=182,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**30.68**	**2**	T	T	22 58 33.4	
	baz=182,slow=76,SNR=12						
BFZ	**Birch Farm**	**30.90**	**164**	*e*P	**P**	**22 26 33.7**	**-1.8**
	comp=Z,145nm,1.5s						
SNZO	**South Karori**	**31.12**	**167**	*e*P	**P**	**22 26 36.7**	**-0.6**
	comp=Z,86nm,0.9s						
SNZO				LR	LR		
	comp=Z,4µm,21.0s						
THZ	**Tophouse**	**31.19**	**169**	*e*P	**P**	**22 26 38.9**	**+0.8**
	comp=Z,76nm,0.8s						
WRAB	**Tennant Creek**	**31.35**	**250**	*e*P	**P**	**22 26 38.3**	**-1.4**
	comp=Z,269nm,1.6s						
WRAB				LR	LR		
	comp=Z,5µm,21.0s						
WRAB	**Tennant Creek**	**31.35**	**250***c*	*i*P	**P**	**22 26 38.1**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,156nm,1.4s						
WB2	**Warramunga Arr**	**31.35**	**250**	*e*P	**P**	**22 26 38.8**	**-0.9**
WRA	**Warramunga Arr**	**31.36**	**250**	P	**P**	**22 26 38.3**	**-1.6**
	comp=Z,62nm,1.1s,baz=79,slow=8.8,SNR=31						
WRA				PcP	**PcP**	**22 29 33.5**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=75,slow=3.5,SNR=4.3						
WRA				LR	LR	22 38 32.2	
	comp=Z,4µm,18.7s,baz=70,slow=35						
KHZ	**Kahutara**	**31.94**	**169**	*e*P	**P**	**22 26 44.7**	**+0.1**
	comp=Z,81nm,1.2s						
TOO	**Toolangi**	**31.96**	**211**	P	**P**	**22 26 45.6**	**+0.7**
	baz=32,SNR=5.6						
GUMO	**Guam**	**32.05**	**319**	PFAKE		22 27 00.0	+14
GUMO				LR	LR		
	comp=Z,3µm,19.0s						
LTZ	**Lake Taylor**	**32.07**	**171**	*e*P	**P**	**22 26 45.3**	**-0.5**
	comp=Z,57nm,0.8s						
KDU	**Kakadu**	**32.48**	**264**	P	**P**	**22 26 48.3**	**-1.4**
	baz=33,SNR=6.3						
FOZ	**Fox Glacier**	**32.50**	**174**	*e*P	**P**	**22 26 52.3**	**+2.9**
	comp=Z,59nm,1.0s						
OXZ	**Oxford**	**32.57**	**171**	*e*P	**P**	**22 26 50.4**	**+0.2**
	comp=Z,57nm,0.9s						
AS01	**Alice Springs**	**32.63**	**243**	*e*P	**P**	**22 26 51.9**	**+0.9**
AS31	**Alice Springs**	**32.67**	**243**	*e*P	**P**	**22 26 50.4**	**-0.9**
	comp=Z,5.7nm,0.8s						
ASAR	**Alice Springs**	**32.67**	**243**	P	**P**	**22 26 49.5**	**-1.8**
	comp=Z,4.9nm,0.7s,baz=64,slow=10,SNR=16						
ASAR				PcP	**PcP**	**22 29 36.4**	**-0.5**
	comp=Z,3.2nm,1.0s,baz=86,slow=2.8,SNR=3.8						
ASAR				LR	LR	22 39 24.9	
	comp=Z,5µm,18.8s,baz=68,slow=35						
RPZ	**Rata Peaks**	**32.82**	**173**	*e*P	**P**	**22 26 51.7**	**-0.6**
	comp=Z,57nm,0.9s						
RPZ	**Rata Peaks**	**32.82**	**173**	P	**P**	**22 26 52.5**	**+0.3**
	comp=Z,27nm,0.9s,baz=18,slow=9.0,SNR=6.7						
CRLZ	**Canterbury Las**	**32.90**	**171**	*e*P	**P**	**22 26 51.1**	**-1.8**
	comp=Z,332nm,1.7s						
MQZ	**McQueen’s Vall**	**33.04**	**171**	*e*P	**P**	**22 26 53.3**	**-0.9**
	comp=Z,185nm,1.3s						
HTT	**Hallett**	**33.06**	**224**	P	**P**	**22 26 54.3**	**-0.3**
	baz=33,SNR=9.6						
LBZ	**Lake Benmore**	**33.38**	**174**	*e*P	**P**	**22 26 56.4**	**-0.9**
	comp=Z,27nm,1.0s						
ODZ	**Otahua Downs**	**34.08**	**174**	*e*P	**P**	**22 27 02.4**	**-0.8**
	comp=Z,145nm,1.8s						
DCZ	**Deep Cove**	**34.26**	**178**	*e*P	**P**	**22 27 05.8**	**+1.1**
	comp=Z,57nm,1.3s						
BBOO	**Buckleboo**	**34.71**	**227**	P	**P**	**22 27 08.7**	**-0.1**
	baz=35,SNR=4.6						
TAU	**Tasmania Unive**	**35.47**	**203**	PFAKE		22 27 30.0	+15
TAU				LR	LR		
	comp=Z,3µm,19.0s						
BNDI	**Bandanaira**	**35.98**	**278**	P	**P**	**22 27 20.9**	**+0.9**
KNRA	**Kununurra**	**36.13**	**259**	P	**P**	**22 27 21.2**	**-0.1**
	baz=36,SNR=3.8						
WRKA	**Warakurna**	**37.96**	**243**	P	**P**	**22 27 36.8**	**0.0**
	baz=38,SNR=6.3						
NLAI	**Namlea**	**38.99**	**279**	P	**P**	**22 27 46.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**39.26**	**255**	P	**P**	**22 27 46.9**	**-0.9**
	baz=39,SNR=13						
FITZ	**Fitzroy Crossi**	**39.26**	**255**	P	**P**	**22 27 46.1**	**-1.7**
	comp=Z,19nm,1.0s,baz=83,slow=11,SNR=16						
TNTI	**Ternate**	**39.84**	**285**	*e*P	**P**	**22 27 52.3**	**-0.3**
	comp=Z,72nm,1.4s						
TNTI	**Ternate**	**39.84**	**285**	P	**P**	**22 27 54.7**	**+2.1**
SANI	**Sanana**	**40.36**	**280**	P	**P**	**22 27 58.5**	**+1.5**
SOEI	**Soe**	**40.69**	**268**	*e*P	**P**	**22 27 58.1**	**-1.8**
	comp=Z,163nm,1.5s						
SOEI	**Soe**	**40.69**	**268**	P	**P**	**22 28 00.9**	**+1.1**
BATI	**Baumata**	**41.24**	**267**	P	**P**	**22 28 05.4**	**+1.1**
BATI	**Baumata**	**41.24**	**267**	P	**P**	**22 28 03.8**	**-0.5**
	comp=Z,31nm,0.7s,baz=153,slow=4.5,SNR=9.7						
MMRI	**Maumere**	**42.81**	**269**	*e*P	**P**	**22 28 14.7**	**-2.3**
	comp=Z,119nm,1.2s						
MMRI	**Maumere**	**42.81**	**269**	P	**P**	**22 28 16.4**	**-0.6**
EDFI	**Ende, Flores**	**43.33**	**269**	P	**P**	**22 28 21.0**	**-0.4**
LUWI	**Luwuk**	**43.73**	**280**	*e*P	**P**	**22 28 24.0**	**-0.4**
	comp=Z,171nm,1.2s						
LUWI	**Luwuk**	**43.73**	**280**	P	**P**	**22 28 24.7**	**+0.3**
DAV	**Davao City (W)**	**43.77**	**293**	PFAKE		22 28 40.0	+15
DAV				LR	LR		
	comp=Z,1µm,21.0s						
PPT	**Papeete**	**43.78**	**104**	LR	LR	22 44 11.6	
	comp=Z,2µm,18.3s,baz=262,slow=33						
PPT2	**Papeete2**	**43.78**	**104**	*e*S	**S**	**22 35 01.9**	**+7.9**
	comp=Z,674nm,24.2s						
PPT2				*e*LQ	LQ	22 38 55.0	
	comp=Z,8µm,27.0s						
PPT2				*e*LR	LR	22 40 47.0	
	comp=Z,1µm,20.5s						
TBI	**Tubuai**	**44.40**	**112**	*e*S	**S**	**22 35 10.5**	**+7.8**
	comp=Z,669nm,25.8s						
TBI				*e*LQ	LQ	22 39 09.9	
	comp=Z,3µm,35.2s						
TBI				*e*LR	LR	22 41 11.4	
	comp=Z,3µm,27.8s						
MBWA	**Marble Bar**	**45.08**	**251**	*e*P	**P**	**22 28 34.3**	**-0.9**
	comp=Z,97nm,1.2s						
MBWA				LR	LR		
	comp=Z,3µm,19.0s						
BKSI	**Bulukumba**	**45.38**	**273**	P	**P**	**22 28 39.7**	**+2.1**
	comp=Z,8.4nm,1.2s						
BNSI	**Bone**	**45.56**	**275**	P	**P**	**22 28 39.4**	**+0.3**
KAPI	**Kappang**	**45.80**	**274**	PFAKE		22 28 50.0	+9.0
KAPI				LR	LR		
	comp=Z,785nm,19.0s						
SPSI	**Sidrap Palu**	**45.98**	**275**	P	**P**	**22 28 42.8**	**+0.4**
TTSI	**Tana Toraja**	**46.12**	**276**	P	**P**	**22 28 43.3**	**-0.2**
PCI	**Palu**	**46.60**	**279**	P	**P**	**22 28 49.4**	**+2.1**
MEEK	**Meekatharra**	**46.83**	**244**	P	**P**	**22 28 49.2**	**+0.3**
	baz=47,SNR=11						
PLAI	**Plampang**	**47.16**	**268**	P	**P**	**22 28 52.9**	**+1.2**
	comp=Z,98nm,3.0s,comp=Z,3µm						
KLBR	**Kellerberrin**	**48.59**	**238**	P	**P**	**22 29 01.4**	**-1.1**
	baz=49,SNR=4.4						
BLDU	**Ballidu**	**49.24**	**239**	P	**P**	**22 29 07.2**	**-0.3**
	baz=49,SNR=4.3						
NWAO	**Narrogin (SRO)**	**49.34**	**236**	*e*P	**P**	**22 29 07.5**	**-0.7**
	comp=Z,77nm,1.1s						
NWAO				LR	LR		
	comp=Z,6µm,20.0s						
NWAO	**Narrogin (SRO)**	**49.34**	**236**	P	**P**	**22 29 07.7**	**-0.6**
	comp=Z,14nm,0.9s,baz=357,slow=6.1,SNR=4.3						
MORW	**Morawa**	**49.50**	**241**	P	**P**	**22 29 09.5**	**-0.1**
	baz=50,SNR=3.8						
KBKI	**Kotabaru**	**49.63**	**275**	P	**P**	**22 29 12.8**	**+2.0**
	comp=Z,8.8nm,1.2s						
MUN	**Mundaring**	**49.96**	**237**	P	**P**	**22 29 13.4**	**+0.4**
	baz=50,SNR=4.6						
PWJI	**Pagerwojo**	**53.12**	**268**	P	**P**	**22 29 38.3**	**+1.4**
TAOE	**Nuku Hiva Isla**	**53.38**	**93**	*e*S	**S**	**22 37 15.0**	**+5.5**
	comp=Z,733nm,25.4s						
TAOE				*e*LR	LR	22 45 05.3	
	comp=Z,855nm,25.1s						
PCJI	**Pacitan**	**53.71**	**268**	P	**P**	**22 29 42.9**	**+1.7**
MJAR	**Matsushiro Arr**	**53.98**	**333**	P	**P**	**22 29 41.5**	**-1.3**
	comp=Z,4.9nm,1.0s,baz=171,slow=8.5,SNR=6.8						
MAJO	**Matsushiro**	**53.99**	**333**	PFAKE		22 29 50.0	+7.2
MAJO				LR	LR		
	comp=Z,1µm,19.0s						
MAJO	**Matsushiro**	**53.99**	**333**⇑	*e*P	**P**	**22 29 42.2**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,40nm,2.4s						
MAT	**Matsushiro**	**53.99**	**333**	P	**P**	**22 29 41.9**	**-0.9**
MAT				S	**S**	**22 37 14.4**	**-2.4**
UGM	**Wanagama**	**54.39**	**268**	*e*P	**P**	**22 29 48.7**	**+2.4**
	comp=Z,119nm,1.1s						
UGM	**Wanagama**	**54.39**	**268**	P	**P**	**22 29 47.9**	**+1.6**
SMRI	**Semarang**	**54.60**	**269**	*e*P	**P**	**22 29 50.9**	**+3.2**
	comp=Z,202nm,1.2s						
TATO	**Taipei**	**56.03**	**310**	PFAKE		22 30 10.0	+12
TATO				LR	LR		
	comp=Z,2µm,19.0s						
KPJI	**Karang Pucung**	**56.04**	**269**	P	**P**	**22 29 59.9**	**+1.8**
ERM	**Erimo**	**56.76**	**340**	PFAKE		22 30 10.0	+7.4
ERM				LR	LR		
	comp=Z,1µm,22.0s						
ERM	**Erimo**	**56.76**	**340**⇓	*e*P	**P**	**22 30 02.1**	**-0.5**
ERM				pmax	pmax		
	comp=Z,35nm,1.2s						
JCJI	**Jatiwangi**	**56.81**	**269**	P	**P**	**22 30 05.2**	**+1.6**
CISI	**Cisompet, Garu**	**57.10**	**268**	*e*P	**P**	**22 30 05.5**	**-0.2**
	comp=Z,284nm,1.5s						
CISI	**Cisompet, Garu**	**57.10**	**268**	P	**P**	**22 30 07.4**	**+1.7**
RKT	**Rikitea**	**57.66**	**110**	*e*S	**S**	**22 38 13.7**	**+7.4**
	comp=Z,664nm,27.8s						
RKT				*e*LQ	LQ	22 44 45.1	
	comp=Z,1µm,30.5s						
RKT				*e*LR	LR	22 47 14.0	
	comp=Z,3µm,25.0s						
DBJI	**Dramaga**	**58.30**	**269**	P	**P**	**22 30 14.8**	**+0.7**
ASAJ	**Asahikawa**	**58.82**	**341**	P	**P**	**22 30 17.1**	**0.0**
	comp=Z,15nm,0.9s,baz=219,slow=13,SNR=8.7						
SSE	**Sheshan**	**59.83**	**316**	PFAKE		22 30 40.0	+16
SSE				LR	LR		
	comp=Z,1µm,21.0s						
KSRS	**Korea Array**	**59.88**	**326**	P	**P**	**22 30 24.7**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=136,slow=7.1,SNR=3.3						
KSAR	**Wonju Array Be**	**59.89**	**326**	P	**P**	**22 30 24.7**	**+0.1**
KSAR	**Wonju Array Be**	**59.89**	**326**	P	**P**	**22 30 24.7**	**+0.1**
YSS	**Yuzh-Sakhalins**	**61.32**	**342**	*e*P	**P**	**22 30 33.4**	**-0.7**
YSS				LR	LR		
	comp=Z,983nm,19.0s						
YSS	**Yuzh-Sakhalins**	**61.32**	**342**	*e*P	**P**	**22 30 34.8**	**+0.6**
YSS				*e*		22 30 48.8	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
NJ2	**Nanjing**	**62.00**	**315**	*e*P	**P**	**22 30 39.9**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.8s						
QIZ	**Qiongzhong**	**62.62**	**298**	P	**P**	**22 30 44.1**	**+0.6**
QIZ				S	**S**	**22 39 15.7**	**+5.6**
QIZ				pmax	pmax		
	comp=Z,940nm,6.1s						
QIZ				LR	LR		
	comp=Z,630nm,15.7s						
QIZ				LR	LR		
	comp=Z,990nm,20.6s						
QIZ				LR	LR		
	comp=Z,1µm,20.6s						
QIZ	**Qiongzhong**	**62.62**	**298**	PFAKE		22 31 00.0	+16
QIZ				LR	LR		
	comp=Z,191nm,21.0s						
USRK	**Ussuriysk Ar.**	**62.96**	**333**	P	**P**	**22 30 45.2**	**0.0**
	comp=Z,14nm,1.1s,baz=144,slow=6.0,SNR=7.5						
USRK				LR	LR	22 56 16.8	
	comp=Z,495nm,20.6s,baz=131,slow=34						
PET	**Petropavlovsk**	**64.16**	**355**	PFAKE		22 31 00.0	+7.1
PET				LR	LR		
	comp=Z,2µm,20.0s						
PETK	**Petropavlovsk-**	**64.33**	**355**	*e*P	**P**	**22 30 54.4**	**+0.3**
PETK	**Petropavlovsk-**	**64.33**	**355**	*e*P	**P**	**22 30 54.4**	**+0.3**
PETK	**Petropavlovsk-**	**64.33**	**355**	P	**P**	**22 30 54.7**	**+0.6**
	comp=Z,11nm,0.9s,baz=132,slow=8.8,SNR=5.8						
MDJ	**Mudanjiang**	**64.36**	**332**	P	**P**	**22 30 55.0**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,19nm,1.1s						
MDJ	**Mudanjiang**	**64.36**	**332**	PFAKE		22 31 10.0	+16
MDJ				LR	LR		
	comp=Z,1µm,20.0s						
DL2	**Dalian**	**64.47**	**323**	P	**P**	**22 30 52.5**	**-2.8**
DL2				*e*S	**S**	**22 39 30.2**	**-2.2**
DL2				pmax	pmax		
	comp=Z,76nm,1.6s						
DL2				pmax	pmax		
	comp=Z,580nm,4.2s						
DL2				LR	LR		
	comp=Z,2µm,14.4s						
DL2				LR	LR		
	comp=Z,850nm,18.4s						
DL2				LR	LR		
	comp=Z,2µm,18.0s						
ADK	**Adak**	**64.57**	**12**	PFAKE		22 31 10.0	+14
ADK				LR	LR		
	comp=Z,4µm,21.0s						
CN2	**Changchun**	**65.75**	**329**	*e*P	**P**	**22 31 03.5**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CASY	**Casey**	**66.28**	**201**	*e*P	**P**	**22 31 06.3**	**-0.3**
	comp=Z,64nm,1.3s						
CASY				LR	LR		
	comp=Z,297nm,20.0s						
VNDA	**Vanda**	**66.42**	**181**	P	**P**	**22 31 07.9**	**+0.5**
	comp=Z,7.0nm,1.0s,baz=352,slow=4.9,SNR=3.0						
GRNR	**Gornyy**	**66.67**	**340**	*e*P	**P**	**22 31 11.0**	**+1.7**
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
SBA	**Scott Base**	**66.73**	**180**	PFAKE		22 31 20.0	+11
SBA				LR	LR		
	comp=Z,2µm,19.0s						
SKNT	**Sakolnakorn**	**67.03**	**294**	P	**P**	**22 31 13.5**	**+1.2**
	comp=Z,23nm,1.6s						
KLR	**Kul'dur**	**67.08**	**337**⇑	*e*P	**P**	**22 31 11.2**	**-0.7**
KLR	**Kul'dur**	**67.08**	**337**	P	**P**	**22 31 12.2**	**+0.3**
	comp=Z,9.5nm,1.1s,baz=126,slow=14,SNR=12						
COCO	**West Island**	**67.23**	**261**	PFAKE		22 31 30.0	+16
COCO				LR	LR		
	comp=Z,1µm,21.0s						
NKL	**Nikolayevsk**	**67.48**	**344**	*e*P	**P**	**22 31 13.7**	**-0.6**
NKL				*e*		22 40 14.0	
NKL				*e*		22 41 05.0	
NKL				pmax	pmax		
	comp=Z,21nm,1.0s						
PSI	**Prapat**	**67.78**	**278**	P	**P**	**22 31 18.7**	**+1.4**
	comp=Z,31nm,0.9s,baz=179,slow=2.9,SNR=12						
SRAK	**Srakaew**	**67.82**	**290**	P	**P**	**22 31 20.6**	**+3.3**
	comp=Z,31nm,1.2s,comp=Z,520nm						
ENH	**Enshi**	**67.86**	**309**	*e*P	**P**	**22 31 15.8**	**-1.5**
	comp=Z,38nm,1.2s						
ENH				LR	LR		
	comp=Z,1µm,19.0s						
TRTT	**Trang**	**68.26**	**283**	P	**P**	**22 31 23.1**	**+3.0**
	comp=Z,16nm,1.6s						
GYA	**Guiyang**	**68.37**	**304**⇑	*i*P	**P**	**22 31 21.0**	**+0.3**
GYA				PP	**PP**	**22 33 55.6**	**+3.6**
GYA				S	**S**	**22 40 23.2**	**+2.7**
GYA				SKS	**SKSac**	**22 41 17.0**	**-1.0**
GYA				SS	**SS**	**22 44 48.3**	**+3.7**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,6.7s						
GYA				LR	LR		
	comp=Z,740nm,18.2s						
GYA				LR	LR		
	comp=Z,620nm,18.6s						
GYA				LR	LR		
	comp=Z,610nm,18.4s						
BJT	**Baijiatuau**	**68.46**	**321**	*e*P	**P**	**22 31 21.0**	**+0.1**
	comp=Z,11nm,1.3s						
BJT				LR	LR		
	comp=Z,1µm,19.0s						
BJT	**Baijiatuau**	**68.46**	**321**	*e*P	**P**	**22 31 21.0**	**+0.1**
BJT				pmax	pmax		
	comp=Z,11nm,1.3s						
BJT				MLR	MLR		
	comp=Z,1µm,19.0s						
BJI	**Beijing**	**68.47**	**321**	P	**P**	**22 31 21.2**	**+0.3**
GSI	**Gunungsitoli**	**68.77**	**276**	*e*P	**P**	**22 31 22.6**	**-0.7**
	comp=Z,81nm,0.9s						
PBKT	**Sadao Pong**	**69.61**	**292**	*e*P	**P**	**22 31 29.7**	**+1.3**
	comp=Z,42nm,1.6s						
XAN	**Xi'an**	**70.09**	**312**	P	**P**	**22 31 30.6**	**-0.5**
XAN				pP	pP	22 31 38.0	-1.7
XAN				PcP	**PcP**	**22 31 53.8**	**+0.7**
XAN				S	**S**	**22 40 36.6**	**-3.8**
XAN				SS	**SS**	**22 45 14.2**	**+3.4**
XAN				pmax	pmax		
	comp=Z,17nm,1.7s						
XAN				pmax	pmax		
	comp=Z,700nm,6.3s						
XAN				LR	LR		
	comp=Z,950nm,19.5s						
XAN				LR	LR		
	comp=Z,940nm,17.3s						
XAN				LR	LR		
	comp=Z,2µm,19.6s						
XAN	**Xi'an**	**70.09**	**312**	*e*P	**P**	**22 31 31.3**	**+0.2**
	comp=Z,188nm,1.4s						
XAN	**Xi'an**	**70.09**	**312**	*e*P	**P**	**22 31 31.3**	**+0.2**
XAN				pmax	pmax		
	comp=Z,187nm,1.4s						
SRDT	**SRDT**	**70.62**	**290**	P	**P**	**22 31 36.6**	**+1.9**
	comp=Z,25nm,1.8s,comp=Z,4µm						
UTHA	**Uthaitani**	**70.69**	**291**	P	**P**	**22 31 37.7**	**+2.7**
	comp=Z,5.6nm,1.6s,comp=Z,76nm						
KMI	**Kunming**	**71.07**	**301**	P	**P**	**22 31 38.9**	**+1.4**
KMI				pP	pP	22 31 41.8	-4.3
KMI				S	**S**	**22 40 58.1**	**+5.6**
KMI				pmax	pmax		
	comp=Z,26nm,1.3s						
KMI				pmax	pmax		
	comp=Z,2µm,12.3s						
KMI				LR	LR		
	comp=Z,470nm,16.3s						
KMI				LR	LR		
	comp=Z,620nm,21.8s						
KMI				LR	LR		
	comp=Z,950nm,21.8s						
MA2	**Magadan**	**71.46**	**352**	PFAKE		22 31 50.0	+11
MA2				LR	LR		
	comp=Z,2µm,20.0s						
HHC	**Hu-ho-hao-te**	**71.82**	**320**	*e*P	**P**	**22 31 43.1**	**+1.5**
CM01	**Chiang Mai Arr**	**72.02**	**294**	*e*P	**P**	**22 31 43.4**	**+0.3**
CM31	**Chiang Mai Arr**	**72.05**	**294**	*e*P	**P**	**22 31 44.8**	**+1.6**
CMAR	**Chiang Mai Arr**	**72.05**	**294**	P	**P**	**22 31 44.3**	**+1.1**
	comp=Z,13nm,1.1s,baz=111,slow=4.0,SNR=32						
CMMT	**Chiang Mai**	**72.16**	**294**	P	**P**	**22 31 45.2**	**+1.3**
	comp=Z,28nm,1.5s						
CMMT	**Chiang Mai**	**72.16**	**294**	P	**P**	**22 31 45.2**	**+1.3**
CHTO	**Chiang Mai**	**72.16**	**294**	*e*P	**P**	**22 31 44.6**	**+0.7**
	comp=Z,59nm,1.4s						
CHTO				LR	LR		
	comp=Z,569nm,20.0s						
CHTO	**Chiang Mai**	**72.16**	**294**	P	**P**	**22 31 45.3**	**+1.4**
	comp=Z,125nm,1.5s						
CHTO	**Chiang Mai**	**72.16**	**294**	P	**P**	**22 31 45.3**	**+1.4**
	comp=Z,125nm,1.5s						
ZEA	**Zeya**	**72.37**	**337**	*e*P	**P**	**22 31 44.1**	**-0.3**
ZEA				pmax	pmax		
	comp=N,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,61nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,600nm,8.0s						
HIA	**Hailar**	**72.38**	**330**	*e*P	**P**	**22 31 43.8**	**-0.9**
HIA				LR	LR		
	comp=Z,949nm,19.0s						
HIA	**Hailar**	**72.38**	**330**⇑	*e*P	**P**	**22 31 45.0**	**+0.4**
HIA				pmax	pmax		
	comp=Z,18nm,1.2s						
CD2	**Chengdu**	**72.56**	**307**	P	**P**	**22 31 46.6**	**+0.4**
CD2				S	**S**	**22 41 12.6**	**+3.5**

CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				pmax	pmax		
	comp=Z,250nm,5.6s						
CD2				LR	LR		
	comp=Z,1µm,13.9s						
CD2				LR	LR		
	comp=Z,2µm,16.9s						
CD2				LR	LR		
	comp=Z,990nm,17.9s						
SEY	Seymchan	74.53	354	⇑*e*P	P	22 31 56.4	-0.5
SEY	Seymchan	74.53	354	P	P	22 31 56.2	-0.7
	comp=Z,2.1nm,0.3s,baz=191,slow=10,SNR=7.3						
LZH	Lanzhou	74.73	312	*e*P	P	22 32 00.0	+1.1
LZH				pP	sP	22 32 09.4	-1.3
LZH				PP	PP	22 34 50.1	+3.7
LZH				pmax	pmax		
	comp=Z,36nm,1.7s						
LZH				pmax	pmax		
	comp=Z,140nm,4.5s						
LZH				LR	LR		
	comp=Z,1µm,17.1s						
LZH				LR	LR		
	comp=Z,1µm,17.8s						
LZH				LR	LR		
	comp=Z,1µm,20.7s						
GAMB	Gambell	76.65	10	*e*P	P	22 32 09.2	+0.2
	comp=Z,50nm,1.0s						
KDAK	Kodiak Island	76.68	22	PFAKE		22 32 20.0	+11
KDAK				LR	LR		
	comp=Z,754nm,19.0s						
SVW2	Sparrevohn	78.21	18	*e*P	P	22 32 14.0	-3.8
ULN	Ulaanbaatar	78.30	324	*e*P	P	22 32 18.7	-0.2
	comp=Z,17nm,1.1s						
ULN				LR	LR		
	comp=Z,993nm,19.0s						
ULN	Ulaanbaatar	78.30	324	*e*P	P	22 32 18.7	-0.2
ULN				pmax	pmax		
	comp=Z,17nm,1.1s						
ULN				MLR	MLR		
	comp=Z,993nm,19.0s						
ANM	Nome	78.58	12	*e*P	P	22 32 20.2	+0.4
ANM	Nome	78.58	12	*e*P	P	22 32 20.2	+0.4
SONM	Songino Array	78.66	324	P	P	22 32 20.8	0.0
	comp=Z,5.7nm,1.1s,baz=135,slow=5.3,SNR=18						
SONM				PKKPbc	PKKPbc	22 51 19.1	+0.8
	comp=Z,0.8nm,0.8s,baz=293,slow=2.1,SNR=5.0						
SONA1	Songino Array	78.66	324	*e*P	P	22 32 20.7	-0.2
BRLK	Bradley Lake	78.74	21	*e*P	P	22 32 20.3	-0.5
QSPA	South Pole Qui	78.89	180	*e*P	P	22 32 21.3	-0.6
	comp=Z,161nm,1.0s						
QSPA				LR	LR		
	comp=Z,1µm,19.0s						
BILL	Bilibino	78.95	0	*e*P	P	22 32 21.1	-0.7
	comp=Z,41nm,1.0s						
BILL				LR	LR		
	comp=Z,1µm,21.0s						
BILL	Bilibino	78.95	0	*d i*P	P	22 32 21.3	-0.5
BILL				pmax	pmax		
	comp=Z,57nm,1.3s						
GTA	Gaotai	79.03	314	⇑P	P	22 32 24.0	+0.9
GTA				pP	PcP	22 32 28.9	-2.6
GTA				sP	pP	22 32 31.2	-0.5
GTA				pmax	pmax		
	comp=Z,19nm,1.2s						
GTA				pmax	pmax		
	comp=Z,290nm,5.7s						
GTA				LR	LR		
	comp=Z,1µm,17.8s						
GTA				LR	LR		
	comp=Z,1µm,18.7s						
GTA				LR	LR		
	comp=Z,1µm,19.0s						
BRDH	Bariadhala	79.84	296	P	P	22 32 28.6	+1.0
	comp=Z,44nm,0.3s,baz=95,slow=11,SNR=7.4						
SUA	Susitna One	80.02	20	*e*P	P	22 32 26.8	-1.2
	comp=Z,29nm,1.0s						
RC01	Rabbit Creek A	80.09	20	*e*P	P	22 32 27.6	-0.5
	comp=Z,26nm,1.0s						
SHL	Shillong	80.46	298	*e*P	P	22 32 31.6	+0.4
	comp=Z,109nm,1.6s						
SHL	Shillong	80.46	298	*e*P	P	22 32 31.6	+0.4
SHL				pmax	pmax		
	comp=Z,109nm,1.6s						
SHL	Shillong	80.46	298	*e*P	P	22 32 32.0	+0.8
BOD	Bodaibo	80.55	335	*e*P	P	22 32 27.8	-2.9
BOD				pmax	pmax		
	comp=Z,17nm,1.4s						
PPLA	Purkeypile	80.62	18	*e*P	P	22 32 29.9	-1.2
KNK	Knik Glacier	80.76	20	*e*P	P	22 32 31.4	-0.4
CAST	Castle Rocks	81.04	18	*e*P	P	22 32 32.0	-1.3
	comp=Z,25nm,0.9s						
SML	Sawmill	81.08	20	*e*P	P	22 32 33.5	0.0
SML	Sawmill	81.08	20	*e*P	P	22 32 33.5	0.0
DIV	Divide	81.51	22	*e*P	P	22 32 35.4	-0.4
TRF	Thorofare Moun	81.61	18	*e*P	P	22 32 34.8	-1.6
KLU	Klutina	81.70	21	*e*P	P	22 32 36.6	-0.2
ZAK	Zakamensk	81.70	325	*e*P	P	22 32 36.0	-1.1
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BPAW	Bear Paw Mtn.	81.88	18	*e*P	P	22 32 36.5	-1.2
RND	Reindeer	82.03	19	*e*P	P	22 32 37.6	-0.9
RND	Reindeer	82.03	19	*e*P	P	22 32 37.6	-0.9
RDOG	Red Dog Mine	82.11	11	*e*P	P	22 32 39.2	+0.4
TLY	Talaya	82.12	326	PFAKE		22 32 50.0	+11
TLY				LR	LR		
	comp=Z,563nm,19.0s						
TLY	Talaya	82.12	326	⇑*e*P	P	22 32 39.2	0.0
MCK	McKinley	82.24	19	*e*P	P	22 32 38.5	-1.1
MCK	McKinley	82.24	19	*e*P	P	22 32 38.5	-1.1
DHY	Denali Highway	82.28	20	*e*P	P	22 32 39.4	-0.6
LSA	Lhasa	82.30	302	*e*P	P	22 32 42.2	+1.0
	comp=Z,52nm,1.6s						
LSA				LR	LR		
	comp=Z,798nm,21.0s						
LSA	Lhasa	82.30	302	*e*P	P	22 32 42.2	+1.0
LSA				pmax	pmax		
	comp=Z,52nm,1.6s						
LSA				MLR	MLR		
	comp=Z,798nm,21.0s						
IM3	Indian Mountai	82.52	16	*e*P	P	22 32 40.1	-0.8
HARP	HAARP	82.58	21	*e*P	P	22 32 41.4	0.0
MLY	Manley	82.63	17	*e*P	P	22 32 40.9	-0.8
KCPM	Cahto Peak	82.67	47	*e*P	P	22 32 42.9	+0.4
	comp=Z,204nm,1.9s						
KMRM	Mail Ridge	82.77	47	*e*P	P	22 32 43.7	+0.8
	comp=Z,41nm,1.1s						
WRH	Wood River Hil	83.03	18	*e*P	P	22 32 42.4	-1.2
MDM	Murphy Dome	83.33	18	*e*P	P	22 32 43.8	-1.4
HDA	Harding Lake	83.34	19	*e*P	P	22 32 44.5	-0.8
HDA	Harding Lake	83.34	19	P	P	22 32 43.6	-1.7
	baz=227,SNR=61						
TCOL	CIGO, UAF Yank	83.38	18	P	P	22 32 43.8	-1.6
	baz=226,SNR=12						
COLA	College	83.38	18	*e*P	P	22 32 44.1	-1.3
	comp=Z,54nm,0.8s						
COLA				LR	LR		
	comp=Z,1µm,20.0s						
COLA	College	83.38	18	*d i*P	P	22 32 43.4	-2.0
COLA				pmax	pmax		
	comp=Z,54nm,0.9s						
RIDG	Independ'e Rid	83.57	20	*e*P	P	22 32 46.3	-0.2
MOY	Mondy	83.58	326	*e*P	P	22 32 47.4	+0.5
IL1	Eielson Array	83.61	19	*e*P	P	22 32 44.8	-1.8
ILAR	Eielson Array	83.61	19	P	P	22 32 45.2	-1.3
	comp=Z,11nm,0.8s,baz=227,slow=6.3,SNR=68						
ILAR				PP	PP	22 35 58.8	-0.8
	comp=Z,0.9nm,0.6s,baz=234,slow=5.1,SNR=6.1						
ILB	Eielson Array	83.61	19	*e*P	P	22 32 45.3	-1.3
POKR	Poker Plat Res	83.68	18	P	P	22 32 45.6	-1.3
	baz=226,SNR=11						
K02D	Willamette Mer	83.69	44	P	P	22 32 45.8	-1.9
	baz=249						
WDC	Whiskeytown Da	83.73	47	*e*P	P	22 32 46.5	-1.3
	comp=Z,33nm,1.5s						
WDC	Whiskeytown Da	83.73	47	*e*P	P	22 32 46.5	-1.3
WDC				pmax	pmax		
	comp=Z,33nm,1.5s						
M02C	Callahan	83.79	46	P	P	22 32 47.3	-0.9
	baz=249						
YBH	Yreka Blue Hor	84.01	46	*e*P	P	22 32 48.5	-0.8
	comp=Z,18nm,1.1s						
YBH	Yreka Blue Hor	84.01	46	*e*P	P	22 32 48.5	-0.8
YBH				pmax	pmax		
	comp=Z,18nm,1.1s						
SCRK	Sand Creek	84.02	20	*e*P	P	22 32 48.5	-0.3
I02D	Swisshome	84.08	43	P	P	22 32 49.0	-0.4
	baz=248						
ORV	Oroville	84.13	48	*e*P	P	22 32 49.2	-0.7
	comp=Z,11nm,1.0s						
ORV	Oroville	84.13	48	*e*P	P	22 32 49.2	-0.7
ORV				pmax	pmax		
	comp=Z,11nm,1.0s						
HUMO	Hull Mountain	84.15	45	*e*P	P	22 32 49.3	-0.6
	comp=Z,58nm,1.7s						
O03E	Paynes Creek	84.16	47	P	P	22 32 48.9	-1.2
	baz=250,SNR=9.6						
AFDM	Forest Hills D	84.32	49	*e*P	P	22 32 50.4	-0.5
	comp=Z,20nm,1.0s						
BESE	Bessie Mountai	84.39	27	*e*P	P	22 32 51.1	+0.3
COLD	Coldfoot	84.39	16	*e*P	P	22 32 51.5	+1.0
WRAK	Wrangell Islan	84.45	30	*e*P	P	22 32 50.2	-0.8
	comp=Z,56nm,1.4s						
WRAK				LR	LR		
	comp=Z,2µm,20.0s						
CMB	Columbia Colle	84.46	50	*e*P	P	22 32 50.3	-1.3
	comp=Z,13nm,1.1s						
CMB	Columbia Colle	84.46	50	*e*P	P	22 32 50.3	-1.3
CMB				pmax	pmax		
	comp=Z,13nm,1.1s						
L04D	Klamath Falls	84.47	45	P	P	22 32 50.8	-0.9
	baz=250						
HYT	Haines Junctio	84.49	24	*e*P	P	22 32 51.2	-0.1
PRP	Porcupine Dome	84.54	18	*e*P	P	22 32 52.7	+1.2
CIS	Catalina Islan	84.58	55	P	P	22 32 51.6	-0.7
	baz=253						
M04C	Macdoel	84.64	46	P	P	22 32 52.0	-0.5
	baz=250						
I04A	Tendick Farm,	84.94	44	P	P	22 32 53.8	-0.1
	baz=250						
J04D	Umpqua Nationa	84.95	44	P	P	22 32 53.3	-0.9
	baz=250						
H04D	Lebanon	84.98	43	P	P	22 32 53.5	-0.5
	baz=249						
BEKR	Beckworth	85.07	48	*e*P	P	22 32 54.2	-0.6
	comp=Z,13nm,1.0s						
MWC	Mount Wilson	85.10	54	*e*P	P	22 32 54.4	-0.7
	comp=Z,24nm,1.1s						
MWC	Mount Wilson	85.10	54	*e*P	P	22 32 54.4	-0.7
MWC				pmax	pmax		
	comp=Z,24nm,1.1s						
ISA	Isabella, Lake	85.19	52	*e*P	P	22 32 54.9	-0.5
	comp=Z,13nm,1.1s						
ISA	Isabella, Lake	85.19	52	*e*P	P	22 32 54.9	-0.5
ISA				pmax	pmax		
	comp=Z,13nm,1.1s						
ISA	Isabella, Lake	85.19	52	P	P	22 32 54.1	-1.3
	baz=253						
NLWA	Neilton Lookou	85.28	40	PFAKE		22 33 10.0	+14
NLWA				LR	LR		
	comp=Z,1µm,20.0s						
WAKR	Walker	85.32	49	*e*P	P	22 32 56.0	-0.2
MDPB	Devils Postpil	85.32	50	*e*P	P	22 32 55.8	-0.5
	comp=Z,16nm,1.0s						
FYU	Fort Yukon	85.33	18	*e*P	P	22 32 56.5	+1.3
EDW2	Edwards Air Fo	85.34	53	P	P	22 32 55.1	-1.1
	baz=253						
F04D	Rainier, OR	85.35	41	P	P	22 32 55.1	-0.8
	baz=249						
OMMB	Old Mammoth Mi	85.37	50	*e*P	P	22 32 56.1	-0.4
	comp=Z,13nm,1.1s						
PNTR	Pine Nut	85.38	49	*e*P	P	22 32 56.7	+0.2
H04A	Detroit Lake	85.40	43	*e*P	P	22 32 55.9	-0.3
	comp=Z,41nm,1.4s						
BFSC	Mount Baldy Ra	85.42	54	P	P	22 32 55.0	-1.6
	baz=253						
EGAK	Eagle	85.47	20	*e*P	P	22 32 55.9	-0.2
	comp=Z,69nm,1.0s						
WHY	Whitehorse	85.48	25	*e*P	P	22 32 55.3	-1.0
109C	Camp Elliot, M	85.48	55	P	P	22 32 55.3	-1.5
	baz=254						
J05D	Fort Rock, OR	85.57	44	P	P	22 32 56.0	-1.2
	baz=250						
TOLK	Toolik Lake Re	85.58	15	*e*P	P	22 32 56.8	+0.3
TOLK	Toolik Lake Re	85.58	15	P	P	22 32 55.9	-0.7
	baz=224						
DAWY	Dawson	85.66	21	*e*P	P	22 32 56.1	-0.9
	comp=Z,14nm,0.9s						
CWC	Cottonwood Cre	85.73	52	P	P	22 32 56.2	-1.9
	baz=253						
PAHR	Pah Rah Range	85.73	48	*e*P	P	22 32 57.7	-0.4
LRMC	Laurel Mtn Rad	85.76	53	P	P	22 32 56.4	-1.9
	baz=253,SNR=6.6						
TIN	Tinemaha, Big	85.79	51	P	P	22 32 57.1	-1.3
	baz=253						
E04D	Cinebar	85.81	41	P	P	22 32 57.2	-0.9
	baz=249						
D03D	Eldon	85.83	40	P	P	22 32 57.3	-0.9
	baz=249						
I05D	Terrebonne, OR	85.85	43	P	P	22 32 57.5	-1.0
	baz=250						
PINE	Pine Mountain	85.94	44	*e*P	P	22 32 59.0	-0.1
MONP2	Monument Peak	86.04	56	P	P	22 32 58.9	-1.0
	baz=254						
RYN	Ryan	86.04	50	*e*P	P	22 32 59.3	-0.4
DAC	Darwin (Calif)	86.06	52	*e*P	P	22 32 59.3	-0.6
MPMC	Manual Prospec	86.08	52	P	P	22 32 59.1	-0.9
	baz=253,SNR=6.4						
TIXI	Tiksi	86.14	349	*e*P	P	22 32 58.4	-0.7
TIXI				LR	LR		
	comp=Z,1µm,19.0s						
TIXI	Tiksi	86.14	349	*d i*P	P	22 32 57.7	-1.4
TIXI				pmax	pmax		
	comp=Z,20nm,1.7s						
NV01	Mina Array Sit	86.14	50	*e*P	P	22 32 59.2	-1.1
NVAR	Mina Array Bea	86.14	50	P	P	22 32 58.9	-1.4
	comp=Z,14nm,1.0s,baz=233,slow=7.5,SNR=15						
G05D	Wamic, OR	86.17	43	P	P	22 32 59.4	-0.6
	baz=250						
PFO	Pinyon Flats O	86.20	55	*e*P	P	22 32 59.3	-1.3
	comp=Z,4.2nm,0.8s						
PFO				LR	LR		
	comp=Z,2µm,19.0s						
PFO	Pinyon Flats O	86.20	55	*e*P	P	22 32 59.3	-1.3
PFO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PFO				MLR	MLR		
	comp=Z,2µm,19.0s						
PFO	Pinyon Flats O	86.20	55	P	P	22 32 59.2	-1.3
	baz=254						
XPFO	Pion Flat	86.21	55	*e*P	P	22 32 59.8	-0.7
IKP	In-Ko-Pah, Jac	86.23	56	P	P	22 32 59.3	-1.3
	baz=254						
NV11	Mina Array Sit	86.26	50	*e*P	P	22 33 00.1	-0.6
F05D	White Salmon	86.30	42	P	P	22 32 59.3	-1.3
	baz=250						
GSC	Goldstone, Bar	86.39	53	*e*P	P	22 33 01.4	0.0
GSC	Goldstone, Bar	86.39	53	P	P	22 32 59.8	-1.6
	baz=254						
PALK	Pallekele	86.46	278	P	P	22 33 01.6	-0.5
	comp=Z,8.7nm,0.9s,baz=115,slow=8.0,SNR=3.1						
KVN	Kaiserville	86.48	49	*e*P	P	22 33 01.3	-0.6
KVN	Kaiserville	86.48	49	*e*P	P	22 33 01.3	-0.6
A04D	Lummi Island	86.50	39	P	P	22 33 00.3	-1.1
	baz=249						
DLBC	Dease Lake	86.52	28	*e*P	P	22 33 01.6	+0.2
SWSC	Sam W. Stewart	86.56	56	P	P	22 33 01.1	-1.1
	baz=254						
HEC	Hector,Ludlow	86.64	54	P	P	22 33 01.0	-1.6
	baz=254,SNR=6.7						
FURC	Furnace Creek,	86.68	52	P	P	22 33 01.0	-1.6
	baz=254						
BELC	Belle Mtn. Jos	86.68	55	P	P	22 33 01.3	-1.6
	baz=254						
B05A	Bryant	86.71	40	P	P	22 33 02.4	0.0
	baz=249						
I07A	Izee	87.02	44	*e*P	P	22 33 04.0	-0.3
BC3	Big Chuckawall	87.02	55	P	P	22 33 03.0	-1.5
	baz=255,SNR=5.6						
WVOR	Wild Horse Val	87.11	46	*e*P	P	22 33 03.8	-1.0
	comp=Z,8.8nm,0.9s						
WVOR				LR	LR		
	comp=Z,2µm,19.0s						
WVOR	Wild Horse Val	87.11	46	*e*P	P	22 33 03.8	-1.0
WVOR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WVOR				MLR	MLR		
	comp=Z,2µm,19.0s						
GMRC	Granite Mounta	87.16	54	P	P	22 33 03.3	-1.9
	baz=254						
LTY	Liberty	87.27	41	*e*P	P	22 33 05.0	-0.4
TPNV	Topopah Spring	87.28	52	*e*P	P	22 33 05.2	-0.5
TPNV	Topopah Spring	87.28	52	*e*P	P	22 33 05.3	-0.5
TPNV	Topopah Spring	87.28	52	P	P	22 33 04.2	-1.6
	baz=254						
GLA	Glamis	87.37	56	*e*P	P	22 33 06.4	+0.3
GLA	Glamis	87.37	56	*e*P	P	22 33 06.4	+0.3
GLA	Glamis	87.37	56	P	P	22 33 04.8	-1.4
	baz=255						
IRM	Iron Mountain	87.40	55	P	P	22 33 04.9	-1.3
	baz=255,SNR=11						
J08A	Circle Bar Ran	87.50	45	*e*P	P	22 33 06.2	-0.4
HAWA	Hanford	87.73	42	*e*P	P	22 33 07.7	+0.2
HAWA				LR	LR		
	comp=Z,1µm,21.0s						
Y12C	Blythe	87.80	55	*e*P	P	22 33 08.1	0.0
Y12C	Blythe	87.80	55	P	P	22 33 07.0	-1.1
	baz=255						
SHPR	Sheep Range	88.01	52	*e*P	P	22 33 09.2	-0.1
E08A	Dider Farm, El	88.07	42	*e*P	P	22 33 08.8	-0.3
R11A	Troy Canyon, C	88.17	50	*e*P	P	22 33 14.0	+4.0
R11A	Troy Canyon, C	88.17	50	P	P	22 33 08.8	-1.2
	baz=254						
PDMCI	Parker Dam,Lak	88.24	55	P	P	22 33 08.9	-1.3
	baz=255						
D08A	Wollman Farm,	88.34	41	*e*P	P	22 33 10.1	-0.3
B08A	Colville Reser	88.48	40	*e*P	P	22 33 10.8	-0.3
E09A	Wood Farm, Sta	88.68	42	*e*P	P	22 33 12.0	0.0
BMO	Blue Mountains	88.75	44	*e*P	P	22 33 11.8	-0.7
BMO	Blue Mountains	88.75	44	*e*P	P	22 33 11.8	-0.7
214A	Organ Pipe Nat	88.75	57	P	P	22 33 11.5	-1.2
	baz=256,SNR=7.3						
ELK	Elko	89.07	48	*e*P	P	22 33 13.9	-0.4
ELK	Elko	89.07	48	*e*P	P	22 33 13.9	-0.4
WMQ	Urumqi	89.07	315	P	P	22 33 14.1	+0.1
WMQ				pP	PcP	22 33 16.6	+1.1
WMQ				sP	pP	22 33 19.3	-3.7
WMQ				pmax	pmax		
	comp=Z,37nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,740nm,4.9s						
WMQ				LR	LR		
	comp=Z,830nm,16.1s						
WMQ				LR	LR		
	comp=Z,1µm,19.1s						
WMQ				LR	LR		
	comp=Z,950nm,24.9s						
WMQ	Urumqi	89.07	315	*e*P	P	22 33 13.9	-0.1
	comp=Z,37nm,1.3s						
MFID	Camas Ranch	89.36	46	*e*P	P	22 33 15.1	-0.4
PSUT	Pine Spring	89.53	51	*e*P	P	22 33 16.7	+0.3
LCMT	Little Creek M	89.62	52	*e*P	P	22 33 16.9	0.0
CCUT	Cedar City	89.66	52	*e*P	P	22 33 17.4	+0.3
NEW	Newport	89.86	41	*e*P	P	22 33 16.7	-0.9
	comp=Z,11nm,1.2s						
NEW				LR	LR		
	comp=Z,1µm,19.0s						
NEW	Newport	89.86	41	P	P	22 33 16.8	-0.7
	baz=253						
SZCU	Shurtz Canyon	89.89	52	*e*P	P	22 33 18.1	0.0
KNB	Kanab	89.95	52	*e*P	P	22 33 18.7	+0.3
INK	Inuvik	90.00	19	*e*P	P	22 33 16.6	-1.0
	comp=Z,5.7nm,1.1s						
INK	Inuvik	90.00	19	*e*P	P	22 33 16.6	-1.0
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
INK	Inuvik	90.00	19	P	P	22 33 16.4	-1.2
	comp=Z,9.4nm,1.1s,baz=237,slow=2.5,SNR=5.2						
HLID	Hailey	90.40	46	*e*P	P	22 33 20.3	-0.1
HLID				LR	LR		
	comp=Z,1µm,20.0s						
HLID	Hailey	90.40	46	P	P	22 33 19.5	-0.8
	baz=255						
PKCU	Pink Cliffs	90.45	52	*e*P	P	22 33 21.8	+0.8
TUC	Tucson	90.51	57	*e*P	P	22 33 20.8	-0.2
	comp=Z,5.7nm,0.8s						
TUC				LR	LR		
	comp=Z,3µm,20.0s						
TUC	Tucson	90.51	57	*e*P	P	22 33 20.8	-0.2
TUC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TUC				MLR	MLR		
	comp=Z,3µm,20.0s						
TUC	Tucson	90.51	57	P	P	22 33 20.0	-1.0
	baz=257						
MTPU	Mount Pierson	90.69	51	*e*P	P	22 33 22.6	+0.5
DUG	Dugway, Tooele	90.72	49	PFAKE		22 33 30.0	+8.1
DUG				LR	LR		
	comp=Z,1µm,20.0s						
DUG	Dugway, Tooele	90.72	49	P	P	22 33 21.0	-0.9
	baz=256						
BGU	Big Grassy Mou	90.73	49	*e*P	P	22 33 21.7	-0.3
WUAZ	Wupatki	90.74	54	*e*P	P	22 33 21.5	-0.6
	comp=Z,12nm,1.1s						
WUAZ				LR	LR		
	comp=Z,1µm,19.0s						
WUAZ	Wupatki	90.74	54	P	P	22 33 20.7	-1.4
	baz=257						
MSU	Marysvale	90.80	51	*e*P	P	22 33 22.8	+0.4
MSU	Marysvale	90.80	51	*e*P	P	22 33 22.8	+0.4
NLU	North Lily Min	91.21	50	*e*P	P	22 33 24.3	0.0
SPUT	South Promonto	91.25	48	*e*P	P	22 33 24.1	-0.3
MSO	Missoula	91.55	43	P	P	22 33 24.9	-0.7
	baz=256						
MPU	Maple Canyon	91.56	50	*e*P	P	22 33 26.3	+0.4
CTU	Camp Tracy	91.62	49	*e*P	P	22 33 26.3	+0.2
Q16A	Castle Valley	91.66	51	*e*P	P	22 33 27.1	+0.7
X18A	Snowflake	91.67	55	*e*P	P	22 33 26.4	-0.1
SYO	Syowa Base	91.69	197	⇑*e*X	P	22 33 22.6	-3.0
DGAR	Diego Garcia	91.70	262	PFAKE		22 33 40.0	+13
DGAR				LR	LR		
	comp=Z,579nm,19.0s						
TMUT	Trail Mountain	91.72	50	*e*P	P	22 33 27.5	+0.7
MCMT	McKenzie Canyo	91.80	45	*e*P	P	22 33 27.3	+0.4
JLU	Jordanelle	91.83	49	*e*P	P	22 33 27.3	+0.2
W18A	Petrified Fore	91.96	55	*e*P	P	22 33 28.2	+0.3
W18A	Petrified Fore	91.96	55	P	P	22 33 26.2	-1.6
	baz=258						
HWUT	Hardware Ranch	91.97	48	PFAKE		22 33 40.0	+12
HWUT				LR	LR		
	comp=Z,491nm,20.0s						
TCUT	Toone Canyon	91.97	49	*e*P	P	22 33 28.1	+0.3
DLMT	Dillon	92.10	44	*e*P	P	22 33 27.9	-0.2
WALA	Waterton Lakes	92.12	40	*e*P	P	22 33 28.4	+0.2
LRM	Limekiln Ridge	92.31	44	*e*P	P	22 33 29.1	-0.1
AHID	Auburn Hatcher	92.56	47	PFAKE		22 33 40.0	+10
AHID				LR	LR		
	comp=Z,922nm,20.0s						
BOZ	Bozeman (W)	92.82	44	*e*P	P	22 33 30.9	-0.6
BOZ				LR	LR		
	comp=Z,1µm,19.0s						
BOZ	Bozeman (W)	92.82	44	*e*P	P	22 33 30.9	-0.6
BOZ				MLR	MLR		
	comp=Z,1µm,19.0s						
BOZ	Bozeman (W)	92.82	44	P	P	22 33 30.3	-1.2
	baz=257						
HRY	Holter Researc	92.93	43	*e*P	P	22 33 31.6	-0.3
YHB	Horse Butte	92.93	45	*e*P	P	22 33 33.4	+1.3
MOOW	Moose Ponds	93.03	46	*e*P	P	22 33 32.5	-0.1
121A	Cookes Peak, D	93.03	58	P	P	22 33 31.3	-1.5
	baz=259						
LOHW	Long Hollow	93.10	46	*e*P	P	22 33 33.7	+0.8
PV09	Paradox Valley	93.13	52	*e*P	P	22 33 34.4	+1.1
PV23	Carpenter Ridg	93.22	52	*e*P	P	22 33 34.6	+1.0
H17A	Grant Village	93.28	46	*e*P	P	22 33 34.7	+0.9
H17A	Grant Village	93.28	46	P	P	22 33 33.0	-0.8
	baz=258						
PV04	Paradox Valley	93.28	52	*e*P	P	22 33 34.6	+0.7
MVCO	Mesa Verde	93.37	53	PFAKE		22 33 50.0	+16
MVCO				LR	LR		
	comp=Z,1µm,19.0s						
MVCO	Mesa Verde	93.37	53	P	P	22 33 32.8	-1.5
	baz=259						
LKWY	Lake	93.44	45	PFAKE		22 33 50.0	+15
LKWY				LR	LR		
	comp=Z,2µm,19.0s						
MK01	Makanchi Array	93.49	317	*e*P	P	22 33 33.6	-0.8
MK31	Makanchi Array	93.50	317	*e*P	P	22 33 34.3	-0.1
MKAR	Makanchi Array	93.50	317	*e*P	P	22 33 34.3	-0.1
MKAR				PKKP	PKKPdf	22 50 38.7	-2.5
MKAR	Makanchi Array	93.50	317	P	P	22 33 34.0	-0.5
MKAR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	93.50	317	P	P	22 33 34.0	-0.5
	comp=Z,9.3nm,1.0s,baz=100,slow=6.3,SNR=38						

MKAR				PKKP	PKKPdf	22 50 38.7	-2.5
	comp=Z,2.8nm,0.7s,baz=275,slow=3.2,SNR=22						
ZALV	Zalesovo Beam	93.55	324	P	P	22 33 33.2	-1.2
	comp=Z,5.3nm,0.9s,baz=106,slow=4.8,SNR=14						
BW06	Boulder Array	93.67	47	eP	P	22 33 34.9	-0.7
BW06				LR	LR		
	comp=Z,877nm,20.0s						
BW06	Boulder Array	93.67	47	P	P	22 33 33.7	-2.0
	baz=258						
PD31	Pinedale Array	93.67	47	eP	P	22 33 35.4	-0.2
PDAR	Pinedale Array	93.67	47	P	P	22 33 34.4	-1.3
	comp=Z,3.9nm,1.0s,baz=240,slow=2.9,SNR=8.2						
MAKZ	Makanchi	93.72	317	eP	P	22 33 35.2	-0.2
MAKZ	Makanchi	93.72	317	eP	P	22 33 35.2	-0.2
O20A	White River Ci	94.13	50	P	P	22 33 36.5	-1.2
	baz=259						
RLMT	Red Lodge	94.35	45	eP	P	22 33 41.1	+2.5
RLMT				LR	LR		
	comp=Z,1μm,20.0s						
ANMO	Albuquerque	94.57	55	PFAKE		22 33 50.0	+10
ANMO				LR	LR		
	comp=Z,1μm,20.0s						
ANMO	Albuquerque	94.57	55⇓	eP	P	22 33 38.6	-1.3
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ANMO	Albuquerque	94.57	55	P	P	22 33 38.0	-1.8
	baz=260						
EGMT	Eagleton	94.59	42	eP	P	22 33 38.8	-0.6
	comp=Z,9.6nm,1.0s						
EGMT				LR	LR		
	comp=Z,921nm,20.0s						
EGMT	Eagleton	94.59	42	P	P	22 33 38.0	-1.5
	baz=259						
NVS	Novosibirsk	94.66	325	i P	P	22 33 39.0	-0.5
S22A	4UR Ranch, Cre	94.77	53	P	P	22 33 39.0	-1.9
	baz=260						
MNTX	Cornudas Mount	94.89	59	PFAKE		22 33 50.0	+8.8
MNTX				LR	LR		
	comp=Z,2μm,19.0s						
MNTX	Cornudas Mount	94.89	59	P	P	22 33 39.8	-1.4
	baz=260						
YKA	Yellowknife Ar	95.08	27	P	P	22 33 39.0	-2.2
	comp=Z,2.6nm,0.9s,baz=254,slow=4.6,SNR=13						
YKA				PP	PP	22 37 32.8	+1.7
	comp=Z,0.5nm,0.9s,baz=262,slow=8.0,SNR=3.9						
SDCO	Great Sand Dun	95.81	53	PFAKE		22 34 00.0	+14
SDCO				LR	LR		
	comp=Z,1μm,20.0s						
ISCO	Idaho Springs	96.06	51	PFAKE		22 34 00.0	+13
ISCO				LR	LR		
	comp=Z,2μm,19.0s						
NVL	N'lazarevskaya	96.38	188	eP	P	22 33 57.3	+10
NVL				pmax	pmax		
	comp=Z,1μm,16.1s						
T25A	Trinidad	96.57	54	P	P	22 33 48.1	-0.9
	baz=261						
KURK	Kurchatov	96.63	320	PFAKE		22 34 00.0	+11
KURK				LR	LR		
	comp=Z,1μm,21.0s						
KURK	Kurchatov	96.63	320⇓	eP	P	22 33 46.8	-1.8
KURK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
LAO	LASA Array	96.71	44	PFAKE		22 34 00.0	+11
LAO				LR	LR		
	comp=Z,1μm,19.0s						
LAO	LASA Array	96.71	44	P	P	22 33 48.5	-0.7
	baz=261						
KSH	Kashi	96.72	309	P	P	22 33 50.5	+1.0
KSH				pP	PcP	22 33 53.3	+3.7
KSH				PP	PP	22 37 48.6	+4.0
KSH				SKS	SKSac	22 44 23.1	-1.5
KSH				S	ScS	22 45 09.8	0.0
KSH				SS	SS	22 51 47.9	+3.1
KSH				pmax	pmax		
	comp=Z,300nm,4.9s						
KSH				LR	LR		
	comp=Z,200nm,8.0s						
KSH				LR	LR		
	comp=Z,410nm,7.2s						
KSH				LR	LR		
	comp=Z,1μm,16.4s						
SNAA	Sanae	97.04	184⇓	eP	Pdif	22 33 50.7	+0.4
NIL	Nilore	98.03	303	PFAKE		22 34 10.0	+15
NIL				LR	LR		
	comp=Z,187nm,19.0s						
AAK	Ala-Archa	98.27	312	PKKPbc	PKKPbc	22 50 27.1	-2.3
AAK				LR	LR		
	comp=Z,700nm,20.0s						
AAK	Ala-Archa	98.27	312	PKKPbc	PKKPbc	22 50 27.1	-2.3
	comp=Z,3.0nm,1.0s,baz=261,slow=5.0,SNR=4.2						
DGMT	Dagmar	98.33	42	PFAKE		22 34 10.0	+14
DGMT				LR	LR		
	comp=Z,1μm,20.0s						
OGNE	Ogallala	98.93	50	PFAKE		22 34 10.0	+11
OGNE				LR	LR		
	comp=Z,2μm,20.0s						
JCT	Junction City	99.44	61	PFAKE		22 34 10.0	+8.2
JCT				LR	LR		
	comp=Z,2μm,19.0s						
FFC	Flin Flon	100.35	36	PFAKE		22 34 20.0	+15
FFC				LR	LR		
	comp=Z,2μm,19.0s						
FFC	Flin Flon	100.35	36	i P	Pdif	22 34 05.1	-0.1
CBKS	Cedar Bluff	100.45	52	PFAKE		22 34 20.0	+14
CBKS				LR	LR		
	comp=Z,1μm,20.0s						
WMOK	Wichita Mounta	100.79	57	PFAKE		22 34 20.0	+12
WMOK				LR	LR		
	comp=Z,2μm,19.0s						
BRVK	Borovoye	102.01	322	PFAKE		22 34 20.0	+7.4
BRVK				LR	LR		
	comp=Z,616nm,20.0s						
BRVK	Borovoye	102.01	322⇑	eP	Pdif	22 34 11.6	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSU1	Kansas State U	102.90	52	PFAKE		22 34 30.0	+13
KSU1				LR	LR		
	comp=Z,1μm,20.0s						
ECSD	EROS Data Cent	103.17	48	PFAKE		22 34 30.0	+12
ECSD				LR	LR		
	comp=Z,1μm,20.0s						
PAYG	Puerto Ayora	103.67	93	PFAKE		22 34 30.0	+9.0
PAYG				LR	LR		
	comp=Z,826nm,20.0s						
NATX	Nacogdoches	103.95	60	PFAKE		22 34 30.0	+8.2
NATX				LR	LR		
	comp=Z,2μm,19.0s						
MIAR	Mount Ida	105.05	57	PFAKE		22 38 50.0	+8.7
MIAR				LR	LR		
	comp=Z,2μm,21.0s						
SCIA	State Center	105.61	50	PFAKE		22 38 50.0	+7.9
SCIA				LR	LR		
	comp=Z,2μm,20.0s						
EYMN	Ely	106.78	43	PFAKE		22 39 00.0	+16
EYMN				LR	LR		
	comp=Z,1μm,21.0s						
JFWS	Jewell Farm	107.80	48	PFAKE		22 39 00.0	+14
JFWS				LR	LR		
	comp=Z,931nm,20.0s						
COWI	Conover	108.47	45	PFAKE		22 39 00.0	+13
COWI				LR	LR		
	comp=Z,1μm,21.0s						
HDIL	Hopedale	108.56	51	PFAKE		22 39 00.0	+12
HDIL				LR	LR		
	comp=Z,2μm,22.0s						
ARU	Arti	108.63	326	PFAKE		22 39 00.0	+13
ARU				LR	LR		
	comp=Z,548nm,21.0s						
BRAL	Brewton	110.42	61	PFAKE		22 39 00.0	+8.6
BRAL				LR	LR		
	comp=Z,1μm,19.0s						
JTS	JuntasAbangare	110.79	83	PFAKE		22 39 00.0	+7.4
JTS				LR	LR		
	comp=Z,665nm,19.0s						
KBS	Kingsbay	110.98	355	PFAKE		22 39 00.0	+8.9
KBS				LR	LR		
	comp=Z,734nm,19.0s						
GLMI	Grayling	111.74	46	PFAKE		22 39 00.0	+6.5
GLMI				LR	LR		
	comp=Z,1μm,20.0s						
ABPO	Ambohimpanom	112.32	244	PFAKE		22 39 10.0	+14
ABPO				LR	LR		
	comp=Z,403nm,22.0s						
LCO	Las Campanas	112.58	128	PFAKE		22 39 10.0	+14
LCO				LR	LR		
	comp=Z,649nm,20.0s						
AAM	Ann Arbor	112.69	49	PFAKE		22 39 10.0	+15
AAM				LR	LR		
	comp=Z,2μm,20.0s						
ACSO	Alum Creek Sta	113.40	51	PFAKE		22 39 10.0	+13
ACSO				LR	LR		
	comp=Z,1μm,20.0s						
GOGA	Godfrey	113.44	58	PFAKE		22 39 10.0	+13
GOGA				LR	LR		
	comp=Z,2μm,20.0s						
NNA	Nana	113.84	108	PFAKE		22 39 10.0	+12
NNA				LR	LR		
	comp=Z,345nm,19.0s						
TRQA	Tornquist	113.87	140	PFAKE		22 39 10.0	+12
TRQA				LR	LR		
	comp=Z,894nm,20.0s						
LVZ	Lovozero	114.89	342	PFAKE		22 39 10.0	+11
LVZ				LR	LR		
	comp=Z,547nm,22.0s						
OTAV	Otavalo	115.44	95	PFAKE		22 39 10.0	+7.9
OTAV				LR	LR		
	comp=Z,346nm,19.0s						
BCIP	Isla Barro Col	115.63	85	PFAKE		22 39 10.0	+8.2
BCIP				LR	LR		
	comp=Z,533nm,20.0s						
BLA	Blacksburg	115.67	54	PFAKE		22 39 10.0	+8.7
BLA				LR	LR		
	comp=Z,2μm,19.0s						
TMCR	Tamitsa	115.76	337	ePKIKP	PKiKP	22 38 57.9	-2.6
KEV	Kevo	115.84	345	PFAKE		22 39 10.0	+9.4
KEV				LR	LR		
	comp=Z,2μm,21.0s						
NHSC	New Hope	116.20	59	PFAKE		22 39 10.0	+7.6
NHSC				LR	LR		
	comp=Z,2μm,19.0s						
ARCES	ARCESS Array B	116.37	345	PKP	PKiKP	22 39 01.6	-0.1
	comp=Z,1.7nm,0.7s,baz=72,slow=5.2,SNR=8.5						
KLMR	Klimovskoe	116.76	334	ePKIKP	PKPdf	22 38 59.3	-3.3
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KLMR	Klimovskoe	116.76	334	ePKPdf	PKPdf	22 38 59.4	-3.2
KLMR				AMP		22 39 14.1	
	comp=Z,8.0nm,1.3s						
LVC	Limon Verde	116.92	122	PFAKE		22 39 20.0	+15
LVC				LR	LR		
	comp=Z,523nm,19.0s						
CNNC	Cliffs of the	117.91	56	PFAKE		22 39 20.0	+14
CNNC				LR	LR		
	comp=Z,1μm,21.0s						
CBN	Corbin Frederi	117.96	53	PFAKE		22 39 20.0	+14
CBN				LR	LR		
	comp=Z,2μm,20.0s						
MAK	Makhachkala	118.02	313	i PKIKP	PKPdf	22 39 01.7	-3.9
MAK				e		22 45 50.7	
MAK				ePS	PKKPdf	22 50 03.6	+8.3
MAK				pmax	pmax		
	comp=Z,173nm,1.0s						
MAK				MLR	MLR		
	comp=Z,792nm,16.0s						
BINY	Binghamton	118.34	48	PFAKE		22 39 20.0	+14
BINY				LR	LR		
	comp=Z,1μm,20.0s						
MTDJ	Mount Denham	118.72	75	PFAKE		22 39 20.0	+12
MTDJ				LR	LR		
	comp=Z,617nm,20.0s						
LONY	Lake Ozonia	118.82	45	PFAKE		22 39 20.0	+13
LONY				LR	LR		
	comp=Z,1μm,20.0s						
SFJD	Kangerlussuaq	119.15	15	PFAKE		22 39 20.0	+13
SFJD				LR	LR		
	comp=Z,2μm,20.0s						
VRH	Novokhopyorsk	119.57	323	ePKIKP	PKPdf	22 39 07.2	-1.1
VRH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GNI	Garni	120.62	310	PFAKE		22 39 20.0	+9.0
GNI				LR	LR		
	comp=Z,543nm,20.0s						
LPSR	Galich'ya Gora	120.64	325	ePKIKP	PKPdf	22 39 09.0	-1.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OBN	Obninsk	120.81	329	PFAKE		22 39 20.0	+9.4
OBN				LR	LR		
	comp=Z,456nm,19.0s						
OBN	Obninsk	120.81	329	i PKIKP	PKPdf	22 39 07.4	-3.1
OBN				ePPP	PPP	22 43 17.7	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VSR	Storozhevoye	121.06	324	ePKIKP	PKPdf	22 39 09.9	-1.3
VSR				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GTBY	Guantanamo Bay	121.07	73	PFAKE		22 39 20.0	+7.8
GTBY				LR	LR		
	comp=Z,502nm,20.0s						
KIV	Kislovodsk	121.20	315	PFAKE		22 39 20.0	+8.1
KIV				LR	LR		
	comp=Z,615nm,19.0s						
KIV	Kislovodsk	121.20	315	i PKIKP	PKiKP	22 39 11.6	-0.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,639nm,23.0s						
FINES	FINESS Array B	121.80	338	PKP	PKPdf	22 39 10.9	-1.3
	comp=Z,3.1nm,1.0s,baz=64,slow=3.2,SNR=5.2						
PKME	Peaks-Kenny Pk	122.26	43	PFAKE		22 39 20.0	+6.2
PKME				LR	LR		
	comp=Z,1μm,19.0s						
CPUP	Villa Florida	124.06	132	PKP	PKPdf	22 39 16.7	-1.0
	comp=Z,4.9nm,1.0s,baz=294,slow=2.0,SNR=6.8						
SDV	Santo Domingo	124.60	87	ePKPdf	PKPdf	22 39 17.7	-1.6
SDV				LR	LR		
	comp=Z,394nm,20.0s						
SDDR	Presa de Saban	124.66	75	PFAKE		22 39 30.0	+11
SDDR				LR	LR		
	comp=Z,759nm,19.0s						
GRTK	Grand Turk	124.79	72	PFAKE		22 39 30.0	+10
GRTK				LR	LR		
	comp=Z,659nm,20.0s						
BOSA	Boshof	125.00	223	PKP	PKiKP	22 39 19.5	-0.5
	comp=Z,4.9nm,1.0s,baz=207,slow=1.1,SNR=5.4						
SUR	Sutherland	125.23	217	PFAKE		22 39 30.0	+10
SUR				LR	LR		
	comp=Z,1μm,20.0s						
IDID	Didziasalis	125.45	333	eP	PKiKP	22 39 19.1	-0.7
ISAL	Salakas	125.56	333	eP	PKPdf	22 39 18.9	-0.8
IIGN	Ignalina	125.66	333	eP	PKiKP	22 39 19.7	-0.6
NB2	NORSAR Subarra	126.74	345	PKPdf	PKPdf	22 39 20.8	-1.1
	comp=Z,0.7nm,0.8s,baz=32,slow=1.8						
NOA	NORSAR Array B	126.74	345	PKP	PKPdf	22 39 20.9	-0.9
	comp=Z,2.0nm,0.9s,baz=31,slow=2.0,SNR=3.8						
AKASG	Malin Array Be	126.86	327	PKP	PKPdf	22 39 21.0	-1.3
	comp=Z,2.2nm,0.8s,baz=61,slow=2.4,SNR=11						
KIEV	Kiev	126.88	327	PFAKE		22 39 30.0	+7.2
KIEV				LR	LR		
	comp=Z,804nm,20.0s						
KMBO	Kilima Mbogo	127.28	260	PKP	PKPdf	22 39 24.2	-0.4
KMBO				LR	LR		
	comp=Z,612nm,21.0s						
KMBO	Kilima Mbogo	127.28	260	PKIKP	PKPdf	22 39 24.2	-0.4
KMBO				MLR	MLR		
	comp=Z,612nm,21.0s						
KMBO	Kilima Mbogo	127.28	260	PKP	PKPdf	22 39 24.2	-0.4
	comp=Z,1.1nm,0.7s,baz=71,slow=4.6,SNR=3.1						
BRTR	Keskin Array B	128.94	313	PKP	PKiKP	22 39 26.7	-0.8
	comp=Z,2.5nm,1.0s,baz=43,slow=3.4,SNR=7.6						
ANTO	Ankara	129.49	313	PFAKE		22 39 40.0	+11
ANTO				LR	LR		
	comp=Z,346nm,21.0s						
SJG	San Juan	129.53	76	PFAKE		22 39 40.0	+11
SJG				LR	LR		
	comp=Z,513nm,22.0s						
LSZ	Lusaka	130.37	239	ePKPdf	PKiKP	22 39 31.4	+0.4
LSZ				LR	LR		
	comp=Z,974nm,20.0s						
LSZ	Lusaka	130.37	239	ePKIKP	PKiKP	22 39 31.4	+0.4
LSZ				MLR	MLR		
	comp=Z,974nm,20.0s						
UZH	Uzhgorod	131.74	328	ePKHKP	PKPpre	22 39 20.4	
UZH				e		22 39 32.3	
TRIS	Tristan da Cun	132.04	182	PFAKE		22 39 40.0	+6.3
TRIS				LR	LR		
	comp=Z,2μm,21.0s						
MORC	Moravsky Berou	133.31	332	ePKP	PKPdf	22 39 34.4	-0.3
DPC	Dobruska-Polom	133.46	333	AMS	AMS	23 37 30.0	
	comp=Z,800nm,23.3s						
UPC	Upice	133.48	334	AMS	AMS	23 40 50.0	
	comp=Z,800nm,22.2s						
MBAR	Mbarara	133.69	258	PFAKE		22 39 50.0	+12
MBAR				LR	LR		
	comp=Z,777nm,22.0s						
ANWB	Willy Bob	133.70	76	PFAKE		22 39 50.0	+13
ANWB				LR	LR		
	comp=Z,579nm,20.0s						
GRGR	Grenville	133.71	84	PFAKE		22 39 50.0	+12
GRGR				LR	LR		
	comp=Z,402nm,22.0s						
BRG	Berggiesshubel	134.08	335	ePKP	PKiKP	22 39 38.0	+0.6
	comp=Z,12nm,1.4s						
BRG	Berggiesshubel	134.08	335	ePKIKP	PKiKP	22 39 38.0	+0.6
BRG				pmax	pmax		
	comp=Z,52nm,1.4s						
PVCC	Panska Ves	134.08	335	AMS	AMS	23 42 40.0	
	comp=Z,900nm,15.6s						
VRAC	Vranov	134.08	332	ePKP	PKiKP	22 39 36.7	-0.7
CLL	Collm	134.13	336	ePKPdf	PKiKP	22 39 37.0	-0.4
CLL				LmV		23 36 00.0	
	comp=Z,800nm,18.9s						
CLL	Collm	134.13	336	ePKIKP	PKiKP	22 39 37.0	-0.4
CLL				MLR	MLR		
	comp=Z,800nm,18.9s						
KRUC	Moravsky	134.35	332	ePKP	PKPdf	22 39 36.4	-0.2
MODS	Modra-Piesok	134.42	331	ePKIKP	PKiKP	22 39 38.2	+0.1
MODS	Modra-Piesok	134.42	331	ePKP	PKiKP	22 39 38.2	+0.1
PRU	Pruhonice	134.50	334	AMS	AMS	23 38 30.0	
	comp=Z,1μm,23.3s						
CONA	Conrad Observa	135.41	331	PKiKP	PKiKP	22 39 40.3	+0.1
	comp=Z,6.5nm,1.2s						
KHC	Kasperske Hory	135.56	334	ePKPdf	PKPdf	22 39 39.0	+0.1
KHC				epPKP	sPKPdf	22 39 50.1	-0.4
KHC				AMS	AMS	23 43 20.0	
	comp=Z,1μm,21.1s						
KHC	Kasperske Hory	135.56	334	ePKIKP	PKPdf	22 39 39.0	+0.1
KHC				e		22 39 50.1	
KHC				MLR	MLR		
	comp=Z,1μm,21.1s						
GERES	GERESS Array B	135.72	334	PKP	PKPdf	22 39 39.0	-0.3
	comp=Z,3.0nm,1.0s,baz=45,slow=2.1,SNR=12						
ARSA	Arzberg	136.05	331	ePKiKP	PKiKP	22 39 40.4	-1.1
	comp=Z,3.7nm,1.0s						
TSUM	Tsumeb	136.43	226	PFAKE		22 39 50.0	+6.8
TSUM				LR	LR		
	comp=Z,1μm,19.0s						
SOKA	Soboth	136.69	330	ePKiKP	PKiKP	22 39 42.3	-0.6
	comp=Z,5.3nm,1.0s						
KBA	Koelnbreinsper	137.20	332	i PKiKP	PKiKP	22 39 43.5	-0.6
	comp=Z,9.3nm,1.2s						
BDFB	Brasilia	137.37	128	PKP	PKPdf	22 39 42.6	-0.7
	comp=Z,3.0nm,0.7s,baz=204,slow=2.8,SNR=4.1						
MYKA	Terra Mystica	137.39	331	ePKPdf	PKPdf	22 39 41.8	-0.6
	comp=Z,7.6nm,1.5s						
WATA	Walderalm	137.79	334	ePKiKP	PKiKP	22 39 45.1	-0.1
	comp=Z,2.9nm,0.5s						
ABTA	Abfaltersbach	137.82	332	ePKPdf	PKPdf	22 39 42.3	-0.9
	comp=Z,7.6nm,1.2s						
MOTA	Moosalm	137.99	334	i pPKPdf	PKiKP	22 39 48.2	+2.6
	comp=Z,6.5nm,1.1s						
RETA	Reutte	138.03	335	PKPdf	PKPdf	22 39 41.9	-1.6
	comp=Z,7.3nm,1.3s						
SQTA	Sankt Quirin	138.04	334	ePKiKP	PKiKP	22 39 45.4	-0.3
	comp=Z,7.7nm,1.4s						
BFO	Black Forest	138.32	337	PFAKE		22 40 00.0	+14
BFO				LR	LR		
	comp=Z,29nm,20.0s						
KEST	Kesra	147.41	323	PKPbc	PKPbc	22 40 02.5	-0.5
	comp=Z,18nm,0.9s,baz=358,slow=4.0,SNR=9.2						
ESDC	Sonseca Array	150.09	344	PKPbc	PKPbc	22 40 08.8	-0.9
	comp=Z,5.1nm,0.9s,baz=8.7,slow=2.2,SNR=12						
PAB	San Pablo	150.32	344	PFAKE		22 40 20.0	+3.5
PAB				LR	LR		
	comp=Z,1μm,19.0s						
SHEL	Horse Pasture	151.78	198	PFAKE		22 40 20.0	-3.0
SHEL				LR	LR		
	comp=Z,343nm,19.0s						
TORD	Torodi Ar. Bea	164.18	279	PKP	PKPdf	22 40 21.8	-1.3
	comp=Z,4.5nm,1.0s,baz=19,slow=1.5,SNR=17						
TORD				PKPab	PKPab	22 41 16.7	-0.1
	comp=Z,7.6nm,1.2s,baz=109,slow=4.3,SNR=8.0						
KIC	Kosan Boka	169.39	244	eP	PKPdf	22 40 25.3	-1.7
	comp=Z,67nm,1.3s						
LIC	Lamto	169.58	243	eP	PKPdf	22 40 26.4	-0.7
	comp=Z,121nm,2.1s						
DBIC	Dimbokro	169.63	246	PKP	PKPdf	22 40 26.1	-1.1
	comp=Z,8.6nm,1.1s,baz=137,slow=2.9,SNR=5.1						
DBIC				PKPab	PKPab	22 41 38.8	-2.1
	comp=Z,4.3nm,1.0s,baz=139,slow=5.8,SNR=2.9						
TIC	Toumodi	169.76	245	eP	PKPdf	22 40 24.8	-2.5
SACV	Santiago Islan	170.21	66	PFAKE		22 40 40.0	+13
SACV				LR	LR		
	comp=Z,533nm,21.0s						

IDC 06 22:21:50.3±1.5, 10°.76S×165°.48E, h0^{km}, mb4.2/3, mb1 4.5/4, mb1mx4.0/40, mbtmp4.3/4, MS4.7/1, Ms1 4.7/1, ms1mx4.3/10, Error ellipse: s-maj=53.6km s-min=29.2km az=129.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.28	175	Pn	Pn	22 24 32.6	-0.4
	baz=328,slow=19,SNR=2.7						
WRA	Warramunga Arr	31.33	249	P	P	22 28 12.9	+0.2
	4.4nm,1.0s,baz=80,slow=10.0,SNR=2.2						
ASAR	Alice Springs	32.68	243	P	P	22 28 24.4	-0.3
	3.8nm,0.6s,baz=65,slow=10,SNR=5.7						
MJAR	Matsushiro Arr	53.60	333	LR	LR	22 51 51.2	
	comp=Z,699nm,21.9s,baz=165,slow=34						
ILAR	Eielson Array	83.33	19	P	P	22 34 18.6	-0.2
	0.5nm,0.7s,baz=239,slow=4.6,SNR=1.9						
ARCES	ARCESS Array B	116.00	345	PKP	PKPdf	22 40 35.0	+0.2
	1.9nm,0.9s,baz=60,slow=2.5,SNR=3.4						

IDC 06 22:23:53.9±1.5, 10°.83S×165°.67E, h0^{km}, mb4.2/3, mb1 4.5/4, mb1mx3.9/35, mbtmp4.2/4, ML4.2/1, Error ellipse: s-maj=53.8km s-min=29.2km az=129.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.21	176	Pn	Pn	22 26 35.9	+0.4
	1.6nm,0.3s,baz=354,slow=18,SNR=3.6						
WRA	Warramunga Arr	31.49	249	P	P	22 30 17.4	-0.3
	2.3nm,0.7s,baz=82,slow=8.8,SNR=2.3						
ASAR	Alice Springs	32.82	243	P	P	22 30 29.9	+0.4
	3.5nm,0.8s,baz=68,slow=10,SNR=5.7						
ILAR	Eielson Array	83.33	19	P	P	22 36 22.9	+0.5
	0.9nm,0.7s,baz=233,slow=5.3,SNR=3.7						
ARCES	ARCESS Array B	116.11	345	PKP	PKiKP	22 42 37.5	-1.0
	1.4nm,0.9s,baz=62,slow=2.1,SNR=3.8						

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*IDC **06** 22:24:23.4±0.5, 10°.84S×165°.56E, h0^{km}, mb4.6/20, mb1 4.8/22, mb1mx4.7/35, mbtmp4.6/22, ML5.5/2, Error ellipse: s-maj=18.1km s-min=13.8km az=108.0*

*NEIC **06** 22:24:26.0±0.3, 10°.88S×165°.43E, h10^{km}, mb5.0/36, Error ellipse: s-maj=9.0km s-min=6.6km az=103.0*

*ISCJB **06** 22:24:27.7±0.2, 11°.01S±0°.03×165°.45E±0°.04, h30^{km}, mb4.8/71, Error ellipse: s-maj=5.7km s-min=4.3km az=27.3*

*MOS **06** 22:24:29.0±1.6, 10°.85S×165°.23E, h33^{km}, mb5.0/18, Error ellipse: s-maj=17.5km s-min=13.6km az=37.2*

ISC 06 22:24:29.1±0.4, 11°.01S±0°.05×165°.55E±0°.07, h30^{km}, n163, σ1^{s}.56/163, mb4.9/71, 4C-11D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.74	285	eP	Pn	22 25 51.0	-1.3
HNR	Honiara	5.74	285	ePn	Pn	22 25 51.3	-1.1
HNR				eS	Sn	22 26 44.7	-12
HNR	Honiara	5.74	285	Pn	Pn	22 25 51.2	-1.1
	178nm,0.3s,baz=135,slow=6.9,SNR=15						
HNR				Sn	Sn	22 26 55.8	-1.4
	baz=36,slow=18,SNR=1.8						
MARNC	Mare, Loyalty	10.68	167	ePn	Pn	22 27 01.4	+1.4
DZM	Mont Dzumac	11.03	176	ePn	Pn	22 27 05.6	+0.6
DZM				Sn	Sn	22 29 06.2	-1.2
DZM	Mont Dzumac	11.03	176	Pn	Pn	22 27 06.6	+1.6
	23nm,0.3s,baz=328,slow=11,SNR=38						
DZM				Sn	Sn	22 29 06.2	-1.2
	1.5nm,0.3s,baz=17,slow=19,SNR=3.6						
ONTNC	Ouen Toro	11.26	176	ePn	Pn	22 27 10.1	+2.0
PINNC	Pines Island,	11.68	171	ePn	Pn	22 27 15.8	+2.1

MSVF	Nonsavu	13.82	120	*e*Pn	P	22 27 51.6	+0.4
MSVF	Nonsavu	13.82	120	*e*P	P	22 27 51.6	+0.4
EIDS	Eidsvold	19.79	222	P	Pn	22 28 59.1	+0.2
	baz=20,SNR=4.1						
CTA	Charters Tower	20.65	242	P	P	22 29 07.2	+0.7
	59nm,0.8s,baz=69,slow=13,SNR=15						
CTAO	Charters Tower	20.65	242	*e*P	P	22 29 06.7	+0.1
	155nm,1.1s						
CTAO	Charters Tower	20.65	242	*e*P	P	22 29 06.7	+0.1
CTAO				pmax	pmax		
	comp=Z,155nm,1.1s						
MTSU	Mount Surprise	21.73	249	P	P	22 29 18.0	-0.1
	baz=22,SNR=11						
RMQ	Roma	22.09	224	P	P	22 29 23.3	+1.3
	baz=22,SNR=11						
ARMA	Armidale	23.25	212	P	P	22 29 35.0	+0.8
	baz=23,SNR=6.1						
OUZ	Omahuta	25.18	164	*e*P	P	22 29 54.7	+2.7
	comp=Z,54nm,1.1s						
QLP	Quilpie	25.38	229	P	P	22 29 54.6	+0.7
	baz=25,SNR=4.6						
RIV	Riverview	26.26	208	P	P	22 30 05.1	+3.3
	baz=26,SNR=5.7						
QIS	Mount Isa	26.68	246	P	P	22 30 05.6	-0.1
	baz=26,SNR=5.9						
CMSA	Cobar Meteorol	27.47	219	P	P	22 30 12.6	-0.2
	baz=27,SNR=7.7						
CNB	Canberra Magne	28.32	209	P	P	22 30 21.5	+1.1
	baz=28,SNR=7.6						
URZ	Urewera	29.04	161	*e*P	P	22 30 27.7	+1.1
	comp=Z,56nm,1.0s						
URZ	Urewera	29.04	161	P	P	22 30 27.2	+0.6
	comp=Z,34nm,0.9s,baz=354,slow=5.9,SNR=11						
H11S2	WAKE ISLAND Hy	29.34	2	T	T	23 00 55.8	
	baz=181,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.34	2	T	T	23 00 59.8	
	baz=181,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	29.36	2	T	T	23 01 00.7	
	baz=181,slow=76,SNR=22						
STKA	Stephens Creek	30.34	223	P	P	22 30 38.8	+0.5
	baz=30,SNR=4.6						
STKA	Stephens Creek	30.34	223	*e*P	P	22 30 39.1	+0.8
	comp=Z,5.5nm,1.1s						
STKA	Stephens Creek	30.34	223	P	P	22 30 38.5	+0.3
	comp=Z,14nm,1.1s,baz=31,slow=8.3,SNR=4.8						
H11N1	WAKE ISLAND Hy	30.56	2	T	T	23 02 31.1	
	baz=182,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	30.57	3	T	T	23 02 49.6	
	baz=182,slow=76,SNR=23						
H11N2	WAKE ISLAND Hy	30.58	2	T	T	23 02 32.5	
	baz=182,slow=76,SNR=21						
BFZ	Birch Farm	31.02	164	*e*P	P	22 30 44.1	-0.1
	comp=Z,54nm,0.9s						
SNZO	South Karori	31.23	167	*e*P	P	22 30 48.4	+2.5
	comp=Z,81nm,0.7s						
THZ	Tophouse	31.30	169	*e*P	P	22 30 48.2	+1.5
	comp=Z,30nm,0.9s						
WRAB	Tennant Creek	31.30	250	*e*P	P	22 30 44.9	-2.1
	comp=Z,30nm,1.1s						
WRAB	Tennant Creek	31.30	250	⇓*i*P	P	22 30 45.6	-1.4
WRAB				pmax	pmax		
	comp=Z,29nm,1.3s						
WB2	Warramunga Arr	31.31	250	*e*P	P	22 30 45.9	-1.1
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	31.32	250	P	P	22 30 45.0	-2.0
	comp=Z,17nm,0.7s,baz=82,slow=8.9,SNR=9.0						
WRA				PcP	PcP	22 33 40.9	0.0
	comp=Z,1.3nm,0.9s,baz=80,slow=3.8,SNR=5.0						
TOO	Toolangi	32.00	211	P	P	22 30 53.9	+1.0
	baz=32,SNR=7.7						
LTZ	Lake Taylor	32.19	171	*e*P	P	22 30 54.4	0.0
	comp=Z,28nm,0.9s						
AS01	Alice Springs	32.60	243	*e*P	P	22 30 56.4	-1.9
AS31	Alice Springs	32.64	243	*e*P	P	22 30 57.1	-1.6
	comp=Z,13nm,1.1s						
ASAR	Alice Springs	32.64	243	P	P	22 30 56.8	-1.9
	comp=Z,31nm,0.9s,baz=74,slow=9.6,SNR=30						
ASAR				PcP	PcP	22 33 43.7	-0.8
	comp=Z,1.8nm,0.8s,baz=72,slow=2.6,SNR=4.2						
OXZ	Oxford	32.68	171	*e*P	P	22 30 59.6	+0.9
	comp=Z,22nm,0.9s						
RPZ	Rata Peaks	32.93	173	*e*P	P	22 31 01.6	+0.7
	comp=Z,23nm,0.9s						
RPZ	Rata Peaks	32.93	173	P	P	22 31 00.4	-0.5
	comp=Z,16nm,0.7s,baz=69,slow=4.3,SNR=6.8						
HTT	Hallett	33.07	223	P	P	22 31 02.4	+0.1
	baz=33,SNR=5.1						
BBOO	Buckleboo	34.71	227	P	P	22 31 16.2	-0.4
	baz=34,SNR=5.1						
WRKA	Warakurna	37.93	243	P	P	22 31 42.7	-1.5
	baz=38,SNR=6.9						
FITZ	Fitzroy Crossi	39.21	255	P	P	22 31 54.2	-0.7
	baz=39,SNR=4.0						
FITZ	Fitzroy Crossi	39.21	255	P	P	22 31 53.8	-1.1
	baz=81,slow=10.0						
MBWA	Marble Bar	45.03	251	*e*P	P	22 32 41.5	-0.9
	comp=Z,40nm,0.8s						
MEEK	Meekatharra	46.79	244	P	P	22 32 55.9	-0.5
	baz=46,SNR=14						
KLBR	Kellerberrin	48.57	237	P	P	22 33 09.2	-0.8
	baz=48,SNR=9.3						
MORW	Morawa	49.47	241	P	P	22 33 16.7	-0.3
	baz=49,SNR=4.2						
MUN	Mundaring	49.94	237	P	P	22 33 20.3	-0.1
	baz=50,SNR=4.3						
MJAR	Matsushiro Arr	53.86	333	P	P	22 33 46.9	-2.7
	comp=Z,1.3nm,0.4s,baz=166,slow=8.8,SNR=4.9						
MAJO	Matsushiro	53.86	333	⇑*e*P	P	22 33 50.4	+0.9
MAJO				pmax	pmax		
	comp=Z,17nm,1.1s						
ASAJ	Asahikawa	58.70	341	P	P	22 34 22.8	-1.1
	comp=Z,9.4nm,0.9s,baz=220,slow=12,SNR=4.7						
YSS	Yuzh-Sakhalins	61.20	342	*e*P	P	22 34 43.1	+2.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	Nanjing	61.87	316	*e*P	P	22 34 45.5	-0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	62.84	333	P	P	22 34 50.3	-1.7
	comp=Z,6.2nm,1.0s,baz=136,slow=5.5,SNR=2.6						
PETK	Petropavlovsk-	64.22	355	P	P	22 35 00.1	-1.0
	comp=Z,5.7nm,0.8s,baz=159,slow=10,SNR=5.6						
CN2	Changchun	65.62	329	*e*P	P	22 35 12.9	+2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CASY	Casey	66.34	201	*e*P	P	22 35 14.7	+0.1
	comp=Z,20nm,0.9s						
KLR	Kul'dur	66.95	337	⇓*i*P	P	22 35 19.6	+0.8
KLR	Kul'dur	66.95	337	P	P	22 35 17.5	-1.3
	comp=Z,7.2nm,1.0s,baz=114,slow=5.8,SNR=9.6						
NKL	Nikolayevsk	67.36	344	*e*P	P	22 35 22.0	+0.8
NKL				pmax	pmax		
	comp=Z,21nm,1.0s						
GYA	Guiyang	68.25	304	⇑*i*P	P	22 35 29.8	+2.2
GYA				PP	PP	22 38 02.0	+3.5
GYA				S	S	22 44 32.6	+6.0
GYA				SKS	SKSac	22 45 24.2	-0.5
GYA	Guiyang	68.25	304	SS	SS	22 48 53.4	+3.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
XAN	Xi'an	69.96	312	P	P	22 35 45.4	+7.4
XAN				pP	pwP	22 35 52.7	+2.6
XAN				pmax	pmax		
	comp=Z,7.0nm,2.3s						
KMI	Kunming	70.94	301	P	P	22 35 44.4	0.0
KMI				pP	pP	22 35 51.6	-1.4
KMI	Kunming	70.94	301	P	P	22 35 51.6	+7.2
KMI				pP	pwP	22 35 59.9	+3.5
KMI				sP	PcP	22 36 04.8	0.0
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MA2	Magadan	71.35	352	⇓*e*P	P	22 35 46.3	+0.5
MA2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC	Hu-ho-hao-te	71.69	320	*e*P	P	22 35 50.3	+1.9
HHC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CMAR	Chiang Mai Arr	71.93	294	P	P	22 35 49.1	-1.0
	comp=Z,0.8nm,0.7s,baz=124,slow=5.0,SNR=4.2						
ZEA	Zeya	72.24	337	*e*P	P	22 35 53.2	+1.9
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
HIA	Hailar	72.25	330	⇓*e*P	P	22 35 53.7	+2.2
HIA				pmax	pmax		
	comp=Z,12nm,1.3s						
CD2	Chengdu	72.43	307	*e*P	P	22 35 53.5	+0.5
LZH	Lanzhou	74.60	312	*e*P	P	22 36 07.3	+1.5
LZH				pP	pP	22 36 15.7	+1.3
LZH				sP	PcP	22 36 19.4	-0.7
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
LZH				LR	LR		
	comp=N,560nm,17.5s						
LZH				LR	LR		
	comp=E,650nm,18.5s						
LZH				LR	LR		
	comp=Z,850nm,18.8s						
ULN	Ulaanbaatar	78.17	324	*e*P	P	22 36 24.7	-1.1
	comp=Z,22nm,1.8s						
ULN	Ulaanbaatar	78.17	324	⇓*i*P	P	22 36 26.0	+0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	78.53	324	P	P	22 36 24.7	-3.1
	comp=Z,1.2nm,0.8s,baz=136,slow=5.3,SNR=4.1						
BILL	Bilibino	78.85	0	⇓*e*P	P	22 36 29.5	+0.6
BILL				pmax	pmax		
	comp=Z,11nm,1.7s						
GTA	Gaotai	78.90	314	*e*P	P	22 36 32.8	+2.8
GTA				pP	pP	22 36 38.6	0.0
GTA				sP	sP	22 36 41.2	-0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.6s						
QSPA	South Pole Qui	78.99	180	*e*P	P	22 36 29.7	-0.3
CAST	Castle Rocks	80.98	18	*e*P	P	22 36 43.8	+3.3
	comp=Z,5.7nm,0.9s						
ZAK	Zakamensk	81.57	325	*e*P	P	22 36 44.4	+0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TLY	Talaya	81.99	326	⇑*e*P	P	22 36 46.2	0.0
MDM	Murphy Dome	83.26	18	*e*P	P	22 36 54.9	+2.4
	comp=Z,21nm,1.4s						
HDA	Harding Lake	83.27	19	*e*P	P	22 36 51.5	-1.0
HDA	Harding Lake	83.27	19	P	P	22 36 51.2	-1.3
	baz=227						
COLA	College	83.31	18	*e*P	P	22 36 52.2	-0.5
	comp=Z,14nm,1.0s						
COLA	College	83.31	18	⇓*e*P	P	22 36 55.1	+2.4
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
O02D	Mt. Diablo Mer	83.41	47	P	P	22 36 54.1	+0.2
	baz=250						
RIDG	Independ'e Rid	83.51	20	*e*P	P	22 36 56.0	+2.1
	comp=Z,12nm,1.0s						
IL1	Eielson Array	83.54	19	*e*P	P	22 36 52.5	-1.4
ILAR	Eielson Array	83.54	19	P	P	22 36 52.1	-1.8
	comp=Z,3.0nm,0.6s,baz=239,slow=5.1,SNR=16						
ILB	Eielson Array	83.54	19	*e*P	P	22 36 53.1	-0.8
K02D	Willamette Mer	83.68	44	P	P	22 36 54.8	-0.4
	baz=249						
N02D	Trinity Center	83.75	46	P	P	22 36 55.7	+0.1
	baz=250						
M02C	Callahan	83.79	46	P	P	22 36 55.8	0.0
	baz=250						
SCRK	Sand Creek	83.95	20	*e*P	P	22 36 56.4	+0.2
	comp=Z,8.7nm,1.0s						
COLD	Coldfoot	84.32	16	*e*P	P	22 36 56.2	-1.6
	comp=Z,5.4nm,0.9s						
AFDM	Forest Hills D	84.32	49	*e*P	P	22 36 58.4	-0.1
	comp=Z,11nm,1.1s						
KNGR	Kungurtug, Tuv	84.97	324	⇑*e*P	P	22 37 01.6	0.0
BEKR	Beckworth	85.07	48	*e*P	P	22 37 02.0	-0.4
	comp=Z,7.1nm,0.9s						
WAKR	Walker	85.32	50	*e*P	P	22 37 04.7	+0.9
	comp=Z,8.4nm,1.0s						
MDPB	Devils Postpil	85.32	50	*e*P	P	22 37 03.9	0.0
	comp=Z,14nm,1.2s						
EDW2	Edwards Air Fo	85.35	53	P	P	22 37 05.2	+1.3
	baz=253						
EGAK	Eagle	85.41	20	*e*P	P	22 37 02.8	-0.6
	comp=Z,140nm,0.6s						
BFSC	Mount Baldy Ra	85.43	54	P	P	22 37 03.4	-0.9
	baz=254						
TOLK	Toolik Lake Re	85.51	15	P	P	22 37 03.9	0.0
	baz=224						
J05D	Fort Rock, OR	85.56	45	P	P	22 37 04.6	-0.2
	baz=251						
DAWY	Dawson	85.59	21	*e*P	P	22 37 03.3	-1.1
CWC	Cottonwood Cre	85.73	52	P	P	22 37 05.3	-0.6
	baz=253						
LRMC	Laurel Mtn Rad	85.77	53	P	P	22 37 05.5	-0.5
	baz=254						
TIXI	Tiksi	86.02	349	⇓*e*P	P	22 37 07.2	+1.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
MONP2	Monument Peak	86.05	56	P	P	22 37 06.7	-0.8
	baz=254						
NV01	Mina Array Sit	86.15	50	*e*P	P	22 37 07.2	-0.7
NVAR	Mina Array Bea	86.15	50	P	P	22 37 05.3	-2.6
	comp=Z,3.8nm,0.9s,baz=243,slow=6.5,SNR=6.6						
NV11	Mina Array Sit	86.26	50	*e*P	P	22 37 09.4	+1.0
	comp=Z,1.2nm,1.4s						
BELC	Belle Mtn. Jos	86.69	55	P	P	22 37 10.2	-0.4
	baz=255						
WVOR	Wild Horse Val	87.10	46	*e*P	P	22 37 12.3	0.0
	comp=Z,8.7nm,1.1s						
WVOR	Wild Horse Val	87.10	46	*e*P	P	22 37 12.4	0.0
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TPNV	Topopah Spring	87.29	52	P	P	22 37 12.0	-1.5
	baz=254						
IRM	Iron Mountain	87.42	55	P	P	22 37 13.2	-0.7
	baz=255						
J08A	Circle Bar Ran	87.49	45	*e*P	P	22 37 15.1	+0.9
	comp=Z,14nm,1.2s						
PDMCI	Parker Dam,Lak	88.26	55	P	P	22 37 19.2	+1.3
	baz=256						
WMQ	Urumqi	88.94	315	P	P	22 37 23.3	+2.3
WMQ				pP	pP	22 37 26.4	-3.7
WMQ				sP	sP	22 37 31.5	-1.9
WMQ				pmax	pmax		
	comp=Z,24nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.3s						
WMQ				LR	LR		
	comp=N,890nm,16.7s						
WMQ				LR	LR		
	comp=E,700nm,19.5s						
WMQ				LR	LR		
	comp=Z,730nm,21.7s						
CCUT	Cedar City	89.67	52	*e*P	P	22 37 27.7	+2.9
	comp=Z,11nm,1.4s						
SZCU	Shurtz Canyon	89.89	52	*e*P	P	22 37 28.6	+2.8
	comp=Z,9.0nm,1.1s						
U15A	North Rim	90.24	53	*e*P	P	22 37 27.6	+0.1
HLID	Hailey	90.39	46	P	P	22 37 27.3	-0.6
	baz=255						
X16A	Lo Mia Camp, P	90.45	55	*e*P	P	22 37 30.2	+1.7
	comp=Z,3.7nm,0.9s						
PKCU	Pink Cliffs	90.46	52	*e*P	P	22 37 31.9	+3.3
	comp=Z,8.2nm,0.9s						
MTPU	Mount Pierson	90.69	51	*e*P	P	22 37 30.9	+1.2
	comp=Z,5.0nm,0.8s						
NLU	North Lily Min	91.22	50	*e*P	P	22 37 34.8	+2.9
	comp=Z,5.8nm,1.0s						
DLMT	Dillon	92.09	44	*e*P	P	22 37 35.6	-0.1
	comp=Z,9.8nm,1.0s						
FXWY	Fox Creek	92.80	46	*e*P	P	22 37 38.9	-0.3
	comp=Z,2.3nm,0.8s						
MK31	Makanchi Array	93.37	317	*e*P	P	22 37 43.6	+2.1
MKAR	Makanchi Array	93.37	317	*e*P	P	22 37 43.6	+2.1
MKAR				PKKP	PKKPdf	22 54 46.4	-2.7
MKAR	Makanchi Array	93.37	317	P	P	22 37 38.8	-2.7
	comp=Z,1.5nm,0.8s,baz=81,slow=6.7,SNR=7.0						
MKAR				PKKP	PKKPdf	22 54 46.4	-2.7
	comp=Z,0.4nm,0.8s,baz=319,slow=1.5,SNR=3.6						
ZALV	Zalesovo Beam	93.42	324	*e*P	P	22 37 43.5	+2.0
ZALV	Zalesovo Beam	93.42	324	P	P	22 37 39.4	-2.1
	comp=Z,0.5nm,0.5s,baz=101,slow=4.6,SNR=3.6						
PDAR	Pinedale Array	93.67	47	P	P	22 37 42.0	-1.2
	comp=Z,0.8nm,0.6s,baz=227,slow=3.6,SNR=3.5						
ANMO	Albuquerque	94.58	55	⇓*e*P	P	22 37 48.9	+1.3
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
YKA	Yellowknife Ar	95.03	27	P	P	22 37 46.0	-2.7
YKA	Yellowknife Ar	95.03	27	P	P	22 37 45.9	-2.7
	comp=Z,0.5nm,0.6s,baz=257,slow=4.6,SNR=8.9						
YKB5	Yellowknife Ar	95.03	27	*e*P	P	22 37 45.9	-2.8
TXAR	Lajitas Array	95.98	61	P	P	22 37 53.0	-1.0
TXAR	Lajitas Array	95.98	61	P	P	22 37 53.0	-1.0
	comp=Z,0.8nm,0.9s,baz=238,slow=5.1,SNR=3.1						
KURK	Kurchatov	96.50	320	⇓*e*P	P	22 37 56.8	+1.2
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KSH	Kashi	96.59	309	P	P	22 37 59.5	+3.0
KSH				pP	pP	22 38 03.3	-2.0
KSH				pmax	pmax		
	comp=Z,460nm,4.8s						
SNAA	Sanae	97.14	184	⇓*e*P	Pdif	22 38 00.0	+1.6
ARCES	ARCESS Array B	116.26	345	PKP	PKiKP	22 43 07.1	-2.0
	comp=Z,1.1nm,0.6s,baz=80,slow=1.5,SNR=8.6						
BOSA	Boshof	125.01	223	PKP	PKPdf	22 43 26.9	-0.4
	comp=Z,1.8nm,0.8s,baz=140,slow=5.4,SNR=3.1						
AKASG	Malin Array Be	126.73	327	PKP	PKPdf	22 43 29.1	-0.6
	comp=Z,0.2nm,0.3s,baz=63,slow=2.5,SNR=3.5						
ESDC	Sonseca Array	149.97	344	PKPbc	PKPbc	22 44 15.5	-1.6
	comp=Z,0.4nm,0.5s,baz=4.1,slow=4.1,SNR=3.1						
TORD	Torodi Ar. Bea	164.07	279	PKP	PKPdf	22 44 30.2	-0.4
	comp=Z,1.0nm,1.0s,baz=54,slow=1.6,SNR=3.2						

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*ISCJB **06** 22:28:33.7±1.1, 34.°3N±0.°1×70.°1E±0.°1, h10^{km}, mb3.2/2, Error ellipse: s-maj=20.7km s-min=9.9km az=141.2*

*IDC **06** 22:28:36.5±3.8, 34.°65N×69.°70E, h0^{km}, mb3.3/2, mb1 3.4/5, mb1mx3.2/38, mbtmp3.3/5, ML3.2/3, Error ellipse: s-maj=115.8km s-min=23.6km az=132.0*

ISC 06 22:28:35.9±1.2, **34.°4N**±0.°1×**70.°2E**±0.°1, **h10^{km}, n12,** σ**1.^{s}16**/13, **Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.90	21	Pn	Pn	22 30 46.6	+1.8
	0.4nm,0.3s,baz=182,slow=11,SNR=7.4						
AAK				Sn	Sn	22 32 23.8	-1.4
	0.0nm,0.3s,baz=180,slow=20,SNR=2.8						
PYUN	Piuthan	12.60	116	*e*P	Pn	22 31 34.7	-0.7
DANN	Dangsing	13.04	114	*e*P	Pn	22 31 42.4	+0.8
DMN	Daman	14.45	114	*e*P	Pn	22 31 59.9	-0.8
	4.3nm,0.5s						
PKIN	Phulchoki	14.68	113	*e*P	Pn	22 32 03.2	-0.7
PKI	Pulchoki	14.70	113	*e*P	Pn	22 32 03.4	-0.8
	4.1nm,0.5s						
GUN	Gumba	14.88	111	*e*P	Pn	22 32 08.2	+1.5
JIRN	Jiri	15.25	112	*e*P	Pn	22 32 12.4	+0.8
	5.0nm,0.4s						
MKAR	Makanchi Array	15.41	33	Pn	P	22 32 16.5	-1.4
	0.1nm,0.3s,baz=216,slow=14,SNR=3.9						
BVAR	Borovoye Array	18.64	0	P	P	22 32 53.3	-0.3
	0.1nm,0.3s,baz=170,slow=12,SNR=2.3						
TORD	Torodi Ar. Bea	65.03	269	P	P	22 39 16.2	-0.4
	0.1nm,0.5s,baz=55,slow=5.3,SNR=3.5						
YKA	Yellowknife Ar	83.39	2	P	P	22 41 03.4	+0.5
	0.2nm,0.5s,baz=350,slow=5.1,SNR=5.2						

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*IDC **06** 22:29:10.1±3.0, 1.°77S×99.°98E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.6/30, mbtmp3.7/6, Error ellipse: s-maj=123.8km s-min=20.1km az=58.0*

*ISCJB **06** 22:29:13.0±0.8, 1.°44S±0.°08×100.°22E±0.°08, h10^{km}, Error ellipse: s-maj=13.7km s-min=9.6km az=135.6*

*DJA **06** 22:29:15.3±0.4, 2.°S±4.°×10.°0E±.°, h10^{km}, M3.9/6, MLv3.9/6*

ISC 06 22:29:13.9±0.8, **1.°48S**±0.°06×**100.°21E**±0.°07, **h10^{km}, n16,** σ**1.^{s}21**/16, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	0.61	24	P	Pg	22 29 25.8	-0.1
SISI	Saibi	1.13	277	P	Pn	22 29 36.1	+0.3
KRJI	Kerinci	1.39	116	P	Pn	22 29 39.4	-0.1
BKNI	Bangkinang	1.97	25	P	Pb	22 29 49.9	-0.1
MNSI	Mandailing Nat	2.34	344	P	Pb	22 29 56.4	+0.1
MASI	Maura Aman, Be	2.62	129	P	Pg	22 30 05.4	+1.2
LHSI	Lahat	4.05	125	P	Pg	22 30 31.3	-0.3
MDSI	Maura Dua	4.96	127	P	Pn	22 30 30.5	+1.9
PKDT	Phuket	9.49	349	P	Pn	22 31 32.7	+1.9
CMAR	Chiang Mai Arr	19.85	356	P	P	22 33 45.6	+0.4
	0.7nm,0.6s,baz=180,slow=12,SNR=3.2						
WRA	Warramunga Arr	38.08	121	P	P	22 36 31.5	-1.7
	0.7nm,0.9s,baz=305,slow=9.0,SNR=4.6						
ASAR	Alice Springs	39.39	127	P	P	22 36 41.7	-2.5
	0.4nm,0.5s,baz=302,slow=8.1,SNR=4.3						
SONM	Songino Array	49.41	5	P	P	22 38 04.0	-0.1
	0.9nm,0.9s,baz=187,slow=8.5,SNR=3.4						
MKAR	Makanchi Array	50.58	344	P	P	22 38 12.1	-0.8
	1.3nm,0.5s,baz=160,slow=8.5,SNR=15						
ZALV	Zalesovo Beam	56.70	349	P	P	22 38 57.3	-0.2
	2.2nm,0.9s,baz=173,slow=6.0,SNR=4.3						
TXAR	Lajitas Array	144.16	37	PKP	PKPab	22 48 48.5	-0.1
	0.2nm,0.5s,baz=224,slow=1.5,SNR=6.4						

IDC 06 22:29:43.7±5.2, **10.°57S**×**165.°18E, h0^{km}, mb3.5**/3, **mb1 3.8**/3, **mb1mx3.5**/23, **mbtmp3.5**/3, **Error ellipse: s-maj=274.0km s-min=33.8km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.14	249	P	P	22 36 04.3	-0.1
	0.3nm,0.6s,baz=80,slow=9.2,SNR=2.4						
ASAR	Alice Springs	32.52	242	P	P	22 36 16.7	+0.1
	0.6nm,0.6s,baz=68,slow=10,SNR=3.9						
ILAR	Eielson Array	83.24	19	P	P	22 42 11.8	0.0
	0.3nm,0.7s,baz=235,slow=6.3,SNR=4.4						

NEIC 06 22:34:07.2±0.0, **67.°32N**×**163.°23W, h23^{km}, ML2.5**(AEIC), **After AEIC., Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.74	9	*e*Pg	Pb	22 34 21.4	-0.1
RDOG				*e*Sn	Sb	22 34 29.6	-1.5
ANM	Nome	2.91	199	*e*Pn	Pn	22 34 53.5	+1.6
IM3	Indian Mountai	4.00	105	*e*Pn	Pn	22 35 06.7	-0.3
IM3				*e*Sn	Sn	22 35 54.2	+1.0
TOLK	Toolik Lake Re	5.30	69	*e*Pn	Pn	22 35 26.0	+1.1
BPAW	Bear Paw Mtn.	5.99	117	*e*Pn	Pn	22 35 35.0	+0.7
BPAW				*e*Sn	Sn	22 36 39.7	-2.4
CAST	Castle Rocks	6.08	125	*e*Pn	Pn	22 35 37.2	+1.6
CAST				*e*Sn	Sn	22 36 38.1	-6.3
PPLA	Purkeypile	6.43	128	*e*Pn	Pn	22 35 42.8	+2.4
PPLA				*e*Sn	Sn	22 36 43.1	-10
MDM	Murphy Dome	6.53	104	*e*Pn	Pn	22 35 44.3	+2.7
MDM				*e*Sn	Sn	22 36 52.0	-3.3
TRF	Thorofare Moun	6.65	120	*e*Pn	Pn	22 35 45.5	+2.0
WRH	Wood River Hil	6.82	108	*e*Pn	Pn	22 35 43.5	-2.2
WRH				*e*Sn	Sn	22 36 47.7	-15
MCK	McKinley	6.94	115	*e*Pn	Pn	22 35 41.8	-5.5
IL1	Eielson Array	7.12	103	*e*Pn	Pn	22 35 51.5	+1.7
ILB	Eielson Array	7.12	103	*e*Pn	Pn	22 35 49.1	-0.7

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*ISCJB **06** 22:36:34.7±0.8, 42.°49N±0.°03×48.°63E±0.°04, h11^{km}±4^{km}, Error ellipse: s-maj=5.7km s-min=5.0km az=143.4*

*MOS **06** 22:36:34.2±0.7, 42.°45N×48.°79E, h11^{km}, mb3.8/1, Error ellipse: s-maj=11.0km s-min=6.6km az=5.7*

*DRS **06** 22:36:35.2±0.0, 42.°47N×48.°95E, h20^{km}*

*NORS **06** 22:36:36.2±0.0, 42.°36N×48.°24E, h2^{km}, MPVA3.9*

ISC 06 22:36:34.8±1.6, **42.°44N**±0.°04×**48.°69E**±0.°05, **h7^{km}**±10^{km}, **n47,** σ**0.^{s}99**/79, **5C-5D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRN	Derbent	0.49	214	⇓*i*PG	Pb	22 36 45.8	+0.2
DRN				*e*S	Sb	22 36 53.6	+0.6
DRN	Derbent	0.49	214	*i* Pg	Pb	22 36 45.8	+0.2
DRN				*e*Sg	Sb	22 36 53.6	+0.6
URKR	Urkarakh	0.83	251	⇓*e*PG	Pb	22 36 51.5	-0.1
URKR				*e*		22 37 02.4	
URKR	Urkarakh	0.83	251	*e*Pg	Pb	22 36 51.5	-0.1
URKR				*e*Sg	Sb	22 37 03.1	0.0
MAK	Makhachkala	1.02	301	⇓*i*PG	Pn	22 36 55.5	0.0
MAK				*e*		22 37 10.5	
MAK				pmax	pmax		
	comp=Z,140nm,0.3s						
MAK				smax	smax		
	comp=E,321nm,0.6s						

MAK				smax	smax		
	comp=E,391nm,0.5s						
MAK	Makhachkala	1.02	301	ePg	Pn	22 36 55.5	0.0
MAK				eSg	Sn	22 37 10.5	+0.4
AKT	Akhty	1.20	217	ePG	Pg	22 36 57.1	-0.6
AKT				eS	Sg	22 37 12.7	-0.5
AKT	Akhty	1.20	217	ePg	Pg	22 36 57.1	-0.6
AKT				eSg	Sg	22 37 12.6	-0.6
KMKR	Kumukh	1.22	256	ePG	Pg	22 36 57.7	-0.5
KMKR				eS	Sb	22 37 14.5	+0.1
KMKR				pmax	pmax		
	comp=Z,35nm,0.2s						
KMKR	Kumukh	1.22	256	ePg	Pg	22 36 57.7	-0.5
KMKR				eSg	Sb	22 37 14.5	+0.1
BUJR	Buynaksk	1.23	289	ePG	Pb	22 36 58.3	-0.1
BUJR				eS	Sn	22 37 16.0	+0.6
BUJR	Buynaksk	1.23	289	ePg	Pb	22 36 58.3	-0.1
BUJR				eSg	Sn	22 37 16.0	+0.6
ARKR	Arakani	1.27	278	PG	Pg	22 37 00.0	+0.9
ARKR				eS	Sn	22 37 17.0	+0.7
ARKR	Arakani	1.27	278	ePg	Pg	22 37 00.0	+0.9
ARKR				eSg	Sn	22 37 17.0	+0.7
GNBR	Gunib	1.28	268	⇑iPG	Pn	22 36 59.1	-0.1
GNBR				iS	Sn	22 37 16.2	-0.4
GNBR				pmax	pmax		
	comp=Z,60nm,0.1s						
GNBR	Gunib	1.28	268	iPg	Pn	22 36 59.1	-0.1
GNBR				iSg	Sn	22 37 16.2	-0.4
KRNR	Karanay	1.38	287	ePG	Pg	22 37 01.0	-0.1
KRNR				eS	Sn	22 37 19.0	0.0
KRNR				pmax	pmax		
	comp=Z,24nm,0.3s						
KRNR	Karanay	1.38	287	ePg	Pg	22 37 01.0	-0.1
KRNR				eSg	Sn	22 37 19.0	0.0
UNCR	Uncukul	1.43	282	PG	Pn	22 37 01.0	-0.2
UNCR				eS	Sn	22 37 20.0	-0.3
UNCR				pmax	pmax		
	comp=Z,34nm,0.4s						
UNCR	Uncukul	1.43	282	ePg	Pn	22 37 01.0	-0.2
UNCR				eSg	Sn	22 37 20.0	-0.3
XNZR	Khunzakh	1.47	275	ePg	Pg	22 37 03.9	+0.8
XNZR				eSg	Sg	22 37 22.7	+0.5
DBC	Dubki	1.49	294	ePG	Pn	22 37 01.6	-0.5
DBC				eS	Sn	22 37 21.3	-0.6
DBC	Dubki	1.49	294	ePg	Pn	22 37 01.6	-0.5
DBC				eSg	Sn	22 37 21.3	-0.6
BTLR	Botlikh	1.84	278	⇓ePN	Pb	22 37 08.1	-0.7
BTLR				pmax	pmax		
	comp=Z,18nm,0.6s						
BTLR	Botlikh	1.84	278	ePg	Pb	22 37 08.0	-0.7
BTLR				eSg	Sb	22 37 31.2	-0.8
LGD	Lagodekhi	1.92	253	P	Pb	22 37 09.1	-1.0
LGD				S	Sg	22 37 35.6	-0.8
LGD	Lagodekhi	1.92	253	ePN	Pb	22 37 09.1	-1.0
LGD	Lagodekhi	1.92	253	ePg	Pb	22 37 09.1	-1.0
LGD				eSg	Sg	22 37 35.6	-0.8
DVE	Vedeno	1.96	286	ePN	Pb	22 37 09.9	-1.0
DVE	Vedeno	1.96	286	ePg	Pb	22 37 09.9	-1.0
DVE				eSg	Sb	22 37 35.2	-0.3
GROC	Groznyy	2.27	291	⇑ePN	Pb	22 37 14.3	-1.7
GROC	Groznyy	2.27	291	ePn	Pb	22 37 16.2	+0.2
GROC				eSn	Sb	22 37 45.4	+1.2
KZRT	Kazreti	3.37	253	P	Sg	22 38 25.8	+2.8
TRLG	Trialeti	3.54	257	P	Pn	22 37 31.0	+0.7
TRLG				S	Sn	22 38 12.2	-0.3
ZEI	Tsey	3.55	277	ePN	Pn	22 37 31.0	+0.4
ZEI				eS	Sn	22 38 16.1	+3.2
ZEI				pmax	pmax		
	comp=Z,5µm,0.3s						
ZEI				pmax	pmax		
	comp=Z,15nm,0.6s						
ZEI	Tsey	3.55	277	ePn	Pn	22 37 32.0	+1.4
ZEI				eSn	Sn	22 38 11.2	-1.8
DIGR	Digorskoe uzhe	3.80	279	cePN	Pn	22 37 35.9	+2.0
DIGR	Digorskoe uzhe	3.80	279	ePn	Pn	22 37 35.9	+2.0
PYA1	Pyatigorsk	4.40	294	⇑ePN	Pn	22 37 42.9	+0.9
PYA1	Pyatigorsk	4.40	294	ePn	Pn	22 37 42.8	+0.8
SHA1	Shidzhatmaz	4.61	288	ePn	Pn	22 37 45.1	0.0
SHA1				eSn	Sn	22 38 36.2	-2.7
KIV	Kislovodsk	4.65	291	ePN	Pn	22 37 44.6	-0.9
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV	Kislovodsk	4.65	291	ePn	Pn	22 37 44.8	-0.7
KIV				eSn	Sn	22 38 37.4	-2.3
ANN	Anapa	8.50	290	eP	Pn	22 38 36.5	-1.8
ANN				eS	Sn	22 40 13.5	-1.0
ANN				pmax	pmax		
	comp=Z,42nm,1.1s						
OBN	Obninsk	14.96	332	eP	Pn	22 40 07.6	+1.1
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	17.92	46	⇓eP	Pn	22 40 44.6	+0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURK	Kurchatov	22.06	58	⇑eP	P	22 41 29.7	-0.3

IDC 06 22:37:03.2±10.0**, 11°.08S**×**164°.51E, h0^{km}, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.5**/23**, mbtmp3.6**/3**, Error ellipse: s-maj=338.6km s-min=49.9km az=124.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.33	249	P	P	22 43 17.4	+0.6
	0.3nm,0.8s,baz=77,slow=8.2,SNR=2.5						
ASAR	Alice Springs	31.69	243	P	P	22 43 28.1	-0.7
	0.3nm,0.5s,baz=72,slow=8.9,SNR=3.8						
MKAR	Makanchi Array	92.72	317	P	P	22 50 17.4	0.0
	0.8nm,0.6s,baz=92,slow=6.5,SNR=11						

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*ISK **06** 22:45:20.9, 43°.41N×28°.68E, h6^{km}, ML3.3/26*
*ISCJB **06** 22:45:21.6±0.5, 43°.40N±0°.01×28°.75E±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=1.9km az=157.5*
*SOF **06** 22:45:22.6, 43°.44N×28°.64E, h11^{km}*
*BUC **06** 22:45:23.5±0.9, 43°.53N×28°.69E, h8^{km}±3^{km}, MD3.8/9, Error ellipse: s-maj=7.8km s-min=5.7km az=128.0*
*DDA **06** 22:45:25.9, 42°.97N×29°.02E, h7^{km}±4^{km}, ML3.4*
ISC 06 22:45:21.7±1.2**, 43°.40N**±0°.02×**28°.72E**±0°.03**, h7^{km}**±9^{km}**, n153, σ1^{s}.02**/181**, 72C-16D, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANR	Mangalia	0.42	347	⇑iP	Pg	22 45 30.7	+0.7
MANR	Mangalia	0.42	347	⇑iP	Pg	22 45 30.7	+0.7
MANR				iS	Sg	22 45 35.6	+0.1
PSN	Preselentsi	0.48	306	iP	Pg	22 45 31.4	+0.4
PSN	Preselentsi	0.48	306	iP	Pg	22 45 31.2	+0.2
EFOR	EFORIE	0.68	355	⇑iP	Pb	22 45 35.4	-0.5
EFOR	EFORIE	0.68	355	⇑iP	Pb	22 45 35.4	-0.5
EFOR				iS	Sg	22 45 44.1	+0.5
MFTR	Murfatlar	0.80	345	⇑iP	Pg	22 45 37.5	+0.3
MFTR	Murfatlar	0.80	345	⇑iP	Pg	22 45 37.5	+0.3
MFTR				iS	Sg	22 45 47.5	-0.1
ICOR	Ion Corvin	0.97	317	⇑iP	Pg	22 45 40.6	+0.2
ICOR	Ion Corvin	0.97	317	⇑iP	Pg	22 45 40.6	+0.2
ICOR				iS	Sg	22 45 52.7	-0.4
PRD	Provadia	0.98	258	P	Pg	22 45 40.6	0.0
PRD	Provadia	0.98	258	iP	Pg	22 45 40.6	0.0
ROIA	ROIAK	1.03	253	P	Pb	22 45 41.7	-0.1
ROIA	ROIAK	1.03	253	iP	Pb	22 45 41.6	-0.2
CVDA	Cernavoda	1.05	332	⇑iP	Pg	22 45 41.6	-0.3
CVDA	Cernavoda	1.05	332	⇑iP	Pg	22 45 41.6	-0.3
CVDA				iS	Sg	22 45 54.8	-0.8
TIRR	Tirgusor	1.08	348	⇑iP	Pg	22 45 42.2	-0.2
TIRR	Tirgusor	1.08	348	⇑iP	Pg	22 45 42.2	-0.2
TIRR				iS	Sg	22 45 55.6	-0.8
TLB	Topalu	1.28	338	⇑iP	Pn	22 45 45.6	-0.4
TLB	Topalu	1.28	338	⇑iP	Pn	22 45 45.6	-0.4
TLB				iS	Sb	22 46 01.6	-1.1
RASA	Rasa	1.39	306	⇓iP	Pn	22 45 47.6	0.0
RASA	Rasa	1.39	306	⇓iP	Pn	22 45 47.6	0.0
RASA				iS	Sb	22 46 05.5	-0.5
HARR	Harsova	1.41	337	⇑iP	Pn	22 45 47.6	-0.1
HARR	Harsova	1.41	337	⇑iP	Pn	22 45 47.6	-0.1
AMRR	Amara	1.56	321	⇑iP	Pn	22 45 50.2	+0.3
AMRR	Amara	1.56	321	⇑iP	Pn	22 45 50.2	+0.3
AMRR				iS	Sn	22 46 10.7	+0.3
LEHL	Lehliu	1.74	309	⇑iP	Pb	22 45 53.5	-0.4
LEHL	Lehliu	1.74	309	⇑iP	Pb	22 45 53.5	-0.4
LEHL				iS	Sb	22 46 16.3	+0.3
TLCR		1.78	2	⇑iP	Pb	22 45 53.9	-0.8
TLCR		1.78	2	⇑iP	Pb	22 45 53.9	-0.8
TLCR				iS	Sb	22 46 17.1	-0.2
CFR	Carcaliu	1.82	347	⇑iP	Pn	22 45 53.0	-0.5
CFR	Carcaliu	1.82	347	⇑iP	Pn	22 45 53.0	-0.5
CFR				iS	Sn	22 46 16.5	-0.3
JMB	Yambol	1.82	240	iP	Pn	22 45 53.8	+0.3
JMB	Yambol	1.82	240	iP	Pn	22 45 53.8	+0.3
KIYI	Yalıkoy-Catalc	1.94	189	PN	Pn	22 45 55.1	0.0
KIYI				SN	Sn	22 46 20.1	+0.4
CTYL	Yalikoy Yolu	1.95	189	PN	Pn	22 45 55.6	+0.4
PGOR	Pogoanele	1.95	321	⇑iP	Pb	22 45 56.5	-1.1
PGOR	Pogoanele	1.95	321	⇑iP	Pb	22 45 56.5	-1.1
PGOR				iS	Sb	22 46 22.0	-0.1
PHSR	Pinarhisar	1.98	207	PN	Pn	22 45 56.1	+0.5
SZH	Strazhica	2.04	267	P	Pn	22 45 56.2	-0.2
SZH	Strazhica	2.04	267	iP	Pn	22 45 56.5	+0.1
GIUM	Giurgiulesti	2.11	350	⇓iP	Pn	22 45 58.7	+1.3
GIUM	Giurgiulesti	2.11	350	⇓iP	Pn	22 45 58.7	+1.3
GIUM				iS	Sb	22 46 25.7	-1.0
INCR	INCERC-Sediu C	2.12	300	⇑iP	Pn	22 45 58.1	+0.6
INCR	INCERC-Sediu C	2.12	300	⇑iP	Pn	22 45 58.1	+0.6
EDRB	Edirne	2.13	224	PN	Pn	22 45 58.3	+0.6
SGRR	Singureni	2.15	293	⇑iP	Pb	22 46 00.2	-0.7
SGRR	Singureni	2.15	293	⇑iP	Pb	22 46 00.2	-0.7
SGRR				iS	Sb	22 46 27.5	-0.2
BUC1	Bucharest	2.16	297	⇑iP	Pb	22 46 00.1	-1.0
BUC1	Bucharest	2.16	297	⇑iP	Pb	22 46 00.1	-1.0
BUC1				iS	Sb	22 46 28.0	-0.1
KLYT	Kilyos	2.16	173	PN	Pn	22 45 58.7	+0.6
CTKS	Kestanelik-??a	2.17	184	PN	Pn	22 45 58.3	+0.1
SULR		2.19	307	⇑iP	Pb	22 46 00.9	-0.7
SULR		2.19	307	⇑iP	Pb	22 46 00.9	-0.7
SLVT	Silivri	2.20	190	PN	Pn	22 45 59.4	+0.7
BGKT	Bogazkoy	2.22	179	PN	Pn	22 45 59.0	+0.1
ELBA	Catalca	2.27	185	iP	Pg	22 46 16.3	+11
ISR	Istrita	2.32	318	⇑iP	Pn	22 46 02.0	+1.6
ISR	Istrita	2.32	318	⇑iP	Pn	22 46 02.0	+1.6
KAVV	Kandilli-Istan	2.35	174	PN	Pn	22 46 00.7	0.0
SILT	Sile	2.35	163	PN	Pn	22 46 00.8	+0.1
CRLT	Corlu	2.39	198	PN	Pn	22 46 01.9	+0.7
ZIMR		2.45	277	⇑iP	Pb	22 46 05.8	-0.3
ZIMR		2.45	277	⇑iP	Pb	22 46 05.8	-0.3
ZIMR				iS	Sb	22 46 35.3	-1.1
PLAR	PLOIESTI	2.46	309	⇑iP	Pn	22 46 02.2	+0.1
PLAR	PLOIESTI	2.46	309	⇑iP	Pn	22 46 02.2	+0.1
PLAR				iS	Sn	22 46 33.8	+1.4
PVL	Pavlikeni	2.48	267	P	Pn	22 46 04.1	+1.7
SECR		2.51	312	⇓iP	Pn	22 46 04.4	+1.5
SECR		2.51	312	⇓iP	Pn	22 46 04.4	+1.5
PETR	Petresti	2.55	336	⇑iP	Pn	22 46 04.7	+1.2
PETR	Petresti	2.55	336	⇑iP	Pn	22 46 04.7	+1.2
KAND	Kocaeli-Kandir	2.56	154	iP	Pn	22 46 04.1	+0.6
KAND				iS	Sn	22 46 35.1	+0.3
ODBI	Odobesti	2.64	334	⇑iP	Pn	22 46 06.6	+1.9
ODBI	Odobesti	2.64	334	⇑iP	Pn	22 46 06.6	+1.9
DIM	Dimitrovgrad	2.71	241	P	Pn	22 46 05.1	-0.5
SBT5	Esenkoy-Cinarc	2.77	177	PN	Pn	22 46 07.2	+0.7
VRI	Vrincioaia	2.84	331	PN	Pn	22 46 07.8	+0.3
VRI	Vrincioaia	2.84	331	⇑iP	Pn	22 46 08.3	+0.8
VRI	Vrincioaia	2.84	331	⇑iP	Pn	22 46 08.3	+0.8
VRI				iS	Sn	22 46 42.2	+0.2
PLOR	Plostina	2.86	330	⇑iP	Pn	22 46 08.3	+0.6
PLOR	Plostina	2.86	330	⇑iP	Pn	22 46 08.3	+0.6
YLV	Yalova	2.88	170	PN	Pn	22 46 08.7	+0.7
MLR	Muntele Rosu	2.88	317	⇑iP	Pn	22 46 10.4	+2.3
MLR	Muntele Rosu	2.88	317	⇑iP	Pn	22 46 10.4	+2.3
MLR				iS	Sn	22 46 44.5	+1.4
SAUV	Serdivan-Sakar	2.92	155	PN	Pn	22 46 08.9	+0.4
MRMT	Marmara Adasi	2.92	197	PN	Pn	22 46 08.5	-0.1
HUMR	Humele	2.92	294	⇑iP	Pn	22 46 10.7	+2.1
HUMR	Humele	2.92	294	⇑iP	Pn	22 46 10.7	+2.1
RKY	Sarkoy-Tekirda	2.95	203	PN	Pn	22 46 09.7	+0.7
BIR	Birlad	2.97	345	⇑iP	Pn	22 46 10.4	+1.2
BIR	Birlad	2.97	345	⇑iP	Pn	22 46 10.4	+1.2
BIR				iS	Sn	22 46 46.0	+1.0
KDZ	Kurdzhali	3.00	235	PN	Pn	22 46 11.1	+1.4
SAHE	Sakarya_HENDEK	3.00	147	iP	Pn	22 46 10.8	+1.1
SAHE				IAML_P			
	comp=Z,222nm,0.2s						
MDNY	Mudanya-Bursa	3.04	178	PN	Pn	22 46 10.9	+0.8
EDC	Edincik	3.12	192	PN	Pn	22 46 11.8	+0.5
GEYV	SAKARYA_Geyve	3.15	157	iP	Pn	22 46 13.6	+1.9
BTIN	Bartın	3.15	123	iP	Pn	22 46 12.2	+0.5
BTIN				iS	Sn	22 46 49.0	-0.6
YIGI	Dzce	3.17	139	iP	Pn	22 46 12.3	+0.2
YIGI				iS	Sn	22 46 48.9	-1.2
VLAD	Vladila	3.18	282	⇑iP	Pn	22 46 12.8	+0.6
VLAD	Vladila	3.18	282	⇑iP	Pn	22 46 12.8	+0.6
ERIK	Erikli-Kesan	3.19	212	PN	Pn	22 46 12.3	+0.1
KRBG	Karabiga-Canak	3.19	200	PN	Pn	22 46 12.1	-0.1
ALN	Alexandroupoli	3.20	219	PN	Pn	22 46 12.2	-0.1
PLD	Plovdiv	3.23	248	PN	Pn	22 46 12.2	-0.6
PLD	Plovdiv	3.23	248	P	Pn	22 46 12.0	-0.8
GULT	Gulveren	3.26	155	PN	Pn	22 46 14.5	+1.2
RDO	Rodhopi	3.26	227	PN	Pn	22 46 13.2	-0.1
ENEZ	Enez	3.28	216	PN	Pn	22 46 13.9	+0.4
BTAS	Taskesti	3.30	148	iP	Pn	22 46 16.3	+2.5
BTAS				IAML_P			
	comp=Z,374nm,0.2s						
VOIR		3.32	309	⇑iP	Pn	22 46 16.8	+2.6
VOIR		3.32	309	⇑iP	Pn	22 46 16.8	+2.6
KURC	Kurucasile-Bar	3.35	116	PN	Pn	22 46 15.5	+1.0
OZUR		3.41	323	⇑iP	Pn	22 46 16.2	+0.9
OZUR		3.41	323	⇑iP	Pn	22 46 16.2	+0.9
OZUR				iS	Sn	22 46 56.2	+0.3
RZN	Rozhen	3.42	241	iP	Pn	22 46 15.2	-0.4
RZN	Rozhen	3.42	241	iP	Pn	22 46 15.2	-0.4
GELI	Tayfur-Gelibol	3.44	210	PN	Pn	22 46 15.9	+0.2
PGB	Panagyurishte	3.44	257	P	Pn	22 46 15.7	-0.1
PGB	Panagyurishte	3.44	257	iP	Pn	22 46 16.1	+0.3
MDUB	Mudurnu	3.47	147	PN	Pn	22 46 17.1	+0.9
DOPR	Dopca	3.49	318	⇑iP	Pn	22 46 18.0	+1.5
DOPR	Dopca	3.49	318	⇑iP	Pn	22 46 18.0	+1.5
MILM	Milestii Mici	3.52	1	⇑iP	Pn	22 46 17.3	+0.6
MILM	Milestii Mici	3.52	1	⇑iP	Pn	22 46 17.3	+0.6
ARR	Arges	3.52	305	⇓iP	Pn	22 46 18.9	+2.0
ARR	Arges	3.52	305	⇓iP	Pn	22 46 18.9	+2.0
BCAM	Yenicaga	3.59	135	iP	Pn	22 46 19.2	+1.3
BCAM				IAML_P			
	comp=Z,280nm,0.1s						
KBUK	KARABUK-Merkez	3.62	125	iP	Pn	22 46 18.7	+0.5
BORA	Eskisehir	3.75	159	PN	Pn	22 46 21.0	+0.9
BORA	Eskisehir	3.75	159	iP	Pn	22 46 21.9	+1.8
BORA				iS	Sn	22 47 05.0	+0.4
BORA				IAML_P			
	comp=Z,328nm,0.1s						
KIBS	BOLU	3.79	141	iP	Pn	22 46 22.1	+1.5
KIBS				IAML_P			
	comp=Z,360nm,0.2s						
DURS	Dursunbey	3.80	183	iP	Pn	22 46 21.6	+0.8
GIRR	Girov	3.88	337	⇑iP	Pn	22 46 21.9	+0.1
GIRR	Girov	3.88	337	⇑iP	Pn	22 46 21.9	+0.1
BIZ	Bicaz	3.99	333	⇓iP	Pn	22 46 23.8	+0.5
BIZ	Bicaz	3.99	333	⇓iP	Pn	22 46 23.8	+0.5
BIZ				iS	Sn	22 47 09.9	-0.3
LOT	Lotru	4.09	302	PN	Pn	22 46 25.2	+0.4
LOT	Lotru	4.09	302	⇑iP	Pn	22 46 27.6	+2.8
LOT	Lotru	4.09	302	⇑iP	Pn	22 46 27.6	+2.8
VTS	Vitosha	4.09	261	P	Pn	22 46 25.3	+0.4
AUMIH	MIHALICIK	4.10	149	iP	Pn	22 46 26.4	+1.6
MMB	Musomiste	4.11	246	P	Pn	22 46 25.3	+0.3
PUNG	Punghina	4.27	284	⇓iP	Pn	22 46 29.7	+2.5
PUNG	Punghina	4.27	284	⇓iP	Pn	22 46 29.7	+2.5
KKB	Krupnik	4.43	252	P	Pn	22 46 29.4	+0.1
GZR	Gura Zlata	4.70	297	⇓iP	Pn	22 46 33.6	+0.5
GZR	Gura Zlata	4.70	297	⇓iP	Pn	22 46 33.6	+0.5
GZR				iS	Sn	22 47 26.5	-1.3
HERR	Herculane	4.77	290	⇓iP	Pn	22 46 35.5	+1.5
HERR	Herculane	4.77	290	⇓iP	Pn	22 46 35.5	+1.5
BURAR	Bucovina Array	4.88	331	⇑iP	Pn	22 46 36.8	+1.3
BURAR	Bucovina Array	4.88	331	⇑iP	Pn	22 46 36.8	+1.3
DRGR		5.43	311	⇑iP	Pn	22 46 44.3	+1.1
DRGR		5.43	311	⇑iP	Pn	22 46 44.3	+1.1

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*ISCJB **06** 22:46:47.9±0.4, 5°.30S±0°.06×68°.58E±0°.07, h13^{km}, mb4.0/23, MS4.3/1, Error ellipse: s-maj=9.7km s-min=9.2km az=9.3*
*IDC **06** 22:46:48.4±0.8, 5°.32S×68°.60E, h0^{km}, mb3.8/13, mb1 4.0/13, mb1mx3.8/47, mbtmp3.8/13, MS4.3/1, Ms1 4.3/1, ms1mx3.3/58, Error ellipse: s-maj=23.0km s-min=19.4km az=36.0*
*NEIC **06** 22:46:49.7±0.3, 5°.32S×68°.61E, h10^{km}, mb4.1/13, Error ellipse: s-maj=7.5km s-min=7.0km az=105.0*
ISC 06 22:46:49.7±0.5**, 5°.37S**±0°.09×**68°.67E**±0°.08**, h13^{km}, n51, σ1^{s}.39**/44**, mb4.0**/23**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	2.50	112	T	T	22 50 10.0	
	baz=291,slow=74,SNR=290						
H08N3	Diego Garcia H	2.50	113	T	T	22 50 09.4	
	baz=291,slow=74,SNR=272						
H08N1	Diego Carcia H	2.52	113	T	T	22 50 11.0	
	baz=291,slow=74,SNR=294						
DGAR	Diego Garcia	4.27	119	ePn	Pn	22 47 54.8	+0.4
DGAR				eSn	Sn	22 48 41.6	-2.6
PALK	Pallekele	17.37	44	ePn	Pn	22 50 48.7	-3.4
	8.8nm,1.0s						
MRIV	Mauritius Mete	18.39	215	eP	Pn	22 51 04.8	+0.2
	1.9nm,1.1s						
RER	Riviere de l'E	20.09	217	eP	P	22 51 22.7	-0.5
	13nm,1.0s						
ATD	Arta Tunnel	30.69	303	eP	P	22 53 01.1	-3.5
	17nm,0.9s						
CM01	Chiang Mai Arr	38.09	51	eP	P	22 54 09.5	+1.0
CM31	Chiang Mai Arr	38.10	51	eP	P	22 54 09.3	+0.7
	3.3nm,0.9s						
CMAR	Chiang Mai Arr	38.10	51	P	P	22 54 10.0	+1.4
	0.5nm,0.3s,baz=245,slow=8.6,SNR=6.6						
CHTO	Chiang Mai	38.31	50	eP	P	22 54 12.1	+1.7
	1.8nm,0.9s						
LEM	Lembang	38.75	94	LR	LR	23 08 53.4	
	comp=Z,375nm,18.1s,baz=168,slow=34						
KBL	Kabul	39.70	0	eP	P	22 54 22.5	+0.5
	2.6nm,1.1s						
BOSA	Boshof	47.14	236	P	P	22 55 21.9	-0.3
	2.2nm,0.8s,baz=23,slow=7.7,SNR=4.0						
H01W3	Cape Leeuwin H	51.17	131	T	T	23 51 02.1	
	baz=295						
H01W2	Cape Leeuwin H	51.17	131	T	T	23 51 02.5	
	baz=295						
H01W1	Cape Leeuwin H	51.19	131	T	T	23 50 58.9	
	baz=295						
MK31	Makanchi Array	53.32	12	eP	P	22 56 07.6	-0.9
	0.8nm,0.9s						
MK32	Makanchi Array	53.32	12	eP	P	22 56 08.2	-0.3
MKAR	Makanchi Array	53.32	12	P	P	22 56 08.2	-0.3
	0.4nm,0.6s,baz=204,slow=7.3,SNR=5.1						
KBZ	Khabaz	54.13	337	P	P	22 56 14.9	+0.5
	2.7nm,0.9s,baz=164,slow=9.1,SNR=5.3						
ABKAR	Akbulak array	54.93	353	eP	P	22 56 18.1	-2.0
	2.0nm,1.1s						
BR101	Keskin Array S	55.28	327	eP	P	22 56 23.6	+0.5
BRTR	Keskin Array B	55.28	327	P	P	22 56 23.6	+0.5
	0.4nm,0.6s,baz=127,slow=8.2,SNR=3.6						
KURBB	Kurchatov Arra	56.41	8	P	P	22 56 30.6	-0.2
	2.0nm,1.2s,baz=203,slow=7.2,SNR=4.9						
KURK	Kurchatov	56.52	8	P	P	22 56 30.6	-0.9
BVAR	Borovoye Array	58.19	1	P	P	22 56 44.1	+0.8
	0.4nm,0.7s,baz=196,slow=10,SNR=3.9						
ZAA0	Zalesovo Array	60.64	11	eP	P	22 56 59.4	-0.8
	2.3nm,0.7s						
ZALV	Zalesovo Beam	60.64	11	P	P	22 56 59.9	-0.3
	1.4nm,0.7s,baz=202,slow=7.6,SNR=7.8						
ZAA1	Zalesovo Array	60.64	11	eP	P	22 56 59.9	-0.3
SONA0	Songino Array	62.49	28	eP	P	22 57 13.9	+0.9
SONM	Songino Array	62.49	28	P	P	22 57 13.9	+0.9
	1.1nm,0.9s,baz=221,slow=6.4,SNR=8.6						
SONA1	Songino Array	62.50	28	eP	P	22 57 12.7	-0.5
ASAR	Alice Springs	65.19	113	P	P	22 57 32.4	+1.1
	0.9nm,0.7s,baz=277,slow=6.2,SNR=9.2						
AS31	Alice Springs	65.19	113	eP	P	22 57 32.4	+1.1
	0.7nm,0.3s						
WRA	Warramunga Arr	65.33	109	P	P	22 57 33.6	+1.5
	2.8nm,0.8s,baz=282,slow=6.3,SNR=17						
WR1	Warramunga Arr	65.33	109	eP	P	22 57 33.6	+1.5
	4.9nm,1.0s						
WB2	Warramunga Arr	65.34	109	eP	P	22 57 33.2	+1.0
AKASG	Malin Array Be	65.34	334	P	P	22 57 31.1	-0.5
	0.2nm,0.3s,baz=132,slow=5.7,SNR=5.8						
AKBB	Malin Array Si	65.34	334	eP	P	22 57 31.1	-0.5
	2.0nm,1.0s						
TORD	Torodi Ar. Bea	69.00	286	P	P	22 57 56.6	+1.0
	0.7nm,1.1s,baz=91,slow=6.1,SNR=3.2						
TOA1	Torodi Ar. Sit	69.01	286	eP	P	22 57 56.6	+1.0
YKA	Yellowknife Ar	122.95	2	PKP	PKiKP	23 05 45.6	0.0
	0.1nm,0.5s,baz=356,slow=1.9,SNR=3.8						
YKA				PP	PP	23 07 28.1	+4.6
	0.4nm,1.0s,baz=352,slow=6.1,SNR=3.9						
YKB5	Yellowknife Ar	122.95	2	ePKPdf	PKiKP	23 05 45.6	0.0
PD31	Pinedale Array	142.73	358	ePKPdf	PKPdf	23 06 23.8	+0.3
PDAR	Pinedale Array	142.73	358	PKP	PKPdf	23 06 23.8	+0.3
	0.2nm,0.5s,baz=29,slow=1.8,SNR=2.8						
NV01	Mina Array Sit	146.49	10	ePKPdf	PKPab	23 06 32.4	+0.1
NVAR	Mina Array Bea	146.49	10	PKPbc	PKPab	23 06 32.7	+0.4
	1.0nm,0.8s,baz=356,slow=2.6,SNR=8.5						
LTX	Lajitas	155.09	344	ePKPbc	PKPdf	23 06 53.5	+10
TXAR	Lajitas Array	155.09	344	PKPbc	PKPdf	23 06 53.5	+10
	0.3nm,0.8s,baz=48,slow=1.3,SNR=3.4						

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*ISCJB **06** 22:47:59.0±0.5, 36°.45N±0°.03×29°.04E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=4.8km s-min=3.8km az=170.8*
*DDA **06** 22:47:58.7, 36°.50N×29°.04E, h15^{km}±1^{km}, ML3.1*
*THE **06** 22:47:58.9, 36°.47N×29°.05E, h2^{km}±3^{km}, ML2.4/3, Error ellipse: s-maj=3.2km s-min=1.2km az=76.0*
*ATH **06** 22:47:58.8, 36°.43N×29°.06E, h23^{km}±1^{km}, ML2.4/2, Error ellipse: s-maj=2.7km s-min=0.8km az=185.0*
*ISK **06** 22:47:58.1, 36°.47N×29°.03E, h3^{km}, ML3.0/21*
ISC 06 22:47:59.1±0.9**, 36°.47N**±0°.03×**29°.05E**±0°.02**, h10^{km}**±7^{km}**, n53, σ0^{s}.66**/67**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.17	10	PG	Pg	22 48 02.4	-0.5
FETY				SG	Sg	22 48 05.7	+0.3
FETY	Fethiye	0.17	10	P	Pg	22 48 02.4	-0.5
FETY				S	Sg	22 48 05.7	+0.3
FETY	Fethiye	0.17	10	iP	Pg	22 48 02.8	0.0
FETY				iS	Sg	22 48 06.3	+0.8
FETY				IAML_P			
	comp=Z,55µm,0.1s						
DALY	Dalyan (Mula)	0.47	318	PG	Pg	22 48 07.4	-0.9
DALY	Dalyan (Mula)	0.47	318	iP	Pg	22 48 07.8	-0.6
AKAS	Kas	0.51	118	PG	Pg	22 48 09.0	-0.1
AKAS	Kas	0.51	118	iP	Pb	22 48 09.8	-0.4
AKAS				IAML_P			
	comp=Z,18µm,0.2s						
KSL	Kastellorizon	0.54	126	P	Pg	22 48 09.3	-0.3
KSL				S	Sg	22 48 16.8	+0.1
KSL				AML	AML	22 48 20.2	
	comp=N,503µm,0.4s						
KSL				AML	AML	22 48 22.5	
	comp=E,780µm,0.3s						
KSL	Kastellorizon	0.54	126	P	Pg	22 48 09.3	-0.3
KSL				S	Sb	22 48 18.7	+0.3
TURN	Turunc	0.54	318	PG	Pn	22 48 11.9	-0.9
TURN	Turunc	0.54	318	iP	Pn	22 48 12.9	+0.1
TURN				IAML_P			
	comp=Z,3µm,0.1s						
ELL	Elmali	0.75	68	PG	Pg	22 48 13.0	-0.6
ARG	Arkhangelos	0.79	251	PG	Pg	22 48 14.2	-0.1
ARG	Arkhangelos	0.79	251	P	Pb	22 48 14.3	-0.6
ARG				S	Sb	22 48 25.1	-0.5
ARG				AML	AML	22 48 28.0	
	comp=N,819µm,0.5s						
ARG				AML	AML	22 48 30.5	
	comp=E,822µm,0.3s						
ARG	Arkhangelos	0.79	251	P	Pb	22 48 14.3	-0.6
ARG				S	Sb	22 48 26.2	+0.6
BBRN	Bozburun-Marma	0.82	285	PG	Pg	22 48 14.9	-0.1
TAVA	DENIZLI_Tavas	1.00	354	iP	Pg	22 48 17.7	-0.7
TAVA				iS	Sb	22 48 31.7	-0.1
TAVA				IAML_P			
	comp=Z,2µm,0.2s						
DATC	Datca-Mugla	1.15	285	PN	Pn	22 48 20.9	-0.4
KORT	Korkueli	1.17	63	PN	Pg	22 48 21.8	+0.1
KORT	Korkueli	1.17	63	iP	Pg	22 48 22.1	+0.4
KORT				IAML_P			
	comp=Z,2µm,0.4s						

DAT	**Datca**	**1.21**	**283**	PN	**Pn**	**22 48 21.5**	**-0.7**
DAT	**Datca**	**1.21**	**283**	*i* P	**Pg**	**22 48 23.2**	**+0.7**
DAT				IAML_P			
	comp=Z,1µm,0.2s						
DENT	**Denizli**	**1.28**	**359**	PN	**Pg**	**22 48 23.4**	**-0.4**
MLSB	**Milas**	**1.31**	**309**	PN	**Pb**	**22 48 23.7**	**-0.2**
ANTB	**Antalya**	**1.36**	**71**	PN	**Pg**	**22 48 24.9**	**-0.4**
BDRM	**Kayabasi**	**1.42**	**295**	*i* P	**Pg**	**22 48 26.3**	**-0.1**
BDRM				*i* S	**Sg**	**22 48 45.8**	**+1.0**
BRDR	**BURDUR-Merkez**	**1.47**	**33**	*i* P	**Pb**	**22 48 26.5**	**-0.1**
AYDN	**Tasoluk**	**1.51**	**322**	*i* P	**Pb**	**22 48 27.3**	**0.0**
BODT	**Bodrum**	**1.52**	**293**	PN	**Pb**	**22 48 26.8**	**-0.5**
BODT	**Bodrum**	**1.52**	**293**	P	**Pb**	**22 48 26.6**	**-0.7**
BODT				S	**Sn**	**22 48 45.2**	**-0.9**
YKAV	**Yalikavak-Bodr**	**1.56**	**295**	PN	**Pb**	**22 48 27.7**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.74**	**328**	PN	**Pn**	**22 48 29.9**	**+0.4**
KARP	**Karpathos**	**1.79**	**240**	PN	**Pn**	**22 48 29.9**	**-0.1**
KARP	**Karpathos**	**1.79**	**240**	P	**Pn**	**22 48 30.4**	**+0.3**
KARP				S	**Sb**	**22 48 53.1**	**-1.3**
KARP	**Karpathos**	**1.79**	**240**	P	**Pn**	**22 48 30.3**	**+0.3**
KARP				S	**Sn**	**22 48 53.0**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.86**	**57**	PN	**Pb**	**22 48 32.2**	**-1.0**
GCAM	**G?zelcaml?**	**1.90**	**311**	PN	**Pn**	**22 48 32.2**	**+0.6**
GCAM	**G?zelcaml?**	**1.90**	**311**	*i* P	**Pb**	**22 48 33.4**	**-0.5**
GCAM				*i* S	**Sb**	**22 48 58.2**	**+0.5**
KHAL	**Karahalli**	**1.93**	**10**	*i* P	**Pb**	**22 48 33.6**	**-0.9**
KHAL				IAML_P			
	comp=Z,189nm,0.1s						
KZIL	**AFYON_Kizioren**	**1.98**	**26**	*i* P	**Pb**	**22 48 34.8**	**-0.6**
KZIL				IAML_P			
	comp=Z,1µm,0.3s						
KULA	**Kula-Manisa**	**2.06**	**352**	PN	**Pn**	**22 48 34.5**	**+0.6**
KEPZ	**Antalya-Kepez**	**2.10**	**77**	*i* P	**Pb**	**22 48 37.6**	**+0.3**
KEPZ				*i* S	**Sg**	**22 49 06.8**	**+0.2**
KEPZ				IAML_P			
	comp=Z,565nm,0.3s						
SMG	**Samos**	**2.16**	**306**	P	**Pn**	**22 48 35.8**	**+0.7**
DGB	**zmir**	**2.34**	**313**	*i* P	**Pn**	**22 48 38.9**	**+1.3**
SHUT	**Suhut-Afyon**	**2.40**	**29**	PN	**Pn**	**22 48 38.9**	**+0.3**
BLCB	**Balcova**	**2.49**	**321**	PN	**Pn**	**22 48 40.5**	**+0.8**
DEMI	**Demirci**	**2.58**	**354**	*i* P	**Pn**	**22 48 41.0**	**0.0**
DEMI				IAML_P			
	comp=Z,443nm,0.2s						
ZKR	**Zakros**	**2.67**	**240**	P	**Pn**	**22 48 42.9**	**+0.8**
URLA	**Izmir**	**2.71**	**315**	PN	**Pn**	**22 48 43.8**	**+1.0**
NPS	**Neapolis**	**3.04**	**248**	P	**Pn**	**22 48 47.5**	**+0.3**
CHOS	**Chios island**	**3.06**	**310**	P	**Pn**	**22 48 48.8**	**+1.3**
LAST	**Lasithi**	**3.18**	**247**	P	**Pn**	**22 48 50.0**	**+0.7**
PRK	**Paraskevi**	**3.54**	**322**	P	**Pn**	**22 48 56.2**	**+2.2**

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*IDC **06** 22:48:35.0±2.4, 2°.12S×99°.35E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/47, mbtmp3.5/4, Error ellipse: s-maj=121.8km s-min=26.0km az=46.0*

*DJA **06** 22:48:42.5±0.4, 1°S±4°×10°0E±°, h10km, M3.8/6, MLv3.8/6*

*ISCJB **06** 22:48:43.4±0.9, 1°.2S±0°.1×100°.35E±0°.09, h35km, mb3.5/4, Error ellipse: s-maj=16.4km s-min=12.0km az=27.3*

ISC 06 22:48:43.8±1.0, **1°.28S**±0°.08×**100°.37E**±0°.07, **h35km, n10, σ2ˢ.06**/10, **mb3.5**/4, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.37**	**14**	P	**Pn**	**22 48 51.2**	**-1.5**
SDSI	**Sungai Dareh**	**1.11**	**72**	P	**Pn**	**22 49 04.1**	**+1.3**
SISI	**Saibi**	**1.28**	**268**	P	**Pn**	**22 49 06.6**	**+1.4**
KRJI	**Kerinci**	**1.36**	**127**	P	**Pn**	**22 49 07.5**	**+1.1**
BKNI	**Bangkinang**	**1.73**	**23**	P	**Pn**	**22 49 14.6**	**+3.3**
MNSI	**Mandailing Nat**	**2.20**	**339**	P	**Pn**	**22 49 20.6**	**+2.7**
WRA	**Warramunga Arr**	**38.05**	**121**	P	**P**	**22 55 59.5**	**+0.3**
	0.1nm,0.5s,baz=282,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**50.44**	**344**	P	**P**	**22 57 37.5**	**-0.4**
	0.3nm,0.3s,baz=153,slow=9.0,SNR=8.3						
KURBB	**Kurchatov Arra**	**54.97**	**343**	P	**P**	**22 58 10.4**	**-1.0**
	0.2nm,0.5s,baz=160,slow=7.2,SNR=3.3						
GEYT	**Alibeck**	**55.14**	**320**	P	**P**	**22 58 11.1**	**-1.8**
	1.1nm,0.7s,baz=140,slow=7.5,SNR=2.5						

DJA 06 22:50:52.2±0.4, **1°S**±4°×**10°0E**±°, **h10km, M3.7**/8, **MLv3.7**/8, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.61**	**27**	P	Pg	22 51 04.2	+0.2
PPI	**Padang Panjang**	**1.02**	**12**	P	Pg	22 51 11.6	-0.2
SISI	**Saibi**	**1.11**	**277**	P	Pb	22 51 12.9	-0.6
SDSI	**Sungai Dareh**	**1.34**	**67**	P	Pn	22 51 16.6	-0.4
KRJI	**Kerinci**	**1.42**	**116**	P	Pn	22 51 17.3	-0.8
BKNI	**Bangkinang**	**1.97**	**26**	P	Pn	22 51 25.5	-0.1
MNSI	**Mandailing Nat**	**2.32**	**345**	P	Pn	22 51 30.6	+0.1
MASI	**Maura Aman, Be**	**2.64**	**129**	P	Pn	22 51 34.8	-0.2

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*IDC **06** 22:57:19.1±1.2, 11°.03S×165°.25E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/45, mbtmp3.8/7, ML4.4/1, Error ellipse: s-maj=37.9km s-min=25.9km az=99.0*

*ISCJB **06** 22:57:22.2±1.0, 11°.2S±0°.1×165°.2E±0°.2, h30km, mb3.6/6, Error ellipse: s-maj=30.6km s-min=18.5km az=174.0*

ISC 06 22:57:23.8±1.1, **11°.1S**±0°.1×**165°.2E**±0°.3, **h30km, n7, σ0ˢ.53**/7, **mb3.7**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.98**	**174**	Pn	**Pn**	**22 59 58.8**	**-0.2**
	2.9nm,0.3s,baz=17,slow=6.2,SNR=16						
WRA	**Warramunga Arr**	**31.01**	**250**	P	**P**	**23 03 38.8**	**-0.2**
	0.8nm,0.9s,baz=82,slow=8.9,SNR=4.1						
ASAR	**Alice Springs**	**32.33**	**243**	P	**P**	**23 03 50.6**	**-0.1**
	0.6nm,0.7s,baz=66,slow=10,SNR=5.4						
SONM	**Songino Array**	**78.41**	**324**	P	**P**	**23 09 21.2**	**-0.5**
	0.3nm,0.7s,baz=105,slow=7.0,SNR=2.5						
QSPA	**South Pole Qui**	**78.92**	**180**	P	**P**	**23 09 24.8**	**+0.5**
	0.6nm,0.6s,baz=72,slow=6.4,SNR=3.9						
ILAR	**Eielson Array**	**83.71**	**19**	P	**P**	**23 09 49.2**	**-0.3**
	0.4nm,0.6s,baz=235,slow=5.8,SNR=6.0						
MKAR	**Makanchi Array**	**93.21**	**317**	P	**P**	**23 10 36.1**	**+0.7**
	0.3nm,0.7s,baz=85,slow=5.1,SNR=2.8						

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*IDC **06** 22:59:29.7±1.6, 11°.05S×164°.67E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.9/46, mbtmp4.0/7, ML4.0/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/38, Error ellipse: s-maj=45.6km s-min=28.2km az=122.0*

*ISCJB **06** 22:59:32.2±1.1, 11°.2S±0°.1×164°.8E±0°.2, h29km, mb3.9/6, Error ellipse: s-maj=23.8km s-min=17.6km az=4.6*

ISC 06 22:59:34.0±1.1, **11°.1S**±0°.1×**164°.7E**±0°.2, **h29km, n12, σ0ˢ.92**/9, **mb3.9**/6, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.99**	**289**	LR	LR	23 02 53.5	
	comp=Z,597nm,19.3s,baz=108,slow=42						
DZM	**Mont Dzumac**	**11.03**	**172**	Pn	**Pn**	**23 02 10.2**	**+0.3**
	1.0nm,0.3s,baz=308,slow=18,SNR=3.6						
CTA	**Charters Tower**	**19.89**	**241**	P	**Pn**	**23 04 05.7**	**+0.6**
	0.3nm,0.3s,baz=73,slow=12,SNR=3.5						
H11S2	**WAKE ISLAND Hy**	**29.48**	**4**	T	T	23 35 28.0	
	baz=184,slow=76,SNR=4.0						
H11S3	**WAKE ISLAND Hy**	**29.48**	**4**	T	T	23 35 29.1	
	baz=184,slow=76,SNR=2.8						
H11S1	**WAKE ISLAND Hy**	**29.49**	**4**	T	T	23 35 28.2	
	baz=184,slow=76,SNR=3.2						
WRA	**Warramunga Arr**	**30.52**	**250**	P	**P**	**23 05 44.7**	**-0.3**
	4.1nm,0.6s,baz=80,slow=9.1,SNR=25						
ASAR	**Alice Springs**	**31.87**	**243**	P	**P**	**23 05 56.8**	**-0.1**
	1.8nm,0.5s,baz=63,slow=10.0,SNR=20						
ASAR				PcP	**PcP**	**23 08 46.6**	**-0.8**
	0.3nm,0.4s,baz=67,slow=3.1,SNR=2.4						
FITZ	**Fitzroy Crossi**	**38.40**	**255**	P	**P**	**23 06 51.9**	**-1.3**
	1.8nm,0.7s,baz=98,slow=10,SNR=3.6						
SONM	**Songino Array**	**78.13**	**324**	P	**P**	**23 11 31.2**	**+0.7**
	0.5nm,0.8s,baz=132,slow=5.1,SNR=3.7						
ILAR	**Eielson Array**	**83.89**	**19**	P	**P**	**23 11 60.0**	**-0.8**
	0.7nm,1.1s,baz=229,slow=5.5,SNR=2.7						
MKAR	**Makanchi Array**	**92.88**	**317**	P	**P**	**23 12 45.4**	**+1.1**
	0.2nm,0.7s,baz=107,slow=5.0,SNR=3.0						

IDC 06 23:05:24.1±1.3, **60°.09S**×**25°.94W, h0km, mb4.0**/2, **mb1 4.0**/2, **mb1mx3.7**/23, **mbtmp4.0**/2, **Error ellipse: s-maj=92.8km s-min=32.0km az=99.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**30.15**	**180**	P	P	23 11 35.1	-0.4
	1.6nm,0.8s,baz=209,slow=13,SNR=5.4						
H10S2	**ASCENSION HYDR**	**51.72**	**14**	T	T	00 12 07.0	
	baz=190,slow=75,SNR=83						
H10S3	**ASCENSION HYDR**	**51.73**	**14**	T	T	00 12 07.3	
	baz=190,slow=75,SNR=92						
H10S1	**ASCENSION HYDR**	**51.74**	**14**	T	T	00 12 08.3	
	baz=190,slow=75,SNR=75						
H10N1	**ASCENSION HYDR**	**52.84**	**14**	T	T	00 13 31.2	
	baz=190,slow=75,SNR=63						
H10N3	**ASCENSION HYDR**	**52.84**	**14**	T	T	00 13 30.5	
	baz=190,slow=75,SNR=38						
H10N2	**ASCENSION HYDR**	**52.86**	**14**	T	T	00 13 32.2	
	baz=190,slow=75,SNR=81						
TORD	**Torodi Ar. Bea**	**76.29**	**28**	P	P	23 17 14.0	-0.4
	0.9nm,0.6s,baz=203,slow=6.1,SNR=11						
YKA	**Yellowknife Ar**	**139.55**	**314**	PKP	PKiKP	23 24 53.1	-1.0
	0.2nm,0.4s,baz=128,slow=2.1,SNR=5.4						
SONM	**Songino Array**	**150.10**	**93**	PKPbc	PKPbc	23 25 16.0	+0.4
	0.5nm,0.9s,baz=208,slow=3.9,SNR=3.5						
ILAR	**Eielson Array**	**153.16**	**305**	PKPbc	PKPbc	23 25 21.9	-0.1
	0.2nm,0.4s,baz=146,slow=1.7,SNR=5.7						

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*IDC **06** 23:08:11.5±1.8, 8°.89S×122°.70E, h152km±20km, mb3.4/5, mb1 3.3/8, mb1mx3.2/54, mbtmp3.7/8, Error ellipse: s-maj=100.9km s-min=19.8km az=61.0*

*DJA **06** 23:08:15.9±2.3, 9°S±13°×12°3E±°, h110km±26km, M3.4/5, MLv3.4/5*

ISC 06 23:08:11.6±0.9, **9°.0S**±0°.1×**122°.8E**±0°.1, **h150km, n13, σ2ˢ.71**/18, **mb3.8**/5, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.67**	**299**	P	**Pn**	**23 08 35.0**	**+1.1**
EDFI	**Ende, Flores**	**1.15**	**281**	P	**Pn**	**23 08 39.5**	**+1.7**
BATI	**Baumata**	**1.48**	**146**	P	**Pn**	**23 08 43.8**	**+2.8**
BATI	**Baumata**	**1.48**	**146**	P	**Pn**	**23 08 42.6**	**+1.6**
	243nm,0.3s,baz=249,slow=0.9,SNR=200						
BATI				S	**Sn**	**23 09 07.5**	**+4.0**
	70nm,0.3s,baz=68,slow=23,SNR=5.3						
SOEI	**Soe**	**1.62**	**119**	P	**Pn**	**23 08 44.9**	**+2.4**
SOEI				S	**Sn**	**23 09 07.3**	**+1.1**
FITZ	**Fitzroy Crossi**	**9.48**	**164**	P	**Pn**	**23 10 24.7**	**0.0**
	0.5nm,0.3s,baz=360,slow=8.9,SNR=22						
FITZ				S	**Sn**	**23 12 05.8**	**-4.1**
	0.5nm,0.3s,baz=319,slow=4.2,SNR=3.9						
WRA	**Warramunga Arr**	**15.58**	**136**	P	**Pn**	**23 11 43.1**	**-0.2**
	0.4nm,0.3s,baz=323,slow=13,SNR=19						
WRA				S	**Sn**	**23 14 30.2**	**-6.6**
	0.3nm,0.3s,baz=320,slow=25,SNR=6.3						
ASAR	**Alice Springs**	**18.05**	**145**	P	**Pn**	**23 12 14.2**	**+1.1**
	0.3nm,0.3s,baz=328,slow=13,SNR=12						
ASAR				S	**S**	**23 15 31.6**	**+0.8**
	0.1nm,0.3s,baz=327,slow=21,SNR=4.0						
STKA	**Stephens Creek**	**28.69**	**145**	P	**P**	**23 13 55.7**	**+1.1**
	0.8nm,0.2s,baz=327,slow=8.1,SNR=3.7						
SONM	**Songino Array**	**58.40**	**347**	P	**P**	**23 17 50.4**	**-0.9**
	0.1nm,0.4s,baz=165,slow=7.6,SNR=2.5						
MKAR	**Makanchi Array**	**66.21**	**331**	P	**P**	**23 18 43.3**	**0.0**
	0.9nm,0.6s,baz=132,slow=7.4,SNR=13						
ZALV	**Zalesovo Beam**	**70.42**	**337**	P	**P**	**23 19 06.8**	**-2.4**
	1.2nm,0.5s,baz=135,slow=5.1,SNR=5.3						
KURBB	**Kurchatov Arra**	**70.67**	**332**	P	**P**	**23 19 09.1**	**-1.7**
	0.4nm,0.8s,baz=130,slow=6.6,SNR=4.3						

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*IDC **06** 23:12:34.1±7.5, 36°.30N×71°.21E, h140km±48km, mb3.3/1, mb1 3.2/7, mb1mx2.9/62, mbtmp3.7/7, Error ellipse: s-maj=109.3km s-min=28.9km az=159.0*

*ISCJB **06** 23:12:35.7±0.5, 36°.38N±0°.05×71°.09E±0°.07, h188km, Error ellipse: s-maj=8.7km s-min=5.6km az=137.6*

ISC 06 23:12:36.1±0.9, **36°.3N**±0°.1×**71°.03E**±0°.08, **h188km, n24, σ1ˢ.32**/25, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.18**	**19**	P	**Pn**	**23 14 03.5**	**-2.4**
	SNR=43						
UCH	**Uchtor**	**6.51**	**23**	P	**Pn**	**23 14 09.5**	**-0.7**
	SNR=26						
EKS2	**Erkin-Say**	**6.70**	**18**	P	**Pn**	**23 14 10.7**	**-1.7**
	SNR=14						
KK31	**Karatay Array**	**6.81**	**357**	Pn	**Pn**	**23 14 11.7**	**-2.0**
	1.7nm,0.2s,baz=186,slow=13,SNR=44						
KK31				Sn	Sn	23 15 22.5	-8.5
	3.8nm,0.5s,baz=181,slow=19,SNR=9.7						
AAK	**Ala-Archa**	**6.87**	**22**	P	**Pn**	**23 14 14.0**	**-0.7**
	SNR=16						
AAK	**Ala-Archa**	**6.87**	**22**	P	**Pn**	**23 14 11.5**	**-3.1**
	2.4nm,0.3s,baz=190,slow=8.7,SNR=52						
AAK				S	Sn	23 15 24.9	-7.8
	0.9nm,0.3s,baz=327,slow=23,SNR=14						
KBK	**Karagaybulak**	**7.03**	**24**	P	**Pn**	**23 14 17.4**	**+0.6**
	SNR=10						
CHMS	**Chumysh**	**7.28**	**22**	P	**Pn**	**23 14 19.6**	**-0.3**
	SNR=8.8						
TKM2	**Tokmak 2**	**7.49**	**27**	P	**Pn**	**23 14 23.0**	**+0.1**
	SNR=23						
GEYT	**Alibeck**	**10.44**	**283**	P	**Pn**	**23 15 01.6**	**+0.3**
	0.4nm,0.3s,baz=96,slow=12,SNR=4.5						
GEYT				S	**Sn**	**23 16 56.4**	**-1.2**
	0.6nm,0.3s,baz=103,slow=19,SNR=3.6						
PYUN	**Piuthan**	**13.01**	**126**	*e*P	**Pn**	**23 15 33.4**	**-0.9**
	16nm,0.5s						
DANN	**Dangsing**	**13.36**	**123**	*e*P	**Pn**	**23 15 39.4**	**+0.6**
	12nm,0.4s						
MKAR	**Makanchi Array**	**13.44**	**35**	P	**Pn**	**23 15 38.2**	**-1.2**
	0.0nm,0.3s,baz=204,slow=14,SNR=3.0						
KOLN	**Koldanda**	**13.63**	**125**	*e*P	**Pn**	**23 15 42.1**	**0.0**
	8.4nm,0.5s						
DMN	**Daman**	**14.75**	**122**	*e*P	**P**	**23 15 56.9**	**-0.4**
	6.1nm,0.3s						
PKIN	**Phulchoki**	**14.97**	**121**	*e*P	**Pn**	**23 15 58.8**	**+0.1**
	11nm,0.6s						
PKI	**Pulchoki**	**14.98**	**121**	*e*P	**Pn**	**23 15 58.8**	**-0.1**
	13nm,0.6s						
GUN	**Gumba**	**15.10**	**119**	*e*P	**Pn**	**23 16 00.4**	**0.0**
AB31	**Akbulak array**	**15.27**	**331**	P	**P**	**23 16 03.5**	**+0.9**
	0.3nm,0.4s,baz=148,slow=12,SNR=13						
KURBB	**Kurchatov Arra**	**15.30**	**18**	P	**Pn**	**23 16 00.3**	**-2.0**
	0.0nm,0.3s,baz=204,slow=10,SNR=3.1						
JIRN	**Jiri**	**15.47**	**120**	*e*P	**P**	**23 16 05.7**	**+0.3**
	43nm,0.4s						
BVAR	**Borovoye Array**	**16.73**	**359**	P	**P**	**23 16 19.1**	**+0.5**
	0.2nm,0.3s,baz=166,slow=12,SNR=12						
AKTO	**Aktyubinsk**	**16.97**	**330**	P	**Pn**	**23 16 24.0**	**+1.6**
	0.1nm,0.3s,baz=130,slow=11,SNR=9.3						
ZALV	**Zalesovo Beam**	**20.09**	**24**	P	**P**	**23 16 56.5**	**+1.5**
	2.6nm,0.6s,baz=225,slow=11,SNR=15						

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*IDC **06** 23:15:00.9±1.3, 10°.87S×165°.34E, h0km, mb3.7/7, mb1 4.0/9, mb1mx3.8/43, mbtmp3.9/9, ML4.2/2, Error ellipse: s-maj=38.5km s-min=23.0km az=133.0*

*ISCJB **06** 23:15:04.1±0.8, 11°.0S±0°.1×165°.22E±0°.09, h30km, mb3.6/6, Error ellipse: s-maj=16.5km s-min=11.1km az=26.2*

ISC 06 23:15:05.7±0.9, **10°.9S**±0°.1×**165°.3E**±0°.1, **h30km, n15, σ1ˢ.17**/10, **mb3.7**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.46**	**285**	Pn	**Pn**	**23 16 25.6**	**+0.6**
	16nm,0.3s,baz=21,slow=12,SNR=2.0						
HNR				Sn	**Sn**	**23 17 26.2**	**-0.7**
	9.2nm,0.3s,baz=196,slow=20,SNR=3.1						
DZM	**Mont Dzumac**	**11.19**	**175**	Pn	**Pn**	**23 17 43.9**	**+0.2**
	0.6nm,0.3s,baz=29,slow=13,SNR=6.5						
CTA	**Charters Tower**	**20.49**	**241**	P	**P**	**23 19 42.4**	**+1.0**
	3.2nm,0.6s,baz=52,slow=6.3,SNR=1.9						
H11S2	**WAKE ISLAND Hy**	**29.21**	**3**	T	T	23 51 32.0	
	baz=179,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.21**	**3**	T	T	23 51 34.4	
	baz=179,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.23**	**3**	T	T	23 51 38.0	
	baz=179						
H11N1	**WAKE ISLAND Hy**	**30.43**	**3**	T	T	23 53 14.2	
	baz=188						
H11N3	**WAKE ISLAND Hy**	**30.44**	**3**	T	T	23 53 12.9	
	baz=188						
H11N2	**WAKE ISLAND Hy**	**30.45**	**3**	T	T	23 53 15.2	
	baz=188						
WRA	**Warramunga Arr**	**31.13**	**249**	P	**P**	**23 21 21.4**	**-0.6**
	0.8nm,0.7s,baz=80,slow=9.0,SNR=7.1						
ASAR	**Alice Springs**	**32.48**	**243**	P	**P**	**23 21 32.6**	**-1.2**
	0.8nm,0.6s,baz=73,slow=10,SNR=8.1						
SONM	**Songino Array**	**78.27**	**324**	P	**P**	**23 27 02.9**	**0.0**
	0.2nm,0.5s,baz=107,slow=3.5,SNR=2.3						
ILAR	**Eielson Array**	**83.49**	**19**	P	**P**	**23 27 31.5**	**+1.2**
	0.5nm,0.8s,baz=242,slow=4.7,SNR=6.3						
MKAR	**Makanchi Array**	**93.10**	**317**	P	**P**	**23 28 17.7**	**+0.9**
	0.5nm,0.7s,baz=90,slow=7.3,SNR=6.7						
YKA	**Yellowknife Ar**	**95.03**	**27**	P	**P**	**23 28 23.3**	**-1.9**
	0.1nm,0.6s,baz=262,slow=4.3,SNR=3.1						

IDC 06 23:19:36.9±2.5, **11°.46S**×**166°.66E, h0km, mb3.7**/4, **mb1 3.9**/5, **mb1mx3.7**/39, **mbtmp3.8**/5, **ML4.2**/1, **Error ellipse: s-maj=66.6km s-min=33.0km az=102.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.56**	**181**	Pn	Pn	23 22 09.3	-0.4
	1.9nm,0.3s,baz=319,slow=11,SNR=9.9						
WRA	**Warramunga Arr**	**32.19**	**251**	P	P	23 26 07.2	+0.3
	2.0nm,0.7s,baz=80,slow=9.1,SNR=11						
ASAR	**Alice Springs**	**33.41**	**244**	P	P	23 26 17.2	-0.5
	0.4nm,0.5s,baz=76,slow=10,SNR=5.1						
SONM	**Songino Array**	**79.53**	**323**	P	P	23 31 45.6	-0.1
	0.1nm,0.3s,baz=103,slow=4.6,SNR=2.2						
MKAR	**Makanchi Array**	**94.43**	**317**	P	P	23 32 59.3	+0.2
	0.3nm,0.7s,baz=93,slow=5.8,SNR=3.1						

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*SOME **06** 23:20:12.2, 42°.58N×79°.68E, h15km*

*KRNET **06** 23:20:12.6±0.1, 42°.58N×79°.63E, h7km, mb3.2*

*NNC **06** 23:20:13.9±1.9, 42°.66N×79°.63E, h0km, mb3.2, mpv3.4, Error ellipse: s-maj=13.8km s-min=6.1km az=156.0*

ISC 06 23:20:14.2±1.7, **42°.69N**±0°.04×**79°.60E**±0°.05, **h2km**±10km, **n51, σ1ˢ.16**/96, **25C-16D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.48**	**348**	P	**Pg**	**23 20 24.3**	**+0.9**
	210nm,0.1s						
SHLS				S	**Sb**	**23 20 32.7**	**-0.4**
	506nm,0.2s						
SHLS	**Shalkode**	**0.48**	**348**	*e*P	**Pg**	**23 20 24.3**	**+0.9**
	baz=18						
SHLS				*e*S	**Sb**	**23 20 33.2**	**+0.1**
	baz=18						
SHLS	**Shalkode**	**0.48**	**348**	*e*P	**Pg**	**23 20 24.3**	**+0.9**
	210nm,0.1s						
SHLS				*e*S	**Sb**	**23 20 33.2**	**+0.1**
	506nm,0.2s						
UZB	**Uzynbulak**	**0.63**	**318**	P	**Pg**	**23 20 26.5**	**+0.3**
	43nm,0.1s						
UZB				S	**Sb**	**23 20 36.5**	**-0.8**
	127nm,0.1s						
UZB	**Uzynbulak**	**0.63**	**318**	*e*P	**Pg**	**23 20 26.5**	**+0.3**
	baz=22						
UZB				*e*S	**Sb**	**23 20 36.6**	**-0.7**
	baz=22						
UZB	**Uzynbulak**	**0.63**	**318**	*e*P	**Pg**	**23 20 26.5**	**+0.3**
	43nm,0.1s						
UZB				*e*S	**Sb**	**23 20 36.6**	**-0.7**
	127nm,0.1s						
PDGK	**Podgornoye**	**0.65**	**353**	⇓*i*P	**Pg**	**23 20 26.6**	**0.0**
	baz=52						
PDGK				⇓*i*S	**Sb**	**23 20 36.9**	**-1.0**
	baz=52						
PRZ	**Przheval'sk**	**0.91**	**258**	⇑*i*P	**Pg**	**23 20 30.6**	**-1.0**
	baz=64						
PRZ				⇑*i*S	**Sg**	**23 20 43.5**	**+0.2**
	baz=64						
SATY	**Saty**	**0.95**	**293**	P	**Pg**	**23 20 32.1**	**-0.4**
	7.8nm,0.1s						
SATY				S	**Sb**	**23 20 46.0**	**-0.7**
	79nm,0.1s						
SATY	**Saty**	**0.95**	**293**	*e*P	**Pg**	**23 20 32.1**	**-0.4**
	7.8nm,0.1s						
SATY				*e*S	**Sb**	**23 20 46.0**	**-0.7**
	79nm,0.1s						
KURS	**Kuram**	**1.32**	**308**	P	**Pn**	**23 20 38.5**	**-1.2**
	1.6nm,0.2s						
KURS				S	**Sn**	**23 20 57.0**	**-0.9**
	21nm,0.3s						
KURS	**Kuram**	**1.32**	**308**	*e*P	**Pn**	**23 20 38.5**	**-1.2**
	baz=11						
KURS				*e*S	**Sn**	**23 20 57.0**	**-0.9**
	baz=11						
KURS	**Kuram**	**1.32**	**308**	*e*P	**Pn**	**23 20 38.5**	**-1.2**
	1.6nm,0.2s						
KURS				*e*S	**Sn**	**23 20 57.0**	**-0.9**
	21nm,0.3s						
MNBS	**Baschi**	**1.64**	**328**	*e*P	**Pb**	**23 20 44.4**	**-0.9**
	baz=30						
MNBS				*e*S	**Sg**	**23 21 07.7**	**+0.7**
	baz=30						
MNBS	**Baschi**	**1.64**	**328**	*e*P	**Pb**	**23 20 44.4**	**-0.9**
	23nm,0.1s						
MNBS				*e*S	**Sg**	**23 21 07.7**	**+0.7**
	84nm,0.1s						
DJR	**Jarkent**	**1.65**	**5**	P	**Pn**	**23 20 44.1**	**-0.3**
	7.9nm,0.2s						
DJR				S	**Sb**	**23 21 06.5**	**-0.2**
	27nm,0.3s						
DJR	**Jarkent**	**1.65**	**5**	*e*P	**Pn**	**23 20 44.1**	**-0.3**
	7.9nm,0.2s						
DJR				*e*S	**Sg**	**23 21 08.0**	**+0.8**
	27nm,0.3s						
KDJ	**Kajisay**	**1.88**	**254**	⇑*i*P	**Pb**	**23 20 47.9**	**-1.4**
	baz=57						
KDJ				⇑*i*S	**Sb**	**23 21 13.4**	**+0.2**
	baz=57						
MDOK	**Medeo**	**1.93**	**285**	*e*P	**Pb**	**23 20 48.8**	**-1.5**
	baz=88						
MDOK				*e*S	**Sb**	**23 21 15.2**	**+0.3**
	baz=88						
MDOK	**Medeo**	**1.93**	**285**	*e*P	**Pb**	**23 20 48.8**	**-1.5**
	8.9nm,0.5s						
MDOK				*e*S	**Sb**	**23 21 15.2**	**+0.3**
	50nm,0.4s						
TNSS	**Tian-Shan**	**1.98**	**281**	*e*P	**Pb**	**23 20 49.5**	**-1.7**
	baz=84						
TNSS				*e*S	**Sb**	**23 21 16.7**	**+0.2**
	baz=84						
TNSS	**Tian-Shan**	**1.98**	**281**	*e*P	**Pb**	**23 20 49.5**	**-1.7**
	11nm,0.3s						
TNSS				*e*S	**Sb**	**23 21 16.7**	**+0.2**
	22nm,0.3s						
KNDC	**Almaty**	**2.00**	**286**	⇓Pn	**Pb**	**23 20 50.8**	**-0.6**
	15nm,0.4s						
KNDC				⇑Sn	**Sg**	**23 21 22.0**	**+3.4**
	61nm,0.5s						
IZV	**Izvestkoviy**	**2.22**	**280**	Pg	**Pb**	**23 20 53.9**	**-1.3**
	8.9nm,0.1s						
IZV				Lg	Lg	23 21 23.9	
	67nm,0.4s						
IZV	**Izvestkoviy**	**2.22**	**280**	*e*P	**Pb**	**23 20 53.9**	**-1.3**
	baz=83						
IZV				*e*S	**Sb**	**23 21 23.8**	**+0.6**
	baz=83						
IZV	**Izvestkoviy**	**2.22**	**280**	*e*P	**Pb**	**23 20 53.9**	**-1.3**
	8.9nm,0.1s						
IZV				*e*S	**Sb**	**23 21 23.9**	**+0.6**
	67nm,0.4s						
MTBS	**Maitube**	**2.37**	**282**	*e*P	**Pb**	**23 20 56.4**	**-1.3**
	baz=84						
MTBS				*e*S	**Sb**	**23 21 28.0**	**+0.6**
	baz=84						
MTBS	**Maitube**	**2.37**	**282**	*e*P	**Pb**	**23 20 56.4**	**-1.3**
	7.7nm,0.3s						
MTBS				*e*S	**Sb**	**23 21 27.9**	**+0.6**
	36nm,0.3s						
TDK	**Taldyqorghan**	**2.47**	**340**	*e*P	**Pb**	**23 20 58.6**	**-0.8**
	20nm,0.3s						
TDK				*e*S	**Sg**	**23 21 32.3**	**-1.3**
	43nm,0.3s						
ULHL	**Ulahol**	**2.52**	**261**	⇑*i*P	**Pn**	**23 20 57.0**	**+0.6**
	baz=64						
ULHL				⇑*i*S	**Sb**	**23 21 29.8**	**-2.1**
	baz=64						
KUU	**Kurty**	**2.67**	**298**	*e*P	**Pb**	**23 21 01.3**	**-1.4**
	baz=0.0						
KUU				*e*S	**Sb**	**23 21 36.8**	**+0.9**
	baz=0.0						
KUU	**Kurty**	**2.67**	**298**	*e*P	**Pb**	**23 21 01.3**	**-1.4**
	1.1nm,0.3s						
KUU				*e*S	**Sb**	**23 21 36.8**	**+0.9**

	24nm,0.4s						
KST	Kastek 15nm,0.2s	2.70	279	Pg	Pb	23 21 01.0	-2.2
KST	31nm,0.4s			Lg	Lg	23 21 35.5	
KST	Kastek baz=81	2.70	279	eP	Pb	23 21 01.6	-1.6
KST	baz=81			eS	Sb	23 21 37.1	+0.3
KST	Kastek 15nm,0.2s	2.70	279	eP	Pb	23 21 01.6	-1.6
KST	31nm,0.4s			eS	Sb	23 21 37.1	+0.3
BOOM	Boomskoye usch baz=69	2.71	267	⇓iP	Pn	23 21 00.3	+1.4
BOOM	baz=69			⇓iS	Sb	23 21 34.5	-2.7
TKM2	Tokmak 2 baz=78	2.95	276	⇑iP	Pn	23 21 03.3	+1.0
TKM2	baz=78			⇑iS	Sb	23 21 40.5	-3.8
NRN	Naryn baz=48	2.96	246	⇑iP	Pn	23 21 03.1	+0.6
NRN	baz=48			⇑iS	Sn	23 21 40.0	+1.3
KZA	Kyzart baz=63	3.28	261	⇑iP	Pn	23 21 07.9	+0.9
KZA	baz=63			⇑iS	Sn	23 21 48.0	+1.2
KBK	Karagaybulak baz=73	3.43	271	⇑iP	Pn	23 21 09.8	+1.0
KBK	baz=73			⇑iS	Sn	23 21 51.6	+1.4
CHMS	Chumysh baz=78	3.58	277	⇑iP	Pn	23 21 11.7	+0.9
CHMS	baz=78			⇑iS	Sn	23 21 55.0	+1.4
FRU1	Bishkek baz=75	3.66	274	⇑iP	Pn	23 21 12.8	+0.9
FRU1	baz=75			⇑iS	Sn	23 21 57.2	+1.5
AAK	Ala-Archa baz=73	3.76	271	⇓iP	Pn	23 21 14.5	+1.1
AAK	baz=73			⇓eS	Sn	23 21 59.4	+1.0
USP	Ospenovka baz=82	3.79	281	⇑iP	Pn	23 21 14.8	+1.2
USP	baz=82			⇑iS	Sn	23 22 00.3	+1.5
UCH	Uchtor baz=66	3.79	265	⇓iP	Pn	23 21 14.8	+0.8
UCH	baz=66			⇓iS	Sn	23 22 00.2	+0.8
EKS2	Erkin-Say baz=73	4.29	272	⇓iP	Pn	23 21 21.6	+1.0
EKS2	baz=73			⇓iS	Sn	23 22 11.9	+0.5
AML	Almayashu baz=66	4.41	265	⇑iP	Pn	23 21 23.4	+0.9
AML	baz=66			⇑iS	Sn	23 22 15.2	+0.6
MAKZ	Makanchi 0.2nm,0.2s	4.46	22	⇓Pn	Pn	23 21 23.1	+0.3
MAKZ	0.2nm,0.3s			⇑Sn	Sn	23 22 15.8	+0.5
MAKZ	0.6nm,0.5s			⇓Lg	Lg	23 22 34.5	
MK31	Makanchi Array 0.1nm,0.2s,baz=107,slow=11,SNR=20	4.53	24	⇓Pn	Pn	23 21 23.9	+0.1
MK31	0.7nm,0.5s,baz=204,slow=24,SNR=5.0			Sn	Sn	23 22 18.0	+0.9
MK31	0.2nm,0.2s,baz=207,slow=27,SNR=5.6			⇑Lg	Lg	23 22 38.2	
KURBB	Kurchatov Arra 2.2nm,0.8s	7.97	355	⇓Lg	Lg	23 24 27.8	
KURK	Kurchatov 3.2nm,1.0s	8.06	356	⇓Lg	Lg	23 24 28.9	

IDC 06 23:20:31.7±2.4**,10°.64S×111°.39E,h0^{km},mb3.7**/5**, mb1 3.8**/6**,mb1mx3.6**/41**,mbtmp3.7**/6**,ML3.1**/1**,Error ellipse: s-maj=125.9km s-min=20.7km az=47.0,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=305,slow=12,SNR=2.2	15.66	120	Pn	Pn	23 24 12.2	-1.8
FITZ	0.1nm,0.3s,baz=207,slow=9.0,SNR=2.2			Sn	Sn	23 26 51.9	-16
WRA	Warramunga Arr 1.1nm,1.0s,baz=287,slow=12,SNR=6.2	23.96	115	P	P	23 25 48.2	+0.1
ASAR	Alice Springs 0.8nm,0.8s,baz=295,slow=9.3,SNR=5.6	25.06	124	P	P	23 25 58.1	+0.1
STKA	Stephens Creek 0.7nm,0.4s,baz=312,slow=12,SNR=3.1	34.99	132	P	P	23 27 26.1	0.0
MKAR	Makanchi Array 0.6nm,0.6s,baz=143,slow=7.9,SNR=6.3	62.82	338	P	P	23 30 58.8	-0.4
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=140,slow=5.1,SNR=4.5	68.18	343	P	P	23 31 34.3	+0.6

*IDC **06** 23:23:49.5±0.6, 10°.91S×165°.36E, h0^{km}, mb4.4/23, mb1 4.5/25, mb1mx4.4/45, mbtmp4.4/25, ML4.8/2, MS4.4/4, Ms1 4.4/4, ms1mx3.5/44, Error ellipse: s-maj=17.5km s-min=14.2km az=107.0*

*NEIC **06** 23:23:51.8±0.3, 10°.86S×165°.29E, h10^{km}, mb4.7/14, Error ellipse: s-maj=9.1km s-min=6.5km az=85.0*

*ISCJB **06** 23:23:52.9±0.3, 11°.05S±0°.03×165°.27E±0°.06, h30^{km}, mb4.5/42, MS4.4/1, Error ellipse: s-maj=8.0km s-min=4.3km az=165.8*

*GCMT **06** 23:23:52.8±0.4, 10°.76S±0°.02×165°.04E±0°.03, h12^{km}±2^{km}, MW5.0/62, Moment Tensor Solution. s23,c26; s62,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.16±.29; $M_{\theta\theta}$2.84±.20; $M_{\phi\phi}$-0.67±.16; $M_{r\theta}$0.55±.41; $M_{\theta\phi}$-1.15±.12; $M_{\phi r}$3.48±.93; Best double couple: $M_0$4.20500×10^{16} NP1:ϕ_s144.00000°,δ66.00000°,λ-47.00000°. NP2: ϕ_s258.00000°,δ48.00000°,λ-146.00000°. Principal axes: T 3.2680, Plg10.0000°, Azm205.0000°; N 1.8770, Plg38.0000°, Azm303.0000°; P -5.1430, Plg50.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 23:23:55.1±0.4**,10°.98S**±0°.06×**165°.28E**±0°.07**,h30^{km},n75, σ1^{s}.61**/73**,mb4.5**/42**,2D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.47	286	ePn	Pn	23 25 13.8	-0.9
HNR				eS	Sn	23 26 13.1	-3.5
HNR	Honiara 37nm,0.3s,baz=143,slow=0.6,SNR=17	5.47	286	Pn	Pn	23 25 13.6	-1.1
HNR	33nm,0.3s,baz=225,slow=8.6,SNR=2.2			Sn	Sn	23 26 18.4	+1.8
HNR	comp=Z,4µm,19.5s,baz=129,slow=39			LR	LR	23 27 23.4	
MARNC	Mare, Loyalty	10.77	166	ePn	Pn	23 26 26.6	-0.7
MARNC				eSn	Sn	23 28 24.7	-2.3
DZM	Mont Dzumac 59nm,0.5s	11.09	174	ePn	Pn	23 26 31.9	+0.1
DZM	comp=Z,3µm,26.2s			eLR	LR	23 29 01.0	
DZM	Mont Dzumac 6.3nm,0.3s,baz=8.7,slow=13,SNR=22	11.09	174	Pn	Pn	23 26 31.5	-0.3
DZM	1.8nm,0.3s,baz=327,slow=23,SNR=3.9			Sn	Sn	23 28 33.6	-1.3
DZM	comp=Z,2µm,18.2s,baz=32,slow=34			LR	LR	23 30 14.3	
ONTNC	Ouen Toro	11.32	174	ePn	Pn	23 26 36.7	+1.8
ONTNC				eSn	Sn	23 28 41.4	+0.9
OUENC	Ouen Island, N	11.47	173	ePn	Pn	23 26 38.2	+1.2
PINNC	Pines Island,	11.75	170	ePn	Pn	23 26 42.4	+1.6
PINNC				eSn	Sn	23 28 49.2	-1.9
MSVF	Nonsavu	14.07	120	eP	P	23 27 21.2	+1.2
CTA	Charters Tower 40nm,0.9s,baz=66,slow=13,SNR=13	20.43	241	P	Pn	23 28 31.5	-0.9
CTAO	Charters Tower 45nm,0.9s	20.43	241	eP	Pn	23 28 31.4	-1.0
CTAO				ePcP	PcP	23 32 46.7	+4.7
URZ	Urewera 10nm,0.6s,baz=56,slow=9.3,SNR=6.1	29.16	161	P	P	23 29 52.8	-0.9
URZ	comp=Z,452nm,18.8s,baz=342,slow=34			LR	LR	23 40 06.6	
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=335	29.32	3	T	T	00 00 20.4	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=253	29.32	3	T	T	00 00 27.1	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=256	29.33	3	T	T	00 00 27.0	
STKA	Stephens Creek 3.3nm,0.8s,baz=83,slow=8.1,SNR=2.9	30.18	223	P	P	23 30 02.4	-0.5
H11N1	WAKE ISLAND Hy baz=183,slow=76,SNR=285	30.54	3	T	T	00 01 56.8	
H11N3	WAKE ISLAND Hy baz=183,slow=76,SNR=144	30.55	3	T	T	00 01 58.1	
H11N2	WAKE ISLAND Hy baz=183,slow=76,SNR=159	30.56	3	T	T	00 01 58.1	
WRAB	Tennant Creek 6.7nm,0.8s	31.07	250	eP	P	23 30 09.4	-1.4
WB2	Warramunga Arr	31.07	250	eP	P	23 30 10.9	+0.1
WRA	Warramunga Arr 5.3nm,0.8s,baz=80,slow=9.1,SNR=23	31.08	250	P	P	23 30 09.6	-1.3
WRA	0.9nm,0.8s,baz=75,slow=2.9,SNR=4.9			PcP	PcP	23 33 06.1	-0.1
THZ	Tophouse 18nm,0.6s	31.39	169	eP	P	23 30 15.8	+2.3
LTZ	Lake Taylor 25nm,0.7s	32.26	170	eP	P	23 30 23.8	+2.6
AS01	Alice Springs	32.37	243	eP	P	23 30 21.0	-1.3
AS31	Alice Springs 2.7nm,0.8s	32.41	243	eP	P	23 30 21.8	-0.9
ASAR	Alice Springs 7.9nm,0.8s,baz=66,slow=10,SNR=51	32.41	243	P	P	23 30 21.9	-0.8
ASAR	1.1nm,0.8s,baz=69,slow=2.7,SNR=6.0			PcP	PcP	23 33 10.5	+0.7
RPZ	Rata Peaks 8.6nm,0.7s,baz=283,slow=5.6,SNR=7.0	33.00	172	P	P	23 30 26.8	-0.7
FITZ	Fitzroy Crossi 1.3nm,0.6s,baz=91,slow=6.6,SNR=5.1	38.96	255	P	P	23 31 16.8	-2.0
PPT2	Papeete2 224nm,24.5s	44.16	104	eS	S	23 38 15.8	-17
PPT2	comp=Z,364nm,23.2s			eLR	LR	23 43 38.6	
TBI	Tubuai comp=Z,758nm,28.2s	44.78	112	eLR	LR	23 43 59.3	
MBWA	Marble Bar	44.78	251	eP	P	23 32 05.7	-0.9
NWAO	Narrogin (SRO)	49.12	236	eP	P	23 32 40.2	0.0
MJAR	Matsushiro Arr 2.5nm,0.7s,baz=174,slow=9.1,SNR=5.7	53.70	333	P	P	23 33 13.1	-1.4
JNU	Nakatsue 13nm,0.8s,baz=104,slow=5.0,SNR=4.0	54.76	325	P	P	23 33 21.4	-0.8
ASAJ	Asahikawa 6.8nm,0.7s,baz=192,slow=9.2,SNR=5.0	58.58	341	P	P	23 33 48.1	-1.0
KSRS	Korea Array 1.5nm,0.6s,baz=146,slow=7.4,SNR=4.6	59.57	326	P	P	23 33 55.3	-0.7
KSAR	Wonju Array Be	59.58	326	P	P	23 33 55.3	-0.9
NJ2	Nanjing	61.65	316	eP	P	23 34 10.8	+0.4
NJ2	comp=Z,12nm,0.6s			pmax	pmax		
USRK	Ussuriysk Ar. comp=Z,2.4nm,0.6s,baz=121,slow=5.6,SNR=5.4	62.69	334	P	P	23 34 16.6	-0.5
PETK	Petropavlovsk- comp=Z,4.6nm,0.9s,baz=148,slow=8.5,SNR=3.4	64.16	355	P	P	23 34 26.0	-0.7
CN2	Changchun	65.45	329	eP	P	23 34 36.5	+1.2
CN2	comp=Z,20nm,0.8s			pmax	pmax		
XAN	Xi'an	69.74	313	P	P	23 35 04.4	+1.8
XAN				pP	pwP	23 35 15.3	+0.9
XAN				PcP	PcP	23 35 27.7	+2.4
XAN	comp=Z,6.0nm,0.9s			pmax	pmax		
XAN	Xi'an comp=Z,4.9nm,0.8s	69.74	313	eP	P	23 35 04.5	+1.8
KMI	Kunming	70.70	302	P	P	23 35 10.7	+1.8
KMI				pP	pP	23 35 13.9	-3.3
KMI				sP	sP	23 35 16.3	-4.0
KMI	comp=Z,3.0nm,1.2s			pmax	pmax		
HHC	Hu-ho-hao-te	71.49	320	eP	P	23 35 14.7	+1.5
HHC	comp=Z,7.0nm,1.1s			pmax	pmax		
CMAR	Chiang Mai Arr comp=Z,0.7nm,0.3s,baz=119,slow=4.7,SNR=3.4	71.67	294	P	P	23 35 14.9	+0.3
LZH	Lanzhou	74.38	312	eP	P	23 35 31.5	+0.9
LZH				pP	pP	23 35 40.4	+1.6
LZH				sP	PcP	23 35 44.8	-0.4
LZH				PP	PP	23 38 20.6	+3.5
LZH				sS	sS	23 45 14.0	-3.0
LZH	Lanzhou	74.38	312	SS	SS	23 49 51.0	+0.8
LZH	comp=Z,20nm,1.0s			pmax	pmax		
LZH	comp=Z,89nm,4.3s			pmax	pmax		
LZH	comp=N,340nm,16.0s			LR	LR		
LZH	comp=E,340nm,16.0s			LR	LR		
LZH	comp=Z,490nm,17.1s			LR	LR		
ULN	Ulaanbaatar comp=Z,4.2nm,0.9s	77.98	324	eP	P	23 35 51.0	+0.2
SONM	Songino Array comp=Z,0.3nm,0.6s,baz=122,slow=7.4,SNR=4.3	78.34	324	P	P	23 35 50.0	-2.7
SONA1	Songino Array	78.35	324	eP	P	23 35 54.3	+1.5
GTA	Gaotai	78.68	314	⇓P	P	23 35 57.5	+2.7
GTA				pP	pP	23 36 02.2	-0.9
GTA				sP	PcP	23 36 04.6	+0.9
GTA	comp=Z,2.0nm,1.1s			pmax	pmax		
QSPA	South Pole Qui comp=Z,6.1nm,0.8s	79.02	180	eP	P	23 35 56.1	-0.2
CAST	Castle Rocks comp=Z,3.7nm,0.7s	81.03	18	eP	P	23 36 05.7	-1.1
ILAR	Eielson Array comp=Z,2.2nm,0.6s,baz=232,slow=5.9,SNR=8.6	83.60	19	P	P	23 36 18.5	-1.8
DAWY	Dawson comp=Z,2.6nm,0.8s	85.66	21	eP	P	23 36 30.9	+0.1
TIXI	Tiksi comp=Z,0.6nm,0.3s,baz=123,slow=6.0,SNR=2.7	85.94	349	P	P	23 36 31.0	-0.9
NV01	Mina Array Sit	86.33	50	eP	P	23 36 33.9	-1.0
NVAR	Mina Array Bea comp=Z,1.4nm,0.8s,baz=231,slow=8.1,SNR=7.9	86.33	50	P	P	23 36 33.9	-1.0
WMQ	Urumqi	88.73	315	P	P	23 36 47.8	+1.7
WMQ				pP	pP	23 36 52.7	-1.7
WMQ				sP	sP	23 36 55.7	-1.7
WMQ	comp=Z,19nm,0.9s			pmax	pmax		
WMQ	comp=Z,240nm,4.9s			pmax	pmax		
WMQ	comp=N,170nm,27.5s			LR	LR		
WMQ	comp=E,210nm,16.5s			LR	LR		
WMQ	comp=Z,240nm,20.9s			LR	LR		
ELK	Elko comp=Z,138nm,19.7s,baz=262,slow=30	89.25	48	LR	LR	00 08 12.7	
U15A	North Rim comp=Z,2.9nm,0.8s	90.43	53	eP	P	23 36 54.6	+0.1
HVU	Hansel Valley comp=Z,17nm,1.9s	91.30	48	eP	P	23 36 58.0	-0.3
SYO	Syowa Base	91.71	197	⇓iX	P	23 37 09.0	+10
MK01	Makanchi Array	93.15	317	eP	P	23 37 05.8	-0.8
MK31	Makanchi Array	93.16	317	eP	P	23 37 06.5	-0.1
MKAR	Makanchi Array comp=Z,1.5nm,0.7s,baz=97,slow=6.6,SNR=14	93.16	317	P	P	23 37 05.5	-1.1
ZALV	Zalesovo Beam comp=Z,1.2nm,0.7s,baz=106,slow=5.3,SNR=5.7	93.24	324	P	P	23 37 05.8	-0.9
MAKZ	Makanchi comp=Z,13nm,2.0s	93.38	317	eP	P	23 37 09.4	+1.8
PV23	Carpenter Ridg comp=Z,5.7nm,0.8s	93.41	52	eP	P	23 37 11.1	+2.9
PDAR	Pinedale Array comp=Z,0.4nm,0.7s,baz=90,slow=1.5,SNR=5.1	93.84	47	P	P	23 37 08.2	-1.9
YKA	Yellowknife Ar comp=Z,0.6nm,0.6s,baz=258,slow=4.6,SNR=12	95.12	27	P	P	23 37 11.9	-3.3
TXAR	Lajitas Array comp=Z,0.3nm,0.8s,baz=214,slow=4.7,SNR=4.5	96.20	61	P	P	23 37 20.2	-0.7
SDV	Santo Domingo	124.95	87	ePKPdf	PKPdf	23 42 52.2	-1.5

*IDC **06** 23:26:27.0±1.0, 10°.79S×165°.29E, h0^{km}, mb4.1/13, mb1 4.3/15, mb1mx4.1/43, mbtmp4.1/15, ML4.3/2, Error ellipse: s-maj=27.7km s-min=19.2km az=144.0*

*NEIC **06** 23:26:28.8±0.4, 10°.75S×165°.33E, h10^{km}, mb4.3/10, Error ellipse: s-maj=9.9km s-min=8.3km az=71.0*

*ISCJB **06** 23:26:30.3±0.4, 10°.86S±0°.06×165°.21E±0°.06, h30^{km}, mb4.1/19, Error ellipse: s-maj=9.3km s-min=7.4km az=138.0*

ISC 06 23:26:31.8±0.6**,10°.75S**±0°.09×**165°.27E**±0°.09**,h30^{km},n40, σ0^{s}.99**/33**,mb4.2**/19**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 6.1nm,0.3s,baz=61,slow=19,SNR=1.6	5.40	284	Pn	Pn	23 27 49.5	-0.9
HNR	8.7nm,0.3s,baz=237,slow=17,SNR=1.9			Sn	Sn	23 28 52.7	+1.1
DZM	Mont Dzumac 3.4nm,0.3s,baz=299,slow=16,SNR=7.8	11.31	174	Pn	Pn	23 29 10.5	-1.1
ONTNC	Ouen Toro	11.55	175	ePn	Pn	23 29 15.5	+0.8
OUENC	Ouen Island, N	11.70	173	ePn	Pn	23 29 16.6	-0.2
MSVF	Nonsavu	14.20	121	ePn	Pn	23 29 46.5	-4.6
MANU	Manus Island 74nm,1.1s	19.77	295	eP	Pn	23 31 02.4	+1.0
CTA	Charters Tower 23nm,1.1s,baz=69,slow=13,SNR=4.6	20.53	241	P	P	23 31 07.7	-0.3
CTAO	Charters Tower 25nm,0.9s	20.53	241	eP	Pn	23 31 09.9	-0.4
COEN	Coen 3.7nm,0.8s	21.81	259	eP	P	23 31 21.1	-0.7
ARMA	Armidale 8.2nm,1.0s	23.32	211	eP	P	23 31 38.6	+0.9
H11S2	WAKE ISLAND Hy baz=186	29.09	3	T	T	00 03 03.5	
H11S3	WAKE ISLAND Hy baz=186	29.09	3	T	T	00 03 10.3	
H11S1	WAKE ISLAND Hy baz=186	29.11	3	T	T	00 03 14.0	
BKZ	Black Stump Fm 15nm,1.2s	30.01	162	eP	P	23 32 38.2	+0.1
H11N1	WAKE ISLAND Hy baz=189	30.32	3	T	T	00 04 31.1	
H11N3	WAKE ISLAND Hy baz=189	30.32	3	T	T	00 04 39.0	
H11N2	WAKE ISLAND Hy baz=189	30.33	3	T	T	00 04 37.4	
WR1	Warramunga Arr 4.0nm,0.9s	31.14	249	eP	P	23 32 46.6	-1.7
WRA	Warramunga Arr 0.4nm,0.6s,baz=72,slow=6.9,SNR=2.9	31.14	249	P	P	23 32 46.6	-1.7
THZ	Tophouse 8.9nm,0.8s	31.61	169	eP	P	23 32 53.4	+1.3
AS01	Alice Springs	32.47	243	eP	P	23 33 00.1	+0.2
AS31	Alice Springs 1.7nm,0.9s	32.51	243	eP	P	23 32 58.5	-1.7
ASAR	Alice Springs 4.3nm,0.8s,baz=73,slow=9.0,SNR=8.7	32.51	243	P	P	23 32 59.5	-0.8
JNU	Nakatsue 12nm,0.9s,baz=106,slow=7.4,SNR=3.7	54.57	324	P	P	23 35 57.2	-0.4
ASAJ	Asahikawa 5.5nm,0.6s,baz=153,slow=10,SNR=3.4	58.37	341	P	P	23 36 24.2	-0.1
CMAR	Chiang Mai Arr 0.7nm,0.4s,baz=124,slow=4.5,SNR=3.8	71.57	294	P	P	23 37 51.7	+0.9
SONA0	Songino Array	78.15	324	eP	P	23 38 28.1	-0.3
SONM	Songino Array 0.2nm,0.7s,baz=125,slow=6.3,SNR=2.0	78.15	324	P	P	23 38 28.1	-0.3
ILAR	Eielson Array 0.6nm,0.6s,baz=237,slow=4.9,SNR=5.9	83.39	19	P	P	23 38 56.7	+0.9
ILB	Eielson Array 1.4nm,0.9s	83.39	19	eP	P	23 38 56.7	+0.9
NV01	Mina Array Sit	86.19	50	eP	P	23 39 11.2	+0.3
NVAR	Mina Array Bea 1.1nm,0.9s,baz=235,slow=6.3,SNR=4.3	86.19	50	P	P	23 39 11.2	+0.3
MK01	Makanchi Array	92.98	317	eP	P	23 39 42.7	+0.3
MK31	Makanchi Array 1.2nm,1.1s	92.99	317	eP	P	23 39 43.5	+1.0
MK32	Makanchi Array	92.99	317	eP	P	23 39 43.1	+0.6
MKAR	Makanchi Array 0.8nm,0.9s,baz=95,slow=7.2,SNR=4.9	92.99	317	P	P	23 39 43.1	+0.6
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=106,slow=5.2,SNR=3.9	93.05	324	P	P	23 39 43.7	+1.2
ZAA1	Zalesovo Array	93.05	324	eP	P	23 39 43.7	+1.2
PDAR	Pinedale Array 0.2nm,0.4s,baz=220,slow=5.8,SNR=3.5	93.70	47	P	P	23 39 45.8	-0.3
YKA	Yellowknife Ar 0.2nm,0.6s,baz=260,slow=4.8,SNR=3.6	94.93	27	P	P	23 39 48.9	-2.0

*ISCJB **06** 23:27:53.7±0.2, 10°.57S±0°.05×166°.07E±0°.06, h10^{km}, mb4.5/45, Error ellipse: s-maj=9.3km s-min=6.3km az=31.8*

*IDC **06** 23:27:53.6±0.8, 10°.52S×166°.12E, h0^{km}, mb4.3/15, mb1 4.5/16, mb1mx4.3/41, mbtmp4.2/16, ML2.7/1, Error ellipse: s-maj=24.4km s-min=18.0km az=124.0*

*NEIC **06** 23:27:55.2±0.2, 10°.50S×166°.13E, h10^{km}, mb4.6/34, Error ellipse: s-maj=7.1km s-min=4.8km az=124.0*

ISC 06 23:27:55.2±0.6**,10°.50S**±0°.09×**166°.1E**±0°.1**,h10^{km},n68, σ0^{s}.83**/60**,mb4.6**/45**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.1nm,0.3s,baz=350,slow=18,SNR=2.4	11.51	179	Pn	Pn	23 30 39.5	-0.3
ONTNC	Ouen Toro	11.75	178	ePn	Pn	23 30 42.9	-0.1
OUENC	Ouen Island, N	11.87	177	ePn	Pn	23 30 45.6	+1.0
PINNC	Pines Island,	12.11	174	ePn	Pn	23 30 49.0	+1.1
MANU	Manus Island 23nm,0.8s	20.43	293	eP	Pn	23 32 35.2	+0.2
EIDS	Eidsvold 16nm,0.9s	20.55	222	eP	Pn	23 32 34.8	-1.5
CTA	Charters Tower 18nm,1.1s,baz=66,slow=14,SNR=4.1	21.38	241	P	P	23 32 43.7	+0.5
CTAO	Charters Tower 29nm,1.1s	21.38	241	eP	P	23 32 44.4	+1.2
ARMA	Armidale 18nm,1.1s	23.98	212	eP	P	23 33 09.6	-0.5
H11S2	WAKE ISLAND Hy baz=176,slow=74	28.81	1	T	T	00 04 21.3	
H11S3	WAKE ISLAND Hy baz=176,slow=74	28.81	1	T	T	00 04 17.9	
H11S1	WAKE ISLAND Hy baz=176	28.83	1	T	T	00 04 22.2	
H11N1	WAKE ISLAND Hy baz=182,slow=77,SNR=7.0	30.03	1	T	T	00 05 56.6	
H11N3	WAKE ISLAND Hy baz=182,slow=77,SNR=6.2	30.04	1	T	T	00 05 55.1	
H11N2	WAKE ISLAND Hy baz=182,slow=77,SNR=6.8	30.05	1	T	T	00 05 56.3	
WB2	Warramunga Arr 6.6nm,1.0s	32.01	249	eP	P	23 34 21.6	-0.5
WR1	Warramunga Arr 6.1nm,0.8s	32.02	249	eP	P	23 34 21.7	-0.5
WRA	Warramunga Arr 5.3nm,0.8s,baz=79,slow=9.0,SNR=7.8	32.02	249	P	P	23 34 21.7	-0.5
AS01	Alice Springs	33.33	243	eP	P	23 34 32.5	-1.2
AS31	Alice Springs 2.0nm,0.9s	33.37	243	eP	P	23 34 32.9	-1.1
ASAR	Alice Springs 6.9nm,1.0s,baz=74,slow=9.3,SNR=9.5	33.37	243	P	P	23 34 33.1	-0.9
RPZ	Rata Peaks 13nm,0.9s,baz=323,slow=10,SNR=5.7	33.37	173	P	P	23 34 33.3	-0.4
MJAR	Matsushiro Arr 2.6nm,0.7s,baz=163,slow=8.0,SNR=4.4	53.66	332	P	P	23 37 15.7	-1.4
MAJO	Matsushiro	53.66	332	eP	P	23 37 15.7	-1.4
USRK	Ussuriysk Ar. 5.8nm,1.0s,baz=126,slow=9.1,SNR=3.2	62.63	333	P	P	23 38 20.9	+1.1
CMAR	Chiang Mai Arr 0.4nm,0.3s,baz=125,slow=4.7,SNR=3.3	72.24	293	P	P	23 39 21.1	-0.1
BILL	Bilibino 8.8nm,1.1s	78.33	0	eP	P	23 39 56.3	+1.1
SONA0	Songino Array	78.45	324	eP	P	23 39 57.0	+0.4
SONM	Songino Array 0.7nm,0.8s,baz=153,slow=6.7,SNR=4.1	78.45	324	P	P	23 39 57.0	+0.4
IL1	Eielson Array	82.88	18	eP	P	23 40 19.6	-0.1
ILAR	Eielson Array 2.0nm,0.8s,baz=227,slow=5.8,SNR=8.3	82.88	18	P	P	23 40 20.0	+0.3
ILB	Eielson Array 3.4nm,0.9s	82.88	18	eP	P	23 40 19.3	-0.4
SCRK	Sand Creek 4.1nm,1.0s	83.28	20	eP	P	23 40 22.8	+0.8
ORV	Oroville 3.2nm,1.0s	83.37	48	eP	P	23 40 23.3	+0.4
AFDM	Forest Hills D 9.1nm,1.2s	83.56	49	eP	P	23 40 25.1	+1.2
BEKR	Beckworth 6.1nm,1.2s	84.31	48	eP	P	23 40 28.0	+0.2
ISA	Isabella, Lake 3.0nm,1.0s	84.45	52	eP	P	23 40 28.7	+0.2
NV01	Mina Array Sit	85.39	50	eP	P	23 40 33.7	+0.3
NVAR	Mina Array Bea 4.4nm,1.1s,baz=234,slow=6.8,SNR=11	85.39	50	P	P	23 40 34.1	+0.7
NV11	Mina Array Sit 0.5nm,1.1s	85.50	50	eP	P	23 40 33.5	-0.3
TIXI	Tiksi 0.9nm,0.3s,baz=143,slow=4.3,SNR=3.8	85.63	349	P	P	23 40 33.4	-0.1

KVN	Kaiserville	85.72	49	*e*P	P	23 40 35.1	+0.1
	4.1nm,1.1s						
WVOR	Wild Horse Val	86.34	46	*e*P	P	23 40 39.2	+1.3
	4.3nm,1.0s						
J08A	Circle Bar Ran	86.74	45	*e*P	P	23 40 39.6	-0.2
	7.1nm,1.1s						
G08A	Pilot Rock	87.00	43	*e*P	P	23 40 40.6	-0.4
	5.5nm,1.1s						
R11A	Troy Canyon, C	87.42	50	*e*P	P	23 40 43.8	+0.5
	3.2nm,1.1s						
Y14A	Wickenburg	88.33	55	*e*P	P	23 40 46.5	-1.1
	3.0nm,1.0s						
PSUT	Pine Spring	88.78	51	*e*P	P	23 40 49.8	0.0
	3.7nm,1.1s						
LCMT	Little Creek M	88.88	52	*e*P	P	23 40 49.3	-0.9
	6.6nm,1.1s						
CCUT	Cedar City	88.91	52	*e*P	P	23 40 51.9	+1.4
	6.3nm,1.1s						
U15A	North Rim	89.48	53	*e*P	P	23 40 53.1	-0.2
	6.3nm,0.9s						
HLID	Hailey	89.63	46	*e*P	P	23 40 52.6	-1.0
	2.6nm,1.1s						
X16A	Lo Mia Camp, P	89.70	55	*e*P	P	23 40 53.9	-0.4
	4.9nm,0.9s						
TUC	Tucson	89.78	57	*e*P	P	23 40 54.9	+0.4
	3.6nm,1.0s						
MTPU	Mount Pierson	89.94	51	*e*P	P	23 40 56.7	+1.2
	5.5nm,1.0s						
WUAZ	Wupatki	90.00	54	*e*P	P	23 40 56.2	+0.6
	6.6nm,1.0s						
MSU	Marysvale	90.05	51	*e*P	P	23 40 55.0	-0.8
MPU	Maple Canyon	90.80	50	*e*P	P	23 40 58.1	-1.2
	5.5nm,1.2s						
JLU	Jordanelle	91.07	49	*e*P	P	23 40 59.3	-1.2
	3.6nm,1.1s						
DLMT	Dillon	91.33	44	*e*P	P	23 41 00.6	-1.0
	4.4nm,0.8s						
BOZ	Bozeman (W)	92.05	44	*e*P	P	23 41 05.9	+1.1
	4.9nm,1.1s						
PD31	Pinedale Array	92.91	47	*e*P	P	23 41 08.8	-0.3
	0.9nm,1.0s						
PDAR	Pinedale Array	92.91	47	P	P	23 41 08.7	-0.3
	1.1nm,1.0s,baz=222,slow=3.8,SNR=4.9						
MK32	Makanchi Array	93.38	317	*e*P	P	23 41 11.9	+1.1
MKAR	Makanchi Array	93.38	317	P	P	23 41 11.9	+1.1
	0.4nm,0.8s,baz=102,slow=5.6,SNR=2.6						
YKA	Yellowknife Ar	94.32	27	P	P	23 41 13.0	-1.6
	0.3nm,0.7s,baz=257,slow=4.9,SNR=4.1						
LTX	Lajitas	95.24	61	*e*P	P	23 41 19.8	0.0
TXAR	Lajitas Array	95.24	61	P	P	23 41 19.8	0.0
	0.5nm,0.9s,baz=197,slow=3.9,SNR=3.5						

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*IDC **06** 23:30:25.5±0.6, 10°.80S×165°.08E, h0^{km}, mb4.6/18, mb1 4.7/20, mb1mx4.5/42, mbtmp4.6/20, ML4.5/2, Error ellipse: s-maj=20.8km s-min=15.6km az=119.0*

*NEIC **06** 23:30:27.3±0.1, 10°.79S×165°.06E, h10^{km}, mb4.9/59, Error ellipse: s-maj=4.9km s-min=4.3km az=128.0*

*ISCJB **06** 23:30:28.9±0.2, 10°.86S±0°.04×165°.02E±0°.04, h31^{km}, mb4.8/79, Error ellipse: s-maj=6.0km s-min=4.9km az=38.5*

*GCMT **06** 23:30:28.3±0.4, 10°.83S±0°.03×165°.07E±0°.04, h29^{km}±1^{km}, MW5.1/62, Moment Tensor Solution. s27,c29; s62,c71; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.37±.48; $M_{\theta\theta}$4.55±.29; $M_{\phi\phi}$1.81±.28; $M_{r\theta}$-0.12±.39; $M_{\theta\phi}$-1.15±.18; $M_{\phi r}$-0.69±.52; Best double couple: $M_0$5.70100×10^{16} NP1:ϕ_s295.00000°,δ46.00000°,λ-83.00000°. NP2: ϕ_s105.00000°,δ45.00000°,λ-97.00000°. Principal axes: T 4.9700, Plg1.0000°, Azm20.0000°; N 1.4530, Plg5.0000°, Azm110.0000°; P -6.4330, Plg85.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 23:30:30.5±0.4, **10°.83S**±0°.06×**165°.04E**±0°.07, **h31**^{km}**, n152, σ1^{s}.33**/153, **mb4.9**/79, **2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.20	285	*e*P	Pn	23 31 46.0	-0.2
HNR	Honiara	5.20	285	*e*Pn	Pn	23 31 46.3	+0.2
HNR				*e*Sn	Sn	23 32 38.7	-6.5
HNR	Honiara	5.20	285	Pn	Pn	23 31 46.4	+0.2
	22nm,0.3s,baz=193,slow=3.1,SNR=7.0						
MARNC	Mare, Loyalty	10.97	165	*e*Pn	Pn	23 33 01.4	-3.9
DZM	Mont Dzumac	11.26	173	*e*Pn	Pn	23 33 08.6	-0.8
DZM	Mont Dzumac	11.26	173	Pn	Pn	23 33 08.9	-0.5
	3.1nm,0.3s,baz=164,slow=23,SNR=6.9						
ONTNC	Ouen Toro	11.49	173	*e*Pn	Pn	23 33 11.7	-0.8
OUENC	Ouen Island, N	11.65	172	*e*Pn	Pn	23 33 09.6	-5.0
PINNC	Pines Island,	11.94	169	*e*Pn	Pn	23 33 19.2	+0.5
MSVF	Nonsavu	14.35	120	*e*Pn	Pn	23 33 51.1	-0.6
EIDS	Eidsvold	19.59	221	*e*P	Pn	23 34 59.5	+1.8
	49nm,1.3s						
MANU	Manus Island	19.60	295	*e*P	Pn	23 34 56.9	-0.9
	165nm,1.0s						
CTA	Charters Tower	20.29	241	P	P	23 35 04.5	+0.6
	76nm,1.0s,baz=66,slow=12,SNR=20						
CTAO	Charters Tower	20.29	241	*e*P	P	23 35 05.0	+1.1
CTAO				*e*Pn	Pn	23 35 06.0	0.0
MTSU	Mount Surprise	21.32	248	P	P	23 35 12.5	-2.5
	baz=21,SNR=7.7						
RMQ	Roma	21.88	222	P	P	23 35 22.6	+1.7
	baz=22,SNR=18						
ARMA	Armidale	23.14	211	P	P	23 35 35.2	+0.9
	baz=23,SNR=7.4						
ARMA	Armidale	23.14	211	*e*P	P	23 35 34.2	-0.1
QLP	Quilpie	25.11	229	P	P	23 35 53.7	+1.0
	baz=25,SNR=25						
QIS	Mount Isa	26.29	245	P	P	23 36 02.6	-0.9
	baz=26,SNR=4.5						
CMSA	Cobar Meteorol	27.30	218	P	P	23 36 13.6	+1.2
	baz=27,SNR=6.6						
H11S2	WAKE ISLAND Hy	29.18	3	T	T	00 06 59.0	
	baz=184,slow=76,SNR=6.2						
H11S3	WAKE ISLAND Hy	29.18	3	T	T	00 06 59.7	
	baz=184,slow=76,SNR=6.9						
H11S1	WAKE ISLAND Hy	29.20	3	T	T	00 07 03.0	
	baz=184,slow=76,SNR=5.8						
URZ	Urewera	29.38	160	P	P	23 36 31.6	+0.8
	3.6nm,0.6s,baz=329,slow=5.9,SNR=2.2						
BKZ	Black Stump Fm	30.01	162	*e*P	P	23 36 37.7	+1.2
	77nm,1.8s						
STKA	Stephens Creek	30.12	222	P	P	23 36 40.0	+2.4
	baz=30,SNR=7.1						
STKA	Stephens Creek	30.12	222	*e*P	P	23 36 39.0	+1.4
	4.7nm,0.9s						
STKA	Stephens Creek	30.12	222	P	P	23 36 38.1	+0.6
	12nm,0.7s,baz=33,slow=10.0,SNR=15						
H11N1	WAKE ISLAND Hy	30.41	3	T	T	00 08 37.6	
	baz=184,slow=76,SNR=7.8						
H11N3	WAKE ISLAND Hy	30.41	3	T	T	00 08 37.9	
	baz=184,slow=76,SNR=6.7						
H11N2	WAKE ISLAND Hy	30.43	3	T	T	00 08 36.7	
	baz=184,slow=76,SNR=6.6						
WRAB	Tennant Creek	30.89	249	*e*P	P	23 36 44.2	-0.3
	22nm,1.1s						
WB2	Warramunga Arr	30.90	249	*e*P	P	23 36 42.8	-1.7
WR1	Warramunga Arr	30.91	249	*e*P	P	23 36 43.1	-1.5
	23nm,1.1s						
WR1				*e*PcP	PcP	23 39 41.2	+0.2
WRA	Warramunga Arr	30.91	249	P	P	23 36 43.1	-1.5
	7.5nm,1.1s,baz=79,slow=9.5,SNR=9.2						
WRA				PcP	PcP	23 39 41.2	+0.2
	0.9nm,0.8s,baz=76,slow=3.6,SNR=3.7						
TOO	Toolangi	31.90	210	P	P	23 36 55.6	+2.4
	baz=32,SNR=5.0						
AS01	Alice Springs	32.23	243	*e*P	P	23 36 54.9	-1.3
AS31	Alice Springs	32.27	243	*e*P	P	23 36 56.0	-0.7
	2.7nm,0.9s						
AS31				*e*PcP	PcP	23 39 44.5	-0.1
ASAR	Alice Springs	32.27	243	P	P	23 36 55.2	-1.4
	7.6nm,0.8s,baz=69,slow=9.2,SNR=18						
ASAR				PcP	PcP	23 39 44.5	-0.1
	1.0nm,0.8s,baz=57,slow=3.4,SNR=4.1						
LTZ	Lake Taylor	32.45	170	*e*P	P	23 36 58.7	+0.7
	26nm,1.0s						
HTT	Hallett	32.85	223	P	P	23 37 03.0	+1.3
	baz=33,SNR=18						
OXZ	Oxford	32.94	171	*e*P	P	23 37 04.8	+2.6
	50nm,1.5s						
BBOO	Buckleboo	34.47	226	P	P	23 37 16.0	+0.4
	baz=34,SNR=18						
BBOO	Buckleboo	34.47	226	*e*P	P	23 37 15.6	0.0
	41nm,0.8s						
WRKA	Warakurna	37.56	243	P	P	23 37 41.9	-0.4
	baz=38,SNR=7.9						
FITZ	Fitzroy Crossi	38.77	255	P	P	23 37 50.5	-1.9
	baz=39,SNR=3.9						
FITZ	Fitzroy Crossi	38.77	255	*e*P	P	23 37 53.6	+1.2
	15nm,0.9s						
FORT	Forrest	39.60	234	*e*P	P	23 37 58.8	-0.5
KSRS	Korea Array	59.31	326	P	P	23 40 29.3	-0.2
	3.0nm,0.9s,baz=134,slow=5.4,SNR=4.6						
KS15	Wonju Array Si	59.32	326	*e*P	P	23 40 29.2	-0.3
KSAR	Wonju Array Be	59.32	326	P	P	23 40 29.2	-0.3
KS01	Wonju Array Si	59.34	326	*e*P	P	23 40 31.6	+1.9
USRK	Ussuriysk Ar.	62.45	334	P	P	23 40 51.6	+1.0
	7.9nm,1.1s,baz=139,slow=9.0,SNR=5.1						
PETK	Petropavlovsk-	63.99	355	P	P	23 41 01.6	+0.9
	8.7nm,0.9s,baz=167,slow=8.7,SNR=5.4						
PEA1	Petropavlovsk-	64.00	355	*e*P	P	23 41 01.6	+0.8
CN2	Changchun	65.20	329	*e*P	P	23 41 09.5	+0.7
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
ENH	Enshi	67.22	309	*e*P	P	23 41 21.6	-0.5
	comp=Z,30nm,1.0s						
GYA	Guiyang	67.72	304	⇑*i*P	P	23 41 25.9	+0.4
GYA				PP	PP	23 43 59.6	+4.4
GYA				S	S	23 50 24.0	+2.5
GYA				SKS	ScS	23 51 22.3	-0.1
GYA	Guiyang	67.72	304	SS	SS	23 54 47.9	+4.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
PBKT	Sadao Pong	68.96	292	*e*P	P	23 41 34.0	+0.8
XAN	Xi'an	69.47	313	P	P	23 41 36.2	+0.1
XAN				pP	sP	23 41 47.3	0.0
XAN				sP	pwP	23 41 51.4	+0.8
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				LR	LR		
	comp=E,150nm,16.3s						
XAN				LR	LR		
	comp=Z,210nm,11.9s						
XAN	Xi'an	69.47	313	*e*P	P	23 41 36.9	+0.8
	comp=Z,13nm,1.0s						
KMI	Kunming	70.42	302	P	P	23 41 44.5	+2.1
KMI				pP	pwP	23 41 56.6	-0.2
KMI				sP	PcP	23 42 00.8	-2.9
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
KMI				pmax	pmax		
	comp=Z,120nm,5.7s						
KMI	Kunming	70.42	302	*e*P	P	23 41 45.5	+3.2
	comp=Z,35nm,1.3s						
HHC	Hu-ho-hao-te	71.22	320	*e*P	P	23 41 49.2	+2.4
HHC				PcP	PcP	23 42 06.0	-0.6
HHC				S	S	23 51 03.5	+1.3
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,3.9s						
HHC				LR	LR		
	comp=N,130nm,9.5s						
HHC				LR	LR		
	comp=E,170nm,10.4s						
HHC				LR	LR		
	comp=Z,140nm,12.1s						
CM01	Chiang Mai Arr	71.36	294	*e*P	P	23 41 49.5	+1.5
CM31	Chiang Mai Arr	71.39	294	*e*P	P	23 41 48.6	+0.4
CMAR	Chiang Mai Arr	71.39	294	P	P	23 41 48.6	+0.4
	comp=Z,3.0nm,0.7s,baz=120,slow=4.2,SNR=16						
CHTO	Chiang Mai	71.50	294	*e*P	P	23 41 49.6	+0.8
	comp=Z,22nm,1.5s						
CHTO	Chiang Mai	71.50	294	P	P	23 41 51.2	+2.4
	comp=Z,37nm,1.4s						
CD2	Chengdu	71.92	308	⇑P	P	23 41 51.5	+0.3
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH	Lanzhou	74.10	312	*e*P	P	23 42 05.6	+1.5
LZH				pP	sP	23 42 14.0	-1.3
LZH				sP	pwP	23 42 16.9	-1.7
LZH				pmax	pmax		
	comp=Z,33nm,1.4s						
ULN	Ulaanbaatar	77.72	324	*e*P	P	23 42 25.6	+1.1
	comp=Z,9.9nm,0.9s						
SONA0	Songino Array	78.08	324	*e*P	P	23 42 26.8	+0.3
SONM	Songino Array	78.08	324	P	P	23 42 26.8	+0.3
	comp=Z,4.9nm,1.0s,baz=137,slow=5.6,SNR=22						
SONA1	Songino Array	78.09	324	*e*P	P	23 42 26.9	+0.4
GTA	Gaotai	78.41	314	*e*P	P	23 42 29.9	+1.4
GTA				pP	pP	23 42 35.4	-1.3
GTA				sP	sP	23 42 38.6	-1.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,130nm,6.0s						
GTA				LR	LR		
	comp=N,160nm,17.5s						
GTA				LR	LR		
	comp=E,230nm,16.8s						
GTA				LR	LR		
	comp=Z,130nm,18.7s						
ANM	Nome	78.43	13	*e*P	P	23 42 29.7	+1.8
	comp=Z,18nm,1.6s						
BILL	Bilibino	78.67	0	*e*P	P	23 42 29.7	+0.6
	comp=Z,20nm,1.1s						
QSPA	South Pole Qui	79.17	180	*e*P	P	23 42 33.3	+1.1
	comp=Z,23nm,1.1s						
SHL	Shillong	79.81	299	*e*P	P	23 42 35.4	-1.1
	comp=Z,47nm,1.6s						
TLY	Talaya	81.56	326	*e*P	P	23 42 44.6	-0.5
	comp=Z,40nm,1.5s						
MDM	Murphy Dome	83.24	18	*e*P	P	23 42 52.5	-1.1
	comp=Z,16nm,1.6s						
HDA	Harding Lake	83.27	19	*e*P	P	23 42 53.5	-0.2
	comp=Z,10nm,0.9s						
IL1	Eielson Array	83.53	19	*e*P	P	23 42 54.5	-0.6
ILAR	Eielson Array	83.53	19	P	P	23 42 53.8	-1.2
	comp=Z,2.5nm,0.8s,baz=228,slow=6.1,SNR=17						
ILB	Eielson Array	83.53	19	*e*P	P	23 42 55.0	0.0
	comp=Z,15nm,1.6s						
SCRK	Sand Creek	83.95	20	*e*P	P	23 42 57.6	+0.2
	comp=Z,9.4nm,1.2s						
ORV	Oroville	84.39	48	*e*P	P	23 42 59.6	-0.4
	comp=Z,13nm,1.6s						
AFDM	Forest Hills D	84.58	49	*e*P	P	23 43 00.7	-0.3
	comp=Z,7.9nm,1.1s						
CMB	Columbia Colle	84.73	50	*e*P	P	23 43 01.2	-0.7
	comp=Z,7.0nm,1.2s						
EGAK	Eagle	85.42	20	*e*P	P	23 43 04.6	+0.1
	comp=Z,15nm,1.3s						
WAKR	Walker	85.59	50	*e*P	P	23 43 07.0	+0.7
	comp=Z,15nm,1.5s						
MDPB	Devils Postpil	85.60	51	*e*P	P	23 43 05.1	-1.4
	comp=Z,6.4nm,1.0s						
DAWY	Dawson	85.61	21	*e*P	P	23 43 06.2	+0.6
	comp=Z,29nm,2.0s						
OMMB	Old Mammoth Mi	85.65	51	*e*P	P	23 43 05.5	-1.3
	comp=Z,8.5nm,1.3s						
TIXI	Tiksi	85.75	349	*e*P	P	23 43 05.8	-0.2
	comp=Z,14nm,1.4s						
PAHR	Pah Rah Range	85.99	48	*e*P	P	23 43 08.0	-0.2
	comp=Z,7.7nm,1.2s						
NV01	Mina Array Sit	86.42	50	*e*P	P	23 43 10.2	-0.2
NVAR	Mina Array Bea	86.42	50	P	P	23 43 10.2	-0.2
	comp=Z,4.1nm,0.9s,baz=230,slow=7.8,SNR=15						
NV11	Mina Array Sit	86.53	50	*e*P	P	23 43 10.7	-0.2
	comp=Z,0.5nm,1.0s						
WVOR	Wild Horse Val	87.34	46	*e*P	P	23 43 14.2	-0.5
	comp=Z,9.7nm,1.2s						
LTY	Liberty	87.45	41	*e*P	P	23 43 13.9	-1.2
	comp=Z,6.6nm,0.8s						
J08A	Circle Bar Ran	87.72	45	*e*P	P	23 43 16.9	+0.3
	comp=Z,16nm,1.4s						
G08A	Pilot Rock	87.97	43	*e*P	P	23 43 17.2	-0.5
	comp=Z,8.1nm,1.1s						
WMQ	Urumqi	88.45	315	P	P	23 43 20.2	+0.3
WMQ				pP	pP	23 43 24.4	-3.9
WMQ				sP	pwP	23 43 33.8	-0.9
WMQ				pmax	pmax		
	comp=Z,17nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,590nm,5.9s						
WMQ				LR	LR		
	comp=N,170nm,30.1s						
WMQ				LR	LR		
	comp=E,270nm,20.1s						
WMQ				LR	LR		
	comp=Z,230nm,25.1s						
W13A	Hualapai Mount	88.96	54	*e*P	P	23 43 22.8	0.0
	comp=Z,7.1nm,1.4s						
ELK	Elko	89.33	48	*e*P	P	23 43 24.2	-0.1
	comp=Z,8.5nm,1.6s						
PSUT	Pine Spring	89.81	51	*e*P	P	23 43 26.8	+0.1
	comp=Z,5.3nm,1.1s						
LCMT	Little Creek M	89.92	52	*e*P	P	23 43 27.0	-0.1
	comp=Z,7.3nm,1.2s						
CCUT	Cedar City	89.96	52	*e*P	P	23 43 27.6	+0.2
	comp=Z,4.7nm,1.0s						
KNB	Kanab	90.25	52	*e*P	P	23 43 28.9	+0.3
	comp=Z,16nm,1.5s						
U15A	North Rim	90.53	53	*e*P	P	23 43 31.1	+1.0
	comp=Z,6.9nm,0.9s						
X16A	Lo Mia Camp, P	90.77	55	*e*P	P	23 43 30.6	-0.5
	comp=Z,3.0nm,0.9s						
MTPU	Mount Pierson	90.98	52	*e*P	P	23 43 33.0	+0.8
	comp=Z,5.0nm,1.0s						
BGU	Big Grassy Mou	90.99	49	*e*P	P	23 43 32.4	+0.4
	comp=Z,5.5nm,1.0s						
WUAZ	Wupatki	91.06	54	*e*P	P	23 43 32.1	-0.3
	comp=Z,4.7nm,0.9s						
MSU	Marysvale	91.09	51	*e*P	P	23 43 31.1	-1.5
HVU	Hansel Valley	91.38	48	*e*P	P	23 43 32.9	-0.9
	comp=Z,10nm,1.0s						
NLU	North Lily Min	91.48	50	*e*P	P	23 43 33.5	-0.9
	comp=Z,4.4nm,1.0s						
MCMT	McKenzie Canyo	92.02	45	*e*P	P	23 43 36.3	-0.5
DLMT	Dillon	92.31	44	*e*P	P	23 43 37.8	-0.2
	comp=Z,10nm,1.0s						
MK01	Makanchi Array	92.88	317	*e*P	P	23 43 40.6	+0.2
MK31	Makanchi Array	92.89	317	*e*P	P	23 43 40.5	+0.1
	comp=Z,26nm,1.9s						
MK32	Makanchi Array	92.89	317	*e*P	P	23 43 40.6	+0.2
MKAR	Makanchi Array	92.89	317	P	P	23 43 40.6	+0.2
	comp=Z,2.6nm,0.8s,baz=100,slow=5.4,SNR=15						
MKAR				PKKP	PKKPdf	00 00 50.4	-0.6
	comp=Z,0.7nm,0.8s,baz=290,slow=1.8,SNR=6.0						
ZAA0	Zalesovo Array	92.98	324	*e*P	P	23 43 40.0	-0.7
	comp=Z,8.6nm,1.4s						
ZALV	Zalesovo Beam	92.98	324	*e*P	P	23 43 39.9	-0.8
ZALV	Zalesovo Beam	92.98	324	P	P	23 43 39.6	-1.1
	comp=Z,0.6nm,0.3s,baz=96,slow=3.0,SNR=9.0						
ZAA1	Zalesovo Array	92.98	324	*e*P	P	23 43 39.6	-1.1
BOZ	Bozeman (W)	93.03	44	*e*P	P	23 43 40.9	-0.5
	comp=Z,4.9nm,1.0s						
FXWY	Fox Creek	93.04	46	*e*P	P	23 43 41.3	-0.2
	comp=Z,3.2nm,0.8s						
MAKZ	Makanchi	93.11	317	*e*P	P	23 43 42.0	+0.6
	comp=Z,13nm,1.4s						
PD31	Pinedale Array	93.92	47	*e*P	P	23 43 46.2	+0.6
	comp=Z,2.6nm,1.0s						
PDAR	Pinedale Array	93.92	47	*e*P	P	23 43 45.2	-0.3
PDAR	Pinedale Array	93.92	47	P	P	23 43 44.3	-1.3
	comp=Z,1.7nm,0.8s,baz=211,slow=2.6,SNR=9.8						
YKA	Yellowknife Ar	95.10	27	P	P	23 43 49.2	-1.0
	comp=Z,1.0nm,0.9s,baz=255,slow=4.8,SNR=12						
YKB5	Yellowknife Ar	95.10	27	*e*P	P	23 43 49.0	-1.2
NRIK	Noril'sk	95.68	340	P	P	23 43 52.4	-0.4
	comp=Z,0.6nm,0.3s,baz=114,slow=8.1,SNR=3.7						
KURK	Kurchatov	96.03	320	*e*P	P	23 43 54.7	0.0
KURBB	Kurchatov Arra	96.07	320	P	P	23 43 54.7	-0.2
	comp=Z,0.5nm,1.0s,baz=85,slow=3.5,SNR=5.2						
KSH	Kashi	96.08	309	P	P	23 43 58.2	+2.8
KSH	Kashi	96.08	309	pP	pP	23 44 03.1	-0.7
KSH	Kashi	96.08	309	S	S	23 55 14.3	+1.7
KSH	Kashi	96.08	309	sS	sS	23 55 22.6	-4.0
KSH				pmax	pmax		
	comp=Z,470nm,6.5s						
KSH				LR	LR		
	comp=N,230nm,5.9s						
KSH				LR	LR		
	comp=E,140nm,4.5s						
KSH				LR	LR		
	comp=Z,440nm,5.8s						
SDV	Santo Domingo	125.18	87	*e*PKPdf	PKPdf	23 49 25.3	-4.0
AKASG	Malin Array Be	126.30	327	PKP	PKiKP	23 49 29.8	-0.7
	comp=Z,0.1nm,0.3s,baz=81,slow=2.9,SNR=4.4						
AKBB	Malin Array Si	126.30	327	*e*PKPdf	PKPdf	23 49 27.1	-3.0
CLL	Collm	133.63	336	*e*PKPdf	PKPdf	23 49 43.0	-1.0
CLL				*e*		23 49 57.0	
KEST	Kesra	146.82	322	PKPbc	PKPab	23 50 10.4	-1.1
	comp=Z,6.2nm,0.9s,baz=45,slow=2.9,SNR=3.6						
ESDC	Sonseca Array	149.66	343	PKPbc	PKiKP	23 50 17.6	-1.0
	comp=Z,0.6nm,0.6s,baz=27,slow=3.2,SNR=3.5						

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*NEIC **06** 23:34:28.4±0.0, 16°.24N×98°.44W, h8^{km}, MD4.0(MEX), After MEX.*

MEX 06 23:34:28.4±0.9, **16°.24N×98°.44W, h8**^{km}±5^{km}**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.33	63	*i* P	Pg	23 34 34.2	-0.8
PNIG				*e*S	Sg	23 34 39.8	+0.4
PNIG	Pinotepa	0.33	63	*i* P	Pg	23 34 34.2	-0.8
PNIG				*e*S	Sg	23 34 39.8	+0.4
ACP2	Acapulco	1.53	295	*i* P	Pn	23 34 51.4	-4.6
VHO	Vista Hermosa	1.83	63	*e*P	Pn	23 34 56.7	-3.6
VHO				*e*S	Sn	23 35 19.2	-4.6
VHO	Vista Hermosa	1.83	63	*e*P	Pn	23 34 56.7	-3.6
VHO				*e*S	Sn	23 35 19.2	-4.6
CAIG	El Cayaco	1.93	295	*e*P	Pn	23 34 57.3	-4.2
CAIG				*i* S	Sn	23 35 21.4	-4.6
CAIG	El Cayaco	1.93	295	*e*P	Pn	23 34 57.3	-4.2
CAIG				*i* S	Sn	23 35 21.4	-4.6
HUIG	Huatulco	2.29	102	*e*P	Pn	23 35 03.8	-2.6
HUIG				*e*S	Sn	23 35 30.0	-4.8
HUIG	Huatulco	2.29	102	*e*P	Pn	23 35 03.8	-2.6
HUIG				*e*S	Sn	23 35 30.0	-4.8
PLIG	Platanillo	2.37	335	*i* P	Pn	23 35 06.7	-1.0
PLIG				*e*S	Sn	23 35 33.9	-3.1
PLIG	Platanillo	2.37	335	*i* P	Pn	23 35 06.7	-1.0
PLIG				*e*P	Pb	23 35 07.9	-3.5
PLIG				*e*S	Sn	23 35 33.9	-3.1
TPIG	Tehuac#an	2.40	25	*i* P	Pn	23 35 06.4	-1.7
TPIG				*e*S	Sn	23 35 37.7	-0.1
TPIG	Tehuac#an	2.40	25	*i* P	Pn	23 35 06.4	-1.7
TPIG				*e*S	Sn	23 35 37.7	-0.1
YAIG	Yautepec	2.67	347	*e*P	Pn	23 35 10.4	-1.5
YAIG				*e*S	Sn	23 35 43.6	-1.0
YAIG	Yautepec	2.67	347	*e*P	Pn	23 35 10.4	-1.5
YAIG				*e*S	Sn	23 35 43.6	-1.0
ARIG	Puente Sto Nin	2.73	318	*e*P	Pn	23 35 10.4	-2.2
ARIG				*e*S	Sn	23 35 45.4	-0.4
ARIG	Puente Sto Nin	2.73	318	*e*P	Pn	23 35 10.4	-2.2
ARIG				*e*S	Sn	23 35 45.4	-0.4
CMIG	Matias Romero	3.51	76	*i* P	Pn	23 35 15.3	-8.0
CMIG				*e*S	Sb	23 36 15.7	+2.1
CMIG	Matias Romero	3.51	76	*i* P	Pn	23 35 15.3	-8.0
CMIG				*e*S	Sb	23 36 15.7	+2.1
LVIG	Laguna Verde	3.96	29	Pn	Pn	23 35 28.1	-1.3
LVIG				Sn	Sn	23 36 11.1	-5.0

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*IDC **06** 23:34:47.1±1.3, 11°.33S×165°.74E, h0^{km}, mb3.9/9, mb1 4.1/10, mb1mx3.9/43, mbtmp4.0/10, ML4.4/1, Error ellipse: s-maj=42.8km s-min=20.8km az=128.0*

*ISCJB **06** 23:34:49.2±0.9, 11°.4S±0°.1×165°.7E±0°.2, h24^{km}, mb3.8/8, Error ellipse: s-maj=23.8km s-min=15.9km az=20.3*

ISC 06 23:34:50.9±1.0, **11°.3S**±0°.1×**165°.7E**±0°.2, **h24**^{km}**, n10, σ1^{s}.04**/10, **mb4.0**/8, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.70	176	Pn	Pn	23 37 23.2	+0.3
	2.7nm,0.3s,baz=80,slow=22,SNR=13						
CTA	Charters Tower	20.64	243	P	P	23 39 28.7	-0.3
	7.4nm,0.8s,baz=60,slow=14,SNR=3.8						
STKA	Stephens Creek	30.21	224	P	P	23 41 00.7	+0.9
	2.1nm,0.6s,baz=27,slow=9.3,SNR=2.9						
WRA	Warramunga Arr	31.36	250	P	P	23 41 09.8	-0.2
	4.0nm,0.9s,baz=80,slow=9.0,SNR=13						
ASAR	Alice Springs	32.64	244	P	P	23 41 19.9	-1.4

	0.6nm,0.7s,baz=73,slow=8.9,SNR=4.3						
FITZ	**Fitzroy Crossi**	**39.28**	**255**	P	**P**	**23 42 17.6**	**-0.5**
	2.9nm,0.8s,baz=105,slow=12,SNR=3.0						
SONM	**Songino Array**	**78.88**	**324**	P	**P**	**23 46 53.9**	**+1.5**
	0.3nm,0.6s,baz=130,slow=7.0,SNR=3.3						
ILAR	**Eielson Array**	**83.80**	**19**	P	**P**	**23 47 17.5**	**-0.4**
	0.5nm,0.5s,baz=246,slow=4.8,SNR=9.8						
MKAR	**Makanchi Array**	**93.71**	**317**	P	**P**	**23 48 06.6**	**+0.8**
	0.4nm,0.7s,baz=90,slow=4.0,SNR=3.1						
YKA	**Yellowknife Ar**	**95.24**	**27**	P	**P**	**23 48 11.2**	**-1.1**
	0.1nm,0.6s,baz=254,slow=4.4,SNR=3.0						

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*IDC **06** 23:38:46.9±0.8, 11°.03S×164°.84E, h0^{km}, mb4.1/15, mb1 4.3/17, mb1mx4.1/46, mbtmp4.2/17, ML4.3/2, Error ellipse: s-maj=28.8km s-min=17.1km az=135.0*

*ISCJB **06** 23:38:49.6±0.6, 11°.15S±0°.09×164°.79E±0°.10, h29^{km}, mb4.1/14, Error ellipse: s-maj=14.7km s-min=11.9km az=29.9*

ISC 06 23:38:51.6±0.7**, 11°.1S**±0°.1×**164°.73E**±0°.09**, h29^{km}, n20,** σ**1^{s}10**/23**, mb4.1**/14**, 1C, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.98**	**289**	Pn	**Pn**	**23 40 05.5**	**+1.1**
	20nm,0.3s,baz=130,slow=16,SNR=4.0						
HNR				Sn	**Sn**	**23 40 58.4**	**-2.8**
	27nm,0.3s,baz=114,slow=20,SNR=1.8						
DZM	**Mont Dzumac**	**11.07**	**172**	Pn	**Pn**	**23 41 27.5**	**-0.6**
	1.5nm,0.3s,baz=351,slow=10,SNR=19						
CTA	**Charters Tower**	**19.92**	**241**	P	**Pn**	**23 43 22.8**	**-0.2**
	16nm,0.9s,baz=73,slow=14,SNR=8.7						
STKA	**Stephens Creek**	**29.76**	**222**	P	**P**	**23 44 56.5**	**+0.8**
	1.6nm,0.7s,baz=28,slow=11,SNR=2.4						
WRA	**Warramunga Arr**	**30.55**	**249**	P	**P**	**23 45 03.2**	**+0.3**
	1.4nm,0.8s,baz=79,slow=9.4,SNR=6.8						
WRA				PcP	**PcP**	**23 48 01.9**	**+0.5**
	0.9nm,1.0s,baz=70,slow=2.2,SNR=3.3						
ASAR	**Alice Springs**	**31.90**	**243**	P	**P**	**23 45 14.5**	**-0.3**
	1.8nm,0.5s,baz=64,slow=10,SNR=20						
ASAR				PcP	**PcP**	**23 48 05.5**	**+0.5**
	0.6nm,0.8s,baz=67,slow=3.1,SNR=3.6						
FITZ	**Fitzroy Crossi**	**38.42**	**255**	P	**P**	**23 46 10.5**	**-0.4**
	2.0nm,0.9s,baz=67,slow=7.7,SNR=3.9						
CN2	**Changchun**	**65.25**	**330**	eP	**P**	**23 49 31.6**	**+1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,7.0s						
KLR	**Kul'dur**	**66.68**	**337**	P	**P**	**23 49 39.4**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=137,slow=9.4,SNR=4.2						
CMAR	**Chiang Mai Arr**	**71.21**	**294**	P	**P**	**23 50 08.3**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=98,slow=6.7,SNR=3.6						
SONM	**Songino Array**	**78.09**	**324**	P	**P**	**23 50 49.0**	**+1.1**
	comp=Z,2.0nm,1.1s,baz=145,slow=6.2,SNR=8.9						
GTA	**Gaotai**	**78.36**	**314**	⇑P	**P**	**23 50 51.3**	**+1.7**
GTA				pP	sP	23 51 00.8	+0.5
GTA				sP	pwP	23 51 04.8	+1.8
ILAR	**Eielson Array**	**83.84**	**19**	P	**P**	**23 51 18.4**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=233,slow=4.9,SNR=15						
TIXI	**Tiksi**	**85.92**	**349**	P	**P**	**23 51 28.2**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=234,slow=8.3,SNR=3.8						
NVAR	**Mina Array Bea**	**86.79**	**50**	P	**P**	**23 51 33.4**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=233,slow=8.2,SNR=8.7						
MKAR	**Makanchi Array**	**92.85**	**317**	P	**P**	**23 52 02.3**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=103,slow=6.4,SNR=16						
ZALV	**Zalesovo Beam**	**92.99**	**324**	P	**P**	**23 52 00.5**	**-1.5**
	comp=Z,1.0nm,0.9s,baz=116,slow=6.6,SNR=3.2						
PDAR	**Pinedale Array**	**94.29**	**47**	P	**P**	**23 52 08.3**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=214,slow=6.4,SNR=4.0						
YKA	**Yellowknife Ar**	**95.44**	**27**	P	**P**	**23 52 11.6**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=255,slow=5.1,SNR=4.3						
ARCES	**ARCESS Array B**	**116.10**	**345**	PKP	**PKiKP**	**23 57 29.7**	**-1.7**
	comp=Z,2.1nm,0.9s,baz=57,slow=3.3,SNR=4.0						

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*IDC **06** 23:38:59.3±0.8, 10°.82S×164°.34E, h0^{km}, mb4.5/17, mb1 4.7/17, mb1mx4.5/43, mbtmp4.4/17, Error ellipse: s-maj=29.1km s-min=17.4km az=142.0*

*NEIC **06** 23:39:00.5±0.2, 11°.75S×164°.72E, h10^{km}, mb5.0/65, Error ellipse: s-maj=6.7km s-min=5.6km az=128.0*

*GCMT **06** 23:39:01.5±0.2, 11°.89S±0°.02×165°.11E±0°.02, h13^{km}, MW5.1/102, Moment Tensor Solution. s32,c36; s102,c147; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.44±.28; $M_{\theta\theta}$1.88±.19; $M_{\phi\phi}$3.56±.20; $M_{r\theta}$-2.58±.53; $M_{\theta\phi}$-2.44±.13; $M_{\phi r}$-0.96±.42; Best double couple: $M_0$5.94800×10^{16} NP1:ϕ_s123.00000°,δ53.00000°, λ-117.00000°. NP2:ϕ_s344.00000°,δ45.00000°, λ-59.00000°. Principal axes: T 5.3550, Plg4.0000°, Azm232.0000°; N 1.1850, Plg21.0000°, Azm141.0000°; P -6.5400, Plg68.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **06** 23:39:02.0±0.2, 11°.92S±0°.04×164°.62E±0°.04, h33^{km}, mb4.8/94 Error ellipse: s-maj=5.7km s-min=5.7km az=141.7*

*MOS **06** 23:39:02.9±0.8, 11°.67S×164°.66E, h33^{km}, mb5.2/24, Error ellipse: s-maj=11.7km s-min=10.4km az=172.5*

ISC 06 23:39:03.9±0.4**, 11°.82S**±0°.06×**164°.74E**±0°.08**, h35^{km}, n218,** σ**1^{s}68**/206**, mb4.9**/98**, 4C-7D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.28**	**296**	eP	**Pn**	**23 40 24.0**	**+3.7**
HNR	**Honiara**	**5.28**	**296**	ePn	**Pn**	**23 40 18.8**	**-1.5**
HNR				eS	Sn	23 41 05.6	-14
HNR	**Honiara**	**5.28**	**296**	eP	**Pn**	**23 40 18.8**	**-1.5**
DZM	**Mont Dzumac**	**10.32**	**171**	ePn	**Pn**	**23 41 28.7**	**-1.0**
	34nm,0.7s						
DZM				eLR	LR	23 43 53.7	
	comp=Z,2µm,27.1s						
DZM	**Mont Dzumac**	**10.32**	**171**	ePn	**Pn**	**23 41 28.5**	**-1.2**
DZM				eSn	**Sn**	**23 43 22.8**	**-1.4**
ONTNC	**Ouen Toro**	**10.56**	**171**	ePn	**Pn**	**23 41 31.9**	**-0.9**
OUENC	**Ouen Island, N**	**10.73**	**170**	ePn	**Pn**	**23 41 35.1**	**0.0**
PINNC	**Pines Island,**	**11.04**	**167**	ePn	**Pn**	**23 41 38.8**	**-0.6**
MSVF	**Nonsavu**	**14.14**	**116**	ePn	**Pn**	**23 42 24.0**	**+2.1**
MSVF	**Nonsavu**	**14.14**	**116**	eP	**Pn**	**23 42 24.0**	**+2.1**
CTAO	**Charters Tower**	**19.57**	**243**	eP	**P**	**23 43 24.9**	**-4.1**
	33nm,1.0s						
CTAO	**Charters Tower**	**19.57**	**243**	eP	**P**	**23 43 24.9**	**-4.1**
CTAO				pmax	pmax		
	comp=Z,33nm,1.0s						
BKZ	**Black Stump Fm**	**29.17**	**161**	eP	**P**	**23 45 02.5**	**+0.5**
	comp=Z,68nm,1.8s						
STKA	**Stephens Creek**	**29.21**	**223**	eP	**P**	**23 45 05.0**	**+2.6**
	comp=Z,0.9nm,0.8s						
STKA	**Stephens Creek**	**29.21**	**223**	eP	**P**	**23 45 05.0**	**+2.6**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**30.18**	**4**	T	T	00 16 39.3	
	baz=184,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**30.18**	**4**	T	T	00 16 44.2	
	baz=184,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**30.20**	**4**	T	T	00 16 43.8	
	baz=184,slow=76,SNR=18						
WRAB	**Tennant Creek**	**30.29**	**251**	eP	**P**	**23 45 12.7**	**+0.7**
	comp=Z,30nm,1.3s						
WRAB				ePcP	**PcP**	**23 48 09.8**	**-2.4**
WRAB	**Tennant Creek**	**30.29**	**251**	deP	**P**	**23 45 12.8**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,23nm,1.3s						
WB2	**Warramunga Arr**	**30.29**	**251**	eP	**P**	**23 45 12.4**	**+0.3**
WRA	**Warramunga Arr**	**30.30**	**251**	P	**P**	**23 45 13.1**	**+0.9**
	comp=Z,7.8nm,0.6s,baz=81,slow=8.8,SNR=32						
WRA				PcP	**PcP**	**23 48 11.8**	**-0.4**
	comp=Z,2.6nm,0.9s,baz=78,slow=2.3,SNR=7.8						
H11N1	**WAKE ISLAND Hy**	**31.41**	**4**	T	T	00 18 10.8	
	baz=183,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**31.41**	**4**	T	T	00 18 12.1	
	baz=183,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**31.42**	**4**	T	T	00 18 12.4	
	baz=183,slow=76,SNR=14						
AS01	**Alice Springs**	**31.53**	**244**	eP	**P**	**23 45 23.4**	**+0.4**
AS01				ePcP	**PcP**	**23 48 15.9**	**+0.5**
AS31	**Alice Springs**	**31.57**	**244**	eP	**P**	**23 45 25.0**	**+1.6**
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	**31.57**	**244**	P	**P**	**23 45 24.1**	**+0.7**
	comp=Z,7.4nm,0.8s,baz=70,slow=8.0,SNR=10						
ASAR				PcP	**PcP**	**23 48 16.1**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=77,slow=3.1,SNR=7.8						
FITZ	**Fitzroy Crossi**	**38.23**	**256**	P	**P**	**23 46 20.9**	**+0.1**
	comp=Z,7.3nm,0.8s,baz=90,slow=7.8,SNR=12						
MBWA	**Marble Bar**	**44.02**	**252**	eP	**P**	**23 47 10.8**	**+2.4**
	comp=Z,13nm,0.8s						
PPT2	**Papeete2**	**44.47**	**103**	eLR	LR	23 59 38.4	
	comp=Z,2µm,29.5s						
TBI	**Tubuai**	**44.96**	**111**	eLQ	LQ	23 57 58.3	
	comp=Z,546nm,27.0s						
TBI				eLR	LR	23 59 50.9	
	comp=Z,1µm,29.2s						
MJAR	**Matsushiro Arr**	**54.21**	**334**	P	P	23 48 18.6	-7.6
	comp=Z,2.3nm,0.8s,baz=150,slow=7.9,SNR=3.5						
MAJO	**Matsushiro**	**54.21**	**334**	⇑eP	**P**	**23 48 26.4**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,22nm,1.2s						
MAT	**Matsushiro**	**54.21**	**334**	P	**P**	**23 48 25.6**	**-0.6**
TAOE	**Nuku Hiva Isla**	**54.23**	**92**	eLR	LR	00 04 09.1	
	comp=Z,510nm,23.4s						
KSRS	**Korea Array**	**59.97**	**327**	P	P	23 48 59.8	-7.1
	comp=Z,2.9nm,1.0s,baz=115,slow=8.2,SNR=3.8						
KSAR	**Wonju Array Be**	**59.98**	**327**	P	P	23 48 59.8	-7.2
KSAR	**Wonju Array Be**	**59.98**	**327**	P	P	23 48 59.8	-7.1
KS01	**Wonju Array Si**	**60.00**	**327**	eP	**P**	**23 49 07.9**	**+0.9**
YSS	**Yuzh-Sakhalins**	**61.73**	**343**	eP	**P**	**23 49 19.1**	**+0.5**
NJ2	**Nanjing**	**61.89**	**316**	eP	**P**	**23 49 21.2**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,16nm,0.7s						
USRK	**Ussuriysk Ar.**	**63.20**	**334**	P	P	23 49 22.2	-6.3
	comp=Z,5.2nm,1.0s,baz=151,slow=6.3,SNR=3.9						
PETK	**Petropavlovsk-**	**64.95**	**355**	P	P	23 49 33.0	-6.8
PETK	**Petropavlovsk-**	**64.95**	**355**	P	P	23 49 33.0	-6.8
	comp=Z,4.5nm,0.8s,baz=154,slow=7.7,SNR=3.8						
KLR	**Kul'dur**	**67.38**	**337**	⇓eP	**P**	**23 49 57.6**	**+2.1**
KLR	**Kul'dur**	**67.38**	**337**	P	P	23 49 50.5	-5.0
	comp=Z,5.1nm,1.1s,baz=118,slow=9.4,SNR=6.4						
NONG	**Nongkai**	**67.65**	**295**	P	**P**	**23 50 01.1**	**+3.3**
	comp=Z,0.2nm,1.1s						
GYA	**Guiyang**	**68.04**	**305**	eP	**P**	**23 50 03.0**	**+2.6**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
PBKT	**Sadao Pong**	**69.07**	**293**	eP	**P**	**23 50 09.7**	**+3.0**
	comp=Z,6.6nm,1.0s						
PBKT	**Sadao Pong**	**69.07**	**293**	P	**P**	**23 50 10.7**	**+4.0**
	comp=Z,8.2nm,1.0s,comp=Z,2µm						
XAN	**Xi'an**	**69.92**	**313**	P	**P**	**23 50 12.7**	**+0.9**
XAN				pP	sP	23 50 25.0	+0.3
XAN				sP	pwP	23 50 30.4	+3.3
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				pmax	pmax		
	comp=Z,240nm,6.3s						
XAN				LR	LR		
	comp=E,240nm,23.9s						
XAN				LR	LR		
	comp=Z,270nm,21.7s						
XAN	**Xi'an**	**69.92**	**313**	eP	**P**	**23 50 12.5**	**+0.7**
	comp=Z,60nm,1.0s						
XAN	**Xi'an**	**69.92**	**313**	eP	**P**	**23 50 12.5**	**+0.7**
XAN				pmax	pmax		
	comp=Z,60nm,1.0s						
SRDT	**SRDT**	**70.03**	**290**	P	**P**	**23 50 16.5**	**+3.8**
	comp=Z,11nm,1.1s						
KMI	**Kunming**	**70.69**	**302**	P	**P**	**23 50 15.3**	**-1.6**
KMI				pP	pP	23 50 20.5	-5.8
KMI				sP	sP	23 50 22.7	-7.1
KMI				S	**S**	**23 59 33.1**	**+3.8**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,240nm,5.3s						
KMI				LR	LR		
	comp=N,73nm,21.8s						
KMI				LR	LR		
	comp=E,250nm,19.8s						
KMI				LR	LR		
	comp=Z,320nm,20.2s						
CM01	**Chiang Mai Arr**	**71.50**	**294**	eP	**P**	**23 50 19.3**	**-2.3**
CMAR	**Chiang Mai Arr**	**71.52**	**294**	P	**P**	**23 50 19.0**	**-2.8**
CMAR	**Chiang Mai Arr**	**71.52**	**294**	P	**P**	**23 50 18.9**	**-2.8**
	comp=Z,1.2nm,0.7s,baz=96,slow=3.6,SNR=9.1						
CHTO	**Chiang Mai**	**71.64**	**294**	eP	**P**	**23 50 23.5**	**+1.0**
	comp=Z,12nm,1.3s						
CHTO	**Chiang Mai**	**71.64**	**294**	eP	**P**	**23 50 23.5**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,11nm,1.3s						
CHTO	**Chiang Mai**	**71.64**	**294**	P	**P**	**23 50 24.2**	**+1.7**
	comp=Z,25nm,1.1s						
HHC	**Hu-ho-hao-te**	**71.79**	**320**	eP	**P**	**23 50 25.5**	**+2.4**
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
CD2	**Chengdu**	**72.29**	**308**	eP	**P**	**23 50 27.3**	**+1.1**
HIA	**Hailar**	**72.56**	**331**	⇓eP	**P**	**23 50 27.6**	**+0.2**
HIA				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH	**Lanzhou**	**74.55**	**313**	eP	**P**	**23 50 41.5**	**+1.9**
LZH				pP	pP	23 50 47.5	-1.5
LZH				sP	sP	23 50 50.1	-2.5
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
LZH				LR	LR		
	comp=N,450nm,14.8s						
LZH				LR	LR		
	comp=E,470nm,14.2s						
LZH				LR	LR		
	comp=Z,480nm,17.1s						
SEY	**Seymchan**	**75.14**	**354**	⇓eP	**P**	**23 50 41.9**	**-0.2**
QSPA	**South Pole Qui**	**78.19**	**180**	eP	P	23 50 54.6	-5.1
	comp=Z,76nm,1.0s						
ULN	**Ulaanbaatar**	**78.35**	**324**	d iP	**P**	**23 51 01.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,13nm,1.2s						
SONM	**Songino Array**	**78.71**	**324**	P	**P**	**23 50 58.5**	**-4.3**
	comp=Z,2.5nm,1.0s,baz=139,slow=5.9,SNR=3.8						
GTA	**Gaotai**	**78.89**	**314**	⇑P	**P**	**23 51 06.1**	**+2.2**
GTA				pP	PcP	23 51 10.0	-2.5
GTA				sP	pP	23 51 13.3	-0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,210nm,5.2s						
GTA				LR	LR		
	comp=N,150nm,20.9s						
GTA				LR	LR		
	comp=E,240nm,18.1s						
GTA				LR	LR		
	comp=Z,230nm,18.1s						
ANM	**Nome**	**79.45**	**13**	eP	**P**	**23 51 07.4**	**+1.1**
	comp=Z,15nm,1.5s						
BILL	**Bilibino**	**79.65**	**1**	eP	**P**	**23 51 07.0**	**-0.4**
	comp=Z,22nm,1.0s						
BILL	**Bilibino**	**79.65**	**1**	eP	**P**	**23 51 06.0**	**-1.3**
BILL				e		23 51 11.5	
BILL				e		23 54 10.9	
BILL				pmax	pmax		
	comp=Z,28nm,1.3s						
SUA	**Susitna One**	**80.98**	**20**	eP	**P**	**23 51 16.7**	**+2.0**
	comp=Z,24nm,1.3s						
KNK	**Knik Glacier**	**81.72**	**21**	eP	**P**	**23 51 20.0**	**+1.4**
	comp=Z,11nm,0.6s						
ZAK	**Zakamensk**	**81.77**	**325**	eP	P	23 51 11.1	-8.1
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CAST	**Castle Rocks**	**81.98**	**18**	eP	**P**	**23 51 19.4**	**-0.5**
	comp=Z,13nm,1.1s						
TLY	**Talaya**	**82.22**	**327**	eP	**P**	**23 51 22.0**	**+0.6**
	comp=Z,12nm,1.0s						
TLY	**Talaya**	**82.22**	**327**	⇓eP	**P**	**23 51 22.3**	**+0.9**
DIV	**Divide**	**82.49**	**22**	eP	**P**	**23 51 22.5**	**-0.1**
	comp=Z,16nm,1.0s						
TRF	**Thorofare Moun**	**82.56**	**19**	eP	**P**	**23 51 23.2**	**+0.1**
	comp=Z,7.1nm,1.0s						
RDOG	**Red Dog Mine**	**82.97**	**12**	eP	**P**	**23 51 26.3**	**+1.4**
	comp=Z,11nm,0.9s						
RND	**Reindeer**	**82.98**	**19**	eP	**P**	**23 51 25.8**	**+0.6**
	comp=Z,9.3nm,1.0s						
RND	**Reindeer**	**82.98**	**19**	eP	**P**	**23 51 25.8**	**+0.6**
RND				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MCK	**McKinley**	**83.19**	**19**	eP	**P**	**23 51 26.1**	**-0.1**
	comp=Z,16nm,1.2s						
MCK	**McKinley**	**83.19**	**19**	eP	**P**	**23 51 26.1**	**-0.1**
MCK				pmax	pmax		
	comp=Z,16nm,1.2s						
IM3	**Indian Mountai**	**83.43**	**16**	eP	**P**	**23 51 27.2**	**-0.1**
MLY	**Manley**	**83.57**	**17**	eP	**P**	**23 51 28.2**	**+0.1**
	comp=Z,23nm,1.6s						
WRH	**Wood River Hil**	**83.97**	**19**	eP	**P**	**23 51 29.8**	**-0.3**
	comp=Z,13nm,1.0s						
MDM	**Murphy Dome**	**84.27**	**18**	eP	**P**	**23 51 30.9**	**-0.8**
	comp=Z,13nm,1.1s						
HDA	**Harding Lake**	**84.29**	**19**	P	**P**	**23 51 31.3**	**-0.4**
	baz=227						
TCOL	**CIGO, UAF Yank**	**84.32**	**18**	P	**P**	**23 51 31.6**	**-0.3**
	baz=226						
COLA	**College**	**84.32**	**18**	eP	**P**	**23 51 31.6**	**-0.2**
	comp=Z,22nm,1.0s						
COLA	**College**	**84.32**	**18**	⇑eP	**P**	**23 51 31.2**	**-0.7**
COLA				pmax	pmax		
	comp=Z,20nm,1.1s						
O02D	**Mt. Diablo Mer**	**84.54**	**47**	P	**P**	**23 51 34.7**	**+1.0**
	baz=250						
ILAR	**Eielson Array**	**84.56**	**19**	P	**P**	**23 51 31.1**	**-2.0**
	comp=Z,4.2nm,0.8s,baz=238,slow=4.8,SNR=19						
ILB	**Eielson Array**	**84.56**	**19**	eP	**P**	**23 51 31.9**	**-1.1**
POKR	**Poker Plat Res**	**84.62**	**18**	P	**P**	**23 51 32.2**	**-1.2**
	baz=227						
KNGR	**Kungurtug, Tuv**	**85.14**	**324**	⇑eP	**P**	**23 51 35.7**	**-0.8**
ORV	**Oroville**	**85.26**	**48**	eP	**P**	**23 51 37.1**	**-0.1**
	comp=Z,10nm,1.4s						
ORV	**Oroville**	**85.26**	**48**	eP	**P**	**23 51 37.1**	**-0.1**
ORV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
O03E	**Paynes Creek**	**85.29**	**47**	P	**P**	**23 51 36.8**	**-0.6**
	baz=250						
AFDM	**Forest Hills D**	**85.45**	**49**	eP	**P**	**23 51 38.5**	**+0.3**
	comp=Z,11nm,1.1s						
HYT	**Haines Junctio**	**85.49**	**25**	eP	**P**	**23 51 38.3**	**+0.2**
	comp=Z,9.8nm,1.1s						
JIRN	**Jiri**	**85.50**	**299**	eP	**P**	**23 51 36.1**	**-3.1**
CMB	**Columbia Colle**	**85.59**	**50**	eP	**P**	**23 51 39.0**	**0.0**
	comp=Z,24nm,1.8s						
CMB	**Columbia Colle**	**85.59**	**50**	eP	**P**	**23 51 39.0**	**0.0**
CMB				pmax	pmax		
	comp=Z,24nm,1.8s						
PALK	**Pallekele**	**85.68**	**278**	i P	**P**	**23 51 39.6**	**-0.3**
M04C	**Macdoel**	**85.76**	**46**	P	**P**	**23 51 40.6**	**+0.8**
	baz=250						
GUN	**Gumba**	**85.84**	**299**	eP	**P**	**23 51 37.8**	**-3.0**
PKI	**Pulchoki**	**86.15**	**299**	eP	**P**	**23 51 39.2**	**-3.1**
PKIN	**Phulchoki**	**86.16**	**299**	eP	**P**	**23 51 39.0**	**-3.3**
DMN	**Daman**	**86.42**	**299**	eP	**P**	**23 51 40.6**	**-3.0**
	comp=Z,18nm,1.0s						
WAKR	**Walker**	**86.44**	**50**	eP	**P**	**23 51 44.0**	**+0.6**
	comp=Z,16nm,1.3s						
MDPB	**Devils Postpil**	**86.45**	**51**	eP	**P**	**23 51 43.7**	**+0.2**
	comp=Z,8.7nm,1.0s						
EDW2	**Edwards Air Fo**	**86.47**	**53**	P	**P**	**23 51 43.9**	**+0.5**
	baz=253						
TOLK	**Toolik Lake Re**	**86.49**	**15**	eP	**P**	**23 51 43.2**	**+0.5**
	comp=Z,10nm,1.3s						
TOLK	**Toolik Lake Re**	**86.49**	**15**	P	**P**	**23 51 43.1**	**+0.5**
	baz=225						
OMMB	**Old Mammoth Mi**	**86.50**	**51**	eP	**P**	**23 51 43.7**	**-0.1**
	comp=Z,8.7nm,1.2s						
PNTR	**Pine Nut**	**86.51**	**49**	eP	**P**	**23 51 44.2**	**+0.6**
	comp=Z,8.3nm,1.1s						
BFSC	**Mount Baldy Ra**	**86.55**	**54**	P	**P**	**23 51 43.7**	**-0.2**
	baz=253						
DAWY	**Dawson**	**86.63**	**21**	eP	**P**	**23 51 44.1**	**+0.6**
	comp=Z,5.3nm,0.9s						
J05D	**Fort Rock, OR**	**86.69**	**45**	P	**P**	**23 51 45.3**	**+0.9**
	baz=250						
CWC	**Cottonwood Cre**	**86.86**	**52**	P	**P**	**23 51 45.6**	**+0.3**
	baz=253						
PAHR	**Pah Rah Range**	**86.86**	**49**	eP	**P**	**23 51 45.6**	**+0.3**
	comp=Z,17nm,1.4s						
LRMC	**Laurel Mtn Rad**	**86.89**	**53**	P	**P**	**23 51 45.9**	**+0.3**
	baz=253						
I05D	**Terrebonne, OR**	**86.97**	**44**	P	**P**	**23 51 46.2**	**+0.6**
	baz=250						
MONP2	**Monument Peak**	**87.16**	**56**	P	**P**	**23 51 46.9**	**-0.1**
	baz=254						
RYN	**Ryan**	**87.17**	**50**	eP	**P**	**23 51 47.3**	**+0.5**
	comp=Z,4.9nm,1.0s						
DAC	**Darwin (Calif)**	**87.18**	**52**	eP	**P**	**23 51 47.4**	**+0.4**
	comp=Z,10nm,1.4s						
DAC	**Darwin (Calif)**	**87.18**	**52**	eP	**P**	**23 51 47.4**	**+0.4**
DAC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MPMC	**Manual Prospec**	**87.20**	**52**	P	**P**	**23 51 47.4**	**+0.3**
	baz=253						
NVAR	**Mina Array Bea**	**87.27**	**50**	P	**P**	**23 51 47.6**	**+0.2**
	comp=Z,4.8nm,0.9s,baz=234,slow=8.0,SNR=17						
NV11	**Mina Array Sit**	**87.38**	**50**	eP	**P**	**23 51 48.1**	**+0.2**
	comp=Z,1.2nm,1.4s						
GRAC	**Grapevine Rang**	**87.56**	**52**	P	**P**	**23 51 49.1**	**+0.5**
	baz=253						
KVN	**Kaiserville**	**87.61**	**49**	eP	**P**	**23 51 49.1**	**+0.1**
	comp=Z,9.8nm,1.3s						
KVN	**Kaiserville**	**87.61**	**49**	eP	**P**	**23 51 49.1**	**+0.1**
KVN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KOLN	**Koldanda**	**87.75**	**299**	eP	**P**	**23 51 46.2**	**-3.8**
	comp=Z,12nm,1.0s						
DANN	**Dangsing**	**87.76**	**299**	eP	**P**	**23 51 46.2**	**-3.9**
	comp=Z,11nm,0.7s						
HEC	**Hector,Ludlow**	**87.76**	**54**	P	**P**	**23 51 49.9**	**+0.2**
	baz=254						
FURC	**Furnace Creek,**	**87.80**	**52**	P	**P**	**23 51 50.3**	**+0.6**
	baz=254						
I07A	**Izee**	**88.13**	**44**	eP	**P**	**23 51 51.9**	**+0.6**
	comp=Z,10nm,1.1s						
TUQ	**Turquoise Moun**	**88.25**	**53**	P	**P**	**23 51 52.5**	**+0.4**
	baz=254						
PYUN	**Piuthan**	**88.35**	**299**	eP	**P**	**23 51 48.8**	**-4.0**
	comp=Z,19nm,1.0s						
TPNV	**Topopah Spring**	**88.41**	**52**	eP	**P**	**23 51 53.2**	**+0.3**
	comp=Z,19nm,1.8s						
TPNV	**Topopah Spring**	**88.41**	**52**	eP	**P**	**23 51 53.2**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,19nm,1.8s						
TPNV	**Topopah Spring**	**88.41**	**52**	P	**P**	**23 51 52.9**	**+0.1**
	baz=254						
IRM	**Iron Mountain**	**88.53**	**55**	P	**P**	**23 51 54.0**	**+0.7**
	baz=255						
WMQ	**Urumqi**	**88.94**	**315**	P	**P**	**23 51 56.1**	**+1.0**
WMQ				pP	pP	23 52 01.7	-3.0
WMQ				sP	sP	23 52 06.2	-2.0
WMQ				pmax	pmax		
	comp=Z,15nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.7s						
WMQ				LR	LR		
	comp=N,160nm,22.1s						
WMQ				LR	LR		
	comp=E,190nm,17.1s						
WMQ				LR	LR		
	comp=Z,230nm,17.1s						
R11A	**Troy Canyon, C**	**89.30**	**51**	eP	**P**	**23 51 57.3**	**+0.3**
	comp=Z,5.2nm,1.3s						
R11A	**Troy Canyon, C**	**89.30**	**51**	P	**P**	**23 51 57.5**	**+0.5**
	baz=254						
PDMCI	**Parker Dam,Lak**	**89.37**	**55**	P	**P**	**23 51 58.0**	**+0.8**
	baz=255						
B08A	**Colville Reser**	**89.59**	**40**	eP	**P**	**23 51 58.6**	**+0.7**
W13A	**Hualapai Mount**	**89.77**	**54**	eP	**P**	**23 52 00.1**	**+0.8**
	comp=Z,6.9nm,1.1s						
214A	**Organ Pipe Nat**	**89.87**	**57**	P	**P**	**23 51 59.5**	**-0.2**
	baz=256						
ELK	**Elko**	**90.19**	**48**	eP	**P**	**23 52 02.1**	**+0.9**
	comp=Z,5.5nm,1.1s						
ELK	**Elko**	**90.19**	**48**	eP	**P**	**23 52 02.1**	**+0.9**
ELK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
F10A	**Beach Ranch, E**	**90.24**	**43**	eP	**P**	**23 52 01.4**	**+0.3**
	comp=Z,25nm,1.5s						
PSUT	**Pine Spring**	**90.66**	**51**	eP	**P**	**23 52 04.0**	**+0.6**
	comp=Z,5.5nm,1.1s						
LCMT	**Little Creek M**	**90.75**	**52**	eP	**P**	**23 52 04.5**	**+0.7**
	comp=Z,13nm,1.2s						
CCUT	**Cedar City**	**90.79**	**52**	eP	**P**	**23 52 05.3**	**+1.2**
	comp=Z,12nm,1.3s						
NEW	**Newport**	**90.97**	**41**	eP	**P**	**23 52 04.5**	**+0.1**
	comp=Z,8.1nm,1.3s						
NEW	**Newport**	**90.97**	**41**	eP	**P**	**23 52 04.5**	**+0.1**
NEW				pmax	pmax		
	comp=Z,8.0nm,1.3s						
NEW	**Newport**	**90.97**	**41**	P	**P**	**23 52 04.6**	**+0.1**
	baz=253						
KNB	**Kanab**	**91.08**	**53**	eP	**P**	**23 52 06.8**	**+1.5**
	comp=Z,19nm,1.3s						
KNB	**Kanab**	**91.08**	**53**	eP	**P**	**23 52 06.8**	**+1.5**
KNB				pmax	pmax		
	comp=Z,19nm,1.3s						
U15A	**North Rim**	**91.35**	**53**	eP	**P**	**23 52 05.0**	**-1.7**

	comp=Z,11nm,1.1s						
HLID	Hailey	91.52	46	*e*P	P	23 52 07.8	+0.6
	comp=Z,8.7nm,1.3s						
X16A	Lo Mia Camp, P	91.56	55	*e*P	P	23 52 08.6	+0.9
	comp=Z,5.5nm,0.9s						
TUC	Tucson	91.63	57	*e*P	P	23 52 09.5	+1.7
	comp=Z,16nm,1.8s						
TUC	Tucson	91.63	57	*e*P	P	23 52 09.5	+1.7
TUC				pmax	pmax		
	comp=Z,16nm,1.8s						
TUC	Tucson	91.63	57	P	P	23 52 09.0	+1.2
	baz=257						
MTPU	Mount Pierson	91.81	52	*e*P	P	23 52 10.4	+1.4
	comp=Z,9.4nm,1.1s						
BGU	Big Grassy Mou	91.86	49	*e*P	P	23 52 09.0	+0.1
WUAZ	Wupatki	91.87	54	*e*P	P	23 52 10.0	+0.9
	comp=Z,12nm,1.3s						
WUAZ	Wupatki	91.87	54	P	P	23 52 09.5	+0.5
	baz=257						
MSU	Marysvale	91.93	51	*e*P	P	23 52 10.7	+1.4
MSU	Marysvale	91.93	51	*e*P	P	23 52 10.7	+1.4
HVU	Hansel Valley	92.25	48	*e*P	P	23 52 11.4	+0.8
	comp=Z,20nm,1.3s						
HVU	Hansel Valley	92.25	48	*e*P	P	23 52 11.4	+0.8
HVU				pmax	pmax		
	comp=Z,20nm,1.3s						
NLU	North Lily Min	92.34	50	*e*P	P	23 52 12.1	+0.9
	comp=Z,7.9nm,1.1s						
SPUT	South Promonto	92.38	48	*e*P	P	23 52 12.0	+0.8
	comp=Z,9.0nm,1.4s						
WALA	Waterton Lakes	93.23	41	*e*P	P	23 52 15.2	+0.2
	comp=Z,2.3nm,0.8s						
MK31	Makanchi Array	93.41	317	*e*P	P	23 52 11.7	-4.0
MK31	Makanchi Array	93.41	317	*e*P	P	23 52 11.7	-4.0
MKAR	Makanchi Array	93.41	317	P	P	23 52 11.0	-4.7
	comp=Z,3.2nm,0.8s,baz=103,slow=5.2,SNR=14						
ZAA0	Zalesovo Array	93.61	324	*e*P	P	23 52 16.8	+0.5
	comp=Z,5.7nm,1.1s						
ZALV	Zalesovo Beam	93.61	324	*e*P	P	23 52 12.2	-4.1
ZALV	Zalesovo Beam	93.61	324	*e*P	P	23 52 12.2	-4.1
ZALV	Zalesovo Beam	93.61	324	P	P	23 52 11.6	-4.8
	comp=Z,3.5nm,1.0s,baz=100,slow=4.4,SNR=4.3						
MAKZ	Makanchi	93.62	317	*e*P	P	23 52 13.8	-2.9
	comp=Z,7.8nm,1.1s						
MAKZ	Makanchi	93.62	317	*e*P	P	23 52 13.8	-2.9
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FXWY	Fox Creek	93.93	46	*e*P	P	23 52 18.9	+0.5
	comp=Z,2.6nm,1.0s						
BOZ	Bozeman (W)	93.93	44	*e*P	P	23 52 19.2	+0.9
	comp=Z,5.4nm,1.1s						
BOZ	Bozeman (W)	93.93	44	*e*P	P	23 52 19.2	+0.9
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
121A	Cookes Peak, D	94.15	58	P	P	23 52 20.6	+1.0
	baz=259						
LOHW	Long Hollow	94.22	46	*e*P	P	23 52 20.8	+1.0
	comp=Z,4.7nm,1.0s						
PDAR	Pinedale Array	94.80	47	*e*P	P	23 52 22.3	-0.1
PDAR	Pinedale Array	94.80	47	P	P	23 52 22.0	-0.4
	comp=Z,1.3nm,0.8s,baz=199,slow=7.8,SNR=6.5						
ANMO	Albuquerque	95.69	56⇓	*e*P	P	23 52 26.7	0.0
ANMO				pmax	pmax		
	comp=Z,14nm,2.9s						
YKA	Yellowknife Ar	96.11	27	P	P	23 52 24.9	-2.7
	comp=Z,2.7nm,0.9s,baz=255,slow=4.6,SNR=24						
YKB5	Yellowknife Ar	96.11	27	*e*P	P	23 52 24.8	-2.8
TXAR	Lajitas Array	97.06	62	P	P	23 52 33.0	+0.1
TXAR	Lajitas Array	97.06	62	P	P	23 52 33.0	+0.1
	comp=Z,0.5nm,0.8s,baz=222,slow=4.9,SNR=7.8						
LAO	LASA Array	97.83	44	P	Pdif	23 52 37.4	+1.4
	baz=261						
FFC	Flin Flon	101.44	36	*i* P	Pdif	23 52 51.9	+0.2
OBN	Obninsk	120.94	328	*i* PKIKP	PKiKP	23 57 56.5	+4.0
OBN				*e*		23 59 21.2	
OBN				*e*PPP	PPP	00 01 54.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	128.75	312	PKP	PKPdf	23 58 06.1	-2.0
	comp=Z,1.3nm,1.0s,baz=125,slow=2.3,SNR=5.6						
VYHS	Vyhne	133.73	329	*e*PKIKP	PKiKP	23 58 18.9	+0.5
VYHS	Vyhne	133.73	329	*e*PKP	PKiKP	23 58 18.9	+0.5
CLL	Collm	134.41	335	*e*PKPdf	PKiKP	23 58 19.0	-0.6
CLL	Collm	134.41	335	*e*PKIKP	PKiKP	23 58 19.0	-0.6
KEST	Kesra	147.41	321	PKPbc	PKPdf	23 58 41.9	-0.3
	comp=Z,16nm,1.0s,baz=312,slow=2.9,SNR=6.6						
ES19	SONSECA Array	150.46	342	*e*PKPbc	PKiKP	23 58 53.0	0.0
ESDC	Sonseca Array	150.51	342	PKPbc	PKPbc	23 58 50.6	-1.8
	comp=Z,4.0nm,1.0s,baz=33,slow=2.5,SNR=7.2						
TOA0	Torodi Ar. Sit	163.39	276	*e*PKPdf	PKPdf	23 59 04.2	+0.2
TOA0				*e*PKPab	PKPab	23 59 56.8	+1.8
TORD	Torodi Ar. Bea	163.39	276	PKP	PKPdf	23 59 03.6	-0.3
	comp=Z,1.1nm,1.0s,baz=30,slow=1.0,SNR=5.6						
TORD				PKPab	PKPab	23 59 54.6	-0.4
	comp=Z,1.6nm,0.9s,baz=46,slow=5.2,SNR=6.8						

IDC 06 23:42:12.3±4.6**, 17°.45S**×**176°.77W, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/38**, mbtmp3.7**/3**, Error ellipse: s-maj=195.4km s-min=40.7km az=142.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.25	259	P	P	23 50 39.1	-0.7
	0.2nm,0.6s,baz=96,slow=8.4,SNR=2.8						
ASAR	Alice Springs	46.42	254	P	P	23 50 41.6	+0.5
	1.5nm,0.6s,baz=86,slow=8.1,SNR=14						
SONM	Songino Array	94.23	319	P	P	23 55 33.4	-0.1
	0.2nm,0.5s,baz=104,slow=6.1,SNR=2.3						
BRTR	Keskin Array B	145.55	316	PKPbc	PKPdf	00 01 52.3	-0.8
	0.7nm,0.8s,baz=64,slow=3.4,SNR=4.1						
MMAI	Mount Meron Ar	147.19	304	PKPbc	PKPdf	00 01 56.8	+0.9
	2.2nm,0.7s,baz=49,slow=6.5,SNR=3.0						
GERES	GERESS Array B	147.55	347	PKPbc	PKPbc	00 01 58.4	-0.3
	0.4nm,0.5s,baz=8.1,slow=2.8,SNR=5.0						

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*IDC **06** 23:42:15.5±1.3, 11°.14S×165°.15E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.7/45, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=45.7km s-min=26.0km az=127.0*

*ISCJB **06** 23:42:18.3±1.0, 11°.3S±0°.1×165°.1E±0°.2, h31^{km}, mb3.6/5, Error ellipse: s-maj=29.0km s-min=19.1km az=7.5*

ISC 06 23:42:20.1±1.0**, 11°.2S**±0°.1×**165°.2E**±0°.2**, h31^{km}, n6, σ0^s.55**/6**, mb3.7**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.88	174	Pn	Pn	23 44 54.1	+0.1
	0.5nm,0.3s,baz=287,slow=19,SNR=3.0						
WRA	Warramunga Arr	30.88	250	P	P	23 48 34.0	-0.1
	1.0nm,0.8s,baz=81,slow=8.9,SNR=3.9						
ASAR	Alice Springs	32.20	243	P	P	23 48 45.4	-0.3
	1.0nm,0.6s,baz=66,slow=10.0,SNR=6.1						
SONM	Songino Array	78.44	324	P	P	23 54 18.7	+0.5
	0.2nm,0.8s,baz=104,slow=6.1,SNR=1.9						
ILAR	Eielson Array	83.84	19	P	P	23 54 45.7	-0.7
	0.5nm,0.8s,baz=234,slow=4.7,SNR=4.1						
YKA	Yellowknife Ar	95.38	27	P	P	23 55 41.4	+0.3
	0.2nm,0.7s,baz=262,slow=4.3,SNR=2.9						

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*IDC **06** 23:49:32.9±0.5, 11°.70S×165°.01E, h0^{km}, mb4.8/27, mb1 4.9/30, mb1mx4.8/46, mbtmp4.8/30, ML4.6/3, MS4.3/5, Ms1 4.3/5, ms1mx3.7/32, Error ellipse: s-maj=15.2km s-min=13.0km az=114.0*

*ISCJB **06** 23:49:35.1±0.2, 11°.75S±0°.04×164°.82E±0°.03, h17^{km}, mb5.0/140, MS4.1/1, Error ellipse: s-maj=6.3km s-min=4.1km az=175.7*

*NEIC **06** 23:49:35.3±0.2, 11°.72S×164°.87E, h10^{km}, mb5.3/93, Error ellipse: s-maj=5.8km s-min=4.6km az=160.0*

*GCMT **06** 23:49:37.3±0.3, 11°.76S±0°.03×164°.99E±0°.03, h12^{km}±1^{km}, MW5.0/76, Moment Tensor Solution. s24,c24; s76,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.03±.30; $M_{\theta\theta}$1.51±.19; $M_{\phi\phi}$2.52±.22; $M_{r\theta}$-1.76±.58; $M_{\theta\phi}$-1.42±.13; $M_{\phi r}$-0.37±.57; Best double couple: $M_0$4.11100×10^{16} NP1:ϕ_s126.00000°, δ53.00000°, λ-112.00000°. NP2: ϕ_s340.00000°, δ42.00000°, λ-63.00000°. Principal axes: T 3.5980, Plg6.0000°, Azm232.0000°; N 1.0260, Plg17.0000°, Azm140.0000°; P -4.6230, Plg72.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **06** 23:49:37.9±0.8, 11°.43S×164°.88E, h33^{km}, mb5.3/15 Error ellipse: s-maj=20.9km s-min=9.4km az=114.3*

ISC 06 23:49:38.6±0.3**, 11°.83S**±0°.06×**164°.94E**±0°.07**, h35^{km}**±3^{km}**, n281, σ1^s.21**/283**, mb5.2**/147**, 5C-12D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.46	295	*e*P	Pn	23 50 59.0	+1.6
HNR	Honiara	5.46	295	*e*Pn	Pn	23 50 57.2	-0.2
HNR				*e*S	Sn	23 51 57.2	-1.8
HNR	Honiara	5.46	295	Pn	Pn	23 50 56.5	-0.9
	73nm,0.3s,baz=219,slow=2.7,SNR=18						
HNR				Sn	Sn	23 51 58.6	-0.4
	32nm,0.3s,baz=26,slow=23,SNR=8.9						
HNR				LR	LR	23 52 54.8	
	comp=Z,3µm,19.4s,baz=128,slow=37						
MARNC	Mare, Loyalty	10.04	163	*e*Pn	Pn	23 51 59.4	-1.0
MARNC				*e*Sn	Sn	23 53 27.7	-24
DZM	Mont Dzumac	10.29	172	*e*Pn	Pn	23 52 04.4	+0.6
	13nm,0.4s						
DZM				*e*LR	LR	23 54 29.4	
	comp=Z,2µm,24.1s						
DZM	Mont Dzumac	10.29	172	*e*Pn	Pn	23 52 05.2	+1.4
DZM				*e*Sn	Sn	23 53 54.1	-3.9
DZM	Mont Dzumac	10.29	172	Pn	Pn	23 52 04.8	+1.0
	1.9nm,0.3s,baz=310,slow=12,SNR=11						
DZM				Sn	Sn	23 53 56.3	-1.7
	0.4nm,0.3s,baz=9.9,slow=17,SNR=2.7						
DZM				LR	LR	23 55 36.6	
	comp=Z,895nm,19.7s,baz=18,slow=35						
OUENC	Ouen Island, N	10.69	170	*e*Pn	Pn	23 52 09.8	+0.6
MSVF	Nonsavu	13.97	116	*e*Pn	Pn	23 52 57.1	+3.0
CTA	Charters Tower	19.74	243	P	Pn	23 54 07.3	+0.2
	0.7nm,0.3s,baz=67,slow=13,SNR=13						
CTA				LR	LR	00 00 49.2	
	comp=Z,1µm,19.4s,baz=74,slow=34						
CTAO	Charters Tower	19.74	243	*e*P	Pn	23 54 07.4	+0.3
	404nm,1.3s						
URZ	Urewera	28.48	160	P	P	23 55 30.8	+0.4
	6.7nm,0.8s,baz=13,slow=14,SNR=2.8						
STKA	Stephens Creek	29.33	223	P	P	23 55 39.0	+0.8
	1.9nm,0.4s,baz=21,slow=8.6,SNR=4.3						
STKA				LR	LR	00 06 53.7	
	comp=Z,991nm,18.9s,baz=30,slow=35						
H11S2	WAKE ISLAND Hy	30.18	3	T	T	00 27 12.6	
	baz=184,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	30.18	3	T	T	00 27 16.1	
	baz=184,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	30.19	3	T	T	00 27 15.3	
	baz=184,slow=76,SNR=16						
WRAB	Tennant Creek	30.47	251	*e*P	P	23 55 48.5	+0.2
	86nm,1.3s						
WB2	Warramunga Arr	30.47	251	*e*P	P	23 55 48.0	-0.2
WB2				*e*PcP	PcP	23 58 47.8	+0.5
WRA	Warramunga Arr	30.48	251	P	P	23 55 48.5	0.0
	18nm,0.7s,baz=81,slow=9.0,SNR=97						
WRA				PcP	PcP	23 58 47.8	+0.5
	3.7nm,1.1s,baz=77,slow=2.7,SNR=7.5						
H11N1	WAKE ISLAND Hy	31.40	4	T	T	00 28 46.2	
	baz=184,slow=76,SNR=9.8						
H11N3	WAKE ISLAND Hy	31.41	4	T	T	00 28 48.8	
	baz=184,slow=76,SNR=8.1						
H11N2	WAKE ISLAND Hy	31.42	4	T	T	00 28 47.7	
	baz=184,slow=76,SNR=7.9						
AS01	Alice Springs	31.70	244	*e*P	P	23 55 58.4	-0.7
AS01				*e*PcP	PcP	23 58 50.1	-0.4
AS31	Alice Springs	31.74	244	*e*P	P	23 55 59.5	-0.1
	2.9nm,0.8s						
ASAR	Alice Springs	31.74	244	P	P	23 55 59.1	-0.4
	7.7nm,0.8s,baz=74,slow=9.2,SNR=56						
ASAR				PcP	PcP	23 58 50.5	-0.1
	5.0nm,1.1s,baz=90,slow=3.0,SNR=8.0						
RPZ	Rata Peaks	32.21	172	P	P	23 56 03.6	+0.3
	3.3nm,0.5s,baz=350,slow=2.7,SNR=4.9						
FITZ	Fitzroy Crossi	38.42	256	P	P	23 56 56.8	-0.3
	12nm,1.0s,baz=95,slow=6.5,SNR=14						
NLAI	Namlea	38.43	280	P	P	23 56 57.5	+0.3
SANI	Sanana	39.81	281	P	P	23 57 08.2	-0.6
BATI	Baumata	40.52	268	P	P	23 57 15.4	+0.7
BATI	Baumata	40.52	268	P	P	23 57 14.9	+0.2
	16nm,0.4s,baz=290,slow=0.2,SNR=7.2						
MMRI	Maumere	42.12	270	*e*P	P	23 57 27.8	+0.1
	60nm,1.1s						
MBWA	Marble Bar	44.20	252	*e*P	P	23 57 44.3	-0.3
PPT	Papeete	44.28	103	LR	LR	00 11 36.8	
	comp=Z,225nm,19.7s,baz=262,slow=30						
PPT2	Papeete2	44.28	103	*e*LR	LR	00 10 07.9	
	comp=Z,993nm,28.5s,baz=258						
BKSI	Bulukumba	44.74	274	P	P	23 57 48.3	-0.6
TBI	Tubuai	44.78	111	*e*LR	LR	00 10 23.3	
	comp=Z,522nm,29.8s						
BNSI	Bone	44.95	276	P	P	23 57 51.2	+0.6
TTSI	Tana Toraja	45.52	277	P	P	23 58 11.8	+17
PCI	Palu	46.04	280	P	P	23 58 00.6	+1.3
KKM	Kota Kinabalu	51.61	288	*e*P	P	23 58 42.7	+0.6
	61nm,1.0s						
TAOE	Nuku Hiva Isla	54.03	92	*e*LR	LR	00 14 30.6	
	comp=Z,344nm,26.4s						
MJAR	Matsushiro Arr	54.31	334	P	P	23 58 59.7	-1.8
	20nm,1.1s,baz=167,slow=7.8,SNR=18						
MAJO	Matsushiro	54.31	334	*e*P	P	23 59 00.8	-0.7
	46nm,1.2s						
MAJO	Matsushiro	54.31	334⇓	*e*P	P	23 59 00.3	-1.2
MAJO				pmax	pmax		
	comp=Z,46nm,1.2s						
MAT	Matsushiro	54.31	334	P	P	23 59 00.1	-1.4
MJB9	Matsu-Tunnel	54.31	334	*e*P	P	23 59 00.9	-0.7
	comp=Z,47nm,1.2s						
JNU	Nakatsue	55.26	325	P	P	23 59 07.6	-0.9
	comp=Z,31nm,1.1s,baz=155,slow=2.2,SNR=4.7						
KSM	Kuching	55.85	280	*e*P	P	23 59 13.7	+0.6
	comp=Z,50nm,1.3s						
LEM	Lembang	56.71	270	P	P	23 59 19.8	+0.4
	comp=Z,11nm,0.4s,baz=108,slow=6.7,SNR=8.9						
ASAJ	Asahikawa	59.27	341	P	P	23 59 35.5	-1.1
	comp=Z,23nm,1.0s,baz=229,slow=14,SNR=9.5						
KSRS	Korea Array	60.08	326	P	P	23 59 41.3	-0.9
	comp=Z,8.0nm,1.0s,baz=148,slow=7.0,SNR=11						
KSAR	Wonju Array Be	60.09	326	P	P	23 59 41.3	-1.0
KSAR	Wonju Array Be	60.09	326	P	P	23 59 41.3	-1.0
KS01	Wonju Array Si	60.11	326	*e*P	P	23 59 42.2	-0.3
YSS	Yuzh-Sakhalins	61.79	343	*e*P	P	23 59 53.7	0.0
	comp=Z,25nm,0.9s						
YSS	Yuzh-Sakhalins	61.79	343	*e*P	P	23 59 54.0	+0.3
YSS				*e*		00 00 04.3	
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
NJ2	Nanjing	62.03	316	*e*P	P	23 59 55.9	+0.3
NJ2				pmax	pmax		
	comp=Z,29nm,0.9s						
QIZ	Qiongzhong	62.36	299	P	P	23 59 58.7	+0.6
QIZ				pmax	pmax		
	comp=Z,170nm,5.9s						
QIZ				LR	LR		
	comp=E,200nm,19.1s						
QIZ				LR	LR		
	comp=Z,210nm,24.5s						
USRK	Ussuriysk Ar.	63.30	334	P	P	00 00 04.2	+0.4
	comp=Z,10nm,0.9s,baz=141,slow=6.5,SNR=11						
PETK	Petropavlovsk-	64.97	355	*e*P	P	00 00 14.2	-0.4
PETK	Petropavlovsk-	64.97	355	P	P	00 00 14.0	-0.6
	comp=Z,15nm,1.1s,baz=150,slow=6.3,SNR=5.8						
KULM	Kulim	66.15	281	*e*P	P	00 00 23.4	+0.3
	comp=Z,56nm,1.4s						
SKNT	Sakolnakorn	66.69	294	P	P	00 00 27.4	+1.0
	comp=Z,329nmcomp=Z,16nm,1.1s						
GRNR	Gornyy	67.11	341	*e*P	P	00 00 29.5	+1.1
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
PSI	Prapat	67.19	278	P	P	00 00 29.2	-0.7
	comp=Z,9.4nm,0.9s,baz=181,slow=3.9,SNR=16						
KLR	Kul'dur	67.46	337	P	P	00 00 30.6	-0.1
	comp=Z,8.7nm,1.0s,baz=136,slow=5.0,SNR=14						
TRTT	Trang	67.76	284	P	P	00 00 35.4	+2.1
	comp=Z,8.4nm,1.6s						
ENH	Enshi	67.78	310	*e*P	P	00 00 33.1	-0.1
	comp=Z,37nm,1.1s						
NONG	Nongkai	67.83	295	P	P	00 00 34.6	+1.0
	comp=Z,0.5nm,1.3s						
CHAI	Chaiyaphum	68.11	293	P	P	00 00 37.0	+1.6
	comp=Z,3.7nm,0.9s						
GYA	Guiyang	68.21	305⇑	*i*P	P	00 00 36.8	+0.8
GYA				PP	PP	00 03 10.0	+3.0
GYA				S	S	00 09 37.4	+3.0
GYA				SKS	ScS	00 10 32.6	-0.6
GYA	Guiyang	68.21	305	SS	SS	00 14 02.5	+4.5
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.7s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
BJT	Baijiatuau	68.59	322	*e*P	P	00 00 37.9	-0.1
	comp=Z,48nm,1.4s						
PBKT	Sadao Pong	69.25	293	*e*P	P	00 00 44.1	+1.6
	comp=Z,9.3nm,0.8s						
PBKT	Sadao Pong	69.25	293	P	P	00 00 44.1	+1.6
	comp=Z,2µmcomp=Z,19nm,0.8s						
UTTA	Uttaradit	70.02	294	P	P	00 00 49.2	+2.0
	comp=Z,2.1nm,1.0s						
XAN	Xi'an	70.07	313	P	P	00 00 47.0	-0.3
XAN				pP	pwP	00 01 03.6	+0.8
XAN				sP	PcP	00 01 11.9	+2.6
XAN				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN				pmax	pmax		
	comp=Z,110nm,5.7s						
XAN				LR	LR		
	comp=Z,240nm,23.9s						
XAN	Xi'an	70.07	313	*e*P	P	00 00 47.2	-0.1
	comp=Z,18nm,1.0s						
SRDT	SRDT	70.21	290	P	P	00 00 50.3	+1.8
	comp=Z,3µmcomp=Z,19nm,1.2s						
UTHA	Uthaitani	70.30	291	P	P	00 00 51.0	+2.0
	comp=Z,4.9nm,1.0s						
SUKH	Sukhothai	70.76	293	P	P	00 00 54.3	+2.5
	comp=Z,4.5nm,1.0s						
KMI	Kunming	70.86	302	P	P	00 00 53.7	+1.2
KMI				pP	pP	00 00 59.3	-2.8
KMI				sP	sP	00 01 02.0	-3.7
KMI				pmax	pmax		
	comp=Z,21nm,1.6s						
KMI				pmax	pmax		
	comp=Z,99nm,3.9s						
KMI	Kunming	70.86	302	*e*P	P	00 00 54.4	+1.9
	comp=Z,56nm,1.5s						
CM01	Chiang Mai Arr	71.68	294	*e*P	P	00 00 56.4	-1.0
CMAR	Chiang Mai Arr	71.70	294	P	P	00 00 58.1	+0.6
	comp=Z,12nm,1.1s,baz=114,slow=4.3,SNR=36						
CHTO	Chiang Mai	71.82	294	*e*P	P	00 00 58.7	+0.5
	comp=Z,29nm,1.4s						
CHTO	Chiang Mai	71.82	294	P	P	00 00 59.6	+1.4
	comp=Z,68nm,1.3s						
HHC	Hu-ho-hao-te	71.92	320	*e*P	P	00 00 59.7	+1.2
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
MA2	Magadan	72.07	352⇓	*e*P	P	00 00 57.4	-1.4
MA2				pmax	pmax		
	comp=Z,28nm,3.1s						
CD2	Chengdu	72.45	308⇑	*i*P	P	00 01 02.5	+0.7
CD2				pmax	pmax		
	comp=Z,60nm,1.2s						
CD2				pmax	pmax		
	comp=Z,120nm,4.9s						
HIA	Hailar	72.66	331	*e*P	P	00 01 02.8	+0.2
	comp=Z,38nm,1.3s						
HIA	Hailar	72.66	331⇓	*e*P	P	00 01 02.6	0.0
HIA				pmax	pmax		
	comp=Z,33nm,1.3s						
ZEA	Zeya	72.76	338	*e*P	P	00 01 02.8	-0.2
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,36nm,1.2s						
BTO	Baotou	72.76	319	*e*P	P	00 01 03.4	-0.1
LZH	Lanzhou	74.70	313	*e*P	P	00 01 16.3	+1.2
LZH				pP	pP	00 01 21.5	-3.1
LZH				sP	PcP	00 01 24.3	-4.9
LZH				PP	PP	00 04 01.0	-1.6
LZH				pmax	pmax		
	comp=Z,46nm,1.6s						
LZH				pmax	pmax		
	comp=Z,360nm,6.4s						
LZH				LR	LR		
	comp=N,550nm,15.6s						
LZH				LR	LR		
	comp=E,520nm,15.1s						
LZH				LR	LR		
	comp=Z,580nm,16.7s						
SEY	Seymchan	75.16	354⇓	*i*P	P	00 01 15.7	-1.2
GAMB	Gambell	77.47	10	*e*P	P	00 01 30.5	+0.6
	comp=Z,24nm,1.2s						
QSPA	South Pole Qui	78.18	180	*e*P	P	00 01 34.9	+0.7
	comp=Z,30nm,1.1s						
ULN	Ulaanbaatar	78.47	324	*e*P	P	00 01 36.1	0.0
	comp=Z,17nm,0.9s						
ULN	Ulaanbaatar	78.47	324*d*	*i*P	P	00 01 36.4	+0.3
ULN				pmax	pmax		
	comp=Z,56nm,2.5s						
YAK	Yakutsk	78.62	344	*e*P	P	00 01 34.2	-2.2
YAK				pmax	pmax		
	comp=Z,23nm,1.2s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
SONM	Songino Array	78.83	324	P	P	00 01 38.2	+0.1
	comp=E,6.1nm,0.9s,baz=147,slow=7.6,SNR=41						
SONA1	Songino Array	78.83	324	*e*P	P	00 01 37.5	-0.5
GTA	Gaotai	79.03	314	⇓P	P	00 01 40.5	+1.1
GTA				pP	PcP	00 01 46.8	-1.0
GTA				sP	pP	00 01 49.5	+0.5
GTA				pmax	pmax		
	comp=Z,27nm,1.2s						
GTA				pmax	pmax		
	comp=Z,160nm,6.0s						
GTA				LR	LR		
	comp=N,170nm,17.1s						
GTA				LR	LR		
	comp=E,200nm,17.1s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
ANM	Nome	79.42	13	*e*P	P	00 01 41.1	+0.4
	comp=Z,11nm,1.2s						
BILL	Bilibino	79.66	1	*e*P	P	00 01 41.4	-0.6
	comp=Z,37nm,1.2s						
BILL	Bilibino	79.66	1*d*	*i*P	P	00 01 41.1	-0.9
BILL				*e*		00 01 49.1	
BILL				*e*		00 04 42.2	
BILL				pmax	pmax		
	comp=Z,31nm,1.0s						
BILL				MLR	MLR		
	comp=Z,114nm,16.0s						
SUA	Susitna One	80.92	20	*e*P	P	00 01 50.1	+1.1
	comp=Z,24nm,1.2s						
ZAK	Zakamensk	81.89	325	*e*P	P	00 01 53.8	-0.6
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
CAST	Castle Rocks	81.93	18	*e*P	P	00 01 52.3	-2.0
	comp=Z,10nm,0.9s						
LSA	Lhasa	82.10	302	*e*P	P	00 01 58.1	+1.6
	comp=Z,29nm,1.8s						
TLY	Talaya	82.33	327*d*	*i*P	P	00 01 56.5	-0.1
DIV	Divide	82.42	22	*e*P	P	00 01 57.0	+0.1
	comp=Z,20nm,1.0s						
KLU	Klutina	82.61	21	*e*P	P	00 01 57.8	-0.1
	comp=Z,21nm,1.1s						
RND	Reindeer	82.93	19	*e*P	P	00 02 00.1	+0.5
	comp=Z,21nm,1.3s						
MCK	McKinley	83.13	19	*e*P	P	00 01 59.9	-0.6
	comp=Z,25nm,1.3s						
IM3	Indian Mountai	83.39	16	*e*P	P	00 02 01.1	-0.6
MLY	Manley	83.52	17	*e*P	P	00 02 02.4	-0.1
	comp=Z,10nm,1.2s						
WRH	Wood River Hil	83.92	19	*e*P	P	00 02 03.8	-0.6
	comp=Z,15nm,1.0s						
MDM	Murphy Dome	84.22	18	*e*P	P	00 02 04.9	-1.1
	comp=Z,17nm,1.2s						
HDA	Harding Lake	84.23	19	*e*P	P	00 02 05.4	-0.7
	comp=Z,33nm,1.3s						
HDA	Harding Lake	84.23	19	P	P	00 02 05.1	-1.0
	baz=227						
TCOL	CIGO, UAF Yank	84.27	18	P	P	00 02 06.0	-0.3
	baz=226						
COLA	College	84.27	18	*e*P	P	00 02 04.9	-1.3
	comp=Z,17nm,0.8s						
COLA	College	84.27	18*c*	*i*P	P	00 02 05.8	-0.4

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COLA                                          pmax    pmax
        comp=Z,20nm,1.1s
O02D    Mt. Diablo Mer       84.40  47  P       P          00 02 09.6 +1.9
        baz=250
RIDG    Independ'e Rid       84.47  20  eP      P          00 02 07.2 -0.2
        comp=Z,40nm,1.1s
ILAR    Eielson Array        84.50  19  P       P          00 02 06.2 -1.3
        comp=Z,3.6nm,0.8s,baz=240,slow=4.7,SNR=33
ILB     Eielson Array        84.50  19  eP      P          00 02 06.7 -0.8
POKR    Poker Plat Res       84.57  18  P       P          00 02 06.2 -1.6
        baz=227
M02C    Callahan             84.78  46  P       P          00 02 09.6 +0.1
        baz=250
YBH     Yreka Blue Hor       85.00  46  eP      P          00 02 12.6 +2.0
        comp=Z,23nm,1.3s
RAMN    Ramite               85.14 299  eP      P          00 02 11.9 +0.1
O03E    Paynes Creek         85.15  47  P       P          00 02 11.4  0.0
        baz=250
KNGR    Kungurtug, Tuv       85.27 324⇑iP      P          00 02 11.8  0.0
CMB     Columbia Colle       85.45  50  eP      P          00 02 13.1 +0.2
        comp=Z,76nm,1.2s
M04C    Macdoel              85.63  46  P       P          00 02 15.0 +1.2
        baz=250
JIRN    Jiri                 85.68 299  eP      P          00 02 15.1 +0.4
        comp=Z,56nm,1.1s
J04D    Umpqua Nationa       85.94  44  P       P          00 02 17.2 +1.8
        baz=250
GUN     Gumba                86.01 299  eP      P          00 02 16.5 +0.2
        comp=Z,64nm,1.3s
PKI     Pulchoki             86.32 299  eP      P          00 02 17.7 -0.1
        comp=Z,69nm,1.4s
PKIN    Phulchoki            86.33 299  eP      P          00 02 17.6 -0.2
        comp=Z,25nm,1.0s
TOLK    Toolik Lake Re       86.45  15  P       P          00 02 17.4 +0.3
        baz=224
J05D    Fort Rock, OR        86.56  45  P       P          00 02 18.5 +0.1
        baz=250
DMN     Daman                86.59 299  eP      P          00 02 19.2 +0.2
TIXI    Tiksi                86.70 349  eP      P          00 02 17.6 -0.6
TIXI    Tiksi                86.70 349⇑eP      P          00 02 17.4 -0.8
TIXI                                    pmax    pmax
        comp=Z,19nm,2.5s
DAC     Darwin (Calif)       87.03  52  eP      P          00 02 21.2 +0.3
        comp=Z,20nm,1.3s
NV01    Mina Array Sit       87.13  50  eP      P          00 02 20.9 -0.5
NVAR    Mina Array Bea       87.13  50  P       P          00 02 21.8 +0.4
        comp=Z,9.6nm,1.1s,baz=234,slow=6.7,SNR=26
TPFO    Pinon Flats          87.18  55  P       P          00 02 22.5 +0.9
        baz=254
NV11    Mina Array Sit       87.24  50  eP      P          00 02 21.2 -0.7
        comp=Z,1.2nm,1.1s
F05D    White Salmon         87.29  42  P       P          00 02 22.5 +0.8
        baz=250
KVN     Kaiserville          87.47  49  eP      P          00 02 23.4 +0.4
        comp=Z,14nm,1.2s
KOLN    Koldanda             87.92 299  eP      P          00 02 24.6 -0.8
        comp=Z,28nm,1.2s
DANN    Dangsing             87.93 299  eP      P          00 02 24.8 -0.7
        comp=Z,32nm,1.1s
I07A    Izee                 88.00  44  eP      P          00 02 26.1 +0.8
        comp=Z,24nm,1.3s
WVOR    Wild Horse Val       88.09  46  eP      P          00 02 26.1 +0.3
        comp=Z,21nm,1.3s
LTY     Liberty              88.26  41  eP      P          00 02 26.6 +0.2
        comp=Z,16nm,1.3s
TPNV    Topopah Spring       88.26  52  eP      P          00 02 28.8 +2.0
        comp=Z,38nm,1.9s
F07A    Phinny Hill Vi       88.30  42  eP      P          00 02 27.9 +1.4
        comp=Z,15nm,1.1s
GLA     Glamis               88.34  56  eP      P          00 02 29.9 +2.9
        comp=Z,28nm,1.3s
J08A    Circle Bar Ran       88.49  45  eP      P          00 02 28.1 +0.4
        comp=Z,19nm,1.2s
PYUN    Piuthan              88.53 299  eP      P          00 02 27.4 -0.9
        comp=Z,22nm,0.9s
HAWA    Hanford              88.72  42  eP      P          00 02 29.4 +0.9
        comp=Z,24nm,1.3s
Y12C    Blythe               88.77  55  eP      P          00 02 31.8 +2.8
        comp=Z,23nm,1.3s
Y12C    Blythe               88.77  55  P       P          00 02 30.7 +1.7
        baz=255
SHPR    Sheep Range          88.98  52  eP      P          00 02 31.3 +1.1
        comp=Z,20nm,1.3s
E08A    Dider Farm, El       89.06  42  eP      P          00 02 31.1 +1.0
        comp=Z,26nm,1.3s
WMQ     Urumqi               89.09 315  P       P          00 02 30.9 +0.5
WMQ                                     PcP     PcP        00 02 33.1 +1.3
WMQ                                     sP      pP         00 02 38.3 -1.8
WMQ                                     pmax    pmax
        comp=Z,30nm,1.3s
WMQ                                     pmax    pmax
        comp=Z,230nm,3.6s
WMQ                                     LR      LR
        comp=N,200nm,22.1s
WMQ                                     LR      LR
        comp=E,170nm,18.3s
WMQ                                     LR      LR
        comp=Z,170nm,19.5s
WMQ     Urumqi               89.09 315  eP      P          00 02 30.6 +0.2
        comp=Z,31nm,1.5s
R11A    Troy Canyon, C       89.15  51  eP      P          00 02 31.0  0.0
        comp=Z,10nm,1.3s
R11A    Troy Canyon, C       89.15  51  P       P          00 02 31.3 +0.3
        baz=254
W13A    Hualapai Mount       89.62  54  eP      P          00 02 34.1 +0.9
        comp=Z,18nm,1.3s
E09A    Wood Farm, Sta       89.67  42  eP      P          00 02 34.9 +2.0
        comp=Z,33nm,1.6s
214A    Organ Pipe Nat       89.71  57  P       P          00 02 34.6 +1.1
        baz=256
BMO     Blue Mountains       89.74  44  eP      P          00 02 33.4 -0.1
Y14A    Wickenburg           90.04  55  eP      P          00 02 37.5 +2.5
        comp=Z,8.2nm,1.0s
ELK     Elko                 90.05  48  eP      P          00 02 35.6 +0.4
        comp=Z,19nm,1.4s
F10A    Beach Ranch, E       90.12  43  eP      P          00 02 35.0 -0.2
MFID    Camas Ranch          90.35  46  eP      P          00 02 37.2 +0.8
        comp=Z,22nm,1.4s
PSUT    Pine Spring          90.51  51  eP      P          00 02 38.3 +0.9
        comp=Z,14nm,1.3s
LCMT    Little Creek M       90.60  52  eP      P          00 02 38.9 +1.2
        comp=Z,21nm,1.2s
CCUT    Cedar City           90.64  52  eP      P          00 02 39.0 +1.0
        comp=Z,21nm,1.3s
SYO     Syowa Base           90.81 197⇓eX      P          00 02 34.2 -3.6
NEW     Newport              90.85  41  eP      P          00 02 37.8 -0.6
        comp=Z,17nm,1.4s
NEW     Newport              90.85  41  P       P          00 02 38.4 -0.1
        baz=253
SZCU    Shurtz Canyon        90.87  52  eP      P          00 02 41.0 +1.9
        comp=Z,17nm,1.2s
KNB     Kanab                90.93  52  eP      P          00 02 40.7 +1.4
        comp=Z,33nm,1.3s
U15A    North Rim            91.20  53  eP      P          00 02 41.3 +0.6
        comp=Z,20nm,1.0s
HLID    Hailey               91.39  46  eP      P          00 02 41.8 +0.6
        comp=Z,16nm,1.3s
HLID    Hailey               91.39  46  P       P          00 02 42.0 +0.8
        baz=255
X16A    Lo Mia Camp, P       91.41  55  eP      P          00 02 42.3 +0.7
        comp=Z,12nm,1.1s
PKCU    Pink Cliffs          91.43  52  eP      P          00 02 44.4 +2.7
        comp=Z,39nm,1.2s
TUC     Tucson               91.47  57  eP      P          00 02 43.3 +1.5
        comp=Z,16nm,1.5s
TUC     Tucson               91.47  57  P       P          00 02 43.1 +1.3
        baz=257
MTPU    Mount Pierson        91.67  52  eP      P          00 02 44.5 +1.6
        comp=Z,15nm,1.1s
WUAZ    Wupatki              91.72  54  eP      P          00 02 43.2 +0.3
        comp=Z,14nm,1.1s
BGU     Big Grassy Mou       91.72  49  eP      P          00 02 43.6 +0.8
        comp=Z,14nm,0.3s
MSU     Marysvale            91.78  51  eP      P          00 02 44.5 +1.2
HVU     Hansel Valley        92.11  48  eP      P          00 02 45.1 +0.5
        comp=Z,31nm,1.3s
NLU     North Lily Min       92.20  50  eP      P          00 02 46.0 +0.9
        comp=Z,17nm,0.8s
SPUT    South Promonto       92.24  48  eP      P          00 02 45.9 +0.7
        comp=Z,6.2nm,0.6s
MPU     Maple Canyon         92.54  50  eP      P          00 02 48.5 +1.8
        comp=Z,22nm,1.4s
X18A    Snowflake            92.64  55  eP      P          00 02 50.1 +2.8
        comp=Z,8.8nm,1.0s
Q16A    Castle Valley        92.64  51  eP      P          00 02 50.8 +3.6
        comp=Z,22nm,1.6s
MCMT    McKenzie Canyo       92.79  45  eP      P          00 02 48.7 +0.9
JLU     Jordanelle           92.81  49  eP      P          00 02 48.9 +0.9
        comp=Z,21nm,0.8s
W18A    Petrified Fore       92.93  55  eP      P          00 02 51.3 +2.7
        comp=Z,12nm,1.1s
W18A    Petrified Fore       92.93  55  P       P          00 02 49.6 +1.0
        baz=258
DLMT    Dillon               93.09  44  eP      P          00 02 49.6 +0.6
        comp=Z,26nm,1.1s
WALA    Waterton Lakes       93.11  41  eP      P          00 02 49.5 +0.4
        comp=Z,17nm,1.2s
LRM     Limekiln Ridge       93.30  44  eP      P          00 02 50.8 +0.7
MK01    Makanchi Array       93.54 317  eP      P          00 02 50.8 -0.1
MK31    Makanchi Array       93.55 317  eP      P          00 02 50.9  0.0
MKAR    Makanchi Array       93.55 317  P       P          00 02 51.0  0.0
MKAR    Makanchi Array       93.55 317  P       P          00 02 51.0  0.0
        comp=Z,7.7nm,1.0s,baz=101,slow=6.3,SNR=42
MKAR                                    PP      PP         00 06 31.5 -4.6
        comp=Z,1.2nm,1.0s,baz=99,slow=7.6,SNR=4.5
ZAA0    Zalesovo Array       93.73 324  eP      P          00 02 50.4 -1.2
        comp=Z,14nm,1.3s
ZALV    Zalesovo Beam        93.73 324  eP      P          00 02 50.1 -1.4
ZALV    Zalesovo Beam        93.73 324  P       P          00 02 50.7 -0.9
        comp=Z,4.2nm,0.9s,baz=107,slow=5.0,SNR=20
MAKZ    Makanchi             93.76 317  eP      P          00 02 51.9  0.0
        comp=Z,25nm,1.3s
FXWY    Fox Creek            93.79  46  eP      P          00 02 52.6 +0.2
        comp=Z,5.0nm,1.1s
BOZ     Bozeman (W)          93.81  44  eP      P          00 02 52.7 +0.4
        comp=Z,29nm,1.6s
HRY     Holter Researc       93.92  43  eP      P          00 02 53.1 +0.4
YHB     Horse Butte          93.92  45  eP      P          00 02 53.8 +0.9
        comp=Z,11nm,1.2s
121A    Cookes Peak, D       94.00  58  P       P          00 02 55.5 +2.0
        baz=259
MOOW    Moose Ponds          94.02  46  eP      P          00 02 54.0 +0.6
        comp=Z,8.9nm,1.4s
LOHW    Long Hollow          94.09  46  eP      P          00 02 55.1 +1.3
        comp=Z,3.7nm,1.1s
H17A    Grant Village        94.27  46  eP      P          00 02 57.1 +2.5
        comp=Z,9.4nm,1.1s
H17A    Grant Village        94.27  46  P       P          00 02 56.5 +1.8
        baz=258
BW06    Boulder Array        94.66  47  eP      P          00 02 56.5 +0.1
        comp=Z,6.7nm,1.2s
PD31    Pinedale Array       94.66  47  eP      P          00 02 57.0 +0.5
PDAR    Pinedale Array       94.66  47  eP      P          00 02 55.3 -1.1
PDAR    Pinedale Array       94.66  47  P       P          00 02 55.6 -0.9
        comp=Z,4.2nm,1.1s,baz=250,slow=3.0,SNR=13
NVS     Novosibirsk          94.84 325  eP      P          00 02 55.5 -1.1
RLMT    Red Lodge            95.33  45  eP      P          00 03 02.2 +2.7
        comp=Z,7.5nm,1.4s
ANMO    Albuquerque          95.54  56⇓eP      P          00 03 00.9 +0.3
ANMO                                    pmax    pmax
        comp=Z,2.0nm,1.1s
EGMT    Eagleton             95.58  42  eP      P          00 03 00.8 +0.5
        comp=Z,10nm,1.1s
S22A    4UR Ranch, Cre       95.75  53  eP      P          00 03 04.2 +2.6
        comp=Z,14nm,1.8s
S22A    4UR Ranch, Cre       95.75  53  P       P          00 03 02.7 +1.1
        baz=260
YKA     Yellowknife Ar       96.03  27  P       P          00 03 00.0 -1.8
        comp=Z,2.9nm,0.9s,baz=255,slow=4.6,SNR=25
YKB5    Yellowknife Ar       96.03  27  eP      P          00 02 59.3 -2.6
YKW3    Yellowknife Ar       96.04  27  eP      P          00 03 00.7 -1.2
        comp=Z,6.6nm,1.1s
NRIK    Noril'sk             96.58 340  P       P          00 03 02.7 -1.5
        comp=Z,0.9nm,0.2s,baz=120,slow=4.1,SNR=4.7
KSH     Kashi                96.63 309  P       P          00 03 07.1 +1.8
KSH                                     pP      pP         00 03 12.0 -3.1
KSH                                     PP      PP         00 07 08.2 +7.9
KSH     Kashi                96.63 309  S       S          00 14 27.1 +2.8
KSH     Kashi                96.63 309  sS      sS         00 14 34.7 -6.1
KSH     Kashi                96.63 309  SS      SS         00 21 06.1 +6.7
KSH                                     pmax    pmax
        comp=Z,370nm,6.0s
KSH                                     LR      LR
        comp=N,180nm,4.6s
KSH                                     LR      LR
        comp=E,350nm,4.6s
KSH                                     LR      LR
        comp=Z,780nm,7.0s
KURK    Kurchatov            96.73 320  P       P          00 03 04.2 -1.1
KURK    Kurchatov            96.73 320  P       P          00 03 04.2 -1.1
KURBB   Kurchatov Arra       96.77 320  P       P          00 03 04.2 -1.3
        comp=Z,0.3nm,0.5s,baz=100,slow=2.3,SNR=6.7
TX31    Lajitas Ar. Si       96.89  62  eP      P          00 03 08.0 +1.3
TXAR    Lajitas Array        96.89  62  P       P          00 03 06.2 -0.5
        comp=Z,1.1nm,1.0s,baz=254,slow=4.6,SNR=5.7
FFC     Flin Flon           101.33  36  i P     Pdif       00 03 25.5 -0.3
BRVK    Borovoye            102.14 322⇓eP      Pdif       00 03 29.5  0.0
BRVK                                    pmax    pmax
        comp=Z,5.0nm,1.7s
ARCES   ARCESS Array B      116.89 345  PKP     PKPdf      00 08 18.3 -0.6
        comp=Z,7.0nm,1.3s,baz=101,slow=1.2,SNR=9.7
OBN     Obninsk             121.06 328⇓iPKIKP  PKiKP      00 08 30.0 +2.6
OBN                                     e                  00 09 56.7
OBN                                     pmax    pmax
        comp=Z,29nm,3.0s
KIV     Kislovodsk          121.21 314  i PKIKP PKiKP      00 08 28.3 +0.1
KIV                                     pmax    pmax
        comp=Z,5.0nm,1.1s
FINES   FINESS Array B      122.20 338  PKP     PKPdf      00 08 27.5 -1.8
        comp=Z,4.4nm,1.0s,baz=63,slow=0.4,SNR=4.2
AKASG   Malin Array Be      127.08 326  PKP     PKPdf      00 08 38.5 -0.5
        comp=Z,0.2nm,0.3s,baz=60,slow=1.6,SNR=8.3
AK11    Malin Array Si      127.12 326  ePKPdf  PKiKP      00 08 39.5 -0.1
BRTR    Keskin Array B      128.90 312  PKP     PKPdf      00 08 43.0  0.0
        comp=Z,2.2nm,1.1s,baz=142,slow=4.2,SNR=8.7
BUR04   Bucovina Ar. S      130.95 325  ePKPdf  PKiKP      00 08 48.0 +0.5
VYHS    Vyhne               133.84 329  eP      Pdif       00 05 51.7 +1.1
CLL     Collm               134.49 336  ePKPdf  PKPdf      00 08 53.0  0.0
CLL     Collm               134.49 336  ePKIKP  PKPdf      00 08 53.0  0.0
CONA    Conrad Observa      135.69 330  ePKiKP  PKiKP      00 08 57.6 +0.5
        comp=Z,6.0nm,1.2s
GERES   GERESS Array B      136.04 333  PKP     PKPdf      00 08 56.4 +0.2
        comp=Z,1.9nm,1.1s,baz=82,slow=2.8,SNR=9.0
GEA0    GERESS Array S      136.05 333  ePKPdf  PKPdf      00 08 56.4 +0.2
SOKA    Soboth              136.97 330  PKPdf   PKPdf      00 08 57.0 -0.9
        comp=Z,4.8nm,1.3s
OBKA    Obir                137.32 330  PKPdf   PKPdf      00 08 57.5 -1.1
        comp=Z,13nm,1.6s
RETA    Reutte              138.36 334  pPKPdf  PKiKP      00 09 03.4 +0.9
        comp=Z,7.4nm,1.3s
SQTA    Sankt Quirin        138.37 333  PKPdf   PKPdf      00 09 00.4 -0.1
        comp=Z,7.0nm,1.2s
FETA    Feichten            138.73 333  PKPdf   PKPdf      00 09 00.7 -0.6
        comp=Z,7.9nm,1.1s
KEST    Kesra               147.54 321  ePKPbc  PKPab      00 09 20.7 -1.0
KEST    Kesra               147.54 321  PKPbc   PKPbc      00 09 18.8 -0.8
        comp=Z,18nm,0.9s,baz=281,slow=4.5,SNR=7.4
ES19    SONSECA Array       150.53 342  ePKPbc  PKPbc      00 09 27.2 +0.2
ESDC    Sonseca Array       150.57 342  PKPbc   PKPbc      00 09 26.3 -0.9
        comp=Z,5.2nm,1.0s,baz=6.5,slow=3.0,SNR=8.9
TOA0    Torodi Ar. Sit      163.59 276  ePKPdf  PKPdf      00 09 37.6 -1.1
TOA0                                    ePKPab  PKPab      00 10 30.8 +0.3
TORD    Torodi Ar. Bea      163.59 276  PKP     PKPdf      00 09 37.3 -1.4
        comp=Z,3.2nm,1.1s,baz=27,slow=2.1,SNR=11
TORD                                    PKPab   PKPab      00 10 30.2 -0.3
        comp=Z,4.0nm,1.1s,baz=101,slow=4.7,SNR=9.8
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*IDC **06** 23:49:28.1±12.0, 34.°04N×69.°51E, h0^{km}, mb4.0/1, mb1 3.7/6, mb1mx3.3/64, mbtmp3.7/6, ML3.5/5, Error ellipse: s-maj=184.9km s-min=39.8km az=164.0*

*NNC **06** 23:49:49.8±4.9, 36.°29N×68.°14E, h0^{km}, mb3.7, mpv3.1, Error ellipse: s-maj=60.6km s-min=30.0km az=133.0*

ISC 06 23:49:49.0±4.0**, 35.°9N**±0.°4×**68.°8E**±0.°1**, h35**^{km}**, n9, σ2.ˢ14**/10**, 1C-1D, Hindu Kush region**

```
Code    Station Name          Δ°   AZ°    Phase ID               Time      Res
                                        Op      ISC           h  m  s    ISC
KK31    Karatay Array         7.31  10  Pn      Pn         23 51 33.9 +0.6
        0.3nm,0.2s,baz=200,slow=16,SNR=25
KK31                                    Sn      Sn         23 52 56.5 +1.5
        0.9nm,0.3s,baz=199,slow=21,SNR=4.6
KK31                                   ⇑Lg      Lg         23 53 33.6
        3.0nm,0.5s,baz=200,slow=29,SNR=4.1
AAK     Ala-Archa             8.05  32  Pn      Pn         23 51 45.2 +1.6
        1.5nm,0.3s,baz=195,slow=11,SNR=28
AAK                                     Sn      Sn         23 53 11.9 -1.6
        0.3nm,0.3s,baz=198,slow=20,SNR=3.2
GEYT    Alibeck               8.76 286  Pn      Pn         23 51 53.3 +0.1
        0.4nm,0.3s,baz=115,slow=7.9,SNR=6.9
GEYT                                    Sn      Sn         23 53 31.1 +0.4
        0.7nm,0.3s,baz=105,slow=27,SNR=5.6
AB31    Akbulak array        14.82 337  P       Pn         23 53 12.9 -3.0
        0.6nm,0.3s,baz=159,slow=12,SNR=51
MKAR    Makanchi Array       14.86  39  Pn      Pn         23 53 14.7 -1.7
        0.0nm,0.3s,baz=219,slow=12,SNR=2.7
KURBB   Kurchatov Arra       16.31  23  Pn      Pn         23 53 36.0 +0.7
        0.1nm,0.3s,baz=208,slow=10,SNR=4.9
AKTO    Aktyubinsk           16.47 335 ⇓P       Pn         23 53 36.3 -0.9
        2.2nm,0.8s
BVAR    Borovoye Array       17.15   3  P       P          23 53 51.0 +3.9
        0.3nm,0.3s,baz=177,slow=10,SNR=6.8
ZALV    Zalesovo Beam        21.23  27  P       P          23 54 30.8 -0.9
        2.4nm,0.4s,baz=221,slow=9.8,SNR=14
```

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*IDC **06** 23:56:19.4±1.6, 10.°00S×166.°67E, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.6/44, mbtmp3.9/6, ML4.2/2, Error ellipse: s-maj=46.1km s-min=28.5km az=130.0*

*ISCJB **06** 23:56:23.3±1.2, 10.°1S±0.°1×166.°5E±0.°1, h33^{km}, mb3.5/4, Error ellipse: s-maj=21.0km s-min=13.6km az=18.2*

ISC 06 23:56:25.1±1.3**, 10.°0S**±0.°1×**166.°5E**±0.°1**, h35**^{km}**, n6, σ1.ˢ31**/7**, mb3.5**/4**, Santa Cruz Islands**

```
Code    Station Name          Δ°   AZ°    Phase ID               Time      Res
                                        Op      ISC           h  m  s    ISC
HNR     Honiara               6.53 275  Pn      Pn         23 58 00.4 +1.8
        22nm,0.3s,baz=134,slow=3.1,SNR=5.9
HNR                                     Sn      Sn         23 59 10.1 -1.9
        21nm,0.3s,baz=180,slow=9.1,SNR=1.8
DZM     Mont Dzumac          11.96 180  Pn      Pn         23 59 13.2 -0.2
        0.4nm,0.3s,baz=333,slow=16,SNR=2.9
WRA     Warramunga Arr       32.57 249  P       P          00 02 53.5 +0.2
        0.4nm,0.6s,baz=81,slow=9.0,SNR=2.7
ASAR    Alice Springs        33.94 242  P       P          00 03 05.2 -0.1
        0.6nm,0.8s,baz=67,slow=10,SNR=3.5
ILAR    Eielson Array        82.32  18  P       P          00 08 42.5 -0.3
        0.3nm,0.8s,baz=238,slow=6.0,SNR=6.2
MKAR    Makanchi Array       93.33 317  P       P          00 09 36.2 -0.3
        0.3nm,0.7s,baz=96,slow=5.4,SNR=2.1
```

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*ISCJB **07** 00:02:31.1±0.6, 35.°38N±0.°09×135.°6E±0.°1, h378^{km}±5^{km}, mb3.2/6, Error ellipse: s-maj=15.4km s-min=14.0km az=170.1*

*IDC **07** 00:02:32.6±1.7, 35.°41N×135.°58E, h384^{km}±16^{km}, mb2.8/6, mb1 3.0/11, mb1mx2.8/51, mbtmp3.7/11, Error ellipse: s-maj=28.6km s-min=17.4km az=84.0*

*JMA **07** 00:02:33.1±0.1, 35.°41N×135.°42E, h363^{km}±1^{km}, M2.8*

ISC 07 00:02:31.9±0.8**, 35.°40N**±0.°09×**135.°50E**±0.°10**, h370**^{km}±7^{km}**, n21, σ1.ˢ06**/23**, mb3.1**/6**, Western Honshu**

```
Code    Station Name          Δ°   AZ°    Phase ID               Time      Res
                                        Op      ISC           h  m  s    ISC
JWT     Wachi                 0.14 213  P       Pn         00 03 18.5 +0.5
JWT                                     S       S          00 03 53.9 -1.1
JKY     Yasaka                0.39 305  P       Pn         00 03 18.9 +0.8
JKSM    Kasumi                0.70 286  P       Pn         00 03 19.3 +0.5
JIE     Ise                   1.42 135  P       Pn         00 03 22.6 +0.9
JIE                                     S       S          00 04 02.1 +0.4
JTNC    Tanabenakahech        1.58 177  P       Pn         00 03 23.0 +0.4
JTNC                                    S       S          00 04 02.1 -1.3
JHS     Saijyo                1.99 259  P       Pn         00 03 25.3 +0.3
TTO1    TONANKAI O.B.S        2.07 149  P       Pn         00 03 26.8 +1.6
JGT2    ShimaneMisato         2.47 263  P       Pn         00 03 28.6 +0.2
JHT     Toyohira              2.63 255  P       Pn         00 03 30.0 +0.3
JNU     Nakatsue              4.45 241  P       Pn         00 03 47.4 +0.6
        2.4nm,0.3s,baz=51,slow=1.6,SNR=12
KSRS    Korea Array           6.44 291  P       Pn         00 04 09.7 +1.4
        0.7nm,0.3s,baz=107,slow=12,SNR=12
USRK    Ussuriysk Ar.         9.19 344  P       P          00 04 42.0 +0.7
        0.8nm,0.3s,baz=155,slow=10,SNR=18
JCJ     Chichijima           10.06 144  S       S          00 06 33.1  -11
        7.9nm,0.3s,baz=285,slow=20,SNR=4.5
ASAJ    Asahikawa            10.27  30  P       Pn         00 04 52.4 -0.5
        1.1nm,0.3s,baz=207,slow=18,SNR=8.3
KLR     Kul'dur              14.09 350  P       Pn         00 05 37.3 -0.2
        0.2nm,0.3s,baz=235,slow=12,SNR=5.9
SONM    Songino Array        24.89 309  P       P          00 07 24.2 +1.5
        0.3nm,0.5s,baz=98,slow=10,SNR=3.0
MKAR    Makanchi Array       40.96 303  P       P          00 09 40.7 +0.8
        0.2nm,0.5s,baz=86,slow=11,SNR=4.4
WRA     Warramunga Arr       55.05 181  P       P          00 11 27.0 +0.2
        0.2nm,0.3s,baz=359,slow=7.7,SNR=6.8
FINES   FINESS Array B       67.96 331  P       P          00 12 52.1 +0.5
        5.0nm,1.2s,baz=61,slow=6.5,SNR=4.9
NOA     NORSAR Array B       73.75 335  P       P          00 13 24.3 -1.9
        0.7nm,0.9s,baz=28,slow=4.4,SNR=2.7
BRTR    Keskin Array B       76.25 309  P       P          00 13 39.0 -1.9
        0.2nm,0.4s,baz=56,slow=6.3,SNR=2.4
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*IDC **07** 00:11:30.3±1.3, 11.°52S×165.°04E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.8/30, mbtmp3.8/7, ML3.6/1, Error ellipse: s-maj=45.0km s-min=25.8km az=127.0*

*ISCJB **07** 00:11:33.9±0.9, 11.°6S±0.°1×165.°0E±0.°2, h34^{km}, mb3.7/6, Error ellipse: s-maj=28.0km s-min=18.3km az=3.9*

ISC 07 00:11:35.5±1.0**, 11.°5S**±0.°1×**165.°0E**±0.°2**, h34**^{km}**, n7, σ1.ˢ35**/7**, mb3.6**/6**, Santa Cruz Islands**

```
Code    Station Name          Δ°   AZ°    Phase ID               Time      Res
                                        Op      ISC           h  m  s    ISC
DZM     Mont Dzumac          10.57 173  Pn      Pn         00 14 05.2 +0.5
        0.5nm,0.3s,baz=17,slow=17,SNR=3.8
WRA     Warramunga Arr       30.66 250  P       P          00 17 46.7 -0.5
        1.1nm,0.9s,baz=78,slow=10,SNR=4.6
ASAR    Alice Springs        31.95 244  P       P          00 17 57.4 -1.2
        0.4nm,0.6s,baz=72,slow=9.1,SNR=4.0
SONM    Songino Array        78.65 324  P       P          00 23 35.5 +1.2
        0.7nm,0.9s,baz=136,slow=6.1,SNR=5.4
ILAR    Eielson Array        84.19  19  P       P          00 24 03.4 +0.4
        0.3nm,0.7s,baz=234,slow=5.4,SNR=3.2
MKAR    Makanchi Array       93.40 317  P       P          00 24 48.3 +0.8
        0.9nm,0.7s,baz=95,slow=6.2,SNR=10.0
YKA     Yellowknife Ar       95.72  27  P       P          00 24 55.9 -1.8
        0.2nm,0.7s,baz=268,slow=4.9,SNR=3.3
```

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*IDC **07** 00:12:31.5±1.2, 11.°05S×164.°73E, h0^{km}, mb4.0/5, mb1 4.2/8, mb1mx3.9/32, mbtmp4.1/8, ML4.2/3, Error ellipse: s-maj=36.2km s-min=25.0km az=126.0*

*ISCJB **07** 00:12:34.1±1.0, 11.°2S±0.°1×164.°6E±0.°1, h29^{km}, mb3.9/5, Error ellipse: s-maj=18.6km s-min=11.1km az=37.0*

ISC 07 00:12:35.9±1.0**, 11.°1S**±0.°1×**164.°6E**±0.°1**, h29**^{km}**, n14, σ0.ˢ97**/11**, mb3.8**/5**, Santa Cruz Islands region**

```
Code    Station Name          Δ°   AZ°    Phase ID               Time      Res
                                        Op      ISC           h  m  s    ISC
HNR     Honiara               4.91 290  Pn      Pn         00 13 47.2 -0.6
        41nm,0.3s,baz=155,slow=8.7,SNR=4.4
HNR                                     Sn      Sn         00 14 42.7 -0.9
        24nm,0.3s,baz=196,slow=7.4,SNR=2.2
DZM     Mont Dzumac          11.01 171  Pn      Pn         00 15 10.6 -1.0
        0.7nm,0.3s,baz=343,slow=14,SNR=3.0
CTA     Charters Tower       19.79 241  P       P          00 17 04.0 -0.1
        0.3nm,0.3s,baz=59,slow=12,SNR=1.9
H11S2   WAKE ISLAND Hy       29.51   4  T       T          00 49 50.4
        baz=183,slow=76,SNR=9.7
H11S3   WAKE ISLAND Hy       29.52   4  T       T          00 49 51.2
        baz=183,slow=76,SNR=9.5
H11S1   WAKE ISLAND Hy       29.53   4  T       T          00 49 51.5
        baz=183,slow=76,SNR=8.1
WRA     Warramunga Arr       30.42 250  P       P          00 18 47.0 +1.0
        4.3nm,0.7s,baz=80,slow=8.9,SNR=23
WRA                                     PcP     PcP        00 21 46.2 +0.8
        0.6nm,0.9s,baz=69,slow=3.5,SNR=3.2
H11N1   WAKE ISLAND Hy       30.74   4  T       T          00 51 22.4
        baz=182,slow=76,SNR=7.3
H11N3   WAKE ISLAND Hy       30.75   4  T       T          00 51 23.6
        baz=182,slow=76,SNR=9.4
H11N2   WAKE ISLAND Hy       30.76   4  T       T          00 51 23.7
        baz=182,slow=76,SNR=6.9
ASAR    Alice Springs        31.77 243  P       P          00 18 59.1 +1.2
        1.5nm,0.6s,baz=62,slow=10,SNR=14
ASAR                                    PcP     PcP        00 21 49.8 +0.8
        0.4nm,0.5s,baz=70,slow=3.0,SNR=3.2
SONM    Songino Array        78.10 324  P       P          00 24 33.2 +0.9
        0.5nm,0.8s,baz=140,slow=4.7,SNR=4.2
ILAR    Eielson Array        83.95  19  P       P          00 25 02.0 -0.9
        0.8nm,1.1s,baz=232,slow=5.9,SNR=3.0
MKAR    Makanchi Array       92.84 317  P       P          00 25 45.8 -0.2
        0.3nm,0.7s,baz=97,slow=6.1,SNR=3.1
```

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*IDC **07** 00:13:11.7±1.8, 10.°87S×165.°41E, h0^{km}, mb3.9/5, mb1 4.1/6, mb1mx3.8/31, mbtmp4.0/6, ML4.4/1, Error ellipse: s-maj=51.5km s-min=30.1km az=123.0*

*ISCJB **07** 00:13:14.4±1.3, 11.°0S±0.°1×165.°4E±0.°2, h30^{km}, mb3.8/4,*

Error ellipse: s-maj=28.6km s-min=20.9km az=4.3

ISC 07 00:13:16.2±1.3**, 10°.9S**±0°.2×**165°.4E**±0°.2**, h30^{km}, n6, σ0^{s}.91**/6**, mb3.8**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.12**	**175**	Pn	**Pn**	**00 15 53.3**	**0.0**
	2.4nm,0.3s,baz=33,slow=10,SNR=8.2						
CTA	**Charters Tower**	**20.58**	**241**	P	**P**	**00 17 53.8**	**+0.9**
	7.1nm,0.7s,baz=71,slow=12,SNR=2.6						
WRA	**Warramunga Arr**	**31.23**	**250**	P	**P**	**00 19 32.4**	**-1.0**
	0.6nm,0.5s,baz=78,slow=9.3,SNR=2.4						
ASAR	**Alice Springs**	**32.57**	**243**	P	**P**	**00 19 44.6**	**-0.5**
	3.0nm,1.0s,baz=72,slow=9.3,SNR=7.8						
ILAR	**Eielson Array**	**83.51**	**19**	P	**P**	**00 25 40.5**	**-0.3**
	0.5nm,1.1s,baz=223,slow=4.9,SNR=3.0						
MKAR	**Makanchi Array**	**93.23**	**317**	P	**P**	**00 26 28.6**	**+0.6**
	0.3nm,0.7s,baz=104,slow=6.1,SNR=2.6						

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*IDC **07** 00:15:41.8±1.2, 11°.53S×165°.30E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.9/31, mbtmp3.9/7, ML4.0/1, Error ellipse: s-maj=41.9km s-min=24.9km az=135.0*

*ISCJB **07** 00:15:44.0±0.9, 11°.6S±0°.1×165°.2E±0°.2, h24^{km}, mb3.8/6, Error ellipse: s-maj=26.5km s-min=18.4km az=7.5*

ISC 07 00:15:45.7±0.9**, 11°.5S**±0°.1×**165°.3E**±0°.2**, h24^{km}, n7, σ0^{s}.81**/7**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.53**	**174**	Pn	**Pn**	**00 18 15.7**	**+0.4**
	1.1nm,0.3s,baz=304,slow=18,SNR=6.4						
WRA	**Warramunga Arr**	**30.89**	**250**	P	**P**	**00 22 00.5**	**-0.2**
	4.3nm,0.8s,baz=82,slow=9.0,SNR=17						
ASAR	**Alice Springs**	**32.17**	**244**	P	**P**	**00 22 10.9**	**-1.0**
	0.8nm,0.7s,baz=66,slow=9.2,SNR=5.4						
SONM	**Songino Array**	**78.79**	**324**	P	**P**	**00 27 47.7**	**+1.0**
	0.4nm,0.6s,baz=133,slow=7.8,SNR=4.3						
ILAR	**Eielson Array**	**84.12**	**19**	P	**P**	**00 28 14.1**	**-0.3**
	0.7nm,0.7s,baz=241,slow=4.4,SNR=9.6						
NVAR	**Mina Array Bea**	**86.69**	**50**	P	**P**	**00 28 27.4**	**-0.6**
	0.2nm,0.5s,baz=244,slow=3.9,SNR=2.7						
MKAR	**Makanchi Array**	**93.57**	**317**	P	**P**	**00 29 00.0**	**+0.2**
	0.1nm,0.3s,baz=88,slow=7.0,SNR=2.4						

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*IDC **07** 00:16:22.1±0.8, 10°.95S×165°.07E, h0^{km}, mb4.4/12, mb1 4.6/14, mb1mx4.4/36, mbtmp4.4/14, ML4.6/2, MS3.5/1, Ms1 3.5/1, ms1mx3.2/44, Error ellipse: s-maj=29.7km s-min=17.9km az=139.0*

*NEIC **07** 00:16:25.1±0.3, 10°.84S×164°.89E, h10^{km}, mb4.9/19, Error ellipse: s-maj=8.2km s-min=7.9km az=140.0*

*ISCJB **07** 00:16:26.7±0.3, 11°.03S±0°.06×164°.84E±0°.06, h31^{km}, mb4.6/35, MS5.1/2, Error ellipse: s-maj=9.0km s-min=8.4km az=148.0*

ISC 07 00:16:28.5±0.5**, 10°.93S**±0°.08×**164°.89E**±0°.07**, h31^{km}, n68, σ1^{s}.94**/67**, mb4.8**/35**, 1C, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.08**	**287**	*e*P	**Pn**	**00 17 43.0**	**+0.3**
HNR				*e*S	**Sn**	**00 18 36.0**	**-4.4**
HNR	**Honiara**	**5.08**	**287**	*e*Pn	**Pn**	**00 17 41.7**	**-0.9**
HNR				*e*S	**Sn**	**00 18 44.0**	**+3.7**
HNR	**Honiara**	**5.08**	**287**	Pn	**Pn**	**00 17 41.9**	**-0.8**
	54nm,0.3s,baz=186,slow=5.3,SNR=10						
HNR				Sn	**Sn**	**00 18 36.3**	**-4.1**
	21nm,0.3s,baz=91,slow=18,SNR=2.6						
DZM	**Mont Dzumac**	**11.18**	**173**	*e*Pn	**Pn**	**00 19 07.3**	**+0.9**
DZM	**Mont Dzumac**	**11.18**	**173**	Pn	**Pn**	**00 19 04.3**	**-2.0**
	1.4nm,0.3s,baz=61,slow=19,SNR=5.1						
DZM				LR	LR	00 22 06.2	
	comp=Z,236nm,19.1s,baz=85,slow=31						
PINNC	**Pines Island,**	**11.87**	**168**	*e*Pn	**Pn**	**00 19 16.2**	**+0.5**
MSVF	**Nonsavu**	**14.43**	**119**	*e*Pn	**Pn**	**00 19 51.8**	**+0.9**
CTA	**Charters Tower**	**20.11**	**241**	P	**P**	**00 20 59.9**	**-0.1**
	41nm,0.9s,baz=74,slow=12,SNR=16						
CTAO	**Charters Tower**	**20.11**	**241**	*e*P	Pn	00 21 00.9	-1.1
	109nm,1.2s						
H11S2	**WAKE ISLAND Hy**	**29.29**	**4**	T	T	00 53 00.9	
	baz=184,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	**29.30**	**3**	T	T	00 52 59.0	
	baz=184,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**29.31**	**4**	T	T	00 53 00.1	
	baz=184,slow=76,SNR=16						
STKA	**Stephens Creek**	**29.95**	**222**	*e*P	**P**	**00 22 37.8**	**+3.7**
	3.1nm,1.1s						
STKA	**Stephens Creek**	**29.95**	**222**	P	**P**	**00 22 32.9**	**-1.2**
	2.8nm,0.7s,baz=40,slow=8.0,SNR=3.1						
H11N1	**WAKE ISLAND Hy**	**30.52**	**4**	T	T	00 54 31.0	
	baz=184,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**30.52**	**4**	T	T	00 54 32.2	
	baz=184,slow=76,SNR=10						
H11N2	**WAKE ISLAND Hy**	**30.54**	**4**	T	T	00 54 32.0	
	baz=184,slow=76,SNR=13						
WRAB	**Tennant Creek**	**30.72**	**249**	*e*P	**P**	**00 22 39.5**	**-1.6**
	5.3nm,0.9s						
WB2	**Warramunga Arr**	**30.72**	**249**	*e*P	**P**	**00 22 40.2**	**-0.8**
WRA	**Warramunga Arr**	**30.73**	**249**	P	**P**	**00 22 39.9**	**-1.2**
	3.3nm,0.9s,baz=79,slow=9.0,SNR=9.0						
WRA				PcP	**PcP**	**00 25 36.2**	**-2.4**
	1.4nm,1.0s,baz=83,slow=2.6,SNR=3.2						
AS01	**Alice Springs**	**32.05**	**243**	*e*P	**P**	**00 22 51.8**	**-1.0**
AS31	**Alice Springs**	**32.09**	**243**	*e*P	**P**	**00 22 52.2**	**-1.0**
	2.5nm,1.1s						
ASAR	**Alice Springs**	**32.09**	**243**	P	**P**	**00 22 52.1**	**-1.0**
	3.6nm,0.9s,baz=67,slow=9.9,SNR=16						
ASAR				PcP	**PcP**	**00 25 41.2**	**-1.0**
	0.5nm,0.9s,baz=63,slow=1.9,SNR=5.4						
LTZ	**Lake Taylor**	**32.38**	**170**	*e*P	P	00 23 01.1	+5.7
	22nm,1.0s						
NJ2	**Nanjing**	**61.35**	**316**	*e*P	**P**	**00 26 42.6**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CN2	**Changchun**	**65.22**	**330**	*e*P	**P**	**00 27 10.2**	**+3.2**
ENH	**Enshi**	**67.17**	**309**	*e*P	**P**	**00 27 19.9**	**0.0**
	comp=Z,27nm,1.1s						
GYA	**Guiyang**	**67.66**	**305**	*e*P	**P**	**00 27 25.0**	**+1.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PBKT	**Sadao Pong**	**68.86**	**293**	*e*P	**P**	**00 27 31.4**	**+0.7**
	comp=Z,6.6nm,1.1s						
XAN	**Xi'an**	**69.42**	**313**	P	**P**	**00 27 33.8**	**-0.1**
XAN				pP	pP	00 27 42.4	+0.6
XAN				sP	sP	00 27 46.7	+1.9
XAN				PcP	**PcP**	**00 27 56.9**	**-0.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
XAN	**Xi'an**	**69.42**	**313**	*e*P	**P**	**00 27 34.0**	**0.0**
	comp=Z,21nm,0.8s						
KMI	**Kunming**	**70.34**	**302**	P	**P**	**00 27 40.4**	**+0.4**
KMI				pP	pP	00 27 46.9	-1.1
KMI				sP	sP	00 27 51.5	+0.6
KMI				pmax	pmax		
	comp=Z,15nm,1.4s						
KMI				pmax	pmax		
	comp=Z,200nm,7.1s						
HHC	**Hu-ho-hao-te**	**71.20**	**320**	*e*P	**P**	**00 27 47.3**	**+2.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
CM01	**Chiang Mai Arr**	**71.27**	**294**	*e*P	**P**	**00 27 45.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**71.29**	**294**	P	**P**	**00 27 45.5**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=100,slow=4.5,SNR=14						
CHTO	**Chiang Mai**	**71.41**	**294**	*e*P	**P**	**00 27 48.7**	**+2.4**
	comp=Z,16nm,1.5s						
CHTO	**Chiang Mai**	**71.41**	**294**	P	**P**	**00 27 49.4**	**+3.1**
	comp=Z,29nm,1.9s						
HIA	**Hailar**	**71.86**	**331**	*e*P	**P**	**00 27 48.8**	**+0.4**
LZH	**Lanzhou**	**74.06**	**313**	*e*P	**P**	**00 28 04.4**	**+2.5**
LZH				pP	sP	00 28 13.4	+0.5
LZH				sP	PcP	00 28 17.8	+0.8
LZH				PP	**PP**	**00 30 55.0**	**+7.3**
LZH				pmax	pmax		
	comp=Z,24nm,1.5s						
LZH				LR	LR		
	comp=N,520nm,16.6s						
LZH				LR	LR		
	comp=E,540nm,16.1s						
LZH				LR	LR		
	comp=Z,610nm,17.7s						
ULN	**Ulaanbaatar**	**77.72**	**324**	*e*P	**P**	**00 28 21.8**	**-0.7**
	comp=Z,12nm,1.0s						
SONM	**Songino Array**	**78.08**	**324**	P	**P**	**00 28 24.3**	**-0.2**
	comp=Z,5.1nm,1.1s,baz=142,slow=5.2,SNR=18						
SONA1	**Songino Array**	**78.08**	**324**	*e*P	**P**	**00 28 25.0**	**+0.4**
GTA	**Gaotai**	**78.37**	**314**	*e*P	**P**	**00 28 27.2**	**+0.8**
GTA				pP	pP	00 28 32.2	-2.2
GTA				sP	PcP	00 28 35.6	0.0
GTA				pmax	pmax		
	comp=Z,11nm,1.7s						
BILL	**Bilibino**	**78.77**	**1**	*e*P	**P**	**00 28 26.4**	**-1.3**
	comp=Z,9.9nm,1.1s						
QSPA	**South Pole Qui**	**79.07**	**180**	*e*P	**P**	**00 28 29.8**	**0.0**
	comp=Z,46nm,1.0s						
HDA	**Harding Lake**	**83.41**	**19**	*e*P	**P**	**00 28 51.7**	**-0.8**
	comp=Z,7.1nm,1.0s						
ILAR	**Eielson Array**	**83.68**	**19**	P	**P**	**00 28 52.5**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=224,slow=6.3,SNR=14						
ILB	**Eielson Array**	**83.68**	**19**	*e*P	**P**	**00 28 53.8**	**-0.1**
IL1	**Eielson Array**	**83.68**	**19**	*e*P	**P**	**00 28 52.2**	**-1.6**
NVAR	**Mina Array Bea**	**86.60**	**50**	P	**P**	**00 29 07.6**	**-1.8**
	comp=Z,1.4nm,0.8s,baz=230,slow=7.6,SNR=7.9						
WMQ	**Urumqi**	**88.42**	**315**	P	**P**	**00 29 17.4**	**-0.4**
WMQ				pP	pP	00 29 25.2	-0.8
WMQ				sP	pwP	00 29 31.8	-1.4
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,200nm,5.1s						
WMQ				LR	LR		
	comp=N,490nm,15.9s						
WMQ				LR	LR		
	comp=E,1μm,18.1s						
WMQ				LR	LR		
	comp=Z,770nm,21.3s						
U15A	**North Rim**	**90.71**	**53**	*e*P	**P**	**00 29 29.1**	**0.0**
	comp=Z,3.6nm,0.8s						
HVU	**Hansel Valley**	**91.56**	**48**	*e*P	**P**	**00 29 32.7**	**0.0**
	comp=Z,3.1nm,0.8s						
SYO	**Syowa Base**	**91.64**	**197**⇑	*e*P	**P**	**00 29 33.0**	**+0.7**
MK01	**Makanchi Array**	**92.85**	**317**	*e*P	**P**	**00 29 38.0**	**-0.4**
MK31	**Makanchi Array**	**92.86**	**317**	*e*P	**P**	**00 29 37.9**	**-0.6**
MKAR	**Makanchi Array**	**92.86**	**317**	P	**P**	**00 29 38.0**	**-0.4**
	comp=Z,4.5nm,0.8s,baz=103,slow=5.2,SNR=27						
ZAA0	**Zalesovo Array**	**92.97**	**324**	*e*P	**P**	**00 29 39.6**	**+0.9**
	comp=Z,5.7nm,1.3s						
ZALV	**Zalesovo Beam**	**92.97**	**324**	*e*P	**P**	**00 29 38.3**	**-0.4**
ZALV	**Zalesovo Beam**	**92.97**	**324**	P	**P**	**00 29 36.9**	**-1.8**
	comp=Z,2.4nm,1.0s,baz=116,slow=5.1,SNR=9.2						
MAKZ	**Makanchi**	**93.08**	**317**	*e*P	**P**	**00 29 38.9**	**-0.5**
	comp=Z,9.2nm,1.1s						
FXWY	**Fox Creek**	**93.22**	**46**	*e*P	**P**	**00 29 40.4**	**-0.1**
	comp=Z,2.0nm,0.9s						
PV03	**Paradox Valley**	**93.78**	**52**	*e*P	**P**	**00 29 46.8**	**+3.8**
	comp=Z,13nm,1.7s						
PDAR	**Pinedale Array**	**94.10**	**47**	P	**P**	**00 29 41.6**	**-2.8**
	comp=Z,0.7nm,0.8s,baz=207,slow=1.3,SNR=5.5						
YKA	**Yellowknife Ar**	**95.26**	**27**	P	**P**	**00 29 45.4**	**-3.6**
	comp=Z,0.4nm,0.9s,baz=251,slow=4.6,SNR=5.4						
BRTR	**Keskin Array B**	**128.26**	**312**	PKP	**PKPdf**	**00 35 32.6**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=35,slow=5.3,SNR=4.3						
GERES	**GERESS Array B**	**135.23**	**333**	PKP	**PKPdf**	**00 35 44.8**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=80,slow=1.1,SNR=4.6						
ESDC	**Sonseca Array**	**149.71**	**343**	PKPbc	**PKPbc**	**00 36 13.6**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=72,slow=4.2,SNR=2.8						

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*IDC **07** 00:20:30.9±1.0, 10°.95S×165°.08E, h0^{km}, mb4.0/10, mb1 4.2/12, mb1mx4.0/40, mbtmp4.0/12, ML4.3/2, Error ellipse: s-maj=31.5km s-min=20.4km az=151.0*

*ISCJB **07** 00:20:33.9±0.5, 11°.07S±0°.07×165°.02E±0°.06, h31^{km}, mb4.0/12, Error ellipse: s-maj=11.1km s-min=8.7km az=23.1*

*NEIC **07** 00:20:35.4±3.6, 10°.96S×165°.04E, h29^{km}±25^{km}, mb4.1/4, Error ellipse: s-maj=13.0km s-min=9.4km az=204.0*

ISC 07 00:20:35.6±0.7**, 11°.0S**±0°.1×**165°.09E**±0°.10**, h31^{km}, n27, σ0^{s}.83**/22**, mb4.0**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.28**	**286**	Pn	**Pn**	**00 21 52.1**	**-0.4**
	20nm,0.3s,baz=132,slow=5.4,SNR=2.2						
HNR				Sn	**Sn**	**00 22 53.2**	**+0.9**
	baz=351,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	**11.13**	**173**	Pn	**Pn**	**00 23 13.1**	**+0.2**
	1.0nm,0.3s,baz=20,slow=8.5,SNR=11						
PINNC	**Pines Island,**	**11.81**	**169**	*e*Pn	**Pn**	**00 23 21.9**	**-0.1**
CTA	**Charters Tower**	**20.27**	**241**	P	**P**	**00 25 08.2**	**-0.6**
	14nm,1.0s,baz=73,slow=14,SNR=3.6						
H11S2	**WAKE ISLAND Hy**	**29.30**	**3**	T	T	00 57 15.8	
	baz=184,slow=76,SNR=7.0						
H11S3	**WAKE ISLAND Hy**	**29.30**	**3**	T	T	00 57 17.1	
	baz=184,slow=76,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**29.32**	**3**	T	T	00 57 17.3	
	baz=184,slow=76,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**30.53**	**3**	T	T	00 58 45.8	
	baz=182,slow=76,SNR=7.6						
H11N3	**WAKE ISLAND Hy**	**30.53**	**3**	T	T	00 58 48.3	
	baz=182,slow=76,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**30.54**	**3**	T	T	00 58 45.1	
	baz=182,slow=76,SNR=5.4						
WB2	**Warramunga Arr**	**30.89**	**249**	*e*P	**P**	**00 26 49.1**	**-0.6**
	3.2nm,1.1s						
WR1	**Warramunga Arr**	**30.91**	**249**	*e*P	**P**	**00 26 48.8**	**-1.0**
	4.9nm,1.0s						
WRA	**Warramunga Arr**	**30.91**	**249**	P	**P**	**00 26 48.8**	**-1.0**
	0.8nm,0.8s,baz=71,slow=9.7,SNR=4.4						
ASAR	**Alice Springs**	**32.26**	**243**	P	**P**	**00 27 00.7**	**-1.0**
	1.5nm,0.8s,baz=68,slow=9.5,SNR=6.9						
CMAR	**Chiang Mai Arr**	**71.48**	**294**	P	**P**	**00 31 54.8**	**+0.9**
	1.2nm,0.3s,baz=106,slow=4.8,SNR=4.0						
SONA0	**Songino Array**	**78.21**	**324**	*e*P	**P**	**00 32 33.1**	**+0.7**
SONM	**Songino Array**	**78.21**	**324**	P	**P**	**00 32 33.1**	**+0.7**
	0.5nm,0.8s,baz=141,slow=5.2,SNR=4.2						
QSPA	**South Pole Qui**	**79.05**	**180**	*e*P	**P**	**00 32 38.0**	**+1.3**
	6.3nm,0.9s						
ILAR	**Eielson Array**	**83.63**	**19**	P	**P**	**00 33 00.3**	**-0.5**
	0.9nm,0.9s,baz=222,slow=6.5,SNR=5.5						
NV01	**Mina Array Sit**	**86.46**	**50**	*e*P	**P**	**00 33 16.4**	**+0.5**
NVAR	**Mina Array Bea**	**86.46**	**50**	P	**P**	**00 33 16.4**	**+0.5**
	0.9nm,0.9s,baz=235,slow=5.2,SNR=4.3						
MK32	**Makanchi Array**	**93.01**	**317**	*e*P	**P**	**00 33 46.1**	**-0.1**
MKAR	**Makanchi Array**	**93.01**	**317**	P	**P**	**00 33 46.1**	**-0.1**
	0.3nm,0.7s,baz=83,slow=7.7,SNR=3.6						
PD31	**Pinedale Array**	**93.97**	**47**	*e*P	**P**	**00 33 50.9**	**-0.1**
	0.5nm,0.8s						
PDAR	**Pinedale Array**	**93.97**	**47**	P	**P**	**00 33 51.9**	**+0.9**
	0.4nm,0.9s,baz=158,slow=1.6,SNR=3.5						
YKA	**Yellowknife Ar**	**95.19**	**27**	P	**P**	**00 33 54.5**	**-1.3**
	0.4nm,0.9s,baz=254,slow=4.8,SNR=4.6						
YKB5	**Yellowknife Ar**	**95.19**	**27**	*e*P	**P**	**00 33 54.5**	**-1.3**

AUST 07 00:22:21.9±0.1**, 32°.30S**×**149°.98E, h0^{km}, Error ellipse: s-maj=0.5km s-min=0.1km az=287.0, New South Wales**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGCD	**Mangrove Creek**	**1.32**	**134**	P	Pg	00 22 46.6	-0.6
	baz=1.4						
MGCD	**Mangrove Creek**	**1.32**	**134**	P	Pg	00 22 46.6	-0.6
	baz=1.3						
MGCD				S	Sb	00 23 05.3	+0.4
	baz=1.3						
ARMA	**Armidale**	**2.35**	**37**	P	Pn	00 23 03.0	+1.1
	baz=2.4						
ARMA	**Armidale**	**2.35**	**37**	P	Pn	00 23 03.0	+1.1
	baz=2.4						
ARMA				S	Sb	00 23 33.7	-1.1
	baz=2.4						
YNG	**Young**	**2.39**	**213**	P	Pn	00 23 00.4	-1.9
	baz=2.3						
CNB	**Canberra Magne**	**3.05**	**189**	P	Pn	00 23 12.7	+1.2
	baz=3.0						
CNB	**Canberra Magne**	**3.05**	**189**	P	Pn	00 23 12.7	+1.2
	baz=3.1						
CNB				S	Sn	00 23 48.5	-0.3
	baz=3.1						
CAN	**Canberra**	**3.12**	**195**	P	Pn	00 23 13.4	+1.0
	baz=3.1						
CAN	**Canberra**	**3.12**	**195**	P	Pn	00 23 13.4	+1.0
	baz=3.1						
CAN				S	Sn	00 23 50.7	+0.2
	baz=3.1						
CMSA	**Cobar Meteorol**	**3.72**	**281**	S	Sn	00 24 05.9	+0.7
	baz=3.7						

PGC 07 00:23:34.4±0.0**, 52°.80N**×**132°.35W, h23^{km}, ML3.5**/11**, 61km southwest of Sandspit, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIB	**Dawson Inlet,**	**0.41**	**349**	P	Pb	00 23 42.8	-0.2
DIB				S	Sb	00 23 48.5	-0.5
MOBC	**Moresby Island**	**0.41**	**34**	P	Pb	00 23 43.0	-0.2
MOBC				S	Sb	00 23 49.0	-0.2
BNB	**Barry Inlet**	**0.43**	**121**	P	Pb	00 23 43.2	-0.2
BNB				S	Sb	00 23 49.7	+0.2
HG3B	**Hotspring**	**0.60**	**112**	P	Pb	00 23 45.7	-0.5
HG3B				S	Sb	00 23 53.8	-0.4
HG4B	**Hotspring**	**0.87**	**125**	P	Pb	00 23 50.2	-0.6
HG4B				S	Sb	00 24 02.5	+0.4
NDB	**Naden**	**1.21**	**343**	P	Pn	00 23 55.8	-0.2
NDB				S	Sb	00 24 12.4	+0.6
MASB	**Masset**	**1.23**	**9**	P	Pn	00 23 56.2	+0.1
BBB	**Bella Bella**	**2.66**	**102**	Pn	Pn	00 24 15.6	-0.2
BBB				Sn	Sn	00 24 45.7	-1.6
PHC	**Port Hardy**	**3.71**	**122**	Pn	Pn	00 24 29.9	-0.3
PHC				Sn	Sn	00 25 11.2	-1.8
WOSB	**Woss**	**4.48**	**124**	Pn	Pn	00 24 43.0	+2.2
FSB	**Fort Saint Jam**	**5.06**	**67**	Pn	Pn	00 24 50.3	+1.5

IDC 07 00:23:48.4±1.4**, 10°.74S**×**164°.25E, h0^{km}, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.7**/41**, mbtmp3.8**/5**, ML4.0**/1**, Error ellipse: s-maj=51.5km s-min=27.7km az=132.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.46**	**170**	Pn	Pn	00 26 33.6	0.0
	0.9nm,0.3s,baz=324,slow=19,SNR=7.2						
WRA	**Warramunga Arr**	**30.22**	**249**	P	P	00 30 01.6	+0.6
	0.9nm,0.8s,baz=78,slow=8.9,SNR=4.8						
ASAR	**Alice Springs**	**31.63**	**242**	P	P	00 30 13.0	-0.5
	0.6nm,0.8s,baz=64,slow=9.4,SNR=3.8						
ILAR	**Eielson Array**	**83.69**	**19**	P	P	00 36 20.0	+1.2
	0.5nm,0.7s,baz=241,slow=4.9,SNR=6.1						
YKA	**Yellowknife Ar**	**95.37**	**27**	P	P	00 37 12.6	-1.8
	0.2nm,0.6s,baz=264,slow=4.5,SNR=5.0						

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*IDC **07** 00:24:11.3±1.5, 11°.09S×165°.56E, h0^{km}, mb3.8/10, mb1 4.0/10, mb1mx3.9/41, mbtmp3.8/10, Error ellipse: s-maj=66.2km s-min=22.0km az=147.0*

*ISCJB **07** 00:24:14.4±1.2, 11°.2S±0°.3×165°.5E±0°.2, h30^{km}, mb3.8/10, Error ellipse: s-maj=56.6km s-min=17.6km az=146.9*

ISC 07 00:24:15.7±1.6**, 11°.2S**±0°.4×**165°.6E**±0°.3**, h30^{km}, n10, σ0^{s}.94**/10**, mb3.9**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.29**	**250**	P	**P**	**00 30 33.8**	**+0.4**
	0.5nm,0.7s,baz=80,slow=9.2,SNR=5.0						
ASAR	**Alice Springs**	**32.59**	**243**	P	**P**	**00 30 44.0**	**-0.8**
	0.7nm,0.7s,baz=71,slow=9.3,SNR=4.4						
FITZ	**Fitzroy Crossi**	**39.19**	**255**	P	**P**	**00 31 42.3**	**+0.9**
	2.4nm,0.8s,baz=52,slow=1.4,SNR=3.7						
SONM	**Songino Array**	**78.66**	**324**	P	**P**	**00 36 15.4**	**+0.4**
	0.3nm,0.7s,baz=123,slow=5.6,SNR=3.0						
ILAR	**Eielson Array**	**83.67**	**19**	P	**P**	**00 36 42.2**	**+1.1**
	0.8nm,0.6s,baz=245,slow=5.2,SNR=15						
NVAR	**Mina Array Bea**	**86.22**	**50**	P	**P**	**00 36 55.3**	**+0.4**
	0.8nm,0.8s,baz=232,slow=6.3,SNR=4.0						
MKAR	**Makanchi Array**	**93.49**	**317**	P	**P**	**00 37 27.9**	**-0.7**
	0.6nm,0.8s,baz=102,slow=6.1,SNR=5.1						
ZALV	**Zalesovo Beam**	**93.55**	**324**	P	**P**	**00 37 27.6**	**-1.0**
	0.2nm,0.3s,baz=64,slow=3.4,SNR=2.4						
PDAR	**Pinedale Array**	**93.75**	**47**	P	**P**	**00 37 30.5**	**+0.3**
	0.2nm,0.6s,baz=231,slow=5.7,SNR=2.4						
YKA	**Yellowknife Ar**	**95.15**	**27**	P	**P**	**00 37 34.6**	**-1.2**
	0.1nm,0.6s,baz=262,slow=4.3,SNR=2.8						

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*IDC **07** 00:25:34.5±1.4, 10°.92S×164°.43E, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.9/44, mbtmp3.9/9, ML4.2/2, MS4.8/1, Ms1 4.8/1, ms1mx3.9/43, Error ellipse: s-maj=46.4km s-min=22.0km az=149.0*

*ISCJB **07** 00:25:37.6±0.9, 11°.0S±0°.1×164°.35E±0°.09, h29^{km}, mb3.7/7, MS4.7/1, Error ellipse: s-maj=20.9km s-min=12.3km az=5.9*

ISC 07 00:25:39.0±1.1**, 11°.0S**±0°.2×**164°.4E**±0°.1**, h29^{km}, n10, σ0^{s}.73**/10**, mb3.7**/7**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.63**	**289**	Pn	**Pn**	**00 26 46.4**	**-0.7**
	29nm,0.3s,baz=192,slow=20,SNR=3.6						
HNR				Sn	**Sn**	**00 27 40.3**	**+0.3**
	19nm,0.3s,baz=241,slow=15,SNR=2.8						
CTA	**Charters Tower**	**19.67**	**240**	P	**Pn**	**00 30 07.9**	**+0.4**
	0.2nm,0.3s,baz=73,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**30.27**	**249**	P	**P**	**00 31 47.0**	**-0.8**
	1.4nm,1.0s,baz=76,slow=9.3,SNR=5.5						
ASAR	**Alice Springs**	**31.65**	**242**	P	**P**	**00 32 00.7**	**+0.7**
	0.2nm,0.4s,baz=60,slow=9.9,SNR=2.9						
RPZ	**Rata Peaks**	**33.13**	**171**	LR	LR	00 42 49.5	
	comp=Z,2μm,21.5s,baz=78,slow=31						
FITZ	**Fitzroy Crossi**	**38.12**	**255**	P	**P**	**00 32 55.2**	**-0.6**
	2.6nm,0.7s,baz=46,slow=9.1,SNR=5.9						
SONM	**Songino Array**	**77.82**	**324**	P	**P**	**00 37 34.7**	**+0.8**
	0.4nm,0.7s,baz=145,slow=5.3,SNR=3.9						
ILAR	**Eielson Array**	**83.86**	**19**	P	**P**	**00 38 05.2**	**-0.4**
	1.8nm,0.8s,baz=229,slow=5.8,SNR=14						
NVAR	**Mina Array Bea**	**86.99**	**50**	P	**P**	**00 38 21.7**	**-0.4**
	0.1nm,0.5s,baz=243,slow=8.0,SNR=2.5						
MKAR	**Makanchi Array**	**92.56**	**317**	P	**P**	**00 38 48.5**	**+0.7**
	0.3nm,0.6s,baz=92,slow=6.4,SNR=4.1						

IDC 07 00:28:02.6±3.2**, 11°.53S**×**165°.18E, h0^{km}, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.5**/45**, mbtmp3.5**/3**, Error ellipse: s-maj=202.5km s-min=38.1km az=148.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.80**	**250**	P	P	00 34 20.3	0.0
	0.3nm,0.5s,baz=80,slow=10,SNR=2.4						
ILAR	**Eielson Array**	**84.14**	**19**	P	P	00 40 35.2	0.0
	0.7nm,0.9s,baz=219,slow=6.8,SNR=4.8						
NVAR	**Mina Array Bea**	**86.75**	**50**	P	P	00 40 49.2	0.0
	0.1nm,0.4s,baz=226,slow=6.1,SNR=2.1						

IDC 07 00:28:31.3±8.3**, 11°.28S**×**164°.88E, h0^{km}, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/45**, mbtmp3.9**/4**, Error ellipse: s-maj=223.8km s-min=39.2km az=121.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.60**	**250**	P	P	00 34 47.7	+0.4
	3.6nm,0.8s,baz=80,slow=9.0,SNR=16						
ASAR	**Alice Springs**	**31.93**	**243**	P	P	00 34 58.4	-0.6
	0.6nm,0.8s,baz=68,slow=10,SNR=4.3						
FITZ	**Fitzroy Crossi**	**38.50**	**255**	P	P	00 35 55.7	0.0
	2.9nm,0.7s,baz=111,slow=6.1,SNR=8.1						
SONM	**Songino Array**	**78.35**	**324**	P	P	00 40 33.8	+0.1
	0.3nm,0.8s,baz=132,slow=6.0,SNR=2.8						

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*IDC **07** 00:30:09.1±0.3, 11°.66S×165°.00E, h0^{km}, mb5.7/40, mb1 5.7/43, mb1mx5.6/47, mbtmp5.6/43, ML5.1/3, MS5.7/25, Ms1 5.7/25, ms1mx5.6/31, Error ellipse: s-maj=11.3km s-min=10.8km az=98.0*

*NEIC **07** 00:30:10.8±0.1, 11°.66S×164°.94E, h8^{km}, mb6.0/105, ME6.3, MS5.9/133, MW6.0, MW6.0, Error ellipse: s-maj=2.7km s-min=2.4km az=120.0 Best double couple: NP1:ϕ_s337.00000°, δ20.00000°, λ-116.00000°. NP2: ϕ_s184.00000°, δ72.00000°, λ-81.00000°. Principal axes: T 1.1900, Plg27.0000°, Azm267.0000°; N 0.0200, Plg9.0000°, Azm2.0000°; P -1.2000, Plg62.0000°, Azm108.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s192.00000°, δ61.00000°, λ-17.00000°. NP2: ϕ_s290.00000°, δ75.00000°, λ-150.00000°. Principal axes: T Plg9.0000°, Azm58.0000°; N Plg0.0000°, Azm0.0000°; P Plg32.0000°, Azm154.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed* *from BB mechanism.*

BJI ***07*** *00:30:10.9, 11°.55S×164°.95E, h10^{km}, mB6.4/72, mb5.8/87, Ms5.9/90, Ms7 5.6/87*

ISCJB ***07*** *00:30:10.8±0.1, 11°.68S±0°.02×164°.88E±0°.02, h19^{km}, mb5.8/205, MS5.8/207, Error ellipse: s-maj=3.1km s-min=2.4km az=160.5*

NEIC ***07*** *00:30:11.0±0.0, 11°.76S×164°.86E, h11^{km} Best double couple: NP1:ϕ_s328.00000°, δ62.00000°, λ-88.00000°. NP2:ϕ_s144.00000°, δ28.00000°, λ-93.00000°. Principal axes: T 1.0800, Plg17.0000°, Azm56.0000°; N 0.0000, Plg1.0000°, Azm146.0000°; P -1.0700, Plg72.0000°, Azm242.0000°;*

GCMT ***07*** *00:30:12.8±0.1, 11°.87S±0°.01×165°.05E±0°.01, h12^{km}, MW6.0/148, Moment Tensor Solution. s134,c263; s148,c416; Duration: 2^{s}5 Moment tensor: Scale 10^{18} Nm; M_{rr}-1.26±.01; $M_{\theta\theta}$0.44±.01; $M_{\phi\phi}$0.82±.01; $M_{r\theta}$-0.42±.03; $M_{\theta\phi}$-0.63±.01; $M_{\phi r}$0.01±.03; Best double couple: $M_0$1.34100×10^{18} NP1:ϕ_s130.00000°, δ52.00000°, λ-107.00000°. NP2:ϕ_s337.00000°, δ41.00000°, λ-69.00000°. Principal axes: T 1.3150, Plg6.0000°, Azm232.0000°; N 0.0560, Plg14.0000°, Azm141.0000°; P -1.3660, Plg75.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

MOS ***07*** *00:30:13.7±1.1, 11°.51S×164°.79E, h33^{km}, mb6.1/65, MS5.7/33 Error ellipse: s-maj=6.8km s-min=5.6km az=105.3*

ISC 07 00:30:12.8±0.6**, 11°.76S**±0°.04×**165°.03E**±0°.04**, h25**^{km}±3^{km}**, n1207, σ1^{s}40**/1230**, mb5.9**/209**, MS5.8**/209**, 62C-61D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.51	294	*i* P	Pn	00 31 33.0	-0.2
HNR				*i* S	Sn	00 32 30.0	-5.8
HNR	**Honiara**	5.51	294	Pn	Pn	00 31 32.8	-0.4
	274nm,0.3s,baz=183,slow=3.7,SNR=39						
HNR				Sn	Sn	00 32 35.2	-0.6
	130nm,0.3s,baz=194,slow=22,SNR=6.7						
HNR				LR	LR	00 33 32.8	
	comp=Z,143µm,21.4s,baz=126,slow=38						
MARNC	**Mare, Loyalty**	10.09	164	*e*Pn	Pn	00 32 36.5	+0.4
DZM	**Mont Dzumac**	10.35	173	*e*Pn	Pn	00 32 40.2	+0.4
	132nm,0.6s						
DZM				*e*LR	LR	00 34 59.5	
	comp=Z,95µm,25.9s						
DZM	**Mont Dzumac**	10.35	173	Pn	Pn	00 32 40.3	+0.6
	8.8nm,0.3s,baz=317,slow=11,SNR=104						
DZM				Sn	Sn	00 34 27.6	-7.4
	baz=38,slow=13,SNR=1.0						
DZM				LR	LR	00 36 31.4	
	comp=Z,64µm,18.2s,baz=356,slow=37						
ONTNC	**Ouen Toro**	10.58	173	*e*Pn	Pn	00 32 44.2	+1.4
PINNC	**Pines Island,**	11.04	168	*e*Pn	Pn	00 32 50.6	+1.4
MSVF	**Nonsavu**	13.92	117	*e*Pn	Pn	00 33 30.4	+1.7
MSVF	**Nonsavu**	13.92	117	*e*P	Pn	00 33 30.4	+1.7
FUNA	**Funafuti**	14.31	78	*e*Pn	P	00 33 37.7	-3.2
	2µm,1.5s						
TARA	**Tarawa**	15.21	32	*e*Pn	Pn	00 33 45.7	-0.3
	32nm,1.1s						
EIDS	**Eidsvold**	18.90	222	P	Pn	00 34 33.9	+1.5
	baz=19,SNR=34						
PATS	**Pohnpei**	19.64	340	P	Pn	00 34 41.2	-0.1
	baz=20,SNR=7.7						
PATS	**Pohnpei**	19.64	340	*e*P	P	00 34 39.7	-0.1
	2µm,1.5s						
CTA	**Charters Tower**	19.85	243	P	Pn	00 34 43.6	-0.2
	2.2nm,0.3s,baz=70,slow=13,SNR=58						
CTA				LR	LR	00 41 36.1	
	comp=Z,57µm,18.5s,baz=68,slow=35						
CTAO	**Charters Tower**	19.85	243	*e*P	Pn	00 34 43.5	-0.2
	460nm,1.2s						
CTAO	**Charters Tower**	19.85	243	*e*P	Pn	00 34 43.5	-0.2
CTAO				pmax	pmax		
	comp=Z,460nm,1.2s						
KWAJ	**Kwajalein Atol**	20.59	7	*e*P	P	00 34 46.1	-3.9
	comp=Z,770nm,1.3s						
KWAJ	**Kwajalein Atol**	20.59	7	*e*P	P	00 34 46.1	-3.9
KWAJ				pmax	pmax		
	comp=Z,770nm,1.3s						
MTSU	**Mount Surprise**	20.98	250	P	P	00 34 55.8	+1.4
	baz=21,SNR=55						
RMQ	**Roma**	21.20	224	P	P	00 34 58.6	+2.0
	baz=21,SNR=91						
COEN	**Coen**	21.42	262	P	P	00 34 59.5	+0.4
	baz=21,SNR=57						
ARMA	**Armidale**	22.35	212	P	P	00 35 10.6	+1.6
	baz=22,SNR=21						
RAO	**Raoul Island**	23.57	140	LR	LR	00 43 29.2	
	comp=Z,3µm,19.6s,baz=312,slow=34						
QLP	**Quilpie**	24.51	230	P	P	00 35 31.0	+0.7
	baz=25,SNR=24						
OUZ	**Omahuta**	24.62	163	*e*P	P	00 35 35.5	+4.3
	comp=Z,568nm,1.4s						
MGCD	**Mangrove Creek**	24.87	209	P	P	00 35 35.7	+2.2
	baz=25,SNR=20						
RIV	**Riverview**	25.37	208	P	P	00 35 40.4	+2.4
	baz=26,SNR=16						
JAY	**Jayapura**	25.80	289	P	P	00 35 40.4	-1.8
QIS	**Mount Isa**	25.91	247	P	P	00 35 42.9	-0.3
	baz=26,SNR=56						
GENI	**Genyem**	26.27	288	P	P	00 35 45.3	-1.1
CMSA	**Cobar Meteorol**	26.57	219	P	P	00 35 49.0	0.0
	baz=27,SNR=104						
YNG	**Young**	27.08	211	P	P	00 35 55.0	+1.4
	baz=27,SNR=10						
CNB	**Canberra Magne**	27.42	209	P	P	00 35 57.7	+1.0
	baz=28,SNR=22						
CAN	**Canberra**	27.60	209	*e*P	P	00 35 58.9	+0.7
	comp=Z,279nm,1.7s						
CAN	**Canberra**	27.60	209	*e*P	P	00 35 58.9	+0.7
CAN				pmax	pmax		
	comp=Z,279nm,1.7s						
HIZ	**Hauiti**	28.05	163	*e*P	P	00 36 08.3	+6.1
	comp=Z,273nm,1.2s						
MXZ	**Matakaoa Point**	28.32	157	*e*P	P	00 36 04.7	+0.2
	comp=Z,202nm,1.0s						
URZ	**Urewera**	28.51	160	*e*P	P	00 36 08.0	+1.6
	comp=Z,160nm,1.2s						
URZ	**Urewera**	28.51	160	P	P	00 36 07.9	+1.6
	comp=Z,60nm,1.1s,baz=353,slow=5.7,SNR=22						
URZ				LR	LR	00 46 27.6	
	comp=Z,21µm,18.5s,baz=345,slow=34						
BKZ	**Black Stump Fm**	29.14	162	*e*P	P	00 36 14.5	+2.7
	comp=Z,480nm,1.7s						
STKA	**Stephens Creek**	29.45	223	P	P	00 36 15.1	+0.5
	baz=30,SNR=27						
STKA	**Stephens Creek**	29.45	223	*e*P	P	00 36 15.4	+0.8
	comp=Z,22nm,1.2s						
STKA	**Stephens Creek**	29.45	223	P	P	00 36 14.6	-0.1
STKA				pmax	pmax		
	comp=Z,62nm,1.1s						
STKA				MLR	MLR		
	comp=Z,53µm,19.6s						
STKA	**Stephens Creek**	29.45	223	P	P	00 36 14.6	-0.1
	comp=Z,48nm,1.0s,baz=46,slow=13,SNR=2.8						
STKA				LR	LR	00 47 21.5	
	comp=Z,53µm,19.6s,baz=38,slow=35						
H11S2	**WAKE ISLAND Hy**	30.10	3	T	T	01 07 47.3	
	baz=184,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	30.10	3	T	T	01 07 49.0	
	baz=184,slow=76,SNR=43						
H11S1	**WAKE ISLAND Hy**	30.12	3	T	T	01 07 49.0	
	baz=184,slow=76,SNR=6.5						
BFZ	**Birch Farm**	30.46	163	*e*P	P	00 36 26.5	+3.0
	comp=Z,116nm,1.0s						
WB2	**Warramunga Arr**	30.57	251	*e*P	P	00 36 24.1	-0.7
WRAB	**Tennant Creek**	30.57	251	*e*P	P	00 36 24.3	-0.5
	comp=Z,607nm,1.3s						
WRAB				*e*PcP	PcP	00 39 24.2	+0.9
WRAB				LR	LR		
	comp=Z,30µm,21.0s						
WRAB	**Tennant Creek**	30.57	251	*d i*P	P	00 36 23.7	-1.1
WRAB				pmax	pmax		
	comp=Z,639nm,1.4s						
WRA	**Warramunga Arr**	30.59	251	P	P	00 36 24.4	-0.5
	comp=Z,251nm,1.1s,baz=80,slow=9.5,SNR=168						
WRA				PcP	PcP	00 39 24.0	+0.6
	comp=Z,38nm,1.0s,baz=72,slow=3.1,SNR=12						
WRA				S	S	00 41 20.5	-5.1
	comp=Z,12nm,1.3s,baz=79,slow=13,SNR=2.5						
WRA				PKiKP	PKiKP	00 46 53.9	-0.8
	comp=Z,3.0nm,1.0s,baz=37,slow=1.2,SNR=6.5						
WRA				LR	LR	00 47 18.9	
	comp=Z,30µm,22.0s,baz=75,slow=34						
SNZO	**South Karori**	30.64	166	*e*P	P	00 36 27.2	+2.2
	comp=Z,175nm,1.4s						
SNZO				LR	LR		
	comp=Z,14µm,19.0s						
THZ	**Tophouse**	30.68	168	*e*P	P	00 36 27.2	+1.7
	comp=Z,87nm,0.9s						
WAKE	**Wake Island**	30.89	3	PFAKE		00 36 40.0	+13
WAKE				LR	LR		
	comp=Z,12µm,22.0s						
TOO	**Toolangi**	31.11	211	P	P	00 36 30.6	+1.3
	baz=31,SNR=13						
H11N1	**WAKE ISLAND Hy**	31.32	3	T	T	01 09 20.2	
	baz=184,slow=76,SNR=41						
H11N3	**WAKE ISLAND Hy**	31.33	3	T	T	01 09 20.8	
	baz=184,slow=76,SNR=35						
H11N2	**WAKE ISLAND Hy**	31.34	3	T	T	01 09 20.2	
	baz=184,slow=76,SNR=49						
KHZ	**Kahutara**	31.43	168	*e*P	P	00 36 34.0	+2.0
	comp=Z,141nm,1.3s						
LTZ	**Lake Taylor**	31.55	170	*e*P	P	00 36 34.7	+1.6
	comp=Z,68nm,0.9s						
AS01	**Alice Springs**	31.81	244	*e*P	P	00 36 33.6	-2.1
KDU	**Kakadu**	31.82	265	P	P	00 36 35.0	-0.8
	baz=32,SNR=7.4						
AS31	**Alice Springs**	31.85	244	*e*P	P	00 36 35.0	-1.1
	comp=Z,22nm,1.0s						
ASAR	**Alice Springs**	31.85	244	P	P	00 36 35.0	-1.1
	comp=Z,51nm,0.9s,baz=74,slow=9.2,SNR=204						
ASAR				PcP	PcP	00 39 27.4	+0.6
	comp=Z,35nm,1.1s,baz=78,slow=3.0,SNR=14						
ASAR				PKiKP	PKiKP	00 46 54.6	-0.9
	comp=Z,1.7nm,1.0s,baz=146,slow=1.2,SNR=5.4						
ASAR				LR	LR	00 48 23.9	
	comp=Z,37µm,20.8s,baz=79,slow=34						
FOZ	**Fox Glacier**	31.93	173	*e*P	P	00 36 38.4	+2.0
	comp=Z,134nm,1.1s						
OXZ	**Oxford**	32.03	170	*e*P	P	00 36 38.1	+0.7
	comp=Z,251nm,1.5s						
GUMO	**Guam**	32.16	321	LR	LR	00 49 22.1	
	comp=Z,9µm,19.9s,baz=145,slow=36						
HTT	**Hallett**	32.18	224	P	P	00 36 39.0	+0.1
	baz=32,SNR=29						
RPZ	**Rata Peaks**	32.27	172	*e*P	P	00 36 40.8	+1.4
	comp=Z,98nm,1.0s						
RPZ	**Rata Peaks**	32.27	172	P	P	00 36 40.4	+1.0
	comp=Z,51nm,0.8s,baz=290,slow=3.0,SNR=22						
CRLZ	**Canterbury Las**	32.38	170	*e*P	P	00 36 42.0	+1.7
	comp=Z,326nm,1.6s						
ARPS	**Mount Arapiles**	32.49	216	P	P	00 36 42.9	+1.5
	baz=33,SNR=17						
MQZ	**McQueen's Vall**	32.51	170	*e*P	P	00 36 41.7	+0.2
	comp=Z,110nm,1.0s						
LBZ	**Lake Benmore**	32.81	173	*e*P	P	00 36 45.4	+1.2
	comp=Z,47nm,1.0s						
WKZ	**Wanaka**	33.13	175	*e*P	P	00 36 48.2	+1.2
	comp=Z,447nm,1.8s						
SAUI	**Saumlaki**	33.43	273	*e*P	P	00 36 50.2	+0.3
	comp=Z,517nm,1.2s						
ODZ	**Otahua Downs**	33.52	173	*e*P	P	00 36 54.2	+3.9
	comp=Z,72nm,1.3s						
MLZ	**Mavora Lakes**	33.60	176	*e*P	P	00 36 53.4	+2.4
	comp=Z,309nm,1.9s						
DCZ	**Deep Cove**	33.64	177	*e*P	P	00 36 52.2	+0.8
	comp=Z,264nm,1.6s						
FAKI	**Fak Fak**	33.64	283	*e*P	P	00 36 52.3	+0.5
	comp=Z,170nm,1.6s						
BBOO	**Buckleboo**	33.83	227	P	P	00 36 53.0	-0.2
	baz=34,SNR=44						
SARN	**Sarigan**	34.09	326	*e*P	P	00 36 54.5	-1.0
	comp=Z,679nm,1.8s						
WHZ	**Wether Hill Ro**	34.11	176	*e*P	P	00 36 57.4	+2.0
	comp=Z,90nm,1.3s						
MOO	**Moorlands**	34.30	204	P	P	00 36 59.0	+1.9
	baz=34,SNR=4.9						
TAU	**Tasmania Unive**	34.64	203	*e*P	P	00 37 00.8	+0.7
TAU				LR	LR		
	comp=Z,10µm,19.0s						
TAU	**Tasmania Unive**	34.64	203	*e*P	P	00 37 00.8	+0.7
TAU				MLR	MLR		
	comp=Z,10µm,19.0s						
RAR	**Rarotonga**	34.96	110	LR	LR	00 48 24.0	
	comp=Z,12µm,21.6s,baz=298,slow=31						
KNRA	**Kununurra**	35.42	259	P	P	00 37 07.0	-0.2
	baz=35,SNR=8.8						
BNDI	**Bandanaira**	35.48	279	P	P	00 37 06.6	-1.1
BNDI				pP	pwP	00 37 46.5	+27
PALU	**Palau**	35.83	301	P	P	00 37 10.9	+0.2
	baz=36,SNR=6.5						
WRKA	**Warakurna**	37.14	244	P	P	00 37 21.0	-0.9
	baz=37,SNR=62						
JOHN	**Johnston Islan**	37.87	42	PFAKE		00 37 40.0	+12
JOHN				LR	LR		
	comp=Z,2µm,22.0s						
NLAI	**Namlea**	38.50	280	P	P	00 37 32.3	-1.1
FITZ	**Fitzroy Crossi**	38.52	256	P	P	00 37 33.2	-0.4
	baz=38,SNR=50						
FITZ	**Fitzroy Crossi**	38.52	256	P	P	00 37 32.6	-0.9
	comp=Z,99nm,1.1s,baz=88,slow=9.7,SNR=65						
FITZ				LR	LR	00 52 39.9	
	comp=Z,33µm,19.9s,baz=86,slow=35						
FORT	**Forrest**	39.06	235	P	P	00 37 38.0	+0.1
	baz=39,SNR=40						
SANI	**Sanana**	39.89	281	P	P	00 37 44.1	-0.9
	comp=Z,215nm,1.4s,comp=Z,12µm						
SANI				pP	pwP	00 38 26.2	+29
	comp=Z,215nm,1.4s,comp=Z,12µm						
SOEI	**Soe**	40.07	269	*e*P	P	00 37 47.1	+0.4
	comp=Z,307nm,1.3s						
SOEI	**Soe**	40.07	269	P	P	00 37 45.6	-1.1
BATI	**Baumata**	40.61	268	P	P	00 37 50.5	-0.6
BATI	**Baumata**	40.61	268	LR	LR	00 54 28.8	
	comp=Z,21µm,20.4s,baz=118,slow=36						
MMRI	**Maumere**	42.20	270	*e*P	P	00 38 00.9	-3.2
	comp=Z,434nm,1.2s						
MMRI	**Maumere**	42.20	270	P	P	00 38 03.1	-1.0
	comp=Z,297nm,1.4s,comp=Z,11µm						
BBSI	**Bau Bau**	42.40	275	P	P	00 38 04.8	-0.9
EDFI	**Ende, Flores**	42.72	270	P	P	00 38 06.8	-1.6
	comp=Z,141nm,2.7s,comp=Z,8µm						
EDFI				pP	pwP	00 38 50.4	+30
	comp=Z,141nm,2.7s,comp=Z,8µm						
MIDW	**Midway**	43.23	23	PFAKE		00 38 20.0	+7.9
MIDW				LR	LR		
	comp=Z,15µm,22.0s						
DAV	**Davao City (W)**	43.47	294	*e*P	P	00 38 14.4	+0.1
DAV				LR	LR		
	comp=Z,5µm,20.0s						
DAV	**Davao City (W)**	43.47	294	⇓ *i*P	P	00 38 12.0	-2.3
BASI	**Baing, Sumba**	43.63	267	P	P	00 38 15.0	-0.7
	comp=Z,259nm,2.0s,comp=Z,8µm						
KCP	**Kidapawan**	43.88	293	⇓ *e*P	P	00 38 16.1	-1.6
SKMP	**Bagumbayan, Su**	44.17	292	*e*P	P	00 38 17.7	-2.3
PPT	**Papeete**	44.21	103	P	P	00 38 20.3	0.0
	comp=Z,50nm,1.0s,baz=246,slow=20,SNR=2.4						
PPT				LR	LR	00 52 13.1	
	comp=Z,10µm,20.6s,baz=273,slow=30						
PPT2	**Papeete2**	44.21	103	*e*S	S	00 44 56.7	+4.0
	comp=Z,5µm,27.5s						
PPT2				*e*LQ	LQ	00 48 50.7	
	comp=Z,29µm,26.2s						
PPT2				*e*LR	LR	00 50 42.4	
	comp=Z,50µm,28.8s,baz=278						
MBWA	**Marble Bar**	44.31	252	*e*P	P	00 38 21.2	+0.2
	comp=Z,432nm,1.1s						
MBWA				LR	LR		
	comp=Z,17µm,19.0s						
JCJ	**Chichijima**	44.53	330	P	P	00 38 21.2	-1.4
	comp=Z,112nm,0.9s,baz=132,slow=5.7,SNR=5.8						
CBIJ	**Chichi jima**	44.54	330	P	P	00 38 21.2	-1.4
TBI	**Tubuai**	44.72	111	*e*S	S	00 45 01.9	+2.1
	comp=Z,4µm,29.2s						
TBI				*e*LQ	LQ	00 49 02.2	
	comp=Z,17µm,28.5s						
TBI				*e*LR	LR	00 50 57.3	
	comp=Z,26µm,29.0s,baz=282						
BKSI	**Bulukumba**	44.82	274	P	P	00 38 24.2	-1.0
	comp=Z,46nm,1.1s,comp=Z,4µm						
BNSI	**Bone**	45.02	276	P	P	00 38 26.3	-0.5
	comp=Z,262nm,1.1s,comp=Z,9µmcomp=Z,9µm						
KAPI	**Kappang**	45.25	275	PFAKE		00 38 40.0	+11
KAPI				LR	LR		
	comp=Z,3µm,21.0s						
SPSI	**Sidrap Palu**	45.45	276	P	P	00 38 28.4	-1.8
	comp=Z,58nm,2.1s,comp=Z,3µm						
MSLP	**Maasin**	45.46	297	*e*P	P	00 38 29.3	-0.9
TTSI	**Tana Toraja**	45.60	277	P	P	00 38 31.0	-0.4
	comp=Z,71nm,1.0s,comp=Z,6µm						
PAGZ	**Pagadian**	45.77	293	*e*P	P	00 38 31.9	-0.8
PLP	**Palo**	45.84	298	⇓ *e*P	P	00 38 31.4	-1.8
MEEK	**Meekatharra**	46.01	244	P	P	00 38 34.6	+0.1
	baz=46,SNR=46						
DCPH	**Dipolog City**	46.11	294	*e*P	P	00 38 37.8	+2.5
PCI	**Palu**	46.12	280	P	P	00 38 35.9	+0.4
PLAI	**Plampang**	46.55	269	P	P	00 38 37.7	-1.1
	comp=Z,219nm,2.2s,comp=Z,9µm						
GUIM	**Jordan**	47.67	296	*e*P	P	00 38 46.0	-1.6
PVCP	**Virac**	47.73	301	*e*P	P	00 38 46.8	-1.1
KLBR	**Kellerberrin**	47.74	238	P	P	00 38 47.9	-0.1
	baz=48,SNR=30						
RCP	**Roxas**	47.96	297	⇓ *e*P	P	00 38 49.9	+0.1
BLDU	**Ballidu**	48.40	239	P	P	00 38 53.6	+0.6
	baz=48,SNR=22						
NWAO	**Narrogin (SRO)**	48.49	236	P	P	00 38 53.9	+0.2
	baz=48,SNR=11						
NWAO	**Narrogin (SRO)**	48.49	236	*e*P	P	00 38 53.5	-0.2
NWAO				*e*PP	PP	00 40 47.7	+1.1
NWAO	**Narrogin (SRO)**	48.49	236	*e*P	P	00 38 53.5	-0.2
NWAO				*e*		00 40 47.7	
NWAO	**Narrogin (SRO)**	48.49	236	LR	LR	00 59 32.8	
	comp=Z,80µm,18.1s,baz=319,slow=36						
MORW	**Morawa**	48.67	242	P	P	00 38 55.3	+0.1
	baz=49,SNR=33						
SMKI	**Samarinda**	48.77	280	P	P	00 38 57.2	+1.1
BKB	**Balikpapan**	48.87	279	P	P	00 38 56.2	-0.6
OTRP	**Odiongan**	48.96	298	*e*P	P	00 38 55.9	-1.6
KIP	**Kipapa**	49.03	48	*e*P	P	00 38 57.9	-0.1
	comp=Z,819nm,1.1s						
KIP				LR	LR		
	comp=Z,24µm,21.0s						
KIP	**Kipapa**	49.03	48	*e*P	P	00 38 57.9	-0.1
KIP				pmax	pmax		
	comp=Z,819nm,1.1s						
KIP				MLR	MLR		
	comp=Z,24µm,21.0s						
KBKI	**Kotabaru**	49.10	276	P	P	00 38 58.1	-0.5
MUN	**Mundaring**	49.11	238	P	P	00 38 58.9	+0.5
	baz=49,SNR=26						
RKGY	**Rocky Gully**	49.13	234	P	P	00 38 59.8	+1.3
	baz=49,SNR=7.5						
SRBI	**Singaraja**	49.16	269	P	P	00 38 58.3	-0.8
GIRL	**Giralia**	49.51	250	P	P	00 39 00.6	-1.0
	baz=50,SNR=4.8						
KHU	**Kahuku**	49.53	52	*e*P	P	00 39 03.4	+1.3
	comp=Z,261nm,1.1s						
KHU	**Kahuku**	49.53	52	*e*P	P	00 39 03.4	+1.3
KHU				pmax	pmax		
	comp=Z,261nm,1.1s						
AIN	**Ainahou**	49.72	52	*e*P	P	00 39 04.4	+1.0
	comp=Z,610nm,1.6s						
HMH	**Humu'ula Sheep**	49.83	52	*e*P	P	00 39 05.3	+0.8
	comp=Z,591nm,1.4s						
KKO	**Keanakako`i**	49.88	52	*e*P	P	00 39 04.8	+0.2
	comp=Z,120nm,1.0s						
POHA	**Pohakuloa**	49.88	51	*e*P	P	00 39 04.5	-0.2
	comp=Z,370nm,0.7s						
POHA				LR	LR		
	comp=Z,17µm,20.0s						
JAGI	**Jajag, Banyuwa**	50.14	269	*e*P	P	00 39 05.0	-1.7
	comp=Z,411nm,1.7s						
JAGI	**Jajag, Banyuwa**	50.14	269	P	P	00 39 05.4	-1.2
	comp=Z,126nm,2.0s,comp=Z,8µm						
KMMI	**Kalianget**	50.54	271	P	P	00 39 09.5	-0.1
TGY	**Tagaytay City**	50.70	299	P	P	00 39 10.2	-0.6
	comp=Z,122nm,0.3s,baz=228,slow=1.9,SNR=12						
TGY				LR	LR	00 59 42.2	
	comp=Z,5µm,21.5s,baz=134,slow=35						
ENPP	**El Nido**	50.72	295	*e*P	P	00 39 10.5	-0.4
BATP	**Bataraza**	51.21	291	*e*P	P	00 39 13.5	-1.0
SMPP	**San Manuel, Pa**	51.90	301	*e*P	P	00 39 18.7	-1.0
JOW	**Kunigami**	52.40	318	*e*P	P	00 39 24.2	+1.0
	comp=Z,125nm,1.2s						
JOW	**Kunigami**	52.40	318	P	P	00 39 22.5	-0.7
	comp=Z,9.7nm,1.0s,baz=137,slow=13,SNR=14						
BOLP	**Bolinao**	52.66	301	*e*P	P	00 39 15.8	-10
PCJI	**Pacitan**	53.09	269	P	P	00 39 28.1	-0.6
WOJI	**Wonogiri, Jawa**	53.40	269	P	P	00 39 30.4	-0.5
UGM	**Wanagama**	53.78	269	*e*P	P	00 39 34.0	+0.2
	comp=Z,915nm,1.9s						
UGM	**Wanagama**	53.78	269	P	P	00 39 33.2	-0.6
INU	**Inuyama**	53.83	332	*e*P	P	00 39 34.0	+0.3
	comp=Z,433nm,1.4s						
TAOE	**Nuku Hiva Isla**	53.95	92	*e*S	S	00 47 09.5	-0.2
	comp=Z,4µm,27.6s						
TAOE				*e*LR	LR	00 55 03.9	
	comp=Z,17µm,23.2s,baz=264						
SMRI	**Semarang**	53.99	270	*e*P	P	00 39 36.7	+1.4
	comp=Z,1µm,1.9s						
SMRI	**Semarang**	53.99	270	P	P	00 39 34.6	-0.7
	comp=Z,311nm,1.9s,comp=Z,16µm						
MJAR	**Matsushiro Arr**	54.28	333	P	P	00 39 36.1	-0.9
MJAR				pmax	pmax		
	comp=Z,123nm,1.2s						
MJAR	**Matsushiro Arr**	54.28	333	P	P	00 39 36.1	-0.9
	comp=Z,121nm,1.2s,baz=165,slow=6.8,SNR=82						
MJAR				LR	LR	01 01 39.4	
	comp=Z,3µm,20.6s,baz=155,slow=35						
MAJO	**Matsushiro**	54.28	333	*e*P	P	00 39 36.0	-1.0
	comp=Z,528nm,1.5s						
MAJO				LR	LR		
	comp=Z,4µm,21.0s						
MAJO	**Matsushiro**	54.28	333	*d i*P	P	00 39 35.5	-1.5
MAJO				pmax	pmax		
	comp=Z,416nm,1.6s						
MAT	**Matsushiro**	54.28	333	P	P	00 39 35.7	-1.3
MAT				S	S	00 47 12.8	-0.5
MJB9	**Matsu-Tunnel**	54.29	333	*e*P	P	00 39 36.7	-0.3
TWG	**Pinlang**	55.09	309	*e*P	P	00 39 44.6	+1.5
	comp=Z,997nm,1.8s						
YULB	**Yu-li**	55.24	309	*e*P	P	00 39 42.9	-1.3
	comp=Z,299nm,1.9s						
JNU	**Nakatsue**	55.25	325	*e*P	P	00 39 44.2	+0.2
	comp=Z,835nm,1.7s						
JNU	**Nakatsue**	55.25	325	P	P	00 39 43.5	-0.6
	comp=Z,110nm,1.1s,baz=110,slow=3.6,SNR=19						
NACB	**Ninganchiao**	55.46	310	*e*P	P	00 39 45.9	+0.2
	comp=Z,525nm,1.6s						
TPUB	**Ta-pu**	55.69	309	*e*P	P	00 39 46.8	-0.6
	comp=Z,567nm,1.7s						
SSLB	**Suanglung**	55.72	310	*e*P	P	00 39 47.3	-0.3
	comp=Z,165nm,1.5s						
YHNB	**Yeheng**	55.90	311	*e*P	P	00 39 49.2	+0.2
	comp=Z,326nm,1.3s						
TATO	**Taipei**	56.00	311	*e*P	P	00 39 49.3	-0.2
	comp=Z,269nm,1.4s						
TATO				LR	LR		
	comp=Z,7µm,20.0s						
CISI	**Cisompet, Garu**	56.48	269	*e*P	P	00 39 52.7	-0.7
	comp=Z,2µm,1.9s						
CISI	**Cisompet, Garu**	56.48	269	P	P	00 39 52.6	-0.7
	comp=Z,389nm,1.9s,comp=Z,11µm						
LEM	**Lembang**	56.80	269	P	P	00 39 56.0	+0.3
	comp=Z,170nm,1.0s,baz=94,slow=4.6,SNR=62						
LEM				LR	LR	01 06 37.9	
	comp=Z,6µm,18.1s,baz=100,slow=39						
ERM	**Erimo**	57.16	341	*e*P	P	00 39 57.6	+0.1
	comp=Z,403nm,1.8s						
ERM				LR	LR		
	comp=Z,2µm,20.0s						
ERM	**Erimo**	57.16	341	*d i*P	P	00 39 56.9	-0.6
ERM				pmax	pmax		
	comp=Z,218nm,1.6s						
TPI	**Tanjungpandan**	57.52	274	P	P	00 40 00.2	-0.4
CBJI	**Citeko**	57.61	270	P	P	00 39 59.9	-1.4
DBJI	**Dramaga**	57.69	270	P	P	00 40 01.4	-0.4
YUK	**Yuzh-Kuril'sk**	58.20	344	*d i*P	P	00 40 04.3	-0.4
YUK				*e*		00 40 54.9	
YUK				*e*S	S	00 47 58.2	-6.7
YUK				*e*SSS	SSS	00 54 16.0	
YUK				pmax	pmax		
	comp=Z,421nm,2.2s						
YUK				pmax	pmax		
	comp=E,109nm,1.7s						
YUK				pmax	pmax		
	comp=Z,151nm,1.7s						
YUK				pmax	pmax		
	comp=N,88nm,1.3s						
YUK				MLR	MLR		
	comp=Z,2µm,23.0s						
YUK				MLR	MLR		
	comp=E,983nm,18.0s						
YUK				MLR	MLR		

	comp=N,2µm,19.0s						
KUR	**Kuril'sk**	**58.81**	**346**	*c*P	**P**	**00 40 09.1**	**+0.2**
KUR				*e*PPP	PPP	00 43 42.9	
KUR				*e*S	**S**	**00 48 14.8**	**+2.0**
KUR				*e*SS	**SS**	**00 52 04.1**	**-2.6**
KUR				pmax	pmax		
	comp=Z,456nm,1.8s						
KUR				pmax	pmax		
	comp=E,124nm,1.9s						
KUR				pmax	pmax		
	comp=N,182nm,1.6s						
KUR				pmax	pmax		
	comp=Z,3µm,4.0s						
KUR				MLR	MLR		
	comp=Z,2µm,15.0s						
KUR				MLR	MLR		
	comp=N,1µm,13.0s						
PPBI	**Pangkal Pinang**	**59.13**	**275**	P	**P**	**00 40 11.5**	**-0.3**
ASAJ	**Asahikawa**	**59.23**	**341**	P	**P**	**00 40 11.7**	**-0.3**
	comp=N,138nm,1.0s,baz=217,slow=11,SNR=48						
SSE	**Sheshan**	**59.88**	**317**	P	**P**	**00 40 16.0**	**-0.6**
SSE				S	**S**	**00 48 31.0**	**+3.9**
SSE				pmax	pmax		
	comp=N,55nm,1.3s						
SSE				LR	LR		
	comp=N,1µm,20.8s						
SSE				LR	LR		
	comp=N,2µm,18.8s						
SSE				LR	LR		
	comp=N,2µm,19.8s						
SSE	**Sheshan**	**59.88**	**317**	*e*P	**P**	**00 40 16.3**	**-0.3**
	comp=N,300nm,1.4s						
SSE				LR	LR		
	comp=Z,4µm,20.0s						
KSRS	**Korea Array**	**60.07**	**326**	P	**P**	**00 40 18.0**	**+0.2**
	comp=Z,28nm,0.8s,baz=155,slow=6.9,SNR=60						
KS15	**Wonju Array Si**	**60.08**	**326**	*e*P	**P**	**00 40 18.5**	**+0.6**
KSAR	**Wonju Array Be**	**60.08**	**326**	P	**P**	**00 40 18.0**	**+0.1**
KSAR	**Wonju Array Be**	**60.08**	**326**	P	**P**	**00 40 18.0**	**+0.1**
KS01	**Wonju Array Si**	**60.10**	**326**	*e*P	**P**	**00 40 18.3**	**+0.3**
HKC	**Hong Kong Obse**	**60.26**	**304**	⇓P	**P**	**00 40 21.0**	**+1.6**
MCO	**Taipa Grande**	**60.67**	**304**	P	**P**	**00 40 24.0**	**+1.7**
GZH	**Guangzhou**	**61.30**	**305**	⇓*i*P	**P**	**00 40 26.9**	**+0.4**
GZH				PP	**PP**	**00 42 41.2**	**-0.7**
GZH				S	**S**	**00 48 50.6**	**+4.9**
GZH				pmax	pmax		
	comp=Z,4µm,6.2s						
GZH				LR	LR		
	comp=Z,2µm,14.6s						
GZH				LR	LR		
	comp=Z,4µm,20.8s						
YSS	**Yuzh-Sakhalins**	**61.75**	**343**	*e*P	**P**	**00 40 29.3**	**+0.2**
	comp=Z,352nm,1.2s						
YSS				LR	LR		
	comp=Z,2µm,19.0s						
YSS	**Yuzh-Sakhalins**	**61.75**	**343**	κ*e*P	**P**	**00 40 29.3**	**+0.2**
YSS				*e*		00 41 13.0	
YSS				*e*		00 42 45.1	
YSS				*e*S	**S**	**00 48 48.2**	**-2.3**
YSS				*e*PS		00 48 57.0	
YSS				*e*SS	**SS**	**00 52 52.0**	**-0.8**
YSS				pmax	pmax		
	comp=E,110nm,1.1s						
YSS				pmax	pmax		
	comp=Z,210nm,1.1s						
YSS				pmax	pmax		
	comp=Z,2µm,4.9s						
MNAI	**Manna**	**61.80**	**271**	*e*P	**P**	**00 40 30.1**	**-0.1**
	comp=Z,586nm,1.5s						
NJ2	**Nanjing**	**62.04**	**316**	⇓*i*P	**P**	**00 40 31.0**	**-0.3**
NJ2				S	**S**	**00 48 58.9**	**+4.2**
NJ2				pmax	pmax		
	comp=Z,130nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,3µm,5.2s						
NJ2				LR	LR		
	comp=Z,3µm,19.5s						
NJ2				LR	LR		
	comp=Z,3µm,19.0s						
NJ2				LR	LR		
	comp=Z,4µm,17.9s						
TEY	**Ternei**	**62.10**	**338**	⇑*e*P	**P**	**00 40 31.8**	**+0.3**
TEY				pmax	pmax		
	comp=N,400nm,1.4s						
TEY				pmax	pmax		
	comp=Z,160nm,1.4s						
TEY				pmax	pmax		
	comp=Z,2µm,4.6s						
TEY				pmax	pmax		
	comp=N,1µm,7.6s						
TEY				MLR	MLR		
	comp=N,2µm,19.0s						
TEY				MLR	MLR		
	comp=Z,3µm,21.0s						
MSHR	**Mys Shultsa**	**62.35**	**332**	⇑*e*P	**P**	**00 40 34.2**	**+1.0**
QIZ	**Qiongzhong**	**62.40**	**299**	P	**P**	**00 40 34.8**	**+0.8**
QIZ				PP	**PP**	**00 42 51.3**	**-0.3**
QIZ				S	**S**	**00 49 03.5**	**+3.8**
QIZ				pmax	pmax		
	comp=Z,56nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,3µm,4.4s						
QIZ				LR	LR		
	comp=Z,2µm,18.6s						
QIZ				LR	LR		
	comp=Z,3µm,22.6s						
QIZ				LR	LR		
	comp=Z,5µm,25.5s						
QIZ	**Qiongzhong**	**62.40**	**299**	*e*P	**P**	**00 40 34.7**	**+0.7**
	comp=Z,52nm,1.3s						
QIZ				*e*PP	**PP**	**00 42 51.4**	**-0.3**
QIZ				LR	LR		
	comp=Z,618nm,22.0s						
VLA	**Vladivostok**	**62.45**	**333**	*d* *i*P	**P**	**00 40 34.5**	**+0.7**
VLA				pmax	pmax		
	comp=Z,578nm,1.8s						
PTCN	**Pitcairn Islan**	**62.46**	**112**	PFAKE		00 40 50.0	+16
PTCN				LR	LR		
	comp=Z,6µm,19.0s						
SKR	**Severo-Kuril's**	**62.66**	**354**	*e*P	**P**	**00 40 32.9**	**-2.2**
SKR				*e*S	**S**	**00 49 05.6**	**+3.8**
SKR				pmax	pmax		
	comp=Z,184nm,1.1s						
SKR				pmax	pmax		
	comp=Z,4µm,5.1s						
SKR				pmax	pmax		
	comp=Z,2µm,5.5s						
SKR				MLR	MLR		
	comp=Z,4µm,16.0s						
SKR				MLR	MLR		
	comp=Z,4µm,18.0s						
USA0B	**Ussuriysk Arra**	**63.27**	**334**	*e*P	**P**	**00 40 40.3**	**+1.0**
	comp=Z,333nm,1.3s						
USRK	**Ussuriysk Ar.**	**63.27**	**334**	P	**P**	**00 40 39.3**	**0.0**
	comp=Z,110nm,1.1s,baz=141,slow=5.9,SNR=59						
USRK				LR	LR	01 07 11.7	
	comp=Z,2µm,20.3s,baz=140,slow=35						
WHN	**Wuhan**	**64.34**	**312**	⇓P	**P**	**00 40 46.0**	**-0.6**
WHN				S	**S**	**00 49 26.7**	**+3.1**
WHN				pmax	pmax		
	comp=Z,220nm,1.1s						
WHN				pmax	pmax		
	comp=Z,4µm,5.3s						
WHN				LR	LR		
	comp=Z,4µm,15.0s						
WHN				LR	LR		
	comp=Z,10µm,21.4s						
WHN				LR	LR		
	comp=Z,15µm,20.9s						
DL2	**Dalian**	**64.63**	**324**	⇓P	**P**	**00 40 47.5**	**-0.8**
DL2				S	**S**	**00 49 27.3**	**+0.6**
DL2				pmax	pmax		
	comp=Z,190nm,1.3s						
DL2				pmax	pmax		
	comp=Z,3µm,4.4s						
DL2				LR	LR		
	comp=Z,2µm,22.6s						
DL2				LR	LR		
	comp=Z,2µm,21.8s						
DL2				LR	LR		
	comp=Z,4µm,26.4s						
BKNI	**Bangkinang**	**64.64**	**276**	*e*P	**P**	**00 40 50.2**	**+1.2**
	comp=Z,3µm,0.8s						
MDJ	**Mudanjiang**	**64.65**	**333**	P	**P**	**00 40 49.3**	**+0.9**
MDJ				pP	pP	00 40 53.9	-1.0
MDJ				sP	sP	00 40 57.1	-0.2
MDJ				PcS		00 45 22.5	
MDJ				S	**S**	**00 49 29.4**	**+2.5**
MDJ				ScS	**ScS**	**00 50 42.7**	**+1.4**
MDJ				SS	**SS**	**00 53 40.2**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,160nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,5µm,4.4s						
MDJ				LR	LR		
	comp=Z,2µm,11.9s						
MDJ				LR	LR		
	comp=Z,2µm,18.1s						
MDJ				LR	LR		
	comp=Z,4µm,23.7s						
MDJ	**Mudanjiang**	**64.65**	**333**	*e*P	**P**	**00 40 48.9**	**+0.5**
	comp=Z,207nm,1.3s						
MDJ				LR	LR		
	comp=Z,3µm,22.0s						
PET	**Petropavlovsk**	**64.75**	**356**	*e*P	**P**	**00 40 49.1**	**+0.3**
	comp=Z,225nm,1.5s						
PET				LR	LR		
	comp=Z,6µm,20.0s						
PET	**Petropavlovsk**	**64.75**	**356**	*e*P	**P**	**00 40 47.9**	**-0.9**
PET				*e*S	**S**	**00 49 30.5**	**+2.8**
PET				*e*PS		00 49 51.2	
PET				pmax	pmax		
	comp=Z,101nm,1.4s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
PEA0B	**Petropavlovsk-**	**64.91**	**355**	*e*P	**P**	**00 40 50.2**	**+0.3**
	comp=Z,442nm,1.5s						
PETK	**Petropavlovsk-**	**64.91**	**355**	*e*P	**P**	**00 40 49.5**	**-0.4**
PETK	**Petropavlovsk-**	**64.91**	**355**	*e*P	**P**	**00 40 49.5**	**-0.4**
PETK	**Petropavlovsk-**	**64.91**	**355**	P	**P**	**00 40 50.2**	**+0.3**
	comp=Z,104nm,1.1s,baz=139,slow=7.0,SNR=36						
PETK				LR	LR	01 04 04.0	
	comp=Z,2µm,21.4s,baz=178,slow=31						
KIWB	**Kanaga Island**	**65.20**	**12**	*e*P	**P**	**00 40 53.2**	**+1.4**
ADK	**Adak**	**65.33**	**12**	*e*P	**P**	**00 40 53.6**	**+1.0**
	comp=Z,769nm,1.8s						
ADK				LR	LR		
	comp=Z,8µm,22.0s						
ADK	**Adak**	**65.33**	**12**	*e*P	**P**	**00 40 53.6**	**+1.0**
ADK				pmax	pmax		
	comp=Z,769nm,1.8s						
ADK				MLR	MLR		
	comp=Z,8µm,22.0s						
TYV	**Tymovskoe**	**65.34**	**345**	*e*P	**P**	**00 40 53.2**	**+0.5**
TYV				*e*S	**S**	**00 49 38.9**	**+3.9**
TYV				pmax	pmax		
	comp=Z,109nm,1.5s						
TYV				pmax	pmax		
	comp=Z,2µm,5.1s						
TYV				smax	smax		
	comp=E,2µm,9.1s						
CASY	**Casey**	**65.47**	**201**	*e*P	**P**	**00 40 53.3**	**-0.1**
	comp=E,156nm,1.4s						
CASY				*e*PP	**PP**	**00 43 20.3**	**+2.9**
CASY				LR	LR		
	comp=Z,1µm,19.0s						
SNY	**Shenyang**	**65.54**	**327**	⇓P	**P**	**00 40 53.9**	**-0.3**
SNY				S	**S**	**00 49 33.1**	**-4.7**
SNY				pmax	pmax		
	comp=Z,120nm,2.5s						
SNY				pmax	pmax		
	comp=Z,3µm,4.7s						
SNY				LR	LR		
	comp=Z,4µm,17.6s						
SNY				LR	LR		
	comp=Z,1µm,19.6s						
SNY				LR	LR		
	comp=Z,4µm,22.1s						
TIA	**Tai'an**	**65.68**	**319**	P	**P**	**00 40 54.3**	**-1.0**
TIA				sP	**pwP**	**00 41 10.5**	**+2.6**
TIA				S	**S**	**00 49 43.2**	**+3.3**
TIA				pmax	pmax		
	comp=Z,28nm,1.3s						
TIA				LR	LR		
	comp=Z,780nm,17.8s						
TIA				LR	LR		
	comp=Z,1µm,17.1s						
TIA				LR	LR		
	comp=Z,1µm,19.2s						
VNDA	**Vanda**	**65.78**	**181**	P	**P**	**00 40 57.5**	**+2.2**
	comp=Z,45nm,1.3s,baz=340,slow=6.7,SNR=5.3						
VNDA				LR	LR	01 07 08.7	
	comp=Z,6µm,18.0s,baz=354,slow=34						
CN2	**Changchun**	**65.99**	**330**	⇓*i*P	**P**	**00 40 56.5**	**-0.6**
CN2				*e*pP	pP	00 41 02.5	-1.1
CN2				*e*S	**S**	**00 49 42.0**	**-1.3**
CN2				pmax	pmax		
	comp=Z,160nm,1.2s						
CN2				pmax	pmax		
	comp=Z,3µm,4.0s						
CN2				LR	LR		
	comp=Z,3µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,4µm,22.0s						
SBA	**Scott Base**	**66.10**	**180**	PFAKE		00 41 10.0	+13
SBA				LR	LR		
	comp=Z,5µm,19.0s						
COCO	**West Island**	**66.54**	**262**	*e*P	**P**	**00 41 02.7**	**+1.5**
COCO				LR	LR		
	comp=Z,9µm,22.0s						
COCO	**West Island**	**66.54**	**262**	*e*P	**P**	**00 41 02.7**	**+1.5**
COCO				MLR	MLR		
	comp=Z,9µm,22.0s						
COCO	**West Island**	**66.54**	**262**	P	**P**	**00 41 03.0**	**+1.8**
SKNT	**Sakolnakorn**	**66.74**	**294**	P	**P**	**00 41 02.9**	**+0.5**
	comp=Z,63nm,1.4s,comp=Z,3µm						
SKLT	**Songkhla**	**66.76**	**283**	P	**P**	**00 41 03.8**	**+1.2**
	comp=Z,216nm,1.8s,comp=Z,8µm						
GRNR	**Gornyy**	**67.08**	**341**	*e*P	**P**	**00 41 05.1**	**+1.2**
GRNR				pmax	pmax		
	comp=N,120nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,280nm,1.2s						
PSI	**Prapat**	**67.27**	**278**	P	**P**	**00 41 05.1**	**-1.0**
	comp=Z,85nm,1.1s,baz=179,slow=1.6,SNR=87						
PSI				PKP2bc		01 09 32.5	
	comp=Z,2.1nm,0.4s,baz=180,slow=7.0,SNR=4.9						
KLR	**Kul'dur**	**67.43**	**337**	P	**P**	**00 41 06.2**	**+0.1**
	comp=Z,68nm,1.1s,baz=137,slow=4.6,SNR=68						
KLR				PKP2bc		01 09 28.1	
	comp=Z,5.8nm,1.2s,baz=236,slow=3.8,SNR=3.1						
SRAK	**Srakaew**	**67.48**	**291**	P	**P**	**00 41 05.1**	**-2.0**
	comp=Z,66nm,1.9s,comp=Z,2µm						
ENH	**Enshi**	**67.80**	**310**	*e*P	**P**	**00 41 08.1**	**-0.9**
	comp=Z,398nm,1.4s						
ENH				LR	LR		
	comp=Z,4µm,21.0s						
TRTT	**Trang**	**67.83**	**284**	P	**P**	**00 41 10.2**	**+0.8**
	comp=Z,68nm,1.6s,comp=Z,3µm						
NONG	**Nongkai**	**67.88**	**295**	P	**P**	**00 41 10.1**	**+0.5**
	comp=Z,2.5nm,1.5s						
NKL	**Nikolayevsk**	**67.93**	**344**	*e*P	**P**	**00 41 08.5**	**-0.7**
NKL				*e*S	**S**	**00 50 06.0**	**-0.3**
NKL				pmax	pmax		
	comp=N,55nm,1.0s						
NKL				pmax	pmax		
	comp=E,77nm,1.0s						
NKL				pmax	pmax		
	comp=Z,210nm,1.0s						
NKL				pmax	pmax		
	comp=Z,3µm,7.0s						
NKL				smax	smax		
	comp=N,800nm,13.0s						
NKL				smax	smax		
	comp=E,2µm,13.0s						
CHAI	**Chaiyaphum**	**68.16**	**292**	P	**P**	**00 41 11.9**	**+0.5**
	comp=E,13nm,1.0s,comp=E,183nm						
PATY	**Pattaya**	**68.22**	**289**	P	**P**	**00 41 13.9**	**+2.1**
	comp=E,11nm,0.6s,comp=E,5µm						
GSI	**Gunungsitoli**	**68.23**	**276**	*e*P	**P**	**00 41 12.7**	**+0.7**
	comp=E,12µm,0.6s						
GYA	**Guiyang**	**68.24**	**305**	⇑*i*P	**P**	**00 41 10.4**	**-1.5**
GYA				PP	**PP**	**00 43 46.8**	**+4.0**
GYA				S	**S**	**00 50 13.6**	**+2.2**
GYA				SKS	**SKSac**	**00 51 08.0**	**-1.5**
GYA				SS	**SS**	**00 54 37.2**	**+2.2**
GYA				pmax	pmax		
	comp=E,90nm,1.0s						
GYA				LR	LR		
	comp=E,15µm,18.2s						
GYA				LR	LR		
	comp=E,16µm,18.6s						
GYA				LR	LR		
	comp=E,13µm,18.4s						
NIKH	**Nikolski High**	**68.25**	**17**	*e*P	**P**	**00 41 11.5**	**+0.3**
BJT	**Baijiatuau**	**68.59**	**322**	*e*P	**P**	**00 41 13.6**	**0.0**
	comp=E,180nm,1.3s						
BJT				LR	LR		
	comp=Z,4µm,19.0s						
BJT	**Baijiatuau**	**68.59**	**322**	*e*P	**P**	**00 41 13.6**	**0.0**
BJT				pmax	pmax		
	comp=Z,180nm,1.3s						
BJT				MLR	MLR		
	comp=Z,4µm,19.0s						
BJI	**Beijing**	**68.60**	**322**	P	**P**	**00 41 13.4**	**-0.3**
BJI				S	**S**	**00 50 16.6**	**+1.8**
BJI				pmax	pmax		
	comp=Z,110nm,1.4s						
BJI				pmax	pmax		
	comp=Z,3µm,5.0s						
BJI				LR	LR		
	comp=Z,3µm,23.6s						
BJI				LR	LR		
	comp=Z,2µm,21.0s						
BJI				LR	LR		
	comp=Z,4µm,29.4s						
PKDT	**Phuket**	**69.13**	**283**	P	**P**	**00 41 18.8**	**+1.2**
	comp=Z,45nm,1.4s,comp=Z,3µm						
PBKT	**Sadao Pong**	**69.30**	**293**	*e*P	**P**	**00 41 19.4**	**+0.8**
PBKT	**Sadao Pong**	**69.30**	**293**	P	**P**	**00 41 19.5**	**+1.0**
PHET	**Kaeng Krachan**	**69.36**	**289**	P	**P**	**00 41 20.7**	**+1.8**
	comp=Z,17nm,1.6s,comp=Z,346nm						
TIY	**Taiyuan**	**69.61**	**318**	⇑*i*P	**P**	**00 41 21.2**	**+1.1**
TIY				S	S	00 50 35.3	+8.2
TIY				pmax	pmax		
	comp=Z,390nm,1.5s						
TIY				pmax	pmax		
	comp=Z,3µm,4.6s						
TIY				LR	LR		
	comp=Z,1µm,14.4s						
TIY				LR	LR		
	comp=Z,2µm,17.9s						
TIY				LR	LR		
	comp=Z,3µm,19.6s						
UTTA	**Uttaradit**	**70.07**	**294**	P	**P**	**00 41 24.4**	**+1.1**
	comp=Z,15nm,1.4s,comp=Z,188nm						
XAN	**Xi'an**	**70.08**	**313**	P	**P**	**00 41 22.4**	**-0.7**
XAN				S	**S**	**00 50 34.0**	**+1.3**
XAN				ScS	**ScS**	**00 51 27.4**	**+3.2**
XAN				pmax	pmax		
	comp=Z,160nm,2.1s						
XAN				pmax	pmax		
	comp=Z,3µm,5.3s						
XAN				LR	LR		
	comp=Z,2µm,21.7s						
XAN				LR	LR		
	comp=Z,3µm,19.5s						
XAN				LR	LR		
	comp=Z,5µm,20.6s						
XAN	**Xi'an**	**70.08**	**313**	*e*P	**P**	**00 41 22.9**	**-0.2**
	comp=Z,4µm,1.9s						
XAN	**Xi'an**	**70.08**	**313**	*e*P	**P**	**00 41 22.9**	**-0.2**
XAN				pmax	pmax		
	comp=Z,4µm,1.9s						
SRDT	**SRDT**	**70.27**	**290**	P	**P**	**00 41 25.9**	**+1.4**
	comp=Z,109nm,1.4s,comp=Z,6µm						
UTHA	**Uthaitani**	**70.36**	**291**	P	**P**	**00 41 26.3**	**+1.3**
	comp=Z,24nm,1.3s,comp=Z,258nm						
SUKH	**Sukhothai**	**70.81**	**293**	P	**P**	**00 41 29.2**	**+1.4**
	comp=Z,18nm,1.2s						
KMI	**Kunming**	**70.89**	**302**	P	**P**	**00 41 29.4**	**+0.9**
KMI				sP	pP	00 41 37.5	+2.5
KMI				S	**S**	**00 50 47.8**	**+4.9**
KMI				sS	pS	00 50 54.0	+2.9
KMI				SKS	**SKSac**	**00 51 26.8**	**-3.1**
KMI				SS	**SS**	**00 55 19.3**	**+3.1**
KMI				pmax	pmax		
	comp=Z,240nm,1.8s						
KMI				pmax	pmax		
	comp=Z,4µm,6.5s						
KMI				LR	LR		
	comp=Z,2µm,20.7s						
KMI				LR	LR		
	comp=Z,3µm,22.1s						
KMI				LR	LR		
	comp=Z,5µm,25.1s						
UMPA	**Umpang Tak**	**71.10**	**292**	P	**P**	**00 41 31.1**	**+1.5**
	comp=Z,17nm,1.3s,comp=Z,3µm						
CM31	**Chiang Mai Arr**	**71.76**	**294**	P	**P**	**00 41 34.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**71.76**	**294**	P	**P**	**00 41 34.3**	**+0.8**
	comp=Z,70nm,1.1s,baz=116,slow=4.0,SNR=147						
CMAR				PKPPKP		01 09 26.8	
	comp=Z,4.9nm,1.1s,baz=288,slow=3.8,SNR=8.4						
CMMT	**Chiang Mai**	**71.87**	**294**	P	**P**	**00 41 34.9**	**+0.7**
	comp=Z,124nm,1.8s,comp=Z,5µm						
CHTO	**Chiang Mai**	**71.87**	**294**	*e*P	**P**	**00 41 34.6**	**+0.4**
CHTO				LR	LR		
	comp=Z,2µm,22.0s						
CHTO	**Chiang Mai**	**71.87**	**294**	P	**P**	**00 41 34.6**	**+0.4**
CHTO	**Chiang Mai**	**71.87**	**294**	P	**P**	**00 41 34.9**	**+0.7**
	comp=Z,555nm,1.8s,comp=Z,21µm						
HHC	**Hu-ho-hao-te**	**71.92**	**320**	*e*P	**P**	**00 41 35.7**	**+1.5**
HHC				PP	**PP**	**00 44 17.3**	**+3.0**
HHC				S	**S**	**00 50 55.5**	**+1.6**
HHC				SS	**SS**	**00 55 34.0**	**+2.9**
HHC				pmax	pmax		
	comp=Z,170nm,1.8s						
HHC				pmax	pmax		
	comp=Z,3µm,5.9s						
HHC				LR	LR		
	comp=Z,2µm,19.0s						
HHC				LR	LR		
	comp=Z,3µm,18.2s						
HHC				LR	LR		
	comp=Z,4µm,18.2s						
MA2	**Magadan**	**72.02**	**352**	*e*P	**P**	**00 41 32.8**	**-1.4**
MA2				LR	LR		
	comp=Z,4µm,21.0s						
MA2	**Magadan**	**72.02**	**352**	*d* *i*P	**P**	**00 41 32.8**	**-1.4**
MA2				pmax	pmax		
	comp=Z,128nm,1.7s						
MA2	**Magadan**	**72.02**	**352**	P	**P**	**00 41 33.5**	**-0.7**
	comp=Z,39nm,1.1s,baz=154,slow=6.5,SNR=20						
CD2	**Chengdu**	**72.48**	**308**	⇓*i*P	**P**	**00 41 37.9**	**+0.2**
CD2				pP	pP	00 41 42.0	-2.2
CD2				PP	**PP**	**00 44 18.8**	**-0.4**
CD2				S	**S**	**00 51 04.9**	**+4.3**
CD2				SKS	**ScS**	**00 51 42.7**	**-0.6**
CD2				SS	**SS**	**00 55 42.4**	**+2.5**
CD2				pmax	pmax		
	comp=Z,360nm,1.4s						
CD2				pmax	pmax		
	comp=Z,6µm,5.7s						
CD2				LR	LR		
	comp=Z,5µm,22.4s						
CD2				LR	LR		
	comp=Z,6µm,18.4s						
CD2				LR	LR		
	comp=Z,6µm,20.4s						
HIA	**Hailar**	**72.64**	**331**	*e*P	**P**	**00 41 38.5**	**+0.3**
HIA				LR	LR		
	comp=Z,3µm,20.0s						
HIA	**Hailar**	**72.64**	**331**	*e*P	**P**	**00 41 38.5**	**+0.3**
HIA				MLR	MLR		
	comp=Z,3µm,20.0s						
ZEA	**Zeya**	**72.73**	**338**	*d* *i*P	**P**	**00 41 38.6**	**+0.1**
ZEA				*e*S	**S**	**00 51 05.5**	**+3.1**
ZEA				*e*PS		00 51 51.0	
ZEA				pmax	pmax		
	comp=E,210nm,1.8s						
ZEA				pmax	pmax		
	comp=N,390nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,700nm,1.6s						
ZEA				pmax	pmax		
	comp=E,1µm,6.0s						
ZEA				pmax	pmax		
	comp=Z,3µm,6.0s						
ZEA				pmax	pmax		
	comp=N,2µm,5.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,10.0s						
ZEA				pmax	pmax		
	comp=N,400nm,6.0s						

ZEA				pmax	pmax		
	comp=E,400nm,6.0s						
ZEA				smax	smax		
	comp=N,1µm,12.0s						
ZEA				smax	smax		
	comp=E,2µm,12.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,18.0s						
ZEA				MLR	MLR		
	comp=N,3µm,17.0s						
CHGN	**Chignik**	**74.31**	**20**	eP	**P**	**00 41 47.1**	**-0.6**
LZH	**Lanzhou**	**74.72**	**313**	⇓P	**P**	**00 41 51.8**	**+0.9**
LZH				pP	pP	00 41 59.3	+1.8
LZH				sP	sP	00 42 02.9	+3.0
LZH				PP	**PP**	**00 44 39.4**	**+1.1**
LZH				S	**S**	**00 51 29.0**	**+3.0**
LZH				sS	pS	00 51 33.3	-0.9
LZH				SS	**SS**	**00 56 16.5**	**+2.4**
LZH				pmax	pmax		
	comp=N,350nm,1.5s						
LZH				pmax	pmax		
	comp=N,4µm,7.1s						
LZH				LR	LR		
	comp=N,4µm,17.8s						
LZH				LR	LR		
	comp=N,7µm,16.8s						
LZH				LR	LR		
	comp=N,10µm,19.9s						
SEY	**Seymchan**	**75.10**	**354**	ceP	**P**	**00 41 52.2**	**0.0**
SEY	**Seymchan**	**75.10**	**354**	P	**P**	**00 41 52.7**	**+0.5**
	comp=N,81nm,1.1s,baz=160,slow=6.6,SNR=65						
PBA	**Port Blair**	**75.45**	**285**	eP	P	00 41 56.9	+1.6
PBA	**Port Blair**	**75.45**	**285**	eP	P	00 41 55.3	0.0
OHAK	**Old Harbor**	**76.82**	**22**	eP	**P**	**00 42 02.4**	**+0.3**
GAMB	**Gambell**	**77.39**	**10**	eP	**P**	**00 42 06.0**	**+0.9**
CIT	**Chita**	**77.42**	**330**	eP	**P**	**00 42 06.1**	**+0.3**
CIT				e		00 42 14.1	
CIT				pmax	pmax		
	comp=Z,679nm,1.8s						
KDAK	**Kodiak Island**	**77.49**	**22**	eP	**P**	**00 42 05.9**	**-0.1**
	comp=Z,98nm,1.0s						
KDAK	**Kodiak Island**	**77.49**	**22**	P	**P**	**00 42 05.5**	**-0.5**
	comp=Z,55nm,1.0s,baz=140,slow=2.0,SNR=9.4						
KDAK				LR	LR	01 10 20.4	
	comp=Z,4µm,20.9s,baz=223,slow=31						
QSPA	**South Pole Qui**	**78.25**	**180**	eP	**P**	**00 42 10.8**	**+0.5**
	comp=Z,1µm,1.1s						
QSPA				LR	LR		
	comp=Z,10µm,19.0s						
ULN	**Ulaanbaatar**	**78.46**	**324**	eP	**P**	**00 42 11.5**	**-0.3**
ULN				LR	LR		
	comp=Z,3µm,21.0s						
ULN	**Ulaanbaatar**	**78.46**	**324**	ceP	**P**	**00 42 12.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,299nm,1.7s						
ULN	**Ulaanbaatar**	**78.46**	**324**	P	**P**	**00 42 12.2**	**+0.4**
	SNR=98						
YAK	**Yakutsk**	**78.58**	**344**	d iP	**P**	**00 42 11.2**	**-0.6**
YAK				e		00 42 18.9	
YAK				e*PP	**pP**	**00 42 21.3**	**+2.9**
YAK				e		00 45 05.2	
YAK				ePPP	PPP	00 47 00.5	
YAK				eS	**S**	**00 52 06.3**	**-0.4**
YAK				e*SS	**pS**	**00 52 18.5**	**+3.5**
YAK				e		00 52 25.9	
YAK				pmax	pmax		
	comp=Z,180nm,1.1s						
YAK				pmax	pmax		
	comp=N,72nm,1.1s						
YAK				pmax	pmax		
	comp=E,47nm,1.2s						
YAK				pmax	pmax		
	comp=Z,486nm,4.4s						
YAK				pmax	pmax		
	comp=N,303nm,4.4s						
YAK				pmax	pmax		
	comp=E,318nm,3.8s						
YAK				smax	smax		
	comp=N,1µm,9.9s						
YAK				smax	smax		
	comp=E,2µm,10.6s						
YAK				MLR	MLR		
	comp=Z,2µm,19.0s						
YAK				MLR	MLR		
	comp=N,1µm,14.0s						
YAK				MLR	MLR		
	comp=E,638nm,17.0s						
SONM	**Songino Array**	**78.83**	**324**	P	**P**	**00 42 13.8**	**+0.1**
	comp=E,54nm,1.0s,baz=141,slow=5.0,SNR=208						
SONM				PKKPbc	**PKKPbc**	**01 01 08.1**	**-1.9**
	comp=E,2.1nm,1.1s,baz=232,slow=1.8,SNR=8.7						
SONA1	**Songino Array**	**78.83**	**324**	eP	**P**	**00 42 13.2**	**-0.5**
SVW2	**Sparrevohn**	**79.00**	**18**	eP	**P**	**00 42 15.0**	**+0.8**
GTA	**Gaotai**	**79.05**	**314**	⇓P	**P**	**00 42 16.0**	**+0.8**
GTA				pP	PcP	00 42 20.6	-3.0
GTA				sP	pP	00 42 22.9	+1.1
GTA				S	**S**	**00 52 16.8**	**+3.8**
GTA				sS	pS	00 52 25.0	+3.6
GTA				SKS	**SKSac**	**00 52 28.2**	**-1.4**
GTA				pmax	pmax		
	comp=E,180nm,1.4s						
GTA				pmax	pmax		
	comp=E,3µm,6.7s						
GTA				LR	LR		
	comp=E,2µm,21.3s						
GTA				LR	LR		
	comp=E,2µm,21.0s						
GTA				LR	LR		
	comp=E,4µm,23.2s						
ANM	**Nome**	**79.33**	**13**	eP	**P**	**00 42 16.8**	**+0.8**
ANM	**Nome**	**79.33**	**13**	eP	**P**	**00 42 16.8**	**+0.8**
RSO	**Redoubt South**	**79.42**	**20**	eP	**P**	**00 42 16.3**	**-0.5**
BRLK	**Bradley Lake**	**79.55**	**21**	eP	**P**	**00 42 17.4**	**+0.1**
BRDH	**Bariadhala**	**79.57**	**296**	P	**P**	**00 42 19.7**	**+1.5**
	comp=E,46nm,0.3s,baz=85,slow=6.5,SNR=40						
BILL	**Bilibino**	**79.59**	**0**	eP	**P**	**00 42 16.8**	**-0.6**
	comp=E,502nm,1.4s						
BILL				LR	LR		
	comp=Z,2µm,22.0s						
BILL	**Bilibino**	**79.59**	**0**	d iP	**P**	**00 42 16.7**	**-0.6**
BILL				e		00 42 25.7	
BILL				e		00 45 19.9	
BILL				ePPP	PPP	00 47 04.5	
BILL				eS	**S**	**00 52 14.6**	**-2.7**
BILL				pmax	pmax		
	comp=Z,528nm,1.7s						
SHL	**Shillong**	**80.24**	**299**	eP	**P**	**00 42 22.9**	**+0.9**
SHL	**Shillong**	**80.24**	**299**	eP	**P**	**00 42 22.9**	**+0.9**
SHL	**Shillong**	**80.24**	**299**	eP	**P**	**00 42 22.4**	**+0.4**
SHL				IAmb	IAmb	00 42 23.5	
	comp=Z,269nm,1.4s						
SHL				eS	**S**	**00 52 28.0**	**+1.7**
SEW	**Seward**	**80.30**	**21**	eP	**P**	**00 42 22.0**	**+0.8**
SUA	**Susitna One**	**80.83**	**20**	eP	**P**	**00 42 23.9**	**-0.4**
BOD	**Bodaibo**	**80.87**	**335**	⇓iP	**P**	**00 42 24.0**	**-0.4**
BOD				pmax	pmax		
	comp=Z,140nm,1.7s						
RPN	**Rapa Nui**	**80.89**	**116**	PFAKE		00 42 40.0	+15
RPN				LR	LR		
	comp=Z,3µm,21.0s						
RC01	**Rabbit Creek A**	**80.90**	**20**	eP	**P**	**00 42 24.8**	**+0.3**
PMR	**Palmer**	**81.46**	**20**	eP	**P**	**00 42 25.9**	**-1.6**
PMR	**Palmer**	**81.46**	**20**	eP	**P**	**00 42 25.9**	**-1.6**
KNK	**Knik Glacier**	**81.57**	**21**	eP	**P**	**00 42 29.0**	**+0.9**
GLI	**Glacier Island**	**81.68**	**22**	eP	**P**	**00 42 29.3**	**+0.6**
CAST	**Castle Rocks**	**81.84**	**18**	eP	**P**	**00 42 28.9**	**-0.6**
ZAK	**Zakamensk**	**81.88**	**325**	eP	**P**	**00 42 29.9**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,81nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,18nm,1.8s						
SML	**Sawmill**	**81.89**	**20**	eP	**P**	**00 42 30.2**	**+0.4**
SML	**Sawmill**	**81.89**	**20**	eP	**P**	**00 42 30.2**	**+0.4**
EYAK	**Cordova Ski Ar**	**81.95**	**22**	eP	**P**	**00 42 30.7**	**+0.7**
LSA	**Lhasa**	**82.14**	**302**	P	**P**	**00 42 33.0**	**+0.7**
LSA				S	**S**	**00 52 45.0**	**-1.5**
LSA				pmax	pmax		
	comp=Z,52nm,1.6s						
LSA				pmax	pmax		
	comp=Z,2µm,6.2s						
LSA				LR	LR		
	comp=Z,730nm,21.1s						
LSA				LR	LR		
	comp=Z,950nm,19.8s						
LSA				LR	LR		
	comp=Z,4µm,22.3s						
LSA	**Lhasa**	**82.14**	**302**	eP	**P**	**00 42 33.1**	**+0.7**
	comp=Z,67nm,1.2s						
LSA				LR	LR		
	comp=Z,4µm,22.0s						
LSA	**Lhasa**	**82.14**	**302**	P	**P**	**00 42 33.0**	**+0.7**
IRK	**Irkutsk**	**82.27**	**327**	eP	**P**	**00 42 31.0**	**-1.0**
IRK				pmax	pmax		
	comp=Z,340nm,4.1s						
TLY	**Talaya**	**82.32**	**327**	eP	**P**	**00 42 31.8**	**-0.5**
TLY				LR	LR		
	comp=Z,1µm,22.0s						
TLY	**Talaya**	**82.32**	**327**	ceP	**P**	**00 42 32.5**	**+0.2**
TLY	**Talaya**	**82.32**	**327**	P	**P**	**00 42 31.8**	**-0.5**
	SNR=61						
DIV	**Divide**	**82.33**	**22**	eP	**P**	**00 42 32.7**	**+0.6**
TRF	**Thorofare Moun**	**82.41**	**19**	eP	**P**	**00 42 31.9**	**-0.8**
KLU	**Klutina**	**82.51**	**21**	eP	**P**	**00 42 33.8**	**+0.7**
BPAW	**Bear Paw Mtn.**	**82.67**	**18**	eP	**P**	**00 42 32.3**	**-1.5**
RND	**Reindeer**	**82.83**	**19**	eP	**P**	**00 42 34.5**	**-0.2**
RND	**Reindeer**	**82.83**	**19**	eP	**P**	**00 42 34.5**	**-0.2**
RDOG	**Red Dog Mine**	**82.86**	**12**	eP	**P**	**00 42 35.8**	**+1.1**
MCK	**McKinley**	**83.04**	**19**	eP	**P**	**00 42 35.2**	**-0.5**
MCK	**McKinley**	**83.04**	**19**	eP	**P**	**00 42 35.2**	**-0.5**
DHY	**Denali Highway**	**83.09**	**20**	eP	**P**	**00 42 36.4**	**+0.2**
IM3	**Indian Mountai**	**83.29**	**16**	eP	**P**	**00 42 36.1**	**-0.8**
HARP	**HAARP**	**83.39**	**21**	eP	**P**	**00 42 38.3**	**+0.7**
MLY	**Manley**	**83.42**	**17**	eP	**P**	**00 42 37.7**	**0.0**
KCPM	**Cahto Peak**	**83.55**	**47**	eP	**P**	**00 42 40.4**	**+1.3**
KMRM	**Mail Ridge**	**83.65**	**47**	eP	**P**	**00 42 41.5**	**+2.0**
HOPS	**Hopland Field**	**83.67**	**48**	eP	**P**	**00 42 40.6**	**+1.1**
	comp=Z,60nm,1.0s						
MOY	**Mondy**	**83.77**	**326**	eP	**P**	**00 42 39.5**	**-0.4**
MOY				pmax	pmax		
	comp=Z,452nm,3.0s						
GDXM	**Geysers**	**83.81**	**48**	eP	**P**	**00 42 42.2**	**+1.9**
WRH	**Wood River Hil**	**83.82**	**19**	eP	**P**	**00 42 39.3**	**-0.4**
KHMM	**Horse Mountain**	**83.86**	**46**	eP	**P**	**00 42 42.7**	**+2.0**
SAO	**San Andreas Ge**	**84.12**	**51**	eP	**P**	**00 42 42.7**	**+0.8**
	comp=Z,34nm,0.8s						
HDA	**Harding Lake**	**84.14**	**19**	P	**P**	**00 42 40.5**	**-0.8**
	baz=227						
TCOL	**CIGO, UAF Yank**	**84.17**	**18**	P	**P**	**00 42 40.7**	**-0.8**
	baz=226						
COLA	**College**	**84.18**	**18**	eP	**P**	**00 42 41.0**	**-0.5**
COLA				LR	LR		
	comp=Z,5µm,21.0s						
COLA	**College**	**84.18**	**18**	eP	**P**	**00 42 41.0**	**-0.5**
COLA				MLR	MLR		
	comp=Z,5µm,21.0s						
SIT	**Sitka**	**84.21**	**28**	eP	**P**	**00 42 42.9**	**+1.1**
O02D	**Mt. Diablo Mer**	**84.29**	**47**	P	**P**	**00 42 43.3**	**+0.5**
	baz=250,SNR=28						
RIDG	**Independ'e Rid**	**84.38**	**20**	eP	**P**	**00 42 43.0**	**+0.4**
ILAR	**Eielson Array**	**84.41**	**19**	P	**P**	**00 42 42.2**	**-0.4**
	comp=Z,43nm,0.8s,baz=237,slow=6.1,SNR=126						
ILAR				LR	LR	01 14 05.3	
	comp=Z,5µm,21.8s,baz=232,slow=31						
ILB	**Eielson Array**	**84.41**	**19**	eP	**P**	**00 42 42.3**	**-0.4**
IL1	**Eielson Array**	**84.41**	**19**	eP	**P**	**00 42 40.9**	**-1.8**
L02E	**Cave Junction**	**84.42**	**45**	P	**P**	**00 42 43.6**	**+0.3**
	baz=249,SNR=6.6						
POKR	**Poker Plat Res**	**84.47**	**18**	P	**P**	**00 42 41.5**	**-1.5**
	baz=227						
SNCC	**San Nicolas Is**	**84.50**	**55**	P	**P**	**00 42 43.9**	**0.0**
	baz=252						
J01E	**Myrtle Point**	**84.56**	**44**	P	**P**	**00 42 44.7**	**+0.7**
	baz=249						
K02D	**Willamette Mer**	**84.57**	**45**	P	**P**	**00 42 45.1**	**+0.9**
	baz=249,SNR=10						
WDC	**Whiskeytown Da**	**84.61**	**47**	eP	**P**	**00 42 45.3**	**+1.0**
WDC	**Whiskeytown Da**	**84.61**	**47**	eP	**P**	**00 42 45.3**	**+1.0**
N02D	**Trinity Center**	**84.63**	**46**	P	**P**	**00 42 45.3**	**+0.9**
	baz=250,SNR=24						
SCZ2	**Santa Cruz Isl**	**84.64**	**54**	P	**P**	**00 42 44.7**	**+0.1**
	baz=252						
M02C	**Callahan**	**84.67**	**46**	P	**P**	**00 42 45.4**	**+0.8**
	baz=250,SNR=23						
PAGB	**Antelope Grade**	**84.70**	**52**	eP	**P**	**00 42 46.8**	**+1.9**
SBC	**Santa Barbara**	**84.72**	**53**	P	**P**	**00 42 45.2**	**+0.3**
	baz=252						
SMMC	**Simmler**	**84.77**	**52**	P	**P**	**00 42 45.5**	**+0.2**
	baz=252						
PKM	**Mcpherson Peak**	**84.78**	**53**	P	**P**	**00 42 45.6**	**+0.1**
	baz=252						
SCRK	**Sand Creek**	**84.82**	**20**	eP	**P**	**00 42 44.7**	**-0.3**
YBH	**Yreka Blue Hor**	**84.89**	**46**	eP	**P**	**00 42 47.1**	**+1.4**
BOK	**Bokaro**	**84.97**	**295**	eP	**P**	**00 42 45.4**	**-1.0**
BOK				IAmb	IAmb	00 42 48.5	
	comp=Z,3µm,3.5s						
ORV	**Oroville**	**85.01**	**48**	eP	**P**	**00 42 47.0**	**+0.7**
ORV	**Oroville**	**85.01**	**48**	eP	**P**	**00 42 47.0**	**+0.7**
HUMO	**Hull Mountain**	**85.03**	**45**	eP	**P**	**00 42 47.5**	**+1.2**
	comp=Z,586nm,1.3s						
O03E	**Paynes Creek**	**85.04**	**47**	P	**P**	**00 42 46.4**	**-0.2**
	baz=250,SNR=66						
BLG	**Laguna Peak, P**	**85.13**	**54**	P	**P**	**00 42 47.2**	**+0.1**
	baz=252						
I03D	**Drain, OR**	**85.15**	**44**	P	**P**	**00 42 47.3**	**+0.4**
	baz=249,SNR=9.0						
RAMN	**Ramite**	**85.18**	**299**	eP	**P**	**00 42 47.8**	**0.0**
	comp=Z,628nm,1.8s						
AFDM	**Forest Hills D**	**85.19**	**49**	eP	**P**	**00 42 48.2**	**+0.9**
SCI2	**San Clemente I**	**85.21**	**55**	P	**P**	**00 42 47.5**	**+0.1**
	baz=253						
BESE	**Bessie Mountai**	**85.23**	**27**	eP	**P**	**00 42 47.1**	**+0.1**
WRAK	**Wrangell Islan**	**85.30**	**30**	eP	**P**	**00 42 47.9**	**+0.6**
WRAK				LR	LR		
	comp=Z,7µm,20.0s						
CMB	**Columbia Colle**	**85.33**	**50**	eP	**P**	**00 42 48.4**	**+0.4**
	comp=Z,230nm,0.9s						
CMB	**Columbia Colle**	**85.33**	**50**	eP	**P**	**00 42 48.4**	**+0.4**
CMB				pmax	pmax		
	comp=Z,229nm,0.9s						
PRP	**Porcupine Dome**	**85.34**	**19**	eP	**P**	**00 42 46.5**	**-1.0**
L04D	**Klamath Falls**	**85.34**	**45**	P	**P**	**00 42 47.9**	**-0.2**
	baz=250,SNR=16						
CIS	**Catalina Islan**	**85.44**	**55**	P	**P**	**00 42 48.6**	**-0.1**
	baz=253						
SKAG	**Skagway**	**85.49**	**26**	eP	**P**	**00 42 47.9**	**-0.3**
M04C	**Macdoel**	**85.52**	**46**	P	**P**	**00 42 49.0**	**0.0**
	baz=250,SNR=30						
OSI	**Osito Audit: C**	**85.55**	**53**	eP	**P**	**00 42 51.0**	**+1.8**
OSI	**Osito Audit: C**	**85.55**	**53**	P	**P**	**00 42 49.4**	**+0.1**
	baz=253						
VOG	**Valley Oaks Go**	**85.56**	**52**	P	**P**	**00 42 48.9**	**-0.2**
	baz=252						
BBB	**Bella Bella**	**85.56**	**35**	P	**P**	**00 42 49.1**	**+0.5**
	comp=Z,68nm,1.2s,baz=250,slow=9.1,SNR=3.9						
ARVC	**Arvin**	**85.62**	**53**	P	**P**	**00 42 50.2**	**+0.7**
	baz=252,SNR=11						
FMP	**Fort Macarthur**	**85.62**	**54**	P	**P**	**00 42 49.6**	**+0.1**
	baz=253						
VES	**Vestal, Richgr**	**85.64**	**52**	P	**P**	**00 42 49.5**	**-0.1**
	baz=252,SNR=12						
JIRN	**Jiri**	**85.72**	**299**	eP	**P**	**00 42 50.7**	**+0.1**
	comp=Z,2µm,1.8s						
G03D	**McMinnville, O**	**85.75**	**42**	P	**P**	**00 42 50.4**	**+0.5**
	baz=249						
DECC	**Green Verdugo**	**85.75**	**54**	P	**P**	**00 42 49.9**	**-0.3**
	baz=253						
I04A	**Tendick Farm,**	**85.82**	**44**	P	**P**	**00 42 50.2**	**-0.1**
	baz=250,SNR=12						
J04D	**Umpqua Nationa**	**85.83**	**44**	P	**P**	**00 42 51.1**	**+0.5**
	baz=250,SNR=20						
RUBR	**Rubicon Trail**	**85.83**	**49**	eP	**P**	**00 42 51.9**	**+1.2**
PASC	**Pasadena Art C**	**85.85**	**54**	eP	**P**	**00 42 51.8**	**+1.2**
H04D	**Lebanon**	**85.85**	**43**	P	**P**	**00 42 50.9**	**+0.5**
	baz=249,SNR=8.4						
K04D	**Chiloquin, OR**	**85.86**	**45**	P	**P**	**00 42 50.9**	**+0.3**
	baz=250,SNR=8.0						
BEKR	**Beckworth**	**85.94**	**48**	eP	**P**	**00 42 51.9**	**+0.7**
PALK	**Pallekele**	**85.95**	**278**	eP	**P**	**00 42 53.0**	**+1.3**
PALK	**Pallekele**	**85.95**	**278**	P	**P**	**00 42 52.8**	**+1.2**
PALK	**Pallekele**	**85.95**	**278**	P	**P**	**00 42 53.0**	**+1.3**
	SNR=18						
PALK	**Pallekele**	**85.95**	**278**	P	**P**	**00 42 52.8**	**+1.2**
	comp=Z,134nm,1.1s,baz=116,slow=4.0,SNR=32						
PALK				LR	LR	01 24 25.9	
	comp=Z,3µm,19.6s,baz=114,slow=38						
MWC	**Mount Wilson**	**85.96**	**54**	eP	**P**	**00 42 52.6**	**+1.2**
MWC	**Mount Wilson**	**85.96**	**54**	eP	**P**	**00 42 52.6**	**+1.2**
GUN	**Gumba**	**86.05**	**299**	eP	**P**	**00 42 52.2**	**0.0**
	comp=Z,950nm,1.7s						
ISA	**Isabella, Lake**	**86.06**	**53**	eP	**P**	**00 42 52.6**	**+0.9**
ISA	**Isabella, Lake**	**86.06**	**53**	eP	**P**	**00 42 52.6**	**+0.9**
ISA	**Isabella, Lake**	**86.06**	**53**	P	**P**	**00 42 52.4**	**+0.7**
	baz=253,SNR=40						
NLWA	**Neilton Lookou**	**86.16**	**40**	eP	**P**	**00 42 53.6**	**+1.7**
NLWA				LR	LR		
	comp=Z,10µm,19.0s						
MDPB	**Devils Postpil**	**86.19**	**51**	eP	**P**	**00 42 53.6**	**+1.0**
WAKR	**Walker**	**86.19**	**50**	eP	**P**	**00 42 53.7**	**+1.2**
EDW2	**Edwards Air Fo**	**86.20**	**53**	P	**P**	**00 42 52.6**	**+0.1**
	baz=253,SNR=61						
F04D	**Rainier, OR**	**86.23**	**42**	P	**P**	**00 42 52.7**	**+0.5**
	baz=249						
OMMB	**Old Mammoth Mi**	**86.24**	**51**	eP	**P**	**00 42 53.7**	**+0.8**
PNTR	**Pine Nut**	**86.25**	**49**	eP	**P**	**00 42 54.0**	**+1.1**
H04A	**Detroit Lake**	**86.28**	**43**	eP	**P**	**00 42 53.1**	**+0.5**
VCNR	**Virginia City**	**86.28**	**49**	eP	**P**	**00 42 53.9**	**+1.0**
BFSC	**Mount Baldy Ra**	**86.28**	**54**	P	**P**	**00 42 52.9**	**-0.1**
	baz=253,SNR=44						
EGAK	**Eagle**	**86.28**	**20**	eP	**P**	**00 42 52.4**	**+0.3**
	comp=Z,227nm,1.2s						
EGAK				LR	LR		
	comp=Z,5µm,22.0s						
109C	**Camp Elliot, M**	**86.34**	**56**	P	**P**	**00 42 53.1**	**+0.1**
	baz=254						
CPE	**Camp Elliot**	**86.34**	**56**	eP	**P**	**00 42 54.7**	**+1.7**
TOLK	**Toolik Lake Re**	**86.36**	**15**	eP	**P**	**00 42 53.4**	**+1.0**
TOLK	**Toolik Lake Re**	**86.36**	**15**	P	**P**	**00 42 53.2**	**+0.8**
	baz=224						
PKI	**Pulchoki**	**86.36**	**299**	eP	**P**	**00 42 53.5**	**-0.2**
	comp=Z,933nm,1.7s						
MLAC	**Mammoth, Mammo**	**86.37**	**51**	P	**P**	**00 42 54.8**	**+1.3**
	baz=252,SNR=5.9						
PKIN	**Phulchoki**	**86.38**	**299**	eP	**P**	**00 42 53.3**	**-0.4**
	comp=Z,664nm,1.7s						
J05D	**Fort Rock, OR**	**86.45**	**45**	P	**P**	**00 42 54.8**	**+1.2**
	baz=250,SNR=40						
DAWY	**Dawson**	**86.47**	**21**	eP	**P**	**00 42 53.2**	**+0.2**
	comp=Z,92nm,1.1s						
MURC	**Murrieta**	**86.47**	**55**	P	**P**	**00 42 54.2**	**+0.5**
	baz=254,SNR=15						
YERR	**Yerington**	**86.49**	**49**	eP	**P**	**00 42 54.8**	**+0.8**
CWC	**Cottonwood Cre**	**86.59**	**52**	P	**P**	**00 42 54.6**	**+0.1**
	baz=253						
PAHR	**Pah Rah Range**	**86.60**	**48**	eP	**P**	**00 42 55.2**	**+0.8**
LRMC	**Laurel Mtn Rad**	**86.62**	**53**	P	**P**	**00 42 54.6**	**0.0**
	baz=253,SNR=45						
BAR	**Barrett**	**86.63**	**56**	eP	**P**	**00 42 55.9**	**+1.3**
DMN	**Daman**	**86.64**	**299**	eP	**P**	**00 42 55.0**	**0.0**
	comp=Z,1µm,1.7s						
MOD	**Modoc Plateau**	**86.64**	**46**	eP	**P**	**00 42 55.3**	**+0.8**
TIXI	**Tiksi**	**86.65**	**349**	eP	**P**	**00 42 53.4**	**-0.3**
TIXI				LR	LR		
	comp=Z,3µm,21.0s						
TIXI	**Tiksi**	**86.65**	**349**	ceP	**P**	**00 42 53.2**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,149nm,1.7s						
TIXI	**Tiksi**	**86.65**	**349**	P	**P**	**00 42 52.8**	**-0.9**
	comp=Z,51nm,1.3s,baz=124,slow=6.5,SNR=44						
TIN	**Tinemaha, Big**	**86.66**	**51**	P	**P**	**00 42 55.0**	**+0.3**
	baz=253,SNR=11						
E04D	**Cinebar**	**86.69**	**41**	P	**P**	**00 42 54.7**	**+0.3**
	baz=249						
D03D	**Eldon**	**86.70**	**40**	P	**P**	**00 42 55.3**	**+0.8**
	baz=249,SNR=14						
I05D	**Terrebonne, OR**	**86.73**	**44**	P	**P**	**00 42 54.9**	**+0.1**
	baz=250,SNR=8.8						
PINE	**Pine Mountain**	**86.82**	**44**	eP	**P**	**00 42 56.7**	**+1.2**
BBRC	**Big Bear Solar**	**86.88**	**54**	P	**P**	**00 42 55.9**	**-0.1**
	baz=254						
PGC	**Sidney**	**86.89**	**39**	eP	**P**	**00 42 55.7**	**+0.3**
	comp=Z,200nm,1.3s						
MONP2	**Monument Peak**	**86.89**	**56**	P	**P**	**00 42 57.4**	**+1.4**
	baz=254,SNR=36						
RYN	**Ryan**	**86.91**	**50**	eP	**P**	**00 42 56.9**	**+1.0**
DAC	**Darwin (Calif)**	**86.92**	**52**	eP	**P**	**00 42 56.9**	**+0.8**
	comp=Z,32nm,0.9s						
DAC	**Darwin (Calif)**	**86.92**	**52**	eP	**P**	**00 42 56.9**	**+0.8**
DAC				pmax	pmax		
	comp=Z,33nm,0.9s						
MPMC	**Manual Prospec**	**86.94**	**52**	P	**P**	**00 42 57.4**	**+1.2**
	baz=253,SNR=72						
RRX	**Edison Barstow**	**86.99**	**54**	P	**P**	**00 42 56.7**	**+0.5**
	baz=254						
NV01	**Mina Array Sit**	**87.02**	**50**	eP	**P**	**00 42 55.7**	**-0.9**
NVAR	**Mina Array Bea**	**87.02**	**50**	P	**P**	**00 42 57.4**	**+0.8**
	comp=Z,66nm,1.0s,baz=234,slow=7.4,SNR=168						
NVAR				PKPPKP	**P'P'df**	**01 08 59.3**	**+3.5**
	comp=Z,2.4nm,1.1s,baz=76,slow=0.6,SNR=5.7						
G05D	**Wamic, OR**	**87.05**	**43**	P	**P**	**00 42 57.4**	**+1.1**
	baz=250						
PFO	**Pinyon Flats O**	**87.06**	**55**	eP	**P**	**00 42 57.6**	**+0.8**
	comp=Z,20nm,0.9s						
PFO				LR	LR		
	comp=Z,10µm,20.0s						
PFO	**Pinyon Flats O**	**87.06**	**55**	eP	**P**	**00 42 57.6**	**+0.8**
PFO				pmax	pmax		
	comp=Z,20nm,0.9s						
PFO				MLR	MLR		
	comp=Z,10µm,20.0s						
PFO	**Pinyon Flats O**	**87.06**	**55**	P	**P**	**00 42 57.8**	**+1.0**
	baz=254,SNR=30						
PFO	**Pinyon Flats O**	**87.06**	**55**	P	**P**	**00 42 57.6**	**+0.8**
	comp=Z,35nm,0.9s,baz=256,slow=3.3,SNR=29						
XPFO	**Pion Flat**	**87.06**	**55**	eP	**P**	**00 42 57.6**	**+0.8**
IKP	**In-Ko-Pah, Jac**	**87.08**	**56**	P	**P**	**00 42 58.2**	**+1.4**
	baz=254,SNR=20						
NV11	**Mina Array Sit**	**87.13**	**50**	eP	**P**	**00 42 57.4**	**+0.4**
F05D	**White Salmon**	**87.17**	**42**	P	**P**	**00 42 57.2**	**+0.3**
	baz=250						
LON	**Longmire**	**87.24**	**41**	eP	**P**	**00 42 58.1**	**+0.9**
LON	**Longmire**	**87.24**	**41**	eP	**P**	**00 42 58.2**	**+0.9**
GSC	**Goldstone, Bar**	**87.26**	**53**	eP	**P**	**00 42 58.4**	**+0.8**
GSC	**Goldstone, Bar**	**87.26**	**53**	eP	**P**	**00 42 58.4**	**+0.8**
GSC	**Goldstone, Bar**	**87.26**	**53**	P	**P**	**00 42 58.7**	**+1.1**
	baz=254,SNR=33						
D05A	**Enumclaw**	**87.28**	**41**	eP	**P**	**00 42 58.8**	**+1.4**
GRAC	**Grapevine Rang**	**87.31**	**52**	P	**P**	**00 42 58.7**	**+1.0**
	baz=253,SNR=55						
KVN	**Kaiserville**	**87.35**	**49**	eP	**P**	**00 42 58.7**	**+0.6**
KVN	**Kaiserville**	**87.35**	**49**	eP	**P**	**00 42 58.7**	**+0.6**
DLBC	**Dease Lake**	**87.36**	**28**	P	**P**	**00 42 57.3**	**-0.3**
	comp=Z,47nm,1.1s,baz=237,slow=7.7,SNR=38						
A04D	**Lummi Island**	**87.37**	**39**	P	**P**	**00 42 57.9**	**+0.2**
	baz=249,SNR=13						
SWSC	**Sam W. Stewart**	**87.41**	**56**	P	**P**	**00 42 58.8**	**+0.5**
	baz=254,SNR=34						
HEC	**Hector,Ludlow**	**87.50**	**54**	P	**P**	**00 42 59.1**	**+0.3**
	baz=254,SNR=75						
BELC	**Belle Mtn. Jos**	**87.54**	**55**	P	**P**	**00 42 59.6**	**+0.5**
	baz=254,SNR=60						
FURC	**Furnace Creek,**	**87.54**	**52**	P	**P**	**00 42 59.3**	**+0.5**
	baz=254,SNR=20						
B05A	**Bryant**	**87.59**	**40**	P	**P**	**00 42 59.3**	**+0.5**
	baz=250,SNR=21						
MDRS	**Chennai**	**87.64**	**284**	eP	**P**	**00 42 59.5**	**-0.2**
SHOC	**Shoshone, Teco**	**87.84**	**53**	P	**P**	**00 43 00.4**	**0.0**
	baz=254,SNR=7.7						
BC3	**Big Chuckawall**	**87.88**	**55**	P	**P**	**00 43 01.4**	**+0.7**
	baz=255,SNR=49						
I07A	**Izee**	**87.89**	**44**	eP	**P**	**00 43 01.2**	**+0.7**
KOLN	**Koldanda**	**87.97**	**299**	eP	**P**	**00 43 00.3**	**-1.1**
	comp=Z,209nm,1.3s						
DANN	**Dangsing**	**87.97**	**299**	eP	**P**	**00 43 00.4**	**-1.1**
	comp=Z,304nm,1.3s						
WVOR	**Wild Horse Val**	**87.98**	**46**	eP	**P**	**00 43 01.9**	**+0.9**
	comp=Z,26nm,0.6s						
WVOR				LR	LR		
	comp=Z,7µm,21.0s						
WVOR	**Wild Horse Val**	**87.98**	**46**	eP	**P**	**00 43 01.9**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,26nm,0.6s						
WVOR				MLR	MLR		
	comp=Z,7µm,21.0s						
TUQ	**Turquoise Moun**	**87.99**	**53**	P	**P**	**00 43 00.9**	**-0.2**
	baz=254,SNR=16						
GMRC	**Granite Mounta**	**88.02**	**54**	P	**P**	**00 43 01.7**	**+0.3**
	baz=254,SNR=37						
B06A	**Marblemount**	**88.06**	**40**	eP	**P**	**00 43 01.6**	**+0.7**
LTY	**Liberty**	**88.15**	**41**	eP	**P**	**00 43 02.2**	**+0.6**
TPNV	**Topopah Spring**	**88.15**	**52**	eP	**P**	**00 43 02.8**	**+0.8**
TPNV	**Topopah Spring**	**88.15**	**52**	eP	**P**	**00 43 02.8**	**+0.8**
TPNV	**Topopah Spring**	**88.15**	**52**	P	**P**	**00 43 02.3**	**+0.3**
	baz=254,SNR=53						
F07A	**Phinny Hill Vi**	**88.19**	**42**	eP	**P**	**00 43 03.0**	**+1.3**
C06D	**Leavenworth**	**88.23**	**40**	P	**P**	**00 43 02.0**	**+0.1**
	baz=250,SNR=6.2						

GLA	Glamis	88.23	56	eP	P	00 43 03.0	+0.7
GLA	Glamis	88.23	56	eP	P	00 43 03.0	+0.7
GLA	Glamis	88.23	56	P	P	00 43 03.0	+0.7
	baz=255,SNR=21						
IRM	Iron Mountain	88.26	55	P	P	00 43 02.9	+0.5
	baz=255,SNR=84						
J08A	Circle Bar Ran	88.38	45	eP	P	00 43 02.8	0.0
LDFC	Landfair	88.53	54	eP	P	00 43 05.3	+1.5
PYUN	Piuthan	88.57	299	eP	P	00 43 03.1	-1.1
	comp=Z,215nm,1.1s						
HAWA	Hanford	88.61	42	eP	P	00 43 04.5	+0.8
	comp=Z,67nm,0.9s						
HAWA				LR	LR		
	comp=Z,7µm,22.0s						
Y12C	Blythe	88.66	55	P	P	00 43 04.8	+0.6
	baz=255,SNR=40						
NEE2	Needles Airpor	88.84	54	P	P	00 43 05.5	+0.5
	baz=255,SNR=21						
SHPR	Sheep Range	88.87	52	eP	P	00 43 06.6	+1.2
E08A	Dider Farm, El	88.95	42	eP	P	00 43 06.1	+0.9
SRIG	Santa Rosalia	88.98	62	eP	P	00 43 06.5	+0.7
R11A	Troy Canyon, C	89.04	51	P	P	00 43 06.6	+0.4
	baz=254,SNR=114						
WMQ	Urumqi	89.10	315	P	P	00 43 06.1	-0.1
WMQ				pP	pP	00 43 11.6	-1.3
WMQ				sP	sP	00 43 16.6	+1.3
WMQ				PP	PP	00 46 33.9	-2.7
WMQ				SKS	SKSac	00 53 37.5	+3.0
WMQ				S	ScS	00 53 56.2	-2.3
WMQ				pmax	pmax		
	comp=Z,220nm,1.5s						
WMQ				LR	LR		
	comp=Z,2µm,18.3s						
WMQ				LR	LR		
	comp=Z,4µm,20.1s						
WMQ				LR	LR		
	comp=Z,4µm,25.1s						
WMQ	Urumqi	89.10	315	eP	P	00 43 06.3	+0.2
	comp=Z,203nm,1.4s						
WMQ	Urumqi	89.10	315	eP	P	00 43 06.4	+0.2
WMQ				pmax	pmax		
	comp=Z,203nm,1.4s						
PDMCI	Parker Dam,Lak	89.10	55	P	P	00 43 06.8	+0.5
	baz=255,SNR=67						
D08A	Wollman Farm,	89.22	42	eP	P	00 43 07.5	+1.0
B08A	Colville Reser	89.36	40	eP	P	00 43 07.6	+0.4
E09A	Wood Farm, Sta	89.56	42	eP	P	00 43 09.0	+0.8
214A	Organ Pipe Nat	89.60	57	P	P	00 43 09.8	+1.0
	baz=256,SNR=47						
BMO	Blue Mountains	89.63	44	eP	P	00 43 09.0	+0.4
	comp=Z,124nm,1.2s						
BMO	Blue Mountains	89.63	44	eP	P	00 43 09.0	+0.4
BMO				pmax	pmax		
	comp=Z,124nm,1.2s						
TRD	Trivandrum	89.84	279	eP	P	00 43 09.1	-1.1
C09A	Chrisman Ranch	89.86	41	eP	P	00 43 10.2	+0.7
ELK	Elko	89.94	48	eP	P	00 43 11.2	+0.8
ELK	Elko	89.94	48	eP	P	00 43 11.2	+0.8
F10A	Beach Ranch, E	90.00	43	eP	P	00 43 10.7	+0.3
JBP	Jabalpur	90.08	294	⇑eP	P	00 43 11.0	0.0
JBP				ex	x	00 46 53.4	
HYB	Hyderabad	90.16	288	i P	P	00 43 12.0	+0.4
HYB				ePP	PP	00 46 44.0	-1.6
HYB				eSKS	SKSac	00 53 44.0	+2.3
HYB				eS	ScS	00 54 08.0	-0.3
HYB				e		00 55 30.0	
HYB	Hyderabad	90.16	288	eP	P	00 43 10.3	-1.4
HYB				IAmb	IAmb	00 43 13.6	
	comp=Z,553nm,2.6s						
MFID	Camas Ranch	90.24	46	eP	P	00 43 12.4	+0.9
PSUT	Pine Spring	90.40	51	eP	P	00 43 13.2	+0.7
HSIG		90.48	61	eP	P	00 43 14.1	+1.2
NGP	Nagpur	90.49	291	eP	P	00 43 12.3	-0.7
NGP				IAmb	IAmb	00 43 13.7	
	comp=Z,84nm,1.2s						
NGP				ex	x	00 44 50.6	
CCUT	Cedar City	90.53	52	eP	P	00 43 14.3	+1.1
NEW	Newport	90.74	41	eP	P	00 43 13.8	+0.1
NEW				LR	LR		
	comp=Z,7µm,21.0s						
NEW	Newport	90.74	41	P	P	00 43 13.7	0.0
	baz=253,SNR=57						
SZCU	Shurtz Canyon	90.75	52	eP	P	00 43 15.4	+1.1
INK	Inuvik	90.80	19	eP	P	00 43 12.7	-0.7
	comp=Z,35nm,1.3s						
INK				PKKPbc	PKKPdf	01 00 39.9	+1.3
INK	Inuvik	90.80	19	eP	P	00 43 12.7	-0.7
INK				pmax	pmax		
	comp=Z,35nm,1.3s						
INK	Inuvik	90.80	19	P	P	00 43 13.2	-0.2
	comp=Z,21nm,1.2s,baz=218,slow=5.1,SNR=28						
INK				PKKPbc	PKKPdf	01 00 39.9	+1.3
	comp=Z,2.1nm,1.0s,baz=75,slow=6.8,SNR=4.0						
INK				LR	LR	01 17 45.4	
	comp=Z,6µm,21.8s,baz=228,slow=32						
KNB	Kanab	90.82	52	eP	P	00 43 16.0	+1.5
KNB	Kanab	90.82	52	eP	P	00 43 16.0	+1.5
DGAR	Diego Garcia	91.02	262	PFAKE		00 43 30.0	+14
DGAR				LR	LR		
	comp=Z,3µm,21.0s						
HLID	Hailey	91.27	46	eP	P	00 43 17.3	+0.9
	comp=Z,68nm,1.0s						
HLID				LR	LR		
	comp=Z,4µm,22.0s						
HLID	Hailey	91.27	46	P	P	00 43 17.3	+0.9
	baz=255						
PKCU	Pink Cliffs	91.32	52	eP	P	00 43 18.8	+1.8
TUC	Tucson	91.36	57	eP	P	00 43 18.5	+1.6
	comp=Z,45nm,0.9s						
TUC				LR	LR		
	comp=Z,18µm,19.0s						
TUC	Tucson	91.36	57	P	P	00 43 17.7	+0.7
	baz=257						
MTPU	Mount Pierson	91.55	52	eP	P	00 43 19.2	+1.1
DUG	Dugway, Tooele	91.59	49	eP	P	00 43 18.5	+0.5
	comp=Z,56nm,1.1s						
DUG				LR	LR		
	comp=Z,9µm,19.0s						
DUG	Dugway, Tooele	91.59	49	eP	P	00 43 18.5	+0.5
DUG				pmax	pmax		
	comp=Z,56nm,1.1s						
DUG				MLR	MLR		
	comp=Z,9µm,19.0s						
DUG	Dugway, Tooele	91.59	49	P	P	00 43 18.3	+0.3
	baz=256						
WUAZ	Wupatki	91.60	54	eP	P	00 43 19.2	+1.1
	comp=Z,111nm,1.2s						
WUAZ				LR	LR		
	comp=Z,8µm,20.0s						
WUAZ	Wupatki	91.60	54	P	P	00 43 18.5	+0.3
	baz=257						
BGU	Big Grassy Mou	91.61	49	eP	P	00 43 19.0	+0.9
MSU	Marysvale	91.67	51	eP	P	00 43 19.6	+1.2
MSU	Marysvale	91.67	51	eP	P	00 43 19.7	+1.2
ZSN	Zaisan	92.01	318	d iP	P	00 43 18.0	-1.6
ZSN				pmax	pmax		
	comp=Z,154nm,1.7s						
ZSN	Zaisan	92.01	318	⇓iP	P	00 43 18.1	-1.6
	comp=Z,154nm,1.7s						
NLU	North Lily Min	92.08	50	eP	P	00 43 21.4	+1.1
SPUT	South Promonto	92.13	48	eP	P	00 43 21.3	+0.8
BHPL	Bhopal	92.40	293	eP	P	00 43 20.9	-1.1
MSO	Missoula	92.43	43	eP	P	00 43 21.8	+0.2
MSO	Missoula	92.43	43	P	P	00 43 21.3	-0.3
	baz=256,SNR=26						
MPU	Maple Canyon	92.43	50	eP	P	00 43 23.2	+1.3
Q16A	Castle Valley	92.53	51	eP	P	00 43 24.1	+1.7
MCMT	McKenzie Canyo	92.68	45	eP	P	00 43 24.3	+1.3
JLU	Jordanelle	92.70	49	eP	P	00 43 24.3	+1.1
W18A	Petrified Fore	92.82	55	P	P	00 43 24.2	+0.4
	baz=258,SNR=28						
HWUT	Hardware Ranch	92.84	48	eP	P	00 43 24.4	+0.6
	comp=Z,17nm,1.0s						
P17A	Butcher Ranch,	92.98	50	eP	P	00 43 25.6	+1.2
WALA	Waterton Lakes	93.00	41	ePn	P	00 43 25.3	+1.0
	comp=Z,160nm,1.2s						
SRU	San Rafael Swe	93.06	51	eP	P	00 43 25.6	+0.8
SRU	San Rafael Swe	93.06	51	eP	P	00 43 25.6	+0.8
LRM	Limekiln Ridge	93.18	44	eP	P	00 43 26.2	+0.9
DDI	Dehra Dun	93.27	300	eP	P	00 43 25.1	-0.8
AHID	Auburn Hatcher	93.44	47	eP	P	00 43 27.2	+0.7
AHID				LR	LR		
	comp=Z,6µm,21.0s						
MK31	Makanchi Array	93.56	317	i P	P	00 43 26.4	-0.3
MK31				pmax	pmax		
	comp=Z,171nm,1.3s						
MKAR	Makanchi Array	93.56	317	P	P	00 43 26.5	-0.3
	comp=Z,60nm,1.0s,baz=101,slow=5.6,SNR=206						
MKAR				PKKPbc	PKKPdf	01 00 31.9	-1.3
	comp=Z,4.6nm,1.0s,baz=298,slow=2.6,SNR=17						
MKAR				PKPPKP		01 08 42.2	
	comp=Z,1.3nm,0.9s,baz=276,slow=2.2,SNR=6.3						
MNCY	Minicoy	93.59	278	eP	P	00 43 24.7	-2.9
QLMT	Earthquake Lak	93.66	45	eP	P	00 43 29.1	+1.5
BOZ	Bozeman (W)	93.69	44	eP	P	00 43 28.1	+0.6
	comp=Z,120nm,1.2s						
BOZ				LR	LR		
	comp=Z,9µm,20.0s						
BOZ	Bozeman (W)	93.69	44	eP	P	00 43 28.1	+0.6
BOZ				pmax	pmax		
	comp=Z,120nm,1.2s						
BOZ				MLR	MLR		
	comp=Z,9µm,20.0s						
BOZ	Bozeman (W)	93.69	44	P	P	00 43 28.2	+0.6
	baz=257,SNR=116						
ZALV	Zalesovo Beam	93.72	324	P	P	00 43 26.5	-0.8
	comp=Z,53nm,1.1s,baz=108,slow=4.8,SNR=135						
MAKZ	Makanchi	93.77	317	eP	P	00 43 27.3	-0.4
MAKZ	Makanchi	93.77	317	eP	P	00 43 27.3	-0.4
HRY	Holter Researc	93.81	43	eP	P	00 43 28.5	+0.5
121A	Cookes Peak, D	93.88	58	P	P	00 43 29.1	+0.3
	baz=259,SNR=27						
MOOW	Moose Ponds	93.90	46	eP	P	00 43 29.5	+0.8
YMR	Madison River	93.95	45	eP	P	00 43 30.8	+1.9
YPP	Pitchstone Pla	93.97	46	eP	P	00 43 30.6	+1.5
H17A	Grant Village	94.16	46	P	P	00 43 31.4	+1.6
	baz=258,SNR=29						
SMLA	Simla	94.18	301	eP	P	00 43 28.5	-1.4
GOA	Goa	94.22	285	eP	P	00 43 29.3	-1.1
MVCO	Mesa Verde	94.23	53	eP	P	00 43 31.2	+0.9
	comp=Z,6.5nm,0.9s						
MVCO				LR	LR		
	comp=Z,7µm,20.0s						
MVCO	Mesa Verde	94.23	53	P	P	00 43 30.6	+0.3
	baz=259,SNR=8.0						
LKWY	Lake	94.32	46	PFAKE		00 43 40.0	+9.4
LKWY				LR	LR		
	comp=Z,10µm,20.0s						
BW06	Boulder Array	94.55	47	eP	P	00 43 31.6	-0.1
	comp=Z,31nm,1.0s						
BW06				LR	LR		
	comp=Z,6µm,22.0s						
BW06	Boulder Array	94.55	47	P	P	00 43 31.8	+0.2
	baz=258,SNR=40						
PDAR	Pinedale Array	94.55	47	P	P	00 43 31.8	+0.1
	comp=Z,29nm,1.1s,baz=236,slow=1.6,SNR=83						
SHLS	Shalkode	94.74	313	ceP	P	00 43 28.9	-3.4
SHLS				e		00 47 17.9	
SHLS				pmax	pmax		
	comp=Z,877nm,1.3s						
SHLS				MLR	MLR		
	comp=Z,629nm,20.0s						
SHLS	Shalkode	94.74	313	⇑eP	P	00 43 29.0	-3.4
	comp=Z,877nm,1.3s						
SHLS				ePP	PP	00 47 17.9	-3.3
SHLS				eLR	LR	01 28 21.1	
	comp=Z,629nm,20.4s						
POO	Poona	94.77	288	eP	P	00 43 30.7	-2.2
POO				⇑iP	P	00 43 31.0	-1.9
	comp=Z,10.0nm,1.0s						
POO				IAmb	IAmb	00 43 32.4	
	comp=Z,4µm,4.1s						
LAZ	Ladron	94.77	56	eP	P	00 43 33.9	+1.0
NVS	Novosibirsk	94.84	325	eP	P	00 43 31.9	-0.4
NVS				e		00 54 08.7	
NVS				pmax	pmax		
	comp=N,23nm,1.5s						
NVS				pmax	pmax		
	comp=E,47nm,1.5s						
NVS				pmax	pmax		
	comp=Z,86nm,1.5s						
NVS				pmax	pmax		
	comp=Z,107nm,3.0s						
NVS				pmax	pmax		
	comp=N,35nm,2.9s						
NVS				pmax	pmax		
	comp=E,23nm,1.8s						
LENM	Lemitar	94.86	56	eP	P	00 43 34.2	+1.0
Y22D	IRIS PASSCAL I	94.89	56	P	P	00 43 33.6	+0.3
	baz=259						
O20A	White River Ci	95.00	50	P	P	00 43 34.0	+0.3
	baz=259,SNR=10						
UZB	Uzynbulak	95.05	313	d iP	P	00 43 31.1	-2.7
UZB				e		00 47 19.4	
UZB				pmax	pmax		
	comp=Z,476nm,1.7s						
UZB	Uzynbulak	95.05	313	⇓iP	P	00 43 31.2	-2.7
	comp=Z,476nm,1.7s						
UZB				ePP	PP	00 47 19.4	-4.2
GCMT	Greycliff	95.08	44	eP	P	00 43 35.3	+1.4
DHRM	DHARAMSHALA	95.11	302	eP	P	00 43 32.9	-1.6
BNM	Barren Site	95.14	56	eP	P	00 43 35.3	+0.7
RLMT	Red Lodge	95.22	45	eP	P	00 43 35.4	+0.7
	comp=Z,36nm,1.2s						
RLMT				LR	LR		
	comp=Z,10µm,20.0s						
RLMT	Red Lodge	95.22	45	P	P	00 43 35.6	+0.9
	baz=259,SNR=32						
PMSA	Palmer Station	95.28	161	PFAKE		00 43 50.0	+16
PMSA				LR	LR		
	comp=Z,3µm,20.0s						
KPKS	Kokpek	95.36	313	d iP	P	00 43 32.1	-3.0
KPKS				e		00 47 21.3	
KPKS				pmax	pmax		
	comp=Z,605nm,2.3s						
KPKS				MLR	MLR		
	comp=Z,744nm,18.0s						
KPKS	Kokpek	95.36	313	⇓iP	P	00 43 32.1	-3.0
	comp=Z,605nm,2.3s						
KPKS				ePP	PP	00 47 21.4	-4.5
KPKS				eLR	LR	01 25 43.8	
	comp=Z,744nm,17.8s						
ANMO	Albuquerque	95.42	56	eP	P	00 43 36.8	+1.0
	comp=Z,18nm,1.1s						
ANMO				LR	LR		
	comp=Z,7µm,21.0s						
ANMO	Albuquerque	95.42	56	d iP	P	00 43 33.9	-1.9
ANMO				pmax	pmax		
	comp=Z,20nm,1.0s						
ANMO	Albuquerque	95.42	56	P	P	00 43 35.3	-0.5
	baz=260						
ANMO	Albuquerque	95.42	56	P	P	00 43 36.8	+1.0
	comp=Z,15nm,1.0s,baz=231,slow=5.5,SNR=20						
EGMT	Eagleton	95.46	42	eP	P	00 43 36.2	+0.6
EGMT				LR	LR		
	comp=Z,6µm,21.0s						
EGMT	Eagleton	95.46	42	P	P	00 43 35.9	+0.3
	baz=259						
SATY	Saty	95.48	313	d iP	P	00 43 34.3	-1.5
SATY				pmax	pmax		
	comp=Z,489nm,1.4s						
SATY	Saty	95.48	313	⇓iP	P	00 43 34.3	-1.5
	comp=Z,489nm,1.4s						
S22A	4UR Ranch, Cre	95.64	53	P	P	00 43 37.2	+0.4
	baz=260,SNR=32						
SEM	Semipalatinsk	95.66	320	d iP	P	00 43 33.2	-3.3
SEM				e		00 47 25.9	
SEM				pmax	pmax		
	comp=Z,306nm,1.4s						
SEM				MLR	MLR		
	comp=Z,582nm,23.0s						
SEM	Semipalatinsk	95.66	320	⇓iP	P	00 43 33.3	-3.3
	comp=Z,306nm,1.4s						
SEM				ePP	PP	00 47 25.9	-2.3
SEM				eLR	LR	01 28 17.7	
	comp=Z,582nm,22.5s						
NVL	N'lazarevskaya	95.66	189	eP	P	00 43 35.0	-0.9
NVL				eS	SKSac	00 54 10.8	+0.6
NVL				pmax	pmax		
	comp=Z,20nm,1.2s						
MNTX	Cornudas Mount	95.73	59	eP	P	00 43 37.4	+0.4
	comp=Z,93nm,2.0s						
MNTX				LR	LR		
	comp=Z,12µm,21.0s						
MNTX	Cornudas Mount	95.73	59	P	P	00 43 36.5	-0.5
	baz=260,SNR=17						
BOM	Bombay	95.80	288	eP	P	00 43 35.9	-1.7
BOM				eS	SKSac	00 54 13.6	+0.8
TDK	Taldyqorghan	95.84	315	ceP	P	00 43 35.7	-1.5
TDK				i		00 47 27.1	
TDK				pmax	pmax		
	comp=Z,581nm,1.5s						
TDK				MLR	MLR		
	comp=Z,1µm,19.0s						
TDK	Taldyqorghan	95.84	315	⇑eP	P	00 43 35.7	-1.5
	comp=Z,581nm,1.5s						
TDK				⇓iPP	PP	00 47 27.1	-2.4
TDK				eLR	LR	01 28 15.1	
	comp=Z,1µm,19.3s						
YKA	Yellowknife Ar	95.92	27	P	P	00 43 35.9	-1.2
	comp=Z,26nm,0.9s,baz=255,slow=4.6,SNR=194						
YKA				PKKPbc	PKKPbc	01 00 25.9	-2.4
	comp=Z,0.3nm,0.8s,baz=64,slow=2.7,SNR=4.0						
YKA				LR	LR	01 21 06.2	
	comp=Z,709nm,19.8s,baz=257,slow=32						
SNAA	Sanae	96.36	184	P	P	00 43 39.5	+0.2
MDOK	Medeo	96.47	313	c iP	P	00 43 38.7	-1.6
MDOK				pmax	pmax		
	comp=Z,101nm,1.6s						
MDOK				MLR	MLR		
	comp=Z,572nm,22.0s						
MDOK	Medeo	96.47	313	⇑iP	P	00 43 38.8	-1.6
	comp=Z,101nm,1.6s						
MDOK				eLR	LR	01 26 12.2	
	comp=Z,572nm,22.2s						
NRIK	Noril'sk	96.54	340	P	P	00 43 38.4	-1.5
	comp=Z,24nm,1.1s,baz=123,slow=4.6,SNR=33						
NRIK				PP	PP	00 47 31.5	-2.7
	comp=Z,2.2nm,0.3s,baz=116,slow=5.7,SNR=4.7						
AAA	Alma-Ata	96.58	313	eP	P	00 43 41.0	+0.3
AAA				pmax	pmax		
	comp=Z,89nm,1.7s						
AAA				MLR	MLR		
	comp=Z,252nm,19.0s						
AAA	Alma-Ata	96.58	313	eP	P	00 43 41.0	+0.3
	comp=Z,89nm,1.7s						
AAA				eLR	LR	01 26 12.0	
	comp=Z,252nm,19.0s						
CHKK	Chushkaly	96.64	313	⇓eP	P	00 43 38.8	-2.1
CHKK				e		00 47 33.4	
CHKK				pmax	pmax		
	comp=Z,240nm,1.6s						
CHKK	Chushkaly	96.64	313	⇓eP	P	00 43 38.8	-2.1
	comp=Z,240nm,1.6s						
CHKK				⇑ePP	PP	00 47 33.4	-2.3
KSH	Kashi	96.65	309	⇓iP	P	00 43 42.3	+1.1
KSH				sP	pP	00 43 50.0	+2.1
KSH				PP	PP	00 47 38.3	+2.2
KSH				SKS	SKSac	00 54 20.0	+3.2
KSH				S	S	00 54 59.1	-2.2
KSH				SS	SS	01 01 41.2	+4.9
KSH				pmax	pmax		
	comp=Z,38nm,1.3s						
KSH				LR	LR		
	comp=Z,2µm,14.3s						
KSH				LR	LR		
	comp=Z,4µm,20.2s						
KSH				LR	LR		
	comp=Z,3µm,19.0s						
SDCO	Great Sand Dun	96.67	53	eP	P	00 43 42.3	+0.7
	comp=Z,3.2nm,0.9s						
SDCO				LR	LR		
	comp=Z,5µm,20.0s						
SDCO	Great Sand Dun	96.67	53	P	P	00 43 41.0	-0.5
	baz=260,SNR=8.4						
K22A	Casper	96.72	48	P	P	00 43 41.2	-0.3
	baz=260						
KURK	Kurchatov	96.74	320	eP	P	00 43 40.3	-0.8
	comp=Z,851nm,1.8s						
KURK				LR	LR		
	comp=Z,3µm,21.0s						
KURK	Kurchatov	96.74	320	ceP	P	00 43 40.5	-0.6
KURK				pmax	pmax		
	comp=Z,81nm,1.7s						
KURK	Kurchatov	96.74	320	P	P	00 43 39.9	-1.2
	SNR=27						
TXAR	Lajitas Array	96.78	62	P	P	00 43 43.0	+1.0
	comp=Z,6.7nm,0.9s,baz=241,slow=4.2,SNR=37						
TXAR				LR	LR	01 19 49.5	
	comp=Z,11µm,20.4s,baz=0.0,slow=31						
N23A	Red Feather La	96.86	50	P	P	00 43 43.1	+0.8
	baz=261,SNR=5.6						
ISCO	Idaho Springs	96.93	51	eP	P	00 43 43.0	+0.3
	comp=Z,23nm,1.6s						
ISCO				LR	LR		
	comp=Z,15µm,20.0s						
ISCO	Idaho Springs	96.93	51	eP	P	00 43 43.0	+0.3
ISCO				pmax	pmax		
	comp=Z,23nm,1.6s						
ISCO				MLR	MLR		
	comp=Z,15µm,20.0s						
ISCO	Idaho Springs	96.93	51	P	P	00 43 43.0	+0.3
	baz=261						
KUU	Kurty	97.11	313	c iP	P	00 43 40.5	-2.5
KUU				e		00 47 36.2	
KUU				pmax	pmax		
	comp=Z,214nm,1.4s						
KUU				MLR	MLR		
	comp=Z,618nm,19.0s						
KUU	Kurty	97.11	313	⇑iP	P	00 43 40.5	-2.5
	comp=Z,214nm,1.4s						
KUU				ePP	PP	00 47 36.3	-3.0
KUU				eLR	LR	01 29 11.3	
	comp=Z,618nm,19.1s						
VNA3	Neumayer Olymp	97.12	182	P	Pdif	00 43 42.5	-0.2
Q24A	Divide	97.15	52	P	P	00 43 43.3	-0.4
	baz=261						
VNA2	Neumayer--Watz	97.35	183	P	Pdif	00 43 43.7	0.0
	baz=179,slow=3.4						
T25A	Trinidad	97.43	54	P	P	00 43 44.6	-0.3
	baz=261,SNR=11						
LAO	LASA Array	97.59	44	eP	Pdif	00 43 46.4	+1.1
	comp=Z,214nm,1.8s						
LAO				LR	LR		
	comp=Z,5µm,21.0s						
LAO	LASA Array	97.59	44	P	Pdif	00 43 45.9	+0.6
	baz=261						
KZA	Kyzart	97.61	311	P	P	00 43 43.5	-2.3
	SNR=10.0						
VNA1	Neumayer--Stat	97.66	182	P	P	00 43 44.5	-0.4
NIL	Nilore	97.88	303	eP	P	00 43 46.3	-0.4
	comp=Z,147nm,1.4s						
NIL				LR	LR		
	comp=Z,789nm,21.0s						
NIL	Nilore	97.88	303	eP	P	00 43 46.3	-0.4
NIL				pmax	pmax		
	comp=Z,147nm,1.4s						
NIL				MLR	MLR		
	comp=Z,789nm,21.0s						
KBK	Karagaybulak	97.92	312	P	Pdif	00 43 47.1	+0.1
	SNR=5.2						
CHMS	Chumysh	98.11	312	P	P	00 43 46.8	-0.8
	SNR=7.4						
UCH	Uchtor	98.17	311	P	Pdif	00 43 49.1	+0.6
	SNR=14						
FRU	Bishkek	98.18	312	eP	P	00 43 46.0	-1.9
FRU				e		00 47 48.0	
FRU				e		00 54 27.0	
FRU				pmax	pmax		
	comp=Z,100nm,2.2s						
AAK	Ala-Archa	98.24	312	P	Pdif	00 43 48.3	-0.1
	SNR=5.8						
AAK	Ala-Archa	98.24	312	eP	P	00 43 48.0	-0.4
	comp=Z,32nm,1.6s						
AAK				LR	LR		
	comp=Z,2µm,19.0s						
AAK	Ala-Archa	98.24	312	P	P	00 43 47.8	-0.6
AAK	Ala-Archa	98.24	312	ceP	Pdif	00 43 48.5	+0.1
AAK				pmax	pmax		
	comp=Z,18nm,1.7s						
AAK	Ala-Archa	98.24	312	P	P	00 43 47.9	-0.4
	SNR=9.8						
MSTX	Muleshoe	98.27	57	P	P	00 43 48.3	-0.3
	baz=262						
USP	Ospenovka	98.33	312	P	Pdif	00 43 48.7	+0.1
	SNR=11						
RSSD	Black Hills	98.74	47	P	P	00 43 49.9	-0.7
	baz=262						
AML	Almayashu	98.76	311	P	Pdif	00 43 51.5	+0.5
	SNR=11						
EKS2	Erkin-Say	98.77	312	P	Pdif	00 43 51.0	+0.3
	SNR=6.7						
BTLS	Baital	98.90	314	d iP	P	00 43 49.1	-1.9
BTLS				e		00 47 48.8	
BTLS				pmax	pmax		
	comp=Z,164nm,1.5s						
BTLS				MLR	MLR		
	comp=Z,310nm,19.0s						

BTLS	Baital	98.90	314	⇓iP	P	00 43 49.1	-1.9
	comp=Z,164nm,1.6s						
BTLS				ePP	PP	00 47 48.8	-4.2
BTLS				eLR	LR	01 29 49.0	
	comp=Z,310nm,18.7s						
KSCO	Kaye Shedlock'	99.10	52	Pdiff	Pdif	00 43 52.2	0.0
	baz=262						
DGMT	Dagmar	99.20	42	PFAKE		00 44 00.0	+7.7
DGMT				LR	LR		
	comp=Z,6µm,21.0s						
DGMT	Dagmar	99.20	42	Pdiff	Pdif	00 43 52.9	+0.5
	baz=263						
AMTX	Amarillo	99.29	56	Pdiff	Pdif	00 43 53.2	+0.1
	baz=262						
BHJ	Bhuj	99.43	292	eP	Pdif	00 43 52.7	-1.2
OGNE	Ogallala	99.80	50	PFAKE		00 44 10.0	+15
OGNE				LR	LR		
	comp=Z,12µm,21.0s						
OGNE	Ogallala	99.80	50	Pdiff	Pdif	00 43 55.5	+0.3
	baz=263						
JCT	Junction City	100.27	61	Pdif	Pdif	00 43 58.0	+0.4
	comp=Z,5.2nm,0.3s						
JCT				LR	LR		
	comp=Z,15µm,20.0s						
JCT	Junction City	100.27	61	P	Pdif	00 43 58.0	+0.4
JCT				pmax	pmax		
	comp=Z,5.0nm,0.3s						
JCT				MLR	MLR		
	comp=Z,15µm,20.0s						
JCT	Junction City	100.27	61	Pdiff	Pdif	00 43 57.4	-0.2
	baz=262						
833A	Chaparral WMA,	100.34	63	Pdiff	Pdif	00 43 57.8	0.0
	baz=262						
ABTX	Abilene, Hawle	100.68	59	Pdiff	Pdif	00 43 59.4	+0.1
	baz=263						
KK31	Karatay Array	101.21	312	P	Pdif	00 44 00.4	-1.0
KK31				pmax	pmax		
	comp=Z,12nm,1.1s						
FFC	Flin Flon	101.22	36	ePdif	Pdif	00 44 00.9	-0.1
	comp=Z,42nm,1.2s						
FFC				LR	LR		
	comp=Z,11µm,20.0s						
FFC	Flin Flon	101.22	36	i P	Pdif	00 44 01.1	0.0
CBKS	Cedar Bluff	101.31	53	PFAKE		00 44 10.0	+8.0
CBKS				LR	LR		
	comp=Z,7µm,20.0s						
CBKS	Cedar Bluff	101.31	53	Pdiff	Pdif	00 44 03.1	+1.1
	baz=264						
IUG	Iuzhnay	101.47	311	c iP	Pdif	00 44 01.2	-1.5
IUG				i		00 48 08.2	
IUG				pmax	pmax		
	comp=Z,116nm,1.8s						
IUG				MLR	MLR		
	comp=Z,360nm,18.0s						
IUG	Iuzhnay	101.47	311	⇑iP	Pdif	00 44 01.2	-1.5
	comp=Z,116nm,1.8s						
IUG				⇓iPP	PP	00 48 08.3	-4.5
IUG				eLR	LR	01 31 54.2	
	comp=Z,360nm,17.9s						
KVTX	Kingsville	101.55	64	PFAKE		00 44 20.0	+17
KVTX				LR	LR		
	comp=Z,3µm,20.0s						
WMOK	Wichita Mounta	101.64	57	PFAKE		00 44 20.0	+16
WMOK				LR	LR		
	comp=Z,12µm,22.0s						
WMOK	Wichita Mounta	101.64	57	Pdiff	Pdif	00 44 04.0	+0.5
	baz=264						
BRVK	Borovoye	102.14	322	ePdif	Pdif	00 44 04.2	-1.0
	comp=Z,48nm,1.3s						
BRVK				LR	LR		
	comp=Z,1µm,20.0s						
BRVK	Borovoye	102.14	322	eP	Pdif	00 44 04.2	-1.0
BRVK				pmax	pmax		
	comp=Z,48nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,1µm,20.0s						
BRVK	Borovoye	102.14	322	P	Pdif	00 44 04.5	-0.8
	SNR=14						
MDND	Maddock	102.20	43	Pdiff	Pdif	00 44 06.6	+0.9
	baz=266						
KSU1	Kansas State U	103.77	52	PFAKE		00 44 30.0	+17
KSU1				LR	LR		
	comp=Z,10µm,20.0s						
ECSD	EROS Data Cent	104.04	48	PFAKE		00 44 30.0	+16
ECSD				LR	LR		
	comp=Z,5µm,20.0s						
PAYG	Puerto Ayora	104.23	94	PFAKE		00 44 30.0	+15
PAYG				LR	LR		
	comp=Z,2µm,22.0s						
ULM	Lac du Bonnet	104.75	41	Pdiff	Pdif	00 44 14.9	-2.0
	comp=Z,3.5nm,0.8s,baz=294,slow=6.0,SNR=7.9						
ULM				PKiKP	PKiKP	00 48 30.7	-1.6
	comp=Z,2.5nm,0.7s,baz=278,slow=7.0,SNR=3.7						
NATX	Nacogdoches	104.79	60	PFAKE		00 44 30.0	+12
NATX				LR	LR		
	comp=Z,12µm,21.0s						
FCC	Fort Churchill	105.61	32	ePdif	Pdif	00 44 19.8	-0.7
	comp=Z,32nm,1.4s						
FCC	Fort Churchill	105.61	32	eP	Pdif	00 44 19.8	-0.7
FCC				pmax	pmax		
	comp=Z,32nm,1.4s						
W39A	Magazine	105.77	57	Pdiff	Pdif	00 44 22.2	+0.4
	baz=267						
MIAR	Mount Ida	105.90	57	PFAKE		00 48 50.0	+15
MIAR				LR	LR		
	comp=Z,14µm,21.0s						
MIAR	Mount Ida	105.90	57	Pdiff	Pdif	00 44 22.6	+0.2
	baz=267						
SCIA	State Center	106.48	50	PFAKE		00 48 50.0	+14
SCIA				LR	LR		
	comp=Z,13µm,20.0s						
U40A	Yellville	106.58	55	Pdiff	Pdif	00 44 26.1	+0.6
	baz=268						
EFI	East Falkland	106.67	154	PFAKE		00 48 50.0	+14
EFI				LR	LR		
	comp=Z,1µm,20.0s						
V41A	Mountainview	107.12	56	Pdiff	Pdif	00 44 28.8	+0.9
	baz=268						
U41A	Viola	107.34	55	Pdiff	Pdif	00 44 29.7	+1.0
	baz=268						
F38A	Pierce - Schro	107.44	45	Pdiff	Pdif	00 44 30.7	+1.7
	baz=271						
T41A	Mountain View	107.48	55	Pdiff	Pdif	00 44 30.3	+0.9
	baz=268						
S41A	Jillco Farms,	107.51	54	Pdiff	Pdif	00 44 30.4	+0.9
	baz=269						
EYMN	Ely	107.65	43	PFAKE		00 48 50.0	+12
EYMN				LR	LR		
	comp=Z,9µm,20.0s						
Q41A	Truxton	107.94	53	Pdiff	Pdif	00 44 32.4	+1.1
	baz=269						
P41A	Barry, Barry	108.08	52	Pdiff	Pdif	00 44 32.7	+0.7
	baz=270						
F39A	Loretta	108.11	45	Pdiff	Pdif	00 44 33.1	+1.1
	baz=272						
AB31	Akbulak array	108.66	318	i P	Pdif	00 44 32.7	-1.6
AB31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
JFWS	Jewell Farm	108.67	49	PFAKE		00 48 50.0	+10
JFWS				LR	LR		
	comp=Z,4µm,19.0s						
ARU	Arti	108.82	326	PFAKE		00 48 50.0	+10
ARU				LR	LR		
	comp=Z,1µm,20.0s						
COWI	Conover	109.35	45	PFAKE		00 48 50.0	+9.0
COWI				LR	LR		
	comp=Z,10µm,22.0s						
HDIL	Hopedale	109.43	51	PFAKE		00 48 50.0	+8.7
HDIL				LR	LR		
	comp=Z,13µm,22.0s						
GEYT	Alibeck	110.44	306	PKiKP	PKiKP	00 48 44.1	+0.7
	comp=Z,7.4nm,1.0s,baz=90,slow=1.4,SNR=11						
BRAL	Brewton	111.26	61	PFAKE		00 49 00.0	+15
BRAL				LR	LR		
	comp=Z,7µm,21.0s						
JTS	JuntasAbangare	111.46	83	PFAKE		00 49 00.0	+14
JTS				LR	LR		
	comp=Z,3µm,20.0s						
ABPO	Ambohimpanom	111.50	244	PFAKE		00 49 00.0	+14
ABPO				LR	LR		
	comp=Z,2µm,21.0s						
KBS	Kingsbay	111.56	355	PFAKE		00 49 00.0	+16
KBS				LR	LR		
	comp=Z,2µm,22.0s						
HOPE	Hope Point	111.73	167	PFAKE		00 49 00.0	+15
HOPE				LR	LR		
	comp=Z,2µm,20.0s						
UOSS	Minazif	111.83	292	i P	PKiKP	00 48 45.0	-1.3
	SNR=8.2						
HATD	Hatta, Dubai	111.89	292	i P	PKiKP	00 48 45.3	-1.1
	SNR=9.1						
MSFE	Esma-Masafi	111.89	293	P	PKiKP	00 48 45.7	-0.8
ASHO	Ashiyiah	111.94	292	i P	PKiKP	00 48 46.7	+0.1
	SNR=14						
ALNE	Al Ain	112.19	291	P	PKiKP	00 48 46.4	-0.6
NAZ	Nazwa, Dubai	112.32	292	i P	PKiKP	00 48 47.0	-0.2
	SNR=6.3						
FAQ	Al Faqa, Dubai	112.37	292	P	PKiKP	00 48 46.8	-0.6
GLMI	Grayling	112.62	46	PFAKE		00 49 00.0	+13
GLMI				LR	LR		
	comp=Z,8µm,20.0s						
LCO	Las Campanas	112.66	128	PFAKE		00 49 00.0	+12
LCO				LR	LR		
	comp=Z,3µm,20.0s						
AAM	Ann Arbor	113.57	49	PFAKE		00 49 00.0	+11
AAM				LR	LR		
	comp=Z,12µm,20.0s						
TRQA	Tornquist	113.76	141	PFAKE		00 49 00.0	+10
TRQA				LR	LR		
	comp=Z,2µm,20.0s						
NNA	Nana	114.20	109	PFAKE		00 49 00.0	+8.8
NNA				LR	LR		
	comp=Z,3µm,22.0s						
ACSO	Alum Creek Sta	114.26	51	PFAKE		00 49 00.0	+9.5
ACSO				LR	LR		
	comp=Z,7µm,20.0s						
GOGA	Godfrey	114.28	59	PFAKE		00 49 00.0	+9.3
GOGA				LR	LR		
	comp=Z,12µm,20.0s						
LVZ	Lovozero	115.31	341	PFAKE		00 49 00.0	+8.3
LVZ				LR	LR		
	comp=Z,1µm,19.0s						
LVZ	Lovozero	115.31	341	⇓iPKIKP	PKPdf	00 48 51.7	0.0
APA	Apatity	115.89	341	⇓iPKIKP	PKiKP	00 48 49.2	-3.6
APA				pmax	pmax		
	comp=Z,12nm,1.0s						
APA				MLR	MLR		
	comp=Z,3µm,23.0s						
OTAV	Otavalo	115.98	96	PFAKE		00 49 10.0	+15
OTAV				LR	LR		
	comp=Z,2µm,20.0s						
TMCR	Tamitsa	116.12	337	ePKIKP	PKiKP	00 48 52.9	-0.4
TMCR				pmax	pmax		
	comp=Z,21nm,1.5s						
BCIP	Isla Barro Col	116.28	86	PFAKE		00 49 10.0	+15
BCIP				LR	LR		
	comp=Z,2µm,22.0s						
KEV	Kevo	116.31	345	PFAKE		00 49 10.0	+16
KEV				LR	LR		
	comp=Z,4µm,21.0s						
BLA	Blacksburg	116.53	54	PFAKE		00 49 10.0	+15
BLA				LR	LR		
	comp=Z,10µm,22.0s						
ARCES	ARCESS Array B	116.84	345	PKP	PKPdf	00 48 54.0	-0.6
	comp=Z,5.5nm,0.7s,baz=73,slow=2.1,SNR=42						
NHSC	New Hope	117.05	59	PFAKE		00 49 10.0	+14
NHSC				LR	LR		
	comp=Z,10µm,21.0s						
KLMR	Klimovskoe	117.06	333	ePKIKP	PKPdf	00 48 52.7	-2.5
KLMR				pmax	pmax		
	comp=Z,36nm,1.4s						
KLMR	Klimovskoe	117.06	333	ePKPdf	PKPdf	00 48 52.7	-2.5
KLMR				AMP		00 48 56.5	
	comp=Z,36nm,1.4s						
KLMR				ePP	PP	00 49 56.5	-8.4
KLMR				ePKKPbc	PKKPbc	00 59 20.3	-2.1
LVC	Limon Verde	117.08	123	ePKPdf	PKiKP	00 48 57.5	+0.5
LVC				LR	LR		
	comp=Z,3µm,21.0s						
LVC	Limon Verde	117.08	123	ePKIKP	PKiKP	00 48 57.5	+0.5
LVC				MLR	MLR		
	comp=Z,3µm,21.0s						
GCUF	Volcan Galeras	117.28	95	eP	PS	00 59 54.9	+1.1
GCUF	Volcan Galeras	117.28	95	eP	PS	00 59 54.9	+1.1
SUMG	Summit	117.62	8	i P	PKiKP	00 48 56.7	+0.1
	comp=Z,75nm,1.3s						
SUMG	Summit	117.62	8	i PKIKP	PKiKP	00 48 56.7	+0.1
SUMG				pmax	pmax		
	comp=Z,75nm,1.3s						
MAK	Makhachkala	118.02	312	i P	Pdif	00 45 12.7	-3.3
MAK				ePPP	PPP	00 52 40.8	
MAK				e		00 55 42.6	
MAK				ePS	PS	00 59 57.7	-0.7
MAK				pmax	pmax		
	comp=Z,85nm,0.7s						
POPC	Popayan, Colom	118.21	93	eP	PKiKP	00 49 04.7	+5.5
POPC	Popayan, Colom	118.21	93	eP	SP	00 59 54.8	-3.5
POPC	Popayan, Colom	118.21	93	eP	PKiKP	00 49 04.7	+5.5
POPC	Popayan, Colom	118.21	93	eP	SP	00 59 54.8	-3.5
CNNC	Cliffs of the	118.76	56	PFAKE		00 49 10.0	+11
CNNC				LR	LR		
	comp=Z,10µm,21.0s						
CBN	Corbin Frederi	118.82	53	PFAKE		00 49 10.0	+11
CBN				LR	LR		
	comp=Z,16µm,20.0s						
PLMC	San Jos del P	119.05	91	eP	PKKPdf	00 59 55.9	+11
PLMC	San Jos del P	119.05	91	eP	PKKPdf	00 59 55.9	+11
LGD	Lagodekhi	119.14	311	P	PKPdf	00 48 59.5	-0.3
LGD	Lagodekhi	119.14	311	ePKIKP	PKPdf	00 48 59.5	-0.3
BINY	Binghamton	119.21	48	PFAKE		00 49 10.0	+10
BINY				LR	LR		
	comp=Z,7µm,21.0s						
MTDJ	Mount Denham	119.46	76	PFAKE		00 49 10.0	+8.7
MTDJ				LR	LR		
	comp=Z,3µm,20.0s						
PTLC	Puerto Leguiza	119.52	97	eP	PKiKP	00 49 03.6	+2.2
PTLC	Puerto Leguiza	119.52	97	eP	SP	01 00 08.4	-1.6
PTLC	Puerto Leguiza	119.52	97	eP	PKiKP	00 49 03.6	+2.2
PTLC	Puerto Leguiza	119.52	97	eP	SP	01 00 08.4	-1.6
LONY	Lake Ozonia	119.70	45	PFAKE		00 49 10.0	+9.1
LONY				LR	LR		
	comp=Z,6µm,20.0s						
VRH	Novokhopyorsk	119.72	323	ePKIKP	PKiKP	00 49 00.6	-0.1
VRH				pmax	pmax		
	comp=Z,40nm,1.3s						
VRH				MLR	MLR		
	comp=Z,2µm,22.0s						
ANIL	Santa Ana	119.83	92	eP	PKKPdf	00 59 56.9	+13
ANIL	Santa Ana	119.83	92	eP	PKKPdf	00 59 56.9	+13
SFJD	Kangerlussuaq	119.93	15	PFAKE		00 49 10.0	+9.4
SFJD				LR	LR		
	comp=Z,7µm,21.0s						
MOS	Moscow	120.22	329	i PKIKP	PKPdf	00 49 01.1	-0.3
MOS				e		00 50 23.9	
MOS				pmax	pmax		
	comp=Z,32nm,1.0s						
TBLG	Delisi	120.26	312	P	PKiKP	00 49 03.2	+1.0
TBLG	Delisi	120.26	312	ePKIKP	PKiKP	00 49 03.1	+1.0
GNI	Garni	120.57	310	ePKPdf	PKiKP	00 49 03.6	+0.6
GNI				LR	LR		
	comp=Z,2µm,22.0s						
GNI	Garni	120.57	310	P	PKiKP	00 49 03.3	+0.3
GNI	Garni	120.57	310	d iPKIKP	PKiKP	00 49 03.3	+0.3
ZEI	Tsey	120.64	313	i PKIKP	PKPdf	00 49 01.8	-1.2
ZEI				pmax	pmax		
	comp=Z,21nm,1.0s						
GOF	Gofitskoye	120.70	316	ePKIKP	PKiKP	00 49 03.7	+0.9
GOF				pmax	pmax		
	comp=Z,50nm,1.2s						
NCK	Nalchik	120.70	314	⇑iPKIKP	PKiKP	00 49 03.7	+0.8
TRLG	Trialeti	120.77	311	P	PKiKP	00 49 04.5	+1.1
LPSR	Galich'ya Gora	120.82	325	ePKIKP	PKiKP	00 49 03.1	+0.3
LPSR				pmax	pmax		
	comp=Z,60nm,1.2s						
LPSR				MLR	MLR		
	comp=Z,2µm,19.0s						
ROSC	El Rosal	120.96	91	eP	PKKPdf	00 59 56.9	+15
ROSC	El Rosal	120.96	91	eP	PKKPdf	00 59 56.9	+15
ROSC	El Rosal	120.96	91	PKP	PKiKP	00 49 05.3	+0.6
	comp=Z,3.3nm,0.4s,baz=132,slow=9.7,SNR=4.6						
SCHQ	Schefferville	121.00	32	PKP	PKPdf	00 49 02.7	-0.3
	comp=Z,10nm,0.9s,baz=358,slow=3.7,SNR=8.7						
SCHQ				PKKPbc	PKKPbc	00 59 07.4	-0.4
	comp=Z,3.9nm,0.9s,baz=131,slow=1.4,SNR=4.3						
VORR	Voronezh	121.02	324	PKIKP	PKPdf	00 49 01.0	-2.1
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
OBN	Obninsk	121.04	328	PFAKE		00 49 20.0	+17
OBN				LR	LR		
	comp=Z,1µm,20.0s						
OBN	Obninsk	121.04	328	c iPKIKP	PKiKP	00 49 03.4	+0.3
OBN				e		00 50 29.8	
OBN				ePPP	PPP	00 53 04.9	
OBN				pmax	pmax		
	comp=Z,54nm,1.3s						
KBZ	Khabaz	121.14	314	PKP	PKiKP	00 49 04.3	+0.6
	comp=Z,9.4nm,1.0s,baz=160,slow=1.4,SNR=11						
SCO	Scoresbysund	121.16	3	i P	PKPdf	00 49 02.6	-0.2
	comp=Z,40nm,1.4s						
SCO	Scoresbysund	121.16	3	i PKIKP	PKPdf	00 49 02.6	-0.2
SCO				pmax	pmax		
	comp=Z,40nm,1.4s						
BGD	Bogdanovka	121.20	311	P	PKiKP	00 49 05.6	+1.4
VSR	Storozhevoye	121.21	323	c iPKIKP	PKPdf	00 49 03.2	-0.3
KIV	Kislovodsk	121.23	314	ePKPdf	PKiKP	00 49 04.3	+0.3
KIV				LR	LR		
	comp=Z,2µm,21.0s						
KIV	Kislovodsk	121.23	314	⇑iP	PKiKP	00 49 04.4	+0.3
KIV	Kislovodsk	121.23	314	P	PKiKP	00 49 04.3	+0.3
KIV	Kislovodsk	121.23	314	i PKIKP	PKiKP	00 49 04.2	+0.2
KIV				e		00 50 34.2	
KIV				ePS	PS	01 00 25.9	-1.5
KIV				eSS	SS	01 07 08.9	+2.2
KIV				pmax	pmax		
	comp=Z,33nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,23.0s						
NEY	Neytrino	121.38	314	⇓iPKIKP	PKiKP	00 49 05.0	+0.5
CHIC	Chingaza	121.50	92	eP	PKPdf	00 49 03.6	-2.1
CHIC	Chingaza	121.50	92	eP	PKPdf	00 49 03.6	-2.1
PUL	Pulkovo	121.55	335	⇑iPKIKP	PKPdf	00 49 03.7	-0.2
PUL	Pulkovo	121.55	335	eP	PKiKP	00 49 03.8	-0.2
GTBY	Guantanamo Bay	121.82	74	PFAKE		00 49 20.0	+14
GTBY				LR	LR		
	comp=Z,2µm,21.0s						
FINES	FINESS Array B	122.17	338	PKP	PKPdf	00 49 04.7	-0.4
	comp=Z,17nm,1.0s,baz=85,slow=4.0,SNR=25						
RUSC	La Rusia	122.36	90	eP	PKiKP	00 49 07.8	+0.2
RUSC	La Rusia	122.36	90	eP	PKiKP	00 49 07.8	+0.2
BARC	Barichara	122.38	90	⇓eP	PKPdf	00 49 01.6	-5.6
BARC	Barichara	122.38	90	⇓eP	PKPdf	00 49 01.6	-5.6
ARTV	Artvin	122.44	311	i P	PKiKP	00 49 07.8	+1.2
ARTV				IAML_P			
	comp=Z,1µm,0.5s						
DAGI	Agillar	122.48	311	i P	PKiKP	00 49 08.0	+1.3
DAGI				IAML_P			
	comp=Z,5.0nm,0.5s						
DBOC	Borcka	122.60	312	i P	PKiKP	00 49 06.9	+0.2
DBOC				IAML_P			
	comp=Z,827nm,1.1s						
DBAD	Bademkaya	122.66	311	i P	PKiKP	00 49 07.4	+0.4
DBAD				IAML_P			
	comp=Z,831nm,1.0s						
HOMI	Horasan	122.72	310	i P	PKiKP	00 49 08.6	+1.3
HOMI				IAML_P			
	comp=Z,22nm,0.1s						
PKME	Peaks-Kenny Pk	123.14	43	PFAKE		00 49 20.0	+12
PKME				LR	LR		
	comp=Z,7µm,22.0s						
SOC	Sochi	123.40	315	i PKIKP	PKPdf	00 49 05.3	-2.6
SOC				e		00 50 44.4	
SOC				ePS	PS	01 00 35.3	-11
SOC				pmax	pmax		
	comp=Z,47nm,1.1s						
SOC				MLR	MLR		
	comp=Z,1µm,21.0s						
ECAT	Cat-ERZURUM	123.52	310	i P	PKiKP	00 49 10.2	+1.3
SVAN	Silvan-Diyarba	123.67	308	i P	PKiKP	00 49 09.7	+0.7
KOPT	Kop Dagi	123.78	310	i P	PKPdf	00 49 07.9	-1.3
KOPT				IAML_P			
	comp=Z,56nm,0.2s						
VSU	Vasula	123.82	335	⇓iPKIKP	PKiKP	00 49 09.0	+0.5
VSU	Vasula	123.82	335	eP	PKPdf	00 49 07.4	-0.9
VSU				IAmb	IAmb	00 49 09.3	
	comp=Z,208nm,1.4s						
BAYB	BAYBURT	123.90	311	i P	PKiKP	00 49 11.8	+2.2
BAYB				IAML_P			
	comp=Z,943nm,1.1s						
CPUP	Villa Florida	124.06	133	PKIKP	PKiKP	00 49 10.0	-0.1
CPUP	Villa Florida	124.06	133	PKP	PKiKP	00 49 10.0	-0.1
	comp=Z,28nm,1.1s,baz=242,slow=1.6,SNR=27						
BOSA	Boshof	124.12	223	PKP	PKPdf	00 49 09.9	-0.1
	comp=Z,19nm,1.0s,baz=138,slow=2.8,SNR=18						
HANI	Diyarbakir_Han	124.23	309	i P	PKiKP	00 49 11.5	+1.4
SUR	Sutherland	124.36	217	ePKPdf	PKiKP	00 49 11.6	+0.8
SUR				LR	LR		
	comp=Z,5µm,20.0s						
EUZM	Uzumlu	124.45	310	i P	PKiKP	00 49 12.3	+1.7
EUZM				IAML_P			
	comp=Z,187nm,0.1s						
ANN	Anapa	124.58	317	i PKIKP	PKPdf	00 49 08.4	-1.7
ANN				e		00 50 55.0	
ANN				pmax	pmax		
	comp=Z,36nm,1.0s						
KELT	Kelkit	124.67	311	i P	PKiKP	00 49 12.0	+0.9
KELT				IAML_P			
	comp=Z,520nm,1.0s						
TNCL	Tunceli-Merkez	124.71	310	i P	PKiKP	00 49 16.0	+4.9
TNCL				IAML_P			
	comp=Z,271nm,1.0s						
REFA	Refahiye_ERZN	125.23	310	i P	PKiKP	00 49 13.6	+1.4
REFA				IAML_P			
	comp=Z,585nm,0.9s						
SDV	Santo Domingo	125.23	87	ePKPdf	PKPdf	00 49 12.3	-0.2
SDV				LR	LR		
	comp=Z,2µm,19.0s						
SDV	Santo Domingo	125.23	87	eP	PKPdf	00 49 11.8	-0.8
SDV	Santo Domingo	125.23	87	eP	PKPdf	00 49 11.8	-0.8
SDDR	Presa de Saban	125.41	75	PFAKE		00 49 30.0	+17
SDDR				LR	LR		
	comp=Z,5µm,21.0s						
SUSE	Susehri	125.43	311	i P	PKiKP	00 49 13.2	+0.6
SUSE				IAML_P			
	comp=Z,448nm,1.0s						
KEMA	Kemaliye	125.47	310	i P	PKiKP	00 49 13.7	+1.1
KEMA				IAML_P			
	comp=Z,3.7nm,0.4s						
GRTK	Grand Turk	125.56	72	PFAKE		00 49 30.0	+17
GRTK				LR	LR		
	comp=Z,2µm,20.0s						
MICGM	Minsk	125.67	331	eP	PKiKP	00 49 12.0	-0.4
MICGM				eLR	LR	01 42 08.0	
MNK	Minsk	125.67	331	ePKIKP	PKiKP	00 49 12.0	-0.4
IZAR	Zarasai	125.70	333	eP	PKiKP	00 49 12.2	-0.2
IZAR				IAmb	IAmb	00 49 14.5	
	comp=Z,17nm,1.1s						
IDID	Didziasalis	125.73	332	eP	PKiKP	00 49 12.3	-0.1
IDID				IAmb	IAmb	00 49 14.5	
	comp=Z,23nm,1.1s						
CUZAR	Zara_SIVAS	125.84	311	i P	PKiKP	00 49 14.3	+0.9
ISAL	Salakas	125.86	333	eP	PKiKP	00 49 12.3	-0.4
ISAL				IAmb	IAmb	00 49 14.8	
	comp=Z,16nm,1.0s						
IIGN	Ignalina	125.95	332	eP	PKiKP	00 49 13.0	+0.1
IIGN				IAmb	IAmb	00 49 15.1	
	comp=Z,35nm,1.2s						
NACGM	Naroch	125.96	332	e	PKiKP	00 49 16.0	+3.1
NACGM				eLQ	LQ	01 44 20.0	
SLIT	Slitere, Latvi	126.15	336	eP	PKiKP	00 49 21.2	+8.1
SLIT				IAmb	IAmb	00 49 23.1	
	comp=Z,407nm,1.1s						
KMBO	Kilima Mbogo	126.57	260	PKP	PKiKP	00 49 16.6	+0.9
KMBO				PP	PP	00 51 10.2	-1.3
KMBO				LR	LR		
	comp=Z,5µm,22.0s						
KMBO	Kilima Mbogo	126.57	260	PKP	PKiKP	00 49 16.6	+0.9
	comp=Z,27nm,1.2s,baz=40,slow=2.7,SNR=21						
KMBO				PP	PP	00 51 10.2	-1.3
	comp=Z,1.0nm,0.9s,baz=78,slow=5.9,SNR=3.5						
SIM	Simferopol'	126.73	318	i PKIKP	PKiKP	00 49 14.9	+0.1
SIM				i		00 51 10.0	
SIM				pmax	pmax		
	comp=Z,60nm,2.4s						
SIM				pmax	pmax		
	comp=Z,350nm,4.5s						
AKASG	Malin Array Be	127.07	326	PKP	PKiKP	00 49 14.9	-0.3
	comp=Z,18nm,1.0s,baz=60,slow=2.2,SNR=55						
AKASG				PP	PP	00 51 10.4	-2.6
	comp=Z,1.5nm,0.7s,baz=46,slow=7.1,SNR=7.8						
KIEV	Kiev	127.08	326	ePKPdf	PKiKP	00 49 15.0	-0.3
KIEV				LR	LR		
	comp=Z,2µm,21.0s						
KIEV	Kiev	127.08	326	⇑iP	PKiKP	00 49 15.2	-0.1
KIEV	Kiev	127.08	326	i P	PKPdf	00 49 14.8	+0.1
	SNR=9.9						

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KIEV  Kiev               127.08 326c iPKIKP   PKiKP    00 49 15.1 -0.2
NB2   NORSAR Subarra127.20 344  PKPdf    PKPdf    00 49 14.1 -0.7
      comp=Z,44nm,1.4s,baz=36,slow=2.2
NB2   NORSAR Subarra127.20 344  PKPdf    PKPdf    00 49 14.1 -0.7
      baz=36,slow=2.2
NOA   NORSAR Array B 127.20 344  PKP      PKiKP    00 49 15.0 -0.3
      comp=Z,11nm,1.0s,baz=32,slow=1.9,SNR=15
PBUR  Paburg             127.39 335 eP       PKPdf    00 49 14.9 -0.3
PBUR                                 IAmb     IAmb     00 49 17.5
      comp=Z,161nm,1.3s
SUW   Suwalki            128.17 332 ePKPdf   PKPdf    00 49 16.6 -0.1
SUW   Suwalki            128.17 332 ePKIKP   PKPdf    00 49 16.6 -0.1
BRTR  Keskin Array B     128.92 312  PKP      PKiKP    00 49 19.1 -0.4
      comp=Z,19nm,1.1s,baz=129,slow=1.8,SNR=55
BRTR                                 PP       PP       00 51 23.6 -2.5
      comp=Z,12nm,1.2s,baz=96,slow=3.7,SNR=7.4
KLNR  Kaliningrad        129.08 334⇑iPKIKP   PKiKP    00 49 19.2 +0.1
KIS   Kishinev           129.16 322 ePKP     PKPdf    00 49 15.0 -3.9
KIS   Kishinev           129.16 322 ePP      PP       00 51 26.0 -0.9
KIS   Kishinev           129.16 322 i PKS    PKSab    00 52 40.0 -0.3
KIS                                 eSKS     SKSac    00 56 10.0  -16
KIS   Kishinev           129.16 322 ePS      PS       01 02 05.0  +28
KIS   Kishinev           129.16 322 ePKIKP   PKPdf    00 49 15.0 -3.9
KIS                                 e                 00 51 26.0
KIS                                 ePPS     PPS      01 03 14.0
KIS                                  MLR      MLR
      comp=Z,2µm,22.0s
KIS                                  MLR      MLR
      comp=N,2µm,23.0s
ANTO  Ankara             129.49 312 ePKPdf   PKiKP    00 49 20.6  0.0
ANTO                                 LR       LR
      comp=Z,2µm,20.0s
ANTO  Ankara             129.49 312⇓iP       PKPdf    00 49 19.5 -0.3
ANTO  Ankara             129.49 312 ⇓PKIKP   PKPdf    00 49 19.5 -0.3
LSZ   Lusaka             129.53 239 ePKPdf   PKiKP    00 49 21.5 +0.1
LSZ                                  LR       LR
      comp=Z,8µm,21.0s
LSZ   Lusaka             129.53 239 ePKIKP   PKiKP    00 49 21.5 +0.1
LSZ                                  MLR      MLR
      comp=Z,8µm,21.0s
GHAJ  Ghor Haditha       129.60 301  PKP      PKiKP    00 49 21.1 +0.2
LEOM  Leova              129.76 322⇓iP       PKiKP    00 49 21.4 +0.6
LEOM  Leova              129.76 322 ⇓PKIKP   PKiKP    00 49 21.4 +0.6
SJG   San Juan           130.27  76 ePKPdf   PKiKP    00 49 22.3 -0.3
SJG                                  LR       LR
      comp=Z,3µm,22.0s
SJG   San Juan           130.27  76 eP       PKPdf    00 49 19.7 -2.1
SJG   San Juan           130.27  76 ePKIKP   PKiKP    00 49 22.3 -0.3
SJG                                  MLR      MLR
      comp=Z,3µm,22.0s
SJG   San Juan           130.27  76 eP       PKPdf    00 49 19.7 -2.1
LVV   L'vov              130.33 328 ePKIKP   PKiKP    00 49 22.1 +0.3
CFR   Carcaliu           130.45 321⇑iP       PKPdf    00 49 20.8 -0.6
CFR   Carcaliu           130.45 321 ⇑PKIKP   PKPdf    00 49 20.8 -0.6
PRAR  RASCA              130.50 324⇑iP       PKiKP    00 49 23.3 +1.0
CSS   Mathiatis          130.58 306  PKP      PKiKP    00 49 24.2 +1.4
BEL   Belsk              130.68 331 ePKPdf   PKiKP    00 49 22.6 +0.2
BEL   Belsk              130.68 331 ePKIKP   PKiKP    00 49 22.6 +0.2
TLB   Topalu             130.79 320⇑iP       PKiKP    00 49 23.0 +0.1
TLB   Topalu             130.79 320 ⇑PKIKP   PKiKP    00 49 23.0 +0.1
BIZ   Bicaz              130.79 324⇑iP       PKiKP    00 49 23.4 +0.5
BURAR Bucovina Array     130.94 325⇑iP       PKiKP    00 49 24.9 +1.6
BURAR Bucovina Array     130.94 325 ⇑PKIKP   PKiKP    00 49 24.9 +1.6
KWP   Kalwaria Pacla     131.13 328 ePP      PP       00 51 39.8 +0.2
GKP   Gorka Klasztor     131.27 335 ePKPdf   PKiKP    00 49 23.4 -0.2
GKP   Gorka Klasztor     131.27 335 ePKIKP   PKiKP    00 49 23.4 -0.2
TRIS  Tristan da Cun     131.37 183  PFAKE             00 49 40.0  +16
TRIS                                 LR       LR
      comp=Z,6µm,21.0s
OZUR                     131.42 323⇑iP       PKiKP    00 49 24.2  0.0
MLR   Muntele Rosu       131.64 322⇑iP       PKiKP    00 49 24.2 -0.6
MLR   Muntele Rosu       131.64 322 ⇑PKIKP   PKiKP    00 49 24.2 -0.6
PRD   Provadia           131.85 319 eP       PKiKP    00 49 24.8 -0.3
UZH   Uzhgorod           131.95 327⇑iPKIKP   PKPdf    00 49 23.0 -1.1
UZH                                 e                 00 49 29.9
UZH                                 i                 00 49 36.7
TRPA  Tarpa              132.12 327⇑iP       PKiKP    00 49 25.1 -0.4
TRPA  Tarpa              132.12 327 ePKiKP   PKiKP    00 49 28.1 +2.6
VOIR                     132.21 322⇑iP       PKiKP    00 49 27.0 +1.1
VOIR                     132.21 322 ⇑PKIKP   PKiKP    00 49 27.0 +1.1
OJC   Ojcow              132.22 330 ePKPdf   PKiKP    00 49 25.9 +0.3
OJC   Ojcow              132.22 330 ePKIKP   PKiKP    00 49 25.9 +0.3
NIE   Niedzica           132.49 329 ePKPdf   PKiKP    00 49 28.2 +1.9
ARR   Arges              132.49 322⇑iP       PKiKP    00 49 26.4  0.0
JMB   Yambol             132.72 318 eP       PKPdf    00 49 25.8  0.0
HUMR  Humele             132.72 321⇑iP       PKiKP    00 49 26.2 -0.6
SZH   Strazhica          132.76 319 eP       PKiKP    00 49 26.5 -0.5
DRGR                     132.81 325⇓iP       PKiKP    00 49 28.0 +0.9
DRGR                     132.81 325 ⇓PKIKP   PKiKP    00 49 28.0 +0.9
LTVH  Ltavrtes, Hu       132.91 326 ePKiKP   PKPdf    00 49 24.1 -1.9
MBAR  Mbarara            132.98 258  PFAKE             00 49 40.0  +12
MBAR                                 LR       LR
      comp=Z,661nm,22.0s
LANS  Liptovska Anna     133.08 329 ePKP     PKiKP    00 49 27.8 +0.3
LANS                                ePP      PP       00 51 53.6 +1.5
RUE   Ruedersdorf        133.26 336 eP       PKPdf    00 49 25.7 -0.7
RUE                                  IAmb     IAmb     00 49 30.0
      comp=Z,32nm,0.8s
KSP   Ksiaz              133.41 333 ePKPdf   PKiKP    00 49 28.1 +0.1
KSP   Ksiaz              133.41 333 ePKIKP   PKiKP    00 49 28.1 +0.1
MORC  Moravsky Berou     133.59 331⇑iP       PKiKP    00 49 28.4 -0.1
MORC  Moravsky Berou     133.59 331 ⇑PKIKP   PKiKP    00 49 28.4 -0.1
MORC  Moravsky Berou     133.59 331 ePKP     PKiKP    00 49 28.0 -0.5
MORC                                ePP      PP       00 51 55.8 +0.5
PTGA  Pitinga            133.62 102  PFAKE             00 49 40.0  +10
PTGA                                 LR       LR
      comp=Z,13µm,22.0s
PSZ   Piszkesteto        133.65 328 ePKiKP   PKPdf    00 49 23.1 -4.4
KRLC  Kraliky            133.74 332 ePKPDF   PKiKP    00 49 29.0 +0.2
KRLC  Kraliky            133.74 332 ePKIKP   PKiKP    00 49 29.0 +0.2
DPC   Dobruska-Polom     133.75 333 ePKPDF   PKiKP    00 49 28.3 -0.5
DPC                                 ex       x        01 03 55.2
DPC                                  AMS      AMS      01 52 30.0
      comp=Z,2µm,20.0s
DPC   Dobruska-Polom     133.75 333 ePKIKP   PKiKP    00 49 28.3 -0.5
DPC                                 e                 01 03 55.2
DPC                                  MLR      MLR
      comp=Z,2µm,20.0s
UPC   Upice              133.78 333 ePKPDF   PKiKP    00 49 28.8  0.0
UPC                                  AMS      AMS      01 52 20.0
      comp=Z,4µm,21.1s
UPC   Upice              133.78 333 ePKIKP   PKiKP    00 49 28.8  0.0
UPC                                  MLR      MLR
      comp=Z,4µm,21.1s
ALN   Alexandroupoli     133.80 316  P        PKPdf    00 49 28.0 +0.2
ALN   Alexandroupoli     133.80 316  P        PKPdf    00 49 28.0 +0.2
VYHS  Vyhne              133.82 329 ePKIKP   PKPdf    00 49 27.6 -0.1
VYHS                                e                 00 51 54.7
VYHS  Vyhne              133.82 329 ePKP     PKPdf    00 49 27.6 -0.1
VYHS                                ePP      PP       00 51 54.7 -2.1
RDO   Rodhopi            134.03 317  P        PKiKP    00 49 29.8 +0.2
RDO   Rodhopi            134.03 317  P        PKiKP    00 49 29.8 +0.2
EZN   Ezine              134.09 315  P        PKiKP    00 49 29.8 +0.1
EZN   Ezine              134.09 315  P        PKiKP    00 49 29.8 +0.1
BZS   Buzias             134.12 324⇓iP       PKPdf    00 49 28.3  0.0
BZS   Buzias             134.12 324 ⇓PKIKP   PKPdf    00 49 28.3  0.0
PLD   Plovdiv            134.12 319 eP       PKPdf    00 49 28.4  0.0
GADA  Gvkgeada           134.22 316  P        PKiKP    00 49 30.0  0.0
GADA  Gvkgeada           134.22 316  P        PKiKP    00 49 30.0  0.0
RZN   Rozhen             134.31 318 eP       PKPdf    00 49 29.3 +0.3
VRAC  Vranov             134.36 331⇑iP       PKiKP    00 49 29.9 -0.1
VRAC  Vranov             134.36 331 ⇑PKIKP   PKiKP    00 49 29.9 -0.1
VRAC  Vranov             134.36 331 ePKP     PKiKP    00 49 29.3 -0.7
VRAC                                ePP      PP       00 52 00.3 +0.1
GRGR  Grenville          134.37  84  PFAKE             00 49 40.0 +9.0
GRGR                                 LR       LR
      comp=Z,2µm,21.0s
BUD   Budapest           134.38 328 ePKiKP   PKPdf    00 49 29.1 +0.4
PVCC  Panska Ves         134.40 334 ePKPDF   PKiKP    00 49 29.9 -0.1
PVCC                                 AMS      AMS      01 47 40.0
      comp=Z,3µm,23.1s
PVCC  Panska Ves         134.40 334 ePKIKP   PKiKP    00 49 29.9 -0.1
PVCC                                 MLR      MLR
      comp=Z,3µm,23.1s
BRG   Berggiesshubel     134.41 335 ePKP     PKPdf    00 49 28.8 +0.1
      comp=Z,21nm,1.2s
BRG                                 ePP      PP       00 51 52.4 -7.9
      comp=Z,40nm,1.7s
BRG                                 eSKP              00 53 01.6
      comp=Z,37nm,1.9s
BRG                                  SS       SS       01 09 57.0 +8.2
      comp=N,2µm,20.9s
      comp=E,2µm,26.2s
      comp=Z,3µm,21.6s
BRG   Berggiesshubel     134.41 335 ePKIKP   PKPdf    00 49 28.8 +0.1
BRG                                  pmax     pmax
      comp=Z,12nm,1.2s
BRG                                  pmax     pmax
      comp=Z,21nm,1.7s
BRG                                  pmax     pmax
      comp=N,40nm,1.9s
BRG                                  MLR      MLR
      comp=N,37µm,20.9s
BRG                                  MLR      MLR
      comp=E,2µm,26.2s
BRG                                  MLR      MLR
      comp=Z,2µm,21.6s
ANWB  Willy Bob          134.43  77  PFAKE             00 49 40.0 +9.0
ANWB                                 LR       LR
      comp=Z,3µm,22.0s
CLL   Collm              134.47 336 ePKPdf   PKPdf    00 49 29.0 +0.2
      comp=Z,14nm,1.0s
CLL                                 i pPKPdf PKiKP    00 49 32.0 +1.9
CLL                                 i                 00 49 39.2
CLL                                 e                 00 51 43.0
CLL                                 ePP      PP       00 51 59.0 -1.6
      comp=Z,76nm,2.3s
CLL                                 i PKSbc  PKSbc    00 53 00.8 +1.1
CLL                                 i SKPdf  SKiKP    00 53 03.7 -1.1
CLL                                 ePS      PS       01 02 18.0 -4.0
CLL                                 ePPS     PPS      01 03 59.0
CLL                                 eSS      SS       01 09 50.0 +0.6
CLL                                 e                 01 12 12.0
CLL                                 eSSS     SSS      01 14 36.0
CLL                                 e                 01 15 30.0
CLL                                  LV                01 52 00.0
      comp=Z,2µm,21.8s
CLL   Collm              134.47 336 ePKIKP   PKPdf    00 49 28.0 -0.8
CLL                                 i                 00 49 39.2
CLL                                  pmax     pmax
      comp=Z,33nm,1.0s
CLL                                  MLR      MLR
      comp=Z,2µm,21.8s
SRO   Srobarova          134.53 329 ePKIKP   PKPdf    00 49 28.8 -0.2
SRO                                 e                 00 52 01.4
SRO   Srobarova          134.53 329 ePKP     PKPdf    00 49 28.8 -0.2
SRO                                 ePP      PP       00 52 01.4 +0.1
KRUC  Moravsky           134.63 331 ePKP     PKiKP    00 49 29.8 -0.8
KRUC                                ePP      PP       00 52 01.7 -0.1
MODS  Modra-Piesok       134.68 330 ePKIKP   PKiKP    00 49 30.8 +0.1
MODS                                e                 00 52 00.4
MODS  Modra-Piesok       134.68 330 ePKP     PKiKP    00 49 30.8 +0.1
MODS                                ePP      PP       00 52 00.4 -1.8
PRA   Prague             134.79 334  AMS      AMS      01 48 20.0
      comp=Z,3µm,26.4s
VTS   Vitosha            134.80 320  P        PKiKP    00 49 31.8 +0.5
VTS   Vitosha            134.80 320⇑iP       PKPdf    00 49 30.3 +0.4
VTS   Vitosha            134.80 320  P        PKiKP    00 49 31.8 +0.5
VTS   Vitosha            134.80 320 ⇑PKIKP   PKPdf    00 49 30.3 +0.4
VTS   Vitosha            134.80 320 eP       PKPdf    00 49 29.3 -0.6
PRU   Pruhonice          134.81 333 ePKPDF   PKiKP    00 49 30.5 -0.4
PRU                                 ex       x        01 04 14.9
PRU                                  AMS      AMS      01 48 20.0
      comp=Z,3µm,23.2s
PRU   Pruhonice          134.81 333 ePKIKP   PKiKP    00 49 30.5 -0.4
PRU                                  MLR      MLR
      comp=Z,3µm,23.2s
THAS  Thassos island     134.83 317  P        PKPdf    00 49 30.3 +0.5
LIA   Limnos Island      134.84 316  P        PKPdf    00 49 30.0 +0.2
LIA   Limnos Island      134.84 316  P        PKPdf    00 49 30.0 +0.2
ZST   Bratislava         134.88 330 ePKP     PKPdf    00 49 28.6 -1.0
ZST                                 ePP      PP       00 52 03.1 -0.4
TREC  Trest              134.88 332 ePKPDF   PKiKP    00 49 30.5 -0.6
TREC                                 AMS      AMS      01 53 30.0
      comp=Z,2µm,21.5s
TREC  Trest              134.88 332 ePKIKP   PKiKP    00 49 30.5 -0.6
TREC                                 MLR      MLR
      comp=Z,2µm,21.5s
MMB   Musomiste          135.01 318 eP       PKPdf    00 49 29.7 -0.5
NVR   Nevrokopi          135.04 318  P        PKiKP    00 49 30.8 -0.9
NVR   Nevrokopi          135.04 318  P        PKiKP    00 49 30.8 -0.9
KKB   Krupnik            135.28 319 eP       PKPdf    00 49 28.0 -2.6
SRS   Serrai             135.33 318  P        PKPdf    00 49 30.8 +0.1
SRS   Serrai             135.33 318  P        PKPdf    00 49 30.8 +0.1
TIH   Tihany             135.35 328 ePKiKP   PKPpre   00 49 16.0
MORH  Mrgy, Hungar       135.40 327 ePKiKP   PKiKP    00 49 32.0 -0.2
OUR   Ouranopolis        135.45 317  P        PKPdf    00 49 31.3 +0.4
OUR   Ouranopolis        135.45 317  P        PKPdf    00 49 31.3 +0.4
SOP   Sopron             135.50 330 ePKiKP   PKPpre   00 49 24.1
TSUM  Tsumeb             135.55 227  PFAKE             00 49 40.0 +6.5
TSUM                                 LR       LR
      comp=Z,10µm,22.0s
ESK   Eskdalemuir        135.57 350  PFAKE             00 49 40.0 +7.7
ESK                                  LR       LR
      comp=Z,4µm,19.0s
SOH   Sokhos             135.63 318  P        PKiKP    00 49 32.1 -0.8
SOH   Sokhos             135.63 318  P        PKiKP    00 49 32.1 -0.8
CONA  Conrad Observa     135.67 330 i PKPdf  PKPdf    00 49 31.6 +0.3
      comp=Z,24nm,1.1s,SNR=6.4
CONA                                 PP       PP       00 52 08.4 -0.2
      comp=Z,43nm,1.7s
KNT   Kendrikon          135.76 318  P        PKPdf    00 49 31.6 +0.1
KNT   Kendrikon          135.76 318  P        PKPdf    00 49 31.6 +0.1
PLG   Polygyros          135.79 317  P        PKiKP    00 49 32.3 -1.0
PLG   Polygyros          135.79 317  P        PKiKP    00 49 32.3 -1.0
APE   Apeiranthos        135.82 312  P        PKPdf    00 49 32.4 +0.6
APE   Apeiranthos        135.82 312  P        PKPdf    00 49 32.4 +0.6
PAIG  Paliouri           135.85 316  P        PKiKP    00 49 32.8 -0.5
PAIG  Paliouri           135.85 316  P        PKiKP    00 49 32.8 -0.5
KHC   Kasperske Hory     135.86 333 ePKPpre  PKPpre   00 49 23.3
KHC                                 ePKPDF   PKPdf    00 49 31.4 -0.1
KHC                                  AMS      AMS      01 49 00.0
      comp=Z,3µm,22.0s
KHC   Kasperske Hory     135.86 333 ePKHKP   PKPpre   00 49 23.3
KHC                                 e                 00 49 31.4
KHC                                  MLR      MLR
      comp=Z,3µm,22.0s
VAY   Valandovo          135.89 319  P        PKiKP    00 49 32.6 -0.8
VAY   Valandovo          135.89 319  P        PKiKP    00 49 32.6 -0.8
VAY   Valandovo          135.89 319 i P      PKPdf    00 49 32.4 +0.6
HORT  Hortiatis          135.91 318  P        PKiKP    00 49 32.6 -1.0
HORT  Hortiatis          135.91 318  P        PKiKP    00 49 32.6 -1.0
GERES GERESS Array B     136.02 333  PKP      PKiKP    00 49 32.7 -0.9
      comp=Z,14nm,1.1s,baz=48,slow=2.0,SNR=29
GRG   Griva              136.19 318  P        PKPdf    00 49 32.3 -0.1
GRG   Griva              136.19 318  P        PKPdf    00 49 32.3 -0.1
BEHE  Becsehely          136.21 328 ePKiKP   PKPdf    00 49 31.0 -1.1
SKO   Skopje             136.27 320  P        PKiKP    00 49 33.3 -0.8
SKO   Skopje             136.27 320  P        PKiKP    00 49 33.3 -0.8
SKO   Skopje             136.27 320 i P      PKiKP    00 49 33.2 -1.0
ARSA  Arzberg            136.31 330 i PKiKP  PKiKP    00 49 33.4 -0.7
      comp=Z,9.6nm,1.4s
ARSA                                i PP     PP       00 52 15.6 +3.1
      comp=Z,9.5nm,1.3s
NEO   Neokhori           136.46 316  P        PKPdf    00 49 33.3 +0.4
NEO   Neokhori           136.46 316  P        PKPdf    00 49 33.3 +0.4
BBGH  Gun Hill           136.48  83  PFAKE             00 49 50.0  +15
BBGH                                 LR       LR
      comp=Z,4µm,21.0s
MOA   Molln              136.49 331 i PKiKP  PKiKP    00 49 34.3 -0.1
      comp=Z,21nm,1.5s
MOA                                 i PP     PP       00 52 13.9 +0.3
      comp=Z,9.7nm,1.4s
LIT   Litokhoron         136.56 317  P        PKPdf    00 49 33.6 +0.5
LIT   Litokhoron         136.56 317  P        PKPdf    00 49 33.6 +0.5
KRUS  Krusevo            136.72 320 i P      PKPdf    00 49 33.9 +0.5
BIA   Bitola             136.85 319 i P      PKiKP    00 49 34.6 -0.8
LKR   Lokris             136.92 315  P        PKPdf    00 49 33.1 -0.6
LKR   Lokris             136.92 315  P        PKPdf    00 49 33.1 -0.6
VILL  Villia             136.93 314  P        PKiKP    00 49 34.6 -1.1
PERS  Pernice            136.94 330 ePKPdf   PKiKP    00 49 34.6 -0.8
SOKA  Soboth             136.95 330 i PKPdf  PKPdf    00 49 34.2 +0.5
      comp=Z,40nm,1.3s,SNR=7.3
SOKA                                 PP       PP       00 52 12.9 -3.7
      comp=Z,32nm,1.7s
PHP   Peshkopia          137.05 320  P        PKPdf    00 49 34.6 +0.6
PHP   Peshkopia          137.05 320  P        PKPdf    00 49 34.6 +0.6
OHR   Ohrid              137.14 320 i P      PKPdf    00 49 34.5 +0.4
PROD  Prodromos          137.17 315  P        PKPdf    00 49 34.9 +0.7
LOUT  Loutraki           137.25 314  P        PKPdf    00 49 35.1 +0.7
OBKA  Obir               137.31 330 i PKPdf  PKPdf    00 49 34.8 +0.4
      comp=Z,19nm,1.1s
OBKA                                ePP      PP       00 52 19.8 +1.0
      comp=Z,25nm,1.5s
NEST  Nestorio           137.35 318  P        PKiKP    00 49 35.4 -1.1
DSF   Desfina            137.36 315  P        PKPdf    00 49 35.3 +0.7
DSF   Desfina            137.36 315  P        PKPdf    00 49 35.3 +0.7
KPRO  Kipourio           137.38 318  P        PKiKP    00 49 35.9 -0.7
BDFB  Brasilia           137.44 129  PKhKP    PKPpre   00 49 24.8
      comp=Z,4.2nm,1.0s,baz=246,slow=5.4,SNR=3.8
BDFB                                 PKP      PKiKP    00 49 36.3 -1.1
      comp=Z,24nm,0.9s,baz=350,slow=1.7,SNR=18
VAM   Vamos              137.47 310  P        PKiKP    00 49 37.2 +0.4
VAM   Vamos              137.47 310  P        PKiKP    00 49 37.2 +0.4
KBA   Koelnbreinsper     137.48 331 i PKPdf  PKPdf    00 49 34.8  0.0
      comp=Z,26nm,1.4s
KBA                                 i PP     PP       00 52 19.4 -0.6
      comp=Z,17nm,1.2s
BEBN  Eben Emael         137.56 341 ⇑PP      PP       00 52 22.8 +2.9
MEM   Membach            137.62 340 ⇓PKiKP   PKiKP    00 49 35.7 -0.9
MEM                                 ⇑PP      PP       00 52 21.6 +1.3
LJU   Ljubljana          137.64 329 ePKPdf   PKPdf    00 49 34.8 -0.1
MYKA  Terra Mystica      137.66 331 i PKPdf  PKPdf    00 49 34.7 -0.3
      comp=Z,19nm,1.1s
ANX   Ano Chora          137.69 316  P        PKiKP    00 49 37.7 +0.4
TRIZ  Trizonia           137.70 315  P        PKiKP    00 49 36.4 -0.7
GUR   Goura              137.71 315  P        PKiKP    00 49 36.6 -0.7
GUR   Goura              137.71 315  P        PKiKP    00 49 36.6 -0.7
EFP   Efpalio            137.78 315  P        PKiKP    00 49 36.6 -0.7
KLV   Kalavryta, Ach     137.80 315  P        PKPdf    00 49 36.1 +0.6
KLV   Kalavryta, Ach     137.80 315  P        PKPdf    00 49 36.1 +0.6
CADS  Cadrg              137.90 330 ePKPdf   PKPdf    00 49 35.9 +0.5
UCC   Uccle              137.98 342 ⇑PP      PP       00 52 24.8 +2.3
WATA  Walderalm          138.10 333 i PKPdf  PKPdf    00 49 34.8 -1.1
      comp=Z,12nm,1.0s
WATA                                i PP     PP       00 52 25.2 +1.5
      comp=Z,18nm,1.3s
ABTA  Abfaltersbach      138.11 332 i PKPdf  PKPdf    00 49 35.5 -0.3
      comp=Z,43nm,1.2s
ABTA                                i PP     PP       00 52 22.0 -1.8
      comp=Z,26nm,1.8s
SNF   Seneffe            138.25 342 ⇓PKiKP   PKiKP    00 49 38.9 +1.1
MOTA  Moosalm            138.30 333 i PKPdf  PKPdf    00 49 35.5 -0.7
      comp=Z,26nm,1.0s
MOTA                                i PP     PP       00 52 25.5 +0.5
      comp=Z,4.8nm,0.9s
RETA  Reutte             138.34 334 i PKPdf  PKPdf    00 49 36.3 +0.1
      comp=Z,24nm,1.3s
SQTA  Sankt Quirin       138.35 333 i PKiKP  PKiKP    00 49 37.3 -1.0
      comp=Z,38nm,1.2s,SNR=6.3
SQTA                                i PP     PP       00 52 26.4 +1.1
      comp=Z,17nm,1.2s
WLF   Walferdange        138.37 339 ⇑PKiKP   PKiKP    00 49 37.9 -0.2
WLF                                 ⇑PP      PP       00 52 29.0 +4.0
DOU   Dourbes            138.52 341 ⇑PKiKP   PKPdf    00 49 36.8 +0.5
DOU                                 ⇑PP      PP       00 52 28.0 +2.2
BFO   Black Forest       138.68 336  PFAKE             00 49 50.0  +11
BFO                                  LR       LR
      comp=Z,91nm,20.0s
FETA  Feichten           138.71 333 i PKiKP  PKiKP    00 49 38.2 -1.0
      comp=Z,53nm,1.1s
FETA                                i PP     PP       00 52 27.3 -0.3
      comp=Z,18nm,1.5s
DAVA  Damuels            138.87 334 i PKPdf  PKPdf    00 49 37.9 +0.6
      comp=Z,30nm,1.1s
DAVA                                i PP     PP       00 52 27.2 -1.3
      comp=Z,27nm,1.5s
TIP   Timpagrande        140.79 320  P        PKiKP    00 49 43.5  0.0
TIP   Timpagrande        140.79 320  P        PKiKP    00 49 43.5  0.0
KEST  Kesra              147.54 321  PKPbc    PKPbc    00 49 55.0 -0.4
      comp=Z,156nm,1.0s,baz=352,slow=1.2,SNR=45
CMAH  Djebel Manchou     148.07 325  P        PKPdf    00 49 54.3 +0.7
CAEH  'Ain El Ouahch     148.28 325  P        PKPdf    00 49 54.7 +0.8
ABSA  Djebel Ababsia     148.28 324  P        PKPdf    00 49 54.9 +0.9
H07N1 FLORES T-PHASE148.71  24 ePKP     PKPbc    00 49 58.5 +0.2
CASM  Ain Smara          148.85 325  P        PKPdf    00 49 55.1 +0.2
H07S1 FLORES T-PHASE148.94  25 ePKP     PKiKP    00 49 59.8 -0.4
DFRA  Djebel Bou Aff     148.98 326  P        PKPbc    00 49 59.6 +0.4
CTEI  Djebel Teioual     149.04 325  P        PKiKP    00 50 00.2 -0.5
PBRG  Braganca           149.21 348 ePKPdf   PKPbc    00 49 59.8 +0.3
PGAV  Gavieira, Arco     149.34 350 ePKPdf   PKPbc    00 50 00.0 +0.1
PGAV  Gavieira, Arco     149.34 350 ePKPab   PKPab    00 50 06.3 +1.8
PGAV  Gavieira, Arco     149.34 350 eLR      LR       01 49 16.6
      comp=Z,4µm,20.0s
SET   Setif              149.50 326  P        PKPdf    00 49 55.0 -1.0
PCAB  Cabril             149.55 350 ePKPdf   PKPab    00 50 03.9 -1.3
POLO  Lamas de Olo       149.83 349 ePKPbc   PKiKP    00 50 02.2 +0.1
POLO  Lamas de Olo       149.83 349 ePKPab   PKPab    00 50 08.3 +1.8
MVO   Moncorvo           149.89 348 ePKPdf   PKiKP    00 50 02.4 +0.2
MVO   Moncorvo           149.89 348 eLR      LR       01 49 47.9
      comp=Z,4µm,20.0s
PVRL  Vila Real          149.91 349 ePKPdf   PKiKP    00 50 02.2  0.0
PTO   Porto              150.20 350 ePKPdf   PKiKP    00 50 03.3 +0.6
SRBC  Serra Branca       150.45  21 ePKP     PKPbc    00 50 02.5 -0.1
PGRA  Graciosa           150.47  21 ePKP     PKPbc    00 50 02.8 +0.2
PVIS  Viseu              150.49 349 ePKPdf   PKiKP    00 50 03.5 +0.1
ESDC  Sonseca Array      150.53 343  PKPbc    PKPbc    00 50 02.0 -0.8
      comp=Z,41nm,1.0s,baz=17,slow=2.6,SNR=29
ESDC                                 PP       PP       00 53 37.4 -0.3
      comp=Z,8.3nm,1.1s,baz=29,slow=6.0,SNR=5.9
PCED  Cedros             150.57  22 ePKP     PKiKP    00 50 03.8 +0.2
ROSA  Rosais             150.66  22 ePKP     PKPdf    00 50 00.1 +2.5
MTE   Manteigas          150.73 348 ePKPdf   PKiKP    00 50 04.4 +0.5
MTE   Manteigas          150.73 348 eLR      LR       01 48 34.5
      comp=Z,4µm,20.0s
PAB   San Pablo          150.76 343 ePKPdf   PKPdf    00 49 58.6 +0.7
PAB                                 ePKPbc   PKPbc    00 50 03.2 -0.2
PAB                                  LR       LR
      comp=Z,3µm,20.0s
PAB   San Pablo          150.76 343  PKIKP    PKPdf    00 49 58.6 +0.7
PAB                                 eP       PKPbc    00 50 03.2 -0.2
PICO  Pico               150.79  22 ePKP     PKPbc    00 50 02.8 -0.7
PMAN  Manadas            150.79  21 ePKP     PKiKP    00 50 05.3 +1.3
PCAN  Candelaria         150.80  22 ePKP     PKPbc    00 50 02.5 -0.9
SHEL  Horse Pasture      150.99 199 ePKPdf   PKPdf    00 49 59.7 +0.9
SHEL                                ePKPbc   PKiKP    00 50 06.4 +1.3
SHEL                                 LR       LR
      comp=Z,2µm,19.0s
SHEL  Horse Pasture      150.99 199 ePKIKP   PKPdf    00 49 59.7 +0.9
ADH   Angra Heroismo     151.07  20 ePKP     PKiKP    00 50 05.0 +0.4
PCAS  Casmilo, Conde     151.24 350 ePKPdf   PKPdf    00 49 59.4 +0.9
PCBR  Castelo Branco     151.25 348 ePKPdf   PKPdf    00 49 59.6 +1.1
PCBR  Castelo Branco     151.25 348 ePKPab   PKiKP    00 50 05.8 +0.9
SESP  Santiago Espad     151.49 339  P        PKiKP    00 50 06.6 +0.9
PMRV  Marv??o            151.63 348 ePKPdf   PKiKP    00 50 06.3 +0.5
PMRV  Marv??o            151.63 348 eLR      LR       01 49 37.6
      comp=Z,3µm,18.0s
PTOM  Tomar              151.65 349 ePKPab   PKiKP    00 50 06.8 +1.0
EANR  'Ain N'Sour        151.87 332  P        PKiKP    00 50 07.0 +0.6
PMTG  Montargil          152.15 349 ePKPdf   PKiKP    00 50 07.3 +0.5
PESTR Estremoz           152.21 348 ePKPdf   PKPbc    00 50 04.9 -1.8
ETRT  Tiaret             152.23 331  P        PKiKP    00 50 08.5 +1.2
PSET  Sete Cidades       152.31  19 ePKP     PKPbc    00 50 03.8 -3.2
PCALD Caldeiras da R     152.41  18 ePKP     PKPbc    00 50 03.8 -3.3
GRON  Grota Negra        152.42  18 ePKP     PKPbc    00 50 05.0 -2.2
CMLA  Cha da Macela      152.43  18 ePKP     PKiKP    00 50 07.5  0.0
CMLA  Cha da Macela      152.43  18  PFAKE             00 50 10.0 +2.5
CMLA                                 LR       LR
      comp=Z,5µm,21.0s
BART  Pico Bartolome     152.53  18 ePKP     PKPbc    00 50 05.3 -2.2
HORN  Hornachuelos       152.60 343  P        PKiKP    00 50 08.6 +0.8
LIS   Lisbon             152.66 350 ePKPdf   PKPdf    00 50 00.5 -0.1
LIS                                  AMS      AMS      02 00 39.3
      comp=Z,3µm,28.2s
LIS   Lisbon             152.66 350 ePKIKP   PKPdf    00 50 00.5 -0.1
PBEJ  Beja               153.08 348 ePKPdf   PKPdf    00 50 03.2 +1.9
PNCL  Nicolau / Gran     153.13 349 ePKPdf   PKPbc    00 50 06.1 -2.6
PSMA  Santa Maria        153.26  18 ePKP     PKPdf    00 50 02.8 +1.3
PSMN  Pico do Norte,     153.27  18 ePKP     PKPdf    00 50 03.5 +1.9
MESJ  Messejana          153.33 348 ePKPdf   PKPdf    00 50 01.5 -0.2
MESJ                                 AMS      AMS      02 01 52.2
      comp=Z,3µm,21.3s
MESJ  Messejana          153.33 348 ePKPdf   PKPdf    00 50 03.7 +2.1
MESJ  Messejana          153.33 348 ePKIKP   PKPdf    00 50 01.4 -0.2
PVAQ  Vaqueiros          153.65 347 eLR      LR       01 49 58.6
      comp=Z,4µm,20.0s
PBDV  Barranco-do-Ve     153.85 347 ePKPdf   PKPdf    00 50 03.7 +1.3
MORF  Marmelete          153.93 348 ePKPdf   PKPdf    00 50 02.0 -0.6
MORF                                 AMS      AMS      02 03 00.3
      comp=Z,4µm,26.7s
MORF  Marmelete          153.93 348 ePKPdf   PKPdf    00 50 05.3 +2.7
MORF  Marmelete          153.93 348 ePKIKP   PKPdf    00 50 01.9 -0.6
LCRM  LCR                156.29 339  P        PKPdf    00 50 08.0 +1.9
MDT   Midelt             156.98 337  P        PKPdf    00 50 08.4 +1.5
ZHG   ZHG                157.10 342  P        PKPdf    00 50 09.0 +2.0
PMOZ  Porto Moniz, M     158.93   5 eLR      LR       01 50 04.9
      comp=Z,3µm,20.0s
PMAR  Madeira            159.06   5 ePKPdf   PKPdf    00 50 07.8 -1.7
```

TOA0	**Torodi Ar. Sit**	**163.67**	**277**	P	**PKPdf**	**00 50 14.9**	**+0.3**
	SNR=25						
TORD	**Torodi Ar. Bea**	**163.67**	**277**	PKP	**PKPdf**	**00 50 12.7**	**-1.9**
	comp=Z,31nm,1.1s,baz=132,slow=2.2,SNR=88						
TORD				PKPab	**PKPab**	**00 51 06.1**	**-0.5**
	comp=Z,28nm,1.1s,baz=16,slow=4.8,SNR=14						
KIC	**Kosan Boka**	**168.57**	**243**	*e*PKIKP	**PKPdf**	**00 50 17.4**	**-1.2**
	comp=Z,244nm,1.6s						
LIC	**Lamto**	**168.75**	**242**	*e*PKIKP	**PKPdf**	**00 50 17.8**	**-0.9**
	comp=Z,150nm,1.6s						
DBIC	**Dimbokro**	**168.81**	**244**	PKP	**PKPdf**	**00 50 17.6**	**-1.1**
	comp=Z,23nm,1.1s,baz=94,slow=0.7,SNR=12						
DBIC				PKPab	**PKPab**	**00 51 29.5**	**+0.2**
	comp=Z,22nm,1.1s,baz=118,slow=5.7,SNR=6.9						
TIC	**Toumodi**	**168.94**	**244**	*e*PKIKP	**PKPdf**	**00 50 18.1**	**-0.7**
SACV	**Santiago Islan**	**171.01**	**68**	PFAKE		00 50 30.0	+10
SACV				LR	LR		
	comp=Z,2µm,21.0s						

MEX 07 00:32:16.8±0.6, 15°.90N×97°.28W, h12^{km}±4^{km}, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.95**	**301**	*e*P	Pg	00 32 32.3	-2.9
PNIG				*e*S	Sg	00 32 44.3	-3.3
HUIG	**Huatulco**	**1.13**	**96**	*e*P	Pb	00 32 34.6	-3.7
HUIG				*e*S	Sb	00 32 49.1	-4.0
VHO	**Vista Hermosa**	**1.28**	**24**	*e*P	Pn	00 32 37.4	-3.3
VHO				*i* S	Sb	00 32 53.0	-4.5

ISCJB ***07*** *00:32:30.0±0.3, 10°.77S±0°.04×164°.72E±0°.05, h10^{km}, mb4.9/26, Error ellipse: s-maj=7.7km s-min=6.2km az=165.3*

IDC ***07*** *00:32:30.1±0.7, 10°.84S×164°.71E, h0^{km}, mb4.9/22, mb1 5.0/24, mb1mx4.8/46, mbtmp4.9/24, ML4.5/2, Error ellipse: s-maj=20.7km s-min=14.8km az=115.0*

NEIC ***07*** *00:32:32.9±3.2, 10°.73S×164°.70E, h17^{km}±20^{km}, mb4.9/7, Error ellipse: s-maj=9.3km s-min=7.3km az=111.0*

ISC 07 00:32:31.9±0.5, 10°.73S±0°.07×164°.77E±0°.06, h10^{km}, n66, σ1^{s}.33/66, mb4.9/26, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.92**	**285**	*i* P	**Pn**	**00 33 47.0**	**+1.1**
HNR				*i* S	**Sn**	**00 34 46.0**	**+3.1**
HNR	**Honiara**	**4.92**	**285**	*e*Pn	**Pn**	**00 33 47.3**	**+1.4**
HNR				*e*Sn	**Sn**	**00 34 43.3**	**+0.4**
HNR	**Honiara**	**4.92**	**285**	Pn	**Pn**	**00 33 44.4**	**-1.5**
	8.1nm,0.3s,baz=177,slow=18,SNR=1.0						
HNR				Sn	**Sn**	**00 34 44.8**	**+1.8**
	151nm,0.3s,baz=24,slow=19,SNR=3.7						
MARNC	**Mare, Loyalty**	**11.14**	**164**	*e*Pn	**Pn**	**00 35 11.7**	**+0.4**
DZM	**Mont Dzumac**	**11.39**	**172**	*e*Pn	**Pn**	**00 35 15.3**	**+0.5**
DZM	**Mont Dzumac**	**11.39**	**172**	Pn	**Pn**	**00 35 14.6**	**-0.2**
	6.3nm,0.3s,baz=313,slow=16,SNR=6.5						
ONTNC	**Ouen Toro**	**11.63**	**172**	*e*Pn	**Pn**	**00 35 18.8**	**+0.8**
PINNC	**Pines Island,**	**12.09**	**168**	*e*Pn	**Pn**	**00 35 25.4**	**+1.0**
FUNA	**Funafuti**	**14.39**	**83**	*e*Pn	**Pn**	**00 35 56.6**	**+0.7**
TARA	**Tarawa**	**14.49**	**35**	*e*Pn	**Pn**	**00 35 57.0**	**-0.2**
PATS	**Pohnpei**	**18.59**	**340**	*e*P	**P**	**00 36 48.6**	**-0.8**
	100nm,1.1s						
KWAJ	**Kwajalein Atol**	**19.61**	**8**	*e*P	**P**	**00 36 58.3**	**-2.2**
CTA	**Charters Tower**	**20.11**	**240**	P	**P**	**00 37 05.5**	**-0.5**
	51nm,0.9s,baz=71,slow=13,SNR=6.6						
CTAO	**Charters Tower**	**20.11**	**240**	*e*P	**P**	**00 37 05.3**	**-0.8**
	76nm,1.0s						
ARMA	**Armidale**	**23.09**	**210**	*e*P	**P**	**00 37 37.8**	**-0.2**
	41nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**29.10**	**4**	T	T	01 08 46.6	
	baz=186						
H11S3	**WAKE ISLAND Hy**	**29.10**	**4**	T	T	01 08 49.9	
	baz=186						
H11S1	**WAKE ISLAND Hy**	**29.11**	**4**	T	T	01 08 50.3	
	baz=186						
STKA	**Stephens Creek**	**30.02**	**222**	*e*P	**P**	**00 38 40.8**	**-0.2**
	0.6nm,0.6s						
STKA	**Stephens Creek**	**30.02**	**222**	P	**P**	**00 38 40.8**	**-0.2**
	29nm,0.9s,baz=34,slow=10,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**30.32**	**4**	T	T	01 10 20.5	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**30.33**	**4**	T	T	01 10 22.9	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.34**	**4**	T	T	01 10 22.3	
	baz=182						
WR1	**Warramunga Arr**	**30.69**	**249**	*e*P	**P**	**00 38 44.3**	**-2.9**
	18nm,1.0s						
WR1				*e*PcP	**PcP**	**00 41 44.9**	**-0.3**
WRA	**Warramunga Arr**	**30.69**	**249**	P	**P**	**00 38 44.3**	**-2.9**
	8.2nm,0.9s,baz=80,slow=9.3,SNR=3.4						
WRA				PcP	**PcP**	**00 41 44.9**	**-0.3**
	3.9nm,1.0s,baz=84,slow=4.6,SNR=3.9						
ASAR	**Alice Springs**	**32.08**	**242**	P	**P**	**00 38 56.4**	**-3.0**
	3.3nm,0.6s,baz=64,slow=10.0,SNR=4.2						
ASAR				PcP	**PcP**	**00 41 48.7**	**-0.2**
	2.7nm,0.8s,baz=73,slow=3.2,SNR=3.8						
MTN	**Manton Dam**	**32.98**	**263**	*e*P	**P**	**00 39 06.2**	**-1.1**
	25nm,1.0s						
LBZ	**Lake Benmore**	**33.86**	**173**	*e*P	**P**	**00 39 15.9**	**+1.3**
FITZ	**Fitzroy Crossi**	**38.53**	**254**	P	**P**	**00 39 52.1**	**-2.8**
	28nm,1.0s,baz=91,slow=9.3,SNR=3.4						
MJAR	**Matsushiro Arr**	**53.25**	**333**	P	**P**	**00 41 50.1**	**-0.7**
	6.4nm,0.9s,baz=173,slow=8.8,SNR=5.5						
MAJO	**Matsushiro**	**53.26**	**333**	*e*P	**P**	**00 41 50.1**	**-0.7**
JNU	**Nakatsue**	**54.27**	**325**	P	**P**	**00 41 59.0**	**+0.7**
	18nm,0.8s,baz=94,slow=4.7,SNR=4.1						
ASAJ	**Asahikawa**	**58.18**	**341**	P	**P**	**00 42 26.6**	**+0.6**
	17nm,0.9s,baz=225,slow=11,SNR=5.6						
KSRS	**Korea Array**	**59.08**	**326**	P	**P**	**00 42 33.3**	**+0.9**
	7.1nm,1.0s,baz=131,slow=7.5,SNR=5.2						
KS15	**Wonju Array Si**	**59.09**	**326**	*e*P	**P**	**00 42 31.7**	**-0.8**
KSAR	**Wonju Array Be**	**59.09**	**326**	P	**P**	**00 42 33.3**	**+0.7**
USRK	**Ussuriysk Ar.**	**62.24**	**334**	P	**P**	**00 42 54.4**	**+0.5**
	9.0nm,1.0s,baz=131,slow=7.9,SNR=3.9						
PETK	**Petropavlovsk-**	**63.87**	**355**	P	**P**	**00 43 06.6**	**+2.1**
	4.1nm,0.7s,baz=183,slow=8.4,SNR=3.1						
PEA1	**Petropavlovsk-**	**63.88**	**355**	*e*P	**P**	**00 43 06.6**	**+2.1**
KLR	**Kul'dur**	**66.39**	**337**	P	**P**	**00 43 21.4**	**+0.5**
	10.0nm,1.1s,baz=161,slow=5.3,SNR=4.2						
VNDA	**Vanda**	**66.79**	**181**	P	**P**	**00 43 23.7**	**+0.5**
	22nm,1.1s,baz=5.9,slow=9.4,SNR=3.6						
CM01	**Chiang Mai Arr**	**71.08**	**294**	*e*P	**P**	**00 43 51.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**71.11**	**294**	P	**P**	**00 43 51.6**	**+0.5**
	12nm,1.0s,baz=118,slow=4.4,SNR=7.1						
SONA0	**Songino Array**	**77.85**	**324**	*e*P	**P**	**00 44 30.9**	**+1.1**
SONM	**Songino Array**	**77.85**	**324**	P	**P**	**00 44 30.9**	**+1.1**
	9.0nm,1.0s,baz=169,slow=3.3,SNR=4.0						
BRDH	**Bariadhala**	**78.90**	**296**	P	**P**	**00 44 37.5**	**+1.6**
	53nm,0.3s,baz=135,slow=5.7,SNR=3.1						
TLY	**Talaya**	**81.33**	**327**	*e*P	**P**	**00 44 47.0**	**-1.6**
	24nm,1.1s						
ILAR	**Eielson Array**	**83.52**	**19**	P	**P**	**00 44 58.9**	**-0.8**
	3.4nm,0.9s,baz=221,slow=5.5,SNR=6.3						
ILB	**Eielson Array**	**83.52**	**19**	*e*P	**P**	**00 44 58.9**	**-0.8**
	6.7nm,1.0s						
IL1	**Eielson Array**	**83.52**	**19**	*e*P	**P**	**00 44 59.6**	**-0.1**
TIXI	**Tiksi**	**85.60**	**349**	P	**P**	**00 45 10.5**	**+0.4**
	14nm,0.3s,baz=127,slow=13,SNR=23						
NV01	**Mina Array Sit**	**86.56**	**50**	*e*P	**P**	**00 45 16.1**	**+0.2**
NVAR	**Mina Array Bea**	**86.56**	**50**	P	**P**	**00 45 16.0**	**+0.2**
	6.2nm,1.0s,baz=248,slow=7.4,SNR=4.4						
MK01	**Makanchi Array**	**92.62**	**317**	*e*P	**P**	**00 45 43.8**	**-0.1**
MK32	**Makanchi Array**	**92.64**	**317**	*e*P	**P**	**00 45 44.0**	**0.0**
MKAR	**Makanchi Array**	**92.64**	**317**	P	**P**	**00 45 44.0**	**0.0**
	14nm,0.8s,baz=101,slow=6.3,SNR=13						
ZAA1	**Zalesovo Array**	**92.74**	**324**	*e*P	**P**	**00 45 43.5**	**-0.8**
ZALV	**Zalesovo Beam**	**92.74**	**324**	*e*P	**P**	**00 45 43.1**	**-1.2**
ZALV	**Zalesovo Beam**	**92.74**	**324**	P	**P**	**00 45 43.5**	**-0.8**
	9.8nm,1.0s,baz=121,slow=5.0,SNR=7.5						
PDAR	**Pinedale Array**	**94.05**	**47**	P	**P**	**00 45 49.6**	**-1.2**
	1.6nm,0.9s,baz=229,slow=5.5,SNR=4.2						
NRIK	**Noril'sk**	**95.49**	**340**	P	**P**	**00 45 55.0**	**-1.6**
	4.4nm,0.8s,baz=99,slow=5.2,SNR=4.7						
MLR	**Muntele Rosu**	**130.68**	**322**	*e*PKPdf	**PKPdf**	**00 51 43.9**	**+0.3**
GEC2	**GERESS Array S**	**134.99**	**333**	*e*PKPdf	**PKPdf**	**00 51 49.0**	**-2.6**
GERES	**GERESS Array B**	**134.99**	**333**	PKP	**PKPdf**	**00 51 50.9**	**-0.7**
	0.8nm,0.8s,baz=4.1,slow=4.1,SNR=4.2						
KEST	**Kesra**	**146.58**	**322**	PKPbc	**PKPbc**	**00 52 14.9**	**+0.6**
	24nm,1.0s,baz=139,slow=9.3,SNR=3.8						
ESDC	**Sonseca Array**	**149.48**	**343**	PKPbc	**PKPdf**	**00 52 20.6**	**+3.1**
	1.6nm,0.9s,baz=49,slow=1.7,SNR=2.2						

MOS ***07*** *00:41:30.7±1.1, 1°.42N×98°.91E, h93^{km}, mb5.0/41, Error ellipse: s-maj=10.4km s-min=5.2km az=112.3*

IDC ***07*** *00:41:31.5±0.4, 1°.36N×98°.92E, h86^{km}±2^{km}, mb4.5/30, mb1 4.5/33, mb1mx4.5/45, mbtmp4.8/33, Error ellipse: s-maj=11.0km s-min=6.2km az=81.0*

ISCJB ***07*** *00:41:32.0±0.3, 1°.41N±0°.03×98°.90E±0°.03, h104^{km}±2^{km}, mb4.8/97, Error ellipse: s-maj=5.8km s-min=3.7km az=152.7*

NEIC ***07*** *00:41:32.6±0.5, 1°.36N×98°.95E, h96^{km}±4^{km}, mb5.0/38, Error ellipse: s-maj=6.2km s-min=3.6km az=56.0*

NEIC Felt [II] at Padangsidempuan.

DJA ***07*** *00:41:34.0±0.4, 1°N±2°×9°9E±°, h79^{km}±9^{km}, M5.4/12, mb5.7/2, MLv5.2/12*

ISC 07 00:41:31.5±0.3, 1°.41N±0°.03×98°.91E±0°.04, h86^{km}±2^{km}, h86^{km}:pP-P, n437, σ1^{s}.36/466, mb4.9/103, 27C-12D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	**Mandailing Nat**	**0.90**	**132**	P	**Pn**	**00 41 53.1**	**+3.2**
GSI	**Gunungsitoli**	**1.34**	**266**	*e*Pn	**Pn**	**00 41 56.4**	**+1.3**
GSI				*e*Sn	**Sn**	**00 42 08.7**	**-4.2**
GSI	**Gunungsitoli**	**1.34**	**266**	P	**Pn**	**00 41 56.9**	**+1.8**
GSI				S	**Sn**	**00 42 13.3**	**+0.4**
PSI	**Prapat**	**1.39**	**1**	P	**Pn**	**00 41 56.4**	**+0.6**
	221nm,0.3s,baz=180,slow=5.4,SNR=613						
PSI				S	**Sn**	**00 42 12.9**	**-1.2**
	258nm,0.3s,baz=180,slow=9.6,SNR=24						
PBSI	**Pulau Batu**	**1.58**	**204**	P	**Pn**	**00 42 00.5**	**+2.3**
PBSI				S	**Sn**	**00 42 20.8**	**+2.5**
TSI	**Tuntungan**	**2.11**	**351**	P	**Pn**	**00 42 07.5**	**+2.4**
TSI				S	**Sn**	**00 42 32.4**	**+1.7**
PPI	**Padang Panjang**	**2.37**	**141**	P	**Pn**	**00 42 12.6**	**+4.0**
BKNI	**Bangkinang**	**2.38**	**117**	*e*Pn	**Pn**	**00 42 11.0**	**+2.3**
BKNI				*e*Sn	Sn	00 42 28.4	-8.8
BKNI	**Bangkinang**	**2.38**	**117**	P	**Pn**	**00 42 10.9**	**+2.2**
KCSI	**Kotacane, Aceh**	**2.39**	**332**	P	**Pn**	**00 42 09.8**	**+0.9**
SISI	**Saibi**	**2.72**	**176**	P	**Pn**	**00 42 14.5**	**+1.3**
SNSI	**Sinabang, Aceh**	**2.77**	**291**	P	**Pn**	**00 42 14.9**	**+1.0**
SNSI				S	**Sn**	**00 42 44.6**	**-1.9**
PDSI	**Padang**	**2.77**	**146**	P	**Pn**	**00 42 17.5**	**+3.5**
RGRI	**Rengat**	**3.84**	**117**	P	**Pn**	**00 42 32.2**	**+3.8**
LHMI	**Lhok Sumawe**	**4.28**	**333**	*e*Pn	**Pn**	**00 42 34.8**	**+0.5**
LHMI				*e*Sn	Sn	00 43 06.6	-16
LHMI	**Lhok Sumawe**	**4.28**	**333**	P	**Pn**	**00 42 35.0**	**+0.7**
PPSI	**Pulau Pagai**	**4.28**	**165**	P	**Pn**	**00 42 35.7**	**+1.3**
KRJI	**Kerinci**	**4.31**	**144**	P	**Pn**	**00 42 38.9**	**+4.0**
BSI	**Banda Aceh**	**5.43**	**318**	P	**Pn**	**00 42 49.9**	**-0.2**
MASI	**Maura Aman, Be**	**5.61**	**144**	P	**Pn**	**00 42 56.3**	**+3.8**
JMBI	**JAMBI**	**5.61**	**123**	P	**Pn**	**00 42 56.4**	**+3.9**
SKLT	**Songkhla**	**5.97**	**17**	P	Pn	00 43 03.0	+5.5
	151nm,1.2s,0.6nm						
TRTT	**Trang**	**6.44**	**7**	P	Pn	00 43 08.8	+5.0
	92nm,0.8s,0.3nm						
PKDT	**Phuket**	**6.47**	**355**	P	**Pn**	**00 43 06.1**	**+1.9**
	33nm,0.8s,0.2nm						
MNAI	**Manna**	**7.01**	**145**	*e*Pn	**Pn**	**00 43 12.5**	**+0.9**
MNAI				*e*Sn	**Sn**	**00 44 26.2**	**-3.6**
PBA	**Port Blair**	**11.88**	**329**	*e*Pn	Pn	00 44 14.8	-3.2
LEM	**Lembang**	**11.93**	**133**	P	**Pn**	**00 44 18.8**	**0.0**
	3.0nm,0.3s,baz=323,slow=20,SNR=2.1						
CISI	**Cisompet, Garu**	**12.57**	**135**	*e*Pn	**Pn**	**00 44 26.2**	**-1.2**
SRAK	**Srakaew**	**12.90**	**14**	P	P	00 44 45.1	+6.1
UTHA	**Uthaitani**	**14.07**	**2**	P	**P**	**00 44 54.2**	**+2.2**
	16nm,0.9s,121nm						
UGM	**Wanagama**	**14.82**	**129**	*e*Pn	**Pn**	**00 44 55.6**	**-1.2**
PBKT	**Sadao Pong**	**15.21**	**8**	*e*P	**P**	**00 45 05.5**	**+0.9**
	32nm,0.8s						
PBKT	**Sadao Pong**	**15.21**	**8**	P	**P**	**00 45 07.1**	**+2.5**
	47nm,0.8s						
SUKH	**Sukhothai**	**15.99**	**2**	P	**P**	**00 45 15.3**	**+2.0**
	15nm,0.8s						
UTTA	**Uttaradit**	**16.32**	**6**	P	**P**	**00 45 19.7**	**+2.8**
	12nm,0.9s,86nm						
CM01	**Chiang Mai Arr**	**16.91**	**0**	*e*Pn	**P**	**00 45 24.4**	**+0.8**
CM31	**Chiang Mai Arr**	**16.95**	**0**	*e*Pn	**P**	**00 45 24.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**16.95**	**0**	P	**P**	**00 45 25.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**16.95**	**0**	P	**P**	**00 45 24.9**	**+1.1**
	2.7nm,0.3s,baz=192,slow=11,SNR=39						
CMAR				ScP	**ScP**	**00 53 32.5**	**0.0**
	0.8nm,0.3s,baz=224,slow=3.2,SNR=6.8						
PALK	**Pallekele**	**19.06**	**288**	*e*P	**Pn**	**00 45 49.7**	**+0.7**
	108nm,1.4s						
PALK				S	S	00 49 06.9	-12
PALK	**Pallekele**	**19.06**	**288**	P	**Pn**	**00 45 49.3**	**+0.3**
PALK				S	S	00 49 06.9	-12
PALK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PALK				smax	smax		
	comp=N,2.0nm,0.3s						
PALK	**Pallekele**	**19.06**	**288**	P	**Pn**	**00 45 49.3**	**+0.3**
	comp=N,2.3nm,0.3s,baz=116,slow=9.2,SNR=10						
PALK				S	S	00 49 06.9	-12
	comp=N,2.3nm,0.3s,baz=113,slow=7.9,SNR=7.8						
KMI	**Kunming**	**23.87**	**9**	P	**P**	**00 46 39.0**	**+1.6**
KMI				pP	pP	00 46 59.3	+2.6
KMI				sP	sP	00 47 06.9	-0.6
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SHL	**Shillong**	**24.96**	**345**	*e*P	**P**	**00 46 47.5**	**+0.2**
	comp=Z,39nm,0.6s						
SHL	**Shillong**	**24.96**	**345**	*e*P	**P**	**00 46 47.5**	**+0.2**
SHL				pmax	pmax		
	comp=Z,39nm,0.6s						
MMRI	**Maumere**	**25.30**	**114**	*e*P	**P**	**00 46 52.2**	**+1.9**
	comp=Z,54nm,1.0s						
GYA	**Guiyang**	**26.00**	**16**	P	**P**	**00 46 57.3**	**+0.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BATI	**Baumata**	**27.20**	**116**	P	**P**	**00 47 06.1**	**-1.4**
	comp=Z,20nm,0.3s,baz=241,slow=17,SNR=3.7						
BATI				S	**S**	**00 51 30.5**	**-10**
	comp=Z,12nm,0.3s,baz=231,slow=20,SNR=3.8						
H08S2	**Diego Garcia H**	**27.84**	**251**	T	T	01 14 53.7	
	baz=71,slow=75,SNR=56						
H08S3	**Diego Garcia H**	**27.85**	**251**	T	T	01 14 50.9	
	baz=71,slow=75,SNR=389						
H08S1	**Diego Carcia H**	**27.86**	**251**	T	T	01 14 54.9	
	baz=71,slow=75,SNR=35						
JIRN	**Jiri**	**28.81**	**336**	*e*P	**P**	**00 47 23.5**	**+1.5**
	comp=Z,85nm,1.2s						
LSA	**Lhasa**	**29.09**	**346**	*e*P	**P**	**00 47 25.6**	**+1.0**
	comp=Z,14nm,0.4s						
LSA	**Lhasa**	**29.09**	**346**	*e*P	**P**	**00 47 25.6**	**+1.0**
LSA				pmax	pmax		
	comp=Z,14nm,0.4s						
GUN	**Gumba**	**29.16**	**336**	*e*P	**P**	**00 47 25.4**	**+0.3**
	comp=Z,60nm,0.9s						
CD2	**Chengdu**	**29.70**	**8**	*e*P	**P**	**00 47 31.3**	**+1.8**
KOLN	**Koldanda**	**30.04**	**332**	*e*P	**P**	**00 47 33.3**	**+0.6**
	comp=Z,52nm,0.7s						
MBWA	**Marble Bar**	**30.29**	**139**	*e*P	**P**	**00 47 34.7**	**-0.1**
	comp=Z,12nm,0.8s						
ENH	**Enshi**	**30.41**	**18**	*e*P	**P**	**00 47 36.0**	**+0.1**
	comp=Z,9.0nm,0.6s						
DANN	**Dangsing**	**30.46**	**333**	*e*P	**P**	**00 47 36.8**	**+0.3**
	comp=Z,41nm,0.8s						
PYUN	**Piuthan**	**30.60**	**332**	*e*P	**P**	**00 47 38.2**	**+0.5**
	comp=Z,13nm,0.3s						
FITZ	**Fitzroy Crossi**	**32.68**	**128**	P	**P**	**00 47 54.3**	**-1.5**
	comp=Z,5.6nm,0.5s,baz=290,slow=4.4,SNR=3.2						
FITZ				ScP	**ScP**	**00 54 15.5**	**-0.9**
	comp=Z,6.2nm,1.1s,baz=251,slow=23,SNR=3.6						
XAN	**Xi'an**	**33.79**	**15**	P	**P**	**00 48 04.6**	**-0.8**
XAN				pP	pP	00 48 15.5	-10
XAN				sP	sP	00 48 20.4	-15
XAN				PcP	PP	00 48 28.4	-55
XAN	**Xi'an**	**33.79**	**15**	*e*P	**P**	**00 48 04.5**	**-0.8**
XAN	**Xi'an**	**33.79**	**15**	*e*P	**P**	**00 48 04.6**	**-0.8**
LZH	**Lanzhou**	**34.81**	**7**	*e*P	**P**	**00 48 18.7**	**+4.4**
LZH				pP	sP	00 48 43.9	-1.0
LZH				sP	pP	00 48 54.5	+20
LZH				PP	**PP**	**00 49 40.0**	**+5.2**
LZH				pmax	pmax		
	comp=Z,14nm,1.4s						
LZH				LR	LR		
	comp=N,450nm,16.6s						
LZH				LR	LR		
	comp=E,520nm,16.1s						
LZH				LR	LR		
	comp=Z,520nm,18.7s						
NJ2	**Nanjing**	**35.82**	**30**	*e*P	**P**	**00 48 22.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,870nm,12.0s						
NJ2				LR	LR		
	comp=N,3µm,20.6s						
NJ2				LR	LR		
	comp=E,3µm,20.6s						
NJ2				LR	LR		
	comp=Z,3µm,24.4s						
GTA	**Gaotai**	**37.84**	**1**	⇑P	**P**	**00 48 40.6**	**+0.6**
GTA				pP	pP	00 49 01.4	+0.8
GTA				sP	sP	00 49 09.8	-0.9
NWAO	**Narrogin (SRO)**	**38.28**	**155**	P	**P**	**00 48 42.8**	**-0.9**
	comp=Z,4.7nm,0.4s,baz=270,slow=12,SNR=1.9						
NIL	**Nilore**	**40.09**	**326**	*e*P	**P**	**00 48 58.5**	**-0.2**
	comp=Z,38nm,0.6s						
NIL	**Nilore**	**40.09**	**326**	*e*P	**P**	**00 48 58.5**	**-0.2**
NIL				pmax	pmax		
	comp=Z,38nm,0.6s						
WRA	**Warramunga Arr**	**40.70**	**123**	P	**P**	**00 49 03.4**	**-0.6**
	comp=Z,92nm,0.7s,baz=303,slow=9.0,SNR=130						
WRA				PcP	**PcP**	**00 51 04.5**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=312,slow=2.8,SNR=4.5						
WRA				pPcP		00 51 28.2	
	comp=Z,3.4nm,0.6s,baz=309,slow=2.6,SNR=5.0						
WRA				ScP	**ScP**	**00 54 44.7**	**-1.5**
	comp=Z,1.9nm,1.0s,baz=310,slow=3.5,SNR=4.7						
WRA				S	**S**	**00 55 02.1**	**-6.1**
	comp=Z,12nm,1.1s,baz=294,slow=16,SNR=15						
WRAB	**Tennant Creek**	**40.71**	**123**	*e*P	**P**	**00 49 03.4**	**-0.7**
	comp=Z,87nm,0.6s						
WRAB	**Tennant Creek**	**40.71**	**123**	⇓*e*P	**P**	**00 49 03.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,14nm,0.6s						
WB2	**Warramunga Arr**	**40.71**	**123**	*e*P	**P**	**00 49 03.5**	**-0.6**
HHC	**Hu-ho-hao-te**	**40.90**	**15**	*e*P	**P**	**00 49 09.1**	**+3.7**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,300nm,6.7s						
BJI	**Beijing**	**41.54**	**20**	*e*P	**P**	**00 49 12.1**	**+1.6**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AS31	**Alice Springs**	**42.17**	**128**	*e*P	**P**	**00 49 15.3**	**-0.6**
	comp=Z,5.2nm,0.5s						
ASAR	**Alice Springs**	**42.17**	**128**	P	**P**	**00 49 15.2**	**-0.8**
	comp=Z,9.9nm,0.5s,baz=301,slow=7.9,SNR=38						
ASAR				PcP	**PcP**	**00 51 09.4**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=298,slow=4.6,SNR=4.7						
ASAR				pPcP		00 51 33.2	
	comp=Z,5.7nm,0.7s,baz=308,slow=3.1,SNR=11						
ASAR				ScP	**ScP**	**00 54 51.5**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=304,slow=3.9,SNR=7.5						
ASAR				S	**S**	**00 55 23.9**	**-6.0**
	comp=Z,8.3nm,0.9s,baz=295,slow=14,SNR=30						
AS01	**Alice Springs**	**42.20**	**128**	*e*P	**P**	**00 49 14.7**	**-1.5**
KSH	**Kashi**	**43.31**	**334**	P	**P**	**00 49 24.2**	**-0.9**
KSH				sP	sP	00 49 54.0	-1.8
KSH				PP	**PcP**	**00 51 13.4**	**+0.8**
KSH				S	**S**	**00 55 41.9**	**-4.5**
KSH				sS	sS	00 56 23.8	+1.9
KSH				SS	**SS**	**00 58 59.0**	**-4.2**
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
KSH				pmax	pmax		
	comp=Z,1µm,5.2s						
KSH				LR	LR		
	comp=N,650nm,6.0s						
KSH				LR	LR		
	comp=E,510nm,7.8s						
KSH				LR	LR		
	comp=Z,890nm,6.9s						
WMQ	**Urumqi**	**43.40**	**348**	P	**P**	**00 49 27.2**	**+1.6**
WMQ				pP	pP	00 49 47.5	+1.1
WMQ				sP	sP	00 49 56.5	+0.1
WMQ				PcS	**PcS**	**00 55 09.1**	**+3.7**
WMQ				S	**S**	**00 55 50.8**	**+3.4**
WMQ				sS	sS	00 56 28.4	+5.5
WMQ				SS	SS	00 58 51.6	-13
WMQ				ScS	**ScS**	**00 59 16.0**	**-1.1**
WMQ				pmax	pmax		
	comp=Z,41nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,760nm,5.5s						
WMQ				LR	LR		
	comp=N,2µm,24.5s						
WMQ				LR	LR		
	comp=E,2µm,22.5s						
WMQ				LR	LR		
	comp=Z,810nm,21.3s						
WMQ	**Urumqi**	**43.40**	**348**	*e*P	**P**	**00 49 26.1**	**+0.5**
	comp=Z,9.7nm,0.8s						
WMQ	**Urumqi**	**43.40**	**348**	*e*P	**P**	**00 49 26.1**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JNU	**Nakatsue**	**43.53**	**40**	P	**P**	**00 49 26.3**	**-0.6**
	comp=Z,13nm,1.1s,baz=256,slow=4.2,SNR=2.3						
KS15	**Wonju Array Si**	**44.70**	**33**	*e*P	**P**	**00 49 37.4**	**+1.3**
KSAR	**Wonju Array Be**	**44.70**	**33**	P	**P**	**00 49 37.1**	**+1.1**
KSAR	**Wonju Array Be**	**44.70**	**33**	P	**P**	**00 49 37.1**	**+1.1**
KSRS	**Korea Array**	**44.73**	**33**	P	**P**	**00 49 37.1**	**+0.9**
	comp=Z,22nm,0.7s,baz=220,slow=8.3,SNR=33						
MRIV	**Mauritius Mete**	**45.95**	**240**	*e*P	**P**	**00 49 47.5**	**+1.3**
	comp=Z,13nm,1.1s						
TKM2	**Tokmak 2**	**46.30**	**336**	P	sP	00 50 19.6	0.0
	SNR=5.7						
KBK	**Karagaybulak**	**46.34**	**336**	P	sP	00 50 20.7	+0.8
	SNR=5.1						
AAK	**Ala-Archa**	**46.52**	**335**	*e*P	**P**	**00 49 51.7**	**+1.2**
AAK	**Ala-Archa**	**46.52**	**335**	⇑*e*P	**P**	**00 49 52.0**	**+1.5**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SONM	**Songino Array**	**46.70**	**7**	P	**P**	**00 49 53.3**	**+1.5**
	comp=Z,11nm,0.7s,baz=190,slow=9.4,SNR=41						
SONM				PcP	**PcP**	**00 51 24.9**	**+0.7**
	comp=Z,3.1nm,0.4s,baz=194,slow=4.4,SNR=11						
SONM				ScP	**ScP**	**00 55 09.3**	**-0.8**
	comp=Z,3.5nm,0.9s,baz=194,slow=3.7,SNR=10.0						
CHMS	**Chumysh**	**46.71**	**336**	P	sP	00 50 22.5	-0.2
	SNR=5.3						
SONA1	**Songino Array**	**46.71**	**7**	*e*P	**P**	**00 49 53.1**	**+1.2**
SONA1				*e*PcP	**PcP**	**00 51 24.7**	**+0.5**
ULN	**Ulaanbaatar**	**46.81**	**8**	*e*P	**P**	**00 49 53.9**	**+1.2**
	comp=Z,12nm,1.0s						
ULN	**Ulaanbaatar**	**46.81**	**8**	*d i*P	**P**	**00 49 53.9**	**+1.2**
ULN				pmax	pmax		
	comp=Z,15nm,1.1s						
EKS2	**Erkin-Say**	**46.84**	**335**	P	sP	00 50 24.3	+0.5
	SNR=5.3						
USP	**Ospenovka**	**47.03**	**336**	P	sP	00 50 25.2	0.0
	SNR=6.3						
MK01	**Makanchi Array**	**47.45**	**345**	*e*P	**P**	**00 49 57.9**	**+0.3**
MK31	**Makanchi Array**	**47.48**	**345**	*e*P	**P**	**00 49 58.4**	**+0.6**
MK31	**Makanchi Array**	**47.48**	**345**	*e*P	**P**	**00 49 58.4**	**+0.6**
MKAR	**Makanchi Array**	**47.48**	**345**	*e*P	**P**	**00 49 58.4**	**+0.6**
	comp=Z,183nm,0.8s						
MKAR				pP	**pP**	**00 50 17.6**	**-1.4**
MKAR				sP	**sP**	**00 50 27.9**	**-0.8**
MKAR				ScP	**ScP**	**00 55 14.3**	**+1.0**
MKAR	**Makanchi Array**	**47.48**	**345**	P	**P**	**00 49 58.1**	**+0.3**
	comp=Z,5.9nm,0.4s,baz=155,slow=8.9,SNR=79						
MKAR				pP	**pP**	**00 50 17.6**	**-1.4**
	comp=Z,11nm,0.6s,baz=154,slow=7.2,SNR=9.1						
MKAR				sP	**sP**	**00 50 27.9**	**-0.8**
	comp=Z,37nm,0.8s,baz=151,slow=7.8,SNR=12						
MKAR				ScP	**ScP**	**00 55 14.3**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=114,slow=3.5,SNR=3.7						
MAKZ	**Makanchi**	**47.58**	**344**	*e*P	**P**	**00 49 59.1**	**+0.6**
	comp=Z,28nm,0.8s						
MAKZ	**Makanchi**	**47.58**	**344**	*e*P	**P**	**00 49 59.1**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,28nm,0.8s						
RER	**Riviere de l'E**	**47.79**	**240**	*e*P	**P**	**00 50 02.4**	**+1.7**
	comp=Z,39nm,0.8s						
CN2	**Changchun**	**48.36**	**26**	*e*P	P	00 50 09.9	+5.3
KK31	**Karatay Array**	**48.65**	**332**	*e*P	**P**	**00 50 07.2**	**+0.4**
KK31	**Karatay Array**	**48.65**	**332**	*e*P	**P**	**00 50 07.3**	**+0.4**
KKAR	**Karatay Array**	**48.65**	**332**	*e*P	**P**	**00 50 07.2**	**+0.4**
KKAR	**Karatay Array**	**48.65**	**332**	*e*P	**P**	**00 50 07.3**	**+0.4**
DGZ	**Jazzator, Alta**	**49.11**	**350**	*c i*P	**P**	**00 50 11.6**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MOY	**Mondy**	**50.11**	**2**	*e*P	**P**	**00 50 18.7**	**+0.7**
TLY	**Talaya**	**50.26**	**4**	*e*P	**P**	**00 50 20.5**	**+1.6**
	comp=Z,19nm,0.8s						
TLY	**Talaya**	**50.26**	**4**	⇓*i*P	**P**	**00 50 20.4**	**+1.5**

MJAR	Matsushiro Arr	50.40	41	ScP	ScP	00 55 24.6	-1.3
	comp=Z,0.8nm,0.3s,baz=227,slow=5.0,SNR=4.9						
HIA	Hailar	50.92	17	⇓eP	P	00 50 24.1	+0.2
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTA	Charters Tower	51.07	117	P	P	00 50 25.8	+0.2
	comp=Z,4.5nm,0.7s,baz=305,slow=8.7,SNR=5.6						
CTAO	Charters Tower	51.07	117	eP	P	00 50 26.1	+0.6
	comp=Z,30nm,0.7s						
CTAO	Charters Tower	51.07	117	eP	P	00 50 26.1	+0.6
CTAO				pmax	pmax		
	comp=Z,30nm,0.7s						
USRK	Ussuriysk Ar.	51.73	30	P	P	00 50 30.6	+0.6
	comp=Z,18nm,0.8s,baz=219,slow=4.5,SNR=31						
KURK	Kurchatov	52.06	344	eP	P	00 50 32.8	+0.5
	comp=Z,35nm,0.8s						
KURK	Kurchatov	52.06	344	d iP	P	00 50 32.5	+0.1
KURK				pmax	pmax		
	comp=Z,24nm,0.9s						
GEYT	Alibeck	52.16	319	P	P	00 50 33.7	+0.2
	comp=Z,10nm,0.8s,baz=156,slow=8.1,SNR=11						
GEYT				pP	pP	00 50 56.1	+1.3
	comp=Z,3.9nm,0.5s,baz=139,slow=9.9,SNR=3.2						
GEYT				sP	sP	00 51 04.9	+0.4
	comp=Z,11nm,0.7s,baz=137,slow=7.3,SNR=6.4						
GYA0B	ALIBECK ARRAY	52.16	319	eP	P	00 50 34.0	+0.5
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	52.23	133	eP	P	00 50 34.5	+0.5
	comp=Z,2.3nm,0.6s						
STKA	Stephens Creek	52.23	133	P	P	00 50 34.5	+0.5
	comp=Z,10nm,0.6s,baz=310,slow=8.3,SNR=8.4						
ZAA0	Zalesovo Array	53.65	350	eP	P	00 50 44.2	+0.2
	comp=Z,48nm,0.8s						
ZALV	Zalesovo Beam	53.65	350	P	P	00 50 44.3	+0.3
	comp=Z,28nm,0.6s,baz=164,slow=7.1,SNR=85						
ZALV				pP	pP	00 51 05.1	-0.6
	comp=Z,20nm,0.5s,baz=174,slow=6.8,SNR=8.5						
ZALV				sP	sP	00 51 14.6	-0.9
	comp=Z,43nm,0.7s,baz=176,slow=6.3,SNR=9.4						
ZALV				S	S	00 58 10.3	-0.8
	comp=Z,0.5nm,0.6s,baz=171,slow=13,SNR=4.3						
NVS	Novosibirsk	54.79	349	eP	P	00 50 51.8	-0.5
NVS				e		00 51 21.3	
NVS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.5s						
KLR	Kul'dur	55.32	26	d iP	P	00 50 57.2	+1.0
BVA0	Borovoye Array	56.63	340	i P	P	00 51 05.0	-0.6
BVA0				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRVK	Borovoye	56.70	340	eP	P	00 51 05.7	-0.3
	comp=Z,11nm,0.6s						
BRVK	Borovoye	56.70	340	⇑eP	P	00 51 05.2	-0.8
BRVK				pmax	pmax		
	comp=Z,12nm,0.7s						
ZEA	Zeya	57.16	20	eP	P	00 51 10.5	+1.3
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
BOD	Bodaibo	57.51	10	eP	P	00 51 11.8	+0.2
BOD				pmax	pmax		
	comp=Z,18nm,1.3s						
AB31	Akbulak array	58.15	331	i P	P	00 51 15.7	-0.6
AB31				pmax	pmax		
	comp=Z,15nm,0.7s						
ABKAR	Akbulak array	58.15	331	eP	P	00 51 16.1	-0.2
YSS	Yuzh-Sakhalins	59.23	34	⇑eP	P	00 51 24.7	+0.9
YSS				e		00 51 47.1	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
KMBO	Kilima Mbogo	61.70	268	P	P	00 51 41.9	+0.3
	comp=Z,3.1nm,0.8s,baz=50,slow=10,SNR=4.5						
TBLG	Delisi	62.99	317	eP	P	00 51 49.8	+0.4
	comp=Z,39nm,0.9s						
TBLG	Delisi	62.99	317	eP	P	00 51 49.8	+0.4
TBLG				pmax	pmax		
	comp=Z,39nm,0.9s						
SVE	Sverdlovsk	63.14	338	eP	P	00 51 50.1	+0.1
SVE				pmax	pmax		
	comp=Z,32nm,1.2s						
ARU	Arti	63.67	336	eP	P	00 51 52.8	-0.8
	comp=Z,23nm,1.2s						
ARU	Arti	63.67	336	d iP	P	00 51 52.6	-0.9
ARU						00 52 24.1	
ARU				S	S	01 00 22.4	+1.4
ARU				SS	SS	01 04 23.6	-6.6
ARU				pmax	pmax		
	comp=Z,24nm,1.3s						
ZEI	Tsey	63.99	318	eP	P	00 51 54.8	-1.4
ZEI				pmax	pmax		
	comp=Z,13nm,0.6s						
NCK	Nalchik	64.49	318	⇑iP	P	00 51 59.5	+0.3
NCK				pmax	pmax		
	comp=Z,16nm,0.8s						
NEY	Neytrino	64.97	318	⇑eP	P	00 52 03.2	+0.7
NEY				pmax	pmax		
	comp=Z,6.0nm,1.8s						
KBZ	Khabaz	65.05	318	P	P	00 52 02.9	+0.1
	comp=Z,15nm,0.9s,baz=126,slow=7.1,SNR=18						
KIV	Kislovodsk	65.28	319	eP	P	00 52 03.8	-0.6
	comp=Z,24nm,1.0s						
KIV	Kislovodsk	65.28	319	eP	P	00 52 03.8	-0.6
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
NRIK	Noril'sk	68.25	356	P	P	00 52 21.5	-1.1
	comp=Z,3.3nm,0.4s,baz=175,slow=7.5,SNR=5.7						
VRH	Novokhopyorsk	68.92	325	eP	P	00 52 25.7	-1.4
VRH				pmax	pmax		
	comp=Z,40nm,0.7s						
BR131	Keskin Array S	70.24	312	eP	P	00 52 35.3	-0.5
BRTR	Keskin Array B	70.24	312	P	P	00 52 35.0	-0.8
	comp=Z,6.2nm,0.9s,baz=147,slow=7.2,SNR=12						
VSR	Storozhevoye	70.38	325	⇓eP	P	00 52 34.4	-1.8
VSR				pmax	pmax		
	comp=Z,32nm,0.9s						
MA2	Magadan	70.42	25	eP	P	00 52 36.8	+0.6
	comp=Z,43nm,1.6s						
MA2	Magadan	70.42	25	⇓eP	P	00 52 37.0	+0.8
MA2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MA2	Magadan	70.42	25	P	P	00 52 35.6	-0.6
	comp=Z,4.7nm,0.5s,baz=221,slow=6.4,SNR=6.8						
ILGA	Ilgaz	70.54	313	eP	P	00 52 38.5	+0.8
	comp=Z,23nm,0.9s						
PETK	Petropavlovsk-	70.62	33	P	P	00 52 38.1	+0.5
	comp=Z,2.3nm,0.7s,baz=249,slow=2.8,SNR=4.7						
PETK				pP	pP	00 53 01.0	+0.7
	comp=Z,4.3nm,0.8s,baz=201,slow=7.6,SNR=3.8						
LPSR	Galich'ya Gora	71.08	326	eP	P	00 52 39.3	-1.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
LSZ	Lusaka	71.81	254	eP	P	00 52 47.0	+1.3
	comp=Z,12nm,0.8s						
LSZ	Lusaka	71.81	254	eP	P	00 52 47.0	+1.3
LSZ				pmax	pmax		
	comp=Z,12nm,0.8s						
BLWY	Bulawayo	72.05	248	i P	P	00 52 48.4	+1.3
PRGR	Permogore	72.13	336	eP	P	00 52 44.9	-1.6
PRGR				e*PP	PcP	00 53 06.3	+1.9
PRGR				e*SP	sP	00 53 16.0	-2.4
PRGR				pmax	pmax		
	comp=Z,15nm,0.7s						
MATP	Matopo	72.19	248	i P	P	00 52 49.7	+1.8
MATP	Matopo	72.19	248	i P	P	00 52 49.4	+1.5
TIXI	Tiksi	72.69	10	eP	P	00 52 49.2	-0.4
	comp=Z,19nm,1.2s						
TIXI	Tiksi	72.69	10	c eP	P	00 52 49.5	-0.2
TIXI				pmax	pmax		
	comp=Z,19nm,1.3s						
SEY	Seymchan	72.91	23	⇑iP	P	00 52 52.0	+0.9
MOS	Moscow	73.04	329	eP	P	00 52 51.0	-1.0
MOS				e		00 53 26.5	
MOS				pmax	pmax		
	comp=Z,44nm,0.8s						
MAW	Mawson	73.31	194	P	P	00 52 54.0	+0.7
MAW	Mawson	73.31	194	P	P	00 52 54.0	+0.7
	comp=Z,17nm,0.8s,baz=81,slow=19,SNR=2.9						
OBN	Obninsk	73.35	328	eP	P	00 52 53.0	-0.8
	comp=Z,82nm,1.6s						
OBN	Obninsk	73.35	328	⇓eP	P	00 52 51.6	-2.2
OBN				e		00 53 10.2	
OBN				pmax	pmax		
	comp=Z,53nm,1.6s						
KLMR	Klimovskoe	74.31	334	eP	P	00 52 58.3	-1.1
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
KLMR	Klimovskoe	74.31	334	eP	P	00 52 58.3	-1.1
KLMR				AMP		00 53 01.2	
	comp=Z,16nm,1.5s						
AKASG	Malin Array Be	76.14	322	P	P	00 53 09.1	-1.0
	comp=Z,2.5nm,0.6s,baz=90,slow=4.9,SNR=12						
AKASG				pP	pP	00 53 32.9	+0.2
	comp=Z,0.8nm,0.5s,baz=88,slow=5.0,SNR=2.7						
AKASG				sP	sP	00 53 41.2	-0.9
	comp=Z,2.0nm,0.5s,baz=88,slow=5.4,SNR=3.1						
KIEV	Kiev	76.15	322	eP	P	00 53 09.6	-0.6
	comp=Z,19nm,1.3s						
KIEV	Kiev	76.15	322	⇑eP	P	00 53 09.4	-0.7
KIEV				pmax	pmax		
	comp=Z,16nm,1.3s						
BOSA	Boshof	76.36	240	i P	P	00 53 13.4	+1.4
BOSA	Boshof	76.36	240	eP	P	00 53 13.4	+1.4
	comp=Z,13nm,0.8s						
BOSA	Boshof	76.36	240	i P	P	00 53 13.1	+1.1
BOSA	Boshof	76.36	240	P	P	00 53 12.8	+0.8
	comp=Z,8.9nm,0.6s,baz=93,slow=3.5,SNR=24						
TMCR	Tamitsa	76.40	337	eP	P	00 53 11.0	-0.2
TMCR				pmax	pmax		
	comp=Z,13nm,0.8s						
VRI	Vrincioaia	76.64	317	⇑iP	P	00 53 13.9	+0.9
VRI	Vrincioaia	76.64	317	⇑P	P	00 53 13.9	+0.9
HUMR	Humele	77.59	315	⇑iP	P	00 53 18.2	-0.2
ARR	Arges	77.98	316	⇑iP	P	00 53 20.5	-0.1
BURAR	Bucovina Array	78.00	318	⇑iP	P	00 53 21.9	+1.1
BURAR	Bucovina Array	78.00	318	P	P	00 53 21.9	+1.1
BUR08	Bucovina Ar. S	78.02	318	eP	P	00 53 21.6	+0.7
VTS	Vitosha	78.52	313	⇑iP	P	00 53 23.8	0.0
VTS	Vitosha	78.52	313	P	P	00 53 23.8	0.0
APA	Apatity	79.54	339	⇑iP	P	00 53 39.2	+11
APA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,2μm,25.0s						
DRGR		79.54	317	⇑iP	P	00 53 29.3	+0.1
DRGR		79.54	317	⇑P	P	00 53 29.3	+0.1
TRPA	Tarpa	79.87	319	⇑iP	P	00 53 31.2	+0.4
BZS	Buzias	80.11	316	⇑iP	P	00 53 32.6	+0.4
BZS	Buzias	80.11	316	⇑P	P	00 53 32.6	+0.4
BILL	Bilibino	80.37	21	⇑eP	P	00 53 35.2	+2.1
BILL				e		00 56 38.8	
BILL				i S	S	01 03 31.6	-0.2
BILL				i SS	SS	01 08 40.7	-4.2
BILL				pmax	pmax		
	comp=Z,30nm,3.9s						
BILL				MLR	MLR		
	comp=Z,1μm,17.0s						
SUW	Suwalki	80.50	325	eP	P	00 53 33.9	-0.1
	comp=Z,54nm,1.1s						
SUW	Suwalki	80.50	325	eP	P	00 53 33.9	-0.1
SUW				pmax	pmax		
	comp=Z,54nm,1.1s						
FINES	FINESS Array B	80.61	332	P	P	00 53 34.4	0.0
	comp=Z,5.8nm,0.7s,baz=98,slow=6.4,SNR=23						
FINES				pP	pP	00 53 57.0	-0.3
	comp=Z,2.7nm,0.5s,baz=111,slow=5.8,SNR=3.5						
FINES				PKKPbc	PKKPbc	01 12 13.6	-3.6
	comp=Z,0.8nm,0.8s,baz=290,slow=5.7,SNR=3.8						
SYO	Syowa Base	80.73	198	⇑eP	P	00 53 35.6	+0.7
SYO	Syowa Base	80.73	198	⇑ePcP	PcP	00 53 41.6	+0.2
BKZ	Black Stump Fm	81.27	130	eP	P	00 53 38.9	+0.4
	comp=Z,45nm,0.5s						
URZ	Urewera	81.61	129	P	P	00 53 39.0	-1.3
	comp=Z,4.1nm,0.4s,baz=257,slow=14,SNR=4.8						
TSUM	Tsumeb	82.27	251	eP	P	00 53 46.3	+2.0
	comp=Z,10nm,0.9s						
ARCES	ARCESS Array B	82.92	340	eP	P	00 53 46.9	+0.4
ARCES	ARCESS Array B	82.92	340	eP	P	00 53 46.9	+0.4
ARCES	ARCESS Array B	82.92	340	P	P	00 53 46.6	+0.1
	comp=Z,3.5nm,0.5s,baz=100,slow=4.4,SNR=31						
KRLC	Kraliky	83.87	320	eP	P	00 53 52.8	+1.0
KRLC	Kraliky	83.87	320	eP	P	00 53 52.8	+1.0
DPC	Dobruska-Polom	84.19	320	eP	P	00 53 54.4	+1.0
DPC	Dobruska-Polom	84.19	320	eP	P	00 53 54.4	+1.0
CONA	Conrad Observa	84.30	318	i P	P	00 53 54.6	+0.6
	comp=Z,7.1nm,1.2s						
ARSA	Arzberg	84.48	317	i P	P	00 53 55.4	+0.4
	comp=Z,14nm,1.3s						
SOKA	Soboth	84.78	317	i P	P	00 53 56.9	+0.4
	comp=Z,9.3nm,1.0s						
GEA0	GERESS Array S	85.79	319	eP	P	00 54 01.6	+0.1
GERES	GERESS Array B	85.79	319	P	P	00 54 02.0	+0.4
GERES	GERESS Array B	85.79	319	P	P	00 54 02.0	+0.4
	comp=Z,5.2nm,1.1s,baz=104,slow=4.4,SNR=7.4						
KHC	Kasperske Hory	85.88	319	eP	P	00 54 02.2	+0.3
KHC				ePCP	PcP	00 54 06.0	+1.4
KHC	Kasperske Hory	85.88	319	eP	P	00 54 02.2	+0.3
ABTA	Abfaltersbach	86.51	317	i P	P	00 54 05.3	+0.1
	comp=Z,9.9nm,1.3s						
SQTA	Sankt Quirin	87.41	317	i P	P	00 54 09.4	-0.1
	comp=Z,5.1nm,1.3s						
MOTA	Moosalm	87.49	317	i P	P	00 54 09.7	-0.3
	comp=Z,6.4nm,0.9s						
NB2	NORSAR Subarra	87.66	331	P	P	00 54 10.0	-0.3
	comp=Z,1.3nm,0.7s,baz=92,slow=4.8						
NOA	NORSAR Array B	87.66	331	P	P	00 54 10.4	+0.1
	comp=Z,3.7nm,1.0s,baz=94,slow=5.1,SNR=6.9						
NOA				pP	pP	00 54 33.1	-0.4
	comp=Z,1.3nm,0.8s,baz=96,slow=4.9,SNR=3.1						
NOA				sP	sP	00 54 43.9	+1.2
	comp=Z,3.0nm,1.0s,baz=93,slow=4.8,SNR=3.1						
RETA	Reutte	87.72	317	i P	P	00 54 09.7	-1.3
	comp=Z,5.8nm,0.8s						
FETA	Feichten	87.74	317	i P	P	00 54 10.7	-0.4
	comp=Z,14nm,1.3s						
KEST	Kesra	88.83	306	P	P	00 54 16.0	-0.5
	comp=Z,15nm,1.0s,baz=66,slow=7.8,SNR=4.1						
WLF	Walferdange	90.73	320	⇑P	P	00 54 25.8	+0.8
	comp=Z,16nm,1.6s						
WLF				⇓pP	pP	00 54 41.4	-6.7
QSPA	South Pole Qui	91.34	180	eP	P	00 54 29.4	+1.9
	comp=Z,20nm,0.4s						
DOU	Dourbes	91.71	320	⇑pP	pP	00 54 52.2	-0.5
	comp=Z,19nm,2.7s						
SNF	Seneffe	91.88	320	⇓P	P	00 54 30.2	0.0
IM3	Indian Mountai	95.72	23	eP	P	00 54 47.8	+0.3
TOLK	Toolik Lake Re	96.41	20	P	P	00 54 51.1	+0.4
	baz=291						
TORD	Torodi Ar. Bea	96.71	283	P	P	00 54 53.1	0.0
	comp=Z,1.5nm,0.9s,baz=130,slow=6.4,SNR=4.7						
CAST	Castle Rocks	97.16	25	eP	Pdif	00 54 55.1	+0.8
BPAW	Bear Paw Mtn.	97.41	25	eP	Pdif	00 54 56.1	+0.8
ILAR	Eielson Array	98.84	23	P	P	00 54 59.9	-1.7
	comp=Z,0.5nm,0.6s,baz=296,slow=4.0,SNR=9.0						
YKA	Yellowknife Ar	111.43	16	PKKPbc	PKKPbc	01 10 50.2	-2.9
	comp=Z,0.3nm,0.8s,baz=141,slow=3.3,SNR=4.2						
FFC	Flin Flon	121.46	14	i PKIKP	PKPdf	01 00 12.6	-2.3
SCHQ	Schefferville	122.73	350	PKP	PKPdf	01 00 17.1	-0.3
	comp=Z,3.2nm,0.6s,baz=20,slow=2.0,SNR=11						
SCHQ				SKPbc	SKPbc	01 03 17.8	
	comp=Z,3.3nm,0.9s,baz=106,slow=7.4,SNR=5.4						
L04D	Klamath Falls	122.84	36	P	PKPdf	01 00 18.2	+0.1
	baz=308						
N02D	Trinity Center	123.37	37	P	PKPdf	01 00 19.2	+0.1
	baz=307						
MSO	Missoula	123.98	27	P	PKiKP	01 00 20.4	0.0
	baz=319						
O03E	Paynes Creek	124.33	37	P	PKPdf	01 00 21.0	+0.1
	baz=308						
EGMT	Eagleton	124.81	23	P	PKiKP	01 00 22.0	0.0
	baz=324						
BOZ	Bozeman (W)	125.96	26	P	PKiKP	01 00 24.8	+0.4
	baz=321						
HLID	Hailey	126.19	30	P	PKiKP	01 00 25.4	+0.3
	baz=317						
ULM	Lac du Bonnet	127.00	12	PKP	PKPdf	01 00 25.6	-0.1
	comp=Z,4.9nm,0.6s,baz=353,slow=3.4,SNR=12						
LAO	LASA Array	127.25	22	P	PKiKP	01 00 27.7	+0.8
	baz=328						
RLMT	Red Lodge	127.35	25	P	PKiKP	01 00 28.0	+0.7
	baz=324						
NVAR	Mina Array Bea	127.60	37	PKP	PKiKP	01 00 28.4	+0.3
	comp=Z,1.3nm,0.7s,baz=276,slow=2.3,SNR=8.6						
NVAR				pPKP	pPKPdf	01 00 51.1	-0.6
	comp=Z,2.3nm,0.9s,baz=307,slow=2.2,SNR=7.3						
NVAR				SKPbc	SKPbc	01 03 36.5	
	comp=Z,1.0nm,0.8s,baz=271,slow=2.9,SNR=3.9						
MDND	Maddock	128.35	16	P	PKiKP	01 00 29.1	+0.1
	baz=336						
MATQ	Matagami	128.95	357	P	PKPdf	01 00 29.7	+0.3
	baz=4.4						
CWC	Cottonwood Cre	129.01	39	P	PKPdf	01 00 30.2	+0.1
	baz=309						
R11A	Troy Canyon, C	129.25	35	P	PKiKP	01 00 31.9	+0.6
	baz=313						
DUG	Dugway, Tooele	129.47	31	ePKPdf	PKiKP	01 00 31.3	-0.3
DUG	Dugway, Tooele	129.47	31	ePKIKP	PKiKP	01 00 31.3	-0.3
DUG	Dugway, Tooele	129.47	31	P	PKiKP	01 00 32.0	+0.3
	baz=317						
LSQQ	Lebel-sur-Quev	129.61	356	P	PKiKP	01 00 31.3	-0.1
	baz=5.3						
MPMC	Manual Prospec	129.62	39	P	PKiKP	01 00 32.5	+0.4
	baz=310						
EYMN	Ely	130.02	9	P	PKiKP	01 00 32.4	+0.1
	baz=346						
C40A	Isle Royale Na	130.38	7	P	PKiKP	01 00 33.2	+0.2
	baz=349						
LATQ	La Tuque	130.87	353	P	PKiKP	01 00 33.8	-0.2
	baz=11						
E38A	The Farm, Brul	131.31	10	P	PKiKP	01 00 34.7	-0.2
	baz=346						
E39A	Mellen	131.69	9	P	PKPdf	01 00 35.3	+0.5
	baz=347						
PFO	Pinyon Flats O	131.82	40	SKPbc	SKPbc	01 03 53.2	-0.6
	comp=Z,10nm,1.0s,baz=347,slow=4.7,SNR=10						
D46A	Sault St. Mari	131.84	3	P	PKPdf	01 00 35.5	+0.5
	baz=356						
F37A	Hinrichs Farm,	131.97	11	P	PKiKP	01 00 36.2	-0.1
	baz=344						
E42A	Champion	131.99	6	P	PKiKP	01 00 36.1	-0.2
	baz=351						
F39A	Loretta	132.09	9	P	PKiKP	01 00 36.1	-0.5
	baz=347						
E43A	Lone Tree Farm	132.14	6	P	PKiKP	01 00 36.4	-0.2
	baz=352						
F40A	Park Falls	132.21	9	P	PKiKP	01 00 36.5	-0.3
	baz=348						
E53A	Dumoine, Ponti	132.32	357	P	PKPdf	01 00 36.0	+0.1
	baz=4.6						
E46A	Sault Ste Mari	132.34	3	P	PKPdf	01 00 36.5	+0.5
	baz=356						
E52A	Mattawa	132.46	358	P	PKPdf	01 00 36.6	+0.4
	baz=3.2						
F43A	Flat Rock, Esc	132.66	6	P	PKiKP	01 00 37.7	0.0
	baz=352						
G40A	Rib Lake	132.83	9	P	PKiKP	01 00 37.8	-0.3
	baz=348						
ECSD	EROS Data Cent	132.96	15	P	PKPdf	01 00 37.7	+0.5
	baz=339						
F52A	Sundridge	132.98	358	P	PKiKP	01 00 38.1	-0.3
	baz=2.4						
G43A	Wallace	133.17	6	P	PKiKP	01 00 38.3	-0.4
	baz=351						
H40A	Chili	133.43	9	P	PKiKP	01 00 38.9	-0.4
	baz=347						
PLVO	Plevna	133.62	356	P	PKiKP	01 00 39.3	-0.4
	baz=5.5						
BANO	Bancroft	133.69	357	P	PKPdf	01 00 38.9	+0.3
	baz=4.3						
I42A	Draeger Farm,	134.36	8	P	PKiKP	01 00 40.6	-0.6
	baz=349						
J39A	Decorah	134.45	11	P	PKPdf	01 00 40.5	+0.5
	baz=345						
J41A	Loganville	134.72	9	P	PKPdf	01 00 41.2	+0.7
	baz=347						
J42A	Columbus	134.90	8	P	PKPdf	01 00 41.4	+0.6
	baz=349						
I51A	Listowel	134.99	360	P	PKiKP	01 00 42.0	-0.5
JFWS	Jewell Farm	135.12	10	P	PKPdf	01 00 41.9	+0.7
	baz=347						
K42A	Prairie Point,	135.39	9	P	PKPdf	01 00 42.5	+0.7
	baz=348						
J49A	Marlette	135.40	2	P	PKPdf	01 00 42.6	+0.8
	baz=357						
J48A	Bridge Port	135.43	3	P	PKiKP	01 00 43.3	-0.1
	baz=356						
HRV	Adam Dziewonsk	135.45	350	P	PKiKP	01 00 43.3	-0.2
	baz=14						
J52A	Paris	135.55	359	P	PKiKP	01 00 43.0	-0.7
	baz=0.8						
K43A	Burlington	135.61	8	P	PKiKP	01 00 43.4	-0.4
	baz=350						
L41A	Preston	135.89	10	P	PKiKP	01 00 43.7	-0.7
	baz=346						
K46A	Dorr	135.91	5	P	PKiKP	01 00 44.0	-0.4
	baz=353						
K48A	Perry	135.91	3	P	PKiKP	01 00 44.0	-0.4
	baz=356						
K47A	Vermontville	135.98	4	P	PKiKP	01 00 44.6	0.0
	baz=354						
BINY	Binghamton	136.35	355	P	PKiKP	01 00 45.2	-0.1
	baz=7.3						
L55A	Hinsdale	136.55	357	P	PKPdf	01 00 44.9	+0.9
	baz=3.8						
M41A	Milan	136.56	10	P	PKiKP	01 00 44.9	-0.8
	baz=346						
L47A	Sherwood	136.66	4	P	PKPdf	01 00 45.0	+0.8
	baz=354						
L50A	Kingsville	136.72	2	P	PKiKP	01 00 45.6	-0.4
	baz=357						
M55A	Ridgway	137.27	357	P	PKiKP	01 00 46.5	-0.7
	baz=3.4						
SFIN	Lafayette	138.05	7	P	PKiKP	01 00 48.6	-0.2
	baz=351						
P41A	Barry, Barry	138.11	12	P	PKiKP	01 00 48.2	-0.8
	baz=345						
O47A	Sheridan	138.30	6	P	PKiKP	01 00 48.8	-0.5
	baz=352						
P42A	Winchester	138.33	11	P	PKiKP	01 00 48.8	-0.6
	baz=346						
O48A	Farmland	138.37	5	P	PKiKP	01 00 48.7	-0.8
	baz=354						
P43A	Skaggs, Pawnee	138.43	10	P	PKiKP	01 00 49.1	-0.5
	baz=347						
O56A	Blue Knob Stat	138.46	357	P	PKiKP	01 00 49.5	-0.2
	baz=3.7						
O49A	Covington	138.50	4	P	PKiKP	01 00 49.4	-0.4
	baz=355						
ACSO	Alum Creek Sta	138.53	2	P	PKiKP	01 00 49.4	-0.4
	baz=357						
P47A	Martinsville	139.03	6	P	PKiKP	01 00 50.4	-0.4
	baz=352						
Q43A	New Douglas	139.08	10	P	PKiKP	01 00 50.8	-0.1
	baz=347						
P48A	Milroy	139.14	5	P	PKiKP	01 00 50.4	-0.6
	baz=353						
P52A	Corning	139.15	1	P	PKiKP	01 00 50.5	-0.6
	baz=358						
P54A	Burton	139.19	359	P	PKiKP	01 00 50.6	-0.6
	baz=0.9						
P55A	Reedsville	139.27	359	P	PKiKP	01 00 51.1	-0.3
	baz=1.9						
Q45A	Warren Harvey,	139.37	8	P	PKiKP	01 00 51.2	-0.4
	baz=349						
R42A	Luebbering	139.51	12	P	PKiKP	01 00 51.5	-0.3
	baz=345						
Q48A	North Vernon	139.64	6	P	PKiKP	01 00 51.8	-0.3
	baz=353						
R43A	Red Bud	139.68	11	P	PKiKP	01 00 52.0	-0.2
	baz=346						
Q51A	Peebles	139.71	3	P	PKiKP	01 00 51.9	-0.4
	baz=356						
Q55A	Buckhannon	139.79	359	P	PKiKP	01 00 52.0	-0.5
	baz=1.5						
Q54A	Coxs Mills	139.81	360	P	PKiKP	01 00 51.9	-0.5
	baz=0.3						
MNTX	Cornudas Mount	139.81	33	P	PKiKP	01 00 51.9	-0.8
	baz=320						
R49A	Shelbyville	140.32	5	P	PKiKP	01 00 53.1	-0.5
	baz=354						
S47A	Hartford	140.83	7	P	PKiKP	01 00 54.1	-0.5
	baz=351						
U40A	Yellville	140.87	15	P	PKiKP	01 00 54.5	-0.3
	baz=341						
T48A	Bowling Green	141.37	7	P	PKiKP	01 00 55.7	0.0
	baz=352						
BLA	Blacksburg	141.57	359	P	PKiKP	01 00 55.8	-0.4
	baz=1.0						
T50A	Nancy	141.61	5	P	PKiKP	01 00 56.0	-0.2
	baz=354						
T51A	Gray	141.73	4	P	PKiKP	01 00 56.1	-0.4
	baz=355						
U47A	Clarksville	141.91	8	P	PKiKP	01 00 56.5	-0.3
	baz=350						
U48A	Cassie Pea, Po	141.94	7	P	PKiKP	01 00 56.5	-0.4
	baz=351						
U50A	Jamestown	142.21	5	P	PKiKP	01 00 57.3	-0.2
	baz=354						
U53A	Fall Branch	142.40	2	P	PKiKP	01 00 57.7	-0.2

	baz=358						
TXAR	Lajitas Array	142.57	33	PKhKP	PKPpre	01 00 52.0	
	comp=Z,0.8nm,0.4s,baz=310,slow=0.4,SNR=24						
TXAR				SKPbc	SKPbc	01 04 24.4	-1.4
	comp=Z,2.6nm,1.0s,baz=260,slow=2.2,SNR=8.9						
V51A	Loudon	142.86	4	P	PKiKP	01 00 58.5	-0.3
	baz=355						
JCT	Junction City	143.62	28	*e*PKPdf	PKPbc	01 00 55.0	+0.3
JCT	Junction City	143.62	28	*e*PKIKP	PKPbc	01 00 55.0	+0.3
Y48A	Jasper	144.41	9	P	PKPbc	01 00 56.9	0.0
	baz=350						
BDFB	Brasilia	144.45	245	PKP	PKPdf	01 00 58.8	-0.2
	comp=Z,16nm,0.6s,baz=116,slow=4.0,SNR=26						
BDFB				pPKP	pPKPdf	01 01 22.6	-0.6
	comp=Z,6.1nm,0.7s,baz=145,slow=3.6,SNR=3.5						
Y49A	Blount Mountai	144.57	8	P	PKPab	01 00 57.1	-0.1
	baz=351,SNR=11						
NATX	Nacogdoches	144.59	20	*e*PKPdf	PKPbc	01 00 58.1	+0.5
NATX	Nacogdoches	144.59	20	P	PKPbc	01 00 57.8	+0.2
	baz=336,SNR=5.4						
Y50A	Piedmont	144.62	7	P	PKPbc	01 00 57.8	+0.1
	baz=352						
Y51A	Rockmart	144.68	6	P	PKPab	01 00 57.5	-0.2
	baz=353						
Y52A	Lilburn	144.81	4	P	PKPbc	01 00 58.5	+0.3
	baz=355,SNR=11						
Y53A	Monroe	144.85	4	P	PKPbc	01 00 58.4	0.0
	baz=356,SNR=9.0						
Y54A	Tignall	144.89	2	P	PKPab	01 00 58.2	-0.2
	baz=357,SNR=5.6						
145A	Houston Renfro	145.16	13	P	PKPdf	01 01 00.1	+0.4
	baz=344,SNR=13						
Z49A	Columbiana	145.21	8	P	PKPbc	01 00 59.2	-0.3
	baz=350,SNR=46						
Z50A	Ashland	145.23	7	P	PKPbc	01 00 59.3	-0.2
	baz=352,SNR=18						
Z51A	Franklin	145.25	6	P	PKPbc	01 00 59.5	-0.2
	baz=353,SNR=6.3						
LRAL	Lakeview Retre	145.29	9	*e*PKPbc	PKPbc	01 00 59.4	-0.4
LRAL	Lakeview Retre	145.29	9	P	PKPbc	01 00 59.4	-0.4
	baz=350,SNR=12						
GOGA	Godfrey	145.30	3	*e*PKPbc	PKPbc	01 00 59.7	-0.1
GOGA	Godfrey	145.30	3	*e*PKIKP	PKPbc	01 00 59.7	-0.1
GOGA	Godfrey	145.30	3	P	PKPbc	01 00 59.9	+0.1
	baz=356,SNR=26						
VBMS	Vicksburg	145.39	14	P	PKPab	01 01 00.6	+0.3
	baz=343						
Z53A	Monticello	145.42	4	P	PKPbc	01 01 00.2	0.0
	baz=356,SNR=22						
147A	Livingston	145.43	11	P	PKPbc	01 01 00.3	0.0
	baz=347,SNR=13						
Z52A	Williamson	145.45	5	P	PKPab	01 01 00.6	+0.1
	baz=354,SNR=35						
Z54A	Sparta	145.50	3	P	PKPbc	01 01 00.4	0.0
	baz=357,SNR=13						
Z55A	Blythe	145.54	2	P	PKPbc	01 01 00.5	0.0
	baz=358,SNR=5.3						
148A	Greensboro	145.58	10	P	PKPbc	01 01 00.6	-0.1
	baz=348,SNR=24						
833A	Chaparral WMA,	145.61	29	P	PKPab	01 01 02.3	+1.0
	baz=326						
NHSC	New Hope	145.66	359	*e*PKPbc	PKPab	01 01 01.4	+0.1
149A	Jones	145.75	9	P	PKPdf	01 01 01.0	+0.2
	baz=350,SNR=14						
150A	Eclectic	145.85	7	P	PKPbc	01 01 01.4	-0.1
	baz=351,SNR=24						
246A	Jackson Lee, B	145.90	12	P	PKPab	01 01 02.2	-0.1
	baz=346						
152A	Waverly Hall	145.94	5	P	PKPbc	01 01 01.9	+0.1
	baz=354,SNR=20						
151A	Opelika	146.01	6	P	PKPbc	01 01 01.9	-0.1
	baz=352,SNR=22						
153A	Fort Valley	146.03	4	P	PKPbc	01 01 02.3	+0.3
	baz=355						
154A	Montrose	146.11	3	P	PKPbc	01 01 02.5	+0.2
	baz=356,SNR=9.2						
156A	Sylvania	146.12	1	P	PKPbc	01 01 02.6	+0.3
	baz=359						
155A	Kite	146.13	2	P	PKPbc	01 01 02.7	+0.3
	baz=358,SNR=12						
CPUP	Villa Florida	146.29	221	PKPbc	PKPbc	01 01 02.9	-0.1
	comp=Z,16nm,0.8s,baz=131,slow=1.7,SNR=32						
CPUP				pPKPbc	pPKPdf	01 01 26.7	+0.7
	comp=Z,13nm,1.0s,baz=122,slow=5.2,SNR=5.4						
249A	Camden	146.31	9	P	PKPbc	01 01 03.3	+0.4
	baz=349,SNR=17						
251A	Midway	146.43	7	P	PKPbc	01 01 03.6	+0.3
	baz=352,SNR=30						
250A	Grady	146.44	8	P	PKPbc	01 01 03.5	+0.2
	baz=351,SNR=6.2						
253A	Americus	146.59	5	P	PKPbc	01 01 03.7	0.0
	baz=354,SNR=6.2						
252A	Lumpkin	146.60	6	P	PKPbc	01 01 04.0	+0.2
	baz=353,SNR=7.7						
254A	Abbeville	146.76	3	P	PKPbc	01 01 04.5	+0.2
	baz=356						
256A	Glennville	146.79	1	P	PKPbc	01 01 04.6	+0.3
	baz=358						
255A	Hazlehurst	146.82	2	P	PKPbc	01 01 04.8	+0.4
	baz=357,SNR=5.6						
349A	Repton	146.91	10	P	PKPbc	01 01 05.2	+0.5
	baz=349,SNR=7.0						
350A	Dozier	146.98	8	P	PKPbc	01 01 05.4	+0.5
	baz=350						
352A	Blakely	147.09	6	P	PKPbc	01 01 05.3	+0.1
	baz=353,SNR=7.8						
BRAL	Brewton	147.11	9	P	PKPbc	01 01 05.6	+0.3
	baz=349						
351A	Pinckard	147.22	7	P	PKPbc	01 01 05.9	+0.4
	baz=352,SNR=7.3						
TIGA	Tifton	147.25	4	P	PKPbc	01 01 05.8	+0.2
	baz=355						
353A	Camilla	147.29	5	P	PKPbc	01 01 06.0	+0.3
	baz=354,SNR=6.2						
355A	Pearson	147.39	3	P	PKPbc	01 01 06.6	+0.6
	baz=357						
356A	Blackshear	147.44	2	P	PKPbc	01 01 06.8	+0.6
	baz=358						
449A	Pace	147.49	10	P	PKPbc	01 01 07.2	+0.9
	baz=348						
450A	Crestview	147.54	9	P	PKPbc	01 01 07.2	+0.8
	baz=350						
452A	Marianna	147.69	7	P	PKPbc	01 01 07.4	+0.6
	baz=352						
453A	Whigham	147.77	5	P	PKPbc	01 01 07.9	+0.9
	baz=354						
451A	Vernon	147.85	8	P	PKPbc	01 01 08.2	+0.9
	baz=351						
454A	Quitman	147.97	4	P	PKPbc	01 01 08.0	+0.4
	baz=355						
455A	Stateville	147.98	3	P	PKPbc	01 01 08.2	+0.6
	baz=356						
456A	Hilliard	148.04	2	P	PKPbc	01 01 08.7	+0.9
	baz=358						
457A	Yulee	148.15	1	P	PKPbc	01 01 08.8	+0.7
	baz=359						
552A	Lynn Haven	148.38	7	P	PKiKP	01 01 09.6	-0.7
	baz=352						
553A	Crawfordville	148.42	6	P	PKiKP	01 01 09.8	-0.6
	baz=354						
554A	Perry	148.59	4	P	PKiKP	01 01 10.3	-0.4
	baz=355						
555A	McAlpin	148.60	3	P	PKiKP	01 01 10.1	-0.6
	baz=356						
556A	Lake Butler	148.74	2	P	PKPbc	01 01 10.4	+0.7
	baz=357						
557A	Orange Park	148.75	1	P	PKPbc	01 01 10.2	+0.6
	baz=359						
657A	Interlachen	149.18	1	P	PKPbc	01 01 11.3	+0.6
	baz=358						
658A	Bunnell	149.35	0	P	PKPbc	01 01 11.6	+0.5
	baz=360						
656A	Willston	149.37	2	P	PKiKP	01 01 11.8	-0.5
	baz=357						
757A	Oxford	149.81	2	P	PKPbc	01 01 12.8	+0.4
	baz=358						
857A	Zephyrhills	150.48	2	P	PKPbc	01 01 14.2	+0.3
	baz=358						
858A	St. Cloud	150.55	0	P	PKPbc	01 01 14.3	+0.2
	baz=359						
DWPF	Disney Wildern	150.65	1	P	PKPbc	01 01 14.7	+0.3
	baz=359						
859A	Kempfer Cattle	150.70	360	P	PKiKP	01 01 15.0	-0.1
	baz=0.3						
LCO	Las Campanas	150.81	199	*e*PKPbc	PKiKP	01 01 15.6	-0.1
LCO	Las Campanas	150.81	199	*e*PKIKP	PKiKP	01 01 15.6	-0.1
958A	Wauchula	151.17	1	P	PKiKP	01 01 16.1	0.0
	baz=359						
959A	Okeechobee	151.24	360	P	PKiKP	01 01 16.2	0.0
	baz=0.4						
058A	Arcadia	151.69	1	P	PKPbc	01 01 17.0	+0.2
	baz=358						
059A	Moore Haven	151.79	0	P	PKiKP	01 01 17.3	-0.1
	baz=360						
059Z	Ave Maria	152.42	1	P	PKiKP	01 01 18.7	0.0
	baz=359						

IDC 07 00:42:44.0±5.3**, 11°.77S**×**164°.34E, h0^{km}, mb3.7**/3**, mb1 4.1**/3**, mb1mx3.7**/37**, mbtmp3.7**/3**, Error ellipse: s-maj=279.1km s-min=34.1km az=140.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	29.94	250	P	P	00 48 55.0	+0.9
	1.2nm,0.9s,baz=80,slow=8.9,SNR=5.0						
ASAR	Alice Springs	31.23	244	P	P	00 49 04.7	-0.9
	0.7nm,0.7s,baz=68,slow=9.5,SNR=5.0						
ILAR	Eielson Array	84.64	19	P	P	00 55 19.1	0.0
	0.4nm,0.6s,baz=240,slow=5.4,SNR=5.6						

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*IDC **07** 00:52:21.3±1.4, 10°.87S×164°.37E, h0^{km}, mb3.7/5, mb1 4.0/7, mb1mx3.8/40, mbtmp3.9/7, ML4.2/2, Error ellipse: s-maj=32.6km s-min=25.9km az=136.0*

*ISCJB **07** 00:52:24.0±1.1, 11°.0S±0°.1×164°.3E±0°.1, h29^{km}, mb3.6/5, Error ellipse: s-maj=22.2km s-min=11.5km az=35.7*

ISC 07 00:52:25.7±1.2**, 10°.9S**±0°.1×**164°.4E**±0°.1**, h29^{km}, n7, σ0ˢ.72**/8**, mb3.5**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.58	288	Pn	Pn	00 53 33.3	+0.3
	20nm,0.3s,baz=191,slow=5.2,SNR=2.5						
HNR				Sn	Sn	00 54 25.3	0.0
	9.9nm,0.3s,baz=180,slow=20,SNR=3.0						
DZM	Mont Dzumac	11.29	170	Pn	Pn	00 55 05.6	+0.4
	1.0nm,0.3s,baz=320,slow=23,SNR=9.0						
WRA	Warramunga Arr	30.25	249	P	P	00 58 34.4	0.0
	0.6nm,0.8s,baz=79,slow=9.2,SNR=2.9						
ASAR	Alice Springs	31.64	242	P	P	00 58 46.3	-0.4
	0.5nm,0.8s,baz=62,slow=12,SNR=2.8						
FITZ	Fitzroy Crossi	38.10	255	P	P	00 59 41.6	-0.8
	0.9nm,0.5s,baz=73,slow=8.9,SNR=7.5						
SONM	Songino Array	77.75	324	P	P	01 04 21.2	+1.0
	0.2nm,0.7s,baz=116,slow=6.6,SNR=2.6						
ILAR	Eielson Array	83.82	19	P	P	01 04 51.4	-0.7
	1.3nm,0.8s,baz=228,slow=6.4,SNR=9.6						

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*IDC **07** 00:53:46.4±1.5, 10°.76S×164°.36E, h0^{km}, mb3.8/5, mb1 4.1/8, mb1mx3.9/43, mbtmp4.0/8, ML4.4/3, Error ellipse: s-maj=37.7km s-min=26.1km az=128.0*

*ISCJB **07** 00:53:49.2±1.0, 10°.9S±0°.1×164°.2E±0°.1, h29^{km}, mb3.7/5, Error ellipse: s-maj=19.5km s-min=11.6km az=33.2*

ISC 07 00:53:50.9±1.1**, 10°.8S**±0°.1×**164°.3E**±0°.1**, h29^{km}, n8, σ0ˢ.87**/9**, mb3.9**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.47	287	Pn	Pn	00 54 57.5	+0.8
	77nm,0.3s,baz=141,slow=9.5,SNR=5.2						
HNR				Sn	Sn	00 55 46.7	-1.1
	13nm,0.3s,baz=195,slow=16,SNR=1.3						
DZM	Mont Dzumac	11.40	170	Pn	Pn	00 56 31.6	-0.2
	1.2nm,0.3s,baz=324,slow=19,SNR=8.4						
CTA	Charters Tower	19.65	240	P	Pn	00 58 20.0	+0.9
	0.4nm,0.3s,baz=70,slow=13,SNR=3.5						
WRA	Warramunga Arr	30.21	249	P	P	00 59 59.0	-0.2
	0.6nm,0.6s,baz=79,slow=9.5,SNR=4.7						
FITZ	Fitzroy Crossi	38.05	254	P	P	01 01 06.6	-0.5
	1.7nm,0.5s,baz=91,slow=8.3,SNR=7.7						
SONM	Songino Array	77.62	324	P	P	01 05 45.5	+0.9
	0.3nm,0.5s,baz=141,slow=6.7,SNR=2.5						
ILAR	Eielson Array	83.75	19	P	P	01 06 16.7	-0.2
	0.9nm,1.0s,baz=228,slow=5.9,SNR=3.6						
MKAR	Makanchi Array	92.36	317	P	P	01 06 57.9	-0.8
	0.4nm,0.7s,baz=90,slow=8.7,SNR=4.2						

IDC 07 00:55:29.6±1.3**, 11°.67S**×**164°.87E, h0^{km}, mb3.9**/4**, mb1 4.3**/5**, mb1mx3.9**/39**, mbtmp4.0**/5**, ML3.5**/1**, Error ellipse: s-maj=49.0km s-min=26.5km az=138.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.45	172	Pn	Pn	00 58 01.1	+0.2
	0.4nm,0.3s,baz=322,slow=17,SNR=3.3						
WRA	Warramunga Arr	30.47	250	P	P	01 01 44.8	+0.4
	1.8nm,0.6s,baz=82,slow=9.2,SNR=11						
ASAR	Alice Springs	31.75	244	P	P	01 01 55.3	-0.5
	1.5nm,0.8s,baz=73,slow=8.8,SNR=8.7						
ILAR	Eielson Array	84.37	19	P	P	01 08 03.2	-0.3
	0.7nm,0.7s,baz=235,slow=5.3,SNR=7.2						
NVAR	Mina Array Bea	87.08	50	P	P	01 08 18.1	+0.3
	0.4nm,0.6s,baz=218,slow=5.7,SNR=3.4						

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*IDC **07** 00:56:41.1±0.6, 11°.63S×164°.85E, h0^{km}, mb4.6/17, mb1 4.7/20, mb1mx4.5/41, mbtmp4.5/20, ML4.2/3, Error ellipse: s-maj=18.3km s-min=15.8km az=141.0*

*NEIC **07** 00:56:43.1±0.2, 11°.65S×164°.79E, h10^{km}, mb5.0/55, Error ellipse: s-maj=9.0km s-min=5.8km az=157.0*

*ISCJB **07** 00:56:46.9±1.7, 11°.69S±0°.07×164°.69E±0°.05, h46^{km}±14^{km}, mb4.9/80, Error ellipse: s-maj=11.6km s-min=7.5km az=2.8*

ISC 07 00:56:47.0±1.3**, 11°.74S**±0°.08×**164°.90E**±0°.08**, h40^{km}**±11^{km}**, n145, σ1ˢ.49**/155**, mb5.0**/80**, 2C-1D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.38	295	*e*Pn	Pn	00 58 04.0	-0.8
HNR				*e*S	Sn	00 59 06.5	+0.9
HNR	Honiara	5.38	295	Pn	Pn	00 58 03.4	-1.4
	22nm,0.3s,baz=151,slow=19,SNR=4.0						
HNR				Sn	Sn	00 59 05.0	-0.6
	baz=24,slow=20,SNR=2.4						
DZM	Mont Dzumac	10.38	172	Pn	Pn	00 59 12.2	-1.2
	1.1nm,0.3s,baz=41,slow=8.4,SNR=21						
MSVF	Nonsavu	14.04	117	*e*Pn	P	01 00 08.1	-2.4
CTA	Charters Tower	19.74	243	P	P	01 01 13.1	-0.5
	0.4nm,0.3s,baz=58,slow=11,SNR=5.7						
CTAO	Charters Tower	19.74	243	*e*P	Pn	01 01 15.5	+0.3
	33nm,1.1s						
URZ	Urewera	28.57	160	P	P	01 02 41.3	+2.2
	13nm,1.0s,baz=285,slow=12,SNR=4.2						
H11S2	WAKE ISLAND Hy	30.09	3	T	T	01 34 19.5	
	baz=184,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	30.10	3	T	T	01 34 18.8	
	baz=184,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	30.11	3	T	T	01 34 19.3	
	baz=184,slow=76,SNR=20						
WRAB	Tennant Creek	30.46	251	*e*P	P	01 02 55.9	-0.2
	34nm,1.4s						
WB2	Warramunga Arr	30.46	251	*e*P	P	01 02 55.5	-0.6
WB2				*e*PcP	PcP	01 05 55.7	+0.7
WRA	Warramunga Arr	30.47	251	P	P	01 02 56.0	-0.3
	15nm,1.1s,baz=81,slow=9.0,SNR=15						
WRA				PcP	PcP	01 05 55.8	+0.7
	1.9nm,0.9s,baz=78,slow=2.6,SNR=6.4						
AS01	Alice Springs	31.70	244	*e*P	P	01 03 06.0	-1.1
AS01				*e*PcP	PcP	01 05 58.2	-0.1
ASAR	Alice Springs	31.74	244	P	P	01 03 06.5	-0.9
	3.8nm,0.9s,baz=73,slow=9.1,SNR=14						
ASAR				PcP	PcP	01 05 58.8	+0.3
	1.6nm,1.0s,baz=78,slow=3.6,SNR=5.4						
FITZ	Fitzroy Crossi	38.40	256	P	P	01 04 03.5	-1.3
	3.8nm,1.0s,baz=84,slow=7.4,SNR=5.4						
MBWA	Marble Bar	44.19	252	*e*P	P	01 04 52.0	-0.4
	176nm,1.5s						
MJAR	Matsushiro Arr	54.21	334	P	P	01 06 07.9	-0.8
	1.5nm,0.4s,baz=172,slow=8.9,SNR=7.7						
ASAJ	Asahikawa	59.18	341	P	P	01 06 42.3	-1.5
	9.3nm,0.8s,baz=223,slow=9.8						
NJ2	Nanjing	61.94	316	*e*P	P	01 07 03.3	+0.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	Ussuriysk Ar.	63.20	334	P	P	01 07 10.8	-0.3
	comp=Z,2.9nm,0.9s,baz=134,slow=8.2,SNR=4.8						
WHN	Wuhan	64.24	312	⇑P	P	01 07 13.9	-4.2
PETK	Petropavlovsk-	64.89	355	P	P	01 07 21.8	-0.1
	comp=Z,4.4nm,0.8s,baz=133,slow=10,SNR=5.2						
PSI	Prapat	67.14	278	P	P	01 07 36.8	-0.6
	comp=Z,2.3nm,0.3s,baz=182,slow=7.6,SNR=7.4						
ENH	Enshi	67.70	310	*e*P	P	01 07 40.5	0.0
	comp=Z,15nm,1.1s						
GYA	Guiyang	68.13	305	P	P	01 07 45.0	+1.7
GYA				PP	PP	01 10 17.2	+3.0
GYA				S	S	01 16 41.8	+1.0
GYA				SKS	SKiKP	01 17 36.3	+0.5
GYA	Guiyang	68.13	305	SS	SS	01 21 05.0	+0.7
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.7s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
BJI	Beijing	68.51	322	*e*P	P	01 07 45.7	+0.5
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN	Xi'an	69.98	313	P	P	01 07 54.2	-0.4
XAN				pP	pP	01 08 02.6	-2.6
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KMI	Kunming	70.78	302	P	P	01 08 01.9	+2.0
KMI				pP	pP	01 08 12.1	+1.6
KMI				sP	pwP	01 08 17.5	+1.1
KMI				pmax	pmax		
	comp=Z,11nm,1.7s						
CM01	Chiang Mai Arr	71.61	294	*e*P	P	01 08 05.1	+0.4
CM31	Chiang Mai Arr	71.63	294	*e*P	P	01 08 06.2	+1.3
CMAR	Chiang Mai Arr	71.63	294	P	P	01 08 05.0	+0.1
	comp=Z,1.3nm,0.3s,baz=118,slow=3.8,SNR=10						
HHC	Hu-ho-hao-te	71.83	320	*e*P	P	01 08 08.6	+2.8
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,930nm,5.1s						
HIA	Hailar	72.57	331	*e*P	P	01 08 08.8	-1.1
	comp=Z,15nm,1.0s						
LZH	Lanzhou	74.61	313	*e*P	P	01 08 23.9	+1.5
LZH				pP	pP	01 08 29.8	-3.3
LZH				sP	PcP	01 08 34.0	-2.6
LZH				PP	PP	01 11 13.4	+3.6
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,91nm,4.3s						
LZH				LR	LR		
	comp=N,450nm,16.6s						
LZH				LR	LR		
	comp=E,520nm,16.1s						
LZH				LR	LR		
	comp=Z,520nm,18.7s						
QSPA	South Pole Qui	78.26	180	*e*P	P	01 08 42.8	+0.3
	comp=Z,25nm,0.9s						
ULN	Ulaanbaatar	78.38	324	*e*P	P	01 08 44.1	+0.6
	comp=Z,8.8nm,0.8s						
ULN				*e*PcP	PcP	01 08 52.0	-0.5
SONM	Songino Array	78.74	324	P	P	01 08 45.6	+0.3
	comp=Z,3.7nm,1.0s,baz=135,slow=5.7,SNR=16						
SONA1	Songino Array	78.74	324	*e*P	P	01 08 44.9	-0.5
GTA	Gaotai	78.95	314	⇓P	P	01 08 47.8	+1.1
GTA				pP	PcP	01 08 52.5	-2.7
GTA				sP	pP	01 08 54.9	-2.6
GTA				pmax	pmax		
	comp=Z,11nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,5.9s						
GTA				LR	LR		
	comp=N,470nm,20.0s						
GTA				LR	LR		
	comp=E,520nm,18.1s						
GTA				LR	LR		
	comp=Z,750nm,18.4s						
BILL	Bilibino	79.58	1	*e*P	P	01 08 48.8	-0.5
	comp=Z,16nm,1.1s						
BILL				*e*PcP	PcP	01 08 57.3	+0.2
TLY	Talaya	82.24	327	*e*P	P	01 09 03.6	-0.3
MDM	Murphy Dome	84.15	18	*e*P	P	01 09 12.9	-0.6
	comp=Z,6.7nm,1.0s						
HDA	Harding Lake	84.17	19	P	P	01 09 13.3	-0.3
	baz=227						
RIDG	Independ’e Rid	84.41	20	*e*P	P	01 09 15.4	+0.5
	comp=Z,26nm,1.5s						
ILAR	Eielson Array	84.44	19	P	P	01 09 14.2	-0.7
	comp=Z,3.4nm,0.7s,baz=234,slow=5.6,SNR=24						
ILB	Eielson Array	84.44	19	*e*P	P	01 09 14.2	-0.7
IL1	Eielson Array	84.44	19	*e*P	P	01 09 13.2	-1.7
SCRK	Sand Creek	84.85	20	*e*P	P	01 09 17.2	0.0
	comp=Z,14nm,1.2s						
ORV	Oroville	85.09	48	*e*P	P	01 09 21.3	+2.5
	comp=Z,7.8nm,1.1s						
AFDM	Forest Hills D	85.28	49	*e*P	P	01 09 20.9	+1.1
	comp=Z,15nm,1.3s						
CMB	Columbia Colle	85.42	50	*e*P	P	01 09 20.9	+0.3
	comp=Z,35nm,1.1s						
WAKR	Walker	86.28	50	*e*P	P	01 09 27.1	+2.1
	comp=Z,25nm,1.5s						
MDPB	Devils Postpil	86.28	51	*e*P	P	01 09 26.1	+1.0
	comp=Z,13nm,1.2s						
EDW2	Edwards Air Fo	86.30	53	P	P	01 09 26.1	+1.1
	baz=253						
EGAK	Eagle	86.31	20	*e*P	P	01 09 24.2	-0.1
	comp=Z,17nm,1.3s						
PNTR	Pine Nut	86.34	49	*e*P	P	01 09 27.2	+1.9
	comp=Z,12nm,1.2s						
TOLK	Toolik Lake Re	86.38	15	P	P	01 09 24.8	+0.2
	baz=225						
BFSC	Mount Baldy Ra	86.38	54	P	P	01 09 26.7	+1.2
	baz=253						
CWC	Cottonwood Cre	86.69	52	P	P	01 09 27.6	+0.6
	baz=253						
PAHR	Pah Rah Range	86.69	48	*e*P	P	01 09 28.1	+1.1
	comp=Z,18nm,1.4s						
LRMC	Laurel Mtn Rad	86.72	53	P	P	01 09 27.8	+0.7
	baz=253						
MONP2	Monument Peak	86.99	56	P	P	01 09 30.2	+1.6
	baz=254						
MPMC	Manual Prospec	87.03	52	P	P	01 09 29.8	+1.0
	baz=253						
NV01	Mina Array Sit	87.11	50	*e*P	P	01 09 29.2	+0.2
NVAR	Mina Array Bea	87.11	50	P	P	01 09 29.3	+0.2
	comp=Z,7.9nm,1.1s,baz=234,slow=7.2,SNR=12						
G05D	Wamic, OR	87.13	43	P	P	01 09 31.1	+2.3
	baz=250						
PFO	Pinyon Flats O	87.16	55	P	P	01 09 28.4	-0.9
	baz=254						
IKP	In-Ko-Pah, Jac	87.18	56	P	P	01 09 31.5	+2.1
	baz=254						
KVN	Kaiserville	87.44	49	*e*P	P	01 09 31.2	+0.6
	comp=Z,14nm,1.5s						
BELC	Belle Mtn. Jos	87.64	55	P	P	01 09 32.4	+0.8
	baz=254						
FURC	Furnace Creek,	87.64	52	P	P	01 09 32.3	+0.9
	baz=254						
I07A	Izee	87.97	44	*e*P	P	01 09 33.3	+0.3
	comp=Z,12nm,1.3s						
WVOR	Wild Horse Val	88.07	46	*e*P	P	01 09 34.4	+0.9
	comp=Z,14nm,1.4s						
GMRC	Granite Mounta	88.12	54	P	P	01 09 34.8	+1.0
	baz=254						
TPNV	Topopah Spring	88.24	52	*e*P	P	01 09 37.5	+3.0
GLA	Glamis	88.33	56	P	P	01 09 36.6	+1.8
	baz=255						
IRM	Iron Mountain	88.36	55	P	P	01 09 36.1	+1.1
	baz=255						
J08A	Circle Bar Ran	88.46	45	*e*P	P	01 09 36.1	+0.9
	comp=Z,15nm,1.4s						
LDFC	Landfair	88.63	54	*e*P	P	01 09 37.5	+1.2
	comp=Z,22nm,1.1s						
Y12C	Blythe	88.75	55	*e*P	P	01 09 38.0	+1.3
	comp=Z,16nm,1.2s						
Y12C	Blythe	88.75	55	P	P	01 09 38.1	+1.3
	baz=255						
SHPR	Sheep Range	88.97	53	*e*P	P	01 09 39.2	+1.3
	comp=Z,9.7nm,1.2s						
WMQ	Urumqi	89.00	315	*e*P	P	01 09 38.2	+0.4
WMQ	Urumqi	89.00	315	SKS	SKSac	01 19 56.2	-8.2
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,8.1s						

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WMQ                                 LR        LR
      comp=N,930nm,24.1s
WMQ                                 LR        LR
      comp=E,1µm,20.7s
WMQ                                 LR        LR
      comp=Z,850nm,20.7s
113A  Mohawk Valley,     89.12  56  eP        P         01 09 41.2 +2.8
      comp=Z,15nm,1.4s
R11A  Troy Canyon, C     89.13  51  eP        P         01 09 39.3 +0.7
      comp=Z,10nm,1.4s
R11A  Troy Canyon, C     89.13  51  P         P         01 09 38.9 +0.2
      baz=254
PDMCI Parker Dam,Lak     89.20  55  P         P         01 09 39.9 +1.1
      baz=255
W13A  Hualapai Mount     89.61  54  eP        P         01 09 41.5 +0.5
      comp=Z,14nm,1.4s
214A  Organ Pipe Nat     89.70  57  P         P         01 09 42.8 +1.5
      baz=256
Y14A  Wickenburg         90.02  55  eP        P         01 09 45.4 +2.6
      comp=Z,9.0nm,1.4s
ELK   Elko               90.03  48  eP        P         01 09 43.3 +0.4
      comp=Z,7.9nm,1.3s
F10A  Beach Ranch, E     90.08  43  eP        P         01 09 45.5 +2.7
      comp=Z,7.7nm,1.4s
MFID  Camas Ranch        90.32  46  eP        P         01 09 45.0 +1.0
      comp=Z,6.3nm,1.0s
PSUT  Pine Spring        90.49  51  eP        P         01 09 45.6 +0.5
      comp=Z,8.0nm,1.3s
LCMT  Little Creek M     90.58  52  eP        P         01 09 46.6 +1.2
      comp=Z,17nm,1.4s
CCUT  Cedar City         90.62  52  eP        P         01 09 47.0 +1.3
      comp=Z,18nm,1.4s
SZCU  Shurtz Canyon      90.85  52  eP        P         01 09 48.0 +1.3
      comp=Z,8.4nm,1.1s
SYO   Syowa Base         90.88 197⇑eP         P         01 09 48.6 +2.6
KNB   Kanab              90.91  52  eP        P         01 09 48.0 +1.0
      comp=Z,28nm,1.5s
U15A  North Rim          91.19  53  eP        P         01 09 49.3 +0.9
      comp=Z,19nm,1.3s
HLID  Hailey             91.36  46  eP        P         01 09 49.6 +0.7
      comp=Z,8.2nm,1.3s
HLID  Hailey             91.36  46  P         P         01 09 49.4 +0.5
      baz=255
X16A  Lo Mia Camp, P     91.40  55  eP        P         01 09 49.9 +0.6
      comp=Z,8.7nm,1.3s
PKCU  Pink Cliffs        91.41  52  eP        P         01 09 53.1 +3.6
      comp=Z,13nm,1.1s
TUC   Tucson             91.46  57  P         P         01 09 50.8 +1.3
      baz=257
MTPU  Mount Pierson      91.65  52  eP        P         01 09 51.0 +0.4
      comp=Z,14nm,1.3s
DUG   Dugway, Tooele     91.68  49  eP        P         01 09 53.5 +3.0
      comp=Z,8.9nm,1.4s
BGU   Big Grassy Mou     91.70  49  eP        P         01 09 51.4 +0.9
      comp=Z,8.1nm,1.3s
MSU   Marysvale          91.76  51  eP        P         01 09 52.6 +1.6
HVU   Hansel Valley      92.09  48  eP        P         01 09 53.0 +0.7
      comp=Z,22nm,1.4s
NLU   North Lily Min     92.17  50  eP        P         01 09 53.8 +1.0
      comp=Z,7.1nm,1.1s
MPU   Maple Canyon       92.52  50  eP        P         01 09 57.8 +3.4
      comp=Z,10nm,1.3s
X18A  Snowflake          92.62  55  eP        P         01 09 56.4 +1.4
      comp=Z,9.0nm,1.3s
MCMT  McKenzie Canyo     92.76  45  eP        P         01 09 56.5 +1.0
DLMT  Dillon             93.06  44  eP        P         01 09 57.3 +0.6
      comp=Z,11nm,1.0s
MK01  Makanchi Array     93.45 317  eP        P         01 09 58.1 -0.2
MK31  Makanchi Array     93.46 317  eP        P         01 09 58.7 +0.3
MKAR  Makanchi Array     93.46 317  eP        P         01 09 58.7 +0.3
      comp=Z,28nm,1.0s
MKAR  Makanchi Array     93.46 317  P         P         01 09 58.4  0.0
      comp=Z,3.6nm,0.8s,baz=99,slow=5.6,SNR=18
ZAA0  Zalesovo Array     93.64 324  eP        P         01 09 58.2 -0.7
      comp=Z,3.8nm,1.0s
ZALV  Zalesovo Beam      93.64 324  eP        P         01 09 57.6 -1.3
ZALV  Zalesovo Beam      93.64 324  P         P         01 09 58.0 -0.9
      comp=Z,3.0nm,1.0s,baz=113,slow=3.9,SNR=8.8
MAKZ  Makanchi           93.67 317  eP        P         01 09 59.6 +0.3
      comp=Z,9.4nm,1.1s
FXWY  Fox Creek          93.76  46  eP        P         01 10 00.9 +0.8
      comp=Z,3.6nm,1.0s
BOZ   Bozeman (W)        93.77  44  eP        P         01 10 00.5 +0.5
      comp=Z,6.8nm,1.1s
BOZ   Bozeman (W)        93.77  44  P         P         01 10 00.7 +0.8
      baz=257
121A  Cookes Peak, D     93.98  58  P         P         01 10 02.6 +1.3
      baz=259
H17A  Grant Village      94.24  46  P         P         01 10 04.3 +1.9
      baz=258
PDAR  Pinedale Array     94.63  47  eP        P         01 10 03.8 -0.3
PDAR  Pinedale Array     94.63  47  P         P         01 10 04.7 +0.6
      comp=Z,7.8nm,0.3s,baz=257,slow=3.6,SNR=10
O20A  White River Ci     95.09  50  P         P         01 10 07.4 +1.2
      baz=259
YKA   Yellowknife Ar     95.97  27  P         P         01 10 07.9 -1.5
      comp=Z,1.1nm,0.9s,baz=256,slow=4.5,SNR=12
YKB5  Yellowknife Ar     95.97  27  eP        P         01 10 07.7 -1.7
TXAR  Lajitas Array      96.89  62  P         P         01 10 15.5 +0.9
      comp=Z,0.4nm,0.7s,baz=216,slow=4.8,SNR=5.3
ARCES ARCESS Array B    116.80 345  PKP       PKPdf     01 15 25.5 -1.0
      comp=Z,1.1nm,0.7s,baz=11,slow=2.5,SNR=5.7
CPUP  Villa Florida     124.16 133  PKP       PKiKP     01 15 42.9 +0.6
      comp=Z,1.9nm,0.9s,baz=204,slow=7.8,SNR=3.2
BRTR  Keskin Array B    128.82 312  PKP       PKPdf     01 15 50.8 +0.1
      comp=Z,0.6nm,1.0s,baz=160,slow=4.6,SNR=3.0
GERES GERESS Array B    135.95 333  PKP       PKPdf     01 16 01.5 -2.2
      comp=Z,0.3nm,0.7s,baz=49,slow=4.1,SNR=4.6
ES19  SONSECA Array     150.44 342  ePKPbc    PKPbc     01 16 35.0 +0.4
ESDC  Sonseca Array     150.48 342  PKPbc     PKPbc     01 16 35.0 +0.3
      comp=Z,0.2nm,0.3s,baz=29,slow=2.9,SNR=4.0
TOA0  Torodi Ar. Sit    163.54 277  ePKPdf    PKPdf     01 16 46.4 -0.1
TOA0                                ePKPab    PKPab     01 17 38.7 +0.6
TORD  Torodi Ar. Bea    163.54 277  PKP       PKPdf     01 16 46.1 -0.3
      comp=Z,1.6nm,1.0s,baz=341,slow=3.1,SNR=7.4
TORD                                PKPab     PKPab     01 17 36.9 -1.2
      comp=Z,1.7nm,1.0s,baz=65,slow=2.9,SNR=7.0
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IGQ 07 00:57:27.4±0.4**, 2°S**±5°×**8°0W**±°**, h1^{km}, MLv3.6, Near coast of Ecuador**

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Code  Station Name        Δ°   AZ°   Phase ID              Time      Res
                                     Op        ISC       h  m  s    ISC
MILO  Milagro-Astudi     0.19  34   P         Pg        00 57 35.8 +4.8
MILO                                S         Sg        00 57 44.6  +11
COHC  Cochancay          0.41  94   P         Pb        00 57 37.6 +0.2
COHC                                S         Sb        00 57 47.0 +3.0
MORR  Playas El Morr     0.71 253   P         Pg        00 57 40.6 -0.4
MORR                                S         Sb        00 57 53.9 +1.2
BMAS  Trigal station     1.50  52   P         Pn        00 57 51.3 -4.5
BIL2  Estacion Bilba     1.51  50   P         Pn        00 57 52.0 -3.9
ARRY  Arrayan            1.52  52   P         Pn        00 57 51.7 -4.3
BBIL  Ulba Tungurahu     1.53  50   P         Pn        00 57 52.3 -3.9
BBIL                                S         Sg        00 58 11.2 -5.4
PAT1  Patacocha          1.53  53   P         Pn        00 57 52.3 -4.0
BPAT  Tungurahua Vol     1.54  53   P         Pn        00 57 52.2 -4.2
BPAT                                S         Sg        00 58 11.9 -5.0
JUI6  Juive              1.56  50   P         Pn        00 57 52.5 -4.1
POND  Pondoa             1.57  50   P         Pn        00 57 52.7 -4.1
POND                                S         Sn        00 58 12.2 -5.7
RUN5  Runtun             1.60  51   P         Pn        00 57 53.4 -3.7
BRUN  Tungurahua Vol     1.60  51   P         Pn        00 57 53.2 -4.0
BRUN                                S         Sn        00 58 13.3 -5.4
GONZ  Gonzanam           1.81 172   P         Pn        00 57 57.7 -2.3
PISA  Pisayambo          1.87  43   P         Pn        00 57 57.5 -3.5
MCRA  Macar, Loja        1.94 189   P         Pn        00 57 57.4 -4.1
PAST  Pastocalle         2.01  30   P         Pn        00 57 58.9 -4.0
BMOR  Cotopaxi Volca     2.08  35   P         Pn        00 57 59.8 -4.1
BNAS  Cotopaxi Volca     2.11  34   P         Pn        00 58 00.6 -3.7
BREF  Cotopaxi Volca     2.14  35   P         Pn        00 58 01.4 -3.4
NAS2  Nasa               2.14  34   P         Pn        00 58 01.5 -3.2
BTAM  Cotopaxi Volca     2.16  36   P         Pn        00 58 00.9 -4.1
BVC2  Cotopaxi Volca     2.16  35   P         Pn        00 58 01.2 -3.9
VC1   Cotopaxi 1         2.18  35   P         Pn        00 58 01.5 -3.8
COV1  Cotopaxi Volc      2.20  37   P         Pn        00 58 01.8 -3.9
PITA  Cotopaxi Volc      2.23  33   P         Pn        00 58 02.5 -3.5
NINA  Atacazo Ninahu     2.29  27   P         Pn        00 58 01.8 -4.9
ARDO  Archidona, Ten     2.35  52   P         Pn        00 58 04.2 -3.0
MAG1  Magdalena          2.35 357   P         Pn        00 58 00.2 -7.0
ANTM  Antisana-La Mi     2.37  37   P         Pn        00 58 05.0 -2.9
ANTG  Antisana-Guama     2.38  36   P         Pn        00 58 04.6 -3.4
ANTS  Antisana-Sarah     2.44  38   P         Pn        00 58 04.8 -4.0
GGPC  Guagua Pichinc     2.48  25   P         Pn        00 58 04.6 -4.9
YANA  Yana               2.55  25   P         Pn        00 58 05.5 -4.8
PAC1  Pacto, Paraso      2.82  18   P         Pn        00 58 06.9 -6.8
CUIC  Cuicocha-Domo      3.02  26   P         Pn        00 58 11.1 -5.6
URCU  Urcuqui            3.18  26   P         Pn        00 58 13.9 -5.1
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IDC ***07*** *01:00:42.8±0.5, 11°79S×165°07E, h0^{km}, mb4.8/22, mb1 4.9/25, mb1mx4.7/46, mbtmp4.8/25, ML4.9/3, MS4.3/1, Ms1 4.3/1, ms1mx3.6/31, Error ellipse: s-maj=17.9km s-min=13.0km az=122.0*

ISCJB ***07*** *01:00:45.4±0.1, 11°83S±0°03×164°87E±0°03, h21^{km}, mb5.0/141, Error ellipse: s-maj=4.8km s-min=3.5km az=152.9*

NEIC ***07*** *01:00:45.1±0.1, 11°80S×164°87E, h10^{km}, mb5.1/106, Error ellipse: s-maj=5.1km s-min=4.2km az=139.0*

MOS ***07*** *01:00:47.4±0.9, 11°60S×164°76E, h33^{km}, mb5.2/35, Error ellipse: s-maj=9.1km s-min=8.5km az=176.9*

ISC 07 01:00:45.2±1.0**, 11°81S**±0°05×**165°00E**±0°06**, h13^{km}**±6^{km}**, n351, σ1^{s}24**/360**, mb5.1**/141**, 5C-11D, Santa Cruz Islands**

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Code  Station Name        Δ°   AZ°   Phase ID              Time      Res
                                     Op        ISC       h  m  s    ISC
HNR   Honiara            5.50 295   eP        Pn        01 02 07.0 +0.1
HNR                                 eS        Sn        01 03 10.0 -0.1
HNR   Honiara            5.50 295   ePn       Pn        01 02 04.9 -2.0
HNR                                 eSn       Sn        01 03 07.4 -2.7
HNR   Honiara            5.50 295   eP        Pn        01 02 04.9 -2.0
HNR                                 e                   01 03 07.4
HNR   Honiara            5.50 295   Pn        Pn        01 02 07.6 +0.7
      123nm,0.3s,baz=145,slow=8.7,SNR=9.0
HNR                                 Sn        Sn        01 03 08.2 -1.9
      64nm,0.3s,baz=197,slow=20,SNR=7.2
HNR                                 LR        LR        01 04 30.7
      comp=Z,3µm,18.8s,baz=330,slow=41
MARNC Mare, Loyalty     10.05 164   ePn       Pn        01 03 09.3  0.0
DZM   Mont Dzumac       10.30 173   ePn       Pn        01 03 13.9 +1.0
DZM   Mont Dzumac       10.30 173   Pn        Pn        01 03 13.7 +0.8
      5.9nm,0.3s,baz=307,slow=16,SNR=30
ONTNC Ouen Toro         10.54 173   ePn       Pn        01 03 17.1 +1.1
PINNC Pines Island,     11.00 168   ePn       Pn        01 03 23.4 +1.1
PINNC                               eSn       Sn        01 05 21.6 -3.7
MSVF  Nonsavu           13.92 117   ePn       P         01 04 08.9 -1.7
MSVF  Nonsavu           13.92 117   eP        P         01 04 08.9 -1.7
EIDS  Eidsvold          18.85 222   P         Pn        01 05 07.7 +2.1
      baz=19,SNR=4.2
EIDS  Eidsvold          18.85 222   eP        Pn        01 05 08.2 +2.5
      54nm,1.3s
CTA   Charters Tower    19.80 243   P         Pn        01 05 17.5 +0.3
      1.3nm,0.3s,baz=76,slow=12,SNR=21
CTAO  Charters Tower    19.80 243   eP        P         01 05 13.5 -2.1
      50nm,0.9s
CTAO  Charters Tower    19.80 243   eP        P         01 05 13.5 -2.1
CTAO                                pmax      pmax
      comp=Z,50nm,0.9s
MANU  Manus Island      20.00 298   eP        P         01 05 17.8 +0.1
      comp=Z,70nm,0.8s
MTSU  Mount Surprise    20.94 250   P         Pn        01 05 29.7 -0.8
      baz=21,SNR=12
RMQ   Roma              21.15 224   P         P         01 05 32.6 +2.4
      baz=21,SNR=24
COEN  Coen              21.39 262   P         P         01 05 33.8 +1.0
      baz=22,SNR=11
COEN  Coen              21.39 262   eP        P         01 05 34.2 +1.4
      comp=Z,40nm,1.1s
ARMA  Armidale          22.29 212   P         P         01 05 45.6 +3.1
      baz=22,SNR=4.4
QLP   Quilpie           24.45 230   P         P         01 06 04.5 +0.5
      baz=25,SNR=5.0
MGCD  Mangrove Creek    24.82 209   P         P         01 06 09.6 +2.3
      baz=25,SNR=5.5
RIV   Riverview         25.31 208   P         P         01 06 14.2 +2.5
      baz=26,SNR=4.3
QIS   Mount Isa         25.87 247   P         P         01 06 17.2 +0.3
      baz=26,SNR=14
CMSA  Cobar Meteorol    26.52 219   P         P         01 06 23.6 +0.9
      baz=27,SNR=15
HIZ   Hauiti            28.01 163   eP        P         01 06 37.1 +1.1
      comp=Z,53nm,1.2s
URZ   Urewera           28.48 160   eP        P         01 06 41.6 +1.5
      comp=Z,33nm,1.4s
BKZ   Black Stump Fm    29.10 161   eP        P         01 06 48.1 +2.4
      comp=Z,25nm,1.1s
STKA  Stephens Creek    29.39 224   P         P         01 06 49.1 +0.7
      baz=30,SNR=7.3
STKA  Stephens Creek    29.39 224   eP        P         01 06 49.1 +0.7
      comp=Z,2.6nm,0.9s
STKA                                ePcP      PcP       01 09 54.1 -0.4
STKA  Stephens Creek    29.39 224   eP        P         01 06 49.1 +0.7
STKA                                e                   01 09 54.1
STKA                                pmax      pmax
      comp=Z,3.0nm,0.9s
STKA  Stephens Creek    29.39 224   P         P         01 06 49.0 +0.7
      comp=Z,11nm,0.8s,baz=28,slow=9.2,SNR=9.4
STKA                                PcP       PcP       01 09 54.1 -0.4
      comp=Z,1.7nm,0.6s,baz=64,slow=6.4,SNR=2.9
H11S2 WAKE ISLAND Hy    30.15   3   T         T         01 38 29.8
      baz=184,slow=76,SNR=7.2
H11S3 WAKE ISLAND Hy    30.15   3   T         T         01 38 29.5
      baz=184,slow=76,SNR=7.3
H11S1 WAKE ISLAND Hy    30.17   3   T         T         01 38 31.2
      baz=184,slow=76,SNR=5.2
BFZ   Birch Farm        30.42 163   eP        P         01 06 57.2 -0.1
      comp=Z,23nm,0.9s
WRAB  Tennant Creek     30.53 251   eP        P         01 06 57.4 -1.2
      comp=Z,112nm,1.4s
WRAB  Tennant Creek     30.53 251⇓iP          P         01 06 57.9 -0.7
WRAB                                pmax      pmax
      comp=Z,97nm,1.7s
WB2   Warramunga Arr    30.53 251   eP        P         01 06 57.7 -0.9
WR1   Warramunga Arr    30.54 251   eP        P         01 06 58.4 -0.4
      comp=Z,122nm,1.4s
WR1                                 ePcP      PcP       01 09 57.2 -0.4
WRA   Warramunga Arr    30.54 251   P         P         01 06 58.4 -0.4
      comp=Z,19nm,0.6s,baz=81,slow=8.9,SNR=100
WRA                                 PcP       PcP       01 09 57.2 -0.4
      comp=Z,3.0nm,0.8s,baz=75,slow=2.9,SNR=8.0
THZ   Tophouse          30.64 168   eP        P         01 06 57.2 -2.1
      comp=Z,38nm,1.4s
TOO   Toolangi          31.05 211   P         P         01 07 04.1 +1.1
      baz=31,SNR=5.4
H11N1 WAKE ISLAND Hy    31.38   3   T         T         01 39 59.5
      baz=182,slow=76,SNR=7.3
H11N3 WAKE ISLAND Hy    31.38   3   T         T         01 39 59.1
      baz=182,slow=76,SNR=8.6
KHZ   Kahutara          31.39 168   eP        P         01 07 03.5 -2.3
      comp=Z,34nm,1.3s
H11N2 WAKE ISLAND Hy    31.39   3   T         T         01 40 00.6
      baz=182,slow=76,SNR=7.1
AS01  Alice Springs     31.76 244   eP        P         01 07 08.2 -1.2
KDU   Kakadu            31.79 265   P         P         01 07 08.4 -1.3
      baz=32,SNR=4.5
AS31  Alice Springs     31.80 244   eP        P         01 07 08.8 -1.0
      comp=Z,3.7nm,0.7s
AS31                                ePcP      PcP       01 10 00.8 -0.2
ASAR  Alice Springs     31.80 244   P         P         01 07 08.8 -1.0
      comp=Z,14nm,0.8s,baz=73,slow=9.4,SNR=57
ASAR                                PcP       PcP       01 10 00.8 -0.2
      comp=Z,3.1nm,0.8s,baz=77,slow=2.5,SNR=8.1
FOZ   Fox Glacier       31.89 173   eP        P         01 07 10.5 +0.3
      comp=Z,24nm,1.0s
HTT   Hallett           32.13 224   P         P         01 07 12.7 +0.2
      baz=32,SNR=10
RPZ   Rata Peaks        32.22 172   P         P         01 07 12.7 -0.5
      comp=Z,12nm,0.7s,baz=320,slow=2.5,SNR=7.1
BBOO  Buckleboo         33.78 227   P         P         01 07 26.8 -0.2
      baz=34,SNR=12
BBOO  Buckleboo         33.78 227   eP        P         01 07 26.8 -0.2
      comp=Z,14nm,0.8s
KNRA  Kununurra         35.38 260   P         P         01 07 41.6 +0.6
      baz=36,SNR=7.0
WRKA  Warakurna         37.10 244   P         P         01 07 54.9 -0.8
      baz=37,SNR=9.0
FITZ  Fitzroy Crossi    38.48 256   P         P         01 08 07.2 -0.2
      baz=39,SNR=20
FITZ  Fitzroy Crossi    38.48 256   eP        P         01 08 07.2 -0.2
      comp=Z,25nm,0.8s
FITZ  Fitzroy Crossi    38.48 256   P         P         01 08 06.7 -0.7
      comp=Z,18nm,0.8s,baz=98,slow=6.5,SNR=36
FORT  Forrest           39.01 235   P         P         01 08 11.6 -0.1
      baz=39,SNR=7.8
FORT  Forrest           39.01 235   eP        P         01 08 11.9 +0.2
      comp=Z,55nm,0.9s
MBWA  Marble Bar        44.27 252   eP        P         01 08 55.1 +0.2
      comp=Z,60nm,1.0s
MEEK  Meekatharra       45.96 244   P         P         01 09 08.6 +0.2
      baz=46,SNR=14
KLBR  Kellerberrin      47.69 238   P         P         01 09 21.3 -0.4
      baz=48,SNR=6.7
BLDU  Ballidu           48.35 239   P         P         01 09 26.8 -0.1
      baz=48,SNR=4.6
NWAO  Narrogin (SRO)    48.44 236   P         P         01 09 27.6 +0.1
      baz=48,SNR=5.2
NWAO  Narrogin (SRO)    48.44 236   eP        P         01 09 27.6 +0.1
      comp=Z,48nm,1.0s
NWAO  Narrogin (SRO)    48.44 236   eP        P         01 09 27.6 +0.1
NWAO                                pmax      pmax
      comp=Z,48nm,1.0s
NWAO  Narrogin (SRO)    48.44 236   P         P         01 09 27.6 +0.1
      comp=Z,27nm,0.9s,baz=310,slow=7.9,SNR=8.3
MORW  Morawa            48.62 242   P         P         01 09 29.4 +0.3
      baz=49,SNR=11
MJAR  Matsushiro Arr    54.31 333   P         P         01 10 10.1 -1.4
      comp=Z,5.1nm,0.9s,baz=171,slow=8.6,SNR=7.0
MAJO  Matsushiro        54.31 333   eP        P         01 10 10.1 -1.4
MAJO  Matsushiro        54.31 333   eP        P         01 10 10.1 -1.4
KSM   Kuching           55.91 280   eP        P         01 10 23.0 -0.5
      comp=Z,31nm,1.1s
ASAJ  Asahikawa         59.27 341   P         P         01 10 45.8 -0.7
      comp=Z,15nm,0.8s,baz=238,slow=13,SNR=7.5
KSRS  Korea Array       60.10 326   P         P         01 10 51.8 -0.5
      comp=Z,3.9nm,1.0s,baz=145,slow=6.8,SNR=4.3
KS15  Wonju Array Si    60.11 326   eP        P         01 10 51.8 -0.6
KSAR  Wonju Array Be    60.11 326   P         P         01 10 51.8 -0.6
KSAR  Wonju Array Be    60.11 326   P         P         01 10 51.8 -0.6
YSS   Yuzh-Sakhalins    61.79 343   eP        P         01 11 11.2 +7.6
YSS                                 pmax      pmax
      comp=Z,10.0nm,1.1s
NJ2   Nanjing           62.05 316   eP        P         01 11 06.2 +0.5
NJ2                                 pmax      pmax
      comp=Z,9.0nm,0.5s
USRK  Ussuriysk Ar.     63.30 334   P         P         01 11 14.1 +0.3
      comp=Z,5.9nm,0.8s,baz=117,slow=9.5,SNR=8.3
WHN   Wuhan             64.36 312 ⇓P          P         01 11 15.9 -5.1
PETK  Petropavlovsk-    64.95 355   P         P         01 11 25.1 +0.6
      comp=Z,5.9nm,0.8s,baz=190,slow=7.5,SNR=5.9
PEA1  Petropavlovsk-    64.96 355   eP        P         01 11 25.1 +0.6
IPM   Ipoh              65.64 280   eP        P         01 11 30.1 +0.3
      comp=Z,51nm,1.2s
CN2   Changchun         66.02 330   eP        P         01 11 34.3 +2.7
SKNT  Sakolnakorn       66.73 294   P         P         01 11 37.7 +1.0
      comp=Z,11nm,1.6s,comp=Z,3µm
PSI   Prapat            67.25 278   P         P         01 11 39.7 -0.6
      comp=Z,7.3nm,0.9s,baz=179,slow=5.1,SNR=5.6
KLR   Kul'dur           67.46 337⇓iP          P         01 11 38.8 -1.9
KLR   Kul'dur           67.46 337   P         P         01 11 40.4 -0.3
      comp=Z,3.9nm,0.8s,baz=117,slow=7.5,SNR=8.1
TRTT  Trang             67.81 284   P         P         01 11 45.7 +2.1
      comp=Z,6.8nm,1.3s
ENH   Enshi             67.81 310   eP        P         01 11 42.5 -0.8
      comp=Z,16nm,1.2s
NONG  Nongkai           67.87 295   P         P         01 11 45.9 +2.0
      comp=Z,0.3nm,0.8s
GYA   Guiyang           68.25 305   P         P         01 11 48.2 +2.0
GYA                                 pP        pwP       01 11 58.0 +2.9
GYA                                 PP        PP        01 14 20.3 +3.3
GYA                                 S         S         01 20 44.8 -2.2
GYA                                 SKS       SKiKP     01 21 40.0 -1.4
GYA   Guiyang           68.25 305   SS        SS        01 25 09.5 -0.9
GYA                                 pmax      pmax
      comp=Z,20nm,1.0s
GYA                                 pmax      pmax
      comp=Z,130nm,6.7s
GYA                                 LR        LR
      comp=N,570nm,18.2s
GYA                                 LR        LR
      comp=E,550nm,18.6s
GYA                                 LR        LR
      comp=Z,520nm,18.4s
BJI   Beijing           68.62 322   eP        P         01 11 48.3 +0.2
BJI                                 pmax      pmax
      comp=Z,9.0nm,1.0s
PBKT  Sadao Pong        69.30 293   P         P         01 11 54.6 +1.8
      comp=Z,8.8nm,0.9s
UTTA  Uttaradit         70.07 294   P         P         01 11 59.8 +2.3
      comp=Z,2.9nm,0.8s
XAN   Xi'an             70.10 313   P         P         01 11 57.2 -0.3
XAN                                 pP        pwP       01 12 09.0 +2.7
XAN                                 sP        PcP       01 12 13.8 -5.7
XAN                                 pmax      pmax
      comp=Z,11nm,0.9s
XAN                                 LR        LR
      comp=N,560nm,16.3s
XAN                                 LR        LR
      comp=E,740nm,18.4s
XAN                                 LR        LR
      comp=Z,650nm,16.3s
XAN   Xi'an             70.10 313   eP        P         01 11 56.8 -0.7
      comp=Z,32nm,0.7s
XAN   Xi'an             70.10 313   eP        P         01 11 56.8 -0.7
XAN                                 pmax      pmax
      comp=Z,32nm,0.7s
UTHA  Uthaitani         70.35 291   P         P         01 12 01.1 +1.8
      comp=Z,4.0nm,1.0s
KMI   Kunming           70.90 302   P         P         01 12 03.7 +0.9
KMI                                 pP        sP        01 12 08.8 +2.2
KMI                                 sP        pwP       01 12 10.5 -1.1
KMI                                 pmax      pmax
      comp=Z,16nm,1.4s
CM01  Chiang Mai Arr    71.72 294   eP        P         01 12 08.4 +0.8
CM31  Chiang Mai Arr    71.75 294   eP        P         01 12 08.9 +1.2
CMAR  Chiang Mai Arr    71.75 294   P         P         01 12 09.0 +1.2
CMAR                                pmax      pmax
      comp=Z,6.0nm,0.9s
CMAR  Chiang Mai Arr    71.75 294   P         P         01 12 08.9 +1.2
      comp=Z,9.8nm,1.1s,baz=116,slow=4.2,SNR=21
CMMT  Chiang Mai        71.86 294   P         P         01 12 10.0 +1.5
CHTO  Chiang Mai        71.87 294   eP        P         01 12 08.2 -0.3
      comp=Z,12nm,1.0s
CHTO  Chiang Mai        71.87 294   eP        P         01 12 08.2 -0.3
CHTO                                pmax      pmax
      comp=Z,12nm,1.0s
CHTO  Chiang Mai        71.87 294   P         P         01 12 10.1 +1.6
      comp=Z,44nm,1.1s
HHC   Hu-ho-hao-te      71.94 320   eP        P         01 12 11.2 +2.6
HHC                                 pmax      pmax
      comp=Z,6.0nm,0.6s
HHC                                 pmax      pmax
      comp=Z,2µm,5.4s
MA2   Magadan           72.06 352⇓eP          P         01 12 06.2 -2.6
MA2                                 pmax      pmax
      comp=Z,11nm,1.3s
CD2   Chengdu           72.49 308   eP        P         01 12 13.4 +1.4
HIA   Hailar            72.67 331⇑iP          P         01 12 12.6 -0.1
HIA                                 pmax      pmax
      comp=Z,12nm,1.0s
LZH   Lanzhou           74.73 313   eP        P         01 12 26.6 +1.3
LZH                                 pP        pwP       01 12 31.8 -2.3
LZH                                 sP        PcP       01 12 35.1 -4.3
LZH                                 PP        PP        01 15 21.2 +8.6
LZH                                 pmax      pmax
      comp=Z,26nm,1.2s
LZH                                 pmax      pmax
      comp=Z,89nm,5.4s
LZH                                 LR        LR
      comp=N,520nm,16.6s
LZH                                 LR        LR
      comp=E,540nm,16.1s
LZH                                 LR        LR
      comp=Z,610nm,17.7s
SEY   Seymchan          75.15 354⇓eP          P         01 12 26.9 +0.1
SEY   Seymchan          75.15 354   P         P         01 12 27.2 +0.4
      comp=Z,3.0nm,0.8s,baz=167,slow=7.1,SNR=7.2
QSPA  South Pole Qui    78.20 180   eP        P         01 12 44.5 +0.1
      comp=Z,28nm,0.9s
ULN   Ulaanbaatar       78.49 324   eP        P         01 12 46.6 +0.4
      comp=Z,8.0nm,0.8s
ULN   Ulaanbaatar       78.49 324d iP         P         01 12 46.3  0.0
ULN                                 pmax      pmax
      comp=Z,32nm,2.5s
SONA0 Songino Array     78.85 324   eP        P         01 12 47.8 -0.4
SONM  Songino Array     78.85 324   P         P         01 12 47.8 -0.4
      comp=Z,2.8nm,0.9s,baz=148,slow=7.6,SNR=15
SONA1 Songino Array     78.85 324   eP        P         01 12 48.2  0.0
GTA   Gaotai            79.06 314 ⇓P          P         01 12 50.2 +0.6
GTA                                 pP        sP        01 12 54.8 +1.4
GTA                                 sP        PcP       01 12 57.1 -0.9
GTA                                 pmax      pmax
      comp=Z,14nm,1.2s
GTA                                 LR        LR
      comp=N,470nm,19.7s
GTA                                 LR        LR
      comp=E,410nm,18.4s
GTA                                 LR        LR
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	comp=Z,750nm,19.7s						
ANM	**Nome**	**79.38**	**13**	*e*P	**P**	**01 12 52.3**	**+1.8**
	comp=Z,14nm,1.3s						
BILL	**Bilibino**	**79.64**	**0**	*e*P	**P**	**01 12 51.7**	**-0.2**
	comp=Z,22nm,1.1s						
BILL	**Bilibino**	**79.64**	**0⇑**	*i*P	**P**	**01 12 51.7**	**-0.2**
BILL				*e*		01 12 59.1	
BILL				*e*		01 15 55.3	
BILL				*e*S	**S**	**01 22 53.9**	**+0.5**
BILL				pmax	pmax		
	comp=Z,22nm,1.0s						
ZAK	**Zakamensk**	**81.91**	**325**	*e*P	**P**	**01 13 03.3**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	**Talaya**	**82.35**	**327⇓**	*e*P	**P**	**01 13 05.2**	**-1.6**
RDOG	**Red Dog Mine**	**82.91**	**12**	*e*P	**P**	**01 13 10.8**	**+1.5**
	comp=Z,11nm,0.8s						
MCK	**McKinley**	**83.09**	**19**	*e*P	**P**	**01 13 12.1**	**+1.7**
	comp=Z,15nm,1.1s						
MCK	**McKinley**	**83.09**	**19**	*e*P	**P**	**01 13 12.1**	**+1.7**
MCK				pmax	pmax		
	comp=Z,15nm,1.1s						
IM3	**Indian Mountai**	**83.35**	**16**	*e*P	**P**	**01 13 11.4**	**-0.2**
HDA	**Harding Lake**	**84.19**	**19**	P	**P**	**01 13 15.9**	**0.0**
	baz=227						
TCOL	**CIGO, UAF Yank**	**84.23**	**18**	P	**P**	**01 13 16.5**	**+0.4**
	baz=226						
COLA	**College**	**84.23**	**18**	*i* P	**P**	**01 13 16.2**	**+0.1**
COLA				pmax	pmax		
	comp=Z,14nm,0.8s						
O02D	**Mt. Diablo Mer**	**84.34**	**47**	P	**P**	**01 13 17.5**	**+0.2**
	baz=250						
ILAR	**Eielson Array**	**84.46**	**19**	P	**P**	**01 13 16.3**	**-1.0**
	comp=Z,5.1nm,0.7s,baz=244,slow=5.2,SNR=12						
ILB	**Eielson Array**	**84.46**	**19**	*e*P	**P**	**01 13 17.0**	**-0.3**
IL1	**Eielson Array**	**84.46**	**19**	*e*P	**P**	**01 13 16.3**	**-1.0**
POKR	**Poker Plat Res**	**84.53**	**18**	P	**P**	**01 13 16.8**	**-0.8**
	baz=227						
N02D	**Trinity Center**	**84.68**	**46**	P	**P**	**01 13 20.0**	**+1.0**
	baz=250						
M02C	**Callahan**	**84.72**	**46**	P	**P**	**01 13 19.8**	**+0.5**
	baz=249						
YBH	**Yreka Blue Hor**	**84.94**	**46**	*e*P	**P**	**01 13 21.6**	**+1.2**
	comp=Z,15nm,1.1s						
ORV	**Oroville**	**85.06**	**48**	*e*P	**P**	**01 13 20.6**	**-0.3**
	comp=Z,16nm,1.3s						
ORV	**Oroville**	**85.06**	**48**	*e*P	**P**	**01 13 20.6**	**-0.3**
ORV				pmax	pmax		
	comp=Z,16nm,1.3s						
HUMO	**Hull Mountain**	**85.08**	**45**	*e*P	**P**	**01 13 23.8**	**+2.9**
	comp=Z,11nm,1.0s						
O03E	**Paynes Creek**	**85.09**	**47**	P	**P**	**01 13 21.1**	**-0.1**
	baz=250,SNR=7.7						
AFDM	**Forest Hills D**	**85.25**	**49**	*e*P	**P**	**01 13 21.7**	**-0.2**
	comp=Z,21nm,1.2s						
KNGR	**Kungurtug, Tuv**	**85.28**	**324⇑**	*e*P	**P**	**01 13 21.5**	**-0.4**
HYT	**Haines Junctio**	**85.38**	**24**	*e*P	**P**	**01 13 23.8**	**+1.6**
	comp=Z,6.8nm,0.9s						
CMB	**Columbia Colle**	**85.39**	**50**	*e*P	**P**	**01 13 22.3**	**-0.4**
	comp=Z,8.4nm,0.9s						
CMB	**Columbia Colle**	**85.39**	**50**	*e*P	**P**	**01 13 22.3**	**-0.4**
CMB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
L04D	**Klamath Falls**	**85.39**	**45**	P	**P**	**01 13 24.4**	**+1.7**
	baz=250						
M04C	**Macdoel**	**85.57**	**46**	P	**P**	**01 13 24.9**	**+1.3**
	baz=250						
G03D	**McMinnville, O**	**85.80**	**42**	P	**P**	**01 13 26.1**	**+1.6**
	baz=249						
I04A	**Tendick Farm,**	**85.87**	**44**	P	**P**	**01 13 25.9**	**+1.0**
	baz=250						
J04D	**Umpqua Nationa**	**85.88**	**44**	P	**P**	**01 13 26.6**	**+1.4**
	baz=250						
H04D	**Lebanon**	**85.91**	**43**	P	**P**	**01 13 26.5**	**+1.5**
	baz=249						
PALK	**Pallekele**	**85.93**	**278**	*e*P	**P**	**01 13 26.6**	**+0.7**
	comp=Z,25nm,1.3s						
PALK	**Pallekele**	**85.93**	**278**	P	**P**	**01 13 26.6**	**+0.7**
	comp=Z,8.8nm,0.8s,baz=128,slow=1.4,SNR=4.5						
BEKR	**Beckworth**	**85.99**	**48**	*e*P	**P**	**01 13 26.2**	**+0.4**
	comp=Z,11nm,1.0s						
MWC	**Mount Wilson**	**86.01**	**54**	*e*P	**P**	**01 13 25.7**	**-0.3**
	comp=Z,22nm,1.3s						
MWC	**Mount Wilson**	**86.01**	**54**	*e*P	**P**	**01 13 25.7**	**-0.3**
MWC				pmax	pmax		
	comp=Z,23nm,1.3s						
ISA	**Isabella, Lake**	**86.11**	**53**	P	**P**	**01 13 26.9**	**+0.5**
	baz=253						
MDPB	**Devils Postpil**	**86.24**	**51**	*e*P	**P**	**01 13 27.3**	**+0.1**
	comp=Z,14nm,0.9s						
WAKR	**Walker**	**86.24**	**50**	*e*P	**P**	**01 13 27.4**	**+0.3**
	comp=Z,18nm,1.2s						
EDW2	**Edwards Air Fo**	**86.25**	**53**	P	**P**	**01 13 26.7**	**-0.4**
	baz=253,SNR=10						
OMMB	**Old Mammoth Mi**	**86.30**	**51**	*e*P	**P**	**01 13 27.9**	**+0.4**
	comp=Z,13nm,1.1s						
PNTR	**Pine Nut**	**86.30**	**49**	*e*P	**P**	**01 13 28.1**	**+0.7**
	comp=Z,16nm,1.2s						
BFSC	**Mount Baldy Ra**	**86.33**	**54**	P	**P**	**01 13 27.6**	**+0.1**
	baz=253						
TOLK	**Toolik Lake Re**	**86.41**	**15**	P	**P**	**01 13 27.6**	**+0.5**
	baz=224						
J05D	**Fort Rock, OR**	**86.50**	**45**	P	**P**	**01 13 28.2**	**0.0**
	baz=250,SNR=6.9						
MURC	**Murrieta**	**86.52**	**55**	P	**P**	**01 13 28.5**	**+0.2**
	baz=254						
YERR	**Yerington**	**86.54**	**49**	*e*P	**P**	**01 13 28.9**	**+0.4**
	comp=Z,11nm,1.2s						
CWC	**Cottonwood Cre**	**86.64**	**52**	P	**P**	**01 13 29.1**	**+0.1**
	baz=253						
PAHR	**Pah Rah Range**	**86.66**	**48**	*e*P	**P**	**01 13 29.2**	**+0.1**
	comp=Z,14nm,1.1s						
LRMC	**Laurel Mtn Rad**	**86.67**	**53**	P	**P**	**01 13 28.8**	**-0.4**
	baz=253,SNR=9.0						
TIXI	**Tiksi**	**86.69**	**349⇑**	*e*P	**P**	**01 13 27.5**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,11nm,2.5s						
E04D	**Cinebar**	**86.74**	**41**	P	**P**	**01 13 30.0**	**+0.9**
	baz=249						
D03D	**Eldon**	**86.76**	**40**	P	**P**	**01 13 30.1**	**+0.9**
	baz=249						
MONP2	**Monument Peak**	**86.94**	**56**	P	**P**	**01 13 30.5**	**-0.2**
	baz=254,SNR=5.5						
RYN	**Ryan**	**86.96**	**50**	*e*P	**P**	**01 13 30.9**	**+0.4**
	comp=Z,9.0nm,1.0s						
DAC	**Darwin (Calif)**	**86.97**	**52**	*e*P	**P**	**01 13 30.7**	**0.0**
	comp=Z,9.9nm,1.1s						
DAC	**Darwin (Calif)**	**86.97**	**52**	*e*P	**P**	**01 13 30.7**	**0.0**
DAC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MPMC	**Manual Prospec**	**86.99**	**52**	P	**P**	**01 13 30.4**	**-0.5**
	baz=253,SNR=10						
NV01	**Mina Array Sit**	**87.07**	**50**	*e*P	**P**	**01 13 30.6**	**-0.6**
NVAR	**Mina Array Bea**	**87.07**	**50**	P	**P**	**01 13 31.1**	**0.0**
	comp=Z,7.7nm,0.9s,baz=234,slow=7.2,SNR=22						
PFO	**Pinyon Flats O**	**87.11**	**55**	*e*P	**P**	**01 13 31.6**	**+0.2**
	comp=Z,15nm,1.4s						
PFO	**Pinyon Flats O**	**87.11**	**55**	*e*P	**P**	**01 13 31.6**	**+0.2**
PFO				pmax	pmax		
	comp=Z,15nm,1.4s						
PFO	**Pinyon Flats O**	**87.11**	**55**	P	**P**	**01 13 31.2**	**-0.2**
	baz=254						
XPFO	**Pion Flat**	**87.11**	**55**	*e*P	**P**	**01 13 33.1**	**+1.8**
	comp=Z,6.5nm,0.9s						
IKP	**In-Ko-Pah, Jac**	**87.13**	**56**	P	**P**	**01 13 31.0**	**-0.4**
	baz=254						
NV11	**Mina Array Sit**	**87.18**	**50**	*e*P	**P**	**01 13 32.0**	**+0.4**
	comp=Z,1.2nm,1.1s						
GSC	**Goldstone, Bar**	**87.31**	**53**	P	**P**	**01 13 32.0**	**-0.2**
	baz=254						
D05A	**Enumclaw**	**87.33**	**41**	*e*P	**P**	**01 13 34.5**	**+2.6**
	comp=Z,62nm,1.4s						
GRAC	**Grapevine Rang**	**87.36**	**52**	P	**P**	**01 13 32.8**	**+0.4**
	baz=253,SNR=8.3						
KVN	**Kaiserville**	**87.40**	**49**	*e*P	**P**	**01 13 33.1**	**+0.3**
	comp=Z,9.7nm,1.0s						
KVN	**Kaiserville**	**87.40**	**49**	*e*P	**P**	**01 13 33.1**	**+0.3**
KVN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SWSC	**Sam W. Stewart**	**87.46**	**56**	P	**P**	**01 13 32.9**	**0.0**
	baz=254						
HEC	**Hector,Ludlow**	**87.55**	**54**	P	**P**	**01 13 33.5**	**+0.1**
	baz=254						
BELC	**Belle Mtn. Jos**	**87.59**	**55**	P	**P**	**01 13 33.5**	**-0.1**
	baz=254,SNR=6.2						
FURC	**Furnace Creek,**	**87.59**	**52**	P	**P**	**01 13 33.8**	**+0.4**
	baz=254						
BC3	**Big Chuckawall**	**87.93**	**55**	P	**P**	**01 13 35.8**	**+0.6**
	baz=254,SNR=7.0						
I07A	**Izee**	**87.95**	**44**	*e*P	**P**	**01 13 37.2**	**+2.1**
	comp=Z,26nm,1.4s						
WVOR	**Wild Horse Val**	**88.03**	**46**	*e*P	**P**	**01 13 36.7**	**+1.1**
	comp=Z,16nm,1.2s						
WVOR	**Wild Horse Val**	**88.03**	**46**	*e*P	**P**	**01 13 36.7**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,16nm,1.2s						
TUQ	**Turquoise Moun**	**88.04**	**53**	P	**P**	**01 13 35.4**	**-0.4**
	baz=254,SNR=5.4						
GMRC	**Granite Mounta**	**88.07**	**54**	P	**P**	**01 13 35.5**	**-0.5**
	baz=254,SNR=6.5						
TPNV	**Topopah Spring**	**88.20**	**52**	*e*P	**P**	**01 13 37.9**	**+1.4**
	comp=Z,12nm,1.3s						
TPNV	**Topopah Spring**	**88.20**	**52**	P	**P**	**01 13 36.1**	**-0.5**
	baz=254						
F07A	**Phinny Hill Vi**	**88.24**	**42**	*e*P	**P**	**01 13 38.5**	**+2.2**
GLA	**Glamis**	**88.28**	**56**	*e*P	**P**	**01 13 37.7**	**+0.8**
	comp=Z,22nm,0.9s						
GLA	**Glamis**	**88.28**	**56**	*e*P	**P**	**01 13 37.7**	**+0.8**
GLA				pmax	pmax		
	comp=Z,22nm,0.9s						
GLA	**Glamis**	**88.28**	**56**	P	**P**	**01 13 37.1**	**+0.3**
	baz=255						
IRM	**Iron Mountain**	**88.31**	**55**	P	**P**	**01 13 37.1**	**+0.1**
	baz=255,SNR=10						
J08A	**Circle Bar Ran**	**88.43**	**45**	*e*P	**P**	**01 13 39.1**	**+1.7**
	comp=Z,12nm,1.0s						
BMN	**Battle Mountai**	**88.46**	**48**	*e*P	**P**	**01 13 38.5**	**+0.8**
BMN	**Battle Mountai**	**88.46**	**48**	*e*P	**P**	**01 13 38.5**	**+0.8**
LDFC	**Landfair**	**88.58**	**54**	*e*P	**P**	**01 13 39.4**	**+1.0**
	comp=Z,41nm,1.2s						
HAWA	**Hanford**	**88.66**	**42**	*e*P	**P**	**01 13 40.5**	**+2.2**
	comp=Z,22nm,1.2s						
G08A	**Pilot Rock**	**88.69**	**43**	*e*P	**P**	**01 13 40.6**	**+2.0**
	comp=Z,12nm,1.1s						
Y12C	**Blythe**	**88.70**	**55**	*e*P	**P**	**01 13 39.9**	**+1.1**
	comp=Z,19nm,1.1s						
Y12C	**Blythe**	**88.70**	**55**	P	**P**	**01 13 39.4**	**+0.6**
	baz=255,SNR=5.6						
SHPR	**Sheep Range**	**88.92**	**52**	*e*P	**P**	**01 13 40.9**	**+0.9**
	comp=Z,22nm,1.4s						
E08A	**Dider Farm, El**	**89.00**	**42**	*e*P	**P**	**01 13 42.1**	**+2.2**
	comp=Z,15nm,1.1s						
113A	**Mohawk Valley,**	**89.07**	**56**	*e*P	**P**	**01 13 41.0**	**+0.5**
	comp=Z,8.2nm,1.1s						
R11A	**Troy Canyon, C**	**89.09**	**51**	*e*P	**P**	**01 13 41.1**	**+0.3**
	comp=Z,10nm,1.2s						
R11A	**Troy Canyon, C**	**89.09**	**51**	P	**P**	**01 13 41.1**	**+0.3**
	baz=254,SNR=12						
WMQ	**Urumqi**	**89.11**	**315**	P	**P**	**01 13 40.4**	**-0.2**
WMQ				pP	pwP	01 13 56.9	+7.4
WMQ				pmax	pmax		
	comp=Z,23nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1µm,11.6s						
WMQ				LR	LR		
	comp=N,710nm,22.3s						
WMQ				LR	LR		
	comp=E,1µm,19.7s						
WMQ				LR	LR		
	comp=Z,860nm,18.3s						
PDMCI	**Parker Dam,Lak**	**89.15**	**55**	P	**P**	**01 13 41.6**	**+0.7**
	baz=255,SNR=7.6						
B08A	**Colville Reser**	**89.41**	**40**	*e*P	**P**	**01 13 43.0**	**+1.2**
	comp=Z,14nm,1.3s						
W13A	**Hualapai Mount**	**89.56**	**54**	*e*P	**P**	**01 13 44.0**	**+0.9**
	comp=Z,13nm,1.1s						
E09A	**Wood Farm, Sta**	**89.61**	**42**	*e*P	**P**	**01 13 44.4**	**+1.6**
	comp=Z,21nm,1.4s						
214A	**Organ Pipe Nat**	**89.65**	**57**	P	**P**	**01 13 44.1**	**+0.8**
	baz=256						
BMO	**Blue Mountains**	**89.68**	**44**	*e*P	**P**	**01 13 44.5**	**+1.3**
BMO	**Blue Mountains**	**89.68**	**44**	*e*P	**P**	**01 13 44.5**	**+1.3**
ELK	**Elko**	**89.99**	**48**	*e*P	**P**	**01 13 45.8**	**+0.8**
	comp=Z,15nm,1.3s						
ELK	**Elko**	**89.99**	**48**	*e*P	**P**	**01 13 45.8**	**+0.8**
ELK				pmax	pmax		
	comp=Z,15nm,1.3s						
F10A	**Beach Ranch, E**	**90.06**	**43**	*e*P	**P**	**01 13 45.1**	**+0.1**
	comp=Z,26nm,1.4s						
MFID	**Camas Ranch**	**90.29**	**46**	*e*P	**P**	**01 13 47.8**	**+1.6**
	comp=Z,20nm,1.4s						
PSUT	**Pine Spring**	**90.45**	**51**	*e*P	**P**	**01 13 48.9**	**+1.8**
	comp=Z,8.9nm,1.1s						
LCMT	**Little Creek M**	**90.54**	**52**	*e*P	**P**	**01 13 48.6**	**+1.0**
	comp=Z,18nm,1.2s						
CCUT	**Cedar City**	**90.58**	**52**	*e*P	**P**	**01 13 49.1**	**+1.3**
	comp=Z,18nm,1.2s						
NEW	**Newport**	**90.79**	**41**	*e*P	**P**	**01 13 50.2**	**+1.9**
	comp=Z,8.8nm,1.2s						
NEW				*e*pP	**pwP**	**01 13 56.4**	**-0.9**
NEW	**Newport**	**90.79**	**41**	*e*P	**P**	**01 13 50.2**	**+1.9**
NEW				*e**PP	**pwP**	**01 13 56.4**	**-0.9**
NEW				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NEW	**Newport**	**90.79**	**41**	P	**P**	**01 13 48.7**	**+0.4**
	baz=253						
SZCU	**Shurtz Canyon**	**90.80**	**52**	*e*P	**P**	**01 13 50.0**	**+1.2**
	comp=Z,15nm,1.2s						
KNB	**Kanab**	**90.87**	**52**	*e*P	**P**	**01 13 50.2**	**+1.1**
	comp=Z,21nm,1.2s						
KNB	**Kanab**	**90.87**	**52**	*e*P	**P**	**01 13 50.2**	**+1.1**
KNB				pmax	pmax		
	comp=Z,21nm,1.2s						
U15A	**North Rim**	**91.14**	**53**	*e*P	**P**	**01 13 51.5**	**+1.0**
	comp=Z,19nm,1.0s						
HLID	**Hailey**	**91.33**	**46**	*e*P	**P**	**01 13 51.8**	**+0.7**
	comp=Z,12nm,1.3s						
HLID	**Hailey**	**91.33**	**46**	P	**P**	**01 13 51.8**	**+0.7**
	baz=255						
X16A	**Lo Mia Camp, P**	**91.35**	**55**	*e*P	**P**	**01 13 52.6**	**+1.2**
	comp=Z,7.5nm,0.9s						
PKCU	**Pink Cliffs**	**91.37**	**52**	*e*P	**P**	**01 13 53.9**	**+2.3**
	comp=Z,24nm,1.2s						
TUC	**Tucson**	**91.41**	**57**	*e*P	**P**	**01 13 52.5**	**+1.0**
	comp=Z,6.8nm,0.9s						
TUC	**Tucson**	**91.41**	**57**	*e*P	**P**	**01 13 52.5**	**+1.0**
TUC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TUC	**Tucson**	**91.41**	**57**	P	**P**	**01 13 52.1**	**+0.6**
	baz=257						
TCRU	**Three Creeks R**	**91.54**	**51**	*e*P	**P**	**01 13 55.0**	**+2.7**
	comp=Z,12nm,0.7s						
MTPU	**Mount Pierson**	**91.61**	**52**	*e*P	**P**	**01 13 54.4**	**+1.7**
	comp=Z,16nm,1.1s						
DUG	**Dugway, Tooele**	**91.64**	**49**	*e*P	**P**	**01 13 53.5**	**+0.9**
	comp=Z,9.9nm,1.1s						
DUG	**Dugway, Tooele**	**91.64**	**49**	*e*P	**P**	**01 13 53.5**	**+0.9**
DUG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DUG	**Dugway, Tooele**	**91.64**	**49**	P	**P**	**01 13 53.0**	**+0.4**
	baz=256						
WUAZ	**Wupatki**	**91.65**	**54**	*e*P	**P**	**01 13 53.3**	**+0.5**
	comp=Z,13nm,0.9s						
WUAZ	**Wupatki**	**91.65**	**54**	P	**P**	**01 13 52.9**	**+0.2**
	baz=257						
BGU	**Big Grassy Mou**	**91.66**	**49**	*e*P	**P**	**01 13 53.3**	**+0.6**
	comp=Z,11nm,1.1s						
MSU	**Marysvale**	**91.72**	**51**	*e*P	**P**	**01 13 54.2**	**+1.2**
MSU	**Marysvale**	**91.72**	**51**	*e*P	**P**	**01 13 54.3**	**+1.2**
HVU	**Hansel Valley**	**92.05**	**48**	*e*P	**P**	**01 13 55.1**	**+0.7**
	comp=Z,28nm,1.3s						
HVU	**Hansel Valley**	**92.05**	**48**	*e*P	**P**	**01 13 55.1**	**+0.7**
HVU				pmax	pmax		
	comp=Z,28nm,1.3s						
NLU	**North Lily Min**	**92.14**	**50**	*e*P	**P**	**01 13 55.9**	**+0.9**
	comp=Z,12nm,1.1s						
SPUT	**South Promonto**	**92.18**	**48**	*e*P	**P**	**01 13 56.9**	**+1.9**
	comp=Z,9.3nm,1.2s						
319A	**Douglas**	**92.45**	**59**	*e*P	**P**	**01 13 57.8**	**+1.3**
	comp=Z,11nm,0.9s						
MSO	**Missoula**	**92.48**	**43**	P	**P**	**01 13 56.4**	**+0.2**
	baz=256						
MPU	**Maple Canyon**	**92.48**	**50**	*e*P	**P**	**01 13 58.3**	**+1.8**
	comp=Z,15nm,1.3s						
Q16A	**Castle Valley**	**92.58**	**51**	*e*P	**P**	**01 13 59.2**	**+2.2**
	comp=Z,17nm,1.4s						
MCMT	**McKenzie Canyo**	**92.73**	**45**	*e*P	**P**	**01 13 59.4**	**+1.8**
JLU	**Jordanelle**	**92.75**	**49**	*e*P	**P**	**01 13 59.5**	**+1.6**
	comp=Z,13nm,1.3s						
TCUT	**Toone Canyon**	**92.90**	**49**	*e*P	**P**	**01 14 00.1**	**+1.6**
	comp=Z,21nm,1.3s						
DLMT	**Dillon**	**93.03**	**44**	*e*P	**P**	**01 14 00.7**	**+1.8**
	comp=Z,18nm,1.1s						
WALA	**Waterton Lakes**	**93.06**	**41**	*e*P	**P**	**01 13 59.8**	**+1.0**
	comp=Z,20nm,1.3s						
LRM	**Limekiln Ridge**	**93.24**	**44**	*e*P	**P**	**01 14 01.3**	**+1.4**
MK01	**Makanchi Array**	**93.56**	**317**	*e*P	**P**	**01 14 00.7**	**-0.5**
MK31	**Makanchi Array**	**93.58**	**317**	*e*P	**P**	**01 14 01.1**	**-0.1**
MK32	**Makanchi Array**	**93.58**	**317**	*e*P	**P**	**01 14 01.1**	**-0.1**
MKAR	**Makanchi Array**	**93.58**	**317**	*e*P	**P**	**01 14 01.1**	**-0.1**
	comp=Z,26nm,0.9s						
MKAR	**Makanchi Array**	**93.58**	**317**	P	**P**	**01 14 01.1**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=100,slow=6.3,SNR=18						
BOZ	**Bozeman (W)**	**93.75**	**44**	*e*P	**P**	**01 14 03.9**	**+1.7**
	comp=Z,19nm,1.4s						
BOZ	**Bozeman (W)**	**93.75**	**44**	*e*P	**P**	**01 14 03.9**	**+1.7**
BOZ				pmax	pmax		
	comp=Z,19nm,1.4s						
BOZ	**Bozeman (W)**	**93.75**	**44**	P	**P**	**01 14 02.8**	**+0.6**
	baz=257						
MAKZ	**Makanchi**	**93.79**	**317**	*e*P	**P**	**01 14 02.0**	**-0.1**
	comp=Z,7.8nm,1.1s						
MAKZ	**Makanchi**	**93.79**	**317**	*e*P	**P**	**01 14 02.0**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
REDW	**Red Top Meadow**	**93.80**	**47**	*e*P	**P**	**01 14 04.6**	**+2.1**
	comp=Z,10nm,1.3s						
YHB	**Horse Butte**	**93.86**	**45**	*e*P	**P**	**01 14 05.6**	**+2.8**
	comp=Z,17nm,1.4s						
HRY	**Holter Researc**	**93.86**	**43**	*e*P	**P**	**01 14 02.7**	**+0.1**
121A	**Cookes Peak, D**	**93.93**	**58**	P	**P**	**01 14 03.3**	**-0.1**
	baz=259						
H17A	**Grant Village**	**94.21**	**46**	*e*P	**P**	**01 14 07.8**	**+3.3**
	comp=Z,4.3nm,1.0s						
BW06	**Boulder Array**	**94.60**	**47**	*e*P	**P**	**01 14 07.5**	**+1.2**
	comp=Z,6.9nm,1.5s						
BW06	**Boulder Array**	**94.60**	**47**	P	**P**	**01 14 06.3**	**0.0**
	baz=258						
PD31	**Pinedale Array**	**94.60**	**47**	*e*P	**P**	**01 14 07.5**	**+1.2**
PDAR	**Pinedale Array**	**94.60**	**47**	*e*P	**P**	**01 14 03.8**	**-2.5**
PDAR	**Pinedale Array**	**94.60**	**47**	P	**P**	**01 14 06.1**	**-0.1**
	comp=Z,2.0nm,1.0s,baz=240,slow=3.0,SNR=7.9						
O20A	**White River Ci**	**95.05**	**50**	P	**P**	**01 14 08.6**	**+0.2**
	baz=259						
RLMT	**Red Lodge**	**95.28**	**45**	P	**P**	**01 14 09.5**	**+0.2**
	baz=259						
ANMO	**Albuquerque**	**95.47**	**56⇓**	*e*P	**P**	**01 14 11.4**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ANMO	**Albuquerque**	**95.47**	**56**	P	**P**	**01 14 10.4**	**0.0**
	baz=260						
EGMT	**Eagleton**	**95.52**	**42**	*e*P	**P**	**01 14 11.6**	**+1.5**
	comp=Z,9.5nm,1.0s						
EGMT	**Eagleton**	**95.52**	**42**	P	**P**	**01 14 10.3**	**+0.2**
	baz=259						
S22A	**4UR Ranch, Cre**	**95.69**	**53**	P	**P**	**01 14 11.3**	**-0.1**
	baz=260						
MNTX	**Cornudas Mount**	**95.78**	**59**	*e*P	**P**	**01 14 13.2**	**+1.6**
	comp=Z,2.1nm,1.0s						
MNTX	**Cornudas Mount**	**95.78**	**59**	P	**P**	**01 14 11.9**	**+0.2**
	baz=260						
YKA	**Yellowknife Ar**	**95.98**	**27**	P	**P**	**01 14 09.7**	**-2.1**
	comp=Z,2.8nm,0.8s,baz=256,slow=4.6,SNR=36						
YKB5	**Yellowknife Ar**	**95.98**	**27**	*e*P	**P**	**01 14 09.4**	**-2.3**
SDCO	**Great Sand Dun**	**96.72**	**53**	P	**P**	**01 14 15.7**	**-0.5**
	baz=260						
TX31	**Lajitas Ar. Si**	**96.83**	**62**	*e*P	**P**	**01 14 18.4**	**+1.8**
TXAR	**Lajitas Array**	**96.83**	**62**	P	**P**	**01 14 15.6**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=221,slow=5.0,SNR=11						
LTX	**Lajitas**	**96.83**	**62**	*e*P	**P**	**01 14 15.6**	**-0.9**
LTX	**Lajitas**	**96.83**	**62**	*e*P	**P**	**01 14 15.6**	**-0.9**
T25A	**Trinidad**	**97.48**	**54**	P	**P**	**01 14 19.4**	**-0.1**
	baz=261						
LAO	**LASA Array**	**97.64**	**44**	P	Pdif	01 14 20.1	+0.2
	baz=261						
FFC	**Flin Flon**	**101.27**	**36**	*i* P	**Pdif**	**01 14 37.2**	**+1.5**
BRVK	**Borovoye**	**102.16**	**322⇓**	*i*P	**Pdif**	**01 14 38.5**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
059A	**Moore Haven**	**116.43**	**66**	*e*PKPdf	**PKiKP**	**01 19 31.6**	**+2.2**
ARA0	**ARCESS Array S**	**116.88**	**345**	*e*PKPdf	**PKPdf**	**01 19 28.2**	**-0.9**
ARCES	**ARCESS Array B**	**116.88**	**345**	PKP	**PKPdf**	**01 19 28.2**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=64,slow=2.1,SNR=5.6						
OBN	**Obninsk**	**121.07**	**328⇓**	*e*PKIKP	**PKPdf**	**01 19 35.6**	**-1.9**
OBN				*e*		01 21 04.3	
OBN				pmax	pmax		
	comp=Z,18nm,1.8s						
CPUP	**Villa Florida**	**124.05**	**133**	PKP	**PKPdf**	**01 19 43.4**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=190,slow=3.2,SNR=4.2						
CPUP				PKKP	**PKKPdf**	**01 30 16.6**	**+7.1**
	comp=Z,1.3nm,0.4s,baz=196,slow=2.4,SNR=4.0						
BOSA	**Boshof**	**124.07**	**223**	PKP	**PKPdf**	**01 19 44.0**	**-0.3**
	comp=Z,4.0nm,0.9s,baz=135,slow=1.4,SNR=4.2						
SDV	**Santo Domingo**	**125.26**	**87**	*e*PKPdf	**PKPdf**	**01 19 46.5**	**-0.5**
AKASG	**Malin Array Be**	**127.09**	**326**	PKP	**PKPdf**	**01 19 48.3**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=60,slow=2.9,SNR=5.3						
AKBB	**Malin Array Si**	**127.09**	**326**	*e*PKPdf	**PKPdf**	**01 19 48.3**	**-0.9**
AKBB	**Malin Array Si**	**127.09**	**326**	*e*PKIKP	**PKPdf**	**01 19 48.3**	**-0.9**
NB200	**NORSAR Array S**	**127.24**	**344**	*e*PKPdf	**PKPdf**	**01 19 48.8**	**-0.5**
NOA	**NORSAR Array B**	**127.24**	**344**	PKP	**PKPdf**	**01 19 48.8**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=33,slow=1.9,SNR=3.6						
BR101	**Keskin Array S**	**128.93**	**312**	*e*PKPdf	**PKPdf**	**01 19 53.0**	**-0.3**
BRTR	**Keskin Array B**	**128.93**	**312**	PKIKP	**PKPdf**	**01 19 53.0**	**-0.3**
BRTR	**Keskin Array B**	**128.93**	**312**	PKP	**PKPdf**	**01 19 53.0**	**-0.3**
	comp=Z,1.3nm,1.0s,baz=117,slow=1.4,SNR=5.2						
CLL	**Collm**	**134.50**	**336**	*e*PKPdf	**PKiKP**	**01 20 06.0**	**+1.4**
CLL				*e*		01 20 27.0	
CLL				LmV		02 28 00.0	
	comp=Z,900nm,19.2s						
CLL				LmH		02 30 00.0	
	comp=N,500nm,20.0s						
CLL				LmH		02 30 00.0	
	comp=E,400nm,19.4s						
MEM	**Membach**	**137.65**	**340**	⇑PKiKP	**PKPdf**	**01 20 10.1**	**+0.9**
KEST	**Kesra**	**147.56**	**321**	PKPbc	**PKPbc**	**01 20 30.2**	**+0.3**
	comp=E,16nm,1.0s,baz=246,slow=4.7,SNR=5.7						
ES19	**SONSECA Array**	**150.53**	**342**	*e*PKPbc	**PKPbc**	**01 20 37.3**	**+0.1**
ESDC	**Sonseca Array**	**150.57**	**343**	PKPbc	**PKPbc**	**01 20 37.0**	**-0.4**
	comp=E,2.7nm,0.8s,baz=31,slow=2.3,SNR=10						
TOA0	**Torodi Ar. Sit**	**163.65**	**276**	*e*PKPdf	**PKPdf**	**01 20 47.8**	**-1.2**
TOA0				*e*PKPab	**PKPab**	**01 21 40.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**163.65**	**276**	PKP	**PKPdf**	**01 20 47.5**	**-1.5**
	comp=E,2.2nm,1.1s,baz=69,slow=2.6,SNR=8.2						
TORD				PKPab	**PKPab**	**01 21 41.0**	**+0.1**
	comp=E,2.4nm,1.0s,baz=68,slow=5.9,SNR=8.6						
TOA1	**Torodi Ar. Sit**	**163.65**	**276**	*e*PKPdf	**PKPdf**	**01 20 47.5**	**-1.5**
TOA1				*e*PKPab	**PKPab**	**01 21 41.0**	**+0.1**

IDC 07 01:04:26.8±1.9, 11°.94S×164°.22E, h0^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.6/41, mbtmp3.8/4, ML3.6/1, MS4.6/1, Ms1 4.6/1, ms1mx3.6/31, Error ellipse: s-maj=51.3km s-min=36.7km az=127.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.29**	**168**	Pn	Pn	01 06 55.7	-0.3
	0.5nm,0.3s,baz=319,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**29.77**	**251**	P	P	01 10 35.9	+0.5
	0.9nm,0.6s,baz=80,slow=9.2,SNR=3.4						
ASAR	**Alice Springs**	**31.05**	**244**	P	P	01 10 46.3	-0.5
	0.6nm,0.8s,baz=69,slow=8.2,SNR=3.1						
RPZ	**Rata Peaks**	**32.20**	**171**	LR	LR	01 23 08.6	
	comp=Z,1µm,18.5s,baz=327,slow=35						
ILAR	**Eielson Array**	**84.84**	**19**	P	P	01 17 03.0	0.0
	0.7nm,1.0s,baz=235,slow=6.3,SNR=3.3						

IDC 07 01:05:27.1±1.2, 11°.71S×164°.84E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.8/41, mbtmp3.8/8, ML3.6/1, MS4.5/1, Ms1 4.5/1, ms1mx3.7/30, Error ellipse: s-maj=41.1km s-min=25.9km az=133.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.42**	**172**	Pn	Pn	01 07 58.9	+0.9
	0.4nm,0.3s,baz=15,slow=12,SNR=7.0						
CTA	**Charters Tower**	**19.70**	**243**	LR	LR	01 17 00.7	
	comp=Z,1µm,20.3s,baz=257,slow=35						
WRA	**Warramunga Arr**	**30.42**	**251**	P	P	01 11 41.4	-0.2
	2.2nm,0.9s,baz=82,slow=10.0,SNR=4.7						
ASAR	**Alice Springs**	**31.70**	**244**	P	P	01 11 52.1	-0.7
	1.4nm,0.9s,baz=85,slow=9.0,SNR=5.0						
SONM	**Songino Array**	**78.67**	**324**	P	P	01 17 32.4	+1.2
	0.7nm,0.9s,baz=139,slow=6.7,SNR=3.5						
ILAR	**Eielson Array**	**84.42**	**19**	P	P	01 18 00.1	-1.0
	0.4nm,0.7s,baz=233,slow=5.8,SNR=4.6						
NVAR	**Mina Array Bea**	**87.13**	**50**	P	P	01 18 16.5	+1.0
	0.1nm,0.3s,baz=253,slow=5.6,SNR=4.3						
MKAR	**Makanchi Array**	**93.39**	**317**	P	P	01 18 44.3	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	0.5nm,0.7s,baz=110,slow=6.4,SNR=3.5						
YKA	Yellowknife Ar	95.97	27	P	P	01 18 54.1	-1.7
	0.1nm,0.7s,baz=259,slow=5.3,SNR=3.4						

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*IDC **07** 01:08:36.9±1.6, 29°.36N×80°.66E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.4/55, mbtmp3.7/8, ML3.3/1, Error ellipse: s-maj=58.5km s-min=19.7km az=67.0*

*ISCJB **07** 01:08:39.2±0.5, 29°.47N±0°.06×81°.13E±0°.04, h17^{km}, mb3.6/8, Error ellipse: s-maj=8.6km s-min=4.8km az=21.8*

*NDI **07** 01:08:42.2±1.3, 29°.48N×80°.94E, h10^{km}, ML3.2*

ISC 07 01:08:40.7±0.7**, 29°.47N**±0°.06×**81°.01E**±0°.05**, h17**^{km}**, n19, σ1^{s}.19**/26**, mb3.8**/8**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	Pithoragarh	0.69	277	eP	Pg	01 08 54.3	-0.1
PTH				eS	Sg	01 09 03.9	+0.2
JOSI	Joshimath	1.66	311	eP	Pb	01 09 11.0	+0.1
JOSI				eS	Sb	01 09 32.9	+1.2
JOSI				IAML		01 09 35.5	
	comp=E,848nm,0.4s						
JOSI				IAML		01 09 37.4	
	comp=N,880nm,0.2s						
KALG	Kalgarh	1.97	272	eP	Pb	01 09 15.6	-0.5
KALG				eS	Sb	01 09 40.5	+0.2
KALG				IAML		01 09 43.6	
	comp=E,781nm,0.2s						
DDI	Dehra Dun	2.70	289	eS	Sn	01 09 57.4	+1.6
DDI				IAML		01 10 00.1	
	comp=N,325nm,0.3s						
DDI				IAML		01 10 00.6	
SMLA	Simla	3.71	297	eP	Pn	01 09 38.8	+1.6
SMLA				eS	Sn	01 10 20.5	-0.1
SMLA				IAML		01 10 23.8	
	comp=E,89nm,0.3s						
SMLA				IAML		01 10 24.2	
	comp=N,63nm,0.1s						
KUDL	Kundal	4.18	253	eP	Pn	01 09 44.3	+0.6
KUDL				eS	Sn	01 10 30.7	-1.5
KUDL				IAML		01 10 55.9	
	comp=N,22nm,0.3s						
KUDL				IAML		01 10 55.9	
	comp=Z,17nm,0.5s						
DHRM	DHARAMSHALA	4.91	306	eP	Pn	01 09 55.4	+1.5
DHRM				eS	Sn	01 10 48.4	-2.0
DHRM				IAML		01 10 53.4	
	comp=N,44nm,0.7s						
DHRM				IAML		01 10 53.5	
	comp=E,49nm,0.1s						
BOK	Bokaro	7.14	141	eP	Pn	01 10 26.4	+2.0
BOK				eS	Sn	01 11 43.9	-1.3
MKAR	Makanchi Array	17.32	3	Pn	Pn	01 12 39.4	-2.4
	comp=E,0.1nm,0.3s,baz=187,slow=10,SNR=8.0						
KURBB	Kurchatov Arra	21.21	356	P	P	01 13 25.0	-0.5
	comp=E,2.0nm,0.5s,baz=181,slow=11,SNR=12						
ZAA0	Zalesovo Array	24.61	5	eP	P	01 13 60.0	0.0
	comp=E,6.2nm,1.3s						
ZALV	Zalesovo Beam	24.61	5	eP	P	01 13 59.9	-0.1
ZALV	Zalesovo Beam	24.61	5	eP	P	01 13 59.9	-0.1
ZALV	Zalesovo Beam	24.61	5	P	P	01 13 59.7	-0.3
	comp=E,1.3nm,0.4s,baz=182,slow=8.4,SNR=10						
BVAR	Borovoye Array	24.80	345	P	P	01 14 01.8	+0.1
	comp=E,0.6nm,0.5s,baz=143,slow=7.8,SNR=6.0						
SONM	Songino Array	26.81	40	P	P	01 14 21.4	+1.3
	comp=E,0.6nm,0.7s,baz=226,slow=9.4,SNR=5.1						
ARCES	ARCESS Array B	50.81	338	P	P	01 17 37.9	-1.9
	comp=E,0.9nm,0.8s,baz=120,slow=8.5,SNR=3.5						
WRA	Warramunga Arr	71.10	127	P	P	01 19 58.6	+0.2
	comp=E,0.6nm,0.9s,baz=319,slow=5.9,SNR=3.9						
ASAR	Alice Springs	73.32	130	P	P	01 20 11.6	-0.1
	comp=E,0.2nm,0.4s,baz=313,slow=6.2,SNR=3.8						

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*IDC **07** 01:10:19.9±1.9, 37°.79N×140°.31E, h0^{km}, mb3.4/6, mb1 3.5/7, mb1mx3.3/52, mbtmp3.4/7, ML2.2/1, MS4.3/1, Ms1 4.3/1, ms1mx3.5/39, Error ellipse: s-maj=53.2km s-min=20.6km az=70.0*

*ISCJB **07** 01:10:22.4±0.5, 37°.80N±0°.05×140°.03E±0°.06, h20^{km}±5^{km}, mb3.4/6, Error ellipse: s-maj=8.4km s-min=6.7km az=42.8*

*JMA **07** 01:10:22.7, 37°.77N×139°.98E, h9^{km}±1^{km}, M3.1*

ISC 07 01:10:22.4±1.0**, 37°.74N**±0°.05×**140°.03E**±0°.04**, h11**^{km}±8^{km}**, n15, σ0^{s}.60**/17**, mb3.4**/6**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAR	Yonezawaarcadi	0.20	28	P	Pg	01 10 26.7	+0.1
JYAR				eS	Sg	01 10 29.9	+0.4
JFT	Otama	0.33	132	P	Pb	01 10 30.1	-0.3
JFT				eS	Sb	01 10 35.3	-0.4
JFY	Yanaizu	0.42	218	P	Pg	01 10 31.0	+0.3
JYS	Shirataka	0.48	4	P	Pg	01 10 31.9	0.0
JNS	Sasagawa	0.57	278	S	Sg	01 10 39.8	-1.2
JFK	Kawauchi	0.77	119	S	Sb	01 10 48.2	-0.2
MJAR	Matsushiro Arr	1.88	231	Pn	Pb	01 10 56.2	-0.6
	0.9nm,0.3s,baz=63,slow=14,SNR=19						
MAT	Matsushiro	1.88	231	P	Pn	01 10 55.6	+1.0
MAT				S	Sb	01 11 21.0	+0.6
ASAJ	Asahikawa	6.66	16	LR	LR	01 15 29.4	
	comp=Z,2μm,19.7s,baz=206,slow=47						
SONM	Songino Array	26.48	303	P	P	01 15 59.6	-0.1
	0.3nm,0.8s,baz=93,slow=8.7,SNR=2.7						
ZALV	Zalesovo Beam	40.62	312	P	P	01 18 02.8	+0.7
	0.5nm,0.6s,baz=72,slow=4.7,SNR=2.4						
KURBB	Kurchatov Arra	44.70	307	P	P	01 18 35.1	-0.2
	0.4nm,0.3s,baz=85,slow=8.2,SNR=4.7						
BVAR	Borovoye Array	49.28	312	P	P	01 19 11.4	+0.3
	0.2nm,0.5s,baz=83,slow=8.2,SNR=3.0						
WRA	Warramunga Arr	57.62	186	P	P	01 20 12.2	-0.5
	0.4nm,0.7s,baz=5.2,slow=7.4,SNR=4.5						
ASAR	Alice Springs	61.35	186	P	P	01 20 37.9	-0.4
	0.2nm,0.6s,baz=13,slow=5.7,SNR=2.8						

JMA 07 01:10:32.7, 37°.76N×139°.98E, h8^{km}±1^{km}, M3.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAR	Yonezawaarcadi	0.20	40	P	Pg	01 10 36.9	+0.1
JYAR				eS	Sg	01 10 39.9	+0.3
JFT	Otama	0.37	130	P	Pg	01 10 40.2	+0.2
JFT				eS	Sg	01 10 45.2	+0.3
JFY	Yanaizu	0.41	212	P	Pg	01 10 41.0	+0.2
JFY				eS	Sg	01 10 46.4	+0.2
JYS	Shirataka	0.47	8	eS	Sg	01 10 48.4	+0.5
JNS	Sasagawa	0.53	277	P	Pg	01 10 42.8	-0.1
JNS				eS	Sg	01 10 49.8	0.0
JMM	Marumori	0.65	80	eS	Sg	01 10 53.8	0.0
MAT	Matsushiro	1.87	230	P	Pb	01 11 07.1	0.0
MAT				S	Sb	01 11 30.7	+0.2

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*ISCJB **07** 01:10:57.2±0.8, 37°.14N±0°.05×71°.5E±0°.1, h100^{km}, Error ellipse: s-maj=12.9km s-min=5.1km az=158.5*

*NNC **07** 01:11:04.7±9.0, 37°.50N×71°.09E, h103^{km}±187^{km}, mb3.2, mpv3.6, Error ellipse: s-maj=69.2km s-min=50.5km az=7.0*

ISC 07 01:10:57.0±1.2**, 37°.08N**±0°.09×**71°.2E**±0°.1**, h100**^{km}**, n14, σ2^{s}.32**/19**, 7C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.04	355	⇑P	Pn	01 12 28.2	+4.4
	2.7nm,0.3s,baz=181,slow=14,SNR=10						
KK31				⇑S	Sn	01 13 31.9	+0.4
	3.4nm,0.3s,baz=185,slow=24,SNR=4.4						
AAK	Ala-Archa	6.09	23	P	Pn	01 12 26.8	+2.2
	4.2nm,0.4s						
AAK				⇓S	Sn	01 13 32.0	-0.9
	7.9nm,0.7s						
TKM2	Tokmak 2	6.72	29	⇑P	Pn	01 12 36.2	+2.9
	3.7nm,0.8s						
TKM2				⇑S	Sn	01 13 46.5	-1.9
	2.2nm,0.6s						
PYUN	Piuthan	13.35	129	eP	Pn	01 14 02.2	-0.5
	22nm,0.5s						
DANN	Dangsing	13.67	126	eP	Pn	01 14 06.1	-0.8
	19nm,0.6s						
KOLN	Koldanda	13.96	128	eP	Pn	01 14 10.1	-0.6
	9.0nm,0.4s						
AB31	Akbulak array	14.67	330	⇓P	P	01 14 22.1	-0.8
	0.4nm,0.3s,baz=141,slow=12,SNR=17						
AB31				⇑S	Sn	01 16 56.6	-4.4
	2.1nm,0.6s,baz=149,slow=22,SNR=7.8						
DMN	Daman	15.04	125	eP	Pn	01 14 24.0	-0.6
	8.7nm,0.4s						
PKIN	Phulchoki	15.26	124	eP	Pn	01 14 26.5	-0.8
	8.6nm,0.6s						
PKI	Pulchoki	15.27	124	eP	Pn	01 14 26.5	-1.0
	7.3nm,0.4s						
GUN	Gumba	15.36	122	eP	Pn	01 14 27.7	-0.9
	19nm,0.6s						
JIRN	Jiri	15.73	122	eP	Pn	01 14 32.5	-0.8
	38nm,0.7s						
AKTO	Aktyubinsk	16.37	329	⇑P	P	01 14 45.3	+3.5
	2.4nm,0.8s						
AKTO				⇑S	Sn	01 17 38.7	-3.4
	1.8nm,0.7s						
RAMN	Ramite	16.47	123	eP	P	01 14 42.7	-0.6
	20nm,0.6s						

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*IDC **07** 01:18:39.0±1.6, 11°.15S×164°.92E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.9/32, mbtmp3.9/7, ML5.1/1, Error ellipse: s-maj=56.7km s-min=25.3km az=149.0*

*ISCJB **07** 01:18:43.3±0.9, 11°.0S±0°.2×164°.72E±0°.09, h31^{km}, mb3.8/6, Error ellipse: s-maj=23.0km s-min=12.3km az=4.6*

ISC 07 01:18:44.4±1.2**, 11°.0S**±0°.3×**164°.8E**±0°.1**, h31**^{km}**, n9, σ0^{s}.63**/9**, mb3.8**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.02	288	Pn	Pn	01 19 58.2	+0.6
	71nm,0.3s,baz=128,slow=8.0,SNR=4.8						
HNR				Sn	Sn	01 20 53.8	-0.8
	37nm,0.3s,baz=147,slow=18,SNR=3.1						
HNR	Honiara	5.02	288	eS	Pn	01 19 58.0	+0.4
CTA	Charters Tower	19.97	241	P	Pn	01 23 17.8	+1.6
	7.1nm,0.9s,baz=80,slow=9.3,SNR=4.3						
WRA	Warramunga Arr	30.60	249	P	P	01 24 55.5	-0.3
	0.6nm,0.4s,baz=79,slow=9.4,SNR=9.3						
ASAR	Alice Springs	31.95	243	P	P	01 25 07.7	-0.1
	0.5nm,0.6s,baz=60,slow=10,SNR=7.4						
SONM	Songino Array	78.11	324	P	P	01 30 41.0	+0.4
	1.6nm,0.9s,baz=131,slow=4.8,SNR=4.6						
ILAR	Eielson Array	83.81	19	P	P	01 31 09.8	-0.7
	0.6nm,0.8s,baz=231,slow=6.3,SNR=4.7						
NVAR	Mina Array Bea	86.75	50	P	P	01 31 25.8	-0.2
	0.1nm,0.4s,baz=245,slow=5.9,SNR=2.2						
MKAR	Makanchi Array	92.87	317	P	P	01 31 55.0	+0.7
	1.0nm,0.8s,baz=104,slow=6.1,SNR=6.8						

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*IDC **07** 01:25:17.9±1.1, 11°.96S×165°.07E, h0^{km}, mb4.1/6, mb1 4.3/9, mb1mx4.1/31, mbtmp4.2/9, ML4.3/3, Error ellipse: s-maj=34.9km s-min=22.7km az=131.0*

*ISCJB **07** 01:25:21.3±0.8, 12°.05S±0°.07×165°.0E±0°.1, h33^{km}, mb4.0/6, Error ellipse: s-maj=18.4km s-min=9.4km az=162.9*

ISC 07 01:25:23.4±0.9**, 11°.96S**±0°.09×**164°.9E**±0°.1**, h35**^{km}**, n12, σ1^{s}.23**/13**, mb4.1**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.47	297	Pn	Pn	01 26 43.6	+1.1
	25nm,0.3s,baz=149,slow=4.5,SNR=4.5						
HNR				Sn	Sn	01 27 41.6	-2.6
	11nm,0.3s,baz=180,slow=18,SNR=2.4						
DZM	Mont Dzumac	10.16	172	Pn	Pn	01 27 46.7	-0.3
	3.1nm,0.3s,baz=324,slow=12,SNR=29						
DZM				Sn	Sn	01 29 39.3	-0.5
	0.3nm,0.3s,baz=41,slow=20,SNR=1.9						
CTA	Charters Tower	19.63	243	P	Pn	01 29 51.5	+0.8
	0.2nm,0.3s,baz=86,slow=13,SNR=2.9						
H11S2	WAKE ISLAND Hy	30.31	3	T	T	02 02 56.1	
	baz=184,slow=76,SNR=9.8						
H11S3	WAKE ISLAND Hy	30.32	3	T	T	02 02 55.9	
	baz=184,slow=76,SNR=7.4						
H11S1	WAKE ISLAND Hy	30.33	3	T	T	02 02 59.0	
	baz=184,slow=76,SNR=6.3						
WRA	Warramunga Arr	30.38	251	P	P	01 31 33.1	+0.6
	2.8nm,0.6s,baz=81,slow=9.1,SNR=36						
WRA				PcP	PcP	01 34 32.3	+0.4
	0.6nm,0.9s,baz=324,slow=3.9,SNR=5.6						
ASAR	Alice Springs	31.63	244	P	P	01 31 43.1	-0.4
	1.5nm,0.7s,baz=73,slow=9.6,SNR=18						
ASAR				PcP	PcP	01 34 35.0	-0.2
	0.5nm,0.7s,baz=52,slow=1.5,SNR=5.0						
SONM	Songino Array	78.91	324	P	P	01 37 25.5	+2.0
	0.8nm,0.7s,baz=140,slow=7.0,SNR=7.4						
ILAR	Eielson Array	84.64	19	P	P	01 37 52.5	-0.6
	1.0nm,0.7s,baz=236,slow=4.7,SNR=11						
MKAR	Makanchi Array	93.61	317	P	P	01 38 35.6	-0.6
	0.8nm,0.7s,baz=92,slow=6.4,SNR=6.3						
YKA	Yellowknife Ar	96.17	27	P	P	01 38 46.6	-0.8
	0.5nm,0.8s,baz=255,slow=4.6,SNR=7.0						

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*ISCJB **07** 01:42:41.9±0.3, 11°.30S±0°.04×165°.69E±0°.05, h24^{km}, mb4.6/44, MS4.3/9, Error ellipse: s-maj=7.0km s-min=5.5km az=172.8*

*NEIC **07** 01:42:43.2±3.1, 11°.18S×165°.73E, h22^{km}±22^{km}, mb4.8/34, Error ellipse: s-maj=9.4km s-min=7.6km az=203.0*

*IDC **07** 01:42:46.6±3.7, 11°.39S×165°.79E, h55^{km}±33^{km}, mb4.0/13, mb1 4.3/15, mb1mx4.1/36, mbtmp4.3/15, ML4.6/2, MS4.2/9, Ms1 4.2/9, ms1mx3.9/31, Error ellipse: s-maj=21.6km s-min=21.3km az=136.0*

ISC 07 01:42:43.9±0.5**, 11°.26S**±0°.06×**165°.74E**±0°.08**, h24**^{km}**, n81, σ1^{s}.41**/76**, mb4.7**/44**, MS4.3**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.98	287	eP	Pn	01 44 10.0	-1.0
HNR	Honiara	5.98	287	ePn	Pn	01 44 08.8	-2.2
HNR				eSn	Sn	01 45 17.0	-1.8
HNR	Honiara	5.98	287	P	Pn	01 44 14.8	+3.8
	8.9nm,0.3s,baz=241,slow=8.0,SNR=3.7						
HNR				S	Sn	01 45 20.6	+1.8
	14nm,0.3s,baz=246,slow=20,SNR=3.3						
HNR				LR	LR	01 46 14.1	
	comp=Z,3μm,19.0s,baz=130,slow=34						
DZM	Mont Dzumac	10.78	176	ePn	Pn	01 45 16.8	-0.1
	60nm,0.5s						
DZM				eLR	LR	01 47 51.3	
	comp=Z,2μm,26.8s						
DZM	Mont Dzumac	10.78	176	ePn	Pn	01 45 17.1	+0.2
DZM				S	Sn	01 47 14.4	-2.5
DZM	Mont Dzumac	10.78	176	P	Pn	01 45 16.5	-0.5
	7.6nm,0.3s,baz=4.2,slow=12,SNR=21						
DZM				S	Sn	01 47 14.4	-2.5
	baz=105,slow=20,SNR=2.1						
DZM				LR	LR	01 48 46.7	
	comp=Z,2μm,19.3s,baz=45,slow=34						
OUENC	Ouen Island, N	11.15	175	ePn	Pn	01 45 23.3	+1.4
OUENC				eSn	Sn	01 47 27.0	+1.1
PINNC	Pines Island,	11.41	172	ePn	Pn	01 45 26.3	+0.8
MSVF	Nonsavu	13.55	120	ePn	Pn	01 45 50.9	-3.9
MANU	Manus Island	20.40	295	eP	P	01 47 20.3	+1.0
	104nm,1.0s						
CTA	Charters Tower	20.70	243	P	P	01 47 22.7	+0.1
	15nm,0.9s,baz=73,slow=14,SNR=8.8						
CTAO	Charters Tower	20.70	243	eP	P	01 47 23.1	+0.5
	45nm,1.3s						
BKZ	Black Stump Fm	29.40	163	eP	P	01 48 45.7	+0.2
	13nm,0.7s						
STKA	Stephens Creek	30.28	224	eP	P	01 48 54.2	+0.9
	1.2nm,0.6s						
STKA	Stephens Creek	30.28	224	P	P	01 48 53.0	-0.4
	3.2nm,0.7s,baz=34,slow=7.3,SNR=5.5						
STKA				LR	LR	02 00 12.2	
	comp=Z,783nm,18.7s,baz=30,slow=35						
WRAB	Tennant Creek	31.39	250	eP	P	01 49 05.2	+1.8
	14nm,0.8s						
WB2	Warramunga Arr	31.39	250	eP	P	01 49 02.0	-1.3
WR1	Warramunga Arr	31.40	250	eP	P	01 49 01.4	-2.0
	17nm,0.8s						
WRA	Warramunga Arr	31.40	250	P	P	01 49 01.4	-2.1
	8.6nm,0.9s,baz=80,slow=9.3,SNR=15						
LTZ	Lake Taylor	31.92	171	eP	P	01 49 09.5	+1.8
	14nm,0.8s						
GUMO	Guam	32.22	319	LR	LR	02 01 14.5	
	comp=Z,182nm,20.1s,baz=112,slow=34						
OXZ	Oxford	32.42	171	eP	P	01 49 14.6	+2.6
	30nm,1.3s						
RPZ	Rata Peaks	32.67	173	P	P	01 49 12.3	-1.9
	6.7nm,0.7s,baz=104,slow=8.4,SNR=1.7						
RPZ				LR	LR	02 00 11.2	
	comp=Z,597nm,20.8s,baz=342,slow=32						
AS31	Alice Springs	32.69	244	eP	P	01 49 13.2	-1.6
	1.2nm,0.6s						
ASAR	Alice Springs	32.69	244	P	P	01 49 13.2	-1.6
	2.2nm,0.9s,baz=73,slow=9.7,SNR=8.0						
ASAR				LR	LR	02 01 15.3	
	comp=Z,362nm,21.1s,baz=56,slow=34						
RAR	Rarotonga	34.49	111	LR	LR	02 00 41.9	
	comp=Z,345nm,19.5s,baz=292,slow=31						
PPT2	Papeete2	43.66	104	eLQ	LQ	02 01 19.8	
	1μm,26.5s						
PPT2				eLR	LR	02 03 18.1	
	comp=Z,341nm,22.0s						
TBI	Tubuai	44.26	112	eLQ	LQ	02 01 23.4	
	515nm,24.8s						
TBI				eLR	LR	02 03 30.0	
	comp=Z,650nm,28.8s						
KSRS	Korea Array	60.05	326	LR	LR	02 15 22.4	
	comp=Z,119nm,21.3s,baz=75,slow=32						
PETK	Petropavlovsk-	64.47	355	LR	LR	02 15 24.0	
	comp=Z,207nm,21.5s,baz=64,slow=30						
IPM	Ipoh	66.25	280	eP	P	01 53 30.3	-0.5
	22nm,1.2s						
XAN	Xi'an	70.26	312	P	P	01 54 08.5	+13
XAN				pP	PcP	01 54 18.5	+1.3
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	Hu-ho-hao-te	71.99	320	eP	P	01 54 08.4	+2.5
HHC				sP	pwP	01 54 18.7	+1.2
HHC				S	S	02 03 23.8	-2.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,3.5s						
HHC				LR	LR		
	comp=N,370nm,11.2s						
HHC				LR	LR		
	comp=E,280nm,9.5s						
HHC				LR	LR		
	comp=Z,320nm,11.2s						
CM31	Chiang Mai Arr	72.19	294	eP	P	01 54 07.3	-0.2
	comp=Z,6.4nm,0.9s						
CMAR	Chiang Mai Arr	72.19	294	P	P	01 54 07.3	-0.2
	comp=Z,0.8nm,0.3s,baz=126,slow=4.3,SNR=8.1						
ULN	Ulaanbaatar	78.47	324	eP	P	01 54 42.0	-1.1
	comp=Z,2.2nm,0.6s						
QSPA	South Pole Qui	78.75	180	eP	P	01 54 45.7	+1.3
	comp=Z,13nm,1.0s						
SONA0	Songino Array	78.83	324	eP	P	01 54 44.9	-0.2
SONM	Songino Array	78.83	324	P	P	01 54 44.9	-0.2
	comp=Z,0.6nm,0.8s,baz=131,slow=5.2,SNR=4.0						
SONA1	Songino Array	78.83	324	eP	P	01 54 46.3	+1.2
BILL	Bilibino	79.09	0	eP	P	01 54 45.0	-0.9
	comp=Z,8.9nm,1.0s						
GTA	Gaotai	79.20	314	eP	P	01 54 49.3	+2.0
GTA				pP	pP	01 54 54.5	+0.6
GTA				sP	PcP	01 54 57.3	+1.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				LR	LR		
	comp=N,310nm,18.4s						
GTA				LR	LR		
	comp=E,270nm,18.7s						
GTA				LR	LR		
	comp=Z,380nm,18.1s						
CAST	Castle Rocks	81.15	18	eP	P	01 54 55.2	-1.9
	comp=Z,8.8nm,1.1s						
WRH	Wood River Hil	83.13	18	eP	P	01 55 05.7	-1.8
	comp=Z,8.9nm,1.1s						
MDM	Murphy Dome	83.43	18	eP	P	01 55 07.7	-1.4
	comp=Z,5.8nm,0.8s						
HDA	Harding Lake	83.44	19	eP	P	01 55 08.1	-1.1
	comp=Z,21nm,0.9s						
COLA	College	83.49	18	eP	P	01 55 10.2	+0.9
	comp=Z,12nm,0.8s						
RIDG	Independ'e Rid	83.67	20	eP	P	01 55 10.5	+0.1
	comp=Z,21nm,1.4s						
IL1	Eielson Array	83.71	18	eP	P	01 55 07.7	-2.8
ILAR	Eielson Array	83.71	18	P	P	01 55 09.1	-1.4
	comp=Z,1.5nm,0.9s,baz=233,slow=5.6,SNR=10						
ILB	Eielson Array	83.71	18	eP	P	01 55 09.1	-1.4
	comp=Z,3.7nm,0.8s						
SCRK	Sand Creek	84.12	20	eP	P	01 55 12.3	-0.5
	comp=Z,5.7nm,0.8s						
AFDM	Forest Hills D	84.35	49	eP	P	01 55 13.8	-0.5
	comp=Z,4.1nm,1.0s						
CMB	Columbia Colle	84.48	50	eP	P	01 55 14.5	-0.6
	comp=Z,5.7nm,1.1s						
EGAK	Eagle	85.58	20	eP	P	01 55 19.2	-0.6
	comp=Z,12nm,0.9s						
DAWY	Dawson	85.75	21	eP	P	01 55 20.5	-0.3
	comp=Z,5.3nm,1.0s						
NV01	Mina Array Sit	86.17	50	eP	P	01 55 22.9	-0.9
NVAR	Mina Array Bea	86.17	50	P	P	01 55 22.9	-0.9
	comp=Z,1.9nm,0.9s,baz=232,slow=7.1,SNR=8.8						
NV11	Mina Array Sit	86.28	50	eP	P	01 55 23.9	-0.3
	comp=Z,0.6nm,1.4s						
U15A	North Rim	90.24	53	eP	P	01 55 43.5	+0.2
	comp=Z,5.1nm,1.2s						
MTPU	Mount Pierson	90.70	51	eP	P	01 55 46.2	+0.7
	comp=Z,2.9nm,1.0s						
HVU	Hansel Valley	91.15	48	eP	P	01 55 47.2	0.0
	comp=Z,4.3nm,1.1s						
TMUT	Trail Mountain	91.73	50	eP	P	01 55 48.8	-1.4
	comp=Z,11nm,1.4s						
MK01	Makanchi Array	93.66	317	eP	P	01 55 57.2	-1.4
MK31	Makanchi Array	93.67	317	eP	P	01 55 58.0	-0.5
	comp=Z,2.9nm,0.9s						
MK32	Makanchi Array	93.67	317	eP	P	01 55 57.4	-1.2
MKAR	Makanchi Array	93.67	317	eP	P	01 55 58.0	-0.5
	comp=Z,15nm,0.9s						
MKAR	Makanchi Array	93.67	317	P	P	01 55 57.4	-1.2
	comp=Z,1.3nm,0.8s,baz=100,slow=4.9,SNR=11						
PD31	Pinedale Array	93.70	47	eP	P	01 55 58.4	-0.7
	comp=Z,1.0nm,1.1s						
PDAR	Pinedale Array	93.70	47	P	P	01 55 58.4	-0.7
	comp=Z,0.5nm,0.9s,baz=254,slow=3.4,SNR=4.5						
ZALV	Zalesovo Beam	93.72	324	eP	P	01 55 58.9	+0.3
ZALV	Zalesovo Beam	93.72	324	P	P	01 55 58.5	-0.1
	comp=Z,0.3nm,0.3s,baz=131,slow=4.4,SNR=2.8						
ZAA1	Zalesovo Array	93.72	324	eP	P	01 55 58.5	-0.1
MAKZ	Makanchi	93.88	317	eP	P	01 56 00.5	+1.0
	comp=Z,3.8nm,1.0s						
YKA	Yellowknife Ar	95.16	27	P	P	01 56 02.6	-2.4
	comp=Z,0.4nm,0.8s,baz=259,slow=4.6,SNR=6.4						
YKB5	Yellowknife Ar	95.16	27	eP	P	01 56 02.6	-2.4
GEC2	GERESS Array S	135.89	334	ePKPdf	PKPdf	02 02 02.2	-0.8
GERES	GERESS Array B	135.89	334	PKP	PKPdf	02 02 02.2	-0.8
	comp=Z,0.2nm,0.2s,baz=342,slow=2.3,SNR=3.1						
ESDC	Sonseca Array	150.26	344	PKPbc	PKPdf	02 02 32.4	+4.0
	comp=Z,0.1nm,0.3s,baz=25,slow=2.8,SNR=2.9						
TORD	Torodi Ar. Bea	164.29	279	PKP	PKPdf	02 02 45.8	-0.7
	comp=Z,0.7nm,0.9s,baz=48,slow=2.1,SNR=4.9						
TOA1	Torodi Ar. Sit	164.29	279	ePKPdf	PKPdf	02 02 45.8	-0.7

IDC 07 01:43:12.9±2.5**, 4°.72S**×**135°.39E, h0**^{km}**, mb3.4**/1**, mb1 3.7**/4**, mb1mx3.5**/33**, mbtmp3.5**/4**, ML3.7**/3**, Error ellipse: s-maj=82.3km s-min=29.3km az=85.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.16	184	Pn	Pn	01 46 50.5	+2.0
	0.2nm,0.3s,baz=6.0,slow=13,SNR=7.2						
WRA				Sn	Sn	01 49 33.1	-4.3
	0.3nm,0.3s,baz=8.6,slow=23,SNR=4.1						
WRA				Lg	Lg	01 51 25.7	
	baz=2.3,slow=22,SNR=4.1						
FITZ	Fitzroy Crossi	16.36	215	Pn	Pn	01 47 02.8	-1.4
	0.9nm,0.3s,baz=33,slow=9.3,SNR=29						
FITZ				Sn	Sn	01 49 55.1	-11
	0.6nm,0.3s,baz=195,slow=13,SNR=7.6						
FITZ				Lg	Lg	01 52 05.0	
	0.2nm,0.3s,baz=174,slow=18,SNR=1.7						
ASAR	Alice Springs	18.89	184	P	P	01 47 35.0	-0.2
	0.1nm,0.3s,baz=6.0,slow=12,SNR=2.7						
ASAR				S	Sn	01 51 04.1	-3.7
	0.1nm,0.3s,baz=3.9,slow=29,SNR=3.3						
ASAR				Lg	Lg	01 53 23.3	
	0.1nm,0.3s,baz=12,slow=31,SNR=3.1						
MKAR	Makanchi Array	69.41	324	P	P	01 54 22.9	0.0
	0.2nm,0.6s,baz=122,slow=5.4,SNR=3.1						

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*ISCJB **07** 01:49:37.4±0.5, 11°.73S±0°.05×165°.82E±0°.10, h10^{km}, mb4.5/26, Error ellipse: s-maj=14.1km s-min=7.4km*

az=165.9

*IDC **07** 01:49:37.3±0.8, 11°.48S×165°.85E, h0^{km}, mb4.3/9, mb1 4.4/10, mb1mx4.1/39, mbtmp4.2/10, ML4.2/1, Error ellipse: s-maj=30.9km s-min=21.2km az=117.0*

*NEIC **07** 01:49:38.5±0.3, 11°.60S×165°.94E, h10^{km}, mb4.7/20, Error ellipse: s-maj=10.7km s-min=7.7km az=89.0*

ISC 07 01:49:38.2±0.6**, 11°.57S**±0°.08×**165°.9E**±0°.1**, h10^{km}, n49, σ1^{s}.18**/45**, mb4.6**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.46	177	Pn	Pn	01 52 10.0	+1.6
	2.1nm,0.3s,baz=344,slow=19,SNR=11						
DZM				Sn	Sn	01 54 04.0	-1.7
	0.3nm,0.3s,baz=143,slow=20,SNR=1.9						
MSVF	Nonsavu	13.24	119	ePn	P	01 53 01.7	+5.2
MANU	Manus Island	20.68	296	eP	Pn	01 54 20.3	-0.6
	70nm,1.0s						
COEN	Coen	22.30	261	eP	P	01 54 35.3	-0.7
	7.2nm,1.0s						
ARMA	Armidale	22.97	213	eP	P	01 54 44.3	+1.2
	33nm,1.4s						
BKZ	Black Stump Fm	29.05	163	eP	P	01 55 37.2	-1.6
	17nm,1.4s						
THZ	Tophouse	30.70	170	eP	P	01 55 54.2	+0.9
	10nm,0.9s						
WRAB	Tennant Creek	31.45	251	eP	P	01 55 57.0	-3.1
	15nm,1.2s						
WB2	Warramunga Arr	31.45	251	eP	P	01 56 00.6	+0.5
	3.9nm,0.8s						
WR1	Warramunga Arr	31.46	251	eP	P	01 56 00.4	+0.2
	3.2nm,0.9s						
WRA	Warramunga Arr	31.46	251	P	P	01 56 00.4	+0.2
	1.9nm,0.8s,baz=81,slow=9.2,SNR=7.1						
RPZ	Rata Peaks	32.34	173	eP	P	01 56 09.9	+2.3
	19nm,0.9s						
RPZ	Rata Peaks	32.34	173	P	P	01 56 10.1	+2.5
	8.3nm,0.8s,baz=126,slow=5.5,SNR=4.1						
AS31	Alice Springs	32.71	244	eP	P	01 56 10.6	-0.6
	0.9nm,0.8s						
AS31				eS	S	02 01 15.3	-13
ASAR	Alice Springs	32.71	244	P	P	01 56 10.6	-0.6
	2.7nm,0.8s,baz=75,slow=9.3,SNR=10						
ODZ	Otahua Downs	33.60	174	eP	P	01 56 17.0	-1.7
	28nm,1.4s						
PYZ	Puysegur Point	34.49	179	eP	P	01 56 26.3	-0.1
	81nm,1.2s						
BBOO	Buckleboo	34.59	228	eP	P	01 56 26.6	-0.9
	29nm,1.5s						
FITZ	Fitzroy Crossi	39.40	256	eP	P	01 57 08.3	-0.3
	5.2nm,0.9s						
FITZ	Fitzroy Crossi	39.40	256	P	P	01 57 08.3	-0.3
	4.3nm,0.9s,baz=73,slow=11,SNR=4.6						
QSPA	South Pole Qui	78.44	180	eP	P	02 01 39.1	0.0
	24nm,0.9s						
ULN	Ulaanbaatar	78.82	324	eP	P	02 01 43.6	+2.0
	4.9nm,0.9s						
SONA0	Songino Array	79.18	324	eP	P	02 01 45.0	+1.4
SONM	Songino Array	79.18	324	P	P	02 01 45.0	+1.4
	1.0nm,0.6s,baz=140,slow=6.3,SNR=11						
HDA	Harding Lake	83.68	19	eP	P	02 02 13.1	+6.2
	5.7nm,0.9s						
ILAR	Eielson Array	83.95	18	P	P	02 02 08.2	0.0
	0.7nm,0.6s,baz=240,slow=4.8,SNR=11						
ILB	Eielson Array	83.95	18	eP	P	02 02 08.2	0.0
	1.8nm,1.5s						
NV01	Mina Array Sit	86.24	50	eP	P	02 02 26.2	+5.6
NVAR	Mina Array Bea	86.24	50	P	P	02 02 26.2	+5.6
	0.6nm,0.7s,baz=237,slow=8.0,SNR=4.7						
MK01	Makanchi Array	94.00	317	eP	P	02 02 57.6	+1.0
MK31	Makanchi Array	94.01	317	eP	P	02 02 57.6	+0.9
	2.9nm,0.8s						
MK32	Makanchi Array	94.01	317	eP	P	02 02 57.7	+1.0
MKAR	Makanchi Array	94.01	317	P	P	02 02 57.7	+1.0
	3.1nm,0.8s,baz=100,slow=6.3,SNR=39						
ZALV	Zalesovo Beam	94.07	324	eP	P	02 02 57.0	+0.3
ZALV	Zalesovo Beam	94.07	324	P	P	02 02 56.4	-0.4
	0.9nm,0.5s,baz=106,slow=4.8,SNR=6.0						
ZAA1	Zalesovo Array	94.07	324	eP	P	02 02 56.4	-0.4
MAKZ	Makanchi	94.22	317	eP	P	02 02 58.9	+1.3
	4.1nm,1.0s						
YKA	Yellowknife Ar	95.36	27	P	P	02 03 00.9	-1.5
	0.2nm,0.6s,baz=259,slow=4.8,SNR=3.6						
YKB5	Yellowknife Ar	95.36	27	eP	P	02 03 00.9	-1.5
ARA0	ARCESS Array S	116.88	345	ePKPdf	PKiKP	02 08 22.8	+0.2
ARCES	ARCESS Array B	116.88	345	PKP	PKiKP	02 08 22.8	+0.2
	0.8nm,0.4s,baz=78,slow=2.2,SNR=17						
NB200	NORSAR Array S	127.25	345	ePKPdf	PKiKP	02 08 43.3	0.0
NOA	NORSAR Array B	127.25	345	PKP	PKiKP	02 08 43.3	0.0
	0.5nm,0.7s,baz=336,slow=1.9,SNR=2.4						
BR101	Keskin Array S	129.44	312	ePKPdf	PKiKP	02 08 48.7	+0.3
BRTR	Keskin Array B	129.44	312	PKP	PKiKP	02 08 48.7	+0.3
	0.3nm,0.7s,baz=49,slow=2.9,SNR=3.3						
KEST	Kesra	147.93	322	PKPbc	PKPab	02 09 25.8	-1.1
	10nm,0.8s,baz=167,slow=5.4,SNR=6.8						
ESDC	Sonseca Array	150.60	344	PKPbc	PKiKP	02 09 30.4	-1.2
	0.6nm,0.6s,baz=33,slow=2.0,SNR=3.7						
TORD	Torodi Ar. Bea	164.50	277	PKP	PKPdf	02 09 43.4	+0.1
	0.7nm,0.9s,baz=48,slow=2.1,SNR=4.2						
TOA1	Torodi Ar. Sit	164.50	277	ePKPdf	PKPdf	02 09 43.4	+0.1

IDC 07 02:01:28.5±1.8**, 10°.87S**×**165°.27E, h0^{km}, mb3.5**/3**, mb1 4.0**/5**, mb1mx3.6**/34**, mbtmp3.9**/5**, ML4.2**/2**, Error ellipse: s-maj=41.4km s-min=31.9km az=134.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.44	285	Pn	Pn	02 02 52.8	+1.9
	25nm,0.3s,baz=187,slow=8.1,SNR=3.2						
DZM	Mont Dzumac	11.19	174	Pn	Pn	02 04 11.1	+1.2
	0.6nm,0.3s,baz=91,slow=22,SNR=5.8						
WRA	Warramunga Arr	31.11	249	P	P	02 07 48.4	-0.7
	0.4nm,0.6s,baz=80,slow=9.0,SNR=3.4						
ASAR	Alice Springs	32.46	243	P	P	02 08 00.6	-0.3
	0.9nm,0.9s,baz=68,slow=10,SNR=6.4						
ILAR	Eielson Array	83.50	19	P	P	02 13 57.9	0.0
	0.4nm,0.9s,baz=240,slow=5.1,SNR=5.6						

*IDC **07** 02:17:16.6±0.4, 10°.67S×165°.02E, h0^{km}, mb4.9/24, mb1 5.0/26, mb1mx5.0/32, mbtmp4.9/26, ML5.6/2, MS4.3/11, Ms1 4.3/11, ms1mx4.0/38, Error ellipse: s-maj=15.5km s-min=12.3km az=102.0*

*ISCJB **07** 02:17:17.2±2.6, 10°.65S±0°.04×164°.90E±0°.03, h9^{km}±16^{km}, mb4.9/70, MS4.5/19, Error ellipse: s-maj=6.2km s-min=5.2km az=162.0*

*NEIC **07** 02:17:18.6±0.1, 10°.64S×164°.94E, h10^{km}, mb4.5/7, Error ellipse: s-maj=5.2km s-min=3.9km az=126.0*

*MOS **07** 02:17:20.8±1.1, 10°.65S×164°.86E, h33^{km}, mb5.2/36, MS4.4/6, Error ellipse: s-maj=8.8km s-min=7.6km az=104.9*

*GCMT **07** 02:17:21.6±0.3, 10°.76S±0°.04×164°.71E±0°.03, h14^{km}±1^{km}, MW5.1/70, Moment Tensor Solution. s14,c16; s70,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.31±.46; M$_{\theta\theta}$-0.68±.28; M$_{\phi\phi}$-2.63±.29; M$_{r\theta}$1.47±.89; M$_{\theta\phi}$-3.09±.20; M$_{\phi r}$-2.36±.75; Best double couple: M$_{0}$5.14000×10^{16} NP1:φ$_{s}$186.00000°, δ62.00000°, λ50.00000°. NP2: φ$_{s}$66.00000°, δ48.00000°, λ140.00000°. Principal axes: T 5.2390, Plg54.0000°, Azm44.0000°; N -0.1960, Plg34.0000°, Azm208.0000°; P -5.0400, Plg8.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 02:17:22.2±0.4**, 10°.65S**±0°.05×**165°.01E**±0°.06**, h36^{km}**±2^{km}**, n388, σ1^{s}.34**/411**, mb5.0**/70**, MS4.6**/19**, 29C-12D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.13	283	iP	Pn	02 18 36.0	-0.5
HNR				iS	Sn	02 19 35.0	+0.5
HNR	Honiara	5.13	283	ePn	Pn	02 18 37.3	+0.9
HNR				eSn	Sn	02 19 30.5	-4.0
HNR	Honiara	5.13	283	Pn	Pn	02 18 37.1	+0.6
	300nm,0.3s,baz=148,slow=5.8,SNR=27						
HNR				Sn	Sn	02 19 36.5	+2.1
	116nm,0.3s,baz=196,slow=17,SNR=4.1						
HNR				LR	LR	02 20 40.3	
	comp=Z,10μm,18.9s,baz=110,slow=40						
DZM	Mont Dzumac	11.44	173	ePn	Pn	02 20 02.6	-0.5
	303nm,1.3s						
DZM				eLR	LR	02 22 27.3	
	comp=Z,2μm,25.5s						
DZM	Mont Dzumac	11.44	173	Pn	Pn	02 20 03.1	0.0
	33nm,0.3s,baz=41,slow=11,SNR=92						
DZM				Sn	Sn	02 22 06.8	-2.9
	baz=90,slow=17,SNR=2.1						
DZM				LR	LR	02 23 35.2	
	comp=Z,2μm,18.8s,baz=26,slow=33						
OUENC	Ouen Island, N	11.83	172	ePn	Pn	02 20 09.2	+0.8
PINNC	Pines Island,	12.12	169	ePn	Pn	02 20 12.5	+0.2
MSVF	Nonsavu	14.47	121	ePn	P	02 20 51.6	+0.8
MSVF	Nonsavu	14.47	121	eP	P	02 20 51.6	+0.8
MANU	Manus Island	19.49	295	eP	Pn	02 21 48.2	+0.5
EIDS	Eidsvold	19.71	220	P	Pn	02 21 50.8	+0.6
	baz=20,SNR=39						
EIDS	Eidsvold	19.71	220	eP	Pn	02 21 50.9	+0.6
CTA	Charters Tower	20.35	240	P	P	02 21 56.1	+0.4
	33nm,0.9s,baz=69,slow=12,SNR=12						
CTAO	Charters Tower	20.35	240	eP	P	02 21 55.3	-0.3
CTAO	Charters Tower	20.35	240	eP	P	02 21 55.3	-0.3
MTSU	Mount Surprise	21.36	247	P	P	02 22 06.4	-0.2
	baz=22,SNR=18						
COEN	Coen	21.58	259	P	P	02 22 08.4	-0.5
	baz=22,SNR=16						
COEN	Coen	21.58	259	eP	P	02 22 08.4	-0.5
RMQ	Roma	21.98	222	P	P	02 22 14.8	+1.6
	baz=22,SNR=19						
ARMA	Armidale	23.27	210	P	P	02 22 27.7	+0.9
	baz=24,SNR=48						
ARMA	Armidale	23.27	210	eP	P	02 22 27.6	+0.8
QLP	Quilpie	25.20	228	P	P	02 22 45.3	+0.7
	baz=25,SNR=28						
OUZ	Omahuta	25.68	164	eP	P	02 22 49.4	+0.7
MGCD	Mangrove Creek	25.83	208	P	P	02 22 52.6	+2.4
	baz=26,SNR=21						
RIV	Riverview	26.33	207	P	P	02 22 56.2	+1.6
	baz=27,SNR=11						
QIS	Mount Isa	26.33	245	P	P	02 22 54.2	-0.8
	baz=26,SNR=3.3						
CMSA	Cobar Meteorol	27.41	218	P	P	02 23 04.9	+0.4
	baz=28,SNR=30						
YNG	Young	28.01	210	P	P	02 23 11.5	+1.6
	baz=28,SNR=9.8						
CNB	Canberra Magne	28.38	208	P	P	02 23 14.6	+1.4
	baz=29,SNR=4.8						
CAN	Canberra	28.55	208	eP	P	02 23 14.3	-0.4
H11S2	WAKE ISLAND Hy	29.01	3	T	T	02 53 31.1	
	baz=184,slow=76,SNR=522						
H11S3	WAKE ISLAND Hy	29.01	3	T	T	02 53 28.4	
	baz=184,slow=76,SNR=258						
H11S1	WAKE ISLAND Hy	29.03	3	T	T	02 53 33.0	
	baz=184,slow=76,SNR=354						
URZ	Urewera	29.55	160	eP	P	02 23 24.8	+1.4
URZ	Urewera	29.55	160	P	P	02 23 24.3	+0.8
	7.2nm,0.6s,baz=300,slow=5.4,SNR=6.6						
MILA	Mila	29.92	206	P	P	02 23 28.7	+1.9
	baz=30,SNR=3.8						
BKZ	Black Stump Fm	30.18	162	eP	P	02 23 30.0	+0.9
STKA	Stephens Creek	30.23	222	P	P	02 23 30.3	+0.7
	baz=30,SNR=50						
STKA	Stephens Creek	30.23	222	P	P	02 23 30.2	+0.6
	54nm,0.8s,baz=35,slow=9.4,SNR=74						
STKA				LR	LR	02 34 08.3	
	comp=Z,607nm,18.9s,baz=41,slow=34						
H11N1	WAKE ISLAND Hy	30.23	4	T	T	02 55 03.2	
	baz=184,slow=76,SNR=345						
H11N3	WAKE ISLAND Hy	30.24	4	T	T	02 55 03.5	
	baz=184,slow=76,SNR=271						
H11N2	WAKE ISLAND Hy	30.25	4	T	T	02 55 04.5	
	baz=184,slow=76,SNR=200						
WRAB	Tennant Creek	30.93	249	eP	P	02 23 34.2	-1.7
	11nm,1.0s						
WRAB	Tennant Creek	30.93	249	⇑eP	P	02 23 33.6	-2.3
WRAB				pmax	pmax		
	comp=Z,11nm,1.0s						
WB2	Warramunga Arr	30.93	249	eP	P	02 23 33.6	-2.3
WB2				ePcP	PcP	02 26 32.3	+0.3
WR1	Warramunga Arr	30.94	249	eP	P	02 23 33.9	-2.1
WR1				ePcP	PcP	02 26 32.4	+0.3
WRA	Warramunga Arr	30.94	249	P	P	02 23 33.9	-2.1
	comp=Z,4.4nm,0.5s,baz=80,slow=9.2,SNR=65						
WRA				PcP	PcP	02 26 32.4	+0.3
	comp=Z,2.9nm,0.8s,baz=81,slow=2.9,SNR=8.7						
WRA				LR	LR	02 36 01.9	
	comp=Z,843nm,18.5s,baz=75,slow=36						
GUMO	Guam	31.30	320	LR	LR	02 34 20.1	
	comp=Z,606nm,22.0s,baz=128,slow=33						
THZ	Tophouse	31.75	169	eP	P	02 23 45.6	+2.6
KDU	Kakadu	31.91	263	P	P	02 23 42.4	-2.2
	baz=32,SNR=4.1						
TOO	Toolangi	32.04	210	P	P	02 23 46.6	+1.1
	baz=32,SNR=13						
TOO	Toolangi	32.04	210	eP	P	02 23 46.5	+1.0
AS01	Alice Springs	32.28	242	eP	P	02 23 45.2	-2.6
AS31	Alice Springs	32.32	242	eP	P	02 23 46.1	-2.0
	comp=Z,2.0nm,0.6s						
AS31				ePcP	PcP	02 26 35.6	-0.1
ASAR	Alice Springs	32.32	242	P	P	02 23 46.1	-2.1
	comp=Z,3.8nm,0.6s,baz=64,slow=9.9,SNR=53						
ASAR				PcP	PcP	02 26 35.6	-0.1
	comp=Z,3.4nm,0.8s,baz=69,slow=2.6,SNR=12						
ASAR				LR	LR	02 36 31.9	
	comp=Z,388nm,18.1s,baz=60,slow=36						
HTT	Hallett	32.96	223	P	P	02 23 54.1	+0.5
	baz=33,SNR=59						
RPZ	Rata Peaks	33.35	172	P	P	02 23 57.3	+0.4
	comp=Z,15nm,0.8s,baz=144,slow=4.4,SNR=8.2						
RPZ				LR	LR	02 36 16.6	
	comp=Z,421nm,18.9s,baz=344,slow=34						
BBOO	Buckleboo	34.57	226	P	P	02 24 07.7	+0.2
	baz=35,SNR=56						
BBOO	Buckleboo	34.57	226	eP	P	02 24 07.8	+0.2
RAR	Rarotonga	35.38	112	LR	LR	02 35 40.2	
	comp=Z,563nm,21.2s,baz=278,slow=31						
KNRA	Kununurra	35.61	258	P	P	02 24 15.2	-1.6
	baz=36,SNR=7.0						
TAU	Tasmania Unive	35.64	203	eP	P	02 24 17.2	+0.5
TAU	Tasmania Unive	35.64	203	eP	P	02 24 17.2	+0.5
WRKA	Warakurna	37.61	243	P	P	02 24 32.1	-1.7
	baz=38,SNR=9.4						
FITZ	Fitzroy Crossi	38.78	254	P	P	02 24 41.7	-1.9
	baz=39,SNR=14						
FITZ	Fitzroy Crossi	38.78	254	P	P	02 24 41.6	-2.1
	comp=Z,8.2nm,0.8s,baz=104,slow=6.4,SNR=18						
FITZ				PcP	PcP	02 26 55.5	+0.8
	comp=Z,2.9nm,0.7s,baz=54,slow=4.8,SNR=2.7						
FITZ				LR	LR	02 40 47.6	
	comp=Z,278nm,18.7s,baz=77,slow=36						
FORT	Forrest	39.68	234	P	P	02 24 51.6	+0.6
	baz=40,SNR=9.5						
FORT	Forrest	39.68	234	eP	P	02 24 51.0	0.0
PPT	Papeete	44.50	104	LR	LR	02 42 02.0	
	comp=Z,298nm,19.2s,baz=252,slow=33						
PPT2	Papeete2	44.50	104	eLR	LR	02 37 52.7	
	comp=Z,617nm,23.5s						
TBI	Tubuai	45.15	112	eLR	LR	02 38 08.0	
	comp=Z,2μm,28.5s,baz=286						
MEEK	Meekatharra	46.47	243	P	P	02 25 45.4	-0.6
	baz=47,SNR=6.9						
NWAO	Narrogin (SRO)	49.08	236	eP	P	02 26 04.9	-1.3
NWAO	Narrogin (SRO)	49.08	236	eP	P	02 26 04.9	-1.3
MORW	Morawa	49.18	241	eP	P	02 26 06.2	-0.8
KKM	Kota Kinabalu	51.33	287	eP	P	02 26 23.9	+0.3
MJAR	Matsushiro Arr	53.29	333	P	P	02 26 37.0	-0.6
MJAR				pmax	pmax		
	comp=Z,12nm,0.9s						
MJAR	Matsushiro Arr	53.29	333	P	P	02 26 37.0	-0.6
	comp=Z,12nm,0.9s,baz=168,slow=7.4,SNR=14						
MAJO	Matsushiro	53.30	333	eP	P	02 26 37.8	+0.1
MAJO	Matsushiro	53.30	333	deP	P	02 26 37.7	+0.1
MAJO				pmax	pmax		
	comp=Z,21nm,0.8s						
MAT	Matsushiro	53.30	333	P	P	02 26 37.5	-0.1
MJB9	Matsu-Tunnel	53.30	333	eP	P	02 26 37.9	+0.2
TAOE	Nuku Hiva Isla	54.03	93	eLR	LR	02 42 22.8	
	comp=Z,397nm,26.1s						
JNU	Nakatsue	54.34	325	eP	P	02 26 45.9	+0.6
YULB	Yu-li	54.53	309	eP	P	02 26 48.2	+1.3
TPUB	Ta-pu	54.99	308	eP	P	02 26 50.2	-0.1
YHNB	Yeheng	55.17	310	eP	P	02 26 52.4	+0.7
KSM	Kuching	55.72	279	eP	P	02 26 55.4	-0.3
CISI	Cisompet, Garu	56.49	268	eP	P	02 26 59.7	-1.6
ASAJ	Asahikawa	58.19	341	P	P	02 27 13.8	+1.2
	comp=Z,41nm,0.8s,baz=218,slow=12,SNR=24						
SSE	Sheshan	59.07	316	P	P	02 27 19.4	+0.5
SSE				pmax	pmax		
	comp=Z,14nm,0.5s						
SSE				pmax	pmax		
	comp=Z,72nm,5.1s						
SSE	Sheshan	59.07	316	eP	P	02 27 19.6	+0.7
KSRS	Korea Array	59.15	326	P	P	02 27 20.2	+0.9
	comp=Z,9.9nm,0.9s,baz=142,slow=7.3,SNR=17						
KSRS				LR	LR	02 51 03.3	
	comp=Z,129nm,19.8s,baz=325,slow=34						
KS15	Wonju Array Si	59.16	326	eP	P	02 27 20.2	+0.8
KSAR	Wonju Array Be	59.16	326	P	P	02 27 20.2	+0.8
KSAR	Wonju Array Be	59.16	326	P	P	02 27 20.3	+0.8
KS01	Wonju Array Si	59.18	326	eP	P	02 27 19.8	+0.2
YSS	Yuzh-Sakhalins	60.70	343	⇓eP	P	02 27 31.3	+1.5
YSS				e		02 27 42.3	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
NJ2	Nanjing	61.23	316	eP	P	02 27 34.4	+0.6
NJ2				pmax	pmax		
	comp=Z,27nm,0.9s						
MSHR	Mys Shultsa	61.37	332	⇓eP	P	02 27 36.6	+2.1
QIZ	Qiongzhong	61.86	298	P	P	02 27 38.0	-0.2
QIZ				S	S	02 35 59.2	-0.5
QIZ				pmax	pmax		
	comp=Z,210nm,13.7s						
QIZ				LR	LR		
	comp=N,230nm,15.7s						
QIZ				LR	LR		
	comp=E,340nm,17.6s						
QIZ				LR	LR		
	comp=Z,370nm,21.6s						
USRK	Ussuriysk Ar.	62.27	334	P	P	02 27 41.8	+1.3
	comp=Z,10nm,0.7s,baz=121,slow=5.6,SNR=15						
DL2	Dalian	63.73	323	⇓iP	P	02 27 51.4	+1.1
DL2				pmax	pmax		
	comp=Z,53nm,0.7s						
PETK	Petropavlovsk-	63.82	355	eP	P	02 27 51.1	+0.5
PETK	Petropavlovsk-	63.82	355	P	P	02 27 50.8	+0.2
	comp=Z,6.5nm,0.8s,baz=166,slow=8.6,SNR=6.2						
PETK				PP	PP	02 30 12.7	+1.3
	comp=Z,6.8nm,1.1s,baz=105,slow=11,SNR=3.6						
PEA1	Petropavlovsk-	63.82	355	eP	P	02 27 50.8	+0.2
PEA1				ePP	PP	02 30 12.7	+1.2
TYV	Tymovskoe	64.28	344	eP	P	02 27 54.4	+0.8
TYV				pmax	pmax		
	comp=Z,12nm,1.8s						
CN2	Changchun	65.04	329	eP	P	02 28 00.9	+2.1
IPM	Ipoh	65.44	280	eP	P	02 28 02.1	0.0
SKNT	Sakolnakorn	66.27	294	P	P	02 28 07.9	+0.6
	comp=Z,21nm,1.5s,comp=Z,812nm						
SKNT	Sakolnakorn	66.27	294	P	P	02 28 07.9	+0.6
	comp=Z,21nm,1.5s,comp=Z,812nm						
KLR	Kul'dur	66.41	337	c iP	P	02 28 08.3	+0.8
CASY	Casey	66.48	201	eP	P	02 28 08.8	+1.0
VNDA	Vanda	66.87	181	P	P	02 28 10.5	+0.4
	comp=Z,23nm,1.1s,baz=4.6,slow=8.3,SNR=6.9						
SRAK	Srakaew	67.08	290	P	P	02 28 12.5	+0.1
	comp=Z,20nm,1.2s,comp=Z,4μm						
SRAK	Srakaew	67.08	290	P	P	02 28 12.5	+0.1
ENH	Enshi	67.09	309	eP	P	02 28 11.6	-0.7
NONG	Nongkai	67.39	295	P	P	02 28 15.4	+1.0
	comp=Z,0.8nm,1.1s						
NONG	Nongkai	67.39	295	P	P	02 28 15.4	+1.0
	comp=Z,0.8nm,1.1s						
TRTT	Trang	67.55	283	P	P	02 28 17.4	+1.9
	comp=Z,6.6nm,1.5s						
TRTT	Trang	67.55	283	P	P	02 28 17.4	+1.9
GYA	Guiyang	67.60	304	⇑iP	P	02 28 15.6	-0.1
GYA				pP	pwP	02 28 32.5	+1.1
GYA				PP	PP	02 30 49.0	+3.8
GYA				S	S	02 37 09.2	-1.3
GYA				SKS	SKiKP	02 38 07.7	-3.5
GYA	Guiyang	67.60	304	SS	SS	02 41 32.0	-0.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.7s						
GYA				LR	LR		
	comp=N,570nm,18.2s						
GYA				LR	LR		
	comp=E,550nm,18.6s						
GYA				LR	LR		
	comp=Z,520nm,18.4s						
CHAI	Chaiyaphum	67.72	292	P	P	02 28 17.4	+0.9
	comp=Z,4.3nm,1.1s						
CHAI	Chaiyaphum	67.72	292	P	P	02 28 17.4	+0.9
	comp=Z,4.3nm,1.1s						
BJI	Beijing	67.72	321	⇓iP	P	02 28 17.0	+1.0
BJI				pmax	pmax		
	comp=Z,13nm,1.3s						
PATY	Pattaya	67.84	289	P	P	02 28 20.3	+3.0
	comp=Z,14nm,1.1s,comp=Z,2μm						
PBKT	Sadao Pong	68.86	292	P	P	02 28 24.7	+1.1
	comp=Z,21nm,1.2s,comp=Z,848nm						
XAN	Xi'an	69.32	313	P	P	02 28 26.4	+0.1
XAN				pP	pwP	02 28 38.3	-1.3
XAN				sP	sP	02 28 43.9	+3.8
XAN				pmax	pmax		
	comp=Z,16nm,1.1s						
XAN				pmax	pmax		
	comp=Z,190nm,4.3s						
XAN				LR	LR		
	comp=N,390nm,21.7s						
XAN				LR	LR		
	comp=Z,400nm,21.7s						
XAN	Xi'an	69.32	313	eP	P	02 28 27.0	+0.7
XAN	Xi'an	69.32	313	eP	P	02 28 27.0	+0.7
UTTA	Uttaradit	69.61	293	P	P	02 28 29.7	+1.4
	comp=Z,3.7nm,1.0s						
UTTA	Uttaradit	69.61	293	P	P	02 28 29.7	+1.4
SRDT	SRDT	69.88	290	P	P	02 28 32.1	+2.1
	comp=Z,23nm,1.3s						
SRDT	SRDT	69.88	290	P	P	02 28 32.1	+2.1
	comp=Z,23nm,1.3s						
UTHA	Uthaitani	69.94	291	P	P	02 28 31.9	+1.6
	comp=Z,5.9nm,1.2s,comp=Z,66nm						
UTHA	Uthaitani	69.94	291	P	P	02 28 31.9	+1.6
	comp=Z,5.9nm,1.2s,comp=Z,66nm						
KMI	Kunming	70.30	302	P	P	02 28 34.4	+1.7
KMI				pP	pwP	02 28 50.0	+1.8
KMI				sP	PcP	02 28 55.2	+1.0
KMI				pmax	pmax		
	comp=Z,48nm,1.3s						
KMI				pmax	pmax		
	comp=Z,180nm,4.9s						
KMI				LR	LR		
	comp=N,150nm,22.9s						
KMI				LR	LR		
	comp=E,220nm,22.4s						
KMI				LR	LR		
	comp=Z,460nm,19.0s						
KMI	Kunming	70.30	302	eP	P	02 28 30.5	-2.1
KMI	Kunming	70.30	302	eP	P	02 28 30.5	-2.1
SUKH	Sukhothai	70.36	293	P	P	02 28 34.6	+1.7
	comp=Z,5.2nm,1.1s						
MA2	Magadan	70.93	352	⇑eP	P	02 28 35.1	-0.4
MA2				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC	Hu-ho-hao-te	71.07	320	eP	P	02 28 40.5	+3.6
HHC				PP	PP	02 31 20.5	+5.6
HHC				S	S	02 37 52.4	+1.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,5.6s						
HHC				LR	LR		
	comp=N,220nm,10.4s						
HHC				LR	LR		
	comp=E,220nm,11.2s						
HHC				LR	LR		
	comp=Z,290nm,14.7s						
CM01	Chiang Mai Arr	71.26	294	eP	P	02 28 39.4	+1.0
CM31	Chiang Mai Arr	71.29	294	eP	P	02 28 39.5	+1.0
CMAR	Chiang Mai Arr	71.29	294	P	P	02 28 39.6	+1.0
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	Chiang Mai Arr	71.29	294	P	P	02 28 39.5	+1.0
	comp=Z,12nm,1.0s,baz=115,slow=4.2,SNR=34						
CMMT	Chiang Mai	71.40	294	P	P	02 28 40.2	+1.0
	comp=Z,19nm,1.2s						
CHTO	Chiang Mai	71.40	294	eP	P	02 28 40.4	+1.2
CHTO	Chiang Mai	71.40	294	eP	P	02 28 40.4	+1.2
CHTO	Chiang Mai	71.40	294	P	P	02 28 40.3	+1.1
	comp=Z,87nm,1.2s						
HIA	Hailar	71.67	331	eP	P	02 28 41.2	+0.9
HIA	Hailar	71.67	331	c iP	P	02 28 41.0	+0.7

HIA				pmax	pmax		
	comp=Z,32nm,1.1s						
ZEA	Zeya	71.70	337	eP	P	02 28 41.2	+0.9
ZEA				pmax	pmax		
	comp=N,18nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,36nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
CD2	Chengdu	71.79	308	P	P	02 28 41.8	+0.4
CD2				pmax	pmax		
	comp=Z,110nm,0.8s						
CD2				pmax	pmax		
	comp=Z,170nm,4.3s						
LZH	Lanzhou	73.96	312	⇑P	P	02 28 55.7	+1.4
LZH				pP	sP	02 29 08.6	+0.4
LZH				sP	pwP	02 29 15.8	+5.9
LZH				PP	PP	02 31 42.6	+2.8
LZH				S	S	02 38 27.6	+3.3
LZH				sS	sS	02 38 47.5	+6.4
LZH	Lanzhou	73.96	312	SS	SS	02 43 07.5	-2.1
LZH				pmax	pmax		
	comp=Z,60nm,1.3s						
LZH				pmax	pmax		
	comp=Z,240nm,4.3s						
LZH				LR	LR		
	comp=N,550nm,15.7s						
LZH				LR	LR		
	comp=E,560nm,17.9s						
LZH				LR	LR		
	comp=Z,710nm,19.0s						
SEY	Seymchan	74.01	354	⇑eP	P	02 28 54.2	+0.5
GAMB	Gambell	76.32	10	eP	P	02 29 08.4	+1.4
KDAK	Kodiak Island	76.49	22	P	P	02 29 08.7	+0.6
KDAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KDAK	Kodiak Island	76.49	22	P	P	02 29 08.7	+0.6
	comp=Z,13nm,0.9s,baz=265,slow=5.5,SNR=4.2						
YAK	Yakutsk	77.52	344	eP	P	02 29 13.3	-0.5
YAK				e*PP	PcP	02 29 19.1	-4.9
YAK				e		02 29 23.7	
YAK				eS	S	02 38 58.3	-3.8
YAK				e*SS	sS	02 39 19.0	+0.4
YAK				e		02 39 28.8	
YAK				eSSS	SSS	02 47 26.9	
YAK				pmax	pmax		
	comp=Z,52nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,12nm,1.0s						
YAK				pmax	pmax		
	comp=Z,234nm,5.3s						
YAK				pmax	pmax		
	comp=E,191nm,4.1s						
YAK				pmax	pmax		
	comp=N,152nm,6.4s						
YAK				smax	smax		
	comp=N,213nm,6.1s						
YAK				smax	smax		
	comp=E,143nm,4.0s						
YAK				MLR	MLR		
	comp=Z,358nm,19.0s						
YAK				MLR	MLR		
	comp=N,114nm,17.0s						
YAK				MLR	MLR		
	comp=E,136nm,20.0s						
ULN	Ulaanbaatar	77.56	324	eP	P	02 29 15.9	+1.2
ULN	Ulaanbaatar	77.56	324	c iP	P	02 29 15.8	+1.2
ULN				pmax	pmax		
	comp=Z,48nm,0.9s						
SONA0	Songino Array	77.92	324	eP	P	02 29 17.8	+1.2
SONM	Songino Array	77.92	324	P	P	02 29 17.8	+1.2
	comp=Z,15nm,0.9s,baz=149,slow=8.5,SNR=75						
SONA1	Songino Array	77.92	324	eP	P	02 29 17.4	+0.8
SVW2	Sparrevohn	77.97	18	eP	P	02 29 17.8	+1.4
GTA	Gaotai	78.27	314	⇑P	P	02 29 20.2	+1.5
GTA				pP	PcP	02 29 24.6	-3.4
GTA				sP	pP	02 29 27.8	-0.7
GTA				pmax	pmax		
	comp=Z,33nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,5.6s						
GTA				LR	LR		
	comp=N,160nm,17.8s						
GTA				LR	LR		
	comp=E,350nm,18.1s						
GTA				LR	LR		
	comp=Z,410nm,19.4s						
ANM	Nome	78.27	13	eP	P	02 29 19.5	+1.5
ANM	Nome	78.27	13	eP	P	02 29 19.5	+1.5
RSO	Redoubt South	78.40	20	eP	P	02 29 20.5	+1.5
BILL	Bilibino	78.50	0	eP	P	02 29 19.7	+0.6
BILL	Bilibino	78.50	0	c iP	P	02 29 19.5	+0.4
BILL				e		02 29 27.9	
BILL				e		02 32 15.8	
BILL				i S	S	02 39 08.6	-3.9
BILL				pmax	pmax		
	comp=Z,52nm,1.0s						
BRLK	Bradley Lake	78.53	21	eP	P	02 29 20.7	+1.1
QSPA	South Pole Qui	79.35	180	eP	P	02 29 25.3	+1.1
SHL	Shillong	79.69	299	eP	P	02 29 27.7	+0.8
SHL	Shillong	79.69	299	eP	P	02 29 27.7	+0.8
SHL	Shillong	79.69	299	eP	P	02 29 26.0	-0.9
SUA	Susitna One	79.81	20	eP	P	02 29 27.2	+0.6
BOD	Bodaibo	79.87	335	eP	P	02 29 26.5	-0.3
BOD				pmax	pmax		
	comp=Z,15nm,1.8s						
KNK	Knik Glacier	80.55	21	eP	P	02 29 34.4	+3.9
CAST	Castle Rocks	80.80	18	eP	P	02 29 31.5	-0.3
ZAK	Zakamensk	80.97	325	eP	P	02 29 32.4	-0.7
ZAK				pmax	pmax		
	comp=Z,18nm,1.0s						
DIV	Divide	81.32	22	eP	P	02 29 32.7	-1.9
TRF	Thorofare Moun	81.38	19	eP	P	02 29 36.4	+1.4
TLY	Talaya	81.40	326	eP	P	02 29 35.5	+0.2
TLY	Talaya	81.40	326	c iP	P	02 29 35.4	+0.2
LSA	Lhasa	81.53	302	eP	P	02 29 38.7	+1.7
RDOG	Red Dog Mine	81.79	12	eP	P	02 29 38.5	+1.6
RND	Reindeer	81.81	19	eP	P	02 29 37.6	+0.4
RND	Reindeer	81.81	19	eP	P	02 29 37.6	+0.4
MCK	McKinley	82.01	19	eP	P	02 29 38.8	+0.6
DHY	Denali Highway	82.06	20	eP	P	02 29 41.3	+2.6
BWN	Browne	82.15	18	eP	P	02 29 39.6	+0.7
IM3	Indian Mountai	82.25	16	eP	P	02 29 39.9	+0.6
HARP	HAARP	82.38	21	eP	P	02 29 41.1	+0.9
MLY	Manley	82.39	17	eP	P	02 29 40.8	+0.7
WRH	Wood River Hil	82.79	19	eP	P	02 29 42.6	+0.4
MDM	Murphy Dome	83.09	18	eP	P	02 29 43.6	-0.2
HDA	Harding Lake	83.11	19	eP	P	02 29 44.2	+0.3
COLA	College	83.14	18	eP	P	02 29 44.5	+0.5
COLA	College	83.14	18	ceP	P	02 29 43.4	-0.6
COLA				pmax	pmax		
	comp=Z,14nm,0.7s						
RIDG	Independ'e Rid	83.36	20	eP	P	02 29 46.6	+1.3
IL1	Eielson Array	83.38	19	eP	P	02 29 44.4	-0.9
ILAR	Eielson Array	83.38	19	P	P	02 29 45.1	-0.2
	comp=Z,9.5nm,0.7s,baz=245,slow=4.6,SNR=94						
ILB	Eielson Array	83.38	19	eP	P	02 29 45.0	-0.2
SCRK	Sand Creek	83.80	20	eP	P	02 29 48.5	+0.9
COLD	Coldfoot	84.12	16	eP	P	02 29 50.8	+1.8
ORV	Oroville	84.30	48	eP	P	02 29 50.8	+0.3
	comp=Z,5.0nm,1.3s						
ORV	Oroville	84.30	48	eP	P	02 29 50.8	+0.3
KNGR	Kungurtug, Tuv	84.36	324	d iP	P	02 29 51.2	+0.5
AFDM	Forest Hills D	84.49	49	eP	P	02 29 51.9	+0.3
RAMN	Ramite	84.63	299	eP	P	02 29 53.5	+0.7
	comp=Z,24nm,0.9s						
CMB	Columbia Colle	84.65	50	eP	P	02 29 52.5	+0.1
CMB	Columbia Colle	84.65	50	eP	P	02 29 52.5	+0.1
JIRN	Jiri	85.16	299	eP	P	02 29 56.3	+0.7
	comp=Z,130nm,1.3s						
EGAK	Eagle	85.26	20	eP	P	02 29 55.1	+0.3
	comp=Z,35nm,1.0s						
TOLK	Toolik Lake Re	85.31	15	eP	P	02 29 56.3	+1.3
DAWY	Dawson	85.46	21	eP	P	02 29 57.8	+1.9
GUN	Gumba	85.49	299	eP	P	02 29 57.4	+0.2
	comp=Z,80nm,1.1s						
MDPB	Devils Postpil	85.51	51	eP	P	02 29 57.8	+0.8
TIXI	Tiksi	85.57	349	eP	P	02 29 56.2	0.0
TIXI	Tiksi	85.57	349	⇑eP	P	02 29 56.0	-0.2
TIXI				pmax	pmax		
	comp=Z,36nm,1.7s						
PKI	Pulchoki	85.81	299	eP	P	02 29 59.0	+0.2
	comp=Z,98nm,1.3s						
PKIN	Phulchoki	85.83	299	eP	P	02 29 59.1	+0.3
	comp=Z,101nm,1.5s						
PAHR	Pah Rah Range	85.90	49	eP	P	02 29 59.7	+0.9
KKN	Kakani	85.98	299	eP	P	02 30 00.0	+0.5
	comp=Z,46nm,0.9s						
DMN	Daman	86.08	299	eP	P	02 30 00.4	+0.3
	comp=Z,109nm,1.2s						
RYN	Ryan	86.22	50	eP	P	02 30 01.3	+0.9
NV01	Mina Array Sit	86.33	50	eP	P	02 30 01.3	+0.3
NVAR	Mina Array Bea	86.33	50	P	P	02 30 01.1	+0.1
	comp=Z,3.5nm,0.9s,baz=233,slow=7.9,SNR=15						
NV11	Mina Array Sit	86.44	50	eP	P	02 30 01.8	+0.4
	comp=Z,0.8nm,1.2s						
KVN	Kaiserville	86.66	49	eP	P	02 30 02.9	+0.3
KVN	Kaiserville	86.66	49	eP	P	02 30 02.9	+0.3
WVOR	Wild Horse Val	87.24	46	eP	P	02 30 06.2	+1.0
WVOR	Wild Horse Val	87.24	46	eP	P	02 30 06.2	+1.0
DANN	Dangsing	87.42	299	eP	P	02 30 05.8	-0.8
	comp=Z,42nm,1.1s						
KOLN	Koldanda	87.42	299	eP	P	02 30 06.0	-0.5
	comp=Z,46nm,1.4s						
J08A	Circle Bar Ran	87.62	45	eP	P	02 30 07.5	+0.4
G08A	Pilot Rock	87.86	43	eP	P	02 30 09.0	+0.9
PYUN	Piuthan	88.02	299	eP	P	02 30 08.7	-0.7
	comp=Z,36nm,1.0s						
Y12C	Blythe	88.05	55	eP	P	02 30 10.4	+1.3
WMQ	Urumqi	88.31	315	P	P	02 30 10.6	+0.4
WMQ				pP	pP	02 30 21.7	+1.4
WMQ	Urumqi	88.31	315	SKS	SKSac	02 40 27.3	-9.2
WMQ				pmax	pmax		
	comp=Z,40nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,610nm,5.9s						
WMQ				LR	LR		
	comp=N,660nm,23.9s						
WMQ				LR	LR		
	comp=E,430nm,31.1s						
WMQ				LR	LR		
	comp=Z,560nm,28.7s						
WMQ	Urumqi	88.31	315	eP	P	02 30 11.0	+0.8
WMQ	Urumqi	88.31	315	eP	P	02 30 11.0	+0.8
R11A	Troy Canyon, C	88.36	51	eP	P	02 30 11.0	+0.2
	comp=Z,3.1nm,1.3s						
W13A	Hualapai Mount	88.89	54	eP	P	02 30 14.1	+0.8
F10A	Beach Ranch, E	89.22	43	eP	P	02 30 15.1	+0.6
PSUT	Pine Spring	89.73	51	eP	P	02 30 17.7	+0.5
	comp=Z,3.6nm,0.9s						
INK	Inuvik	89.77	19	eP	P	02 30 18.9	+2.5
INK	Inuvik	89.77	19	eP	P	02 30 18.9	+2.5
LCMT	Little Creek M	89.84	52	eP	P	02 30 18.6	+0.9
CCUT	Cedar City	89.87	52	eP	P	02 30 19.1	+1.1
SZCU	Shurtz Canyon	90.10	52	eP	P	02 30 19.9	+1.0
DGZ	Jazzator, Alta	90.14	321	c iP	P	02 30 18.7	-0.1
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KNB	Kanab	90.17	52	eP	P	02 30 20.6	+1.3
KNB	Kanab	90.17	52	eP	P	02 30 20.6	+1.3
U15A	North Rim	90.45	53	eP	P	02 30 21.7	+1.0
HLID	Hailey	90.53	46	eP	P	02 30 21.6	+0.8
X16A	Lo Mia Camp, P	90.69	55	eP	P	02 30 22.4	+0.6
MTPU	Mount Pierson	90.89	52	eP	P	02 30 24.3	+1.4
DUG	Dugway, Tooele	90.90	49	eP	P	02 30 22.6	+0.1
DUG	Dugway, Tooele	90.90	49	eP	P	02 30 22.7	+0.1
BGU	Big Grassy Mou	90.90	49	eP	P	02 30 23.1	+0.5
MSU	Marysvale	91.00	51	eP	P	02 30 24.5	+1.3
MSU	Marysvale	91.00	51	eP	P	02 30 24.5	+1.3
HVU	Hansel Valley	91.28	48	eP	P	02 30 25.1	+0.8
HVU	Hansel Valley	91.28	48	eP	P	02 30 25.1	+0.8
NLU	North Lily Min	91.40	50	eP	P	02 30 26.1	+1.1
CTU	Camp Tracy	91.80	49	eP	P	02 30 27.8	+1.0
TMUT	Trail Mountain	91.91	51	eP	P	02 30 30.3	+2.8
MCMT	McKenzie Canyo	91.92	45	eP	P	02 30 28.1	+0.8
SYO	Syowa Base	91.94	197	⇓ePcP	PcP	02 30 32.0	+4.6
TCUT	Toone Canyon	92.14	49	eP	P	02 30 29.0	+0.6
DLMT	Dillon	92.21	44	eP	P	02 30 28.9	+0.4
LRM	Limekiln Ridge	92.41	44	eP	P	02 30 30.3	+0.7
MK01	Makanchi Array	92.73	317	eP	P	02 30 30.8	0.0
MK31	Makanchi Array	92.74	317	eP	P	02 30 30.9	+0.1
MK32	Makanchi Array	92.74	317	eP	P	02 30 31.1	+0.3
MK32				ePP	PP	02 34 10.6	-2.7
MKAR	Makanchi Array	92.74	317	eP	P	02 30 30.9	+0.1
MKAR	Makanchi Array	92.74	317	P	P	02 30 31.1	+0.3
	comp=Z,16nm,0.8s,baz=97,slow=6.2,SNR=166						
MKAR				PP	PP	02 34 10.6	-2.7
	comp=Z,1.2nm,1.0s,baz=88,slow=8.9,SNR=3.8						
MKAR				PKKPbc	PKKPdf	02 47 41.8	-0.5
	comp=Z,0.8nm,0.8s,baz=318,slow=1.6,SNR=7.4						
ZAA0	Zalesovo Array	92.82	324	eP	P	02 30 30.4	-0.5
ZALV	Zalesovo Beam	92.82	324	eP	P	02 30 29.8	-1.1
ZALV	Zalesovo Beam	92.82	324	P	P	02 30 30.1	-0.8
	comp=Z,16nm,1.1s,baz=108,slow=4.8,SNR=36						
ZAA1	Zalesovo Array	92.82	324	eP	P	02 30 30.1	-0.8
BOZ	Bozeman (W)	92.93	44	eP	P	02 30 32.3	+0.5
BOZ	Bozeman (W)	92.93	44	eP	P	02 30 32.3	+0.5
FXWY	Fox Creek	92.94	46	eP	P	02 30 32.6	+0.6
MAKZ	Makanchi	92.95	317	eP	P	02 30 31.7	0.0
MAKZ	Makanchi	92.95	317	eP	P	02 30 31.7	0.0
HRY	Holter Researc	93.03	43	eP	P	02 30 33.1	+0.9
PD31	Pinedale Array	93.82	47	eP	P	02 30 36.8	+0.6
PDAR	Pinedale Array	93.82	47	P	P	02 30 35.8	-0.3
	comp=Z,1.3nm,0.8s,baz=249,slow=2.5,SNR=12						
NVS	Novosibirsk	93.92	325	eP	P	02 30 36.0	0.0
NVS				pmax	pmax		
	comp=E,8.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,15nm,1.3s						
YKA	Yellowknife Ar	94.96	27	P	P	02 30 39.1	-1.4
	comp=Z,0.7nm,0.8s,baz=254,slow=4.7,SNR=13						
YKA				PP	PP	02 34 28.7	-1.4
	comp=Z,0.6nm,1.0s,baz=252,slow=8.0,SNR=4.1						
YKB5	Yellowknife Ar	94.96	27	eP	P	02 30 38.2	-2.3
YKB5				ePP	PP	02 34 28.7	-1.4
NRIK	Noril'sk	95.50	340	P	P	02 30 42.8	-0.1
	comp=Z,6.7nm,0.7s,baz=103,slow=4.8,SNR=8.9						
KURK	Kurchatov	95.88	320	eP	P	02 30 44.6	-0.4
KURK	Kurchatov	95.88	320	c iP	P	02 30 43.9	-1.1
KURK				pmax	pmax		
	comp=Z,11nm,1.5s						
KSH	Kashi	95.94	309	P	P	02 30 47.6	+1.8
KSH				pP	pwP	02 31 01.8	+0.6
KSH				pmax	pmax		
	comp=Z,170nm,6.3s						
LTX	Lajitas	96.28	61	eP	P	02 30 47.1	-0.4
LTX	Lajitas	96.28	61	eP	P	02 30 47.1	-0.4
TXAR	Lajitas Array	96.28	61	P	P	02 30 47.1	-0.4
	comp=Z,0.3nm,0.8s,baz=234,slow=7.7,SNR=4.1						
BRVK	Borovoye	101.26	322	ePdif	Pdif	02 31 09.3	+0.2
BRVK	Borovoye	101.26	322	⇓eP	Pdif	02 31 08.6	-0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARA0	ARCESS Array S	115.78	345	ePKPdf	PKiKP	02 35 60.0	-0.4
ARA0				ePKKPbc	PKKPbc	02 46 32.8	-2.1
ARCES	ARCESS Array B	115.78	345	PKIKP	PKiKP	02 36 00.0	-0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARCES	ARCESS Array B	115.78	345	PKP	PKiKP	02 35 60.0	-0.3
	comp=Z,3.1nm,0.8s,baz=73,slow=1.9,SNR=21						
ARCES				PKKPbc	PKKPbc	02 46 32.8	-2.2
	comp=Z,2.0nm,1.0s,baz=243,slow=1.8,SNR=7.1						
KBZ	Khabaz	120.35	315	PKP	PKPdf	02 36 07.7	-2.1
	comp=Z,1.6nm,0.8s,baz=108,slow=9.6,SNR=2.9						
KIV	Kislovodsk	120.44	315	⇓iP	sPKPdf	02 36 24.2	-0.4
KIV	Kislovodsk	120.44	315	ePKIKP	PKiKP	02 36 11.0	+0.8
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
FIA0	FINESS Array S	121.14	338	ePKPdf	PKPdf	02 36 09.3	-1.5
FIA0	FINESS Array S	121.14	338	ePKIKP	PKPdf	02 36 09.3	-1.5
FINES	FINESS Array B	121.14	338	PKP	PKPdf	02 36 09.3	-1.5
	comp=Z,2.1nm,0.8s,baz=70,slow=2.2,SNR=7.8						
CPUP	Villa Florida	124.83	133	PKIKP	PKPdf	02 36 19.0	0.0
CPUP				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CPUP	Villa Florida	124.83	133	PKP	PKPdf	02 36 18.9	0.0
	comp=Z,3.7nm,0.9s,baz=252,slow=6.0,SNR=6.3						
BOSA	Boshof	124.90	224	PKP	PKiKP	02 36 19.8	+0.2
	comp=Z,4.2nm,0.8s,baz=359,slow=1.2,SNR=5.8						
SDV	Santo Domingo	125.20	87	ePKPdf	PKPdf	02 36 19.9	-0.4
NB2	NORSAR Subarra	126.14	345	PKPdf	PKPdf	02 36 20.1	-0.4
	comp=Z,0.7nm,0.7s,baz=31,slow=1.9						
NB200	NORSAR Array S	126.14	345	ePKPdf	PKPdf	02 36 20.3	-0.2
NOA	NORSAR Array B	126.14	345	PKP	PKPdf	02 36 20.3	-0.2
	comp=Z,1.1nm,0.8s,baz=328,slow=1.7,SNR=5.3						
AKASG	Malin Array Be	126.14	327	PKIKP	PKPdf	02 36 20.0	-0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	126.14	327	PKP	PKPdf	02 36 19.9	-0.7
	comp=Z,1.9nm,0.7s,baz=64,slow=2.6,SNR=9.7						
AKBB	Malin Array Si	126.14	327	ePKPdf	PKPdf	02 36 19.9	-0.7
AKBB	Malin Array Si	126.14	327	ePKIKP	PKPdf	02 36 20.0	-0.7
KIEV	Kiev	126.15	327	⇑iP	PKPdf	02 36 20.8	+0.1
KIEV	Kiev	126.15	327	⇑PKIKP	PKPdf	02 36 20.8	+0.1
AK11	Malin Array Si	126.18	327	ePKPdf	PKPdf	02 36 20.6	-0.2
KMBO	Kilima Mbogo	126.74	261	PKIKP	PKiKP	02 36 24.0	+0.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMBO	Kilima Mbogo	126.74	261	PKP	PKiKP	02 36 23.9	+0.2
	comp=Z,0.8nm,0.6s,baz=38,slow=19,SNR=2.8						
BR101	Keskin Array S	128.16	313	ePKPdf	PKPdf	02 36 24.6	-0.5
BR101				ePP	PP	02 38 27.2	-1.6
BR131	Keskin Array S	128.16	313	ePKPdf	PKPdf	02 36 25.1	0.0
BRTR	Keskin Array B	128.17	313	PKP	PKPdf	02 36 24.6	-0.5
	comp=Z,1.4nm,0.9s,baz=90,slow=2.5,SNR=8.2						
BRTR				PP	PP	02 38 27.2	-1.6
	comp=Z,2.1nm,1.1s,baz=102,slow=5.4,SNR=5.0						
CFR	Carcaliu	129.59	321	⇑iP	PKiKP	02 36 28.2	0.0
CFR	Carcaliu	129.59	321	⇑PKIKP	PKiKP	02 36 28.2	0.0
BIZ	Bicaz	129.89	324	⇑iP	PKiKP	02 36 29.6	+0.8
BURAR	Bucovina Array	130.03	325	⇓iP	PKiKP	02 36 30.6	+1.4
BURAR	Bucovina Array	130.03	325	⇓PKIKP	PKiKP	02 36 30.6	+1.4
BUR04	Bucovina Ar. S	130.03	325	ePKPdf	PKiKP	02 36 30.0	+0.8
VRI	Vrincioaia	130.09	323	⇑iP	PKiKP	02 36 29.6	+0.3
VRI	Vrincioaia	130.09	323	⇑PKIKP	PKiKP	02 36 29.6	+0.3
DOPR	Dopca	130.84	323	⇑iP	PKiKP	02 36 31.3	+0.5
TRPA	Tarpa	131.19	327	⇓iP	PKiKP	02 36 31.5	+0.1
ARR	Arges	131.60	323	⇑iP	PKiKP	02 36 32.6	+0.2
VLAD	Vladila	132.48	322	⇑iP	PKPdf	02 36 30.2	-2.8
VYHS	Vyhne	132.87	330	ePKIKP	PKiKP	02 36 34.9	+0.1
VYHS				e		02 39 00.9	
VYHS	Vyhne	132.87	330	ePKP	PKiKP	02 36 34.9	+0.1
VYHS				ePP	PP	02 39 00.9	+2.4
BZS	Buzias	133.21	325	⇑iP	PKPdf	02 36 32.8	-1.5
BZS	Buzias	133.21	325	⇑PKIKP	PKPdf	02 36 32.9	-1.4
PVCC	Panska Ves	133.40	334	ePKPDF	PKiKP	02 36 36.8	+1.0
PVCC	Panska Ves	133.40	334	ePKIKP	PKiKP	02 36 36.8	+1.0
BRG	Berggiesshubel	133.41	335	ePKP	PKPdf	02 36 34.5	0.0
	comp=Z,6.3nm,1.1s						
BRG	Berggiesshubel	133.41	335	ePKIKP	PKPdf	02 36 34.5	0.0
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	Collm	133.46	336	i PKPdf	PKPdf	02 36 34.8	+0.2
	comp=Z,6.0nm,0.8s						
CLL	Collm	133.46	336	i PKIKP	PKPdf	02 36 34.8	+0.2
CLL				pmax	pmax		
	comp=Z,14nm,0.8s						
MODS	Modra-Piesok	133.72	330	ePKIKP	PKiKP	02 36 37.3	+0.8
MODS	Modra-Piesok	133.72	330	ePKP	PKiKP	02 36 37.3	+0.8
PRU	Pruhonice	133.81	334	ePKPDF	PKiKP	02 36 37.0	+0.4
PRU	Pruhonice	133.81	334	ePKIKP	PKiKP	02 36 37.0	+0.4
VTS	Vitosha	133.94	321	⇑iP	PKiKP	02 36 37.6	+0.3
VTS	Vitosha	133.94	321	⇑PKIKP	PKiKP	02 36 37.6	+0.3
CONA	Conrad Observa	134.71	331	i PKPdf	PKPdf	02 36 37.2	0.0
	comp=Z,2.6nm,0.8s						
KHC	Kasperske Hory	134.87	334	ePKPdf	PKiKP	02 36 38.2	-0.7
KHC	Kasperske Hory	134.87	334	ePKPDF	PKiKP	02 36 39.3	+0.4
KHC	Kasperske Hory	134.87	334	ePKIKP	PKiKP	02 36 39.3	+0.4
GEC2	GERESS Array S	135.03	333	ePKPdf	PKPdf	02 36 37.7	-0.1
GEC2	GERESS Array S	135.03	333	ePKIKP	PKPdf	02 36 37.7	-0.1
GERES	GERESS Array B	135.03	333	PKP	PKPdf	02 36 37.7	-0.1
	comp=Z,2.3nm,0.9s,baz=50,slow=2.1,SNR=13						
GEA0	GERESS Array S	135.04	333	ePKPdf	PKPdf	02 36 38.3	+0.5
ARSA	Arzberg	135.35	331	i PKPdf	PKPdf	02 36 38.6	+0.2
	comp=Z,4.6nm,1.2s						
MOA	Molln	135.51	332	i PKiKP	PKPdf	02 36 39.3	+0.7
	comp=Z,2.9nm,1.0s						
SOKA	Soboth	135.99	330	i PKiKP	PKiKP	02 36 40.8	-0.5
	comp=Z,7.3nm,1.1s						
KBA	Koelnbreinsper	136.50	332	i PKPdf	PKPdf	02 36 39.0	-1.7
	comp=Z,3.7nm,1.0s						
MOTA	Moosalm	137.31	334	i PKPdf	PKPdf	02 36 41.1	-1.0
	comp=Z,3.8nm,1.0s						
RETA	Reutte	137.34	334	i PKPdf	PKPdf	02 36 42.4	+0.3
	comp=Z,7.6nm,1.8s						
SQTA	Sankt Quirin	137.36	334	i PKiKP	PKPdf	02 36 43.1	+0.9
	comp=Z,8.3nm,1.2s						
FETA	Feichten	137.72	334	i PKPdf	PKPdf	02 36 42.8	-0.2
	comp=Z,7.6nm,1.1s						
DAVA	Damuels	137.87	335	i PKPdf	PKPdf	02 36 43.5	+0.3
	comp=Z,5.4nm,1.1s						
BDFB	Brasilia	138.15	128	PKP	PKPdf	02 36 42.4	-2.1
	comp=Z,2.9nm,0.8s,baz=189,slow=8.7,SNR=4.7						
KEST	Kesra	146.66	322	ePKPdf	PKPab	02 37 01.6	-0.2
KEST	Kesra	146.66	322	PKPbc	PKPbc	02 37 01.0	+0.3
	comp=Z,14nm,0.9s,baz=215,slow=3.4,SNR=7.3						
ES19	SONSECA Array	149.44	343	ePKPbc	PKPbc	02 37 08.2	+0.3
ESDC	Sonseca Array	149.48	343	PKPbc	PKPbc	02 37 08.3	+0.3
	comp=Z,1.3nm,0.7s,baz=28,slow=3.4,SNR=7.1						
TOA0	Torodi Ar. Sit	163.48	280	ePKPdf	PKPdf	02 37 21.1	-1.1
TORD	Torodi Ar. Bea	163.48	280	PKP	PKPdf	02 37 20.6	-1.6
	comp=Z,2.1nm,1.0s,baz=346,slow=4.1,SNR=9.3						
TORD				PKPab	PKPab	02 38 13.3	-0.2
	comp=Z,1.1nm,1.0s,baz=74,slow=4.2,SNR=7.5						
TORD				PP	PP	02 41 57.5	-1.7
	comp=Z,1.3nm,1.1s,baz=68,slow=3.9,SNR=3.6						
TOA1	Torodi Ar. Sit	163.48	280	ePKPdf	PKPdf	02 37 20.6	-1.6
TOA1				ePKPab	PKPab	02 38 13.3	-0.2
TOA1				ePP	PP	02 41 57.5	-1.7

IDC 07 02:24:01.4±4.2**, 11°.29S**×**162°.98E, h0^{km}, mb3.8**/4**,**
mb1 4.1/4**, mb1mx3.7**/39**, mbtmp3.8**/4**, Error ellipse:**
s-maj=213.0km s-min=31.2km az=140.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.86	249	P	P	02 30 02.1	+0.1
	0.4nm,0.5s,baz=80,slow=9.2,SNR=3.3						
ASAR	Alice Springs	30.27	242	P	P	02 30 14.3	-0.2
	0.3nm,0.4s,baz=63,slow=10,SNR=4.9						
FITZ	Fitzroy Crossi	36.70	255	P	P	02 31 10.4	0.0
	2.4nm,0.7s,baz=97,slow=7.6,SNR=2.1						
ILAR	Eielson Array	84.62	19	P	P	02 36 36.5	0.0
	0.7nm,1.1s,baz=224,slow=5.0,SNR=3.3						

IDC 07 02:25:30.8±19.0**, 7°.65S**×**155°.72E, h370^{km}**±239^{km}**,**
mb3.1/6**, mb1 3.4**/7**, mb1mx3.1**/39**, mbtmp3.9**/7**, Error**
ellipse: s-maj=110.5km s-min=26.7km az=172.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	17.68	145	P	P	02 29 13.6	+0.1
	0.7nm,0.3s,baz=127,slow=15,SNR=2.7						
WRA	Warramunga Arr	24.05	237	P	P	02 30 14.4	+0.2
	1.6nm,1.0s,baz=61,slow=9.7,SNR=5.1						
FITZ	Fitzroy Crossi	31.05	248	P	P	02 31 15.5	-0.6
	2.2nm,0.7s,baz=80,slow=8.0,SNR=7.1						
CMAR	Chiang Mai Arr	61.71	296	P	P	02 35 12.2	+0.7
	1.4nm,0.3s,baz=101,slow=5.2,SNR=2.6						
SONM	Songino Array	70.27	327	P	P	02 36 05.5	+0.4
	0.4nm,0.5s,baz=135,slow=6.7,SNR=3.7						
ILAR	Eielson Array	83.72	21	P	P	02 37 18.2	-0.5
	0.3nm,0.8s,baz=220,slow=8.3,SNR=1.3						
MKAR	Makanchi Array	84.36	319	P	P	02 37 21.7	-0.7
	0.2nm,0.4s,baz=98,slow=2.9,SNR=2.8						

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*IDC **07** 02:27:59.8±1.2, 11°.88S×166°.12E, h0^{km}, mb3.7/6,*
mb1 3.9/7, mb1mx3.7/42, mbtmp3.7/7, ML3.7/1, Error
ellipse: s-maj=45.4km s-min=27.1km az=134.0
*ISCJB **07** 02:28:02.8±0.9, 12°.0S±0°.1×166°.1E±0°.2, h30^{km}, mb3.7/6,*
Error ellipse: s-maj=27.0km s-min=17.9km az=11.5
ISC 07 02:28:04.5±0.9**, 11°.9S**±0°.1×**166°.1E**±0°.2**, h30^{km}, n8,**
σ**0^{s}.77**/8**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.12	178	Pn	Pn	02 30 28.3	+0.4
	0.7nm,0.3s,baz=74,slow=18,SNR=1.7						
WRA	Warramunga Arr	31.53	251	P	P	02 34 24.0	-0.4
	0.3nm,0.6s,baz=81,slow=9.1,SNR=2.5						
ASAR	Alice Springs	32.74	245	P	P	02 34 34.1	-0.8
	0.8nm,0.7s,baz=73,slow=9.4,SNR=6.9						
SONM	Songino Array	79.56	324	P	P	02 40 09.9	+1.1
	0.3nm,0.5s,baz=139,slow=6.1,SNR=2.4						

```
ILAR  Eielson Array     84.21  18  P        P         02 40 32.8 +0.1
      0.4nm,0.9s,baz=233,slow=6.0,SNR=2.2
NVAR  Mina Array Bea    86.30  50  P        P         02 40 43.2 -0.8
      0.3nm,0.2s,baz=327,slow=7.1,SNR=6.2
MKAR  Makanchi Array    94.38 317  P        P         02 41 21.4 -0.2
      0.6nm,0.7s,baz=95,slow=6.4,SNR=6.8
ARCES ARCESS Array B   117.25 345  PKP      PKiKP     02 46 46.6 +0.2
      1.0nm,0.7s,baz=57,slow=5.5,SNR=5.1
```

IDC 07 02:33:17.4±4.4**, 6°.04S**×**128°.90E, h301**^{km}±44^{km}**, mb3.1**/1**, mb1 3.2**/4**, mb1mx2.9**/37**, mbtmp3.9**/4**, Error ellipse: s-maj=62.4km s-min=13.8km az=71.0, Banda Sea**

```
Code  Station Name       Δ°   AZ°  Phase ID            Time     Res
                                   Op       ISC        h  m  s  ISC
BATI  Baumata            6.63 231  S        S         02 36 07.5 -5.1
      7.4nm,0.3s,baz=261,slow=23,SNR=4.1
FITZ  Fitzroy Crossi    12.40 195  P        Pn        02 36 04.9 +0.2
      0.5nm,0.3s,baz=22,slow=11,SNR=15
FITZ                               S        S         02 38 18.5 -3.9
      0.2nm,0.3s,baz=122,slow=19,SNR=3.5
WRA   Warramunga Arr    14.79 160  P        P         02 36 32.0 -0.2
      0.5nm,0.3s,baz=341,slow=12,SNR=21
WRA                                S        S         02 39 11.7 -2.4
      0.1nm,0.3s,baz=337,slow=19,SNR=5.0
ASAR  Alice Springs     18.17 165  P        P         02 37 10.0 +1.0
      0.3nm,0.3s,baz=347,slow=11,SNR=26
ASAR                               S        S         02 40 21.9 +0.7
      0.2nm,0.3s,baz=337,slow=16,SNR=7.3
MKAR  Makanchi Array    66.83 327  P        P         02 43 37.2 -0.1
      0.4nm,0.4s,baz=115,slow=8.4,SNR=11
```

IDC ***07*** *02:42:24.2±0.5, 11°.73S×165°.05E, h0^{km}, mb4.6/21, mb1 4.7/24, mb1mx4.7/34, mbtmp4.5/24, ML4.3/3, Error ellipse: s-maj=16.5km s-min=13.6km az=113.0*

ISCJB ***07*** *02:42:27.3±0.2, 11°.84S±0°.04×164°.92E±0°.03, h26^{km}, mb4.8/109, Error ellipse: s-maj=5.8km s-min=4.6km az=160.4*

NEIC ***07*** *02:42:28.2±2.1, 11°.77S×164°.98E, h22^{km}±14^{km}, mb5.0/86, Error ellipse: s-maj=6.2km s-min=4.6km az=180.0*

ISC 07 02:42:26.6±0.9**, 11°.73S**±0°.06×**165°.01E**±0°.06**, h13**^{km}±5^{km}**, n206, σ1^{s}16**/215**, mb4.9**/109**, 1D, Santa Cruz Islands**

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Code  Station Name       Δ°   AZ°  Phase ID            Time     Res
                                   Op       ISC        h  m  s  ISC
HNR   Honiara            5.48 294  ePn      Pn        02 43 47.8 -0.1
HNR                                eSn      Sn        02 44 44.0 -6.9
HNR   Honiara            5.48 294  Pn       Pn        02 43 49.1 +1.2
      35nm,0.3s,baz=186,slow=6.2,SNR=4.5
HNR                                Sn       Sn        02 44 51.6 +0.7
      39nm,0.3s,baz=229,slow=20,SNR=4.8
DZM   Mont Dzumac       10.38 173  ePn      Pn        02 44 54.7 -0.6
      24nm,0.4s
DZM                                eLR      LR        02 47 19.2
      comp=Z,1μm,27.1s
DZM   Mont Dzumac       10.38 173  ePn      Pn        02 44 54.6 -0.7
DZM   Mont Dzumac       10.38 173  Pn       Pn        02 44 55.2 -0.1
      1.6nm,0.3s,baz=318,slow=13,SNR=14
OUENC Ouen Island, N    10.77 171  ePn      Pn        02 45 01.0 +0.3
PINNC Pines Island,     11.07 168  ePn      Pn        02 45 04.3 -0.4
MSVF  Nonsavu           13.95 117  ePn      Pn        02 45 43.3 -0.9
EIDS  Eidsvold          18.91 222  eP       Pn        02 46 50.5 +2.8
      34nm,1.3s
CTA   Charters Tower    19.85 243  P        Pn        02 46 59.0 -0.1
      0.3nm,0.3s,baz=80,slow=15,SNR=7.2
CTAO  Charters Tower    19.85 243  eP       Pn        02 46 59.9 +0.8
      19nm,1.0s
MANU  Manus Island      19.97 297  eP       P         02 46 59.1 +0.3
      60nm,1.1s
COEN  Coen              21.41 262  eP       P         02 47 15.6 +1.3
      14nm,1.1s
ARMA  Armidale          22.36 212  eP       P         02 47 26.0 +1.4
      28nm,1.0s
URZ   Urewera           28.55 160  P        P         02 48 22.5 +0.4
      12nm,0.9s,baz=313,slow=1.7,SNR=4.0
BKZ   Black Stump Fm    29.17 161  eP       P         02 48 28.4 +0.7
      28nm,1.5s
STKA  Stephens Creek    29.45 223  eP       P         02 48 30.0 -0.3
      1.2nm,0.9s
STKA  Stephens Creek    29.45 223  P        P         02 48 30.0 -0.3
      4.5nm,0.9s,baz=43,slow=5.6,SNR=4.6
H11S2 WAKE ISLAND Hy    30.07   3  T        T         03 20 06.1
      baz=184,slow=76,SNR=22
H11S3 WAKE ISLAND Hy    30.08   3  T        T         03 20 07.4
      baz=184,slow=76,SNR=14
H11S1 WAKE ISLAND Hy    30.09   3  T        T         03 20 08.4
      baz=184,slow=76,SNR=23
WB2   Warramunga Arr    30.57 251  eP       P         02 48 39.8 -0.5
WB2                                ePcP     PcP       02 51 39.3 +0.2
WRAB  Tennant Creek     30.57 251  eP       P         02 48 40.1 -0.2
      30nm,1.1s
WR1   Warramunga Arr    30.58 251  eP       P         02 48 40.2 -0.2
      33nm,1.1s
WR1                                ePcP     PcP       02 51 39.3 +0.2
WRA   Warramunga Arr    30.58 251  P        P         02 48 40.2 -0.2
      12nm,0.8s,baz=80,slow=8.7,SNR=59
WRA                                PcP      PcP       02 51 39.3 +0.2
      1.9nm,0.9s,baz=82,slow=3.2,SNR=8.8
H11N1 WAKE ISLAND Hy    31.30   3  T        T         03 21 41.3
      baz=174
H11N3 WAKE ISLAND Hy    31.30   3  T        T         03 21 41.0
      baz=174
H11N2 WAKE ISLAND Hy    31.32   3  T        T         03 21 41.9
      baz=174
AS01  Alice Springs     31.80 244  eP       P         02 48 50.4 -0.8
AS01                               ePcP     PcP       02 51 41.2 -1.2
AS31  Alice Springs     31.84 244  eP       P         02 48 50.6 -0.9
      1.9nm,0.9s
AS31                               ePcP     PcP       02 51 42.2 -0.2
ASAR  Alice Springs     31.85 244  P        P         02 48 50.8 -0.8
      5.6nm,0.9s,baz=75,slow=9.4,SNR=40
ASAR                               PcP      PcP       02 51 42.2 -0.2
      1.8nm,0.8s,baz=89,slow=3.1,SNR=7.7
RPZ   Rata Peaks        32.30 172  eP       P         02 48 55.3 +0.1
      19nm,1.1s
RPZ   Rata Peaks        32.30 172  P        P         02 48 55.3 +0.1
      8.6nm,0.8s,baz=118,slow=1.6,SNR=4.8
BBOO  Buckleboo         33.84 227  eP       P         02 49 07.6 -1.3
      26nm,1.5s
FITZ  Fitzroy Crossi    38.51 256  eP       P         02 49 48.9 -0.1
      25nm,1.2s
FITZ  Fitzroy Crossi    38.51 256  P        P         02 49 48.7 -0.3
      9.9nm,0.8s,baz=95,slow=7.0,SNR=24
FORT  Forrest           39.06 235  eP       P         02 49 53.8 +0.3
      37nm,1.1s
PPT2  Papeete2          44.24 103  eLR      LR        03 02 54.9
      comp=Z,687nm,27.0s
MBWA  Marble Bar        44.30 252  eP       P         02 50 36.9 +0.3
      26nm,1.0s
TBI   Tubuai            44.75 111  eLR      LR        03 03 07.2
      comp=Z,419nm,29.0s
NWAO  Narrogin (SRO)    48.49 236  P        P         02 51 07.4 -1.9
      15nm,1.1s,baz=307,slow=9.1,SNR=4.2
KKM   Kota Kinabalu     51.65 287  eP       P         02 51 35.0 +1.3
      32nm,1.2s
TAOE  Nuku Hiva Isla    53.97  92  eLR      LR        03 07 22.2
      comp=Z,430nm,24.5s
MJAR  Matsushiro Arr    54.25 333  P        P         02 51 51.4 -0.9
      5.8nm,0.9s,baz=163,slow=8.0,SNR=7.1
MAJO  Matsushiro        54.25 333  eP       P         02 51 51.4 -1.0
ASAJ  Asahikawa         59.20 341  P        P         02 52 28.1 +0.7
      10.0nm,0.9s,baz=238,slow=21,SNR=3.8
KSRS  Korea Array       60.04 326  P        P         02 52 31.9 -1.4
      2.0nm,0.7s,baz=140,slow=5.9,SNR=4.8
KS15  Wonju Array Si    60.05 326  eP       P         02 52 31.9 -1.5
KSAR  Wonju Array Be    60.05 326  P        P         02 52 31.9 -1.5
NJ2   Nanjing           62.00 316  eP       P         02 52 48.4 +1.7
NJ2                                pmax     pmax
      comp=Z,8.0nm,0.5s
USRK  Ussuriysk Ar.     63.24 334  P        P         02 52 55.5 +0.8
      comp=Z,4.3nm,0.6s,baz=127,slow=5.5,SNR=7.4
WHN   Wuhan             64.31 312  P        P         02 53 02.4 +0.3
PETK  Petropavlovsk-    64.88 355  P        P         02 53 05.0 -0.4
      comp=Z,4.1nm,0.9s,baz=144,slow=3.4,SNR=3.1
PEA1  Petropavlovsk-    64.89 355  eP       P         02 53 05.0 -0.4
IPM   Ipoh              65.63 280  eP       P         02 53 12.6 +1.5
      comp=Z,27nm,1.1s
CN2   Changchun         65.96 330  eP       P         02 53 15.5 +3.0
KULM  Kulim             66.20 281  eP       P         02 53 16.0 +1.3
      comp=Z,35nm,1.5s
SKNT  Sakolnakorn       66.71 294  P        P         02 53 19.7 +1.8
      comp=Z,6.9nm,1.6s
ENH   Enshi             67.77 310  eP       P         02 53 24.7 +0.2
      comp=Z,16nm,1.0s
GYA   Guiyang           68.21 305  eP       P         02 53 29.2 +1.8
GYA                                pmax     pmax
      comp=Z,10.0nm,1.0s
PBKT  Sadao Pong        69.28 293  eP       P         02 53 36.2 +2.2
XAN   Xi'an             70.05 313  P        P         02 53 38.7 +0.1
XAN                                pP       pwP       02 53 48.5 +1.0
XAN                                sP       PcP       02 53 53.4 -7.3
XAN                                PcP      sP        02 54 02.6  +20
XAN                                pmax     pmax
      comp=Z,8.0nm,1.2s
XAN                                LR       LR
      comp=N,300nm,20.6s
XAN                                LR       LR
      comp=Z,280nm,18.4s
XAN   Xi'an             70.05 313  eP       P         02 53 39.2 +0.6
      comp=Z,12nm,1.2s
KMI   Kunming           70.86 302  P        P         02 53 46.1 +2.1
KMI                                pP       pwP       02 53 54.6 +1.7
KMI                                sP       PcP       02 53 58.0 -6.6
KMI                                pmax     pmax
      comp=Z,14nm,1.2s
KMI                                pmax     pmax
      comp=Z,91nm,3.4s
CM01  Chiang Mai Arr    71.70 294  eP       P         02 53 49.6 +0.7
CM31  Chiang Mai Arr    71.73 294  eP       P         02 53 50.7 +1.7
CMAR  Chiang Mai Arr    71.73 294  P        P         02 53 50.7 +1.7
      comp=Z,5.4nm,0.9s,baz=118,slow=4.3,SNR=20
CHTO  Chiang Mai        71.84 294  eP       P         02 53 51.6 +1.9
      comp=Z,9.1nm,1.1s
CHTO  Chiang Mai        71.84 294  P        P         02 53 52.0 +2.3
      comp=Z,31nm,1.4s
HHC   Hu-ho-hao-te      71.89 320  eP       P         02 53 52.5 +2.8
HHC                                pmax     pmax
      comp=Z,8.0nm,0.6s
HHC                                pmax     pmax
      comp=Z,160nm,5.0s
LZH   Lanzhou           74.69 313  eP       P         02 54 07.9 +1.5
LZH                                pP       PcP       02 54 18.6 -2.0
LZH                                sP       pwP       02 54 22.3 +7.0
LZH                                PP       PP        02 56 49.8 -3.8
LZH                                pmax     pmax
      comp=Z,28nm,1.5s
LZH                                pmax     pmax
      comp=Z,130nm,5.4s
LZH                                LR       LR
      comp=N,250nm,14.6s
LZH                                LR       LR
      comp=E,280nm,15.0s
LZH                                LR       LR
      comp=Z,250nm,17.8s
QSPA  South Pole Qui    78.28 180  eP       P         02 54 26.1 -0.1
      comp=Z,17nm,0.9s
ULN   Ulaanbaatar       78.43 324  eP       P         02 54 28.4 +1.1
      comp=Z,7.9nm,0.9s
SONA0 Songino Array     78.79 324  eP       P         02 54 30.1 +0.9
SONM  Songino Array     78.79 324  P        P         02 54 30.1 +0.9
      comp=Z,2.3nm,0.9s,baz=140,slow=6.2,SNR=16
SONA1 Songino Array     78.79 324  eP       P         02 54 29.7 +0.4
SVW2  Sparrevohn        78.98  18  eP       P         02 54 33.6 +3.7
      comp=Z,24nm,1.4s
GTA   Gaotai            79.01 314  ⇓P       P         02 54 31.7 +1.0
GTA                                pP       PcP       02 54 37.8 -1.4
GTA                                sP       pwP       02 54 40.9 +1.2
GTA                                pmax     pmax
      comp=Z,12nm,1.4s
GTA                                pmax     pmax
      comp=Z,150nm,5.9s
GTA                                LR       LR
      comp=N,180nm,17.8s
GTA                                LR       LR
      comp=E,200nm,19.0s
GTA                                LR       LR
      comp=Z,200nm,18.7s
BILL  Bilibino          79.56   0  eP       P         02 54 32.6 -0.2
      comp=Z,18nm,1.1s
SUA   Susitna One       80.81  20  eP       P         02 54 40.6 +0.7
      comp=Z,14nm,1.1s
CAST  Castle Rocks      81.82  18  eP       P         02 54 44.8 -0.3
      comp=Z,10nm,1.0s
KLU   Klutina           82.49  21  eP       P         02 54 49.4 +0.6
      comp=Z,23nm,1.2s
RND   Reindeer          82.81  19  eP       P         02 54 51.8 +1.5
      comp=Z,14nm,1.1s
BWN   Browne            83.16  18  eP       P         02 54 52.7 +0.6
      comp=Z,20nm,1.0s
IM3   Indian Mountai    83.27  16  eP       P         02 54 52.4 -0.1
MLY   Manley            83.40  17  eP       P         02 54 53.6 +0.3
      comp=Z,5.8nm,1.2s
WRH   Wood River Hil    83.80  19  eP       P         02 54 55.2 -0.1
      comp=Z,7.4nm,0.9s
MDM   Murphy Dome       84.10  18  eP       P         02 54 56.7 -0.2
      comp=Z,10nm,1.1s
HDA   Harding Lake      84.12  19  eP       P         02 54 57.1 +0.2
      comp=Z,11nm,0.8s
HDA   Harding Lake      84.12  19  P        P         02 54 57.6 +0.6
      baz=227
TCOL  CIGO, UAF Yank    84.15  18  P        P         02 54 57.5 +0.4
      baz=226
COLA  College           84.16  18  eP       P         02 54 58.0 +0.9
      comp=Z,14nm,0.9s
RIDG  Independ'e Rid    84.36  20  eP       P         02 54 59.0 +0.7
      comp=Z,30nm,1.2s
IL1   Eielson Array     84.39  19  eP       P         02 54 57.0 -1.3
ILAR  Eielson Array     84.39  19  P        P         02 54 57.9 -0.4
      comp=Z,2.5nm,0.6s,baz=236,slow=5.4,SNR=40
ILB   Eielson Array     84.39  19  eP       P         02 54 58.4  0.0
      comp=Z,3.1nm,0.8s
SCRK  Sand Creek        84.80  20  eP       P         02 55 00.7 +0.1
      comp=Z,25nm,1.2s
ORV   Oroville          85.00  48  eP       P         02 55 01.7 -0.3
      comp=Z,6.9nm,1.2s
O03E  Paynes Creek      85.03  47  P        P         02 55 02.4 +0.2
      baz=250
AFDM  Forest Hills D    85.19  49  eP       P         02 55 03.5 +0.5
      comp=Z,12nm,1.1s
CMB   Columbia Colle    85.33  50  eP       P         02 55 04.2 +0.5
      comp=Z,10nm,1.3s
BEKR  Beckworth         85.94  48  eP       P         02 55 08.9 +2.0
      comp=Z,6.4nm,1.1s
ISA   Isabella, Lake    86.06  53  eP       P         02 55 07.4 -0.1
      comp=Z,9.7nm,1.3s
ISA   Isabella, Lake    86.06  53  P        P         02 55 07.4 -0.1
      baz=253
WAKR  Walker            86.19  50  eP       P         02 55 09.1 +0.9
      comp=Z,11nm,1.2s
WAKR                               epP      pwP       02 55 17.0 -0.3
MDPB  Devils Postpil    86.19  51  eP       P         02 55 08.9 +0.6
      comp=Z,8.1nm,0.9s
EDW2  Edwards Air Fo    86.20  53  P        P         02 55 08.5 +0.3
      baz=253
OMMB  Old Mammoth Mi    86.24  51  eP       P         02 55 11.0 +2.3
      comp=Z,6.9nm,1.3s
PNTR  Pine Nut          86.25  49  eP       P         02 55 08.7 +0.2
      comp=Z,8.0nm,1.1s
EGAK  Eagle             86.26  20  eP       P         02 55 07.6 -0.1
      comp=Z,10nm,0.9s
CWC   Cottonwood Cre    86.59  52  P        P         02 55 10.2 +0.1
      baz=253
PAHR  Pah Rah Range     86.60  48  eP       P         02 55 10.8 +0.7
PAHR                               epP      pwP       02 55 18.9 -0.3
LRMC  Laurel Mtn Rad    86.62  53  P        P         02 55 10.7 +0.4
      baz=253
RYN   Ryan              86.91  50  eP       P         02 55 12.3 +0.6
      comp=Z,5.7nm,1.2s
DAC   Darwin (Calif)    86.92  52  eP       P         02 55 11.8  0.0
      comp=Z,8.8nm,1.1s
NV01  Mina Array Sit    87.01  50  eP       P         02 55 11.7 -0.5
NVAR  Mina Array Bea    87.01  50  P        P         02 55 12.0 -0.2
      comp=Z,6.1nm,1.0s,baz=234,slow=5.8,SNR=18
NV11  Mina Array Sit    87.12  50  eP       P         02 55 12.7  0.0
      comp=Z,0.5nm,1.1s
KVN   Kaiserville       87.35  49  eP       P         02 55 13.8  0.0
      comp=Z,5.0nm,1.0s
SWSC  Sam W. Stewart    87.41  56  P        P         02 55 14.6 +0.6
      baz=254
HEC   Hector,Ludlow     87.50  54  P        P         02 55 15.1 +0.6
      baz=254
BELC  Belle Mtn. Jos    87.54  55  P        P         02 55 15.3 +0.5
      baz=254
FURC  Furnace Creek,    87.54  52  P        P         02 55 15.9 +1.4
      baz=254
BC3   Big Chuckawall    87.88  55  P        P         02 55 17.0 +0.6
      baz=254
WVOR  Wild Horse Val    87.98  46  eP       P         02 55 17.6 +0.9
      comp=Z,11nm,1.3s
IRM   Iron Mountain     88.26  55  P        P         02 55 18.3 +0.2
      baz=255
J08A  Circle Bar Ran    88.37  45  eP       P         02 55 20.1 +1.5
      comp=Z,7.1nm,1.1s
LDFC  Landfair          88.53  54  eP       P         02 55 20.6 +1.2
      comp=Z,26nm,1.3s
HAWA  Hanford           88.60  42  eP       P         02 55 21.0 +1.6
      comp=Z,8.1nm,1.1s
G08A  Pilot Rock        88.63  43  eP       P         02 55 20.4 +0.7
      comp=Z,9.9nm,1.1s
Y12C  Blythe            88.65  55  eP       P         02 55 20.9 +1.0
      comp=Z,6.3nm,0.9s
Y12C  Blythe            88.65  55  P        P         02 55 20.6 +0.7
      baz=255
SHPR  Sheep Range       88.87  52  eP       P         02 55 21.8 +0.7
      comp=Z,11nm,1.4s
SHPR                               epP      pwP       02 55 30.3 +0.1
R11A  Troy Canyon, C    89.04  51  eP       P         02 55 21.9  0.0
      comp=Z,7.6nm,1.5s
R11A  Troy Canyon, C    89.04  51  P        P         02 55 22.1 +0.2
      baz=254
WMQ   Urumqi            89.07 315  eP       P         02 55 22.4 +0.7
WMQ                                pmax     pmax
      comp=Z,14nm,1.5s
WMQ                                pmax     pmax
      comp=Z,350nm,9.5s
WMQ                                LR       LR
      comp=N,540nm,22.9s
WMQ                                LR       LR
      comp=E,430nm,33.3s
WMQ                                LR       LR
      comp=Z,310nm,22.9s
PDMCI Parker Dam,Lak    89.10  55  P        P         02 55 22.9 +0.9
      baz=255
W13A  Hualapai Mount    89.51  54  eP       P         02 55 25.2 +1.0
      comp=Z,13nm,1.5s
214A  Organ Pipe Nat    89.60  57  P        P         02 55 25.6 +1.1
      baz=256
BMO   Blue Mountains    89.62  44  eP       P         02 55 24.5 +0.2
ELK   Elko              89.94  48  eP       P         02 55 26.4 +0.3
      comp=Z,6.1nm,1.4s
F10A  Beach Ranch, E    90.00  43  eP       P         02 55 26.7 +0.6
      comp=Z,19nm,1.4s
F10A                               epP      pwP       02 55 34.4 -0.7
PSUT  Pine Spring       90.40  51  eP       P         02 55 29.3 +1.0
      comp=Z,4.6nm,1.0s
LCMT  Little Creek M    90.49  52  eP       P         02 55 29.8 +1.2
      comp=Z,6.9nm,1.1s
CCUT  Cedar City        90.53  52  eP       P         02 55 30.0 +1.0
      comp=Z,8.2nm,1.2s
NEW   Newport           90.73  41  P        P         02 55 29.7 +0.3
      baz=253
SZCU  Shurtz Canyon     90.75  52  eP       P         02 55 31.2 +1.3
      comp=Z,9.1nm,1.2s
SZCU                               epP      pwP       02 55 39.0  0.0
KNB   Kanab             90.81  52  eP       P         02 55 30.9 +0.7
      comp=Z,20nm,1.4s
U15A  North Rim         91.09  53  eP       P         02 55 32.5 +0.8
      comp=Z,8.5nm,1.0s
HLID  Hailey            91.27  46  eP       P         02 55 33.2 +1.1
      comp=Z,9.4nm,1.4s
HLID  Hailey            91.27  46  P        P         02 55 33.0 +0.8
      baz=255
X16A  Lo Mia Camp, P    91.30  55  eP       P         02 55 33.8 +1.3
      comp=Z,7.4nm,1.2s
PKCU  Pink Cliffs       91.31  52  eP       P         02 55 34.8 +2.1
      comp=Z,28nm,1.5s
TUC   Tucson            91.36  57  P        P         02 55 33.6 +0.9
      baz=257
MTPU  Mount Pierson     91.55  52  eP       P         02 55 35.1 +1.2
      comp=Z,7.7nm,1.1s
DUG   Dugway, Tooele    91.59  49  eP       P         02 55 34.6 +0.9
      comp=Z,6.0nm,1.3s
DUG   Dugway, Tooele    91.59  49  P        P         02 55 34.5 +0.9
      baz=256
WUAZ  Wupatki           91.60  54  eP       P         02 55 35.2 +1.3
      comp=Z,12nm,1.5s
BGU   Big Grassy Mou    91.60  49  eP       P         02 55 34.6 +0.8
      comp=Z,7.7nm,1.3s
MSU   Marysvale         91.67  51  eP       P         02 55 35.9 +1.7
HVU   Hansel Valley     92.00  48  eP       P         02 55 36.2 +0.7
      comp=Z,10nm,1.1s
NLU   North Lily Min    92.08  50  eP       P         02 55 37.0 +1.0
      comp=Z,7.3nm,1.1s
CTU   Camp Tracy        92.49  49  eP       P         02 55 39.5 +1.6
      comp=Z,9.5nm,1.2s
X18A  Snowflake         92.52  55  eP       P         02 55 40.1 +1.9
      comp=Z,3.7nm,1.0s
DLMT  Dillon            92.97  44  eP       P         02 55 40.3 +0.4
      comp=Z,13nm,1.2s
WALA  Waterton Lakes    92.99  41  eP       P         02 55 40.5 +0.6
      comp=Z,20nm,1.5s
MK01  Makanchi Array    93.51 317  eP       P         02 55 42.0 -0.2
MK31  Makanchi Array    93.53 317  eP       P         02 55 42.5 +0.1
      comp=Z,6.0nm,1.1s
MK32  Makanchi Array    93.53 317  eP       P         02 55 41.4 -0.9
MKAR  Makanchi Array    93.53 317  eP       P         02 55 42.5 +0.1
      comp=Z,19nm,0.9s
MKAR  Makanchi Array    93.53 317  P        P         02 55 41.4 -0.9
      comp=Z,2.1nm,0.8s,baz=90,slow=7.1,SNR=20
FXWY  Fox Creek         93.67  46  eP       P         02 55 44.3 +0.9
      comp=Z,3.6nm,1.3s
BOZ   Bozeman (W)       93.69  44  eP       P         02 55 43.5 +0.3
BOZ   Bozeman (W)       93.69  44  P        P         02 55 44.0 +0.7
      baz=257
ZAA0  Zalesovo Array    93.69 324  eP       P         02 55 42.6 -0.2
      comp=Z,7.1nm,1.3s
ZALV  Zalesovo Beam     93.69 324  eP       P         02 55 41.6 -1.2
ZALV  Zalesovo Beam     93.69 324  P        P         02 55 42.3 -0.6
      comp=Z,1.9nm,0.9s,baz=98,slow=5.1,SNR=7.7
ZAA1  Zalesovo Array    93.69 324  eP       P         02 55 42.3 -0.6
MAKZ  Makanchi          93.74 317  eP       P         02 55 43.5 +0.2
      comp=Z,12nm,1.4s
YHB   Horse Butte       93.80  45  eP       P         02 55 46.1 +2.2
      comp=Z,6.5nm,1.1s
PD31  Pinedale Array    94.54  47  eP       P         02 55 48.2 +0.9
PDAR  Pinedale Array    94.54  47  eP       P         02 55 48.6 +1.2
PDAR  Pinedale Array    94.54  47  P        P         02 55 48.2 +0.9
      comp=Z,1.6nm,1.0s,baz=251,slow=4.5,SNR=7.4
YKA   Yellowknife Ar    95.91  27  P        P         02 55 50.5 -2.2
      comp=Z,1.7nm,0.8s,baz=256,slow=4.5,SNR=29
YKB5  Yellowknife Ar    95.91  27  eP       P         02 55 50.8 -1.9
LTX   Lajitas           96.79  62  eP       P         02 55 58.1 +0.4
TXAR  Lajitas Array     96.79  62  P        P         02 55 58.1 +0.4
      comp=Z,0.6nm,0.9s,baz=226,slow=5.5,SNR=6.1
ARA0  ARCESS Array S   116.81 345  ePKPdf   PKPdf     03 01 09.3 -1.0
ARCES ARCESS Array B   116.81 345  PKP      PKPdf     03 01 09.3 -1.0
      comp=Z,1.0nm,0.7s,baz=11,slow=5.1,SNR=3.9
CPUP  Villa Florida    124.09 133  PKP      PKPdf     03 01 24.5 -1.1
      comp=Z,1.3nm,0.9s,baz=317,slow=4.4,SNR=3.0
BOSA  Boshof           124.13 223  PKP      PKPdf     03 01 25.3 -0.5
      comp=Z,3.8nm,1.0s,baz=78,slow=1.3,SNR=3.2
AKASG Malin Array Be   127.03 326  PKP      PKPdf     03 01 29.8 -0.7
      comp=Z,0.3nm,0.4s,baz=52,slow=1.6,SNR=4.1
AKBB  Malin Array Si   127.03 326  ePKPdf   PKPdf     03 01 29.8 -0.7
BR101 Keskin Array S   128.89 312  ePKPdf   PKPdf     03 01 34.7 +0.1
BRTR  Keskin Array B   128.89 312  PKP      PKPdf     03 01 34.7 +0.1
      comp=Z,0.9nm,1.0s,baz=162,slow=9.1,SNR=5.0
CLL   Collm            134.43 336  ePKPdf   PKiKP     03 01 46.0 +0.1
GEC2  GERESS Array S   135.99 333  ePKPdf   PKPdf     03 01 47.7 +0.1
GERES GERESS Array B   135.99 333  PKP      PKPdf     03 01 47.7 +0.1
      comp=Z,0.9nm,0.8s,baz=100,slow=5.5,SNR=4.9
BDFB  Brasilia         137.48 129  PKP      PKPdf     03 01 50.0 -1.3
      comp=Z,3.6nm,1.0s,baz=133,slow=3.0,SNR=3.8
KEST  Kesra            147.51 321  PKPbc    PKPdf     03 02 09.3 +0.8
      comp=Z,14nm,1.0s,baz=306,slow=3.8,SNR=4.5
ES19  SONSECA Array    150.46 342  ePKPbc   PKiKP     03 02 19.4 +0.2
ESDC  Sonseca Array    150.50 343  PKPbc    PKPbc     03 02 16.7 -1.8
      comp=Z,1.9nm,0.8s,baz=25,slow=3.0,SNR=6.0
ESDC                               PKPab    PKPab     03 02 24.8 -0.2
      comp=Z,1.1nm,0.8s,baz=40,slow=3.4,SNR=3.4
TOA0  Torodi Ar. Sit   163.65 277  ePKPdf   PKPdf     03 02 29.8 -0.6
TOA0                               ePKPab   PKPab     03 03 22.6 +0.3
TORD  Torodi Ar. Bea   163.65 277  PKP      PKPdf     03 02 28.6 -1.8
      comp=Z,1.6nm,1.0s,baz=332,slow=2.5,SNR=6.8
TORD                               PKPab    PKPab     03 03 21.9 -0.4
      comp=Z,1.6nm,1.0s,baz=45,slow=4.6,SNR=6.4
TOA1  Torodi Ar. Sit   163.65 277  ePKPdf   PKPdf     03 02 28.6 -1.8
TOA1                               ePKPab   PKPab     03 03 21.9 -0.4
DBIC  Dimbokro         168.81 244  PKP      PKPdf     03 02 33.0 -1.5
      comp=Z,1.4nm,0.7s,baz=20,slow=12,SNR=2.7
```

IDC ***07*** *02:46:03.0±0.7, 10°.80S×165°.37E, h0^{km}, mb4.3/13, mb1 4.5/15, mb1mx4.4/29, mbtmp4.3/15, ML5.0/2, MS4.5/2, Ms1 4.5/2, ms1mx3.6/38, Error ellipse: s-maj=25.4km s-min=15.8km az=144.0*

NEIC ***07*** *02:46:05.3±0.2, 10°.81S×165°.26E, h10^{km}, mb4.8/53, Error*

ellipse: s-maj=7.7km s-min=5.9km az=139.0

*ISCJB **07** 02:46:06.9±0.2, 10°.90S±0°.04×165°.22E±0°.04, h30km, mb4.6/69, Error ellipse: s-maj=6.5km s-min=5.5km az=148.9*

*GCMT **07** 02:46:07.3±0.4, 10°.73S±0°.03×165°.13E±0°.04, h24km±1km, MW5.1/60, Moment Tensor Solution. s24,c29; s60,c79; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-5.51±.51; Mθθ3.98±.30; Mφφ1.53±.30; Mrθ-0.25±.33; Mθφ-2.82±.22; Mφr1.69±.50; Best double couple: M0 5.92800×10¹⁶ NP1:φs136.00000°, δ52.00000°, λ-74.00000°. NP2: φs291.00000°, δ41.00000°, λ-110.00000°. Principal axes: T 5.9450, Plg6.0000°, Azm214.0000°; N -0.0340, Plg13.0000°, Azm306.0000°; P -5.9110, Plg76.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 02:46:08.6±0.4**, 10°.83S**±0°.07×**165°.34E**±0°.06**, h30km, n117, σ1s.78**/114**, mb4.7**/69**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.49	284	ePn	Pn	02 47 28.2	-0.2
HNR				eSn	Sn	02 48 19.5	-11
HNR	Honiara	5.49	284	Pn	Pn	02 47 28.1	-0.3
	148nm,0.3s,baz=140,slow=5.2,SNR=10						
HNR				Sn	Sn	02 48 31.3	+0.7
	25nm,0.3s,baz=270,slow=20,SNR=1.9						
HNR				LR	LR	02 49 32.7	
	comp=Z,4µm,18.4s,baz=68,slow=38						
DZM	Mont Dzumac	11.22	175	ePn	Pn	02 48 47.6	+0.4
DZM	Mont Dzumac	11.22	175	Pn	Pn	02 48 47.3	+0.1
	3.5nm,0.3s,baz=315,slow=21,SNR=22						
DZM				LR	LR	02 52 39.9	
	comp=Z,2µm,18.1s,baz=26,slow=35						
MSVF	Nonsavu	14.09	121	ePn	Pn	02 49 28.8	+2.4
KWAJ	Kwajalein Atol	19.64	7	eP	P	02 50 34.5	-0.5
	368nm,1.3s						
EIDS	Eidsvold	19.79	221	eP	Pn	02 50 38.6	+0.4
	53nm,1.3s						
MANU	Manus Island	19.86	295	eP	Pn	02 50 38.2	-1.1
	150nm,1.2s						
CTA	Charters Tower	20.55	241	P	P	02 50 45.4	+0.5
	8.2nm,0.4s,baz=68,slow=11,SNR=16						
CTAO	Charters Tower	20.55	241	eP	P	02 50 45.5	+0.5
	61nm,1.4s						
COEN	Coen	21.87	260	eP	P	02 50 57.8	-1.4
	17nm,1.3s						
ARMA	Armidale	23.29	211	eP	P	02 51 12.2	-2.0
	23nm,1.4s						
RAO	Raoul Island	24.09	142	eP	P	02 51 20.9	-0.8
	476nm,0.9s						
H11S2	WAKE ISLAND Hy	29.17	3	T	T	03 22 33.2	
	baz=184,slow=76,SNR=273						
H11S3	WAKE ISLAND Hy	29.17	3	T	T	03 22 31.8	
	baz=184,slow=76,SNR=175						
H11S1	WAKE ISLAND Hy	29.19	3	T	T	03 22 34.5	
	baz=184,slow=76,SNR=287						
URZ	Urewera	29.28	161	eP	P	02 52 08.4	+0.2
	11nm,0.9s						
URZ	Urewera	29.28	161	P	P	02 52 12.5	+4.2
	6.4nm,0.7s,baz=347,slow=1.3,SNR=3.4						
BKZ	Black Stump Fm	29.92	162	eP	P	02 52 14.5	+0.5
	31nm,1.2s						
STKA	Stephens Creek	30.32	223	eP	P	02 52 19.3	+1.7
	1.2nm,0.8s						
STKA	Stephens Creek	30.32	223	P	P	02 52 17.9	+0.3
	3.6nm,0.8s,baz=49,slow=11,SNR=5.1						
H11N1	WAKE ISLAND Hy	30.39	3	T	T	03 24 03.6	
	baz=182,slow=76,SNR=262						
H11N3	WAKE ISLAND Hy	30.40	3	T	T	03 24 05.6	
	baz=182,slow=76,SNR=90						
H11N2	WAKE ISLAND Hy	30.41	3	T	T	03 24 07.3	
	baz=182,slow=76,SNR=188						
WB2	Warramunga Arr	31.17	249	eP	P	02 52 22.5	-2.8
	7.1nm,1.1s						
WRAB	Tennant Creek	31.17	249	eP	P	02 52 22.0	-3.3
	8.1nm,1.0s						
WR1	Warramunga Arr	31.18	249	eP	P	02 52 22.9	-2.5
	9.8nm,1.2s						
WRA	Warramunga Arr	31.18	249	P	P	02 52 22.9	-2.5
	3.1nm,0.8s,baz=78,slow=9.1,SNR=8.2						
THZ	Tophouse	31.52	169	eP	P	02 52 29.1	+1.0
	12nm,0.9s						
TOO	Toolangi	32.05	211	eP	P	02 52 33.6	+0.8
	22nm,1.4s						
KHZ	Kahutara	32.27	169	eP	P	02 52 34.9	+0.3
	11nm,0.8s						
AS01	Alice Springs	32.49	243	eP	P	02 52 33.8	-3.1
AS31	Alice Springs	32.53	243	eP	P	02 52 35.5	-1.7
	1.5nm,0.7s						
ASAR	Alice Springs	32.53	243	P	P	02 52 34.9	-2.4
	4.6nm,0.6s,baz=67,slow=10,SNR=40						
RPZ	Rata Peaks	33.13	172	eP	P	02 52 40.4	-1.8
	16nm,1.1s						
RPZ	Rata Peaks	33.13	172	P	P	02 52 44.9	+2.7
	3.0nm,0.5s,baz=198,slow=3.2,SNR=2.5						
BBOO	Buckleboo	34.68	226	eP	P	02 52 54.7	-1.1
	15nm,1.0s						
FITZ	Fitzroy Crossi	39.05	255	eP	P	02 53 30.7	-2.4
	3.2nm,0.8s						
FITZ	Fitzroy Crossi	39.05	255	P	P	02 53 30.7	-2.4
	2.2nm,0.8s,baz=85,slow=7.4,SNR=6.1						
FORT	Forrest	39.84	234	eP	P	02 53 39.5	-0.1
	41nm,0.9s						
NJ2	Nanjing	61.59	316	eP	P	02 56 23.5	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PETK	Petropavlovsk-	64.02	355	P	P	02 56 38.5	-0.7
	comp=Z,3.8nm,0.9s,baz=142,slow=7.2,SNR=3.1						
PEA1	Petropavlovsk-	64.03	355	eP	P	02 56 38.5	-0.8
CN2	Changchun	65.36	329	eP	P	02 56 50.0	+1.8
ENH	Enshi	67.45	309	eP	P	02 57 05.2	+3.3
	comp=Z,14nm,1.2s						
GYA	Guiyang	67.97	304	⇑iP	P	02 57 07.6	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	69.69	312	P	P	02 57 18.9	+3.1
XAN				pP	pwP	02 57 29.4	+2.5
XAN				sP	PcP	02 57 34.6	-3.9
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				LR	LR		
	comp=N,330nm,21.7s						
XAN				LR	LR		
	comp=Z,220nm,15.2s						
KMI	Kunming	70.67	301	P	P	02 57 26.7	+4.4
KMI				pP	pwP	02 57 33.1	-0.3
KMI				sP	sP	02 57 37.3	+2.9
KMI				PP	PP	03 00 02.2	+3.0
KMI				S	S	03 06 34.9	-0.1
KMI				sS	sS	03 06 47.5	-0.9
KMI	Kunming	70.67	301	SS	SS	03 11 08.7	+1.2
KMI				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,130nm,4.1s						
CM31	Chiang Mai Arr	71.66	294	eP	P	02 57 28.4	+0.3
CMAR	Chiang Mai Arr	71.66	294	P	P	02 57 28.4	+0.3
	comp=Z,1.0nm,0.3s,baz=92,slow=4.9,SNR=5.5						
CD2	Chengdu	72.16	307	eP	P	02 57 30.7	-0.2
LZH	Lanzhou	74.32	312	eP	P	02 57 44.2	+0.5
LZH				pP	pP	02 57 52.8	+0.2
LZH				sP	sP	02 57 55.1	-0.8
LZH				PP	PP	03 00 33.4	+3.3
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,80nm,4.5s						
LZH				LR	LR		
	comp=N,250nm,14.6s						
LZH				LR	LR		
	comp=E,280nm,15.0s						
LZH				LR	LR		
	comp=Z,250nm,17.8s						
ULN	Ulaanbaatar	77.90	324	eP	P	02 58 03.7	-0.1
	comp=Z,8.1nm,1.0s						
SONA0	Songino Array	78.26	324	eP	P	02 58 05.0	-0.8
SONM	Songino Array	78.26	324	P	P	02 58 05.0	-0.8
SONM	Songino Array	78.26	324	P	P	02 58 05.0	-0.8
	comp=Z,1.0nm,0.8s,baz=132,slow=5.2,SNR=3.3						
ANM	Nome	78.37	12	eP	P	02 58 07.4	+1.5
	comp=Z,8.8nm,1.3s						
GTA	Gaotai	78.62	314	⇑P	P	02 58 12.4	+4.4
GTA				pP	pwP	02 58 17.8	-1.4
GTA				sP	sP	02 58 20.7	+0.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,140nm,5.4s						
GTA				LR	LR		
	comp=N,180nm,18.1s						
GTA				LR	LR		
	comp=E,280nm,17.1s						
GTA				LR	LR		
	comp=Z,270nm,18.1s						
BILL	Bilibino	78.67	0	eP	P	02 58 07.3	-0.1
	comp=Z,19nm,1.3s						
QSPA	South Pole Qui	79.17	180	eP	P	02 58 10.6	+0.1
	comp=Z,36nm,1.0s						
CAST	Castle Rocks	80.87	18	eP	P	02 58 22.6	+3.1
	comp=Z,4.7nm,0.9s						
IM3	Indian Mountai	82.33	16	eP	P	02 58 28.4	+1.3
MDM	Murphy Dome	83.15	18	eP	P	02 58 34.0	+2.6
	comp=Z,11nm,1.4s						
HDA	Harding Lake	83.17	19	eP	P	02 58 33.3	+1.7
	comp=Z,11nm,0.9s						
IL1	Eielson Array	83.44	19	eP	P	02 58 31.5	-1.4
ILAR	Eielson Array	83.44	19	P	P	02 58 32.4	-0.5
	comp=Z,1.0nm,0.5s,baz=241,slow=4.7,SNR=11						
ILB	Eielson Array	83.44	19	eP	P	02 58 34.0	+1.1
SCRK	Sand Creek	83.86	20	eP	P	02 58 35.4	+0.2
	comp=Z,7.4nm,1.1s						
AFDM	Forest Hills D	84.36	49	eP	P	02 58 37.7	-0.6
	comp=Z,9.3nm,1.2s						
WAKR	Walker	85.36	50	eP	P	02 58 43.9	+0.3
	comp=Z,12nm,1.3s						
MDPB	Devils Postpil	85.37	50	eP	P	02 58 43.7	+0.1
	comp=Z,6.3nm,1.1s						
OMMB	Old Mammoth Mi	85.43	51	eP	P	02 58 44.2	+0.2
	comp=Z,11nm,1.4s						
PAHR	Pah Rah Range	85.77	48	eP	P	02 58 45.4	0.0
	comp=Z,9.2nm,1.4s						
RYN	Ryan	86.09	50	eP	P	02 58 47.3	+0.2
	comp=Z,6.3nm,1.3s						
NV01	Mina Array Sit	86.19	50	eP	P	02 58 46.6	-1.1
NVAR	Mina Array Bea	86.19	50	P	P	02 58 46.5	-1.1
	comp=Z,4.8nm,1.1s,baz=233,slow=6.6,SNR=13						
NV11	Mina Array Sit	86.31	50	eP	P	02 58 48.0	-0.1
	comp=Z,0.6nm,1.3s						
KVN	Kaiserville	86.53	49	eP	P	02 58 49.1	-0.1
	comp=Z,6.1nm,1.3s						
WVOR	Wild Horse Val	87.13	46	eP	P	02 58 51.6	-0.4
	comp=Z,14nm,1.4s						
J08A	Circle Bar Ran	87.52	45	eP	P	02 58 54.0	+0.1
	comp=Z,12nm,1.5s						
R11A	Troy Canyon, C	88.22	51	eP	P	02 58 56.3	-1.2
	comp=Z,5.7nm,1.4s						
WMQ	Urumqi	88.66	315	eP	P	02 59 00.1	+0.8
W13A	Hualapai Mount	88.72	54	eP	P	02 59 00.5	+0.5
	comp=Z,2.5nm,0.8s						
LCMT	Little Creek M	89.69	52	eP	P	02 59 04.7	+0.4
	comp=Z,11nm,1.5s						
CCUT	Cedar City	89.72	52	eP	P	02 59 04.7	+0.1
	comp=Z,3.3nm,1.0s						
SZCU	Shurtz Canyon	89.95	52	eP	P	02 59 06.2	+0.6
	comp=Z,9.6nm,1.5s						
KNB	Kanab	90.02	52	eP	P	02 59 06.6	+0.7
	comp=Z,10nm,1.4s						
U15A	North Rim	90.30	53	eP	P	02 59 08.0	+0.6
	comp=Z,10nm,1.3s						
HLID	Hailey	90.42	46	eP	P	02 59 08.0	+0.4
	comp=Z,5.1nm,1.3s						
X16A	Lo Mia Camp, P	90.53	55	eP	P	02 59 09.1	+0.7
	comp=Z,3.2nm,1.2s						
MTPU	Mount Pierson	90.75	52	eP	P	02 59 10.2	+0.7
	comp=Z,5.8nm,1.1s						
WUAZ	Wupatki	90.82	54	eP	P	02 59 10.3	+0.7
	comp=Z,7.6nm,1.3s						
MSU	Marysvale	90.86	51	eP	P	02 59 10.8	+0.9
HVU	Hansel Valley	91.16	48	eP	P	02 59 11.4	+0.3
	comp=Z,10nm,1.3s						
DLMT	Dillon	92.11	44	eP	P	02 59 15.4	0.0
	comp=Z,16nm,1.4s						
BOZ	Bozeman (W)	92.83	44	eP	P	02 59 18.8	+0.1
	comp=Z,11nm,1.4s						
MK01	Makanchi Array	93.08	317	eP	P	02 59 18.4	-1.3
MK31	Makanchi Array	93.09	317	eP	P	02 59 19.8	0.0
MK32	Makanchi Array	93.09	317	eP	P	02 59 18.4	-1.4
MKAR	Makanchi Array	93.09	317	eP	P	02 59 19.8	0.0
	comp=Z,10nm,0.9s						
MKAR	Makanchi Array	93.09	317	P	P	02 59 18.4	-1.4
	comp=Z,1.0nm,0.7s,baz=89,slow=6.4,SNR=8.2						
ZALV	Zalesovo Beam	93.15	324	eP	P	02 59 21.9	+2.2
ZALV	Zalesovo Beam	93.15	324	P	P	02 59 15.7	-4.1
	comp=Z,0.4nm,0.5s,baz=119,slow=5.4,SNR=2.7						
ZAA1	Zalesovo Array	93.15	324	eP	P	02 59 15.7	-4.1
PD31	Pinedale Array	93.70	47	eP	P	02 59 20.5	-2.4
PDAR	Pinedale Array	93.70	47	P	P	02 59 20.5	-2.4
	comp=Z,0.9nm,1.1s,baz=216,slow=2.9,SNR=3.2						
YKA	Yellowknife Ar	94.97	27	P	P	02 59 23.7	-4.2
	comp=Z,0.4nm,0.8s,baz=256,slow=4.7,SNR=6.3						
YKB5	Yellowknife Ar	94.97	27	eP	P	02 59 23.7	-4.2
SDCO	Great Sand Dun	95.88	53	eP	P	02 59 33.1	0.0
	comp=Z,1.4nm,0.8s						
LTX	Lajitas	96.08	61	eP	P	02 59 31.7	-2.2
TXAR	Lajitas Array	96.08	61	P	P	02 59 31.7	-2.2
	comp=Z,0.4nm,0.9s,baz=270,slow=5.0,SNR=3.6						
ARA0	ARCESS Array S	116.03	345	ePKPdf	PKiKP	03 04 45.5	-2.6
ARCES	ARCESS Array B	116.03	345	PKP	PKiKP	03 04 45.5	-2.6
	comp=Z,2.2nm,0.8s,baz=8.5,slow=1.8,SNR=4.5						
SDV	Santo Domingo	124.88	87	PKP	PKPdf	03 05 06.5	-0.5
	comp=Z,1.8nm,0.7s,baz=292,slow=3.9						
BOSA	Boshof	125.00	224	PKP	PKiKP	03 05 06.9	-0.2
	comp=Z,1.4nm,0.9s,baz=162,slow=6.4,SNR=2.0						
KEST	Kesra	147.01	323	PKPbc	PKPbc	03 05 48.2	-0.8
	comp=Z,5.9nm,0.9s,baz=342,slow=3.2,SNR=2.7						

ISC 07 02:53:29.3±1.1**, 38°.80N**±0°.06×**43°.28E**±0°.08**, h13km, n6, σ0s.81**/9**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.22	157	PG	Pb	02 53 35.7	+0.5
VANB				SG	Sb	02 53 40.3	+1.2
TVAN	Van	0.28	160	i P	Pb	02 53 36.7	+0.3
TVAN				i S	Sb	02 53 40.9	-0.3
VMUR	Van-Muradiye	0.30	50	i P	Pn	02 53 38.5	-1.1
TUTA	Tutak	0.70	329	i P	Pn	02 53 45.3	+0.1
AGRB	Hanur-Agry	0.81	344	ePG	Pn	02 53 46.6	0.0
AGRB				SG	Sn	02 53 58.6	0.0
GURO	Guroymak-BITLI	1.01	256	ePG	Pn	02 53 48.2	-1.1

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*IDC **07** 02:56:23.9±0.4, 10°.75S×165°.48E, h0km, mb4.6/29, mb1 4.7/29, mb1mx4.7/46, mbtmp4.6/29, MS4.3/16, Ms1 4.3/16, ms1mx4.2/35, Error ellipse: s-maj=17.1km s-min=12.3km az=126.0*

*NEIC **07** 02:56:26.1±0.1, 10°.72S×165°.42E, h10km, mb4.9/115, Error ellipse: s-maj=5.2km s-min=3.7km az=129.0*

*ISCJB **07** 02:56:27.7±0.1, 10°.77S±0°.04×165°.36E±0°.03, h30km, mb4.8/142, MS4.4/18, Error ellipse: s-maj=5.6km s-min=4.3km az=142.7*

*GCMT **07** 02:56:29.1±0.3, 10°.61S±0°.02×165°.35E±0°.01, h20km±1km, MW5.1/89, Moment Tensor Solution. s23,c25; s89,c124; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.47±.34; Mθθ2.19±.18; Mφφ-5.66±.24; Mrθ2.11±.47; Mθφ0.30±.16; Mφr-1.20±.36; Best double couple: M0 5.47600×10¹⁶ NP1:φs148.00000°, δ62.00000°, λ50.00000°. NP2: φs29.00000°, δ48.00000°, λ140.00000°. Principal axes: T 5.0930, Plg54.0000°, Azm7.0000°; N 0.7650, Plg35.0000°, Azm170.0000°; P -5.8580, Plg8.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 02:56:29.1±0.3**, 10°.77S**±0°.06×**165°.49E**±0°.06**, h30km, n294, σ1s.27**/289**, mb4.9**/142**, MS4.4**/18**, 3C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.61	283	ePn	Pn	02 57 51.5	+1.0
HNR				eSn	Sn	02 58 49.7	-4.4
HNR	Honiara	5.61	283	Pn	Pn	02 57 51.2	+0.6
	170nm,0.3s,baz=133,slow=5.7,SNR=10.0						
HNR				Sn	Sn	02 58 57.9	+3.9
	30nm,0.3s,baz=343,slow=19,SNR=2.5						
HNR				LR	LR	02 59 39.5	
	comp=Z,2µm,21.7s,baz=114,slow=35						
DZM	Mont Dzumac	11.28	175	ePn	Pn	02 59 04.8	-3.6
	108nm,1.2s						
DZM				eLR	LR	03 01 36.6	
	comp=Z,2µm,24.5s						
DZM	Mont Dzumac	11.28	175	ePn	Pn	02 59 06.3	-2.1
DZM	Mont Dzumac	11.28	175	LR	LR	03 03 00.9	
	comp=Z,2µm,19.0s,baz=22,slow=35						
OUENC	Ouen Island, N	11.66	174	ePn	Pn	02 59 16.3	+2.8
MSVF	Nonsavu	14.01	121	eP	P	02 59 55.8	+2.6
TARA	Tarawa	14.13	32	ePn	Pn	02 59 47.1	-0.2
EIDS	Eidsvold	19.93	221	eP	Pn	03 01 00.8	+0.3
	79nm,1.4s						
MANU	Manus Island	19.97	294	eP	Pn	03 01 00.9	0.0
	311nm,1.2s						
CTA	Charters Tower	20.71	241	P	P	03 01 07.7	+0.6
	52nm,0.9s,baz=69,slow=13,SNR=18						
CTAO	Charters Tower	20.71	241	eP	P	03 01 08.2	+1.1
	122nm,1.3s						
COEN	Coen	22.02	259	eP	P	03 01 20.8	-0.5
	34nm,1.4s						
ARMA	Armidale	23.42	211	eP	P	03 01 35.6	-0.3
	40nm,1.4s						
KNTN	Kanton	23.97	72	eP	P	03 01 40.0	-1.2
	107nm,1.1s						
H11S2	WAKE ISLAND Hy	29.10	2	T	T	03 32 52.8	
	baz=183,slow=76,SNR=154						
H11S3	WAKE ISLAND Hy	29.10	2	T	T	03 33 04.1	
	baz=183,slow=76,SNR=92						
H11S1	WAKE ISLAND Hy	29.11	2	T	T	03 32 53.5	
	baz=183,slow=76,SNR=123						
URZ	Urewera	29.29	161	eP	P	03 02 29.9	+1.0
	47nm,1.4s						
URZ	Urewera	29.29	161	P	P	03 02 29.5	+0.7
	8.0nm,0.7s,baz=302,slow=2.5,SNR=4.6						
URZ				LR	LR	03 13 38.7	
	comp=Z,930nm,18.0s,baz=353,slow=35						
BKZ	Black Stump Fm	29.94	163	eP	P	03 02 34.9	+0.3
	23nm,0.6s						
H11N1	WAKE ISLAND Hy	30.32	3	T	T	03 34 05.6	
	baz=182,slow=76,SNR=124						
H11N3	WAKE ISLAND Hy	30.32	3	T	T	03 34 06.0	
	baz=182,slow=76,SNR=130						
H11N2	WAKE ISLAND Hy	30.34	3	T	T	03 34 07.0	
	baz=182,slow=76,SNR=30						
STKA	Stephens Creek	30.47	223	eP	P	03 02 44.8	+5.5
	2.5nm,1.1s						
STKA	Stephens Creek	30.47	223	P	P	03 02 40.1	+0.8
	4.5nm,0.8s,baz=32,slow=11,SNR=4.0						
STKA				LR	LR	03 14 27.8	
	comp=Z,1µm,19.2s,baz=268,slow=36						
BFZ	Birch Farm	31.28	164	eP	P	03 02 46.1	-0.2
	50nm,1.0s						
WRAB	Tennant Creek	31.33	249	eP	P	03 02 47.7	+0.6
	7.1nm,0.8s						
WB2	Warramunga Arr	31.33	249	eP	P	03 02 46.6	-0.5
WR1	Warramunga Arr	31.34	249	eP	P	03 02 45.6	-1.6
	10nm,1.0s						
WR1				ePcP	PcP	03 05 39.2	-1.7
WRA	Warramunga Arr	31.34	249	P	P	03 02 45.6	-1.6
	3.8nm,0.8s,baz=79,slow=9.0,SNR=22						
WRA				PcP	PcP	03 05 39.2	-1.7
	1.1nm,1.0s,baz=17,slow=1.1,SNR=4.0						
WRA				LR	LR	03 14 08.8	
	comp=Z,1µm,21.1s,baz=70,slow=34						
THZ	Tophouse	31.56	169	eP	P	03 02 49.6	+0.7
	38nm,1.4s						
KHZ	Kahutara	32.31	169	eP	P	03 02 55.5	+0.2
	31nm,1.1s						
AS01	Alice Springs	32.65	243	eP	P	03 02 56.6	-2.1
AS31	Alice Springs	32.69	243	eP	P	03 02 58.0	-1.1
	2.1nm,0.7s						
AS31				ePcP	PcP	03 05 45.9	+1.3
ASAR	Alice Springs	32.69	243	P	P	03 02 57.8	-1.3
	6.8nm,0.7s,baz=72,slow=9.7,SNR=64						
ASAR				PcP	PcP	03 05 45.9	+1.3
	0.8nm,0.6s,baz=49,slow=1.9,SNR=4.9						
FOZ	Fox Glacier	32.86	174	eP	P	03 03 02.0	+1.9
	26nm,1.0s						
RPZ	Rata Peaks	33.18	173	eP	P	03 03 03.4	+0.4
	20nm,0.8s						
RPZ	Rata Peaks	33.18	173	P	P	03 03 02.4	-0.6
	6.0nm,0.7s,baz=315,slow=8.6,SNR=3.2						
RPZ				LR	LR	03 15 58.4	
	comp=Z,652nm,20.1s,baz=213,slow=35						
MQZ	McQueen's Vall	33.40	171	eP	P	03 03 05.4	+0.5
	59nm,1.4s						
BBOO	Buckleboo	34.83	226	eP	P	03 03 17.7	+0.1
	11nm,0.8s						
RAR	Rarotonga	34.90	112	LR	LR	03 16 32.9	
	comp=Z,241nm,18.2s,baz=304,slow=35						
PYZ	Puysegur Point	35.29	179	eP	P	03 03 22.1	+0.8
	61nm,1.2s						
FITZ	Fitzroy Crossi	39.21	255	eP	P	03 03 54.2	-0.6
	10nm,1.1s						
FITZ	Fitzroy Crossi	39.21	255	P	P	03 03 52.7	-2.2
	2.5nm,0.6s,baz=79,slow=10						
FORT	Forrest	39.99	234	eP	P	03 04 01.5	+0.2
	26nm,0.8s						
JCJ	Chichijima	43.91	329	LR	LR	03 18 57.6	
	comp=Z,174nm,20.8s,baz=68,slow=31						
PPT	Papeete	44.01	104	LR	LR	03 18 47.9	
	comp=Z,475nm,19.1s,baz=354,slow=30						
PPT2	Papeete2	44.01	104	eLR	LR	03 16 48.0	
	comp=Z,1µm,28.5s						
TBI	Tubuai	44.67	112	eLQ	LQ	03 15 25.8	
	951nm,32.2s						
TBI				eLR	LR	03 17 20.7	
	comp=Z,728nm,31.5s						
NWAO	Narrogin (SRO)	49.41	236	P	P	03 05 15.7	-0.6
	11nm,1.0s,baz=307,slow=5.1,SNR=2.8						
TAOE	Nuku Hiva Isla	53.55	93	eLR	LR	03 21 02.4	
	comp=Z,645nm,27.0s						
MJAR	Matsushiro Arr	53.61	333	P	P	03 05 46.8	-0.9
	3.9nm,0.8s,baz=168,slow=8.4,SNR=6.9						
MAJO	Matsushiro	53.61	333	eP	P	03 05 46.8	-0.9
MAT	Matsushiro	53.61	333	P	P	03 05 47.1	-0.5
ASAJ	Asahikawa	58.45	341	P	P	03 06 23.3	+1.2
	16nm,0.7s,baz=154,slow=7.3,SNR=7.8						
KSRS	Korea Array	59.50	326	P	P	03 06 29.2	-0.3
	2.7nm,0.7s,baz=130,slow=7.7,SNR=6.2						
KS15	Wonju Array Si	59.52	326	eP	P	03 06 29.2	-0.4
KSAR	Wonju Array Be	59.52	326	P	P	03 06 29.2	-0.4
NJ2	Nanjing	61.64	315	eP	P	03 06 43.5	-0.8
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
USRK	Ussuriysk Ar.	62.59	333	P	P	03 06 51.1	+0.7
	comp=Z,3.8nm,0.6s,baz=124,slow=5.9,SNR=8.8						
PETK	Petropavlovsk-	63.97	355	P	P	03 06 60.0	+0.6
	comp=Z,12nm,0.9s,baz=162,slow=10,SNR=9.4						
PETK				LR	LR	03 28 12.1	
	comp=Z,291nm,20.9s,baz=178,slow=30						
PEA1	Petropavlovsk-	63.97	355	eP	P	03 06 60.0	+0.6
WHN	Wuhan	64.02	312	P	P	03 07 06.3	+6.2
CN2	Changchun	65.37	329	eP	P	03 07 11.7	+3.0
ENH	Enshi	67.53	309	eP	P	03 07 22.8	0.0
	comp=Z,14nm,1.0s						
NONG	Nongkai	67.87	295	P	P	03 07 29.7	+4.6
GYA	Guiyang	68.05	304	P	P	03 07 30.0	+3.7
GYA				PP	PP	03 10 00.2	+3.4
GYA				S	S	03 16 25.4	+1.1
GYA				SKS	SKiKP	03 17 20.0	-0.3
GYA	Guiyang	68.05	304	SS	SS	03 20 49.6	+2.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.7s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,520nm,18.6s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
BJI	Beijing	68.11	321	⇑iP	P	03 07 26.9	+0.7
BJI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN	Xi'an	69.75	312	P	P	03 07 36.8	+0.2
XAN				pP	sP	03 07 50.3	+1.6
XAN				sP	PcP	03 07 56.3	-2.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
XAN				LR	LR		
	comp=E,300nm,18.4s						
XAN				LR	LR		
	comp=Z,320nm,19.5s						
KMI	Kunming	70.76	301	P	P	03 07 45.2	+2.0
KMI				sP	PcP	03 08 04.4	+0.5
KMI				pmax	pmax		

	comp=Z,6.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,120nm,4.3s						
MA2	**Magadan**	**71.10**	**352**	P	**P**	**03 07 42.9**	**-1.4**
	comp=Z,2.4nm,0.3s,baz=168,slow=7.7,SNR=4.2						
HHC	**Hu-ho-hao-te**	**71.45**	**320**	*e*P	**P**	**03 07 50.1**	**+3.1**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,69nm,5.1s						
CM01	**Chiang Mai Arr**	**71.74**	**294**	*e*P	**P**	**03 07 51.2**	**+2.2**
CM31	**Chiang Mai Arr**	**71.77**	**294**	*e*P	**P**	**03 07 47.2**	**-1.9**
CMAR	**Chiang Mai Arr**	**71.77**	**294**	P	**P**	**03 07 47.2**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=114,slow=4.4,SNR=2.4						
CMMT	**Chiang Mai**	**71.88**	**294**	P	P	03 07 56.6	+6.8
	comp=Z,5.2nm,1.2s,comp=Z,0.0nm						
CHTO	**Chiang Mai**	**71.88**	**294**	P	P	03 07 56.7	+6.9
	comp=Z,24nm,1.2s						
CHTO	**Chiang Mai**	**71.88**	**294**	P	P	03 07 56.7	+6.9
	comp=Z,24nm,1.2s,comp=Z,0.1nm						
LZH	**Lanzhou**	**74.38**	**312**	*e*P	**P**	**03 08 06.4**	**+1.9**
LZH				pP	sP	03 08 17.5	+0.7
LZH				sP	PcP	03 08 20.4	+1.3
LZH				PP	**PP**	**03 10 53.3**	**+2.2**
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
LZH				pmax	pmax		
	comp=Z,80nm,4.9s						
LZH				LR	LR		
	comp=N,240nm,16.0s						
LZH				LR	LR		
	comp=E,240nm,16.0s						
LZH				LR	LR		
	comp=Z,290nm,17.1s						
GAMB	**Gambell**	**76.34**	**10**	*e*P	**P**	**03 08 15.6**	**+0.8**
	comp=Z,28nm,0.8s						
KDAK	**Kodiak Island**	**76.42**	**22**	*e*P	**P**	**03 08 15.6**	**+0.2**
	comp=Z,41nm,1.2s						
KDAK	**Kodiak Island**	**76.42**	**22**	P	**P**	**03 08 15.6**	**+0.2**
	comp=Z,16nm,1.0s,baz=109,slow=2.8,SNR=4.2						
ULN	**Ulaanbaatar**	**77.93**	**324**	*e*P	**P**	**03 08 25.2**	**+0.8**
	comp=Z,8.2nm,1.2s						
SVW2	**Sparrevohn**	**77.93**	**18**	*e*P	**P**	**03 08 24.6**	**+0.6**
	comp=Z,14nm,1.0s						
ANM	**Nome**	**78.27**	**12**	*e*P	**P**	**03 08 27.0**	**+1.3**
	comp=Z,16nm,1.2s						
SONA0	**Songino Array**	**78.29**	**324**	*e*P	**P**	**03 08 26.5**	**+0.2**
SONM	**Songino Array**	**78.29**	**324**	P	**P**	**03 08 26.5**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=131,slow=5.4,SNR=11						
SONA1	**Songino Array**	**78.29**	**324**	*e*P	**P**	**03 08 26.1**	**-0.3**
RSO	**Redoubt South**	**78.35**	**20**	*e*P	**P**	**03 08 27.1**	**+0.6**
BILL	**Bilibino**	**78.60**	**0**	*e*P	**P**	**03 08 27.7**	**+0.3**
	comp=Z,21nm,0.8s						
GTA	**Gaotai**	**78.68**	**314**	⇑P	**P**	**03 08 29.2**	**+0.5**
GTA				pP	PcP	03 08 34.2	-3.4
GTA				sP	pP	03 08 37.4	-0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,6.0s						
GTA				LR	LR		
	comp=N,250nm,19.4s						
GTA				LR	LR		
	comp=E,290nm,19.4s						
GTA				LR	LR		
	comp=Z,260nm,18.7s						
QSPA	**South Pole Qui**	**79.24**	**180**	*e*P	**P**	**03 08 31.9**	**+0.6**
	comp=Z,15nm,1.0s						
SUA	**Susitna One**	**79.75**	**20**	*e*P	**P**	**03 08 34.1**	**+0.1**
	comp=Z,14nm,1.1s						
PMR	**Palmer**	**80.38**	**20**	*e*P	**P**	**03 08 38.6**	**+1.4**
	comp=Z,15nm,1.1s						
CAST	**Castle Rocks**	**80.76**	**18**	*e*P	**P**	**03 08 38.9**	**-0.4**
	comp=Z,23nm,1.3s						
DIV	**Divide**	**81.25**	**22**	*e*P	**P**	**03 08 42.5**	**+0.5**
	comp=Z,27nm,1.0s						
DIV				*e*pP	**pP**	**03 08 50.4**	**-0.8**
KLU	**Klutina**	**81.43**	**21**	*e*P	**P**	**03 08 43.6**	**+0.6**
	comp=Z,17nm,1.2s						
RND	**Reindeer**	**81.76**	**19**	*e*P	**P**	**03 08 45.2**	**+0.5**
	comp=Z,18nm,1.1s						
RDOG	**Red Dog Mine**	**81.80**	**11**	*e*P	**P**	**03 08 46.1**	**+1.4**
	comp=Z,16nm,0.8s						
MCK	**McKinley**	**81.96**	**19**	*e*P	**P**	**03 08 47.3**	**+1.6**
	comp=Z,27nm,1.4s						
DHY	**Denali Highway**	**82.01**	**20**	*e*P	**P**	**03 08 46.4**	**+0.3**
	comp=Z,12nm,1.2s						
BWN	**Browne**	**82.11**	**18**	*e*P	**P**	**03 08 48.5**	**+2.1**
	comp=Z,26nm,1.0s						
IM3	**Indian Mountai**	**82.23**	**16**	*e*P	**P**	**03 08 46.6**	**-0.4**
HARP	**HAARP**	**82.31**	**21**	*e*P	**P**	**03 08 48.8**	**+1.2**
	comp=Z,34nm,1.0s						
MLY	**Manley**	**82.35**	**17**	*e*P	**P**	**03 08 47.8**	**+0.1**
	comp=Z,9.8nm,1.3s						
WRH	**Wood River Hil**	**82.75**	**18**	*e*P	**P**	**03 08 49.6**	**-0.1**
	comp=Z,17nm,1.1s						
MDM	**Murphy Dome**	**83.05**	**18**	*e*P	**P**	**03 08 50.9**	**-0.4**
	comp=Z,17nm,1.0s						
HDA	**Harding Lake**	**83.06**	**19**	*e*P	**P**	**03 08 51.5**	**+0.1**
	comp=Z,32nm,0.9s						
HDA	**Harding Lake**	**83.06**	**19**	P	**P**	**03 08 52.1**	**+0.7**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.10**	**18**	P	**P**	**03 08 51.6**	**+0.1**
	baz=226						
COLA	**College**	**83.10**	**18**	*e*P	**P**	**03 08 51.4**	**-0.1**
	comp=Z,21nm,0.9s						
O02D	**Mt. Diablo Mer**	**83.29**	**47**	P	**P**	**03 08 53.6**	**+0.3**
	baz=250						
RIDG	**Independ'e Rid**	**83.30**	**20**	*e*P	**P**	**03 08 52.8**	**0.0**
	comp=Z,18nm,1.0s						
IL1	**Eielson Array**	**83.33**	**19**	*e*P	**P**	**03 08 50.7**	**-2.0**
ILAR	**Eielson Array**	**83.33**	**19**	P	**P**	**03 08 51.8**	**-1.0**
	comp=Z,6.5nm,0.8s,baz=237,slow=4.2,SNR=64						
ILAR				LR	LR	03 43 16.1	
	comp=Z,164nm,18.8s,baz=256,slow=34						
ILB	**Eielson Array**	**83.33**	**19**	*e*P	**P**	**03 08 51.7**	**-1.0**
POKR	**Poker Plat Res**	**83.40**	**18**	P	**P**	**03 08 52.9**	**-0.2**
	baz=226						
K02D	**Willamette Mer**	**83.55**	**44**	P	**P**	**03 08 55.1**	**+0.6**
	baz=249						
M02C	**Callahan**	**83.66**	**46**	P	**P**	**03 08 55.8**	**+0.7**
	baz=250						
SCRK	**Sand Creek**	**83.74**	**20**	*e*P	**P**	**03 08 55.3**	**+0.2**
	comp=Z,14nm,1.0s						
PKM	**Mcpherson Peak**	**83.83**	**53**	P	**P**	**03 08 56.4**	**+0.1**
	baz=252						
ORV	**Oroville**	**84.02**	**48**	*e*P	**P**	**03 08 56.8**	**-0.1**
	comp=Z,2.3nm,0.9s						
O03E	**Paynes Creek**	**84.04**	**47**	P	**P**	**03 08 57.0**	**-0.1**
	baz=251						
I03D	**Drain, OR**	**84.13**	**44**	P	**P**	**03 08 57.3**	**0.0**
	baz=249						
AFDM	**Forest Hills D**	**84.21**	**49**	*e*P	**P**	**03 08 58.0**	**+0.1**
	comp=Z,11nm,0.9s						
HYT	**Haines Junctio**	**84.24**	**24**	*e*P	**P**	**03 08 58.3**	**+0.6**
	comp=Z,13nm,1.0s						
L04D	**Klamath Falls**	**84.33**	**45**	P	**P**	**03 08 59.0**	**+0.4**
	baz=250						
CMB	**Columbia Colle**	**84.36**	**50**	*e*P	**P**	**03 08 58.7**	**0.0**
	comp=Z,7.8nm,0.9s						
SKAG	**Skagway**	**84.41**	**26**	*e*P	**P**	**03 08 59.1**	**+0.8**
	comp=Z,11nm,1.0s						
BBB	**Bella Bella**	**84.49**	**35**	P	**P**	**03 08 58.1**	**-0.8**
	comp=Z,33nm,1.0s,baz=297,slow=2.3						
M04C	**Macdoel**	**84.51**	**46**	P	**P**	**03 08 59.6**	**+0.1**
	baz=250						
I04A	**Tendick Farm,**	**84.80**	**44**	P	**P**	**03 09 01.0**	**+0.2**
	baz=250						
ISA	**Isabella, Lake**	**85.11**	**52**	*e*P	**P**	**03 09 02.6**	**+0.1**
	comp=Z,7.2nm,0.9s						
ISA	**Isabella, Lake**	**85.11**	**52**	P	**P**	**03 09 02.2**	**-0.3**
	baz=253,SNR=6.6						
WAKR	**Walker**	**85.21**	**50**	*e*P	**P**	**03 09 03.7**	**+0.5**
	comp=Z,14nm,1.3s						
MDPB	**Devils Postpil**	**85.22**	**50**	*e*P	**P**	**03 09 03.7**	**+0.3**
	comp=Z,10nm,0.9s						
EDW2	**Edwards Air Fo**	**85.26**	**53**	P	**P**	**03 09 03.3**	**0.0**
	baz=254,SNR=9.0						
PNTR	**Pine Nut**	**85.27**	**49**	*e*P	**P**	**03 09 04.2**	**+0.7**
	comp=Z,7.3nm,0.9s						
OMMB	**Old Mammoth Mi**	**85.27**	**50**	*e*P	**P**	**03 09 03.9**	**+0.2**
	comp=Z,5.5nm,1.1s						
BFSC	**Mount Baldy Ra**	**85.34**	**54**	P	**P**	**03 09 03.5**	**-0.3**
	baz=254,SNR=5.1						
DAWY	**Dawson**	**85.39**	**21**	*e*P	**P**	**03 09 04.4**	**+1.1**
	comp=Z,9.1nm,0.9s						
J05D	**Fort Rock, OR**	**85.43**	**45**	P	**P**	**03 09 04.5**	**+0.4**
	baz=251						
MURC	**Murrieta**	**85.54**	**55**	P	**P**	**03 09 05.0**	**+0.3**
	baz=254						
PAHR	**Pah Rah Range**	**85.62**	**48**	*e*P	**P**	**03 09 05.1**	**0.0**
	comp=Z,5.9nm,0.9s						
CWC	**Cottonwood Cre**	**85.64**	**52**	P	**P**	**03 09 05.8**	**+0.5**
	baz=253						
MOD	**Modoc Plateau**	**85.64**	**46**	*e*P	**P**	**03 09 04.8**	**-0.3**
	comp=Z,6.9nm,0.9s						
LRMC	**Laurel Mtn Rad**	**85.67**	**53**	P	**P**	**03 09 05.7**	**+0.2**
	baz=254						
TIXI	**Tiksi**	**85.77**	**349**	*e*P	**P**	**03 09 04.7**	**-0.3**
	comp=Z,10nm,1.4s						
RYN	**Ryan**	**85.93**	**50**	*e*P	**P**	**03 09 06.8**	**0.0**
	comp=Z,5.5nm,1.0s						
MONP2	**Monument Peak**	**85.97**	**56**	P	**P**	**03 09 07.6**	**+0.5**
	baz=255,SNR=5.0						
MPMC	**Manual Prospec**	**85.99**	**52**	P	**P**	**03 09 06.9**	**-0.2**
	baz=254,SNR=6.2						
NV01	**Mina Array Sit**	**86.04**	**50**	*e*P	**P**	**03 09 06.8**	**-0.5**
NVAR	**Mina Array Bea**	**86.04**	**50**	P	**P**	**03 09 07.2**	**-0.1**
	comp=Z,7.7nm,0.9s,baz=235,slow=7.6,SNR=33						
NVAR				LR	LR	03 41 57.2	
	comp=Z,373nm,18.2s,baz=268,slow=32						
PFO	**Pinyon Flats O**	**86.13**	**55**	*e*P	**P**	**03 09 06.5**	**-1.3**
	comp=Z,13nm,1.5s						
PFO	**Pinyon Flats O**	**86.13**	**55**	P	**P**	**03 09 07.6**	**-0.2**
	baz=254						
PFO	**Pinyon Flats O**	**86.13**	**55**	P	**P**	**03 09 06.5**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=326,slow=3.6,SNR=3.4						
F05D	**White Salmon**	**86.14**	**42**	P	**P**	**03 09 07.8**	**+0.4**
	baz=250						
NV11	**Mina Array Sit**	**86.15**	**50**	*e*P	**P**	**03 09 07.8**	**0.0**
	comp=Z,0.8nm,0.9s						
IKP	**In-Ko-Pah, Jac**	**86.16**	**56**	P	**P**	**03 09 07.8**	**-0.1**
	baz=255						
DLBC	**Dease Lake**	**86.29**	**28**	*e*P	**P**	**03 09 07.7**	**-0.2**
	comp=Z,11nm,1.3s						
DLBC	**Dease Lake**	**86.29**	**28**	P	**P**	**03 09 07.7**	**-0.2**
	comp=Z,4.1nm,1.0s,baz=238,slow=10,SNR=7.0						
GSC	**Goldstone, Bar**	**86.31**	**53**	*e*P	**P**	**03 09 09.3**	**+0.7**
	comp=Z,4.4nm,1.0s						
GSC	**Goldstone, Bar**	**86.31**	**53**	P	**P**	**03 09 08.5**	**-0.1**
	baz=254						
A04D	**Lummi Island**	**86.33**	**39**	P	**P**	**03 09 09.1**	**+1.0**
	baz=249						
GRAC	**Grapevine Rang**	**86.34**	**51**	P	**P**	**03 09 09.2**	**+0.6**
	baz=254						
KVN	**Kaiserville**	**86.37**	**49**	*e*P	**P**	**03 09 08.9**	**0.0**
	comp=Z,9.9nm,1.2s						
SWSC	**Sam W. Stewart**	**86.49**	**56**	P	**P**	**03 09 09.5**	**+0.1**
	baz=255						
HEC	**Hector,Ludlow**	**86.56**	**54**	P	**P**	**03 09 09.7**	**-0.1**
	baz=254,SNR=5.5						
FURC	**Furnace Creek,**	**86.58**	**52**	P	**P**	**03 09 09.9**	**+0.1**
	baz=254						
BELC	**Belle Mtn. Jos**	**86.61**	**55**	P	**P**	**03 09 09.8**	**-0.3**
	baz=255,SNR=7.7						
I07A	**Izee**	**86.88**	**44**	*e*P	**P**	**03 09 11.8**	**+0.6**
	comp=Z,9.9nm,1.3s						
BC3	**Big Chuckawall**	**86.95**	**55**	P	**P**	**03 09 11.7**	**-0.1**
	baz=255						
WVOR	**Wild Horse Val**	**86.98**	**46**	*e*P	**P**	**03 09 11.7**	**0.0**
	comp=Z,8.0nm,1.0s						
TUQ	**Turquoise Moun**	**87.04**	**53**	P	**P**	**03 09 12.2**	**0.0**
	baz=255						
GMRC	**Granite Mounta**	**87.08**	**54**	P	**P**	**03 09 12.4**	**-0.1**
	baz=255						
TPNV	**Topopah Spring**	**87.19**	**52**	P	**P**	**03 09 12.7**	**-0.3**
	baz=254						
GLA	**Glamis**	**87.31**	**56**	P	**P**	**03 09 13.7**	**+0.2**
	baz=255						
IRM	**Iron Mountain**	**87.33**	**55**	P	**P**	**03 09 13.2**	**-0.3**
	baz=255,SNR=8.4						
J08A	**Circle Bar Ran**	**87.37**	**45**	*e*P	**P**	**03 09 13.8**	**+0.3**
	comp=Z,16nm,1.3s						
LDFC	**Landfair**	**87.59**	**54**	*e*P	**P**	**03 09 15.3**	**+0.4**
	comp=Z,19nm,1.1s						
G08A	**Pilot Rock**	**87.62**	**43**	*e*P	**P**	**03 09 15.1**	**+0.4**
	comp=Z,11nm,1.1s						
Y12C	**Blythe**	**87.73**	**55**	*e*P	**P**	**03 09 15.9**	**+0.5**
	comp=Z,13nm,1.1s						
Y12C	**Blythe**	**87.73**	**55**	P	**P**	**03 09 15.3**	**0.0**
	baz=256,SNR=5.7						
SHPR	**Sheep Range**	**87.92**	**52**	*e*P	**P**	**03 09 17.0**	**+0.5**
	comp=Z,5.4nm,1.2s						
R11A	**Troy Canyon, C**	**88.07**	**51**	*e*P	**P**	**03 09 17.1**	**0.0**
	comp=Z,4.4nm,1.1s						
R11A	**Troy Canyon, C**	**88.07**	**51**	P	**P**	**03 09 16.7**	**-0.4**
	baz=255						
PDMCI	**Parker Dam,Lak**	**88.17**	**55**	P	**P**	**03 09 18.3**	**+0.9**
	baz=256						
W13A	**Hualapai Mount**	**88.57**	**54**	*e*P	**P**	**03 09 20.0**	**+0.3**
	comp=Z,6.4nm,1.1s						
214A	**Organ Pipe Nat**	**88.69**	**57**	P	**P**	**03 09 20.3**	**+0.3**
	baz=257,SNR=7.0						
WMQ	**Urumqi**	**88.72**	**315**	*e*P	**P**	**03 09 22.0**	**+2.1**
F10A	**Beach Ranch, E**	**88.98**	**43**	*e*P	**P**	**03 09 21.3**	**+0.2**
	comp=Z,4.6nm,0.9s						
Y14A	**Wickenburg**	**89.00**	**55**	*e*P	**P**	**03 09 21.9**	**+0.5**
	comp=Z,4.9nm,1.0s						
MFID	**Camas Ranch**	**89.23**	**46**	*e*P	**P**	**03 09 22.7**	**+0.3**
	comp=Z,5.2nm,1.1s						
PSUT	**Pine Spring**	**89.43**	**51**	*e*P	**P**	**03 09 24.3**	**+0.7**
	comp=Z,4.3nm,0.9s						
LCMT	**Little Creek M**	**89.53**	**52**	*e*P	**P**	**03 09 25.0**	**+1.0**
	comp=Z,6.7nm,1.0s						
CCUT	**Cedar City**	**89.57**	**52**	*e*P	**P**	**03 09 25.1**	**+0.8**
	comp=Z,6.1nm,0.9s						
NEW	**Newport**	**89.70**	**41**	P	**P**	**03 09 24.2**	**-0.2**
	baz=254						
NEW	**Newport**	**89.70**	**41**	P	**P**	**03 09 23.7**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=252,slow=6.4						
INK	**Inuvik**	**89.72**	**19**	*e*P	**P**	**03 09 23.3**	**-0.7**
	comp=Z,7.1nm,1.3s						
INK	**Inuvik**	**89.72**	**19**	P	**P**	**03 09 23.3**	**-0.7**
	comp=Z,2.4nm,1.1s,baz=207,slow=2.9,SNR=4.4						
SZCU	**Shurtz Canyon**	**89.79**	**52**	*e*P	**P**	**03 09 25.8**	**+0.5**
	comp=Z,6.0nm,0.9s						
KNB	**Kanab**	**89.86**	**52**	*e*P	**P**	**03 09 26.4**	**+0.8**
	comp=Z,14nm,1.4s						
U15A	**North Rim**	**90.14**	**53**	*e*P	**P**	**03 09 27.3**	**+0.3**
	comp=Z,10nm,0.9s						
HLID	**Hailey**	**90.27**	**46**	*e*P	**P**	**03 09 27.8**	**+0.5**
	comp=Z,5.0nm,1.0s						
HLID	**Hailey**	**90.27**	**46**	P	**P**	**03 09 27.8**	**+0.5**
	baz=256						
PKCU	**Pink Cliffs**	**90.36**	**52**	*e*P	**P**	**03 09 29.6**	**+1.5**
	comp=Z,16nm,1.0s						
X16A	**Lo Mia Camp, P**	**90.37**	**55**	*e*P	**P**	**03 09 28.9**	**+0.9**
	comp=Z,6.2nm,1.0s						
TUC	**Tucson**	**90.45**	**57**	*e*P	**P**	**03 09 29.6**	**+1.3**
	comp=Z,4.0nm,1.0s						
TUC	**Tucson**	**90.45**	**57**	P	**P**	**03 09 29.1**	**+0.8**
	baz=258						
TCRU	**Three Creeks R**	**90.52**	**51**	*e*P	**P**	**03 09 30.3**	**+1.6**
	comp=Z,11nm,1.0s						
MTPU	**Mount Pierson**	**90.59**	**51**	*e*P	**P**	**03 09 30.5**	**+1.3**
	comp=Z,8.7nm,0.9s						
DUG	**Dugway, Tooele**	**90.61**	**49**	*e*P	**P**	**03 09 29.1**	**+0.1**
	comp=Z,6.9nm,1.3s						
DUG	**Dugway, Tooele**	**90.61**	**49**	P	**P**	**03 09 29.3**	**+0.3**
	baz=256						
BGU	**Big Grassy Mou**	**90.62**	**49**	*e*P	**P**	**03 09 29.3**	**+0.3**
	comp=Z,4.4nm,1.0s						
WUAZ	**Wupatki**	**90.67**	**54**	*e*P	**P**	**03 09 30.5**	**+1.1**
WUAZ	**Wupatki**	**90.67**	**54**	P	**P**	**03 09 30.2**	**+0.8**
	baz=257						
MSU	**Marysvale**	**90.70**	**51**	*e*P	**P**	**03 09 30.4**	**+0.9**
HVU	**Hansel Valley**	**91.01**	**48**	*e*P	**P**	**03 09 31.4**	**+0.6**
	comp=Z,10nm,0.9s						
NLU	**North Lily Min**	**91.11**	**50**	*e*P	**P**	**03 09 32.2**	**+0.8**
	comp=Z,8.0nm,1.1s						
SPUT	**South Promonto**	**91.14**	**48**	*e*P	**P**	**03 09 32.1**	**+0.7**
	comp=Z,3.9nm,0.9s						
CTU	**Camp Tracy**	**91.51**	**49**	*e*P	**P**	**03 09 33.6**	**+0.4**
	comp=Z,5.4nm,0.8s						
X18A	**Snowflake**	**91.60**	**55**	*e*P	**P**	**03 09 34.5**	**+0.7**
	comp=Z,2.2nm,0.9s						
TMUT	**Trail Mountain**	**91.62**	**50**	*e*P	**P**	**03 09 35.1**	**+1.2**
	comp=Z,4.5nm,0.9s						
MCMT	**McKenzie Canyo**	**91.66**	**45**	*e*P	**P**	**03 09 34.3**	**+0.4**
JLU	**Jordanelle**	**91.72**	**49**	*e*P	**P**	**03 09 35.0**	**+0.7**
	comp=Z,3.7nm,0.9s						
TCUT	**Toone Canyon**	**91.86**	**49**	*e*P	**P**	**03 09 35.2**	**+0.3**
	comp=Z,6.8nm,0.8s						
W18A	**Petrified Fore**	**91.89**	**55**	P	**P**	**03 09 35.3**	**+0.2**
	baz=258						
DLMT	**Dillon**	**91.96**	**44**	*e*P	**P**	**03 09 35.3**	**+0.2**
	comp=Z,13nm,1.0s						
WALA	**Waterton Lakes**	**91.96**	**40**	*e*P	**P**	**03 09 36.4**	**+1.3**
	comp=Z,14nm,1.4s						
SYO	**Syowa Base**	**91.97**	**197**	⇑*i*P	**P**	**03 09 35.0**	**+0.5**
LRM	**Limekiln Ridge**	**92.17**	**44**	*e*P	**P**	**03 09 36.5**	**+0.3**
BOZ	**Bozeman (W)**	**92.68**	**44**	*e*P	**P**	**03 09 38.5**	**+0.1**
BOZ	**Bozeman (W)**	**92.68**	**44**	P	**P**	**03 09 38.8**	**+0.3**
	baz=258						
FXWY	**Fox Creek**	**92.68**	**46**	*e*P	**P**	**03 09 39.3**	**+0.7**
	comp=Z,3.2nm,0.8s						
TPAW	**Teton Pass**	**92.70**	**46**	*e*P	**P**	**03 09 38.4**	**-0.3**
	comp=Z,5.3nm,1.3s						
HRY	**Holter Researc**	**92.78**	**43**	*e*P	**P**	**03 09 39.4**	**+0.6**
MOOW	**Moose Ponds**	**92.90**	**46**	*e*P	**P**	**03 09 40.1**	**+0.5**
	comp=Z,1.6nm,1.0s						
121A	**Cookes Peak, D**	**92.98**	**58**	P	**P**	**03 09 41.1**	**+0.9**
	baz=259						
PV09	**Paradox Valley**	**93.04**	**52**	*e*P	**P**	**03 09 41.8**	**+1.3**
MK01	**Makanchi Array**	**93.13**	**317**	*e*P	**P**	**03 09 39.5**	**-0.9**
MK31	**Makanchi Array**	**93.14**	**317**	*e*P	**P**	**03 09 39.9**	**-0.5**
MK32	**Makanchi Array**	**93.14**	**317**	*e*P	**P**	**03 09 39.3**	**-1.1**
MKAR	**Makanchi Array**	**93.14**	**317**	*e*P	**P**	**03 09 39.9**	**-0.5**
	comp=Z,15nm,0.9s						
MKAR	**Makanchi Array**	**93.14**	**317**	P	**P**	**03 09 39.3**	**-1.1**
	comp=Z,2.1nm,0.6s,baz=93,slow=6.1,SNR=29						
MKAR				PKKPbc	**PKKPdf**	**03 26 48.3**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=262,slow=3.3,SNR=3.5						
MKAR				LR	LR	03 52 25.5	
	comp=Z,89nm,18.8s,baz=74,slow=36						
H17A	**Grant Village**	**93.15**	**46**	*e*P	**P**	**03 09 42.1**	**+1.3**
	comp=Z,4.3nm,0.9s						
H17A	**Grant Village**	**93.15**	**46**	P	**P**	**03 09 41.8**	**+1.0**
	baz=258						
ZAA0	**Zalesovo Array**	**93.18**	**324**	*e*P	**P**	**03 09 39.4**	**-1.0**
	comp=Z,5.8nm,1.4s						
ZALV	**Zalesovo Beam**	**93.18**	**324**	*e*P	**P**	**03 09 38.9**	**-1.4**
ZALV	**Zalesovo Beam**	**93.18**	**324**	P	**P**	**03 09 38.8**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=120,slow=4.3,SNR=8.4						
ZALV				PP	**PP**	**03 13 21.7**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=90,slow=7.4,SNR=4.0						
ZALV	**Zalesovo Beam**	**93.18**	**324**	PP	PP	03 13 21.7	-2.4
ZAA1	**Zalesovo Array**	**93.18**	**324**	*e*P	**P**	**03 09 38.8**	**-1.6**
ZAA1				*e*PP	**PP**	**03 13 21.7**	**-2.4**
PV04	**Paradox Valley**	**93.19**	**52**	*e*P	**P**	**03 09 41.8**	**+0.8**
	comp=Z,14nm,1.4s						
PV12	**Saucer Basin,**	**93.26**	**52**	*e*P	**P**	**03 09 42.8**	**+1.4**
	comp=Z,4.7nm,0.8s						
MAKZ	**Makanchi**	**93.36**	**317**	*e*P	**P**	**03 09 41.0**	**-0.4**
	comp=Z,5.0nm,1.1s						
BW06	**Boulder Array**	**93.55**	**47**	*e*P	**P**	**03 09 42.4**	**-0.2**
	comp=Z,4.9nm,1.1s						
BW06	**Boulder Array**	**93.55**	**47**	P	**P**	**03 09 42.6**	**-0.1**
	baz=259						
PD31	**Pinedale Array**	**93.55**	**47**	*e*P	**P**	**03 09 42.9**	**+0.2**
PDAR	**Pinedale Array**	**93.55**	**47**	*e*P	**P**	**03 09 41.8**	**-0.8**
PDAR	**Pinedale Array**	**93.55**	**47**	P	**P**	**03 09 42.2**	**-0.4**
	comp=Z,2.6nm,0.9s,baz=253,slow=2.2,SNR=16						
EGMT	**Eagleton**	**94.43**	**42**	P	**P**	**03 09 46.7**	**+0.4**
	baz=259						
ANMO	**Albuquerque**	**94.50**	**55**	*e*P	**P**	**03 09 47.7**	**+0.6**
	comp=Z,2.1nm,0.9s						
ANMO	**Albuquerque**	**94.50**	**55**	P	**P**	**03 09 47.6**	**+0.4**
	baz=260						
MNTX	**Cornudas Mount**	**94.84**	**59**	P	**P**	**03 09 48.9**	**+0.3**
	baz=260						
YKA	**Yellowknife Ar**	**94.84**	**27**	P	**P**	**03 09 46.3**	**-1.4**
	comp=Z,2.0nm,0.9s,baz=256,slow=4.6,SNR=24						
YKA				LR	LR	03 45 55.2	
	comp=Z,28nm,20.3s,baz=258,slow=31						
YKB5	**Yellowknife Ar**	**94.84**	**27**	*e*P	**P**	**03 09 45.4**	**-2.3**
NRIK	**Noril'sk**	**95.77**	**340**	LR	LR	03 52 02.5	
	comp=Z,129nm,20.9s,baz=104,slow=35						
LTX	**Lajitas**	**95.92**	**61**	*e*P	**P**	**03 09 53.3**	**-0.3**
TXAR	**Lajitas Array**	**95.92**	**61**	P	**P**	**03 09 53.3**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=224,slow=3.5,SNR=4.2						
TXAR				LR	LR	03 46 33.7	
	comp=Z,208nm,19.3s,baz=0.0,slow=31						
THIG		**104.42**	**77**	P	**Pdif**	**03 10 42.6**	**+11**
ARA0	**ARCESS Array S**	**116.00**	**345**	*e*PKPdf	**PKiKP**	**03 15 07.3**	**-1.3**
ARCES	**ARCESS Array B**	**116.00**	**345**	PKP	**PKiKP**	**03 15 07.3**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=76,slow=1.9,SNR=25						
FIA0	**FINESS Array S**	**121.42**	**339**	*e*PKPdf	**PKPdf**	**03 15 17.6**	**-1.6**
FINES	**FINESS Array B**	**121.42**	**339**	PKP	**PKPdf**	**03 15 17.6**	**-1.6**
	comp=Z,2.3nm,0.9s,baz=48,slow=2.8,SNR=6.0						
SDV	**Santo Domingo**	**124.73**	**87**	*e*PKPdf	**PKPdf**	**03 15 26.7**	**-0.5**
SDV	**Santo Domingo**	**124.73**	**87**	PKP	**PKPdf**	**03 15 26.4**	**-0.7**
	comp=Z,5.2nm,0.7s,baz=286,slow=4.3,SNR=9.7						
BOSA	**Boshof**	**125.14**	**223**	PKP	**PKPdf**	**03 15 27.6**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=76,slow=1.0,SNR=3.7						
NB2	**NORSAR Subarra**	**126.37**	**345**	PKPdf	**PKPdf**	**03 15 28.0**	**-0.7**
	comp=Z,1.9nm,0.9s,baz=30,slow=2.0						
NB200	**NORSAR Array S**	**126.37**	**345**	*e*PKPdf	**PKPdf**	**03 15 27.4**	**-1.3**
NOA	**NORSAR Array B**	**126.37**	**345**	PKP	**PKPdf**	**03 15 27.4**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=30,slow=3.5,SNR=3.5						
AKASG	**Malin Array Be**	**126.49**	**327**	PKP	**PKPdf**	**03 15 28.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=53,slow=2.5,SNR=3.9						
AKBB	**Malin Array Si**	**126.49**	**327**	*e*PKPdf	**PKPdf**	**03 15 28.4**	**-0.7**
BR101	**Keskin Array S**	**128.59**	**313**	*e*PKPdf	**PKPdf**	**03 15 33.6**	**-0.1**
BRTR	**Keskin Array B**	**128.59**	**313**	PKP	**PKPdf**	**03 15 33.6**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=104,slow=5.2,SNR=3.7						
CLL	**Collm**	**133.75**	**336**	*e*PKPdf	**PKiKP**	**03 15 44.0**	**-0.2**
CLL				LmV		04 18 00.0	
	comp=Z,200nm,18.5s						
GEC2	**GERESS Array S**	**135.34**	**334**	*e*PKPdf	**PKPdf**	**03 15 46.2**	**0.0**
GERES	**GERESS Array B**	**135.34**	**334**	PKP	**PKPdf**	**03 15 46.2**	**0.0**
	comp=Z,0.9nm,0.7s,baz=52,slow=2.2,SNR=7.2						
BDFB	**Brasilia**	**137.71**	**128**	PKP	**PKPdf**	**03 15 50.6**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=214,slow=3.6,SNR=2.5						
KEST	**Kesra**	**147.04**	**323**	PKPbc	**PKPbc**	**03 16 09.0**	**-0.5**
	comp=Z,15nm,1.1s,baz=71,slow=3.6,SNR=6.6						
ES19	**SONSECA Array**	**149.68**	**344**	*e*PKPbc	**PKPbc**	**03 16 16.4**	**+0.1**
ESDC	**Sonseca Array**	**149.72**	**344**	PKPbc	**PKPbc**	**03 16 15.7**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=7.8,slow=3.3,SNR=5.6						
TORD	**Torodi Ar. Bea**	**163.97**	**280**	PKP	**PKPdf**	**03 16 28.7**	**-1.7**
	comp=Z,1.3nm,1.0s,baz=338,slow=2.1,SNR=5.7						
TORD				PKPab	**PKPab**	**03 17 22.7**	**-0.8**
	comp=Z,1.5nm,1.2s,baz=108,slow=6.9,SNR=3.8						
TOA1	**Torodi Ar. Sit**	**163.97**	**280**	*e*PKPdf	**PKPdf**	**03 16 28.7**	**-1.7**
TOA1				*e*PKPab	**PKPab**	**03 17 22.7**	**-0.8**

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*IDC **07** 02:59:53.6±0.6, 11°.44S×165°.30E, h0^{km}, mb4.4/19, mb1 4.6/20, mb1mx4.5/47, mbtmp4.4/20, ML4.3/1, MS4.2/2, Ms1 4.2/2, ms1mx3.5/32, Error ellipse: s-maj=24.7km s-min=15.0km az=138.0*

*NEIC **07** 02:59:55.9±0.1, 11°.45S×165°.22E, h10^{km}, mb5.0/90, Error ellipse: s-maj=4.7km s-min=3.6km az=140.0*

*ISCJB **07** 02:59:56.4±0.2, 11°.58S±0°.04×165°.19E±0°.04, h24^{km}, mb4.8/109, Error ellipse: s-maj=6.0km s-min=4.8km az=147.6*

ISC 07 02:59:57.7±0.4**, 11°.57S**±0°.07×**165°.30E**±0°.08**, h24^{km}, n194, σ1ˢ.08**/182**, mb4.9**/109**, 1C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.68**	**292**	Sn	**Sn**	**03 02 24.6**	**-0.4**
	22nm,0.3s,baz=145,slow=18,SNR=2.8						
DZM	**Mont Dzumac**	**10.50**	**174**	*e*Pn	**Pn**	**03 02 27.3**	**+0.5**
DZM	**Mont Dzumac**	**10.50**	**174**	Pn	**Pn**	**03 02 27.2**	**+0.4**
	2.1nm,0.3s,baz=121,slow=20,SNR=6.2						
OUENC	**Ouen Island, N**	**10.88**	**172**	*e*Pn	**Pn**	**03 02 34.1**	**+2.1**
MSVF	**Nonsavu**	**13.77**	**118**	*e*P	**P**	**03 03 20.2**	**+0.2**
EIDS	**Eidsvold**	**19.21**	**222**	*e*P	**P**	**03 04 17.3**	**-2.8**
	29nm,1.3s						
CTA	**Charters Tower**	**20.17**	**243**	P	**P**	**03 04 31.6**	**+1.1**
	17nm,0.9s,baz=61,slow=9.7,SNR=6.7						
CTAO	**Charters Tower**	**20.17**	**243**	*e*P	Pn	03 04 32.4	-0.1
	32nm,1.0s						
LHI	**Lord Howe Isla**	**20.67**	**195**	*e*P	**P**	**03 04 32.6**	**-3.3**
	119nm,1.0s						
COEN	**Coen**	**21.70**	**261**	*e*P	**P**	**03 04 47.3**	**+0.1**
	12nm,1.0s						
ARMA	**Armidale**	**22.64**	**212**	*e*P	**P**	**03 04 59.5**	**+2.3**
	22nm,1.0s						
RAO	**Raoul Island**	**23.54**	**141**	LR	LR	03 11 34.6	
	comp=Z,910nm,20.2s,baz=130,slow=30						
OUZ	**Omahuta**	**24.72**	**164**	*e*P	**P**	**03 05 18.6**	**+1.5**
	54nm,1.4s						
URZ	**Urewera**	**28.59**	**160**	*e*P	**P**	**03 05 53.1**	**+1.0**
	22nm,1.3s						
BKZ	**Black Stump Fm**	**29.23**	**162**	*e*P	**P**	**03 05 59.4**	**+1.7**
	82nm,1.9s						
STKA	**Stephens Creek**	**29.76**	**224**	*e*P	**P**	**03 06 01.8**	**-0.7**
	1.2nm,0.8s						
STKA	**Stephens Creek**	**29.76**	**224**	P	**P**	**03 06 01.8**	**-0.7**

	6.1nm,0.9s,baz=23,slow=9.5,SNR=6.1						
H11S2	WAKE ISLAND Hy	29.91	3	T	T	03 37 06.3	
	baz=193,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	29.91	3	T	T	03 37 04.0	
	baz=193,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	29.92	3	T	T	03 37 05.1	
	baz=193,slow=76,SNR=16						
BFZ	Birch Farm	30.56	163	eP	P	03 06 09.7	+0.3
	81nm,1.5s						
SNZO	South Karori	30.75	166	eP	P	03 06 14.3	+3.2
	33nm,0.9s						
THZ	Tophouse	30.80	169	eP	P	03 06 14.1	+2.5
	21nm,1.1s						
WRAB	Tennant Creek	30.88	251	eP	P	03 06 12.1	-0.4
	18nm,0.8s						
WB2	Warramunga Arr	30.88	250	eP	P	03 06 11.9	-0.6
WR1	Warramunga Arr	30.89	250	eP	P	03 06 12.2	-0.5
	27nm,0.8s						
WRA	Warramunga Arr	30.89	250	P	P	03 06 12.2	-0.5
	21nm,0.9s,baz=81,slow=9.3,SNR=40						
H11N1	WAKE ISLAND Hy	31.13	3	T	T	03 38 36.2	
	baz=192,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	31.14	3	T	T	03 38 36.3	
	baz=192,slow=76,SNR=30						
H11N2	WAKE ISLAND Hy	31.15	3	T	T	03 38 38.3	
	baz=192,slow=76,SNR=37						
KHZ	Kahutara	31.56	168	eP	P	03 06 21.5	+3.3
	24nm,1.2s						
AS01	Alice Springs	32.12	244	eP	P	03 06 22.6	-0.9
AS31	Alice Springs	32.16	244	eP	P	03 06 24.3	+0.4
	1.2nm,0.8s						
ASAR	Alice Springs	32.16	244	P	P	03 06 22.9	-1.0
	5.2nm,0.9s,baz=76,slow=9.3,SNR=14						
RPZ	Rata Peaks	32.41	172	P	P	03 06 27.5	+1.8
	2.5nm,0.4s,baz=353,slow=16,SNR=2.0						
WKZ	Wanaka	33.29	175	eP	P	03 06 32.5	-0.9
	53nm,1.5s						
BBOO	Buckleboo	34.15	227	eP	P	03 06 40.9	-0.1
	44nm,1.7s						
FITZ	Fitzroy Crossi	38.82	256	eP	P	03 07 21.1	0.0
	13nm,1.3s						
FITZ	Fitzroy Crossi	38.82	256	P	P	03 07 21.1	0.0
	4.4nm,0.8s,baz=71,slow=4.8,SNR=4.8						
DAV	Davao City (W)	43.64	293	LR	LR	03 27 23.8	
	comp=Z,164nm,18.2s,baz=202,slow=38						
MBWA	Marble Bar	44.61	252	eP	P	03 08 08.5	0.0
	12nm,0.9s						
NJ2	Nanjing	62.09	316	eP	P	03 10 17.4	+0.7
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
USRK	Ussuriysk Ar.	63.22	334	P	P	03 10 22.7	-1.3
	comp=Z,1.9nm,0.8s,baz=107,slow=8.3,SNR=3.5						
WHN	Wuhan	64.42	312	⇓P	P	03 10 22.0	-10
WHN	Wuhan	64.42	312	⇓P	P	03 10 41.4	+9.2
CN2	Changchun	65.97	329	eP	P	03 10 46.2	+4.2
GYA	Guiyang	68.35	305	eP	P	03 10 59.2	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	70.15	313	P	P	03 11 08.5	-0.1
XAN	Xi'an	70.15	313	P	P	03 11 18.1	+10
XAN				pP	PcP	03 11 32.5	+2.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KMI	Kunming	71.02	302	P	P	03 11 15.5	+1.2
KMI				pP	pwP	03 11 24.9	-2.1
KMI				sP	PcP	03 11 29.4	-5.2
KMI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,150nm,6.5s						
CM31	Chiang Mai Arr	71.92	294	eP	P	03 11 20.3	+0.8
CMAR	Chiang Mai Arr	71.92	294	P	P	03 11 20.3	+0.8
	comp=Z,1.9nm,0.4s,baz=116,slow=4.5,SNR=5.8						
HHC	Hu-ho-hao-te	71.95	320	eP	P	03 11 21.6	+2.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
CD2	Chengdu	72.57	308	P	P	03 11 23.9	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,170nm,4.5s						
LZH	Lanzhou	74.79	312	eP	P	03 11 37.6	+1.3
LZH				pP	pwP	03 11 49.2	+0.1
LZH				sP	PcP	03 11 53.7	+3.4
LZH				PP	PP	03 14 32.8	+8.9
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
LZH				pmax	pmax		
	comp=Z,94nm,4.9s						
LZH				LR	LR		
	comp=N,250nm,14.6s						
LZH				LR	LR		
	comp=E,280nm,15.0s						
LZH				LR	LR		
	comp=Z,250nm,17.8s						
QSPA	South Pole Qui	78.43	180	eP	P	03 11 54.8	-1.6
	comp=Z,11nm,1.3s						
SONA0	Songino Array	78.83	324	eP	P	03 11 58.4	-0.4
SONM	Songino Array	78.83	324	P	P	03 11 58.4	-0.4
	comp=Z,1.2nm,0.8s,baz=139,slow=4.9,SNR=5.0						
GTA	Gaotai	79.11	314	⇑P	P	03 12 02.1	+1.5
GTA				pP	PcP	03 12 11.3	+2.4
GTA				sP	pwP	03 12 15.6	+2.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,85nm,5.6s						
GTA				LR	LR		
	comp=N,250nm,19.7s						
GTA				LR	LR		
	comp=E,290nm,19.0s						
GTA				LR	LR		
	comp=Z,260nm,18.7s						
RND	Reindeer	82.58	19	eP	P	03 12 19.8	+1.3
	comp=Z,36nm,1.8s						
WRH	Wood River Hil	83.57	18	eP	P	03 12 22.9	-0.5
	comp=Z,8.6nm,1.0s						
MDM	Murphy Dome	83.87	18	eP	P	03 12 25.0	0.0
	comp=Z,7.9nm,1.0s						
HDA	Harding Lake	83.88	19	eP	P	03 12 24.6	-0.5
	comp=Z,19nm,1.0s						
HDA	Harding Lake	83.88	19	P	P	03 12 24.9	-0.2
	baz=227						
TCOL	CIGO, UAF Yank	83.92	18	P	P	03 12 25.1	-0.1
	baz=226						
COLA	College	83.92	18	eP	P	03 12 25.0	-0.3
	comp=Z,16nm,1.0s						
O02D	Mt. Diablo Mer	83.97	47	P	P	03 12 27.0	+0.8
	baz=250						
RIDG	Independ'e Rid	84.12	20	eP	P	03 12 26.4	0.0
	comp=Z,24nm,1.4s						
IL1	Eielson Array	84.15	19	eP	P	03 12 25.6	-0.9
ILAR	Eielson Array	84.15	19	P	P	03 12 25.5	-1.0
	comp=Z,2.2nm,0.7s,baz=235,slow=5.3,SNR=16						
ILB	Eielson Array	84.15	19	eP	P	03 12 25.9	-0.5
	comp=Z,20nm,1.8s						
M02C	Callahan	84.35	46	P	P	03 12 28.1	0.0
	baz=249						
SCRK	Sand Creek	84.56	20	eP	P	03 12 28.9	+0.2
	comp=Z,12nm,1.1s						
YBH	Yreka Blue Hor	84.58	46	eP	P	03 12 29.7	+0.5
	comp=Z,15nm,1.1s						
ORV	Oroville	84.69	48	eP	P	03 12 29.6	-0.2
	comp=Z,6.9nm,1.0s						
O03E	Paynes Creek	84.72	47	P	P	03 12 29.7	-0.4
	baz=250						
AFDM	Forest Hills D	84.88	49	eP	P	03 12 30.8	0.0
	comp=Z,12nm,0.9s						
CMB	Columbia Colle	85.02	50	eP	P	03 12 31.5	0.0
	comp=Z,6.3nm,0.8s						
M04C	Macdoel	85.20	46	P	P	03 12 33.0	+0.5
	baz=250						
BEKR	Beckworth	85.63	48	eP	P	03 12 31.1	-3.6
	comp=Z,6.8nm,0.9s						
ISA	Isabella, Lake	85.74	52	eP	P	03 12 35.4	+0.1
	comp=Z,8.5nm,1.1s						
ISA	Isabella, Lake	85.74	52	P	P	03 12 35.2	0.0
	baz=253						
MDPB	Devils Postpil	85.87	50	eP	P	03 12 36.2	+0.1
	comp=Z,10nm,0.9s						
WAKR	Walker	85.87	50	eP	P	03 12 36.4	+0.5
	comp=Z,10nm,1.0s						
EDW2	Edwards Air Fo	85.89	53	P	P	03 12 35.9	0.0
	baz=253						
OMMB	Old Mammoth Mi	85.93	50	eP	P	03 12 37.0	+0.6
	comp=Z,4.4nm,1.0s						
PNTR	Pine Nut	85.94	49	eP	P	03 12 36.6	+0.3
	comp=Z,16nm,1.2s						
VCNR	Virginia City	85.96	49	eP	P	03 12 37.2	+0.8
	comp=Z,5.1nm,1.1s						
BFSC	Mount Baldy Ra	85.97	54	P	P	03 12 36.2	-0.2
	baz=253						
EGAK	Eagle	86.02	20	eP	P	03 12 35.9	+0.1
	comp=Z,12nm,0.9s						
J05D	Fort Rock, OR	86.13	45	P	P	03 12 37.3	+0.2
	baz=250						
CWC	Cottonwood Cre	86.28	52	P	P	03 12 38.0	0.0
	baz=253						
PAHR	Pah Rah Range	86.29	48	eP	P	03 12 38.1	+0.1
	comp=Z,9.2nm,1.1s						
LRMC	Laurel Mtn Rad	86.31	53	P	P	03 12 38.3	+0.2
	baz=253						
MOD	Modoc Plateau	86.33	46	eP	P	03 12 38.2	+0.1
	comp=Z,6.0nm,1.0s						
PINE	Pine Mountain	86.50	44	eP	P	03 12 39.8	+0.8
	comp=Z,60nm,1.9s						
RYN	Ryan	86.59	50	eP	P	03 12 39.7	+0.3
	comp=Z,8.2nm,1.1s						
DAC	Darwin (Calif)	86.61	52	eP	P	03 12 40.3	+0.6
	comp=Z,20nm,1.6s						
MPMC	Manual Prospec	86.62	52	P	P	03 12 39.7	-0.1
	baz=253						
NV01	Mina Array Sit	86.70	50	eP	P	03 12 39.6	-0.4
NVAR	Mina Array Bea	86.70	50	P	P	03 12 40.1	0.0
	comp=Z,8.3nm,0.9s,baz=232,slow=7.4,SNR=23						
TPFO	Pinon Flats	86.75	55	P	P	03 12 39.6	-0.7
	baz=254						
NV11	Mina Array Sit	86.81	50	eP	P	03 12 40.5	0.0
	comp=Z,0.7nm,0.9s						
GSC	Goldstone, Bar	86.94	53	eP	P	03 12 41.1	0.0
	comp=Z,9.2nm,1.3s						
GSC	Goldstone, Bar	86.94	53	P	P	03 12 41.1	0.0
	baz=254						
GRAC	Grapevine Rang	86.99	51	P	P	03 12 42.0	+0.7
	baz=253						
KVN	Kaiserville	87.04	49	eP	P	03 12 41.7	0.0
	comp=Z,7.7nm,1.0s						
DLBC	Dease Lake	87.08	28	eP	P	03 12 41.6	+0.3
	comp=Z,13nm,1.3s						
DLBC	Dease Lake	87.08	28	P	P	03 12 41.6	+0.3
	comp=Z,3.0nm,1.0s,baz=191,slow=5.2,SNR=4.1						
HEC	Hector,Ludlow	87.18	54	P	P	03 12 42.4	0.0
	baz=254						
BELC	Belle Mtn. Jos	87.22	55	P	P	03 12 42.3	-0.3
	baz=254						
FURC	Furnace Creek,	87.22	52	P	P	03 12 42.6	+0.2
	baz=254						
I07A	Izee	87.58	44	eP	P	03 12 44.4	+0.3
	comp=Z,28nm,1.9s						
WVOR	Wild Horse Val	87.67	46	eP	P	03 12 45.5	+0.9
	comp=Z,10nm,1.1s						
TPNV	Topopah Spring	87.83	52	P	P	03 12 45.3	-0.3
	baz=254						
IRM	Iron Mountain	87.94	55	P	P	03 12 45.7	-0.2
	baz=255						
J08A	Circle Bar Ran	88.06	45	eP	P	03 12 46.5	+0.1
	comp=Z,11nm,1.0s						
LDFC	Landfair	88.22	54	eP	P	03 12 48.0	+0.6
	comp=Z,18nm,1.0s						
G08A	Pilot Rock	88.33	43	eP	P	03 12 48.1	+0.5
	comp=Z,12nm,1.1s						
Y12C	Blythe	88.34	55	eP	P	03 12 48.4	+0.6
	comp=Z,6.6nm,0.8s						
Y12C	Blythe	88.34	55	P	P	03 12 47.7	-0.1
	baz=255						
SHPR	Sheep Range	88.55	52	eP	P	03 12 49.5	+0.5
	comp=Z,7.2nm,1.2s						
R11A	Troy Canyon, C	88.72	51	eP	P	03 12 49.8	0.0
	comp=Z,4.3nm,1.0s						
R11A	Troy Canyon, C	88.72	51	P	P	03 12 50.0	+0.3
	baz=254						
PDMCI	Parker Dam,Lak	88.78	55	P	P	03 12 50.7	+0.9
	baz=255						
WMQ	Urumqi	89.16	315	eP	P	03 12 52.5	+1.0
W13A	Hualapai Mount	89.19	54	eP	P	03 12 52.5	+0.5
	comp=Z,6.9nm,1.0s						
214A	Organ Pipe Nat	89.28	57	P	P	03 12 52.7	+0.4
	baz=256						
ELK	Elko	89.63	48	eP	P	03 12 54.2	+0.2
	comp=Z,2.7nm,1.0s						
ELK	Elko	89.63	48	P	P	03 12 52.5	-1.5
	comp=Z,3.0nm,1.0s,baz=228,slow=3.1,SNR=8.4						
PSUT	Pine Spring	90.08	51	eP	P	03 12 56.5	+0.4
	comp=Z,8.1nm,1.2s						
LCMT	Little Creek M	90.17	52	eP	P	03 12 57.1	+0.6
	comp=Z,9.1nm,0.9s						
CCUT	Cedar City	90.21	52	eP	P	03 12 57.6	+0.8
	comp=Z,7.8nm,0.9s						
SZCU	Shurtz Canyon	90.44	52	eP	P	03 12 58.5	+0.7
	comp=Z,8.4nm,1.0s						
KNB	Kanab	90.50	52	eP	P	03 12 58.9	+0.8
	comp=Z,12nm,1.1s						
INK	Inuvik	90.54	19	eP	P	03 12 56.0	-1.3
	comp=Z,19nm,1.9s						
INK	Inuvik	90.54	19	P	P	03 12 56.0	-1.3
	comp=Z,1.7nm,1.1s,baz=254,slow=8.9,SNR=2.6						
U15A	North Rim	90.77	53	eP	P	03 13 00.4	+0.9
	comp=Z,13nm,0.9s						
HLID	Hailey	90.96	46	eP	P	03 13 00.6	+0.6
	comp=Z,9.2nm,1.3s						
HLID	Hailey	90.96	46	P	P	03 13 00.5	+0.4
	baz=255						
X16A	Lo Mia Camp, P	90.98	55	eP	P	03 13 01.2	+0.8
	comp=Z,9.5nm,0.4s						
PKCU	Pink Cliffs	91.00	52	eP	P	03 13 02.0	+1.4
	comp=Z,22nm,1.1s						
TUC	Tucson	91.04	57	P	P	03 13 01.1	+0.5
	baz=257						
TCRU	Three Creeks R	91.17	51	eP	P	03 13 02.8	+1.6
	comp=Z,12nm,0.9s						
MTPU	Mount Pierson	91.24	52	eP	P	03 13 03.0	+1.3
	comp=Z,8.9nm,0.9s						
DUG	Dugway, Tooele	91.28	49	eP	P	03 13 01.8	+0.2
	comp=Z,3.2nm,0.9s						
DUG	Dugway, Tooele	91.28	49	P	P	03 13 01.6	+0.1
	baz=256						
WUAZ	Wupatki	91.28	54	eP	P	03 13 02.1	+0.4
	comp=Z,7.0nm,0.9s						
WUAZ	Wupatki	91.28	54	P	P	03 13 02.1	+0.4
	baz=257						
BGU	Big Grassy Mou	91.29	49	eP	P	03 13 02.0	+0.4
	comp=Z,5.2nm,0.9s						
MSU	Marysvale	91.35	51	eP	P	03 13 03.2	+1.2
HVU	Hansel Valley	91.69	48	eP	P	03 13 04.0	+0.6
	comp=Z,12nm,1.0s						
NLU	North Lily Min	91.77	50	eP	P	03 13 04.8	+0.9
	comp=Z,11nm,1.0s						
SPUT	South Promonto	91.81	48	eP	P	03 13 04.4	+0.3
	comp=Z,3.9nm,1.0s						
319A	Douglas	92.08	59	eP	P	03 13 06.3	+0.8
	comp=Z,5.9nm,0.8s						
MPU	Maple Canyon	92.11	50	eP	P	03 13 06.7	+1.1
	comp=Z,4.1nm,1.1s						
CTU	Camp Tracy	92.18	49	eP	P	03 13 06.5	+0.7
	comp=Z,6.4nm,1.0s						
X18A	Snowflake	92.21	55	eP	P	03 13 06.7	+0.7
	comp=Z,3.8nm,0.9s						
TMUT	Trail Mountain	92.27	50	eP	P	03 13 07.7	+1.3
	comp=Z,6.3nm,1.1s						
JLU	Jordanelle	92.38	49	eP	P	03 13 07.3	+0.5
	comp=Z,7.6nm,1.1s						
DLMT	Dillon	92.67	44	eP	P	03 13 08.3	+0.5
	comp=Z,11nm,1.1s						
LRM	Limekiln Ridge	92.87	44	eP	P	03 13 09.4	+0.5
FXWY	Fox Creek	93.37	46	eP	P	03 13 11.5	+0.2
	comp=Z,3.2nm,1.0s						
BOZ	Bozeman (W)	93.38	44	eP	P	03 13 11.5	+0.3
	comp=Z,7.9nm,1.4s						
BOZ	Bozeman (W)	93.38	44	P	P	03 13 11.9	+0.7
	baz=257						
121A	Cookes Peak, D	93.56	58	P	P	03 13 13.2	+0.8
	baz=259						
MOOW	Moose Ponds	93.59	46	eP	P	03 13 12.9	+0.6
	comp=Z,3.4nm,1.2s						
MK01	Makanchi Array	93.59	317	eP	P	03 13 11.9	-0.1
MK32	Makanchi Array	93.61	317	eP	P	03 13 10.4	-1.6
MKAR	Makanchi Array	93.61	317	P	P	03 13 10.4	-1.6
	comp=Z,0.8nm,0.8s,baz=91,slow=6.0,SNR=4.8						
LOHW	Long Hollow	93.66	46	eP	P	03 13 12.7	+0.1
	comp=Z,5.5nm,1.3s						
PV09	Paradox Valley	93.68	52	eP	P	03 13 14.8	+1.9
ZAA1	Zalesovo Array	93.73	324	eP	P	03 13 10.5	-1.9
ZALV	Zalesovo Beam	93.73	324	P	P	03 13 10.5	-1.9
ZALV	Zalesovo Beam	93.73	324	P	P	03 13 10.5	-1.9
	comp=Z,0.3nm,0.4s,baz=103,slow=4.6,SNR=2.8						
H17A	Grant Village	93.85	46	eP	P	03 13 14.9	+1.4
	comp=Z,4.4nm,1.0s						
H17A	Grant Village	93.85	46	P	P	03 13 14.9	+1.4
	baz=258						
BW06	Boulder Array	94.23	47	eP	P	03 13 15.2	0.0
	comp=Z,3.7nm,1.1s						
PD31	Pinedale Array	94.23	47	eP	P	03 13 15.6	+0.3
PDAR	Pinedale Array	94.23	47	eP	P	03 13 14.8	-0.5
PDAR	Pinedale Array	94.23	47	P	P	03 13 15.2	-0.1
	comp=Z,2.2nm,0.9s,baz=242,slow=2.9,SNR=10						
S22A	4UR Ranch, Cre	95.32	53	P	P	03 13 20.6	+0.1
	baz=260						
MNTX	Cornudas Mount	95.41	59	eP	P	03 13 21.2	+0.6
	comp=Z,8.8nm,1.6s						
MNTX	Cornudas Mount	95.41	59	P	P	03 13 21.0	+0.4
	baz=260						
YKA	Yellowknife Ar	95.64	27	P	P	03 13 19.3	-1.6
	comp=Z,1.2nm,0.9s,baz=255,slow=4.6,SNR=11						
YKB5	Yellowknife Ar	95.64	27	eP	P	03 13 19.3	-1.6
LTX	Lajitas	96.47	61	eP	P	03 13 23.1	-2.5
TXAR	Lajitas Array	96.47	61	P	P	03 13 23.1	-2.5
	comp=Z,0.8nm,0.9s,baz=205,slow=5.5,SNR=6.7						
Q24A	Divide	96.83	52	P	P	03 13 27.9	+0.6
	baz=261						
SDV	Santo Domingo	124.96	87	ePKPdf	PKiKP	03 18 57.4	-0.1
BDFB	Brasilia	137.35	129	PKP	PKiKP	03 19 21.8	-0.5
	comp=Z,1.9nm,0.7s,baz=223,slow=9.6,SNR=3.3						
DOU	Dourbes	138.43	341	⇓PKiKP	PKiKP	03 19 25.1	+1.8
ES19	SONSECA Array	150.39	343	ePKPbc	PKiKP	03 19 48.7	+0.4
ESDC	Sonseca Array	150.44	343	PKPbc	PKPbc	03 19 48.0	+0.4
	comp=Z,1.7nm,1.0s,baz=79,slow=1.5,SNR=4.3						

MEX 07 03:04:42.3±0.7, 14°.32N×93°.00W, h105^{km}±34^{km}, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.92	50	eP	Pn	03 05 01.2	-1.0
THIG				i S	Sn	03 05 15.5	-1.9
PCIG		1.39	351	eP	Pn	03 05 06.0	-1.5
PCIG				i S	Sn	03 05 25.0	-1.7
CCIG	Comitan	2.12	23	eP	Pn	03 05 20.8	+3.9
CCIG				eS	Sn	03 05 41.6	-1.6

IDC 07 03:07:17.4±4.9, 12°.05S×165°.67E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.6/40, mbtmp3.8/3, Error ellipse: s-maj=240.1km s-min=36.3km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.08	251	P	P	03 13 37.5	-0.1
	1.6nm,0.6s,baz=82,slow=9.0,SNR=14						
ASAR	Alice Springs	32.28	245	P	P	03 13 48.2	+0.1
	0.6nm,0.6s,baz=68,slow=10,SNR=7.3						
ILAR	Eielson Array	84.48	18	P	P	03 19 51.7	0.0
	0.4nm,0.7s,baz=232,slow=6.8,SNR=1.4						

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*IDC **07** 03:08:12.4±1.4, 11°.07S×165°.62E, h0^{km}, mb3.9/5, mb1 4.2/6, mb1mx3.8/38, mbtmp3.9/6, ML3.7/1, Error ellipse: s-maj=52.2km s-min=25.4km az=136.0*

*ISCJB **07** 03:08:15.0±1.1, 11°.2S±0°.1×165°.7E±0°.2, h30^{km}, mb3.9/5, Error ellipse: s-maj=27.3km s-min=20.3km az=18.1*

ISC 07 03:08:16.7±1.1, 11°.1S±0°.2×165°.7E±0°.2, h30^{km}, n6, σ0^s.72/6, mb3.8/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.90	176	Pn	Pn	03 10 51.0	+0.1
	0.6nm,0.3s,baz=342,slow=20,SNR=2.9						
WRA	Warramunga Arr	31.36	250	P	P	03 14 35.4	+0.3
	3.0nm,0.9s,baz=81,slow=9.4,SNR=13						
ASAR	Alice Springs	32.67	243	P	P	03 14 46.0	-0.6
	0.5nm,0.6s,baz=66,slow=10,SNR=5.5						
FITZ	Fitzroy Crossi	39.27	255	P	P	03 15 43.5	+0.5
	1.6nm,0.9s,baz=100,slow=6.1,SNR=2.1						
ILAR	Eielson Array	83.63	19	P	P	03 20 42.6	+0.6
	1.1nm,0.6s,baz=235,slow=5.3,SNR=13						
YKA	Yellowknife Ar	95.09	27	P	P	03 21 35.9	-0.7
	0.1nm,0.4s,baz=261,slow=4.9,SNR=1.9						

IDC 07 03:12:24.4±1.8, 10°.77S×165°.17E, h0^{km}, mb3.6/4, mb1 4.0/5, mb1mx3.7/38, mbtmp3.8/5, ML4.4/1, MS4.6/1, Ms1 4.6/1, ms1mx3.4/27, Error ellipse: s-maj=49.9km s-min=31.1km az=116.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.30	174	Pn	Pn	03 15 07.3	-0.1
	2.4nm,0.3s,baz=38,slow=12,SNR=16						
RAO	Raoul Island	24.25	142	LR	LR	03 26 08.1	
	comp=Z,1µm,19.3s,baz=163,slow=34						
H11S2	WAKE ISLAND Hy	29.11	3	T	T	03 49 01.7	
	baz=184,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	29.12	3	T	T	03 49 02.6	
	baz=184,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	29.13	3	T	T	03 49 03.0	
	baz=184,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	30.34	3	T	T	03 50 34.5	
	baz=182,slow=76,SNR=20						
H11N3	WAKE ISLAND Hy	30.34	3	T	T	03 50 30.6	
	baz=182,slow=76,SNR=22						
H11N2	WAKE ISLAND Hy	30.36	3	T	T	03 50 35.9	
	baz=182,slow=76,SNR=18						
WRA	Warramunga Arr	31.05	249	P	P	03 18 44.2	-0.2
	0.2nm,0.4s,baz=79,slow=9.0,SNR=6.6						
ASAR	Alice Springs	32.41	243	P	P	03 18 56.0	-0.3
	1.0nm,0.8s,baz=65,slow=9.9,SNR=6.2						
SONM	Songino Array	78.11	324	P	P	03 24 26.7	+1.2
	0.1nm,0.4s,baz=142,slow=7.3,SNR=2.0						
ILAR	Eielson Array	83.43	19	P	P	03 24 52.6	-0.8
	0.4nm,0.8s,baz=239,slow=5.1,SNR=2.5						

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*IDC **07** 03:14:52.6±0.8, 11°.71S×164°.75E, h0^{km}, mb4.1/11, mb1 4.3/12, mb1mx4.1/34, mbtmp4.0/12, ML4.1/1, MS3.9/1, Ms1 3.9/1, ms1mx3.1/32, Error ellipse: s-maj=35.9km s-min=19.5km az=145.0*

*NEIC **07** 03:14:53.5±0.4, 11°.94S×164°.85E, h10^{km}, mb4.5/8, Error ellipse: s-maj=13.4km s-min=8.2km az=136.0*

*ISCJB **07** 03:14:55.5±0.5, 12°.0S±0°.1×164°.75E±0°.10, h33^{km}, mb4.1/16, MS3.8/1, Error ellipse: s-maj=17.1km s-min=10.1km az=138.6*

ISC 07 03:14:57.6±0.6, 11°.9S±0°.1×164°.8E±0°.2, h35^{km}, n41, σ1^s.19/38, mb4.0/16, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.25	172	ePn	Pn	03 17 20.0	-2.4
DZM	Mont Dzumac	10.25	172	Pn	Pn	03 17 24.4	+1.9
	1.5nm,0.3s,baz=270,slow=20,SNR=7.0						
KWAJ	Kwajalein Atol	20.73	8	eP	P	03 19 34.8	-0.5
	231nm,0.6s						
H11S2	WAKE ISLAND Hy	30.23	4	T	T	03 52 37.7	
	baz=190						
H11S3	WAKE ISLAND Hy	30.24	3	T	T	03 53 02.5	
	baz=190						
H11S1	WAKE ISLAND Hy	30.25	4	T	T	03 52 39.1	
	baz=190						
WB2	Warramunga Arr	30.35	251	eP	P	03 21 07.0	+0.5
	9.3nm,1.1s						
WRAB	Tennant Creek	30.35	251	eP	P	03 21 05.9	-0.6
	7.5nm,1.0s						
WR1	Warramunga Arr	30.36	251	eP	P	03 21 05.6	-0.9
	9.8nm,1.1s						
WR1				ePcP	PcP	03 24 08.3	+2.2
WRA	Warramunga Arr	30.37	251	P	P	03 21 05.6	-0.9
	5.4nm,1.0s,baz=80,slow=9.4,SNR=14						
WRA				PcP	PcP	03 24 08.3	+2.2
	0.5nm,0.8s,baz=72,slow=2.7,SNR=4.6						
H11N1	WAKE ISLAND Hy	31.46	4	T	T	03 54 35.2	
	baz=182						
H11N3	WAKE ISLAND Hy	31.46	4	T	T	03 54 35.2	
	baz=182						
H11N2	WAKE ISLAND Hy	31.48	4	T	T	03 54 35.2	
	baz=182						
AS31	Alice Springs	31.62	244	eP	P	03 21 15.7	-2.0

	1.0nm,1.0s						
AS31				*e*PcP	PcP	03 24 10.8	+1.4
ASAR	Alice Springs	31.63	244	P	P	03 21 15.7	-2.0
	2.5nm,0.9s,baz=73,slow=9.4,SNR=5.0						
ASAR				PcP	PcP	03 24 10.8	+1.4
	0.4nm,0.7s,baz=67,slow=2.5,SNR=4.3						
GUMO	Guam	32.13	321	LR	LR	03 31 55.2	
	comp=Z,199nm,21.2s,baz=58,slow=32						
FITZ	Fitzroy Crossi	38.31	256	*e*P	P	03 22 14.6	-0.7
	5.7nm,1.0s						
FITZ	Fitzroy Crossi	38.31	256	P	P	03 22 14.6	-0.7
	2.9nm,0.8s,baz=117,slow=4.1,SNR=5.6						
SONA0	Songino Array	78.81	324	*e*P	P	03 26 58.0	+0.9
SONM	Songino Array	78.81	324	P	P	03 26 58.0	+0.9
SONM	Songino Array	78.81	324	P	P	03 26 58.0	+0.9
	0.7nm,0.7s,baz=138,slow=7.5,SNR=4.9						
ILAR	Eielson Array	84.58	19	P	P	03 27 26.2	-0.8
	1.1nm,0.7s,baz=237,slow=5.0,SNR=12						
ILB	Eielson Array	84.58	19	*e*P	P	03 27 27.1	+0.1
	4.1nm,0.3s						
SCRK	Sand Creek	85.00	20	*e*P	P	03 27 29.4	+0.1
	4.9nm,1.2s						
NV01	Mina Array Sit	87.24	50	*e*P	P	03 27 40.8	-0.2
NVAR	Mina Array Bea	87.24	50	P	P	03 27 40.8	-0.3
	0.5nm,0.7s,baz=247,slow=8.7,SNR=3.6						
MK32	Makanchi Array	93.52	317	*e*P	P	03 28 09.6	-0.4
MKAR	Makanchi Array	93.52	317	P	P	03 28 09.6	-0.4
	0.4nm,0.7s,baz=104,slow=5.1,SNR=5.1						
ZALV	Zalesovo Beam	93.71	324	*e*P	P	03 28 10.6	0.0
ZALV	Zalesovo Beam	93.71	324	P	P	03 28 10.9	+0.3
	0.2nm,0.3s,baz=105,slow=9.3,SNR=4.0						
ZAA1	Zalesovo Array	93.71	324	*e*P	P	03 28 10.9	+0.3
PD31	Pinedale Array	94.77	47	*e*P	P	03 28 15.3	-0.7
	2.6nm,1.4s						
PDAR	Pinedale Array	94.77	47	P	P	03 28 15.3	-0.7
	0.1nm,0.5s,baz=281,slow=5.4,SNR=2.2						
YKA	Yellowknife Ar	96.12	27	P	P	03 28 19.6	-1.8
	0.4nm,0.7s,baz=255,slow=4.6,SNR=8.9						
YKB5	Yellowknife Ar	96.12	27	*e*P	P	03 28 19.6	-1.8
LTX	Lajitas	97.01	62	*e*P	P	03 28 27.6	+1.2
TXAR	Lajitas Array	97.01	62	P	P	03 28 27.6	+1.2
	0.2nm,0.7s,baz=230,slow=7.0,SNR=3.2						
BR101	Keskin Array S	128.86	312	*e*PKPdf	PKiKP	03 34 03.5	+0.7
BR131	Keskin Array S	128.86	312	*e*Pdif	Pdif	03 30 47.8	-0.2
BRTR	Keskin Array B	128.86	312	PKP	PKiKP	03 34 03.5	+0.7
	0.3nm,0.8s,baz=63,slow=6.6,SNR=2.7						
ESDC	Sonseca Array	150.59	342	PKPbc	PKPbc	03 34 46.0	-0.3
	0.3nm,0.4s,baz=3.6,slow=4.3,SNR=2.9						

IDC 07 03:20:23.2±3.1**, 10°.90S×164°.51E, h0^{km}, mb3.8**/3**, mb1 3.9**/4**, mb1mx3.6**/31**, mbtmp3.8**/4**, ML3.5**/1**, Error ellipse: s-maj=65.2km s-min=45.1km az=83.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.26	171	Pn	Pn	03 23 05.0	-0.6
	0.3nm,0.3s,baz=294,slow=20,SNR=1.3						
WRA	Warramunga Arr	30.39	249	P	P	03 26 37.6	+0.1
	0.4nm,0.6s,baz=76,slow=8.4,SNR=3.4						
ASAR	Alice Springs	31.77	242	P	P	03 26 49.5	-0.1
	1.1nm,0.6s,baz=63,slow=10,SNR=13						
MKAR	Makanchi Array	92.59	317	P	P	03 33 36.9	+0.1
	0.3nm,0.7s,baz=79,slow=7.5,SNR=4.4						

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*IDC **07** 03:20:33.0±1.8, 10°.71S×164°.56E, h0^{km}, mb3.8/4, mb1 4.1/6, mb1mx3.8/33, mbtmp3.9/6, ML3.9/2, Error ellipse: s-maj=50.9km s-min=30.0km az=126.0*

*ISCJB **07** 03:20:34.9±1.2, 10°.9S±0°.1×164°.6E±0°.2, h24^{km}, mb3.8/4, Error ellipse: s-maj=26.9km s-min=20.9km az=2.5*

ISC 07 03:20:36.7±1.3**, 10°.8S**±0°.1×**164°.5E**±0°.2**, h24^{km}, n6, σ0ˢ.48**/6**, mb3.8**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.38	171	Pn	Pn	03 23 18.1	+0.1
	0.7nm,0.3s,baz=194,slow=18,SNR=2.0						
CTA	Charters Tower	19.90	240	P	Pn	03 25 08.6	+0.2
	0.3nm,0.3s,baz=58,slow=8.7,SNR=4.3						
WRA	Warramunga Arr	30.47	249	P	P	03 26 47.7	-0.3
	0.8nm,0.7s,baz=81,slow=9.2,SNR=8.1						
ASAR	Alice Springs	31.87	242	P	P	03 26 60.0	-0.4
	1.5nm,0.6s,baz=63,slow=10,SNR=16						
ILAR	Eielson Array	83.63	19	P	P	03 33 02.6	-0.3
	0.6nm,0.9s,baz=219,slow=6.6,SNR=2.5						
MKAR	Makanchi Array	92.52	317	P	P	03 33 46.6	+0.6
	0.3nm,0.7s,baz=102,slow=5.1,SNR=4.1						

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*MOS **07** 03:28:35.8±0.0, 42°.56N×41°.07E, h15^{km}, MPVA3.4*

*TIF **07** 03:28:35.3, 42°.37N×40°.91E, h25^{km}±2^{km}*

*ISK **07** 03:28:35.3, 42°.33N×40°.88E, h10^{km}, ML2.6/4*

*DDA **07** 03:28:36.3, 42°.30N×41°.15E, h7^{km}±4^{km}, ML2.9*

*NORS **07** 03:28:37.2±0.0, 42°.52N×41°.26E, h10^{km}, MPVA3.2*

ISC 07 03:28:34.3±1.3**, 42°.39N**±0°.02×**40°.95E**±0°.03**, h2^{km}**±11^{km}**, n25, σ1ˢ.27**/47**, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.96	144	PG	Pb	03 28 54.1	+0.5
BATM				SG	Sn	03 29 07.7	-1.3
BATM	Batumi	0.96	144	P	Pn	03 28 58.4	+3.6
BATM				S	Sn	03 29 08.1	-0.9
DOMR	Dombai	1.03	29	*i* Pg	Pg	03 28 53.7	-0.4
DOMR				*e*Sg	Sg	03 29 05.7	-1.8
BCA	Borcka	1.07	152	PG	Pg	03 28 55.3	+0.6
BCA				SG	Sn	03 29 10.4	-1.3
DBOC	Borcka	1.17	152	*i* P	Pn	03 28 57.8	+0.1
DBOC				*i* S	Sn	03 29 13.8	-0.4
ARXR	Arkhyz	1.20	11	*i* Pg	Pn	03 28 57.0	-1.2
ARXR				*i* Sg	Sb	03 29 12.3	-1.5
CHOM	Cayeli-Rize	1.29	186	PN	Pg	03 28 59.1	0.0
CHOM				SN	Sn	03 29 16.6	-0.7
RPOR	Krasnaya Polya	1.41	339	*e*Pg	Pn	03 29 01.2	+0.2
RPOR				*i* Sg	Sn	03 29 19.7	-0.4
ARTV	Artvin	1.41	148	*i* P	Pb	03 29 01.3	-0.1
ARTV				*i* S	Sg	03 29 19.9	+0.4
DBAD	Bademkaya	1.48	157	*i* P	Pb	03 29 02.2	-0.3
DAGI	Agillar	1.49	151	*i* P	Pb	03 29 02.8	0.0
DAGI				*i* S	Sn	03 29 21.3	-1.1
DAGI				IAML_P			
	comp=Z,400nm,0.1s						
SOC	Sochi	1.50	323	*e*Pg	Pn	03 29 02.7	+0.5
SOC				*e*Pg	Pb	03 29 03.7	+0.9
SOC				*e*Sg	Sb	03 29 22.6	+0.4
SOC				*e*Sg	Sg	03 29 23.8	+1.3
NEY	Neytrino	1.57	56	*e*Pg	Pn	03 29 03.0	-0.3
NEY				*i* Sg	Sn	03 29 22.4	-1.9
DDEM	Demirkent	1.61	158	*i* P	Pb	03 29 04.2	-0.5
KTUT	Trabzon	1.65	213	PN	Pb	03 29 04.2	-1.2
SHA1	Shidzhatmaz	1.84	42	*i* Pg	Pn	03 29 08.4	+1.2
SHA1				*i* Pg	Pn	03 29 08.4	+1.2
SHA1				*i* Sg	Sn	03 29 31.2	0.0
SHA1				*i* Sg	Sb	03 29 31.3	-1.1
LZRR	Lazarevskoye	1.93	324	*e*Pg	Pn	03 29 09.4	+1.3
LZRR				*e*Sg	Sb	03 29 34.3	-0.3
DIGR	Digorskoe uzhe	2.01	74	*e*Pg	Pn	03 29 10.7	+1.3
DIGR				*e*Sg	Sn	03 29 36.1	+0.8
KIV	Kislovodsk	2.02	38	PN	Pn	03 29 11.4	+1.9
KIV0	Kislovodsk Arr	2.02	39	*i* Pg	Pn	03 29 11.3	+1.8
KIV0				*e*Sg	Sn	03 29 36.5	+1.0
BAYT	Aydıntepe-Bayb	2.08	197	PN	Pn	03 29 10.5	+0.2
ZEI	Tsey	2.22	79	*e*Pg	Pn	03 29 13.9	+1.7
ZEI				*e*Sg	Sn	03 29 42.6	+2.2
BGD	Bogdanovka	2.28	119	P	Sn	03 29 41.8	0.0
TRLG	Trialeti	2.50	109	P	Pb	03 29 19.1	-0.9
TRLG				S	Sn	03 29 49.8	+2.5
LGD	Lagodekhi	3.98	96	P	Pn	03 29 34.5	-1.7

IDC 07 03:29:43.0±2.0**, 11°.30S×165°.14E, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.6**/26**, mbtmp3.6**/3**, ML3.6**/1**, Error ellipse: s-maj=52.2km s-min=35.3km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.79	174	Pn	Pn	03 32 19.3	+0.4
	0.4nm,0.3s,baz=308,slow=12,SNR=6.1						
WRA	Warramunga Arr	30.84	250	P	P	03 36 01.4	+0.4
	0.7nm,0.7s,baz=82,slow=8.7,SNR=5.8						
ASAR	Alice Springs	32.15	243	P	P	03 36 12.2	-0.5
	0.5nm,0.8s,baz=68,slow=8.1,SNR=3.6						
ILAR	Eielson Array	83.94	19	P	P	03 42 14.6	0.0
	0.3nm,0.5s,baz=231,slow=5.3,SNR=1.9						

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*ISCJB **07** 03:33:47.1±0.3, 74°.35N±0°.06×130°.0E±0°.2, h10^{km}, mb4.0/32, MS3.8/1, Error ellipse: s-maj=8.6km s-min=5.9km az=162.5*

*IDC **07** 03:33:47.1±0.7, 74°.39N×130°.01E, h0^{km}, mb3.8/15, mb1 4.0/15, mb1mx3.8/40, mbtmp3.8/15, MS3.8/1, Ms1 3.7/1, ms1mx2.8/47, Error ellipse: s-maj=19.6km s-min=14.8km az=162.0*

*NEIC **07** 03:33:48.6±0.3, 74°.32N×129°.95E, h10^{km}, mb4.3/18, Error ellipse: s-maj=7.1km s-min=5.2km az=164.0*

ISC 07 03:33:48.3±0.5**, 74°.24N**±0°.06×**129°.91E**±0°.07**, h10^{km}, n51, σ1ˢ.40**/53**, mb4.1**/32**, Near coast of northern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIXI	Tiksi	2.62	187	Pn	Pn	03 34 29.6	-0.9
	24nm,0.3s,baz=5.8,slow=12,SNR=78						
TIXI				Sn	Sn	03 34 59.7	-2.7
	14nm,0.3s,baz=13,slow=6.6,SNR=4.6						
NRIK	Noril'sk	13.84	271	Pn	Pn	03 37 00.8	-3.3
	0.9nm,0.3s,baz=57,slow=12,SNR=8.9						
SEY	Seymchan	13.85	133	Pn	P	03 37 14.9	+2.2
	0.4nm,0.3s,baz=321,slow=10,SNR=7.8						
SEY				Sn	Sn	03 39 35.5	-2.5
	0.2nm,0.3s,baz=0.0,slow=20,SNR=2.8						
RDOG	Red Dog Mine	21.38	72	*e*P	P	03 38 35.6	+0.2
	7.7nm,0.7s						
KBS	Kingsbay	23.22	334	*e*P	P	03 38 54.9	0.0
	28nm,1.3s						
SPA0	Spitsbergen Ar	23.26	331	*e*P	P	03 38 56.8	+1.5
	18nm,1.1s						
ANM	Nome	23.36	80	*e*P	P	03 38 58.6	+2.2
	6.6nm,1.3s						
PEA1	Petropavlovsk-	24.04	136	*e*P	P	03 39 04.2	+1.2
PEA0B	Petropavlovsk-	24.04	136	*e*P	P	03 39 05.0	+1.9
	52nm,1.5s						
PETK	Petropavlovsk-	24.04	136	*e*P	P	03 39 03.3	+0.3
PETK	Petropavlovsk-	24.04	136	P	P	03 39 04.2	+1.1
	8.9nm,0.7s,baz=6.6,slow=5.4,SNR=9.6						
KLR	Kul'dur	25.11	177	P	P	03 39 14.3	+1.6
	2.2nm,0.9s,baz=31,slow=9.8,SNR=3.5						
COLD	Coldfoot	25.21	64	*e*P	P	03 39 15.0	+1.4
	5.7nm,1.0s						
IM3	Indian Mountai	25.30	69	*e*P	P	03 39 14.6	+0.2
MLY	Manley	26.82	68	*e*P	P	03 39 28.3	+0.1
	3.3nm,1.1s						
ZAA1	Zalesovo Array	27.13	247	*e*P	P	03 39 33.5	+2.5
ZALV	Zalesovo Beam	27.13	247	P	P	03 39 33.5	+2.4
	0.6nm,0.6s,baz=30,slow=9.0,SNR=4.1						
BWN	Browne	27.84	68	*e*P	P	03 39 37.0	-0.3
	21nm,1.5s						
IL1	Eielson Array	28.00	65	*e*P	P	03 39 39.0	+0.3
ILAR	Eielson Array	28.00	65	P	P	03 39 39.6	+0.9
	2.1nm,0.7s,baz=322,slow=9.0,SNR=34						
ILB	Eielson Array	28.00	65	*e*P	P	03 39 39.6	+0.9
	2.4nm,0.8s						
PPLA	Purkeypile	28.20	71	*e*P	P	03 39 40.2	-0.5
	10nm,1.4s						
TRF	Thorofare Moun	28.23	69	*e*P	P	03 39 40.0	-0.9
	11nm,1.4s						
SONA0	Songino Array	28.39	214	*e*P	P	03 39 43.6	+1.0
SONM	Songino Array	28.39	214	P	P	03 39 43.6	+1.0
	0.5nm,0.7s,baz=15,slow=6.0,SNR=3.8						
ARA0	ARCESS Array S	28.77	315	*e*P	P	03 39 45.2	-0.3
ARCES	ARCESS Array B	28.77	315	P	P	03 39 45.2	-0.3
	3.2nm,1.0s,baz=28,slow=9.6,SNR=8.8						
DOT	Dot Lake	29.63	64	*e*P	P	03 39 52.8	-0.4
	5.3nm,1.4s						
DAWY	Dawson	30.41	60	*e*P	P	03 40 00.5	+0.4
	3.8nm,1.2s						
KLU	Klutina	30.98	68	*e*P	P	03 40 05.3	0.0
	13nm,0.9s						
GLI	Glacier Island	31.21	70	*e*P	P	03 40 09.8	+2.6
	50nm,0.5s						
KURK	Kurchatov	31.66	251	*e*P	P	03 40 13.8	+2.6
	3.3nm,0.9s						
MK32	Makanchi Array	34.36	244	*e*P	P	03 40 35.2	+0.4
MKAR	Makanchi Array	34.36	244	P	P	03 40 35.2	+0.4
	0.6nm,0.7s,baz=33,slow=5.0,SNR=6.1						
YKA	Yellowknife Ar	37.12	44	P	P	03 40 56.9	-1.4
	0.3nm,0.7s,baz=342,slow=8.5,SNR=8.2						
YKB5	Yellowknife Ar	37.12	44	*e*P	P	03 40 56.9	-1.4
ABKAR	Akbulak array	38.00	269	*e*P	P	03 41 06.5	+0.7
	1.4nm,0.6s						
NB200	NORSAR Array S	39.07	317	*e*P	P	03 41 14.4	-0.4
NOA	NORSAR Array B	39.07	317	P	P	03 41 14.4	-0.4
	1.1nm,0.7s,baz=23,slow=8.3,SNR=3.3						
AKASG	Malin Array Be	44.75	297	P	P	03 42 00.9	-0.4
	0.4nm,0.4s,baz=24,slow=8.9,SNR=4.9						
AKBB	Malin Array Si	44.75	297	*e*P	P	03 42 00.9	-0.4
	5.7nm,1.3s						
KBZ	Khabaz	47.71	282	P	P	03 42 26.1	+1.6
	2.7nm,0.8s,baz=63,slow=3.4,SNR=5.8						
KBZ				LR	LR	04 03 22.8	
	comp=Z,107nm,21.2s,baz=41,slow=37						
PD31	Pinedale Array	56.73	49	*e*P	P	03 43 30.8	-1.1
	2.0nm,1.4s						
PDAR	Pinedale Array	56.73	49	P	P	03 43 30.8	-1.1
	0.2nm,0.5s,baz=353,slow=6.5,SNR=2.9						
NV01	Mina Array Sit	58.95	58	*e*P	P	03 43 47.7	+0.1
NVAR	Mina Array Bea	58.95	58	P	P	03 43 47.7	+0.1
	0.4nm,0.7s,baz=356,slow=4.9,SNR=3.3						
LTX	Lajitas	70.91	48	*e*P	P	03 45 04.5	-0.9
TXAR	Lajitas Array	70.91	48	P	P	03 45 04.5	-0.9
	0.4nm,0.7s,baz=358,slow=5.4,SNR=6.6						
TOA1	Torodi Ar. Sit	86.98	310	*e*P	P	03 46 32.1	-1.3
TOA0	Torodi Ar. Sit	86.98	310	*e*P	P	03 46 35.5	+2.1
TORD	Torodi Ar. Bea	86.98	310	P	P	03 46 32.1	-1.3
	1.0nm,1.0s,baz=359,slow=5.1,SNR=7.6						

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*IDC **07** 03:40:13.7±1.7, 11°.00S×165°.50E, h0^{km}, mb4.0/9, mb1 4.2/9, mb1mx4.0/29, mbtmp3.9/9, Error ellipse: s-maj=64.6km s-min=25.3km az=146.0*

*ISCJB **07** 03:40:16.7±1.4, 11°.1S±0°.3×165°.4E±0°.3, h30^{km}, mb3.9/9, Error ellipse: s-maj=55.5km s-min=19.7km az=145.2*

ISC 07 03:40:18.3±1.6**, 11°.0S**±0°.4×**165°.5E**±0°.3**, h30^{km}, n16, σ0ˢ.64**/10**, mb4.0**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	WAKE ISLAND Hy	29.36	2	T	T	04 16 47.4	
	baz=183,slow=76,SNR=35						
H11S3	WAKE ISLAND Hy	29.36	2	T	T	04 16 49.8	
	baz=183,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	29.37	2	T	T	04 16 47.7	
	baz=183,slow=76,SNR=30						
H11N1	WAKE ISLAND Hy	30.58	3	T	T	04 18 13.6	
	baz=182,slow=76,SNR=27						
H11N3	WAKE ISLAND Hy	30.58	3	T	T	04 18 14.0	
	baz=182,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	30.60	3	T	T	04 18 15.0	
	baz=182,slow=76,SNR=19						
WRA	Warramunga Arr	31.24	250	P	P	03 46 34.9	-0.7
	0.7nm,0.8s,baz=76,slow=8.2,SNR=3.9						
ASAR	Alice Springs	32.56	243	P	P	03 46 47.1	-0.1
	1.2nm,0.9s,baz=72,slow=10,SNR=6.7						
CMAR	Chiang Mai Arr	71.86	294	P	P	03 51 40.2	+1.3
	0.9nm,0.4s,baz=108,slow=4.8,SNR=3.7						
SONM	Songino Array	78.49	324	P	P	03 52 16.3	-0.5
	1.4nm,0.8s,baz=138,slow=5.2,SNR=10						
ILAR	Eielson Array	83.58	19	P	P	03 52 43.1	-0.2
	0.9nm,0.7s,baz=242,slow=5.1,SNR=14						
NVAR	Mina Array Bea	86.22	50	P	P	03 52 57.9	+0.4
	0.9nm,0.9s,baz=238,slow=8.1,SNR=3.7						
MKAR	Makanchi Array	93.32	317	P	P	03 53 30.5	0.0
	1.0nm,1.0s,baz=95,slow=7.2,SNR=5.8						
ZALV	Zalesovo Beam	93.38	324	P	P	03 53 30.0	-0.5
	0.5nm,0.6s,baz=116,slow=3.4,SNR=2.3						
YKA	Yellowknife Ar	95.08	27	P	P	03 53 37.9	-0.3
	0.2nm,0.7s,baz=250,slow=5.1,SNR=3.3						
ARCES	ARCESS Array B	116.25	345	PKP	PKPdf	03 58 58.6	+0.3
	1.0nm,0.7s,baz=34,slow=14,SNR=1.1						

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*IDC **07** 03:48:49.6±1.1, 11°.00S×165°.28E, h0^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.8/37, mbtmp3.8/7, ML4.2/1, Error ellipse: s-maj=46.1km s-min=23.6km az=137.0*

*ISCJB **07** 03:48:52.4±0.8, 11°.2S±0°.1×165°.3E±0°.2, h30^{km}, mb3.7/6, Error ellipse: s-maj=25.1km s-min=17.1km az=18.7*

ISC 07 03:48:54.1±0.9**, 11°.1S**±0°.1×**165°.3E**±0°.2**, h30^{km}, n13, σ0ˢ.89**/7**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.99	174	Pn	Pn	03 51 29.5	0.0
	1.8nm,0.3s,baz=314,slow=18,SNR=11						
H11S2	WAKE ISLAND Hy	29.41	3	T	T	04 25 36.2	
	baz=185						
H11S3	WAKE ISLAND Hy	29.41	3	T	T	04 25 36.0	
	baz=185						
H11S1	WAKE ISLAND Hy	29.43	3	T	T	04 25 40.6	
	baz=185						
H11N1	WAKE ISLAND Hy	30.63	3	T	T	04 27 04.3	
	baz=185						
H11N3	WAKE ISLAND Hy	30.64	3	T	T	04 27 04.6	
	baz=185						
H11N2	WAKE ISLAND Hy	30.65	3	T	T	04 27 12.6	
	baz=185						
WRA	Warramunga Arr	31.06	250	P	P	03 55 09.8	0.0
	2.2nm,0.9s,baz=78,slow=9.5,SNR=9.8						
ASAR	Alice Springs	32.39	243	P	P	03 55 21.3	-0.1
	1.2nm,0.8s,baz=73,slow=9.6,SNR=8.6						
ILAR	Eielson Array	83.68	19	P	P	04 01 20.2	+0.6
	0.2nm,0.6s,baz=225,slow=4.9,SNR=6.2						
NVAR	Mina Array Bea	86.38	50	P	P	04 01 34.7	+0.6
	0.1nm,0.4s,baz=224,slow=4.9,SNR=2.5						
MKAR	Makanchi Array	93.24	317	P	P	04 02 06.2	+0.3
	0.3nm,0.8s,baz=101,slow=7.5,SNR=2.7						
YKA	Yellowknife Ar	95.20	27	P	P	04 02 12.9	-1.5
	0.1nm,0.3s,baz=85,slow=8.5,SNR=2.7						

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*IDC **07** 03:52:02.3±0.7, 10°.88S×165°.45E, h0^{km}, mb4.0/12, mb1 4.2/13, mb1mx4.1/37, mbtmp4.0/13, ML4.5/1, Error ellipse: s-maj=23.4km s-min=18.4km az=123.0*

*ISCJB **07** 03:52:05.4±0.6, 10°.99S±0°.09×165°.5E±0°.1, h30^{km}, mb4.0/12, Error ellipse: s-maj=16.2km s-min=12.9km az=20.3*

ISC 07 03:52:06.9±0.7**, 10°.9S**±0°.1×**165°.4E**±0°.2**, h30^{km}, n20, σ0ˢ.63**/13**, mb3.9**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.14	175	Pn	Pn	03 54 44.6	+0.3
	3.5nm,0.3s,baz=27,slow=14,SNR=14						
CTA	Charters Tower	20.60	241	P	Pn	03 56 46.6	+0.5
	1.8nm,0.3s,baz=54,slow=8.7,SNR=3.5						
URZ	Urewera	29.17	161	P	P	03 58 06.0	+0.4
	10nm,0.9s,baz=337,slow=9.4,SNR=4.6						
H11S2	WAKE ISLAND Hy	29.24	2	T	T	04 28 39.8	
	baz=182,slow=76,SNR=7.7						
H11S3	WAKE ISLAND Hy	29.25	2	T	T	04 28 40.5	
	baz=182,slow=76,SNR=6.1						
H11S1	WAKE ISLAND Hy	29.26	2	T	T	04 28 41.2	
	baz=182,slow=76,SNR=5.3						
H11N1	WAKE ISLAND Hy	30.47	3	T	T	04 30 11.3	
	baz=185						
H11N3	WAKE ISLAND Hy	30.47	3	T	T	04 30 11.8	
	baz=185						
H11N2	WAKE ISLAND Hy	30.48	3	T	T	04 30 12.7	
	baz=185						
WRA	Warramunga Arr	31.25	250	P	P	03 58 24.0	-0.2
	0.6nm,0.5s,baz=82,slow=8.9,SNR=7.7						
ASAR	Alice Springs	32.58	243	P	P	03 58 35.2	-0.8
	1.5nm,0.6s,baz=71,slow=9.5,SNR=16						
RPZ	Rata Peaks	33.04	173	P	P	03 58 39.7	0.0
	2.8nm,0.5s,baz=257,slow=8.0,SNR=3.4						
FITZ	Fitzroy Crossi	39.12	255	P	P	03 59 31.8	-0.2
	1.9nm,1.0s,baz=117,slow=11,SNR=3.1						
SONM	Songino Array	78.38	324	P	P	04 04 05.7	+0.9
	0.7nm,0.7s,baz=144,slow=6.9,SNR=2.8						
ILAR	Eielson Array	83.48	19	P	P	04 04 31.4	-0.1
	0.7nm,0.5s,baz=243,slow=4.9,SNR=16						
NVAR	Mina Array Bea	86.17	50	P	P	04 04 44.5	-1.4
	0.9nm,0.9s,baz=242,slow=11,SNR=5.3						
MKAR	Makanchi Array	93.22	317	P	P	04 05 19.2	+0.6
	0.4nm,0.6s,baz=95,slow=5.5,SNR=4.3						
PDAR	Pinedale Array	93.68	47	P	P	04 05 21.3	+0.2
	0.3nm,0.8s,baz=273,slow=8.0,SNR=2.1						
YKA	Yellowknife Ar	94.99	27	P	P	04 05 26.2	-0.1
	0.2nm,0.6s,baz=253,slow=4.4,SNR=3.4						
TXAR	Lajitas Array	96.03	61	P	P	04 05 31.9	-0.1
	0.2nm,0.7s,baz=256,slow=6.1,SNR=3.1						

MEX 07 03:52:12.9±0.5**, 16°.20N×98°.12W, h6^{km}**±7^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.19	358	*i* P	Pg	03 52 16.5	-0.2
PNIG				*i* S	Sg	03 52 19.3	0.0
VHO	Vista Hermosa	1.59	57	*i* P	Pn	03 52 37.8	-4.0
VHO				*i* S	Sn	03 52 58.1	-4.6

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*ISCJB **07** 03:52:50.7±2.4, 11°.72S±0°.04×164°.97E±0°.03, h3^{km}±15^{km}, mb5.1/214, MS4.0/2, Error ellipse: s-maj=6.5km s-min=4.2km az=177.0*

*IDC **07** 03:52:51.2±0.5, 11°.71S×165°.13E, h0^{km}, mb4.8/26, mb1 4.9/29, mb1mx4.9/38, mbtmp4.8/29, ML4.5/3, MS3.9/4, Ms1 3.9/4, ms1mx3.5/18, Error ellipse: s-maj=15.4km s-min=12.8km az=112.0*

*NEIC **07** 03:52:53.3±0.1, 11°.69S×165°.00E, h10^{km}, mb5.3/172, Error ellipse: s-maj=4.3km s-min=3.3km az=145.0*

*MOS **07** 03:52:55.6±0.9, 11°.69S×164°.93E, h35^{km}, mb5.3/48, Error ellipse: s-maj=8.3km s-min=7.7km az=156.0*

*GCMT **07** 03:52:55.3±0.4, 11°.67S±0°.04×164°.99E±0°.03, h21^{km}±1^{km}, MW5.0/68, Moment Tensor Solution. s14,c14; s68,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.91±.35; $M_{\theta\theta}$1.79±.21; $M_{\phi\phi}$3.11±.22; $M_{r\theta}$0.79±.42; $M_{\theta\phi}$-0.93±.13; $M_{\phi r}$0.61±.37; Best double couple: $M_0$4.32900×10^{16} NP1:ϕ_s162.00000°, δ47.00000°, λ-78.00000°. NP2: ϕ_s324.00000°, δ44.00000°, λ-103.00000°. Principal axes: T 3.5930, Plg1.0000°, Azm243.0000°; N 1.4620, Plg9.0000°, Azm333.0000°; P -5.0650, Plg81.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 03:52:53.7±1.3**, 11°.72S**±0°.05×**165°.06E**±0°.05**, h16^{km}**±7^{km}**, n480, σ1ˢ.12**/487**, mb5.2**/222**, 9C-14D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.52	294	*e*Pn	Pn	03 54 16.3	+0.9
HNR				*e*Sn	Sn	03 55 18.5	-0.1
HNR	Honiara	5.52	294	*e*P	Pn	03 54 16.3	+0.9
HNR				*e*		03 55 18.5	
HNR	Honiara	5.52	294	Pn	Pn	03 54 17.1	+1.8
	60nm,0.3s,baz=155,slow=11,SNR=4.8						
HNR				Sn	Sn	03 55 18.3	-0.3
	59nm,0.3s,baz=205,slow=24,SNR=7.6						
HNR				LR	LR	03 56 26.1	
	comp=Z,2µm,20.3s,baz=125,slow=38						
DZM	Mont Dzumac	10.38	173	*e*Pn	Pn	03 55 22.8	+0.7
	36nm,0.5s						
DZM	Mont Dzumac	10.38	173	*e*Pn	Pn	03 55 22.5	+0.4
DZM				*e*Sn	Sn	03 57 17.0	-1.2
DZM	Mont Dzumac	10.38	173	Pn	Pn	03 55 22.5	+0.4
	2.7nm,0.3s,baz=302,slow=16,SNR=7.8						
DZM				Sn	Sn	03 57 14.0	-4.2
	1.1nm,0.3s,baz=204,slow=19,SNR=3.1						
DZM				LR	LR	03 58 26.4	
	comp=Z,480nm,19.4s,baz=21,slow=32						
ONTNC	Ouen Toro	10.61	173	*e*Pn	Pn	03 55 26.0	+0.8
ONTNC				*e*Sn	Sn	03 57 21.7	-2.1
PINNC	Pines Island,	11.07	168	*e*Pn	Pn	03 55 32.6	+1.1
MSVF	Nonsavu	13.91	117	*e*Pn	Pn	03 56 13.3	+2.9
MSVF	Nonsavu	13.91	117	*e*P	Pn	03 56 13.3	+2.9
EIDS	Eidsvold	18.95	222	*e*P	Pn	03 57 17.4	+2.4
	44nm,1.3s						
CTA	Charters Tower	19.90	243	P	Pn	03 57 26.1	-0.3
	0.5nm,0.3s,baz=74,slow=12,SNR=6.3						
CTAO	Charters Tower	19.90	243	*e*P	Pn	03 57 26.6	+0.2
	74nm,1.4s						
CTAO	Charters Tower	19.90	243	*e*P	Pn	03 57 26.6	+0.2
CTAO				pmax	pmax		
	comp=Z,74nm,1.4s						
MANU	Manus Island	20.01	297	*e*P	Pn	03 57 27.1	-0.7
	comp=Z,81nm,0.8s						
COEN	Coen	21.46	262	*e*P	P	03 57 42.7	+1.0

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                  comp=Z,32nm,1.0s
ARMA  Armidale           22.39 212  eP     P       03 57 52.5 +0.8
                  comp=Z,33nm,1.0s
OUZ   Omahuta            24.64 163  eP     P       03 58 15.1 +1.4
                  comp=Z,30nm,1.0s
HIZ   Hauiti             28.07 164  eP     P       03 58 44.9 +0.3
                  comp=Z,74nm,1.1s
URZ   Urewera            28.54 160   P     P       03 58 50.0 +1.2
                  comp=Z,9.8nm,0.8s,baz=292,slow=5.4,SNR=2.5
BKZ   Black Stump Fm     29.16 162  eP     P       03 58 55.5 +1.1
                  comp=Z,16nm,0.8s
STKA  Stephens Creek     29.49 223  eP     P       03 58 58.1 +0.7
                  comp=Z,2.2nm,1.2s
STKA  Stephens Creek     29.49 223  eP     P       03 58 58.1 +0.7
STKA                                 pmax  pmax
                  comp=Z,2.0nm,1.2s
STKA  Stephens Creek     29.49 223   P     P       03 58 58.1 +0.7
                  comp=Z,5.7nm,1.0s,baz=31,slow=11,SNR=3.7
H11S2 WAKE ISLAND Hy 30.06     3     T     T       04 30 28.6
                  baz=184,slow=76,SNR=31
H11S3 WAKE ISLAND Hy 30.07     3     T     T       04 30 29.0
                  baz=184,slow=76,SNR=26
H11S1 WAKE ISLAND Hy 30.08     3     T     T       04 30 30.7
                  baz=184,slow=76,SNR=29
WRAB  Tennant Creek      30.61 251  eP     P       03 59 07.3 -0.2
                  comp=Z,89nm,1.5s
WRAB  Tennant Creek      30.61 251c iP     P       03 59 06.8 -0.6
WRAB                                 pmax  pmax
                  comp=Z,59nm,1.4s
WB2   Warramunga Arr     30.62 251  eP     P       03 59 06.1 -1.3
WB2                                 ePcP   PcP     04 02 06.3 +0.5
WR1   Warramunga Arr     30.63 251  eP     P       03 59 07.0 -0.5
                  comp=Z,95nm,1.4s
WR1                                 ePcP   PcP     04 02 06.4 +0.5
WRA   Warramunga Arr     30.63 251   P     P       03 59 07.0 -0.5
                  comp=Z,19nm,0.8s,baz=81,slow=9.1,SNR=36
WRA                                  PcP   PcP     04 02 06.4 +0.5
                  comp=Z,4.2nm,1.0s,baz=75,slow=2.8,SNR=8.8
WRA                                  S     S       04 04 08.0 -1.5
                  comp=Z,5.3nm,1.3s,baz=81,slow=15,SNR=4.8
TOO   Toolangi           31.15 211  eP     P       03 59 12.6 +0.6
                  comp=Z,11nm,1.0s
TOO   Toolangi           31.15 211  eP     P       03 59 12.6 +0.6
TOO                                  pmax  pmax
                  comp=Z,11nm,1.0s
H11N1 WAKE ISLAND Hy 31.29     3     T     T       04 32 00.2
                  baz=182,slow=76,SNR=22
H11N3 WAKE ISLAND Hy 31.29     3     T     T       04 32 00.6
                  baz=182,slow=76,SNR=26
H11N2 WAKE ISLAND Hy 31.31     3     T     T       04 32 01.5
                  baz=182,slow=76,SNR=18
AS01  Alice Springs      31.85 244  eP     P       03 59 15.6 -2.7
AS01                                ePcP   PcP     04 02 08.0 -1.1
AS31  Alice Springs      31.89 244  eP     P       03 59 18.0 -0.7
                  comp=Z,2.6nm,0.8s
AS31                                ePcP   PcP     04 02 09.0 -0.3
ASAR  Alice Springs      31.89 244   P     P       03 59 17.5 -1.2
                  comp=Z,3.9nm,0.8s,baz=74,slow=9.4,SNR=11
ASAR                                 PcP   PcP     04 02 09.0 -0.3
                  comp=Z,3.3nm,0.8s,baz=73,slow=3.1,SNR=10
FOZ   Fox Glacier        31.96 173  eP     P       03 59 21.2 +2.3
                  comp=Z,81nm,1.5s
GUMO  Guam               32.15 321   LR    LR      04 12 03.7
                  comp=Z,163nm,19.7s,baz=110,slow=36
RPZ   Rata Peaks         32.30 172  eP     P       03 59 22.7 +0.8
                  comp=Z,16nm,0.8s
RPZ   Rata Peaks         32.30 172   P     P       03 59 21.8 -0.1
                  comp=Z,12nm,0.8s,baz=9.4,slow=0.6,SNR=6.9
LBZ   Lake Benmore       32.84 173  eP     P       03 59 26.1 -0.7
                  comp=Z,31nm,1.5s
BBOO  Buckleboo          33.88 227  eP     P       03 59 34.7 -1.3
                  comp=Z,9.2nm,0.9s
FITZ  Fitzroy Crossi     38.56 256  eP     P       04 00 16.2  0.0
                  comp=Z,17nm,0.9s
FITZ  Fitzroy Crossi     38.56 256   P     P       04 00 16.1  0.0
                  comp=Z,7.0nm,0.8s,baz=103,slow=5.2,SNR=12
FORT  Forrest            39.11 235  eP     P       04 00 20.8 +0.2
                  comp=Z,27nm,0.8s
BATI  Baumata            40.65 268   P     P       04 00 35.9 +2.3
                  comp=Z,25nm,0.7s,baz=77,slow=5.9,SNR=5.2
EDFI  Ende, Flores       42.76 270   P     P       04 00 50.6 -0.4
PPT2  Papeete2           44.19 103  eLR    LR      04 13 30.2
                  comp=Z,600nm,28.5s
MBWA  Marble Bar         44.35 252  eP     P       04 01 04.3 +0.6
                  comp=Z,54nm,1.1s
APSI  Ampana             44.40 281   P     P       04 01 03.2 -0.9
TBI   Tubuai             44.70 111  eLR    LR      04 13 45.6
                  comp=Z,305nm,29.2s
BNSI  Bone               45.05 275   P     P       04 01 09.4 +0.1
SPSI  Sidrap Palu        45.48 276   P     P       04 01 12.8 +0.1
PLAI  Plampang           46.58 269   P     P       04 01 21.4  0.0
NWAO  Narrogin (SRO)     48.53 236  eP     P       04 01 36.6 +0.2
                  comp=Z,48nm,1.1s
NWAO  Narrogin (SRO)     48.53 236  eP     P       04 01 36.6 +0.2
NWAO                                 pmax  pmax
                  comp=Z,48nm,1.1s
MORW  Morawa             48.72 242  eP     P       04 01 38.3 +0.5
                  comp=Z,22nm,0.8s
KHU   Kahuku             49.48  52  eP     P       04 01 41.0 -3.0
                  comp=Z,208nm,1.5s
KHU   Kahuku             49.48  52  eP     P       04 01 41.0 -3.0
KHU                                  pmax  pmax
                  comp=Z,208nm,1.5s
KKM   Kota Kinabalu      51.70 287  eP     P       04 02 01.4 +0.7
                  comp=Z,63nm,1.0s
PCJI  Pacitan            53.13 269   P     P       04 02 12.7 +1.4
                  comp=Z,36nm,1.4s
TAOE  Nuku Hiva Isla     53.92  92  eLR    LR      04 17 43.2
                  comp=Z,254nm,29.5s
MJAR  Matsushiro Arr     54.27 333   P     P       04 02 18.2 -1.0
                  comp=Z,14nm,0.9s,baz=170,slow=8.5,SNR=18
MAJO  Matsushiro         54.27 333  eP     P       04 02 18.2 -1.0
MAJO  Matsushiro         54.27 333⇑iP     P       04 02 18.9 -0.3
MAJO                                 pmax  pmax
                  comp=Z,38nm,1.4s
MAT   Matsushiro         54.27 333   P     P       04 02 18.3 -0.9
JNU   Nakatsue           55.24 325  eP     P       04 02 26.2 -0.1
                  comp=Z,44nm,1.3s
JNU   Nakatsue           55.24 325   P     P       04 02 26.2 -0.1
                  comp=Z,23nm,1.0s,baz=128,slow=7.6,SNR=4.2
KSM   Kuching            55.95 280  eP     P       04 02 32.0 +0.1
                  comp=Z,26nm,1.1s
ASAJ  Asahikawa          59.21 341   P     P       04 02 54.9 +0.8
                  comp=Z,30nm,0.9s,baz=216,slow=10,SNR=10
KSRS  Korea Array        60.06 326   P     P       04 03 00.4 +0.3
                  comp=Z,8.2nm,1.0s,baz=142,slow=6.9,SNR=10
KS15  Wonju Array Si     60.07 326  eP     P       04 03 00.4 +0.2
KSAR  Wonju Array Be     60.07 326   P     P       04 03 00.4 +0.2
KSAR  Wonju Array Be     60.07 326   P     P       04 03 00.4 +0.2
KS01  Wonju Array Si     60.09 326  eP     P       04 03 00.3  0.0
YSS   Yuzh-Sakhalins     61.73 343⇑eP     P       04 03 12.2 +1.0
YSS                                 e              04 03 22.1
YSS                                  pmax  pmax
                  comp=Z,30nm,0.9s
NJ2   Nanjing            62.03 316  eP     P       04 03 14.5 +0.9
NJ2                                  pmax  pmax
                  comp=Z,16nm,0.5s
USRK  Ussuriysk Ar.      63.25 334   P     P       04 03 22.4 +0.9
                  comp=Z,10nm,0.8s,baz=134,slow=5.1,SNR=13
WHN   Wuhan              64.34 312 ⇓P     P       04 03 30.8 +1.8
PETK  Petropavlovsk-     64.88 355  eP     P       04 03 32.1  0.0
PETK  Petropavlovsk-     64.88 355  eP     P       04 03 32.1  0.0
PETK  Petropavlovsk-     64.88 355   P     P       04 03 32.4 +0.4
                  comp=Z,9.8nm,0.8s,baz=144,slow=8.6,SNR=8.2
PETK                                 LR    LR      04 26 02.4
                  comp=Z,68nm,22.0s,baz=143,slow=31
PEA1  Petropavlovsk-     64.88 355  eP     P       04 03 32.4 +0.3
IPM   Ipoh               65.68 280  eP     P       04 03 38.7 +0.5
                  comp=Z,55nm,1.1s
CN2   Changchun          65.98 330  eP     P       04 03 43.5 +4.1
KULM  Kulim              66.25 281  eP     P       04 03 42.1 +0.4
                  comp=Z,44nm,1.4s
SKNT  Sakolnakorn        66.75 294   P     P       04 03 45.9 +1.0
                  comp=Z,13nm,0.9s
PSI   Prapat             67.30 278   P     P       04 03 47.4 -1.2
                  comp=Z,6.2nm,0.7s,baz=180,slow=6.0,SNR=6.8
KLR   Kul'dur            67.41 337⇓eP     P       04 03 48.6 +0.2
KLR   Kul'dur            67.41 337   P     P       04 03 49.2 +0.8
                  comp=Z,12nm,1.0s,baz=120,slow=4.5,SNR=16
ENH   Enshi              67.81 310  eP     P       04 03 51.3  0.0
                  comp=Z,18nm,1.0s
CHAI  Chaiyaphum         68.18 292   P     P       04 03 56.5 +2.6
                  comp=Z,4.1nm,0.9s,comp=Z,208nm
CHAI  Chaiyaphum         68.18 292   P     P       04 03 56.5 +2.6
                  comp=Z,4.1nm,0.9s,comp=Z,208nm
GYA   Guiyang            68.25 305   P     P       04 03 56.5 +2.2
GYA                                  pP    pwP     04 04 07.8 +3.7
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GYA                                  PP    PP      04 06 22.0 -3.1
GYA                                  S     S       04 12 53.7 -1.1
GYA                                  SKS   SKiKP   04 13 48.2 -0.9
GYA   Guiyang            68.25 305   SS    SS      04 17 19.0 +0.8
GYA                                  pmax  pmax
                  comp=Z,20nm,1.0s
GYA                                  pmax  pmax
                  comp=Z,120nm,6.7s
GYA                                  LR    LR
                  comp=N,560nm,18.5s
GYA                                  LR    LR
                  comp=E,540nm,18.8s
GYA                                  LR    LR
                  comp=Z,520nm,18.4s
GSI   Gunungsitoli       68.26 276  eP     P       04 03 56.3 +1.8
                  comp=Z,74nm,1.3s
BJT   Baijiatuau         68.58 322  eP     P       04 03 56.7 +0.7
                  comp=Z,22nm,1.0s
BJT   Baijiatuau         68.58 322  eP     P       04 03 56.7 +0.7
BJT                                  pmax  pmax
                  comp=Z,22nm,1.0s
BJI   Beijing            68.59 322⇓iP     P       04 03 56.0  0.0
BJI                                  pmax  pmax
                  comp=Z,16nm,0.9s
PBKT  Sadao Pong         69.32 293  eP     P       04 04 02.5 +1.5
                  comp=Z,9.2nm,0.8s
PBKT  Sadao Pong         69.32 293   P     P       04 04 03.3 +2.3
                  comp=Z,13nm,0.8s,comp=Z,1µm
PBKT  Sadao Pong         69.32 293   P     P       04 04 03.3 +2.3
                  comp=Z,13nm,0.8s,comp=Z,1µm
XAN   Xi'an              70.08 313   P     P       04 04 05.6 +0.1
XAN                                  pP    pwP     04 04 14.9 -0.4
XAN                                  PcP   PcP     04 04 29.2 +1.7
XAN                                  pmax  pmax
                  comp=Z,16nm,1.0s
XAN                                  pmax  pmax
                  comp=Z,170nm,6.1s
XAN                                  LR    LR
                  comp=N,150nm,17.3s
XAN                                  LR    LR
                  comp=Z,160nm,19.5s
XAN   Xi'an              70.08 313  eP     P       04 04 05.0 -0.5
                  comp=Z,13nm,0.8s
XAN   Xi'an              70.08 313  eP     P       04 04 05.0 -0.5
XAN                                  pmax  pmax
                  comp=Z,13nm,0.8s
UTTA  Uttaradit          70.09 294   P     P       04 04 08.6 +2.9
                  comp=Z,3.3nm,1.0s
UTTA  Uttaradit          70.09 294   P     P       04 04 08.6 +2.9
                  comp=Z,3.3nm,1.0s
UTHA  Uthaitani          70.37 291   P     P       04 04 10.1 +2.6
                  comp=Z,4.2nm,1.1s
SUKH  Sukhothai          70.83 293   P     P       04 04 13.4 +3.1
                  comp=Z,3.3nm,1.0s
KMI   Kunming            70.90 302   P     P       04 04 12.2 +1.3
KMI                                  pP    pwP     04 04 22.7 +2.0
KMI                                  sP    PcP     04 04 27.1 -4.3
KMI                                  pmax  pmax
                  comp=Z,11nm,1.3s
KMI                                  pmax  pmax
                  comp=Z,120nm,5.8s
KMI   Kunming            70.90 302  eP     P       04 04 13.2 +2.3
                  comp=Z,20nm,1.0s
KMI   Kunming            70.90 302  eP     P       04 04 13.2 +2.3
KMI                                  pmax  pmax
                  comp=Z,20nm,1.0s
CM01  Chiang Mai Arr     71.75 294  eP     P       04 04 16.7 +0.9
CM31  Chiang Mai Arr     71.77 294  eP     P       04 04 17.4 +1.4
CMAR  Chiang Mai Arr     71.77 294   P     P       04 04 17.4 +1.4
                  comp=Z,9.9nm,1.0s,baz=121,slow=4.1,SNR=26
CMMT  Chiang Mai         71.89 294   P     P       04 04 18.4 +1.7
                  comp=Z,14nm,1.1s
CMMT  Chiang Mai         71.89 294   P     P       04 04 18.4 +1.7
                  comp=Z,14nm,1.1s
CHTO  Chiang Mai         71.89 294  eP     P       04 04 17.8 +1.1
                  comp=Z,17nm,1.2s
CHTO  Chiang Mai         71.89 294  eP     P       04 04 17.8 +1.1
CHTO                                 pmax  pmax
                  comp=Z,17nm,1.2s
CHTO  Chiang Mai         71.89 294   P     P       04 04 18.5 +1.8
                  comp=Z,61nm,1.2s
CHTO  Chiang Mai         71.89 294   P     P       04 04 18.5 +1.8
                  comp=Z,61nm,1.2s
HHC   Hu-ho-hao-te       71.92 320  eP     P       04 04 18.0 +1.5
HHC                                  pmax  pmax
                  comp=Z,23nm,0.8s
HHC                                  pmax  pmax
                  comp=Z,210nm,5.4s
MA2   Magadan            71.98 352⇓eP     P       04 04 14.3 -2.1
MA2                                  pmax  pmax
                  comp=Z,16nm,1.5s
HIA   Hailar             72.63 331  eP     P       04 04 21.2 +0.7
                  comp=Z,37nm,1.2s
HIA   Hailar             72.63 331⇑iP     P       04 04 21.2 +0.7
HIA                                  pmax  pmax
                  comp=Z,30nm,1.1s
ZEA   Zeya               72.71 338  eP     P       04 04 21.4 +0.6
ZEA                                  pmax  pmax
                  comp=Z,29nm,1.0s
LZH   Lanzhou            74.72 313 ⇑P     P       04 04 35.1 +1.9
LZH                                  pP    PcP     04 04 45.4 -2.0
LZH                                  sP    pwP     04 04 49.0 +5.9
LZH                                  PP    PP      04 07 29.4 +8.8
LZH                                  pmax  pmax
                  comp=Z,31nm,1.3s
LZH                                  pmax  pmax
                  comp=Z,150nm,4.3s
LZH                                  LR    LR
                  comp=N,520nm,16.6s
LZH                                  LR    LR
                  comp=E,540nm,16.1s
LZH                                  LR    LR
                  comp=Z,610nm,17.7s
SEY   Seymchan           75.07 354⇓eP     P       04 04 34.1 -0.3
GAMB  Gambell            77.35  10  eP     P       04 04 48.1 +0.8
                  comp=Z,44nm,1.4s
KDAK  Kodiak Island      77.45  22  eP     P       04 04 48.0  0.0
                  comp=Z,52nm,1.4s
KDAK  Kodiak Island      77.45  22  eP     P       04 04 48.0  0.0
KDAK                                 pmax  pmax
                  comp=Z,52nm,1.4s
KDAK  Kodiak Island      77.45  22   P     P       04 04 48.0  0.0
                  comp=Z,9.1nm,0.9s,baz=194,slow=4.2,SNR=3.3
QSPA  South Pole Qui     78.29 180  eP     P       04 04 53.2 +0.3
                  comp=Z,31nm,0.9s
ULN   Ulaanbaatar        78.45 324  eP     P       04 04 54.5 +0.4
                  comp=Z,14nm,0.8s
ULN   Ulaanbaatar        78.45 324  eP     P       04 04 54.5 +0.4
ULN                                  pmax  pmax
                  comp=Z,15nm,0.8s
YAK   Yakutsk            78.55 344  eP     P       04 04 52.8 -1.3
YAK                                  pmax  pmax
                  comp=Z,27nm,0.9s
YAK                                  pmax  pmax
                  comp=N,8.0nm,0.9s
YAK                                  pmax  pmax
                  comp=E,4.0nm,1.0s
SONA0 Songino Array      78.82 324  eP     P       04 04 56.9 +0.8
SONM  Songino Array      78.82 324   P     P       04 04 56.9 +0.8
                  comp=E,6.6nm,0.9s,baz=148,slow=7.6,SNR=29
SONA1 Songino Array      78.82 324  eP     P       04 04 56.5 +0.4
SVW2  Sparrevohn         78.96  18  eP     P       04 04 57.0 +0.6
GTA   Gaotai             79.05 314 ⇓P     P       04 04 58.7 +1.2
GTA                                  pP    sP      04 05 03.3 +0.8
GTA                                  sP    PcP     04 05 05.7 -0.3
GTA                                  pmax  pmax
                  comp=Z,21nm,1.0s
GTA                                  pmax  pmax
                  comp=Z,170nm,6.4s
GTA                                  LR    LR
                  comp=N,130nm,16.8s
GTA                                  LR    LR
                  comp=E,170nm,16.5s
GTA                                  LR    LR
                  comp=Z,180nm,16.2s
ANM   Nome               79.29  13  eP     P       04 04 59.1 +0.9
                  comp=Z,30nm,1.5s
ANM   Nome               79.29  13  eP     P       04 04 59.1 +0.9
ANM                                  pmax  pmax
                  comp=Z,30nm,1.5s
RSO   Redoubt South      79.38  20  eP     P       04 04 58.8 -0.2
BILL  Bilibino           79.56   0  eP     P       04 04 59.5  0.0
                  comp=Z,47nm,1.2s
BILL  Bilibino           79.56   0d iP     P       04 04 59.3 -0.2
BILL                                e              04 05 09.1
BILL                                e              04 07 57.7
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BILL                                eS     SKSac   04 15 16.4 +1.3
BILL                                 pmax  pmax
                  comp=Z,48nm,1.3s
BILL                                 MLR   MLR
                  comp=Z,103nm,14.0s
SHL   Shillong           80.25 299  eP     P       04 05 04.0 -0.5
SUA   Susitna One        80.78  20  eP     P       04 05 07.2 +0.7
                  comp=Z,26nm,1.2s
CAST  Castle Rocks       81.79  18  eP     P       04 05 11.0 -0.7
                  comp=Z,19nm,0.8s
ZAK   Zakamensk          81.87 325  eP     P       04 05 11.0 -1.4
ZAK                                  pmax  pmax
                  comp=Z,10.0nm,1.1s
LSA   Lhasa              82.15 302  eP     P       04 05 16.4 +1.6
                  comp=Z,6.8nm,1.0s
LSA   Lhasa              82.15 302  eP     P       04 05 16.4 +1.6
LSA                                  pmax  pmax
                  comp=Z,7.0nm,1.0s
DIV   Divide             82.28  22  eP     P       04 05 14.8 +0.5
                  comp=Z,25nm,1.0s
TLY   Talaya             82.31 327deP     P       04 05 14.4 -0.2
TRF   Thorofare Moun     82.37  19  eP     P       04 05 15.7 +0.9
                  comp=Z,16nm,1.1s
KLU   Klutina            82.47  21  eP     P       04 05 15.9 +0.6
                  comp=Z,24nm,1.1s
BMRM  Bremner River      82.60  22  eP     P       04 05 20.9 +5.0
                  comp=Z,7.4nm,0.8s
BPAW  Bear Paw Mtn.      82.63  18  eP     P       04 05 15.7 -0.2
                  comp=Z,8.7nm,1.4s
RND   Reindeer           82.79  19  eP     P       04 05 17.2 +0.3
                  comp=Z,23nm,1.2s
RND   Reindeer           82.79  19  eP     P       04 05 17.2 +0.3
RND                                  pmax  pmax
                  comp=Z,23nm,1.2s
RDOG  Red Dog Mine       82.81  12  eP     P       04 05 18.0 +1.1
                  comp=Z,26nm,1.0s
MCK   McKinley           83.00  19  eP     P       04 05 17.6 -0.3
                  comp=Z,15nm,0.9s
MCK   McKinley           83.00  19  eP     P       04 05 17.6 -0.3
MCK                                  pmax  pmax
                  comp=Z,15nm,0.9s
DHY   Denali Highway     83.04  20  eP     P       04 05 18.5 +0.1
                  comp=Z,6.0nm,0.9s
BWN   Browne             83.14  18  eP     P       04 05 18.9 +0.3
                  comp=Z,33nm,0.8s
IM3   Indian Mountai     83.25  16  eP     P       04 05 19.3 +0.2
MLY   Manley             83.38  17  eP     P       04 05 19.8 -0.1
                  comp=Z,17nm,1.4s
GDXM  Geysers            83.76  48  eP     P       04 05 24.3 +1.8
                  comp=Z,17nm,1.1s
WRH   Wood River Hil     83.78  19  eP     P       04 05 21.4 -0.4
                  comp=Z,14nm,0.8s
MDM   Murphy Dome        84.08  18  eP     P       04 05 22.9 -0.5
                  comp=Z,13nm,0.9s
HDA   Harding Lake       84.09  19  eP     P       04 05 23.6  0.0
                  comp=Z,26nm,0.8s
HDA   Harding Lake       84.09  19   P     P       04 05 23.3 -0.2
                  baz=227
TCOL  CIGO, UAF Yank     84.13  18   P     P       04 05 22.9 -0.7
                  baz=226
COLA  College            84.13  18  eP     P       04 05 23.8 +0.2
                  comp=Z,28nm,0.8s
COLA  College            84.13  18d iP     P       04 05 23.0 -0.6
COLA                                 pmax  pmax
                  comp=Z,26nm,0.8s
O02D  Mt. Diablo Mer     84.24  47   P     P       04 05 25.9 +1.0
                  baz=250,SNR=5.5
RIDG  Independ'e Rid     84.33  20  eP     P       04 05 25.3 +0.5
                  comp=Z,45nm,1.1s
IL1   Eielson Array      84.36  19  eP     P       04 05 24.6 -0.2
ILAR  Eielson Array      84.36  19   P     P       04 05 24.3 -0.5
                  comp=Z,8.9nm,0.7s,baz=237,slow=5.3,SNR=58
ILB   Eielson Array      84.36  19  eP     P       04 05 24.4 -0.5
POKR  Poker Plat Res     84.43  18   P     P       04 05 24.5 -0.7
                  baz=227
J01E  Myrtle Point       84.51  44   P     P       04 05 26.6 +0.5
                  baz=248
K02D  Willamette Mer     84.52  45   P     P       04 05 26.6 +0.4
                  baz=249
WDC   Whiskeytown Da     84.56  47  eP     P       04 05 27.8 +1.4
                  comp=Z,19nm,1.4s
WDC   Whiskeytown Da     84.56  47  eP     P       04 05 27.8 +1.4
WDC                                  pmax  pmax
                  comp=Z,19nm,1.4s
N02D  Trinity Center     84.58  46   P     P       04 05 27.0 +0.4
                  baz=250
M02C  Callahan           84.62  46   P     P       04 05 27.2 +0.4
                  baz=249
SCRK  Sand Creek         84.78  20  eP     P       04 05 27.9 +0.7
                  comp=Z,64nm,1.3s
YBH   Yreka Blue Hor     84.84  46  eP     P       04 05 29.1 +1.2
                  comp=Z,34nm,1.3s
ORV   Oroville           84.96  48  eP     P       04 05 28.9 +0.4
                  comp=Z,19nm,1.1s
ORV   Oroville           84.96  48  eP     P       04 05 28.9 +0.4
ORV                                  pmax  pmax
                  comp=Z,19nm,1.1s
O03E  Paynes Creek       84.99  47   P     P       04 05 28.4 -0.3
                  baz=250,SNR=11
AFDM  Forest Hills D     85.15  49  eP     P       04 05 30.0 +0.5
                  comp=Z,26nm,1.1s
BESE  Bessie Mountai     85.18  27  eP     P       04 05 30.1 +0.8
                  comp=Z,32nm,1.3s
RAMN  Ramite             85.19 299  eP     P       04 05 30.6 +0.4
JIS   Juneau Island      85.24  27  eP     P       04 05 30.4 +1.1
                  comp=Z,22nm,1.2s
KNGR  Kungurtug, Tuv     85.25 324⇑eP     P       04 05 30.0 +0.2
HYT   Haines Junctio     85.28  24  eP     P       04 05 30.1 +0.4
                  comp=Z,13nm,1.0s
CMB   Columbia Colle     85.29  50  eP     P       04 05 30.6 +0.4
                  comp=Z,13nm,1.0s
CMB   Columbia Colle     85.29  50  eP     P       04 05 30.6 +0.4
CMB                                  pmax  pmax
                  comp=Z,13nm,1.0s
L04D  Klamath Falls      85.29  45   P     P       04 05 30.2 -0.1
                  baz=250
PRP   Porcupine Dome     85.29  19  eP     P       04 05 29.1 -0.6
                  comp=Z,7.4nm,1.2s
SKAG  Skagway            85.44  26  eP     P       04 05 30.4  0.0
                  comp=Z,32nm,1.4s
M04C  Macdoel            85.47  46   P     P       04 05 31.4 +0.2
                  baz=250,SNR=5.3
ARVC  Arvin              85.58  53   P     P       04 05 32.3 +0.6
                  baz=252
VES   Vestal, Richgr     85.59  52   P     P       04 05 32.1 +0.5
                  baz=252
G03D  McMinnville, O     85.70  42   P     P       04 05 32.9 +0.9
                  baz=249
JIRN  Jiri               85.73 299  eP     P       04 05 33.4 +0.3
                  comp=Z,33nm,0.9s
I04A  Tendick Farm,      85.77  44   P     P       04 05 32.5  0.0
                  baz=250
J04D  Umpqua Nationa     85.78  44   P     P       04 05 33.4 +0.6
                  baz=250
RUBR  Rubicon Trail      85.78  49  eP     P       04 05 34.3 +1.4
                  comp=Z,51nm,1.4s
BEKR  Beckworth          85.89  48  eP     P       04 05 33.9 +0.5
                  comp=Z,22nm,1.2s
MWC   Mount Wilson       85.92  54  eP     P       04 05 34.2 +0.6
                  comp=Z,31nm,1.3s
MWC   Mount Wilson       85.92  54  eP     P       04 05 34.2 +0.6
MWC                                  pmax  pmax
                  comp=Z,31nm,1.3s
PALK  Pallekele          85.98 278  eP     P       04 05 31.4 -2.8
                  comp=Z,29nm,1.1s
PALK  Pallekele          85.98 278  eP     P       04 05 31.4 -2.8
PALK                                 pmax  pmax
                  comp=Z,29nm,1.1s
ISA   Isabella, Lake     86.01  53  eP     P       04 05 34.6 +0.7
                  comp=Z,20nm,1.3s
ISA   Isabella, Lake     86.01  53  eP     P       04 05 34.6 +0.7
ISA                                  pmax  pmax
                  comp=Z,21nm,1.3s
ISA   Isabella, Lake     86.01  53   P     P       04 05 33.9  0.0
                  baz=253,SNR=7.8
GUN   Gumba              86.06 299  eP     P       04 05 34.2 -0.5
                  comp=Z,32nm,1.0s
MDPB  Devils Postpil     86.14  50  eP     P       04 05 35.4 +0.7
                  comp=Z,23nm,1.0s
WAKR  Walker             86.14  50  eP     P       04 05 35.6 +1.0
                  comp=Z,40nm,1.3s
EDW2  Edwards Air Fo     86.16  53   P     P       04 05 34.8 +0.2
                  baz=253,SNR=11
OMMB  Old Mammoth Mi     86.20  51  eP     P       04 05 35.8 +0.7
                  comp=Z,26nm,1.3s
PNTR  Pine Nut           86.20  49  eP     P       04 05 35.9 +0.9
                  comp=Z,30nm,1.3s
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VCNR  Virginia City      86.23  49  eP         P        04 05 36.0 +0.9
      comp=Z,14nm,1.2s
BFSC  Mount Baldy Ra     86.24  54   P         P        04 05 34.4 -0.7
      baz=253,SNR=8.5
109C  Camp Elliot, M     86.30  56   P         P        04 05 35.2  0.0
      baz=254
MLAC  Mammoth, Mammo86.33  51   P         P        04 05 36.2 +0.6
      baz=252
PKI   Pulchoki           86.38 299  eP         P        04 05 36.0 -0.2
      comp=Z,31nm,1.1s
PKIN  Phulchoki          86.39 299  eP         P        04 05 35.9 -0.3
      comp=Z,32nm,1.1s
J05D  Fort Rock, OR      86.40  45   P         P        04 05 35.8 +0.1
      baz=250
MURC  Murrieta           86.42  55   P         P        04 05 35.8 -0.2
      baz=254
DAWY  Dawson             86.42  21  eP         P        04 05 35.6 +0.4
      comp=Z,13nm,1.0s
YERR  Yerington          86.44  49  eP         P        04 05 36.8 +0.7
      comp=Z,15nm,1.3s
CWC   Cottonwood Cre     86.55  52   P         P        04 05 36.8 +0.2
      baz=253
PAHR  Pah Rah Range      86.56  48  eP         P        04 05 37.3 +0.7
      comp=Z,28nm,1.2s
LRMC  Laurel Mtn Rad     86.58  53   P         P        04 05 37.0 +0.2
      baz=253,SNR=6.5
BAR   Barrett            86.59  56  eP         P        04 05 37.3 +0.6
      comp=Z,18nm,1.4s
MOD   Modoc Plateau      86.59  46  eP         P        04 05 37.3 +0.6
      comp=Z,26nm,1.3s
TIN   Tinemaha, Big      86.61  51   P         P        04 05 37.4 +0.5
      baz=253
TIXI  Tiksi              86.62 349⇓eP         P        04 05 35.2 -0.8
TIXI                                 pmax      pmax
      comp=Z,19nm,2.5s
E04D  Cinebar            86.64  41   P         P        04 05 37.0 +0.4
      baz=249
DMN   Daman              86.65 299  eP         P        04 05 37.7 +0.3
      comp=Z,50nm,1.1s
D03D  Eldon              86.66  40   P         P        04 05 37.3 +0.7
      baz=249
I05D  Terrebonne, OR     86.68  44   P         P        04 05 37.2 +0.2
      baz=250
PINE  Pine Mountain      86.77  44  eP         P        04 05 39.2 +1.6
      comp=Z,21nm,1.0s
MONP2 Monument Peak      86.85  56   P         P        04 05 38.3  0.0
      baz=254,SNR=7.4
RYN   Ryan               86.86  50  eP         P        04 05 38.2 +0.1
      comp=Z,22nm,1.2s
DAC   Darwin (Calif)     86.88  52  eP         P        04 05 39.0 +0.8
      comp=Z,20nm,1.2s
DAC   Darwin (Calif)     86.88  52  eP         P        04 05 39.1 +0.8
DAC                                  pmax      pmax
      comp=Z,20nm,1.2s
MPMC  Manual Prospec     86.89  52   P         P        04 05 38.2 -0.2
      baz=253,SNR=13
NV01  Mina Array Sit     86.97  50  eP         P        04 05 38.8  0.0
NVAR  Mina Array Bea     86.97  50   P         P        04 05 39.3 +0.6
      comp=Z,12nm,0.9s,baz=233,slow=7.7,SNR=38
G05D  Wamic, OR          87.00  43   P         P        04 05 39.7 +1.2
      baz=250
PFO   Pinyon Flats O     87.02  55  eP         P        04 05 39.5 +0.6
      comp=Z,20nm,1.4s
PFO   Pinyon Flats O     87.02  55  eP         P        04 05 39.5 +0.6
PFO                                  pmax      pmax
      comp=Z,20nm,1.4s
PFO   Pinyon Flats O     87.02  55   P         P        04 05 39.0  0.0
      baz=254
XPFO  Pion Flat          87.02  55  eP         P        04 05 39.5 +0.6
      comp=Z,22nm,1.4s
IKP   In-Ko-Pah, Jac     87.03  56   P         P        04 05 39.2 +0.2
      baz=254
NV11  Mina Array Sit     87.08  50  eP         P        04 05 39.4 +0.2
      comp=Z,1.8nm,1.1s
F05D  White Salmon       87.13  42   P         P        04 05 39.8 +0.8
      baz=250
GSC   Goldstone, Bar     87.21  53  eP         P        04 05 40.5 +0.7
      comp=Z,8.3nm,1.1s
GSC   Goldstone, Bar     87.21  53  eP         P        04 05 40.5 +0.7
GSC                                  pmax      pmax
      comp=Z,8.0nm,1.1s
GSC   Goldstone, Bar     87.21  53   P         P        04 05 39.9 +0.1
      baz=254,SNR=6.0
D05A  Enumclaw           87.23  41  eP         P        04 05 41.1 +1.6
      comp=Z,126nm,1.4s
GRAC  Grapevine Rang     87.26  52   P         P        04 05 40.1 +0.1
      baz=253,SNR=8.6
KVN   Kaiserville        87.31  49  eP         P        04 05 40.9 +0.6
      comp=Z,16nm,1.1s
KVN   Kaiserville        87.31  49  eP         P        04 05 40.9 +0.6
KVN                                  pmax      pmax
      comp=Z,16nm,1.1s
DLBC  Dease Lake         87.32  28  eP         P        04 05 39.8  0.0
      comp=Z,12nm,1.1s
A04D  Lummi Island       87.32  39   P         P        04 05 40.6 +0.7
      baz=249
SWSC  Sam W. Stewart     87.37  56   P         P        04 05 40.8 +0.3
      baz=254,SNR=6.7
HEC   Hector,Ludlow      87.45  54   P         P        04 05 41.0  0.0
      baz=254,SNR=5.6
BELC  Belle Mtn. Jos     87.49  55   P         P        04 05 41.4 +0.1
      baz=254,SNR=13
FURC  Furnace Creek,     87.49  52   P         P        04 05 41.0  0.0
      baz=254,SNR=10.0
B05A  Bryant             87.54  40   P         P        04 05 41.0 +0.1
      baz=250
SHOC  Shoshone, Teco     87.79  53   P         P        04 05 42.6 +0.1
      baz=254,SNR=5.2
BC3   Big Chuckawall     87.83  55   P         P        04 05 43.0 +0.1
      baz=254,SNR=6.9
I07A  Izee               87.84  44  eP         P        04 05 43.5 +0.8
      comp=Z,27nm,1.2s
WVOR  Wild Horse Val     87.94  46  eP         P        04 05 44.0 +0.8
      comp=Z,32nm,1.3s
WVOR  Wild Horse Val     87.94  46  eP         P        04 05 44.0 +0.8
WVOR                                 pmax      pmax
      comp=Z,33nm,1.3s
TUQ   Turquoise Moun     87.94  53   P         P        04 05 43.6 +0.3
      baz=254
GMRC  Granite Mounta     87.97  54   P         P        04 05 43.7 +0.1
      baz=254,SNR=11
KOLN  Koldanda           87.98 299  eP         P        04 05 43.1 -0.7
      comp=Z,14nm,0.9s
DANN  Dangsing           87.98 299  eP         P        04 05 42.5 -1.4
      comp=Z,13nm,0.8s
LTY   Liberty            88.10  41  eP         P        04 05 44.2 +0.4
      comp=Z,24nm,1.3s
TPNV  Topopah Spring     88.10  52  eP         P        04 05 44.8 +0.6
      comp=Z,17nm,1.3s
TPNV  Topopah Spring     88.10  52  eP         P        04 05 44.8 +0.6
TPNV                                 pmax      pmax
      comp=Z,17nm,1.3s
TPNV  Topopah Spring     88.10  52   P         P        04 05 44.4 +0.3
      baz=254,SNR=7.1
F07A  Phinny Hill Vi     88.14  42  eP         P        04 05 44.9 +1.0
      comp=Z,21nm,1.1s
GLA   Glamis             88.18  56  eP         P        04 05 45.8 +1.4
      comp=Z,52nm,1.4s
GLA   Glamis             88.18  56  eP         P        04 05 45.8 +1.4
GLA                                  pmax      pmax
      comp=Z,52nm,1.4s
GLA   Glamis             88.18  56   P         P        04 05 45.3 +0.9
      baz=255,SNR=7.0
IRM   Iron Mountain      88.22  55   P         P        04 05 45.0 +0.4
      baz=255,SNR=12
J08A  Circle Bar Ran     88.33  45  eP         P        04 05 45.9 +0.8
      comp=Z,27nm,1.2s
LDFC  Landfair           88.49  54  eP         P        04 05 47.2 +1.2
      comp=Z,63nm,1.2s
HAWA  Hanford            88.56  42  eP         P        04 05 46.1 +0.2
      comp=Z,18nm,1.1s
PYUN  Piuthan            88.58 299  eP         P        04 05 45.7 -1.0
      comp=Z,25nm,0.9s
G08A  Pilot Rock         88.59  43  eP         P        04 05 46.9 +0.7
      comp=Z,26nm,1.2s
Y12C  Blythe             88.61  55  eP         P        04 05 47.7 +1.3
      comp=Z,35nm,1.2s
Y12C  Blythe             88.61  55   P         P        04 05 47.1 +0.7
      baz=255,SNR=10
NEE2  Needles Airpor     88.80  54   P         P        04 05 47.8 +0.5
      baz=255
SHPR  Sheep Range        88.83  52  eP         P        04 05 48.3 +0.7
      comp=Z,33nm,1.3s
E08A  Dider Farm, El     88.90  42  eP         P        04 05 48.5 +1.1
113A  Mohawk Valley,     88.97  56  eP         P        04 05 49.5 +1.4
      comp=Z,20nm,1.2s
R11A  Troy Canyon, C     88.99  51  eP         P        04 05 49.0 +0.6
      comp=Z,25nm,1.4s
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R11A  Troy Canyon, C     88.99  51   P         P        04 05 48.2 -0.1
      baz=254,SNR=19
PDMCI Parker Dam,Lak     89.06  55   P         P        04 05 49.0 +0.5
      baz=255,SNR=9.0
WMQ   Urumqi             89.10 315   P         P        04 05 48.7 +0.1
WMQ                                  pP        sP       04 05 56.1 +2.6
WMQ                                  sP        pwP      04 06 03.2 +4.7
WMQ                                  pmax      pmax
      comp=Z,27nm,1.3s
WMQ                                  pmax      pmax
      comp=Z,490nm,3.9s
WMQ                                  LR        LR
      comp=N,130nm,19.5s
WMQ                                  LR        LR
      comp=E,180nm,19.5s
WMQ                                  LR        LR
      comp=Z,110nm,19.5s
WMQ   Urumqi             89.10 315  eP         P        04 05 49.1 +0.5
      comp=Z,13nm,1.1s
WMQ   Urumqi             89.10 315  eP         P        04 05 49.1 +0.5
WMQ                                  pmax      pmax
      comp=Z,13nm,1.1s
D08A  Wollman Farm,      89.17  42  eP         P        04 05 49.0 +0.3
      comp=Z,20nm,1.3s
B08A  Colville Reser     89.31  40  eP         P        04 05 49.7 +0.3
      comp=Z,32nm,1.5s
W13A  Hualapai Mount     89.46  54  eP         P        04 05 51.4 +0.7
      comp=Z,27nm,1.3s
E09A  Wood Farm, Sta     89.51  42  eP         P        04 05 51.2 +0.9
      comp=Z,15nm,1.2s
214A  Organ Pipe Nat     89.56  57   P         P        04 05 51.5 +0.6
      baz=256,SNR=12
BMO   Blue Mountains     89.58  44  eP         P        04 05 51.3 +0.5
      comp=Z,34nm,1.4s
BMO   Blue Mountains     89.58  44  eP         P        04 05 51.3 +0.5
BMO                                  pmax      pmax
      comp=Z,34nm,1.4s
C09A  Chrisman Ranch     89.81  41  eP         P        04 05 52.3 +0.6
      comp=Z,7.8nm,1.0s
Y14A  Wickenburg         89.88  55  eP         P        04 05 52.3 -0.1
      comp=Z,16nm,1.3s
ELK   Elko               89.89  48  eP         P        04 05 53.5 +0.9
      comp=Z,23nm,1.3s
ELK   Elko               89.89  48  eP         P        04 05 53.5 +0.9
ELK                                  pmax      pmax
      comp=Z,23nm,1.3s
F10A  Beach Ranch, E     89.96  43  eP         P        04 05 53.0 +0.5
      comp=Z,54nm,1.4s
MFID  Camas Ranch        90.19  46  eP         P        04 05 54.9 +1.1
      comp=Z,38nm,1.4s
PSUT  Pine Spring        90.35  51  eP         P        04 05 55.7 +1.0
      comp=Z,20nm,1.2s
HSIG                     90.43  61  eP         P        04 05 56.6 +1.5
      comp=Z,23nm,1.3s
LCMT  Little Creek M     90.44  52  eP         P        04 05 56.2 +1.1
      comp=Z,24nm,1.1s
CCUT  Cedar City         90.48  52  eP         P        04 05 56.8 +1.4
      comp=Z,25nm,1.1s
NEW   Newport            90.69  41  eP         P        04 05 55.9 +0.1
      comp=Z,26nm,1.4s
NEW   Newport            90.69  41   P         P        04 05 56.0 +0.1
      baz=253
SZCU  Shurtz Canyon      90.71  52  eP         P        04 05 57.4 +0.9
      comp=Z,28nm,1.2s
INK   Inuvik             90.75  19  eP         P        04 05 54.5 -1.1
      comp=Z,9.1nm,1.5s
INK   Inuvik             90.75  19  eP         P        04 05 54.5 -1.1
INK                                  pmax      pmax
      comp=Z,9.0nm,1.5s
INK   Inuvik             90.75  19   P         P        04 05 54.5 -1.1
      comp=Z,2.3nm,1.1s,baz=226,slow=2.4,SNR=4.0
KNB   Kanab              90.77  52  eP         P        04 05 58.0 +1.3
      comp=Z,45nm,1.3s
KNB   Kanab              90.77  52  eP         P        04 05 58.0 +1.3
KNB                                  pmax      pmax
      comp=Z,45nm,1.3s
SYO   Syowa Base         90.95 197⇑iP         P        04 05 55.4 -1.2
SYO   Syowa Base         90.95 197⇑isP        sP       04 06 12.0  +10
DGZ   Jazzator, Alta     90.99 321c iP        P        04 05 57.3 -0.1
DGZ                                  pmax      pmax
      comp=Z,4.0nm,1.0s
U15A  North Rim          91.04  53  eP         P        04 05 59.5 +1.3
      comp=Z,31nm,1.1s
HLID  Hailey             91.22  46  eP         P        04 05 59.4 +0.8
      comp=Z,22nm,1.3s
HLID  Hailey             91.22  46   P         P        04 05 59.4 +0.8
      baz=255
X16A  Lo Mia Camp, P     91.25  55  eP         P        04 06 00.5 +1.5
      comp=Z,15nm,1.1s
PKCU  Pink Cliffs        91.27  52  eP         P        04 06 01.2 +2.1
      comp=Z,43nm,1.2s
TUC   Tucson             91.31  57  eP         P        04 06 00.6 +1.4
      comp=Z,13nm,1.1s
TUC   Tucson             91.31  57  eP         P        04 06 00.6 +1.4
TUC                                  pmax      pmax
      comp=Z,13nm,1.1s
TUC   Tucson             91.31  57   P         P        04 05 59.8 +0.6
      baz=257
TCRU  Three Creeks R     91.44  51  eP         P        04 06 01.1 +1.2
      comp=Z,24nm,1.1s
MTPU  Mount Pierson      91.51  52  eP         P        04 06 02.1 +1.8
      comp=Z,29nm,1.2s
DUG   Dugway, Tooele     91.54  49  eP         P        04 06 01.0 +0.9
      comp=Z,27nm,1.4s
DUG   Dugway, Tooele     91.54  49  eP         P        04 06 01.0 +0.9
DUG                                  pmax      pmax
      comp=Z,27nm,1.4s
DUG   Dugway, Tooele     91.54  49   P         P        04 06 00.8 +0.6
      baz=256
WUAZ  Wupatki            91.56  54  eP         P        04 06 01.6 +1.3
      comp=Z,20nm,1.1s
WUAZ  Wupatki            91.56  54   P         P        04 06 00.8 +0.5
      baz=257
BGU   Big Grassy Mou     91.56  49  eP         P        04 06 01.1 +0.9
      comp=Z,27nm,1.4s
MSU   Marysvale          91.62  51  eP         P        04 06 02.4 +1.7
MSU   Marysvale          91.62  51  eP         P        04 06 02.4 +1.7
HVU   Hansel Valley      91.95  48  eP         P        04 06 03.1 +1.1
      comp=Z,48nm,1.3s
HVU   Hansel Valley      91.95  48  eP         P        04 06 03.1 +1.1
HVU                                  pmax      pmax
      comp=Z,48nm,1.3s
NLU   North Lily Min     92.04  50  eP         P        04 06 03.6 +1.1
      comp=Z,26nm,1.3s
SPUT  South Promonto     92.08  48  eP         P        04 06 03.6 +1.0
      comp=Z,21nm,1.4s
319A  Douglas            92.36  59  eP         P        04 06 05.7 +1.6
      comp=Z,17nm,1.1s
MSO   Missoula           92.38  43  eP         P        04 06 04.5 +0.6
      comp=Z,8.1nm,1.0s
MSO   Missoula           92.38  43   P         P        04 06 04.0 +0.1
      baz=256
MPU   Maple Canyon       92.38  50  eP         P        04 06 05.5 +1.3
      comp=Z,24nm,1.4s
CTU   Camp Tracy         92.45  49  eP         P        04 06 05.5 +1.1
      comp=Z,20nm,1.3s
X18A  Snowflake          92.48  55  eP         P        04 06 06.0 +1.3
      comp=Z,12nm,1.0s
Q16A  Castle Valley      92.48  51  eP         P        04 06 06.7 +2.1
      comp=Z,18nm,1.5s
MCMT  McKenzie Canyo     92.63  45  eP         P        04 06 06.2 +1.0
JLU   Jordanelle         92.65  49  eP         P        04 06 07.0 +1.6
      comp=Z,21nm,1.3s
W18A  Petrified Fore     92.78  55   P         P        04 06 06.5 +0.5
      baz=258
TCUT  Toone Canyon       92.80  49  eP         P        04 06 07.6 +1.5
      comp=Z,31nm,1.3s
DLMT  Dillon             92.93  44  eP         P        04 06 07.6 +1.1
      comp=Z,33nm,1.1s
P17A  Butcher Ranch,     92.93  50  eP         P        04 06 07.8 +1.2
      comp=Z,14nm,1.5s
WALA  Waterton Lakes     92.95  41  eP         P        04 06 07.4 +0.9
      comp=Z,32nm,1.3s
LRM   Limekiln Ridge     93.14  44  eP         P        04 06 08.1 +0.6
MK01  Makanchi Array     93.54 317  eP         P        04 06 09.0 -0.1
MK31  Makanchi Array     93.56 317  eP         P        04 06 09.2  0.0
MKAR  Makanchi Array     93.56 317  eP         P        04 06 09.2  0.0
      comp=Z,51nm,0.9s
MKAR  Makanchi Array     93.56 317   PP        PP       04 09 52.8 -1.2
      comp=Z,0.8nm,0.9s,baz=98,slow=7.5,SNR=4.5
MKAR                                 PKKPbc    PKKPdf   04 23 13.4 -2.2
      comp=Z,1.1nm,1.1s,baz=291,slow=1.2,SNR=3.9
FXWY  Fox Creek          93.63  46  eP         P        04 06 10.7 +0.8
      comp=Z,5.2nm,1.0s
BOZ   Bozeman (W)        93.64  44  eP         P        04 06 10.8 +1.0
      comp=Z,19nm,1.2s
BOZ   Bozeman (W)        93.64  44   P         P        04 06 10.1 +0.4
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      baz=257
REDW  Red Top Meadow     93.70  47  eP         P        04 06 10.9 +0.8
      comp=Z,17nm,1.4s
ZAA0  Zalesovo Array     93.71 324  eP         P        04 06 08.4 -1.2
      comp=Z,8.0nm,1.0s
ZALV  Zalesovo Beam      93.71 324   P         P        04 06 08.3 -1.3
      comp=Z,6.7nm,0.9s,baz=112,slow=4.0,SNR=20
ZAA1  Zalesovo Array     93.71 324  eP         P        04 06 08.3 -1.3
YHB   Horse Butte        93.76  45  eP         P        04 06 11.9 +1.6
      comp=Z,13nm,1.2s
HRY   Holter Researc     93.76  43  eP         P        04 06 11.0 +0.8
MAKZ  Makanchi           93.77 317  eP         P        04 06 10.3 +0.2
      comp=Z,15nm,1.0s
MAKZ  Makanchi           93.77 317  eP         P        04 06 10.3 +0.2
MAKZ                                 pmax      pmax
      comp=Z,15nm,1.0s
121A  Cookes Peak, D     93.84  58   P         P        04 06 11.3 +0.3
      baz=259
MOOW  Moose Ponds        93.86  46  eP         P        04 06 09.8 -1.0
      comp=Z,8.2nm,1.4s
LOHW  Long Hollow        93.93  46  eP         P        04 06 11.8 +0.6
      comp=Z,8.2nm,1.4s
PV09  Paradox Valley     93.95  52  eP         P        04 06 14.3 +2.8
FLWY  Flagg Ranch        93.96  46  eP         P        04 06 12.5 +1.2
      comp=Z,10nm,1.3s
PV23  Carpenter Ridg     94.03  52  eP         P        04 06 14.0 +2.1
      comp=Z,8.7nm,1.1s
H17A  Grant Village      94.11  46  eP         P        04 06 14.1 +2.0
      comp=Z,5.5nm,1.0s
H17A  Grant Village      94.11  46   P         P        04 06 12.8 +0.7
      baz=258
PV12  Saucer Basin,      94.17  52  eP         P        04 06 14.7 +2.2
      comp=Z,8.8nm,1.2s
MVCO  Mesa Verde         94.18  53   P         P        04 06 12.6 +0.1
      baz=259
BW06  Boulder Array      94.50  47  eP         P        04 06 13.9  0.0
      comp=Z,9.2nm,1.3s
BW06  Boulder Array      94.50  47   P         P        04 06 14.3 +0.5
      baz=258
PD31  Pinedale Array     94.50  47  eP         P        04 06 14.4 +0.5
PDAR  Pinedale Array     94.50  47  eP         P        04 06 13.2 -0.7
PDAR  Pinedale Array     94.50  47   P         P        04 06 13.8 -0.1
      comp=Z,4.0nm,1.1s,baz=203,slow=1.1,SNR=16
NVS   Novosibirsk        94.83 325  eP         P        04 06 14.5 -0.2
NVS                                  pmax      pmax
      comp=Z,7.0nm,1.3s
NVS                                  pmax      pmax
      comp=E,6.0nm,1.4s
O20A  White River Ci     94.95  50   P         P        04 06 15.9  0.0
      baz=259
RLMT  Red Lodge          95.17  45  eP         P        04 06 18.8 +2.0
      comp=E,9.2nm,1.4s
RLMT  Red Lodge          95.17  45   P         P        04 06 17.5 +0.6
      baz=259
ANMO  Albuquerque        95.38  56  eP         P        04 06 19.0 +1.0
      comp=E,4.3nm,1.3s
ANMO  Albuquerque        95.38  56⇓iP         P        04 06 19.1 +1.1
ANMO                                 pmax      pmax
      comp=Z,4.0nm,1.3s
ANMO  Albuquerque        95.38  56   P         P        04 06 18.3 +0.3
      baz=260
EGMT  Eagleton           95.42  42   P         P        04 06 17.8 +0.1
      baz=259
S22A  4UR Ranch, Cre     95.59  53  eP         P        04 06 20.1 +1.1
      comp=Z,2.6nm,1.0s
S22A  4UR Ranch, Cre     95.59  53   P         P        04 06 19.0  0.0
      baz=260
MNTX  Cornudas Mount     95.68  59   P         P        04 06 19.2  0.0
      baz=260
SMCO  Snowmass           95.73  51  eP         P        04 06 22.1 +2.3
      comp=Z,9.1nm,1.4s
YKA   Yellowknife Ar     95.88  27   P         P        04 06 18.2 -1.1
      comp=Z,4.8nm,0.8s,baz=255,slow=4.6,SNR=63
YKB5  Yellowknife Ar     95.88  27  eP         P        04 06 17.5 -1.8
YKW3  Yellowknife Ar     95.89  27  eP         P        04 06 18.3 -1.0
      comp=Z,5.8nm,1.0s
NRIK  Noril'sk           96.52 340   P         P        04 06 22.6 +0.4
      comp=Z,1.4nm,0.3s,baz=105,slow=3.1,SNR=4.2
KSH   Kashi              96.66 309   P         P        04 06 27.3 +3.7
KSH                                  pP        pwP      04 06 37.9 +4.4
KSH                                  pmax      pmax
      comp=Z,300nm,6.1s
KURK  Kurchatov          96.73 320  eP         P        04 06 23.4 -0.1
      comp=Z,3.5nm,1.0s
KURK  Kurchatov          96.73 320⇓eP         P        04 06 24.5 +1.0
KURK                                 pmax      pmax
      comp=Z,5.0nm,0.9s
LTX   Lajitas            96.74  62  eP         P        04 06 23.9 -0.2
LTX   Lajitas            96.74  62  eP         P        04 06 24.0 -0.2
TXAR  Lajitas Array      96.74  62   P         P        04 06 24.0 -0.2
TXAR  Lajitas Array      96.74  62   P         P        04 06 23.9 -0.2
      comp=Z,0.9nm,0.9s,baz=224,slow=5.1,SNR=9.2
LAO   LASA Array         97.54  44   P         Pdif     04 06 27.6 +0.1
      baz=261
FFC   Flin Flon         101.17  36  ePdif      Pdif     04 06 43.1 -0.2
FFC   Flin Flon         101.17  36  eP         Pdif     04 06 43.1 -0.2
BRVK  Borovoye          102.13 322⇓iP         Pdif     04 06 47.6  0.0
BRVK                                 pmax      pmax
      comp=Z,14nm,3.5s
ARA0  ARCESS Array S    116.81 345  ePKPdf     PKPdf    04 11 34.9 -2.1
ARCES ARCESS Array B    116.81 345   PKP       PKPdf    04 11 34.9 -2.1
      comp=Z,2.1nm,0.7s,baz=38,slow=2.2,SNR=7.9
LGD   Lagodekhi         119.14 311  i PKIKP    PKPpre   04 11 33.2
OBN   Obninsk           121.03 328⇓iPKIKP     PKiKP    04 11 45.9 +0.3
OBN                                 e                   04 13 14.2
OBN                                  pmax      pmax
      comp=Z,5.0nm,0.5s
KIV   Kislovodsk        121.22 314  ePKIKP     PKiKP    04 11 48.4 +1.9
KIV                                  pmax      pmax
      comp=Z,9.0nm,1.1s
FIA0  FINESS Array S    122.15 338  ePKPdf     PKPdf    04 11 45.4 -2.1
FIA0  FINESS Array S    122.15 338  ePKIKP     PKPdf    04 11 45.4 -2.1
FINES FINESS Array B    122.15 338   PKP       PKPdf    04 11 45.4 -2.1
      comp=Z,2.5nm,0.9s,baz=330,slow=5.3,SNR=4.9
CPUP  Villa Florida     124.06 133   PKP       PKPdf    04 11 51.4 -0.9
      comp=Z,3.7nm,1.0s,baz=264,slow=2.1,SNR=6.0
BOSA  Boshof            124.17 223   PKP       PKPdf    04 11 52.5 -0.1
      comp=Z,2.7nm,0.7s,baz=21,slow=5.3,SNR=4.4
SDV   Santo Domingo     125.20  87  ePKPdf     PKPdf    04 11 54.9  0.0
KMBO  Kilima Mbogo      126.61 260   PKP       PKiKP    04 11 58.2  0.0
      comp=Z,1.0nm,0.6s,baz=76,slow=12,SNR=2.9
AKASG Malin Array Be    127.06 326   PKP       PKPdf    04 11 56.9 -0.3
      comp=Z,2.5nm,0.9s,baz=64,slow=2.0,SNR=9.1
AKBB  Malin Array Si    127.06 326  ePKPdf     PKPdf    04 11 56.9 -0.3
AK11  Malin Array Si    127.10 326  ePKPdf     PKPdf    04 11 57.1 -0.1
NB2   NORSAR Subarra127.17 344   PKPdf     PKPdf    04 11 56.4 -0.8
      comp=Z,5.3nm,1.0s,baz=35,slow=2.0
NB200 NORSAR Array S    127.17 344  ePKPdf     PKPdf    04 11 56.8 -0.4
NOA   NORSAR Array B    127.17 344   PKP       PKPdf    04 11 56.8 -0.4
      comp=Z,1.6nm,0.9s,baz=36,slow=2.1,SNR=4.8
ILGA  Ilgaz             128.42 314  ePKPdf     PKiKP    04 12 01.9 +0.8
BR101 Keskin Array S    128.92 312  ePKPdf     PKPdf    04 12 01.1 -0.2
BR101                               ePP        PP       04 14 05.4 -3.0
BRTR  Keskin Array B    128.92 312   PKP       PKPdf    04 12 01.1 -0.2
      comp=Z,2.9nm,1.2s,baz=147,slow=2.9,SNR=8.1
BRTR                                 PP        PP       04 14 05.4 -3.0
      comp=Z,1.3nm,1.0s,baz=123,slow=2.1,SNR=4.9
LSZ   Lusaka            129.57 239  ePKPdf     PKiKP    04 12 04.6 +0.7
LSZ   Lusaka            129.57 239  ePKIKP     PKiKP    04 12 04.6 +0.7
BUR04 Bucovina Ar. S    130.93 325  ePKPdf     PKiKP    04 12 06.7 +0.9
LANS  Liptovska Anna    133.06 329  ePKP       PKPdf    04 12 07.4 -1.3
MORC  Moravsky Berou    133.58 331  ePKP       PKPdf    04 12 10.1 +0.4
VYHS  Vyhne             133.81 329  ePKIKP     PKPdf    04 12 10.1  0.0
VYHS  Vyhne             133.81 329  ePKP       PKPdf    04 12 10.1  0.0
CLL   Collm             134.45 336  ePKPdf     PKiKP    04 12 12.0 -0.6
CLL   Collm             134.45 336  ePKIKP     PKiKP    04 12 12.0 -0.6
KRUC  Moravsky          134.61 331  ePKP       PKPdf    04 12 11.8 +0.2
DIVS  Divibare          135.93 324  ePKPdf     PKiKP    04 12 15.3 -0.7
GEC2  GERESS Array S    136.00 333  ePKPdf     PKPdf    04 12 13.3 -1.0
GEC2  GERESS Array S    136.00 333  ePKIKP     PKPdf    04 12 13.3 -1.0
GERES GERESS Array B    136.00 333   PKP       PKPdf    04 12 13.3 -1.0
      comp=Z,1.5nm,0.9s,baz=46,slow=3.9,SNR=6.8
GEA0  GERESS Array S    136.01 333  ePKPdf     PKPdf    04 12 13.3 -1.0
BDFB  Brasilia          137.44 129   PKP       PKPdf    04 12 17.6 -0.3
      comp=Z,3.6nm,0.9s,baz=254,slow=4.4,SNR=5.3
KEST  Kesra             147.54 321   PKPbc     PKPbc    04 12 38.8 +1.0
      comp=Z,21nm,1.0s,baz=192,slow=1.8,SNR=8.3
ES19  SONSECA Array     150.47 343  ePKPbc     PKPbc    04 12 45.4 +0.2
ESDC  Sonseca Array     150.51 343   PKPbc     PKPbc    04 12 45.4 +0.2
      comp=Z,4.8nm,0.8s,baz=16,slow=2.6,SNR=15
TOA0  Torodi Ar. Sit    163.70 277  ePKPdf     PKPdf    04 12 55.8 -1.3
TOA0                                ePKPdf     pPKPdf   04 12 57.2 -3.7
TOA0                                ePKPab     PKPab    04 13 49.4 +0.3
TORD  Torodi Ar. Bea    163.70 277   PKP       PKPdf    04 12 55.6 -1.5
      comp=Z,3.9nm,1.1s,baz=343,slow=1.8,SNR=14
TORD                                 PKPab     PKPab    04 13 49.5 +0.3
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	comp=Z,4.0nm,1.0s,baz=51,slow=4.3,SNR=8.1						
TOA1	**Torodi Ar. Sit**	**163.70**	**277**	*e*PKPdf	**PKPdf**	**04 12 55.6**	**-1.5**
TOA1				*e*PKPab	**PKPab**	**04 13 49.5**	**+0.3**

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*IDC **07** 03:56:28.7±1.1, 10.°85S×165.°17E, h0^{km}, mb4.0/7, mb1 4.3/8, mb1mx4.0/37, mbtmp4.0/8, ML4.2/1, MS3.7/1, Ms1 3.7/1, ms1mx3.0/26, Error ellipse: s-maj=41.7km s-min=24.1km az=137.0*

*ISCJB **07** 03:56:32.0±0.7, 11.°0S±0.°1×165.°2E±0.°1, h31^{km}, mb4.0/7, MS3.6/1, Error ellipse: s-maj=21.8km s-min=15.5km az=26.8*

ISC 07 03:56:33.7±0.9**, 10.°8S**±0.°1×**165.°2E**±0.°2**, h31^{km}, n16, σ1.^{s}34**/9**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.23**	**174**	Pn	**Pn**	**03 59 12.5**	**+0.2**
	1.7nm,0.3s,baz=28,slow=9.7,SNR=5.5						
CTA	**Charters Tower**	**20.44**	**241**	P	**P**	**04 01 10.4**	**+1.6**
	6.4nm,0.7s,baz=78,slow=12,SNR=4.3						
H11S2	**WAKE ISLAND Hy**	**29.18**	**3**	T	T	04 32 58.7	
	baz=178						
H11S3	**WAKE ISLAND Hy**	**29.19**	**3**	T	T	04 33 01.2	
	baz=178						
H11S1	**WAKE ISLAND Hy**	**29.20**	**3**	T	T	04 32 60.0	
	baz=178						
H11N1	**WAKE ISLAND Hy**	**30.41**	**3**	T	T	04 34 31.0	
	baz=177						
H11N3	**WAKE ISLAND Hy**	**30.41**	**3**	T	T	04 34 31.8	
	baz=177						
H11N2	**WAKE ISLAND Hy**	**30.43**	**3**	T	T	04 34 36.5	
	baz=177						
WRA	**Warramunga Arr**	**31.07**	**249**	P	**P**	**04 02 47.1**	**-2.3**
	2.4nm,0.9s,baz=73,slow=9.6,SNR=6.9						
ASAR	**Alice Springs**	**32.42**	**243**	P	**P**	**04 03 00.5**	**-0.8**
	1.8nm,0.7s,baz=71,slow=9.9,SNR=7.7						
JCJ	**Chichijima**	**43.84**	**330**	LR	LR	04 20 10.9	
	comp=Z,86nm,20.7s,baz=114,slow=32						
SONM	**Songino Array**	**78.20**	**324**	P	**P**	**04 08 31.5**	**+1.1**
	1.3nm,1.0s,baz=108,slow=4.7,SNR=3.6						
ILAR	**Eielson Array**	**83.48**	**19**	P	**P**	**04 08 57.6**	**-0.5**
	0.6nm,0.8s,baz=239,slow=5.1,SNR=7.2						
NVAR	**Mina Array Bea**	**86.29**	**50**	P	**P**	**04 09 13.3**	**+0.2**
	1.1nm,0.8s,baz=230,slow=7.0,SNR=4.3						
MKAR	**Makanchi Array**	**93.02**	**317**	P	**P**	**04 09 44.9**	**+0.5**
	0.4nm,0.7s,baz=86,slow=7.7,SNR=3.5						
PDAR	**Pinedale Array**	**93.80**	**47**	P	**P**	**04 09 47.5**	**-0.8**
	0.8nm,1.1s,baz=230,slow=2.2,SNR=3.1						

IDC 07 03:59:57.7±3.8**, 11.°37S**×**165.°91E, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/32**, mbtmp3.6**/3**, Error ellipse: s-maj=184.3km s-min=31.7km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.53**	**250**	P	P	04 06 21.7	-0.2
	1.2nm,0.7s,baz=82,slow=9.1,SNR=9.6						
ASAR	**Alice Springs**	**32.80**	**244**	P	P	04 06 33.2	+0.2
	0.4nm,0.7s,baz=67,slow=10,SNR=4.1						
ILAR	**Eielson Array**	**83.76**	**18**	P	P	04 12 28.5	0.0
	0.3nm,0.8s,baz=224,slow=5.0,SNR=3.7						

IDC 07 04:00:14.2±1.6**, 11.°89S**×**165.°50E, h0^{km}, mb3.9**/6**, mb1 4.1**/7**, mb1mx3.9**/33**, mbtmp3.9**/7**, ML3.8**/1**, Error ellipse: s-maj=45.9km s-min=26.8km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.16**	**175**	Pn	Pn	04 02 39.4	-2.2
	0.8nm,0.3s,baz=29,slow=19,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**30.21**	**2**	T	T	04 37 00.2	
	baz=191						
H11S3	**WAKE ISLAND Hy**	**30.22**	**2**	T	T	04 37 00.6	
	baz=191						
H11S1	**WAKE ISLAND Hy**	**30.23**	**2**	T	T	04 37 00.6	
	baz=191						
WRA	**Warramunga Arr**	**30.97**	**251**	P	P	04 06 33.5	0.0
	1.0nm,0.7s,baz=80,slow=9.1,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**31.44**	**3**	T	T	04 38 33.4	
	baz=188						
H11N3	**WAKE ISLAND Hy**	**31.44**	**3**	T	T	04 38 38.8	
	baz=188						
H11N2	**WAKE ISLAND Hy**	**31.45**	**3**	T	T	04 38 41.4	
	baz=188						
ASAR	**Alice Springs**	**32.20**	**244**	P	P	04 06 44.0	-0.3
	2.0nm,0.8s,baz=63,slow=10,SNR=10						
FITZ	**Fitzroy Crossi**	**38.93**	**256**	P	P	04 07 43.3	+1.1
	1.5nm,0.8s,baz=74,slow=7.4,SNR=3.5						
SONM	**Songino Array**	**79.20**	**324**	P	P	04 12 20.3	-1.0
	0.4nm,0.7s,baz=141,slow=4.8,SNR=3.4						
ILAR	**Eielson Array**	**84.39**	**19**	P	P	04 12 49.3	+1.2
	0.8nm,0.9s,baz=236,slow=5.2,SNR=4.8						
MKAR	**Makanchi Array**	**93.97**	**317**	P	P	04 13 33.9	-0.3
	0.5nm,0.8s,baz=98,slow=5.0,SNR=4.4						

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*IDC **07** 04:09:25.9±1.2, 11.°45S×165.°12E, h0^{km}, mb3.8/7, mb1 4.1/8, mb1mx3.9/33, mbtmp3.8/8, ML3.6/1, Error ellipse: s-maj=41.8km s-min=23.0km az=133.0*

*ISCJB **07** 04:09:29.4±0.9, 11.°6S±0.°1×165.°1E±0.°2, h34^{km}, mb3.7/6, Error ellipse: s-maj=23.2km s-min=17.2km az=19.9*

ISC 07 04:09:31.0±0.9**, 11.°5S**±0.°1×**165.°1E**±0.°2**, h34^{km}, n8, σ0.^{s}63**/8**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.56**	**173**	Pn	**Pn**	**04 12 00.4**	**+0.2**
	0.5nm,0.3s,baz=246,slow=5.2,SNR=8.1						
CTA	**Charters Tower**	**20.00**	**242**	P	**Pn**	**04 14 02.8**	**0.0**
	2.6nm,0.2s,baz=66,slow=17,SNR=3.2						
WRA	**Warramunga Arr**	**30.71**	**250**	P	**P**	**04 15 43.2**	**+0.1**
	1.7nm,0.8s,baz=80,slow=9.2,SNR=12						
ASAR	**Alice Springs**	**32.00**	**244**	P	**P**	**04 15 53.6**	**-0.8**
	1.2nm,0.8s,baz=72,slow=9.8,SNR=14						
SONM	**Songino Array**	**78.67**	**324**	P	**P**	**04 21 30.6**	**+0.8**
	0.3nm,0.4s,baz=130,slow=4.8,SNR=2.8						
ILAR	**Eielson Array**	**84.17**	**19**	P	**P**	**04 21 57.6**	**-0.8**
	0.4nm,0.6s,baz=236,slow=4.8,SNR=9.1						
NVAR	**Mina Array Bea**	**86.83**	**50**	P	**P**	**04 22 12.7**	**+0.1**
	0.3nm,0.7s,baz=252,slow=5.6,SNR=3.6						
MKAR	**Makanchi Array**	**93.43**	**317**	P	**P**	**04 22 43.2**	**+0.2**
	0.2nm,0.8s,baz=104,slow=6.1,SNR=3.9						

IDC 07 04:15:11.6±1.5**, 11.°15S**×**166.°71E, h0^{km}, mb3.9**/6**, mb1 4.2**/6**, mb1mx3.9**/34**, mbtmp3.9**/6**, MS3.5**/3**, Ms1 3.5**/3**, ms1mx3.0**/26**, Error ellipse: s-maj=103.5km s-min=22.1km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.87**	**284**	LR	LR	04 19 51.4	
	comp=Z,559nm,18.0s,baz=154,slow=41						
URZ	**Urewera**	**28.56**	**163**	LR	LR	04 31 54.0	
	comp=Z,73nm,18.2s,baz=6.0,slow=35						
H11S2	**WAKE ISLAND Hy**	**29.45**	**360**	T	T	04 52 34.1	
	baz=181,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.45**	**360**	T	T	04 52 38.3	
	baz=181,slow=76,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	**29.46**	**360**	T	T	04 52 37.0	
	baz=181,slow=76,SNR=3.5						
H11N1	**WAKE ISLAND Hy**	**30.66**	**0**	T	T	04 54 03.9	
	baz=182,slow=76,SNR=9.9						
H11N3	**WAKE ISLAND Hy**	**30.67**	**0**	T	T	04 54 04.3	
	baz=182,slow=76,SNR=8.0						
H11N2	**WAKE ISLAND Hy**	**30.68**	**0**	T	T	04 54 05.3	
	baz=182,slow=76,SNR=9.2						
STKA	**Stephens Creek**	**31.02**	**224**	P	P	04 21 31.4	+0.3
	1.5nm,0.6s,baz=17,slow=10,SNR=4.0						
WRA	**Warramunga Arr**	**32.34**	**250**	P	P	04 21 43.1	+0.2
	1.3nm,0.8s,baz=82,slow=8.8,SNR=7.0						
ASAR	**Alice Springs**	**33.59**	**244**	P	P	04 21 53.2	-0.6
	0.7nm,0.8s,baz=75,slow=9.5,SNR=5.6						
LEM	**Lembang**	**58.45**	**269**	LR	LR	04 53 17.9	
	comp=Z,30nm,18.1s,baz=138,slow=39						
ILAR	**Eielson Array**	**83.31**	**18**	P	P	04 27 40.4	+0.4
	1.8nm,0.7s,baz=248,slow=5.0,SNR=44						
NVAR	**Mina Array Bea**	**85.37**	**50**	P	P	04 27 51.4	0.0
	0.6nm,0.8s,baz=235,slow=3.2,SNR=3.3						
YKA	**Yellowknife Ar**	**94.63**	**27**	P	P	04 28 33.2	-0.9
	0.4nm,0.7s,baz=258,slow=4.7,SNR=6.3						

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*ISCJB **07** 04:24:49.4±0.5, 42.°19N±0.°07×96.°73E±0.°06, h10^{km}, mb4.1/4, MS3.5/1, Error ellipse: s-maj=10.5km s-min=5.3km az=27.8*

*NEIC **07** 04:24:52.3±0.9, 42.°25N×96.°82E, h10^{km}, mb4.0/6, Error ellipse: s-maj=18.2km s-min=6.8km az=177.0*

*BJI **07** 04:24:53.2, 42.°23N×96.°69E, h5^{km}, mB4.4/2, mb4.3/3, ML4.3/8, Ms3.9/4, Ms7 3.6/4*

*IDC **07** 04:24:54.2±3.2, 42.°65N×96.°78E, h0^{km}, mb3.8/2, mb1 3.8/6, mb1mx3.4/39, mbtmp3.7/6, ML3.3/4, MS3.5/1, Ms1 3.4/1, ms1mx2.7/40, Error ellipse: s-maj=49.8km s-min=23.9km az=171.0*

ISC 07 04:24:52.8±0.6**, 42.°29N**±0.°08×**96.°68E**±0.°06**, h10^{km}, n27, σ2.^{s}10**/32**, mb4.2**/4**, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**3.74**	**139**	Pn	**Pn**	**04 25 52.2**	**+1.6**
GTA				Pg	**Pb**	**04 25 59.6**	**+0.7**
GTA				Sn	**Sn**	**04 26 31.4**	**-3.3**
GTA				Sg	**Sb**	**04 26 46.0**	**+1.7**
GTA				LR	LR		
	comp=N,570nm,4.9s						
GTA				LR	LR		
	comp=E,520nm,4.8s						
GTA				LR	LR		
	comp=Z,410nm,6.8s						
WMQ	**Urumqi**	**6.75**	**286**	Pn	**Pn**	**04 26 34.8**	**+2.8**
WMQ				smax	smax		
	comp=N,230nm,0.9s						
WMQ				smax	smax		
	comp=E,340nm,0.7s						
WMQ	**Urumqi**	**6.75**	**286**	*e*Pn	**Pn**	**04 26 34.8**	**+2.8**
WMQ				*e*Pg	**Pb**	**04 26 52.3**	**+2.0**
WMQ				*e*Sg	**Sg**	**04 28 24.3**	**-5.2**
SONA0	**Songino Array**	**8.83**	**48**	*e*Pn	**Pn**	**04 27 00.4**	**0.0**
SONA0				*e*Lg	Lg	04 29 25.3	
SONM	**Songino Array**	**8.83**	**48**	Pn	**Pn**	**04 27 00.4**	**0.0**
	0.6nm,0.3s,baz=231,slow=15,SNR=9.8						
SONM				Lg	Lg	04 29 25.3	
	1.2nm,0.3s,baz=220,slow=26,SNR=5.3						
MK01	**Makanchi Array**	**11.19**	**298**	*e*Pn	**Pn**	**04 27 33.2**	**+0.5**
MK01				*e*Sn	**Sn**	**04 29 41.7**	**+3.8**
MK31	**Makanchi Array**	**11.21**	**299**	*e*Pn	**Pn**	**04 27 33.4**	**+0.4**
MK32	**Makanchi Array**	**11.21**	**299**	*e*Pn	**Pn**	**04 27 33.6**	**+0.6**
MK32				*e*Lg	Lg	04 30 46.4	
MKAR	**Makanchi Array**	**11.21**	**299**	Pn	**Pn**	**04 27 33.6**	**+0.6**
	0.6nm,0.3s,baz=109,slow=15,SNR=35						
MKAR				Lg	Lg	04 30 46.4	
	0.3nm,0.3s,baz=111,slow=24,SNR=3.5						
MAKZ	**Makanchi**	**11.42**	**298**	*e*Pn	**Pn**	**04 27 36.2**	**+0.4**
TARG	**Taragay, Kyrgy**	**14.05**	**274**	*e*Pn	**Pn**	**04 28 09.8**	**-2.3**
ZALV	**Zalesovo Beam**	**14.07**	**330**	*e*Pn	**Pn**	**04 28 10.4**	**-1.6**
ZALV				Lg	Lg	04 32 12.8	
ZALV	**Zalesovo Beam**	**14.07**	**330**	Pn	**Pn**	**04 28 11.6**	**-0.4**
	0.2nm,0.3s,baz=68,slow=16,SNR=3.2						
ZALV				Lg	Lg	04 32 12.7	
	0.1nm,0.3s,baz=124,slow=21,SNR=3.0						
ZAA1	**Zalesovo Array**	**14.07**	**330**	*e*Pn	**Pn**	**04 28 11.6**	**-0.5**
KURK	**Kurchatov**	**14.99**	**310**	*e*Pn	**Pn**	**04 28 21.3**	**-3.2**
	6.6nm,1.4s						
AAK	**Ala-Archa**	**16.37**	**279**	Pn	**Pn**	**04 28 44.7**	**+2.0**
	0.2nm,0.3s,baz=90,slow=15,SNR=4.8						
ARSB	**Arslanbob**	**17.68**	**275**	*e*Pn	**P**	**04 29 01.1**	**+1.0**
	4.1nm,0.6s						
GAR	**Garm**	**20.24**	**269**	*e*P	**P**	**04 29 25.0**	**-3.2**
	6.1nm,0.6s						
BRVK	**Borovoye**	**20.66**	**310**	*e*P	**P**	**04 29 33.8**	**+1.3**
	2.9nm,0.8s						
CHGR	**Chuyangaron**	**21.21**	**269**	*e*P	**P**	**04 29 38.8**	**+0.1**
	12nm,0.7s						
MDJ	**Mudanjiang**	**23.92**	**73**	*e*P	**P**	**04 30 05.9**	**-0.8**
	28nm,1.5s						
KS01	**Wonju Array Si**	**24.35**	**91**	*e*P	**P**	**04 30 07.3**	**-3.5**
KBZ	**Khabaz**	**38.77**	**291**	LR	LR	04 50 18.6	
	comp=Z,66nm,18.9s,baz=32,slow=39						
ARA0	**ARCESS Array S**	**44.62**	**332**	*e*P	**P**	**04 33 05.0**	**+0.2**
ARCES	**ARCESS Array B**	**44.62**	**332**	P	**P**	**04 33 05.0**	**+0.2**
	0.9nm,0.7s,baz=79,slow=11,SNR=3.0						
FIA0	**FINESS Array S**	**45.06**	**320**	*e*P	**P**	**04 33 08.9**	**+0.5**
FINES	**FINESS Array B**	**45.06**	**320**	P	**P**	**04 33 08.9**	**+0.5**
	2.2nm,1.1s,baz=95,slow=9.9,SNR=4.4						

IDC 07 04:28:11.8±1.6**, 10.°98S**×**165.°31E, h0^{km}, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.7**/24**, mbtmp3.8**/5**, ML3.8**/1**, Error ellipse: s-maj=50.6km s-min=29.1km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.08**	**175**	Pn	Pn	04 30 52.7	+1.0
	0.6nm,0.3s,baz=0.0,slow=20,SNR=4.5						
WRA	**Warramunga Arr**	**31.10**	**250**	P	P	04 34 31.4	-0.9
	0.8nm,0.6s,baz=82,slow=9.2,SNR=6.8						
ASAR	**Alice Springs**	**32.44**	**243**	P	P	04 34 44.3	+0.3
	0.4nm,0.5s,baz=71,slow=9.2,SNR=5.8						
ILAR	**Eielson Array**	**83.59**	**19**	P	P	04 40 41.2	-0.4
	0.6nm,0.7s,baz=233,slow=5.1,SNR=10						
MKAR	**Makanchi Array**	**93.18**	**317**	P	P	04 41 28.9	+0.8
	0.2nm,0.6s,baz=117,slow=5.0,SNR=2.6						

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*IDC **07** 04:37:38.4±0.7, 11.°66S×164.°97E, h0^{km}, mb4.4/15, mb1 4.6/17, mb1mx4.4/36, mbtmp4.4/17, ML4.4/2, MS3.7/9, Ms1 3.7/9, ms1mx3.4/30, Error ellipse: s-maj=22.6km s-min=16.1km az=123.0*

*NEIC **07** 04:37:40.3±0.2, 11.°67S×164.°90E, h10^{km}, mb4.8/47, Error ellipse: s-maj=6.3km s-min=4.8km az=112.0*

*ISCJB **07** 04:37:42.2±0.2, 11.°81S±0.°04×164.°86E±0.°05, h34^{km}, mb4.7/59, MS3.9/8, Error ellipse: s-maj=6.9km s-min=5.7km az=11.8*

ISC 07 04:37:43.7±0.4**, 11.°72S**±0.°07×**164.°98E**±0.°08**, h34^{km}, n100, σ1.^{s}08**/95**, mb4.7**/59**, MS3.8**/8**, 1D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.45**	**294**	LR	LR	04 41 01.3	
	comp=Z,353nm,21.2s,baz=112,slow=38						
DZM	**Mont Dzumac**	**10.39**	**172**	*e*Pn	**Pn**	**04 40 09.8**	**-0.7**
	38nm,0.6s						
DZM				*e*LR	LR	04 42 34.3	
	comp=Z,311nm,24.7s						
DZM	**Mont Dzumac**	**10.39**	**172**	*e*Pn	**Pn**	**04 40 10.6**	**+0.2**
DZM	**Mont Dzumac**	**10.39**	**172**	Pn	**Pn**	**04 40 09.9**	**-0.5**
	2.7nm,0.3s,baz=340,slow=12,SNR=35						
DZM				LR	LR	04 43 25.9	
	comp=Z,264nm,18.2s,baz=274,slow=33						
ONTNC	**Ouen Toro**	**10.62**	**173**	*e*Pn	**Pn**	**04 40 14.1**	**+0.5**
OUENC	**Ouen Island, N**	**10.79**	**171**	*e*Pn	**Pn**	**04 40 15.8**	**0.0**
PINNC	**Pines Island,**	**11.09**	**168**	*e*Pn	**Pn**	**04 40 20.1**	**+0.2**
MSVF	**Nonsavu**	**13.98**	**117**	*e*P	**P**	**04 41 07.9**	**+0.8**
MSVF				*e*Sn	Sn	04 43 20.1	-14
EIDS	**Eidsvold**	**18.90**	**222**	*e*P	**Pn**	**04 42 04.4**	**+2.2**
	34nm,1.3s						
CTA	**Charters Tower**	**19.83**	**243**	P	**Pn**	**04 42 12.3**	**-1.1**
	0.8nm,0.3s,baz=68,slow=11,SNR=9.7						
CTAO	**Charters Tower**	**19.83**	**243**	*e*P	**P**	**04 42 10.5**	**-1.2**
	13nm,0.8s						
MANU	**Manus Island**	**19.94**	**298**	*e*P	**Pn**	**04 42 14.9**	**+0.2**
	41nm,0.9s						
COEN	**Coen**	**21.38**	**262**	*e*P	**P**	**04 42 28.6**	**+0.1**
	17nm,1.1s						
ARMA	**Armidale**	**22.36**	**212**	*e*P	**P**	**04 42 41.2**	**+2.2**
	36nm,1.4s						
RAO	**Raoul Island**	**23.63**	**140**	*e*P	**P**	**04 42 49.0**	**-2.9**
	2μm,0.6s						
RAO				*e*Sn	Sn	04 47 33.5	+7.0
OUZ	**Omahuta**	**24.67**	**163**	*e*P	**P**	**04 43 02.5**	**+1.1**
	68nm,1.3s						
URZ	**Urewera**	**28.57**	**160**	P	**P**	**04 43 38.0**	**+1.5**
	3.4nm,0.5s,baz=333,slow=14,SNR=3.1						
BKZ	**Black Stump Fm**	**29.19**	**161**	*e*P	**P**	**04 43 41.0**	**-1.1**
	18nm,1.1s						
STKA	**Stephens Creek**	**29.44**	**223**	P	**P**	**04 43 44.3**	**0.0**
	2.5nm,0.5s,baz=48,slow=9.6,SNR=5.5						
STKA				LR	LR	04 55 08.5	
	comp=Z,238nm,18.5s,baz=27,slow=36						
H11S2	**WAKE ISLAND Hy**	**30.06**	**3**	T	T	05 15 19.1	
	baz=184,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**30.07**	**3**	T	T	05 15 12.3	
	baz=184,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**30.08**	**3**	T	T	05 15 18.3	
	baz=184,slow=76,SNR=16						
WRAB	**Tennant Creek**	**30.54**	**251**	*e*P	**P**	**04 43 53.2**	**-1.0**
	11nm,1.0s						
WB2	**Warramunga Arr**	**30.54**	**251**	*e*P	**P**	**04 43 53.4**	**-0.9**
WR1	**Warramunga Arr**	**30.55**	**251**	*e*P	**P**	**04 43 53.0**	**-1.4**
	15nm,1.0s						
WR1				*e*PcP	**PcP**	**04 46 52.6**	**-0.2**
WRA	**Warramunga Arr**	**30.55**	**251**	P	**P**	**04 43 53.0**	**-1.4**
	6.9nm,0.9s,baz=81,slow=9.2,SNR=30						
WRA				PcP	**PcP**	**04 46 52.6**	**-0.2**
	1.2nm,0.9s,baz=79,slow=3.0,SNR=6.3						
WRA				LR	LR	04 55 06.0	
	comp=Z,98nm,19.0s,baz=65,slow=34						
H11N1	**WAKE ISLAND Hy**	**31.29**	**3**	T	T	05 16 50.7	
	baz=182,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy**	**31.30**	**3**	T	T	05 16 49.7	
	baz=182,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**31.31**	**3**	T	T	05 16 48.2	
	baz=182,slow=76,SNR=16						
AS01	**Alice Springs**	**31.78**	**244**	*e*P	**P**	**04 44 03.2**	**-2.0**
AS31	**Alice Springs**	**31.82**	**244**	*e*P	**P**	**04 44 04.3**	**-1.3**
	1.4nm,0.7s						
AS31				*e*PcP	**PcP**	**04 46 55.8**	**-0.4**
ASAR	**Alice Springs**	**31.82**	**244**	P	**P**	**04 44 04.0**	**-1.6**
	4.7nm,0.8s,baz=71,slow=9.0,SNR=36						
ASAR				PcP	**PcP**	**04 46 55.8**	**-0.4**
	0.6nm,0.7s,baz=82,slow=4.7,SNR=4.7						
ASAR				LR	LR	04 56 00.2	
	comp=Z,183nm,20.1s,baz=80,slow=35						
RPZ	**Rata Peaks**	**32.31**	**172**	*e*P	**P**	**04 44 09.5**	**-0.1**
	21nm,1.1s						
LBZ	**Lake Benmore**	**32.86**	**173**	*e*P	**P**	**04 44 14.4**	**+0.1**
	37nm,1.5s						
BBOO	**Buckleboo**	**33.83**	**227**	*e*P	**P**	**04 44 22.2**	**-0.7**
	20nm,1.3s						
FITZ	**Fitzroy Crossi**	**38.49**	**256**	*e*P	**P**	**04 45 01.9**	**-1.0**
	3.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**38.49**	**256**	P	**P**	**04 45 01.9**	**-1.0**
	2.2nm,0.7s,baz=112,slow=5.7,SNR=8.1						
FITZ				LR	LR	04 59 45.9	
	comp=Z,126nm,19.5s,baz=88,slow=34						
FORT	**Forrest**	**39.05**	**235**	*e*P	**P**	**04 45 06.6**	**-0.9**
	18nm,0.9s						
PPT	**Papeete**	**44.27**	**103**	LR	LR	05 01 19.0	
	comp=Z,66nm,21.0s,baz=190,slow=32						
PPT2	**Papeete2**	**44.27**	**103**	*e*LR	LR	04 58 10.1	
	comp=Z,150nm,24.2s						
AIN	**Ainahou**	**49.73**	**52**	*e*P	**P**	**04 46 33.5**	**+0.3**
	88nm,1.2s						
JOW	**Kunigami**	**52.34**	**318**	*e*P	**P**	**04 46 52.3**	**-0.1**
	14nm,0.9s						
MJAR	**Matsushiro Arr**	**54.23**	**333**	P	**P**	**04 47 05.5**	**-0.7**
	3.6nm,0.8s,baz=166,slow=8.4,SNR=5.9						
MAJO	**Matsushiro**	**54.23**	**333**	*e*P	**P**	**04 47 05.5**	**-0.7**
JNU	**Nakatsue**	**55.19**	**325**	*e*P	**P**	**04 47 12.3**	**-1.0**
	40nm,1.4s						
PETK	**Petropavlovsk-**	**64.87**	**355**	P	**P**	**04 48 18.4**	**-0.9**
	3.9nm,0.8s,baz=163,slow=12,SNR=4.0						
PEA1	**Petropavlovsk-**	**64.87**	**355**	*e*P	**P**	**04 48 18.4**	**-0.9**
ENH	**Enshi**	**67.74**	**310**	*e*P	**P**	**04 48 38.9**	**+0.7**
	9.9nm,0.8s						
XAN	**Xi'an**	**70.02**	**313**	P	**P**	**04 48 52.9**	**+0.6**
XAN				pP	pP	04 49 00.2	-1.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN	**Xi'an**	**70.02**	**313**	*e*P	**P**	**04 48 53.5**	**+1.1**
	comp=Z,6.3nm,0.8s						
KMI	**Kunming**	**70.83**	**302**	P	**P**	**04 48 59.5**	**+1.8**
KMI				pP	pP	04 49 05.6	-1.2
KMI				sP	sP	04 49 09.3	-0.8
KMI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,100nm,4.4s						
CMAR	**Chiang Mai Arr**	**71.70**	**294**	P	**P**	**04 49 04.5**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=108,slow=2.9,SNR=4.7						
HHC	**Hu-ho-hao-te**	**71.86**	**320**	*e*P	P	04 49 10.0	+6.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.2s						
QSPA	**South Pole Qui**	**78.29**	**180**	*e*P	**P**	**04 49 40.3**	**+0.1**
	comp=Z,13nm,0.8s						
SONA0	**Songino Array**	**78.77**	**324**	*e*P	**P**	**04 49 44.1**	**+1.0**
SONM	**Songino Array**	**78.77**	**324**	P	**P**	**04 49 44.1**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=149,slow=7.4,SNR=17						
SONA1	**Songino Array**	**78.77**	**324**	*e*P	**P**	**04 49 43.8**	**+0.7**
GTA	**Gaotai**	**78.98**	**314**	⇓P	**P**	**04 49 46.3**	**+1.9**
GTA				pP	PcP	04 49 51.0	-1.9
GTA				sP	pP	04 49 53.2	-0.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,170nm,6.7s						
GTA				LR	LR		
	comp=N,150nm,18.7s						
GTA				LR	LR		
	comp=E,260nm,20.0s						
GTA				LR	LR		
	comp=Z,120nm,18.7s						
ANM	**Nome**	**79.30**	**13**	*e*P	**P**	**04 49 46.2**	**+0.8**
	comp=Z,14nm,1.4s						
BILL	**Bilibino**	**79.55**	**0**	*e*P	**P**	**04 49 45.5**	**-1.2**
	comp=Z,22nm,1.2s						
RDOG	**Red Dog Mine**	**82.83**	**12**	*e*P	**P**	**04 50 05.0**	**+0.9**
	comp=Z,6.3nm,1.0s						
IM3	**Indian Mountai**	**83.27**	**16**	*e*P	**P**	**04 50 06.0**	**-0.4**
HDA	**Harding Lake**	**84.12**	**19**	*e*P	**P**	**04 50 09.9**	**-0.9**
	comp=Z,9.5nm,1.2s						
ILAR	**Eielson Array**	**84.38**	**19**	P	**P**	**04 50 11.8**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=239,slow=4.7,SNR=15						
ILB	**Eielson Array**	**84.38**	**19**	*e*P	**P**	**04 50 11.8**	**-0.4**
	comp=Z,9.5nm,1.5s						
IL1	**Eielson Array**	**84.39**	**19**	*e*P	**P**	**04 50 11.5**	**-0.6**
SCRK	**Sand Creek**	**84.80**	**20**	*e*P	**P**	**04 50 14.5**	**0.0**
	comp=Z,9.9nm,1.3s						
AFDM	**Forest Hills D**	**85.20**	**49**	*e*P	**P**	**04 50 16.9**	**-0.1**
	comp=Z,7.0nm,1.3s						
PAHR	**Pah Rah Range**	**86.61**	**48**	*e*P	**P**	**04 50 25.5**	**+1.5**
	comp=Z,6.8nm,1.3s						
NV01	**Mina Array Sit**	**87.03**	**50**	*e*P	**P**	**04 50 25.8**	**-0.4**
NVAR	**Mina Array Bea**	**87.03**	**50**	P	**P**	**04 50 25.9**	**-0.3**
	comp=Z,2.7nm,1.1s,baz=236,slow=6.6,SNR=9.4						
NVAR				LR	LR	05 22 44.1	
	comp=Z,91nm,18.4s,baz=259,slow=31						
NV11	**Mina Array Sit**	**87.14**	**50**	*e*P	**P**	**04 50 26.8**	**+0.1**
	comp=Z,0.8nm,1.4s						
SHPR	**Sheep Range**	**88.89**	**52**	*e*P	**P**	**04 50 37.0**	**+2.0**
	comp=Z,5.5nm,1.3s						
R11A	**Troy Canyon, C**	**89.05**	**51**	*e*P	**P**	**04 50 36.6**	**+0.8**
	comp=Z,3.3nm,1.2s						
W13A	**Hualapai Mount**	**89.52**	**54**	*e*P	**P**	**04 50 39.4**	**+1.2**
	comp=Z,4.9nm,1.3s						
ELK	**Elko**	**89.95**	**48**	*e*P	**P**	**04 50 41.2**	**+1.2**
	comp=Z,5.2nm,1.4s						
LCMT	**Little Creek M**	**90.50**	**52**	*e*P	**P**	**04 50 43.9**	**+1.3**
	comp=Z,4.1nm,1.2s						
CCUT	**Cedar City**	**90.54**	**52**	*e*P	**P**	**04 50 44.9**	**+2.1**
	comp=Z,6.2nm,1.2s						
SZCU	**Shurtz Canyon**	**90.77**	**52**	*e*P	**P**	**04 50 45.2**	**+1.3**
	comp=Z,4.4nm,1.2s						
KNB	**Kanab**	**90.83**	**52**	*e*P	**P**	**04 50 45.7**	**+1.6**
	comp=Z,9.8nm,1.4s						
U15A	**North Rim**	**91.11**	**53**	*e*P	**P**	**04 50 47.0**	**+1.5**
U15A				*e*pP	**sP**	**04 50 58.7**	**+0.4**
HLID	**Hailey**	**91.28**	**46**	*e*P	**P**	**04 50 46.2**	**+0.1**
	comp=Z,4.3nm,1.3s						
X16A	**Lo Mia Camp, P**	**91.31**	**55**	*e*P	**P**	**04 50 48.8**	**+2.3**
	comp=Z,2.1nm,1.0s						
MTPU	**Mount Pierson**	**91.57**	**52**	*e*P	**P**	**04 50 49.0**	**+1.3**
	comp=Z,8.8nm,1.4s						
HVU	**Hansel Valley**	**92.01**	**48**	*e*P	**P**	**04 50 50.1**	**+0.6**
	comp=Z,9.1nm,1.3s						
DLMT	**Dillon**	**92.98**	**44**	*e*P	**P**	**04 50 54.8**	**+1.0**
	comp=Z,5.9nm,1.1s						
MK01	**Makanchi Array**	**93.49**	**317**	*e*P	**P**	**04 50 56.6**	**+0.6**
MK31	**Makanchi Array**	**93.50**	**317**	*e*P	**P**	**04 50 56.1**	**0.0**
	comp=Z,6.1nm,1.3s						
MK32	**Makanchi Array**	**93.50**	**317**	*e*P	**P**	**04 50 56.2**	**+0.2**
MKAR	**Makanchi Array**	**93.50**	**317**	*e*P	**P**	**04 50 56.1**	**0.0**
	comp=Z,18nm,0.8s						
MKAR	**Makanchi Array**	**93.50**	**317**	P	**P**	**04 50 56.2**	**+0.2**
	comp=Z,3.6nm,0.8s,baz=95,slow=6.5,SNR=35						
ZALV	**Zalesovo Beam**	**93.66**	**324**	*e*P	**P**	**04 50 56.2**	**-0.3**
ZALV	**Zalesovo Beam**	**93.66**	**324**	P	**P**	**04 50 56.5**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=104,slow=3.1,SNR=6.0						

ZAA1	Zalesovo Array	93.66	324	*e*P	P	04 50 56.5	-0.1
MAKZ	Makanchi	93.71	317	*e*P	P	04 50 57.8	+0.8
	comp=Z,6.2nm,1.1s						
PD31	Pinedale Array	94.56	47	*e*P	P	04 51 00.6	-0.7
	comp=Z,5.1nm,1.5s						
PDAR	Pinedale Array	94.56	47	P	P	04 51 00.6	-0.7
	comp=Z,0.5nm,0.8s,baz=268,slow=4.0,SNR=4.0						
PDAR				LR	LR	05 25 28.2	
	comp=Z,32nm,19.8s,baz=45,slow=30						
YKA	Yellowknife Ar	95.91	27	P	P	04 51 04.8	-1.9
	comp=Z,0.6nm,0.9s,baz=257,slow=4.6,SNR=6.1						
YKB5	Yellowknife Ar	95.91	27	*e*P	P	04 51 04.8	-1.9
LRAL	Lakeview Retre	111.34	59	*e*Pdif	Pdif	04 52 15.2	-1.0

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*IDC **07** 04:44:26.4±1.0, 10°.86S×165°.51E, h0^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.9/37, mbtmp3.8/11, ML3.5/1, Error ellipse: s-maj=39.1km s-min=20.6km az=138.0*

*ISCJB **07** 04:44:29.4±0.7, 11°.0S±0°.1×165°.5E±0°.1, h30^{km}, mb3.8/9, Error ellipse: s-maj=21.3km s-min=14.3km az=29.0*

ISC 07 04:44:31.0±0.8**, 10°.9S**±0°.1×**165°.5E**±0°.2**, h30^{km}, n17, σ0ˢ.98**/11**, mb3.8**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.19	175	Pn	Pn	04 47 09.4	+0.4
	0.4nm,0.3s,baz=324,slow=22,SNR=7.2						
CTA	Charters Tower	20.68	241	P	P	04 49 09.3	+0.6
	8.1nm,0.9s,baz=68,slow=7.5,SNR=4.7						
H11S2	WAKE ISLAND Hy	29.19	2	T	T	05 21 01.0	
	baz=181,slow=76,SNR=5.1						
H11S3	WAKE ISLAND Hy	29.19	2	T	T	05 21 01.3	
	baz=181,slow=76,SNR=4.2						
H11S1	WAKE ISLAND Hy	29.20	2	T	T	05 21 02.4	
	baz=181,slow=76,SNR=4.1						
H11N1	WAKE ISLAND Hy	30.41	3	T	T	05 22 32.8	
	baz=182,slow=76,SNR=4.1						
H11N3	WAKE ISLAND Hy	30.42	3	T	T	05 22 32.9	
	baz=182,slow=76,SNR=4.4						
H11N2	WAKE ISLAND Hy	30.43	3	T	T	05 22 33.7	
	baz=182,slow=76,SNR=4.7						
WRA	Warramunga Arr	31.32	249	P	P	04 50 48.0	-1.0
	1.1nm,0.9s,baz=82,slow=9.0,SNR=5.6						
ASAR	Alice Springs	32.66	243	P	P	04 50 59.6	-1.1
	1.1nm,0.8s,baz=74,slow=10,SNR=9.3						
SONM	Songino Array	78.38	324	P	P	04 56 30.0	+1.2
	0.2nm,0.6s,baz=87,slow=6.3,SNR=2.8						
ILAR	Eielson Array	83.41	19	P	P	04 56 55.2	+0.1
	0.5nm,0.6s,baz=244,slow=5.1,SNR=11						
NVAR	Mina Array Bea	86.09	50	P	P	04 57 09.6	+0.1
	1.8nm,0.9s,baz=234,slow=7.6,SNR=8.1						
MKAR	Makanchi Array	93.22	317	P	P	04 57 43.6	+0.9
	0.1nm,0.4s,baz=92,slow=9.1,SNR=2.7						
ZALV	Zalesovo Beam	93.27	324	P	P	04 57 42.7	0.0
	0.6nm,0.6s,baz=66,slow=1.7,SNR=3.4						
PDAR	Pinedale Array	93.60	47	P	P	04 57 45.2	+0.4
	0.5nm,0.8s,baz=197,slow=1.5,SNR=4.4						
YKA	Yellowknife Ar	94.92	27	P	P	04 57 48.5	-1.5
	0.2nm,0.7s,baz=257,slow=4.7,SNR=4.8						

MEX 07 04:48:13.0±0.4**, 13°.93N**×**92°.44W, h15^{km}**±179^{km}**, MD3.8, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.99	10	*e*P	Pb	04 48 27.9	-4.0
PCIG		1.93	337	*e*P	Pn	04 48 41.6	-3.6
PCIG				*i* S	Sn	04 49 04.9	-4.3
CCIG	Comitan	2.36	7	*e*P	Pn	04 48 48.2	-3.2

IDC 07 04:58:56.9±3.6**, 11°.55S**×**164°.92E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/22**, mbtmp3.8**/4**, MS3.4**/3**, Ms1 3.4**/3**, ms1mx2.9**/35**, Error ellipse: s-maj=151.6km s-min=30.6km az=137.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.57	172	LR	LR	05 04 53.6	
	comp=Z,89nm,21.4s,baz=128,slow=34						
STKA	Stephens Creek	29.52	223	LR	LR	05 16 01.2	
	comp=Z,68nm,20.5s,baz=27,slow=35						
WRA	Warramunga Arr	30.55	250	P	P	05 05 12.9	+0.5
	0.6nm,0.8s,baz=79,slow=9.6,SNR=4.5						
ASAR	Alice Springs	31.85	244	P	P	05 05 23.5	-0.3
	1.7nm,0.9s,baz=80,slow=9.1,SNR=11						
ILAR	Eielson Array	84.24	19	P	P	05 11 30.2	+0.1
	0.3nm,0.7s,baz=232,slow=5.5,SNR=4.0						
NVAR	Mina Array Bea	86.96	50	LR	LR	05 49 13.3	
	comp=Z,45nm,18.1s,baz=61,slow=35						
MKAR	Makanchi Array	93.33	317	P	P	05 12 13.6	-0.3
	1.2nm,0.9s,baz=101,slow=6.0,SNR=11						

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*IDC **07** 05:07:06.7±1.5, 10°.75S×164°.62E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.9/34, mbtmp3.9/6, Error ellipse: s-maj=70.6km s-min=24.1km az=135.0*

*ISCJB **07** 05:07:09.7±1.3, 10°.8S±0°.3×164°.5E±0°.3, h29^{km}, mb3.8/6, Error ellipse: s-maj=60.9km s-min=20.9km az=135.4*

ISC 07 05:07:11.4±1.3**, 10°.8S**±0°.3×**164°.6E**±0°.3**, h29^{km}, n6, σ1ˢ.31**/6**, mb3.9**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.88	222	P	P	05 13 17.3	+0.7
	2.0nm,0.7s,baz=312,slow=19,SNR=4.3						
WRA	Warramunga Arr	30.51	249	P	P	05 13 20.9	-1.5
	0.9nm,0.8s,baz=80,slow=9.0,SNR=4.3						
ASAR	Alice Springs	31.91	242	P	P	05 13 34.4	-0.3
	1.5nm,0.6s,baz=62,slow=10,SNR=15						
SONM	Songino Array	77.76	324	P	P	05 19 07.1	+1.3
	0.6nm,0.8s,baz=133,slow=6.1,SNR=3.8						
ILAR	Eielson Array	83.61	19	P	P	05 19 35.8	-0.9
	0.7nm,0.8s,baz=238,slow=4.9,SNR=7.6						
NVAR	Mina Array Bea	86.71	50	P	P	05 19 53.1	0.0
	0.5nm,0.7s,baz=235,slow=5.2,SNR=3.7						

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*ISCJB **07** 05:07:39.3±0.7, 15°.19S±0°.05×167°.45E±0°.10, h129^{km}, mb4.5/17, Error ellipse: s-maj=13.9km s-min=5.8km az=166.7*

*IDC **07** 05:07:39.1±3.7, 15°.09S×167°.35E, h110^{km}±29^{km}, mb4.1/5, mb1 4.3/6, mb1mx3.8/32, mbtmp4.4/6, Error ellipse: s-maj=37.1km s-min=28.6km az=102.0*

*NEIC **07** 05:07:40.4±1.6, 15°.18S×167°.51E, h127^{km}±12^{km}, mb4.4/12, Error ellipse: s-maj=14.7km s-min=9.8km az=210.0*

ISC 07 05:07:40.4±1.0**, 15°.19S**±0°.08×**167°.7E**±0°.2**, h129^{km}, n34, σ1ˢ.19**/40**, mb4.5**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	6.27	177	*e*Pn	Pn	05 09 08.7	-1.9
MARNC				*e*Sn	Sn	05 10 18.8	-2.1
DZM	Mont Dzumac	6.94	189	*e*Pn	Pn	05 09 19.5	-0.2
DZM				*e*Sn	Sn	05 10 38.2	+0.9
DZM	Mont Dzumac	6.94	189	P	Pn	05 09 19.7	0.0
	12nm,0.3s,baz=24,slow=9.4,SNR=55						
DZM				S	Sn	05 10 37.4	+0.1
	10nm,0.3s,baz=110,slow=23,SNR=11						
ONTNC	Ouen Toro	7.17	189	*e*Pn	Pn	05 09 23.3	+0.6
ONTNC				*e*Sn	Sn	05 10 43.8	+1.1
OUENC	Ouen Island, N	7.23	186	*e*Pn	Pn	05 09 23.8	+0.3
OUENC				*e*Sn	Sn	05 10 45.0	+0.8
PINNC	Pines Island,	7.39	181	*e*Pn	Pn	05 09 26.0	+0.4
PINNC				*e*Sn	Sn	05 10 48.3	+0.3
EIDS	Eidsvold	18.53	234	*e*P	P	05 11 47.9	+0.9
	12nm,0.6s						
ARMA	Armidale	21.12	221	*e*P	P	05 12 14.6	-0.5
	33nm,1.6s						
URZ	Urewera	24.45	162	*e*P	P	05 12 48.2	+1.0
	22nm,1.4s						
BKZ	Black Stump Fm	25.12	164	*e*P	P	05 12 54.1	+0.8
	8.6nm,0.7s						
CAN	Canberra	26.11	216	*e*P	P	05 13 01.9	-0.5
	11nm,1.0s						
BFZ	Birch Farm	26.48	165	*e*P	P	05 13 05.4	-0.1
	43nm,1.3s						
SNZO	South Karori	26.74	168	*e*P	P	05 13 08.3	+0.5
	100nm,1.6s						
THZ	Tophouse	26.87	171	*e*P	P	05 13 09.6	+0.6
	29nm,1.5s						
LTZ	Lake Taylor	27.78	173	*e*P	P	05 13 18.1	+0.9
	29nm,1.5s						
STKA	Stephens Creek	28.98	230	*e*P	P	05 13 28.1	+0.2
	1.8nm,0.6s						
STKA	Stephens Creek	28.98	230	P	P	05 13 27.8	-0.1
	6.4nm,0.3s,baz=60,slow=10,SNR=19						
TOO	Toolangi	29.70	217	*e*P	P	05 13 33.5	-0.9
	19nm,1.3s						
WB2	Warramunga Arr	32.06	257	*e*P	P	05 13 53.7	-1.6
WR1	Warramunga Arr	32.07	257	*e*P	P	05 13 52.9	-2.5
	4.9nm,1.0s						
WRA	Warramunga Arr	32.07	257	P	P	05 13 52.9	-2.5
	2.2nm,0.7s,baz=86,slow=9.3,SNR=13						
AS01	Alice Springs	32.81	250	*e*P	P	05 14 00.9	-0.9
AS31	Alice Springs	32.85	250	*e*P	P	05 14 00.6	-1.6
	4.1nm,0.5s						
AS31				*e*ScP	ScP	05 20 18.7	+2.3
ASAR	Alice Springs	32.86	250	P	P	05 14 00.2	-1.9
	6.2nm,0.4s,baz=78,slow=9.1,SNR=45						
ASAR				ScP	ScP	05 20 18.7	+2.3
	0.2nm,0.3s,baz=100,slow=1.5,SNR=4.2						
BBOO	Buckleboo	33.59	233	*e*P	P	05 14 08.4	0.0
	19nm,0.6s						
QSPA	South Pole Qui	74.84	180	*e*P	P	05 19 06.7	+0.1
	8.1nm,1.1s						
SONA0	Songino Array	83.08	323	*e*P	P	05 19 52.7	+1.0
SONM	Songino Array	83.08	323	P	P	05 19 52.7	+1.0
	0.3nm,0.5s,baz=148,slow=6.8,SNR=3.0						
MK32	Makanchi Array	97.79	316	*e*P	Pdif	05 21 01.3	+0.2
MKAR	Makanchi Array	97.79	316	P	Pdif	05 21 01.3	+0.2
	0.3nm,0.4s,baz=78,slow=7.4,SNR=3.7						
ARA0	ARCESS Array S	120.79	345	*e*PKPdf	PKPdf	05 26 16.5	-0.2
ARCES	ARCESS Array B	120.79	345	PKP	PKPdf	05 26 16.5	-0.2
	2.9nm,1.0s,baz=67,slow=2.3,SNR=9.5						
TORD	Torodi Ar. Bea	166.23	263	PKP	PKPdf	05 27 30.3	-0.9
	0.3nm,0.6s,baz=126,slow=0.5,SNR=3.5						
TOA1	Torodi Ar. Sit	166.23	263	*e*PKPdf	PKPdf	05 27 30.3	-0.9

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*NNC **07** 05:14:08.1±2.0, 53°.44N×87°.53E, h0^{km}±15^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=17.8km s-min=7.1km az=74.0, Suspected Mining explosion.*

ASRS 07 05:14:02.2, 53°.60N×87°.88E, M2.9, 6C-8D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.85	282	⇓Pn	Pg	05 14 38.2	+0.6
	9.0nm,0.5s						
ZAA0				⇑Sn	Sg	05 15 02.3	+0.7
	58nm,0.7s						
KURK	Kurchatov	6.39	247	⇓Pn	Pn	05 15 41.1	+3.6
	2.0nm,0.6s						
KURK				⇓Sn	Sn	05 16 51.2	+0.1
	2.0nm,0.5s						
KURK				⇑Lg	Lg	05 17 25.5	
	18nm,1.2s						
KURBB	Kurchatov Arra	6.49	246	⇑Pn	Pn	05 15 42.1	+3.2
	4.7nm,0.5s						
KURBB				⇑Sn	Sn	05 16 53.6	+0.1
	13nm,0.6s						
KURBB				⇓Lg	Lg	05 17 26.1	
	20nm,0.7s						
MK31	Makanchi Array	7.70	210	⇓Pn	Pn	05 15 59.1	+3.5
	0.7nm,0.5s,baz=30,slow=14,SNR=26						
MK31				⇓Sn	Sn	05 17 23.1	-0.3
	1.9nm,0.6s,baz=28,slow=25,SNR=5.5						
MK31				⇓Lg	Lg	05 18 04.7	
	16nm,1.2s,baz=44,slow=34,SNR=5.6						
MAKZ	Makanchi	7.78	211	⇓Pn	Pn	05 16 00.1	+3.4
	1.2nm,0.7s						
MAKZ				⇑Sn	Sn	05 17 26.9	+1.4
	1.9nm,0.6s						
MAKZ				⇑Lg	Lg	05 18 01.2	
	6.5nm,0.8s						

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*IDC **07** 05:14:13.3±1.1, 11°.52S×164°.99E, h0^{km}, mb4.1/7, mb1 4.3/8, mb1mx4.0/32, mbtmp4.1/8, ML3.9/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/30, Error ellipse: s-maj=42.9km s-min=22.4km az=133.0*

*NEIC **07** 05:14:16.0±0.4, 11°.21S×165°.00E, h10^{km}, mb4.3/6, Error ellipse: s-maj=13.8km s-min=8.1km az=143.0*

*ISCJB **07** 05:14:17.9±0.6, 11°.3S±0°.1×164°.87E±0°.09, h34^{km}, mb4.4/16, MS3.4/2, Error ellipse: s-maj=16.4km s-min=10.5km az=143.1*

ISC 07 05:14:19.3±0.7**, 11°.2S**±0°.1×**165°.0E**±0°.1**, h34^{km}, n36, σ1ˢ.02**/26**, mb4.3**/16**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.24	289	*e*Pn	Pn	05 15 35.7	+0.5
HNR	Honiara	5.24	289	LR	LR	05 17 34.4	
	comp=Z,535nm,19.1s,baz=82,slow=37						
DZM	Mont Dzumac	10.88	173	Pn	Pn	05 16 44.3	-8.4
	0.8nm,0.3s,baz=343,slow=13,SNR=5.8						
DZM				LR	LR	05 20 24.9	
	comp=Z,188nm,19.5s,baz=324,slow=35						
CTA	Charters Tower	20.02	242	P	Pn	05 18 51.6	+0.2
	0.3nm,0.3s,baz=66,slow=13,SNR=9.8						
CTAO	Charters Tower	20.02	242	*e*P	Pn	05 18 51.6	+0.2
	22nm,1.0s						
COEN	Coen	21.42	260	*e*P	P	05 19 05.0	+0.4
	5.5nm,0.9s						
URZ	Urewera	29.03	160	LR	LR	05 30 56.6	
	comp=Z,61nm,19.2s,baz=354,slow=35						
H11S2	WAKE ISLAND Hy	29.58	3	T	T	05 51 15.5	
	baz=184,slow=76,SNR=6.0						
H11S3	WAKE ISLAND Hy	29.59	3	T	T	05 51 15.6	
	baz=184,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	29.60	3	T	T	05 51 17.5	
	baz=184,slow=76,SNR=5.7						
WB2	Warramunga Arr	30.68	250	*e*P	P	05 20 31.4	+0.4
	6.6nm,1.0s						
WRAB	Tennant Creek	30.68	250	*e*P	P	05 20 31.0	0.0
	5.3nm,1.0s						
WR1	Warramunga Arr	30.69	250	*e*P	P	05 20 30.4	-0.8
	4.6nm,0.9s						
WRA	Warramunga Arr	30.69	250	P	P	05 20 30.4	-0.8
	3.0nm,1.0s,baz=77,slow=9.2,SNR=15						
H11N1	WAKE ISLAND Hy	30.81	4	T	T	05 52 48.3	
	baz=184,slow=76,SNR=4.5						
H11N3	WAKE ISLAND Hy	30.81	4	T	T	05 52 53.3	
	baz=184,slow=76,SNR=4.7						
H11N2	WAKE ISLAND Hy	30.82	4	T	T	05 52 46.5	
	baz=184,slow=76,SNR=4.9						
SNZO	South Karori	31.17	166	*e*P	P	05 20 34.9	-0.1
	119nm,1.5s						
AS31	Alice Springs	32.01	243	*e*P	P	05 20 42.2	-0.6
	1.0nm,0.8s						
ASAR	Alice Springs	32.01	243	P	P	05 20 40.5	-2.3
	3.2nm,0.8s,baz=68,slow=10.0,SNR=26						
RPZ	Rata Peaks	32.80	172	LR	LR	05 32 56.7	
	comp=Z,86nm,19.0s,baz=336,slow=35						
SARN	Sarigan	33.61	325	*e*P	P	05 20 57.3	+0.6
	98nm,1.4s						
FORT	Forrest	39.30	235	*e*P	P	05 21 46.2	+1.0
	30nm,1.0s						
PETK	Petropavlovsk-	64.38	355	P	P	05 24 51.0	-0.6
	5.9nm,1.0s,baz=157,slow=8.0,SNR=3.7						
PEA1	Petropavlovsk-	64.39	355	*e*P	P	05 24 51.0	-0.7
BILL	Bilibino	79.07	1	*e*P	P	05 26 16.5	-3.1
	10nm,0.6s						
ILAR	Eielson Array	83.94	19	P	P	05 26 46.7	+1.2
	0.6nm,0.8s,baz=225,slow=5.8,SNR=4.0						
ILB	Eielson Array	83.94	19	*e*P	P	05 26 46.1	+0.6
NV01	Mina Array Sit	86.74	50	*e*P	P	05 27 01.2	+0.8
NVAR	Mina Array Bea	86.74	50	P	P	05 27 01.2	+0.8
	1.1nm,1.0s,baz=243,slow=6.5,SNR=4.3						
MK32	Makanchi Array	93.12	317	*e*P	P	05 27 30.0	+0.1
MKAR	Makanchi Array	93.12	317	P	P	05 27 30.0	+0.1
	0.7nm,0.8s,baz=88,slow=8.8,SNR=2.2						
YKA	Yellowknife Ar	95.50	27	P	P	05 27 41.4	+1.0
	0.2nm,0.7s,baz=247,slow=5.9,SNR=3.8						
YKB5	Yellowknife Ar	95.50	27	*e*P	P	05 27 41.0	+0.6
ARA0	ARCESS Array S	116.31	345	*e*PKPdf	PKiKP	05 32 59.1	+0.3
ARCES	ARCESS Array B	116.31	345	PKP	PKiKP	05 32 59.1	+0.3
	2.8nm,1.1s,baz=25,slow=3.0,SNR=2.6						

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*IDC **07** 05:17:31.2±0.9, 11°.19S×165°.30E, h0^{km}, mb4.0/9, mb1 4.2/11, mb1mx4.0/40, mbtmp4.0/11, ML4.4/2, MS3.3/3, Ms1 3.2/3, ms1mx2.9/37, Error ellipse: s-maj=29.2km s-min=20.8km az=140.0*

*NEIC **07** 05:17:32.9±0.3, 11°.24S×165°.24E, h10^{km}, mb4.5/9, Error ellipse: s-maj=8.6km s-min=6.5km az=88.0*

*ISCJB **07** 05:17:34.2±0.4, 11°.37S±0°.05×165°.21E±0°.06, h30^{km}, mb4.2/19, MS3.2/3, Error ellipse: s-maj=9.0km s-min=7.1km az=142.9*

ISC 07 05:17:36.0±0.6**, 11°.27S**±0°.09×**165°.30E**±0°.08**, h30^{km}, n45, σ1ˢ.01**/44**, mb4.2**/19**, MS3.3**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.57	289	*e*Pn	Pn	05 18 56.2	-0.6
HNR				*e*Sn	Sn	05 19 59.8	-0.1
HNR	Honiara	5.57	289	Pn	Pn	05 18 57.1	+0.2
	47nm,0.3s,baz=207,slow=7.9,SNR=4.2						
HNR				Sn	Sn	05 19 59.8	-0.1
	18nm,0.3s,baz=151,slow=7.6,SNR=2.3						
DZM	Mont Dzumac	10.80	174	*e*Pn	Pn	05 20 07.0	-1.7
DZM	Mont Dzumac	10.80	174	Pn	Pn	05 20 08.7	0.0
	0.7nm,0.3s,baz=165,slow=22,SNR=10						
ONTNC	Ouen Toro	11.04	174	*e*Pn	Pn	05 20 12.0	+0.1
OUENC	Ouen Island, N	11.19	173	*e*Pn	Pn	05 20 13.9	0.0
PINNC	Pines Island,	11.47	170	*e*Pn	Pn	05 20 17.7	-0.1
COEN	Coen	21.75	261	*e*P	P	05 22 25.0	-0.3
	7.1nm,0.8s						
ARMA	Armidale	22.90	212	*e*P	P	05 22 37.1	-0.4
	14nm,1.3s						
H11S2	WAKE ISLAND Hy	29.60	3	T	T	05 53 49.4	
H11S3	WAKE ISLAND Hy	29.60	3	T	T	05 53 50.7	
H11S1	WAKE ISLAND Hy	29.62	3	T	T	05 53 49.4	
STKA	Stephens Creek	29.98	223	*e*P	P	05 23 42.2	+0.3
	0.5nm,0.7s						
STKA	Stephens Creek	29.98	223	P	P	05 23 42.5	+0.6
	1.4nm,0.7s,baz=58,slow=15,SNR=2.7						
STKA				LR	LR	05 33 45.5	
	comp=Z,95nm,20.6s,baz=25,slow=32						
H11N1	WAKE ISLAND Hy	30.82	3	T	T	05 55 21.0	
H11N3	WAKE ISLAND Hy	30.83	3	T	T	05 55 21.0	
H11N2	WAKE ISLAND Hy	30.84	3	T	T	05 55 21.0	
WB2	Warramunga Arr	30.98	250	*e*P	P	05 23 50.3	-0.6
WR1	Warramunga Arr	30.99	250	*e*P	P	05 23 50.1	-0.9
	8.7nm,1.0s						
WR1				*e*PcP	PcP	05 26 47.4	+0.6
WRA	Warramunga Arr	30.99	250	P	P	05 23 50.1	-1.0
	1.7nm,0.8s,baz=81,slow=8.8,SNR=9.7						
WRA				PcP	PcP	05 26 47.4	+0.6
	0.4nm,0.7s,baz=83,slow=2.8,SNR=5.4						
THZ	Tophouse	31.10	169	*e*P	P	05 23 52.2	+0.4
	15nm,1.2s						
AS31	Alice Springs	32.30	243	*e*P	P	05 23 59.5	-3.1
	1.1nm,1.0s						
AS31				*e*PcP	PcP	05 26 50.6	+0.3
ASAR	Alice Springs	32.30	243	P	P	05 24 01.4	-1.1
	1.1nm,0.7s,baz=72,slow=9.8,SNR=8.9						
ASAR				PcP	PcP	05 26 50.6	+0.3
	0.8nm,0.8s,baz=78,slow=2.7,SNR=7.1						
ASAR				LR	LR	05 36 17.0	
	comp=Z,60nm,20.1s,baz=84,slow=35						
SOEI	Soe	40.35	268	*e*P	P	05 25 14.5	+3.0
	28nm,0.5s						
MJAR	Matsushiro Arr	53.97	333	LR	LR	05 50 19.3	
	comp=Z,11nm,19.0s,baz=35,slow=36						
CM01	Chiang Mai Arr	71.77	294	*e*P	P	05 28 56.7	+0.6
CM31	Chiang Mai Arr	71.80	294	*e*P	P	05 28 56.3	+0.1
CMAR	Chiang Mai Arr	71.80	294	P	P	05 28 57.0	+0.7
	0.8nm,0.5s,baz=130,slow=4.2,SNR=6.7						
SONA0	Songino Array	78.58	324	*e*P	P	05 29 33.2	-1.7
SONM	Songino Array	78.58	324	P	P	05 29 33.2	-1.7
	0.5nm,0.9s,baz=132,slow=8.0,SNR=2.8						
HDA	Harding Lake	83.59	19	*e*P	P	05 30 01.7	+0.7
	4.4nm,0.8s						
ILAR	Eielson Array	83.86	19	P	P	05 30 01.6	-0.7
	1.1nm,0.6s,baz=241,slow=5.0,SNR=22						
ILB	Eielson Array	83.86	19	*e*P	P	05 30 02.6	+0.3
NV01	Mina Array Sit	86.50	50	*e*P	P	05 30 16.5	0.0
NVAR	Mina Array Bea	86.50	50	P	P	05 30 17.0	+0.5
	0.5nm,0.7s,baz=221,slow=7.6,SNR=4.1						
U15A	North Rim	90.59	53	*e*P	P	05 30 36.4	+0.4
	3.2nm,1.0s						
X16A	Lo Mia Camp, P	90.81	55	*e*P	P	05 30 38.8	+1.8
	2.0nm,1.0s						
MK01	Makanchi Array	93.37	317	*e*P	P	05 30 48.3	0.0
MK31	Makanchi Array	93.38	317	*e*P	P	05 30 48.6	+0.3
MK32	Makanchi Array	93.38	317	*e*P	P	05 30 48.9	+0.5
MKAR	Makanchi Array	93.38	317	*e*P	P	05 30 48.4	0.0
	9.1nm,0.8s						
MKAR	Makanchi Array	93.38	317	P	P	05 30 48.9	+0.5
	1.8nm,0.8s,baz=98,slow=6.4,SNR=16						
MAKZ	Makanchi	93.59	317	*e*P	P	05 30 49.3	0.0
	2.7nm,1.0s						
YKA	Yellowknife Ar	95.37	27	P	P	05 30 55.8	-1.3
	0.2nm,0.5s,baz=258,slow=4.9,SNR=4.7						
YKB5	Yellowknife Ar	95.37	27	*e*P	P	05 30 56.2	-0.9

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*IDC **07** 05:20:22.2±1.4, 17°.22N×68°.48W, h0^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.8/41, mbtmp3.8/11, ML3.3/2, MS3.2/3, Ms1 3.3/3, ms1mx2.7/46, Error ellipse: s-maj=33.2km s-min=20.5km az=171.0*

*ISCJB **07** 05:20:25.2±0.5, 17°.13N±0°.04×68°.47W±0°.03, h38^{km}, mb3.8/9, MS3.3/2, Error ellipse: s-maj=6.5km s-min=3.7km az=163.7*

*NEIC **07** 05:20:25.8±0.0, 17°.11N×68°.49W, h10^{km}, MD3.7(RSPR), After RSPR.*

*RSPR **07** 05:20:25.8, 17°.11N×68°.49W, h10^{km}±4^{km}, MD3.7/11*

ISC 07 05:20:27.3±0.7**, 17°.18N**±0°.06×**68°.48W**±0°.04**, h38^{km}, n53, σ0ˢ.86**/65**, mb3.9**/9**, 22C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSP	Las Mesas	1.66	53	⇑*e*P	Pn	05 20 52.7	-1.1
LSP	Las Mesas	1.66	53	⇑*e*P	Pn	05 20 52.7	-1.1
GBPR	Guanica, Bosqu	1.72	62	⇑*e*P	Pn	05 20 53.3	-1.4
GBPR	Guanica, Bosqu	1.72	62	*e*S	Sn	05 21 14.7	-0.7
GBPR	Guanica, Bosqu	1.72	62	⇑*e*P	Pn	05 20 53.3	-1.4
GBPR				*e*S	Sn	05 21 14.7	-0.7
DR12	Loma Pena Alta	1.81	332	⇑*i*P	Pn	05 20 54.9	-1.1
DR12				*e*S	Sn	05 21 17.7	-0.1
DR12	Loma Pena Alta	1.81	332	*i* Pu	Pn	05 20 54.9	-1.1
DR12				*e*S	Sn	05 21 17.7	-0.1
AGPR	Aguadilla, PR	1.83	45	⇑*e*P	Pn	05 20 54.9	-1.3
AGPR	Aguadilla, PR	1.83	45	*e*S	Sn	05 21 18.2	+0.1
AGPR	Aguadilla, PR	1.83	45	⇑*e*P	Pn	05 20 54.9	-1.3
AGPR				*e*S	Sn	05 21 18.2	+0.1
OBIP	Obispado Ponce	1.98	64	⇑*e*P	Pn	05 20 57.3	-1.0
OBIP	Obispado Ponce	1.98	64	*e*S	Sn	05 21 21.5	-0.4
OBIP	Obispado Ponce	1.98	64	⇑*e*P	Pn	05 20 57.3	-1.0
OBIP				*e*S	Sn	05 21 21.5	-0.4
CELP	Cerrillos	2.02	64	⇓*i*P	Pn	05 20 57.2	-1.6
CELP	Cerrillos	2.02	64	⇓*i*P	Pn	05 20 57.2	-1.6
EMPR	Esperanza - Ma	2.26	55	⇓*e*P	Pn	05 21 02.0	-0.1
EMPR	Esperanza - Ma	2.26	55	*e*S	Sn	05 21 29.1	+0.4
EMPR	Esperanza - Ma	2.26	55	⇓*e*P	Pn	05 21 02.0	-0.1
EMPR				*e*S	Sn	05 21 29.1	+0.4
SJG	San Juan	2.41	67	⇑*e*P	Pn	05 21 03.5	-0.6
SJG	San Juan	2.41	67	*e*S	Sn	05 21 32.0	-0.4
SJG	San Juan	2.41	67	⇑*e*P	Pn	05 21 03.5	-0.6
SJG				*e*S	Sn	05 21 32.0	-0.4
SJG	San Juan	2.41	67	Pn	Pn	05 21 01.7	-2.5
	8.8nm,0.3s,baz=278,slow=13,SNR=13						
SJG				Sn	Sn	05 21 32.0	-0.4
	30nm,0.3s,baz=299,slow=21,SNR=11						
HUMP	Col San Antoni	2.68	69	*e*S	Sn	05 21 38.7	-0.5
HUMP	Col San Antoni	2.68	69	⇑*e*P	Pn	05 21 07.1	-0.9
HUMP	Col San Antoni	2.68	69	⇑*e*P	Pn	05 21 07.1	-0.9
HUMP				*e*S	Sn	05 21 38.7	-0.5
CBYP	Canovanas	2.73	66	⇑*e*P	Pn	05 21 07.4	-1.2
CBYP	Canovanas	2.73	66	⇑*e*P	Pn	05 21 07.4	-1.2
MTP	Monte Pirata	2.94	71	⇑*e*P	Pn	05 21 10.8	-0.6
MTP	Monte Pirata	2.94	71	*e*S	Sn	05 21 45.2	-0.3
MTP	Monte Pirata	2.94	71	⇑*e*P	Pn	05 21 10.8	-0.6
MTP				*e*S	Sn	05 21 45.2	-0.3
SDDR	Presa de Saban	3.22	304	*e*Pn	Pn	05 21 14.4	-1.0
CUPR	Culebra, Puert	3.25	69	⇑*e*P	Pn	05 21 15.2	-0.5
CUPR	Culebra, Puert	3.25	69	*e*S	Sn	05 21 52.7	-0.4
CUPR	Culebra, Puert	3.25	69	⇑*e*P	Pn	05 21 15.2	-0.5
CUPR				*e*S	Sn	05 21 52.7	-0.4
STVI	Saint Thomas	3.56	70	⇑*e*P	Pn	05 21 19.0	-0.9
STVI	Saint Thomas	3.56	70	*e*S	Sn	05 22 01.2	+0.5
STVI	Saint Thomas	3.56	70	⇑*e*P	Pn	05 21 19.0	-0.9
STVI				*e*S	Sn	05 22 01.2	+0.5
ABVI	Anegada Island	4.24	68	⇑*e*P	Pn	05 21 29.0	-0.3
ABVI				*e*S	Sn	05 22 18.2	+0.6

ABV	Anegada	4.24	68	⇑eP	Pn	05 21 29.0	-0.3
ABV	Anegada	4.24	68	eS	Sn	05 22 18.2	+0.6
SDV	Santo Domingo	8.51	195	Pn	Pn	05 22 27.4	-0.8
	10.0nm,0.6s						
SDV				eSn	Sn	05 24 03.9	+0.8
SDV	Santo Domingo	8.51	195	Pn	Pn	05 22 27.4	-0.8
	2.4nm,0.3s,baz=343,slow=13,SNR=26						
ROSC	El Rosal	13.53	206	LR	LR	05 28 40.6	
	comp=Z,48nm,18.6s,baz=346,slow=37						
ATAH	Atahualpa	26.07	203	LR	LR	05 37 55.1	
	comp=Z,58nm,18.1s,baz=16,slow=40						
TXAR	Lajitas Array	34.38	297	P	P	05 27 11.2	+0.1
	0.2nm,0.6s,baz=115,slow=8.4,SNR=4.5						
SCHQ	Schefferville	37.60	2	P	P	05 27 39.0	+0.9
	1.9nm,0.6s,baz=217,slow=9.9,SNR=5.2						
PDAR	Pinedale Array	43.18	315	P	P	05 28 24.1	-0.7
	0.3nm,0.6s,baz=103,slow=11,SNR=4.6						
NVAR	Mina Array Bea	48.23	306	P	P	05 29 05.5	+0.8
	0.6nm,0.4s,baz=88,slow=6.8,SNR=8.9						
NEW	Newport	50.17	319	P	P	05 29 18.8	-0.4
	1.6nm,0.6s,baz=108,slow=7.7,SNR=5.3						
YKA	Yellowknife Ar	55.41	336	P	P	05 29 57.4	-0.2
	0.4nm,0.4s,baz=110,slow=7.1,SNR=7.8						
ILAR	Eielson Array	69.66	333	P	P	05 31 32.5	-0.1
	0.5nm,0.6s,baz=94,slow=4.6,SNR=13						
ILAR				LR	LR	06 01 12.6	
	comp=Z,24nm,18.9s,baz=230,slow=35						
ARCES	ARCESS Array B	75.44	21	P	P	05 32 08.3	+1.3
	1.9nm,0.9s,baz=295,slow=4.9,SNR=5.3						
FINES	FINESS Array B	77.23	29	P	P	05 32 18.6	+1.4
	1.3nm,0.6s,baz=270,slow=5.0,SNR=7.2						

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*ISCJB **07** 05:27:36.1±0.3, 21°.31S±0°.03×176°.37W±0°.05, h200^{km}, mb4.3/39, Error ellipse: s-maj=7.2km s-min=4.1km az=17.9*

*WEL **07** 05:27:37.0, 21°.23S×176°.35W, h200^{km}*

*NEIC **07** 05:27:37.2±1.0, 21°.23S×176°.35W, h200^{km}±9^{km}, mb4.5/21, Error ellipse: s-maj=10.4km s-min=7.1km az=142.0*

*IDC **07** 05:27:44.1±4.0, 21°.25S×176°.60W, h270^{km}±37^{km}, mb3.6/13, mb1 3.9/15, mb1mx3.8/36, mbtmp4.3/15, Error ellipse: s-maj=18.5km s-min=13.7km az=131.0*

ISC 07 05:27:37.1±0.4, **21°.46S**±0°.07×**176°.25W**±0°.08, **h200**^{km}, **n97**, σ**2^{s}34**/114, **mb4.3**/39, **1C**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.39	69	ePn	Pn	05 29 07.5	-2.0
MSVF	Nonsavu	6.52	304	ePn	Pn	05 29 09.6	-1.6
MARNC	Mare, Loyalty	14.63	267	ePn	Pn	05 30 56.0	+1.2
PINNC	Pines Island,	15.16	263	ePn	Pn	05 31 01.3	0.0
OUENC	Ouen Island, N	15.72	263	eP	Pn	05 31 10.6	+2.5
	34nm,0.8s						
ONTNC	Ouen Toro	16.07	264	eP	Pn	05 31 14.3	+1.9
	58nm,0.9s						
DZM	Mont Dzumac	16.09	265	eP	Pn	05 31 14.2	+1.6
	54nm,0.8s						
DZM	Mont Dzumac	16.09	265	P	Pn	05 31 13.1	+0.5
	3.3nm,0.3s,baz=74,slow=19,SNR=27						
MXZ	Matakaoa Point	16.73	195	P	Pn	05 31 24.5	+4.5
HAZ	Te Kaha	17.04	196	P	Pn	05 31 26.4	+2.7
HAZ				S	S	05 34 26.4	-3.2
RUGZ	Raukumara Rang	17.27	196	P	Pn	05 31 28.5	+2.0
RUGZ				S	S	05 34 28.5	-5.8
TWGZ	Tauwhareparae	17.39	195	P	Pn	05 31 30.6	+2.7
TWGZ				S	S	05 34 32.9	-3.8
MWZ	Matawai	17.65	196	P	Pn	05 31 32.1	+1.1
MWZ				S	S	05 34 37.4	-4.5
URZ	Urewera	17.70	197	eP	P	05 31 30.8	+1.3
	25nm,0.5s						
URZ	Urewera	17.70	197	P	P	05 31 32.2	+2.7
	6.5nm,0.3s,baz=269,slow=2.4,SNR=42						
URZ				S	S	05 34 42.8	+0.1
	1.0nm,0.3s,baz=257,slow=23,SNR=12						
URZ	Urewera	17.70	197	P	P	05 31 31.6	+2.1
URZ				S	S	05 34 38.9	-3.8
TOZ	Tahuroa Road	17.72	202	P	Pn	05 31 34.2	+2.5
RAGZ	Rawiri	17.84	196	P	P	05 31 33.8	+2.7
RIGZ	Rimuhau	17.95	195	P	Pn	05 31 35.9	+1.4
MTHZ	Maungataniwha	18.32	197	P	P	05 31 37.2	+0.8
MTHZ				S	S	05 34 51.5	-3.9
NMHZ	Naumai	18.56	197	P	P	05 31 41.7	+2.6
NMHZ				S	S	05 34 59.8	-0.2
HIZ	Hauiti	18.64	202	P	Pn	05 31 43.9	+1.3
BKZ	Black Stump Fm	18.71	198	eP	P	05 31 43.1	+2.4
	11nm,0.6s						
BKZ	Black Stump Fm	18.71	198	P	P	05 31 41.9	+1.3
BKZ				S	S	05 35 01.1	-1.9
KWHZ	Kaweka Forest	18.98	198	P	P	05 31 45.2	+1.7
KWHZ				S	S	05 35 07.8	-0.4
NGZ	Ngauruhoe	18.99	200	P	P	05 31 44.9	+1.1
TRVZ	Turoa	19.12	200	P	P	05 31 46.0	+0.7
BHHZ	Black Hill Sta	19.14	198	P	P	05 31 45.6	+0.3
BHHZ				S	S	05 35 09.1	-2.4
KAHZ	Kahuranaki	19.20	196	P	P	05 31 48.4	+2.6
PXZ	Pawanui	19.42	196	P	P	05 31 50.0	+1.8
THZ	Tophouse	22.21	202	eP	P	05 32 19.6	+2.4
	25nm,0.5s						
KHZ	Kahutara	22.59	200	eP	P	05 32 23.0	+2.4
	22nm,0.5s						
LTZ	Lake Taylor	23.33	202	eP	P	05 32 29.3	+1.9
	34nm,0.8s						
OXZ	Oxford	23.89	201	eP	P	05 32 35.2	+2.8
	37nm,0.5s						
RPZ	Rata Peaks	24.58	203	eP	P	05 32 41.5	+2.9
	32nm,0.6s						
RPZ	Rata Peaks	24.58	203	P	P	05 32 41.3	+2.7
	28nm,0.5s,baz=20,slow=3.2,SNR=27						
FOZ	Fox Glacier	24.88	205	eP	P	05 32 43.1	+1.7
	46nm,0.5s						
WHZ	Wether Hill Ro	27.59	204	eP	P	05 33 07.9	+2.3
	55nm,1.7s						
ARMA	Armidale	30.14	246	eP	P	05 33 29.6	+1.1
	18nm,1.1s						
EIDS	Eidsvold	30.18	256	eP	P	05 33 28.2	-0.6
	17nm,0.9s						
CAN	Canberra	33.36	238	eP	P	05 33 56.6	+0.1
	60nm,1.8s						
CTA	Charters Tower	35.03	265	P	P	05 34 08.4	-2.6
	9.3nm,0.8s,baz=88,slow=11,SNR=7.9						
STKA	Stephens Creek	38.86	246	eP	P	05 34 42.3	-0.8
	1.0nm,0.6s						
STKA	Stephens Creek	38.86	246	P	P	05 34 42.5	-0.6
	3.6nm,0.5s,baz=89,slow=9.8,SNR=8.5						
COEN	Coen	39.27	274	eP	P	05 34 45.1	-1.7
	14nm,0.8s						
AS01	Alice Springs	45.85	257	eP	P	05 35 38.1	-1.5
AS31	Alice Springs	45.89	257	eP	P	05 35 39.1	-0.8
	3.3nm,0.8s						
ASAR	Alice Springs	45.90	257	P	P	05 35 37.4	-2.6
	10nm,0.8s,baz=99,slow=7.4,SNR=27						
ASAR				PcP	PcP	05 37 11.8	-1.9
	1.3nm,0.6s,baz=105,slow=3.8,SNR=6.1						
WB2	Warramunga Arr	46.08	263	eP	P	05 35 39.0	-2.4
WRAB	Tennant Creek	46.08	263	eP	P	05 35 37.9	-3.5
	11nm,0.9s						
WRA	Warramunga Arr	46.09	263	P	P	05 35 38.5	-3.0
	7.5nm,0.8s,baz=96,slow=8.1,SNR=58						
WRA				PcP	PcP	05 37 12.6	-1.8
	0.4nm,0.6s,baz=95,slow=2.9,SNR=2.3						
FORT	Forrest	50.42	247	eP	P	05 36 12.9	-1.6
	30nm,0.6s						
FITZ	Fitzroy Crossi	54.52	263	P	P	05 36 43.4	-1.3
	1.4nm,0.6s,baz=112,slow=7.0						
SOEI	Soe	58.16	272	eP	P	05 37 10.2	-0.4
	14nm,0.7s						
ISA	Isabella, Lake	78.85	45	eP	P	05 39 18.6	+0.4
	3.2nm,0.9s						
WAKR	Walker	79.95	42	eP	P	05 39 24.8	+0.6
	3.8nm,0.9s						
NVAR	Mina Array Bea	80.61	42	P	P	05 39 27.8	0.0
	1.2nm,0.7s,baz=223,slow=9.0,SNR=10						
NJ2	Nanjing	81.75	309	eP	P	05 39 33.2	-0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
X16A	Lo Mia Camp, P	82.93	49	eP	P	05 39 40.5	+0.6
	comp=Z,2.6nm,1.0s						
U15A	North Rim	83.41	47	eP	P	05 39 43.5	+1.0
	comp=Z,4.7nm,0.8s						
ELK	Elko	83.89	42	P	P	05 39 43.7	-1.0
	comp=Z,1.2nm,0.9s,baz=267,slow=8.3,SNR=5.2						
CN2	Changchun	84.05	322	eP	P	05 39 47.0	+1.8
MTPU	Mount Pierson	84.35	46	eP	P	05 39 48.6	+1.3
	comp=Z,2.2nm,0.8s						
MNTX	Cornudas Mount	85.98	54	eP	P	05 39 55.6	+0.6
	comp=Z,2.3nm,0.8s						
TX31	Lajitas Ar. Si	86.21	57	eP	P	05 39 56.8	+0.5
TXAR	Lajitas Array	86.21	57	P	P	05 39 56.8	+0.4
	comp=Z,1.4nm,0.9s,baz=221,slow=7.8,SNR=12						
PV14	Lion Creek, Pa	86.64	47	eP	P	05 39 54.2	-4.2
	comp=Z,9.5nm,1.0s						
ANMO	Albuquerque	86.74	51	P	P	05 39 58.6	-0.4
	comp=Z,0.4nm,0.4s,baz=243,slow=2.3,SNR=3.3						
LNIG	Linares	87.65	62	eP	P	05 40 02.7	-0.5
	comp=Z,4.9nm,0.8s						
PDAR	Pinedale Array	88.55	43	P	P	05 40 07.4	0.0
	comp=Z,0.3nm,0.6s,baz=220,slow=3.0,SNR=4.6						
ILAR	Eielson Array	88.89	12	P	P	05 40 05.8	-2.3
	comp=Z,0.4nm,0.8s,baz=209,slow=5.9,SNR=6.5						
CM01	Chiang Mai Arr	91.94	289	eP	P	05 40 21.6	-1.8
CMAR	Chiang Mai Arr	91.97	289	P	P	05 40 22.3	-1.2
	comp=Z,1.5nm,0.6s,baz=125,slow=4.2,SNR=7.1						
LCO	Las Campanas	92.48	122	eP	P	05 40 27.6	+1.4
	comp=Z,4.6nm,0.7s						
LZH	Lanzhou	94.64	307	eP	P	05 40 35.4	-0.3
LZH				pP	pwP	05 41 27.7	+0.4
LZH				sP	sP	05 41 55.7	+11
LZH				PP	PP	05 44 30.1	+3.2
LZH				pmax	pmax		
	comp=Z,28nm,0.9s						
LZH				pmax	pmax		
	comp=Z,93nm,4.5s						
YKA	Yellowknife Ar	96.70	24	P	P	05 40 42.0	-2.1
	comp=Z,0.1nm,0.5s,baz=258,slow=9.2,SNR=2.8						
ZALV	Zalesovo Beam	112.26	321	PKiKP	PKiKP	05 45 46.1	-2.5
	comp=Z,0.6nm,0.5s,baz=341,slow=1.0,SNR=3.7						
MKAR	Makanchi Array	113.04	313	PKiKP	PKiKP	05 45 48.0	-2.4
	comp=Z,0.7nm,0.6s,baz=228,slow=0.8,SNR=10						
KSH	Kashi	116.77	304	PKP	PKPdf	05 45 58.0	+0.1
KSH				PP	PP	05 47 17.2	+7.7
KSH				AMB	AMB		
	comp=Z,300nm,4.6s						
ARCES	ARCESS Array B	130.15	350	PKP	PKPdf	05 46 22.7	+0.2
	comp=Z,0.7nm,0.5s,baz=70,slow=1.1,SNR=4.1						
FINES	FINESS Array B	137.14	344	PKP	PKPdf	05 46 34.8	-1.0
	comp=Z,1.8nm,1.0s,baz=64,slow=3.2,SNR=3.8						
AKASG	Malin Array Be	144.63	332	PKP	PKPab	05 46 45.5	-3.3
	comp=Z,1.0nm,0.4s,baz=44,slow=4.3,SNR=10						
BUR08	Bucovina Ar. S	148.67	332	ePKPbc	PKPdf	05 46 59.0	+2.4
BUR08				ePKPab	PKPbc	05 47 02.5	+1.9
BUR04	Bucovina Ar. S	148.68	332	ePKPbc	PKPdf	05 46 59.9	+3.2
BRTR	Keskin Array B	148.69	312	PKPbc	PKPdf	05 46 58.6	+1.7
	comp=Z,1.0nm,0.6s,baz=148,slow=4.6,SNR=6.2						
CLL	Collm	149.34	349	ePKPbc	PKPdf	05 47 00.9	+3.5
CLL	Collm	149.34	349	⇑iPKPbc	PKPdf	05 47 00.9	+3.5
	comp=Z,6.0nm,0.9s						
CLL				ePKPab	PKiKP	05 47 06.0	+2.9
DPC	Dobruska-Polom	149.51	344	ePKP	PKPbc	05 47 01.6	-0.9
BRG	Berggiesshubel	149.57	347	i PKP	PKPdf	05 47 01.2	+3.4
	comp=Z,9.8nm,1.4s						
BRG	Berggiesshubel	149.57	347	ePKP	PKPdf	05 47 01.3	+3.4
	comp=Z,9.0nm,1.3s						
LANS	Liptovska Anna	149.66	339	ePKP	PKPbc	05 47 02.3	-0.7
PRU	Pruhonice	150.27	346	ePKP	PKPdf	05 47 02.4	+3.4
VYHS	Vyhne	150.44	339	ePKP	PKPdf	05 47 02.9	+3.6
MODS	Modra-Piesok	151.03	341	ePKP	PKPdf	05 47 03.9	+3.7
KHC	Kasperske Hory	151.29	346	ePKP	PKPbc	05 47 05.5	-1.3
GERES	GERESS Array B	151.54	346	PKPbc	PKPbc	05 47 06.1	-1.3
	comp=Z,0.7nm,0.5s,baz=56,slow=3.4,SNR=8.6						
GERES				PKPab	PKiKP	05 47 12.1	+4.2
	comp=Z,0.3nm,0.4s,baz=11,slow=2.1,SNR=2.9						
GEA0	GERESS Array S	151.54	346	ePKPbc	PKPbc	05 47 06.2	-1.3

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*IDC **07** 05:28:51.1±2.1, 11°.22S×167°.01E, h0^{km}, mb4.0/6, mb1 4.3/6, mb1mx4.0/36, mbtmp3.9/6, MS3.3/4, Ms1 3.3/4, ms1mx2.9/38, Error ellipse: s-maj=84.9km s-min=30.8km az=152.0*

*ISCJB **07** 05:28:53.9±1.7, 11°.3S±0°.4×166°.9E±0°.2, h28^{km}, mb4.1/8, MS3.2/3, Error ellipse: s-maj=59.3km s-min=24.6km az=153.9*

ISC 07 05:28:55.4±1.9, **11°.3S**±0°.4×**167°.0E**±0°.3, **h28**^{km}, **n12**, σ**0^{s}75**/8, **mb4.0**/8, **MS3.4**/3, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.17	284	LR	LR	05 33 30.7	
	comp=Z,498nm,19.6s,baz=128,slow=39						
WRA	Warramunga Arr	32.57	251	P	P	05 35 24.5	-0.1
	1.5nm,0.9s,baz=80,slow=8.9,SNR=7.0						
FITZ	Fitzroy Crossi	40.52	255	LR	LR	05 51 49.9	
	comp=Z,59nm,18.2s,baz=175,slow=34						
DAV	Davao City (W)	45.05	292	LR	LR	05 57 29.5	
	comp=Z,12nm,18.1s,baz=324,slow=38						
JNU	Nakatsue	55.97	323	LR	LR	05 58 30.7	
	comp=Z,28nm,19.2s,baz=288,slow=32						
HHC	Hu-ho-hao-te	72.79	319	eP	P	05 40 20.8	-0.7
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,6.8s						
SONM	Songino Array	79.56	323	P	P	05 41 00.3	+0.3
	comp=Z,0.3nm,0.6s,baz=104,slow=6.1,SNR=3.1						
GTA	Gaotai	80.09	314	eP	P	05 41 03.8	+0.8
GTA				pP	PcP	05 41 07.4	-2.9
GTA				sP	pP	05 41 09.5	-1.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	83.32	18	P	P	05 41 19.5	+0.2
	comp=Z,2.1nm,0.6s,baz=219,slow=4.5,SNR=37						
NVAR	Mina Array Bea	85.22	49	P	P	05 41 30.4	+0.6
	comp=Z,0.4nm,0.6s,baz=239,slow=6.2,SNR=3.2						
MKAR	Makanchi Array	94.51	317	P	P	05 42 13.2	-0.1
	comp=Z,0.8nm,0.8s,baz=104,slow=5.2,SNR=4.8						
YKA	Yellowknife Ar	94.59	27	P	P	05 42 12.1	-1.1
	comp=Z,0.4nm,0.7s,baz=254,slow=4.8,SNR=7.8						

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*ISCJB **07** 05:30:17.4±0.5, 45°.41N±0°.02×71°.47W±0°.02, h3^{km}±3^{km}, Error ellipse: s-maj=2.9km s-min=2.4km az=31.0*

*OTT **07** 05:30:19.0±0.1, 45°.41N×71°.44W, h5^{km}, MN3.1/20*

OTT 20km southeast from East Angus, Qc. Felt 36km east from Sherbrooke, Qc Northern Appalachians Seismic Zone. Felt at Sherbrooke, Qc.

*NEIC **07** 05:30:18.0±0.0, 45°.41N×71°.44W, h5^{km}, MN2.7(WES), MN3.1(OTT), After OTT.*

NEIC Felt in the Cookshire-Eaton area.

*ANF **07** 05:30:19.0±0.7, 45°.32N×71°.39W, h4^{km}±5^{km}, ML2.9/3, Error ellipse: s-maj=4.1km s-min=2.6km az=10.0*

*WES **07** 05:30:20.2, 45°.41N×71°.47W, h6^{km}*

ISC 07 05:30:18.5±1.2, **45°.40N**±0°.02×**71°.45W**±0°.02, **h5**^{km}±10^{km}, **n60**, σ**0^{s}84**/99, **1D**, **Southern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOQ	Mont Orford	0.57	261	ePg	Pg	05 30 30.0	+0.5
MOQ				eSg	Sg	05 30 36.7	-0.2
MOQ	Mont Orford	0.57	261	⇓PG	Pg	05 30 30.0	+0.5
MOQ				SG	Sg	05 30 36.9	0.0
MOQ				Trac		05 30 38.5	
	comp=Z,81nm,0.1s						
BECQ	Becancour	1.19	323	PG	Pg	05 30 41.1	-0.1
BECQ				SG	Sg	05 30 56.8	+0.3
BECQ				Trac		05 31 01.6	
	comp=Z,4.0nm,0.0s						
LBNH	Lisbon	1.21	196	ePg	Pg	05 30 41.2	-0.5
LBNH				eSg	Sg	05 30 56.3	-1.0
LBNH	Lisbon	1.21	196	PG	Pg	05 30 41.2	-0.5
LBNH				SG	Sg	05 30 56.5	-0.8
LBNH				Trac		05 30 58.8	
	comp=Z,107nm,0.2s						
LBNH	Lisbon	1.21	196	P	Pg	05 30 41.2	-0.5
	baz=15						
LBNH				S	Sg	05 30 56.2	-1.1
	baz=15						
QCQ	Quebec	1.38	5	Pg	Pb	05 30 45.2	+0.4
QCQ	Quebec	1.38	5	PG	Pb	05 30 45.2	+0.4
QCQ				SG	Sb	05 31 02.5	-0.3
QCQ				Trac		05 31 08.8	
	comp=Z,19nm,0.1s						
VT1	Waterbury	1.42	221	ePn	Pn	05 30 45.0	+0.1
VT1				eSn	Sb	05 31 03.6	-0.1
STUQ	Sainte-Ursule	1.46	309	PN	Pn	05 30 45.6	+0.2
STUQ				SG	Sb	05 31 04.5	-0.4
STUQ				Trac		05 31 07.6	
	comp=Z,7.9nm,0.0s						
WVL	Waterville	1.52	123	ePn	Pn	05 30 46.9	+0.6
MNTQ	Montreal, Queb	1.53	274	PN	Pn	05 30 46.5	0.0
MNTQ				SG	Sn	05 31 07.1	+0.3
MNTQ				Trac		05 31 09.6	
	comp=Z,35nm,0.1s						
PKME	Peaks-Kenny Pk	1.53	94	ePn	Pn	05 30 47.0	+0.6
PKME	Peaks-Kenny Pk	1.53	94	PN	Pn	05 30 47.1	+0.6
PKME				SN	Sn	05 31 06.3	-0.4
PKME				LG	Lg	05 31 09.0	
PKME				Trac		05 31 10.1	
	comp=Z,277nm,0.2s						
PKME	Peaks-Kenny Pk	1.53	94	Pb	Pn	05 30 47.1	+0.6
	baz=276						
PKME				S	Sn	05 31 06.9	+0.1
	baz=276						
BCLQ	Boischatel	1.54	7	Pn	Pn	05 30 46.7	+0.2
BCLQ	Boischatel	1.54	7	PN	Pn	05 30 46.7	+0.2
BCLQ				SN	Sn	05 31 07.3	+0.4
BCLQ				Trac		05 31 09.8	
	comp=Z,53nm,0.1s						
DPQ	Saint Jean	1.58	325	Pn	Pn	05 30 47.1	0.0
DPQ	Saint Jean	1.58	325	PN	Pn	05 30 47.1	0.0
DPQ				SG	Sn	05 31 08.2	+0.3
DPQ				Trac		05 31 12.1	
	comp=Z,34nm,0.1s						
FRNY	Flat Rock	1.61	250	ePn	Pn	05 30 47.5	-0.1
FRNY				eSn	Sn	05 31 08.6	-0.2
FRNY	Flat Rock	1.61	250	PN	Pn	05 30 47.7	+0.1
FRNY				SG	Sn	05 31 09.1	+0.3
FRNY				Trac		05 31 12.1	
	comp=Z,59nm,0.1s						
HNH	Hanover	1.80	200	ePn	Pn	05 30 50.6	+0.5
HNH				eSn	Sn	05 31 13.4	0.0
FFD	Franklin Falls	1.94	184	ePn	Pn	05 30 53.5	+1.5
FFD				eSn	Sn	05 31 17.8	+1.0
A54	Misere	2.18	19	Pn	Pn	05 30 56.5	+1.1
A54	Misere	2.18	19	PN	Pn	05 30 56.5	+1.1
A54				SN	Sn	05 31 22.6	-0.2
A54				LG	Lg	05 31 27.7	
A54				Trac		05 31 32.0	
	comp=Z,9.2nm,0.1s						
LATQ	La Tuque	2.19	336	S	Sb	05 31 26.8	+0.9
	baz=155						
LMQ	La Malbaie	2.28	20	Pn	Pn	05 30 58.1	+1.3
LMQ	La Malbaie	2.28	20	PN	Pn	05 30 58.1	+1.3
LMQ				SN	Sn	05 31 25.4	+0.1
LMQ				LG	Lg	05 31 30.9	
LMQ				Trac		05 31 33.3	
	comp=Z,29nm,0.1s						
A16	Riviere Ouelle	2.30	25	Pn	Pn	05 30 56.4	-0.6
A16	Riviere Ouelle	2.30	25	PN	Pn	05 30 56.4	-0.6
A16				Trac		05 31 34.9	
	comp=Z,38nm,0.3s						
TRQ	Mont Tremblant	2.32	292	ePn	Pn	05 30 58.0	+0.6
TRQ				eSn	Sn	05 31 24.8	-1.5
TRQ	Mont Tremblant	2.32	292	PN	Pn	05 30 57.3	-0.1
TRQ				SN	Sn	05 31 23.4	-3.0
TRQ				Trac		05 31 29.2	
	comp=Z,20nm,0.1s						
LONY	Lake Ozonia	2.35	252	ePn	Pn	05 30 59.0	+1.2
LONY				eSn	Sn	05 31 25.5	-1.6
LONY	Lake Ozonia	2.35	252	PN	Pn	05 30 58.4	+0.7
LONY				SN	Sn	05 31 28.1	+1.0
LONY				LG	Lg	05 31 33.0	
LONY	Lake Ozonia	2.35	252	P	Pn	05 30 58.5	+0.7
	baz=69						
NCB	Newcomb	2.44	235	ePn	Pn	05 30 59.7	+0.7
NCB	Newcomb	2.44	235	PN	Pn	05 30 59.3	+0.3
NCB				SN	Sn	05 31 27.6	-1.6
NCB				LG	Lg	05 31 35.1	
A61	Sainte Mathild	2.48	22	PN	Pn	05 30 59.6	+0.1
A61				SN	Sn	05 31 29.7	-0.4
A61				LG	Lg	05 31 37.5	
A61				Trac		05 31 41.0	
	comp=Z,16nm,0.1s						
DAQ	Lac Daran	2.57	3	PN	Pn	05 31 00.5	-0.3
DAQ				SN	Sn	05 31 31.9	-0.6
DAQ				Trac		05 31 42.0	
	comp=Z,31nm,0.2s						
ACCN	Adirondack Com	2.57	219	ePn	Pn	05 31 00.4	-0.4
A64	Saint Simeon	2.65	23	PN	Pn	05 31 02.7	+0.8
A64				Trac		05 31 44.6	
	comp=Z,9.6nm,0.1s						
PQI	Presque Isle	2.71	61	ePn	Pn	05 31 03.3	+0.6
PQI				eSn	Sn	05 31 34.6	-1.2
WBO	Williamsburg	2.73	263	Pn	Pn	05 31 04.0	+1.0
WBO	Williamsburg	2.73	263	PN	Pn	05 31 04.0	+1.0
WBO				SN	Sn	05 31 36.9	+0.6
WBO				Trac		05 31 46.0	
	comp=Z,14nm,0.2s						
HRV	Adam Dziewonsk	2.90	182	ePn	Pn	05 31 05.5	+0.2
HRV	Adam Dziewonsk	2.90	182	P	Pn	05 31 05.3	0.0
	baz=1.2						
EMMW	East Machias	2.91	102	ePn	Pn	05 31 04.3	-1.1
EMMW				eSn	Sn	05 31 39.3	-1.6
WES	Weston	3.02	178	ePn	Pn	05 31 06.3	-0.6
WES				eSn	Sg	05 31 55.6	+0.2
BCX	Boston College	3.07	176	ePn	Pn	05 31 07.4	-0.3
BCX				eSg	Sg	05 31 55.6	-1.5
TRY	Troy	3.11	212	ePn	Pn	05 31 07.8	-0.4
TRY				eSb	Sb	05 31 52.8	+0.3
QUA2	Belchertown	3.19	192	ePn	Pn	05 31 09.4	+0.1
QUA2				eSb	Sb	05 31 58.0	+3.3
GGN	Saint George	3.27	93	Pn	Pn	05 31 10.4	0.0
GGN	Saint George	3.27	93	PN	Pn	05 31 10.4	0.0
GGN				SN	Sn	05 31 49.5	-0.1
GGN				Trac		05 32 02.6	
	comp=Z,16nm,0.1s						
GGN				LG	Lg	05 32 03.7	
GRQ	Grand Remous	3.30	293	Pn	Pn	05 31 10.8	+0.1
GRQ	Grand Remous	3.30	293	PN	Pn	05 31 10.8	+0.1
GRQ				SN	Sn	05 31 50.3	-0.1
GRQ				Trac		05 32 08.5	
	comp=Z,12nm,0.2s						
BRYW	Bryant College	3.48	181	ePn	Pn	05 31 13.2	-0.2
BRYW				eSg	Sg	05 32 10.7	+0.3
PLVO	Plevna	3.99	267	ePn	Pn	05 31 20.0	-0.3
PLVO				eSg	Sg	05 32 26.1	-0.5
E54A	Lac Daplat, Po	4.13	286	P	Pn	05 31 22.2	0.0
	baz=102						
BATG	Bathurst New B	4.18	61	ePn	Pn	05 31 22.6	-0.3
CRLO	Chalk River	4.20	281	PN	Pn	05 31 22.2	-0.9
CRLO				SN	Sn	05 32 10.8	-1.7
CRLO				Trac		05 32 31.7	
	comp=Z,7.7nm,0.2s						

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*ISCJB **07** 05:40:24.7±0.4, 23°.89N±0°.02×122°.64E±0°.02, h23^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=2.6km az=163.6*

*TAP **07** 05:40:24.8, 23°.90N×122°.57E, h14^{km}±1^{km}, ML2.9, D*

*JMA **07** 05:40:25.7±0.2, 24°.02N×122°.62E, h31^{km}, M2.4*

ISC 07 05:40:24.7±1.2, **23°.91N**±0°.03×**122°.63E**±0°.02, **h22**^{km}±5^{km}, **n58**, σ**0^{s}69**/100, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.61	28	P	Pb	05 40 36.5	-0.2
JYNG				eS	Sb	05 40 43.6	-1.3
YOJ	Yonaguni jima	0.65	33	eP	Pb	05 40 36.9	-0.5
	baz=34						
YOJ				eS	Sb	05 40 46.1	+0.1
	baz=34						
YOJ	Yonaguni jima	0.65	33	P	Pb	05 40 36.8	-0.6
YOJ				eS	Sb	05 40 44.6	-1.4
EOS1	EOS1	0.78	324	eP	Pn	05 40 40.0	-0.4
	baz=327						
EOS1				eS	Sn	05 40 50.9	-0.5
	baz=327						
ENA	Nanau	0.96	302	P	Pn	05 40 42.8	-0.1
	baz=304						
ENA				S	Sn	05 40 56.0	+0.1
	baz=304						
TWD	Chiawan	0.96	280	eP	Pn	05 40 43.1	+0.2
	baz=281						
TWD				eS	Sb	05 40 54.7	-0.1
	baz=281						
NACB	Ninganchiao	0.98	286	eP	Pb	05 40 42.8	-0.2
	baz=286						
TWC	Suao	0.99	314	P	Pb	05 40 42.8	-0.4
	baz=317						
TWC				eS	Sn	05 40 56.5	-0.2
	baz=317						
ETLH	Xiulin Townshi	1.09	286	eP	Pn	05 40 44.6	-0.2
	baz=287						
ETLH				eS	Sn	05 40 58.8	-0.4

	baz=287						
HATJ	Hateruma jima	1.09	82	P	Pn	05 40 44.8	+0.2
HATJ				*e*S	Sb	05 40 59.8	+1.3
IRIF	Iriomote-Funau	1.09	67	P	Pn	05 40 44.9	+0.2
IRIF				*e*S	Sn	05 40 59.7	+0.6
ESL	Shilin baz=265	1.10	265	*e*P	Pb	05 40 45.4	+0.4
ESL	baz=265			*e*S	Sn	05 40 59.1	-0.3
EGS	baz=328	1.12	326	*e*P	Pn	05 40 44.1	-1.0
EGFH	Guangfu baz=257	1.13	258	*e*P	Pn	05 40 45.3	+0.1
EGFH	baz=257			*e*S	Sb	05 40 59.8	+0.1
HGSD	Ruisui baz=248	1.18	249	*e*P	Pn	05 40 46.2	+0.3
HGSD	baz=248			*e*S	Sn	05 41 01.8	+0.4
NTC	Toucheng baz=324	1.19	322	P	Pb	05 40 47.0	+0.5
NTC	baz=324			*e*S	Sn	05 41 02.6	+1.1
TWE	Neicheng baz=315	1.19	313	*e*P	Pb	05 40 47.5	+1.0
TWE	baz=315			*e*S	Sn	05 41 02.3	+0.7
ENTT	Nioudou baz=308	1.21	307	P	Pb	05 40 47.0	+0.1
ENTT	baz=308			S	Sn	05 41 02.9	+0.8
NDT	Datong Townshi baz=305	1.23	304	*e*P	Pb	05 40 47.3	+0.1
NDT	baz=305			S	Sb	05 41 03.7	+1.1
TWB1	Santiao Chiao baz=334	1.23	332	*e*P	Pn	05 40 46.1	-0.5
NNSB	Datong baz=295	1.25	294	*e*P	Pb	05 40 47.3	-0.3
NNSB	baz=295			*e*S	Sb	05 41 03.5	+0.2
NNS	Nan Shan baz=296	1.26	295	*e*P	Pb	05 40 47.4	-0.4
EHY	Hungye baz=250	1.26	251	P	Pn	05 40 47.4	+0.3
EHY	baz=250			*e*S	Sn	05 41 03.3	-0.1
WHF	Hehuan Shan baz=281	1.27	281	P	Pn	05 40 47.6	+0.1
WHF	baz=281			S	Sb	05 41 04.2	+0.1
TIPB	Shuangxi baz=327	1.28	325	P	Pn	05 40 47.2	-0.2
TIPB	baz=327			*e*S	Sb	05 41 04.1	-0.1
JKRS	Kuro-shima	1.30	75	P	Pn	05 40 48.4	+0.8
JKRS				*e*S	Sb	05 41 06.1	+1.3
YULB	Yu-li baz=246	1.32	247	*e*P	Pn	05 40 48.6	+0.6
YULB	baz=246			*e*S	Sn	05 41 04.5	-0.4
OWD	Renai baz=272	1.33	272	*i* P	Pb	05 40 48.6	-0.4
OWD	baz=272			S	Sn	05 41 04.9	-0.3
CHGB	Renai baz=277	1.34	277	*e*P	Pn	05 40 48.6	+0.3
CHGB	baz=277			*e*S	Sb	05 41 05.9	-0.1
NWLT	Wulai baz=311	1.34	310	P	Pb	05 40 49.3	+0.2
NWLT	baz=311			S	Sb	05 41 07.4	+1.6
TWF1	Yuli baz=244	1.34	246	*e*P	Pn	05 40 48.9	+0.7
TWF1	baz=244			*e*S	Sn	05 41 05.6	+0.2
YHNB	Yeheng baz=305	1.37	304	*e*P	Pb	05 40 49.0	-0.6
YHNB	baz=305			*e*S	Sb	05 41 07.1	+0.4
VWDT	VWDT baz=263	1.37	264	*e*P	Pb	05 40 49.4	-0.2
VWDT	baz=263			*e*S	Sn	05 41 05.7	-0.3
NSK	Sanguang baz=304	1.38	303	P	Pb	05 40 49.2	-0.7
NSK	baz=304			*e*S	Sb	05 41 06.8	-0.4
TDCB	Techi baz=285	1.38	284	*e*P	Pb	05 40 49.4	-0.5
NWF	Wu-fen Shan baz=328	1.39	326	*e*P	Pn	05 40 48.7	-0.1
NWF	baz=328			*e*S	Sb	05 41 08.1	+0.8
WFSB	Wu-fen Shan baz=328	1.39	326	*e*P	Pn	05 40 48.7	-0.1
WFSB	baz=328			*e*S	Sb	05 41 09.2	+2.0
CHKT	Chengkung baz=234	1.41	235	*e*P	Pn	05 40 48.9	-0.3
CHKT	baz=234			*e*S	Sn	05 41 06.1	-1.0
JIJ	Ishigaki jima	1.46	72	P	Pn	05 40 49.8	+0.1
SSLB	Suanglung baz=265	1.54	266	*e*P	Pn	05 40 51.2	+0.4
SSLB	baz=265			*e*S	Sb	05 41 10.8	-0.7
YM11	YM11 baz=324	1.57	323	*e*P	Pn	05 40 51.9	+0.5
YM05	YM05 baz=323	1.58	322	*e*P	Pn	05 40 51.5	0.0
WHP	Taichung City baz=284	1.58	284	*e*P	Pb	05 40 53.4	+0.2
WHP	baz=284			S	Sb	05 41 12.4	-0.4
SMLT	Sun Moon Lake baz=269	1.58	269	*e*P	Pn	05 40 52.1	+0.6
SMLT	baz=269			*e*S	Sb	05 41 12.3	-0.5
YM08	YM08 baz=325	1.58	324	*e*P	Pb	05 40 52.9	-0.4
YM04	YM04 baz=322	1.58	321	*e*P	Pn	05 40 50.8	-0.8
TYC	Yuchr baz=270	1.62	270	*e*P	Pb	05 40 53.4	-0.4
TYC	baz=270			*e*S	Sb	05 41 13.1	-0.8
WHYT	Xinyi Township baz=262	1.64	263	P	Pn	05 40 51.9	-0.4
WHYT	baz=262			*e*S	Sb	05 41 13.7	-0.8
LIOB	Emei baz=297	1.64	297	*e*P	Pn	05 40 52.6	+0.3
ELDTW	Lidau baz=243	1.65	244	*e*P	Pn	05 40 52.8	+0.4
ELDTW	baz=243			*e*S	Sn	05 41 12.8	-0.2
NSTT	Nanjuang baz=296	1.65	296	*e*P	Pn	05 40 52.1	-0.2
JISG	Ishigakijimahi	1.68	66	*e*S	Sn	05 41 12.5	-1.1
WTP	Ta-pu baz=249	1.96	251	*e*P	Pb	05 40 59.1	-0.7
SLGT	Liugui baz=242	2.04	244	*e*P	Pn	05 40 58.7	+1.0
CHN1	Nanshi baz=249	2.06	250	*e*P	Pn	05 40 60.0	+1.9
TWK	Hsinying baz=251	2.07	252	*e*P	Pn	05 40 59.9	+1.7
TWK	baz=251			*e*S	Sn	05 41 24.2	+0.9
LAY	Lan-yu baz=206	2.11	208	*e*P	Pn	05 40 59.2	+0.4
LAY	baz=206			*e*S	Sn	05 41 23.2	-1.3
MASBT	Mashibuluo baz=234	2.25	235	*e*P	Pn	05 41 00.5	-0.1
MASBT	baz=234			*e*S	Sn	05 41 28.3	+0.6

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*SOME **07** 05:41:13.9, 42°.93N×77°.25E, h15^{km}*

*KRNET **07** 05:41:13.9±0.1, 42°.92N×77°.27E, h19^{km}, mb2.7*

*NNC **07** 05:41:13.4±0.4, 42°.91N×77°.27E, h2^{km}±2^{km}, mb3.0, mpv3.0, Error ellipse: s-maj=3.9km s-min=1.7km az=173.0*

*KNET **07** 05:41:16.1±1.1, 42°.86N×77°.11E, h18^{km}±5^{km}, ml1.7, Error ellipse: s-maj=9.1km s-min=2.8km az=101.0*

ISC 07 05:41:13.9±0.9**, 42°.93N**±0°.02×**77°.24E**±0°.01**, h14**^{km}±7^{km}**,**
n70, σ**0**^{s}**.90**/128**, 31C-26D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNSS	Tian-Shan 14nm,0.2s	0.24	297	P	Pg	05 41 19.5	0.0
TNSS	151nm,0.2s			S	Sb	05 41 23.6	-1.1
TNSS	Tian-Shan baz=96	0.24	297	*e*P	Pg	05 41 19.5	0.0
TNSS	baz=96			*e*S	Sb	05 41 23.5	-1.1
TNSS	Tian-Shan 10nm,0.1s	0.24	297	*e*P	Pg	05 41 19.5	0.0
TNSS	151nm,0.2s			*e*S	Sb	05 41 23.6	-1.1
MDOK	Medeo 2.2nm,0.4s	0.28	329	⇓P	Pg	05 41 19.6	-0.3
MDOK	22nm,0.4s			⇑S	Sg	05 41 24.0	+0.1
MDOK	Medeo 24nm,0.2s	0.28	329	Pg	Pg	05 41 19.9	0.0
MDOK	36nm,0.3s			Lg	Lg	05 41 24.1	
MDOK	Medeo baz=26	0.28	329	⇑*i*P	Pg	05 41 19.9	0.0
MDOK	baz=26			⇑*e*S	Sg	05 41 24.1	+0.1
MDOK	Medeo 24nm,0.2s	0.28	329	⇑*i*P	Pg	05 41 19.9	0.0
MDOK	28nm,0.2s			*e*S	Sg	05 41 24.1	+0.1
KOTS	Kotyrbulak 26nm,0.1s	0.32	343	P	Pg	05 41 20.8	+0.1
KOTS	49nm,0.4s			S	Sg	05 41 25.6	+0.3
KOTS	Kotyrbulak baz=39	0.32	343	*e*P	Pg	05 41 20.8	+0.1
KOTS	baz=39			*e*S	Sg	05 41 25.6	+0.3
KOTS	Kotyrbulak 26nm,0.1s	0.32	343	*e*P	Pg	05 41 20.8	+0.1
KOTS	49nm,0.4s			*e*S	Sg	05 41 25.6	+0.3
AAA	Alma-Ata 42nm,0.1s	0.37	320	P	Pg	05 41 22.2	+0.7
AAA	224nm,0.1s			S	Sb	05 41 28.0	0.0
AAA	Alma-Ata baz=18	0.37	320	*e*P	Pg	05 41 22.2	+0.7
AAA	baz=18			*e*S	Sb	05 41 28.1	0.0
AAA	Alma-Ata 42nm,0.1s	0.37	320	*e*P	Pg	05 41 22.2	+0.7
AAA	224nm,0.1s			*e*S	Sb	05 41 28.0	0.0
IZV	Izvestkoviy 19nm,0.1s	0.47	284	P	Pg	05 41 23.7	+0.3
IZV	104nm,0.2s			S	Sg	05 41 30.7	+0.9
IZV	Izvestkoviy baz=83	0.47	284	*e*P	Pg	05 41 23.7	+0.3
IZV	baz=83			*e*S	Sg	05 41 30.7	+0.9
IZV	Izvestkoviy 19nm,0.1s	0.47	284	*e*P	Pg	05 41 23.6	+0.3
IZV	104nm,0.2s			*e*S	Sg	05 41 30.6	+0.9
MTBS	Maitube 7.6nm,0.1s	0.63	289	P	Pb	05 41 25.8	-0.9
MTBS	33nm,0.1s			S	Sb	05 41 34.5	-1.0
MTBS	Maitube baz=89	0.63	289	*e*P	Pb	05 41 25.8	-0.9
MTBS	baz=89			*e*S	Sb	05 41 34.5	-1.0
MTBS	Maitube 7.6nm,0.1s	0.63	289	*e*P	Pb	05 41 25.8	-0.9
MTBS	33nm,0.1s			*e*S	Sb	05 41 34.5	-1.0
KDJ	Kajisay baz=84	0.80	183	⇓*i*P	Pg	05 41 29.4	0.0
KDJ	baz=84			⇓*i*S	Sg	05 41 40.0	+0.1
SATY	Saty 15nm,0.1s	0.87	81	P	Pb	05 41 29.8	-1.0
SATY	42nm,0.2s			S	Sg	05 41 41.5	-0.6
SATY	Saty 5.6nm,0.1s	0.87	81	*e*P	Pb	05 41 29.9	-0.9
SATY	41nm,0.2s			*e*S	Sg	05 41 41.5	-0.6
KURS	Kuram 2.0nm,0.7s	0.88	50	P	Pb	05 41 30.4	-0.7
KURS	4.3nm,0.3s			S	Sb	05 41 42.0	-0.8
KURS	Kuram baz=49	0.88	50	⇑*i*P	Pb	05 41 30.4	-0.7
KURS	baz=49			⇓*i*S	Sb	05 41 42.0	-0.8
KURS	Kuram 2.0nm,0.7s	0.88	50	⇑*i*P	Pb	05 41 30.4	-0.7
KURS	4.3nm,0.3s			⇓*i*S	Sb	05 41 42.0	-0.8
KTBS	Karatobe 6.3nm,0.2s	0.89	333	P	Pb	05 41 30.7	-0.4
KTBS	22nm,0.2s			S	Sg	05 41 42.9	+0.2
KTBS	Karatobe 6.3nm,0.2s	0.89	333	*e*P	Pb	05 41 30.8	-0.4
KTBS	22nm,0.2s			*e*S	Sg	05 41 43.0	+0.2
KST	Kastek 9.3nm,0.2s	0.94	278	P	Pb	05 41 31.9	-0.3
KST	16nm,0.3s			S	Sb	05 41 45.0	+0.4
KST	Kastek baz=78	0.94	278	⇑*i*P	Pb	05 41 31.9	-0.3
KST	baz=78			⇓*i*S	Sb	05 41 45.0	+0.4
KST	Kastek 9.3nm,0.2s	0.94	278	⇑*i*P	Pb	05 41 31.9	-0.3
KST	16nm,0.3s			⇓*i*S	Sb	05 41 45.0	+0.4
ULHL	Ulahol 5.2nm,0.1s,SNR=60	1.00	228	⇑P	Pb	05 41 32.9	-0.4
ULHL	8.7nm,0.1s			⇓S	Sb	05 41 46.4	0.0
ULHL	Ulahol baz=29	1.00	228	⇑*i*P	Pb	05 41 32.8	-0.4
ULHL	baz=29			⇑*i*S	Sb	05 41 46.4	0.0
BOOM	Boomskoye usch baz=47	1.05	246	⇑*i*P	Pb	05 41 33.6	-0.4
BOOM	baz=47			⇑*i*S	Sb	05 41 48.0	+0.3
DGS	Degeres 3.7nm,0.2s	1.12	287	P	Pb	05 41 35.2	0.0
DGS	8.3nm,0.2s			S	Sn	05 41 50.2	-0.4
DGS	Degeres baz=87	1.12	287	*e*P	Pb	05 41 35.2	0.0
DGS	baz=87			*e*S	Sn	05 41 50.2	-0.4
DGS	Degeres 3.7nm,0.2s	1.12	287	*e*P	Pb	05 41 35.2	0.0
DGS	8.3nm,0.2s			*e*S	Sn	05 41 50.2	-0.4
KUU	Kurty 3.3nm,0.1s	1.17	326	P	Pb	05 41 35.9	0.0
KUU	11nm,0.1s			S	Sn	05 41 51.3	-0.4
KUU	Kurty baz=25	1.17	326	⇑*i*P	Pb	05 41 35.9	0.0
KUU	baz=25			⇑*i*S	Sn	05 41 51.3	-0.4
KUU	Kurty 3.3nm,0.1s	1.17	326	⇑*i*P	Pb	05 41 35.9	0.0
KUU	11nm,0.1s			⇑*i*S	Sn	05 41 51.3	-0.4
TKM2	Tokmak 2 1.9nm,0.1s,SNR=8.9	1.21	270	⇑P	Pb	05 41 36.7	0.0
TKM2	Tokmak 2 0.8nm,0.4s	1.21	270	⇓P	Pn	05 41 36.3	-0.3
TKM2	1.4nm,0.3s			⇓S	Sn	05 41 53.0	+0.2
TKM2	Tokmak 2 baz=70	1.21	270	⇓*i*P	Pn	05 41 36.4	-0.2
TKM2	baz=70			⇓*i*S	Sn	05 41 53.2	+0.3
TARG	Taragay, Kyrgy baz=62	1.27	161	⇓*i*P	Pn	05 41 37.0	-0.6
TARG	baz=62			⇓*i*S	Sn	05 41 53.6	-1.0
UZB	Uzynbulak 6.8nm,0.1s	1.32	80	P	Pb	05 41 37.7	-1.0
UZB	11nm,0.1s			S	Sb	05 41 54.8	-0.8
UZB	Uzynbulak baz=80	1.32	80	*e*P	Pb	05 41 37.7	-1.0
UZB	baz=80			*e*S	Sb	05 41 54.8	-0.8
UZB	Uzynbulak 6.8nm,0.1s	1.32	80	*e*P	Pb	05 41 37.7	-1.0
UZB	11nm,0.1s			*e*S	Sb	05 41 54.8	-0.8
ARXS	Arharly 7.4nm,0.2s	1.36	18	P	Pb	05 41 39.2	+0.1
ARXS	11nm,0.1s			S	Sg	05 41 56.9	-0.8
ARXS	Arharly 2.3nm,0.1s	1.36	18	*e*P	Pb	05 41 39.0	-0.2
ARXS	11nm,0.1s			*e*S	Sg	05 41 56.9	-0.8
SHLS	Shalkode 5.6nm,0.2s	1.65	81	Pg	Pg	05 41 49.7	+4.2
SHLS	9.1nm,0.3s			Lg	Lg	05 42 15.7	
SHLS	Shalkode 5.6nm,0.2s	1.65	81	*e*P	Pg	05 41 49.7	+4.2
SHLS	9.1nm,0.3s			*e*S	Sg	05 42 15.7	+8.7
PDGK	Podgornoye baz=75	1.70	75	⇓*i*P	Pb	05 41 44.0	-1.0
PDGK	baz=75			⇓*i*S	Sb	05 42 05.8	-0.4
KZA	Kyzart 4.0nm,0.2s,SNR=9.0	1.70	241	⇓P	Pb	05 41 45.7	+0.5
KZA	Kyzart baz=41	1.70	241	⇓*i*P	Pb	05 41 45.6	+0.4
KZA	baz=41			⇓*i*S	Sg	05 42 08.4	-0.3
KBK	Karagaybulak 2.9nm,0.1s,SNR=9.8	1.71	262	⇓P	Pb	05 41 45.7	+0.5
KBK	Karagaybulak baz=62	1.71	262	⇑*i*P	Pb	05 41 45.5	+0.3
KBK	baz=62			⇑*i*S	Sg	05 42 08.9	-0.1
NRN	Naryn baz=13	1.75	212	⇑*i*P	Pb	05 41 46.5	+0.4
NRN	baz=13			⇑*i*S	Sg	05 42 10.3	-0.1
CHMS	Chumysh 1.4nm,0.1s	1.83	273	⇓P	Pb	05 41 47.6	+0.4
CHMS	Chumysh baz=73	1.83	273	⇑*i*P	Pb	05 41 47.2	0.0
CHMS	baz=73			⇑*i*S	Sb	05 42 11.3	+1.4
USP	Ospenovka 2.2nm,0.1s,SNR=9.8	2.04	281	⇓P	Pb	05 41 51.0	+0.3
USP	Ospenovka baz=81	2.04	281	⇑*i*P	Pb	05 41 50.2	-0.5
USP	baz=81			⇑*i*S	Sb	05 42 16.8	+0.9
AAK	Ala-Archa 1.1nm,0.1s	2.04	263	⇑P	Pb	05 41 51.6	+0.7
AAK	Ala-Archa 1.4nm,0.5s	2.04	263	⇓Pn	Pb	05 41 50.5	-0.4
AAK	2.1nm,0.5s			⇑Sn	Sg	05 42 18.6	-1.0
AAK	Ala-Archa baz=63	2.04	263	⇑*i*P	Pb	05 41 50.7	-0.2
AAK	baz=63			⇑*i*S	Sb	05 42 17.5	+1.3
DJR	Jarkent 0.9nm,0.4s	2.33	52	Pg	Pb	05 41 55.9	+0.2
DJR	2.4nm,0.3s			Lg	Lg	05 42 26.0	
DJR	Jarkent 0.9nm,0.4s	2.33	52	*e*P	Pb	05 41 55.9	+0.2
DJR	2.4nm,0.3s			*e*S	Sg	05 42 26.0	-2.7
ARLS	Aral baz=45	2.41	245	⇓*e*P	Pb	05 41 55.1	-2.0
ARLS	baz=45			⇓*i*S	Sb	05 42 25.8	-1.0
KAPS	Kapalarasan 0.7nm,0.2s	2.81	32	Pg	Pb	05 42 04.2	+0.3
KAPS	11nm,0.4s			Lg	Lg	05 42 40.2	
KAPS	Kapalarasan 0.7nm,0.2s	2.81	32	*e*P	Pb	05 42 04.2	+0.3
KAPS	11nm,0.4s			⇓*i*S	Sb	05 42 40.2	+2.1
MRKS	Merke 1.4nm,0.4s	2.96	268	Pg	Pb	05 42 08.3	+1.8
MRKS	4.1nm,0.3s			Lg	Lg	05 42 47.2	
MRKS	Merke 1.4nm,0.4s	2.96	268	*e*P	Pb	05 42 08.3	+1.8
MRKS	4.1nm,0.3s			⇑*i*S	Sg	05 42 47.2	-1.8

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*IDC **07** 05:41:35.1±0.9, 11°.56S×165°.36E, h0^{km}, mb4.2/11, mb1 4.5/12, mb1mx4.2/37, mbtmp4.3/12, ML4.9/1, Error ellipse: s-maj=37.7km s-min=18.7km az=144.0*

*ISCJB **07** 05:41:37.7±0.3, 11°.47S±0°.05×165°.12E±0°.05, h24^{km}, mb4.4/23, Error ellipse: s-maj=7.9km s-min=6.7km az=136.0*

*NEIC **07** 05:41:37.4±0.3, 11°.38S×165°.21E, h10^{km}, mb4.6/12, Error ellipse: s-maj=6.9km s-min=6.0km az=89.0*

ISC 07 05:41:39.4±0.5**, 11°.40S**±0°.08×**165°.20E**±0°.08**, h24**^{km}**, n53,**
σ**1**^{s}**.28**/53**, mb4.5**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	Honiara	5.53	290	*e*Pn	Pn	05 43 00.6	+0.3
HNR				*e*Sn	Sn	05 44 01.6	-1.6
HNR	Honiara 35nm,0.3s,baz=151,slow=6.8,SNR=5.1	5.53	290	Pn	Pn	05 43 00.8	+0.5
MARNC	Mare, Loyalty	10.38	165	*e*Pn	Pn	05 44 06.2	-0.7
DZM	Mont Dzumac	10.68	174	*e*Pn	Pn	05 44 11.2	+0.1
DZM	Mont Dzumac 2.7nm,0.3s,baz=305,slow=16,SNR=18	10.68	174	Pn	Pn	05 44 10.8	-0.2
ONTNC	Ouen Toro	10.91	174	*e*Pn	Pn	05 44 16.0	+1.9
PINNC	Pines Island,	11.35	169	*e*Pn	Pn	05 44 20.4	+0.2
MANU	Manus Island 84nm,1.0s	19.99	296	*e*P	P	05 46 10.4	-0.1
CTA	Charters Tower 4.6nm,1.0s,baz=40,slow=7.9,SNR=2.0	20.16	242	P	P	05 46 11.9	-0.3
COEN	Coen 9.3nm,0.9s	21.64	261	*e*P	P	05 46 28.6	+0.4
ARMA	Armidale 45nm,1.6s	22.74	212	*e*P	P	05 46 40.5	+0.5
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=15	29.74	3	T	T	06 18 42.1	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=18	29.74	3	T	T	06 18 40.2	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=17	29.76	3	T	T	06 18 37.5	
STKA	Stephens Creek 1.2nm,1.1s	29.82	223	*e*P	P	05 47 45.0	+0.2
STKA	Stephens Creek 3.1nm,0.7s,baz=59,slow=10,SNR=5.5	29.82	223	P	P	05 47 43.6	-1.1
WRAB	Tennant Creek 8.8nm,1.0s	30.85	250	*e*P	P	05 47 53.8	-0.3
WB2	Warramunga Arr	30.85	250	*e*P	P	05 47 53.8	-0.2
WR1	Warramunga Arr	30.86	250	*e*P	P	05 47 53.7	-0.5
WR1				*e*PcP	PcP	05 50 51.6	+0.8
WRA	Warramunga Arr 6.3nm,0.9s,baz=80,slow=9.2,SNR=31	30.86	250	P	P	05 47 53.7	-0.5
WRA	0.7nm,0.9s,baz=82,slow=3.1,SNR=5.9			PcP	PcP	05 50 51.7	+0.7
SNZO	South Karori 62nm,1.3s	30.94	166	*e*P	P	05 47 54.0	-0.5
H11N1	WAKE ISLAND Hy baz=182,slow=76,SNR=11	30.96	3	T	T	06 20 06.6	
H11N3	WAKE ISLAND Hy baz=182,slow=76,SNR=13	30.97	3	T	T	06 20 06.8	
H11N2	WAKE ISLAND Hy baz=182,slow=76,SNR=9.9	30.98	3	T	T	06 20 08.2	
AS01	Alice Springs	32.12	243	*e*P	P	05 48 02.5	-2.7
AS31	Alice Springs 1.8nm,1.2s	32.16	244	*e*P	P	05 48 04.5	-1.1

AS31				ePcP	PcP	05 50 54.9	+0.5
ASAR	Alice Springs	32.16	243	P	P	05 48 04.8	-0.7
	3.1nm,1.0s,baz=72,slow=9.1,SNR=16						
ASAR				PcP	PcP	05 50 54.9	+0.5
	1.1nm,0.8s,baz=76,slow=2.7,SNR=9.7						
MTN	Manton Dam	33.33	264	eP	P	05 48 15.1	-0.7
	19nm,1.4s						
BBOO	Buckleboo	34.20	227	eP	P	05 48 23.3	+0.1
	4.2nm,0.8s						
ENH	Enshi	67.71	309	eP	P	05 52 35.2	0.0
	6.5nm,0.8s						
CM31	Chiang Mai Arr	71.77	294	eP	P	05 53 01.9	+1.5
CMAR	Chiang Mai Arr	71.77	294	P	P	05 53 01.9	+1.5
	0.9nm,0.3s,baz=124,slow=4.4,SNR=6.6						
QSPA	South Pole Qui	78.61	180	eP	P	05 53 39.2	+0.1
	23nm,1.6s						
SONA0	Songino Array	78.64	324	eP	P	05 53 41.0	+1.5
SONA0				ePcP	PcP	05 53 50.4	+2.0
SONM	Songino Array	78.64	324	P	P	05 53 41.0	+1.5
	1.6nm,0.9s,baz=138,slow=6.2,SNR=10						
BILL	Bilibino	79.23	0	eP	P	05 53 43.0	+0.8
	4.7nm,1.0s						
HDA	Harding Lake	83.75	19	eP	P	05 54 06.3	+0.1
	5.3nm,0.8s						
ILAR	Eielson Array	84.02	19	P	P	05 54 06.8	-0.8
	1.6nm,0.6s,baz=237,slow=5.2,SNR=21						
ILB	Eielson Array	84.02	19	eP	P	05 54 07.0	-0.5
NV01	Mina Array Sit	86.66	50	eP	P	05 54 21.5	-0.1
NVAR	Mina Array Bea	86.66	50	P	P	05 54 21.9	+0.2
	0.7nm,0.7s,baz=235,slow=7.8,SNR=6.2						
U15A	North Rim	90.74	53	eP	P	05 54 42.1	+1.0
	2.6nm,0.8s						
X16A	Lo Mia Camp, P	90.96	55	eP	P	05 54 43.5	+1.4
MK01	Makanchi Array	93.40	317	eP	P	05 54 52.6	-0.2
MK31	Makanchi Array	93.42	317	eP	P	05 54 49.7	-3.2
MK32	Makanchi Array	93.42	317	eP	P	05 54 53.2	+0.3
MKAR	Makanchi Array	93.42	317	eP	P	05 54 49.0	-3.9
	19nm,0.9s						
MKAR	Makanchi Array	93.42	317	P	P	05 54 53.2	+0.3
	3.5nm,0.9s,baz=101,slow=6.3,SNR=15						
MAKZ	Makanchi	93.63	317	eP	P	05 54 50.7	-3.2
	4.5nm,1.0s						
YKA	Yellowknife Ar	95.53	27	P	P	05 55 00.8	-1.3
	0.7nm,0.9s,baz=255,slow=4.6,SNR=7.3						
YKB5	Yellowknife Ar	95.53	27	eP	P	05 54 59.9	-2.2
LTX	Lajitas	96.47	61	eP	P	05 55 06.5	-0.9
TXAR	Lajitas Array	96.47	61	P	P	05 55 06.5	-0.9
	0.2nm,0.6s,baz=221,slow=5.4,SNR=3.3						

IDC 07 05:41:43.5±2.6**, 11°.80S×165°.52E, h0^{km}, mb4.2**/6**, mb1 4.4**/6**, mb1mx4.0**/36**, mbtmp4.1**/6**, Error ellipse: s-maj=108.2km s-min=26.6km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.02	251	P	P	05 48 03.5	+0.2
	1.2nm,0.5s,baz=81,slow=8.6,SNR=9.3						
ASAR	Alice Springs	32.26	244	P	P	05 48 14.0	-0.1
	1.2nm,0.6s,baz=66,slow=10.0,SNR=11						
SONM	Songino Array	79.14	324	P	P	05 53 50.4	+0.1
	0.6nm,0.7s,baz=132,slow=6.6,SNR=4.0						
ILAR	Eielson Array	84.30	19	P	P	05 54 17.3	+0.3
	1.7nm,0.6s,baz=237,slow=4.9,SNR=12						
MKAR	Makanchi Array	93.92	317	P	P	05 55 02.8	-0.4
	2.1nm,0.8s,baz=103,slow=5.2,SNR=7.0						
YKA	Yellowknife Ar	95.74	27	P	P	05 55 10.7	-0.5
	0.5nm,0.8s,baz=255,slow=5.0,SNR=6.3						

IDC 07 05:46:36.8±1.8**, 10°.82S×165°.32E, h0^{km}, mb3.7**/3**, mb1 4.1**/4**, mb1mx3.6**/46**, mbtmp3.8**/4**, ML4.2**/1**, Error ellipse: s-maj=53.4km s-min=32.6km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.23	175	Pn	Pn	05 49 19.0	+0.1
	1.8nm,0.3s,baz=348,slow=14,SNR=8.9						
WRA	Warramunga Arr	31.17	249	P	P	05 52 58.1	+0.2
	0.5nm,0.7s,baz=79,slow=7.8,SNR=4.1						
ASAR	Alice Springs	32.52	243	P	P	05 53 09.6	-0.2
	1.8nm,0.7s,baz=70,slow=9.9,SNR=18						
ILAR	Eielson Array	83.44	19	P	P	05 59 05.8	0.0
	0.2nm,0.7s,baz=230,slow=5.4,SNR=4.5						

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*NNC **07** 05:51:06.1±4.0, 53°.38N×90°.34E, h2^{km}±21^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=24.7km s-min=21.7km az=77.0, Suspected Mining explosion.*

KRAR 07 05:50:56.9±0.1**, 53°.78N×91°.03E, M2.9, 5C-9D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.68	275	⇑Pn	Pb	05 52 01.0	-1.8
	6.4nm,0.7s						
ZAA0				⇓Lg	Lg	05 52 51.1	
	30nm,0.8s						
KURK	Kurchatov	8.21	253	⇑Pn	Pn	05 52 58.5	+1.4
	3.9nm,0.9s						
KURK				⇑Sn	Sn	05 54 27.6	-3.0
	6.3nm,0.8s						
KURK				⇑Lg	Lg	05 55 14.0	
	9.7nm,0.8s						
KURBB	Kurchatov Arra	8.30	253	⇓Pn	Pn	05 52 57.4	-1.1
	2.5nm,0.7s						
KURBB				⇓Sn	Sn	05 54 29.5	-3.4
	17nm,0.8s						
KURBB				⇓Lg	Lg	05 55 13.7	
	18nm,0.9s						
MK31	Makanchi Array	8.95	222	⇓Pn	Pn	05 53 08.1	+0.7
	0.3nm,0.6s,baz=41,slow=14,SNR=5.7						
MK31				⇓Sn	Sn	05 54 46.6	-2.2
	3.2nm,0.8s,baz=45,slow=22,SNR=16						
MK31				⇑Lg	Lg	05 55 36.4	
	4.9nm,1.0s,baz=26,slow=32,SNR=4.1						
MAKZ	Makanchi	9.06	223	⇓Pn	Pn	05 53 08.8	-0.2
	1.4nm,1.0s						
MAKZ				⇓Sn	Sn	05 54 48.3	-3.3
	1.7nm,0.9s						
MAKZ				⇓Lg	Lg	05 55 38.2	
	4.6nm,1.1s						

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*ISCJB **07** 05:58:05.8±0.3, 13°.72S±0°.06×170°.37E±0°.06, h10^{km}, mb4.4/25, MS4.0/6, Error ellipse: s-maj=9.5km s-min=7.4km az=32.4*

*IDC **07** 05:58:06.0±0.8, 13°.68S×170°.42E, h0^{km}, mb4.2/11, mb1 4.4/12, mb1mx4.1/37, mbtmp4.2/12, ML3.8/1, MS4.0/9, Ms1 4.0/9, ms1mx3.8/18, Error ellipse: s-maj=30.6km s-min=18.2km az=135.0*

*NEIC **07** 05:58:07.4±0.2, 13°.65S×170°.38E, h10^{km}, mb4.6/10, Error ellipse: s-maj=7.2km s-min=5.4km az=123.0*

*GCMT **07** 05:58:10.4±0.3, 13°.73S±0°.01×170°.45E±0°.02, h12^{km}, MW5.0/86, Moment Tensor Solution. s34,c45; s86,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.40±.09; $M_{\theta\theta}$0.97±.09; $M_{\phi\phi}$-0.56±.09; $M_{r\theta}$-0.41±.28; $M_{\theta\phi}$3.23±.07; $M_{\phi r}$0.29±.25; Best double couple: $M_0$3.36300×10^{16} NP1:ϕ_s96.00000°, δ85.00000°, λ-8.00000°. NP2: ϕ_s187.00000°, δ82.00000°, λ-175.00000°. Principal axes: T 3.5260, Plg2.0000°, Azm142.0000°; N -0.3260, Plg80.0000°, Azm244.0000°; P -3.2010, Plg10.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 05:58:07.5±0.6**, 13°.64S**±0°.09×**170°.39E**±0°.10**, h10^{km}, n58, σ0^{s}.84**/43**, mb4.5**/25**, MS4.0**/6**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.42	120	ePn	Pn	06 00 10.2	+0.5
DZM	Mont Dzumac	9.18	204	ePn	Pn	06 00 18.7	-1.5
	18nm,0.8s						
DZM				eLR	LR	06 02 30.3	
	comp=Z,2µm,24.4s						
DZM	Mont Dzumac	9.18	204	ePn	Pn	06 00 20.2	+0.1
DZM	Mont Dzumac	9.18	204	Pn	Pn	06 00 20.6	+0.5
	1.0nm,0.3s,baz=73,slow=15,SNR=5.2						
DZM				LR	LR	06 03 22.9	
	comp=Z,2µm,21.3s,baz=26,slow=35						
PINNC	Pines Island,	9.35	197	ePn	Pn	06 00 22.5	+0.2
ONTNC	Ouen Toro	9.39	203	ePn	Pn	06 00 22.6	-0.4
FUNA	Funafuti	10.03	60	ePn	Pn	06 00 29.4	-2.2
HNR	Honiara	11.05	291	LR	LR	06 04 55.1	
	comp=Z,314nm,19.9s,baz=126,slow=37						
RAO	Raoul Island	18.94	147	LR	LR	06 07 52.8	
	comp=Z,2µm,21.4s,baz=146,slow=31						
EIDS	Eidsvold	21.58	234	eP	P	06 02 59.1	+1.6
	30nm,1.1s						
CTA	Charters Tower	23.95	251	P	P	06 03 24.2	+2.0
	2.2nm,0.5s,baz=40,slow=12,SNR=3.1						
ARMA	Armidale	24.04	223	eP	P	06 03 24.1	+1.0
	41nm,1.3s						
URZ	Urewera	25.23	168	eP	P	06 03 33.2	-0.4
	35nm,1.3s						
URZ	Urewera	25.23	168	P	P	06 03 33.2	-0.4
	6.5nm,0.7s,baz=15,slow=6.0,SNR=4.9						
URZ				LR	LR	06 10 40.8	
	comp=Z,346nm,19.5s,baz=1.0,slow=30						
MANU	Manus Island	25.52	295	eP	P	06 03 35.6	-0.8
	48nm,1.3s						
BKZ	Black Stump Fm	25.99	169	eP	P	06 03 39.3	-1.2
	20nm,1.1s						
COEN	Coen	26.43	266	eP	P	06 03 44.2	-0.4
	11nm,1.4s						
SNZO	South Karori	27.82	173	eP	P	06 03 56.9	0.0
	56nm,1.2s						
CAN	Canberra	28.94	218	eP	P	06 04 05.8	-1.3
	24nm,1.4s						
STKA	Stephens Creek	32.01	231	eP	P	06 04 34.9	+0.7
	4.4nm,1.2s						
STKA	Stephens Creek	32.01	231	P	P	06 04 34.3	+0.2
	10nm,1.1s,baz=62,slow=7.6,SNR=9.9						
H11S2	WAKE ISLAND Hy	32.14	353	T	T	06 38 33.8	
	baz=173,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	32.14	353	T	T	06 38 36.5	
	baz=173,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	32.16	353	T	T	06 38 44.6	
	baz=173,slow=76,SNR=14						
TOO	Toolangi	32.55	218	eP	P	06 04 39.3	+0.5
	26nm,1.4s						
H11N1	WAKE ISLAND Hy	33.33	354	T	T	06 40 09.4	
	baz=172,slow=76,SNR=6.0						
H11N3	WAKE ISLAND Hy	33.33	354	T	T	06 40 06.6	
	baz=172,slow=76,SNR=4.8						
H11N2	WAKE ISLAND Hy	33.34	354	T	T	06 40 08.9	
	baz=172,slow=76,SNR=6.9						
WB2	Warramunga Arr	35.01	255	eP	P	06 04 59.9	-0.6
WR1	Warramunga Arr	35.02	255	eP	P	06 04 59.3	-1.3
WRA	Warramunga Arr	35.02	255	P	P	06 04 59.3	-1.3
	1.2nm,0.7s,baz=85,slow=9.0,SNR=9.6						
AS01	Alice Springs	35.84	248	eP	P	06 05 06.8	-0.9
AS31	Alice Springs	35.88	248	eP	P	06 05 07.1	-0.9
	1.8nm,1.0s						
ASAR	Alice Springs	35.88	248	P	P	06 05 07.5	-0.6
	2.5nm,0.8s,baz=77,slow=8.9,SNR=22						
PPT2	Papeete2	38.71	101	eLQ	LQ	06 14 22.6	
	3µm,32.0s						
PPT2				eLR	LR	06 16 03.7	
	comp=Z,231nm,30.5s						
TBI	Tubuai	39.17	110	eLQ	LQ	06 14 34.3	
	757nm,35.5s						
TBI				eLR	LR	06 16 26.9	
	comp=Z,487nm,32.2s,baz=284						
FITZ	Fitzroy Crossi	43.19	258	eP	P	06 06 09.6	+0.6
	16nm,1.5s						
TAOE	Nuku Hiva Isla	48.68	90	eLR	LR	06 20 44.2	
	comp=Z,379nm,29.0s						
VNDA	Vanda	64.03	182	LR	LR	06 33 03.7	
	comp=Z,77nm,18.4s,baz=288,slow=33						
QSPA	South Pole Qui	76.38	180	eP	P	06 09 57.7	+0.8
	7.7nm,1.3s						
CAST	Castle Rocks	82.10	16	eP	P	06 10 27.8	-0.1
	11nm,1.4s						
SONA0	Songino Array	83.45	322	eP	P	06 10 36.4	+0.9
SONM	Songino Array	83.45	322	P	P	06 10 36.4	+0.9
	2.1nm,1.0s,baz=125,slow=4.7,SNR=11						
SONA1	Songino Array	83.46	322	eP	P	06 10 36.2	+0.7
NV01	Mina Array Sit	84.28	48	eP	P	06 10 39.2	-0.8
NVAR	Mina Array Bea	84.28	48	P	P	06 10 39.5	-0.5
	0.8nm,0.9s,baz=224,slow=6.3,SNR=4.5						
NVAR				LR	LR	06 40 57.7	
	comp=Z,133nm,20.0s,baz=256,slow=30						
ILAR	Eielson Array	84.59	17	P	P	06 10 41.1	+0.4
	1.7nm,0.8s,baz=235,slow=5.4,SNR=13						
ILB	Eielson Array	84.59	17	eP	P	06 10 40.6	0.0
IL1	Eielson Array	84.59	17	eP	P	06 10 40.5	-0.2
HVU	Hansel Valley	89.43	47	eP	P	06 11 03.7	-1.2
	8.1nm,1.3s						
PDAR	Pinedale Array	92.00	47	LR	LR	06 48 30.5	
	comp=Z,94nm,18.1s,baz=254,slow=33						
LTX	Lajitas	93.11	61	eP	P	06 11 22.2	0.0
TXAR	Lajitas Array	93.11	61	P	P	06 11 22.2	0.0
	0.5nm,0.8s,baz=228,slow=5.0,SNR=4.7						
TXAR				LR	LR	06 44 04.1	
	comp=Z,81nm,21.7s,baz=0.0,slow=30						
YKA	Yellowknife Ar	95.21	27	P	P	06 11 31.3	+0.4
	0.4nm,0.8s,baz=257,slow=4.8,SNR=6.3						
YKA				LR	LR	06 46 47.1	
	comp=Z,7.7nm,20.5s,baz=250,slow=31						
YKB5	Yellowknife Ar	95.21	27	eP	P	06 11 30.5	-0.5
ZAA0	Zalesovo Array	98.32	323	eP	P	06 11 42.9	-2.4
	36nm,1.6s						
MK32	Makanchi Array	98.52	316	eP	P	06 11 46.9	+0.5
MKAR	Makanchi Array	98.52	316	P	P	06 11 46.9	+0.5
	0.7nm,0.9s,baz=111,slow=5.7,SNR=5.1						

IDC 07 05:59:49.7±4.5**, 11°.20S×165°.51E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/40**, mbtmp3.6**/4**, Error ellipse: s-maj=187.1km s-min=36.5km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.22	250	P	P	06 06 09.7	-1.5
	0.3nm,0.7s,baz=80,slow=9.5,SNR=1.1						
ASAR	Alice Springs	32.52	243	P	P	06 06 23.6	+1.0
	0.5nm,0.7s,baz=68,slow=9.7,SNR=0.9						
ILAR	Eielson Array	83.73	19	P	P	06 12 19.7	-0.6
	0.2nm,0.9s,baz=224,slow=6.3,SNR=1.0						
MKAR	Makanchi Array	93.48	317	P	P	06 13 08.2	+0.8
	0.8nm,0.6s,baz=87,slow=6.2,SNR=6.2						

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*IDC **07** 06:01:29.6±0.8, 11°.20S×165°.34E, h0^{km}, mb4.1/12, mb1 4.3/13, mb1mx4.1/40, mbtmp4.1/13, ML3.9/1, MS4.4/3, Ms1 4.4/3, ms1mx3.5/27, Error ellipse: s-maj=34.9km s-min=18.5km az=139.0*

*NEIC **07** 06:01:31.4±0.2, 11°.24S×165°.31E, h10^{km}, mb4.4/14, Error ellipse: s-maj=7.1km s-min=5.0km az=132.0*

*ISCJB **07** 06:01:32.7±0.3, 11°.37S±0°.07×165°.27E±0°.07, h30^{km}, mb4.2/23, MS4.4/3, Error ellipse: s-maj=11.1km s-min=8.3km az=41.4*

ISC 07 06:01:34.3±0.6**, 11°.27S**±0°.10×**165°.3E**±0°.1**, h30^{km}, n47, σ0^{s}.63**/45**, mb4.3**/23**, MS4.4**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.79	174	Pn	Pn	06 04 06.9	-0.1
	0.8nm,0.3s,baz=303,slow=16,SNR=11						
PINNC	Pines Island,	11.46	170	ePn	Pn	06 04 15.1	-1.0
CTA	Charters Tower	20.31	242	P	P	06 06 09.0	+0.9
	10nm,0.9s,baz=61,slow=12,SNR=6.0						
CTAO	Charters Tower	20.31	242	eP	Pn	06 06 13.1	+2.8
	39nm,1.4s						
COEN	Coen	21.76	261	eP	P	06 06 23.6	-0.2
	6.5nm,1.0s						
ARMA	Armidale	22.90	212	eP	P	06 06 36.0	+0.1
	9.4nm,1.2s						
URZ	Urewera	28.88	161	eP	P	06 07 31.2	+0.8
	17nm,1.1s						
STKA	Stephens Creek	29.98	223	eP	P	06 07 40.0	-0.4
	1.0nm,1.1s						
STKA	Stephens Creek	29.98	223	P	P	06 07 40.7	+0.4
	0.9nm,0.5s,baz=12,slow=9.3,SNR=2.9						
WRAB	Tennant Creek	30.99	250	eP	P	06 07 49.5	+0.1
	18nm,1.6s						
WB2	Warramunga Arr	30.99	250	eP	P	06 07 49.1	-0.3
	11nm,1.4s						
WR1	Warramunga Arr	31.00	250	eP	P	06 07 49.4	-0.1
WR1				ePcP	PcP	06 10 45.4	+0.1
WRA	Warramunga Arr	31.00	250	P	P	06 07 49.4	-0.1
	2.4nm,0.9s,baz=83,slow=8.7,SNR=10						
WRA				PcP	PcP	06 10 45.4	+0.1
	0.6nm,0.8s,baz=72,slow=3.1,SNR=4.7						
AS31	Alice Springs	32.30	243	eP	P	06 08 00.4	-0.6
	0.7nm,0.8s						
ASAR	Alice Springs	32.31	243	P	P	06 08 00.1	-0.9
	1.5nm,0.9s,baz=72,slow=9.0,SNR=4.6						
RAR	Rarotonga	34.88	111	LR	LR	06 18 51.4	
	comp=Z,715nm,21.6s,baz=276,slow=30						
ASAJ	Asahikawa	58.87	341	LR	LR	06 30 41.0	
	comp=Z,349nm,21.9s,baz=164,slow=30						
CM31	Chiang Mai Arr	71.81	294	eP	P	06 12 54.3	-0.4
CMAR	Chiang Mai Arr	71.81	294	P	P	06 12 54.3	-0.4
	1.1nm,0.2s,baz=126,slow=7.3,SNR=6.0						
SONA0	Songino Array	78.59	324	eP	P	06 13 33.3	0.0
SONM	Songino Array	78.59	324	P	P	06 13 33.3	0.0
	0.2nm,0.3s,baz=147,slow=8.2,SNR=2.5						
HDA	Harding Lake	83.59	19	eP	P	06 13 59.8	+0.3
	6.1nm,1.0s						
ILAR	Eielson Array	83.86	19	P	P	06 14 01.0	+0.2
	1.5nm,0.6s,baz=237,slow=5.2,SNR=28						
ILB	Eielson Array	83.86	19	eP	P	06 14 01.1	+0.4
NV01	Mina Array Sit	86.50	50	eP	P	06 14 15.6	+0.8
NVAR	Mina Array Bea	86.50	50	P	P	06 14 13.8	-1.1
	1.8nm,1.0s,baz=244,slow=7.6,SNR=6.9						
NV11	Mina Array Sit	86.61	50	eP	P	06 14 16.4	+1.1
	0.9nm,1.4s						
W13A	Hualapai Mount	89.01	54	eP	P	06 14 28.1	+1.1
	2.4nm,0.9s						
LCMT	Little Creek M	89.98	52	eP	P	06 14 30.6	-0.8
	2.4nm,1.0s						
U15A	North Rim	90.58	53	eP	P	06 14 34.8	+0.4
	3.9nm,0.9s						
X16A	Lo Mia Camp, P	90.80	55	eP	P	06 14 35.1	-0.2
	2.8nm,1.0s						
MK01	Makanchi Array	93.38	317	eP	P	06 14 47.0	+0.2
MK31	Makanchi Array	93.39	317	eP	P	06 14 47.1	+0.3
MK32	Makanchi Array	93.39	317	eP	P	06 14 47.5	+0.6
MKAR	Makanchi Array	93.39	317	eP	P	06 14 47.0	+0.2
	9.9nm,0.9s						
MKAR	Makanchi Array	93.39	317	P	P	06 14 47.5	+0.6
	1.2nm,0.7s,baz=96,slow=6.3,SNR=9.2						
PD31	Pinedale Array	94.02	47	eP	P	06 14 49.1	-1.0
PDAR	Pinedale Array	94.02	47	P	P	06 14 49.3	-0.7
	0.3nm,0.9s,baz=270,slow=2.7,SNR=2.5						
YKA	Yellowknife Ar	95.37	27	P	P	06 14 53.9	-1.5
	0.3nm,0.7s,baz=255,slow=4.8,SNR=6.5						
YKB5	Yellowknife Ar	95.37	27	eP	P	06 14 54.6	-0.8
NRIK	Noril'sk	96.18	340	LR	LR	06 54 18.4	
	comp=Z,161nm,21.9s,baz=110,slow=33						
LTX	Lajitas	96.31	61	eP	P	06 15 01.1	+0.4
TXAR	Lajitas Array	96.31	61	P	P	06 15 01.1	+0.4
	0.2nm,0.6s,baz=219,slow=7.0,SNR=2.1						
ARA0	ARCESS Array S	116.44	345	ePKPdf	PKiKP	06 20 15.3	+0.6
ARCES	ARCESS Array B	116.44	345	PKP	PKiKP	06 20 15.3	+0.6
	0.5nm,0.5s,baz=71,slow=1.7,SNR=7.0						
FIA0	FINESS Array S	121.82	338	ePKPdf	PKiKP	06 20 25.9	+0.6
FINES	FINESS Array B	121.82	338	PKP	PKiKP	06 20 25.9	+0.6
	1.6nm,0.9s,baz=182,slow=34,SNR=2.1						

IDC 07 06:05:12.9±3.4**, 10°.14S×166°.09E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/38**, mbtmp3.5**/4**, Error ellipse: s-maj=132.2km s-min=32.4km az=135.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.12	249	P	P	06 11 41.6	-0.6
	0.4nm,0.9s,baz=84,slow=9.7,SNR=3.0						
ASAR	Alice Springs	33.50	242	P	P	06 11 55.4	+1.0
	0.4nm,0.8s,baz=74,slow=9.8,SNR=2.0						
SONM	Songino Array	78.14	324	P	P	06 17 13.5	-0.7
	0.1nm,0.3s,baz=108,slow=4.7,SNR=1.7						
ILAR	Eielson Array	82.55	18	P	P	06 17 37.7	+0.3
	0.4nm,0.6s,baz=240,slow=5.4,SNR=8.8						

IDC 07 06:06:07.8±1.8**, 11°.09S×165°.48E, h0^{km}, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.6**/39**, mbtmp3.9**/5**, ML4.0**/1**, Error ellipse: s-maj=52.6km s-min=31.5km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.96	175	Pn	Pn	06 08 45.8	-0.2
	1.2nm,0.3s,baz=345,slow=17,SNR=6.5						
STKA	Stephens Creek	30.23	223	P	P	06 12 20.9	+0.5
	0.6nm,0.4s,baz=49,slow=11,SNR=1.7						
WRA	Warramunga Arr	31.23	250	P	P	06 12 29.7	+0.4
	2.9nm,0.8s,baz=81,slow=9.1,SNR=12						
ASAR	Alice Springs	32.54	243	P	P	06 12 39.9	-1.0
	0.7nm,0.8s,baz=72,slow=8.7,SNR=2.4						
ILAR	Eielson Array	83.64	19	P	P	06 18 37.9	0.0
	0.3nm,0.6s,baz=238,slow=4.8,SNR=4.3						

IDC 07 06:09:07.1±3.0**, 54°.51N×87°.13E, h0^{km}, mb1 2.9**/2**, mb1mx2.8**/44**, mbtmp2.9**/2**, ML2.7**/2**, Error ellipse: s-maj=25.2km s-min=18.4km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.47	249	i		06 16 22.9	
	baz=69,slow=346,SNR=8.4						
ZALV	Zalesovo Beam	1.47	248	Pg	Pn	06 09 32.3	-2.5
	1.0nm,0.3s,baz=69,slow=16,SNR=17						
ZALV				Lg	Lg	06 09 54.0	
	1.9nm,0.3s,baz=68,slow=19,SNR=11						
KURBB	Kurchatov Arra	6.53	237	Pn	Pn	06 10 45.2	+0.9
	0.1nm,0.3s,baz=52,slow=14,SNR=5.8						
KURBB				Lg	Lg	06 12 33.9	
	0.0nm,0.3s,baz=60,slow=32,SNR=3.0						
MKAR	Makanchi Array	8.31	204	Pn	Pn	06 11 09.8	+1.0
	0.1nm,0.3s,baz=20,slow=10,SNR=6.3						
MKAR				Sn	Sn	06 12 43.2	-0.1
	0.2nm,0.3s,baz=24,slow=27,SNR=6.0						
MKAR				Lg	Lg	06 13 32.8	
	0.1nm,0.3s,baz=18,slow=29,SNR=2.8						
BVAR	Borovoye Array	10.03	268	Pn	Pn	06 11 34.7	+2.4
	0.1nm,0.3s,baz=73,slow=17,SNR=4.0						

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*IDC **07** 06:10:03.9±1.1, 11°.25S×165°.37E, h0^{km}, mb3.6/6, mb1 3.9/7, mb1mx3.7/36, mbtmp3.7/7, ML3.8/1, Error ellipse: s-maj=41.4km s-min=25.1km az=133.0*

*ISCJB **07** 06:10:07.1±0.9, 11°.4S±0°.1×165°.3E±0°.2, h30^{km}, mb3.6/6, Error ellipse: s-maj=26.2km s-min=18.1km az=8.2*

ISC 07 06:10:08.6±0.9**, 11°.3S**±0°.1×**165°.3E**±0°.2**, h30^{km}, n8, σ1^{s}.13**/8**, mb3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.81	175	Pn	Pn	06 12 41.9	+0.4
	0.8nm,0.3s,baz=308,slow=21,SNR=7.4						
WRA	Warramunga Arr	31.03	250	P	P	06 16 24.2	+0.2
	0.5nm,0.6s,baz=82,slow=9.0,SNR=5.6						
ASAR	Alice Springs	32.34	243	P	P	06 16 34.6	-0.9
	0.3nm,0.5s,baz=64,slow=10,SNR=3.2						
SONM	Songino Array	78.59	324	P	P	06 22 09.1	+1.5
	0.2nm,0.4s,baz=131,slow=8.1,SNR=2.5						
ILAR	Eielson Array	83.84	19	P	P	06 22 34.8	-0.1
	0.3nm,0.6s,baz=234,slow=5.1,SNR=8.1						
NVAR	Mina Array Bea	86.47	50	P	P	06 22 48.9	0.0
	0.2nm,0.5s,baz=256,slow=7.3,SNR=3.1						
MKAR	Makanchi Array	93.40	317	P	P	06 23 20.9	-0.2
	0.5nm,0.8s,baz=93,slow=7.3,SNR=5.5						
ARCES	ARCESS Array B	116.43	345	PKP	PKPdf	06 28 47.2	-1.7
	2.9nm,0.9s,baz=20,slow=8.1,SNR=3.9						

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*ISCJB **07** 06:26:46.2±0.7, 11°.9S±0°.1×165°.2E±0°.1, h10^{km}, mb3.8/8, Error ellipse: s-maj=22.0km s-min=16.4km az=34.0*

*IDC **07** 06:26:46.2±1.0, 11°.72S×165°.20E, h0^{km}, mb3.9/8, mb1 4.2/9, mb1mx3.8/46, mbtmp3.9/9, ML3.5/1, Error ellipse: s-maj=45.1km s-min=20.6km az=145.0*

ISC 07 06:26:47.8±0.8**, 11°.8S**±0°.1×**165°.2E**±0°.2**, h10^{km}, n10, σ0^{s}.71**/10**, mb3.9**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.34	174	Pn	Pn	06 29 16.3	0.0
	0.4nm,0.3s,baz=121,slow=18,SNR=1.9						
WRA	Warramunga Arr	30.75	251	P	P	06 33 03.4	-0.2
	1.8nm,0.9s,baz=82,slow=8.8,SNR=11						
ASAR	Alice Springs	32.01	244	P	P	06 33 14.1	-0.6
	0.7nm,0.9s,baz=68,slow=9.3,SNR=8.2						

FITZ	Fitzroy Crossi 1.7nm,0.6s,baz=75,slow=6.7,SNR=8.1	38.70	256	P	P	06 34 12.5	+0.3
ILAR	Eielson Array 1.1nm,0.6s,baz=241,slow=5.2,SNR=17	84.34	19	P	P	06 39 19.6	-0.2
NVAR	Mina Array Bea 0.8nm,0.7s,baz=233,slow=7.8,SNR=6.7	86.87	50	P	P	06 39 33.6	+0.3
MKAR	Makanchi Array 0.2nm,0.5s,baz=96,slow=5.2,SNR=2.9	93.67	317	P	P	06 40 05.4	+0.8
YKA	Yellowknife Ar 0.2nm,0.7s,baz=249,slow=5.8,SNR=3.7	95.83	27	P	P	06 40 12.7	-1.4
TXAR	Lajitas Array 0.3nm,1.0s,baz=231,slow=4.3,SNR=2.2	96.62	62	P	P	06 40 19.3	+0.7
ARCES	ARCESS Array B 2.0nm,1.0s,baz=71,slow=3.1,SNR=1.9	116.87	345	PKP	PKiKP	06 45 32.2	0.0

*IDC **07** 06:26:58.4±1.8, 38°.83N×71°.92E, h0^{km}, mb3.5/3, mb1 3.6/9, mb1mx3.4/62, mbtmp3.5/9, ML3.1/6, MS3.2/1, Ms1 3.2/1, ms1mx2.3/43, Error ellipse: s-maj=27.7km s-min=18.1km az=143.0*

*KRNET **07** 06:26:59.6±0.1, 39°.11N×71°.61E, mb3.3*

*SOME **07** 06:26:59.8, 39°.73N×70°.90E, h0^{km}*

*NNC **07** 06:27:05.3±2.8, 39°.28N×71°.68E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=22.3km s-min=14.3km az=14.0*

ISC 07 06:27:04.4±1.4, 39°.27N±0°.08×71°.68E±0°.04, h10^{km}, n39, σ2^{s}.61/55, mb3.6/3, 17C-14D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken baz=27	1.03	320	⇓iP	Pg	06 27 21.4	-2.9
BTK	baz=27			⇓iS	Sg	06 27 36.6	-1.1
SFK	Sufi-Kurgan baz=58	1.59	62	⇑iP	Pn	06 27 31.9	-1.0
SFK	baz=58			⇑iS	Sb	06 27 55.6	+1.2
ARSB	Arslanbob baz=25	2.28	26	⇑iP	Pn	06 27 42.6	+0.3
ARSB	baz=25			⇑iS	Sb	06 28 14.5	+0.3
ARK	Arkit baz=6.0	2.54	5	⇑iP	Pn	06 27 46.7	+0.9
ARK	baz=6.0			⇑iS	Sb	06 28 21.0	-0.4
AML	Almayashu SNR=17	3.25	28	P	Pn	06 27 58.9	+3.1
AML	Almayashu baz=27	3.25	28	⇑iP	Pn	06 27 56.6	+0.8
AML	baz=27			⇑iS	Sn	06 28 38.0	+3.3
MNAS	Manas baz=11	3.28	11	⇓iP	Pn	06 27 57.5	+1.5
MNAS	baz=11			⇓iS	Sn	06 28 38.6	+3.5
ARLS	Aral baz=36	3.28	37	⇓iP	Pn	06 27 56.6	+0.5
ARLS	baz=36			⇓iS	Sn	06 28 38.9	+3.7
UCH	Uchtor SNR=16	3.66	35	P	Pn	06 28 04.6	+3.1
UCH	Uchtor baz=34	3.66	35	⇓iP	Pn	06 28 02.2	+0.7
UCH	baz=34			⇓iS	Sn	06 28 47.8	+2.9
MRKS	Merke 17nm,0.4s	3.67	18	Pg	Pn	06 28 04.9	+3.6
MRKS	10.0nm,0.9s			Lg	Lg	06 28 52.6	
MRKS	Merke 6.1nm,0.7s	3.67	18	eP	Pn	06 28 04.8	+3.5
MRKS	10.0nm,0.9s			eS	Sb	06 28 51.7	-2.2
EKS2	Erkin-Say SNR=11	3.74	24	P	Pn	06 28 05.8	+3.5
KZA	Kyzart SNR=10	3.91	43	P	Pn	06 28 09.3	+4.4
KZA	Kyzart baz=42	3.91	43	⇓iP	Pn	06 28 05.0	+0.1
KZA	baz=42			⇓iS	Sn	06 28 53.5	+2.5
KK31	Karatay Array 2.3nm,0.3s,baz=172,slow=12,SNR=62	3.93	347	⇑Pn	Pn	06 28 06.8	+2.0
KK31	6.7nm,0.5s,baz=157,slow=15,SNR=6.0			⇓Pg	Pg	06 28 17.5	-2.2
KK31	8.2nm,0.6s,baz=172,slow=24,SNR=4.8			⇑Sn	Sn	06 28 55.6	+4.6
KK31	5.9nm,0.4s,baz=182,slow=33,SNR=4.9			⇓Lg	Lg	06 29 07.6	
AAK	Ala-Archa SNR=13	3.98	31	P	Pb	06 28 11.9	-3.0
AAK	Ala-Archa 16nm,0.9s	3.98	31	⇑Pn	Pn	06 28 08.5	+2.8
AAK	14nm,0.8s			⇑Lg	Lg	06 29 11.2	
AAK	Ala-Archa 3.5nm,0.3s,baz=197,slow=3.9,SNR=26	3.98	31	Pn	Pn	06 28 08.3	+2.5
AAK	1.1nm,0.3s,baz=175,slow=22,SNR=1.5			Sn	Sb	06 29 00.6	-2.5
KBK	Karagaybulak SNR=12	4.19	35	P	Pn	06 28 12.7	+4.0
CHMS	Chumysh SNR=16	4.39	31	P	Pn	06 28 15.2	+4.0
USP	Ospenovka SNR=9.5	4.53	27	P	Pn	06 28 15.7	+2.7
TKM2	Tokmak 2 SNR=13	4.70	38	P	Pn	06 28 20.3	+4.7
TKM2	Tokmak 2 4.0nm,0.5s	4.70	38	⇑Pn	Pn	06 28 18.4	+2.8
TKM2	6.1nm,0.7s			⇑Lg	Lg	06 29 35.4	
KST	Kastek 4.2nm,0.6s	4.97	39	Pg	Pb	06 28 33.5	+1.9
KST	12nm,0.7s			Lg	Lg	06 29 41.2	
KST	Kastek 0.6nm,0.4s	4.97	39	eP	Pb	06 28 33.6	+2.1
KST	12nm,0.7s			⇑iS	Sg	06 29 41.2	-2.7
DGS	Degeres 7.2nm,0.6s	5.03	37	Pg	Pb	06 28 34.5	+1.9
DGS	7.2nm,0.8s			Lg	Lg	06 29 42.7	
DGS	Degeres 1.4nm,0.7s	5.03	37	eP	Pb	06 28 34.5	+1.9
DGS	7.2nm,0.8s			eS	Sg	06 29 42.7	-3.2
MKAR	Makanchi Array 0.0nm,0.3s,baz=229,slow=14,SNR=4.3	10.80	42	Pn	Pn	06 29 40.2	+1.0
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=216,slow=12,SNR=2.4	12.34	21	Pn	Pn	06 29 58.3	-1.7
AB31	Akbulak array 0.4nm,0.4s,baz=133,slow=8.0,SNR=17	13.04	324	⇑P	Pn	06 30 08.7	-0.9
AB31	6.4nm,1.3s,baz=152,slow=21,SNR=5.3			⇑S	Sn	06 32 35.2	+0.6
BVAR	Borovoye Array 0.2nm,0.3s,baz=163,slow=11,SNR=4.1	13.79	357	Pn	Pn	06 30 19.6	-0.2
AKTO	Aktyubinsk 2.7nm,0.6s	14.75	324	⇓P	Pn	06 30 36.9	+3.8
AKTO	2.4nm,0.8s			⇓S	Sn	06 33 18.3	+1.8
AKTO	Aktyubinsk 0.1nm,0.3s,baz=125,slow=12,SNR=1.8	14.75	324	Pn	Pn	06 30 33.2	+0.2
AKTO	0.1nm,0.3s,baz=237,slow=14,SNR=2.0			Sn	Sn	06 33 13.0	-3.5
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=212,slow=12,SNR=6.4	17.19	27	P	Pn	06 31 05.5	+0.9
PALK	Pallekele comp=Z,40nm,20.2s,baz=115,slow=36	32.88	163	LR	LR	06 46 40.2	
TORD	Torodi Ar. Bea 0.2nm,0.5s,baz=64,slow=5.0,SNR=2.1	66.34	268	P	P	06 37 49.3	-4.2
INK	Inuvik 1.2nm,1.0s,baz=340,slow=8.4,SNR=3.7	71.09	10	P	P	06 38 20.4	-1.9
YKA	Yellowknife Ar 0.3nm,0.7s,baz=348,slow=5.8,SNR=5.4	78.46	3	P	P	06 39 03.2	-1.9

IDC 07 06:30:56.5±9.1, 2°.69S×138°.43E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.4/37, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=390.2km s-min=29.2km az=85.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.2nm,0.3s,baz=13,slow=12,SNR=10	17.61	193	P	Pn	06 35 01.7	-1.8
ASAR	Alice Springs 1.1nm,0.5s,baz=20,slow=11,SNR=14	21.31	191	P	P	06 35 46.0	+0.9
MKAR	Makanchi Array 0.3nm,0.9s,baz=115,slow=5.5,SNR=2.8	69.60	323	P	P	06 42 07.7	0.0

IDC 07 06:39:30.5±4.0, 10°.09S×163°.10E, h0^{km}, mb3.7/4, mb1 4.0/4, mb1mx3.7/33, mbtmp3.7/4, Error ellipse: s-maj=194.1km s-min=34.6km az=139.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 2.0nm,1.2s,baz=75,slow=8.8,SNR=4.7	29.41	247	P	P	06 45 36.0	+0.1
ASAR	Alice Springs 0.3nm,0.6s,baz=62,slow=10,SNR=4.6	30.94	240	P	P	06 45 48.1	-1.4
FITZ	Fitzroy Crossi 2.0nm,0.7s,baz=102,slow=7.1,SNR=6.3	37.13	253	P	P	06 46 44.2	+0.9
ILAR	Eielson Array 0.2nm,0.6s,baz=236,slow=5.7,SNR=1.6	83.46	19	P	P	06 51 59.7	0.0

IDC 07 06:42:11.3±1.8, 10°.81S×164°.46E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.6/35, mbtmp3.7/5, ML4.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/20, Error ellipse: s-maj=50.5km s-min=34.1km az=116.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara comp=Z,208nm,19.6s,baz=137,slow=41	4.66	287	LR	LR	06 45 20.3	
DZM	Mont Dzumac 3.2nm,0.3s,baz=9.1,slow=15,SNR=28	11.35	171	Pn	Pn	06 44 56.1	+1.1
WRA	Warramunga Arr 0.3nm,0.6s,baz=82,slow=9.1,SNR=1.8	30.39	249	P	P	06 48 25.6	+0.1
ASAR	Alice Springs 0.3nm,0.6s,baz=68,slow=9.9,SNR=2.2	31.78	242	P	P	06 48 36.8	-0.9
ILAR	Eielson Array 0.3nm,0.8s,baz=230,slow=5.6,SNR=1.8	83.70	19	P	P	06 54 40.9	-0.8
MKAR	Makanchi Array 0.3nm,0.7s,baz=99,slow=5.2,SNR=2.8	92.49	317	P	P	06 55 25.6	+1.1

IDC 07 06:45:27.8±2.3, 7°.50S×128°.36E, h0^{km}, mb3.2/1, mb1 3.6/3, mb1mx3.4/30, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=98.8km s-min=30.2km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.86	194	Pn	Pn	06 48 05.8	+1.1
WRA	Warramunga Arr 0.4nm,0.3s,baz=330,slow=13,SNR=19	13.66	155	Pn	Pn	06 48 42.2	-0.8
ASAR	Alice Springs 0.1nm,0.3s,baz=335,slow=10,SNR=3.4	16.93	162	Pn	Pn	06 49 25.9	-0.5
MKAR	Makanchi Array 0.1nm,0.6s,baz=119,slow=5.1,SNR=1.6	67.76	328	P	P	06 56 27.4	0.0

*ISCJB **07** 06:51:11.8±0.2, 10°.79S±0°.04×165°.51E±0°.06, h10^{km}, mb4.6/52, MS3.6/3, Error ellipse: s-maj=8.2km s-min=5.5km az=24.1*

*IDC **07** 06:51:11.5±0.6, 10°.75S×165°.60E, h0^{km}, mb4.3/13, mb1 4.5/14, mb1mx4.3/36, mbtmp4.3/14, ML4.2/1, MS3.6/5, Ms1 3.6/5, ms1mx3.3/34, Error ellipse: s-maj=25.2km s-min=16.6km az=129.0*

*NEIC **07** 06:51:13.3±0.2, 10°.72S×165°.57E, h10^{km}, mb4.7/42, Error ellipse: s-maj=5.9km s-min=4.1km az=115.0*

ISC 07 06:51:13.2±0.5, 10°.73S±0°.09×165°.62E±0°.10, h10^{km}, n93, σ0^{s}.81/89, mb4.7/52, MS3.7/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara 92nm,0.3s,baz=144,slow=5.1,SNR=7.3	5.73	283	Pn	Pn	06 52 40.9	+2.5
HNR	comp=Z,910nm,19.5s,baz=118,slow=41			LR	LR	06 55 06.7	
DZM	Mont Dzumac 1.6nm,0.3s,baz=19,slow=7.8,SNR=20	11.31	176	Pn	Pn	06 53 55.4	+0.4
DZM	comp=Z,186nm,18.8s,baz=36,slow=36			LR	LR	06 57 58.4	
ONTNC	Ouen Toro	11.54	176	ePn	Pn	06 53 59.6	+1.5
OUENC	Ouen Island, N	11.68	174	ePn	Pn	06 54 01.4	+1.4
PINNC	Pines Island,	11.95	172	ePn	Pn	06 54 05.9	+2.2
EIDS	Eidsvold 10.0nm,0.9s	20.05	221	eP	Pn	06 55 48.4	0.0
CTA	Charters Tower 6.3nm,0.7s,baz=55,slow=13,SNR=6.6	20.84	241	P	Pn	06 55 59.3	+1.6
CTAO	Charters Tower 15nm,0.8s	20.84	241	eP	Pn	06 55 58.8	+1.1
COEN	Coen 5.4nm,1.0s	22.15	259	eP	P	06 56 08.2	-1.3
ARMA	Armidale 16nm,1.3s	23.52	212	eP	P	06 56 24.4	+0.7
KNTN	Kanton 103nm,1.5s	23.84	72	eP	P	06 56 28.0	+1.2
OUZ	Omahuta 16nm,0.9s	25.44	165	eP	P	06 56 42.5	+1.3
H11S2	WAKE ISLAND Hy baz=183,slow=76,SNR=25	29.05	2	T	T	07 27 53.0	
H11S3	WAKE ISLAND Hy baz=183,slow=76,SNR=13	29.06	2	T	T	07 27 53.1	
H11S1	WAKE ISLAND Hy baz=183,slow=76,SNR=31	29.07	2	T	T	07 27 54.4	
URZ	Urewera 20nm,1.0s	29.29	161	eP	P	06 57 15.4	-0.3
URZ	Urewera 8.3nm,0.5s,baz=276,slow=3.4,SNR=9.3	29.29	161	P	P	06 57 15.4	-0.3
BKZ	Black Stump Fm 24nm,0.5s	29.93	163	eP	P	06 57 21.1	-0.5
H11N1	WAKE ISLAND Hy baz=182,slow=76,SNR=12	30.28	2	T	T	07 29 26.1	
H11N3	WAKE ISLAND Hy baz=182,slow=76,SNR=12	30.28	2	T	T	07 29 24.8	
H11N2	WAKE ISLAND Hy baz=182,slow=76,SNR=11	30.30	2	T	T	07 29 27.4	
STKA	Stephens Creek 0.8nm,0.9s	30.58	223	eP	P	06 57 26.2	-1.2
STKA				ePcP	PcP	07 00 26.0	0.0
STKA	Stephens Creek 1.2nm,0.3s,baz=45,slow=19,SNR=2.4	30.58	223	P	P	06 57 26.9	-0.4
STKA	0.9nm,0.4s,baz=29,slow=5.2,SNR=3.1			PcP	PcP	07 00 26.0	0.0
STKA	comp=Z,152nm,18.7s,baz=26,slow=34			LR	LR	07 08 42.9	
BFZ	Birch Farm 73nm,1.6s	31.28	164	eP	P	06 57 32.4	-1.0
WRAB	Tennant Creek 4.4nm,1.1s	31.46	249	eP	P	06 57 34.8	-0.5
WB2	Warramunga Arr	31.46	249	eP	P	06 57 34.5	-0.8
WR1	Warramunga Arr	31.47	249	eP	P	06 57 34.9	-0.5
WR1				ePcP	PcP	07 00 28.3	-0.3
WRA	Warramunga Arr 2.9nm,0.8s,baz=79,slow=9.2,SNR=17	31.48	249	P	P	06 57 34.9	-0.5
WRA	0.9nm,0.7s,baz=78,slow=3.0,SNR=6.4			PcP	PcP	07 00 28.3	-0.3
WRA	comp=Z,142nm,18.0s,baz=75,slow=36			LR	LR	07 10 08.3	
SNZO	South Karori 53nm,1.3s	31.50	167	eP	P	06 57 35.0	-0.1
THZ	Tophouse 18nm,1.0s	31.57	170	eP	P	06 57 36.1	+0.1
GUMO	Guam comp=Z,68nm,20.1s,baz=151,slow=34	31.74	319	LR	LR	07 09 03.9	
LTZ	Lake Taylor 9.8nm,0.8s	32.45	171	eP	P	06 57 43.7	0.0
AS01	Alice Springs	32.78	243	eP	P	06 57 45.5	-1.4
AS31	Alice Springs 1.1nm,0.7s	32.82	243	eP	P	06 57 45.7	-1.5
AS31				ePcP	PcP	07 00 32.2	-0.1
ASAR	Alice Springs 3.5nm,0.7s,baz=73,slow=9.6,SNR=37	32.82	243	P	P	06 57 46.2	-1.0
ASAR	1.7nm,0.7s,baz=68,slow=2.7,SNR=13			PcP	PcP	07 00 32.2	-0.1
RSO	Redoubt South	78.27	20	eP	P	07 03 13.8	+0.5
SONA0	Songino Array	78.34	324	eP	P	07 03 14.4	+0.5
SONM	Songino Array 1.2nm,0.9s,baz=137,slow=6.5,SNR=9.2	78.34	324	P	P	07 03 14.4	+0.5
QSPA	South Pole Qui 6.8nm,1.0s	79.27	180	eP	P	07 03 18.1	-0.7
CAST	Castle Rocks 4.6nm,0.8s	80.69	18	eP	P	07 03 26.5	+0.3
WRH	Wood River Hil 5.8nm,1.0s	82.67	18	eP	P	07 03 37.2	+0.6
MDM	Murphy Dome 4.7nm,0.7s	82.97	18	eP	P	07 03 38.6	+0.4
HDA	Harding Lake 12nm,0.7s	82.99	19	eP	P	07 03 38.7	+0.5
COLA	College 11nm,0.8s	83.03	18	eP	P	07 03 38.6	+0.2
ILAR	Eielson Array 3.6nm,0.6s,baz=239,slow=5.1,SNR=63	83.25	19	P	P	07 03 39.9	+0.2
ILB	Eielson Array	83.25	19	eP	P	07 03 39.9	+0.2
IL1	Eielson Array	83.26	19	eP	P	07 03 39.7	+0.1
SCRK	Sand Creek 9.9nm,1.3s	83.67	20	eP	P	07 03 42.4	+0.4
AFDM	Forest Hills D 5.7nm,1.0s	84.09	49	eP	P	07 03 44.9	+0.4
CMB	Columbia Colle 3.9nm,0.9s	84.23	50	eP	P	07 03 45.8	+0.4
MDPB	Devils Postpil 4.2nm,0.9s	85.10	50	eP	P	07 03 50.4	+0.4
DAWY	Dawson 3.6nm,0.8s	85.31	21	eP	P	07 03 50.8	+0.7
NV01	Mina Array Sit	85.92	50	eP	P	07 03 54.3	+0.3
NVAR	Mina Array Bea 3.2nm,0.9s,baz=234,slow=8.0,SNR=16	85.92	50	P	P	07 03 54.4	+0.4
NV11	Mina Array Sit 0.3nm,1.0s	86.03	50	eP	P	07 03 54.6	+0.2
KVN	Kaiserville 3.7nm,1.0s	86.25	49	eP	P	07 03 56.2	+0.6
J08A	Circle Bar Ran 14nm,1.4s	87.25	45	eP	P	07 04 00.8	+0.6
G08A	Pilot Rock 7.5nm,1.1s	87.50	43	eP	P	07 04 01.2	-0.2
ELK	Elko 0.6nm,0.6s,baz=8.9,slow=5.0,SNR=3.8	88.83	48	P	P	07 04 08.3	+0.3
LCMT	Little Creek M 3.2nm,0.9s	89.41	52	eP	P	07 04 11.6	+0.9
CCUT	Cedar City 5.2nm,1.0s	89.45	52	eP	P	07 04 11.7	+0.7
NEW	Newport 0.6nm,0.3s,baz=42,slow=17,SNR=4.7	89.59	41	P	P	07 04 11.4	+0.2
SZCU	Shurtz Canyon 3.7nm,0.9s	89.67	52	eP	P	07 04 12.4	+0.4
KNB	Kanab 5.7nm,1.2s	89.74	52	eP	P	07 04 13.4	+1.1
U15A	North Rim 6.1nm,0.9s	90.02	53	eP	P	07 04 14.7	+1.0
HLID	Hailey 3.8nm,1.1s	90.15	46	eP	P	07 04 15.1	+1.0
X16A	Lo Mia Camp, P 3.3nm,0.9s	90.24	55	eP	P	07 04 14.7	0.0
MTPU	Mount Pierson 5.4nm,0.9s	90.47	51	eP	P	07 04 17.1	+1.2
MSU	Marysvale	90.58	51	eP	P	07 04 16.1	-0.1
HVU	Hansel Valley 4.3nm,0.9s	90.89	48	eP	P	07 04 18.2	+0.7
NLU	North Lily Min 5.2nm,1.1s	90.99	50	eP	P	07 04 17.7	-0.4
DLMT	Dillon 5.7nm,0.9s	91.84	44	eP	P	07 04 21.9	0.0
FXWY	Fox Creek 1.6nm,0.8s	92.56	46	eP	P	07 04 25.7	+0.4
HRY	Holter Researc	92.67	43	eP	P	07 04 26.2	+0.6
H17A	Grant Village 5.5nm,1.4s	93.04	46	eP	P	07 04 28.4	+0.9
MK01	Makanchi Array	93.19	317	eP	P	07 04 27.4	-0.6
MK31	Makanchi Array	93.21	317	eP	P	07 04 27.6	-0.4
MK32	Makanchi Array	93.21	317	eP	P	07 04 27.9	0.0
MKAR	Makanchi Array 7.7nm,0.8s	93.21	317	eP	P	07 04 27.6	-0.4
MKAR	Makanchi Array 1.1nm,0.7s,baz=94,slow=6.3,SNR=16	93.21	317	P	P	07 04 27.9	-0.1
PD31	Pinedale Array	93.43	47	eP	P	07 04 28.7	-0.7
PDAR	Pinedale Array	93.43	47	eP	P	07 04 28.7	-0.7
PDAR	Pinedale Array 1.0nm,0.9s,baz=259,slow=1.5,SNR=7.6	93.43	47	P	P	07 04 29.1	-0.3
YKA	Yellowknife Ar 0.7nm,0.6s,baz=255,slow=4.5,SNR=17	94.75	27	P	P	07 04 33.3	-1.3
YKB5	Yellowknife Ar	94.75	27	eP	P	07 04 32.9	-1.7
LTX	Lajitas	95.79	61	eP	P	07 04 40.0	-0.3
TXAR	Lajitas Array 0.1nm,0.6s,baz=243,slow=4.0,SNR=2.4	95.79	61	P	P	07 04 40.0	-0.3
ARA0	ARCESS Array S	116.00	345	ePKPdf	PKPdf	07 09 55.0	-0.9
ARCES	ARCESS Array B 0.6nm,0.5s,baz=64,slow=2.0,SNR=10	116.00	345	PKP	PKPdf	07 09 55.0	-0.9
CPUP	Villa Florida	124.33	132	ePKPdf	PKiKP	07 10 11.8	-1.7
CPUP	Villa Florida 0.9nm,0.8s,baz=128,slow=1.7,SNR=3.0	124.33	132	PKP	PKiKP	07 10 13.1	-0.4
BOSA	Boshof 1.5nm,0.7s,baz=155,slow=15,SNR=3.1	125.26	223	PKP	PKiKP	07 10 15.1	-0.4
ESDC	Sonseca Array 0.3nm,0.4s,baz=19,slow=4.4,SNR=4.3	149.72	344	PKPab	PKPab	07 11 10.2	+1.3

IDC 07 06:56:02.5±1.7, 10°.97S×164°.93E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.7/34, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=49.6km s-min=31.3km az=123.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac 0.6nm,0.3s,baz=309,slow=12,SNR=9.6	11.13	173	Pn	Pn	06 58 42.0	-1.2
H11N1	WAKE ISLAND Hy baz=188,slow=76,SNR=14	30.55	4	T	T	07 33 38.7	
H11N3	WAKE ISLAND Hy baz=188,slow=76,SNR=9.1	30.56	4	T	T	07 33 38.5	
H11N2	WAKE ISLAND Hy baz=188,slow=76,SNR=17	30.57	4	T	T	07 33 40.4	
WRA	Warramunga Arr 1.6nm,0.7s,baz=80,slow=9.3,SNR=10	30.76	249	P	P	07 02 20.2	+0.3
ASAR	Alice Springs 1.3nm,0.9s,baz=64,slow=9.7,SNR=8.1	32.11	243	P	P	07 02 31.9	+0.1
ILAR	Eielson Array 0.4nm,1.0s,baz=242,slow=5.1,SNR=4.2	83.70	19	P	P	07 08 33.3	+0.4
MKAR	Makanchi Array 0.2nm,0.7s,baz=100,slow=4.4,SNR=1.8	92.92	317	P	P	07 09 16.9	-0.8

IDC 07 07:02:57.4±2.6, 54°.31N×86°.13E, h0^{km}, mb1 2.9/2, mb1mx2.8/41, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=20.2km s-min=14.4km az=39.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA baz=67,slow=346,SNR=4.0	0.85	246	i		07 07 30.0	
ZALV	Zalesovo Beam 0.8nm,0.3s,baz=60,slow=16,SNR=7.7	0.85	246	Pg	Pg	07 03 12.4	-1.3
ZALV	3.5nm,0.3s,baz=52,slow=25,SNR=9.5			Lg	Lg	07 03 26.1	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=52,slow=14,SNR=7.0	5.93	235	Pn	Pn	07 04 26.9	+0.5
KURBB	0.0nm,0.3s,baz=51,slow=31,SNR=2.7			Lg	Lg	07 06 05.4	
MKAR	Makanchi Array 0.2nm,0.3s,baz=24,slow=12,SNR=9.3	7.91	200	Pn	Pn	07 04 54.8	+1.2
MKAR	0.0nm,0.3s,baz=23,slow=32,SNR=4.8			Lg	Lg	07 07 10.7	

IDC 07 07:09:17.5±3.8, 10°.71S×163°.91E, h0^{km}, mb3.5/3, mb1 3.9/3, mb1mx3.5/35, mbtmp3.5/3, Error ellipse: s-maj=195.2km s-min=34.4km az=138.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.7nm,0.8s,baz=80,slow=8.7,SNR=4.6	29.92	249	P	P	07 15 27.4	-0.1
ASAR	Alice Springs 0.5nm,0.6s,baz=62,slow=10,SNR=6.6	31.35	242	P	P	07 15 40.2	0.0
ILAR	Eielson Array 0.4nm,1.0s,baz=216,slow=4.5,SNR=4.4	83.77	19	P	P	07 21 48.4	0.0

IDC 07 07:09:26.8±4.1, 11°.79S×165°.46E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.6/36, mbtmp3.7/3, Error ellipse: s-maj=208.3km s-min=31.8km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 2.0nm,0.9s,baz=82,slow=9.1,SNR=7.7	30.97	251	P	P	07 15 45.7	-0.4
ASAR	Alice Springs 0.5nm,0.8s,baz=72,slow=9.8,SNR=4.2	32.22	244	P	P	07 15 57.5	+0.4
ILAR	Eielson Array 0.3nm,0.5s,baz=238,slow=5.0,SNR=11	84.30	19	P	P	07 22 00.3	0.0

IDC ***07*** *07:10:37.6±4.9, 1°.79S×100°.26E, h0^{km}, mb3.8/3, mb1 3.8/3, mb1mx3.5/41, mbtmp3.8/3, Error ellipse: s-maj=179.5km s-min=93.7km az=67.0*

DJA ***07*** *07:10:41.7±0.4, 2°S±3°×10°0E±°, h10^{km}, M3.9/8, MLv3.9/8*

ISCJB ***07*** *07:10:43.0±0.7, 1°.48S±0°.06×100°.19E±0°.08, h33^{km}, mb3.8/3, Error ellipse: s-maj=11.5km s-min=8.4km az=151.9*

ISC 07 07:10:43.8±1.0**, 1°.48S**±0°.06×**100°.18E**±0°.06**, h33^{km}, n13, σ1^{s}.29**/13**, mb3.8**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	0.63	26	P	Pb	07 10 53.8	-2.8
PPI	Padang Panjang	1.04	12	P	Pn	07 11 01.6	-0.5
SISI	Saibi	1.10	278	P	Pn	07 11 01.9	-1.1
PPSI	Pulau Pagai	1.28	188	P	Pn	07 11 05.2	-0.3
SDSI	Sungai Dareh	1.36	66	P	Pn	07 11 06.4	-0.1
KRJI	Kerinci	1.42	115	P	Pn	07 11 07.6	+0.2
MNSI	Mandailing Nat	2.34	345	P	Pn	07 11 21.4	+1.4
MASI	Maura Aman, Be	2.63	129	P	Pn	07 11 24.2	+0.1
MDSI	Maura Dua	4.98	127	P	Pn	07 11 56.0	-0.4
SONM	Songino Array	49.41	6	P	P	07 19 31.4	+0.7
	0.6nm,0.9s,baz=183,slow=6.6,SNR=4.0						
MKAR	Makanchi Array	50.58	344	P	P	07 19 39.9	+0.4
	0.9nm,0.4s,baz=138,slow=8.1,SNR=7.2						
ZALV	Zalesovo Beam	56.70	349	P	P	07 20 25.8	+1.8
	0.6nm,0.6s,baz=182,slow=5.6,SNR=4.4						
TXAR	Lajitas Array	144.18	37	PKP	PKPab	07 30 16.0	+1.1
	0.2nm,0.6s,baz=316,slow=2.5,SNR=5.4						

IDC ***07*** *07:11:17.9±0.4, 10°.98S×165°.69E, h0^{km}, mb4.9/31, mb1 5.0/33, mb1mx5.0/40, mbtmp4.9/33, ML5.4/2, MS4.4/2, Ms1 4.4/2, ms1mx3.7/39, Error ellipse: s-maj=15.6km s-min=11.3km az=100.0*

BJI ***07*** *07:11:18.1, 10°.92S×165°.83E, h14^{km}, mB5.3/39, mb4.9/50, Ms5.3/21, Ms7 5.0/21*

NEIC ***07*** *07:11:19.3±0.1, 10°.97S×165°.56E, h10^{km}, mb5.3/181, Error ellipse: s-maj=2.9km s-min=2.1km az=119.0*

ISCJB ***07*** *07:11:20.9±0.1, 11°.04S±0°.02×165°.50E±0°.02, h30^{km}, mb5.2/221, MS4.3/1, Error ellipse: s-maj=3.5km s-min=3.0km az=10.0*

MOS ***07*** *07:11:21.5±0.8, 11°.00S×165°.53E, h33^{km}, mb5.3/51, Error ellipse: s-maj=8.3km s-min=7.3km az=63.2*

ISC 07 07:11:22.5±0.3**, 11°.07S**±0°.05×**165°.60E**±0°.05**, h30^{km}, n506, σ0^{s}.89**/518**, mb5.2**/221**, 11C-4D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.79	286	*e*Pn	Pn	07 12 45.9	-0.5
HNR				*e*Sn	Sn	07 13 51.9	+0.1
HNR	Honiara	5.79	286	*e*P	Pn	07 12 45.9	-0.5
HNR				*e*		07 13 51.9	
HNR	Honiara	5.79	286	Pn	Pn	07 12 47.1	+0.7
	115nm,0.3s,baz=195,slow=2.0,SNR=14						
HNR				Sn	Sn	07 13 51.9	+0.1
	13nm,0.3s,baz=144,slow=22,SNR=1.2						
HNR				LR	LR	07 15 05.6	
	comp=Z,3µm,21.9s,baz=115,slow=39						
MARNC	Mare, Loyalty	10.62	168	*e*Pn	Pn	07 13 53.0	+0.4
DZM	Mont Dzumac	10.97	176	Pn	Pn	07 13 58.4	+0.8
	21nm,0.3s,baz=354,slow=12,SNR=137						
DZM				Sn	Sn	07 15 56.9	-2.5
	1.3nm,0.3s,baz=58,slow=21,SNR=1.4						
ONTNC	Ouen Toro	11.21	176	*e*Pn	Pn	07 14 01.2	+0.5
OUENC	Ouen Island, N	11.35	174	*e*Pn	Pn	07 14 03.2	+0.5
PINNC	Pines Island,	11.62	171	*e*Pn	Pn	07 14 05.7	-0.6
MSVF	Nonsavu	13.76	120	*e*Pn	Pn	07 14 37.4	+1.7
MSVF	Nonsavu	13.76	120	*e*P	Pn	07 14 37.4	+1.7
TARA	Tarawa	14.33	31	*e*Pn	Pn	07 14 42.0	-1.4
EIDS	Eidsvold	19.78	222	*e*P	Pn	07 15 51.6	-0.4
	55nm,0.9s						
MANU	Manus Island	20.19	295	*e*P	P	07 15 53.6	-1.3
	950nm,1.3s						
CTA	Charters Tower	20.66	242	P	Pn	07 16 01.3	-1.1
	92nm,0.9s,baz=68,slow=12,SNR=62						
CTA				LR	LR	07 23 38.3	
	comp=Z,1µm,19.4s,baz=54,slow=36						
CTAO	Charters Tower	20.66	242	*e*P	P	07 16 00.6	+0.6
	129nm,0.9s						
CTAO	Charters Tower	20.66	242	*e*P	P	07 16 00.6	+0.6
CTAO				pmax	pmax		
	comp=Z,129nm,0.9s						
COEN	Coen	22.07	260	*e*P	P	07 16 15.1	-0.2
	comp=Z,266nm,1.4s						
ARMA	Armidale	23.22	212	*e*P	P	07 16 27.3	0.0
	comp=Z,60nm,1.1s						
OUZ	Omahuta	25.12	164	*e*P	P	07 16 46.4	+1.6
	comp=Z,77nm,1.0s						
KMRZ	Kaimai	28.24	163	P	P	07 17 14.5	+1.6
HIZ	Hauiti	28.56	165	*e*P	P	07 17 16.9	+1.2
	comp=Z,108nm,1.0s						
HAZ	Te Kaha	28.74	160	P	P	07 17 19.4	+2.1
MXZ	Matakaoa Point	28.75	159	*e*P	P	07 17 17.5	+0.1
	comp=Z,66nm,0.8s						
RUGZ	Raukumara Rang	28.89	160	P	P	07 17 20.2	+1.4
PRRZ	Plateau Road	28.98	162	P	P	07 17 22.0	+2.6
URZ	Urewera	28.98	161	*e*P	P	07 17 20.3	+0.9
	comp=Z,72nm,1.1s						
URZ	Urewera	28.98	161	P	P	07 17 20.3	+0.9
	comp=Z,42nm,0.9s,baz=265,slow=2.7,SNR=20						
URZ	Urewera	28.98	161	P	P	07 17 20.5	+1.1
RATZ	Rangitukua	29.14	164	P	P	07 17 23.4	+2.5
MWZ	Matawai	29.18	161	P	P	07 17 22.1	+0.8
KATZ	Kakaramea	29.22	164	P	P	07 17 24.2	+2.4
TWVZ	Taurewa	29.24	164	P	P	07 17 23.9	+2.1
KRVZ	Karewarewa	29.32	164	P	P	07 17 25.2	+2.6
WTVZ	West Tongariro	29.32	164	P	P	07 17 25.4	+2.8
NGZ	Ngauruhoe	29.38	164	P	P	07 17 26.2	+3.0
COVZ	Chateau Observ	29.39	164	P	P	07 17 25.8	+2.6
H11S2	WAKE ISLAND Hy	29.39	2	T	T	07 48 00.5	
	baz=182,slow=76,SNR=25						
H11S3	WAKE ISLAND Hy	29.39	2	T	T	07 48 00.5	
	baz=182,slow=76,SNR=28						
H11S1	WAKE ISLAND Hy	29.41	2	T	T	07 48 04.5	
	baz=182,slow=76,SNR=26						
MTHZ	Maungataniwha	29.44	162	P	P	07 17 25.0	+1.5
FWVZ	Far West T-bar	29.44	164	P	P	07 17 25.9	+2.1
TUVZ	Tukino	29.48	164	P	P	07 17 26.4	+2.4
TRVZ	Turoa	29.48	164	P	P	07 17 26.1	+1.9
SNGZ	Shannon Statio	29.53	161	P	P	07 17 25.2	+0.8
CNGZ	Carnagh Statio	29.54	160	P	P	07 17 24.7	+0.2
RAHZ	Arahi	29.57	162	P	P	07 17 25.9	+1.2
RIGZ	Rimuhau	29.59	160	P	P	07 17 25.5	+0.6
BKZ	Black Stump Fm	29.62	163	*e*P	P	07 17 26.1	+0.9
	comp=Z,77nm,0.5s						
BKZ	Black Stump Fm	29.62	163	P	P	07 17 26.5	+1.3
MOVZ	Moawhango	29.64	164	P	P	07 17 26.9	+1.5
WHHZ	Waihua	29.76	162	P	P	07 17 27.4	+1.0
BHHZ	Black Hill Sta	29.80	164	P	P	07 17 27.8	+1.1
KWHZ	Kaweka Forest	29.84	163	P	P	07 17 28.4	+1.3
ARHZ	Aropaoanui	29.86	162	P	P	07 17 28.3	+1.1
MCHZ	McNeill Hill	29.94	163	P	P	07 17 29.2	+1.2
STKA	Stephens Creek	30.33	223	*e*P	P	07 17 31.7	+0.2
	comp=Z,4.6nm,0.8s						
STKA	Stephens Creek	30.33	223	*e*P	P	07 17 31.7	+0.2
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	Stephens Creek	30.33	223	P	P	07 17 32.7	+1.2
	comp=Z,19nm,0.7s,baz=35,slow=8.7,SNR=39						
STKA				PcP	PcP	07 20 32.5	+1.1
	comp=Z,4.7nm,1.0s,baz=32,slow=3.5,SNR=3.8						
H11N1	WAKE ISLAND Hy	30.61	2	T	T	07 49 39.9	
	baz=182,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	30.62	2	T	T	07 49 40.2	
	baz=182,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	30.63	2	T	T	07 49 40.8	
	baz=182,slow=76,SNR=14						
BFZ	Birch Farm	30.96	164	*e*P	P	07 17 36.6	-0.3
	comp=Z,167nm,1.2s						
SNZO	South Karori	31.18	167	*e*P	P	07 17 39.8	+1.0
	comp=Z,60nm,0.9s						
THZ	Tophouse	31.25	169	*e*P	P	07 17 40.0	+0.5
	comp=Z,43nm,0.7s						
WRAB	Tennant Creek	31.33	250	*e*P	P	07 17 39.7	-0.8
	comp=Z,57nm,0.9s						
WRAB	Tennant Creek	31.33	250	*d i*P	P	07 17 39.8	-0.7
WRAB				pmax	pmax		
	comp=Z,97nm,1.3s						
WB2	Warramunga Arr	31.33	250	*e*P	P	07 17 40.1	-0.4
WR1	Warramunga Arr	31.34	250	*e*P	P	07 17 40.1	-0.5
	comp=Z,75nm,0.9s						
WRA	Warramunga Arr	31.34	250	P	P	07 17 40.1	-0.5
	comp=Z,48nm,0.9s,baz=80,slow=9.0,SNR=118						
WRA				PcP	PcP	07 20 35.4	+1.1
	comp=Z,4.2nm,0.7s,baz=74,slow=3.0,SNR=8.0						
TOO	Toolangi	31.98	211	*e*P	P	07 17 46.2	+0.2
	comp=Z,16nm,0.9s						
TOO	Toolangi	31.98	211	*e*P	P	07 17 46.2	+0.2
TOO				pmax	pmax		
	comp=Z,16nm,0.9s						
KHZ	Kahutara	31.99	169	*e*P	P	07 17 45.8	-0.2
	comp=Z,44nm,0.8s						
LTZ	Lake Taylor	32.13	171	*e*P	P	07 17 48.5	+1.2
	comp=Z,57nm,0.8s						
FOZ	Fox Glacier	32.55	174	*e*P	P	07 17 51.0	+0.1
	comp=Z,34nm,0.9s						
AS01	Alice Springs	32.61	243	*e*P	P	07 17 50.6	-1.1
OXZ	Oxford	32.62	171	*e*P	P	07 17 52.3	+0.7
	comp=Z,48nm,0.8s						
AS31	Alice Springs	32.65	243	*e*P	P	07 17 51.4	-0.7
	comp=Z,11nm,1.2s						
ASAR	Alice Springs	32.65	243	P	P	07 17 51.4	-0.7
	comp=Z,13nm,0.6s,baz=64,slow=10,SNR=142						
ASAR				PcP	PcP	07 20 38.8	+0.9
	comp=Z,5.0nm,0.7s,baz=68,slow=2.8,SNR=13						
ASAR				ScP	ScP	07 24 24.9	+5.0
	comp=Z,1.6nm,1.0s,baz=68,slow=3.2,SNR=4.5						
RPZ	Rata Peaks	32.87	173	*e*P	P	07 17 54.4	+0.7
RPZ	Rata Peaks	32.87	173	P	P	07 17 53.9	+0.1
	comp=Z,28nm,0.8s,baz=352,slow=1.1,SNR=11						
MQZ	McQueen's Vall	33.09	171	*e*P	P	07 17 55.9	+0.3
	comp=Z,46nm,0.8s						
MTN	Manton Dam	33.75	263	*e*P	P	07 18 00.2	-1.5
	comp=Z,21nm,0.8s						
BBOO	Buckleboo	34.71	227	*e*P	P	07 18 09.9	+0.1
	comp=Z,35nm,0.9s						
FITZ	Fitzroy Crossi	39.23	255	*e*P	P	07 18 47.3	-1.2
	comp=Z,20nm,0.8s						
FORT	Forrest	39.91	235	*e*P	P	07 18 54.2	+0.2
	comp=Z,56nm,0.9s						
SOEI	Soe	40.65	268	*e*P	P	07 18 59.4	-1.1
	comp=Z,40nm,1.2s						
MMRI	Maumere	42.76	269	*e*P	P	07 19 16.6	-1.0
	comp=Z,128nm,1.3s						
EDFI	Ende, Flores	43.28	269	P	P	07 19 20.0	-2.0
APSI	Ampana	44.79	280	P	P	07 19 31.9	-2.0
MBWA	Marble Bar	45.05	251	*e*P	P	07 19 35.8	-0.2
	comp=Z,46nm,1.0s						
MPSI	Mapaga	46.80	281	P	P	07 19 49.8	-0.1
PLAI	Plampang	47.12	268	P	P	07 19 52.2	-0.1
	comp=Z,28nm,0.9s						
NWAO	Narrogin (SRO)	49.33	236	*e*P	P	07 20 07.6	-1.6
	comp=Z,36nm,1.0s						
NWAO	Narrogin (SRO)	49.33	236	*e*P	P	07 20 07.6	-1.6
NWAO				pmax	pmax		
	comp=Z,35nm,1.0s						
JAGI	Jajag, Banyuwa	50.72	268	*e*P	P	07 20 18.0	-2.0
	comp=Z,36nm,0.9s						
PCJI	Pacitan	53.67	268	P	P	07 20 42.4	+0.5
MJAR	Matsushiro Arr	53.92	333	P	P	07 20 42.7	-0.6
	comp=Z,5.7nm,0.7s,baz=170,slow=8.6,SNR=7.2						
MAJO	Matsushiro	53.92	333	*e*P	P	07 20 42.7	-0.6
MAJO	Matsushiro	53.92	333	*e*P	P	07 20 42.7	-0.6
MAT	Matsushiro	53.92	333	P	P	07 20 43.0	-0.3
JNU	Nakatsue	55.01	324	*e*P	P	07 20 50.6	-0.8
	comp=Z,108nm,1.5s						
JNU	Nakatsue	55.01	324	P	P	07 20 51.3	0.0
	comp=Z,10nm,0.8s,baz=153,slow=4.5,SNR=2.3						
CISI	Cisompet, Garu	57.06	268	*e*P	P	07 21 05.3	-1.1
	comp=Z,55nm,1.0s						
ASAJ	Asahikawa	58.76	341	P	P	07 21 18.6	+1.0
	comp=Z,17nm,0.7s,baz=208,slow=8.7,SNR=15						
KSRS	Korea Array	59.81	326	P	P	07 21 25.4	+0.4
	comp=Z,2.0nm,0.7s,baz=126,slow=7.0,SNR=4.6						
YSS	Yuzh-Sakhalins	61.26	342	⇓*e*P	P	07 21 35.9	+1.2
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
NJ2	Nanjing	61.93	316	*e*P	P	07 21 39.6	0.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
SKR	Severo-Kuril's	62.04	353	*e*P	P	07 21 43.8	+3.9
SKR				*e*S	S	07 30 04.6	+2.1
SKR				pmax	pmax		
	comp=Z,3µm,5.6s						
SKR				pmax	pmax		
	comp=Z,1µm,5.5s						
SKR				MLR	MLR		
	comp=Z,3µm,22.0s						
SKR				MLR	MLR		
	comp=Z,3µm,20.0s						
VLA	Vladivostok	62.09	333	*i* P	P	07 21 40.0	-0.4
VLA				pmax	pmax		
	comp=Z,87nm,0.8s						
USRK	Ussuriysk Ar.	62.90	333	P	P	07 21 46.4	+0.5
	comp=Z,7.9nm,0.9s,baz=144,slow=7.3,SNR=7.4						
PETK	Petropavlovsk-	64.27	355	*e*P	P	07 21 54.6	-0.1
PETK	Petropavlovsk-	64.27	355	*e*P	P	07 21 54.6	-0.1
PETK	Petropavlovsk-	64.27	355	P	P	07 21 55.0	+0.3
	comp=Z,8.1nm,0.7s,baz=157,slow=9.9,SNR=12						
PEA1	Petropavlovsk-	64.28	355	*e*P	P	07 21 55.0	+0.2
TYV	Tymovskoe	64.82	344	*e*P	P	07 21 58.8	+0.5
TYV				pmax	pmax		
	comp=Z,11nm,2.0s						
CN2	Changchun	65.68	329	*e*P	P	07 22 04.3	+0.2
CN2				*e*sP	pP	07 22 11.4	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
IPM	Ipoh	66.08	280	*e*P	P	07 22 07.5	+0.2
	comp=Z,41nm,1.1s						
CASY	Casey	66.31	201	*e*P	P	07 22 08.4	+0.6
	comp=Z,22nm,1.0s						
VNDA	Vanda	66.47	181	*e*P	P	07 22 09.6	+0.9
VNDA	Vanda	66.47	181	*e*P	P	07 22 09.6	+0.9
VNDA	Vanda	66.47	181	P	P	07 22 09.8	+1.1
	comp=Z,7.4nm,0.8s,baz=320,slow=6.8,SNR=6.6						
GRNR	Gornyy	66.61	340	*e*P	P	07 22 11.8	+1.9
SKNT	Sakolnakorn	66.97	294	P	P	07 22 14.2	+1.4
KLR	Kul'dur	67.02	337	*e*P	P	07 22 13.0	+0.5
KLR	Kul'dur	67.02	337	P	P	07 22 12.9	+0.5
	comp=Z,8.0nm,0.7s,baz=135,slow=2.8,SNR=22						
NKL	Nikolayevsk	67.42	344	*e*P	P	07 22 14.7	-0.2
NKL				pmax	pmax		
	comp=Z,33nm,0.9s						
NIKH	Nikolski High	67.43	16	*e*P	P	07 22 14.8	-0.2
	comp=Z,155nm,0.8s						
ENH	Enshi	67.80	309	*e*P	P	07 22 17.4	-0.5
	comp=Z,22nm,1.3s						
NONG	Nongkai	68.09	295	P	P	07 22 21.6	+1.7
TRTT	Trang	68.21	283	P	P	07 22 30.5	+10
GYA	Guiyang	68.31	304	P	P	07 22 21.8	+0.5
GYA				PP	PP	07 24 55.0	+2.6
GYA				S	S	07 31 23.2	+2.5
GYA				SKS	SKSac	07 32 17.9	-0.6
GYA				SS	SS	07 35 47.0	+2.4
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,6.7s						
GYA				LR	LR		
	comp=Z,590nm,18.5s						
GYA				LR	LR		
	comp=Z,560nm,18.8s						
GYA				LR	LR		
	comp=Z,550nm,18.4s						
GSI	Gunungsitoli	68.72	276	*e*P	P	07 22 23.3	-0.6
	comp=Z,49nm,0.9s						
XAN	Xi'an	70.03	312	P	P	07 22 32.1	+0.4
XAN				pP	pwP	07 22 42.3	-0.4
XAN				PcP	PcP	07 22 55.7	+1.9
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,170nm,4.9s						
XAN	Xi'an	70.03	312	*e*P	P	07 22 31.3	-0.4
	comp=Z,7.0nm,0.9s						
XAN	Xi'an	70.03	312	*e*P	P	07 22 31.3	-0.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMI	Kunming	71.01	301	P	P	07 22 40.5	+2.4
KMI				pP	pP	07 22 44.7	-1.9
KMI				sP	sP	07 22 47.5	-2.3
KMI				S	S	07 31 53.1	+0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,71nm,3.4s						
MA2	Magadan	71.41	352	*e*P	P	07 22 38.9	-0.6
	comp=Z,8.2nm,0.9s						
MA2	Magadan	71.41	352	*ce*P	P	07 22 39.4	-0.1
MA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MA2	Magadan	71.41	352	P	P	07 22 38.7	-0.8
	comp=Z,6.5nm,0.8s,baz=151,slow=12,SNR=7.0						
HHC	Hu-ho-hao-te	71.75	320	*e*P	P	07 22 43.9	+1.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,7.2s						
CM01	Chiang Mai Arr	71.96	294	*e*P	P	07 22 44.2	+0.5
CM31	Chiang Mai Arr	71.99	294	*e*P	P	07 22 43.9	+0.1
CMAR	Chiang Mai Arr	71.99	294	P	P	07 22 44.9	+1.0
	comp=Z,3.6nm,0.7s,baz=128,slow=4.7,SNR=14						
CMMT	Chiang Mai	72.09	294	P	P	07 22 56.6	+12
CHTO	Chiang Mai	72.10	294	P	P	07 22 56.7	+12
ZEA	Zeya	72.30	337	*e*P	P	07 22 46.0	+1.0
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
CD2	Chengdu	72.50	307	P	P	07 22 46.7	-0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,120nm,4.0s						
CD2				LR	LR		
	comp=Z,840nm,15.7s						
CD2				LR	LR		
	comp=Z,740nm,8.3s						
CD2				LR	LR		
	comp=Z,970nm,11.8s						
SEY	Seymchan	74.48	354	*ce*P	P	07 22 58.3	+0.7
SEY	Seymchan	74.48	354	P	P	07 22 57.6	+0.1
	comp=Z,3.9nm,0.7s,baz=151,slow=6.0,SNR=11						
LZH	Lanzhou	74.66	312	*e*P	P	07 23 01.6	+2.1
LZH				pP	pP	07 23 06.2	-1.8
LZH				sP	sP	07 23 09.0	-2.2
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
LZH				pmax	pmax		
	comp=Z,88nm,4.3s						
LZH				LR	LR		
	comp=Z,550nm,15.7s						
LZH				LR	LR		
	comp=Z,560nm,17.9s						
LZH				LR	LR		
	comp=Z,710nm,19.0s						
OHAK	Old Harbor	75.98	22	*e*P	P	07 23 05.5	-0.9
	comp=Z,54nm,1.0s						
GAMB	Gambell	76.61	10	*e*P	P	07 23 09.3	-0.4
	comp=Z,54nm,1.0s						
KDAK	Kodiak Island	76.65	22	*ce*P	P	07 23 10.4	+0.2
KDAK	Kodiak Island	76.65	22	P	P	07 23 10.1	-0.1
	comp=Z,27nm,0.9s,baz=200,slow=3.1,SNR=11						
SVW2	Sparrevohn	78.18	18	*e*P	P	07 23 18.4	-0.3
	comp=Z,39nm,1.0s						
ANM	Nome	78.54	12	*e*P	P	07 23 20.4	-0.2
	comp=Z,26nm,1.2s						
ANM	Nome	78.54	12	*e*P	P	07 23 20.4	-0.2
ANM				pmax	pmax		
	comp=Z,26nm,1.2s						
RSO	Redoubt South	78.59	20	*e*P	P	07 23 20.7	-0.5
SONA0	Songino Array	78.59	324	*e*P	P	07 23 21.9	+0.4
SONM	Songino Array	78.59	324	P	P	07 23 21.9	+0.4
	comp=Z,3.1nm,0.8s,baz=140,slow=7.4,SNR=23						
SONA1	Songino Array	78.60	324	*e*P	P	07 23 21.4	0.0
BRLK	Bradley Lake	78.71	21	*e*P	P	07 23 21.4	-0.3
	comp=Z,64nm,0.8s						
BILL	Bilibino	78.90	0	*e*P	P	07 23 22.8	+0.3
	comp=Z,29nm,0.9s						
BILL	Bilibino	78.90	0	*c i*P	P	07 23 22.6	+0.1
BILL				*e*		07 23 31.8	
BILL				*e*		07 26 19.0	
BILL				pmax	pmax		
	comp=Z,31nm,0.8s						
BILL				MLR	MLR		
	comp=Z,6µm,22.0s						
QSPA	South Pole Qui	78.94	180	*e*P	P	07 23 23.5	+0.4
	comp=Z,35nm,1.0s						
GTA	Gaotai	78.97	314	⇑P	P	07 23 24.1	+0.4
GTA				pP	PcP	07 23 31.5	-0.7
GTA				sP	sP	07 23 34.7	-0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,90nm,5.6s						
GTA				LR	LR		
	comp=Z,360nm,19.7s						
GTA				LR	LR		
	comp=Z,530nm,19.7s						
GTA				LR	LR		
	comp=Z,310nm,20.9s						
SEW	Seward	79.46	21	*e*P	P	07 23 25.0	-0.6
	comp=Z,38nm,0.8s						
SUA	Susitna One	79.99	20	*e*P	P	07 23 27.8	-0.9
	comp=Z,21nm,0.8s						
RC01	Rabbit Creek A	80.06	20	*e*P	P	07 23 28.2	-0.8
	comp=Z,69nm,1.6s						
SHL	Shillong	80.40	298	*e*P	P	07 23 32.0	+0.2
BOD	Bodaibo	80.49	335	*e*P	P	07 23 30.7	-0.6
BOD				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KNK	Knik Glacier	80.73	21	*e*P	P	07 23 32.6	0.0
	comp=Z,129nm,1.8s						
GLI	Glacier Island	80.83	21	*e*P	P	07 23 32.7	-0.5
	comp=Z,39nm,0.8s						
CAST	Castle Rocks	81.01	18	*e*P	P	07 23 33.3	-0.8
	comp=Z,36nm,0.7s						
SML	Sawmill	81.05	20	*e*P	P	07 23 33.8	-0.5
	comp=Z,31nm,1.0s						
SML	Sawmill	81.05	20	*e*P	P	07 23 33.8	-0.5
SML				pmax	pmax		
	comp=Z,31nm,1.0s						
DIV	Divide	81.48	22	*e*P	P	07 23 35.9	-0.7
	comp=Z,61nm,0.8s						
ZAK	Zakamensk	81.63	325	*e*P	P	07 23 37.3	-0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLU	Klutina	81.67	21	*e*P	P	07 23 36.6	-1.0
	comp=Z,34nm,0.8s						
BPAW	Bear Paw Mtn.	81.84	18	*e*P	P	07 23 37.7	-0.8
	comp=Z,8.9nm,0.8s						
RND	Reindeer	82.00	19	*e*P	P	07 23 38.5	-0.9
	comp=Z,34nm,0.9s						
RND	Reindeer	82.00	19	*e*P	P	07 23 38.5	-0.9
RND				pmax	pmax		
	comp=Z,34nm,0.9s						
TLY	Talaya	82.06	326	*e*P	P	07 23 39.1	-0.7
	comp=Z,12nm,0.8s						
TLY	Talaya	82.06	326	*ce*P	P	07 23 40.2	+0.3
RDOG	Red Dog Mine	82.07	11	*e*P	P	07 23 39.3	-0.3
	comp=Z,35nm,0.9s						
MCK	McKinley	82.21	19	*e*P	P	07 23 39.8	-0.6
	comp=Z,48nm,1.2s						
MCK	McKinley	82.21	19	*e*P	P	07 23 39.8	-0.6
MCK				pmax	pmax		
	comp=Z,48nm,1.2s						
DHY	Denali Highway	82.25	20	*e*P	P	07 23 40.5	-0.2
	comp=Z,15nm,0.8s						
BWN	Browne	82.36	18	*e*P	P	07 23 40.5	-0.6
	comp=Z,67nm,1.0s						
IM3	Indian Mountai	82.48	16	*e*P	P	07 23 41.3	-0.4
HARP	HAARP	82.55	21	*e*P	P	07 23 42.4	+0.2
	comp=Z,77nm,0.8s						
MLY	Manley	82.60	17	*e*P	P	07 23 42.0	-0.5
	comp=Z,21nm,1.3s						
GDXM	Geysers	82.94	48	*e*P	P	07 23 44.4	-0.4
	comp=Z,16nm,0.9s						
WRH	Wood River Hil	83.00	18	*e*P	P	07 23 43.6	-0.8
	comp=Z,36nm,0.8s						
MDM	Murphy Dome	83.29	18	*e*P	P	07 23 45.3	-0.7
	comp=Z,39nm,0.8s						
HDA	Harding Lake	83.31	19	*e*P	P	07 23 45.7	-0.4
	comp=Z,109nm,0.8s						
HDA	Harding Lake	83.31	19	P	P	07 23 45.6	-0.4
	baz=227						
TCOL	CIGO, UAF Yank	83.35	18	P	P	07 23 45.6	-0.7
	baz=226						
COLA	College	83.35	18	*e*P	P	07 23 45.4	-0.8
	comp=Z,80nm,0.8s						
COLA	College	83.35	18	*e*P	P	07 23 45.4	-0.8
COLA				pmax	pmax		
	comp=Z,79nm,0.8s						
O02D	Mt. Diablo Mer	83.42	47	P	P	07 23 47.6	+0.3
	baz=250						
L02E	Cave Junction	83.54	45	P	P	07 23 48.2	+0.5

	baz=249						
RIDG	**Independ'e Rid**	**83.54**	**20**	*e*P	**P**	**07 23 47.3**	**-0.1**
	comp=Z,35nm,0.8s						
IL1	**Eielson Array**	**83.58**	**19**	*e*P	**P**	**07 23 46.7**	**-0.7**
ILAR	**Eielson Array**	**83.58**	**19**	P	**P**	**07 23 46.8**	**-0.6**
	comp=Z,24nm,0.6s,baz=231,slow=4.7,SNR=341						
ILB	**Eielson Array**	**83.58**	**19**	*e*P	**P**	**07 23 46.9**	**-0.5**
POKR	**Poker Plat Res**	**83.65**	**18**	P	**P**	**07 23 46.9**	**-0.9**
	baz=226						
K02D	**Willamette Mer**	**83.69**	**44**	P	**P**	**07 23 48.6**	**0.0**
	baz=249						
N02D	**Trinity Center**	**83.75**	**46**	P	**P**	**07 23 48.9**	**-0.1**
	baz=250						
M02C	**Callahan**	**83.79**	**46**	P	**P**	**07 23 49.5**	**+0.4**
	baz=250						
PKM	**Mcpherson Peak**	**83.92**	**53**	P	**P**	**07 23 50.3**	**+0.2**
	baz=252						
SCRK	**Sand Creek**	**83.98**	**20**	*e*P	**P**	**07 23 49.2**	**-0.5**
	comp=Z,72nm,1.2s						
YBH	**Yreka Blue Hor**	**84.01**	**46**	*e*P	**P**	**07 23 49.6**	**-0.6**
	comp=Z,28nm,1.0s						
YBH	**Yreka Blue Hor**	**84.01**	**46**	*e*P	**P**	**07 23 49.7**	**-0.6**
YBH				pmax	pmax		
	comp=Z,28nm,1.0s						
ORV	**Oroville**	**84.14**	**48**	*e*P	**P**	**07 23 50.2**	**-0.7**
	comp=Z,17nm,1.0s						
ORV	**Oroville**	**84.14**	**48**	*e*P	**P**	**07 23 50.2**	**-0.7**
ORV				pmax	pmax		
	comp=Z,17nm,1.0s						
HUMO	**Hull Mountain**	**84.15**	**45**	*e*P	**P**	**07 23 50.6**	**-0.3**
	comp=Z,26nm,0.9s						
O03E	**Paynes Creek**	**84.16**	**47**	P	**P**	**07 23 51.0**	**-0.1**
	baz=250,SNR=9.9						
AFDM	**Forest Hills D**	**84.32**	**49**	*e*P	**P**	**07 23 51.4**	**-0.5**
	comp=Z,34nm,1.1s						
COLD	**Coldfoot**	**84.36**	**16**	*e*P	**P**	**07 23 51.9**	**+0.6**
	comp=Z,6.6nm,0.8s						
BESE	**Bessie Mountai**	**84.36**	**27**	*e*P	**P**	**07 23 51.3**	**-0.3**
	comp=Z,30nm,1.0s						
JIS	**Juneau Island**	**84.42**	**27**	*e*P	**P**	**07 23 51.5**	**-0.3**
	comp=Z,16nm,1.0s						
WRAK	**Wrangell Islan**	**84.43**	**30**	*e*P	**P**	**07 23 51.1**	**-0.8**
	comp=Z,30nm,0.8s						
L04D	**Klamath Falls**	**84.46**	**45**	P	**P**	**07 23 52.3**	**-0.4**
	baz=250						
HYT	**Haines Junctio**	**84.47**	**24**	*e*P	**P**	**07 23 51.4**	**-0.8**
	comp=Z,27nm,0.8s						
CMB	**Columbia Colle**	**84.47**	**50**	*e*P	**P**	**07 23 51.1**	**-1.5**
	comp=Z,17nm,1.0s						
CMB	**Columbia Colle**	**84.47**	**50**	*e*P	**P**	**07 23 51.1**	**-1.5**
CMB				pmax	pmax		
	comp=Z,17nm,1.0s						
PRP	**Porcupine Dome**	**84.51**	**18**	*e*P	**P**	**07 23 51.2**	**-1.2**
	comp=Z,6.6nm,0.7s						
SKAG	**Skagway**	**84.62**	**26**	*e*P	**P**	**07 23 52.2**	**-0.6**
	comp=Z,45nm,1.3s						
M04C	**Macdoel**	**84.64**	**46**	P	**P**	**07 23 53.8**	**+0.3**
	baz=250,SNR=6.8						
VES	**Vestal, Richgr**	**84.78**	**52**	P	**P**	**07 23 53.9**	**-0.3**
	baz=252						
G03D	**McMinnville, O**	**84.87**	**42**	P	**P**	**07 23 54.1**	**-0.3**
	baz=249						
I04A	**Tendick Farm,**	**84.94**	**44**	P	**P**	**07 23 54.8**	**-0.1**
	baz=250						
J04D	**Umpqua Nationa**	**84.95**	**44**	P	**P**	**07 23 55.1**	**-0.1**
	baz=250						
H04D	**Lebanon**	**84.97**	**43**	P	**P**	**07 23 55.0**	**0.0**
	baz=249						
K04D	**Chiloquin, OR**	**84.99**	**45**	P	**P**	**07 23 55.4**	**+0.2**
	baz=250						
BEKR	**Beckworth**	**85.07**	**48**	*e*P	**P**	**07 23 55.0**	**-0.8**
	comp=Z,25nm,1.1s						
MWC	**Mount Wilson**	**85.11**	**54**	*e*P	**P**	**07 23 55.0**	**-1.2**
	comp=Z,13nm,0.9s						
MWC	**Mount Wilson**	**85.11**	**54**	*e*P	**P**	**07 23 55.0**	**-1.2**
MWC				pmax	pmax		
	comp=Z,13nm,0.9s						
ISA	**Isabella, Lake**	**85.20**	**52**	*e*P	**P**	**07 23 55.6**	**-0.8**
	comp=Z,14nm,1.1s						
ISA	**Isabella, Lake**	**85.20**	**52**	*e*P	**P**	**07 23 55.6**	**-0.8**
ISA				pmax	pmax		
	comp=Z,14nm,1.1s						
ISA	**Isabella, Lake**	**85.20**	**52**	P	**P**	**07 23 56.5**	**0.0**
	baz=253,SNR=8.7						
FYU	**Fort Yukon**	**85.30**	**18**	*e*P	**P**	**07 23 56.0**	**-0.1**
	comp=Z,21nm,1.3s						
WAKR	**Walker**	**85.32**	**49**	*e*P	**P**	**07 23 56.6**	**-0.6**
	comp=Z,34nm,1.3s						
MDPB	**Devils Postpil**	**85.33**	**50**	*e*P	**P**	**07 23 57.0**	**-0.2**
	comp=Z,22nm,1.0s						
EDW2	**Edwards Air Fo**	**85.35**	**53**	P	**P**	**07 23 57.3**	**+0.2**
	baz=253,SNR=12						
OMMB	**Old Mammoth Mi**	**85.38**	**50**	*e*P	**P**	**07 23 57.3**	**-0.3**
	comp=Z,18nm,1.3s						
PNTR	**Pine Nut**	**85.38**	**49**	*e*P	**P**	**07 23 57.0**	**-0.4**
	comp=Z,24nm,1.1s						
BFSC	**Mount Baldy Ra**	**85.43**	**54**	P	**P**	**07 23 57.3**	**-0.4**
	baz=254,SNR=8.7						
WHY	**Whitehorse**	**85.45**	**25**	*e*P	**P**	**07 23 56.5**	**-0.6**
	comp=Z,11nm,0.9s						
109C	**Camp Elliot, M**	**85.50**	**55**	P	**P**	**07 23 57.8**	**0.0**
	baz=254						
CPE	**Camp Elliot**	**85.50**	**55**	*e*P	**P**	**07 23 57.2**	**-0.6**
	comp=Z,24nm,1.3s						
MLAC	**Mammoth, Mammo**	**85.51**	**50**	P	**P**	**07 23 57.6**	**-0.5**
	baz=252						
J05D	**Fort Rock, OR**	**85.57**	**45**	P	**P**	**07 23 58.5**	**+0.4**
	baz=250						
YERR	**Yerington**	**85.62**	**49**	*e*P	**P**	**07 23 58.0**	**-0.5**
	comp=Z,20nm,1.4s						
MURC	**Murrieta**	**85.62**	**55**	P	**P**	**07 23 58.4**	**-0.1**
	baz=254						
DAWY	**Dawson**	**85.63**	**21**	*e*P	**P**	**07 23 57.5**	**-0.4**
	comp=Z,28nm,0.8s						
PAHR	**Pah Rah Range**	**85.73**	**48**	*e*P	**P**	**07 23 58.6**	**-0.5**
	comp=Z,23nm,1.2s						
CWC	**Cottonwood Cre**	**85.73**	**52**	P	**P**	**07 23 58.7**	**-0.4**
	baz=253						
LRMC	**Laurel Mtn Rad**	**85.77**	**53**	P	**P**	**07 23 59.4**	**+0.1**
	baz=253,SNR=12						
BAR	**Barrett**	**85.79**	**56**	*e*P	**P**	**07 23 58.1**	**-1.3**
	comp=Z,14nm,1.1s						
TIN	**Tinemaha, Big**	**85.80**	**51**	P	**P**	**07 23 59.3**	**-0.1**
	baz=253						
E04D	**Cinebar**	**85.80**	**41**	P	**P**	**07 23 59.3**	**+0.3**
	baz=249						
D03D	**Eldon**	**85.82**	**40**	P	**P**	**07 23 59.4**	**+0.3**
	baz=249						
I05D	**Terrebonne, OR**	**85.85**	**43**	P	**P**	**07 23 59.6**	**+0.1**
	baz=250						
PINE	**Pine Mountain**	**85.94**	**44**	*e*P	**P**	**07 23 59.8**	**-0.3**
	comp=Z,34nm,1.0s						
BBRC	**Big Bear Solar**	**86.02**	**54**	P	**P**	**07 24 00.4**	**-0.3**
	baz=254						
RYN	**Ryan**	**86.04**	**50**	*e*P	**P**	**07 24 00.2**	**-0.5**
	comp=Z,19nm,1.1s						
MONP2	**Monument Peak**	**86.05**	**56**	P	**P**	**07 24 01.0**	**+0.2**
	baz=254,SNR=6.8						
DAC	**Darwin (Calif)**	**86.06**	**52**	*e*P	**P**	**07 24 00.1**	**-0.7**
	comp=Z,15nm,1.1s						
DAC	**Darwin (Calif)**	**86.06**	**52**	*e*P	**P**	**07 24 00.1**	**-0.7**
DAC				pmax	pmax		
	comp=Z,15nm,1.1s						
MPMC	**Manual Prospec**	**86.08**	**52**	P	**P**	**07 24 01.0**	**0.0**
	baz=253,SNR=9.5						
TIXI	**Tiksi**	**86.08**	**349**	*e*P	**P**	**07 23 59.4**	**-0.5**
	comp=Z,0.5nm,1.1s						
TIXI	**Tiksi**	**86.08**	**349**	*ce*P	**P**	**07 23 59.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,20nm,2.5s						
TIXI	**Tiksi**	**86.08**	**349**	P	**P**	**07 23 59.4**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=29,slow=3.0,SNR=7.5						
NV01	**Mina Array Sit**	**86.15**	**50**	*e*P	**P**	**07 24 00.4**	**-0.9**
NVAR	**Mina Array Bea**	**86.15**	**50**	P	**P**	**07 24 01.1**	**-0.1**
	comp=Z,15nm,1.0s,baz=233,slow=7.5,SNR=51						
G05D	**Wamic, OR**	**86.17**	**43**	P	**P**	**07 24 01.1**	**+0.2**
	baz=250						
PFO	**Pinyon Flats O**	**86.21**	**55**	*e*P	**P**	**07 24 01.5**	**-0.1**
	comp=Z,8.5nm,0.9s						
PFO	**Pinyon Flats O**	**86.21**	**55**	*e*P	**P**	**07 24 01.5**	**-0.1**
PFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PFO	**Pinyon Flats O**	**86.21**	**55**	P	**P**	**07 24 01.2**	**-0.3**
	baz=254,SNR=5.2						
XPFO	**Pion Flat**	**86.22**	**55**	*e*P	**P**	**07 24 01.1**	**-0.5**
	comp=Z,9.8nm,1.0s						
IKP	**In-Ko-Pah, Jac**	**86.24**	**56**	P	**P**	**07 24 01.8**	**+0.2**
	baz=254						
NV11	**Mina Array Sit**	**86.26**	**50**	*e*P	**P**	**07 24 01.2**	**-0.5**
	comp=Z,2.0nm,1.1s						
F05D	**White Salmon**	**86.29**	**42**	P	**P**	**07 24 01.6**	**+0.1**
	baz=250						
D05A	**Enumclaw**	**86.40**	**41**	*e*P	**P**	**07 24 02.3**	**+0.3**
	comp=Z,52nm,1.1s						
GSC	**Goldstone, Bar**	**86.40**	**53**	*e*P	**P**	**07 24 02.4**	**0.0**
	comp=Z,27nm,1.5s						
GSC	**Goldstone, Bar**	**86.40**	**53**	*e*P	**P**	**07 24 02.4**	**0.0**
GSC				pmax	pmax		
	comp=Z,27nm,1.5s						
GSC	**Goldstone, Bar**	**86.40**	**53**	P	**P**	**07 24 02.4**	**0.0**
	baz=254,SNR=6.5						
GRAC	**Grapevine Rang**	**86.44**	**51**	P	**P**	**07 24 02.5**	**0.0**
	baz=254,SNR=11						
KVN	**Kaiserville**	**86.48**	**49**	*e*P	**P**	**07 24 02.8**	**-0.1**
	comp=Z,15nm,1.0s						
KVN	**Kaiserville**	**86.48**	**49**	*e*P	**P**	**07 24 02.8**	**-0.1**
KVN				pmax	pmax		
	comp=Z,15nm,1.0s						
A04D	**Lummi Island**	**86.49**	**39**	P	**P**	**07 24 02.3**	**0.0**
	baz=249						
DLBC	**Dease Lake**	**86.50**	**28**	*e*P	**P**	**07 24 01.8**	**-0.5**
	comp=Z,12nm,1.0s						
DLBC	**Dease Lake**	**86.50**	**28**	P	**P**	**07 24 02.3**	**0.0**
	comp=Z,8.6nm,0.9s,baz=239,slow=10,SNR=14						
SWSC	**Sam W. Stewart**	**86.57**	**56**	P	**P**	**07 24 03.2**	**+0.1**
	baz=255,SNR=6.8						
HEC	**Hector,Ludlow**	**86.64**	**54**	P	**P**	**07 24 03.3**	**-0.3**
	baz=254						
FURC	**Furnace Creek,**	**86.68**	**52**	P	**P**	**07 24 03.8**	**+0.3**
	baz=254,SNR=10						
BELC	**Belle Mtn. Jos**	**86.69**	**55**	P	**P**	**07 24 03.8**	**-0.1**
	baz=254,SNR=12						
B05A	**Bryant**	**86.70**	**40**	P	**P**	**07 24 04.0**	**+0.6**
	baz=250						
SHOC	**Shoshone, Teco**	**86.98**	**53**	P	**P**	**07 24 05.5**	**+0.3**
	baz=254						
I07A	**Izee**	**87.01**	**44**	*e*P	**P**	**07 24 05.4**	**+0.2**
	comp=Z,20nm,1.0s						
BC3	**Big Chuckawall**	**87.03**	**55**	P	**P**	**07 24 05.9**	**+0.3**
	baz=255,SNR=9.0						
WVOR	**Wild Horse Val**	**87.11**	**46**	*e*P	**P**	**07 24 05.3**	**-0.4**
	comp=Z,19nm,1.1s						
WVOR	**Wild Horse Val**	**87.11**	**46**	*e*P	**P**	**07 24 05.3**	**-0.4**
WVOR				pmax	pmax		
	comp=Z,19nm,1.1s						
TUQ	**Turquoise Moun**	**87.13**	**53**	P	**P**	**07 24 06.0**	**0.0**
	baz=254,SNR=9.2						
GMRC	**Granite Mounta**	**87.17**	**54**	P	**P**	**07 24 06.3**	**+0.1**
	baz=255,SNR=11						
TPNV	**Topopah Spring**	**87.29**	**52**	*e*P	**P**	**07 24 06.5**	**-0.3**
TPNV	**Topopah Spring**	**87.29**	**52**	*e*P	**P**	**07 24 06.5**	**-0.3**
TPNV	**Topopah Spring**	**87.29**	**52**	P	**P**	**07 24 06.8**	**0.0**
	baz=254,SNR=6.0						
F07A	**Phinny Hill Vi**	**87.31**	**42**	*e*P	**P**	**07 24 06.5**	**0.0**
	comp=Z,26nm,1.0s						
C06D	**Leavenworth**	**87.34**	**40**	P	**P**	**07 24 06.5**	**-0.2**
	baz=250						
GLA	**Glamis**	**87.38**	**56**	*e*P	**P**	**07 24 07.3**	**+0.2**
	comp=Z,27nm,1.1s						
GLA	**Glamis**	**87.38**	**56**	*e*P	**P**	**07 24 07.4**	**+0.2**
GLA				pmax	pmax		
	comp=Z,27nm,1.1s						
GLA	**Glamis**	**87.38**	**56**	P	**P**	**07 24 07.8**	**+0.6**
	baz=255,SNR=6.8						
IRM	**Iron Mountain**	**87.41**	**55**	P	**P**	**07 24 07.7**	**+0.4**
	baz=255,SNR=18						
J08A	**Circle Bar Ran**	**87.50**	**45**	*e*P	**P**	**07 24 07.5**	**-0.1**
	comp=Z,20nm,1.0s						
LDFC	**Landfair**	**87.68**	**54**	*e*P	**P**	**07 24 08.5**	**-0.2**
	comp=Z,56nm,1.3s						
HAWA	**Hanford**	**87.72**	**42**	*e*P	**P**	**07 24 08.6**	**+0.1**
	comp=Z,20nm,1.0s						
G08A	**Pilot Rock**	**87.76**	**43**	*e*P	**P**	**07 24 08.9**	**+0.1**
	comp=Z,22nm,1.0s						
Y12C	**Blythe**	**87.81**	**55**	P	**P**	**07 24 09.6**	**+0.4**
	baz=255,SNR=12						
NEE2	**Needles Airpor**	**87.99**	**54**	P	**P**	**07 24 10.2**	**+0.2**
	baz=255						
SHPR	**Sheep Range**	**88.01**	**52**	*e*P	**P**	**07 24 10.4**	**+0.2**
	comp=Z,25nm,1.4s						
E08A	**Dider Farm, El**	**88.07**	**42**	*e*P	**P**	**07 24 10.5**	**+0.5**
	comp=Z,18nm,0.9s						
R11A	**Troy Canyon, C**	**88.17**	**51**	P	**P**	**07 24 11.1**	**+0.1**
	baz=254,SNR=13						
PDMCI	**Parker Dam,Lak**	**88.25**	**55**	P	**P**	**07 24 11.8**	**+0.6**
	baz=256,SNR=13						
D08A	**Wollman Farm,**	**88.33**	**41**	*e*P	**P**	**07 24 11.6**	**+0.3**
	comp=Z,12nm,1.0s						
B08A	**Colville Reser**	**88.48**	**40**	*e*P	**P**	**07 24 11.9**	**-0.2**
	comp=Z,8.4nm,0.9s						
E09A	**Wood Farm, Sta**	**88.67**	**42**	*e*P	**P**	**07 24 13.0**	**+0.1**
	comp=Z,16nm,1.0s						
BMO	**Blue Mountains**	**88.75**	**44**	*e*P	**P**	**07 24 13.5**	**0.0**
	comp=Z,6.9nm,1.0s						
BMO	**Blue Mountains**	**88.75**	**44**	*e*P	**P**	**07 24 13.5**	**0.0**
BMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
214A	**Organ Pipe Nat**	**88.76**	**57**	P	**P**	**07 24 14.5**	**+0.7**
	baz=256,SNR=10						
WMQ	**Urumqi**	**89.00**	**315**	P	**P**	**07 24 15.9**	**+1.2**
WMQ				pP	pP	07 24 22.0	-1.3
WMQ				sP	sP	07 24 25.6	-0.8
WMQ				SKS	**SKSac**	**07 34 43.3**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,330nm,4.5s						
WMQ				LR	LR		
	comp=Z,1µm,27.7s						
WMQ				LR	LR		
	comp=Z,980nm,38.9s						
WMQ				LR	LR		
	comp=Z,2µm,27.7s						
ELK	**Elko**	**89.07**	**48**	*e*P	**P**	**07 24 14.5**	**-0.8**
	comp=Z,16nm,1.4s						
ELK	**Elko**	**89.07**	**48**	*e*P	**P**	**07 24 14.5**	**-0.8**
ELK				pmax	pmax		
	comp=Z,16nm,1.4s						
F10A	**Beach Ranch, E**	**89.12**	**43**	*e*P	**P**	**07 24 14.9**	**-0.3**
	comp=Z,14nm,0.9s						
MFID	**Camas Ranch**	**89.36**	**46**	*e*P	**P**	**07 24 16.0**	**-0.4**
	comp=Z,49nm,1.9s						
PSUT	**Pine Spring**	**89.53**	**51**	*e*P	**P**	**07 24 17.4**	**0.0**
	comp=Z,12nm,1.1s						
LCMT	**Little Creek M**	**89.63**	**52**	*e*P	**P**	**07 24 18.2**	**+0.3**
	comp=Z,18nm,1.1s						
CCUT	**Cedar City**	**89.67**	**52**	*e*P	**P**	**07 24 18.6**	**+0.4**
	comp=Z,19nm,1.0s						
NEW	**Newport**	**89.85**	**41**	*e*P	**P**	**07 24 18.5**	**0.0**
	comp=Z,7.3nm,0.8s						
NEW	**Newport**	**89.85**	**41**	P	**P**	**07 24 18.1**	**-0.5**
	baz=253						
NEW	**Newport**	**89.85**	**41**	P	**P**	**07 24 18.0**	**-0.5**
	comp=Z,6.2nm,0.8s,baz=233,slow=5.1,SNR=17						
SZCU	**Shurtz Canyon**	**89.89**	**52**	*e*P	**P**	**07 24 19.6**	**+0.5**
	comp=Z,19nm,1.1s						
KNB	**Kanab**	**89.96**	**52**	*e*P	**P**	**07 24 19.6**	**+0.2**
	comp=Z,29nm,1.2s						
KNB	**Kanab**	**89.96**	**52**	*e*P	**P**	**07 24 19.6**	**+0.2**
KNB				pmax	pmax		
	comp=Z,29nm,1.2s						
INK	**Inuvik**	**89.97**	**19**	P	**P**	**07 24 17.5**	**-1.0**
	comp=Z,5.2nm,1.0s,baz=282,slow=3.4,SNR=13						
HLID	**Hailey**	**90.40**	**46**	*e*P	**P**	**07 24 21.5**	**+0.2**
	comp=Z,12nm,1.0s						
HLID	**Hailey**	**90.40**	**46**	P	**P**	**07 24 21.6**	**+0.3**
	baz=255						
PKCU	**Pink Cliffs**	**90.46**	**52**	*e*P	**P**	**07 24 22.4**	**+0.4**
	comp=Z,40nm,1.2s						
TUC	**Tucson**	**90.52**	**57**	*e*P	**P**	**07 24 22.2**	**+0.2**
	comp=Z,8.8nm,1.0s						
TUC	**Tucson**	**90.52**	**57**	*e*P	**P**	**07 24 22.2**	**+0.2**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TUC	**Tucson**	**90.52**	**57**	P	**P**	**07 24 22.5**	**+0.5**
	baz=257						
TCRU	**Three Creeks R**	**90.62**	**51**	*e*P	**P**	**07 24 22.9**	**+0.3**
	comp=Z,18nm,0.9s						
MTPU	**Mount Pierson**	**90.69**	**51**	*e*P	**P**	**07 24 23.1**	**0.0**
	comp=Z,17nm,0.9s						
DUG	**Dugway, Tooele**	**90.72**	**49**	*e*P	**P**	**07 24 22.8**	**-0.1**
	comp=Z,8.2nm,1.0s						
DUG	**Dugway, Tooele**	**90.72**	**49**	*e*P	**P**	**07 24 22.8**	**-0.1**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DUG	**Dugway, Tooele**	**90.72**	**49**	P	**P**	**07 24 22.8**	**-0.1**
	baz=256						
BGU	**Big Grassy Mou**	**90.74**	**49**	*e*P	**P**	**07 24 23.1**	**+0.1**
	comp=Z,9.6nm,1.0s						
WUAZ	**Wupatki**	**90.75**	**54**	*e*P	**P**	**07 24 23.6**	**+0.5**
	comp=Z,15nm,0.9s						
WUAZ	**Wupatki**	**90.75**	**54**	P	**P**	**07 24 23.4**	**+0.3**
	baz=257						
MSU	**Marysvale**	**90.81**	**51**	*e*P	**P**	**07 24 23.9**	**+0.5**
MSU	**Marysvale**	**90.81**	**51**	*e*P	**P**	**07 24 24.0**	**+0.5**
DGZ	**Jazzator, Alta**	**90.82**	**321**	*d i*P	**P**	**07 24 22.8**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HVU	**Hansel Valley**	**91.13**	**48**	*e*P	**P**	**07 24 24.8**	**0.0**
	comp=Z,24nm,1.0s						
HVU	**Hansel Valley**	**91.13**	**48**	*e*P	**P**	**07 24 24.8**	**0.0**
HVU				pmax	pmax		
	comp=Z,24nm,1.0s						
NLU	**North Lily Min**	**91.22**	**50**	*e*P	**P**	**07 24 24.8**	**-0.5**
	comp=Z,15nm,1.0s						
SPUT	**South Promonto**	**91.25**	**48**	*e*P	**P**	**07 24 24.9**	**-0.4**
	comp=Z,6.9nm,0.9s						
MSO	**Missoula**	**91.55**	**43**	P	**P**	**07 24 26.2**	**-0.3**
	baz=256						
MPU	**Maple Canyon**	**91.56**	**50**	*e*P	**P**	**07 24 26.7**	**-0.2**
	comp=Z,18nm,1.3s						
319A	**Douglas**	**91.57**	**58**	*e*P	**P**	**07 24 27.2**	**+0.2**
	comp=Z,15nm,1.0s						
CTU	**Camp Tracy**	**91.63**	**49**	*e*P	**P**	**07 24 27.0**	**-0.2**
	comp=Z,14nm,0.9s						
Q16A	**Castle Valley**	**91.67**	**51**	*e*P	**P**	**07 24 27.6**	**+0.2**
	comp=Z,16nm,1.2s						
X18A	**Snowflake**	**91.68**	**55**	*e*P	**P**	**07 24 27.4**	**-0.1**
	comp=Z,7.8nm,0.9s						
TMUT	**Trail Mountain**	**91.72**	**50**	*e*P	**P**	**07 24 27.8**	**+0.1**
	comp=Z,7.1nm,1.0s						
SYO	**Syowa Base**	**91.72**	**197**	⇑ *i*P	**P**	**07 24 26.0**	**-0.8**
SYO	**Syowa Base**	**91.72**	**197**	⇑ *e*PcP	**PcP**	**07 24 29.0**	**+1.4**
MCMT	**McKenzie Canyo**	**91.80**	**45**	*e*P	**P**	**07 24 27.7**	**-0.2**
JLU	**Jordanelle**	**91.83**	**49**	*e*P	**P**	**07 24 28.1**	**-0.1**
	comp=Z,12nm,1.0s						
W18A	**Petrified Fore**	**91.97**	**55**	P	**P**	**07 24 28.8**	**0.0**
	baz=258						
TCUT	**Toone Canyon**	**91.97**	**49**	*e*P	**P**	**07 24 28.3**	**-0.5**
	comp=Z,15nm,0.9s						
DLMT	**Dillon**	**92.10**	**44**	*e*P	**P**	**07 24 28.8**	**-0.3**
	comp=Z,21nm,0.9s						
WALA	**Waterton Lakes**	**92.12**	**40**	*e*P	**P**	**07 24 28.6**	**-0.5**
	comp=Z,14nm,0.9s						
SRU	**San Rafael Swe**	**92.20**	**51**	*e*P	**P**	**07 24 29.4**	**-0.4**
	comp=Z,8.9nm,1.3s						
SRU	**San Rafael Swe**	**92.20**	**51**	*e*P	**P**	**07 24 29.4**	**-0.4**
SRU				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LRM	**Limekiln Ridge**	**92.30**	**44**	*e*P	**P**	**07 24 30.1**	**-0.1**
P18A	**Preston Nutter**	**92.52**	**50**	*e*P	**P**	**07 24 31.7**	**+0.2**
	comp=Z,48nm,0.8s						
FXWY	**Fox Creek**	**92.80**	**46**	*e*P	**P**	**07 24 31.8**	**-0.8**
	comp=Z,4.1nm,0.8s						
BOZ	**Bozeman (W)**	**92.81**	**44**	*e*P	**P**	**07 24 32.5**	**0.0**
	comp=Z,14nm,1.1s						
BOZ	**Bozeman (W)**	**92.81**	**44**	*e*P	**P**	**07 24 32.5**	**0.0**
BOZ				pmax	pmax		
	comp=Z,14nm,1.1s						
BOZ	**Bozeman (W)**	**92.81**	**44**	P	**P**	**07 24 32.7**	**+0.2**
	baz=257						
REDW	**Red Top Meadow**	**92.87**	**47**	*e*P	**P**	**07 24 33.3**	**+0.4**
	comp=Z,17nm,1.6s						
HRY	**Holter Researc**	**92.93**	**43**	*e*P	**P**	**07 24 33.0**	**+0.1**
YHB	**Horse Butte**	**92.93**	**45**	*e*P	**P**	**07 24 33.1**	**0.0**
	comp=Z,8.7nm,1.0s						
SNOW	**Snow King Moun**	**92.96**	**46**	*e*P	**P**	**07 24 33.3**	**0.0**
	comp=Z,5.4nm,0.8s						
MOOW	**Moose Ponds**	**93.03**	**46**	*e*P	**P**	**07 24 33.2**	**-0.4**
	comp=Z,3.6nm,1.0s						
121A	**Cookes Peak, D**	**93.05**	**58**	P	**P**	**07 24 34.1**	**+0.3**
	baz=259						
YMR	**Madison River**	**93.07**	**45**	*e*P	**P**	**07 24 33.5**	**-0.2**
	comp=Z,5.4nm,0.9s						
YFT	**Old Faithful**	**93.11**	**45**	*e*P	**P**	**07 24 34.4**	**+0.4**
	comp=Z,6.5nm,1.0s						
PV09	**Paradox Valley**	**93.14**	**52**	*e*P	**P**	**07 24 33.7**	**-0.6**
PV19	**Morning Glory**	**93.21**	**52**	*e*P	**P**	**07 24 36.2**	**+1.7**
	comp=Z,6.3nm,0.9s						
PV23	**Carpenter Ridg**	**93.22**	**52**	*e*P	**P**	**07 24 35.8**	**+1.2**
	comp=Z,9.5nm,0.8s						
PV20	**West Nyswonger**	**93.23**	**52**	*e*P	**P**	**07 24 36.2**	**+1.6**
	comp=Z,6.5nm,0.9s						
PV21	**Cone Mtn., Par**	**93.27**	**52**	*e*P	**P**	**07 24 36.5**	**+1.7**
	comp=Z,6.0nm,0.9s						
H17A	**Grant Village**	**93.28**	**46**	*e*P	**P**	**07 24 33.8**	**-1.0**
	comp=Z,5.2nm,0.9s						
H17A	**Grant Village**	**93.28**	**46**	P	**P**	**07 24 35.6**	**+0.8**
	baz=258						
PV04	**Paradox Valley**	**93.29**	**52**	*e*P	**P**	**07 24 36.1**	**+1.3**
	comp=Z,7.2nm,0.9s						
PV11	**David Mesa, Pa**	**93.30**	**52**	*e*P	**P**	**07 24 37.7**	**+2.8**
	comp=Z,6.1nm,0.8s						
PV12	**Saucer Basin,**	**93.36**	**52**	*e*P	**P**	**07 24 35.6**	**+0.4**
	comp=Z,7.1nm,0.9s						
MVCO	**Mesa Verde**	**93.37**	**53**	P	**P**	**07 24 35.1**	**-0.2**
	baz=259						
MK01	**Makanchi Array**	**93.42**	**317**	*e*P	**P**	**07 24 34.4**	**-0.7**
MK31	**Makanchi Array**	**93.44**	**317**	*e*P	**P**	**07 24 34.5**	**-0.6**
MK32	**Makanchi Array**	**93.44**	**317**	*e*P	**P**	**07 24 35.0**	**-0.1**
MKAR	**Makanchi Array**	**93.44**	**317**	*e*P	**P**	**07 24 34.5**	**-0.6**
	comp=Z,87nm,1.6s						
MKAR	**Makanchi Array**	**93.44**	**317**	P	**P**	**07 24 35.0**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=92,slow=7.3,SNR=22						
MKAR				PKKP	**PKKPdf**	**07 41 41.5**	**-0.7**
	comp=Z,5.0nm,0.8s,baz=284,slow=3.3,SNR=20						
ZAA0	**Zalesovo Array**	**93.49**	**324**	*e*P	**P**	**07 24 34.3**	**-0.8**
	comp=Z,6.3nm,1.1s						
ZALV	**Zalesovo Beam**	**93.49**	**324**	P	**P**	**07 24 33.9**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=116,slow=4.3,SNR=12						
ZAA1	**Zalesovo Array**	**93.49**	**324**	*e*P	**P**	**07 24 33.9**	**-1.2**
PV01	**Paradox Valley**	**93.50**	**52**	*e*P	**P**	**07 24 35.3**	**-0.6**
	comp=Z,8.7nm,1.4s						
PV07	**Paradox Valley**	**93.50**	**52**	*e*P	**P**	**07 24 37.4**	**+1.5**
	comp=Z,6.2nm,1.0s						
PV15	**Paradox Valley**	**93.61**	**52**	*e*P	**P**	**07 24 36.2**	**-0.2**
	comp=Z,11nm,1.2s						
MAKZ	**Makanchi**	**93.65**	**317**	*e*P	**P**	**07 24 35.9**	**-0.2**
	comp=Z,9.5nm,1.1s						
MAKZ	**Makanchi**	**93.65**	**317**	*e*P	**P**	**07 24 35.9**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BW06	**Boulder Array**	**93.67**	**47**	*e*P	**P**	**07 24 35.9**	**-0.7**
	comp=Z,5.8nm,1.1s						
BW06	**Boulder Array**	**93.67**	**47**	P	**P**	**07 24 36.2**	**-0.4**
	baz=258						
PD31	**Pinedale Array**	**93.67**	**47**	*e*P	**P**	**07 24 36.2**	**-0.3**
PDAR	**Pinedale Array**	**93.67**	**47**	*e*P	**P**	**07 24 35.9**	**-0.7**
PDAR	**Pinedale Array**	**93.67**	**47**	P	**P**	**07 24 36.4**	**-0.3**
	comp=Z,4.1nm,1.0s,baz=250,slow=3.1,SNR=19						
O20A	**White River Ci**	**94.13**	**50**	P	**P**	**07 24 38.7**	**0.0**
	baz=259						
ANMO	**Albuquerque**	**94.58**	**55**	*e*P	**P**	**07 24 40.0**	**-0.8**
	comp=Z,3.7nm,1.0s						
ANMO	**Albuquerque**	**94.58**	**55**	*ce*P	**P**	**07 24 40.7**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANMO	**Albuquerque**	**94.58**	**55**	P	**P**	**07 24 40.6**	**-0.2**
	baz=260						
EGMT	**Eagleton**	**94.58**	**42**	*e*P	**P**	**07 24 40.2**	**-0.2**
	comp=Z,15nm,0.9s						
EGMT	**Eagleton**	**94.58**	**42**	P	**P**	**07 24 40.3**	**-0.2**
	baz=259						
NVS	**Novosibirsk**	**94.59**	**325**	*e*P	**P**	**07 24 40.4**	**+0.2**
S22A	**4UR Ranch, Cre**	**94.78**	**53**	P	**P**	**07 24 41.9**	**0.0**
	baz=260						
MNTX	**Cornudas Mount**	**94.90**	**59**	*e*P	**P**	**07 24 41.0**	**-1.2**
	comp=Z,2.7nm,0.9s						
MNTX	**Cornudas Mount**	**94.90**	**59**	P	**P**	**07 24 42.0**	**-0.2**
	baz=260						
YKA	**Yellowknife Ar**	**95.06**	**27**	P	**P**	**07 24 40.5**	**-1.6**
	comp=Z,4.9nm,0.7s,baz=257,slow=4.7,SNR=114						
YKB5	**Yellowknife Ar**	**95.06**	**27**	*e*P	**P**	**07 24 40.0**	**-2.2**
YKW3	**Yellowknife Ar**	**95.07**	**27**	*e*P	**P**	**07 24 40.4**	**-1.8**
	comp=Z,39nm,2.0s						
SDCO	**Great Sand Dun**	**95.82**	**53**	P	**P**	**07 24 45.8**	**-0.8**
	baz=261						
K22A	**Casper**	**95.85**	**48**	P	**P**	**07 24 46.1**	**-0.4**
	baz=260						
LTX	**Lajitas**	**95.97**	**61**	*e*P	**P**	**07 24 46.6**	**-0.6**
LTX				*e*PP	**PP**	**07 28 40.3**	**+0.3**
LTX	**Lajitas**	**95.97**	**61**	*e*P	**P**	**07 24 46.6**	**-0.6**
LTX				*e*		07 28 40.3	

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TXAR  Lajitas Array      95.97  61   P        P        07 24 46.6 -0.6
      comp=Z,0.9nm,0.9s,baz=224,slow=4.9,SNR=9.5
TXAR                                 PP       PP       07 28 40.3 +0.3
      comp=Z,1.5nm,1.1s,baz=217,slow=5.8,SNR=4.1
TXAR                                 PKKP     PKKPdf   07 41 36.8 -0.5
      comp=Z,0.3nm,0.7s,baz=89,slow=3.3,SNR=5.3
NRIK  Noril'sk           96.09 340   P        P        07 24 46.1 -0.6
      comp=Z,1.1nm,0.4s,baz=114,slow=8.0,SNR=5.6
KURK  Kurchatov          96.56 320 i P        P        07 24 48.4 -0.9
KURK                                 pmax     pmax
      comp=Z,6.0nm,1.8s
KSH   Kashi              96.65 309   P        P        07 24 51.2 +1.0
KSH                                  pP       pP       07 24 56.1 -2.8
KSH                                  pmax     pmax
      comp=Z,370nm,5.8s
MSTX  Muleshoe           97.43  57   P        P        07 24 53.0 -0.8
      baz=262
DGMT  Dagmar             98.32  42   P        P        07 24 57.2 -0.1
      baz=263
FFC   Flin Flon         100.34  36  ePdif     Pdif     07 25 05.5 -0.6
FFC   Flin Flon         100.34  36ceP         Pdif     07 25 06.0 -0.1
ARA0  ARCESS Array S    116.32 345  ePKPdf    PKPdf    07 30 02.3 -0.3
ARCES ARCESS Array B    116.32 345   PKP      PKPdf    07 30 02.3 -0.3
      comp=Z,2.7nm,0.6s,baz=85,slow=1.5,SNR=22
MNMC  Minye Minye       117.88 119  ePKPdf    PKiKP    07 30 07.7 +0.3
OBN   Obninsk           120.74 329⇓ePKIKP     PKPdf    07 30 08.4 -3.0
OBN                                 e                  07 31 36.0
OBN                                 eSS       SS       07 48 04.8 -3.0
OBN                                  pmax     pmax
      comp=Z,4.0nm,0.6s
KIV   Kislovodsk        121.14 315  ePKIKP    PKPdf    07 30 11.5 -1.2
KIV                                  pmax     pmax
      comp=Z,6.0nm,1.1s
FIA0  FINESS Array S    121.74 338  ePKPdf    PKPdf    07 30 12.1 -1.0
FIA0  FINESS Array S    121.74 338  ePKIKP    PKPdf    07 30 12.1 -1.0
FINES FINESS Array B    121.74 338   PKIKP    PKPdf    07 30 12.1 -1.0
FINES                                pmax     pmax
      comp=Z,3.0nm,0.9s
FINES FINESS Array B    121.74 338   PKP      PKPdf    07 30 12.1 -1.0
      comp=Z,2.4nm,0.8s,baz=116,slow=4.4,SNR=4.7
CPUP  Villa Florida     124.12 132   PKP      PKPdf    07 30 18.8  0.0
      comp=Z,4.4nm,0.8s,baz=309,slow=3.0,SNR=12
SDV   Santo Domingo     124.64  87  ePKPdf    PKPdf    07 30 19.8 -0.5
BOSA  Boshof            125.00 223  ePKPdf    PKiKP    07 30 21.4 +0.4
BOSA  Boshof            125.00 223  ePKIKP    PKiKP    07 30 21.4 +0.4
BOSA  Boshof            125.00 223   PKP      PKiKP    07 30 21.7 +0.7
      comp=Z,11nm,0.6s,baz=157,slow=1.6,SNR=31
NB2   NORSAR Subarra126.68 345       PKPdf    PKPdf    07 30 22.2 -0.5
      comp=Z,6.5nm,1.1s,baz=30,slow=2.0
NB200 NORSAR Array S 126.68 345     ePKPdf    PKPdf    07 30 22.7 -0.1
NOA   NORSAR Array B 126.68 345      PKP      PKPdf    07 30 22.7 -0.1
      comp=Z,0.9nm,0.6s,baz=37,slow=2.1,SNR=5.7
AKASG Malin Array Be    126.80 327   PKP      PKPdf    07 30 22.8 -0.4
      comp=Z,2.0nm,0.7s,baz=54,slow=2.3,SNR=8.9
KIEV  Kiev              126.81 327 i PKIKP    PKPdf    07 30 20.6 -2.6
AK11  Malin Array Si    126.84 327  ePKPdf    PKPdf    07 30 22.7 -0.5
LBTB  Lobatse           127.02 227  ePKPdf    PKPdf    07 30 24.5 -0.1
LBTB  Lobatse           127.02 227  ePKIKP    PKPdf    07 30 24.5 -0.1
KMBO  Kilima Mbogo      127.24 260   PKP      PKiKP    07 30 26.9 +0.9
      comp=Z,2.1nm,0.8s,baz=49,slow=10,SNR=6.1
BR101 Keskin Array S    128.87 313  ePKPdf    PKPdf    07 30 26.9 -0.8
BRTR  Keskin Array B    128.87 313   PKP      PKPdf    07 30 26.9 -0.8
      comp=Z,1.1nm,0.7s,baz=123,slow=2.5,SNR=6.2
SJG   San Juan          129.57  76  ePKPdf    PKPdf    07 30 29.0 -0.3
SJG   San Juan          129.57  76  ePKIKP    PKPdf    07 30 29.0 -0.3
HUMP  Col San Antoni    129.85  76  ePKPdf    PKPdf    07 30 29.9 -0.1
LSZ   Lusaka            130.36 239  ePKPdf    PKiKP    07 30 31.9 -0.1
LSZ   Lusaka            130.36 239  ePKIKP    PKiKP    07 30 31.9 -0.1
CDVI  St. Croix         130.89  76  ePKPdf    PKPdf    07 30 31.5 -0.4
PTGA  Pitinga           133.22 102  ePKPdf    PKPdf    07 30 36.0 -0.5
CLL   Collm             134.06 336  ePKPdf    PKiKP    07 30 38.0 -0.3
CLL   Collm             134.06 336  ePKIKP    PKiKP    07 30 38.0 -0.3
CONA  Conrad Observa    135.34 331 i pPKPdf   PKiKP    07 30 41.3 +0.2
      comp=Z,2.9nm,0.6s
KHC   Kasperske Hory    135.50 334  ePKPDF    PKiKP    07 30 41.5 +0.2
KHC   Kasperske Hory    135.50 334  ePKIKP    PKiKP    07 30 41.5 +0.2
GERES GERESS Array B    135.66 334   PKP      PKPdf    07 30 40.5 +0.4
      comp=Z,1.3nm,0.7s,baz=104,slow=0.6,SNR=7.9
SOKA  Soboth            136.63 330 i PKiKP    PKiKP    07 30 43.0 -0.8
      comp=Z,2.9nm,0.8s
BDFB  Brasilia          137.44 128  ePKPdf    PKPdf    07 30 43.8 -0.6
BDFB                                ePKPdf    PKPdf    07 30 44.7 +0.3
BDFB  Brasilia          137.44 128   PKhKP    PKPpre   07 30 39.7
      comp=Z,5.3nm,0.9s,baz=137,slow=4.3,SNR=3.5
BDFB                                 PKP      PKPdf    07 30 44.7 +0.3
      comp=Z,8.3nm,0.8s,baz=133,slow=3.2,SNR=10
WATA  Walderalm         137.73 334 i PKiKP    PKPdf    07 30 44.8 +0.6
      comp=Z,2.3nm,0.5s
ABTA  Abfaltersbach     137.76 332 i PKPdf    PKPdf    07 30 43.8 -0.3
      comp=Z,3.4nm,0.6s
MOTA  Moosalm           137.93 334 i PKPdf    PKPdf    07 30 42.7 -1.8
      comp=Z,2.3nm,0.5s
RETA  Reutte            137.96 334 i PKPdf    PKPdf    07 30 41.4 -3.0
      comp=Z,1.6nm,0.4s
FETA  Feichten          138.34 334 i PKiKP    PKPdf    07 30 45.4 +0.1
      comp=Z,5.2nm,1.2s
KEST  Kesra             147.34 323   PKPbc    PKPbc    07 31 04.4 +0.6
      comp=Z,22nm,0.9s,baz=315,slow=6.9,SNR=11
ES19  SONSECA Array     149.99 344  ePKPbc    PKPbc    07 31 10.6 +0.1
ESDC  Sonseca Array     150.03 344   PKPbc    PKPbc    07 31 10.6  0.0
      comp=Z,3.3nm,0.9s,baz=40,slow=1.5,SNR=8.7
TOA0  Torodi Ar. Sit    164.12 279  ePKPdf    PKPdf    07 31 23.9 -0.1
TORD  Torodi Ar. Bea    164.12 279   PKP      PKPdf    07 31 23.5 -0.4
      comp=Z,4.1nm,0.9s,baz=352,slow=3.6,SNR=19
TORD                                 PKPab    PKPab    07 32 18.0 +0.5
      comp=Z,2.5nm,1.0s,baz=150,slow=6.8,SNR=5.3
TOA1  Torodi Ar. Sit    164.12 279  ePKPdf    PKPdf    07 31 23.5 -0.4
TOA1                                ePKPab    PKPab    07 32 18.0 +0.4
DBIC  Dimbokro          169.61 246   PKP      PKPdf    07 31 27.9 -0.2
      comp=Z,5.8nm,1.0s,baz=243,slow=1.7,SNR=4.6
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NEIC ***07*** *07:19:51.5±0.1, 15°.81S×172°.97W, h18km, mb5.1/266, MS5.6/299, MW5.7, MW5.8, Error ellipse: s-maj=4.1km s-min=2.5km az=139.0, Moment Tensor Solution. s107 Moment tensor: Scale 10^{17}Nm; M_{rr}3.28; $M_{\theta\theta}$-0.58; $M_{\phi\phi}$-2.70; $M_{r\theta}$0.74; $M_{\theta\phi}$-0.09; $M_{\phi r}$3.15; Best double couple: $M_0$4.40000×10^{17} NP1:ϕ_s179.00000°, δ22.00000°, λ79.00000°. NP2:ϕ_s10.00000°, δ69.00000°, λ94.00000°. Principal axes: T 4.7100, Plg66.0000°, Azm287.0000°; N -0.6200, Plg4.0000°, Azm188.0000°; P -4.0900, Plg24.0000°, Azm97.0000°;*

NEIC Felt at Pago Pago, American Samoa.

ISCJB ***07*** *07:19:51.4±0.1, 15°.72S±0°.03×173°.08W±0°.02, h26km, mb5.0/310, MS5.6/609 Error ellipse: s-maj=4.5km s-min=2.6km az=144.5*

IDC ***07*** *07:19:51.8±2.9, 15°.76S×172°.96W, h17km±17km, mb4.8/30, mb1 4.9/30, mb1mx4.8/39, mbtmp4.9/30, MS5.4/32, Ms1 5.4/32, ms1mx5.3/40, Error ellipse: s-maj=14.4km s-min=10.5km az=134.0*

MOS ***07*** *07:19:52.8±0.9, 15°.73S×172°.97W, h33km, mb5.2/67, MS5.6/56, Error ellipse: s-maj=9.4km s-min=7.0km az=58.1*

GCMT ***07*** *07:19:59.5±0.1, 15°.73S±0°.01×172°.58W, h21km, MW5.8/144, Moment Tensor Solution. s136,c296; s144,c353; Duration: 2s0 Moment tensor: Scale 10^{17} Nm; M_{rr}5.47±.06; $M_{\theta\theta}$0.73±.05; $M_{\phi\phi}$-6.20±.05; $M_{r\theta}$1.52±.10; $M_{\theta\phi}$0.05±.04; $M_{\phi r}$3.65±.10; Best double couple: $M_0$7.06900×10^{17} NP1:ϕ_s13.00000°, δ62.00000°, λ104.00000°. NP2:ϕ_s165.00000°, δ31.00000°, λ65.00000°. Principal axes: T 6.8730, Plg69.0000°, Azm312.0000°; N 0.3930, Plg12.0000°, Azm186.0000°; P -7.2650, Plg16.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***07*** *07:19:59.0±0.0, 15°.49S×172°.73W, h11km, Moment Tensor Solution. s42 Moment tensor: Scale 10^{17}Nm; M_{rr}5.05; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-3.97; $M_{r\theta}$1.06; $M_{\theta\phi}$-0.65; $M_{\phi r}$5.54; Best double couple: $M_0$7.30000×10^{17} NP1:ϕ_s11.00000°, δ70.00000°, λ90.00000°. NP2:ϕ_s192.00000°, δ19.00000°, λ91.00000°. Principal axes: T 7.7300, Plg64.0000°, Azm280.0000°; N -0.9400, Plg0.0000°, Azm11.0000°; P -6.7900, Plg25.0000°, Azm101.0000°;*

ISC 07 07:19:52.6±0.2**, 15°.83S**±0°.04×**172°.92W**±0°.04**, h26km, n1349, σ1s.57**/1027**, mb5.1**/309**, MS5.6**/609**, 22C-57D, Samoa Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID              Time      Res
                                     Op       ISC          h  m  s   ISC
NIUE  Niue                4.31 139   P        Pn       07 20 53.4 -3.0
      baz=4.2,SNR=273
NIUE  Niue                4.31 139  ePn       Pn       07 20 53.8 -2.7
NIUE                                eSn       Sn       07 21 40.5 -5.4
MSVF  Nonsavu             8.85 256  ePn       Pn       07 22 06.5 +7.6
MSVF  Nonsavu             8.85 256  eP        Pn       07 22 06.5 +7.5
FUNA  Funafuti           10.59 312  ePn       Pn       07 22 21.7 -1.0
KNTN  Kanton             13.03   5  ePn       Pn       07 22 53.5 -2.6
RAR   Rarotonga          13.57 115  ePn       Pn       07 22 58.8 -4.7
RAR   Rarotonga          13.57 115   Pn       Pn       07 22 58.1 -5.3
      9.5nm,0.3s,baz=275,slow=7.8,SNR=11
RAR                                  LR       LR       07 26 50.1
      comp=Z,26µm,21.3s,baz=304,slow=31
RAO   Raoul Island       14.12 198   LR       LR       07 28 14.3
      comp=Z,18µm,18.4s,baz=27,slow=35
MARNC Mare, Loyalty      18.89 250  eP        P        07 24 11.1 -0.2
      338nm,0.8s
PINNC Pines Island,      19.71 247  eP        P        07 24 20.1 -0.1
      12nm,0.7s
OUENC Ouen Island, N     20.20 248  eP        P        07 24 26.1 +0.6
      126nm,1.0s
OUENC                                LR       LR
      comp=Z,27µm,19.0s
DZM   Mont Dzumac        20.47 249  eP        P        07 24 28.7 +0.1
      comp=Z,619nm,1.7s
DZM                                 eS        S        07 28 10.3 -6.4
      comp=Z,4µm,25.5s
DZM                                 eLQ       LQ       07 28 24.7
      comp=Z,18µm,29.5s
DZM                                 eLR       LR       07 29 18.5
      comp=Z,39µm,23.9s
DZM   Mont Dzumac        20.47 249  eP        P        07 24 28.9 +0.3
      comp=Z,38nm,0.8s
DZM                                  LR       LR
      comp=Z,29µm,21.0s
DZM   Mont Dzumac        20.47 249   P        Pn       07 24 29.4 -1.5
      comp=Z,33nm,0.7s,baz=80,slow=19,SNR=9.7
DZM                                  LR       LR       07 31 15.8
      comp=Z,27µm,19.6s,baz=81,slow=33
ONTNC Ouen Toro          20.52 249  eP        P        07 24 29.7 +0.7
      comp=Z,71nm,1.1s
ONTNC                                LR       LR
      comp=Z,26µm,22.0s
TARA  Tarawa             22.08 319  eP        P        07 24 45.4 -0.4
      comp=Z,57nm,0.9s
TARA                                 LR       LR
      comp=Z,28µm,19.0s
PAE   Paea               22.42  98  eP        P        07 24 51.4 +1.8
      comp=Z,16nm,0.8s
PAE   Paea               22.42  98  eT        T        07 47 58.4
      comp=Z,11nm,0.3s
PPT   Papeete            22.43  98   P        P        07 24 50.0 +0.4
      comp=Z,77nm,0.9s,baz=270,slow=13,SNR=3.1
PPT                                  LR       LR       07 31 33.1
      comp=Z,10µm,19.4s,baz=250,slow=31
PPT2  Papeete2           22.43  98  eP        P        07 24 51.9 +2.2
      comp=Z,128nm,1.1s
PPT2                                eS        S        07 28 53.2 -1.6
      comp=Z,14µm,28.2s
PPT2                                eLR       LR       07 30 08.8
      comp=Z,30µm,25.2s,baz=261
PPT2  Papeete2           22.43  98  eT        T        07 47 45.2
      comp=Z,13nm,0.3s
PPTF  Pamatai, Papee     22.44  98   PFAKE             07 25 00.0 +10
PPTF                                 LR       LR
      comp=Z,12µm,18.0s
TIAR  Tiarei             22.65  98  eP        P        07 24 53.5 +1.5
      comp=Z,30nm,0.9s
TIAR  Tiarei             22.65  98  eT        T        07 48 02.9
      comp=Z,6.7nm,0.3s
TVO   Taravao            22.74  98  eP        P        07 24 54.8 +1.8
      comp=Z,146nm,1.5s
TVO   Taravao            22.74  98  eT        T        07 48 02.1
      comp=Z,3.3nm,0.3s
OUZ   Omahuta            22.77 210  eP        P        07 24 53.0 -0.1
      comp=Z,19nm,0.7s
OUZ                                  LR       LR
      comp=Z,15µm,19.0s
MXZ   Matakaoa Point     22.99 198   PFAKE             07 25 10.0 +15
MXZ                                  LR       LR
      comp=Z,11µm,22.0s
TBI   Tubuai             23.31 112  eS        S        07 29 08.2 -1.7
      comp=Z,16µm,30.5s
TBI                                 eLR       LR       07 30 42.1
      comp=Z,35µm,25.5s,baz=287
TBI   Tubuai             23.31 112  eT        T        07 49 05.9
      comp=Z,28nm,0.3s
XMAS  Kiritimati         23.45  42  eP        P        07 25 00.1  0.0
      comp=Z,189nm,1.0s
XMAS                                eS        S        07 29 14.1 +2.0
PUZ   Puketiti           23.48 198   P        P        07 25 03.6 +3.4
CNGZ  Carnagh Statio     23.88 197   P        P        07 25 10.8 +6.8
MWZ   Matawai            23.94 199   P        P        07 25 07.5 +2.9
URZ   Urewera            24.00 200  eP        P        07 25 05.7 +0.4
      comp=Z,35nm,0.7s
URZ                                 eS        S        07 29 24.8 +4.1
URZ                                  LR       LR
      comp=Z,12µm,18.0s
URZ   Urewera            24.00 200   P        P        07 25 06.4 +1.2
      comp=Z,26nm,0.5s,baz=301,slow=2.2,SNR=21
URZ                                  S        S        07 29 24.8 +4.1
      comp=Z,4.5nm,0.6s,baz=4.2,slow=20,SNR=1.6
URZ   Urewera            24.00 200   P        P        07 25 07.8 +2.6
KMRZ  Kaimai             24.03 202   P        P        07 25 10.7 +5.1
TOZ   Tahuroa Road       24.09 203   P        P        07 25 12.1 +6.0
RAGZ  Rawiri             24.12 199   P        P        07 25 10.4 +3.9
PMOR  Pomariorio Ree     24.14  91  eP        P        07 25 08.4 +1.7
      comp=Z,366nm,1.4s
PMOR  Pomariorio Ree     24.14  91  eT        T        07 50 06.8
      comp=Z,7.9nm,0.2s
TARZ  Mount Tarawera     24.18 201   P        P        07 25 14.7 +7.6
RIGZ  Rimuhau            24.21 198   P        P        07 25 13.8 +6.6
HLRZ  Highlands Stat     24.25 201   P        P        07 25 13.5 +5.9
VAH   Vaihoa             24.38  92  eP        P        07 25 10.0 +1.1
      comp=Z,95nm,1.0s
VAH   Vaihoa             24.38  92  eT        T        07 50 24.2
      comp=Z,13nm,0.2s
PRGZ  Paritu Road        24.38 198   P        P        07 25 15.6 +6.9
KNZ   Kokohu             24.53 198   P        P        07 25 16.3 +6.3
RAHZ  Arahi              24.61 199   P        P        07 25 14.1 +3.3
NMHZ  Naumai             24.86 199   P        P        07 25 18.2 +5.0
RATZ  Rangitukua         25.00 201   P        P        07 25 20.4 +6.0
HIZ   Hauiti             25.02 203   PFAKE             07 25 30.0 +15
HIZ                                  LR       LR
      comp=Z,7µm,18.0s
HIZ   Hauiti             25.02 203   P        P        07 25 22.8 +8.3
BKZ   Black Stump Fm     25.03 200  eP        P        07 25 15.2 +0.5
      comp=Z,12nm,0.5s
BKZ                                  LR       LR
      comp=Z,9µm,20.0s
BKZ   Black Stump Fm     25.03 200   P        P        07 25 18.3 +3.6
KATZ  Kakaramea          25.12 201   P        P        07 25 22.3 +6.7
KWHZ  Kaweka Forest      25.29 200   P        P        07 25 22.7 +5.7
TWVZ  Taurewa            25.30 202   P        P        07 25 19.0 +1.9
NGZ   Ngauruhoe          25.34 201   P        P        07 25 21.2 +3.7
BHHZ  Black Hill Sta     25.46 200   P        P        07 25 20.9 +2.3
MOVZ  Moawhango          25.49 201   P        P        07 25 25.2 +6.3
PXZ   Pawanui            25.70 198   P        P        07 25 27.3 +6.7
KHEZ  Kahui Hut          26.02 204   P        P        07 25 32.1 +8.4
BFZ   Birch Farm         26.49 199  eP        P        07 25 29.1 +1.3
      comp=Z,34nm,0.6s
BFZ                                  LR       LR
      comp=Z,9µm,20.0s
BFZ   Birch Farm         26.49 199   P        P        07 25 29.4 +1.6
MRZ   Mangatainoka R     26.68 200   P        P        07 25 34.0 +4.5
HNR   Honiara            27.21 280   PFAKE             07 25 50.0 +15
HNR                                  LR       LR
      comp=Z,23µm,18.0s
HNR   Honiara            27.21 280   LR       LR       07 35 00.1
      comp=Z,24µm,18.8s,baz=119,slow=33
SNZO  South Karori       27.55 200  eP        P        07 25 37.3  0.0
      comp=Z,26nm,0.7s
SNZO                                epwP      pwP      07 25 48.5 +1.2
SNZO                                 LR       LR
      comp=Z,9µm,19.0s
THZ   Tophouse           28.58 203  eP        P        07 25 46.5 -0.1
      comp=Z,18nm,0.5s
THZ                                  LR       LR
      comp=Z,9µm,22.0s
KHZ   Kahutara           28.93 201  eP        P        07 25 49.6  0.0
      comp=Z,20nm,0.6s
KHZ                                  LR       LR
      comp=Z,9µm,19.0s
LTZ   Lake Taylor        29.70 202  eP        P        07 25 57.0 +0.5
      comp=Z,36nm,0.6s
LTZ                                  LR       LR
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      comp=Z,7µm,20.0s
LHI   Lord Howe Isla     29.91 234   PFAKE             07 26 10.0 +12
LHI                                  LR       LR
      comp=Z,7µm,20.0s
OXZ   Oxford             30.26 202  eP        P        07 26 02.9 +1.5
      comp=Z,55nm,0.6s
OXZ                                  LR       LR
      comp=Z,7µm,18.0s
CRLZ  Canterbury Las     30.27 201   PFAKE             07 26 10.0 +8.6
CRLZ                                 LR       LR
      comp=Z,6µm,18.0s
MQZ   McQueen's Vall     30.38 201   PFAKE             07 26 10.0 +7.6
MQZ                                  LR       LR
      comp=Z,6µm,19.0s
RPZ   Rata Peaks         30.96 203  eP        P        07 26 08.4 +0.8
RPZ                                  LR       LR
      comp=Z,9µm,20.0s
RPZ   Rata Peaks         30.96 203   P        P        07 26 08.4 +0.8
      comp=Z,6.6nm,0.6s,baz=15,slow=6.5,SNR=7.2
KWAJ  Kwajalein Atol     31.16 320   PFAKE             07 26 20.0 +10
KWAJ                                 LR       LR
      comp=Z,11µm,20.0s
FOZ   Fox Glacier        31.28 205  eP        P        07 26 11.5 +1.1
      comp=Z,29nm,0.6s
FOZ                                  LR       LR
      comp=Z,9µm,20.0s
LBZ   Lake Benmore       31.86 203   PFAKE             07 26 30.0 +15
LBZ                                  LR       LR
      comp=Z,7µm,20.0s
ODZ   Otahua Downs       32.25 202   PFAKE             07 26 30.0 +11
ODZ                                  LR       LR
      comp=Z,6µm,19.0s
JOHN  Johnston Islan     32.53   6   PFAKE             07 26 30.0 +8.4
JOHN                                 LR       LR
      comp=Z,8µm,19.0s
WKZ   Wanaka             32.68 204  eP        P        07 26 23.1 +0.3
      comp=Z,11nm,0.6s
WKZ                                  LR       LR
      comp=Z,10µm,21.0s
TAOE  Nuku Hiva Isla     32.73  82  eS        S        07 31 41.0 +2.0
      comp=Z,2µm,24.9s
TAOE                                eLR       LR       07 34 49.8
      comp=Z,18µm,27.1s,baz=256
TAOE  Nuku Hiva Isla     32.73  82  eT        T        08 00 45.0
      comp=Z,173nm,0.2s
TAOE  Nuku Hiva Isla     32.73  82   PFAKE             07 26 40.0 +16
TAOE                                 LR       LR
      comp=Z,7µm,20.0s
MLZ   Mavora Lakes       33.48 205  eP        P        07 26 30.5 +0.8
      comp=Z,18nm,0.8s
MLZ                                  LR       LR
      comp=Z,9µm,22.0s
DCZ   Deep Cove          33.95 205  eP        P        07 26 34.3 +0.6
      comp=Z,23nm,0.7s
DCZ                                  LR       LR
      comp=Z,7µm,19.0s
WHZ   Wether Hill Ro     33.98 204  eP        P        07 26 35.4 +1.4
      comp=Z,37nm,0.6s
WHZ                                  LR       LR
      comp=Z,7µm,22.0s
PYZ   Puysegur Point     34.72 205   PFAKE             07 26 50.0 +10
PYZ                                  LR       LR
      comp=Z,7µm,19.0s
EIDS  Eidsvold           34.91 248  eP        P        07 26 42.0 -0.3
      comp=Z,17nm,0.9s
EIDS                                 LR       LR
      comp=Z,12µm,20.0s
ARMA  Armidale           35.52 240   P        P        07 26 47.8 +0.2
      baz=36,SNR=19
ARMA  Armidale           35.52 240  eP        P        07 26 47.5 -0.2
      comp=Z,21nm,0.7s
ARMA                                 LR       LR
      comp=Z,7µm,18.0s
RABL  Rabaul             36.21 285   PFAKE             07 27 10.0 +16
RABL                                 LR       LR
      comp=Z,2µm,18.0s
PATS  Pohnpei            36.31 306   PFAKE             07 27 10.0 +16
PATS                                 LR       LR
      comp=Z,8µm,22.0s
RKT   Rikitea            36.42 108  eP        P        07 26 57.2 +1.9
      comp=Z,87nm,1.1s
RKT                                 eS        S        07 32 37.3 +1.6
      comp=Z,769nm,27.0s
RKT                                 eLQ       LQ       07 35 14.6
      comp=Z,2µm,29.2s
RKT                                 eLR       LR       07 36 41.9
      comp=Z,11µm,26.2s,baz=278
RKT   Rikitea            36.42 108  eT        T        08 05 27.7
      comp=Z,17nm,0.3s
RMQ   Roma               37.15 247   P        P        07 27 01.7 +0.2
      baz=37,SNR=4.4
CTA   Charters Tower     39.00 258   P        P        07 27 16.9 -0.3
      comp=Z,10nm,0.7s,baz=93,slow=11,SNR=11
CTA                                  LR       LR       07 41 42.2
      comp=Z,10µm,18.9s,baz=48,slow=34
CTAO  Charters Tower     39.00 258  eP        P        07 27 16.8 -0.4
      comp=Z,13nm,0.8s
CTAO                                 LR       LR
      comp=Z,10µm,19.0s
CTAO  Charters Tower     39.00 258  eP        P        07 27 16.8 -0.4
CTAO                                 pmax     pmax
      comp=Z,13nm,0.8s
CTAO                                 MLR      MLR
      comp=Z,10µm,19.0s
WRMHI West Rim           39.08  27   PFAKE             07 27 30.0 +12
WRMHI                                LR       LR
      comp=Z,3µm,18.0s
UWB   Uwekahuna B        39.10  27   PFAKE             07 27 30.0 +12
UWB                                  LR       LR
      comp=Z,4µm,20.0s
SBLHI Steaming Bluff     39.11  27   PFAKE             07 27 30.0 +12
SBLHI                                LR       LR
      comp=Z,3µm,18.0s
STCH  Steam Cracks       39.13  27   PFAKE             07 27 30.0 +12
STCH                                 LR       LR
      comp=Z,4µm,19.0s
CAN   Canberra           39.13 233  eP        P        07 27 18.3 +0.1
      comp=Z,5.6nm,0.7s
CAN                                  LR       LR
      comp=Z,8µm,18.0s
CAN   Canberra           39.13 233  eP        P        07 27 18.3 +0.1
CAN                                  pmax     pmax
      comp=Z,6.0nm,0.7s
CAN                                  MLR      MLR
      comp=Z,8µm,18.0s
JCUZ  Jacuzzi            39.14  27   PFAKE             07 27 30.0 +12
JCUZ                                 LR       LR
      comp=Z,3µm,20.0s
HMH   Humu'ula Sheep     39.17  27  eP        P        07 27 18.9 +0.1
      comp=Z,151nm,1.2s
H11S2 WAKE ISLAND Hy 39.57 329       T        T        08 09 19.3
      baz=149,slow=76,SNR=18
H11S3 WAKE ISLAND Hy 39.58 329       T        T        08 09 20.3
      baz=149,slow=76,SNR=20
H11S1 WAKE ISLAND Hy 39.59 329       T        T        08 09 14.7
      baz=149,slow=76,SNR=30
MILA  Mila               39.63 230   P        P        07 27 22.9 +0.5
      baz=40,SNR=3.2
WAKE  Wake Island        40.27 329   PFAKE             07 27 40.0 +12
WAKE                                 LR       LR
      comp=Z,6µm,19.0s
H11N3 WAKE ISLAND Hy 40.51 330       T        T        08 10 36.0
      baz=142,slow=75,SNR=43
H11N1 WAKE ISLAND Hy 40.52 330       T        T        08 11 15.3
      SNR=31
H11N2 WAKE ISLAND Hy 40.53 330       T        T        08 10 36.6
      baz=132,slow=75,SNR=36
CMSA  Cobar Meteorol     40.73 240   P        P        07 27 30.8 -0.6
      baz=41,SNR=62
MTSU  Mount Surprise     40.90 260   P        P        07 27 33.3 +0.3
      baz=41,SNR=7.9
QLP   Quilpie            41.18 248   P        P        07 27 35.4 +0.2
      baz=41,SNR=6.9
MANU  Manus Island       41.45 285   PFAKE             07 27 50.0 +12
MANU                                 LR       LR
      comp=Z,5µm,19.0s
COEN  Coen               42.41 267   P        P        07 27 45.2 -0.2
      baz=43,SNR=17
COEN  Coen               42.41 267  eP        P        07 27 44.9 -0.6
      comp=Z,48nm,1.1s
COEN                                 LR       LR
      comp=Z,6µm,22.0s
TOO   Toolangi           42.55 231   P        P        07 27 46.3  0.0
      baz=43,SNR=7.0
TOO   Toolangi           42.55 231  eP        P        07 27 46.5 +0.2
      comp=Z,22nm,0.8s
TOO                                  LR       LR
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       comp=Z,10µm,18.0s
TOO    Toolangi          42.55 231  eP     P        07 27 46.5 +0.2
TOO                                  pmax   pmax
       comp=Z,23nm,0.8s
TOO                                  MLR    MLR
       comp=Z,10µm,18.0s
TAU    Tasmania Unive    43.31 223   PFAKE          07 28 00.0 +7.6
TAU                                  LR     LR
       comp=Z,18µm,19.0s
MIDW   Midway            44.00 354   PFAKE          07 28 10.0  +12
MIDW                                 LR     LR
       comp=Z,8µm,19.0s
STKA   Stephens Creek    44.22 240   P      P       07 28 00.0 +0.1
       baz=44,SNR=50
STKA   Stephens Creek    44.22 240  eP      P       07 27 59.3  -0.6
       comp=Z,8.7nm,0.8s
STKA                                 LR     LR
       comp=Z,2µm,18.0s
STKA   Stephens Creek    44.22 240  eP      P       07 27 59.3  -0.6
STKA                                 pmax   pmax
       comp=Z,9.0nm,0.8s
STKA                                 MLR    MLR
       comp=Z,2µm,18.0s
STKA   Stephens Creek    44.22 240   P      P       07 27 59.9 +0.1
       comp=Z,34nm,0.8s,baz=84,slow=10,SNR=22
STKA                                 LR     LR      07 45 44.6
       comp=Z,7µm,18.1s,baz=78,slow=35
MCQ    Macquarie Isla    44.32 203   PFAKE          07 28 10.0  +10
MCQ                                  LR     LR
       comp=Z,4µm,19.0s
ARPS   Mount Arapiles    45.10 234   P      P       07 28 06.8   0.0
       baz=45,SNR=6.4
HTT    Hallett           46.71 239   P      P       07 28 19.7 +0.1
       baz=47,SNR=15
BBOO   Buckleboo         48.99 240   P      P       07 28 37.0  -0.3
       baz=49,SNR=11
BBOO   Buckleboo         48.99 240  eP      P       07 28 32.5  -4.8
       comp=Z,29nm,0.9s
BBOO                                 LR     LR
       comp=Z,9µm,19.0s
WB2    Warramunga Arr    50.18 257  eP      P       07 28 44.3  -2.3
WRAB   Tennant Creek     50.18 257  eP      P       07 28 44.6  -1.9
       comp=Z,27nm,1.0s
WRAB                                 LR     LR
       comp=Z,10µm,18.0s
WRAB   Tennant Creek     50.18 257ceP       P       07 28 44.6  -1.9
WRAB                                 pmax   pmax
       comp=Z,95nm,2.5s
WR1    Warramunga Arr    50.19 257  eP      P       07 28 45.9  -0.8
       comp=Z,20nm,0.8s
WR1                                 eS      S       07 35 55.9  -1.6
WRA    Warramunga Arr    50.19 257   P      P       07 28 45.8  -0.8
WRA                                  S      S       07 35 55.9  -1.6
WRA                                  pmax   pmax
       comp=Z,11nm,0.9s
WRA                                  smax   smax
       comp=N,1.0nm,1.0s
WRA                                  MLR    MLR
       comp=Z,10µm,18.1s
WRA    Warramunga Arr    50.19 257   P      P       07 28 45.8  -0.8
       comp=Z,11nm,0.9s,baz=90,slow=6.3,SNR=60
WRA                                  S      S       07 35 55.9  -1.6
       comp=Z,0.5nm,1.0s,baz=97,slow=14,SNR=2.1
WRA                                  LR     LR      07 49 42.7
       comp=Z,10µm,18.1s,baz=85,slow=36
AS01   Alice Springs     50.37 252  eP      P       07 28 46.6  -1.4
AS31   Alice Springs     50.41 252  eP      P       07 28 47.0  -1.2
       comp=Z,13nm,0.7s
AS31                                 LR     LR
       comp=Z,200nm,19.0s
ASAR   Alice Springs     50.41 252   P      P       07 28 47.0  -1.3
       comp=Z,38nm,0.6s,baz=89,slow=6.9,SNR=139
ASAR                                 S      S       07 36 03.8 +3.3
       comp=Z,1.0nm,0.9s,baz=93,slow=14,SNR=3.8
ASAR                                 LR     LR      07 49 04.2
       comp=Z,10µm,19.2s,baz=98,slow=35
GUMO   Guam              50.95 303   PFAKE          07 29 00.0 +7.7
GUMO                                 LR     LR
       comp=Z,3µm,20.0s
GUMO   Guam              50.95 303   LR     LR      07 48 24.6
       comp=Z,2µm,19.2s,baz=144,slow=34
KDU    Kakadu            52.90 266   P      P       07 29 06.7  -0.1
       baz=53,SNR=7.0
MTN    Manton Dam        54.16 265   PFAKE          07 29 30.0  +14
MTN                                  LR     LR
       comp=Z,6µm,21.0s
SAUI   Saumlaki          55.00 271   PFAKE          07 29 30.0 +7.7
SAUI                                 LR     LR
       comp=Z,6µm,22.0s
FAKI   Fak Fak           55.43 277   PFAKE          07 29 40.0  +15
FAKI                                 LR     LR
       comp=Z,7µm,22.0s
WRKA   Warakurna         55.48 250   P      P       07 29 25.1  -0.5
       baz=56,SNR=50
FORT   Forrest           55.63 243   P      P       07 29 26.0  -0.5
       baz=56,SNR=28
FORT   Forrest           55.63 243  eP      P       07 29 25.4  -1.2
       comp=Z,52nm,0.7s
FORT                                 LR     LR
       comp=Z,4µm,18.0s
KNRA   Kununurra         55.96 262   P      P       07 29 29.5 +0.4
       baz=56,SNR=7.2
FITZ   Fitzroy Crossi    58.57 258   P      P       07 29 47.1  -0.5
       baz=59,SNR=16
FITZ   Fitzroy Crossi    58.57 258  eP      P       07 29 46.9  -0.7
       comp=Z,7.5nm,0.8s
FITZ                                 LR     LR
       comp=Z,9µm,20.0s
JCJ    Chichijima        60.98 314   LR     LR      07 51 27.6
       comp=Z,3µm,21.4s,baz=102,slow=31
TNTI   Ternate           61.20 280   PFAKE          07 30 20.0  +14
TNTI                                 LR     LR
       comp=Z,1µm,21.0s
SOEI   Soe               61.37 267  eP      P       07 30 06.6  -0.4
       comp=Z,75nm,0.9s
SOEI                                 LR     LR
       comp=Z,3µm,20.0s
BATI   Baumata           61.85 267   LR     LR      07 54 02.8
       comp=Z,933nm,20.8s,baz=134,slow=33
SBA    Scott Base        62.86 185   PFAKE          07 30 30.0  +14
SBA                                  LR     LR
       comp=Z,4µm,19.0s
VNDA   Vanda             62.99 186   P      P       07 30 19.4 +2.7
       comp=Z,7.8nm,1.1s,baz=12,slow=10,SNR=2.2
VNDA                                 LR     LR      07 51 53.4
       comp=Z,1µm,21.4s,baz=15,slow=30
MBWA   Marble Bar        63.68 254  eP      P       07 30 21.2  -1.0
       comp=Z,34nm,0.8s
MBWA                                 LR     LR
       comp=Z,8µm,19.0s
MEEK   Meekatharra       64.08 248   P      P       07 30 24.9 +0.1
       baz=64,SNR=10
KLBR   Kellerberrin      64.44 242   P      P       07 30 27.1   0.0
       baz=65,SNR=10.0
NWAO   Narrogin (SRO)    64.81 241   PFAKE          07 30 40.0  +11
NWAO                                 LR     LR
       comp=Z,8µm,18.0s
DAV    Davao City (W)    65.00 286   PFAKE          07 30 40.0 +9.1
DAV                                  LR     LR
       comp=Z,3µm,19.0s
DAV    Davao City (W)    65.00 286   LR     LR      07 57 37.1
       comp=Z,2µm,18.0s,baz=112,slow=35
BLDU   Ballidu           65.41 243   P      P       07 30 32.6  -0.8
       baz=66,SNR=5.4
MORW   Morawa            66.12 245  eP      P       07 30 37.9  -0.1
       comp=Z,27nm,1.1s
MORW                                 LR     LR
       comp=Z,5µm,18.0s
JHJ    Hachijo jima 2    66.40 318   LR     LR      07 54 11.0
       comp=Z,1µm,22.0s,baz=119,slow=31
GIRL   Giralia           68.53 252   P      P       07 30 52.1  -1.2
       baz=69,SNR=3.1
GIRL   Giralia           68.53 252   PFAKE          07 31 10.0  +17
GIRL                                 LR     LR
       comp=Z,11µm,19.0s
MJAR   Matsushiro Arr    69.56 320   P      P       07 30 59.8 +0.4
MJAR                                 pmax   pmax
       comp=Z,5.0nm,0.7s
MJAR   Matsushiro Arr    69.56 320   P      P       07 30 59.8 +0.4
       comp=Z,2.1nm,0.4s,baz=160,slow=5.5,SNR=6.6
MJAR                                 LR     LR      07 55 57.0
       comp=Z,3µm,21.8s,baz=135,slow=31
MAJO   Matsushiro        69.57 320  eP      P       07 30 59.8 +0.4
MAJO                                 LR     LR
       comp=Z,4µm,22.0s
MAJO   Matsushiro        69.57 320  eP      P       07 30 59.8 +0.4
MAJO                                 MLR    MLR
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       comp=Z,4µm,22.0s
MJB9   Matsu-Tunnel      69.57 320   PFAKE          07 31 10.0  +11
MJB9                                 LR     LR
       comp=Z,5µm,22.0s
CASY   Casey             70.21 205  eP      P       07 31 03.4 +0.5
       comp=Z,28nm,1.1s
CASY                                 LR     LR
       comp=Z,2µm,18.0s
ERM    Erimo             70.38 327   PFAKE          07 31 20.0  +16
ERM                                  LR     LR
       comp=Z,4µm,20.0s
KUR    Kuril'sk          70.42 332  eP      P       07 31 05.5 +1.1
KUR                                 eS      S       07 40 21.3 +5.7
KUR                                  pmax   pmax
       comp=Z,140nm,1.5s
YUK    Yuzh-Kuril'sk     70.47 330  eP      P       07 30 59.3  -5.4
YUK                                  PPP    PPP     07 35 30.4
YUK                                 eS      S       07 40 11.7  -4.4
YUK                                  SS     SS      07 44 52.1 +4.2
YUK                                  pmax   pmax
       comp=Z,125nm,1.3s
YUK                                  pmax   pmax
       comp=N,90nm,1.0s
YUK                                  pmax   pmax
       comp=E,181nm,1.3s
YUK                                  pmax   pmax
       comp=Z,211nm,3.3s
SNCC   San Nicolas Is    70.55  46   PFAKE          07 31 20.0  +14
SNCC                                 LR     LR
       comp=Z,4µm,20.0s
JOW    Kunigami          71.11 306   PFAKE          07 31 20.0  +11
JOW                                  LR     LR
       comp=Z,2µm,21.0s
MCCM   Marconi Confer    71.30  40   PFAKE          07 31 20.0  +10
MCCM                                 LR     LR
       comp=Z,3µm,20.0s
PKM    Mcpherson Peak    71.30  44   P      P       07 31 11.7 +1.4
       baz=234
SAO    San Andreas Ge    71.35  42   PFAKE          07 31 20.0  +10
SAO                                  LR     LR
       comp=Z,5µm,18.0s
BLG    Laguna Peak, P    71.36  45   P      P       07 31 12.4 +1.9
       baz=235
JAGI   Jajag, Banyuwa    71.38 266   PFAKE          07 31 20.0 +9.0
JAGI                                 LR     LR
       comp=Z,2µm,22.0s
CIS    Catalina Islan    71.40  46   P      P       07 31 11.5 +0.8
       baz=236
SMMC   Simmler           71.43  44   P      P       07 31 12.4 +1.6
       baz=234
PAGB   Antelope Grade    71.50  43   PFAKE          07 31 20.0 +8.7
PAGB                                 LR     LR
       comp=Z,5µm,19.0s
SKR    Severo-Kuril's    71.59 340  eP      P       07 31 09.0  -2.4
SKR                                  pmax   pmax
       comp=Z,1µm,6.8s
SKR                                  MLR    MLR
       comp=Z,2µm,19.0s
SKR                                  MLR    MLR
       comp=Z,2µm,18.0s
HOPS   Hopland Field     71.72  39   PFAKE          07 31 20.0 +7.5
HOPS                                 LR     LR
       comp=Z,4µm,20.0s
GDXM   Geysers           71.77  39   PFAKE          07 31 20.0 +7.1
GDXM                                 LR     LR
       comp=Z,5µm,18.0s
OSI    Osito Audit: C    71.88  45   PFAKE          07 31 30.0  +16
OSI                                  LR     LR
       comp=Z,4µm,18.0s
PASC   Pasadena Art C    71.99  45   PFAKE          07 31 30.0  +16
PASC                                 LR     LR
       comp=Z,3µm,18.0s
ARVC   Arvin             72.10  44   P      P       07 31 15.7 +0.8
       baz=235
MWC    Mount Wilson      72.11  45  eP      P       07 31 16.4 +1.2
       comp=Z,22nm,0.9s
MWC                                  LR     LR
       comp=Z,4µm,19.0s
MWC    Mount Wilson      72.11  45  eP      P       07 31 16.4 +1.2
MWC                                  pmax   pmax
       comp=Z,22nm,0.9s
MWC                                  MLR    MLR
       comp=Z,4µm,19.0s
KMRM   Mail Ridge        72.12  38  eP      P       07 31 15.5 +0.5
       comp=Z,32nm,0.9s
KMRM                                 LR     LR
       comp=Z,4µm,20.0s
ASAJ   Asahikawa         72.15 328   P      P       07 31 16.5 +1.6
       comp=Z,30nm,0.7s,baz=221,slow=5.8,SNR=11
ASAJ                                 LR     LR      08 00 54.2
       comp=Z,759nm,19.0s,baz=132,slow=34
BAR    Barrett           72.23  47   PFAKE          07 31 30.0  +14
BAR                                  LR     LR
       comp=Z,2µm,20.0s
VES    Vestal, Richgr    72.34  44   P      P       07 31 16.7 +0.5
       baz=235
MURC   Murrieta          72.36  46   P      P       07 31 17.6 +1.1
       baz=236
BFSC   Mount Baldy Ra    72.39  46   P      P       07 31 17.8 +1.0
       baz=236
JNU    Nakatsue          72.43 313  eP      P       07 31 17.5 +0.6
       comp=Z,15nm,0.9s
JNU    Nakatsue          72.43 313   P      P       07 31 18.7 +1.8
       comp=Z,15nm,0.9s,baz=57,slow=9.2,SNR=4.4
JNU                                  LR     LR      07 57 58.5
       comp=Z,1µm,20.4s,baz=118,slow=32
MONP2  Monument Peak     72.52  47   P      P       07 31 18.8 +1.1
       baz=237
EDW2   Edwards Air Fo    72.52  45   P      P       07 31 18.3 +0.8
       baz=236
IKP    In-Ko-Pah, Jac    72.61  48   P      P       07 31 19.5 +1.5
       baz=238
O02D   Mt. Diablo Mer    72.63  38   P      P       07 31 19.1 +1.1
       baz=231
ISA    Isabella, Lake    72.64  44  eP      P       07 31 19.3 +1.1
       comp=Z,23nm,1.0s
ISA                                  LR     LR
       comp=Z,4µm,19.0s
ISA    Isabella, Lake    72.64  44   P      P       07 31 18.8 +0.6
       baz=235
CMB    Columbia Colle    72.79  41  eP      P       07 31 19.1 +0.2
       comp=Z,14nm,0.9s
CMB                                  LR     LR
       comp=Z,3µm,20.0s
CMB    Columbia Colle    72.79  41  eP      P       07 31 19.1 +0.2
CMB                                  pmax   pmax
       comp=Z,14nm,0.9s
CMB                                  MLR    MLR
       comp=Z,3µm,20.0s
SRIG   Santa Rosalia     72.81  54   PFAKE          07 31 30.0  +11
SRIG                                 LR     LR
       comp=Z,3µm,19.0s
PFO    Pinyon Flats O    72.88  47  eP      P       07 31 20.3 +0.6
       comp=Z,9.3nm,1.1s
PFO                                  LR     LR
       comp=Z,3µm,20.0s
PFO    Pinyon Flats O    72.88  47   P      P       07 31 20.3 +0.6
       baz=237
PFO    Pinyon Flats O    72.88  47   P      P       07 31 20.1 +0.4
       comp=Z,2.5nm,0.9s,baz=256,slow=3.7,SNR=5.3
XPFO   Pion Flat         72.88  47  eP      P       07 31 19.5  -0.2
       comp=Z,9.9nm,1.1s
XPFO                                 LR     LR
       comp=Z,3µm,20.0s
BBRC   Big Bear Solar    72.91  46   P      P       07 31 20.6 +0.6
       baz=236
AFDM   Forest Hills D    72.97  40  eP      P       07 31 20.2 +0.2
       comp=Z,9.1nm,0.9s
AFDM                                 LR     LR
       comp=Z,3µm,20.0s
SLBS   Sierra La Lagu    72.99  59   PFAKE          07 31 30.0  +10
SLBS                                 LR     LR
       comp=Z,2µm,20.0s
SWSC   Sam W. Stewart    72.99  48   P      P       07 31 20.9 +0.7
       baz=238
ORV    Oroville          73.02  39  eP      P       07 31 20.2   0.0
       comp=Z,7.4nm,1.1s
ORV                                  LR     LR
       comp=Z,2µm,18.0s
ORV    Oroville          73.02  39  eP      P       07 31 20.2   0.0
ORV                                  pmax   pmax
       comp=Z,7.0nm,1.1s
ORV                                  MLR    MLR
       comp=Z,2µm,18.0s
WDC    Whiskeytown Da    73.03  38  eP      P       07 31 20.9 +0.6
       comp=Z,4.8nm,1.0s
WDC                                  LR     LR
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       comp=Z,4µm,20.0s
LRMC   Laurel Mtn Rad    73.07  44   P      P       07 31 21.4 +0.6
       baz=236
PEA0B  Petropavlovsk-    73.18 342  eP      P       07 31 21.3 +0.4
       comp=Z,60nm,1.0s
PETK   Petropavlovsk-    73.18 342  eP      P       07 31 20.9   0.0
PETK   Petropavlovsk-    73.18 342  eP      P       07 31 20.9   0.0
PETK   Petropavlovsk-    73.18 342   P      P       07 31 21.3 +0.4
       comp=Z,26nm,0.8s,baz=140,slow=7.5,SNR=24
PETK                                 LR     LR      08 01 45.3
       comp=Z,776nm,18.7s,baz=149,slow=34
PEA1   Petropavlovsk-    73.19 342  eP      P       07 31 21.3 +0.4
N02D   Trinity Center    73.19  37   P      P       07 31 22.3 +1.0
       baz=230
O03E   Paynes Creek      73.30  38   P      P       07 31 22.7 +0.7
       baz=231
CWC    Cottonwood Cre    73.35  43   P      P       07 31 23.3 +0.8
       baz=235
MDPB   Devils Postpil    73.38  42  eP      P       07 31 23.2 +0.5
       comp=Z,15nm,1.0s
MDPB                                 LR     LR
       comp=Z,4µm,19.0s
BELC   Belle Mtn. Jos    73.41  47   P      P       07 31 23.5 +0.6
       baz=237
KKM    Kota Kinabalu     73.41 281   PFAKE          07 31 30.0 +6.8
KKM                                  LR     LR
       comp=Z,1µm,18.0s
OMMB   Old Mammoth Mi    73.42  42  eP      P       07 31 23.9 +0.8
       comp=Z,9.6nm,1.0s
OMMB                                 LR     LR
       comp=Z,5µm,19.0s
MPMC   Manual Prospec    73.53  44   P      P       07 31 24.5 +0.9
       baz=236
MLAC   Mammoth, Mammo73.54  42   P      P       07 31 24.9 +1.2
       baz=234
RUBR   Rubicon Trail     73.54  40   PFAKE          07 31 40.0  +16
RUBR                                 LR     LR
       comp=Z,3µm,20.0s
GSC    Goldstone, Bar    73.56  45  eP      P       07 31 24.3 +0.6
       comp=Z,12nm,0.9s
GSC                                  LR     LR
       comp=Z,4µm,19.0s
GSC    Goldstone, Bar    73.56  45   P      P       07 31 24.9 +1.3
       baz=236
DAC    Darwin (Calif)    73.58  44  eP      P       07 31 23.8  -0.1
       comp=Z,6.0nm,1.0s
DAC                                  LR     LR
       comp=Z,4µm,19.0s
DAC    Darwin (Calif)    73.58  44  eP      P       07 31 23.8  -0.1
DAC                                  pmax   pmax
       comp=Z,6.0nm,1.0s
DAC                                  MLR    MLR
       comp=Z,4µm,19.0s
TIN    Tinemaha, Big     73.60  43   P      P       07 31 25.0 +1.1
       baz=235
BC3    Big Chuckawall    73.61  47   P      P       07 31 24.9 +0.9
       baz=238
HEC    Hector,Ludlow     73.63  46   P      P       07 31 25.0 +0.9
       baz=237
WAKR   Walker            73.67  41  eP      P       07 31 23.6  -0.7
       comp=Z,17nm,1.1s
WAKR                                 LR     LR
       comp=Z,4µm,20.0s
YBH    Yreka Blue Hor    73.67  37  eP      P       07 31 24.6 +0.5
       comp=Z,4.4nm,0.8s
YBH                                  LR     LR
       comp=Z,2µm,20.0s
YBH    Yreka Blue Hor    73.67  37  eP      P       07 31 24.6 +0.5
YBH                                  pmax   pmax
       comp=Z,4.0nm,0.8s
YBH                                  MLR    MLR
       comp=Z,2µm,20.0s
GLA    Glamis            73.74  48  eP      P       07 31 25.8 +1.1
       comp=Z,9.1nm,0.9s
GLA                                  LR     LR
       comp=Z,2µm,19.0s
GLA    Glamis            73.74  48  eP      P       07 31 25.8 +1.1
GLA                                  pmax   pmax
       comp=Z,9.0nm,0.9s
GLA                                  MLR    MLR
       comp=Z,2µm,19.0s
GLA    Glamis            73.74  48   P      P       07 31 25.7 +1.1
       baz=238
BEKR   Beckworth         73.91  39  eP      P       07 31 26.7 +1.0
       comp=Z,9.9nm,0.8s
BEKR                                 LR     LR
       comp=Z,2µm,20.0s
PNTR   Pine Nut          73.91  41  eP      P       07 31 26.7 +0.9
       comp=Z,26nm,0.9s
PNTR                                 LR     LR
       comp=Z,4µm,20.0s
VCNR   Virginia City     74.00  40  eP      P       07 31 27.5 +1.2
       comp=Z,12nm,0.9s
VCNR                                 LR     LR
       comp=Z,3µm,20.0s
GMRC   Granite Mounta    74.07  46   P      P       07 31 27.3 +0.6
       baz=237
YERR   Yerington         74.07  41  eP      P       07 31 27.1 +0.4
       comp=Z,14nm,0.9s
YERR                                 LR     LR
       comp=Z,4µm,20.0s
YSS    Yuzh-Sakhalins    74.09 330  eP      P       07 31 26.4 +0.1
       comp=Z,62nm,0.8s
YSS                                  LR     LR
       comp=Z,2µm,21.0s
YSS    Yuzh-Sakhalins    74.09 330⇓eP       P       07 31 27.5 +1.2
YSS                                 e               07 34 18.0
YSS                                 eS      S       07 41 00.5 +3.0
YSS                                 ePS     PnS     07 41 26.0  -7.3
YSS                                  pmax   pmax
       comp=Z,50nm,0.8s
YSS                                  pmax   pmax
       comp=Z,400nm,11.3s
IRM    Iron Mountain     74.09  47   P      P       07 31 27.5 +0.7
       baz=238
GRAC   Grapevine Rang    74.13  43   P      P       07 31 28.6 +1.7
       baz=236
FURC   Furnace Creek,    74.17  44   P      P       07 31 27.9 +0.9
       baz=236
M04C   Macdoel           74.20  37   P      P       07 31 29.5 +2.2
       baz=231
L04D   Klamath Falls     74.21  37   P      P       07 31 28.6 +1.2
       baz=231
QSPA   South Pole Qui    74.21 180  eP      P       07 31 28.6 +1.5
       comp=Z,24nm,0.8s
QSPA                                 LR     LR
       comp=Z,4µm,19.0s
TUQ    Turquoise Moun    74.24  45   P      P       07 31 28.8 +1.1
       baz=237
SHOC   Shoshone, Teco    74.25  45   P      P       07 31 28.6 +1.0
       baz=237
RYN    Ryan              74.32  41  eP      P       07 31 28.4 +0.3
       comp=Z,13nm,0.9s
RYN                                  LR     LR
       comp=Z,3µm,19.0s
Y12C   Blythe            74.32  47  eP      P       07 31 28.9 +0.9
       comp=Z,12nm,0.9s
Y12C                                 LR     LR
       comp=Z,3µm,20.0s
Y12C   Blythe            74.32  47   P      P       07 31 28.6 +0.6
       baz=238
NV01   Mina Array Sit    74.34  42  eP      P       07 31 28.5 +0.2
NVAR   Mina Array Bea    74.34  42   P      P       07 31 28.9 +0.6
       comp=Z,8.2nm,0.9s,baz=231,slow=10,SNR=32
NVAR                                 LR     LR      07 58 46.6
       comp=Z,4µm,18.9s,baz=237,slow=31
113A   Mohawk Valley,    74.35  49  eP      P       07 31 28.4 +0.2
       comp=Z,10nm,0.9s
113A                                 LR     LR
       comp=Z,3µm,21.0s
PAHR   Pah Rah Range     74.41  40  eP      P       07 31 29.2 +0.6
       comp=Z,17nm,1.1s
PAHR                                 LR     LR
       comp=Z,3µm,20.0s
NV11   Mina Array Sit    74.44  42  eP      P       07 31 28.7  -0.1
       comp=Z,2.5nm,1.0s
NV11                                 LR     LR
       comp=Z,400nm,19.0s
OHAK   Old Harbor        74.60  11   PFAKE          07 31 40.0  +11
OHAK                                 LR     LR
       comp=Z,3µm,20.0s
LDFC   Landfair          74.61  46  eP      P       07 31 30.0 +0.2
       comp=Z,25nm,0.8s
LDFC                                 LR     LR
       comp=Z,4µm,20.0s
HSIG                     74.62  53   PFAKE          07 31 40.0  +10
HSIG                                 LR     LR
       comp=Z,3µm,20.0s
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214A Organ Pipe Nat 74.64 50 P P 07 31 31.1 +1.2
baz=240
KVN Kaiserville 74.83 41 eP P 07 31 31.4 +0.3
comp=Z,14nm,0.9s
KVN LR LR
comp=Z,4µm,21.0s
KVN Kaiserville 74.83 41 eP P 07 31 31.4 +0.3
KVN pmax pmax
comp=Z,15nm,0.9s
KVN MLR MLR
comp=Z,4µm,21.0s
TPNV Topopah Spring 74.85 44 eP P 07 31 31.8 +0.6
comp=Z,17nm,0.9s
TPNV LR LR
comp=Z,4µm,19.0s
TPNV Topopah Spring 74.85 44 eP P 07 31 31.8 +0.6
TPNV pmax pmax
comp=Z,17nm,0.9s
TPNV MLR MLR
comp=Z,4µm,19.0s
TPNV Topopah Spring 74.85 44 P P 07 31 32.5 +1.3
baz=236
PDMCI Parker Dam,Lak 74.88 47 P P 07 31 32.7 +1.5
baz=238
J04D Umpqua Nationa 74.97 36 P P 07 31 33.3 +1.5
baz=230
TWG Pinlang 75.13 299 PFAKE 07 31 40.0 +7.0
TWG LR LR
comp=Z,3µm,20.0s
I04A Tendick Farm, 75.15 35 P P 07 31 34.4 +1.7
baz=230
MOD Modoc Plateau 75.18 38 eP P 07 31 33.5 +0.5
comp=Z,25nm,1.1s
MOD LR LR
comp=Z,2µm,20.0s
YULB Yu-li 75.18 300 PFAKE 07 31 40.0 +6.8
YULB LR LR
comp=Z,1µm,21.0s
KDAK Kodiak Island 75.26 11 eP P 07 31 33.0 +0.1
comp=Z,31nm,0.9s
KDAK LR LR
comp=Z,2µm,21.0s
KDAK Kodiak Island 75.26 11 P P 07 31 33.1 +0.3
comp=Z,23nm,0.7s,baz=196,slow=3.9,SNR=21
SHPR Sheep Range 75.34 45 eP P 07 31 34.2 +0.1
comp=Z,13nm,1.0s
SHPR LR LR
comp=Z,3µm,19.0s
W13A Hualapai Mount 75.47 47 eP P 07 31 35.3 +0.3
comp=Z,8.8nm,0.9s
W13A LR LR
comp=Z,3µm,20.0s
J05D Fort Rock, OR 75.49 36 P P 07 31 36.5 +1.7
baz=231
Y14A Wickenburg 75.50 48 PFAKE 07 31 50.0 +15
Y14A LR LR
comp=Z,2µm,19.0s
G03D McMinnville, O 75.60 34 P P 07 31 37.1 +1.9
baz=229
SSLB Suanglung 75.63 300 PFAKE 07 31 50.0 +14
SSLB LR LR
comp=Z,2µm,22.0s
YHNB Yeheng 75.65 301 PFAKE 07 31 50.0 +14
YHNB LR LR
comp=Z,3µm,20.0s
H04A Detroit Lake 75.85 35 eP P 07 31 36.8 +0.2
comp=Z,34nm,1.0s
H04A LR LR
comp=Z,3µm,20.0s
PINE Pine Mountain 75.98 36 eP P 07 31 38.2 +0.6
comp=Z,50nm,1.1s
PINE LR LR
comp=Z,3µm,20.0s
R11A Troy Canyon, C 76.06 43 eP P 07 31 38.2 0.0
comp=Z,10nm,1.0s
R11A LR LR
comp=Z,3µm,21.0s
R11A Troy Canyon, C 76.06 43 P P 07 31 39.4 +1.3
baz=237
I05D Terrebonne, OR 76.09 35 P P 07 31 39.7 +1.6
baz=231
BMN Battle Mountai 76.18 40 PFAKE 07 31 50.0 +11
BMN LR LR
comp=Z,3µm,19.0s
F04D Rainier, OR 76.31 33 P P 07 31 40.8 +1.7
baz=229
TUC Tucson 76.31 50 eP P 07 31 40.2 +0.6
comp=Z,14nm,0.9s
TUC LR LR
comp=Z,3µm,19.0s
TUC Tucson 76.31 50 eP P 07 31 40.2 +0.6
TUC pmax pmax
comp=Z,14nm,0.9s
TUC MLR MLR
comp=Z,3µm,19.0s
TUC Tucson 76.31 50 P P 07 31 40.9 +1.3
baz=241
WVOR Wild Horse Val 76.49 38 eP P 07 31 41.0 +0.5
comp=Z,14nm,1.0s
WVOR LR LR
comp=Z,3µm,19.0s
WVOR Wild Horse Val 76.49 38 eP P 07 31 41.0 +0.5
WVOR pmax pmax
comp=Z,14nm,1.0s
WVOR MLR MLR
comp=Z,3µm,19.0s
G05D Wamic, OR 76.68 35 P P 07 31 42.8 +1.5
baz=231
KSRS Korea Array 76.79 315 P P 07 31 43.2 +1.2
comp=Z,4.0nm,0.7s,baz=128,slow=5.8,SNR=8.2
KSRS LR LR 08 00 06.1
comp=Z,1µm,21.5s,baz=110,slow=32
KSAR Wonju Array Be 76.81 315 P P 07 31 43.2 +1.0
KSAR Wonju Array Be 76.81 315 P P 07 31 43.2 +1.0
KS01 Wonju Array Si 76.82 315 eP P 07 31 42.5 +0.2
E04D Cinebar 76.85 33 P P 07 31 44.1 +1.9
baz=230
X16A Lo Mia Camp, P 76.86 48 eP P 07 31 43.2 +0.4
comp=Z,20nm,0.9s
X16A LR LR
comp=Z,2µm,19.0s
LCMT Little Creek M 76.91 45 eP P 07 31 43.2 +0.2
comp=Z,9.1nm,0.8s
LCMT LR LR
comp=Z,3µm,19.0s
TYV Tymovskoe 76.94 333 eP P 07 31 43.1 +0.5
TYV eS S 07 41 31.4 +2.4
TYV pmax pmax
comp=Z,900nm,4.7s
TYV pmax pmax
comp=Z,43nm,1.5s
TYV smax smax
comp=E,500nm,5.2s
TYV smax smax
comp=E,11nm,2.0s
I07A Izee 76.97 36 eP P 07 31 43.7 +0.5
comp=E,12nm,1.0s
I07A LR LR
comp=Z,3µm,20.0s
319A Douglas 77.00 52 eP P 07 31 44.0 +0.4
comp=Z,23nm,0.9s
319A LR LR
comp=Z,4µm,18.0s
F05D White Salmon 77.01 34 P P 07 31 45.0 +1.9
baz=231
CCUT Cedar City 77.11 45 eP P 07 31 44.6 +0.3
comp=Z,11nm,0.9s
CCUT LR LR
comp=Z,3µm,22.0s
J08A Circle Bar Ran 77.13 37 eP P 07 31 44.7 +0.7
comp=Z,2.2nm,0.8s
J08A LR LR
comp=Z,2µm,19.0s
D04E Lakebay 77.15 32 P P 07 31 45.1 +1.3
baz=229
HOM Homer 77.19 11 PFAKE 07 32 00.0 +16
HOM LR LR
comp=Z,2µm,20.0s
KNB Kanab 77.20 45 eP P 07 31 44.9 +0.2
comp=Z,18nm,0.9s
KNB LR LR
comp=Z,3µm,19.0s
KNB Kanab 77.20 45 eP P 07 31 44.9 +0.2
KNB pmax pmax
comp=Z,18nm,0.9s
KNB MLR MLR
comp=Z,3µm,19.0s
D03D Eldon 77.22 32 P P 07 31 45.9 +1.7
baz=229
U15A North Rim 77.27 46 eP P 07 31 45.6 +0.4
comp=Z,14nm,0.9s
U15A LR LR
comp=Z,2µm,19.0s
PSUT Pine Spring 77.30 44 eP P 07 31 45.5 +0.2
comp=Z,22nm,0.9s
PSUT LR LR
comp=Z,4µm,19.0s
SZCU Shurtz Canyon 77.32 45 eP P 07 31 45.6 +0.2
comp=Z,11nm,0.9s
SZCU LR LR
comp=Z,2µm,21.0s
LON Longmire 77.37 33 eP P 07 31 45.9 +0.7
comp=Z,10nm,0.8s
LON Longmire 77.37 33 eP P 07 31 45.9 +0.7
LON pmax pmax
comp=Z,10.0nm,0.8s
BRLK Bradley Lake 77.43 11 eP P 07 31 45.8 +0.6
comp=Z,44nm,1.2s
BRLK LR LR
comp=Z,3µm,22.0s
WUAZ Wupatki 77.45 47 eP P 07 31 47.0 +1.0
comp=Z,13nm,1.0s
WUAZ LR LR
comp=Z,2µm,21.0s
WUAZ Wupatki 77.45 47 P P 07 31 47.2 +1.1
baz=240
D05A Enumclaw 77.56 33 eP P 07 31 46.5 +0.3
comp=Z,27nm,0.9s
ELK Elko 77.60 41 eP P 07 31 46.7 -0.2
comp=Z,11nm,0.9s
ELK LR LR
comp=Z,3µm,19.0s
ELK Elko 77.60 41 eP P 07 31 46.7 -0.2
ELK pmax pmax
comp=Z,11nm,0.9s
ELK MLR MLR
comp=Z,3µm,19.0s
KSM Kuching 77.68 275 eP P 07 31 46.6 -1.0
comp=Z,42nm,1.1s
KSM LR LR
comp=Z,1µm,21.0s
RSO Redoubt South 77.75 10 eP P 07 31 47.1 -0.1
PKCU Pink Cliffs 77.77 45 eP P 07 31 48.7 +0.7
comp=Z,24nm,0.9s
PKCU LR LR
comp=Z,3µm,20.0s
F07A Phinny Hill Vi 77.85 35 eP P 07 31 48.3 +0.5
comp=Z,18nm,0.9s
F07A LR LR
comp=Z,3µm,20.0s
HPIG 77.88 57 eP P 07 31 48.7 +0.1
comp=Z,18nm,0.9s
HPIG LR LR
comp=Z,2µm,19.0s
SVW2 Sparrevohn 77.92 9 eP P 07 31 47.9 +0.1
comp=Z,8.2nm,1.0s
SVW2 LR LR
comp=Z,2µm,21.0s
X18A Snowflake 77.99 49 eP P 07 31 49.5 +0.4
comp=Z,12nm,1.0s
X18A LR LR
comp=Z,2µm,19.0s
USRK Ussuriysk Ar. 78.00 323 P P 07 31 47.3 -1.4
comp=Z,5.5nm,1.0s,baz=101,slow=4.6,SNR=3.1
USRK LR LR 08 00 09.3
comp=Z,4µm,21.6s,baz=124,slow=31
USA0B Ussuriysk Arra 78.01 323 PFAKE 07 32 00.0 +11
USA0B LR LR
comp=Z,5µm,22.0s
G08A Pilot Rock 78.02 36 eP P 07 31 49.2 +0.3
comp=Z,23nm,1.1s
G08A LR LR
comp=Z,3µm,21.0s
SEW Seward 78.02 12 PFAKE 07 32 00.0 +12
SEW LR LR
comp=Z,2µm,20.0s
LEM Lembang 78.06 266 LR LR 08 06 53.6
comp=Z,3µm,19.8s,baz=146,slow=36
MTPU Mount Pierson 78.17 45 eP P 07 31 50.2 -0.1
comp=Z,11nm,1.1s
MTPU LR LR
comp=Z,3µm,20.0s
A04D Lummi Island 78.19 31 P P 07 31 51.1 +1.5
baz=229
B05A Bryant 78.20 32 P P 07 31 50.7 +1.0
baz=230
TCRU Three Creeks R 78.28 44 PFAKE 07 32 00.0 +9.3
TCRU LR LR
comp=Z,4µm,19.0s
LTY Liberty 78.30 33 eP P 07 31 50.9 +0.5
comp=Z,12nm,1.0s
HAWA Hanford 78.37 35 eP P 07 31 51.0 +0.3
comp=Z,28nm,1.1s
HAWA LR LR
comp=Z,3µm,19.0s
MSU Marysvale 78.41 44 eP P 07 31 51.3 -0.2
MSU Marysvale 78.41 44 eP P 07 31 51.3 -0.2
W18A Petrified Fore 78.42 48 eP P 07 31 52.0 +0.4
comp=Z,9.6nm,0.9s
W18A LR LR
comp=Z,2µm,20.0s
W18A Petrified Fore 78.42 48 P P 07 31 52.9 +1.4
baz=241
SSE Sheshan 78.58 307 P P 07 31 49.1 -3.1
SSE S S 07 41 48.7 +1.1
SSE pmax pmax
comp=Z,13nm,1.1s
SSE pmax pmax
comp=Z,240nm,4.5s
SSE LR LR
comp=N,390nm,24.1s
SSE LR LR
comp=E,620nm,24.3s
SSE Sheshan 78.58 307 PFAKE 07 32 00.0 +7.8
SSE LR LR
comp=Z,1µm,21.0s
C06D Leavenworth 78.60 33 P P 07 31 53.4 +1.4
baz=231
121A Cookes Peak, D 78.66 51 P P 07 31 54.1 +1.3
baz=243
B06A Marblemount 78.67 32 eP P 07 31 52.5 +0.2
comp=Z,34nm,1.1s
B06A LR LR
comp=Z,2µm,18.0s
E08A Dider Farm, El 78.69 35 eP P 07 31 52.9 +0.5
comp=Z,3.6nm,1.0s
E08A LR LR
comp=Z,3µm,19.0s
BMO Blue Mountains 78.69 37 eP P 07 31 52.3 -0.4
comp=Z,7.8nm,0.9s
BMO Blue Mountains 78.69 37 eP P 07 31 52.3 -0.4
BMO pmax pmax
comp=Z,8.0nm,0.9s
MFID Camas Ranch 78.74 39 eP P 07 31 53.1 +0.1
comp=Z,20nm,1.1s
MFID LR LR
comp=Z,2µm,19.0s
ZAIG Zacatecas 78.80 62 eP P 07 31 53.6 -0.4
comp=Z,4.4nm,1.0s
ZAIG LR LR
comp=Z,4µm,20.0s
DUG Dugway, Tooele 78.87 43 eP P 07 31 54.3 +0.5
comp=Z,16nm,1.0s
DUG LR LR
comp=Z,2µm,19.0s
DUG Dugway, Tooele 78.87 43 eP P 07 31 54.3 +0.5
DUG pmax pmax
comp=Z,16nm,1.0s
DUG MLR MLR
comp=Z,2µm,19.0s
DUG Dugway, Tooele 78.87 43 P P 07 31 55.0 +1.2
baz=238
RC01 Rabbit Creek A 78.88 11 eP P 07 31 53.1 -0.1
comp=Z,46nm,1.2s
RC01 LR LR
comp=Z,1µm,22.0s
XMIS Christmas Isla 79.04 262 PFAKE 07 32 10.0 +15
XMIS LR LR
comp=Z,2µm,19.0s
SUA Susitna One 79.04 11 eP P 07 31 53.6 -0.6
comp=Z,22nm,0.9s
SUA LR LR
comp=Z,3µm,22.0s
D08A Wollman Farm, 79.11 34 eP P 07 31 54.8 0.0
comp=Z,17nm,1.0s
D08A LR LR
comp=Z,3µm,18.0s
BGU Big Grassy Mou 79.11 42 eP P 07 31 55.1 -0.1
comp=Z,8.7nm,1.0s
BGU LR LR
comp=Z,3µm,20.0s
EYAK Cordova Ski Ar 79.20 13 PFAKE 07 32 10.0 +15
EYAK LR LR
comp=Z,4µm,20.0s
GLI Glacier Island 79.20 13 eP P 07 31 54.4 -0.6
comp=Z,64nm,1.1s
GLI LR LR
comp=Z,2µm,20.0s
E09A Wood Farm, Sta 79.21 35 eP P 07 31 55.1 -0.2
comp=Z,24nm,1.1s
E09A LR LR
comp=Z,2µm,20.0s
NLU North Lily Min 79.22 43 eP P 07 31 55.6 -0.3
comp=Z,5.1nm,0.9s
NLU LR LR
comp=Z,4µm,19.0s
Q16A Castle Valley 79.30 44 eP P 07 31 56.1 -0.1
comp=Z,15nm,0.9s
HMT Hamilton 79.35 14 PFAKE 07 32 10.0 +14
HMT LR LR
comp=Z,3µm,20.0s
F10A Beach Ranch, E 79.40 36 eP P 07 31 56.1 -0.4
comp=Z,32nm,1.0s
F10A LR LR
comp=Z,3µm,22.0s
KNK Knik Glacier 79.42 12 eP P 07 31 55.6 -0.5
comp=Z,35nm,1.1s
KNK LR LR
comp=Z,2µm,20.0s
NKL Nikolayevsk 79.44 334 eP P 07 31 55.0 -1.3
NKL pmax pmax
comp=Z,130nm,1.5s
NKL pmax pmax
comp=Z,1µm,10.0s
PMR Palmer 79.45 11 eP P 07 31 55.8 -0.4
comp=Z,14nm,0.9s
PMR Palmer 79.45 11 eP P 07 31 55.8 -0.4
PMR pmax pmax
comp=Z,14nm,0.9s
TMUT Trail Mountain 79.46 44 eP P 07 31 57.0 -0.3
comp=Z,38nm,0.9s
TMUT LR LR
comp=Z,3µm,19.0s
MPU Maple Canyon 79.55 43 eP P 07 31 57.9 +0.3
comp=Z,12nm,1.0s
MPU LR LR
comp=Z,4µm,18.0s
WRAK Wrangell Islan 79.58 22 eP P 07 31 57.0 -0.1
comp=Z,26nm,1.0s
MDJ Mudanjiang 79.65 322 PFAKE 07 32 10.0 +12
MDJ LR LR
comp=Z,4µm,21.0s
HLID Hailey 79.67 39 eP P 07 31 58.2 +0.1
comp=Z,24nm,1.1s
HLID LR LR
comp=Z,2µm,20.0s
HLID Hailey 79.67 39 P P 07 31 59.5 +1.4
baz=236
SPUT South Promonto 79.69 42 eP P 07 31 58.2 -0.1
comp=Z,16nm,1.2s
SPUT LR LR
comp=Z,4µm,20.0s
B08A Colville Reser 79.69 33 eP P 07 31 58.1 +0.2
comp=Z,38nm,1.1s
DIV Divide 79.71 13 eP P 07 31 57.4 -0.4
comp=Z,64nm,1.0s
DIV LR LR
comp=Z,2µm,20.0s
HVU Hansel Valley 79.73 41 eP P 07 31 58.0 -0.5
comp=Z,17nm,0.9s
HVU LR LR
comp=Z,4µm,19.0s
HVU Hansel Valley 79.73 41 eP P 07 31 58.0 -0.5
HVU pmax pmax
comp=Z,17nm,0.9s
HVU MLR MLR
comp=Z,4µm,19.0s
GRNR Gornyy 79.75 330 eP P 07 32 01.9 +3.7
GRNR pmax pmax
comp=Z,42nm,1.0s
SML Sawmill 79.80 12 eP P 07 31 58.2 -0.1
SML Sawmill 79.80 12 eP P 07 31 58.2 -0.1
CTU Camp Tracy 79.82 43 eP P 07 31 59.1 +0.1
comp=Z,14nm,1.1s
CTU LR LR
comp=Z,2µm,20.0s
LLLB Lillooet 79.83 30 eP P 07 31 58.3 -0.4
comp=Z,34nm,1.0s
SRU San Rafael Swe 79.83 44 eP P 07 31 59.1 +0.1
comp=Z,14nm,1.0s
SRU LR LR
comp=Z,3µm,19.0s
SRU San Rafael Swe 79.83 44 eP P 07 31 59.2 +0.1
SRU pmax pmax
comp=Z,14nm,1.0s
SRU MLR MLR
comp=Z,3µm,19.0s
P17A Butcher Ranch, 79.86 44 eP P 07 31 59.2 -0.1
comp=Z,34nm,1.2s
P17A LR LR
comp=Z,4µm,20.0s
C09A Chrisman Ranch 79.91 34 eP P 07 31 58.8 -0.4
comp=Z,30nm,0.9s
C09A LR LR
comp=Z,2µm,18.0s
JLU Jordanelle 79.97 43 eP P 07 31 59.7 -0.2
comp=Z,19nm,1.0s
JLU LR LR
comp=Z,3µm,19.0s
LAZ Ladron 79.98 50 eP P 07 32 00.5 +0.4
LENM Lemitar 80.00 50 eP P 07 32 00.1 0.0
KLU Klutina 80.01 13 eP P 07 31 59.3 -0.1
comp=Z,42nm,1.2s
KLU LR LR
comp=Z,2µm,22.0s
SCM Sheep Creek Mo 80.03 12 PFAKE 07 32 10.0 +10
SCM LR LR
comp=Z,2µm,20.0s
MNTX Cornudas Mount 80.12 53 eP P 07 32 00.7 0.0
comp=Z,14nm,1.0s
MNTX LR LR
comp=Z,2µm,20.0s
MNTX Cornudas Mount 80.12 53 P P 07 32 02.1 +1.5
baz=244
PCA Pinnacle 80.13 16 PFAKE 07 32 10.0 +10
PCA LR LR
comp=Z,2µm,20.0s
PPLA Purkeypile 80.14 9 eP P 07 32 00.1 -0.1
comp=Z,12nm,1.0s
PPLA LR LR
comp=Z,3µm,21.0s
TCUT Toone Canyon 80.26 42 eP P 07 32 01.6 +0.1
comp=Z,72nm,1.0s
TCUT LR LR
comp=Z,4µm,19.0s
PV05 Paradox Valley 80.30 46 eP P 07 32 02.1 +0.4
comp=Z,20nm,0.9s
MVCO Mesa Verde 80.30 47 eP P 07 32 02.0 +0.2
comp=Z,3.7nm,0.8s
MVCO LR LR
comp=Z,2µm,20.0s
MVCO Mesa Verde 80.30 47 P P 07 32 02.2 +0.4
baz=242
JIS Juneau Island 80.35 20 eP P 07 32 01.4 +0.2
comp=Z,16nm,1.0s
ANM Nome 80.36 3 eP P 07 32 01.4 +0.2
comp=Z,16nm,1.0s
ANM LR LR
comp=Z,2µm,20.0s
ANM Nome 80.36 3 eP P 07 32 01.4 +0.2
ANM pmax pmax
comp=Z,16nm,1.0s
ANM MLR MLR
comp=Z,2µm,20.0s
BESE Bessie Mountai 80.44 19 eP P 07 32 02.1 +0.3
comp=Z,24nm,1.0s
TX31 Lajitas Ar. Si 80.47 56 eP P 07 32 02.6 -0.1
LTX Lajitas 80.47 56 eP P 07 32 03.4 +0.7
TXAR Lajitas Array 80.47 56 P P 07 32 03.4 +0.7
comp=Z,15nm,1.2s,baz=223,slow=6.2,SNR=35
TXAR LR LR 08 01 36.6
comp=Z,2µm,19.4s,baz=0.0,slow=31
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PV09	Paradox Valley	80.47	46	eP	P	07 32 03.4	+0.6
PV10	Paradox Valley	80.48	46	eP	P	07 32 02.9	+0.1
	comp=Z,20nm,0.8s						
PV10				LR	LR		
	comp=Z,3μm,20.0s						
PV19	Morning Glory	80.49	46	PFAKE		07 32 10.0	+7.3
PV19				LR	LR		
	comp=Z,2μm,20.0s						
PV17	East Wray Mesa	80.49	46	eP	P	07 32 03.8	+1.1
	comp=Z,26nm,1.1s						
PV17				LR	LR		
	comp=Z,3μm,22.0s						
UNM	Universidad Na	80.49	67	PFAKE		07 32 10.0	+6.8
UNM				LR	LR		
	comp=Z,3μm,20.0s						
PV14	Lion Creek, Pa	80.49	46	eP	P	07 32 05.3	+2.6
	comp=Z,29nm,1.0s						
PV14				LR	LR		
	comp=Z,3μm,19.0s						
PV20	West Nyswonger	80.51	46	PFAKE		07 32 10.0	+7.2
PV20				LR	LR		
	comp=Z,2μm,19.0s						
PV16	Nyswonger Mesa	80.53	46	eP	P	07 32 04.2	+1.2
	comp=Z,14nm,1.0s						
PV16				LR	LR		
	comp=Z,2μm,20.0s						
PV03	Paradox Valley	80.55	46	eP	P	07 32 03.9	+0.8
	comp=Z,16nm,0.9s						
PV03				LR	LR		
	comp=Z,2μm,21.0s						
PV11	David Mesa, Pa	80.56	46	PFAKE		07 32 10.0	+6.9
PV11				LR	LR		
	comp=Z,3μm,21.0s						
PV04	Paradox Valley	80.58	46	PFAKE		07 32 10.0	+6.8
PV04				LR	LR		
	comp=Z,3μm,21.0s						
PV02	Paradox Valley	80.61	46	eP	P	07 32 04.6	+1.1
	comp=Z,22nm,0.9s						
PV21	Cone Mtn., Par	80.61	46	PFAKE		07 32 20.0	+17
PV21				LR	LR		
	comp=Z,3μm,20.0s						
PV12	Saucer Basin,	80.62	46	PFAKE		07 32 20.0	+17
PV12				LR	LR		
	comp=Z,3μm,21.0s						
CAST	Castle Rocks	80.65	9	eP	P	07 32 01.9	-0.9
	comp=Z,22nm,1.2s						
CAST				LR	LR		
	comp=Z,2μm,20.0s						
PV01	Paradox Valley	80.69	46	eP	P	07 32 03.8	0.0
	comp=Z,18nm,1.0s						
PV01				LR	LR		
	comp=Z,3μm,19.0s						
MA2	Magadan	80.72	342	eP	P	07 32 02.8	-0.4
	comp=Z,19nm,1.0s						
MA2				LR	LR		
	comp=Z,2μm,20.0s						
MA2	Magadan	80.72	342	ceP	P	07 32 03.8	+0.6
MA2				pmax	pmax		
	comp=Z,56nm,2.5s						
MA2	Magadan	80.72	342	P	P	07 32 02.6	-0.6
	comp=Z,8.6nm,0.8s,baz=216,slow=7.7,SNR=9.9						
MA2				LR	LR	08 03 00.9	
	comp=Z,2μm,20.6s,baz=154,slow=32						
ANMO	Albuquerque	80.73	50	eP	P	07 32 03.8	-0.3
	comp=Z,1.6nm,0.9s						
ANMO				LR	LR		
	comp=Z,2μm,19.0s						
ANMO	Albuquerque	80.73	50	ceP	P	07 32 04.9	+0.8
ANMO				pmax	pmax		
	comp=Z,26nm,1.7s						
ANMO	Albuquerque	80.73	50	P	P	07 32 04.9	+0.8
	baz=243						
PV07	Paradox Valley	80.78	46	PFAKE		07 32 20.0	+16
PV07				LR	LR		
	comp=Z,3μm,20.0s						
NJ2	Nanjing	80.79	307	eP	P	07 32 04.3	+0.1
NJ2	Nanjing	80.79	307	S	S	07 42 12.6	+1.7
NJ2				pmax	pmax		
	comp=Z,13nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,760nm,5.6s						
NJ2				LR	LR		
	comp=N,2μm,19.5s						
NJ2				LR	LR		
	comp=E,2μm,19.0s						
NJ2				LR	LR		
	comp=Z,1μm,19.0s						
NEW	Newport	80.81	34	eP	P	07 32 03.7	-0.3
	comp=Z,12nm,1.0s						
NEW				LR	LR		
	comp=Z,2μm,18.0s						
NEW	Newport	80.81	34	eP	P	07 32 03.7	-0.3
NEW				pmax	pmax		
	comp=Z,12nm,1.0s						
NEW				MLR	MLR		
	comp=Z,2μm,18.0s						
NEW	Newport	80.81	34	P	P	07 32 04.4	+0.4
	baz=234						
TRF	Thorofare Moun	80.97	10	eP	P	07 32 04.4	-0.2
	comp=Z,62nm,1.2s						
TRF				LR	LR		
	comp=Z,4μm,22.0s						
SKAG	Skagway	81.01	18	eP	P	07 32 04.4	-0.2
	comp=Z,49nm,1.2s						
SKAG				LR	LR		
	comp=Z,1μm,20.0s						
GDL2	Guadalupe Moun	81.11	53	eP	P	07 32 06.6	+0.5
KLR	Kul'dur	81.13	327	P	P	07 32 06.0	+0.4
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KLR	Kul'dur	81.13	327	P	P	07 32 06.0	+0.4
	comp=Z,6.7nm,0.9s,baz=95,slow=6.0,SNR=9.8						
KLR				LR	LR	08 02 24.7	
	comp=Z,2μm,21.9s,baz=140,slow=32						
DHY	Denali Highway	81.15	11	eP	P	07 32 05.2	-0.4
	comp=Z,19nm,1.2s						
RND	Reindeer	81.18	11	eP	P	07 32 05.2	-0.4
	comp=Z,67nm,1.2s						
RND				LR	LR		
	comp=Z,2μm,21.0s						
RND	Reindeer	81.18	11	eP	P	07 32 05.3	-0.4
RND				pmax	pmax		
	comp=Z,67nm,1.2s						
RND				MLR	MLR		
	comp=Z,2μm,21.0s						
AHID	Auburn Hatcher	81.30	41	PFAKE		07 32 20.0	+13
AHID				LR	LR		
	comp=Z,2μm,20.0s						
MCMT	McKenzie Canyo	81.30	39	eP	P	07 32 07.5	+0.5
PAX	Paxson	81.43	12	PFAKE		07 32 20.0	+13
PAX				LR	LR		
	comp=Z,1μm,20.0s						
BPAW	Bear Paw Mtn.	81.46	10	PFAKE		07 32 20.0	+13
BPAW				LR	LR		
	comp=Z,2μm,21.0s						
MCK	McKinley	81.46	11	eP	P	07 32 06.0	-1.1
	comp=Z,89nm,1.1s						
MCK				LR	LR		
	comp=Z,3μm,22.0s						
MCK	McKinley	81.46	11	eP	P	07 32 06.0	-1.1
MCK				pmax	pmax		
	comp=Z,89nm,1.1s						
MCK				MLR	MLR		
	comp=Z,3μm,22.0s						
HYT	Haines Junctio	81.49	17	eP	P	07 32 06.6	-0.8
	comp=Z,51nm,1.2s						
CN2	Changchun	81.71	320	eP	P	07 32 09.5	+0.7
CN2				epP	PcP	07 32 14.5	-0.1
CN2	Changchun	81.71	320	eS	S	07 42 19.8	-0.2
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,1μm,10.0s						
CN2				LR	LR		
	comp=N,2μm,22.0s						
CN2				LR	LR		
	comp=E,1μm,22.0s						
CN2				LR	LR		
	comp=Z,2μm,20.0s						
S22A	4UR Ranch, Cre	81.73	47	eP	P	07 32 09.4	-0.1
	comp=Z,21nm,1.0s						
S22A				LR	LR		
	comp=Z,2μm,22.0s						
S22A	4UR Ranch, Cre	81.73	47	P	P	07 32 10.2	+0.8
	baz=243						
DLMT	Dillon	81.74	38	eP	P	07 32 09.1	-0.1
	comp=Z,16nm,1.0s						
DLMT				LR	LR		
	comp=Z,2μm,20.0s						
MSO	Missoula	81.75	36	eP	P	07 32 09.1	0.0
	comp=Z,37nm,1.1s						
MSO				LR	LR		
	comp=Z,3μm,21.0s						
MSO	Missoula	81.75	36	P	P	07 32 09.4	+0.3
	baz=236						
REDW	Red Top Meadow	81.76	41	eP	P	07 32 09.2	-0.2
	comp=Z,22nm,1.1s						
REDW				LR	LR		
	comp=Z,2μm,20.0s						
BWN	Browne	81.78	10	eP	P	07 32 08.9	+0.2
	comp=Z,68nm,1.0s						
BWN				LR	LR		
	comp=Z,4μm,20.0s						
FXWY	Fox Creek	81.79	40	eP	P	07 32 09.4	-0.2
	comp=Z,12nm,1.0s						
DL2	Dalian	81.81	314	⇑P	P	07 32 11.4	+2.0
DL2				PP	PP	07 35 18.8	+1.7
DL2	Dalian	81.81	314	S	S	07 42 28.1	+6.9
DL2				pmax	pmax		
	comp=Z,45nm,1.4s						
DL2				pmax	pmax		
	comp=Z,970nm,6.2s						
DL2				LR	LR		
	comp=N,2μm,20.3s						
DL2				LR	LR		
	comp=E,1μm,22.3s						
DL2				LR	LR		
	comp=Z,2μm,22.4s						
O20A	White River Ci	81.87	44	eP	P	07 32 09.8	-0.2
	comp=Z,8.4nm,1.0s						
O20A				LR	LR		
	comp=Z,3μm,20.0s						
O20A	White River Ci	81.87	44	P	P	07 32 11.4	+1.4
	baz=242						
SNOW	Snow King Moun	81.87	41	eP	P	07 32 09.4	-0.7
	comp=Z,30nm,0.9s						
SNOW				LR	LR		
	comp=Z,2μm,19.0s						
SNY	Shenyang	81.90	318	⇓P	P	07 32 12.9	+3.0
DLBC	Dease Lake	81.94	21	eP	P	07 32 09.6	-0.2
	comp=Z,17nm,1.1s						
MOOW	Moose Ponds	82.03	40	eP	P	07 32 10.4	-0.3
LOHW	Long Hollow	82.05	40	eP	P	07 32 10.6	-0.3
	comp=Z,9.3nm,0.9s						
LOHW				LR	LR		
	comp=Z,2μm,20.0s						
LRM	Limekiln Ridge	82.07	38	eP	P	07 32 13.2	+2.1
WHY	Whitehorse	82.11	18	eP	P	07 32 10.7	+0.1
	comp=Z,8.5nm,1.1s						
QLMT	Earthquake Lak	82.16	39	eP	P	07 32 11.6	+0.1
LNIG	Linares	82.22	61	eP	P	07 32 11.9	-0.1
	comp=Z,9.8nm,0.8s						
LNIG				LR	LR		
	comp=Z,4μm,20.0s						
FLWY	Flagg Ranch	82.22	40	eP	P	07 32 11.1	-0.7
	comp=Z,19nm,1.0s						
FLWY				LR	LR		
	comp=Z,2μm,20.0s						
RIDG	Independ'e Rid	82.25	12	eP	P	07 32 10.8	-0.4
	comp=Z,44nm,1.1s						
RIDG				LR	LR		
	comp=Z,2μm,20.0s						
YPP	Pitchstone Pla	82.26	40	eP	P	07 32 12.5	+0.4
	comp=Z,11nm,1.2s						
YHB	Horse Butte	82.26	39	PFAKE		07 32 20.0	+8.0
YHB				LR	LR		
	comp=Z,2μm,21.0s						
BW06	Boulder Array	82.28	42	eP	P	07 32 11.2	-0.9
	comp=Z,4.4nm,1.0s						
BW06				LR	LR		
	comp=Z,4μm,20.0s						
BW06	Boulder Array	82.28	42	P	P	07 32 12.3	+0.1
	baz=240						
PD31	Pinedale Array	82.28	42	eP	P	07 32 11.5	-0.6
	comp=Z,4.0nm,1.0s						
PDAR	Pinedale Array	82.28	42	eP	P	07 32 11.5	-0.6
PDAR	Pinedale Array	82.28	42	P	P	07 32 12.2	0.0
	comp=Z,9.1nm,1.1s,baz=238,slow=5.1,SNR=32						
PDAR				LR	LR	08 03 58.1	
	comp=Z,3μm,18.8s,baz=246,slow=32						
SMCO	Snowmass	82.28	46	eP	P	07 32 11.7	-0.7
	comp=Z,34nm,1.0s						
SMCO				LR	LR		
	comp=Z,2μm,19.0s						
WRH	Wood River Hil	82.29	11	eP	P	07 32 11.2	-0.2
	comp=Z,128nm,1.2s						
WRH				LR	LR		
	comp=Z,2μm,21.0s						
DOT	Dot Lake	82.33	13	PFAKE		07 32 20.0	+8.4
DOT				LR	LR		
	comp=Z,2μm,20.0s						
YFT	Old Faithful	82.33	40	eP	P	07 32 13.2	+0.8
	comp=Z,12nm,0.9s						
YMR	Madison River	82.36	39	eP	P	07 32 12.9	+0.4
	comp=Z,1.4nm,0.6s						
YMR				LR	LR		
	comp=Z,2μm,20.0s						
MLY	Manley	82.37	9	eP	P	07 32 11.0	-0.8
	comp=Z,28nm,1.0s						
MLY				LR	LR		
	comp=Z,2μm,20.0s						
HDA	Harding Lake	82.44	11	eP	P	07 32 11.6	-0.6
	comp=Z,45nm,1.1s						
HDA				LR	LR		
	comp=Z,1μm,19.0s						
HDA	Harding Lake	82.44	11	P	P	07 32 12.2	0.0
	baz=205						
BOZ	Bozeman (W)	82.44	38	eP	P	07 32 12.6	-0.2
	comp=Z,18nm,1.1s						
BOZ				LR	LR		
	comp=Z,2μm,19.0s						
BOZ	Bozeman (W)	82.44	38	eP	P	07 32 12.6	-0.2
BOZ				pmax	pmax		
	comp=Z,18nm,1.1s						
BOZ				MLR	MLR		
	comp=Z,2μm,19.0s						
BOZ	Bozeman (W)	82.44	38	P	P	07 32 13.8	+0.9
	baz=238						
H17A	Grant Village	82.46	40	P	P	07 32 14.9	+1.8
	baz=239						
YNR	Norris Junctio	82.56	40	eP	P	07 32 13.9	+0.3
	comp=Z,2.1nm,0.9s						
YNR				LR	LR		
	comp=Z,1μm,22.0s						
SCRK	Sand Creek	82.63	12	eP	P	07 32 12.9	-0.5
	comp=Z,5.4nm,0.8s						
SCRK				LR	LR		
	comp=Z,2μm,20.0s						
LKWY	Lake	82.66	40	eP	P	07 32 14.0	-0.1
	comp=Z,14nm,1.0s						
SDCO	Great Sand Dun	82.67	48	eP	P	07 32 13.9	-0.5
	comp=Z,8.1nm,1.0s						
SDCO				LR	LR		
	comp=Z,2μm,19.0s						
SDCO	Great Sand Dun	82.67	48	P	P	07 32 14.9	+0.5
	baz=244						
TCOL	CIGO, UAF Yank	82.70	11	P	P	07 32 13.4	-0.1
	baz=204						
COLA	College	82.70	11	eP	P	07 32 12.6	-0.8
	comp=Z,88nm,1.0s						
COLA				LR	LR		
	comp=Z,2μm,22.0s						
COLA	College	82.70	11	i P	P	07 32 13.5	0.0
COLA				pmax	pmax		
	comp=Z,93nm,1.0s						
MDM	Murphy Dome	82.71	10	eP	P	07 32 12.7	-0.9
	comp=Z,45nm,1.2s						
MDM				LR	LR		
	comp=Z,3μm,20.0s						
PAYG	Puerto Ayora	82.73	89	PFAKE		07 32 30.0	+15
PAYG				LR	LR		
	comp=Z,2μm,18.0s						
IL1	Eielson Array	82.78	11	eP	P	07 32 13.1	-0.9
ILAR	Eielson Array	82.78	11	P	P	07 32 13.4	-0.5
	comp=Z,6.5nm,0.6s,baz=224,slow=5.9,SNR=54						
ILAR				LR	LR	08 05 25.0	
	comp=Z,895nm,19.1s,baz=214,slow=33						
ILB	Eielson Array	82.78	11	eP	P	07 32 13.2	-0.7
	comp=Z,24nm,1.0s						
IM3	Indian Mountai	82.84	8	eP	P	07 32 13.8	-0.5
HRY	Holter Researc	82.91	37	eP	P	07 32 15.4	+0.2
POKR	Poker Plat Res	83.00	11	P	P	07 32 15.1	+0.1
	baz=205						
WALA	Waterton Lakes	83.01	35	eP	P	07 32 15.7	0.0
	comp=Z,32nm,1.1s						
WALA				LR	LR		
	comp=Z,2μm,19.0s						
SEY	Seymchan	83.06	345	ceP	P	07 32 15.6	+0.2
SEY	Seymchan	83.06	345	P	P	07 32 14.6	-0.8
	comp=Z,9.0nm,0.3s,baz=145,slow=5.2,SNR=22						
SEY				LR	LR	08 04 11.6	
	comp=Z,3μm,21.8s,baz=149,slow=32						
MSTX	Muleshoe	83.06	52	eP	P	07 32 16.0	-0.3
	comp=Z,18nm,0.9s						
MSTX				LR	LR		
	comp=Z,4μm,18.0s						
MSTX	Muleshoe	83.06	52	P	P	07 32 16.9	+0.6
	baz=246						
LVIG	Laguna Verde	83.07	67	PFAKE		07 32 30.0	+14
LVIG				LR	LR		
	comp=Z,2μm,20.0s						
T25A	Trinidad	83.18	48	eP	P	07 32 16.3	-0.7
	comp=Z,15nm,1.0s						
T25A				LR	LR		
	comp=Z,2μm,21.0s						
T25A	Trinidad	83.18	48	P	P	07 32 17.6	+0.6
	baz=244						
RWWY	Rawlins	83.29	43	eP	P	07 32 16.5	-0.9
	comp=Z,42nm,1.0s						
RWWY				LR	LR		
	comp=Z,5μm,20.0s						
Q24A	Divide	83.45	47	eP	P	07 32 18.5	+0.1
	comp=Z,24nm,1.1s						
Q24A				LR	LR		
	comp=Z,3μm,20.0s						
Q24A	Divide	83.45	47	P	P	07 32 19.2	+0.7
	baz=244						
QIZ	Qiongzhong	83.49	292	P	P	07 32 18.1	-0.6
QIZ				sP	PcP	07 32 22.6	-0.3
QIZ				PP	PP	07 35 30.7	-0.6
QIZ	Qiongzhong	83.49	292	S	S	07 42 39.2	0.0
QIZ	Qiongzhong	83.49	292	sS	sS	07 42 46.0	-6.0
QIZ				pmax	pmax		
	comp=Z,730nm,12.8s						
QIZ				LR	LR		
	comp=N,610nm,23.5s						
QIZ				LR	LR		
	comp=E,1μm,23.5s						
QIZ				LR	LR		
	comp=Z,2μm,22.6s						
QIZ	Qiongzhong	83.49	292	PFAKE		07 32 30.0	+11
QIZ				LR	LR		
	comp=Z,1μm,21.0s						
ISCO	Idaho Springs	83.50	46	eP	P	07 32 18.8	+0.1
	comp=Z,10nm,0.9s						
ISCO				LR	LR		
	comp=Z,2μm,19.0s						
ISCO	Idaho Springs	83.50	46	eP	P	07 32 18.8	+0.1
ISCO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ISCO				MLR	MLR		
	comp=Z,2μm,19.0s						
ISCO	Idaho Springs	83.50	46	P	P	07 32 19.4	+0.7
	baz=243						
833A	Chaparral WMA,	83.53	58	eP	P	07 32 21.2	+2.5
	comp=Z,18nm,1.0s						
833A				LR	LR		
	comp=Z,2μm,20.0s						
833A	Chaparral WMA,	83.53	58	P	P	07 32 19.2	+0.5
	baz=248						
CMIG	Matias Romero	83.59	70	P	P	07 32 18.9	-0.3
	comp=Z,2.0nm,0.8s,baz=204,slow=8.2,SNR=4.2						
PMSA	Palmer Station	83.59	156	eP	P	07 32 15.3	-3.0
	comp=Z,42nm,0.6s						
PMSA				LR	LR		
	comp=Z,3μm,21.0s						
RLMT	Red Lodge	83.63	40	eP	P	07 32 18.8	-0.3
	comp=Z,33nm,1.1s						
RLMT				LR	LR		
	comp=Z,1μm,20.0s						
RLMT	Red Lodge	83.63	40	P	P	07 32 20.0	+0.9
	baz=240						
PRP	Porcupine Dome	83.71	11	eP	P	07 32 18.7	-0.2
	comp=Z,68nm,1.2s						
GCMT	Greycliff	83.72	39	eP	P	07 32 22.1	+2.7
DAWY	Dawson	83.73	14	eP	P	07 32 19.0	+0.1
	comp=Z,44nm,1.0s						
DAWY				LR	LR		
	comp=Z,2μm,19.0s						
N23A	Red Feather La	83.77	45	eP	P	07 32 19.6	-0.4
	comp=Z,21nm,0.9s						
N23A				LR	LR		
	comp=Z,2μm,20.0s						
N23A	Red Feather La	83.77	45	P	P	07 32 20.6	+0.7
	baz=243						
TIA	Tai'an	83.84	310	P	P	07 32 28.1	+8.0
TIA	Tai'an	83.84	310	S	S	07 42 56.0	+14
TIA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIA				pmax	pmax		
	comp=Z,370nm,7.1s						
TIA				LR	LR		
	comp=N,390nm,17.8s						
TIA				LR	LR		
	comp=E,600nm,21.4s						
TIA				LR	LR		
	comp=Z,910nm,19.2s						
MYKOM	Kota Tinggi	83.97	274	PFAKE		07 32 30.0	+8.8
MYKOM				LR	LR		
	comp=Z,3μm,19.0s						
RDOG	Red Dog Mine	83.97	4	eP	P	07 32 20.3	+0.3
	comp=Z,30nm,1.1s						
RDOG				LR	LR		
	comp=Z,2μm,20.0s						
JCT	Junction City	84.01	56	eP	P	07 32 21.1	0.0
	comp=Z,10nm,0.8s						
JCT				LR	LR		
	comp=Z,2μm,20.0s						
JCT	Junction City	84.01	56	eP	P	07 32 21.1	0.0
JCT				pmax	pmax		
	comp=Z,11nm,0.8s						
JCT				MLR	MLR		
	comp=Z,2μm,20.0s						
JCT	Junction City	84.01	56	P	P	07 32 22.1	+1.0
	baz=248						
K22A	Casper	84.19	43	eP	P	07 32 22.0	0.0
	comp=Z,15nm,1.0s						
K22A				LR	LR		
	comp=Z,4μm,19.0s						
K22A	Casper	84.19	43	P	P	07 32 22.6	+0.7
	baz=242						
AMTX	Amarillo	84.26	51	eP	P	07 32 22.1	-0.2
	comp=Z,27nm,0.9s						
AMTX				LR	LR		
	comp=Z,4μm,18.0s						
AMTX	Amarillo	84.26	51	P	P	07 32 23.2	+0.8
	baz=246						
PHWY	Pilot Hill	84.28	44	eP	P	07 32 22.9	+0.3
	comp=Z,15nm,0.9s						
PHWY				LR	LR		
	comp=Z,2μm,20.0s						
KVTX	Kingsville	84.49	60	PFAKE		07 32 30.0	+6.5
KVTX				LR	LR		
	comp=Z,1μm,20.0s						
COLD	Coldfoot	84.50	9	eP	P	07 32 23.6	+0.9
	comp=Z,15nm,1.2s						
FYU	Fort Yukon	84.70	11	eP	P	07 32 24.1	+0.4
	comp=Z,10nm,0.8s						
FYU				LR	LR		
	comp=Z,1μm,20.0s						
EGMT	Eagleton	84.80	37	eP	P	07 32 25.0	+0.2
	comp=Z,27nm,1.0s						
EGMT				LR	LR		
	comp=Z,2μm,20.0s						
EGMT	Eagleton	84.80	37	P	P	07 32 25.4	+0.6
	baz=240						
ABTX	Abilene, Hawle	84.94	54	eP	P	07 32 25.9	+0.1
	comp=Z,50nm,0.9s						
ABTX				LR	LR		
	comp=Z,4μm,20.0s						
ABTX	Abilene, Hawle	84.94	54	P	P	07 32 26.4	+0.7
	baz=248						
BILL	Bilibino	85.00	352	eP	P	07 32 25.4	+0.2
	comp=Z,26nm,1.1s						
BILL	Bilibino	85.00	352	d iP	P	07 32 25.2	0.0
BILL				e		07 32 31.4	
BILL				e		07 35 44.3	
BILL				i S	S	07 42 50.6	-1.7
BILL				pmax	pmax		
	comp=Z,49nm,1.7s						
KSCO	Kaye Shedlock'	85.25	47	eP	P	07 32 27.2	-0.1
	comp=Z,20nm,1.1s						

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KSCO                                   LR      LR
      comp=Z,1µm,21.0s
KSCO  Kaye Shedlock'    85.25  47   P       P        07 32 28.0 +0.7
      baz=245
CCIG  Comitan           85.84  72  eP       P        07 32 30.9 +0.1
      comp=Z,8.8nm,1.0s
CCIG                                   LR      LR
      comp=Z,4µm,20.0s
435B  Jarrell           85.89  57  eP       P        07 32 30.6  0.0
      comp=Z,10nm,0.9s
435B                                   LR      LR
      comp=Z,3µm,20.0s
435B  Jarrell           85.89  57   P       P        07 32 31.5 +1.0
      baz=249
ZEA   Zeya              86.03 329  eP       P        07 32 29.2 -1.4
ZEA                                eS       S        07 43 03.0  0.0
ZEA                                    pmax    pmax
      comp=N,37nm,1.4s
ZEA                                    pmax    pmax
      comp=Z,64nm,1.4s
ZEA                                    pmax    pmax
      comp=E,900nm,9.0s
ZEA                                    smax    smax
      comp=E,700nm,14.0s
ZEA                                    smax    smax
      comp=N,1µm,16.0s
BJT   Baijiatuau        86.10 313  eP       P        07 32 31.6 +0.3
      comp=N,3.7nm,0.7s
BJT                                    LR      LR
      comp=Z,2µm,22.0s
BJT   Baijiatuau        86.10 313  eP       P        07 32 31.6 +0.3
BJT                                    pmax    pmax
      comp=Z,4.0nm,0.7s
BJT                                    MLR     MLR
      comp=Z,2µm,22.0s
BJI   Beijing           86.10 313   P       P        07 32 32.8 +1.5
BJI                                 PP      PP       07 35 52.8 +0.7
BJI   Beijing           86.10 313   S       S        07 42 58.5 -5.7
BJI                                    pmax    pmax
      comp=Z,31nm,1.7s
BJI                                    LR      LR
      comp=N,630nm,17.4s
BJI                                    LR      LR
      comp=E,950nm,21.1s
BJI                                    LR      LR
      comp=Z,1µm,26.3s
LAO   LASA Array        86.25  39  eP       P        07 32 31.9 -0.1
      comp=Z,13nm,0.9s
LAO                                    LR      LR
      comp=Z,2µm,22.0s
LAO   LASA Array        86.25  39   P       P        07 32 33.5 +1.5
      baz=242
BKNI  Bangkinang        86.28 271   PFAKE            07 32 40.0 +7.2
BKNI                                   LR      LR
      comp=Z,2µm,19.0s
WMOK  Wichita Mounta    86.40  53  eP       P        07 32 33.0  0.0
      comp=Z,5.3nm,0.9s
WMOK                                   LR      LR
      comp=Z,2µm,19.0s
WMOK  Wichita Mounta    86.40  53  eP       P        07 32 33.0  0.0
WMOK                                   pmax    pmax
      comp=Z,5.0nm,0.9s
WMOK                                   MLR     MLR
      comp=Z,2µm,19.0s
WMOK  Wichita Mounta    86.40  53   P       P        07 32 34.3 +1.3
      baz=248
WHTX  Lake Whitney,     86.43  56  eP       P        07 32 33.7 +0.6
      comp=Z,13nm,0.8s
WHTX                                   LR      LR
      comp=Z,3µm,19.0s
WHTX  Lake Whitney,     86.43  56   P       P        07 32 33.6 +0.4
      baz=249
OGNE  Ogallala          86.46  46   PFAKE            07 32 40.0 +6.8
OGNE                                   LR      LR
      comp=Z,2µm,20.0s
RSSD  Black Hills       86.47  42  eP       P        07 32 33.8 +0.4
      comp=Z,6.7nm,0.8s
RSSD                                   LR      LR
      comp=Z,2µm,19.0s
RSSD  Black Hills       86.47  42  eP       P        07 32 33.8 +0.4
RSSD                                   pmax    pmax
      comp=Z,7.0nm,0.8s
RSSD                                   MLR     MLR
      comp=Z,2µm,19.0s
RSSD  Black Hills       86.47  42   P       P        07 32 33.7 +0.4
      baz=244
U32A  Winter Ranch,     86.85  51   PFAKE            07 32 50.0  +15
U32A                                   LR      LR
      comp=Z,4µm,19.0s
COCO  West Island       86.97 258   PFAKE            07 32 50.0  +14
COCO                                   LR      LR
      comp=Z,3µm,20.0s
CBKS  Cedar Bluff       87.23  48  eP       P        07 32 37.7 +0.7
      comp=Z,14nm,0.9s
CBKS                                   LR      LR
      comp=Z,2µm,20.0s
CBKS  Cedar Bluff       87.23  48  eP       P        07 32 37.7 +0.7
CBKS                                   pmax    pmax
      comp=Z,14nm,0.9s
CBKS                                   MLR     MLR
      comp=Z,2µm,20.0s
CBKS  Cedar Bluff       87.23  48   P       P        07 32 37.4 +0.4
      baz=247
IPM   Ipoh              87.42 275   PFAKE            07 32 50.0  +12
IPM                                    LR      LR
      comp=Z,1µm,19.0s
MAW   Mawson            87.53 198   LR      LR       08 10 17.6
      comp=Z,4µm,19.3s,baz=116,slow=34
ENH   Enshi             87.54 302  eP       P        07 32 38.2 -0.4
      comp=Z,14nm,0.8s
ENH                                    LR      LR
      comp=Z,1µm,21.0s
HIA   Hailar            87.82 323  eP       P        07 32 39.3 -0.2
      comp=Z,15nm,1.1s
HIA                                    LR      LR
      comp=Z,4µm,22.0s
HIA   Hailar            87.82 323  eP       P        07 32 39.9 +0.4
HIA                                    pmax    pmax
      comp=Z,74nm,1.8s
KULM  Kulim             88.00 276   PFAKE            07 32 50.0 +8.8
KULM                                   LR      LR
      comp=Z,2µm,19.0s
DGMT  Dagmar            88.28  38  eP       P        07 32 41.6 -0.1
      comp=Z,28nm,0.9s
DGMT                                   LR      LR
      comp=Z,3µm,20.0s
DGMT  Dagmar            88.28  38   P       P        07 32 42.4 +0.7
      baz=244
INK   Inuvik            88.58  14  eP       P        07 32 42.1 -0.6
      comp=Z,34nm,1.1s
INK                                    LR      LR
      comp=Z,2µm,20.0s
INK   Inuvik            88.58  14  eP       P        07 32 42.1 -0.6
INK                                    pmax    pmax
      comp=Z,34nm,1.1s
INK                                    MLR     MLR
      comp=Z,2µm,20.0s
INK   Inuvik            88.58  14   P       P        07 32 42.0 -0.6
      comp=Z,12nm,0.9s,baz=209,slow=6.2,SNR=27
NATX  Nacogdoches       88.58  57  eP       P        07 32 43.1 -0.4
      comp=Z,12nm,0.9s
NATX                                   LR      LR
      comp=Z,2µm,20.0s
NATX  Nacogdoches       88.58  57   P       P        07 32 44.0 +0.5
      baz=250
GO06  Curarrehue        88.60 131  eP       P        07 32 46.2 +2.5
      comp=Z,8.2nm,0.9s
GO06                                   LR      LR
      comp=Z,3µm,22.0s
GYA   Guiyang           88.65 298⇑iP       P        07 32 46.6 +2.5
GYA                                 PP      PP       07 36 49.5  +36
GYA   Guiyang           88.65 298   SKS     SKSac    07 43 11.8 -0.4
GYA   Guiyang           88.65 298   S       S        07 43 28.0 -1.7
GYA   Guiyang           88.65 298   SS      SS       07 49 21.5 -0.1
GYA                                    pmax    pmax
      comp=Z,20nm,1.0s
GYA                                    pmax    pmax
      comp=Z,120nm,7.7s
GYA                                    LR      LR
      comp=N,520nm,18.9s
GYA                                    LR      LR
      comp=E,550nm,18.4s
GYA                                    LR      LR
      comp=Z,500nm,18.6s
PLCA  Paso Flores       88.88 132  eP       P        07 32 45.6 +0.6
      comp=Z,1.9nm,0.8s
PLCA  Paso Flores       88.88 132  eP       P        07 32 45.6 +0.6
PLCA                                   pmax    pmax
      comp=Z,2.0nm,0.8s
X37A  Clayton           88.97  54   PFAKE            07 33 00.0  +15
X37A                                   LR      LR
      comp=Z,2µm,18.0s
TUL1  Leonard           89.10  52  eP       P        07 32 46.1 +0.2
      comp=Z,6.4nm,1.0s
TUL1                                   LR      LR
      comp=Z,3µm,18.0s
TUL1  Leonard           89.10  52   P       P        07 32 46.2 +0.2
      baz=250
XAN   Xi'an             89.26 306   P       P        07 32 47.3 +0.6
XAN                                 pP      sP       07 32 59.0 +1.7
XAN                                 sP      pwP      07 33 04.8 +7.7
XAN                                 PP      PP       07 36 13.8 -3.9
XAN   Xi'an             89.26 306   S       SKSac    07 43 23.8 +8.5
XAN   Xi'an             89.26 306   sS      sS       07 43 45.4 -2.4
XAN                                    pmax    pmax
      comp=Z,14nm,1.9s
XAN                                    pmax    pmax
      comp=Z,500nm,7.2s
XAN                                    LR      LR
      comp=N,920nm,20.6s
XAN                                    LR      LR
      comp=E,540nm,19.5s
XAN                                    LR      LR
      comp=Z,1µm,18.4s
XAN   Xi'an             89.26 306  eP       P        07 32 46.6 -0.1
      comp=Z,6.0nm,0.8s
XAN                                    LR      LR
      comp=Z,1µm,20.0s
XAN   Xi'an             89.26 306  eP       P        07 32 46.6 -0.1
XAN                                    pmax    pmax
      comp=Z,6.0nm,0.8s
XAN                                    MLR     MLR
      comp=Z,1µm,20.0s
BGNE  Belgrade          89.34  47   PFAKE            07 33 00.0  +13
BGNE                                   LR      LR
      comp=Z,3µm,20.0s
MYIG  Mrida             89.41  68   PFAKE            07 33 00.0  +12
MYIG                                   LR      LR
      comp=Z,2µm,20.0s
KSU1  Kansas State U    89.61  49   PFAKE            07 33 00.0  +12
KSU1                                   LR      LR
      comp=Z,2µm,20.0s
HHC   Hu-ho-hao-te      89.66 313  eP       P        07 32 48.9 +0.4
HHC                                 PP      PP       07 36 22.6 +1.8
HHC   Hu-ho-hao-te      89.66 313   S       S        07 43 36.8 -1.7
HHC                                    pmax    pmax
      comp=Z,6.0nm,0.6s
HHC                                    pmax    pmax
      comp=Z,460nm,6.2s
HHC                                    LR      LR
      comp=N,600nm,17.3s
HHC                                    LR      LR
      comp=E,640nm,19.0s
HHC                                    LR      LR
      comp=Z,960nm,19.9s
YAK   Yakutsk           89.69 337  eP       P        07 32 47.8 -0.2
YAK                                e*PP     pwP      07 32 58.0 -0.4
YAK                                e                 07 36 20.5
YAK                                eS       SKSac    07 43 15.3 -1.1
YAK                                e*SS     SKKSac   07 43 31.9 +2.7
YAK                                    pmax    pmax
      comp=Z,10.0nm,0.9s
YAK                                    pmax    pmax
      comp=N,2.0nm,0.9s
YAK                                    pmax    pmax
      comp=E,2.0nm,1.0s
YAK                                    pmax    pmax
      comp=Z,329nm,5.3s
YAK                                    pmax    pmax
      comp=N,177nm,4.8s
YAK                                    pmax    pmax
      comp=E,221nm,4.3s
YAK                                    smax    smax
      comp=N,183nm,4.2s
YAK                                    smax    smax
      comp=E,148nm,4.9s
GSI   Gunungsitoli      89.87 271   PFAKE            07 33 00.0  +10
GSI                                    LR      LR
      comp=Z,2µm,21.0s
ESTN  Estel             90.27  77   PFAKE            07 33 00.0 +8.1
ESTN                                   LR      LR
      comp=Z,1µm,22.0s
YKA   Yellowknife Ar    90.31  23   P       P        07 32 50.7 -0.2
      comp=Z,4.4nm,0.7s,baz=238,slow=4.8,SNR=57
YKA                                 PKKPbc  PKKPbc   07 50 27.6 +4.9
      comp=Z,0.2nm,0.7s,baz=43,slow=2.2,SNR=4.2
YKA                                    LR      LR    08 06 17.0
      comp=Z,125nm,21.0s,baz=227,slow=31
YKB5  Yellowknife Ar    90.31  23  eP       P        07 32 49.9 -1.0
YKW3  Yellowknife Ar    90.35  23  eP       P        07 32 51.0  0.0
      comp=Z,16nm,1.0s
MIAR  Mount Ida         90.35  54  eP       P        07 32 51.5 -0.2
      comp=Z,3.3nm,1.1s
MIAR                                   LR      LR
      comp=Z,2µm,20.0s
MIAR  Mount Ida         90.35  54  eP       P        07 32 51.5 -0.2
MIAR                                   pmax    pmax
      comp=Z,3.0nm,1.1s
MIAR                                   MLR     MLR
      comp=Z,2µm,20.0s
MIAR  Mount Ida         90.35  54   P       P        07 32 53.0 +1.3
      baz=251
W39A  Magazine          90.40  54   PFAKE            07 33 00.0 +8.0
W39A                                   LR      LR
      comp=Z,4µm,20.0s
W39A  Magazine          90.40  54   P       P        07 32 53.1 +1.2
      baz=251
TEIG  Tepich            90.51  69   PFAKE            07 33 00.0 +7.2
TEIG                                   LR      LR
      comp=Z,2µm,20.0s
Z41A  Richland Creek    90.55  56   PFAKE            07 33 00.0 +7.3
Z41A                                   LR      LR
      comp=Z,3µm,20.0s
Z41A  Richland Creek    90.55  56   P       P        07 32 53.9 +1.2
      baz=252
BTO   Baotou            90.67 312  eP       P        07 32 55.1 +1.9
MDND  Maddock           90.82  40  eP       P        07 32 55.0 +1.4
      comp=Z,15nm,1.0s
MDND                                   LR      LR
      comp=Z,2µm,20.0s
MDND  Maddock           90.82  40   P       P        07 32 53.9 +0.2
      baz=247
JTS   JuntasAbangare    90.83  80  eP       P        07 32 55.4 +0.9
      comp=Z,19nm,1.1s
JTS                                    LR      LR
      comp=Z,2µm,18.0s
JTS   JuntasAbangare    90.83  80  eP       P        07 32 55.4 +0.9
JTS                                    pmax    pmax
      comp=Z,19nm,1.1s
JTS                                    MLR     MLR
      comp=Z,2µm,18.0s
Y41A  Eaglette Beard    90.90  55   P       P        07 32 54.9 +0.6
      baz=252
X40A  Basin Creek Fa    90.92  54   PFAKE            07 33 10.0  +16
X40A                                   LR      LR
      comp=Z,2µm,20.0s
X40A  Basin Creek Fa    90.92  54   P       P        07 32 55.2 +0.8
      baz=252
X41A  Kaden, Bauxite    91.17  55   P       P        07 32 56.5 +0.9
      baz=252
ECSD  EROS Data Cent    91.24  45  eP       P        07 32 56.0 +0.3
      comp=Z,6.3nm,1.1s
ECSD                                   LR      LR
      comp=Z,2µm,22.0s
ECSD  EROS Data Cent    91.24  45   P       P        07 32 56.0 +0.3
      baz=249
PEL   Peldehue          91.35 125  eP       P        07 32 57.7 +1.1
      comp=Z,18nm,1.1s
PEL                                    LR      LR
      comp=Z,4µm,21.0s
PEL   Peldehue          91.35 125  eP       P        07 32 57.7 +1.1
PEL                                    pmax    pmax
      comp=Z,18nm,1.1s
PEL                                    MLR     MLR
      comp=Z,4µm,21.0s
UALR  University of     91.39  54  eP       P        07 32 57.1 +0.5
      comp=Z,9.5nm,0.8s
UALR                                   LR      LR
      comp=Z,2µm,20.0s
U40A  Yellville         91.49  53   P       P        07 32 57.5 +0.5
      baz=252
LHMI  Lhok Sumawe       91.53 275   PFAKE            07 33 10.0  +12
LHMI                                   LR      LR
      comp=Z,1µm,21.0s
Y42A  Garnett, Star     91.54  55   P       P        07 32 58.1 +0.8
      baz=252
HDC   Heredia           91.55  80   PFAKE            07 33 10.0  +12
HDC                                    LR      LR
      comp=Z,2µm,20.0s
CCAR  Cane Creek        91.57  55  eP       P        07 32 58.0 +0.5
      comp=Z,14nm,1.1s
W41B  Gary Mavity, V    91.59  54  eP       P        07 32 58.0 +0.5
      comp=Z,7.5nm,1.1s
W41B                                   LR      LR
      comp=Z,4µm,20.0s
W41B  Gary Mavity, V    91.59  54   P       P        07 32 57.7 +0.3
      baz=252
WHAR  Wooly Hollow      91.59  54  eP       P        07 32 58.3 +0.8
      comp=Z,6.3nm,1.0s
KMI   Kunming           91.63 296   P       P        07 33 01.2 +3.0
KMI                                 pP      sP       07 33 09.4 +0.6
KMI                                 sP      pwP      07 33 12.9 +4.3
KMI                                 PP      PP       07 36 41.7 +4.7
KMI   Kunming           91.63 296   SKS     SKSac    07 43 32.5 +2.7
KMI   Kunming           91.63 296   S       S        07 43 58.6 +1.2
KMI   Kunming           91.63 296   SS      SS       07 50 06.2 +1.3
KMI                                    pmax    pmax
      comp=Z,10.0nm,1.1s
KMI                                    pmax    pmax
      comp=Z,460nm,9.6s
KMI                                    LR      LR
      comp=N,890nm,19.7s
KMI                                    LR      LR
      comp=E,1µm,18.7s
KMI                                    LR      LR
      comp=Z,2µm,19.7s
KMI   Kunming           91.63 296   PFAKE            07 33 10.0  +12
KMI                                    LR      LR
      comp=Z,2µm,20.0s
V41A  Mountainview      91.85  53   P       P        07 32 59.4 +0.7
      baz=252
ESPN  Las Esperanzas    91.97  78   PFAKE            07 33 10.0  +10
ESPN                                   LR      LR
      comp=Z,2µm,20.0s
VBMS  Vicksburg         92.06  57   PFAKE            07 33 10.0  +10
VBMS                                   LR      LR
      comp=Z,1µm,20.0s
U41A  Viola             92.20  53   P       P        07 33 00.9 +0.6
      baz=252
FFC   Flin Flon         92.21  33  eP       P        07 32 59.6 -0.3
      comp=Z,6.2nm,1.1s
FFC                                    LR      LR
      comp=Z,2µm,20.0s
FFC   Flin Flon         92.21  33ceP       P        07 33 00.9 +1.0
GO04  Tololo Observa    92.26 122  eP       P        07 33 01.4 +0.3
      comp=Z,14nm,0.9s
GO04                                   LR      LR
      comp=Z,2µm,20.0s
SYO   Syowa Base        92.27 191⇓iP       P        07 33 00.2 +0.2
SYO   Syowa Base        92.27 191⇓isP      sP       07 33 06.2 -4.4
EFI   East Falkland     92.28 146   PFAKE            07 33 10.0  +10
EFI                                    LR      LR
      comp=Z,4µm,20.0s
VNA3  Neumayer Olymp    92.38 175   P       P        07 33 02.3 +1.7
CD2   Chengdu           92.43 301   P       P        07 33 02.6 +1.1
CD2                                 pP      pP       07 33 05.9 -3.5
CD2                                 PP      PP       07 36 42.6 -0.4
CD2   Chengdu           92.43 301   SKS     SKSac    07 43 35.4 +1.7
CD2   Chengdu           92.43 301   S       S        07 44 05.6 +1.6
CD2   Chengdu           92.43 301   SS      SS       07 50 16.8 +0.9
CD2                                    pmax    pmax
      comp=Z,10.0nm,0.6s
CD2                                    pmax    pmax
      comp=Z,830nm,9.9s
CD2                                    LR      LR
      comp=N,2µm,21.9s
CD2                                    LR      LR
      comp=E,2µm,22.9s
CD2                                    LR      LR
      comp=Z,2µm,27.8s
V42A  Cord              92.45  54   P       P        07 33 02.1 +0.7
      baz=252
SNAA  Sanae             92.45 177   P       P        07 33 05.2 +4.3
SNAA  Sanae             92.45 177  eP       P        07 33 02.2 +1.3
      comp=Z,11nm,1.0s
SNAA                                   LR      LR
      comp=Z,3µm,21.0s
SNAA  Sanae             92.45 177 i P       P        07 33 02.7 +1.8
X43A  Marvell           92.46  55   PFAKE            07 33 10.0 +8.5
X43A                                   LR      LR
      comp=Z,2µm,19.0s
NNA   Nana              92.51 103   PFAKE            07 33 10.0 +7.7
NNA                                    LR      LR
      comp=Z,1µm,20.0s
T41A  Mountain View     92.54  52   P       P        07 33 02.0 +0.1
      baz=252,SNR=11
CIT   Chita             92.55 324  eP       P        07 33 04.5 +2.9
CIT                                e                 07 33 11.2
CIT                                e                 07 33 19.0
CIT                                    pmax    pmax
      comp=Z,112nm,2.1s
S41A  Jillco Farms,     92.72  52   P       P        07 33 02.3 -0.4
      baz=252,SNR=7.3
LCO   Las Campanas      92.73 121  eP       P        07 33 03.3 -0.1
      comp=Z,10nm,0.9s
LCO                                    LR      LR
      comp=Z,4µm,22.0s
LCO   Las Campanas      92.73 121  eP       P        07 33 03.3 -0.1
LCO                                    pmax    pmax
      comp=Z,10.0nm,0.9s
LCO                                    MLR     MLR
      comp=Z,4µm,22.0s
U42A  Revenden          92.73  53   P       P        07 33 02.5 -0.2
      baz=252,SNR=5.2
VNA2  Neumayer--Watz    92.89 175   P       P        07 33 05.0 +2.1
SCIA  State Center      92.98  47   PFAKE            07 33 20.0  +16
SCIA                                   LR      LR
      comp=Z,2µm,20.0s
T42A  Van Buren         93.05  52  eP       P        07 33 04.0 -0.1
      comp=Z,8.3nm,1.0s
T42A                                   LR      LR
      comp=Z,2µm,20.0s
T42A  Van Buren         93.05  52   P       P        07 33 04.5 +0.3
      baz=253
VNA1  Neumayer--Stat    93.08 175   P       P        07 33 05.9 +2.2
CM31  Chiang Mai Arr    93.19 288  eP       P        07 33 04.8 -0.5
CMAR  Chiang Mai Arr    93.19 288   P       P        07 33 04.9 -0.3
      comp=Z,2.2nm,0.4s,baz=99,slow=2.7,SNR=16
R41A  Rosebud           93.21  51   P       P        07 33 04.3 -0.6
      baz=252
CCM   Cathedral Cave    93.24  51  eP       P        07 33 04.8 -0.3
      comp=Z,8.4nm,1.0s
CCM                                    LR      LR
      comp=Z,2µm,19.0s
CCM   Cathedral Cave    93.24  51  eP       P        07 33 04.8 -0.3
CCM                                    pmax    pmax
      comp=Z,8.0nm,1.0s
CCM                                    MLR     MLR
      comp=Z,2µm,19.0s
CCM   Cathedral Cave    93.24  51   P       P        07 33 05.8 +0.8
      baz=252
CHTO  Chiang Mai        93.28 289   PFAKE            07 33 20.0  +14
CHTO                                   LR      LR
      comp=Z,1µm,22.0s
CHTO  Chiang Mai        93.28 289   P       P        07 33 11.9 +6.2
      comp=Z,66nm,1.1s
MET   Memphis--Engin    93.38  55   PFAKE            07 33 20.0  +14
MET                                    LR      LR
      comp=Z,2µm,20.0s
PBMO  Poplar Bluff      93.48  53  eP       P        07 33 05.7 -0.4
      comp=Z,7.7nm,1.1s
PBMO                                   LR      LR
      comp=Z,2µm,19.0s
S42A  Caledonia         93.49  52   P       P        07 33 06.4 +0.2
      baz=253
Q41A  Truxton           93.52  51   P       P        07 33 06.3  0.0
      baz=253
M39A  Webster           93.59  48   P       P        07 33 06.3 -0.3
      baz=252,SNR=5.2
X45A  UM Field Stati    93.61  55   P       P        07 33 06.8  0.0
      baz=253
OXF   Oxford            93.62  55  eP       P        07 33 05.8 -1.1
      comp=Z,14nm,1.1s
OXF   Oxford            93.62  55  eP       P        07 33 05.8 -1.1
OXF                                    pmax    pmax
      comp=Z,14nm,1.1s
OXF   Oxford            93.62  55   P       P        07 33 07.2 +0.3
      baz=253
T43A  Greenville        93.68  53   P       P        07 33 07.6 +0.6
      baz=253
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FVM   French Village    93.83  52 eP     P      07 33 06.9 -0.9
      comp=Z,11nm,1.0s
FVM                               LR     LR
      comp=Z,3µm,19.0s
FVM   French Village    93.83  52 eP     P      07 33 06.9 -0.9
FVM                               pmax   pmax
      comp=Z,11nm,1.0s
FVM                               MLR    MLR
      comp=Z,3µm,19.0s
N40A  Mertquake, Sal    93.84  49  P     P      07 33 08.1 +0.4
      baz=252,SNR=5.7
LZH   Lanzhou           93.85 306 ⇑P     P      07 33 06.2 -1.9
LZH                               pP     pP     07 33 12.1 -3.9
LZH                               sP     pwP    07 33 15.3 -3.3
LZH                               PP     PP     07 36 51.5 -2.6
LZH   Lanzhou           93.85 306  SKS   SKSac  07 43 48.7 +7.1
LZH   Lanzhou           93.85 306  S     S      07 44 13.8 -2.8
LZH   Lanzhou           93.85 306  SS    SS     07 50 29.0 -7.3
LZH                               pmax   pmax
      comp=Z,54nm,1.4s
LZH                               pmax   pmax
      comp=Z,240nm,4.3s
LZH                               LR     LR
      comp=N,1µm,18.4s
LZH                               LR     LR
      comp=E,2µm,18.2s
LZH                               LR     LR
      comp=Z,3µm,19.5s
P41A  Barry, Barry      93.86  50  P     P      07 33 08.0 +0.1
      baz=253,SNR=5.9
L39A  Vinton            93.91  47  P     P      07 33 07.5 -0.6
      baz=252,SNR=5.2
PVMO  Portageville      93.94  53  PFAKE        07 33 20.0  +12
PVMO                              LR     LR
      comp=Z,3µm,20.0s
W45A  Hickory Valley    93.98  55  P     P      07 33 09.2 +0.6
      baz=254
S43A  Fulton Ridge,     93.98  52  P     P      07 33 09.0 +0.5
      baz=253
ULM   Lac du Bonnet     93.98  39 eP     P      07 33 07.3 -0.8
      comp=Z,10nm,1.0s
ULM                               LR     LR
      comp=Z,3µm,20.0s
ULM   Lac du Bonnet     93.98  39 eP     P      07 33 07.4 -0.8
ULM                               pmax   pmax
      comp=Z,10.0nm,1.0s
ULM                               MLR    MLR
      comp=Z,3µm,20.0s
ULM   Lac du Bonnet     93.98  39  P     P      07 33 07.0 -1.1
      comp=Z,5.8nm,1.0s,baz=256,slow=5.6,SNR=7.8
ULM                               LR     LR     08 08 48.8
      comp=Z,3µm,21.2s,baz=256,slow=31
147A  Livingston        94.02  57  PFAKE        07 33 20.0  +11
147A                              LR     LR
      comp=Z,2µm,21.0s
Q42A  Golden Eagle      94.02  51  P     P      07 33 09.2 +0.6
      baz=253
M40A  Post Highland     94.04  48  P     P      07 33 08.6 -0.1
      baz=253,SNR=5.4
O41A  Passleys Farm,    94.12  50  P     P      07 33 09.1 +0.1
      baz=253
SLM   Saint Louis       94.17  51  PFAKE        07 33 20.0  +11
SLM                               LR     LR
      comp=Z,2µm,18.0s
K39A  Oelwein           94.17  47  P     P      07 33 08.8 -0.5
      baz=252,SNR=5.5
R43A  Red Bud           94.29  52  P     P      07 33 10.7 +0.8
      baz=253
SPMN  Marine on St.     94.31  44 eP     P      07 33 09.3 -0.5
      comp=Z,20nm,1.1s
SPMN                              LR     LR
      comp=Z,3µm,20.0s
SPMN  Marine on St.     94.31  44  P     P      07 33 09.5 -0.3
      baz=252,SNR=5.5
N41A  Harden Midland    94.31  49  PFAKE        07 33 20.0  +10
N41A                              LR     LR
      comp=Z,3µm,20.0s
P42A  Winchester        94.36  50 eP     P      07 33 11.9 +1.7
      comp=Z,25nm,1.1s
P42A                              LR     LR
      comp=Z,4µm,20.0s
P42A  Winchester        94.36  50  P     P      07 33 10.8 +0.7
      baz=253,SNR=5.7
OTAV  Otavalo           94.37  91  PFAKE        07 33 20.0 +8.6
OTAV                              LR     LR
      comp=Z,900nm,22.0s
L40A  Anamosa           94.45  48 eP     P      07 33 10.4 -0.1
      comp=Z,18nm,0.9s
L40A                              LR     LR
      comp=Z,2µm,18.0s
L40A  Anamosa           94.45  48  P     P      07 33 10.0 -0.5
      baz=253,SNR=5.3
J39A  Decorah           94.48  46  P     P      07 33 10.3 -0.4
      baz=253,SNR=5.6
H38A  Maiden Rock       94.49  45  P     P      07 33 10.7  0.0
      baz=252
349A  Repton            94.53  59  P     P      07 33 11.4 +0.3
      baz=254
BOD   Bodaibo           94.54 329 eP     P      07 33 05.8 -4.7
BOD                               pmax   pmax
      comp=Z,11nm,1.7s
F37A  Hinrichs Farm,    94.58  44  P     P      07 33 11.0  0.0
      baz=252
BRAL  Brewton           94.60  59  PFAKE        07 33 20.0 +8.5
BRAL                              LR     LR
      comp=Z,1µm,19.0s
Q43A  New Douglas       94.66  51  P     P      07 33 11.6 +0.1
      baz=254
SIUC  Southern Illin    94.67  52  PFAKE        07 33 20.0 +8.4
SIUC                              LR     LR
      comp=Z,2µm,18.0s
PB10  IPOC Station P    94.69 116  PFAKE        07 33 20.0 +7.9
PB10                              LR     LR
      comp=Z,2µm,20.0s
O42A  Bath              94.73  50  P     P      07 33 12.3 +0.4
      baz=253
M41A  Milan             94.73  48  P     P      07 33 12.3 +0.4
      baz=253
I39A  Houston           94.77  46 eP     P      07 33 13.3 +1.4
      comp=Z,16nm,1.0s
I39A                              LR     LR
      comp=Z,2µm,20.0s
I39A  Houston           94.77  46  P     P      07 33 11.3 -0.6
      baz=253
PLAL  Pickwick Lake     94.81  55  PFAKE        07 33 20.0 +7.7
PLAL                              LR     LR
      comp=Z,2µm,19.0s
T45A  Paducah           94.92  53  PFAKE        07 33 20.0 +7.2
T45A                              LR     LR
      comp=Z,3µm,19.0s
G38A  Ridgeland         94.93  45  P     P      07 33 11.8 -0.8
      baz=253,SNR=8.2
N42A  Yates City        94.94  49  P     P      07 33 12.8  0.0
      baz=254
GO02  Mina Guanaco      94.96 118  PFAKE        07 33 30.0  +16
GO02                              LR     LR
      comp=Z,3µm,22.0s
L41A  Preston           94.97  48  P     P      07 33 13.8 +0.9
      baz=253
V46A  Holladay          95.00  54  P     P      07 33 13.9 +0.7
      baz=254
LRAL  Lakeview Retre    95.14  57  PFAKE        07 33 30.0  +16
LRAL                              LR     LR
      comp=Z,2µm,20.0s
F38A  Pierce - Schro    95.15  44  P     P      07 33 14.1 +0.4
      baz=253
Q44A  Meyer Farm, Va    95.16  51  PFAKE        07 33 30.0  +16
Q44A                              LR     LR
      comp=Z,3µm,18.0s
H39A  Augusta           95.17  45  P     P      07 33 14.2 +0.4
      baz=253
J40A  Soldiers Grove    95.17  46  P     P      07 33 13.3 -0.5
      baz=253,SNR=5.9
K41A  Shullsburg        95.25  47  P     P      07 33 14.3 +0.1
      baz=253
WVT   Waverly           95.31  54  PFAKE        07 33 30.0  +15
WVT                               LR     LR
      comp=Z,2µm,20.0s
WVT   Waverly           95.31  54  P     P      07 33 15.3 +0.7
      baz=254
JFWS  Jewell Farm       95.38  47 eP     P      07 33 14.1 -0.6
      comp=Z,17nm,0.8s
JFWS                              LR     LR
      comp=Z,2µm,19.0s
JFWS  Jewell Farm       95.38  47  P     P      07 33 15.5 +0.7
      baz=254
BCIP  Isla Barro Col    95.40  82  PFAKE        07 33 30.0  +15
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BCIP                              LR     LR
      comp=Z,900nm,20.0s
I40A  Norwalk           95.40  46  P     P      07 33 15.5 +0.6
      baz=253
HDIL  Hopedale          95.41  50  PFAKE        07 33 30.0  +15
HDIL                              LR     LR
      comp=Z,3µm,20.0s
HDIL  Hopedale          95.41  50  P     P      07 33 16.0 +1.1
      baz=254
G39A  Holcombe          95.43  45  P     P      07 33 15.5 +0.5
      baz=253
PB04  IPOC Station P    95.43 115  PFAKE        07 33 30.0  +14
PB04                              LR     LR
      comp=Z,1µm,20.0s
250A  Grady             95.46  58  PFAKE        07 33 30.0  +15
250A                              LR     LR
      comp=Z,900nm,22.0s
SONA1 Songino Array     95.47 318 eP     P      07 33 14.0 -1.2
SONA0 Songino Array     95.47 318 eP     P      07 33 13.7 -1.5
SONA0                             ePP    PP     07 37 06.3 -0.1
SONM  Songino Array     95.47 318  P     P      07 33 13.7 -1.5
      comp=Z,1.1nm,0.8s,baz=137,slow=4.2,SNR=9.7
SONM                              PP     PP     07 37 06.3 -0.1
      comp=Z,1.3nm,1.0s,baz=114,slow=5.4,SNR=4.2
X48A  Hartselle         95.48  56  PFAKE        07 33 30.0  +15
X48A                              LR     LR
      comp=Z,3µm,20.0s
T46A  Princeton         95.50  53  P     P      07 33 15.8 +0.4
      baz=254
451A  Vernon            95.54  60  PFAKE        07 33 30.0  +14
451A                              LR     LR
      comp=Z,1µm,20.0s
L42A  Oliver, Polo      95.54  48  PFAKE        07 33 30.0  +14
L42A                              LR     LR
      comp=Z,2µm,18.0s
L42A  Oliver, Polo      95.54  48  P     P      07 33 15.7 +0.2
      baz=254
TIXI  Tiksi             95.54 344 eP     P      07 33 14.4 -0.4
      comp=Z,5.5nm,1.0s
TIXI                              LR     LR
      comp=Z,2µm,20.0s
TIXI  Tiksi             95.54 344ceP     P      07 33 15.2 +0.4
TIXI                              pmax   pmax
      comp=Z,8.0nm,1.7s
R45A  Skylar, Fairfi    95.54  52  P     P      07 33 16.0 +0.4
      baz=254
E38A  The Farm, Brul    95.56  43  PFAKE        07 33 30.0  +15
E38A                              LR     LR
      comp=Z,3µm,20.0s
E38A  The Farm, Brul    95.56  43  P     P      07 33 15.9 +0.4
      baz=253
Z49A  Columbiana        95.56  57  P     P      07 33 16.4 +0.6
      baz=255
J41A  Loganville        95.67  47  P     P      07 33 16.2 +0.1
      baz=254
H40A  Chili             95.77  45  P     P      07 33 16.6 +0.1
      baz=254
F39A  Loretta           95.78  44  P     P      07 33 16.3 -0.2
      baz=253
OLIL  Olney             95.80  52  PFAKE        07 33 30.0  +13
OLIL                              LR     LR
      comp=Z,3µm,20.0s
U47A  Clarksville       95.81  54  P     P      07 33 17.4 +0.5
      baz=255
Y49A  Blount Mountai    95.83  57  PFAKE        07 33 30.0  +13
Y49A                              LR     LR
      comp=Z,2µm,21.0s
USIN  University of     95.92  52  PFAKE        07 33 30.0  +13
USIN                              LR     LR
      comp=Z,2µm,20.0s
I41A  Arkdale           95.97  46 eP     P      07 33 18.9 +1.5
      comp=Z,8.5nm,0.9s
I41A                              LR     LR
      comp=Z,2µm,20.0s
I41A  Arkdale           95.97  46  P     P      07 33 18.0 +0.6
      baz=254
K42A  Prairie Point,    95.98  47  P     P      07 33 18.1 +0.6
      baz=254
EYMN  Ely               95.98  42  PFAKE        07 33 30.0  +13
EYMN                              LR     LR
      comp=Z,2µm,20.0s
V48A  Smith Brothers    96.00  55  PFAKE        07 33 30.0  +12
V48A                              LR     LR
      comp=Z,3µm,19.0s
TRQA  Tornquist         96.03 132  PFAKE        07 33 30.0  +12
TRQA                              LR     LR
      comp=Z,2µm,21.0s
Z50A  Ashland           96.07  57  PFAKE        07 33 30.0  +12
Z50A                              LR     LR
      comp=Z,1µm,20.0s
G40A  Rib Lake          96.08  45 eP     P      07 33 19.5 +1.6
      comp=Z,14nm,1.1s
G40A                              LR     LR
      comp=Z,2µm,21.0s
G40A  Rib Lake          96.08  45  P     P      07 33 18.4 +0.5
      baz=254
E39A  Mellen            96.15  44  P     P      07 33 18.8 +0.6
      baz=254
H41A  Junction City     96.27  46 eP     P      07 33 20.3 +1.5
      comp=Z,12nm,1.0s
H41A                              LR     LR
      comp=Z,2µm,19.0s
H41A  Junction City     96.27  46  P     P      07 33 19.2 +0.4
      baz=254
W49A  Belvidere         96.28  55  P     P      07 33 19.3 +0.3
      baz=255
P45A  Graceland, Par    96.28  51  PFAKE        07 33 30.0  +11
P45A                              LR     LR
      comp=Z,3µm,20.0s
J42A  Columbus          96.29  47  P     P      07 33 19.6 +0.7
      baz=254
F40A  Park Falls        96.31  44  P     P      07 33 18.9 -0.1
      baz=254
U48A  Cassie Pea, Po    96.41  54  P     P      07 33 20.7 +1.1
      baz=255
LVC   Limon Verde       96.41 116  PFAKE        07 33 30.0  +10
LVC                               LR     LR
      comp=Z,2µm,19.0s
PB01  IPOC Station P    96.44 114  PFAKE        07 33 30.0  +10
PB01                              LR     LR
      comp=Z,2µm,19.0s
352A  Blakely           96.44  59  PFAKE        07 33 30.0  +10
352A                              LR     LR
      comp=Z,1µm,21.0s
M44A  Midewin, Midew    96.54  49  PFAKE        07 33 30.0  +10
M44A                              LR     LR
      comp=Z,2µm,19.0s
I42A  Draeger Farm,     96.59  46  PFAKE        07 33 30.0  +10
I42A                              LR     LR
      comp=Z,2µm,20.0s
K43A  Burlington        96.68  48  PFAKE        07 33 30.0 +9.3
K43A                              LR     LR
      comp=Z,2µm,19.0s
PB11  IPOC Station P    96.71 113  PFAKE        07 33 30.0 +8.4
PB11                              LR     LR
      comp=Z,3µm,20.0s
453A  Whigham           96.79  60  PFAKE        07 33 30.0 +8.6
453A                              LR     LR
      comp=Z,1µm,20.0s
152A  Waverly Hall      96.91  58  PFAKE        07 33 30.0 +8.1
152A                              LR     LR
      comp=Z,2µm,21.0s
F41A  Three Lakes       96.95  45 eP     P      07 33 23.6 +1.8
      comp=Z,18nm,1.0s
F41A                              LR     LR
      comp=Z,3µm,22.0s
F41A  Three Lakes       96.95  45  P     P      07 33 23.1 +1.2
      baz=255
MNMC  Minye Minye       96.97 112  PFAKE        07 33 30.0 +7.0
MNMC                              LR     LR
      comp=Z,4µm,21.0s
SFIN  Lafayette         96.98  50  PFAKE        07 33 30.0 +7.9
SFIN                              LR     LR
      comp=Z,3µm,18.0s
U49A  Red Boiling Sp    97.01  54  P     Pdif   07 33 23.5 +1.1
      baz=256
H42A  Shiocton          97.02  46  PFAKE        07 33 30.0 +7.8
H42A                              LR     LR
      comp=Z,2µm,20.0s
COWI  Conover           97.02  44 eP     Pdif   07 33 24.0 +1.7
      comp=Z,16nm,0.9s
COWI                              LR     LR
      comp=Z,3µm,21.0s
WCI   Wyandotte Cave    97.04  52  PFAKE        07 33 30.0 +7.5
WCI                               LR     LR
      comp=Z,3µm,20.0s
W50A  Signal Mountai    97.05  56  PFAKE        07 33 30.0 +7.3
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W50A                              LR     LR
      comp=Z,2µm,20.0s
BLO   Bloomington       97.10  51  PFAKE        07 33 30.0 +7.2
BLO                               LR     LR
      comp=Z,3µm,18.0s
E41A  Kenton            97.23  44  P     Pdif   07 33 23.9 +0.7
      baz=255
253A  Americus          97.24  59  PFAKE        07 33 30.0 +6.4
253A                              LR     LR
      comp=Z,1µm,21.0s
X51A  Calhoun           97.26  56  PFAKE        07 33 30.0 +6.4
X51A                              LR     LR
      comp=Z,2µm,20.0s
G42A  Mountain          97.28  45  PFAKE        07 33 30.0 +6.6
G42A                              LR     LR
      comp=Z,2µm,21.0s
V50A  Pikevile          97.33  55  P     Pdif   07 33 24.7 +0.7
      baz=256
T49A  Edmonton          97.34  54  PFAKE        07 33 40.0  +16
T49A                              LR     LR
      comp=Z,2µm,20.0s
C40A  Isle Royale Na    97.49  42  PFAKE        07 33 40.0  +16
C40A                              LR     LR
      comp=Z,2µm,19.0s
H43A  Windswept, Lux    97.53  46  PFAKE        07 33 40.0  +15
H43A                              LR     LR
      comp=Z,2µm,20.0s
TIGA  Tifton            97.54  60  PFAKE        07 33 40.0  +15
TIGA                              LR     LR
      comp=Z,900nm,21.0s
D41A  Chassel           97.65  43  PFAKE        07 33 40.0  +15
D41A                              LR     LR
      comp=Z,4µm,20.0s
FCC   Fort Churchill    97.72  31 eP     P      07 33 23.7 -1.2
      comp=Z,1.4nm,1.1s
FCC                               LR     LR
      comp=Z,2µm,20.0s
FCC   Fort Churchill    97.72  31 eP     P      07 33 23.7 -1.2
FCC                               pmax   pmax
      comp=Z,1.0nm,1.1s
FCC                               MLR    MLR
      comp=Z,2µm,20.0s
Y52A  Lilburn           97.73  57  PFAKE        07 33 40.0  +14
Y52A                              LR     LR
      comp=Z,2µm,20.0s
555A  McAlpin           97.74  61  PFAKE        07 33 40.0  +14
555A                              LR     LR
      comp=Z,1µm,18.0s
M46A  Old House Fiel    97.78  49  PFAKE        07 33 40.0  +14
M46A                              LR     LR
      comp=Z,4µm,18.0s
957A  Wimauma           97.79  64  PFAKE        07 33 40.0  +14
957A                              LR     LR
      comp=Z,1µm,22.0s
G43A  Wallace           97.79  45  PFAKE        07 33 40.0  +14
G43A                              LR     LR
      comp=Z,2µm,20.0s
GTA   Gaotai            97.81 309 ⇓P     Pdif   07 33 26.8 +0.7
GTA                               pP     sP     07 33 36.7  0.0
GTA                               sP     pwP    07 33 40.4 +3.9
GTA   Gaotai            97.81 309  SKS   SKSac  07 44 03.7 +1.5
GTA   Gaotai            97.81 309  S     S      07 44 51.6 +0.9
GTA   Gaotai            97.81 309  sS    sS     07 45 10.6 +6.9
GTA                               pmax   pmax
      comp=Z,4.0nm,2.0s
GTA                               pmax   pmax
      comp=Z,180nm,7.0s
GTA                               LR     LR
      comp=N,510nm,21.3s
GTA                               LR     LR
      comp=E,2µm,21.3s
GTA                               LR     LR
      comp=Z,2µm,21.6s
E42A  Champion          97.93  44  P     Pdif   07 33 26.4 +0.1
      baz=256
656A  Willston          97.93  62  PFAKE        07 33 40.0  +13
656A                              LR     LR
      comp=Z,1µm,21.0s
V51A  Loudon            97.96  55  PFAKE        07 33 40.0  +13
V51A                              LR     LR
      comp=Z,2µm,20.0s
GOGA  Godfrey           98.10  58  PFAKE        07 33 40.0  +13
GOGA                              LR     LR
      comp=Z,1µm,18.0s
W52A  Murphy            98.13  56  PFAKE        07 33 40.0  +13
W52A                              LR     LR
      comp=Z,2µm,20.0s
ZAK   Zakamensk         98.15 320 eP     Pdif   07 33 27.6 +0.3
ZAK                               pmax   pmax
      comp=Z,4.0nm,1.5s
154A  Montrose          98.21  59  PFAKE        07 33 40.0  +12
154A                              LR     LR
      comp=Z,2µm,22.0s
TLY   Talaya            98.26 321 eP     P      07 33 26.7 -1.0
      comp=Z,4.6nm,0.9s
TLY                               LR     LR
      comp=Z,2µm,20.0s
TLY   Talaya            98.26 321 i P    Pdif   07 33 27.8 +0.1
TKL   Tuckaleechee C    98.38  55  PFAKE        07 33 40.0  +11
TKL                               LR     LR
      comp=Z,2µm,21.0s
061Z  Ochoppi           98.52  66  PFAKE        07 33 40.0  +11
061Z                              LR     LR
      comp=Z,1µm,18.0s
E43A  Lone Tree Farm    98.53  44  PFAKE        07 33 40.0  +11
E43A                              LR     LR
      comp=Z,3µm,21.0s
V52A  Sevierville       98.56  55  PFAKE        07 33 40.0  +11
V52A                              LR     LR
      comp=Z,2µm,20.0s
059A  Moore Haven       98.57  64  PFAKE        07 33 40.0  +10
059A                              LR     LR
      comp=Z,2µm,20.0s
255A  Hazlehurst        98.57  59  PFAKE        07 33 40.0  +11
255A                              LR     LR
      comp=Z,900nm,20.0s
DWPF  Disney Wildern    98.58  63  PFAKE        07 33 40.0  +10
DWPF                              LR     LR
      comp=Z,800nm,18.0s
456A  Hilliard          98.68  61  PFAKE        07 33 40.0  +10
456A                              LR     LR
      comp=Z,900nm,18.0s
TZTN  Tazewell          98.76  55  PFAKE        07 33 40.0  +10
TZTN                              LR     LR
      comp=Z,2µm,20.0s
S51A  Beattyville       98.97  53  PFAKE        07 33 40.0 +8.9
S51A                              LR     LR
      comp=Z,2µm,20.0s
O49A  Covington         98.98  51  PFAKE        07 33 40.0 +8.9
O49A                              LR     LR
      comp=Z,4µm,19.0s
M48A  Edgerton          98.99  49  PFAKE        07 33 40.0 +8.9
M48A                              LR     LR
      comp=Z,3µm,19.0s
658A  Bunnell           99.03  62  PFAKE        07 33 40.0 +8.5
658A                              LR     LR
      comp=Z,900nm,20.0s
V53A  Saluda            99.14  56  PFAKE        07 33 40.0 +8.0
V53A                              LR     LR
      comp=Z,2µm,21.0s
N49A  Columbus Grove    99.26  50  PFAKE        07 33 40.0 +7.7
N49A                              LR     LR
      comp=Z,3µm,21.0s
060A  Indiantown        99.26  65  PFAKE        07 33 40.0 +7.4
060A                              LR     LR
      comp=Z,2µm,20.0s
Q51A  Peebles           99.47  52  PFAKE        07 33 40.0 +6.7
Q51A                              LR     LR
      comp=Z,2µm,19.0s
ROSC  El Rosal          99.57  88  PFAKE        07 33 50.0  +15
ROSC                              LR     LR
      comp=Z,1µm,22.0s
ROSC  El Rosal          99.57  88  LR    LR     08 08 56.5
      comp=Z,1µm,21.5s,baz=238,slow=30
I47A  Gladwin           99.70  47  P     Pdif   07 33 34.6 +0.3
      baz=258
P51A  Williamsport      99.78  52  PFAKE        07 33 50.0  +15
P51A                              LR     LR
      comp=Z,2µm,19.0s
257A  Skidaway Islan    99.79  60  PFAKE        07 33 50.0  +15
257A                              LR     LR
      comp=Z,1µm,20.0s
MTDJ  Mount Denham      99.80  74  PFAKE        07 33 50.0  +15
MTDJ                              LR     LR
      comp=Z,1µm,20.0s
GLMI  Grayling          99.80  46  PFAKE        07 33 50.0  +15
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GLMI				LR	LR		
	comp=Z,2µm,19.0s						
AAM	**Ann Arbor**	**99.94**	**49**	PFAKE		07 33 50.0	+15
AAM				LR	LR		
	comp=Z,3µm,20.0s						
ACSO	**Alum Creek Sta**	**100.00**	**51**	PFAKE		07 33 50.0	+14
ACSO				LR	LR		
	comp=Z,3µm,19.0s						
M50A	**Fremont**	**100.20**	**50**	PFAKE		07 33 50.0	+14
M50A				LR	LR		
	comp=Z,4µm,20.0s						
KMSC	**Kings Mountain**	**100.21**	**56**	PFAKE		07 33 50.0	+13
KMSC				LR	LR		
	comp=Z,2µm,19.0s						
NHSC	**New Hope**	**100.72**	**59**	PFAKE		07 33 50.0	+11
NHSC				LR	LR		
	comp=Z,1µm,19.0s						
O52A	**Adamsville**	**100.84**	**51**	PFAKE		07 33 50.0	+11
O52A				LR	LR		
	comp=Z,2µm,18.0s						
P53A	**Whipple**	**101.05**	**52**	PFAKE		07 33 50.0	+10
P53A				LR	LR		
	comp=Z,3µm,18.0s						
E47A	**Iron Bridge**	**101.06**	**45**	P	**Pdif**	**07 33 40.6**	**+0.4**
	baz=259						
SHL	**Shillong**	**101.25**	**293**	PFAKE		07 33 50.0	+8.2
SHL				LR	LR		
	comp=Z,2µm,18.0s						
BLA	**Blacksburg**	**101.35**	**54**	PFAKE		07 33 50.0	+8.2
BLA				LR	LR		
	comp=Z,2µm,20.0s						
O54A	**Avella**	**101.95**	**51**	P	**Pdif**	**07 33 45.1**	**+0.8**
	baz=259						
RES	**Resolute Bay**	**102.02**	**15**	PFAKE		07 34 00.0	+16
RES				LR	LR		
	comp=Z,2µm,19.0s						
MCWV	**Mont Chateau**	**102.25**	**52**	PFAKE		07 34 00.0	+14
MCWV				LR	LR		
	comp=Z,1µm,18.0s						
N54A	**Moraine State**	**102.38**	**51**	PFAKE		07 34 00.0	+14
N54A				LR	LR		
	comp=Z,3µm,18.0s						
GTBY	**Guantanamo Bay**	**102.41**	**73**	PFAKE		07 34 00.0	+13
GTBY				LR	LR		
	comp=Z,1µm,19.0s						
D49A	**Beulah Townshi**	**102.50**	**44**	P	**Pdif**	**07 33 47.1**	**+0.5**
	baz=260						
ERPA	**Erie**	**102.58**	**50**	PFAKE		07 34 00.0	+13
ERPA				LR	LR		
	comp=Z,4µm,20.0s						
M54A	**Oil Creek Stat**	**102.72**	**50**	PFAKE		07 34 00.0	+12
M54A				LR	LR		
	comp=Z,3µm,20.0s						
LSA	**Lhasa**	**102.72**	**297**	PFAKE		07 34 00.0	+11
LSA				LR	LR		
	comp=Z,1µm,22.0s						
CNNC	**Cliffs of the**	**103.00**	**57**	PFAKE		07 34 00.0	+11
CNNC				LR	LR		
	comp=Z,1µm,19.0s						
O56A	**Blue Knob Stat**	**103.33**	**52**	PFAKE		07 34 00.0	+9.5
O56A				LR	LR		
	comp=Z,3µm,18.0s						
R58B	**Mineral**	**103.47**	**54**	PFAKE		07 34 00.0	+8.9
R58B				LR	LR		
	comp=Z,2µm,20.0s						
SSPA	**Standing Stone**	**103.90**	**51**	PFAKE		07 34 00.0	+7.0
SSPA				LR	LR		
	comp=Z,2µm,18.0s						
CBN	**Corbin Frederi**	**103.91**	**54**	PFAKE		07 34 00.0	+7.0
CBN				LR	LR		
	comp=Z,3µm,20.0s						
SDV	**Santo Domingo**	**104.13**	**85**	PFAKE		07 34 10.0	+15
SDV				LR	LR		
	comp=Z,900nm,21.0s						
MMNY	**Mt. Morris Dam**	**104.20**	**49**	PFAKE		07 34 10.0	+16
MMNY				LR	LR		
	comp=Z,3µm,20.0s						
SDMD	**Soldier's Deli**	**104.50**	**53**	PFAKE		07 34 10.0	+14
SDMD				LR	LR		
	comp=Z,1µm,20.0s						
PAGS	**Pennsylvania G**	**104.72**	**52**	PFAKE		07 34 10.0	+13
PAGS				LR	LR		
	comp=Z,2µm,19.0s						
MVL	**Millersville**	**104.97**	**52**	PFAKE		07 34 10.0	+12
MVL				LR	LR		
	comp=Z,3µm,20.0s						
PLVO	**Plevna**	**105.11**	**47**	PFAKE		07 38 20.0	+7.3
PLVO				LR	LR		
	comp=Z,2µm,21.0s						
VLDQ	**Val d'Or**	**105.23**	**44**	PFAKE		07 38 20.0	+7.2
VLDQ				LR	LR		
	comp=Z,4µm,20.0s						
N59A	**State Game Lan**	**105.53**	**51**	PFAKE		07 38 30.0	+16
N59A				LR	LR		
	comp=Z,3µm,18.0s						
BINY	**Binghamton**	**105.54**	**50**	PFAKE		07 38 30.0	+16
BINY				LR	LR		
	comp=Z,4µm,18.0s						
KSPA	**Keystone Colle**	**105.61**	**51**	PFAKE		07 38 30.0	+16
KSPA				LR	LR		
	comp=Z,3µm,19.0s						
SDDR	**Presa de Saban**	**105.75**	**74**	PFAKE		07 38 30.0	+15
SDDR				LR	LR		
	comp=Z,3µm,20.0s						
LUPA	**Lehigh Univers**	**105.79**	**52**	PFAKE		07 38 30.0	+16
LUPA				LR	LR		
	comp=Z,200nm,18.0s						
GRTK	**Grand Turk**	**106.38**	**72**	PFAKE		07 38 30.0	+14
GRTK				LR	LR		
	comp=Z,1µm,20.0s						
BRNJ	**Basking Ridge**	**106.41**	**52**	PFAKE		07 38 30.0	+15
BRNJ				LR	LR		
	comp=Z,2µm,19.0s						
ODNJ	**Ogdensburg**	**106.42**	**51**	PFAKE		07 38 30.0	+15
ODNJ				LR	LR		
	comp=Z,3µm,18.0s						
LONY	**Lake Ozonia**	**106.83**	**48**	PFAKE		07 38 30.0	+14
LONY				LR	LR		
	comp=Z,2µm,21.0s						
PAL	**Palisades**	**106.94**	**51**	PFAKE		07 38 30.0	+14
PAL				LR	LR		
	comp=Z,2µm,18.0s						
NCB	**Newcomb**	**107.02**	**48**	PFAKE		07 38 30.0	+14
NCB				LR	LR		
	comp=Z,2µm,20.0s						
ACCN	**Adirondack Com**	**107.36**	**49**	PFAKE		07 38 30.0	+13
ACCN				LR	LR		
	comp=Z,3µm,20.0s						
WMQ	**Urumqi**	**107.50**	**312**	PFAKE		07 38 30.0	+13
WMQ				LR	LR		
	comp=Z,899nm,20.0s						
FRNY	**Flat Rock**	**107.56**	**47**	PFAKE		07 38 30.0	+13
FRNY				LR	LR		
	comp=Z,2µm,20.0s						
PALK	**Pallekele**	**107.66**	**273**	PFAKE		07 38 30.0	+12
PALK				LR	LR		
	comp=Z,2µm,18.0s						
YLE	**Yale**	**107.70**	**51**	PFAKE		07 38 30.0	+12
YLE				LR	LR		
	comp=Z,3µm,21.0s						
TULEG	**Thule**	**108.58**	**14**	PFAKE		07 38 30.0	+12
TULEG				LR	LR		
	comp=Z,2µm,20.0s						
LBNH	**Lisbon**	**108.69**	**48**	PFAKE		07 38 30.0	+11
LBNH				LR	LR		
	comp=Z,2µm,22.0s						
HRV	**Adam Dziewonsk**	**108.83**	**50**	PFAKE		07 38 30.0	+10
HRV				LR	LR		
	comp=Z,3µm,19.0s						
WES	**Weston**	**109.00**	**50**	PFAKE		07 38 30.0	+10
WES				LR	LR		
	comp=Z,4µm,18.0s						
MPR	**Mayaguez**	**109.46**	**76**	PFAKE		07 38 30.0	+8.5
MPR				LR	LR		
	comp=Z,2µm,19.0s						
AGP	**Aguadilla**	**109.49**	**76**	PFAKE		07 38 30.0	+8.4
AGP				LR	LR		
	comp=Z,2µm,21.0s						
ZAA0	**Zalesovo Array**	**109.85**	**322**	PFAKE		07 38 30.0	+8.8
ZAA0				LR	LR		
	comp=Z,2µm,21.0s						
ZAA1	**Zalesovo Array**	**109.85**	**322**	*e*Pdif	**Pdif**	**07 34 20.4**	**+1.4**
ZALV	**Zalesovo Beam**	**109.85**	**322**	Pdiff	**Pdif**	**07 34 20.4**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=349,slow=1.5,SNR=3.0						
ZALV				PKiKP	**PKiKP**	**07 38 20.8**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=113,slow=1.5,SNR=6.2						
SJG	**San Juan**	**110.36**	**76**	PFAKE		07 38 40.0	+17
SJG				LR	LR		
	comp=Z,1µm,20.0s						
PKME	**Peaks-Kenny Pk**	**110.62**	**47**	PFAKE		07 38 30.0	+7.0
PKME				LR	LR		
	comp=Z,2µm,20.0s						
HUMP	**Col San Antoni**	**110.65**	**76**	PFAKE		07 38 40.0	+16
HUMP				LR	LR		
	comp=Z,1µm,20.0s						
CBYP	**Canovanas**	**110.67**	**76**	PFAKE		07 38 40.0	+16
CBYP				LR	LR		
	comp=Z,1µm,19.0s						
MTP	**Monte Pirata**	**110.92**	**76**	PFAKE		07 38 40.0	+16
MTP				LR	LR		
	comp=Z,1µm,20.0s						
CUPR	**Culebra, Puert**	**111.21**	**76**	PFAKE		07 38 40.0	+15
CUPR				LR	LR		
	comp=Z,2µm,20.0s						
DGAR	**Diego Garcia**	**111.28**	**255**	PFAKE		07 38 40.0	+15
DGAR				LR	LR		
	comp=Z,3µm,19.0s						
MK32	**Makanchi Array**	**111.46**	**314**	*e*Pdif	**Pdif**	**07 34 34.0**	**+7.5**
MKAR	**Makanchi Array**	**111.46**	**314**	Pdif	**Pdif**	**07 34 34.0**	**+7.5**
MKAR				LR	LR		
	comp=Z,400nm,22.0s						
MKAR	**Makanchi Array**	**111.46**	**314**	P	**Pdif**	**07 34 34.0**	**+7.5**
MKAR				MLR	MLR		
	comp=Z,400nm,22.0s						
MKAR	**Makanchi Array**	**111.46**	**314**	Pdiff	**Pdif**	**07 34 34.0**	**+7.5**
	comp=Z,0.4nm,0.8s,baz=96,slow=5.8,SNR=2.6						
MKAR				PKiKP	**PKiKP**	**07 38 24.2**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=77,slow=0.8,SNR=20						
MKAR				PKKP	**PKKPab**	**07 49 30.3**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=285,slow=4.8,SNR=4.0						
STVI	**Saint Thomas**	**111.52**	**76**	PFAKE		07 38 40.0	+15
STVI				LR	LR		
	comp=Z,2µm,20.0s						
MAKZ	**Makanchi**	**111.67**	**314**	PFAKE		07 38 40.0	+15
MAKZ				LR	LR		
	comp=Z,1µm,22.0s						
PTGA	**Pitinga**	**111.84**	**97**	PFAKE		07 38 40.0	+14
PTGA				LR	LR		
	comp=Z,2µm,20.0s						
ABVI	**Anegada Island**	**112.17**	**76**	PFAKE		07 38 40.0	+13
ABVI				LR	LR		
	comp=Z,2µm,18.0s						
GGN	**Saint George**	**112.35**	**47**	PFAKE		07 38 40.0	+14
GGN				LR	LR		
	comp=Z,3µm,21.0s						
BATG	**Bathurst New B**	**112.87**	**45**	PFAKE		07 38 40.0	+13
BATG				LR	LR		
	comp=Z,3µm,20.0s						
SEUS	**St. Eustatius**	**113.22**	**77**	PFAKE		07 38 40.0	+11
SEUS				LR	LR		
	comp=Z,1µm,19.0s						
SMRT	**St. Maarten**	**113.23**	**77**	PFAKE		07 38 40.0	+11
SMRT				LR	LR		
	comp=Z,1µm,18.0s						
KURK	**Kurchatov**	**113.77**	**319**	PFAKE		07 38 40.0	+11
KURK				LR	LR		
	comp=Z,2µm,20.0s						
KURK	**Kurchatov**	**113.77**	**319***c*	*i*PKIKP	**PKiKP**	**07 38 31.4**	**+2.6**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SPB	**Sao Paulo**	**113.88**	**125**	PFAKE		07 38 40.0	+10
SPB				LR	LR		
	comp=Z,4µm,20.0s						
SVB	**Belmont**	**114.07**	**82**	PFAKE		07 38 40.0	+10
SVB				LR	LR		
	comp=Z,800nm,20.0s						
ANWB	**Willy Bob**	**114.38**	**78**	PFAKE		07 38 40.0	+9.1
ANWB				LR	LR		
	comp=Z,1µm,20.0s						
FDF	**Fort de France**	**114.45**	**81**	PFAKE		07 38 40.0	+8.8
FDF				LR	LR		
	comp=Z,1µm,20.0s						
HAL	**Halifax**	**114.67**	**48**	PFAKE		07 38 40.0	+9.3
HAL				LR	LR		
	comp=Z,2µm,20.0s						
TARG	**Taragay, Kyrgy**	**114.68**	**309**	PFAKE		07 38 40.0	+8.6
TARG				LR	LR		
	comp=Z,1µm,22.0s						
HMDM	**Hanimaadhoo**	**114.77**	**270**	PFAKE		07 38 40.0	+8.2
HMDM				LR	LR		
	comp=Z,4µm,18.0s						
KDJ	**Kajisay**	**115.14**	**309**	PFAKE		07 38 40.0	+8.0
KDJ				LR	LR		
	comp=Z,1µm,22.0s						
MNCI	**Minicoy**	**115.25**	**272**	PFAKE		07 38 40.0	+7.3
MNCI				LR	LR		
	comp=Z,4µm,19.0s						
NRN	**Naryn**	**116.04**	**309**	PFAKE		07 38 50.0	+16
NRN				LR	LR		
	comp=Z,1µm,21.0s						
KSH	**Kashi**	**116.10**	**307**	PKP	**PKiKP**	**07 38 37.6**	**+3.8**
KSH				PP	**PP**	**07 39 38.4**	**-0.6**
KSH				PKS		07 42 12.4	
KSH				SKS	**SKSdf**	**07 45 43.6**	**-0.9**
KSH				SKKS	**SKKSac**	**07 46 38.5**	**-0.1**
KSH	**Kashi**	**116.10**	**307**	SS	SS	07 55 49.9	+9.3
KSH				AMB	AMB		
	comp=Z,480nm,5.2s						
KSH				LR	LR		
	comp=N,280nm,6.0s						
KSH				LR	LR		
	comp=E,190nm,4.8s						
KSH				LR	LR		
	comp=Z,350nm,7.3s						
GBN	**Guysborough**	**116.10**	**47**	PFAKE		07 38 50.0	+17
GBN				LR	LR		
	comp=Z,3µm,20.0s						
KBS	**Kingsbay**	**116.84**	**359**	PFAKE		07 38 50.0	+16
KBS				LR	LR		
	comp=Z,800nm,18.0s						
FRU1	**Bishkek**	**117.00**	**310**	PFAKE		07 38 50.0	+15
FRU1				LR	LR		
	comp=Z,1µm,21.0s						
AAK	**Ala-Archa**	**117.11**	**310**	PFAKE		07 38 50.0	+14
AAK				LR	LR		
	comp=Z,1µm,21.0s						
BDFB	**Brasilia**	**117.26**	**117**	PFAKE		07 38 50.0	+13
BDFB				LR	LR		
	comp=Z,2µm,20.0s						
NIL	**Nilore**	**118.29**	**300**	PFAKE		07 38 50.0	+12
NIL				LR	LR		
	comp=Z,899nm,20.0s						
DRLN	**Deer Lake**	**118.39**	**42**	PFAKE		07 38 50.0	+12
DRLN				LR	LR		
	comp=Z,3µm,19.0s						
BRVK	**Borovoye**	**118.56**	**322**	*e*PKPdf	**PKiKP**	**07 38 37.8**	**-0.2**
BRVK				LR	LR		
	comp=Z,2µm,20.0s						
BRVK	**Borovoye**	**118.56**	**322***c*	*i*PKIKP	**PKiKP**	**07 38 39.2**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,11nm,1.7s						
MRIV	**Mauritius Mete**	**118.83**	**236**	PFAKE		07 38 50.0	+10
MRIV				LR	LR		
	comp=Z,1µm,22.0s						
KK31	**Karatay Array**	**119.99**	**311**	*e*PKPdf	**PKPdf**	**07 38 40.7**	**-0.4**
KK31	**Karatay Array**	**119.99**	**311**	*e*PKIKP	**PKPdf**	**07 38 40.7**	**-0.4**
KKAR	**Karatay Array**	**119.99**	**311**	*e*PKPdf	**PKPdf**	**07 38 40.6**	**-0.5**
KKAR	**Karatay Array**	**119.99**	**311**	*e*PKIKP	**PKPdf**	**07 38 40.6**	**-0.5**
BTK	**Batken**	**120.05**	**307**	PFAKE		07 38 50.0	+8.6
BTK				LR	LR		
	comp=Z,1µm,22.0s						
GAR	**Garm**	**120.51**	**306**	*e*PKPdf	**PKPdf**	**07 38 41.6**	**-0.7**
GAR	**Garm**	**120.51**	**306**	*e*PKIKP	**PKPdf**	**07 38 41.6**	**-0.7**
CHGR	**Chuyangaron**	**121.44**	**306**	*e*PKPdf	**PKiKP**	**07 38 44.2**	**0.0**
KBL	**Kabul**	**121.77**	**301**	*e*PKPdf	**PKiKP**	**07 38 45.6**	**+0.4**
KBL				LR	LR		
	comp=Z,800nm,20.0s						
KBL	**Kabul**	**121.77**	**301**	*e*PKIKP	**PKiKP**	**07 38 45.6**	**+0.4**
KBL				MLR	MLR		
	comp=Z,800nm,20.0s						
ARU	**Arti**	**123.95**	**328**	*e*PKPdf	**PKPdf**	**07 38 47.6**	**-0.6**
ARU				LR	LR		
	comp=Z,2µm,21.0s						
ARU	**Arti**	**123.95**	**328**	*i* PKIKP	**PKiKP**	**07 38 48.5**	**0.0**
ARU						07 40 30.8	
ARU						07 46 00.2	
ARU				SS	SS	07 57 17.0	-2.8
KEV	**Kevo**	**124.69**	**352**	PFAKE		07 39 00.0	+10
KEV				LR	LR		
	comp=Z,2µm,21.0s						
LVZ	**Lovozero**	**125.02**	**348**	PFAKE		07 39 00.0	+10
LVZ				LR	LR		
	comp=Z,2µm,20.0s						
ARA0	**ARCESS Array S**	**125.10**	**352**	*e*PKPdf	**PKiKP**	**07 38 50.3**	**-0.1**
ARCES	**ARCESS Array B**	**125.10**	**352**	PKP	**PKiKP**	**07 38 50.3**	**-0.1**
	comp=Z,4.2nm,0.7s,baz=5.7,slow=1.2,SNR=20						
ABKAR	**Akbulak array**	**125.84**	**320**	*e*PKPdf	**PKPdf**	**07 38 51.8**	**-0.2**
PRGR	**Permogore**	**126.71**	**338**	*e*PKIKP	**PKiKP**	**07 38 53.6**	**-0.2**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TMCR	**Tamitsa**	**127.26**	**344**	*e*PKIKP	**PKiKP**	**07 38 57.3**	**+2.5**
ABPO	**Ambohimpanom**	**127.46**	**230**	PFAKE		07 39 10.0	+13
ABPO				LR	LR		
	comp=Z,2µm,18.0s						
KLMR	**Klimovskoe**	**129.35**	**340**	*e*PKIKP	**PKiKP**	**07 38 59.0**	**-0.1**
KLMR				pmax	pmax		
	comp=Z,24nm,1.4s						
KLMR	**Klimovskoe**	**129.35**	**340**	*e*PKPdf	**PKiKP**	**07 38 59.1**	**-0.1**
KLMR				AMP		07 39 16.0	
	comp=Z,24nm,1.4s						
GEYT	**Alibeck**	**130.13**	**306**	PKP	**PKiKP**	**07 39 00.8**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=11,slow=2.9,SNR=5.9						
GYA0B	**ALIBECK ARRAY**	**130.13**	**306**	PFAKE		07 39 10.0	+8.5
GYA0B				LR	LR		
	comp=Z,1µm,21.0s						
SUR	**Sutherland**	**130.29**	**195**	PFAKE		07 39 10.0	+7.7
SUR				LR	LR		
	comp=Z,2µm,19.0s						
RCBR	**Riachuelo**	**132.32**	**113**	PFAKE		07 39 20.0	+13
RCBR				LR	LR		
	comp=Z,22µm,18.0s						
BOSA	**Boshof**	**132.44**	**202**	PKP	**PKiKP**	**07 39 06.7**	**+0.1**
	comp=Z,5.0nm,1.0s,baz=149,slow=6.2,SNR=3.6						
FIA0	**FINESS Array S**	**132.46**	**348**	*e*PKPdf	**PKPdf**	**07 39 04.2**	**-0.1**
FIA0	**FINESS Array S**	**132.46**	**348**	*e*PKIKP	**PKPdf**	**07 39 04.2**	**-0.1**
FINES	**FINESS Array B**	**132.46**	**348**	PKP	**PKPdf**	**07 39 04.2**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=48,slow=2.8,SNR=8.3						
SOHO	**SOHO**	**132.99**	**288**	PKiKP	**PKiKP**	**07 39 08.1**	**+0.5**
	SNR=10						
UOSS	**Minazif**	**133.28**	**289**	*e*PKPdf	**PKPdf**	**07 39 06.7**	**-0.3**
UOSS				LR	LR		
	comp=Z,500nm,20.0s						
UOSS	**Minazif**	**133.28**	**289**	pPKiKP	PKiKP	07 39 21.1	+13
HATD	**Hatta, Dubai**	**133.34**	**289**	pPKPdf	**PKiKP**	**07 39 10.0**	**+1.7**
	SNR=6.1						
ASHO	**Ashiyiah**	**133.41**	**289**	pPKiKP	**PKiKP**	**07 39 12.1**	**+3.6**
	SNR=5.1						
MOS	**Moscow**	**133.82**	**337**	*e*PKIKP	**PKiKP**	**07 39 07.6**	**-0.7**
MOS				*e*		07 39 20.9	
MOS				pmax	pmax		
	comp=Z,37nm,0.6s						
OBN	**Obninsk**	**134.69**	**337**	PFAKE		07 39 20.0	+10
OBN				LR	LR		
	comp=Z,2µm,19.0s						
OBN	**Obninsk**	**134.69**	**337**⇓	*e*PKIKP	**PKiKP**	**07 39 11.0**	**+1.0**
OBN				*e*		07 41 45.6	
OBN				*i*		07 46 13.3	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,1µm,20.0s						
NB2	**NORSAR Subarra**	**134.76**	**357**	PKPdf	**PKPdf**	**07 39 06.7**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=31,slow=1.9						
NB200	**NORSAR Array S**	**134.76**	**357**	*e*PKPdf	**PKiKP**	**07 39 09.5**	**-0.6**
NOA	**NORSAR Array B**	**134.76**	**357**	PKP	**PKiKP**	**07 39 09.5**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=331,slow=1.8,SNR=2.7						
HFS	**Hagfors**	**135.50**	**355**	PKP	**PKPdf**	**07 39 10.4**	**+0.3**
	baz=64,slow=5.0						
ZEI	**Tsey**	**138.65**	**318**	*i* PKIKP	**PKiKP**	**07 39 17.8**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	**138.81**	**320**	PKP	**PKPdf**	**07 39 16.1**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=229,slow=11,SNR=3.1						
KIV	**Kislovodsk**	**138.83**	**320**	PFAKE		07 39 30.0	+11
KIV				LR	LR		
	comp=Z,2µm,22.0s						
KIV	**Kislovodsk**	**138.83**	**320**	*i* PKIKP	**PKiKP**	**07 39 18.7**	**-0.3**
KIV				*e*		07 42 06.9	
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,1µm,24.0s						
GNI	**Garni**	**139.30**	**314**	PFAKE		07 39 30.0	+10
GNI				LR	LR		
	comp=Z,1µm,22.0s						
SUW	**Suwalki**	**139.88**	**345**	PFAKE		07 39 30.0	+9.3
SUW				LR	LR		
	comp=Z,2µm,22.0s						
SOC	**Sochi**	**140.83**	**322**	*i* PKIKP	**PKiKP**	**07 39 23.2**	**+0.2**
SOC				*e*		07 42 16.3	
SOC				*e*PPP	PPP	07 45 22.8	
SOC				*e*SS	SS	08 00 44.5	-0.9
SOC				MLR	MLR		
	comp=Z,2µm,20.0s						
AKASG	**Malin Array Be**	**140.91**	**338**	PKhKP	PKPpre	07 39 17.2	
	comp=Z,2.8nm,0.7s,baz=35,slow=3.1,SNR=11						
AKBB	**Malin Array Si**	**140.91**	**338**	*e*PKPdf	**PKPdf**	**07 39 18.1**	**-2.1**
AKBB				LR	LR		
	comp=Z,2µm,22.0s						
AKBB	**Malin Array Si**	**140.91**	**338**	*e*PKIKP	**PKPdf**	**07 39 18.1**	**-2.1**
AKBB				MLR	MLR		
	comp=Z,2µm,22.0s						
KIEV	**Kiev**	**140.93**	**338**	*e*PKPdf	**PKPdf**	**07 39 18.3**	**-2.0**
KIEV				LR	LR		
	comp=Z,2µm,22.0s						
KIEV	**Kiev**	**140.93**	**338**⇑	*i*P	**PKPdf**	**07 39 15.4**	**-4.9**
KIEV	**Kiev**	**140.93**	**338**	⇑PKIKP	**PKPdf**	**07 39 15.4**	**-4.9**
AK11	**Malin Array Si**	**140.95**	**338**	*e*PKPdf	**PKPdf**	**07 39 18.9**	**-1.4**
ANN	**Anapa**	**141.42**	**325**	*i* PKIKP	**PKiKP**	**07 39 26.7**	**+2.6**
ANN				pmax	pmax		
	comp=Z,81nm,1.6s						
BAYB	**BAYBURT**	**142.28**	**317**	*i* P	**PKPdf**	**07 39 19.8**	**-3.6**
BAYB				IAML_P			
	comp=Z,8.9nm,0.1s						
LSZ	**Lusaka**	**142.71**	**215**	*e*PKPdf	**PKPdf**	**07 39 22.8**	**-1.9**
LSZ				LR	LR		
	comp=Z,2µm,19.0s						
LSZ	**Lusaka**	**142.71**	**215**	*e*PKIKP	**PKPdf**	**07 39 22.8**	**-1.9**
LSZ				MLR	MLR		
	comp=Z,2µm,19.0s						
KELT	**Kelkit**	**143.00**	**317**	*i* P	**PKPdf**	**07 39 24.2**	**-0.4**
KELT				IAML_P			
	comp=Z,161nm,0.6s						
SIM	**Simferopol'**	**143.10**	**327**	*i* PKIKP	**PKPdf**	**07 39 25.6**	**+1.2**
SIM				*e*		07 42 38.0	
SIM				pmax	pmax		
	comp=Z,430nm,15.5s						
LVV	**L'vov**	**143.41**	**342**	*e*PKIKP	PKPbc	07 39 22.1	+0.2
LVV				*e*		07 42 33.6	
LVV				pmax	pmax		
	comp=E,900nm,25.0s						
LVV				pmax	pmax		
	comp=N,1µm,24.0s						
LVV				pmax	pmax		
	comp=Z,1µm,25.0s						
SUSE	**Susehri**	**143.65**	**318**	*i* P	**PKPdf**	**07 39 26.5**	**+0.8**
SUSE				IAML_P			
	comp=Z,81nm,0.2s						
TSUM	**Tsumeb**	**143.68**	**197**	*e*PKPdf	**PKPdf**	**07 39 25.2**	**-1.1**
TSUM				LR	LR		
	comp=Z,3µm,20.0s						
KEMA	**Kemaliye**	**143.96**	**317**	*i* P	**PKPdf**	**07 39 25.5**	**-0.7**
KWP	**Kalwaria Pacla**	**143.97**	**343**	PFAKE		07 39 40.0	+11
KWP				LR	LR		
	comp=Z,17µm,21.0s						
DAMY	**Dhamar**	**144.00**	**273**	PFAKE		07 39 40.0	+9.3
DAMY				LR	LR		
	comp=Z,1µm,20.0s						
ELZG	**Elazig**	**144.02**	**315**	*i* P	**PKPdf**	**07 39 27.5**	**+1.0**
ELZG				IAML_P			
	comp=Z,19nm,0.2s						
KIS	**Kishinev**	**144.06**	**334**	*e*	**PKPdf**	**07 39 26.0**	**0.0**
KIS				*e*L	L	08 30 06.0	
KIS				LRM	MLR	08 42 02.0	
	comp=Z,1µm,21.0s						
CUZAR	**Zara_SIVAS**	**144.10**	**318**	*i* P	**PKPdf**	**07 39 27.5**	**+1.0**
OJC	**Ojcow**	**144.19**	**346**	*e*PKPdf	PKPbc	07 39 24.1	-0.1
OJC	**Ojcow**	**144.19**	**346**	*e*PKIKP	PKPbc	07 39 24.1	-0.1
CLL	**Collm**	**144.30**	**354**	*e*PKPdf	**PKPdf**	**07 39 25.7**	**-0.5**
CLL	**Collm**	**144.30**	**354**	*e*PKPdf	PKPbc	07 39 25.0	+0.5
	comp=Z,8.0nm,1.0s						
CLL				*e*PKPlp		07 39 28.0	
	comp=Z,800nm,18.6s						
CLL				*i* PKiKP	**PKiKP**	**07 39 29.6**	**-0.2**
	comp=Z,8.0nm,0.8s						

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CLL                                  i pPKiKP  sPKPdf   07 39 36.3  -0.7
CLL                                  i sPKiKP  sPKiKP   07 39 38.1  -2.5
       comp=Z,22nm,1.0s
CLL                                  e                  07 39 41.0
CLL                                  ePP       PP       07 42 40.0  -0.5
CLL                                  e                  07 52 38.0
CLL                                  ePSKS              07 52 54.0
CLL                                  e                  07 56 35.0
CLL                                  eSS       SS       08 01 20.0  -3.9
CLL                                  ePSPS              08 02 42.0
CLL                                  e                  08 03 18.0
CLL                                  eSSS      SSS      08 06 42.0
CLL                                  e                  08 10 24.0
CLL                                   Lm       MLR      08 44 00.0
       comp=Z,900nm,19.7s
CLL    Collm             144.30 354  ePKIKP    PKPdf    07 39 27.0  +0.8
CLL                                  i                  07 39 36.3
CLL                                   pmax     pmax
       comp=Z,6.0nm,1.0s
CLL                                   pmax     pmax
       comp=Z,8.0nm,0.8s
CLL                                   MLR      MLR
       comp=Z,900nm,19.7s
SNOP   Sinop             144.43 323  ePKPdf    PKPdf    07 39 25.9  -0.8
SINO   SINOP_Merkez      144.43 323  i P       PKiKP    07 39 29.2  -1.2
CUKAN  kangal_SIVAS      144.61 317  i P       PKPdf    07 39 28.9  +1.5
BRG    Berggiesshubel    144.61 352  ePKP      PKPbc    07 39 25.6  +0.1
       comp=Z,3.2nm,0.9s
BRG                                  e                  07 39 31.4
       comp=Z,27nm,1.5s
BRG                                  i                  07 39 49.0
       comp=Z,32nm,1.4s
BRG                                  ePP       PP       07 42 51.2  +8.8
       comp=Z,13nm,1.4s
BRG    Berggiesshubel    144.61 352  ePKIKP    PKPbc    07 39 25.6  +0.1
BRG                                  e                  07 39 31.4
BRG                                  e                  07 42 51.2
BRG                                   pmax     pmax
       comp=Z,10.0nm,0.9s
BRG                                   pmax     pmax
       comp=Z,3.0nm,1.5s
BRG                                   pmax     pmax
       comp=Z,27nm,1.4s
BRG                                   pmax     pmax
       comp=Z,32nm,1.4s
BRG                                   MLR      MLR
       comp=N,13µm,16.9s
BRG                                   MLR      MLR
       comp=E,925nm,18.2s
BRG                                   MLR      MLR
       comp=Z,754nm,21.6s
UPC    Upice             144.67 350  ePKP      PKiKP    07 39 29.2  -1.5
UPC                                   AMS      AMS      08 41 40.0
       comp=Z,2µm,20.4s
UPC    Upice             144.67 350  ePKIKP    PKiKP    07 39 29.2  -1.5
UPC                                   MLR      MLR
       comp=Z,2µm,20.4s
DPC    Dobruska-Polom    144.77 350  ePKP      PKiKP    07 39 29.0  -1.9
DPC                                  ePP       PP       07 42 41.8  -1.7
DPC                                  eSS       SS       08 01 46.9  +17
DPC                                   AMS      AMS      08 38 50.0
       comp=Z,2µm,23.0s
DPC    Dobruska-Polom    144.77 350  ePKIKP    PKiKP    07 39 29.0  -1.9
DPC                                  e                  07 42 41.8
DPC                                   MLR      MLR
       comp=Z,2µm,23.0s
AKCD   Akcadag           144.84 316  i P       PKPdf    07 39 29.2  +1.4
AKCD                                  IAML_P
       comp=Z,47nm,0.1s
PVCC   Panska Ves        144.87 352  ePKP      PKiKP    07 39 30.2  -0.8
PVCC                                  AMS      AMS      08 41 40.0
       comp=Z,2µm,20.0s
PVCC   Panska Ves        144.87 352  ePKIKP    PKiKP    07 39 30.2  -0.8
PVCC                                  MLR      MLR
       comp=Z,2µm,20.0s
BUR08  Bucovina Ar. S    144.92 339  ePKPdf    PKPbc    07 39 26.6  -0.1
BUR04  Bucovina Ar. S    144.94 338  ePKPdf    PKPbc    07 39 26.5  -0.3
BURAR  Bucovina Array    144.94 338⇑iP         PKPdf    07 39 27.6   0.0
BURAR  Bucovina Array    144.94 338 ⇑PKIKP     PKPdf    07 39 27.7  +0.1
KRLC   Kraliky           144.95 349  ePKP      PKPdf    07 39 28.6  +1.1
KRLC   Kraliky           144.95 349  ePKIKP    PKPdf    07 39 28.6  +1.1
UZH    Uzhgorod          144.99 342  ePKIKP    PKPbc    07 39 26.7  -0.1
UZH                                  e                  07 39 35.9
UZH                                   MLR      MLR
       comp=Z,300nm,22.0s
ATD    Arta Tunnel       145.01 268   PFAKE             07 39 40.0  +7.5
ATD                                   LR       LR
       comp=Z,1µm,19.0s
SURC   SANLIURFA_SURC145.07 313  i P       PKiKP    07 39 29.9  -2.0
MORC   Moravsky Berou    145.09 348  ePKPbc    PKPbc    07 39 26.2  -1.0
MORC                                  LR       LR
       comp=Z,2µm,20.0s
MORC   Moravsky Berou    145.09 348⇓iP         PKPdf    07 39 27.8   0.0
MORC   Moravsky Berou    145.09 348 ⇓PKIKP     PKPdf    07 39 27.8   0.0
MORC   Moravsky Berou    145.09 348  ePKP      PKPdf    07 39 27.8   0.0
CUALT  Altinyayla-SIV    145.09 318  i P       PKiKP    07 39 30.3  -1.8
BIZ    Bicaz             145.19 337⇓iP         PKPdf    07 39 28.4  +0.4
LANS   Liptovska Anna    145.26 346  ePKP      PKPdf    07 39 28.4  +0.3
MEM    Membach           145.30   1 ⇑PKP       PKPdf    07 39 28.5  +0.5
PRA    Prague            145.34 352   AMS      AMS      08 42 10.0
       comp=Z,2µm,26.0s
CUSAR  Sarkisla-SIVAS    145.34 318  i P       PKiKP    07 39 30.3  -2.3
TRPA   Tarpa             145.37 342⇓iP         PKPdf    07 39 28.6  +0.4
TRPA   Tarpa             145.37 342⇑ePKiKP     PKPdf    07 39 29.1  +0.9
PRU    Pruhonice         145.40 352  ePKP      PKPab    07 39 28.5  +0.2
PRU                                  ePP       PP       07 42 49.9  +2.8
PRU                                  eSS       SS       08 01 49.8  +13
PRU                                   AMS      AMS      08 42 30.0
       comp=Z,2µm,24.7s
PRU    Pruhonice         145.40 352  ePKIKP    PKPab    07 39 28.5  +0.2
PRU                                  e                  07 42 49.9
PRU                                   MLR      MLR
       comp=Z,2µm,24.7s
TLCR                     145.49 332⇓iP         PKPbc    07 39 27.7  -0.8
TLCR                     145.49 332 ⇓PKIKP     PKPbc    07 39 27.7  -0.8
CTAK   Corum_Osmancik145.52 321  i P       PKPdf    07 39 17.9   -11
GZT    Gaziantep         145.57 314  i P       PKiKP    07 39 31.4  -1.7
COAL   Corum-Alaca       145.64 321  i P       PKiKP    07 39 31.2  -1.9
ARCR   ARCALIA           145.69 339⇓iP         PKPab    07 39 30.3  +0.8
VRAC   Vranov            145.72 349⇓iP         PKPab    07 39 30.0  +0.5
VRAC   Vranov            145.72 349  ePKP      PKPab    07 39 29.4  -0.1
VRAC   Vranov            145.72 349   PKPbc    PKPab    07 39 29.1  -0.5
       comp=Z,18nm,1.1s,baz=29,slow=2.7,SNR=19
PETR   Petresti          145.74 335⇓iP         PKiKP    07 39 33.0   0.0
KMBO   Kilima Mbogo      145.76 243   PKP      PKPdf    07 39 28.4  -1.9
       comp=Z,11nm,0.4s,baz=266,slow=18,SNR=8.9
KMBO                                  PKPbc    PKiKP    07 39 32.5  -1.8
       comp=Z,11nm,0.4s,baz=150,slow=2.1,SNR=27
DOU    Dourbes           145.77   3 ⇓PKP       PKiKP    07 39 31.4  -1.5
ODBI   Odobesti          145.78 335⇓iP         PKiKP    07 39 33.6  +0.5
CFR    Carcaliu          145.79 333⇓iP         PKiKP    07 39 32.0  -1.1
CFR    Carcaliu          145.79 333 ⇓PKP2      PKiKP    07 39 32.0  -1.1
VRI    Vrincioaia        145.83 335⇓iP         PKiKP    07 39 31.9  -1.3
VRI    Vrincioaia        145.83 335 ⇓PKP2      PKiKP    07 39 31.9  -1.3
PLOR   Plostina          145.87 335⇓iP         PKPab    07 39 30.3  +0.1
PLOR   Plostina          145.87 335 ⇓PKP2      PKPab    07 39 30.3  +0.1
ILGA   Ilgaz             145.90 323   PFAKE             07 39 40.0  +6.2
ILGA                                  LR       LR
       comp=Z,900nm,21.0s
ILGA   Ilgaz             145.90 323  i P       PKiKP    07 39 33.5  -0.3
TREC   Trest             145.93 350  ePKP      PKPab    07 39 30.4  +0.1
TREC                                 ePP       PP       07 42 47.7  -2.6
TREC                                  AMS      AMS      08 41 50.0
       comp=Z,2µm,17.1s
TREC   Trest             145.93 350  ePKP2     PKPab    07 39 30.4  +0.1
TREC                                 e                  07 42 47.7
TREC                                  MLR      MLR
       comp=Z,2µm,17.1s
KRUC   Moravsky          146.00 349  ePKP      PKPab    07 39 30.0  -0.5
OZUR                     146.01 336⇓iP         PKPab    07 39 31.3  +0.5
VYHS   Vyhne             146.03 346  ePKP2     PKPab    07 39 30.9  +0.2
VYHS   Vyhne             146.03 346  ePKP      PKPab    07 39 30.9  +0.2
VYHS                                 e                  07 39 42.0
KOLL   Kolacno           146.05 346  ePKP2     PKPab    07 39 30.7   0.0
KOLL   Kolacno           146.05 346  ePKP      PKPab    07 39 30.7   0.0
KOLL                                 e                  07 39 41.7
GRA1   Grafenberg Arr    146.06 355  ePKPdf    PKPdf    07 39 29.3  -0.1
GRA1                                  LR       LR
       comp=Z,1µm,18.0s
GRF    Grafenberg Arr    146.06 355  ePKP2     PKPdf    07 39 29.3  -0.1
GRF                                   MLR      MLR
       comp=Z,1µm,18.0s
GRFO   Grafenberg        146.06 355  ePKPdf    PKPbc    07 39 30.0  -0.2
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GRFO                                  LR       LR
       comp=Z,1µm,21.0s
SIRC   Yozgat            146.08 319  i P       PKiKP    07 39 32.4  -1.7
LTVH   Ltavrtes, Hu      146.23 342⇑ePKiKP     PKiKP    07 39 33.0  -0.9
TIRR   Tirgusor          146.23 332   PFAKE             07 39 40.0  +6.0
TIRR                                  LR       LR
       comp=Z,1µm,20.0s
TIRR   Tirgusor          146.23 332⇓iP         PKiKP    07 39 32.9  -1.1
TIRR   Tirgusor          146.23 332 ⇓PKP2      PKiKP    07 39 32.9  -1.1
SAIM   ADANA             146.24 316  i P       PKiKP    07 39 33.3  -1.1
WLF    Walferdange       146.25   1  ePKPdf    PKiKP    07 39 32.9  -1.0
WLF    Walferdange       146.25   1 ⇓PKP       PKiKP    07 39 32.6  -1.3
HARR   Harsova           146.27 333⇓iP         PKPab    07 39 32.0  +0.3
HARR   Harsova           146.27 333 ⇓PKP2      PKPab    07 39 32.0  +0.3
DOPR   Dopca             146.27 337⇓iP         PKiKP    07 39 32.7  -1.4
ANDN   Andirin           146.28 316  i P       PKiKP    07 39 33.4  -1.1
TLB    Topalu            146.30 333⇓iP         PKPab    07 39 32.3  +0.5
TLB    Topalu            146.30 333 ⇓PKP2      PKPab    07 39 32.3  +0.5
PSZ    Piszkesteto       146.30 344  ePKPdf    PKPdf    07 39 29.6  -0.3
PSZ                                   LR       LR
       comp=Z,1µm,20.0s
PSZ    Piszkesteto       146.30 344  ePKP2     PKPdf    07 39 29.6  -0.3
PSZ                                   MLR      MLR
       comp=Z,1µm,20.0s
PSZ    Piszkesteto       146.30 344  ePKiKP    PKPdf    07 39 30.0  +0.1
KHC    Kasperske Hory    146.37 352  ePKPdf    PKPdf    07 39 29.9  -0.1
KHC                                   LR       LR
       comp=Z,700nm,21.0s
KHC    Kasperske Hory    146.37 352  ePKP      PKiKP    07 39 33.0  -1.2
KHC                                  eSS       SS       08 02 04.3  +17
KHC                                   AMS      AMS      08 42 50.0
       comp=Z,2µm,20.3s
KHC    Kasperske Hory    146.37 352  ePKP2     PKiKP    07 39 33.0  -1.2
KHC                                   MLR      MLR
       comp=Z,2µm,20.3s
CDAG   Cicekdag          146.40 320  i P       PKiKP    07 39 34.0  -0.7
ELDT   Eldivan           146.43 322  i P       PKiKP    07 39 33.6  -1.3
DELI   KIRIKKALE         146.44 321  i P       PKiKP    07 39 33.5  -1.2
MLR    Muntele Rosu      146.45 336  ePKPdf    PKPdf    07 39 30.4  +0.1
MLR                                   LR       LR
       comp=Z,3µm,22.0s
MLR    Muntele Rosu      146.45 336⇓iP         PKPab    07 39 32.5  -0.1
MLR    Muntele Rosu      146.45 336 ⇓PKP2      PKPab    07 39 32.5  -0.1
MODS   Modra-Piesok      146.48 348  ePKP2     PKPab    07 39 31.7  -0.7
MODS   Modra-Piesok      146.48 348  ePKP      PKPab    07 39 31.7  -0.7
MODS                                 e                  07 39 48.6
DRGR                     146.50 340⇓iP         PKPab    07 39 32.3  -0.3
DRGR                     146.50 340 ⇓PKP2      PKPab    07 39 32.4  -0.2
ISR    Istrita           146.51 335⇓iP         PKPab    07 39 32.8  +0.1
ISR    Istrita           146.51 335 ⇓PKP2      PKPab    07 39 32.8  +0.1
GEC2   GERESS Array S    146.63 352  ePKPdf    PKPdf    07 39 29.8  -0.7
GEC2                                  LR       LR
       comp=Z,2µm,21.0s
GEC2   GERESS Array S    146.63 352  ePKIKP    PKPdf    07 39 29.8  -0.7
GEC2                                  MLR      MLR
       comp=Z,2µm,21.0s
GERES  GERESS Array B    146.63 352   PKPbc    PKPab    07 39 32.3  -0.8
       comp=Z,1.9nm,0.6s,baz=95,slow=1.6,SNR=15
GEA0   GERESS Array S    146.64 352  ePKPdf    PKPdf    07 39 30.5   0.0
YAHY   KAYSERI_Yahyal    146.65 317  i P       PKiKP    07 39 34.5  -0.8
ZST    Bratislava        146.69 348  ePKP      PKPab    07 39 32.6  -0.6
SECR                     146.78 335⇓iP         PKiKP    07 39 35.3  +0.1
BR101  Keskin Array S    146.78 321  ePKPbc    PKPab    07 39 33.5  -0.6
BR131  Keskin Array S    146.78 321  ePKPdf    PKPdf    07 39 31.4  +0.4
BR131  Keskin Array S    146.78 321   PKPab    PKPbc    07 39 32.9  +0.1
       SNR=58
BRTR   Keskin Array B    146.78 321   PKPbc    PKPab    07 39 33.5  -0.6
       comp=Z,57nm,1.0s,baz=85,slow=2.1,SNR=41
VOIR                     146.84 337⇓iP         PKPab    07 39 33.8  -0.2
VOIR                     146.84 337 ⇓PKP2      PKPab    07 39 33.8  -0.2
BCAM   Yenicaga          147.00 324  i P       PKiKP    07 39 36.4  +0.5
ARR    Arges             147.06 337⇓iP         PKiKP    07 39 35.0  -0.8
STU    Stuttgart         147.11 357   PFAKE             07 39 40.0  +4.3
STU                                   LR       LR
       comp=Z,1µm,20.0s
CONA   Conrad Observa    147.19 349  i PKiKP   PKiKP    07 39 35.8  -0.2
       comp=Z,50nm,1.5s
CONA                                 i pPKPdf  PKiKP    07 39 36.7  +0.6
       SNR=13
ANTO   Ankara            147.20 322  ePKPdf    PKPdf    07 39 31.8  +0.1
ANTO                                  LR       LR
       comp=Z,700nm,19.0s
ANTO   Ankara            147.20 322⇓iP         PKiKP    07 39 35.6  -0.7
ANTO   Ankara            147.20 322 ⇓PKP2      PKiKP    07 39 35.6  -0.7
DEV    Deva              147.24 339⇓iP         PKiKP    07 39 36.4  +0.3
DEV    Deva              147.24 339 ⇓PKP2      PKiKP    07 39 36.4  +0.3
YIGI   Dzce              147.25 325  i P       PKiKP    07 39 36.5  +0.3
SOP    Sopron            147.29 348  ePKiKP    PKPab    07 39 35.1  -0.5
SIRR   Siria             147.30 341⇓iP         PKiKP    07 39 36.9  +0.7
LOT    Lotru             147.31 338⇓iP         PKiKP    07 39 36.8  +0.4
KIBS   BOLU              147.39 324  i P       PKiKP    07 39 37.5  +0.7
GULE   Gulek             147.49 316  i P       PKPab    07 39 35.8  -1.1
MOA    Molln             147.53 351  i PKPab   PKPab    07 39 35.1  -1.4
       comp=Z,35nm,1.6s
KKUL   Konya-Kulu        147.56 321  i P       PKiKP    07 39 38.8  +1.6
BFO    Black Forest      147.58 358  ePKPdf    PKPdf    07 39 31.4  -0.5
BFO                                  ePKPbc    PKPab    07 39 35.5  -1.2
BFO    Black Forest      147.58 358c iPKP2     PKiKP    07 39 36.5  -0.2
PRD    Provadia          147.67 332  eP        PKPab    07 39 36.8  -0.4
GZR    Gura Zlata        147.71 339⇓iP         PKPbc    07 39 35.4  +0.3
GZR    Gura Zlata        147.71 339 ⇓PKP2      PKPbc    07 39 35.4  +0.3
ECH    Echery            147.71 360  ePKPdf    PKPdf    07 39 31.7  -0.5
ECH                                  ePKPdf    PKPbc    07 39 35.5  +0.5
ECH    Echery            147.71 360  ePKIKP    PKPdf    07 39 31.7  -0.5
ECH                                  e                  07 39 35.5
TIH    Tihany            147.74 346  ePKiKP    PKiKP    07 39 36.0  -1.0
KERG   Konya-Eregli      147.85 317  i P       PKPbc    07 39 36.3  +0.4
BZS    Buzias            147.90 341⇓iP         PKPbc    07 39 35.8  +0.3
BZS    Buzias            147.90 341 ⇓PKP2      PKPbc    07 39 35.8  +0.3
ARSA   Arzberg           147.90 349  i PKPab   PKPbc    07 39 36.0  +0.5
       comp=Z,21nm,1.3s
AUMIH  MIHALICIK         147.97 323  i P       PKiKP    07 39 37.9  -0.1
MORH   Mrgy, Hungar      148.20 345  eP        PKPdf    07 39 33.6  +0.6
MORH   Mrgy, Hungar      148.20 345  ePKiKP    PKPdf    07 39 32.1  -0.9
ASCN   Ascension         148.25 137   PFAKE             07 39 50.0   +10
ASCN                                  LR       LR
       comp=Z,13µm,21.0s
SZH    Strazhica         148.27 333  eP        PKiKP    07 39 38.2  -0.1
HERR   Herculane         148.28 339⇑iP         PKiKP    07 39 37.2  -1.0
RETA   Reutte            148.29 355  i P       PKPab    07 39 39.6   0.0
       comp=Z,30nm,1.2s
WATA   Walderalm         148.37 354  ePKPbc    PKPbc    07 39 36.6  -0.3
       comp=Z,4.6nm,0.5s
BEHE   Becsehely         148.40 347  eP        PKiKP    07 39 37.7  -0.8
BEHE   Becsehely         148.40 347  ePKiKP    PKPdf    07 39 31.1  -2.3
FURI   Furi              148.40 261   PFAKE             07 39 50.0  +8.5
FURI                                  LR       LR
       comp=Z,1µm,19.0s
MOTA   Moosalm           148.40 355  i pPKPdf  PKiKP    07 39 38.7  +0.1
       comp=Z,30nm,1.1s
KBA    Koelnbreinsper    148.41 352  i PKPab   PKPab    07 39 39.2  -1.1
       comp=Z,17nm,1.2s
KDHN   Kadinhani         148.46 321  i P       PKiKP    07 39 38.1  -0.9
SQTA   Sankt Quirin      148.52 355  i P       PKPab    07 39 40.3  -0.3
       comp=Z,18nm,1.1s
SOKA   Soboth            148.54 349  i PKPbc   PKPbc    07 39 37.2  -0.1
       comp=Z,21nm,1.3s
BORA   Eskisehir         148.54 324  i P       PKiKP    07 39 38.5  -0.6
DAVA   Damuels           148.55 356  i P       PKPab    07 39 40.4  -0.4
       comp=Z,45nm,1.6s
PVL    Pavlikeni         148.57 334  eP        PKiKP    07 39 38.5  -0.4
MDVR   Moldovita         148.60 340⇓iP         PKiKP    07 39 39.1  +0.1
PUNG   Punghina          148.62 338⇓iP         PKPab    07 39 42.5  +1.5
KONT   Konya--Tatoy      148.66 320  i P       PKPab    07 39 40.3  -1.1
FETA   Feichten          148.76 355  i PKPab   PKPab    07 39 40.6  -1.1
       SNR=8.8
FETA                                 i P       pPKPdf   07 39 41.1  -1.1
       comp=Z,32nm,1.2s
KMER   Konya-Meram       148.77 319  i P       PKPab    07 39 40.9  -1.1
OBKA   Obir              148.79 350  i PKPab   PKPab    07 39 41.0  -0.7
       comp=Z,11nm,1.0s
MYKA   Terra Mystica     148.81 351  i pPKPdf  PKiKP    07 39 39.4   0.0
       comp=Z,12nm,0.8s
ABTA   Abfaltersbach     148.85 353  i pPKPdf  PKiKP    07 39 39.9  +0.4
       SNR=5.6
ABTA                                 i PKPab   PKiKP    07 39 40.1  +0.6
       comp=Z,20nm,0.9s
EREN   Erenkoy           148.85 314  i P       PKPab    07 39 41.9  -0.3
FRGS   Fruska Gora       148.86 342  eP        PKiKP    07 39 39.8  +0.3
GULN   MERSIN_Gulnar     148.92 316  i P       PKPab    07 39 41.4  -1.1
DAVOX  Davos/Dischmat    149.06 356   PKPbc    PKiKP    07 39 40.6  +0.5
       comp=Z,9.3nm,0.8s,baz=300,slow=6.0,SNR=12
ERMK   Ermenek           149.08 317  i P       PKPab    07 39 43.0  -0.4
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CADS   Cadrg             149.19 351  ePKPbc    PKiKP    07 39 39.8  -0.3
FUORN  Ofenpass-Fuorn    149.19 356  ePKPdf    PKPdf    07 39 34.8  -0.2
FUORN                                ePKPbc    PKiKP    07 39 40.2  -0.2
LJU    Ljubljana         149.24 350  ePKPbc    PKiKP    07 39 40.5  +0.3
LJU    Ljubljana         149.24 350  eP        PKiKP    07 39 41.0  +0.8
CRES   Cresnjev          149.28 348  eP        PKiKP    07 39 40.4  +0.1
TUE    Stuetta           149.40 357  ePKPbc    PKiKP    07 39 42.1  +1.3
CEY    Cerknica          149.56 350  eP        PKPbc    07 39 39.4  -0.4
SENIN  Lac Senin/Sane    149.56 360  ePKPbc    PKPab    07 39 42.9  -2.1
PGB    Panagyurishte     149.60 335  eP        PKiKP    07 39 40.6  -0.5
BOJS   Bojanci           149.63 349  ePKPbc    PKiKP    07 39 41.9  +0.9
TRI    Trieste           149.69 351   PFAKE             07 39 50.0  +4.8
TRI                                   LR       LR
       comp=Z,1µm,20.0s
CSS    Mathiatis         149.73 314  ePKPbc    PKiKP    07 39 41.0  -0.6
DIVS   Divibare          149.77 341  ePKPbc    PKiKP    07 39 41.0  -0.5
DIVS                                  LR       LR
       comp=Z,2µm,22.0s
DIVS   Divibare          149.77 341  eP        PKiKP    07 39 40.7  -0.8
KZIL   AFYON_Kizioren    149.81 322  i P       PKiKP    07 39 42.2  +0.4
DURS   Dursunbey         149.83 326  i P       PKiKP    07 39 42.1  +0.3
VTS    Vitosha           149.92 336  ePKPbc    PKiKP    07 39 43.4  +1.5
VTS                                   LR       LR
       comp=Z,1µm,22.0s
VTS    Vitosha           149.92 336⇑iP         PKiKP    07 39 42.9  +1.0
VTS    Vitosha           149.92 336 ⇑PKP2      PKiKP    07 39 42.9  +1.0
VTS    Vitosha           149.92 336  eP        PKiKP    07 39 42.7  +0.8
BLY    Banja Luka        149.94 346   PFAKE             07 39 50.0  +3.7
BLY                                   LR       LR
       comp=Z,2µm,20.0s
BLY    Banja Luka        149.94 346⇓iP         PKiKP    07 39 42.1  +0.4
BLY    Banja Luka        149.94 346  eP        PKPbc    07 39 40.7   0.0
LEF    Lefka             149.95 315  i P       PKiKP    07 39 42.3  +0.3
LEF                                   IAML_P
       comp=Z,2µm,0.7s
HAPS   Han Pijesak,Bl    150.09 343  eP        PKPbc    07 39 41.1  -0.2
BBLS   Lazi&#263;i       150.16 342  eP        PKiKP    07 39 42.5  +0.2
KORT   Korkueli          150.50 320  i P       PKiKP    07 39 43.5  +0.3
KORT                                  IAML_P
       comp=Z,50nm,0.1s
MANT   Manisa            150.57 324  ePKPbc    PKiKP    07 39 43.2  -0.2
MANT                                  LR       LR
       comp=Z,4µm,22.0s
SSB    Saint Sauveur     150.57   4  ePKPbc    PKiKP    07 39 45.1  +2.1
SSB    Saint Sauveur     150.57   4  ePKIKP    PKiKP    07 39 45.1  +2.1
MMB    Musomiste         150.58 334  eP        PKPbc    07 39 41.5  -1.0
KKB    Krupnik           150.62 335  eP        PKiKP    07 39 43.6  +0.4
PGAV   Gavieira, Arco    150.80  24  eLR       LR       08 39 36.4
       comp=Z,1µm,20.0s
TAVA   DENIZLI_Tavas     151.06 322  i P       PKiKP    07 39 45.6  +1.2
STIP   Stip              151.12 336  i P       PKPbc    07 39 42.7  -0.9
STIP                                 i P       PKPbc    07 39 43.5  -0.1
SKO    Skopje            151.16 337  i P       PKiKP    07 39 43.8  -0.6
VAY    Valandovo         151.28 335  i P       PKiKP    07 39 44.0  -0.6
BRY    Bratogost         151.29 342  eP        PKPbc    07 39 42.1  -2.1
AKAS   Kas               151.45 320  i P       PKiKP    07 39 46.5  +1.3
POLO   Lamas de Olo      151.49  24  ePKPdf    PKiKP    07 39 47.2  +2.1
MBAR   Mbarara           151.49 237  ePKPbc    PKiKP    07 39 48.1  +2.0
MBAR                                  LR       LR
       comp=Z,2µm,19.0s
MBAR   Mbarara           151.49 237  ePKIKP    PKiKP    07 39 48.1  +2.0
MBAR                                  MLR      MLR
       comp=Z,2µm,19.0s
PDG    Podgorica         151.50 341⇓iP         PKiKP    07 39 46.9  +1.9
PDG    Podgorica         151.50 341  eP        PKiKP    07 39 46.0  +1.0
TTG    Podgorica         151.50 341   PFAKE             07 39 50.0  -2.8
TTG                                   LR       LR
       comp=Z,1µm,22.0s
PBRG   Braganca          151.51  22  ePKPdf    PKiKP    07 39 44.6  -0.5
FETY   Fethiye           151.51 321  i P       PKiKP    07 39 45.4  +0.1
TREB   Trebinje          151.52 342  eP        PKPbc    07 39 41.2  -3.4
DRME   Dracevica, Mon    151.75 341  eP        PKiKP    07 39 45.0  -0.5
MVO    Moncorvo          151.96  23  ePKPdf    PKiKP    07 39 47.4  +1.3
MVO    Moncorvo          151.96  23  eLR       LR       08 38 26.7
       comp=Z,1µm,20.0s
PVIS   Viseu             152.01  25  ePKPdf    PKPab    07 39 53.6  -1.5
BIA    Bitola            152.03 337  i P       PKiKP    07 39 48.2  +2.0
TIR    Tirane            152.27 339   PFAKE             07 39 50.0  +3.4
TIR                                   LR       LR
       comp=Z,2µm,21.0s
LIT    Litokhoron        152.34 334   PFAKE             07 39 50.0  +3.2
LIT                                   LR       LR
       comp=Z,1µm,20.0s
MTE    Manteigas         152.41  25  eLR       LR       08 39 22.4
       comp=Z,1µm,20.0s
PCBR   Castelo Branco    152.92  25  ePKPdf    PKiKP    07 39 50.0  +2.0
AQU    L'Aquila          153.02 350   PFAKE             07 39 50.0  +1.8
AQU                                   LR       LR
       comp=Z,2µm,22.0s
PMTG   Montargil         153.24  27  ePKPdf    PKPab    07 39 56.5  -3.8
PMRV   Marv??o           153.30  26  ePKPdf    PKiKP    07 39 54.2  +5.4
PMRV   Marv??o           153.30  26  eLR       LR       08 39 26.1
       comp=Z,2µm,20.0s
MESJ   Messejana         154.25  29  ePKPdf    PKPdf    07 39 41.4  -1.2
MESJ                                 eSS       SS       08 03 18.6  +2.5
ES19   SONSECA Array     154.36  20  ePKPdf    PKPdf    07 39 42.8  +0.1
ES19                                 ePKPbc    sPKPdf   07 39 53.6  +0.1
ESDC   Sonseca Array     154.36  20   PKPbc    PKiKP    07 39 53.4  +2.3
       comp=Z,0.2nm,0.3s,baz=190,slow=30,SNR=2.1
ESLA   Sonseca Array     154.36  20   PFAKE             07 39 50.0  -1.0
ESLA                                  LR       LR
       comp=Z,2µm,19.0s
MORF   Marmelete         154.47  30  ePKPdf    PKPdf    07 39 41.5  -1.4
CUC    Castrocucco       154.75 344   PFAKE             07 39 50.0  -1.8
CUC                                   LR       LR
       comp=Z,2µm,19.0s
TIP    Timpagrande       155.24 342   PFAKE             07 40 00.0  -8.8
TIP                                   LR       LR
       comp=Z,2µm,21.0s
CEL    Celeste           156.35 342   PFAKE             07 40 00.0   -14
CEL                                   LR       LR
       comp=Z,2µm,20.0s
MDT    Midelt            160.05  30   PKPab    PKPab    07 40 30.0  +0.2
       comp=Z,5.2nm,0.9s,baz=276,slow=2.5,SNR=3.7
LIC    Lamto             164.77 127  eP        PKPdf    07 39 52.6  -2.7
       comp=Z,66nm,1.4s
TIC    Toumodi           165.04 126  eP        PKPdf    07 39 53.0  -2.5
KIC    Kosan Boka        165.07 128  eP        PKPdf    07 39 55.1  -0.4
       comp=Z,52nm,1.3s
DBIC   Dimbokro          165.18 127   PKP      PKPdf    07 39 56.7  +1.1
       comp=Z,2.9nm,0.9s,baz=185,slow=1.0,SNR=2.2
DBIC                                  PKPab    PKPab    07 40 51.4  -1.4
       comp=Z,3.4nm,1.0s,baz=230,slow=7.9,SNR=2.5
TOA0   Torodi Ar. Sit    174.14 116  ePKPdf    PKPdf    07 40 00.2  -0.6
TOA0                                 ePKPdf    PKPdf    07 40 00.7  -0.2
TOA0                                 ePKPab    PKPab    07 41 31.0  -1.5
TOA1   Torodi Ar. Sit    174.14 116  ePKPdf    PKPdf    07 40 00.1  -0.8
TOA1                                 ePKPab    PKPab    07 41 31.5  -0.9
TORD   Torodi Ar. Bea    174.14 116   PKP      PKPdf    07 40 00.1  -0.8
       comp=Z,2.6nm,1.0s,baz=325,slow=1.8,SNR=11
TORD                                  PKPab    PKPab    07 41 31.5  -0.9
       comp=Z,2.7nm,1.0s,baz=217,slow=5.1,SNR=2.3
```

IDC 07 07:19:55.3±3.2, 10°.71S×165°.79E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.7/39, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=69.6km s-min=44.3km az=90.0, Santa Cruz Islands

```
Code   Station Name          Δ°   AZ°   Phase ID           Time      Res
                                        Op       ISC       h  m  s   ISC
DZM    Mont Dzumac        11.31 177     Pn       Pn        07 22 38.5 +0.1
       1.0nm,0.3s,baz=1.6,slow=23,SNR=1.4
H11S2  WAKE ISLAND Hy 29.03     2     T        T         07 55 13.5
       baz=184,slow=76,SNR=21
H11S3  WAKE ISLAND Hy 29.03     2     T        T         07 55 14.0
       baz=184,slow=76,SNR=22
H11S1  WAKE ISLAND Hy 29.05     2     T        T         07 55 15.3
       baz=184,slow=76,SNR=22
H11N1  WAKE ISLAND Hy 30.25     2     T        T         07 56 45.5
       baz=183,slow=76,SNR=11
H11N3  WAKE ISLAND Hy 30.26     2     T        T         07 57 02.0
       baz=183,slow=76,SNR=10.0
H11N2  WAKE ISLAND Hy 30.27     2     T        T         07 56 56.3
       baz=183,slow=76,SNR=8.2
WRA    Warramunga Arr     31.64 249     P        P         07 26 20.5 +0.1
       1.9nm,0.8s,baz=80,slow=9.0,SNR=8.0
ASAR   Alice Springs      32.98 243     P        P         07 26 31.8 -0.4
       0.2nm,0.3s,baz=63,slow=10,SNR=1.7
MKAR   Makanchi Array     93.31 317     P        P         07 33 12.2  0.0
       0.6nm,0.7s,baz=109,slow=6.1,SNR=6.3
```

IDC 07 07:20:45.0±4.8**, 11°.97S**×**163°.55E, h0^{km}, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/38**, mbtmp3.9**/4**, Error ellipse: s-maj=120.5km s-min=50.5km az=112.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.30**	**222**	P	P	07 26 40.8	+0.4
	1.3nm,0.8s,baz=76,slow=17,SNR=3.5						
WRA	**Warramunga Arr**	**29.14**	**251**	P	P	07 26 48.1	+0.1
	1.5nm,0.7s,baz=82,slow=9.2,SNR=8.1						
ASAR	**Alice Springs**	**30.45**	**243**	P	P	07 26 59.4	-0.3
	0.6nm,0.5s,baz=65,slow=10,SNR=9.2						
MKAR	**Makanchi Array**	**92.73**	**317**	P	P	07 33 59.1	-0.1
	0.4nm,0.9s,baz=119,slow=8.4,SNR=1.9						

---

*IDC **07** 07:29:32.6±0.9, 15°.68S×173°.13W, h0^{km}, mb4.0/10, mb1 4.3/10, mb1mx4.0/40, mbtmp4.0/10, Error ellipse: s-maj=51.3km s-min=17.8km az=140.0*

*NEIC **07** 07:29:34.3±0.3, 15°.74S×173°.14W, h10^{km}, mb4.6/14, Error ellipse: s-maj=9.1km s-min=6.6km az=136.0*

*ISCJB **07** 07:29:35.3±0.4, 15°.74S±0°.07×173°.18W±0°.08, h29^{km}, mb4.3/21, Error ellipse: s-maj=12.3km s-min=8.9km az=136.3*

ISC 07 07:29:37.0±0.6**, 15°.8S**±0°.1×**173°.1W**±0°.1**, h29^{km}, n36, σ0^s.66**/35**, mb4.3**/21**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.51**	**138**	*e*Pn	Pn	07 30 37.1	-6.2
NIUE				*e*Sn	Sn	07 31 21.6	-13
FUNA	**Funafuti**	**10.38**	**313**	*e*Pn	**Pn**	**07 32 03.8**	**-0.2**
RAR	**Rarotonga**	**13.79**	**115**	*e*Pn	**Pn**	**07 32 50.0**	**-0.6**
URZ	**Urewera**	**24.01**	**199**	*e*P	**P**	**07 34 49.1**	**-0.1**
	6.1nm,0.6s						
URZ	**Urewera**	**24.01**	**199**	P	**P**	**07 34 49.4**	**+0.2**
	1.8nm,0.3s,baz=27,slow=11,SNR=1.9						
BKZ	**Black Stump Fm**	**25.03**	**199**	*e*P	**P**	**07 34 59.7**	**+1.0**
	22nm,1.3s						
THZ	**Tophouse**	**28.58**	**202**	*e*P	**P**	**07 35 30.2**	**-0.3**
	30nm,1.5s						
KHZ	**Kahutara**	**28.93**	**201**	*e*P	**P**	**07 35 33.8**	**+0.2**
	25nm,1.3s						
WHZ	**Wether Hill Ro**	**33.97**	**204**	*e*P	**P**	**07 36 18.6**	**+0.6**
	30nm,1.6s						
ARMA	**Armidale**	**35.38**	**239**	*e*P	**P**	**07 36 30.2**	**-0.2**
	7.4nm,1.1s						
TOO	**Toolangi**	**42.44**	**231**	*e*P	**P**	**07 37 29.4**	**0.0**
	20nm,1.5s						
STKA	**Stephens Creek**	**44.08**	**240**	*e*P	**P**	**07 37 42.3**	**-0.4**
	2.3nm,1.5s						
STKA	**Stephens Creek**	**44.08**	**240**	P	**P**	**07 37 42.3**	**-0.4**
	2.8nm,0.7s,baz=98,slow=9.3,SNR=8.9						
WB2	**Warramunga Arr**	**50.00**	**257**	*e*P	**P**	**07 38 29.4**	**+0.3**
	4.7nm,1.1s						
WR1	**Warramunga Arr**	**50.01**	**257**	*e*P	**P**	**07 38 29.2**	**0.0**
	12nm,1.5s						
WRA	**Warramunga Arr**	**50.01**	**257**	P	**P**	**07 38 29.2**	**0.0**
	1.2nm,0.7s,baz=93,slow=7.2,SNR=16						
AS01	**Alice Springs**	**50.20**	**252**	*e*P	**P**	**07 38 30.6**	**0.0**
AS31	**Alice Springs**	**50.24**	**252**	*e*P	**P**	**07 38 30.7**	**-0.2**
	2.1nm,0.7s						
ASAR	**Alice Springs**	**50.24**	**252**	P	**P**	**07 38 31.2**	**+0.3**
	6.9nm,0.7s,baz=86,slow=8.1,SNR=87						
FORT	**Forrest**	**55.48**	**243**	*e*P	**P**	**07 39 09.0**	**-0.4**
	21nm,1.2s						
NVAR	**Mina Array Bea**	**74.42**	**42**	P	**P**	**07 41 12.3**	**-0.4**
	0.7nm,0.7s,baz=247,slow=7.7,SNR=4.5						
LTX	**Lajitas**	**80.60**	**56**	*e*P	**P**	**07 41 49.0**	**+1.7**
TXAR	**Lajitas Array**	**80.60**	**56**	P	**P**	**07 41 49.0**	**+1.7**
	0.6nm,0.9s,baz=223,slow=6.8,SNR=4.9						
PDAR	**Pinedale Array**	**82.36**	**42**	P	**P**	**07 41 54.9**	**-1.7**
	0.6nm,0.8s,baz=220,slow=3.5,SNR=5.3						
SMCO	**Snowmass**	**82.38**	**46**	*e*P	**P**	**07 41 56.8**	**-0.2**
	3.8nm,1.4s						
ILAR	**Eielson Array**	**82.74**	**11**	P	**P**	**07 41 56.9**	**-0.9**
	0.7nm,0.7s,baz=229,slow=6.3,SNR=14						
ILB	**Eielson Array**	**82.74**	**11**	*e*P	**P**	**07 41 56.8**	**-0.9**
	5.8nm,1.4s						
IM3	**Indian Mountai**	**82.79**	**8**	*e*P	**P**	**07 41 58.5**	**+0.6**
INK	**Inuvik**	**88.55**	**14**	P	**P**	**07 42 25.9**	**-0.5**
	0.8nm,0.8s,baz=186,slow=4.5,SNR=3.1						
YKA	**Yellowknife Ar**	**90.32**	**23**	P	**P**	**07 42 34.7**	**-0.1**
	0.5nm,0.7s,baz=238,slow=4.8,SNR=11						
YKB5	**Yellowknife Ar**	**90.32**	**23**	*e*P	**P**	**07 42 35.3**	**+0.4**
BVAR	**Borovoye Array**	**118.31**	**322**	PKP	**PKiKP**	**07 48 21.5**	**0.0**
	0.6nm,0.6s,baz=339,slow=3.8,SNR=3.8						
ARA0	**ARCESS Array S**	**124.99**	**352**	*e*PKPdf	**PKiKP**	**07 48 34.4**	**+0.2**
ARCES	**ARCESS Array B**	**124.99**	**352**	PKP	**PKiKP**	**07 48 34.4**	**+0.2**
	2.4nm,1.0s,baz=327,slow=1.5,SNR=2.2						
BR101	**Keskin Array S**	**146.59**	**321**	*e*PKPdf	**PKPab**	**07 49 17.3**	**0.0**
BRTR	**Keskin Array B**	**146.59**	**321**	PKPbc	**PKPab**	**07 49 17.3**	**0.0**
	3.5nm,0.9s,baz=94,slow=1.3,SNR=12						

NNC 07 07:35:24.5±1.9**, 41°.81N**×**78°.45E, h0^{km}, mb3.3, mpv2.9, 2C-2D, Error ellipse: s-maj=12.3km s-min=9.0km az=148.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	**1.25**	**359**	P	Pg	07 35 47.0	-1.4
	1.1nm,0.2s						
SATY				S	Sg	07 36 03.6	-1.0
	3.4nm,0.2s						
TNSS	**Tian-Shan**	**1.65**	**318**	P	Pn	07 35 55.4	+0.3
	4.1nm,0.2s						
TNSS				S	Sb	07 36 18.4	+0.8
	5.3nm,0.3s						
KOTS	**Kotyrbulak**	**1.73**	**326**	P	Pn	07 35 55.9	0.0
	1.8nm,0.3s						
KOTS				S	Sb	07 36 19.3	-0.3
	5.7nm,0.3s						
IZV	**Izvestkoviy**	**1.83**	**313**	P	Pb	07 35 58.6	-0.3
	2.7nm,0.2s						
IZV				S	Sg	07 36 23.8	+0.6
	3.0nm,0.1s						
CHKK	**Chushkaly**	**2.31**	**333**	Pg	Pb	07 36 06.8	-0.1
	8.1nm,0.2s						
CHKK				Lg	Lg	07 36 37.8	
	14nm,0.3s						
TKM2	**Tokmak 2**	**2.38**	**299**	⇓Pg	Pn	07 36 06.3	+1.3
	1.7nm,0.5s						
TKM2				⇑Lg	Lg	07 36 37.7	
	2.2nm,0.4s						
DGS	**Degeres**	**2.44**	**307**	Pg	Pb	07 36 09.2	-0.1
	5.9nm,0.4s						
DGS				Lg	Lg	07 36 41.8	
	5.5nm,0.4s						
ARXS	**Arharly**	**2.44**	**350**	Pg	Pb	07 36 09.6	+0.2
	4.7nm,0.3s						
ARXS				Lg	Lg	07 36 42.2	
	4.9nm,0.3s						
KUU	**Kurty**	**2.59**	**324**	Pg	Pb	07 36 11.2	-0.7
	2.2nm,0.2s						
KUU				Lg	Lg	07 36 45.1	
	8.6nm,0.1s						
DJR	**Jarkent**	**2.71**	**21**	Pg	Pb	07 36 14.9	+1.1
	0.6nm,0.1s						
DJR				Lg	Lg	07 36 51.7	
	2.4nm,0.4s						
AAK	**Ala-Archa**	**3.05**	**287**	⇓Pg	Pb	07 36 18.7	-1.0
	1.6nm,0.7s						
AAK				⇑Lg	Lg	07 36 58.1	
	1.6nm,0.5s						

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*ISCJB **07** 07:35:32.1±0.9, 0°.29N±0°.05×80°.14W±0°.06, h17^{km}, Error ellipse: s-maj=9.4km s-min=5.2km az=34.6*

*IGQ **07** 07:35:33.0±0.7, 0°N±5°×8°0W±°, h10^{km}, MLv4.2*

ISC 07 07:35:32.9±1.6**, 0°.24N**±0°.06×**80°.09W**±0°.07**, h17^{km}, n63, σ1^s.12**/67**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**0.44**	**134**	P	**Pg**	**07 35 42.5**	**+0.6**
JAMA	**Jama**	**0.51**	**193**	P	**Pg**	**07 35 42.2**	**-0.9**
PAC1	**Pacto, Paraso**	**1.30**	**89**	P	**Pn**	**07 35 54.5**	**-1.9**
PAC1				S	**Sb**	**07 36 12.4**	**-1.0**
GGPC	**Guagua Pichinc**	**1.55**	**105**	P	**Pn**	**07 35 58.8**	**-1.5**
YANA	**Yana**	**1.56**	**103**	P	**Pn**	**07 35 58.9**	**-1.5**
NINA	**Atacazo Ninahu**	**1.60**	**113**	P	**Pn**	**07 35 59.6**	**-1.3**
NINA				S	**Sn**	**07 36 19.9**	**-1.5**
PAST	**Pastocalle**	**1.72**	**123**	P	**Pn**	**07 36 02.0**	**-0.4**
CUIC	**Cuicocha-Domo**	**1.73**	**88**	P	**Pn**	**07 36 01.5**	**-1.1**
CUIC				S	**Sb**	**07 36 25.5**	**-0.6**
COTA	**Cotacachi**	**1.75**	**87**	P	**Pn**	**07 36 02.6**	**-0.4**
PITA	**Cotopaxi Volc**	**1.83**	**115**	P	**Pn**	**07 36 04.1**	**0.0**
NAS2	**Nasa**	**1.84**	**118**	P	**Pn**	**07 36 04.4**	**+0.2**
BNAS	**Cotopaxi Volca**	**1.84**	**119**	P	**Pn**	**07 36 04.5**	**+0.2**
URCU	**Urcuqui**	**1.84**	**84**	P	**Pn**	**07 36 03.5**	**-0.7**
BREF	**Cotopaxi Volca**	**1.88**	**119**	P	**Pn**	**07 36 06.2**	**+1.3**
IMBA	**Imbabura, San**	**1.89**	**89**	P	**Pn**	**07 36 05.0**	**+0.2**
BMOR	**Cotopaxi Volca**	**1.89**	**121**	P	**Pn**	**07 36 05.1**	**+0.1**
BVC2	**Cotopaxi Volca**	**1.90**	**118**	P	**Pn**	**07 36 05.3**	**+0.2**
VC1	**Cotopaxi 1**	**1.90**	**117**	P	**Pn**	**07 36 05.3**	**+0.2**
BTAM	**Cotopaxi Volca**	**1.92**	**118**	P	**Pn**	**07 36 05.6**	**+0.3**
ANTG	**Antisana-Guama**	**1.98**	**112**	P	**Pn**	**07 36 06.1**	**0.0**
SAGO	**Sagoatoa**	**1.98**	**134**	P	**Pn**	**07 36 06.9**	**+0.7**
ANTM	**Antisana-La Mi**	**2.02**	**112**	P	**Pn**	**07 36 06.8**	**+0.1**
YAHU	**Yahuarcocha**	**2.02**	**86**	P	**Pn**	**07 36 07.3**	**+0.7**
YAHU				S	**Sb**	**07 36 35.5**	**+0.9**
ANTI	**Antisana**	**2.04**	**109**	P	**Pn**	**07 36 07.3**	**+0.2**
ANTS	**Antisana-Sarah**	**2.05**	**111**	P	**Pn**	**07 36 07.3**	**+0.1**
CAYA	**Cayambe**	**2.10**	**94**	P	**Pn**	**07 36 08.1**	**+0.2**
PIS1	**Pisayambo**	**2.13**	**127**	P	**Pn**	**07 36 09.1**	**+0.8**
PISA	**Pisayambo**	**2.13**	**127**	P	**Pn**	**07 36 09.2**	**+0.9**
BIL2	**Estacion Bilba**	**2.31**	**137**	P	**Pn**	**07 36 12.4**	**+1.8**
JUI6	**Juive**	**2.31**	**136**	P	**Pn**	**07 36 11.7**	**+1.2**
BBIL	**Ulba Tungurahu**	**2.32**	**136**	P	**Pn**	**07 36 11.9**	**+1.2**
RUN5	**Runtun**	**2.34**	**135**	P	**Pn**	**07 36 12.3**	**+1.4**
RETU	**Refugio**	**2.35**	**136**	P	**Pn**	**07 36 12.2**	**+1.0**
BRUN	**Tungurahua Vol**	**2.35**	**134**	P	**Pn**	**07 36 12.0**	**+0.9**
TULM	**Tulcn-Chalpat**	**2.35**	**78**	P	**Pn**	**07 36 11.7**	**+0.4**
BMAS	**Trigal station**	**2.36**	**137**	P	**Pn**	**07 36 12.4**	**+1.1**
BULB	**Ulba Tungurahu**	**2.36**	**135**	P	**Pn**	**07 36 12.5**	**+1.2**
CMBC	**Cumbal**	**2.37**	**73**	*e*P	**Pn**	**07 36 11.4**	**0.0**
CMBC	**Cumbal**	**2.37**	**73**	*e*P	**Pn**	**07 36 11.4**	**0.0**
ARRY	**Arrayan**	**2.38**	**137**	P	**Pn**	**07 36 12.3**	**+0.8**
PAT1	**Patacocha**	**2.39**	**136**	P	**Pn**	**07 36 13.4**	**+1.6**
BPAT	**Tungurahua Vol**	**2.39**	**136**	P	**Pn**	**07 36 12.5**	**+0.7**
CONE	**Cono NE Rev Vo**	**2.46**	**97**	P	**Pn**	**07 36 14.6**	**+1.9**
MILO	**Milagro-Astudi**	**2.56**	**168**	P	**Pn**	**07 36 11.8**	**-1.8**
SALI	**Salinas**	**2.57**	**201**	P	**Pn**	**07 36 14.7**	**+0.9**
ARDO	**Archidona, Ten**	**2.59**	**118**	P	**Pn**	**07 36 16.4**	**+2.2**
PUYO	**Puyo, Santa Ro**	**2.69**	**130**	P	**Pn**	**07 36 16.9**	**+1.4**
COHC	**Cochancay**	**2.81**	**163**	P	**Pn**	**07 36 16.6**	**-0.5**
GCUF	**Volcan Galeras**	**2.91**	**70**	*e*P	**Pn**	**07 36 20.2**	**+1.2**
GCUF	**Volcan Galeras**	**2.91**	**70**	*e*P	**Pn**	**07 36 20.2**	**+1.2**
CRUC	**La Cruz**	**3.41**	**67**	*e*P	**Pn**	**07 36 26.8**	**+1.2**
CRUC	**La Cruz**	**3.41**	**67**	*e*P	**Pn**	**07 36 26.8**	**+1.2**
SOTA	**Rioblanco**	**3.96**	**62**	*e*P	**Pn**	**07 36 33.9**	**+0.5**
SOTA	**Rioblanco**	**3.96**	**62**	*e*P	**Pn**	**07 36 33.9**	**+0.5**
MCRA	**Macar, Loja**	**4.58**	**178**	P	**Pn**	**07 36 42.9**	**+1.4**
MARP	**Paez Belalcaza**	**4.88**	**58**	*e*P	**Pn**	**07 36 46.8**	**+1.0**
MARP	**Paez Belalcaza**	**4.88**	**58**	*e*P	**Pn**	**07 36 46.8**	**+1.0**
YOTC	**Yotoco, Valle**	**5.28**	**45**	*e*P	**Pn**	**07 36 50.1**	**-1.1**
YOTC	**Yotoco, Valle**	**5.28**	**45**	*e*P	**Pn**	**07 36 50.1**	**-1.1**
PTLC	**Puerto Leguiza**	**5.29**	**91**	*e*P	**Pn**	**07 36 52.3**	**+1.0**
PTLC	**Puerto Leguiza**	**5.29**	**91**	*e*P	**Pn**	**07 36 52.3**	**+1.0**
CHIC	**Chingaza**	**7.71**	**55**	*e*P	**Pn**	**07 37 27.3**	**+2.5**
CHIC	**Chingaza**	**7.71**	**55**	*e*P	**Pn**	**07 37 27.3**	**+2.5**

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*IDC **07** 07:38:16.8±0.5, 33°.60S×77°.53E, h0^{km}, mb4.5/22, mb1 4.6/22, mb1mx4.4/53, mbtmp4.5/22, Error ellipse: s-maj=17.2km s-min=16.1km az=140.0*

*ISCJB **07** 07:38:17.6±0.3, 33°.68S±0°.06×77°.59E±0°.06, h16^{km}, mb4.8/57, Error ellipse: s-maj=9.3km s-min=7.5km az=7.4*

*NEIC **07** 07:38:18.5±0.1, 33°.63S×77°.54E, h10^{km}, mb5.0/35, Error ellipse: s-maj=5.5km s-min=4.4km az=195.0*

ISC 07 07:38:19.4±0.4**, 33°.69S**±0°.08×**77°.54E**±0°.08**, h16^{km}, n148, σ0^s.91**/145**, mb4.9**/57**, 2D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRIV	**Mauritius Mete**	**22.24**	**302**	*e*P	**P**	**07 43 15.8**	**+0.2**
	40nm,1.2s						
RER	**Riviere de l'E**	**22.97**	**297**	*e*P	**P**	**07 43 24.0**	**+0.6**
	106nm,1.2s						
H08S2	**Diego Garcia H**	**26.33**	**349**	T	T	08 11 10.4	
	baz=171,slow=76,SNR=56						
H08S1	**Diego Carcia H**	**26.34**	**349**	T	T	08 11 10.4	
	baz=171,slow=76,SNR=23						
H08S3	**Diego Garcia H**	**26.35**	**349**	T	T	08 11 11.9	
	baz=171,slow=76,SNR=191						
H01W2	**Cape Leeuwin H**	**30.15**	**103**	T	T	08 15 58.4	
	baz=262,slow=74,SNR=98						
H01W3	**Cape Leeuwin H**	**30.16**	**103**	T	T	08 15 58.7	
	baz=262,slow=74,SNR=123						
H01W1	**Cape Leeuwin H**	**30.17**	**103**	T	T	08 15 59.7	
	baz=262,slow=74,SNR=128						
CISI	**Cisompet, Garu**	**38.18**	**54**	*e*P	**P**	**07 45 38.1**	**-0.3**
	39nm,1.3s						
PALK	**Pallekele**	**40.84**	**5**	P	**P**	**07 45 59.3**	**-1.2**
	6.9nm,0.8s,baz=116,slow=10,SNR=3.7						
SYO	**Syowa Base**	**41.24**	**200**	⇓*e*P	**P**	**07 46 02.0**	**-1.2**
PSI	**Prapat**	**41.52**	**33**	P	**P**	**07 46 05.7**	**-0.6**
	2.2nm,0.4s,baz=180,slow=11,SNR=4.8						
KULM	**Kulim**	**44.51**	**34**	*e*P	**P**	**07 46 30.2**	**-0.1**
	51nm,1.5s						
MATP	**Matopo**	**45.24**	**274**	P	**P**	**07 46 35.9**	**-0.4**
	7.3nm,1.1s,baz=144,slow=10.0,SNR=6.7						
FITZ	**Fitzroy Crossi**	**45.56**	**82**	*e*P	**P**	**07 46 39.0**	**+0.3**
	23nm,1.5s						
LBTB	**Lobatse**	**45.70**	**267**	*e*P	**P**	**07 46 39.9**	**0.0**
	18nm,1.4s						
LBTB	**Lobatse**	**45.70**	**267**	P	**P**	**07 46 39.8**	**-0.1**
	5.1nm,1.0s,baz=90,slow=17,SNR=3.6						
SUR	**Sutherland**	**47.06**	**255**	P	**P**	**07 46 52.4**	**+1.8**
	13nm,1.0s,baz=200,slow=2.7,SNR=4.3						
LSZ	**Lusaka**	**48.03**	**280**	*e*P	**P**	**07 46 58.6**	**+0.3**
	26nm,1.3s						
SOEI	**Soe**	**48.98**	**72**	*e*P	**P**	**07 47 05.7**	**+0.1**
	30nm,1.4s						
AS31	**Alice Springs**	**49.92**	**94**	*e*P	**P**	**07 47 12.5**	**-0.1**
	2.2nm,1.1s						
AS01	**Alice Springs**	**49.96**	**94**	*e*P	**P**	**07 47 12.5**	**-0.4**
HYB	**Hyderabad**	**50.83**	**1**	*i*P	**P**	**07 47 20.0**	**+0.7**
WR1	**Warramunga Arr**	**51.92**	**90**	*e*P	**P**	**07 47 27.4**	**-0.3**
	19nm,1.3s						
WRA	**Warramunga Arr**	**51.92**	**90**	P	**P**	**07 47 27.4**	**-0.3**
	7.5nm,1.0s,baz=244,slow=7.2,SNR=24						
WB2	**Warramunga Arr**	**51.93**	**90**	*e*P	**P**	**07 47 27.6**	**-0.1**
WRAB	**Tennant Creek**	**51.94**	**90**	*e*P	**P**	**07 47 27.3**	**-0.5**
	20nm,1.2s						
STKA	**Stephens Creek**	**53.09**	**107**	*e*P	**P**	**07 47 36.2**	**0.0**
	6.5nm,1.6s						
STKA	**Stephens Creek**	**53.09**	**107**	P	**P**	**07 47 36.1**	**0.0**
	3.5nm,0.9s,baz=244,slow=9.9,SNR=4.1						
TOO	**Toolangi**	**54.27**	**115**	*e*P	**P**	**07 47 45.7**	**+0.9**
	34nm,1.3s						
PBKT	**Sadao Pong**	**54.74**	**28**	*e*P	**P**	**07 47 48.1**	**-0.1**
	16nm,1.2s						
SNAA	**Sanae**	**55.40**	**202**	*e*P	**P**	**07 47 52.8**	**+0.2**
	26nm,1.4s						
SNAA	**Sanae**	**55.40**	**202**	P	**P**	**07 47 52.9**	**+0.4**
	8.7nm,1.1s,baz=116,slow=12,SNR=4.7						
CM01	**Chiang Mai Arr**	**55.70**	**25**	*e*P	**P**	**07 47 54.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**55.73**	**25**	P	**P**	**07 47 54.5**	**-0.8**
	0.9nm,0.3s,baz=205,slow=6.3,SNR=6.8						
QSPA	**South Pole Qui**	**56.46**	**180**	*e*P	**P**	**07 48 00.8**	**+0.5**
QSPA	**South Pole Qui**	**56.46**	**180**	P	**P**	**07 48 00.1**	**-0.1**
	14nm,1.1s,baz=277,slow=3.2,SNR=17						
CTA	**Charters Tower**	**61.77**	**96**	P	**P**	**07 48 38.2**	**+0.7**
	5.0nm,0.9s,baz=216,slow=13,SNR=2.6						
LSA	**Lhasa**	**64.35**	**13**	*e*P	**P**	**07 48 54.8**	**-0.1**
	19nm,1.5s						
GYA	**Guiyang**	**65.90**	**29**	P	**P**	**07 49 06.8**	**+2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NIL	**Nilore**	**67.10**	**356**	*e*P	**P**	**07 49 11.4**	**-0.7**
	comp=Z,14nm,1.0s						
KBL	**Kabul**	**68.34**	**352**	*e*P	**P**	**07 49 19.7**	**-0.3**
	comp=Z,22nm,1.0s						
CD2	**Chengdu**	**68.86**	**24**	P	**P**	**07 49 23.0**	**-0.1**
CD2				pmax	pmax		
	comp=Z,20nm,1.5s						
CD2				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2				LR	LR		
	comp=N,3μm,23.5s						
CD2				LR	LR		
	comp=E,3μm,20.9s						
CD2				LR	LR		
	comp=Z,4μm,22.5s						
H09W1	**TRISTAN DA CUN**	**70.55**	**238**	T	T	09 07 25.7	
	SNR=4.6						
KSH	**Kashi**	**72.85**	**359**	P	P	07 49 42.3	-5.1
KSH				pP	pwP	07 49 55.5	-0.5
KSH				PP	**PP**	**07 52 36.4**	**+6.4**
KSH				S	S	07 59 02.1	-11
KSH				sS	SKiKP	07 59 21.3	+1.0
KSH	**Kashi**	**72.85**	**359**	SS	SS	08 03 55.3	+1.4
GEYT	**Alibeck**	**73.51**	**344**	P	**P**	**07 49 50.8**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=223,slow=6.1,SNR=6.4						
GYA0B	**ALIBECK ARRAY**	**73.51**	**344**	*e*P	**P**	**07 49 51.0**	**-0.2**
	comp=Z,23nm,1.5s						
XAN	**Xi'an**	**73.53**	**27**	P	**P**	**07 49 51.3**	**-0.1**
XAN				pP	pwP	07 50 00.0	0.0
XAN				sP	PcP	07 50 04.3	-3.0
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
XAN				pmax	pmax		
	comp=Z,400nm,7.7s						
XAN	**Xi'an**	**73.53**	**27**	*e*P	**P**	**07 49 50.7**	**-0.7**
	comp=Z,11nm,1.0s						
LZH	**Lanzhou**	**73.64**	**22**	*e*P	**P**	**07 49 51.4**	**-0.7**
LZH				pP	pwP	07 50 01.4	+0.6
LZH				sP	PcP	07 50 05.1	-2.8
LZH				PP	PP	07 52 48.4	+12
LZH				pmax	pmax		
	comp=Z,23nm,1.6s						
LZH				pmax	pmax		
	comp=Z,98nm,4.7s						
LZH				LR	LR		
	comp=N,250nm,14.6s						
LZH				LR	LR		
	comp=E,280nm,15.0s						
LZH				LR	LR		
	comp=Z,250nm,17.8s						
BTK	**Batken**	**73.64**	**355**	*e*P	**P**	**07 49 52.6**	**+0.7**
	comp=Z,30nm,1.3s						
NRN	**Naryn**	**74.77**	**359**	*e*P	**P**	**07 49 58.5**	**-0.3**
	comp=Z,14nm,1.2s						
KZA	**Kyzart**	**75.42**	**358**	P	**P**	**07 50 02.9**	**+0.2**
	SNR=5.4						
AML	**Almayashu**	**75.53**	**357**	P	**P**	**07 50 03.7**	**+0.4**
	SNR=6.1						
ULHL	**Ulahol**	**75.57**	**359**	P	**P**	**07 50 03.3**	**0.0**
	SNR=7.3						
GTA	**Gaotai**	**75.60**	**18**	⇓P	**P**	**07 50 03.4**	**0.0**
GTA				pP	sP	07 50 08.8	-0.3
GTA				sP	pwP	07 50 11.4	-0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,50nm,5.7s						
GTA				LR	LR		
	comp=N,590nm,20.0s						
GTA				LR	LR		
	comp=E,1μm,19.7s						
GTA				LR	LR		
	comp=Z,780nm,20.0s						
AAK	**Ala-Archa**	**76.01**	**358**	*e*P	**P**	**07 50 05.5**	**-0.2**
	comp=Z,12nm,1.2s						
EKS2	**Erkin-Say**	**76.06**	**357**	P	**P**	**07 50 06.7**	**+0.8**
	SNR=6.6						
NJ2	**Nanjing**	**76.10**	**35**	*e*P	**P**	**07 50 06.8**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
TKM2	**Tokmak 2**	**76.26**	**359**	P	**P**	**07 50 06.6**	**-0.5**
	SNR=7.5						
USP	**Ospenovka**	**76.64**	**358**	P	**P**	**07 50 09.1**	**0.0**
	SNR=12						
KKAR	**Karatay Array**	**76.69**	**355**	*e*P	**P**	**07 50 09.7**	**+0.4**
	comp=Z,29nm,1.0s						
WMQ	**Urumqi**	**77.69**	**8**	P	**P**	**07 50 15.1**	**+0.1**
WMQ				sP	PcP	07 50 24.1	-1.0
WMQ				S	**S**	**08 00 03.9**	**-2.4**
WMQ	**Urumqi**	**77.69**	**8**	SS	SS	08 05 01.8	-5.4
WMQ				pmax	pmax		
	comp=Z,27nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,240nm,3.6s						
WMQ				LR	LR		
	comp=N,1μm,30.5s						
WMQ				LR	LR		
	comp=E,1μm,26.1s						
WMQ				LR	LR		
	comp=Z,1μm,37.1s						
WMQ	**Urumqi**	**77.69**	**8**	*e*P	**P**	**07 50 14.9**	**-0.2**
	comp=Z,29nm,1.4s						
SIRT	**Sirnak**	**78.00**	**332**	*e*P	**P**	**07 50 17.6**	**+0.6**
	comp=Z,47nm,1.0s						
MK01	**Makanchi Array**	**80.20**	**3**	*e*P	**P**	**07 50 27.6**	**-1.1**
MAKZ	**Makanchi**	**80.22**	**3**	*e*P	**P**	**07 50 27.7**	**-1.2**
	comp=Z,6.9nm,1.0s						
MK31	**Makanchi Array**	**80.22**	**3**	*e*P	**P**	**07 50 27.9**	**-1.0**
	comp=Z,8.0nm,1.1s						
MK32	**Makanchi Array**	**80.22**	**3**	*e*P	**P**	**07 50 27.8**	**-1.1**
MKAR	**Makanchi Array**	**80.22**	**3**	*e*P	**P**	**07 50 27.8**	**-1.0**
	comp=Z,37nm,0.9s						
MKAR	**Makanchi Array**	**80.22**	**3**	P	**P**	**07 50 27.8**	**-1.0**
	comp=Z,5.1nm,0.8s,baz=177,slow=6.1,SNR=26						
HHC	**Hu-ho-hao-te**	**80.53**	**25**	*e*P	**P**	**07 50 33.6**	**+2.9**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,210nm,5.6s						
BR101	**Keskin Array S**	**83.58**	**327**	*e*P	**P**	**07 50 46.6**	**-0.1**
BR131	**Keskin Array S**	**83.58**	**327**	*e*P	**P**	**07 50 46.8**	**0.0**
	comp=Z,6.6nm,1.1s						
BRTR	**Keskin Array B**	**83.58**	**327**	P	**P**	**07 50 46.6**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=157,slow=8.0,SNR=9.3						
KURBB	**Kurchatov Arra**	**83.95**	**1**	P	**P**	**07 50 48.4**	**+0.2**
	comp=Z,3.6nm,0.8s,baz=192,slow=5.2,SNR=22						
KURK	**Kurchatov**	**84.04**	**1**	*e*P	**P**	**07 50 48.3**	**-0.4**
	comp=Z,19nm,1.4s						
ABKAR	**Akbulak array**	**84.05**	**349**	*e*P	**P**	**07 50 48.4**	**-0.4**
	comp=Z,15nm,1.3s						
SONA0	**Songino Array**	**85.18**	**19**	*e*P	**P**	**07 50 54.6**	**-0.1**
SONM	**Songino Array**	**85.18**	**19**	P	**P**	**07 50 54.6**	**-0.1**
	comp=Z,3.2nm,1.0s,baz=200,slow=4.6,SNR=16						
SONA1	**Songino Array**	**85.19**	**19**	*e*P	**P**	**07 50 54.4**	**-0.4**
AKTO	**Aktyubinsk**	**85.52**	**348**	P	**P**	**07 50 55.6**	**-0.5**
	comp=Z,1.8nm,0.4s,baz=150,slow=5.0,SNR=12						
TOA0	**Torodi Ar. Sit**	**85.77**	**289**	*e*P	**P**	**07 50 58.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**85.77**	**289**	P	**P**	**07 50 56.8**	**-1.5**
	comp=Z,8.9nm,1.1s,baz=131,slow=4.2,SNR=23						
TOA1	**Torodi Ar. Sit**	**85.77**	**289**	*e*P	**P**	**07 50 56.8**	**-1.5**
BVAR	**Borovoye Array**	**86.57**	**356**	P	**P**	**07 51 00.6**	**-0.7**
	comp=Z,3.3nm,1.0s,baz=167,slow=7.2,SNR=12						
BRVK	**Borovoye**	**86.61**	**356**	*e*P	**P**	**07 51 01.3**	**-0.2**
	comp=Z,10nm,1.2s						
ZAA0	**Zalesovo Array**	**87.50**	**4**	*e*P	**P**	**07 51 05.3**	**-0.5**
	comp=Z,39nm,1.4s						
ZALV	**Zalesovo Beam**	**87.50**	**4**	*e*P	**P**	**07 51 05.1**	**-0.6**
ZALV	**Zalesovo Beam**	**87.50**	**4**	P	**P**	**07 51 05.0**	**-0.7**
	comp=Z,12nm,0.9s,baz=199,slow=4.1,SNR=38						
ZAA1	**Zalesovo Array**	**87.51**	**4**	*e*P	**P**	**07 51 05.0**	**-0.8**
CN2	**Changchun**	**88.63**	**33**	*e*P	**P**	**07 51 13.0**	**+1.6**
MLR	**Muntele Rosu**	**91.61**	**327**	*e*P	**P**	**07 51 25.8**	**+0.3**
	comp=Z,17nm,1.1s						
MLR	**Muntele Rosu**	**91.61**	**327**	P	**P**	**07 51 25.8**	**+0.3**
	comp=Z,7.4nm,0.9s,baz=230,slow=20,SNR=7.4						
AKASG	**Malin Array Be**	**94.21**	**332**	P	**P**	**07 51 36.6**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=130,slow=4.1,SNR=9.2						
IM3	**Indian Mountai**	**135.82**	**27**	*e*PKPdf	**PKPdf**	**07 57 38.5**	**+0.1**
MLY	**Manley**	**137.34**	**28**	*e*PKPdf	**PKPdf**	**07 57 41.5**	**+0.2**
FYU	**Fort Yukon**	**138.66**	**24**	*e*PKPdf	**PKPdf**	**07 57 44.3**	**+0.8**
ILAR	**Eielson Array**	**138.94**	**27**	PKP	**PKPdf**	**07 57 43.2**	**-1.0**
	comp=Z,0.7nm,1.0s,baz=297,slow=2.1,SNR=3.6						
OTAV	**Otavalo**	**139.81**	**219**	*e*PKPdf	**PKPdf**	**07 57 47.5**	**-0.5**
SCRK	**Sand Creek**	**140.43**	**27**	*e*PKPdf	**PKPdf**	**07 57 47.0**	**-0.1**
INK	**Inuvik**	**141.08**	**18**	*e*PKPdf	**PKPdf**	**07 57 48.0**	**+0.1**
INK	**Inuvik**	**141.08**	**18**	PKP	**PKPdf**	**07 57 47.1**	**-0.8**
	comp=Z,4.2nm,1.0s,baz=314,slow=3.7,SNR=7.9						
HUMP	**Col San Antoni**	**143.84**	**254**	*e*PKPdf	PKPbc	07 57 52.3	+0.2
MPR	**Mayaguez**	**144.90**	**253**	*e*PKPdf	**PKPab**	**07 57 55.2**	**-0.1**
WHY	**Whitehorse**	**145.80**	**28**	*e*PKPdf	**PKPdf**	**07 57 56.3**	**-0.3**
SKAG	**Skagway**	**146.33**	**30**	*e*PKPdf	**PKPdf**	**07 57 57.8**	**+0.4**
BESE	**Bessie Mountai**	**147.04**	**31**	*e*PKPdf	**PKPdf**	**07 57 58.1**	**-0.6**
SCHQ	**Schefferville**	**147.40**	**321**	*e*PKPdf	**PKPdf**	**07 57 59.9**	**+0.5**
SCHQ	**Schefferville**	**147.40**	**321**	PKPbc	**PKPbc**	**07 58 01.7**	**-0.2**
	comp=Z,19nm,1.0s,baz=55,slow=4.7,SNR=13						
JIS	**Juneau Island**	**147.42**	**31**	*e*PKPdf	**PKPdf**	**07 58 00.3**	**+1.1**
SDDR	**Presa de Saban**	**148.61**	**250**	*e*PKPbc	**PKPbc**	**07 58 06.3**	**+0.1**
DLBC	**Dease Lake**	**149.13**	**28**	*e*PKPbc	**PKiKP**	**07 58 07.1**	**-0.5**
YKW3	**Yellowknife Ar**	**150.09**	**11**	*e*PKPbc	**PKPbc**	**07 58 07.6**	**-0.9**
YKW3				*e*PKPab	**pPKPab**	**07 58 16.6**	**-2.0**
YKA	**Yellowknife Ar**	**150.16**	**11**	PKP	**PKPdf**	**07 58 02.3**	**-1.3**
	comp=Z,1.2nm,1.1s,baz=329,slow=2.8,SNR=9.1						
YKA				PKPbc	**pPKPdf**	**07 58 07.9**	**-0.1**

	comp=Z,12nm,1.0s,baz=345,slow=2.7,SNR=19						
YKB5	Yellowknife Ar	150.16	11	ePKPdf	PKPdf	07 58 02.4	-1.2
YKB5				ePKPbc	PKPbc	07 58 08.3	-0.3
DGMT	Dagmar	165.17	5	ePKPab	PKPab	07 59 19.6	-0.1
NV01	Mina Array Sit	166.34	65	ePKPdf	PKPdf	07 58 24.9	+0.8
NVAR	Mina Array Bea	166.34	65	PKP	PKPdf	07 58 25.6	+1.5
	comp=Z,1.7nm,1.0s,baz=206,slow=1.2,SNR=7.8						
V48A	Smith Brothers	166.97	283	ePKPdf	PKPdf	07 58 23.3	-1.1
V48A				ePKPab	PKPab	07 59 28.2	-0.1
R11A	Troy Canyon, C	168.40	63	ePKPdf	PKPdf	07 58 25.3	-0.3
BGU	Big Grassy Mou	168.91	46	ePKPdf	PKPdf	07 58 25.8	0.0
PDAR	Pinedale Array	169.36	30	PKP	PKPdf	07 58 26.1	+0.1
	comp=Z,0.6nm,0.9s,baz=92,slow=4.5,SNR=4.1						
RSSD	Black Hills	169.51	6	ePKPab	PKPab	07 59 38.8	-0.4
PSUT	Pine Spring	169.59	59	ePKPdf	PKPdf	07 58 27.2	+0.8
SZCU	Shurtz Canyon	170.51	63	ePKPdf	PKPdf	07 58 28.1	+1.2
LCMT	Little Creek M	170.59	66	ePKPdf	PKPdf	07 58 27.6	+0.7
MTPU	Mount Pierson	170.99	58	ePKPdf	PKPdf	07 58 27.1	-0.2
PV16	Nyswonger Mesa	173.02	47	ePKPdf	PKPdf	07 58 28.3	+0.3
PV11	David Mesa, Pa	173.06	47	ePKPdf	PKPdf	07 58 28.4	+0.3
PV12	Saucer Basin,	173.09	46	ePKPdf	PKPdf	07 58 28.8	+0.7
PV03	Paradox Valley	173.10	47	ePKPdf	PKPdf	07 58 28.5	+0.4
PV13	Radium Mtn., P	173.18	47	ePKPdf	PKPdf	07 58 28.5	+0.4
PV02	Paradox Valley	173.20	47	ePKPdf	PKPdf	07 58 28.6	+0.4
ISCO	Idaho Springs	173.40	22	ePKPdf	PKPdf	07 58 28.0	-0.3
X18A	Snowflake	173.73	80	ePKPab	PKPab	07 59 59.0	+0.5
S22A	4UR Ranch, Cre	174.61	40	ePKPdf	PKPdf	07 58 29.6	+0.8
SDCO	Great Sand Dun	175.25	31	ePKPdf	PKPdf	07 58 29.5	+0.6
LTX	Lajitas	175.54	166	ePKPdf	PKPdf	07 58 29.6	+0.6
TXAR	Lajitas Array	175.54	166	PKP	PKPdf	07 58 29.6	+0.6
	comp=Z,0.8nm,1.1s,baz=202,slow=1.3,SNR=4.4						
LAZ	Ladron	176.05	78	ePKPdf	PKPdf	07 58 29.5	+0.3
LAZ				ePKPab	PKPab	08 00 09.7	+0.9
JCT	Junction City	176.09	216	ePKPdf	PKPdf	07 58 29.3	+0.3
LENM	Lemitar	176.22	82	ePKPab	PKPab	08 00 10.3	+0.8
BNM	Barren Site	176.50	81	ePKPab	PKPab	08 00 11.1	+0.2
WMOK	Wichita Mounta	176.78	290	ePKPdf	PKPdf	07 58 29.2	+0.1
WMOK				ePKPab	PKPab	08 00 12.1	+0.3
MNTX	Cornudas Mount	176.84	128	ePKPdf	PKPdf	07 58 29.2	+0.1

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*IDC **07** 07:40:01.5±2.0, 46.°82N×155.°89E, h0^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.6/57, mbtmp3.8/10, ML3.4/2, Error ellipse: s-maj=52.4km s-min=21.0km az=169.0*

*ISCJB **07** 07:40:02.7±0.9, 47.°09N±0.°08×155.°2E±0.°1, h18^{km}, mb3.7/9, Error ellipse: s-maj=15.0km s-min=4.2km az=135.2*

*SKHL **07** 07:40:04.8±0.4, 46.°99N×155.°42E, h53^{km}±2^{km}, mb4.2/6*

*MOS **07** 07:40:05.7±2.4, 46.°82N×155.°51E, h55^{km}, mb4.1/4, Error ellipse: s-maj=16.2km s-min=11.2km az=50.8*

ISC 07 07:40:04.5±1.1**, 47.°0N**±0.°1×**155.°4E**±0.°1**, h18**^{km}**, n27, σ2.**^{s}**12**/35**, mb3.5**/9**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.71	7	eP	Pn	07 41 00.3	-0.5
SKR				AMB	AMB	07 41 01.4	
	60nm,0.9s						
SKR				eS	Sn	07 41 41.9	-2.0
SKR				A	A	07 41 47.0	
	100nm,0.5s						
SKR				A	A	07 41 47.0	
	160nm,0.5s						
SKR	Severo-Kuril's	3.71	7	ePN	Pn	07 41 01.0	+0.2
SKR				pmax	pmax		
	comp=Z,58nm,0.9s						
PAU	Pauzhetka	4.56	11	eP	Pn	07 41 12.6	+0.1
PAU				eS	Sn	07 42 03.7	-1.2
PAU				A	A	07 42 04.8	
	comp=Z,210nm,0.8s						
PAU				A	A	07 42 04.8	
	comp=Z,150nm,0.8s						
KUR	Kuril'sk	5.52	254	eP	Pn	07 41 25.6	-0.1
KUR				AMB	AMB	07 41 28.0	
	comp=Z,30nm,0.7s						
KUR				eS	Sn	07 42 25.9	-2.7
KUR				A	A	07 42 27.7	
	comp=Z,50nm,0.4s						
KUR	Kuril'sk	5.52	254	ePN	Pn	07 41 27.7	+2.0
KUR				eS	Sn	07 42 29.1	+0.5
KUR				pmax	pmax		
	comp=Z,62nm,0.2s						
KUR				pmax	pmax		
	comp=E,33nm,0.1s						
KUR				pmax	pmax		
	comp=N,28nm,0.3s						
KUR				smax	smax		
	comp=N,69nm,0.3s						
KUR				smax	smax		
	comp=E,159nm,0.5s						
PETK	Petropavlovsk-	6.28	13	Pn	Pn	07 41 37.1	+0.9
	comp=E,1.5nm,0.3s,baz=201,slow=13,SNR=35						
PET	Petropavlovsk	6.38	18	eP	Pn	07 41 37.1	-0.3
PET				AMB	AMB	07 41 38.2	
	comp=E,10.0nm,0.7s						
PET				eS	Sn	07 42 46.4	-3.3
PET				A	A	07 42 47.6	
	comp=E,30nm,0.5s						
SHO	Shikotan	6.78	246	eP	Pn	07 41 42.0	-1.1
SHO				AMB	AMB	07 41 43.9	
	comp=E,40nm,0.7s						
SHO				AMB	AMB	07 41 43.9	
	comp=E,30nm,0.7s						
SHO				AMB	AMB	07 41 43.9	
	comp=E,20nm,0.7s						
SHO				eS	Sn	07 42 54.8	-5.0
SHO				A	A	07 42 59.4	
	comp=E,20nm,0.3s						
SHO				A	A	07 42 59.4	
	comp=E,50nm,0.3s						
SHO	Shikotan	6.78	246	ePN	Pn	07 41 41.9	-1.1
SHO				pmax	pmax		
	comp=Z,23nm,0.4s						
SHO				pmax	pmax		
	comp=E,11nm,0.3s						
SHO				pmax	pmax		
	comp=N,6.0nm,0.4s						
YUK	Yuzh-Kuril'sk	7.32	249	eP	Pn	07 41 51.0	+0.6
YUK				AMB	AMB	07 41 52.5	
	comp=N,20nm,0.7s						
YUK				AMB	AMB	07 41 52.5	
	comp=N,30nm,0.7s						
YUK				AMB	AMB	07 41 52.5	
	comp=N,10.0nm,0.7s						
YUK				eS	Sn	07 43 09.9	-3.0
YUK				A	A	07 43 15.8	
	comp=N,210nm,0.9s						
YUK				A	A	07 43 15.8	
	comp=N,180nm,0.9s						
YUK	Yuzh-Kuril'sk	7.32	249	ePN	Pn	07 41 51.4	+1.0
YUK				pmax	pmax		
	comp=N,46nm,0.2s						
YUK				pmax	pmax		
	comp=E,31nm,0.2s						
YUK				pmax	pmax		
	comp=Z,87nm,0.2s						
LAGR	Lagunnoye	7.36	250	eP	Pn	07 41 52.0	+1.1
LAGR				AMB	AMB	07 41 53.0	
	comp=Z,50nm,0.5s						
LAGR				AMB	AMB	07 41 53.0	
	comp=Z,80nm,0.5s						
LAGR				AMB	AMB	07 41 53.0	
	comp=Z,10.0nm,0.5s						
LAGR				eS	Sn	07 43 11.0	-2.8
LAGR	Lagunnoye	7.36	250	PN	Pn	07 41 52.7	+1.8
LAGR				pmax	pmax		
	comp=Z,144nm,0.3s						
LAGR				pmax	pmax		
	comp=N,53nm,0.1s						
LAGR				pmax	pmax		
	comp=E,75nm,0.1s						
GRPR	Tuman	7.39	249	eP	Pn	07 41 52.2	+0.8
GRPR				eS	Sn	07 43 13.0	-1.8
GRPR	Tuman	7.39	249	PN	Pn	07 41 51.9	+0.5
GLVR	Golovnino	7.67	248	eS	Sn	07 43 19.0	-2.7
TYV	Tymovskoe	9.22	299	eP	Pn	07 42 16.3	-0.1
ASAJ	Asahikawa	9.42	257	Pn	Pn	07 42 23.3	+4.1
	comp=E,0.7nm,0.3s,baz=75,slow=12,SNR=3.1						
INK	Inuvik	40.59	33	P	P	07 47 42.3	-0.3
	comp=E,0.5nm,0.5s,baz=284,slow=1.0,SNR=4.3						
ZALV	Zalesovo Beam	43.71	306	P	P	07 48 09.6	+1.4
	comp=E,0.3nm,0.3s,baz=50,slow=9.8,SNR=3.3						
MKAR	Makanchi Array	48.19	298	P	P	07 48 46.3	+2.6
	comp=E,0.2nm,0.5s,baz=74,slow=7.6,SNR=2.8						
KURK	Kurchatov	48.51	304	P	P	07 48 49.3	+3.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	Kurchatov Arra	48.60	304	P	P	07 48 49.3	+2.6
	comp=Z,0.5nm,0.5s,baz=73,slow=7.9,SNR=4.9						
YKA	Yellowknife Ar	49.78	37	P	P	07 48 53.9	-1.6
	comp=Z,0.2nm,0.6s,baz=293,slow=6.8,SNR=4.3						
BVAR	Borovoye Array	51.88	310	P	P	07 49 14.9	+3.4
	comp=Z,1.7nm,0.5s,baz=62,slow=7.9,SNR=8.8						
FINES	FINESS Array B	64.45	336	P	P	07 50 42.5	+3.2
	comp=Z,2.6nm,1.1s,baz=39,slow=9.1,SNR=3.3						
TXAR	Lajitas Array	76.00	62	P	P	07 51 49.6	-1.1
	comp=Z,0.3nm,0.6s,baz=300,slow=4.6,SNR=5.8						

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*ISCJB **07** 07:40:46.5±1.9, 34.°72S±0.°06×72.°7W±0.°1, h7^{km}±10^{km}, Error ellipse: s-maj=16.7km s-min=8.3km az=16.9*

*GUC **07** 07:40:50.0±0.5, 34.°71S×72.°57W, h37^{km}±2^{km}, ML3.6*

ISC 07 07:40:45.4±2.9**, 34.°68S**±0.°06×**72.°9W**±0.°1**, h3**^{km}±13^{km}**, n17, σ3.**^{s}**29**/24**, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.80	69	⇑iP	Pg	07 41 01.1	+0.5
CHPI				iS	Sg	07 41 08.9	-2.0
CCHI	Chillan	2.03	161	eP	Pn	07 41 21.0	+0.6
CCHI				iS	Sn	07 41 44.8	-1.5
CCHI				IAML		07 41 51.1	
	comp=E,1μm,0.4s						
ROCH	El Roble	2.32	43	IAML		07 42 01.5	
	comp=N,326nm,0.6s						
CLCH	Cerro Calan	2.34	57	eP	Pn	07 41 24.4	-0.5
CLCH				iS	Sn	07 41 49.8	-4.5
CLCH				IAML		07 41 58.2	
	comp=E,790nm,0.4s						
LMEL	Las Melosas	2.38	70	eP	Pn	07 41 24.9	-0.6
LMEL				iS	Sn	07 41 51.1	-4.2
LMEL				IAML		07 41 55.9	
	comp=N,1μm,0.2s						
PEL	Peldehue	2.40	51	⇓iP	Pn	07 41 25.0	-0.6
PEL				iS	Sn	07 41 51.0	-4.6
PEL				IAML		07 41 57.5	
	comp=N,258nm,0.4s						
FCH	Farellones	2.55	59	eP	Pn	07 41 27.1	-1.0
FCH				iS	Sn	07 41 55.9	-3.9
FCH				IAML		07 42 06.2	
	comp=N,370nm,0.2s						
AAGR	Agrelo	3.74	66	iP	Pn	07 41 48.6	+4.4
ARCO	CERRO ARCO	3.78	62	iP	Pn	07 41 49.5	+4.7
ARCO				IAML		07 42 03.7	
	comp=Z,27nm,0.4s						
ARCO				iS	Sn	07 42 35.3	+5.4
AUSP	Uspallata	3.83	51	iP	Pn	07 41 46.8	+1.3
AUSP				eS	Sn	07 42 34.0	+2.9
ASAL	Salagasta	3.98	60	iP	Pn	07 41 50.4	+2.9
ASAL				eS	Sn	07 42 39.3	+4.6
ACCO	Cerro Coronel	5.21	39	eP	Pn	07 42 05.6	+1.0
ACCO				eS	Sb	07 43 18.4	-2.0
AMOG	MOGNA	5.26	46	iP	Pn	07 42 05.0	-0.1
ACAN	Cantantal	5.34	65	iP	Pn	07 42 09.7	+3.6
AROD	Rodeo	5.36	34	iP	Pn	07 42 08.4	+1.9
ACDV	Cuesta del Vie	5.52	36	⇓iP	Pn	07 42 09.7	+1.1
AGUA	GUANDACOL	6.39	37	iP	Pn	07 42 21.3	+0.7

IDC 07 07:41:36.7±3.2**, 23.°51S**×**179.°83W, h0**^{km}**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/32**, mbtmp3.6**/4**, Error ellipse: s-maj=280.3km s-min=34.8km az=166.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CTA	Charters Tower	31.63	270	P	P	07 48 03.4	+1.6
	1.5nm,0.4s,baz=90,slow=13,SNR=1.5						
ASAR	Alice Springs	42.25	260	P	P	07 49 32.4	+0.3
	0.4nm,0.8s,baz=98,slow=6.7,SNR=2.6						
WRA	Warramunga Arr	42.59	266	P	P	07 49 33.6	-1.3
	0.2nm,0.3s,baz=102,slow=8.8,SNR=19						
TXAR	Lajitas Array	90.09	58	P	P	07 54 39.0	0.0
	0.4nm,1.0s,baz=201,slow=4.8,SNR=3.6						

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*IDC **07** 07:43:39.7±1.3, 11.°54S×164.°90E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/39, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=47.1km s-min=27.0km az=129.0*

*ISCJB **07** 07:43:43.0±1.0, 11.°7S±0.°1×164.°9E±0.°2, h34^{km}, mb3.7/5, Error ellipse: s-maj=28.6km s-min=19.7km az=6.7*

ISC 07 07:43:44.7±1.0**, 11.°6S**±0.°1×**164.°9E**±0.°2**, h34**^{km}**, n6, σ1.**^{s}**18**/6**, mb3.6**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.51	172	Pn	Pn	07 46 13.2	+0.1
	0.3nm,0.3s,baz=358,slow=13,SNR=14						
WRA	Warramunga Arr	30.54	250	P	P	07 49 54.1	-1.2
	0.9nm,0.9s,baz=80,slow=9.0,SNR=4.0						
ASAR	Alice Springs	31.83	244	P	P	07 50 07.2	+0.5
	0.6nm,0.8s,baz=78,slow=9.7,SNR=5.3						
ILAR	Eielson Array	84.30	19	P	P	07 56 13.3	+0.5
	0.6nm,0.8s,baz=236,slow=5.8,SNR=8.0						
MKAR	Makanchi Array	93.39	317	P	P	07 56 57.5	+1.0
	0.5nm,0.7s,baz=93,slow=6.2,SNR=5.4						
YKA	Yellowknife Ar	95.84	27	P	P	07 57 06.3	-1.1
	0.2nm,0.8s,baz=261,slow=4.8,SNR=5.0						

IDC 07 07:43:59.6±3.8**, 11.°38S**×**165.°13E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.5**/39**, mbtmp3.7**/3**, Error ellipse: s-maj=183.0km s-min=34.5km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.80	250	P	P	07 50 18.0	+0.6
	0.8nm,0.4s,baz=82,slow=8.7,SNR=11						
ASAR	Alice Springs	32.10	243	P	P	07 50 28.0	-0.9
	0.6nm,0.7s,baz=67,slow=9.8,SNR=4.9						
ILAR	Eielson Array	84.02	19	P	P	07 56 31.7	0.0
	0.5nm,1.0s,baz=231,slow=5.7,SNR=4.3						

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*SOME **07** 07:47:31.0, 42.°52N×79.°60E, h15^{km}*

*KRNET **07** 07:47:31.6±0.1, 42.°59N×79.°57E, h13^{km}, mb2.6*

*NNC **07** 07:47:32.0±1.0, 42.°59N×79.°58E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=7.1km s-min=3.6km az=151.0*

ISC 07 07:47:30.9±1.8**, 42.°56N**±0.°05×**79.°59E**±0.°06**, h12**^{km}±13^{km}**, n52, σ0.**^{s}**99**/92**, 11C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHLS	Shalkode	0.60	351	P	Pb	07 47 43.5	-0.1
	5.3nm,0.1s						
SHLS				S	Sb	07 47 52.8	+0.7
	36nm,0.2s						
SHLS	Shalkode	0.60	351	eP	Pb	07 47 43.8	+0.2
	baz=22						
SHLS				eS	Sb	07 47 52.9	+0.7
	baz=22						
SHLS	Shalkode	0.60	351	eP	Pb	07 47 43.8	+0.2
	5.3nm,0.1s						
SHLS				eS	Sb	07 47 52.8	+0.7
	36nm,0.2s						
UZB	Uzynbulak	0.72	325	P	Pg	07 47 45.0	0.0
	1.9nm,0.2s						
UZB				S	Sb	07 47 55.2	-0.3
	13nm,0.2s						
UZB	Uzynbulak	0.72	325	eP	Pg	07 47 45.0	0.0
	baz=25						
UZB				eS	Sb	07 47 55.2	-0.3
	baz=25						
UZB	Uzynbulak	0.72	325	eP	Pg	07 47 45.0	0.0
	1.9nm,0.2s						
UZB				eS	Sb	07 47 55.1	-0.3
	14nm,0.3s						
PDGK	Podgornoye	0.77	355	⇑iP	Pg	07 47 45.6	-0.4
	baz=55						
PDGK				⇑iS	Sg	07 47 56.1	0.0
	baz=55						
PRZ	Przheval'sk	0.88	266	⇓iP	Pg	07 47 48.3	+0.3
	baz=63						
PRZ				⇓iS	Sg	07 48 00.0	+0.5
	baz=63						
SATY	Saty	1.00	300	P	Pb	07 47 50.2	-0.1
	3.0nm,0.1s						
SATY				S	Sb	07 48 04.1	+0.5
	21nm,0.1s						
SATY	Saty	1.00	300	eP	Pb	07 47 50.2	-0.1
	3.0nm,0.1s						
SATY				eS	Sb	07 48 04.1	+0.5
	21nm,0.1s						
KURS	Kuram	1.39	312	P	Pg	07 47 57.6	-0.1
	1.2nm,0.2s						
KURS				S	Sg	07 48 16.8	+0.9
	3.2nm,0.2s						
KURS	Kuram	1.39	312	eP	Pg	07 47 57.6	-0.1
	baz=12						
KURS				eS	Sg	07 48 16.8	+0.9
	baz=12						
KURS	Kuram	1.39	312	eP	Pg	07 47 57.6	-0.1
	1.2nm,0.2s						
KURS				eS	Sg	07 48 16.8	+0.9
	3.2nm,0.2s						
DJR	Jarkent	1.78	5	P	Pb	07 48 04.0	+0.4
	0.8nm,0.2s						
DJR				S	Sg	07 48 27.8	-0.4
	4.2nm,0.2s						
DJR	Jarkent	1.78	5	eP	Pb	07 48 04.0	+0.4
	0.8nm,0.2s						
DJR				eS	Sg	07 48 27.8	-0.4
	4.2nm,0.2s						
KDJ	Kajisay	1.83	257	⇑iP	Pg	07 48 06.1	-0.1
	baz=56						
KDJ				⇑iS	Sg	07 48 30.3	+0.3
	baz=56						
KOTS	Kotyrbulak	1.94	291	Pg	Pb	07 48 07.4	+1.0
	3.3nm,0.3s						
KOTS				Lg	Lg	07 48 34.4	
	18nm,0.3s						
KOTS	Kotyrbulak	1.94	291	eP	Pb	07 48 07.4	+1.0
	baz=90						
KOTS				eS	Sg	07 48 33.8	+0.5
	baz=90						
KOTS	Kotyrbulak	1.94	291	eP	Pb	07 48 07.4	+1.0
	2.1nm,0.2s						
KOTS				eS	Sg	07 48 33.8	+0.5
	18nm,0.3s						
MDOK	Medeo	1.96	289	Pn	Pb	07 48 07.4	+0.7
	1.4nm,0.5s						
MDOK				⇓Sn	Sg	07 48 34.2	+0.2
	4.1nm,0.5s						
MDOK	Medeo	1.96	289	Pg	Pb	07 48 07.9	+1.2
	1.6nm,0.2s						
MDOK				Lg	Lg	07 48 34.4	
	5.7nm,0.4s						
MDOK	Medeo	1.96	289	eP	Pb	07 48 07.9	+1.2
	baz=88						
MDOK				eS	Sg	07 48 34.4	+0.3
	baz=88						
MDOK	Medeo	1.96	289	eP	Pb	07 48 07.9	+1.2
	1.6nm,0.2s						
MDOK				eS	Sg	07 48 34.4	+0.3
	5.7nm,0.4s						
TNSS	Tian-Shan	2.00	285	Pg	Pb	07 48 08.1	+0.6
	3.0nm,0.2s						
TNSS				Lg	Lg	07 48 35.6	
	7.2nm,0.6s						
TNSS	Tian-Shan	2.00	285	eP	Pb	07 48 08.4	+0.9
	baz=84						
TNSS				eS	Sg	07 48 35.5	+0.2
	baz=84						
TNSS	Tian-Shan	2.00	285	eP	Pb	07 48 08.4	+0.9
	3.7nm,0.0s						
TNSS				eS	Sg	07 48 35.5	+0.2
	10nm,0.0s						
ARXS	Arharly	2.09	323	Pg	Pb	07 48 09.6	+0.7
	2.4nm,0.4s						
ARXS				Lg	Lg	07 48 37.3	
	6.8nm,0.4s						
ARXS	Arharly	2.09	323	eP	Pb	07 48 09.6	+0.7
	2.4nm,0.4s						
ARXS				eS	Sg	07 48 37.3	-0.9
	6.8nm,0.4s						
IZV	Izvestkoviy	2.24	283	Pg	Pb	07 48 12.4	+0.9
	3.0nm,0.2s						
IZV				Lg	Lg	07 48 42.3	
	28nm,0.3s						
IZV	Izvestkoviy	2.24	283	eP	Pb	07 48 12.4	+0.9
	baz=83						
IZV				eS	Sg	07 48 42.3	-0.7
	baz=83						
IZV	Izvestkoviy	2.24	283	eP	Pb	07 48 12.4	+0.9
	3.0nm,0.2s						
IZV				eS	Sg	07 48 42.3	-0.7
	28nm,0.3s						
CHKK	Chushkaly	2.30	305	Pg	Pb	07 48 13.4	+1.0
	1.2nm,0.1s						
CHKK				Lg	Lg	07 48 43.9	
	9.4nm,0.2s						
CHKK	Chushkaly	2.30	305	eP	Pb	07 48 13.4	+1.0
	baz=5.0						
CHKK				eS	Sg	07 48 43.8	-1.0
	baz=5.0						
CHKK	Chushkaly	2.30	305	eP	Pb	07 48 13.4	+1.0
	1.2nm,0.1s						
CHKK				eS	Sg	07 48 43.9	-1.0
	9.4nm,0.2s						
KTBS	Karatobe	2.42	299	Pg	Pb	07 48 15.5	+1.0
	1.4nm,0.3s						
KTBS				Lg	Lg	07 48 47.4	
	19nm,0.2s						
KTBS	Karatobe	2.42	299	eP	Pb	07 48 15.5	+1.0
	baz=98						
KTBS				eS	Sg	07 48 47.5	-1.2
	baz=98						
KTBS	Karatobe	2.42	299	eP	Pb	07 48 15.5	+1.0
	1.4nm,0.3s						
KTBS				eS	Sg	07 48 47.4	-1.2
	19nm,0.2s						
ULHL	Ulahol	2.50	264	⇑iP	Pb	07 48 15.3	-0.6
	baz=63						
ULHL				⇑iS	Sb	07 48 47.7	+1.0
	baz=63						
BOOM	Boomskoye usch	2.70	270	⇑iP	Pb	07 48 18.5	-0.8
	baz=69						
BOOM				⇑iS	Sb	07 48 52.1	-0.3
	baz=69						
KST	Kastek	2.71	282	Pg	Pb	07 48 20.6	+1.2
	2.5nm,0.3s						
KST				Lg	Lg	07 48 56.3	
	8.3nm,0.6s						
KST	Kastek	2.71	282	eP	Pb	07 48 20.6	+1.2
	baz=81						
KST				eS	Sg	07 48 56.2	-1.8
	baz=81						
KST	Kastek	2.71	282	eP	Pb	07 48 20.6	+1.2
	2.5nm,0.3s						
KST				eS	Sg	07 48 56.3	-1.8
	8.3nm,0.6s						
KUU	Kurty	2.72	300	Pg	Pb	07 48 20.4	+0.8
	1.7nm,0.2s						
KUU				Lg	Lg	07 48 55.8	
	8.0nm,0.3s						
KUU	Kurty	2.72	300	eP	Pb	07 48 20.4	+0.8
	baz=0.0						
KUU				eS	Sg	07 48 55.8	-2.6
	baz=0.0						
KUU	Kurty	2.72	300	eP	Pb	07 48 20.4	+0.8
	1.7nm,0.2s						
KUU				eS	Sg	07 48 55.8	-2.6
	8.0nm,0.3s						
KAPS	Kapalarasan	2.73	357	Pg	Pb	07 48 21.2	+1.4
	0.5nm,0.3s						
KAPS				Lg	Lg	07 48 56.3	
	3.2nm,0.5s						
KAPS	Kapalarasan	2.73	357	eP	Pb	07 48 20.6	+0.8
	0.2nm,0.2s						
KAPS				eS	Sg	07 48 56.3	-2.4
	3.2nm,0.5s						
DGS	Degeres	2.88	285	Pg	Pb	07 48 23.9	+1.4
	1.5nm,0.4s						
DGS				Lg	Lg	07 49 02.3	
	13nm,0.4s						
DGS	Degeres	2.88	285	eP	Pb	07 48 24.0	+1.6
	baz=85						
DGS				eS	Sg	07 49 02.3	-1.3
	baz=85						
DGS	Degeres	2.88	285	eP	Pb	07 48 24.0	+1.6
	1.5nm,0.4s						
DGS				eS	Sg	07 49 02.3	-1.3
	13nm,0.4s						
TKM2	Tokmak 2	2.96	278	⇓Pg	Pb	07 48 22.9	-0.9
	0.3nm,0.4s						
TKM2				⇑Lg	Lg	07 49 02.7	
	3.5nm,0.7s						

TKM2	**Tokmak 2**	**2.96**	**278**	⇑*i*P	**Pb**	**07 48 21.9**	**-1.9**
	baz=78						
TKM2				⇑*i*S	**Sb**	**07 48 58.8**	**-1.2**
	baz=78						

IDC 07 07:53:49.4±2.7**, 54°.18N**×**86°.28E, h0**^{km}**, mb1 2.6**/2**, mb1mx2.5**/57**, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=21.0km s-min=13.4km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**256**	*i*		07 59 00.0	
	baz=74,slow=347,SNR=2.4						
ZALV	**Zalesovo Beam**	**0.89**	**256**	Pg	Pg	07 54 05.8	-0.6
	0.5nm,0.3s,baz=72,slow=14,SNR=12						
ZALV				Lg	Lg	07 54 19.1	
	4.1nm,0.3s,baz=78,slow=30,SNR=35						
KURBB	**Kurchatov Arra**	**5.93**	**236**	Pn	Pn	07 55 18.9	+0.6
	0.1nm,0.3s,baz=52,slow=13,SNR=4.4						
MKAR	**Makanchi Array**	**7.81**	**201**	Pn	Pn	07 55 45.4	+1.1
	0.1nm,0.3s,baz=21,slow=13,SNR=5.3						

MEX 07 07:54:14.4±0.6**, 15°.01N**×**91°.95W, h153**^{km}±12^{km}**, MD3.6, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.28**	**352**	*e*P	Pn	07 54 41.0	-1.2
CCIG				*e*S	Sn	07 55 00.6	-2.9
PCIG		**1.41**	**300**	*i* P	Pn	07 54 41.9	-1.3
PCIG				*e*S	Sn	07 55 02.9	-2.4

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*IDC **07** 07:56:55.0±0.5, 29°.36N×142°.30E, h0^{km}, mb4.2/28, mb1 4.3/31, mb1mx4.3/54, mbtmp4.2/31, ML3.1/4, Error ellipse: s-maj=16.0km s-min=11.3km az=88.0*

*JMA **07** 07:56:56.3±0.2, 29°.48N×142°.71E, h53^{km}, M4.4*

*ISCJB **07** 07:56:57.2±0.2, 29°.39N±0°.02×142°.17E±0°.05, h24^{km}, mb4.5/68, Error ellipse: s-maj=6.6km s-min=3.2km az=170.7*

*NEIC **07** 07:56:59.6±1.6, 29°.33N×142°.22E, h30^{km}±11^{km}, mb4.7/39, Error ellipse: s-maj=5.6km s-min=4.1km az=90.0*

ISC 07 07:56:58.7±0.4**, 29°.39N**±0°.04×**142°.26E**±0°.08**, h24**^{km}**, n118,** σ**1**^{s}**18**/130**, mb4.6**/68**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.29**	**182**	*e*Pn	**Pn**	**07 57 34.5**	**-0.5**
CBIJ				*e*Sn	**Sn**	**07 58 00.5**	**-1.8**
CBIJ	**Chichi jima**	**2.29**	**182**	P	**Pn**	**07 57 34.6**	**-0.3**
JCJ	**Chichijima**	**2.29**	**182**	Pn	**Pn**	**07 57 34.5**	**-0.5**
	7.0nm,0.3s,baz=284,slow=20,SNR=12						
JCJ				Sn	**Sn**	**07 58 00.5**	**-1.8**
	138nm,0.3s,baz=301,slow=23,SNR=22						
JHHJ	**Haha-jima-NKT**	**2.75**	**181**	*e*S	**Sn**	**07 58 13.9**	**+0.1**
JHJ2	**Mitsune**	**4.26**	**331**	*e*Pn	**Pn**	**07 58 02.7**	**+0.8**
JHJ	**Hachijo jima 2**	**4.28**	**331**	Pn	**Pn**	**07 58 02.4**	**+0.1**
	9.3nm,0.3s,baz=250,slow=23,SNR=1.9						
JHJ				Sn	**Sn**	**07 58 49.8**	**-1.7**
	31nm,0.3s,baz=240,slow=24,SNR=4.2						
BSO1	**Boso 1**	**5.36**	**349**	P	**Pn**	**07 58 15.3**	**-1.3**
BSO1				*e*S	**Sn**	**07 59 14.9**	**-2.4**
BSO3	**Boso 3**	**5.59**	**345**	P	**Pn**	**07 58 19.1**	**-1.0**
JHU	**Hanno**	**6.91**	**339**	P	**Pn**	**07 58 38.4**	**-0.1**
JHU				*e*S	**Sn**	**07 59 54.9**	**-1.5**
JNY	**Yasuok**	**7.01**	**329**	P	**Pn**	**07 58 44.4**	**+4.4**
JRY	**Ryogami san**	**7.18**	**338**	P	**Pn**	**07 58 42.6**	**+0.3**
JRY				*e*S	**Sn**	**08 00 03.7**	**+0.6**
JAG	**Ashikaga**	**7.40**	**342**	P	**Pn**	**07 58 44.3**	**-0.9**
INU	**Inuyama**	**7.41**	**325**	*e*Pn	**Pn**	**07 58 46.6**	**+1.3**
MJAR	**Matsushiro Arr**	**7.90**	**336**	Pn	**Pn**	**07 58 51.5**	**-0.6**
	0.5nm,0.3s,baz=159,slow=10,SNR=51						
MJAR				Sn	**Sn**	**08 00 17.9**	**-2.7**
	0.2nm,0.3s,baz=162,slow=19,SNR=4.0						
MAJO	**Matsushiro**	**7.90**	**336**	*e*Pn	**Pn**	**07 58 52.8**	**+0.7**
MAJO				*e*Sn	**Sn**	**08 00 17.9**	**-2.8**
MAT	**Matsushiro**	**7.90**	**336**	P	**Pn**	**07 58 52.0**	**-0.1**
MAT				S	**Sn**	**08 00 17.6**	**-3.1**
JFK	**Kawauchi**	**8.04**	**352**	P	**Pn**	**07 58 51.8**	**-2.1**
KSRS	**Korea Array**	**14.41**	**308**	Pn	**P**	**08 00 24.9**	**-2.8**
	0.3nm,0.3s,baz=119,slow=13,SNR=6.7						
KSAR	**Wonju Array Be**	**14.43**	**308**	Pn	**P**	**08 00 24.9**	**-3.1**
USRK	**Ussuriysk Ar.**	**16.89**	**334**	Pn	**Pn**	**08 00 53.1**	**-0.3**
	0.1nm,0.3s,baz=150,slow=12,SNR=2.5						
MDJ	**Mudanjiang**	**18.22**	**330**	*e*Pn	**P**	**08 01 10.2**	**+0.3**
	32nm,1.2s						
NACB	**Ninganchiao**	**19.16**	**259**	*e*P	**P**	**08 01 19.6**	**-0.8**
	19nm,0.8s						
SSLB	**Suanglung**	**19.84**	**259**	*e*P	**P**	**08 01 28.1**	**+0.2**
	35nm,1.0s						
KLR	**Kul'dur**	**21.38**	**341**	P	**P**	**08 01 44.6**	**+0.4**
	2.1nm,0.6s,baz=134,slow=12,SNR=9.9						
BJT	**Baijiatuau**	**23.84**	**303**	*e*P	**P**	**08 02 10.3**	**+0.3**
	6.9nm,0.7s						
HIA	**Hailar**	**26.23**	**325**	*e*P	**P**	**08 02 32.8**	**+1.1**
	12nm,0.8s						
HHC	**Hu-ho-hao-te**	**27.45**	**303**	*e*P	**P**	**08 02 45.1**	**+2.2**
HHC				S	S	08 07 35.7	+14
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.2s						
HHC				LR	LR		
	comp=N,220nm,13.0s						
HHC				LR	LR		
	comp=E,350nm,9.5s						
XAN	**Xi'an**	**28.66**	**288**	P	**P**	**08 02 53.2**	**-0.5**
XAN				pP	pwP	08 03 03.7	-1.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN	**Xi'an**	**28.66**	**288**	*e*P	**P**	**08 02 53.5**	**-0.2**
	comp=Z,4.7nm,0.8s						
SONA1	**Songino Array**	**33.14**	**314**	*e*P	**P**	**08 03 34.0**	**+0.8**
SONA0	**Songino Array**	**33.14**	**314**	*e*P	**P**	**08 03 34.0**	**+0.8**
SONM	**Songino Array**	**33.14**	**314**	P	**P**	**08 03 34.0**	**+0.8**
	comp=Z,5.0nm,0.7s,baz=119,slow=8.4,SNR=33						
FAKI	**Fak Fak**	**33.53**	**198**	*e*P	**P**	**08 03 35.7**	**-0.9**
	comp=Z,55nm,1.3s						
SEY	**Seymchan**	**34.19**	**8**	P	**P**	**08 03 42.3**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=196,slow=5.2,SNR=6.5						
GTA	**Gaotai**	**36.13**	**298**	*e*P	**P**	**08 03 58.7**	**-0.4**
GTA				pP	pP	08 04 03.6	-1.4
GTA				sP	sP	08 04 05.9	-1.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
TLY	**Talaya**	**36.23**	**319**	*e*P	**P**	**08 04 00.3**	**+0.7**
	comp=Z,12nm,1.2s						
SKNT	**Sakolnakorn**	**37.13**	**259**	P	**P**	**08 04 08.5**	**+0.9**
	comp=Z,8.9nm,1.1s,comp=Z,1µm						
NONG	**Nongkai**	**37.38**	**261**	P	**P**	**08 04 10.7**	**+1.0**
	comp=Z,0.7nm,1.0s						
CHAI	**Chaiyaphum**	**39.32**	**259**	P	**P**	**08 04 26.4**	**+0.3**
	comp=Z,17nm,0.8s,comp=Z,274nm						
UTTA	**Uttaradit**	**39.75**	**263**	P	**P**	**08 04 30.2**	**+0.5**
	comp=Z,3.5nm,0.8s						
PBKT	**Sadao Pong**	**39.89**	**261**	*e*P	**P**	**08 04 30.2**	**-0.6**
	comp=Z,6.0nm,0.6s						
PBKT	**Sadao Pong**	**39.89**	**261**	P	**P**	**08 04 31.5**	**+0.6**
	comp=Z,10.0nm,0.7s						
SRAK	**Srakaew**	**40.15**	**256**	P	**P**	**08 04 30.0**	**-3.1**
	comp=Z,61nm,1.0s,comp=Z,494nm						
CMMT	**Chiang Mai**	**40.71**	**265**	P	**P**	**08 04 38.2**	**+0.5**
	comp=Z,12nm,0.9s,comp=Z,626nm						
CHTO	**Chiang Mai**	**40.71**	**265**	*e*P	**P**	**08 04 36.7**	**-1.0**
CHTO	**Chiang Mai**	**40.71**	**265**	P	**P**	**08 04 38.3**	**+0.6**
	comp=Z,51nm,0.9s						
CM31	**Chiang Mai Arr**	**40.85**	**265**	*e*P	**P**	**08 04 38.4**	**-0.5**
	comp=Z,6.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**40.85**	**265**	P	**P**	**08 04 38.6**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=50,slow=8.9,SNR=9.7						
SKLT	**Songkhla**	**44.95**	**249**	P	**P**	**08 05 15.4**	**+3.4**
	comp=Z,141nm,1.2s,comp=Z,1µm						
WMQ	**Urumqi**	**45.32**	**304**	*e*P	**P**	**08 05 15.2**	**+0.4**
	comp=Z,22nm,1.5s						
ZAA0	**Zalesovo Array**	**47.82**	**318**	*e*P	**P**	**08 05 34.1**	**0.0**
	comp=Z,10nm,1.1s						
ZAA1	**Zalesovo Array**	**47.82**	**318**	*e*P	**P**	**08 05 35.0**	**+0.9**
ZALV	**Zalesovo Beam**	**47.82**	**318**	*e*P	**P**	**08 05 34.6**	**+0.5**
ZALV	**Zalesovo Beam**	**47.82**	**318**	P	**P**	**08 05 35.0**	**+0.9**
	comp=Z,4.3nm,0.7s,baz=101,slow=6.2,SNR=20						
ZALV				PcP	**PcP**	**08 07 02.9**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=100,slow=4.9,SNR=3.3						
ANM	**Nome**	**47.89**	**27**	*e*P	**P**	**08 05 36.3**	**+1.7**
	comp=Z,3.6nm,0.9s						
MK01	**Makanchi Array**	**49.08**	**308**	*e*P	**P**	**08 05 44.5**	**+0.5**
MK32	**Makanchi Array**	**49.09**	**308**	*e*P	**P**	**08 05 44.6**	**+0.6**
MKAR	**Makanchi Array**	**49.09**	**308**	*e*P	**P**	**08 05 44.2**	**+0.1**
	comp=Z,19nm,0.8s						
MKAR	**Makanchi Array**	**49.09**	**308**	P	**P**	**08 05 44.6**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=91,slow=9.3,SNR=29						
MAKZ	**Makanchi**	**49.30**	**308**	*e*P	**P**	**08 05 46.2**	**+0.5**
	comp=Z,6.5nm,1.4s						
WRAB	**Tennant Creek**	**49.63**	**190**	*e*P	**P**	**08 05 47.9**	**-0.5**
	comp=Z,13nm,1.1s						
WB2	**Warramunga Arr**	**49.64**	**190**	*e*P	**P**	**08 05 48.0**	**-0.4**
WR1	**Warramunga Arr**	**49.64**	**190**	*e*P	**P**	**08 05 47.9**	**-0.5**
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**49.64**	**190**	P	**P**	**08 05 47.9**	**-0.5**
	comp=Z,7.5nm,0.9s,baz=9.7,slow=8.0,SNR=59						
WRA				PcP	**PcP**	**08 07 10.6**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=3.6,slow=3.8,SNR=5.6						
FITZ	**Fitzroy Crossi**	**49.86**	**201**	*e*P	**P**	**08 05 50.0**	**-0.1**
	comp=Z,6.3nm,1.3s						
FITZ	**Fitzroy Crossi**	**49.86**	**201**	P	**P**	**08 05 50.0**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=12,slow=9.3,SNR=3.7						
NRIK	**Noril'sk**	**50.55**	**338**	P	**P**	**08 05 55.0**	**+0.3**
	comp=Z,4.0nm,0.8s,baz=110,slow=11,SNR=6.0						
KURK	**Kurchatov**	**51.45**	**313**	*e*P	**P**	**08 06 02.8**	**+1.0**
	comp=Z,38nm,1.1s						
KDAK	**Kodiak Island**	**52.51**	**38**	*e*P	**P**	**08 06 10.9**	**+1.3**
	comp=Z,55nm,1.6s						
KDAK	**Kodiak Island**	**52.51**	**38**	P	**P**	**08 06 10.8**	**+1.3**
	comp=Z,4.0nm,0.8s,baz=287,slow=14,SNR=3.8						
TARG	**Taragay, Kyrgy**	**52.74**	**302**	*e*P	**P**	**08 06 11.8**	**-0.3**
	comp=Z,4.1nm,1.0s						
AS01	**Alice Springs**	**53.35**	**190**	*e*P	**P**	**08 06 16.4**	**+0.2**
AS31	**Alice Springs**	**53.36**	**190**	*e*P	**P**	**08 06 15.8**	**-0.4**
	comp=Z,1.5nm,1.3s						
ASAR	**Alice Springs**	**53.36**	**190**	P	**P**	**08 06 15.7**	**-0.6**
	comp=Z,2.0nm,0.9s,baz=2.3,slow=5.9,SNR=11						
ASAR				PcP	**PcP**	**08 07 24.4**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=12,slow=4.7,SNR=3.1						
AAK	**Ala-Archa**	**55.02**	**304**	P	**P**	**08 06 28.4**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=138,slow=6.7,SNR=5.8						
ILAR	**Eielson Array**	**55.68**	**29**	P	**P**	**08 06 31.6**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=266,slow=6.1,SNR=9.7						
ILB	**Eielson Array**	**55.68**	**29**	*e*P	**P**	**08 06 32.7**	**+0.1**
	comp=Z,8.4nm,1.4s						
BRVK	**Borovoye**	**56.48**	**316**	*e*P	**P**	**08 06 38.8**	**+0.3**
	comp=Z,15nm,1.1s						
KK31	**Karatay Array**	**57.81**	**305**	*e*P	**P**	**08 06 48.3**	**+0.1**
	comp=Z,11nm,0.9s						
KKAR	**Karatay Array**	**57.81**	**305**	*e*P	**P**	**08 06 48.6**	**+0.4**
	comp=Z,11nm,0.9s						
EGAK	**Eagle**	**58.13**	**29**	*e*P	**P**	**08 06 51.1**	**+1.1**
	comp=Z,13nm,1.6s						
GAR	**Garm**	**58.88**	**300**	*e*P	**P**	**08 06 55.8**	**0.0**
	comp=Z,7.4nm,0.9s						
CHGR	**Chuyangaron**	**59.84**	**300**	*e*P	**P**	**08 07 02.4**	**-0.1**
	comp=Z,17nm,0.6s						
INK	**Inuvik**	**60.93**	**25**	*e*P	**P**	**08 07 09.8**	**+0.6**
	comp=Z,7.1nm,1.6s						
INK	**Inuvik**	**60.93**	**25**	P	**P**	**08 07 09.6**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=295,slow=5.9,SNR=8.7						
STKA	**Stephens Creek**	**60.94**	**181**	*e*P	**P**	**08 07 09.5**	**-0.1**
	comp=Z,0.5nm,0.9s						
STKA	**Stephens Creek**	**60.94**	**181**	P	**P**	**08 07 09.7**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=330,slow=14,SNR=3.5						
ARU	**Arti**	**62.66**	**322**	*e*P	**P**	**08 07 21.1**	**0.0**
	comp=Z,13nm,0.8s						
ABKAR	**Akbulak array**	**63.55**	**314**	*e*P	**P**	**08 07 27.4**	**+0.3**
	comp=Z,5.2nm,0.7s						
AKTO	**Aktyubinsk**	**64.44**	**315**	P	**P**	**08 07 33.7**	**+0.7**
	comp=Z,3.4nm,0.6s,baz=90,slow=7.3,SNR=9.4						
KIRV	**Kirov**	**66.84**	**325**	P	**P**	**08 07 49.0**	**+0.8**
	comp=Z,14nm,0.7s,baz=60,slow=3.6,SNR=4.6						
GEYT	**Alibeck**	**68.33**	**302**	P	**P**	**08 07 59.2**	**+1.1**
	comp=Z,3.6nm,0.5s,baz=64,slow=3.4,SNR=7.7						
YKA	**Yellowknife Ar**	**70.10**	**29**	P	**P**	**08 08 08.6**	**0.0**
	comp=Z,1.1nm,0.8s,baz=294,slow=6.4,SNR=13						
YKB5	**Yellowknife Ar**	**70.10**	**29**	*e*P	**P**	**08 08 10.3**	**+1.7**
ARA0	**ARCESS Array S**	**71.40**	**341**	*e*P	**P**	**08 08 17.0**	**+0.6**
ARCES	**ARCESS Array B**	**71.40**	**341**	P	**P**	**08 08 17.0**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=70,slow=8.7,SNR=3.0						
FIA0	**FINESS Array S**	**75.92**	**334**	*e*P	**P**	**08 08 43.3**	**+0.3**
FINES	**FINESS Array B**	**75.92**	**334**	P	**P**	**08 08 43.3**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=106,slow=4.5,SNR=4.9						
KBZ	**Khabaz**	**76.50**	**313**	P	**P**	**08 08 47.4**	**+0.7**
	comp=Z,5.6nm,0.8s,baz=87,slow=7.0,SNR=10						
NV01	**Mina Array Sit**	**79.06**	**52**	*e*P	**P**	**08 09 02.3**	**+0.9**
NVAR	**Mina Array Bea**	**79.06**	**52**	P	**P**	**08 09 01.9**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=303,slow=5.0,SNR=6.3						
AKASG	**Malin Array Be**	**80.81**	**324**	P	**P**	**08 09 09.7**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=44,slow=5.1,SNR=4.5						
NB200	**NORSAR Array S**	**81.51**	**338**	*e*P	**P**	**08 09 13.2**	**-0.7**
NOA	**NORSAR Array B**	**81.51**	**338**	P	**P**	**08 09 13.2**	**-0.7**
	comp=Z,2.3nm,1.0s,baz=43,slow=5.6,SNR=2.5						
PSUT	**Pine Spring**	**82.03**	**50**	*e*P	**P**	**08 09 18.7**	**+1.4**
	comp=Z,3.0nm,0.9s						
PDAR	**Pinedale Array**	**82.54**	**45**	P	**P**	**08 09 21.4**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=303,slow=5.0,SNR=2.6						
KNB	**Kanab**	**83.52**	**51**	*e*P	**P**	**08 09 26.5**	**+1.5**
	comp=Z,4.4nm,0.9s						
SRU	**San Rafael Swe**	**83.93**	**48**	*e*P	**P**	**08 09 28.4**	**+1.4**
	comp=Z,3.7nm,0.8s						
BR101	**Keskin Array S**	**84.49**	**313**	*e*P	**P**	**08 09 30.6**	**+0.8**
BR131	**Keskin Array S**	**84.49**	**313**	*e*P	**P**	**08 09 29.4**	**-0.5**
	comp=Z,4.8nm,0.9s						
BRTR	**Keskin Array B**	**84.49**	**313**	P	**P**	**08 09 30.6**	**+0.8**
	comp=Z,3.0nm,0.8s,baz=102,slow=4.0,SNR=17						
PV14	**Lion Creek, Pa**	**85.31**	**48**	*e*P	**P**	**08 09 35.1**	**+1.0**
	comp=Z,6.9nm,0.8s						
PV12	**Saucer Basin,**	**85.49**	**48**	*e*P	**P**	**08 09 37.3**	**+2.3**
	comp=Z,8.1nm,0.9s						
LTX	**Lajitas**	**94.18**	**53**	*e*P	**P**	**08 10 14.4**	**-1.6**
TX31	**Lajitas Ar. Si**	**94.18**	**53**	*e*P	**P**	**08 10 16.1**	**+0.1**
	comp=Z,3.7nm,1.0s						
TXAR	**Lajitas Array**	**94.18**	**53**	P	**P**	**08 10 14.4**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=301,slow=2.5,SNR=11						
TOA1	**Torodi Ar. Sit**	**123.10**	**312**	*e*PKPdf	**PKPdf**	**08 15 52.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**123.11**	**312**	PKP	**PKPdf**	**08 15 52.8**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=356,slow=4.1,SNR=2.6						

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*ISCJB **07** 08:03:29.6±0.2, 0°.27N±0°.03×98°.56E±0°.04, h48^{km}, mb4.7/46, Error ellipse: s-maj=5.7km s-min=4.1km az=143.2*

*DJA **07** 08:03:31.3±0.4, 0°N±3°×9°9E±°, h35^{km}±11^{km}, M4.8/19, mb4.9/6, mB5.1/5, MLv4.9/19, Mw(mB)4.5/5*

*NEIC **07** 08:03:31.5±0.4, 0°.25N×98°.58E, h52^{km}±4^{km}, mb4.7/23, Error ellipse: s-maj=5.0km s-min=3.5km az=53.0*

*IDC **07** 08:03:33.6±2.1, 0°.33N×98°.64E, h69^{km}±15^{km}, mb4.2/19, mb1 4.2/22, mb1mx4.1/45, mbtmp4.5/22, MS4.9/1, Ms1 4.9/1, ms1mx3.8/51, Error ellipse: s-maj=23.1km s-min=14.6km az=145.0*

ISC 07 08:03:31.1±0.4**, 0°.22N**±0°.04×**98°.56E**±0°.04**, h48**^{km}**, n132,** σ**1**^{s}**63**/134**, mb4.8**/46**, 13C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.39**	**226**	P	**Pn**	**08 03 41.4**	**+0.4**
MNSI	**Mandailing Nat**	**1.17**	**61**	P	**Pn**	**08 03 51.3**	**+0.1**
GSI	**Gunungsitoli**	**1.46**	**318**	*e*Pn	**Pn**	**08 03 55.3**	**+0.2**
GSI				*e*Sn	**Sn**	**08 04 15.9**	**+2.8**
GSI	**Gunungsitoli**	**1.46**	**318**	P	**Pn**	**08 03 55.5**	**+0.4**
PPI	**Padang Panjang**	**1.96**	**110**	P	**Pn**	**08 04 03.0**	**+1.1**
PDSI	**Padang**	**2.21**	**120**	P	**Pn**	**08 04 06.1**	**+0.7**
BKNI	**Bangkinang**	**2.48**	**87**	*e*Pn	**Pn**	**08 04 09.6**	**+0.5**
BKNI	**Bangkinang**	**2.48**	**87**	P	**Pn**	**08 04 10.0**	**+0.9**
PSI	**Prapat**	**2.59**	**8**	P	**Pn**	**08 04 09.8**	**-1.0**
	22nm,0.3s,baz=360,slow=8.8,SNR=63						
PSI				S	**Sn**	**08 04 43.3**	**+2.2**
	44nm,0.3s,baz=0.3,slow=15,SNR=2.2						
SNSI	**Sinabang, Aceh**	**3.12**	**314**	P	**Pn**	**08 04 17.8**	**0.0**
TSI	**Tuntungan**	**3.26**	**0**	P	**Pn**	**08 04 21.1**	**+1.3**
PPSI	**Pulau Pagai**	**3.30**	**154**	P	**Pn**	**08 04 20.9**	**+0.6**
TPTI		**3.32**	**336**	P	**Pn**	**08 04 19.8**	**-0.8**
KCSI	**Kotacane, Aceh**	**3.38**	**347**	P	**Pn**	**08 04 20.9**	**-0.5**
KRJI	**Kerinci**	**3.70**	**128**	P	**Pn**	**08 04 28.0**	**+2.1**
IPM	**Ipoh**	**4.90**	**30**	*e*Pn	**Pn**	**08 04 43.4**	**+1.1**
MASI	**Maura Aman, Be**	**4.97**	**132**	P	Pn	08 04 53.2	+10
LHMI	**Lhok Sumawe**	**5.23**	**342**	*e*Pn	**Pn**	**08 04 46.9**	**0.0**
KULM	**Kulim**	**5.46**	**22**	*e*Pn	**Pn**	**08 04 50.3**	**+0.4**
MYKOM	**Kota Tinggi**	**5.52**	**74**	*e*Pn	**Pn**	**08 04 51.0**	**+0.2**
MNAI	**Manna**	**6.32**	**136**	*e*Pn	**Pn**	**08 05 02.2**	**+0.4**
MNAI	**Manna**	**6.32**	**136**	P	**Pn**	**08 05 01.9**	**0.0**
LHSI	**Lahat**	**6.38**	**129**	P	Pn	08 05 09.9	+7.2
MDSI	**Maura Dua**	**7.30**	**130**	P	**Pn**	**08 05 16.4**	**+1.1**
CISI	**Cisompet, Garu**	**12.04**	**130**	*e*Pn	Pn	08 06 15.3	-4.8
COCO	**West Island**	**12.44**	**188**	*e*Pn	**Pn**	**08 06 25.5**	**-0.2**
XMIS	**Christmas Isla**	**12.76**	**147**	*e*Pn	**Pn**	**08 06 26.1**	**-3.9**
UGM	**Wanagama**	**14.40**	**124**	*e*Pn	**Pn**	**08 06 51.6**	**-0.8**
PBKT	**Sadao Pong**	**16.42**	**8**	*e*Pn	**Pn**	**08 07 17.8**	**-0.6**
	12nm,0.8s						
CM01	**Chiang Mai Arr**	**18.09**	**1**	*e*P	**P**	**08 07 37.7**	**-1.3**
CM31	**Chiang Mai Arr**	**18.13**	**1**	*e*P	**P**	**08 07 38.8**	**-0.6**
	15nm,1.0s						
CMAR	**Chiang Mai Arr**	**18.13**	**1**	P	**P**	**08 07 39.3**	**-0.2**
	0.9nm,0.3s,baz=317,slow=33,SNR=4.1						
CHTO	**Chiang Mai**	**18.49**	**1**	*e*P	**P**	**08 07 42.3**	**-1.0**
	5.7nm,0.8s						
KKM	**Kota Kinabalu**	**18.55**	**71**	*e*P	**P**	**08 07 42.5**	**-1.7**
	46nm,0.7s						
PALK	**Pallekele**	**19.14**	**292**	*e*P	**P**	**08 07 50.5**	**-0.1**
	11nm,0.8s						
PALK	**Pallekele**	**19.14**	**292**	P	**Pn**	**08 07 52.8**	**+1.0**
	0.7nm,0.3s,baz=117,slow=10,SNR=5.2						
PALK				S	S	08 11 10.2	-15
	1.9nm,0.3s,baz=235,slow=0.1,SNR=6.6						
LUWI	**Luwuk**	**24.25**	**93**	*e*P	**P**	**08 08 43.8**	**-0.1**
	208nm,1.1s						
KMI	**Kunming**	**25.09**	**9**	P	**P**	**08 08 53.5**	**+1.8**
KMI				pP	pP	08 09 02.6	-1.5
KMI				sP	sP	08 09 06.8	-3.0
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SHL	**Shillong**	**26.01**	**346**	*e*P	**P**	**08 08 59.0**	**-1.0**
	comp=Z,41nm,0.8s						
SHL	**Shillong**	**26.01**	**346**	*e*P	**P**	**08 08 58.0**	**-2.0**
H08S2	**Diego Garcia H**	**27.14**	**253**	T	T	08 36 51.2	
	baz=74,slow=75,SNR=99						
H08S3	**Diego Garcia H**	**27.14**	**253**	T	T	08 36 55.9	
	baz=74,slow=75,SNR=162						
H08S1	**Diego Carcia H**	**27.16**	**253**	T	T	08 36 54.6	
	baz=74,slow=75,SNR=48						
GYA	**Guiyang**	**27.23**	**16**	⇑*i*P	**P**	**08 09 11.0**	**+0.1**
GYA				pP	pP	08 09 23.6	+0.2
GYA				PP	**PnPn**	**08 10 01.0**	**+4.6**
GYA				S	**S**	**08 13 49.4**	**+2.5**
GYA				sS	sS	08 14 06.2	-1.8
GYA				SS	**SnSn**	**08 15 07.8**	**+9.2**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,530nm,17.0s						
GYA				LR	LR		
	comp=E,550nm,17.4s						
GYA				LR	LR		
	comp=Z,500nm,17.6s						
SOEI	**Soe**	**27.44**	**112**	*e*P	**P**	**08 09 14.1**	**+1.1**
	comp=Z,34nm,0.4s						
LSA	**Lhasa**	**30.16**	**347**	*e*P	**P**	**08 09 37.2**	**-0.1**
	comp=Z,3.5nm,0.8s						
CD2	**Chengdu**	**30.92**	**9**	P	**P**	**08 09 44.7**	**+1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
ENH	**Enshi**	**31.65**	**18**	*e*P	**P**	**08 09 48.7**	**-1.2**
	comp=Z,21nm,0.6s						
SAUI	**Saumlaki**	**33.64**	**105**	*e*P	**P**	**08 10 08.2**	**+0.6**
	comp=Z,58nm,0.7s						
WHN	**Wuhan**	**33.69**	**25**	⇑P	P	08 10 16.0	+8.3
XAN	**Xi'an**	**35.02**	**15**	P	**P**	**08 10 18.3**	**-1.1**
XAN				pP	pP	08 10 29.0	-3.0
XAN				sP	sP	08 10 33.9	-3.8
XAN				pmax	pmax		
	comp=Z,46nm,0.8s						
XAN	**Xi'an**	**35.02**	**15**	*e*P	**P**	**08 10 18.2**	**-1.1**
	comp=Z,36nm,0.8s						
LZH	**Lanzhou**	**36.03**	**7**	⇓P	**P**	**08 10 29.0**	**+1.0**
LZH				pP	pP	08 10 42.1	+1.4
LZH				sP	sP	08 10 46.1	-0.3
LZH				PP	**PP**	**08 11 55.4**	**+4.7**
LZH				S	**S**	**08 16 06.8**	**+3.0**
LZH				sS	sS	08 16 27.7	+2.5
LZH				SS	**SnSn**	**08 18 24.7**	**-7.3**
LZH				pmax	pmax		
	comp=Z,25nm,1.4s						
LZH				pmax	pmax		
	comp=Z,86nm,4.9s						
LZH				LR	LR		
	comp=N,1µm,16.8s						
LZH				LR	LR		
	comp=E,2µm,17.3s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
NJ2	**Nanjing**	**37.02**	**29**	*e*P	**P**	**08 10 37.0**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,2µm,16.3s						
NJ2				LR	LR		
	comp=E,960nm,16.3s						
NJ2				LR	LR		
	comp=Z,2µm,16.8s						
GTA	**Gaotai**	**39.02**	**2**	⇑P	**P**	**08 10 53.2**	**-0.1**
GTA				pP	pP	08 11 02.7	-3.4
GTA				sP	sP	08 11 06.4	-5.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NIL	**Nilore**	**40.87**	**327**	*e*P	**P**	**08 11 08.3**	**-0.4**
	comp=Z,24nm,0.6s						
HHC	**Hu-ho-hao-te**	**42.13**	**15**	*e*P	**P**	**08 11 22.2**	**+3.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,470nm,6.7s						
BJT	**Baijiatuau**	**42.75**	**20**	*e*P	**P**	**08 11 24.1**	**+0.4**
	comp=Z,32nm,0.8s						
BJI	**Beijing**	**42.77**	**20**	⇑*i*P	**P**	**08 11 24.1**	**+0.2**
BJI				pmax	pmax		
	comp=Z,32nm,1.2s						
BJI				LR	LR		
	comp=N,580nm,8.5s						
BJI				LR	LR		
	comp=E,880nm,10.6s						
BJI				LR	LR		
	comp=Z,520nm,20.1s						
WMQ	**Urumqi**	**44.48**	**349**	P	**P**	**08 11 39.3**	**+1.5**
WMQ				pP	pP	08 11 48.9	-1.9
WMQ				sP	sP	08 11 51.1	-5.3
WMQ				pmax	pmax		
	comp=Z,22nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,390nm,5.1s						
WMQ				LR	LR		
	comp=N,2µm,23.1s						
WMQ				LR	LR		
	comp=E,3µm,11.5s						
WMQ				LR	LR		
	comp=Z,1µm,22.1s						
TARG	**Taragay, Kyrgy**	**45.38**	**338**	*e*P	**P**	**08 11 45.5**	**+0.1**
	comp=Z,4.7nm,0.8s						
NRN	**Naryn**	**45.82**	**336**	*e*P	**P**	**08 11 49.0**	**+0.2**
	comp=Z,9.7nm,1.0s						
KS15	**Wonju Array Si**	**45.88**	**33**	*e*P	**P**	**08 11 47.9**	**-1.0**
KS01	**Wonju Array Si**	**45.91**	**33**	*e*P	**P**	**08 11 48.2**	**-1.0**
KSRS	**Korea Array**	**45.91**	**33**	P	**P**	**08 11 48.3**	**-0.8**
	comp=Z,11nm,0.7s,baz=221,slow=8.4,SNR=31						
KDJ	**Kajisay**	**45.96**	**338**	*e*P	**P**	**08 11 50.0**	**+0.3**
	comp=Z,8.8nm,0.8s						
SONA0	**Songino Array**	**47.92**	**7**	*e*P	**P**	**08 12 05.3**	**+0.5**
SONM	**Songino Array**	**47.92**	**7**	P	**P**	**08 12 05.3**	**+0.5**
	comp=Z,12nm,0.8s,baz=187,slow=9.8,SNR=50						
SONM				PcP	**PcP**	**08 13 32.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=183,slow=3.6,SNR=3.3						
SONA1	**Songino Array**	**47.93**	**7**	*e*P	**P**	**08 12 05.2**	**+0.3**
MK01	**Makanchi Array**	**48.50**	**345**	*e*P	**P**	**08 12 08.8**	**-0.4**
MK31	**Makanchi Array**	**48.53**	**345**	*e*P	**P**	**08 12 09.3**	**-0.1**
	comp=Z,4.9nm,0.8s						
MK32	**Makanchi Array**	**48.53**	**345**	*e*P	**P**	**08 12 09.6**	**+0.2**
MKAR	**Makanchi Array**	**48.53**	**345**	*e*P	**P**	**08 12 09.2**	**-0.2**
	comp=Z,36nm,0.6s						
MKAR	**Makanchi Array**	**48.53**	**345**	P	**P**	**08 12 09.6**	**+0.2**
	comp=Z,6.1nm,0.6s,baz=155,slow=7.9,SNR=67						
MAKZ	**Makanchi**	**48.62**	**345**	*e*P	**P**	**08 12 10.1**	**-0.1**
	comp=Z,4.8nm,0.8s						
KK31	**Karatay Array**	**49.54**	**333**	*e*P	**P**	**08 12 17.0**	**-0.2**
KKAR	**Karatay Array**	**49.54**	**333**	*e*P	**P**	**08 12 17.4**	**+0.2**
CN2	**Changchun**	**49.58**	**25**	*e*P	**P**	**08 12 20.0**	**+2.5**

MAJO	Matsushiro	51.52	41	eP	P	08 12 30.7	-1.6
MAT	Matsushiro	51.52	41	P	P	08 12 30.5	-1.8
MJAR	Matsushiro Arr	51.52	41	P	P	08 12 30.7	-1.6
	comp=Z,7.3nm,0.8s,baz=223,slow=7.6,SNR=11						
MJAR				LR	LR	08 35 07.5	
	comp=Z,1μm,21.7s,baz=140,slow=37						
GEYT	Alibeck	52.83	320	P	P	08 12 41.6	-0.4
	comp=Z,1.4nm,0.4s,baz=142,slow=7.3,SNR=2.6						
USRK	Ussuriysk Ar.	52.93	30	P	P	08 12 42.1	-0.5
	comp=Z,20nm,0.8s,baz=229,slow=5.7,SNR=26						
OPO	Ambohidratompo	53.77	247	P	P	08 12 50.7	+1.3
	comp=Z,4.1nm,0.8s,baz=74,slow=14,SNR=4.1						
ZAA0	Zalesovo Array	54.74	350	eP	P	08 12 55.2	-0.4
	comp=Z,9.9nm,0.9s						
ZALV	Zalesovo Beam	54.74	350	eP	P	08 12 55.2	-0.4
ZALV	Zalesovo Beam	54.74	350	P	P	08 12 55.6	0.0
	comp=Z,6.7nm,0.5s,baz=173,slow=7.0,SNR=20						
ZAA1	Zalesovo Array	54.75	350	eP	P	08 12 55.6	0.0
KLR	Kul'dur	56.54	25	P	P	08 13 07.8	-0.8
	comp=Z,13nm,0.9s,baz=234,slow=7.2,SNR=27						
ABKAR	Akbulak array	59.02	332	eP	P	08 13 25.1	-0.9
	comp=Z,6.9nm,0.8s						
KMBO	Kilima Mbogo	61.32	269	P	P	08 13 44.6	+1.9
	comp=Z,2.2nm,0.4s,baz=47,slow=9.0,SNR=7.6						
KBZ	Khabaz	65.70	319	P	P	08 14 10.8	0.0
	comp=Z,4.7nm,0.8s,baz=114,slow=6.0,SNR=9.8						
NRIK	Noril'sk	69.40	356	P	P	08 14 32.9	-0.8
	comp=Z,2.7nm,0.6s,baz=173,slow=6.0,SNR=4.5						
BR101	Keskin Array S	70.77	312	eP	P	08 14 41.5	-1.4
BR131	Keskin Array S	70.77	312	eP	P	08 14 41.9	-1.0
	comp=Z,3.4nm,0.7s						
BRTR	Keskin Array B	70.77	312	P	P	08 14 41.5	-1.4
	comp=Z,2.8nm,0.7s,baz=131,slow=6.8,SNR=18						
BOSA	Boshof	75.47	240	eP	P	08 15 10.8	-0.1
BOSA	Boshof	75.47	240	P	P	08 15 12.0	+1.1
	comp=Z,4.4nm,0.9s,baz=62,slow=5.3,SNR=5.5						
AKASG	Malin Array Be	76.86	322	P	P	08 15 16.9	-1.2
	comp=Z,1.6nm,0.6s,baz=89,slow=4.9,SNR=8.0						
KIEV	Kiev	76.87	322	⇑iP	P	08 15 17.0	-1.1
VRI	Vrincioaia	77.26	317	⇑iP	P	08 15 20.6	+0.1
PLOR	Plostina	77.31	317	⇑iP	P	08 15 21.4	+0.6
MLR	Muntele Rosu	77.71	317	eP	P	08 15 22.9	-0.3
	comp=Z,9.2nm,0.9s						
MLR	Muntele Rosu	77.71	317	⇑iP	P	08 15 23.3	+0.1
VOIR		78.31	316	⇑iP	P	08 15 26.0	-0.5
BURAR	Bucovina Array	78.66	319	⇑iP	P	08 15 28.8	+0.5
BUR04	Bucovina Ar. S	78.66	319	eP	P	08 15 28.6	+0.3
BUR08	Bucovina Ar. S	78.67	319	eP	P	08 15 28.9	+0.5
VTS	Vitosha	79.07	313	⇑iP	P	08 15 30.3	-0.5
SYO	Syowa Base	79.50	198	⇓eP	P	08 15 34.2	+1.9
TRPA	Tarpa	80.52	319	⇑iP	P	08 15 37.8	-0.5
BZS	Buzias	80.72	316	⇑iP	P	08 15 39.2	-0.2
BKZ	Black Stump Fm	80.79	130	eP	P	08 15 39.5	-0.5
	comp=Z,12nm,0.9s						
URZ	Urewera	81.15	129	P	P	08 15 42.7	+0.9
	comp=Z,3.9nm,0.7s,baz=243,slow=18,SNR=2.3						
FIA0	FINESS Array S	81.49	332	eP	P	08 15 42.9	-0.3
FINES	FINESS Array B	81.49	332	P	P	08 15 42.9	-0.3
	comp=Z,2.2nm,0.6s,baz=110,slow=5.1,SNR=8.1						
ARA0	ARCESS Array S	83.91	340	eP	P	08 15 55.4	-0.2
ARCES	ARCESS Array B	83.91	340	P	P	08 15 55.4	-0.2
	comp=Z,0.8nm,0.7s,baz=98,slow=5.4,SNR=8.1						
GEA0	GERESS Array S	86.44	319	eP	P	08 16 08.5	-0.3
GERES	GERESS Array B	86.44	319	P	P	08 16 08.5	-0.3
	comp=Z,0.5nm,0.5s,baz=76,slow=5.6,SNR=6.6						
CLL	Collm	87.04	321	eP	P	08 16 12.0	+0.4
ULM	Lac du Bonnet	128.23	12	PKP	PKPdf	08 22 31.8	-0.6
	comp=Z,0.9nm,0.5s,baz=4.4,slow=13,SNR=3.2						
NVAR	Mina Array Bea	128.76	37	PKP	PKPdf	08 22 31.9	-2.1
	comp=Z,0.2nm,0.6s,baz=270,slow=0.9,SNR=2.7						
PDAR	Pinedale Array	130.31	27	PKP	PKPdf	08 22 34.9	-2.0
	comp=Z,0.4nm,0.8s,baz=191,slow=0.5,SNR=2.7						
PDAR				SKPbc	SKPab	08 25 52.3	-3.8
	comp=Z,1.4nm,0.9s,baz=202,slow=0.5,SNR=7.4						
BDFB	Brasilia	143.62	243	PKP	PKPbc	08 22 59.1	-0.3
	comp=Z,4.1nm,0.6s,baz=136,slow=3.1,SNR=7.4						
TXAR	Lajitas Array	143.75	34	PKP	PKPbc	08 23 00.0	+0.6
	comp=Z,0.4nm,0.6s,baz=181,slow=1.4,SNR=5.7						
TXAR				SKPbc	SKPbc	08 26 34.5	-2.3
	comp=Z,0.7nm,0.8s,baz=302,slow=2.0,SNR=4.8						
TKL	Tuckaleechee C	144.24	3	PKP	PKPab	08 23 00.1	-0.1
	comp=Z,1.8nm,0.5s,baz=288,slow=9.3,SNR=1.9						
X48A	Hartselle	145.12	8	ePKPbc	PKPbc	08 23 03.0	-0.4
HODGE	Hodges	145.72	1	ePKPdf	PKPdf	08 23 04.6	-0.4
Y49A	Blount Mountai	145.78	7	ePKPdf	PKPdf	08 23 04.6	-0.6
Y52A	Lilburn	146.01	4	ePKPdf	PKPdf	08 23 05.8	+0.3
152A	Waverly Hall	147.15	5	ePKPdf	PKPdf	08 23 07.6	+0.1

IDC ***07*** *08:03:39.2±0.3, 10°.98S×164°.84E, h0^{km}, mb5.5/29, mb1 5.6/31, mb1mx5.5/36, mbtmp5.5/31, ML5.9/2, MS4.9/29, Ms1 4.9/29, ms1mx4.8/37, Error ellipse: s-maj=13.4km s-min=11.5km az=98.0*

ISCJB ***07*** *08:03:39.5±1.1, 11°.04S±0°.02×164°.73E±0°.02, h12^{km}±7^{km}, mb5.5/300, MS5.3/271, Error ellipse: s-maj=4.1km s-min=3.3km az=174.0*

NEIC ***07*** *08:03:40.8±0.1, 11°.03S×164°.78E, h11^{km}, mb5.5/229, ME5.3, MS5.4/216, MW5.8, MW5.8, Error ellipse: s-maj=2.3km s-min=2.0km az=140.0, Moment Tensor Solution. s14 Moment tensor: Scale 10^{17}Nm; M_{rr}-6.88; $M_{\theta\theta}$1.26; $M_{\phi\phi}$5.62; $M_{r\theta}$1.14; $M_{\theta\phi}$0.89; $M_{\phi r}$0.65; Best double couple: $M_0$6.50000×10^{17} NP1:ϕ_s5.00000°, δ42.00000°, λ-100.00000°. NP2:ϕ_s198.00000°, δ49.00000°, λ-81.00000°. Principal axes: T 5.8600, Plg4.0000°, Azm282.0000°; N 1.2000, Plg7.0000°, Azm12.0000°; P -7.0600, Plg82.0000°, Azm162.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s340.00000°, δ30.00000°, λ-90.00000°. NP2: ϕ_s160.00000°, δ60.00000°, λ-90.00000°. Principal axes: T Plg15.0000°, Azm250.0000°; N Plg0.0000°, Azm0.0000°; P Plg75.0000°, Azm70.0000°; Apparent Stress 0.11 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

BJI ***07*** *08:03:41.0, 10°.69S×164°.62E, h11^{km}, mB6.0/68, mb5.6/81, Ms5.6/71, Ms7 5.3/69*

NEIC ***07*** *08:03:41.0±0.0, 10°.92S×164°.75E, h13^{km}, Moment Tensor Solution. s40 Moment tensor: Scale 10^{17}Nm; M_{rr}-5.99; $M_{\theta\theta}$0.67; $M_{\phi\phi}$5.32; $M_{r\theta}$-2.04; $M_{\theta\phi}$1.70; $M_{\phi r}$-0.81; Best double couple: $M_0$6.30000×10^{17} NP1:ϕ_s32.00000°, δ53.00000°, λ-72.00000°. NP2:ϕ_s185.00000°, δ40.00000°, λ-111.00000°. Principal axes: T 6.0400, Plg6.0000°, Azm110.0000°; N 0.5300, Plg13.0000°, Azm201.0000°; P -6.5800, Plg74.0000°, Azm353.0000°;*

MOS ***07*** *08:03:43.2±0.9, 10°.94S×164°.67E, h33^{km}, mb5.7/88, MS5.2/27 Error ellipse: s-maj=7.2km s-min=5.9km az=112.0*

GCMT ***07*** *08:03:43.8±0.1, 11°.17S±0°.01×164°.70E, h12^{km}, MW5.8/142, Moment Tensor Solution. s138,c272; s142,c442; Duration: 2^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-6.59±.04; $M_{\theta\theta}$0.83±.04; $M_{\phi\phi}$5.76±.04; $M_{r\theta}$-2.39±.14; $M_{\theta\phi}$0.54±.04; $M_{\phi r}$0.73±.13; Best double couple: $M_0$6.59300×10^{17} NP1:ϕ_s170.00000°, δ50.00000°, λ-112.00000°. NP2:ϕ_s22.00000°, δ45.00000°, λ-66.00000°. Principal axes: T 5.8380, Plg2.0000°, Azm275.0000°; N 1.5150, Plg17.0000°, Azm184.0000°; P -7.3480, Plg73.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 07 08:03:42.7±0.5**, 11°.10S**±0°.04×**164°.80E**±0°.04**, h24**^{km}±3^{km}**, h24**^{km}**:pP-P, n1007,** σ1^s**21**/956**, mb5.5**/300**, MS5.4**/273**, 55C-44D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.06	289	ePn	Pn	08 04 56.5	-0.6
HNR				eSn	Sn	08 05 55.3	+0.5
HNR	Honiara	5.06	289	eP	Pn	08 04 56.5	-0.6
HNR				e		08 05 55.3	
HNR	Honiara	5.06	289	Pn	Pn	08 04 57.6	+0.5
	664nm,0.3s,baz=146,slow=6.1,SNR=60						
HNR				Sn	Sn	08 05 54.5	-0.3
	564nm,0.3s,baz=174,slow=17,SNR=7.8						
MARNC	Mare, Loyalty	10.78	164	ePn	Pn	08 06 15.6	0.0
MARNC				eSn	Sn	08 08 14.8	-0.9
DZM	Mont Dzumac	11.03	172	ePn	Pn	08 06 20.0	+0.9
	225nm,0.3s						
DZM				eLQ	LQ	08 08 21.8	
	23μm,24.1s						
DZM				eLR	LR	08 08 51.6	
	comp=Z,14μm,34.3s						
DZM	Mont Dzumac	11.03	172	ePn	Pn	08 06 19.8	+0.7
DZM				eSn	Sn	08 08 18.7	-3.1
DZM	Mont Dzumac	11.03	172	Pn	Pn	08 06 20.3	+1.2
	48nm,0.3s,baz=6.9,slow=14,SNR=265						
DZM				Sn	Sn	08 08 18.4	-3.4
	4.3nm,0.3s,baz=326,slow=20,SNR=1.3						
PINNC	Pines Island,	11.73	168	ePn	Pn	08 06 29.4	+0.7
PINNC				eSn	Sn	08 08 34.2	-4.7
RABL	Rabaul	14.28	298	ePn	Pn	08 07 03.3	-0.3
FUNA	Funafuti	14.41	81	ePn	Pn	08 07 05.8	+0.3
MSVF	Nonsavu	14.42	119	ePn	Pn	08 07 06.1	+0.5
MSVF	Nonsavu	14.42	119	eP	Pn	08 07 06.1	+0.5
TARA	Tarawa	14.77	34	ePn	Pn	08 07 09.9	-0.4
PATS	Pohnpei	18.95	340	P	Pn	08 08 05.9	+2.8
	baz=19,SNR=4.0						
PATS	Pohnpei	18.95	340	eP	P	08 08 02.2	-0.1
	424nm,1.2s						
EIDS	Eidsvold	19.24	221	P	Pn	08 08 08.4	+1.8
	baz=19,SNR=9.4						
EIDS	Eidsvold	19.24	221	eP	Pn	08 08 07.2	+0.6
	94nm,1.0s						
MANU	Manus Island	19.50	296	eP	P	08 08 08.2	-0.2
	318nm,1.0s						
CTA	Charters Tower	19.96	241	P	Pn	08 08 15.5	+0.3
	307nm,1.0s,baz=67,slow=13,SNR=61						
CTA				LR	LR	08 14 18.3	
	comp=Z,8μm,21.6s,baz=58,slow=32						
CTAO	Charters Tower	19.96	241	eP	Pn	08 08 15.1	-0.1
	522nm,1.1s						
CTAO	Charters Tower	19.96	241	eP	Pn	08 08 15.1	-0.1
CTAO				pmax	pmax		
	comp=Z,522nm,1.1s						
KWAJ	Kwajalein Atol	19.97	8	eP	P	08 08 14.0	+0.6
	comp=Z,530nm,0.6s						
KWAJ	Kwajalein Atol	19.97	8	eP	P	08 08 14.0	+0.6
KWAJ				pmax	pmax		
	comp=Z,530nm,0.6s						
MTSU	Mount Surprise	21.01	248	P	P	08 08 26.5	+1.7
	baz=21,SNR=216						
COEN	Coen	21.30	260	P	P	08 08 28.7	+0.8
	baz=21,SNR=146						
COEN	Coen	21.30	260	eP	P	08 08 28.4	+0.4
	comp=Z,196nm,1.0s						
COEN				LR	LR		
	comp=Z,13μm,21.0s						
RMQ	Roma	21.52	222	P	P	08 08 32.6	+2.3
	baz=22,SNR=32						
ARMA	Armidale	22.79	211	P	P	08 08 45.6	+1.7
	baz=23,SNR=15						
ARMA	Armidale	22.79	211	eP	P	08 08 44.7	+0.8
	comp=Z,198nm,1.4s						
ARMA				LR	LR		
	comp=Z,12μm,18.0s						
RAO	Raoul Island	24.22	141	LR	LR	08 17 12.3	
	comp=Z,2μm,21.0s,baz=316,slow=34						
KNTN	Kanton	24.71	72	eP	P	08 09 02.5	+0.2
	comp=Z,232nm,1.0s						
QLP	Quilpie	24.76	229	P	P	08 09 03.9	+1.1
	baz=25,SNR=23						
OUZ	Omahuta	25.31	163	eP	P	08 09 09.1	+1.5
	comp=Z,80nm,1.0s						
MGCD	Mangrove Creek	25.35	208	P	P	08 09 10.0	+2.1
	baz=25,SNR=7.9						
JAY	Jayapura	25.38	288	P	P	08 09 07.1	-1.4
RIV	Riverview	25.84	207	P	P	08 09 16.0	+3.5
	baz=26,SNR=5.9						
QIS	Mount Isa	25.97	246	P	P	08 09 13.8	0.0
	baz=26,SNR=146						
CMSA	Cobar Meteorol	26.94	218	P	P	08 09 23.6	+1.2
	baz=27,SNR=28						
YNG	Young	27.53	210	P	P	08 09 29.6	+1.9
	baz=28,SNR=10.0						
CNB	Canberra Magne	27.89	208	P	P	08 09 32.7	+1.7
	baz=28,SNR=6.8						
CAN	Canberra	28.07	208	PFAKE		08 09 40.0	+7.5
CAN				LR	LR		
	comp=Z,3μm,18.0s						
MXZ	Matakaoa Point	29.01	158	eP	P	08 09 40.8	0.0
	comp=Z,74nm,0.7s						
URZ	Urewera	29.21	160	eP	P	08 09 43.7	+1.1
	comp=Z,116nm,1.4s						
URZ	Urewera	29.21	160	P	P	08 09 44.4	+1.8
	comp=Z,25nm,0.6s,baz=100,slow=3.0,SNR=12						
URZ				LR	LR	08 19 54.0	
	comp=Z,4μm,18.8s,baz=350,slow=33						
MILA	Mila	29.44	206	P	P	08 09 48.6	+3.9
	baz=30,SNR=3.8						
H11S2	WAKE ISLAND Hy	29.46	4	T	T	08 40 50.8	
	baz=184,slow=76,SNR=324						
H11S3	WAKE ISLAND Hy	29.46	4	T	T	08 40 51.1	
	baz=184,slow=76,SNR=314						
H11S1	WAKE ISLAND Hy	29.48	4	T	T	08 40 46.5	
	baz=184,slow=76,SNR=349						
STKA	Stephens Creek	29.77	222	P	P	08 09 48.5	+0.9
	baz=30,SNR=23						
STKA	Stephens Creek	29.77	222	eP	P	08 09 48.1	+0.4
	comp=Z,8.3nm,0.9s						
STKA				LR	LR		
	comp=Z,1μm,20.0s						
STKA	Stephens Creek	29.77	222	eP	P	08 09 48.1	+0.4
STKA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STKA				MLR	MLR		
	comp=Z,1μm,20.0s						
STKA	Stephens Creek	29.77	222	P	P	08 09 48.6	+0.9
	comp=Z,9.8nm,0.7s,baz=51,slow=11,SNR=28						
STKA				PcP	PcP	08 12 52.0	+0.8
	comp=Z,26nm,0.8s,baz=334,slow=2.9,SNR=6.2						
BKZ	Black Stump Fm	29.83	162	eP	P	08 09 49.5	+1.3
	comp=Z,50nm,0.6s						
WAKE	Wake Island	30.24	3	PFAKE		08 10 00.0	+8.2
WAKE				LR	LR		
	comp=Z,4μm,19.0s						
WRAB	Tennant Creek	30.58	250	eP	P	08 09 54.2	-0.8
	comp=Z,246nm,0.9s						
WRAB				LR	LR		
	comp=Z,8μm,18.0s						
WRAB	Tennant Creek	30.58	250	ceP	P	08 09 54.4	-0.6
WRAB				pmax	pmax		
	comp=Z,395nm,1.3s						
WB2	Warramunga Arr	30.59	250	eP	P	08 09 53.9	-1.1
WR1	Warramunga Arr	30.59	250	eP	P	08 09 54.9	-0.3
	comp=Z,328nm,0.9s						
WR1				ePcP	PcP	08 12 54.4	+0.9
WRA	Warramunga Arr	30.60	250	P	P	08 09 54.9	-0.3
	comp=Z,205nm,0.7s,baz=80,slow=9.2,SNR=270						
WRA				PcP	PcP	08 12 54.4	+0.9
	comp=Z,20nm,0.9s,baz=77,slow=3.1,SNR=8.5						
WRA				PKiKP	PKiKP	08 20 24.1	-0.8
	comp=Z,1.4nm,0.8s,baz=84,slow=1.5,SNR=7.6						
WRA				LR	LR	08 21 59.2	
	comp=Z,6μm,18.2s,baz=75,slow=36						
H11N1	WAKE ISLAND Hy	30.69	4	T	T	08 42 17.1	
	baz=184,slow=76,SNR=233						
H11N3	WAKE ISLAND Hy	30.69	4	T	T	08 42 21.6	
	baz=184,slow=76,SNR=221						
H11N2	WAKE ISLAND Hy	30.70	4	T	T	08 42 20.3	
	baz=184,slow=76,SNR=183						
BFZ	Birch Farm	31.15	163	eP	P	08 10 00.4	+0.7
	comp=Z,49nm,0.8s						
SNZO	South Karori	31.33	166	eP	P	08 10 02.5	+1.3
	comp=Z,41nm,0.7s						
THZ	Tophouse	31.36	168	eP	P	08 10 03.4	+1.7
	comp=Z,54nm,0.8s						
THZ				LR	LR		
	comp=Z,4μm,20.0s						
GUMO	Guam	31.50	321	P	P	08 10 02.5	-0.6
	comp=Z,93nm,0.6s,baz=133,slow=11,SNR=4.7						
GUMO				LR	LR	08 23 03.4	
	comp=Z,4μm,18.2s,baz=142,slow=37						
TOO	Toolangi	31.55	210	P	P	08 10 04.9	+1.5
	baz=32,SNR=15						
TOO	Toolangi	31.55	210	eP	P	08 10 03.7	+0.3
	comp=Z,37nm,0.8s						
TOO				LR	LR		
	comp=Z,4μm,18.0s						
TOO	Toolangi	31.55	210	eP	P	08 10 03.7	+0.3
TOO				pmax	pmax		
	comp=Z,37nm,0.8s						
TOO				MLR	MLR		
	comp=Z,4μm,18.0s						
KDU	Kakadu	31.66	264	P	P	08 10 03.1	-1.4
	baz=32,SNR=55						
AS01	Alice Springs	31.90	243	eP	P	08 10 05.7	-0.9
AS31	Alice Springs	31.94	243	eP	P	08 10 06.3	-0.7
	comp=Z,47nm,1.0s						
AS31				ePcP	PcP	08 12 57.7	+0.6
ASAR	Alice Springs	31.94	243	P	P	08 10 07.2	+0.2
	comp=Z,87nm,0.7s,baz=65,slow=10.0,SNR=633						
ASAR				PcP	PcP	08 12 57.4	+0.2
	comp=Z,21nm,0.8s,baz=69,slow=2.6,SNR=13						
ASAR				PKiKP	PKiKP	08 20 24.4	-1.4
	comp=Z,0.6nm,0.9s,baz=75,slow=1.1,SNR=4.7						
ASAR				LR	LR	08 21 33.6	
	comp=Z,6μm,20.3s,baz=72,slow=34						
KHZ	Kahutara	32.12	168	eP	P	08 10 08.8	+0.6
	comp=Z,102nm,1.5s						
KHZ				LR	LR		
	comp=Z,3μm,19.0s						
LTZ	Lake Taylor	32.23	170	eP	P	08 10 09.2	0.0
	comp=Z,47nm,0.7s						
LTZ				LR	LR		
	comp=Z,3μm,20.0s						
HTT	Hallett	32.50	223	P	P	08 10 12.6	+0.8
	baz=32,SNR=25						
FOZ	Fox Glacier	32.61	173	eP	P	08 10 13.3	+0.8
	comp=Z,44nm,0.7s						
FOZ				LR	LR		
	comp=Z,4μm,18.0s						
OXZ	Oxford	32.72	170	eP	P	08 10 13.9	+0.4
	comp=Z,244nm,1.7s						
OXZ				LR	LR		
	comp=Z,5μm,19.0s						
ARPS	Mount Arapiles	32.89	215	P	P	08 10 16.7	+1.6
	baz=33,SNR=9.2						
RPZ	Rata Peaks	32.95	172	eP	P	08 10 16.6	+1.1
RPZ				ePcP	PcP	08 13 01.1	+1.7
RPZ				LR	LR		
	comp=Z,4μm,18.0s						
RPZ	Rata Peaks	32.95	172	P	P	08 10 16.5	+1.1
	comp=Z,44nm,0.6s,baz=306,slow=2.7,SNR=45						
RPZ				PcP	PcP	08 13 01.1	+1.7
	comp=Z,5.8nm,0.7s,baz=17,slow=20,SNR=2.2						
RPZ				LR	LR	08 22 18.0	
	comp=Z,1μm,21.2s,baz=348,slow=34						
MTN	Manton Dam	32.97	264	PFAKE		08 10 30.0	+14
MTN				LR	LR		
	comp=Z,6μm,22.0s						
CRLZ	Canterbury Las	33.06	170	PFAKE		08 10 30.0	+14
CRLZ				LR	LR		
	comp=Z,4μm,18.0s						
MQZ	McQueen's Vall	33.19	170	eP	P	08 10 20.5	+2.9
	comp=Z,58nm,1.0s						
MQZ				LR	LR		
	comp=Z,3μm,20.0s						
FAKI	Fak Fak	33.28	282	PFAKE		08 10 30.0	+11
FAKI				LR	LR		
	comp=Z,5μm,20.0s						
SARN	Sarigan	33.42	325	eP	P	08 10 18.8	-1.1
	comp=Z,155nm,1.3s						
LBZ	Lake Benmore	33.49	173	PFAKE		08 10 30.0	+10
LBZ				LR	LR		
	comp=Z,5μm,18.0s						
WKZ	Wanaka	33.80	175	eP	P	08 10 24.0	+1.1
	comp=Z,176nm,1.5s						
WKZ				LR	LR		
	comp=Z,4μm,22.0s						
BBOO	Buckleboo	34.12	226	P	P	08 10 26.4	+0.6
	baz=34,SNR=52						
BBOO	Buckleboo	34.12	226	eP	P	08 10 26.3	+0.4
	comp=Z,90nm,0.8s						
BBOO				LR	LR		
	comp=Z,5μm,20.0s						
ODZ	Otahua Downs	34.20	173	PFAKE		08 10 40.0	+14
ODZ				LR	LR		
	comp=Z,5μm,18.0s						
MLZ	Mavora Lakes	34.27	176	eP	P	08 10 27.2	+0.2
	comp=Z,95nm,1.6s						
MLZ				LR	LR		
	comp=Z,4μm,18.0s						
DCZ	Deep Cove	34.31	177	eP	P	08 10 27.5	+0.2
	comp=Z,97nm,1.3s						
DCZ				LR	LR		
	comp=Z,2μm,19.0s						
WHZ	Wether Hill Ro	34.78	176	eP	P	08 10 31.3	-0.1
	comp=Z,29nm,1.0s						
WHZ				LR	LR		
	comp=Z,4μm,18.0s						
PYZ	Puysegur Point	34.99	178	PFAKE		08 10 50.0	+17
PYZ				LR	LR		
	comp=Z,3μm,18.0s						
TAU	Tasmania Unive	35.16	203	PFAKE		08 10 50.0	+15
TAU				LR	LR		
	comp=Z,3μm,18.0s						
BNDI	Bandanaira	35.16	278	P	P	08 10 33.6	-1.4
PALU	Palau	35.30	300	P	P	08 10 37.5	+1.2
	baz=35,SNR=7.7						
KNRA	Kununurra	35.32	259	P	P	08 10 35.7	-0.7
	baz=35,SNR=82						
RAR	Rarotonga	35.41	111	LR	LR	08 22 08.0	
	comp=Z,4μm,21.7s,baz=252,slow=31						
WRKA	Warakurna	37.23	243	P	P	08 10 52.4	-0.4
	baz=37,SNR=133						
NLAI	Namlea	38.18	279	P	P	08 11 00.1	-0.7
FITZ	Fitzroy Crossi	38.47	255	P	P	08 11 02.2	-1.0
	baz=38,SNR=268						
FITZ	Fitzroy Crossi	38.47	255	eP	P	08 11 02.4	-0.8
	comp=Z,263nm,0.8s						
FITZ				ePcP	PcP	08 13 16.6	+0.4
FITZ				LR	LR		
	comp=Z,4μm,20.0s						
FITZ	Fitzroy Crossi	38.47	255	P	P	08 11 02.5	-0.8
	comp=Z,267nm,0.8s,baz=90,slow=7.8,SNR=222						
FITZ				PcP	PcP	08 13 16.6	+0.4
	comp=Z,25nm,0.9s,baz=64,slow=6.4,SNR=2.3						
TNTI	Ternate	39.03	285	PFAKE		08 11 20.0	+12
TNTI				LR	LR		
	comp=Z,3μm,22.0s						
FORT	Forrest	39.26	234	P	P	08 11 10.2	+0.5
	baz=39,SNR=38						
FORT	Forrest	39.26	234	eP	P	08 11 09.7	+0.1
	comp=Z,218nm,0.8s						
FORT				LR	LR		
	comp=Z,5μm,21.0s						
SANI	Sanana	39.55	280	P	P	08 11 09.7	-2.6
XMAS	Kiritimati	39.75	73	PFAKE		08 11 30.0	+16
XMAS				LR	LR		
	comp=Z,6μm,20.0s						
BATI	Baumata	40.42	267	P	P	08 11 18.3	-1.2
BATI	Baumata	40.42	267	P	P	08 11 19.8	+0.2
	comp=Z,88nm,0.7s,baz=253,slow=1.0,SNR=12						
BATI				LR	LR	08 29 45.1	
	comp=Z,2μm,18.1s,baz=108,slow=39						
MMRI	Maumere	41.98	269	P	P	08 11 33.5	+1.1
EDFI	Ende, Flores	42.50	269	P	P	08 11 33.7	-3.1
DAV	Davao City (W)	43.00	293	⇑iP	P	08 11 40.9	+0.3
DAV	Davao City (W)	43.00	293	LR	LR	08 27 21.6	
	comp=Z,2μm,20.4s,baz=102,slow=33						
KCP	Kidapawan	43.42	293	⇑iP	P	08 11 44.2	0.0
MBWA	Marble Bar	44.30	251	eP	P	08 11 51.2	+0.1
	comp=Z,106nm,0.9s						
MBWA				LR	LR		
	comp=Z,5μm,18.0s						
MBWA	Marble Bar	44.30	251	P	P	08 11 51.0	-0.1
	SNR=9.0						
BKSI	Bulukumba	44.55	274	P	P	08 11 51.6	-1.6
PPT	Papeete	44.58	104	LR	LR	08 26 31.4	
	comp=Z,4μm,19.4s,baz=264,slow=31						
PPT2	Papeete2	44.58	104	eS	S	08 18 28.3	-0.1
	comp=Z,4μm,28.2s						
PPT2				eLQ	LQ	08 22 24.3	
	comp=Z,5μm,24.5s						
PPT2				eLR	LR	08 24 18.1	
	comp=Z,14μm,29.0s,baz=281						
BNSI	Bone	44.74	275	P	P	08 11 53.8	-0.9
SPSI	Sidrap Palu	45.16	275	P	P	08 11 58.7	+0.7
TBI	Tubuai	45.17	112	eLQ	LQ	08 22 41.5	
	comp=Z,8μm,27.2s						
TBI				eLR	LR	08 24 32.3	
	comp=Z,18μm,30.2s,baz=286						
MEEK	Meekatharra	46.09	244	P	P	08 12 05.8	+0.5
	baz=46,SNR=55						
PLAI	Plampang	46.34	268	P	P	08 12 05.2	-2.1
KLBR	Kellerberrin	47.90	237	P	P	08 12 19.6	+0.3
	baz=48,SNR=12						
BLDU	Ballidu	48.54	239	P	P	08 12 24.6	+0.4
	baz=48,SNR=10.0						
NWAO	Narrogin (SRO)	48.67	236	P	P	08 12 26.0	+0.8
	baz=49,SNR=7.9						
NWAO	Narrogin (SRO)	48.67	236	eP	P	08 12 25.0	-0.2
NWAO				LR	LR		

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                 comp=Z,8µm,19.0s
NWAO  Narrogin (SRO)     48.67 236   P         P         08 12 25.8 +0.5
                 SNR=7.8
NWAO  Narrogin (SRO)     48.67 236   P         P         08 12 25.7 +0.5
                 comp=Z,93nm,1.1s,baz=317,slow=6.9,SNR=11
MORW  Morawa             48.79 241   P         P         08 12 26.6 +0.4
                 baz=49,SNR=23
MORW  Morawa             48.79 241  eP         P         08 12 26.3 +0.1
                 comp=Z,163nm,1.2s
MORW                                 LR        LR
                 comp=Z,5µm,18.0s
MUN   Mundaring          49.27 237   P         P         08 12 30.3 +0.5
                 baz=49,SNR=10.0
GIRL  Giralia            49.52 250   PFAKE               08 12 40.0 +8.1
GIRL                                 LR        LR
                 comp=Z,4µm,19.0s
WRMHI West Rim           49.64  53   PFAKE               08 12 40.0 +7.1
WRMHI                                LR        LR
                 comp=Z,2µm,21.0s
KKO   Keanakako`i        49.66  53   PFAKE               08 12 40.0 +6.9
KKO                                  LR        LR
                 comp=Z,2µm,22.0s
BYL   Byron's Ledge      49.67  53   PFAKE               08 12 40.0 +6.8
BYL                                  LR        LR
                 comp=Z,2µm,19.0s
SBLHI Steaming Bluff     49.68  53   PFAKE               08 12 40.0 +6.8
SBLHI                                LR        LR
                 comp=Z,2µm,18.0s
NPOC  North of Pu‘u      49.78  53   PFAKE               08 12 50.0  +16
NPOC                                 LR        LR
                 comp=Z,3µm,18.0s
JCUZ  Jacuzzi            49.78  53   PFAKE               08 12 50.0  +16
JCUZ                                 LR        LR
                 comp=Z,2µm,19.0s
TGY   Tagaytay City      50.19 299   P         P         08 12 37.1 +0.1
                 comp=Z,126nm,0.3s,baz=170,slow=6.5,SNR=7.0
KKM   Kota Kinabalu      51.27 287  eP         P         08 12 45.3  0.0
                 comp=Z,97nm,0.9s
KKM                                  LR        LR
                 comp=Z,2µm,22.0s
SMPP  San Manuel, Pa     51.37 301  eP         P         08 12 44.0 -1.9
JOW   Kunigami           51.76 317  eP         P         08 12 48.9 +0.2
                 comp=Z,76nm,1.0s
INU   Inuyama            53.15 332  eP         P         08 12 58.2 -0.6
                 comp=Z,153nm,1.1s
UGM   Wanagama           53.57 268  eP         P         08 13 02.4 +0.1
                 comp=Z,58nm,0.7s
MJAR  Matsushiro Arr     53.60 333   P         P         08 13 00.9 -1.2
                 comp=Z,80nm,1.0s,baz=169,slow=7.8,SNR=47
MAJO  Matsushiro         53.60 333  eP         P         08 13 02.0 -0.1
                 comp=Z,168nm,1.1s
MAJO                                 LR        LR
                 comp=Z,2µm,20.0s
MAJO  Matsushiro         53.60 333d iP         P         08 13 01.6 -0.5
MAJO                                 pmax      pmax
                 comp=Z,192nm,1.2s
MAT   Matsushiro         53.60 333   P         P         08 13 00.4 -1.7
MAT                                  S         S         08 20 32.2 -2.1
MJB9  Matsu-Tunnel       53.60 333  eP         P         08 13 02.3 +0.2
                 comp=Z,163nm,1.1s
MJB9                                 LR        LR
                 comp=Z,3µm,19.0s
YOJ   Yonaguni jima      53.97 311  eP         P         08 13 04.4 -0.6
                 comp=Z,253nm,1.0s
YOJ   Yonaguni jima      53.97 311  eP         P         08 13 04.4 -0.6
YOJ                                  pmax      pmax
                 comp=Z,253nm,1.0s
SBUM  Sibu               54.00 281  eP         P         08 13 05.2 -0.2
                 comp=Z,11nm,1.0s
TAOE  Nuku Hiva Isla     54.20  93  eS         S         08 20 43.2 -0.2
                 comp=Z,3µm,27.4s
TAOE                                eLR        LR        08 28 41.8
                 comp=Z,6µm,31.2s,baz=266
TWG   Pinlang            54.50 308   PFAKE               08 13 20.0  +11
TWG                                  LR        LR
                 comp=Z,10µm,19.0s
JNU   Nakatsue           54.59 325  eP         P         08 13 08.5 -0.9
                 comp=Z,287nm,1.2s
JNU   Nakatsue           54.59 325   LR        LR        08 33 46.0
                 comp=Z,633nm,20.8s,baz=128,slow=33
YULB  Yu-li              54.65 309  eP         P         08 13 09.1 -0.9
                 comp=Z,106nm,1.0s
YULB                                 LR        LR
                 comp=Z,3µm,22.0s
NACB  Ninganchiao        54.86 310  eP         P         08 13 11.1 -0.4
                 comp=Z,113nm,1.0s
TPUB  Ta-pu              55.11 309  eP         P         08 13 12.7 -0.6
                 comp=Z,153nm,0.9s
TPUB                                 LR        LR
                 comp=Z,2µm,21.0s
SSLB  Suanglung          55.13 309  eP         P         08 13 13.0 -0.5
                 comp=Z,57nm,0.8s
SSLB                                 LR        LR
                 comp=Z,3µm,22.0s
YHNB  Yeheng             55.31 310  eP         P         08 13 14.8 -0.1
                 comp=Z,163nm,1.1s
YHNB                                 LR        LR
                 comp=Z,4µm,22.0s
TATO  Taipei             55.40 311   PFAKE               08 13 30.0  +15
TATO                                 LR        LR
                 comp=Z,4µm,20.0s
KSM   Kuching            55.60 279  eP         P         08 13 16.2 -0.8
                 comp=Z,73nm,1.2s
CISI  Cisompet, Garu     56.28 268  eP         P         08 13 20.6 -1.4
                 comp=Z,101nm,1.3s
KUR   Kuril'sk           58.12 346  eP         P         08 13 33.1 -1.2
KUR                                  S         S         08 21 33.3 -0.8
KUR                                  pmax      pmax
                 comp=Z,199nm,1.6s
RKT   Rikitea            58.44 110  eS         S         08 21 39.2  0.0
                 comp=Z,2µm,31.0s
RKT                                 eLQ        LQ        08 28 13.7
                 comp=Z,2µm,31.0s
RKT                                 eLR        LR        08 30 44.7
                 comp=Z,10µm,28.0s,baz=274
SSE   Sheshan            59.25 316   P         P         08 13 42.0 -0.4
SSE                                  sP        pP        08 13 47.3 -1.1
SSE                                  S         S         08 21 52.5 +3.2
SSE                                  pmax      pmax
                 comp=Z,24nm,0.7s
SSE                                  pmax      pmax
                 comp=Z,620nm,6.2s
SSE                                  LR        LR
                 comp=Z,630nm,16.1s
SSE   Sheshan            59.25 316  eP         P         08 13 42.2 -0.2
                 comp=Z,295nm,1.0s
KSRS  Korea Array        59.40 326   P         P         08 13 43.7 +0.3
                 comp=Z,43nm,0.9s,baz=141,slow=7.0,SNR=52
KSRS                                 LR        LR        08 37 23.8
                 comp=Z,586nm,20.5s,baz=130,slow=34
KS15  Wonju Array Si     59.41 326  eP         P         08 13 43.6 +0.1
                 comp=Z,133nm,1.3s
KSAR  Wonju Array Be     59.41 326   P         P         08 13 43.7 +0.2
KSAR  Wonju Array Be     59.41 326   P         P         08 13 43.7 +0.2
KS01  Wonju Array Si     59.43 326  eP         P         08 13 43.3 -0.3
GZH   Guangzhou          60.75 304   P         P         08 13 49.7 -3.2
GZH                                  S         S         08 22 08.6 -0.3
GZH                                  LR        LR
                 comp=Z,1µm,23.4s
GZH                                  LR        LR
                 comp=Z,1µm,22.4s
YSS   Yuzh-Sakhalins     61.06 343  eP         P         08 13 54.8 +0.3
                 comp=Z,479nm,1.6s
YSS   Yuzh-Sakhalins     61.06 343⇓eP         P         08 13 55.2 +0.7
YSS                                 e                    08 14 12.7
YSS                                 eS         S         08 22 10.3 -1.7
YSS                                 ePS        PnS       08 22 38.0  +10
YSS                                  pmax      pmax
                 comp=N,50nm,1.1s
YSS                                  pmax      pmax
                 comp=Z,90nm,1.1s
YSS                                  pmax      pmax
                 comp=Z,600nm,8.7s
YSS                                  MLR       MLR
                 comp=Z,1µm,16.0s
YSS                                  MLR       MLR
                 comp=N,700nm,17.0s
NJ2   Nanjing            61.41 316  eP         P         08 13 57.4 +0.2
NJ2                                  sP        sP        08 14 05.0 -0.4
NJ2                                  pmax      pmax
                 comp=N,83nm,1.4s
NJ2                                  pmax      pmax
                 comp=N,1µm,5.4s
NJ2                                  LR        LR
                 comp=N,2µm,20.6s
NJ2                                  LR        LR
                 comp=N,2µm,21.7s
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NJ2                                  LR        LR
                 comp=N,2µm,20.6s
TEY   Ternei             61.41 338⇓eP          P         08 13 58.4 +1.5
TEY                                  pmax      pmax
                 comp=N,40nm,0.9s
TEY                                  pmax      pmax
                 comp=Z,80nm,0.9s
TEY                                  pmax      pmax
                 comp=E,20nm,2.4s
MSHR  Mys Shultsa        61.67 332  i P        P         08 14 00.1 +1.4
VLA   Vladivostok        61.77 333  i P        P         08 13 59.9 +0.5
VLA                                  pmax      pmax
                 comp=Z,179nm,1.2s
QIZ   Qiongzhong         61.89 299   P         P         08 14 00.6 -0.1
QIZ                                  sP        pP        08 14 06.3 -0.3
QIZ                                  S         S         08 22 27.0 +3.4
QIZ                                  sS        pS        08 22 30.7 +0.4
QIZ                                  pmax      pmax
                 comp=Z,1µm,6.9s
QIZ                                  LR        LR
                 comp=Z,1µm,16.7s
QIZ                                  LR        LR
                 comp=Z,1µm,22.6s
QIZ                                  LR        LR
                 comp=Z,2µm,28.4s
MYKOM Kota Tinggi        61.94 278  eP         P         08 14 00.9 -0.3
                 comp=Z,43nm,1.2s
SKR   Severo-Kuril's     61.98 354  eP         P         08 13 49.3  -11
SKR                                  pmax      pmax
                 comp=Z,112nm,1.1s
SKR                                  pmax      pmax
                 comp=Z,2µm,18.9s
USA0B Ussuriysk Arra     62.58 334  eP         P         08 14 05.2 +0.3
                 comp=Z,292nm,1.3s
USRK  Ussuriysk Ar.      62.58 334   P         P         08 14 05.5 +0.7
                 comp=Z,56nm,0.8s,baz=123,slow=6.1,SNR=47
USRK                                 LR        LR        08 39 46.4
                 comp=Z,535nm,20.5s,baz=144,slow=35
DL2   Dalian             63.97 324 ⇓P          P         08 14 14.1  0.0
DL2                                  S         S         08 22 49.1 +0.2
DL2                                  pmax      pmax
                 comp=Z,100nm,1.0s
DL2                                  pmax      pmax
                 comp=Z,2µm,5.0s
DL2                                  LR        LR
                 comp=Z,1µm,15.3s
DL2                                  LR        LR
                 comp=Z,830nm,17.8s
DL2                                  LR        LR
                 comp=Z,2µm,22.9s
MDJ   Mudanjiang         63.97 333   P         P         08 14 15.2 +1.2
MDJ                                  pmax      pmax
                 comp=Z,140nm,1.1s
MDJ                                  pmax      pmax
                 comp=Z,2µm,3.6s
MDJ   Mudanjiang         63.97 333  eP         P         08 14 14.2 +0.2
                 comp=Z,148nm,1.1s
PET   Petropavlovsk      64.08 356  eP         P         08 14 14.6  0.0
                 comp=Z,202nm,1.5s
PET   Petropavlovsk      64.08 356  eP         P         08 14 14.1 -0.5
PET                                 eS         S         08 22 47.2 -2.5
PET                                 ePS        PnS       08 23 08.1 -0.8
PET                                 eSS        SS        08 26 55.4 -3.9
PET                                  pmax      pmax
                 comp=Z,900nm,8.5s
PET                                  pmax      pmax
                 comp=Z,95nm,1.5s
PET                                  pmax      pmax
                 comp=Z,600nm,10.1s
PET                                  MLR       MLR
                 comp=Z,1µm,19.0s
PET                                  MLR       MLR
                 comp=Z,1µm,18.0s
PEA0B Petropavlovsk-     64.24 355  eP         P         08 14 15.8 +0.2
                 comp=Z,258nm,1.4s
PETK  Petropavlovsk-     64.24 355  eP         P         08 14 15.6  0.0
PETK  Petropavlovsk-     64.24 355  eP         P         08 14 15.6  0.0
PETK  Petropavlovsk-     64.24 355   P         P         08 14 16.0 +0.4
                 comp=Z,70nm,1.0s,baz=184,slow=4.9,SNR=29
PETK                                 LR        LR        08 37 14.1
                 comp=Z,604nm,19.8s,baz=170,slow=31
PEA1  Petropavlovsk-     64.24 355  eP         P         08 14 16.0 +0.3
BKNI  Bangkinang         64.35 276  eP         P         08 14 17.2  0.0
                 comp=Z,319nm,1.1s
TYV   Tymovskoe          64.65 345  eP         P         08 14 18.9 +0.6
TYV                                  pmax      pmax
                 comp=Z,700nm,3.5s
TYV                                  pmax      pmax
                 comp=Z,10.0nm,1.7s
SNY   Shenyang           64.87 327 ⇑P          P         08 14 20.7 +0.7
SNY                                  S         S         08 23 04.7 +4.8
SNY                                  pmax      pmax
                 comp=Z,17nm,0.7s
SNY                                  pmax      pmax
                 comp=Z,2µm,7.9s
SNY                                  LR        LR
                 comp=Z,1µm,13.9s
SNY                                  LR        LR
                 comp=Z,1µm,15.5s
SNY                                  LR        LR
                 comp=Z,2µm,16.7s
TIA   Tai'an             65.04 319   P         P         08 14 20.4 -0.9
TIA                                  pmax      pmax
                 comp=Z,18nm,1.4s
CN2   Changchun          65.31 330⇓iP          P         08 14 23.0 +0.2
CN2                                 esP        sP        08 14 30.0 -1.1
CN2                                 eS         S         08 23 05.0 -0.3
CN2                                  pmax      pmax
                 comp=Z,150nm,1.0s
CN2                                  pmax      pmax
                 comp=Z,1µm,5.0s
CN2                                  LR        LR
                 comp=Z,1µm,20.0s
CN2                                  LR        LR
                 comp=Z,1µm,20.0s
CN2                                  LR        LR
                 comp=Z,2µm,20.0s
IPM   Ipoh               65.32 280  eP         P         08 14 23.1 -0.4
                 comp=Z,86nm,1.1s
KULM  Kulim              65.88 281  eP         P         08 14 27.0 -0.1
                 comp=Z,65nm,1.4s
CASY  Casey              66.00 201  eP         P         08 14 27.7 +0.8
                 comp=Z,42nm,1.1s
CASY                                 LR        LR
                 comp=Z,1µm,18.0s
SKNT  Sakolnakorn        66.27 294   P         P         08 14 29.6 +0.1
                 comp=Z,40nm,1.1s,comp=Z,814nm
GRNR  Gornyy             66.38 341  eP         P         08 14 31.0 +1.4
GRNR                                 pmax      pmax
                 comp=Z,110nm,1.1s
SKLT  Songkhla           66.39 283   P         P         08 14 34.7 +4.3
                 comp=Z,28nm,1.5s,comp=Z,1µm
COCO  West Island        66.41 261  eP         P         08 14 30.7 +0.1
                 comp=Z,171nm,1.1s
VNDA  Vanda              66.43 181  eP         P         08 14 30.6 +1.1
                 comp=Z,114nm,1.5s
VNDA  Vanda              66.43 181  eP         P         08 14 30.6 +1.1
VNDA                                 pmax      pmax
                 comp=Z,114nm,1.5s
VNDA  Vanda              66.43 181   P         P         08 14 30.9 +1.4
                 comp=Z,17nm,0.8s,baz=8.6,slow=5.2,SNR=12
VNDA                                 LR        LR        08 40 16.2
                 comp=Z,704nm,18.9s,baz=34,slow=33
KLR   Kul'dur            66.74 337d iP         P         08 14 32.4 +0.5
KLR   Kul'dur            66.74 337   LR        LR        08 41 24.8
                 comp=Z,420nm,20.3s,baz=168,slow=34
PSI   Prapat             66.96 278   LR        LR        08 46 26.6
                 comp=Z,665nm,19.9s,baz=90,slow=38
SRAK  Srakaew            67.04 290   P         P         08 14 33.7 -0.8
                 comp=Z,26nm,1.1s,comp=Z,545nm
ENH   Enshi              67.21 310  eP         P         08 14 34.7 -0.7
                 comp=Z,175nm,1.0s
NONG  Nongkai            67.39 295   P         P         08 14 37.5 +0.8
                 comp=Z,1.7nm,1.0s
TRTT  Trang              67.46 283   P         P         08 14 38.2 +1.0
                 comp=Z,12nm,1.5s,comp=Z,876nm
GYA   Guiyang            67.68 305⇓iP          P         08 14 38.7 +0.2
GYA                                  PP        PP        08 17 11.6 +3.5
GYA                                  S         S         08 23 38.0 +3.0
GYA                                  SKS       SKiKP     08 24 34.4 -0.7
GYA                                  pmax      pmax
                 comp=Z,60nm,0.7s
GYA                                  pmax      pmax
                 comp=Z,150nm,6.7s
GYA                                  LR        LR
                 comp=Z,12µm,18.4s
CHAI  Chaiyaphum         67.70 292   P         P         08 14 39.5 +0.8
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                 comp=Z,15nm,0.8s,comp=Z,431nm
PATY  Pattaya            67.79 289   P         P         08 14 41.5 +2.3
                 comp=Z,22nm,0.8s
BJT   Baijiatuau         67.93 322  eP         P         08 14 39.8 +0.1
                 comp=Z,64nm,1.0s
BJT                                  LR        LR
                 comp=Z,2µm,22.0s
BJT   Baijiatuau         67.93 322  eP         P         08 14 39.8 +0.1
BJT                                  pmax      pmax
                 comp=Z,64nm,1.0s
BJT                                  MLR       MLR
                 comp=Z,2µm,22.0s
BJI   Beijing            67.94 322⇓iP          P         08 14 39.8 +0.1
BJI                                  S         S         08 23 39.9 +2.6
BJI                                  pmax      pmax
                 comp=Z,46nm,1.3s
BJI                                  LR        LR
                 comp=Z,1µm,24.0s
BJI                                  LR        LR
                 comp=Z,2µm,21.2s
BJI                                  LR        LR
                 comp=Z,3µm,31.4s
GSI   Gunungsitoli       67.94 276  eP         P         08 14 40.0 -0.3
                 comp=Z,78nm,0.8s
PKDT  Phuket             68.77 283   P         P         08 14 47.9 +2.5
                 comp=Z,7.0nm,0.8s
PBKT  Sadao Pong         68.84 293  eP         P         08 14 46.1 +0.3
                 comp=Z,39nm,1.0s
PBKT  Sadao Pong         68.84 293   P         P         08 14 46.5 +0.7
                 comp=Z,42nm,1.0s
PHET  Kaeng Krachan      68.94 289   P         P         08 14 48.8 +2.4
                 comp=Z,8.3nm,0.9s,comp=Z,210nm
TIY   Taiyuan            68.97 318  eP         P         08 14 46.8 +0.5
TIY                                  pmax      pmax
                 comp=Z,130nm,1.5s
TIY                                  LR        LR
                 comp=Z,380nm,16.4s
TIY                                  LR        LR
                 comp=Z,1µm,19.2s
TIY                                  LR        LR
                 comp=Z,1µm,17.9s
XAN   Xi'an              69.47 313   P         P         08 14 49.3 -0.2
XAN                                  PP        PP        08 17 21.6 -1.8
XAN                                  S         S         08 23 56.1 +0.2
XAN                                  ScS       SKSac     08 24 44.9 -3.8
XAN                                  SS        SS        08 28 23.2 -0.7
XAN                                  pmax      pmax
                 comp=Z,99nm,0.9s
XAN                                  pmax      pmax
                 comp=Z,1µm,6.3s
XAN                                  LR        LR
                 comp=Z,910nm,17.3s
XAN                                  LR        LR
                 comp=Z,1µm,20.6s
XAN                                  LR        LR
                 comp=Z,2µm,22.8s
XAN   Xi'an              69.47 313  eP         P         08 14 49.3 -0.2
                 comp=Z,75nm,0.8s
XAN                                  LR        LR
                 comp=Z,3µm,22.0s
XAN   Xi'an              69.47 313  eP         P         08 14 49.3 -0.2
XAN                                  pmax      pmax
                 comp=Z,75nm,0.8s
XAN                                  MLR       MLR
                 comp=Z,3µm,22.0s
UTTA  Uttaradit          69.60 294   P         P         08 14 52.0 +1.5
                 comp=Z,8.8nm,1.0s,comp=Z,86nm
SRDT  SRDT               69.84 290   P         P         08 14 53.7 +1.7
                 comp=Z,38nm,1.0s
UTHA  Uthaitani          69.91 291   P         P         08 14 54.1 +1.7
                 comp=Z,12nm,1.0s,comp=Z,101nm
SUKH  Sukhothai          70.35 293   P         P         08 14 57.3 +2.2
                 comp=Z,11nm,1.0s
KMI   Kunming            70.36 302   P         P         08 14 56.3 +1.0
KMI                                  pP        pP        08 15 01.5 +0.2
KMI                                  sP        sP        08 15 03.6 +0.1
KMI                                  PP        PP        08 17 30.1 -1.3
KMI                                  S         S         08 24 10.2 +3.2
KMI                                  sS        sS        08 24 19.1 +2.1
KMI                                  SKS       SKSac     08 24 54.0 -2.2
KMI                                  pmax      pmax
                 comp=Z,91nm,1.3s
KMI                                  pmax      pmax
                 comp=Z,1µm,6.9s
KMI                                  LR        LR
                 comp=Z,300nm,22.7s
KMI                                  LR        LR
                 comp=Z,2µm,18.9s
KMI                                  LR        LR
                 comp=Z,3µm,22.7s
KMI   Kunming            70.36 302  eP         P         08 14 56.0 +0.7
                 comp=Z,133nm,1.2s
KMI                                  LR        LR
                 comp=Z,2µm,22.0s
KMI   Kunming            70.36 302  eP         P         08 14 56.0 +0.7
KMI                                  pmax      pmax
                 comp=Z,133nm,1.2s
KMI                                  MLR       MLR
                 comp=Z,2µm,22.0s
UMPA  Umpang Tak         70.65 292   P         P         08 14 59.0 +2.0
                 comp=Z,8.0nm,1.1s,comp=Z,2µm
CM01  Chiang Mai Arr     71.26 294  eP         P         08 15 00.5 -0.2
HHC   Hu-ho-hao-te       71.27 320  eP         P         08 15 01.3 +0.9
HHC                                  PP        PP        08 17 41.5 +2.6
HHC                                  S         S         08 24 17.2 +0.4
HHC                                  pmax      pmax
                 comp=Z,63nm,1.2s
HHC                                  pmax      pmax
                 comp=Z,2µm,7.5s
HHC                                  LR        LR
                 comp=Z,2µm,16.4s
HHC                                  LR        LR
                 comp=Z,930nm,17.3s
HHC                                  LR        LR
                 comp=Z,2µm,19.0s
CM31  Chiang Mai Arr     71.28 294  eP         P         08 15 01.1 +0.3
                 comp=Z,50nm,1.0s
CM31  Chiang Mai Arr     71.28 294   P         P         08 15 01.0 +0.2
                 SNR=15
CMAR  Chiang Mai Arr     71.28 294   P         P         08 15 01.6 +0.8
                 comp=Z,26nm,1.0s,baz=118,slow=4.3,SNR=69
CMAR                                 PKPPKP              08 42 55.9
                 comp=Z,0.7nm,0.3s,baz=277,slow=5.4,SNR=6.3
CMAR                                 LR        LR        08 47 02.5
                 comp=Z,335nm,18.0s,baz=154,slow=36
MA2   Magadan            71.34 353  eP         P         08 14 59.2 -1.0
                 comp=Z,438nm,1.4s
MA2   Magadan            71.34 353ceP          P         08 14 59.7 -0.5
MA2                                  pmax      pmax
                 comp=Z,90nm,1.7s
CMMT  Chiang Mai         71.39 294   P         P         08 15 02.5 +1.0
                 comp=Z,38nm,1.5s,comp=Z,1µm
CHTO  Chiang Mai         71.40 294  eP         P         08 15 01.5  0.0
                 comp=Z,47nm,1.1s
CHTO  Chiang Mai         71.40 294  eP         P         08 15 01.5  0.0
CHTO                                 pmax      pmax
                 comp=Z,47nm,1.1s
CHTO  Chiang Mai         71.40 294   P         P         08 15 01.8 +0.3
                 SNR=11
CHTO  Chiang Mai         71.40 294   P         P         08 15 02.6 +1.1
                 comp=Z,169nm,1.7s,comp=Z,4µm
CD2   Chengdu            71.90 308⇓iP          P         08 15 04.5 +0.2
CD2                                  PP        PP        08 17 44.0 -0.4
CD2                                  S         S         08 24 27.8 +3.5
CD2                                  pmax      pmax
                 comp=Z,320nm,0.7s
CD2                                  pmax      pmax
                 comp=Z,4µm,8.4s
CD2                                  LR        LR
                 comp=Z,4µm,28.4s
CD2                                  LR        LR
                 comp=Z,5µm,21.6s
CD2                                  LR        LR
                 comp=Z,6µm,24.0s
HIA   Hailar             71.96 331  eP         P         08 15 04.1 -0.2
                 comp=Z,249nm,1.3s
HIA   Hailar             71.96 331d iP         P         08 15 04.5 +0.2
HIA                                  pmax      pmax
                 comp=Z,225nm,1.3s
ZEA   Zeya               72.03 338  eP         P         08 15 05.0 +0.4
ZEA                                  pmax      pmax
                 comp=E,74nm,1.4s
ZEA                                  pmax      pmax
                 comp=N,140nm,1.2s
ZEA                                  pmax      pmax
                 comp=Z,230nm,1.2s
ZEA                                  pmax      pmax
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	comp=Z,2μm,8.0s						
ZEA				MLR	MLR		
	comp=E,1μm,15.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,15.0s						
BTO	**Baotou**	**72.12**	**319**	*e*P	**P**	**08 15 06.3**	**+0.8**
LZH	**Lanzhou**	**74.11**	**313**	⇓P	**P**	**08 15 18.5**	**+1.0**
LZH				pP	sP	08 15 24.9	-0.8
LZH				sP	pwP	08 15 27.0	-2.9
LZH				PP	**PP**	**08 18 05.0**	**+1.7**
LZH				S	**S**	**08 24 54.6**	**+5.2**
LZH				sS	sS	08 25 00.6	+1.0
LZH				pmax	pmax		
	comp=Z,200nm,1.4s						
LZH				pmax	pmax		
	comp=Z,700nm,4.9s						
LZH				LR	LR		
	comp=Z,2μm,16.3s						
LZH				LR	LR		
	comp=Z,2μm,18.4s						
LZH				LR	LR		
	comp=Z,3μm,19.6s						
SEY	**Seymchan**	**74.43**	**354**	*i* P	**P**	**08 15 18.5**	**0.0**
CIT	**Chita**	**76.75**	**330**	*e*P	**P**	**08 15 32.6**	**+0.5**
CIT				*e*		08 15 39.4	
CIT				*e*		08 15 42.6	
CIT				*e*		08 15 48.3	
CIT				pmax	pmax		
	comp=Z,384nm,1.2s						
GAMB	**Gambell**	**76.78**	**10**	*e*P	**P**	**08 15 32.4**	**+0.5**
	comp=Z,34nm,0.8s						
GAMB				LR	LR		
	comp=Z,800nm,22.0s						
KDAK	**Kodiak Island**	**76.97**	**22**	*e*P	**P**	**08 15 33.7**	**+0.6**
	comp=Z,39nm,1.1s						
KDAK	**Kodiak Island**	**76.97**	**22**	*e*P	**P**	**08 15 33.7**	**+0.6**
KDAK				pmax	pmax		
	comp=Z,39nm,1.1s						
ULN	**Ulaanbaatar**	**77.80**	**324**	P	**P**	**08 15 38.8**	**+0.6**
YAK	**Yakutsk**	**77.89**	**344**	*d* *i*P	**P**	**08 15 37.9**	**-0.3**
YAK				*e*		08 15 45.4	
YAK				*e**PP	**PcP**	**08 15 47.7**	**-0.2**
YAK				*e*		08 18 35.1	
YAK				*e*S	**S**	**08 25 33.8**	**+4.2**
YAK				*e**SS	**SKSac**	**08 25 46.9**	**-3.4**
YAK				*e*		08 25 56.1	
YAK				pmax	pmax		
	comp=Z,101nm,1.1s						
YAK				pmax	pmax		
	comp=E,20nm,1.0s						
YAK				pmax	pmax		
	comp=N,33nm,1.1s						
YAK				pmax	pmax		
	comp=Z,364nm,5.2s						
YAK				pmax	pmax		
	comp=E,317nm,4.4s						
YAK				pmax	pmax		
	comp=N,342nm,4.4s						
YAK				smax	smax		
	comp=N,190nm,5.0s						
YAK				smax	smax		
	comp=E,164nm,4.1s						
YAK				MLR	MLR		
	comp=Z,1μm,16.0s						
YAK				MLR	MLR		
	comp=E,545nm,16.0s						
YAK				MLR	MLR		
	comp=N,679nm,17.0s						
SONA0	**Songino Array**	**78.16**	**324**	*e*P	**P**	**08 15 40.8**	**+0.6**
SONM	**Songino Array**	**78.16**	**324**	P	**P**	**08 15 40.8**	**+0.6**
	comp=N,88nm,1.2s,baz=142,slow=4.3,SNR=78						
SONM				PKKPbc	**PKKPbc**	**08 34 42.5**	**+0.9**
	comp=N,0.3nm,0.5s,baz=279,slow=1.5,SNR=3.9						
SONM				PKPPKP		08 42 43.6	
	comp=N,1.1nm,0.8s,baz=132,slow=2.2,SNR=7.0						
SONM				LR	LR	08 47 57.4	
	comp=N,1μm,22.0s,baz=124,slow=34						
SONA1	**Songino Array**	**78.16**	**324**	*e*P	**P**	**08 15 40.0**	**-0.2**
GTA	**Gaotai**	**78.43**	**314**	⇓P	**P**	**08 15 42.8**	**+0.9**
GTA				pP	pP	08 15 46.6	-1.4
GTA				sP	sP	08 15 49.1	-1.1
GTA				S	**S**	**08 25 37.7**	**+1.0**
GTA				sS	pS	08 25 45.0	+1.1
GTA				pmax	pmax		
	comp=N,95nm,1.5s						
GTA				pmax	pmax		
	comp=N,960nm,5.1s						
GTA				LR	LR		
	comp=N,1μm,21.3s						
GTA				LR	LR		
	comp=N,1μm,21.9s						
GTA				LR	LR		
	comp=N,2μm,21.6s						
SVW2	**Sparrevohn**	**78.45**	**18**	*e*P	**P**	**08 15 41.6**	**+0.2**
	comp=N,53nm,1.1s						
ANM	**Nome**	**78.74**	**13**	*e*P	**P**	**08 15 43.2**	**+0.3**
	comp=N,50nm,1.4s						
ANM	**Nome**	**78.74**	**13**	*e*P	**P**	**08 15 43.2**	**+0.3**
ANM				pmax	pmax		
	comp=Z,50nm,1.4s						
RSO	**Redoubt South**	**78.88**	**20**	*e*P	**P**	**08 15 43.5**	**-0.5**
QSPA	**South Pole Qui**	**78.91**	**180**	*e*P	**P**	**08 15 44.2**	**+0.2**
	comp=Z,104nm,0.9s						
BILL	**Bilibino**	**78.94**	**1**	*e*P	**P**	**08 15 43.6**	**-0.3**
	comp=Z,148nm,1.5s						
BILL	**Bilibino**	**78.94**	**1**	*d* *i*P	**P**	**08 15 43.6**	**-0.3**
BILL				*e*		08 15 52.0	
BILL				*e*		08 18 41.6	
BILL				pmax	pmax		
	comp=Z,125nm,1.7s						
BILL				MLR	MLR		
	comp=Z,500nm,19.0s						
BRLK	**Bradley Lake**	**79.02**	**21**	*e*P	**P**	**08 15 44.6**	**+0.1**
	comp=Z,28nm,0.9s						
BRDH	**Bariadhala**	**79.09**	**296**	P	**P**	**08 15 47.1**	**+1.5**
	comp=Z,84nm,0.3s,baz=97,slow=7.4,SNR=6.8						
SHL	**Shillong**	**79.73**	**299**	*e*P	**P**	**08 15 49.0**	**-0.4**
	comp=Z,132nm,1.4s						
SHL	**Shillong**	**79.73**	**299**	*e*P	**P**	**08 15 49.0**	**-0.4**
SHL				pmax	pmax		
	comp=Z,132nm,1.4s						
SHL	**Shillong**	**79.73**	**299**	⇓*i*P	**P**	**08 15 48.0**	**-1.4**
	comp=Z,9.0nm,1.2s						
SEW	**Seward**	**79.77**	**21**	*e*P	**P**	**08 15 51.7**	**+3.1**
	comp=Z,38nm,1.1s						
BOD	**Bodaibo**	**80.19**	**335**	*e*P	**P**	**08 15 50.3**	**-0.6**
BOD				pmax	pmax		
	comp=Z,70nm,1.6s						
SUA	**Susitna One**	**80.29**	**20**	*e*P	**P**	**08 15 50.9**	**-0.7**
	comp=Z,78nm,1.5s						
RC01	**Rabbit Creek A**	**80.36**	**21**	*e*P	**P**	**08 15 52.0**	**+0.2**
	comp=Z,53nm,1.5s						
PMR	**Palmer**	**80.93**	**20**	*e*P	**P**	**08 15 54.9**	**+0.2**
	comp=Z,38nm,1.2s						
PMR	**Palmer**	**80.93**	**20**	*e*P	**P**	**08 15 54.9**	**+0.2**
PMR				pmax	pmax		
	comp=Z,38nm,1.2s						
GHO	**Glory Hole Cre**	**81.12**	**20**	PFAKE		08 16 10.0	+14
GHO				LR	LR		
	comp=Z,1μm,21.0s						
ZAK	**Zakamensk**	**81.22**	**325**	*e*P	**P**	**08 15 55.8**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,47nm,1.2s						
CAST	**Castle Rocks**	**81.28**	**18**	*e*P	**P**	**08 15 55.9**	**-0.8**
	comp=Z,22nm,0.9s						
LSA	**Lhasa**	**81.60**	**302**	*e*P	**P**	**08 15 59.4**	**-0.3**
	comp=Z,41nm,1.4s						
IRK	**Irkutsk**	**81.60**	**327**	*e*P	**P**	**08 15 54.6**	**-4.0**
IRK				pmax	pmax		
	comp=Z,66nm,2.7s						
TLY	**Talaya**	**81.65**	**327**	*e*P	**P**	**08 15 58.5**	**-0.4**
	comp=Z,36nm,0.8s						
TLY				LR	LR		
	comp=Z,700nm,21.0s						
TLY	**Talaya**	**81.65**	**327**	*d* *i*P	**P**	**08 15 58.2**	**-0.7**
DIV	**Divide**	**81.80**	**22**	*e*P	**P**	**08 15 59.1**	**-0.5**
	comp=Z,38nm,1.2s						
TRF	**Thorofare Moun**	**81.86**	**19**	*e*P	**P**	**08 15 59.1**	**-0.9**
	comp=Z,18nm,1.0s						
TRF				LR	LR		
	comp=Z,1μm,22.0s						
KLU	**Klutina**	**81.98**	**22**	*e*P	**P**	**08 16 00.4**	**-0.1**
	comp=Z,30nm,1.1s						
BPAW	**Bear Paw Mtn.**	**82.11**	**18**	*e*P	**P**	**08 16 00.6**	**-0.5**
	comp=Z,17nm,1.4s						
RDOG	**Red Dog Mine**	**82.26**	**12**	*e*P	**P**	**08 16 01.7**	**0.0**
	comp=Z,49nm,0.9s						
RND	**Reindeer**	**82.29**	**19**	*e*P	**P**	**08 16 01.3**	**-0.7**
	comp=Z,30nm,1.1s						
RND	**Reindeer**	**82.29**	**19**	*e*P	**P**	**08 16 01.3**	**-0.7**
RND				pmax	pmax		
	comp=Z,30nm,1.1s						
MCK	**McKinley**	**82.49**	**19**	*e*P	**P**	**08 16 02.4**	**-0.6**
	comp=Z,63nm,1.4s						
MCK	**McKinley**	**82.49**	**19**	*e*P	**P**	**08 16 02.4**	**-0.6**
MCK				pmax	pmax		
	comp=Z,63nm,1.4s						
DHY	**Denali Highway**	**82.55**	**20**	*e*P	**P**	**08 16 03.7**	**+0.2**
	comp=Z,19nm,1.1s						
BWN	**Browne**	**82.63**	**18**	*e*P	**P**	**08 16 03.1**	**-0.7**
	comp=Z,75nm,1.0s						
BWN				LR	LR		
	comp=Z,1μm,20.0s						
IM3	**Indian Mountai**	**82.72**	**16**	*e*P	**P**	**08 16 03.9**	**-0.3**
HARP	**HAARP**	**82.86**	**21**	*e*P	**P**	**08 16 07.3**	**+2.3**
	comp=Z,48nm,1.2s						
MLY	**Manley**	**82.86**	**17**	*e*P	**P**	**08 16 04.4**	**-0.6**
	comp=Z,29nm,1.2s						
MOY	**Mondy**	**83.10**	**326**	*e*P	**P**	**08 16 06.5**	**-0.1**
MOY				pmax	pmax		
	comp=Z,84nm,2.3s						
PAX	**Paxson**	**83.12**	**21**	PFAKE		08 16 20.0	+14
PAX				LR	LR		
	comp=Z,600nm,22.0s						
KCPM	**Cahto Peak**	**83.27**	**48**	*e*P	**P**	**08 16 07.2**	**-0.6**
	comp=Z,101nm,1.4s						
WRH	**Wood River Hil**	**83.27**	**19**	*e*P	**P**	**08 16 06.4**	**-0.6**
	comp=Z,37nm,1.0s						
HOPS	**Hopland Field**	**83.40**	**48**	*e*P	**P**	**08 16 08.1**	**-0.2**
	comp=Z,77nm,1.4s						
GDXM	**Geysers**	**83.54**	**49**	*e*P	**P**	**08 16 08.7**	**-0.4**
	comp=Z,20nm,1.2s						
MDM	**Murphy Dome**	**83.57**	**18**	*e*P	**P**	**08 16 07.8**	**-0.8**
	comp=Z,40nm,1.1s						
MDM				LR	LR		
	comp=Z,900nm,19.0s						
HDA	**Harding Lake**	**83.59**	**19**	*e*P	**P**	**08 16 08.1**	**-0.6**
	comp=Z,59nm,0.9s						
HDA				LR	LR		
	comp=Z,1μm,20.0s						
HDA	**Harding Lake**	**83.59**	**19**	P	**P**	**08 16 08.1**	**-0.6**
	baz=228						
TCOL	**CIGO, UAF Yank**	**83.62**	**18**	P	**P**	**08 16 07.7**	**-1.1**
	baz=227						
COLA	**College**	**83.63**	**18**	*e*P	**P**	**08 16 08.0**	**-0.8**
	comp=Z,32nm,0.8s						
COLA	**College**	**83.63**	**18**	*d* *i*P	**P**	**08 16 07.6**	**-1.2**
COLA				pmax	pmax		
	comp=Z,28nm,0.8s						
RIDG	**Independ'e Rid**	**83.84**	**20**	*e*P	**P**	**08 16 09.6**	**-0.5**
	comp=Z,35nm,0.9s						
ILAR	**Eielson Array**	**83.86**	**19**	P	**P**	**08 16 09.6**	**-0.4**
	comp=Z,13nm,0.7s,baz=232,slow=4.8,SNR=99						
ILAR				LR	LR	08 51 15.3	
	comp=Z,462nm,19.1s,baz=243,slow=34						
ILB	**Eielson Array**	**83.86**	**19**	*e*P	**P**	**08 16 09.3**	**-0.8**
	comp=Z,23nm,0.8s						
POKR	**Poker Plat Res**	**83.92**	**18**	P	**P**	**08 16 09.2**	**-1.1**
	baz=227						
ODAN	**Odare**	**83.96**	**299**	*e*P	**P**	**08 16 11.8**	**+0.1**
	comp=Z,174nm,0.9s						
O02D	**Mt. Diablo Mer**	**84.01**	**47**	P	**P**	**08 16 11.8**	**+0.3**
	baz=250						
L02E	**Cave Junction**	**84.11**	**45**	P	**P**	**08 16 11.3**	**-0.6**
	baz=249						
J01E	**Myrtle Point**	**84.24**	**44**	P	**P**	**08 16 12.5**	**0.0**
	baz=249						
K02D	**Willamette Mer**	**84.26**	**45**	P	**P**	**08 16 12.7**	**0.0**
	baz=249						
SCRK	**Sand Creek**	**84.28**	**20**	*e*P	**P**	**08 16 12.2**	**-0.2**
	comp=Z,47nm,1.3s						
WDC	**Whiskeytown Da**	**84.32**	**47**	*e*P	**P**	**08 16 13.3**	**+0.3**
	comp=Z,49nm,1.6s						
WDC	**Whiskeytown Da**	**84.32**	**47**	*e*P	**P**	**08 16 13.3**	**+0.3**
WDC				pmax	pmax		
	comp=Z,49nm,1.6s						
N02D	**Trinity Center**	**84.34**	**47**	P	**P**	**08 16 13.0**	**-0.2**
	baz=250						
M02C	**Callahan**	**84.38**	**46**	P	**P**	**08 16 13.1**	**-0.3**
	baz=250						
YBH	**Yreka Blue Hor**	**84.59**	**46**	*e*P	**P**	**08 16 14.1**	**-0.3**
	comp=Z,27nm,1.0s						
YBH	**Yreka Blue Hor**	**84.59**	**46**	*e*P	**P**	**08 16 14.1**	**-0.3**
YBH				pmax	pmax		
	comp=Z,27nm,1.0s						
KNGR	**Kungurtug, Tuv**	**84.60**	**324**	*d* *i*P	**P**	**08 16 13.7**	**-0.6**
COLD	**Coldfoot**	**84.60**	**16**	*e*P	**P**	**08 16 14.1**	**+0.3**
	comp=Z,9.7nm,0.9s						
RAMN	**Ramite**	**84.67**	**299**	*e*P	**P**	**08 16 15.3**	**0.0**
	comp=Z,99nm,1.1s						
ORV	**Oroville**	**84.74**	**48**	*e*P	**P**	**08 16 14.1**	**-1.0**
	comp=Z,36nm,1.5s						
ORV	**Oroville**	**84.74**	**48**	*e*P	**P**	**08 16 14.1**	**-1.0**
ORV				pmax	pmax		
	comp=Z,36nm,1.5s						
BESE	**Bessie Mountai**	**84.75**	**27**	*e*P	**P**	**08 16 15.1**	**+0.3**
	comp=Z,73nm,1.5s						
O03E	**Paynes Creek**	**84.76**	**47**	P	**P**	**08 16 15.1**	**-0.2**
	baz=251,SNR=11						
PRP	**Porcupine Dome**	**84.79**	**19**	*e*P	**P**	**08 16 13.7**	**-1.3**
	comp=Z,39nm,1.8s						
JIS	**Juneau Island**	**84.81**	**28**	*e*P	**P**	**08 16 16.2**	**+1.3**
	comp=Z,53nm,1.6s						
HYT	**Haines Junctio**	**84.82**	**25**	*e*P	**P**	**08 16 15.0**	**-0.2**
	comp=Z,17nm,0.9s						
I03D	**Drain, OR**	**84.83**	**44**	P	**P**	**08 16 15.2**	**-0.2**
	baz=250						
AFDM	**Forest Hills D**	**84.93**	**49**	*e*P	**P**	**08 16 15.7**	**-0.5**
	comp=Z,32nm,1.2s						
SKAG	**Skagway**	**85.00**	**26**	*e*P	**P**	**08 16 15.8**	**-0.1**
	comp=Z,30nm,1.0s						
CMB	**Columbia Colle**	**85.08**	**50**	*e*P	**P**	**08 16 16.3**	**-0.6**
	comp=Z,15nm,1.0s						
CMB	**Columbia Colle**	**85.08**	**50**	*e*P	**P**	**08 16 16.3**	**-0.6**
CMB				pmax	pmax		
	comp=Z,15nm,1.0s						
JIRN	**Jiri**	**85.20**	**299**	*e*P	**P**	**08 16 18.1**	**-0.1**
	comp=Z,321nm,1.4s						
M04C	**Macdoel**	**85.22**	**46**	P	**P**	**08 16 17.9**	**+0.2**
	baz=251,SNR=5.3						
CIS	**Catalina Islan**	**85.24**	**55**	P	**P**	**08 16 17.8**	**0.0**
	baz=254						
ARVC	**Arvin**	**85.41**	**53**	P	**P**	**08 16 18.7**	**+0.2**
	baz=253						
VES	**Vestal, Richgr**	**85.42**	**52**	P	**P**	**08 16 18.0**	**-0.6**
	baz=253						
I04A	**Tendick Farm,**	**85.50**	**44**	P	**P**	**08 16 19.5**	**+0.6**
	baz=250						
H04D	**Lebanon**	**85.53**	**43**	P	**P**	**08 16 18.9**	**0.0**
	baz=250						
GUN	**Gumba**	**85.53**	**299**	*e*P	**P**	**08 16 19.8**	**0.0**
	comp=Z,154nm,1.2s						
FYU	**Fort Yukon**	**85.57**	**18**	*e*P	**P**	**08 16 18.6**	**-0.1**
	comp=Z,26nm,1.2s						
FYU				LR	LR		
	comp=Z,600nm,20.0s						
PALK	**Pallekele**	**85.64**	**278**	*e*P	**P**	**08 16 18.8**	**-1.5**
	comp=Z,58nm,1.2s						
PALK	**Pallekele**	**85.64**	**278**	P	**P**	**08 16 21.2**	**+1.0**
	comp=Z,46nm,1.2s,baz=116,slow=4.7,SNR=8.3						
BEKR	**Beckworth**	**85.67**	**48**	*e*P	**P**	**08 16 19.5**	**-0.5**
	comp=Z,40nm,1.3s						
EGAK	**Eagle**	**85.75**	**20**	*e*P	**P**	**08 16 19.9**	**+0.4**
	comp=Z,44nm,0.9s						
MWC	**Mount Wilson**	**85.76**	**54**	*e*P	**P**	**08 16 20.2**	**-0.4**
	comp=Z,71nm,1.6s						
MWC				LR	LR		
	comp=Z,2μm,20.0s						
WHY	**Whitehorse**	**85.82**	**25**	*e*P	**P**	**08 16 19.8**	**-0.3**
	comp=Z,19nm,1.4s						
ISA	**Isabella, Lake**	**85.84**	**53**	*e*P	**P**	**08 16 20.2**	**-0.6**
	comp=Z,19nm,1.1s						
ISA				LR	LR		
	comp=Z,2μm,21.0s						
ISA	**Isabella, Lake**	**85.84**	**53**	P	**P**	**08 16 20.7**	**-0.1**
	baz=253,SNR=13						
PKI	**Pulchoki**	**85.85**	**299**	*e*P	**P**	**08 16 21.0**	**-0.4**
	comp=Z,235nm,1.5s						
PKIN	**Phulchoki**	**85.86**	**299**	*e*P	**P**	**08 16 21.0**	**-0.3**
	comp=Z,148nm,1.4s						
WAKR	**Walker**	**85.94**	**50**	*e*P	**P**	**08 16 21.2**	**-0.1**
	comp=Z,73nm,1.6s						
DAWY	**Dawson**	**85.94**	**21**	*e*P	**P**	**08 16 20.4**	**-0.2**
	comp=Z,45nm,1.4s						
MDPB	**Devils Postpil**	**85.95**	**51**	*e*P	**P**	**08 16 21.2**	**-0.3**
	comp=Z,22nm,1.1s						
MDPB				LR	LR		
	comp=Z,1μm,22.0s						
TIXI	**Tiksi**	**85.97**	**349**	*e*P	**P**	**08 16 19.8**	**-0.7**
	comp=Z,84nm,1.5s						
TIXI	**Tiksi**	**85.97**	**349**	*d* *e*P	**P**	**08 16 19.5**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,77nm,1.7s						
TIXI	**Tiksi**	**85.97**	**349**	LR	LR	08 52 33.1	
	comp=Z,297nm,19.3s,baz=154,slow=34						
PNTR	**Pine Nut**	**85.99**	**49**	*e*P	**P**	**08 16 21.4**	**-0.3**
	comp=Z,40nm,1.4s						
EDW2	**Edwards Air Fo**	**86.00**	**53**	P	**P**	**08 16 21.4**	**-0.1**
	baz=254,SNR=12						
OMMB	**Old Mammoth Mi**	**86.00**	**51**	*e*P	**P**	**08 16 21.5**	**-0.3**
	comp=Z,34nm,1.5s						
OMMB				LR	LR		
	comp=Z,2μm,18.0s						
KKN	**Kakani**	**86.02**	**299**	*e*P	**P**	**08 16 21.7**	**-0.3**
	comp=Z,164nm,1.4s						
VCNR	**Virginia City**	**86.02**	**49**	*e*P	**P**	**08 16 21.6**	**-0.1**
	comp=Z,15nm,1.2s						
BFSC	**Mount Baldy Ra**	**86.08**	**54**	P	**P**	**08 16 22.0**	**-0.1**
	baz=254,SNR=6.9						
DMN	**Daman**	**86.12**	**299**	*e*P	**P**	**08 16 22.6**	**0.0**
	comp=Z,218nm,1.3s						
J05D	**Fort Rock, OR**	**86.14**	**45**	P	**P**	**08 16 22.4**	**+0.2**
	baz=251						
109C	**Camp Elliot, M**	**86.16**	**56**	P	**P**	**08 16 22.7**	**+0.4**
	baz=254						
CPE	**Camp Elliot**	**86.16**	**56**	*e*P	**P**	**08 16 22.3**	**0.0**
	comp=Z,41nm,1.5s						
CPE				LR	LR		
	comp=Z,1μm,19.0s						
YERR	**Yerington**	**86.23**	**49**	*e*P	**P**	**08 16 23.2**	**+0.4**
	comp=Z,34nm,1.5s						
MURC	**Murrieta**	**86.28**	**55**	P	**P**	**08 16 22.7**	**-0.3**
	baz=254						
PAHR	**Pah Rah Range**	**86.34**	**49**	*e*P	**P**	**08 16 22.8**	**-0.5**
	comp=Z,44nm,1.4s						
E04D	**Cinebar**	**86.34**	**41**	P	**P**	**08 16 22.8**	**-0.1**
	baz=250						
MOD	**Modoc Plateau**	**86.35**	**46**	*e*P	**P**	**08 16 23.5**	**+0.3**
	comp=Z,30nm,1.4s						
D03D	**Eldon**	**86.35**	**40**	P	**P**	**08 16 23.2**	**+0.3**
	baz=249						
CWC	**Cottonwood Cre**	**86.37**	**52**	P	**P**	**08 16 23.5**	**0.0**
	baz=254						
LRMC	**Laurel Mtn Rad**	**86.41**	**53**	P	**P**	**08 16 23.1**	**-0.6**
	baz=254,SNR=10						
I05D	**Terrebonne, OR**	**86.41**	**44**	P	**P**	**08 16 23.4**	**0.0**
	baz=251						
BAR	**Barrett**	**86.45**	**56**	*e*P	**P**	**08 16 23.9**	**+0.1**
	comp=Z,11nm,1.1s						
PINE	**Pine Mountain**	**86.50**	**44**	*e*P	**P**	**08 16 23.7**	**-0.3**
	comp=Z,23nm,1.1s						
RYN	**Ryan**	**86.66**	**50**	*e*P	**P**	**08 16 24.7**	**-0.2**
	comp=Z,37nm,1.5s						
RYN				LR	LR		
	comp=Z,1μm,19.0s						
DAC	**Darwin (Calif)**	**86.70**	**52**	*e*P	**P**	**08 16 24.8**	**-0.4**
	comp=Z,13nm,1.0s						
DAC	**Darwin (Calif)**	**86.70**	**52**	*e*P	**P**	**08 16 24.8**	**-0.4**
DAC				pmax	pmax		
	comp=Z,13nm,1.0s						
MONP2	**Monument Peak**	**86.71**	**56**	P	**P**	**08 16 24.6**	**-0.7**
	baz=255,SNR=11						
MPMC	**Manual Prospec**	**86.72**	**52**	P	**P**	**08 16 25.2**	**-0.1**
	baz=254,SNR=10						
NV01	**Mina Array Sit**	**86.77**	**50**	*e*P	**P**	**08 16 24.9**	**-0.5**
NVAR	**Mina Array Bea**	**86.77**	**50**	P	**P**	**08 16 25.4**	**-0.1**
	comp=Z,13nm,1.0s,baz=236,slow=5.6,SNR=33						
NVAR				PKKPbc	**PKKPbc**	**08 34 21.6**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=112,slow=2.9,SNR=8.0						
NVAR				PKPPKP	**P'P'df**	**08 42 30.1**	**+3.7**
	comp=Z,0.9nm,0.7s,baz=82,slow=3.7,SNR=4.3						
NVAR				LR	LR	08 46 30.1	
	comp=Z,708nm,21.0s,baz=262,slow=30						
F05D	**White Salmon**	**86.84**	**42**	P	**P**	**08 16 25.4**	**0.0**
	baz=251						
PFO	**Pinyon Flats O**	**86.87**	**55**	*e*P	**P**	**08 16 26.3**	**+0.3**
	comp=Z,15nm,1.1s						
PFO	**Pinyon Flats O**	**86.87**	**55**	*e*P	**P**	**08 16 26.3**	**+0.3**
PFO				pmax	pmax		
	comp=Z,15nm,1.1s						
PFO	**Pinyon Flats O**	**86.87**	**55**	P	**P**	**08 16 25.6**	**-0.4**
	baz=255						
XPFO	**Pion Flat**	**86.87**	**55**	*e*P	**P**	**08 16 25.7**	**-0.3**
	comp=Z,16nm,1.1s						
NV11	**Mina Array Sit**	**86.88**	**50**	*e*P	**P**	**08 16 25.9**	**-0.1**
	comp=Z,1.5nm,1.0s						
DLBC	**Dease Lake**	**86.90**	**29**	*e*P	**P**	**08 16 26.0**	**+0.5**
IKP	**In-Ko-Pah, Jac**	**86.90**	**56**	P	**P**	**08 16 26.0**	**-0.1**
	baz=255						
D05A	**Enumclaw**	**86.93**	**41**	*e*P	**P**	**08 16 27.3**	**+1.5**
	comp=Z,188nm,1.7s						
GSC	**Goldstone, Bar**	**87.05**	**53**	*e*P	**P**	**08 16 26.6**	**-0.2**
	comp=Z,27nm,1.4s						
GSC	**Goldstone, Bar**	**87.05**	**53**	*e*P	**P**	**08 16 26.6**	**-0.2**
GSC				pmax	pmax		
	comp=Z,27nm,1.4s						
GSC	**Goldstone, Bar**	**87.05**	**53**	P	**P**	**08 16 26.8**	**0.0**
	baz=254						
GRAC	**Grapevine Rang**	**87.07**	**52**	P	**P**	**08 16 26.8**	**0.0**
	baz=254						
KVN	**Kaiserville**	**87.10**	**49**	*e*P	**P**	**08 16 26.7**	**-0.4**
	comp=Z,18nm,1.1s						
KVN	**Kaiserville**	**87.10**	**49**	*e*P	**P**	**08 16 26.7**	**-0.4**
KVN				pmax	pmax		
	comp=Z,18nm,1.1s						
B05A	**Bryant**	**87.23**	**40**	P	**P**	**08 16 28.3**	**+1.1**
	baz=250						
SWSC	**Sam W. Stewart**	**87.23**	**56**	P	**P**	**08 16 27.7**	**+0.1**
	baz=255,SNR=6.0						
HEC	**Hector,Ludlow**	**87.29**	**54**	P	**P**	**08 16 28.1**	**+0.1**
	baz=255						
FURC	**Furnace Creek,**	**87.32**	**52**	P	**P**	**08 16 28.2**	**+0.3**
	baz=254,SNR=8.7						
BELC	**Belle Mtn. Jos**	**87.34**	**55**	P	**P**	**08 16 28.1**	**-0.2**
	baz=255,SNR=14						
KOLN	**Koldanda**	**87.45**	**299**	*e*P	**P**	**08 16 28.1**	**-0.9**
	comp=Z,73nm,1.2s						
DANN	**Dangsing**	**87.46**	**299**	*e*P	**P**	**08 16 28.2**	**-1.0**
	comp=Z,88nm,1.2s						
I07A	**Izee**	**87.58**	**44**	*e*P	**P**	**08 16 28.9**	**-0.2**
	comp=Z,48nm,1.4s						
SHOC	**Shoshone, Teco**	**87.62**	**53**	P	**P**	**08 16 29.1**	**-0.3**
	baz=255,SNR=5.6						
WVOR	**Wild Horse Val**	**87.69**	**46**	*e*P	**P**	**08 16 29.8**	**0.0**
	comp=Z,36nm,1.3s						
WVOR	**Wild Horse Val**	**87.69**	**46**	*e*P	**P**	**08 16 29.8**	**0.0**
WVOR				pmax	pmax		
	comp=Z,36nm,1.3s						
BC3	**Big Chuckawall**	**87.69**	**55**	P	**P**	**08 16 30.2**	**+0.3**
	baz=255,SNR=13						
TUQ	**Turquoise Moun**	**87.78**	**53**	P	**P**	**08 16 29.9**	**-0.4**
	baz=255,SNR=8.0						
LTY	**Liberty**	**87.80**	**41**	*e*P	**P**	**08 16 30.3**	**+0.2**
	comp=Z,13nm,1.0s						
GMRC	**Granite Mounta**	**87.82**	**54**	P	**P**	**08 16 30.5**	**-0.1**
	baz=255						
F07A	**Phinny Hill Vi**	**87.86**	**43**	*e*P	**P**	**08 16 30.8**	**+0.5**
	comp=Z,20nm,1.1s						
TPNV	**Topopah Spring**	**87.92**	**52**	*e*P	**P**	**08 16 30.9**	**-0.1**
	comp=Z,27nm,1.6s						
TPNV				LR	LR		
	comp=Z,2μm,21.0s						
TPNV	**Topopah Spring**	**87.92**	**52**	*e*P	**P**	**08 16 30.9**	**-0.1**
TPNV				pmax	pmax		
	comp=Z,27nm,1.6s						
TPNV				MLR	MLR		
	comp=Z,2μm,21.0s						
TPNV	**Topopah Spring**	**87.92**	**52**	P	**P**	**08 16 30.2**	**-0.9**
	baz=255,SNR=13						
GLA	**Glamis**	**88.05**	**56**	*e*P	**P**	**08 16 31.7**	**+0.2**
	comp=Z,32nm,1.0s						
GLA	**Glamis**	**88.05**	**56**	*e*P	**P**	**08 16 31.7**	**+0.2**
GLA				pmax	pmax		
	comp=Z,32nm,1.0s						
GLA	**Glamis**	**88.05**	**56**	P	**P**	**08 16 31.1**	**-0.5**
	baz=256						
PYUN	**Piuthan**	**88.06**	**299**	*e*P	**P**	**08 16 30.5**	**-1.4**
	comp=Z,50nm,0.9s						
IRM	**Iron Mountain**	**88.07**	**55**	P	**P**	**08 16 31.8**	**+0.1**
	baz=255,SNR=25						
J08A	**Circle Bar Ran**	**88.08**	**45**	*e*P	**P**	**08 16 31.6**	**0.0**
	comp=Z,34nm,1.2s						

HAWA	**Hanford**	88.27	42	*e*P	P	08 16 32.3	+0.1
	comp=Z,46nm,1.5s						
G08A	**Pilot Rock**	88.32	43	*e*P	P	08 16 32.6	-0.1
	comp=Z,29nm,1.1s						
LDFC	**Landfair**	88.33	54	*e*P	P	08 16 32.5	-0.5
	comp=Z,30nm,0.9s						
LDFC				LR	LR		
	comp=Z,1µm,20.0s						
Y12C	**Blythe**	88.47	55	*e*P	P	08 16 33.7	+0.2
	comp=Z,24nm,1.0s						
Y12C				LR	LR		
	comp=Z,1µm,19.0s						
Y12C	**Blythe**	88.47	55	P	P	08 16 34.0	+0.5
	baz=256,SNR=6.5						
WMQ	**Urumqi**	88.48	315	P	P	08 16 33.5	+0.1
WMQ				pP	pP	08 16 39.1	-0.4
WMQ				sP	sP	08 16 40.5	-1.2
WMQ				PP	PP	08 19 59.2	-2.5
WMQ				pmax	pmax		
	comp=Z,100nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,2µm,5.3s						
WMQ				LR	LR		
	comp=Z,2µm,21.7s						
WMQ				LR	LR		
	comp=Z,2µm,20.5s						
WMQ				LR	LR		
	comp=Z,4µm,29.7s						
WMQ	**Urumqi**	88.48	315	*e*P	P	08 16 33.2	-0.2
	comp=Z,91nm,1.3s						
WMQ	**Urumqi**	88.48	315	*e*P	P	08 16 33.2	-0.2
WMQ				pmax	pmax		
	comp=Z,91nm,1.3s						
NEE2	**Needles Airpor**	88.64	54	P	P	08 16 34.5	+0.2
	baz=256						
SHPR	**Sheep Range**	88.65	53	*e*P	P	08 16 34.6	+0.1
	comp=Z,62nm,1.7s						
SHPR				LR	LR		
	comp=Z,2µm,21.0s						
R11A	**Troy Canyon, C**	88.80	51	*e*P	P	08 16 35.0	-0.2
	comp=Z,26nm,1.5s						
R11A				LR	LR		
	comp=Z,1µm,22.0s						
R11A	**Troy Canyon, C**	88.80	51	P	P	08 16 35.1	-0.1
	baz=255,SNR=14						
113A	**Mohawk Valley,**	88.84	56	*e*P	P	08 16 35.5	+0.3
	comp=Z,27nm,1.3s						
113A				LR	LR		
	comp=Z,2µm,20.0s						
SRIG	**Santa Rosalia**	88.87	62	PFAKE		08 16 50.0	+15
SRIG				LR	LR		
	comp=Z,2µm,21.0s						
D08A	**Wollman Farm,**	88.88	42	*e*P	P	08 16 35.4	+0.3
	comp=Z,52nm,1.6s						
PDMCI	**Parker Dam,Lak**	88.91	55	P	P	08 16 35.5	0.0
	baz=256,SNR=9.3						
B08A	**Colville Reser**	89.00	40	*e*P	P	08 16 35.8	+0.1
	comp=Z,50nm,1.6s						
E09A	**Wood Farm, Sta**	89.22	42	*e*P	P	08 16 36.7	0.0
	comp=Z,46nm,1.5s						
W13A	**Hualapai Mount**	89.31	54	*e*P	P	08 16 38.0	+0.3
W13A				LR	LR		
	comp=Z,1µm,18.0s						
BMO	**Blue Mountains**	89.31	44	*e*P	P	08 16 37.3	0.0
	comp=Z,50nm,1.6s						
BMO	**Blue Mountains**	89.31	44	*e*P	P	08 16 37.3	0.0
BMO				pmax	pmax		
	comp=Z,50nm,1.6s						
214A	**Organ Pipe Nat**	89.44	57	P	P	08 16 38.3	+0.2
	baz=257,SNR=17						
ELK	**Elko**	89.67	48	*e*P	P	08 16 39.3	0.0
	comp=Z,47nm,1.6s						
ELK	**Elko**	89.67	48	*e*P	P	08 16 39.3	0.0
ELK				pmax	pmax		
	comp=Z,47nm,1.6s						
F10A	**Beach Ranch, E**	89.68	43	*e*P	P	08 16 38.9	-0.2
	comp=Z,51nm,1.5s						
Y14A	**Wickenburg**	89.74	55	*e*P	P	08 16 39.6	+0.1
	comp=Z,17nm,1.4s						
HYB	**Hyderabad**	89.75	288	*i* P	P	08 16 40.0	+0.1
MFID	**Camas Ranch**	89.94	46	*e*P	P	08 16 40.4	0.0
	comp=Z,50nm,1.6s						
SLBS	**Sierra La Lagu**	90.11	66	PFAKE		08 16 50.0	+8.5
SLBS				LR	LR		
	comp=Z,2µm,19.0s						
PSUT	**Pine Spring**	90.16	51	*e*P	P	08 16 41.6	+0.1
	comp=Z,21nm,1.2s						
INK	**Inuvik**	90.25	19	*e*P	P	08 16 40.8	-0.2
	comp=Z,9.1nm,1.0s						
INK	**Inuvik**	90.25	19	*e*P	P	08 16 40.8	-0.2
INK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
INK	**Inuvik**	90.25	19	PKKPbc	PKKPbc	08 34 10.8	-2.8
	comp=Z,1.7nm,0.9s,baz=88,slow=1.9,SNR=4.0						
LCMT	**Little Creek M**	90.27	52	*e*P	P	08 16 42.6	+0.5
LCMT				LR	LR		
	comp=Z,2µm,20.0s						
CCUT	**Cedar City**	90.30	52	*e*P	P	08 16 42.3	0.0
	comp=Z,18nm,1.0s						
DGZ	**Jazzator, Alta**	90.35	321	*d i*P	P	08 16 41.5	-0.6
DGZ				pmax	pmax		
	comp=Z,18nm,0.9s						
HSIG		90.35	61	*e*P	P	08 16 42.7	+0.3
	comp=Z,66nm,1.6s						
HSIG				LR	LR		
	comp=Z,2µm,20.0s						
NEW	**Newport**	90.39	41	*e*P	P	08 16 41.8	-0.4
	comp=Z,32nm,1.6s						
NEW	**Newport**	90.39	41	*e*P	P	08 16 41.8	-0.4
NEW				pmax	pmax		
	comp=Z,33nm,1.6s						
NEW	**Newport**	90.39	41	P	P	08 16 41.7	-0.5
	baz=254						
SZCU	**Shurtz Canyon**	90.53	52	*e*P	P	08 16 44.3	+1.0
	comp=Z,114nm,2.0s						
KNB	**Kanab**	90.60	53	*e*P	P	08 16 43.5	-0.1
	comp=Z,116nm,1.7s						
KNB				LR	LR		
	comp=Z,2µm,20.0s						
KNB	**Kanab**	90.60	53	*e*P	P	08 16 43.5	-0.1
KNB				pmax	pmax		
	comp=Z,116nm,1.7s						
KNB				MLR	MLR		
	comp=Z,2µm,20.0s						
U15A	**North Rim**	90.88	53	*e*P	P	08 16 44.8	-0.3
	comp=Z,18nm,0.9s						
HLID	**Hailey**	90.98	46	*e*P	P	08 16 45.3	+0.1
	comp=Z,54nm,1.6s						
HLID	**Hailey**	90.98	46	P	P	08 16 45.2	+0.1
	baz=256						
PKCU	**Pink Cliffs**	91.09	52	*e*P	P	08 16 46.7	+0.6
	comp=Z,45nm,1.2s						
PKCU				LR	LR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	91.19	57	*e*P	P	08 16 46.8	+0.5
	comp=Z,23nm,1.6s						
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	91.19	57	*e*P	P	08 16 46.8	+0.5
TUC				pmax	pmax		
	comp=Z,23nm,1.6s						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	91.19	57	P	P	08 16 46.9	+0.5
	baz=258						
TCRU	**Three Creeks R**	91.25	51	*e*P	P	08 16 47.1	+0.4
	comp=Z,26nm,1.0s						
TCRU				LR	LR		
	comp=Z,2µm,19.0s						
MTPU	**Mount Pierson**	91.32	52	*e*P	P	08 16 47.5	+0.3
	comp=Z,45nm,1.6s						
MTPU				LR	LR		
	comp=Z,2µm,22.0s						
DUG	**Dugway, Tooele**	91.34	49	*e*P	P	08 16 47.3	+0.4
	comp=Z,9.6nm,0.9s						
DUG	**Dugway, Tooele**	91.34	49	*e*P	P	08 16 47.3	+0.4
DUG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DUG	**Dugway, Tooele**	91.34	49	P	P	08 16 47.0	+0.1
	baz=257						
BGU	**Big Grassy Mou**	91.34	49	*e*P	P	08 16 47.3	+0.3
	comp=Z,17nm,1.1s						
ZSN	**Zaisan**	91.38	318	*d i*P	P	08 16 45.3	-1.5
ZSN				pmax	pmax		
	comp=Z,60nm,2.0s						
ZSN				MLR	MLR		
	comp=Z,144nm,17.0s						
ZSN	**Zaisan**	91.38	318	⇓*i*P	P	08 16 45.4	-1.5
	comp=Z,60nm,2.0s						
ZSN				*e*LR	LR	09 00 19.2	
	comp=Z,144nm,16.9s						
WUAZ	**Wupatki**	91.40	54	*e*P	P	08 16 47.8	+0.4
	comp=Z,15nm,0.9s						
WUAZ				LR	LR		
	comp=Z,1µm,18.0s						
WUAZ	**Wupatki**	91.40	54	P	P	08 16 47.8	+0.4
	baz=258						
MSU	**Marysvale**	91.43	51	*e*P	P	08 16 47.9	+0.4
MSU	**Marysvale**	91.43	51	*e*P	P	08 16 47.9	+0.4
SYO	**Syowa Base**	91.46	197	⇑*e*P	P	08 16 45.4	-1.4
HVU	**Hansel Valley**	91.73	48	*e*P	P	08 16 49.0	+0.2
HVU	**Hansel Valley**	91.73	48	*e*P	P	08 16 49.0	+0.2
NLU	**North Lily Min**	91.83	50	*e*P	P	08 16 49.6	+0.3
	comp=Z,20nm,1.1s						
SPUT	**South Promonto**	91.86	48	*e*P	P	08 16 49.5	+0.1
	comp=Z,17nm,1.1s						
MSO	**Missoula**	92.10	43	*e*P	P	08 16 50.1	-0.2
	comp=Z,19nm,1.6s						
MSO	**Missoula**	92.10	43	P	P	08 16 51.3	+1.1
	baz=256						
MPU	**Maple Canyon**	92.18	50	*e*P	P	08 16 50.9	0.0
	comp=Z,19nm,1.2s						
CTU	**Camp Tracy**	92.24	49	*e*P	P	08 16 51.0	-0.1
	comp=Z,21nm,1.1s						
319A	**Douglas**	92.25	59	*e*P	P	08 16 52.1	+0.7
	comp=Z,22nm,1.3s						
319A				LR	LR		
	comp=Z,2µm,22.0s						
Q16A	**Castle Valley**	92.29	51	*e*P	P	08 16 52.1	+0.6
	comp=Z,55nm,1.7s						
Q16A				LR	LR		
	comp=Z,1µm,22.0s						
X18A	**Snowflake**	92.34	55	*e*P	P	08 16 52.2	+0.5
	comp=Z,11nm,1.2s						
TMUT	**Trail Mountain**	92.34	51	*e*P	P	08 16 52.2	+0.4
	comp=Z,33nm,1.7s						
TMUT				LR	LR		
	comp=Z,900nm,18.0s						
MCMT	**McKenzie Canyo**	92.37	45	*e*P	P	08 16 52.1	+0.4
JLU	**Jordanelle**	92.44	49	*e*P	P	08 16 52.2	0.0
	comp=Z,14nm,1.0s						
TCUT	**Toone Canyon**	92.58	49	*e*P	P	08 16 52.9	0.0
	comp=Z,19nm,1.0s						
W18A	**Petrified Fore**	92.63	55	PFAKE		08 17 00.0	+6.9
W18A				LR	LR		
	comp=Z,1µm,22.0s						
W18A	**Petrified Fore**	92.63	55	P	P	08 16 53.1	0.0
	baz=258						
WALA	**Waterton Lakes**	92.65	41	*e*P	P	08 16 52.8	0.0
	comp=Z,37nm,1.5s						
DLMT	**Dillon**	92.67	44	*e*P	P	08 16 52.8	-0.2
	comp=Z,53nm,1.3s						
P17A	**Butcher Ranch,**	92.73	50	*e*P	P	08 16 53.6	+0.1
	comp=Z,32nm,1.7s						
P17A				LR	LR		
	comp=Z,1µm,18.0s						
SRU	**San Rafael Swe**	92.82	51	*e*P	P	08 16 54.0	0.0
	comp=Z,8.7nm,1.2s						
LRM	**Limekiln Ridge**	92.87	44	*e*P	P	08 16 53.9	-0.2
MK01	**Makanchi Array**	92.91	317	*e*P	P	08 16 53.1	-0.8
MK31	**Makanchi Array**	92.93	317	*e*P	P	08 16 53.6	-0.4
	comp=Z,98nm,1.5s						
MK32	**Makanchi Array**	92.93	317	*e*P	P	08 16 53.7	-0.3
MKAR	**Makanchi Array**	92.93	317	*e*P	P	08 16 53.5	-0.5
	comp=Z,196nm,0.9s						
MKAR	**Makanchi Array**	92.93	317	P	P	08 16 53.7	-0.3
	comp=Z,23nm,0.8s,baz=94,slow=4.0,SNR=77						
MKAR				LR	LR	08 56 42.4	
	comp=Z,479nm,22.0s,baz=98,slow=34						
ZAA0	**Zalesovo Array**	93.06	324	*e*P	P	08 16 53.1	-1.2
	comp=Z,70nm,1.4s						
ZAA0				LR	LR		
	comp=Z,900nm,22.0s						
ZALV	**Zalesovo Beam**	93.06	324	*e*P	P	08 16 52.7	-1.6
ZALV	**Zalesovo Beam**	93.06	324	P	P	08 16 53.2	-1.1
	comp=Z,26nm,1.1s,baz=108,slow=3.3,SNR=34						
ZALV				PP	PP	08 20 48.4	+11
	comp=Z,3.2nm,1.1s,baz=98,slow=6.4,SNR=3.7						
ZALV				LR	LR	08 56 23.4	
	comp=Z,491nm,21.1s,baz=86,slow=34						
ZAA1	**Zalesovo Array**	93.06	324	*e*P	P	08 16 53.2	-1.1
MAKZ	**Makanchi**	93.14	317	*e*P	P	08 16 54.3	-0.7
	comp=Z,83nm,1.2s						
MAKZ				LR	LR		
	comp=Z,1µm,20.0s						
MAKZ	**Makanchi**	93.14	317	*e*P	P	08 16 54.3	-0.7
MAKZ				pmax	pmax		
	comp=Z,83nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,1µm,20.0s						
QLMT	**Earthquake Lak**	93.36	45	*e*P	P	08 16 57.3	+1.1
BOZ	**Bozeman (W)**	93.38	44	*e*P	P	08 16 56.2	0.0
	comp=Z,42nm,1.4s						
BOZ	**Bozeman (W)**	93.38	44	*e*P	P	08 16 56.3	0.0
BOZ				pmax	pmax		
	comp=Z,43nm,1.4s						
BOZ	**Bozeman (W)**	93.38	44	P	P	08 16 55.9	-0.4
	baz=258						
FXWY	**Fox Creek**	93.39	46	*e*P	P	08 16 56.3	-0.2
	comp=Z,5.4nm,0.9s						
REDW	**Red Top Meadow**	93.46	47	*e*P	P	08 16 56.6	-0.2
	comp=Z,26nm,1.5s						
HRY	**Holter Researc**	93.48	43	*e*P	P	08 16 56.7	0.0
YHB	**Horse Butte**	93.50	45	*e*P	P	08 16 58.2	+1.2
SNOW	**Snow King Moun**	93.55	47	*e*P	P	08 16 57.9	+0.7
MOOW	**Moose Ponds**	93.61	46	*e*P	P	08 16 57.2	-0.3
	comp=Z,8.3nm,1.1s						
YMR	**Madison River**	93.65	45	*e*P	P	08 16 58.9	+1.3
LOHW	**Long Hollow**	93.69	46	*e*P	P	08 16 57.5	-0.3
	comp=Z,9.5nm,1.2s						
YFT	**Old Faithful**	93.69	46	*e*P	P	08 17 00.6	+2.8
FLWY	**Flagg Ranch**	93.71	46	*e*P	P	08 16 57.6	-0.3
	comp=Z,21nm,1.3s						
121A	**Cookes Peak, D**	93.72	58	P	P	08 16 58.6	+0.5
	baz=259						
PV09	**Paradox Valley**	93.77	52	*e*P	P	08 16 58.3	-0.1
PV23	**Carpenter Ridg**	93.85	52	*e*P	P	08 17 00.1	+1.3
YNR	**Norris Junctio**	93.86	45	*e*P	P	08 16 59.3	+0.7
	comp=Z,15nm,1.3s						
H17A	**Grant Village**	93.86	46	*e*P	P	08 17 00.5	+1.8
H17A	**Grant Village**	93.86	46	P	P	08 16 59.6	+1.0
	baz=258						
PV20	**West Nyswonger**	93.86	52	PFAKE		08 17 10.0	+11
PV20				LR	LR		
	comp=Z,2µm,22.0s						
PV21	**Cone Mtn., Par**	93.90	52	PFAKE		08 17 10.0	+11
PV21				LR	LR		
	comp=Z,2µm,22.0s						
PV04	**Paradox Valley**	93.92	52	*e*P	P	08 16 59.9	+0.9
PV12	**Saucer Basin,**	93.99	52	*e*P	P	08 17 00.6	+1.3
PV12				LR	LR		
	comp=Z,2µm,22.0s						
MVCO	**Mesa Verde**	94.02	53	PFAKE		08 17 10.0	+10
MVCO				LR	LR		
	comp=Z,1µm,19.0s						
MVCO	**Mesa Verde**	94.02	53	P	P	08 16 59.4	-0.1
	baz=259						
LKWY	**Lake**	94.02	46	*e*P	P	08 17 02.2	+2.8
	comp=Z,9.9nm,0.9s						
LKWY	**Lake**	94.02	46	*e*P	P	08 17 02.2	+2.8
LKWY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SHLS	**Shalkode**	94.13	313	*ce*P	P	08 16 56.6	-3.1
SHLS				*e*		08 20 41.2	
SHLS				pmax	pmax		
	comp=Z,369nm,1.5s						
SHLS	**Shalkode**	94.13	313	⇑*e*P	P	08 16 56.7	-3.1
	comp=Z,369nm,1.5s						
SHLS				*e*PP	PP	08 20 41.2	-5.3
PV01	**Paradox Valley**	94.13	52	*e*P	P	08 16 59.6	-0.5
	comp=Z,4.6nm,0.9s						
PV01				LR	LR		
	comp=Z,2µm,22.0s						
NVS	**Novosibirsk**	94.17	325	*e*P	P	08 16 59.3	-0.1
NVS				pmax	pmax		
	comp=Z,54nm,1.4s						
NVS				pmax	pmax		
	comp=N,11nm,1.3s						
NVS				pmax	pmax		
	comp=E,32nm,1.5s						
BW06	**Boulder Array**	94.27	47	*e*P	P	08 16 59.8	-0.7
	comp=E,15nm,1.3s						
BW06	**Boulder Array**	94.27	47	P	P	08 17 01.1	+0.6
	baz=259						
PD31	**Pinedale Array**	94.27	47	*e*P	P	08 16 59.6	-0.9
	comp=E,14nm,1.3s						
PDAR	**Pinedale Array**	94.27	47	*e*P	P	08 16 59.1	-1.4
PDAR	**Pinedale Array**	94.27	47	P	P	08 16 59.9	-0.6
	comp=E,4.2nm,0.9s,baz=272,slow=3.7,SNR=14						
PDAR				PP	PP	08 20 54.3	+6.6
	comp=E,0.5nm,0.8s,baz=265,slow=6.2,SNR=2.9						
PDAR				PKKPbc	PKKPdf	08 34 01.4	-0.8
	comp=E,1.8nm,0.7s,baz=101,slow=3.9,SNR=13						
PDAR				PKPPKP		08 42 15.3	
	comp=E,0.7nm,0.9s,baz=72,slow=2.9,SNR=4.8						
PDAR				LR	LR	08 55 36.1	
	comp=E,407nm,18.2s,baz=253,slow=33						
UZB	**Uzynbulak**	94.44	313	*d i*P	P	08 16 59.6	-1.6
UZB				pmax	pmax		
	comp=Z,223nm,1.7s						
UZB	**Uzynbulak**	94.44	313	⇓*i*P	P	08 16 59.7	-1.6
	comp=Z,223nm,1.7s						
HPIG		94.53	64	PFAKE		08 17 10.0	+7.9
HPIG				LR	LR		
	comp=Z,2µm,21.0s						
KPKS	**Kokpek**	94.74	313	*d i*P	P	08 17 00.8	-1.7
KPKS				*i* S	SKSac	08 27 36.6	-0.2
KPKS				pmax	pmax		
	comp=Z,329nm,1.7s						
KPKS				smax	smax		
	comp=N,507nm,6.3s						
KPKS				MLR	MLR		
	comp=Z,484nm,21.0s						
KPKS	**Kokpek**	94.74	313	⇓*i*P	P	08 17 00.9	-1.7
	comp=Z,329nm,1.7s						
KPKS				⇓*i*S	SKSac	08 27 36.6	-0.2
	comp=Z,507nm,6.2s						
KPKS				*e*LR	LR	09 02 30.8	
	comp=Z,484nm,20.6s						
O20A	**White River Ci**	94.75	50	PFAKE		08 17 10.0	+7.2
O20A				LR	LR		
	comp=Z,1µm,20.0s						
O20A	**White River Ci**	94.75	50	P	P	08 17 02.3	-0.5
	baz=260						
PRZ	**Przheval'sk**	94.77	312	*e*P	P	08 17 03.0	+0.2
	comp=Z,69nm,1.4s						
PRZ	**Przheval'sk**	94.77	312	*e*P	P	08 17 03.0	+0.2
PRZ				pmax	pmax		
	comp=Z,69nm,1.4s						
ZHN	**Zhinishke**	94.87	313	*d i*P	P	08 17 01.3	-1.8
ZHN				pmax	pmax		
	comp=Z,124nm,1.5s						
ZHN	**Zhinishke**	94.87	313	⇓*i*P	P	08 17 01.3	-1.8
	comp=Z,124nm,1.5s						
SATY	**Saty**	94.87	313	*d i*P	P	08 17 01.1	-2.0
SATY				pmax	pmax		
	comp=Z,262nm,1.9s						
SATY	**Saty**	94.87	313	⇓*i*P	P	08 17 01.2	-2.0
	comp=Z,262nm,1.9s						
RLMT	**Red Lodge**	94.92	45	P	P	08 17 02.7	-0.7
	baz=259						
SEM	**Semipalatinsk**	95.01	320	*c i*P	P	08 17 01.4	-2.3
SEM				pmax	pmax		
	comp=Z,198nm,1.7s						
SEM				MLR	MLR		
	comp=Z,489nm,19.0s						
SEM	**Semipalatinsk**	95.01	320	⇑*i*P	P	08 17 01.5	-2.3
	comp=Z,198nm,1.7s						
SEM				*e*PP	PP	08 20 43.3	-10
SEM				*e*LR	LR	08 59 41.7	
	comp=Z,489nm,19.0s						
TARG	**Taragay, Kyrgy**	95.07	311	*e*P	P	08 17 03.7	-0.7
	comp=Z,17nm,1.1s						
EGMT	**Eagleton**	95.13	42	*e*P	P	08 17 04.1	0.0
	comp=Z,32nm,1.6s						
EGMT	**Eagleton**	95.13	42	P	P	08 17 03.7	-0.5
	baz=259						
ANMO	**Albuquerque**	95.24	56	*e*P	P	08 17 04.8	-0.3
	comp=Z,8.8nm,1.2s						
ANMO	**Albuquerque**	95.24	56	*ce*P	P	08 17 06.0	+0.9
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ANMO	**Albuquerque**	95.24	56	P	P	08 17 04.9	-0.3
	baz=260						
S22A	**4UR Ranch, Cre**	95.42	53	*e*P	P	08 17 06.7	+0.7
S22A				LR	LR		
	comp=Z,900nm,19.0s						
S22A	**4UR Ranch, Cre**	95.42	53	P	P	08 17 05.7	-0.3
	baz=260						
YKA	**Yellowknife Ar**	95.44	27	P	P	08 17 03.4	-1.7
	comp=Z,1.5nm,0.7s,baz=254,slow=4.6,SNR=16						
YKA				PP	PP	08 21 04.9	+8.9
	comp=Z,1.3nm,1.1s,baz=257,slow=7.6,SNR=4.1						
YKA				PKiKP	PKiKP	08 21 45.6	+0.2
	comp=Z,0.2nm,0.7s,baz=260,slow=1.3,SNR=4.0						
YKA				PKKP	PKKPbc	08 33 58.1	-1.6
	comp=Z,0.5nm,0.7s,baz=72,slow=2.6,SNR=6.0						
YKA				LR	LR	08 57 48.4	
	comp=Z,59nm,18.1s,baz=271,slow=34						
YKB5	**Yellowknife Ar**	95.44	27	*e*P	P	08 17 03.5	-1.6
SMCO	**Snowmass**	95.55	51	*e*P	P	08 17 06.9	+0.2
	comp=Z,8.0nm,1.4s						
SMCO				LR	LR		
	comp=Z,2µm,22.0s						
MNTX	**Cornudas Mount**	95.58	59	*e*P	P	08 17 06.5	-0.1
	comp=Z,11nm,1.6s						
MNTX				LR	LR		
	comp=Z,2µm,20.0s						
MNTX	**Cornudas Mount**	95.58	59	P	P	08 17 06.3	-0.2
	baz=260						
KDJ	**Kajisay**	95.60	312	*e*P	P	08 17 07.2	+0.6
	comp=Z,16nm,1.0s						
KDJ	**Kajisay**	95.60	312	*e*P	P	08 17 07.2	+0.6
KDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
NRIK	**Noril'sk**	95.85	340	P	P	08 17 05.8	-1.0
	comp=Z,7.3nm,0.7s,baz=117,slow=4.3,SNR=18						
NRIK				PP	PP	08 20 55.9	-3.1
	comp=Z,1.4nm,0.3s,baz=126,slow=7.8,SNR=4.2						
MDOK	**Medeo**	95.87	313	*c i*P	P	08 17 06.1	-1.6
MDOK				pmax	pmax		
	comp=Z,55nm,1.7s						
MDOK	**Medeo**	95.87	313	⇑*i*P	P	08 17 06.1	-1.6
	comp=Z,55nm,1.7s						
CHKK	**Chushkaly**	96.02	313	⇑*i*P	P	08 17 06.6	-1.6
CHKK				*e*		08 20 57.7	
CHKK				pmax	pmax		
	comp=Z,106nm,1.6s						
CHKK	**Chushkaly**	96.02	313	⇑*i*P	P	08 17 06.6	-1.6
	comp=Z,106nm,1.6s						
CHKK				*e*PP	PP	08 20 57.8	-3.3
CHKK				*e*S	SKSac	08 27 49.0	+5.6
	comp=Z,597nm,6.6s						
KSH	**Kashi**	96.07	309	P	P	08 17 10.3	+1.6
KSH				pP	pP	08 17 14.2	-0.6
KSH				PP	PP	08 21 04.1	+2.4
KSH				SKS	SKSac	08 27 46.8	+2.8
KSH				S	S	08 28 25.6	-0.9
KSH				LR	LR		
	comp=Z,450nm,5.5s						
KSH				LR	LR		
	comp=Z,1µm,8.9s						
KSH				LR	LR		
	comp=Z,1µm,17.2s						
KURK	**Kurchatov**	96.09	320	*e*P	P	08 17 07.5	-0.8
	comp=Z,38nm,1.4s						
KURK				*e*PP	PP	08 21 00.5	-0.9
KURK				LR	LR		
	comp=Z,1µm,22.0s						
KURK	**Kurchatov**	96.09	320	*ce*P	P	08 17 07.7	-0.6
KURK				pmax	pmax		
	comp=Z,40nm,1.7s						
KURK	**Kurchatov**	96.09	320	P	P	08 17 08.4	+0.1
	SNR=11						
KURBB	**Kurchatov Arra**	96.13	320	PP	PP	08 21 00.5	-1.2
	comp=Z,2.6nm,1.0s,baz=101,slow=8.2,SNR=6.7						
KURBB				PKKPbc	PKKPdf	08 33 58.1	-0.5
	comp=Z,1.3nm,0.9s,baz=282,slow=3.0,SNR=5.9						
NRN	**Naryn**	96.35	311	*e*P	P	08 17 09.7	-0.5
	comp=Z,16nm,1.5s						
NRN	**Naryn**	96.35	311	*e*P	P	08 17 09.7	-0.5
NRN				pmax	pmax		
	comp=Z,16nm,1.5s						
K22A	**Casper**	96.45	48	P	P	08 17 10.1	-0.3
	baz=261						
SDCO	**Great Sand Dun**	96.46	53	P	P	08 17 10.4	-0.4
	baz=261						
KUU	**Kurty**	96.49	313	*d i*P	P	08 17 08.2	-2.2
KUU				*i* S	SKSac	08 27 46.1	+0.3
KUU				pmax	pmax		
	comp=Z,114nm,1.8s						

KUU				smax	smax		
	comp=N,641nm,6.9s						
KUU	Kurty	96.49	313	⇓iP	P	08 17 08.2	-2.2
	comp=N,114nm,1.8s						
KUU				⇓iS	SKSac	08 27 46.1	+0.3
	comp=N,641nm,6.9s						
N23A	Red Feather La	96.61	50	PFAKE		08 17 20.0	+8.7
N23A				LR	LR		
	comp=Z,1µm,20.0s						
N23A	Red Feather La	96.61	50	P	P	08 17 10.6	-0.7
	baz=261						
TX31	Lajitas Ar. Si	96.67	61	eP	P	08 17 11.1	-0.5
	comp=Z,5.0nm,1.4s						
LTX	Lajitas	96.67	61	eP	P	08 17 11.5	-0.1
LTX				ePP	PP	08 21 08.1	+1.5
LTX	Lajitas	96.67	61	eP	P	08 17 11.5	-0.1
LTX				e		08 21 08.1	
TXAR	Lajitas Array	96.67	61	P	P	08 17 11.5	-0.1
	comp=Z,1.3nm,1.0s,baz=217,slow=4.8,SNR=4.4						
TXAR				PP	PP	08 21 08.1	+1.5
	comp=Z,1.6nm,1.1s,baz=234,slow=6.0,SNR=5.0						
TXAR				PKKP	PKKPbc	08 33 56.3	+0.9
	comp=Z,0.7nm,0.6s,baz=101,slow=3.8,SNR=15						
TXAR				LR	LR	08 52 30.8	
	comp=Z,2µm,21.0s,baz=0.0,slow=30						
ISCO	Idaho Springs	96.69	51	PFAKE		08 17 20.0	+8.3
ISCO				LR	LR		
	comp=Z,2µm,20.0s						
Q24A	Divide	96.92	52	PFAKE		08 17 20.0	+7.2
Q24A				LR	LR		
	comp=Z,1µm,21.0s						
SNAA	Sanae	97.00	184	P	P	08 17 11.6	-0.7
SNAA	Sanae	97.00	184	i P	Pdif	08 17 13.2	+0.8
PHWY	Pilot Hill	97.03	49	PFAKE		08 17 20.0	+6.7
PHWY				LR	LR		
	comp=Z,1µm,20.0s						
T25A	Trinidad	97.22	54	PFAKE		08 17 30.0	+16
T25A				LR	LR		
	comp=Z,1µm,18.0s						
LAO	LASA Array	97.28	44	eP	P	08 17 13.8	-0.1
	comp=Z,25nm,1.4s						
LAO	LASA Array	97.28	44	P	Pdif	08 17 14.6	+0.6
	baz=262						
NIL	Nilore	97.33	303	eP	P	08 17 13.7	-0.7
	comp=Z,28nm,1.5s						
NIL				LR	LR		
	comp=Z,800nm,22.0s						
NIL	Nilore	97.33	303	eP	P	08 17 13.7	-0.7
NIL				pmax	pmax		
	comp=Z,28nm,1.5s						
NIL				MLR	MLR		
	comp=Z,800nm,22.0s						
FRU	Bishkek	97.58	312	eP	P	08 17 12.0	-3.3
FRU				pmax	pmax		
	comp=Z,40nm,2.0s						
AAK	Ala-Archa	97.64	312	ceP	P	08 17 15.5	-0.3
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
AAK	Ala-Archa	97.64	312	P	Pdif	08 17 16.1	+0.2
	comp=Z,1.7nm,0.7s,baz=125,slow=5.1,SNR=2.9						
AAK				PP	PP	08 21 14.8	+1.0
	comp=Z,1.2nm,0.6s,baz=88,slow=11,SNR=2.5						
AAK				PKKPbc	PKKPdf	08 33 56.0	+0.1
	comp=Z,0.7nm,0.3s,baz=306,slow=18,SNR=4.4						
AAK				LR	LR	09 03 01.4	
	comp=Z,441nm,20.3s,baz=93,slow=36						
VNA3	Neumayer Olymp	97.76	182	P	Pdif	08 17 16.1	+0.4
VNA2	Neumayer--Watz	98.00	183	P	P	08 17 16.4	-0.3
	baz=178,slow=2.2						
MSTX	Muleshoe	98.10	57	PFAKE		08 17 30.0	+12
MSTX				LR	LR		
	comp=Z,2µm,20.0s						
BTLS	Baital	98.28	314	deP	P	08 17 16.6	-1.8
BTLS				e		08 21 14.6	
BTLS				eS	SKSac	08 27 55.4	+0.5
BTLS				pmax	pmax		
	comp=Z,88nm,1.8s						
BTLS				smax	smax		
	comp=N,301nm,7.3s						
BTLS	Baital	98.28	314	⇓eP	P	08 17 16.6	-1.8
	comp=N,88nm,1.8s						
BTLS				⇓ePP	PP	08 21 14.6	-3.8
BTLS				eS	SKSac	08 27 55.4	+0.5
	comp=N,300nm,7.3s						
VNA1	Neumayer--Stat	98.31	182	P	P	08 17 15.8	-2.2
KSCO	Kaye Shedlock'	98.87	52	PFAKE		08 17 30.0	+8.6
KSCO				LR	LR		
	comp=Z,2µm,22.0s						
AMTX	Amarillo	99.11	56	PFAKE		08 17 30.0	+7.5
AMTX				LR	LR		
	comp=Z,1µm,18.0s						
BTK	Batken	100.07	309	PFAKE		08 17 40.0	+13
BTK				LR	LR		
	comp=Z,1µm,22.0s						
JCT	Junction City	100.15	61	PFAKE		08 17 40.0	+13
JCT				LR	LR		
	comp=Z,2µm,20.0s						
833A	Chaparral WMA,	100.24	63	PFAKE		08 17 40.0	+12
833A				LR	LR		
	comp=Z,1µm,20.0s						
ABTX	Abilene, Hawle	100.53	59	PFAKE		08 17 40.0	+11
ABTX				LR	LR		
	comp=Z,2µm,21.0s						
KK31	Karatay Array	100.60	312	ePdif	Pdif	08 17 28.2	-0.6
KK31	Karatay Array	100.60	312	eP	Pdif	08 17 28.2	-0.6
KKAR	Karatay Array	100.60	312	ePdif	Pdif	08 17 28.2	-0.6
KKAR	Karatay Array	100.60	312	eP	Pdif	08 17 28.2	-0.6
FFC	Flin Flon	100.82	36	i P	Pdif	08 17 30.2	+0.7
IUG	Iuzhnay	100.87	311	ceP	Pdif	08 17 28.8	-1.3
IUG				e		08 21 39.2	
IUG				pmax	pmax		
	comp=Z,84nm,1.9s						
IUG	Iuzhnay	100.87	311	⇑eP	Pdif	08 17 28.9	-1.3
	comp=Z,84nm,1.9s						
IUG				ePP	PP	08 21 39.3	+1.0
BVAR	Borovoye Array	101.42	322	PP	PP	08 21 40.6	-1.4
	comp=Z,1.8nm,0.8s,baz=81,slow=9.2,SNR=4.0						
WMOK	Wichita Mounta	101.47	57	PFAKE		08 17 40.0	+7.1
WMOK				LR	LR		
	comp=Z,2µm,20.0s						
BRVK	Borovoye	101.49	322	PFAKE		08 17 40.0	+7.5
BRVK				LR	LR		
	comp=Z,1µm,20.0s						
BRVK	Borovoye	101.49	322	i P	Pdif	08 17 31.7	-0.8
BRVK				pmax	pmax		
	comp=Z,23nm,1.7s						
LVIG	Laguna Verde	101.85	72	PFAKE		08 17 50.0	+15
LVIG				LR	LR		
	comp=Z,2µm,22.0s						
MRIV	Mauritius Mete	102.01	246	PFAKE		08 17 50.0	+14
MRIV				LR	LR		
	comp=Z,300nm,18.0s						
435B	Jarrell	102.08	61	PFAKE		08 17 50.0	+14
435B				LR	LR		
	comp=Z,2µm,21.0s						
WHTX	Lake Whitney,	102.31	60	PFAKE		08 17 50.0	+13
WHTX				LR	LR		
	comp=Z,1µm,18.0s						
KSU1	Kansas State U	103.54	52	PFAKE		08 17 50.0	+8.0
KSU1				LR	LR		
	comp=Z,1µm,18.0s						
TUL1	Leonard	104.00	56	PFAKE		08 18 00.0	+16
TUL1				LR	LR		
	comp=Z,1µm,19.0s						
X37A	Clayton	104.26	57	PFAKE		08 18 00.0	+15
X37A				LR	LR		
	comp=Z,1µm,20.0s						
NATX	Nacogdoches	104.66	60	PFAKE		08 18 00.0	+13
NATX				LR	LR		
	comp=Z,2µm,20.0s						
FCC	Fort Churchill	105.18	32	PFAKE		08 22 10.0	+7.1
FCC				LR	LR		
	comp=Z,1µm,20.0s						
W39A	Magazine	105.59	56	PFAKE		08 22 20.0	+16
W39A				LR	LR		
	comp=Z,1µm,22.0s						
MIAR	Mount Ida	105.73	57	PFAKE		08 22 20.0	+15
MIAR				LR	LR		
	comp=Z,2µm,20.0s						
SCIA	State Center	106.22	50	PFAKE		08 22 20.0	+15
SCIA				LR	LR		
	comp=Z,1µm,19.0s						
Z41A	Richland Creek	106.31	59	PFAKE		08 22 20.0	+14
Z41A				LR	LR		
	comp=Z,2µm,19.0s						
X40A	Basin Creek Fa	106.34	57	PFAKE		08 22 20.0	+14
X40A				LR	LR		
	comp=Z,1µm,20.0s						
SPMN	Marine on St.	106.51	46	PFAKE		08 22 20.0	+14
SPMN				LR	LR		
	comp=Z,1µm,21.0s						
UALR	University of	106.76	57	PFAKE		08 22 20.0	+13
UALR				LR	LR		
	comp=Z,2µm,21.0s						
W41B	Gary Mavity, V	106.85	57	PFAKE		08 22 20.0	+13
W41B				LR	LR		
	comp=Z,2µm,20.0s						
L40A	Anamosa	107.71	49	PFAKE		08 22 20.0	+12
L40A				LR	LR		
	comp=Z,2µm,21.0s						
T42A	Van Buren	107.83	55	PFAKE		08 22 20.0	+11
T42A				LR	LR		
	comp=Z,1µm,20.0s						
X43A	Marvell	107.96	57	PFAKE		08 22 20.0	+11
X43A				LR	LR		
	comp=Z,2µm,21.0s						
ABKAR	Akbulak array	108.02	318	ePdif	Pdif	08 18 00.1	-1.5
VBMS	Vicksburg	108.20	60	PFAKE		08 22 20.0	+11
VBMS				LR	LR		
	comp=Z,2µm,20.0s						
MYIG	Mrida	108.21	72	PFAKE		08 22 20.0	+10
MYIG				LR	LR		
	comp=Z,1µm,21.0s						
G40A	Rib Lake	108.35	46	PFAKE		08 22 20.0	+11
G40A				LR	LR		
	comp=Z,900nm,20.0s						
P42A	Winchester	108.41	52	PFAKE		08 22 20.0	+10
P42A				LR	LR		
	comp=Z,1µm,18.0s						
MET	Memphis--Engin	108.75	57	PFAKE		08 22 20.0	+10
MET				LR	LR		
	comp=Z,1µm,20.0s						
AKTO	Aktyubinsk	109.17	320	PKiKP	PKiKP	08 22 11.0	+0.4
	comp=Z,2.5nm,0.9s,baz=145,slow=6.7,SNR=4.9						
OXF	Oxford	109.17	57	PFAKE		08 22 20.0	+8.9
OXF				LR	LR		
	comp=Z,1µm,21.0s						
HDIL	Hopedale	109.20	51	PFAKE		08 22 20.0	+9.0
HDIL				LR	LR		
	comp=Z,1µm,22.0s						
SIUC	Southern Illin	109.32	54	PFAKE		08 22 20.0	+8.7
SIUC				LR	LR		
	comp=Z,2µm,21.0s						
T45A	Paducah	109.78	55	PFAKE		08 22 20.0	+7.8
T45A				LR	LR		
	comp=Z,1µm,20.0s						
TGUH	Tegucigalpa,Un	109.84	79	PFAKE		08 22 20.0	+7.1
TGUH				LR	LR		
	comp=Z,2µm,21.0s						
GEYT	Alibeck	109.87	306	PP	PP	08 22 43.8	-1.2
	comp=Z,1.9nm,0.4s,baz=90,slow=2.9,SNR=4.4						
GYA0B	ALIBECK ARRAY	109.87	306	PFAKE		08 22 20.0	+7.6
GYA0B				LR	LR		
	comp=Z,700nm,19.0s						
147A	Livingston	110.11	59	PFAKE		08 22 20.0	+7.0
147A				LR	LR		
	comp=Z,2µm,22.0s						
OLIL	Olney	110.17	53	PFAKE		08 22 20.0	+7.1
OLIL				LR	LR		
	comp=Z,1µm,20.0s						
PLAL	Pickwick Lake	110.27	57	PFAKE		08 22 20.0	+6.8
PLAL				LR	LR		
	comp=Z,1µm,20.0s						
WVT	Waverly	110.45	56	PFAKE		08 22 30.0	+16
WVT				LR	LR		
	comp=Z,1µm,20.0s						
USIN	University of	110.54	54	PFAKE		08 22 30.0	+16
USIN				LR	LR		
	comp=Z,2µm,21.0s						
X48A	Hartselle	111.12	57	PFAKE		08 22 30.0	+15
X48A				LR	LR		
	comp=Z,900nm,20.0s						
LRAL	Lakeview Retre	111.18	59	PFAKE		08 22 30.0	+15
LRAL				LR	LR		
	comp=Z,2µm,21.0s						
V48A	Smith Brothers	111.28	56	PFAKE		08 22 30.0	+15
V48A				LR	LR		
	comp=Z,1µm,20.0s						
UOSS	Minazif	111.37	292	PFAKE		08 22 30.0	+14
UOSS				LR	LR		
	comp=Z,500nm,21.0s						
BLO	Bloomington	111.39	52	PFAKE		08 22 30.0	+15
BLO				LR	LR		
	comp=Z,1µm,18.0s						
ABPO	Ambohimpanom	111.59	244	PFAKE		08 22 30.0	+14
ABPO				LR	LR		
	comp=Z,1µm,22.0s						
JTS	JuntasAbangare	111.61	83	PFAKE		08 22 30.0	+14
JTS				LR	LR		
	comp=Z,1µm,21.0s						
WCI	Wyandotte Cave	111.61	53	PFAKE		08 22 30.0	+14
WCI				LR	LR		
	comp=Z,2µm,20.0s						
Y49A	Blount Mountai	111.66	58	PFAKE		08 22 30.0	+14
Y49A				LR	LR		
	comp=Z,1µm,20.0s						
OPO	Ambohidratompo	111.78	245	PKiKP	PKiKP	08 22 17.0	+0.2
	comp=Z,5.6nm,0.8s,baz=144,slow=4.2,SNR=6.2						
250A	Grady	111.80	60	PFAKE		08 22 30.0	+14
250A				LR	LR		
	comp=Z,1µm,20.0s						
Z50A	Ashland	112.08	59	PFAKE		08 22 30.0	+13
Z50A				LR	LR		
	comp=Z,2µm,20.0s						
HDC	Heredia	112.38	84	PFAKE		08 22 30.0	+12
HDC				LR	LR		
	comp=Z,2µm,22.0s						
ESPN	Las Esperanzas	112.49	81	PFAKE		08 22 30.0	+12
ESPN				LR	LR		
	comp=Z,1µm,21.0s						
W50A	Signal Mountai	112.53	56	PFAKE		08 22 30.0	+12
W50A				LR	LR		
	comp=Z,1µm,20.0s						
M48A	Edgerton	112.60	50	PFAKE		08 22 30.0	+13
M48A				LR	LR		
	comp=Z,1µm,20.0s						
X51A	Calhoun	112.93	57	PFAKE		08 22 30.0	+12
X51A				LR	LR		
	comp=Z,1µm,22.0s						
352A	Blakely	112.95	60	PFAKE		08 22 30.0	+12
352A				LR	LR		
	comp=Z,1µm,20.0s						
O49A	Covington	113.00	51	PFAKE		08 22 30.0	+12
O49A				LR	LR		
	comp=Z,1µm,20.0s						
N49A	Columbus Grove	113.05	50	PFAKE		08 22 30.0	+12
N49A				LR	LR		
	comp=Z,1µm,22.0s						
152A	Waverly Hall	113.10	59	PFAKE		08 22 30.0	+11
152A				LR	LR		
	comp=Z,2µm,21.0s						
PRGR	Permogore	113.36	333	i PKIKP	PKiKP	08 22 18.1	-0.1
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
Y52A	Lilburn	113.61	58	PFAKE		08 22 30.0	+10
Y52A				LR	LR		
	comp=Z,2µm,22.0s						
TKL	Tuckaleechee C	113.76	56	PKiKP	PKiKP	08 22 20.3	+0.4
	comp=Z,3.7nm,0.8s,baz=162,slow=7.2,SNR=4.2						
S51A	Beattyville	113.78	54	PFAKE		08 22 30.0	+10
S51A				LR	LR		
	comp=Z,1µm,18.0s						
M50A	Fremont	113.86	50	PFAKE		08 22 30.0	+10
M50A				LR	LR		
	comp=Z,900nm,19.0s						
Q51A	Peebles	113.86	52	PFAKE		08 22 30.0	+10
Q51A				LR	LR		
	comp=Z,1µm,20.0s						
TZTN	Tazewell	113.89	55	PFAKE		08 22 30.0	+10
TZTN				LR	LR		
	comp=Z,900nm,22.0s						
ACSO	Alum Creek Sta	114.03	51	PFAKE		08 22 30.0	+10
ACSO				LR	LR		
	comp=Z,900nm,22.0s						
P51A	Williamsport	114.04	52	PFAKE		08 22 30.0	+10
P51A				LR	LR		
	comp=Z,2µm,19.0s						
GOGA	Godfrey	114.13	58	PFAKE		08 22 30.0	+9.4
GOGA				LR	LR		
	comp=Z,2µm,22.0s						
154A	Montrose	114.47	59	PFAKE		08 22 30.0	+8.7
154A				LR	LR		
	comp=Z,2µm,20.0s						
V53A	Saluda	114.54	56	PFAKE		08 22 30.0	+8.6
V53A				LR	LR		
	comp=Z,1µm,21.0s						
NNA	Nana	114.63	109	PFAKE		08 22 30.0	+7.9
NNA				LR	LR		
	comp=Z,1µm,21.0s						
656A	Willston	115.05	63	PFAKE		08 22 30.0	+7.5
656A				LR	LR		
	comp=Z,800nm,18.0s						
APA	Apatity	115.19	341	⇓iPKIKP	PKiKP	08 22 19.6	-2.0
APA				i PS	PKKPbc	08 32 57.0	-2.3
APA				i PPS	PPS	08 34 14.0	
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,900nm,23.0s						
P53A	Whipple	115.33	52	PFAKE		08 22 30.0	+7.3
P53A				LR	LR		
	comp=Z,1µm,19.0s						
FRB	Frobisher Bay	115.59	23	PKP	PKiKP	08 22 21.2	-1.2
	comp=Z,3.1nm,1.0s,baz=224,slow=3.9,SNR=5.3						
FRB				PP	PP	08 23 23.5	-1.1
	comp=Z,3.5nm,1.1s,baz=271,slow=7.4,SNR=3.1						
KEV	Kevo	115.62	345	PFAKE		08 22 30.0	+7.6
KEV				LR	LR		
	comp=Z,800nm,21.0s						
GO02	Mina Guanaco	115.91	125	ePKPdf	PKPdf	08 22 24.4	-0.4
GO02				LR	LR		
	comp=Z,700nm,19.0s						
ARA0	ARCESS Array S	116.15	345	ePKPdf	PKiKP	08 22 23.2	-0.3
ARCES	ARCESS Array B	116.15	345	PKP	PKiKP	08 22 23.2	-0.3
	comp=Z,4.2nm,0.6s,baz=74,slow=1.9,SNR=38						
ARCES				PKKPbc	PKKPbc	08 32 54.2	-1.8
	comp=Z,2.8nm,0.8s,baz=96,slow=2.4,SNR=8.9						
658A	Bunnell	116.17	63	PFAKE		08 22 40.0	+15
658A				LR	LR		
	comp=Z,800nm,19.0s						
N54A	Moraine State	116.20	50	PFAKE		08 22 40.0	+16
N54A				LR	LR		
	comp=Z,1µm,20.0s						
OTAV	Otavalo	116.27	95	PFAKE		08 22 40.0	+14
OTAV				LR	LR		
	comp=Z,700nm,21.0s						
BLA	Blacksburg	116.33	54	ePKPdf	PKPdf	08 22 24.7	-0.1
BLA				LR	LR		
	comp=Z,1µm,21.0s						
BLA	Blacksburg	116.33	54	ePKIKP	PKPdf	08 22 24.7	-0.1
BLA				MLR	MLR		
	comp=Z,1µm,21.0s						
M54A	Oil Creek Stat	116.36	49	PFAKE		08 22 40.0	+15
M54A				LR	LR		
	comp=Z,1µm,20.0s						
KLMR	Klimovskoe	116.38	334	ePKIKP	PKPdf	08 22 21.9	-2.2
KLMR				pmax	pmax		
	comp=Z,14nm,1.0s						
KLMR	Klimovskoe	116.38	334	ePKPdf	PKPdf	08 22 21.9	-2.2
KLMR				AMP		08 22 25.7	
	comp=Z,14nm,1.0s						
KLMR				ePP	PP	08 23 24.7	-5.6
KLMR				ePKKPab	PKKPab	08 32 56.4	-0.5
NHSC	New Hope	116.90	59	PFAKE		08 22 40.0	+14
NHSC				LR	LR		
	comp=Z,1µm,20.0s						
CMBC	Cumbal	117.02	95	⇑eP	PKiKP	08 22 28.2	+0.9
CMBC	Cumbal	117.02	95	⇑eP	PKiKP	08 22 28.2	+0.9
GRGC	Isla de Gorgon	117.09	92	⇑eP	PKiKP	08 22 28.9	+2.0
GRGC	Isla de Gorgon	117.09	92	⇑eP	PKiKP	08 22 28.9	+2.0
MAK	Makhachkala	117.41	313	i PKIKP	PKPdf	08 22 22.5	-4.1
MAK				e		08 23 33.7	
MAK				pmax	pmax		
	comp=Z,105nm,0.5s						
SSPA	Standing Stone	117.83	50	PFAKE		08 22 40.0	+12
SSPA				LR	LR		
	comp=Z,1µm,22.0s						
PB01	IPOC Station P	117.83	121	PFAKE		08 22 40.0	+12
PB01				LR	LR		
	comp=Z,1µm,21.0s						
PB11	IPOC Station P	118.24	120	ePKPdf	PKPdf	08 22 28.5	-0.6
PB11				LR	LR		
	comp=Z,2µm,22.0s						
R58B	Mineral	118.24	53	PFAKE		08 22 40.0	+12
R58B				LR	LR		
	comp=Z,1µm,22.0s						
SOTA	Rioblanco	118.45	94	eP	PKiKP	08 22 31.5	+1.4
SOTA	Rioblanco	118.45	94	eP	PKiKP	08 22 31.5	+1.4
MNMC	Minye Minye	118.55	119	ePKPdf	PKPdf	08 22 29.5	-0.4
MNMC				LR	LR		
	comp=Z,2µm,21.0s						
CNNC	Cliffs of the	118.58	56	PFAKE		08 22 40.0	+11
CNNC				LR	LR		
	comp=Z,1µm,22.0s						
CBN	Corbin Frederi	118.60	53	PFAKE		08 22 40.0	+11
CBN				LR	LR		
	comp=Z,1µm,19.0s						
VRH	Novokhopyorsk	119.06	323	ePKIKP	PKPdf	08 22 29.1	-0.4
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YOTC	Yotoco, Valle	119.06	92	eP	PKPdf	08 22 30.9	0.0
YOTC	Yotoco, Valle	119.06	92	eP	PKPdf	08 22 30.9	0.0
MVL	Millersville	119.09	50	PFAKE		08 22 40.0	+10
MVL				LR	LR		
	comp=Z,2µm,19.0s						
TBLG	Delisi	119.66	312	P	Pdif	08 18 56.7	+3.1
GNI	Garni	119.98	310	i PKIKP	PKiKP	08 22 32.0	0.0
KZRT	Kazreti	119.98	311	P	Pdif	08 18 55.1	0.0
ZEI	Tsey	120.03	313	i PKIKP	PKPdf	08 22 31.7	-0.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NCK	Nalchik	120.08	314	i PKIKP	PKiKP	08 22 32.4	+0.5
LPSR	Galich'ya Gora	120.16	325	ePKIKP	PKiKP	08 22 31.9	+0.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
GUYC	Guyana, Colomb	120.21	90	eP	PKPdf	08 22 32.2	-1.3
GUYC	Guyana, Colomb	120.21	90	eP	PKPdf	08 22 32.2	-1.3
OBN	Obninsk	120.37	328	⇓iPKIKP	PKPdf	08 22 30.8	-1.1
OBN				e		08 23 58.3	
OBN				pmax	pmax		
	comp=Z,14nm,1.1s						
UREC	San Jos de Ur	120.47	87	eP	PKPdf	08 22 32.2	-1.2
UREC	San Jos de Ur	120.47	87	eP	PKPdf	08 22 32.2	-1.2
KBZ	Khabaz	120.52	314	PKP	PKiKP	08 22 32.7	+0.1
	comp=Z,4.8nm,0.9s,baz=81,slow=3.5,SNR=7.8						
VSR	Storozhevoye	120.55	324	ePKIKP	PKPdf	08 22 31.9	-0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SCHQ	Schefferville	120.56	32	PKP	PKiKP	08 22 33.1	+0.6
	comp=Z,3.9nm,1.0s,baz=175,slow=11,SNR=2.8						
KIV	Kislovodsk	120.61	315	i PKIKP	PKiKP	08 22 33.6	+0.6
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
CPNY	Central Park	120.73	49	PFAKE		08 22 40.0	+6.9
CPNY				LR	LR		
	comp=Z,1µm,22.0s						
NEY	Neytrino	120.76	314	i PKIKP	PKiKP	08 22 33.7	+0.3
PUL	Pulkovo	120.86	335	i PKIKP	PKiKP	08 22 33.9	+1.1
ZARC	Zaragoza, Cauc	121.09	88	eP	PKiKP	08 22 34.8	+0.2
ZARC	Zaragoza, Cauc	121.09	88	eP	PKiKP	08 22 34.8	+0.2
ROSC	El Rosal	121.20	91	ePKPdf	PKPdf	08 22 34.7	-0.6
ROSC	El Rosal	121.20	91	PKP	PKiKP	08 22 35.9	+0.5
	comp=Z,10nm,0.8s,baz=87,slow=9.8,SNR=7.3						
CTAB	Cerro Tablazo,	121.34	91	eP	PKPdf	08 22 34.2	-1.4
CTAB	Cerro Tablazo,	121.34	91	eP	PKPdf	08 22 34.2	-1.4
PTBC	PUERTO BERRIO,	121.34	89	eP	PKPdf	08 22 34.2	-0.9
PTBC	PUERTO BERRIO,	121.34	89	eP	PKPdf	08 22 34.2	-0.9
FIA1	FINESS Array S	121.48	338	ePKPdf	PKPdf	08 22 33.7	-0.2
FIA0	FINESS Array S	121.48	338	ePKPdf	PKPdf	08 22 33.5	-0.4
FIA0	FINESS Array S	121.48	338	ePKIKP	PKPdf	08 22 33.5	-0.4
FINES	FINESS Array B	121.48	338	PKP	PKPdf	08 22 33.5	-0.4
	comp=Z,7.9nm,0.9s,baz=84,slow=5.9,SNR=14						
CHIC	Chingaza	121.74	91	eP	PKPdf	08 22 36.2	-0.2
CHIC	Chingaza	121.74	91	eP	PKPdf	08 22 36.2	-0.2
OCAC	Ocana	122.71	87	⇑eP	PKiKP	08 22 39.5	+1.5
OCAC	Ocana	122.71	87	⇑eP	PKiKP	08 22 39.5	+1.5
VSU	Vasula	123.13	335	c iPKIKP	PKiKP	08 22 39.0	+1.7
VSU				pmax	pmax		
	comp=Z,69nm,1.3s						
ANN	Anapa	123.95	317	i PKIKP	PKiKP	08 22 39.3	-0.1
ANN				pmax	pmax		
	comp=Z,47nm,0.9s						
BOSA	Boshof	124.44	224	ePKPdf	PKPdf	08 22 40.1	-0.7
BOSA				ePKPdf	PKiKP	08 22 41.3	+0.2

BOSA	Boshof	124.44	224	*e*PKIKP	PKPdf	08 22 40.1	-0.7
BOSA	Boshof	124.44	224	PKP	PKiKP	08 22 41.3	+0.2
	comp=Z,18nm,0.8s,baz=139,slow=2.1,SNR=28						
CPUP	Villa Florida	124.67	133	*e*PKPdf	PKPdf	08 22 40.9	-0.2
CPUP	Villa Florida	124.67	133	*e*PKIKP	PKPdf	08 22 40.9	-0.2
CPUP	Villa Florida	124.67	133	PKP	PKiKP	08 22 41.6	+0.2
	comp=Z,20nm,0.9s,baz=279,slow=2.2,SNR=25						
SUR	Sutherland	124.74	217	*e*PKPdf	PKiKP	08 22 43.5	+1.8
IDID	Didziasalis	125.05	332	*e*P	PKPdf	08 22 41.0	+0.1
IDID				IAmb	IAmb	08 22 44.1	
	comp=Z,8.4nm,0.6s						
ISAL	Salakas	125.17	333	*e*P	PKPdf	08 22 41.1	0.0
ISAL				IAmb	IAmb	08 22 44.4	
	comp=Z,8.8nm,0.8s						
IIGN	Ignalina	125.27	332	*e*P	PKiKP	08 22 42.1	+0.4
IIGN				IAmb	IAmb	08 22 44.7	
	comp=Z,10nm,0.8s						
NACGM	Naroch	125.28	332	*e*	PKiKP	08 22 42.0	+0.3
SDV	Santo Domingo	125.42	87	*e*PKPdf	PKPdf	08 22 42.9	-0.2
SIM	Simferopol'	126.09	318	*i* PKIKP	PKiKP	08 22 44.3	+0.6
SIM				*e*		08 24 37.0	
SIM				pmax	pmax		
	comp=Z,14nm,0.8s						
SIM				pmax	pmax		
	comp=Z,170nm,8.6s						
AKASG	Malin Array Be	126.40	326	PKP	PKPdf	08 22 43.4	-0.2
	comp=Z,5.5nm,0.8s,baz=60,slow=2.1,SNR=30						
AKASG				PP	PP	08 24 39.5	+0.7
	comp=Z,0.4nm,0.4s,baz=52,slow=6.4,SNR=5.1						
AKBB	Malin Array Si	126.40	326	*e*PKPdf	PKPdf	08 22 43.3	-0.4
AKBB				*e*PP	PP	08 24 38.3	-0.4
KIEV	Kiev	126.41	326	*e*PKPdf	PKPdf	08 22 43.3	-0.3
KIEV	Kiev	126.41	326	⇑*i*P	PKPdf	08 22 43.0	-0.6
KIEV	Kiev	126.41	326	⇑PKIKP	PKPdf	08 22 43.0	-0.6
LBTB	Lobatse	126.42	227	*e*PKPdf	PKPdf	08 22 43.1	-1.6
AK11	Malin Array Si	126.44	326	*e*PKPdf	PKPdf	08 22 42.6	-1.1
KMBO	Kilima Mbogo	126.47	260	PKP	PKiKP	08 22 45.8	+0.2
	comp=Z,2.6nm,0.4s,baz=61,slow=4.4,SNR=11						
NB2	NORSAR Subarra	126.51	344	PKPdf	PKPdf	08 22 43.2	-0.4
	comp=Z,25nm,1.4s,baz=34,slow=2.0						
NB2	NORSAR Subarra	126.51	344	PKPdf	PKPdf	08 22 43.2	-0.4
	baz=34,slow=2.0						
NB200	NORSAR Array S	126.51	344	*e*PKPdf	PKPdf	08 22 43.3	-0.3
NOA	NORSAR Array B	126.51	344	PKP	PKPdf	08 22 43.3	-0.3
	comp=Z,3.5nm,0.8s,baz=35,slow=2.0,SNR=9.2						
HFS	Hagfors	126.56	342	PKIKP	PKPdf	08 22 43.0	-0.7
HFS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HFS	Hagfors	126.56	342	PKP	PKPdf	08 22 43.0	-0.7
	comp=Z,4.7nm,0.7s,baz=90,slow=3.0,SNR=5.1						
SDD	Santo Domingo	126.75	75	PFAKE		08 23 00.0	+14
SDD				LR	LR		
	comp=Z,400nm,21.0s						
MATP	Matopo	126.81	234	PKP	PKPdf	08 22 45.7	+0.2
	comp=Z,13nm,0.8s,baz=162,slow=1.9,SNR=18						
SUW	Suwalki	127.48	332	*e*PKP	PKiKP	08 22 46.6	+0.5
SUW	Suwalki	127.48	332	*e*PKIKP	PKiKP	08 22 46.6	+0.5
ASF	Jabal al Asfar	127.79	302	PKP	PKiKP	08 22 47.3	-0.2
	comp=Z,7.5nm,0.9s,baz=304,slow=2.5,SNR=7.8						
ILGA	Ilgaz	127.80	314	PFAKE		08 23 00.0	+12
ILGA				LR	LR		
	comp=Z,900nm,22.0s						
BR101	Keskin Array S	128.31	312	*e*PKPdf	PKPdf	08 22 47.9	0.0
BR101				*e*PP	PP	08 24 50.8	-1.3
BR131	Keskin Array S	128.31	312	*e*PKPdf	PKPdf	08 22 46.9	-0.9
BRTR	Keskin Array B	128.31	312	PKP	PKPdf	08 22 47.9	0.0
	comp=Z,5.9nm,0.9s,baz=116,slow=2.9,SNR=23						
BRTR				PP	PP	08 24 50.8	-1.3
	comp=Z,6.6nm,1.1s,baz=94,slow=5.4,SNR=7.7						
KLNR	Kaliningrad	128.39	335	*i* PKIKP	PKiKP	08 22 48.2	+0.3
MMAI	Mount Meron Ar	128.84	304	PKP	PKiKP	08 22 50.0	+0.3
	comp=Z,1.3nm,0.3s,baz=46,slow=2.4,SNR=5.4						
ANTO	Ankara	128.88	313	*e*PKPdf	PKPdf	08 22 48.3	-0.5
ANTO	Ankara	128.88	313	⇑*i*P	PKiKP	08 22 49.7	+0.2
ANTO	Ankara	128.88	313	⇑PKIKP	PKiKP	08 22 49.7	+0.2
MPR	Mayaguez	129.39	76	PFAKE		08 23 00.0	+9.0
MPR				LR	LR		
	comp=Z,700nm,19.0s						
LVV	L'vov	129.66	328	*e*PKIKP	PKPdf	08 22 49.4	-0.5
LSZ	Lusaka	129.67	239	*e*PKPdf	PKPdf	08 22 50.8	-0.3
LSZ				LR	LR		
	comp=Z,1µm,18.0s						
LSZ	Lusaka	129.67	239	*e*PKIKP	PKPdf	08 22 50.8	-0.3
LSZ				MLR	MLR		
	comp=Z,1µm,18.0s						
LSZ	Lusaka	129.67	239	PKP	PKiKP	08 22 51.7	-0.2
	comp=Z,19nm,0.9s,baz=134,slow=1.3,SNR=15						
CFR	Carcaliu	129.80	321	⇑*i*P	PKiKP	08 22 51.1	+0.1
CFR	Carcaliu	129.80	321	⇑PKIKP	PKiKP	08 22 51.1	+0.1
OBIP	Obispado Ponce	129.90	76	*e*PKPdf	PKPdf	08 22 50.7	-0.5
EIL	Elat	129.91	299	PKP	PKPdf	08 22 51.3	+0.3
	comp=Z,13nm,0.9s,baz=172,slow=2.6,SNR=7.8						
TIRR	Tirgusor	129.97	320	PFAKE		08 23 00.0	+8.6
TIRR				LR	LR		
	comp=Z,1µm,22.0s						
BEL	Belsk	130.00	332	*e*PKP	PKiKP	08 22 51.5	+0.3
BEL	Belsk	130.00	332	*e*PKIKP	PKiKP	08 22 51.5	+0.3
BIZ	Bicaz	130.13	324	⇑*i*P	PKiKP	08 22 52.3	+0.6
TLB	Topalu	130.15	320	⇑*i*P	PKiKP	08 22 52.1	+0.3
TLB	Topalu	130.15	320	⇑PKIKP	PKiKP	08 22 52.1	+0.3
BUR08	Bucovina Ar. S	130.27	325	*e*PKPdf	PKPdf	08 22 51.5	+0.2
BURAR	Bucovina Array	130.27	325	⇑*i*P	PKiKP	08 22 52.5	+0.4
BURAR	Bucovina Array	130.27	325	⇑PKIKP	PKiKP	08 22 52.5	+0.4
BUR04	Bucovina Ar. S	130.27	325	*e*PKPdf	PKPdf	08 22 51.5	+0.2
SJG	San Juan	130.33	76	*e*PKPdf	PKPdf	08 22 51.5	-0.5
SJG				*e*PKPdf	PKPdf	08 22 51.9	-0.2
SJG				LR	LR		
	comp=Z,800nm,21.0s						
SJG	San Juan	130.33	76	PKP	PKPdf	08 22 51.8	-0.2
	comp=Z,31nm,0.7s,baz=30,slow=3.7,SNR=9.9						
KWP	Kalwaria Pacla	130.46	328	*e*PKP	PKPdf	08 22 51.3	-0.2
KWP	Kalwaria Pacla	130.46	328	*e*PKPdf	PKPdf	08 22 51.3	-0.2
KWP	Kalwaria Pacla	130.46	328	*e*PKIKP	PKPdf	08 22 51.3	-0.2
CBYP	Canovanas	130.61	75	PFAKE		08 23 00.0	+6.5
CBYP				LR	LR		
	comp=Z,1µm,22.0s						
HUMP	Col San Antoni	130.62	76	*e*PKPdf	PKPdf	08 22 52.5	-0.1
MTP	Monte Pirata	130.90	76	PFAKE		08 23 00.0	+6.0
MTP				LR	LR		
	comp=Z,1µm,21.0s						
MLR	Muntele Rosu	130.99	322	*e*PKPdf	PKPdf	08 22 53.1	+0.4
MLR	Muntele Rosu	130.99	322	⇓*i*P	PKiKP	08 22 53.4	-0.2
MLR	Muntele Rosu	130.99	322	⇓PKIKP	PKiKP	08 22 53.4	-0.2
DOPR	Dopca	131.07	323	⇑*i*P	PKiKP	08 22 53.8	+0.1
CUPR	Culebra, Puert	131.15	75	PFAKE		08 23 10.0	+15
CUPR				LR	LR		
	comp=Z,1µm,20.0s						
UZH	Uzhgorod	131.28	327	*e*PKHKP	PKPpre	08 22 43.0	
UZH				*e*		08 22 50.7	
TRPA	Tarpa	131.45	327	⇑*i*P	PKiKP	08 22 54.2	-0.1
OJC	Ojcow	131.53	331	*e*PKP	PKiKP	08 22 54.7	+0.2
OJC	Ojcow	131.53	331	*e*PKIKP	PKiKP	08 22 55.6	+1.2
VOIR		131.55	323	⇓*i*P	PKiKP	08 22 57.3	+2.6
VOIR		131.55	323	⇓PKIKP	PKiKP	08 22 57.3	+2.6
NIE	Niedzica	131.81	329	*e*PKP	PKiKP	08 22 55.6	+0.5
ARR	Arges	131.84	323	⇑*i*P	PKiKP	08 22 55.0	-0.3
HUMR	Humele	132.07	322	⇑*i*P	PKiKP	08 22 55.3	-0.4
DRGR		132.15	325	⇑*i*P	PKiKP	08 22 55.5	-0.4
DRGR		132.15	325	⇑PKIKP	PKiKP	08 22 55.5	-0.4
KSP	Ksiaz	132.73	333	*e*PKP	PKPdf	08 22 55.5	-0.2
KSP	Ksiaz	132.73	333	*e*PKIKP	PKPdf	08 22 55.5	-0.2
MORC	Moravsky Berou	132.91	331	*e*PKPdf	PKPdf	08 22 56.6	+0.5
MORC	Moravsky Berou	132.91	331	⇑*i*P	PKiKP	08 22 57.5	+0.2
MORC	Moravsky Berou	132.91	331	⇑PKIKP	PKiKP	08 22 57.5	+0.2
MORC	Moravsky Berou	132.91	331	*e*PKP	PKiKP	08 22 58.6	+1.3
GZR	Gura Zlata	132.91	324	⇑*i*P	PKPdf	08 22 56.8	+0.5
GZR	Gura Zlata	132.91	324	⇑PKIKP	PKPdf	08 22 56.8	+0.5
DPC	Dobruska-Polom	133.07	333	*e*PKPDF	PKiKP	08 23 00.3	+2.7
DPC				AMS	AMS	09 23 10.0	
	comp=Z,800nm,18.0s						
DPC	Dobruska-Polom	133.07	333	*e*PKIKP	PKiKP	08 23 00.3	+2.7
DPC				MLR	MLR		
	comp=Z,800nm,18.0s						
VYHS	Vyhne	133.15	329	*e*PKIKP	PKiKP	08 22 57.4	-0.4
VYHS	Vyhne	133.15	329	*e*PKP	PKiKP	08 22 57.4	-0.4
SMRT	St. Maarten	133.26	76	PFAKE		08 23 10.0	+11
SMRT				LR	LR		
	comp=Z,700nm,20.0s						
SEUS	St. Eustatius	133.36	76	PFAKE		08 23 10.0	+11
SEUS				LR	LR		
	comp=Z,1µm,18.0s						
BZS	Buzias	133.45	325	⇑*i*P	PKiKP	08 22 58.0	-0.4
BZS	Buzias	133.45	325	⇑PKIKP	PKiKP	08 22 58.0	-0.4
PVCC	Panska Ves	133.71	334	*e*PKPDF	PKiKP	08 22 59.9	+1.1
PVCC	Panska Ves	133.71	334	*e*PKIKP	PKiKP	08 22 59.9	+1.1
BRG	Berggiesshubel	133.72	335	*e*PKP	PKPdf	08 22 57.5	0.0
	comp=Z,10nm,1.1s						
BRG				*e*PP	PP	08 25 27.1	+1.1
	comp=Z,10nm,1.3s						
	comp=N,630nm,21.5s						
	comp=E,418nm,19.9s						
	comp=Z,821nm,18.8s						
BRG	Berggiesshubel	133.72	335	*e*PKIKP	PKPdf	08 22 57.5	0.0
BRG				*e*		08 25 27.1	
BRG				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,11nm,1.3s						
BRG				MLR	MLR		
	comp=N,10µm,21.5s						
BRG				MLR	MLR		
	comp=E,630nm,19.9s						
BRG				MLR	MLR		
	comp=Z,418nm,18.8s						
CLL	Collm	133.78	336	*e*PKPdf	PKPdf	08 22 57.5	-0.1
CLL	Collm	133.78	336	*e*PKPdf	PKiKP	08 22 59.0	+0.1
	comp=Z,11nm,0.9s						
CLL				*i* pPKPdf	pPKPdf	08 23 03.7	-0.2
CLL				*e*PP	PP	08 25 24.0	-2.4
CLL				LV		09 25 00.0	
	comp=Z,800nm,20.0s						
CLL	Collm	133.78	336	*e*PKIKP	PKiKP	08 22 59.0	+0.1
CLL				*i*		08 23 03.7	
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,800nm,20.0s						
MDVR	Moldovita	133.88	324	⇑*i*P	PKPdf	08 22 58.7	+0.6
KRUC	Moravsky	133.94	331	*e*PKP	PKiKP	08 22 59.9	+0.6
PTGA	Pitinga	133.98	102	*e*PKPdf	PKPdf	08 22 58.0	-1.1
MODS	Modra-Piesok	134.00	330	*e*PKIKP	PKiKP	08 23 01.2	+1.7
MODS	Modra-Piesok	134.00	330	*e*PKP	PKiKP	08 23 01.2	+1.7
PRU	Pruhonice	134.12	334	*e*PKPDF	PKiKP	08 23 00.7	+1.0
PRU				AMS	AMS	09 15 20.0	
	comp=Z,1µm,19.0s						
PRU	Pruhonice	134.12	334	*e*PKIKP	PKiKP	08 23 00.7	+1.0
PRU				MLR	MLR		
	comp=Z,1µm,19.0s						
VTS	Vitosha	134.15	320	*e*PKPdf	PKPdf	08 22 58.8	0.0
VTS	Vitosha	134.15	320	⇑*i*P	PKiKP	08 23 00.7	+0.5
VTS	Vitosha	134.15	320	⇑PKIKP	PKiKP	08 23 00.7	+0.5
TREC	Trest	134.20	332	AMS	AMS	09 20 30.0	
	comp=Z,1µm,21.1s						
EKA	Eskdalemuir Ar	134.87	350	PKP	PKPdf	08 23 00.2	+0.7
	comp=Z,0.8nm,0.5s,baz=25,slow=2.0,SNR=3.4						
CONA	Conrad Observa	134.99	331	*i* PKPdf	PKPdf	08 22 59.9	-0.2
	comp=Z,20nm,1.7s						
KHC	Kasperske Hory	135.18	333	*e*PKPdf	PKPdf	08 23 00.3	-0.1
KHC	Kasperske Hory	135.18	333	*e*PKPDF	PKiKP	08 23 02.9	+1.0
KHC				*e*x	x	08 23 12.1	
KHC				AMS	AMS	09 15 00.0	
	comp=Z,1µm,19.2s						
KHC	Kasperske Hory	135.18	333	*e*PKIKP	PKiKP	08 23 02.9	+1.0
KHC				*e*		08 23 12.1	
KHC				MLR	MLR		
	comp=Z,1µm,19.2s						
VAY	Valandovo	135.25	319	*i* P	PKiKP	08 23 01.6	-0.6
DIVS	Divibare	135.28	324	*e*PKPdf	PKPdf	08 23 00.8	0.0
GEC2	GERESS Array S	135.34	333	*e*PKPdf	PKPdf	08 23 01.0	+0.3
GERES	GERESS Array B	135.34	333	PKhKP	PKPpre	08 22 49.5	
	comp=Z,0.7nm,0.8s,baz=11,slow=1.0,SNR=4.6						
GERES				PKP	PKPdf	08 23 00.0	-0.8
	comp=Z,4.7nm,0.8s,baz=75,slow=1.5,SNR=18						
GEA0	GERESS Array S	135.34	333	*e*PKPdf	PKPdf	08 22 59.8	-1.0
SKO	Skopje	135.62	320	*i* P	PKPdf	08 23 01.5	+0.1
ARSA	Arzberg	135.63	330	*i* PKiKP	PKiKP	08 23 02.2	-0.7
	comp=Z,4.8nm,1.0s						
MOA	Molln	135.80	332	*i* PKPdf	PKPdf	08 23 00.2	-1.4
	comp=Z,1.5nm,0.6s						
KRUS	Krusevo	136.07	320	*i* P	PKPdf	08 23 02.7	+0.3
BIA	Bitola	136.21	319	*i* P	PKiKP	08 23 04.5	+0.3
SOKA	Soboth	136.27	330	*i* PKPdf	PKPdf	08 23 01.3	-1.3
	comp=Z,12nm,1.2s						
CRES	Cresnjev	136.65	329	*e*PKPdf	PKPdf	08 23 03.0	-0.2
KBA	Koelnbreinsper	136.79	332	*i* PKiKP	PKPdf	08 23 03.8	+0.2
	comp=Z,12nm,0.8s						
MEM	Membach	136.92	340	⇑PKiKP	PKiKP	08 23 06.5	+1.2
LJU	Ljubljana	136.96	330	*e*PKPdf	PKPdf	08 23 03.8	0.0
MYKA	Terra Mystica	136.98	331	*i* PKPdf	PKPdf	08 23 02.8	-1.1
	comp=Z,3.2nm,0.5s						
WATA	Walderalm	137.41	333	*i* PKiKP	PKiKP	08 23 06.4	-0.2
	comp=Z,19nm,1.0s						
ABTA	Abfaltersbach	137.43	332	*i* PKPdf	PKPdf	08 23 03.2	-1.5
	comp=Z,15nm,0.8s						
MOTA	Moosalm	137.61	333	*i* PKPdf	PKPdf	08 23 05.0	-0.1
	comp=Z,11nm,0.7s						
RETA	Reutte	137.65	334	*i* PKiKP	PKiKP	08 23 06.2	-0.8
	comp=Z,8.7nm,1.2s						
SQTA	Sankt Quirin	137.66	333	*i* PKPdf	PKPdf	08 23 03.9	-1.3
	comp=Z,11nm,0.9s						
WLF	Walferdange	137.68	339	⇓PKiKP	PKiKP	08 23 07.3	+0.4
DOU	Dourbes	137.82	341	⇑PKiKP	PKiKP	08 23 07.2	+0.1
FETA	Feichten	138.02	333	*i* PKiKP	PKiKP	08 23 07.0	-0.9
	comp=Z,14nm,1.1s						
BDFB	Brasilia	138.03	129	PKP	PKPdf	08 23 07.3	+0.6
	comp=Z,17nm,0.9s,baz=148,slow=2.4,SNR=4.1						
DAVA	Damuels	138.19	334	*i* PKiKP	PKiKP	08 23 07.4	-0.8
	comp=Z,17nm,1.0s						
DAVOX	Davos/Dischmat	138.58	334	PKhKP	PKPpre	08 22 58.0	
	comp=Z,2.8nm,0.7s,baz=348,slow=9.3,SNR=4.6						
DAVOX				PKP	PKPdf	08 23 07.0	0.0
	comp=Z,12nm,0.7s,baz=102,slow=6.0,SNR=10						
MATE	Matera	139.30	322	⇑*i*P	PKiKP	08 23 11.8	+1.3
KEST	Kesra	146.89	322	*e*PKPdf	PKPdf	08 23 22.3	+0.4
KEST	Kesra	146.89	322	PKPbc	PKPbc	08 23 23.3	-0.4
	comp=Z,70nm,0.9s,baz=357,slow=1.4,SNR=29						
CMAH	Djebel Manchou	147.40	325	P	PKPbc	08 23 25.7	+0.6
ABSA	Djebel Ababsia	147.62	324	P	PKPbc	08 23 26.1	+0.3
CASM	Ain Smara	148.19	325	P	PKPbc	08 23 27.1	-0.1
DFRA	Djebel Bou Aff	148.31	327	P	PKPbc	08 23 28.4	+0.8
PBRG	Braganca	148.52	348	*e*PKPdf	PKPbc	08 23 27.8	-0.1
PGAV	Gavieira, Arco	148.66	350	*e*PKPdf	PKiKP	08 23 29.2	-0.6
SET	Setif	148.83	327	P	PKiKP	08 23 31.0	+0.6
POLO	Lamas de Olo	149.15	349	*e*PKPdf	PKPbc	08 23 29.6	0.0
MVO	Moncorvo	149.20	348	*e*PKPdf	PKPbc	08 23 29.8	+0.1
PVRL	Vila Real	149.23	349	*e*PKPdf	PKiKP	08 23 30.8	-0.1
ES19	SONSECA Array	149.80	343	*e*PKPbc	PKPbc	08 23 30.9	-0.3
PVIS	Viseu	149.80	349	*e*PKPdf	PKPbc	08 23 30.7	-0.5
ESDC	Sonseca Array	149.84	343	PKPbc	PKPbc	08 23 30.9	-0.4
	comp=Z,17nm,1.0s,baz=12,slow=2.3,SNR=24						
ESDC				PP	PP	08 27 03.4	-0.5
	comp=Z,1.8nm,0.7s,baz=24,slow=7.1,SNR=4.3						
ESLA	Sonseca Array	149.84	343	*e*PKPbc	PKPbc	08 23 31.4	+0.1
MTE	Manteigas	150.04	348	*e*PKPdf	PKPdf	08 23 28.7	+1.9
MTE	Manteigas	150.04	348	*e*PKPbc	PKPbc	08 23 30.6	-1.2
PAB	San Pablo	150.07	343	*e*PKPbc	PKPbc	08 23 31.6	-0.2
PAB	San Pablo	150.07	343	*e*PKP2	PKPbc	08 23 31.7	-0.2
PCBR	Castelo Branco	150.56	348	*e*PKPdf	PKiKP	08 23 33.5	-0.2
PMRV	Marv??o	150.94	347	*e*PKPdf	PKiKP	08 23 34.3	-0.2
PTOM	Tomar	150.96	349	*e*PKPdf	PKiKP	08 23 35.3	+0.8
PMTG	Montargil	151.46	349	*e*PKPdf	PKPbc	08 23 35.1	0.0
CMLA	Cha da Macela	151.88	18	*i* PKIKP	PKiKP	08 23 39.0	+2.5
PNCL	Nicolau / Gran	152.44	349	*e*PKPdf	PKPdf	08 23 33.9	+3.4
MESJ	Messejana	152.64	348	*e*PKPdf	PKiKP	08 23 39.2	+1.2
RCBR	Riachuelo	153.41	128	*e*PKPdf	PKPdf	08 23 32.9	+0.3
RCBR	Riachuelo	153.41	128	*e*PKIKP	PKPdf	08 23 32.9	+0.3
MDT	Midelt	156.29	337	PKP	PKPdf	08 23 35.7	-0.5
	comp=Z,6.5nm,1.1s,baz=334,slow=2.8,SNR=4.4						
MDT				PKPbc	sPKPdf	08 23 46.7	+1.8
	comp=Z,4.9nm,0.9s,baz=51,slow=4.4,SNR=4.5						
MDT				PKPab	PKPab	08 24 04.3	+0.3
	comp=Z,9.2nm,0.9s,baz=113,slow=4.7,SNR=6.5						
TOA0	Torodi Ar. Sit	163.36	279	*e*PKPdf	PKPdf	08 23 43.6	-0.9
TOA0				*e*PKPdf	PKPdf	08 23 44.1	-0.4
TOA0	Torodi Ar. Sit	163.36	279	P	PKPdf	08 23 44.3	-0.2
TORD	Torodi Ar. Bea	163.36	279	PKP	PKPdf	08 23 44.4	-0.1
	comp=Z,12nm,1.0s,baz=42,slow=0.8,SNR=41						
TORD				PKPab	PKPab	08 24 34.4	-0.9
	comp=Z,2.4nm,0.9s,baz=66,slow=3.5,SNR=2.5						
TORD				PP	PP	08 28 23.8	+3.0
	comp=Z,3.4nm,1.1s,baz=131,slow=8.6,SNR=3.6						
TOA1	Torodi Ar. Sit	163.36	279	*e*PKPdf	PKPdf	08 23 44.4	-0.1
TOA1				*e*PKPab	PKPab	08 24 34.4	-0.9
KIC	Kosan Boka	168.64	246	*e*PKIKP	PKPdf	08 23 48.0	-0.8
	comp=Z,72nm,1.2s						
KIC	Kosan Boka	168.64	246	*e*PKP1	PKPab	08 25 01.8	+3.1
	comp=Z,64nm,1.4s						
LIC	Lamto	168.84	245	*e*PKIKP	PKPdf	08 23 48.1	-0.8
	comp=Z,71nm,1.3s						
LIC	Lamto	168.84	245	*e*PKP1	PKPab	08 25 02.4	+2.8
	comp=Z,85nm,1.4s						
DBIC	Dimbokro	168.88	248	PKP	PKPdf	08 23 48.5	-0.4
	comp=Z,16nm,1.0s,baz=113,slow=1.1,SNR=11						
DBIC				PKPab	PKPab	08 25 00.1	+0.4
	comp=Z,4.2nm,0.8s,baz=39,slow=6.5,SNR=2.3						
TIC	Toumodi	169.01	247	*e*PKIKP	PKPdf	08 23 48.3	-0.7
TIC	Toumodi	169.01	247	*e*PKP1	PKPab	08 25 02.0	+1.6

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*NNC **07** 08:09:56.5±8.9, 37.°40N×71.°99E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=69.2km s-min=56.0km az=165.0*

ISC 07 08:09:57.2±4.3**, 37.°2N**±0.°2×**71.°7E**±0.°1**, h100^{km}, n4, σ3.^{s}08**/8**, 3C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	4.11	54	Pn	Pn	08 10 56.8	-1.1
KSH				Sn	Sn	08 11 48.7	+3.7
KSH				smax	smax		
	comp=N,35nm,0.3s						
KSH				smax	smax		
	comp=E,42nm,0.3s						
AAK	Ala-Archa	5.87	21	⇑Pn	Pn	08 11 23.1	+1.3
	comp=E,1.3nm,0.5s						
AAK				⇓Sn	Sn	08 12 26.4	-1.4
	comp=E,3.8nm,0.9s						
KK31	Karatay Array	5.99	352	⇓Pn	Pn	08 11 21.7	-1.6
	comp=E,0.4nm,0.3s,baz=170,slow=11,SNR=14						
KK31				⇓Sn	Sn	08 12 34.2	+3.8
	comp=E,1.0nm,0.5s,baz=172,slow=36,SNR=3.9						
TKM2	Tokmak 2	6.47	26	⇑Pn	Pn	08 11 29.5	-0.7
	comp=E,1.7nm,0.7s						
TKM2				⇑Sn	Sn	08 12 39.2	-3.4
	comp=E,1.2nm,0.8s						

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*IDC **07** 08:14:15.1±0.6, 2.°27S×68.°16E, h0^{km}, mb4.3/20, mb1 4.4/20, mb1mx4.1/64, mbtmp4.3/20, MS4.4/2, Ms1 4.5/2, ms1mx3.9/47, Error ellipse: s-maj=16.7km s-min=14.9km az=21.0*

*ISCJB **07** 08:14:16.0±0.3, 2.°23S±0.°05×68.°16E±0.°06, h15^{km}, mb4.5/48, MS4.3/1, Error ellipse: s-maj=8.5km s-min=7.3km az=151.4*

*NEIC **07** 08:14:16.8±0.2, 2.°24S×68.°12E, h10^{km}, mb4.8/29, Error ellipse: s-maj=6.1km s-min=5.5km az=60.0*

*GCMT **07** 08:14:19.8±0.3, 2.°20S±0.°03×68.°08E±0.°02, h20^{km}±1^{km}, MW5.3/67, Moment Tensor Solution. s25,c27; s67,c92; Duration: 1.^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.25±.08; $M_{\theta\theta}$0.37±.04; $M_{\phi\phi}$0.88±.05; $M_{r\theta}$0.38±.11; $M_{\theta\phi}$-0.01±.03; $M_{\phi r}$0.29±.09; Best double couple: $M_0$1.14800×10^{17} NP1:ϕ_s195.00000°, δ54.00000°, λ-76.00000°. NP2:ϕ_s352.00000°, δ38.00000°, λ-109.00000°. Principal axes: T 0.9250, Plg8.0000°, Azm275.0000°; N 0.4450, Plg12.0000°, Azm7.0000°; P -1.3710, Plg76.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 08:14:17.6±0.5**, 2.°26S**±0.°09×**68.°10E**±0.°09**, h15^{km}, n87, σ0.^{s}87**/71**, mb4.6**/48**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N2	Diego Garcia H	4.97	144	T	T	08 20 32.3	
	baz=324,slow=75,SNR=6877						
H08N3	Diego Garcia H	4.98	145	T	T	08 20 33.2	
	baz=324,slow=75,SNR=8317						
H08N1	Diego Carcia H	4.99	144	T	T	08 20 33.9	
	baz=324,slow=75,SNR=8414						
DGAR	Diego Garcia	6.71	140	*e*Pn	Pn	08 15 56.5	+0.9
H08S3	Diego Garcia H	6.89	141	T	T	08 23 07.6	
	baz=312,slow=76,SNR=23						
H08S1	Diego Carcia H	6.90	141	T	T	08 23 05.2	
	baz=312,slow=76,SNR=5.2						
H08S2	Diego Garcia H	6.91	141	T	T	08 23 06.3	
	baz=312,slow=76,SNR=10						
PALK	Pallekele	15.74	53	LR	LR	08 22 41.8	
	comp=Z,2µm,20.3s,baz=296,slow=32						
MRIV	Mauritius Mete	20.70	209	*e*P	Pn	08 18 59.9	+0.1
	14nm,1.1s						
KMBO	Kilima Mbogo	30.85	272	P	P	08 20 34.3	+0.5
	0.8nm,0.3s,baz=106,slow=8.2,SNR=3.3						
KULM	Kulim	33.37	77	*e*P	P	08 20 56.3	+0.6
	20nm,1.2s						
IPM	Ipoh	33.58	78	*e*P	P	08 20 57.2	-0.3
	26nm,1.4s						
SHL	Shillong	36.00	38	*e*P	P	08 21 18.6	+0.1
	11nm,1.0s						
KBL	Kabul	36.62	1	*e*P	P	08 21 24.4	+0.8
	20nm,1.3s						
CM01	Chiang Mai Arr	36.67	55	*e*P	P	08 21 24.2	0.0
CM31	Chiang Mai Arr	36.68	55	*e*P	P	08 21 24.0	-0.2
	9.7nm,0.9s						
CMAR	Chiang Mai Arr	36.68	55	P	P	08 21 23.4	-0.8
	1.0nm,0.3s,baz=248,slow=8.8,SNR=4.1						
CMAR				LR	LR	08 36 10.2	
	comp=Z,439nm,18.3s,baz=120,slow=36						
CHTO	Chiang Mai	36.87	54	*e*P	P	08 21 26.5	+0.7
	8.5nm,1.0s						
CHTO	Chiang Mai	36.87	54	P	P	08 21 33.0	+7.2
	42nm,2.5s						
CMMT	Chiang Mai	36.87	54	P	P	08 21 32.9	+7.1
	9.7nm,2.5s,530nm						
MBAR	Mbarara	37.38	272	*e*P	P	08 21 30.4	0.0
	18nm,1.5s						
PBKT	Sadao Pong	37.47	59	*e*P	P	08 21 31.2	+0.3
	7.8nm,0.9s						
PBKT	Sadao Pong	37.47	59	P	P	08 21 34.9	+4.0
	11nm,1.7s						
CHAI	Chaiyaphum	38.05	61	P	P	08 21 40.2	+4.4
	5.4nm,0.9s,989nm						
LSA	Lhasa	38.68	33	*e*P	P	08 21 41.3	-0.2
	16nm,1.3s						
LEM	Lembang	39.64	98	P	P	08 21 49.3	-0.1
	35nm,0.7s,baz=309,slow=13,SNR=2.2						
CISI	Cisompet, Garu	39.90	99	*e*P	P	08 21 51.1	-0.4
	75nm,1.4s						
SKNT	Sakolnakorn	40.24	60	P	P	08 21 59.6	+5.5
	6.0nm,1.6s,1µm						
GEYT	Alibeck	41.04	348	P	P	08 22 00.6	+0.1
	0.8nm,0.3s,baz=185,slow=10.0,SNR=3.4						
GYA0B	ALIBECK ARRAY	41.04	348	*e*P	P	08 22 00.1	-0.4
	7.0nm,1.1s						
GAR	Garm	41.11	3	*e*P	P	08 22 01.6	+0.5
	97nm,1.7s						
LSZ	Lusaka	41.41	249	*e*P	P	08 22 04.1	+0.1
	9.9nm,0.8s						
LSZ	Lusaka	41.41	249	P	P	08 22 04.3	+0.3
	6.9nm,0.8s,baz=74,slow=8.4,SNR=15						
BTK	Batken	42.19	3	*e*P	P	08 22 11.1	+1.1
	33nm,1.4s						
MATP	Matopo	42.63	242	P	P	08 22 13.5	-0.4
	7.7nm,1.2s,baz=128,slow=4.9,SNR=3.0						
AAK	Ala-Archa	45.06	7	P	P	08 22 33.7	+0.5
	2.6nm,0.9s,baz=197,slow=12,SNR=3.4						
FRU1	Bishkek	45.25	7	*e*P	P	08 22 35.5	+0.9
	23nm,0.4s						
PRZ	Przheval'sk	45.50	11	*e*P	P	08 22 37.4	+0.7
	13nm,0.9s						
MK31	Makanchi Array	50.42	13	*e*P	P	08 23 14.3	-0.2
	5.8nm,1.5s						
MK32	Makanchi Array	50.42	13	*e*P	P	08 23 12.5	-2.0
MKAR	Makanchi Array	50.42	13	P	P	08 23 12.5	-2.0
	0.5nm,0.6s,baz=191,slow=7.6,SNR=4.0						
ABKAR	Akbulak array	51.80	353	*e*P	P	08 23 26.0	+1.3
	9.9nm,1.3s						
XAN	Xi'an	52.70	43	*e*P	P	08 23 31.8	0.0
	15nm,1.0s						
KURBB	Kurchatov Arra	53.43	8	P	P	08 23 36.9	+0.1
	3.4nm,1.0s,baz=202,slow=7.7,SNR=10.0						
KURK	Kurchatov	53.54	8	*e*P	P	08 23 36.9	-0.7
H01W3	Cape Leeuwin H	53.66	133	T	T	09 21 32.6	
	baz=298,slow=75,SNR=4.7						
H01W2	Cape Leeuwin H	53.67	133	T	T	09 21 33.5	
	baz=298,slow=75,SNR=4.3						
H01W1	Cape Leeuwin H	53.68	133	T	T	09 21 32.9	
	baz=298,slow=75,SNR=4.9						
ZALV	Zalesovo Beam	57.72	12	P	P	08 24 07.5	-0.2
	1.0nm,0.4s,baz=188,slow=8.7,SNR=2.9						
ZAA1	Zalesovo Array	57.72	12	*e*P	P	08 24 07.5	-0.2
FITZ	Fitzroy Crossi	58.52	110	*e*P	P	08 24 14.3	+0.3
	9.1nm,1.0s						
SONA0	Songino Array	60.04	29	*e*P	P	08 24 23.9	-0.2

SONM	Songino Array	60.04	29	P	P	08 24 23.9	-0.2
	2.2nm,0.8s,baz=217,slow=7.3,SNR=11						
SONA1	Songino Array	60.05	29	*e*P	P	08 24 24.1	0.0
WRA	Warramunga Arr	66.92	111	P	P	08 25 09.7	-0.3
	6.9nm,0.8s,baz=284,slow=6.1,SNR=24						
WR1	Warramunga Arr	66.92	111	*e*P	P	08 25 09.7	-0.3
	11nm,0.9s						
WRAB	Tennant Creek	66.93	111	*e*P	P	08 25 10.1	+0.1
	11nm,0.9s						
WB2	Warramunga Arr	66.93	111	*e*P	P	08 25 10.1	0.0
	48nm,1.6s						
ASAR	Alice Springs	66.98	115	P	P	08 25 09.7	-0.6
	5.5nm,0.8s,baz=281,slow=6.0,SNR=23						
AS31	Alice Springs	66.98	115	*e*P	P	08 25 10.4	+0.1
	1.7nm,0.8s						
AS01	Alice Springs	67.02	115	*e*P	P	08 25 10.7	+0.1
NRIK	Noril'sk	72.68	7	P	P	08 25 44.5	+0.1
	0.8nm,0.3s,baz=161,slow=5.8,SNR=4.3						
STKA	Stephens Creek	74.81	122	*e*P	P	08 25 57.5	-0.3
	2.0nm,1.3s						
STKA	Stephens Creek	74.81	122	P	P	08 25 57.7	-0.1
	2.8nm,0.8s,baz=281,slow=2.0,SNR=5.1						
KLR	Kul'dur	74.86	37	P	P	08 25 56.4	-1.3
	0.8nm,0.7s,baz=278,slow=16,SNR=2.8						
HFS	Hagfors	75.10	335	P	P	08 25 58.9	+0.2
	11nm,1.2s,baz=140,slow=7.0,SNR=2.3						
ES19	SONSECA Array	77.68	311	*e*P	P	08 26 14.3	+0.4
ESDC	Sonseca Array	77.72	311	P	P	08 26 15.3	+1.1
	0.3nm,0.4s,baz=90,slow=5.6,SNR=3.6						
CTA	Charters Tower	78.10	110	P	P	08 26 16.2	-0.4
	4.4nm,0.7s,baz=289,slow=3.1,SNR=1.8						
TIXI	Tiksi	83.26	16	*e*P	P	08 26 43.0	-0.1
	11nm,1.1s						
TIXI	Tiksi	83.26	16	P	P	08 26 43.4	+0.2
	3.5nm,0.4s,baz=127,slow=1.2,SNR=7.1						
ARMA	Armidale	83.28	120	*e*P	P	08 26 44.8	+0.4
	14nm,1.0s						
QSPA	South Pole Qui	87.74	180	*e*P	P	08 27 06.1	+0.3
	19nm,1.6s						
YKA	Yellowknife Ar	119.88	1	PKP	PKPdf	08 33 04.6	-2.5
	0.4nm,0.9s,baz=332,slow=2.6,SNR=4.1						
YKB5	Yellowknife Ar	119.88	1	*e*PKPdf	PKPdf	08 33 06.6	-0.6
ULM	Lac du Bonnet	130.29	347	PKP	PKPdf	08 33 27.4	-0.1
	1.4nm,0.8s,baz=34,slow=3.6,SNR=2.9						
PDAR	Pinedale Array	139.62	357	PKP	PKiKP	08 33 46.9	-0.9
	0.4nm,0.7s,baz=90,slow=3.0,SNR=4.0						
NVAR	Mina Array Bea	143.53	8	PKP	PKiKP	08 33 54.0	-1.9
	0.6nm,0.6s,baz=270,slow=1.8,SNR=3.7						
PV16	Nyswonger Mesa	144.02	356	*e*PKPdf	PKPdf	08 33 52.3	-1.2
PV13	Radium Mtn., P	144.16	356	*e*PKPdf	PKPbc	08 33 52.1	+0.4
PV01	Paradox Valley	144.17	356	*e*PKPdf	PKPdf	08 33 53.7	-0.1
PV05	Paradox Valley	144.26	356	*e*PKPdf	PKPdf	08 33 53.7	-0.2
S22A	4UR Ranch, Cre	144.38	353	*e*PKPdf	PKPdf	08 33 54.5	+0.3
LCMT	Little Creek M	145.40	2	*e*PKPbc	PKPdf	08 33 55.7	-0.1
TUC	Tucson	150.09	358	*e*PKPdf	PKPdf	08 34 03.3	-0.3
LTX	Lajitas	151.96	345	*e*PKPbc	PKiKP	08 34 13.3	-0.1
TXAR	Lajitas Array	151.96	345	PKPbc	PKiKP	08 34 13.4	-0.1
	2.9nm,1.1s,baz=110,slow=1.9,SNR=8.0						

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*IDC **07** 08:20:40.2±0.5, 10°.75S×164°.71E, h0^{km}, mb4.4/21, mb1 4.5/23, mb1mx4.5/40, mbtmp4.5/23, ML4.8/2, MS4.0/1, Ms1 4.0/1, ms1mx3.4/39, Error ellipse: s-maj=18.9km s-min=13.4km az=93.0*

*NEIC **07** 08:20:41.8±0.1, 10°.69S×164°.65E, h10^{km}, mb4.6/40, Error ellipse: s-maj=4.6km s-min=3.4km az=104.0*

*ISCJB **07** 08:20:43.0±0.2, 10°.80S±0°.04×164°.61E±0°.05, h29^{km}, mb4.5/60, MS4.9/2, Error ellipse: s-maj=7.0km s-min=5.2km az=5.7*

ISC 07 08:20:44.4±0.4, **10°.80S**±0°.05×**164°.74E**±0°.07, **h29^{km}, n114,** σ**1^{s}.00**/116, **mb4.6**/60, **MS4.7**/3, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.91	286	*e*Pn	Pn	08 21 53.7	-2.7
HNR				*e*Sn	Sn	08 22 55.1	+2.9
HNR	Honiara	4.91	286	Pn	Pn	08 21 56.3	0.0
	95nm,0.3s,baz=150,slow=7.7,SNR=10.0						
HNR				Sn	Sn	08 22 55.1	+2.9
	34nm,0.3s,baz=165,slow=21,SNR=2.1						
MARNC	Mare, Loyalty	11.08	164	*e*Pn	Pn	08 23 22.2	+1.2
DZM	Mont Dzumac	11.32	172	*e*Pn	Pn	08 23 26.1	+1.7
DZM				*e*Sn	Sn	08 25 29.3	-0.8
DZM	Mont Dzumac	11.32	172	Pn	Pn	08 23 26.0	+1.6
	3.2nm,0.3s,baz=316,slow=9.5,SNR=56						
DZM				Sn	Sn	08 25 27.6	-2.5
	0.8nm,0.3s,baz=157,slow=19,SNR=1.8						
DZM				LR	LR	08 26 30.4	
	comp=Z,682nm,18.1s,baz=358,slow=31						
PINNC	Pines Island,	12.03	168	*e*Pn	Pn	08 23 35.8	+1.9
PINNC				*e*Sn	Sn	08 25 44.5	-2.7
EIDS	Eidsvold	19.42	220	*e*P	Pn	08 25 09.4	-0.5
	21nm,0.8s						
CTA	Charters Tower	20.05	240	P	Pn	08 25 17.1	-0.3
	12nm,0.8s,baz=57,slow=13,SNR=8.3						
CTAO	Charters Tower	20.05	240	*e*P	P	08 25 15.2	-0.2
	14nm,0.8s						
COEN	Coen	21.29	259	*e*P	P	08 25 27.8	-1.1
	9.1nm,0.8s						
ARMA	Armidale	23.01	210	*e*P	P	08 25 47.1	-0.2
	10nm,0.9s						
H11S2	WAKE ISLAND Hy	29.17	4	T	T	08 57 04.2	
	baz=184,slow=76,SNR=142						
H11S3	WAKE ISLAND Hy	29.18	4	T	T	08 57 08.7	
	baz=184,slow=76,SNR=54						
H11S1	WAKE ISLAND Hy	29.19	4	T	T	08 57 03.0	
	baz=184,slow=76,SNR=88						
URZ	Urewera	29.50	160	P	P	08 26 47.8	+1.6
	3.4nm,0.5s,baz=351,slow=18,SNR=3.1						
STKA	Stephens Creek	29.95	222	*e*P	P	08 26 51.5	+1.3
	2.2nm,1.0s						
STKA	Stephens Creek	29.95	222	P	P	08 26 51.4	+1.1
	3.7nm,0.8s,baz=49,slow=7.9,SNR=5.6						
BKZ	Black Stump Fm	30.13	162	*e*P	P	08 26 52.6	+0.8
	9.3nm,1.1s						
H11N1	WAKE ISLAND Hy	30.40	4	T	T	08 58 31.6	
	baz=184,slow=76,SNR=53						
H11N3	WAKE ISLAND Hy	30.41	4	T	T	08 58 34.0	
	baz=184,slow=76,SNR=57						
H11N2	WAKE ISLAND Hy	30.42	4	T	T	08 58 32.5	
	baz=184,slow=76,SNR=55						
WB2	Warramunga Arr	30.63	249	*e*P	P	08 26 55.9	-0.5
	3.4nm,0.8s						
WR1	Warramunga Arr	30.64	249	*e*P	P	08 26 55.0	-1.5
	6.8nm,1.1s						
WRA	Warramunga Arr	30.64	249	P	P	08 26 55.0	-1.5
	2.0nm,0.8s,baz=77,slow=9.3,SNR=15						
WRA				PcP	PcP	08 29 54.7	+0.1
	0.9nm,0.9s,baz=77,slow=3.9,SNR=4.4						
BFZ	Birch Farm	31.45	163	*e*P	P	08 27 04.8	+1.4
	16nm,1.0s						
THZ	Tophouse	31.66	168	*e*P	P	08 27 06.9	+1.6
	9.2nm,1.0s						
TOO	Toolangi	31.78	210	*e*P	P	08 27 07.3	+0.9
	15nm,1.1s						
AS01	Alice Springs	31.98	242	*e*P	P	08 27 07.9	-0.4
AS31	Alice Springs	32.02	242	*e*P	P	08 27 07.6	-1.1
	1.8nm,1.1s						
ASAR	Alice Springs	32.02	242	P	P	08 27 07.2	-1.6
	1.7nm,0.7s,baz=63,slow=9.9,SNR=13						
ASAR				PcP	PcP	08 29 58.0	-0.2
	0.6nm,0.7s,baz=80,slow=2.1,SNR=3.5						
KHZ	Kahutara	32.42	168	*e*P	P	08 27 13.1	+1.3
	14nm,1.0s						
RPZ	Rata Peaks	33.24	172	*e*P	P	08 27 20.4	+1.3
	18nm,0.9s						
RPZ	Rata Peaks	33.24	172	P	P	08 27 19.7	+0.6
	13nm,0.8s,baz=109,slow=4.3,SNR=6.7						
BBOO	Buckleboo	34.28	226	*e*P	P	08 27 28.3	0.0
	11nm,0.8s						
FITZ	Fitzroy Crossi	38.49	255	*e*P	P	08 28 03.2	-1.2
	7.2nm,0.7s						
FORT	Forrest	39.38	234	*e*P	P	08 28 11.5	-0.2
MJAR	Matsushiro Arr	53.31	333	P	P	08 29 59.7	-1.3
	2.6nm,0.7s,baz=24,slow=26,SNR=4.7						
MAJO	Matsushiro	53.31	333	*e*P	P	08 29 59.7	-1.3
SBUM	Sibu	53.88	281	*e*P	P	08 30 04.7	-0.9
	2.8nm,1.1s						
YULB	Yu-li	54.41	309	*e*P	P	08 30 08.3	-1.0
	10nm,0.9s						
ASAJ	Asahikawa	58.24	341	P	P	08 30 36.9	+0.7
	16nm,0.9s,baz=143,slow=12,SNR=4.8						
KSRS	Korea Array	59.12	326	P	P	08 30 42.6	+0.2
	2.6nm,0.9s,baz=144,slow=8.7,SNR=4.5						
NJ2	Nanjing	61.16	316	*e*P	P	08 30 55.0	-1.5
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
USRK	Ussuriysk Ar.	62.29	334	P	P	08 31 04.5	+0.7
	comp=Z,3.7nm,0.8s,baz=156,slow=15,SNR=5.7						
PEA0B	Petropavlovsk-	63.94	355	*e*P	P	08 31 14.6	0.0
	comp=Z,20nm,1.0s						
PETK	Petropavlovsk-	63.94	355	*e*P	P	08 31 14.0	-0.6
PETK	Petropavlovsk-	63.94	355	P	P	08 31 14.5	-0.2
	comp=Z,4.8nm,0.7s,baz=159,slow=8.7,SNR=5.9						
PEA1	Petropavlovsk-	63.95	355	*e*P	P	08 31 14.5	-0.2
CN2	Changchun	65.03	330	*e*P	P	08 31 23.0	+1.0
KLR	Kul'dur	66.45	337	P	P	08 31 31.6	+0.5
	comp=Z,4.6nm,0.8s,baz=341,slow=3.5,SNR=8.5						
VNDA	Vanda	66.72	181	*e*P	P	08 31 33.2	+0.8
VNDA	Vanda	66.72	181	P	P	08 31 33.0	+0.6
	comp=Z,5.1nm,1.1s,baz=56,slow=8.2,SNR=3.4						
XAN	Xi'an	69.23	313	P	P	08 31 51.3	+2.4
XAN				pP	sP	08 31 58.4	-1.0
XAN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KMI	Kunming	70.15	302	P	P	08 31 56.6	+1.6
KMI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HHC	Hu-ho-hao-te	71.01	320	*e*P	P	08 32 01.1	+1.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
CM31	Chiang Mai Arr	71.11	294	*e*P	P	08 32 00.4	-0.3
	comp=Z,7.8nm,1.0s						
CMAR	Chiang Mai Arr	71.11	294	P	P	08 32 01.5	+0.8
	comp=Z,1.1nm,0.3s,baz=128,slow=6.1,SNR=6.4						
CHTO	Chiang Mai	71.22	294	*e*P	P	08 32 01.2	-0.2
	comp=Z,5.3nm,1.1s						
CD2	Chengdu	71.67	308	*e*P	P	08 32 03.5	-0.4
LZH	Lanzhou	73.86	313	*e*P	P	08 32 16.8	-0.2
LZH				pP	pP	08 32 23.1	-1.6
LZH				sP	sP	08 32 24.8	-2.4
LZH				PP	PP	08 35 19.4	+17
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,93nm,4.3s						
LZH				LR	LR		
	comp=N,250nm,14.6s						
LZH				LR	LR		
	comp=E,280nm,15.0s						
LZH				LR	LR		
	comp=Z,250nm,17.8s						
SONA0	Songino Array	77.89	324	*e*P	P	08 32 40.5	+0.8
SONM	Songino Array	77.89	324	P	P	08 32 40.5	+0.8
	comp=Z,1.6nm,1.0s,baz=137,slow=6.2,SNR=6.4						
SONA1	Songino Array	77.89	324	*e*P	P	08 32 39.5	-0.2
GTA	Gaotai	78.18	314	*e*P	P	08 32 42.6	+1.1
GTA				pP	pP	08 32 48.0	-1.2
GTA				sP	PcP	08 32 51.0	+0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ANM	Nome	78.47	13	*e*P	P	08 32 42.7	+0.4
	comp=Z,4.1nm,1.1s						
RSO	Redoubt South	78.63	20	*e*P	P	08 32 44.0	+0.4
BILL	Bilibino	78.65	1	*e*P	P	08 32 43.1	-0.1
	comp=Z,7.4nm,1.0s						
QSPA	South Pole Qui	79.20	180	*e*P	P	08 32 47.2	+0.5
	comp=Z,13nm,1.1s						
RDOG	Red Dog Mine	81.99	12	*e*P	P	08 33 01.8	+0.6
	comp=Z,14nm,0.7s						
IM3	Indian Mountai	82.46	16	*e*P	P	08 33 04.1	+0.3
WRH	Wood River Hil	83.02	19	*e*P	P	08 33 06.8	+0.1
	comp=Z,3.6nm,0.7s						
MDM	Murphy Dome	83.31	18	*e*P	P	08 33 09.2	+1.0
HDA	Harding Lake	83.34	19	*e*P	P	08 33 08.6	+0.3
	comp=Z,20nm,1.2s						
RIDG	Independ'e Rid	83.59	20	*e*P	P	08 33 10.1	+0.4
	comp=Z,8.4nm,1.0s						
ILAR	Eielson Array	83.60	19	P	P	08 33 09.2	-0.5
	comp=Z,3.9nm,0.9s,baz=241,slow=5.1,SNR=26						
ILB	Eielson Array	83.60	19	*e*P	P	08 33 09.4	-0.3
IL1	Eielson Array	83.60	19	*e*P	P	08 33 09.7	0.0
SCRK	Sand Creek	84.03	20	*e*P	P	08 33 12.2	+0.1
	comp=Z,5.8nm,1.0s						
TIXI	Tiksi	85.67	349	P	P	08 33 19.6	-0.4
	comp=Z,2.2nm,0.7s,baz=276,slow=1.2,SNR=4.9						
NV01	Mina Array Sit	86.63	50	*e*P	P	08 33 25.2	-0.5
NVAR	Mina Array Bea	86.63	50	P	P	08 33 26.0	+0.3
	comp=Z,1.4nm,0.9s,baz=234,slow=7.0,SNR=6.0						
WMQ	Urumqi	88.22	315	*e*P	P	08 33 33.6	+0.5
WMQ				pmax	pmax		
	comp=Z,950nm,12.0s						
WMQ				LR	LR		
	comp=N,610nm,21.3s						
WMQ				LR	LR		
	comp=E,570nm,21.3s						
WMQ				LR	LR		
	comp=Z,730nm,19.7s						
INK	Inuvik	90.00	19	*e*P	P	08 33 41.3	+0.5
	comp=Z,1.9nm,0.9s						
INK	Inuvik	90.00	19	P	P	08 33 41.5	+0.7
	comp=Z,1.8nm,0.9s,baz=260,slow=3.8,SNR=5.8						
U15A	North Rim	90.75	53	*e*P	P	08 33 45.9	+0.4
	comp=Z,2.2nm,0.8s						
HLID	Hailey	90.82	46	*e*P	P	08 33 45.4	-0.1
	comp=Z,1.3nm,0.8s						
MTPU	Mount Pierson	91.19	52	*e*P	P	08 33 46.9	-0.7
	comp=Z,1.6nm,0.9s						
MSU	Marysvale	91.30	51	*e*P	P	08 33 47.9	0.0
HVU	Hansel Valley	91.58	48	*e*P	P	08 33 48.6	-0.4
	comp=Z,3.0nm,0.8s						
NLU	North Lily Min	91.69	50	*e*P	P	08 33 50.5	+0.8
	comp=Z,2.3nm,1.0s						
MK01	Makanchi Array	92.66	317	*e*P	P	08 33 53.0	-0.6
MK31	Makanchi Array	92.67	317	*e*P	P	08 33 53.3	-0.5
	comp=Z,2.5nm,0.8s						
MK32	Makanchi Array	92.67	317	*e*P	P	08 33 53.6	-0.1
MKAR	Makanchi Array	92.67	317	*e*P	P	08 33 52.9	-0.8
	comp=Z,16nm,0.7s						
MKAR	Makanchi Array	92.67	317	P	P	08 33 53.6	-0.1
	comp=Z,2.9nm,0.8s,baz=98,slow=6.2,SNR=21						
SRU	San Rafael Swe	92.69	51	*e*P	P	08 33 53.3	-1.0
	comp=Z,0.7nm,0.7s						
ZALV	Zalesovo Beam	92.78	324	P	P	08 33 53.7	-0.3
	comp=Z,0.7nm,0.3s,baz=123,slow=5.5,SNR=3.9						
ZAA1	Zalesovo Array	92.78	324	*e*P	P	08 33 53.7	-0.3
BW06	Boulder Array	94.12	47	*e*P	P	08 34 01.0	+0.2
	comp=Z,1.9nm,0.8s						
PD31	Pinedale Array	94.12	47	*e*P	P	08 34 00.8	0.0
	comp=Z,1.8nm,0.8s						
PDAR	Pinedale Array	94.12	47	*e*P	P	08 34 00.5	-0.3
TX31	Lajitas Ar. Si	96.58	61	*e*P	P	08 34 11.8	-0.4
ARA0	ARCESS Array S	115.85	345	*e*PKPdf	PKiKP	08 39 22.6	-1.2
ARCES	ARCESS Array B	115.85	345	PKP	PKiKP	08 39 22.6	-1.2
	comp=Z,1.8nm,0.8s,baz=56,slow=2.1,SNR=6.8						
FIA0	FINESS Array S	121.18	338	*e*PKPdf	PKiKP	08 39 34.1	-0.2
FINES	FINESS Array B	121.18	338	PKP	PKiKP	08 39 34.1	-0.2
	comp=Z,1.0nm,0.7s,baz=349,slow=1.4,SNR=2.7						
AKASG	Malin Array Be	126.12	327	PKP	PKPdf	08 39 43.7	-0.3
	comp=Z,0.2nm,0.3s,baz=55,slow=2.3,SNR=3.0						
CLL	Collm	133.48	336	*e*PKPdf	PKiKP	08 40 00.0	+0.8
CLL				L	L	11 08 00.0	
	comp=Z,100nm,21.4s						
GERES	GERESS Array B	135.05	333	PKP	PKPdf	08 40 01.6	+0.4
	comp=Z,0.3nm,0.3s,baz=318,slow=2.6,SNR=3.5						
KEST	Kesra	146.62	322	*e*PKPdf	PKPdf	08 40 22.4	0.0
KEST	Kesra	146.62	322	PKPbc	PKPbc	08 40 23.7	-0.2
	comp=Z,6.5nm,0.9s,baz=135,slow=1.4,SNR=3.3						
ESDC	Sonseca Array	149.54	343	PKPbc	PKPbc	08 40 31.8	+0.3
	comp=Z,0.7nm,0.5s,baz=31,slow=2.0,SNR=3.2						
TORD	Torodi Ar. Bea	163.25	280	PKP	PKPdf	08 40 45.0	-0.3
	comp=Z,0.5nm,0.8s,baz=48,slow=2.1,SNR=3.5						
TORD				PKPab	PKPab	08 41 35.4	-0.5
	comp=Z,0.4nm,0.8s,baz=72,slow=2.8,SNR=2.9						
TOA1	Torodi Ar. Sit	163.25	280	*e*PKPdf	PKPdf	08 40 45.0	-0.3
TOA1				*e*PKPab	PKPab	08 41 35.4	-0.5

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*SOME **07** 08:34:59.8, 42°.55N×79°.63E, h20^{km}*

*KRNET **07** 08:35:00.3±0.1, 42°.60N×79°.56E, h16^{km}, mb2.9*

*NNC **07** 08:35:00.4±0.6, 42°.62N×79°.57E, h0^{km}, mb3.3, mpv3.1, Error ellipse: s-maj=3.7km s-min=1.8km az=137.0*

ISC 07 08:34:60.0±1.6, **42°.59N**±0°.05×**79°.54E**±0°.04, **h7^{km}**±10^{km}, **n55,** σ**1^{s}.32**/97, **28C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.57	354	P	Pb	08 35 12.0	-0.5
	81nm,0.1s						
SHLS				S	Sn	08 35 21.2	-3.3
	216nm,0.2s						
SHLS	Shalkode	0.57	354	*e*P	Pb	08 35 12.0	-0.5
	baz=23						
SHLS				*e*S	Sb	08 35 21.0	+0.1
	baz=23						
SHLS	Shalkode	0.57	354	*e*P	Pb	08 35 12.0	-0.5
	81nm,0.1s						
SHLS				*e*S	Sb	08 35 21.1	+0.1
	216nm,0.2s						
UZB	Uzynbulak	0.68	326	P	Pg	08 35 13.5	+0.4
	8.0nm,0.1s						
UZB				S	Sb	08 35 23.6	-0.4
	96nm,0.2s						
UZB	Uzynbulak	0.68	326	*e*P	Pg	08 35 13.5	+0.4
	baz=24						
UZB				*e*S	Sb	08 35 23.6	-0.4
	baz=24						
UZB	Uzynbulak	0.68	326	*e*P	Pg	08 35 13.5	+0.4
	8.0nm,0.1s						
UZB				*e*S	Sb	08 35 23.6	-0.4
	96nm,0.2s						
PDGK	Podgornoye	0.74	357	P	Pg	08 35 14.1	-0.3
	12nm,0.1s						
PDGK				S	Sb	08 35 24.5	-1.3
	18nm,0.2s						
PDGK	Podgornoye	0.74	357	⇓P	Pg	08 35 13.9	-0.4
	1.4nm,0.4s						
PDGK				⇑S	Sg	08 35 24.1	0.0
	27nm,0.7s						
PDGK	Podgornoye	0.74	357	⇑*i*P	Pg	08 35 14.1	-0.3
	baz=56						
PDGK				⇑*i*S	Sb	08 35 24.7	-1.1
	baz=56						
PRZ	Przheval'sk	0.85	264	⇑*i*P	Pg	08 35 17.1	+0.8
	baz=62						
PRZ				⇑*i*S	Sn	08 35 29.4	-1.9
	baz=62						
SATY	Saty	0.96	300	P	Pb	08 35 18.6	-0.4
	7.3nm,0.1s						
SATY				S	Sn	08 35 32.7	-1.3
	72nm,0.1s						
SATY	Saty	0.96	300	⇓*i*P	Pb	08 35 18.6	-0.4
	3.5nm,0.1s						
SATY				*e*S	Sn	08 35 32.3	-1.7
	68nm,0.1s						
KURS	Kuram	1.35	312	P	Pb	08 35 25.6	-0.1
	3.0nm,0.2s						
KURS				S	Sg	08 35 44.2	+0.7
	11nm,0.3s						
KURS	Kuram	1.35	312	*e*P	Pb	08 35 25.6	-0.1
	baz=11						
KURS				*e*S	Sg	08 35 44.2	+0.7
	baz=11						
KURS	Kuram	1.35	312	*e*P	Pb	08 35 25.6	-0.1
	3.0nm,0.2s						
KURS				*e*S	Sg	08 35 44.2	+0.7
	11nm,0.3s						
DJR	Jarkent	1.76	6	P	Pb	08 35 32.2	-0.3
	5.0nm,0.2s						
DJR				S	Sg	08 35 55.8	-0.6
	7.7nm,0.2s						
DJR	Jarkent	1.76	6	*e*P	Pb	08 35 32.2	-0.3
	5.0nm,0.2s						
DJR				*e*S	Sg	08 35 55.8	-0.6
	7.7nm,0.2s						
KDJ	Kajisay	1.81	256	⇑*i*P	Pg	08 35 34.6	-0.1
	baz=56						
KDJ				⇑*i*S	Sg	08 35 58.6	+0.5
	baz=56						
KOTS	Kotyrbulak	1.90	291	Pg	Pb	08 35 35.8	+0.7
	5.1nm,0.2s						
KOTS				Lg	Lg	08 36 02.2	
	40nm,0.3s						
KOTS	Kotyrbulak	1.90	291	*e*P	Pb	08 35 35.8	+0.7
	baz=90						
KOTS				*e*S	Sg	08 36 01.6	+0.6
	baz=90						
KOTS	Kotyrbulak	1.90	291	*e*P	Pb	08 35 35.8	+0.7
	2.3nm,0.2s						
KOTS				*e*S	Sg	08 36 01.6	+0.6
	40nm,0.3s						
MDOK	Medeo	1.92	288	⇑Pn	Pb	08 35 35.6	+0.2
	3.7nm,0.6s						
MDOK				Sn	Sg	08 36 01.5	-0.3
	18nm,0.7s						
MDOK	Medeo	1.92	288	Pg	Pb	08 35 35.8	+0.4
	5.0nm,0.2s						
MDOK				Lg	Lg	08 36 01.6	
	15nm,0.4s						
MDOK	Medeo	1.92	288	*e*P	Pb	08 35 35.8	+0.4
	baz=88						
MDOK				*e*S	Sg	08 36 01.6	-0.1
	baz=88						
MDOK	Medeo	1.92	288	*e*P	Pb	08 35 35.8	+0.4
	5.0nm,0.2s						
MDOK				*e*S	Sg	08 36 01.6	-0.1
	15nm,0.4s						
TNSS	Tian-Shan	1.96	284	Pg	Pb	08 35 36.7	+0.4
	9.0nm,0.2s						
TNSS				Lg	Lg	08 36 03.5	
	15nm,0.3s						
TNSS	Tian-Shan	1.96	284	*e*P	Pb	08 35 36.7	+0.4
	baz=84						
TNSS				*e*S	Sg	08 36 03.5	+0.4
	baz=84						
TNSS	Tian-Shan	1.96	284	*e*P	Pb	08 35 36.7	+0.4
	9.0nm,0.2s						
TNSS				*e*S	Sg	08 36 03.5	+0.4
	15nm,0.3s						
IZV	Izvestkoviy	2.20	283	Pg	Pb	08 35 41.0	+0.8
	12nm,0.2s						
IZV				Lg	Lg	08 36 10.8	
IZV	Izvestkoviy	2.20	283	*e*P	Pb	08 35 41.0	+0.8
	12nm,0.2s						
IZV				*e*S	Sg	08 36 10.8	0.0
	40nm,0.3s						
CHKK	Chushkaly	2.26	305	Pg	Pb	08 35 41.7	+0.6
	1.3nm,0.2s						
CHKK				Lg	Lg	08 36 11.8	
	38nm,0.3s						
CHKK	Chushkaly	2.26	305	*e*P	Pb	08 35 41.7	+0.6
	1.3nm,0.2s						
CHKK				*e*S	Sg	08 36 11.8	-0.7
	38nm,0.3s						
MTBS	Maitube	2.35	284	Pg	Pb	08 35 43.8	+1.0
	7.6nm,0.3s						
MTBS				Lg	Lg	08 36 15.3	
	21nm,0.3s						
MTBS	Maitube	2.35	284	*e*P	Pb	08 35 43.8	+1.0
	7.6nm,0.3s						
MTBS				*e*S	Sg	08 36 15.3	-0.2
	21nm,0.3s						
KTBS	Karatobe	2.38	299	Pg	Pb	08 35 43.9	+0.8
	3.9nm,0.2s						
KTBS				Lg	Lg	08 36 15.6	
	45nm,0.3s						
KTBS	Karatobe	2.38	299	*e*P	Pb	08 35 43.9	+0.8
	3.9nm,0.2s						
KTBS				*e*S	Sg	08 36 15.6	-0.7
	45nm,0.3s						
ULHL	Ulahol	2.47	263	⇑*i*P	Pb	08 35 43.8	-1.0
	baz=63						
ULHL				⇑*i*S	Sb	08 36 16.4	+1.0
	baz=63						
BOOM	Boomskoye usch	2.66	269	⇑*i*P	Pb	08 35 46.6	-1.5
	baz=69						
BOOM				⇑*i*S	Sb	08 36 20.9	-0.1
	baz=69						
KST	Kastek	2.67	281	Pg	Pb	08 35 49.3	+1.0
	6.6nm,0.3s						
KST				Lg	Lg	08 36 24.7	
	13nm,0.5s						
KST	Kastek	2.67	281	*e*P	Pb	08 35 49.3	+1.0
	6.6nm,0.3s						
KST				*e*S	Sg	08 36 24.7	-1.1
	13nm,0.5s						
KUU	Kurty	2.68	300	Pg	Pb	08 35 49.0	+0.7
	1.3nm,0.3s						
KUU				Lg	Lg	08 36 24.2	
	17nm,0.2s						
KUU	Kurty	2.68	300	*e*P	Pb	08 35 49.0	+0.7
	1.3nm,0.3s						
KUU				*e*S	Sg	08 36 24.2	-1.9
	17nm,0.2s						
KAPS	Kapalarasan	2.70	357	Pg	Pb	08 35 49.2	+0.5
	1.4nm,0.3s						
KAPS				Lg	Lg	08 36 24.6	
	4.3nm,0.2s						

KAPS	Kapalarasan 1.4nm,0.3s	2.70	357	eP	Pb	08 35 49.2	+0.5
KAPS	4.3nm,0.2s			eS	Sg	08 36 24.6	-2.2
DGS	Degeres 6.5nm,0.3s	2.85	285	Pg	Pb	08 35 52.3	+1.2
DGS	20nm,0.4s			Lg	Lg	08 36 30.1	
DGS	Degeres 6.5nm,0.3s	2.85	285	eP	Pb	08 35 52.3	+1.2
DGS	20nm,0.4s			eS	Sg	08 36 30.1	-1.3
NRN	Naryn baz=47	2.88	248	⇑iP	Pb	08 35 49.7	-2.2
NRN	baz=47			⇑iS	Sb	08 36 26.5	-0.9
TKM2	Tokmak 2 1.3nm,0.6s	2.92	278	⇑Pg	Pb	08 35 51.4	-1.2
TKM2	5.8nm,0.6s			⇓Lg	Lg	08 36 30.6	
TKM2	Tokmak 2 baz=78	2.92	278	⇑iP	Pb	08 35 50.6	-2.0
TKM2	baz=78			⇑iS	Sb	08 36 27.6	-1.0
KZA	Kyzart baz=62	3.22	262	⇑iP	Pb	08 35 55.1	-2.7
KZA	baz=62			⇑iS	Sb	08 36 35.0	-2.4
AAK	Ala-Archa 2.2nm,0.9s	3.73	273	⇑Pg	Pb	08 36 08.1	+1.9
AAK	5.2nm,0.9s			⇑Lg	Lg	08 36 58.8	
USP	Ospenovka baz=82	3.77	282	⇑iP	Pb	08 36 02.5	-4.3
USP	baz=82			⇑iS	Sb	08 36 47.1	-5.5
ARLS	Aral baz=61	3.94	261	⇑iP	Pn	08 36 04.3	+3.3
ARLS	baz=61			⇑iS	Sn	08 36 50.3	+2.7
MAKZ	Makanchi 0.3nm,0.4s	4.57	22	⇓Pn	Pn	08 36 10.7	+1.2
MAKZ	0.4nm,0.6s			⇑Sn	Sn	08 37 04.7	+1.9
MAKZ	0.4nm,0.5s			⇑Lg	Lg	08 37 21.1	
MK31	Makanchi Array 0.2nm,0.3s,baz=207,slow=6.2,SNR=13	4.64	24	⇓Pn	Pn	08 36 11.2	+0.7
MK31	0.3nm,0.5s,baz=206,slow=25,SNR=4.0			⇓Sn	Sn	08 37 06.4	+1.7
MK31	0.2nm,0.4s,baz=197,slow=28,SNR=3.5			⇑Lg	Lg	08 37 23.0	

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*DDA **07** 08:35:15.9, 37°.86N×34°.45E, h7^{km}±3^{km}, ML2.7*
*ISCJB **07** 08:35:18.3±0.7, 37°.91N±0°.03×34°.52E±0°.05, h3^{km}±6^{km}, Error ellipse: s-maj=6.8km s-min=4.4km az=0.4*
*ISK **07** 08:35:18.2, 37°.95N×34°.53E, h11^{km}, ML2.2/14*
ISC 07 08:35:17.9±1.4**, 37°.89N**±0°.04×**34°.49E**±0°.04**, h7**^{km}±13^{km}**, n20, σ0^{s}69**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIG	Nigde	0.24	23	PG	Pg	08 35 22.8	+0.1
YAHY	KAYSERI_Yahyal	0.72	73	i P	Pg	08 35 30.5	-1.2
YAHY	comp=Z,1μm,0.2s			IAML_P			
KARA	Karaisali	0.77	144	PG	Pb	08 35 33.9	+0.3
KARA				SG	Sn	08 35 46.1	-1.0
SULT	Sultanhani-AKS	0.83	292	PG	Pb	08 35 34.9	+0.2
AKSY	AKSARAY - Alti	0.95	323	i P	Pg	08 35 34.9	-1.2
AKSY	comp=Z,210nm,0.2s			IAML_P			
AVNS	Nevsehir-Avano	0.96	17	i P	Pg	08 35 35.9	-0.4
AVNS				i S	Sb	08 35 49.8	-0.1
MERS	Mersin	1.02	179	PG	Pb	08 35 38.4	+0.5
MERS				SG	Sn	08 35 54.8	+1.5
KOZT	Kozan	1.14	111	PN	Pb	08 35 39.6	-0.3
KOZT				SN	Sn	08 35 56.3	+0.2
CEYT	Ceyhan	1.33	131	PN	Pb	08 35 43.4	+0.2
YURE	YUREGIR	1.40	139	PN	Pb	08 35 44.4	+0.1
KIZK	Mersin	1.43	191	PN	Pb	08 35 45.4	+0.5
BNN	Bunyan	1.44	48	PN	Pn	08 35 43.8	-0.7
SIRC	Yozgat	1.53	19	i P	Pg	08 35 46.9	-0.4
SIRC				i S	Sg	08 36 08.0	+0.8
SIRC	comp=Z,1μm,0.3s			IAML_P			
KEBE	Keben-Mersin	1.57	204	PN	Pb	08 35 47.6	+0.3
TEVE	Tevekalti-Mers	1.68	210	PN	Pb	08 35 49.1	0.0
CDAG	Cicekdag	1.73	357	i P	Pg	08 35 50.6	-0.5
CDAG				i S	Sg	08 36 14.8	+1.1
IKL	Isikli	1.77	202	PN	Pb	08 35 50.5	-0.1
BERE	Bereket-Mersin	1.84	214	PN	Pb	08 35 51.6	-0.4
AKKU	Akkuyu-Mersin	1.88	204	PN	Pb	08 35 52.2	-0.4
KMRS	Kahramanmaras	1.95	101	PN	Pn	08 35 51.9	+0.5

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*NNC **07** 08:37:41.3±8.7, 53°.53N×87°.99E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=98.4km s-min=39.1km az=43.0, Suspected Mining explosion.*
KRAR 07 08:37:42.5±0.1**, 53°.57N**×**87°.64E, M2.2, 4C-2D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array 9.6nm,0.6s	1.72	284	⇓Pn	Pg	08 38 15.7	+0.3
ZAA0	15nm,0.4s			⇑Sn	Sg	08 38 41.0	+3.4
MK31	Makanchi Array 0.8nm,0.6s,baz=29,slow=14,SNR=22	7.60	209	⇑Pn	Pn	08 39 34.9	+0.4
MK31	2.8nm,0.8s,baz=35,slow=25,SNR=6.8			⇑Lg	Lg	08 41 43.5	
MAKZ	Makanchi 1.2nm,0.6s	7.68	210	⇑Pn	Pn	08 39 36.5	+1.0
MAKZ	5.2nm,0.9s			⇓Lg	Lg	08 41 46.4	

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*NNC **07** 08:42:59.3±4.7, 54°.23N×86°.53E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=44.6km s-min=20.8km az=6.0, Suspected Mining explosion.*
IDC 07 08:43:02.9±2.3**, 54°.10N**×**86°.41E, h0**^{km}**, mb1 3.3**/2**, mb1mx3.0**/49**, mbtmp3.3**/2**, ML3.2**/2**, 8C-4D, Error ellipse: s-maj=18.4km s-min=11.6km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=84,slow=347,SNR=6.6	0.95	262	i		08 48 45.1	
ZAA0	Zalesovo Array 1.4nm,0.3s	0.95	262	⇓P	Pg	08 43 18.7	-2.4
ZAA0	3.4nm,0.5s			⇑S	Sg	08 43 33.7	+0.2
ZALV	Zalesovo Beam 1.9nm,0.3s,baz=80,slow=16,SNR=22	0.95	262	Pg	Pg	08 43 19.5	-1.6
ZALV	1.2nm,0.3s,baz=81,slow=31,SNR=6.7			Lg	Lg	08 43 34.7	
ZALV	123nm,1.2s,baz=80,slow=29,SNR=27			Rg	Rg	08 43 39.1	
KURK	Kurchatov 5.1nm,1.1s	5.85	238	⇓Pn	Pn	08 44 30.8	+0.1
KURK	4.5nm,1.0s			⇑Lg	Lg	08 46 11.7	
KURBB	Kurchatov Arra 2.8nm,0.5s	5.95	237	⇑Pn	Pn	08 44 32.0	-0.2
KURBB	8.8nm,1.2s			⇓Lg	Lg	08 46 12.5	
KURBB	Kurchatov Arra 0.4nm,0.3s,baz=54,slow=13,SNR=11	5.95	237	Pn	Pn	08 44 32.9	+0.7
KURBB	baz=40,slow=35,SNR=2.7			Sn	Sn	08 45 40.9	-0.1
KURBB	baz=62,slow=34,SNR=4.4			Lg	Lg	08 46 12.4	
MK31	Makanchi Array 0.2nm,0.3s,baz=23,slow=14,SNR=21	7.77	201	⇑Pn	Pn	08 44 57.0	-0.2
MK31	0.3nm,0.5s,baz=16,slow=28			⇓Sn	Sn	08 46 27.3	+1.5
MK31	0.5nm,0.7s,baz=28,slow=34,SNR=5.4			⇑Lg	Lg	08 47 07.7	
MKAR	Makanchi Array 0.5nm,0.3s,baz=25,slow=13,SNR=19	7.77	201	Pn	Pn	08 44 58.1	+1.0
MKAR	0.1nm,0.3s,baz=24,slow=28,SNR=4.5			Sn	Sn	08 46 26.7	+0.9
MKAR	0.1nm,0.3s,baz=29,slow=28,SNR=7.6			Lg	Lg	08 47 09.1	
MAKZ	Makanchi 0.3nm,0.6s	7.83	203	⇑Pn	Pn	08 44 59.0	+1.1
MAKZ	1.5nm,1.1s			⇑Sn	Sn	08 46 27.8	+0.7
MAKZ	0.5nm,0.7s			⇑Lg	Lg	08 47 15.3	

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*IDC **07** 08:50:39.3±0.6, 10°.87S×165°.39E, h0^{km}, mb4.3/19, mb1 4.5/21, mb1mx4.4/40, mbtmp4.4/21, ML4.6/2, Error ellipse: s-maj=17.4km s-min=14.1km az=105.0*
*NEIC **07** 08:50:41.0±0.2, 10°.86S×165°.32E, h10^{km}, mb4.6/26, Error ellipse: s-maj=4.7km s-min=3.8km az=102.0*
*ISCJB **07** 08:50:42.1±0.3, 10°.95S±0°.04×165°.24E±0°.05, h30^{km}, mb4.5/40, Error ellipse: s-maj=7.1km s-min=5.7km az=1.7*
ISC 07 08:50:43.7±0.5**, 10°.97S**±0°.06×**165°.35E**±0°.07**, h30**^{km}**, n79, σ1^{s}12**/82**, mb4.5**/40**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 24nm,0.3s,baz=209,slow=5.7,SNR=4.5	5.54	286	Pn	Pn	08 52 04.3	+0.1
HNR	12nm,0.3s,baz=349,slow=5.6,SNR=1.5			Sn	Sn	08 53 10.0	+3.1
MARNC	Mare, Loyalty	10.76	167	ePn	Pn	08 53 17.6	+1.8
DZM	Mont Dzumac	11.09	175	ePn	Pn	08 53 21.3	+0.9
DZM				eSn	Sn	08 55 22.2	-1.3
DZM	Mont Dzumac 2.7nm,0.3s,baz=296,slow=17,SNR=18	11.09	175	Pn	Pn	08 53 21.5	+1.1
DZM	baz=266,slow=16,SNR=1.5			Sn	Sn	08 55 17.6	-5.9
ONTNC	Ouen Toro	11.32	175	ePn	Pn	08 53 24.9	+1.3
ONTNC				eSn	Sn	08 55 27.3	-1.9
PINNC	Pines Island,	11.75	170	ePn	Pn	08 53 31.0	+1.6
RABL	Rabaul	14.70	296	ePn	Pn	08 54 07.5	-2.2
EIDS	Eidsvold 36nm,1.4s	19.70	221	eP	P	08 55 11.3	+0.6
MANU	Manus Island 88nm,0.9s	19.93	295	eP	P	08 55 13.1	-0.3
CTA	Charters Tower 20nm,0.8s,baz=62,slow=12,SNR=8.6	20.50	241	P	Pn	08 55 21.6	-0.2
CTAO	Charters Tower 32nm,0.9s	20.50	241	eP	P	08 55 20.1	+0.7
COEN	Coen 11nm,1.0s	21.86	260	eP	P	08 55 34.9	+0.7
ARMA	Armidale 17nm,1.3s	23.18	211	eP	P	08 55 49.4	+1.3
URZ	Urewera 16nm,1.0s	29.14	161	eP	P	08 56 43.7	+1.5
URZ	Urewera 6.5nm,0.8s,baz=42,slow=15,SNR=4.4	29.14	161	P	P	08 56 42.6	+0.4
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=14	29.30	3	T	T	09 27 13.9	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=9.8	29.30	3	T	T	09 27 15.2	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=10.0	29.32	3	T	T	09 27 14.5	
BKZ	Black Stump Fm 16nm,1.1s	29.78	162	eP	P	08 56 49.2	+1.3
STKA	Stephens Creek 0.7nm,0.9s	30.23	223	eP	P	08 56 52.4	+0.4
STKA				PcP	PcP	08 59 53.5	+1.1
STKA	Stephens Creek 2.3nm,0.8s,baz=37,slow=11,SNR=5.0	30.23	223	P	P	08 56 52.5	+0.6
STKA	1.8nm,1.0s,baz=82,slow=19,SNR=2.0			PcP	PcP	08 59 53.5	+1.1
H11N1	WAKE ISLAND Hy baz=182,slow=76,SNR=12	30.53	3	T	T	09 28 47.2	
H11N3	WAKE ISLAND Hy baz=182,slow=76,SNR=8.8	30.53	3	T	T	09 28 51.2	
H11N2	WAKE ISLAND Hy baz=182,slow=76,SNR=9.3	30.54	3	T	T	09 28 47.1	
WB2	Warramunga Arr	31.14	250	eP	P	08 57 00.0	-0.1
WB2				ePcP	PcP	08 59 55.8	+0.8
WR1	Warramunga Arr 11nm,1.3s	31.15	250	eP	P	08 57 00.2	+0.1
WRA	Warramunga Arr 2.1nm,0.6s,baz=80,slow=8.9,SNR=23	31.15	250	P	P	08 57 00.2	+0.1
WRA	2.0nm,0.9s,baz=84,slow=3.2,SNR=8.8			PcP	PcP	08 59 55.8	+0.8
THZ	Tophouse 31nm,1.4s	31.38	169	eP	P	08 57 03.1	+1.1
AS01	Alice Springs	32.44	243	eP	P	08 57 10.9	-0.6
AS31	Alice Springs 3.0nm,0.6s	32.48	243	eP	P	08 57 11.1	-0.8
ASAR	Alice Springs 10nm,0.8s,baz=66,slow=10,SNR=115	32.48	243	P	P	08 57 11.4	-0.5
ASAR	1.8nm,0.8s,baz=79,slow=2.4,SNR=12			PcP	PcP	08 59 59.6	+1.0
RPZ	Rata Peaks 5.2nm,0.8s,baz=4.8,slow=16,SNR=2.9	33.00	172	P	P	08 57 15.7	-0.4
BBOO	Buckleboo 26nm,1.5s	34.60	227	eP	P	08 57 30.0	-0.2
FITZ	Fitzroy Crossi 8.2nm,1.4s	39.03	255	eP	P	08 58 07.0	-1.1
BATI	Baumata 12nm,0.4s,baz=16,slow=7.4	40.97	267	P	P	08 58 24.4	+0.2
CBIJ	Chichi jima	44.02	330	eP	P	08 58 47.3	-1.4
JCJ	Chichijima 37nm,0.3s,baz=274,slow=21,SNR=5.2	44.02	330	P	P	08 58 47.3	-1.4
MORW	Morawa 17nm,0.9s	49.32	241	eP	P	08 59 29.8	-0.7
MJAR	Matsushiro Arr 3.6nm,0.8s,baz=170,slow=8.7,SNR=6.6	53.73	333	P	P	09 00 02.1	-1.1
MAJO	Matsushiro	53.73	333	eP	P	09 00 02.1	-1.1
JNU	Nakatsue 39nm,1.2s	54.79	324	eP	P	09 00 10.5	-0.6
KSRS	Korea Array 1.8nm,0.8s,baz=138,slow=6.9,SNR=3.4	59.60	326	P	P	09 00 44.6	-0.2
KSAR	Wonju Array Be	59.61	326	P	P	09 00 44.6	-0.3
USRK	Ussuriysk Ar. 3.1nm,0.9s,baz=163,slow=6.9,SNR=3.7	62.71	334	P	P	09 01 04.8	-1.0
KLR	Kul'dur 3.0nm,1.0s,baz=126,slow=12,SNR=4.7	66.83	337	P	P	09 01 33.4	+0.8
SEY	Seymchan 0.5nm,0.4s,baz=258,slow=18,SNR=3.6	74.36	354	P	P	09 02 18.4	+0.2
SONA0	Songino Array	78.38	324	eP	P	09 02 41.4	-0.1
SONM	Songino Array 0.9nm,0.6s,baz=134,slow=5.8,SNR=4.7	78.38	324	P	P	09 02 41.4	-0.1
BILL	Bilibino 5.5nm,1.0s	78.80	0	eP	P	09 02 43.1	-0.1
QSPA	South Pole Qui 8.2nm,1.2s	79.04	180	eP	P	09 02 45.2	+0.4
TRF	Thorofare Moun 3.8nm,1.0s	81.57	19	eP	P	09 02 58.5	0.0
IM3	Indian Mountai	82.45	16	eP	P	09 03 03.2	+0.4
HDA	Harding Lake 7.6nm,1.2s	83.30	19	eP	P	09 03 07.8	+0.6
IL1	Eielson Array	83.56	19	eP	P	09 03 08.3	-0.3
ILAR	Eielson Array 2.4nm,0.7s,baz=234,slow=5.0,SNR=42	83.56	19	P	P	09 03 08.2	-0.4
ILB	Eielson Array 3.3nm,0.7s	83.56	19	eP	P	09 03 09.2	+0.6
AFDM	Forest Hills D 3.2nm,0.8s	84.44	49	eP	P	09 03 13.7	0.0
HYT	Haines Junctio 16nm,1.5s	84.48	24	eP	P	09 03 13.6	+0.1
MDPB	Devils Postpil 4.1nm,0.9s	85.45	50	eP	P	09 03 19.5	+0.4
NV01	Mina Array Sit	86.27	50	eP	P	09 03 23.2	+0.1
NVAR	Mina Array Bea 2.3nm,0.9s,baz=232,slow=8.1,SNR=12	86.27	50	P	P	09 03 23.6	+0.5
NV11	Mina Array Sit 0.5nm,1.2s	86.38	50	eP	P	09 03 23.7	+0.1
X16A	Lo Mia Camp, P 3.0nm,1.1s	90.59	55	eP	P	09 03 44.6	+0.9
HVU	Hansel Valley 4.9nm,1.1s	91.24	48	eP	P	09 03 47.2	+0.7
MK01	Makanchi Array	93.19	317	eP	P	09 03 55.0	-0.3
MK31	Makanchi Array 1.5nm,1.0s	93.20	317	eP	P	09 03 55.2	-0.1
MK32	Makanchi Array	93.20	317	eP	P	09 03 55.8	+0.5
MKAR	Makanchi Array 6.9nm,0.8s	93.20	317	eP	P	09 03 54.9	-0.4
MKAR	Makanchi Array 1.4nm,0.9s,baz=99,slow=6.3,SNR=12	93.20	317	P	P	09 03 55.8	+0.5
MKAR	0.6nm,0.8s,baz=274,slow=2.6,SNR=5.8			PKKP	PKKPdf	09 21 04.1	+0.2
PD31	Pinedale Array 4.4nm,1.5s	93.78	47	eP	P	09 03 58.1	-0.3
PDAR	Pinedale Array 0.6nm,0.8s,baz=238,slow=2.8,SNR=5.5	93.78	47	P	P	09 03 58.5	+0.1
YKA	Yellowknife Ar 0.5nm,0.7s,baz=256,slow=4.5,SNR=9.9	95.08	27	P	P	09 04 02.4	-1.1
YKB5	Yellowknife Ar	95.08	27	eP	P	09 04 02.2	-1.3
LTX	Lajitas	96.13	61	eP	P	09 04 09.9	+0.7
TXAR	Lajitas Array 0.2nm,0.7s,baz=226,slow=5.8,SNR=3.7	96.13	61	P	P	09 04 09.9	+0.6
BOSA	Boshof 3.9nm,1.0s,baz=193,slow=5.0,SNR=3.1	124.91	223	PKP	PKiKP	09 09 43.2	+1.1
TOA0	Torodi Ar. Sit	163.87	279	ePKPdf	PKPdf	09 10 44.7	-0.3
TORD	Torodi Ar. Bea 1.0nm,1.0s,baz=243,slow=0.3,SNR=5.2	163.87	279	PKP	PKPdf	09 10 44.5	-0.5
TOA1	Torodi Ar. Sit	163.88	279	ePKPdf	PKPdf	09 10 44.5	-0.5

IDC 07 08:53:40.1±8.0**, 17°.89S**×**179°.77E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/38**, mbtmp3.5**/3**, Error ellipse: s-maj=354.1km s-min=35.8km az=144.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.1nm,0.4s,baz=101,slow=8.6,SNR=2.6	42.93	260	P	P	09 01 40.2	-0.9
ASAR	Alice Springs 0.5nm,0.4s,baz=78,slow=8.8,SNR=8.3	43.13	254	P	P	09 01 43.4	+0.7
ILAR	Eielson Array 0.2nm,0.7s,baz=195,slow=5.6,SNR=3.7	86.27	14	P	P	09 06 23.3	0.0

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*ISCJB **07** 09:01:32.6±0.3, 0°.49N±0°.04×122°.42E±0°.05, h114^{km}, mb4.1/17, Error ellipse: s-maj=7.1km s-min=4.2km az=150.5*
*IDC **07** 09:01:33.9±0.6, 0°.54N×122°.47E, h112^{km}±5^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.6/47, mbtmp4.2/10, MS4.4/1, Ms1 4.4/1, ms1mx3.1/53, Error ellipse: s-maj=49.5km s-min=11.1km az=61.0*
*NEIC **07** 09:01:34.9±0.8, 0°.47N×122°.41E, h124^{km}±8^{km}, mb4.3/10, Error ellipse: s-maj=11.3km s-min=4.7km az=57.0*
*DJA **07** 09:01:35.0±0.4, 0°N±4°×12°2E±°, h80^{km}±9^{km}, M4.5/12, mb4.5/7, mB5.0/4, MLv4.5/12, Mw(mB)4.4/4*
ISC 07 09:01:34.0±0.5**, 0°.54N**±0°.06×**122°.43E**±0°.06**, h114**^{km}**, n79, σ1^{s}00**/91**, mb4.3**/27**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.49	262	P	Pn	09 01 49.3	-1.9
KMSI	Cibinong	1.55	89	P	Pn	09 02 03.0	+1.4
LUWI	Luwuk	1.61	168	ePn	Pn	09 02 02.6	+0.3
LUWI				eSn	Sn	09 02 26.5	+2.5
LUWI	Luwuk	1.61	168	P	Pn	09 02 02.7	+0.3
APSI	Ampana	1.64	208	P	Pn	09 02 02.1	-0.7
MPSI	Mapaga	2.54	265	P	Pn	09 02 12.8	-1.3
PCI	Palu	2.97	241	P	Pn	09 02 17.6	-2.1
SANI	Sanana	4.39	126	P	Pn	09 02 38.1	-0.6
TTSI	Tana Toraja	4.42	216	P	Pn	09 02 38.7	-0.3
KDI	Kendari	4.47	178	P	Pn	09 02 39.6	-0.2
SPSI	Sidrap Palu 82nm,0.6s,2μm0.4nm	5.21	211	P	Pn	09 02 49.4	-0.3
BNSI	Bone	5.43	205	P	Pn	09 02 53.1	+0.4
NLAI	Namlea	5.99	129	P	Pn	09 03 00.8	+0.5
BKSI	Bulukumba	6.26	202	P	Pn	09 03 03.7	-0.3
KKM	Kota Kinabalu	8.27	312	ePn	Pn	09 03 32.7	+1.5
EDFI	Ende, Flores	9.26	185	P	Pn	09 03 42.7	-2.0
JAGI	Jajag, Banyuwa	12.18	222	ePn	Pn	09 04 24.2	+0.4
CISI	Cisompet, Garu 22nm,1.0s	16.65	241	ePn	Pn	09 05 20.1	-0.6
KNRA	Kununurra baz=17,SNR=5.4	17.29	159	P	Pn	09 05 28.7	+0.3
FITZ	Fitzroy Crossi baz=19,SNR=74	18.79	170	P	P	09 05 44.9	+0.3
FITZ	Fitzroy Crossi 16nm,0.7s	18.79	170	eP	P	09 05 45.0	+0.3
FITZ	Fitzroy Crossi 4.6nm,0.3s,baz=8.2,slow=7.9,SNR=131	18.79	170	P	P	09 05 44.9	+0.3
MDSI	Maura Dua	18.91	254	P	Pn	09 05 50.5	+2.7
MBWA	Marble Bar 11nm,0.6s	21.73	187	eP	P	09 06 15.1	-1.2
WRAB	Tennant Creek 6.2nm,0.9s	23.46	151	eP	P	09 06 30.4	-3.1
WR1	Warramunga Arr 13nm,1.4s	23.47	151	eP	P	09 06 32.8	-0.7
WRA	Warramunga Arr 1.4nm,0.3s,baz=330,slow=11,SNR=56	23.47	151	P	P	09 06 32.8	-0.7
WRA	0.4nm,0.4s,baz=328,slow=2.2,SNR=7.4			PcP	PcP	09 10 15.9	-0.5
WB2	Warramunga Arr	23.47	151	eP	P	09 06 32.5	-1.1
WB2				eP	P	09 06 33.2	-0.3
GSI	Gunungsitoli 20nm,0.8s	24.86	272	eP	P	09 06 45.4	-0.9
COEN	Coen 13nm,1.3s	25.09	126	eP	P	09 06 48.6	+0.3
WRKA	Warakurna baz=26,SNR=29	26.06	168	P	P	09 06 56.5	-0.4
AS31	Alice Springs 1.0nm,0.5s	26.52	156	eP	P	09 07 01.4	+0.3
ASPA	Alice Springs baz=27	26.52	156	P	P	09 07 01.4	+0.3
ASAR	Alice Springs 1.2nm,0.5s,baz=344,slow=14,SNR=37	26.52	156	P	P	09 07 00.9	-0.2
ASAR	1.0nm,0.3s,baz=340,slow=2.1,SNR=12			PcP	PcP	09 10 22.8	-0.4
ASAR	0.2nm,0.5s,baz=353,slow=3.1,SNR=4.0			ScP	ScP	09 13 52.5	-0.5
AS01	Alice Springs	26.54	156	eP	P	09 07 01.1	-0.2
QIS	Mount Isa baz=27,SNR=5.2	26.88	142	P	P	09 07 05.3	+1.0
MEEK	Meekatharra baz=27,SNR=23	27.27	187	P	P	09 07 06.6	-1.2
CMAR	Chiang Mai Arr 0.8nm,0.3s,baz=123,slow=6.6,SNR=4.2	29.14	309	P	P	09 07 24.8	+0.4
CMAR	1.0nm,0.3s,baz=116,slow=2.1,SNR=4.7			PcP	PcP	09 10 29.8	+0.1
MORW	Morawa baz=30,SNR=9.9	30.07	191	P	P	09 07 31.7	-0.9
CTA	Charters Tower 6.1nm,1.1s,baz=317,slow=13,SNR=2.9	31.07	133	P	P	09 07 41.1	-0.4
BLDU	Ballidu baz=31,SNR=26	31.46	189	P	P	09 07 43.6	-1.2
FORT	Forrest baz=32,SNR=8.3	31.61	171	P	P	09 07 45.3	-0.8
FORT	Forrest 18nm,0.6s	31.61	171	eP	P	09 07 45.6	-0.5
KLBR	Kellerberrin baz=32,SNR=13	32.27	187	P	P	09 07 50.7	-1.2
NWAO	Narrogin (SRO) baz=34,SNR=4.9	33.65	188	P	P	09 08 03.1	-0.8
BBOO	Buckleboo baz=36,SNR=6.3	35.58	160	P	P	09 08 20.2	-0.3
STKA	Stephens Creek baz=37,SNR=15	37.00	152	P	P	09 08 33.0	+0.4
STKA	Stephens Creek 1.4nm,1.0s	37.00	152	eP	P	09 08 32.7	+0.1
STKA	Stephens Creek 2.0nm,0.3s,baz=326,slow=8.1,SNR=14	37.00	152	P	P	09 08 32.7	+0.1
HTT	Hallett baz=37,SNR=4.8	37.19	157	P	P	09 08 35.0	+0.8
CMSA	Cobar Meteorol baz=39,SNR=9.2	38.78	147	P	P	09 08 48.7	+1.0
RAMN	Ramite 16nm,0.5s	43.29	310	eP	P	09 09 27.0	+2.1
JIRN	Jiri 14nm,0.4s	43.97	311	eP	P	09 09 31.7	+1.2
GUN	Gumba 15nm,0.5s	44.33	311	eP	P	09 09 34.6	+1.2
PKI	Pulchoki 4.2nm,0.4s	44.52	310	eP	P	09 09 36.1	+1.3
PKIN	Phulchoki 4.4nm,0.3s	44.53	310	eP	P	09 09 35.9	+1.0
KKN	Kakani 7.1nm,0.5s	44.73	311	eP	P	09 09 37.9	+1.5
DMN	Daman 7.5nm,0.6s	44.77	310	eP	P	09 09 37.7	+0.9
KOLN	Koldanda 16nm,0.7s	46.00	309	eP	P	09 09 47.5	+1.0
DANN	Dangsing 23nm,0.6s	46.17	310	eP	P	09 09 48.8	+1.0
PYUN	Piuthan 23nm,0.6s	46.63	309	eP	P	09 09 52.7	+1.3
SONA0	Songino Array	49.12	346	eP	P	09 10 10.0	-0.2
SONM	Songino Array 0.3nm,0.4s,baz=156,slow=7.0,SNR=3.3	49.12	346	P	P	09 10 10.0	-0.2
SONM	0.8nm,0.7s,baz=165,slow=7.7,SNR=4.0			pP	pP	09 10 36.4	-0.5
SONM	1.1nm,0.8s,baz=161,slow=8.5,SNR=5.4			sP	sP	09 10 48.9	-0.7
MK01	Makanchi Array	57.84	328	eP	P	09 11 14.4	+0.7

MK31	Makanchi Array	57.85	328	*e*P	P	09 11 14.8	+1.0
MK32	Makanchi Array	57.85	328	*e*P	P	09 11 14.8	+0.9
MKAR	Makanchi Array 1.1nm,0.4s,baz=128,slow=8.6,SNR=32	57.85	328	P	P	09 11 14.8	+0.9
MKAR	0.4nm,0.5s,baz=123,slow=8.3,SNR=1.7			pP	pP	09 11 41.6	+0.2
MKAR	0.9nm,0.8s,baz=123,slow=8.8,SNR=2.4			sP	sP	09 11 53.2	-0.8
AAK	Ala-Archa comp=Z,298nm,18.0s,baz=308,slow=38	59.95	321	LR	LR	09 39 33.6	
ZALV	Zalesovo Beam 0.5nm,0.3s,baz=134,slow=10,SNR=4.3	61.59	336	P	P	09 11 38.5	-0.7
ZALV	0.7nm,0.6s,baz=111,slow=7.9,SNR=1.8			pP	pP	09 12 07.3	+0.3
ZALV	0.5nm,0.4s,baz=119,slow=5.6,SNR=1.5			sP	sP	09 12 19.1	-0.4
ZAA1	Zalesovo Array	61.59	336	*e*P	P	09 11 38.5	-0.7
CHGR	Chuyangaron 14nm,0.7s	61.70	315	*e*P	P	09 11 40.8	+0.4
KURK	Kurchatov	62.23	330	*e*P	P	09 11 44.4	+0.8
KK31	Karatay Array	62.73	320	*e*P	P	09 11 47.5	+0.4
KKAR	Karatay Array	62.73	320	*e*P	P	09 11 47.5	+0.4
BVAR	Borovoye Array 0.9nm,0.6s,baz=138,slow=7.6,SNR=5.4	67.73	329	P	P	09 12 19.3	+0.2
TORD	Torodi Ar. Bea 0.7nm,0.7s,baz=80,slow=1.6,SNR=5.5	119.72	285	PKP	PKPdf	09 20 10.1	-1.6
TOA1	Torodi Ar. Sit	119.72	285	*e*PKPdf	PKPdf	09 20 10.1	-1.6
LTX	Lajitas	126.93	52	*e*PKPdf	PKiKP	09 20 25.6	-0.2
TXAR	Lajitas Array 0.3nm,0.7s,baz=179,slow=1.7,SNR=5.4	126.93	52	PKP	PKiKP	09 20 25.6	-0.2
TXAR	0.1nm,0.6s,baz=259,slow=0.9,SNR=1.4			pPKP	pPKPdf	09 20 56.9	+0.5

NNC 07 09:02:08.5±9.0**, 53°.42N×88°.40E, h0km, mb3.6, mpv3.3, 8C-6D, Error ellipse: s-maj=71.7km s-min=37.4km az=62.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array 7.7nm,0.5s	2.20	285	⇓P	Pb	09 02 48.8	-0.2
ZAA0	36nm,0.9s			⇑S	Sn	09 03 13.4	-0.7
KURK	Kurchatov 1.9nm,0.7s	6.61	250	⇓Pn	Pn	09 03 45.4	-1.5
KURK	1.1nm,0.7s			⇑Sn	Sn	09 05 04.4	+1.5
KURK	5.7nm,0.8s			⇑Lg	Lg	09 05 40.5	
KURBB	Kurchatov Arra 3.4nm,0.8s	6.71	249	⇓Pn	Pn	09 03 46.5	-1.7
KURBB	3.3nm,0.6s			⇑Sn	Sn	09 05 06.5	+1.3
KURBB	7.5nm,0.7s			⇑Lg	Lg	09 05 43.8	
MK31	Makanchi Array 1.0nm,0.8s,baz=35,slow=14,SNR=10.0	7.71	213	⇑Pn	Pn	09 04 06.2	+4.2
MK31	1.2nm,0.7s,baz=35,slow=22,SNR=4.6			⇓Sn	Sn	09 05 31.3	+1.3
MK31	2.2nm,0.8s,baz=44,slow=34			⇑Lg	Lg	09 06 13.4	
MAKZ	Makanchi 1.0nm,0.9s	7.80	215	⇓Pn	Pn	09 04 03.2	-0.1
MAKZ	0.9nm,0.6s			⇑Sn	Sn	09 05 34.1	+1.9
MAKZ	3.1nm,1.0s			⇓Lg	Lg	09 06 19.1	

IDC 07 09:09:52.7±5.9**, 1°.92S×68°.23E, h0km, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.3**/49**, mbtmp3.7**/2**, Error ellipse: s-maj=531.6km s-min=53.2km az=36.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N2	Diego Garcia H baz=324,slow=75,SNR=616	5.18	148	T	T	09 16 18.6	
H08N3	Diego Garcia H baz=324,slow=75,SNR=603	5.19	148	T	T	09 16 12.3	
H08N1	Diego Carcia H baz=324,slow=75,SNR=611	5.20	148	T	T	09 16 13.2	
WRA	Warramunga Arr 0.8nm,0.8s,baz=285,slow=6.3,SNR=6.0	66.92	111	P	P	09 20 47.5	-0.1
ASAR	Alice Springs 0.5nm,0.7s,baz=278,slow=5.6,SNR=5.5	67.00	115	P	P	09 20 48.2	+0.1
TXAR	Lajitas Array 0.4nm,0.9s,baz=107,slow=0.9,SNR=3.7	151.66	345	PKPbc	PKPbc	09 29 49.9	-0.2

IDC 07 09:10:23.6±3.0**, 10°.50S×165°.39E, h0km, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.4**/41**, mbtmp3.5**/4**, ML3.3**/1**, Error ellipse: s-maj=65.6km s-min=42.3km az=89.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac 0.2nm,0.3s,baz=323,slow=20,SNR=8.1	11.55	175	Pn	Pn	09 13 09.8	-0.3
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=6.0	28.83	3	T	T	09 47 06.5	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=6.1	28.84	3	T	T	09 47 03.7	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=6.4	28.85	3	T	T	09 47 08.0	
H11N1	WAKE ISLAND Hy baz=182,slow=76,SNR=4.2	30.06	3	T	T	09 48 31.0	
H11N3	WAKE ISLAND Hy baz=182,slow=76,SNR=4.2	30.06	3	T	T	09 48 35.7	
H11N2	WAKE ISLAND Hy baz=182,slow=76,SNR=5.1	30.07	3	T	T	09 48 34.0	
WRA	Warramunga Arr 0.1nm,0.4s,baz=80,slow=9.2,SNR=3.5	31.34	249	P	P	09 16 46.6	+0.4
ASAR	Alice Springs 0.4nm,0.8s,baz=67,slow=9.7,SNR=8.5	32.73	242	P	P	09 16 58.0	-0.4
MKAR	Makanchi Array 0.1nm,0.6s,baz=101,slow=6.6,SNR=2.2	92.88	317	P	P	09 23 38.5	-0.1

IDC 07 09:10:57.5±67.0**, 16°.13S×176°.26W, h0km, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/38**, mbtmp3.6**/3**, Error ellipse: s-maj=1257.0km s-min=170.6km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek 1.1nm,0.7s,baz=90,slow=6.1,SNR=2.9	41.29	240	P	P	09 18 44.8	-0.1
WRA	Warramunga Arr 0.2nm,0.5s,baz=92,slow=7.3,SNR=4.2	46.99	258	P	P	09 19 31.4	+0.6
ASAR	Alice Springs 0.9nm,0.7s,baz=87,slow=8.0,SNR=16	47.26	253	P	P	09 19 32.1	-0.8

IDC 07 09:11:09.4±1.6**, 11°.67S×164°.72E, h0km, mb3.5**/4**, mb1 3.7**/5**, mb1mx3.5**/41**, mbtmp3.6**/5**, ML3.7**/1**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx3.1**/27**, Error ellipse: s-maj=48.5km s-min=29.8km az=125.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac 0.6nm,0.3s,baz=8.7,slow=6.8,SNR=6.1	10.47	171	Pn	Pn	09 13 41.3	+0.3
CTA	Charters Tower comp=Z,312nm,18.1s,baz=226,slow=38	19.62	242	LR	LR	09 23 30.4	
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=7.4	30.03	4	T	T	09 48 49.1	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=6.7	30.04	4	T	T	09 48 45.7	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=5.7	30.05	4	T	T	09 48 51.5	
WRA	Warramunga Arr 0.2nm,0.5s,baz=81,slow=9.1,SNR=3.9	30.33	250	P	P	09 17 23.2	+0.1
H11N1	WAKE ISLAND Hy baz=183	31.26	4	T	T	09 50 19.9	
H11N3	WAKE ISLAND Hy baz=183	31.27	4	T	T	09 50 20.3	
H11N2	WAKE ISLAND Hy baz=183	31.28	4	T	T	09 50 27.0	
ASAR	Alice Springs 0.5nm,0.9s,baz=74,slow=9.8,SNR=3.8	31.62	244	P	P	09 17 34.0	-0.4
ILAR	Eielson Array 0.3nm,0.8s,baz=234,slow=5.5,SNR=2.6	84.42	19	P	P	09 23 43.3	-0.2
MKAR	Makanchi Array 0.2nm,0.7s,baz=109,slow=4.5,SNR=2.8	93.29	317	P	P	09 24 26.5	+0.3

*IDC **07** 09:13:23.1±1.1, 29°.34N×142°.29E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/43, mbtmp3.5/5, ML2.5/2, Error ellipse: s-maj=41.6km s-min=20.2km az=83.0*
*ISCJB **07** 09:13:24.5±1.1, 29°.36N±0°.07×142°.3E±0°.3, h24km, mb3.5/4, Error ellipse: s-maj=36.2km s-min=8.9km az=173.2*
ISC 07 09:13:26.6±1.1**, 29°.32N**±0°.09×**142°.2E**±0°.3**, h24km, n6, σ0s.41**/8**, mb3.5**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima 1.3nm,0.3s,baz=86,slow=19,SNR=1.9	2.22	181	Pn	Pn	09 14 01.9	+0.1
JCJ	7.1nm,0.3s,baz=277,slow=18,SNR=2.6			Sn	Sn	09 14 27.9	-0.6
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=154,slow=9.0,SNR=3.9	7.96	336	Pn	Pn	09 15 20.4	-0.4
SONM	Songino Array 0.7nm,0.8s,baz=117,slow=7.4,SNR=5.1	33.18	314	P	P	09 20 01.8	+0.4
MKAR	Makanchi Array 0.1nm,0.5s,baz=95,slow=8.3,SNR=4.5	49.12	308	P	P	09 22 12.1	-0.1
WRA	Warramunga Arr 1.0nm,0.8s,baz=11,slow=8.1,SNR=7.6	49.56	190	P	P	09 22 16.2	+0.4
WRA	0.3nm,0.7s,baz=4.2,slow=3.5,SNR=2.7			PcP	PcP	09 23 37.5	+0.2
ILAR	Eielson Array 0.3nm,0.9s,baz=250,slow=6.3,SNR=2.9	55.75	29	P	P	09 23 01.0	-0.1

*IDC **07** 09:20:49.1±1.3, 10°.98S×165°.46E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/35, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=48.1km s-min=22.2km az=129.0*
*ISCJB **07** 09:20:51.8±0.9, 11°.2S±0°.1×165°.5E±0°.2, h30km, mb3.6/6, Error ellipse: s-maj=24.5km s-min=16.5km az=21.7*
ISC 07 09:20:53.6±1.0**, 11°.1S**±0°.1×**165°.5E**±0°.2**, h30km, n14, σ0s.75**/8**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac 1.2nm,0.3s,baz=302,slow=9.5,SNR=10	10.98	175	Pn	Pn	09 23 28.6	-0.2
CTA	Charters Tower 3.8nm,0.9s,baz=81,slow=16,SNR=2.5	20.57	242	P	P	09 25 29.2	-1.0
H11S2	WAKE ISLAND Hy baz=182	29.39	2	T	T	09 57 41.8	
H11S3	WAKE ISLAND Hy baz=182	29.40	2	T	T	09 57 46.1	
H11S1	WAKE ISLAND Hy baz=182	29.41	2	T	T	09 57 47.7	
STKA	Stephens Creek 1.4nm,0.7s,baz=59,slow=11,SNR=3.5	30.26	223	P	P	09 27 03.2	+1.2
H11N1	WAKE ISLAND Hy baz=182	30.62	3	T	T	09 59 14.7	
H11N3	WAKE ISLAND Hy baz=182	30.62	3	T	T	09 59 12.5	
H11N2	WAKE ISLAND Hy baz=182	30.64	3	T	T	09 59 18.7	
WRA	Warramunga Arr 1.1nm,0.8s,baz=80,slow=9.0,SNR=8.7	31.25	250	P	P	09 27 10.8	0.0
ASAR	Alice Springs 0.3nm,0.5s,baz=64,slow=9.8,SNR=8.0	32.57	243	P	P	09 27 22.0	-0.5
ILAR	Eielson Array 0.3nm,0.7s,baz=236,slow=5.6,SNR=6.2	83.61	19	P	P	09 33 18.7	-0.1
MKAR	Makanchi Array 0.5nm,0.8s,baz=108,slow=4.7,SNR=4.6	93.37	317	P	P	09 34 06.3	+0.4
YKA	Yellowknife Ar 0.1nm,0.8s,baz=259,slow=6.2,SNR=2.6	95.10	27	P	P	09 34 13.2	-0.3

*ISCJB **07** 09:21:24.0±0.4, 24°.43N±0°.02×122°.01E±0°.02, h5km±3km, Error ellipse: s-maj=3.4km s-min=2.4km az=142.2*
*JMA **07** 09:21:24.7±0.1, 24°.43N×121°.96E, h14km, M2.6*
*TAP **07** 09:21:24.5, 24°.45N×121°.96E, h13km, ML3.0, B*
ISC 07 09:21:24.1±0.9**, 24°.43N**±0°.02×**121°.99E**±0°.02**, h14km**±6km**, n64, σ0s.60**/92**, 6C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1 baz=51	0.17	47	⇓P	Pg	09 21 29.0	+0.8
EOS1	baz=51			S	Sb	09 21 32.8	+0.4
TWC	Suao baz=336	0.22	323	⇑*i*P	Pg	09 21 28.9	0.0
TWC	baz=336			*i* S	Sg	09 21 31.5	-0.7
ENA	Nanau baz=269	0.23	269	P	Pg	09 21 29.1	0.0
ENA	baz=269			S	Sg	09 21 32.1	-0.4
ILA	Ilan baz=318	0.40	326	*e*P	Pb	09 21 32.9	-0.1
TWE	Neicheng baz=320	0.41	314	⇑*i*P	Pg	09 21 32.5	+0.1
TWE	baz=320			S	Sg	09 21 37.3	-0.7
ENTT	Nioudou baz=297	0.44	298	⇑*i*P	Pg	09 21 33.1	+0.2
ENTT	baz=297			*e*S	Sg	09 21 38.5	-0.3
NTC	Toucheng baz=352	0.44	341	*e*P	Pg	09 21 33.1	+0.1
NACB	Ninganchiao baz=231	0.45	234	⇓P	Pg	09 21 33.1	+0.1
NACB	baz=231			S	Sg	09 21 39.0	0.0
NDT	Datong Townshi baz=290	0.47	291	P	Pg	09 21 33.7	+0.3
NDT	baz=290			S	Sg	09 21 39.4	-0.3
TWD	Chiawan baz=227	0.50	226	P	Pg	09 21 34.1	0.0
TWD	baz=227			*e*S	Sg	09 21 41.1	+0.2
ETLH	Xiulin Townshi baz=241	0.52	244	*e*P	Pg	09 21 34.5	+0.1
ETLH	baz=241			*e*S	Sb	09 21 42.0	-0.5
NNSB	Datong baz=268	0.55	270	⇓P	Pg	09 21 35.2	+0.1
NNSB	baz=268			S	Sg	09 21 42.0	-0.5
TIPB	Shuangxi baz=353	0.56	344	P	Pg	09 21 35.4	+0.3
TIPB	baz=353			*e*S	Sg	09 21 42.6	+0.1
NWLT	Wulai baz=300	0.56	308	*e*P	Pb	09 21 35.5	-0.3
NWLT	baz=300			*e*S	Sg	09 21 42.5	-0.2
NNS	Nan Shan baz=269	0.56	271	*e*P	Pg	09 21 35.2	-0.1
NNS	baz=269			S	Sg	09 21 42.3	-0.5
TWB1	Santiao Chiao baz=354	0.57	360	*e*P	Pb	09 21 36.3	+0.3
TWB1	baz=354			*e*S	Sg	09 21 42.8	-0.2
YHNB	Yeheng baz=297	0.61	293	⇑P	Pb	09 21 36.4	-0.2
YHNB	baz=297			*e*S	Sg	09 21 43.3	-0.9
NSK	Sanguang baz=297	0.62	293	*e*P	Pg	09 21 36.6	+0.2
NSK	baz=297			*e*S	Sg	09 21 44.0	-0.7
TWA	Mucha baz=327	0.66	326	*e*P	Pg	09 21 37.1	+0.1
NWF	Wu-fen Shan baz=333	0.66	343	⇑P	Pb	09 21 38.1	+0.6
WFSB	Wu-fen Shan baz=345	0.66	343	⇑P	Pb	09 21 38.0	+0.5
NHDH	Xindian Distri baz=315	0.68	321	*e*P	Pb	09 21 38.2	+0.4
TATO	Taipei baz=313	0.71	320	P	Pb	09 21 38.7	+0.4
WHF	Hehuan Shan baz=255	0.72	247	⇓*i*P	Pg	09 21 38.3	0.0
WHF	baz=255			*e*S	Sb	09 21 48.2	-0.5
TWT	Tachien baz=249	0.77	257	*e*P	Pb	09 21 39.6	+0.2
TDCB	Techi baz=255	0.78	257	P	Pb	09 21 39.7	+0.1
TDCB	baz=255			S	Sg	09 21 49.2	-0.5
ESL	Shilin baz=225	0.80	220	*e*P	Pg	09 21 39.1	-0.5
YM01	YM01 baz=342	0.81	332	P	Pn	09 21 40.8	-0.3
YM11	YM11 baz=333	0.82	333	P	Pn	09 21 41.2	-0.2
YM05	YM05 baz=342	0.82	332	*e*P	Pn	09 21 41.2	-0.2
YM04	YM04 baz=331	0.83	330	*e*P	Pb	09 21 40.9	+0.6
CHGB	Renai baz=251	0.83	244	P	Pg	09 21 40.2	-0.1
CHGB	baz=251			S	Sg	09 21 51.2	-0.1
YM08	YM08 baz=335	0.83	334	*e*P	Pb	09 21 40.8	+0.3
TWS1	Kuangyinshan baz=322	0.84	322	*e*P	Pn	09 21 41.6	-0.1
JYNG	Yonagunijimaku	0.87	89	P	Pg	09 21 41.8	+0.8
JYNG				*e*S	Sg	09 21 52.6	+0.2
OWD	Renai baz=231	0.88	238	*e*P	Pg	09 21 41.2	-0.1
NCU	National Centr baz=296	0.91	306	*e*P	Pn	09 21 43.3	+0.8
NCUH	Zhongli baz=295	0.91	306	*e*P	Pn	09 21 43.2	+0.7
TWY	Chenhua baz=337	0.91	337	*e*P	Pn	09 21 42.4	-0.2
TWY	baz=337			*e*S	Sn	09 21 55.0	-0.5
LIOB	Emei baz=283	0.91	284	*e*P	Pb	09 21 41.9	+0.1
EGFH	Guangfu baz=226	0.92	214	*e*P	Pg	09 21 42.5	+0.5
YOJ	Yonaguni jima baz=89	0.93	88	P	Pb	09 21 42.0	0.0
WHP	Taichung City baz=260	0.97	261	*e*P	Pn	09 21 43.5	+0.1
WHP	baz=260			S	Sb	09 21 55.5	+0.1
SBCB	Hsinchu baz=284	0.98	292	*e*P	Pn	09 21 45.3	+1.8
VWDT	VWDT baz=234	1.03	229	*e*P	Pg	09 21 44.2	+0.1
HGSD	Ruisui baz=209	1.07	209	*e*P	Pn	09 21 45.6	+0.8
NMLH	Miaoli baz=275	1.10	276	*e*P	Pg	09 21 47.2	+1.9
TWQ1	Liyutan baz=265	1.11	266	*e*P	Pg	09 21 47.5	+1.8
NSY	Sanyi baz=268	1.12	269	*e*P	Pg	09 21 46.6	+0.8
SMLT	Sun Moon Lake baz=240	1.14	241	*e*P	Pg	09 21 46.3	+0.2
SSLB	Suanglung baz=242	1.15	236	P	Pg	09 21 46.3	0.0
SSLB	baz=242			*e*S	Sg	09 22 00.9	-0.3
TYC	Yuchr baz=242	1.16	243	*e*P	Pn	09 21 46.4	+0.4
YULB	Yu-li baz=212	1.22	212	*e*P	Pn	09 21 47.2	+0.4
TWF1	Yuli baz=226	1.25	211	*e*P	Pg	09 21 48.3	+0.1
WHYT	Xinyi Township baz=234	1.27	235	*e*P	Pg	09 21 49.0	+0.3
CHN5	Tsauling baz=238	1.46	236	*e*P	Pg	09 21 52.9	+0.6
CHN5	baz=238			*e*S	Sg	09 22 13.2	+2.0
IRIF	Iriomote-Funau	1.59	93	P	Pn	09 21 50.7	-1.2
IRIF				S	Sn	09 22 11.3	-0.9
CHN4	Tsaushan baz=231	1.67	230	*e*P	Pg	09 21 57.0	+0.7
TWK	Hsinying baz=232	1.80	230	*e*P	Pg	09 21 58.3	-0.5
CHN1	Nanshi baz=230	1.83	227	*e*P	Pg	09 21 58.8	-0.4
JKRS	Kuro-shima	1.85	96	P	Pn	09 21 56.1	+0.6
JKRS				S	Sn	09 22 18.4	-0.3
JIJ	Ishigaki jima	1.96	92	P	Pn	09 21 57.6	+0.6
JIJ				S	Sn	09 22 20.3	-1.2
JISG	Ishigakijimahi	2.12	85	P	Pn	09 21 58.8	-0.4
JISG				*e*S	Sn	09 22 24.4	-0.9
XPSS	Dashiqiu baz=325	2.97	327	*e*P	Pn	09 22 10.8	0.0

*NNC **07** 09:27:24.0±0.4, 44°.21N×78°.34E, h0km, mb2.0, mpv2.6, Error ellipse: s-maj=3.2km s-min=2.3km az=10.0*
*SOME **07** 09:27:25.5, 44°.17N×78°.33E, h5km*
ISC 07 09:27:25.5±1.0**, 44°.23N**±0°.03×**78°.33E**±0°.02**, h11km**±7km**, n18, σ1s.69**/35**, 2C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNBS	Baschi 19nm,0.1s	0.16	161	P	Pg	09 27 29.2	0.0
MNBS	99nm,0.1s			S	Sg	09 27 31.8	+0.1
MNBS	Baschi 19nm,0.1s	0.16	161	*e*P	Pg	09 27 29.1	0.0
MNBS	99nm,0.1s			*e*S	Sg	09 27 31.8	+0.1
ARXS	Arharly 12nm,0.1s	0.36	268	P	Pg	09 27 32.8	0.0
ARXS	21nm,0.1s			S	Sg	09 27 38.1	+0.6
ARXS	Arharly 12nm,0.1s	0.36	268	*e*P	Pg	09 27 32.8	0.0
ARXS	21nm,0.1s			*e*S	Sg	09 27 38.1	+0.6
CHKK	Chushkaly 0.8nm,0.1s	1.04	249	*e*P	Pg	09 27 43.8	-1.7
CHKK	3.1nm,0.4s			*e*S	Sg	09 27 56.9	-2.1
DJR	Jarkent 1.2nm,0.2s	1.05	84	P	Pg	09 27 44.7	-1.2
DJR	0.9nm,0.2s			S	Sg	09 27 58.4	-1.1
DJR	Jarkent 0.5nm,0.1s	1.05	84	*e*P	Pg	09 27 44.7	-1.2
DJR	0.6nm,0.1s			*e*S	Sg	09 27 58.4	-1.1
SATY	Saty 5.2nm,0.1s	1.17	177	P	Pg	09 27 46.6	-1.4
SATY	5.8nm,0.1s			S	Sb	09 28 02.3	-0.8
SATY	Saty 5.0nm,0.2s	1.17	177	*e*P	Pg	09 27 46.5	-1.6
SATY	5.0nm,0.1s			*e*S	Sb	09 28 01.6	-1.5
UZB	Uzynbulak 1.3nm,0.2s	1.19	155	*e*P	Pg	09 27 47.0	-1.5
UZB	2.8nm,0.1s			*e*S	Sg	09 28 02.3	-1.7
PDGK	Podgornoye 0.4nm,0.1s	1.23	137	P	Pg	09 27 47.6	-1.7
PDGK	2.2nm,0.2s			S	Sg	09 28 03.4	-1.8
PDGK	Podgornoye 0.2nm,0.3s	1.23	137	⇑P	Pg	09 27 47.3	-1.9
PDGK	0.3nm,0.4s			⇓S	Sg	09 28 03.3	-1.9
KAPS	Kapalarasan 0.8nm,0.3s	1.28	34	P	Pn	09 27 49.0	-0.6
KAPS	4.9nm,0.2s			S	Sg	09 28 05.6	-1.3
KTBS	Karatobe 1.6nm,0.2s	1.30	247	P	Pg	09 27 48.9	-1.6
KTBS	4.7nm,0.2s			S	Sg	09 28 05.8	-1.4
KTBS	Karatobe 1.6nm,0.2s	1.30	247	*e*P	Pg	09 27 48.9	-1.6
KTBS	4.7nm,0.2s			*e*S	Sg	09 28 05.8	-1.4
SHLS	Shalkode 3.4nm,0.3s	1.35	142	*e*P	Pb	09 27 53.7	+2.8
SHLS	9.8nm,0.4s			*e*S	Sn	09 28 13.9	+5.3
TNSS	Tian-Shan 1.4nm,0.4s	1.56	221	*e*P	Pb	09 27 54.1	-0.5
TNSS	3.6nm,0.3s			*e*S	Sg	09 28 14.6	-1.1
TKM2	Tokmak 2 0.9nm,0.8s	2.38	238	⇑Pg	Pn	09 28 05.5	+0.8
TKM2	1.0nm,0.7s			⇓Lg	Lg	09 28 38.4	

IDC 07 09:28:39.3±8.4**, 10°.34S**×**166°.04E, h0^{km}, mb3.9**/5**, mb1 4.1**/6**, mb1mx3.7**/41**, mbtmp4.0**/6**, ML3.5**/1**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx3.0**/38**, Error ellipse: s-maj=144.8km s-min=43.7km az=59.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	11.68	178	Pn	Pn	09 31 25.7	-1.6
	0.3nm,0.3s,baz=315,slow=20,SNR=2.0						
CTA	**Charters Tower**	21.39	241	P	P	09 33 27.9	-0.9
	3.9nm,0.9s,baz=76,slow=8.3,SNR=2.8						
H11S2	**WAKE ISLAND Hy**	28.65	1	T	T	10 04 01.4	
	baz=181,slow=76,SNR=10.0						
H11S3	**WAKE ISLAND Hy**	28.65	1	T	T	10 04 01.7	
	baz=181,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	28.67	1	T	T	10 04 02.7	
	baz=181,slow=76,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	29.87	2	T	T	10 05 32.9	
	baz=182,slow=76,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	29.88	2	T	T	10 05 33.3	
	baz=182,slow=76,SNR=8.5						
H11N2	**WAKE ISLAND Hy**	29.89	2	T	T	10 05 34.5	
	baz=182,slow=76,SNR=5.9						
STKA	**Stephens Creek**	31.16	223	P	P	09 35 00.9	+0.9
	1.7nm,0.7s,baz=47,slow=7.4,SNR=3.6						
WRA	**Warramunga Arr**	32.01	249	P	P	09 35 08.0	+0.3
	1.0nm,0.6s,baz=79,slow=9.2,SNR=11						
WRA				LR	LR	09 47 40.2	
	comp=Z,101nm,18.2s,baz=55,slow=36						
ASAR	**Alice Springs**	33.38	242	P	P	09 35 19.4	-0.2
	0.6nm,0.6s,baz=63,slow=10,SNR=10						
FITZ	**Fitzroy Crossi**	39.85	254	P	P	09 36 15.4	+0.5
	1.9nm,0.6s,baz=83,slow=8.6,SNR=6.8						
BATI	**Baumata**	41.68	266	P	P	09 36 29.5	-0.6
	29nm,0.5s,baz=106,slow=7.4,SNR=3.8						

*ISCJB **07** 09:36:52.4±0.6, 6°.56S±0°.03×74°.29W±0°.04, h159^{km}±6^{km}, mb4.5/144, Error ellipse: s-maj=7.0km s-min=4.5km az=159.2*

*IDC **07** 09:36:53.8±0.4, 6°.73S×74°.41W, h161^{km}±3^{km}, mb4.0/19, mb1 4.1/26, mb1mx4.1/37, mbtmp4.5/26, MS3.4/3, Ms1 3.4/3, ms1mx3.2/28, Error ellipse: s-maj=13.6km s-min=8.8km az=44.0*

*NEIC **07** 09:36:54.3±0.1, 6°.64S×74°.30W, mb4.5/138, Error ellipse: s-maj=5.6km s-min=3.0km az=63.0*

ISC 07 09:36:53.8±0.3**, 6°.71S**±0°.04×**74°.42W**±0°.05**, h158^{km}**±2^{km}**, h158^{km}:pP-P, n592, σ1^{s}13**/666**, mb4.5**/145**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	3.96	264	P	Pn	09 37 52.6	-1.6
ATAH				S	Sn	09 38 37.7	-3.4
	92nm,0.3s,baz=256,slow=21,SNR=16						
ATAH				LR	LR	09 39 32.0	
	comp=Z,242nm,18.6s,slow=40						
NNA	**Nana**	5.76	204	*e*Pn	Pn	09 38 18.3	+0.8
NNA				*e*Pn	Pn	09 38 18.4	+0.9
NNA				*e*Sn	Sn	09 39 18.8	-4.2
NNA				*e*Sn	Sn	09 39 19.8	-3.1
NNA	**Nana**	5.76	204	P	Pn	09 38 18.3	+0.8
	8.1nm,0.3s,baz=38,slow=3.2,SNR=13						
NNA				S	Sn	09 39 18.8	-4.2
	45nm,0.3s,baz=206,slow=12,SNR=6.8						
PTLC	**Puerto Leguiza**	6.85	357	*e*P	Pn	09 38 24.8	-7.1
PTLC	**Puerto Leguiza**	6.85	357	*e*P	Pn	09 38 24.8	-7.1
OTAV	**Otavalo**	7.99	330	*e*Pn	Pn	09 38 46.3	-1.2
OTAV	**Otavalo**	7.99	330	*e*P	Pn	09 38 47.6	0.0
OTAV	**Otavalo**	7.99	330	*e*P	Pn	09 38 47.6	0.0
CMBC	**Cumbal**	8.33	336	*e*P	Pn	09 38 51.4	-0.6
CMBC	**Cumbal**	8.33	336	*e*P	Pn	09 38 51.4	-0.6
GCUF	**Volcan Galeras**	8.41	340	*e*P	Pn	09 38 52.1	-1.0
GCUF	**Volcan Galeras**	8.41	340	*e*P	Pn	09 38 52.1	-1.0
SOTA	**Rioblanco**	9.06	346	*e*P	Pn	09 39 00.8	-0.9
SOTA	**Rioblanco**	9.06	346	*e*P	Pn	09 39 00.8	-0.9
PCON	**Cinco Dias**	9.20	348	*e*P	Pn	09 38 58.5	-5.1
PCON	**Cinco Dias**	9.20	348	*e*P	Pn	09 38 58.5	-5.1
VILC	**Villavicencio,**	10.78	4	*e*P	Pn	09 39 25.4	+1.3
VILC	**Villavicencio,**	10.78	4	*e*P	Pn	09 39 25.4	+1.3
YOTC	**Yotoco, Valle**	10.80	350	*e*P	Pn	09 39 26.2	+1.8
YOTC	**Yotoco, Valle**	10.80	350	*e*P	Pn	09 39 26.2	+1.8
LPAZ	**La Paz**	11.34	148	*e*Pn	Pn	09 39 30.4	-1.5
ROSC	**El Rosal**	11.48	1	P	Pn	09 39 36.4	+2.9
	0.7nm,0.3s,baz=307,slow=20,SNR=4.2						
ROSC				S	S	09 42 02.5	+6.4
	0.6nm,0.3s,baz=67,slow=23,SNR=1.3						
MNMC	**Minye Minye**	13.21	160	*e*Pn	Pn	09 39 55.0	-0.7
MNMC				*e*Sn	S	09 42 30.1	-2.9
PB11	**IPOC Station P**	13.77	161	*e*Pn	Pn	09 40 01.5	-1.3
PB11				*e*S	S	09 42 46.9	+2.4
PB01	**IPOC Station P**	15.03	162	*e*Pn	Pn	09 40 18.4	0.0
	7.5nm,0.9s						
PB01				*e*Sn	Sn	09 43 07.1	+1.5
PTGA	**Pitinga**	15.60	68	*e*Pn	Pn	09 40 24.4	-1.0
	18nm,0.4s						
PTGA				S	Sn	09 43 15.4	-3.9
PTGA	**Pitinga**	15.60	68	P	Pn	09 40 24.4	-1.0
	5.4nm,0.3s,baz=259,slow=15,SNR=23						
PTGA				S	Sn	09 43 15.4	-3.9
	0.6nm,0.3s,baz=340,slow=22,SNR=1.7						
SDV	**Santo Domingo**	15.95	14	*e*Pn	Pn	09 40 28.3	-1.6
	16nm,1.0s						
SDV				*e*S	S	09 43 24.6	-3.0
SDV	**Santo Domingo**	15.95	14	P	Pn	09 40 29.9	0.0
	2.5nm,0.3s,baz=169,slow=5.6,SNR=15						
SDV				S	S	09 43 24.6	-3.0
	0.4nm,0.3s,baz=100,slow=8.6,SNR=3.2						
SIV	**San Ignacio**	16.00	126	P	Pn	09 40 30.3	0.0
	1.5nm,0.3s,baz=312,slow=12,SNR=34						
SIV				S	Sn	09 43 32.7	+3.7
	0.5nm,0.3s,baz=264,slow=16,SNR=2.2						
LVC	**Limon Verde**	16.68	162	*e*P	P	09 40 38.6	+0.1
LVC				*e*P	Pn	09 40 40.2	+1.4
LVC				*e*S	Sn	09 43 46.6	+1.1
LVC	**Limon Verde**	16.68	162	P	P	09 40 38.6	+0.1
	0.9nm,0.3s,baz=0.8,slow=12,SNR=16						
LVC				S	Sn	09 43 46.6	+1.1
	0.2nm,0.3s,baz=130,slow=19,SNR=1.9						
PAYG	**Puerto Ayora**	16.92	290	*e*P	Pn	09 40 42.0	+0.5
	18nm,0.8s						
PB10	**IPOC Station P**	17.11	168	*e*P	Pn	09 40 46.0	+2.3
	13nm,1.0s						
GO02	**Mina Guanaco**	18.92	166	*e*P	Pn	09 41 05.1	-0.2
	12nm,0.4s						
JTS	**JuntasAbangare**	19.88	328	P	P	09 41 13.5	+0.4
	0.1nm,0.3s,baz=135,slow=19,SNR=2.6						
BOAB	**BOACO BROADBAN**	22.07	330	*e*P	P	09 41 36.3	0.0
	11nm,0.9s						
LCO	**Las Campanas**	22.46	171	*e*P	P	09 41 40.0	-0.1
	5.1nm,0.8s						
GRGR	**Grenville**	22.62	34	*e*P	P	09 41 40.8	-0.8
	91nm,1.0s						
GO04	**Tololo Observa**	23.58	172	*e*P	P	09 41 52.8	+2.3
	5.8nm,0.9s						
MDP	**Montagnes des**	24.71	62	P	P	09 42 01.2	+0.6
	17nm,0.8s,baz=241,slow=11,SNR=5.0						
MTDJ	**Mount Denham**	24.97	353	*e*P	P	09 42 04.0	+1.0
	30nm,1.1s						
BANI	**BANI**	25.27	9	*e*P	P	09 42 04.8	-0.9
CPUP	**Villa Florida**	25.42	142	P	P	09 42 06.5	-0.4
	4.9nm,0.6s,baz=325,slow=9.1,SNR=14						
CPUP				pP	pP	09 42 38.3	-1.5
	3.8nm,0.7s,baz=322,slow=10,SNR=4.5						
CPUP				PcP	PcP	09 45 34.3	-0.7
	0.5nm,0.4s,baz=310,slow=2.7,SNR=2.9						
SJG	**San Juan**	25.98	18	*e*P	P	09 42 11.2	-0.8
	36nm,0.5s						
SJG				*e*P	P	09 42 11.9	-0.1
SJG	**San Juan**	25.98	18	P	P	09 42 11.9	-0.1
	28nm,0.4s,baz=130,slow=8.2,SNR=6.9						
STVI	**Saint Thomas**	26.60	20	*e*P	P	09 42 16.5	-1.0
	30nm,0.5s						
APG	**El Apazote**	26.80	324	P	P	09 42 20.5	+0.8
	1.7nm,0.6s,baz=309,slow=12,SNR=3.7						
APG				pP	pP	09 42 52.2	-0.4
	3.1nm,0.8s,baz=59,slow=2.0,SNR=3.2						
BDFB	**Brasilia**	27.36	111	P	P	09 42 23.9	-0.6
	1.3nm,0.4s,baz=253,slow=7.7,SNR=3.7						
CCIG	**Comitan**	28.80	323	*e*P	P	09 42 37.4	0.0
	4.7nm,0.7s						
SPB	**Sao Paulo**	30.89	126	*e*P	P	09 42 55.8	+0.2
	25nm,0.4s						
060A	**Indiantown**	34.04	351	P	P	09 43 24.1	+1.2
	baz=169						
058A	**Arcadia**	34.32	348	P	P	09 43 26.1	+0.7
	baz=167						
859A	**Kempfer Cattle**	35.13	350	P	P	09 43 32.9	+0.6
	baz=169						
656A	**Willston**	36.71	348	P	P	09 43 46.2	+0.4
	baz=166						
556A	**Lake Butler**	37.30	349	P	P	09 43 50.9	+0.2
	baz=167						
555A	**McAlpin**	37.53	348	P	P	09 43 52.8	+0.2
	baz=166						
553A	**Crawfordville**	37.93	346	P	P	09 43 56.8	+0.8
	baz=164						
455A	**Stateville**	38.14	348	P	P	09 43 57.9	+0.1
	baz=166						
RCBR	**Riachuelo**	38.30	91	PcP	PcP	09 46 09.9	-0.5
	76nm,0.7s,baz=129,slow=0.4,SNR=2.4						
357A	**Townsend**	38.52	350	P	P	09 44 00.9	+0.1
	baz=168						
452A	**Marianna**	38.74	345	P	P	09 44 03.1	+0.4
	baz=163						
TIGA	**Tifton**	38.94	347	P	P	09 44 04.3	-0.1
	baz=165						
256A	**Glennville**	39.13	350	P	P	09 44 06.0	0.0
	baz=168						
449A	**Pace**	39.22	342	P	P	09 44 06.8	+0.1
	baz=160						
351A	**Pinckard**	39.26	345	P	P	09 44 07.2	+0.1
	baz=162						
352A	**Blakely**	39.28	346	P	P	09 44 07.9	+0.6
	baz=163						
254A	**Abbeville**	39.36	348	P	P	09 44 07.9	0.0
	baz=166						
BRAL	**Brewton**	39.56	343	P	P	09 44 09.6	+0.1
	baz=160						
350A	**Dozier**	39.59	344	P	P	09 44 09.9	+0.1
	baz=161						
156A	**Sylvania**	39.72	351	P	P	09 44 11.4	+0.5
	baz=169						
252A	**Lumpkin**	39.73	346	P	P	09 44 11.5	+0.5
	baz=164						
349A	**Repton**	39.77	343	P	P	09 44 11.5	+0.2
	baz=160						
LNIG	**Linares**	39.77	323	*e*P	P	09 44 11.6	+0.1
	7.8nm,0.7s						
155A	**Kite**	39.86	349	P	P	09 44 12.4	+0.4
	baz=167						
154A	**Montrose**	39.97	349	*e*P	P	09 44 12.6	-0.4
	51nm,1.1s						
154A				*e*pP	pP	09 44 48.8	+1.4
154A	**Montrose**	39.97	349	P	P	09 44 13.0	0.0
	baz=166						
NHSC	**New Hope**	39.98	352	P	P	09 44 13.5	+0.6
	baz=171						
251A	**Midway**	39.99	345	P	P	09 44 12.7	-0.4
	baz=163,SNR=8.8						
250A	**Grady**	40.10	344	P	P	09 44 13.5	-0.5
	baz=161						
153A	**Fort Valley**	40.16	348	P	P	09 44 14.3	-0.1
	baz=165						
249A	**Camden**	40.34	343	P	P	09 44 15.9	-0.1
	baz=160,SNR=7.9						
152A	**Waverly Hall**	40.37	347	*e*P	P	09 44 16.1	-0.2
	15nm,0.8s						
152A				*e*pP	pP	09 44 52.0	+1.2
152A	**Waverly Hall**	40.37	347	P	P	09 44 15.9	-0.3
	baz=164,SNR=9.2						
151A	**Opelika**	40.38	346	P	P	09 44 15.8	-0.5
	baz=163,SNR=8.3						
Z54A	**Sparta**	40.53	349	P	P	09 44 17.3	-0.2
	baz=167						
150A	**Eclectic**	40.63	345	P	P	09 44 17.9	-0.4
	baz=162,SNR=6.2						
Z53A	**Monticello**	40.71	348	P	P	09 44 18.7	-0.3
	baz=166						
Z52A	**Williamson**	40.80	347	P	P	09 44 19.6	-0.2
	baz=165,SNR=11						
GOGA	**Godfrey**	40.82	348	*e*P	P	09 44 19.4	-0.5
	10nm,1.0s						
GOGA				*e*pP	pP	09 44 55.5	+1.0
GOGA	**Godfrey**	40.82	348	P	P	09 44 19.4	-0.5
	baz=166,SNR=5.0						
149A	**Jones**	40.83	344	P	P	09 44 19.4	-0.6
	baz=161,SNR=11						
Z51A	**Franklin**	41.10	346	P	P	09 44 21.7	-0.5
	baz=164						
Y54A	**Tignall**	41.11	350	P	P	09 44 22.2	-0.1
	baz=167						
Z50A	**Ashland**	41.22	345	*e*P	P	09 44 22.9	-0.4
	23nm,1.0s						
Z50A				*e*pP	pP	09 44 58.8	+0.9
Z50A	**Ashland**	41.22	345	P	P	09 44 22.8	-0.4
	baz=162,SNR=12						
Y53A	**Monroe**	41.27	348	P	P	09 44 23.2	-0.4
	baz=166,SNR=6.4						
LRAL	**Lakeview Retre**	41.30	344	*e*P	P	09 44 23.3	-0.5
	17nm,1.0s						
LRAL				*e*pP	pP	09 44 59.2	+0.7
LRAL	**Lakeview Retre**	41.30	344	P	P	09 44 23.1	-0.7
	baz=161,SNR=8.1						
Z49A	**Columbiana**	41.32	345	P	P	09 44 23.4	-0.6
	baz=162,SNR=5.8						
147A	**Livingston**	41.33	342	P	P	09 44 23.4	-0.6
	baz=159						
Y52A	**Lilburn**	41.38	348	P	P	09 44 24.0	-0.4
	baz=165						
Y51A	**Rockmart**	41.63	347	P	P	09 44 26.1	-0.5
	baz=164,SNR=11						
Y50A	**Piedmont**	41.78	346	P	P	09 44 27.6	-0.1
	baz=163						
X53A	**Estanollee**	41.84	349	P	P	09 44 27.8	-0.5
	baz=167						
Y49A	**Blount Mountai**	41.92	345	*e*P	P	09 44 27.9	-1.0
	7.9nm,0.5s						
Y49A	**Blount Mountai**	41.92	345	P	P	09 44 28.0	-0.8
	baz=162,SNR=5.7						
X52A	**Dahlonega**	42.06	348	P	P	09 44 29.5	-0.5
	baz=166,SNR=5.8						
KMSC	**Kings Mountain**	42.14	352	P	P	09 44 30.7	+0.1
	baz=170						
Y48A	**Jasper**	42.17	344	P	P	09 44 29.5	-1.4
	baz=161						
X51A	**Calhoun**	42.22	347	P	P	09 44 30.8	-0.5
	baz=164						
X50B	**Fort Payne**	42.30	346	P	P	09 44 31.2	-0.8
	baz=163,SNR=9.3						
833A	**Chaparral WMA,**	42.35	326	P	P	09 44 32.5	0.0
	baz=141						
W53A	**Cullowhee**	42.47	349	P	P	09 44 33.3	-0.1
	baz=167,SNR=6.8						
X49A	**Woodville**	42.52	345	P	P	09 44 32.8	-0.9
	baz=162						
W52A	**Murphy**	42.54	348	P	P	09 44 33.8	-0.1
	baz=166						
X48A	**Hartselle**	42.65	345	*e*P	P	09 44 34.1	-0.6
	4.7nm,0.7s						
X48A	**Hartselle**	42.65	345	P	P	09 44 33.8	-0.9
	baz=161						
W51A	**Cleveland**	42.77	347	P	P	09 44 35.6	-0.2
	baz=165,SNR=7.0						
V53A	**Saluda**	42.89	350	P	P	09 44 36.4	-0.3
	baz=168						
X47A	**Russelville**	42.93	344	P	P	09 44 35.6	-1.4
	baz=160						
W50A	**Signal Mountai**	42.93	347	*e*P	P	09 44 36.6	-0.5
	19nm,0.8s						
W50A				*e*pP	pP	09 45 13.1	+1.1
W50A	**Signal Mountai**	42.93	347	P	P	09 44 36.5	-0.6
	baz=164,SNR=9.5						
CPCT	**Cooper Cave**	43.00	348	*e*P	P	09 44 37.5	-0.2
	8.3nm,0.9s						
CPCT				*e*pP	pP	09 45 13.3	+0.8
W49A	**Belvidere**	43.08	346	P	P	09 44 37.2	-1.1
	baz=162						
SWET	**Sewanee**	43.09	346	*e*P	P	09 44 37.3	-1.1
	12nm,0.9s						
Y44A	**Strider, Charl**	43.13	341	P	P	09 44 37.3	-1.3
	baz=157						
X46A	**Booneville**	43.17	343	P	P	09 44 37.3	-1.7
	baz=159						
V52A	**Sevierville**	43.20	349	*e*P	P	09 44 38.9	-0.3
	13nm,1.1s						
V52A				*e*pP	pP	09 45 14.7	+0.6
V52A	**Sevierville**	43.20	349	P	P	09 44 38.4	-0.8
	baz=166						
W48A	**Pulaski**	43.27	345	P	P	09 44 38.9	-0.8
	baz=162,SNR=8.0						
V51A	**Loudon**	43.31	348	*e*P	P	09 44 39.8	-0.3
	10nm,0.9s						
V51A				*e*pP	pP	09 45 15.7	+0.7
V51A	**Loudon**	43.31	348	P	P	09 44 39.4	-0.6
	baz=165						
V50A	**Pikevile**	43.34	347	P	P	09 44 39.7	-0.7
	baz=164,SNR=7.5						
OXF	**Oxford**	43.38	342	P	P	09 44 40.0	-0.7
	baz=158						
435B	**Jarrell**	43.38	330	*e*P	P	09 44 40.3	-0.5
	16nm,0.9s						
435B	**Jarrell**	43.38	330	P	P	09 44 41.6	+0.8
	baz=145						
U53A	**Fall Branch**	43.53	350	P	P	09 44 41.7	-0.1
	baz=168						
W47A	**Westpoint**	43.55	344	P	P	09 44 40.7	-1.3
	baz=161						
Y42A	**Garnett, Star**	43.56	339	P	P	09 44 40.8	-1.2
	baz=154						
V49A	**McMinnville**	43.61	346	P	P	09 44 41.3	-1.2
	baz=163,SNR=6.3						
U52A	**Thorn Hill**	43.69	350	P	P	09 44 42.5	-0.6
	baz=167						
U51A	**La Follette**	43.80	349	P	P	09 44 43.2	-0.8
	baz=166						
V48A	**Smith Brothers**	43.81	345	*e*P	P	09 44 43.1	-0.9
	25nm,0.8s						
V48A				*e*pP	pP	09 45 19.5	+0.4
V48A	**Smith Brothers**	43.81	345	P	P	09 44 43.1	-0.9
	baz=162,SNR=16						
W45A	**Hickory Valley**	43.91	342	P	P	09 44 43.2	-1.7
	baz=158						
U50A	**Jamestown**	44.00	348	P	P	09 44 44.8	-0.8
	baz=165,SNR=7.3						
BLA	**Blacksburg**	44.05	353	P	P	09 44 45.1	-1.0
	baz=171						
T54A	**Tazewell**	44.06	352	P	P	09 44 45.9	-0.1
	baz=170						
V47A	**Nunnelly**	44.07	345	P	P	09 44 44.3	-1.9
	baz=161						
T53A	**Wise**	44.12	351	P	P	09 44 46.1	-0.5
	baz=168						
V46A	**Holladay**	44.21	344	P	P	09 44 45.6	-1.6
	baz=160						
U49A	**Red Boiling Sp**	44.30	347	P	P	09 44 46.7	-1.3
	baz=164						
WHTX	**Lake Whitney,**	44.32	332	P	P	09 44 48.7	+0.5
	baz=146						
T52A	**Hallie**	44.32	350	P	P	09 44 47.8	-0.4
	baz=168						
T51A	**Gray**	44.35	349	P	P	09 44 47.8	-0.6
	baz=166,SNR=8.7						
V45A	**Humboldt**	44.39	343	P	P	09 44 46.5	-2.1
	baz=159						
X41A	**Kaden, Bauxite**	44.41	339	P	P	09 44 47.8	-1.0
	baz=154						
WVT	**Waverly**	44.44	344	*e*P	P	09 44 46.9	-2.2
	5.2nm,0.8s						
WVT				*e*pP	pP	09 45 23.4	-0.7
WVT	**Waverly**	44.44	344	P	P	09 44 47.1	-2.0
	baz=161						
U48A	**Cassie Pea, Po**	44.47	346	P	P	09 44 48.0	-1.4
	baz=163						
R58B	**Mineral**	44.56	356	P	P	09 44 49.8	-0.2
	baz=175						
T50A	**Nancy**	44.58	348	P	P	09 44 49.1	-1.1
	baz=165						
U47A	**Clarksville**	44.59	345	P	P	09 44 48.6	-1.7
	baz=162						
S55A	**Lewisburg**	44.62	353	P	P	09 44 50.9	+0.4
	baz=171,SNR=12						
S53A	**Williamson**	44.75	351	P	P	09 44 51.0	-0.5
	baz=169						
T49A	**Edmonton**	44.81	347	*e*P	P	09 44 50.5	-1.5
	13nm,0.9s						
T49A				*e*pP	pP	09 45 27.2	+0.1
T49A	**Edmonton**	44.81	347	P	P	09 44 51.1	-1.0
	baz=164,SNR=7.5						
MIAR	**Mount Ida**	44.85	337	P	P	09 44 51.4	-0.9
	baz=152						
W41B	**Gary Mavity, V**	44.92	339	P	P	09 44 51.6	-1.3
	baz=154						
S51A	**Beattyville**	44.95	350	P	P	09 44 52.2	-0.9
	baz=167						
T48A	**Bowling Green**	45.01	346	P	P	09 44 52.1	-1.4
	baz=163						
R55A	**Marlinton**	45.08	354	P	P	09 44 54.7	+0.5
	baz=172						
R54A	**Victor**	45.08	353	P	P	09 44 54.2	+0.1
	baz=171,SNR=10						
S50A	**Richmond**	45.13	349	P	P	09 44 53.7	-0.8
	baz=166						
T46A	**Princeton**	45.31	345	P	P	09 44 55.0	-1.0
	baz=161						
R53A	**Hurricane**	45.36	352	P	P	09 44 56.0	-0.2
	baz=169						
S49A	**Springfield**	45.41	348	P	P	09 44 55.5	-1.2
	baz=165,SNR=7.1						
V41A	**Mountainview**	45.44	340	P	P	09 44 55.3	-1.8
	baz=155						
S48A	**Wiedeman Farm,**	45.46	347	P	P	09 44 55.4	-1.7
	baz=164						
W39A	**Magazine**	45.51	338	P	P	09 44 56.9	-0.6
	baz=152						
LTX	**Lajitas**	45.56	323	*e*P	P	09 44 58.8	+0.6
LTX				*e*pP	pP	09 45 34.3	+0.9
LTX				*e*PcP	PcP	09 46 34.6	+0.5
TX31	**Lajitas Ar. Si**	45.56	323	*e*P	P	09 44 58.6	+0.4
TX31				*e*P	P	09 44 58.8	+0.6
TXAR	**Lajitas Array**	45.56	323	P	P	09 44 58.8	+0.6
	2.3nm,0.5s,baz=149,slow=8.5,SNR=74						
TXAR				pP	pP	09 45 34.3	+0.9
	1.2nm,0.7s,baz=142,slow=7.5,SNR=4.4						
TXAR				PcP	PcP	09 46 34.6	+0.5
	0.8nm,0.6s,baz=144,slow=7.1,SNR=5.3						
S47A	**Hartford**	45.59	346	P	P	09 44 56.3	-1.7
	baz=162,SNR=9.1						
R51A	**Hillsboro**	45.59	350	P	P	09 44 57.4	-0.7
	baz=167						
R50A	**Paris**	45.70	349	P	P	09 44 57.9	-1.1
	baz=166						
Q55A	**Buckhannon**	45.78	354	P	P	09 44 59.9	+0.2
	baz=172						
PBMO	**Poplar Bluff**	45.79	342	*e*P	P	09 44 58.0	-1.6
	7.4nm,0.9s						
Q54A	**Coxs Mills**	45.85	353	P	P	09 45 00.1	0.0
	baz=171,SNR=9.0						
U41A	**Viola**	45.87	340	P	P	09 44 58.6	-1.7
	baz=155						
S46A	**Don Dixon Farm**	45.88	345	P	P	09 44 58.4	-1.9
	baz=161						
R49A	**Shelbyville**	45.88	348	P	P	09 44 59.2	-1.2
	baz=165						
ABTX	**Abilene, Hawle**	45.90	330	*e*P	P	09 45 01.2	+0.6
	21nm,1.1s						
ABTX	**Abilene, Hawle**	45.90	330	P	P	09 45 01.3	+0.6
	baz=144,SNR=5.1						
Q52A	**Bidwell**	46.02	351	P	P	09 45 01.0	-0.5
	baz=169						
T43A	**Greenville**	46.03	342	P	P	09 44 59.8	-1.7
	baz=158						
WCI	**Wyandotte Cave**	46.06	347	*e*P	P	09 45 00.2	-1.5
	16nm,1.1s						
WCI	**Wyandotte Cave**	46.06	347	P	P	09 45 00.2	-1.5
	baz=163						
S45A	**Carrier Mills**	46.09	344	P	P	09 45 00.3	-1.7
	baz=160						
R48A	**Northridge Ran**	46.13	348	P	P	09 45 01.1	-1.2
	baz=164						
R47A	**Wooly Knot Far**	46.17	347	P	P	09 45 00.6	-2.0
	baz=163						
Q50A	**Georgetown**	46.19	350	P	P	09 45 01.8	-0.9
	baz=167						
U40A	**Yellville**	46.20	339	P	P	09 45 02.0	-1.0
	baz=154,SNR=5.4						
T42A	**Van Buren**	46.23	341	*e*P	P	09 45 01.2	-1.9
	4.4nm,0.9s						
T42A				*e*pP	pP	09 45 37.9	-0.6
T42A	**Van Buren**	46.23	341	P	P	09 45 01.7	-1.4
	baz=157						
P55A	**Reedsville**	46.26	354	P	P	09 45 03.3	-0.1
	baz=172						
P53A	**Whipple**	46.42	353	*e*P	P	09 45 04.5	0.0
	38nm,0.6s						
P53A	**Whipple**	46.42	353	P	P	09 45 04.6	0.0
	baz=170,SNR=14						
P54A	**Burton**	46.42	354	P	P	09 45 04.7	+0.1
	baz=172,SNR=6.3						
T41A	**Mountain View**	46.45	341	P	P	09 45 03.8	-1.1

	baz=156						
Q49A	**Aurora** baz=166	**46.51**	**349**	P	**P**	**09 45 04.0**	**-1.3**
R45A	**Skylar, Fairfi** baz=161	**46.60**	**345**	P	**P**	**09 45 04.4**	**-1.6**
Q48A	**North Vernon** baz=164	**46.61**	**348**	P	**P**	**09 45 04.5**	**-1.5**
P51A	**Williamsport** baz=168	**46.65**	**351**	P	**P**	**09 45 05.2**	**-1.1**
P52A	**Corning** baz=169,SNR=5.8	**46.66**	**352**	P	**P**	**09 45 05.9**	**-0.6**
Q47A	**Bedord North L** baz=163,SNR=13	**46.76**	**347**	P	**P**	**09 45 06.0**	**-1.2**
R44A	**Waltonville** baz=160	**46.77**	**344**	P	**P**	**09 45 05.0**	**-2.2**
P50A	**Jamestown** baz=167	**46.90**	**350**	P	**P**	**09 45 07.4**	**-0.9**
FVM	**French Village** 5.8nm,0.6s	**46.90**	**343**	*e*P	**P**	**09 45 06.1**	**-2.2**
FVM				*e*pP	**pP**	**09 45 44.0**	**+0.2**
O55A	**Ligonier** baz=173	**46.90**	**355**	P	**P**	**09 45 06.8**	**-1.6**
TUL1	**Leonard** 4.6nm,0.8s	**46.92**	**336**	*e*P	**P**	**09 45 07.3**	**-1.2**
TUL1	**Leonard** baz=150	**46.92**	**336**	P	**P**	**09 45 07.8**	**-0.7**
O54A	**Avella** baz=172	**46.98**	**354**	P	**P**	**09 45 08.0**	**-1.0**
P49A	**Miami Univ. Ec** baz=166	**46.99**	**349**	P	**P**	**09 45 07.5**	**-1.5**
BLO	**Bloomington** 28nm,0.6s	**47.01**	**347**	*e*P	**P**	**09 45 07.9**	**-1.2**
R43A	**Red Bud** baz=159	**47.03**	**343**	P	**P**	**09 45 07.6**	**-1.7**
P48A	**Milroy** baz=165	**47.06**	**348**	P	**P**	**09 45 07.7**	**-1.8**
O52A	**Adamsville** 24nm,0.9s	**47.09**	**352**	*e*P	**P**	**09 45 09.7**	**-0.1**
O52A				*e*pP	**pP**	**09 45 45.8**	**+0.5**
O52A	**Adamsville** baz=170,SNR=8.4	**47.09**	**352**	P	**P**	**09 45 09.4**	**-0.4**
O53A	**New Philadelph** baz=171,SNR=5.8	**47.15**	**353**	P	**P**	**09 45 10.0**	**-0.2**
WMOK	**Wichita Mounta** baz=146	**47.21**	**332**	P	**P**	**09 45 10.8**	**-0.1**
SSPA	**Standing Stone** baz=175	**47.22**	**356**	P	**P**	**09 45 11.0**	**+0.2**
O51A	**Pataskala** baz=169	**47.23**	**351**	P	**P**	**09 45 10.2**	**-0.7**
P47A	**Martinsville** baz=164,SNR=9.9	**47.26**	**348**	P	**P**	**09 45 09.6**	**-1.4**
Q44A	**Meyer Farm, Va** baz=160	**47.36**	**345**	P	**P**	**09 45 10.1**	**-1.8**
ACSO	**Alum Creek Sta** 14nm,0.8s	**47.37**	**351**	*e*P	**P**	**09 45 10.6**	**-1.4**
ACSO	**Alum Creek Sta** baz=168	**47.37**	**351**	P	**P**	**09 45 11.2**	**-0.8**
O50A	**Cable** baz=167	**47.39**	**350**	P	**P**	**09 45 11.3**	**-0.8**
N55A	**Marion Center** baz=174	**47.45**	**355**	P	**P**	**09 45 12.9**	**+0.4**
R41A	**Rosebud** baz=157	**47.48**	**342**	P	**P**	**09 45 12.1**	**-0.8**
Q43A	**New Douglas** baz=159	**47.58**	**344**	P	**P**	**09 45 12.5**	**-1.1**
P46A	**Rosedale** baz=163	**47.59**	**347**	P	**P**	**09 45 11.9**	**-1.7**
P45A	**Graceland, Par** baz=162	**47.63**	**346**	P	**P**	**09 45 13.3**	**-0.7**
N53A	**Lisbon** baz=171,SNR=7.3	**47.65**	**353**	P	**P**	**09 45 13.9**	**-0.2**
N54A	**Moraine State** 18nm,0.8s	**47.72**	**354**	*e*P	**P**	**09 45 14.4**	**-0.2**
N54A	**Moraine State** baz=172,SNR=5.9	**47.72**	**354**	P	**P**	**09 45 14.9**	**+0.3**
N52A	**McGinn's Farm,** baz=170	**47.76**	**353**	P	**P**	**09 45 14.1**	**-0.9**
O48A	**Farmland** baz=165,SNR=6.3	**47.77**	**349**	P	**P**	**09 45 13.4**	**-1.6**
P44A	**Sand Creek, Wi** baz=161	**47.79**	**345**	P	**P**	**09 45 13.5**	**-1.7**
Q42A	**Golden Eagle** baz=158	**47.79**	**343**	P	**P**	**09 45 13.7**	**-1.6**
CLNB	**Carlsbad**	**47.85**	**326**	*e*P	**P**	**09 45 16.3**	**+0.4**
N50A	**Nevada** baz=168	**47.93**	**351**	P	**P**	**09 45 15.2**	**-1.0**
O47A	**Sheridan** baz=164,SNR=8.1	**47.96**	**348**	P	**P**	**09 45 14.9**	**-1.5**
Q41A	**Truxton** baz=157	**48.04**	**342**	P	**P**	**09 45 15.6**	**-1.5**
M55A	**Ridgway** baz=174	**48.11**	**356**	P	**P**	**09 45 17.8**	**+0.1**
P43A	**Skaggs, Pawnee** baz=160	**48.19**	**344**	P	**P**	**09 45 17.0**	**-1.3**
M54A	**Oil Creek Stat** 16nm,0.9s	**48.23**	**355**	*e*P	**P**	**09 45 17.6**	**-0.9**
M54A	**Oil Creek Stat** baz=173	**48.23**	**355**	P	**P**	**09 45 18.5**	**0.0**
N49A	**Columbus Grove** 12nm,0.9s	**48.24**	**350**	*e*P	**P**	**09 45 17.2**	**-1.4**
N49A	**Columbus Grove** baz=167	**48.24**	**350**	P	**P**	**09 45 17.5**	**-1.1**
M53A	**WI Miller and** baz=172	**48.26**	**354**	P	**P**	**09 45 18.4**	**-0.4**
SFIN	**Lafayette** 16nm,0.6s	**48.29**	**347**	*e*P	**P**	**09 45 17.5**	**-1.5**
SFIN	**Lafayette** baz=163,SNR=7.2	**48.29**	**347**	P	**P**	**09 45 17.0**	**-2.0**
MNTX	**Cornudas Mount** 5.3nm,1.1s	**48.30**	**324**	*e*P	**P**	**09 45 19.1**	**-0.2**
MNTX	**Cornudas Mount** baz=137,SNR=6.3	**48.30**	**324**	P	**P**	**09 45 19.0**	**-0.2**
O45A	**Potomac** baz=162	**48.31**	**346**	P	**P**	**09 45 17.3**	**-1.9**
N48A	**Decatur** baz=166	**48.33**	**349**	P	**P**	**09 45 17.7**	**-1.6**
M51A	**Elyria** baz=170	**48.34**	**352**	P	**P**	**09 45 18.2**	**-1.1**
P42A	**Winchester** 6.9nm,0.9s	**48.36**	**344**	*e*P	**P**	**09 45 18.2**	**-1.4**
P42A	**Winchester** baz=158	**48.36**	**344**	P	**P**	**09 45 18.0**	**-1.6**
O44A	**Mansfield** baz=161	**48.40**	**346**	P	**P**	**09 45 18.1**	**-1.7**
ALLY	**Alegheny Colle** 24nm,0.6s	**48.41**	**354**	*e*P	**P**	**09 45 20.2**	**+0.2**
M52A	**Chesterland** baz=171	**48.44**	**353**	P	**P**	**09 45 19.3**	**-0.9**
N47A	**Urbana** baz=165,SNR=6.7	**48.48**	**349**	P	**P**	**09 45 18.8**	**-1.7**
M50A	**Fremont** 25nm,1.0s	**48.53**	**351**	*e*P	**P**	**09 45 20.2**	**-0.6**
M50A				*e*pP	**pP**	**09 45 57.0**	**+0.5**
M50A	**Fremont** baz=168	**48.53**	**351**	P	**P**	**09 45 19.7**	**-1.2**
MSTX	**Muleshoe** 10.0nm,0.8s	**48.56**	**328**	*e*P	**P**	**09 45 21.4**	**0.0**
MSTX	**Muleshoe** baz=141	**48.56**	**328**	P	**P**	**09 45 21.3**	**0.0**
BINY	**Binghamton** baz=178	**48.70**	**358**	P	**P**	**09 45 21.9**	**-0.2**
N46A	**Monticello** baz=164	**48.71**	**348**	P	**P**	**09 45 20.5**	**-1.7**
L53A	**Girard** baz=172,SNR=13	**48.73**	**354**	P	**P**	**09 45 22.1**	**-0.2**
O43A	**Sugar Creek Fa** baz=160	**48.74**	**345**	P	**P**	**09 45 20.7**	**-1.8**
M49A	**Liberty Center** baz=167	**48.75**	**350**	P	**P**	**09 45 21.5**	**-1.0**
L55A	**Hinsdale** baz=175	**48.80**	**356**	P	**P**	**09 45 23.0**	**+0.1**
N45A	**Kentland** baz=162	**48.83**	**347**	P	**P**	**09 45 21.0**	**-2.1**
O42A	**Bath** baz=159	**48.86**	**344**	P	**P**	**09 45 21.6**	**-1.8**
ERPA	**Erie** 30nm,0.9s	**48.86**	**355**	*e*P	**P**	**09 45 22.5**	**-0.9**
ERPA	**Erie** baz=172,SNR=5.6	**48.86**	**355**	P	**P**	**09 45 23.0**	**-0.3**
M47A	**Cromwell** baz=165	**48.93**	**349**	P	**P**	**09 45 22.4**	**-1.5**
N44A	**Piper City** baz=162	**48.93**	**346**	P	**P**	**09 45 21.9**	**-2.0**
HDIL	**Hopedale** 36nm,0.7s	**48.99**	**345**	*e*P	**P**	**09 45 22.6**	**-1.8**
HDIL				*e*pP	**pP**	**09 45 59.4**	**-0.7**
HDIL	**Hopedale** baz=160,SNR=6.8	**48.99**	**345**	P	**P**	**09 45 22.6**	**-1.8**
O41A	**Passleys Farm,** baz=158	**49.01**	**343**	P	**P**	**09 45 22.4**	**-2.1**
M46A	**Old House Fiel** baz=164	**49.12**	**348**	P	**P**	**09 45 23.7**	**-1.7**
L50A	**Kingsville** baz=169	**49.12**	**352**	P	**P**	**09 45 23.7**	**-1.6**
L48A	**N Adams** baz=167	**49.28**	**350**	P	**P**	**09 45 25.1**	**-1.5**
M45A	**Boilermakers S** baz=163	**49.29**	**347**	P	**P**	**09 45 25.3**	**-1.3**
N43A	**Stutzman Famil** baz=160	**49.32**	**345**	P	**P**	**09 45 24.9**	**-1.9**
N42A	**Yates City** baz=159,SNR=8.3	**49.44**	**344**	P	**P**	**09 45 26.1**	**-1.7**
L47A	**Sherwood** baz=166	**49.45**	**349**	P	**P**	**09 45 26.1**	**-1.7**
M44A	**Midewin, Midew** baz=162	**49.47**	**347**	P	**P**	**09 45 26.4**	**-1.6**
N41A	**Harden Midland** 30nm,1.0s	**49.55**	**344**	*e*P	**P**	**09 45 26.8**	**-1.8**
N41A	**Harden Midland** baz=158	**49.55**	**344**	P	**P**	**09 45 26.8**	**-1.8**
K52A	**Tillsonburg** baz=172	**49.59**	**354**	P	**P**	**09 45 27.9**	**-0.9**
L46A	**Eue Claire** baz=164	**49.69**	**348**	P	**P**	**09 45 27.6**	**-2.0**
M43A	**Waltham Townsh** baz=161	**49.73**	**346**	P	**P**	**09 45 28.0**	**-2.0**
TYNO	**Tyneside** baz=173	**49.82**	**355**	P	**P**	**09 45 29.9**	**-0.7**
J55A	**Hilton** baz=175	**49.84**	**357**	P	**P**	**09 45 30.4**	**-0.3**
STCO	**Saint Catharin** baz=174	**49.87**	**355**	P	**P**	**09 45 30.8**	**-0.2**
N40A	**Mertquake, Sal** baz=157	**49.92**	**343**	P	**P**	**09 45 29.7**	**-1.8**
KSU1	**Kansas State U** 15nm,0.8s	**50.01**	**337**	*e*P	**P**	**09 45 31.3**	**-0.8**
KSU1	**Kansas State U** baz=151	**50.01**	**337**	P	**P**	**09 45 30.9**	**-1.2**
J52A	**Paris** baz=172	**50.02**	**354**	P	**P**	**09 45 31.5**	**-0.6**
ELFO	**Elginfield** baz=171	**50.06**	**353**	P	**P**	**09 45 31.1**	**-1.3**
K48A	**Perry** baz=167	**50.06**	**351**	P	**P**	**09 45 31.0**	**-1.5**
K47A	**Vermontville** baz=166	**50.08**	**350**	P	**P**	**09 45 30.5**	**-2.1**
K46A	**Dorr** baz=165	**50.24**	**349**	P	**P**	**09 45 31.8**	**-2.0**
121A	**Cookes Peak, D** baz=135,SNR=5.3	**50.31**	**323**	P	**P**	**09 45 35.3**	**+0.6**
M40A	**Post Highland** baz=158	**50.38**	**343**	P	**P**	**09 45 32.9**	**-2.0**
L43A	**Garden Prairie** baz=161	**50.39**	**346**	P	**P**	**09 45 32.9**	**-2.0**
319A	**Douglas** 12nm,0.9s	**50.44**	**321**	*e*P	**P**	**09 45 35.4**	**-0.3**
J48A	**Bridge Port** baz=168	**50.50**	**351**	P	**P**	**09 45 34.1**	**-1.6**
WLVO	**Wesleyville** baz=175	**50.53**	**356**	P	**P**	**09 45 35.5**	**-0.3**
J47A	**Sunmer** baz=166,SNR=5.4	**50.60**	**350**	P	**P**	**09 45 35.1**	**-1.4**
PKRO	**Pickering** baz=174	**50.62**	**356**	P	**P**	**09 45 35.9**	**-0.7**
I51A	**Listowel** baz=171	**50.63**	**354**	P	**P**	**09 45 35.4**	**-1.4**
M39A	**Webster** baz=157	**50.64**	**343**	P	**P**	**09 45 35.2**	**-1.7**
L41A	**Preston** baz=159	**50.73**	**345**	P	**P**	**09 45 35.9**	**-1.5**
I55A	**Frankford** baz=176	**50.78**	**357**	P	**P**	**09 45 37.2**	**-0.6**
BNM	**Barren Site**	**50.80**	**325**	*e*P	**P**	**09 45 39.2**	**+0.8**
L40A	**Anamosa** baz=158	**50.91**	**344**	P	**P**	**09 45 38.1**	**-0.7**
BWLO	**Walkerton** baz=171	**50.96**	**354**	P	**P**	**09 45 38.2**	**-0.9**
I49A	**Point Hope** baz=169	**50.99**	**352**	P	**P**	**09 45 37.8**	**-1.6**
CBKS	**Cedar Bluff** baz=147	**51.03**	**335**	P	**P**	**09 45 39.4**	**-0.4**
DELO	**Deloro Mine** baz=176	**51.08**	**357**	P	**P**	**09 45 39.7**	**-0.2**
J45A	**Montague** baz=164	**51.08**	**349**	P	**P**	**09 45 39.1**	**-1.0**
H55A	**Tweed** baz=176	**51.09**	**357**	P	**P**	**09 45 39.7**	**-0.4**
H56A	**Elgin** baz=178	**51.10**	**358**	P	**P**	**09 45 39.6**	**-0.5**
K42A	**Prairie Point,** baz=161	**51.10**	**346**	P	**P**	**09 45 38.1**	**-2.1**
LONY	**Lake Ozonia** baz=180	**51.10**	**360**	P	**P**	**09 45 39.4**	**-0.8**
K41A	**Shullsburg** baz=160	**51.17**	**345**	P	**P**	**09 45 39.5**	**-1.3**
L39A	**Vinton** baz=157	**51.19**	**343**	P	**P**	**09 45 39.6**	**-1.3**
ANMO	**Albuquerque** 5.5nm,0.8s	**51.28**	**326**	*e*P	**P**	**09 45 42.7**	**+0.7**
ANMO				*e*pP	**pP**	**09 46 20.3**	**+2.3**
ANMO	**Albuquerque** baz=138	**51.28**	**326**	P	**P**	**09 45 42.1**	**+0.1**
I47A	**Gladwin** baz=167	**51.31**	**351**	P	**P**	**09 45 40.1**	**-1.7**
SCIA	**State Center** baz=156	**51.35**	**342**	P	**P**	**09 45 40.3**	**-1.8**
I46A	**Reed City** baz=166	**51.40**	**350**	P	**P**	**09 45 40.4**	**-2.0**
JFWS	**Jewell Farm** baz=160	**51.45**	**345**	P	**P**	**09 45 40.9**	**-1.9**
K40A	**Colesburg** baz=158	**51.48**	**344**	P	**P**	**09 45 41.5**	**-1.5**
PLVO	**Plevna** baz=176	**51.57**	**358**	P	**P**	**09 45 43.3**	**-0.4**
K39A	**Oelwein** baz=158	**51.69**	**344**	P	**P**	**09 45 43.1**	**-1.5**
G53A	**Haliburton** baz=174	**51.74**	**356**	P	**P**	**09 45 44.2**	**-0.7**
G55A	**Calabogie** baz=177	**51.77**	**358**	P	**P**	**09 45 44.8**	**-0.4**
H48A	**Harrisville** baz=169	**51.80**	**352**	P	**P**	**09 45 44.5**	**-0.9**
J41A	**Loganville** baz=160	**51.81**	**346**	P	**P**	**09 45 44.4**	**-1.1**
H47A	**Mio** baz=168	**51.83**	**351**	P	**P**	**09 45 43.8**	**-1.8**
T25A	**Trinidad** 6.9nm,0.8s	**51.85**	**329**	*e*P	**P**	**09 45 47.2**	**+1.0**
T25A	**Trinidad** baz=141,SNR=6.9	**51.85**	**329**	P	**P**	**09 45 46.5**	**+0.3**
H46A	**Fife Lake** baz=166	**51.93**	**350**	P	**P**	**09 45 44.9**	**-1.4**
TUC	**Tucson** baz=132	**52.01**	**320**	P	**P**	**09 45 47.6**	**+0.3**
J40A	**Soldiers Grove** baz=159	**52.02**	**345**	P	**P**	**09 45 45.1**	**-2.0**
I42A	**Draeger Farm,** baz=162	**52.05**	**347**	P	**P**	**09 45 44.9**	**-2.3**
TOBO	**Tobermory, Bru** baz=171	**52.09**	**354**	P	**P**	**09 45 49.1**	**+1.6**
BUKO	**Buck Lake** baz=174	**52.11**	**356**	P	**P**	**09 45 46.7**	**-0.9**
PEMO	**Pembroke** baz=176	**52.22**	**357**	P	**P**	**09 45 48.2**	**-0.2**
J39A	**Decorah** baz=158,SNR=8.7	**52.22**	**344**	P	**P**	**09 45 46.6**	**-2.0**
I40A	**Norwalk** baz=159	**52.46**	**345**	P	**P**	**09 45 48.4**	**-1.8**
KSCO	**Kaye Shedlock'** baz=144	**52.47**	**332**	P	**P**	**09 45 51.2**	**+0.6**
G45A	**Suttons Bay** baz=166	**52.50**	**350**	P	**P**	**09 45 50.3**	**-0.2**
ALGO	**Algonquin Park** baz=175	**52.53**	**357**	P	**P**	**09 45 50.3**	**-0.5**
H42A	**Shiocton** baz=162	**52.55**	**347**	P	**P**	**09 45 49.7**	**-1.2**
BGNE	**Belgrade** baz=150	**52.59**	**338**	P	**P**	**09 45 50.6**	**-0.8**
G46A	**Petoskey** baz=167	**52.63**	**351**	P	**P**	**09 45 50.2**	**-1.3**
I39A	**Houston** baz=158	**52.66**	**344**	P	**P**	**09 45 50.8**	**-0.9**
F48A	**Evansville** baz=170	**52.82**	**353**	P	**P**	**09 45 52.0**	**-0.8**
SDCO	**Great Sand Dun** 5.6nm,0.8s	**52.88**	**329**	*e*P	**P**	**09 45 54.0**	**+0.2**
SDCO	**Great Sand Dun** baz=140,SNR=16	**52.88**	**329**	P	**P**	**09 45 54.4**	**+0.6**
E52A	**Mattawa** baz=175	**52.90**	**356**	P	**P**	**09 45 52.9**	**-0.6**
H41A	**Junction City** baz=161	**52.90**	**346**	P	**P**	**09 45 51.8**	**-1.8**
E53A	**Dumoine, Ponti** baz=176	**52.93**	**357**	P	**P**	**09 45 52.6**	**-1.1**
E54A	**Lac Daplat, Po** baz=176,SNR=5.1	**52.97**	**358**	P	**P**	**09 45 53.5**	**-0.4**
X18A	**Snowflake** 4.6nm,0.8s	**53.00**	**323**	*e*P	**P**	**09 45 55.7**	**+1.1**
214A	**Organ Pipe Nat** baz=130,SNR=7.4	**53.09**	**319**	P	**P**	**09 45 55.8**	**+0.7**
H40A	**Chili** baz=160	**53.09**	**346**	P	**P**	**09 45 53.5**	**-1.4**
E51A	**G1948 Merrick** baz=174,SNR=5.3	**53.20**	**356**	P	**P**	**09 45 55.0**	**-0.6**
G42A	**Mountain** baz=162	**53.23**	**348**	P	**P**	**09 45 54.2**	**-1.7**
H39A	**Augusta** baz=159	**53.36**	**345**	P	**P**	**09 45 55.5**	**-1.4**
E48A	**Lockeyer** baz=170	**53.41**	**353**	P	**P**	**09 45 55.6**	**-1.5**
S22A	**4UR Ranch, Cre** 1.9nm,1.0s	**53.56**	**328**	*e*P	**P**	**09 45 59.4**	**+0.5**
S22A	**4UR Ranch, Cre** baz=138,SNR=5.2	**53.56**	**328**	P	**P**	**09 45 58.8**	**0.0**
D52A	**ZEK Kipawa Sen** baz=175	**53.57**	**357**	P	**P**	**09 45 58.1**	**-0.2**
H38A	**Maiden Rock** baz=158	**53.62**	**344**	P	**P**	**09 45 57.3**	**-1.4**
D53A	**Lac Vacive, Po** baz=176	**53.63**	**357**	P	**P**	**09 45 58.3**	**-0.5**
Q24A	**Divide** baz=141	**53.64**	**330**	P	**P**	**09 45 57.5**	**-1.9**
D54A	**Lac Fusel, La** baz=177	**53.67**	**358**	P	**P**	**09 45 58.3**	**-0.8**
OGNE	**Ogallala** baz=145	**53.78**	**334**	P	**P**	**09 46 00.0**	**-0.1**
X16A	**Lo Mia Camp, P** 5.8nm,0.8s	**53.82**	**322**	*e*P	**P**	**09 46 01.6**	**+0.9**
X16A				*e*pP	**pP**	**09 46 41.4**	**+4.4**
F41A	**Three Lakes** baz=162	**53.84**	**347**	P	**P**	**09 45 58.6**	**-1.8**
G39A	**Holcombe** baz=159	**53.90**	**345**	P	**P**	**09 45 59.0**	**-1.8**
G38A	**Ridgeland** baz=158	**53.97**	**345**	P	**P**	**09 45 59.7**	**-1.5**
D46A	**Sault St. Mari** baz=168	**54.05**	**352**	P	**P**	**09 46 00.5**	**-1.3**
ECSD	**EROS Data Cent** 3.0nm,0.9s	**54.08**	**340**	*e*P	**P**	**09 46 01.0**	**-1.2**
ECSD	**EROS Data Cent** baz=152	**54.08**	**340**	P	**P**	**09 46 00.7**	**-1.5**
F40A	**Park Falls** baz=161	**54.24**	**347**	P	**P**	**09 46 01.8**	**-1.4**
SPMN	**Marine on St.** 12nm,0.9s	**54.27**	**344**	*e*P	**P**	**09 46 02.1**	**-1.4**
SPMN	**Marine on St.** baz=157	**54.27**	**344**	P	**P**	**09 46 01.8**	**-1.7**
F39A	**Loretta** baz=160	**54.43**	**346**	P	**P**	**09 46 03.4**	**-1.2**
Y14A	**Wickenburg** 4.9nm,1.1s	**54.48**	**320**	*e*P	**P**	**09 46 04.6**	**-0.7**
ISCO	**Idaho Springs** baz=141	**54.51**	**331**	P	**P**	**09 46 06.0**	**+0.3**
WUAZ	**Wupatki** 8.4nm,0.8s	**54.52**	**323**	*e*P	**P**	**09 46 06.6**	**+0.9**
WUAZ	**Wupatki** baz=133,SNR=8.5	**54.52**	**323**	P	**P**	**09 46 06.3**	**+0.6**
VLDQ	**Val d'Or** 7.7nm,0.6s	**54.66**	**358**	*e*P	**P**	**09 46 06.0**	**-0.1**
VLDQ				*e*pP	**pP**	**09 46 43.2**	**+0.7**
F37A	**Hinrichs Farm,** baz=158	**54.68**	**344**	P	**P**	**09 46 05.2**	**-1.3**
F38A	**Pierce - Schro** baz=158	**54.71**	**345**	P	**P**	**09 46 05.3**	**-1.3**
PV01	**Paradox Valley** 7.6nm,0.8s	**54.77**	**327**	*e*P	**P**	**09 46 07.7**	**+0.2**
E39A	**Mellen** baz=160	**54.78**	**346**	P	**P**	**09 46 05.9**	**-1.2**
PV02	**Paradox Valley** 6.8nm,0.8s	**54.92**	**327**	*e*P	**P**	**09 46 08.6**	**+0.1**
PV13	**Radium Mtn., P** 17nm,1.1s	**54.93**	**327**	*e*P	**P**	**09 46 08.7**	**0.0**
PV13				*e*pP	**pP**	**09 46 47.8**	**+2.6**
PV03	**Paradox Valley** 3.6nm,1.0s	**55.01**	**327**	*e*P	**P**	**09 46 09.8**	**+0.6**
PV05	**Paradox Valley** 8.4nm,0.8s	**55.02**	**327**	*e*P	**P**	**09 46 08.4**	**-0.9**
PV12	**Saucer Basin,** 4.5nm,0.8s	**55.03**	**327**	*e*P	**P**	**09 46 08.3**	**-1.1**
PV11	**David Mesa, Pa** 4.7nm,1.0s	**55.06**	**327**	*e*P	**P**	**09 46 09.4**	**-0.1**
PV16	**Nyswonger Mesa** 6.9nm,1.1s	**55.09**	**327**	*e*P	**P**	**09 46 11.0**	**+1.2**
PV17	**East Wray Mesa** 5.5nm,0.9s	**55.09**	**327**	*e*P	**P**	**09 46 10.2**	**+0.5**
SUSD	**Miller** baz=150,SNR=5.5	**55.52**	**339**	P	**P**	**09 46 11.3**	**-1.1**
N23A	**Red Feather La** baz=141	**55.52**	**331**	P	**P**	**09 46 12.7**	**-0.1**
LSQQ	**Lebel-sur-Quev** baz=177	**55.58**	**358**	P	**P**	**09 46 12.4**	**-0.4**
SWSC	**Sam W. Stewart** baz=127	**55.68**	**318**	P	**P**	**09 46 14.8**	**+1.0**
U15A	**North Rim** 4.0nm,0.9s	**55.69**	**323**	*e*P	**P**	**09 46 15.4**	**+1.2**
W13A	**Hualapai Mount** 4.9nm,0.8s	**55.78**	**321**	*e*P	**P**	**09 46 15.6**	**+0.7**
BC3	**Big Chuckawall** baz=128	**55.88**	**319**	P	**P**	**09 46 15.9**	**+0.5**
IRM	**Iron Mountain** baz=129,SNR=11	**55.99**	**319**	P	**P**	**09 46 16.8**	**+0.7**
O20A	**White River Ci** baz=138	**56.08**	**329**	P	**P**	**09 46 17.0**	**+0.3**
MATQ	**Matagami** baz=176	**56.31**	**357**	P	**P**	**09 46 17.3**	**-0.7**
CHGQ	**Chibougamau** baz=180	**56.39**	**0**	P	**P**	**09 46 18.6**	**+0.1**
KNB	**Kanab** 4.4nm,0.7s	**56.40**	**323**	*e*P	**P**	**09 46 20.5**	**+1.4**
BELC	**Belle Mtn. Jos** baz=128	**56.45**	**319**	P	**P**	**09 46 20.0**	**+0.5**
PFO	**Pinyon Flats O** baz=127	**56.52**	**318**	P	**P**	**09 46 20.6**	**+0.6**
SRU	**San Rafael Swe** 4.2nm,0.7s	**56.54**	**327**	*e*P	**P**	**09 46 20.2**	**+0.2**
GMRC	**Granite Mounta** baz=128	**56.71**	**320**	P	**P**	**09 46 21.7**	**+0.4**
MTPU	**Mount Pierson** 1.9nm,1.1s	**56.72**	**325**	*e*P	**P**	**09 46 22.4**	**+0.8**
SZCU	**Shurtz Canyon** 2.4nm,0.7s	**56.94**	**324**	*e*P	**P**	**09 46 23.5**	**+0.5**
MURC	**Murrieta** baz=126	**57.01**	**317**	P	**P**	**09 46 24.1**	**+0.8**
MSU	**Marysvale**	**57.04**	**325**	*e*P	**P**	**09 46 24.0**	**+0.3**
TMUT	**Trail Mountain** 1.9nm,0.7s	**57.04**	**326**	*e*P	**P**	**09 46 24.1**	**+0.3**
CCUT	**Cedar City** 2.2nm,0.8s	**57.08**	**323**	*e*P	**P**	**09 46 24.4**	**+0.5**
CCUT				*e*PcP	**sP**	**09 47 18.4**	**+0.4**
K22A	**Casper** baz=141	**57.16**	**332**	P	**P**	**09 46 24.5**	**+0.2**
HEC	**Hector,Ludlow** baz=128	**57.18**	**319**	P	**P**	**09 46 25.4**	**+0.9**
BBRC	**Big Bear Solar** baz=127	**57.22**	**318**	P	**P**	**09 46 25.9**	**+0.9**
RSSD	**Black Hills** 7.2nm,1.0s	**57.23**	**335**	*e*P	**P**	**09 46 25.5**	**+0.6**
RSSD	**Black Hills** baz=144	**57.23**	**335**	P	**P**	**09 46 25.1**	**+0.2**
TUQ	**Turquoise Moun** baz=128	**57.29**	**320**	P	**P**	**09 46 25.6**	**+0.3**
SHPR	**Sheep Range** 2.6nm,0.9s	**57.48**	**321**	*e*P	**P**	**09 46 27.8**	**+1.1**
GSC	**Goldstone, Bar** baz=128	**57.77**	**319**	P	**P**	**09 46 29.5**	**+0.8**
SHOC	**Shoshone, Teco** baz=128	**57.80**	**320**	P	**P**	**09 46 29.4**	**+0.6**
PSUT	**Pine Spring** 6.9nm,1.0s	**58.02**	**324**	*e*P	**P**	**09 46 30.1**	**-0.4**
JLU	**Jordanelle** 3.4nm,0.9s	**58.10**	**327**	*e*P	**P**	**09 46 31.8**	**+0.8**
EDW2	**Edwards Air Fo** baz=126	**58.30**	**318**	P	**P**	**09 46 32.9**	**+0.6**
SNCC	**San Nicolas Is**	**58.39**	**316**	P	**P**	**09 46 33.3**	**+0.4**

	baz=124						
TPNV	**Topopah Spring**	**58.44**	**321**	*e*P	**P**	**09 46 34.0**	**+0.6**
	6.3nm,0.9s						
TPNV	**Topopah Spring**	**58.44**	**321**	P	**P**	**09 46 34.4**	**+1.0**
	baz=129,SNR=6.7						
TCUT	**Toone Canyon**	**58.44**	**328**	*e*P	**P**	**09 46 34.1**	**+0.7**
	24nm,0.6s						
LRMC	**Laurel Mtn Rad**	**58.45**	**319**	P	**P**	**09 46 34.4**	**+1.0**
	baz=127						
FURC	**Furnace Creek,**	**58.52**	**320**	P	**P**	**09 46 34.7**	**+1.0**
	baz=128,SNR=5.2						
DUG	**Dugway, Tooele**	**58.56**	**326**	*e*P	**P**	**09 46 34.8**	**+0.7**
	10nm,0.9s						
DUG	**Dugway, Tooele**	**58.56**	**326**	P	**P**	**09 46 34.8**	**+0.7**
	baz=134,SNR=11						
MPMC	**Manual Prospec**	**58.67**	**320**	P	**P**	**09 46 35.2**	**+0.2**
	baz=127						
PD31	**Pinedale Array**	**58.70**	**330**	*e*P	**P**	**09 46 34.9**	**-0.2**
PD31				*e*pP	**pP**	**09 47 13.8**	**+1.7**
PD31				*e*PcP	**PcP**	**09 47 22.6**	**-0.7**
PDAR	**Pinedale Array**	**58.70**	**330**	*e*P	**P**	**09 46 34.4**	**-0.7**
PDAR				pP	**pP**	**09 47 13.8**	**+1.7**
PDAR				PcP	**PcP**	**09 47 22.6**	**-0.7**
PDAR	**Pinedale Array**	**58.70**	**330**	P	**P**	**09 46 34.8**	**-0.3**
	0.8nm,0.5s,baz=122,slow=7.3,SNR=14						
PDAR				pP	**pP**	**09 47 13.8**	**+1.7**
	0.3nm,0.4s,baz=132,slow=8.2,SNR=2.7						
PDAR				PcP	**PcP**	**09 47 22.6**	**-0.7**
	0.8nm,0.5s,baz=121,slow=5.9,SNR=5.3						
BW06	**Boulder Array**	**58.70**	**330**	*e*P	**P**	**09 46 34.8**	**-0.3**
	1.4nm,1.0s						
BW06	**Boulder Array**	**58.70**	**330**	P	**P**	**09 46 35.7**	**+0.6**
	baz=138						
SCZ2	**Santa Cruz Isl**	**58.89**	**316**	P	**P**	**09 46 37.0**	**+0.6**
	baz=124						
R11A	**Troy Canyon, C**	**58.92**	**323**	*e*P	**P**	**09 46 37.1**	**+0.4**
	3.4nm,0.9s						
R11A	**Troy Canyon, C**	**58.92**	**323**	P	**P**	**09 46 37.5**	**+0.8**
	baz=130,SNR=7.3						
ARVC	**Arvin**	**58.99**	**318**	P	**P**	**09 46 37.6**	**+0.5**
	baz=126						
ISA	**Isabella, Lake**	**59.08**	**319**	P	**P**	**09 46 38.3**	**+0.6**
	baz=126						
SPUT	**South Promonto**	**59.13**	**327**	*e*P	**P**	**09 46 37.8**	**-0.2**
	10nm,1.2s						
GRAC	**Grapevine Rang**	**59.17**	**321**	P	**P**	**09 46 39.1**	**+0.9**
	baz=128						
BGU	**Big Grassy Mou**	**59.18**	**327**	*e*P	**P**	**09 46 38.5**	**+0.1**
	5.2nm,0.9s						
CWC	**Cottonwood Cre**	**59.28**	**320**	P	**P**	**09 46 39.9**	**+0.7**
	baz=127						
PKM	**Mcpherson Peak**	**59.52**	**317**	P	**P**	**09 46 41.1**	**+0.3**
	baz=125						
VES	**Vestal, Richgr**	**59.58**	**319**	P	**P**	**09 46 41.8**	**+0.8**
	baz=126						
HVU	**Hansel Valley**	**59.64**	**327**	*e*P	**P**	**09 46 41.8**	**+0.3**
	4.1nm,1.1s						
ULM	**Lac du Bonnet**	**59.71**	**344**	*e*P	**P**	**09 46 40.4**	**-1.2**
	9.3nm,0.8s						
ULM				*e*pP	**pP**	**09 47 18.2**	**-0.5**
ULM				PcP	**PcP**	**09 47 26.5**	**-0.4**
ULM	**Lac du Bonnet**	**59.71**	**344**	P	**P**	**09 46 40.1**	**-1.4**
	7.4nm,0.6s,baz=152,slow=7.2,SNR=17						
ULM				pP	**pP**	**09 47 18.1**	**-0.5**
	5.6nm,0.6s,baz=151,slow=8.1,SNR=5.5						
ULM				PcP	**PcP**	**09 47 26.5**	**-0.4**
	4.9nm,0.8s,baz=159,slow=3.8,SNR=4.9						
SNOW	**Snow King Moun**	**59.80**	**330**	*e*P	**P**	**09 46 42.1**	**-0.6**
	3.7nm,1.0s						
LOHW	**Long Hollow**	**59.84**	**330**	*e*P	**P**	**09 46 43.2**	**+0.2**
	3.0nm,0.8s						
SMMC	**Simmler**	**59.88**	**318**	P	**P**	**09 46 43.9**	**+0.7**
	baz=125						
MOOW	**Moose Ponds**	**60.01**	**330**	*e*P	**P**	**09 46 44.2**	**+0.1**
	1.6nm,0.8s						
FXWY	**Fox Creek**	**60.06**	**330**	*e*P	**P**	**09 46 44.4**	**-0.1**
	3.0nm,0.8s						
FLWY	**Flagg Ranch**	**60.23**	**331**	*e*P	**P**	**09 46 46.4**	**+0.8**
	7.8nm,0.8s						
ELK	**Elko**	**60.29**	**325**	*e*P	**P**	**09 46 46.5**	**+0.4**
ELK				pP	**pP**	**09 47 24.8**	**+1.6**
ELK				PcP	**PcP**	**09 47 29.8**	**0.0**
ELK	**Elko**	**60.29**	**325**	P	**P**	**09 46 46.0**	**0.0**
	1.2nm,0.6s,baz=112,slow=5.5						
ELK				pP	**pP**	**09 47 24.8**	**+1.6**
	0.6nm,0.7s,baz=135,slow=5.7,SNR=1.5						
ELK				PcP	**PcP**	**09 47 29.8**	**0.0**
	1.9nm,0.7s,baz=138,slow=5.4,SNR=5.3						
RLMT	**Red Lodge**	**60.32**	**332**	P	**P**	**09 46 46.2**	**0.0**
	baz=139						
H17A	**Grant Village**	**60.40**	**331**	*e*P	**P**	**09 46 48.2**	**+1.4**
	3.2nm,1.1s						
H17A	**Grant Village**	**60.40**	**331**	P	**P**	**09 46 47.9**	**+1.1**
	baz=138						
LKWY	**Lake**	**60.44**	**331**	*e*P	**P**	**09 46 48.5**	**+1.5**
OMMB	**Old Mammoth Mi**	**60.58**	**320**	*e*P	**P**	**09 46 49.2**	**+1.0**
	6.1nm,0.9s						
NV01	**Mina Array Sit**	**60.63**	**321**	*e*P	**P**	**09 46 48.5**	**0.0**
NV01				*e*pP	**PcP**	**09 47 31.6**	**+0.4**
NVAR	**Mina Array Bea**	**60.63**	**321**	P	**P**	**09 46 48.9**	**+0.5**
	1.1nm,0.7s,baz=117,slow=7.7,SNR=8.3						
NVAR				pP	**pP**	**09 47 26.8**	**+1.2**
	0.7nm,0.6s,baz=134,slow=6.5,SNR=2.1						
NVAR				PcP	**PcP**	**09 47 30.6**	**-0.6**
	1.2nm,0.6s,baz=125,slow=3.8,SNR=8.3						
MDPB	**Devils Postpil**	**60.64**	**320**	*e*P	**P**	**09 46 49.0**	**+0.5**
	5.3nm,0.8s						
YMR	**Madison River**	**60.79**	**331**	*e*P	**P**	**09 46 50.0**	**+0.7**
	8.6nm,0.9s						
DGMT	**Dagmar**	**60.85**	**338**	P	**P**	**09 46 50.0**	**+0.6**
	baz=146						
YHB	**Horse Butte**	**60.96**	**331**	*e*P	**P**	**09 46 51.0**	**+0.5**
	14nm,0.7s						
GCMT	**Greycliff**	**61.01**	**333**	*e*P	**P**	**09 46 50.9**	**+0.2**
QLMT	**Earthquake Lak**	**61.13**	**331**	*e*P	**P**	**09 46 52.5**	**+0.8**
SCHQ	**Schefferville**	**61.65**	**5**	*e*P	**P**	**09 46 54.0**	**-0.7**
	5.8nm,1.1s						
SCHQ				*e*pP	**pP**	**09 47 31.9**	**-0.1**
SCHQ	**Schefferville**	**61.65**	**5**	P	**P**	**09 46 54.0**	**-0.7**
	1.7nm,0.3s,baz=174,slow=7.3,SNR=10						
SCHQ				pP	**pP**	**09 47 31.9**	**-0.1**
	3.4nm,0.8s,baz=192,slow=7.0,SNR=3.1						
HLID	**Hailey**	**61.74**	**328**	*e*P	**P**	**09 46 55.9**	**+0.1**
	2.6nm,0.7s						
HLID	**Hailey**	**61.74**	**328**	P	**P**	**09 46 56.2**	**+0.4**
	baz=134,SNR=5.2						
BOZ	**Bozeman (W)**	**61.79**	**331**	*e*P	**P**	**09 46 56.4**	**+0.4**
	5.7nm,0.7s						
BOZ	**Bozeman (W)**	**61.79**	**331**	P	**P**	**09 46 56.2**	**+0.3**
	baz=137,SNR=8.4						
MCMT	**McKenzie Canyo**	**61.83**	**330**	*e*P	**P**	**09 46 56.6**	**+0.2**
PAHR	**Pah Rah Range**	**62.08**	**322**	*e*P	**P**	**09 46 58.6**	**+0.6**
	6.5nm,1.0s						
MFID	**Camas Ranch**	**62.40**	**327**	*e*P	**P**	**09 47 00.9**	**+0.8**
	17nm,0.8s						
EGMT	**Eagleton**	**62.75**	**334**	*e*P	**P**	**09 47 02.3**	**+0.1**
	6.5nm,0.6s						
EGMT	**Eagleton**	**62.75**	**334**	P	**P**	**09 47 02.3**	**+0.1**
	baz=140,SNR=5.7						
ORV	**Oroville**	**63.30**	**321**	*e*P	**P**	**09 47 06.5**	**+0.6**
	12nm,1.1s						
MSO	**Missoula**	**63.79**	**331**	*e*P	**P**	**09 47 09.3**	**+0.2**
	9.5nm,0.8s						
MSO	**Missoula**	**63.79**	**331**	P	**P**	**09 47 09.6**	**+0.4**
	baz=135,SNR=13						
M04C	**Macdoel**	**64.81**	**323**	P	**P**	**09 47 16.6**	**+0.7**
	baz=126						
F10A	**Beach Ranch, E**	**64.85**	**328**	*e*P	**P**	**09 47 16.9**	**+0.9**
	6.6nm,0.7s						
I07A	**Izee**	**64.85**	**326**	*e*P	**P**	**09 47 16.5**	**+0.4**
J05D	**Fort Rock, OR**	**65.35**	**324**	P	**P**	**09 47 20.1**	**+0.7**
	baz=127						
WALA	**Waterton Lakes**	**65.37**	**333**	*e*P	**P**	**09 47 19.9**	**+0.5**
	7.8nm,0.8s						
FFC	**Flin Flon**	**65.40**	**343**	*e*P	**P**	**09 47 18.6**	**-0.7**
	6.5nm,0.9s						
J04D	**Umpqua Nationa**	**65.83**	**324**	P	**P**	**09 47 23.0**	**+0.5**
	baz=126						
I05D	**Terrebonne, OR**	**66.05**	**325**	P	**P**	**09 47 24.5**	**+0.8**
	baz=127						
NEW	**Newport**	**66.34**	**330**	*e*P	**P**	**09 47 25.2**	**-0.3**
	7.2nm,0.8s						
NEW				pP	**pP**	**09 48 04.5**	**+1.2**
NEW	**Newport**	**66.34**	**330**	P	**P**	**09 47 25.8**	**+0.3**
	baz=133						
NEW	**Newport**	**66.34**	**330**	P	**P**	**09 47 25.3**	**-0.2**
	5.3nm,0.7s,baz=143,slow=5.1,SNR=8.7						
NEW				pP	**pP**	**09 48 04.5**	**+1.2**
	1.5nm,0.7s,baz=118,slow=16,SNR=2.1						
FCC	**Fort Churchill**	**67.15**	**349**	*e*P	**P**	**09 47 29.5**	**-0.8**
	12nm,1.0s						
D03D	**Eldon**	**68.95**	**327**	P	**P**	**09 47 42.6**	**+0.8**
	baz=127						
DBIC	**Dimbokro**	**70.67**	**81**	*e*P	**P**	**09 47 53.0**	**0.0**
	6.6nm,0.8s						
DBIC				pP	**pP**	**09 48 31.1**	**-0.1**
DBIC	**Dimbokro**	**70.67**	**81**	P	**P**	**09 47 53.0**	**0.0**
	6.3nm,0.7s,baz=242,slow=3.8,SNR=14						
DBIC				pP	**pP**	**09 48 31.1**	**-0.1**
	2.1nm,0.4s,baz=236,slow=4.0,SNR=2.4						
PPT	**Papeete**	**73.88**	**254**	sP	sP	09 49 08.5	+1.1
	37nm,0.7s,baz=36,slow=19,SNR=2.5						
YKA	**Yellowknife Ar**	**75.55**	**342**	P	**P**	**09 48 20.1**	**-0.5**
	3.3nm,0.6s,baz=140,slow=5.8,SNR=79						
YKA				pP	**pP**	**09 48 59.2**	**-0.1**
	2.3nm,0.6s,baz=140,slow=6.0,SNR=10						
YKA				LR	LR	10 23 54.7	
	comp=Z,14nm,20.9s,baz=64,slow=37						
YKB5	**Yellowknife Ar**	**75.55**	**342**	*e*P	**P**	**09 48 19.8**	**-0.9**
YKB5				*e*		10 23 54.7	
YKW3	**Yellowknife Ar**	**75.61**	**342**	*e*P	**P**	**09 48 20.6**	**-0.4**
	4.9nm,0.8s						
TOA1	**Torodi Ar. Sit**	**78.12**	**75**	*e*P	**P**	**09 48 35.9**	**-0.2**
TOA1				*e*pP	**pP**	**09 49 15.5**	**+0.6**
TOA0	**Torodi Ar. Sit**	**78.12**	**75**	*e*P	**P**	**09 48 36.1**	**+0.1**
	2.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.12**	**75**	P	**P**	**09 48 35.9**	**-0.2**
	1.4nm,0.5s,baz=270,slow=3.5,SNR=16						
TORD				pP	**pP**	**09 49 15.5**	**+0.6**
	0.8nm,0.6s,baz=286,slow=6.0,SNR=2.3						
DLBC	**Dease Lake**	**78.68**	**334**	LR	LR	10 25 27.8	
	comp=Z,70nm,21.9s,baz=138,slow=37						
ESDC	**Sonseca Array**	**79.48**	**48**	P	**P**	**09 48 42.6**	**-0.5**
	0.8nm,0.6s,baz=248,slow=4.4,SNR=3.7						
ESDC				pP	**pP**	**09 49 21.7**	**-0.4**
	0.3nm,0.4s,baz=278,slow=6.4,SNR=1.6						
SIT	**Sitka**	**80.41**	**331**	*e*P	**P**	**09 48 49.6**	**+2.1**
	43nm,0.4s						
SUMG	**Summit**	**82.45**	**10**	*e*P	**P**	**09 48 57.9**	**-0.5**
	8.4nm,0.8s						
SUMG	**Summit**	**82.45**	**10**	*i* P	**P**	**09 48 58.5**	**0.0**
	34nm,0.9s						
SUMG				*i*		09 49 33.9	
QSPA	**South Pole Qui**	**83.39**	**180**	*e*P	**P**	**09 49 05.0**	**+1.8**
	4.7nm,0.8s						
INK	**Inuvik**	**85.31**	**341**	P	**P**	**09 49 12.4**	**-0.1**
	2.7nm,0.5s,baz=108,slow=4.3,SNR=32						
INK				pP	**pP**	**09 49 52.6**	**+0.6**
	1.9nm,0.6s,baz=96,slow=3.7,SNR=3.0						
KLU	**Klutina**	**87.17**	**333**	*e*P	**P**	**09 49 22.4**	**+0.4**
	6.3nm,0.8s						
SCRK	**Sand Creek**	**87.20**	**336**	*e*P	**P**	**09 49 22.4**	**+0.3**
	3.7nm,0.7s						
SML	**Sawmill**	**88.36**	**333**	*e*P	**P**	**09 49 27.9**	**+0.4**
	11nm,0.6s						
HDA	**Harding Lake**	**88.57**	**336**	*e*P	**P**	**09 49 28.4**	**0.0**
	6.1nm,0.8s						
HDA	**Harding Lake**	**88.57**	**336**	P	**P**	**09 49 27.9**	**-0.5**
	baz=108						
IL1	**Eielson Array**	**88.66**	**336**	*e*P	**P**	**09 49 28.3**	**-0.5**
ILAR	**Eielson Array**	**88.66**	**336**	P	**P**	**09 49 28.4**	**-0.4**
	2.0nm,0.8s,baz=123,slow=3.4,SNR=20						
ILAR				pP	**pP**	**09 50 08.8**	**+0.1**
	0.9nm,0.8s,baz=154,slow=3.1,SNR=3.3						
ILB	**Eielson Array**	**88.66**	**336**	*e*P	**P**	**09 49 28.7**	**-0.1**
POKR	**Poker Plat Res**	**88.99**	**336**	P	**P**	**09 49 30.3**	**-0.1**
	baz=108						
TCOL	**CIGO, UAF Yank**	**89.09**	**336**	P	**P**	**09 49 30.8**	**0.0**
	baz=108						
MDM	**Murphy Dome**	**89.27**	**336**	*e*P	**P**	**09 49 31.9**	**+0.2**
	12nm,0.7s						
KDAK	**Kodiak Island**	**89.36**	**328**	*e*P	**P**	**09 49 31.9**	**-0.3**
	9.2nm,1.1s						
KDAK	**Kodiak Island**	**89.36**	**328**	P	**P**	**09 49 31.9**	**-0.3**
	4.3nm,0.6s,baz=316,slow=1.4,SNR=5.8						
SUA	**Susitna One**	**89.37**	**332**	*e*P	**P**	**09 49 33.0**	**+0.7**
	4.9nm,0.8s						
BPAW	**Bear Paw Mtn.**	**90.17**	**335**	*e*P	**P**	**09 49 35.7**	**-0.2**
	8.3nm,0.8s						
MLY	**Manley**	**90.31**	**336**	*e*P	**P**	**09 49 36.8**	**+0.2**
	4.3nm,0.7s						
CAST	**Castle Rocks**	**90.47**	**334**	*e*P	**P**	**09 49 37.2**	**-0.1**
	4.9nm,0.6s						
RAO	**Raoul Island**	**98.40**	**239**	*e*P	Pdif	09 50 17.0	+2.6
	2µm,0.5s						
ARA0	**ARCESS Array S**	**99.73**	**21**	*e*pP	pP	09 50 58.6	-0.8
ARCES	**ARCESS Array B**	**99.73**	**21**	pP	pP	09 50 58.6	-0.8
	0.6nm,0.6s,baz=258,slow=4.2,SNR=1.3						
STKA	**Stephens Creek**	**128.49**	**220**	PKP	**PKPdf**	**09 55 42.3**	**-0.3**
	2.6nm,0.7s,baz=101,slow=1.0,SNR=5.3						
ZAA1	**Zalesovo Array**	**129.99**	**16**	*e*PKPdf	**PKiKP**	**09 55 45.2**	**-0.3**
ZALV	**Zalesovo Beam**	**129.99**	**16**	PKP	**PKiKP**	**09 55 45.2**	**-0.3**
	2.0nm,0.4s,baz=315,slow=2.6,SNR=7.4						
ZALV				pPKP	**pPKPdf**	**09 56 25.8**	**-0.6**
	1.0nm,0.4s,baz=305,slow=3.1,SNR=3.3						
KLR	**Kul'dur**	**132.22**	**337**	PKP	**PKPdf**	**09 55 48.4**	**-0.6**
	1.3nm,0.7s,baz=76,slow=2.8,SNR=6.4						
KLR				pPKP	**pPKPdf**	**09 56 31.8**	**+1.0**
	0.5nm,0.6s,baz=45,slow=16,SNR=1.2						
MK32	**Makanchi Array**	**135.33**	**23**	*e*PKPdf	**PKPdf**	**09 55 55.1**	**0.0**
MKAR	**Makanchi Array**	**135.33**	**23**	PKP	**PKPdf**	**09 55 55.1**	**0.0**
	0.9nm,0.5s,baz=308,slow=2.6,SNR=16						
MKAR				pPKP	**pPKPdf**	**09 56 37.2**	**+0.4**
	0.3nm,0.4s,baz=308,slow=2.6,SNR=2.6						
SONA0	**Songino Array**	**139.02**	**359**	*e*PKPdf	**PKPdf**	**09 56 01.0**	**-0.9**
SONM	**Songino Array**	**139.02**	**359**	PKP	**PKPdf**	**09 56 01.0**	**-0.9**
	0.4nm,0.7s,baz=355,slow=1.8,SNR=3.5						
AS31	**Alice Springs**	**139.05**	**222**	*e*PKPdf	**PKPdf**	**09 56 02.1**	**-0.5**
ASAR	**Alice Springs**	**139.05**	**222**	PKhKP	PKPpre	09 55 56.5	
	0.7nm,0.7s,baz=153,slow=3.2,SNR=6.5						
ASAR				PKP	**PKPdf**	**09 56 02.1**	**-0.5**
	2.2nm,0.7s,baz=118,slow=2.1,SNR=13						
WMQ	**Urumqi**	**139.85**	**20**	*e*P	**PKPdf**	**09 56 03.4**	**-0.1**
WR1	**Warramunga Arr**	**141.24**	**226**	*e*PKPpre	PKPpre	09 56 01.7	
WR1				*e*PKPdf	**PKPdf**	**09 56 06.8**	**+0.2**
WRA	**Warramunga Arr**	**141.24**	**226**	PKhKP	PKPpre	09 56 01.7	
	0.8nm,0.4s,baz=123,slow=2.1,SNR=15						
WRA				PKP	**PKPdf**	**09 56 06.8**	**+0.2**
	3.9nm,0.6s,baz=123,slow=2.0,SNR=17						
KSRS	**Korea Array**	**143.26**	**330**	PKP	**PKPdf**	**09 56 09.3**	**-0.4**
	1.1nm,0.6s,baz=2.4,slow=2.3,SNR=5.0						
KSAR	**Wonju Array Be**	**143.29**	**330**	PKP	**PKPdf**	**09 56 09.3**	**-0.4**
HHC	**Hu-ho-hao-te**	**145.59**	**352**	*e*P	**PKPdf**	**09 56 13.7**	**-0.1**
GTA	**Gaotai**	**147.03**	**8**	*e*P	**PKPbc**	**09 56 18.1**	**-0.5**
GTA				pP	**PKiKP**	**09 56 25.5**	**+4.6**
GTA				sP	PKPab	09 56 29.5	+9.2
FITZ	**Fitzroy Crossi**	**148.38**	**218**	PKPbc	**PKPdf**	**09 56 20.1**	**+1.2**
	12nm,0.8s,baz=179,slow=3.0,SNR=9.6						
FITZ				pPKPbc	**pPKPbc**	**09 57 03.6**	**-0.4**
	4.2nm,0.8s,baz=176,slow=4.0,SNR=2.7						
LZH	**Lanzhou**	**150.72**	**3**	*e*PKPbc	**PKPdf**	**09 56 20.6**	**-1.8**
LZH				pPKP	**pPKPdf**	**09 57 04.2**	**-0.1**
LZH				sPKP		09 57 21.9	
XAN	**Xi'an**	**152.63**	**354**	P	**PKPbc**	**09 56 32.2**	**-0.1**
XAN				pP	**PKPab**	**09 56 42.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**166.66**	**28**	PKPab	**PKPab**	**09 57 44.7**	**+0.2**
	1.5nm,0.6s,baz=320,slow=6.3,SNR=8.7						
CMAR				pPKPab	**pPKPab**	**09 58 24.3**	**-0.3**
	0.9nm,0.4s,baz=290,slow=2.8,SNR=1.7						

IDC 07 09:37:33.5±1.6**,11°.07S**×**166°.35E,h0^{km},mb3.7**/5**, mb1 4.0**/6**,mb1mx3.7**/48**,mbtmp3.8**/6**,ML3.5**/1**,Error ellipse: s-maj=53.8km s-min=27.2km az=123.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.94**	**180**	Pn	Pn	09 40 11.0	-0.6
	0.3nm,0.3s,baz=352,slow=16,SNR=4.6						
STKA	**Stephens Creek**	**30.84**	**224**	P	P	09 43 51.3	-0.2
	1.9nm,1.0s,baz=50,slow=7.9,SNR=2.4						
WRA	**Warramunga Arr**	**32.04**	**250**	P	P	09 44 02.7	+0.5
	2.0nm,0.8s,baz=82,slow=9.3,SNR=10.0						
ASAR	**Alice Springs**	**33.32**	**244**	P	P	09 44 13.4	-0.1
	0.5nm,0.6s,baz=67,slow=9.9,SNR=8.8						
ILAR	**Eielson Array**	**83.34**	**18**	P	P	09 50 02.5	+0.4
	0.4nm,0.7s,baz=226,slow=6.2,SNR=2.9						
MKAR	**Makanchi Array**	**93.94**	**317**	P	P	09 50 52.3	-1.1
	0.2nm,0.7s,baz=90,slow=5.8,SNR=2.4						

IDC ***07*** *09:40:48.5±0.7,10°.89S×164°.85E,h0^{km},mb4.1/16, mb1 4.3/18,mb1mx4.1/49,mbtmp4.1/18,ML4.2/2,Error ellipse: s-maj=18.8km s-min=15.4km az=119.0*

NEIC ***07*** *09:40:50.1±0.3,10°.89S×164°.86E,h10^{km},mb4.1/9,Error ellipse: s-maj=7.2km s-min=6.0km az=112.0*

ISCJB ***07*** *09:40:51.4±0.4,10°.99S±0°.06×164°.79E±0°.06,h31^{km}, mb4.0/20,Error ellipse: s-maj=9.7km s-min=8.3km az=32.0*

ISC 07 09:40:53.2±0.6**,10°.92S**±0°.09×**164°.83E**±0°.08**,h31^{km},n39, σ0^{s}.87**/35**,mb4.0**/20**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.03**	**287**	*e*Pn	**Pn**	**09 42 05.9**	**-0.8**
HNR				*e*Pn	**Pn**	**09 42 06.6**	**-0.1**
HNR				*e*Sn	**Sn**	**09 43 04.0**	**+0.2**
HNR	**Honiara**	**5.03**	**287**	Pn	**Pn**	**09 42 06.6**	**-0.1**
	25nm,0.3s,baz=158,slow=19,SNR=2.3						
HNR				Sn	**Sn**	**09 43 04.0**	**+0.2**
	baz=93,slow=20,SNR=1.3						
DZM	**Mont Dzumac**	**11.19**	**172**	Pn	**Pn**	**09 43 30.9**	**-0.4**
	0.5nm,0.3s,baz=314,slow=21,SNR=7.7						
CTA	**Charters Tower**	**20.07**	**241**	P	**P**	**09 45 25.2**	**+0.9**
	19nm,0.8s,baz=71,slow=12,SNR=15						
CTAO	**Charters Tower**	**20.07**	**241**	*e*P	Pn	09 45 25.6	-0.6
	22nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.29**	**4**	T	T	10 17 29.9	
	baz=184,slow=76,SNR=9.4						
H11S3	**WAKE ISLAND Hy**	**29.29**	**4**	T	T	10 17 29.3	
	baz=184,slow=76,SNR=8.5						
H11S1	**WAKE ISLAND Hy**	**29.30**	**4**	T	T	10 17 31.8	
	baz=184,slow=76,SNR=11						
URZ	**Urewera**	**29.36**	**160**	P	**P**	**09 46 52.9**	**-0.6**
	10nm,0.9s,baz=51,slow=18,SNR=2.9						
STKA	**Stephens Creek**	**29.92**	**222**	*e*P	**P**	**09 46 59.0**	**+0.4**
	0.7nm,1.0s						
STKA	**Stephens Creek**	**29.92**	**222**	P	**P**	**09 46 59.0**	**+0.4**
	1.6nm,0.6s,baz=49,slow=10,SNR=6.4						
BKZ	**Black Stump Fm**	**29.98**	**162**	*e*P	**P**	**09 46 59.3**	**+0.3**
	6.6nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**30.51**	**4**	T	T	10 19 10.6	
	baz=184,slow=76,SNR=9.8						
H11N3	**WAKE ISLAND Hy**	**30.52**	**4**	T	T	10 18 58.3	
	baz=184,slow=76,SNR=9.9						
H11N2	**WAKE ISLAND Hy**	**30.53**	**4**	T	T	10 18 59.2	
	baz=184,slow=76,SNR=9.3						
WRAB	**Tennant Creek**	**30.67**	**249**	*e*P	**P**	**09 47 01.5**	**-3.9**
	4.7nm,0.6s						
WR1	**Warramunga Arr**	**30.68**	**249**	*e*P	**P**	**09 47 04.9**	**-0.5**
	2.3nm,0.8s						
WRA	**Warramunga Arr**	**30.68**	**249**	P	**P**	**09 47 04.9**	**-0.6**
	1.3nm,0.7s,baz=75,slow=8.7,SNR=14						
AS31	**Alice Springs**	**32.05**	**243**	*e*P	**P**	**09 47 16.8**	**-0.7**
	0.7nm,0.9s						
ASAR	**Alice Springs**	**32.05**	**243**	P	**P**	**09 47 16.8**	**-0.7**
	1.3nm,0.6s,baz=65,slow=10,SNR=25						
FITZ	**Fitzroy Crossi**	**38.55**	**255**	P	**P**	**09 48 12.9**	**-0.5**
	1.5nm,0.6s,baz=87,slow=7.0,SNR=9.0						
KSRS	**Korea Array**	**59.27**	**326**	P	**P**	**09 50 52.2**	**+0.3**
	1.4nm,0.8s,baz=136,slow=8.2,SNR=3.2						
KSAR	**Wonju Array Be**	**59.29**	**326**	P	**P**	**09 50 52.2**	**+0.2**
PETK	**Petropavlovsk-**	**64.07**	**355**	P	**P**	**09 51 23.7**	**-0.3**
	1.7nm,0.7s,baz=147,slow=8.2,SNR=2.4						
PEA1	**Petropavlovsk-**	**64.07**	**355**	*e*P	**P**	**09 51 23.7**	**-0.3**
VNDA	**Vanda**	**66.60**	**181**	P	**P**	**09 51 41.3**	**+1.2**
	5.3nm,1.1s,baz=27,slow=6.8,SNR=2.5						
CMAR	**Chiang Mai Arr**	**71.24**	**294**	P	**P**	**09 52 10.3**	**+0.3**
	0.9nm,0.3s,baz=113,slow=6.0,SNR=2.6						
SONA0	**Songino Array**	**78.04**	**324**	*e*P	**P**	**09 52 49.4**	**+0.4**
SONM	**Songino Array**	**78.04**	**324**	P	**P**	**09 52 49.4**	**+0.4**
	1.0nm,0.8s,baz=146,slow=7.8,SNR=5.3						
ILAR	**Eielson Array**	**83.68**	**19**	P	**P**	**09 53 18.5**	**-0.1**
	0.7nm,0.7s,baz=241,slow=5.2,SNR=9.0						
NVAR	**Mina Array Bea**	**86.63**	**50**	P	**P**	**09 53 34.5**	**+0.3**
	0.2nm,0.4s,baz=226,slow=7.5,SNR=2.9						
MK01	**Makanchi Array**	**92.81**	**317**	*e*P	**P**	**09 54 03.6**	**+0.7**
MK31	**Makanchi Array**	**92.82**	**317**	*e*P	**P**	**09 54 03.0**	**+0.1**
	1.3nm,1.1s						
MK32	**Makanchi Array**	**92.82**	**317**	*e*P	**P**	**09 54 03.7**	**+0.8**
MKAR	**Makanchi Array**	**92.82**	**317**	P	**P**	**09 54 03.7**	**+0.8**
	0.6nm,0.7s,baz=96,slow=5.6,SNR=9.0						
PD31	**Pinedale Array**	**94.13**	**47**	*e*P	**P**	**09 54 09.3**	**0.0**
	0.4nm,0.8s						
PDAR	**Pinedale Array**	**94.13**	**47**	P	**P**	**09 54 09.4**	**0.0**
	0.3nm,0.7s,baz=224,slow=2.5,SNR=3.3						
YKA	**Yellowknife Ar**	**95.28**	**27**	P	**P**	**09 54 13.0**	**-0.8**
	0.2nm,0.8s,baz=255,slow=4.4,SNR=3.7						
YKB5	**Yellowknife Ar**	**95.28**	**27**	*e*P	**P**	**09 54 13.0**	**-0.8**

IDC ***07*** *09:43:27.5±0.9,11°.42S×165°.08E,h0^{km},mb3.8/8, mb1 4.1/10,mb1mx3.9/51,mbtmp3.9/10,ML4.4/2,Error ellipse: s-maj=30.6km s-min=19.7km az=153.0*

NEIC ***07*** *09:43:29.1±0.4,11°.44S×165°.14E,h10^{km},mb4.3/6,Error ellipse: s-maj=9.2km s-min=7.8km az=60.0*

ISCJB ***07*** *09:43:31.0±0.5,11°.59S±0°.07×165°.03E±0°.07,h34^{km}, mb4.0/13,Error ellipse: s-maj=11.4km s-min=7.8km az=39.0*

ISC 07 09:43:32.9±0.7**,11°.5S**±0°.1×**165°.08E**±0°.09**,h34^{km},n29, σ1^{s}.06**/27**,mb3.9**/13**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.46**	**292**	*e*Pn	**Pn**	**09 44 51.6**	**-0.3**
HNR				*e*Pn	**Pn**	**09 44 51.9**	**-0.1**
HNR				*e*Sn	**Sn**	**09 45 52.5**	**-1.1**
HNR	**Honiara**	**5.46**	**292**	Pn	**Pn**	**09 44 51.8**	**-0.1**
	16nm,0.3s,baz=153,slow=18,SNR=3.7						
HNR				Sn	**Sn**	**09 45 52.5**	**-1.1**
	12nm,0.3s,baz=287,slow=2.8,SNR=2.4						
DZM	**Mont Dzumac**	**10.57**	**173**	*e*Pn	**Pn**	**09 46 01.5**	**-0.7**
DZM	**Mont Dzumac**	**10.57**	**173**	Pn	**Pn**	**09 46 01.4**	**-0.9**
	2.6nm,0.3s,baz=314,slow=8.0,SNR=26						
ONTNC	**Ouen Toro**	**10.81**	**173**	*e*Pn	**Pn**	**09 46 05.3**	**0.0**
PINNC	**Pines Island,**	**11.26**	**169**	*e*Pn	**Pn**	**09 46 10.8**	**-0.7**
COEN	**Coen**	**21.50**	**261**	*e*P	**P**	**09 48 20.4**	**+1.3**
	6.6nm,0.9s						
BKZ	**Black Stump Fm**	**29.35**	**162**	*e*P	**P**	**09 49 32.9**	**+0.2**
	7.1nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**29.86**	**3**	T	T	10 21 33.8	
	baz=184,slow=76,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**29.86**	**3**	T	T	10 21 34.1	
	baz=184,slow=76,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**29.88**	**3**	T	T	10 21 34.0	
	baz=184,slow=76,SNR=4.3						
WRAB	**Tennant Creek**	**30.70**	**250**	*e*P	**P**	**09 49 45.5**	**+0.6**
	6.9nm,1.1s						
WB2	**Warramunga Arr**	**30.70**	**250**	*e*P	**P**	**09 49 45.3**	**+0.4**
	8.7nm,1.1s						
WR1	**Warramunga Arr**	**30.71**	**250**	*e*P	**P**	**09 49 44.5**	**-0.5**
	5.4nm,1.0s						
WRA	**Warramunga Arr**	**30.71**	**250**	P	**P**	**09 49 44.5**	**-0.5**
	4.1nm,1.0s,baz=80,slow=9.0,SNR=11						
H11N1	**WAKE ISLAND Hy**	**31.09**	**3**	T	T	10 23 03.8	
	baz=182,slow=74						
H11N3	**WAKE ISLAND Hy**	**31.09**	**3**	T	T	10 23 08.8	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**31.10**	**3**	T	T	10 23 04.9	
	baz=182,slow=74						
ASAR	**Alice Springs**	**32.00**	**244**	P	**P**	**09 49 55.9**	**-0.4**
	1.2nm,1.0s,baz=70,slow=10,SNR=6.7						
ASAR				PcP	**PcP**	**09 52 45.9**	**0.0**
	0.2nm,0.6s,baz=72,slow=3.0,SNR=2.7						
FITZ	**Fitzroy Crossi**	**38.63**	**255**	*e*P	**P**	**09 50 54.0**	**+0.6**
	1.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**38.63**	**255**	P	**P**	**09 50 54.0**	**+0.6**
	1.5nm,0.8s,baz=101,slow=11,SNR=3.5						
SONA0	**Songino Array**	**78.66**	**324**	*e*P	**P**	**09 55 30.0**	**-1.7**
SONM	**Songino Array**	**78.66**	**324**	P	**P**	**09 55 30.0**	**-1.7**
	0.4nm,0.6s,baz=133,slow=6.3,SNR=2.6						
GTA	**Gaotai**	**78.92**	**314**	*e*P	**P**	**09 55 36.8**	**+3.5**
GTA				pP	sP	09 55 45.3	-0.4
GTA				sP	pwP	09 55 48.6	-0.3
ILAR	**Eielson Array**	**84.17**	**19**	P	**P**	**09 56 00.6**	**+0.3**
	0.4nm,0.6s,baz=237,slow=5.0,SNR=8.7						
NVAR	**Mina Array Bea**	**86.83**	**50**	P	**P**	**09 56 14.1**	**-0.4**
	0.5nm,0.6s,baz=236,slow=5.5,SNR=3.8						
YKA	**Yellowknife Ar**	**95.69**	**27**	P	**P**	**09 56 53.9**	**-1.0**
	0.1nm,0.7s,baz=247,slow=4.0,SNR=2.6						
LTX	**Lajitas**	**96.63**	**62**	*e*P	**P**	**09 57 00.3**	**+0.2**
TXAR	**Lajitas Array**	**96.63**	**62**	P	**P**	**09 57 00.3**	**+0.2**
	0.2nm,0.6s,baz=232,slow=4.4,SNR=2.3						

IDC ***07*** *09:44:28.2±1.0,10°.81S×165°.54E,h0^{km},mb3.8/8, mb1 4.0/9,mb1mx3.8/50,mbtmp3.7/9,Error ellipse:*

s-maj=40.4km s-min=22.7km az=138.0

*ISCJB **07** 09:44:31.1±0.7, 10°.9S±0°.1×165°.5E±0°.2, h30^{km}, mb3.7/8, Error ellipse: s-maj=23.4km s-min=15.9km az=20.6*

ISC 07 09:44:32.7±0.8**, 10°.8S**±0°.1×**165°.5E**±0°.2**, h30^{km}, n15, σ1^{s}10**/9**, mb3.6**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.21**	**176**	Pn	**Pn**	**09 47 11.2**	**+0.2**
	baz=352,slow=13,SNR=1.7						
H11S2	**WAKE ISLAND Hy**	**29.16**	**2**	T	T	10 21 03.8	
	baz=183						
H11S3	**WAKE ISLAND Hy**	**29.16**	**2**	T	T	10 21 08.6	
	baz=183						
H11S1	**WAKE ISLAND Hy**	**29.18**	**2**	T	T	10 21 03.2	
	baz=183						
H11N1	**WAKE ISLAND Hy**	**30.39**	**3**	T	T	10 22 32.6	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**30.39**	**3**	T	T	10 22 42.0	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.40**	**3**	T	T	10 22 39.2	
	baz=182						
WRA	**Warramunga Arr**	**31.36**	**249**	P	**P**	**09 50 50.7**	**-0.3**
	0.3nm,0.7s,baz=80,slow=9.1,SNR=2.3						
ASAR	**Alice Springs**	**32.70**	**243**	P	**P**	**09 51 02.5**	**-0.2**
	0.6nm,0.8s,baz=70,slow=9.6,SNR=3.7						
SONM	**Songino Array**	**78.37**	**324**	P	**P**	**09 56 32.1**	**+1.7**
	0.4nm,0.5s,baz=116,slow=6.6,SNR=2.8						
ILAR	**Eielson Array**	**83.38**	**19**	P	**P**	**09 56 57.1**	**+0.5**
	0.9nm,0.6s,baz=237,slow=5.2,SNR=13						
NVAR	**Mina Array Bea**	**86.05**	**50**	P	**P**	**09 57 11.6**	**+0.6**
	1.1nm,0.9s,baz=251,slow=5.5,SNR=4.3						
MKAR	**Makanchi Array**	**93.22**	**317**	P	**P**	**09 57 43.4**	**-0.9**
	0.4nm,0.6s,baz=84,slow=5.2,SNR=4.3						
PDAR	**Pinedale Array**	**93.57**	**47**	P	**P**	**09 57 46.6**	**+0.3**
	0.1nm,0.4s,baz=251,slow=2.8,SNR=2.5						
YKA	**Yellowknife Ar**	**94.89**	**27**	P	**P**	**09 57 49.9**	**-1.7**
	0.2nm,0.8s,baz=263,slow=4.9,SNR=3.2						

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*IDC **07** 09:44:58.1±1.4, 10°.95S×165°.42E, h0^{km}, mb3.7/7, mb1 4.0/9, mb1mx3.8/50, mbtmp3.9/9, ML4.2/2, Error ellipse: s-maj=40.7km s-min=25.2km az=133.0*

*ISCJB **07** 09:45:01.0±0.9, 11°.0S±0°.1×165°.3E±0°.1, h30^{km}, mb3.6/6, Error ellipse: s-maj=18.9km s-min=16.5km az=178.4*

ISC 07 09:45:02.8±1.0**, 10°.9S**±0°.1×**165°.4E**±0°.1**, h30^{km}, n9, σ0^{s}97**/9**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.56**	**285**	Pn	**Pn**	**09 46 23.6**	**+0.1**
	16nm,0.3s,baz=356,slow=16,SNR=4.4						
DZM	**Mont Dzumac**	**11.11**	**175**	Pn	**Pn**	**09 47 40.3**	**+0.5**
	0.8nm,0.3s,baz=356,slow=19,SNR=2.6						
CTA	**Charters Tower**	**20.53**	**241**	P	**P**	**09 49 39.0**	**0.0**
	8.9nm,1.1s,baz=63,slow=14,SNR=2.3						
WRA	**Warramunga Arr**	**31.18**	**250**	P	**P**	**09 51 18.9**	**-0.6**
	0.4nm,0.7s,baz=80,slow=9.2,SNR=2.7						
ASAR	**Alice Springs**	**32.52**	**243**	P	**P**	**09 51 30.4**	**-0.9**
	1.7nm,1.0s,baz=64,slow=10,SNR=6.3						
SONM	**Songino Array**	**78.38**	**324**	P	**P**	**09 57 02.1**	**+1.5**
	0.3nm,0.3s,baz=133,slow=5.8,SNR=3.1						
ILAR	**Eielson Array**	**83.53**	**19**	P	**P**	**09 57 27.9**	**+0.3**
	0.4nm,0.6s,baz=237,slow=5.1,SNR=4.8						
MKAR	**Makanchi Array**	**93.20**	**317**	P	**P**	**09 58 14.4**	**0.0**
	0.3nm,0.7s,baz=98,slow=6.3,SNR=2.3						
YKA	**Yellowknife Ar**	**95.05**	**27**	P	**P**	**09 58 21.0**	**-1.4**
	0.1nm,0.6s,baz=254,slow=4.5,SNR=3.2						

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*IDC **07** 09:47:06.4±0.8, 10°.72S×164°.74E, h0^{km}, mb4.1/12, mb1 4.3/14, mb1mx4.1/45, mbtmp4.2/14, ML4.5/2, Error ellipse: s-maj=20.6km s-min=17.6km az=86.0*

*NEIC **07** 09:47:08.2±0.5, 10°.73S×164°.72E, h10^{km}, mb4.2/7, Error ellipse: s-maj=10.5km s-min=7.1km az=68.0*

*ISCJB **07** 09:47:09.5±0.5, 10°.87S±0°.06×164°.70E±0°.07, h31^{km}, mb4.1/15, Error ellipse: s-maj=10.9km s-min=7.0km az=140.2*

ISC 07 09:47:11.2±0.8**, 10°.78S**±0°.10×**164°.75E**±0°.09**, h31^{km}, n36, σ0^{s}99**/33**, mb4.2**/15**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.92**	**285**	*e*Pn	**Pn**	**09 48 22.7**	**-0.4**
HNR				*e*Pn	**Pn**	**09 48 23.1**	**+0.1**
HNR				*e*Sn	**Sn**	**09 49 20.6**	**+1.6**
HNR	**Honiara**	**4.92**	**285**	Pn	**Pn**	**09 48 22.7**	**-0.4**
	10.0nm,0.3s,baz=159,slow=8.6,SNR=2.4						
HNR				Sn	**Sn**	**09 49 20.5**	**+1.6**
	12nm,0.3s,baz=206,slow=22,SNR=1.6						
MARNC	**Mare, Loyalty**	**11.10**	**164**	*e*Pn	**Pn**	**09 49 47.9**	**+0.1**
DZM	**Mont Dzumac**	**11.35**	**172**	Pn	**Pn**	**09 49 51.7**	**+0.3**
	6.9nm,0.3s,baz=52,slow=15,SNR=34						
DZM				Sn	Sn	09 51 46.6	-11
	0.1nm,0.3s,baz=81,slow=23,SNR=1.3						
ONTNC	**Ouen Toro**	**11.58**	**172**	*e*Pn	**Pn**	**09 49 55.1**	**+0.6**
PINNC	**Pines Island,**	**12.05**	**168**	*e*Pn	**Pn**	**09 50 01.4**	**+0.5**
EIDS	**Eidsvold**	**19.45**	**220**	*e*P	**P**	**09 51 34.2**	**-1.2**
	18nm,1.1s						
CTA	**Charters Tower**	**20.07**	**240**	P	Pn	09 51 43.4	-0.8
	4.0nm,0.8s,baz=59,slow=14,SNR=2.5						
CTAO	**Charters Tower**	**20.07**	**240**	*e*P	**P**	**09 51 42.5**	**+0.2**
	15nm,1.1s						
COEN	**Coen**	**21.31**	**259**	*e*P	**P**	**09 51 54.2**	**-1.5**
	5.1nm,1.0s						
ARMA	**Armidale**	**23.04**	**210**	*e*P	**P**	**09 52 14.2**	**+0.1**
	8.7nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**29.15**	**4**	T	T	10 23 27.3	
	baz=184,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	**29.15**	**4**	T	T	10 23 23.5	
	baz=184,slow=76,SNR=27						
H11S1	**WAKE ISLAND Hy**	**29.16**	**4**	T	T	10 23 45.8	
	baz=184,slow=76,SNR=28						
URZ	**Urewera**	**29.52**	**160**	*e*P	**P**	**09 53 13.6**	**+0.7**
URZ				*e*P	**P**	**09 53 14.2**	**+1.3**
URZ	**Urewera**	**29.52**	**160**	P	**P**	**09 53 13.6**	**+0.7**
	2.7nm,0.5s,baz=270,slow=5.1,SNR=4.6						
STKA	**Stephens Creek**	**29.98**	**222**	*e*P	**P**	**09 53 16.7**	**-0.3**
	1.1nm,0.8s						
STKA	**Stephens Creek**	**29.98**	**222**	P	**P**	**09 53 17.8**	**+0.8**
	3.5nm,0.7s,baz=52,slow=11,SNR=8.5						
H11N1	**WAKE ISLAND Hy**	**30.37**	**4**	T	T	10 24 57.2	
	baz=184,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**30.38**	**4**	T	T	10 24 58.7	
	baz=184,slow=76,SNR=24						
H11N2	**WAKE ISLAND Hy**	**30.39**	**4**	T	T	10 24 58.1	
	baz=184,slow=76,SNR=22						
WR1	**Warramunga Arr**	**30.66**	**249**	*e*P	**P**	**09 53 21.9**	**-1.4**
	4.4nm,1.0s						
WRA	**Warramunga Arr**	**30.66**	**249**	P	**P**	**09 53 21.9**	**-1.4**
	0.7nm,0.6s,baz=80,slow=9.5,SNR=7.0						
ASAR	**Alice Springs**	**32.05**	**242**	P	**P**	**09 53 33.4**	**-2.0**
	0.3nm,0.4s,baz=65,slow=9.9,SNR=8.3						
RPZ	**Rata Peaks**	**33.27**	**172**	P	**P**	**09 53 45.0**	**-0.8**
	6.1nm,0.9s,baz=9.5,slow=6.1,SNR=2.9						
FITZ	**Fitzroy Crossi**	**38.51**	**255**	*e*P	**P**	**09 54 32.6**	**+1.6**
	5.2nm,1.0s						
VNDA	**Vanda**	**66.75**	**181**	P	**P**	**09 58 00.1**	**+1.1**
	5.0nm,1.1s,baz=0.0,slow=4.0,SNR=3.4						
SONA0	**Songino Array**	**77.88**	**324**	*e*P	**P**	**09 59 06.8**	**+0.7**
SONM	**Songino Array**	**77.88**	**324**	P	**P**	**09 59 06.8**	**+0.7**
	1.1nm,0.9s,baz=123,slow=5.5,SNR=5.8						
SONA1	**Songino Array**	**77.88**	**324**	*e*P	**P**	**09 59 06.5**	**+0.4**
ILAR	**Eielson Array**	**83.57**	**19**	P	**P**	**09 59 36.3**	**+0.3**
	1.1nm,0.7s,baz=247,slow=4.9,SNR=14						
NVAR	**Mina Array Bea**	**86.60**	**50**	P	**P**	**09 59 51.4**	**-0.7**
	0.3nm,0.6s,baz=251,slow=5.6,SNR=2.9						
MK32	**Makanchi Array**	**92.66**	**317**	*e*P	**P**	**10 00 20.2**	**0.0**
MKAR	**Makanchi Array**	**92.66**	**317**	P	**P**	**10 00 20.2**	**0.0**
	1.3nm,0.8s,baz=98,slow=5.7,SNR=9.5						
ZALV	**Zalesovo Beam**	**92.77**	**324**	P	**P**	**10 00 19.5**	**-1.0**
	0.5nm,0.5s,baz=100,slow=6.0,SNR=3.4						
ZAA1	**Zalesovo Array**	**92.77**	**324**	*e*P	**P**	**10 00 19.5**	**-1.0**

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*IDC **07** 09:50:05.8±0.4, 11°.04S×164°.85E, h0^{km}, mb4.7/28, mb1 4.8/30, mb1mx4.8/44, mbtmp4.7/30, ML5.2/2, MS4.2/19, Ms1 4.2/19, ms1mx4.0/34, Error ellipse: s-maj=13.7km s-min=11.8km az=99.0*

*ISCJB **07** 09:50:07.6±0.2, 11°.08S±0°.03×164°.77E±0°.03, h19^{km}, mb4.7/107, MS4.3/23, Error ellipse: s-maj=4.7km s-min=3.9km az=135.7*

*NEIC **07** 09:50:09.8±1.5, 11°.04S×164°.81E, h23^{km}±10^{km}, mb4.7/78, Error ellipse: s-maj=4.3km s-min=4.0km az=147.0*

*GCMT **07** 09:50:09.8±0.2, 11°.12S±0°.02×164°.71E±0°.01, h12^{km}, MW5.2/105, Moment Tensor Solution. s54,c63; s105,c177; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.73±.03; $M_{\theta\theta}$0.10±.02; $M_{\phi\phi}$0.63±.02; $M_{r\theta}$-0.12±.06; $M_{\theta\phi}$0.10±.01; $M_{\phi r}$0.30±.05; Best double couple: $M_0$0.75700×10^{17} NP1:ϕ_s179.00000°, δ57.00000°, λ-102.00000°. NP2:ϕ_s20.00000°, δ35.00000°, λ-73.00000°. Principal axes: T 0.7020, Plg11.0000°, Azm278.0000°; N 0.1100, Plg10.0000°, Azm186.0000°; P -0.8120, Plg75.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 09:50:06.1±0.9**, 11°.05S**±0°.05×**164°.87E**±0°.05**, h2^{km}**±5^{km}**, n214, σ1^{s}01**/231**, mb4.7**/107**, MS4.4**/24**, 4D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.11**	**288**	*e*Pn	**Pn**	**09 51 24.7**	**+1.0**
HNR				*e*Pn	**Pn**	**09 51 25.3**	**+1.5**
HNR				*e*Sn	**Sn**	**09 52 22.3**	**-1.0**
HNR	**Honiara**	**5.11**	**288**	Pn	**Pn**	**09 51 24.7**	**+1.0**
	148nm,0.3s,baz=144,slow=7.0,SNR=21						
HNR				Sn	**Sn**	**09 52 22.3**	**-1.0**
	127nm,0.3s,baz=158,slow=22,SNR=9.5						
MARNC	**Mare, Loyalty**	**10.80**	**164**	*e*Pn	**Pn**	**09 52 42.8**	**+0.8**
DZM	**Mont Dzumac**	**11.06**	**172**	*e*Pn	**Pn**	**09 52 46.2**	**+0.6**
	264nm,1.4s						
DZM				*e*LR	LR	09 55 18.2	
	comp=Z,2µm,25.2s						
DZM	**Mont Dzumac**	**11.06**	**172**	*e*Pn	**Pn**	**09 52 45.8**	**+0.3**
DZM				*e*Sn	**Sn**	**09 54 45.9**	**-4.1**
DZM	**Mont Dzumac**	**11.06**	**172**	Pn	**Pn**	**09 52 46.4**	**+0.8**
	9.0nm,0.3s,baz=330,slow=14,SNR=26						
DZM				Sn	**Sn**	**09 54 45.9**	**-4.1**
	1.2nm,0.3s,baz=341,slow=23,SNR=2.2						
DZM				LR	LR	09 56 11.8	
	comp=Z,2µm,19.4s,baz=28,slow=33						
ONTNC	**Ouen Toro**	**11.29**	**172**	*e*Pn	**Pn**	**09 52 49.6**	**+1.0**
PINNC	**Pines Island,**	**11.76**	**168**	*e*Pn	**Pn**	**09 52 56.3**	**+1.3**
TARA	**Tarawa**	**14.70**	**34**	*e*Pn	**Pn**	**09 53 35.5**	**+0.2**
EIDS	**Eidsvold**	**19.32**	**221**	P	**Pn**	**09 54 34.4**	**+0.6**
	baz=19,SNR=4.2						
EIDS	**Eidsvold**	**19.32**	**221**	*e*P	**P**	**09 54 33.1**	**+0.3**
	18nm,1.1s						
MANU	**Manus Island**	**19.54**	**296**	*e*P	**Pn**	**09 54 36.3**	**-0.2**
	86nm,1.1s						
CTA	**Charters Tower**	**20.04**	**241**	P	Pn	09 54 42.2	-0.2
	45nm,0.9s,baz=80,slow=12,SNR=14						
CTA				LR	LR	10 01 08.8	
	comp=Z,727nm,21.6s,baz=53,slow=33						
CTAO	**Charters Tower**	**20.04**	**241**	*e*P	Pn	09 54 42.6	+0.1
	55nm,1.0s						
MTSU	**Mount Surprise**	**21.09**	**248**	P	**P**	**09 54 53.7**	**+1.6**
	baz=21,SNR=62						
COEN	**Coen**	**21.37**	**260**	P	**P**	**09 54 55.7**	**+0.5**
	baz=21,SNR=10						
COEN	**Coen**	**21.37**	**260**	*e*P	**P**	**09 54 55.7**	**+0.5**
	21nm,0.8s						
RMQ	**Roma**	**21.60**	**222**	P	**P**	**09 54 59.1**	**+1.5**
	baz=22,SNR=7.6						
ARMA	**Armidale**	**22.86**	**211**	P	**P**	**09 55 11.7**	**+0.6**
	baz=23,SNR=15						
ARMA	**Armidale**	**22.86**	**211**	*e*P	**P**	**09 55 12.0**	**+0.9**
	33nm,0.8s						
QLP	**Quilpie**	**24.84**	**229**	P	**P**	**09 55 30.8**	**+0.6**
	baz=25,SNR=9.8						
OUZ	**Omahuta**	**25.33**	**163**	*e*P	**P**	**09 55 37.1**	**+2.7**
	24nm,0.8s						
MGCD	**Mangrove Creek**	**25.42**	**208**	P	**P**	**09 55 36.6**	**+1.3**
	baz=26,SNR=5.0						
QIS	**Mount Isa**	**26.05**	**246**	P	**P**	**09 55 41.0**	**-0.2**
	baz=26,SNR=14						
CMSA	**Cobar Meteorol**	**27.02**	**218**	P	**P**	**09 55 50.1**	**+0.3**
	baz=27,SNR=7.5						
CNB	**Canberra Magne**	**27.96**	**208**	P	**P**	**09 55 59.6**	**+1.3**
	baz=28,SNR=5.6						
CAN	**Canberra**	**28.14**	**208**	*e*P	**P**	**09 56 00.8**	**+1.0**
	16nm,1.1s						
MXZ	**Matakaoa Point**	**29.03**	**158**	*e*P	**P**	**09 56 09.0**	**+1.3**
	37nm,0.8s						
URZ	**Urewera**	**29.23**	**160**	*e*P	**P**	**09 56 10.3**	**+0.9**
URZ				*e*P	**P**	**09 56 10.5**	**+1.1**
URZ				*e*PcP	**PcP**	**09 59 15.1**	**-1.6**
URZ	**Urewera**	**29.23**	**160**	P	**P**	**09 56 10.3**	**+0.9**
	4.9nm,0.5s,baz=270,slow=0.8,SNR=8.5						
URZ				PcP	**PcP**	**09 59 15.1**	**-1.6**
	7.9nm,1.0s,baz=104,slow=12,SNR=1.6						
URZ				LR	LR	10 05 00.7	
	comp=Z,451nm,20.8s,baz=336,slow=31						
H11S2	**WAKE ISLAND Hy**	**29.41**	**4**	T	T	10 27 10.2	
	baz=184,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.41**	**4**	T	T	10 27 07.3	
	baz=184,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.43**	**4**	T	T	10 27 08.4	
	baz=184,slow=76,SNR=22						
STKA	**Stephens Creek**	**29.85**	**222**	P	**P**	**09 56 15.8**	**+0.7**
	baz=30,SNR=13						
STKA	**Stephens Creek**	**29.85**	**222**	*e*P	**P**	**09 56 15.7**	**+0.7**
	1.8nm,0.7s						
STKA				PcP	**PcP**	**09 59 18.9**	**+0.5**
STKA	**Stephens Creek**	**29.85**	**222**	P	**P**	**09 56 15.4**	**+0.3**
	7.7nm,0.6s,baz=59,slow=10,SNR=13						
STKA				PcP	**PcP**	**09 59 18.9**	**+0.5**
	4.9nm,0.7s,baz=353,slow=3.8,SNR=6.0						
STKA				LR	LR	10 07 06.2	
	comp=Z,690nm,18.3s,baz=38,slow=34						
BKZ	**Black Stump Fm**	**29.85**	**162**	*e*P	**P**	**09 56 16.0**	**+0.9**
	18nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**30.64**	**4**	T	T	10 28 39.7	
	baz=184,slow=76,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	**30.64**	**4**	T	T	10 28 46.6	
	baz=184,slow=76,SNR=8.2						
H11N2	**WAKE ISLAND Hy**	**30.66**	**4**	T	T	10 28 40.6	
	baz=184,slow=76,SNR=3.4						
WRAB	**Tennant Creek**	**30.66**	**250**	*e*P	**P**	**09 56 21.7**	**-0.7**
	32nm,0.9s						
WB2	**Warramunga Arr**	**30.66**	**250**	*e*P	**P**	**09 56 21.1**	**-1.4**
WB2				*e*P	**P**	**09 56 21.8**	**-0.6**
WR1	**Warramunga Arr**	**30.67**	**250**	*e*P	**P**	**09 56 21.8**	**-0.7**
	44nm,1.1s						
WR1				*e*PcP	**PcP**	**09 59 20.9**	**0.0**
WRA	**Warramunga Arr**	**30.67**	**250**	P	**P**	**09 56 21.8**	**-0.7**
	22nm,0.6s,baz=80,slow=9.1,SNR=79						
WRA				PcP	**PcP**	**09 59 20.9**	**0.0**
	2.1nm,0.5s,baz=75,slow=3.4,SNR=12						
WRA				LR	LR	10 08 36.6	
	comp=Z,1µm,19.1s,baz=70,slow=36						
THZ	**Tophouse**	**31.39**	**168**	*e*P	**P**	**09 56 29.4**	**+0.7**
	19nm,0.8s						
GUMO	**Guam**	**31.51**	**320**	LR	LR	10 09 16.8	
	comp=Z,825nm,18.3s,baz=144,slow=36						
TOO	**Toolangi**	**31.63**	**210**	P	**P**	**09 56 31.5**	**+0.8**
	baz=32,SNR=19						
TOO	**Toolangi**	**31.63**	**210**	*e*P	**P**	**09 56 31.8**	**+1.1**
	18nm,0.7s						
AS01	**Alice Springs**	**31.98**	**243**	*e*P	**P**	**09 56 32.9**	**-1.1**
AS31	**Alice Springs**	**32.02**	**243**	*e*P	**P**	**09 56 33.7**	**-0.7**
	3.7nm,0.8s						
ASAR	**Alice Springs**	**32.02**	**243**	P	**P**	**09 56 33.3**	**-1.1**
	11nm,0.6s,baz=63,slow=9.9,SNR=74						
ASAR				PcP	**PcP**	**09 59 24.4**	**0.0**
	3.6nm,0.7s,baz=60,slow=2.7,SNR=10.0						
ASAR				LR	LR	10 07 50.1	
	comp=Z,971nm,22.0s,baz=68,slow=33						
HTT	**Hallett**	**32.58**	**223**	P	**P**	**09 56 39.1**	**-0.1**
	baz=33,SNR=10.0						
OXZ	**Oxford**	**32.75**	**170**	*e*P	**P**	**09 56 39.9**	**-0.5**
	20nm,0.8s						
RPZ	**Rata Peaks**	**32.98**	**172**	*e*P	**P**	**09 56 42.7**	**+0.2**
RPZ				*e*P	**P**	**09 56 42.9**	**+0.4**
RPZ				*e*PcP	**PcP**	**09 59 26.5**	**-0.1**
RPZ	**Rata Peaks**	**32.98**	**172**	P	**P**	**09 56 42.7**	**+0.2**
	9.4nm,0.6s,baz=283,slow=2.9,SNR=14						
RPZ				PcP	**PcP**	**09 59 26.5**	**-0.1**
	5.0nm,0.9s,baz=79,slow=7.5,SNR=2.3						
RPZ				LR	LR	10 09 19.7	
	comp=Z,740nm,18.9s,baz=356,slow=35						
BBOO	**Buckleboo**	**34.20**	**226**	P	**P**	**09 56 53.3**	**0.0**
	baz=34,SNR=18						
BBOO	**Buckleboo**	**34.20**	**226**	*e*P	**P**	**09 56 53.1**	**-0.2**
	31nm,0.9s						
RAR	**Rarotonga**	**35.36**	**111**	LR	LR	10 08 30.6	
	comp=Z,691nm,21.1s,baz=308,slow=31						
KNRA	**Kununurra**	**35.40**	**259**	P	**P**	**09 57 02.8**	**-1.0**
	baz=36,SNR=10.0						
WRKA	**Warakurna**	**37.31**	**243**	P	**P**	**09 57 19.5**	**-0.7**
	baz=37,SNR=17						
FITZ	**Fitzroy Crossi**	**38.55**	**255**	P	**P**	**09 57 30.0**	**-0.6**
	baz=39,SNR=7.9						
FITZ	**Fitzroy Crossi**	**38.55**	**255**	*e*P	**P**	**09 57 29.8**	**-0.9**
	22nm,0.8s						
FITZ	**Fitzroy Crossi**	**38.55**	**255**	P	**P**	**09 57 29.7**	**-0.9**
	25nm,0.9s,baz=88,slow=6.2,SNR=12						
FORT	**Forrest**	**39.34**	**234**	*e*P	**P**	**09 57 37.3**	**+0.3**
	26nm,0.8s						
BATI	**Baumata**	**40.48**	**267**	P	**P**	**09 57 46.6**	**-0.3**
	13nm,0.4s,baz=79,slow=5.2,SNR=2.9						
EDFI	**Ende, Flores**	**42.57**	**269**	P	P	09 58 16.2	+12
JCJ	**Chichijima**	**43.85**	**330**	LR	LR	10 15 06.2	
	comp=Z,157nm,20.0s,baz=136,slow=34						
MBWA	**Marble Bar**	**44.38**	**251**	*e*P	**P**	**09 58 19.7**	**+1.2**
	18nm,1.0s						
PPT2	**Papeete2**	**44.53**	**104**	*e*S	**S**	**10 04 59.4**	**+2.8**
	401nm,28.5s						
PPT2				*e*LR	LR	10 10 45.8	
	comp=Z,2µm,28.0s,baz=276						
TBI	**Tubuai**	**45.13**	**112**	*e*S	**S**	**10 05 04.6**	**-0.3**
	290nm,31.2s						
TBI				*e*LQ	LQ	10 09 10.8	
	830nm,29.5s						
TBI				*e*LR	LR	10 11 04.4	
	comp=Z,2µm,29.2s,baz=293						
MEEK	**Meekatharra**	**46.17**	**244**	P	**P**	**09 58 33.0**	**+0.3**
	baz=46,SNR=8.5						
KLBR	**Kellerberrin**	**47.98**	**237**	P	**P**	**09 58 46.7**	**-0.1**
	baz=48,SNR=6.7						
NWAO	**Narrogin (SRO)**	**48.75**	**236**	P	**P**	**09 58 53.0**	**+0.4**
	baz=49,SNR=3.6						
NWAO	**Narrogin (SRO)**	**48.75**	**236**	*e*P	**P**	**09 58 52.3**	**-0.3**
NWAO				*e*P	**P**	**09 58 52.7**	**0.0**
NWAO	**Narrogin (SRO)**	**48.75**	**236**	P	**P**	**09 58 52.3**	**-0.3**
	15nm,0.9s,baz=344,slow=7.8,SNR=4.2						
MJAR	**Matsushiro Arr**	**53.59**	**333**	P	**P**	**09 59 28.8**	**-0.1**
	12nm,1.1s,baz=152,slow=7.0,SNR=8.0						
MAJO	**Matsushiro**	**53.59**	**333**	*e*P	**P**	**09 59 28.8**	**-0.1**
TAOE	**Nuku Hiva Isla**	**54.14**	**93**	*e*S	**S**	**10 07 10.5**	**-1.1**
	296nm,27.4s						
TAOE				*e*LR	LR	10 15 03.7	
	comp=Z,793nm,30.1s						
JNU	**Nakatsue**	**54.59**	**325**	*e*P	**P**	**09 59 36.3**	**+0.1**
	32nm,1.1s						
JNU	**Nakatsue**	**54.59**	**325**	P	**P**	**09 59 36.3**	**+0.1**
	14nm,0.8s,baz=250,slow=0.8,SNR=4.8						
JNU				LR	LR	10 20 34.0	
	comp=Z,136nm,19.6s,baz=126,slow=34						
RKT	**Rikitea**	**58.39**	**110**	*e*S	**S**	**10 08 09.7**	**+2.0**
	356nm,32.0s						
RKT				*e*LR	LR	10 17 13.3	
	comp=Z,1µm,28.0s,baz=278						
ASAJ	**Asahikawa**	**58.52**	**341**	P	**P**	**10 00 04.9**	**+0.9**
	16nm,0.5s,baz=209,slow=7.1,SNR=24						
KSRS	**Korea Array**	**59.40**	**326**	P	**P**	**10 00 10.3**	**0.0**
	4.3nm,0.9s,baz=127,slow=7.0,SNR=7.6						
KSRS				LR	LR	10 23 46.6	
	comp=Z,113nm,19.8s,baz=110,slow=34						
KSAR	**Wonju Array Be**	**59.41**	**326**	P	**P**	**10 00 10.3**	**-0.1**
KS01	**Wonju Array Si**	**59.43**	**326**	*e*P	**P**	**10 00 11.2**	**+0.7**
NJ2	**Nanjing**	**61.42**	**316**	*e*P	**P**	**10 00 24.4**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
QIZ	**Qiongzhong**	**61.93**	**299**	P	**P**	**10 00 29.3**	**+1.4**
QIZ				S	**S**	**10 08 52.7**	**-0.5**
QIZ				LR	LR		
	comp=N,200nm,21.6s						
QIZ				LR	LR		
	comp=E,300nm,22.6s						
QIZ				LR	LR		
	comp=Z,450nm,24.5s						
USRK	**Ussuriysk Ar.**	**62.57**	**334**	P	**P**	**10 00 32.5**	**+0.8**
	comp=Z,5.9nm,0.6s,baz=128,slow=5.6,SNR=19						
USRK				LR	LR	10 25 30.4	
	comp=Z,165nm,21.3s,baz=140,slow=34						
PETK	**Petropavlovsk-**	**64.20**	**355**	P	**P**	**10 00 42.4**	**+0.1**
	comp=Z,6.2nm,0.7s,baz=170,slow=10,SNR=7.9						
PETK				LR	LR	10 26 35.8	
	comp=Z,79nm,18.3s,baz=156,slow=34						
PEA1	**Petropavlovsk-**	**64.20**	**355**	*e*P	**P**	**10 00 42.4**	**+0.1**
VNDA	**Vanda**	**66.47**	**181**	P	**P**	**10 00 57.4**	**+0.6**
	comp=Z,11nm,1.1s,baz=7.3,slow=6.4,SNR=3.9						
VNDA				PP	**PP**	**10 03 27.7**	**+4.7**
	comp=Z,12nm,1.2s,baz=16,slow=4.0,SNR=3.4						
VNDA				LR	LR	10 27 08.6	
	comp=Z,140nm,19.4s,baz=244,slow=33						
KLR	**Kul'dur**	**66.72**	**337**	LR	LR	10 26 55.0	
	comp=Z,92nm,21.2s,baz=160,slow=33						
PSI	**Prapat**	**67.02**	**278**	P	**P**	**10 01 00.8**	**-0.7**
	comp=Z,6.0nm,0.8s,baz=178,slow=3.1,SNR=4.6						
ENH	**Enshi**	**67.24**	**309**	*e*P	**P**	**10 01 02.0**	**-0.5**
	comp=Z,18nm,0.9s						
GYA	**Guiyang**	**67.71**	**305**	P	**P**	**10 01 05.9**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PBKT	**Sadao Pong**	**68.89**	**293**	*e*P	**P**	**10 01 14.3**	**+1.3**
XAN	**Xi'an**	**69.49**	**313**	P	**P**	**10 01 16.4**	**-0.1**
XAN				pP	pwP	10 01 25.7	+3.5
XAN				sP	PcP	10 01 30.4	-9.4
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
XAN				LR	LR		
	comp=N,210nm,21.7s						
XAN				LR	LR		
	comp=E,250nm,21.7s						
XAN				LR	LR		
	comp=Z,360nm,24.9s						
XAN	**Xi'an**	**69.49**	**313**	*e*P	**P**	**10 01 16.7**	**+0.1**
	comp=Z,13nm,0.8s						
KMI	**Kunming**	**70.39**	**302**	P	**P**	**10 01 23.8**	**+1.3**
KMI				sP	pwP	10 01 31.7	+3.6
KMI				S	**S**	**10 10 38.5**	**+1.9**
KMI				pmax	pmax		
	comp=Z,14nm,1.9s						
KMI				pmax	pmax		
	comp=Z,210nm,5.2s						
KMI				LR	LR		
	comp=N,230nm,19.7s						
KMI				LR	LR		
	comp=E,230nm,20.8s						
KMI				LR	LR		
	comp=Z,400nm,23.7s						
HHC	**Hu-ho-hao-te**	**71.28**	**320**	*e*P	**P**	**10 01 29.5**	**+2.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,6.4s						
CM01	**Chiang Mai Arr**	**71.30**	**294**	*e*P	**P**	**10 01 28.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**71.33**	**294**	P	**P**	**10 01 28.4**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=120,slow=4.1,SNR=10						
CMAR				LR	LR	10 32 24.0	
	comp=Z,83nm,19.5s,baz=105,slow=36						
CD2	**Chengdu**	**71.92**	**308**	⇓P	**P**	**10 01 32.0**	**+0.5**
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
HIA	**Hailar**	**71.95**	**331**	*e*P	**P**	**10 01 32.2**	**+1.1**
	comp=Z,19nm,1.1s						
LZH	**Lanzhou**	**74.13**	**313**	*e*P	**P**	**10 01 45.7**	**+1.2**
LZH				pP	pwP	10 01 50.1	-0.1
LZH				sP	PcP	10 01 52.0	-7.7
LZH				PP	**PP**	**10 04 30.5**	**+0.3**
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
LZH				pmax	pmax		
	comp=Z,98nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,16.6s						
LZH				LR	LR		
	comp=E,260nm,16.0s						
LZH				LR	LR		
	comp=Z,240nm,17.8s						
SONA0	**Songino Array**	**78.17**	**324**	*e*P	**P**	**10 02 07.5**	**+0.3**
SONM	**Songino Array**	**78.17**	**324**	P	**P**	**10 02 07.5**	**+0.3**
	comp=Z,3.4nm,0.7s,baz=146,slow=4.6,SNR=17						
SONM				LR	LR	10 36 00.9	
	comp=Z,248nm,19.7s,baz=146,slow=35						
SONA1	**Songino Array**	**78.17**	**324**	*e*P	**P**	**10 02 07.4**	**+0.2**
GTA	**Gaotai**	**78.44**	**314**	⇓P	**P**	**10 02 09.8**	**+0.8**
GTA				pP	pwP	10 02 15.9	+1.3
GTA				sP	PcP	10 02 19.1	+0.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.7s						
GTA				pmax	pmax		

	comp=Z,160nm,5.9s						
GTA				LR	LR		
	comp=N,200nm,18.1s						
GTA				LR	LR		
	comp=E,360nm,19.7s						
GTA				LR	LR		
	comp=Z,340nm,18.4s						
ANM	Nome	78.68	13	*e*P	P	10 02 10.5	+0.9
	comp=Z,4.7nm,1.1s						
BILL	Bilibino	78.89	1	*e*P	P	10 02 10.7	+0.1
	comp=Z,9.1nm,1.0s						
QSPA	South Pole Qui	78.95	180	*e*P	P	10 02 11.7	+0.4
	comp=Z,25nm,0.8s						
CAST	Castle Rocks	81.22	18	*e*P	P	10 02 23.7	+0.3
	comp=Z,4.1nm,0.8s						
RDOG	Red Dog Mine	82.20	12	*e*P	P	10 02 29.3	+0.9
	comp=Z,9.1nm,0.7s						
IM3	Indian Mountai	82.67	16	*e*P	P	10 02 30.9	0.0
MLY	Manley	82.80	17	*e*P	P	10 02 32.2	+0.5
	comp=Z,2.1nm,1.0s						
WRH	Wood River Hil	83.21	19	*e*P	P	10 02 33.0	-0.7
	comp=Z,3.8nm,0.9s						
MDM	Murphy Dome	83.50	18	*e*P	P	10 02 34.5	-0.8
	comp=Z,7.1nm,1.0s						
HDA	Harding Lake	83.53	19	*e*P	P	10 02 34.1	-1.3
	comp=Z,9.8nm,0.9s						
COLA	College	83.56	18	*e*P	P	10 02 34.7	-0.8
	comp=Z,7.1nm,0.8s						
IL1	Eielson Array	83.80	19	*e*P	P	10 02 34.7	-2.0
ILAR	Eielson Array	83.80	19	P	P	10 02 36.2	-0.5
	comp=Z,2.4nm,0.7s,baz=237,slow=4.4,SNR=20						
ILAR				LR	LR	10 39 15.5	
	comp=Z,63nm,19.0s,baz=222,slow=35						
ILB	Eielson Array	83.80	19	*e*P	P	10 02 36.5	-0.2
SCRK	Sand Creek	84.22	20	*e*P	P	10 02 39.5	+0.4
	comp=Z,4.9nm,1.0s						
ORV	Oroville	84.66	48	*e*P	P	10 02 41.8	+0.1
	comp=Z,4.1nm,1.1s						
AFDM	Forest Hills D	84.85	49	*e*P	P	10 02 43.0	+0.3
	comp=Z,2.7nm,0.9s						
CMB	Columbia Colle	85.00	50	*e*P	P	10 02 43.5	0.0
	comp=Z,3.5nm,1.0s						
MWC	Mount Wilson	85.68	54	*e*P	P	10 02 47.5	+0.3
	comp=Z,7.0nm,1.0s						
WAKR	Walker	85.86	50	*e*P	P	10 02 49.3	+1.3
	comp=Z,4.4nm,1.1s						
MDPB	Devils Postpil	85.87	51	*e*P	P	10 02 48.4	+0.3
	comp=Z,3.2nm,0.9s						
DAWY	Dawson	85.88	21	*e*P	P	10 02 47.8	+0.5
	comp=Z,4.8nm,1.1s						
OMMB	Old Mammoth Mi	85.92	51	*e*P	P	10 02 48.8	+0.3
	comp=Z,4.4nm,1.2s						
TIXI	Tiksi	85.94	349	*e*P	P	10 02 46.9	-0.4
	comp=Z,2.7nm,0.8s						
PAHR	Pah Rah Range	86.26	49	*e*P	P	10 02 50.8	+0.9
	comp=Z,2.6nm,1.2s						
RYN	Ryan	86.58	50	*e*P	P	10 02 51.7	+0.1
	comp=Z,2.7nm,1.0s						
NV01	Mina Array Sit	86.69	50	*e*P	P	10 02 51.9	-0.3
NVAR	Mina Array Bea	86.69	50	P	P	10 02 51.9	-0.2
	comp=Z,3.6nm,1.1s,baz=226,slow=7.0,SNR=13						
NVAR				PKKPbc	PKKPbc	10 20 49.2	+0.6
	comp=Z,0.5nm,0.6s,baz=108,slow=2.9,SNR=4.2						
NV11	Mina Array Sit	86.80	50	*e*P	P	10 02 52.9	+0.3
	comp=Z,0.5nm,1.1s						
KVN	Kaiserville	87.02	49	*e*P	P	10 02 53.8	+0.1
	comp=Z,1.7nm,0.9s						
WVOR	Wild Horse Val	87.61	46	*e*P	P	10 02 56.8	+0.4
	comp=Z,3.2nm,1.0s						
LDFC	Landfair	88.25	54	*e*P	P	10 03 00.5	+0.9
	comp=Z,9.2nm,1.1s						
WMQ	Urumqi	88.49	315	*e*P	P	10 03 01.8	+1.3
WMQ				pP	pwP	10 03 06.5	+0.4
WMQ				sP	PcP	10 03 09.8	+7.7
WMQ				pmax	pmax		
	comp=Z,28nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,360nm,3.6s						
WMQ				LR	LR		
	comp=N,280nm,23.9s						
WMQ				LR	LR		
	comp=E,320nm,21.9s						
WMQ				LR	LR		
	comp=Z,430nm,31.9s						
SHPR	Sheep Range	88.57	53	*e*P	P	10 03 02.0	+0.8
	comp=Z,1.9nm,1.2s						
R11A	Troy Canyon, C	88.72	51	*e*P	P	10 03 00.9	-0.9
	comp=Z,1.4nm,1.1s						
113A	Mohawk Valley,	88.76	56	*e*P	P	10 03 02.5	+0.5
	comp=Z,3.4nm,1.1s						
W13A	Hualapai Mount	89.23	54	*e*P	P	10 03 05.0	+0.7
	comp=Z,1.0nm,0.8s						
ELK	Elko	89.59	48	P	P	10 03 05.8	-0.2
	comp=Z,2.4nm,1.1s,baz=234,slow=4.9,SNR=6.1						
Y14A	Wickenburg	89.66	55	*e*P	P	10 03 06.8	+0.6
	comp=Z,1.4nm,1.1s						
PSUT	Pine Spring	90.08	51	*e*P	P	10 03 08.9	+0.7
	comp=Z,6.0nm,1.2s						
LCMT	Little Creek M	90.19	52	*e*P	P	10 03 07.8	-0.9
	comp=Z,4.7nm,1.2s						
CCUT	Cedar City	90.22	52	*e*P	P	10 03 09.9	+1.0
	comp=Z,4.8nm,1.2s						
SZCU	Shurtz Canyon	90.45	52	*e*P	P	10 03 10.9	+0.9
	comp=Z,2.7nm,1.1s						
KNB	Kanab	90.52	52	*e*P	P	10 03 11.3	+1.0
	comp=Z,3.7nm,1.2s						
U15A	North Rim	90.80	53	*e*P	P	10 03 12.7	+0.9
	comp=Z,3.0nm,0.8s						
HLID	Hailey	90.90	46	*e*P	P	10 03 12.6	+0.7
	comp=Z,2.9nm,1.1s						
PKCU	Pink Cliffs	91.01	52	*e*P	P	10 03 14.3	+1.5
	comp=Z,2.9nm,1.2s						
X16A	Lo Mia Camp, P	91.03	55	*e*P	P	10 03 13.8	+1.1
	comp=Z,3.7nm,1.1s						
TCRU	Three Creeks R	91.17	51	*e*P	P	10 03 14.8	+1.4
	comp=Z,8.3nm,1.1s						
MTPU	Mount Pierson	91.24	52	*e*P	P	10 03 15.3	+1.5
	comp=Z,5.4nm,1.2s						
DUG	Dugway, Tooele	91.26	49	*e*P	P	10 03 14.1	+0.5
	comp=Z,2.5nm,1.0s						
BGU	Big Grassy Mou	91.27	49	*e*P	P	10 03 14.1	+0.5
	comp=Z,1.4nm,0.8s						
WUAZ	Wupatki	91.32	54	*e*P	P	10 03 15.1	+1.0
	comp=Z,4.3nm,1.1s						
MSU	Marysvale	91.36	51	*e*P	P	10 03 15.5	+1.3
SYO	Syowa Base	91.53	197⇓	*e*P	P	10 03 12.4	-1.7
SYO	Syowa Base	91.53	197⇓	*e*PcP	PcP	10 03 15.6	+0.6
HVU	Hansel Valley	91.65	48	*e*P	P	10 03 16.1	+0.7
	comp=Z,6.5nm,1.1s						
NLU	North Lily Min	91.75	50	*e*P	P	10 03 16.9	+0.8
	comp=Z,3.2nm,1.2s						
SPUT	South Promonto	91.78	48	*e*P	P	10 03 17.1	+1.1
	comp=Z,2.1nm,0.9s						
MPU	Maple Canyon	92.10	50	*e*P	P	10 03 18.5	+0.9
	comp=Z,3.4nm,1.1s						
Q16A	Castle Valley	92.21	51	*e*P	P	10 03 18.3	+0.2
	comp=Z,2.1nm,1.2s						
DLMT	Dillon	92.59	44	*e*P	P	10 03 19.6	0.0
	comp=Z,6.3nm,1.0s						
MK32	Makanchi Array	92.94	317	*e*P	P	10 03 20.8	-0.3
MKAR	Makanchi Array	92.94	317	P	P	10 03 20.8	-0.3
	comp=Z,1.0nm,0.7s,baz=183,slow=8.4,SNR=5.6						
MKAR				PKKPbc	PKKPdf	10 20 30.9	-0.6
	comp=Z,0.6nm,0.7s,baz=302,slow=2.6,SNR=6.0						
ZAA0	Zalesovo Array	93.06	324	*e*P	P	10 03 20.1	-1.3
	comp=Z,6.9nm,1.1s						
ZALV	Zalesovo Beam	93.06	324	*e*P	P	10 03 19.8	-1.6
ZALV	Zalesovo Beam	93.06	324	P	P	10 03 20.0	-1.4
	comp=Z,1.6nm,0.7s,baz=80,slow=1.8,SNR=9.4						
ZAA1	Zalesovo Array	93.06	324	*e*P	P	10 03 20.0	-1.4
MAKZ	Makanchi	93.15	317	*e*P	P	10 03 21.4	-0.6
	comp=Z,11nm,1.1s						
BOZ	Bozeman (W)	93.30	44	*e*P	P	10 03 23.6	+0.6
	comp=Z,3.6nm,1.1s						
PDAR	Pinedale Array	94.19	47	*e*P	P	10 03 25.5	-1.7
PDAR	Pinedale Array	94.19	47	P	P	10 03 26.4	-0.8
	comp=Z,1.4nm,1.1s,baz=272,slow=4.0,SNR=5.5						
PDAR				PKKP	PKKPdf	10 20 28.6	-0.9
	comp=Z,0.4nm,0.7s,baz=72,slow=5.9,SNR=4.5						
YKA	Yellowknife Ar	95.38	27	P	P	10 03 30.2	-1.6
	comp=Z,0.3nm,0.7s,baz=258,slow=4.9,SNR=6.3						
YKB5	Yellowknife Ar	95.38	27	*e*P	P	10 03 29.2	-2.7
NRIK	Noril'sk	95.83	340	P	P	10 03 31.8	-2.0
	comp=Z,0.9nm,0.3s,baz=124,slow=6.3,SNR=5.2						
LTX	Lajitas	96.59	61	*e*P	P	10 03 39.8	+1.5
TXAR	Lajitas Array	96.59	61	P	P	10 03 39.8	+1.5
	comp=Z,0.2nm,0.7s,baz=238,slow=5.2,SNR=2.4						
TXAR				PKKP	PKKPbc	10 20 23.1	+0.4
	comp=Z,0.3nm,0.6s,baz=97,slow=4.6,SNR=5.7						
ARA0	ARCESS Array S	116.12	345	*e*PKPdf	PKiKP	10 08 49.9	-0.7
ARCES	ARCESS Array B	116.12	345	PKP	PKiKP	10 08 49.9	-0.7
	comp=Z,2.0nm,0.7s,baz=62,slow=1.9,SNR=13						
FIA0	FINESS Array S	121.46	338	*e*PKPdf	PKPdf	10 09 00.4	-0.6
FINES	FINESS Array B	121.46	338	PKP	PKPdf	10 09 00.4	-0.6
	comp=Z,0.7nm,0.5s,baz=18,slow=2.4,SNR=5.4						
BOSA	Boshof	124.52	224	*e*PKPdf	PKPdf	10 09 07.6	-0.5
BOSA				*e*PKPdf	PKPdf	10 09 07.9	-0.2
BOSA	Boshof	124.52	224	PKP	PKPdf	10 09 07.9	-0.2
	comp=Z,3.3nm,0.5s,baz=142,slow=2.6,SNR=14						
CPUP	Villa Florida	124.66	133	PKP	PKPdf	10 09 07.9	-0.3
	comp=Z,2.4nm,0.6s,baz=31,slow=0.7,SNR=6.1						
SDV	Santo Domingo	125.36	87	*e*PKPdf	PKPdf	10 09 08.9	-1.2
SDV	Santo Domingo	125.36	87	PKP	PKPdf	10 09 09.4	-0.7
	comp=Z,8.6nm,0.7s,baz=274,slow=6.6,SNR=10						
AKASG	Malin Array Be	126.40	326	PKP	PKPdf	10 09 09.9	-0.9
	comp=Z,0.4nm,0.4s,baz=53,slow=2.4,SNR=4.6						
NB200	NORSAR Array S	126.48	344	*e*PKPdf	PKPdf	10 09 10.9	+0.2
NOA	NORSAR Array B	126.48	344	PKP	PKPdf	10 09 10.9	+0.2
	comp=Z,0.6nm,0.8s,baz=35,slow=2.1,SNR=2.4						
KMBO	Kilima Mbogo	126.54	260	PKP	PKPdf	10 09 12.4	-0.1
	comp=Z,0.8nm,0.3s,baz=133,slow=3.6,SNR=3.7						
SIV	San Ignacio	127.19	120	PKP	PKPdf	10 09 12.2	-1.2
	comp=Z,1.9nm,0.6s,baz=291,slow=4.0,SNR=6.2						
BR101	Keskin Array S	128.33	312	*e*PKPdf	PKPdf	10 09 13.9	-1.1
BRTR	Keskin Array B	128.33	312	PKP	PKPdf	10 09 13.9	-1.1
	comp=Z,0.7nm,0.9s,baz=122,slow=4.7,SNR=4.9						
LSZ	Lusaka	129.75	239	*e*PKPdf	PKPdf	10 09 18.2	-0.1
PTGA	Pitinga	133.92	102	*e*PKPdf	PKPdf	10 09 26.5	+0.3
PTGA	Pitinga	133.92	102	PKP	PKPdf	10 09 26.1	-0.1
	comp=Z,2.2nm,0.5s,baz=312,slow=22,SNR=10						
GEC2	GERESS Array S	135.32	333	*e*PKPdf	PKiKP	10 09 29.0	-0.4
GERES	GERESS Array B	135.32	333	PKP	PKiKP	10 09 29.0	-0.4
	comp=Z,0.3nm,0.3s,baz=166,slow=0.4,SNR=3.2						
KEST	Kesra	146.90	322	PKPbc	PKPbc	10 09 50.4	-0.5
	comp=Z,11nm,1.0s,baz=358,slow=5.1,SNR=3.1						
ES19	SONSECA Array	149.78	343	*e*PKPbc	PKPbc	10 09 58.4	+0.1
ESDC	Sonseca Array	149.82	343	PKPbc	PKPbc	10 09 57.5	-0.9
	comp=Z,0.6nm,0.5s,baz=27,slow=6.8,SNR=4.1						
ESDC				PKPab	PKPab	10 10 03.7	+0.1
	comp=Z,1.6nm,0.6s,baz=17,slow=3.7,SNR=6.8						
TOA0	Torodi Ar. Sit	163.42	279	*e*PKPdf	PKPdf	10 10 11.6	-0.1
TORD	Torodi Ar. Bea	163.42	279	PKP	PKPdf	10 10 11.2	-0.5
	comp=Z,2.9nm,1.2s,baz=101,slow=3.5,SNR=7.9						
TORD				PKPab	sPKPab	10 11 00.4	-0.6
	comp=Z,0.5nm,0.8s,baz=67,slow=3.7,SNR=2.3						
TOA1	Torodi Ar. Sit	163.42	279	*e*PKPdf	PKPdf	10 10 11.2	-0.5
TOA1				*e*PKPab	sPKPab	10 11 00.5	-0.6
DBIC	Dimbokro	168.96	248	PKP	PKPdf	10 10 15.3	-0.8
	comp=Z,5.8nm,1.1s,baz=93,slow=2.9,SNR=3.9						

ISCJB 07 09:56:50.9±0.8, 10°.9S±0°.1×164°.78E±0°.09, h29^{km}, mb3.9/9, Error ellipse: s-maj=17.0km s-min=10.1km az=36.7

IDC 07 09:56:56.0±3.8, 10°.88S×164°.54E, h55^{km}±33^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.7/37, mbtmp4.1/12, ML4.0/3, Error ellipse: s-maj=27.4km s-min=23.5km az=72.0

ISC 07 09:56:52.6±0.9, 10°.8S±0°.1×164°.8E±0°.1, h29^{km}, n19, σ1^s.75/14, mb4.0/9, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.97	286	P	Pn	09 58 06.7	+1.4
	28nm,0.3s,baz=152,slow=7.8,SNR=5.7						
HNR				S	Sn	09 59 04.5	+2.7
	53nm,0.3s,baz=224,slow=3.6,SNR=6.3						
DZM	Mont Dzumac	11.29	172	P	Pn	09 59 33.0	+0.9
	1.5nm,0.3s,baz=55,slow=12,SNR=13						
CTA	Charters Tower	20.08	241	P	P	10 01 21.1	-2.9
	0.1nm,0.3s,baz=82,slow=7.6,SNR=2.2						
H11S2	WAKE ISLAND Hy	29.20	4	T	T	10 33 26.1	
	baz=184,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.20	4	T	T	10 33 17.3	
	baz=184,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	29.22	4	T	T	10 33 19.0	
	baz=184,slow=76,SNR=18						
URZ	Urewera	29.46	160	P	P	10 02 55.9	+2.0
	18nm,1.1s,baz=355,slow=12,SNR=2.3						
STKA	Stephens Creek	29.96	222	P	P	10 02 59.1	+0.6
	2.6nm,0.7s,baz=66,slow=15,SNR=4.9						
H11N1	WAKE ISLAND Hy	30.43	4	T	T	10 34 54.3	
	baz=184,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.43	4	T	T	10 34 53.0	
	baz=184,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.44	4	T	T	10 34 52.8	
	baz=184,slow=76,SNR=12						
WRA	Warramunga Arr	30.68	249	P	P	10 03 03.0	-2.0
	0.4nm,0.4s,baz=79,slow=9.3,SNR=9.2						
ASAR	Alice Springs	32.05	242	P	P	10 03 15.1	-2.1
	0.4nm,0.5s,baz=64,slow=10.0,SNR=11						
CMAR	Chiang Mai Arr	71.17	294	P	P	10 08 08.5	-0.8
	0.5nm,0.3s,baz=120,slow=5.3,SNR=4.3						
SONM	Songino Array	77.94	324	P	P	10 08 47.5	-0.7
	0.5nm,0.8s,baz=136,slow=5.8,SNR=2.2						
ILAR	Eielson Array	83.61	19	P	P	10 09 18.3	+0.3
	0.5nm,0.7s,baz=241,slow=5.3,SNR=7.9						
MKAR	Makanchi Array	92.73	317	P	P	10 10 01.9	-0.3
	0.7nm,0.8s,baz=93,slow=7.3,SNR=5.3						
ZALV	Zalesovo Beam	92.84	324	P	P	10 10 02.9	+0.5
	0.2nm,0.3s,baz=90,slow=5.8,SNR=2.0						
BRTR	Keskin Array B	128.13	312	PKP	PKPdf	10 15 55.7	-0.9
	0.3nm,0.6s,baz=90,slow=1.4,SNR=2.7						

IDC 07 10:05:12.0±1.3, 10°.93S×164°.79E, h0^{km}, mb3.9/5, mb1 4.2/6, mb1mx3.8/41, mbtmp4.0/6, ML4.0/1, MS4.3/1, Ms1 4.3/1, ms1mx3.1/34, Error ellipse: s-maj=43.3km s-min=25.9km az=116.0

ISCJB 07 10:05:14.3±1.1, 11°.1S±0°.1×164°.8E±0°.2, h31^{km}, mb4.0/5, MS4.3/1, Error ellipse: s-maj=30.2km s-min=17.6km az=176.4

ISC 07 10:05:16.4±1.1, 11°.0S±0°.1×164°.9E±0°.3, h31^{km}, n7, σ0^s.66/8, mb4.1/5, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.09	172	Pn	Pn	10 07 53.0	0.0
	1.1nm,0.3s,baz=331,slow=20,SNR=9.9						
WRA	Warramunga Arr	30.66	249	P	P	10 11 28.2	-0.2
	3.2nm,0.9s,baz=77,slow=8.9,SNR=23						
WRA				PcP	PcP	10 14 26.2	-0.1
	0.3nm,0.7s,baz=72,slow=3.1,SNR=3.3						
ASAR	Alice Springs	32.02	243	P	P	10 11 39.8	-0.5
	1.7nm,0.6s,baz=63,slow=10,SNR=22						
ASAR				PcP	PcP	10 14 30.9	+1.1
	0.7nm,0.8s,baz=86,slow=1.7,SNR=6.0						
JHJ	Hachijo jima 2	49.98	332	LR	LR	10 30 32.1	
	comp=Z,316nm,20.9s,baz=112,slow=30						
MJAR	Matsushiro Arr	53.55	333	P	P	10 14 34.4	0.0
	2.3nm,0.8s,baz=156,slow=7.9,SNR=4.5						
ILAR	Eielson Array	83.78	19	P	P	10 17 41.6	-0.6
	0.4nm,0.8s,baz=232,slow=4.4,SNR=3.9						
MKAR	Makanchi Array	92.91	317	P	P	10 18 27.1	+0.6
	0.2nm,0.5s,baz=123,slow=5.3,SNR=3.1						

IDC 07 10:05:47.7±2.3, 15°.97S×71°.37W, h93^{km}±25^{km}, mb3.3/3, mb1 3.5/6, mb1mx3.3/36, mbtmp3.7/6, Error ellipse: s-maj=38.4km s-min=19.5km az=50.0

ISCJB 07 10:05:50.1±1.0, 16°.09S±0°.09×71°.2W±0°.2, h133^{km}, mb3.2/3, Error ellipse: s-maj=24.1km s-min=11.1km az=162.4

ISC 07 10:05:51.4±1.1, 16°.1S±0°.1×71°.2W±0°.2, h133^{km}, n7, σ1^s.50/7, mb3.4/3, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	6.80	162	P	Pn	10 07 27.4	-1.6
	2.9nm,0.3s,baz=344,slow=9.0,SNR=21						
LVC				S	Sn	10 08 47.2	+1.9
	0.3nm,0.3s,baz=98,slow=14,SNR=1.6						
NNA	Nana	6.84	306	P	Pn	10 07 21.4	-8.0
	1.4nm,0.3s,baz=165,slow=12,SNR=3.8						
SIV	San Ignacio	9.74	91	P	Pn	10 08 07.9	-0.5
	0.2nm,0.3s,baz=281,slow=15,SNR=4.5						
TXAR	Lajitas Array	55.00	325	P	P	10 15 09.7	+0.4
	0.5nm,0.9s,baz=150,slow=5.2,SNR=3.7						
TORD	Torodi Ar. Bea	77.71	72	P	P	10 17 35.4	+1.4
	0.3nm,0.4s,baz=265,slow=5.6,SNR=4.2						
YKA	Yellowknife Ar	85.43	341	P	P	10 18 13.4	-0.2
	0.4nm,0.8s,baz=136,slow=4.9,SNR=8.2						
SONM	Songino Array	148.32	3	PKPbc	PKPbc	10 25 21.4	-0.8
	0.2nm,0.4s,baz=332,slow=3.4,SNR=3.2						

IDC 07 10:10:30.2±1.5, 11°.02S×164°.93E, h0^{km}, mb3.9/5, mb1 4.2/7, mb1mx3.8/42, mbtmp4.1/7, ML4.1/2, MS3.3/2, Ms1 3.3/2, ms1mx3.0/31, Error ellipse: s-maj=38.5km s-min=25.6km az=125.0

ISCJB 07 10:10:33.4±1.1, 11°.1S±0°.1×164°.8E±0°.1, h31^{km}, mb3.9/4, MS3.3/1, Error ellipse: s-maj=20.3km s-min=11.6km az=36.5

ISC 07 10:10:35.1±1.2, 11°.1S±0°.1×164°.9E±0°.1, h31^{km}, n8, σ0^s.60/8, mb3.9/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.09	288	Pn	Pn	10 11 50.2	+0.8
	18nm,0.3s,baz=135,slow=2.9,SNR=4.6						
HNR				Sn	Sn	10 12 46.4	-0.8
	5.2nm,0.3s,baz=180,slow=20,SNR=3.1						
HNR				LR	LR	10 14 06.3	
	comp=Z,242nm,18.2s,baz=112,slow=42						
DZM	Mont Dzumac	11.05	172	Pn	Pn	10 13 11.2	0.0
	0.5nm,0.3s,baz=348,slow=13,SNR=9.3						
CTA	Charters Tower	20.01	241	P	Pn	10 15 07.5	+0.1
	2.6nm,0.4s,baz=66,slow=11,SNR=7.3						
WRA	Warramunga Arr	30.65	250	P	P	10 16 46.5	-0.6
	2.0nm,0.8s,baz=81,slow=9.2,SNR=12						
GUMO	Guam	31.51	321	LR	LR	10 29 30.8	
	comp=Z,67nm,20.1s,baz=142,slow=36						
ASAR	Alice Springs	32.00	243	P	P	10 16 58.9	0.0
	2.2nm,0.5s,baz=63,slow=10,SNR=44						
SONM	Songino Array	78.17	324	P	P	10 22 31.9	+0.3
	0.2nm,0.4s,baz=130,slow=4.5,SNR=3.4						
ILAR	Eielson Array	83.82	19	P	P	10 23 00.8	-0.4
	0.5nm,0.8s,baz=236,slow=5.0,SNR=6.7						

TEH 07 10:13:02.4, 30°.85N×50°.06E, h7^{km}, ML3.5

ISCJB 07 10:13:04.0±1.5, 30°.9N±0°.1×49°.99E±0°.09, h10^{km}, Error ellipse: s-maj=17.8km s-min=6.6km az=32.5

THR 07 10:13:04.9, 30°.79N×49°.92E, h46^{km}, ML3.3

ISC 07 10:13:03.1±1.8, 30°.9N±0°.1×50°.08E±0°.08, h10^{km}, n16, σ1^s.33/17, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLNJ	Kolanjah	1.31	83	*e*Pg	Pg	10 13 27.8	-0.5
ZNGN	Zangian	1.41	28	*e*Pn	Pb	10 13 29.3	-0.5
SHGR	Shooshtar-Gavs	1.65	319	*e*AML	AML	10 13 58.4	
	comp=N,417nm,0.6s						
SHGR				*e*Pg	Pg	10 13 34.3	-0.6
SHGR				*e*Sg	Sg	10 13 56.2	-0.1
SHGR				*e*AML	AML	10 14 00.5	
	comp=E,308nm,0.3s						
ROKH	ROKH	1.69	29	*e*Pn	Pb	10 13 34.1	-0.3
ROKH				IAMB	IAmb	10 13 34.7	
	comp=Z,0.0nm,0.2s						
IKAZ	Kazeroun	1.87	125	*e*Pn	Pg	10 13 38.4	-0.6
IKAZ				IAMB	IAmb	10 14 09.8	
	comp=Z,7µm,0.4s						
IPIR	Pirpir	1.94	21	*e*Pn	Pb	10 13 38.4	-0.4
IPIR				IAMB	IAmb	10 13 40.0	
	comp=Z,2µm,0.2s						
IRAM	Ramesheh	2.18	64	*e*Pn	Pb	10 13 41.7	-1.2
IRAM				IAMB	IAmb	10 13 42.9	
	comp=Z,2µm,0.2s						
IGAR	Gharneh	2.27	47	*e*Pn	Pb	10 13 43.4	-1.0
IGAR				IAMB	IAmb	10 13 44.5	
	comp=N,2µm,0.2s						
IKLH	Kolahrood	2.76	27	*e*Pn	Pb	10 13 50.2	-2.5
IKLH				IAMB	IAmb	10 13 52.3	
	comp=Z,1µm,0.2s						
IZEF	Zefreh	2.78	43	*e*Pn	Pn	10 13 49.8	+1.7
IZEF				IAMB	IAmb	10 13 51.0	
	comp=Z,791nm,0.1s						
ASAO	Ashtian	3.67	359	*e*Pn	Pn	10 14 01.7	+1.5
ASAO	Ashtian	3.67	359	*e*Pn	Pn	10 14 01.7	+1.5
ANAR	Anarak	3.87	52	*e*Pn	Pn	10 14 04.2	+1.4
ICHK	Chekchek	3.94	68	IAMB	IAmb	10 14 06.0	
	comp=Z,1µm,0.3s						
ICHK				*e*Pn	Pn	10 14 05.7	+1.8
IFIR	Firoozkooh	5.26	24	*e*Pn	Pn	10 14 23.3	+1.2
IFIR				IAMB	IAmb	10 14 24.6	
	comp=Z,343nm,0.2s						
ISHM	Shahmirzad	5.61	28	*e*Pn	Pn	10 14 28.1	+1.2
ISHM				IAMB	IAmb	10 14 29.8	
	comp=Z,536nm,0.2s						

IDC 07 10:13:12.2±1.8, 11°.19S×165°.20E, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.5/39, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=51.9km s-min=32.0km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.89	174	Pn	Pn	10 15 50.5	+1.0
	0.3nm,0.3s,baz=207,slow=18,SNR=8.6						
WRA	Warramunga Arr	30.93	250	P	P	10 19 31.2	0.0
	0.4nm,0.5s,baz=81,slow=8.9,SNR=5.2						
ASAR	Alice Springs	32.25	243	P	P	10 19 42.5	-0.3
	0.5nm,0.9s,baz=82,slow=7.9,SNR=3.6						
ILAR	Eielson Array	83.82	19	P	P	10 25 43.2	-0.1
	0.5nm,0.8s,baz=234,slow=5.4,SNR=5.7						

IDC 07 10:14:55.2±0.8, 37°.67N×143°.80E, h0^{km}, mb3.7/13, mb1 3.9/17, mb1mx3.8/50, mbtmp3.8/17, ML3.8/3, Error ellipse: s-maj=20.8km s-min=16.3km az=104.0

ISCJB 07 10:14:56.7±0.5, 37°.76N±0°.04×143°.58E±0°.04, h19^{km}, mb3.8/12, Error ellipse: s-maj=5.4km s-min=4.9km az=156.1

JMA 07 10:14:59.7±0.1, 37°.88N×143°.54E, h41^{km}, M3.9

ISC 07 10:14:58.0±0.7, 37°.76N±0°.05×143°.67E±0°.07, h19^{km}, n34, σ2^s.12/49, mb3.7/12, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.82	288	P	Pn	10 15 27.7	-0.6
JIKH				S	Sn	10 15 47.8	-3.0
JIO	Ouri	1.95	291	P	Pn	10 15 29.5	-0.6
JIO				*e*S	Sn	10 15 51.5	-2.6
JKMT	Kesennumamotoy	2.02	302	P	Pn	10 15 30.3	-0.7
JKMT				S	Sn	10 15 52.8	-2.9
OFUJ	Ofunato	2.05	311	P	Pn	10 15 30.7	-0.7
OFUJ				*e*S	Sn	10 15 52.9	-3.5
JMK	Ichinoseki	2.26	302	P	Pn	10 15 33.9	-0.4
JMK				*e*S	Sn	10 15 59.6	-2.0
JOM	Ohasama	2.52	313	P	Pn	10 15 37.6	-0.4
JOM				*e*S	Sn	10 16 06.1	-2.1
JFT	Otama	2.65	266	P	Pn	10 15 40.1	+0.4
JFT				S	Sn	10 16 10.1	-1.3
JYK	Kaneyama	2.84	295	P	Pn	10 15 42.8	+0.4
JYK				*e*S	Sn	10 16 15.0	-1.1
JANG	Nango	3.10	328	*e*S	Sn	10 16 18.4	-4.0
JAG	Ashikaga	3.62	250	P	Pn	10 15 53.1	0.0
JAG				*e*S	Sn	10 16 34.0	-1.3
BSO1	Boso 1	3.79	216	P	Pn	10 15 54.5	-0.3
JOT	Ohata	4.14	332	*e*S	Sn	10 16 44.5	-3.6
JRY	Ryogami san	4.20	247	P	Pn	10 16 01.1	+0.1
JRY				*e*S	Sn	10 16 45.7	-3.8
JOD2	Odawara 2	4.45	237	S	Sn	10 16 52.4	-3.3
MJAR	Matsushiro Arr	4.53	256	Pn	Pn	10 16 07.1	+1.6
	0.9nm,0.3s,baz=91,slow=15,SNR=42						
MJAR				Sn	Sn	10 16 57.7	+0.1
	1.0nm,0.3s,baz=94,slow=16,SNR=6.0						
MAT	Matsushiro	4.53	256	P	Pn	10 16 07.7	+2.2
MAT				S	Sn	10 16 56.1	-1.5
JCH	Churui	4.85	357	P	Pn	10 16 08.8	-1.1
JHJ	Hachijo jima 2	5.61	216	Pn	Pn	10 16 19.1	-1.3
	8.6nm,0.3s,baz=342,slow=22,SNR=11						
JHJ				Sn	Sn	10 17 19.4	-4.9
	54nm,0.3s,baz=108,slow=21,SNR=7.1						
ASAJ	Asahikawa	6.40	353	Pn	Pn	10 16 30.6	-0.6
	4.5nm,0.3s,baz=200,slow=9.2,SNR=16						
ASAJ				Sn	Sn	10 17 39.5	-4.2
	1.6nm,0.3s,baz=105,slow=20,SNR=2.4						
JCJ	Chichijima	10.71	187	Pn	Pn	10 17 26.1	-4.2
	3.5nm,0.3s,baz=270,slow=20,SNR=5.1						
JCJ				Sn	Sn	10 19 18.8	-11
	13nm,0.3s,baz=291,slow=20,SNR=7.1						
USRK	Ussuriysk Ar.	10.91	310	Pn	Pn	10 17 35.6	+2.5
	0.1nm,0.3s,baz=170,slow=27,SNR=2.7						
SEY	Seymchan	25.76	9	P	P	10 20 29.0	+1.9
	1.1nm,0.2s,baz=197,slow=19,SNR=2.8						

SONM	Songino Array	28.89	302	P	P	10 20 57.0	+1.4
	0.6nm,0.6s,baz=89,slow=7.4,SNR=3.2						
ZALV	Zalesovo Beam	42.76	312	P	P	10 22 54.7	+0.8
	1.0nm,0.8s,baz=65,slow=5.4,SNR=3.3						
ZALV				PcP	PcP	10 24 45.4	+0.3
	0.8nm,0.5s,baz=90,slow=5.2,SNR=4.2						
MKAR	Makanchi Array	45.26	302	P	P	10 23 15.0	+0.9
	0.6nm,0.6s,baz=92,slow=7.9,SNR=7.3						
KURBB	Kurchatov Arra	46.97	308	P	P	10 23 27.6	+0.2
	1.6nm,0.5s,baz=81,slow=8.2,SNR=9.2						
ILAR	Eielson Array	47.92	33	P	P	10 23 33.1	-1.6
	0.8nm,0.9s,baz=229,slow=5.5,SNR=4.1						
WRA	Warramunga Arr	58.06	190	P	P	10 24 49.5	-0.4
	1.6nm,0.6s,baz=9.8,slow=7.2,SNR=20						
ASAR	Alice Springs	61.79	190	P	P	10 25 15.1	-0.4
	0.3nm,0.5s,baz=14,slow=14,SNR=5.0						
YKA	Yellowknife Ar	62.27	31	P	P	10 25 19.6	+1.4
	0.0nm,0.5s,baz=215,slow=31,SNR=3.8						
FINES	FINESS Array B	69.00	333	P	P	10 26 02.6	+0.9
	0.7nm,0.5s,baz=54,slow=7.1,SNR=3.8						
AKASG	Malin Array Be	74.81	323	P	P	10 26 36.9	+0.1
	0.7nm,0.5s,baz=37,slow=25,SNR=4.1						
PDAR	Pinedale Array	75.87	47	P	P	10 26 43.9	+0.5
	0.4nm,0.7s,baz=241,slow=3.1,SNR=4.4						
BRTR	Keskin Array B	79.70	313	P	P	10 27 07.7	+3.1
	0.5nm,0.7s,baz=31,slow=5.2,SNR=3.3						

IDC 07 10:15:31.7±3.1, 10°.53S×162°.89E, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.5/36, mbtmp3.6/4, Error ellipse: s-maj=184.5km s-min=27.1km az=140.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	29.05	248	P	P	10 21 34.4	+0.4
	1.2nm,0.8s,baz=76,slow=8.9,SNR=7.1						
ASAR	Alice Springs	30.55	241	P	P	10 21 46.8	-0.5
	0.2nm,0.4s,baz=68,slow=10,SNR=3.4						
ILAR	Eielson Array	83.94	19	P	P	10 28 05.0	+1.6
	0.2nm,0.6s,baz=231,slow=5.4,SNR=7.7						
YKA	Yellowknife Ar	95.81	28	P	P	10 28 57.6	-2.1
	0.1nm,0.7s,baz=254,slow=4.4,SNR=3.3						

MEX 07 10:16:33.9±0.3, 27°.46N×111°.39W, h14^{km}, MD3.5, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUYB	Guaymas	0.63	46	*i* P	Pg	10 16 44.4	-1.8
GUYB				*e*S	Sg	10 16 52.6	-2.0
SRIG	Santa Rosalia	0.77	260	*i* P	Pg	10 16 46.5	-2.5
	baz=79,slow=3.4						
SRIG				*e*S	Sg	10 16 56.3	-2.8

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*ISCJB **07** 10:23:26.0±0.2, 10°.67S±0°.04×164°.84E±0°.05, h10^{km}, mb4.7/57, MS4.4/24, Error ellipse: s-maj=6.7km s-min=5.7km az=147.2*

*IDC **07** 10:23:26.0±0.6, 10°.58S×164°.61E, h0^{km}, mb4.4/19, mb1 4.6/20, mb1mx4.6/30, mbtmp4.5/20, ML5.1/1, MS4.4/22, Ms1 4.4/22, ms1mx4.3/34, Error ellipse: s-maj=21.0km s-min=14.3km az=99.0*

*GCMT **07** 10:23:26.7±0.2, 10°.66S±0°.02×164°.93E±0°.01, h12^{km}, MW5.1/97, Moment Tensor Solution. s21,c24; s97,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.56±.13; M$_{\theta\theta}$2.31±.11; M$_{\phi\phi}$-3.87±.11; M$_{r\theta}$-1.95±.37; M$_{\theta\phi}$2.44±.11; M$_{\phi r}$-1.49±.36; Best double couple: M$_0$4.83200×10^{16} NP1:φ$_s$200.00000°, δ71.00000°, λ148.00000°. NP2: φ$_s$302.00000°, δ59.00000°, λ22.00000°. Principal axes: T 4.8430, Plg36.0000°, Azm158.0000°; N -0.0230, Plg53.0000°, Azm353.0000°; P -4.8210, Plg8.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 10:23:27.7±0.2, 10°.59S×164°.88E, h10^{km}, mb4.9/34 Error ellipse: s-maj=6.8km s-min=5.2km az=88.0*

ISC 07 10:23:27.5±0.4, 10°.66S±0°.07×164°.87E±0°.06, h10^{km}, n111, σ1^s.58/99, mb4.8/57, MS4.5/25, 2C-1D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.00	284	*e*Pn	Pn	10 24 43.3	+0.6
HNR				*e*Pn	Pn	10 24 43.9	+1.1
HNR				*e*Sn	Sn	10 25 39.7	-0.9
HNR				*e*Sn	Sn	10 25 41.8	+1.2
HNR	Honiara	5.00	284	Pn	Pn	10 24 43.3	+0.6
	62nm,0.3s,baz=35,slow=4.2,SNR=21						
HNR				Sn	Sn	10 25 39.7	-0.9
	86nm,0.3s,baz=196,slow=20,SNR=4.5						
HNR				LR	LR	10 26 47.1	
	comp=Z,11μm,19.1s,baz=114,slow=42						
MARNC	Mare, Loyalty	11.18	165	*e*Pn	Pn	10 26 07.8	+0.3
DZM	Mont Dzumac	11.45	173	*e*Pn	Pn	10 26 11.6	+0.3
	281nm,1.4s						
DZM				*e*LR	LR	10 28 53.6	
	comp=Z,4μm,22.9s						
DZM	Mont Dzumac	11.45	173	Pn	Pn	10 26 11.6	+0.3
	12nm,0.3s,baz=0.6,slow=9.4,SNR=61						
DZM				LR	LR	10 29 55.6	
	comp=Z,3μm,19.3s,baz=18,slow=34						
PINNC	Pines Island,	12.14	169	*e*Pn	Pn	10 26 21.2	+0.6
MSVF	Nonsavu	14.58	120	*e*Pn	Pn	10 26 54.0	-0.1
MANU	Manus Island	19.38	295	*e*P	Pn	10 27 54.7	-0.1
	167nm,1.0s						
EIDS	Eidsvold	19.62	220	*e*P	Pn	10 27 58.2	+0.6
	27nm,1.1s						
CTA	Charters Tower	20.23	240	P	P	10 28 02.3	-0.8
	17nm,1.1s,baz=76,slow=17,SNR=2.6						
CTA				LR	LR	10 35 28.9	
	comp=Z,1μm,19.5s,baz=48,slow=36						
CTAO	Charters Tower	20.23	240	*e*P	Pn	10 28 05.1	+0.1
	36nm,1.1s						
COEN	Coen	21.45	259	*e*P	P	10 28 17.1	+0.9
	22nm,1.1s						
ARMA	Armidale	23.20	210	*e*P	P	10 28 36.5	+1.6
	21nm,1.0s						
H11S2	WAKE ISLAND Hy	29.02	4	T	T	10 59 41.6	
	baz=184,slow=76,SNR=211						
H11S3	WAKE ISLAND Hy	29.02	4	T	T	10 59 41.0	
	baz=184,slow=76,SNR=184						
H11S1	WAKE ISLAND Hy	29.04	4	T	T	10 59 42.1	
	baz=184,slow=76,SNR=222						
URZ	Urewera	29.59	160	P	P	10 29 34.9	+2.1
	7.1nm,0.8s,baz=329,slow=9.4,SNR=3.5						
STKA	Stephens Creek	30.14	222	*e*P	P	10 29 38.0	+0.3
	2.3nm,0.8s						
STKA	Stephens Creek	30.14	222	P	P	10 29 38.0	+0.3
	10nm,0.8s,baz=42,slow=10,SNR=19						
STKA				LR	LR	10 40 34.9	
	comp=Z,887nm,18.4s,baz=41,slow=34						
BKZ	Black Stump Fm	30.22	162	*e*P	P	10 29 39.7	+1.2
	21nm,0.9s						
H11N1	WAKE ISLAND Hy	30.25	4	T	T	11 01 12.7	
	baz=184,slow=76,SNR=124						
H11N3	WAKE ISLAND Hy	30.25	4	T	T	11 01 12.3	
	baz=184,slow=76,SNR=73						
H11N2	WAKE ISLAND Hy	30.27	4	T	T	11 01 13.3	
	baz=184,slow=76,SNR=101						
WR1	Warramunga Arr	30.81	249	*e*P	P	10 29 40.5	-3.4
	6.0nm,0.9s						
WRA	Warramunga Arr	30.82	249	P	P	10 29 40.5	-3.4
	1.8nm,0.7s,baz=81,slow=9.2,SNR=22						
WRA				PcP	PcP	10 32 39.2	-2.0
	0.5nm,0.9s,baz=74,slow=3.5,SNR=2.8						
WRA				LR	LR	10 42 16.9	
	comp=Z,2μm,18.6s,baz=70,slow=37						
AS31	Alice Springs	32.20	242	*e*P	P	10 29 53.0	-3.1
	1.2nm,1.1s						
ASAR	Alice Springs	32.20	242	P	P	10 29 53.0	-3.1
	1.5nm,0.6s,baz=64,slow=10.0,SNR=27						
ASAR				PcP	PcP	10 32 42.8	-2.1
	0.6nm,0.6s,baz=66,slow=4.0,SNR=5.1						
ASAR				LR	LR	10 41 28.0	
	comp=Z,1μm,21.2s,baz=69,slow=34						
RPZ	Rata Peaks	33.37	172	P	P	10 30 08.0	+2.0
	4.4nm,0.7s,baz=337,slow=15,SNR=2.9						
RPZ				LR	LR	10 42 06.7	
	comp=Z,1μm,20.8s,baz=341,slow=34						
FITZ	Fitzroy Crossi	38.65	254	*e*P	P	10 30 50.3	-1.3
	4.6nm,0.8s						
PPT	Papeete	44.62	104	LR	LR	10 45 52.3	
	comp=Z,690nm,21.2s,baz=256,slow=30						
PPT2	Papeete2	44.62	104	*e*LR	LR	10 44 14.2	
	comp=Z,1μm,22.2s						
TBI	Tubuai	45.27	112	*e*LQ	LQ	10 42 38.0	
	1μm,29.8s						
TBI				*e*LR	LR	10 44 31.4	
	comp=Z,1μm,26.5s,baz=290						
MJAR	Matsushiro Arr	53.24	333	P	P	10 32 44.6	-1.8
	6.9nm,1.0s,baz=174,slow=7.7,SNR=6.1						
MAJO	Matsushiro	53.24	333	*e*P	P	10 32 44.6	-1.8
TAOE	Nuku Hiva Isla	54.16	93	*e*LR	LR	10 48 36.2	
	comp=Z,626nm,24.8s						
LEM	Lembang	56.66	269	LR	LR	10 58 11.1	
	comp=Z,241nm,22.0s,baz=68,slow=37						
ASAJ	Asahikawa	58.15	341	LR	LR	10 53 55.3	
	comp=Z,387nm,21.9s,baz=154,slow=32						
RKT	Rikitea	58.53	111	*e*LR	LR	10 50 41.6	
	comp=Z,957nm,26.0s						
KSRS	Korea Array	59.08	326	P	P	10 33 27.7	-0.4
	4.7nm,1.1s,baz=154,slow=9.0,SNR=5.3						
KSAR	Wonju Array Be	59.09	326	P	P	10 33 27.7	-0.5
NJ2	Nanjing	61.15	316	*e*P	P	10 33 43.8	+1.4
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
QIZ	Qiongzhong	61.74	298	P	P	10 33 45.3	-1.4
QIZ				S	S	10 42 11.0	+0.9
QIZ				LR	LR		
	comp=N,190nm,53.9s						
QIZ				LR	LR		
	comp=E,320nm,23.5s						
QIZ				LR	LR		
	comp=Z,380nm,24.5s						
USRK	Ussuriysk Ar.	62.22	334	P	P	10 33 48.6	-0.8
	comp=Z,6.6nm,1.0s,baz=146,slow=3.7,SNR=5.3						
USRK				LR	LR	10 57 40.8	
	comp=Z,150nm,21.0s,baz=147,slow=33						
PETK	Petropavlovsk-	63.81	355	P	P	10 33 59.6	-0.2
	comp=Z,6.0nm,0.8s,baz=132,slow=6.4,SNR=6.0						
PETK				LR	LR	10 56 34.7	
	comp=Z,219nm,19.4s,baz=169,slow=31						
PEA1	Petropavlovsk-	63.81	355	*e*P	P	10 33 59.6	-0.2
CN2	Changchun	64.97	330	*e*P	P	10 34 14.2	+6.6
IPM	Ipoh	65.31	280	*e*P	P	10 34 12.5	+2.0
	comp=Z,12nm,0.9s						
VNDA	Vanda	66.86	181	P	P	10 34 20.3	+0.9
	comp=Z,21nm,1.2s,baz=334,slow=5.5,SNR=4.8						
PSI	Prapat	66.97	278	LR	LR	11 06 01.5	
	comp=Z,16nm,21.4s,baz=111,slow=38						
ENH	Enshi	66.99	309	*e*P	P	10 34 21.8	+0.9
	comp=Z,16nm,1.0s						
GYA	Guiyang	67.49	304	P	P	10 34 26.1	+1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI	Beijing	67.65	321	⇓*i*P	P	10 34 25.9	+1.1
BJI				pmax	pmax		
	comp=Z,6.0nm,1.6s						
PBKT	Sadao Pong	68.74	292	*e*P	P	10 34 27.8	-4.3
	comp=Z,15nm,0.3s						
XAN	Xi'an	69.23	313	P	P	10 34 35.9	+0.9
XAN				pP	pwP	10 34 47.7	+6.0
XAN				sP	PcP	10 34 53.5	-5.2
XAN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,180nm,6.4s						
XAN				LR	LR		
	comp=Z,240nm,22.8s						
XAN	Xi'an	69.23	313	*e*P	P	10 34 35.7	+0.7
	comp=Z,6.2nm,0.8s						
KMI	Kunming	70.19	302	P	P	10 34 39.8	-1.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MA2	Magadan	70.91	352	LR	LR	11 00 42.8	
	comp=Z,259nm,20.4s,baz=180,slow=32						
HHC	Hu-ho-hao-te	70.98	320	*e*P	P	10 34 49.7	+4.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,6.7s						
CM01	Chiang Mai Arr	71.15	294	*e*P	P	10 34 47.0	+0.1
CMAR	Chiang Mai Arr	71.17	294	P	P	10 34 46.4	-0.7
	comp=Z,2.3nm,0.7s,baz=123,slow=3.9,SNR=12						
CMAR				LR	LR	11 06 59.6	
	comp=Z,76nm,19.2s,baz=113,slow=37						
CD2	Chengdu	71.69	308	⇑P	P	10 34 51.7	+1.6
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,230nm,3.5s						
LZH	Lanzhou	73.86	312	*e*P	P	10 35 05.8	+2.7
LZH				pP	pwP	10 35 11.9	+2.2
LZH				sP	PcP	10 35 16.0	-2.5
LZH				PP	PP	10 37 54.8	+6.7
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=N,250nm,14.6s						
LZH				LR	LR		
	comp=E,280nm,15.0s						
LZH				LR	LR		
	comp=Z,250nm,17.8s						
GAMB	Gambell	76.34	10	*e*P	P	10 35 17.4	+0.9
	comp=Z,22nm,1.2s						
SONA0	Songino Array	77.85	324	*e*P	P	10 35 25.2	-0.3
SONM	Songino Array	77.85	324	P	P	10 35 25.2	-0.3
	comp=Z,4.9nm,1.0s,baz=135,slow=5.9,SNR=20						
SONM				LR	LR	11 08 54.1	
	comp=Z,110nm,19.7s,baz=68,slow=35						
SONA1	Songino Array	77.85	324	*e*P	P	10 35 26.5	+1.0
SVW2	Sparrevohn	78.02	18	*e*P	P	10 35 26.8	+0.8
	comp=Z,22nm,1.2s						
GTA	Gaotai	78.17	314	P	P	10 35 29.4	+1.9
GTA				pP	PcP	10 35 35.3	-1.7
GTA				sP	pwP	10 35 38.5	+4.3
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,180nm,5.2s						
GTA				LR	LR		
	comp=N,220nm,17.5s						
GTA				LR	LR		
	comp=E,230nm,19.0s						
GTA				LR	LR		
	comp=Z,170nm,18.1s						
ANM	Nome	78.30	13	*e*P	P	10 35 29.1	+1.6
	comp=Z,5.3nm,1.2s						
BILL	Bilibino	78.50	1	*e*P	P	10 35 29.0	+0.5
	comp=Z,14nm,1.0s						
QSPA	South Pole Qui	79.34	180	*e*P	P	10 35 33.7	+0.2
	comp=Z,22nm,1.0s						
SHL	Shillong	79.58	299	*e*P	P	10 35 36.0	+0.4
CAST	Castle Rocks	80.85	18	*e*P	P	10 35 41.5	+0.1
	comp=Z,6.6nm,1.0s						
TLY	Talaya	81.33	326	*e*P	P	10 35 45.2	+1.0
	comp=Z,15nm,1.0s						
RDOG	Red Dog Mine	81.82	12	*e*P	P	10 35 47.5	+1.0
	comp=Z,18nm,1.0s						
IM3	Indian Mountai	82.29	16	*e*P	P	10 35 48.4	-0.6
MLY	Manley	82.43	17	*e*P	P	10 35 50.0	+0.2
	comp=Z,6.4nm,1.2s						
WRH	Wood River Hil	82.84	19	*e*P	P	10 35 52.2	+0.4
	comp=Z,5.6nm,1.1s						
MDM	Murphy Dome	83.13	18	*e*P	P	10 35 53.3	-0.1
	comp=Z,13nm,1.2s						
HDA	Harding Lake	83.16	19	*e*P	P	10 35 53.6	+0.1
	comp=Z,18nm,1.1s						
COLA	College	83.19	18	*e*P	P	10 35 53.7	+0.1
	comp=Z,10nm,0.9s						
RIDG	Independ'e Rid	83.41	20	*e*P	P	10 35 55.7	+0.8
	comp=Z,14nm,1.2s						
ILAR	Eielson Array	83.42	19	P	P	10 35 54.2	-0.6
	comp=Z,4.0nm,0.9s,baz=227,slow=5.7,SNR=30						
ILB	Eielson Array	83.42	19	*e*P	P	10 35 55.0	+0.1
IL1	Eielson Array	83.42	19	*e*P	P	10 35 53.8	-1.0
SCRK	Sand Creek	83.85	20	*e*P	P	10 35 57.6	+0.3
	comp=Z,10nm,1.0s						
MAW	Mawson	84.75	202	LR	LR	11 10 11.5	
	comp=Z,214nm,19.2s,baz=125,slow=33						
DAWY	Dawson	85.51	21	*e*P	P	10 36 06.5	+1.0
	comp=Z,7.1nm,1.1s						
TIXI	Tiksi	85.55	349	*e*P	P	10 36 05.0	-0.5
	comp=Z,7.5nm,1.1s						
NVAR	Mina Array Bea	86.43	50	P	P	10 36 12.4	+1.5
	comp=Z,1.5nm,0.9s,baz=229,slow=8.1,SNR=8.0						
NVAR				LR	LR	11 07 13.7	
	comp=Z,360nm,19.9s,baz=272,slow=30						
NV01	Mina Array Sit	86.43	50	*e*P	P	10 36 09.6	-1.3
WMQ	Urumqi	88.22	315	P	P	10 36 20.7	+1.5
WMQ				pP	sP	10 36 23.3	+1.0
WMQ				sP	pwP	10 36 37.5	+12
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.5s						
WMQ				LR	LR		
	comp=N,210nm,25.3s						
WMQ				LR	LR		
	comp=E,220nm,28.3s						
WMQ				LR	LR		
	comp=Z,280nm,22.3s						
HVU	Hansel Valley	91.39	48	*e*P	P	10 36 33.1	-1.1
	comp=Z,2.7nm,1.0s						
SYO	Syowa Base	91.90	197	⇑*e*P	P	10 36 33.4	-2.4
MK01	Makanchi Array	92.64	317	*e*P	P	10 36 38.9	-0.8
MK31	Makanchi Array	92.66	317	*e*P	P	10 36 38.9	-0.9
MK32	Makanchi Array	92.66	317	*e*P	P	10 36 38.6	-1.1
MKAR	Makanchi Array	92.66	317	*e*P	P	10 36 39.2	-0.6
	comp=Z,22nm,0.8s						
MKAR	Makanchi Array	92.66	317	P	P	10 36 38.6	-1.1
	comp=Z,3.4nm,0.7s,baz=96,slow=5.6,SNR=20						
MKAR				LR	LR	11 17 34.4	
	comp=Z,136nm,21.9s,baz=90,slow=35						
ZAA0	Zalesovo Array	92.74	324	*e*P	P	10 36 39.0	-0.9
	comp=Z,4.4nm,1.0s						
ZALV	Zalesovo Beam	92.74	324	*e*P	P	10 36 37.9	-2.1
ZALV	Zalesovo Beam	92.74	324	P	P	10 36 38.1	-1.9
	comp=Z,2.1nm,0.8s,baz=96,slow=4.5,SNR=9.5						
ZALV				LR	LR	11 15 47.3	
	comp=Z,129nm,21.4s,baz=72,slow=34						
ZAA1	Zalesovo Array	92.75	324	*e*P	P	10 36 38.1	-1.9
MAKZ	Makanchi	92.87	317	*e*P	P	10 36 40.4	-0.4
	comp=Z,5.5nm,1.0s						
PDAR	Pinedale Array	93.92	47	P	P	10 36 45.8	-0.3
	comp=Z,0.7nm,0.9s,baz=242,slow=3.2,SNR=5.1						
YKA	Yellowknife Ar	95.03	27	P	P	10 36 48.9	-1.3
	comp=Z,0.2nm,0.7s,baz=260,slow=4.2,SNR=5.5						
YKB5	Yellowknife Ar	95.03	27	*e*P	P	10 36 48.9	-1.3
NRIK	Noril'sk	95.46	340	LR	LR	11 17 07.1	
	comp=Z,206nm,21.9s,baz=100,slow=34						
TXAR	Lajitas Array	96.40	61	LR	LR	11 11 19.3	
	comp=Z,280nm,21.8s,baz=0.0,slow=30						
KEST	Kesra	146.59	322	PKPbc	PKPdf	10 43 09.2	+0.7
	comp=Z,14nm,1.0s,baz=89,slow=6.9,SNR=3.8						
ESDC	Sonseca Array	149.45	343	PKPbc	PKiKP	10 43 18.1	-0.4
	comp=Z,1.5nm,0.9s,baz=17,slow=4.4,SNR=3.7						

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*KNET **07** 10:31:03.0±0.3, 42°.70N×75°.70E, h16^{km}±3^{km}, ml1.4, Error ellipse: s-maj=3.7km s-min=1.6km az=41.0*

*ISCJB **07** 10:31:03.2±0.4, 42°.67N±0°.02×75°.68E±0°.02, h0^{km}, Error ellipse: s-maj=3.7km s-min=2.3km az=160.2*

*SOME **07** 10:31:03.2, 42°.68N×75°.68E*

*NNC **07** 10:31:03.2±0.3, 42°.67N×75°.66E, h0^{km}, mb3.1, mpv3.0, Error ellipse: s-maj=1.9km s-min=1.4km az=167.0, Suspected Mining explosion.*

ISC 07 10:31:03.2±0.8, 42°.66N±0°.03×75°.65E±0°.02, h0^{km}, n33, σ0^s.76/48, 15C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	Tokmak 2	0.27	352	⇑P	Pg	10 31 08.5	+0.2
	17nm,0.1s,SNR=135						
TKM2	Tokmak 2	0.27	352	⇑P	Pg	10 31 08.3	0.0
	9.3nm,0.5s						
TKM2				⇑S	Sg	10 31 12.3	+0.6
	14nm,0.3s						
KST	Kastek	0.45	31	P	Pg	10 31 11.6	-0.2
	29nm,0.2s						
KST				S	Sg	10 31 17.9	+0.3
	30nm,0.4s						
KBK	Karagaybulak	0.52	270	⇑P	Pb	10 31 14.4	-0.9
	13nm,0.1s,SNR=19						
KBK				⇑S	Sb	10 31 22.8	-0.6
	37nm,0.4s						
DGS	Degeres	0.59	9	P	Pg	10 31 14.4	-0.2
	9.6nm,0.2s						
DGS				S	Sg	10 31 22.7	+0.5
	16nm,0.3s						
ULHL	Ulahol	0.60	133	⇑P	Pg	10 31 15.1	+0.4
	20nm,0.2s,SNR=15						
ULHL				⇓S	Sb	10 31 24.2	-1.6
	9.4nm,0.2s						
KZA	Kyzart	0.65	207	⇑P	Pb	10 31 17.1	-0.5
	12nm,0.2s,SNR=31						
MTBS	Maitube	0.74	50	P	Pg	10 31 17.2	-0.2
	14nm,0.2s						
MTBS				S	Sg	10 31 27.2	+0.2
	20nm,0.2s						
CHMS	Chumysh	0.74	298	⇑P	Pg	10 31 17.6	+0.2
	4.7nm,0.2s						
IZV	Izvestkoviy	0.80	62	P	Pg	10 31 18.4	-0.2
	15nm,0.1s						
IZV				S	Sg	10 31 29.7	+0.7
	18nm,0.2s						
AAK	Ala-Archa	0.85	269	⇑P	Pg	10 31 19.6	+0.1
	6.4nm,0.3s,SNR=9.3						
AAK	Ala-Archa	0.85	269	⇓P	Pg	10 31 19.7	+0.1
	1.6nm,0.3s						
AAK				⇑S	Sg	10 31 31.8	+1.3
	3.3nm,0.4s						
UCH	Uchtor	0.94	243	⇑P	Pb	10 31 22.0	-0.7
	3.1nm,0.3s,SNR=8.3						
USP	Ospenovka	1.04	306	⇑P	Pg	10 31 22.9	-0.3
	3.4nm,0.1s,SNR=18						
SGDS	Sogindy	1.09	317	P	Pg	10 31 24.0	-0.1
	6.2nm,0.2s						
SGDS				S	Sg	10 31 39.1	+0.9
	4.8nm,0.1s						
MDOK	Medeo	1.15	63	P	Pg	10 31 24.2	-0.9
	2.8nm,0.3s						
MDOK				S	Sb	10 31 40.5	-1.0
	6.7nm,0.8s						
MDOK	Medeo	1.15	63	Pg	Pg	10 31 24.5	-0.6
	7.8nm,0.2s						
MDOK				Lg	Lg	10 31 39.6	
	5.3nm,0.5s						
KOTS	Kotyrbulak	1.22	61	P	Pg	10 31 26.1	-0.4
	6.8nm,0.2s						
KOTS				S	Sb	10 31 42.8	-0.8
	7.1nm,0.3s						
KTBS	Karatobe	1.30	35	P	Pg	10 31 27.5	-0.6
	5.2nm,0.3s						
KTBS				S	Sg	10 31 45.2	+0.3
	7.1nm,0.2s						
KUU	Kurty	1.33	22	P	Pg	10 31 27.7	-1.1
	3.5nm,0.1s						
KUU				S	Sg	10 31 44.2	-1.8
	4.6nm,0.3s						
EKS2	Erkin-Say	1.38	271	⇓P	Pb	10 31 30.3	+0.3
	14nm,0.1s,SNR=8.6						
AML	Almayashu	1.54	251	⇓P	Pb	10 31 33.1	+0.2
	5.0nm,0.2s,SNR=8.2						
CHKK	Chushkaly	1.54	39	P	Pg	10 31 33.2	+0.4
	5.8nm,0.3s						
CHKK				S	Sb	10 31 52.8	0.0
	13nm,0.2s						
MRKS	Merke	1.79	274	P	Pb	10 31 37.1	+0.2
	18nm,0.2s						
MRKS				S	Sg	10 32 00.8	+0.2
	8.7nm,0.3s						
KURS	Kuram	2.02	65	Pg	Pg	10 31 42.5	+0.5
	2.4nm,0.3s						
KURS				Lg	Lg	10 32 10.4	
	2.9nm,0.5s						
SATY	Saty	2.07	78	Pg	Pb	10 31 41.8	+0.2
	16nm,0.2s						
SATY				Lg	Lg	10 32 11.1	
	12nm,0.6s						
ARXS	Arharly	2.22	45	Pg	Pb	10 31 43.6	-0.7
	4.1nm,0.3s						
ARXS				Lg	Lg	10 32 12.8	
	14nm,0.4s						
MNAS	Manas	2.33	267	⇓Pn	Pn	10 31 43.8	+0.8
	1.8nm,0.4s						
MNAS				⇑Lg	Lg	10 32 18.2	
	1.5nm,0.5s						
MNAS	Manas	2.33	267	Pg	Pg	10 31 47.2	-0.6
	1.7nm,0.4s						
MNAS				Lg	Lg	10 32 18.8	
	1.7nm,0.2s						
UZB	Uzynbulak	2.53	78	Pg	Pg	10 31 50.9	-0.7
UZB				Lg	Lg	10 32 25.0	

PDGK	Podgornoye	2.90	75	Pg	Pb	10 31 56.1	+0.3
	1.4nm,0.3s						
PDGK				Lg	Lg	10 32 33.8	
	1.7nm,0.5s						
PDGK	Podgornoye	2.90	75	⇓Pn	Pn	10 31 52.2	+1.5
	1.2nm,0.3s						
PDGK				⇑Lg	Lg	10 32 33.3	
	4.3nm,0.8s						
KK31	Karatay Array	3.80	278	⇓Pg	Pg	10 32 14.0	-2.1
	0.4nm,0.3s,baz=89,slow=15,SNR=14						
KK31				⇑Lg	Lg	10 33 05.3	
	1.0nm,0.7s,baz=92,slow=27,SNR=4.6						

IDC 07 10:31:46.0±1.7,10°.54S×165°.25E,h0^{km},mb3.4/3, mb1 3.8/4,mb1mx3.5/26,mbtmp3.6/4,ML3.6/1,Error ellipse: s-maj=53.2km s-min=30.6km az=128.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.52	174	Pn	Pn	10 34 30.4	-1.5
	0.4nm,0.3s,baz=22,slow=12,SNR=5.7						
WRA	Warramunga Arr	31.20	249	P	P	10 38 07.3	+0.1
	0.3nm,0.7s,baz=73,slow=8.6,SNR=3.1						
ASAR	Alice Springs	32.58	242	P	P	10 38 19.4	0.0
	0.4nm,0.6s,baz=76,slow=8.5,SNR=7.2						
ILAR	Eielson Array	83.20	19	P	P	10 44 14.0	+0.2
	0.5nm,0.9s,baz=228,slow=7.9,SNR=3.6						

MEX 07 10:41:05.9±0.5,15°.37N×95°.81W,h19^{km}±17^{km},MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.49	324	*i* P	Pg	10 41 14.4	-1.5
HUIG				*i* S	Sg	10 41 20.7	-1.9
VHO	Vista Hermosa	1.91	332	*i* P	Pn	10 41 34.0	-3.7
VHO				*e*S	Sn	10 41 51.2	-10
PNIG	Pinotepa	2.45	295	*e*P	Pn	10 41 42.4	-2.5

IDC 07 10:46:15.3±1.8,11°.41S×165°.86E,h0^{km},mb3.6/4, mb1 3.8/5,mb1mx3.6/41,mbtmp3.7/5,ML3.5/1,Error ellipse: s-maj=53.3km s-min=31.4km az=123.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.62	177	Pn	Pn	10 48 49.2	+0.3
	0.3nm,0.3s,baz=80,slow=19,SNR=6.5						
WRA	Warramunga Arr	31.46	250	P	P	10 52 39.1	+0.1
	0.5nm,0.9s,baz=84,slow=8.7,SNR=4.6						
ASAR	Alice Springs	32.73	244	P	P	10 52 49.8	-0.3
	0.7nm,0.7s,baz=67,slow=9.5,SNR=9.5						
ILAR	Eielson Array	83.82	18	P	P	10 58 46.1	-0.2
	0.2nm,0.6s,baz=237,slow=5.2,SNR=4.4						
MKAR	Makanchi Array	93.86	317	P	P	10 59 35.1	+0.3
	0.3nm,0.7s,baz=111,slow=2.7,SNR=4.0						

IDC 07 10:49:52.1±1.2,4°.90S×144°.44E,h0^{km},mb4.2/9, mb1 4.4/10,mb1mx4.1/39,mbtmp4.2/10,ML4.0/1,Error ellipse: s-maj=37.9km s-min=20.1km az=125.0

DJA 07 10:49:55.7±3.7,5°S±28°×14°5E±3°8,h139^{km}±18^{km}, M5.0/8,mb4.7/8,mB5.2/1,MLv5.2/2,Mw(mB)4.6/1

NEIC 07 10:49:59.1±1.1,5°.04S×144°.42E,h54^{km}±12^{km},mb4.3/11, Error ellipse: s-maj=11.1km s-min=7.0km az=153.0

ISCJB 07 10:50:00.5±0.5,5°.19S±0°.06×144°.39E±0°.06,h82^{km}, mb4.1/11,Error ellipse: s-maj=9.0km s-min=7.9km az=14.5

ISC 07 10:50:01.0±0.7,5°.19S±0°.09×144°.55E±0°.08,h82^{km},n36, σ1^{s}.64/36,mb4.2/12,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	4.66	305	P	Pn	10 51 08.9	-0.1
GENI	Genyem	5.07	300	P	Pn	10 51 16.0	+1.4
RABL	Rabaul	7.66	83	*e*Pn	Pn	10 51 48.3	-1.6
COEN	Coen	8.82	189	*e*Pn	Pn	10 52 06.6	+0.8
RKPI	Ransiki, Papua	10.98	289	P	Pn	10 52 36.9	+1.7
FAKI	Fak Fak	12.47	280	*e*Pn	Pn	10 52 53.2	-2.3
MTN	Manton Dam	15.27	239	*e*Pn	Pn	10 53 30.8	-1.2
	16nm,0.4s						
HNR	Honiara	15.84	106	*e*Pn	P	10 53 41.7	+0.2
	120nm,0.9s						
WRAB	Tennant Creek	17.70	213	*e*P	Pn	10 54 02.8	+0.6
	8.0nm,0.9s						
WB2	Warramunga Arr	17.71	213	*e*Pn	P	10 54 01.5	-0.6
WB2				*e*P	Pn	10 54 02.9	+0.6
WR1	Warramunga Arr	17.71	213	*e*Pn	Pn	10 54 02.8	+0.4
	11nm,1.0s						
WRA	Warramunga Arr	17.71	213	P	Pn	10 54 02.8	+0.4
	0.6nm,0.3s,baz=33,slow=12,SNR=29						
SANI	Sanana	18.78	279	P	P	10 54 12.5	-1.4
SOEI	Soe	20.61	256	*e*P	P	10 54 31.5	-2.5
	39nm,0.7s						
SOEI	Soe	20.61	256	P	P	10 54 33.1	-0.8
AS01	Alice Springs	21.02	208	*e*P	P	10 54 39.2	+1.0
AS31	Alice Springs	21.04	208	*e*P	P	10 54 42.9	+4.5
	6.0nm,0.8s						
ASAR	Alice Springs	21.04	208	P	P	10 54 41.2	+2.8
	21nm,0.8s,baz=25,slow=12,SNR=47						
BATI	Baumata	21.28	255	P	P	10 54 41.1	+0.1
BATI	Baumata	21.28	255	P	P	10 54 40.5	-0.5
	33nm,0.5s,baz=52,slow=2.1,SNR=7.4						
FITZ	Fitzroy Crossi	22.50	234	*e*P	P	10 54 52.5	-1.4
	4.4nm,0.9s						
FITZ	Fitzroy Crossi	22.50	234	P	P	10 54 52.5	-1.4
	1.5nm,0.5s,baz=57,slow=10,SNR=10						
EDFI	Ende, Flores	22.96	260	P	P	10 54 54.6	-4.3
CMAR	Chiang Mai Arr	50.72	299	P	P	10 58 53.4	+0.6
	2.7nm,0.7s,baz=124,slow=6.2,SNR=9.8						
VNDA	Vanda	72.87	176	*e*P	P	11 01 19.1	-1.5
MK32	Makanchi Array	75.33	321	*e*P	P	11 01 36.0	+0.6
MKAR	Makanchi Array	75.33	321	P	P	11 01 36.0	+0.6
	0.3nm,0.4s,baz=96,slow=9.4,SNR=7.9						
MAKZ	Makanchi	75.53	321	*e*P	P	11 01 37.3	+0.7
	2.2nm,1.1s						
ZALV	Zalesovo Beam	77.04	328	P	P	11 01 44.4	-0.6
	0.5nm,0.4s,baz=116,slow=5.0,SNR=2.5						
ZAA1	Zalesovo Array	77.04	328	*e*P	P	11 01 44.4	-0.6
RND	Reindeer	84.39	25	*e*P	P	11 02 24.8	+0.7
	6.0nm,0.8s						
DHY	Denali Highway	84.88	25	*e*P	P	11 02 29.0	+2.3
	5.5nm,0.8s						
ILAR	Eielson Array	85.71	24	P	P	11 02 31.1	+0.6
	1.3nm,0.6s,baz=255,slow=4.7,SNR=21						
ILB	Eielson Array	85.71	24	*e*P	P	11 02 31.1	+0.6
	1.6nm,0.7s						
INK	Inuvik	91.80	22	P	P	11 03 00.4	+1.0
	0.7nm,0.7s,baz=244,slow=7.0,SNR=3.2						
NVAR	Mina Array Bea	98.80	52	P	Pdif	11 03 34.7	+2.4
	0.2nm,0.5s,baz=310,slow=4.2,SNR=2.7						

IDC 07 10:50:25.1±1.9,11°.21S×164°.98E,h0^{km},mb3.8/3, mb1 4.1/4,mb1mx3.7/39,mbtmp3.9/4,ML3.5/1,Error ellipse: s-maj=53.2km s-min=34.4km az=126.0,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.89	173	Pn	Pn	10 53 02.4	-0.1
	0.4nm,0.3s,baz=352,slow=5.6,SNR=7.9						
WRA	Warramunga Arr	30.72	250	P	P	10 56 41.4	-0.7
	0.8nm,0.7s,baz=82,slow=10.0,SNR=3.7						
ASAR	Alice Springs	32.05	243	P	P	10 56 54.5	+0.6
	1.6nm,0.8s,baz=82,slow=10,SNR=5.5						
ILAR	Eielson Array	83.91	19	P	P	11 02 56.6	0.0
	0.6nm,0.7s,baz=238,slow=6.3,SNR=4.1						

IDC 07 10:52:18.9±1.8,11°.27S×165°.11E,h0^{km},mb3.5/3, mb1 3.9/5,mb1mx3.6/42,mbtmp3.8/5,ML4.4/2,MS4.4/1, Ms1 4.4/1,ms1mx3.0/26,Error ellipse: s-maj=39.2km s-min=32.4km az=129.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.40	289	Pn	Pn	10 53 40.9	+0.2
	20nm,0.3s,baz=114,slow=12,SNR=3.8						
DZM	Mont Dzumac	10.81	173	Pn	Pn	10 54 55.9	+0.8
	1.5nm,0.3s,baz=0.0,slow=20,SNR=11						
RAO	Raoul Island	23.89	141	LR	LR	11 04 26.7	
	comp=Z,808nm,18.4s,baz=130,slow=30						
WRA	Warramunga Arr	30.82	250	P	P	10 58 37.1	+0.3
	0.4nm,0.6s,baz=80,slow=9.6,SNR=3.1						
ASAR	Alice Springs	32.13	243	P	P	10 58 47.8	-0.6
	0.2nm,0.4s,baz=82,slow=8.6,SNR=3.7						
ILAR	Eielson Array	83.93	19	P	P	11 04 50.4	-0.1
	0.3nm,0.7s,baz=240,slow=5.0,SNR=5.2						

IDC 07 10:53:29.6±0.9,15°.59S×173°.10W,h0^{km},mb3.9/7, mb1 4.2/7,mb1mx3.9/41,mbtmp3.9/7,MS3.3/2,Ms1 3.3/2, ms1mx3.0/37,Error ellipse: s-maj=48.9km s-min=20.6km az=138.0

ISCJB 07 10:53:32.5±0.8,15°.5S±0°.2×173°.2W±0°.2,h29^{km},mb3.9/7, MS3.1/1,Error ellipse: s-maj=40.5km s-min=18.0km az=43.0

ISC 07 10:53:34.0±1.0,15°.6S±0°.3×173°.2W±0°.3,h29^{km},n10, σ0^{s}.46/8,mb3.9/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	13.87	116	LR	LR	11 00 40.6	
	comp=Z,171nm,21.9s,baz=270,slow=31						
PPT	Papeete	22.67	98	LR	LR	11 04 45.3	
	comp=Z,74nm,21.2s,baz=335,slow=30						
URZ	Urewera	24.16	199	P	P	10 58 47.8	+0.1
	13nm,1.1s,baz=280,slow=5.7,SNR=3.7						
WRA	Warramunga Arr	50.04	257	P	P	11 02 26.6	+0.2
	0.3nm,0.4s,baz=97,slow=7.0,SNR=11						
ASAR	Alice Springs	50.28	252	P	P	11 02 27.8	-0.5
	1.6nm,0.6s,baz=86,slow=8.2,SNR=18						
NVAR	Mina Array Bea	74.31	42	P	P	11 05 08.4	-0.7
	0.3nm,0.5s,baz=224,slow=6.3,SNR=2.9						
TXAR	Lajitas Array	80.52	56	P	P	11 05 44.1	+0.2
	1.7nm,1.1s,baz=231,slow=7.9,SNR=4.6						
ILAR	Eielson Array	82.59	11	P	P	11 05 54.0	+0.1
	0.7nm,0.8s,baz=225,slow=6.1,SNR=6.8						
YKA	Yellowknife Ar	90.18	23	P	P	11 06 31.6	+0.5
	0.5nm,0.8s,baz=246,slow=4.3,SNR=6.0						
BRTR	Keskin Array B	146.46	321	PKPbc	PKPab	11 13 13.8	0.0
	0.8nm,0.7s,baz=98,slow=2.4,SNR=5.7						

IDC 07 10:55:48.0±0.8,32°.36N×40°.15W,h0^{km},mb4.0/18, mb1 4.2/18,mb1mx4.0/59,mbtmp4.0/18,MS3.8/16, Ms1 3.8/16,ms1mx3.5/42,Error ellipse: s-maj=23.1km s-min=15.0km az=3.0

ISCJB 07 10:55:48.5±0.3,32°.33N±0°.07×40°.07W±0°.06,h13^{km}, mb4.3/41,MS3.8/16,Error ellipse: s-maj=9.9km s-min=6.8km az=173.0

NEIC 07 10:55:49.7±0.3,32°.32N×40°.05W,h10^{km},mb4.5/28,Error ellipse: s-maj=8.6km s-min=5.8km az=171.0

ISC 07 10:55:50.6±0.5,32°.41N±0°.09×40°.07W±0°.08,h13^{km},n82, σ1^{s}.23/70,mb4.4/41,MS3.8/16,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSA	Rosais	11.50	54	*e*Pn	Pn	10 58 33.6	-0.8
DRLN	Deer Lake	21.29	327	*e*P	P	11 00 37.5	+0.8
	32nm,0.8s						
BATG	Bathurst New B	24.72	314	*e*P	P	11 01 13.0	+1.5
	5.5nm,0.9s						
SJG	San Juan	27.46	245	*e*P	P	11 01 37.2	+0.7
	16nm,1.1s						
SJG	San Juan	27.46	245	LR	LR	11 10 13.9	
	comp=Z,42nm,19.8s,baz=62,slow=32						
SCHQ	Schefferville	29.30	328	LR	LR	11 12 48.2	
	comp=Z,236nm,18.9s,baz=114,slow=35						
MDP	Montagnes des	29.61	206	LR	LR	11 10 55.0	
	comp=Z,99nm,21.0s,baz=14,slow=31						
MDT	Midelt	29.79	80	LR	LR	11 11 12.9	
	comp=Z,277nm,21.1s,baz=305,slow=31						
TKL	Tuckaleechee C	36.14	287	*e*P	P	11 02 53.2	+0.6
	6.1nm,1.1s						
TKL	Tuckaleechee C	36.14	287	P	P	11 02 53.2	+0.6
	2.1nm,0.7s,baz=83,slow=9.0,SNR=3.5						
SDV	Santo Domingo	36.72	237	*e*P	P	11 02 58.4	+0.6
	19nm,1.0s						
PTGA	Pitinga	37.95	214	*e*P	P	11 03 07.5	-0.6
	6.5nm,1.0s						
PTGA	Pitinga	37.95	214	P	P	11 03 06.8	-1.3
	3.6nm,0.8s,baz=67,slow=14,SNR=4.2						
DBIC	Dimbokro	41.58	120	*e*P	P	11 03 38.1	-0.2
	6.3nm,1.0s						
DBIC	Dimbokro	41.58	120	P	P	11 03 38.1	-0.2
	2.3nm,0.8s,baz=286,slow=7.4,SNR=2.4						
ROSC	El Rosal	42.15	237	LR	LR	11 18 44.3	
	comp=Z,85nm,20.3s,baz=29,slow=33						
TOA1	Torodi Ar. Sit	42.67	107	*e*P	P	11 03 46.5	-0.8
TOA0	Torodi Ar. Sit	42.68	107	*e*P	P	11 03 46.4	-0.9
TOA0				*e*P	P	11 03 47.8	+0.5
TORD	Torodi Ar. Bea	42.68	107	P	P	11 03 46.5	-0.8
	2.6nm,1.0s,baz=306,slow=5.6,SNR=10						
TORD				LR	LR	11 20 14.7	
	comp=Z,114nm,21.4s,baz=325,slow=34						
NB200	NORSAR Array S	43.66	33	*e*P	P	11 03 54.7	+0.1
NOA	NORSAR Array B	43.66	33	P	P	11 03 54.7	+0.1
	0.5nm,0.7s,baz=260,slow=9.1,SNR=2.2						
NOA				LR	LR	11 18 37.9	
	comp=Z,50nm,21.2s,baz=20,slow=31						
ULM	Lac du Bonnet	44.42	311	LR	LR	11 22 01.4	
	comp=Z,95nm,18.6s,baz=83,slow=35						
H10N2	ASCENSION HYDR	46.87	144	T	T	11 54 17.7	
	baz=330,slow=75,SNR=45						
H10N3	ASCENSION HYDR	46.87	144	T	T	11 54 03.3	
	baz=330,slow=75,SNR=46						
H10N1	ASCENSION HYDR	46.88	144	T	T	11 54 19.6	
	baz=330,slow=75,SNR=54						
H10S1	ASCENSION HYDR	47.75	145	T	T	11 55 27.9	
	baz=331,slow=75,SNR=180						
H10S3	ASCENSION HYDR	47.75	145	T	T	11 55 27.7	
	baz=331,slow=75,SNR=227						
H10S2	ASCENSION HYDR	47.76	145	T	T	11 55 28.7	
	baz=331,slow=75,SNR=197						
WMOK	Wichita Mounta	48.37	290	*e*P	P	11 04 30.4	-1.8
	3.7nm,0.9s						
RES	Resolute Bay	49.93	344	*e*P	P	11 04 44.6	+1.1
	1.4nm,1.0s						
FIA0	FINESS Array S	50.79	35	*e*P	P	11 04 50.4	+0.2
FINES	FINESS Array B	50.79	35	P	P	11 04 50.4	+0.2
	1.6nm,0.9s,baz=270,slow=7.3,SNR=2.5						
MLR	Muntele Rosu	51.61	55	P	P	11 04 57.2	+0.4
	3.4nm,0.7s,baz=26,slow=18,SNR=4.2						
AKASG	Malin Array Be	52.99	48	P	P	11 05 06.2	-0.6
	1.4nm,0.7s,baz=274,slow=6.7,SNR=4.7						
LTX	Lajitas	53.96	285	*e*P	P	11 05 13.1	-1.2
TXAR	Lajitas Array	53.96	285	P	P	11 05 13.1	-1.2
	1.0nm,0.9s,baz=99,slow=5.9,SNR=10						
TXAR				LR	LR	11 25 44.2	
	comp=Z,124nm,21.7s,baz=0.0,slow=33						
TX31	Lajitas Ar. Si	53.96	285	*e*P	P	11 05 14.0	-0.4
ANMO	Albuquerque	54.37	292	LR	LR	11 26 06.1	
	comp=Z,186nm,21.2s,baz=81,slow=34						
BW06	Boulder Array	54.61	302	*e*P	P	11 05 18.5	-0.6
	4.1nm,0.9s						
PD31	Pinedale Array	54.61	302	*e*P	P	11 05 18.5	-0.6
	3.8nm,0.9s						
PDAR	Pinedale Array	54.61	302	P	P	11 05 18.0	-1.1
	3.1nm,0.9s,baz=64,slow=7.2,SNR=19						
PDAR				LR	LR	11 27 04.1	
	comp=Z,92nm,21.0s,baz=102,slow=34						
YKA	Yellowknife Ar	54.75	327	P	P	11 05 17.6	-1.8
	1.0nm,0.9s,baz=84,slow=7.4,SNR=10						
YKA				PcP	PcP	11 06 21.2	-0.7
	0.3nm,0.6s,baz=86,slow=4.3,SNR=4.8						
YKA				LR	LR	11 26 54.7	
	comp=Z,20nm,20.7s,baz=47,slow=34						
YKB5	Yellowknife Ar	54.75	327	*e*P	P	11 05 18.7	-0.7
YKB5				*e*PcP	PcP	11 06 21.2	-0.7
BNM	Barren Site	54.75	291	*e*P	P	11 05 22.6	+2.4
YMR	Madison River	55.16	305	*e*P	P	11 05 24.4	+1.3
	4.8nm,0.9s						
BOZ	Bozeman (W)	55.41	306	*e*P	P	11 05 24.9	+0.2
	16nm,0.6s						
FXWY	Fox Creek	55.45	304	*e*P	P	11 05 26.4	+1.3
	1.3nm,0.9s						
HPIG		56.47	283	*e*P	P	11 05 32.8	+0.2
	5.5nm,1.1s						
KLMR	Klimovskoe	57.31	35	*e*P	P	11 05 36.6	-1.2
KLMR				AMP		11 05 45.1	
	comp=Z,11nm,1.4s						
DUG	Dugway, Tooele	57.65	300	*e*P	P	11 05 41.5	+0.8
WUAZ	Wupatki	58.02	294	*e*P	P	11 05 45.0	+1.5
	comp=Z,4.7nm,1.1s						
NEW	Newport	58.43	310	LR	LR	11 30 06.3	
	comp=Z,138nm,19.1s,baz=60,slow=35						
BR101	Keskin Array S	58.49	60	*e*P	P	11 05 46.9	+0.2
BRTR	Keskin Array B	58.49	60	P	P	11 05 46.9	+0.2
	comp=Z,1.1nm,0.8s,baz=274,slow=4.8,SNR=5.9						
MNMC	Minye Minye	58.53	213	*e*P	P	11 05 44.5	-2.6
	comp=Z,10.0nm,1.1s						
PB11	IPOC Station P	59.11	213	*e*P	P	11 05 48.5	-2.5
	comp=Z,13nm,1.1s						
CPUP	Villa Florida	60.69	198	*e*P	P	11 06 04.6	+3.0
	comp=Z,3.7nm,1.0s						
CPUP	Villa Florida	60.69	198	P	P	11 06 04.6	+3.0
	comp=Z,1.1nm,0.4s,baz=12,slow=7.4,SNR=3.3						
J08A	Circle Bar Ran	60.73	305	*e*P	P	11 06 03.0	+1.0
	comp=Z,3.9nm,0.9s						
INK	Inuvik	61.56	335	*e*P	P	11 06 05.8	-1.2
	comp=Z,2.7nm,1.0s						
INK	Inuvik	61.56	335	P	P	11 06 05.8	-1.2
	comp=Z,3.5nm,1.1s,baz=54,slow=6.4,SNR=5.1						
INK				LR	LR	11 32 27.7	
	comp=Z,112nm,18.0s,baz=63,slow=36						
NV01	Mina Array Sit	62.25	300	*e*P	P	11 06 11.5	-0.9
NVAR	Mina Array Bea	62.25	300	P	P	11 06 11.5	-0.9
	comp=Z,1.5nm,0.9s,baz=66,slow=7.2,SNR=6.9						
DLBC	Dease Lake	63.00	324	LR	LR	11 33 00.3	
	comp=Z,277nm,20.8s,baz=178,slow=35						
GO02	Mina Guanaco	63.81	210	*e*P	P	11 06 22.0	-0.9
	comp=Z,4.0nm,0.9s						
ILAR	Eielson Array	67.84	334	P	P	11 06 48.1	0.0
	comp=Z,0.8nm,1.0s,baz=60,slow=5.9,SNR=5.2						
ILAR				LR	LR	11 34 09.1	
	comp=Z,66nm,20.5s,baz=280,slow=34						
HARP	HAARP	68.31	331	*e*P	P	11 06 47.2	-3.9
	comp=Z,18nm,1.1s						
NRIK	Noril'sk	71.61	17	P	P	11 07 12.8	+1.6
	comp=Z,3.5nm,0.5s,baz=270,slow=1.1,SNR=6.0						
ABKAR	Akbulak array	72.14	43	*e*P	P	11 07 15.5	+0.8
	comp=Z,3.8nm,1.0s						
TIXI	Tiksi	75.93	4	*e*P	P	11 07 37.1	+0.6
	comp=Z,2.5nm,0.8s						
KURK	Kurchatov	81.16	34	*e*P	P	11 08 06.2	+0.5
	comp=Z,4.6nm,1.0s						
ZAA1	Zalesovo Array	81.70	29	*e*P	P	11 08 08.8	+0.3
ZAA0	Zalesovo Array	81.70	29	*e*P	P	11 08 09.5	+1.0
	comp=Z,5.4nm,1.0s						
ZALV	Zalesovo Beam	81.70	29	*e*P	P	11 08 08.9	+0.4
ZALV	Zalesovo Beam	81.70	29	P	P	11 08 08.8	+0.3
	comp=Z,1.7nm,0.9s,baz=294,slow=8.0,SNR=9.0						
CHGR	Chuyangaron	83.47	48	*e*P	P	11 08 20.1	+1.9
MAKZ	Makanchi	85.44	36	*e*P	P	11 08 28.0	+0.1
	comp=Z,3.4nm,1.1s						
MK31	Makanchi Array	85.61	36	*e*P	P	11 08 28.0	-0.8
MK32	Makanchi Array	85.61	36	*e*P	P	11 08 28.2	-0.6
MKAR	Makanchi Array	85.61	36	P	P	11 08 28.2	-0.6
	comp=Z,1.4nm,1.0s,baz=319,slow=3.5,SNR=6.7						
MK01	Makanchi Array	85.63	36	*e*P	P	11 08 28.9	0.0
ASAR	Alice Springs	169.79	33	PKPab	PKPab	11 17 11.8	-0.6
	comp=Z,1.1nm,1.1s,baz=344,slow=5.6,SNR=4.9						

IDC 07 10:56:55.2±0.8,10°.88S×165°.51E,h0^{km},mb4.0/8, mb1 4.2/10,mb1mx3.9/46,mbtmp4.1/10,ML4.5/2,Error ellipse: s-maj=25.7km s-min=19.4km az=147.0

NEIC 07 10:56:56.5±0.5,10°.82S×165°.48E,h10^{km},mb4.3/5,Error ellipse: s-maj=12.1km s-min=11.0km az=160.0

ISCJB 07 10:56:57.2±0.5,10°.91S±0°.08×165°.49E±0°.06,h30^{km}, mb4.1/11,Error ellipse: s-maj=11.4km s-min=7.8km az=15.6

ISC 07 10:56:59.2±0.6,10°.83S±0°.10×165°.54E±0°.07,h30^{km},n24, σ1^{s}.38/25,mb4.0/11,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.67	284	*e*Pn	Pn	10 58 22.1	+0.6
HNR				*e*Pn	Pn	10 58 22.3	+0.8
HNR				*e*Sn	Sn	10 59 25.9	+0.2
HNR	Honiara	5.67	284	Pn	Pn	10 58 22.1	+0.6
	19nm,0.3s,baz=124,slow=8.4,SNR=4.3						
HNR				Sn	Sn	10 59 25.9	+0.2
	5.7nm,0.3s,baz=180,slow=20,SNR=2.7						
MARNC	Mare, Loyalty	10.86	168	*e*Pn	Pn	10 59 41.6	+9.0
DZM	Mont Dzumac	11.21	176	*e*Pn	Pn	10 59 36.3	-1.2
DZM	Mont Dzumac	11.21	176	Pn	Pn	10 59 35.9	-1.6
	2.7nm,0.3s,baz=320,slow=8.1,SNR=21						
PINNC	Pines Island,	11.86	171	*e*Pn	Pn	10 59 47.3	+1.0
FUNA	Funafuti	13.66	82	*e*Pn	Pn	11 00 11.1	+0.1
CTA	Charters Tower	20.72	241	P	P	11 01 38.5	+1.2
	4.6nm,0.8s,baz=27,slow=6.8,SNR=3.0						
H11S2	WAKE ISLAND Hy	29.16	2	T	T	11 33 33.3	
	baz=183,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.16	2	T	T	11 33 30.5	
	baz=183,slow=76,SNR=9.0						
H11S1	WAKE ISLAND Hy	29.18	2	T	T	11 33 34.5	
	baz=183,slow=76,SNR=12						
URZ	Urewera	29.21	161	P	P	11 02 58.3	+0.1
	11nm,1.0s,baz=115,slow=16,SNR=2.3						
BKZ	Black Stump Fm	29.86	163	*e*P	P	11 03 05.0	+1.0
	13nm,1.1s						
WR1	Warramunga Arr	31.36	249	*e*P	P	11 03 16.6	-0.8
	3.3nm,1.0s						
WRA	Warramunga Arr	31.36	249	P	P	11 03 16.6	-0.9
	1.1nm,0.7s,baz=82,slow=9.3,SNR=6.4						
WRA				PcP	PcP	11 06 12.3	+1.3
	0.4nm,0.8s,baz=102,slow=2.2,SNR=4.5						
AS31	Alice Springs	32.70	243	*e*P	P	11 03 28.3	-1.0
	0.7nm,0.5s						
ASAR	Alice Springs	32.70	243	P	P	11 03 28.3	-1.0
	1.5nm,0.6s,baz=66,slow=9.9,SNR=5.9						
ASAR				PcP	PcP	11 06 15.7	+1.0
	0.4nm,0.8s,baz=65,slow=2.8,SNR=4.2						
SONA0	Songino Array	78.37	324	*e*P	P	11 08 54.1	-2.8
ILAR	Eielson Array	83.38	19	P	P	11 09 24.3	+1.2
	0.5nm,0.6s,baz=240,slow=4.8,SNR=13						
ILB	Eielson Array	83.38	19	*e*P	P	11 09 24.3	+1.2
	1.9nm,1.0s						
YERR	Yerington	85.51	49	*e*P	P	11 09 31.4	-3.4
	6.3nm,0.7s						
NVAR	Mina Array Bea	86.05	50	P	P	11 09 38.5	+1.0
	0.7nm,0.8s,baz=224,slow=6.2,SNR=4.4						
PDAR	Pinedale Array	93.56	47	P	P	11 10 14.7	+2.0
	0.3nm,0.7s,baz=232,slow=2.2,SNR=2.9						
YKA	Yellowknife Ar	94.88	27	P	P	11 10 17.7	-0.3
	0.2nm,0.7s,baz=267,slow=4.7,SNR=3.3						

IDC 07 11:03:40.1±1.7,11°.14S×164°.49E,h0^{km},mb3.5/3, mb1 3.8/4,mb1mx3.5/46,mbtmp3.6/4,ML3.4/1,Error ellipse: s-maj=52.6km s-min=32.0km az=128.0,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.03	170	Pn	Pn	11 06 19.2	-0.3
	0.3nm,0.3s,baz=320,slow=18,SNR=3.9						
WRA	Warramunga Arr	30.29	250	P	P	11 09 53.8	+0.4
	0.8nm,1.0s,baz=80,slow=9.4,SNR=3.4						
ASAR	Alice Springs	31.65	243	P	P	11 10 05.0	-0.3
	0.2nm,0.6s,baz=62,slow=10,SNR=5.0						
ILAR	Eielson Array	84.00	19	P	P	11 16 12.1	0.0
	0.7nm,1.0s,baz=232,slow=5.6,SNR=3.1						

ISCJB 07 11:09:36.0±0.5,37°.21N±0°.05×136°.89E±0°.09,h250^{km}, mb3.0/1,Error ellipse: s-maj=9.5km s-min=6.9km az=173.9

IDC 07 11:09:35.7±1.1,37°.11N×136°.86E,h255^{km}±15^{km},mb2.7/1, mb1 3.2/6,mb1mx2.8/58,mbtmp3.9/6,Error ellipse: s-maj=28.1km s-min=14.3km az=72.0

JMA 07 11:09:35.2,37°.13N×137°.09E,h272^{km},M2.8

ISC 07 11:09:36.3±1.0,37°.16N±0°.08×136°.95E±0°.08,h250^{km},n24, σ1^{s}.11/27,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSZ	Suzu	0.43	49	P	Pn	11 10 10.3	+1.4
MAT	Matsushiro	1.18	121	P	Pn	11 10 13.0	+0.5
MAT				*e*S	S	11 10 43.7	+2.8
MAT	Matsushiro	1.18	121	P	Pn	11 10 13.2	+0.7
MJAR	Matsushiro Arr	1.18	121	P	Pn	11 10 13.2	+0.7
	0.6nm,0.3s,baz=292,slow=7.8,SNR=35						
JNG	Nsakai	1.19	129	P	Pn	11 10 13.4	+0.8
JYTA	Yamagatataniai	1.58	186	P	Pn	11 10 16.3	+1.0
JHK	Hiroka	1.65	86	P	Pn	11 10 16.1	+0.3
JRY	Ryogami san	1.94	126	P	Pn	11 10 18.6	+0.3

JNS	Sasagawa	1.99	70	P	Pn	11 10 19.0	+0.4
JYN	Shimob	2.10	142	P	Pn	11 10 20.3	+0.5
JYN				*e*S	S	11 10 55.0	+0.9
JAG	Ashikaga	2.14	109	P	Pn	11 10 19.6	-0.5
JWT	Wachi	2.26	214	P	Pn	11 10 21.7	+0.5
JFT	Otama	2.72	82	P	Pn	11 10 25.9	+0.1
JIE	Ise	2.77	184	P	Pn	11 10 27.1	+0.7
JMM	Marumori	3.13	76	P	Pn	11 10 30.4	+0.2
JWY	Kouya	3.14	201	P	Pn	11 10 31.0	+0.5
JYK	Kaneyama	3.21	56	P	Pn	11 10 31.5	+0.5
TK02	Tokai 2	3.28	168	P	Pn	11 10 32.3	+0.7
JHJ	Hachijo jima 2 6.9nm,0.3s,baz=164,slow=22,SNR=3.3	4.65	149	P	Pn	11 10 47.3	-0.7
JHJ	10nm,0.3s,baz=115,slow=22,SNR=4.2			S	S	11 11 45.5	+0.5
JNU	Nakatsue 0.8nm,0.3s,baz=89,slow=17,SNR=5.9	6.40	233	P	Pn	11 11 06.9	-2.6
USRK	Ussuriysk Ar. 0.5nm,0.3s,baz=142,slow=12,SNR=9.7	7.97	333	P	Pn	11 11 30.3	+1.2
ASAJ	Asahikawa 1.2nm,0.3s,baz=333,slow=30,SNR=5.5	8.16	30	P	Pn	11 11 30.0	-1.5
KLR	Kul'dur 0.5nm,0.3s,baz=164,slow=11,SNR=14	12.64	344	P	Pn	11 12 27.1	-0.5
WRA	Warramunga Arr 0.3nm,0.8s,baz=0.8,slow=7.5,SNR=4.7	56.85	183	P	P	11 18 53.8	-1.3

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*IDC **07** 11:13:01.9±1.0, 11°.35S×164°.89E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.8/45, mbtmp3.8/9, ML4.0/2, Error ellipse: s-maj=35.9km s-min=22.1km az=149.0*

*ISCJB **07** 11:13:05.1±0.7, 11°.5S±0°.1×164°.8E±0°.1, h34km, mb3.6/7, Error ellipse: s-maj=17.4km s-min=16.7km az=34.6*

ISC 07 11:13:06.7±0.8**, 11°.5S**±0°.1×**164°.9E**±0°.1**, h34km, n9, σ1s.03**/9**, mb3.7**/7**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 12nm,0.3s,baz=15,slow=19,SNR=3.5	5.23	292	Pn	Pn	11 14 22.0	-0.5
DZM	Mont Dzumac 0.5nm,0.3s,baz=317,slow=22,SNR=11	10.67	172	Pn	Pn	11 15 36.6	-0.7
WRA	Warramunga Arr 1.2nm,1.1s,baz=81,slow=9.0,SNR=4.2	30.52	250	P	P	11 19 18.3	+1.2
ASAR	Alice Springs 0.5nm,0.6s,baz=65,slow=9.5,SNR=7.4	31.83	243	P	P	11 19 29.4	+0.7
ILAR	Eielson Array 0.6nm,0.8s,baz=237,slow=4.8,SNR=9.7	84.18	19	P	P	11 25 34.2	0.0
NVAR	Mina Array Bea 0.4nm,0.8s,baz=245,slow=8.6,SNR=2.8	86.95	50	P	P	11 25 49.6	+0.7
MKAR	Makanchi Array 0.2nm,0.6s,baz=112,slow=1.6,SNR=3.0	93.22	317	P	P	11 26 17.3	-0.5
YKA	Yellowknife Ar 0.1nm,0.5s,baz=257,slow=5.5,SNR=3.2	95.74	27	P	P	11 26 27.5	-1.4
TXAR	Lajitas Array 0.2nm,0.6s,baz=270,slow=4.5,SNR=2.7	96.79	62	P	P	11 26 35.7	+1.0

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*IDC **07** 11:13:35.6±0.8, 11°.21S×165°.09E, h0km, mb3.9/11, mb1 4.1/13, mb1mx4.0/44, mbtmp4.0/13, ML4.2/2, Error ellipse: s-maj=22.1km s-min=19.5km az=131.0*

*NEIC **07** 11:13:37.2±0.3, 11°.23S×165°.10E, h10km, mb4.4/4, Error ellipse: s-maj=7.9km s-min=6.4km az=48.0*

*ISCJB **07** 11:13:39.3±0.5, 11°.34S±0°.08×164°.98E±0°.07, h34km, mb4.1/14, Error ellipse: s-maj=12.5km s-min=7.9km az=34.4*

ISC 07 11:13:40.8±0.7**, 11°.26S**±0°.10×**165°.07E**±0°.08**, h34km, n32, σ0s.48**/30**, mb4.0**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.35	289	*e*Pn	Pn	11 14 58.3	-0.1
HNR				*e*Pn	Pn	11 14 58.5	+0.1
HNR				*e*Sn	Sn	11 15 58.9	0.0
HNR	Honiara 19nm,0.3s,baz=187,slow=23,SNR=3.1	5.35	289	Pn	Pn	11 14 58.3	-0.1
HNR	8.0nm,0.3s,baz=56,slow=24,SNR=6.2			Sn	Sn	11 15 58.9	0.0
DZM	Mont Dzumac	10.83	173	*e*Pn	Pn	11 16 13.1	-0.6
DZM	Mont Dzumac 0.8nm,0.3s,baz=331,slow=18,SNR=7.4	10.83	173	Pn	Pn	11 16 13.7	+0.1
MANU	Manus Island 28nm,1.0s	19.80	296	*e*P	P	11 18 07.7	-0.9
CTA	Charters Tower 7.2nm,1.2s,baz=59,slow=15,SNR=2.5	20.11	242	P	P	11 18 12.2	+0.3
COEN	Coen 20nm,1.0s	21.53	261	*e*P	P	11 18 27.5	+0.2
RAO	Raoul Island 468nm,0.4s	23.93	141	*e*P	P	11 18 52.0	+0.2
URZ	Urewera	28.97	160	*e*P	P	11 19 36.9	-0.3
URZ				*e*P	P	11 19 37.0	-0.1
URZ	Urewera 4.7nm,1.0s,baz=258,slow=5.3,SNR=4.8	28.97	160	P	P	11 19 36.9	-0.3
BKZ	Black Stump Fm 4.6nm,1.1s	29.60	162	*e*P	P	11 19 42.8	-0.1
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=5.1	29.60	3	T	T	11 50 49.6	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=4.5	29.61	3	T	T	11 50 50.8	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=4.3	29.62	3	T	T	11 50 49.6	
STKA	Stephens Creek 0.3nm,0.7s	29.83	223	*e*P	P	11 19 45.8	+0.8
STKA	Stephens Creek 1.9nm,0.8s,baz=45,slow=10,SNR=3.1	29.83	223	P	P	11 19 45.8	+0.8
WR1	Warramunga Arr 6.7nm,1.1s	30.79	250	*e*P	P	11 19 52.9	-0.6
WRA	Warramunga Arr 1.4nm,0.7s,baz=78,slow=8.9,SNR=8.3	30.79	250	P	P	11 19 52.9	-0.6
H11N1	WAKE ISLAND Hy baz=182	30.83	3	T	T	11 52 21.2	
H11N3	WAKE ISLAND Hy baz=182	30.83	3	T	T	11 52 21.9	
H11N2	WAKE ISLAND Hy baz=182	30.84	3	T	T	11 52 23.0	
ASAR	Alice Springs 1.3nm,0.9s,baz=64,slow=10,SNR=8.1	32.10	243	P	P	11 20 04.6	-0.5
CMAR	Chiang Mai Arr 0.3nm,0.3s,baz=120,slow=3.6,SNR=4.3	71.59	294	P	P	11 24 59.7	+0.4
SONA0	Songino Array	78.44	324	*e*P	P	11 25 38.6	+0.2
SONM	Songino Array 0.7nm,0.8s,baz=126,slow=7.3,SNR=3.4	78.44	324	P	P	11 25 38.6	+0.2
ILAR	Eielson Array 0.5nm,0.8s,baz=230,slow=6.2,SNR=3.9	83.92	19	P	P	11 26 06.7	-0.3
NVAR	Mina Array Bea 1.5nm,1.1s,baz=230,slow=7.6,SNR=4.2	86.67	50	P	P	11 26 22.3	+0.7
MK32	Makanchi Array	93.22	317	*e*P	P	11 26 52.5	+0.5
MKAR	Makanchi Array 0.7nm,0.8s,baz=107,slow=5.0,SNR=5.5	93.22	317	P	P	11 26 52.4	+0.5
YKA	Yellowknife Ar 0.3nm,0.8s,baz=254,slow=4.5,SNR=5.6	95.47	27	P	P	11 27 01.1	-0.7
ARA0	ARCESS Array S	116.37	345	*e*PKPdf	PKPdf	11 32 20.1	-0.3
ARCES	ARCESS Array B 1.6nm,0.9s,baz=98,slow=2.5,SNR=5.3	116.37	345	PKP	PKPdf	11 32 20.1	-0.3

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*ISCJB **07** 11:16:29.7±0.5, 55°.89N±0°.04×135°.41W±0°.08, h10km, mb3.6/1, MS3.5/1, Error ellipse: s-maj=7.8km s-min=3.8km az=141.9*

*NEIC **07** 11:16:32.4±0.0, 55°.96N×135°.29W, h20km, ML3.4(AEIC), After AEIC.*

NEIC Felt at Sitka.

*IDC **07** 11:16:33.6±1.4, 56°.16N×135°.38W, h0km, mb3.3/4, mb1 3.7/9, mb1mx3.5/44, mbtmp3.5/9, ML3.2/5, MS3.3/2, Ms1 3.3/2, ms1mx2.8/27, Error ellipse: s-maj=20.3km s-min=14.5km az=6.0*

ISC 07 11:16:32.7±0.9**, 55°.97N**±0°.06×**135°.30W**±0°.07**, h10km, n38, σ1s.66**/36**, Off coast of southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIT	Sitka	1.09	359	P	Pg	11 16 51.8	-1.9
SIT				S	Sg	11 17 05.8	-2.1
CRAG	Craig	1.33	111	P	Pn	11 16 54.8	-2.5
CRAG				S	Sb	11 17 13.7	-1.1
WRAK	Wrangell Islan	1.71	73	P	Pn	11 17 01.4	-1.2
WRAK				S	Sn	11 17 23.2	-1.3
JIS	Juneau Island	2.37	12	P	Pn	11 17 10.8	-0.8
BESE	Bessie Mountai	2.63	5	P	Pn	11 17 14.5	-0.8
H02S1	DAWSON INLET T SNR=646	3.22	148	Pn	Pn	11 17 21.8	-1.5
H02S1				Sn	Sn	11 17 58.6	-3.1
SKAG	Skagway	3.50	360	P	Pn	11 17 26.9	-0.2
DHAK	Deception Hill	3.50	335	P	Pn	11 17 26.3	-1.0
PLBC	Pleasant Camp	3.55	351	P	Pn	11 17 27.4	-0.3
DLBC	Dease Lake	3.79	47	P	Pn	11 17 31.1	-0.1
DLBC	Dease Lake 2.4nm,0.3s,baz=209,slow=10,SNR=166	3.79	47	Pn	Pn	11 17 31.5	+0.3
DLBC	35nm,0.3s,baz=124,slow=24,SNR=9.7			Lg	Lg	11 18 29.8	
DLBC	comp=Z,342nm,18.4s,baz=282,slow=40			LR	LR	11 19 01.4	
BNB	Barry Inlet	3.98	147	P	Pn	11 17 32.1	-1.8
PNL	Peninsula	4.31	331	P	Pn	11 17 37.1	-1.1
WHY	Whitehorse	4.71	3	P	Pn	11 17 43.8	-0.1
PCA	Pinnacle	4.91	330	P	Pn	11 17 46.1	-0.4
YUK5	Granite Creek	5.35	347	P	Pn	11 17 53.1	+0.4
YUK4	Talbot Arm	5.67	343	P	Pn	11 17 58.7	+1.6
BBB	Bella Bella	5.68	129	P	Pn	11 17 55.5	-1.5
BBB	Bella Bella 1.7nm,0.3s,baz=313,slow=6.1,SNR=12	5.68	129	Pn	Pn	11 17 56.3	-0.7
BBB	1.0nm,0.3s,baz=99,slow=18,SNR=6.5			Sn	Sn	11 18 59.8	-2.5
BBB	1.1nm,0.3s,baz=122,slow=7.8,SNR=3.3			Lg	Lg	11 19 30.7	
YUK3	Moose Creek	6.41	337	P	Pn	11 18 07.2	0.0
MCARA	McCarthy VSAT	6.76	327	P	Pn	11 18 12.3	+0.5
DAWY	Dawson	8.38	348	P	Pn	11 18 34.2	+0.2
EGAK	Eagle 3.9nm,0.3s	9.30	344	*e*Pn	Pn	11 18 47.0	+0.3
KDAK	Kodiak Island 1.1nm,0.3s,baz=87,slow=6.8,SNR=19	9.63	288	Pn	Pn	11 18 48.4	-2.8
ILAR	Eielson Array 0.1nm,0.3s,baz=152,slow=12,SNR=14	10.51	332	Pn	Pn	11 19 03.0	-0.3
ILAR	0.0nm,0.3s,baz=123,slow=26,SNR=3.4			Lg	Lg	11 22 16.0	
YKA	Yellowknife Ar 0.1nm,0.3s,baz=250,slow=12,SNR=18	12.41	50	Pn	Pn	11 19 29.2	0.0
YKA	0.0nm,0.3s,baz=249,slow=30,SNR=5.5			Lg	Lg	11 23 00.1	
INK	Inuvik 0.0nm,0.3s,baz=175,slow=5.2,SNR=3.1	12.41	3	Pn	Pn	11 19 27.7	-1.5
PDAR	Pinedale Array 0.5nm,1.0s,baz=318,slow=6.3,SNR=2.8	21.18	118	P	P	11 21 21.0	+2.7
RES	Resolute Bay 1.9nm,0.7s,baz=255,slow=9.0,SNR=9.4	24.35	25	P	P	11 21 52.2	+1.9
TXAR	Lajitas Array 0.1nm,0.7s,baz=320,slow=8.3,SNR=2.3	34.81	127	P	P	11 23 27.9	+4.3
NRIK	Noril'sk comp=Z,38nm,18.4s,baz=352,slow=42	51.18	342	LR	LR	11 52 03.1	
H11N2	WAKE ISLAND Hy baz=35,slow=76,SNR=393	55.96	254	T	T	12 26 45.1	
H11N3	WAKE ISLAND Hy baz=35,slow=76,SNR=489	55.96	254	T	T	12 26 45.6	
H11N1	WAKE ISLAND Hy baz=35,slow=76,SNR=200	55.98	254	T	T	12 26 46.3	
H11S1	WAKE ISLAND Hy baz=34,slow=75,SNR=470	57.06	253	T	T	12 28 11.0	
H11S2	WAKE ISLAND Hy baz=34,slow=75,SNR=210	57.08	253	T	T	12 28 12.0	
H11S3	WAKE ISLAND Hy baz=34,slow=75,SNR=298	57.08	253	T	T	12 28 12.2	
MKAR	Makanchi Array 0.4nm,0.6s,baz=22,slow=6.8,SNR=3.8	72.86	334	P	P	11 28 02.6	+1.2

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*IDC **07** 11:18:49.4±1.2, 11°.87S×165°.28E, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.7/41, mbtmp3.8/7, ML4.0/2, MS4.6/1, Ms1 4.6/1, ms1mx2.9/34, Error ellipse: s-maj=36.7km s-min=24.9km az=143.0*

*ISCJB **07** 11:18:53.0±0.9, 12°.0S±0°.1×165°.1E±0°.1, h33km, mb3.7/5, MS4.5/1, Error ellipse: s-maj=19.6km s-min=11.0km az=36.6*

ISC 07 11:18:54.8±1.0**, 11°.9S**±0°.1×**165°.2E**±0°.1**, h35km, n8, σ0s.45**/8**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 18nm,0.3s,baz=90,slow=20,SNR=4.1	5.72	295	Pn	Pn	11 20 17.9	+0.5
HNR	9.3nm,0.3s,baz=202,slow=19,SNR=2.8			Sn	Sn	11 21 21.4	-0.5
DZM	Mont Dzumac 0.3nm,0.3s,baz=336,slow=6.8,SNR=9.1	10.19	174	Pn	Pn	11 21 18.8	0.0
RAO	Raoul Island comp=Z,2µm,21.7s,baz=115,slow=33	23.35	140	LR	LR	11 31 37.8	
WRA	Warramunga Arr 0.6nm,0.8s,baz=83,slow=9.1,SNR=5.3	30.71	251	P	P	11 25 06.5	-0.2
ASAR	Alice Springs 0.6nm,0.8s,baz=73,slow=9.1,SNR=5.2	31.95	244	P	P	11 25 17.5	-0.2
ILAR	Eielson Array 0.7nm,0.6s,baz=240,slow=5.4,SNR=18	84.48	19	P	P	11 31 23.1	-0.5
NVAR	Mina Array Bea 0.3nm,0.4s,baz=239,slow=8.3,SNR=3.8	86.97	50	P	P	11 31 37.0	+0.1
MKAR	Makanchi Array 0.2nm,0.5s,baz=92,slow=6.0,SNR=3.4	93.78	317	P	P	11 32 08.7	+0.4

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*IDC **07** 11:23:52.5±0.7, 10°.86S×164°.77E, h0km, mb4.2/14, mb1 4.4/16, mb1mx4.2/40, mbtmp4.2/16, ML4.4/2, Error ellipse: s-maj=22.2km s-min=17.1km az=128.0*

*NEIC **07** 11:23:54.1±0.3, 10°.81S×164°.78E, h10km, mb4.4/10, Error ellipse: s-maj=8.6km s-min=6.6km az=91.0*

*ISCJB **07** 11:23:55.6±0.4, 10°.96S±0°.05×164°.74E±0°.06, h31km, mb4.2/21, Error ellipse: s-maj=8.7km s-min=7.0km az=144.3*

ISC 07 11:23:57.3±0.6**, 10°.86S**±0°.09×**164°.81E**±0°.08**, h31km, n48, σ0s.84**/45**, mb4.1**/21**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.99	286	*e*Pn	Pn	11 25 10.3	+0.2
HNR				*e*Pn	Pn	11 25 10.5	+0.4
HNR				*e*Sn	Sn	11 26 07.8	+1.0
HNR	Honiara 18nm,0.3s,baz=141,slow=6.0,SNR=4.6	4.99	286	Pn	Pn	11 25 10.3	+0.2
HNR	7.9nm,0.3s,baz=221,slow=17,SNR=3.5			Sn	Sn	11 26 07.8	+1.0
MARNC	Mare, Loyalty	11.00	164	*e*Pn	Pn	11 26 32.8	+0.2
DZM	Mont Dzumac 1.7nm,0.3s,baz=324,slow=12,SNR=23	11.26	172	Pn	Pn	11 26 35.5	-0.6
ONTNC	Ouen Toro	11.49	172	*e*Pn	Pn	11 26 40.1	+0.8
PINNC	Pines Island,	11.96	168	*e*Pn	Pn	11 26 46.2	+0.6
CTA	Charters Tower 19nm,1.0s,baz=60,slow=14,SNR=7.1	20.08	241	P	P	11 28 29.1	+0.7
CTAO	Charters Tower 30nm,1.0s	20.08	241	*e*P	Pn	11 28 29.8	-0.5
COEN	Coen 5.2nm,0.9s	21.35	259	*e*P	P	11 28 41.6	-0.6
ARMA	Armidale 9.2nm,1.0s	23.00	210	*e*P	P	11 28 59.9	+0.2
H11S2	WAKE ISLAND Hy baz=190	29.23	4	T	T	12 00 36.7	
H11S3	WAKE ISLAND Hy baz=190	29.23	4	T	T	12 00 40.2	
H11S1	WAKE ISLAND Hy baz=190	29.24	4	T	T	12 00 35.9	
STKA	Stephens Creek 0.9nm,0.9s	29.95	222	*e*P	P	11 30 02.5	-0.4
STKA	Stephens Creek 3.6nm,0.9s,baz=103,slow=9.5,SNR=4.5	29.95	222	P	P	11 30 02.5	-0.4
H11N1	WAKE ISLAND Hy baz=188	30.45	4	T	T	12 02 08.6	
H11N3	WAKE ISLAND Hy baz=188	30.46	4	T	T	12 02 07.0	
H11N2	WAKE ISLAND Hy baz=188	30.47	4	T	T	12 02 11.2	
WR1	Warramunga Arr 3.3nm,0.9s	30.68	249	*e*P	P	11 30 07.6	-1.9
WRA	Warramunga Arr 1.2nm,0.5s,baz=79,slow=8.9,SNR=12	30.68	249	P	P	11 30 07.6	-1.9
WRA	0.5nm,0.9s,baz=66,slow=2.3,SNR=3.5			PcP	PcP	11 33 07.3	+0.1
AS31	Alice Springs 1.2nm,1.1s	32.05	243	*e*P	P	11 30 19.9	-1.6
ASAR	Alice Springs 3.0nm,1.0s,baz=62,slow=10,SNR=10	32.06	243	P	P	11 30 19.9	-1.6
ASAR	0.7nm,0.7s,baz=64,slow=2.1,SNR=7.0			PcP	PcP	11 33 10.7	-0.1
RPZ	Rata Peaks 4.4nm,0.8s,baz=87,slow=2.0,SNR=2.4	33.18	172	P	P	11 30 31.7	+0.6
CMAR	Chiang Mai Arr 1.1nm,0.3s,baz=115,slow=4.2,SNR=4.8	71.20	294	P	P	11 35 13.3	-0.4
SEY	Seymchan 0.7nm,0.6s,baz=183,slow=5.7,SNR=3.6	74.19	354	P	P	11 35 31.2	+0.6
SONA0	Songino Array	77.98	324	*e*P	P	11 35 53.6	+0.9
SONM	Songino Array 1.2nm,0.8s,baz=139,slow=7.1,SNR=6.6	77.98	324	P	P	11 35 53.6	+0.9
SONA1	Songino Array	77.98	324	*e*P	P	11 35 53.9	+1.1
QSPA	South Pole Qui 7.4nm,1.1s	79.14	180	*e*P	P	11 35 59.9	+1.1
HDA	Harding Lake 4.4nm,0.8s	83.37	19	*e*P	P	11 36 21.5	+0.5
ILAR	Eielson Array 1.3nm,0.7s,baz=235,slow=4.7,SNR=17	83.63	19	P	P	11 36 22.8	+0.4
ILB	Eielson Array	83.63	19	*e*P	P	11 36 22.8	+0.4
NV01	Mina Array Sit	86.61	50	*e*P	P	11 36 37.1	-1.1
NVAR	Mina Array Bea 0.4nm,0.5s,baz=241,slow=5.1,SNR=5.6	86.61	50	P	P	11 36 38.5	+0.3
HVU	Hansel Valley 2.8nm,0.8s	91.56	48	*e*P	P	11 37 01.8	+0.4
MK01	Makanchi Array	92.75	317	*e*P	P	11 37 06.5	-0.1
MK31	Makanchi Array 2.0nm,0.9s	92.76	317	*e*P	P	11 37 06.4	-0.2
MK32	Makanchi Array	92.76	317	*e*P	P	11 37 07.0	+0.3
MKAR	Makanchi Array 11nm,0.8s	92.76	317	*e*P	P	11 37 05.1	-1.6
MKAR	Makanchi Array 1.9nm,0.7s,baz=93,slow=6.9,SNR=20	92.76	317	P	P	11 37 07.0	+0.3
ZALV	Zalesovo Beam	92.87	324	*e*P	P	11 37 06.3	-0.7
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=150,slow=6.5,SNR=4.4	92.87	324	P	P	11 37 06.9	0.0
ZAA1	Zalesovo Array	92.87	324	*e*P	P	11 37 06.9	0.0
BOZ	Bozeman (W)	93.21	44	*e*pP	pP	11 37 19.5	+2.2
PDAR	Pinedale Array 0.6nm,0.9s,baz=228,slow=3.8,SNR=4.4	94.11	47	P	P	11 37 13.5	+0.3
YKA	Yellowknife Ar 0.3nm,0.8s,baz=248,slow=4.8,SNR=4.7	95.23	27	P	P	11 37 16.2	-1.4
ARA0	ARCESS Array S	115.92	345	*e*PKPdf	PKiKP	11 42 35.8	-0.7
ARCES	ARCESS Array B 2.9nm,1.0s,baz=85,slow=2.6,SNR=5.6	115.92	345	PKP	PKiKP	11 42 35.8	-0.7

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*IDC **07** 11:29:05.9±1.0, 10°.74S×164°.56E, h0km, mb4.1/7, mb1 4.2/10, mb1mx3.9/42, mbtmp4.1/10, ML3.7/3, Error ellipse: s-maj=25.8km s-min=23.6km az=134.0*

ISC 07 11:29:10.7±0.9**, 10°.9S**±0°.1×**164°.5E**±0°.1**, h29km, n21, σ1s.34**/17**, mb4.1**/8**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 5.1nm,0.3s,baz=342,slow=21,SNR=1.8	4.72	288	Pn	Pn	11 30 18.1	-1.9
DZM	Mont Dzumac 0.7nm,0.3s,baz=5.9,slow=11,SNR=10	11.27	171	Pn	Pn	11 31 48.3	-1.6
CTA	Charters Tower 0.1nm,0.3s,baz=94,slow=13,SNR=2.0	19.81	240	P	P	11 33 38.3	-0.8
RAO	Raoul Island 225nm,0.3s,baz=160,slow=13,SNR=2.8	24.55	141	P	P	11 34 29.8	+1.7
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=6.7	29.28	4	T	T	12 06 11.6	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=5.9	29.28	4	T	T	12 06 10.9	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=8.1	29.30	4	T	T	12 06 14.7	
STKA	Stephens Creek 1.5nm,0.7s,baz=58,slow=19,SNR=2.5	29.73	222	P	P	11 35 15.8	+1.3
WRA	Warramunga Arr 4.4nm,0.6s,baz=80,slow=9.1,SNR=34	30.40	249	P	P	11 35 21.0	+0.4
WRA	0.5nm,0.6s,baz=74,slow=3.4,SNR=3.9			PcP	PcP	11 38 20.2	0.0
WRA	Warramunga Arr	30.40	249	PcP	PcP	11 38 20.2	0.0
H11N1	WAKE ISLAND Hy baz=184,slow=76,SNR=4.4	30.51	4	T	T	12 07 43.9	
H11N3	WAKE ISLAND Hy baz=184,slow=76,SNR=2.0	30.51	4	T	T	12 07 47.6	
H11N2	WAKE ISLAND Hy baz=184,slow=76,SNR=3.4	30.52	4	T	T	12 07 49.1	
ASAR	Alice Springs 3.8nm,0.8s,baz=62,slow=10,SNR=46	31.78	242	P	P	11 35 33.1	+0.3
ASAR	0.6nm,0.7s,baz=70,slow=2.4,SNR=4.2			PcP	PcP	11 38 23.1	-0.7
ASAR	Alice Springs	31.78	242	PcP	PcP	11 38 23.1	-0.7
FITZ	Fitzroy Crossi 3.0nm,0.8s,baz=98,slow=8.3,SNR=5.5	38.25	255	P	P	11 36 29.1	+0.5
XAN	Xi'an	69.13	313	P	P	11 40 15.6	+1.0
SONM	Songino Array 0.7nm,0.8s,baz=139,slow=4.4,SNR=4.6	77.83	324	P	P	11 41 06.0	+0.4
GTA	Gaotai	78.08	314	*e*P	P	11 41 09.1	+1.9
GTA				pP	sP	11 41 18.7	+1.8
GTA				sP	pwP	11 41 22.0	-1.0
ILAR	Eielson Array 0.4nm,0.8s,baz=216,slow=7.5,SNR=5.7	83.76	19	P	P	11 41 34.1	-2.7
MKAR	Makanchi Array 0.6nm,0.8s,baz=98,slow=6.2,SNR=3.9	92.58	317	P	P	11 42 20.1	+0.5

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*ISCJB **07** 11:29:53.3±0.2, 11°.92S±0°.05×165°.14E±0°.04, h10km, mb4.8/98, MS3.1/1, Error ellipse: s-maj=7.8km s-min=5.6km az=175.5*

*IDC **07** 11:29:53.1±0.5, 11°.91S×165°.24E, h0km, mb4.7/22, mb1 4.8/25, mb1mx4.6/44, mbtmp4.6/25, ML4.5/3, MS3.3/4, Ms1 3.3/4, ms1mx3.0/23, Error ellipse: s-maj=17.1km s-min=13.3km az=122.0*

*NEIC **07** 11:29:54.8±0.1, 11°.89S×165°.20E, h10km, mb5.0/68, Error ellipse: s-maj=5.4km s-min=4.1km az=142.0*

ISC 07 11:29:54.6±0.5**, 11°.90S**±0°.08×**165°.20E**±0°.08**, h10km, n190, σ0s.77**/186**, mb4.9**/98**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.71	295	Pn	Pn	11 31 19.6	0.0
HNR				Sn	Sn	11 32 24.6	-0.7
HNR	Honiara 22nm,0.3s,baz=198,slow=6.2,SNR=6.3	5.71	295	Pn	Pn	11 31 19.6	0.0
HNR	19nm,0.3s,baz=16,slow=21,SNR=3.9			Sn	Sn	11 32 24.6	-0.7
HNR	comp=Z,742nm,18.4s,baz=126,slow=36			LR	LR	11 33 18.9	
DZM	Mont Dzumac 35nm,0.5s	10.19	173	*e*Pn	Pn	11 32 21.7	+0.5
DZM	comp=Z,743nm,25.9s			*e*LR	LR	11 34 42.7	
DZM	Mont Dzumac 5.5nm,0.3s,baz=1.3,slow=13,SNR=18	10.19	173	Pn	Pn	11 32 21.6	+0.5
CTA	Charters Tower 0.4nm,0.3s,baz=76,slow=12,SNR=7.0	19.94	244	P	Pn	11 34 28.2	-0.4
URZ	Urewera 20nm,1.2s,baz=315,slow=3.2,SNR=2.7	28.33	160	P	P	11 35 49.4	+0.7
STKA	Stephens Creek 2.6nm,0.7s,baz=27,slow=9.1,SNR=5.5	29.46	224	P	P	11 35 58.6	-0.2
H11S2	WAKE ISLAND Hy baz=186	30.23	3	T	T	12 07 44.3	
H11S3	WAKE ISLAND Hy baz=186	30.23	3	T	T	12 07 46.3	
H11S1	WAKE ISLAND Hy baz=186	30.25	3	T	T	12 07 51.6	
WRA	Warramunga Arr	30.70	251	P	P	11 36 09.6	-0.4
WRA				PcP	PcP	11 39 07.2	-0.8
WRA	Warramunga Arr 7.2nm,0.8s,baz=81,slow=9.4,SNR=21	30.70	251	P	P	11 36 09.6	-0.4
WRA	1.6nm,0.8s,baz=77,slow=3.1,SNR=7.1			PcP	PcP	11 39 07.2	-0.8
H11N1	WAKE ISLAND Hy baz=175	31.45	3	T	T	12 09 17.3	
H11N3	WAKE ISLAND Hy baz=175	31.46	3	T	T	12 09 19.8	
H11N2	WAKE ISLAND Hy baz=175	31.47	3	T	T	12 09 16.6	
ASAR	Alice Springs	31.94	244	P	P	11 36 19.9	-1.1
ASAR				PcP	PcP	11 39 10.8	-0.5
ASAR	Alice Springs 4.0nm,0.9s,baz=73,slow=9.5,SNR=12	31.94	244	P	P	11 36 19.9	-1.1
ASAR	1.2nm,1.0s,baz=70,slow=2.8,SNR=4.6			PcP	PcP	11 39 10.8	-0.5
RPZ	Rata Peaks 3.0nm,0.6s,baz=286,slow=4.7,SNR=2.8	32.11	172	P	P	11 36 21.6	-0.4
GUMO	Guam comp=Z,38nm,19.1s,baz=108,slow=35	32.37	321	LR	LR	11 49 01.3	
FITZ	Fitzroy Crossi 22nm,0.8s,baz=107,slow=6.9,SNR=29	38.65	256	P	P	11 37 18.9	+0.2
PPT2	Papeete2 comp=Z,179nm,27.0s	44.02	103	*e*LR	LR	11 50 23.2	
NWAO	Narrogin (SRO) 9.0nm,0.9s,baz=299,slow=9.5,SNR=2.8	48.55	236	P	P	11 38 38.3	0.0
JNU	Nakatsue 14nm,0.9s,baz=137,slow=4.4,SNR=4.9	55.46	325	P	P	11 39 30.0	+0.2
KSRS	Korea Array 2.5nm,0.8s,baz=141,slow=8.1,SNR=5.8	60.28	326	P	P	11 40 04.1	+0.6
KSRS	comp=Z,9.1nm,18.1s,baz=30,slow=36			LR	LR	12 06 28.0	
KSAR	Wonju Array Be	60.29	326	P	P	11 40 04.1	+0.5
USRK	Ussuriysk Ar. 4.3nm,0.7s,baz=106,slow=8.2,SNR=5.8	63.47	334	P	P	11 40 25.7	+0.9

PETK	**Petropavlovsk-**	**65.06**	**355**	LR	LR	12 02 15.0	
	comp=Z,33nm,21.3s,baz=90,slow=30						
ENH	**Enshi**	**68.02**	**310**	*e*P	**P**	**11 40 54.2**	**-0.4**
	25nm,1.3s						
NONG	**Nongkai**	**68.08**	**295**	P	**P**	**11 40 56.7**	**+1.6**
PBKT	**Sadao Pong**	**69.51**	**293**	P	**P**	**11 41 05.9**	**+1.9**
XAN	**Xi'an**	**70.30**	**313**	P	**P**	**11 41 09.0**	**+0.3**
XAN				pP	pwP	11 41 17.8	+0.9
XAN				sP	PcP	11 41 22.1	-8.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN	**Xi'an**	**70.30**	**313**	*e*P	**P**	**11 41 08.9**	**+0.3**
	comp=Z,35nm,0.8s						
UTHA	**Uthaitani**	**70.56**	**291**	P	**P**	**11 41 14.9**	**+4.4**
CMAR	**Chiang Mai Arr**	**71.96**	**294**	P	**P**	**11 41 20.4**	**+1.3**
	comp=Z,4.0nm,0.8s,baz=121,slow=4.4,SNR=21						
CMMT	**Chiang Mai**	**72.08**	**294**	P	**P**	**11 41 21.5**	**+1.8**
	comp=Z,6.8nm,1.1s,comp=Z,0.0nm						
CHTO	**Chiang Mai**	**72.08**	**294**	P	**P**	**11 41 21.6**	**+1.9**
	comp=Z,31nm,1.1s,comp=Z,0.1nm						
SEY	**Seymchan**	**75.26**	**354**	P	**P**	**11 41 37.5**	**+0.1**
	comp=Z,5.4nm,0.9s,baz=166,slow=7.7,SNR=16						
GAMB	**Gambell**	**77.49**	**10**	*e*P	**P**	**11 41 49.9**	**-0.1**
	comp=Z,7.9nm,1.0s						
KDAK	**Kodiak Island**	**77.56**	**22**	P	**P**	**11 41 50.4**	**-0.2**
	comp=Z,12nm,1.0s,baz=225,slow=7.1,SNR=3.3						
QSPA	**South Pole Qui**	**78.11**	**180**	*e*P	**P**	**11 41 53.9**	**0.0**
	comp=Z,38nm,1.0s						
SONM	**Songino Array**	**79.03**	**324**	P	**P**	**11 42 00.0**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=140,slow=6.2,SNR=9.3						
SVW2	**Sparrevohn**	**79.08**	**18**	*e*P	**P**	**11 41 58.8**	**-0.2**
	comp=Z,17nm,1.1s						
ANM	**Nome**	**79.43**	**12**	*e*P	**P**	**11 42 01.6**	**+0.8**
	comp=Z,6.0nm,1.1s						
BRLK	**Bradley Lake**	**79.62**	**21**	*e*P	**P**	**11 42 01.5**	**-0.5**
	comp=Z,22nm,0.9s						
BILL	**Bilibino**	**79.73**	**0**	*e*P	**P**	**11 42 02.4**	**+0.1**
	comp=Z,16nm,0.8s						
KNK	**Knik Glacier**	**81.64**	**21**	*e*P	**P**	**11 42 12.5**	**-0.2**
	comp=Z,15nm,1.0s						
GLI	**Glacier Island**	**81.75**	**21**	*e*P	**P**	**11 42 13.0**	**-0.2**
	comp=Z,32nm,1.0s						
CAST	**Castle Rocks**	**81.92**	**18**	*e*P	**P**	**11 42 13.7**	**-0.5**
	comp=Z,17nm,0.8s						
SML	**Sawmill**	**81.96**	**20**	*e*P	**P**	**11 42 14.2**	**-0.3**
	comp=Z,18nm,1.1s						
DIV	**Divide**	**82.39**	**22**	*e*P	**P**	**11 42 16.8**	**0.0**
	comp=Z,21nm,0.8s						
TRF	**Thorofare Moun**	**82.49**	**19**	*e*P	**P**	**11 42 17.7**	**+0.3**
	comp=Z,17nm,1.1s						
KLU	**Klutina**	**82.58**	**21**	*e*P	**P**	**11 42 17.6**	**-0.1**
	comp=Z,11nm,0.9s						
BPAW	**Bear Paw Mtn.**	**82.75**	**18**	*e*P	**P**	**11 42 19.1**	**+0.6**
	comp=Z,6.6nm,1.2s						
RND	**Reindeer**	**82.91**	**19**	*e*P	**P**	**11 42 19.3**	**-0.1**
	comp=Z,16nm,1.1s						
RDOG	**Red Dog Mine**	**82.96**	**12**	*e*P	**P**	**11 42 20.2**	**+0.7**
	comp=Z,14nm,0.9s						
MCK	**McKinley**	**83.11**	**19**	*e*P	**P**	**11 42 20.2**	**-0.3**
	comp=Z,13nm,1.0s						
DHY	**Denali Highway**	**83.16**	**20**	*e*P	**P**	**11 42 21.3**	**+0.5**
	comp=Z,6.4nm,1.0s						
IM3	**Indian Mountai**	**83.38**	**16**	*e*P	**P**	**11 42 22.0**	**+0.3**
MLY	**Manley**	**83.50**	**17**	*e*P	**P**	**11 42 23.0**	**+0.6**
	comp=Z,4.3nm,0.8s						
WRH	**Wood River Hil**	**83.90**	**18**	*e*P	**P**	**11 42 24.1**	**-0.3**
	comp=Z,11nm,0.8s						
MDM	**Murphy Dome**	**84.20**	**18**	*e*P	**P**	**11 42 25.6**	**-0.3**
	comp=Z,12nm,0.8s						
HDA	**Harding Lake**	**84.22**	**19**	*e*P	**P**	**11 42 26.2**	**+0.2**
	comp=Z,19nm,0.7s						
HDA	**Harding Lake**	**84.22**	**19**	P	**P**	**11 42 25.8**	**-0.2**
	baz=227						
TCOL	**CIGO, UAF Yank**	**84.25**	**18**	P	**P**	**11 42 25.2**	**-1.0**
	baz=226						
COLA	**College**	**84.25**	**18**	*e*P	**P**	**11 42 25.6**	**-0.5**
	comp=Z,26nm,0.8s						
O02D	**Mt. Diablo Mer**	**84.26**	**47**	P	**P**	**11 42 27.4**	**+0.5**
	baz=249						
SNCC	**San Nicolas Is**	**84.45**	**55**	P	**P**	**11 42 28.4**	**+0.5**
	baz=252						
RIDG	**Independ'e Rid**	**84.45**	**20**	*e*P	**P**	**11 42 28.0**	**+0.7**
	comp=Z,48nm,1.2s						
IL1	**Eielson Array**	**84.48**	**19**	*e*P	**P**	**11 42 27.1**	**-0.2**
ILAR	**Eielson Array**	**84.48**	**19**	P	**P**	**11 42 27.2**	**-0.1**
	comp=Z,8.8nm,0.6s,baz=242,slow=5.3,SNR=126						
ILB	**Eielson Array**	**84.48**	**19**	*e*P	**P**	**11 42 27.0**	**-0.4**
POKR	**Poker Plat Res**	**84.55**	**18**	P	**P**	**11 42 27.1**	**-0.6**
	baz=226						
N02D	**Trinity Center**	**84.60**	**46**	P	**P**	**11 42 29.0**	**+0.4**
	baz=249						
M02C	**Callahan**	**84.64**	**46**	P	**P**	**11 42 28.9**	**+0.1**
	baz=249						
SMMC	**Simmler**	**84.72**	**52**	P	**P**	**11 42 28.3**	**-1.0**
	baz=252						
SCRK	**Sand Creek**	**84.89**	**20**	*e*P	**P**	**11 42 30.1**	**+0.5**
	comp=Z,36nm,1.1s						
ORV	**Oroville**	**84.98**	**48**	*e*P	**P**	**11 42 29.6**	**-0.8**
	comp=Z,6.3nm,0.9s						
O03E	**Paynes Creek**	**85.01**	**47**	P	**P**	**11 42 29.3**	**-1.4**
	baz=250						
AFDM	**Forest Hills D**	**85.16**	**49**	*e*P	**P**	**11 42 30.4**	**-1.1**
	comp=Z,9.1nm,0.9s						
CMB	**Columbia Colle**	**85.30**	**50**	*e*P	**P**	**11 42 31.0**	**-1.1**
	comp=Z,7.6nm,0.9s						
L04D	**Klamath Falls**	**85.32**	**45**	P	**P**	**11 42 31.7**	**-0.5**
	baz=249						
CIS	**Catalina Islan**	**85.38**	**55**	P	**P**	**11 42 29.9**	**-2.8**
	baz=253						
PRP	**Porcupine Dome**	**85.42**	**18**	*e*P	**P**	**11 42 32.7**	**+0.5**
	comp=Z,3.5nm,1.0s						
VES	**Vestal, Richgr**	**85.59**	**52**	P	**P**	**11 42 32.3**	**-1.3**
	baz=252						
J04D	**Umpqua Nationa**	**85.81**	**44**	P	**P**	**11 42 33.6**	**-1.2**
	baz=250						
MWC	**Mount Wilson**	**85.91**	**54**	*e*P	**P**	**11 42 35.0**	**-0.5**
	comp=Z,12nm,1.1s						
ISA	**Isabella, Lake**	**86.01**	**52**	*e*P	**P**	**11 42 35.8**	**0.0**
ISA	**Isabella, Lake**	**86.01**	**52**	P	**P**	**11 42 35.6**	**-0.2**
	baz=252,SNR=7.5						
MDPB	**Devils Postpil**	**86.15**	**50**	*e*P	**P**	**11 42 36.2**	**-0.5**
	comp=Z,9.2nm,0.9s						
EDW2	**Edwards Air Fo**	**86.15**	**53**	P	**P**	**11 42 36.4**	**-0.1**
	baz=253,SNR=6.5						
WAKR	**Walker**	**86.15**	**50**	*e*P	**P**	**11 42 35.6**	**-1.0**
	comp=Z,8.2nm,1.0s						
FYU	**Fort Yukon**	**86.20**	**18**	*e*P	**P**	**11 42 37.2**	**+1.3**
	comp=Z,13nm,1.0s						
BFSC	**Mount Baldy Ra**	**86.23**	**54**	P	**P**	**11 42 36.2**	**-0.7**
	baz=253						
109C	**Camp Elliot, M**	**86.28**	**55**	P	**P**	**11 42 36.5**	**-0.6**
	baz=253						
MLAC	**Mammoth, Mammo**	**86.33**	**51**	P	**P**	**11 42 38.8**	**+1.2**
	baz=252						
MURC	**Murrieta**	**86.41**	**55**	P	**P**	**11 42 37.7**	**-0.1**
	baz=253						
J05D	**Fort Rock, OR**	**86.43**	**45**	P	**P**	**11 42 38.0**	**+0.3**
	baz=250						
DAWY	**Dawson**	**86.54**	**21**	*e*P	**P**	**11 42 38.0**	**+0.3**
	comp=Z,8.9nm,0.8s						
CWC	**Cottonwood Cre**	**86.55**	**52**	P	**P**	**11 42 38.7**	**+0.1**
	baz=253						
PAHR	**Pah Rah Range**	**86.57**	**48**	*e*P	**P**	**11 42 38.1**	**-0.4**
	comp=Z,9.3nm,1.0s						
LRMC	**Laurel Mtn Rad**	**86.57**	**53**	P	**P**	**11 42 38.5**	**-0.1**
	baz=253,SNR=6.0						
I05D	**Terrebonne, OR**	**86.71**	**44**	P	**P**	**11 42 39.9**	**+0.9**
	baz=250						
MONP2	**Monument Peak**	**86.83**	**56**	P	**P**	**11 42 39.8**	**-0.2**
	baz=254						
MPMC	**Manual Prospec**	**86.89**	**52**	P	**P**	**11 42 39.9**	**-0.3**
	baz=253,SNR=5.8						
NV01	**Mina Array Sit**	**86.98**	**50**	*e*P	**P**	**11 42 40.5**	**-0.1**
NVAR	**Mina Array Bea**	**86.98**	**50**	P	**P**	**11 42 41.0**	**+0.3**
	comp=Z,7.1nm,0.9s,baz=235,slow=8.1,SNR=26						
PFO	**Pinyon Flats O**	**87.00**	**55**	P	**P**	**11 42 40.4**	**-0.3**
	baz=254						
IKP	**In-Ko-Pah, Jac**	**87.02**	**56**	P	**P**	**11 42 40.7**	**-0.1**
	baz=254						
G05D	**Wamic, OR**	**87.04**	**43**	P	**P**	**11 42 40.2**	**-0.3**
	baz=250						
NV11	**Mina Array Sit**	**87.09**	**50**	*e*P	**P**	**11 42 40.5**	**-0.6**
	comp=Z,0.7nm,1.0s						
GSC	**Goldstone, Bar**	**87.21**	**53**	P	**P**	**11 42 41.7**	**0.0**
	baz=253						
GRAC	**Grapevine Rang**	**87.26**	**51**	P	**P**	**11 42 42.0**	**+0.2**
	baz=253						
KVN	**Kaiserville**	**87.31**	**49**	*e*P	**P**	**11 42 41.5**	**-0.7**
	comp=Z,5.2nm,0.9s						
SWSC	**Sam W. Stewart**	**87.35**	**56**	P	**P**	**11 42 42.2**	**-0.1**
	baz=254						
HEC	**Hector,Ludlow**	**87.44**	**54**	P	**P**	**11 42 42.6**	**-0.2**
	baz=254						
BELC	**Belle Mtn. Jos**	**87.48**	**55**	P	**P**	**11 42 43.0**	**-0.1**
	baz=254,SNR=9.5						
FURC	**Furnace Creek,**	**87.50**	**52**	P	**P**	**11 42 42.6**	**-0.3**
	baz=253						
SHOC	**Shoshone, Teco**	**87.79**	**53**	P	**P**	**11 42 44.7**	**+0.3**
	baz=254						
BC3	**Big Chuckawall**	**87.82**	**55**	P	**P**	**11 42 45.0**	**+0.3**
	baz=254						
TUQ	**Turquoise Moun**	**87.94**	**53**	P	**P**	**11 42 44.9**	**-0.3**
	baz=254,SNR=5.9						
WVOR	**Wild Horse Val**	**87.96**	**46**	*e*P	**P**	**11 42 45.1**	**-0.1**
	comp=Z,9.4nm,1.1s						
GMRC	**Granite Mounta**	**87.97**	**54**	P	**P**	**11 42 45.1**	**-0.3**
	baz=254,SNR=6.6						
TPNV	**Topopah Spring**	**88.10**	**52**	*e*P	**P**	**11 42 46.0**	**-0.1**
	comp=Z,4.1nm,1.0s						
TPNV	**Topopah Spring**	**88.10**	**52**	P	**P**	**11 42 45.8**	**-0.3**
	baz=254						
GLA	**Glamis**	**88.17**	**56**	P	**P**	**11 42 46.8**	**+0.5**
	baz=255						
IRM	**Iron Mountain**	**88.21**	**55**	P	**P**	**11 42 46.5**	**0.0**
	baz=254,SNR=8.8						
J08A	**Circle Bar Ran**	**88.36**	**45**	*e*P	**P**	**11 42 47.1**	**+0.1**
	comp=Z,11nm,1.0s						
LDFC	**Landfair**	**88.48**	**54**	*e*P	**P**	**11 42 47.3**	**-0.5**
	comp=Z,17nm,0.9s						
Y12C	**Blythe**	**88.60**	**55**	*e*P	**P**	**11 42 48.4**	**+0.2**
	comp=Z,11nm,1.0s						
Y12C	**Blythe**	**88.60**	**55**	P	**P**	**11 42 48.7**	**+0.5**
	baz=255,SNR=6.5						
SHPR	**Sheep Range**	**88.82**	**52**	*e*P	**P**	**11 42 49.6**	**+0.2**
	comp=Z,8.1nm,1.1s						
R11A	**Troy Canyon, C**	**89.00**	**51**	*e*P	**P**	**11 42 50.5**	**+0.3**
	comp=Z,6.3nm,1.1s						
R11A	**Troy Canyon, C**	**89.00**	**51**	P	**P**	**11 42 50.7**	**+0.5**
	baz=254						
PDMCI	**Parker Dam,Lak**	**89.05**	**55**	P	**P**	**11 42 50.5**	**+0.2**
	baz=255,SNR=6.4						
W13A	**Hualapai Mount**	**89.45**	**54**	*e*P	**P**	**11 42 52.8**	**+0.3**
	comp=Z,5.2nm,0.9s						
214A	**Organ Pipe Nat**	**89.54**	**57**	P	**P**	**11 42 53.3**	**+0.6**
	baz=256,SNR=8.3						
Y14A	**Wickenburg**	**89.87**	**55**	*e*P	**P**	**11 42 54.6**	**+0.3**
	comp=Z,4.1nm,1.0s						
ELK	**Elko**	**89.91**	**48**	*e*P	**P**	**11 42 54.3**	**-0.2**
	comp=Z,2.5nm,1.0s						
F10A	**Beach Ranch, E**	**89.99**	**43**	*e*P	**P**	**11 42 54.6**	**0.0**
	comp=Z,0.7nm,0.6s						
MFID	**Camas Ranch**	**90.22**	**46**	*e*P	**P**	**11 42 55.4**	**-0.4**
	comp=Z,5.5nm,0.9s						
PSUT	**Pine Spring**	**90.36**	**51**	*e*P	**P**	**11 42 56.6**	**0.0**
	comp=Z,6.0nm,0.9s						
LCMT	**Little Creek M**	**90.44**	**52**	*e*P	**P**	**11 42 57.8**	**+0.8**
	comp=Z,8.6nm,1.0s						
CCUT	**Cedar City**	**90.48**	**52**	*e*P	**P**	**11 42 58.3**	**+1.0**
	comp=Z,7.1nm,0.9s						
NEW	**Newport**	**90.73**	**41**	P	**P**	**11 42 58.6**	**+0.6**
	baz=253						
NEW	**Newport**	**90.73**	**41**	P	**P**	**11 42 58.3**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=204,slow=10.0,SNR=3.6						
KNB	**Kanab**	**90.77**	**52**	*e*P	**P**	**11 42 59.6**	**+1.0**
	comp=Z,14nm,1.2s						
SYO	**Syowa Base**	**90.82**	**197**	⇑*e*P	P	11 43 10.0	+12
INK	**Inuvik**	**90.87**	**19**	*e*P	**P**	**11 42 57.7**	**-0.3**
	comp=Z,4.6nm,1.1s						
U15A	**North Rim**	**91.04**	**53**	*e*P	**P**	**11 43 01.1**	**+1.1**
	comp=Z,11nm,0.9s						
X16A	**Lo Mia Camp, P**	**91.24**	**55**	*e*P	**P**	**11 43 01.8**	**+0.9**
	comp=Z,6.0nm,0.9s						
HLID	**Hailey**	**91.25**	**46**	*e*P	**P**	**11 43 01.4**	**+0.8**
	comp=Z,4.2nm,0.8s						
HLID	**Hailey**	**91.25**	**46**	P	**P**	**11 43 01.2**	**+0.5**
	baz=255						
PKCU	**Pink Cliffs**	**91.27**	**52**	*e*P	**P**	**11 43 02.4**	**+1.4**
	comp=Z,11nm,1.0s						
TUC	**Tucson**	**91.29**	**57**	*e*P	**P**	**11 43 01.3**	**+0.4**
	comp=Z,3.3nm,0.8s						
TUC	**Tucson**	**91.29**	**57**	P	**P**	**11 43 01.7**	**+0.8**
	baz=257						
MTPU	**Mount Pierson**	**91.51**	**52**	*e*P	**P**	**11 43 03.4**	**+1.2**
	comp=Z,8.2nm,1.0s						
WUAZ	**Wupatki**	**91.55**	**54**	*e*P	**P**	**11 43 02.9**	**+0.7**
	comp=Z,5.8nm,1.0s						
WUAZ	**Wupatki**	**91.55**	**54**	P	**P**	**11 43 03.2**	**+1.0**
	baz=256						
DUG	**Dugway, Tooele**	**91.56**	**49**	*e*P	**P**	**11 43 01.9**	**-0.2**
	comp=Z,3.7nm,0.8s						
DUG	**Dugway, Tooele**	**91.56**	**49**	P	**P**	**11 43 02.4**	**+0.3**
	baz=256						
BGU	**Big Grassy Mou**	**91.57**	**49**	*e*P	**P**	**11 43 02.6**	**+0.5**
	comp=Z,4.1nm,0.9s						
MSU	**Marysvale**	**91.63**	**51**	*e*P	**P**	**11 43 04.0**	**+1.4**
HVU	**Hansel Valley**	**91.97**	**48**	*e*P	**P**	**11 43 04.8**	**+0.8**
	comp=Z,11nm,0.9s						
NLU	**North Lily Min**	**92.05**	**50**	*e*P	**P**	**11 43 05.2**	**+0.7**
	comp=Z,5.8nm,1.0s						
319A	**Douglas**	**92.33**	**59**	*e*P	**P**	**11 43 06.5**	**+0.6**
	comp=Z,5.9nm,0.7s						
MPU	**Maple Canyon**	**92.39**	**50**	*e*P	**P**	**11 43 07.0**	**+0.9**
	comp=Z,4.1nm,1.2s						
CTU	**Camp Tracy**	**92.46**	**49**	*e*P	**P**	**11 43 06.9**	**+0.6**
	comp=Z,4.9nm,0.9s						
X18A	**Snowflake**	**92.47**	**55**	*e*P	**P**	**11 43 06.7**	**+0.2**
	comp=Z,3.9nm,0.8s						
FXWY	**Fox Creek**	**93.66**	**46**	*e*P	**P**	**11 43 12.4**	**+0.6**
	comp=Z,1.7nm,0.8s						
BOZ	**Bozeman (W)**	**93.67**	**44**	*e*P	**P**	**11 43 11.5**	**-0.3**
	comp=Z,10nm,0.8s						
MKAR	**Makanchi Array**	**93.77**	**317**	P	**P**	**11 43 12.2**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=98,slow=6.1,SNR=27						
ZALV	**Zalesovo Beam**	**93.93**	**324**	P	**P**	**11 43 11.8**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=128,slow=4.3,SNR=11						
PV09	**Paradox Valley**	**93.95**	**52**	*e*P	**P**	**11 43 13.5**	**+0.1**
PV23	**Carpenter Ridg**	**94.04**	**52**	*e*P	**P**	**11 43 14.3**	**+0.5**
	comp=Z,5.5nm,0.7s						
H17A	**Grant Village**	**94.14**	**46**	P	**P**	**11 43 15.6**	**+1.5**
	baz=258						
MVCO	**Mesa Verde**	**94.18**	**53**	P	**P**	**11 43 15.0**	**+0.6**
	baz=258						
BW06	**Boulder Array**	**94.52**	**47**	P	**P**	**11 43 15.9**	**+0.1**
	baz=258						
PDAR	**Pinedale Array**	**94.52**	**47**	P	**P**	**11 43 16.1**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=222,slow=2.0,SNR=8.6						
RLMT	**Red Lodge**	**95.20**	**45**	P	**P**	**11 43 18.4**	**-0.5**
	baz=258						
EGMT	**Eagleton**	**95.45**	**42**	P	**P**	**11 43 20.1**	**+0.3**
	baz=258						
S22A	**4UR Ranch, Cre**	**95.59**	**53**	P	**P**	**11 43 21.6**	**+0.7**
	baz=259						
MNTX	**Cornudas Mount**	**95.66**	**59**	P	**P**	**11 43 21.4**	**+0.4**
	baz=260						
YKA	**Yellowknife Ar**	**95.97**	**27**	P	**P**	**11 43 20.2**	**-1.4**
	comp=Z,3.0nm,0.7s,baz=256,slow=4.6,SNR=52						
YKB5	**Yellowknife Ar**	**95.97**	**27**	*e*P	**P**	**11 43 19.9**	**-1.7**
TXAR	**Lajitas Array**	**96.70**	**62**	P	**P**	**11 43 25.2**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=230,slow=4.8,SNR=8.8						
ARCES	**ARCESS Array B**	**117.02**	**345**	PKP	**PKPdf**	**11 48 38.8**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=64,slow=2.8,SNR=12						
AKASG	**Malin Array Be**	**127.27**	**326**	PKP	**PKiKP**	**11 48 59.7**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=87,slow=2.2,SNR=3.6						
KEST	**Kesra**	**147.75**	**321**	PKPbc	**PKiKP**	**11 49 41.3**	**-1.0**
	comp=Z,6.5nm,0.9s,baz=193,slow=1.1,SNR=4.1						
ESDC	**Sonseca Array**	**150.71**	**343**	PKPbc	**PKPbc**	**11 49 47.8**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=29,slow=1.9,SNR=5.7						
TORD	**Torodi Ar. Bea**	**163.85**	**276**	PKP	**PKPdf**	**11 49 58.2**	**-0.9**
	comp=Z,0.9nm,1.0s,baz=86,slow=2.1,SNR=4.7						

IGQ 07 11:33:08.8±0.3**,2°S**±3°×**8°0W**±°**,h58^{km},MLv3.6,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**0.25**	**60**	P	Pn	11 33 20.1	+1.7
MILO				S	Sn	11 33 30.1	+4.8
AMIL	**Milagro (Trans**	**0.33**	**34**	P	Pn	11 33 20.1	+1.1
AMIL				S	Sn	11 33 29.9	+3.7
COHC	**Cochancay**	**0.52**	**96**	P	Pn	11 33 21.6	+0.7
COHC				S	Sn	11 33 32.4	+2.8
MORR	**Playas El Morr**	**0.61**	**248**	P	Pn	11 33 24.8	+3.0
SALI	**Salinas**	**1.23**	**280**	P	Pn	11 33 30.5	+0.6
SALI				S	Sn	11 33 47.4	+1.7
IGUA	**Igualata**	**1.46**	**51**	P	Pn	11 33 32.8	-0.6
BMAS	**Trigal station**	**1.58**	**55**	P	Pn	11 33 34.2	-0.7
ARRY	**Arrayan**	**1.59**	**56**	P	Pn	11 33 34.2	-0.8
BBIL	**Ulba Tungurahu**	**1.60**	**54**	P	Pn	11 33 34.8	-0.3
PAT1	**Patacocha**	**1.61**	**56**	P	Pn	11 33 35.0	-0.4
BPAT	**Tungurahua Vol**	**1.61**	**56**	P	Pn	11 33 34.8	-0.6
BPAT				S	Sn	11 33 55.1	-0.4
JUI6	**Juive**	**1.63**	**53**	P	Pn	11 33 35.1	-0.5
RETU	**Refugio**	**1.63**	**54**	P	Pn	11 33 35.5	-0.3
POND	**Pondoa**	**1.65**	**53**	P	Pn	11 33 35.2	-0.6
POND				S	Sn	11 33 55.5	-0.5
BULB	**Ulba Tungurahu**	**1.67**	**55**	P	Pn	11 33 35.7	-0.4
RUN5	**Runtun**	**1.67**	**54**	P	Pn	11 33 36.2	+0.1
BRUN	**Tungurahua Vol**	**1.68**	**54**	P	Pn	11 33 35.9	-0.3
BRUN				S	Sn	11 33 56.1	-0.8
GONZ	**Gonzanam**	**1.85**	**168**	P	Pn	11 33 40.8	+2.2
PIS1	**Pisayambo**	**1.93**	**46**	P	Pn	11 33 39.6	-0.1
PISA	**Pisayambo**	**1.93**	**46**	P	Pn	11 33 40.0	+0.2
MCRA	**Macar, Loja**	**1.96**	**185**	P	Pn	11 33 40.5	+0.8
MCRA				S	Sn	11 34 05.2	+2.0
ILLI	**Illinizas Sur**	**1.98**	**32**	P	Pn	11 33 39.5	-1.0
ILLI				S	Sn	11 34 05.1	+0.6
PAST	**Pastocalle**	**2.04**	**34**	P	Pn	11 33 40.1	-1.2
BMOR	**Cotopaxi Volca**	**2.12**	**38**	P	Pn	11 33 42.0	-0.5
BNAS	**Cotopaxi Volca**	**2.16**	**37**	P	Pn	11 33 43.0	+0.1
BREF	**Cotopaxi Volca**	**2.18**	**38**	P	Pn	11 33 43.4	0.0
BTAM	**Cotopaxi Volca**	**2.21**	**39**	P	Pn	11 33 43.7	+0.1
BVC2	**Cotopaxi Volca**	**2.21**	**38**	P	Pn	11 33 43.8	+0.2
VC1	**Cotopaxi 1**	**2.23**	**38**	P	Pn	11 33 44.6	+0.7
PITA	**Cotopaxi Volc**	**2.28**	**36**	P	Pn	11 33 44.7	+0.2
NINA	**Atacazo Ninahu**	**2.31**	**30**	P	Pn	11 33 44.6	-0.4
MAG1	**Magdalena**	**2.32**	**0**	P	Pn	11 33 42.4	-2.3
ANTM	**Antisana-La Mi**	**2.42**	**40**	P	Pn	11 33 47.4	+0.8
ARDO	**Archidona, Ten**	**2.42**	**55**	P	Pn	11 33 47.6	+1.5
ANTG	**Antisana-Guama**	**2.43**	**39**	P	Pn	11 33 47.1	+0.5
ANTS	**Antisana-Sarah**	**2.48**	**40**	P	Pn	11 33 47.9	+0.5
GGPC	**Guagua Pichinc**	**2.51**	**28**	P	Pn	11 33 45.9	-1.8
YANA	**Yana**	**2.57**	**28**	P	Pn	11 33 47.1	-1.4
PAC1	**Pacto, Paraso**	**2.83**	**20**	P	Pn	11 33 49.2	-2.6
CUIC	**Cuicocha-Domo**	**3.04**	**28**	P	Pn	11 33 53.9	-0.9
URCU	**Urcuqui**	**3.21**	**28**	P	Pn	11 33 56.7	-0.5

IDC 07 11:33:47.3±1.7**,10°.76S**×**164°.52E,h0^{km},mb3.6**/3**, mb1 4.0**/4**,mb1mx3.6**/40**,mbtmp3.7**/4**,ML3.8**/1**,Error ellipse: s-maj=51.0km s-min=31.5km az=127.0,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.40**	**171**	Pn	Pn	11 36 31.5	0.0
	0.7nm,0.3s,baz=350,slow=13,SNR=9.3						
WRA	**Warramunga Arr**	**30.45**	**249**	P	P	11 40 02.0	0.0
	0.8nm,0.6s,baz=80,slow=9.1,SNR=5.1						
ASAR	**Alice Springs**	**31.85**	**242**	P	P	11 40 14.2	-0.1
	0.4nm,0.6s,baz=66,slow=9.9,SNR=4.4						
ILAR	**Eielson Array**	**83.63**	**19**	P	P	11 46 17.3	0.0
	0.3nm,0.8s,baz=220,slow=6.9,SNR=3.1						

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*JMA **07** 11:43:14.6±0.1,23°.70N×121°.54E,h0^{km}±1^{km},M3.2*
*TAP **07** 11:43:15.9,23°.76N×121°.41E,h20^{km},ML3.6,B*
*ISCJB **07** 11:43:16.0±0.2,23°.73N±0°.01×121°.47E±0°.02,h20^{km}±2^{km}, Error ellipse: s-maj=2.6km s-min=1.8km az=30.6*
ISC 07 11:43:16.1±0.9**,23°.73N**±0°.02×**121°.44E**±0°.02**,h22^{km}**±2^{km}**, n108,**σ0^{s}.**74**/159**,7C-17D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.06**	**194**	P	**Pb**	**11 43 19.7**	**-0.3**
	baz=170						
EGFH				S	**Sb**	**11 43 22.4**	**-0.3**
	baz=170						
ESL	**Shilin**	**0.09**	**354**	⇓*i*P	**Pb**	**11 43 19.7**	**-0.5**
	baz=26						
ESL				S	**Sb**	**11 43 22.0**	**-1.0**
	baz=26						
ENLB	**Shoufeng**	**0.23**	**40**	P	**Pb**	**11 43 22.0**	**0.0**
	baz=44						
ENLB				*e*S	**Sb**	**11 43 26.2**	**0.0**
	baz=44						
HGSD	**Ruisui**	**0.24**	**184**	⇓P	**Pb**	**11 43 22.0**	**-0.1**
	baz=183						
EHY	**Hungye**	**0.25**	**207**	P	**Pb**	**11 43 21.3**	**-0.9**
	baz=197						
EHY				S	**Sb**	**11 43 25.9**	**-0.5**
	baz=197						
VWDT	**VWDT**	**0.28**	**275**	⇑P	**Pb**	**11 43 22.2**	**-0.3**
	baz=264						
VWDT				S	**Sb**	**11 43 26.1**	**-0.9**
	baz=264						
HWA	**Hwalien**	**0.29**	**31**	*e*P	**Pb**	**11 43 23.3**	**+0.6**
	baz=35						
HWA				*e*S	**Sb**	**11 43 28.1**	**+0.9**
	baz=35						
OWD	**Renai**	**0.33**	**313**	⇓P	**Pb**	**11 43 22.8**	**-0.6**
	baz=313						
OWD				S	**Sb**	**11 43 27.0**	**-1.5**
	baz=313						
YULB	**Yu-li**	**0.36**	**202**	*e*P	**Pb**	**11 43 23.2**	**-0.6**
	baz=193						
YULB				*e*S	**Sb**	**11 43 29.3**	**+0.3**
	baz=193						
TWD	**Chiawan**	**0.38**	**22**	*e*P	**Pb**	**11 43 23.6**	**-0.4**
	baz=28						
TWD				*e*S	**Sb**	**11 43 29.4**	**0.0**
	baz=28						
TWF1	**Yuli**	**0.40**	**200**	⇑P	**Pb**	**11 43 24.1**	**-0.2**
	baz=194						
TWF1				*e*S	**Sb**	**11 43 30.1**	**0.0**
	baz=194						
CHGB	**Renai**	**0.41**	**323**	⇓P	**Pb**	**11 43 24.4**	**-0.4**
	baz=331						
CHGB				S	**Sb**	**11 43 29.1**	**-1.6**
	baz=331						
WHF	**Hehuan Shan**	**0.45**	**339**	⇓*i*P	**Pb**	**11 43 24.8**	**-0.7**
	baz=341						
WHF				*e*S	**Sb**	**11 43 30.6**	**-1.3**
	baz=341						
SSLB	**Suanglung**	**0.45**	**278**	⇑P	**Pb**	**11 43 24.6**	**-0.8**
	baz=281						
SSLB				S	**Sb**	**11 43 29.8**	**-1.8**
	baz=281						
NACB	**Ninganchiao**	**0.47**	**17**	⇑P	**Pb**	**11 43 24.7**	**-0.9**
	baz=21						
NACB				S	**Sb**	**11 43 31.4**	**-0.6**
	baz=21						
ETLH	**Xiulin Townshi**	**0.48**	**4**	*e*P	**Pb**	**11 43 25.1**	**-0.7**
	baz=14						
ETLH				*e*S	**Sb**	**11 43 31.7**	**-0.8**
	baz=14						
SMLT	**Sun Moon Lake**	**0.52**	**287**	⇓*i*P	**Pb**	**11 43 26.0**	**-0.7**
	baz=285						
SMLT				*i* S	**Sb**	**11 43 32.7**	**-1.2**
	baz=285						
TYC	**Yuchr**	**0.56**	**288**	⇓*i*P	**Pb**	**11 43 26.6**	**-0.7**
	baz=292						
TYC				S	**Sb**	**11 43 33.4**	**-1.6**
	baz=292						
TWT	**Tachien**	**0.58**	**335**	⇓*i*P	**Pb**	**11 43 27.4**	**-0.3**
	baz=335						
TWT				S	**Sb**	**11 43 34.2**	**-1.4**
	baz=335						
TDCB	**Techi**	**0.58**	**334**	⇓P	**Pb**	**11 43 27.4**	**-0.4**
	baz=335						
TDCB				S	**Sb**	**11 43 34.2**	**-1.5**
	baz=335						
CHKT	**Chengkung**	**0.63**	**187**	*e*P	**Pb**	**11 43 27.6**	**-0.8**
	baz=171						
WJS	**Zhushan**	**0.66**	**278**	*e*P	**Pb**	**11 43 29.6**	**+0.5**
	baz=276						
WJS				*e*S	**Sn**	**11 43 39.6**	**-0.3**
	baz=276						
ELDTW	**Lidau**	**0.66**	**216**	P	**Pb**	**11 43 28.3**	**-0.8**
	baz=202						
NNSB	**Datong**	**0.70**	**355**	⇑P	**Pb**	**11 43 29.2**	**-0.5**
	baz=6.0						
NNSB				S	**Sb**	**11 43 38.0**	**-1.0**
	baz=6.0						
NNS	**Nan Shan**	**0.71**	**355**	⇑*i*P	**Pb**	**11 43 29.4**	**-0.5**
	baz=6.0						
NNS				*e*S	**Sb**	**11 43 38.6**	**-0.7**
	baz=6.0						
WHP	**Taichung City**	**0.71**	**320**	P	**Pb**	**11 43 29.4**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=320						
WHP	baz=320			eS	Sb	11 43 38.4	-0.9
WNT	Mingjian baz=280	0.71	282	⇓iP	Pb	11 43 30.4	+0.6
WNT	baz=280			eS	Sn	11 43 40.4	-0.7
CHN5	Tsauling baz=251	0.71	260	⇑iP	Pb	11 43 30.2	+0.3
CHN5	baz=251			S	Sb	11 43 39.9	+0.6
ENA	Nanau baz=26	0.75	21	eP	Pb	11 43 29.1	-1.3
WGK	Gukeng baz=266	0.81	267	eP	Pb	11 43 31.9	+0.5
WGK	baz=266			eS	Sn	11 43 43.3	-0.2
TCU	Taichung baz=301	0.82	301	eP	Pb	11 43 31.6	0.0
WDLH	Douliu baz=266	0.83	267	eP	Pb	11 43 31.6	-0.3
WDLH	baz=266			eS	Sn	11 43 44.5	+0.4
STYT	Tauyuan baz=226	0.84	228	⇓P	Pb	11 43 31.7	-0.4
STYT	baz=226			eS	Sb	11 43 43.1	+0.1
TPUB	Ta-pu baz=239	0.86	240	eP	Pb	11 43 32.7	+0.4
TPUB	baz=239			S	Sn	11 43 44.7	-0.2
CHN4	Tsaushan baz=233	0.87	244	eP	Pn	11 43 33.0	0.0
CHN4	baz=233			eS	Sb	11 43 44.1	+0.5
TWQ1	Liyutan baz=315	0.87	315	P	Pn	11 43 33.1	0.0
TWQ1	baz=315			eS	Sb	11 43 44.3	+0.5
NDT	Datong Townshi baz=18	0.87	4	eP	Pb	11 43 32.5	-0.1
WCHH	Zhanghua baz=292	0.88	294	eP	Pn	11 43 33.2	0.0
WTP	Ta-pu baz=236	0.90	238	eP	Pn	11 43 33.5	0.0
WTP	baz=236			eS	Sb	11 43 45.4	+0.8
CHN2	Minshiung baz=255	0.91	258	eP	Pn	11 43 34.7	+1.2
NSY	Sanyi baz=318	0.93	318	⇓P	Pn	11 43 34.6	+0.7
NSY	baz=318			eS	Sn	11 43 46.5	0.0
YHNB	Yeheng baz=357	0.94	356	⇓eP	Pb	11 43 33.7	-0.1
YHNB	baz=357			S	Sb	11 43 45.3	-0.5
NSK	Sanguang baz=357	0.95	355	P	Pb	11 43 33.9	0.0
NSK	baz=357			S	Sb	11 43 45.5	-0.5
TWC	Suao baz=27	0.95	23	eP	Pn	11 43 34.5	+0.3
WDJ	Dajia District baz=320	0.96	310	eP	Pn	11 43 34.7	+0.5
WDJ	baz=320			eS	Sn	11 43 48.8	+1.5
CHY	Chiayi baz=267	0.96	256	eP	Pb	11 43 33.5	-0.5
TWG	Pinlang baz=184	0.97	201	eP	Pb	11 43 33.7	-0.4
TWGBT	Beinan baz=186	0.97	200	eP	Pb	11 43 33.8	-0.4
TWGBT	baz=186			eS	Sn	11 43 47.5	+0.1
PTSB	Yuanli baz=316	0.98	317	⇓eP	Pn	11 43 35.1	+0.5
PTSB	baz=316			eS	Sn	11 43 48.9	+1.0
NSTT	Nanjuang baz=336	0.98	336	⇓iP	Pn	11 43 34.9	+0.3
NSTT	baz=336			S	Sb	11 43 46.8	-0.3
TWK	Hsinying baz=241	0.99	243	eP	Pn	11 43 35.0	+0.3
TWK	baz=241			eS	Sn	11 43 48.8	+0.7
LIOB	Emei baz=337	0.99	337	⇓P	Pb	11 43 34.6	0.0
LIOB	baz=337			eS	Sb	11 43 46.7	-0.6
NMLH	Miaoli baz=326	1.00	324	⇓P	Pn	11 43 36.2	+1.3
SNST	Tainan City baz=239	1.00	240	eP	Pn	11 43 35.6	+0.7
SNST	baz=239			eS	Sn	11 43 48.7	+0.3
RLNB	Erlin baz=278	1.01	279	eP	Pb	11 43 34.5	-0.2
RLNB	baz=278			eS	Sn	11 43 49.1	+0.7
TWE	Neicheng baz=25	1.01	12	eP	Pb	11 43 33.5	-1.4
TWE	baz=25			eS	Sn	11 43 48.9	+0.4
EOS1	EOS1 baz=58	1.03	37	eP	Pb	11 43 35.9	+0.7
SLGT	Liugui baz=220	1.03	225	eP	Pn	11 43 35.4	+0.1
NWLT	Wulai baz=18	1.05	3	eP	Pb	11 43 35.9	+0.4
WTCT	Ta-ch'eng baz=276	1.07	277	eP	Pn	11 43 34.9	-1.0
WLGB	Puzi baz=266	1.08	257	eP	Pb	11 43 36.7	+0.7
WSF	Szhu baz=263	1.12	266	eP	Pb	11 43 36.9	+0.1
SBCB	Hsinchu baz=323	1.14	339	eP	Pb	11 43 37.1	0.0
NTC	Toucheng baz=22	1.18	17	eP	Pn	11 43 37.2	-0.1
CHN8	Yiju baz=252	1.19	252	eP	Pb	11 43 38.2	+0.2
CHN8	baz=252			eS	Sb	11 43 54.1	+1.1
ECL	Taimali baz=183	1.21	202	eP	Pb	11 43 38.3	-0.1
SSD	Sandimen baz=206	1.23	218	eP	Pb	11 43 38.6	-0.1
NHDH	Xindian Distri baz=16	1.23	3	eP	Pb	11 43 39.4	+0.7
TATO	Taipei baz=19	1.24	2	eP	Pb	11 43 38.9	0.0
TWA	Mucha baz=18	1.25	6	eP	Pn	11 43 38.5	+0.1
NCUH	Zhongli baz=354	1.26	349	eP	Pb	11 43 39.3	+0.2
NCU	National Centr baz=350	1.26	349	eP	Pb	11 43 39.4	+0.3
NCU	baz=350			eS	Sb	11 43 57.0	+2.1
SCLT	Jiali baz=240	1.27	245	eP	Pb	11 43 40.2	+0.8
TIPB	Shuangxi baz=20	1.29	16	eP	Pn	11 43 38.2	-0.6
TWM1	Shoushan baz=236	1.30	226	eP	Pb	11 43 40.9	+1.1
MASBT	Mashibuluo baz=204	1.34	214	eP	Pb	11 43 40.7	+0.2
TWS1	Kuangyinshan baz=19	1.37	359	eP	Pb	11 43 41.9	+0.9
TWS1	baz=19			eS	Sb	11 44 00.6	+2.6
TWB1	Santiao Chiao baz=26	1.37	21	eP	Pb	11 43 41.3	+0.3
NWF	Wu-fen Shan baz=28	1.37	13	eP	Pb	11 43 42.0	+0.9
WFSB	Wu-fen Shan baz=27	1.37	13	eP	Pb	11 43 41.2	+0.1
YM01	YM01 baz=29	1.42	5	eP	Pb	11 43 41.8	0.0
YM04	YM04 baz=27	1.42	3	eP	Pb	11 43 42.3	+0.4
NTST	Danshui baz=25	1.43	0	eP	Pb	11 43 41.6	-0.4
YM05	YM05 baz=28	1.43	4	eP	Pb	11 43 42.5	+0.3
YM11	YM11 baz=29	1.44	5	eP	Pb	11 43 42.9	+0.7
EAST	Anshuo baz=186	1.45	202	eP	Pb	11 43 42.6	+0.2
SSPT	Xinbi baz=200	1.48	213	eP	Pb	11 43 43.0	+0.2
SCZT	Fangliau baz=202	1.55	209	eP	Pn	11 43 43.0	+0.6
LAY	Lan-yu baz=171	1.69	177	eP	Pn	11 43 41.9	-2.4
WDGT	Dungji baz=252	1.70	254	eP	Pn	11 43 43.9	-0.6
PHUB	P'eng-hu baz=242	1.73	263	eP	Pn	11 43 45.0	+0.1
PNG	Penghu baz=263	1.74	265	eP	Pn	11 43 44.8	-0.1
TWKBT	Hengchun baz=184	1.87	198	eP	Pb	11 43 49.1	-0.5
VCHM	Qimei baz=252	1.92	255	eP	Pn	11 43 48.1	+0.7
IRIF	Iriomote-Funau	2.18	73	P	Pn	11 43 51.3	+0.3
IRIF				eS	Sn	11 44 18.6	+1.3
HATJ	Hateruma jima	2.19	81	eS	Sn	11 44 16.9	-0.6
VWUC	VWUC baz=305	2.21	305	eP	Pn	11 43 50.6	-0.9
PTTC	Pingtan baz=322	2.33	320	eP	Pn	11 43 52.2	-0.9
JKRS	Kuro-shima	2.40	77	P	Pn	11 43 54.7	+0.6
JKRS				S	Sn	11 44 23.4	+0.6
PTMZ	Houxiangcun baz=301	2.49	302	eP	Pn	11 43 55.9	+0.6
JIJ	Ishigaki jima	2.55	75	P	Pn	11 43 56.4	+0.3
JIJ				eS	Sn	11 44 25.8	-0.7
JISG	Ishigakijimahi	2.75	71	P	Pn	11 43 59.0	0.0
JISG				S	Sn	11 44 30.9	-0.7
KNMB	Chin-men Tao baz=273	2.89	285	eP	Pn	11 44 00.6	-0.2
LYJJ	Jianjiangzhen baz=338	3.20	332	eP	Pn	11 44 04.7	-0.4
MHZQ	Yeshan baz=319	3.22	318	eP	Pn	11 44 05.3	-0.1
AXDP	Jialang baz=289	3.38	291	eP	Pn	11 44 07.8	+0.3
XPSS	Dashiqiu baz=332	3.38	341	eP	Pn	11 44 07.5	-0.1
ZZJH	Jiuhuzhen baz=272	3.56	283	eP	Pn	11 44 10.2	+0.1

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*ISCJB **07** 11:47:51.8±1.7, 29°.89N±0°.09×36°.2E±0°.1, h3km, Error ellipse: s-maj=20.7km s-min=8.0km az=33.4*

*JSO **07** 11:47:54.6±4.3, 30°N±22°×3°6E±3°2, h10km±27km, M3.1/6, Mjma3.0/6, ML3.2/3, MLv3.1/6*

*HLW **07** 11:48:02.0, 29°.67N×35°.64E, h9km±13km, Ml3.0*

ISC 07 11:47:52.7±2.1**, 29°.95N**±0°.09×**36°.0E**±0°.1**, h3**km**, n13, σ0s.63**/13**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSNJ	Maan	0.42	317	P	Pb	11 48 02.8	-0.1
JDRJ	Daraweish	0.83	339	P	Pb	11 48 09.9	-0.1
HRFI	Mount Harif	0.85	276	P	Pn	11 48 11.2	-0.5
AQBJ	Aqaba	0.87	256	P	Pn	11 48 11.2	-0.7
EIL	Elat	0.97	254	P	Pn	11 48 13.6	+0.3
SWQJ	Swaqa	1.29	2	P	Pn	11 48 18.3	+0.5
HBST	Basata baz=241	1.34	237	P	Pn	11 48 18.6	+0.2
HBST	baz=241			AMP		11 48 00.0	
WALJ	Wala	1.62	354	P	Pn	11 48 21.7	-0.5
KZIT	Kziot	1.69	305	P	Pg	11 48 25.3	+0.1
HNKL	Nakhl baz=281	1.77	270	P	Pg	11 48 26.3	-0.4
HKAT	Jabal Katrina baz=232	2.27	232	P	Pn	11 48 31.3	0.0
ASF	Jabal al Asfar	2.34	19	P	Pn	11 48 32.3	+0.1
SUZ	Suez baz=275	2.77	269	P	Pn	11 48 39.6	+1.5

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*ISCJB **07** 11:52:34.4±0.7, 19°.4S±0°.1×177°.7W±0°.1, h600km, mb4.0/15, Error ellipse: s-maj=21.9km s-min=10.7km az=147.0*

*IDC **07** 11:52:34.8±1.9, 19°.36S×177°.74W, h586km±23km, mb3.5/15, mb1 3.7/17, mb1mx3.6/36, mbtmp4.4/17, Error ellipse: s-maj=22.4km s-min=10.3km az=152.0*

ISC 07 11:52:35.4±0.8**, 19°.4S**±0°.2×**177°.7W**±0°.1**, h600**km**, n40, σ0s.85**/43**, mb4.0**/15**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.5nm,0.3s,baz=81,slow=19,SNR=9.7	15.08	257	P	P	11 55 44.1	-0.4
URZ	Urewera 0.8nm,0.3s,baz=358,slow=7.6,SNR=6.6	19.32	192	P	P	11 56 21.2	-1.5
CTA	Charters Tower 14nm,0.6s,baz=92,slow=10.0,SNR=25	33.90	263	P	P	11 58 30.3	-0.1
STKA	Stephens Creek 6.4nm,0.6s,baz=93,slow=11,SNR=18	38.53	243	P	P	11 59 09.2	+1.1
WRA	Warramunga Arr 4.3nm,0.7s,baz=96,slow=8.7,SNR=75	45.05	261	P	P	11 59 59.0	-0.5
WRA	0.2nm,0.5s,baz=96,slow=6.6,SNR=3.3			PcP	PcP	12 01 28.3	+1.1
WRA	1.3nm,1.2s,baz=92,slow=12,SNR=2.6			S	S	12 05 55.4	-0.6
ASAR	Alice Springs 10nm,0.7s,baz=87,slow=8.8,SNR=89	45.06	256	P	P	11 59 59.9	+0.4
ASAR	0.5nm,0.5s,baz=86,slow=4.9,SNR=4.3			PcP	PcP	12 01 28.3	+1.1
ASAR	1.3nm,1.0s,baz=88,slow=16,SNR=6.4			S	S	12 05 56.6	+0.5
FITZ	Fitzroy Crossi 1.0nm,0.5s,baz=98,slow=4.9,SNR=3.5	53.47	262	P	P	12 01 01.5	+0.3
MJAR	Matsushiro Arr 2.6nm,0.6s,baz=167,slow=6.2,SNR=6.3	69.52	323	P	P	12 02 44.2	-1.0
ASAJ	Asahikawa 12nm,0.9s,baz=158,slow=1.5,SNR=4.4	72.92	331	P	P	12 03 05.8	+1.0
PETK	Petropavlovsk- 2.7nm,0.6s,baz=128,slow=7.4,SNR=10	75.30	345	P	P	12 03 17.4	-0.6
NVAR	Mina Array Bea 1.9nm,0.7s,baz=228,slow=8.5,SNR=11	80.04	43	P	P	12 03 45.1	+1.0
TXAR	Lajitas Array 1.7nm,0.7s,baz=219,slow=6.8,SNR=24	86.22	57	P	P	12 04 16.6	+1.8
ILAR	Eielson Array 2.6nm,0.8s,baz=230,slow=5.1,SNR=50	87.20	13	P	P	12 04 17.4	-1.0
PDAR	Pinedale Array 0.7nm,0.7s,baz=251,slow=3.6,SNR=8.4	87.97	43	P	P	12 04 23.1	+0.2
CMAR	Chiang Mai Arr 0.7nm,0.6s,baz=118,slow=3.4,SNR=6.2	90.03	289	P	P	12 04 34.4	+1.7
SONM	Songino Array 0.2nm,0.4s,baz=91,slow=5.8,SNR=3.1	95.13	319	P	P	12 04 55.3	-0.3
YKA	Yellowknife Ar 0.5nm,0.7s,baz=238,slow=4.1,SNR=10	95.41	25	P	P	12 04 55.3	-0.9
MKAR	Makanchi Array 0.5nm,0.5s,baz=113,slow=0.8,SNR=11	110.67	314	PKiKP	PKiKP	12 10 00.8	-0.1
ARCES	ARCESS Array B 1.1nm,0.5s,baz=34,slow=1.3,SNR=20	127.91	350	PKP	PKiKP	12 10 33.7	-0.2
FINES	FINESS Array B 1.6nm,0.8s,baz=56,slow=5.2,SNR=3.6	134.81	344	PKP	PKiKP	12 10 47.1	-0.9
AKASG	Malin Array Be 1.4nm,0.3s,baz=40,slow=4.3,SNR=9.2	142.20	332	PKhKP	PKPpre	12 10 56.2	
BRTR	Keskin Array B 2.2nm,0.6s,baz=139,slow=4.6,SNR=12	146.32	314	PKPbc	PKiKP	12 11 10.7	-1.8
CLL	Collm comp=Z,12nm,1.0s	147.07	348	⇓iPKPbc	PKiKP	12 11 12.2	-1.3
UPC	Upice	147.12	344	ePKP	PKiKP	12 11 12.8	-0.8
DPC	Dobruska-Polom	147.18	343	ePKP	PKiKP	12 11 13.3	-0.5
DPC				ex	x	12 11 16.7	
BRG	Berggiesshubel comp=Z,5.5nm,0.8s	147.28	346	ePKP	PKiKP	12 11 13.1	-0.8
PRA	Prague	147.92	345	ePKP	PKiKP	12 11 14.6	-0.7
PRU	Pruhonice	147.97	345	ePKP	PKiKP	12 11 15.2	-0.2
GERES	GERESS Array B comp=Z,3.3nm,0.7s,baz=52,slow=2.4,SNR=17	149.24	345	PKPbc	PKiKP	12 11 17.9	-0.3
CONA	Conrad Observa comp=Z,6.1nm,0.7s	149.50	342	i PKPbc	PKiKP	12 11 18.7	0.0
MOA	Molln comp=Z,7.7nm,1.4s	150.01	344	i PKPbc	PKiKP	12 11 19.6	-0.2
SOKA	Soboth comp=Z,5.4nm,0.8s	150.87	342	i PKPbc	PKiKP	12 11 21.3	-0.4
KBA	Koelnbreinsper comp=Z,4.1nm,0.5s	150.97	344	i PKPbc	PKiKP	12 11 22.0	+0.1
OBKA	Obir comp=Z,2.7nm,0.6s	151.16	342	i PKPbc	PKiKP	12 11 22.4	+0.2
MOTA	Moosalm comp=Z,5.3nm,0.7s	151.23	348	i PKPbc	PKiKP	12 11 22.9	+0.5
MYKA	Terra Mystica comp=Z,5.4nm,0.7s	151.31	344	i PKPbc	PKiKP	12 11 21.9	-0.6
SQTA	Sankt Quirin comp=Z,6.0nm,0.6s	151.33	347	i PKPbc	PKiKP	12 11 22.7	+0.1
ABTA	Abfaltersbach comp=Z,9.6nm,0.6s	151.48	345	i PKPbc	PKiKP	12 11 22.6	-0.3
DAVA	Damuels comp=Z,8.6nm,1.0s	151.52	349	ePKPbc	PKiKP	12 11 24.1	+1.0
FETA	Feichten comp=Z,6.9nm,0.9s	151.61	348	i PKPbc	PKiKP	12 11 23.4	+0.1

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*ISCJB **07** 11:54:50.2±1.0, 11°.6S±0°.1×165°.0E±0°.1, h34km, mb3.7/5, MS3.2/1, Error ellipse: s-maj=21.1km s-min=11.5km az=39.5*

*IDC **07** 11:54:53.5±4.0, 11°.65S×165°.16E, h55km±37km, mb3.5/5, mb1 3.8/7, mb1mx3.5/40, mbtmp3.9/7, ML4.1/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/23, Error ellipse: s-maj=36.9km s-min=34.0km az=97.0*

ISC 07 11:54:51.8±1.1**, 11°.5S**±0°.1×**165°.2E**±0°.1**, h34**km**, n8, σ1s.27**/8**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 5.9nm,0.3s,baz=149,slow=18,SNR=2.7	5.52	292	P	Pn	11 56 13.6	+1.9
HNR	11nm,0.3s,baz=212,slow=22,SNR=3.2			S	Sn	11 57 12.6	-1.4
DZM	Mont Dzumac 1.2nm,0.3s,baz=301,slow=18,SNR=10.0	10.56	173	P	Pn	11 57 21.2	+0.4
DZM	comp=Z,128nm,19.1s,baz=40,slow=34			LR	LR	12 00 52.0	
WRA	Warramunga Arr 0.8nm,0.7s,baz=83,slow=9.1,SNR=3.7	30.77	250	P	P	12 01 03.5	-0.8
ASAR	Alice Springs 0.6nm,0.8s,baz=79,slow=8.8,SNR=2.8	32.05	244	P	P	12 01 14.9	-0.8
GUMO	Guam comp=Z,51nm,18.3s,baz=105,slow=38	32.05	321	LR	LR	12 15 20.1	
SONM	Songino Array 0.4nm,0.6s,baz=124,slow=2.6,SNR=3.6	78.71	324	P	P	12 06 51.5	+0.7
ILAR	Eielson Array 0.4nm,0.6s,baz=230,slow=5.1,SNR=6.5	84.16	19	P	P	12 07 18.4	-0.7
MKAR	Makanchi Array 0.5nm,0.9s,baz=90,slow=4.9,SNR=4.5	93.47	317	P	P	12 08 03.7	-0.3

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*IDC **07** 11:58:17.9±0.7, 10°.94S×165°.55E, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.0/37, mbtmp4.1/15, ML4.4/2, Error ellipse: s-maj=22.3km s-min=18.0km az=120.0*

*NEIC **07** 11:58:19.3±0.3, 10°.92S×165°.56E, h10km, mb4.4/4, Error ellipse: s-maj=10.1km s-min=7.9km az=86.0*

*ISCJB **07** 11:58:20.7±0.5, 11°.09S±0°.05×165°.48E±0°.09, h30km, mb4.1/15, Error ellipse: s-maj=12.5km s-min=7.5km az=168.4*

ISC 07 11:58:22.4±0.6**, 10°.99S**±0°.08×**165°.5E**±0°.1**, h30**km**, n27, σ0s.85**/32**, mb4.0**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 14nm,0.3s,baz=166,slow=5.6,SNR=4.5	5.72	285	Pn	Pn	11 59 45.3	-0.1
DZM	Mont Dzumac 2.0nm,0.3s,baz=174,slow=17,SNR=15	11.05	176	Pn	Pn	12 00 58.2	-0.5
DZM	0.4nm,0.3s,baz=166,slow=19,SNR=3.1			Sn	Sn	12 03 00.2	-1.1
ONTNC	Ouen Toro	11.29	176	ePn	Pn	12 01 02.4	+0.6
CTA	Charters Tower 6.1nm,1.1s,baz=60,slow=15,SNR=2.1	20.65	242	P	P	12 02 60.0	+0.1
URZ	Urewera 14nm,1.2s	29.06	161	eP	P	12 04 20.8	+0.7
URZ				eP	P	12 04 20.9	+0.8
URZ	Urewera 10nm,1.0s,baz=260,slow=1.1,SNR=5.1	29.06	161	P	P	12 04 20.9	+0.8
BKZ	Black Stump Fm 8.7nm,0.4s	29.71	163	eP	P	12 04 27.3	+1.4
STKA	Stephens Creek 2.5nm,0.9s,baz=34,slow=7.3,SNR=2.4	30.35	223	P	P	12 04 32.3	+0.7
WR1	Warramunga Arr 2.2nm,0.7s	31.32	250	eP	P	12 04 39.6	-0.7
WR1				ePcP	PcP	12 07 34.7	+0.5
WRA	Warramunga Arr 1.8nm,0.6s,baz=82,slow=9.1,SNR=20	31.32	250	P	P	12 04 39.6	-0.8
WRA	0.2nm,0.7s,baz=77,slow=3.0,SNR=6.0			PcP	PcP	12 07 34.7	+0.5
ASAR	Alice Springs 2.5nm,0.7s,baz=64,slow=10.0,SNR=23	32.64	243	P	P	12 04 51.0	-1.0
ASAR	0.6nm,0.6s,baz=52,slow=2.5,SNR=5.1			PcP	PcP	12 07 38.0	+0.2
RPZ	Rata Peaks 4.4nm,0.9s,baz=14,slow=4.2,SNR=3.4	32.95	173	P	P	12 04 54.1	-0.3
CMAR	Chiang Mai Arr 0.5nm,0.3s,baz=125,slow=4.5,SNR=4.1	71.91	294	P	P	12 09 43.9	+0.5
SONA0	Songino Array	78.50	324	eP	P	12 10 21.5	+0.6
SONM	Songino Array 0.3nm,0.4s,baz=141,slow=8.3,SNR=2.6	78.50	324	P	P	12 10 21.5	+0.6
ILAR	Eielson Array 0.7nm,0.7s,baz=247,slow=5.3,SNR=12	83.52	19	P	P	12 10 47.2	+0.1
ILB	Eielson Array 0.9nm,0.6s	83.52	19	eP	P	12 10 47.2	+0.1
NVAR	Mina Array Bea 0.3nm,0.6s,baz=260,slow=5.4,SNR=3.6	86.14	50	P	P	12 11 01.3	+0.2
MK32	Makanchi Array	93.34	317	eP	P	12 11 34.4	-0.3
MKAR	Makanchi Array 0.3nm,0.7s,baz=104,slow=6.1,SNR=4.1	93.34	317	P	P	12 11 34.4	-0.3
PDAR	Pinedale Array 0.3nm,0.7s,baz=242,slow=9.1,SNR=3.0	93.66	47	P	P	12 11 37.1	+0.6
YKA	Yellowknife Ar 0.2nm,0.6s,baz=255,slow=4.7,SNR=4.9	95.01	27	P	P	12 11 39.9	-2.0
YKB5	Yellowknife Ar	95.01	27	eP	P	12 11 39.9	-2.0
NRIK	Noril'sk 3.2nm,0.4s,baz=129,slow=6.7,SNR=2.5	96.00	340	P	P	12 11 46.7	+0.4
ARA0	ARCESS Array S	116.23	345	ePKPdf	PKiKP	12 17 01.6	-0.8
ARCES	ARCESS Array B 1.7nm,1.0s,baz=132,slow=1.3,SNR=3.7	116.23	345	PKP	PKiKP	12 17 01.6	-0.8
BOSA	Boshof 0.8nm,0.6s,baz=141,slow=6.5,SNR=3.0	125.02	223	PKP	PKiKP	12 17 22.3	+1.3

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*IDC **07** 12:14:05.1±0.7, 11°.23S×165°.04E, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.1/43, mbtmp4.1/15, ML4.8/2, MS3.5/1, Ms1 3.5/1, ms1mx2.8/38, Error ellipse: s-maj=22.5km s-min=17.3km az=138.0*

*NEIC **07** 12:14:06.9±0.4, 11°.22S×165°.02E, h10km, mb4.4/6, Error ellipse: s-maj=8.9km s-min=7.5km az=65.0*

*ISCJB **07** 12:14:08.9±0.4, 11°.37S±0°.06×164°.90E±0°.06, h34km, mb4.0/17, Error ellipse: s-maj=10.2km s-min=7.3km az=40.3*

ISC 07 12:14:10.6±0.6**, 11°.36S**±0°.08×**164°.97E**±0°.08**, h34**km**, n35, σ1s.37**/34**, mb4.0**/17**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.30	291	ePn	Pn	12 15 27.2	-0.1
HNR				ePn	Pn	12 15 27.7	+0.3
HNR				eSn	Sn	12 16 25.4	-1.8
HNR	Honiara 89nm,0.3s,baz=150,slow=4.7,SNR=23	5.30	291	Pn	Pn	12 15 27.2	-0.1
HNR	13nm,0.3s,baz=198,slow=20,SNR=2.8			Sn	Sn	12 16 25.4	-1.8
HNR	comp=Z,508nm,21.7s,baz=112,slow=40			LR	LR	12 17 40.1	
MARNC	Mare, Loyalty	10.48	164	ePn	Pn	12 16 39.3	+0.7
DZM	Mont Dzumac 2.9nm,0.3s,baz=307,slow=16,SNR=32	10.74	173	Pn	Pn	12 16 42.6	+0.3
DZM	0.3nm,0.3s,baz=255,slow=20,SNR=2.5			Sn	Sn	12 18 37.7	-3.8
PINNC	Pines Island,	11.44	168	ePn	Pn	12 16 52.9	+1.3
CTA	Charters Tower 8.4nm,0.8s,baz=84,slow=13,SNR=2.8	19.98	242	P	Pn	12 18 41.4	-0.7
COEN	Coen 20nm,0.9s	21.42	261	eP	P	12 18 57.3	+1.5
URZ	Urewera 9.5nm,0.9s	28.91	160	eP	P	12 20 06.8	+0.4
URZ				eP	P	12 20 07.0	+0.6
URZ	Urewera 6.8nm,0.8s,baz=239,slow=5.9,SNR=4.9	28.91	160	P	P	12 20 07.0	+0.6
BKZ	Black Stump Fm 10.0nm,1.0s	29.53	162	eP	P	12 20 12.8	+0.8
STKA	Stephens Creek 0.7nm,0.8s	29.69	223	eP	P	12 20 14.8	+1.3
STKA	Stephens Creek 2.8nm,0.7s,baz=87,slow=18,SNR=4.4	29.69	223	P	P	12 20 14.8	+1.3
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=12	29.71	3	T	T	12 51 19.2	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=11	29.71	3	T	T	12 51 21.0	

H11S1	**WAKE ISLAND Hy**	**29.73**	**3**	T	T	12 51 18.5	
	baz=184,slow=76,SNR=11						
WR1	**Warramunga Arr**	**30.66**	**250**	*e*P	**P**	**12 20 21.4**	**-0.8**
WRA	**Warramunga Arr**	**30.66**	**250**	P	**P**	**12 20 21.4**	**-0.8**
	1.9nm,0.6s,baz=80,slow=8.9,SNR=16						
H11N1	**WAKE ISLAND Hy**	**30.93**	**4**	T	T	12 52 55.9	
	baz=183,slow=76,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**30.94**	**4**	T	T	12 52 53.4	
	baz=183,slow=76,SNR=8.6						
H11N2	**WAKE ISLAND Hy**	**30.95**	**4**	T	T	12 53 01.1	
	baz=183,slow=76,SNR=7.2						
AS31	**Alice Springs**	**31.97**	**243**	*e*P	**P**	**12 20 33.0**	**-0.8**
	0.8nm,0.6s						
ASAR	**Alice Springs**	**31.97**	**243**	P	**P**	**12 20 33.0**	**-0.8**
	1.7nm,0.8s,baz=67,slow=9.4,SNR=22						
CMAR	**Chiang Mai Arr**	**71.54**	**294**	P	**P**	**12 25 29.4**	**+0.7**
	0.4nm,0.7s,baz=118,slow=5.2,SNR=3.6						
SONA0	**Songino Array**	**78.47**	**324**	*e*P	**P**	**12 26 08.4**	**+0.1**
SONM	**Songino Array**	**78.47**	**324**	P	**P**	**12 26 08.4**	**+0.1**
	0.3nm,0.4s,baz=87,slow=3.0,SNR=3.3						
QSPA	**South Pole Qui**	**78.65**	**180**	*e*P	**P**	**12 26 10.0**	**+1.0**
	6.6nm,1.0s						
GTA	**Gaotai**	**78.73**	**314**	*e*P	**P**	**12 26 13.7**	**+3.8**
GTA				pP	PcP	12 26 18.4	-0.3
GTA				sP	sP	12 26 20.7	-1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ILAR	**Eielson Array**	**84.05**	**19**	P	**P**	**12 26 36.1**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=233,slow=5.4,SNR=12						
NVAR	**Mina Array Bea**	**86.81**	**50**	P	**P**	**12 26 50.6**	**-1.4**
	comp=Z,1.0nm,0.9s,baz=232,slow=8.6,SNR=4.2						
MK32	**Makanchi Array**	**93.23**	**317**	*e*P	**P**	**12 27 21.3**	**-0.4**
MKAR	**Makanchi Array**	**93.23**	**317**	P	**P**	**12 27 21.3**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=104,slow=4.6,SNR=5.6						
PDAR	**Pinedale Array**	**94.33**	**47**	P	**P**	**12 27 26.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=225,slow=5.0,SNR=2.7						
YKA	**Yellowknife Ar**	**95.60**	**27**	P	**P**	**12 27 29.9**	**-2.3**
	comp=Z,0.4nm,0.8s,baz=253,slow=4.7,SNR=6.8						
LTX	**Lajitas**	**96.65**	**62**	*e*P	**P**	**12 27 38.2**	**+0.3**
TXAR	**Lajitas Array**	**96.65**	**62**	P	**P**	**12 27 38.2**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=207,slow=7.8,SNR=3.3						

IDC 07 12:17:08.3±4.4**,10°.48S**×**164°.71E,h0^{km},mb3.6**/3**,**
mb1 3.9/3**,mb1mx3.5**/45**,mbtmp3.6**/3**,Error ellipse:**
s-maj=230.4km s-min=34.0km az=138.0,Santa Cruz
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.73**	**249**	P	P	12 23 26.1	+0.7
	0.6nm,0.8s,baz=80,slow=8.7,SNR=3.4						
ASAR	**Alice Springs**	**32.15**	**242**	P	P	12 23 37.0	-0.8
	0.5nm,0.7s,baz=65,slow=9.5,SNR=5.2						
ILAR	**Eielson Array**	**83.30**	**19**	P	P	12 29 36.7	+0.1
	0.4nm,0.7s,baz=226,slow=6.6,SNR=4.5						

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*IDC **07** 12:18:31.4±1.2, 11°.01S×164°.71E, h0^{km}, mb4.1/6,*
mb1 4.3/9, mb1mx3.9/49, mbtmp4.2/9, ML4.2/3, Error
ellipse: s-maj=31.5km s-min=24.0km az=135.0
*NEIC **07** 12:18:33.2±0.7, 11°.02S×164°.73E, h10^{km}, mb4.5/4, Error*
ellipse: s-maj=13.5km s-min=11.1km az=72.0
*ISCJB **07** 12:18:34.3±0.8, 11°.15S±0°.10×164°.70E±0°.09, h29^{km},*
mb4.1/9, Error ellipse: s-maj=15.5km s-min=10.0km
az=37.4
ISC 07 12:18:35.9±0.9**,11°.1S**±0°.1×**164°.7E**±0°.1**,h29^{km},n17,**
σ0^{s}82/21**,mb4.1**/9**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.98**	**289**	Pn	**Pn**	**12 19 47.7**	**-1.2**
	10nm,0.3s,baz=177,slow=18,SNR=3.9						
HNR				Sn	**Sn**	**12 20 47.5**	**+2.0**
	4.9nm,0.3s,baz=317,slow=19,SNR=2.4						
DZM	**Mont Dzumac**	**11.06**	**172**	*e*Pn	**Pn**	**12 21 11.0**	**-1.4**
DZM	**Mont Dzumac**	**11.06**	**172**	Pn	**Pn**	**12 21 12.7**	**+0.3**
	0.7nm,0.3s,baz=319,slow=16,SNR=6.7						
CTA	**Charters Tower**	**19.91**	**241**	P	**P**	**12 23 05.1**	**-0.4**
	0.8nm,0.3s,baz=67,slow=12,SNR=13						
CTAO	**Charters Tower**	**19.91**	**241**	*e*P	**Pn**	**12 23 07.6**	**+0.4**
	19nm,0.8s						
BKZ	**Black Stump Fm**	**29.88**	**161**	*e*P	**P**	**12 24 42.8**	**+1.7**
	9.1nm,1.2s						
WR1	**Warramunga Arr**	**30.54**	**249**	*e*P	**P**	**12 24 46.9**	**-0.2**
	7.2nm,1.1s						
WR1				*e*PcP	**PcP**	**12 27 45.3**	**-0.5**
WRA	**Warramunga Arr**	**30.54**	**249**	P	**P**	**12 24 46.9**	**-0.2**
	2.9nm,0.8s,baz=79,slow=9.1,SNR=12						
WRA				PcP	**PcP**	**12 27 45.3**	**-0.5**
	0.4nm,0.8s,baz=65,slow=2.6,SNR=3.0						
AS31	**Alice Springs**	**31.89**	**243**	*e*P	**P**	**12 24 59.2**	**+0.1**
	1.4nm,0.6s						
ASAR	**Alice Springs**	**31.90**	**243**	P	**P**	**12 24 59.0**	**-0.1**
	3.4nm,0.6s,baz=63,slow=10,SNR=40						
ASAR				PcP	**PcP**	**12 27 49.1**	**-0.3**
	0.3nm,0.9s,baz=87,slow=2.0,SNR=4.4						
FITZ	**Fitzroy Crossi**	**38.41**	**255**	*e*P	**P**	**12 25 54.5**	**-0.7**
	11nm,0.8s						
FITZ	**Fitzroy Crossi**	**38.41**	**255**	P	**P**	**12 25 54.5**	**-0.7**
	8.0nm,0.4s,baz=81,slow=1.9,SNR=3.7						
SONA0	**Songino Array**	**78.10**	**324**	*e*P	**P**	**12 30 32.2**	**-0.1**
SONM	**Songino Array**	**78.10**	**324**	P	**P**	**12 30 32.3**	**-0.1**
	0.6nm,0.7s,baz=104,slow=6.1,SNR=4.8						
ILAR	**Eielson Array**	**83.85**	**19**	P	**P**	**12 31 02.6**	**+0.1**
	0.2nm,0.6s,baz=243,slow=6.0,SNR=3.1						
MK32	**Makanchi Array**	**92.86**	**317**	*e*P	**P**	**12 31 46.1**	**+0.1**
MKAR	**Makanchi Array**	**92.86**	**317**	P	**P**	**12 31 46.1**	**+0.1**
	0.2nm,0.7s,baz=123,slow=5.3,SNR=5.2						

IDC 07 12:19:59.5±1.6**,11°.20S**×**165°.62E,h0^{km},mb3.6**/4**,**
mb1 3.9/5**,mb1mx3.6**/48**,mbtmp3.7**/5**,ML3.7**/1**,Error**
ellipse: s-maj=51.8km s-min=29.7km az=124.0,Santa
Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.84**	**176**	Pn	Pn	12 22 35.4	-0.7
	0.5nm,0.3s,baz=352,slow=19,SNR=3.6						
WRA	**Warramunga Arr**	**31.32**	**250**	P	P	12 26 20.9	-1.0
	1.3nm,1.0s,baz=82,slow=9.1,SNR=4.9						
ASAR	**Alice Springs**	**32.62**	**243**	P	P	12 26 34.3	+1.0
	0.3nm,0.8s,baz=63,slow=9.8,SNR=3.0						
ILAR	**Eielson Array**	**83.69**	**19**	P	P	12 32 30.0	+0.1
	0.3nm,0.6s,baz=240,slow=5.2,SNR=8.4						
MKAR	**Makanchi Array**	**93.55**	**317**	P	P	12 33 17.3	-0.3
	0.4nm,0.6s,baz=97,slow=6.1,SNR=3.9						

IDC 07 12:23:36.5±1.7**,11°.18S**×**165°.67E,h0^{km},mb3.6**/3**,**
mb1 3.9/5**,mb1mx3.6**/50**,mbtmp3.8**/5**,ML4.0**/2**,Error**
ellipse: s-maj=41.7km s-min=31.5km az=131.0,Santa
Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.89**	**287**	Pn	Pn	12 25 07.2	+2.0
	3.0nm,0.3s,baz=121,slow=5.9,SNR=2.5						
DZM	**Mont Dzumac**	**10.85**	**176**	Pn	Pn	12 26 14.7	+1.4
	1.8nm,0.3s,baz=353,slow=9.4,SNR=15						
WRA	**Warramunga Arr**	**31.36**	**250**	P	P	12 29 58.9	-0.4
	0.7nm,0.7s,baz=83,slow=9.1,SNR=8.2						
ASAR	**Alice Springs**	**32.66**	**243**	P	P	12 30 10.1	-0.6
	0.2nm,0.6s,baz=66,slow=9.8,SNR=5.1						
ILAR	**Eielson Array**	**83.67**	**19**	P	P	12 36 06.7	-0.1
	0.5nm,0.7s,baz=230,slow=5.0,SNR=6.5						

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*IDC **07** 12:25:59.9±0.5, 11°.94S×165°.05E, h0^{km}, mb4.4/18,*
mb1 4.5/21, mb1mx4.4/47, mbtmp4.4/21, ML4.1/3, MS3.7/6,
Ms1 3.7/6, ms1mx3.4/36, Error ellipse: s-maj=18.2km
s-min=14.8km az=121.0
*ISCJB **07** 12:26:00.0±0.2, 11°.97S±0°.05×164°.87E±0°.04, h5^{km},*
mb4.5/56, MS3.8/4, Error ellipse: s-maj=7.3km
s-min=5.9km az=166.4
*NEIC **07** 12:26:02.2±0.2, 11°.91S×164°.91E, h10^{km}, mb4.6/35, Error*
ellipse: s-maj=7.7km s-min=5.5km az=140.0
ISC 07 12:26:01.3±0.7**,11°.93S**±0°.07×**164°.97E**±0°.07**,h6^{km}**±3^{km}**,**
h6^{km}:pP-P,n101,σ1^{s}15/103**,mb4.6**/56**,MS3.7**/4**,Santa**
Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.53**	**296**	*e*Pn	**Pn**	**12 27 24.0**	**-0.2**
HNR				*e*Pn	**Pn**	**12 27 26.3**	**+2.0**
HNR				*e*Sn	**Sn**	**12 28 26.8**	**-1.3**
HNR	**Honiara**	**5.53**	**296**	Pn	**Pn**	**12 27 24.0**	**-0.2**
	14nm,0.3s,baz=164,slow=7.4,SNR=7.1						
HNR				Sn	**Sn**	**12 28 26.8**	**-1.3**
	14nm,0.3s,baz=176,slow=19,SNR=3.2						
HNR				LR	LR	12 29 24.7	
	comp=Z,902nm,20.4s,baz=141,slow=37						
DZM	**Mont Dzumac**	**10.19**	**172**	*e*Pn	**Pn**	**12 28 27.6**	**-0.6**
DZM	**Mont Dzumac**	**10.19**	**172**	Pn	**Pn**	**12 28 27.5**	**-0.7**
	1.3nm,0.3s,baz=4.4,slow=9.6,SNR=9.4						
DZM				LR	LR	12 32 06.0	
	comp=Z,198nm,19.4s,baz=22,slow=36						
PINNC	**Pines Island,**	**10.89**	**168**	*e*Pn	**Pn**	**12 28 39.2**	**+1.5**
CTA	**Charters Tower**	**19.72**	**243**	P	**P**	**12 30 31.5**	**-0.4**
	0.2nm,0.3s,baz=73,slow=9.3,SNR=7.3						
CTAO	**Charters Tower**	**19.72**	**243**	*e*P	**Pn**	**12 30 33.1**	**-0.2**
	34nm,1.1s						
COEN	**Coen**	**21.34**	**262**	*e*P	**P**	**12 30 50.6**	**+1.2**
ARMA	**Armidale**	**22.17**	**212**	*e*P	**P**	**12 30 59.5**	**+1.1**
	13nm,0.8s						
STKA	**Stephens Creek**	**29.28**	**224**	*e*P	**P**	**12 32 04.5**	**-0.1**
	1.4nm,1.1s						
STKA	**Stephens Creek**	**29.28**	**224**	P	**P**	**12 32 03.5**	**-1.1**
	2.7nm,0.8s,baz=3.6,slow=12,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**30.27**	**3**	T	T	13 02 17.7	
	baz=184,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy**	**30.28**	**3**	T	T	13 02 21.9	
	baz=184,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**30.29**	**3**	T	T	13 02 23.7	
	baz=184,slow=76,SNR=25						
WB2	**Warramunga Arr**	**30.46**	**251**	*e*P	**P**	**12 32 15.2**	**0.0**
WB2				*e*P	**pP**	**12 32 15.4**	**-0.2**
WRAB	**Tennant Creek**	**30.46**	**251**	*e*P	**P**	**12 32 15.3**	**+0.1**
	10nm,1.0s						
WR1	**Warramunga Arr**	**30.47**	**251**	*e*P	**P**	**12 32 15.0**	**-0.3**
	16nm,0.9s						
WRA	**Warramunga Arr**	**30.47**	**251**	P	**P**	**12 32 15.0**	**-0.3**
	9.5nm,0.8s,baz=81,slow=8.9,SNR=43						
WRA				PcP	**PcP**	**12 35 14.5**	**-0.3**
	1.8nm,0.8s,baz=74,slow=2.8,SNR=13						
H11N1	**WAKE ISLAND Hy**	**31.50**	**3**	T	T	13 03 53.5	
	baz=184,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**31.50**	**3**	T	T	13 04 07.5	
	baz=184,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	**31.52**	**3**	T	T	13 03 54.8	
	baz=184,slow=76,SNR=19						
AS01	**Alice Springs**	**31.68**	**244**	*e*P	**P**	**12 32 25.9**	**0.0**
ASAR	**Alice Springs**	**31.72**	**244**	P	**P**	**12 32 25.1**	**-1.3**
	2.3nm,0.9s,baz=75,slow=9.8,SNR=16						
ASAR				PcP	**PcP**	**12 35 17.7**	**-0.4**
	1.6nm,0.8s,baz=66,slow=2.7,SNR=10						
RPZ	**Rata Peaks**	**32.11**	**172**	P	**P**	**12 32 28.9**	**-0.5**
	6.8nm,0.8s,baz=46,slow=9.6,SNR=3.8						
RPZ				LR	LR	12 43 30.5	
	comp=Z,142nm,20.6s,baz=54,slow=33						
FITZ	**Fitzroy Crossi**	**38.42**	**256**	P	**P**	**12 33 23.8**	**-0.3**
	baz=90,slow=8.8						
MJAR	**Matsushiro Arr**	**54.41**	**334**	P	**P**	**12 35 28.6**	**-0.8**
	4.6nm,0.8s,baz=170,slow=9.1,SNR=9.0						
MAJO	**Matsushiro**	**54.41**	**334**	*e*P	**P**	**12 35 28.6**	**-0.8**
KSRS	**Korea Array**	**60.18**	**326**	P	**P**	**12 36 10.4**	**+0.3**
	3.5nm,0.9s,baz=132,slow=8.9,SNR=6.0						
KSAR	**Wonju Array Be**	**60.19**	**326**	P	**P**	**12 36 10.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**63.40**	**334**	P	**P**	**12 36 32.0**	**+0.3**
	3.6nm,0.7s,baz=140,slow=8.0,SNR=6.3						
BKNI	**Bangkinang**	**64.60**	**276**	*e*P	**P**	**12 36 41.6**	**+1.3**
	172nm,0.6s						
IPM	**Ipoh**	**65.63**	**280**	*e*P	**P**	**12 36 46.8**	**-0.2**
	12nm,1.0s						
NONG	**Nongkai**	**67.89**	**295**	P	**P**	**12 37 03.0**	**+1.7**
PBKT	**Sadao Pong**	**69.32**	**293**	P	**P**	**12 37 12.1**	**+1.9**
UTTA	**Uttaradit**	**70.09**	**294**	P	**P**	**12 37 17.4**	**+2.5**
XAN	**Xi'an**	**70.16**	**313**	P	**P**	**12 37 15.6**	**+0.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**71.77**	**294**	P	**P**	**12 37 26.5**	**+1.3**
	comp=Z,6.0nm,0.8s,baz=124,slow=4.6,SNR=30						
CMMT	**Chiang Mai**	**71.89**	**294**	P	**P**	**12 37 27.5**	**+1.6**
	comp=Z,7.0nm,1.0s						
CHTO	**Chiang Mai**	**71.89**	**294**	P	**P**	**12 37 27.6**	**+1.7**
	comp=Z,31nm,1.0s						
HHC	**Hu-ho-hao-te**	**72.01**	**320**	*e*P	**P**	**12 37 28.5**	**+2.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,3.9s						
QSPA	**South Pole Qui**	**78.08**	**180**	*e*P	**P**	**12 38 00.9**	**-0.1**
QSPA				*e*P	**pP**	**12 38 01.4**	**-0.1**
QSPA	**South Pole Qui**	**78.08**	**180**	P	**P**	**12 38 00.9**	**-0.1**
	comp=Z,5.6nm,0.8s,baz=323,slow=0.9,SNR=27						
SONA0	**Songino Array**	**78.93**	**324**	*e*P	**P**	**12 38 05.7**	**-0.3**
SONM	**Songino Array**	**78.93**	**324**	P	**P**	**12 38 05.7**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=140,slow=6.3,SNR=8.1						
SONA1	**Songino Array**	**78.93**	**324**	*e*P	**P**	**12 38 06.6**	**+0.6**
GTA	**Gaotai**	**79.12**	**314**	*e*P	**P**	**12 38 08.6**	**+1.4**
GTA				pP	pwP	12 38 13.0	-0.7
GTA				sP	PcP	12 38 15.6	0.0
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRDH	**Bariadhala**	**79.59**	**296**	LR	LR	13 15 29.0	
	comp=Z,42nm,18.0s,baz=206,slow=37						
RSO	**Redoubt South**	**79.60**	**20**	*e*P	**P**	**12 38 11.7**	**+2.2**
BILL	**Bilibino**	**79.76**	**0**	*e*P	**P**	**12 38 10.2**	**+0.3**
	comp=Z,4.9nm,0.9s						
CAST	**Castle Rocks**	**82.02**	**18**	*e*P	**P**	**12 38 21.4**	**-0.7**
	comp=Z,6.5nm,0.9s						
DIV	**Divide**	**82.50**	**22**	*e*P	**P**	**12 38 25.0**	**+0.3**
	comp=Z,14nm,1.0s						
KLU	**Klutina**	**82.69**	**21**	*e*P	**P**	**12 38 26.1**	**+0.5**
	comp=Z,4.1nm,0.8s						
IM3	**Indian Mountai**	**83.47**	**16**	*e*P	**P**	**12 38 29.7**	**+0.2**
WRH	**Wood River Hil**	**84.00**	**19**	*e*P	**P**	**12 38 32.1**	**-0.2**
	comp=Z,5.7nm,0.9s						
MDM	**Murphy Dome**	**84.30**	**18**	*e*P	**P**	**12 38 33.6**	**-0.2**
	comp=Z,8.8nm,1.0s						
HDA	**Harding Lake**	**84.32**	**19**	*e*P	**P**	**12 38 33.8**	**-0.1**
	comp=Z,14nm,0.9s						
RIDG	**Independ'e Rid**	**84.56**	**20**	*e*P	**P**	**12 38 35.9**	**+0.7**
	comp=Z,12nm,1.1s						
IL1	**Eielson Array**	**84.59**	**19**	*e*P	**P**	**12 38 35.7**	**+0.5**
ILAR	**Eielson Array**	**84.59**	**19**	P	**P**	**12 38 33.5**	**-1.8**
	comp=Z,3.5nm,0.8s,baz=245,slow=5.7,SNR=24						
ILB	**Eielson Array**	**84.59**	**19**	*e*P	**P**	**12 38 35.8**	**+0.5**
SCRK	**Sand Creek**	**85.00**	**20**	*e*P	**P**	**12 38 38.1**	**+0.6**
	comp=Z,20nm,1.2s						
AFDM	**Forest Hills D**	**85.35**	**49**	*e*P	**P**	**12 38 40.3**	**+0.6**
	comp=Z,5.8nm,1.1s						
CMB	**Columbia Colle**	**85.49**	**50**	*e*P	**P**	**12 38 40.8**	**+0.3**
	comp=Z,3.3nm,1.0s						
BBB	**Bella Bella**	**85.73**	**35**	LR	LR	13 08 43.0	
	comp=Z,77nm,19.9s,baz=184,slow=30						
NV01	**Mina Array Sit**	**87.17**	**50**	*e*P	**P**	**12 38 48.7**	**-0.3**
NVAR	**Mina Array Bea**	**87.17**	**50**	P	**P**	**12 38 48.6**	**-0.4**
	comp=Z,1.9nm,1.0s,baz=224,slow=6.9,SNR=8.1						
NV11	**Mina Array Sit**	**87.28**	**50**	*e*P	**P**	**12 38 50.2**	**+0.8**
	comp=Z,0.5nm,1.1s						
GLA	**Glamis**	**88.37**	**56**	*e*P	**P**	**12 38 57.1**	**+2.5**
	comp=Z,12nm,0.8s						
Y12C	**Blythe**	**88.80**	**55**	*e*P	**P**	**12 38 57.8**	**+1.2**
	comp=Z,3.8nm,1.0s						
SHPR	**Sheep Range**	**89.02**	**52**	*e*P	**P**	**12 38 59.0**	**+1.3**
	comp=Z,3.0nm,1.2s						
R11A	**Troy Canyon, C**	**89.19**	**51**	*e*P	**P**	**12 38 59.0**	**+0.5**
	comp=Z,0.5nm,0.9s						
E09A	**Wood Farm, Sta**	**89.72**	**42**	*e*P	**P**	**12 39 00.9**	**+0.3**
	comp=Z,5.0nm,1.0s						
BMO	**Blue Mountains**	**89.79**	**44**	*e*P	**P**	**12 38 58.2**	**-2.9**
	comp=Z,1.0nm,0.8s						
ELK	**Elko**	**90.10**	**48**	P	**P**	**12 39 02.7**	**-0.1**
	comp=Z,1.7nm,1.1s,baz=222,slow=5.8,SNR=4.4						
ELK				LR	LR	13 09 21.6	
	comp=Z,21nm,21.1s,baz=222,slow=29						
LCMT	**Little Creek M**	**90.64**	**52**	*e*P	**P**	**12 39 08.0**	**+2.7**
	comp=Z,1.4nm,1.0s						
CCUT	**Cedar City**	**90.68**	**52**	*e*P	**P**	**12 39 08.6**	**+3.0**
	comp=Z,2.2nm,1.0s						
SZCU	**Shurtz Canyon**	**90.90**	**52**	*e*P	**P**	**12 39 08.1**	**+1.5**
	comp=Z,2.5nm,1.1s						
KNB	**Kanab**	**90.97**	**52**	*e*P	**P**	**12 39 05.1**	**-1.8**
	comp=Z,1.5nm,1.2s						
U15A	**North Rim**	**91.24**	**53**	*e*P	**P**	**12 39 09.2**	**+0.9**
	comp=Z,2.4nm,0.9s						
HLID	**Hailey**	**91.43**	**46**	*e*P	**P**	**12 39 10.1**	**+1.2**
	comp=Z,1.8nm,1.0s						
MTPU	**Mount Pierson**	**91.71**	**52**	*e*P	**P**	**12 39 12.2**	**+1.7**
	comp=Z,3.3nm,1.2s						
BGU	**Big Grassy Mou**	**91.76**	**49**	*e*P	**P**	**12 39 11.5**	**+1.1**
	comp=Z,4.1nm,1.2s						
MSU	**Marysvale**	**91.82**	**51**	*e*P	**P**	**12 39 12.6**	**+1.7**
HVU	**Hansel Valley**	**92.16**	**48**	*e*P	**P**	**12 39 13.0**	**+0.7**
	comp=Z,2.5nm,1.1s						
MK32	**Makanchi Array**	**93.64**	**317**	*e*P	**P**	**12 39 18.4**	**-0.4**
MKAR	**Makanchi Array**	**93.64**	**317**	*e*P	**P**	**12 39 18.3**	**-0.5**
	comp=Z,14nm,0.7s						
MKAR	**Makanchi Array**	**93.64**	**317**	P	**P**	**12 39 18.4**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=99,slow=6.2,SNR=16						
ZALV	**Zalesovo Beam**	**93.82**	**324**	P	**P**	**12 39 18.4**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=123,slow=3.2,SNR=8.3						
ZAA1	**Zalesovo Array**	**93.83**	**324**	*e*P	**P**	**12 39 18.4**	**-1.0**
MAKZ	**Makanchi**	**93.86**	**317**	*e*P	**P**	**12 39 18.5**	**-1.3**
	comp=Z,2.1nm,1.0s						
PDAR	**Pinedale Array**	**94.70**	**47**	P	**P**	**12 39 21.3**	**-2.8**
	comp=Z,0.2nm,0.5s,baz=280,slow=5.4,SNR=2.8						
YKA	**Yellowknife Ar**	**96.10**	**27**	P	**P**	**12 39 27.9**	**-1.7**
	comp=Z,1.0nm,0.7s,baz=257,slow=4.6,SNR=21						
YKB5	**Yellowknife Ar**	**96.10**	**27**	*e*P	**P**	**12 39 27.9**	**-1.7**
LTX	**Lajitas**	**96.92**	**62**	*e*P	**P**	**12 39 34.3**	**0.0**
TXAR	**Lajitas Array**	**96.92**	**62**	P	**P**	**12 39 34.3**	**0.0**
	comp=Z,0.2nm,0.6s,baz=246,slow=6.8,SNR=3.0						
ARA0	**ARCESS Array S**	**116.99**	**345**	*e*PKPdf	**PKPdf**	**12 44 45.6**	**-1.0**
ARCES	**ARCESS Array B**	**116.99**	**345**	PKP	**PKPdf**	**12 44 45.6**	**-1.0**
	comp=Z,4.5nm,1.1s,baz=55,slow=0.5,SNR=9.3						
ES19	**SONSECA Array**	**150.63**	**342**	*e*PKPbc	**PKPbc**	**12 45 55.1**	**+0.3**
ESDC	**Sonseca Array**	**150.68**	**342**	PKPbc	**PKPbc**	**12 45 54.4**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=3.5,slow=2.1,SNR=7.5						
ESDC				PKPab	**sPKPab**	**12 46 02.4**	**+0.1**
	comp=Z,0.1nm,0.2s,baz=41,slow=2.9,SNR=4.4						
TORD	**Torodi Ar. Bea**	**163.63**	**276**	PKP	**PKPdf**	**12 46 05.6**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=276,slow=2.6,SNR=3.6						
TORD				PKPab	**sPKPab**	**12 46 58.6**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=72,slow=6.2,SNR=2.9						
TOA1	**Torodi Ar. Sit**	**163.63**	**276**	*e*PKPdf	**PKPdf**	**12 46 05.6**	**-0.7**
TOA1				*e*PKPab	**sPKPab**	**12 46 58.6**	**-0.2**

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*ISCJB **07** 12:26:03.6±0.5, 39°.66N±0°.03×28°.90E±0°.03, h1^{km}±6^{km},*
Error ellipse: s-maj=4.6km s-min=4.1km az=160.4
*DDA **07** 12:26:03.2, 39°.64N×28°.89E, h7^{km}±2^{km}, ML2.8*
*ISK **07** 12:26:03.4, 39°.62N×28°.88E, h8^{km}, ML2.4/10*
ISC 07 12:26:03.5±1.4**,39°.64N**±0°.03×**28°.88E**±0°.03**,h9^{km}**±12^{km}**,**
n19,σ0^{s}69/26**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.31**	**263**	*i* P	**Pg**	**12 26 10.1**	**+0.3**
DURS				*i* S	**Sb**	**12 26 15.2**	**-1.4**
DURS				IAML_P			
	comp=Z,3µm,0.1s						
TVSB	**Tavsanli**	**0.49**	**112**	PG	**Pg**	**12 26 12.9**	**-0.1**
TVSB				SG	**Sb**	**12 26 20.3**	**-1.4**
DEMI	**Demirci**	**0.61**	**192**	*i* P	**Pg**	**12 26 15.4**	**+0.2**
DEMI				*i* S	**Sb**	**12 26 24.9**	**-0.2**
DEMI				IAML_P			
	comp=Z,1µm,0.1s						
GDZ	**Gediz**	**0.72**	**139**	*i* P	**Pg**	**12 26 17.3**	**-0.1**
GDZ				*i* S	**Sb**	**12 26 28.0**	**-0.4**
GDZ				IAML_P			
	comp=Z,4µm,0.2s						
MDNY	**Mudanya-Bursa**	**0.73**	**0**	PG	**Pb**	**12 26 18.2**	**-0.2**
KCTX	**Karacabey (Bur**	**0.74**	**328**	PG	**Pb**	**12 26 19.0**	**+0.3**
GEMT	**Gemlik**	**0.83**	**17**	PG	**Pb**	**12 26 20.7**	**+0.6**
CAVI	**Cavuskoy**	**0.93**	**52**	PG	**Pn**	**12 26 22.8**	**0.0**
STEP	**BALIKESIR_Sava**	**0.93**	**254**	*i* P	**Pb**	**12 26 21.6**	**-0.3**
STEP				*i* S	**Sn**	**12 26 35.5**	**-0.9**
STEP				IAML_P			
	comp=Z,2µm,0.1s						
YLV	**Yalova**	**1.00**	**22**	PG	**Pg**	**12 26 22.8**	**0.0**
GONE	**Gonen-Balikesi**	**1.00**	**294**	PG	**Pb**	**12 26 23.4**	**+0.3**
EDC	**Edincik**	**1.05**	**313**	PG	**Pg**	**12 26 23.7**	**0.0**
AKHS	**Akhisar**	**1.12**	**228**	*i* P	**Pn**	**12 26 25.6**	**+0.2**
AKHS				*i* S	**Sn**	**12 26 42.8**	**+1.8**
AKHS				IAML_P			
	comp=Z,1µm,0.2s						
KULA	**Kula-Manisa**	**1.14**	**189**	PN	**Pn**	**12 26 25.5**	**-0.2**
MANT	**Manisa**	**1.17**	**192**	*i* P	**Pn**	**12 26 26.2**	**-0.1**
MANT				*i* S	**Sn**	**12 26 43.1**	**+0.6**
BORA	**Eskisehir**	**1.24**	**78**	PN	**Pn**	**12 26 27.8**	**+0.7**
GULT	**Gulveren**	**1.49**	**57**	PN	**Pb**	**12 26 31.4**	**0.0**
SILT	**Sile**	**1.62**	**21**	PN	**Pb**	**12 26 33.2**	**-0.4**
AUSIV	**SIVRIHISAR**	**2.07**	**95**	PN	**Pn**	**12 26 39.2**	**+0.7**

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*IDC **07** 12:31:18.5±0.9, 11°.65S×164°.94E, h0^{km}, mb4.2/11,*
mb1 4.4/14, mb1mx4.2/37, mbtmp4.2/14, ML4.0/3, MS4.2/1,
Ms1 4.2/1, ms1mx3.1/35, Error ellipse: s-maj=26.0km
s-min=18.8km az=132.0
*NEIC **07** 12:31:20.4±0.3, 11°.65S×164°.92E, h10^{km}, mb4.6/12, Error*
ellipse: s-maj=8.1km s-min=6.4km az=97.0
*ISCJB **07** 12:31:22.3±0.4, 11°.77S±0°.06×164°.84E±0°.07, h34^{km},*
mb4.4/21, MS4.2/1, Error ellipse: s-maj=10.0km
s-min=8.2km az=153.6
ISC 07 12:31:23.8±0.6**,11°.70S**±0°.09×**164°.96E**±0°.08**,h34^{km},n43,**
σ1^{s}29/46**,mb4.4**/21**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.42**	**294**	*e*Pn	**Pn**	**12 32 40.3**	**-1.9**
HNR				*e*Pn	**Pn**	**12 32 42.2**	**0.0**
HNR				*e*Sn	**Sn**	**12 33 42.6**	**-0.8**
HNR				*e*Sn	**Sn**	**12 33 49.6**	**+6.2**
HNR	**Honiara**	**5.42**	**294**	Pn	**Pn**	**12 32 40.3**	**-1.9**
	9.3nm,0.3s,baz=199,slow=6.1,SNR=7.5						
HNR				Sn	**Sn**	**12 33 42.6**	**-0.8**
	1.8nm,0.3s,baz=217,slow=20,SNR=4.2						
DZM	**Mont Dzumac**	**10.41**	**172**	Pn	**Pn**	**12 33 50.3**	**-0.5**
	1.8nm,0.3s,baz=312,slow=13,SNR=48						
PINNC	**Pines Island,**	**11.11**	**168**	*e*Pn	**Pn**	**12 34 00.5**	**+0.2**
CTA	**Charters Tower**	**19.81**	**243**	P	**P**	**12 35 51.4**	**-0.2**
	0.1nm,0.3s,baz=63,slow=12,SNR=5.5						
CTAO	**Charters Tower**	**19.81**	**243**	*e*P	**Pn**	**12 35 52.1**	**-1.3**
	11nm,0.9s						
COEN	**Coen**	**21.35**	**262**	*e*P	**P**	**12 36 09.5**	**+1.1**
	13nm,1.0s						
CAN	**Canberra**	**27.61**	**209**	*e*P	**P**	**12 37 08.2**	**0.0**
	18nm,1.1s						
BKZ	**Black Stump Fm**	**29.21**	**161**	*e*P	**P**	**12 37 23.2**	**+0.8**
	12nm,1.2s						
STKA	**Stephens Creek**	**29.43**	**223**	*e*P	**P**	**12 37 24.4**	**0.0**
	0.9nm,0.9s						
STKA	**Stephens Creek**	**29.43**	**223**	P	**P**	**12 37 24.4**	**0.0**
	2.7nm,0.8s,baz=27,slow=11,SNR=3.9						
H11S2	**WAKE ISLAND Hy**	**30.05**	**3**	T	T	13 08 55.9	
	baz=184,slow=76,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**30.05**	**3**	T	T	13 08 59.9	
	baz=184,slow=76,SNR=7.3						
H11S1	**WAKE ISLAND Hy**	**30.07**	**3**	T	T	13 08 56.5	
	baz=184,slow=76,SNR=6.6						
WRAB	**Tennant Creek**	**30.52**	**251**	*e*P	**P**	**12 37 34.2**	**0.0**
	5.4nm,0.8s						
WB2	**Warramunga Arr**	**30.52**	**251**	*e*P	**P**	**12 37 33.5**	**-0.7**
WB2				*e*P	**P**	**12 37 34.2**	**+0.1**
WR1	**Warramunga Arr**	**30.53**	**251**	*e*P	**P**	**12 37 33.5**	**-0.8**
	8.3nm,1.0s						
WRA	**Warramunga Arr**	**30.53**	**251**	P	**P**	**12 37 33.5**	**-0.8**
	4.7nm,0.8s,baz=82,slow=9.0,SNR=32						
WRA				PcP	**PcP**	**12 40 33.0**	**+0.2**
	1.1nm,1.1s,baz=72,slow=3.1,SNR=5.1						
ASAR	**Alice Springs**	**31.81**	**244**	P	**P**	**12 37 44.3**	**-1.2**
	2.8nm,0.8s,baz=72,slow=9.5,SNR=23						
ASAR				PcP	**PcP**	**12 40 36.6**	**+0.4**
	0.8nm,0.8s,baz=56,slow=3.5,SNR=5.2						
RAR	**Rarotonga**	**35.05**	**110**	LR	LR	12 48 54.0	
	comp=Z,430nm,21.4s,baz=256,slow=30						
MJAR	**Matsushiro Arr**	**54.20**	**333**	P	**P**	**12 40 45.3**	**-0.8**
	2.5nm,0.9s,baz=301,slow=45,SNR=4.9						
MAJO	**Matsushiro**	**54.20**	**333**	*e*P	**P**	**12 40 45.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**71.67**	**294**	P	**P**	**12 42 43.4**	**+0.7**
	1.0nm,0.6s,baz=129,slow=4.8,SNR=9.0						
QSPA	**South Pole Qui**	**78.31**	**180**	*e*P	**P**	**12 43 21.5**	**+1.1**
	6.9nm,0.9s						
SONA0	**Songino Array**	**78.74**	**324**	*e*P	**P**	**12 43 23.4**	**+0.4**
SONM	**Songino Array**	**78.74**	**324**	P	**P**	**12 43 23.4**	**+0.4**
	1.2nm,0.8s,baz=131,slow=7.2,SNR=7.0						
HARP	**HAARP**	**83.37**	**21**	*e*P	**P**	**12 43 48.2**	**+1.0**
	48nm,0.7s						
HDA	**Harding Lake**	**84.11**	**19**	*e*P	**P**	**12 43 51.9**	**+1.0**
	3.7nm,0.7s						
ILAR	**Eielson Array**	**84.38**	**19**	P	**P**	**12 43 52.1**	**-0.1**
	0.9nm,0.7s,baz=237,slow=5.4,SNR=18						

ILB	Eielson Array	84.38	19	*e*P	P	12 43 53.7	+1.5
	1.8nm,0.9s						
NVAR	Mina Array Bea	87.04	50	P	P	12 44 06.7	+0.3
	0.6nm,0.7s,baz=236,slow=7.5,SNR=4.2						
MK01	Makanchi Array	93.45	317	*e*P	P	12 44 36.2	+0.3
MK31	Makanchi Array	93.47	317	*e*P	P	12 44 36.8	+0.7
	1.9nm,0.9s						
MK32	Makanchi Array	93.47	317	*e*P	P	12 44 36.2	+0.2
MKAR	Makanchi Array	93.47	317	*e*P	P	12 44 36.8	+0.7
	11nm,0.8s						
MKAR	Makanchi Array	93.47	317	P	P	12 44 36.2	+0.2
	1.6nm,0.6s,baz=100,slow=6.1,SNR=18						
ZALV	Zalesovo Beam	93.63	324	*e*P	P	12 44 35.6	-0.9
ZALV	Zalesovo Beam	93.63	324	P	P	12 44 35.0	-1.5
	0.9nm,0.7s,baz=118,slow=5.4,SNR=6.3						
ZAA1	Zalesovo Array	93.63	324	*e*P	P	12 44 35.0	-1.5
MAKZ	Makanchi	93.68	317	*e*P	P	12 44 37.8	+0.8
	3.4nm,1.0s						
YKA	Yellowknife Ar	95.91	27	P	P	12 44 45.1	-1.6
	0.4nm,0.8s,baz=258,slow=4.6,SNR=6.7						
TORD	Torodi Ar. Bea	163.59	277	PKP	PKPdf	12 51 24.0	-0.2
	0.6nm,1.0s,baz=65,slow=3.2,SNR=2.4						
TOA1	Torodi Ar. Sit	163.59	277	*e*PKPdf	PKPdf	12 51 24.0	-0.2

IDC ***07*** *12:36:46.5±0.4, 10.°87S×165.°26E, h0^{km}, mb4.8/21, mb1 5.0/23, mb1mx4.9/29, mbtmp4.8/23, ML5.3/2, MS4.4/31, Ms1 4.4/31, ms1mx4.3/38, Error ellipse: s-maj=16.3km s-min=12.9km az=93.0*

ISCJB ***07*** *12:36:48.9±0.1, 10.°87S±0.°02×165.°14E±0.°03, h20^{km}, mb5.0/171, MS4.5/40, Error ellipse: s-maj=3.6km s-min=3.2km az=4.0*

NEIC ***07*** *12:36:48.8±0.1, 10.°82S×165.°19E, h10^{km}, mb5.1/128, Error ellipse: s-maj=4.0km s-min=3.3km az=119.0*

MOS ***07*** *12:36:50.8±1.0, 10.°85S×165.°11E, h33^{km}, mb5.1/57, MS4.4/10, Error ellipse: s-maj=8.3km s-min=7.7km az=117.9*

GCMT ***07*** *12:36:51.8±0.1, 10.°92S±0.°01×165.°06E±0.°01, h17^{km}, MW5.2/108, Moment Tensor Solution. s76,c107; s108,c184; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.65±.02; M$_{\theta\theta}$-0.11±.01; M$_{\phi\phi}$0.76±.01; M$_{r\theta}$0.25±.04; M$_{\theta\phi}$-0.09±.01; M$_{\phi r}$0.36±.03; Best double couple: M$_0$0.84100×10^{17} NP1:ϕ_s194.00000°, δ61.00000°, λ-67.00000°. NP2:ϕ_s333.00000°, δ36.00000°, λ-125.00000°. Principal axes: T 0.8510, Plg13.0000°, Azm268.0000°; N -0.0180, Plg20.0000°, Azm3.0000°; P -0.8320, Plg66.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 12:36:50.2±0.5, **10.°89S**±0.°05×**165.°31E**±0.°05, **h21**^{km}±7^{km}, **n445,** σ**1^{s}42**/440, **mb5.0**/171, **MS4.5**/41, **13C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.48	285	*e*Pn	Pn	12 38 10.3	-0.3
HNR				*e*Pn	Pn	12 38 10.6	0.0
HNR				*e*Sn	Sn	12 39 11.0	-2.1
HNR	Honiara	5.48	285	Pn	Pn	12 38 10.6	0.0
	176nm,0.3s,baz=152,slow=3.8,SNR=84						
HNR				Sn	Sn	12 39 11.0	-2.1
	57nm,0.3s,baz=198,slow=20,SNR=2.0						
HNR				LR	LR	12 40 34.0	
	comp=Z,12μm,18.3s,baz=122,slow=42						
MARNC	Mare, Loyalty	10.85	166	*e*Pn	Pn	12 39 26.1	+1.8
DZM	Mont Dzumac	11.17	175	*e*Pn	Pn	12 39 29.6	+0.8
	464nm,1.4s						
DZM				*e*LQ	LQ	12 41 36.2	
	2μm,24.1s						
DZM				*e*LR	LR	12 42 04.7	
	comp=Z,4μm,22.6s						
DZM	Mont Dzumac	11.17	175	Pn	Pn	12 39 29.5	+0.8
	9.2nm,0.3s,baz=305,slow=16,SNR=82						
DZM				Sn	Sn	12 41 29.7	-3.5
	0.8nm,0.3s,baz=311,slow=19,SNR=1.9						
DZM				LR	LR	12 43 34.0	
	comp=Z,5μm,18.4s,baz=7.5,slow=36						
PINNC	Pines Island,	11.83	170	*e*Pn	Pn	12 39 39.1	+1.3
MSVF	Nonsavu	14.09	120	*e*Pn	P	12 40 13.2	-3.2
MSVF	Nonsavu	14.09	120	*i* P	Pn	12 40 12.0	+3.2
TARA	Tarawa	14.33	32	*e*Pn	Pn	12 40 12.4	+0.4
RABL	Rabaul	14.63	296	*e*Pn	Pn	12 40 16.1	0.0
EIDS	Eidsvold	19.72	221	P	Pn	12 41 20.3	+0.2
	baz=20,SNR=5.5						
EIDS	Eidsvold	19.72	221	*e*P	Pn	12 41 20.0	-0.1
	33nm,0.9s						
MANU	Manus Island	19.86	295	*e*P	Pn	12 41 21.3	-0.5
	520nm,1.0s						
CTA	Charters Tower	20.50	241	P	P	12 41 27.7	+0.7
	94nm,0.8s,baz=68,slow=12,SNR=33						
CTA				LR	LR	12 47 36.4	
	comp=Z,902nm,20.4s,baz=60,slow=32						
CTAO	Charters Tower	20.50	241	*e*P	P	12 41 27.9	+0.9
	190nm,1.0s						
CTAO	Charters Tower	20.50	241	*e*P	P	12 41 27.9	+0.9
CTAO				pmax	pmax		
	comp=Z,190nm,1.0s						
MTSU	Mount Surprise	21.55	248	P	P	12 41 38.7	+0.3
	baz=22,SNR=31						
COEN	Coen	21.83	260	P	P	12 41 41.1	-0.3
	baz=22,SNR=9.4						
COEN	Coen	21.83	260	*e*P	P	12 41 41.0	-0.4
	comp=Z,30nm,0.9s						
RMQ	Roma	22.01	223	P	P	12 41 44.6	+1.3
	baz=22,SNR=18						
ARMA	Armidale	23.22	211	P	P	12 41 56.4	+0.3
	baz=23,SNR=4.8						
ARMA	Armidale	23.22	211	*e*P	P	12 41 56.1	0.0
	comp=Z,47nm,1.1s						
QLP	Quilpie	25.27	229	P	P	12 42 15.5	+0.3
	baz=25,SNR=6.3						
OUZ	Omahuta	25.36	164	*e*P	P	12 42 18.6	+2.8
	comp=Z,146nm,1.2s						
QIS	Mount Isa	26.51	246	P	P	12 42 26.3	-0.2
	baz=26,SNR=11						
CMSA	Cobar Meteorol	27.41	219	P	P	12 42 34.7	+0.2
	baz=28,SNR=9.6						
MKAZ	Moumakai	27.57	163	P	P	12 42 38.5	+2.8
HIZ	Hauiti	28.80	164	*e*P	P	12 42 48.1	+1.3
	comp=Z,68nm,1.0s						
HAZ	Te Kaha	29.00	159	P	P	12 42 50.5	+1.9
MXZ	Matakaoa Point	29.01	158	*e*P	P	12 42 50.2	+1.5
	comp=Z,80nm,0.8s						
MXZ	Matakaoa Point	29.01	158	P	P	12 42 50.3	+1.6
RUGZ	Raukumara Rang	29.15	160	P	P	12 42 51.1	+1.0
PKGZ	Pakihiroa	29.22	159	P	P	12 42 52.7	+2.1
URZ	Urewera	29.23	161	*e*P	P	12 42 51.6	+1.0
URZ				*e*P	P	12 42 52.5	+2.0
URZ	Urewera	29.23	161	P	P	12 42 51.6	+1.0
	comp=Z,54nm,1.0s,baz=3.9,slow=6.0,SNR=12						
URZ				LR	LR	12 53 31.4	
	comp=Z,2μm,19.0s,baz=353,slow=34						
URZ	Urewera	29.23	161	P	P	12 42 53.1	+2.5
H11S2	WAKE ISLAND Hy	29.23	3	T	T	13 13 20.9	
	baz=184,slow=76,SNR=302						
H11S3	WAKE ISLAND Hy	29.23	3	T	T	13 13 26.3	
	baz=184,slow=76,SNR=391						
H11S1	WAKE ISLAND Hy	29.25	3	T	T	13 13 23.6	
	baz=184,slow=76,SNR=248						
WMGZ	Waiomatatini S	29.28	158	P	P	12 42 52.5	+1.5
MWZ	Matawai	29.43	160	P	P	12 42 54.0	+1.6
TWGZ	Tauwhareparae	29.45	159	P	P	12 42 54.4	+1.8
PUZ	Puketiti	29.45	159	P	P	12 42 53.2	+0.6
RAGZ	Rawiri	29.54	161	P	P	12 42 55.8	+2.4
COVZ	Chateau Observ	29.63	164	P	P	12 42 58.4	+4.1
TKGZ	Te Karaka	29.64	160	P	P	12 42 54.9	+0.7
SNGZ	Shannon Statio	29.78	161	P	P	12 42 56.2	+0.7
CNGZ	Carnagh Statio	29.80	159	P	P	12 42 56.9	+1.2
RAHZ	Arahi	29.82	161	P	P	12 42 57.9	+2.0
RIGZ	Rimuhau	29.85	160	P	P	12 42 57.6	+1.5
BKZ	Black Stump Fm	29.87	162	*e*P	P	12 42 57.6	+1.3
	comp=Z,55nm,1.0s						
BKZ	Black Stump Fm	29.87	162	P	P	12 42 57.7	+1.4
NMHZ	Naumai	29.90	162	P	P	12 42 59.0	+2.4
WAKE	Wake Island	30.02	3	*e*P	P	12 42 58.0	+0.4
	comp=Z,94nm,0.9s						
BHHZ	Black Hill Sta	30.04	163	P	P	12 43 01.6	+3.7
KWHZ	Kaweka Forest	30.09	163	P	P	12 43 00.3	+2.0
MCHZ	McNeill Hill	30.18	162	P	P	12 43 00.7	+1.6
STKA	Stephens Creek	30.26	223	P	P	12 43 00.5	+0.6
	baz=30,SNR=5.8						
STKA	Stephens Creek	30.26	223	*e*P	P	12 43 00.3	+0.5
	comp=Z,4.4nm,0.8s						
STKA	Stephens Creek	30.26	223	P	P	12 42 59.0	-0.8
STKA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STKA				MLR	MLR		
	comp=Z,786nm,20.6s						
STKA	Stephens Creek	30.26	223	P	P	12 42 59.0	-0.8
	comp=Z,6.2nm,0.9s,baz=30,slow=9.6,SNR=8.9						
STKA				LR	LR	12 53 30.5	
	comp=Z,786nm,20.6s,baz=42,slow=33						
MHGZ	Mahia Peninsul	30.30	160	P	P	12 43 01.2	+1.1
H11N1	WAKE ISLAND Hy	30.45	3	T	T	13 14 52.5	
	baz=182,slow=76,SNR=614						
H11N3	WAKE ISLAND Hy	30.46	3	T	T	13 14 54.2	
	baz=182,slow=76,SNR=358						
H11N2	WAKE ISLAND Hy	30.47	3	T	T	13 14 53.9	
	baz=182,slow=76,SNR=383						
PXZ	Pawanui	30.77	163	P	P	12 43 05.4	+1.2
WRAB	Tennant Creek	31.12	249	*e*P	P	12 43 07.1	-0.5
	comp=Z,39nm,1.1s						
WRAB	Tennant Creek	31.12	249	*i* P	P	12 43 06.1	-1.5
WRAB				pmax	pmax		
	comp=Z,50nm,1.2s						
WB2	Warramunga Arr	31.12	249	*e*P	P	12 43 06.5	-1.2
WR1	Warramunga Arr	31.14	249	*e*P	P	12 43 06.0	-1.7
	comp=Z,40nm,1.1s						
WR1				*e*PcP	PcP	12 46 00.6	-2.3
WRA	Warramunga Arr	31.14	249	P	P	12 43 06.0	-1.7
	comp=Z,5.1nm,0.6s,baz=81,slow=8.9,SNR=61						
WRA				PcP	PcP	12 46 00.5	-2.3
	comp=Z,1.8nm,0.9s,baz=91,slow=3.5,SNR=3.7						
WRA				LR	LR	12 54 22.3	
	comp=Z,920nm,19.6s,baz=70,slow=34						
BFZ	Birch Farm	31.20	164	*e*P	P	12 43 09.2	+1.2
	comp=Z,86nm,1.0s						
SNZO	South Karori	31.41	166	*e*P	P	12 43 12.3	+2.6
	comp=Z,78nm,1.0s						
THZ	Tophouse	31.46	169	*e*P	P	12 43 13.2	+2.9
	comp=Z,44nm,0.9s						
TOO	Toolangi	31.98	211	P	P	12 43 15.8	+0.9
	baz=32,SNR=5.3						
KDU	Kakadu	32.18	263	P	P	12 43 14.9	-2.0
	baz=32,SNR=8.3						
KHZ	Kahutara	32.22	169	*e*P	P	12 43 18.6	+1.8
	comp=Z,23nm,0.7s						
LTZ	Lake Taylor	32.34	170	*e*P	P	12 43 19.8	+1.7
	comp=Z,35nm,0.7s						
AS01	Alice Springs	32.44	243	*e*P	P	12 43 18.0	-1.2
AS31	Alice Springs	32.48	243	*e*P	P	12 43 18.3	-1.3
	comp=Z,6.2nm,0.6s						
ASAR	Alice Springs	32.48	243	P	P	12 43 18.1	-1.5
	comp=Z,11nm,0.9s,baz=65,slow=9.9,SNR=81						
ASAR				PcP	PcP	12 46 05.6	-0.9
	comp=Z,2.0nm,0.8s,baz=90,slow=2.8,SNR=4.2						
ASAR				LR	LR	12 54 50.6	
	comp=Z,559nm,18.8s,baz=72,slow=33						
FOZ	Fox Glacier	32.75	174	*e*P	P	12 43 22.4	+0.8
	comp=Z,39nm,1.0s						
OXZ	Oxford	32.84	171	*e*P	P	12 43 23.0	+0.7
	comp=Z,37nm,0.9s						
HTT	Hallett	32.99	223	P	P	12 43 24.9	+0.9
	baz=33,SNR=3.9						
RPZ	Rata Peaks	33.08	172	*e*P	P	12 43 24.5	+0.1
RPZ				*e*P	P	12 43 25.4	+0.9
RPZ	Rata Peaks	33.08	172	P	P	12 43 24.5	+0.1
	comp=Z,23nm,0.8s,baz=151,slow=6.7,SNR=12						
BBOO	Buckleboo	34.62	226	P	P	12 43 38.2	+0.1
	baz=35,SNR=7.1						
BBOO	Buckleboo	34.62	226	*e*P	P	12 43 38.0	-0.1
	comp=Z,39nm,0.9s						
KNRA	Kununurra	35.85	258	P	P	12 43 47.0	-1.8
	baz=36,SNR=8.1						
WRKA	Warakurna	37.77	243	P	P	12 44 04.3	-0.9
	baz=38,SNR=25						
FORT	Forrest	39.78	235	P	P	12 44 21.9	+0.1
	baz=40,SNR=9.2						
FORT	Forrest	39.78	235	*e*P	P	12 44 21.9	+0.1
	comp=Z,172nm,0.8s						
SANI	Sanana	40.00	280	P	P	12 44 17.1	-6.8
BATI	Baumata	40.93	267	LR	LR	13 02 30.9	
	comp=Z,406nm,18.2s,baz=106,slow=38						
EDFI	Ende, Flores	43.01	269	P	P	12 44 43.3	-5.4
DAV	Davao City (W)	43.39	293	LR	LR	13 03 15.1	
	comp=Z,244nm,18.7s,baz=106,slow=37						
KCP	Kidapawan	43.81	292	⇑*e*P	P	12 44 56.9	+1.8
PPT	Papeete	44.15	104	LR	LR	13 00 33.9	
	comp=Z,410nm,19.5s,baz=238,slow=32						
PPT2	Papeete2	44.15	104	*e*S	S	12 51 46.5	+16
	comp=Z,458nm,23.8s						
PPT2				*e*LR	LR	12 57 19.0	
	comp=Z,1μm,35.0s						
TBI	Tubuai	44.78	112	*e*S	S	12 51 57.3	+18
	comp=Z,464nm,26.8s						
TBI				*e*LQ	LQ	12 56 03.2	
	comp=Z,1μm,33.2s						
TBI				*e*LR	LR	12 57 56.2	
	comp=Z,1μm,33.2s,baz=288						
MEEK	Meekatharra	46.63	244	P	P	12 45 17.1	-0.3
	baz=47,SNR=5.6						
KLBR	Kellerberrin	48.43	237	P	P	12 45 30.5	-0.8
	baz=48,SNR=5.8						
NWAO	Narrogin (SRO)	49.19	236	P	P	12 45 37.6	+0.4
	baz=49,SNR=8.4						
NWAO	Narrogin (SRO)	49.19	236	*e*P	P	12 45 37.5	+0.4
NWAO	Narrogin (SRO)	49.19	236	*e*P	P	12 45 37.5	+0.4
NWAO	Narrogin (SRO)	49.19	236	LR	LR	13 06 12.2	
	comp=Z,849nm,18.0s,baz=316,slow=36						
MORW	Morawa	49.32	241	P	P	12 45 38.6	+0.5
	baz=49,SNR=4.8						
MORW	Morawa	49.32	241	*e*P	P	12 45 37.2	-0.9
	comp=Z,21nm,0.7s						
MUN	Mundaring	49.80	237	P	P	12 45 42.0	+0.2
	baz=50,SNR=5.1						
TGY	Tagaytay City	50.53	298	LR	LR	13 04 29.8	
	comp=Z,354nm,21.9s,baz=120,slow=33						
KKM	Kota Kinabalu	51.69	287	*e*P	P	12 45 55.1	-1.2
	comp=Z,22nm,0.7s						
MJAR	Matsushiro Arr	53.64	333	P	P	12 46 08.9	-1.4
	comp=Z,10nm,0.8s,baz=169,slow=9.1,SNR=15						
MAJO	Matsushiro	53.64	333	*e*P	P	12 46 08.9	-1.4
MAJO	Matsushiro	53.64	333	*e*P	P	12 46 08.9	-1.4
MAT	Matsushiro	53.64	333	P	P	12 46 09.4	-0.9
JNU	Nakatsue	54.71	324	*e*P	P	12 46 18.7	+0.5
	comp=Z,60nm,0.9s						
JNU	Nakatsue	54.71	324	LR	LR	13 06 13.8	
	comp=Z,298nm,21.7s,baz=134,slow=32						
KSM	Kuching	56.06	279	*e*P	P	12 46 27.1	-1.1
	comp=Z,17nm,1.1s						
LEM	Lembang	57.08	269	LR	LR	13 12 25.7	
	comp=Z,182nm,21.8s,baz=60,slow=38						
RKT	Rikitea	58.04	110	*e*S	S	12 55 00.2	+18
	comp=Z,415nm,29.5s						
RKT				*e*LQ	LQ	13 01 35.1	
	comp=Z,435nm,28.0s						
RKT				*e*LR	LR	13 04 09.5	
	comp=Z,917nm,34.5s						
KSRS	Korea Array	59.51	326	P	P	12 46 52.4	+0.4
	comp=Z,6.9nm,0.8s,baz=135,slow=7.4,SNR=14						
KSRS				LR	LR	13 10 57.6	
	comp=Z,106nm,18.7s,baz=126,slow=34						
KSAR	Wonju Array Be	59.52	326	P	P	12 46 52.4	+0.3
KSAR	Wonju Array Be	59.52	326	P	P	12 46 52.4	+0.3
KS01	Wonju Array Si	59.54	326	*e*P	P	12 46 52.4	+0.1
MDSI	Maura Dua	60.83	271	P	P	12 47 06.0	+4.4
YSS	Yuzh-Sakhalins	61.01	343	*e*P	P	12 47 01.3	-0.8
	comp=Z,55nm,1.0s						
YSS	Yuzh-Sakhalins	61.01	343	*e*P	P	12 47 03.0	+0.9
YSS				*e*		12 47 08.2	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
NJ2	Nanjing	61.61	316	*e*P	P	12 47 07.3	+0.8
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
VLA	Vladivostok	61.81	333	*i* P	P	12 47 09.1	+1.5
VLA				pmax	pmax		
	comp=Z,87nm,0.9s						
SKR	Severo-Kuril's	61.84	353	c*e*P	P	12 47 10.7	+3.1
QIZ	Qiongzhong	62.23	298	P	P	12 47 10.6	-0.3
QIZ				S	S	12 55 36.6	+0.6
QIZ				pmax	pmax		
	comp=Z,130nm,2.8s						
QIZ				LR	LR		
	comp=N,140nm,13.7s						
QIZ				LR	LR		
	comp=E,250nm,22.1s						
QIZ				LR	LR		
	comp=Z,400nm,21.1s						
USRK	Ussuriysk Ar.	62.62	334	P	P	12 47 13.0	0.0
	comp=Z,13nm,0.8s,baz=120,slow=6.4,SNR=16						
WHN	Wuhan	63.97	312	⇑P	P	12 47 30.5	+8.3
MDJ	Mudanjiang	64.02	332	P	P	12 47 21.2	-1.0
MDJ				pmax	pmax		
	comp=Z,39nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,2μm,4.7s						
MDJ	Mudanjiang	64.02	332	*e*P	P	12 47 23.4	+1.1
	comp=Z,38nm,1.0s						
PETK	Petropavlovsk-	64.08	355	*e*P	P	12 47 23.1	+0.7
PETK	Petropavlovsk-	64.08	355	*e*P	P	12 47 23.2	+0.7
PETK	Petropavlovsk-	64.08	355	P	P	12 47 22.4	-0.1
	comp=Z,12nm,0.8s,baz=153,slow=9.5,SNR=12						
PETK				LR	LR	13 09 33.0	
	comp=Z,347nm,20.7s,baz=176,slow=31						
PEA1	Petropavlovsk-	64.08	355	*e*P	P	12 47 22.4	-0.1
DL2	Dalian	64.10	323	P	P	12 47 27.4	+4.5
DL2				*e*S	S	12 56 06.7	+8.0
DL2				pmax	pmax		
	comp=Z,59nm,1.1s						
DL2				LR	LR		
	comp=N,680nm,17.5s						
DL2				LR	LR		
	comp=E,420nm,16.4s						
DL2				LR	LR		
	comp=Z,520nm,13.8s						
TYV	Tymovskoe	64.58	344	*e*P	P	12 47 26.3	+0.5
TYV				pmax	pmax		
	comp=Z,16nm,1.9s						
TYV				pmax	pmax		
	comp=Z,400nm,4.6s						
CN2	Changchun	65.39	329	*e*P	P	12 47 33.0	+1.8
IPM	Ipoh	65.78	280	*e*P	P	12 47 33.6	-0.7
	comp=Z,13nm,0.8s						
MNSI	Mandailing Nat	66.35	276	P	P	12 47 46.0	+7.9
GRNR	Gornyy	66.36	340	*e*P	P	12 47 40.0	+2.7
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
CASY	Casey	66.36	201	*e*P	P	12 47 37.4	+0.2
	comp=Z,16nm,0.9s						
VNDA	Vanda	66.64	181	*e*P	P	12 47 39.4	+0.7
VNDA				*e*pP	P	12 47 40.1	+1.3
VNDA	Vanda	66.64	181	P	P	12 47 38.2	-0.5
	comp=Z,31nm,1.2s,baz=346,slow=5.3,SNR=6.7						
VNDA				LR	LR	13 13 34.5	
	comp=Z,150nm,18.2s,baz=2.5,slow=33						
SKNT	Sakolnakorn	66.64	294	P	P	12 47 40.5	+0.7
	comp=Z,6.6nm,0.8s						
KLR	Kul'dur	66.75	337	*e*P	P	12 47 40.1	+0.3
ENH	Enshi	67.47	309	*e*P	P	12 47 43.2	-1.7
	comp=Z,47nm,0.9s						
NONG	Nongkai	67.76	295	P	P	12 47 47.5	+0.6
TRTT	Trang	67.90	283	P	P	12 48 01.3	+13
GYA	Guiyang	67.98	304	⇑*i*P	P	12 47 48.8	+0.5
GYA				PP	PP	12 50 21.4	+2.9
GYA				S	S	12 56 47.8	+1.1
GYA	Guiyang	67.98	304	SS	SS	13 01 10.8	+1.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.7s						
GYA				LR	LR		
	comp=N,550nm,18.9s						
GYA				LR	LR		
	comp=E,580nm,18.4s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
BJT	Baijiatuau	68.09	321	*e*P	P	12 47 47.9	-0.6
	comp=Z,17nm,0.9s						
BJT	Baijiatuau	68.09	321	*e*P	P	12 47 47.9	-0.6
BJT				pmax	pmax		
	comp=Z,17nm,0.9s						
CHAI	Chaiyaphum	68.09	292	P	P	12 47 57.7	+8.7
BJI	Beijing	68.10	321	⇑*i*P	P	12 47 48.9	+0.4
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BJI				LR	LR		
	comp=N,450nm,11.2s						
BJI				LR	LR		
	comp=E,340nm,15.5s						
BJI				LR	LR		
	comp=Z,430nm,27.5s						
PBKT	Sadao Pong	69.23	292	*e*P	P	12 47 56.1	0.0
	comp=Z,8.9nm,0.8s						
PBKT	Sadao Pong	69.23	292	P	P	12 47 57.7	+1.6
XAN	Xi'an	69.70	312	P	P	12 47 58.4	-0.4
XAN				pP	sP	12 48 07.3	+0.2
XAN				sP	pwP	12 48 11.4	+3.6
XAN				PcP	PcP	12 48 22.1	+0.6
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN				LR	LR		
	comp=N,290nm,17.3s						
XAN				LR	LR		
	comp=E,310nm,20.6s						
XAN				LR	LR		
	comp=Z,370nm,18.4s						
XAN	Xi'an	69.70	312	*e*P	P	12 47 58.0	-0.8
	comp=Z,20nm,0.8s						
XAN	Xi'an	69.70	312	*e*P	P	12 47 58.0	-0.8
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
UTTA	Uttaradit	69.98	293	P	P	12 48 07.4	+6.7
SRDT	SRDT	70.24	290	P	P	12 48 05.5	+3.1
UTHA	Uthaitani	70.30	291	P	P	12 48 09.7	+7.0
KMI	Kunming	70.68	302	P	P	12 48 06.3	+1.1
KMI				pP	pP	12 48 11.2	0.0
KMI				sP	sP	12 48 12.5	-1.0
KMI				PP	PP	12 50 39.7	-2.3
KMI				S	S	12 57 22.0	+3.2
KMI				sS	sS	12 57 30.3	+2.7
KMI				SKS	SKSac	12 58 06.6	-0.2
KMI	Kunming	70.68	302	SS	SS	13 01 53.6	+2.4
KMI				pmax	pmax		
	comp=Z,16nm,1.5s						
KMI				pmax	pmax		
	comp=Z,93nm,3.1s						
KMI				LR	LR		
	comp=N,210nm,16.3s						
KMI				LR	LR		
	comp=E,180nm,12.9s						
KMI				LR	LR		
	comp=Z,380nm,17.3s						
KMI	Kunming	70.68	302	*e*P	P	12 48 05.7	+0.5
	comp=Z,21nm,1.1s						
KMI	Kunming	70.68	302	*e*P	P	12 48 05.7	+0.5
KMI				pmax	pmax		
	comp=Z,21nm,1.1s						
MA2	Magadan	71.20	352	*e*P	P	12 48 06.5	-0.8
	comp=Z,15nm,1.0s						
MA2	Magadan	71.20	352	*i* P	P	12 48 04.9	-2.4
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	Hu-ho-hao-te	71.44	320	*e*P	P	12 48 10.5	+1.2
HHC				S	S	12 57 26.9	0.0
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,290nm,5.0s						
HHC				LR	LR		
	comp=N,380nm,14.7s						
HHC				LR	LR		
	comp=E,310nm,10.4s						
HHC				LR	LR		
	comp=Z,480nm,16.4s						
CM01	Chiang Mai Arr	71.64	294	*e*P	P	12 48 11.0	+0.2
CM31	Chiang Mai Arr	71.66	294	*e*P	P	12 48 11.2	+0.3
CMAR	Chiang Mai Arr	71.66	294	P	P	12 48 11.2	+0.3
	comp=Z,3.8nm,0.9s,baz=118,slow=4.1,SNR=18						
CMAR				LR	LR	13 17 34.5	
	comp=Z,101nm,21.6s,baz=112,slow=34						
CMMT	Chiang Mai	71.77	294	P	P	12 48 12.6	+1.0
CHTO	Chiang Mai	71.77	294	*e*P	P	12 48 12.1	+0.5
	comp=Z,7.4nm,1.0s						
CHTO	Chiang Mai	71.77	294	*e*P	P	12 48 12.1	+0.5
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHTO	Chiang Mai	71.77	294	P	P	12 48 12.7	+1.1
	comp=Z,42nm,1.1s						
HIA	Hailar	72.03	331	*e*P	P	12 48 12.7	+0.1
	comp=Z,30nm,0.9s						
HIA	Hailar	72.03	331	*e*P	P	12 48 12.7	+0.1
HIA				pmax	pmax		

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       comp=Z,30nm,0.9s
ZEA    Zeya              72.04 337  eP      P        12 48 13.4 +0.9
ZEA                                 pmax    pmax
       comp=N,47nm,1.0s
ZEA                                 pmax    pmax
       comp=E,24nm,1.0s
ZEA                                 pmax    pmax
       comp=Z,49nm,1.0s
CD2    Chengdu           72.17 307⇑iP      P        12 48 14.3 +0.4
CD2                                 pmax    pmax
       comp=Z,50nm,0.8s
CD2                                 pmax    pmax
       comp=Z,120nm,5.0s
SEY    Seymchan          74.28 354  i P     P        12 48 24.0 -1.5
LZH    Lanzhou           74.34 312  ⇑P      P        12 48 27.8 +1.1
LZH                                 pP      sP       12 48 35.4 +0.5
LZH                                 sP      pwP      12 48 37.3 +1.6
LZH                                 PP      PP       12 51 18.5 +5.4
LZH                                 pmax    pmax
       comp=Z,34nm,1.5s
LZH                                 pmax    pmax
       comp=Z,150nm,4.3s
LZH                                 LR      LR
       comp=N,520nm,16.6s
LZH                                 LR      LR
       comp=E,540nm,16.1s
LZH                                 LR      LR
       comp=Z,610nm,17.7s
GAMB   Gambell           76.50  10  eP      P        12 48 38.6 +0.4
       comp=Z,18nm,0.9s
KDAK   Kodiak Island     76.60  22  LR      LR       13 16 57.4
       comp=Z,257nm,21.0s,baz=330,slow=32
YAK    Yakutsk           77.83 344  eP      P        12 48 44.5 -1.2
YAK                                 e                12 48 50.8
YAK                                 e*PP    sP       12 48 53.7 -0.6
YAK                                 eS      S        12 58 35.1 -2.0
YAK                                 e                12 59 00.3
YAK                                 eSS     SS       13 03 32.9 -5.3
YAK                                 pmax    pmax
       comp=Z,18nm,1.1s
YAK                                 pmax    pmax
       comp=N,6.0nm,1.0s
YAK                                 pmax    pmax
       comp=E,2.0nm,1.0s
YAK                                 pmax    pmax
       comp=Z,411nm,5.9s
YAK                                 pmax    pmax
       comp=E,281nm,5.7s
YAK                                 pmax    pmax
       comp=N,336nm,5.2s
YAK                                 smax    smax
       comp=N,243nm,4.4s
YAK                                 smax    smax
       comp=E,184nm,4.2s
YAK                                 MLR     MLR
       comp=Z,371nm,19.0s
YAK                                 MLR     MLR
       comp=N,243nm,19.0s
YAK                                 MLR     MLR
       comp=E,242nm,19.0s
SVW2   Sparrevohn        78.10  18  eP      P        12 48 48.5 +1.2
       comp=E,21nm,1.2s
SONA0  Songino Array     78.29 324  eP      P        12 48 48.9 +0.1
SONM   Songino Array     78.29 324  P       P        12 48 48.9 +0.1
       comp=E,4.8nm,1.0s,baz=136,slow=5.4,SNR=23
SONM                                LR      LR       13 22 28.1
       comp=E,169nm,19.8s,baz=154,slow=35
SONA1  Songino Array     78.29 324  eP      P        12 48 48.8 -0.1
ANM    Nome              78.43  12  eP      P        12 48 50.5 +1.4
       comp=E,6.1nm,1.0s
RSO    Redoubt South     78.52  20  eP      P        12 48 50.4 +0.4
GTA    Gaotai            78.65 314  ⇑P      P        12 48 52.2 +1.2
GTA                                 pP      pP       12 48 57.5 +0.4
GTA                                 sP      pwP      12 49 00.4 +0.4
GTA                                 pmax    pmax
       comp=Z,13nm,1.2s
GTA                                 pmax    pmax
       comp=Z,110nm,6.0s
GTA                                 LR      LR
       comp=N,300nm,18.4s
GTA                                 LR      LR
       comp=E,300nm,17.8s
GTA                                 LR      LR
       comp=Z,420nm,20.9s
BRLK   Bradley Lake      78.65  21  eP      P        12 48 51.4 +1.0
       comp=Z,22nm,1.0s
BILL   Bilibino          78.73   0  eP      P        12 48 49.4 -1.2
       comp=Z,25nm,1.0s
BILL   Bilibino          78.73   0d iP      P        12 48 50.2 -0.4
BILL                                e                12 49 02.1
BILL                                e                12 51 46.9
BILL                                eS      S        12 58 56.6  +10
BILL                                eSS     SS       13 03 52.4 +0.9
BILL                                pmax    pmax
       comp=Z,12nm,0.9s
QSPA   South Pole Qui    79.11 180  eP      P        12 48 54.1 +1.0
       comp=Z,58nm,1.1s
SUA    Susitna One       79.93  20  eP      P        12 48 58.1 +0.6
       comp=Z,18nm,1.1s
SHL    Shillong          80.07 298  eP      P        12 48 58.0 -1.1
BOD    Bodaibo           80.21 335  eP      P        12 48 57.2 -1.7
BOD                                 pmax    pmax
       comp=Z,12nm,1.9s
CAST   Castle Rocks      80.94  18  eP      P        12 49 01.6 -1.1
       comp=Z,14nm,1.0s
ZAK    Zakamensk         81.33 325  eP      P        12 49 04.6 -0.6
ZAK                                 pmax    pmax
       comp=Z,9.0nm,1.1s
DIV    Divide            81.43  22  eP      P        12 49 06.0 +0.5
       comp=Z,38nm,1.2s
KLU    Klutina           81.61  21  eP      P        12 49 07.4 +1.0
       comp=Z,24nm,1.2s
TLY    Talaya            81.76 326  eP      P        12 49 06.8 -0.5
       comp=Z,9.8nm,0.8s
TLY    Talaya            81.76 326  eP      P        12 49 06.8 -0.5
TLY                                 pmax    pmax
       comp=Z,10.0nm,0.8s
RND    Reindeer          81.93  19  eP      P        12 49 08.2 +0.1
       comp=Z,15nm,1.0s
RND    Reindeer          81.93  19  eP      P        12 49 08.2 +0.1
RND                                 pmax    pmax
       comp=Z,15nm,1.0s
RDOG   Red Dog Mine      81.96  12  eP      P        12 49 08.8 +0.7
       comp=Z,18nm,0.9s
MCK    McKinley          82.14  19  eP      P        12 49 09.1  0.0
       comp=Z,16nm,1.1s
MCK    McKinley          82.14  19  eP      P        12 49 09.1  0.0
MCK                                 pmax    pmax
       comp=Z,16nm,1.1s
DHY    Denali Highway    82.19  20  eP      P        12 49 11.3 +1.7
       comp=Z,11nm,1.0s
IM3    Indian Mountai    82.39  16  eP      P        12 49 10.4 +0.1
HARP   HAARP             82.49  21  eP      P        12 49 12.5 +1.5
       comp=Z,37nm,1.1s
MLY    Manley            82.52  17  eP      P        12 49 11.9 +0.8
       comp=Z,5.5nm,1.0s
WRH    Wood River Hil    82.92  18  eP      P        12 49 13.0 -0.1
       comp=Z,13nm,1.0s
MDM    Murphy Dome       83.22  18  eP      P        12 49 14.4 -0.3
       comp=Z,26nm,1.2s
HDA    Harding Lake      83.24  19  eP      P        12 49 15.1 +0.3
       comp=Z,27nm,0.9s
HDA    Harding Lake      83.24  19  P       P        12 49 15.0 +0.3
       baz=227
TCOL   CIGO, UAF Yank    83.27  18  P       P        12 49 15.0 +0.1
       baz=226
COLA   College           83.28  18  eP      P        12 49 14.5 -0.4
       comp=Z,17nm,0.9s
COLA   College           83.28  18⇑iP      P        12 49 14.7 -0.2
COLA                                pmax    pmax
       comp=Z,18nm,1.0s
RIDG   Independ'e Rid    83.48  20  eP      P        12 49 16.5 +0.4
       comp=Z,15nm,1.1s
ILAR   Eielson Array     83.50  19  P       P        12 49 15.8 -0.3
       comp=Z,5.1nm,0.8s,baz=232,slow=5.3,SNR=64
ILAR                                LR      LR       13 24 02.6
       comp=Z,181nm,18.4s,baz=265,slow=34
ILB    Eielson Array     83.50  19  eP      P        12 49 16.3 +0.1
IL1    Eielson Array     83.51  19  eP      P        12 49 15.9 -0.2
POKR   Poker Plat Res    83.57  18  P       P        12 49 16.1 -0.4
       baz=227
SCRK   Sand Creek        83.92  20  eP      P        12 49 19.0 +0.5
       comp=Z,16nm,1.0s
YBH    Yreka Blue Hor    84.09  46  eP      P        12 49 17.0 -2.8
       comp=Z,11nm,1.0s
YBH    Yreka Blue Hor    84.09  46  eP      P        12 49 17.0 -2.8
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YBH                                 pmax    pmax
       comp=Z,11nm,1.0s
ORV    Oroville          84.23  48  eP      P        12 49 19.7 -0.7
       comp=Z,7.4nm,1.0s
ORV    Oroville          84.23  48  eP      P        12 49 19.7 -0.7
ORV                                 pmax    pmax
       comp=Z,7.0nm,1.0s
O03E   Paynes Creek      84.25  47  P       P        12 49 21.9 +1.3
       baz=251
COLD   Coldfoot          84.27  16  eP      P        12 49 21.5 +1.5
       comp=Z,4.4nm,1.0s
AFDM   Forest Hills D    84.42  49  eP      P        12 49 21.4  0.0
       comp=Z,15nm,1.1s
HYT    Haines Junctio    84.43  24  eP      P        12 49 21.3 +0.2
       comp=Z,12nm,0.9s
PRP    Porcupine Dome    84.44  18  eP      P        12 49 20.0 -1.1
       comp=Z,4.1nm,0.9s
L04D   Klamath Falls     84.54  45  P       P        12 49 23.3 +1.2
       baz=250
CMB    Columbia Colle    84.57  50  eP      P        12 49 22.4 +0.2
       comp=Z,9.2nm,0.9s
CMB    Columbia Colle    84.57  50  eP      P        12 49 22.4 +0.2
CMB                                 pmax    pmax
       comp=Z,9.0nm,0.9s
SKAG   Skagway           84.59  26  eP      P        12 49 22.3 +0.5
       comp=Z,16nm,1.0s
MAW    Mawson            84.70 202  LR      LR       13 23 53.5
       comp=Z,184nm,18.2s,baz=76,slow=33
KNGR   Kungurtug, Tuv    84.73 324  i P     P        12 49 22.0 -0.8
MWC    Mount Wilson      85.23  54  eP      P        12 49 25.7 -0.2
       comp=Z,14nm,1.0s
ISA    Isabella, Lake    85.32  53  eP      P        12 49 25.4 -0.7
       comp=Z,7.0nm,0.9s
ISA    Isabella, Lake    85.32  53  eP      P        12 49 25.4 -0.7
ISA                                 pmax    pmax
       comp=Z,7.0nm,0.9s
ISA    Isabella, Lake    85.32  53  P       P        12 49 27.1 +1.0
       baz=253
WAKR   Walker            85.42  50  eP      P        12 49 28.5 +1.8
       comp=Z,14nm,1.1s
MDPB   Devils Postpil    85.43  50  eP      P        12 49 27.5 +0.6
       comp=Z,10.0nm,0.9s
EDW2   Edwards Air Fo    85.47  53  P       P        12 49 27.8 +1.0
       baz=254
BFSC   Mount Baldy Ra    85.56  54  P       P        12 49 27.9 +0.5
       baz=254
DAWY   Dawson            85.57  21  eP      P        12 49 27.4 +0.7
       comp=Z,13nm,1.0s
J05D   Fort Rock, OR     85.64  45  P       P        12 49 29.0 +1.4
       baz=251
PAHR   Pah Rah Range     85.83  48  eP      P        12 49 28.7 +0.1
       comp=Z,12nm,1.1s
MOD    Modoc Plateau     85.85  46  eP      P        12 49 29.5 +0.9
       comp=Z,10.0nm,1.0s
CWC    Cottonwood Cre    85.85  52  P       P        12 49 29.8 +0.9
       baz=253
TIXI   Tiksi             85.86 349  eP      P        12 49 27.8 -0.1
       comp=Z,10nm,1.1s
TIXI   Tiksi             85.86 349ceP      P        12 49 27.5 -0.3
TIXI                                pmax    pmax
       comp=Z,18nm,2.5s
LRMC   Laurel Mtn Rad    85.89  53  P       P        12 49 29.7 +0.7
       baz=254
RYN    Ryan              86.15  50  eP      P        12 49 31.8 +1.6
       comp=Z,11nm,1.1s
DAC    Darwin (Calif)    86.18  52  eP      P        12 49 31.5 +1.0
       comp=Z,6.9nm,1.0s
DAC    Darwin (Calif)    86.18  52  eP      P        12 49 31.5 +1.0
DAC                                 pmax    pmax
       comp=Z,7.0nm,1.0s
MONP2  Monument Peak     86.18  56  P       P        12 49 31.5 +0.8
       baz=255
MPMC   Manual Prospec    86.20  52  P       P        12 49 31.4 +0.8
       baz=254
NV01   Mina Array Sit    86.25  50  eP      P        12 49 31.3 +0.4
NVAR   Mina Array Bea    86.25  50  P       P        12 49 31.4 +0.5
       comp=Z,5.2nm,0.9s,baz=233,slow=8.0,SNR=21
NVAR                                LR      LR       13 22 33.3
       comp=Z,278nm,18.8s,baz=266,slow=32
PFO    Pinyon Flats O    86.34  55  eP      P        12 49 32.1 +0.8
       comp=Z,6.1nm,1.0s
PFO    Pinyon Flats O    86.34  55  eP      P        12 49 32.1 +0.8
PFO                                 pmax    pmax
       comp=Z,6.0nm,1.0s
TPFO   Pinon Flats       86.35  55  P       P        12 49 31.8 +0.5
       baz=254
XPFO   Pion Flat         86.35  55  eP      P        12 49 32.1 +0.8
       comp=Z,6.6nm,1.0s
NV11   Mina Array Sit    86.36  50  eP      P        12 49 32.2 +0.9
       comp=Z,0.7nm,1.0s
DLBC   Dease Lake        86.48  28  eP      P        12 49 32.6 +1.3
       comp=Z,5.7nm,0.8s
KVN    Kaiserville       86.58  49  eP      P        12 49 33.2 +0.8
       comp=Z,6.9nm,1.0s
KVN    Kaiserville       86.58  49  eP      P        12 49 33.3 +0.8
KVN                                 pmax    pmax
       comp=Z,7.0nm,1.0s
FURC   Furnace Creek,    86.80  52  P       P        12 49 34.5 +1.2
       baz=254
BELC   Belle Mtn. Jos    86.82  55  P       P        12 49 34.6 +0.9
       baz=255
I07A   Izee              87.09  44  eP      P        12 49 35.7 +1.0
       comp=Z,12nm,1.1s
SHOC   Shoshone, Teco    87.10  53  P       P        12 49 35.1 +0.2
       baz=254
WVOR   Wild Horse Val    87.19  46  eP      P        12 49 36.1 +0.9
       comp=Z,14nm,1.1s
WVOR   Wild Horse Val    87.19  46  eP      P        12 49 36.1 +0.9
WVOR                                pmax    pmax
       comp=Z,14nm,1.1s
TUQ    Turquoise Moun    87.25  53  P       P        12 49 36.2 +0.5
       baz=255
GMRC   Granite Mounta    87.29  54  P       P        12 49 35.8 -0.1
       baz=255
TPNV   Topopah Spring    87.40  52  eP      P        12 49 37.3 +0.9
       comp=Z,4.4nm,1.1s
TPNV   Topopah Spring    87.40  52  eP      P        12 49 37.3 +0.9
TPNV                                pmax    pmax
       comp=Z,4.0nm,1.1s
GLA    Glamis            87.52  56  eP      P        12 49 37.9 +1.0
       comp=Z,13nm,0.9s
GLA    Glamis            87.52  56  eP      P        12 49 37.9 +1.0
GLA                                 pmax    pmax
       comp=Z,13nm,0.9s
GLA    Glamis            87.52  56  P       P        12 49 38.6 +1.7
       baz=256
IRM    Iron Mountain     87.54  55  P       P        12 49 38.3 +1.3
       baz=255
J08A   Circle Bar Ran    87.58  45  eP      P        12 49 37.1  0.0
       comp=Z,13nm,1.0s
LDFC   Landfair          87.81  54  eP      P        12 49 38.9 +0.5
       comp=Z,16nm,1.0s
G08A   Pilot Rock        87.83  43  eP      P        12 49 38.8 +0.6
       comp=Z,11nm,1.0s
Y12C   Blythe            87.94  55  eP      P        12 49 39.9 +1.0
       comp=Z,16nm,1.1s
Y12C   Blythe            87.94  55  P       P        12 49 40.1 +1.3
       baz=256
SHPR   Sheep Range       88.13  52  eP      P        12 49 40.1 +0.1
       comp=Z,5.8nm,1.1s
R11A   Troy Canyon, C    88.28  51  eP      P        12 49 41.0 +0.4
       comp=Z,3.0nm,1.1s
R11A   Troy Canyon, C    88.28  51  P       P        12 49 41.5 +0.9
       baz=255
113A   Mohawk Valley,    88.31  56  eP      P        12 49 41.8 +1.2
       comp=Z,6.7nm,1.0s
PDMCI  Parker Dam,Lak    88.38  55  P       P        12 49 42.1 +1.2
       baz=256
WMQ    Urumqi            88.69 315  P       P        12 49 42.3  0.0
WMQ                                 pP      pP       12 49 48.0 -0.5
WMQ                                 sP      pwP      12 49 51.7 +0.4
WMQ    Urumqi            88.69 315  SKS     SKSac    13 00 09.7 -0.9
WMQ    Urumqi            88.69 315  SS      SS       13 06 20.4 +0.4
WMQ                                 pmax    pmax
       comp=Z,25nm,0.9s
WMQ                                 pmax    pmax
       comp=Z,250nm,5.3s
WMQ                                 LR      LR
       comp=N,340nm,20.1s
WMQ                                 LR      LR
       comp=E,260nm,27.5s
WMQ                                 LR      LR
       comp=Z,370nm,22.5s
W13A   Hualapai Mount    88.78  54  eP      P        12 49 43.2 +0.1
       comp=Z,5.2nm,1.0s
BMO    Blue Mountains    88.82  44  eP      P        12 49 43.6 +0.8
       comp=Z,6.0nm,1.1s
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BMO    Blue Mountains    88.82  44  eP      P        12 49 43.7 +0.8
BMO                                 pmax    pmax
       comp=Z,6.0nm,1.1s
214A   Organ Pipe Nat    88.91  57  P       P        12 49 45.1 +1.5
       baz=257
ELK    Elko              89.17  48  eP      P        12 49 45.5 +0.7
       comp=Z,3.3nm,1.0s
ELK    Elko              89.17  48  eP      P        12 49 45.5 +0.7
ELK                                 pmax    pmax
       comp=Z,3.0nm,1.0s
LPIG   La Paz            89.33  65  LR      LR       13 22 26.3
       comp=Z,120nm,18.3s,baz=261,slow=31
PSUT   Pine Spring       89.64  51  eP      P        12 49 48.2 +1.2
       comp=Z,6.2nm,1.0s
CCUT   Cedar City        89.78  52  eP      P        12 49 49.4 +1.6
       comp=Z,9.7nm,1.0s
SZCU   Shurtz Canyon     90.01  52  eP      P        12 49 49.4 +0.6
       comp=Z,8.6nm,1.1s
KNB    Kanab             90.08  52  eP      P        12 49 50.0 +0.9
       comp=Z,13nm,1.2s
KNB    Kanab             90.08  52  eP      P        12 49 50.0 +0.9
KNB                                 pmax    pmax
       comp=Z,13nm,1.2s
U15A   North Rim         90.36  53  eP      P        12 49 52.1 +1.6
       comp=Z,14nm,1.0s
HLID   Hailey            90.48  46  eP      P        12 49 52.1 +1.3
       comp=Z,6.9nm,1.0s
HLID   Hailey            90.48  46  P       P        12 49 52.1 +1.3
       baz=256
DGZ    Jazzator, Alta    90.51 321c iP     P        12 49 50.3 -0.5
DGZ                                 pmax    pmax
       comp=Z,2.0nm,0.7s
PKCU   Pink Cliffs       90.57  52  eP      P        12 49 53.8 +2.3
       comp=Z,20nm,1.1s
X16A   Lo Mia Camp, P    90.58  55  eP      P        12 49 53.1 +1.6
       comp=Z,5.5nm,0.9s
TUC    Tucson            90.66  57  eP      P        12 49 52.4 +0.6
TUC    Tucson            90.66  57  eP      P        12 49 52.4 +0.6
TUC    Tucson            90.66  57  P       P        12 49 53.9 +2.1
       baz=258
TCRU   Three Creeks R    90.73  51  eP      P        12 49 54.6 +2.4
       comp=Z,10.0nm,1.0s
MTPU   Mount Pierson     90.81  52  eP      P        12 49 54.8 +2.1
       comp=Z,9.8nm,0.9s
DUG    Dugway, Tooele    90.82  49  eP      P        12 49 53.5 +1.1
       comp=Z,4.1nm,0.9s
DUG    Dugway, Tooele    90.82  49  eP      P        12 49 53.5 +1.1
DUG                                 pmax    pmax
       comp=Z,4.0nm,0.9s
DUG    Dugway, Tooele    90.82  49  P       P        12 49 53.5 +1.1
       baz=257
BGU    Big Grassy Mou    90.83  49  eP      P        12 49 53.6 +1.1
       comp=Z,7.1nm,1.1s
WUAZ   Wupatki           90.88  54  eP      P        12 49 54.5 +1.6
       comp=Z,14nm,1.1s
WUAZ   Wupatki           90.88  54  P       P        12 49 54.4 +1.6
       baz=257
MSU    Marysvale         90.92  51  eP      P        12 49 55.1 +2.1
MSU    Marysvale         90.92  51  eP      P        12 49 55.1 +2.1
HVU    Hansel Valley     91.22  48  eP      P        12 49 55.5 +1.3
       comp=Z,19nm,1.2s
HVU    Hansel Valley     91.22  48  eP      P        12 49 55.6 +1.3
HVU                                 pmax    pmax
       comp=Z,19nm,1.2s
NLU    North Lily Min    91.32  50  eP      P        12 49 56.1 +1.3
       comp=Z,11nm,1.2s
SPUT   South Promonto    91.35  48  eP      P        12 49 55.9 +1.0
       comp=Z,4.9nm,1.0s
MPU    Maple Canyon      91.67  50  eP      P        12 49 56.3 -0.1
       comp=Z,6.9nm,1.1s
CTU    Camp Tracy        91.73  49  eP      P        12 49 56.7  0.0
       comp=Z,9.5nm,1.2s
Q16A   Castle Valley     91.77  51  eP      P        12 49 55.3 -1.7
       comp=Z,6.6nm,1.0s
SYO    Syowa Base        91.80 197⇑iX      P        12 50 10.1  +14
TMUT   Trail Mountain    91.83  50  eP      P        12 49 57.9 +0.5
       comp=Z,3.8nm,0.9s
MCMT   McKenzie Canyo    91.88  45  eP      P        12 49 58.2 +0.8
JLU    Jordanelle        91.93  49  eP      P        12 49 55.6 -2.1
       comp=Z,9.2nm,1.2s
TCUT   Toone Canyon      92.07  49  eP      P        12 49 58.7 +0.4
       comp=Z,10nm,0.9s
W18A   Petrified Fore    92.10  55  P       P        12 49 59.9 +1.3
       baz=258
WALA   Waterton Lakes    92.17  41  eP      P        12 49 56.6 -1.8
       comp=Z,7.9nm,1.1s
DLMT   Dillon            92.17  44  eP      P        12 49 59.5 +0.9
       comp=Z,22nm,1.1s
LRM    Limekiln Ridge    92.38  44  eP      P        12 50 00.8 +1.2
FXWY   Fox Creek         92.89  46  eP      P        12 50 03.1 +1.0
       comp=Z,4.4nm,0.9s
MK01   Makanchi Array    93.11 317  eP      P        12 50 02.2 -0.5
MOOW   Moose Ponds       93.11  46  eP      P        12 50 03.9 +0.8
       comp=Z,3.0nm,0.9s
MK31   Makanchi Array    93.12 317  eP      P        12 50 02.4 -0.4
MK32   Makanchi Array    93.12 317  eP      P        12 50 02.1 -0.7
MKAR   Makanchi Array    93.12 317  eP      P        12 50 02.4 -0.4
       comp=Z,34nm,0.7s
MKAR   Makanchi Array    93.12 317  P       P        12 50 02.1 -0.7
       comp=Z,4.1nm,0.7s,baz=96,slow=6.0,SNR=48
MKAR                                PKKP    PKKPdf   13 07 11.6 -0.3
       comp=Z,3.4nm,0.8s,baz=272,slow=1.5,SNR=19
MKAR                                LR      LR       13 31 06.7
       comp=Z,170nm,21.9s,baz=90,slow=35
YMR    Madison River     93.15  45  eP      P        12 50 05.4 +2.1
       comp=Z,5.6nm,1.0s
LOHW   Long Hollow       93.18  46  eP      P        12 50 04.3 +0.9
       comp=Z,3.7nm,1.1s
ZAA0   Zalesovo Array    93.18 324  eP      P        12 50 01.9 -0.9
ZALV   Zalesovo Beam     93.18 324  eP      P        12 50 01.3 -1.5
ZALV   Zalesovo Beam     93.18 324  P       P        12 50 01.1 -1.7
       comp=Z,3.1nm,0.8s,baz=116,slow=4.0,SNR=15
ZALV                                PKKPbc  PKKPdf   13 07 12.2 +0.2
       comp=Z,0.8nm,0.5s,baz=297,slow=3.3,SNR=4.4
ZALV                                LR      LR       13 30 01.8
       comp=Z,135nm,21.8s,baz=70,slow=34
ZAA1   Zalesovo Array    93.19 324  eP      P        12 50 01.1 -1.7
MAKZ   Makanchi          93.33 317  eP      P        12 50 03.3 -0.5
       comp=Z,7.4nm,1.0s
MAKZ   Makanchi          93.33 317  eP      P        12 50 03.3 -0.5
MAKZ                                pmax    pmax
       comp=Z,7.0nm,1.0s
H17A   Grant Village     93.36  46  eP      P        12 50 06.2 +2.0
       comp=Z,4.6nm,0.9s
H17A   Grant Village     93.36  46  P       P        12 50 06.4 +2.2
       baz=258
BW06   Boulder Array     93.76  47  eP      P        12 50 06.4 +0.3
       comp=Z,3.8nm,1.0s
BW06   Boulder Array     93.76  47  P       P        12 50 06.3 +0.2
       baz=259
PD31   Pinedale Array    93.76  47  eP      P        12 50 06.3 +0.2
PDAR   Pinedale Array    93.76  47  P       P        12 50 05.8 -0.3
       comp=Z,2.0nm,0.9s,baz=244,slow=2.8,SNR=14
PDAR                                LR      LR       13 28 54.1
       comp=Z,67nm,18.2s,baz=276,slow=33
NVS    Novosibirsk       94.29 325  eP      P        12 50 07.8 -0.1
NVS                                 pmax    pmax
       comp=Z,10.0nm,1.2s
NVS                                 pmax    pmax
       comp=E,7.0nm,1.6s
EGMT   Eagleton          94.64  42  P       P        12 50 10.4 +0.6
       baz=259
ANMO   Albuquerque       94.71  55  eP      P        12 50 11.1 +0.5
       comp=E,2.6nm,1.1s
ANMO   Albuquerque       94.71  55ceP      P        12 50 11.1 +0.5
ANMO                                pmax    pmax
       comp=Z,1.0nm,1.0s
ANMO   Albuquerque       94.71  55  LR      LR       13 25 24.4
       comp=Z,71nm,18.9s,baz=264,slow=31
YKA    Yellowknife Ar    95.03  27  P       P        12 50 09.6 -1.5
       comp=Z,2.0nm,0.8s,baz=255,slow=4.6,SNR=36
YKA                                 LR      LR       13 30 19.0
       comp=Z,24nm,18.3s,baz=260,slow=34
YKB5   Yellowknife Ar    95.03  27  eP      P        12 50 09.3 -1.8
YKW3   Yellowknife Ar    95.05  27  eP      P        12 50 09.9 -1.2
       comp=Z,2.4nm,0.9s
NRIK   Noril'sk          95.83 340  P       P        12 50 12.7 -2.0
       comp=Z,4.0nm,0.6s,baz=98,slow=6.4,SNR=5.1
NRIK                                LR      LR       13 32 32.3
       comp=Z,220nm,20.7s,baz=80,slow=35
ZAIG   Zacatecas         96.08  68  eP      P        12 50 14.4 -2.7
       comp=Z,27nm,0.5s
LTX    Lajitas           96.13  61  eP      P        12 50 17.2 +0.1
LTX    Lajitas           96.13  61  eP      P        12 50 17.2 +0.1
TXAR   Lajitas Array     96.13  61  P       P        12 50 17.2 +0.2
       comp=Z,0.3nm,0.8s,baz=250,slow=4.7,SNR=3.2
TXAR                                PKKPbc  PKKPbc   13 07 04.1 -0.6
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	comp=Z,0.2nm,0.8s,baz=112,slow=4.0,SNR=2.6						
TXAR				LR	LR	13 27 58.7	
	comp=Z,238nm,18.8s,baz=0.0,slow=32						
KURK	Kurchatov	96.25	320	eP	P	12 50 22.1	+5.2
	comp=Z,2.9nm,1.0s						
KURK	Kurchatov	96.25	320	eP	P	12 50 17.8	+0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SNAA	Sanae	97.24	184	i P	Pdif	12 50 21.7	+0.4
AAK	Ala-Archa	97.88	312	i P	P	12 50 21.1	-3.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRVK	Borovoye	101.63	322	i P	Pdif	12 50 39.2	-1.8
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARA0	ARCESS Array S	116.08	345	ePKPdf	PKiKP	12 55 30.6	-0.6
ARCES	ARCESS Array B	116.08	345	PKP	PKiKP	12 55 30.6	-0.6
	comp=Z,1.7nm,0.8s,baz=90,slow=1.3,SNR=7.3						
OBN	Obninsk	120.45	329⇓	ePKIKP	PKiKP	12 55 40.5	+0.4
OBN				e		12 57 06.8	
OBN				e		13 02 26.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LPAZ	La Paz	120.63	116	ePKPdf	PKPdf	12 55 40.5	-1.8
LPAZ	La Paz	120.63	116	ePKIKP	PKPdf	12 55 40.5	-1.8
VSR	Storozhevoye	120.69	324	i PKIKP	PKPdf	12 55 38.6	-2.0
KIV	Kislovodsk	120.82	315	i PKIKP	PKPdf	12 55 39.1	-2.1
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NEY	Neytrino	120.98	314	i PKIKP	PKiKP	12 55 42.4	+0.6
FIA0	FINESS Array S	121.47	338	ePKPdf	PKPdf	12 55 41.2	-0.5
FIA0	FINESS Array S	121.47	338	ePKIKP	PKPdf	12 55 41.3	-0.5
FINES	FINESS Array B	121.47	338	PKP	PKPdf	12 55 41.2	-0.5
	comp=Z,1.1nm,0.7s,baz=124,slow=0.5,SNR=2.6						
CPUP	Villa Florida	124.44	133	PKP	PKPdf	12 55 48.4	-0.2
	comp=Z,7.4nm,0.9s,baz=249,slow=1.8,SNR=14						
SDV	Santo Domingo	124.91	87	ePKPdf	PKiKP	12 55 50.2	-0.1
BOSA	Boshof	124.93	224	PKP	PKiKP	12 55 49.8	-0.2
	comp=Z,5.4nm,1.0s,baz=326,slow=0.6,SNR=6.0						
NB2	NORSAR Subarra	126.44	345	PKPdf	PKPdf	12 55 51.5	+0.1
	comp=Z,0.5nm,0.7s,baz=36,slow=2.2						
NB200	NORSAR Array S	126.44	345	ePKPdf	PKPdf	12 55 51.5	+0.1
NOA	NORSAR Array B	126.44	345	PKP	PKPdf	12 55 51.5	+0.1
	comp=Z,0.7nm,0.8s,baz=35,slow=2.1,SNR=2.3						
AKASG	Malin Array Be	126.50	327	PKP	PKPdf	12 55 51.1	-0.6
	comp=Z,0.2nm,0.3s,baz=66,slow=1.4,SNR=5.0						
KIEV	Kiev	126.52	327	i PKIKP	PKiKP	12 55 53.6	+1.4
BR101	Keskin Array S	128.55	313	ePKPdf	PKPdf	12 55 54.1	-2.1
BRTR	Keskin Array B	128.55	313	PKP	PKPdf	12 55 54.1	-2.1
	comp=Z,0.5nm,0.7s,baz=52,slow=2.4,SNR=3.5						
LSZ	Lusaka	130.20	239	ePKPdf	PKiKP	12 56 00.4	-0.4
LSZ	Lusaka	130.20	239	ePKIKP	PKiKP	12 56 00.4	-0.4
CLL	Collm	133.79	336	ePKIKP	PKiKP	12 56 10.0	+3.1
KHC	Kasperske Hory	135.22	334	ePKPDF	PKPdf	12 56 08.5	+0.1
KHC	Kasperske Hory	135.22	334	ePKIKP	PKPdf	12 56 08.5	+0.1
GERES	GERESS Array B	135.38	333	PKP	PKPdf	12 56 08.9	+0.1
	comp=Z,1.2nm,0.8s,baz=345,slow=3.2,SNR=5.8						
BDFB	Brasilia	137.76	128	ePKPdf	PKPdf	12 56 13.9	-0.3
BDFB				ePKPdf	PKiKP	12 56 14.2	-1.9
BDFB	Brasilia	137.76	128	PKP	PKPdf	12 56 13.9	-0.3
	comp=Z,5.5nm,0.6s,baz=162,slow=13,SNR=5.6						
KEST	Kesra	147.04	322	ePKPbc	PKPbc	12 56 32.6	+0.6
KEST	Kesra	147.04	322	PKPbc	PKPdf	12 56 30.1	+0.1
	comp=Z,16nm,0.9s,baz=266,slow=2.9,SNR=6.9						
PBRG	Braganca	148.43	349	ePKPab	PKPab	12 56 38.8	0.0
PGAV	Gavieira, Arco	148.54	351	ePKPdf	PKPab	12 56 39.8	+0.5
PGAV	Gavieira, Arco	148.54	351	ePKPab	PKPab	12 56 48.8	+10
POLO	Lamas de Olo	149.04	350	ePKPdf	PKPdf	12 56 32.6	-0.6
POLO	Lamas de Olo	149.04	350	ePKPab	PKPab	12 56 48.2	+6.9
MVO	Moncorvo	149.10	349	ePKPdf	PKPdf	12 56 33.4	+0.2
MVO	Moncorvo	149.10	349	ePKPab	PKPab	12 56 46.6	+5.1
PVIS	Viseu	149.70	350	ePKPdf	PKPbc	12 56 38.9	+0.1
PVIS	Viseu	149.70	350	ePKPab	PKPab	12 56 44.8	+0.9
ESDC	Sonseca Array	149.79	343	PKPbc	PKPbc	12 56 38.8	-0.3
	comp=Z,2.0nm,0.7s,baz=16,slow=2.9,SNR=6.3						
ESDC				PKPab	PKPab	12 56 44.5	+0.2
	comp=Z,2.0nm,0.7s,baz=8.0,slow=4.3,SNR=10						
MTE	Manteigas	149.94	349	ePKPab	PKiKP	12 56 40.2	-0.2
PCBR	Castelo Branco	150.47	349	ePKPab	PKPab	12 56 46.4	-0.6
PMRV	Marv??o	150.85	348	ePKPdf	PKPdf	12 56 36.0	0.0
PMRV	Marv??o	150.85	348	ePKPab	PKPab	12 56 46.9	-1.8
PTOM	Tomar	150.85	350	ePKPab	PKPab	12 56 48.0	-0.6
PMTG	Montargil	151.35	349	ePKPab	PKPbc	12 56 42.5	-0.2
PBEJ	Beja	152.30	348	ePKPab	PKPab	12 57 03.3	+8.6
PNCL	Nicolau / Gran	152.34	349	ePKPdf	PKPdf	12 56 36.0	-2.2
PNCL	Nicolau / Gran	152.34	349	ePKPab	PKPab	12 56 54.0	-0.9
MESJ	Messejana	152.55	349	ePKPab	PKPab	12 56 54.9	-0.8
TOA0	Torodi Ar. Sit	163.82	280	ePKPdf	PKPdf	12 56 53.5	+0.7
TORD	Torodi Ar. Bea	163.82	280	PKP	PKPdf	12 56 51.9	-1.0
	comp=Z,2.9nm,1.0s,baz=346,slow=2.2,SNR=11						
TORD				PKPab	PKPab	12 57 44.9	-0.4
	comp=Z,1.0nm,0.8s,baz=71,slow=2.2,SNR=3.7						
TOA1	Torodi Ar. Sit	163.82	280	ePKPdf	PKPdf	12 56 51.9	-1.0
TOA1				ePKPab	PKPab	12 57 44.9	-0.4

IDC 07 12:45:41.0±1.5, 10°.38S×166°.02E, h0^{km}, mb3.6/3, mb1 4.0/5, mb1mx3.6/40, mbtmp3.9/5, ML4.0/2, Error ellipse: s-maj=44.4km s-min=29.6km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.06	278	Pn	Pn	12 47 11.2	-0.6
	4.4nm,0.3s,baz=90,slow=20,SNR=1.8						
DZM	Mont Dzumac	11.63	178	Pn	Pn	12 48 29.1	+0.7
	0.7nm,0.3s,baz=332,slow=15,SNR=7.6						
WRA	Warramunga Arr	31.97	249	P	P	12 52 09.5	+0.5
	0.6nm,0.7s,baz=82,slow=8.8,SNR=4.6						
WRA				PcP	PcP	12 54 56.7	-2.8
	0.7nm,1.0s,baz=94,slow=4.4,SNR=3.5						
ASAR	Alice Springs	33.33	243	P	P	12 52 21.4	+0.4
	1.1nm,0.7s,baz=66,slow=9.5,SNR=14						
ILAR	Eielson Array	82.80	18	P	P	12 58 07.4	+0.7
	0.3nm,0.8s,baz=238,slow=5.0,SNR=3.7						

MEX 07 12:48:30.5±0.7, 16°.26N×97°.48W, h31^{km}±13^{km}, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.64	282	eP	Pb	12 48 41.0	-2.2
PNIG				i S	Sb	12 48 50.1	-1.9
VHO	Vista Hermosa	1.08	41	eP	Pn	12 48 47.7	-1.9
VHO				eS	Sn	12 49 01.4	-2.2
HUIG	Huatulco	1.40	110	eP	Pn	12 48 51.8	-2.2
HUIG				i S	Sn	12 49 08.7	-2.7

IDC 07 12:50:38.1±1.7, 11°.41S×165°.14E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.6/47, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=34.2km s-min=31.5km az=155.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.47	291	Pn	Pn	12 52 01.6	+0.6
	0.6nm,0.3s,baz=166,slow=8.3,SNR=1.9						
HNR				Sn	Sn	12 53 05.7	+0.9
	1.7nm,0.3s,baz=104,slow=12,SNR=2.1						
DZM	Mont Dzumac	10.67	173	Pn	Pn	12 53 13.7	+1.2
	0.5nm,0.3s,baz=356,slow=13,SNR=4.6						
WRA	Warramunga Arr	30.80	250	P	P	12 56 56.0	+0.1
	0.7nm,0.8s,baz=83,slow=8.7,SNR=6.4						
ASAR	Alice Springs	32.10	243	P	P	12 57 06.8	-0.6
	0.5nm,0.8s,baz=74,slow=9.8,SNR=4.3						
ILAR	Eielson Array	84.05	19	P	P	13 03 10.2	-0.1
	0.5nm,0.9s,baz=224,slow=5.0,SNR=5.9						

IDC 07 12:53:33.5±1.8, 11°.42S×165°.09E, h0^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.5/47, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=39.7km s-min=32.4km az=130.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.43	291	Pn	Pn	12 54 55.5	-0.3
	4.3nm,0.3s,baz=121,slow=19,SNR=2.2						
DZM	Mont Dzumac	10.67	173	Pn	Pn	12 56 07.6	-0.2
	0.2nm,0.3s,baz=312,slow=15,SNR=3.9						
WRA	Warramunga Arr	30.75	250	P	P	12 59 51.2	+0.4
	0.3nm,0.5s,baz=80,slow=8.5,SNR=4.1						
ASAR	Alice Springs	32.05	243	P	P	13 00 01.9	-0.3
	0.4nm,0.9s,baz=67,slow=10,SNR=3.1						
ILAR	Eielson Array	84.07	19	P	P	13 06 05.8	0.0
	0.4nm,1.0s,baz=240,slow=5.5,SNR=5.4						

IDC 07 12:53:57.6±1.8, 10°.97S×165°.52E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.6/46, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=53.9km s-min=31.8km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.07	176	Pn	Pn	12 56 36.9	-0.6
	0.3nm,0.3s,baz=346,slow=19,SNR=2.8						
WRA	Warramunga Arr	31.30	250	P	P	13 00 20.1	+0.4
	0.6nm,0.8s,baz=81,slow=9.1,SNR=4.8						
ASAR	Alice Springs	32.63	243	P	P	13 00 31.2	-0.3
	0.4nm,0.8s,baz=64,slow=9.9,SNR=4.0						
ILAR	Eielson Array	83.51	19	P	P	13 06 27.1	0.0
	0.3nm,0.6s,baz=236,slow=4.8,SNR=6.2						

IDC 07 12:54:38.2±1.7, 11°.22S×164°.79E, h0^{km}, mb3.7/3, mb1 3.9/5, mb1mx3.6/46, mbtmp3.8/5, ML3.2/2, Error ellipse: s-maj=40.2km s-min=31.2km az=134.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.08	290	Pn	Pn	12 55 56.8	+1.0
	1.7nm,0.3s,baz=119,slow=13,SNR=2.3						
DZM	Mont Dzumac	10.91	172	Pn	Pn	12 57 16.6	+0.8
	0.1nm,0.3s,baz=100,slow=2.3,SNR=3.0						
WRA	Warramunga Arr	30.54	250	P	P	13 00 53.4	-0.4
	1.6nm,0.8s,baz=82,slow=8.8,SNR=8.7						
ASAR	Alice Springs	31.88	243	P	P	13 01 05.4	-0.1
	0.4nm,0.7s,baz=65,slow=9.9,SNR=5.3						
ILAR	Eielson Array	83.97	19	P	P	13 07 10.0	0.0
	0.4nm,0.8s,baz=239,slow=5.5,SNR=3.6						

*DJA **07** 12:57:40.1±0.3, 1°S±2°×10°0E±°, h10^{km}, M4.1/13, mb4.0/1, MLv4.2/13*

*IDC **07** 12:57:54.3±2.6, 1°.08S×101°.03E, h141^{km}±22^{km}, mb3.3/5, mb1 3.3/7, mb1mx3.1/55, mbtmp3.6/7, Error ellipse: s-maj=83.4km s-min=15.4km az=58.0*

ISC 07 12:57:36.4±1.2, 1°.39S±0°.03×100°.01E±0°.05, h10^{km}±9^{km}, n21, σ1^{s}.84/31, mb3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	0.65	44	P	Pn	12 57 51.5	-0.3
PDSI				S	Sn	12 58 00.4	-1.7
PPI	Padang Panjang	1.00	23	P	Pn	12 57 58.9	+2.4
PPI				S	Sn	12 58 13.2	+2.5
PPSI	Pulau Pagai	1.37	180	P	Pg	12 58 03.5	+0.8
PPSI				S	Sg	12 58 21.8	+1.3
SDSI	Sungai Dareh	1.49	72	P	Pb	12 58 03.7	-0.5
SDSI				S	Sb	12 58 21.9	-1.2
KRJI	Kerinci	1.61	116	P	Pn	12 58 04.9	-0.1
KRJI				S	Sn	12 58 24.5	-1.4
BKNI	Bangkinang	1.99	31	P	Pg	12 58 14.8	+0.2
BKNI				S	Sg	12 58 41.8	+1.3
PBSI	Pulau Batu	2.18	307	P	Pg	12 58 25.6	+7.4
MNSI	Mandailing Nat	2.21	349	P	Pg	12 58 19.0	+0.1
MNSI				S	Sg	12 58 50.4	+2.9
MASI	Maura Aman, Be	2.83	128	P	Pn	12 58 22.7	+1.0
MASI				S	Sb	12 59 01.1	-0.7
GSI	Gunungsitoli	3.61	318	P	Pb	12 58 38.1	-2.4
MNAI	Manna	4.17	135	P	Pn	12 58 40.8	+0.7
PSI	Prapat	4.30	345	P	Pg	12 58 58.0	-0.9
	1.7nm,0.3s,baz=180,slow=11,SNR=4.7						
PSI				S	Sg	12 59 49.5	-5.2
	2.2nm,0.3s,baz=180,slow=16,SNR=6.5						
DSRI	Dabo	4.66	79	P	Pn	12 58 47.7	+0.9
DSRI				S	Sn	12 59 39.9	-1.1
KASI	Kota Agung	6.08	133	P	Pn	12 59 05.8	-0.6
CMAR	Chiang Mai Arr	19.75	357	P	Pn	13 02 10.2	+2.1
	0.1nm,0.3s,baz=190,slow=11,SNR=5.2						
WRA	Warramunga Arr	38.30	121	P	P	13 04 55.7	-1.8
	0.4nm,0.4s,baz=304,slow=9.0,SNR=2.9						
ASAR	Alice Springs	39.61	127	P	P	13 05 06.2	-2.2
	0.4nm,0.6s,baz=300,slow=7.7,SNR=7.6						
ASAR				PcP	PcP	13 07 15.7	0.0
	0.2nm,0.6s,baz=307,slow=2.5,SNR=3.5						
SONM	Songino Array	49.34	6	P	P	13 06 27.1	+1.1
	0.3nm,0.4s,baz=182,slow=9.5,SNR=2.6						
MKAR	Makanchi Array	50.45	344	P	P	13 06 36.9	+2.6
	1.6nm,0.6s,baz=157,slow=8.6,SNR=32						
ZALV	Zalesovo Beam	56.57	349	P	P	13 07 20.5	+1.5
	0.6nm,0.4s,baz=186,slow=4.1,SNR=4.9						
TXAR	Lajitas Array	144.21	37	PKP	PKPdf	13 17 12.7	-0.8
	0.3nm,0.5s,baz=202,slow=1.8,SNR=7.2						

IDC 07 13:00:23.8±1.7, 8°.35S×124°.60E, h0^{km}, mb3.3/1, mb1 3.7/5, mb1mx3.5/43, mbtmp3.5/5, ML3.7/4, Error ellipse: s-maj=54.5km s-min=24.4km az=78.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.06	207	Pn	Pn	13 01 00.8	+1.0
	25nm,0.3s,baz=62,slow=4.7,SNR=38						
BATI				Sn	Sn	13 01 19.9	-6.4
	31nm,0.3s,baz=0.0,slow=20,SNR=21						
FITZ	Fitzroy Crossi	9.74	174	Pn	Pn	13 02 44.0	-1.4
	0.4nm,0.3s,baz=357,slow=9.5,SNR=8.0						
FITZ				Sn	Sn	13 04 19.5	-16
	0.6nm,0.3s,baz=179,slow=17,SNR=8.5						
WRA	Warramunga Arr	14.89	142	Pn	Pn	13 03 55.9	+0.1
	0.4nm,0.3s,baz=313,slow=15,SNR=24						
WRA				Sn	Sn	13 06 29.9	-12
	0.1nm,0.3s,baz=320,slow=24,SNR=4.4						
ASAR	Alice Springs	17.65	151	Pn	Pn	13 04 31.4	+0.1
	0.2nm,0.3s,baz=320,slow=11,SNR=16						
MKAR	Makanchi Array	66.55	330	P	P	13 11 15.6	-0.1
	0.2nm,0.7s,baz=142,slow=4.9,SNR=3.0						

*IDC **07** 13:07:02.0±1.0, 13°.43N×87°.46W, h0^{km}, mb3.6/7, mb1 3.9/10, mb1mx3.8/48, mbtmp3.7/10, ML3.4/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/39, Error ellipse: s-maj=47.2km s-min=13.5km az=50.0*

*ISCJB **07** 13:07:06.0±0.5, 12°.58N±0°.05×88°.25W±0°.03, h61^{km}±5^{km}, mb4.0/13, Error ellipse: s-maj=9.5km s-min=3.6km az=29.0*

*UCR **07** 13:07:06.4±1.0, 12°.59N×88°.25W, h49^{km}±19^{km}, ML4.0, mb4.6(NEIC)*

*SNET **07** 13:07:07.0±0.0, 12°.62N×88°.29W, h45^{km}*

*NEIC **07** 13:07:10.6±1.6, 12°.79N×87°.87W, h91^{km}±19^{km}, mb4.6/7, MD4.1(SNET), Error ellipse: s-maj=32.5km s-min=8.9km az=67.0*

NEIC Felt [II] at Usulutan, El Salvador.

ISC 07 13:07:07.4±1.0, 12°.66N±0°.06×88°.21W±0°.04, h59^{km}±10^{km}, n55, σ1^{s}.20/67, mb4.0/13, 8C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.71	31	eP	Pn	13 07 21.8	-0.1
LCND	La Caada	0.71	26⇑	iP	Pn	13 07 21.6	-0.3
LCND				eS	Sn	13 07 32.8	+0.5
LCND				IAML		13 07 37.1	
	comp=Z,10µm,0.4s						
LCY	Lacayo	0.76	354⇑	iP	Pn	13 07 22.2	-0.3
VSM	San Miguel	0.77	355	eP	Pn	13 07 22.5	-0.2
BLLM	Bellamira	0.78	358⇑	eP	Pn	13 07 22.4	-0.3
PACA	Pacayal	0.81	352⇑	iP	Pn	13 07 22.9	-0.3
PACA				eS	Sn	13 07 34.9	+0.3
TECA	Tecapa	0.88	341⇑	iP	Pn	13 07 23.5	-0.6
CAHU	Cacacuatique	1.10	360	eP	Pn	13 07 27.3	+0.3
CRIN	San Cristobal	1.13	88	eP	Pn	13 07 27.3	+0.1
CRIN				eS	Sn	13 07 43.2	+1.3
SNVI	San Vicente	1.13	327	eP	Pn	13 07 26.7	-0.6
PAVA	Las Pavas	1.27	326	eP	Pn	13 07 28.9	-0.2
PAVA				eS	Sn	13 07 45.4	+0.2
PAVA				IAML		13 07 47.4	
	comp=Z,3µm,0.6s						
LFRS	El Faro	1.27	319⇑	iP	Pn	13 07 28.2	-0.9
VICT	Victoria	1.36	342⇑	iP	Pn	13 07 30.3	0.0
LFU	La Fuente	1.40	321⇑	eP	Pn	13 07 30.4	-0.3
SNET	Serv Nac Est T	1.43	316	eP	Pn	13 07 30.3	-0.9
SNET				eS	Sn	13 07 48.0	-1.1
SNET				IAML		13 07 57.0	
	comp=Z,2µm,0.2s						
OPAM	San Salvador	1.43	317	eP	Pn	13 07 30.5	-0.7
OPAM				IAML		13 07 52.6	
	comp=Z,2µm,0.2s						
CNGN	Cerro Negro	1.48	96	eP	Pn	13 07 31.1	-0.8
BOQS	Boqueron	1.49	316	eP	Pn	13 07 31.7	-0.6
MOMN	Momotombo	1.65	99	eP	Pn	13 07 33.1	-1.0
COPN	Copaltepe	1.65	107	eP	Pn	13 07 33.0	-1.1
TGUH	Tegucigalpa,Un	1.66	33	ePn	Pn	13 07 35.2	+1.0
TGUH				eSn	Sn	13 07 57.4	+2.9
CEVE	Cerro Verde	1.80	310	eP	Pn	13 07 36.3	-0.1
CEVE				IAML		13 08 03.3	
	comp=Z,3µm,0.4s						
SBLS	San Blas	1.81	310	eP	Pn	13 07 36.0	-0.5
ESTN	Estel	1.84	76	ePn	Pn	13 07 36.6	-0.2
ESTN				eSn	Sn	13 07 59.7	+0.5
ESTN	Estel	1.84	76	eP	Pn	13 07 37.0	+0.2
ESTN				eS	Sn	13 08 00.2	+1.1
RTR	El Retiro	1.86	311	eP	Pn	13 07 36.8	-0.4
MGAN	Managua	1.98	105	eP	Pn	13 07 37.9	-0.7
MGAN				eS	Sn	13 08 01.8	-0.5
MATN	Matagalpa	2.24	83	eP	Pn	13 07 42.0	-0.2
MATN				eS	Sn	13 08 09.5	+0.6
BOAB	BOACO BROADBAN	2.49	95	ePn	Pn	13 07 44.9	-0.7
BOAB				eSn	Sn	13 08 05.1	-10
BOAB	BOACO BROADBAN	2.49	95	eP	Pn	13 07 44.1	-1.5
ACON	Acoyapa	3.04	103	eP	Pn	13 07 52.2	-1.0
APG	El Apazote	3.20	317	Pn	Pn	13 07 55.9	+0.4
	comp=Z,1.8nm,0.3s,baz=115,slow=11,SNR=14						
APG				Sn	Sn	13 08 37.9	+5.4
	comp=Z,1.9nm,0.3s,baz=3.4,slow=17,SNR=3.3						
JTS	JuntasAbangare	3.96	126	ePn	Pn	13 08 07.1	+1.3
JTS	JuntasAbangare	3.96	126	Pn	Pn	13 08 06.4	+0.6
	comp=Z,3.7nm,0.3s,baz=163,slow=19,SNR=8.2						
JTS				Pg		13 08 14.9	
	comp=Z,29nm,0.3s,baz=18,slow=14,SNR=46						
JTS				Sn	Sn	13 08 51.7	+0.6
	comp=Z,1.8nm,0.3s,baz=348,slow=19,SNR=2.6						
JTS				Lg	Lg	13 09 08.5	
	comp=Z,12nm,0.3s,baz=211,slow=20,SNR=23						
CMIG	Matias Romero	7.81	305	Pn	Pn	13 08 59.4	+0.9
	comp=Z,0.8nm,0.3s,baz=160,slow=10,SNR=11						
CMIG				Sn	Sn	13 10 27.5	+1.9
	comp=Z,0.5nm,0.3s,baz=231,slow=13,SNR=2.5						
OTAV	Otavalo	15.68	141	ePn	Pn	13 10 45.7	+0.4
	comp=Z,2.2nm,0.8s						
SDV	Santo Domingo	17.66	101	LR	LR	13 18 53.3	
	comp=Z,29nm,19.0s,baz=99,slow=42						
250A	Grady	19.31	5	eP	P	13 11 25.8	-1.9
	comp=Z,62nm,0.4s						
TXAR	Lajitas Array	21.95	321	P	P	13 11 57.1	+0.8
	comp=Z,2.3nm,0.5s,baz=140,slow=10,SNR=48						
TX31	Lajitas Ar. Si	21.95	321	eP	P	13 11 57.2	+0.9
MIAR	Mount Ida	22.33	348	eP	P	13 12 01.3	+1.0
	comp=Z,4.6nm,0.8s						
MSTX	Muleshoe	25.02	330	eP	P	13 12 25.9	-0.2
	comp=Z,7.7nm,0.8s						
ANMO	Albuquerque	27.67	326	P	P	13 12 49.8	-0.3
	comp=Z,0.3nm,0.3s,baz=311,slow=20,SNR=3.0						
O20A	White River Ci	32.56	331	eP	P	13 13 34.0	+0.7
	comp=Z,14nm,1.5s						
PDAR	Pinedale Array	35.24	332	P	P	13 13 56.1	-0.5
	comp=Z,0.5nm,0.6s,baz=126,slow=12,SNR=6.5						
REDW	Red Top Meadow	36.30	332	eP	P	13 14 06.3	+0.7
	comp=Z,7.6nm,0.5s						
SNOW	Snow King Moun	36.33	332	eP	P	13 14 06.7	+0.8
	comp=Z,7.7nm,0.6s						
LOHW	Long Hollow	36.38	332	eP	P	13 14 06.4	+0.2
	comp=Z,7.8nm,1.5s						
NVAR	Mina Array Bea	37.06	319	P	P	13 14 14.5	+2.4
	comp=Z,0.3nm,0.5s,baz=119,slow=12,SNR=3.7						
NVAR				PcP	PcP	13 16 32.4	+0.5
	comp=Z,0.6nm,0.7s,baz=116,slow=3.9,SNR=4.1						
ULM	Lac du Bonnet	38.01	352	P	P	13 14 17.3	-2.4
	comp=Z,1.7nm,0.6s,baz=172,slow=12,SNR=3.9						
MCMT	McKenzie Canyo	38.35	331	eP	P	13 14 24.4	+1.4
YKA	Yellowknife Ar	53.22	345	P	P	13 16 17.8	-1.7
	comp=Z,0.3nm,0.4s,baz=138,slow=7.7,SNR=12						
ILAR	Eielson Array	65.53	336	P	P	13 17 43.0	-1.5
	comp=Z,0.3nm,0.8s,baz=163,slow=5.5,SNR=6.8						
WRA	Warramunga Arr	138.62	254	PKhKP	PKPpre	13 26 27.9	
	comp=Z,0.2nm,0.3s,baz=89,slow=2.6,SNR=7.8						
ASAR	Alice Springs	138.66	249	PKP	PKiKP	13 26 31.4	+1.6
	comp=Z,0.2nm,0.7s,baz=92,slow=2.0,SNR=3.7						

IDC 07 13:07:25.7±9.4, 14°.75S×173°.87W, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.5/36, mbtmp3.5/3, Error ellipse: s-maj=420.4km s-min=37.5km az=139.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.55	256	P	P	13 16 19.1	+0.3
	0.3nm,0.6s,baz=92,slow=7.5,SNR=6.3						
ASAR	Alice Springs	49.88	251	P	P	13 16 20.9	-0.4
	1.4nm,0.8s,baz=86,slow=8.5,SNR=11						
ILAR	Eielson Array	81.90	11	P	P	13 19 46.6	0.0
	0.2nm,0.8s,baz=227,slow=6.5,SNR=4.7						

DJA 07 13:08:24.2±1.8, 7°S±10°×10°6E±°, h12^{km}±10^{km}, M3.7/6, MLv3.7/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	1.15	66	P	Pb	13 08 45.2	-0.8
SKJI				S	Sg	13 09 01.4	+0.1
KASI	Kota Agung	2.18	333	P	Pn	13 09 00.4	0.0
LEM	Lembang	2.20	73	P	Pb	13 09 04.7	+0.7
CISI	Cisompet, Garu	2.30	92	P	Pn	13 09 02.1	+0.1
LWLI	Liwa	2.83	330	P	Pn	13 09 10.1	+0.7
CMJI	Cimerak	2.94	96	P	Pn	13 09 11.1	+0.4
CMJI				S	Sn	13 09 46.6	+0.6
MNAI	Manna	4.00	321	P	Pn	13 09 24.7	-0.7

*IDC **07** 13:13:25.4±1.3, 11°.15S×164°.71E, h0^{km}, mb4.0/6, mb1 4.1/9, mb1mx3.9/33, mbtmp4.0/9, ML3.9/3, MS3.6/1, Ms1 3.6/1, ms1mx2.9/31, Error ellipse: s-maj=33.1km s-min=21.9km az=127.0*

*ISCJB **07** 13:13:27.9±0.8, 11°.2S±0°.1×164°.67E±0°.09, h29^{km}, mb4.0/6, Error ellipse: s-maj=16.0km s-min=10.9km az=35.4*

ISC 07 13:13:29.8±1.0, 11°.2S±0°.1×164°.7E±0°.1, h29^{km}, n15, σ0^{s}.44/10, mb4.0/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.99	290	Pn	Pn	13 14 42.9	+0.1
	6.7nm,0.3s,baz=219,slow=11,SNR=3.8						
HNR				Sn	Sn	13 15 39.6	+0.2
	7.7nm,0.3s,baz=205,slow=19,SNR=2.6						
DZM	Mont Dzumac	10.94	171	Pn	Pn	13 16 04.9	+0.3
	0.9nm,0.3s,baz=17,slow=10,SNR=15						
DZM				LR	LR	13 20 02.3	
	comp=Z,271nm,18.2s,baz=32,slow=36						
CTA	Charters Tower	19.82	241	P	Pn	13 17 59.6	-0.3
	0.2nm,0.3s,baz=56,slow=7.3,SNR=4.4						
H11S2	WAKE ISLAND Hy	29.57	4	T	T	13 50 33.0	
	baz=184,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	29.57	4	T	T	13 50 31.3	
	baz=184,slow=76,SNR=8.2						
H11S1	WAKE ISLAND Hy	29.59	4	T	T	13 50 34.2	
	baz=184,slow=76,SNR=6.9						
WRA	Warramunga Arr	30.46	250	P	P	13 19 39.9	-0.4
	3.3nm,0.8s,baz=80,slow=9.2,SNR=20						
H11N1	WAKE ISLAND Hy	30.80	4	T	T	13 52 06.0	
	baz=184,slow=76,SNR=4.8						
H11N3	WAKE ISLAND Hy	30.80	4	T	T	13 52 05.8	
	baz=184,slow=76,SNR=4.9						
H11N2	WAKE ISLAND Hy	30.81	4	T	T	13 52 05.6	
	baz=184,slow=76,SNR=4.8						
ASAR	Alice Springs	31.80	243	P	P	13 19 52.0	-0.1
	0.9nm,0.7s,baz=73,slow=9.9,SNR=8.6						
PETK	Petropavlovsk-	64.33	355	P	P	13 24 03.0	+0.5
	2.3nm,0.8s,baz=207,slow=6.1,SNR=2.8						
SONM	Songino Array	78.18	324	P	P	13 25 27.1	+0.5
	0.9nm,0.8s,baz=116,slow=3.4,SNR=5.8						
ILAR	Eielson Array	83.99	19	P	P	13 25 56.4	-0.7
	0.5nm,0.7s,baz=232,slow=5.6,SNR=6.2						
MKAR	Makanchi Array	92.93	317	P	P	13 26 40.0	-0.3
	0.7nm,0.8s,baz=102,slow=6.4,SNR=7.4						

*IDC **07** 13:22:36.2±1.4, 11.°21S×165.°25E, h0^{km}, mb3.8/4, mb1 4.1/6, mb1mx3.8/36, mbtmp3.9/6, ML4.1/2, Error ellipse: s-maj=39.5km s-min=27.0km az=138.0*

*ISCJB **07** 13:22:39.1±1.1, 11.°4S±0.°1×165.°2E±0.°1, h31^{km}, mb3.6/4, Error ellipse: s-maj=21.7km s-min=17.4km az=149.0*

ISC 07 13:22:41.0±1.1**, 11.°3S**±0.°1×**165.°2E**±0.°2**, h31^{km}, n9, σ1.^{s}60**/6**, mb3.7**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.53	289	Pn	Pn	13 24 01.6	+0.4
	7.7nm,0.3s,baz=209,slow=11,SNR=3.2						
DZM	Mont Dzumac	10.79	174	Pn	Pn	13 25 13.9	+0.3
	1.3nm,0.3s,baz=356,slow=22,SNR=12						
H11N1	WAKE ISLAND Hy	30.84	3	T	T	14 00 57.3	
	baz=182,slow=76,SNR=219						
H11N3	WAKE ISLAND Hy	30.85	3	T	T	14 00 54.6	
	baz=182,slow=76,SNR=167						
H11N2	WAKE ISLAND Hy	30.86	3	T	T	14 00 55.7	
	baz=182,slow=76,SNR=153						
WRA	Warramunga Arr	30.94	250	P	P	13 28 56.0	+0.5
	1.3nm,0.9s,baz=79,slow=9.6,SNR=5.7						
ASAR	Alice Springs	32.25	243	P	P	13 29 05.5	-1.5
	0.2nm,0.4s,baz=63,slow=10,SNR=3.5						
ILAR	Eielson Array	83.89	19	P	P	13 35 05.8	-1.6
	0.4nm,0.8s,baz=236,slow=4.8,SNR=6.2						
YKA	Yellowknife Ar	95.41	27	P	P	13 36 03.7	+1.5
	0.3nm,0.8s,baz=258,slow=4.8,SNR=5.2						

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*IDC **07** 13:23:15.1±0.7, 10.°72S×165.°44E, h0^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.3/35, mbtmp4.3/17, ML4.9/2, MS3.8/4, Ms1 3.8/4, ms1mx3.4/27, Error ellipse: s-maj=19.7km s-min=15.8km az=86.0*

*NEIC **07** 13:23:16.8±0.3, 10.°73S×165.°48E, h10^{km}, mb4.9/21, Error ellipse: s-maj=6.6km s-min=5.2km az=77.0*

*ISCJB **07** 13:23:18.3±0.3, 10.°82S±0.°04×165.°46E±0.°05, h31^{km}, mb4.5/40, MS3.7/1, Error ellipse: s-maj=7.0km s-min=4.5km az=153.2*

ISC 07 13:23:19.9±0.5**, 10.°73S**±0.°06×**165.°52E**±0.°06**, h31^{km}, n87, σ1.^{s}47**/84**, mb4.6**/40**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.64	283	ePn	Pn	13 24 41.4	-0.3
HNR				eSn	Sn	13 25 46.3	+0.9
HNR	Honiara	5.64	283	Pn	Pn	13 24 40.9	-0.7
	50nm,0.3s,baz=163,slow=2.0,SNR=42						
HNR				Sn	Sn	13 25 45.9	+0.4
	22nm,0.3s,baz=221,slow=20,SNR=2.7						
HNR				LR	LR	13 27 06.7	
	comp=Z,1μm,18.2s,baz=92,slow=42						
MARNC	Mare, Loyalty	10.96	168	ePn	Pn	13 25 53.1	-1.5
DZM	Mont Dzumac	11.31	176	ePn	Pn	13 26 00.9	+1.3
	45nm,0.5s						
DZM				eLR	LR	13 28 32.8	
	comp=Z,864nm,28.6s						
DZM	Mont Dzumac	11.31	176	ePn	Pn	13 25 58.8	-0.8
DZM				Sn	Sn	13 28 07.4	+2.4
DZM	Mont Dzumac	11.31	176	Pn	Pn	13 26 00.5	+0.9
	5.1nm,0.3s,baz=344,slow=9.0,SNR=31						
DZM				Sn	Sn	13 28 07.4	+2.4
	0.6nm,0.3s,baz=95,slow=18,SNR=3.5						
DZM				LR	LR	13 29 39.0	
	comp=Z,375nm,21.5s,baz=31,slow=34						
ONTNC	Ouen Toro	11.54	176	ePn	Pn	13 26 02.4	-0.3
PINNC	Pines Island,	11.96	171	ePn	Pn	13 26 07.1	-1.2
MSVF	Nonsavu	13.99	121	Pn	Pn	13 26 33.9	-2.4
TARA	Tarawa	14.09	32	ePn	Pn	13 26 38.2	+0.7
RABL	Rabaul	14.75	295	ePn	Pn	13 26 45.4	-1.1
EIDS	Eidsvold	19.98	221	eP	P	13 27 50.4	+0.5
	26nm,0.9s						
CTA	Charters Tower	20.75	241	P	P	13 27 59.0	+0.6
	11nm,1.1s,baz=256,slow=4.2,SNR=3.1						
COEN	Coen	22.06	259	eP	P	13 28 12.3	-0.1
	13nm,1.0s						
ARMA	Armidale	23.46	211	eP	P	13 28 26.7	-0.4
	12nm,1.0s						
OUZ	Omahuta	25.46	164	eP	P	13 28 45.4	+0.2
	74nm,1.5s						
CAN	Canberra	28.72	209	eP	P	13 29 14.2	-0.4
	49nm,1.4s						
OMRZ	Omania	28.94	162	P	P	13 29 17.9	+1.3
H11S2	WAKE ISLAND Hy	29.06	2	T	T	13 59 24.3	
	baz=181,slow=76,SNR=200						
H11S3	WAKE ISLAND Hy	29.07	2	T	T	13 59 23.0	
	baz=181,slow=76,SNR=144						
HAZ	Te Kaha	29.08	160	P	P	13 29 18.5	+0.9
H11S1	WAKE ISLAND Hy	29.08	2	T	T	13 59 23.9	
	baz=181,slow=76,SNR=167						
PRRZ	Plateau Road	29.31	162	P	P	13 29 21.0	+1.2
URZ	Urewera	29.31	161	eP	P	13 29 19.3	-0.4
	28nm,0.9s						
URZ	Urewera	29.31	161	P	P	13 29 19.6	-0.1
	17nm,0.8s,baz=28,slow=8.2,SNR=6.0						
MWZ	Matawai	29.52	161	P	P	13 29 21.1	-0.5
TWGZ	Tauwhareparae	29.52	160	P	P	13 29 20.9	-0.8
MRHZ	Matea Rd	29.63	163	P	P	13 29 24.2	+1.6
TKGZ	Te Karaka	29.72	160	P	P	13 29 22.2	-1.1
SNGZ	Shannon Statio	29.86	161	P	P	13 29 24.4	-0.3
CNGZ	Carnagh Statio	29.88	160	P	P	13 29 24.1	-0.7
RAHZ	Arahi	29.91	162	P	P	13 29 25.2	+0.2
BKZ	Black Stump Fm	29.96	163	eP	P	13 29 25.1	-0.5
	30nm,0.8s						
BKZ	Black Stump Fm	29.96	163	P	P	13 29 25.5	0.0
STKA	Stephens Creek	30.52	223	eP	P	13 29 30.0	-0.5
	2.3nm,1.0s						
STKA	Stephens Creek	30.52	223	P	P	13 29 30.2	-0.3
	1.7nm,0.6s,baz=81,slow=13,SNR=2.5						
BFZ	Birch Farm	31.30	164	eP	P	13 29 36.8	-0.5
	27nm,0.9s						
WRAB	Tennant Creek	31.37	249	eP	P	13 29 36.9	-1.4
	14nm,1.4s						
WRA	Warramunga Arr	31.38	249	P	P	13 29 36.6	-1.7
	2.4nm,0.8s,baz=79,slow=9.3,SNR=7.7						
WRA				LR	LR	13 41 01.3	
	comp=Z,162nm,19.8s,baz=90,slow=34						
THZ	Tophouse	31.58	169	eP	P	13 29 44.0	+4.2
	14nm,0.8s						
LTZ	Lake Taylor	32.47	171	eP	P	13 29 48.5	+1.0
	17nm,0.8s						
ASAR	Alice Springs	32.73	243	P	P	13 29 48.5	-1.7
	1.4nm,0.7s,baz=64,slow=10,SNR=8.5						
FOZ	Fox Glacier	32.89	174	eP	P	13 29 50.9	-0.3
	19nm,1.1s						
OXZ	Oxford	32.96	171	eP	P	13 29 53.0	+1.1
	53nm,1.6s						
RPZ	Rata Peaks	33.21	173	eP	P	13 29 55.2	+1.2
	18nm,0.9s						
RPZ	Rata Peaks	33.21	173	P	P	13 29 53.2	-0.9
	7.4nm,0.8s,baz=181,slow=6.9,SNR=4.3						
RPZ				LR	LR	13 42 34.4	
	comp=Z,124nm,19.3s,baz=14,slow=35						
BBOO	Buckleboo	34.88	226	eP	P	13 30 08.0	-0.7
	12nm,1.0s						
PPT2	Papeete2	43.99	104	eLR	LR	13 43 34.5	
	comp=Z,260nm,28.2s						
TBI	Tubuai	44.66	112	eLR	LR	13 44 00.7	
	comp=Z,244nm,34.8s						
KSRS	Korea Array	59.49	326	P	P	13 33 19.0	-1.2
	1.1nm,0.6s,baz=139,slow=7.0,SNR=3.1						
KSAR	Wonju Array Be	59.51	326	P	P	13 33 19.0	-1.3
NJ2	Nanjing	61.64	315	P	P	13 33 36.6	+1.6
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
CN2	Changchun	65.36	329	eP	P	13 34 02.2	+2.9
NONG	Nongkai	67.88	295	P	P	13 34 19.3	+3.3
GYA	Guiyang	68.06	304	P	P	13 34 19.7	+2.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PBKT	Sadao Pong	69.36	292	eP	P	13 34 24.5	-0.7
PBKT	Sadao Pong	69.36	292	P	P	13 34 34.0	+8.8
XAN	Xi'an	69.75	312	P	P	13 34 32.4	+5.0
XAN				pP	sP	13 34 42.4	+2.4
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMI	Kunming	70.77	301	P	P	13 34 36.3	+2.3
KMI				pP	pP	13 34 41.0	-2.2
KMI				sP	pwP	13 34 42.8	-2.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,130nm,3.6s						
HHC	Hu-ho-hao-te	71.45	320	eP	P	13 34 40.7	+3.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,320nm,6.7s						
CM01	Chiang Mai Arr	71.76	293	eP	P	13 34 39.1	-0.7
CMAR	Chiang Mai Arr	71.78	294	P	P	13 34 39.4	-0.6
	comp=Z,0.7nm,0.3s,baz=119,slow=4.7,SNR=8.3						
CMMT	Chiang Mai	71.89	294	P	P	13 34 40.7	0.0
	comp=Z,3.4nm,0.8s,comp=Z,0.0nm						
CHTO	Chiang Mai	71.90	294	P	P	13 34 40.8	+0.1
	comp=Z,16nm,2.2s,comp=Z,0.1nm						
CD2	Chengdu	72.24	307	P	P	13 34 41.1	-1.4
LZH	Lanzhou	74.38	312	eP	P	13 34 57.1	+1.9
LZH				pP	pP	13 35 02.4	-2.1
LZH				sP	pwP	13 35 05.2	-1.4
LZH				PP	PP	13 37 37.6	-4.3
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,94nm,4.8s						
LZH				LR	LR		
	comp=N,230nm,16.6s						
LZH				LR	LR		
	comp=E,260nm,16.0s						
LZH				LR	LR		
	comp=Z,240nm,17.8s						
SONM	Songino Array	78.28	324	P	P	13 35 16.2	-0.9
	comp=Z,1.0nm,0.8s,baz=146,slow=7.5,SNR=6.1						
SONA1	Songino Array	78.29	324	eP	P	13 35 15.9	-1.2
BILL	Bilibino	78.57	0	eP	P	13 35 18.0	0.0
	comp=Z,6.3nm,1.0s						
GTA	Gaotai	78.68	314	eP	P	13 35 18.7	-0.8
GTA				pP	PcP	13 35 23.4	-4.9
GTA				sP	pP	13 35 26.1	-2.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
QSPA	South Pole Qui	79.27	180	eP	P	13 35 22.1	-0.2
	comp=Z,15nm,1.4s						
QSPA	South Pole Qui	79.27	180	P	P	13 35 21.8	-0.4
	comp=Z,4.3nm,0.9s,baz=38,slow=2.0,SNR=14						
IL1	Eielson Array	83.29	19	eP	P	13 35 45.1	+1.8
ILAR	Eielson Array	83.29	19	P	P	13 35 43.1	-0.2
	comp=Z,1.0nm,0.9s,baz=238,slow=5.4,SNR=5.5						
NV01	Mina Array Sit	85.99	50	eP	P	13 35 57.4	-0.5
NVAR	Mina Array Bea	85.99	50	P	P	13 36 00.1	+2.2
	comp=Z,1.4nm,0.9s,baz=238,slow=8.4,SNR=5.1						
NV11	Mina Array Sit	86.11	50	eP	P	13 35 59.0	+0.7
	comp=Z,0.3nm,1.1s						
WMQ	Urumqi	88.72	315	eP	P	13 36 11.9	+1.2
WMQ				LR	LR		
	comp=N,110nm,21.3s						
WMQ				LR	LR		
	comp=E,140nm,19.9s						
WMQ				LR	LR		
	comp=Z,140nm,24.5s						
HVU	Hansel Valley	90.96	48	eP	P	13 36 22.7	+1.4
	comp=Z,10nm,1.6s						
DLMT	Dillon	91.92	44	eP	P	13 36 25.8	+0.1
	comp=Z,7.2nm,1.3s						
SYO	Syowa Base	92.02	197⇑	eX	P	13 36 19.0	-6.5
MK01	Makanchi Array	93.13	317	eP	P	13 36 29.9	-1.2
MK31	Makanchi Array	93.14	317	eP	P	13 36 34.8	+3.7
MKAR	Makanchi Array	93.14	317	P	P	13 36 30.4	-0.8
	comp=Z,0.5nm,0.7s,baz=96,slow=5.9,SNR=4.2						
ZALV	Zalesovo Beam	93.17	324	P	P	13 36 32.7	+1.7
	comp=Z,0.9nm,0.6s,baz=112,slow=5.5,SNR=5.7						
MAKZ	Makanchi	93.36	317	eP	P	13 36 32.3	+0.2
	comp=Z,5.2nm,1.3s						
YKA	Yellowknife Ar	94.80	27	P	P	13 36 37.9	-0.4
	comp=Z,0.1nm,0.7s,baz=256,slow=4.2,SNR=3.2						

IDC 07 13:25:39.3±3.6**, 11.°89S**×**166.°29E, h0^{km}, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.7**/33**, mbtmp3.8**/5**, Error ellipse: s-maj=127.8km s-min=33.7km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.70	251	P	P	13 32 05.0	0.0
	1.0nm,0.7s,baz=76,slow=7.3,SNR=4.9						
ASAR	Alice Springs	32.90	245	P	P	13 32 15.2	-0.3
	0.5nm,0.6s,baz=65,slow=10,SNR=4.1						
CMAR	Chiang Mai Arr	72.94	294	P	P	13 37 11.6	+0.5
	0.3nm,0.3s,baz=107,slow=5.8,SNR=3.0						
ILAR	Eielson Array	84.14	18	P	P	13 38 12.0	+0.1
	0.3nm,0.5s,baz=234,slow=5.1,SNR=5.5						
MKAR	Makanchi Array	94.50	317	P	P	13 39 00.8	-0.9
	0.4nm,0.7s,baz=91,slow=6.1,SNR=4.3						

IDC 07 13:26:32.9±3.6**, 10.°24S**×**164.°41E, h0^{km}, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.6**/33**, mbtmp3.8**/3**, Error ellipse: s-maj=186.1km s-min=31.8km az=138.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.55	248	P	P	13 32 48.5	0.0
	0.7nm,0.5s,baz=78,slow=8.9,SNR=5.9						
ASAR	Alice Springs	32.00	241	P	P	13 33 01.2	-0.1
	1.1nm,0.8s,baz=68,slow=9.6,SNR=6.1						
ILAR	Eielson Array	83.18	19	P	P	13 39 00.6	0.0
	0.5nm,0.8s,baz=243,slow=5.0,SNR=3.1						

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*IDC **07** 13:28:30.2±0.6, 11.°16S×165.°33E, h0^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.3/32, mbtmp4.2/17, ML4.8/2, Error ellipse: s-maj=18.9km s-min=16.6km az=127.0*

*NEIC **07** 13:28:31.6±0.2, 11.°19S×165.°31E, h10^{km}, mb4.6/5, Error ellipse: s-maj=6.8km s-min=5.6km az=89.0*

*ISCJB **07** 13:28:32.9±0.4, 11.°34S±0.°05×165.°24E±0.°06, h30^{km}, mb4.2/19, Error ellipse: s-maj=8.6km s-min=6.9km az=138.7*

ISC 07 13:28:34.5±0.5**, 11.°32S**±0.°07×**165.°30E**±0.°09**, h30^{km}, n51, σ1.^{s}02**/50**, mb4.2**/19**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.59	289	Pn	Pn	13 29 55.2	-0.5
	40nm,0.3s,baz=137,slow=7.1,SNR=9.1						
HNR				Sn	Sn	13 30 58.4	-0.6
	21nm,0.3s,baz=188,slow=23,SNR=3.6						
MARNC	Mare, Loyalty	10.44	166	ePn	Pn	13 31 03.1	+1.0
DZM	Mont Dzumac	10.75	174	ePn	Pn	13 31 06.9	+0.3
DZM				Sn	Sn	13 33 02.8	-3.1
DZM	Mont Dzumac	10.75	174	Pn	Pn	13 31 07.4	+0.9
	4.5nm,0.3s,baz=48,slow=7.9,SNR=21						
DZM				Sn	Sn	13 33 02.8	-3.1
	0.1nm,0.3s,baz=102,slow=19,SNR=2.7						
ONTNC	Ouen Toro	10.98	174	ePn	Pn	13 31 10.9	+1.2
PINNC	Pines Island,	11.42	170	ePn	Pn	13 31 16.2	+0.7
CTA	Charters Tower	20.29	242	P	Pn	13 33 09.9	-0.1
	17nm,1.2s,baz=70,slow=20,SNR=3.7						
COEN	Coen	21.75	261	eP	P	13 33 23.6	-0.2
	16nm,0.9s						
URZ	Urewera	28.83	160	P	P	13 34 32.0	+1.8
	4.3nm,0.7s,baz=267,slow=18,SNR=3.2						
H11S2	WAKE ISLAND Hy	29.65	3	T	T	14 03 59.5	
	baz=193,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	29.66	3	T	T	14 04 00.9	
	baz=193,slow=76,SNR=6.0						
H11S1	WAKE ISLAND Hy	29.67	3	T	T	14 03 59.5	
	baz=193,slow=76,SNR=8.2						
STKA	Stephens Creek	29.94	223	P	P	13 34 42.3	+2.2
	1.8nm,0.7s,baz=37,slow=7.9,SNR=4.7						
H11N1	WAKE ISLAND Hy	30.88	3	T	T	14 05 34.2	
	baz=192,slow=76,SNR=9.3						
H11N3	WAKE ISLAND Hy	30.88	3	T	T	14 05 36.9	
	baz=192,slow=76,SNR=9.3						
H11N2	WAKE ISLAND Hy	30.89	3	T	T	14 05 36.1	
	baz=192,slow=76,SNR=12						
WB2	Warramunga Arr	30.97	250	eP	P	13 34 49.4	0.0
	8.9nm,1.1s						
WRAB	Tennant Creek	30.97	250	eP	P	13 34 50.2	+0.8
	17nm,1.3s						
WR1	Warramunga Arr	30.98	250	eP	P	13 34 49.6	+0.2
WR1				ePcP	PcP	13 37 45.9	+0.6
WRA	Warramunga Arr	30.98	250	P	P	13 34 49.6	+0.2
	1.9nm,0.5s,baz=82,slow=8.8,SNR=22						
WRA				PcP	PcP	13 37 45.9	+0.6
	0.5nm,0.8s,baz=78,slow=2.9,SNR=7.1						
AS01	Alice Springs	32.24	243	eP	P	13 35 00.7	+0.1
AS31	Alice Springs	32.28	243	eP	P	13 34 59.5	-1.4
	2.1nm,1.1s						
ASAR	Alice Springs	32.28	243	P	P	13 35 00.6	-0.4
	1.4nm,0.7s,baz=62,slow=10,SNR=10						
ASAR				PcP	PcP	13 37 49.2	+0.4
	1.1nm,0.7s,baz=68,slow=2.8,SNR=8.8						
RPZ	Rata Peaks	32.66	172	P	P	13 35 04.5	+0.6
	2.8nm,0.7s,baz=195,slow=20,SNR=2.7						
CM01	Chiang Mai Arr	71.80	294	eP	P	13 39 55.3	+0.5
CMAR	Chiang Mai Arr	71.82	294	P	P	13 39 55.9	+1.0
	1.5nm,0.8s,baz=125,slow=4.6,SNR=9.2						
SONA0	Songino Array	78.63	324	eP	P	13 40 33.5	-0.2
SONM	Songino Array	78.63	324	P	P	13 40 33.4	-0.2
	0.5nm,0.6s,baz=138,slow=6.4,SNR=3.6						
HDA	Harding Lake	83.64	19	eP	P	13 40 59.2	-0.6
	5.5nm,0.8s						
IL1	Eielson Array	83.91	19	eP	P	13 40 60.0	-1.2
ILAR	Eielson Array	83.91	19	P	P	13 41 00.6	-0.6
	1.7nm,0.6s,baz=237,slow=5.3,SNR=30						
ILB	Eielson Array	83.91	19	eP	P	13 41 00.9	-0.2
NVAR	Mina Array Bea	86.53	50	P	P	13 41 14.8	-0.4
	1.3nm,0.8s,baz=225,slow=6.9,SNR=5.5						
MK01	Makanchi Array	93.41	317	eP	P	13 41 46.7	-0.4
MK31	Makanchi Array	93.42	317	eP	P	13 41 47.0	-0.1
MK32	Makanchi Array	93.42	317	eP	P	13 41 47.1	0.0
MKAR	Makanchi Array	93.42	317	P	P	13 41 47.1	0.0
	2.0nm,0.7s,baz=98,slow=6.3,SNR=20						
ZALV	Zalesovo Beam	93.52	324	eP	P	13 41 46.3	-1.0
ZALV	Zalesovo Beam	93.52	324	P	P	13 41 47.1	-0.3
	0.5nm,0.4s,baz=101,slow=4.7,SNR=5.7						
ZAA1	Zalesovo Array	93.52	324	eP	P	13 41 47.1	-0.3
PDAR	Pinedale Array	94.06	47	P	P	13 41 50.6	+0.2
	0.4nm,0.8s,baz=267,slow=3.5,SNR=3.1						
YKA	Yellowknife Ar	95.42	27	P	P	13 41 53.7	-2.1
	0.3nm,0.7s,baz=255,slow=4.9,SNR=6.4						
LTX	Lajitas	96.34	61	eP	P	13 42 02.1	+1.2
TXAR	Lajitas Array	96.34	61	P	P	13 42 02.1	+1.2
	0.2nm,0.6s,baz=219,slow=7.0,SNR=3.1						
ARA0	ARCESS Array S	116.49	345	ePKPdf	PKPdf	13 47 14.7	-0.3
ARCES	ARCESS Array B	116.49	345	PKP	PKPdf	13 47 14.7	-0.3
	1.7nm,0.8s,baz=66,slow=2.8,SNR=8.2						
KEST	Kesra	147.37	322	ePKPbc	PKPab	13 48 17.2	-0.5
KEST	Kesra	147.37	322	PKPbc	PKPbc	13 48 16.3	+0.4
	4.9nm,0.7s,baz=189,slow=2.8,SNR=4.2						
ESDC	Sonseca Array	150.20	343	PKPbc	PKPbc	13 48 23.2	+0.2
	1.6nm,1.0s,baz=44,slow=1.8,SNR=3.9						
TORD	Torodi Ar. Bea	163.88	278	PKP	PKPdf	13 48 35.4	-0.4
	0.6nm,0.9s,baz=30,slow=4.0,SNR=3.0						
TOA1	Torodi Ar. Sit	163.88	278	ePKPdf	PKPdf	13 48 35.4	-0.4

IDC 07 13:30:33.9±3.5**, 11.°33S**×**164.°75E, h0^{km}, mb3.7**/4**, mb1 4.0**/4**, mb1mx3.6**/30**, mbtmp3.7**/4**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.9**/35**, Error ellipse: s-maj=155.7km s-min=34.6km az=143.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	24.07	140	LR	LR	13 44 25.1	
	comp=Z,415nm,18.7s,baz=140,slow=34						
WRA	Warramunga Arr	30.47	250	P	P	13 36 48.5	-0.2
	0.8nm,0.9s,baz=78,slow=8.5,SNR=3.2						
ILAR	Eielson Array	84.09	19	P	P	13 43 07.0	+0.7
	0.4nm,0.7s,baz=232,slow=5.6,SNR=6.1						
MKAR	Makanchi Array	93.06	317	P	P	13 43 49.9	+0.3
	0.2nm,0.7s,baz=106,slow=3.6,SNR=2.0						
YKA	Yellowknife Ar	95.67	27	P	P	13 43 59.7	-1.4
	0.2nm,0.7s,baz=254,slow=4.4,SNR=4.0						

IDC 07 13:36:20.7±5.1**, 11.°79S**×**165.°50E, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/35**, mbtmp3.5**/3**, Error ellipse: s-maj=260.1km s-min=33.0km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.00	251	P	P	13 42 39.8	-0.5
	0.9nm,0.9s,baz=82,slow=8.8,SNR=4.8						
ASAR	Alice Springs	32.25	244	P	P	13 42 51.5	+0.4
	0.3nm,0.8s,baz=78,slow=9.0,SNR=3.8						
ILAR	Eielson Array	84.30	19	P	P	13 48 54.1	0.0
	0.2nm,0.6s,baz=234,slow=5.2,SNR=6.1						

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*ISCJB **07** 13:38:39.0±0.7, 35.°86N±0.°04×139.°86E±0.°09, h88^{km}±5^{km}, mb3.4/5, Error ellipse: s-maj=11.8km s-min=6.9km az=169.8*

*IDC **07** 13:38:39.6±6.0, 35.°93N×140.°04E, h84^{km}±39^{km}, mb3.2/5, mb1 3.3/5, mb1mx3.0/56, mbtmp3.5/5, MS3.8/1, Ms1 3.8/1, ms1mx2.9/13, Error ellipse: s-maj=81.3km s-min=20.6km az=64.0*

*JMA **07** 13:38:40.6±0.2, 35.°92N×139.°82E, h77^{km}±2^{km}, M3.0 Broadband fault plane solution: P waves. NP1: ϕ_s6.00000°, δ68.00000°, λ100.00000°. NP2: ϕ_s161.00000°, δ24.00000°, λ67.00000°. Principal axes: T Plg66.0000°, Azm293.0000°; N Plg9.0000°, Azm182.0000°; P Plg22.0000°, Azm88.0000°;*

ISC 07 13:38:40.0±1.1**, 35.°88N**±0.°05×**139.°84E**±0.°08**, h83^{km}**±8^{km}**, n17, σ0.^{s}76**/24**, mb3.5**/5**, 1C-5D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOK	Tokyo	0.20	200	P	Pn	13 38 53.3	+1.2
JAG	Ashikaga	0.63	330	⇓P	Pn	13 38 55.0	-0.2
JAG				S	Sn	13 39 05.4	-1.1
JRY	Ryogami san	0.78	281	⇓P	Pn	13 38 57.0	+0.3
JRY				S	Sn	13 39 09.6	+0.4
JOD2	Odawara 2	0.87	225	⇓P	Pn	13 38 57.5	-0.2
JOD2				S	Sn	13 39 09.8	-1.1
JKT	Katashina	1.01	332	⇓P	Pn	13 38 59.1	-0.4
JKT				S	Sn	13 39 13.0	-1.0
JYN	Shimob	1.12	251	⇓P	Pn	13 39 00.7	-0.1
JYN				S	Sn	13 39 15.7	-0.6
JFNN	Fujinakano	1.16	235	P	Pn	13 39 01.2	0.0
JFNN				S	Sn	13 39 16.6	-0.5
BSO3	Boso 3	1.20	153	⇑P	Pn	13 39 01.9	+0.5
JIM2	Oshima 3	1.20	196	S	Sn	13 39 17.5	-0.5
MJAR	Matsushiro Arr	1.48	297	P	Pn	13 39 05.2	0.0
	2.8nm,0.3s,baz=106,slow=8.7,SNR=168						
MJAR				S	Sn	13 39 26.0	+1.8
	1.1nm,0.3s,baz=193,slow=29,SNR=5.7						
MAT	Matsushiro	1.48	297	P	Pn	13 39 05.2	0.0
MAT				S	Sn	13 39 25.5	+1.3
ASAJ	Asahikawa	8.50	14	LR	LR	13 43 43.7	
	comp=Z,724nm,20.9s,baz=190,slow=36						
ZALV	Zalesovo Beam	41.77	313	P	P	13 46 20.9	-0.1
	0.7nm,0.4s,baz=105,slow=7.3,SNR=3.2						
MKAR	Makanchi Array	43.67	303	P	P	13 46 36.6	+0.1
	0.2nm,0.6s,baz=79,slow=8.5,SNR=2.9						
KURBB	Kurchatov Arra	45.72	309	P	P	13 46 52.9	+0.2
	0.3nm,0.4s,baz=88,slow=8.2,SNR=4.6						
WRA	Warramunga Arr	55.76	186	P	P	13 48 08.1	-0.3
	0.2nm,0.4s,baz=1.1,slow=7.6,SNR=5.8						
ASAR	Alice Springs	59.48	186	P	P	13 48 34.6	+0.1
	0.3nm,0.8s,baz=8.7,slow=6.7,SNR=3.4						

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*IDC **07** 13:40:14.2±0.8, 11.°06S×164.°82E, h0^{km}, mb4.2/14, mb1 4.3/17, mb1mx4.1/41, mbtmp4.2/17, ML4.0/3, MS3.7/1, Ms1 3.7/1, ms1mx3.0/32, Error ellipse: s-maj=22.1km s-min=15.8km az=111.0*

*NEIC **07** 13:40:15.7±0.5, 11.°07S×164.°82E, h10^{km}, mb4.0/1, Error ellipse: s-maj=11.7km s-min=8.9km az=92.0*

*ISCJB **07** 13:40:16.9±0.6, 11.°14S±0.°07×164.°77E±0.°07, h31^{km}, mb4.1/15, MS3.7/1, Error ellipse: s-maj=11.5km s-min=9.2km az=39.8*

ISC 07 13:40:18.9±0.7**, 11.°09S**±0.°09×**164.°83E**±0.°10**, h31^{km}, n30, σ0.^{s}75**/23**, mb4.1**/15**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.08	288	Pn	Pn	13 41 33.2	+0.2
	17nm,0.3s,baz=248,slow=11,SNR=13						
HNR				Sn	Sn	13 42 30.5	-0.1
	8.6nm,0.3s,baz=61,slow=19,SNR=3.3						
DZM	Mont Dzumac	11.03	172	ePn	Pn	13 42 54.3	-0.4
	16nm,0.7s						
DZM				eLR	LR	13 45 27.0	
	comp=Z,366nm,26.4s						
DZM	Mont Dzumac	11.03	172	Pn	Pn	13 42 54.5	-0.2
	0.7nm,0.3s,baz=81,slow=11,SNR=14						
CTA	Charters Tower	19.99	241	P	P	13 44 48.4	-0.6
	0.2nm,0.3s,baz=59,slow=12,SNR=5.4						

H11S2	WAKE ISLAND Hy	29.45	4	T	T	14 17 18.8	
	baz=184,slow=76,SNR=8.0						
H11S3	WAKE ISLAND Hy	29.45	4	T	T	14 17 16.8	
	baz=184,slow=76,SNR=6.7						
H11S1	WAKE ISLAND Hy	29.47	4	T	T	14 17 23.6	
	baz=184,slow=76,SNR=7.2						
STKA	Stephens Creek	29.80	222	P	P	13 46 24.7	+1.6
	2.0nm,0.8s,baz=68,slow=9.6,SNR=4.0						
WRAB	Tennant Creek	30.61	250	eP	P	13 46 29.0	-1.4
	1.3nm,0.5s						
WRA	Warramunga Arr	30.62	250	P	P	13 46 29.4	-1.2
	5.5nm,0.7s,baz=80,slow=9.0,SNR=39						
WRA				PcP	PcP	13 49 28.7	+0.1
	1.1nm,1.1s,baz=74,slow=3.4,SNR=6.6						
H11N1	WAKE ISLAND Hy	30.68	4	T	T	14 18 40.6	
	baz=184,slow=76,SNR=9.1						
H11N3	WAKE ISLAND Hy	30.68	4	T	T	14 18 47.4	
	baz=184,slow=76,SNR=6.9						
H11N2	WAKE ISLAND Hy	30.69	4	T	T	14 18 42.1	
	baz=184,slow=76,SNR=8.1						
ASAR	Alice Springs	31.97	243	P	P	13 46 41.3	-1.1
	3.1nm,0.6s,baz=64,slow=9.8,SNR=52						
ASAR				PcP	PcP	13 49 31.8	-0.4
	1.0nm,0.8s,baz=91,slow=2.7,SNR=7.5						
RPZ	Rata Peaks	32.95	172	P	P	13 46 51.2	+0.5
	1.9nm,0.5s,baz=323,slow=20,SNR=2.2						
FITZ	Fitzroy Crossi	38.50	255	P	P	13 47 37.6	-1.0
	1.8nm,0.6s,baz=100,slow=6.1,SNR=3.0						
BATI	Baumata	40.45	267	LR	LR	14 05 49.2	
	comp=Z,98nm,19.8s,baz=116,slow=38						
PPT2	Papeete2	44.56	104	eLR	LR	14 00 57.9	
	comp=Z,136nm,22.8s						
TBI	Tubuai	45.15	112	eLR	LR	14 01 10.1	
	comp=Z,348nm,28.5s						
RKT	Rikitea	58.42	110	eLR	LR	14 07 21.1	
	comp=Z,329nm,28.0s						
ASAJ	Asahikawa	58.54	341	P	P	13 50 12.1	-0.3
	7.2nm,0.8s,baz=214,slow=6.3,SNR=5.8						
USRK	Ussuriysk Ar.	62.59	334	P	P	13 50 40.0	0.0
	3.4nm,0.9s,baz=139,slow=11,SNR=3.6						
PETK	Petropavlovsk-	64.23	355	P	P	13 50 51.0	+0.2
	1.3nm,0.8s,baz=187,slow=6.8,SNR=3.5						
KLR	Kul'dur	66.74	337	P	P	13 51 07.3	+0.2
	2.5nm,1.0s,baz=132,slow=11,SNR=4.4						
CMAR	Chiang Mai Arr	71.31	294	P	P	13 51 36.8	+0.8
	0.3nm,0.4s,baz=101,slow=4.7,SNR=4.1						
SONM	Songino Array	78.17	324	P	P	13 52 15.9	+0.5
	1.2nm,0.9s,baz=134,slow=7.1,SNR=4.9						
QSPA	South Pole Qui	78.92	180	eP	P	13 52 19.4	+0.1
ILAR	Eielson Array	83.84	19	P	P	13 52 44.4	-0.6
	0.7nm,0.9s,baz=235,slow=4.8,SNR=6.4						
NVAR	Mina Array Bea	86.74	50	P	P	13 52 59.9	-0.5
	0.8nm,0.9s,baz=212,slow=8.1,SNR=4.4						
MKAR	Makanchi Array	92.94	317	P	P	13 53 29.3	+0.2
	0.9nm,0.7s,baz=124,slow=5.5,SNR=7.6						

IDC ***07*** *13:42:07.3±0.8, 27°.45N×56°.23E, h0km, mb4.1/25, mb1 4.2/27, mb1mx4.1/61, mbtmp4.1/27, ML3.8/2, Error ellipse: s-maj=17.5km s-min=13.9km az=175.0*

NEIC ***07*** *13:42:08.5±0.0, 27°.52N×56°.31E, h7km, mb4.3/2, MN4.0(TEH), After TEH.*

ISCJB ***07*** *13:42:08.8±0.6, 27°.58N±0°.02×56°.29E±0°.04, h14km±4km, mb4.1/34, Error ellipse: s-maj=6.3km s-min=3.5km az=176.7*

TEH ***07*** *13:42:08.5, 27°.52N×56°.31E, h7km, ML4.0*

THR ***07*** *13:42:09.1, 27°.44N×56°.30E, h15km, ML4.1*

DSN ***07*** *13:42:10.7±0.9, 27°.49N×56°.44E, h11km, ML3.6/9, Error ellipse: s-maj=30.1km s-min=7.9km az=102.0*

OMAN ***07*** *13:42:11.2±1.5, 27°.53N×56°.42E, h16km±14km, mb4.3/1, ml3.9/11, Error ellipse: s-maj=22.4km s-min=17.0km az=276.0*

ISC 07 13:42:09.1±1.0**, 27°.52N**±0°.03×**56°.32E**±0°.04**, h9**km±7km**, n102, σ1s.37**/107**, mb4.2**/36**, 2C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.17	228	ePg	Pg	13 42 12.2	-0.7
GENO				eSg	Sg	13 42 15.7	+0.2
GENO				IAMB	IAmb	13 42 23.3	
	comp=Z,0.0nm,0.6s						
NIAN	Nian	0.46	84	ePg	Pg	13 42 17.5	-0.6
NIAN				IAMB	IAmb	13 42 32.2	
	comp=Z,0.0nm,0.5s						
SHME	Shamm	1.47	186	eP	Pn	13 42 36.3	+0.5
	SNR=57						
SHME				S	Sg	13 42 57.2	+0.8
SHME	Shamm	1.47	186	ePn	Pn	13 42 36.5	+0.7
BANOM	Banah	1.59	181	eP	Pn	13 42 38.3	+0.9
	SNR=112						
BANOM	Banah	1.59	181	P	Pb	13 42 38.5	-0.1
	SNR=51						
BANOM				S	Sg	13 43 00.7	+0.6
UMQ	Umm Al-Quwin	2.07	197	ePn	Pb	13 42 48.1	+1.3
NGRK	Negar Kerman	2.15	10	ePn	Pn	13 42 46.8	+1.3
NGRK				IAMB	IAmb	13 43 19.5	
	comp=N,0.0nm,0.4s						
MSFE	Esma-Masafi	2.15	184	eP	Pb	13 42 47.2	-1.0
	SNR=42						
MSFE	Esma-Masafi	2.15	184	ePn	Pn	13 42 46.4	+1.2
MDH	Madha	2.21	180	eP	Pn	13 42 47.1	+1.2
	SNR=18						
MDH	Madha	2.21	180	P	Pn	13 42 47.2	+1.3
	SNR=28						
MDH				S	Sb	13 43 15.1	-1.5
MDH	Madha	2.21	180	ePn	Pn	13 42 46.9	+1.0
KRBR	Kerman	2.49	9	eAML	AML	13 43 35.5	
	comp=N,794nm,0.5s						
KRBR				ePn	Pb	13 42 52.7	-1.5
KRBR				eAML	AML	13 43 35.9	
	comp=E,1µm,0.6s						
TVBK	TV Kerman	2.49	9	ePn	Pn	13 42 52.1	+2.0
TVBK				IAMB	IAmb	13 43 32.9	
	comp=Z,0.0nm,0.3s						
UOSS	Minazif	2.56	182	eP	Pn	13 42 51.8	+1.0
	SNR=11						
UOSS	Minazif	2.56	182	P	Pn	13 42 52.0	+1.2
	SNR=11						
UOSS	Minazif	2.56	182	ePn	Pn	13 42 51.5	+0.7
CHMN	Cheshme madani	2.57	24	ePn	Pn	13 42 53.2	+2.0
CHMN				IAMB	IAmb	13 43 38.5	
	comp=Z,0.0nm,1.0s						
NAZ	Nazwa, Dubai	2.58	193	P	Pb	13 42 54.9	-0.7
	SNR=9.7						
NAZ	Nazwa, Dubai	2.58	193	ePn	Pb	13 42 53.9	-1.7
HATD	Hatta, Dubai	2.68	184	eP	Pn	13 42 54.5	+2.0
	SNR=11						
HATD	Hatta, Dubai	2.68	184	P	Pn	13 42 54.6	+2.0
	SNR=11						
HATD	Hatta, Dubai	2.68	184	ePn	Pn	13 42 54.3	+1.8
ASHO	Ashiyiah	2.83	185	eP	Pn	13 42 56.1	+1.6
	SNR=22						
ASHO	Ashiyiah	2.83	185	P	Pn	13 42 56.1	+1.6
	SNR=22						
ASHO	Ashiyiah	2.83	185	ePn	Pn	13 42 56.0	+1.5
FAQ	Al Faqa, Dubai	2.83	193	eP	Pn	13 42 56.2	+1.7
	SNR=8.0						
FAQ	Al Faqa, Dubai	2.83	193	P	Pn	13 42 56.5	+1.9
	SNR=8.1						
FAQ	Al Faqa, Dubai	2.83	193	ePn	Pn	13 42 55.4	+0.9
KHGB	Koh Gabri	2.85	3	ePn	Pn	13 42 57.4	+2.4
KHGB				IAMB	IAmb	13 43 47.5	
	comp=N,0.0nm,0.6s						
ASUD	Al Ashush, Dub	3.01	197	i P	Pn	13 42 58.9	+2.0
	SNR=7.3						
ASUD	Al Ashush, Dub	3.01	197	P	Pn	13 42 58.9	+2.0
	SNR=5.7						
ASUD	Al Ashush, Dub	3.01	197	ePn	Pn	13 42 59.0	+2.0
GHIR	Ghir-Karzin	3.05	285	ePn	Pn	13 42 59.1	+1.5
GHIR	Ghir-Karzin	3.05	285	ePn	Pn	13 42 59.1	+1.5
AJN	Ajban	3.17	202	ePn	Pb	13 43 08.1	+2.4
SOHO	SOHO	3.37	177	P	Pn	13 43 04.2	+2.3
ALNE	Al Ain	3.48	189	P	Pn	13 43 04.7	+1.2
ALNE	Al Ain	3.48	189	ePn	Pn	13 43 04.0	+0.5
HOQ	Hoqain	4.02	167	ePn	Pn	13 43 14.4	+3.6
IMEH	Mehriz	4.14	339	ePn	Pn	13 43 14.9	+2.2
IMEH				IAMB	IAmb	13 44 38.1	
	comp=Z,1µm,0.9s						
CHBR	Chabahar	4.19	116	ePn	Pn	13 43 14.3	+1.1
CHBR	Chabahar	4.19	116	ePn	Pn	13 43 14.3	+1.1
ZHSF	Zahedan	4.44	61	ePn	Pn	13 43 18.9	+2.1
ZHSF	Zahedan	4.44	61	ePn	Pn	13 43 18.9	+2.1
WSAR	Wadi Sarin	4.74	153	P	Pn	13 43 21.3	+0.4
	SNR=8.2						
WSAR				S	Sn	13 44 17.0	+1.0
YZKH	Yazd	5.08	343	ePn	Pn	13 43 27.6	+2.0
YZKH	Yazd	5.08	343	ePn	Pn	13 43 27.6	+2.0
MZR	Muzera	5.18	210	ePn	Pn	13 43 27.8	+1.0
IRAM	Ramesheh	5.48	322	ePn	Pn	13 43 32.2	+1.1
IRAM				IAMB	IAmb	13 45 02.1	
	comp=Z,579nm,0.6s						
TPRV	Parvadeh(Tabas	5.50	3	ePn	Pn	13 43 32.9	+1.6
TPRV				IAMB	IAmb	13 45 17.0	
	comp=Z,0.0nm,1.8s						
ANAR	Anarak	6.08	339	ePn	Pn	13 43 41.1	+1.8
IGAR	Gharneh	6.12	324	ePn	Pn	13 43 41.1	+1.2
IGAR				IAMB	IAmb	13 44 53.8	
	comp=Z,715nm,0.5s						
DMTO	DMTO	9.84	188	P	Pn	13 44 31.3	+0.6
	SNR=5.4						
NIL	Nilore	15.81	63	ePn	Pn	13 45 51.9	0.0
	comp=Z,19nm,0.7s						
MMAI	Mount Meron Ar	18.87	292	P	Pn	13 46 30.4	+0.2
	comp=Z,1.0nm,0.3s,baz=101,slow=17,SNR=6.1						
KBZ	Khabaz	19.47	330	P	Pn	13 46 37.9	+0.6
	comp=Z,0.1nm,0.3s,baz=161,slow=10,SNR=6.5						
AAK	Ala-Archa	21.12	40	P	P	13 46 55.0	+0.7
	SNR=8.0						
AAK	Ala-Archa	21.12	40	P	P	13 46 55.2	+0.9
	comp=Z,2.8nm,0.6s,baz=226,slow=7.9,SNR=12						
BR131	Keskin Array S	22.40	309	P	P	13 47 09.0	+1.0
	SNR=8.3						
BRTR	Keskin Array B	22.40	309	P	P	13 47 08.3	+0.3
	comp=Z,8.0nm,0.9s,baz=130,slow=14,SNR=13						
AKTO	Aktyubinsk	22.92	3	P	P	13 47 14.0	+0.7
	comp=Z,8.0nm,0.8s,baz=184,slow=9.2,SNR=14						
BVAR	Borovoye Array	27.55	19	P	P	13 47 56.1	0.0
	comp=Z,2.8nm,0.8s,baz=208,slow=12,SNR=12						
MKAR	Makanchi Array	28.05	40	P	P	13 48 01.1	+0.4
	comp=Z,0.6nm,0.5s,baz=237,slow=7.6,SNR=14						
KURBB	Kurchatov Arra	28.60	30	P	P	13 48 05.8	+0.4
	comp=Z,1.1nm,0.5s,baz=230,slow=8.6,SNR=9.8						
KURK	Kurchatov	28.70	30	P	P	13 48 05.8	-0.6
ARR	Arges	30.83	314	⇓iP	P	13 48 26.4	+1.0
AKASG	Malin Array Be	30.97	326	P	P	13 48 25.7	-0.7
	comp=Z,3.2nm,0.7s,baz=130,slow=8.4,SNR=14						
KIEV	Kiev	30.97	326	eP	P	13 48 23.9	-2.5
	comp=Z,2.7nm,0.7s						
KIEV	Kiev	30.97	326	⇑iP	P	13 48 25.8	-0.6
DRGR		32.63	315	⇑iP	P	13 48 40.9	-0.3
ZALV	Zalesovo Beam	33.69	31	P	P	13 48 50.4	+0.1
	comp=Z,2.8nm,0.3s,baz=239,slow=9.9,SNR=23						
CONA	Conrad Observa	37.38	314	i pP	P	13 49 24.5	+2.3
	comp=Z,7.6nm,1.6s						
ARSA	Arzberg	37.39	313	i pP	P	13 49 23.0	+0.7
	comp=Z,2.3nm,0.7s						
GTA	Gaotai	37.84	60	eP	P	13 49 26.8	+0.5
GTA				pP	pP	13 49 31.5	+2.2
GTA				sP	sP	13 49 34.1	+3.5
GTA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
MOA	Molln	38.38	313	i P	P	13 49 30.7	+0.1
	comp=Z,6.5nm,1.3s						
KBA	Koelnbreinsper	38.78	312	i P	P	13 49 32.5	-1.6
	comp=Z,11nm,1.9s						
GERES	GERESS Array B	39.03	315	P	P	13 49 35.5	-0.6
	comp=Z,1.0nm,0.6s,baz=101,slow=6.9,SNR=6.4						
FINES	FINESS Array B	39.49	338	P	P	13 49 39.4	-0.2
	comp=Z,4.3nm,0.5s,baz=143,slow=10.0,SNR=37						
WATA	Walderalm	40.01	312	i P	P	13 49 43.8	-0.5
	comp=Z,3.0nm,0.5s						
SQTA	Sankt Quirin	40.23	312	i P	P	13 49 44.8	-1.3
	comp=Z,7.4nm,0.5s						
MOTA	Moosalm	40.32	312	i P	P	13 49 45.6	-1.4
	comp=Z,3.0nm,0.5s						
FETA	Feichten	40.50	311	i P	P	13 49 46.0	-2.5
	comp=Z,5.3nm,0.7s						
DAVOX	Davos/Dischmat	41.02	311	P	P	13 49 51.8	-1.0
	comp=Z,5.3nm,0.9s,baz=107,slow=4.8,SNR=5.5						
DAVA	Damuels	41.12	311	i P	P	13 49 52.0	-1.5
	comp=Z,8.2nm,0.5s						
HFS	Hagfors	43.54	331	P	P	13 50 12.4	-0.5
	comp=Z,3.2nm,0.5s,baz=126,slow=10.0,SNR=21						
SONM	Songino Array	43.65	48	P	P	13 50 15.1	+1.0
	comp=Z,1.9nm,0.8s,baz=257,slow=9.0,SNR=12						
NB2	NORSAR Subarra	45.05	331	P	P	13 50 23.8	-1.2
	comp=Z,6.9nm,1.2s,baz=113,slow=7.9						
NOA	NORSAR Array B	45.05	331	P	P	13 50 24.0	-0.9
	comp=Z,2.1nm,0.7s,baz=116,slow=7.9,SNR=9.3						
NRIK	Noril'sk	45.64	15	P	P	13 50 30.5	+1.0
	comp=Z,2.9nm,0.5s,baz=189,slow=2.0,SNR=4.3						
ARCES	ARCESS Array B	45.70	345	P	P	13 50 30.3	+0.3
	comp=Z,3.6nm,0.9s,baz=147,slow=9.4,SNR=10.0						
ESDC	Sonseca Array	50.80	300	P	P	13 51 09.4	-0.5
	comp=Z,0.2nm,0.3s,baz=79,slow=6.7,SNR=2.9						
TORD	Torodi Ar. Bea	52.79	266	P	P	13 51 22.6	-2.4
	comp=Z,2.3nm,0.5s,baz=1.8,slow=4.5,SNR=29						
SPITS	Spitsbergen Ar	53.84	351	P	P	13 51 32.1	+0.2
	comp=Z,8.7nm,1.1s,baz=210,slow=7.8,SNR=2.3						
KSAR	Wonju Array Be	59.89	61	P	P	13 52 14.6	-0.7
KSRS	Korea Array	59.91	61	P	P	13 52 14.6	-0.9
	comp=Z,0.9nm,0.7s,baz=280,slow=6.5,SNR=2.9						
BOSA	Boshof	63.26	211	P	P	13 52 37.5	-0.7
	comp=Z,1.3nm,0.6s,baz=1.8,slow=4.1,SNR=4.9						
ILAR	Eielson Array	86.25	10	P	P	13 54 50.2	-0.6
	comp=Z,0.9nm,0.8s,baz=329,slow=3.4,SNR=10.0						
WRA	Warramunga Arr	88.99	113	P	P	13 55 04.3	-0.4
	comp=Z,0.3nm,0.6s,baz=312,slow=4.2,SNR=2.3						
YKA	Yellowknife Ar	90.01	356	P	P	13 55 09.3	+0.6
	comp=Z,1.3nm,0.9s,baz=2.6,slow=4.7,SNR=18						
ASAR	Alice Springs	90.48	116	P	P	13 55 13.5	+1.9
	comp=Z,0.4nm,0.8s,baz=316,slow=3.9,SNR=2.9						

MEX 07 13:43:34.9±0.5**, 28°.07N**×**112°.30W, h4**km±11km**, MD3.5, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.75	176	eP	Pg	13 43 47.8	-1.6
GUYB	Guaymas	1.27	98	eP	Pg	13 43 55.7	-3.6
GUYB				eS	Sg	13 44 12.3	-3.5
HSIG		1.51	51	eP	Pn	13 43 59.5	-3.4
HSIG				eS	Sn	13 44 17.9	-5.2

IDC ***07*** *13:45:35.3±0.8, 11°.66S×165°.12E, h0km, mb4.3/18, mb1 4.4/20, mb1mx4.3/38, mbtmp4.2/20, ML4.3/2, Error ellipse: s-maj=24.8km s-min=16.4km az=134.0*

NEIC ***07*** *13:45:37.1±0.3, 11°.57S×165°.06E, h10km, mb4.8/2, Error ellipse: s-maj=8.9km s-min=6.6km az=93.0*

ISCJB ***07*** *13:45:38.9±0.4, 11°.69S±0°.06×165°.01E±0°.08, h34km, mb4.2/20, Error ellipse: s-maj=11.0km s-min=8.2km az=0.7*

ISC 07 13:45:40.6±0.6**, 11°.62S**±0°.09×**165°.1E**±0°.1**, h34**km**, n49, σ0s.86**/45**, mb4.3**/20**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.50	293	ePn	Pn	13 46 59.8	-0.3
HNR	Honiara	5.50	293	Pn	Pn	13 46 59.9	-0.2
	12nm,0.3s,baz=157,slow=10.0,SNR=4.9						
DZM	Mont Dzumac	10.47	173	Pn	Pn	13 48 08.1	-0.4
	1.6nm,0.3s,baz=317,slow=13,SNR=19						
ONTNC	Ouen Toro	10.71	173	ePn	Pn	13 48 13.7	+2.1
PINNC	Pines Island,	11.16	169	ePn	Pn	13 48 17.7	-0.1
STKA	Stephens Creek	29.57	223	P	P	13 51 41.4	-1.1
	1.8nm,0.7s,baz=333,slow=14,SNR=3.5						
H11S2	WAKE ISLAND Hy	29.97	3	T	T	14 23 02.5	
	baz=181,slow=76,SNR=77						
H11S3	WAKE ISLAND Hy	29.97	3	T	T	14 23 02.8	
	baz=181,slow=76,SNR=92						
H11S1	WAKE ISLAND Hy	29.98	3	T	T	14 23 04.9	
	baz=181,slow=76,SNR=88						
WB2	Warramunga Arr	30.66	250	eP	P	13 51 51.9	-0.4
WR1	Warramunga Arr	30.67	250	eP	P	13 51 51.6	-0.7
WR1				ePcP	PcP	13 54 50.5	+0.5
WRA	Warramunga Arr	30.67	250	P	P	13 51 51.6	-0.7
	3.8nm,1.0s,baz=81,slow=9.4,SNR=11						
WRA				PcP	PcP	13 54 50.5	+0.5
	0.9nm,0.7s,baz=65,slow=2.3,SNR=3.8						
H11N1	WAKE ISLAND Hy	31.19	3	T	T	14 24 34.0	
	baz=182,slow=76,SNR=47						
H11N3	WAKE ISLAND Hy	31.20	3	T	T	14 24 34.5	
	baz=182,slow=76,SNR=44						
H11N2	WAKE ISLAND Hy	31.21	3	T	T	14 24 35.5	
	baz=182,slow=76,SNR=56						
ASAR	Alice Springs	31.95	244	P	P	13 52 02.5	-1.0
	2.0nm,0.9s,baz=72,slow=9.3,SNR=15						
FITZ	Fitzroy Crossi	38.60	256	P	P	13 53 00.5	-0.3
	1.1nm,0.6s,baz=141,slow=16,SNR=4.4						
MJAR	Matsushiro Arr	54.19	333	P	P	13 55 02.0	-0.8
	1.6nm,0.6s,baz=165,slow=10,SNR=4.6						
MAJO	Matsushiro	54.19	333	eP	P	13 55 02.0	-0.9
USRK	Ussuriysk Ar.	63.17	334	P	P	13 56 06.1	+0.9
	4.9nm,0.9s,baz=167,slow=9.4,SNR=4.9						
PETK	Petropavlovsk-	64.78	355	P	P	13 56 15.9	+0.3
	2.7nm,0.8s,baz=156,slow=7.8,SNR=4.1						
PEA1	Petropavlovsk-	64.79	355	eP	P	13 56 15.9	+0.3
KLR	Kul'dur	67.33	337	P	P	13 56 32.6	+0.6
	1.8nm,0.7s,baz=111,slow=5.9,SNR=5.7						
CMAR	Chiang Mai Arr	71.74	294	P	P	13 57 01.3	+1.3
	1.6nm,0.3s,baz=127,slow=6.9,SNR=7.0						
SEY	Seymchan	74.97	354	P	P	13 57 16.9	-1.2
	1.4nm,0.7s,baz=157,slow=9.1,SNR=4.8						
SONA0	Songino Array	78.74	324	eP	P	13 57 41.0	+1.1
SONM	Songino Array	78.74	324	P	P	13 57 41.0	+1.1
	1.3nm,0.7s,baz=146,slow=7.7,SNR=9.9						
SONA1	Songino Array	78.75	324	eP	P	13 57 40.5	+0.6
GTA	Gaotai	78.99	314	eP	P	13 57 42.8	+1.4
GTA				pP	PcP	13 57 48.0	-1.9
GTA				sP	pP	13 57 51.5	+1.0
HDA	Harding Lake	84.00	19	eP	P	13 58 07.3	+0.1
	4.7nm,0.8s						
IL1	Eielson Array	84.27	19	eP	P	13 58 08.2	-0.3
ILAR	Eielson Array	84.27	19	P	P	13 58 08.7	+0.1
	1.5nm,0.6s,baz=237,slow=5.1,SNR=24						
ILB	Eielson Array	84.27	19	eP	P	13 58 07.4	-1.1
SCRK	Sand Creek	84.68	20	eP	P	13 58 11.0	+0.3
	8.2nm,1.1s						
NVAR	Mina Array Bea	86.89	50	P	P	13 58 23.2	+0.7
	2.6nm,1.0s,baz=248,slow=9.7,SNR=7.6						
MK01	Makanchi Array	93.48	317	eP	P	13 58 52.7	-0.2
MK31	Makanchi Array	93.49	317	eP	P	13 58 51.5	-1.5
MK32	Makanchi Array	93.49	317	eP	P	13 58 53.4	+0.4
MKAR	Makanchi Array	93.49	317	P	P	13 58 53.4	+0.4
	2.3nm,0.8s,baz=95,slow=5.5,SNR=19						
ZALV	Zalesovo Beam	93.64	324	P	P	13 58 53.2	-0.2
	0.8nm,0.7s,baz=88,slow=15,SNR=4.1						
ZAA1	Zalesovo Array	93.64	324	eP	P	13 58 53.2	-0.2
PDAR	Pinedale Array	94.42	47	P	P	13 58 56.6	-1.0
	0.5nm,0.9s,baz=211,slow=1.6,SNR=3.7						
YKA	Yellowknife Ar	95.78	27	P	P	13 59 02.0	-1.0
	0.8nm,0.8s,baz=255,slow=4.7,SNR=13						
LTX	Lajitas	96.68	62	eP	P	13 59 08.4	+0.4
TXAR	Lajitas Array	96.68	62	P	P	13 59 08.4	+0.4
	0.2nm,0.7s,baz=226,slow=6.2,SNR=3.4						
WVT	Waverly	110.53	56	ePdif	Pdif	14 00 07.5	-2.0
Y49A	Blount Mountai	111.71	58	ePdif	Pdif	14 00 13.9	-0.9
ARA0	ARCESS Array S	116.72	345	ePKPdf	PKiKP	14 04 20.7	-0.2
ARCES	ARCESS Array B	116.72	345	PKP	PKiKP	14 04 20.7	-0.2
	1.5nm,0.8s,baz=71,slow=4.4,SNR=7.0						

ISCJB ***07*** *13:46:34.7±0.2, 10°.84S±0°.03×165°.68E±0°.04, h10km, mb4.7/47, MS4.4/6, Error ellipse: s-maj=5.4km s-min=4.2km az=165.8*

IDC ***07*** *13:46:34.0±0.5, 10°.74S×165°.76E, h0km, mb4.5/23, mb1 4.6/25, mb1mx4.5/41, mbtmp4.5/25, ML4.7/2, MS4.2/5, Ms1 4.2/5, ms1mx3.7/34, Error ellipse: s-maj=16.4km s-min=13.3km az=106.0*

NEIC ***07*** *13:46:35.7±0.3, 10°.75S×165°.71E, h10km, mb5.2/23, Error ellipse: s-maj=6.9km s-min=5.2km az=75.0*

ISC 07 13:46:35.5±0.4**, 10°.77S**±0°.05×**165°.81E**±0°.06**, h10**km**, n124, σ1s.62**/123**, mb4.7**/47**, MS4.3**/6**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.93	282	ePn	Pn	13 48 00.2	-3.2
HNR				Sn	Sn	13 49 12.3	+0.9
HNR	Honiara	5.93	282	Pn	Pn	13 48 01.8	-1.6
	24nm,0.3s,baz=354,slow=21,SNR=6.7						
HNR				Sn	Sn	13 49 12.3	+0.9
	18nm,0.3s,baz=350,slow=19,SNR=1.9						
HNR				LR	LR	13 50 20.9	
	comp=Z,3µm,18.7s,baz=104,slow=39						
MARNC	Mare, Loyalty	10.86	169	ePn	Pn	13 49 13.0	+1.9
DZM	Mont Dzumac	11.26	177	ePn	Pn	13 49 18.8	+2.2
	52nm,0.4s						
DZM				eLR	LR	13 51 51.1	
	comp=Z,1µm,25.8s						
DZM	Mont Dzumac	11.26	177	ePn	Pn	13 49 18.4	+1.9
DZM				eSn	Sn	13 51 22.2	-0.4
DZM	Mont Dzumac	11.26	177	Pn	Pn	13 49 18.8	+2.2
	4.4nm,0.3s,baz=359,slow=21,SNR=14						
DZM				Sn	Sn	13 51 18.5	-4.1
	2.0nm,0.3s,baz=43,slow=19,SNR=5.5						
DZM				LR	LR	13 52 34.6	
	comp=Z,765nm,21.9s,baz=22,slow=32						
ONTNC	Ouen Toro	11.49	177	ePn	Pn	13 49 20.8	+1.2
ONTNC				eSn	Sn	13 51 25.7	-2.4
PINNC	Pines Island,	11.88	173	ePn	Pn	13 49 27.2	+2.2
MSVF	Nonsavu	13.73	122	ePn	Pn	13 49 50.7	+0.3
TARA	Tarawa	13.97	31	eP	P	13 49 57.0	-4.7
EIDS	Eidsvold	20.14	222	eP	Pn	13 51 11.2	-0.6
	25nm,0.9s						
MANU	Manus Island	20.26	294	eP	Pn	13 51 12.7	-0.6
	64nm,0.8s						
CTA	Charters Tower	20.99	241	P	Pn	13 51 20.2	-1.6
	15nm,0.9s,baz=75,slow=13,SNR=7.2						
CTAO	Charters Tower	20.99	241	eP	Pn	13 51 19.7	-2.0
	25nm,0.8s						
COEN	Coen	22.34	260	eP	P	13 51 33.6	-0.1
	13nm,0.9s						
ARMA	Armidale	23.59	212	eP	P	13 51 47.5	+0.9
	18nm,1.1s						
RAO	Raoul Island	23.86	143	eP	P	13 51 49.8	+0.7
	548nm,1.0s						
OUZ	Omahuta	25.35	165	eP	P	13 52 03.4	+0.7
	49nm,0.9s						
HIZ	Hauiti	28.79	165	eP	P	13 52 34.9	+1.4
	50nm,0.9s						
OMRZ	Omania	28.82	163	P	P	13 52 37.8	+3.8
HAZ	Te Kaha	28.94	160	P	P	13 52 36.8	+1.8
MXZ	Matakaoa Point	28.95	159	P	P	13 52 37.5	+2.5
RUGZ	Raukumara Rang	29.10	160	P	P	13 52 38.1	+1.6
URZ	Urewera	29.19	162	eP	P	13 52 37.9	+0.7
	61nm,1.1s						
URZ	Urewera	29.19	162	P	P	13 52 37.8	+0.7
	36nm,0.9s,baz=337,slow=2.2,SNR=17						
URZ	Urewera	29.19	162	P	P	13 52 38.0	+0.9
PRRZ	Plateau Road	29.19	163	P	P	13 52 39.9	+2.7
MWZ	Matawai	29.39	161	P	P	13 52 39.6	+0.7
TWGZ	Tauwhareparae	29.39	160	P	P	13 52 39.4	+0.4
RTZ	Ruatahuna	29.47	162	P	P	13 52 41.0	+1.2
RAGZ	Rawiri	29.50	161	P	P	13 52 41.3	+1.3
MRHZ	Matea Rd	29.51	163	P	P	13 52 42.0	+1.9
TKGZ	Te Karaka	29.59	161	P	P	13 52 41.4	+0.7
BKZ	Black Stump Fm	29.84	163	eP	P	13 52 43.6	+0.6
	61nm,0.5s						
STKA	Stephens Creek	30.69	223	eP	P	13 52 50.3	-0.2
	1.4nm,0.9s						
STKA	Stephens Creek	30.69	223	P	P	13 52 51.2	+0.6
	4.7nm,0.9s,baz=58,slow=7.9,SNR=5.5						
BFZ	Birch Farm	31.19	165	eP	P	13 52 54.1	-0.7
	149nm,1.3s						
SNZO	South Karori	31.41	167	eP	P	13 52 56.9	+0.1
	55nm,1.0s						
THZ	Tophouse	31.50	170	eP	P	13 52 57.5	-0.1
	34nm,0.9s						
WRAB	Tennant Creek	31.63	249	eP	P	13 52 57.9	-1.1
	28nm,1.5s						
WB2	Warramunga Arr	31.63	249	eP	P	13 52 57.1	-1.8
WRA	Warramunga Arr	31.64	249	P	P	13 52 58.0	-1.1
	6.6nm,0.8s,baz=80,slow=9.3,SNR=20						
WRA				PcP	PcP	13 55 51.4	0.0
	0.5nm,0.5s,baz=72,slow=3.1,SNR=4.8						
WRA				LR	LR	14 05 24.4	
	comp=Z,270nm,18.4s,baz=60,slow=36						
KHZ	Kahutara	32.24	169	eP	P	13 53 03.9	-0.1
	22nm,0.9s						
TOO	Toolangi	32.34	211	eP	P	13 53 05.8	+0.7
	9.7nm,0.8s						
LTZ	Lake Taylor	32.39	171	eP	P	13 53 06.6	+1.3
	47nm,0.8s						
FOZ	Fox Glacier	32.83	175	eP	P	13 53 10.4	+1.3
	26nm,0.8s						
OXZ	Oxford	32.88	172	eP	P	13 53 10.4	+0.8
	33nm,0.7s						
AS01	Alice Springs	32.93	243	eP	P	13 53 08.6	-1.8
AS31	Alice Springs	32.97	243	eP	P	13 53 09.0	-1.8
ASAR	Alice Springs	32.98	243	P	P	13 53 09.3	-1.5
	6.8nm,0.8s,baz=73,slow=9.5,SNR=26						
ASAR				PcP	PcP	13 55 54.9	-0.1
	2.0nm,1.0s,baz=97,slow=2.9,SNR=6.0						

RPZ	Rata Peaks	33.14	173	P	P	13 53 12.6	+0.6
	24nm,0.8s,baz=323,slow=2.3,SNR=16						
RPZ				LR	LR	14 06 13.9	
	comp=Z,364nm,18.1s,baz=12,slow=36						
LBZ	Lake Benmore	33.71	174	eP	P	13 53 18.4	+1.5
	28nm,1.3s						
FITZ	Fitzroy Crossi	39.52	255	eP	P	13 54 06.7	0.0
	6.6nm,0.9s						
FITZ	Fitzroy Crossi	39.52	255	P	P	13 54 06.8	0.0
	4.8nm,0.8s,baz=126,slow=5.0,SNR=7.3						
PPT2	Papeete2	43.70	104	eLR	LR	14 06 58.3	
	comp=Z,229nm,22.2s						
TBI	Tubuai	44.37	112	eS	S	14 01 30.7	+10
	348nm,28.5s						
TBI				eLR	LR	14 07 19.5	
	comp=Z,442nm,28.8s						
NWAO	Narrogin (SRO)	49.67	236	P	P	13 55 27.6	-0.2
	6.9nm,0.9s,baz=347,slow=10,SNR=3.5						
NWAO				LR	LR	14 16 21.1	
	comp=Z,768nm,19.3s,baz=310,slow=36						
MJAR	Matsushiro Arr	53.76	332	P	P	13 55 57.8	-0.3
	3.1nm,0.7s,baz=174,slow=8.3,SNR=4.9						
ASAJ	Asahikawa	58.56	341	P	P	13 56 32.9	+0.6
	12nm,0.8s,baz=223,slow=12,SNR=4.7						
KSRS	Korea Array	59.69	326	P	P	13 56 41.0	+0.7
	1.6nm,0.9s,baz=138,slow=6.5,SNR=3.1						
KSAR	Wonju Array Be	59.70	325	P	P	13 56 41.0	+0.6
YSS	Yuzh-Sakhalins	61.05	342	eP	P	13 56 51.7	+2.4
	54nm,1.4s						
NJ2	Nanjing	61.87	315	eP	P	13 56 56.2	+1.0
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
CN2	Changchun	65.54	329	eP	P	13 57 22.5	+3.3
VNDA	Vanda	66.77	181	P	P	13 57 27.2	+0.6
	comp=Z,3.8nm,0.9s,baz=348,slow=14,SNR=2.4						
KLR	Kul'dur	66.83	336	P	P	13 57 27.5	+0.1
	comp=Z,3.0nm,0.8s,baz=250,slow=2.3,SNR=5.1						
GYA	Guiyang	68.32	304	P	P	13 57 40.5	+3.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	69.98	312	P	P	13 57 49.2	+1.7
XAN				pP	sP	13 57 57.0	+5.0
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KMI	Kunming	71.03	301	P	P	13 57 55.8	+1.4
KMI				pP	sP	13 58 02.4	+3.6
KMI				sP	PcP	13 58 04.7	-10
KMI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KMI				pmax	pmax		
	comp=Z,110nm,4.1s						
HHC	Hu-ho-hao-te	71.67	320	eP	P	13 57 58.0	+0.3
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,320nm,5.6s						
CMAR	Chiang Mai Arr	72.06	293	P	P	13 58 00.7	+0.2
	comp=Z,0.6nm,0.3s,baz=104,slow=4.6,SNR=4.4						
CHTO	Chiang Mai	72.17	294	P	P	13 58 10.0	+8.9
	comp=Z,20nm,0.9s						
CD2	Chengdu	72.49	307	P	P	13 58 06.1	+3.3
SEY	Seymchan	74.21	354	P	P	13 58 11.6	-0.5
	comp=Z,2.6nm,1.0s,baz=110,slow=12,SNR=3.4						
LZH	Lanzhou	74.62	312	eP	P	13 58 16.7	+1.3
LZH				pP	PcP	13 58 23.7	-6.0
LZH				sP	sP	13 58 27.5	+7.6
LZH				PP	PP	14 01 06.3	+3.9
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,99nm,4.9s						
LZH				LR	LR		
	comp=N,230nm,16.6s						
LZH				LR	LR		
	comp=E,260nm,16.0s						
LZH				LR	LR		
	comp=Z,240nm,17.8s						
SONM	Songino Array	78.48	324	P	P	13 58 37.1	+0.1
	comp=Z,1.3nm,0.8s,baz=141,slow=5.0,SNR=6.8						
GTA	Gaotai	78.92	314	⇓P	P	13 58 40.5	+1.0
GTA				pP	PcP	13 58 48.2	0.0
GTA				sP	sP	13 58 51.0	+7.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,140nm,5.4s						
GTA				LR	LR		
	comp=N,170nm,16.8s						
GTA				LR	LR		
	comp=E,150nm,16.5s						
GTA				LR	LR		
	comp=Z,100nm,17.1s						
HDA	Harding Lake	82.96	19	P	P	13 59 01.4	+1.0
	baz=227						
TCOL	CIGO, UAF Yank	83.00	18	P	P	13 59 00.8	+0.3
	baz=226						
ILAR	Eielson Array	83.23	18	P	P	13 59 02.7	+0.9
	comp=Z,3.0nm,0.7s,baz=231,slow=5.9,SNR=17						
ISA	Isabella, Lake	84.85	52	P	P	13 59 12.4	+1.5
	baz=253						
EDW2	Edwards Air Fo	85.00	53	P	P	13 59 13.2	+1.7
	baz=253						
J05D	Fort Rock, OR	85.21	44	P	P	13 59 14.2	+1.6
	baz=250						
CWC	Cottonwood Cre	85.39	52	P	P	13 59 14.7	+1.1
	baz=253						
LRMC	Laurel Mtn Rad	85.42	53	P	P	13 59 15.7	+1.9
	baz=254						
MPMC	Manual Prospec	85.73	52	P	P	13 59 15.2	-0.2
	baz=254						
NVAR	Mina Array Bea	85.80	50	P	P	13 59 16.7	+1.0
	comp=Z,2.9nm,0.9s,baz=232,slow=7.0,SNR=10						
SWSC	Sam W. Stewart	86.23	56	P	P	13 59 19.1	+1.5
	baz=255						
HEC	Hector,Ludlow	86.30	54	P	P	13 59 19.4	+1.3
	baz=254						
FURC	Furnace Creek,	86.33	52	P	P	13 59 19.4	+1.4
	baz=254						
BELC	Belle Mtn. Jos	86.34	55	P	P	13 59 19.9	+1.5
	baz=254						
BC3	Big Chuckawall	86.69	55	P	P	13 59 21.8	+1.7
	baz=255						
GMRC	Granite Mounta	86.82	54	P	P	13 59 21.7	+1.0
	baz=255						
GLA	Glamis	87.04	56	P	P	13 59 22.8	+1.1
	baz=255						
IRM	Iron Mountain	87.07	55	P	P	13 59 23.3	+1.5
	baz=255						
Y12C	Blythe	87.47	55	P	P	13 59 25.6	+1.9
	baz=255						
R11A	Troy Canyon, C	87.82	50	P	P	13 59 25.9	+0.4
	baz=255						
PDMCI	Parker Dam,Lak	87.91	55	P	P	13 59 27.1	+1.4
	baz=256						
214A	Organ Pipe Nat	88.43	57	P	P	13 59 30.2	+1.9
	baz=256						
WMQ	Urumqi	88.95	315	eP	P	13 59 32.9	+2.3
WMQ				LR	LR		
	comp=N,110nm,30.9s						
WMQ				LR	LR		
	comp=E,230nm,30.9s						
WMQ				LR	LR		
	comp=Z,140nm,24.1s						
HLID	Hailey	90.04	46	P	P	13 59 37.2	+1.4
	baz=255						
TUC	Tucson	90.18	57	P	P	13 59 38.8	+2.2
	baz=258						
DUG	Dugway, Tooele	90.37	49	P	P	13 59 38.8	+1.4
	baz=256						
WUAZ	Wupatki	90.41	54	P	P	13 59 39.4	+1.6
	baz=257						
BOZ	Bozeman (W)	92.45	44	P	P	13 59 48.2	+1.2
	baz=257						
PDAR	Pinedale Array	93.32	47	P	P	13 59 51.2	+0.1
	comp=Z,1.1nm,0.9s,baz=254,slow=3.7,SNR=6.4						
MKAR	Makanchi Array	93.37	317	P	P	13 59 51.0	0.0
	comp=Z,1.4nm,0.8s,baz=92,slow=6.2,SNR=8.5						
MKAR				PKKP	PKKPdf	14 16 57.7	-0.9
	comp=Z,0.7nm,0.7s,baz=291,slow=2.4,SNR=8.2						
ZALV	Zalesovo Beam	93.37	324	P	P	13 59 50.3	-0.4
	comp=Z,1.3nm,0.7s,baz=66,slow=4.0,SNR=5.3						
EGMT	Eagleton	94.22	42	P	P	13 59 56.2	+1.2
	baz=259						
YKA	Yellowknife Ar	94.70	27	P	P	13 59 55.7	-1.0
	comp=Z,0.9nm,0.8s,baz=255,slow=4.6,SNR=11						
TXAR	Lajitas Array	95.64	61	P	P	14 00 02.5	+0.6
	comp=Z,0.2nm,0.7s,baz=221,slow=6.7,SNR=2.9						
BVAR	Borovoye Array	101.77	322	Pdiff	Pdif	14 00 35.9	+7.1
	comp=Z,0.9nm,0.8s,baz=108,slow=4.7,SNR=4.8						
ARCES	ARCESS Array B	116.08	346	PKP	PKPdf	14 05 17.6	-0.7
	comp=Z,1.3nm,0.7s,baz=66,slow=3.0,SNR=6.1						
FINES	FINESS Array B	121.54	339	PKP	PKPdf	14 05 26.7	-2.3
	comp=Z,0.5nm,0.5s,baz=266,slow=5.6,SNR=2.1						
CPUP	Villa Florida	124.16	132	PKP	PKiKP	14 05 34.7	-0.7
	comp=Z,1.8nm,0.7s,baz=6.4,slow=6.5,SNR=4.9						
BOSA	Boshof	125.36	223	PKP	PKPdf	14 05 35.8	-1.8
	comp=Z,2.1nm,0.8s,baz=163,slow=17,SNR=2.8						
NOA	NORSAR Array B	126.45	345	PKP	PKiKP	14 05 38.0	-1.0
	comp=Z,1.0nm,0.8s,baz=36,slow=2.1,SNR=1.4						
AKASG	Malin Array Be	126.67	327	PKP	PKiKP	14 05 38.5	-1.2
	comp=Z,0.1nm,0.3s,baz=70,slow=1.9,SNR=2.3						
CLL	Collm	133.88	337	ePKPdf	PKiKP	14 05 54.0	-0.1
GERES	GERESS Array B	135.49	334	PKP	PKiKP	14 05 56.3	-1.3
	comp=Z,0.6nm,0.5s,baz=106,slow=3.2,SNR=4.7						
BDFB	Brasilia	137.45	128	PKP	PKiKP	14 06 00.6	-2.0
	comp=Z,2.9nm,0.7s,baz=179,slow=20,SNR=4.0						
KEST	Kesra	147.24	323	PKPbc	PKiKP	14 06 20.4	-1.7
	comp=Z,5.4nm,0.8s,baz=297,slow=17,SNR=2.4						
ESDC	Sonseca Array	149.81	344	PKPbc	PKiKP	14 06 26.5	-0.7
	comp=Z,0.4nm,0.4s,baz=12,slow=2.9,SNR=4.6						
TORD	Torodi Ar. Bea	164.28	280	PKP	PKPdf	14 06 39.6	-0.8
	comp=Z,0.8nm,1.0s,baz=343,slow=3.0,SNR=3.3						
TORD				PKPab	pPKPab	14 07 34.9	-2.9
	comp=Z,0.6nm,1.0s,baz=35,slow=5.3,SNR=3.0						

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*IDC **07** 14:05:22.6±0.9, 11°.57S×165°.22E, h0^{km}, mb4.1/12, mb1 4.2/13, mb1mx4.1/41, mbtmp4.1/13, ML4.0/1, Error ellipse: s-maj=31.1km s-min=20.0km az=123.0*

*ISCJB **07** 14:05:26.3±0.6, 11°.7S±0°.1×165°.2E±0°.2, h34^{km}, mb4.0/12, Error ellipse: s-maj=21.6km s-min=14.2km az=11.6*

ISC 07 14:05:27.8±0.7, **11°.6S**±0°.1×**165°.2E**±0°.2, **h34^{km}, n13,** σ**0s.60**/13, **mb4.0**/12, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.47	174	Pn	Pn	14 07 55.6	0.0
	1.2nm,0.3s,baz=97,slow=19,SNR=11						
STKA	Stephens Creek	29.68	224	P	P	14 11 30.5	-0.1
	2.5nm,0.8s,baz=101,slow=15,SNR=2.9						
WRA	Warramunga Arr	30.81	251	P	P	14 11 40.3	-0.5
	7.1nm,0.9s,baz=80,slow=9.2,SNR=33						
ASAR	Alice Springs	32.08	244	P	P	14 11 51.3	-0.7
	2.8nm,0.9s,baz=76,slow=9.6,SNR=18						
CMAR	Chiang Mai Arr	71.87	294	P	P	14 16 49.2	+1.3
	0.5nm,0.4s,baz=128,slow=5.4,SNR=5.2						
QSPA	South Pole Qui	78.39	180	P	P	14 17 25.4	+0.5
	2.2nm,1.0s,baz=359,slow=5.7,SNR=3.6						
SONM	Songino Array	78.82	324	P	P	14 17 27.5	0.0
	0.8nm,0.8s,baz=158,slow=4.8,SNR=4.8						
ILAR	Eielson Array	84.21	19	P	P	14 17 55.0	-0.4
	0.4nm,0.7s,baz=235,slow=5.1,SNR=8.7						
TIXI	Tiksi	86.55	349	P	P	14 18 07.1	+0.2
	1.4nm,0.4s,baz=139,slow=0.5,SNR=4.0						
NVAR	Mina Array Bea	86.78	50	P	P	14 18 09.5	+0.4
	0.7nm,0.7s,baz=239,slow=10,SNR=4.4						
MKAR	Makanchi Array	93.58	317	P	P	14 18 40.5	-0.1
	0.4nm,0.7s,baz=104,slow=4.5,SNR=4.1						
ZALV	Zalesovo Beam	93.71	324	P	P	14 18 40.6	-0.3
	0.4nm,0.6s,baz=108,slow=4.7,SNR=2.4						
YKA	Yellowknife Ar	95.71	27	P	P	14 18 49.2	-0.7
	0.2nm,0.8s,baz=242,slow=4.8,SNR=3.5						

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*ISCJB **07** 14:05:53.2±1.7, 11°.05S±0°.03×164°.77E±0°.03, h2^{km}±10^{km}, mb5.0/145, MS4.4/12, Error ellipse: s-maj=5.5km s-min=4.5km az=179.3*

*IDC **07** 14:05:53.7±0.4, 11°.08S×164°.91E, h0^{km}, mb5.0/29, mb1 5.0/30, mb1mx4.9/40, mbtmp5.0/30, ML5.2/1, MS4.1/4, Ms1 4.1/4, ms1mx3.9/8, Error ellipse: s-maj=14.5km s-min=11.6km az=101.0*

*NEIC **07** 14:05:56.1±0.1, 11°.03S×164°.84E, h10^{km}, mb5.0/103, Error ellipse: s-maj=4.5km s-min=4.0km az=124.0*

*MOS **07** 14:05:57.9±1.2, 11°.01S×164°.76E, h33^{km}, mb5.2/52, MS4.2/4, Error ellipse: s-maj=8.5km s-min=7.6km az=123.4*

*GCMT **07** 14:05:58.1±0.2, 11°.22S±0°.02×164°.74E±0°.01, h12^{km}, MW5.1/98, Moment Tensor Solution. s51,c59; s98,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.86±.09; $M_{\theta\theta}$1.17±.10; $M_{\phi\phi}$3.69±.09; $M_{r\theta}$-2.91±.37; $M_{\theta\phi}$0.16±.08; $M_{\phi r}$1.37±.34; Best double couple: $M_0$5.08200×10^{16} NP1:ϕ_s155.00000°, δ59.00000°, λ-113.00000°. NP2: ϕ_s14.00000°, δ37.00000°, λ-57.00000°. Principal axes: T 3.9500, Plg12.0000°, Azm261.0000°; N 2.2650, Plg19.0000°, Azm167.0000°; P -6.2140, Plg67.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 14:05:58.3±1.5, **11°.10S**±0°.05×**164°.83E**±0°.05, **h27^{km}**±10^{km}, **n344,** σ**1s.26**/355, **mb5.0**/145, **MS4.4**/13, **10C-3D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.08	289	ePn	Pn	14 07 12.6	-0.2
HNR				Sn	Sn	14 08 10.6	-0.1
HNR	Honiara	5.08	289	eP	Pn	14 07 12.6	-0.2
HNR						14 08 10.6	
HNR	Honiara	5.08	289	Pn	Pn	14 07 13.0	+0.2
	92nm,0.3s,baz=214,slow=1.6,SNR=37						
HNR				Sn	Sn	14 08 10.6	-0.1
	40nm,0.3s,baz=225,slow=20,SNR=3.9						
MARNC	Mare, Loyalty	10.77	164	ePn	Pn	14 08 31.9	+1.2
DZM	Mont Dzumac	11.02	172	ePn	Pn	14 08 34.2	-0.1
	327nm,1.1s						
DZM				eLR	LR	14 11 07.8	
	comp=Z,3µm,25.8s						
DZM	Mont Dzumac	11.02	172	ePn	Pn	14 08 34.2	-0.1
DZM				Sn	Sn	14 10 31.1	-5.6
DZM	Mont Dzumac	11.02	172	Pn	Pn	14 08 29.8	-4.5
	0.7nm,0.3s,baz=320,slow=11,SNR=7.0						
DZM				Sn	Sn	14 10 31.1	-5.6
	baz=87,slow=19,SNR=1.1						
DZM				LR	LR	14 12 11.1	
	comp=Z,2µm,18.3s,baz=29,slow=34						
PINNC	Pines Island,	11.71	168	ePn	Pn	14 08 44.0	+0.2
RABL	Rabaul	14.30	298	ePn	Pn	14 09 18.8	-0.4
FUNA	Funafuti	14.39	81	ePn	Pn	14 09 21.2	+0.9
MSVF	Nonsavu	14.40	119	ePn	Pn	14 09 21.8	+1.2
MSVF	Nonsavu	14.40	119	eP	Pn	14 09 21.8	+1.2
EIDS	Eidsvold	19.25	221	eP	Pn	14 10 23.3	+1.4
	173nm,1.8s						
MANU	Manus Island	19.53	296	eP	Pn	14 10 24.5	-0.8
	297nm,1.4s						
CTA	Charters Tower	19.98	241	P	P	14 10 28.7	-0.1
	50nm,0.9s,baz=69,slow=13,SNR=24						
CTAO	Charters Tower	19.98	241	eP	Pn	14 10 30.8	+0.2
	72nm,1.0s						
CTAO	Charters Tower	19.98	241	eP	Pn	14 10 30.8	+0.2
CTAO				pmax	pmax		
	comp=Z,72nm,1.0s						
MTSU	Mount Surprise	21.03	248	P	P	14 10 42.0	+1.8
	baz=21,SNR=27						
COEN	Coen	21.32	260	P	P	14 10 43.9	+0.5
	baz=22,SNR=9.4						
COEN	Coen	21.32	260	eP	P	14 10 44.2	+0.8
	comp=Z,72nm,1.4s						
RMQ	Roma	21.54	223	P	P	14 10 47.1	+1.5
	baz=22,SNR=4.2						
ARMA	Armidale	22.80	211	P	P	14 11 00.0	+0.8
	baz=23,SNR=4.4						
ARMA	Armidale	22.80	211	eP	P	14 11 00.6	+1.4
	comp=Z,43nm,1.1s						
QLP	Quilpie	24.78	229	P	P	14 11 18.8	+0.8
	baz=25,SNR=16						
OUZ	Omahuta	25.30	163	eP	P	14 11 25.1	+2.5
	comp=Z,75nm,1.3s						
QIS	Mount Isa	25.99	246	P	P	14 11 29.1	0.0
	baz=26,SNR=18						
URZ	Urewera	29.19	160	P	P	14 11 56.4	-1.1
	comp=Z,10nm,1.0s,baz=293,slow=7.7,SNR=3.2						
URZ				LR	LR	14 22 20.9	
	comp=Z,305nm,19.6s,baz=1.5,slow=34						
H11S2	WAKE ISLAND Hy	29.46	4	T	T	14 43 05.2	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.47	4	T	T	14 42 53.6	
	baz=184,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.48	4	T	T	14 43 05.8	
	baz=184,slow=76,SNR=12						
STKA	Stephens Creek	29.79	223	P	P	14 12 03.6	+0.7
	baz=30,SNR=6.7						
STKA	Stephens Creek	29.79	223	eP	P	14 12 03.8	+0.8
STKA				PcP	PcP	14 15 06.8	+0.5
STKA	Stephens Creek	29.79	223	P	P	14 12 02.6	-0.3
	comp=Z,6.3nm,0.8s,baz=58,slow=13,SNR=8.0						
STKA				PcP	PcP	14 15 06.8	+0.5
	comp=Z,4.6nm,0.8s,baz=353,slow=2.6,SNR=4.1						
BKZ	Black Stump Fm	29.82	162	eP	P	14 12 05.2	+2.1
	comp=Z,39nm,1.3s						
WRAB	Tennant Creek	30.61	250	eP	P	14 12 10.3	-0.1
	comp=Z,66nm,0.9s						
WRAB	Tennant Creek	30.61	250	ceP	P	14 12 10.8	+0.4
WRAB				pmax	pmax		
	comp=Z,82nm,1.0s						
WB2	Warramunga Arr	30.61	250	eP	P	14 12 10.3	-0.1
WRA	Warramunga Arr	30.62	250	P	P	14 12 10.3	-0.2
	comp=Z,86nm,1.0s,baz=80,slow=9.1,SNR=84						
WRA				PcP	PcP	14 15 09.2	+0.5
	comp=Z,6.6nm,1.0s,baz=86,slow=2.5,SNR=9.6						
H11N1	WAKE ISLAND Hy	30.69	4	T	T	14 44 32.9	
	baz=183,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.70	4	T	T	14 44 38.0	
	baz=183,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	30.71	4	T	T	14 44 37.1	
	baz=183,slow=76,SNR=10						
THZ	Tophouse	31.35	168	eP	P	14 12 18.0	+1.3
	comp=Z,27nm,1.0s						
TOO	Toolangi	31.56	210	P	P	14 12 19.9	+1.4
	baz=32,SNR=6.9						
TOO	Toolangi	31.56	210	eP	P	14 12 20.0	+1.4
	comp=Z,65nm,1.7s						
TOO	Toolangi	31.56	210	eP	P	14 12 20.0	+1.4
TOO				pmax	pmax		
	comp=Z,65nm,1.7s						
KDU	Kakadu	31.69	264	P	P	14 12 18.3	-1.6
	baz=32,SNR=5.1						
AS01	Alice Springs	31.92	243	eP	P	14 12 18.8	-3.1
AS31	Alice Springs	31.96	243	eP	P	14 12 21.9	-0.4
	comp=Z,8.3nm,0.8s						
ASAR	Alice Springs	31.96	243	P	P	14 12 22.1	-0.2
	comp=Z,32nm,0.8s,baz=65,slow=10,SNR=84						
ASAR				PcP	PcP	14 15 12.7	+0.4
	comp=Z,6.5nm,0.9s,baz=75,slow=2.9,SNR=13						
LTZ	Lake Taylor	32.22	170	eP	P	14 12 27.3	+3.0
	comp=Z,17nm,0.7s						
HTT	Hallett	32.52	223	P	P	14 12 26.8	-0.2
	baz=33,SNR=3.5						
FOZ	Fox Glacier	32.60	173	eP	P	14 12 28.6	+1.1
	comp=Z,26nm,1.1s						
RPZ	Rata Peaks	32.94	172	eP	P	14 12 31.7	+1.2
	comp=Z,16nm,0.8s						
RPZ	Rata Peaks	32.94	172	P	P	14 12 30.3	-0.3
	comp=Z,12nm,0.8s,baz=348,slow=7.9,SNR=6.0						
BBOO	Buckleboo	34.13	226	P	P	14 12 41.6	+0.5
	baz=34,SNR=5.6						
BBOO	Buckleboo	34.13	226	eP	P	14 12 41.7	+0.6
	comp=Z,33nm,1.0s						
DCZ	Deep Cove	34.30	177	eP	P	14 12 42.8	+0.5
	comp=Z,45nm,1.2s						
KNRA	Kununurra	35.35	259	P	P	14 12 51.6	-0.2
	baz=36,SNR=21						
RAR	Rarotonga	35.38	111	P	P	14 12 51.0	-1.0
	comp=Z,14nm,0.5s,baz=106,slow=7.9,SNR=3.5						
RAR				LR	LR	14 22 51.1	
	comp=Z,263nm,21.4s,baz=30,slow=29						
WRKA	Warakurna	37.25	243	P	P	14 13 07.7	-0.4
	baz=38,SNR=27						
FITZ	Fitzroy Crossi	38.49	255	P	P	14 13 18.2	-0.4
	baz=39,SNR=15						
FITZ	Fitzroy Crossi	38.49	255	eP	P	14 13 17.8	-0.8
	comp=Z,65nm,1.0s						
FITZ	Fitzroy Crossi	38.49	255	P	P	14 13 18.4	-0.2
	comp=Z,54nm,0.9s,baz=86,slow=6.0,SNR=57						
FORT	Forrest	39.27	234	P	P	14 13 25.0	+0.1
	baz=40,SNR=6.7						
FORT	Forrest	39.27	234	eP	P	14 13 25.4	+0.5
	comp=Z,76nm,1.0s						
SANI	Sanana	39.57	280	P	P	14 13 26.3	-1.3
BATI	Baumata	40.44	267	P	P	14 13 34.7	-0.2
	comp=Z,13nm,0.5s,baz=60,slow=8.1,SNR=4.1						
MBWA	Marble Bar	44.33	251	eP	P	14 14 07.7	+1.3
	comp=Z,37nm,1.0s						
PPT2	Papeete2	44.56	104	eS	S	14 20 46.6	+3.8
	comp=Z,269nm,28.5s						
PPT2				eLR	LR	14 26 34.7	
	comp=Z,1µm,28.2s,baz=282						
BNSI	Bone	44.77	275	P	P	14 14 09.8	-0.2
TBI	Tubuai	45.15	112	eLR	LR	14 26 50.6	
	comp=Z,2µm,29.8s						
PCI	Palu	45.81	280	P	P	14 14 18.5	+0.2
MEEK	Meekatharra	46.11	244	P	P	14 14 21.1	+0.5
	baz=46,SNR=10						
KLBR	Kellerberrin	47.92	237	P	P	14 14 35.1	+0.5
	baz=48,SNR=6.4						
NWAO	Narrogin (SRO)	48.69	236	P	P	14 14 40.0	-0.4
	comp=Z,20nm,0.9s,baz=308,slow=9.1,SNR=5.6						
MORW	Morawa	48.81	241	P	P	14 14 43.1	+1.6
	baz=49,SNR=5.4						
MORW	Morawa	48.81	241	eP	P	14 14 43.3	+1.9
	comp=Z,45nm,0.9s						
KKM	Kota Kinabalu	51.29	287	eP	P	14 15 00.9	+0.2
	comp=Z,29nm,1.0s						
INU	Inuyama	53.17	332	eP	P	14 15 15.2	+1.1
	comp=Z,62nm,1.2s						
MJAR	Matsushiro Arr	53.61	333	P	P	14 15 16.6	-0.8
	comp=Z,25nm,0.9s,baz=171,slow=8.6,SNR=25						
MAJO	Matsushiro	53.62	333	eP	P	14 15 17.3	0.0
	comp=Z,44nm,1.0s						
MAJO	Matsushiro	53.62	333	eP	P	14 15 17.3	0.0
MAJO				pmax	pmax		
	comp=Z,44nm,1.0s						
MAT	Matsushiro	53.62	333	P	P	14 15 16.7	-0.6
MJB9	Matsu-Tunnel	53.62	333	eP	P	14 15 17.9	+0.5
	comp=Z,44nm,1.0s						
TAOE	Nuku Hiva Isla	54.18	93	eLR	LR	14 30 51.9	
	comp=Z,518nm,26.7s						
JNU	Nakatsue	54.61	325	eP	P	14 15 25.3	+0.6
	comp=Z,50nm,1.0s						
YULB	Yu-li	54.67	309	eP	P	14 15 27.6	+2.3
	comp=Z,41nm,1.1s						
TPI	Tanjungpandan	57.28	274	P	P	14 15 52.4	+8.3
RKT	Rikitea	58.41	110	eS	S	14 23 54.6	+1.0
	comp=Z,146nm,30.0s						
RKT				eLR	LR	14 33 00.2	
	comp=Z,2µm,28.0s						
ASAJ	Asahikawa	58.56	341	P	P	14 15 52.9	+0.4
	comp=Z,58nm,0.9s,baz=235,slow=6.4,SNR=16						
SSE	Sheshan	59.27	316	eP	P	14 15 57.9	+0.2
	comp=Z,79nm,0.9s						
KSRS	Korea Array	59.42	326	P	P	14 15 58.2	-0.4
	comp=Z,16nm,0.9s,baz=141,slow=7.1,SNR=22						
KSAR	Wonju Array Be	59.43	326	P	P	14 15 58.2	-0.5
KSAR	Wonju Array Be	59.43	326	P	P	14 15 58.2	-0.5
KS01	Wonju Array Si	59.45	326	eP	P	14 15 59.1	+0.3
YSS	Yuzh-Sakhalins	61.07	343	eP	P	14 16 10.6	+0.8
	comp=Z,74nm,1.2s						
YSS	Yuzh-Sakhalins	61.07	343	eP	P	14 16 10.4	+0.7
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
NJ2	Nanjing	61.43	316	eP	P	14 16 13.0	+0.5
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
QIZ	Qiongzhong	61.92	299	P	P	14 16 15.9	-0.1
QIZ				S	S	14 24 40.2	+1.5
QIZ				pmax	pmax		
	comp=Z,140nm,5.5s						
QIZ				LR	LR		
	comp=N,220nm,23.0s						
QIZ				LR	LR		
	comp=E,240nm,26.5s						
QIZ				LR	LR		
	comp=Z,340nm,24.5s						
USA0B	Ussuriysk Arra	62.60	334	eP	P	14 16 21.3	+1.2
	comp=Z,65nm,1.3s						
USRK	Ussuriysk Ar.	62.60	334	P	P	14 16 21.1	+1.1
	comp=Z,31nm,1.0s,baz=140,slow=5.6,SNR=22						
WHN	Wuhan	63.76	312	⇑P	P	14 16 28.7	+0.6
MDJ	Mudanjiang	63.98	333	eP	P	14 16 30.0	+0.7
	comp=Z,39nm,1.0s						
PET	Petropavlovsk	64.09	356	i P	P	14 16 28.8	-0.9
PET				pmax	pmax		
	comp=Z,38nm,1.1s						
PEA0B	Petropavlovsk-	64.25	355	eP	P	14 16 32.6	+1.8
	comp=Z,52nm,1.1s						
PETK	Petropavlovsk-	64.25	355	eP	P	14 16 31.1	+0.2

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PETK  Petropavlovsk-   64.25 355   P      P       14 16 31.0 +0.2
PETK                               pmax   pmax
      comp=Z,22nm,1.0s
PETK  Petropavlovsk-   64.25 355   P      P       14 16 30.9 +0.2
      comp=Z,22nm,1.0s,baz=141,slow=5.6,SNR=12
TYV   Tymovskoe        64.66 345  eP      P       14 16 22.9  -11
TYV                                pmax   pmax
      comp=Z,500nm,4.1s
TYV                                pmax   pmax
      comp=Z,10.0nm,3.1s
CN2   Changchun        65.33 330  eP      P       14 16 40.8 +2.7
IPM   Ipoh             65.34 280  eP      P       14 16 39.4 +0.6
      comp=Z,19nm,1.0s
MNSI  Mandailing Nat   65.90 276   P      P       14 16 41.9 -0.5
CASY  Casey            66.00 201  eP      P       14 16 42.7 +0.7
      comp=Z,12nm,1.0s
SKNT  Sakolnakorn      66.29 294   P      P       14 16 45.9 +1.1
      comp=Z,11nm,1.0s,comp=Z,843nm
GRNR  Gornyy           66.40 341  eP      P       14 16 46.7 +1.9
VNDA  Vanda            66.42 181   P      P       14 16 45.7 +1.1
VNDA                               pmax   pmax
      comp=Z,14nm,1.3s
VNDA  Vanda            66.42 181   P      P       14 16 45.7 +1.1
      comp=Z,12nm,1.1s,baz=17,slow=8.8,SNR=3.9
KLR   Kul'dur          66.76 337  eP      P       14 16 48.3 +1.2
ENH   Enshi            67.24 309  eP      P       14 16 50.2 -0.4
      comp=Z,39nm,0.9s
NONG  Nongkai          67.42 295   P      P       14 16 53.1 +1.1
      comp=Z,0.5nm,1.1s
GYA   Guiyang          67.71 305⇑iP      P       14 16 54.6 +0.8
GYA                                PP     PP      14 19 22.3 -1.2
GYA                                S      S       14 25 52.0 +1.9
GYA   Guiyang          67.71 305   SS     SS      14 30 15.5 +3.7
GYA                                pmax   pmax
      comp=Z,20nm,1.0s
GYA                                pmax   pmax
      comp=Z,120nm,7.7s
GYA                                LR     LR
      comp=N,550nm,18.9s
GYA                                LR     LR
      comp=E,580nm,18.4s
GYA                                LR     LR
      comp=Z,520nm,18.6s
BJT   Baijiatuau       67.96 322  eP      P       14 16 55.7 +0.8
      comp=Z,19nm,1.1s
BJT   Baijiatuau       67.96 322  eP      P       14 16 55.7 +0.8
BJT                                pmax   pmax
      comp=Z,19nm,1.1s
BJI   Beijing          67.97 322⇓iP      P       14 16 55.7 +0.8
BJI                                pmax   pmax
      comp=Z,11nm,1.1s
PBKT  Sadao Pong       68.87 293  eP      P       14 17 02.7 +1.7
PBKT  Sadao Pong       68.87 293   P      P       14 17 02.8 +1.7
      comp=Z,11nm,0.9s
XAN   Xi'an            69.50 313   P      P       14 17 04.4 -0.3
XAN                                pP     pwP     14 17 15.2 -2.9
XAN                                sP     sP      14 17 20.5 +6.1
XAN                                pmax   pmax
      comp=Z,28nm,0.9s
XAN   Xi'an            69.50 313  eP      P       14 17 04.8  0.0
      comp=Z,21nm,0.8s
XAN   Xi'an            69.50 313  eP      P       14 17 04.8  0.0
XAN                                pmax   pmax
      comp=Z,21nm,0.8s
UTTA  Uttaradit        69.63 294   P      P       14 17 08.0 +2.2
UTHA  Uthaitani        69.94 291   P      P       14 17 10.6 +2.9
KMI   Kunming          70.39 302   P      P       14 17 12.2 +1.6
KMI                                pP     sP      14 17 17.4 -2.8
KMI                                sP     sP      14 17 19.9 -0.3
KMI                                S      S       14 26 26.0 +4.0
KMI                                pmax   pmax
      comp=Z,19nm,1.3s
KMI                                pmax   pmax
      comp=Z,120nm,3.1s
KMI                                LR     LR
      comp=N,160nm,17.4s
KMI                                LR     LR
      comp=E,250nm,21.0s
KMI                                LR     LR
      comp=Z,280nm,22.2s
KMI   Kunming          70.39 302  eP      P       14 17 12.8 +2.2
      comp=Z,39nm,1.4s
KMI   Kunming          70.39 302  eP      P       14 17 12.8 +2.2
KMI                                pmax   pmax
      comp=Z,39nm,1.4s
HHC   Hu-ho-hao-te     71.30 320  eP      P       14 17 17.5 +1.8
HHC                                pmax   pmax
      comp=Z,23nm,1.0s
HHC                                pmax   pmax
      comp=Z,220nm,6.6s
CMAR  Chiang Mai Arr   71.31 294   P      P       14 17 17.0 +0.9
      comp=Z,6.5nm,0.9s,baz=111,slow=4.5,SNR=28
MA2   Magadan          71.35 353  eP      P       14 17 14.3 -1.1
      comp=Z,8.3nm,1.0s
MA2   Magadan          71.35 353ceP      P       14 17 13.7 -1.7
MA2                                pmax   pmax
      comp=Z,26nm,2.5s
MA2   Magadan          71.35 353   P      P       14 17 14.3 -1.1
      comp=Z,5.0nm,0.8s,baz=184,slow=5.0,SNR=7.9
CMMT  Chiang Mai       71.42 294   P      P       14 17 18.1 +1.3
CHTO  Chiang Mai       71.43 294  eP      P       14 17 17.8 +1.0
      comp=Z,9.9nm,1.1s
CHTO  Chiang Mai       71.43 294  eP      P       14 17 17.8 +1.0
CHTO                               pmax   pmax
      comp=Z,10.0nm,1.1s
CHTO  Chiang Mai       71.43 294   P      P       14 17 18.1 +1.3
      comp=Z,37nm,1.3s
CD2   Chengdu          71.92 308⇓iP      P       14 17 20.3 +0.7
CD2                                pmax   pmax
      comp=Z,90nm,1.1s
CD2                                pmax   pmax
      comp=Z,230nm,4.5s
HIA   Hailar           71.98 331  eP      P       14 17 20.0 +0.5
      comp=Z,48nm,1.0s
HIA   Hailar           71.98 331  eP      P       14 17 20.0 +0.5
HIA                                pmax   pmax
      comp=Z,48nm,1.0s
ZEA   Zeya             72.05 338  eP      P       14 17 19.9 +0.1
ZEA                                pmax   pmax
      comp=N,46nm,1.4s
ZEA                                pmax   pmax
      comp=Z,60nm,1.4s
LZH   Lanzhou          74.13 313  eP      P       14 17 33.6 +0.9
LZH                                pP     pP      14 17 38.4 -1.4
LZH                                sP     sP      14 17 40.3 -2.1
LZH                                PP     PP      14 20 19.9 +1.3
LZH                                pmax   pmax
      comp=Z,47nm,1.0s
LZH                                pmax   pmax
      comp=Z,170nm,4.7s
LZH                                LR     LR
      comp=N,520nm,16.6s
LZH                                LR     LR
      comp=E,540nm,16.1s
LZH                                LR     LR
      comp=Z,610nm,17.7s
SEY   Seymchan         74.44 354ceP      P       14 17 32.1 -1.5
GAMB  Gambell          76.79  10  eP      P       14 17 47.5 +0.4
      comp=Z,20nm,1.1s
KDAK  Kodiak Island    76.97  22   P      P       14 17 47.9 -0.3
      comp=Z,12nm,0.9s,baz=180,slow=2.0,SNR=3.2
YAK   Yakutsk          77.90 344  eP      P       14 17 52.7 -0.6
YAK                               e               14 18 00.4
YAK                               e*PP    PcP     14 18 02.8 -0.3
YAK                               eS      S       14 27 46.1 +1.6
YAK                               e*SS    SKSac   14 28 00.0 -5.1
YAK                               e               14 28 11.5
YAK                               eSS     SS      14 32 41.5 -4.4
YAK                               eSSS    SSS     14 36 04.7
YAK                                pmax   pmax
      comp=Z,33nm,0.9s
YAK                                pmax   pmax
      comp=N,11nm,1.0s
YAK                                pmax   pmax
      comp=E,7.0nm,1.1s
YAK                                pmax   pmax
      comp=Z,243nm,4.8s
YAK                                smax   smax
      comp=E,674nm,5.0s
YAK                                smax   smax
      comp=N,118nm,4.1s
YAK                                MLR    MLR
      comp=Z,121nm,17.0s
YAK                                MLR    MLR
      comp=E,128nm,17.0s
YAK                                MLR    MLR
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      comp=N,73nm,23.0s
SONM  Songino Array    78.18 324   P      P       14 17 55.8 +0.4
      comp=N,17nm,1.1s,baz=137,slow=5.7,SNR=38
SONA1 Songino Array    78.19 324  eP      P       14 17 55.6 +0.1
SVW2  Sparrevohn       78.45  18  eP      P       14 17 56.7 +0.2
      comp=N,25nm,1.2s
GTA   Gaotai           78.45 314   P      P       14 17 57.6 +0.5
GTA                                pP     pP      14 18 03.0 -1.3
GTA                                sP     sP      14 18 06.0 -0.8
GTA                                pmax   pmax
      comp=Z,26nm,1.1s
GTA                                pmax   pmax
      comp=Z,110nm,7.6s
GTA                                LR     LR
      comp=N,160nm,17.8s
GTA                                LR     LR
      comp=E,260nm,19.7s
GTA                                LR     LR
      comp=Z,270nm,20.3s
ANM   Nome             78.74  13  eP      P       14 17 58.6 +0.6
      comp=Z,19nm,1.5s
RSO   Redoubt South    78.88  20  eP      P       14 17 60.0 +0.9
QSPA  South Pole Qui   78.90 180   P      P       14 17 59.8 +0.6
      comp=Z,30nm,1.0s,baz=358,slow=1.5,SNR=48
BILL  Bilibino         78.94   1  eP      P       14 17 58.4 -0.6
      comp=Z,8.2nm,0.9s
BILL  Bilibino         78.94   1⇑eP      P       14 17 58.1 -0.9
BILL                              e               14 18 07.4
BILL                              e               14 21 02.8
BILL                              i S     S       14 27 44.5  -11
BILL                               pmax   pmax
      comp=Z,12nm,1.3s
BILL                               MLR    MLR
      comp=Z,92nm,17.0s
BOD   Bodaibo          80.20 335  eP      P       14 18 05.0 -1.1
BOD                                pmax   pmax
      comp=Z,9.0nm,2.2s
ZAK   Zakamensk        81.23 325  eP      P       14 18 10.3 -1.6
ZAK                                pmax   pmax
      comp=Z,11nm,1.1s
CAST  Castle Rocks     81.28  18  eP      P       14 18 11.7 -0.1
      comp=Z,11nm,0.9s
LSA   Lhasa            81.62 302  eP      P       14 18 17.4 +2.5
      comp=Z,14nm,1.4s
TLY   Talaya           81.67 327  eP      P       14 18 14.2  0.0
      comp=Z,33nm,1.1s
TLY   Talaya           81.67 327  i P     P       14 18 13.8 -0.3
DIV   Divide           81.80  22  eP      P       14 18 14.3 -0.3
      comp=Z,11nm,1.0s
TRF   Thorofare Moun   81.86  19  eP      P       14 18 14.8 -0.2
      comp=Z,18nm,1.3s
KLU   Klutina          81.98  22  eP      P       14 18 17.5 +1.9
      comp=Z,17nm,1.3s
RDOG  Red Dog Mine     82.26  12  eP      P       14 18 17.5 +0.6
      comp=Z,19nm,1.0s
RND   Reindeer         82.29  19  eP      P       14 18 19.4 +2.2
      comp=Z,9.0nm,1.1s
MCK   McKinley         82.49  19  eP      P       14 18 17.8 -0.3
      comp=Z,16nm,1.2s
MCK   McKinley         82.49  19  eP      P       14 18 17.8 -0.3
MCK                                pmax   pmax
      comp=Z,16nm,1.2s
IM3   Indian Mountai   82.72  16  eP      P       14 18 19.1 -0.2
MLY   Manley           82.86  17  eP      P       14 18 21.7 +1.6
      comp=Z,7.2nm,1.0s
WRH   Wood River Hil   83.27  19  eP      P       14 18 21.1 -1.0
      comp=Z,14nm,1.1s
MDM   Murphy Dome      83.57  18  eP      P       14 18 23.1 -0.6
      comp=Z,17nm,1.1s
HDA   Harding Lake     83.59  19  eP      P       14 18 23.2 -0.6
      comp=Z,27nm,1.0s
HDA   Harding Lake     83.59  19   P      P       14 18 22.8 -1.0
      baz=227
TCOL  CIGO, UAF Yank   83.62  18   P      P       14 18 22.8 -1.1
      baz=226
COLA  College          83.62  18  eP      P       14 18 22.9 -1.0
      comp=Z,18nm,1.0s
COLA  College          83.62  18  eP      P       14 18 22.3 -1.6
COLA                               pmax   pmax
      comp=Z,18nm,1.0s
RIDG  Independ'e Rid   83.84  20  eP      P       14 18 25.0 -0.2
      comp=Z,25nm,1.5s
IL1   Eielson Array    83.86  19  eP      P       14 18 23.4 -1.7
ILAR  Eielson Array    83.86  19   P      P       14 18 24.0 -1.1
      comp=Z,5.7nm,1.0s,baz=226,slow=6.0,SNR=24
ILB   Eielson Array    83.86  19  eP      P       14 18 23.9 -1.3
POKR  Poker Plat Res   83.92  18   P      P       14 18 24.1 -1.4
      baz=227
SCRK  Sand Creek       84.28  20  eP      P       14 18 27.1 -0.4
      comp=Z,9.4nm,1.2s
COLD  Coldfoot         84.60  16  eP      P       14 18 30.5 +1.6
      comp=Z,8.8nm,1.4s
KNGR  Kungurtug, Tuv   84.62 324  eP      P       14 18 28.6 -0.9
ORV   Oroville         84.72  48  eP      P       14 18 29.9 -0.2
      comp=Z,6.1nm,1.1s
ORV   Oroville         84.72  48  eP      P       14 18 29.9 -0.2
ORV                                pmax   pmax
      comp=Z,6.0nm,1.1s
O03E  Paynes Creek     84.75  47   P      P       14 18 30.2 -0.1
      baz=251
AFDM  Forest Hills D   84.92  49  eP      P       14 18 31.4 +0.3
      comp=Z,8.2nm,1.0s
CMB   Columbia Colle   85.07  50  eP      P       14 18 31.6 -0.3
      comp=Z,5.2nm,0.9s
CMB   Columbia Colle   85.07  50  eP      P       14 18 31.6 -0.3
CMB                                pmax   pmax
      comp=Z,5.0nm,0.9s
M04C  Macdoel          85.21  46   P      P       14 18 32.8 +0.1
      baz=251
JIRN  Jiri             85.23 299  eP      P       14 18 33.0 -0.4
      comp=Z,48nm,1.2s
GUN   Gumba            85.56 299  eP      P       14 18 35.3 +0.3
      comp=Z,36nm,1.2s
ISA   Isabella, Lake   85.82  53  eP      P       14 18 35.7  0.0
      comp=Z,6.8nm,1.1s
ISA   Isabella, Lake   85.82  53   P      P       14 18 35.8  0.0
      baz=253
PKI   Pulchoki         85.88 299  eP      P       14 18 36.5 -0.1
      comp=Z,38nm,1.2s
PKIN  Phulchoki        85.89 299  eP      P       14 18 36.4 -0.2
      comp=Z,29nm,1.2s
WAKR  Walker           85.92  50  eP      P       14 18 37.7 +1.3
      comp=Z,9.2nm,1.1s
MDPB  Devils Postpil   85.93  51  eP      P       14 18 37.0 +0.4
      comp=Z,10nm,1.1s
DAWY  Dawson           85.94  21  eP      P       14 18 36.5 +0.9
      comp=Z,8.6nm,1.2s
EDW2  Edwards Air Fo   85.98  53   P      P       14 18 37.0 +0.5
      baz=254
TIXI  Tiksi            85.98 349  eP      P       14 18 35.2 -0.4
TIXI  Tiksi            85.98 349ceP      P       14 18 33.6 -2.0
TIXI                               pmax   pmax
      comp=Z,5.0nm,1.0s
TIXI  Tiksi            85.98 349   P      P       14 18 35.0 -0.6
      comp=Z,3.3nm,0.8s,baz=134,slow=3.8,SNR=7.3
J05D  Fort Rock, OR    86.12  45   P      P       14 18 37.6 +0.4
      baz=251
DMN   Daman            86.15 299  eP      P       14 18 38.0 +0.2
      comp=Z,50nm,1.3s
PAHR  Pah Rah Range    86.32  49  eP      P       14 18 38.9 +0.6
      comp=Z,6.4nm,1.1s
MOD   Modoc Plateau    86.33  46  eP      P       14 18 37.8 -0.5
      comp=Z,32nm,1.9s
LRMC  Laurel Mtn Rad   86.39  53   P      P       14 18 38.6 -0.1
      baz=254
RYN   Ryan             86.64  50  eP      P       14 18 40.4 +0.5
      comp=Z,17nm,1.8s
MONP2 Monument Peak    86.69  56   P      P       14 18 40.7 +0.4
      baz=255
NV01  Mina Array Sit   86.75  50  eP      P       14 18 40.5  0.0
NVAR  Mina Array Bea   86.75  50   P      P       14 18 40.5  0.0
      comp=Z,5.9nm,0.9s,baz=234,slow=7.9,SNR=19
NV11  Mina Array Sit   86.86  50  eP      P       14 18 41.0 +0.1
      comp=Z,0.5nm,0.9s
GSC   Goldstone, Bar   87.03  53   P      P       14 18 42.3 +0.5
      baz=254
KVN   Kaiserville      87.08  49  eP      P       14 18 42.4 +0.3
      comp=Z,4.0nm,0.9s
KVN   Kaiserville      87.08  49  eP      P       14 18 42.4 +0.3
KVN                                pmax   pmax
      comp=Z,4.0nm,0.9s
FURC  Furnace Creek,   87.30  52   P      P       14 18 42.8 -0.1
      baz=254
BELC  Belle Mtn. Jos   87.33  55   P      P       14 18 43.5 +0.2
      baz=255
KOLN  Koldanda         87.48 299  eP      P       14 18 43.1 -1.2
      comp=Z,12nm,1.0s
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DANN  Dangsing         87.48 299  eP      P       14 18 42.5 -1.9
      comp=Z,20nm,1.2s
WVOR  Wild Horse Val   87.67  46  eP      P       14 18 44.8  0.0
      comp=Z,9.7nm,1.1s
WVOR  Wild Horse Val   87.67  46  eP      P       14 18 44.8  0.0
WVOR                               pmax   pmax
      comp=Z,10.0nm,1.1s
TUQ   Turquoise Moun   87.76  53   P      P       14 18 45.3  0.0
      baz=255
TPNV  Topopah Spring   87.91  52   P      P       14 18 45.8 -0.2
      baz=254
GLA   Glamis           88.03  56  eP      P       14 18 47.4 +0.8
      comp=Z,7.6nm,0.9s
GLA   Glamis           88.03  56  eP      P       14 18 47.4 +0.8
GLA                                pmax   pmax
      comp=Z,8.0nm,0.9s
GLA   Glamis           88.03  56   P      P       14 18 47.2 +0.6
      baz=256
IRM   Iron Mountain    88.05  55   P      P       14 18 46.5 -0.1
      baz=255
J08A  Circle Bar Ran   88.06  45  eP      P       14 18 46.6  0.0
      comp=Z,12nm,1.1s
PYUN  Piuthan          88.08 299  eP      P       14 18 46.4 -0.7
      comp=Z,18nm,1.1s
G08A  Pilot Rock       88.30  43  eP      P       14 18 48.0 +0.3
      comp=Z,10nm,1.0s
Y12C  Blythe           88.45  55  eP      P       14 18 49.0 +0.6
      comp=Z,8.0nm,1.1s
Y12C  Blythe           88.45  55   P      P       14 18 48.9 +0.5
      baz=256
WMQ   Urumqi           88.50 315   P      P       14 18 49.9 +1.3
WMQ                                PcP    PcP     14 18 50.8 +0.6
WMQ   Urumqi           88.50 315   SKS    SKSac   14 29 16.2 +0.2
WMQ                                pmax   pmax
      comp=Z,19nm,1.3s
WMQ                                pmax   pmax
      comp=Z,340nm,3.7s
WMQ                                LR     LR
      comp=N,170nm,21.3s
WMQ                                LR     LR
      comp=E,270nm,19.7s
WMQ                                LR     LR
      comp=Z,250nm,34.7s
E08A  Dider Farm, El   88.60  42  eP      P       14 18 49.1 +0.2
      comp=Z,10nm,1.1s
R11A  Troy Canyon, C   88.78  51   P      P       14 18 50.6 +0.4
      baz=255
PDMCI Parker Dam,Lak   88.89  55   P      P       14 18 51.2 +0.7
      baz=256
214A  Organ Pipe Nat   89.42  57   P      P       14 18 53.8 +0.7
      baz=257
ELK   Elko             89.66  48  eP      P       14 18 55.0 +0.7
      comp=Z,4.4nm,1.4s
ELK   Elko             89.66  48  eP      P       14 18 55.0 +0.7
ELK                                pmax   pmax
      comp=Z,4.0nm,1.4s
PSUT  Pine Spring      90.14  51  eP      P       14 18 57.4 +0.8
      comp=Z,3.2nm,0.8s
LCMT  Little Creek M   90.25  52  eP      P       14 18 57.6 +0.6
      comp=Z,4.9nm,1.0s
CCUT  Cedar City       90.28  52  eP      P       14 18 58.5 +1.2
      comp=Z,6.9nm,1.0s
DGZ   Jazzator, Alta   90.37 321d iP      P       14 18 56.0 -1.3
DGZ                                pmax   pmax
      comp=Z,4.0nm,1.0s
SZCU  Shurtz Canyon    90.51  52  eP      P       14 18 59.4 +1.1
      comp=Z,5.3nm,1.1s
KNB   Kanab            90.58  52  eP      P       14 18 59.8 +1.2
      comp=Z,5.4nm,1.1s
KNB   Kanab            90.58  52  eP      P       14 18 59.8 +1.2
KNB                                pmax   pmax
      comp=Z,5.0nm,1.1s
U15A  North Rim        90.86  53  eP      P       14 19 00.8 +0.8
      comp=Z,6.8nm,0.9s
HLID  Hailey           90.96  46  eP      P       14 19 00.7 +0.5
      comp=Z,5.1nm,1.0s
HLID  Hailey           90.96  46   P      P       14 19 00.7 +0.5
      baz=256
PKCU  Pink Cliffs      91.08  52  eP      P       14 19 03.0 +1.9
      comp=Z,10nm,1.0s
X16A  Lo Mia Camp, P   91.09  55  eP      P       14 19 02.4 +1.3
      comp=Z,4.3nm,0.9s
TUC   Tucson           91.17  57   P      P       14 19 02.3 +0.9
      baz=258
MTPU  Mount Pierson    91.31  52  eP      P       14 19 03.5 +1.2
      comp=Z,7.1nm,1.1s
DUG   Dugway, Tooele   91.32  49   P      P       14 19 02.6 +0.6
      baz=257
BGU   Big Grassy Mou   91.33  49  eP      P       14 19 02.2 +0.2
      comp=Z,4.8nm,1.1s
WUAZ  Wupatki          91.38  54  eP      P       14 19 03.5 +1.1
      comp=Z,5.0nm,0.9s
WUAZ  Wupatki          91.38  54   P      P       14 19 03.5 +1.1
      baz=257
MSU   Marysvale        91.42  51  eP      P       14 19 03.7 +1.2
MSU   Marysvale        91.42  51  eP      P       14 19 03.7 +1.2
SYO   Syowa Base       91.46 197⇑esP     P       14 19 09.2 +7.3
HVU   Hansel Valley    91.71  48  eP      P       14 19 04.2 +0.4
      comp=Z,8.3nm,1.0s
HVU   Hansel Valley    91.71  48  eP      P       14 19 04.2 +0.4
HVU                                pmax   pmax
      comp=Z,8.0nm,1.0s
NLU   North Lily Min   91.82  50  eP      P       14 19 05.3 +0.9
      comp=Z,6.3nm,1.1s
CTU   Camp Tracy       92.22  49  eP      P       14 19 06.4 +0.2
      comp=Z,9.1nm,1.2s
MCMT  McKenzie Canyo   92.36  45  eP      P       14 19 07.7 +1.0
TCUT  Toone Canyon     92.57  49  eP      P       14 19 08.7 +0.8
      comp=Z,8.8nm,1.0s
DLMT  Dillon           92.65  44  eP      P       14 19 08.4 +0.4
      comp=Z,14nm,1.0s
LRM   Limekiln Ridge   92.86  44  eP      P       14 19 08.9 -0.1
MK01  Makanchi Array   92.94 317  eP      P       14 19 06.5 -2.6
MK31  Makanchi Array   92.95 317  eP      P       14 19 09.1 -0.1
MKAR  Makanchi Array   92.95 317   P      P       14 19 09.1 -0.1
      comp=Z,6.9nm,0.9s,baz=99,slow=6.3,SNR=33
MKAR                               PKKP   PKKPdf  14 36 18.0 -1.4
      comp=Z,0.9nm,0.9s,baz=298,slow=3.6,SNR=7.7
MKAR                               LR     LR      15 00 05.1
      comp=Z,108nm,21.9s,baz=116,slow=35
ZAA0  Zalesovo Array   93.08 324  eP      P       14 19 08.9 -0.6
      comp=Z,14nm,1.3s
ZALV  Zalesovo Beam    93.08 324  eP      P       14 19 07.9 -1.6
ZALV  Zalesovo Beam    93.08 324   P      P       14 19 08.8 -0.7
      comp=Z,8.2nm,1.1s,baz=113,slow=3.9,SNR=22
MAKZ  Makanchi         93.16 317  eP      P       14 19 10.1 -0.1
      comp=Z,18nm,1.1s
MAKZ  Makanchi         93.16 317  eP      P       14 19 10.1 -0.1
MAKZ                               pmax   pmax
      comp=Z,18nm,1.1s
BOZ   Bozeman (W)      93.37  44  eP      P       14 19 11.6 +0.3
      comp=Z,8.7nm,0.8s
BOZ   Bozeman (W)      93.37  44  eP      P       14 19 11.6 +0.3
BOZ                                pmax   pmax
      comp=Z,9.0nm,0.8s
FXWY  Fox Creek        93.38  46  eP      P       14 19 12.1 +0.6
      comp=Z,4.1nm,1.0s
121A  Cookes Peak, D   93.70  58   P      P       14 19 13.7 +0.5
      baz=259
H17A  Grant Village    93.85  46  eP      P       14 19 15.5 +1.8
      comp=Z,4.8nm,1.0s
H17A  Grant Village    93.85  46   P      P       14 19 15.4 +1.8
      baz=258
NVS   Novosibirsk      94.19 325  eP      P       14 19 14.3 -0.3
NVS                                pmax   pmax
      comp=Z,10.0nm,1.3s
NVS                                pmax   pmax
      comp=E,5.0nm,1.0s
BW06  Boulder Array    94.25  47  eP      P       14 19 14.8 -0.7
      comp=E,2.6nm,0.9s
PD31  Pinedale Array   94.25  47  eP      P       14 19 15.3 -0.2
PDAR  Pinedale Array   94.25  47  eP      P       14 19 14.2 -1.4
PDAR  Pinedale Array   94.25  47   P      P       14 19 15.2 -0.4
      comp=E,2.4nm,0.9s,baz=233,slow=3.2,SNR=14
EGMT  Eagleton         95.12  42   P      P       14 19 19.9 +0.7
      baz=259
ANMO  Albuquerque      95.22  56ceP      P       14 19 19.3 -0.8
ANMO                               pmax   pmax
      comp=Z,2.0nm,1.1s
YKB5  Yellowknife Ar   95.44  27  eP      P       14 19 18.2 -2.0
YKA   Yellowknife Ar   95.44  27   P      P       14 19 17.6 -2.5
      comp=Z,1.2nm,0.9s,baz=254,slow=4.4,SNR=11
KURK  Kurchatov        96.11 320  eP      P       14 19 26.1 +2.6
      comp=Z,12nm,1.6s
KURK  Kurchatov        96.11 320  i P     P       14 19 21.6 -1.9
KURK                               pmax   pmax
      comp=Z,3.0nm,1.0s
```

KURBB	**Kurchatov Arra**	**96.15**	**320**	P	**P**	**14 19 22.9**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=106,slow=3.4,SNR=4.1						
AAK	**Ala-Archa**	**97.66**	**312**	*i* P	**P**	**14 19 29.7**	**-1.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BVAR	**Borovoye Array**	**101.44**	**322**	P	**Pdif**	**14 19 47.3**	**0.0**
	comp=Z,2.4nm,1.1s,baz=90,slow=3.1,SNR=7.2						
BVAR				PP	**PP**	**14 23 50.9**	**-6.4**
	comp=Z,1.2nm,0.9s,baz=97,slow=12,SNR=4.2						
BRVK	**Borovoye**	**101.51**	**322**	*i* P	**Pdif**	**14 19 48.0**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**116.16**	**345**	PKP	**PKiKP**	**14 24 37.7**	**-0.8**
	comp=Z,2.6nm,1.1s,baz=35,slow=4.4,SNR=3.5						
OBN	**Obninsk**	**120.39**	**328**	⇑*e*PKIKP	**PKiKP**	**14 24 49.6**	**+2.5**
OBN				*e*		14 26 12.9	
OBN				*e*		14 31 45.9	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	**Kislovodsk**	**120.63**	**315**	*i* PKIKP	**PKiKP**	**14 24 48.6**	**+0.5**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,97nm,23.0s						
LPAZ	**La Paz**	**120.96**	**117**	*e*PKPdf	**PKiKP**	**14 24 50.7**	**+0.5**
FINES	**FINESS Array B**	**121.49**	**338**	PKIKP	**PKPdf**	**14 24 47.0**	**-2.0**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	**FINESS Array B**	**121.49**	**338**	PKP	**PKPdf**	**14 24 47.0**	**-2.0**
	comp=Z,3.7nm,1.0s,baz=298,slow=4.1,SNR=4.7						
BOSA	**Boshof**	**124.45**	**224**	PKP	**PKPdf**	**14 24 53.5**	**-2.4**
	comp=Z,4.4nm,0.9s,baz=142,slow=2.6,SNR=5.3						
CPUP	**Villa Florida**	**124.65**	**133**	PKP	**PKPdf**	**14 24 55.9**	**-0.3**
	comp=Z,6.7nm,1.1s,baz=263,slow=3.9,SNR=10						
SDV	**Santo Domingo**	**125.40**	**87**	*e*PKPdf	**PKPdf**	**14 24 57.3**	**-0.8**
AKASG	**Malin Array Be**	**126.42**	**326**	PKP	**PKPdf**	**14 24 56.4**	**-2.4**
	comp=Z,0.4nm,0.4s,baz=62,slow=2.1,SNR=5.7						
LBTB	**Lobatse**	**126.44**	**227**	*e*PKPdf	**PKiKP**	**14 25 00.5**	**+0.3**
LBTB	**Lobatse**	**126.44**	**227**	*e*PKIKP	**PKiKP**	**14 25 00.5**	**+0.3**
AK11	**Malin Array Si**	**126.46**	**326**	*e*PKPdf	**PKPdf**	**14 24 58.7**	**-0.1**
BRTR	**Keskin Array B**	**128.34**	**312**	PKIKP	**PKPdf**	**14 25 01.7**	**-1.3**
BRTR						14 27 06.0	
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**128.34**	**312**	PKP	**PKPdf**	**14 25 01.7**	**-1.3**
	comp=Z,1.3nm,0.9s,baz=160,slow=3.9,SNR=5.4						
BRTR				PP	**PP**	**14 27 06.0**	**-1.5**
	comp=Z,1.3nm,0.9s,baz=100,slow=4.1,SNR=4.8						
LSZ	**Lusaka**	**129.69**	**239**	*e*PKPdf	**PKiKP**	**14 25 07.8**	**+0.8**
LSZ	**Lusaka**	**129.69**	**239**	*e*PKIKP	**PKiKP**	**14 25 07.8**	**+0.8**
BUR04	**Bucovina Ar. S**	**130.29**	**325**	*e*PKPdf	**PKPdf**	**14 25 06.4**	**0.0**
HUMP	**Col San Antoni**	**130.59**	**76**	*e*PKPdf	**PKPdf**	**14 25 07.7**	**+0.1**
CLL	**Collm**	**133.79**	**336**	*e*PKPdf	**PKiKP**	**14 25 14.0**	**0.0**
CLL				L	L	15 24 00.0	
	comp=Z,100nm,21.5s						
CLL	**Collm**	**133.79**	**336**	*e*PKIKP	**PKiKP**	**14 25 14.0**	**0.0**
KHC	**Kasperske Hory**	**135.19**	**333**	*e*PKPdf	**PKiKP**	**14 25 17.0**	**0.0**
KHC	**Kasperske Hory**	**135.19**	**333**	*e*PKPDF	**PKiKP**	**14 25 16.5**	**-0.5**
KHC	**Kasperske Hory**	**135.19**	**333**	*e*PKIKP	**PKiKP**	**14 25 16.5**	**-0.5**
GERES	**GERESS Array B**	**135.35**	**333**	PKP	**PKPdf**	**14 25 16.4**	**+0.5**
	comp=Z,1.5nm,1.0s,baz=67,slow=3.3,SNR=6.9						
GEA0	**GERESS Array S**	**135.36**	**333**	*e*PKPdf	**PKPdf**	**14 25 16.6**	**+0.8**
BDFB	**Brasilia**	**138.01**	**129**	*e*PKPdf	**PKiKP**	**14 25 23.3**	**-0.5**
BDFB	**Brasilia**	**138.01**	**129**	*e*PKIKP	**PKiKP**	**14 25 23.3**	**-0.5**
BDFB	**Brasilia**	**138.01**	**129**	PKP	**PKPdf**	**14 25 22.4**	**+0.6**
	comp=Z,6.4nm,0.8s,baz=167,slow=4.3,SNR=6.6						
KEST	**Kesra**	**146.91**	**322**	*e*PKPdf	**PKPab**	**14 25 39.8**	**-0.4**
KEST	**Kesra**	**146.91**	**322**	PKPbc	**PKPab**	**14 25 39.6**	**-0.6**
	comp=Z,32nm,1.0s,baz=316,slow=1.9,SNR=9.4						
ES19	**SONSECA Array**	**149.81**	**343**	*e*PKPbc	**PKPbc**	**14 25 46.5**	**+0.2**
ESDC	**Sonseca Array**	**149.85**	**343**	PKPbc	**PKPbc**	**14 25 45.7**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=26,slow=1.3,SNR=7.8						
TOA0	**Torodi Ar. Sit**	**163.38**	**279**	*e*PKPdf	**PKPdf**	**14 25 59.1**	**-0.5**
TOA0				*e*PKPdf	**PKPdf**	**14 25 59.5**	**0.0**
TORD	**Torodi Ar. Bea**	**163.38**	**279**	PKP	**PKPdf**	**14 25 59.0**	**-0.5**
	comp=Z,4.9nm,1.0s,baz=8.4,slow=1.1,SNR=17						
TORD				PKPab	**PKPab**	**14 26 50.0**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=84,slow=4.5,SNR=2.8						
DBIC	**Dimbokro**	**168.90**	**247**	PKP	**PKPdf**	**14 26 03.1**	**-0.8**
	comp=Z,3.2nm,0.9s,baz=151,slow=3.1,SNR=3.8						

*ISCJB **07** 14:10:11.3±0.8, 11.°1S±0.°1×165.°9E±0.°1, h10^{km}, mb3.9/8, MS4.3/1, Error ellipse: s-maj=20.1km s-min=13.7km az=148.4*

*IDC **07** 14:10:11.4±0.9, 11.°04S×165.°93E, h0^{km}, mb4.0/8, mb1 4.1/10, mb1mx3.9/37, mbtmp4.0/10, ML4.2/2, MS4.4/1, Ms1 4.4/1, ms1mx3.2/25, Error ellipse: s-maj=26.5km s-min=21.3km az=74.0*

ISC 07 14:10:12.9±0.9, 11.°0S±0.°1×166.°0E±0.°1, h10^{km}, n11, σ1ˢ30/10, mb3.8/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.12**	**284**	Pn	**Pn**	**14 11 43.8**	**+0.3**
	8.3nm,0.3s,baz=167,slow=18,SNR=3.1						
DZM	**Mont Dzumac**	**11.01**	**178**	Pn	**Pn**	**14 12 51.3**	**+0.6**
	1.2nm,0.3s,baz=58,slow=19,SNR=8.0						
RAO	**Raoul Island**	**23.58**	**143**	LR	LR	14 21 56.1	
	comp=Z,1µm,21.5s,baz=122,slow=30						
URZ	**Urewera**	**28.91**	**162**	P	**P**	**14 16 11.8**	**-0.4**
	2.7nm,0.5s,baz=253,slow=7.3,SNR=3.7						
WRA	**Warramunga Arr**	**31.69**	**250**	P	**P**	**14 16 36.0**	**-1.0**
	2.6nm,0.8s,baz=80,slow=9.3,SNR=4.9						
RPZ	**Rata Peaks**	**32.88**	**173**	P	**P**	**14 16 47.8**	**+0.7**
	7.9nm,0.8s,baz=22,slow=5.4,SNR=5.5						
ASAR	**Alice Springs**	**33.00**	**243**	P	**P**	**14 16 46.5**	**-2.0**
	0.8nm,0.9s,baz=64,slow=11,SNR=4.2						
CMAR	**Chiang Mai Arr**	**72.29**	**293**	P	**P**	**14 21 40.6**	**+1.3**
	0.7nm,0.9s,baz=124,slow=5.6,SNR=4.1						
ILAR	**Eielson Array**	**83.41**	**18**	P	**P**	**14 22 41.0**	**+0.8**
	0.4nm,0.7s,baz=228,slow=5.1,SNR=8.1						
MKAR	**Makanchi Array**	**93.64**	**317**	P	**P**	**14 23 30.2**	**+0.5**
	0.4nm,0.8s,baz=108,slow=4.7,SNR=3.3						
YKA	**Yellowknife Ar**	**94.84**	**27**	P	**P**	**14 23 33.0**	**-1.8**
	0.1nm,0.5s,baz=236,slow=4.4,SNR=3.3						

*SOME **07** 14:10:32.1, 42.°53N×79.°62E, h5^{km}*

*NNC **07** 14:10:32.8±1.4, 42.°61N×79.°62E, h0^{km}, mb2.4, mpv2.3, Error ellipse: s-maj=9.2km s-min=6.0km az=126.0*

*KRNET **07** 14:10:33.2±0.1, 42.°60N×79.°62E, h14^{km}, mb2.1*

ISC 07 14:10:34.6±2.0, 42.°64N±0.°07×79.°49E±0.°08, h6^{km}±13^{km}, n15, σ1ˢ17/29, 11C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.52**	**358**	P	**Pg**	**14 10 44.5**	**0.0**
	6.1nm,0.1s						
SHLS				S	**Sb**	**14 10 53.5**	**-0.4**
	12nm,0.3s						
SHLS	**Shalkode**	**0.52**	**358**	*e*P	**Pg**	**14 10 44.5**	**0.0**
	baz=19						
SHLS				*e*S	**Sb**	**14 10 53.5**	**-0.4**
	baz=19						
SHLS	**Shalkode**	**0.52**	**358**	*e*P	**Pg**	**14 10 44.5**	**0.0**
	6.1nm,0.1s						
SHLS				*e*S	**Sb**	**14 10 53.5**	**-0.4**
	12nm,0.3s						
UZB	**Uzynbulak**	**0.61**	**326**	P	**Pg**	**14 10 46.3**	**0.0**
	0.5nm,0.1s						
UZB				S	**Sb**	**14 10 56.7**	**-0.1**
	6.3nm,0.2s						
UZB	**Uzynbulak**	**0.61**	**326**	*e*P	**Pg**	**14 10 46.3**	**0.0**
	baz=21						
UZB				*e*S	**Sb**	**14 10 56.6**	**-0.1**
	baz=21						
UZB	**Uzynbulak**	**0.61**	**326**	*e*P	**Pg**	**14 10 46.3**	**0.0**
	0.5nm,0.1s						
UZB				*e*S	**Sb**	**14 10 56.7**	**-0.1**
	6.3nm,0.2s						
PDGK	**Podgornoye**	**0.69**	**360**	⇑P	**Pg**	**14 10 46.7**	**-1.1**
	2.1nm,1.0s						
PDGK				⇑S	**Sg**	**14 10 57.1**	**+0.4**
	1.1nm,0.4s						
PDGK	**Podgornoye**	**0.69**	**360**	⇓*i*P	**Pg**	**14 10 46.7**	**-1.1**
	baz=52						
PDGK				⇓*i*S	**Sg**	**14 10 57.1**	**+0.4**
	baz=52						
PRZ	**Przheval'sk**	**0.82**	**259**	⇓*i*P	**Pg**	**14 10 50.5**	**+0.1**
	baz=63						
PRZ				⇓*e*S	**Sg**	**14 11 02.8**	**+1.8**
	baz=63						
KDJ	**Kajisay**	**1.79**	**254**	⇓*i*P	**Pb**	**14 11 07.5**	**-0.3**
	baz=56						
KDJ				⇓*i*S	**Sg**	**14 11 33.1**	**+1.1**
	baz=56						
ULHL	**Ulahol**	**2.44**	**262**	⇑*i*P	**Pb**	**14 11 17.3**	**-1.7**
	baz=63						
ULHL				⇑*i*S	**Sb**	**14 11 49.1**	**-0.2**
	baz=63						
BOOM	**Boomskoye usch**	**2.63**	**268**	⇑*i*P	**Pb**	**14 11 20.0**	**-2.2**
	baz=69						
BOOM				⇑*i*S	**Sb**	**14 11 54.2**	**-0.6**
	baz=69						
NRN	**Naryn**	**2.87**	**246**	⇑*e*P	**Pn**	**14 11 23.1**	**+2.0**
	baz=48						
NRN				⇑*i*S	**Sb**	**14 11 59.6**	**-2.2**
	baz=48						
TKM2	**Tokmak 2**	**2.88**	**277**	⇓Pg	**Pg**	**14 11 28.3**	**-1.5**
	0.4nm,0.6s						
TKM2				⇑Lg	Lg	14 12 04.5	
	0.5nm,0.5s						
TKM2	**Tokmak 2**	**2.88**	**277**	⇑*i*P	**Pn**	**14 11 23.4**	**+2.2**
	baz=78						
TKM2				⇑*e*S	**Sb**	**14 12 00.3**	**-1.8**
	baz=78						

IDC 07 14:11:20.1±12.0, 12.°32S×167.°28E, h224^{km}±118^{km}, mb3.3/9, mb1 3.6/9, mb1mx3.4/34, mbtmp3.8/9, Error ellipse: s-maj=58.9km s-min=30.7km az=167.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.50**	**252**	P	P	14 17 28.4	-1.7
	0.6nm,0.9s,baz=84,slow=8.9,SNR=3.0						
ASAR	**Alice Springs**	**33.61**	**246**	P	P	14 17 40.8	+1.1
	0.4nm,0.5s,baz=72,slow=9.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**74.00**	**293**	P	P	14 22 32.4	+0.7
	0.6nm,0.7s,baz=116,slow=4.1,SNR=3.9						
SONM	**Songino Array**	**80.58**	**323**	P	P	14 23 07.9	+0.1
	0.1nm,0.3s,baz=132,slow=4.3,SNR=2.1						
ILAR	**Eielson Array**	**84.24**	**18**	P	P	14 23 26.0	-0.2
	2.7nm,0.6s,baz=236,slow=5.3,SNR=32						
NVAR	**Mina Array Bea**	**85.70**	**49**	P	P	14 23 34.1	-0.2
	0.3nm,0.6s,baz=225,slow=5.0,SNR=3.0						
PDAR	**Pinedale Array**	**93.31**	**47**	P	P	14 24 11.0	+1.0
	0.1nm,0.4s,baz=217,slow=5.2,SNR=2.3						
YKA	**Yellowknife Ar**	**95.41**	**27**	P	P	14 24 17.9	-0.8
	0.2nm,0.4s,baz=257,slow=4.7,SNR=5.0						
MKAR	**Makanchi Array**	**95.47**	**317**	P	P	14 24 19.2	-0.3
	1.0nm,0.7s,baz=91,slow=6.6,SNR=7.3						
ARCES	**ARCESS Array B**	**117.93**	**346**	PKP	PKPdf	14 29 38.9	-0.6
	1.2nm,0.5s,baz=75,slow=2.3,SNR=20						
FINES	**FINESS Array B**	**123.50**	**339**	PKP	PKPdf	14 29 49.7	-0.6
	1.1nm,0.9s,baz=90,slow=4.6,SNR=3.5						

IDC 07 14:15:33.6±1.7, 11.°02S×165.°99E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.5/28, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=55.3km s-min=30.8km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.00**	**178**	Pn	Pn	14 18 12.8	+0.4
	0.6nm,0.3s,baz=160,slow=9.2,SNR=5.6						
WRA	**Warramunga Arr**	**31.71**	**250**	P	P	14 21 59.5	0.0
	0.4nm,1.0s,baz=84,slow=9.4,SNR=3.7						
ASAR	**Alice Springs**	**33.02**	**243**	P	P	14 22 10.7	-0.2
	0.3nm,0.5s,baz=70,slow=9.9,SNR=5.6						
ILAR	**Eielson Array**	**83.41**	**18**	P	P	14 28 02.5	0.0
	0.2nm,0.7s,baz=235,slow=6.3,SNR=3.5						

UCR 07 14:17:03.9±1.7, 13.°80N×91.°43W, h24^{km}±999^{km}, MD3.4, ML3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**0.86**	**41**	*e*P	Pb	14 17 19.4	-1.0
FUG				*e*S	Sb	14 17 31.9	+0.3
PCG	**Pacaya**	**0.99**	**53**	*e*P	Pn	14 17 22.3	-0.3
PCG				*e*S	Sn	14 17 37.0	+1.0
IXG	**Ixpaco**	**1.03**	**69**	*e*P	Pn	14 17 23.1	+0.1
IXG				*e*S	Sn	14 17 38.4	+1.5
NBG	**Las Nubes**	**1.31**	**53**	*e*P	Pn	14 17 27.5	+0.4
NBG				*e*S	Sb	14 17 46.3	+1.7
RTR	**El Retiro**	**1.74**	**87**	*e*P	Pn	14 17 33.0	+0.3
CEVE	**Cerro Verde**	**1.76**	**89**	*e*P	Pn	14 17 33.9	+0.7
CEVE				*e*S	Sb	14 17 56.6	-0.8
CEVE				IAML		14 18 07.5	
	comp=Z,592nm,0.5s						
SBLS	**San Blas**	**1.76**	**88**	*e*P	Pn	14 17 33.5	+0.4
SNJE	**San Jose**	**1.77**	**88**	*e*P	Pn	14 17 34.1	+0.8

*IDC **07** 14:23:37.1±1.3, 35.°70N×25.°28E, h0^{km}, mb3.4/5, mb1 3.5/8, mb1mx3.4/42, mbtmp3.4/8, ML3.6/3, Error ellipse: s-maj=31.7km s-min=23.8km az=149.0*

*ATH **07** 14:23:39.4, 36.°05N×25.°05E, h28^{km}, ML3.5/17, Error ellipse: s-maj=1.0km s-min=0.5km az=88.0*

*ISCJB **07** 14:23:40.5±0.2, 36.°06N±0.°02×25.°08E±0.°02, h27^{km}±2^{km}, mb3.4/5, Error ellipse: s-maj=3.1km s-min=2.5km az=22.4*

*THE **07** 14:23:40.6, 36.°07N×25.°09E, h26^{km}±1^{km}, ML3.9/6, Error ellipse: s-maj=2.0km s-min=0.3km az=23.0*

ISC 07 14:23:40.4±0.6, 36.°05N±0.°02×25.°07E±0.°02, h20^{km}±4^{km}, n82, σ0ˢ84/115, mb3.6/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THR6	**Thira Island,**	**0.41**	**41**	P	**Pb**	**14 23 48.8**	**+0.1**
THR6	**Thira Island,**	**0.41**	**41**	P	**Pb**	**14 23 48.8**	**+0.1**
THR5	**Thira Island,**	**0.43**	**32**	P	**Pb**	**14 23 49.0**	**-0.2**
THR5	**Thira Island,**	**0.43**	**32**	P	**Pb**	**14 23 49.0**	**-0.2**
SAP3	**Santorini-Thir**	**0.45**	**30**	P	**Pb**	**14 23 49.6**	**+0.1**
SAP3				S	**Sb**	**14 23 56.0**	**+0.3**
SAP3	**Santorini-Thir**	**0.45**	**30**	P	**Pb**	**14 23 49.5**	**+0.1**
THT1	**Athinios (Pele**	**0.45**	**41**	P	**Pb**	**14 23 48.9**	**-0.5**
THT1				AML	AML	14 23 55.7	
	comp=E,2487µm,0.3s						
THT1				S	**Sb**	**14 23 55.8**	**+0.1**
THT1				AML	AML	14 23 56.8	
	comp=N,3285µm,0.2s						
THT1	**Athinios (Pele**	**0.45**	**41**	P	**Pb**	**14 23 48.9**	**-0.5**
THT1				S	**Sb**	**14 23 55.7**	**+0.1**
THR3	**Thira Island,**	**0.45**	**37**	P	**Pb**	**14 23 49.2**	**-0.3**
THR3	**Thira Island,**	**0.45**	**37**	P	**Pb**	**14 23 49.2**	**-0.3**
SANT	**Santorini**	**0.45**	**45**	P	**Pb**	**14 23 49.2**	**-0.4**
SANT				S	**Sb**	**14 23 56.1**	**+0.2**
SANT				AML	AML	14 24 02.5	
	comp=E,12822µm,0.4s						
SANT				AML	AML	14 24 02.9	
	comp=N,4059µm,0.3s						
SANT	**Santorini**	**0.45**	**45**	P	**Pb**	**14 23 49.5**	**-0.1**
SAP2K	**Karterados**	**0.47**	**40**	P	**Pb**	**14 23 49.5**	**-0.4**
SAP2K				S	**Sb**	**14 23 56.7**	**+0.2**
SFIR	**Foira Santorin**	**0.47**	**38**	P	**Pb**	**14 23 49.7**	**-0.3**
THR7	**Fira-Santorini**	**0.47**	**38**	P	**Pb**	**14 23 49.9**	**-0.1**
THR7	**Fira-Santorini**	**0.47**	**38**	P	**Pb**	**14 23 49.8**	**-0.1**
THT2	**Imerovigli**	**0.48**	**37**	P	**Pb**	**14 23 50.0**	**-0.1**
THT2				S	**Sb**	**14 23 57.4**	**+0.6**
THT2				AML	AML	14 24 04.2	
	comp=N,10099µm,0.3s						
THT2				AML	AML	14 24 04.6	
	comp=E,11570µm,0.2s						
THT2	**Imerovigli**	**0.48**	**37**	P	**Pb**	**14 23 50.0**	**-0.1**
THR8	**Santorini-Mono**	**0.49**	**43**	P	**Pb**	**14 23 49.7**	**-0.5**
THR8	**Santorini-Mono**	**0.49**	**43**	P	**Pb**	**14 23 49.8**	**-0.5**
SAP4	**Santorini-Oia**	**0.49**	**30**	P	**Pb**	**14 23 50.2**	**-0.1**
SAP4				S	**Sb**	**14 23 57.8**	**+0.8**
THR2	**Thira island,**	**0.50**	**37**	P	**Pb**	**14 23 50.2**	**-0.2**
ANAF	**Anafi Island**	**0.65**	**62**	P	**Pb**	**14 23 52.9**	**-0.2**
ANAF				S	**Sb**	**14 24 02.5**	**+0.8**
ANAF				AML	AML	14 24 04.8	
	comp=N,27977µm,0.3s						
ANAF				AML	AML	14 24 05.0	
	comp=E,28036µm,0.3s						
ANAF	**Anafi Island**	**0.65**	**62**	P	**Pb**	**14 23 52.3**	**-0.8**
ANAF				S	**Sb**	**14 24 01.5**	**-0.2**
IACM	**Heraklion**	**0.74**	**180**	P	**Pb**	**14 23 54.2**	**-0.3**
IACM				S	**Sb**	**14 24 05.2**	**+0.9**
IACM	**Heraklion**	**0.74**	**180**	P	**Pb**	**14 23 54.8**	**+0.2**
IACM				S	**Sn**	**14 24 05.7**	**-0.6**
KSTL	**Kastelli Herak**	**0.74**	**180**	P	**Pn**	**14 23 56.2**	**+0.5**
PRNS	**Prines Rethymn**	**0.82**	**214**	P	**Pn**	**14 23 56.9**	**+0.1**
PRNS				S	**Sn**	**14 24 09.3**	**+1.0**
MHLO	**Agia Marina, M**	**0.83**	**320**	P	**Pb**	**14 23 55.4**	**-0.7**
MHLO				S	**Sb**	**14 24 07.2**	**+0.3**
MHLO				AML	AML	14 24 12.4	
	comp=N,13550µm,0.7s						
MHLO				AML	AML	14 24 15.8	
	comp=E,12716µm,0.4s						
MHLO	**Agia Marina, M**	**0.83**	**320**	P	**Pb**	**14 23 55.5**	**-0.7**
MHLA	**Plaka, Milos I**	**0.87**	**323**	P	**Pb**	**14 23 56.3**	**-0.4**
MHLA				S	**Sb**	**14 24 08.4**	**+0.5**
NPS	**Neapolis**	**0.90**	**150**	P	**Pb**	**14 23 56.8**	**-0.5**
NPS				S	**Sn**	**14 24 10.3**	**0.0**
NPS				AML	AML	14 24 13.0	
	comp=E,14284µm,0.4s						
NPS				AML	AML	14 24 13.2	
	comp=N,9327µm,0.4s						
NPS	**Neapolis**	**0.90**	**150**	P	**Pb**	**14 23 57.0**	**-0.3**
NPS				S	**Sb**	**14 24 09.3**	**+0.4**
LAST	**Lasithi**	**0.95**	**159**	P	**Pb**	**14 23 58.0**	**-0.2**
LAST				S	**Sn**	**14 24 11.4**	**-0.1**
LAST				AML	AML	14 24 12.6	
	comp=E,7479µm,0.7s						
LAST				AML	AML	14 24 13.1	
	comp=N,5562µm,0.3s						
LAST	**Lasithi**	**0.95**	**159**	P	**Pb**	**14 23 57.9**	**-0.2**
LAST				S	**Sb**	**14 24 10.5**	**+0.2**
VAM	**Vamos**	**0.95**	**228**	P	**Pb**	**14 23 57.5**	**-0.7**
VAM				S	**Sb**	**14 24 10.9**	**+0.6**
VAM				AML	AML	14 24 12.1	
	comp=E,17221µm,0.3s						
VAM				AML	AML	14 24 13.4	
	comp=N,21516µm,0.3s						
VAM	**Vamos**	**0.95**	**228**	P	**Pb**	**14 23 57.5**	**-0.7**
VAM				S	**Sb**	**14 24 10.9**	**+0.6**
CHAN	**Chania**	**0.99**	**238**	P	**Pb**	**14 23 58.1**	**-0.6**
CHAN				S	**Sb**	**14 24 11.6**	**+0.3**
TMBK	**Timbaki Herakl**	**1.00**	**194**	P	**Pb**	**14 23 58.1**	**-0.9**
TMBK				S	**Sb**	**14 24 12.2**	**+0.4**
AMGA	**Amorgos Island**	**1.03**	**40**	P	**Pn**	**14 23 59.6**	**0.0**
AMGA				S	**Sn**	**14 24 14.1**	**+0.7**
IMMV	**Iera Moni Meta**	**1.06**	**237**	P	**Pb**	**14 23 59.3**	**-0.7**
IMMV				S	**Sb**	**14 24 12.5**	**-0.9**
IMMV				AML	AML	14 24 18.0	
	comp=E,9815µm,0.4s						
IMMV				AML	AML	14 24 21.5	
	comp=N,9943µm,0.5s						
IMMV	**Iera Moni Meta**	**1.06**	**237**	P	**Pb**	**14 23 59.3**	**-0.7**
IMMV				S	**Sb**	**14 24 13.7**	**+0.3**
APE	**Apeiranthos**	**1.08**	**20**	P	**Pb**	**14 23 59.6**	**-0.9**
APE				S	**Sn**	**14 24 15.8**	**+0.9**
APE				AML	AML	14 24 17.3	
	comp=E,3841µm,0.4s						
APE				AML	AML	14 24 17.8	
	comp=N,2417µm,0.5s						
STIA	**Sitia Lasithi**	**1.19**	**135**	P	**Pn**	**14 24 00.5**	**-1.3**
STIA				S	**Sb**	**14 24 16.1**	**-1.0**
SERI	**Serifos**	**1.20**	**337**	P	**Pn**	**14 24 01.2**	**-0.8**
SERI				AML	AML	14 24 19.6	
	comp=E,675µm,0.3s						
SERI				AML	AML	14 24 20.1	
	comp=N,1486µm,0.3s						
SERI	**Serifos**	**1.20**	**337**	P	**Pn**	**14 24 00.8**	**-1.3**
ZKR	**Zakros**	**1.32**	**135**	P	**Pn**	**14 24 03.8**	**+0.2**
ZKR				S	**Sb**	**14 24 21.8**	**+0.8**
ZKR				AML	AML	14 24 30.1	
	comp=E,2218µm,0.8s						
ZKR				AML	AML	14 24 31.3	
	comp=N,1104µm,1.1s						
KERA	**Keramoti**	**1.40**	**242**	P	**Pb**	**14 24 05.4**	**-0.4**
KERA				S	**Sb**	**14 24 23.4**	**+0.1**
KERA				AML	AML	14 24 26.6	
	comp=E,6295µm,0.4s						
KERA				AML	AML	14 24 29.4	
	comp=N,5606µm,0.6s						
ANKY	**Antikythira Is**	**1.44**	**263**	P	**Pb**	**14 24 06.2**	**-0.3**
ANKY				S	**Sb**	**14 24 25.4**	**+0.9**
ANKY				AML	AML	14 24 28.0	
	comp=N,3256µm,0.5s						
ANKY				AML	AML	14 24 29.1	
	comp=E,4949µm,0.5s						
GVD	**Gavdhos**	**1.45**	**214**	P	**Pn**	**14 24 06.1**	**+0.7**
GVD				AML	AML	14 24 32.5	
	comp=N,3191µm,0.4s						
GVD				AML	AML	14 24 35.0	
	comp=E,3150µm,0.4s						
KYTH	**Kithira**	**1.65**	**278**	P	**Pn**	**14 24 08.4**	**+0.2**
KYTH				S	**Sb**	**14 24 29.8**	**-0.6**
KYTH				AML	AML	14 24 36.6	
	comp=N,2233µm,0.4s						
KYTH				AML	AML	14 24 41.8	
	comp=E,2244µm,0.6s						
KARP	**Karpathos**	**1.77**	**106**	P	**Pn**	**14 24 10.3**	**+0.4**
VLI	**Veliai**	**1.84**	**292**	P	**Pn**	**14 24 10.6**	**-0.3**
VLI				S	**Sn**	**14 24 33.4**	**-0.2**
VLI				AML	AML	14 24 39.9	
	comp=N,862µm,0.4s						
VLI				AML	AML	14 24 48.6	
	comp=E,1270µm,0.7s						
VLI	**Veliai**	**1.84**	**292**	P	**Pn**	**14 24 10.2**	**-0.6**
DID	**Didima**	**2.07**	**315**	P	**Pn**	**14 24 13.9**	**-0.1**
VLY	**Voula,Athens**	**2.07**	**331**	P	**Pn**	**14 24 14.8**	**+0.8**
CHOS	**Chios island**	**2.46**	**18**	P	**Pn**	**14 24 19.1**	**-0.3**
ARG	**Arkhangelos**	**2.48**	**85**	P	**Pn**	**14 24 20.7**	**+1.1**
EREA	**Eretria**	**2.53**	**339**	P	**Pn**	**14 24 20.9**	**+0.5**
VILL	**Villia**	**2.53**	**327**	P	**Pn**	**14 24 19.5**	**-0.9**
LOUT	**Loutraki**	**2.56**	**320**	P	**Pn**	**14 24 21.1**	**+0.4**
LTK	**Loutraki**	**2.59**	**320**	P	**Pn**	**14 24 21.8**	**+0.7**
VIL2	**Platees**	**2.59**	**327**	P	**Pn**	**14 24 20.8**	**-0.4**
ITM	**Ithomi**	**2.77**	**295**	P	**Pn**	**14 24 24.9**	**+1.4**
PROD	**Prodromos**	**2.80**	**323**	P	**Pn**	**14 24 24.6**	**+0.6**
PYL	**PYLOS**	**2.81**	**288**	P	**Pn**	**14 24 25.4**	**+1.3**
GUR	**Goura**	**2.88**	**312**	P	**Pn**	**14 24 25.8**	**+0.6**
KLV	**Kalavryta, Ach**	**3.07**	**311**	P	**Pn**	**14 24 28.8**	**+1.1**
DSF	**Desfina**	**3.11**	**320**	P	**Pn**	**14 24 28.9**	**+0.6**
DRO	**Drossia**	**3.29**	**306**	P	**Pn**	**14 24 32.4**	**+1.7**
LAKA	**Lakka**	**3.30**	**312**	P	**Pn**	**14 24 31.8**	**+1.0**
TRIZ	**Trizonia**	**3.33**	**315**	P	**Pn**	**14 24 32.0**	**+0.9**
ANX	**Ano Chora**	**3.57**	**316**	P	**Pn**	**14 24 36.0**	**+1.3**
AGG	**Agios Georgios**	**3.68**	**325**	P	**Pn**	**14 24 37.6**	**+1.5**
BRTR	**Keskin Array B**	**7.71**	**59**	Pn	**Pn**	**14 25 34.5**	**+3.0**
	comp=E,0.2nm,0.3s,baz=226,slow=14,SNR=8.2						
BRTR				Sn	**Sn**	**14 26 53.9**	**-4.3**
	comp=E,0.2nm,0.3s,baz=311,slow=24,SNR=3.6						
AKASG	**Malin Array Be**	**14.95**	**10**	Pn	**P**	**14 27 14.6**	**-1.2**
	comp=E,0.4nm,0.3s,baz=199,slow=11,SNR=4.8						
GERES	**GERESS Array B**	**15.27**	**330**	Pn	**P**	**14 27 20.3**	**+0.8**
	comp=E,0.1nm,0.3s,baz=152,slow=16,SNR=2.5						
TORD	**Torodi Ar. Bea**	**31.01**	**229**	P	**P**	**14 29 55.9**	**-0.7**
	comp=E,0.6nm,0.6s,baz=51,slow=8.4,SNR=4.1						
MKAR	**Makanchi Array**	**43.35**	**57**	P	**P**	**14 31 41.1**	**0.0**
	comp=E,0.3nm,0.6s,baz=278,slow=7.1,SNR=6.2						
ZALV	**Zalesovo Beam**	**44.45**	**47**	P	**P**	**14 31 48.6**	**-1.1**
	comp=E,0.3nm,0.3s,baz=257,slow=8.4,SNR=2.7						
CMAR	**Chiang Mai Arr**	**66.55**	**84**	P	**P**	**14 34 29.4**	**+0.2**
	comp=E,0.4nm,0.5s,baz=284,slow=7.3,SNR=4.3						
YKA	**Yellowknife Ar**	**76.58**	**342**	P	**P**	**14 35 30.8**	**+1.9**
	comp=E,0.1nm,0.5s,baz=41,slow=6.7,SNR=4.2						

IDC 07 14:24:19.7±1.7, 10.°79S×165.°52E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.5/34, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=54.1km s-min=30.9km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.26**	**176**	Pn	Pn	14 27 02.4	+0.3
	0.3nm,0.3s,baz=347,slow=19,SNR=6.3						
WRA	**Warramunga Arr**	**31.37**	**249**	P	P	14 30 42.5	0.0
	0.3nm,0.5s,baz=82,slow=9.4,SNR=5.1						
ASAR	**Alice Springs**	**32.71**	**243**	P	P	14 30 54.3	0.0
	0.4nm,0.6s,baz=65,slow=10,SNR=6.7						
ILAR	**Eielson Array**	**83.34**	**19**	P	P	14 36 48.2	0.0
	0.3nm,0.9s,baz=236,slow=6.4,SNR=2.3						

*IDC **07** 14:25:47.8±0.7, 10.°98S×164.°92E, h0^{km}, mb4.2/13, mb1 4.4/15, mb1mx4.3/35, mbtmp4.3/15, ML4.5/2, MS4.1/4, Ms1 4.2/4, ms1mx3.6/26, Error ellipse: s-maj=23.2km s-min=16.9km az=123.0*

*NEIC **07** 14:25:49.3±0.4, 10.°93S×164.°87E, h10^{km}, mb4.5/5, Error ellipse: s-maj=10.2km s-min=8.0km az=102.0*

*ISCJB **07** 14:25:50.7±0.4, 11.°10S±0.°05×164.°84E±0.°06, h31km, mb4.2/20, MS4.1/2, Error ellipse: s-maj=8.9km s-min=7.6km az=151.1*

*GCMT **07** 14:25:52.3±0.4, 11.°10S±0.°04×164.°71E±0.°02, h14km±1km, MW4.9/64, Moment Tensor Solution. s18,c19; s64,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.65±.20; $M_{\theta\theta}$0.49±.11; $M_{\phi\phi}$2.16±.13; $M_{r\theta}$-0.47±.32; $M_{\theta\phi}$0.28±.07; $M_{\phi r}$1.11±.26; Best double couple: $M_0$2.69600×10^{16} NP1:ϕ_s177.00000°,δ57.00000°,λ-101.00000°. NP2: ϕ_s18.00000°,δ34.00000°,λ-73.00000°. Principal axes: T 2.4200, Plg12.0000°, Azm275.0000°; N 0.5540, Plg10.0000°, Azm183.0000°; P -2.9720, Plg75.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 14:25:52.9±0.6**, 11.°05S**±0.°09×**164.°83E**±0.°07**, h31**km**, n50,** σ1s**43**/46**, mb4.3**/20**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.07	288	ePn	Pn	14 27 06.2	-0.6
HNR				Sn	Sn	14 28 05.8	+1.5
HNR	Honiara	5.07	288	Pn	Pn	14 27 07.0	+0.2
	16nm,0.3s,baz=358,slow=5.6,SNR=11						
HNR				Sn	Sn	14 28 05.8	+1.5
	3.6nm,0.3s,baz=89,slow=20,SNR=3.7						
HNR				LR	LR	14 29 00.4	
	comp=Z,4μm,21.5s,baz=116,slow=38						
DZM	Mont Dzumac	11.07	172	ePn	Pn	14 28 29.9	+0.7
	213nm,1.2s						
DZM				eLR	LR	14 31 02.6	
	comp=Z,780nm,25.9s						
DZM	Mont Dzumac	11.07	172	ePn	Pn	14 28 29.3	0.0
DZM	Mont Dzumac	11.07	172	Pn	Pn	14 28 29.0	-0.3
	3.4nm,0.3s,baz=22,slow=10.0,SNR=17						
DZM				LR	LR	14 31 57.3	
	comp=Z,645nm,19.0s,baz=40,slow=33						
ONTNC	Ouen Toro	11.30	172	ePn	Pn	14 28 33.3	+0.9
PINNC	Pines Island,	11.77	168	ePn	Pn	14 28 40.0	+1.3
CTA	Charters Tower	20.01	241	P	Pn	14 30 24.1	-1.0
	12nm,0.7s,baz=74,slow=12,SNR=16						
CTAO	Charters Tower	20.01	241	eP	Pn	14 30 25.4	+0.3
	54nm,1.1s						
COEN	Coen	21.34	260	eP	P	14 30 37.4	-0.2
	8.2nm,0.9s						
ARMA	Armidale	22.85	211	eP	P	14 30 50.8	-3.0
	24nm,1.1s						
H11S2	WAKE ISLAND Hy	29.41	4	T	T	15 02 39.2	
	baz=184,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	29.41	4	T	T	15 02 38.7	
	baz=184,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	29.43	4	T	T	15 02 39.2	
	baz=184,slow=76,SNR=4.6						
STKA	Stephens Creek	29.83	222	P	P	14 31 57.7	+0.3
	2.0nm,0.7s,baz=53,slow=15,SNR=2.2						
WRAB	Tennant Creek	30.63	250	eP	P	14 32 02.2	-2.4
	27nm,1.5s						
WB2	Warramunga Arr	30.63	249	eP	P	14 32 03.3	-1.4
H11N1	WAKE ISLAND Hy	30.64	4	T	T	15 04 10.0	
	baz=183						
WR1	Warramunga Arr	30.64	250	eP	P	14 32 03.9	-0.9
WR1				ePcP	PcP	14 35 02.9	+0.2
WRA	Warramunga Arr	30.64	250	P	P	14 32 03.9	-0.9
	5.6nm,0.9s,baz=78,slow=9.3,SNR=19						
WRA				PcP	PcP	14 35 02.9	+0.2
	0.5nm,0.6s,baz=76,slow=3.3,SNR=8.4						
WRA				LR	LR	14 44 27.8	
	comp=Z,426nm,18.3s,baz=75,slow=36						
H11N3	WAKE ISLAND Hy	30.64	4	T	T	15 04 11.9	
	baz=183						
H11N2	WAKE ISLAND Hy	30.66	4	T	T	15 04 10.2	
	baz=183						
AS01	Alice Springs	31.95	243	eP	P	14 32 15.4	-0.9
AS31	Alice Springs	31.99	243	eP	P	14 32 16.1	-0.5
	1.7nm,0.7s						
ASAR	Alice Springs	31.99	243	P	P	14 32 15.8	-0.8
	4.4nm,0.7s,baz=62,slow=10,SNR=39						
ASAR				PcP	PcP	14 35 06.2	-0.1
	0.7nm,0.6s,baz=67,slow=2.5,SNR=6.8						
PPT2	Papeete2	44.57	104	eLR	LR	14 46 32.1	
	comp=Z,408nm,22.2s						
TBI	Tubuai	45.16	112	eLR	LR	14 47 10.2	
	comp=Z,850nm,27.8s						
TAOE	Nuku Hiva Isla	54.18	93	eS	S	14 42 56.2	+4.6
	127nm,25.5s						
TAOE				eLR	LR	14 50 50.0	
	comp=Z,282nm,26.9s						
RKT	Rikitea	58.43	110	eLR	LR	14 53 00.5	
	comp=Z,902nm,27.8s						
PETK	Petropavlovsk-	64.19	355	P	P	14 36 24.2	-0.3
	2.9nm,0.8s,baz=153,slow=9.7,SNR=3.2						
PEA1	Petropavlovsk-	64.20	355	eP	P	14 36 24.2	-0.4
XAN	Xi'an	69.46	313	P	P	14 36 59.3	+0.7
XAN				pP	sP	14 37 09.2	-0.2
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMI	Kunming	70.36	302	P	P	14 37 06.4	+1.9
KMI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
HHC	Hu-ho-hao-te	71.26	320	eP	P	14 37 11.4	+1.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,3.7s						
CMAR	Chiang Mai Arr	71.29	294	P	P	14 37 11.8	+1.8
	comp=Z,0.6nm,0.3s,baz=114,slow=4.4,SNR=6.5						
SONA0	Songino Array	78.14	324	eP	P	14 37 49.1	-0.2
SONM	Songino Array	78.14	324	P	P	14 37 49.1	-0.2
	comp=Z,1.7nm,0.8s,baz=142,slow=4.7,SNR=9.0						
SONA1	Songino Array	78.14	324	eP	P	14 37 49.6	+0.3
GTA	Gaotai	78.42	314	eP	P	14 37 53.4	+2.4
GTA				pP	pP	14 37 58.8	-0.2
GTA				sP	sP	14 38 02.2	+0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
QSPA	South Pole Qui	78.95	180	P	P	14 37 54.3	+0.8
	comp=Z,7.6nm,1.0s,baz=302,slow=1.5,SNR=13						
ILAR	Eielson Array	83.81	19	P	P	14 38 17.9	-1.0
	comp=Z,0.7nm,0.6s,baz=239,slow=4.3,SNR=16						
ILB	Eielson Array	83.81	19	eP	P	14 38 17.0	-1.9
NV01	Mina Array Sit	86.71	50	eP	P	14 38 31.6	-2.8
NVAR	Mina Array Bea	86.71	50	P	P	14 38 33.3	-1.1
	comp=Z,0.5nm,0.5s,baz=244,slow=3.6,SNR=4.3						
NVAR				LR	LR	15 09 47.0	
	comp=Z,87nm,20.1s,baz=227,slow=30						
MK01	Makanchi Array	92.90	317	eP	P	14 39 01.9	-1.1
MK32	Makanchi Array	92.91	317	eP	P	14 39 02.2	-0.8
MKAR	Makanchi Array	92.91	317	P	P	14 39 02.2	-0.8
	comp=Z,0.9nm,0.7s,baz=93,slow=5.5,SNR=7.0						
ZALV	Zalesovo Beam	93.03	324	P	P	14 39 02.6	-0.8
	comp=Z,0.3nm,0.3s,baz=142,slow=5.1,SNR=3.5						
ZAA1	Zalesovo Array	93.04	324	eP	P	14 39 02.6	-0.8
YKA	Yellowknife Ar	95.39	27	P	P	14 39 12.4	-1.6
	comp=Z,0.1nm,0.5s,baz=257,slow=4.8,SNR=3.5						

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*DDA **07** 14:30:56.6, 35.°99N×35.°96E, h24km±1km, ML3.4*

*ISK **07** 14:30:56.7, 36.°00N×35.°97E, h9km, ML3.2/16*

*GRAL **07** 14:30:57.6±0.3, 36.°20N×36.°04E, h15km±999km, MD3.5*

*ISCJB **07** 14:30:58.1±0.5, 36.°03N±0.°02×35.°95E±0.°03, h10km±3km, Error ellipse: s-maj=3.6km s-min=3.4km az=22.4*

*NSSC **07** 14:31:10.0±1.0, 34.°40N×36.°26E, h214km±35km, ML2.7*

ISC 07 14:30:57.3±0.9**, 35.°95N**±0.°02×**35.°92E**±0.°02**, h16**km±7km**, n50,** σ1s**61**/75**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAYL	Yayladag	0.17	62	i P	Pg	14 31 02.7	+0.8
YAYL				i S	Sg	14 31 05.4	+0.5
YAYL				IAML_P			
	comp=Z,91μm,0.1s						
TAHT	Tahtakopru-Hat	0.48	27	PG	Pg	14 31 05.3	-1.6
TAHT				SG	Sg	14 31 11.4	-1.9
KRTS	Karatas	0.76	325	PG	Pb	14 31 11.9	-0.2
KRTS				SG	Sb	14 31 22.5	+0.3
YURE	YUREGIR	0.90	345	PG	Pg	14 31 13.4	-1.5
YURE	YUREGIR	0.90	345	i P	Pb	14 31 14.4	-0.3
CEYT	Ceyhan	1.06	353	PG	Pb	14 31 16.9	-0.5
MERS	Mersin	1.45	310	PN	Pb	14 31 23.9	-0.1
KARA	Karaisali	1.48	332	PN	Pn	14 31 23.1	-0.2
EREN	Erenkoy	1.48	254	PN	Pg	14 31 25.3	-0.6
EREN	Erenkoy	1.48	254	i P	Pg	14 31 26.7	+0.8
EREN				i S	Sn	14 31 45.5	+3.2
EREN				IAML_P			
	comp=Z,1μm,0.2s						
KIZK	Mersin	1.53	291	PN	Pb	14 31 25.3	+0.1
KIZK	Mersin	1.53	291	i P	Pg	14 31 26.1	-0.7
KIZK				i S	Sn	14 31 45.9	+2.4
KIZK				IAML_P			
	comp=Z,2μm,0.1s						
KOZT	Kozan	1.53	357	PN	Pn	14 31 24.2	+0.3
GAZ	Gaziantep	1.60	40	PN	Pn	14 31 25.1	+0.1
GULE	Gulek	1.61	326	i P	Pb	14 31 26.7	-0.2
GULE				i S	Sg	14 31 49.2	-0.3
GULE				IAML_P			
	comp=Z,998nm,0.2s						
ANDN	Andirin	1.66	12	i P	Pn	14 31 26.2	+0.4
ANDN				i S	Sn	14 31 46.3	-0.6
ANDN				IAML_P			
	comp=Z,732nm,0.1s						
HWQ	Hawqa	1.67	179	eP	Pg	14 31 28.8	-0.7
HWQ				eS	Sg	14 31 51.7	+0.5
KMRS	Kahramanmaras	1.74	27	PN	Pn	14 31 27.1	+0.2
IKL	Isikli	1.83	280	PN	Pn	14 31 29.5	+1.4
KEBE	Keben-Mersin	1.85	286	PN	Pn	14 31 29.6	+1.2
TEPE	Tepekoy-Mersin	1.93	279	PN	Pn	14 31 30.9	+1.5
AKK2	Akkuyu-Mersin	1.93	276	PN	Pn	14 31 30.6	+1.2
GZT	Gaziantep	1.93	43	i P	Pn	14 31 29.9	+0.3
GZT				i S	Sn	14 31 53.8	+0.2
GZT				IAML_P			
	comp=Z,819nm,0.1s						
AKKU	Akkuyu-Mersin	1.93	277	PN	Pn	14 31 30.6	+1.2
GULN	MERSIN_Gulnar	1.94	278	i P	Pn	14 31 30.8	+1.3
GULN				i S	Sn	14 31 54.5	+1.0
GULN				IAML_P			
	comp=Z,510nm,0.1s						
SAIM	ADANA	2.02	4	i P	Pn	14 31 32.4	+1.5
SAIM				IAML_P			
	comp=Z,550nm,0.1s						
KERG	Konya-Eregli	2.05	316	i P	Pb	14 31 34.5	+0.2
KERG				i S	Sb	14 32 00.5	+0.9
KERG				IAML_P			
	comp=Z,439nm,0.2s						
BHL	Bhannes	2.05	186	eP	Pb	14 31 34.1	-0.2
BHL				eS	Sb	14 32 01.1	+1.5
TEVE	Tevekalti-Mers	2.06	284	PN	Pn	14 31 32.7	+1.4
YAHY	KAYSERI_Yahyal	2.19	348	i P	Pn	14 31 34.5	+1.5
YAHY				i S	Sn	14 32 01.8	+2.0
YAHY				IAML_P			
	comp=Z,740nm,0.3s						
BERE	Bereket-Mersin	2.22	281	PN	Pn	14 31 35.3	+1.8
DQRL	Deir Qamar	2.26	187	eP	Pb	14 31 37.0	-0.8
TEKE	Tekeli-Mersin	2.28	276	PN	Pn	14 31 35.8	+1.6
CSS	Mathiatis	2.33	246	PN	Pn	14 31 36.9	+1.9
SURC	SANLIURFA_SURC	2.36	66	i P	Pn	14 31 36.8	+1.3
SURC				i S	Sn	14 32 05.3	+1.2
QASN	Qassioun	2.43	173	eP	Pb	14 31 41.1	+0.3
QASN				eS	Sn	14 32 03.5	-2.4
QASN				AML	AML	14 32 26.9	
	comp=E,276nm,0.7s						
QASN				AML	AML	14 32 28.6	
	comp=N,164nm,0.4s						
ATAB	Bozova	2.44	51	i P	Pg	14 31 43.5	-0.6
ATAB				IAML_P			
	comp=Z,4μm,0.2s						
RCY	Rachaya	2.45	182	eP	Pn	14 31 39.5	+2.8
RCY				eS	Sb	14 32 10.6	-0.4
BRBR	Barbar	2.53	179	eP	Pb	14 31 41.6	-1.0
BRBR				eS	Sn	14 32 05.4	-3.2
BRBR				AML	AML	14 32 22.5	
	comp=E,76nm,0.6s						
BRBR				AML	AML	14 32 31.9	
	comp=N,89nm,0.6s						
ELBS	KAHRAMANMARAS_	2.56	22	i P	Pb	14 31 43.9	+1.0
ELBS				i S	Sg	14 32 18.1	-1.5
ELBS				IAML_P			
	comp=Z,376nm,0.3s						
TOTH	TOTAH	2.62	171	eP	Pb	14 31 43.3	-0.6
TOTH				eS	Sn	14 32 04.8	-5.7
TOTH				AML	AML	14 32 27.1	
	comp=E,42nm,0.3s						
TOTH				AML	AML	14 32 30.5	
	comp=N,80nm,0.5s						
SANL	SANLIURFA_Merk	2.76	63	i P	Pb	14 31 47.4	+1.1
SANL				i S	Sg	14 32 23.2	-2.7
SANL				IAML_P			
	comp=Z,688nm,0.2s						
URFA	Urfa	2.77	57	PN	Pn	14 31 41.8	+0.8
AKCD	Akcadag	2.84	34	i P	Pn	14 31 43.7	+1.6
AKCD				i S	Sg	14 32 25.9	-2.6
BNN	Bunyan	2.90	359	PN	Pn	14 31 43.6	+0.7
DARE	Darende-Malaty	2.90	25	PN	Pn	14 31 43.7	+0.8
ELZG	Elazig	3.53	43	i P	Pn	14 31 53.0	+1.4
ELZG				i S	Sg	14 32 49.7	-1.0
ELZG				IAML_P			
	comp=Z,562nm,0.2s						
KEPZ	Antalya-Kepez	3.60	287	i P	Pb	14 31 58.3	-2.4
KEPZ				i S	Sb	14 32 41.4	-2.8
KEPZ				IAML_P			
	comp=Z,141nm,0.2s						
KEMA	Kemaliye	3.89	31	i P	Pn	14 31 57.2	+0.7
KEMA				i S	Sg	14 33 01.4	-0.9
KEMA				IAML_P			
	comp=Z,155nm,0.1s						
MARD	Mardin	4.14	69	i P	Pn	14 32 01.5	+1.6
MARD				i S	Sb	14 33 03.8	+4.1
MARD				IAML_P			
	comp=Z,601nm,0.2s						

IDC 07 14:46:23.7±1.8**, 11.°65S×165.°06E, h0**km**, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/41**, mbtmp3.7**/4**, ML3.2**/1**, Error ellipse: s-maj=51.0km s-min=32.8km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.45	173	Pn	Pn	14 48 54.9	-0.1
	0.2nm,0.3s,baz=299,slow=16,SNR=7.0						
WRA	Warramunga Arr	30.64	251	P	P	14 52 40.3	+0.2
	0.8nm,1.0s,baz=81,slow=9.1,SNR=3.7						
ASAR	Alice Springs	31.92	244	P	P	14 52 51.1	-0.3
	0.4nm,0.8s,baz=71,slow=10,SNR=3.7						
ILAR	Eielson Array	84.29	19	P	P	14 58 57.1	0.0
	0.5nm,0.9s,baz=238,slow=5.3,SNR=5.2						

IDC 07 14:51:54.7±1.6**, 10.°96S×164.°73E, h0**km**, mb4.0**/3**, mb1 4.2**/5**, mb1mx3.8**/43**, mbtmp4.1**/5**, ML4.0**/2**, Error ellipse: s-maj=34.4km s-min=29.8km az=151.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.95	287	Pn	Pn	14 53 12.3	+1.9
	15nm,0.3s,baz=105,slow=4.9,SNR=4.4						
HNR				Sn	Sn	14 54 08.9	+0.5
	6.8nm,0.3s,baz=174,slow=19,SNR=2.7						
DZM	Mont Dzumac	11.17	172	Pn	Pn	14 54 36.8	+0.8
	0.5nm,0.3s,baz=324,slow=17,SNR=3.7						
WRA	Warramunga Arr	30.58	249	P	P	14 58 10.3	-0.2
	0.8nm,0.5s,baz=80,slow=8.9,SNR=10						
ASAR	Alice Springs	31.95	243	P	P	14 58 22.1	-0.4
	2.0nm,0.5s,baz=65,slow=10,SNR=35						
ILAR	Eielson Array	83.75	19	P	P	15 04 25.4	0.0
	0.6nm,0.8s,baz=226,slow=5.4,SNR=7.1						

IDC 07 14:52:08.1±5.1**, 10.°66S×164.°25E, h0**km**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.6**/41**, mbtmp3.7**/3**, Error ellipse: s-maj=273.3km s-min=34.1km az=138.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.25	249	P	P	14 58 21.4	+0.4
	0.4nm,0.5s,baz=79,slow=9.0,SNR=6.1						
ASAR	Alice Springs	31.67	242	P	P	14 58 33.0	-0.5
	1.0nm,0.7s,baz=65,slow=10,SNR=5.0						
ILAR	Eielson Array	83.62	19	P	P	15 04 38.1	0.0
	0.6nm,0.9s,baz=231,slow=6.1,SNR=4.8						

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*ISCJB **07** 14:57:19.9±0.2, 28.°03N±0.°03×104.°22E±0.°04, h21km, mb4.4/60, MS3.5/7, Error ellipse: s-maj=4.5km s-min=3.6km az=174.8*

*BJI **07** 14:57:19.3, 28.°05N×104.°13E, h10km, mB4.7/15, mb4.5/24, ML4.5/24, Ms4.2/23, Ms7 4.0/20*

*MOS **07** 14:57:22.3±0.9, 28.°01N×104.°27E, h42km, mb4.6/32, Error ellipse: s-maj=9.2km s-min=6.1km az=96.8*

*IDC **07** 14:57:23.5±2.0, 28.°03N×104.°24E, h35km±15km, mb4.1/37, mb1 4.2/39, mb1mx4.1/64, mbtmp4.3/39, ML4.2/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/53, Error ellipse: s-maj=11.4km s-min=9.8km az=55.0*

*NEIC **07** 14:57:24.9±0.5, 28.°00N×104.°24E, h48km±5km, mb4.6/22, Error ellipse: s-maj=4.6km s-min=3.7km az=94.0*

ISC 07 14:57:22.1±0.3**, 28.°06N**±0.°03×**104.°23E**±0.°04**, h21**km**, n152,** σ1s**62**/167**, mb4.5**/60**, MS3.4**/7**, 3C-2D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	Guiyang	2.69	126	⇓iPn	Pn	14 58 06.4	+2.1
GYA				Pg	Pb	14 58 11.6	+2.0
GYA				Sn	Sb	14 58 43.2	+0.9
GYA				Sg	Sn	14 58 49.4	+13
GYA				smax	smax		
	comp=N,3μm,0.7s						
GYA				smax	smax		
	comp=E,2μm,0.7s						
CD2	Chengdu	2.87	352	⇓iPn	Pn	14 58 08.3	+1.7
CD2				Pg	Pb	14 58 12.7	+0.2
CD2				Sn	Sn	14 58 41.3	+0.8
CD2				Sg	Sb	14 58 49.6	+2.4
CD2				smax	smax		
	comp=N,10μm,0.7s						
CD2				smax	smax		
	comp=E,17μm,1.0s						
KMI	Kunming	3.22	205	Pn	Pn	14 58 12.4	+0.9
KMI				Pg	Pb	14 58 19.3	+0.6
KMI				Sg	Sb	14 59 04.9	+7.4
KMI				smax	smax		
	comp=N,270nm,1.1s						
KMI				smax	smax		
	comp=E,170nm,0.8s						
KMI				LR	LR		
	comp=N,3μm,6.9s						
KMI				LR	LR		
	comp=E,2μm,5.7s						
KMI				LR	LR		
	comp=Z,2μm,8.2s						
KMI	Kunming	3.22	205	ePn	Pn	14 58 12.5	+0.9
KMI	Kunming	3.22	205	eP	Pn	14 58 12.5	+0.9
ENH	Enshi	5.10	63	ePn	Pn	14 58 39.9	+2.7
XAN	Xi'an	7.19	33	Pn	Pn	14 59 06.8	+0.8
XAN				Sn	Sn	15 00 24.6	-2.4
XAN				Sg	Sb	15 01 09.8	+18
XAN				smax	smax		
	comp=N,450nm,1.0s						
XAN				smax	smax		
	comp=E,580nm,0.9s						
XAN				LR	LR		
	comp=N,1μm,6.9s						
XAN				LR	LR		
	comp=E,1μm,6.9s						
XAN				LR	LR		
	comp=Z,980nm,11.8s						
XAN	Xi'an	7.19	33	ePn	Pn	14 59 06.2	+0.2
XAN	Xi'an	7.19	33	eP	Pn	14 59 06.2	+0.2
LZH	Lanzhou	8.01	358	eP	Pn	14 59 20.1	+2.8
LZH				pP	Pb	14 59 24.8	-15
LZH				sP		14 59 28.3	
LZH				S	Sn	15 00 52.7	+5.4
LZH				sS	Sb	15 00 55.4	-20
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,98nm,4.6s						
LZH				LR	LR		
	comp=N,3μm,8.1s						
LZH				LR	LR		
	comp=E,3μm,9.2s						
LZH				LR	LR		
	comp=Z,2μm,7.6s						
WHN	Wuhan	9.17	72	P	Pn	14 59 35.5	+2.3
WHN				S	Sn	15 01 11.7	-4.1
WHN				LR	LR		
	comp=N,4μm,11.4s						
WHN				LR	LR		
	comp=E,2μm,13.1s						
WHN				LR	LR		
	comp=Z,2μm,14.3s						
GZH	Guangzhou	9.60	119	P	Pn	14 59 38.7	-0.4
GZH				LR	LR		
	comp=N,690nm,3.8s						
GZH				LR	LR		
	comp=E,450nm,4.6s						
NONG	Nongkai	10.00	186	P	Pn	14 59 49.0	+4.4
QIZ	Qiongzhong	10.36	149	ePn	Pn	14 59 48.5	-1.0
CMMT	Chiang Mai	10.40	209	P	Pn	14 59 52.9	+2.8
	10.0nm,1.1s						
CHTO	Chiang Mai	10.40	209	ePn	Pn	14 59 50.4	+0.3
CHTO	Chiang Mai	10.40	209	eP	Pn	14 59 50.4	+0.3
CHTO	Chiang Mai	10.40	209	P	Pn	14 59 53.0	+2.9
	44nm,1.1s						
CMAR	Chiang Mai Arr	10.72	208	Pn	Pn	14 59 56.4	+1.9
	0.5nm,0.3s,baz=16,slow=12,SNR=45						
CMAR				Lg	Lg	15 03 03.6	
	baz=23,slow=30,SNR=2.7						
PBKT	Sadao Pong	11.83	195	ePn	Pn	15 00 11.2	+1.6
PBKT	Sadao Pong	11.83	195	P	Pn	15 00 11.8	+2.2
	4.9nm,0.9s						
GTA	Gaotai	11.90	343	eP	Pn	15 00 12.7	+2.1
GTA				pP		15 00 17.2	
GTA				sP		15 00 19.9	
GTA				S	Sn	15 02 25.3	+2.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,39nm,4.5s						
GTA				LR	LR		
	comp=N,440nm,11.4s						
GTA				LR	LR		
	comp=E,910nm,12.4s						
GTA				LR	LR		
	comp=Z,260nm,10.8s						
CHAI	Chaiyaphum	12.28	190	P	P	15 00 28.4	+0.4
	3.9nm,0.7s						
UTHA	Uthaitani	13.21	201	P	P	15 00 34.0	-4.3
	2.9nm,0.8s						
SRAK	Srakaew	14.13	189	P	P	15 00 48.4	-0.1
PATY	Pattaya	15.39	192	P	P	15 01 04.4	+1.9
	14nm,0.8s,978nm						
PHET	Kaeng Krachan	15.68	197	P	P	15 01 05.9	+0.2
	16nm,0.8s,147nm						
RAMN	Ramite	15.69	270	eP	Pn	15 01 01.0	-1.1
	29nm,0.4s						
JIRN	Jiri	15.96	273	eP	Pn	15 01 03.7	-2.1
	34nm,0.4s						
GUN	Gumba	16.21	274	eP	Pn	15 01 07.5	-1.5
	49nm,0.7s						
PKI	Pulchoki	16.66	273	eP	Pn	15 01 12.9	-1.8
	35nm,0.6s						
PKIN	Phulchoki	16.67	273	eP	Pn	15 01 12.3	-2.4
	16nm,0.4s						
DANN	Dangsing	18.05	276	eP	Pn	15 01 28.4	-3.5
	36nm,0.5s						
KOLN	Koldanda	18.24	274	eP	Pn	15 01 30.8	-3.3
	9.0nm,0.4s						
PYUN	Piuthan	18.74	275	eP	P	15 01 36.2	-3.6
	41nm,0.6s						
SONA0	Songino Array	19.81	4	eP	P	15 01 52.0	+0.7
SONM	Songino Array	19.81	4	P	P	15 01 52.0	+0.7
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	19.81	4	P	P	15 01 52.0	+0.7
	comp=Z,0.8nm,0.3s,baz=190,slow=11,SNR=27						
SONA1	Songino Array	19.82	4	eP	Pn	15 01 53.4	+0.3
TRTT	Trang	20.57	193	P	P	15 02 00.4	+0.8
	comp=Z,9.2nm,0.9s						
WMQ	Urumqi	20.59	324	P	P	15 01 59.2	-0.5
WMQ				pP	Pn	15 02 01.5	-0.5
WMQ				sP	sP	15 02 09.3	+0.3
WMQ				PP	PnPn	15 02 17.5	0.0
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,370nm,4.9s						
WMQ				LR	LR		
	comp=Z,450nm,20.5s						
WMQ				LR	LR		
	comp=Z,250nm,20.1s						

WMQ				LR	LR		
	comp=Z,240nm,14.9s						
PKDT	Phuket	20.82	197	P	Pn	15 02 03.8	-1.0
	comp=Z,10nm,0.8s,comp=Z,314nm						
TGY	Tagaytay City	20.84	128	LR	LR	15 08 51.8	
	comp=Z,71nm,21.1s,baz=346,slow=33						
JOW	Kunigami	21.37	88	P	P	15 02 08.2	0.0
	comp=Z,0.9nm,0.3s,baz=202,slow=15,SNR=2.5						
KS15	Wonju Array Si	21.93	59	eP	P	15 02 14.5	+0.3
KSAR	Wonju Array Be	21.93	59	P	P	15 02 14.5	+0.3
KSAR	Wonju Array Be	21.93	59	P	P	15 02 14.5	+0.3
KSRS	Korea Array	21.97	59	P	P	15 02 14.5	0.0
	comp=Z,3.4nm,0.6s,baz=258,slow=11,SNR=13						
KSRS				LR	LR	15 10 42.8	
	comp=Z,93nm,18.1s,baz=245,slow=36						
ZAK	Zakamensk	22.30	358	eP	P	15 02 18.4	+0.3
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s						
KULM	Kulim	22.90	189	eP	P	15 02 24.4	-0.2
	comp=Z,13nm,1.4s						
IPM	Ipoh	23.65	188	eP	P	15 02 30.9	-1.2
	comp=Z,22nm,1.1s						
MOY	Mondy	23.70	355	eP	P	15 02 36.4	+4.0
LHMI	Lhok Sumawe	23.74	198	eP	P	15 02 32.7	-0.3
	comp=Z,85nm,1.1s						
HIA	Hailar	24.30	25	eP	P	15 02 41.0	+3.1
	comp=Z,19nm,0.7s						
HIA	Hailar	24.30	25	eP	P	15 02 41.1	+3.1
HIA				pmax	pmax		
	comp=Z,19nm,0.7s						
KKM	Kota Kinabalu	24.68	150	eP	P	15 02 40.6	-1.1
	comp=Z,21nm,1.1s						
MK01	Makanchi Array	25.39	323	eP	P	15 02 48.6	+0.7
MK31	Makanchi Array	25.41	323	eP	P	15 02 48.5	+0.4
MK31	Makanchi Array	25.41	323	eP	P	15 02 48.5	+0.4
MK32	Makanchi Array	25.41	323	eP	P	15 02 48.4	+0.3
MKAR	Makanchi Array	25.41	323	eP	P	15 02 48.5	+0.4
	comp=Z,43nm,0.8s						
MKAR				ScP	ScP	15 09 55.7	-2.4
MKAR	Makanchi Array	25.41	323	P	P	15 02 48.4	+0.3
	comp=Z,5.6nm,0.8s,baz=121,slow=12,SNR=35						
MKAR				ScP	ScP	15 09 55.7	-2.4
	comp=Z,2.3nm,0.8s,baz=104,slow=5.1,SNR=22						
MAKZ	Makanchi	25.59	323	eP	P	15 02 49.9	+0.3
	comp=Z,7.1nm,0.7s						
PSI	Prapat	25.63	192	P	P	15 02 49.7	-0.6
	comp=Z,12nm,0.9s,baz=0.1,slow=5.5,SNR=4.8						
HYB	Hyderabad	25.89	251	iP	P	15 02 53.0	+0.3
NIL	Nilore	27.11	290	eP	P	15 03 04.6	+1.0
	comp=Z,21nm,0.5s						
NIL	Nilore	27.11	290	eP	P	15 03 04.6	+1.0
NIL				pmax	pmax		
	comp=Z,21nm,0.5s						
USRK	Ussuriysk Ar.	27.43	47	P	P	15 03 06.6	+0.4
	comp=Z,9.3nm,0.6s,baz=218,slow=12,SNR=23						
SFK	Sufi-Kurgan	27.98	303	P	P	15 03 13.7	+2.2
AAK	Ala-Archa	28.10	309	P	P	15 03 13.4	+0.8
	comp=Z,0.6nm,0.5s,baz=102,slow=8.7,SNR=3.3						
MNAS	Manas	29.43	308	P	P	15 03 25.5	+1.1
ZAA0	Zalesovo Array	29.52	337	eP	P	15 03 24.6	-0.3
	comp=Z,7.8nm,0.9s						
ZALV	Zalesovo Beam	29.52	337	eP	P	15 03 24.4	-0.4
ZALV	Zalesovo Beam	29.52	337	eP	P	15 03 24.4	-0.4
ZALV	Zalesovo Beam	29.52	337	P	P	15 03 23.6	-1.2
	comp=Z,4.3nm,0.5s,baz=138,slow=7.7,SNR=22						
ZAA1	Zalesovo Array	29.53	337	eP	P	15 03 23.6	-1.2
KURBB	Kurchatov Arra	29.77	326	P	P	15 03 26.2	-0.9
	comp=Z,3.3nm,0.7s,baz=132,slow=9.5,SNR=15						
KURBB				ScP	ScP	15 10 09.7	-1.5
	comp=Z,0.9nm,0.9s,baz=141,slow=3.3,SNR=4.3						
KURK	Kurchatov	29.79	326	eP	P	15 03 27.6	+0.4
KURK				ScP	ScP	15 10 09.7	-1.6
KURK	Kurchatov	29.79	326	eP	P	15 03 27.6	+0.4
KLR	Kul'dur	29.87	37	P	P	15 03 28.8	+0.9
	comp=Z,2.8nm,0.8s,baz=246,slow=9.3,SNR=5.8						
KLR				LR	LR	15 17 01.4	
	comp=Z,88nm,19.9s,baz=183,slow=39						
PALK	Pallekele	30.38	232	P	P	15 03 32.5	-0.3
	comp=Z,11nm,0.9s,baz=116,slow=8.5,SNR=3.5						
OTUK	Ortayu	31.83	318	P	P	15 03 45.0	-0.3
JCJ	Chichijima	33.57	83	LR	LR	15 17 09.8	
	comp=Z,48nm,19.0s,baz=338,slow=35						
ASAJ	Asahikawa	34.54	52	P	P	15 04 08.8	-0.2
	comp=Z,7.7nm,1.1s,baz=243,slow=14,SNR=3.2						
BVAR	Borovoye Array	35.28	324	P	P	15 04 14.9	-0.3
	comp=Z,0.9nm,0.7s,baz=72,slow=9.8,SNR=4.7						
BVAR				PcP	PcP	15 06 44.4	-1.2
	comp=Z,1.0nm,0.7s,baz=113,slow=3.4,SNR=4.0						
BVAR				ScP	ScP	15 10 28.4	-1.8
	comp=Z,1.2nm,0.7s,baz=134,slow=8.4,SNR=6.9						
BVAR				LR	LR	15 18 36.1	
	comp=Z,95nm,20.9s,baz=100,slow=36						
YAK	Yakutsk	37.91	19	eP	P	15 04 38.8	+1.3
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
GEYT	Alibeck	39.56	297	P	P	15 04 52.8	+1.0
	comp=E,6.3nm,0.7s,baz=103,slow=6.7,SNR=11						
ABKAR	Akbulak array	39.82	314	eP	P	15 04 54.0	+0.3
WSAR	Wadi Sarin	41.20	274	P	P	15 05 06.2	+0.7
	comp=E,6.4nm,0.6s,baz=96,slow=6.0,SNR=3.5						
AKTO	Aktyubinsk	41.34	316	P	P	15 05 07.5	+1.2
	comp=E,0.6nm,0.5s,baz=90,slow=9.1,SNR=3.7						
NRIK	Noril'sk	42.44	351	P	P	15 05 14.8	-0.2
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NRIK	Noril'sk	42.44	351	P	P	15 05 14.8	-0.2
	comp=Z,9.6nm,0.9s,baz=151,slow=7.0,SNR=9.9						
TIXI	Tiksi	45.71	11	P	P	15 05 40.3	-0.9
	comp=Z,3.7nm,0.5s,baz=191,slow=3.9,SNR=22						
GNI	Garni	49.87	300	LR	LR	15 30 27.3	
	comp=Z,231nm,20.9s,baz=83,slow=40						
ZEI	Tsey	50.30	304	eP	P	15 06 16.4	-1.0
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	50.97	305	P	P	15 06 21.7	-0.5
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KBZ	Khabaz	50.97	305	P	P	15 06 21.6	-0.5
	comp=Z,2.0nm,0.7s,baz=92,slow=11,SNR=6.6						
KVAR	Kislovodsk Arr	51.10	305	P	P	15 06 24.7	+1.4
	comp=Z,1.4nm,0.3s,baz=90,slow=20,SNR=3.9						
KLMR	Klimovskoe	53.64	327	eP	P	15 06 44.1	+2.4
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KLMR	Klimovskoe	53.64	327	e	P	15 06 44.1	+2.4
KLMR				AMP		15 06 48.7	
	comp=Z,9.0nm,1.2s						
BILL	Bilibino	53.88	24	eP	P	15 06 42.7	-0.7
	comp=Z,5.0nm,0.7s						
BILL	Bilibino	53.88	24	eP	P	15 06 42.7	-0.7
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WRAB	Tennant Creek	55.91	145	eP	P	15 06 58.0	-0.6
	comp=Z,20nm,0.9s						
WRAB	Tennant Creek	55.91	145	eP	P	15 06 58.0	-0.6
WRAB				pmax	pmax		
	comp=Z,20nm,0.9s						
WR1	Warramunga Arr	55.91	145	eP	P	15 06 57.7	-0.9
WRA	Warramunga Arr	55.91	145	P	P	15 06 57.7	-0.9
WRA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WRA	Warramunga Arr	55.91	145	P	P	15 06 57.7	-0.9
	comp=Z,11nm,0.8s,baz=336,slow=8.4,SNR=109						
WB2	Warramunga Arr	55.91	145	eP	P	15 06 57.7	-0.9
BR101	Keskin Array S	58.37	301	eP	P	15 07 14.8	-1.3
BRTR	Keskin Array B	58.37	301	P	P	15 07 14.8	-1.3
	comp=Z,1.8nm,0.7s,baz=119,slow=7.5,SNR=12						
AS31	Alice Springs	58.85	148	eP	P	15 07 18.8	-0.6
	comp=Z,2.1nm,0.5s						
ASAR	Alice Springs	58.85	148	P	P	15 07 18.9	-0.5
	comp=Z,5.5nm,0.6s,baz=330,slow=6.7,SNR=107						
AS01	Alice Springs	58.88	148	eP	P	15 07 18.9	-0.6
AKASG	Malin Array Be	59.56	315	P	P	15 07 22.7	-1.3
	comp=Z,0.9nm,0.4s,baz=67,slow=6.9,SNR=4.0						
ARA0	ARCESS Array S	60.08	337	eP	P	15 07 27.6	+0.4
ARCES	ARCESS Array B	60.08	337	P	P	15 07 27.6	+0.4
	comp=Z,0.7nm,0.4s,baz=79,slow=6.4,SNR=5.7						
FIA0	FINESS Array S	60.16	327	eP	P	15 07 26.7	-1.2
FIA0	FINESS Array S	60.16	327	eP	P	15 07 26.7	-1.2
FINES	FINESS Array B	60.16	327	P	P	15 07 26.7	-1.2
	comp=Z,1.8nm,0.8s,baz=96,slow=5.6,SNR=5.5						
VRI	Vrincioaia	62.07	309	⇑iP	P	15 07 41.5	+0.3
PLOR	Plostina	62.12	309	⇑iP	P	15 07 42.3	+0.7
SPITS	Spitsbergen Ar	62.31	347	P	P	15 07 41.6	-0.7
	comp=Z,9.6nm,1.0s,baz=81,slow=8.9,SNR=2.6						
MLR	Muntele Rosu	62.69	309	eP	P	15 07 44.8	-0.7
	comp=Z,5.5nm,1.0s						
MLR	Muntele Rosu	62.69	309	⇑iP	P	15 07 45.0	-0.5
MLR	Muntele Rosu	62.69	309	P	P	15 07 44.8	-0.7
	comp=Z,2.8nm,0.4s,baz=356,slow=10,SNR=6.3						
CTA	Charters Tower	62.79	135	P	P	15 07 45.6	-0.6
	comp=Z,5.5nm,0.9s,baz=321,slow=6.5,SNR=4.0						
HFS	Hagfors	66.36	327	P	P	15 08 08.3	-0.7
	comp=Z,1.6nm,0.6s,baz=87,slow=12,SNR=4.9						
VYHS	Vyhne	66.63	314	eP	P	15 08 10.9	-0.1
VYHS	Vyhne	66.63	314	eP	P	15 08 10.9	-0.1
NB2	NORSAR Subarra	67.28	328	P	P	15 08 13.5	-1.5
	comp=Z,1.2nm,0.6s,baz=73,slow=6.9						
NOA	NORSAR Array B	67.28	328	P	P	15 08 13.5	-1.5
	comp=Z,1.2nm,0.7s,baz=74,slow=6.4,SNR=6.9						
NC204	NORSAR Array S	67.42	329	eP	P	15 08 15.1	-0.8
CLL	Collm	69.36	318	eP	P	15 08 26.0	-2.1
CLL				LmH		17 16 00.0	
	comp=N,100nm,18.4s						
CLL				LmH		17 16 00.0	
	comp=E,100nm,19.7s						
CLL	Collm	69.36	318	eP	P	15 08 26.0	-2.1
STKA	Stephens Creek	69.41	147	eP	P	15 08 27.8	-0.8
	comp=E,2.2nm,1.3s						
STKA	Stephens Creek	69.41	147	P	P	15 08 27.8	-0.8
	comp=E,1.3nm,0.5s,baz=327,slow=10,SNR=5.8						
GERES	GERESS Array B	69.76	315	P	P	15 08 30.4	-0.4
	comp=E,0.6nm,0.5s,baz=90,slow=6.9,SNR=5.2						
KMBO	Kilima Mbogo	70.34	258	P	P	15 08 34.2	-0.8
	comp=E,0.9nm,0.5s,baz=54,slow=8.7,SNR=3.4						
MLY	Manley	70.95	26	eP	P	15 08 38.2	+0.6
	comp=E,5.0nm,0.6s						
PPLA	Purkeypile	71.28	28	eP	P	15 08 40.3	+0.5
	comp=E,8.3nm,0.7s						
MDM	Murphy Dome	71.93	25	eP	P	15 08 44.1	+0.6
	comp=E,7.7nm,1.0s						
RND	Reindeer	72.41	27	eP	P	15 08 46.1	-0.4
	comp=E,10nm,1.5s						
SUA	Susitna One	72.51	29	eP	P	15 08 46.8	-0.4
	comp=E,6.5nm,0.7s						
ILAR	Eielson Array	72.53	25	P	P	15 08 46.0	-1.1
	comp=E,0.4nm,0.4s,baz=289,slow=3.9,SNR=7.2						
ILAR				PP	PP	15 11 30.0	+2.0
	comp=E,0.9nm,1.0s,baz=282,slow=7.5,SNR=4.2						
DAVOX	Davos/Dischmat	72.91	314	P	P	15 08 49.8	-0.2
	comp=E,3.9nm,0.7s,baz=68,slow=11,SNR=5.0						
KLU	Klutina	74.53	28	eP	P	15 08 59.0	-0.1
	comp=E,5.6nm,0.7s						
INK	Inuvik	74.98	19	eP	P	15 09 01.9	+0.6
	comp=E,5.0nm,0.8s						
INK	Inuvik	74.98	19	eP	P	15 09 02.0	+0.6
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YKA	Yellowknife Ar	84.56	17	P	P	15 09 53.3	0.0
	comp=Z,0.9nm,0.5s,baz=328,slow=5.0,SNR=18						
LSZ	Lusaka	85.23	250	eP	P	15 09 57.1	-0.6
	comp=Z,7.0nm,0.6s						
LSZ	Lusaka	85.23	250	eP	P	15 09 57.1	-0.6
LSZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BOSA	Boshof	94.26	240	P	P	15 10 37.7	-2.5
	comp=Z,1.5nm,0.6s,baz=60,slow=2.9,SNR=4.9						

IDC 07 14:58:00.3±1.6**, 11°.69S×165°.14E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/40**, mbtmp3.7**/5**, ML3.2**/1**, Error ellipse: s-maj=48.9km s-min=29.7km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.40	173	Pn	Pn	15 00 29.6	-1.4
	0.2nm,0.3s,baz=127,slow=17,SNR=4.6						
WRA	Warramunga Arr	30.71	251	P	P	15 04 17.4	+0.2
	0.7nm,0.7s,baz=77,slow=9.9,SNR=8.3						
ASAR	Alice Springs	31.98	244	P	P	15 04 28.8	+0.3
	0.5nm,0.8s,baz=74,slow=8.5,SNR=7.3						
ILAR	Eielson Array	84.31	19	P	P	15 10 34.3	+0.5
	0.3nm,0.7s,baz=239,slow=5.4,SNR=3.9						
MKAR	Makanchi Array	93.58	317	P	P	15 11 17.6	-0.9
	0.3nm,0.9s,baz=114,slow=6.5,SNR=2.7						

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*IDC **07** 15:04:01.5±1.0, 11°.08S×164°.96E, h0^{km}, mb4.2/13, mb1 4.4/15, mb1mx4.2/42, mbtmp4.2/15, ML4.3/2, MS3.5/2, Ms1 3.5/2, ms1mx3.1/22, Error ellipse: s-maj=30.2km s-min=18.7km az=125.0*

*NEIC **07** 15:04:04.3±0.3, 10°.99S×164°.75E, h10^{km}, mb4.9/29, Error ellipse: s-maj=6.1km s-min=5.8km az=131.0*

*ISCJB **07** 15:04:05.0±0.3, 11°.07S±0°.04×164°.75E±0°.04, h29^{km}, mb4.9/41, MS3.8/1, Error ellipse: s-maj=6.1km s-min=5.5km az=19.4*

ISC 07 15:04:06.9±0.5**, 11°.04S**±0°.07×**164°.74E**±0°.06**, h29^{km}, n69, σ1^{s}21**/67**, mb4.8**/41**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.98	288	Pn	Pn	15 05 22.2	+2.4
	24nm,0.3s,baz=138,slow=6.3,SNR=9.1						
HNR				Sn	Sn	15 06 19.0	+2.5
	22nm,0.3s,baz=212,slow=20,SNR=6.6						
HNR				LR	LR	15 06 42.1	
	comp=Z,210nm,21.2s,baz=122,slow=31						
MARNC	Mare, Loyalty	10.86	164	ePn	Pn	15 06 42.3	+1.9
DZM	Mont Dzumac	11.10	172	ePn	Pn	15 06 42.4	-1.4
DZM	Mont Dzumac	11.10	172	Pn	Pn	15 06 41.5	-2.3
	1.1nm,0.3s,baz=58,slow=8.1,SNR=10						
PINNC	Pines Island,	11.80	168	ePn	Pn	15 06 53.0	-0.3
RABL	Rabaul	14.20	298	ePn	Pn	15 07 23.0	-3.2
FUNA	Funafuti	14.46	81	ePn	Pn	15 07 30.7	+0.9
EIDS	Eidsvold	19.25	220	eP	P	15 08 27.8	-1.4
MANU	Manus Island	19.42	296	eP	P	15 08 31.3	+0.2
	34nm,1.1s						
CTA	Charters Tower	19.94	241	P	P	15 08 37.3	+0.5
	12nm,1.0s,baz=66,slow=13,SNR=7.6						
CTAO	Charters Tower	19.94	241	eP	Pn	15 08 38.5	-0.1
	36nm,1.4s						
LHI	Lord Howe Isla	21.05	194	eP	P	15 08 48.0	-0.7
	250nm,1.2s						
COEN	Coen	21.26	260	eP	P	15 08 52.6	+1.6
	8.2nm,0.9s						
ARMA	Armidale	22.82	210	eP	P	15 09 04.6	-3.1
	11nm,1.0s						
NIUE	Niue	25.71	111	eP	P	15 09 34.3	-0.6
	283nm,1.3s						
URZ	Urewera	29.28	160	eP	P	15 10 07.7	+1.0
	20nm,1.3s						
H11S2	WAKE ISLAND Hy	29.40	4	T	T	15 41 37.6	
	baz=181,slow=76,SNR=101						
H11S3	WAKE ISLAND Hy	29.41	4	T	T	15 41 34.6	
	baz=181,slow=76,SNR=80						
H11S1	WAKE ISLAND Hy	29.42	4	T	T	15 41 35.7	
	baz=181,slow=76,SNR=91						
WRAB	Tennant Creek	30.55	249	eP	P	15 10 18.0	-0.3
	15nm,1.2s						
WB2	Warramunga Arr	30.55	249	eP	P	15 10 17.5	-0.8
WR1	Warramunga Arr	30.57	249	eP	P	15 10 18.4	+0.1
	16nm,1.1s						
WR1				ePcP	PcP	15 13 17.9	+1.0
WRA	Warramunga Arr	30.57	249	P	P	15 10 18.4	+0.1
	9.5nm,1.0s,baz=78,slow=9.0,SNR=20						
WRA				PcP	PcP	15 13 17.8	+1.0
	1.1nm,0.8s,baz=66,slow=2.9,SNR=4.6						
H11N1	WAKE ISLAND Hy	30.63	4	T	T	15 43 07.3	
	baz=182,slow=76,SNR=116						
H11N3	WAKE ISLAND Hy	30.63	4	T	T	15 43 08.4	
	baz=182,slow=76,SNR=49						
H11N2	WAKE ISLAND Hy	30.64	4	T	T	15 43 07.5	
	baz=182,slow=76,SNR=55						
BFZ	Birch Farm	31.23	163	eP	P	15 10 25.0	+1.0
	17nm,1.0s						
THZ	Tophouse	31.44	168	eP	P	15 10 26.0	+0.2
	48nm,2.0s						
TOO	Toolangi	31.58	210	eP	P	15 10 26.9	-0.3
	50nm,1.7s						
AS01	Alice Springs	31.88	243	eP	P	15 10 30.2	+0.3
AS31	Alice Springs	31.92	243	eP	P	15 10 30.7	+0.4
	1.8nm,0.6s						
ASAR	Alice Springs	31.92	243	P	P	15 10 30.1	-0.3
	3.2nm,0.5s,baz=63,slow=10,SNR=43						
ASAR				PcP	PcP	15 13 21.3	+0.8
	1.4nm,0.7s,baz=68,slow=3.3,SNR=6.3						
ASAR				LR	LR	15 23 58.4	
	comp=Z,195nm,18.2s,baz=62,slow=37						
KHZ	Kahutara	32.19	168	eP	P	15 10 33.6	+1.3
LTZ	Lake Taylor	32.30	170	eP	P	15 10 34.1	+0.7
	28nm,1.4s						
OXZ	Oxford	32.79	170	eP	P	15 10 39.2	+1.6
	43nm,1.4s						
WKZ	Wanaka	33.87	175	eP	P	15 10 48.1	+1.0
	51nm,1.4s						
BBOO	Buckleboo	34.12	226	eP	P	15 10 47.8	-1.6
	11nm,1.0s						
TAU	Tasmania Unive	35.19	202	eP	P	15 10 56.9	-1.6
	164nm,1.7s						
RAR	Rarotonga	35.48	111	eP	P	15 11 02.9	+1.7
	165nm,1.6s						
FITZ	Fitzroy Crossi	38.43	255	eP	P	15 11 26.7	+0.2
	13nm,0.8s						
FITZ	Fitzroy Crossi	38.43	255	P	P	15 11 26.1	-0.3
	14nm,0.9s,baz=66,slow=8.3,SNR=9.1						
FORT	Forrest	39.25	234	eP	P	15 11 34.5	+1.4
	18nm,1.0s						
SOEI	Soe	39.81	268	eP	P	15 11 38.4	+0.3
	30nm,1.6s						
MMRI	Maumere	41.92	269	eP	P	15 11 55.8	+0.3
	12nm,1.1s						
MCQ	Macquarie Isla	43.60	185	eP	P	15 12 09.7	+1.4
	399nm,1.8s						
KIP	Kipapa	48.77	49	eP	P	15 12 49.2	-0.3
	174nm,1.4s						
OPA	Opana	48.93	48	eP	P	15 12 51.1	+0.4
	332nm,1.7s						
KKH	Kailua Kona	49.23	52	eP	P	15 12 52.8	-0.3
KHLU	Kahalu`u	49.29	52	eP	P	15 12 53.2	-0.5
	472nm,2.0s						
KHU	Kahuku	49.31	53	eP	P	15 12 52.9	-1.1
	100nm,1.0s						
AIN	Ainahou	49.50	53	eP	P	15 12 54.9	-0.6
	542nm,1.8s						
MLOA	Mauna Loa Obse	49.50	52	eP	P	15 12 57.4	+1.6
	300nm,1.5s						
ASAJ	Asahikawa	58.47	341	P	P	15 14 01.5	+1.3
	6.2nm,0.8s,baz=224,slow=9.2,SNR=5.3						
USRK	Ussuriysk Ar.	62.50	334	P	P	15 14 27.6	-0.2
	4.2nm,0.9s,baz=112,slow=3.9,SNR=2.8						
KLR	Kul'dur	66.66	337	P	P	15 14 55.4	+0.5
	1.6nm,0.7s,baz=126,slow=10,SNR=3.8						
CM01	Chiang Mai Arr	71.18	294	eP	P	15 15 23.3	-0.3
CMAR	Chiang Mai Arr	71.21	294	P	P	15 15 23.6	-0.2
	1.0nm,0.9s,baz=116,slow=4.9,SNR=6.7						
SONA0	Songino Array	78.08	324	eP	P	15 16 03.2	-0.1
SONM	Songino Array	78.08	324	P	P	15 16 03.2	-0.1
	2.5nm,1.1s,baz=140,slow=5.2,SNR=7.2						
SONA1	Songino Array	78.08	324	eP	P	15 16 03.9	+0.6
QSPA	South Pole Qui	78.97	180	eP	P	15 16 08.2	+0.3
	13nm,1.4s						
ILAR	Eielson Array	83.82	19	P	P	15 16 32.3	-1.0
	0.5nm,0.8s,baz=244,slow=4.1,SNR=5.8						
MK31	Makanchi Array	92.84	317	eP	P	15 17 17.9	+0.8
	2.7nm,1.4s						
MK32	Makanchi Array	92.84	317	eP	P	15 17 16.3	-0.7
MKAR	Makanchi Array	92.84	317	eP	P	15 17 17.9	+0.8
	8.1nm,1.2s						
MKAR	Makanchi Array	92.84	317	P	P	15 17 16.3	-0.7
	0.7nm,0.8s,baz=104,slow=7.9,SNR=6.4						
ZALV	Zalesovo Beam	92.97	324	P	P	15 17 16.2	-1.2
	0.3nm,0.3s,baz=123,slow=5.3,SNR=2.6						
ZAA1	Zalesovo Array	92.97	324	eP	P	15 17 16.2	-1.2
PDAR	Pinedale Array	94.27	47	P	P	15 17 21.3	-2.7
	0.3nm,0.8s,baz=232,slow=2.2,SNR=2.5						

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*IDC **07** 15:05:05.7±0.6, 11°.01S×165°.71E, h0^{km}, mb4.4/17, mb1 4.6/19, mb1mx4.4/40, mbtmp4.4/19, ML4.8/2, MS3.8/3, Ms1 3.8/3, ms1mx3.4/23, Error ellipse: s-maj=18.5km s-min=14.6km az=108.0*

*NEIC **07** 15:05:07.8±0.2, 11°.00S×165°.66E, h10^{km}, mb5.0/72, Error ellipse: s-maj=5.2km s-min=4.0km az=98.0*

*ISCJB **07** 15:05:09.2±0.2, 11°.10S±0°.03×165°.58E±0°.03, h30^{km}, mb4.9/93, MS3.9/2, Error ellipse: s-maj=4.8km s-min=4.0km az=178.1*

ISC 07 15:05:10.7±0.3**, 11°.11S**±0°.05×**165°.67E**±0°.05**, h30^{km}, n165, σ1^{s}59**/172**, mb5.0**/93**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.87	286	ePn	Pn	15 06 35.5	-0.2
HNR				eSn	Sn	15 07 42.7	+0.7
HNR	Honiara	5.87	286	Pn	Pn	15 06 35.5	-0.2
	28nm,0.3s,baz=59,slow=7.6,SNR=6.8						
HNR				Sn	Sn	15 07 41.6	-0.4
	14nm,0.3s,baz=329,slow=19,SNR=1.8						
MARNC	Mare, Loyalty	10.56	168	ePn	Pn	15 07 42.8	+2.8
MARNC				eSn	Sn	15 09 36.9	-0.4
DZM	Mont Dzumac	10.93	176	ePn	Pn	15 07 47.0	+1.9
	58nm,0.6s						
DZM				eLR	LR	15 10 17.3	
	comp=Z,995nm,25.6s						
DZM	Mont Dzumac	10.93	176	ePn	Pn	15 07 47.0	+1.9
DZM				eSn	Sn	15 09 45.3	-1.2
DZM	Mont Dzumac	10.93	176	Pn	Pn	15 07 46.4	+1.2
	5.5nm,0.3s,baz=317,slow=8.0,SNR=42						
DZM				Sn	Sn	15 09 42.3	-4.2
	baz=270,slow=20,SNR=1.5						
PINNC	Pines Island,	11.57	172	ePn	Pn	15 07 55.8	+2.0
PINNC				eSn	Sn	15 09 53.7	-8.3
FUNA	Funafuti	13.58	80	ePn	Pn	15 08 20.3	-1.0
MSVF	Nonsavu	13.68	120	ePn	Pn	15 08 23.0	+0.2
TARA	Tarawa	14.33	31	ePn	Pn	15 08 30.9	-0.7
RABL	Rabaul	15.04	296	ePn	Pn	15 08 39.9	-1.3
PATS	Pohnpei	19.27	337	eP	Pn	15 09 33.9	-0.3
	700nm,1.8s						
EIDS	Eidsvold	19.80	222	eP	Pn	15 09 41.0	+0.6
	29nm,1.1s						
KWAJ	Kwajalein Atol	19.88	6	eP	P	15 09 37.4	-2.2
	616nm,1.3s						
MANU	Manus Island	20.27	295	eP	P	15 09 45.0	+1.0
	129nm,1.0s						
CTA	Charters Tower	20.70	242	eP	P	15 09 49.4	+0.7
CTA	Charters Tower	20.70	242	P	P	15 09 49.4	+0.7
	8.0nm,0.8s,baz=93,slow=12,SNR=3.7						
CTAO	Charters Tower	20.70	242	eP	P	15 09 48.6	-0.1
	20nm,0.8s						
LHI	Lord Howe Isla	21.21	196	eP	P	15 09 54.8	+0.8
	448nm,1.8s						
COEN	Coen	22.14	260	eP	P	15 10 04.0	-0.2
	14nm,1.0s						
ARMA	Armidale	23.22	212	eP	P	15 10 16.4	+0.9
	33nm,1.1s						
RAO	Raoul Island	23.68	142	LR	LR	15 16 47.7	
	comp=Z,175nm,18.1s,baz=164,slow=30						
OUZ	Omahuta	25.06	165	eP	P	15 10 33.2	+0.8
	56nm,1.4s						
CAN	Canberra	28.47	209	eP	P	15 11 04.0	+0.8
	46nm,1.5s						
HIZ	Hauiti	28.50	165	eP	P	15 11 03.6	+0.3
	59nm,1.2s						
MXZ	Matakaoa Point	28.68	159	eP	P	15 11 07.0	+2.0
	41nm,1.0s						
URZ	Urewera	28.91	161	eP	P	15 11 08.0	+1.0
URZ	Urewera	28.91	161	P	P	15 11 08.0	+1.0
	14nm,0.9s,baz=310,slow=4.6,SNR=7.3						
BKZ	Black Stump Fm	29.56	163	eP	P	15 11 14.0	+1.2
	75nm,1.4s						
STKA	Stephens Creek	30.34	223	eP	P	15 11 21.2	+1.4
	1.6nm,0.8s						
STKA	Stephens Creek	30.34	223	P	P	15 11 20.6	+0.8
	6.0nm,0.8s,baz=48,slow=11,SNR=8.1						
BFZ	Birch Farm	30.90	164	eP	P	15 11 24.6	0.0
	26nm,0.7s						
SNZO	South Karori	31.12	167	eP	P	15 11 29.3	+2.8
	104nm,1.4s						
THZ	Tophouse	31.19	170	eP	P	15 11 28.4	+1.1
	18nm,0.9s						
WC3	Warramunga Arr	31.36	250	eP	P	15 11 28.7	-0.3
	16nm,1.0s						
WRAB	Tennant Creek	31.38	250	eP	P	15 11 26.0	-3.2
	11nm,0.9s						
WB2	Warramunga Arr	31.38	250	eP	P	15 11 28.1	-1.1
WR1	Warramunga Arr	31.39	250	eP	P	15 11 28.4	-0.8
	11nm,0.8s						
WR1				ePcP	PcP	15 14 22.7	+0.1
WRA	Warramunga Arr	31.39	250	P	P	15 11 28.4	-0.8
WRA				PcP	PcP	15 14 22.7	+0.1
WRA	Warramunga Arr	31.39	250	P	P	15 11 28.4	-0.8
	8.2nm,0.9s,baz=81,slow=9.1,SNR=18						
WRA				PcP	PcP	15 14 22.7	+0.1
	0.7nm,0.8s,baz=79,slow=2.8,SNR=4.8						

KHZ	Kahutara	31.94	169	*e*P	P	15 11 34.3	+0.6
	20nm,0.8s						
TOO	Toolangi	31.98	211	*e*P	P	15 11 35.7	+1.5
	22nm,1.2s						
LTZ	Lake Taylor	32.07	171	*e*P	P	15 11 35.9	+0.9
	26nm,0.8s						
FOZ	Fox Glacier	32.50	174	*e*P	P	15 11 39.5	+0.8
	30nm,1.2s						
OXZ	Oxford	32.57	171	*e*P	P	15 11 40.5	+1.3
	22nm,0.9s						
AS01	Alice Springs	32.65	243	*e*P	P	15 11 39.7	-0.6
AS01				*e*PcP	PcP	15 14 26.0	0.0
AS31	Alice Springs	32.69	243	*e*P	P	15 11 39.9	-0.8
	1.8nm,0.5s						
ASAR	Alice Springs	32.70	243	P	P	15 11 39.6	-1.1
ASAR				PcP	PcP	15 14 26.1	0.0
ASAR	Alice Springs	32.70	243	P	P	15 11 39.6	-1.1
	4.3nm,0.9s,baz=76,slow=9.8,SNR=14						
ASAR				PcP	PcP	15 14 26.1	0.0
	1.7nm,0.9s,baz=73,slow=2.8,SNR=6.2						
RPZ	Rata Peaks	32.82	173	*e*P	P	15 11 41.2	-0.2
RPZ	Rata Peaks	32.82	173	P	P	15 11 41.2	-0.2
	17nm,0.9s,baz=1.2,slow=11,SNR=9.1						
CRLZ	Canterbury Las	32.90	171	*e*P	P	15 11 43.2	+1.1
	226nm,1.7s						
MQZ	McQueen’s Vall	33.04	171	*e*P	P	15 11 44.4	+1.0
	100nm,1.7s						
LBZ	Lake Benmore	33.38	174	*e*P	P	15 11 48.0	+1.6
	74nm,1.9s						
WKZ	Wanaka	33.72	176	*e*P	P	15 11 51.5	+2.1
	57nm,1.5s						
SARN	Sarigan	33.92	324	*e*P	P	15 11 50.3	-1.0
	83nm,1.2s						
MLZ	Mavora Lakes	34.20	177	*e*P	P	15 11 54.5	+1.0
	95nm,1.9s						
DCZ	Deep Cove	34.26	178	*e*P	P	15 11 54.9	+0.9
	40nm,1.5s						
BBOO	Buckleboo	34.73	227	*e*P	P	15 11 57.7	-0.5
	58nm,1.6s						
FITZ	Fitzroy Crossi	39.29	255	*e*P	P	15 12 36.0	-1.2
	6.0nm,0.9s						
FITZ	Fitzroy Crossi	39.29	255	P	P	15 12 36.1	-1.0
	4.6nm,0.8s,baz=124,slow=6.9,SNR=4.8						
FORT	Forrest	39.94	235	*e*P	P	15 12 42.3	-0.1
	19nm,0.9s						
PPT2	Papeete2	43.76	104	*e*LR	LR	15 25 30.0	
	comp=Z,178nm,24.0s						
MBWA	Marble Bar	45.10	251	*e*P	P	15 13 23.6	-1.0
	52nm,1.5s						
AIN	Ainahou	48.83	52	*e*P	P	15 13 55.4	+1.5
	488nm,1.6s						
JHJ2	Mitsune	50.41	332	*e*P	P	15 14 05.9	+0.5
	1µm,1.5s						
KKM	Kota Kinabalu	52.08	287	*e*P	P	15 14 17.4	-1.1
	23nm,1.2s						
JOW	Kunigami	52.35	317	*e*P	P	15 14 19.6	-0.5
	29nm,0.8s						
MJAR	Matsushiro Arr	53.99	333	P	P	15 14 30.9	-1.2
MJAR	Matsushiro Arr	53.99	333	P	P	15 14 30.9	-1.2
	2.8nm,0.7s,baz=177,slow=7.9,SNR=4.8						
MAJO	Matsushiro	53.99	333	*e*P	P	15 14 33.6	+1.6
	62nm,1.8s						
MJB9	Matsu-Tunnel	54.00	333	*e*P	P	15 14 33.6	+1.6
	60nm,1.7s						
JNU	Nakatsue	55.09	324	*e*P	P	15 14 42.3	+2.2
	196nm,2.0s						
RKT	Rikitea	57.64	110	*e*LR	LR	15 31 50.9	
	comp=Z,268nm,28.5s						
ASAJ	Asahikawa	58.83	341	*e*P	P	15 15 05.8	-0.5
ASAJ	Asahikawa	58.83	341	P	P	15 15 05.8	-0.5
	5.8nm,0.8s,baz=251,slow=5.6,SNR=4.1						
NJ2	Nanjing	62.01	315	*e*P	P	15 15 28.5	+0.2
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
USRK	Ussuriysk Ar.	62.97	333	P	P	15 15 33.7	-0.8
USRK	Ussuriysk Ar.	62.97	333	P	P	15 15 33.7	-0.8
	comp=Z,4.4nm,0.9s,baz=132,slow=6.4,SNR=3.0						
PETK	Petropavlovsk-	64.32	355	*e*P	P	15 15 45.5	+2.2
CN2	Changchun	65.76	329	*e*P	P	15 15 57.2	+4.4
VNDA	Vanda	66.43	181	*e*P	P	15 15 57.1	+0.5
	comp=Z,120nm,1.9s						
KLR	Kul'dur	67.08	337	P	P	15 16 01.2	+0.1
	comp=Z,2.9nm,0.7s,baz=93,slow=2.7,SNR=5.1						
GYA	Guiyang	68.39	304	*e*P	P	15 16 11.8	+1.8
GYA				PP	PP	15 18 44.4	+3.0
GYA				S	S	15 25 08.2	-1.7
GYA	Guiyang	68.39	304	SS	SS	15 29 33.6	-0.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.7s						
GYA				LR	LR		
	comp=N,550nm,18.9s						
GYA				LR	LR		
	comp=E,580nm,18.4s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
XAN	Xi'an	70.11	312	P	P	15 16 23.7	+3.3
XAN				pP	pwP	15 16 33.0	+1.0
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMI	Kunming	71.09	301	P	P	15 16 31.9	+5.1
KMI				pP	sP	15 16 36.9	-2.0
KMI				sP	pwP	15 16 38.6	+0.4
KMI				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KMI				LR	LR		
	comp=Z,100nm,35.9s						
HHC	Hu-ho-hao-te	71.83	320	*e*P	P	15 16 32.6	+1.8
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.9s						
CM01	Chiang Mai Arr	72.04	294	*e*P	P	15 16 33.1	+0.7
CMAR	Chiang Mai Arr	72.07	294	LR	LR	15 45 13.6	
	comp=Z,31nm,22.0s,baz=150,slow=33						
LZH	Lanzhou	74.74	312	*e*P	P	15 16 48.7	+0.5
LZH				pP	pP	15 16 58.4	+1.4
LZH				sP	PcP	15 17 03.5	+1.3
LZH				PP	PP	15 19 31.1	-4.7
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,95nm,4.8s						
LZH				LR	LR		
	comp=N,420nm,16.6s						
LZH				LR	LR		
	comp=E,440nm,16.1s						
LZH				LR	LR		
	comp=Z,510nm,17.7s						
KDAK	Kodiak Island	76.67	22	LR	LR	15 44 56.8	
	comp=Z,140nm,19.6s,baz=215,slow=31						
SONA0	Songino Array	78.67	324	*e*P	P	15 17 10.7	+0.6
SONM	Songino Array	78.67	324	P	P	15 17 10.7	+0.6
SONM	Songino Array	78.67	324	P	P	15 17 10.7	+0.6
	comp=Z,0.5nm,0.6s,baz=134,slow=4.2,SNR=1.9						
SONA1	Songino Array	78.67	324	*e*P	P	15 17 11.1	+1.0
QSPA	South Pole Qui	78.90	180	*e*P	P	15 17 10.1	-1.0
	comp=Z,12nm,1.1s						
BILL	Bilibino	78.94	0	*e*P	P	15 17 10.8	-0.1
	comp=Z,7.6nm,0.9s						
GTA	Gaotai	79.05	314	*e*P	P	15 17 20.1	+7.8
GTA				pP	sP	15 17 24.4	0.0
GTA				sP	pwP	15 17 27.2	+3.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MLY	Manley	82.62	17	*e*P	P	15 17 30.6	-0.2
	comp=Z,16nm,1.8s						
WRH	Wood River Hil	83.01	18	*e*P	P	15 17 30.9	-1.8
	comp=Z,42nm,1.9s						
MDM	Murphy Dome	83.31	18	*e*P	P	15 17 32.6	-1.7
	comp=Z,21nm,1.6s						
HDA	Harding Lake	83.33	19	*e*P	P	15 17 33.4	-0.9
	comp=Z,12nm,0.7s						
HDA	Harding Lake	83.33	19	P	P	15 17 34.1	-0.3
	baz=227						
TCOL	CIGO, UAF Yank	83.37	18	P	P	15 17 36.1	+1.6
	baz=226						
COLA	College	83.37	18	*e*P	P	15 17 34.7	+0.2
	comp=Z,9.3nm,0.6s						
O02D	Mt. Diablo Mer	83.39	47	P	P	15 17 38.7	+3.3
	baz=250						
RIDG	Independ’e Rid	83.56	20	*e*P	P	15 17 35.4	-0.2
	comp=Z,6.5nm,0.9s						
IL1	Eielson Array	83.60	19	*e*P	P	15 17 34.7	-1.1
ILAR	Eielson Array	83.60	19	P	P	15 17 35.0	-0.7
ILAR	Eielson Array	83.60	19	P	P	15 17 35.0	-0.7
	comp=Z,4.1nm,0.6s,baz=237,slow=4.9,SNR=48						
ILB	Eielson Array	83.60	19	*e*P	P	15 17 34.8	-0.9
POKR	Poker Plat Res	83.67	18	P	P	15 17 34.8	-1.3
	baz=226						
WDC	Whiskeytown Da	83.71	47	*e*P	P	15 17 37.7	+0.9
	comp=Z,34nm,1.7s						
N02D	Trinity Center	83.73	46	P	P	15 17 39.5	+2.4
	baz=250						
DOT	Dot Lake	83.76	20	*e*P	P	15 17 38.1	+1.4
	comp=Z,6.9nm,0.9s						
YBH	Yreka Blue Hor	83.99	46	*e*P	P	15 17 39.6	+1.2
	comp=Z,44nm,1.8s						
SCRK	Sand Creek	84.00	20	*e*P	P	15 17 37.0	-1.0
	comp=Z,11nm,1.4s						
ORV	Oroville	84.11	48	*e*P	P	15 17 40.3	+1.4
	comp=Z,2.5nm,0.8s						
HUMO	Hull Mountain	84.13	45	*e*P	P	15 17 40.1	+1.1
	comp=Z,64nm,1.8s						
AFDM	Forest Hills D	84.30	49	*e*P	P	15 17 41.8	+1.9
	comp=Z,3.7nm,0.7s						
WAKR	Walker	85.30	49	*e*P	P	15 17 44.7	-0.5
	comp=Z,36nm,2.0s						
MDPB	Devils Postpil	85.30	50	*e*P	P	15 17 44.2	-1.1
	comp=Z,4.6nm,0.7s						
EDW2	Edwards Air Fo	85.32	53	P	P	15 17 47.6	+2.4
	baz=253						
FYU	Fort Yukon	85.32	18	*e*P	P	15 17 43.6	-0.7
	comp=Z,42nm,1.8s						
PNTR	Pine Nut	85.36	49	*e*P	P	15 17 45.7	+0.1
	comp=Z,13nm,1.2s						
WHY	Whitehorse	85.46	25	*e*P	P	15 17 44.4	-1.0
	comp=Z,16nm,1.6s						
J05D	Fort Rock, OR	85.55	44	P	P	15 17 48.3	+2.0
	baz=250						
DAWY	Dawson	85.64	21	*e*P	P	15 17 46.0	-0.2
	comp=Z,21nm,1.9s						
CWC	Cottonwood Cre	85.70	52	P	P	15 17 49.6	+2.4
	baz=253						
PAHR	Pah Rah Range	85.71	48	*e*P	P	15 17 46.9	-0.3
	comp=Z,23nm,1.8s						
LRMC	Laurel Mtn Rad	85.74	53	P	P	15 17 49.8	+2.5
	baz=253						
MOD	Modoc Plateau	85.74	46	*e*P	P	15 17 46.3	-1.0
	comp=Z,36nm,1.9s						
NV01	Mina Array Sit	86.12	50	*e*P	P	15 17 47.9	-1.5
NVAR	Mina Array Bea	86.12	50	P	P	15 17 48.5	-0.8
NVAR	Mina Array Bea	86.12	50	P	P	15 17 48.5	-0.8
	comp=Z,1.5nm,0.6s,baz=233,slow=9.2,SNR=10						
KVN	Kaiserville	86.46	49	*e*P	P	15 17 48.7	-2.3
	comp=Z,8.2nm,1.5s						
BELC	Belle Mtn. Jos	86.66	55	P	P	15 17 54.4	+2.4
	baz=254						
I07A	Izee	87.00	44	*e*P	P	15 17 51.6	-1.7
	comp=Z,54nm,2.0s						
BC3	Big Chuckawall	87.00	55	P	P	15 17 56.6	+3.0
	baz=255						
WVOR	Wild Horse Val	87.09	46	*e*P	P	15 17 52.5	-1.3
TUQ	Turquoise Moun	87.10	53	P	P	15 17 56.8	+2.7
	baz=254						
GMRC	Granite Mounta	87.14	54	P	P	15 17 56.6	+2.3
	baz=254						
TPNV	Topopah Spring	87.26	52	P	P	15 17 57.4	+2.5
	baz=254						
SHPR	Sheep Range	87.98	52	*e*P	P	15 17 58.2	-0.1
	comp=Z,5.5nm,1.3s						
WMQ	Urumqi	89.09	315	*e*P	P	15 18 03.5	+0.2
WMQ				LR	LR		
	comp=N,130nm,18.7s						
WMQ				LR	LR		
	comp=E,120nm,22.1s						
WMQ				LR	LR		
	comp=Z,81nm,39.1s						
CCUT	Cedar City	89.64	52	*e*P	P	15 18 06.0	-0.2
	comp=Z,12nm,1.6s						
SZCU	Shurtz Canyon	89.86	52	*e*P	P	15 18 07.1	-0.2
	comp=Z,8.9nm,1.6s						
U15A	North Rim	90.20	53	*e*P	P	15 18 08.9	0.0
	comp=Z,5.4nm,1.0s						
HLID	Hailey	90.38	46	P	P	15 18 12.3	+2.9
	baz=255						
MTPU	Mount Pierson	90.67	51	*e*P	P	15 18 09.8	-1.3
	comp=Z,3.8nm,0.8s						
HVU	Hansel Valley	91.11	48	*e*P	P	15 18 12.4	-0.5
	comp=Z,3.8nm,0.7s						
MK01	Makanchi Array	93.50	317	*e*P	P	15 18 22.3	-1.4
MK32	Makanchi Array	93.52	317	*e*P	P	15 18 23.0	-0.7
MKAR	Makanchi Array	93.52	317	P	P	15 18 23.0	-0.7
MKAR	Makanchi Array	93.52	317	P	P	15 18 23.0	-0.7
	comp=Z,0.9nm,0.7s,baz=89,slow=6.1,SNR=7.0						
PD31	Pinedale Array	93.65	47	*e*P	P	15 18 25.3	+0.6
	comp=Z,3.7nm,1.4s						
PDAR	Pinedale Array	93.65	47	*e*P	P	15 18 24.7	0.0
PDAR	Pinedale Array	93.65	47	P	P	15 18 22.6	-2.1
	comp=Z,0.5nm,0.9s,baz=247,slow=6.3,SNR=2.1						
MAKZ	Makanchi	93.73	317	*e*P	P	15 18 24.4	-0.3
	comp=Z,4.7nm,1.4s						
YKA	Yellowknife Ar	95.06	27	P	P	15 18 28.1	-2.3
YKA	Yellowknife Ar	95.06	27	P	P	15 18 28.1	-2.3
	comp=Z,0.8nm,0.6s,baz=256,slow=4.7,SNR=14						
YKB5	Yellowknife Ar	95.06	27	*e*P	P	15 18 28.3	-2.1
ESDC	Sonseca Array	150.10	344	*e*PKPbc	PKPbc	15 24 59.4	+0.5
ESDC	Sonseca Array	150.10	344	PKPbc	PKPbc	15 24 59.4	+0.5
	comp=Z,0.2nm,0.4s,baz=33,slow=3.3,SNR=2.8						

IDC 07 15:13:31.3±2.1**, 6°.06S**×**129°.97E, h0**^{km}**, mb3.6**/1**, mb1 3.5**/4**, mb1mx3.4**/35**, mbtmp3.3**/4**, ML3.3**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.7**/36**, Error ellipse: s-maj=91.0km s-min=27.1km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.69	199	Pn	Pn	15 16 33.8	+0.6
	0.2nm,0.3s,baz=23,slow=12,SNR=9.9						
FITZ				Sn	Sn	15 18 41.2	-14
	0.1nm,0.3s,baz=108,slow=20,SNR=3.9						
WRA	Warramunga Arr	14.44	163	Pn	Pn	15 16 58.0	+0.9
	0.1nm,0.3s,baz=346,slow=12,SNR=8.9						
WRA				Sn	Sn	15 19 22.5	-16
	0.2nm,0.3s,baz=334,slow=23,SNR=5.6						
ASAR	Alice Springs	17.91	168	P	Pn	15 17 41.0	-1.1
	0.1nm,0.3s,baz=347,slow=11,SNR=11						
ASAR				S	Sn	15 20 47.0	-16
	0.0nm,0.3s,baz=356,slow=26,SNR=3.5						
KSRS	Korea Array	43.33	358	LR	LR	15 42 30.4	
	comp=Z,60nm,18.0s,baz=132,slow=40						
MKAR	Makanchi Array	67.43	327	P	P	15 24 28.9	+0.1
	0.3nm,0.4s,baz=130,slow=7.7,SNR=11						

ISCJB ***07*** *15:17:56.7±0.6, 36°.16N±0°.05×71°.30E±0°.08, h114*^{km}*, mb3.3/1, Error ellipse: s-maj=10.3km s-min=5.4km az=154.3*

IDC ***07*** *15:17:59.0±5.0, 36°.40N×71°.21E, h86*^{km}*±47*^{km}*, mb3.0/1, mb1 3.1/5, mb1mx2.9/45, mbtmp3.4/5, ML3.3/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/18, Error ellipse: s-maj=62.6km s-min=29.0km az=145.0*

NNC ***07*** *15:18:04.8±4.1, 36°.80N×71°.05E, h164*^{km}*±59*^{km}*, mb2.7, mpv3.6, Error ellipse: s-maj=41.7km s-min=31.9km az=66.0*

ISC 07 15:17:58.0±1.0**, 36°.32N**±0°.08×**71°.26E**±0°.08**, h114**^{km}**, n27, σ2**^{s}**.53**/32**, 9C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.08	25	⇑P	Pn	15 19 01.7	+2.9
	1.8nm,0.3s						
SFK				⇓S	Sn	15 19 48.4	+2.5
	2.6nm,0.5s						
AML	Almayashu	6.10	17	P	Pn	15 19 27.6	+1.6
	SNR=17						
MNAS	Manas	6.23	8	⇑P	Pn	15 19 29.3	+1.7
	6.8nm,0.7s						
MNAS				⇑S	Sn	15 20 35.1	-2.4
	1.9nm,0.5s						
UCH	Uchtor	6.41	22	P	Pn	15 19 32.0	+1.6
	SNR=5.7						
EKS2	Erkin-Say	6.62	16	P	Pn	15 19 34.6	+1.7
	SNR=9.2						
AAK	Ala-Archa	6.78	21	P	Pn	15 19 37.3	+2.2
	SNR=6.5						
AAK	Ala-Archa	6.78	21	⇑P	Pn	15 19 36.2	+1.1
	3.9nm,0.7s						
AAK				⇓S	Sn	15 20 49.3	-1.6
	4.5nm,1.0s						
KK31	Karatay Array	6.80	355	⇓P	Pn	15 19 36.7	+1.5
	4.9nm,0.3s,baz=180,slow=14,SNR=65						
KK31				⇑S	Sn	15 20 49.3	-1.8
	2.8nm,0.5s,baz=183,slow=23,SNR=7.7						
TKM2	Tokmak 2	7.39	26	P	Pn	15 19 45.2	+1.9
	SNR=6.5						
TKM2	Tokmak 2	7.39	26	⇑P	Pn	15 19 44.3	+1.0
	3.1nm,0.6s						
TKM2				⇑S	Sn	15 21 03.9	-1.8
	1.5nm,0.8s						
GEYT	Alibeck	10.62	283	P	Pn	15 20 27.0	+0.1
	0.3nm,0.3s,baz=94,slow=17,SNR=2.2						
PYUN	Piuthan	12.87	126	*e*P	Pn	15 20 55.1	-1.8
	9.8nm,0.5s						
DANN	Dangsing	13.21	123	*e*P	Pn	15 20 59.1	-2.4
	4.1nm,0.3s						
MKAR	Makanchi Array	13.31	35	P	Pn	15 21 03.6	+1.2
	0.0nm,0.3s,baz=222,slow=12,SNR=1.8						
KOLN	Koldanda	13.49	126	*e*P	Pn	15 21 02.9	-2.1
	3.3nm,0.4s						
DMN	Daman	14.60	123	*e*P	Pn	15 21 17.3	-2.0
	3.4nm,0.4s						
PKIN	Phulchoki	14.82	122	*e*P	Pn	15 21 19.8	-2.3
	3.1nm,0.4s						
PKI	Pulchoki	14.83	122	*e*P	Pn	15 21 20.4	-1.9
	7.9nm,0.8s						
GUN	Gumba	14.95	120	*e*P	Pn	15 21 20.9	-2.9
	3.5nm,0.3s						
KURBB	Kurchatov Arra	15.22	18	P	P	15 21 29.7	+0.7
	0.0nm,0.3s,baz=203,slow=11,SNR=2.8						
JIRN	Jiri	15.32	120	*e*P	Pn	15 21 26.2	-2.2
	8.4nm,0.4s						
AB31	Akbulak array	15.34	331	⇓P	Pn	15 21 29.2	+1.0
	0.3nm,0.4s,baz=0.5,slow=27,SNR=14						
AB31				⇓S	Sn	15 24 07.9	-10
	0.3nm,0.3s,baz=154,slow=23,SNR=4.4						
BVAR	Borovoye Array	16.71	358	P	P	15 21 47.5	+2.0
	0.2nm,0.3s,baz=187,slow=9.6,SNR=4.2						
AKTO	Aktyubinsk	17.04	330	⇑P	Pn	15 21 50.6	+1.5
	1.1nm,0.8s						
AKTO				⇑S	Sn	15 24 50.2	-8.5
	1.9nm,1.0s						
ZALV	Zalesovo Beam	19.99	24	P	Pn	15 22 23.1	-1.0
	0.7nm,0.3s,baz=202,slow=10,SNR=12						
PALK	Pallekele	30.18	161	LR	LR	15 35 56.8	
	comp=Z,62nm,18.1s,baz=115,slow=36						
NOA	NORSAR Array B	44.65	323	P	P	15 26 02.1	+3.2
	0.3nm,0.5s,baz=100,slow=8.1,SNR=1.9						

ISK ***07*** *15:19:10.6, 40°.95N×38°.03E, h7*^{km}*, ML2.3/8*

ISCJB ***07*** *15:19:11.3±1.1, 40°.98N±0°.05×38°.01E±0°.05, h4*^{km}*±9*^{km}*, Error ellipse: s-maj=8.6km s-min=5.9km az=168.1*

DDA ***07*** *15:19:11.1, 40°.94N×38°.07E, h8*^{km}*±2*^{km}*, ML2.6*

ISC 07 15:19:11.6±1.2**, 40°.93N**±0°.06×**38°.06E**±0°.03**, h12**^{km}±10^{km}**, n17, σ0**^{s}**.98**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORDU	Ordu-Boztepe	0.17	292	*i* P	Pg	15 19 15.9	+0.5
RSDY	Resadiye-TOKAT	0.77	227	PG	Pg	15 19 26.1	-0.4
RSDY				SG	Sb	15 19 36.9	-0.6
ERBA	Erbaa	1.02	256	*i* P	Pb	15 19 31.0	-0.3
ERBA				IAML_P			
	comp=Z,2µm,0.1s						
CUZAR	Zara_SIVAS	1.06	192	*i* P	Pn	15 19 32.2	-0.3
CUZAR				*i* S	Sn	15 19 47.7	+0.4
KELT	Kelkit	1.20	130	*i* P	Pn	15 19 34.7	+0.3
KELT				*i* S	Sn	15 19 51.5	+0.8
KELT				IAML_P			
	comp=Z,422nm,0.1s						
KTUT	Trabzon	1.29	87	PN	Pn	15 19 35.4	-0.1
MACK	Trabzon	1.29	89	*i* P	Pn	15 19 32.6	-3.0
SVSK	Karacayir	1.30	219	PN	Pg	15 19 35.8	-0.7
SVSK				SN	Sn	15 19 54.2	+1.4
TOKT	Tokat	1.30	243	PN	Pb	15 19 35.7	-0.4
KVT	Kavak	1.53	276	PN	Pn	15 19 38.7	-0.2
BAYT	Aydıntepe-Bayb	1.67	108	PN	Pn	15 19 41.5	+0.6
CUKAN	kangal_SIVAS	1.67	196	*i* P	Pg	15 19 43.7	-0.1
KEMA	Kemaliye	1.69	169	*i* P	Pg	15 19 43.6	-0.5
KEMA				IAML_P			
	comp=Z,644nm,0.3s						
BAYB	BAYBURT	1.80	111	*i* P	Pg	15 19 46.0	-0.2
BAYB				*i* S	Sg	15 20 09.7	+0.1
CHOM	Cayeli-Rize	2.05	84	PN	Pn	15 19 47.1	+1.2
DIKM	Dikmen	2.23	290	PN	Pn	15 19 48.7	+0.3
PTK	Pertek	2.28	153	PN	Pn	15 19 50.6	+1.4

IDC ***07*** *15:20:00.2±1.7, 10°.96S×164°.85E, h0*^{km}*, mb3.7/4, mb1 4.0/6, mb1mx3.8/39, mbtmp3.9/6, ML3.9/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/35, Error ellipse: s-maj=40.3km s-min=28.6km az=135.0*

ISCJB ***07*** *15:20:03.0±1.4, 11°.1S±0°.1×164°.8E±0°.2, h31*^{km}*, mb3.6/3, MS3.2/2, Error ellipse: s-maj=24.4km s-min=17.2km az=142.8*

ISC 07 15:20:04.9±1.5**, 11°.0S**±0°.2×**164°.8E**±0°.2**, h31**^{km}**, n8, σ0**^{s}**.53**/6**, mb3.6**/3**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.05	288	Pn	Pn	15 21 18.9	+0.4
	7.2nm,0.3s,baz=278,slow=15,SNR=3.5						
HNR				LR	LR	15 23 12.3	
	comp=Z,485nm,18.5s,baz=149,slow=38						
DZM	Mont Dzumac	11.09	172	Pn	Pn	15 22 41.8	+0.2
	0.6nm,0.3s,baz=112,slow=16,SNR=12						
DZM				LR	LR	15 26 35.8	
	comp=Z,122nm,18.3s,baz=28,slow=36						
CTA	Charters Tower	20.01	241	P	Pn	15 24 37.3	+0.2
	8.8nm,0.8s,baz=64,slow=13,SNR=3.7						
WRA	Warramunga Arr	30.64	249	P	P	15 26 16.2	-0.6
	0.6nm,0.9s,baz=80,slow=9.4,SNR=3.7						
GUMO	Guam	31.46	321	LR	LR	15 39 37.0	
	comp=Z,37nm,18.2s,baz=136,slow=37						
ASAR	Alice Springs	31.99	243	P	P	15 26 28.1	-0.5
	0.8nm,0.6s,baz=62,slow=10,SNR=15						
FITZ	Fitzroy Crossi	38.51	255	LR	LR	15 42 09.3	
	comp=Z,47nm,19.3s,baz=64,slow=34						
ILAR	Eielson Array	83.78	19	P	P	15 32 30.8	0.0
	0.4nm,0.8s,baz=224,slow=4.7,SNR=3.2						

IDC ***07*** *15:20:55.3±1.7, 11°.02S×164°.86E, h0*^{km}*, mb3.8/4, mb1 4.1/6, mb1mx3.8/38, mbtmp4.0/6, ML4.0/2, Error ellipse: s-maj=39.0km s-min=28.4km az=134.0*

ISCJB ***07*** *15:20:58.1±1.4, 11°.1S±0°.1×164°.8E±0°.2, h31*^{km}*, mb3.7/3, Error ellipse: s-maj=25.3km s-min=17.8km az=142.9*

ISC 07 15:21:00.1±1.5**, 11°.1S**±0°.2×**164°.8E**±0°.2**, h31**^{km}**, n7, σ0**^{s}**.73**/6**, mb3.9**/3**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.05	288	Pn	Pn	15 22 14.4	+0.6
	5.9nm,0.3s,baz=135,slow=8.6,SNR=3.0						
DZM	Mont Dzumac	11.05	172	Pn	Pn	15 23 36.6	+0.3
DZM	Mont Dzumac	11.05	172	Pn	Pn	15 23 36.6	+0.3
	1.2nm,0.3s,baz=325,slow=18,SNR=5.3						
CTA	Charters Tower	19.98	241	P	Pn	15 25 32.0	0.0
	9.4nm,0.9s,baz=41,slow=10,SNR=3.0						
WRA	Warramunga Arr	30.61	250	P	P	15 27 11.0	-0.7
	0.3nm,0.5s,baz=81,slow=9.1,SNR=4.2						
ASAR	Alice Springs	31.96	243	P	P	15 27 22.9	-0.7
	0.8nm,0.5s,baz=63,slow=10,SNR=13						
ILAR	Eielson Array	83.83	19	P	P	15 33 26.1	-0.1
	1.2nm,1.1s,baz=232,slow=5.5,SNR=3.5						

IDC ***07*** *15:21:09.7±1.8, 11°.95S×165°.31E, h0*^{km}*, mb4.0/5, mb1 4.4/6, mb1mx4.0/37, mbtmp4.1/6, ML4.5/1, Error ellipse: s-maj=66.2km s-min=27.7km az=161.0*

NEIC ***07*** *15:21:10.8±0.4, 11°.96S×165°.30E, h10*^{km}*, mb4.8/8, Error ellipse: s-maj=11.5km s-min=9.8km az=145.0*

ISCJB ***07*** *15:21:12.8±0.9, 12°.0S±0°.2×165°.2E±0°.1, h33*^{km}*, mb4.4/12, Error ellipse: s-maj=33.1km s-min=13.8km az=164.0*

ISC 07 15:21:14.6±1.3**, 12°.0S**±0°.3×**165°.3E**±0°.1**, h35**^{km}**, n17, σ0**^{s}**.76**/17**, mb4.5**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.80	295	*e*Pn	Pn	15 22 37.6	-0.6
HNR	Honiara	5.80	295	Pn	Pn	15 22 38.5	+0.3
	12nm,0.3s,baz=346,slow=8.8,SNR=5.1						
WR1	Warramunga Arr	30.73	251	*e*P	P	15 27 26.4	-0.3

	32nm,2.0s						
WRA	Warramunga Arr	30.73	251	P	P	15 27 26.4	-0.3
	1.2nm,0.8s,baz=80,slow=9.2,SNR=6.3						
CM01	Chiang Mai Arr	72.03	294	eP	P	15 32 35.6	+0.1
CM31	Chiang Mai Arr	72.05	294	eP	P	15 32 36.2	+0.5
	8.0nm,1.6s						
CMAR	Chiang Mai Arr	72.05	294	P	P	15 32 37.0	+1.3
	0.9nm,0.8s,baz=120,slow=3.5,SNR=6.0						
DHY	Denali Highway	83.22	20	eP	P	15 33 37.7	+0.6
	11nm,1.4s						
SAO	San Andreas Ge	84.09	51	eP	P	15 33 41.3	-0.7
	17nm,1.1s						
MDM	Murphy Dome	84.26	18	eP	P	15 33 42.2	-0.1
	6.1nm,1.3s						
HDA	Harding Lake	84.27	19	eP	P	15 33 41.3	-1.0
	3.3nm,0.8s						
ILAR	Eielson Array	84.54	19	P	P	15 33 44.0	+0.4
	1.3nm,0.7s,baz=235,slow=5.5,SNR=14						
ILB	Eielson Array	84.54	19	eP	P	15 33 44.4	+0.7
	2.6nm,0.8s						
IL1	Eielson Array	84.54	19	eP	P	15 33 42.7	-1.0
SCRK	Sand Creek	84.95	20	eP	P	15 33 46.1	+0.2
	9.1nm,1.3s						
NVAR	Mina Array Bea	86.98	50	P	P	15 33 57.9	+1.2
	0.7nm,0.8s,baz=240,slow=9.1,SNR=3.9						
YKA	Yellowknife Ar	96.01	27	P	P	15 34 37.2	-0.6
	0.5nm,0.7s,baz=258,slow=4.7,SNR=8.3						

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*IDC **07** 15:22:31.6±0.8, 5°.48S×103°.18E, h0^{km}, mb4.3/18, mb1 4.4/18, mb1mx4.2/50, mbtmp4.3/18, MS3.1/1, Ms1 3.1/1, ms1mx2.5/45, Error ellipse: s-maj=28.6km s-min=12.9km az=48.0*

*ISCJB **07** 15:22:38.8±0.5, 5°.64S±0°.03×103°.36E±0°.03, h70^{km}±4^{km}, mb4.5/56, Error ellipse: s-maj=7.2km s-min=3.3km az=42.9*

*NEIC **07** 15:22:39.7±0.6, 5°.58S×103°.32E, h62^{km}±5^{km}, mb4.7/36, Error ellipse: s-maj=8.0km s-min=4.3km az=49.0*

NEIC Felt [III] at Liwa.

*DJA **07** 15:22:40.0±0.7, 6°S±2°×10°3E±°, h29^{km}±8^{km}, M4.7/23, mB5.3/7, mb4.8/16, MLv4.8/23, Mw(mB)4.7/7*

ISC 07 15:22:39.2±0.8, **5°.71S**±0°.05×**103°.32E**±0°.04, **h60**^{km}±7^{km}, **n169, σ1^{s}69**/175, **mb4.6**/61, **1C, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	1.00	47	P	Pn	15 22 56.5	-0.9
LWLI				S	Sn	15 23 08.6	-2.3
KASI	Kota Agung	1.18	81	P	Pn	15 22 59.0	-0.7
KASI				S	Sn	15 23 13.2	-1.7
MNAI	Manna	1.39	345	ePn	Pn	15 23 02.1	-0.3
MNAI				eSn	Sn	15 23 19.2	-0.7
MNAI	Manna	1.39	345	P	Pn	15 23 02.3	-0.2
MDSI	Maura Dua	1.48	35	P	Pn	15 23 03.3	-0.4
MDSI				S	Sn	15 23 21.3	-0.8
KLI	Kotabumi	1.74	61	P	Pn	15 23 07.2	0.0
KLI				S	Sn	15 23 29.1	+0.7
LHSI	Lahat	1.88	6	P	Pn	15 23 09.8	+0.7
LHSI				S	Sn	15 23 32.4	+0.7
BLSI	Bandar Lampung	1.94	80	P	Pn	15 23 09.8	-0.1
BLSI				S	Sn	15 23 31.9	-1.4
MASI	Maura Aman, Be	2.77	337	P	Pn	15 23 21.7	+0.4
PMBI	Palembang	3.12	28	P	Pn	15 23 23.9	-2.1
SKJI	Sukabumi	3.46	112	P	Pn	15 23 31.8	+1.1
DBJI	Dramaga	3.51	104	P	Pn	15 23 33.1	+1.7
KRJI	Kerinci	4.04	333	P	Pn	15 23 40.2	+1.4
KRJI				S	Sn	15 24 26.2	+1.3
JMBI	JAMBI	4.06	4	P	Pn	15 23 39.7	+0.8
LEM	Lembang	4.41	105	P	Pn	15 23 47.1	+3.3
LEM	Lembang	4.41	105	Pn	Pn	15 23 46.8	+2.9
	9.9nm,0.3s,baz=179,slow=8.3,SNR=8.0						
LEM				Sn	Sn	15 24 37.6	+3.5
	6.0nm,0.3s,baz=163,slow=19,SNR=3.0						
PPSI	Pulau Pagai	4.41	311	P	Pn	15 23 44.4	+0.7
PPBI	Pangkal Pinang	4.50	39	P	Pn	15 23 44.5	-0.5
CISI	Cisompet, Garu	4.83	113	ePn	Pn	15 23 50.1	+0.7
CISI				eSn	Sn	15 24 39.1	-5.0
CISI	Cisompet, Garu	4.83	113	P	Pn	15 23 49.7	+0.3
XMIS	Christmas Isla	5.27	154	ePn	Pn	15 23 51.7	-3.8
XMIS				eSn	Sn	15 24 46.1	-9.0
DSRI	Dabo	5.34	14	P	Pn	15 23 57.1	+0.6
CMJI	Cimerak	5.49	112	P	Pn	15 23 59.6	+1.1
PDSI	Padang	5.55	329	P	Pn	15 23 59.0	-0.4
	57nm,0.4s,2µm0.7nm						
KPJI	Karang Pucung	5.80	106	P	Pn	15 24 05.3	+2.6
PPI	Padang Panjang	5.98	331	P	Pn	15 24 06.8	+1.6
BKNI	Bangkinang	6.41	339	ePn	Pn	15 24 03.8	-7.3
TPRI	Tanjung Pinang	6.69	10	P	Pn	15 24 16.0	+1.0
SMRI	Semarang	7.20	101	ePn	Pn	15 24 21.4	-0.5
MNSI	Mandailing Nat	7.46	330	P	Pn	15 24 24.2	-1.3
MYKOM	Kota Tinggi	7.47	4	ePn	Pn	15 24 25.4	-0.1
UGM	Wanagama	7.48	107	ePn	Pn	15 24 27.4	+1.7
UGM				eSn	Sn	15 25 50.2	+1.0
UGM	Wanagama	7.48	107	P	Pn	15 24 27.1	+1.3
	74nm,0.6s						
PCJI	Pacitan	8.18	108	P	Pn	15 24 36.3	+1.0
	41nm,1.0s						
PWJI	Pagerwojo	8.73	106	P	Pn	15 24 44.3	+1.4
	45nm,0.6s,931nm						
GSI	Gunungsitoli	9.03	320	ePn	Pn	15 24 45.4	-1.6
GSI				eSn	Sn	15 26 15.5	-12
GSI	Gunungsitoli	9.03	320	P	Pn	15 24 45.3	-1.6
COCO	West Island	9.09	224	ePn	Pn	15 24 49.1	+1.4
COCO				eSn	Sn	15 26 23.8	-4.8
PSI	Prapat	9.53	332	LR	LR	15 28 50.9	
	comp=Z,124nm,21.3s,baz=176,slow=41						
KSM	Kuching	9.98	45	ePn	Pn	15 25 00.3	+0.4
GMJI	Gumukmas	10.36	105	P	Pn	15 25 04.9	-0.3
IPM	Ipoh	10.38	347	ePn	Pn	15 25 06.5	+1.1
JAGI	Jajag, Banyuwa	11.09	105	ePn	Pn	15 25 15.6	+0.4
JAGI	Jajag, Banyuwa	11.09	105	P	Pn	15 25 15.2	0.0
KULM	Kulim	11.25	346	ePn	Pn	15 25 18.8	+1.5
SBUM	Sibu	12.03	48	ePn	Pn	15 25 28.7	+0.7
LHMI	Lhok Sumawe	12.59	330	ePn	Pn	15 25 33.0	-2.7
PLAI	Plampang	14.67	103	P	Pn	15 26 00.9	-2.6
KKM	Kota Kinabalu	17.37	48	ePn	Pn	15 26 37.3	-0.6
	23nm,1.1s						
MPSI	Mapaga	17.60	71	P	P	15 26 41.2	+0.3
EDFI	Ende, Flores	18.47	100	P	P	15 26 48.3	-2.2
APSI	Ampana	18.90	76	P	Pn	15 26 55.9	-0.4
MMRI	Maumere	18.99	100	eP	P	15 26 57.1	+1.0
	33nm,1.3s						
GIRL	Giralia	19.86	149	eP	Pn	15 27 09.3	+1.7
	583nm,1.4s						
LUWI	Luwuk	19.95	77	eP	P	15 27 06.4	-0.2
	86nm,1.3s						
PBA	Port Blair	20.21	329	eP	P	15 27 05.0	-4.4
	58nm,0.9s						
BATI	Baumata	20.63	104	P	Pn	15 27 16.6	-0.2
BATI	Baumata	20.63	104	P	Pn	15 27 16.6	-0.2
	25nm,0.4s,baz=215,slow=1.3,SNR=11						
BATI				S	S	15 30 51.3	-10
	6.6nm,0.4s,baz=336,slow=20,SNR=4.1						
SOEI	Soe	21.14	102	eP	P	15 27 20.5	+0.9
	33nm,0.7s						
SOEI	Soe	21.14	102	P	P	15 27 20.6	+1.1
UTHA	Uthaitani	21.48	350	P	P	15 27 25.3	+2.3
MBWA	Marble Bar	22.11	136	eP	P	15 27 31.2	+1.4
	53nm,1.4s						
PBKT	Sadao Pong	22.26	354	eP	P	15 27 30.1	-1.2
	3.0nm,0.7s						
PBKT	Sadao Pong	22.26	354	P	P	15 27 34.3	+3.0
CM01	Chiang Mai Arr	24.36	350	eP	P	15 27 50.0	-1.8
CM31	Chiang Mai Arr	24.40	350	eP	P	15 27 50.2	-2.0
	3.7nm,0.8s						
CMAR	Chiang Mai Arr	24.40	350	P	P	15 27 50.8	-1.4
	2.1nm,0.9s,baz=184,slow=8.8,SNR=18						
CMMT	Chiang Mai	24.74	350	P	P	15 27 54.0	-1.3
	3.8nm,0.9s						
CHTO	Chiang Mai	24.75	350	eP	P	15 27 52.8	-2.5
	3.2nm,0.8s						
CHTO	Chiang Mai	24.75	350	P	P	15 27 54.1	-1.2
	17nm,0.9s						
TNTI	Ternate	24.86	76	eP	P	15 27 54.8	-1.6
	10nm,0.9s						
FITZ	Fitzroy Crossi	25.03	121	eP	P	15 27 59.7	+1.8
	21nm,1.8s						
FITZ	Fitzroy Crossi	25.03	121	P	P	15 27 59.7	+1.8
	3.0nm,1.0s,baz=276,slow=9.2,SNR=4.1						
QIZ	Qiongzhong	25.41	14	eP	P	15 28 02.1	+0.8
	25nm,1.2s						
MTN	Manton Dam	28.33	106	eP	P	15 28 28.5	+0.8
	24nm,1.5s						
KMI	Kunming	30.65	359	P	P	15 28 50.9	+2.5
KMI				sP	pP	15 29 02.8	+0.2
KMI				pmax	pmax		
	comp=Z,5.0nm,1.6s						
H08S2	Diego Garcia H	30.68	265	T	T	16 01 26.1	
	baz=87,slow=76,SNR=9.8						
H08S3	Diego Garcia H	30.69	265	T	T	16 01 26.6	
	baz=87,slow=76,SNR=30						
H08S1	Diego Carcia H	30.70	265	T	T	16 01 24.4	
	baz=87,slow=76,SNR=8.5						
H01W3	Cape Leeuwin H	30.70	162	T	T	16 02 19.9	
	baz=341,slow=76,SNR=12						
H01W2	Cape Leeuwin H	30.72	162	T	T	16 02 21.2	
	baz=341,slow=76,SNR=14						
H01W1	Cape Leeuwin H	30.72	162	T	T	16 02 20.5	
	baz=341,slow=76,SNR=5.6						
WR1	Warramunga Arr	33.30	118	eP	P	15 29 12.4	+0.9
	comp=Z,34nm,1.9s						
WR1				ePcP	PcP	15 31 54.1	+1.4
WRA	Warramunga Arr	33.30	118	P	P	15 29 12.4	+0.9
	comp=Z,0.8nm,0.5s,baz=305,slow=9.4,SNR=11						
WRA				PcP	PcP	15 31 54.1	+1.4
	comp=Z,0.3nm,0.5s,baz=310,slow=1.8,SNR=2.7						
WRAB	Tennant Creek	33.30	118	eP	P	15 29 10.7	-0.9
	comp=Z,24nm,1.6s						
WB2	Warramunga Arr	33.31	118	eP	P	15 29 12.0	+0.4
FORT	Forrest	34.09	140	eP	P	15 29 17.4	-0.8
	comp=Z,22nm,1.1s						
ASAR	Alice Springs	34.42	124	P	P	15 29 23.0	+1.8
	comp=Z,1.3nm,0.6s,baz=298,slow=7.3,SNR=32						
ASAR				PcP	PcP	15 31 57.2	+1.4
	comp=Z,0.2nm,0.6s,baz=302,slow=1.7,SNR=2.3						
AS31	Alice Springs	34.42	124	eP	P	15 29 21.8	+0.6
	comp=Z,1.4nm,0.4s						
AS01	Alice Springs	34.46	124	eP	P	15 29 21.9	+0.3
NACB	Ninganchiao	34.63	30	eP	P	15 29 22.9	0.0
	comp=Z,167nm,1.9s						
ENH	Enshi	36.26	9	eP	P	15 29 36.8	-0.1
	comp=Z,20nm,1.8s						
CD2	Chengdu	36.41	1	⇑P	P	15 29 37.0	-1.2
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,25.0s						
JIRN	Jiri	37.07	334	eP	P	15 29 44.7	+0.5
	comp=Z,10nm,0.4s						
LSA	Lhasa	37.09	342	eP	P	15 29 44.3	-0.2
	comp=Z,2.6nm,0.9s						
GUN	Gumba	37.43	334	eP	P	15 29 47.6	+0.4
	comp=Z,14nm,0.4s						
KOLN	Koldanda	38.35	331	eP	P	15 29 55.3	+0.5
	comp=Z,11nm,0.7s						
DANN	Dangsing	38.76	332	eP	P	15 29 58.3	-0.1
	comp=Z,19nm,0.5s						
PYUN	Piuthan	38.92	331	eP	P	15 30 00.0	+0.4
	comp=Z,8.3nm,0.5s						
XAN	Xi'an	39.88	7	P	P	15 30 06.1	-1.3
XAN				pP	pP	15 30 15.7	-6.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN	Xi'an	39.88	7	eP	P	15 30 05.9	-1.4
	comp=Z,4.8nm,0.7s						
COEN	Coen	40.06	105	eP	P	15 30 09.4	+0.3
	comp=Z,11nm,1.3s						
NJ2	Nanjing	40.36	21	eP	P	15 30 11.3	+0.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BBOO	Buckleboo	40.70	136	eP	P	15 30 15.5	+1.4
	comp=Z,75nm,2.0s						
LZH	Lanzhou	41.58	1	eP	P	15 30 23.4	+2.0
LZH				pP	sP	15 30 41.2	-1.6
LZH				sP	pwP	15 30 50.2	+11
LZH				PP	PnPn	15 32 06.9	+3.1
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=N,540nm,16.6s						
LZH				LR	LR		
	comp=E,560nm,16.0s						
LZH				LR	LR		
	comp=Z,640nm,17.8s						
STKA	Stephens Creek	44.23	131	eP	P	15 30 45.2	+2.4
	comp=Z,2.5nm,0.6s						
STKA	Stephens Creek	44.23	131	P	P	15 30 45.2	+2.4
	comp=Z,12nm,0.6s,baz=308,slow=8.1,SNR=37						
GTA	Gaotai	45.01	356	eP	P	15 30 48.9	-0.1
GTA				pP	pP	15 30 53.9	-10
GTA				sP	pwP	15 30 57.0	-9.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JNU	Nakatsue	46.64	32	eP	P	15 31 02.8	+1.0
	comp=Z,205nm,1.9s						
HHC	Hu-ho-hao-te	46.94	9	eP	P	15 31 07.8	+3.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,2µm,7.2s						
NIL	Nilore	48.41	326	eP	P	15 31 15.5	-0.1
	comp=Z,11nm,0.7s						
KS15	Wonju Array Si	48.66	26	eP	P	15 31 17.5	+0.1
KSAR	Wonju Array Be	48.66	26	P	P	15 31 17.1	-0.2
KSRS	Korea Array	48.68	26	P	P	15 31 17.1	-0.4
	comp=Z,3.7nm,0.6s,baz=223,slow=7.4,SNR=16						
WMQ	Urumqi	51.28	346	eP	P	15 31 39.0	+1.7
WMQ				pmax	pmax		
	comp=Z,63nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,3.6s						
WMQ				LR	LR		
	comp=N,130nm,17.7s						
WMQ				LR	LR		
	comp=E,290nm,26.1s						
WMQ				LR	LR		
	comp=Z,94nm,24.1s						
KSH	Kashi	51.60	333	P	P	15 31 42.6	+2.8
KSH				pP	pwP	15 31 58.1	+0.4
KSH				pmax	pmax		
	comp=Z,380nm,4.2s						
CN2	Changchun	53.18	20	eP	P	15 31 54.3	+3.1
MAJO	Matsushiro	53.21	35	eP	P	15 31 49.4	-2.3
MJAR	Matsushiro Arr	53.22	35	P	P	15 31 49.4	-2.3
	comp=Z,3.8nm,0.8s,baz=220,slow=9.2,SNR=7.8						
SONA0	Songino Array	53.38	3	eP	P	15 31 52.8	0.0
SONA0				ePcP	PcP	15 33 00.2	+0.7
SONM	Songino Array	53.38	3	P	P	15 31 52.8	0.0
	comp=Z,2.9nm,0.7s,baz=184,slow=9.1,SNR=20						
SONM				PcP	PcP	15 33 00.2	+0.7
	comp=Z,1.7nm,0.6s,baz=184,slow=5.2,SNR=6.5						
SONA1	Songino Array	53.39	3	eP	P	15 31 52.9	0.0
SONA1				ePcP	PcP	15 33 00.3	+0.8
ULHL	Ulahol	53.72	335	P	P	15 31 50.5	-5.1
	SNR=5.7						
GAR	Garm	53.96	328	eP	P	15 31 56.7	-0.5
	comp=Z,6.9nm,1.0s						
CHGR	Chuyangaron	54.32	327	eP	P	15 31 58.3	-1.5
	comp=Z,8.8nm,1.1s						
ARSB	Arslanbob	54.42	332	eP	P	15 31 59.7	-0.8
	comp=Z,24nm,1.3s						
UCH	Uchtor	54.45	334	P	P	15 31 56.2	-4.9
	SNR=7.0						
BTK	Batken	54.49	330	eP	P	15 32 02.4	+1.3
	comp=Z,3.7nm,0.6s						
USA0B	Ussuriysk Arra	55.99	25	eP	P	15 32 11.2	-0.4
	comp=Z,127nm,1.9s						
USRK	Ussuriysk Ar.	55.99	25	P	P	15 32 11.0	-0.6
	comp=Z,11nm,0.7s,baz=205,slow=5.4,SNR=22						
GEYT	Alibeck	60.40	320	P	P	15 32 39.7	-2.9
	comp=Z,1.1nm,0.3s,baz=139,slow=3.3,SNR=3.2						
ZAA0	Zalesovo Array	61.44	348	eP	P	15 32 46.3	-2.9
	comp=Z,6.8nm,0.7s						
ZALV	Zalesovo Beam	61.44	348	eP	P	15 32 46.3	-2.9
BRVK	Borovoye	64.87	339	eP	P	15 33 11.2	-0.7
	comp=Z,3.7nm,0.8s						
ABKAR	Akbulak array	66.47	331	eP	P	15 33 22.3	-0.1
	comp=Z,7.4nm,0.6s						
AKTO	Aktyubinsk	68.19	331	P	P	15 33 31.5	-1.8
	comp=Z,1.6nm,0.5s,baz=121,slow=8.0,SNR=7.3						
ARU	Arti	71.92	336	eP	P	15 33 55.5	-0.5
	comp=Z,8.0nm,1.1s						
KBZ	Khabaz	73.26	319	P	P	15 34 04.5	+0.3
	comp=Z,1.7nm,0.8s,baz=135,slow=1.4,SNR=3.2						
BKZ	Black Stump Fm	73.37	129	eP	P	15 34 06.4	+1.2
	comp=Z,32nm,1.6s						
PETK	Petropavlovsk-	74.30	31	eP	P	15 34 09.5	-0.6
PETK	Petropavlovsk-	74.30	31	P	P	15 34 08.8	-1.3
	comp=Z,1.8nm,0.7s,baz=221,slow=2.6,SNR=4.0						
PEA1	Petropavlovsk-	74.30	31	eP	P	15 34 08.8	-1.3
NRIK	Noril'sk	75.67	354	P	P	15 34 15.5	-2.2
	comp=Z,1.5nm,0.3s,baz=143,slow=3.9,SNR=5.3						
BR101	Keskin Array S	78.25	312	eP	P	15 34 32.5	-0.6
BRTR	Keskin Array B	78.25	312	P	P	15 34 32.5	-0.6
	comp=Z,1.0nm,0.8s,baz=134,slow=8.0,SNR=6.8						
ANTO	Ankara	78.92	312	eP	P	15 34 32.7	-3.9
	comp=Z,13nm,0.9s						
BUR04	Bucovina Ar. S	86.22	318	eP	P	15 35 16.4	+2.0
BUR08	Bucovina Ar. S	86.23	318	eP	P	15 35 16.7	+2.2
FIA1	FINESS Array S	88.92	332	eP	P	15 35 27.6	+0.7
FIA0	FINESS Array S	88.92	332	eP	P	15 35 27.5	+0.6
FINES	FINESS Array B	88.92	332	P	P	15 35 27.5	+0.6
	comp=Z,0.7nm,0.6s,baz=123,slow=7.0,SNR=4.6						
ARA0	ARCESS Array S	91.07	340	eP	P	15 35 36.4	-0.4
ARCES	ARCESS Array B	91.07	340	P	P	15 35 36.4	-0.4
	comp=Z,1.3nm,0.9s,baz=96,slow=5.7,SNR=2.9						
ACSO	Alum Creek Sta	145.16	8	ePKPbc	PKPbc	15 42 08.9	-1.1
TX31	Lajitas Ar. Si	145.33	44	ePKPbc	PKPbc	15 42 11.8	+0.7
LTX	Lajitas	145.33	44	ePKPbc	PKPdf	15 42 12.4	+1.2
TXAR	Lajitas Array	145.33	44	PKPbc	PKPdf	15 42 12.4	+1.2
	comp=Z,3.0nm,0.5s,baz=276,slow=1.2,SNR=41						
O56A	Blue Knob Stat	145.55	3	ePKPdf	PKPdf	15 42 11.8	+0.6
HHAR	Hobbs	145.69	25	ePKPdf	PKPdf	15 42 11.5	0.0
T42A	Van Buren	146.15	21	ePKPdf	PKPdf	15 42 12.8	+0.6
Q51A	Peebles	146.29	9	ePKPdf	PKPdf	15 42 13.6	+1.2
PBMO	Poplar Bluff	146.61	20	ePKPdf	PKPdf	15 42 14.6	+1.6
JCT	Junction City	147.13	39	ePKPbc	PKPbc	15 42 17.2	+0.9
MIAR	Mount Ida	147.32	26	ePKPbc	PKPbc	15 42 17.5	+0.8
WVT	Waverly	148.04	17	ePKPbc	PKPbc	15 42 18.8	+0.3
BLA	Blacksburg	148.46	6	ePKPdf	PKPdf	15 42 15.2	-1.0
BLA				ePKPbc	PKPbc	15 42 20.1	+0.4
V52A	Sevierville	149.34	11	ePKPbc	PKPbc	15 42 21.4	-0.5
V53A	Saluda	149.65	10	ePKPbc	PKPbc	15 42 22.6	-0.2
KMSC	Kings Mountain	150.39	8	ePKPbc	PKPbc	15 42 23.0	-1.5

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*IDC **07** 15:30:21.9±0.8, 44°.20N×82°.07E, h0^{km}, mb3.6/6, mb1 3.9/12, mb1mx3.6/55, mbtmp3.8/12, ML3.6/6, Error ellipse: s-maj=13.7km s-min=9.0km az=94.0*

*SOME **07** 15:30:22.4, 43°.98N×82°.05E, h20^{km}*

*BJI **07** 15:30:22.7, 44°.21N×82°.08E, h10^{km}, mb3.9/3, ML3.9/9, Ms3.7/1*

*MOS **07** 15:30:23.7±1.7, 44°.21N×82°.03E, h23^{km}, mb4.3/4, Error ellipse: s-maj=15.8km s-min=8.2km az=93.6*

*NNC **07** 15:30:23.7±0.9, 44°.20N×81°.94E, h0^{km}, mb4.8, mpv4.4, Error ellipse: s-maj=8.8km s-min=4.4km az=130.0*

ISC 07 15:30:22.3±1.1, **44°.26N**±0°.03×**82°.09E**±0°.03, **h4**^{km}±8^{km}, **n88, σ1^{s}90**/110, **mb3.6**/9, **15C-16D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.50	238	P	Pn	15 30 49.5	-0.5
	187nm,0.1s						
KTMS				S	Sn	15 31 08.5	-1.4
	1µm,0.2s						
KTMS	Ketmen	1.50	238	eP	Pn	15 30 49.3	-0.7
	89nm,0.1s						
KTMS				eS	Sn	15 31 08.6	-1.4
	1µm,0.2s						
DJR	Jarkent	1.65	273	P	Pg	15 30 53.6	-0.3
	76nm,0.2s						
DJR				S	Sg	15 31 15.0	-0.3
	777nm,0.4s						
DJR	Jarkent	1.65	273	eP	Pb	15 30 53.1	-0.2
	1.3nm,0.2s						
DJR				eS	Sg	15 31 15.3	0.0
	777nm,0.4s						
PDGK	Podgornoye	2.10	245	Pg	Pn	15 30 59.0	+0.8
	96nm,0.3s						
PDGK				Lg	Lg	15 31 26.2	
	335nm,0.4s						
PDGK	Podgornoye	2.10	245	⇓Pn	Pn	15 30 58.8	+0.5
	185nm,0.7s						
PDGK				⇓Sn	Sb	15 31 26.3	-1.1
	158nm,0.4s						
PDGK	Podgornoye	2.10	245	PN	Pn	15 30 58.7	+0.5
PDGK						15 31 26.2	
PDGK				pmax	pmax		
	comp=Z,185nm,0.7s						
PDGK				smax	smax		
	comp=N,158nm,0.4s						
KAPS	Kapalarasan	2.20	299	Pg	Pg	15 31 03.9	-0.5
	comp=N,83nm,0.1s						
KAPS				Lg	Lg	15 31 33.5	
	comp=N,1µm,0.5s						
KAPS	Kapalarasan	2.20	299	eP	Pb	15 31 03.0	+0.4
	comp=N,2.5nm,0.2s						
KAPS				eS	Sg	15 31 32.5	-0.4
	comp=N,1µm,0.5s						
SHLS	Shalkode	2.20	241	Pg	Pn	15 30 56.6	-3.0
	comp=N,312nm,0.2s						
SHLS				Lg	Lg	15 31 22.2	
	comp=N,1µm,0.3s						
SHLS	Shalkode	2.20	241	eP	Pn	15 30 56.6	-3.0
	comp=N,29nm,0.2s						
SHLS				eS	Sn	15 31 21.5	-5.9
	comp=N,1µm,0.3s						
UZB	Uzynbulak	2.48	244	Pg	Pn	15 31 05.0	+1.4
	comp=N,110nm,0.2s						
UZB				Lg	Lg	15 31 36.9	
	comp=N,396nm,0.3s						
UZB	Uzynbulak	2.48	244	eP	Pn	15 31 05.0	+1.4
	comp=N,18nm,0.3s						
UZB				eS	Sb	15 31 35.9	-2.7
	comp=N,396nm,0.3s						
MK31	Makanchi Array	2.54	3	⇓Pn	Pb	15 31 07.3	-1.1
	comp=N,25nm,0.3s,baz=187,slow=13,SNR=1692						
MK31				⇑Lg	Lg	15 31 43.6	
	comp=N,51nm,0.3s,baz=182,slow=26,SNR=6.8						
MK31	Makanchi Array	2.54	3	PN	Pb	15 31 06.9	-1.5
MK31						15 31 43.8	
MK31				pmax	pmax		
	comp=Z,25nm,0.3s						
MK31				pmax	pmax		
	comp=N,51nm,0.3s						
MKAR	Makanchi Array	2.54	3	Pn	Pb	15 31 07.2	-1.2
	comp=N,10nm,0.3s,baz=186,slow=14,SNR=346						
MKAR				Pg	Pg	15 31 11.3	+0.4
	comp=N,29nm,0.3s,baz=182,slow=17,SNR=113						
MKAR				Sn	Sb	15 31 39.6	-0.3
	comp=N,64nm,0.3s,baz=187,slow=28,SNR=21						
MAKZ	Makanchi	2.55	358	⇑Pn	Pb	15 31 07.2	-1.4
	comp=N,96nm,0.4s						
MAKZ				⇓Lg	Lg	15 31 45.7	
	comp=N,104nm,0.5s						
MAKZ	Makanchi	2.55	358	PN	Pb	15 31 07.2	-1.4
MAKZ						15 31 45.6	
MAKZ				pmax	pmax		
	comp=Z,96nm,0.4s						
MAKZ				pmax	pmax		
	comp=N,104nm,0.5s						
MNBS	Baschi	2.66	267	Pg	Pb	15 31 09.4	-1.0
	comp=N,95nm,0.2s						
MNBS				Lg	Lg	15 31 44.1	
	comp=N,903nm,0.3s						
MNBS	Baschi	2.66	267	eP	Pb	15 31 09.4	-1.0
	comp=N,95nm,0.2s						
MNBS				eS	Sb	15 31 43.2	-0.3
	comp=N,903nm,0.3s						
TDK	Taldyqorghan	2.73	287	Pg	Pb	15 31 12.1	+0.5
	comp=N,375nm,0.4s						
TDK				Lg	Lg	15 31 48.2	
	comp=N,2µm,0.3s						
TDK	Taldyqorghan	2.73	287	eP	Pb	15 31 12.1	+0.5
	comp=N,375nm,0.4s						
TDK				eS	Sg	15 31 48.2	-1.8
	comp=N,2µm,0.3s						
KURS	Kuram	2.93	256	Pg	Pb	15 31 13.9	-1.3
KURS				Lg	Lg	15 31 51.3	
	comp=N,245nm,0.6s						
KURS	Kuram	2.93	256	eP	Pb	15 31 13.8	-1.4
	comp=N,13nm,0.5s						
KURS				eS	Sb	15 31 51.3	-0.1
	comp=N,245nm,0.6s						
ARXS	Arharly	3.06	271	Pg	Pb	15 31 16.5	-0.8
	comp=N,101nm,0.2s						
ARXS				Lg	Lg	15 31 56.2	
	comp=N,698nm,0.5s						
ARXS	Arharly	3.06	271	eP	Pb	15 31 16.9	-0.4
	comp=N,28nm,0.4s						
ARXS				eS	Sb	15 31 56.2	+1.2
	comp=N,698nm,0.5s						
CHKK	Chushkaly	3.70	265	Pg	Pb	15 31 27.6	-0.6

	comp=N,116nm,0.3s						
CHKK				Lg	Lg	15 32 14.0	
	comp=N,531nm,0.2s						
CHKK	Chushkaly	3.70	265	eP	Pb	15 31 27.6	-0.6
	comp=N,116nm,0.3s						
CHKK				eS	Sb	15 32 14.0	+0.8
	comp=N,531nm,0.2s						
ZSN	Zaisan	3.73	30	Pg	Pg	15 31 31.7	-2.2
	comp=N,10nm,0.4s						
ZSN				Lg	Lg	15 32 22.2	
	comp=N,184nm,0.3s						
ZSN	Zaisan	3.73	30	eP	Pg	15 31 31.7	-2.2
	comp=N,2.8nm,0.2s						
ZSN				eS	Sg	15 32 21.8	-0.5
	comp=N,184nm,0.3s						
KOTS	Kotyrbulak	3.75	256	Pg	Pb	15 31 25.3	-3.7
	comp=N,94nm,0.4s						
KOTS				Lg	Lg	15 32 12.0	
	comp=N,379nm,0.4s						
KOTS	Kotyrbulak	3.75	256	eP	Pb	15 31 25.3	-3.7
	comp=N,28nm,0.6s						
KOTS				eS	Sb	15 32 10.7	-4.1
	comp=N,379nm,0.4s						
MDOK	Medeo	3.81	255	⇑Pg	Pg	15 31 33.0	-2.3
	comp=N,59nm,0.4s						
MDOK				⇓Lg	Lg	15 32 23.5	
	comp=N,67nm,0.5s						
MDOK	Medeo	3.81	255	Pg	Pb	15 31 25.7	-4.4
	comp=N,91nm,0.4s						
MDOK				Lg	Lg	15 32 13.7	
	comp=N,230nm,0.6s						
MDOK	Medeo	3.81	255	eP	Pb	15 31 25.7	-4.4
	comp=N,52nm,0.4s						
MDOK				eS	Sb	15 32 11.5	-5.3
	comp=N,230nm,0.6s						
KNDC	Almaty	3.85	256	⇑Pg	Pb	15 31 33.1	+2.3
	comp=N,51nm,0.6s						
KNDC				⇑Lg	Lg	15 32 27.7	
	comp=N,174nm,0.6s						
AAA	Alma-Ata	3.89	256	Pg	Pb	15 31 31.7	+0.2
	comp=N,46nm,0.2s						
AAA				Lg	Lg	15 32 21.1	
	comp=N,268nm,0.5s						
AAA	Alma-Ata	3.89	256	eP	Pb	15 31 31.7	+0.2
	comp=N,46nm,0.2s						
AAA				eS	Sb	15 32 21.1	+2.2
	comp=N,268nm,0.5s						
TNSS	Tian-Shan	3.92	254	Pg	Pb	15 31 32.0	-0.3
	comp=N,78nm,0.4s						
TNSS				Lg	Lg	15 32 22.9	
	comp=N,217nm,0.3s						
TNSS	Tian-Shan	3.92	254	eP	Pb	15 31 31.8	-0.5
	comp=N,10nm,0.4s						
TNSS				eS	Sb	15 32 21.3	+1.1
	comp=N,217nm,0.3s						
KTBS	Karatobe	3.94	264	Pg	Pb	15 31 31.6	-0.7
	comp=N,67nm,0.5s						
KTBS				Lg	Lg	15 32 20.9	
	comp=N,349nm,0.5s						
KTBS	Karatobe	3.94	264	eP	Pb	15 31 31.6	-0.7
	comp=N,67nm,0.5s						
KTBS				eS	Sb	15 32 20.9	+0.7
	comp=N,349nm,0.5s						
WMQ	Urumqi	4.07	94	Pn	Pn	15 31 28.8	+3.5
WMQ				Sn	Sb	15 32 21.7	-2.3
WMQ				Sg	Sg	15 32 31.8	-1.1
WMQ				smax	smax		
	comp=N,310nm,1.1s						
WMQ				smax	smax		
	comp=N,230nm,0.9s						
IZV	Izvestkoviy	4.16	255	Pg	Pb	15 31 37.1	+1.0
	comp=N,73nm,0.5s						
IZV				Lg	Lg	15 32 29.5	
	comp=N,220nm,0.7s						
IZV	Izvestkoviy	4.16	255	eP	Pb	15 31 37.1	+1.0
	comp=N,14nm,0.5s						
IZV				eS	Sb	15 32 30.3	+3.7
	comp=N,70nm,0.6s						
KUU	Kurty	4.16	267	Pg	Pb	15 31 36.4	+0.4
	comp=N,53nm,0.4s						
KUU				Lg	Lg	15 32 27.7	
	comp=N,263nm,0.7s						
KUU	Kurty	4.16	267	eP	Pb	15 31 35.0	-0.9
	comp=N,3.6nm,0.3s						
KUU				eS	Sb	15 32 26.9	+0.4
	comp=N,263nm,0.7s						
MTBS	Maitube	4.25	257	Pg	Pb	15 31 37.2	-0.4
	comp=N,51nm,0.3s						
MTBS				Lg	Lg	15 32 30.9	
	comp=N,243nm,0.3s						
MTBS	Maitube	4.25	257	eP	Pb	15 31 37.2	-0.4
	comp=N,51nm,0.3s						
MTBS				eS	Sb	15 32 30.9	+1.5
	comp=N,243nm,0.3s						
KST	Kastek	4.61	257	Pg	Pb	15 31 45.1	+1.4
	comp=N,62nm,0.5s						
KST				Lg	Lg	15 32 44.4	
	comp=N,136nm,0.7s						
KST	Kastek	4.61	257	eP	Pb	15 31 45.1	+1.4
	comp=N,62nm,0.5s						
KST				eS	Sb	15 32 44.4	+4.9
	comp=N,136nm,0.7s						
DGS	Degeres	4.69	260	Pg	Pb	15 31 46.6	+1.6
	comp=N,51nm,0.5s						
DGS				Lg	Lg	15 32 47.9	
	comp=N,267nm,0.5s						
DGS	Degeres	4.69	260	eP	Pb	15 31 46.6	+1.6
	comp=N,15nm,0.4s						
DGS				eS	Sg	15 32 47.6	-5.2
	comp=N,267nm,0.5s						
TKM2	Tokmak 2	4.90	256	P	Pn	15 31 40.9	+4.0
	SNR=11						
TKM2	Tokmak 2	4.90	256	⇓Pn	Pn	15 31 39.9	+3.1
	comp=N,3.1nm,0.6s						
TKM2				⇓Pg	Pg	15 31 55.9	-0.2
	comp=N,28nm,0.5s						
TKM2				⇓Lg	Lg	15 32 56.2	
	comp=N,59nm,0.6s						
TKM2	Tokmak 2	4.90	256	i PN	Pg	15 31 55.9	-0.2
TKM2				pmax	pmax		
	comp=Z,28nm,0.4s						
KBK	Karagaybulak	5.44	255	P	Pn	15 31 48.5	+4.2
	SNR=14						
USP	Ospenovka	5.58	262	P	Pn	15 31 47.1	+1.1
	SNR=11						
FRU	Bishkek	5.61	258	ePN	Pn	15 31 48.0	+1.5
FRU				eS	Sb	15 33 08.0	-0.4
FRU				pmax	pmax		
	comp=Z,40nm,1.8s						
FRU				smax	smax		
	comp=E,160nm,1.8s						
AAK	Ala-Archa	5.76	256	⇑Pg	Pg	15 32 08.0	-4.6
	comp=E,22nm,0.6s						
AAK				⇑Lg	Lg	15 33 23.1	
	comp=E,28nm,0.8s						
AAK	Ala-Archa	5.76	256	PN	Pg	15 32 08.0	-4.6
AAK				pmax	pmax		
	comp=Z,22nm,0.6s						
AAK				pmax	pmax		
	comp=N,28nm,0.8s						
AAK	Ala-Archa	5.76	256	Pn	Pn	15 31 50.6	+2.0
	comp=N,1.3nm,0.3s,baz=99,slow=8.1,SNR=17						
AAK				Pg	Pb	15 32 05.8	+2.5
	comp=N,3.6nm,0.3s,baz=68,slow=9.5,SNR=18						
AAK				Lg	Lg	15 33 20.5	
	comp=N,2.3nm,0.3s,baz=357,slow=20,SNR=10.0						
EKS2	Erkin-Say	6.25	258	P	Pn	15 31 57.1	+1.7
	SNR=9.0						
DGZ	Jazzator, Alta	6.55	32	i PN	Pn	15 32 03.1	+3.6
KURBB	Kurchatov Arra	6.80	341	⇓Pn	Pn	15 32 03.1	+0.4
	comp=N,5.6nm,0.5s						
KURBB				⇓Pg	Pg	15 32 30.1	-2.4
	comp=N,16nm,0.8s						
KURBB				⇓Lg	Lg	15 33 57.3	
	comp=N,44nm,0.8s						
KURBB	Kurchatov Arra	6.80	341	Pn	Pn	15 32 04.1	+1.3
	comp=N,0.5nm,0.3s,baz=161,slow=12,SNR=40						
KURBB				Pg	Pg	15 32 28.1	-4.4
	comp=N,0.6nm,0.3s,baz=69,slow=10,SNR=12						
KURBB				Sn	Sn	15 33 20.4	-0.2
	comp=N,0.5nm,0.3s,baz=160,slow=20,SNR=6.5						
KURBB				Lg	Lg	15 33 55.1	
	comp=N,0.9nm,0.3s,baz=153,slow=28,SNR=6.8						
KURK	Kurchatov	6.87	341	⇓Pn	Pn	15 32 04.3	+0.6
	comp=N,4.3nm,0.5s						
KURK				⇑Lg	Lg	15 34 00.5	
	comp=N,58nm,0.7s						
KURK	Kurchatov	6.87	341	i PN	Pn	15 32 04.9	+1.2
MNAS	Manas	7.20	259	⇓Pn	Pn	15 32 08.4	-0.1
	comp=N,7.0nm,0.7s						
MNAS				⇑Pg	Pg	15 32 35.3	-4.9
	comp=N,7.1nm,0.7s						
MNAS				⇑Lg	Lg	15 34 07.8	
	comp=N,15nm,0.6s						
SFK	Sufi-Kurgan	7.66	239	⇑Pn	Pn	15 32 14.9	+0.1
	comp=N,11nm,1.0s						
SFK				⇑Lg	Lg	15 34 31.0	
	comp=N,8.7nm,0.7s						
OTUK	Ortayu	7.84	304	⇑Pg	Pb	15 32 45.4	+6.7
	comp=N,5.0nm,0.7s						
OTUK				⇓Lg	Lg	15 34 27.0	
	comp=N,55nm,0.7s						
KK31	Karatay Array	8.47	266	⇑Pg	Pg	15 32 57.2	-7.2
	comp=N,1.4nm,0.4s,baz=84,slow=15,SNR=3.7						
KK31				⇓Lg	Lg	15 34 51.1	
	comp=N,11nm,0.5s,baz=75,slow=29,SNR=5.9						
ZALV	Zalesovo Beam	9.86	9	Pn	Pn	15 32 45.7	+1.0
	comp=N,1.6nm,0.3s,baz=196,slow=14,SNR=30						
ZALV				Sn	Sn	15 34 31.9	-3.7
	comp=N,1.2nm,0.3s,baz=190,slow=26,SNR=5.3						
ZALV				Lg	Lg	15 35 33.4	
	comp=N,0.4nm,0.3s,baz=182,slow=27,SNR=4.1						
NVS	Novosibirsk	10.62	4	eP	Pn	15 33 06.1	+11
NVS				e		15 35 07.0	
BVAR	Borovoye Array	11.68	323	Pn	Pn	15 33 10.4	+0.8
	comp=N,1.1nm,0.3s,baz=132,slow=14,SNR=42						
BVAR				Lg	Lg	15 36 30.9	
	comp=N,0.6nm,0.3s,baz=135,slow=33,SNR=4.9						
BRVK	Borovoye	11.75	323d	iP	Pn	15 33 10.6	+0.1
GTA	Gaotai	14.07	104	eP	P	15 33 51.3	+0.9
GTA				pP	Pn	15 33 57.7	+15
GTA				sP		15 34 00.7	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				smax	smax		
	comp=N,5.0nm,1.5s						
GTA				smax	smax		
	comp=E,4.0nm,1.1s						
SONM	Songino Array	17.23	69	P	P	15 34 25.3	-0.1
	comp=E,0.6nm,0.3s,baz=264,slow=10,SNR=19						
SONM				Lg	Lg	15 39 26.4	
	comp=E,0.1nm,0.3s,baz=123,slow=29,SNR=2.4						
AKTO	Aktyubinsk	17.40	299	Lg	Lg	15 39 31.2	
	comp=E,0.1nm,0.3s,baz=216,slow=23,SNR=3.8						
NCK	Nalchik	27.59	282	i P	P	15 36 19.2	+8.8
NCK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	Kislovodsk	28.11	283	eP	P	15 36 23.7	+8.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,38nm,15.0s						
CMAR	Chiang Mai Arr	29.36	146	P	P	15 36 26.7	+0.4
	comp=Z,0.2nm,0.4s,baz=314,slow=8.4,SNR=2.9						
OBN	Obninsk	30.85	307	⇑eP	P	15 36 43.4	+4.3
OBN				e		15 37 45.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,49nm,13.0s						
ARCES	ARCESS Array B	37.79	331	P	P	15 37 40.3	+1.2
	comp=Z,1.7nm,0.9s,baz=83,slow=9.2,SNR=4.4						
NOA	NORSAR Array B	43.77	318	P	P	15 38 29.5	+1.0
	comp=Z,0.4nm,0.6s,baz=80,slow=8.0,SNR=2.1						
TORD	Torodi Ar. Bea	74.09	273	P	P	15 42 01.8	+2.0
	comp=Z,0.3nm,0.5s,baz=42,slow=4.2,SNR=3.2						
WRA	Warramunga Arr	79.75	131	P	P	15 42 30.8	-0.6
	comp=Z,0.3nm,0.4s,baz=335,slow=5.2,SNR=4.5						
ASAR	Alice Springs	82.55	133	P	P	15 42 45.5	-0.8
	comp=Z,0.3nm,0.7s,baz=327,slow=5.6,SNR=4.9						

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*IDC **07** 15:31:28.0±0.8, 11°.67S×165°.04E, h0^{km}, mb4.2/18, mb1 4.4/21, mb1mx4.2/52, mbtmp4.2/21, ML4.0/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/26, Error ellipse: s-maj=23.1km s-min=15.5km az=131.0*

*NEIC **07** 15:31:29.5±0.2, 11°.65S×164°.98E, h10^{km}, mb4.8/31, Error ellipse: s-maj=5.3km s-min=4.1km az=107.0*

*ISCJB **07** 15:31:31.2±0.2, 11°.77S±0°.04×164°.96E±0°.05, h34^{km}, mb4.5/43, Error ellipse: s-maj=6.5km s-min=5.2km az=176.2*

ISC 07 15:31:32.9±0.4**, 11°.71S**±0°.06×**164°.99E**±0°.07**, h34**^{km}**, n77, σ0^{s}.86**/81**, mb4.6**/43**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.45	294	ePn	Pn	15 32 48.8	-2.9
HNR				eSn	Sn	15 33 52.6	-0.8
HNR	Honiara	5.45	294	Pn	Pn	15 32 52.3	+0.6
	9.2nm,0.3s,baz=237,slow=1.9,SNR=4.2						
HNR				Sn	Sn	15 33 54.6	+1.2
	9.7nm,0.3s,baz=0.0,slow=20,SNR=6.6						
HNR				LR	LR	15 35 15.4	
	comp=Z,132nm,19.8s,baz=353,slow=42						
MARNC	Mare, Loyalty	10.14	164	ePn	Pn	15 33 55.8	-0.4
DZM	Mont Dzumac	10.39	172	ePn	Pn	15 33 59.4	-0.4
DZM				Sn	Sn	15 35 53.7	-1.4
DZM	Mont Dzumac	10.39	172	Pn	Pn	15 33 59.7	0.0
	0.9nm,0.3s,baz=307,slow=12,SNR=28						
DZM				Sn	Sn	15 35 53.7	-1.4
	0.3nm,0.3s,baz=180,slow=20,SNR=2.7						
ONTNC	Ouen Toro	10.63	173	ePn	Pn	15 34 02.9	0.0
PINNC	Pines Island,	11.09	168	ePn	Pn	15 34 09.3	+0.1
TARA	Tarawa	15.19	32	ePn	Pn	15 35 04.1	-1.0
	175nm,1.3s						
EIDS	Eidsvold	18.90	222	eP	Pn	15 35 51.7	+0.1
	45nm,1.8s						
CTA	Charters Tower	19.83	243	P	P	15 36 00.9	-0.1
	0.3nm,0.3s,baz=71,slow=12,SNR=6.5						
CTAO	Charters Tower	19.83	243	eP	P	15 36 01.0	-0.1
	15nm,1.0s						
ARMA	Armidale	22.36	212	eP	P	15 36 28.9	+0.6
	21nm,1.2s						
BKZ	Black Stump Fm	29.19	161	eP	P	15 37 32.6	+1.3
	26nm,1.4s						
STKA	Stephens Creek	29.45	223	eP	P	15 37 33.6	0.0
	3.8nm,1.6s						
STKA	Stephens Creek	29.45	223	P	P	15 37 34.3	+0.6
	1.6nm,0.7s,baz=48,slow=12,SNR=3.3						
BFZ	Birch Farm	30.51	163	eP	P	15 37 44.0	+1.0
	55nm,1.5s						
WRAB	Tennant Creek	30.55	251	eP	P	15 37 43.9	+0.4
	39nm,1.7s						
WB2	Warramunga Arr	30.55	251	eP	P	15 37 43.7	+0.2
WR1	Warramunga Arr	30.56	251	eP	P	15 37 44.0	+0.3
	14nm,1.0s						
WR1				ePcP	PcP	15 40 43.0	+0.9
WRA	Warramunga Arr	30.56	251	P	P	15 37 44.0	+0.3
	7.6nm,1.0s,baz=81,slow=9.3,SNR=20						
WRA				PcP	PcP	15 40 43.0	+0.9
	0.7nm,1.0s,baz=83,slow=2.7,SNR=4.5						
SNZO	South Karori	30.69	166	eP	P	15 37 44.7	+0.2
	54nm,1.1s						
H11N1	WAKE ISLAND Hy	31.29	3	T	T	16 10 40.2	
	baz=182,slow=76,SNR=6.4						
H11N3	WAKE ISLAND Hy	31.29	3	T	T	16 10 42.1	
	baz=182,slow=76,SNR=5.5						
H11N2	WAKE ISLAND Hy	31.30	3	T	T	16 10 40.3	
	baz=182,slow=76,SNR=5.6						
AS01	Alice Springs	31.79	244	eP	P	15 37 54.4	-0.1
AS31	Alice Springs	31.83	244	eP	P	15 37 53.1	-1.7
	1.0nm,0.8s						
ASAR	Alice Springs	31.83	244	P	P	15 37 54.8	-0.1
	3.1nm,0.8s,baz=75,slow=9.3,SNR=20						
ASAR				PcP	PcP	15 40 46.2	+0.8
	0.8nm,1.0s,baz=99,slow=3.3,SNR=4.2						
BBOO	Buckleboo	33.83	227	eP	P	15 38 11.6	-0.6
	34nm,1.5s						
FITZ	Fitzroy Crossi	38.49	256	eP	P	15 38 52.5	+0.4
	13nm,1.5s						
FITZ	Fitzroy Crossi	38.49	256	P	P	15 38 52.6	+0.4
	2.5nm,0.7s,baz=132,slow=7.5,SNR=3.7						
FORT	Forrest	39.05	235	eP	P	15 38 56.3	-0.5
	19nm,1.0s						
MJAR	Matsushiro Arr	54.22	333	P	P	15 40 54.9	-0.5
	0.8nm,0.7s,baz=170,slow=9.2,SNR=5.1						
MAJO	Matsushiro	54.23	333	eP	P	15 40 54.9	-0.5
JNU	Nakatsue	55.19	325	eP	P	15 41 00.8	-1.7
	138nm,1.7s						
ASAJ	Asahikawa	59.18	341	P	P	15 41 30.8	+0.4
	12nm,0.9s,baz=152,slow=15,SNR=3.6						
USRK	Ussuriysk Ar.	63.21	334	P	P	15 41 58.6	+0.8
	2.3nm,0.6s,baz=111,slow=7.4,SNR=5.3						
PETK	Petropavlovsk-	64.86	355	P	P	15 42 08.6	+0.1
	1.6nm,0.7s,baz=163,slow=5.1,SNR=3.6						
PEA1	Petropavlovsk-	64.87	355	eP	P	15 42 08.6	+0.1
KLR	Kul'dur	67.37	337	P	P	15 42 25.5	+0.8
	1.0nm,0.7s,baz=165,slow=4.5,SNR=4.3						
ENH	Enshi	67.74	310	eP	P	15 42 26.5	-0.9
	31nm,1.8s						
XAN	Xi'an	70.02	313	eP	P	15 42 41.9	+0.3
	12nm,1.7s						
KMI	Kunming	70.83	302	eP	P	15 42 49.0	+2.0
	4.7nm,0.9s						
CM01	Chiang Mai Arr	71.67	294	eP	P	15 42 53.1	+1.3
CM31	Chiang Mai Arr	71.70	294	eP	P	15 42 52.2	+0.2
	13nm,1.8s						
CMAR	Chiang Mai Arr	71.70	294	P	P	15 42 54.0	+1.9
	0.2nm,0.3s,baz=144,slow=3.9,SNR=5.2						
SEY	Seymchan	75.06	354	P	P	15 43 10.6	-0.3
	2.6nm,1.0s,baz=138,slow=8.7,SNR=6.6						
SONA0	Songino Array	78.76	324	eP	P	15 43 32.8	+0.5
SONM	Songino Array	78.76	324	P	P	15 43 32.8	+0.5
	1.0nm,0.7s,baz=146,slow=7.6,SNR=8.3						
SONA1	Songino Array	78.77	324	eP	P	15 43 32.4	+0.1
HDA	Harding Lake	84.11	19	eP	P	15 43 59.9	-0.2
	22nm,1.8s						
IL1	Eielson Array	84.38	19	eP	P	15 44 00.5	-0.9
ILAR	Eielson Array	84.38	19	P	P	15 44 00.9	-0.5
	1.6nm,0.7s,baz=236,slow=5.3,SNR=32						
ILB	Eielson Array	84.38	19	eP	P	15 44 00.9	-0.5
	3.0nm,0.8s						
SCRK	Sand Creek	84.80	20	eP	P	15 44 03.6	-0.1
	17nm,1.6s						
WAKR	Walker	86.20	50	eP	P	15 44 10.9	-0.4
	8.1nm,0.8s						
MDPB	Devils Postpil	86.20	51	eP	P	15 44 11.2	-0.2
	4.6nm,0.9s						
NV01	Mina Array Sit	87.02	50	eP	P	15 44 14.8	-0.6
NVAR	Mina Array Bea	87.02	50	P	P	15 44 15.5	+0.1
	2.4nm,1.0s,baz=238,slow=8.4,SNR=8.3						
R11A	Troy Canyon, C	89.05	51	eP	P	15 44 25.3	+0.3
	3.7nm,1.3s						
ELK	Elko	89.95	48	eP	P	15 44 29.2	0.0
	14nm,2.0s						
KNB	Kanab	90.83	52	eP	P	15 44 33.8	+0.4
	9.8nm,1.5s						
U15A	North Rim	91.10	53	eP	P	15 44 34.8	0.0
	6.0nm,1.1s						
HVU	Hansel Valley	92.00	48	eP	P	15 44 38.9	+0.2
	12nm,1.5s						
TMUT	Trail Mountain	92.59	51	eP	P	15 44 40.7	-1.0
	5.6nm,1.1s						
MK01	Makanchi Array	93.48	317	eP	P	15 44 45.1	-0.1
MK31	Makanchi Array	93.50	317	eP	P	15 44 45.5	+0.2
	1.5nm,1.0s						
MK32	Makanchi Array	93.50	317	eP	P	15 44 46.0	+0.7
MKAR	Makanchi Array	93.50	317	eP	P	15 44 45.5	+0.2
	7.9nm,0.8s						
MKAR	Makanchi Array	93.50	317	P	P	15 44 46.0	+0.7
	1.2nm,0.7s,baz=96,slow=6.3,SNR=12						
ZALV	Zalesovo Beam	93.66	324	P	P	15 44 45.2	-0.6
	0.2nm,0.4s,baz=101,slow=2.9,SNR=4.7						
ZAA1	Zalesovo Array	93.66	324	eP	P	15 44 45.1	-0.6
YKA	Yellowknife Ar	95.91	27	P	P	15 44 54.5	-1.3
	0.9nm,0.8s,baz=252,slow=4.3,SNR=12						
YKB5	Yellowknife Ar	95.91	27	eP	P	15 44 54.2	-1.7
LTX	Lajitas	96.80	62	eP	P	15 45 02.6	+1.7
TXAR	Lajitas Array	96.80	62	P	P	15 45 02.6	+1.7
	0.3nm,0.7s,baz=235,slow=3.2,SNR=2.6						
ARA0	ARCESS Array S	116.79	345	ePKPdf	PKPdf	15 50 13.3	0.0
ARCES	ARCESS Array B	116.79	345	PKP	PKPdf	15 50 13.3	0.0
	2.5nm,0.9s,baz=29,slow=2.8,SNR=5.5						

IDC 07 15:34:47.9±1.8**, 11°.94S**×**165°.67E, h0**^{km}**, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/54**, mbtmp3.7**/4**, ML3.4**/1**, Error ellipse: s-maj=52.1km s-min=32.2km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.10	176	Pn	Pn	15 37 14.9	+0.5
	0.3nm,0.3s,baz=69,slow=17,SNR=5.0						
WRA	Warramunga Arr	31.11	251	P	P	15 41 08.8	+0.3
	0.6nm,0.7s,baz=83,slow=8.8,SNR=7.5						
ASAR	Alice Springs	32.33	244	P	P	15 41 18.6	-0.5
	0.4nm,0.8s,baz=73,slow=9.4,SNR=5.0						
ILAR	Eielson Array	84.38	18	P	P	15 47 21.8	0.0
	0.3nm,0.5s,baz=240,slow=5.0,SNR=6.4						

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*ISCJB **07** 15:37:26.4±0.3, 21°.12S±0°.03×67°.40W±0°.04, h187^{km}±4^{km}, mb3.8/7, Error ellipse: s-maj=6.0km s-min=4.0km az=14.2*

*NEIC **07** 15:37:27.4±0.8, 21°.13S×67°.36W, h178^{km}±13^{km}, mb4.3/5, Error ellipse: s-maj=18.1km s-min=8.2km az=87.0*

*IDC **07** 15:37:29.0±3.7, 20°.90S×67°.10W, h192^{km}±31^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.4/39, mbtmp3.9/8, Error ellipse: s-maj=36.1km s-min=22.1km az=50.0*

*SCB **07** 15:37:29.3±3.0, 21°.01S×67°.34W, h125^{km}±24^{km}, ML4.3/2, Error ellipse: s-maj=6.3km s-min=4.6km az=0.0*

*GUC **07** 15:37:29.3±0.6, 21°.03S×67°.79W, h206^{km}±8^{km}, ML3.9*

*SJA **07** 15:38:13.0±0.5, 24°.83S×67°.46W, h223^{km}±20^{km}, ML3.0, MW3.3*

ISC 07 15:37:26.6±0.7**, 21°.12S**±0°.04×**67°.42W**±0°.04**, h180**^{km}±7^{km}**, n61, σ1^{s}.53**/85**, mb3.9**/7**, 1C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.89	301	⇑eP	Pn	15 38 05.3	+2.3
PB08				eS	Sn	15 38 32.8	+1.7
PB08	IPOC Station P	1.89	301	P	Pn	15 38 02.9	-0.1
PB08				S	Sn	15 38 29.2	-1.9
PB01	IPOC Station P	1.93	272	ePn	Pn	15 38 05.1	+2.0
PB01				eSn	Sn	15 38 32.0	+0.8
PB01	IPOC Station P	1.93	272	eS	Sn	15 38 32.1	+0.8
PB01				IAML		15 38 34.5	
	comp=N,490nm,0.2s						
PB01	IPOC Station P	1.93	272	P	Pn	15 38 03.3	+0.2
PB01				S	Sn	15 38 30.1	-1.2
LVC	Limon Verde	2.03	223	ePn	Pn	15 38 04.4	0.0
LVC				eSn	Sn	15 38 36.0	+2.3
LVC	Limon Verde	2.03	223	S	Sn	15 38 36.3	+2.6
	comp=N,5.4nm,0.3s,baz=276,slow=20,SNR=3.8						
PB02	IPOC Station P	2.32	265	eS	Sn	15 38 39.4	+0.5
PB02				IAML		15 38 44.2	
	comp=E,603nm,0.4s						
PB07	IPOC Station P	2.38	255	eP	Pn	15 38 10.3	+2.2
PB07				eS	Sn	15 38 40.9	+0.7
PB11	IPOC Station P	2.49	302	ePn	Pn	15 38 10.3	+0.9
PB11				eSn	Sn	15 38 43.1	+0.5
PB11	IPOC Station P	2.49	302	eP	Pn	15 38 10.7	+1.3
PB11				eS	Sn	15 38 42.1	-0.6
PB11	IPOC Station P	2.49	302	P	Pn	15 38 09.5	+0.1
PB11				S	Sn	15 38 41.5	-1.2
PB06	IPOC Station P	2.55	231	eS	Sn	15 38 46.0	+2.2
PB06				IAML		15 38 47.2	
	comp=N,265nm,0.4s						
PB06	IPOC Station P	2.55	231	P	Pn	15 38 12.0	+2.0
PB06				S	Sn	15 38 44.8	+1.0
PB04	IPOC Station P	2.81	244	ePn	Pn	15 38 14.2	+1.0
PB04				eSn	Sn	15 38 49.7	+0.3
PB04	IPOC Station P	2.81	244	P	Pn	15 38 15.9	+2.7
PB04				S	Sn	15 38 49.9	+0.5
MNMC	Minye Minye	2.84	314	ePn	Pn	15 38 15.2	+1.5
MNMC				eSn	Sn	15 38 50.9	+0.6
MNMC	Minye Minye	2.84	314	eP	Pn	15 38 15.4	+1.7
MNMC				eS	Sn	15 38 50.4	0.0
MNMC				IAML		15 38 56.5	
	comp=E,597nm,0.2s						
MNMC	Minye Minye	2.84	314	P	Pn	15 38 14.1	+0.4
MNMC				S	Sn	15 38 50.3	0.0
PSGC	Pisagua	2.95	300	eP	Pn	15 38 15.3	+0.5
PSGC				eS	Sn	15 38 50.5	-1.9
PSGC				IAML		15 38 54.0	
	comp=N,272nm,0.6s						
PSGC	Pisagua	2.95	300	P	Pn	15 38 14.8	0.0
PSGC				S	Sn	15 38 50.2	-2.2
BB01	Montecillos	3.65	34	P	Pn	15 38 24.8	+1.1
BB01				S	Sn	15 39 06.4	-1.8
BB01				AML	AML	15 39 09.7	
	comp=N,562nm,0.9s						
PB12	IPOC Station P	3.70	312	eP	Pn	15 38 23.8	-0.3
PB12				eS	Sn	15 39 06.6	-2.4
PB10	IPOC Station P	3.76	230	ePn	Pn	15 38 26.8	+2.2
PB10				eSn	Sn	15 39 09.4	-0.6
BS06	Camiri	3.81	74	P	Pn	15 38 26.9	+1.5

BS06				S	Sn	15 39 09.9	-1.4
BS06				AML	AML	15 39 12.1	
	comp=N,464nm,0.5s						
BBOJ	La Paz, Jacaqu	4.18	350	P	Pn	15 38 33.3	+2.6
BBOE	La Paz, Chanca	4.32	353	P	Pn	15 38 33.8	+1.4
GO02	Mina Guanaco	4.49	206	ePn	Pn	15 38 36.4	+2.1
GO02				eSn	Sn	15 39 28.0	+0.6
BBOD	La Paz, Gloria	4.59	346	P	Pn	15 38 38.3	+2.4
LPAZ	La Paz	4.85	352	ePn	Pn	15 38 40.9	+1.6
LPAZ	La Paz	4.85	352	P	Pn	15 38 40.9	+1.6
BBOB	La Paz, Bander	5.00	352	P	Pn	15 38 42.7	+1.6
CYA	Choya	7.44	169	iP	Pn	15 39 14.6	+2.1
CYA				IAML		15 39 20.9	
	comp=Z,5.8nm,0.3s						
SIV	San Ignacio	7.89	51	P	Pn	15 39 17.3	-1.3
	comp=Z,2.2nm,0.3s,baz=263,slow=12,SNR=44						
ACLC	CERRO LA CRUZ	8.28	177	iP	Pn	15 39 23.9	+0.1
LCO	Las Campanas	8.40	200	ePn	Pn	15 39 24.4	-1.1
LCO				eSn	Sn	15 40 56.6	-3.1
ACDV	Cuesta del Vie	9.14	189	iP	Pn	15 39 35.6	+0.5
APLL	PUNTA DE LOS L	9.27	175	iP	Pn	15 39 36.7	0.0
APLL				IAML		15 39 38.1	
	comp=Z,16nm,0.6s						
GO04	Tololo Observa	9.52	198	ePn	Pn	15 39 38.8	-1.3
GO04				eSn	Sn	15 41 21.6	-4.6
ACCO	Cerro Coronel	9.55	189	iP	Pn	15 39 40.8	+0.3
AMOG	MOGNA	9.83	185	iP	Pn	15 39 43.6	-0.4
CPUP	Villa Florida	10.60	121	ePn	Pn	15 39 54.9	+0.9
CPUP	Villa Florida	10.60	121	P	Pn	15 39 53.4	-0.6
	comp=Z,0.3nm,0.3s,baz=306,slow=11,SNR=7.7						
ROC1	El Roble	12.24	194	ePn	Pn	15 40 15.9	+0.7
PEL	Peldehue	12.32	193	ePn	Pn	15 40 15.6	-0.6
NNA	Nana	12.80	314	ePn	P	15 40 25.0	-1.6
TRQA	Tornquist	17.52	166	eP	Pn	15 41 20.8	+0.7
	comp=Z,23nm,1.6s						
GO06	Curarrehue	18.73	190	eP	Pn	15 41 37.5	+3.1
	comp=Z,24nm,1.3s						
PLCA	Paso Flores	19.73	187	eP	Pn	15 41 45.6	-0.6
	comp=Z,9.9nm,1.4s						
PTGA	Pitinga	21.53	21	eP	P	15 42 00.8	-1.0
	comp=Z,19nm,1.7s						
PTGA	Pitinga	21.53	21	P	P	15 42 00.3	-1.5
	comp=Z,1.7nm,0.8s,baz=190,slow=17,SNR=3.6						
CBYP	Canovanas	39.18	2	eP	P	15 44 37.7	+0.5
	comp=Z,34nm,0.9s						
TXAR	Lajitas Array	61.13	324	P	P	15 47 22.3	+0.2
	comp=Z,0.3nm,0.7s,baz=149,slow=7.2,SNR=2.9						
PDAR	Pinedale Array	74.48	329	P	P	15 48 46.8	+1.3
	comp=Z,0.2nm,0.6s,baz=141,slow=5.8,SNR=2.9						
ULM	Lac du Bonnet	75.38	342	P	P	15 48 49.3	-0.9
	comp=Z,1.0nm,0.5s,baz=147,slow=7.1,SNR=3.7						
TORD	Torodi Ar. Bea	75.92	70	P	P	15 48 52.5	-1.5
	comp=Z,1.6nm,0.6s,baz=256,slow=5.8,SNR=9.2						
YKA	Yellowknife Ar	91.30	340	P	P	15 50 12.8	+1.7
	comp=Z,1.4nm,0.7s,baz=132,slow=4.3,SNR=23						
ASAR	Alice Springs	130.88	206	PKP	PKiKP	15 56 19.5	+1.2
	comp=Z,0.4nm,0.7s,baz=139,slow=2.3,SNR=4.1						
WRA	Warramunga Arr	133.97	209	PKP	PKiKP	15 56 25.6	+1.0
	comp=Z,0.5nm,0.7s,baz=149,slow=1.6,SNR=5.5						
MKAR	Makanchi Array	144.50	37	PKP	PKPdf	15 56 42.6	+1.0
	comp=Z,1.9nm,0.7s,baz=326,slow=4.0,SNR=30						
SONM	Songino Array	152.88	9	PKPbc	PKPbc	15 57 02.5	0.0
	comp=Z,0.3nm,0.3s,baz=353,slow=0.1,SNR=3.3						

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*IDC **07** 15:37:50.8±2.4, 9°.68S×112°.67E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.5/47, mbtmp3.7/4, ML3.2/1, Error ellipse: s-maj=122.5km s-min=23.4km az=47.0*

*DJA **07** 15:37:58.1±0.8, 10°S±7°×11°3E±°, h18^{km}±8^{km}, M3.9/12, MLv3.9/12*

ISC 07 15:37:52.7±1.8**, 9°.55S**±0°.07×**112°.94E**±0°.04**, h3**^{km}±12^{km}**, n16, σ1^{s}.56**/25**, mb3.9**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	1.37	21	P	Pb	15 38 20.2	+1.2
GMJI				S	Sg	15 38 35.4	-1.3
JAGI	Jajag, Banyuwa	1.61	48	P	Pg	15 38 24.1	+0.5
JAGI				S	Sn	15 38 40.5	-2.9
PWJI	Pagerwojo	1.89	324	P	Pb	15 38 27.9	0.0
PWJI				S	Sn	15 38 50.4	+0.1
ABJI	Asem Bagus	2.17	36	P	Pg	15 38 34.3	0.0
ABJI				S	Sb	15 38 59.4	-0.5
PCJI	Pacitan	2.20	308	P	Pb	15 38 32.5	-0.8
PCJI				S	Sn	15 38 57.5	-0.6
DNP	Denpasar	2.41	69	P	Pb	15 38 36.1	-0.6
DNP				S	Sb	15 39 06.4	-0.4
NGJI	Ngawi	2.62	326	P	Pg	15 38 42.6	-0.3
NGJI				S	Sb	15 39 11.5	-1.4
GRJI	Gresik	2.66	350	P	Pb	15 38 41.6	+0.5
GRJI				S	Sn	15 39 11.9	+2.5
SRBI	Singaraja	2.68	57	P	Pb	15 38 40.6	-0.8
SRBI				S	Sb	15 39 13.3	-1.4
KMMI	Kalianget	2.69	22	P	Pb	15 38 41.0	-0.5
UGM	Wanagama	2.89	304	P	Pn	15 38 42.2	+2.4
PLAI	Plampang	4.83	82	P	Pn	15 39 10.5	+4.1
FITZ	Fitzroy Crossi	14.97	126	Pn	Pn	15 41 24.6	-0.8
	0.1nm,0.3s,baz=296,slow=10,SNR=2.4						
FITZ				Sn	Sn	15 44 00.1	-12
	0.1nm,0.3s,baz=144,slow=19,SNR=6.0						
WRA	Warramunga Arr	23.10	119	P	P	15 42 59.6	-0.5
	1.3nm,0.8s,baz=292,slow=11,SNR=11						
ASAR	Alice Springs	24.46	128	P	P	15 43 13.7	+0.5
	1.7nm,0.6s,baz=304,slow=8.5,SNR=31						
MKAR	Makanchi Array	62.41	337	P	P	15 48 15.7	-1.4
	0.5nm,0.4s,baz=153,slow=7.6,SNR=11						

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*ISCJB **07** 15:38:13.7±0.7, 11°.00S±0°.08×165°.71E±0°.08, h10^{km}, mb4.6/21, MS3.5/5, Error ellipse: s-maj=14.5km s-min=6.4km az=44.6*

*NEIC **07** 15:38:14.7±0.6, 10°.85S×165°.80E, h10^{km}, mb4.9/17, Error ellipse: s-maj=12.9km s-min=7.5km az=54.0*

*IDC **07** 15:38:19.4±3.8, 10°.95S×165°.76E, h42^{km}±31^{km}, mb3.7/7, mb1 4.0/9, mb1mx3.6/51, mbtmp4.1/9, ML4.5/2, MS3.6/6, Ms1 3.6/6, ms1mx3.2/25, Error ellipse: s-maj=31.8km s-min=20.0km az=47.0*

ISC 07 15:38:15.7±0.7**, 10°.94S**±0°.09×**165°.73E**±0°.08**, h10**^{km}**, n42, σ1^{s}.38**/36**, mb4.9**/21**, MS3.5**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.89	284	P	Pn	15 39 44.5	+1.4
	36nm,0.3s,baz=135,slow=4.5,SNR=14						
HNR				S	Sn	15 40 51.8	+1.1
	0.3nm,0.3s,baz=192,slow=20,SNR=2.7						
MARNC	Mare, Loyalty	10.71	168	ePn	Pn	15 40 51.2	+2.0
DZM	Mont Dzumac	11.09	177	ePn	Pn	15 40 55.4	+0.9
DZM	Mont Dzumac	11.09	177	P	Pn	15 40 54.7	+0.2
	1.3nm,0.3s,baz=20,slow=18,SNR=11						
DZM				LR	LR	15 44 40.8	
	comp=Z,178nm,18.9s,baz=30,slow=34						
ONTNC	Ouen Toro	11.32	177	ePn	Pn	15 40 58.9	+1.2
PINNC	Pines Island,	11.72	172	ePn	Pn	15 41 05.4	+2.3
FUNA	Funafuti	13.49	81	ePn	P	15 41 36.4	-0.2
TARA	Tarawa	14.16	31	ePn	P	15 41 44.0	0.0
MANU	Manus Island	20.26	295	eP	Pn	15 42 53.2	-0.3
	138nm,1.6s						
ARMA	Armidale	23.40	212	eP	P	15 43 24.3	-0.7
	57nm,2.0s						
STKA	Stephens Creek	30.51	223	LR	LR	15 55 45.0	
	comp=Z,131nm,19.8s,baz=26,slow=34						
BFZ	Birch Farm	31.04	164	eP	P	15 44 32.4	-1.4
	20nm,1.1s						
SNZO	South Karori	31.26	167	eP	P	15 44 35.2	-0.5
	71nm,1.3s						
THZ	Tophouse	31.34	170	eP	P	15 44 35.6	-0.8
	50nm,1.8s						
WRAB	Tennant Creek	31.49	250	eP	P	15 44 37.5	-0.5
	9.1nm,1.1s						
WB2	Warramunga Arr	31.50	250	eP	P	15 44 38.3	+0.2
WR1	Warramunga Arr	31.51	250	eP	P	15 44 37.2	-0.9
	7.4nm,1.0s						
WRA	Warramunga Arr	31.51	250	P	P	15 44 37.2	-0.9
	0.9nm,0.7s,baz=80,slow=9.1,SNR=4.3						
GUMO	Guam	31.98	319	LR	LR	15 58 26.9	
	comp=Z,43nm,18.3s,baz=172,slow=38						
KHZ	Kahutara	32.09	169	eP	P	15 44 44.4	+1.5
	22nm,1.2s						
TOO	Toolangi	32.15	211	eP	P	15 44 43.1	-0.6
	31nm,1.6s						
FOZ	Fox Glacier	32.66	174	eP	P	15 44 47.6	-0.3
	44nm,1.7s						
OXZ	Oxford	32.72	171	eP	P	15 44 47.3	-1.2
	19nm,1.2s						
AS01	Alice Springs	32.78	243	eP	P	15 44 47.3	-2.1
ASAR	Alice Springs	32.83	243	P	P	15 44 48.8	-1.0
	1.0nm,0.9s,baz=71,slow=10,SNR=6.1						
ASAR				LR	LR	15 57 18.0	
	comp=Z,95nm,22.0s,baz=82,slow=35						
RPZ	Rata Peaks	32.98	173	P	P	15 44 50.7	-0.1
	7.0nm,0.8s,baz=326,slow=15,SNR=5.1						
RPZ				LR	LR	15 57 22.1	
	comp=Z,98nm,18.5s,baz=346,slow=35						
LBZ	Lake Benmore	33.54	174	eP	P	15 44 54.9	-0.8
	57nm,1.9s						
WKZ	Wanaka	33.88	176	eP	P	15 44 57.2	-1.4
	62nm,1.5s						
FAKI	Fak Fak	34.15	281	eP	P	15 45 01.0	-0.4
	21nm,1.3s						
ODZ	Otahua Downs	34.24	174	eP	P	15 45 00.6	-1.2
	20nm,1.3s						
FITZ	Fitzroy Crossi	39.39	255	eP	P	15 45 45.9	-0.1
	8.2nm,1.4s						
FITZ	Fitzroy Crossi	39.39	255	P	P	15 45 45.7	-0.3
	1.0nm,0.3s,baz=111,slow=8.6,SNR=25						
CMAR	Chiang Mai Arr	72.06	294	P	P	15 49 40.6	-0.1
	0.1nm,0.3s,baz=134,slow=3.9,SNR=3.5						
IL1	Eielson Array	83.42	19	eP	P	15 50 46.2	+3.2
ILAR	Eielson Array	83.42	19	P	P	15 50 42.0	-1.1
	0.8nm,0.8s,baz=223,slow=5.2,SNR=4.5						
ILB	Eielson Array	83.42	19	eP	P	15 50 45.9	+2.9
	12nm,1.8s						
NVAR	Mina Array Bea	85.97	50	LR	LR	16 19 50.9	
	comp=Z,66nm,21.1s,baz=338,slow=29						
PV02	Paradox Valley	93.20	52	epP	pP	15 51 40.8	+7.0
PV07	Paradox Valley	93.32	52	epP	pP	15 51 42.5	+8.2
MK32	Makanchi Array	93.44	317	eP	P	15 51 29.4	-2.2
MKAR	Makanchi Array	93.44	317	P	P	15 51 29.4	-2.2
	0.6nm,0.8s,baz=117,slow=4.6,SNR=5.8						
W41B	Gary Mavity, V	106.00	56	eSdif	Sdif	16 04 24.8	-1.8

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*SOME **07** 15:40:09.7, 42°.58N×79°.62E, h20^{km}*

*KRNET **07** 15:40:09.1±0.1, 42°.57N×79°.64E, h15^{km}, mb2.6*

*NNC **07** 15:40:09.2±1.2, 42°.60N×79°.61E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=8.1km s-min=4.3km az=136.0*

ISC 07 15:40:07.8±1.6**, 42°.54N**±0°.05×**79°.66E**±0°.04**, h14**^{km}±11^{km}**, n44, σ0^{s}.89**/83**, 10C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.64	347	P	Pb	15 40 21.6	+0.8
	28nm,0.1s						
SHLS				S	Sn	15 40 31.1	-1.5
	23nm,0.2s						
SHLS	Shalkode	0.64	347	eP	Pb	15 40 21.6	+0.8
	baz=17						
SHLS				eS	Sb	15 40 30.3	+0.7
	baz=17						
SHLS	Shalkode	0.64	347	eP	Pb	15 40 21.6	+0.8
	28nm,0.1s						
SHLS				eS	Sb	15 40 30.4	+0.7
	23nm,0.2s						
UZB	Uzynbulak	0.77	323	P	Pg	15 40 22.9	+0.1
	2.2nm,0.1s						
UZB				S	Sb	15 40 33.1	-0.4
	22nm,0.2s						
UZB	Uzynbulak	0.77	323	eP	Pg	15 40 22.9	+0.1
	baz=22						
UZB				eS	Sg	15 40 32.5	-0.4
	baz=22						
UZB	Uzynbulak	0.77	323	eP	Pg	15 40 22.9	+0.1
	2.2nm,0.1s						
UZB				eS	Sg	15 40 32.5	-0.4
	22nm,0.2s						
PDGK	Podgornoye	0.80	351	P	Pg	15 40 23.6	+0.2
	2.2nm,0.1s						
PDGK				S	Sb	15 40 34.1	-0.2
	2.3nm,0.2s						
PDGK	Podgornoye	0.80	351	⇓P	Pg	15 40 23.2	-0.2
	1.7nm,0.4s						
PDGK				⇑S	Sg	15 40 33.7	-0.3
	4.1nm,0.4s						
PDGK	Podgornoye	0.80	351	⇑iP	Pg	15 40 23.6	+0.2
	baz=52						
PDGK				⇑iS	Sb	15 40 34.2	-0.2
	baz=52						
PRZ	Przheval'sk	0.93	267	⇑iP	Pb	15 40 26.3	+0.4
	baz=65						
PRZ				⇑iS	Sg	15 40 38.9	+0.8
	baz=65						
KTMS	Ketmen	1.04	29	P	Pb	15 40 28.2	+0.5
	3.6nm,0.1s						
KTMS				S	Sb	15 40 41.5	+0.2
	10nm,0.2s						
KTMS	Ketmen	1.04	29	eP	Pb	15 40 28.2	+0.5
	baz=30						
KTMS				eS	Sb	15 40 41.5	+0.2
	baz=30						
KTMS	Ketmen	1.04	29	eP	Pb	15 40 28.2	+0.5
	3.6nm,0.1s						
KTMS				eS	Sb	15 40 41.5	+0.2
	10nm,0.2s						
KURS	Kuram	1.45	311	P	Pg	15 40 36.2	+0.6
	1.5nm,0.5s						
KURS				S	Sg	15 40 54.2	-0.3
	5.6nm,0.4s						
KURS	Kuram	1.45	311	eP	Pb	15 40 35.4	+0.8
	baz=11						
KURS				eS	Sg	15 40 54.0	-0.5
	baz=11						
KURS	Kuram	1.45	311	eP	Pb	15 40 35.4	+0.8
	1.0nm,0.5s						
KURS				eS	Sg	15 40 54.0	-0.5
	5.6nm,0.4s						
MNBS	Baschi	1.79	330	P	Pb	15 40 41.3	+0.8
	1.4nm,0.2s						
MNBS				S	Sg	15 41 04.6	-0.9
	15nm,0.3s						
MNBS	Baschi	1.79	330	eP	Pb	15 40 41.3	+0.8
	baz=30						
MNBS				eS	Sg	15 41 04.0	-1.6
	baz=30						
MNBS	Baschi	1.79	330	eP	Pb	15 40 41.3	+0.8
	1.4nm,0.2s						
MNBS				eS	Sg	15 41 04.0	-1.6
	15nm,0.3s						
DJR	Jarkent	1.80	3	P	Pb	15 40 41.4	+0.8
	0.5nm,0.2s						
DJR				S	Sg	15 41 05.3	-0.3
	1.9nm,0.2s						
DJR	Jarkent	1.80	3	eP	Pb	15 40 41.4	+0.8
	0.5nm,0.2s						
DJR				eS	Sb	15 41 03.9	+0.9
	1.9nm,0.2s						
KDJ	Kajisay	1.88	258	⇑iP	Pb	15 40 43.8	+1.7
	baz=57						
KDJ				⇑iS	Sg	15 41 08.3	-0.1
	baz=57						
KOTS	Kotyrbulak	2.00	291	P	Pb	15 40 44.8	+0.7
	2.5nm,0.2s						
KOTS				S	Sb	15 41 09.8	+1.0
	6.1nm,0.3s						
KOTS	Kotyrbulak	2.00	291	eP	Pb	15 40 44.8	+0.7
	baz=90						
KOTS				eS	Sb	15 41 09.8	+1.0
	baz=90						
KOTS	Kotyrbulak	2.00	291	eP	Pb	15 40 44.8	+0.7
	2.5nm,0.2s						
KOTS				eS	Sb	15 41 09.8	+1.0
	6.1nm,0.3s						
MDOK	Medeo	2.02	289	Pn	Pb	15 40 43.9	-0.6
	1.1nm,0.5s						
MDOK				Sn	Sb	15 41 10.5	+1.1
	1.7nm,0.5s						
TNSS	Tian-Shan	2.06	285	P	Pb	15 40 46.1	+0.9
	3.8nm,0.4s						
TNSS				S	Sb	15 41 11.3	+0.5
	2.8nm,0.3s						
TNSS	Tian-Shan	2.06	285	eP	Pb	15 40 46.1	+0.9
	baz=84						
TNSS				eS	Sg	15 41 12.6	-1.5
	baz=84						
TNSS	Tian-Shan	2.06	285	eP	Pb	15 40 46.1	+0.9
	2.6nm,0.3s						
TNSS				eS	Sg	15 41 12.6	-1.5
	2.8nm,0.3s						
ARXS	Arharly	2.14	322	Pg	Pb	15 40 47.9	+1.5
	1.0nm,0.3s						
ARXS				Lg	Lg	15 41 14.6	
	5.6nm,0.4s						
ARXS	Arharly	2.14	322	eP	Pb	15 40 47.4	+0.9
	2.2nm,0.4s						
ARXS				eS	Sg	15 41 14.6	-2.1
	5.6nm,0.4s						
IZV	Izvestkoviy	2.30	284	Pg	Pb	15 40 49.6	+0.4
	5.1nm,0.1s						
IZV				Lg	Lg	15 41 19.1	
	6.3nm,0.3s						
IZV	Izvestkoviy	2.30	284	eP	Pb	15 40 49.6	+0.4
	baz=83						
IZV				eS	Sb	15 41 18.3	+0.8
	baz=83						
IZV	Izvestkoviy	2.30	284	eP	Pb	15 40 49.6	+0.4
	0.8nm,0.2s						
IZV				eS	Sb	15 41 18.3	+0.8
	6.3nm,0.3s						
CHKK	Chushkaly	2.35	305	Pg	Pb	15 40 50.8	+0.7
	0.9nm,0.1s						
CHKK				Lg	Lg	15 41 20.9	
	8.0nm,0.2s						
CHKK	Chushkaly	2.35	305	eP	Pb	15 40 50.8	+0.7
	baz=5.0						
CHKK				eS	Sb	15 41 20.5	+1.5
	baz=5.0						
CHKK	Chushkaly	2.35	305	eP	Pb	15 40 50.8	+0.7
	0.3nm,0.1s						
CHKK				eS	Sb	15 41 20.4	+1.5
	8.0nm,0.2s						
KTBS	Karatobe	2.48	299	Pg	Pb	15 40 52.6	+0.5
	0.9nm,0.2s						
KTBS				Lg	Lg	15 41 23.9	
	8.4nm,0.4s						
KTBS	Karatobe	2.48	299	eP	Pb	15 40 52.6	+0.5
	baz=98						
KTBS				eS	Sb	15 41 23.5	+1.0
	baz=98						
KTBS	Karatobe	2.48	299	eP	Pb	15 40 52.6	+0.5
	0.3nm,0.2s						
KTBS				eS	Sb	15 41 23.6	+1.0
	8.4nm,0.4s						
ULHL	Ulahol	2.55	265	⇓iP	Pb	15 40 53.0	-0.5
	baz=64						
ULHL				⇓iS	Sb	15 41 26.2	+1.4
	baz=64						
BOOM	Boomskoye usch	2.75	270	⇓iP	Pb	15 40 55.9	-1.0
	baz=70						
BOOM				⇓iS	Sb	15 41 30.0	-0.5
	baz=70						
TKM2	Tokmak 2	3.02	279	⇑Pg	Pb	15 40 59.6	-1.9
	0.4nm,0.3s						
TKM2				⇓Lg	Lg	15 41 40.6	
	1.4nm,0.5s						
TKM2	Tokmak 2	3.02	279	⇑iP	Pb	15 41 00.2	-1.3
	baz=78						
TKM2				⇑iS	Sb	15 41 37.3	-1.0
	baz=78						

IDC 07 15:43:20.2±1.6**, 11°.94S**×**165°.18E, h0**^{km}**, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.7**/42**, mbtmp3.8**/5**, ML3.8**/1**, Error ellipse: s-maj=49.5km s-min=31.6km az=119.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.15	173	Pn	Pn	15 45 47.4	0.0
	0.8nm,0.3s,baz=136,slow=22,SNR=12						
WRA	Warramunga Arr	30.66	251	P	P	15 49 37.0	+0.3
	0.3nm,0.7s,baz=83,slow=9.1,SNR=2.6						
ASAR	Alice Springs	31.90	244	P	P	15 49 47.2	-0.4
	0.3nm,0.7s,baz=68,slow=9.5,SNR=2.1						
ILAR	Eielson Array	84.53	19	P	P	15 55 54.7	-0.1
	0.8nm,0.6s,baz=238,slow=5.0,SNR=6.8						
MKAR	Makanchi Array	93.79	317	P	P	15 56 39.2	0.0
	1.6nm,0.7s,baz=91,slow=6.1,SNR=19						

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*IDC **07** 15:44:12.5±5.8, 52°.40N×171°.84W, h80^{km}±47^{km}, mb3.2/5, mb1 3.5/8, mb1mx3.2/57, mbtmp3.6/8, ML3.4/3, Error ellipse: s-maj=69.9km s-min=26.0km az=163.0*

*ISCJB **07** 15:44:17.3±0.3, 52°.96N±0°.07×172°.10W±0°.06, h100^{km}, mb3.5/5, Error ellipse: s-maj=10.6km s-min=2.7km az=156.5*

*NEIC **07** 15:44:17.5±0.0, 52°.66N×171°.96W, h97^{km}, mb3.7/17, ML3.4(AEIC), After AEIC.*

ISC 07 15:44:17.0±1.0**, 52°.8N**±0°.2×**172°.03W**±0°.07**, h100**^{km}**, n63, σ1^{s}.72**/65**, mb3.3**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSE	Korovin Southe	1.32	250	ePn	Pn	15 44 42.9	+1.8
KOFP	Korovin Flat P	1.38	247	ePn	Pn	15 44 43.6	+1.9
KOKL	Mount Kliuchef	1.42	250	ePn	Pn	15 44 44.1	+1.9
ATKA	Atka Island	1.46	246	ePn	Pn	15 44 43.8	+1.1
ATKA				eSn	Sn	15 45 02.3	+0.1
NIKH	Nikolski High	1.93	84	ePn	Pn	15 44 49.4	+0.8
NIKH				eSn	Sn	15 45 12.4	-0.3
OKAK	Okmok	2.33	70	ePn	Pn	15 44 54.5	+0.6
OKER	Okmok East Rim	2.48	74	ePn	Pn	15 44 57.6	+1.8
GSTR	Great Sitkin T	2.57	255	ePn	Pn	15 44 59.3	+2.3
GSMY	Great Sitkin M	2.58	254	ePn	Pn	15 44 58.2	+1.1
GSTD	Great Sitkin T	2.63	255	ePn	Pn	15 44 58.7	+0.8
GSTD				eSn	Sn	15 45 30.9	+1.6
ETKA	Kagalaska Isla	2.85	252	ePn	Pn	15 45 01.9	+1.2
ADAG	Mount Adagdak	2.92	255	ePn	Pn	15 45 03.4	+1.7
ADK	Adak	3.00	254	ePn	Pn	15 45 04.0	+1.3
ADK				eSn	Sn	15 45 38.8	+0.8
KIRH	Kanaga Island	3.24	255	ePn	Pn	15 45 07.5	+1.6
KIWB	Kanaga Island	3.29	255	ePn	Pn	15 45 08.3	+1.8
KIKV	Kanaga Island	3.29	255	ePn	Pn	15 45 08.3	+1.7
MSW	Makushin Switc	3.33	69	ePn	Pn	15 45 08.7	+1.6
MTBL	Makushin Table	3.40	68	ePn	Pn	15 45 09.8	+1.7
UNV	Unalaska Valle	3.47	71	ePn	Pn	15 45 10.5	+1.6
TAFP	Tanaga Falls P	3.76	258	ePn	Pn	15 45 14.9	+2.0
AKRB	Akutan Reef Bi	3.79	67	ePn	Pn	15 45 15.5	+2.2
TASE	Tanaga Southea	3.81	257	ePn	Pn	15 45 15.6	+1.9
AKMO	Akutan Morgan	3.82	68	ePn	Pn	15 45 16.3	+2.7
ZRO	Akutan Zero	3.83	68	ePn	Pn	15 45 16.5	+2.7
AKUT	Akutan	3.96	68	ePn	Pn	15 45 17.9	+2.3
AKUT				eSn	Sn	15 46 04.4	+3.5
FALS	False Pass	5.49	65	ePn	Pn	15 45 38.3	+2.1
SDPT	Sand Point	7.25	65	ePn	Pn	15 46 00.5	+0.4
CHGN	Chignik	8.64	61	ePn	Pn	15 46 18.6	-0.4
SII	Sitkinak Islan	10.98	63	ePn	Pn	15 46 50.4	-0.4
GAMB	Gambell	10.98	1	ePn	Pn	15 46 54.8	+4.1
OHAK	Old Harbor	11.61	60	ePn	Pn	15 46 56.4	-2.8
KDAK	Kodiak Island	12.12	58	ePn	Pn	15 47 04.1	-1.9
KDAK	Kodiak Island	12.12	58	P	Pn	15 47 03.4	-2.6
	0.8nm,0.3s,baz=246,slow=5.4,SNR=18						
KDAK				S	Sn	15 49 06.1	-13
	0.2nm,0.3s,baz=222,slow=15,SNR=2.1						
SVW2	Sparrevohn	12.19	41	ePn	Pn	15 47 09.8	+2.9
BRLK	Bradley Lake	13.60	51	ePn	Pn	15 47 24.9	-0.5
SUA	Susitna One	14.37	45	ePn	P	15 47 36.2	-3.3
RC01	Rabbit Creek A	14.64	47	ePn	P	15 47 38.2	-4.2
GHO	Glory Hole Cre	15.29	45	ePn	P	15 47 47.3	-2.4
	6.4nm,1.1s						
KNK	Knik Glacier	15.34	47	ePn	P	15 47 47.5	-2.7
	20nm,1.4s						
SML	Sawmill	15.56	45	ePn	P	15 47 52.5	-0.1
	14nm,1.5s						
TRF	Thorofare Moun	15.56	38	ePn	P	15 47 53.8	+1.1
	10nm,1.5s						
BPAW	Bear Paw Mtn.	15.68	36	ePn	P	15 47 55.1	+1.2
	16nm,1.5s						
SCM	Sheep Creek Mo	16.00	46	ePn	P	15 47 56.1	-1.5
	11nm,1.3s						
RND	Reindeer	16.09	40	ePn	P	15 47 59.1	+0.7
	3.8nm,1.1s						
KLU	Klutina	16.50	48	ePn	P	15 48 01.1	-2.0
	6.9nm,1.3s						
DHY	Denali Highway	16.51	42	ePn	P	15 48 03.6	+0.3
	4.2nm,1.4s						
HMT	Hamilton	16.94	53	ePn	P	15 48 07.0	-0.8
	55nm,1.4s						
MDM	Murphy Dome	17.15	36	ePn	P	15 48 11.5	+1.3
	5.0nm,1.4s						
HARP	HAARP	17.17	45	ePn	P	15 48 09.4	-1.0
	4.1nm,1.1s						
HDA	Harding Lake	17.32	38	eP	P	15 48 13.5	+1.5
	3.0nm,1.2s						
IL1	Eielson Array	17.53	37	eP	P	15 48 15.3	+1.0
ILAR	Eielson Array	17.53	37	P	P	15 48 14.1	-0.2
	0.1nm,0.3s,baz=227,slow=9.6,SNR=12						

ILB	Eielson Array	17.53	37	eP	P	15 48 15.2	+0.9
PEA0B	Petropavlovsk-	18.18	283	eP	Pn	15 48 21.8	-0.7
	49nm,1.5s						
PETK	Petropavlovsk-	18.18	283	P	Pn	15 48 21.0	-1.5
	0.2nm,0.3s,baz=87,slow=13,SNR=5.5						
SCRK	Sand Creek	18.27	41	eP	Pn	15 48 23.4	-0.3
	3.9nm,1.3s						
FYU	Fort Yukon	19.07	33	eP	Pn	15 48 32.7	-0.2
	5.5nm,1.3s						
EGAK	Eagle	19.72	41	eP	Pn	15 48 39.2	-1.4
	4.7nm,1.4s						
SEY	Seymchan	21.17	312	P	P	15 48 55.9	+2.2
	0.3nm,0.3s,baz=90,slow=19,SNR=4.1						
INK	Inuvik	23.88	35	P	P	15 49 21.7	+0.9
	0.5nm,0.4s,baz=239,slow=5.9,SNR=3.0						
ARCES	ARCESS Array B	57.28	353	P	P	15 53 53.9	+0.4
	2.2nm,1.0s,baz=19,slow=5.7,SNR=2.6						
MKAR	Makanchi Array	62.30	312	P	P	15 54 27.3	-0.9
	0.1nm,0.3s,baz=35,slow=6.2,SNR=2.6						
CMAR	Chiang Mai Arr	74.94	281	P	P	15 55 46.6	-0.5
	0.3nm,0.3s,baz=33,slow=6.8,SNR=4.7						

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*ISCJB **07** 15:50:14.7±0.7, 21°.2S±0°.1×178°.7W±0°.2, h550^{km}, mb3.5/10, Error ellipse: s-maj=24.5km s-min=14.4km az=28.5*

*IDC **07** 15:50:16.9±6.3, 21°.21S×178°.61W, h568^{km}±80^{km}, mb3.0/10, mb1 3.2/11, mb1mx3.1/23, mbtmp3.9/11, Error ellipse: s-maj=36.6km s-min=22.1km az=5.0*

ISC 07 15:50:15.6±1.0, **21°.2S**±0°.2×**178°.6W**±0°.2, **h550**^{km}, **n14, σ0^{s}.91**/13, **mb3.5**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	17.44	191	P	P	15 53 47.4	-0.7
	0.7nm,0.3s,baz=277,slow=16,SNR=3.9						
RPZ	Rata Peaks	24.08	199	P	P	15 54 48.4	+0.4
	2.7nm,0.5s,baz=68,slow=16,SNR=3.6						
STKA	Stephens Creek	36.98	245	P	P	15 56 38.4	-0.4
	0.8nm,0.6s,baz=96,slow=9.2,SNR=3.0						
ASAR	Alice Springs	43.81	257	P	P	15 57 33.8	+0.4
	1.5nm,0.6s,baz=94,slow=8.0,SNR=26						
WRA	Warramunga Arr	43.94	263	P	P	15 57 34.0	-0.5
	0.3nm,0.3s,baz=96,slow=7.0,SNR=32						
PETK	Petropavlovsk-	76.76	346	P	P	16 01 09.9	-0.4
	1.6nm,0.8s,baz=152,slow=6.5,SNR=2.7						
NVAR	Mina Array Bea	81.90	44	P	P	16 01 38.6	+0.5
	0.2nm,0.3s,baz=235,slow=7.6,SNR=2.5						
SEY	Seymchan	86.88	347	P	P	16 02 01.4	-0.2
	baz=194,slow=19						
ILAR	Eielson Array	89.08	13	P	P	16 02 10.8	-1.1
	0.3nm,0.8s,baz=218,slow=5.3,SNR=5.7						
CMAR	Chiang Mai Arr	89.79	290	P	P	16 02 16.0	-0.2
	0.5nm,0.8s,baz=123,slow=3.3,SNR=4.1						
PDAR	Pinedale Array	89.83	43	P	P	16 02 16.0	-0.2
	0.3nm,0.6s,baz=218,slow=5.7,SNR=3.1						
SONM	Songino Array	95.87	319	P	P	16 02 44.6	+1.0
	0.2nm,0.4s,baz=101,slow=4.6,SNR=2.8						
AKASG	Malin Array Be	143.30	330	PKP	PKPab	16 08 44.5	-0.9
	1.9nm,0.4s,baz=44,slow=4.1,SNR=7.2						
BRTR	Keskin Array B	146.84	311	PKPbc	PKPdf	16 08 56.0	+2.1
	0.6nm,0.6s,baz=123,slow=4.6,SNR=3.8						

IDC 07 15:51:43.6±1.8, **11°.32S**×**165°.17E**, **h0**^{km}, **mb3.5**/3, **mb1 3.8**/4, **mb1mx3.6**/27, **mbtmp3.6**/4, **ML3.3**/1, **MS4.3**/1, **Ms1 4.3**/1, **ms1mx2.8**/18, **Error ellipse: s-maj=52.1km s-min=31.8km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.76	174	Pn	Pn	15 54 19.2	0.0
	0.2nm,0.3s,baz=38,slow=19,SNR=3.6						
RAO	Raoul Island	23.82	141	LR	LR	16 04 24.8	
	comp=Z,767nm,19.5s,baz=116,slow=32						
WRA	Warramunga Arr	30.86	250	P	P	15 58 02.4	+0.5
	0.6nm,0.9s,baz=81,slow=9.2,SNR=3.4						
ASAR	Alice Springs	32.17	243	P	P	15 58 12.9	-0.5
	0.4nm,0.9s,baz=68,slow=10,SNR=3.3						
ILAR	Eielson Array	83.95	19	P	P	16 04 15.2	0.0
	0.3nm,0.7s,baz=233,slow=4.5,SNR=6.3						

MEX 07 15:54:34.9±0.5, **15°.74N**×**94°.96W**, **h20**^{km}±19^{km}, **MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.11	272	eP	Pn	15 54 52.0	-3.3
HUIG				i S	Sb	15 55 05.2	-4.2
CMIG	Matias Romero	1.35	3	i P	Pn	15 54 55.6	-3.0
CMIG				i S	Sn	15 55 11.7	-4.2
PCIG		1.67	91	eP	Pn	15 55 00.3	-2.8
PCIG				eS	Sn	15 55 19.4	-4.6
CCIG	Comitan	2.77	78	eP	Pn	15 55 15.8	-2.4
CCIG				i S	Sn	15 55 47.6	-3.6

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*ISCJB **07** 15:57:55.9±0.4, 31°.35S±0°.03×69°.16W±0°.03, h118^{km}±4^{km}, mb3.4/3, Error ellipse: s-maj=4.5km s-min=4.2km az=7.3*

*IDC **07** 15:57:55.7±1.2, 31°.62S×68°.92W, h108^{km}±7^{km}, mb3.3/3, mb1 3.7/4, mb1mx3.5/19, mbtmp3.8/4, Error ellipse: s-maj=41.4km s-min=28.9km az=4.0*

*SJA **07** 15:57:55.8±1.2, 31°.36S×69°.21W, h111^{km}±4^{km}, ML3.9, MW4.2*

*GUC **07** 15:57:56.3±0.7, 31°.34S×69°.35W, h135^{km}±4^{km}, ML3.9*

ISC 07 15:57:56.1±0.7, **31°.35S**±0°.03×**69°.18W**±0°.03, **h112**^{km}±4^{km}, **n52, σ1^{s}.10**/83, **mb3.4**/3, **6C-6D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.46	193	eP	Pn	15 58 13.7	+0.3
RTLS				eS	Sn	15 58 26.5	+0.3
RTLS				IAML		15 58 28.2	
	comp=Z,2µm,0.7s						
RTLS	Leoncito	0.46	193	eP	Pn	15 58 13.6	+0.3
RTLS				IAML		15 58 28.1	
	comp=Z,2µm,0.7s						
ZON	Zonda	0.47	114	eP	Pn	15 58 13.5	+0.5
ZON				eS	Sn	15 58 26.1	+0.3
ZON				IAML		15 58 27.5	
	comp=Z,2µm,0.3s						
ZON	Zonda	0.47	114	eP	Pn	15 58 13.5	+0.5
ZON				eS	Sn	15 58 26.3	+0.5
SJA	San Juan	0.55	108	eP	Pn	15 58 14.4	+0.8
SJA				⇓eS	Sn	15 58 27.6	+0.8
SJA				IAML		15 58 27.8	
	comp=Z,5µm,0.3s						
RTLL	Cerro Villicun	0.60	88	eP	Pn	15 58 14.4	+0.4
RTLL				⇓eS	Sn	15 58 27.7	+0.3
RTLL				IAML		15 58 29.7	
	comp=Z,4µm,0.3s						
RTLL	Cerro Villicun	0.60	88	eP	Pn	15 58 14.1	+0.2
RTLL				eS	Sn	15 58 27.5	+0.1
RTLL	Cerro Villicun	0.60	88	⇑eP	Pn	15 58 14.1	+0.2
RTLL				eS	Sn	15 58 27.4	+0.1
RTLL				IAML		15 58 28.7	
	comp=E,11µm,0.3s						
AMOG	MOGNA	0.72	55	eP	Pn	15 58 15.4	+0.6
AMOG	MOGNA	0.72	55	eP	Pn	15 58 15.5	+0.6
RTCV	Cerro Valdivia	0.74	133	eP	Pn	15 58 15.8	+0.7
RTCV				eS	Sn	15 58 28.9	-0.5
ACCO	Cerro Coronel	0.77	7	⇓eP	Pn	15 58 16.4	+0.7
ACCO	Cerro Coronel	0.77	7	eP	Pn	15 58 16.4	+0.7
CFA	Coronel Fontan	0.84	108	eP	Pn	15 58 16.5	+0.5
CFA				eS	Sn	15 58 31.6	+0.8
CFA	Coronel Fontan	0.84	108	eP	Pn	15 58 16.5	+0.5
CFA				eS	Sn	15 58 31.7	+0.8
AUSP	Uspallata	0.89	192	eP	Pn	15 58 17.3	+0.6
AUSP	Uspallata	0.89	192	eP	Pn	15 58 17.4	+0.7
ACDV	Cuesta del Vie	1.18	2	eP	Pn	15 58 20.6	+0.9
ACDV				eS	Sn	15 58 38.7	+1.5
ACDV				IAML		15 58 39.5	
	comp=Z,1µm,0.5s						
ACDV	Cuesta del Vie	1.18	2	eP	Pn	15 58 20.6	+0.9
ACDV				eS	Sn	15 58 38.8	+1.5
ACDV				IAML		15 58 39.3	
	comp=Z,1µm,0.5s						
AROD	Rodeo	1.21	348	eP	Pn	15 58 21.2	+1.1
AROD				⇓eS	Sn	15 58 40.3	+2.1
AROD	Rodeo	1.21	348	eP	Pn	15 58 21.1	+1.1
AROD				eS	Sn	15 58 40.2	+2.1
ASAL	Salagasta	1.27	167	eP	Pn	15 58 21.4	+0.9
ARCO	CERRO ARCO	1.50	172	⇓eP	Pn	15 58 24.2	+1.0
ARCO				eS	Sn	15 58 45.5	+1.7
ARCO				IAML		15 58 46.9	
	comp=Z,2µm,0.7s						
CMCH	Combarbala	1.57	276	⇑eP	Pn	15 58 24.3	+0.3
CMCH				eS	Sn	15 58 45.7	+0.5
AAGR	Agrelo	1.75	170	eP	Pn	15 58 27.0	+0.8
AAGR	Agrelo	1.75	170	eP	Pn	15 58 27.1	+0.8
AAGR				eS	Sn	15 58 50.8	+1.6
GO04	Tololo Observa	1.83	310	eP	Pn	15 58 27.3	0.0
GO04	Tololo Observa	1.83	310	⇑eP	Pn	15 58 27.3	0.0
GO04				eS	Sn	15 58 50.2	-0.8
GO04				IAML		15 58 55.7	
	comp=N,4µm,0.5s						
ACAN	Cantantal	1.92	119	eP	Pn	15 58 29.2	+0.9
ACAN	Cantantal	1.92	119	eP	Pn	15 58 29.3	+0.9
ACAN				eS	Sn	15 58 53.4	+0.5
AGUA	GUANDACOL	1.95	18	eP	Pn	15 58 30.2	+1.5
FCH	Farellones	2.18	205	⇓eP	Pn	15 58 32.8	+0.9
FCH				eS	Sn	15 59 01.7	+2.6
FCH				IAML		15 59 08.1	
	comp=E,355nm,0.2s						
AVIZ	Vizcacheras	2.19	165	eP	Pn	15 58 32.4	+0.8
PEL	Peldehue	2.20	215	⇑eP	Pn	15 58 31.8	0.0
PEL				eS	Sn	15 58 59.3	+0.3
PEL				IAML		15 59 03.3	
	comp=N,364nm,0.4s						
ROCH	El Roble	2.24	223	⇑eP	Pn	15 58 32.4	-0.1
ROCH				eS	Sn	15 59 00.3	0.0
ROCH				IAML		15 59 02.7	
	comp=N,506nm,0.4s						
ROC1	El Roble	2.25	223	eP	Pn	15 58 32.6	0.0
APLL	PUNTA DE LOS L	2.47	68	eP	Pn	15 58 35.8	+0.5
APLL				i S	Sn	15 59 05.8	+0.5
APLL				IAML		15 59 06.6	
	comp=Z,311nm,0.6s						
APLL	PUNTA DE LOS L	2.47	68	eP	Pn	15 58 35.8	+0.5
LCO	Las Campanas	2.68	330	eP	Pn	15 58 38.3	0.0
LCO	Las Campanas	2.68	330	⇑eP	Pn	15 58 38.4	+0.1
LCO				eS	Sn	15 59 10.0	-0.7
LCO				IAML		15 59 12.1	
	comp=N,446nm,0.4s						
MRA	San Martin	3.13	111	eP	Pn	15 58 44.5	+0.5
MRA				i S	Sn	15 59 20.1	-0.7
MRA				IAML		15 59 47.2	
	comp=Z,311nm,0.4s						
MRA	San Martin	3.13	111	eP	Pn	15 58 44.5	+0.5
CYA	Choya	4.12	46	eP	Pn	15 58 56.7	-0.5
CYA				IAML		15 58 57.1	
	comp=Z,130nm,0.4s						
CYA				i S	Sn	15 59 42.4	-2.2
CPUP	Villa Florida	11.53	67	P	Pn	16 00 34.0	-3.3
	comp=Z,0.3nm,0.3s,baz=237,slow=10,SNR=6.3						
CPUP				S	Sn	16 02 47.6	+3.6
	comp=Z,0.3nm,0.3s,baz=273,slow=17,SNR=1.8						
TXAR	Lajitas Array	68.69	328	P	P	16 08 48.5	+0.8
	comp=Z,0.2nm,0.4s,baz=161,slow=11,SNR=2.7						
TXAR				pP	pP	16 09 17.3	+1.1
	comp=Z,0.5nm,0.9s,baz=93,slow=3.6,SNR=2.8						
TORD	Torodi Ar. Bea	81.02	69	P	P	16 09 57.9	-1.1
	comp=Z,1.0nm,0.7s,baz=224,slow=4.0,SNR=6.1						
TORD				pP	pP	16 10 26.4	-1.5
	comp=Z,1.0nm,0.8s,baz=276,slow=5.8,SNR=3.8						
PDAR	Pinedale Array	82.55	331	P	P	16 10 08.2	+1.6
	comp=Z,0.2nm,0.6s,baz=134,slow=7.7,SNR=2.5						
ASAR	Alice Springs	121.00	205	PKP	PKPdf	16 16 34.9	-1.2
	comp=Z,0.3nm,0.7s,baz=173,slow=2.0,SNR=2.8						
WRA	Warramunga Arr	124.23	207	PKP	PKPdf	16 16 41.6	-0.7
	comp=Z,0.8nm,0.7s,baz=158,slow=1.7,SNR=5.2						
WRA				pPKP	pPKPdf	16 17 10.9	-2.8
	comp=Z,0.4nm,1.0s,baz=174,slow=1.7,SNR=2.3						
ZALV	Zalesovo Beam	150.71	32	PKPbc	PKiKP	16 17 35.1	-0.2
	comp=Z,3.6nm,0.4s,baz=304,slow=2.8,SNR=18						
MKAR	Makanchi Array	153.20	47	PKPbc	PKiKP	16 17 40.8	+0.1
	comp=Z,0.7nm,0.7s,baz=291,slow=2.6,SNR=8.5						
MKAR				PKPab	PKPab	16 17 53.2	+0.4
	comp=Z,1.1nm,0.7s,baz=302,slow=4.1,SNR=9.6						
SONM	Songino Array	163.19	10	PKPab	PKPab	16 18 37.0	+1.0
	comp=Z,0.3nm,0.6s,baz=336,slow=3.2,SNR=2.7						

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*IDC **07** 15:59:54.9±1.5, 10°.91S×165°.23E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.8/27, mbtmp4.0/7, ML4.1/2, MS3.2/4, Ms1 3.1/4, ms1mx2.9/33, Error ellipse: s-maj=34.3km s-min=25.8km az=138.0*

*NEIC **07** 15:59:56.3±0.8, 10°.86S×165°.16E, h10^{km}, mb4.9/3, Error ellipse: s-maj=16.4km s-min=10.3km az=52.0*

*ISCJB **07** 15:59:58.0±0.8, 11°.07S±0°.09×165°.16E±0°.09, h31^{km}, mb3.8/1, Error ellipse: s-maj=16.2km s-min=8.3km az=43.2*

ISC 07 15:59:59.6±1.1, **11°.0S**±0°.1×**165°.2E**±0°.1, **h31**^{km}, **n23, σ1^{s}.35**/16, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.36	287	ePn	Pn	16 01 14.7	-2.8
HNR	Honiara	5.36	287	Pn	Pn	16 01 17.4	-0.1
	11nm,0.3s,baz=184,slow=19,SNR=3.1						
HNR				Sn	Sn	16 02 20.2	+2.0
	baz=111,slow=16,SNR=1.7						
HNR				LR	LR	16 03 32.2	
	comp=Z,158nm,19.2s,baz=198,slow=40						
DZM	Mont Dzumac	11.06	174	Pn	Pn	16 02 36.5	+0.7
	0.8nm,0.3s,baz=153,slow=14,SNR=9.9						
DZM				Sn	Sn	16 04 36.2	-2.3
	0.2nm,0.3s,baz=3.7,slow=19,SNR=3.2						
PINNC	Pines Island,	11.73	169	ePn	Pn	16 02 46.9	+1.9
CTA	Charters Tower	20.29	241	P	Pn	16 04 35.8	+0.6
	3.1nm,0.6s,baz=68,slow=11,SNR=2.3						
H11S2	WAKE ISLAND Hy	29.37	3	T	T	16 36 35.3	
	baz=183,slow=76,SNR=7.3						
H11S3	WAKE ISLAND Hy	29.37	3	T	T	16 36 34.3	
	baz=183,slow=76,SNR=7.2						
H11S1	WAKE ISLAND Hy	29.38	3	T	T	16 36 35.0	
	baz=183,slow=76,SNR=7.9						
BKZ	Black Stump Fm	29.80	162	eP	P	16 06 05.0	+1.2
	28nm,1.6s						
STKA	Stephens Creek	30.06	223	LR	LR	16 16 40.1	
	comp=Z,46nm,18.5s,baz=27,slow=33						
H11N1	WAKE ISLAND Hy	30.59	3	T	T	16 38 04.5	
	baz=182,slow=76,SNR=5.3						
H11N3	WAKE ISLAND Hy	30.60	3	T	T	16 38 07.3	
	baz=182,slow=76,SNR=7.0						
H11N2	WAKE ISLAND Hy	30.61	3	T	T	16 38 05.7	
	baz=182,slow=76,SNR=4.5						
WB2	Warramunga Arr	30.93	250	eP	P	16 06 13.7	-0.3
WR1	Warramunga Arr	30.94	250	eP	P	16 06 14.4	+0.3
	17nm,1.5s						
WRA	Warramunga Arr	30.94	250	P	P	16 06 14.4	+0.3
	0.9nm,0.7s,baz=81,slow=9.3,SNR=10						
KHZ	Kahutara	32.12	168	eP	P	16 06 23.8	-0.4
	46nm,1.5s						
AS01	Alice Springs	32.24	243	eP	P	16 06 25.9	+0.4
ASAR	Alice Springs	32.28	243	P	P	16 06 26.0	+0.1
	1.4nm,0.8s,baz=67,slow=10,SNR=16						
ASAR				LR	LR	16 18 52.5	
	comp=Z,58nm,20.8s,baz=91,slow=35						
FITZ	Fitzroy Crossi	38.82	255	LR	LR	16 24 12.0	
	comp=Z,23nm,20.0s,baz=117,slow=37						
ILAR	Eielson Array	83.68	19	P	P	16 12 24.6	-0.3
	0.3nm,0.6s,baz=229,slow=5.3,SNR=9.3						
MK32	Makanchi Array	93.10	317	eP	P	16 13 10.4	-0.2
MKAR	Makanchi Array	93.10	317	P	P	16 13 10.4	-0.2
	0.6nm,0.8s,baz=106,slow=3.1,SNR=6.3						

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*ISCJB **07** 16:12:40.7±1.3, 10°.4S±0°.1×161°.3E±0°.1, h67^{km}, mb3.4/5, Error ellipse: s-maj=23.7km s-min=15.3km az=137.8*

*IDC **07** 16:12:46.1±2.4, 10°.13S×161°.08E, h93^{km}±16^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.4/31, mbtmp3.7/6, MS3.9/1, Ms1 3.9/1, ms1mx2.8/18, Error ellipse: s-maj=28.6km s-min=23.4km az=92.0*

ISC 07 16:12:41.9±1.2, **10°.4S**±0°.1×**161°.3E**±0°.2, **h67**^{km}, **n8, σ0^{s}.89**/8, **mb3.5**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.64	304	P	Pn	16 13 09.0	+0.4
	27nm,0.3s,baz=176,slow=8.4,SNR=33						
HNR				S	Sn	16 13 27.5	-1.3
	61nm,0.3s,baz=180,slow=22,SNR=14						
DZM	Mont Dzumac	12.64	158	P	P	16 15 47.1	-0.8
	0.3nm,0.3s,baz=299,slow=19,SNR=5.4						
WRA	Warramunga Arr	27.70	247	P	P	16 18 24.9	+0.9
	1.0nm,0.6s,baz=75,slow=9.2,SNR=13						
ASAR	Alice Springs	29.30	240	P	P	16 18 38.5	+0.3
	0.3nm,0.7s,baz=66,slow=10,SNR=4.6						
FITZ	Fitzroy Crossi	35.38	253	P	P	16 19 31.7	+0.3
	1.9nm,0.7s,baz=71,slow=8.2,SNR=6.4						
ASAJ	Asahikawa	56.82	344	LR	LR	16 41 33.7	
	comp=Z,119nm,20.9s,baz=192,slow=31						
SONM	Songino Array	75.58	325	P	P	16 24 19.2	-0.4
	0.5nm,0.8s,baz=134,slow=6.2,SNR=2.9						
ILAR	Eielson Array	84.29	20	P	P	16 25 06.6	+0.6
	0.4nm,1.0s,baz=237,slow=4.9,SNR=4.2						

IDC 07 16:21:16.2±1.6, **11°.76S**×**165°.17E**, **h0**^{km}, **mb3.5**/4, **mb1 3.8**/5, **mb1mx3.6**/29, **mbtmp3.5**/5, **ML3.4**/1, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx2.7**/20, **Error ellipse: s-maj=47.8km s-min=28.7km az=120.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.32	173	Pn	Pn	16 23 46.2	+0.5
	0.3nm,0.3s,baz=229,slow=20,SNR=5.2						
RAO	Raoul Island	23.47	140	LR	LR	16 34 15.7	
	comp=Z,265nm,20.1s,baz=120,slow=33						
WRA	Warramunga Arr	30.71	251	P	P	16 27 32.9	-0.2
	0.4nm,0.9s,baz=84,slow=8.9,SNR=3.8						
ASAR	Alice Springs	31.97	244	P	P	16 27 44.0	-0.2
	0.4nm,0.8s,baz=67,slow=9.5,SNR=5.2						
SONM	Songino Array	78.91	324	P	P	16 33 22.3	+0.6
	0.3nm,0.9s,baz=104,slow=7.9,SNR=2.3						
ILAR	Eielson Array	84.37	19	P	P	16 33 49.5	-0.5
	0.4nm,0.6s,baz=240,slow=4.8,SNR=8.3						

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*IDC **07** 16:22:03.5±1.7, 11°.55S×165°.02E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/29, mbtmp3.6/6, ML3.3/1, Error ellipse: s-maj=50.4km s-min=31.9km az=112.0*

*ISCJB **07** 16:22:06.8±1.1, 11°.7S±0°.1×165°.1E±0°.2, h34^{km}, mb3.5/5, Error ellipse: s-maj=27.2km s-min=18.8km az=2.7*

ISC 07 16:22:08.6±1.2, **11°.6S**±0°.1×**165°.1E**±0°.2, **h34**^{km}, **n7, σ1^{s}.10**/7, **mb3.6**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.49	173	Pn	Pn	16 24 37.0	+0.2
	0.2nm,0.3s,baz=319,slow=20,SNR=4.0						
CTA	Charters Tower	19.98	243	P	Pn	16 26 41.0	+0.8
	0.1nm,0.3s,baz=73,slow=11,SNR=3.0						
WRA	Warramunga Arr	30.70	250	P	P	16 28 20.0	-0.6
	0.5nm,0.7s,baz=81,slow=9.2,SNR=3.0						
ASAR	Alice Springs	31.98	244	P	P	16 28 30.4	-1.4
	0.5nm,0.8s,baz=74,slow=9.8,SNR=2.8						
SONM	Songino Array	78.74	324	P	P	16 34 07.9	+0.1
	0.7nm,1.0s,baz=114,slow=6.5,SNR=2.5						
ILAR	Eielson Array	84.24	19	P	P	16 34 35.7	-0.7
	0.3nm,0.7s,baz=232,slow=5.1,SNR=2.3						
MKAR	Makanchi Array	93.49	317	P	P	16 35 22.1	+1.1
	0.2nm,0.6s,baz=115,slow=7.4,SNR=2.1						

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*NEIC **07** 16:24:52.0±0.7, 10°.94S×164°.45E, h10^{km}, mb4.5/6, Error ellipse: s-maj=16.1km s-min=8.8km az=56.0*

*IDC **07** 16:24:57.3±3.8, 10°.94S×164°.36E, h51^{km}±33^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.5/31, mbtmp3.8/9, ML4.1/2, MS2.7/2, Ms1 2.7/2, ms1mx2.5/15, Error ellipse: s-maj=29.7km s-min=25.9km az=82.0*

ISC 07 16:24:54.3±0.9, **10°.9S**±0°.1×**164°.6E**±0°.1, **h29**^{km}, **n30, σ1^{s}.71**/25, **mb4.0**/12, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.82	288	ePn	Pn	16 26 05.5	+0.6
HNR				eSn	Sn	16 27 03.0	+3.2
HNR	Honiara	4.82	288	P	Pn	16 26 06.0	+1.1
	14nm,0.3s,baz=144,slow=9.0,SNR=8.2						
HNR				S	Sn	16 27 03.0	+3.2
	baz=142,slow=19,SNR=2.3						
MARNC	Mare, Loyalty	10.98	163	ePn	Pn	16 27 30.1	+0.5
DZM	Mont Dzumac	11.21	171	ePn	Pn	16 27 33.5	+0.8
DZM	Mont Dzumac	11.21	171	P	Pn	16 27 34.3	+1.6
	1.0nm,0.3s,baz=302,slow=16,SNR=10						
DZM				LR	LR	16 30 18.2	
	comp=Z,18nm,21.1s,baz=48,slow=28						
PINNC	Pines Island,	11.92	167	ePn	Pn	16 27 43.2	+0.8
RABL	Rabaul	14.03	298	ePn	Pn	16 28 09.2	-2.0
EIDS	Eidsvold	19.23	220	eP	P	16 29 14.9	-1.4
	51nm,1.8s						
COEN	Coen	21.13	260	eP	P	16 29 36.4	-0.6
	8.2nm,1.1s						
H11S2	WAKE ISLAND Hy	29.32	4	T	T	17 01 25.1	
	baz=184,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	29.32	4	T	T	17 01 30.6	
	baz=184,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	29.34	4	T	T	17 01 29.3	
	baz=184,slow=76,SNR=12						
STKA	Stephens Creek	29.75	222	LR	LR	16 41 41.8	
	comp=Z,33nm,21.8s,baz=24,slow=34						
BKZ	Black Stump Fm	30.04	161	eP	P	16 31 02.9	+2.0
	19nm,1.4s						
WB2	Warramunga Arr	30.45	249	eP	P	16 31 03.5	-1.2
	8.8nm,1.3s						
WR1	Warramunga Arr	30.46	249	eP	P	16 31 03.5	-1.3
	11nm,1.3s						
WRA	Warramunga Arr	30.46	249	P	P	16 31 03.5	-1.3
	0.2nm,0.5s,baz=80,slow=8.7,SNR=3.6						
H11N1	WAKE ISLAND Hy	30.55	4	T	T	17 02 55.9	
	baz=184,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.55	4	T	T	17 02 56.0	
	baz=184,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	30.57	4	T	T	17 02 57.5	
	baz=184,slow=76,SNR=18						
ASAR	Alice Springs	31.84	243	P	P	16 31 14.9	-2.0
	0.3nm,0.7s,baz=64,slow=9.9,SNR=7.2						
TAU	Tasmania Unive	35.22	202	eP	P	16 31 43.8	-2.3
	246nm,1.8s						
FITZ	Fitzroy Crossi	38.32	255	eP	P	16 32 10.5	-2.3
	18nm,1.6s						
FITZ	Fitzroy Crossi	38.32	255	P	P	16 32 10.5	-2.3
	1.0nm,0.7s,baz=100,slow=10.0,SNR=4.0						
SONA0	Songino Array	77.92	324	eP	P	16 36 49.8	+0.1
SONM	Songino Array	77.92	324	P	P	16 36 49.8	+0.1
	0.2nm,0.3s,baz=131,slow=5.9,SNR=3.8						
QSPA	South Pole Qui	79.06	180	P	P	16 36 57.4	+1.7
	1.3nm,0.8s,baz=321,slow=6.6,SNR=5.1						
ILAR	Eielson Array	83.78	19	P	P	16 37 19.9	-0.6
	0.4nm,1.0s,baz=217,slow=6.8,SNR=2.9						
MK32	Makanchi Array	92.68	317	eP	P	16 38 04.0	+0.4
MKAR	Makanchi Array	92.68	317	P	P	16 38 04.0	+0.4
	0.6nm,0.9s,baz=99,slow=6.0,SNR=3.6						

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*IDC **07** 16:27:54.3±1.5, 11°.70S×165°.07E, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.6/36, mbtmp3.7/7, ML3.8/2, Error ellipse: s-maj=32.6km s-min=28.2km az=139.0*

*NEIC **07** 16:27:56.0±0.4, 11°.80S×165°.08E, h10^{km}, mb4.8/5, Error ellipse: s-maj=8.8km s-min=7.4km az=53.0*

*ISCJB **07** 16:27:57.6±0.7, 11°.84S±0°.08×165°.00E±0°.08, h33^{km}, mb3.4/1, Error ellipse: s-maj=13.8km s-min=8.7km az=39.2*

ISC 07 16:27:59.5±0.8, **11°.8S**±0°.1×**165°.03E**±0°.10, **h35**^{km}, **n20, σ0^{s}.56**/22, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.53	295	ePn	Pn	16 29 19.1	-0.2
HNR				eSn	Sn	16 30 21.2	-0.5
HNR	Honiara	5.53	295	Pn	Pn	16 29 19.1	-0.2
	4.1nm,0.3s,baz=188,slow=15,SNR=2.6						
HNR				Sn	Sn	16 30 21.2	-0.5
	baz=157,slow=13,SNR=2.3						
DZM	Mont Dzumac	10.29	173	ePn	Pn	16 30 23.9	-1.0
DZM	Mont Dzumac	10.29	173	Pn	Pn	16 30 24.7	-0.2
	0.6nm,0.3s,baz=323,slow=10,SNR=7.1						
BKZ	Black Stump Fm	29.09	161	eP	P	16 33 56.6	-0.3
	29nm,1.6s						
WB2	Warramunga Arr	30.55	251	eP	P	16 34 10.4	+0.3
WR1	Warramunga Arr	30.56	251	eP	P	16 34 11.0	+0.8
WRA	Warramunga Arr	30.56	251	P	P	16 34 11.0	+0.8
	0.3nm,0.5s,baz=80,slow=9.2,SNR=5.3						
SNZO	South Karori	30.59	166	eP	P	16 34 10.8	+0.8
	118nm,1.4s						
AS01	Alice Springs	31.78	244	eP	P	16 34 21.6	+0.7
AS31	Alice Springs	31.82	244	eP	P	16 34 21.5	+0.3
	1.4nm,1.4s						
ASAR	Alice Springs	31.82	244	P	P	16 34 21.0	-0.3
	0.4nm,0.6s,baz=70,slow=9.6,SNR=6.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FOZ	**Fox Glacier** 28nm,1.3s	**31.88**	**173**	*e*P	**P**	**16 34 21.0**	**-0.4**
JOHN	**Johnston Islan** 318nm,1.3s	**37.91**	**42**	*e*P	**P**	**16 35 13.8**	**+0.1**
FITZ	**Fitzroy Crossi** 23nm,2.0s	**38.51**	**256**	*e*P	**P**	**16 35 18.9**	**+0.1**
FITZ	**Fitzroy Crossi** 0.8nm,0.7s,baz=59,slow=5.9,SNR=2.9	**38.51**	**256**	P	**P**	**16 35 19.3**	**+0.5**
FORT	**Forrest** 19nm,1.0s	**39.03**	**235**	*e*P	**P**	**16 35 23.8**	**+0.7**
ILAR	**Eielson Array** 0.5nm,0.7s,baz=236,slow=5.2,SNR=8.2	**84.46**	**19**	P	**P**	**16 40 27.8**	**-0.5**
MK32	**Makanchi Array**	**93.59**	**317**	*e*P	**P**	**16 41 12.6**	**+0.4**
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=91,slow=5.8,SNR=2.9	**93.59**	**317**	P	**P**	**16 41 12.6**	**+0.4**

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*IDC **07** 16:28:01.7±1.5, 11°.75S×165°.16E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.8/36, mbtmp3.9/7, ML4.2/2, Error ellipse: s-maj=37.4km s-min=27.3km az=131.0*

*ISCJB **07** 16:28:05.0±1.2, 11°.9S±0°.1×165°.1E±0°.2, h33^{km}, mb3.8/5, Error ellipse: s-maj=24.4km s-min=14.5km az=145.1*

ISC 07 16:28:06.9±1.3**, 11°.8S**±0°.1×**165°.1E**±0°.2**, h35**^{km}**, n10, σ0^{s}.43**/10**, mb3.7**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 9.2nm,0.3s,baz=197,slow=11,SNR=5.1	**5.63**	**295**	Pn	**Pn**	**16 29 28.2**	**+0.1**
HNR	**Honiara**	**5.63**	**295**	*e*Pg	**Pn**	**16 29 28.2**	**+0.1**
DZM	**Mont Dzumac** 1.4nm,0.3s,baz=133,slow=19,SNR=11	**10.26**	**173**	Pn	**Pn**	**16 30 32.0**	**+0.2**
WR1	**Warramunga Arr**	**30.65**	**251**	*e*pwP	**P**	**16 34 18.6**	**+0.3**
WRA	**Warramunga Arr** 0.8nm,0.6s,baz=80,slow=9.2,SNR=9.5	**30.65**	**251**	P	**P**	**16 34 18.6**	**+0.3**
ASAR	**Alice Springs** 0.9nm,0.9s,baz=70,slow=9.2,SNR=7.4	**31.90**	**244**	P	**P**	**16 34 28.6**	**-0.7**
FITZ	**Fitzroy Crossi** 1.6nm,0.7s,baz=78,slow=4.4,SNR=5.1	**38.60**	**256**	P	**P**	**16 35 27.1**	**+0.1**
ILAR	**Eielson Array** 0.6nm,0.6s,baz=241,slow=5.1,SNR=12	**84.45**	**19**	P	**P**	**16 40 35.2**	**-0.4**
MK32	**Makanchi Array**	**93.68**	**317**	*e*pwP	**P**	**16 41 20.4**	**+0.4**
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=106,slow=5.2,SNR=3.4	**93.68**	**317**	P	**P**	**16 41 20.4**	**+0.4**

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*IDC **07** 16:33:53.3±1.5, 10°.84S×165°.28E, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/41, mbtmp4.0/8, ML4.5/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/33, Error ellipse: s-maj=39.0km s-min=25.7km az=132.0*

*NEIC **07** 16:33:55.3±0.3, 10°.93S×165°.19E, h10^{km}, mb4.7/14, Error ellipse: s-maj=6.6km s-min=6.5km az=133.0*

*ISCJB **07** 16:33:56.0±0.5, 10°.98S±0°.06×165°.22E±0°.06, h31^{km}, MS3.9/1, Error ellipse: s-maj=8.3km s-min=8.2km az=42.1*

ISC 07 16:33:58.0±0.6**, 10°.93S**±0°.08×**165°.21E**±0°.08**, h31**^{km}**, n32, σ0^{s}.73**/31**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 17nm,0.3s,baz=145,slow=14,SNR=9.3	**5.39**	**286**	Pn	**Pn**	**16 35 16.6**	**+0.4**
MARNC	**Mare, Loyalty**	**10.84**	**166**	*e*Pn	**Pn**	**16 36 30.0**	**-1.0**
DZM	**Mont Dzumac**	**11.14**	**174**	*e*Pn	**Pn**	**16 36 35.6**	**+0.3**
DZM	**Mont Dzumac** 2.5nm,0.3s,baz=321,slow=21,SNR=23	**11.14**	**174**	Pn	**Pn**	**16 36 35.8**	**+0.5**
DZM	 comp=Z,49nm,18.0s,baz=186,slow=32			LR	LR	16 39 54.5	
PINNC	**Pines Island,**	**11.81**	**170**	*e*Pn	**Pn**	**16 36 45.2**	**+0.8**
FUNA	**Funafuti**	**13.99**	**81**	*e*Pn	**Pn**	**16 37 14.4**	**+0.2**
TARA	**Tarawa**	**14.42**	**33**	*e*Pn	**Pn**	**16 37 20.6**	**+0.6**
EIDS	**Eidsvold** 15nm,1.3s	**19.63**	**221**	*e*P	**P**	**16 38 23.8**	**-0.3**
MANU	**Manus Island** 37nm,1.1s	**19.79**	**295**	*e*P	**Pn**	**16 38 27.2**	**-0.4**
CTA	**Charters Tower** 7.7nm,1.0s,baz=61,slow=14,SNR=2.9	**20.39**	**241**	P	**P**	**16 38 33.2**	**+0.8**
CTAO	**Charters Tower** 42nm,1.4s	**20.39**	**241**	*e*P	**P**	**16 38 32.8**	**+0.3**
LHI	**Lord Howe Isla** 265nm,1.4s	**21.27**	**195**	*e*P	**P**	**16 38 41.1**	**-0.6**
COEN	**Coen** 25nm,2.0s	**21.72**	**260**	*e*P	**P**	**16 38 47.1**	**+0.2**
ARMA	**Armidale** 34nm,1.9s	**23.14**	**211**	*e*P	**P**	**16 39 02.6**	**+0.7**
URZ	**Urewera** 40nm,1.6s	**29.23**	**161**	*e*P	**P**	**16 39 57.5**	**+0.5**
BKZ	**Black Stump Fm** 23nm,1.5s	**29.86**	**162**	*e*P	**P**	**16 40 04.0**	**+1.3**
WB2	**Warramunga Arr**	**31.02**	**249**	*e*P	**P**	**16 40 12.4**	**-0.8**
WR1	**Warramunga Arr** 31nm,1.8s	**31.03**	**249**	*e*P	**P**	**16 40 13.7**	**+0.4**
WRA	**Warramunga Arr** 0.8nm,0.6s,baz=80,slow=9.1,SNR=13	**31.03**	**249**	P	**P**	**16 40 13.7**	**+0.4**
BFZ	**Birch Farm** 76nm,1.6s	**31.20**	**164**	*e*P	**P**	**16 40 15.6**	**+1.2**
AS01	**Alice Springs**	**32.33**	**243**	*e*P	**P**	**16 40 24.6**	**-0.1**
AS31	**Alice Springs** 0.8nm,0.6s	**32.37**	**243**	*e*P	**P**	**16 40 24.7**	**-0.4**
ASAR	**Alice Springs** 1.5nm,0.6s,baz=64,slow=10,SNR=47	**32.37**	**243**	P	**P**	**16 40 24.9**	**-0.2**
FOZ	**Fox Glacier** 33nm,1.4s	**32.73**	**174**	*e*P	**P**	**16 40 27.5**	**-0.3**
BBOO	**Buckleboo** 34nm,1.6s	**34.52**	**226**	*e*P	**P**	**16 40 42.0**	**-1.6**
JOHN	**Johnston Islan** 398nm,1.3s	**37.14**	**43**	*e*P	**P**	**16 41 05.1**	**-1.1**
FITZ	**Fitzroy Crossi** 10nm,1.4s	**38.90**	**255**	*e*P	**P**	**16 41 21.6**	**+0.5**
FITZ	**Fitzroy Crossi** 1.3nm,0.9s,baz=90,slow=9.1,SNR=2.8	**38.90**	**255**	P	**P**	**16 41 22.1**	**+1.0**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=243,slow=4.0,SNR=4.0	**83.57**	**19**	P	**P**	**16 46 22.2**	**-0.6**
DLBC	**Dease Lake** comp=Z,42nm,18.4s,baz=328,slow=32	**86.56**	**28**	LR	LR	17 20 20.7	
MK32	**Makanchi Array**	**93.08**	**317**	*e*P	**P**	**16 47 09.5**	**+0.7**
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=89,slow=6.8,SNR=2.5	**93.08**	**317**	P	**P**	**16 47 09.5**	**+0.7**

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*IDC **07** 16:37:58.9±1.6, 11°.29S×165°.49E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.6/33, mbtmp3.7/5, ML4.0/1, Error ellipse: s-maj=50.6km s-min=29.8km az=124.0*

*NEIC **07** 16:38:00.9±0.9, 11°.26S×165°.36E, h10^{km}, mb4.6/3, Error ellipse: s-maj=20.2km s-min=10.8km az=58.0*

*ISCJB **07** 16:38:01.3±0.9, 11°.4S±0°.1×165°.4E±0°.1, h24^{km}, mb4.0/8, Error ellipse: s-maj=21.4km s-min=12.2km az=153.9*

ISC 07 16:38:02.8±1.2**, 11°.3S**±0°.1×**165°.3E**±0°.2**, h24**^{km}**, n14, σ1^{s}.33**/14**, mb3.7**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.58**	**289**	*e*Pn	**Pn**	**16 39 22.8**	**-1.6**
MARNC	**Mare, Loyalty**	**10.47**	**166**	*e*Pn	**Pn**	**16 40 30.9**	**-0.7**
DZM	**Mont Dzumac**	**10.79**	**174**	*e*Pn	**Pn**	**16 40 35.4**	**-0.5**
DZM	**Mont Dzumac** 1.2nm,0.3s,baz=348,slow=21,SNR=11	**10.79**	**174**	Pn	**Pn**	**16 40 35.8**	**-0.1**
ONTNC	**Ouen Toro**	**11.02**	**174**	*e*Pn	**Pn**	**16 40 39.3**	**+0.3**
WB2	**Warramunga Arr** 26nm,1.8s	**30.98**	**250**	*e*P	**P**	**16 44 18.7**	**+0.1**
WR1	**Warramunga Arr** 23nm,1.7s	**31.00**	**250**	*e*P	**P**	**16 44 21.1**	**+2.4**
WRA	**Warramunga Arr** 0.7nm,0.8s,baz=82,slow=9.0,SNR=7.0	**31.00**	**250**	P	**P**	**16 44 21.1**	**+2.4**
AS31	**Alice Springs** 1.6nm,1.3s	**32.30**	**243**	*e*P	**P**	**16 44 30.7**	**+0.5**
ASAR	**Alice Springs** 0.4nm,0.8s,baz=76,slow=9.2,SNR=5.2	**32.30**	**243**	P	**P**	**16 44 29.5**	**-0.7**
OXZ	**Oxford** 46nm,1.6s	**32.46**	**171**	*e*P	**P**	**16 44 31.0**	**-0.2**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=227,slow=7.3,SNR=3.5	**83.87**	**19**	P	**P**	**16 50 29.4**	**-0.7**
MK32	**Makanchi Array**	**93.40**	**317**	*e*P	**P**	**16 51 17.6**	**+1.4**
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=96,slow=7.4,SNR=2.7	**93.40**	**317**	P	**P**	**16 51 17.6**	**+1.4**

IDC 07 16:40:49.2±1.7**, 10°.82S**×**164°.96E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.6**/29**, mbtmp3.7**/4**, ML3.0**/1**, Error ellipse: s-maj=52.2km s-min=30.9km az=128.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 0.1nm,0.3s,baz=327,slow=9.4,SNR=3.4	**11.28**	**173**	Pn	Pn	16 43 31.6	-0.2
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=80,slow=8.7,SNR=3.2	**30.84**	**249**	P	P	16 47 07.1	-0.1
ASAR	**Alice Springs** 0.3nm,0.7s,baz=64,slow=10.0,SNR=6.4	**32.20**	**243**	P	P	16 47 19.4	+0.1
ILAR	**Eielson Array** 0.7nm,1.1s,baz=212,slow=6.3,SNR=2.5	**83.55**	**19**	P	P	16 53 18.9	0.0

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*DDA **07** 16:51:31.7, 38°.76N×43°.50E, h7^{km}±3^{km}, ML3.0*

*ISK **07** 16:51:31.5, 38°.76N×43°.41E, h9^{km}, ML2.7/8*

*ISCJB **07** 16:51:32.8±0.4, 38°.74N±0°.03×43°.45E±0°.05, h19^{km}±5^{km}, Error ellipse: s-maj=7.0km s-min=4.3km az=6.1*

ISC 07 16:51:32.7±0.9**, 38°.75N**±0°.03×**43°.48E**±0°.03**, h16**^{km}±6^{km}**, n18, σ1^{s}.23**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.17**	**204**	PG	**Pg**	**16 51 36.9**	**-0.3**
VANB				SG	**Sg**	**16 51 41.3**	**+1.1**
TVAN	**Van**	**0.23**	**194**	*i* P	**Pg**	**16 51 37.5**	**-0.6**
TVAN				*i* S	**Sg**	**16 51 41.6**	**-0.2**
VMUR	**Van-Muradiye**	**0.25**	**17**	*i* P	**Pg**	**16 51 37.4**	**-0.9**
VMUR				*i* S	**Sg**	**16 51 43.7**	**+1.6**
ERCV	**ERCIS-VAN**	**0.29**	**337**	PG	**Pg**	**16 51 37.6**	**-1.4**
CLDR	**Caldiran**	**0.52**	**41**	PG	**Pg**	**16 51 42.3**	**-0.8**
CLDR				SG	**Sb**	**16 51 50.9**	**0.0**
CLDR	**Caldiran**	**0.52**	**41**	*i* P	**Pg**	**16 51 42.3**	**-0.8**
CLDR				*i* S	**Sb**	**16 51 51.3**	**+0.5**
CLDR	 comp=Z,9μm,0.1s			IAML_P			
ADCV	**BITLIS_Adilcev**	**0.59**	**276**	*i* P	**Pb**	**16 51 44.5**	**-0.2**
ADCV	 comp=Z,711nm,0.1s			IAML_P			
DYDN	**Diyadin**	**0.81**	**12**	*i* P	**Pb**	**16 51 47.9**	**-0.6**
DYDN				*i* S	**Sn**	**16 52 01.4**	**+0.1**
BASK	**Baskale_VAN**	**0.81**	**149**	*i* P	**Pg**	**16 51 46.8**	**-1.7**
BASK				*i* S	**Sb**	**16 51 59.9**	**+0.6**
TUTA	**Tutak**	**0.83**	**322**	*i* P	**Pb**	**16 51 47.8**	**-1.1**
TUTA				*i* S	**Sb**	**16 52 00.4**	**+0.5**
AGRB	**Hanur-Agry**	**0.90**	**335**	PG	**Pg**	**16 51 48.8**	**-1.5**
GURO	**Guroymak-BITLI**	**1.15**	**260**	PN	**Pg**	**16 51 52.9**	**-2.0**
EATA	**Eleskirt**	**1.35**	**326**	*i* P	**Pg**	**16 51 57.9**	**-0.8**
EATA				*i* S	**Sn**	**16 52 18.5**	**+3.7**
EATA	 comp=Z,884nm,0.2s			IAML_P			
TASB	**TASBURUN-IGDIR**	**1.36**	**25**	PN	**Pn**	**16 51 57.0**	**-0.1**
SIRT	**Sirnak**	**1.50**	**214**	PN	**Pn**	**16 51 59.2**	**+0.3**
CUKT	**Cukurca**	**1.51**	**176**	PN	**Pn**	**16 51 59.3**	**+0.2**
GNI	**Garni**	**1.70**	**35**	PN	**Pb**	**16 52 02.9**	**-0.8**
KOPR	**Koprukoy-ERZUR**	**1.77**	**315**	PN	**Pn**	**16 52 02.5**	**-0.2**

IDC 07 16:54:10.4±1.5**, 12°.06S**×**165°.20E, h0**^{km}**, mb4.0**/7**, mb1 4.2**/9**, mb1mx4.0**/37**, mbtmp4.1**/9**, ML3.8**/2**, MS3.4**/4**, Ms1 3.4**/4**, ms1mx2.9**/34**, Error ellipse: s-maj=50.4km s-min=22.6km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 8.4nm,0.3s,baz=137,slow=8.8,SNR=5.0	**5.78**	**296**	Pn	Pn	16 55 37.6	+0.1
HNR	 2.5nm,0.3s,baz=288,slow=20,SNR=2.5			Sn	Sn	16 56 38.2	-6.5
HNR	 comp=Z,62nm,19.7s,baz=94,slow=36			LR	LR	16 57 37.7	
CTA	**Charters Tower** 0.1nm,0.3s,baz=76,slow=18,SNR=2.9	**19.86**	**244**	P	Pn	16 58 45.3	+0.5
STKA	**Stephens Creek** 1.5nm,0.8s,baz=35,slow=12,SNR=3.3	**29.34**	**224**	P	P	17 00 15.6	+0.5
STKA	 comp=Z,40nm,21.5s,baz=27,slow=33			LR	LR	17 10 10.9	
WRA	**Warramunga Arr** 1.7nm,0.6s,baz=80,slow=9.1,SNR=25	**30.64**	**251**	P	P	17 00 26.4	-0.4
ASAR	**Alice Springs** 2.0nm,0.8s,baz=69,slow=9.4,SNR=27	**31.86**	**244**	P	P	17 00 36.5	-1.0
KSRS	**Korea Array** comp=Z,42nm,20.3s,baz=145,slow=34	**60.41**	**326**	LR	LR	17 28 01.6	
CMAR	**Chiang Mai Arr** 0.8nm,0.8s,baz=100,slow=4.3,SNR=6.9	**72.03**	**294**	P	P	17 05 37.1	+0.3
ILAR	**Eielson Array** 1.1nm,0.7s,baz=245,slow=5.3,SNR=16	**84.64**	**19**	P	P	17 06 46.6	+1.0
INK	**Inuvik** comp=Z,132nm,19.2s,baz=124,slow=33	**91.03**	**19**	LR	LR	17 44 13.7	
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=97,slow=6.2,SNR=6.0	**93.89**	**317**	P	P	17 07 29.2	-0.8
YKA	**Yellowknife Ar** 0.1nm,0.5s,baz=258,slow=6.0,SNR=4.4	**96.12**	**27**	P	P	17 07 38.3	-1.5

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*NNC **07** 16:57:24.9±1.8, 42°.53N×79°.62E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=11.9km s-min=5.9km az=153.0*

*SOME **07** 16:57:25.2, 42°.50N×79°.60E, h20^{km}*

*KRNET **07** 16:57:25.9±0.1, 42°.57N×79°.61E, h17^{km}, mb2.5*

ISC 07 16:57:24.0±1.7**, 42°.51N**±0°.05×**79°.64E**±0°.04**, h11**^{km}±12^{km}**, n31, σ0^{s}.94**/57**, 8C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode** 20nm,0.1s	**0.66**	**349**	P	**Pb**	**16 57 38.3**	**+0.6**
SHLS	 30nm,0.3s			S	**Sb**	**16 57 47.9**	**+1.0**
SHLS	**Shalkode** baz=19	**0.66**	**349**	*e*P	**Pb**	**16 57 38.3**	**+0.6**
SHLS	 baz=19			*e*S	**Sb**	**16 57 47.9**	**+1.0**
SHLS	**Shalkode** 20nm,0.1s	**0.66**	**349**	*e*P	**Pb**	**16 57 38.3**	**+0.6**
SHLS	 30nm,0.3s			*e*S	**Sb**	**16 57 47.9**	**+1.0**
UZB	**Uzynbulak** 2.5nm,0.1s	**0.78**	**325**	P	**Pb**	**16 57 39.4**	**-0.3**
UZB	 14nm,0.2s			S	**Sg**	**16 57 49.7**	**+0.2**
UZB	**Uzynbulak** baz=23	**0.78**	**325**	*e*P	**Pb**	**16 57 39.4**	**-0.3**
UZB	 baz=23			*e*S	**Sg**	**16 57 49.6**	**+0.2**
UZB	**Uzynbulak** 2.5nm,0.1s	**0.78**	**325**	*e*P	**Pb**	**16 57 39.4**	**-0.3**
UZB	 14nm,0.2s			*e*S	**Sg**	**16 57 49.6**	**+0.2**
PDGK	**Podgornoye** 2.2nm,0.1s	**0.83**	**352**	P	**Pb**	**16 57 40.2**	**-0.3**
PDGK	 0.6nm,0.2s			S	**Sb**	**16 57 50.8**	**-0.9**
PDGK	**Podgornoye** baz=53	**0.83**	**352**	⇓*i*P	**Pb**	**16 57 40.1**	**-0.3**
PDGK	 baz=53			⇓*i*S	**Sb**	**16 57 50.5**	**-1.2**
PRZ	**Przheval'sk** baz=65	**0.92**	**269**	⇑*i*P	**Pn**	**16 57 43.0**	**0.0**
PRZ	 baz=65			⇑*i*S	**Sn**	**16 57 55.4**	**-0.9**
KTMS	**Ketmen** 2.4nm,0.1s	**1.07**	**29**	P	**Pb**	**16 57 45.0**	**+0.3**
KTMS	 5.2nm,0.3s			S	**Sb**	**16 57 59.0**	**+0.3**
KTMS	**Ketmen** baz=31	**1.07**	**29**	*e*P	**Pb**	**16 57 45.0**	**+0.3**
KTMS	 baz=31			*e*S	**Sb**	**16 57 59.0**	**+0.3**
KTMS	**Ketmen** 2.4nm,0.1s	**1.07**	**29**	*e*P	**Pb**	**16 57 45.0**	**+0.3**
KTMS	 5.2nm,0.3s			*e*S	**Sb**	**16 57 59.0**	**+0.3**
MNBS	**Baschi** 0.7nm,0.1s	**1.81**	**330**	P	**Pb**	**16 57 57.7**	**+0.4**
MNBS	 6.8nm,0.2s			S	**Sg**	**16 58 21.2**	**-1.0**
KDJ	**Kajisay** baz=57	**1.86**	**259**	⇑*i*P	**Pg**	**16 58 00.2**	**+0.5**
KDJ	 baz=57			⇑*i*S	**Sg**	**16 58 24.5**	**+0.6**
KOTS	**Kotyrbulak** 1.7nm,0.2s	**2.00**	**292**	Pg	**Pg**	**16 58 01.9**	**-0.3**
KOTS	 5.5nm,0.4s			Lg	Lg	16 58 28.4	
KOTS	**Kotyrbulak** baz=90	**2.00**	**292**	*e*P	**Pg**	**16 58 01.9**	**-0.3**
KOTS	 baz=90			*e*S	**Sg**	**16 58 28.4**	**+0.3**
KOTS	**Kotyrbulak** 1.7nm,0.2s	**2.00**	**292**	*e*P	**Pg**	**16 58 01.9**	**-0.3**
KOTS	 5.5nm,0.4s			*e*S	**Sg**	**16 58 28.4**	**+0.3**
TNSS	**Tian-Shan** 1.2nm,0.2s	**2.05**	**286**	Pg	**Pb**	**16 58 01.4**	**0.0**
TNSS	 2.2nm,0.5s			Lg	Lg	16 58 28.6	
TNSS	**Tian-Shan** baz=84	**2.05**	**286**	*e*P	**Pb**	**16 58 01.5**	**0.0**
TNSS	 baz=84			*e*S	**Sb**	**16 58 27.6**	**+0.4**
TNSS	**Tian-Shan** 0.3nm,0.2s	**2.05**	**286**	*e*P	**Pb**	**16 58 01.4**	**0.0**
TNSS	 2.2nm,0.5s			*e*S	**Sb**	**16 58 27.6**	**+0.4**
IZV	**Izvestkoviy** 2.5nm,0.1s	**2.29**	**284**	Pg	**Pb**	**16 58 05.9**	**+0.5**
IZV	 5.5nm,0.4s			Lg	Lg	16 58 35.9	
IZV	**Izvestkoviy** baz=83	**2.29**	**284**	*e*P	**Pb**	**16 58 05.9**	**+0.5**
IZV	 baz=83			*e*S	**Sb**	**16 58 35.4**	**+1.6**
IZV	**Izvestkoviy** 2.5nm,0.1s	**2.29**	**284**	*e*P	**Pb**	**16 58 05.9**	**+0.5**
IZV	 5.5nm,0.4s			*e*S	**Sb**	**16 58 35.4**	**+1.6**
CHKK	**Chushkaly** 0.7nm,0.1s	**2.36**	**306**	Pg	**Pb**	**16 58 06.9**	**+0.4**
CHKK	 4.8nm,0.3s			Lg	Lg	16 58 37.1	
CHKK	**Chushkaly** baz=5.0	**2.36**	**306**	*e*P	**Pb**	**16 58 06.9**	**+0.4**
CHKK	 baz=5.0			*e*S	**Sb**	**16 58 37.1**	**+1.4**
CHKK	**Chushkaly** 0.7nm,0.1s	**2.36**	**306**	*e*P	**Pb**	**16 58 06.9**	**+0.4**
CHKK	 4.8nm,0.3s			*e*S	**Sb**	**16 58 37.1**	**+1.4**
ULHL	**Ulahol** baz=64	**2.53**	**265**	⇑*i*P	**Pb**	**16 58 09.4**	**-0.2**
ULHL	 baz=64			⇑*i*S	**Sb**	**16 58 42.3**	**+1.5**
BOOM	**Boomskoye usch** baz=70	**2.74**	**271**	⇑*i*P	**Pb**	**16 58 12.0**	**-1.0**
BOOM	 baz=70			⇑*i*S	**Sb**	**16 58 44.5**	**-2.2**
DGS	**Degeres** 1.1nm,0.3s	**2.94**	**286**	Pg	**Pb**	**16 58 18.0**	**+1.6**
DGS	 4.1nm,0.5s			Lg	Lg	16 58 55.9	
DGS	**Degeres** baz=85	**2.94**	**286**	*e*P	**Pb**	**16 58 18.0**	**+1.6**
DGS	 baz=85			*e*S	**Sg**	**16 58 56.0**	**-2.3**
DGS	**Degeres** 1.1nm,0.3s	**2.94**	**286**	*e*P	**Pb**	**16 58 18.0**	**+1.6**
DGS	 4.1nm,0.5s			*e*S	**Sg**	**16 58 55.9**	**-2.3**

MEX 07 16:59:49.7±0.9**, 16°.91N**×**95°.33W, h113**^{km}±13^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.47**	**67**	*e*P	Pn	17 00 05.7	-1.0
CMIG				*i* S	Sn	17 00 17.2	-2.2
VHO	**Vista Hermosa**	**1.35**	**277**	*e*P	Pn	17 00 14.3	-0.9
VHO				*i* S	Sn	17 00 33.2	-1.2
HUIG	**Huatulco**	**1.36**	**213**	*e*P	Pn	17 00 13.8	-1.2
HUIG				*e*S	Sn	17 00 33.2	-1.1

IDC 07 17:02:18.1±1.9**, 10°.84S**×**165°.59E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/5**, mb1mx3.6**/38**, mbtmp3.8**/5**, ML3.8**/2**, Error ellipse: s-maj=41.5km s-min=34.5km az=130.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 3.7nm,0.3s,baz=99,slow=6.5,SNR=2.6	**5.73**	**284**	Pn	Pn	17 03 46.5	+2.0
DZM	**Mont Dzumac** 0.5nm,0.3s,baz=280,slow=10,SNR=8.0	**11.20**	**176**	Pn	Pn	17 05 01.2	+1.5
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=81,slow=8.7,SNR=7.4	**31.41**	**249**	P	P	17 08 40.3	-1.0
ASAR	**Alice Springs** 0.7nm,0.6s,baz=64,slow=10,SNR=12	**32.74**	**243**	P	P	17 08 52.9	-0.1
ILAR	**Eielson Array** 0.3nm,0.9s,baz=232,slow=4.4,SNR=2.6	**83.37**	**19**	P	P	17 14 46.9	0.0

IDC 07 17:07:07.0±2.1**, 17°.94S**×**168°.17E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/33**, mbtmp3.5**/4**, ML2.6**/1**, Error ellipse: s-maj=64.5km s-min=32.1km az=131.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 0.3nm,0.3s,baz=54,slow=16,SNR=21	**4.42**	**201**	Pn	Pn	17 08 16.2	+0.7
WRA	**Warramunga Arr** 0.4nm,0.9s,baz=93,slow=8.4,SNR=4.6	**32.03**	**261**	P	P	17 13 36.2	+0.6
ASAR	**Alice Springs** 0.6nm,0.6s,baz=82,slow=8.6,SNR=10	**32.48**	**254**	P	P	17 13 38.7	-0.8
ILAR	**Eielson Array** 0.4nm,0.9s,baz=226,slow=7.5,SNR=2.8	**89.30**	**18**	P	P	17 20 04.7	0.0

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*ISCJB **07** 17:16:24.3±0.7, 11°.29S±0°.10×165°.68E±0°.09, h10^{km}, mb3.9/9, Error ellipse: s-maj=15.9km s-min=10.3km az=35.3*

*IDC **07** 17:16:24.0±0.9, 11°.26S×165°.85E, h0^{km}, mb3.8/8, mb1 4.0/10, mb1mx3.9/38, mbtmp3.9/10, ML3.8/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/41, Error ellipse: s-maj=25.5km s-min=20.9km az=104.0*

ISC 07 17:16:25.8±0.8**, 11°.2S**±0°.1×**165°.8E**±0°.1**, h10**^{km}**, n18, σ1^{s}.04**/13**, mb3.8**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 0.6nm,0.3s,baz=72,slow=20,SNR=1.9	**6.00**	**287**	Pn	**Pn**	**17 17 55.7**	**+1.0**
HNR	 2.2nm,0.3s,baz=28,slow=19,SNR=2.8			Sn	**Sn**	**17 19 01.7**	**-1.8**
DZM	**Mont Dzumac** 2.2nm,0.3s,baz=348,slow=12,SNR=18	**10.81**	**177**	Pn	**Pn**	**17 19 01.6**	**+0.7**
DZM	 comp=Z,73nm,20.5s,baz=35,slow=33			LR	LR	17 22 18.4	
URZ	**Urewera** 1.9nm,0.4s,baz=322,slow=12,SNR=4.2	**28.78**	**161**	P	**P**	**17 22 22.2**	**-1.7**
H11S2	**WAKE ISLAND Hy** baz=178	**29.53**	**2**	T	T	17 52 34.7	
H11S3	**WAKE ISLAND Hy** baz=178	**29.54**	**2**	T	T	17 52 35.0	
H11S1	**WAKE ISLAND Hy** baz=178	**29.55**	**2**	T	T	17 52 36.4	
STKA	**Stephens Creek** 1.4nm,0.8s,baz=29,slow=6.6,SNR=4.1	**30.34**	**224**	P	**P**	**17 22 38.8**	**+1.0**
H11N1	**WAKE ISLAND Hy** baz=186,slow=74,SNR=3.1	**30.75**	**2**	T	T	17 54 08.2	
H11N3	**WAKE ISLAND Hy** baz=186,slow=74,SNR=3.2	**30.76**	**2**	T	T	17 54 08.9	
H11N2	**WAKE ISLAND Hy** baz=186	**30.77**	**2**	T	T	17 54 09.8	
WRA	**Warramunga Arr** 0.9nm,0.7s,baz=83,slow=9.1,SNR=14	**31.45**	**250**	P	**P**	**17 22 48.0**	**+0.2**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=66,slow=9.5,SNR=6.6	**32.74**	**244**	P	**P**	**17 22 58.1**	**-1.1**
CMAR	**Chiang Mai Arr** 1.0nm,0.9s,baz=121,slow=4.9,SNR=8.8	**72.20**	**294**	P	**P**	**17 27 51.8**	**+0.1**
SONM	**Songino Array** 0.4nm,0.8s,baz=117,slow=5.0,SNR=3.2	**78.82**	**324**	P	**P**	**17 28 29.5**	**+0.3**
ILAR	**Eielson Array** 0.6nm,0.5s,baz=234,slow=5.2,SNR=15	**83.67**	**18**	P	**P**	**17 28 54.7**	**+0.3**
MKAR	**Makanchi Array** 6.4nm,0.3s,baz=94,slow=5.5,SNR=2.4	**93.66**	**317**	P	**P**	**17 29 43.2**	**+0.5**
YKA	**Yellowknife Ar** 0.1nm,0.4s,baz=254,slow=5.7,SNR=3.1	**95.11**	**27**	P	**P**	**17 29 48.1**	**-0.8**
ARCES	**ARCESS Array B** 1.1nm,0.9s,baz=102,slow=1.7,SNR=5.2	**116.50**	**345**	PKP	**PKiKP**	**17 35 09.8**	**+0.2**

IDC 07 17:23:31.6±1.7**, 11°.74S**×**165°.02E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.6**/44**, mbtmp3.6**/4**, ML4.1**/1**, Error ellipse: s-maj=49.2km s-min=31.1km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.37**	**173**	Pn	Pn	17 26 01.1	-0.7
	1.6nm,0.3s,baz=293,slow=12,SNR=22						
WRA	**Warramunga Arr**	**30.58**	**251**	P	P	17 29 47.9	+0.4
	0.3nm,0.4s,baz=79,slow=9.0,SNR=8.3						
ASAR	**Alice Springs**	**31.85**	**244**	P	P	17 29 58.1	-0.5
	0.3nm,0.7s,baz=74,slow=9.2,SNR=7.2						
ILAR	**Eielson Array**	**84.39**	**19**	P	P	17 36 05.7	+0.1
	0.3nm,0.7s,baz=226,slow=7.3,SNR=3.7						

*ISCJB **07** 17:25:44.5±0.4, 12°.16S±0°.08×165°.36E±0°.07, h10^{km}, mb4.4/28, MS3.3/2, Error ellipse: s-maj=12.3km s-min=9.1km az=141.7*

*IDC **07** 17:25:44.5±0.7, 12°.10S×165°.47E, h0^{km}, mb4.1/15, mb1 4.3/17, mb1mx4.2/44, mbtmp4.1/17, ML4.1/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/39, Error ellipse: s-maj=20.7km s-min=16.6km az=141.0*

*NEIC **07** 17:25:45.6±0.3, 12°.21S×165°.47E, h10^{km}, mb4.9/12, Error ellipse: s-maj=10.2km s-min=7.3km az=131.0*

ISC 07 17:25:46.0±0.6, 12°.12S±0°.09×165°.30E±0°.09, h10^{km}, n43, σ1^{s}23/44, mb4.5/28, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.90**	**296**	*e*Pn	**Pn**	**17 27 09.9**	**-3.6**
HNR				*e*Sn	**Sn**	**17 28 19.7**	**-1.4**
HNR	**Honiara**	**5.90**	**296**	Pn	**Pn**	**17 27 15.0**	**+1.5**
	9.8nm,0.3s,baz=82,slow=14,SNR=6.4						
HNR				Sn	**Sn**	**17 28 19.7**	**-1.4**
	15nm,0.3s,baz=25,slow=23,SNR=7.2						
HNR				LR	LR	17 29 41.5	
	comp=Z,115nm,18.9s,baz=42,slow=39						
DZM	**Mont Dzumac**	**9.96**	**174**	*e*Pn	**Pn**	**17 28 07.2**	**-2.1**
DZM	**Mont Dzumac**	**9.96**	**174**	Pn	**Pn**	**17 28 10.7**	**+1.4**
	0.8nm,0.3s,baz=280,slow=13,SNR=13						
DZM				LR	LR	17 31 40.7	
	comp=Z,133nm,18.3s,baz=30,slow=36						
CTA	**Charters Tower**	**19.93**	**244**	P	Pn	17 30 21.4	+1.6
	7.6nm,0.8s,baz=78,slow=13,SNR=5.3						
RAO	**Raoul Island**	**23.13**	**140**	P	**P**	**17 30 51.0**	**-1.3**
	238nm,0.3s,baz=270,slow=20,SNR=4.0						
STKA	**Stephens Creek**	**29.37**	**224**	*e*P	**P**	**17 31 47.5**	**-1.9**
	2.1nm,1.4s						
STKA	**Stephens Creek**	**29.37**	**224**	P	**P**	**17 31 51.2**	**+1.9**
	1.7nm,0.8s,baz=9.5,slow=12,SNR=2.8						
STKA				LR	LR	17 42 57.8	
	comp=Z,81nm,18.4s,baz=26,slow=35						
WR1	**Warramunga Arr**	**30.72**	**251**	*e*P	**P**	**17 32 02.3**	**+0.8**
	18nm,1.6s						
WRA	**Warramunga Arr**	**30.72**	**251**	P	**P**	**17 32 02.3**	**+0.8**
	1.2nm,0.9s,baz=83,slow=8.7,SNR=9.0						
WRA				LR	LR	17 42 36.1	
	comp=Z,61nm,21.8s,baz=80,slow=33						
AS31	**Alice Springs**	**31.93**	**245**	*e*P	**P**	**17 32 12.1**	**-0.1**
	0.7nm,0.8s						
ASAR	**Alice Springs**	**31.93**	**245**	P	**P**	**17 32 12.7**	**+0.5**
	1.6nm,0.8s,baz=71,slow=8.6,SNR=15						
FITZ	**Fitzroy Crossi**	**38.69**	**256**	P	**P**	**17 33 10.2**	**-0.1**
	3.7nm,0.8s,baz=125,slow=8.2,SNR=6.3						
MJAR	**Matsushiro Arr**	**54.72**	**333**	P	**P**	**17 35 16.2**	**+0.5**
	0.8nm,0.6s,baz=156,slow=9.3,SNR=3.3						
MAJO	**Matsushiro**	**54.72**	**333**	*e*P	**P**	**17 35 16.2**	**+0.5**
CM01	**Chiang Mai Arr**	**72.11**	**294**	*e*P	**P**	**17 37 12.9**	**+1.7**
CMAR	**Chiang Mai Arr**	**72.14**	**294**	P	**P**	**17 37 13.7**	**+2.3**
	0.9nm,0.7s,baz=120,slow=4.8,SNR=9.2						
SONA0	**Songino Array**	**79.27**	**324**	*e*P	**P**	**17 37 52.9**	**+1.1**
SONM	**Songino Array**	**79.27**	**324**	P	**P**	**17 37 52.9**	**+1.1**
	1.0nm,0.9s,baz=132,slow=4.3,SNR=4.7						
BILL	**Bilibino**	**79.94**	**0**	*e*P	**P**	**17 37 55.3**	**+0.5**
	10nm,1.2s						
CAST	**Castle Rocks**	**82.09**	**18**	*e*P	**P**	**17 38 05.6**	**-0.8**
	8.1nm,0.8s						
MCK	**McKinley**	**83.29**	**19**	*e*P	**P**	**17 38 13.4**	**+0.8**
	19nm,1.5s						
IM3	**Indian Mountai**	**83.57**	**16**	*e*P	**P**	**17 38 14.2**	**+0.2**
WRH	**Wood River Hil**	**84.08**	**18**	*e*P	**P**	**17 38 15.7**	**-0.9**
	11nm,1.2s						
MDM	**Murphy Dome**	**84.38**	**18**	*e*P	**P**	**17 38 17.5**	**-0.7**
	38nm,2.0s						
HDA	**Harding Lake**	**84.39**	**19**	*e*P	**P**	**17 38 17.7**	**-0.5**
	9.5nm,0.8s						
RIDG	**Independ'e Rid**	**84.62**	**20**	*e*P	**P**	**17 38 19.8**	**+0.4**
	24nm,1.3s						
ILAR	**Eielson Array**	**84.66**	**19**	P	**P**	**17 38 19.1**	**-0.4**
	2.3nm,0.7s,baz=248,slow=4.9,SNR=35						
ILB	**Eielson Array**	**84.66**	**19**	*e*P	**P**	**17 38 19.2**	**-0.4**
IL1	**Eielson Array**	**84.66**	**19**	*e*P	**P**	**17 38 18.0**	**-1.6**
SCRK	**Sand Creek**	**85.07**	**20**	*e*P	**P**	**17 38 22.2**	**+0.4**
	11nm,1.0s						
BEKR	**Beckworth**	**85.98**	**48**	*e*P	**P**	**17 38 26.9**	**-0.1**
	10nm,0.6s						
NVAR	**Mina Array Bea**	**87.04**	**50**	P	**P**	**17 38 32.4**	**+0.1**
	0.8nm,0.8s,baz=217,slow=7.4,SNR=3.1						
NEW	**Newport**	**90.84**	**41**	P	**P**	**17 38 48.3**	**-1.4**
	1.5nm,0.7s,baz=255,slow=4.7,SNR=3.9						
U15A	**North Rim**	**91.09**	**53**	*e*P	**P**	**17 38 51.9**	**+0.4**
	3.7nm,0.9s						
MK01	**Makanchi Array**	**93.99**	**317**	*e*P	**P**	**17 39 03.8**	**-0.5**
MK32	**Makanchi Array**	**94.00**	**317**	*e*P	**P**	**17 39 04.7**	**+0.3**
MKAR	**Makanchi Array**	**94.00**	**317**	P	**P**	**17 39 04.7**	**+0.3**
	0.6nm,0.5s,baz=99,slow=6.2,SNR=9.6						
ZALV	**Zalesovo Beam**	**94.16**	**324**	P	**P**	**17 39 05.3**	**+0.5**
	0.3nm,0.3s,baz=126,slow=7.3,SNR=3.4						
ZAA1	**Zalesovo Array**	**94.17**	**324**	*e*P	**P**	**17 39 05.3**	**+0.5**
MAKZ	**Makanchi**	**94.21**	**317**	*e*P	**P**	**17 39 06.0**	**+0.7**
	4.5nm,1.5s						
PDAR	**Pinedale Array**	**94.59**	**47**	P	**P**	**17 39 08.0**	**+0.6**
	0.1nm,0.5s,baz=243,slow=1.7,SNR=4.2						
YKA	**Yellowknife Ar**	**96.12**	**27**	P	**P**	**17 39 11.5**	**-2.1**
	0.2nm,0.5s,baz=253,slow=4.6,SNR=3.8						
NIL	**Nilore**	**38.96**	**327**	*e*P	**P**	**17 38 06.3**	**-0.2**
	4.1nm,0.6s						
WR1	**Warramunga Arr**	**42.20**	**123**	*e*P	**P**	**17 38 32.5**	**-0.9**
	41nm,1.9s						
WRA	**Warramunga Arr**	**42.20**	**123**	P	**P**	**17 38 32.5**	**-0.9**
	0.1nm,0.6s,baz=302,slow=9.1,SNR=6.1						
ASAR	**Alice Springs**	**43.60**	**128**	P	**P**	**17 38 43.8**	**-1.1**
	0.2nm,1.0s,baz=300,slow=8.2,SNR=3.3						
NRN	**Naryn**	**43.97**	**337**	*e*P	**P**	**17 38 48.2**	**+0.4**
	1.6nm,0.6s						
SONA0	**Songino Array**	**46.61**	**8**	*e*P	**P**	**17 39 08.3**	**-0.2**
SONM	**Songino Array**	**46.61**	**8**	P	**P**	**17 39 08.3**	**-0.2**
	0.7nm,0.5s,baz=188,slow=11,SNR=6.1						
MK32	**Makanchi Array**	**46.78**	**346**	*e*P	**P**	**17 39 10.0**	**+0.3**
MKAR	**Makanchi Array**	**46.78**	**346**	P	**P**	**17 39 10.0**	**+0.3**
	0.8nm,0.4s,baz=165,slow=7.8,SNR=9.1						
ZAA0	**Zalesovo Array**	**53.08**	**351**	*e*P	**P**	**17 39 57.0**	**-0.3**
	4.7nm,1.1s						
ZALV	**Zalesovo Beam**	**53.08**	**351**	*e*P	**P**	**17 39 56.9**	**-0.4**
ZALV	**Zalesovo Beam**	**53.08**	**351**	P	**P**	**17 39 57.2**	**0.0**
	2.3nm,0.3s,baz=168,slow=6.7,SNR=14						
ZAA1	**Zalesovo Array**	**53.08**	**351**	*e*P	**P**	**17 39 57.2**	**-0.1**
FIA0	**FINESS Array S**	**79.61**	**332**	*e*P	**P**	**17 42 47.0**	**-0.1**
FINES	**FINESS Array B**	**79.61**	**332**	P	**P**	**17 42 47.0**	**-0.1**
	1.0nm,0.7s,baz=82,slow=7.3,SNR=6.7						
ARA0	**ARCESS Array S**	**82.10**	**340**	*e*P	**P**	**17 43 00.8**	**+0.5**
ARCES	**ARCESS Array B**	**82.10**	**340**	P	**P**	**17 43 00.8**	**+0.5**
	2.4nm,1.1s,baz=85,slow=4.0,SNR=7.5						

JMA 07 17:29:10.8±0.2, 37°.27N×142°.17E, h33^{km}, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.04**	**276**	P	Pn	17 29 29.3	+0.2
JFK				*e*S	Sn	17 29 42.5	0.0
ONAJ	**Iwakimizuishiy**	**1.11**	**262**	P	Pn	17 29 30.3	+0.2
JIKH	**Ishinomakikobu**	**1.18**	**332**	P	Pn	17 29 31.3	+0.3
JMM	**Marumori**	**1.25**	**299**	P	Pn	17 29 32.5	+0.6
JFFD	**Fukushimafurud**	**1.30**	**263**	P	Pn	17 29 32.8	+0.2
JIO	**Ouri**	**1.35**	**331**	P	Pn	17 29 33.8	+0.5
JFT	**Otama**	**1.48**	**280**	P	Pb	17 29 36.7	-1.0
JOU	**Okura**	**1.62**	**313**	P	Pb	17 29 38.6	-1.5
JAG	**Ashikaga**	**2.34**	**250**	P	Pn	17 29 48.2	+1.3
MAT	**Matsushiro**	**3.26**	**258**	P	Pb	17 30 03.9	-4.0
MAT				S	Sb	17 30 44.5	-2.7

*IDC **07** 17:30:37.6±1.3, 1°.57N×97°.22E, h0^{km}, mb3.8/7, mb1 3.8/9, mb1mx3.6/51, mbtmp3.7/9, ML3.6/2, MS2.6/1, Ms1 2.6/1, ms1mx2.4/47, Error ellipse: s-maj=40.0km s-min=19.8km az=53.0*

*ISCJB **07** 17:30:40.6±0.7, 1°.64N±0°.09×97°.28E±0°.09, h30^{km}, mb3.9/11, Error ellipse: s-maj=14.1km s-min=11.3km az=135.5*

*NEIC **07** 17:30:44.5±0.7, 1°.70N×97°.41E, h46^{km}±6^{km}, mb4.3/5, Error ellipse: s-maj=11.0km s-min=6.4km az=78.0*

ISC 07 17:30:42.9±0.9, 1°.71N±0°.08×97°.3E±0°.1, h30^{km}, n26, σ0^{s}66/23, mb4.0/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.48**	**148**	*e*Pn	**Pn**	**17 30 54.8**	**+1.1**
PSI	**Prapat**	**1.93**	**56**	Pn	**Pn**	**17 31 13.9**	**+0.1**
	5.3nm,0.3s,baz=189,slow=0.6,SNR=15						
PSI				LR	LR	17 32 19.7	
	comp=Z,151nm,20.2s,baz=284,slow=50						
IPM	**Ipoh**	**4.61**	**53**	*e*Pn	**Pn**	**17 31 51.3**	**+0.7**
KULM	**Kulim**	**4.86**	**43**	*e*Pn	**Pn**	**17 31 55.1**	**+1.0**
PBKT	**Sadao Pong**	**15.19**	**13**	*e*Pn	**Pn**	**17 34 16.6**	**+1.1**
	3.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**16.72**	**5**	Pn	**Pn**	**17 34 34.2**	**-0.8**
	0.2nm,0.3s,baz=197,slow=11,SNR=10						
H08S2	**Diego Garcia H**	**26.46**	**249**	T	T	18 03 41.5	
	baz=70,slow=76,SNR=41						
H08S3	**Diego Garcia H**	**26.46**	**249**	T	T	18 03 42.0	
	baz=70,slow=76,SNR=66						
H08S1	**Diego Carcia H**	**26.48**	**249**	T	T	18 03 42.0	
	baz=70,slow=76,SNR=32						

*IDC **07** 17:35:20.2±1.1, 10°.84S×164°.80E, h0^{km}, mb3.8/9, mb1 4.0/11, mb1mx3.9/39, mbtmp3.9/11, ML4.3/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/45, Error ellipse: s-maj=29.6km s-min=21.8km az=131.0*

*NEIC **07** 17:35:21.5±0.5, 10°.84S×164°.80E, h10^{km}, mb4.5/3, Error ellipse: s-maj=12.9km s-min=10.8km az=94.0*

*ISCJB **07** 17:35:22.9±0.6, 10°.98S±0°.09×164°.81E±0°.08, h31^{km}, mb3.9/10, MS3.8/1, Error ellipse: s-maj=13.6km s-min=10.3km az=30.5*

ISC 07 17:35:24.7±0.8, 10°.9S±0°.1×164°.9E±0°.1, h31^{km}, n25, σ1^{s}03/19, mb3.9/10, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.04**	**286**	Pn	**Pn**	**17 36 36.7**	**-1.5**
	19nm,0.3s,baz=122,slow=5.9,SNR=9.4						
HNR				Sn	**Sn**	**17 37 37.6**	**+2.1**
	baz=108,slow=20,SNR=2.5						
HNR				LR	LR	17 38 33.6	
	comp=Z,318nm,21.6s,baz=138,slow=39						
DZM	**Mont Dzumac**	**11.22**	**172**	*e*Pn	**Pn**	**17 38 03.1**	**0.0**
DZM	**Mont Dzumac**	**11.22**	**172**	Pn	**Pn**	**17 38 03.5**	**+0.4**
	1.1nm,0.3s,baz=83,slow=9.7,SNR=39						
CTA	**Charters Tower**	**20.10**	**241**	P	**P**	**17 39 57.1**	**+1.1**
	2.6nm,0.7s,baz=75,slow=13,SNR=3.0						
H11S2	**WAKE ISLAND Hy**	**29.25**	**4**	T	T	18 11 50.7	
	baz=184,slow=76,SNR=43						
H11S3	**WAKE ISLAND Hy**	**29.25**	**4**	T	T	18 11 51.7	
	baz=184,slow=76,SNR=34						
H11S1	**WAKE ISLAND Hy**	**29.27**	**4**	T	T	18 11 52.8	
	baz=184,slow=76,SNR=43						
STKA	**Stephens Creek**	**29.96**	**222**	*e*P	**P**	**17 41 30.8**	**+0.4**
	2.1nm,1.2s						
STKA	**Stephens Creek**	**29.96**	**222**	P	**P**	**17 41 31.0**	**+0.7**
	5.6nm,1.1s,baz=359,slow=6.3,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**30.48**	**4**	T	T	18 13 24.4	
	baz=182,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**30.48**	**4**	T	T	18 13 25.7	
	baz=182,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	**30.50**	**4**	T	T	18 13 27.0	
	baz=182,slow=76,SNR=16						
WR1	**Warramunga Arr**	**30.71**	**249**	*e*P	**P**	**17 41 36.3**	**-0.9**
	13nm,1.4s						
WRA	**Warramunga Arr**	**30.71**	**249**	P	**P**	**17 41 36.3**	**-0.9**
	0.4nm,0.6s,baz=78,slow=9.0,SNR=7.1						
ASAR	**Alice Springs**	**32.08**	**243**	P	**P**	**17 41 47.5**	**-1.8**
	0.4nm,0.6s,baz=63,slow=10.0,SNR=8.4						
CMAR	**Chiang Mai Arr**	**71.25**	**294**	P	**P**	**17 46 41.8**	**+0.3**
	0.5nm,0.9s,baz=92,slow=4.5,SNR=3.2						
SONA0	**Songino Array**	**78.03**	**324**	*e*P	**P**	**17 47 20.6**	**+0.2**
SONM	**Songino Array**	**78.03**	**324**	P	**P**	**17 47 20.6**	**+0.2**
	0.2nm,0.3s,baz=121,slow=5.6,SNR=3.8						
QSPA	**South Pole Qui**	**79.11**	**180**	*e*P	**P**	**17 47 26.2**	**+0.1**
	16nm,1.5s						
ILAR	**Eielson Array**	**83.65**	**19**	P	**P**	**17 47 50.6**	**+0.8**
	0.5nm,0.8s,baz=238,slow=4.9,SNR=4.9						
BBB	**Bella Bella**	**84.95**	**35**	LR	LR	18 18 29.3	
	comp=Z,40nm,21.1s,baz=134,slow=30						
MK01	**Makanchi Array**	**92.80**	**317**	*e*P	**P**	**17 48 33.2**	**-1.1**
MK32	**Makanchi Array**	**92.81**	**317**	*e*P	**P**	**17 48 33.5**	**-0.9**
MKAR	**Makanchi Array**	**92.81**	**317**	P	**P**	**17 48 33.5**	**-0.9**
	0.8nm,0.9s,baz=101,slow=5.2,SNR=7.3						
PDAR	**Pinedale Array**	**94.09**	**47**	P	**P**	**17 48 41.0**	**+0.3**
	0.9nm,1.1s,baz=292,slow=0.8,SNR=3.8						

IDC 07 17:39:33.9±1.9, 10°.65S×164°.87E, h0^{km}, mb3.3/3, mb1 3.7/5, mb1mx3.5/37, mbtmp3.6/5, ML4.0/2, Error ellipse: s-maj=41.5km s-min=36.1km az=132.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.00**	**284**	Pn	Pn	17 40 48.3	-1.8
	10nm,0.3s,baz=152,slow=8.2,SNR=5.4						
DZM	**Mont Dzumac**	**11.46**	**173**	Pn	Pn	17 42 17.2	-1.8
	0.5nm,0.3s,baz=336,slow=18,SNR=6.0						
WRA	**Warramunga Arr**	**30.82**	**249**	P	P	17 45 53.7	+1.9
	0.3nm,0.9s,baz=77,slow=9.3,SNR=3.1						
ASAR	**Alice Springs**	**32.21**	**242**	P	P	17 46 03.4	-0.7
	0.3nm,0.9s,baz=65,slow=9.3,SNR=2.7						
ILAR	**Eielson Array**	**83.42**	**19**	P	P	17 52 02.9	+0.1
	0.4nm,0.9s,baz=230,slow=5.8,SNR=3.0						

*IDC **07** 17:40:03.4±1.6, 11°.28S×165°.85E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.7/38, mbtmp3.8/6, ML4.0/2, Error ellipse: s-maj=41.0km s-min=30.0km az=128.0*

*ISCJB **07** 17:40:07.1±1.3, 11°.5S±0°.1×165°.8E±0°.2, h37^{km}, mb3.6/4, Error ellipse: s-maj=26.1km s-min=18.3km az=152.5*

ISC 07 17:40:08.8±1.3, 11°.4S±0°.1×165°.8E±0°.2, h37^{km}, n6, σ0^{s}39/6, mb3.4/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.10**	**288**	Pn	**Pn**	**17 41 36.7**	**+0.2**
	3.7nm,0.3s,baz=113,slow=18,SNR=2.3						
DZM	**Mont Dzumac**	**10.67**	**177**	Pn	**Pn**	**17 42 39.4**	**+0.1**
	1.2nm,0.3s,baz=24,slow=18,SNR=7.7						
WRA	**Warramunga Arr**	**31.46**	**250**	P	**P**	**17 46 26.7**	**-0.5**
	0.4nm,0.8s,baz=79,slow=9.0,SNR=3.2						
ASAR	**Alice Springs**	**32.73**	**244**	P	**P**	**17 46 38.2**	**-0.1**
	0.4nm,1.0s,baz=65,slow=10.0,SNR=3.8						
ILAR	**Eielson Array**	**83.78**	**18**	P	**P**	**17 52 33.6**	**-0.2**
	0.2nm,0.5s,baz=225,slow=5.1,SNR=6.1						
MKAR	**Makanchi Array**	**93.81**	**317**	P	**P**	**17 53 22.6**	**+0.3**
	0.6nm,0.7s,baz=94,slow=5.8,SNR=4.8						

IDC 07 17:41:02.3±4.6, 11°.86S×167°.79E, h0^{km}, mb3.5/4, mb1 3.8/4, mb1mx3.5/37, mbtmp3.5/4, Error ellipse: s-maj=216.3km s-min=31.7km az=141.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.11**	**252**	P	P	17 47 40.4	0.0
	0.3nm,0.6s,baz=84,slow=8.6,SNR=6.6						
ASAR	**Alice Springs**	**34.25**	**245**	P	P	17 47 50.1	-0.1
	0.3nm,0.6s,baz=70,slow=9.8,SNR=4.9						
FITZ	**Fitzroy Crossi**	**41.12**	**256**	P	P	17 48 48.3	-0.1
	1.3nm,0.9s,baz=104,slow=8.3,SNR=6.5						
ILAR	**Eielson Array**	**83.65**	**18**	P	P	17 53 32.4	0.0
	0.5nm,0.7s,baz=231,slow=5.6,SNR=6.1						

*IDC **07** 17:49:43.7±0.7, 11°.30S×165°.93E, h0^{km}, mb4.5/13, mb1 4.6/15, mb1mx4.3/44, mbtmp4.5/15, ML4.9/2, MS4.2/20, Ms1 4.2/20, ms1mx4.0/38, Error ellipse: s-maj=21.6km s-min=17.7km az=98.0*

*ISCJB **07** 17:49:44.6±0.3, 11°.38S±0°.05×165°.80E±0°.06, h10^{km}, mb4.8/44, MS4.3/22, Error ellipse: s-maj=9.3km s-min=5.6km az=151.0*

*NEIC **07** 17:49:45.7±0.3, 11°.26S×165°.94E, h10^{km}, mb5.1/25, Error ellipse: s-maj=8.2km s-min=5.0km az=69.0*

*GCMT **07** 17:49:49.7±0.3, 11°.37S±0°.01×165°.65E±0°.02, h18^{km}±1^{km}, MW5.0/81, Moment Tensor Solution. s35,c44; s81,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.09±.15; $M_{\theta\theta}$2.27±.11; $M_{\phi\phi}$-1.18±.10; $M_{r\theta}$-3.11±.43; $M_{\theta\phi}$-1.69±.09; $M_{\phi r}$-1.81±.35; Best double couple: $M_0$4.41700×10^{16} NP1:ϕ_s71.00000°,δ81.00000°,λ-124.00000°. NP2: ϕ_s328.00000°,δ35.00000°,λ-15.00000°. Principal axes: T 4.1850, Plg28.0000°, Azm187.0000°; N 0.4630, Plg34.0000°, Azm76.0000°; P -4.6490, Plg43.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 17:49:47.0±0.5, 11°.44S±0°.07×165°.74E±0°.08, h10^{km}, n100, σ1^{s}68/85, mb4.9/44, MS4.3/23, 3C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.04**	**289**	Pn	**Pn**	**17 51 17.6**	**+1.2**
	18nm,0.3s,baz=197,slow=3.8,SNR=16						
HNR				Sn	**Sn**	**17 52 24.3**	**-1.3**
	8.1nm,0.3s,baz=53,slow=20,SNR=2.4						
HNR				LR	LR	17 53 44.2	
	comp=Z,4μm,20.0s,baz=124,slow=39						
MARNC	**Mare, Loyalty**	**10.23**	**168**	*e*Pn	**Pn**	**17 52 15.5**	**+1.6**
DZM	**Mont Dzumac**	**10.60**	**176**	*e*Pn	**Pn**	**17 52 19.5**	**+0.4**
	86nm,0.5s						
DZM				*e*LR	LR	17 54 51.3	
	comp=Z,3μm,29.1s						
DZM	**Mont Dzumac**	**10.60**	**176**	Pn	**Pn**	**17 52 19.7**	**+0.6**
	12nm,0.3s,baz=345,slow=13,SNR=91						
DZM				Sn	**Sn**	**17 54 14.3**	**-3.6**
	0.7nm,0.3s,baz=300,slow=20,SNR=3.2						
DZM				LR	LR	17 55 00.9	
	comp=Z,448nm,19.6s,baz=16,slow=30						
ONTNC	**Ouen Toro**	**10.83**	**176**	*e*Pn	**Pn**	**17 52 23.0**	**+0.8**
PINNC	**Pines Island,**	**11.23**	**172**	*e*Pn	**Pn**	**17 52 28.9**	**+1.2**
MSVF	**Nonsavu**	**13.46**	**119**	*e*Pn	**Pn**	**17 53 00.6**	**+2.4**
RABL	**Rabaul**	**15.25**	**297**	*e*Pn	**Pn**	**17 53 22.3**	**-0.3**
	28nm,0.9s						
EIDS	**Eidsvold**	**19.61**	**223**	*e*P	**P**	**17 54 17.8**	**+2.2**
	71nm,1.8s						
MANU	**Manus Island**	**20.48**	**296**	*e*P	**P**	**17 54 26.3**	**+1.1**
	376nm,1.4s						
CTA	**Charters Tower**	**20.61**	**243**	P	**P**	**17 54 28.0**	**+1.4**
	19nm,1.2s,baz=53,slow=15,SNR=2.8						
RAO	**Raoul Island**	**23.38**	**142**	LR	LR	18 02 06.7	
	comp=Z,1μm,19.3s,baz=87,slow=32						
URZ	**Urewera**	**28.58**	**161**	P	**P**	**17 55 42.3**	**-1.0**
	5.3nm,0.4s,baz=239,slow=6.3,SNR=6.3						
URZ				LR	LR	18 05 27.3	
	comp=Z,1μm,20.2s,baz=336,slow=33						
BKZ	**Black Stump Fm**	**29.23**	**163**	*e*P	**P**	**17 55 48.8**	**-0.3**
	40nm,1.5s						
H11S2	**WAKE ISLAND Hy**	**29.75**	**2**	T	T	18 26 17.1	
	baz=182						
H11S3	**WAKE ISLAND Hy**	**29.76**	**2**	T	T	18 26 17.5	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**29.77**	**2**	T	T	18 26 17.7	
	baz=182						
STKA	**Stephens Creek**	**30.16**	**224**	P	**P**	**17 55 57.0**	**-0.3**
	2.9nm,0.8s,baz=33,slow=12,SNR=5.4						
STKA				LR	LR	18 08 11.1	
	comp=Z,416nm,18.0s,baz=44,slow=36						
THZ	**Tophouse**	**30.86**	**170**	*e*P	**P**	**17 56 04.3**	**+0.9**
	52nm,1.6s						
H11N1	**WAKE ISLAND Hy**	**30.97**	**2**	T	T	18 27 48.9	
	baz=184						
H11N3	**WAKE ISLAND Hy**	**30.98**	**2**	T	T	18 27 48.9	
	baz=184						
H11N2	**WAKE ISLAND Hy**	**30.99**	**2**	T	T	18 27 49.4	
	baz=184						
WRA	**Warramunga Arr**	**31.34**	**250**	P	**P**	**17 56 07.5**	**-0.6**
	2.8nm,0.5s,baz=80,slow=8.9,SNR=38						
WRA				PcP	**PcP**	**17 59 01.1**	**-1.0**
	0.3nm,0.7s,baz=79,slow=4.3,SNR=2.9						
WRA				ScP	**ScP**	**18 02 44.6**	**-0.8**
	1.1nm,1.1s,baz=86,slow=3.0,SNR=3.6						
OXZ	**Oxford**	**32.24**	**171**	*e*P	**P**	**17 56 15.9**	**+0.4**
	33nm,1.2s						
GUMO	**Guam**	**32.35**	**320**	LR	LR	18 10 12.7	
	comp=Z,830nm,18.2s,baz=134,slow=38						
RPZ	**Rata Peaks**	**32.49**	**173**	*e*P	**P**	**17 56 18.5**	**+0.7**
	134nm,1.9s						
RPZ	**Rata Peaks**	**32.49**	**173**	P	**P**	**17 56 17.7**	**0.0**
	7.5nm,0.4s,baz=350,slow=3.1,SNR=7.2						
RPZ				LR	LR	18 08 44.2	
	comp=Z,578nm,18.3s,baz=356,slow=35						
AS31	**Alice Springs**	**32.61**	**244**	*e*P	**P**	**17 56 19.5**	**+0.3**
	1.0nm,0.9s						
ASAR	**Alice Springs**	**32.61**	**244**	P	**P**	**17 56 17.9**	**-1.3**
	1.9nm,0.7s,baz=66,slow=9.3,SNR=22						
ASAR				PcP	**PcP**	**17 59 05.1**	**-0.3**
	0.5nm,0.9s,baz=86,slow=3.8,SNR=2.5						
ASAR				ScP	**ScP**	**18 02 50.2**	**+0.5**
	1.4nm,1.1s,baz=89,slow=3.9,SNR=4.3						
RAR	**Rarotonga**	**34.43**	**111**	LR	LR	18 07 35.5	
	comp=Z,521nm,20.5s,baz=266,slow=31						
FITZ	**Fitzroy Crossi**	**39.27**	**255**	*e*P	**P**	**17 57 16.0**	**-0.3**
	6.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.27**	**255**	LR	LR	18 14 03.2	
	comp=Z,319nm,18.1s,baz=82,slow=37						
PPT	**Papeete**	**43.61**	**103**	LR	LR	18 13 35.4	
	comp=Z,228nm,18.0s,baz=248,slow=33						
PPT2	**Papeete2**	**43.61**	**103**	*e*LR	LR	18 10 18.0	
	comp=Z,608nm,26.2s,baz=275						
LUWI	**Luwuk**	**43.88**	**281**	*e*P	**P**	**17 57 54.1**	**0.0**
	65nm,1.4s						
TBI	**Tubuai**	**44.19**	**112**	*e*LR	LR	18 10 36.9	
	comp=Z,966nm,27.2s,baz=282						
MJAR	**Matsushiro Arr**	**54.31**	**333**	LR	LR	18 20 32.3	
	comp=Z,111nm,20.9s,baz=170,slow=34						
KSM	**Kuching**	**56.56**	**279**	*e*P	**P**	**17 59 30.2**	**-0.1**
	31nm,1.5s						
CISI	**Cisompet, Garu**	**57.19**	**268**	*e*P	**P**	**17 59 34.1**	**-0.7**
	23nm,1.0s						
RKT	**Rikitea**	**57.46**	**110**	*e*LR	LR	18 16 45.0	
	comp=Z,1μm,24.8s						
LEM	**Lembang**	**57.49**	**269**	P	**P**	**17 59 36.3**	**-0.9**
	20nm,0.6s,baz=113,slow=19,SNR=7.4						
KSRS	**Korea Array**	**60.19**	**326**	LR	LR	18 24 38.8	
	comp=Z,133nm,19.3s,baz=118,slow=35						
NJ2	**Nanjing**	**62.29**	**316**	*e*P	**P**	**18 00 09.3**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
PETK	**Petropavlovsk-**	**64.65**	**355**	LR	LR	18 24 45.7	
	comp=Z,208nm,19.1s,baz=166,slow=33						
CN2	**Changchun**	**66.07**	**329**	*e*P	**P**	**18 00 35.8**	**+1.6**
VNDA	**Vanda**	**66.11**	**181**	LR	LR	18 26 13.2	
	comp=Z,272nm,19.6s,baz=4.0,slow=33						
IPM	**Ipoh**	**66.28**	**280**	*e*P	**P**	**18 00 35.6**	**-0.6**
	comp=Z,53nm,1.5s						
SKNT	**Sakolnakorn**	**67.24**	**294**	P	**P**	**18 00 42.7**	**+0.5**
	comp=Z,11nm,1.3s						
PSI	**Prapat**	**67.92**	**278**	LR	LR	18 33 12.5	
	comp=Z,63nm,20.3s,baz=92,slow=38						
ENH	**Enshi**	**68.14**	**309**	*e*P	**P**	**18 00 46.6**	**-1.0**
	comp=Z,27nm,1.3s						
NONG	**Nongkai**	**68.37**	**295**	P	**P**	**18 00 50.0**	**+0.7**
	comp=Z,0.4nm,1.2s						
GYA	**Guiyang**	**68.63**	**304**	⇑*i*P	**P**	**18 00 50.9**	**0.0**
GYA				PP	**PP**	**18 03 26.4**	**+3.8**
GYA				S	**S**	**18 09 54.6**	**+0.4**
GYA				SKS	**SKiKP**	**18 10 47.8**	**+3.2**
GYA	**Guiyang**	**68.63**	**304**	SS	SS	18 14 21.8	+2.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.7s						
GYA				LR	LR		
	comp=N,550nm,18.9s						
GYA				LR	LR		
	comp=E,580nm,18.4s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
BJT	**Baijiatuau**	**68.77**	**321**	*e*P	**P**	**18 00 50.2**	**-1.2**
	comp=Z,8.5nm,1.1s						
BJI	**Beijing**	**68.78**	**321**	*e*P	**P**	**18 00 49.6**	**-1.8**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PBKT	**Sadao Pong**	**69.82**	**292**	*e*P	**P**	**18 00 58.8**	**+0.5**
	comp=Z,14nm,1.3s						
PBKT	**Sadao Pong**	**69.82**	**292**	P	**P**	**18 00 59.9**	**+1.6**
	comp=Z,9.5nm,1.8s,comp=Z,1μm						
XAN	**Xi'an**	**70.38**	**312**	P	**P**	**18 00 59.8**	**-1.7**
XAN				pP	sP	18 01 08.7	+5.3

XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
XAN				pmax	pmax		
	comp=Z,220nm,4.7s						
XAN				LR	LR		
	comp=N,310nm,16.3s						
XAN				LR	LR		
	comp=Z,370nm,23.9s						
XAN	Xi'an	70.38	312	*e*P	P	18 01 00.4	-1.1
	comp=Z,12nm,1.0s						
KMI	Kunming	71.32	302	P	P	18 01 08.0	+0.4
KMI				pmax	pmax		
	comp=Z,22nm,1.4s						
KMI	Kunming	71.32	302	*e*P	P	18 01 08.5	+0.9
	comp=Z,44nm,1.4s						
HHC	Hu-ho-hao-te	72.12	320	*e*P	P	18 01 13.3	+1.3
HHC				PP	PP	18 03 55.5	+3.0
HHC				S	S	18 10 34.2	-0.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,230nm,6.4s						
HHC				LR	LR		
	comp=N,310nm,4.7s						
HHC				LR	LR		
	comp=E,510nm,5.1s						
HHC				LR	LR		
	comp=Z,240nm,5.0s						
CM01	Chiang Mai Arr	72.23	294	*e*P	P	18 01 12.3	-0.6
CM31	Chiang Mai Arr	72.26	294	*e*P	P	18 01 14.3	+1.2
CMAR	Chiang Mai Arr	72.26	294	P	P	18 01 13.8	+0.6
	comp=Z,8.4nm,1.2s,baz=112,slow=4.2,SNR=27						
CMAR				LR	LR	18 31 16.6	
	comp=Z,81nm,21.9s,baz=102,slow=34						
CMMT	Chiang Mai	72.37	294	P	P	18 01 14.4	+0.6
	comp=Z,12nm,1.7s						
CHTO	Chiang Mai	72.38	294	*e*P	P	18 01 14.2	+0.4
	comp=Z,26nm,1.4s						
CHTO	Chiang Mai	72.38	294	P	P	18 01 14.4	+0.6
	comp=Z,52nm,1.4s						
CD2	Chengdu	72.83	307	⇑P	P	18 01 16.2	-0.2
CD2				pmax	pmax		
	comp=Z,40nm,1.2s						
CD2				pmax	pmax		
	comp=Z,320nm,4.7s						
LZH	Lanzhou	75.01	312	⇑P	P	18 01 29.9	+0.7
LZH				pP	sP	18 01 35.3	+4.2
LZH				sP	pwP	18 01 37.2	-0.9
LZH				PP	PP	18 04 25.0	+7.7
LZH				pmax	pmax		
	comp=Z,36nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH				LR	LR		
	comp=N,550nm,15.7s						
LZH				LR	LR		
	comp=E,560nm,17.9s						
LZH				LR	LR		
	comp=Z,710nm,19.0s						
QSPA	South Pole Qui	78.57	180	*e*P	P	18 01 49.8	+1.1
	comp=Z,16nm,1.1s						
SONM	Songino Array	78.98	324	P	P	18 01 50.2	-1.0
	comp=Z,2.9nm,1.1s,baz=134,slow=5.8,SNR=11						
SONM				LR	LR	18 36 50.9	
	comp=Z,109nm,19.0s,baz=114,slow=36						
SONA1	Songino Array	78.98	324	*e*P	P	18 01 50.1	-1.1
BILL	Bilibino	79.27	0	*e*P	P	18 01 50.0	-2.1
	comp=Z,9.9nm,1.1s						
GTA	Gaotai	79.32	314	⇓P	P	18 01 53.1	-0.2
GTA				pP	sP	18 01 59.7	+4.5
GTA				sP	PcP	18 02 03.3	+1.8
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA				pmax	pmax		
	comp=Z,110nm,7.1s						
GTA				LR	LR		
	comp=N,230nm,18.4s						
GTA				LR	LR		
	comp=E,190nm,20.6s						
GTA				LR	LR		
	comp=Z,340nm,21.6s						
SHL	Shillong	80.70	298	*e*P	P	18 02 00.7	-0.4
	comp=Z,34nm,1.3s						
HDA	Harding Lake	83.61	19	*e*P	P	18 02 12.9	-2.4
	comp=Z,6.6nm,1.0s						
ILAR	Eielson Array	83.88	18	P	P	18 02 13.5	-3.2
	comp=Z,1.1nm,0.6s,baz=234,slow=5.2,SNR=11						
ILAR				LR	LR	18 38 22.6	
	comp=Z,129nm,19.2s,baz=258,slow=35						
IL1	Eielson Array	83.88	18	*e*P	P	18 02 13.7	-3.0
MAW	Mawson	84.36	202	LR	LR	18 35 44.2	
	comp=Z,170nm,18.4s,baz=124,slow=33						
NVAR	Mina Array Bea	86.28	50	LR	LR	18 33 13.3	
	comp=Z,200nm,19.9s,baz=276,slow=30						
WMQ	Urumqi	89.36	315	P	P	18 02 43.1	-0.9
WMQ				pP	sP	18 02 49.2	+3.2
WMQ				sP	pwP	18 02 56.1	+3.1
WMQ	Urumqi	89.36	315	SKS	SKSac	18 13 14.8	+0.3
WMQ	Urumqi	89.36	315	SS	SS	18 19 33.1	+3.6
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ				LR	LR		
	comp=N,160nm,21.5s						
WMQ				LR	LR		
	comp=E,230nm,24.1s						
WMQ				LR	LR		
	comp=Z,260nm,26.7s						
MK01	Makanchi Array	93.79	317	*e*P	P	18 03 03.0	-1.4
MK31	Makanchi Array	93.80	317	*e*P	P	18 03 03.2	-1.3
MKAR	Makanchi Array	93.80	317	*e*P	P	18 03 03.2	-1.3
	comp=Z,47nm,1.4s						
MKAR	Makanchi Array	93.80	317	P	P	18 03 03.1	-1.3
	comp=Z,2.2nm,0.8s,baz=95,slow=7.4,SNR=20						
ZAA0	Zalesovo Array	93.87	324	*e*P	P	18 03 02.4	-2.2
	comp=Z,6.9nm,1.4s						
ZALV	Zalesovo Beam	93.87	324	*e*P	P	18 03 01.9	-2.7
ZALV	Zalesovo Beam	93.87	324	P	P	18 03 02.4	-2.2
	comp=Z,1.1nm,0.7s,baz=121,slow=5.5,SNR=9.3						
MAKZ	Makanchi	94.01	317	*e*P	P	18 03 04.4	-1.1
	comp=Z,11nm,1.3s						
YKA	Yellowknife Ar	95.32	27	P	P	18 03 07.4	-3.6
	comp=Z,0.2nm,0.5s,baz=268,slow=5.1,SNR=3.6						
KSH	Kashi	96.99	309	P	P	18 03 21.2	+1.8
KSH				pmax	pmax		
	comp=Z,110nm,6.7s						
ARCES	ARCESS Array B	116.71	345	PKP	PKPdf	18 08 28.0	-3.1
	comp=Z,2.1nm,1.0s,baz=72,slow=4.0,SNR=3.8						
BRTR	Keskin Array B	129.22	312	PKP	PKPdf	18 08 54.4	-1.7
	comp=Z,0.7nm,0.9s,baz=1.9,slow=3.7,SNR=3.7						
BRTR				PP	PP	18 11 00.9	-3.6
	comp=Z,0.5nm,0.6s,baz=30,slow=7.7,SNR=3.7						
GERES	GERESS Array B	136.05	333	PKP	PKPdf	18 09 07.5	-1.1
	comp=Z,0.3nm,0.6s,baz=127,slow=8.9,SNR=3.5						
ES19	SONSECA Array	150.39	344	*e*PKPdf	PKPdf	18 09 32.3	-1.7
ESDC	Sonseca Array	150.43	344	PKPbc	PKPdf	18 09 37.0	+3.0
	comp=Z,1.6nm,0.9s,baz=11,slow=2.5,SNR=5.7						
TORD	Torodi Ar. Bea	164.31	278	PKP	PKPdf	18 09 50.3	-1.7
	comp=Z,0.6nm,0.9s,baz=354,slow=6.1,SNR=4.7						

IDC 07 17:49:51.0±2.4**, 19°.32N**×**102°.07E, h0**^{km}**, mb3.8**/4**, mb1 3.8**/5**, mb1mx3.4**/52**, mbtmp3.7**/5**, ML3.5**/1**, MS4.3**/1**, Ms1 4.3**/1**, ms1mx2.8**/42**, Error ellipse: s-maj=40.1km s-min=18.5km az=139.0, Laos**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	3.09	254	Pn	Pn	17 50 40.4	-0.7
	1.7nm,0.3s,baz=71,slow=12,SNR=54						
CMAR				Pg	Pb	17 50 48.2	+1.4
	4.6nm,0.3s,baz=70,slow=19,SNR=116						
CMAR				Lg	Lg	17 51 28.9	
	4.3nm,0.3s,baz=72,slow=33,SNR=9.7						
MKAR	Makanchi Array	31.84	334	P	P	17 56 18.0	+0.4
	0.7nm,0.7s,baz=142,slow=8.9,SNR=8.7						
BATI	Baumata	36.25	142	LR	LR	18 14 03.5	
	comp=Z,406nm,18.6s,baz=131,slow=40						
ZALV	Zalesovo Beam	37.02	343	P	P	17 57 02.8	+0.4
	2.0nm,0.6s,baz=150,slow=9.1,SNR=8.9						
BVAR	Borovoye Array	41.62	331	P	P	17 57 40.9	+0.1
	0.5nm,0.5s,baz=133,slow=8.7,SNR=5.4						
FINES	FINESS Array B	66.53	329	P	P	18 00 41.6	-0.9
	1.7nm,1.1s,baz=91,slow=11,SNR=2.8						

MEX 07 17:50:43.8±0.5**, 15°.00N**×**92°.87W, h103**^{km}±11^{km}**, MD3.5, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.78	334	*e*P	Pn	17 51 01.0	-1.2
PCIG				*i* S	Sn	17 51 13.9	-2.2
CCIG	Comitan	1.46	29	*e*P	Pn	17 51 08.6	-1.3

IDC 07 17:57:17.9±3.8**, 10°.94S**×**165°.20E, h68**^{km}±34^{km}**, mb3.3**/3**, mb1 3.7**/5**, mb1mx3.4**/44**, mbtmp3.8**/5**, ML4.0**/2**, Error ellipse: s-maj=35.0km s-min=24.3km az=40.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.38	286	P	Pn	17 58 34.6	-1.1
	15nm,0.3s,baz=140,slow=7.8,SNR=9.5						
HNR				S	Sn	17 59 37.6	+1.3
	9.1nm,0.3s,baz=194,slow=13,SNR=3.2						
DZM	Mont Dzumac	11.13	174	P	Pn	17 59 54.7	+0.3
	0.4nm,0.3s,baz=32,slow=7.8,SNR=11						
WRA	Warramunga Arr	31.02	249	P	P	18 03 28.8	-0.6
	1.1nm,1.3s,baz=80,slow=9.4,SNR=2.6						
ASAR	Alice Springs	32.36	243	P	P	18 03 41.4	+0.2
	0.4nm,1.0s,baz=64,slow=10,SNR=4.6						
ILAR	Eielson Array	83.58	19	P	P	18 09 38.5	+0.1
	0.4nm,0.6s,baz=234,slow=5.3,SNR=5.9						

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*IDC **07** 17:58:58.8±0.7, 11°.01S×165°.55E, h0^{km}, mb4.3/15, mb1 4.5/17, mb1mx4.2/43, mbtmp4.3/17, ML4.7/2, MS4.0/7, Ms1 4.0/7, ms1mx3.5/37, Error ellipse: s-maj=20.4km s-min=15.4km az=125.0*

*ISCJB **07** 17:59:01.9±0.3, 11°.11S±0°.04×165°.49E±0°.04, h30^{km}, mb4.5/33, MS4.1/7, Error ellipse: s-maj=6.4km s-min=5.9km az=149.2*

*NEIC **07** 17:59:02.2±2.3, 10°.99S×165°.51E, h21^{km}±16^{km}, mb4.8/19, Error ellipse: s-maj=7.7km s-min=6.1km az=195.0*

ISC 07 17:59:03.8±0.5**, 11°.03S**±0°.07×**165°.55E**±0°.07**, h30**^{km}**, n69,** $\sigma 1^{s}28$/65**, mb4.6**/33**, MS4.1**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.74	286	Pn	Pn	18 00 26.6	-0.3
	49nm,0.3s,baz=180,slow=2.7,SNR=16						
HNR				Sn	Sn	18 01 32.4	+0.5
	6.6nm,0.3s,baz=190,slow=18,SNR=1.7						
HNR				LR	LR	18 02 42.1	
	comp=Z,2µm,21.1s,baz=81,slow=39						
DZM	Mont Dzumac	11.01	176	*e*Pn	Pn	18 01 40.6	+1.2
	67nm,0.7s						
DZM				*e*LR	LR	18 04 09.0	
	comp=Z,850nm,25.4s						
DZM	Mont Dzumac	11.01	176	Pn	Pn	18 01 40.0	+0.6
	2.2nm,0.3s,baz=326,slow=4.5,SNR=17						
DZM				Sn	Sn	18 03 42.1	+0.4
	0.3nm,0.3s,baz=342,slow=20,SNR=2.2						
DZM				LR	LR	18 05 20.5	
	comp=Z,433nm,18.7s,baz=32,slow=35						
ONTNC	Ouen Toro	11.25	176	*e*Pn	Pn	18 01 42.6	+0.1
MSVF	Nonsavu	13.82	120	*e*Pn	Pn	18 02 16.9	-0.9
RABL	Rabaul	14.90	296	*e*Pn	Pn	18 02 29.2	-3.3
EIDS	Eidsvold	19.78	222	*e*P	P	18 03 31.4	-0.3
	42nm,1.4s						
MANU	Manus Island	20.13	295	*e*P	P	18 03 36.0	+0.3
	198nm,1.1s						
CTA	Charters Tower	20.64	242	P	P	18 03 41.0	-0.1
	20nm,1.1s,baz=58,slow=12,SNR=5.1						
CTAO	Charters Tower	20.64	242	*e*P	P	18 03 41.1	0.0
	31nm,1.0s						
COEN	Coen	22.04	260	*e*P	P	18 03 55.9	-0.3
	33nm,1.2s						
URZ	Urewera	29.02	161	P	P	18 05 02.2	+1.0
	6.1nm,0.6s,baz=300,slow=8.8,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.35	2	T	T	18 35 39.0	
	baz=181,slow=76,SNR=4.7						
H11S3	WAKE ISLAND Hy	29.36	2	T	T	18 35 40.2	
	baz=181,slow=76,SNR=6.0						
H11S1	WAKE ISLAND Hy	29.37	2	T	T	18 35 41.3	
	baz=181,slow=76,SNR=5.2						
BKZ	Black Stump Fm	29.67	163	*e*P	P	18 05 08.5	+1.6
	40nm,1.3s						
STKA	Stephens Creek	30.32	223	*e*P	P	18 05 12.5	-0.2
	1.9nm,1.2s						
STKA	Stephens Creek	30.32	223	P	P	18 05 12.6	-0.2
	3.0nm,0.8s,baz=7.5,slow=11,SNR=6.1						
STKA				LR	LR	18 16 48.2	
	comp=Z,512nm,18.2s,baz=37,slow=35						
H11N1	WAKE ISLAND Hy	30.58	2	T	T	18 37 06.5	
	baz=180						
H11N3	WAKE ISLAND Hy	30.58	3	T	T	18 37 06.1	
	baz=180						
H11N2	WAKE ISLAND Hy	30.59	2	T	T	18 37 07.2	
	baz=180						
WRAB	Tennant Creek	31.30	250	*e*P	P	18 05 20.3	-1.3
	14nm,1.0s						
WB2	Warramunga Arr	31.30	250	*e*P	P	18 05 20.0	-1.5
WR1	Warramunga Arr	31.31	250	*e*P	P	18 05 20.3	-1.4
	22nm,1.1s						
WR1				*e*PcP	PcP	18 08 14.6	-0.9
WRA	Warramunga Arr	31.31	250	P	P	18 05 20.3	-1.4
	6.4nm,0.8s,baz=80,slow=9.3,SNR=34						
WRA				PcP	PcP	18 08 14.6	-0.9
	0.5nm,1.0s,baz=66,slow=2.7,SNR=7.9						
WRA				LR	LR	18 16 42.5	
	comp=Z,284nm,19.4s,baz=70,slow=34						
AS01	Alice Springs	32.59	243	*e*P	P	18 05 31.4	-1.5
AS31	Alice Springs	32.63	243	*e*P	P	18 05 32.2	-1.0
	3.2nm,0.8s						
ASAR	Alice Springs	32.63	243	P	P	18 05 32.0	-1.2
	11nm,0.8s,baz=66,slow=10.0,SNR=102						
ASAR				PcP	PcP	18 08 17.8	-1.3
	1.1nm,1.0s,baz=63,slow=3.4,SNR=4.2						
ASAR				LR	LR	18 17 56.8	
	comp=Z,211nm,18.2s,baz=65,slow=35						
FITZ	Fitzroy Crossi	39.20	255	*e*P	P	18 06 27.9	-1.7
	5.0nm,0.9s						
FITZ	Fitzroy Crossi	39.20	255	P	P	18 06 28.1	-1.4
	4.5nm,0.9s,baz=92,slow=7.5,SNR=5.8						
PPT	Papeete	43.89	104	LR	LR	18 23 48.9	
	comp=Z,233nm,18.4s,baz=192,slow=34						
PPT2	Papeete2	43.89	104	*e*LR	LR	18 19 36.4	
	comp=Z,227nm,22.2s						
LEM	Lembang	57.31	269	LR	LR	18 36 11.9	
	comp=Z,64nm,18.4s,baz=88,slow=39						
RKT	Rikitea	57.77	110	*e*LR	LR	18 26 06.0	
	comp=Z,172nm,28.2s						
NJ2	Nanjing	61.87	316	*e*P	P	18 09 20.5	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PETK	Petropavlovsk-	64.23	355	P	P	18 09 35.0	-0.8
	comp=Z,1.6nm,0.8s,baz=180,slow=5.8,SNR=2.8						
PEA1	Petropavlovsk-	64.24	355	*e*P	P	18 09 35.0	-0.8
KLR	Kul'dur	66.97	337	P	P	18 09 54.6	+1.1
	comp=Z,1.7nm,1.0s,baz=58,slow=12,SNR=2.6						
GYA	Guiyang	68.25	304	*e*P	P	18 10 03.8	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	Hu-ho-hao-te	71.69	320	*e*P	P	18 10 24.9	+1.8
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,360nm,5.0s						
CMAR	Chiang Mai Arr	71.93	294	P	P	18 10 25.4	+0.5
	comp=Z,0.5nm,0.3s,baz=118,slow=5.5,SNR=5.1						
CD2	Chengdu	72.44	307	P	P	18 10 29.8	+2.1
LZH	Lanzhou	74.60	312	*e*P	P	18 10 41.5	+1.0
LZH				pP	pP	18 10 45.6	-3.5
LZH				sP	sP	18 10 49.7	-2.6
LZH				PP	PP	18 13 33.4	+5.7
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,95nm,4.8s						
LZH				LR	LR		
	comp=N,230nm,16.6s						
LZH				LR	LR		
	comp=E,260nm,16.0s						
LZH				LR	LR		
	comp=Z,240nm,17.8s						
SONA0	Songino Array	78.54	324	*e*P	P	18 11 03.4	+0.9
SONM	Songino Array	78.54	324	P	P	18 11 03.4	+0.9
	comp=Z,1.1nm,0.9s,baz=125,slow=7.6,SNR=4.3						
GTA	Gaotai	78.91	314	*e*P	P	18 11 06.1	+1.4
GTA				pP	PcP	18 11 10.0	-3.3
GTA				sP	pP	18 11 13.2	-0.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
IM3	Indian Mountai	82.46	16	*e*P	P	18 11 22.6	-0.3
HDA	Harding Lake	83.29	19	*e*P	P	18 11 28.0	+0.7
	comp=Z,9.2nm,0.9s						
ILAR	Eielson Array	83.56	19	P	P	18 11 28.1	-0.6
	comp=Z,1.2nm,0.6s,baz=240,slow=5.1,SNR=22						
ILB	Eielson Array	83.56	19	*e*P	P	18 11 28.0	-0.6
IL1	Eielson Array	83.56	19	*e*P	P	18 11 28.0	-0.6
SCRK	Sand Creek	83.97	20	*e*P	P	18 11 30.6	-0.3
	comp=Z,11nm,1.4s						
AFDM	Forest Hills D	84.33	49	*e*P	P	18 11 32.5	-0.8
	comp=Z,7.1nm,1.1s						
NV01	Mina Array Sit	86.16	50	*e*P	P	18 11 42.0	-0.6
NVAR	Mina Array Bea	86.16	50	P	P	18 11 43.0	+0.4
	comp=Z,2.0nm,0.8s,baz=233,slow=8.4,SNR=6.8						
WMQ	Urumqi	88.95	315	*e*P	P	18 11 56.9	+1.2
WMQ				LR	LR		
	comp=N,180nm,15.1s						
WMQ				LR	LR		
	comp=E,140nm,22.1s						
WMQ				LR	LR		
	comp=Z,100nm,19.9s						
CCUT	Cedar City	89.68	52	*e*P	P	18 11 59.5	-0.1
	comp=Z,2.9nm,0.8s						
U15A	North Rim	90.25	53	*e*P	P	18 12 02.3	+0.1
	comp=Z,4.1nm,0.9s						
MTPU	Mount Pierson	90.71	51	*e*P	P	18 12 03.8	-0.7
	comp=Z,15nm,1.9s						
NLU	North Lily Min	91.23	50	*e*P	P	18 12 06.6	-0.1
	comp=Z,4.4nm,1.0s						
TMUT	Trail Mountain	91.73	50	*e*P	P	18 12 07.7	-1.5
	comp=Z,3.9nm,1.0s						
DLMT	Dillon	92.10	44	*e*P	P	18 12 10.1	-0.4
	comp=Z,5.0nm,0.9s						
MK01	Makanchi Array	93.37	317	*e*P	P	18 12 15.1	-1.0
MK32	Makanchi Array	93.38	317	*e*P	P	18 12 15.8	-0.3
MKAR	Makanchi Array	93.38	317	P	P	18 12 15.8	-0.4
	comp=Z,0.5nm,0.7s,baz=91,slow=6.4,SNR=4.4						
PDAR	Pinedale Array	93.68	47	P	P	18 12 17.3	-0.6
	comp=Z,0.7nm,0.9s,baz=37,slow=0.7,SNR=5.2						
YKA	Yellowknife Ar	95.05	27	P	P	18 12 21.3	-2.1
	comp=Z,0.5nm,0.7s,baz=258,slow=4.6,SNR=9.0						
ARA0	ARCESS Array S	116.27	345	*e*PKPdf	PKiKP	18 17 43.1	-0.6
ARCES	ARCESS Array B	116.27	345	PKP	PKiKP	18 17 43.1	-0.6
	comp=Z,1.9nm,0.9s,baz=73,slow=4.2,SNR=5.5						

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*ISCJB **07** 18:03:08.8±0.3, 67°.05N±0°.02×20°.98E±0°.06, h0^{km}, Error ellipse: s-maj=3.6km s-min=3.2km az=179.9*

*UPP **07** 18:03:09.5±0.1, 67°.06N×20°.92E, h0^{km}, ML1.7, Explosion*

*NAO **07** 18:03:10.3±0.9, 67°.08N×20°.96E, ML2.5*

*HEL **07** 18:03:10.4±0.2, 67°.07N×20°.87E, h0^{km}, ML2.2, ML1.7(UPP), Explosion*

*KOLA **07** 18:03:11.2, 67°.96N×20°.53E, h0^{km}*

*BER **07** 18:03:12.4±2.8, 67°.06N×20°.73E, h0^{km}, ML1.6, ML2.5(NAO), Suspected explosion*

ISC 07 18:03:09.7±0.8**, 67°.07N**±0°.02×**20°.95E**±0°.03**, h0**^{km}**, n56,** $\sigma 1^{s}18$/76**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	Masugnsbyn	0.56	46	P	Pg	18 03 20.7	+0.2
MASU				S	Sg	18 03 27.9	+0.1
MASU	Masugnsbyn	0.56	46	*i* P	Pg	18 03 20.7	+0.2
MASU				*i* S	Sg	18 03 27.9	+0.1
ERTU	Ertsjaerv	0.72	136	P	Pg	18 03 22.9	-0.6
ERTU	Ertsjaerv	0.72	136	*e*P	Pg	18 03 22.7	-0.7
HARU	Harads	0.91	179	P	Pg	18 03 26.4	-0.8
HARU	Harads	0.91	179	*e*P	Pg	18 03 26.4	-0.8
KUA	Kurravaara	0.92	345	P	Pg	18 03 26.6	-0.7
KUA	Kurravaara	0.92	345	*e*P	Pg	18 03 26.6	-0.7
RATU	Laukkuluspa	0.92	326	P	Pg	18 03 26.7	-0.6
RATU	Laukkuluspa	0.92	326	*e*P	Pg	18 03 26.7	-0.6
SALU	Saltoluokta	1.00	289	P	Pg	18 03 28.5	-0.4
SALU	Saltoluokta	1.00	289	*e*P	Pg	18 03 28.5	-0.4
LANU	Lannavaara	1.06	22	P	Pg	18 03 29.3	-0.7
LANU	Lannavaara	1.06	22	*e*P	Pg	18 03 29.0	-1.0
LANU				*e*SN	Sn	18 03 47.1	-0.2
NIKU	Nikkaluokta	1.09	318	P	Pg	18 03 29.7	-0.8
NIKU	Nikkaluokta	1.09	318	*e*P	Pg	18 03 29.7	-0.8
KALU	Kalix	1.56	140	P	Pn	18 03 38.2	-0.4
KALU	Kalix	1.56	140	*e*P	Pn	18 03 37.9	-0.7
KALU				*e*SN	Sg	18 04 03.2	+3.6
SJUU	Sjulsmark	1.59	170	P	Pn	18 03 38.7	-0.5
SJUU	Sjulsmark	1.59	170	*e*P	Pn	18 03 38.7	-0.5
TOF	Tornio	1.68	125	*e*P	Pn	18 03 40.3	0.0
TOF				MSG		18 04 01.2	
	comp=Z,14nm,0.2s						
TOF				*e*SN	Sg	18 04 06.6	+3.0
HEF	Hetta	1.69	36	Pg	Pn	18 03 40.4	-0.1
HEF				Lg	Lg	18 04 03.9	
HEF	Hetta	1.69	36	*e*P	Pn	18 03 40.9	+0.4
HEF	Hetta	1.69	36	*e*P	Pn	18 03 40.2	-0.3
HEF				MSG		18 04 01.2	
	comp=Z,18nm,0.2s						
HEF				*e*SN	Sg	18 04 05.5	+1.5
KIF	Kilpisjarvi	1.94	358	Pn	Pb	18 03 45.4	-0.6
KIF				Lg	Lg	18 04 13.1	
KIF	Kilpisjarvi	1.94	358	Pn	Pb	18 03 45.4	-0.6
KIF				Sg	Sg	18 04 13.1	+1.1
KIF	Kilpisjarvi	1.94	358	*e*PB	Pb	18 03 45.1	-0.8
KIF				MSG		18 04 09.5	
	comp=Z,18nm,0.2s						
KIF				*e*SG	Sg	18 04 13.8	+1.8
RNF	Rovaniemi	2.06	101	*e*P	Pn	18 03 46.1	+0.6
RNF				*e*SG	Sg	18 04 15.7	0.0
KTK1	Kautokeino	2.13	23	*e*P	Pb	18 03 48.0	-1.2
KTK1				IAML		18 04 24.3	
	comp=Z,9.0nm,0.2s						
SGF	Sodankyl	2.20	78	*e*P	Pn	18 03 48.6	+1.1
SGF				*e*SG	Sg	18 04 20.2	-0.1
STEI	Steigen	2.36	294	*e*P	Pn	18 03 49.4	-0.2
STEI				IAML		18 04 35.8	
	comp=Z,4.0nm,0.3s						
OUL	Oulu	2.84	132	*e*PB	Pb	18 03 58.8	-2.4
ARA0	ARCESS Array S	3.00	32	Pn	Pn	18 03 59.2	+0.7
	baz=218,slow=16						
ARA0				Sn	Sn	18 04 35.9	+0.9
	baz=220,slow=28						
ARA0	ARCESS Array S	3.00	32	Pn	Pn	18 03 59.2	+0.7
	baz=218,slow=16						
ARA0				Sn	Sn	18 04 35.9	+0.9
	baz=220,slow=28						
ARE0	ARCESS Array S	3.00	32	*e*P	Pn	18 03 59.1	+0.6
ARE0	ARCESS Array S	3.00	32	*e*P	Pn	18 03 58.4	0.0
	baz=217						
LOF	Lofoten	3.03	294	*e*P	Pn	18 03 59.9	+1.0
LOF				IAML		18 04 55.4	
	comp=Z,5.8nm,0.2s						
KONS	Konsvik	3.15	263	*e*P	Pn	18 04 01.8	+1.2
KONS				IAML		18 05 03.3	
	comp=Z,4.6nm,0.2s						
VRF	Varrio	3.41	75	*e*PB	Pn	18 04 07.4	+3.3
VRF				*e*SG	Sg	18 04 57.8	-1.4
MSF	Maaselka	3.45	106	*e*P	Pn	18 04 06.8	+2.2
KEV	Kevo	3.50	37	Pn	Pn	18 04 05.8	+0.5
KEV				Sn	Sn	18 04 48.9	+1.5
KEV	Kevo	3.50	37	Pn	Pn	18 04 05.8	+0.5
KEV				Sn	Sn	18 04 48.9	+1.5
KEV	Kevo	3.50	37	*e*P	Pn	18 04 07.1	+1.8
KU6	Riekki	3.73	102	*e*P	Pn	18 04 10.6	+2.1
	baz=286						
VAF	Ylistaro	4.11	169	*e*P	Pn	18 04 15.5	+1.8
APA0	Apatity Array	4.69	78	Pn	Pn	18 04 21.6	0.0
APA0				Sn	Sn	18 05 16.8	+0.2
APA0	Apatity Array	4.69	78	P	Pn	18 04 22.6	+1.0
APA0				S	Sn	18 05 16.4	-0.3
APA0	Apatity Array	4.69	78	Pn	Pn	18 04 21.6	0.0
APA0				Sn	Sn	18 05 16.8	+0.2
FIA0	FINESS Array S	6.08	156	Pn	Pn	18 04 41.7	+1.0
	baz=346,slow=16						
FIA0				Sn	Sn	18 05 50.9	+0.1
	baz=336,slow=28						
FIA0	FINESS Array S	6.08	156	Pn	Pn	18 04 41.7	+1.0
	baz=346,slow=16						
FIA0				Sn	Sn	18 05 50.9	+0.1
	baz=336,slow=28						
NB2	NORSAR Subarra	7.40	220	Pn	Pn	18 04 56.6	-2.3
NB2	NORSAR Subarra	7.40	220	Pn	Pn	18 04 56.6	-2.3

NRA0	**NORESS Array S**	**7.59**	**217**	Pn	**Pn**	**18 05 01.5**	**+0.1**
NRA0	**NORESS Array S**	**7.59**	**217**	Pn	**Pn**	**18 05 01.5**	**+0.1**
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**18 05 02.2**	**-0.4**
	baz=28,slow=14						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**18 05 02.2**	**-0.4**
	baz=28,slow=14						

IDC 07 18:14:38.4±1.7,10°.84S×165°.47E,h0^{km},mb3.5/3, mb1 3.9/4,mb1mx3.5/34,mbtmp3.6/4,ML3.6/1,Error ellipse: s-maj=53.8km s-min=30.7km az=128.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.20**	**175**	Pn	Pn	18 17 20.2	+0.2
	0.4nm,0.3s,baz=300,slow=17,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**29.17**	**2**	T	T	18 51 23.8	
	baz=188						
H11S3	**WAKE ISLAND Hy**	**29.18**	**2**	T	T	18 51 25.5	
	baz=188						
H11S1	**WAKE ISLAND Hy**	**29.19**	**2**	T	T	18 51 24.3	
	baz=188						
H11N1	**WAKE ISLAND Hy**	**30.40**	**3**	T	T	18 52 55.4	
	baz=179						
H11N3	**WAKE ISLAND Hy**	**30.40**	**3**	T	T	18 52 55.2	
	baz=179						
H11N2	**WAKE ISLAND Hy**	**30.41**	**3**	T	T	18 52 54.7	
	baz=179						
WRA	**Warramunga Arr**	**31.30**	**249**	P	P	18 21 00.8	+0.2
	0.4nm,0.6s,baz=82,slow=9.3,SNR=6.3						
ASAR	**Alice Springs**	**32.64**	**243**	P	P	18 21 12.1	-0.3
	0.5nm,0.7s,baz=65,slow=9.6,SNR=8.1						
ILAR	**Eielson Array**	**83.41**	**19**	P	P	18 27 07.3	0.0
	0.3nm,0.7s,baz=224,slow=5.0,SNR=3.0						

PGC 07 18:15:35.6±0.6,50°.53N×130°.35W,h10^{km},MLSn3.4/27, Mw4.0/27,208km west of Pt. Hardy, Bc Vancouver Island, Canada Region

ISCJB 07 18:15:36.3±0.6,50°.63N±0°.04×130°.24W±0°.07, h33^{km}±16^{km},mb3.3/2,Error ellipse: s-maj=9.4km s-min=3.8km az=138.5

IDC 07 18:15:40.3±2.2,50°.60N×129°.32W,h0^{km},mb3.6/2, mb1 3.8/6,mb1mx3.5/43,mbtmp3.5/6,ML3.2/4,Error ellipse: s-maj=31.9km s-min=13.6km az=76.0

NEIC 07 18:15:42.7±1.6,50°.86N×129°.28W,h10^{km},MW4.0(OTT), Error ellipse: s-maj=27.2km s-min=11.9km az=58.0

ISC 07 18:15:39.3±2.5,50°.69N±0°.05×130°.03W±0°.06, h23^{km}±22^{km},n60,σ1^{s}.51/51,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACB	**Port Alice, BC**	**1.64**	**98**	Pn	Pn	18 16 04.7	-2.0
PHC	**Port Hardy**	**1.65**	**88**	Pn	Pn	18 16 05.7	-1.2
PHC				Sn	**Sn**	**18 16 26.6**	**-0.7**
HG4B	**Hotspring**	**1.77**	**336**	Pn	Pn	18 16 04.9	-3.6
HG4B				Sn	**Sn**	**18 16 27.1**	**-3.2**
BBB	**Bella Bella**	**1.92**	**38**	Pn	**Pn**	**18 16 10.1**	**-0.5**
BBB				Sn	**Sn**	**18 16 33.9**	**-0.1**
BBB	**Bella Bella**	**1.92**	**38**	Pn	**Pn**	**18 16 10.2**	**-0.3**
	6.6nm,0.3s,baz=222,slow=6.7,SNR=301						
BBB				Sn	**Sn**	**18 16 33.4**	**-0.6**
	40nm,0.3s,baz=266,slow=19,SNR=17						
EDB	**Eliza Dome**	**2.04**	**112**	Pn	Pn	18 16 09.6	-2.6
EDB				Sn	**Sn**	**18 16 35.1**	**-1.8**
TLCB	**Telegraph Cove**	**2.04**	**93**	Pn	**Pn**	**18 16 11.3**	**-0.9**
TLCB				Sn	**Sn**	**18 16 36.9**	**0.0**
BNB	**Barry Inlet**	**2.17**	**331**	Pn	Pn	18 16 10.2	-3.9
WOSB	**Woss**	**2.27**	**102**	Pn	Pn	18 16 14.1	-1.5
NCRB	**Newcastle Ridg**	**2.55**	**95**	Pn	Pn	18 16 18.0	-1.4
BCBC	**Bella Coola**	**2.65**	**49**	Sn	**Sn**	**18 16 53.9**	**+1.9**
GDR	**Gold River**	**2.72**	**108**	Pn	Pn	18 16 19.5	-2.1
MOBC	**Moresby Island**	**2.74**	**335**	Pn	Pn	18 16 18.8	-3.1
MOBC				Sn	**Sn**	**18 16 49.8**	**-4.4**
BNAB	**Bonilla**	**2.83**	**353**	Pn	**Pn**	**18 16 20.9**	**-2.2**
DIB	**Dawson Inlet,**	**2.94**	**330**	Pn	**Pn**	**18 16 21.4**	**-3.2**
DIB				Sn	**Sn**	**18 16 55.9**	**-3.3**
CBB	**Campbell River**	**3.06**	**101**	Pn	**Pn**	**18 16 25.3**	**-0.9**
CBB				Sn	**Sn**	**18 17 01.8**	**-0.3**
TOFB	**Tofino**	**3.07**	**118**	Pn	**Pn**	**18 16 24.6**	**-1.8**
BTB	**Buttle Lake**	**3.15**	**111**	Pn	Pn	18 16 25.7	-2.0
TXB	**Texada**	**3.73**	**103**	Pn	**Pn**	**18 16 34.4**	**-1.1**
MGB	**Mount Grey**	**3.84**	**114**	Pn	Pn	18 16 35.2	-2.0
GHNB	**Nanoose**	**3.98**	**108**	Pn	**Pn**	**18 16 38.5**	**-0.5**
SHB	**Sechelt**	**4.11**	**103**	Pn	**Pn**	**18 16 39.9**	**-0.8**
NLLB	**Nanaimo Lost L**	**4.17**	**108**	Pn	**Pn**	**18 16 41.0**	**-0.4**
PFB	**Port Renfrew**	**4.21**	**118**	Pn	**Pn**	**18 16 41.2**	**-0.8**
B926	**Mesachie Lake**	**4.26**	**114**	Pn	**Pn**	**18 16 42.0**	**-0.7**
BIB	**Bowen Island**	**4.52**	**104**	Pn	**Pn**	**18 16 45.6**	**-0.7**
LZB	**Mount Lazard**	**4.54**	**115**	Pn	**Pn**	**18 16 46.0**	**-0.6**
WSLR	**Whistler**	**4.58**	**94**	Pn	**Pn**	**18 16 47.5**	**+0.3**
B010	**North Saanich**	**4.73**	**113**	Pn	**Pn**	**18 16 49.0**	**-0.3**
PGC	**Sidney**	**4.73**	**113**	Pn	**Pn**	**18 16 48.7**	**-0.6**
B009	**North Saanich**	**4.73**	**113**	Pn	**Pn**	**18 16 48.6**	**-0.6**
B011	**North Saanich**	**4.74**	**113**	Pn	**Pn**	**18 16 49.1**	**-0.2**
SNB	**Saturna Island**	**4.84**	**111**	Pn	**Pn**	**18 16 51.1**	**+0.3**
VGZ	**Gonzales**	**4.92**	**115**	Pn	**Pn**	**18 16 51.8**	**0.0**
MCW	**Mount Constitu**	**5.09**	**111**	Pn	**Pn**	**18 16 54.7**	**+0.6**
FSB	**Fort Saint Jam**	**5.14**	**40**	Pn	**Pn**	**18 16 56.1**	**+1.2**
LLLB	**Lillooet**	**5.18**	**88**	Pn	**Pn**	**18 16 55.7**	**+0.2**
VDB	**Vedder Mountai**	**5.39**	**105**	Pn	**Pn**	**18 16 59.0**	**+0.7**
HDW	**Hoodsport**	**5.49**	**121**	Pn	**Pn**	**18 16 59.9**	**+0.2**
MBW	**Mount Baker**	**5.60**	**107**	Pn	**Pn**	**18 17 02.3**	**+0.9**
JCW	**Jim Creek**	**5.84**	**112**	Pn	**Pn**	**18 17 04.7**	**+0.2**
B06A	**Marblemount**	**5.96**	**108**	Pn	**Pn**	**18 17 06.6**	**+0.5**
GPW	**Glacier Peak**	**6.35**	**110**	Pn	**Pn**	**18 17 12.4**	**+0.7**
FMW	**Mount Fremont**	**6.68**	**121**	Pn	**Pn**	**18 17 16.8**	**+0.7**
LON	**Longmire**	**6.71**	**123**	Pn	**Pn**	**18 17 17.0**	**+0.5**
LTY	**Liberty**	**7.05**	**116**	Pn	**Pn**	**18 17 21.9**	**+0.7**
B08A	**Colville Reser**	**7.34**	**104**	Pn	**Pn**	**18 17 25.2**	**+0.1**
DLBC	**Dease Lake**	**7.77**	**0**	Pn	**Pn**	**18 17 32.2**	**+1.3**
	0.4nm,0.3s,baz=189,slow=18,SNR=9.5						
NEW	**Newport**	**8.75**	**101**	Pn	Pn	18 17 39.7	-4.7
	0.3nm,0.3s,baz=252,slow=20,SNR=3.4						
YKA	**Yellowknife Ar**	**14.51**	**30**	Pn	**Pn**	**18 19 02.5**	**-0.5**
	0.1nm,0.3s,baz=224,slow=12,SNR=8.0						
PDAR	**Pinedale Array**	**16.08**	**112**	Pn	**Pn**	**18 19 25.2**	**+1.2**
	0.0nm,0.3s,baz=303,slow=12,SNR=8.1						
ILAR	**Eielson Array**	**16.65**	**334**	Pn	**P**	**18 19 37.8**	**+4.6**
	0.0nm,0.3s,baz=142,slow=13,SNR=8.1						
ULM	**Lac du Bonnet**	**21.64**	**78**	P	**P**	**18 20 27.5**	**-0.2**
	1.3nm,0.6s,baz=288,slow=13,SNR=2.8						
TXAR	**Lajitas Array**	**29.10**	**127**	P	**P**	**18 21 40.0**	**+1.7**
	0.1nm,0.3s,baz=331,slow=5.2,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**57.98**	**262**	T	T	19 27 57.2	
	baz=42,slow=76,SNR=103						
H11N3	**WAKE ISLAND Hy**	**57.98**	**262**	T	T	19 27 57.5	
	baz=42,slow=76,SNR=141						
H11N1	**WAKE ISLAND Hy**	**57.99**	**262**	T	T	19 27 57.5	
	baz=42,slow=76,SNR=99						
H11S1	**WAKE ISLAND Hy**	**59.01**	**261**	T	T	19 29 44.0	
	baz=46,slow=74,SNR=16						
H11S2	**WAKE ISLAND Hy**	**59.02**	**261**	T	T	19 29 43.1	
	baz=46,slow=74,SNR=24						
H11S3	**WAKE ISLAND Hy**	**59.02**	**261**	T	T	19 29 43.1	
	baz=46,slow=74,SNR=20						

IDC 07 18:16:36.5±1.4,10°.83S×164°.80E,h0^{km},mb3.8/8, mb1 4.0/10,mb1mx3.9/39,mbtmp3.9/10,ML4.4/2,MS3.5/3, Ms1 3.5/3,ms1mx3.1/35,Error ellipse: s-maj=32.2km s-min=23.7km az=118.0

ISCJB 07 18:16:39.3±0.9,11°.0S±0°.1×164°.81E±0°.10,h31^{km}, mb3.7/7,MS3.4/2,Error ellipse: s-maj=17.1km s-min=10.9km az=36.6

ISC 07 18:16:41.1±1.1,10°.9S±0°.1×164°.9E±0°.1,h31^{km},n17, σ0^{s}.99/11,mb3.7/7,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.04**	**286**	Pn	**Pn**	**18 17 54.6**	**-0.1**
	20nm,0.3s,baz=131,slow=6.2,SNR=8.2						
HNR				Sn	**Sn**	**18 18 52.7**	**+0.8**
	5.0nm,0.3s,baz=180,slow=11,SNR=1.8						
DZM	**Mont Dzumac**	**11.23**	**172**	Pn	**Pn**	**18 19 19.6**	**+0.1**
	2.4nm,0.3s,baz=273,slow=18,SNR=13						
DZM				LR	LR	18 23 22.2	
	comp=Z,239nm,19.1s,baz=30,slow=36						
CTA	**Charters Tower**	**20.11**	**241**	P	**P**	**18 21 13.4**	**+0.9**
	3.0nm,0.8s,baz=64,slow=14,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**29.25**	**4**	T	T	18 53 10.5	
	baz=184,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**29.25**	**4**	T	T	18 53 09.8	
	baz=184,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	**29.27**	**4**	T	T	18 53 10.3	
	baz=184,slow=76,SNR=24						
STKA	**Stephens Creek**	**29.96**	**222**	P	**P**	**18 22 47.7**	**+0.9**
	3.2nm,0.9s,baz=24,slow=10,SNR=4.0						
STKA				LR	LR	18 34 22.1	
	comp=Z,174nm,18.3s,baz=25,slow=36						
H11N1	**WAKE ISLAND Hy**	**30.47**	**4**	T	T	18 54 40.7	
	baz=184,slow=76,SNR=9.7						
H11N3	**WAKE ISLAND Hy**	**30.48**	**4**	T	T	18 54 42.5	
	baz=184,slow=76,SNR=10						
H11N2	**WAKE ISLAND Hy**	**30.49**	**4**	T	T	18 54 42.4	
	baz=184,slow=76,SNR=12						
WRA	**Warramunga Arr**	**30.72**	**249**	P	**P**	**18 22 52.0**	**-1.6**
	0.3nm,0.4s,baz=77,slow=9.0,SNR=8.0						
GUMO	**Guam**	**31.38**	**320**	LR	LR	18 35 27.0	
	comp=Z,34nm,18.6s,baz=128,slow=36						
ASAR	**Alice Springs**	**32.09**	**243**	P	**P**	**18 23 04.3**	**-1.3**
	0.8nm,0.8s,baz=68,slow=9.8,SNR=7.3						
CMAR	**Chiang Mai Arr**	**71.25**	**294**	P	**P**	**18 27 57.9**	**0.0**
	0.7nm,1.0s,baz=145,slow=3.8,SNR=5.0						
SONM	**Songino Array**	**78.02**	**324**	P	**P**	**18 28 36.3**	**-0.5**
	0.7nm,0.9s,baz=130,slow=5.8,SNR=3.4						
ILAR	**Eielson Array**	**83.64**	**19**	P	**P**	**18 29 07.2**	**+0.9**
	0.5nm,0.8s,baz=249,slow=4.5,SNR=4.6						
MKAR	**Makanchi Array**	**92.81**	**317**	P	**P**	**18 29 50.3**	**-0.4**
	0.5nm,0.7s,baz=95,slow=5.7,SNR=5.2						

ISCJB 07 18:24:46.7±0.6,12°.53N±0°.08×142°.74E±0°.07,h100^{km}, mb3.9/17,Error ellipse: s-maj=12.5km s-min=9.1km az=153.1

IDC 07 18:24:49.4±1.9,12°.59N×142°.91E,h113^{km}±20^{km}, mb3.6/17,mb1 3.8/18,mb1mx3.6/54,mbtmp4.0/18,Error ellipse: s-maj=21.2km s-min=12.4km az=87.0

ISC 07 18:24:48.2±0.7,12°.6N±0°.1×142°.79E±0°.10,h100^{km},n18, σ0^{s}.76/20,mb4.0/17,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.27**	**63**	P	**Pn**	**18 25 25.2**	**+1.0**
	8.5nm,0.3s,baz=191,slow=16,SNR=5.7						
GUMO				S	**Sn**	**18 25 51.8**	**0.0**
	22nm,0.3s,baz=329,slow=14,SNR=5.5						
JNU	**Nakatsue**	**23.18**	**334**	P	**P**	**18 29 46.8**	**+0.4**
	13nm,1.0s,baz=146,slow=5.3,SNR=4.0						
MJAR	**Matsushiro Arr**	**24.23**	**351**	P	**P**	**18 29 55.8**	**+0.1**
	2.2nm,0.9s,baz=188,slow=11,SNR=4.5						
USRK	**Ussuriysk Ar.**	**32.86**	**346**	P	**P**	**18 31 11.4**	**-1.1**
	1.8nm,0.7s,baz=162,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**33.35**	**195**	P	**P**	**18 31 16.9**	**-0.1**
	0.8nm,0.5s,baz=17,slow=9.6,SNR=20						
WRA				PcP	**PcP**	**18 33 57.2**	**+0.4**
	0.1nm,0.4s,baz=10,slow=3.1,SNR=2.9						
ASAR	**Alice Springs**	**37.04**	**194**	P	**P**	**18 31 49.0**	**+0.4**
	0.4nm,0.4s,baz=26,slow=11,SNR=14						
CMAR	**Chiang Mai Arr**	**42.58**	**284**	P	**P**	**18 32 35.9**	**+1.2**
	1.2nm,0.7s,baz=92,slow=6.7,SNR=8.6						
STKA	**Stephens Creek**	**44.20**	**181**	P	**P**	**18 32 46.8**	**-0.6**
	2.1nm,0.8s,baz=303,slow=7.6,SNR=3.2						
SONM	**Songino Array**	**46.43**	**327**	P	**P**	**18 33 05.8**	**+0.8**
	0.7nm,0.5s,baz=142,slow=6.9,SNR=5.1						
MKAR	**Makanchi Array**	**60.83**	**317**	P	**P**	**18 34 50.6**	**+0.5**
	1.3nm,0.8s,baz=92,slow=7.9,SNR=11						
ZALV	**Zalesovo Beam**	**61.29**	**325**	P	**P**	**18 34 52.9**	**0.0**
	1.6nm,0.4s,baz=113,slow=7.6,SNR=12						
KURBB	**Kurchatov Arra**	**64.11**	**320**	P	**P**	**18 35 11.6**	**-0.1**
	3.2nm,0.6s,baz=106,slow=6.6,SNR=9.7						
AAK	**Ala-Archa**	**65.65**	**311**	P	**P**	**18 35 22.4**	**+0.3**
	0.3nm,0.3s,baz=65,slow=19,SNR=2.3						
BVAR	**Borovoye Array**	**69.48**	**322**	P	**P**	**18 35 46.0**	**+0.2**
	2.5nm,0.4s,baz=107,slow=7.8,SNR=34						
YKA	**Yellowknife Ar**	**84.69**	**27**	P	**P**	**18 37 10.5**	**-0.2**
	0.2nm,0.4s,baz=286,slow=4.9,SNR=3.2						
ARCES	**ARCESS Array B**	**87.43**	**342**	P	**P**	**18 37 23.1**	**-1.0**
	0.8nm,0.6s,baz=81,slow=8.0,SNR=3.9						
NVAR	**Mina Array Bea**	**89.14**	**51**	P	**P**	**18 37 33.0**	**-0.1**
	0.3nm,0.4s,baz=307,slow=7.5,SNR=2.5						
FINES	**FINESS Array B**	**91.22**	**335**	P	**P**	**18 37 40.2**	**-1.8**
	0.7nm,0.4s,baz=50,slow=3.0,SNR=7.1						

IDC 07 18:29:40.8±1.7,13°.92N×93°.10E,h0^{km},mb3.5/3, mb1 3.6/4,mb1mx3.2/50,mbtmp3.3/4,ML3.2/1,Error ellipse: s-maj=60.3km s-min=28.6km az=68.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.21**	**50**	Pn	Pn	18 31 28.1	+0.6
	0.1nm,0.3s,baz=238,slow=15,SNR=3.6						
CMAR				Sn	Sn	18 32 44.5	-5.6
	0.2nm,0.3s,baz=220,slow=22,SNR=4.2						
MKAR	**Makanchi Array**	**34.01**	**347**	P	P	18 36 25.6	-0.8
	0.3nm,0.8s,baz=164,slow=8.3,SNR=2.2						
WRA	**Warramunga Arr**	**52.71**	**129**	P	P	18 38 56.8	-0.8
	0.2nm,0.4s,baz=308,slow=9.3,SNR=12						
WRA				PcP	PcP	18 40 07.1	-0.4
	0.4nm,0.5s,baz=321,slow=3.1,SNR=10						
ASAR	**Alice Springs**	**54.66**	**133**	P	P	18 39 12.1	+0.2
	0.5nm,0.5s,baz=307,slow=7.0,SNR=19						
ASAR				PcP	PcP	18 40 15.5	+0.7
	0.1nm,0.4s,baz=316,slow=4.3,SNR=3.1						

IDC 07 18:29:36.2±1.4,10°.59S×165°.46E,h0^{km},mb3.5/7, mb1 3.8/9,mb1mx3.7/40,mbtmp3.7/9,ML3.7/2,MS3.8/2, Ms1 3.8/2,ms1mx3.3/23,Error ellipse: s-maj=33.5km s-min=24.7km az=116.0

ISCJB 07 18:29:39.1±0.9,10°.7S±0°.1×165°.36E±0°.09,h31^{km}, mb3.5/7,MS4.2/1,Error ellipse: s-maj=17.7km s-min=11.5km az=29.9

ISC 07 18:29:40.8±1.1,10°.7S±0°.1×165°.4E±0°.1,h31^{km},n16, σ1^{s}.05/10,mb3.5/7,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.54**	**282**	Pn	**Pn**	**18 31 01.0**	**-0.1**
	4.6nm,0.3s,baz=162,slow=10,SNR=3.0						
HNR				Sn	**Sn**	**18 32 02.8**	**-0.9**
	4.0nm,0.3s,baz=187,slow=8.1,SNR=2.0						
HNR				LR	LR	18 33 16.4	
	comp=Z,230nm,18.8s,baz=90,slow=40						
DZM	**Mont Dzumac**	**11.39**	**175**	Pn	**Pn**	**18 32 20.6**	**-0.9**
	0.3nm,0.3s,baz=306,slow=19,SNR=5.8						
RAO	**Raoul Island**	**24.17**	**142**	LR	LR	18 42 14.8	
	comp=Z,898nm,20.5s,baz=132,slow=31						
H11S2	**WAKE ISLAND Hy**	**28.99**	**2**	T	T	19 05 54.3	
	baz=182,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.00**	**2**	T	T	19 05 54.0	
	baz=182,slow=76,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**29.01**	**2**	T	T	19 05 54.4	
	baz=182,slow=76,SNR=6.9						
H11N1	**WAKE ISLAND Hy**	**30.22**	**3**	T	T	19 07 25.1	
	baz=182,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**30.22**	**3**	T	T	19 07 27.5	
	baz=182,slow=76,SNR=16						
H11N2	**WAKE ISLAND Hy**	**30.23**	**3**	T	T	19 07 25.2	
	baz=182,slow=76,SNR=16						
STKA	**Stephens Creek**	**30.51**	**223**	P	**P**	**18 35 52.8**	**+1.4**
	1.3nm,0.8s,baz=80,slow=6.1,SNR=2.4						
WRA	**Warramunga Arr**	**31.33**	**249**	P	**P**	**18 35 58.0**	**-0.7**
	0.6nm,0.9s,baz=82,slow=9.1,SNR=4.0						
ASAR	**Alice Springs**	**32.69**	**243**	P	**P**	**18 36 11.2**	**+0.5**
	0.4nm,0.7s,baz=63,slow=10,SNR=4.8						
CMAR	**Chiang Mai Arr**	**71.68**	**294**	P	**P**	**18 41 00.5**	**+0.3**
	0.3nm,0.6s,baz=107,slow=4.8,SNR=2.8						
SONM	**Songino Array**	**78.17**	**324**	P	**P**	**18 41 38.7**	**+1.4**
	0.3nm,0.7s,baz=131,slow=7.9,SNR=2.0						
ILAR	**Eielson Array**	**83.25**	**19**	P	**P**	**18 42 03.3**	**-0.6**
	0.3nm,0.7s,baz=221,slow=6.1,SNR=4.3						
MKAR	**Makanchi Array**	**93.03**	**317**	P	**P**	**18 42 50.5**	**-0.9**
	0.1nm,0.4s,baz=84,slow=5.9,SNR=2.3						

IDC 07 18:29:44.5±1.8,14°.13N×55°.24E,h0^{km},mb3.6/9, mb1 3.7/9,mb1mx3.4/46,mbtmp3.6/9,MS2.9/1,Ms1 2.9/1, ms1mx2.6/39,Error ellipse: s-maj=48.2km s-min=30.2km az=53.0,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**9.61**	**19**	LR	LR	18 35 16.9	
	comp=Z,66nm,20.4s,baz=186,slow=35						
H08N2	**Diego Garcia H**	**25.64**	**141**	T	T	19 02 18.3	
	baz=323,slow=75,SNR=31						
H08N3	**Diego Garcia H**	**25.66**	**141**	T	T	19 02 18.1	
	baz=323,slow=75,SNR=21						
H08N1	**Diego Carcia H**	**25.67**	**141**	T	T	19 02 18.8	
	baz=323,slow=75,SNR=23						
MKAR	**Makanchi Array**	**39.65**	**29**	P	P	18 37 17.5	-0.7
	0.3nm,0.6s,baz=213,slow=9.0,SNR=4.3						
KURBB	**Kurchatov Arra**	**41.01**	**23**	P	P	18 37 29.1	-0.2
	0.6nm,0.2s,baz=217,slow=8.9,SNR=3.2						
ZALV	**Zalesovo Beam**	**46.02**	**24**	P	P	18 38 10.4	+0.8
	0.4nm,0.5s,baz=202,slow=11,SNR=2.9						
GERES	**GERESS Array B**	**48.56**	**324**	P	P	18 38 30.2	+0.5
	0.1nm,0.3s,baz=121,slow=12,SNR=2.2						
FINES	**FINESS Array B**	**51.70**	**343**	P	P	18 38 52.1	-1.0
	0.8nm,0.7s,baz=144,slow=6.2,SNR=3.8						
SONM	**Songino Array**	**53.90**	**41**	P	P	18 39 10.0	+0.2
	0.2nm,0.6s,baz=246,slow=11,SNR=2.1						
ARCES	**ARCESS Array B**	**58.44**	**348**	P	P	18 39 41.8	0.0
	2.6nm,1.0s,baz=134,slow=3.9,SNR=4.5						
H01W3	**Cape Leeuwin H**	**74.11**	**133**	T	T	20 02 37.8	
	baz=297						
H01W2	**Cape Leeuwin H**	**74.11**	**133**	T	T	20 02 38.0	
	baz=297						
H01W1	**Cape Leeuwin H**	**74.12**	**133**	T	T	20 02 37.4	
	baz=297						
WRA	**Warramunga Arr**	**84.82**	**112**	P	P	18 42 20.2	-1.4
	0.2nm,0.8s,baz=296,slow=4.8,SNR=3.0						
ASAR	**Alice Springs**	**85.53**	**116**	P	P	18 42 26.3	+1.2
	0.2nm,0.7s,baz=282,slow=6.5,SNR=2.7						

ISCJB 07 18:46:51.6±0.6,25°.33N±0°.05×96°.38E±0°.06,h25^{km}, mb3.4/10,Error ellipse: s-maj=8.6km s-min=6.4km az=36.3

NDI 07 18:46:53.7±2.4,25°.54N×96°.45E,h10^{km},ML3.0

IDC 07 18:46:54.3±5.8,25°.38N×96°.12E,h34^{km}±49^{km},mb3.3/9, mb1 3.5/10,mb1mx3.3/46,mbtmp3.5/10,ML3.0/1,Error ellipse: s-maj=46.9km s-min=17.9km az=61.0

ISC 07 18:46:53.1±0.8,25°.39N±0°.05×96°.35E±0°.06,h25^{km},n27, σ2^{s}.09/33,mb3.6/10,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOKO	**MOKOCHONG**	**1.89**	**300**	*e*P	**Pb**	**18 47 27.3**	**+0.2**
MOKO				*e*S	**Sb**	**18 47 51.2**	**+0.9**
MOKO				IAML		18 47 55.2	
	comp=E,366nm,0.5s						
MOKO				IAML		18 47 55.3	
	comp=N,316nm,0.2s						
LKP	**Lekhapani**	**1.99**	**347**	*e*P	**Pb**	**18 47 26.8**	**-1.8**
LKP				*e*S	**Sb**	**18 47 50.5**	**-2.5**
LKP				IAML		18 47 56.5	
	comp=N,124nm,0.3s						
LKP				IAML		18 47 59.9	
	comp=E,172nm,0.5s						
KOHI	**KOHIMA**	**2.05**	**280**	*e*P	**Pb**	**18 47 29.4**	**-0.3**
KOHI				*e*S	**Sb**	**18 47 52.3**	**-2.6**
KOHI				*e*S	**Sn**	**18 47 54.9**	**+3.9**
KOHI				IAML		18 48 02.5	
	comp=E,286nm,0.4s						
KOHI				IAML		18 48 03.1	
	comp=N,184nm,0.7s						
JORH	**JORHAT**	**2.32**	**306**	*e*S	**Sb**	**18 48 01.3**	**-1.2**
ZIRO	**ZIRO**	**3.09**	**314**	*e*P	**Pn**	**18 47 41.1**	**+0.7**
ZIRO				*e*S	**Sn**	**18 48 17.7**	**+1.0**
SHL	**Shillong**	**4.04**	**273**	*e*P	**Pn**	**18 47 55.2**	**+1.6**
SHL				*e*S	**Sn**	**18 48 42.5**	**+2.3**
SHL				IAML		18 48 43.3	
	comp=E,28nm,0.4s						
SHL				IAML		18 48 43.7	
	comp=N,33nm,0.2s						
SAIH	**SAIHA**	**4.22**	**228**	*e*P	Pn	18 48 00.0	+4.1
SAIH				*e*S	**Sb**	**18 48 50.8**	**-6.5**
SAIH				IAML		18 49 01.6	
	comp=N,20nm,0.7s						
SAIH				IAML		18 49 02.5	
	comp=E,19nm,0.7s						
CMAR	**Chiang Mai Arr**	**7.30**	**160**	Pn	**Pn**	**18 48 40.8**	**+2.5**
	comp=E,0.1nm,0.3s,baz=338,slow=13,SNR=2.7						
CMAR				Pg	Pb	18 49 11.6	+12
	comp=E,0.0nm,0.3s,baz=339,slow=18,SNR=2.8						
CMAR				Lg	Lg	18 50 48.0	
	comp=E,0.1nm,0.3s,baz=340,slow=27,SNR=3.3						
RAMN	**Ramite**	**8.89**	**282**	*e*P	**Pn**	**18 49 01.6**	**+1.3**
	comp=E,13nm,0.3s						
JIRN	**Jiri**	**9.38**	**286**	*e*P	**Pn**	**18 49 08.0**	**+1.0**
	comp=E,9.9nm,0.3s						
GUN	**Gumba**	**9.70**	**287**	*e*P	**Pn**	**18 49 12.2**	**+0.8**
	comp=E,18nm,0.4s						
PKI	**Pulchoki**	**10.04**	**285**	*e*P	**Pn**	**18 49 15.9**	**-0.1**
	comp=E,7.6nm,0.4s						
PKIN	**Phulchoki**	**10.05**	**285**	*e*P	**Pn**	**18 49 15.7**	**-0.5**
	comp=E,6.8nm,0.4s						
DMN	**Daman**	**10.31**	**285**	*e*P	**Pn**	**18 49 18.8**	**-0.9**
	comp=E,7.6nm,0.3s						
DANN	**Dangsing**	**11.62**	**287**	*e*P	**Pn**	**18 49 35.7**	**-1.9**
	comp=E,4.5nm,0.4s						
KOLN	**Koldanda**	**11.65**	**285**	*e*P	**Pn**	**18 49 37.0**	**-1.1**
PYUN	**Piuthan**	**12.24**	**286**	*e*P	**Pn**	**18 49 43.7**	**-2.4**
	comp=E,3.6nm,0.4s						
SONM	**Songino Array**	**23.77**	**17**	P	**P**	**18 52 04.1**	**+0.4**
	comp=E,0.2nm,0.5s,baz=212,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**24.12**	**336**	P	**P**	**18 52 07.7**	**+0.8**
	comp=E,0.5nm,0.5s,baz=139,slow=8.7,SNR=13						
AAK	**Ala-Archa**	**24.87**	**319**	P	**P**	**18 52 17.3**	**+3.4**
	comp=E,0.4nm,0.7s,baz=131,slow=20,SNR=2.7						
ZALV	**Zalesovo Beam**	**29.79**	**346**	P	**P**	**18 52 58.0**	**+0.3**
	comp=E,0.4nm,0.4s,baz=169,slow=8.8,SNR=3.6						
BRTR	**Keskin Array B**	**53.75**	**302**	P	**P**	**18 56 13.0**	**-0.6**
	comp=E,0.4nm,0.6s,baz=117,slow=4.8,SNR=2.7						
WRA	**Warramunga Arr**	**58.26**	**137**	P	**P**	**18 56 46.1**	**+0.3**
	comp=E,0.7nm,1.1s,baz=325,slow=7.3,SNR=3.4						
FINES	**FINESS Array B**	**58.62**	**328**	P	**P**	**18 56 45.7**	**-2.0**
	comp=E,1.5nm,0.9s,baz=143,slow=0.7,SNR=3.2						
ASAR	**Alice Springs**	**60.84**	**140**	P	**P**	**18 57 04.8**	**+1.3**
	comp=E,0.3nm,0.6s,baz=319,slow=6.8,SNR=4.3						
NOA	**NORSAR Array B**	**65.81**	**328**	P	**P**	**18 57 34.9**	**-1.1**
	comp=E,0.2nm,0.5s,baz=103,slow=6.5,SNR=2.8						
GERES	**GERESS Array B**	**66.63**	**314**	P	**P**	**18 57 39.5**	**-2.1**
	comp=E,0.3nm,0.5s,baz=64,slow=6.7,SNR=3.0						

IDC 07 18:48:45.8±0.8,10°.94S×165°.73E,h0^{km},mb4.0/12, mb1 4.2/14,mb1mx4.0/36,mbtmp4.0/14,ML4.7/2,MS3.8/1, Ms1 3.8/1,ms1mx3.6/50,Error ellipse: s-maj=22.1km s-min=17.3km az=122.0

ISCJB 07 18:48:48.4±0.4,11°.09S±0°.05×165°.68E±0°.05,h30^{km}, mb4.3/19,Error ellipse: s-maj=8.4km s-min=6.5km az=142.0

NEIC 07 18:48:48.8±2.5,11°.01S×165°.72E,h20^{km}±17^{km},mb4.8/9, Error ellipse: s-maj=8.6km s-min=6.8km az=221.0

ISC 07 18:48:50.2±0.6,11°.04S±0°.07×165°.71E±0°.08,h30^{km},n39, σ0^{s}.85/39,mb4.4/19,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.90**	**285**	Pn	**Pn**	**18 50 15.0**	**-0.6**
	39nm,0.3s,baz=122,slow=6.5,SNR=16						
HNR				Sn	**Sn**	**18 51 22.8**	**+0.6**
	24nm,0.3s,baz=201,slow=22,SNR=7.2						
HNR				LR	LR	18 52 31.2	
	comp=Z,811nm,20.3s,baz=28,slow=38						
DZM	**Mont Dzumac**	**10.99**	**176**	*e*Pn	**Pn**	**18 51 24.2**	**-1.3**
DZM				Sn	**Sn**	**18 53 26.8**	**-0.8**
DZM	**Mont Dzumac**	**10.99**	**176**	Pn	**Pn**	**18 51 27.1**	**+1.5**
	2.4nm,0.3s,baz=313,slow=8.8,SNR=27						
DZM				Sn	**Sn**	**18 53 26.8**	**-0.8**
	0.2nm,0.3s,baz=343,slow=19,SNR=1.7						
MSVF	**Nonsavu**	**13.67**	**121**	*e*Pn	**Pn**	**18 52 01.8**	**-0.4**
RABL	**Rabaul**	**15.05**	**296**	*e*Pn	**Pn**	**18 52 21.0**	**0.0**
	20nm,0.6s						
MANU	**Manus Island**	**20.29**	**295**	*e*P	**P**	**18 53 22.9**	**-0.9**
	60nm,0.9s						
CTA	**Charters Tower**	**20.77**	**242**	P	**P**	**18 53 28.7**	**-0.3**
	11nm,0.8s,baz=73,slow=13,SNR=8.7						
ARMA	**Armidale**	**23.30**	**212**	*e*P	**P**	**18 53 55.2**	**-0.6**
	13nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**29.36**	**2**	T	T	19 25 12.8	
	baz=181,slow=76,SNR=37						
H11S3	**WAKE ISLAND Hy**	**29.37**	**2**	T	T	19 25 13.2	
	baz=181,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	**29.38**	**2**	T	T	19 25 11.1	
	baz=181,slow=76,SNR=24						
BKZ	**Black Stump Fm**	**29.61**	**163**	*e*P	**P**	**18 54 54.0**	**+1.2**

	35nm,1.7s						
STKA	Stephens Creek	30.42	223	P	P	18 55 00.7	+0.6
	1.9nm,0.5s,baz=52,slow=9.8,SNR=9.1						
H11N1	WAKE ISLAND Hy	30.59	2	T	T	19 26 44.5	
	baz=184						
H11N3	WAKE ISLAND Hy	30.59	2	T	T	19 26 43.2	
	baz=184						
H11N2	WAKE ISLAND Hy	30.60	2	T	T	19 26 44.3	
	baz=184						
THZ	Tophouse	31.24	170	eP	P	18 55 08.1	+0.9
	23nm,1.3s						
WB2	Warramunga Arr	31.44	250	eP	P	18 55 09.0	-0.3
WR1	Warramunga Arr	31.45	250	eP	P	18 55 09.5	+0.1
	6.5nm,0.8s						
WR1				ePcP	PcP	18 58 02.5	+0.2
WRA	Warramunga Arr	31.45	250	P	P	18 55 09.5	+0.1
	4.8nm,0.7s,baz=81,slow=9.2,SNR=41						
WRA				PcP	PcP	18 58 02.5	+0.2
	0.4nm,0.9s,baz=75,slow=3.1,SNR=2.2						
AS01	Alice Springs	32.72	243	eP	P	18 55 20.7	+0.2
AS31	Alice Springs	32.76	243	eP	P	18 55 20.8	-0.1
	0.8nm,0.8s						
ASAR	Alice Springs	32.77	243	P	P	18 55 20.8	-0.1
	3.2nm,0.7s,baz=65,slow=10,SNR=41						
ASAR				PcP	PcP	18 58 05.6	-0.3
	0.8nm,1.0s,baz=72,slow=3.8,SNR=4.2						
RPZ	Rata Peaks	32.88	173	P	P	18 55 23.0	+1.5
	3.6nm,0.7s,baz=282,slow=14,SNR=3.0						
MJAR	Matsushiro Arr	53.95	333	P	P	18 58 11.8	+0.4
	1.5nm,0.8s,baz=175,slow=8.0,SNR=2.6						
MAJO	Matsushiro	53.96	333	eP	P	18 58 11.8	+0.4
CMAR	Chiang Mai Arr	72.08	294	P	P	19 00 13.4	+1.2
	0.3nm,0.5s,baz=126,slow=4.4,SNR=3.4						
SONA0	Songino Array	78.65	324	eP	P	19 00 50.0	+0.5
SONM	Songino Array	78.65	324	P	P	19 00 50.0	+0.5
	0.4nm,0.7s,baz=140,slow=4.8,SNR=2.5						
BRLK	Bradley Lake	78.65	21	eP	P	19 00 49.7	+0.6
	100nm,1.0s						
WRH	Wood River Hil	82.94	18	eP	P	19 01 10.7	-1.2
	23nm,1.8s						
HDA	Harding Lake	83.25	19	eP	P	19 01 13.0	-0.6
	28nm,1.9s						
ILAR	Eielson Array	83.52	19	P	P	19 01 13.1	-1.8
	0.8nm,1.0s,baz=226,slow=6.5,SNR=3.9						
NVAR	Mina Array Bea	86.05	50	P	P	19 01 29.7	+1.2
	3.3nm,1.2s,baz=228,slow=6.8,SNR=2.3						
MK32	Makanchi Array	93.50	317	eP	P	19 02 02.2	-0.9
MKAR	Makanchi Array	93.50	317	P	P	19 02 02.2	-0.9
	0.4nm,0.7s,baz=99,slow=4.0,SNR=5.2						
YKA	Yellowknife Ar	94.99	27	P	P	19 02 09.2	-0.3
	0.1nm,0.4s,baz=265,slow=6.0,SNR=3.2						
ARA0	ARCESS Array S	116.33	345	ePKPdf	PKiKP	19 07 29.1	-1.2
ARCES	ARCESS Array B	116.33	345	PKP	PKiKP	19 07 29.1	-1.2
	2.6nm,1.1s,baz=90,slow=1.8,SNR=3.1						

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*SOME **07** 18:52:07.5, 42°.53N×81°.20E, h15km*

*NNC **07** 18:52:07.8±1.2, 42°.57N×79°.63E, h0km, mb2.8, mpv2.6, Error ellipse: s-maj=7.7km s-min=4.2km az=136.0*

*KRNET **07** 18:52:09.3±0.1, 42°.61N×79°.54E, h15km, mb2.0*

ISC 07 18:52:07.1±1.5, **42°.54N**±0°.05×**79°.64E**±0°.04, **h16**km±10km, **n35**, σ**0^s.99**/62, **12C-4D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.63	348	P	Pb	18 52 20.8	+0.9
	19nm,0.1s						
SHLS				S	Sn	18 52 30.3	-1.2
	18nm,0.2s						
SHLS	Shalkode	0.63	348	eP	Pb	18 52 20.8	+0.9
	19nm,0.1s						
SHLS				eS	Sn	18 52 30.3	-1.2
	18nm,0.2s						
UZB	Uzynbulak	0.76	324	P	Pg	18 52 22.2	+0.2
	1.1nm,0.1s						
UZB				S	Sb	18 52 32.5	+0.2
	14nm,0.2s						
UZB	Uzynbulak	0.76	324	eP	Pg	18 52 22.2	+0.2
	1.1nm,0.1s						
UZB				eS	Sb	18 52 32.5	+0.2
	14nm,0.2s						
PDGK	Podgornoye	0.80	352	P	Pg	18 52 22.8	+0.1
	2.1nm,0.2s						
PDGK				S	Sb	18 52 33.5	+0.1
	3.2nm,0.2s						
PDGK	Podgornoye	0.80	352	⇓P	Pg	18 52 22.1	-0.7
	1.6nm,0.4s						
PDGK				⇑S	Sb	18 52 33.4	0.0
	4.3nm,0.5s						
PDGK	Podgornoye	0.80	352	⇑iP	Pg	18 52 22.6	-0.1
	baz=57						
PDGK				⇑iS	Sb	18 52 33.2	-0.2
	baz=57						
PRZ	Przheval'sk	0.92	267	⇓iP	Pg	18 52 25.6	+0.6
	baz=62						
PRZ				⇓iS	Sb	18 52 36.8	0.0
	baz=62						
KTMS	Ketmen	1.05	30	P	Pb	18 52 27.5	+0.5
	2.0nm,0.1s						
KTMS				S	Sg	18 52 41.3	+0.1
	2.3nm,0.1s						
KTMS	Ketmen	1.05	30	eP	Pb	18 52 27.5	+0.5
	2.0nm,0.1s						
KTMS				eS	Sg	18 52 41.2	+0.1
	2.3nm,0.1s						
KURS	Kuram	1.44	312	P	Pb	18 52 34.2	+0.6
	1.7nm,0.3s						
KURS				S	Sb	18 52 52.0	+0.4
	3.0nm,0.5s						
KURS	Kuram	1.44	312	eP	Pb	18 52 34.2	+0.6
	1.7nm,0.3s						
KURS				eS	Sb	18 52 52.0	+0.4
	3.0nm,0.5s						
MNBS	Baschi	1.79	330	P	Pg	18 52 40.8	-0.7
	1.0nm,0.2s						
MNBS				S	Sg	18 53 04.2	-0.5
	5.1nm,0.3s						
MNBS	Baschi	1.79	330	eP	Pg	18 52 40.8	-0.7
	1.0nm,0.2s						
MNBS				eS	Sg	18 53 04.2	-0.5
	5.1nm,0.3s						
DJR	Jarkent	1.80	3	P	Pb	18 52 40.4	+0.7
	0.4nm,0.2s						
DJR				S	Sg	18 53 05.1	0.0
	1.3nm,0.2s						
DJR	Jarkent	1.80	3	eP	Pb	18 52 40.4	+0.7
	0.4nm,0.2s						
DJR				eS	Sg	18 53 05.1	0.0
	1.3nm,0.2s						
KDJ	Kajisay	1.87	258	⇑iP	Pg	18 52 42.8	-0.2
	baz=55						
KDJ				⇑iS	Sg	18 53 06.9	-0.4
	baz=55						
KOTS	Kotyrbulak	1.98	291	Pg	Pb	18 52 44.5	+1.6
	2.5nm,0.2s						
KOTS				Lg	Lg	18 53 12.1	
	8.6nm,0.3s						
KOTS	Kotyrbulak	1.98	291	eP	Pb	18 52 44.5	+1.6
	2.5nm,0.2s						
KOTS				eS	Sg	18 53 12.1	+1.2
	8.6nm,0.3s						
MDOK	Medeo	2.00	289	⇑Pn	Pb	18 52 42.8	-0.5
	0.7nm,0.5s						
MDOK				⇑Sn	Sg	18 53 10.7	-1.0
	3.0nm,1.0s						
TNSS	Tian-Shan	2.04	285	Pg	Pb	18 52 44.9	+0.7
	2.5nm,0.4s						
TNSS				Lg	Lg	18 53 12.0	
	2.3nm,0.3s						
TNSS	Tian-Shan	2.04	285	eP	Pb	18 52 44.9	+0.7
	2.5nm,0.4s						
TNSS				eS	Sg	18 53 12.0	-0.9
	2.3nm,0.3s						
ARXS	Arharly	2.13	322	Pg	Pb	18 52 46.3	+0.8
	0.8nm,0.3s						
ARXS				Lg	Lg	18 53 14.2	
	6.3nm,0.3s						
ARXS	Arharly	2.13	322	eP	Pb	18 52 46.2	+0.8
	0.8nm,0.3s						
ARXS				eS	Sg	18 53 14.2	-1.6
	6.3nm,0.3s						
IZV	Izvestkoviy	2.28	284	Pg	Pb	18 52 49.0	+1.0
	3.4nm,0.1s						
IZV				Lg	Lg	18 53 19.2	
	6.1nm,0.2s						
IZV	Izvestkoviy	2.28	284	eP	Pb	18 52 49.0	+1.0
	3.4nm,0.1s						
IZV				eS	Sg	18 53 19.2	-1.3
	6.1nm,0.2s						
CHKK	Chushkaly	2.34	305	Pg	Pb	18 52 49.8	+0.8
	1.8nm,0.3s						
CHKK				Lg	Lg	18 53 20.2	
	4.8nm,0.2s						
CHKK	Chushkaly	2.34	305	eP	Pb	18 52 49.8	+0.8
	1.8nm,0.3s						
CHKK				eS	Sb	18 53 20.2	+2.5
	4.8nm,0.2s						
KTBS	Karatobe	2.46	299	Pg	Pb	18 52 51.6	+0.5
	0.7nm,0.2s						
KTBS				Lg	Lg	18 53 24.1	
	7.5nm,0.3s						
KTBS	Karatobe	2.46	299	eP	Pb	18 52 51.6	+0.5
	0.7nm,0.2s						
KTBS				eS	Sg	18 53 24.1	-2.2
	7.5nm,0.3s						
ULHL	Ulahol	2.53	265	⇑iP	Pb	18 52 52.0	-0.4
	baz=63						
ULHL				⇑iS	Sb	18 53 23.9	+0.5
	baz=63						
BOOM	Boomskoye usch	2.73	270	⇑iP	Pb	18 52 54.9	-0.9
	baz=69						
BOOM				⇑iS	Sb	18 53 28.3	-0.8
	baz=69						
DGS	Degeres	2.93	285	Pg	Pb	18 53 00.2	+1.1
	1.6nm,0.4s						
DGS				Lg	Lg	18 53 38.2	
	2.9nm,0.5s						
DGS	Degeres	2.93	285	eP	Pb	18 53 00.1	+1.1
	1.6nm,0.4s						
DGS				eS	Sb	18 53 38.2	+3.6
	2.9nm,0.5s						
TKM2	Tokmak 2	3.00	279	⇓Pg	Pb	18 53 00.7	+0.3
	1.0nm,0.7s						
TKM2				⇑Lg	Lg	18 53 41.3	
	0.6nm,0.5s						

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*BJI **07** 18:59:14.0, 11°.00S×165°.70E, h10km, mB6.4/75, mb5.7/76, Ms6.9/98, Ms7 6.9/90*

*IDC **07** 18:59:14.0±0.3, 10°.90S×165°.84E, h0km, mb5.6/36, mb1 5.6/38, mb1mx5.6/42, mbtmp5.6/38, ML5.7/2, MS6.6/38, Ms1 6.6/38, ms1mx6.5/48, Error ellipse: s-maj=12.1km s-min=9.5km az=115.0*

*ISCJB **07** 18:59:15.5±0.1, 10°.95S±0°.02×165°.59E±0°.02, h16km, mb5.8/150, MS6.8/216, Error ellipse: s-maj=2.3km s-min=2.2km az=43.0*

*NEIC **07** 18:59:16.3±0.1, 11°.00S×165°.66E, h11km, mb6.4/50, ME7.3, MS6.9/131, MW6.7, MW6.7, Error ellipse: s-maj=3.5km s-min=2.8km az=135.0, Moment Tensor Solution. s94 Moment tensor: Scale 10^{19}Nm; M_{rr}0.02; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-0.15; $M_{r\theta}$-0.01; $M_{\theta\phi}$-1.31; $M_{\phi r}$0.29; Best double couple: $M_0$1.40000×10^{19} NP1:ϕ_s267.00000°, δ77.00000°, λ180.00000°. NP2:ϕ_s357.00000°, δ90.00000°, λ13.00000°. Principal axes: T 1.3400, Plg9.0000°, Azm223.0000°; N 0.0200, Plg77.0000°, Azm358.0000°; P -1.3600, Plg9.0000°, Azm131.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s167.00000°, δ80.00000°, λ-15.00000°. NP2:ϕ_s260.00000°, δ75.00000°, λ-170.00000°. Principal axes: T Plg4.0000°, Azm214.0000°; N Plg0.0000°, Azm0.0000°; P Plg18.0000°, Azm123.0000°; Apparent Stress 3.36 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt strongly at Lata.

*NEIC **07** 18:59:16.0±0.0, 10°.80S×165°.56E, h11km, Moment Tensor Solution. s53 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.25; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-0.02; $M_{r\theta}$-0.69; $M_{\theta\phi}$-1.20; $M_{\phi r}$-0.19; Best double couple: $M_0$1.40000×10^{19} NP1: ϕ_s89.00000°, δ81.00000°, λ-148.00000°. NP2: ϕ_s354.00000°, δ59.00000°, λ-10.00000°. Principal axes: T 1.4300, Plg14.0000°, Azm218.0000°; N -0.0200, Plg57.0000°, Azm104.0000°; P -1.4100, Plg28.0000°, Azm316.0000°;*

*MOS **07** 18:59:18.7±1.2, 10°.89S×165°.62E, h35km, mb6.0/66, MS6.8/72 Error ellipse: s-maj=6.7km s-min=5.6km az=85.4*

*GCMT **07** 18:59:23.3±0.0, 10°.94S×165°.59E, h15km, MW6.7/153, Moment Tensor Solution. s149,c388; s153,c695; Duration: 5^s.7 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.27±.01; $M_{\theta\theta}$0.37±.01; $M_{\phi\phi}$-0.10±.01; $M_{r\theta}$-0.44±.02; $M_{\theta\phi}$-1.29±.01; $M_{\phi r}$0.82±.03; Best double couple: $M_0$1.56900×10^{19} NP1:ϕ_s172.00000°, δ90.00000°, λ-34.00000°. NP2:ϕ_s262.00000°, δ56.00000°, λ-180.00000°. Principal axes: T 1.8070, Plg23.0000°, Azm223.0000°; N -0.4770, Plg56.0000°, Azm352.0000°; P -1.3300, Plg23.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 07 18:59:16.6±0.5, **11°.02S**±0°.03×**165°.71E**±0°.03, **h14**km±2km, **n1354**, σ**1^s.79**/1398, **mb5.9**/151, **MS6.8**/226, **82C-34D**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.89	285	ePn	Pn	19 00 44.9	+1.3
	12µm,0.7s						
HNR				Sn	Sn	19 01 53.1	+2.2
HNR	Honiara	5.89	285	P	Pn	19 00 44.8	+1.3
HNR						19 01 53.1	
HNR				pmax	pmax		
	comp=Z,515nm,0.3s						
HNR				smax	smax		
	comp=N,219nm,0.3s						
HNR				MLR	MLR		
	comp=Z,409µm,21.0s						
HNR	Honiara	5.89	285	Pn	Pn	19 00 44.8	+1.3
	comp=Z,515nm,0.3s,baz=152,slow=3.8,SNR=157						
HNR				Sn	Sn	19 01 53.1	+2.2
	comp=Z,219nm,0.3s,baz=192,slow=20,SNR=2.8						
HNR				LR	LR	19 03 02.2	
	comp=Z,1409µm,21.0s,baz=68,slow=38						
MARNC	Mare, Loyalty	10.64	168	ePn	Pn	19 01 49.3	+0.6
DZM	Mont Dzumac	11.01	176	Pn	Pn	19 01 53.9	0.0
	comp=Z,22nm,0.3s,baz=153,slow=21,SNR=117						
DZM				Sn	Sn	19 03 54.3	-2.7
	baz=307,slow=20,SNR=1.6						
DZM				LR	LR	19 05 45.1	
	comp=Z,379µm,19.8s,baz=5.0,slow=35						
PINNC	Pines Island,	11.65	172	ePn	Pn	19 02 04.1	+1.6
FUNA	Funafuti	13.52	81	ePn	Pn	19 02 28.3	+0.1
	comp=Z,2µm,0.9s						
MSVF	Nonsavu	13.69	121	ePn	Pn	19 02 32.3	+1.8
MSVF	Nonsavu	13.69	121	d iP	Pn	19 02 32.5	+2.0
MSVF				MLR	MLR		
	comp=Z,460µm,15.0s						
TARA	Tarawa	14.23	31	ePn	Pn	19 02 36.9	-1.1
RABL	Rabaul	15.04	296	ePn	Pn	19 02 49.1	+0.2
NFK	Norfolk Island	18.05	174	P	P	19 03 30.2	+2.6
	baz=18,SNR=4.4						
PATS	Pohnpei	19.21	337	P	Pn	19 03 41.9	+0.7
	baz=19,SNR=17						
PATS	Pohnpei	19.21	337	eP	Pn	19 03 41.8	+0.5
KWAJ	Kwajalein Atol	19.78	6	eP	Pn	19 03 47.8	-0.4
	comp=Z,2µm,0.8s						
KWAJ	Kwajalein Atol	19.78	6	eP	Pn	19 03 47.8	-0.4
KWAJ				pmax	pmax		
	comp=Z,2µm,0.8s						
EIDS	Eidsvold	19.89	222	P	Pn	19 03 50.4	+1.0
	baz=20,SNR=84						
EIDS	Eidsvold	19.89	222	eP	P	19 03 48.5	+0.7
MANU	Manus Island	20.27	295	eP	P	19 03 53.0	+0.9
CTA	Charters Tower	20.78	242	P	Pn	19 03 58.9	-1.0
	comp=Z,198nm,0.8s,baz=72,slow=12,SNR=67						
CTA				S	Sn	19 07 55.5	+1.0
	comp=Z,14nm,0.9s,baz=30,slow=20,SNR=2.9						
CTA				LR	LR	19 10 45.5	
	comp=Z,346µm,20.7s,baz=60,slow=33						
CTAO	Charters Tower	20.78	242	eP	Pn	19 03 58.6	-1.3
	comp=Z,7µm,1.2s						
CTAO				LR	LR		
	comp=Z,470µm,20.0s						
CTAO	Charters Tower	20.78	242	eP	Pn	19 03 58.7	-1.2
CTAO				pmax	pmax		
	comp=Z,7µm,1.2s						
CTAO				MLR	MLR		
	comp=Z,470µm,20.0s						
LHI	Lord Howe Isla	21.31	196	P	P	19 04 06.7	+3.6
	baz=22,SNR=7.7						
LHI	Lord Howe Isla	21.31	196	eP	P	19 04 04.2	+1.2
MTSU	Mount Surprise	21.86	249	P	P	19 04 10.7	+1.5
	baz=22,SNR=316						
RMQ	Roma	22.19	224	P	P	19 04 13.7	+1.1
	baz=22,SNR=300						
COEN	Coen	22.19	260	P	P	19 04 12.7	0.0
	baz=22,SNR=88						
COEN	Coen	22.19	260	eP	P	19 04 13.0	+0.2
ARMA	Armidale	23.32	212	P	P	19 04 25.3	+0.7
	baz=24,SNR=91						
ARMA	Armidale	23.32	212	eP	P	19 04 25.1	+0.6
RAO	Raoul Island	23.72	142	LR	LR	19 11 54.4	
	comp=Z,186µm,19.6s,baz=312,slow=32						
KNTN	Kanton	23.84	72	eP	P	19 04 30.3	+0.6
NIUE	Niue	24.83	112	P	P	19 04 39.6	+0.8
	baz=25,SNR=3.5						
NIUE	Niue	24.83	112	eP	P	19 04 39.2	+0.4
OUZ	Omahuta	25.14	165	eP	P	19 04 43.5	+2.2
QLP	Quilpie	25.48	230	P	P	19 04 45.4	+0.8
	baz=26,SNR=38						
MGCD	Mangrove Creek	25.84	209	P	P	19 04 49.7	+2.0
	baz=26,SNR=20						
JAY	Jayapura	26.20	287	P	P	19 04 49.1	-2.2
RIV	Riverview	26.32	208	P	P	19 04 54.7	+2.6
	baz=26,SNR=18						
GENI	Genyem	26.68	286	P	P	19 04 54.0	-1.6
QIS	Mount Isa	26.81	246	P	P	19 04 56.5	-0.2
	baz=27,SNR=79						
CMSA	Cobar Meteorol	27.56	219	P	P	19 05 03.6	+0.3
	baz=28,SNR=78						
TOZ	Tahuroa Road	28.01	163	P	P	19 05 08.8	+1.6
YNG	Young	28.05	212	P	P	19 05 08.6	+0.9
	baz=28,SNR=18						
TGRZ	Tauranga	28.23	162	P	P	19 05 14.7	+5.5
KMRZ	Kaimai	28.25	163	P	P	19 05 13.1	+3.7
CNB	Canberra Magne	28.38	209	P	P	19 05 11.6	+0.9
	baz=29,SNR=30						
OPRZ	Ohinepanea	28.43	162	P	P	19 05 14.4	+3.5
CAN	Canberra	28.56	209	eP	P	19 05 13.0	+0.7
CAN	Canberra	28.56	209	eP	P	19 05 13.0	+0.7
WHRZ	Whale Island	28.57	161	P	P	19 05 15.1	+2.9
HIZ	Hauiti	28.57	165	eP	P	19 05 13.8	+1.5
HIZ	Hauiti	28.57	165	P	P	19 05 14.3	+2.1
TLZ	Tolley Road	28.58	164	P	P	19 05 14.9	+2.5
MARZ	Manawahe	28.59	162	P	P	19 05 17.4	+5.0
OMRZ	Omania	28.61	162	P	P	19 05 16.4	+3.7
HAZ	Te Kaha	28.75	160	P	P	19 05 15.8	+2.0
MXZ	Matakaoa Point	28.75	159	eP	P	19 05 15.2	+1.4
MXZ	Matakaoa Point	28.75	159	P	P	19 05 15.1	+1.2
GRRZ	Galatos Road	28.76	163	P	P	19 05 19.3	+5.3
TARZ	Mount Tarawera	28.77	162	P	P	19 05 19.9	+5.8
HRRZ	Handcock Road	28.85	163	P	P	19 05 18.7	+4.0
RRRZ	Republican Roa	28.87	162	P	P	19 05 19.6	+4.7
RUGZ	Raukumara Rang	28.90	160	P	P	19 05 16.3	+1.0
PKGZ	Pakihiroa	28.96	160	P	P	19 05 17.5	+1.7
URZ	Urewera	28.98	161	eP	P	19 05 15.2	-0.7
URZ				eS	S	19 10 12.3	+5.8
URZ	Urewera	28.98	161	P	P	19 05 16.1	+0.2
	comp=Z,42nm,0.4s,baz=267,slow=3.6,SNR=49						
URZ	Urewera	28.98	161	P	P	19 05 16.1	+0.2
WATZ	Wairara	28.99	164	P	P	19 05 18.4	+2.4
WHTZ	Whakaora	29.01	163	P	P	19 05 19.6	+3.3
MUGZ	Murupara	29.08	162	P	P	19 05 19.0	+2.3
KHEZ	Kahui Hut	29.11	167	P	P	19 05 20.7	+3.6
VRZ	Vera Road	29.13	165	P	P	19 05 21.0	+3.9
RATZ	Rangitukua	29.15	164	P	P	19 05 19.7	+2.3
MWZ	Matawai	29.18	161	P	P	19 05 19.7	+2.0
PUZ	Puketiti	29.19	159	P	P	19 05 19.0	+1.3
TWGZ	Tauwhareparae	29.19	160	P	P	19 05 18.1	+0.3
KATZ	Kakaramea	29.23	164	P	P	19 05 20.4	+2.2
TWVZ	Taurewa	29.25	164	P	P	19 05 20.2	+1.8
RTZ	Ruatahuna	29.27	162	P	P	19 05 19.2	+0.7
RAGZ	Rawiri	29.30	161	P	P	19 05 20.4	+1.7
MRHZ	Matea Rd	29.30	163	P	P	19 05 21.0	+2.2
KRVZ	Karewarewa	29.33	164	P	P	19 05 21.6	+2.6
WTVZ	West Tongariro	29.33	164	P	P	19 05 21.8	+2.7
H11S2	WAKE ISLAND Hy	29.34	2	T	T	19 35 42.5	
	baz=182						
H11S3	WAKE ISLAND Hy	29.34	2	T	T	19 35 41.4	
	baz=182						
H11S1	WAKE ISLAND Hy	29.36	2	T	T	19 35 42.1	
	baz=182						
TKGZ	Te Karaka	29.38	160	P	P	19 05 20.9	+1.5
NGZ	Ngauruhoe	29.39	164	P	P	19 05 22.5	+2.8
COVZ	Chateau Observ	29.40	164	P	P	19 05 22.3	+2.6
PKVZ	Pokaka	29.43	165	P	P	19 05 22.5	+2.5
MTHZ	Maungataniwha	29.44	162	P	P	19 05 20.8	+0.8
FWVZ	Far West T-bar	29.45	164	P	P	19 05 22.2	+1.9
WHVZ	Whangaehu Hut	29.49	164	P	P	19 05 22.6	+2.0
TUVZ	Tukino	29.49	164	P	P	19 05 23.3	+2.7
TRVZ	Turoa	29.49	164	P	P	19 05 22.8	+2.1
SNGZ	Shannon Statio	29.53	161	P	P	19 05 21.1	+0.3
CNGZ	Carnagh Statio	29.55	160	P	P	19 05 22.6	+1.7
MTVZ	Mangateitei	29.55	165	P	P	19 05 23.3	+2.2
RAHZ	Arahi	29.58	162	P	P	19 05 22.0	+0.8
RIGZ	Rimuhau	29.60	161	P	P	19 05 22.7	+1.3
BKZ	Black Stump Fm	29.63	163	eP	P	19 05 21.5	-0.2
BKZ	Black Stump Fm	29.63	163	P	P	19 05 22.0	+0.3
MOVZ	Moawhango	29.65	164	P	P	19 05 23.0	+1.1
NMHZ	Naumai	29.66	162	P	P	19 05 24.2	+2.2
WHHZ	Waihua	29.77	162	P	P	19 05 23.2	+0.4
WAZ	Wanganui	29.78	166	P	P	19 05 27.3	+4.4
BHHZ	Black Hill Sta	29.81	164	P	P	19 05 24.1	+0.8
KNZ	Kokohu	29.86	161	P	P	19 05 25.2	+1.6
ARHZ	Aropaoanui	29.87	162	P	P	19 05 25.2	+1.5
MILA	Mila	29.91	207	P	P	19 05 27.7	+3.6
	baz=30,SNR=7.6						
WAKE	Wake Island	30.13	2	PFAKE		19 05 40.0	+14
WAKE				LR	LR		
	comp=Z,148µm,22.0s						
STKA	Stephens Creek	30.43	223	P	P	19 05 29.2	+0.4
	baz=31,SNR=112						
STKA	Stephens Creek	30.43	223	eP	P	19 05 29.3	+0.4
STKA				PcP	PcP	19 08 29.8	+1.4
STKA				ScP	ScP	19 12 13.4	+2.7
STKA	Stephens Creek	30.43	223	eP	P	19 05 29.3	+0.4
STKA						19 08 29.8	
STKA						19 12 13.4	
STKA	Stephens Creek	30.43	223	P	P	19 05 30.2	+1.4
	comp=Z,77nm,0.8s,baz=30,slow=10,SNR=76						
STKA				PcP	PcP	19 08 29.8	+1.4
	comp=Z,29nm,0.8s,baz=114,slow=5.9,SNR=2.8						
STKA				ScP	ScP	19 12 13.4	+2.7
	comp=Z,29nm,1.1s,baz=327,slow=20,SNR=4.1						
STKA				LR	LR	19 16 48.5	
	comp=Z,395µm,19.7s,baz=42,slow=34						
H11N1	WAKE ISLAND Hy	30.56	2	T	T	19 37 12.0	
	baz=183						
H11N3	WAKE ISLAND Hy	30.57	2	T	T	19 37 13.1	
	baz=183						
H11N2	WAKE ISLAND Hy	30.58	2	T	T	19 37 10.6	
	baz=183						
SRPI	Serui, Papua	30.63	285	P	P	19 05 29.3	-1.5
BAKI	Biak	30.97	286	P	P	19 05 32.3	-1.5
BFZ	Birch Farm	30.98	164	eP	P	19 05 32.8	-0.7
BFZ				eS	S	19 10 40.3	+2.5
SNZO	South Karori	31.19	167	eP	P	19 05 34.7	-0.7
	comp=Z,6µm,1.6s						
SNZO				LR	LR		
	comp=Z,133µm,19.0s						
THZ	Tophouse	31.27	170	eP	P	19 05 36.4	+0.2
THZ				eS	S	19 10 48.7	+6.3
WRAB	Tennant Creek	31.45	250	eP	P	19 05 37.1	-0.8
	comp=Z,2µm,1.6s						
WRAB				LR	LR		
	comp=Z,245µm,19.0s						
WRAB	Tennant Creek	31.45	250	ceP	P	19 05 37.2	-0.8
WRAB				pmax	pmax		
	comp=Z,428nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,403µm,16.0s						
WB2	Warramunga Arr	31.45	250	eP	P	19 05 36.7	-1.2
WRA	Warramunga Arr	31.46	250	P	P	19 05 37.8	-0.3
	comp=Z,172nm,0.7s,baz=80,slow=9.2,SNR=335						
WRA				PcP	PcP	19 08 32.9	+1.5
	comp=Z,28nm,0.9s,baz=75,slow=3.2,SNR=5.4						
WRA				ScP	ScP	19 12 17.3	+2.9
	comp=Z,24nm,1.1s,baz=72,slow=3.8,SNR=9.1						
WRA				LR	LR	19 16 53.9	
	comp=Z,190µm,21.6s,baz=75,slow=34						
WRA				P3KPbc		19 37 16.1	
	comp=Z,1.0nm,0.8s,baz=264,slow=2.1,SNR=4.6						

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KHZ   Kahutara          32.02 169 eP     P      19 05 42.1  -0.5
GUMO  Guam              32.02 319  P     P      19 05 40.5  -2.4
GUMO                              eP     P      19 05 43.3  +0.4
GUMO  Guam              32.02 319  P     P      19 05 40.5  -2.4
      comp=Z,150nm,0.7s,baz=216,slow=19,SNR=3.2
GUMO                               LR    LR     19 18 07.6
      comp=Z,88µm,18.2s,baz=154,slow=35
TOO   Toolangi          32.07 211  P     P      19 05 43.8  +0.5
      baz=32,SNR=46
TOO   Toolangi          32.07 211 eP     P      19 05 44.2  +0.9
TOO   Toolangi          32.07 211 eP     P      19 05 44.2  +0.9
LTZ   Lake Taylor       32.16 171 eP     P      19 05 43.8  -0.1
LTZ                               eS     S      19 11 00.0  +3.8
KDU   Kakadu            32.56 264  P     P      19 05 46.3  -1.4
      baz=33,SNR=33
FOZ   Fox Glacier       32.59 174 eP     P      19 05 48.7  +1.1
OXZ   Oxford            32.65 171 eP     P      19 05 48.6  +0.4
RKPI  Ransiki, Papua    32.70 285  P     P      19 05 48.6  -0.4
AS01  Alice Springs     32.73 243 eP     P      19 05 47.2  -2.0
AS31  Alice Springs     32.77 243 eP     P      19 05 48.9  -0.7
ASAR  Alice Springs     32.77 243  P     P      19 05 49.0  -0.6
      comp=Z,75nm,0.7s,baz=67,slow=9.9,SNR=251
ASAR                               PcP   PcP    19 08 35.6  +0.7
      comp=Z,67nm,1.1s,baz=76,slow=3.2,SNR=7.6
ASAR                               ScP   ScP    19 12 22.4  +3.7
      comp=Z,24nm,1.1s,baz=80,slow=3.2,SNR=9.0
ASAR                               LR    LR     19 18 01.7
      comp=Z,269µm,20.4s,baz=74,slow=34
ASAR                               P3KPbc       19 37 08.6
      comp=Z,2.4nm,0.8s,baz=260,slow=3.1,SNR=11
RPZ   Rata Peaks        32.90 173 eP     P      19 05 50.4   0.0
RPZ   Rata Peaks        32.90 173  P     P      19 05 50.0  -0.4
      comp=Z,338nm,0.8s,baz=355,slow=1.1,SNR=78
RPZ                                LR    LR     19 18 26.9
      comp=Z,132µm,19.8s,baz=346,slow=35
CRLZ  Canterbury Las    32.98 171 eP     P      19 05 51.1   0.0
MQZ   McQueen's Vall    33.12 171 eP     P      19 05 52.1  -0.2
MQZ                               eS     S      19 11 13.1  +2.0
HTT   Hallett           33.17 224  P     P      19 05 53.2  +0.3
      baz=33,SNR=48
LBZ   Lake Benmore      33.47 174 eP     P      19 05 54.5  -0.8
ARPS  Mount Arapiles    33.48 216  P     P      19 05 56.2  +0.7
      baz=34,SNR=32
WKZ   Wanaka            33.81 176 eP     P      19 06 00.2  +1.9
SAUI  Saumlaki          34.06 272 eP     P      19 06 00.6  -0.3
SAUI  Saumlaki          34.06 272  P     P      19 05 58.4  -2.5
FAKI  Fak Fak           34.14 281 eP     P      19 06 01.4  -0.1
FAKI  Fak Fak           34.14 281  P     P      19 05 59.4  -2.2
ODZ   Otahua Downs      34.17 174 eP     P      19 06 00.6  -0.8
MLZ   Mavora Lakes      34.29 177 eP     P      19 06 03.7  +1.2
DCZ   Deep Cove         34.35 178 eP     P      19 06 03.4  +0.5
RAR   Rarotonga         34.60 111  LR    LR     19 17 57.3
      comp=Z,40µm,20.2s,baz=277,slow=32
WHZ   Wether Hill Ro    34.80 177 eP     P      19 06 07.8  +0.8
BBOO  Buckleboo         34.82 227  P     P      19 06 07.0  -0.2
      baz=35,SNR=80
BBOO  Buckleboo         34.82 227 eP     P      19 06 07.1  -0.2
MOO   Moorlands         35.23 204  P     P      19 06 13.2  +2.5
      baz=35,SNR=11
TAU   Tasmania Unive    35.58 203 eP     P      19 06 13.5  -0.1
      comp=Z,516nm,1.5s
TAU                                LR    LR
      comp=Z,81µm,19.0s
TAU   Tasmania Unive    35.58 203 eP     P      19 06 13.5  -0.1
TAU                                pmax  pmax
      comp=Z,516nm,1.5s
TAU                                MLR   MLR
      comp=Z,81µm,19.0s
SWI   Sorong            35.67 284  P     P      19 06 14.1  -0.7
BNDI  Bandanaira        36.03 277  P     P      19 06 15.8  -2.1
PALU  Palau             36.04 299  P     P      19 06 18.9  +0.9
      baz=36,SNR=8.6
KNRA  Kununurra         36.21 259  P     P      19 06 19.1  -0.3
      baz=36,SNR=33
JOHN  Johnston Islan    36.88  42  PFAKE        19 06 40.0  +15
JOHN                               LR    LR
      comp=Z,14µm,22.0s
WRKA  Warakurna         38.06 243  P     P      19 06 34.7  -0.4
      baz=38,SNR=255
FITZ  Fitzroy Crossi    39.35 255  P     P      19 06 44.9  -1.0
      baz=39,SNR=131
FITZ  Fitzroy Crossi    39.35 255 eP     P      19 06 45.8  -0.2
TNTI  Ternate           39.88 285 eP     P      19 06 49.7  -0.6
TNTI  Ternate           39.88 285  P     P      19 06 48.7  -1.7
FORT  Forrest           40.03 235  P     P      19 06 51.6  +0.3
      baz=40,SNR=56
FORT  Forrest           40.03 235 eP     P      19 06 51.7  +0.3
SANI  Sanana            40.41 280  P     P      19 06 53.9  -0.9
      comp=Z,284nm,1.3s,comp=Z,12µmcomp=Z,52µm
SOEI  Soe               40.76 268  P     P      19 06 57.1  -0.7
BATI  Baumata           41.31 267  P     P      19 07 02.1  -0.2
MIDW  Midway            42.30  22  PFAKE        19 07 20.0  +10
MIDW                               LR    LR
      comp=Z,145µm,20.0s
SGSI  Sangihe           42.57 288  P     P      19 07 12.2  -0.3
MMRI  Maumere           42.87 269 eP     P      19 07 13.4  -1.6
MMRI  Maumere           42.87 269  P     P      19 07 13.2  -1.8
BBSI  Bau Bau           43.01 274  P     P      19 07 16.3  +0.2
KMSI  Cibinong          43.05 283  P     P      19 07 16.2  -0.2
      comp=Z,1µm,1.1s,comp=Z,18µmcomp=Z,46µm
KDI   Kendari           43.25 276  P     P      19 07 17.1  -1.0
EDFI  Ende, Flores      43.40 269  P     P      19 07 17.4  -2.0
PAE   Paea              43.74 104 eP     P      19 07 24.5  +2.6
      comp=Z,40nm,1.3s
PPT   Papeete           43.74 104  LR    LR     19 22 25.4
      comp=Z,47µm,18.6s,baz=276,slow=32
PPT2  Papeete2          43.74 104 eP     P      19 07 24.8  +2.8
      comp=Z,245nm,1.3s
LUWI  Luwuk             43.77 280 eP     P      19 07 21.8  -0.5
LUWI  Luwuk             43.77 280  P     P      19 07 21.5  -0.8
DAV   Davao City (W)    43.80 292  PFAKE        19 07 30.0  +7.6
DAV                                LR    LR
      comp=Z,41µm,19.0s
TIAR  Tiarei            43.96 104 eP     P      19 07 26.5  +2.8
      comp=Z,35nm,0.9s
TVO   Taravao           44.06 104 eP     P      19 07 27.4  +2.8
      comp=Z,48nm,1.1s
KCP   Kidapawan         44.22 292⇑eP     P      19 07 27.2  +1.3
CBIJ  Chichi jima       44.24 329  P     P      19 07 24.7  -1.0
JCJ   Chichijima        44.24 329  P     P      19 07 24.7  -1.0
      comp=Z,70nm,0.5s,baz=207,slow=4.5,SNR=2.7
BASI  Baing, Sumba      44.33 267  P     P      19 07 26.1  -0.7
WSI   Waingapu          44.66 267  P     P      19 07 28.6  -0.8
APSI  Ampana            44.89 280  P     P      19 07 31.2   0.0
      comp=Z,232nm,1.4s,comp=Z,5µmcomp=Z,30µm
MRSI  Marisa            44.98 282  P     P      19 07 29.8  -2.1
CTBH  Cotabato--PC H    45.07 292⇑eP     P      19 07 32.0  -0.6
CGP   Cagayan de Oro    45.16 294 eP     P      19 07 35.7  +2.3
MBWA  Marble Bar        45.17 251 eP     P      19 07 34.0  +0.6
      comp=Z,3µm,1.4s
MBWA                               LR    LR
      comp=Z,136µm,20.0s
MBWA  Marble Bar        45.17 251  P     P      19 07 33.5  +0.1
      SNR=13
PMOR  Pomariorio Ree    45.32 100 eP     P      19 07 36.5  +1.9
      comp=Z,260nm,1.2s
BKSI  Bulukumba         45.44 273  P     P      19 07 34.3  -1.3
BNSI  Bone              45.62 275  P     P      19 07 36.7  -0.3
KAPI  Kappang           45.86 274  PFAKE        19 07 50.0  +11
KAPI                               LR    LR
      comp=Z,48µm,19.0s
SPSI  Sidrap Palu       46.04 275  P     P      19 07 39.1  -1.2
      comp=Z,120nm,1.3s,comp=Z,4µmcomp=Z,23µm
PLP   Palo              46.09 297⇑eP     P      19 07 39.9  -0.8
TTSI  Tana Toraja       46.17 276  P     P      19 07 40.2  -1.2
PCI   Palu              46.65 279  P     P      19 07 46.1  +1.0
      comp=Z,580nm,1.0s,comp=Z,13µm
SNPH  Sibulan           46.84 294 eP     P      19 07 52.3  +5.7
MPSI  Mapaga            46.90 281  P     P      19 07 46.0  -1.1
      comp=Z,124nm,0.8s,comp=Z,3µmcomp=Z,25µm
MEEK  Meekatharra       46.92 244  P     P      19 07 48.0  +0.8
      baz=47,SNR=196
KEKH  Kekaha            47.19  46 eP     P      19 07 50.6  +1.4
PLAI  Plampang          47.23 268  P     P      19 07 48.1  -1.6
KIP   Kipapa            48.05  48 eP     P      19 07 58.0  +2.2
      comp=Z,3µm,1.3s
KIP                                LR    LR
      comp=Z,140µm,22.0s
KIP   Kipapa            48.05  48ceP     P      19 07 57.3  +1.4
KIP                                pmax  pmax
      comp=Z,267nm,1.7s
OPA   Opana             48.22  48 eP     P      19 07 58.7  +1.5
OPA   Opana             48.22  48 eP     P      19 07 58.7  +1.5
RCP   Roxas             48.22 296⇓eP     P      19 08 02.0  +4.7
KHLU  Kahalu`u          48.54  51 eP     P      19 08 01.2  +1.4
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KHU   Kahuku            48.55  52 eP     P      19 08 02.5  +2.4
KHU   Kahuku            48.55  52 eP     P      19 08 02.5  +2.4
KLBR  Kellerberrin      48.69 238  P     P      19 08 00.8   0.0
      baz=49,SNR=43
MWH   Moku‘aweowe       48.70  52 eP     P      19 08 01.9  +0.4
AIN   Ainahou           48.75  52 eP     P      19 08 02.8  +1.3
MLOA  Mauna Loa Obse    48.75  52 eP     P      19 08 04.2  +2.4
HMH   Humu‘ula Sheep    48.86  52 eP     P      19 08 03.4  +0.9
MLH   Mauna Loa         48.87  52 eP     P      19 08 02.8  +0.3
MLH   Mauna Loa         48.87  52 eP     P      19 08 02.8  +0.3
WRMHI West Rim          48.89  52 eP     P      19 08 04.8  +2.3
KHLH  Kahului Airpor    48.90  50 eP     P      19 08 03.7  +1.3
POHA  Pohakuloa         48.91  51 eP     P      19 08 04.2  +1.4
      comp=Z,3µm,1.3s
POHA                               LR    LR
      comp=Z,114µm,21.0s
PUH   Pauahi            48.94  52 eP     P      19 08 04.0  +1.2
HPAH  Hawaii Prepara    48.94  51 eP     P      19 08 03.2  +0.3
HLK   Haleakala         48.95  50 eP     P      19 08 05.2  +2.0
SMKI  Samarinda         49.31 279  P     P      19 08 05.4  -0.3
BLDU  Ballidu           49.34 239  P     P      19 08 06.2  +0.4
      baz=49,SNR=26
BKB   Balikpapan        49.42 278  P     P      19 08 07.5  +0.9
NWAO  Narrogin (SRO)    49.45 236  P     P      19 08 07.2  +0.7
      baz=50,SNR=28
NWAO  Narrogin (SRO)    49.45 236 eP     P      19 08 06.9  +0.4
      comp=Z,5µm,1.7s
NWAO                               LR    LR
      comp=Z,308µm,19.0s
NWAO  Narrogin (SRO)    49.45 236 eP     P      19 08 06.9  +0.4
NWAO                               MLR   MLR
      comp=Z,308µm,19.0s
NWAO  Narrogin (SRO)    49.45 236  P     P      19 08 06.3  -0.2
      SNR=24
MORW  Morawa            49.60 241  P     P      19 08 07.7  -0.1
      baz=50,SNR=36
MORW  Morawa            49.60 241 eP     P      19 08 08.4  +0.6
KBKI  Kotabaru          49.69 275  P     P      19 08 07.0  -1.7
DNP   Denpasar          49.76 268  P     P      19 08 07.6  -1.6
SRBI  Singaraja         49.84 269  P     P      19 08 08.3  -1.5
MUN   Mundaring         50.06 237  P     P      19 08 11.7  +0.5
      baz=50,SNR=40
RKGY  Rocky Gully       50.09 234  P     P      19 08 12.7  +1.2
      baz=50,SNR=6.3
GIRL  Giralia           50.38 250  P     P      19 08 13.7  -0.1
      baz=50,SNR=7.8
JAGI  Jajag, Banyuwa    50.83 268 eP     P      19 08 15.2  -2.1
JAGI  Jajag, Banyuwa    50.83 268  P     P      19 08 14.8  -2.5
TGY   Tagaytay City     50.93 298  P     P      19 08 18.6  +0.6
      comp=Z,66nm,0.3s,baz=166,slow=8.3
BALP  Baler             51.14 301 eP     P      19 08 16.4  -3.1
GMJI  Gumukmas          51.55 268  P     P      19 08 20.9  -1.8
BATP  Bataraza          51.56 291 eP     P      19 08 21.6  -1.2
KKM   Kota Kinabalu     52.09 287 eP     P      19 08 26.7  -0.2
JOW   Kunigami          52.31 317 eP     P      19 08 30.4  +2.2
H01W1 Cape Leeuwin H    52.41 234  P     P      19 08 29.4  +0.8
      baz=100,slow=6.9,SNR=6.1
H01W3 Cape Leeuwin H    52.42 234  P     P      19 08 29.6  +0.9
      baz=100,slow=6.9,SNR=3.9
H01W2 Cape Leeuwin H    52.43 234  P     P      19 08 29.1  +0.3
      baz=100,slow=6.9,SNR=5.7
APYP  Conner            52.45 303 eP     P      19 08 27.9  -1.4
ABRA  Dolores           52.79 302 eP     P      19 08 30.8  -1.0
PWJI  Pagerwojo         53.19 268  P     P      19 08 33.7  -1.2
INU   Inuyama           53.51 331 eP     P      19 08 37.0  +0.1
PCJI  Pacitan           53.78 268  P     P      19 08 38.9  -0.3
MJAR  Matsushiro Arr    53.93 333  P     P      19 08 38.8  -1.1
      comp=Z,48nm,1.1s,baz=168,slow=8.7,SNR=43
MAJO  Matsushiro        53.93 333 eP     P      19 08 39.2  -0.7
      comp=Z,282nm,1.2s
MAJO                               LR    LR
      comp=Z,70µm,20.0s
MAJO  Matsushiro        53.93 333 eP     P      19 08 36.8  -3.1
MAJO                               pmax  pmax
      comp=Z,52nm,1.1s
MAT   Matsushiro        53.93 333  P     P      19 08 38.3  -1.6
MAT                                S     S      19 16 16.8  +1.6
MJB9  Matsu-Tunnel      53.94 333 eP     P      19 08 39.3  -0.7
UGM   Wanagama          54.46 268 eP     P      19 08 43.8  -0.5
UGM   Wanagama          54.46 268  P     P      19 08 43.8  -0.5
SMRI  Semarang          54.66 269 eP     P      19 08 45.7  -0.1
SMRI  Semarang          54.66 269  P     P      19 08 44.2  -1.5
SBUM  Sibu              54.86 281 eP     P      19 08 47.3  +0.1
JNU   Nakatsue          55.04 324  P     P      19 08 47.5  -0.6
      comp=Z,59nm,0.7s,baz=108,slow=2.8,SNR=35
JNU                                LR    LR     19 31 53.7
      comp=Z,34µm,18.1s,baz=170,slow=36
YULB  Yu-li             55.29 309 eP     P      19 08 52.2  +2.2
NACB  Ninganchiao       55.50 310 eP     P      19 08 52.9  +1.4
TPUB  Ta-pu             55.76 308 eP     P      19 08 53.0  -0.5
SSLB  Suanglung         55.77 309 eP     P      19 08 54.8  +1.2
YHNB  Yeheng            55.94 310 eP     P      19 08 55.7  +0.9
TATO  Taipei            56.02 310  PFAKE        19 09 10.0  +15
TATO                               LR    LR
      comp=Z,121µm,19.0s
KPJI  Karang Pucung     56.10 269  P     P      19 08 55.8  -0.3
KSM   Kuching           56.46 279 eP     P      19 08 57.9  -0.8
ERM   Erimo             56.70 340  PFAKE        19 09 10.0  +10
ERM                                LR    LR
      comp=Z,54µm,21.0s
ERM   Erimo             56.70 340 i P    P      19 09 02.5  +2.8
ERM                                pmax  pmax
      comp=Z,57nm,1.0s
CISI  Cisompet, Garu    57.17 268 eP     P      19 09 02.4  -1.3
CISI  Cisompet, Garu    57.17 268  P     P      19 09 02.0  -1.7
LEM   Lembang           57.47 269  P     P      19 09 06.3  +0.3
      comp=Z,4µm,1.3s,comp=Z,92µmcomp=Z,307µm
RKT   Rikitea           57.63 110 eS     S      19 17 07.4  +2.4
      comp=Z,38µm,33.5s
RKT                               eSS    SS     19 21 00.3  +4.9
      comp=Z,15µm,30.8s
RKT                               eLQ    LQ     19 23 49.6
      comp=Z,111µm,30.5s
RKT                               eLR    LR     19 26 03.0
      comp=Z,60µm,34.0s
YUK   Yuzh-Kuril'sk     57.69 343 eP     P      19 09 07.3  +0.6
YUK                               e             19 10 00.4
YUK                               e             19 11 15.7
YUK                               i S    S      19 17 07.1  +2.2
YUK                               e             19 18 55.4
YUK                                pmax  pmax
      comp=Z,689nm,2.3s
YUK                                pmax  pmax
      comp=Z,348nm,1.2s
YUK                                pmax  pmax
      comp=N,249nm,1.3s
YUK                                pmax  pmax
      comp=E,354nm,1.3s
KUR   Kuril'sk          58.27 345 eP     P      19 09 10.6  -0.1
KUR                               eS     S      19 17 17.8  +5.4
KUR                               eSSS   SSS    19 23 15.6
KUR                                pmax  pmax
      comp=Z,646nm,1.7s
KUR                                pmax  pmax
      comp=Z,5µm,8.7s
KUR                                MLR   MLR
      comp=Z,49µm,17.0s
KUR                                MLR   MLR
      comp=N,69µm,16.0s
SKJI  Sukabumi          58.48 269  P     P      19 09 11.6  -1.3
ASAJ  Asahikawa         58.76 341  P     P      19 09 14.7  +0.5
      comp=N,104nm,0.9s,baz=221,slow=8.4,SNR=45
ASAJ                               LR    LR     19 30 29.3
      comp=N,41µm,20.8s,baz=170,slow=32
XMIS  Christmas Isla    58.91 264 eP     P      19 09 16.0  +0.1
PPBI  Pangkal Pinang    59.73 274  P     P      19 09 21.9  +0.3
      comp=N,91nm,1.2s,comp=N,3µmcomp=N,23µm
SSE   Sheshan           59.81 316  P     P      19 09 23.3  +1.6
SSE                                S     S      19 17 34.2  +1.2
SSE                                pmax  pmax
      comp=N,48nm,0.8s
SSE                                pmax  pmax
      comp=N,910nm,3.7s
SSE                                LR    LR
      comp=N,7µm,18.1s
SSE                                LR    LR
      comp=N,4µm,17.9s
SSE   Sheshan           59.81 316 eP     P      19 09 21.1  -0.7
      comp=N,74nm,0.8s
SSE                                LR    LR
      comp=Z,54µm,20.0s
KSRS  Korea Array       59.84 326  P     P      19 09 22.0  +0.2
      comp=Z,16nm,0.6s,baz=141,slow=6.0,SNR=47
KSRS                               LR    LR     19 33 44.9
      comp=Z,44µm,18.7s,baz=132,slow=35
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KS15  Wonju Array Si    59.85 326 eP     P      19 09 23.7  +1.8
KSAR  Wonju Array Be    59.85 326  P     P      19 09 22.0  +0.1
KSAR  Wonju Array Be    59.85 326  P     P      19 09 22.0  +0.1
KS01  Wonju Array Si    59.87 326 eP     P      19 09 20.3  -1.7
HKC   Hong Kong Obse    60.40 303 ⇑P     P      19 09 29.0  +3.1
KASI  Kota Agung        60.74 270  P     P      19 09 26.3  -2.2
MCO   Taipa Grande      60.82 303  P     P      19 09 32.0  +3.1
MDSI  Maura Dua         61.23 271  P     P      19 09 29.6  -2.2
YSS   Yuzh-Sakhalins    61.25 342 eP     P      19 09 31.3  +0.1
      comp=Z,864nm,1.4s
YSS                                LR    LR
      comp=Z,105µm,19.0s
YSS   Yuzh-Sakhalins    61.25 342⇓iP     P      19 09 31.7  +0.5
YSS                               e             19 10 11.5
YSS                               eS     S      19 17 49.1  -1.7
YSS                               ePS           19 17 59.9
YSS                               ePPS   PPS    19 18 18.9
YSS                                pmax  pmax
      comp=Z,270nm,1.5s
YSS                                pmax  pmax
      comp=N,130nm,1.1s
YSS                                pmax  pmax
      comp=E,120nm,1.3s
YSS                                pmax  pmax
      comp=Z,4µm,4.6s
YSS                                pmax  pmax
      comp=N,2µm,4.3s
GZH   Guangzhou         61.44 304⇑iP     P      19 09 32.8  -0.2
GZH                                PP    PP     19 11 46.9  -1.6
GZH                                S     S      19 17 55.2  +1.1
GZH                                SS    SS     19 21 58.7  +3.3
GZH                                LR    LR
      comp=N,56µm,20.2s
TEY   Ternei            61.69 337⇓eP     P      19 09 41.3  +7.1
TEY                               e             19 17 58.0
TEY                                pmax  pmax
      comp=E,40nm,0.8s
TEY                                pmax  pmax
      comp=Z,200nm,1.3s
TEY                                pmax  pmax
      comp=E,700nm,11.2s
NJ2   Nanjing           61.98 315 eP     P      19 09 36.8  +0.3
NJ2                                pP    pP     19 09 38.9  -1.7
NJ2                                ScP   ScP    19 14 15.1  -3.7
NJ2                                S     S      19 18 00.6   0.0
NJ2                                sS    sS     19 18 07.3  +0.2
NJ2                                SS    SS     19 22 05.2  +1.8
NJ2                                pmax  pmax
      comp=E,77nm,1.0s
NJ2                                pmax  pmax
      comp=E,3µm,7.3s
NJ2                                LR    LR
      comp=E,55µm,16.8s
NJ2                                LR    LR
      comp=E,49µm,19.5s
NJ2                                LR    LR
      comp=E,84µm,18.4s
SKR   Severo-Kuril's    62.01 353 eP     P      19 09 34.2  -2.1
SKR                               i S    S      19 18 08.0  +7.7
SKR                                pmax  pmax
      comp=Z,230nm,1.2s
SKR                                pmax  pmax
      comp=Z,4µm,10.6s
SKR                                pmax  pmax
      comp=Z,5µm,8.9s
SKR                                MLR   MLR
      comp=Z,57µm,18.0s
MSHR  Mys Shultsa       62.02 332c iP    P      19 09 36.2  -0.3
VLA   Vladivostok       62.10 333 i P    P      19 09 38.5  +1.4
VLA                                pmax  pmax
      comp=Z,280nm,1.9s
VLA                                MLR   MLR
      comp=Z,19µm,15.0s
PTCN  Pitcairn Islan    62.12 113  PFAKE        19 09 50.0  +12
PTCN                               LR    LR
      comp=Z,26µm,22.0s
QIZ   Qiongzhong        62.64 298  P     P      19 09 42.9  +1.7
QIZ                                sP    pP     19 09 45.1  +0.4
QIZ                                S     S      19 18 11.8  +2.4
QIZ                                sS    sS     19 18 16.6  +0.6
QIZ                                pmax  pmax
      comp=Z,3µm,11.2s
QIZ                                LR    LR
      comp=Z,28µm,17.6s
QIZ                                LR    LR
      comp=Z,36µm,19.6s
QIZ                                LR    LR
      comp=Z,55µm,20.6s
QIZ   Qiongzhong        62.64 298 eP     P      19 09 42.8  +1.7
      comp=Z,69nm,1.3s
QIZ                                LR    LR
      comp=Z,9µm,22.0s
USA0B Ussuriysk Arra    62.91 333 eP     P      19 09 42.3  -0.2
USRK  Ussuriysk Ar.     62.91 333  P     P      19 09 43.1  +0.7
      comp=Z,23nm,0.6s,baz=144,slow=5.0,SNR=55
USRK                               LR    LR     19 36 25.7
      comp=Z,29µm,19.5s,baz=131,slow=36
PET   Petropavlovsk     64.07 355 eP     P      19 09 51.7  +1.8
      comp=Z,439nm,1.6s
PET                                LR    LR
      comp=Z,48µm,21.0s
PET   Petropavlovsk     64.07 355 eP     P      19 09 51.3  +1.4
PET                               e             19 12 06.4
PET                               eS     S      19 18 25.2  -0.8
PET                               eSS    SS     19 22 31.4  -4.0
PET                               eSSS   SSS    19 25 26.4
PET                                pmax  pmax
      comp=Z,118nm,1.4s
PET                                pmax  pmax
      comp=Z,5µm,11.8s
PET                                pmax  pmax
      comp=Z,5µm,11.7s
PET                                smax  smax
      comp=E,27µm,18.9s
PET                                smax  smax
      comp=E,18µm,15.9s
PEA0B Petropavlovsk-    64.24 355 eP     P      19 09 51.7  +0.6
PETK  Petropavlovsk-    64.24 355 eP     P      19 09 51.0  -0.1
PETK  Petropavlovsk-    64.24 355  P     P      19 09 51.2  +0.1
      comp=E,20nm,0.7s,baz=165,slow=6.1,SNR=29
PETK                               LR    LR     19 32 08.0
      comp=E,43µm,21.2s,baz=165,slow=31
PETK                               PKP2bc       19 38 45.2
      comp=E,16nm,1.1s,baz=114,slow=6.6,SNR=8.0
MDJ   Mudanjiang        64.31 332  P     P      19 09 52.6  +0.9
MDJ                                pP    sP     19 09 57.2  -0.2
MDJ                                sP    pP     19 09 59.7  +3.9
MDJ                                PP    PP     19 12 17.2  +3.8
MDJ                                PcS          19 14 27.7
MDJ                                S     S      19 18 35.0  +5.6
MDJ                                ScS   SKSac  19 19 43.4  -2.1
MDJ                                SS    SS     19 22 35.2  -4.3
MDJ                                pmax  pmax
      comp=E,54nm,1.1s
MDJ                                pmax  pmax
      comp=E,2µm,4.9s
MDJ                                LR    LR
      comp=E,31µm,19.6s
MDJ                                LR    LR
      comp=E,93µm,16.6s
MDJ                                LR    LR
      comp=E,85µm,17.4s
MDJ   Mudanjiang        64.31 332 eP     P      19 09 51.1  -0.6
      comp=E,320nm,1.3s
MDJ                                LR    LR
      comp=Z,61µm,19.0s
WHN   Wuhan             64.35 312 ⇓P     P      19 09 53.9  +1.7
WHN                                S     S      19 18 30.0  -0.3
WHN                                LR    LR
      comp=Z,133µm,15.3s
WHN                                LR    LR
      comp=Z,64µm,14.9s
WHN                                LR    LR
      comp=Z,155µm,17.1s
DL2   Dalian            64.44 323  P     P      19 09 53.8  +1.2
DL2                                S     S      19 18 33.7  +2.6
DL2                                SS    SS     19 22 43.7  +2.0
DL2                                pmax  pmax
      comp=Z,190nm,1.1s
DL2                                pmax  pmax
      comp=Z,7µm,10.1s
DL2                                LR    LR
      comp=Z,50µm,18.4s
DL2                                LR    LR
      comp=Z,68µm,18.8s
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ADK    Adak              64.47  12 eP      P        19 09 53.9 +1.4
       comp=Z,481nm,1.4s
ADK                                 LR      LR
       comp=Z,104µm,22.0s
ADK    Adak              64.47  12 eP      P        19 09 53.9 +1.4
ADK                                 pmax    pmax
       comp=Z,481nm,1.4s
ADK                                 MLR     MLR
       comp=Z,104µm,22.0s
GSTR   Great Sitkin T    64.80  12 eP      P        19 09 57.6 +2.8
TYV    Tymovskoe         64.81 344 eP      P        19 09 55.6 +0.8
TYV                                 pmax    pmax
       comp=Z,54nm,1.7s
BKNI   Bangkinang        65.23 275 eP      P        19 09 55.6 -2.8
SNY    Shenyang          65.29 327 ⇓P      P        19 09 59.4 +1.3
SNY                                 S       S        19 18 43.7 +2.2
SNY                                 pmax    pmax
       comp=Z,79nm,2.4s
SNY                                 pmax    pmax
       comp=Z,2µm,4.3s
SNY                                 LR      LR
       comp=Z,64µm,19.6s
SNY                                 LR      LR
       comp=Z,71µm,18.0s
TIA    Tai'an            65.57 318  P       P        19 09 58.9 -1.2
TIA                                 pP      sP       19 10 09.8 +4.7
TIA                                 S       S        19 18 48.8 +3.5
TIA                                 LR      LR
       comp=Z,29µm,13.5s
TIA                                 LR      LR
       comp=Z,45µm,17.8s
TIA                                 LR      LR
       comp=Z,38µm,17.8s
CN2    Changchun         65.70 329 eP      P        19 10 00.1 -0.7
CN2                                esP     sP       19 10 08.0 +1.5
CN2                                eS      S        19 18 43.4 -3.1
CN2                                 pmax    pmax
       comp=Z,170nm,1.2s
CN2                                 pmax    pmax
       comp=Z,7µm,10.0s
CN2                                 LR      LR
       comp=Z,44µm,17.0s
CN2                                 LR      LR
       comp=Z,45µm,18.0s
CASY   Casey             66.39 201 eP      P        19 10 04.7 -0.1
       comp=Z,781nm,1.6s
CASY                                LR      LR
       comp=Z,6µm,21.0s
VNDA   Vanda             66.52 181  P       P        19 10 06.7 +1.2
       comp=Z,30nm,0.9s,baz=351,slow=9.2,SNR=18
VNDA                                LR      LR       19 34 41.0
       comp=Z,63µm,21.2s,baz=4.5,slow=32
GRNR   Gornyy            66.61 340 eP      P        19 10 07.7 +1.2
GRNR                                pmax    pmax
       comp=Z,50nm,1.0s
KULM   Kulim             66.74 281 eP      P        19 10 07.5 -0.6
SBA    Scott Base        66.82 180 eP      P        19 10 10.6 +3.1
       comp=Z,245nm,1.0s
SBA                                 LR      LR
       comp=Z,39µm,21.0s
SBA    Scott Base        66.82 180 eP      P        19 10 10.6 +3.1
SBA                                 pmax    pmax
       comp=Z,245nm,1.0s
SBA                                 MLR     MLR
       comp=Z,39µm,21.0s
KLR    Kul'dur           67.02 337 eP      P        19 10 08.7 -0.4
KLR    Kul'dur           67.02 337  PKP2bc  P'P'bc   19 38 37.4 +0.4
       comp=Z,6.0nm,1.0s,baz=337,slow=2.7,SNR=6.8
SKNT   Sakolnakorn       67.05 294  P       P        19 10 09.8 -0.2
       comp=Z,59nm,0.9s,comp=Z,2µm
SKLT   Songkhla          67.24 283  P       P        19 10 12.8 +1.5
       comp=Z,93nm,2.5s,comp=Z,5µm
COCO   West Island       67.30 261 eP      P        19 10 15.0 +3.4
       comp=Z,7µm,1.8s
COCO                                LR      LR
       comp=Z,56µm,21.0s
COCO   West Island       67.30 261 eP      P        19 10 15.0 +3.4
COCO                                MLR     MLR
       comp=Z,56µm,21.0s
NIKH   Nikolski High     67.36  16 eP      P        19 10 12.9 +1.7
NKL    Nikolayevsk       67.41 344 eP      P        19 10 08.0 -3.4
NKL                                e                 19 10 38.0
NKL                                eS      S        19 19 10.0 +3.3
NKL                                 pmax    pmax
       comp=N,1µm,9.0s
NKL                                 pmax    pmax
       comp=E,2µm,9.0s
NKL                                 pmax    pmax
       comp=Z,4µm,7.0s
SRAK   Srakaew           67.85 290  P       P        19 10 15.2 +0.2
       comp=Z,108nm,1.5s,comp=Z,1µm
ENH    Enshi             67.85 309  PFAKE            19 10 30.0  +15
ENH                                 LR      LR
       comp=Z,41µm,22.0s
NONG   Nongkai           68.17 295  P       P        19 10 17.0  0.0
       comp=Z,3.4nm,0.9s
TRTT   Trang             68.31 283  P       P        19 10 18.8 +0.8
       comp=Z,37nm,1.4s,comp=Z,2µm
GYA    Guiyang           68.37 304⇑iP      P        19 10 17.5 -0.8
GYA                                 PP      PP       19 12 53.2 +3.8
GYA                                 S       S        19 19 20.0 +0.3
GYA                                 SKS     SKSac    19 20 15.8 -1.6
GYA                                 SS      SS       19 23 45.5 +1.9
GYA                                 pmax    pmax
       comp=Z,70nm,1.2s
GYA                                 pmax    pmax
       comp=Z,6µm,14.3s
GYA                                 LR      LR
       comp=Z,40µm,18.6s
GYA                                 LR      LR
       comp=Z,31µm,22.1s
GYA                                 LR      LR
       comp=Z,45µm,21.4s
BJT    Baijiatuau        68.43 321  PFAKE            19 10 30.0  +12
BJT                                 LR      LR
       comp=Z,71µm,19.0s
BJI    Beijing           68.44 321⇓iP      P        19 10 17.2 -1.1
BJI                                 S       S        19 19 19.0 -0.7
BJI                                 pmax    pmax
       comp=Z,3µm,5.7s
BJI                                 LR      LR
       comp=Z,5µm,17.5s
BJI                                 LR      LR
       comp=Z,9µm,15.9s
CHAI   Chaiyaphum        68.50 292  P       P        19 10 19.6 +0.5
       comp=Z,19nm,0.9s,comp=Z,213nm
PATY   Pattaya           68.61 289  P       P        19 10 22.5 +2.7
       comp=Z,43nm,0.9s
UNV    Unalaska Valle    68.80  17 eP      P        19 10 22.8 +2.7
GSI    Gunungsitoli      68.82 276 eP      P        19 10 20.9 -0.4
TIY    Taiyuan           69.52 317⇑iP      P        19 10 25.0 -0.1
TIY                                 S       S        19 19 33.7 +1.0
TIY                                 SS      SS       19 24 04.2 +3.4
TIY                                 pmax    pmax
       comp=Z,39nm,0.9s
TIY                                 pmax    pmax
       comp=Z,5µm,8.6s
TIY                                 LR      LR
       comp=Z,29µm,15.1s
TIY                                 LR      LR
       comp=Z,54µm,18.0s
PKDT   Phuket            69.62 283  P       P        19 10 31.1 +5.0
       comp=Z,29nm,0.9s,comp=Z,2µm
PBKT   Sadao Pong        69.64 292 eP      P        19 10 26.6 +0.4
PBKT   Sadao Pong        69.64 292  P       P        19 10 26.5 +0.4
       comp=Z,79nm,2.0s,comp=Z,5µm
PHET   Kaeng Krachan     69.76 288  P       P        19 10 29.6 +2.7
       comp=Z,22nm,1.1s,comp=Z,304nm
XAN    Xi'an             70.08 312  P       P        19 10 27.5 -1.1
XAN                                 pP      sP       19 10 37.3 +3.7
XAN                                 sP      PcP      19 10 43.0 -7.7
XAN                                 PcP     pP       19 10 51.4  +19
XAN                                 PP      PP       19 13 04.2 +0.2
XAN                                 S       S        19 19 31.2 -8.2
XAN                                 pmax    pmax
       comp=Z,67nm,0.8s
XAN                                 pmax    pmax
       comp=Z,7µm,11.8s
XAN                                 LR      LR
       comp=Z,44µm,20.6s
XAN                                 LR      LR
       comp=Z,66µm,20.6s
UTTA   Uttaradit         70.39 293  P       P        19 10 31.8 +1.0
       comp=Z,17nm,1.0s,comp=Z,168nm
FALS   False Pass        70.59  18 eP      P        19 10 33.5 +2.3
SRDT   SRDT              70.65 289  P       P        19 10 33.5 +1.1
       comp=Z,108nm,1.8s,comp=Z,4µm
UTHA   Uthaitani         70.71 291  P       P        19 10 33.9 +1.1
       comp=Z,23nm,1.6s,comp=Z,263nm
KMI    Kunming           71.08 301 ⇑P      P        19 10 35.7 +0.6
KMI                                 pP      pwP      19 10 42.8 +0.6
KMI                                 sP      PcP      19 10 47.6 -7.8
KMI                                 PP      PP       19 13 09.3 -3.6
KMI                                 S       S        19 19 52.5 +0.7
KMI                                 sS      sS       19 20 04.0 +5.6
KMI                                 SS      SS       19 24 26.1 +0.6
KMI                                 pmax    pmax
       comp=Z,80nm,2.0s
KMI                                 pmax    pmax
       comp=Z,2µm,5.8s
KMI                                 LR      LR
       comp=Z,35µm,18.1s
KMI                                 LR      LR
       comp=Z,28µm,21.1s
KMI                                 LR      LR
       comp=Z,42µm,27.7s
SUKH   Sukhothai         71.14 293  P       P        19 10 37.7 +2.4
       comp=Z,13nm,1.3s
MA2    Magadan           71.38 352 eP      P        19 10 34.1 -1.8
       comp=Z,234nm,1.0s
MA2    Magadan           71.38 352deP      P        19 10 34.6 -1.3
MA2                                 pmax    pmax
       comp=Z,169nm,2.5s
MA2                                 MLR     MLR
       comp=Z,29µm,17.0s
MA2    Magadan           71.38 352  P       P        19 10 35.2 -0.8
       comp=Z,22nm,0.8s,baz=169,slow=7.9,SNR=17
MA2                                 LR      LR       19 36 06.7
       comp=Z,60µm,22.0s,baz=172,slow=31
UMPA   Umpang Tak        71.45 291  P       P        19 10 39.0 +1.7
       comp=Z,14nm,1.1s,comp=Z,182nm
HHC    Hu-ho-hao-te      71.79 320 eP      P        19 10 40.4 +1.4
HHC                                 PP      PP       19 13 24.8 +6.2
HHC                                 S       S        19 19 59.6 +0.4
HHC                                 pmax    pmax
       comp=Z,26nm,1.0s
HHC                                 pmax    pmax
       comp=Z,2µm,5.1s
HHC                                 LR      LR
       comp=Z,47µm,18.8s
HHC                                 LR      LR
       comp=Z,41µm,15.5s
HHC                                 LR      LR
       comp=Z,67µm,17.6s
CM01   Chiang Mai Arr    72.04 294 eP      P        19 10 39.6 -1.2
CM31   Chiang Mai Arr    72.07 294 eP      P        19 10 41.4 +0.4
CMAR   Chiang Mai Arr    72.07 294  P       P        19 10 41.4 +0.4
       comp=Z,15nm,0.8s,baz=115,slow=4.4,SNR=64
CMAR                                PKP2bc           19 38 24.4
       comp=Z,1.2nm,0.8s,baz=276,slow=4.5,SNR=6.2
CMAR                                LR      LR       19 43 23.3
       comp=Z,19µm,19.1s,baz=114,slow=37
CMMT   Chiang Mai        72.18 294  P       P        19 10 41.7 +0.1
       comp=Z,90nm,1.3s,comp=Z,4µm
CHTO   Chiang Mai        72.18 294 eP      P        19 10 41.5 -0.1
       comp=Z,176nm,1.5s
CHTO                                LR      LR
       comp=Z,28µm,22.0s
CHTO   Chiang Mai        72.18 294 eP      P        19 10 41.5 -0.1
CHTO                                pmax    pmax
       comp=Z,176nm,1.5s
CHTO                                MLR     MLR
       comp=Z,28µm,22.0s
CHTO   Chiang Mai        72.18 294  P       P        19 10 41.7 +0.1
       comp=Z,406nm,1.2s,comp=Z,16µmcomp=Z,135µm
ZEA    Zeya              72.31 337 eP      P        19 10 42.4 +0.8
ZEA                                e                 19 11 05.0
ZEA                                eS      S        19 20 06.5 +2.2
ZEA                                 pmax    pmax
       comp=E,180nm,1.6s
ZEA                                 pmax    pmax
       comp=N,150nm,1.0s
ZEA                                 pmax    pmax
       comp=Z,260nm,1.0s
HIA    Hailar            72.33 330  PFAKE            19 10 50.0 +8.1
HIA                                 LR      LR
       comp=Z,37µm,20.0s
CD2    Chengdu           72.56 307  P       P        19 10 43.3 -0.4
CD2                                 sP      sP       19 10 47.9 -0.8
CD2                                 PP      PP       19 13 24.9 -0.4
CD2                                 S       S        19 20 08.1 -0.2
CD2                                 SS      SS       19 24 49.1 +1.4
CD2                                 pmax    pmax
       comp=Z,110nm,1.3s
CD2                                 pmax    pmax
       comp=Z,320nm,4.7s
CD2                                 LR      LR
       comp=Z,142µm,16.1s
CD2                                 LR      LR
       comp=Z,127µm,16.5s
CD2                                 LR      LR
       comp=Z,107µm,17.1s
BTO    Baotou            72.65 319 eP      P        19 10 44.2 +0.1
BTO                                 S       S        19 20 06.1 -2.9
CHGN   Chignik           73.40  20 eP      P        19 10 51.4 +3.4
CMBY   CAMPBELL BAY      73.64 281 eP      P        19 10 49.0 -1.4
CMBY                                IAmb    IAmb     19 11 24.8
       comp=Z,7µm,14.1s
SEY    Seymchan          74.45 354deP      P        19 10 53.2 -0.8
SEY    Seymchan          74.45 354  P       P        19 10 53.1 -0.9
       comp=Z,15nm,0.7s,baz=176,slow=4.0,SNR=40
LZH    Lanzhou           74.71 312 ⇑P      P        19 10 57.0 +0.6
LZH                                 pP      sP       19 11 03.0 +1.6
LZH                                 sP      PcP      19 11 06.1 -4.5
LZH                                 PP      PP       19 13 43.3 -0.4
LZH                                 S       S        19 20 34.8 +2.1
LZH                                 sS      sS       19 20 40.7 +1.4
LZH                                 SS      SS       19 25 19.6 -1.0
LZH                                 pmax    pmax
       comp=Z,490nm,1.3s
LZH                                 pmax    pmax
       comp=Z,7µm,4.9s
LZH                                 LR      LR
       comp=Z,124µm,17.4s
LZH                                 LR      LR
       comp=Z,63µm,18.4s
LZH                                 LR      LR
       comp=Z,97µm,19.9s
OHAK   Old Harbor        75.90  22 eP      P        19 11 01.6 -0.9
PBA    Port Blair        75.90 285 eP      P        19 11 03.6 +0.1
PBA                                 IAmb    IAmb     19 11 40.3
       comp=Z,10µm,15.4s
GAMB   Gambell           76.55  10 eP      P        19 11 06.1 +0.1
KDAK   Kodiak Island     76.57  21 eP      P        19 11 06.1 -0.2
       comp=Z,332nm,1.4s
KDAK   Kodiak Island     76.57  21  P       P        19 11 06.7 +0.4
       comp=Z,40nm,0.8s,baz=170,slow=5.9,SNR=11
KDAK                                LR      LR       19 38 27.8
       comp=Z,43µm,21.2s,baz=227,slow=31
CIT    Chita             77.12 330 eP      P        19 11 09.6 -0.1
CIT                                e                 19 11 18.6
CIT                                e                 19 11 26.6
CIT                                 pmax    pmax
       comp=Z,350nm,2.9s
YAK    Yakutsk           78.06 344 eP      P        19 11 16.0 +1.4
YAK                                e                 19 11 24.9
YAK                                e*PP    PcP      19 11 27.3 +3.1
YAK                                e                 19 14 06.2
YAK                                eS      S        19 21 06.5 -1.5
YAK                                e*SS    ScS      19 21 32.1 -1.5
YAK                                e                 19 21 46.7
YAK                                eSSS    SSS      19 29 21.3
YAK                                 pmax    pmax
       comp=Z,70nm,0.9s
YAK                                 pmax    pmax
       comp=N,15nm,0.9s
YAK                                 pmax    pmax
       comp=E,7.0nm,1.4s
YAK                                 pmax    pmax
       comp=Z,2µm,5.9s
YAK                                 pmax    pmax
       comp=N,609nm,5.2s
YAK                                 smax    smax
       comp=E,9µm,12.4s
YAK                                 smax    smax
       comp=N,3µm,11.9s
YAK                                 MLR     MLR
       comp=Z,33µm,15.0s
YAK                                 MLR     MLR
       comp=N,29µm,17.0s
YAK                                 MLR     MLR
       comp=E,21µm,20.0s
SVW2   Sparrevohn        78.10  18 eP      P        19 11 15.4 +0.5
ULN    Ulaanbaatar       78.26 324  PFAKE            19 11 30.0  +14
ULN                                 LR      LR
       comp=Z,39µm,19.0s
HOM    Homer             78.29  21 eP      P        19 11 18.1 +2.2
ANM    Nome              78.47  12 eP      P        19 11 17.0 +0.1
ANM    Nome              78.47  12 eP      P        19 11 17.0 +0.1
RSO    Redoubt South     78.51  20 eP      P        19 11 16.6 -0.8
SONM   Songino Array     78.62 324  P       P        19 11 17.8 -0.5
       comp=Z,12nm,0.5s,baz=139,slow=3.8,SNR=56
SONM                                PKKPbc  PKKPbc   19 30 12.6 -3.5
       comp=Z,1.4nm,0.8s,baz=253,slow=2.4,SNR=5.0
SONM                                PKPPKP  P'P'df   19 38 13.5 -1.8
       comp=Z,1.0nm,0.8s,baz=288,slow=1.2,SNR=4.3
SONM                                LR      LR       19 45 07.0
       comp=Z,27µm,19.4s,baz=114,slow=35
SONA1  Songino Array     78.63 324 eP      P        19 11 17.1 -1.1
BRLK   Bradley Lake      78.63  21 eP      P        19 11 17.7 -0.2
BILL   Bilibino          78.86   0 eP      P        19 11 17.6 -1.2
       comp=Z,651nm,1.5s
BILL   Bilibino          78.86   0d iP     P        19 11 17.7 -1.2
BILL                                e                19 11 28.4
BILL                                e                19 14 22.1
BILL                               i S      S        19 21 16.4 +0.1
BILL                                pmax    pmax
       comp=Z,453nm,2.5s
BILL                                MLR     MLR
       comp=Z,29µm,18.0s
QSPA   South Pole Qui    78.98 180 eP      P        19 11 19.8 -0.2
       comp=Z,774nm,1.0s
QSPA                                LR      LR
       comp=Z,27µm,22.0s
GTA    Gaotai            79.02 314 ⇑P      P        19 11 20.8 +0.2
GTA                                 pP      sP       19 11 25.2 -0.4
GTA                                 sP      pwP      19 11 27.9 +3.0
GTA                                 S       S        19 21 19.6 +0.1
GTA                                 sS      sS       19 21 27.5 +1.4
GTA                                 SKS     SKSac    19 21 30.7 -5.6
GTA                                 SS      SS       19 26 28.2 +2.7
GTA                                 pmax    pmax
       comp=Z,39nm,1.4s
GTA                                 pmax    pmax
       comp=Z,1µm,5.6s
GTA                                 LR      LR
       comp=Z,62µm,18.1s
GTA                                 LR      LR
       comp=Z,42µm,19.4s
GTA                                 LR      LR
       comp=Z,62µm,20.9s
SEW    Seward            79.38  21 eP      P        19 11 22.3 +0.4
BRDH   Bariadhala        79.86 296  P       P        19 11 26.3 +1.0
       comp=Z,118nm,0.4s,baz=110,slow=6.2,SNR=8.9
SUA    Susitna One       79.92  20 eP      P        19 11 23.7 -1.3
RC01   Rabbit Creek A    79.98  20 eP      P        19 11 25.1 -0.1
SHL    Shillong          80.47 298 eP      P        19 11 29.0 +0.1
SHL    Shillong          80.47 298⇑iP      P        19 11 28.0 -0.9
SHL                                 IAmb    IAmb     19 12 01.0
SHL                                i S      S        19 21 35.0 -0.5
BOD    Bodaibo           80.49 335 eP      P        19 11 26.1 -1.9
BOD                                 pmax    pmax
       comp=Z,116nm,1.9s
PPLA   Purkeypile        80.51  18 eP      P        19 11 27.6 -0.6
PMR    Palmer            80.55  20 eP      P        19 11 26.8 -1.3
PMR    Palmer            80.55  20 eP      P        19 11 26.8 -1.3
RPN    Rapa Nui          80.62 116  LR      LR       19 40 50.6
       comp=Z,25µm,19.6s,baz=268,slow=31
KNK    Knik Glacier      80.65  20 eP      P        19 11 28.9 +0.1
GLI    Glacier Island    80.75  21 eP      P        19 11 29.2 -0.1
CAST   Castle Rocks      80.94  18 eP      P        19 11 28.7 -1.6
SML    Sawmill           80.97  20 eP      P        19 11 30.5  0.0
SML    Sawmill           80.97  20 eP      P        19 11 30.5  0.0
EYAK   Cordova Ski Ar    81.02  22 eP      P        19 11 32.4 +1.6
DIV    Divide            81.40  22 eP      P        19 11 33.0 +0.1
HMT    Hamilton          81.43  23 eP      P        19 11 33.4 +0.4
TRF    Thorofare Moun    81.51  18 eP      P        19 11 32.5 -1.0
KLU    Klutina           81.59  21 eP      P        19 11 34.1 +0.2
ZAK    Zakamensk         81.66 325 eP      P        19 11 32.8 -1.7
ZAK                                e                 19 21 49.6
ZAK                                 pmax    pmax
       comp=Z,55nm,1.4s
BPAW   Bear Paw Mtn.     81.77  18 eP      P        19 11 34.2 -0.5
RND    Reindeer          81.93  19 eP      P        19 11 35.1 -0.5
RND    Reindeer          81.93  19 eP      P        19 11 35.1 -0.5
RDOG   Red Dog Mine      82.01  11 eP      P        19 11 36.2 +0.4
IRK    Irkutsk           82.02 327 eP      P        19 11 35.1 -1.2
IRK                                 pmax    pmax
       comp=Z,227nm,4.0s
TLY    Talaya            82.08 326 eP      P        19 11 35.8 -0.9
       comp=Z,105nm,0.8s
TLY                                 LR      LR
       comp=Z,23µm,22.0s
TLY    Talaya            82.08 326c iP     P        19 11 35.7 -0.9
TLY    Talaya            82.08 326  P       P        19 11 36.6  0.0
       SNR=18
MCK    McKinley          82.13  19 eP      P        19 11 36.0 -0.6
MCK    McKinley          82.13  19 eP      P        19 11 36.0 -0.6
DHY    Denali Highway    82.17  20 eP      P        19 11 36.9 -0.1
LSA    Lhasa             82.31 302  P       P        19 11 38.8 -0.1
LSA                                 S       S        19 21 49.2 -5.8
LSA                                 LR      LR
       comp=Z,12µm,26.3s
LSA                                 LR      LR
       comp=Z,7µm,24.0s
LSA                                 LR      LR
       comp=Z,26µm,27.4s
LSA    Lhasa             82.31 302  PFAKE            19 11 50.0  +11
LSA                                 LR      LR
       comp=Z,15µm,19.0s
LSA    Lhasa             82.31 302  P       P        19 11 39.2 +0.3
IM3    Indian Mountai    82.41  16 eP      P        19 11 36.7 -1.3
HARP   HAARP             82.47  21 eP      P        19 11 38.8 +0.4
MLY    Manley            82.53  17 eP      P        19 11 37.8 -0.9
KCPM   Cahto Peak        82.56  47 eP      P        19 11 40.4 +0.8
KMRM   Mail Ridge        82.66  47 eP      P        19 11 41.4 +1.4
HOPS   Hopland Field     82.69  48 eP      P        19 11 40.5 +0.4
       comp=Z,285nm,1.3s
H02S1  DAWSON INLET T    82.69  32  P       P        19 11 39.4 -0.3
GDXM   Geysers           82.83  48 eP      P        19 11 42.2 +1.3
KHMM   Horse Mountain    82.88  46 eP      P        19 11 42.8 +1.5
SAO    San Andreas Ge    83.14  51 eP      P        19 11 43.5 +1.0
       comp=Z,122nm,1.0s
MDM    Murphy Dome       83.22  18 eP      P        19 11 40.7 -1.5
HDA    Harding Lake      83.23  19 eP      P        19 11 40.7 -1.6
HDA    Harding Lake      83.23  19  P       P        19 11 40.8 -1.6
       baz=227
TCOL   CIGO, UAF Yank    83.27  18  P       P        19 11 41.3 -1.2
       baz=226
COLA   College           83.28  18 eP      P        19 11 41.8 -0.7
       comp=Z,359nm,0.9s
COLA                                LR      LR
       comp=Z,50µm,20.0s
COLA   College           83.28  18d iP     P        19 11 40.6 -1.9
COLA                                pmax    pmax
       comp=Z,262nm,2.2s
COLA                                MLR     MLR
       comp=Z,10µm,20.0s
O02D   Mt. Diablo Mer    83.31  47  P       P        19 11 43.1 -0.2
       baz=250,SNR=37
L02E   Cave Junction     83.43  45  P       P        19 11 43.4 -0.5
       baz=249,SNR=6.5
RIDG   Independ'e Rid    83.47  20 eP      P        19 11 43.3 -0.3
ILAR   Eielson Array     83.50  19  P       P        19 11 42.0 -1.7
ILAR                                pmax    pmax
       comp=Z,99nm,0.7s
ILAR                                MLR     MLR
       comp=Z,24µm,21.9s
ILAR   Eielson Array     83.50  19  P       P        19 11 42.0 -1.7
       comp=Z,99nm,0.7s,baz=232,slow=4.4,SNR=139
ILAR                                PKKPbc  PKKPbc   19 30 03.6 -1.9
       comp=Z,0.8nm,0.5s,baz=326,slow=1.7,SNR=8.8
ILAR                                LR      LR       19 43 18.9
       comp=Z,24µm,21.9s,baz=237,slow=32
ILB    Eielson Array     83.50  19 eP      P        19 11 42.1 -1.7
IL1    Eielson Array     83.50  19 eP      P        19 11 40.5 -3.2
MOY    Mondy             83.54 325 eP      P        19 11 43.4 -0.9
MOY                                 pmax    pmax
       comp=Z,298nm,3.5s
SNCC   San Nicolas Is    83.54  54  P       P        19 11 43.6 -1.0
       baz=252
J01E   Myrtle Point      83.57  44  P       P        19 11 44.4 -0.1
       baz=248
POKR   Poker Plat Res    83.57  18  P       P        19 11 42.3 -1.7
       baz=226
POKR                                S       S        19 22 07.0 +1.5
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	baz=226						
K02D	Willamette Mer	83.58	44	P	P	19 11 44.1	-0.6
	baz=249,SNR=9.4						
WDC	Whiskeytown Da	83.62	47	eP	P	19 11 45.1	+0.2
WDC	Whiskeytown Da	83.62	47	eP	P	19 11 45.1	+0.2
N02D	Trinity Center	83.64	46	P	P	19 11 44.8	-0.3
	baz=250,SNR=32						
SCZ2	Santa Cruz Isl	83.68	54	P	P	19 11 44.6	-0.8
	baz=252						
M02C	Callahan	83.68	46	P	P	19 11 45.9	+0.6
	baz=249,SNR=28						
PAGB	Antelope Grade	83.73	52	eP	P	19 11 46.3	+0.7
SBC	Santa Barbara	83.75	53	P	P	19 11 44.4	-1.3
	baz=252						
PKM	Mcpherson Peak	83.81	53	P	P	19 11 45.7	-0.5
	baz=252						
YBH	Yreka Blue Hor	83.90	46	eP	P	19 11 47.1	+0.7
YBH	Yreka Blue Hor	83.90	46	P	P	19 11 46.5	+0.1
	comp=Z,68nm,0.9s,baz=77,slow=1.3,SNR=34						
YBH				LR	LR	19 43 08.4	
	comp=Z,33µm,19.8s,baz=278,slow=32						
SCRK	Sand Creek	83.91	20	eP	P	19 11 44.9	-1.0
ORV	Oroville	84.03	48	eP	P	19 11 46.3	-0.6
ORV	Oroville	84.03	48	eP	P	19 11 46.3	-0.6
HUMO	Hull Mountain	84.04	45	eP	P	19 11 47.7	+0.8
	comp=Z,892nm,1.1s						
I03D	Drain, OR	84.16	44	P	P	19 11 46.6	-0.9
	baz=249						
BLG	Laguna Peak, P	84.16	54	P	P	19 11 46.1	-1.7
	baz=253						
AFDM	Forest Hills D	84.21	49	eP	P	19 11 47.6	-0.4
SCI2	San Clemente I	84.24	55	P	P	19 11 47.5	-0.7
	baz=253						
BESE	Bessie Mountai	84.28	27	eP	P	19 11 48.6	+0.8
COLD	Coldfoot	84.29	16	eP	P	19 11 48.5	+0.9
JIS	Juneau Island	84.33	27	eP	P	19 11 48.6	+0.7
WRAK	Wrangell Islan	84.34	30	eP	P	19 11 48.6	+0.6
	comp=Z,178nm,1.1s						
WRAK				LR	LR		
	comp=Z,56µm,20.0s						
CMB	Columbia Colle	84.35	50	eP	P	19 11 48.3	-0.4
	comp=Z,777nm,1.2s						
CMB	Columbia Colle	84.35	50	eP	P	19 11 48.3	-0.4
CMB				pmax	pmax		
	comp=Z,777nm,1.2s						
L04D	Klamath Falls	84.36	45	P	P	19 11 48.4	-0.4
	baz=250,SNR=18						
PRP	Porcupine Dome	84.43	18	eP	P	19 11 47.1	-1.6
CIS	Catalina Islan	84.47	55	P	P	19 11 47.8	-1.6
	baz=253						
COR	Corvallis	84.51	43	eP	P	19 11 48.9	-0.3
	comp=Z,215nm,1.4s						
COR	Corvallis	84.51	43	eP	P	19 11 48.9	-0.3
COR				pmax	pmax		
	comp=Z,215nm,1.4s						
M04C	Macdoel	84.53	46	P	P	19 11 48.1	-1.5
	baz=250,SNR=29						
SKAG	Skagway	84.54	26	eP	P	19 11 49.4	+0.4
BBB	Bella Bella	84.58	34	LR	LR	19 42 35.8	
	comp=Z,85µm,20.1s,baz=269,slow=31						
VOG	Valley Oaks Go	84.58	52	P	P	19 11 48.3	-1.5
	baz=252						
OSI	Osito Audit: C	84.58	53	P	P	19 11 49.4	-0.6
	baz=253						
ARVC	Arvin	84.65	53	P	P	19 11 49.7	-0.5
	baz=253						
FMP	Fort Macarthur	84.66	54	P	P	19 11 49.3	-0.9
	baz=253						
VES	Vestal, Richgr	84.67	52	P	P	19 11 48.8	-1.5
	baz=252,SNR=17						
MAW	Mawson	84.73	202	P	P	19 11 52.1	+2.1
	baz=85,SNR=5.7						
MAW	Mawson	84.73	202	eP	P	19 11 52.5	+2.5
MAW	Mawson	84.73	202	P	P	19 11 51.5	+1.6
	comp=Z,256nm,1.2s,baz=96,slow=1.7,SNR=7.5						
MAW				LR	LR	19 44 58.1	
	comp=Z,23µm,21.6s,baz=104,slow=32						
G03D	McMinnville, O	84.76	42	P	P	19 11 49.8	-0.7
	baz=249						
DECC	Green Verdugo	84.78	54	P	P	19 11 50.2	-0.8
	baz=253						
I04A	Tendick Farm,	84.83	44	P	P	19 11 49.6	-1.4
	baz=250,SNR=12						
J04D	Umpqua Nationa	84.84	44	P	P	19 11 50.5	-0.8
	baz=250,SNR=31						
H04D	Lebanon	84.87	43	P	P	19 11 50.8	-0.3
	baz=249						
K04D	Chiloquin, OR	84.88	45	P	P	19 11 50.5	-0.9
	baz=250						
PASC	Pasadena Art C	84.88	54	eP	P	19 11 51.4	0.0
BEKR	Beckworth	84.96	48	eP	P	19 11 51.5	-0.4
MWC	Mount Wilson	85.00	54	eP	P	19 11 52.3	+0.1
ISA	Isabella, Lake	85.09	52	eP	P	19 11 52.1	-0.4
ISA	Isabella, Lake	85.09	52	eP	P	19 11 52.1	-0.4
ISA	Isabella, Lake	85.09	52	P	P	19 11 51.5	-1.0
	baz=253,SNR=50						
NLWA	Neilton Lookou	85.17	40	eP	P	19 11 54.5	+1.9
	comp=Z,278nm,1.5s						
NLWA				LR	LR		
	comp=Z,69µm,20.0s						
WAKR	Walker	85.21	49	eP	P	19 11 53.9	+0.6
MDPB	Devils Postpil	85.21	50	eP	P	19 11 53.7	+0.4
FYU	Fort Yukon	85.23	18	eP	P	19 11 52.3	0.0
EDW2	Edwards Air Fo	85.23	53	P	P	19 11 52.6	-0.6
	baz=253,SNR=80						
F04D	Rainier, OR	85.24	41	P	P	19 11 52.5	-0.4
	baz=249						
BOK	Bokaro	85.25	295	eP	P	19 11 54.9	+1.4
BOK				IAmb	IAmb	19 12 28.0	
	comp=Z,431nm,5.7s						
OMMB	Old Mammoth Mi	85.27	50	eP	P	19 11 54.1	+0.4
PNTR	Pine Nut	85.27	49	eP	P	19 11 54.6	+1.0
H04A	Detroit Lake	85.29	43	eP	P	19 11 53.5	+0.2
VCNR	Virginia City	85.30	49	eP	P	19 11 55.5	+1.9
BFSC	Mount Baldy Ra	85.32	54	P	P	19 11 52.2	-1.5
	baz=253,SNR=38						
EGAK	Eagle	85.37	20	PFAKE		19 12 00.0	+6.9
EGAK				LR	LR		
	comp=Z,52µm,22.0s						
WHY	Whitehorse	85.37	25	eP	P	19 11 52.5	-0.9
109C	Camp Elliot, M	85.38	55	P	P	19 11 53.1	-0.8
	baz=254						
CPE	Camp Elliot	85.38	55	eP	P	19 11 54.2	+0.3
MLAC	Mammoth, Mammo	85.40	50	P	P	19 11 53.2	-1.0
	baz=252,SNR=7.6						
RAMN	Ramite	85.41	298	eP	P	19 11 54.1	-0.4
J05D	Fort Rock, OR	85.46	44	P	P	19 11 53.3	-1.0
	baz=250						
MURC	Murrieta	85.50	55	P	P	19 11 54.0	-0.6
	baz=254,SNR=5.5						
YERR	Yerington	85.50	49	eP	P	19 11 58.2	+3.5
DAWY	Dawson	85.55	21	eP	P	19 11 53.3	-0.8
	comp=Z,135nm,1.0s						
CWC	Cottonwood Cre	85.62	52	P	P	19 11 54.4	-0.9
	baz=253						
PAHR	Pah Rah Range	85.62	48	eP	P	19 11 54.9	-0.3
LRMC	Laurel Mtn Rad	85.65	53	P	P	19 11 54.8	-0.6
	baz=253,SNR=7.4						
MOD	Modoc Plateau	85.65	46	eP	P	19 11 54.9	-0.4
	comp=Z,178nm,1.3s						
BAR	Barrett	85.67	56	eP	P	19 11 55.5	+0.1
TIN	Tinemaha, Big	85.69	51	P	P	19 11 54.9	-0.7
	baz=253,SNR=18						
E04D	Cinebar	85.70	41	P	P	19 11 54.1	-1.1
	baz=249						
D03D	Eldon	85.72	40	P	P	19 11 54.1	-1.1
	baz=249						
I05D	Terrebonne, OR	85.74	43	P	P	19 11 54.5	-1.0
	baz=250						
D04E	Lakebay	85.79	40	P	P	19 11 54.1	-1.5
	baz=249						
PINE	Pine Mountain	85.83	44	eP	P	19 11 56.8	+0.6
PGC	Sidney	85.90	39	eP	P	19 11 56.3	+0.2
BBRC	Big Bear Solar	85.91	54	P	P	19 11 55.9	-0.9
	baz=254						
RYN	Ryan	85.93	50	eP	P	19 11 57.0	+0.3
MONP2	Monument Peak	85.93	56	P	P	19 11 56.3	-0.6
	baz=254,SNR=43						
JIRN	Jiri	85.94	299	eP	P	19 11 56.8	-0.5
	comp=Z,898nm,1.7s						
MPMC	Manual Prospec	85.97	52	P	P	19 11 56.0	-1.1
	baz=253,SNR=24						
RRX	Edison Barstow	86.02	54	P	P	19 11 56.2	-0.9
	baz=254						
NV01	Mina Array Sit	86.04	50	eP	P	19 11 55.0	-2.4
NVAR	Mina Array Bea	86.04	50	P	P	19 11 57.3	0.0
	comp=Z,60nm,0.9s,baz=232,slow=7.1,SNR=52						
NVAR				PKKPbc	PKKPdf	19 29 55.2	+3.2
	comp=Z,0.3nm,0.3s,baz=332,slow=5.1,SNR=2.4						
NVAR				LR	LR	19 43 23.6	
	comp=Z,85µm,20.0s,baz=264,slow=31						
TIXI	Tiksi	86.06	349	PFAKE		19 12 10.0	+14
TIXI				LR	LR		
	comp=Z,35µm,20.0s						
TIXI	Tiksi	86.06	349	deP	P	19 11 55.3	-1.1
TIXI				pmax	pmax		
	comp=Z,175nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,22µm,19.0s						
TIXI	Tiksi	86.06	349	P	P	19 11 55.5	-0.9
	comp=Z,13nm,0.5s,baz=123,slow=7.8,SNR=44						
G05D	Wamic, OR	86.06	43	P	P	19 11 56.7	-0.4
	baz=250						
PFO	Pinyon Flats O	86.10	55	eP	P	19 11 57.1	-0.6
	comp=Z,89nm,1.1s						
PFO	Pinyon Flats O	86.10	55	eP	P	19 11 57.1	-0.6
PFO				pmax	pmax		
	comp=Z,89nm,1.1s						
PFO	Pinyon Flats O	86.10	55	P	P	19 11 56.7	-1.0
	baz=254,SNR=24						
PFO	Pinyon Flats O	86.10	55	LR	LR	19 42 22.0	
	comp=Z,73µm,20.8s,baz=264,slow=30						
XPFO	Pion Flat	86.10	55	eP	P	19 11 57.1	-0.5
IKP	In-Ko-Pah, Jac	86.12	56	P	P	19 11 57.3	-0.4
	baz=254,SNR=16						
NV11	Mina Array Sit	86.15	50	eP	P	19 11 57.5	-0.3
F05D	White Salmon	86.19	42	P	P	19 11 56.5	-1.1
	baz=250						
LON	Longmire	86.26	41	eP	P	19 11 57.6	-0.4
LON	Longmire	86.26	41	eP	P	19 11 57.6	-0.4
GUN	Gumba	86.27	299	eP	P	19 11 58.5	-0.4
	comp=Z,1µm,2.3s						
GSC	Goldstone, Bar	86.29	53	eP	P	19 11 58.6	+0.1
GSC	Goldstone, Bar	86.29	53	P	P	19 11 57.9	-0.7
	baz=254,SNR=30						
D05A	Enumclaw	86.29	41	eP	P	19 11 59.4	+1.2
GRAC	Grapevine Rang	86.33	51	P	P	19 11 58.1	-0.5
	baz=253,SNR=8.5						
KVN	Kaiserville	86.37	49	eP	P	19 11 57.9	-1.1
KVN	Kaiserville	86.37	49	eP	P	19 11 57.9	-1.1
A04D	Lummi Island	86.38	39	P	P	19 11 58.2	-0.3
	baz=249,SNR=9.0						
DLBC	Dease Lake	86.41	28	eP	P	19 11 58.2	-0.4
	comp=Z,152nm,1.6s						
DLBC	Dease Lake	86.41	28	LR	LR	19 44 44.9	
	comp=Z,45µm,19.8s,baz=262,slow=32						
SWSC	Sam W. Stewart	86.45	56	P	P	19 11 58.8	-0.5
	baz=254,SNR=16						
PALK	Pallekele	86.51	278	eP	P	19 12 01.0	+1.0
	comp=Z,369nm,1.7s						
PALK	Pallekele	86.51	278	iP	P	19 11 59.5	-0.4
	SNR=10						
PALK	Pallekele	86.51	278	eP	P	19 12 01.0	+1.0
PALK				pmax	pmax		
	comp=Z,369nm,1.7s						
HEC	Hector,Ludlow	86.53	54	P	P	19 11 58.4	-1.3
	baz=254,SNR=54						
FURC	Furnace Creek,	86.57	52	P	P	19 11 58.9	-0.8
	baz=254,SNR=27						
BELC	Belle Mtn. Jos	86.57	55	P	P	19 11 59.1	-0.9
	baz=254,SNR=80						
PKI	Pulchoki	86.59	299	eP	P	19 11 59.4	-1.1
	comp=Z,235nm,1.4s						
B05A	Bryant	86.60	40	P	P	19 11 58.4	-1.2
	baz=250,SNR=16						
PKIN	Phulchoki	86.61	299	eP	P	19 11 59.5	-1.0
DMN	Daman	86.86	299	eP	P	19 12 01.2	-0.5
	comp=Z,436nm,1.5s						
SHOC	Shoshone, Teco	86.87	53	P	P	19 12 00.1	-1.1
	baz=254,SNR=6.3						
I07A	Izee	86.91	44	eP	P	19 12 01.2	-0.2
BC3	Big Chuckawall	86.92	55	P	P	19 12 01.1	-0.6
	baz=255,SNR=49						
WVOR	Wild Horse Val	87.00	46	eP	P	19 12 02.1	+0.2
	comp=Z,1µm,2.2s						
WVOR				LR	LR		
	comp=Z,48µm,21.0s						
WVOR	Wild Horse Val	87.00	46	eP	P	19 12 02.1	+0.2
WVOR				pmax	pmax		
	comp=Z,1µm,2.2s						
WVOR				MLR	MLR		
	comp=Z,48µm,21.0s						
TUQ	Turquoise Moun	87.02	53	P	P	19 12 00.6	-1.5
	baz=254						
GMRC	Granite Mounta	87.05	54	P	P	19 12 01.6	-0.8
	baz=254,SNR=61						
B06A	Marblemount	87.07	39	eP	P	19 12 03.3	+1.4
LTY	Liberty	87.16	41	eP	P	19 12 02.3	-0.2
TPNV	Topopah Spring	87.18	52	eP	P	19 12 02.9	0.0
TPNV	Topopah Spring	87.18	52	eP	P	19 12 02.9	0.0
TPNV	Topopah Spring	87.18	52	P	P	19 12 02.0	-0.9
	baz=254,SNR=28						
F07A	Phinny Hill Vi	87.20	42	eP	P	19 12 03.5	+0.9
C06D	Leavenworth	87.24	40	P	P	19 12 01.5	-1.3
	baz=250						
GLA	Glamis	87.27	56	eP	P	19 12 03.5	+0.2
GLA	Glamis	87.27	56	eP	P	19 12 03.5	+0.2
GLA	Glamis	87.27	56	P	P	19 12 02.7	-0.6
	baz=255,SNR=60						
IRM	Iron Mountain	87.30	55	P	P	19 12 02.9	-0.5
	baz=255,SNR=95						
H06E1	SOCORRO T-PHAS	87.33	70	P	P	19 12 03.4	-0.4
J08A	Circle Bar Ran	87.39	45	eP	P	19 12 04.0	+0.2
LLLB	Lillooet	87.56	37	eP	P	19 12 04.8	+0.5
HAWA	Hanford	87.62	42	eP	P	19 12 04.9	+0.2
	comp=Z,721nm,1.9s						
HAWA				LR	LR		
	comp=Z,51µm,20.0s						
G08A	Pilot Rock	87.65	43	eP	P	19 12 05.1	+0.1
Y12C	Blythe	87.69	55	eP	P	19 12 05.3	+0.1
Y12C	Blythe	87.69	55	P	P	19 12 04.9	-0.3
	baz=255,SNR=32						
NEE2	Needles Airpor	87.88	54	P	P	19 12 04.9	-1.2
	baz=255						
SHPR	Sheep Range	87.90	52	eP	P	19 12 06.9	+0.5
E08A	Dider Farm, El	87.96	42	eP	P	19 12 06.5	+0.2
SRIG	Santa Rosalia	88.05	62	eP	P	19 12 08.7	+1.6
R11A	Troy Canyon, C	88.06	50	eP	P	19 12 06.7	-0.5
R11A	Troy Canyon, C	88.06	50	P	P	19 12 06.7	-0.5
	baz=254,SNR=88						
MDRS	Chennai	88.11	284	eP	P	19 12 08.5	+1.0
MDRS				IAmb	IAmb	19 13 46.1	
	comp=Z,4µm,11.9s						
PDMCI	Parker Dam,Lak	88.14	55	P	P	19 12 06.5	-0.8
	baz=255,SNR=51						
DANN	Dangsing	88.19	299	eP	P	19 12 06.5	-1.7
	comp=Z,68nm,0.8s						
KOLN	Koldanda	88.20	299	eP	P	19 12 06.6	-1.5
	comp=Z,177nm,1.6s						
D08A	Wollman Farm,	88.23	41	eP	P	19 12 07.8	+0.2
B08A	Colville Reser	88.37	40	eP	P	19 12 07.8	-0.4
W13A	Hualapai Mount	88.54	54	eP	P	19 12 09.5	-0.1
E09A	Wood Farm, Sta	88.57	42	eP	P	19 12 09.2	+0.1
BMO	Blue Mountains	88.64	44	eP	P	19 12 09.6	-0.1
	comp=Z,301nm,1.8s						
BMO				LR	LR		
	comp=Z,67µm,22.0s						
BMO	Blue Mountains	88.64	44	eP	P	19 12 09.6	-0.1
BMO				pmax	pmax		
	comp=Z,301nm,1.8s						
BMO				MLR	MLR		
	comp=Z,67µm,22.0s						
214A	Organ Pipe Nat	88.65	57	P	P	19 12 09.0	-0.9
	baz=256						
PYUN	Piuthan	88.80	299	eP	P	19 12 09.2	-1.7
	comp=Z,53nm,0.9s						
C09A	Chrisman Ranch	88.87	41	eP	P	19 12 10.4	-0.1
ELK	Elko	88.96	48	eP	P	19 12 11.1	-0.3
ELK	Elko	88.96	48	eP	P	19 12 11.1	-0.3
Y14A	Wickenburg	88.96	55	eP	P	19 12 11.8	+0.5
F10A	Beach Ranch, E	89.02	43	eP	P	19 12 10.7	-0.7
LPIG	La Paz	89.03	65	LR	LR	19 43 51.1	
	comp=Z,26µm,21.4s,baz=262,slow=30						
WMQ	Urumqi	89.05	315	P	P	19 12 10.5	-1.1
WMQ				pP	sP	19 12 16.0	-0.6
WMQ				sP	pwP	19 12 21.0	+2.2
WMQ				SKS	SKSac	19 22 41.7	+0.5
WMQ				sS	sS	19 23 08.5	+1.5
WMQ				SS	SS	19 28 56.7	+3.2
WMQ				pmax	pmax		
	comp=Z,73nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,3µm,4.3s						
WMQ				LR	LR		
	comp=Z,70µm,19.7s						
WMQ				LR	LR		
	comp=Z,52µm,25.1s						
WMQ				LR	LR		
	comp=Z,84µm,26.3s						
MFID	Camas Ranch	89.25	46	eP	P	19 12 12.8	+0.2
PSUT	Pine Spring	89.42	51	eP	P	19 12 14.0	+0.4
LCMT	Little Creek M	89.52	52	eP	P	19 12 14.3	+0.3
HSIG		89.54	60	eP	P	19 12 14.2	+0.1
CCUT	Cedar City	89.56	52	eP	P	19 12 14.5	+0.3
NEW	Newport	89.75	41	eP	P	19 12 14.4	-0.3
	comp=Z,143nm,1.5s						
NEW				LR	LR		
	comp=Z,37µm,21.0s						
NEW	Newport	89.75	41	P	P	19 12 14.0	-0.7
	baz=253,SNR=24						
SZCU	Shurtz Canyon	89.78	52	eP	P	19 12 16.1	+0.8
KNB	Kanab	89.84	52	eP	P	19 12 15.9	+0.3
INK	Inuvik	89.89	19	eP	P	19 12 13.8	-1.0
	comp=Z,348nm,2.1s						
INK	Inuvik	89.89	19	P	P	19 12 13.7	-1.0
	comp=Z,28nm,1.1s,baz=258,slow=4.3,SNR=22						
INK				LR	LR	19 46 13.0	
	comp=Z,44µm,21.4s,baz=227,slow=31						
HLID	Hailey	90.29	46	eP	P	19 12 16.9	-0.6
	comp=Z,7µm,3.6s						
HLID				LR	LR		
	comp=Z,24µm,20.0s						
HLID	Hailey	90.29	46	P	P	19 12 16.8	-0.7
	baz=255						
PKCU	Pink Cliffs	90.34	52	eP	P	19 12 18.4	+0.3
TRD	Trivandrum	90.39	279	eP	P	19 12 18.2	-0.1
TRD				IAMs_20	IAMs_20	19 57 47.3	
	comp=Z,38µm,14.6s						
JBP	Jabalpur	90.40	293⇑	eP	P	19 12 18.2	0.0
JBP				ex	x	19 16 28.4	
JBP				AMS	AMS	19 55 05.6	
	comp=Z,17µm,17.9s						
TUC	Tucson	90.40	57	eP	P	19 12 18.4	+0.2
	comp=Z,1µm,2.3s						
TUC				LR	LR		
	comp=Z,145µm,19.0s						
TUC	Tucson	90.40	57	eP	P	19 12 18.4	+0.2
TUC				MLR	MLR		
	comp=Z,145µm,19.0s						
TUC	Tucson	90.40	57	P	P	19 12 17.7	-0.5
	baz=257						
HYB	Hyderabad	90.57	288	iP	P	19 12 20.0	+0.8
HYB				ePP	PP	19 15 56.0	+1.7
HYB				e		19 21 44.0	
HYB				eSKS	SKSac	19 22 48.0	-3.0
HYB				eS	S	19 23 12.0	-3.0
HYB	Hyderabad	90.57	288	eP	P	19 12 16.9	-2.3
HYB				IAmb	IAmb	19 12 56.2	
	comp=Z,5µm,15.4s						
MTPU	Mount Pierson	90.58	51	eP	P	19 12 19.2	0.0
DUG	Dugway, Tooele	90.61	49	eP	P	19 12 19.4	+0.4
	comp=Z,1µm,2.6s						
DUG				LR	LR		
	comp=Z,44µm,20.0s						
DUG	Dugway, Tooele	90.61	49	eP	P	19 12 19.4	+0.4
DUG				MLR	MLR		
	comp=Z,44µm,20.0s						
DUG	Dugway, Tooele	90.61	49	P	P	19 12 17.9	-1.1
	baz=256						
BGU	Big Grassy Mou	90.63	49	eP	P	19 12 19.5	+0.4
WUAZ	Wupatki	90.64	54	eP	P	19 12 19.0	-0.3
	comp=Z,3µm,2.7s						
WUAZ				LR	LR		
	comp=Z,46µm,21.0s						
WUAZ	Wupatki	90.64	54	P	P	19 12 18.9	-0.4
	baz=257						
MSU	Marysvale	90.69	51	eP	P	19 12 20.1	+0.5
MSU	Marysvale	90.69	51	eP	P	19 12 20.1	+0.5
NGP	Nagpur	90.84	291⇓	eP	P	19 12 19.3	-1.0
NGP				ex	x	19 22 46.9	
NGP				ex	x	19 52 12.2	
	comp=Z,20µm,31.5s						
DGZ	Jazzator, Alta	90.85	321c	iP	P	19 12 18.3	-1.7
DGZ				pmax	pmax		
	comp=Z,12nm,0.6s						
DGZ				MLR	MLR		
	comp=Z,20µm,18.0s						
HVU	Hansel Valley	91.02	48	eP	P	19 12 20.4	-0.5
HVU	Hansel Valley	91.02	48	eP	P	19 12 20.4	-0.5
NLU	North Lily Min	91.11	50	eP	P	19 12 21.2	-0.2
SPUT	South Promonto	91.14	48	eP	P	19 12 21.3	-0.2
MSO	Missoula	91.44	43	eP	P	19 12 21.9	-0.8
MSO	Missoula	91.44	43	P	P	19 12 21.6	-1.1
	baz=256,SNR=19						
MPU	Maple Canyon	91.45	50	eP	P	19 12 24.0	+0.9
319A	Douglas	91.45	58	eP	P	19 12 23.3	+0.1
CTU	Camp Tracy	91.52	49	eP	P	19 12 23.7	+0.5
Q16A	Castle Valley	91.55	51	eP	P	19 12 24.5	+1.0
TMUT	Trail Mountain	91.61	50	eP	P	19 12 24.3	+0.4
MCMT	McKenzie Canyo	91.69	45	eP	P	19 12 24.5	+0.4
JLU	Jordanelle	91.72	49	eP	P	19 12 24.7	+0.4
DGAR	Diego Garcia	91.77	262	PFAKE		19 12 40.0	+15
DGAR				LR	LR		
	comp=Z,24µm,19.0s						
DGAR	Diego Garcia	91.77	262	iP	P	19 12 23.7	-1.1
DGAR				pmax	pmax		
	comp=Z,293nm,1.9s						
DGAR				MLR	MLR		
	comp=Z,51µm,18.0s						
SYO	Syowa Base	91.80	197⇑	eP	P	19 12 22.6	-1.2
SYO	Syowa Base	91.80	197⇑	eP	P	19 12 28.5	+4.7
W18A	Petrified Fore	91.86	55	P	P	19 12 23.9	-1.1
	baz=258						
HWUT	Hardware Ranch	91.86	48	eP	P	19 12 24.9	0.0
	comp=Z,2µm,3.2s						
HWUT				LR	LR		
	comp=Z,28µm,20.0s						
TCUT	Toone Canyon	91.86	49	eP	P	19 12 25.4	+0.5
ZSN	Zaisan	91.92	318⇑	iP	P	19 12 22.5	-2.2
	comp=Z,102nm,2.2s						
ZSN				eLR	LR	19 54 09.5	
	comp=Z,5µm,18.1s						
DLMT	Dillon	91.99	44	eP	P	19 12 25.6	+0.3
P17A	Butcher Ranch,	92.00	50	eP	P	19 12 25.9	+0.4
WALA	Waterton Lakes	92.01	40	eP	P	19 12 26.1	+0.8
	comp=Z,3µm,2.7s						
SRU	San Rafael Swe	92.09	51	eP	P	19 12 26.2	+0.2
SRU	San Rafael Swe	92.09	51	eP	P	19 12 26.2	+0.2
LRM	Limekiln Ridge	92.20	44	eP	P	19 12 26.3	-0.1
AHID	Auburn Hatcher	92.45	47	PFAKE		19 12 40.0	+12
AHID				LR	LR		
	comp=Z,38µm,22.0s						
QLMT	Earthquake Lak	92.67	45	eP	P	19 12 29.4	+0.8
FXWY	Fox Creek	92.69	46	eP	P	19 12 28.8	0.0
BOZ	Bozeman (W)	92.71	44	eP	P	19 12 29.0	+0.3
	comp=Z,2µm,2.8s						
BOZ				LR	LR		
	comp=Z,55µm,20.0s						
BOZ	Bozeman (W)	92.71	44	eP	P	19 12 29.0	+0.3
BOZ				MLR	MLR		
	comp=Z,55µm,20.0s						
BOZ	Bozeman (W)	92.71	44	P	P	19 12 27.7	-0.9
	baz=257,SNR=47						
TPAW	Teton Pass	92.72	46	eP	P	19 12 28.2	-0.7
BHPL	Bhopal	92.72	293	eP	P	19 12 28.1	-1.0
BHPL				IAmb	IAmb	19 13 04.3	
	comp=Z,538nm,8.2s						
REDW	Red Top Meadow	92.76	47	eP	P	19 12 29.2	+0.2
IMW	Indian Meadow	92.81	46	eP	P	19 12 29.8	+0.4
HRY	Holter Researc	92.82	43	eP	P	19 12 29.3	+0.2
YHB	Horse Butte	92.82	45	eP	P	19 12 30.1	+0.8
SNOW	Snow King Moun	92.85	46	eP	P	19 12 30.4	+0.9
MOOW	Moose Ponds	92.92	46	eP	P	19 12 29.8	+0.1
121A	Cookes Peak, D	92.93	58	P	P	19 12 29.2	-0.8
	baz=259,SNR=29						
YMR	Madison River	92.96	45	eP	P	19 12 30.9	+1.0
PV05	Paradox Valley	92.97	52	eP	P	19 12 32.5	+2.4
YPP	Pitchstone Pla	92.99	46	eP	P	19 12 30.9	+0.7
LOHW	Long Hollow	92.99	46	eP	P	19 12 30.2	+0.1
YFT	Old Faithful	93.00	45	eP	P	19 12 31.9	+1.8
FLWY	Flagg Ranch	93.02	46	eP	P	19 12 30.1	-0.2
PV09	Paradox Valley	93.02	52	eP	P	19 12 30.8	+0.3
PV14	Lion Creek, Pa	93.08	52	eP	P	19 12 31.3	+0.6
PV23	Carpenter Ridg	93.11	52	eP	P	19 12 31.2	+0.4
PV20	West Nyswonger	93.12	52	eP	P	19 12 32.7	+1.9
PV16	Nyswonger Mesa	93.15	52	eP	P	19 12 31.2	+0.2

PV21	Cone Mtn., Par	93.16	51	eP	P	19 12 31.8	+0.8
YNR	Norris Junctio	93.17	45	eP	P	19 12 32.8	+1.9
H17A	Grant Village	93.17	46	eP	P	19 12 32.4	+1.4
H17A	Grant Village	93.17	46	P	P	19 12 31.5	+0.5
	baz=258,SNR=26						
PV04	Paradox Valley	93.18	52	eP	P	19 12 31.3	+0.3
PV13	Radium Mtn., P	93.20	52	eP	P	19 12 31.7	+0.5
MVCO	Mesa Verde	93.26	53	eP	P	19 12 31.6	+0.1
MVCO				LR	LR		
	comp=Z,34µm,19.0s						
MVCO	Mesa Verde	93.26	53	P	P	19 12 30.7	-0.8
	baz=259						
PV02	Paradox Valley	93.27	52	eP	P	19 12 32.2	+0.7
LKWY	Lake	93.33	45	eP	P	19 12 32.9	+1.2
	comp=Z,25nm,1.0s						
LKWY				LR	LR		
	comp=Z,94µm,20.0s						
PV07	Paradox Valley	93.39	52	eP	P	19 12 32.8	+0.8
MK01	Makanchi Array	93.47	317	eP	P	19 12 30.4	-1.5
DDI	Dehra Dun	93.48	300	eP	P	19 12 33.0	+0.5
DDI				IAmb	IAmb	19 13 08.8	
	comp=Z,1µm,10.6s						
MK31	Makanchi Array	93.48	317	eP	P	19 12 30.5	-1.5
MKAR	Makanchi Array	93.48	317	eP	P	19 12 30.5	-1.5
MKAR				PP	PP	19 16 13.9	-2.6
MKAR				PKKPbc	PKKPdf	19 29 37.0	-1.9
MKAR				P'P'		19 37 49.6	
MKAR	Makanchi Array	93.48	317	P	P	19 12 31.3	-0.7
	comp=Z,21nm,0.7s,baz=98,slow=5.3,SNR=98						
MKAR				PP	PP	19 16 13.9	-2.6
	comp=Z,3.0nm,0.8s,baz=100,slow=9.2,SNR=2.5						
MKAR				PKKPbc	PKKPdf	19 29 37.0	-1.9
	comp=Z,9.6nm,0.7s,baz=275,slow=3.0,SNR=36						
MKAR				PKPPKP		19 37 49.6	
	comp=Z,0.5nm,0.7s,baz=305,slow=1.4,SNR=4.4						
MKAR				LR	LR	19 53 54.5	
	comp=Z,18µm,21.6s,baz=90,slow=35						
ZALV	Zalesovo Beam	93.51	324	P	P	19 12 30.3	-1.6
ZALV				pmax	pmax		
	comp=Z,12nm,0.6s						
ZALV	Zalesovo Beam	93.51	324	P	P	19 12 30.2	-1.6
	comp=Z,11nm,0.6s,baz=114,slow=4.1,SNR=41						
ZALV				PKKPbc	PKKPdf	19 29 35.4	-3.7
	comp=Z,3.4nm,0.5s,baz=255,slow=4.4,SNR=11						
BW06	Boulder Array	93.56	47	eP	P	19 12 32.1	-0.6
BW06				LR	LR		
	comp=Z,43µm,22.0s						
BW06	Boulder Array	93.56	47	P	P	19 12 31.7	-1.1
	baz=258,SNR=30						
PD31	Pinedale Array	93.56	47	eP	P	19 12 32.3	-0.5
PDAR	Pinedale Array	93.56	47	eP	P	19 12 30.7	-2.0
PDAR				PKKPbc	PKKPdf	19 29 37.9	-1.0
PDAR	Pinedale Array	93.56	47	P	P	19 12 32.3	-0.5
	comp=Z,17nm,0.9s,baz=239,slow=2.6,SNR=29						
PDAR				PKKPbc	PKKPdf	19 29 37.9	-1.0
	comp=Z,1.0nm,0.7s,baz=81,slow=4.4,SNR=6.6						
PDAR				LR	LR	19 47 31.4	
	comp=Z,32µm,21.8s,baz=262,slow=31						
MAKZ	Makanchi	93.69	317	eP	P	19 12 31.8	-1.2
MAKZ	Makanchi	93.69	317	eP	P	19 12 31.8	-1.2
HPIG		93.70	63	eP	P	19 12 34.5	+0.8
LAZ	Ladron	93.81	56	eP	P	19 12 35.0	+1.0
LENM	Lemitar	93.90	56	eP	P	19 12 34.5	0.0
O20A	White River Ci	94.02	50	eP	P	19 12 35.0	+0.2
O20A	White River Ci	94.02	50	P	P	19 12 34.0	-0.9
	baz=259						
GCMT	Greycliff	94.09	44	eP	P	19 12 35.5	+0.5
MNCY	Minicoy	94.16	278	eP	P	19 12 34.4	-1.4
BNM	Barren Site	94.18	56	eP	P	19 12 34.6	-1.3
RLMT	Red Lodge	94.24	45	eP	P	19 12 36.1	+0.3
RLMT				LR	LR		
	comp=Z,71µm,21.0s						
RLMT	Red Lodge	94.24	45	P	P	19 12 34.8	-1.0
	baz=259						
SMLA	Simla	94.37	301	eP	P	19 12 36.0	-0.5
SMLA				IAmb	IAmb	19 13 12.5	
	comp=Z,721nm,9.6s						
ANMO	Albuquerque	94.46	55	eP	P	19 12 36.8	-0.2
ANMO	Albuquerque	94.46	55	ceP	P	19 12 35.7	-1.3
ANMO				pmax	pmax		
	comp=Z,13nm,0.9s						
ANMO				MLR	MLR		
	comp=Z,39µm,17.0s						
ANMO	Albuquerque	94.46	55	P	P	19 12 36.0	-1.1
	baz=260						
ANMO	Albuquerque	94.46	55	LR	LR	19 52 57.2	
	comp=Z,4µm,18.2s,baz=255,slow=34						
EGMT	Eagleton	94.48	42	eP	P	19 12 36.1	-0.5
EGMT				LR	LR		
	comp=Z,38µm,20.0s						
EGMT	Eagleton	94.48	42	P	P	19 12 35.7	-0.9
	baz=259						
NVS	Novosibirsk	94.62	325	i P	P	19 12 35.8	-1.2
NVS				e		19 23 05.9	
NVS				pmax	pmax		
	comp=Z,100nm,1.8s						
NVS				pmax	pmax		
	comp=N,21nm,1.7s						
NVS				pmax	pmax		
	comp=E,38nm,1.7s						
S22A	4UR Ranch, Cre	94.67	53	eP	P	19 12 38.3	+0.2
S22A	4UR Ranch, Cre	94.67	53	P	P	19 12 37.5	-0.5
	baz=260,SNR=17						
GOA	Goa	94.68	285	eP	P	19 12 37.0	-1.1
GOA				IAmb	IAmb	19 13 12.3	
	comp=Z,62nm,4.3s						
SHLS	Shalkode	94.73	313	⇓eP	P	19 12 33.7	-4.2
	comp=Z,107nm,1.5s						
SHLS				⇓ePP	PP	19 16 21.0	-5.6
SHLS				eLR	LR	19 53 03.5	
	comp=Z,11µm,20.1s						
MNTX	Cornudas Mount	94.78	59	eP	P	19 12 38.1	-0.3
MNTX				LR	LR		
	comp=Z,70µm,21.0s						
MNTX	Cornudas Mount	94.78	59	P	P	19 12 37.5	-0.8
	baz=260,SNR=35						
SMCO	Snowmass	94.81	51	eP	P	19 12 39.6	+0.8
YKA	Yellowknife Ar	94.97	27	P	P	19 12 35.9	-2.5
	comp=Z,11nm,0.7s,baz=256,slow=4.7,SNR=100						
YKA				PP	PP	19 16 35.1	+7.4
	comp=Z,3.5nm,1.0s,baz=255,slow=7.8,SNR=4.6						
YKA				PKiKP	PKiKP	19 17 18.9	-1.2
	comp=Z,1.0nm,0.6s,baz=254,slow=1.3,SNR=8.6						
YKA				PKKPbc	PKKPbc	19 29 33.6	-2.9
	comp=Z,1.4nm,0.9s,baz=62,slow=2.6,SNR=5.5						
YKA				LR	LR	19 50 23.0	
	comp=Z,5µm,19.7s,baz=266,slow=32						
UZB	Uzynbulak	95.04	313	⇑iP	P	19 12 36.6	-2.8
	comp=Z,189nm,2.8s						
UZB				⇑ePP	PP	19 16 25.2	-3.8
UZB				⇓eS	SKSac	19 23 12.1	-3.0
	comp=Z,1µm,2.8s						
UZB				eLR	LR	19 56 48.4	
	comp=Z,7µm,19.7s						
RWWY	Rawlins	95.07	49	eP	P	19 12 39.0	-0.8
POO	Poona	95.17	288	⇑iP	P	19 12 38.0	-2.4
POO				eP	P	19 12 41.0	+0.6
POO				IAmb	IAmb	19 14 20.0	
	comp=Z,1µm,10.6s						
DHRM	DHARAMSHALA	95.29	302	eP	P	19 12 41.5	+0.6
DHRM				IAmb	IAmb	19 13 15.0	
	comp=Z,262nm,6.5s						
DHRM				IAMs_20	IAMs_20	19 53 56.8	
	comp=Z,40µm,30.7s						
KPKS	Kokpek	95.34	313	⇓iP	P	19 12 37.6	-3.2
	comp=Z,305nm,2.2s						
KPKS				ePP	PP	19 16 30.3	-1.0
KPKS				⇓iS	SKSac	19 23 16.2	-0.3
	comp=Z,2µm,3.7s						
KPKS				eLR	LR	19 55 57.5	
	comp=Z,13µm,18.0s						
ZHN	Zhinishke	95.47	313	⇑iP	P	19 12 38.4	-2.9
	comp=Z,88nm,2.5s						
ZHN				⇑iPP	PP	19 16 31.6	-0.7
ZHN				⇑iS	SKSac	19 23 17.4	+0.1
	comp=Z,71nm,6.9s						
ZHN				eLR	LR	19 56 16.4	
	comp=Z,5µm,15.3s						
SATY	Saty	95.47	313	eP	P	19 12 49.9	+8.6
	comp=Z,1µm,3.2s						
SATY				⇓iS	SKSac	19 23 25.7	+8.3
	comp=Z,3µm,3.6s						
SATY				eLR	LR	19 56 33.8	
	comp=Z,9µm,17.2s						
SEM	Semipalatinsk	95.52	320	⇓iP	P	19 12 38.1	-3.5
	comp=Z,164nm,1.9s						
SEM				ePP	PP	19 16 30.5	-2.1
SEM				eS	SKSac	19 23 13.8	-3.7
	comp=Z,2µm,2.6s						
SEM				eLR	LR	19 57 01.8	
	comp=Z,20µm,20.2s						
SDCO	Great Sand Dun	95.70	53	eP	P	19 12 42.5	-0.3
SDCO				LR	LR		
	comp=Z,51µm,20.0s						
SDCO	Great Sand Dun	95.70	53	P	P	19 12 41.8	-0.9
	baz=261						
GDL2	Guadalupe Moun	95.72	58	eP	P	19 12 42.6	-0.2
K22A	Casper	95.74	48	eP	P	19 12 45.7	+3.0
K22A	Casper	95.74	48	P	P	19 12 41.2	-1.5
	baz=260						
PMSA	Palmer Station	95.75	161	PFAKE		19 12 50.0	+8.0
PMSA				LR	LR		
	comp=Z,20µm,19.0s						
ZAIG	Zacatecas	95.76	68	eP	P	19 12 47.3	+4.0
TDK	Taldyqorghan	95.80	315	eP	P	19 12 40.6	-2.0
	comp=Z,196nm,1.4s						
TDK				ePP	PP	19 16 31.1	-3.6
TDK				⇑iS	SKSac	19 23 16.8	-2.0
	comp=Z,2µm,3.0s						
TDK				eLR	LR	19 57 39.7	
	comp=Z,33µm,19.1s						
TX31	Lajitas Ar. Si	95.85	61	eP	P	19 12 42.6	-0.7
TX31				eP	P	19 12 43.0	-0.4
TXAR	Lajitas Array	95.85	61	P	P	19 12 42.5	-0.8
	comp=Z,3.5nm,0.6s,baz=222,slow=5.2,SNR=19						
TXAR				PP	PP	19 16 32.9	-2.7
	comp=Z,5.3nm,1.1s,baz=258,slow=6.1,SNR=3.6						
TXAR				PKKPbc	PKKPbc	19 29 33.0	-0.1
	comp=Z,1.2nm,0.6s,baz=91,slow=4.3,SNR=8.6						
TXAR				LR	LR	19 48 15.2	
	comp=Z,65µm,20.7s,baz=0.0,slow=31						
N23A	Red Feather La	95.88	50	eP	P	19 12 44.4	+0.9
N23A	Red Feather La	95.88	50	P	P	19 12 42.6	-0.8
	baz=261						
ISCO	Idaho Springs	95.95	51	eP	P	19 12 46.1	+2.2
ISCO				LR	LR		
	comp=Z,118µm,22.0s						
ISCO	Idaho Springs	95.95	51	P	P	19 12 42.9	-1.0
	baz=261						
NRIK	Noril'sk	96.09	340	P	P	19 12 42.1	-1.3
	comp=Z,8.0nm,0.6s,baz=119,slow=4.9,SNR=13						
NRIK				LR	LR	19 56 41.3	
	comp=Z,24µm,19.4s,baz=103,slow=36						
Q24A	Divide	96.17	52	P	P	19 12 43.2	-1.7
	baz=261						
BOM	Bombay	96.20	288	eP	P	19 12 44.0	-1.1
BOM				IAMs_20	IAMs_20	19 56 15.3	
	comp=Z,20µm,16.0s						
PHWY	Pilot Hill	96.31	49	eP	P	19 12 48.4	+3.0
T25A	Trinidad	96.46	54	eP	P	19 12 49.0	+2.9
T25A	Trinidad	96.46	54	P	P	19 12 45.3	-0.9
	baz=261						
MDOK	Medeo	96.47	313	eP	P	19 12 42.6	-3.4
	comp=Z,86nm,2.5s						
MDOK				ePP	PP	19 16 34.0	-6.1
MDOK				eS	SKSac	19 23 23.3	+0.7
MDOK				eLR	LR	19 55 07.3	
	comp=Z,10µm,23.0s						
NVL	N'lazarevskaya	96.48	188	eP	P	19 12 43.0	-2.3
NVL				eS	SKSac	19 23 19.2	-2.3
NVL				eSP	SP	19 25 33.0	+8.9
NVL				eSS	SS	19 30 51.6	+14
NVL				eSSS	SSS	19 34 31.0	
NVL				pmax	pmax		
	comp=Z,32nm,1.3s						
NVL				MLR	MLR		
	comp=Z,19µm,17.0s						
AAA	Alma-Ata	96.57	313	eP	P	19 12 43.8	-2.5
AAA				eS	SKSac	19 23 22.9	-0.1
AAA				pmax	pmax		
	comp=Z,57nm,0.6s						
AAA				MLR	MLR		
	comp=Z,5µm,17.0s						
AAA	Alma-Ata	96.57	313	eP	P	19 12 43.8	-2.5
	comp=Z,57nm,0.6s						
AAA				eS	SKSac	19 23 22.9	-0.1
AAA				eLR	LR	19 55 08.3	
	comp=Z,5µm,17.2s						
KURK	Kurchatov	96.60	320	eP	P	19 12 44.6	-1.5
KURK				PP	PP	19 16 24.9	-16
KURK				PKKPbc	PKKPbc	19 29 28.6	-3.1
KURK				LR	LR		
	comp=Z,65µm,19.0s						
KURK	Kurchatov	96.60	320	ceP	P	19 12 44.5	-1.6
KURK				pmax	pmax		
	comp=Z,64nm,2.6s						
KURK				MLR	MLR		
	comp=Z,35µm,17.0s						
KURK	Kurchatov	96.60	320	P	P	19 12 45.9	-0.2
	SNR=24						
LAO	LASA Array	96.60	44	eP	P	19 12 47.2	+0.9
LAO				LR	LR		
	comp=Z,45µm,20.0s						
LAO	LASA Array	96.60	44	P	P	19 12 46.2	-0.2
	baz=261						
KURBB	Kurchatov Arra	96.64	320	P	P	19 12 44.2	-2.1
	comp=Z,2.6nm,0.5s,baz=97,slow=4.5,SNR=33						
KURBB				PP	PP	19 16 24.9	-16
	comp=Z,5.9nm,0.9s,baz=104,slow=6.0,SNR=4.1						
KURBB				PKKPbc	PKKPbc	19 29 28.6	-3.0
	comp=Z,6.6nm,0.7s,baz=283,slow=3.0,SNR=30						
KSH	Kashi	96.71	309	P	P	19 12 49.6	+2.5
KSH				pP	pwP	19 12 53.3	-1.0
KSH				PP	PP	19 16 47.2	+5.2
KSH				SKS	SKSac	19 23 24.3	+0.3
KSH				S	S	19 24 06.8	-1.8
KSH				SS	SS	19 30 43.1	-0.6
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,700nm,4.3s						
KSH				LR	LR		
	comp=Z,7µm,11.3s						
KSH				LR	LR		
	comp=Z,4µm,8.9s						
KSH				LR	LR		
	comp=Z,27µm,16.5s						
SNAA	Sanae	97.14	184	P	Pdif	19 12 52.0	+3.6
SNAA	Sanae	97.14	184	eP	P	19 12 48.2	-0.2
SNAA	Sanae	97.14	184	i P	Pdif	19 12 49.3	+0.9
MSTX	Muleshoe	97.31	57	eP	Pdif	19 12 50.3	+0.3
MSTX	Muleshoe	97.31	57	P	P	19 12 48.0	-1.9
	baz=262						
RSSD	Black Hills	97.75	47	eP	Pdif	19 12 51.9	0.0
RSSD	Black Hills	97.75	47	eP	Pdif	19 12 51.9	0.0
RSSD	Black Hills	97.75	47	P	P	19 12 50.4	-1.4
	baz=262						
VNA3	Neumayer Olymp	97.87	182	P	Pdif	19 12 52.1	+0.5
NIL	Nilore	98.04	303	PFAKE		19 13 00.0	+6.8
NIL				LR	LR		
	comp=Z,14µm,20.0s						
VNA2	Neumayer--Watz	98.11	182	P	Pdif	19 12 52.7	0.0
	baz=178,slow=4.3						
VNA2	Neumayer--Watz	98.11	182	PKiKP	PKiKP	19 17 30.0	+4.5
	baz=178,slow=4.3						
KSCO	Kaye Shedlock'	98.12	52	P	P	19 12 52.2	-1.3
	baz=262						
FRU	Bishkek	98.19	312	eP	P	19 12 53.0	-0.6
FRU				e		19 16 55.0	
FRU				ePPP	PPP	19 19 09.0	
FRU				e		19 23 31.0	
FRU				eS	SKKSac	19 24 06.0	+5.6
FRU				pmax	pmax		
	comp=Z,300nm,3.0s						
FRU				smax	smax		
	comp=E,7µm,11.0s						
FRU				smax	smax		
	comp=E,2µm,4.0s						
DGMT	Dagmar	98.21	42	eP	P	19 12 53.4	-0.1
DGMT				LR	LR		
	comp=Z,44µm,21.0s						
DGMT	Dagmar	98.21	42	P	P	19 12 52.2	-1.3
	baz=263						
AAK	Ala-Archa	98.25	312	eP	Pdif	19 12 54.2	+0.1
AAK	Ala-Archa	98.25	312	i P	Pdif	19 12 54.2	+0.2
	SNR=5.8						
AAK	Ala-Archa	98.25	312	c iP	P	19 12 53.1	-0.9
AAK				pmax	pmax		
	comp=Z,27nm,2.5s						
AAK	Ala-Archa	98.25	312	P	P	19 12 53.5	-0.5
	comp=Z,3.0nm,0.8s,baz=144,slow=3.2,SNR=17						
AAK				LR	LR	20 00 49.2	
	comp=Z,18µm,18.1s,baz=74,slow=38						
AMTX	Amarillo	98.33	56	eP	P	19 12 54.0	-0.5
AMTX	Amarillo	98.33	56	Pdiff	P	19 12 52.8	-1.6
	baz=262						
VNA1	Neumayer--Stat	98.42	182	P	P	19 12 52.1	-1.9
OGNE	Ogallala	98.82	50	PFAKE		19 13 10.0	+13
OGNE				LR	LR		
	comp=Z,92µm,22.0s						
OGNE	Ogallala	98.82	50	Pdiff	P	19 12 55.2	-1.3
	baz=263						
BTLS	Baital	98.87	314	c iP	P	19 12 53.5	-2.9
BTLS				i S	SKSac	19 23 31.8	-2.7
BTLS				pmax	pmax		
	comp=Z,89nm,2.3s						
BTLS				MLR	MLR		
	comp=Z,11µm,17.0s						
BTLS	Baital	98.87	314	⇑iP	P	19 12 53.6	-2.9
	comp=Z,89nm,2.2s						
BTLS				⇓iS	SKSac	19 23 31.9	-2.7
BTLS				eLR	LR	19 58 35.7	
	comp=Z,11µm,16.9s						
JCT	Junction City	99.33	61	eP	Pdif	19 12 57.9	-1.1
JCT				LR	LR		
	comp=Z,89µm,20.0s						
JCT	Junction City	99.33	61	eP	Pdif	19 12 57.9	-1.1
JCT				MLR	MLR		
	comp=Z,89µm,20.0s						
JCT	Junction City	99.33	61	Pdiff	Pdif	19 12 57.0	-2.0
	baz=263						
833A	Chaparral WMA,	99.41	63	Pdiff	Pdif	19 12 56.7	-2.6
	baz=263						
ABTX	Abilene, Hawle	99.73	59	Pdiff	Pdif	19 12 57.9	-2.8
	baz=263						
BHJ	Bhuj	99.78	292	eP	Pdif	19 12 59.3	-1.8
BHJ				IAmb	IAmb	19 13 37.4	
	comp=Z,454nm,9.1s						
BHJ				IAMs_20	IAMs_20	20 07 39.1	
	comp=Z,29µm,8.2s						
FFC	Flin Flon	100.24	36	eP	Pdif	19 13 01.3	-1.1
	comp=Z,27nm,1.1s						
FFC				LR	LR		
	comp=Z,82µm,19.0s						
FFC	Flin Flon	100.24	36	eP	Pdif	19 13 01.3	-1.1
FFC				pmax	pmax		
	comp=Z,27nm,1.1s						
FFC				MLR	MLR		
	comp=Z,82µm,19.0s						
CBKS	Cedar Bluff	100.34	52	PFAKE		19 13 10.0	+6.7
CBKS				LR	LR		
	comp=Z,47µm,20.0s						
CBKS	Cedar Bluff	100.34	52	Pdiff	Pdif	19 13 01.2	-2.1
	baz=264						
KVTX	Kingsville	100.63	64	PFAKE		19 13 20.0	+15
KVTX				LR	LR		
	comp=Z,31µm,21.0s						
WMOK	Wichita Mounta	100.68	57	PFAKE		19 13 20.0	+15
WMOK				LR	LR		
	comp=Z,80µm,21.0s						
WMOK	Wichita Mounta	100.68	57	Pdiff	Pdif	19 13 01.9	-3.0
	baz=264						
JBG	Jabagly	101.13	311	deP	Pdif	19 13 03.7	-3.1
JBG				pmax	pmax		
	comp=Z,57nm,2.0s						
KK31	Karatay Array	101.21	312	ePdif	Pdif	19 13 06.8	-0.1
KK31	Karatay Array	101.21	312	eP	Pdif	19 13 06.9	-0.1
KKAR	Karatay Array	101.21	312	ePdif	Pdif	19 13 06.8	-0.1
KKAR	Karatay Array	101.21	312	eP	Pdif	19 13 06.9	-0.1
MDND	Maddock	101.21	43	Pdiff	Pdif	19 13 05.7	-1.2
	baz=266						
435B	Jarrell	101.27	61	Pdiff	Pdif	19 13 04.7	-2.8
	baz=264						
SUSD	Miller	101.42	47	Pdiff	Pdif	19 13 06.3	-1.6
	baz=266						
IUG	Iuzhnay	101.49	311	ceP	Pdif	19 13 05.7	-2.7
IUG				e		19 17 14.5	
IUG				i S	SKSac	19 23 47.3	-0.4
IUG				pmax	pmax		
	comp=Z,37nm,1.1s						
IUG				smax	smax		
	comp=E,2µm,5.3s						
IUG	Iuzhnay	101.49	311	⇑eP	Pdif	19 13 05.8	-2.7
	comp=E,37nm,1.1s						
IUG				⇓ePP	PP	19 17 14.5	-3.9
IUG				⇓iS	SKSac	19 23 47.4	-0.3
	comp=E,2µm,5.3s						
IUG				eLR	LR	20 00 51.8	
	comp=E,6µm,17.6s						
WHTX	Lake Whitney,	101.50	59	Pdiff	Pdif	19 13 05.7	-2.9
	baz=264						
BGNE	Belgrade	101.78	50	Pdiff	Pdif	19 13 06.2	-3.4
	baz=266						
BVAR	Borovoye Array	101.91	322	P	Pdif	19 13 08.5	-1.3
	comp=E,5.4nm,0.6s,baz=117,slow=5.6,SNR=27						
BVAR				PP	PP	19 17 16.9	-4.2
	comp=E,4.2nm,0.7s,baz=90,slow=7.4,SNR=4.8						
BVAR				PKiKP	PKiKP	19 17 32.3	-0.4
	comp=E,12nm,1.0s,baz=133,slow=1.8,SNR=6.6						
BVAR				PKKPbc	PKKPbc	19 29 14.4	-2.4
	comp=E,1.9nm,0.5s,baz=259,slow=1.5,SNR=21						
BRVK	Borovoye	101.97	322	eP	Pdif	19 13 07.5	-2.6
	comp=E,26nm,1.0s						
BRVK				LR	LR		
	comp=Z,26µm,19.0s						
BRVK	Borovoye	101.97	322	eP	Pdif	19 13 07.5	-2.6
BRVK				pmax	pmax		
	comp=Z,26nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,26µm,19.0s						
BRVK	Borovoye	101.97	322	P	Pdif	19 13 10.5	+0.4
	SNR=11						
KSU1	Kansas State U	102.79	52	PFAKE		19 13 30.0	+16
KSU1				LR	LR		
	comp=Z,61µm,20.0s						
KSU1	Kansas State U	102.79	52	Pdiff	Pdif	19 13 11.4	-2.8
	baz=266						
ECSD	EROS Data Cent	103.06	48	PFAKE		19 13 30.0	+15
ECSD				LR	LR		
	comp=Z,36µm,21.0s						
ECSD	EROS Data Cent	103.06	48	Pdiff	Pdif	19 13 13.3	-1.9
	baz=267						
TUL1	Leonard	103.22	56	Pdiff	Pdif	19 13 13.8	-2.3
	baz=266						
PAYG	Puerto Ayora	103.61	93	PFAKE		19 13 30.0	+12
PAYG				LR	LR		
	comp=Z,12µm,19.0s						
ULM	Lac du Bonnet	103.76	41	ePdif	Pdif	19 13 18.7	+0.6
ULM				PP	PP	19 17 31.1	-3.9
ULM	Lac du Bonnet	103.76	41	Pdiff	Pdif	19 13 16.6	-1.5
	comp=Z,4.1nm,0.8s,baz=279,slow=4.2,SNR=7.2						
ULM				PP	PP	19 17 31.1	-3.9
	comp=Z,2.0nm,0.6s,baz=276,slow=7.4,SNR=3.5						
NATX	Nacogdoches	103.85	60	PFAKE		19 13 30.0	+11
NATX				LR	LR		
	comp=Z,61µm,20.0s						
NATX	Nacogdoches	103.85	60	Pdiff	Pdif	19 13 16.1	-2.8
	baz=266						
FCC	Fort Churchill	104.64	32	ePdif	Pdif	19 13 21.0	-0.8
FCC	Fort Churchill	104.64	32	eP	Pdif	19 13 21.0	-0.8
W39A	Magazine	104.81	56	Pdiff	Pdif	19 13 23.3	+0.1
	baz=267						
MIAR	Mount Ida	104.94	57	PFAKE		19 13 40.0	+16
MIAR				LR	LR		
	comp=Z,88µm,21.0s						
SCIA	State Center	105.50	49	PFAKE		19 17 50.0	+10
SCIA				LR	LR		
	comp=Z,72µm,20.0s						
EYMN	Ely	106.67	43	PFAKE		19 17 50.0	+8.4
EYMN				LR	LR		
	comp=Z,72µm,20.0s						
JFWS	Jewell Farm	107.69	48	PFAKE		19 18 00.0	+16
JFWS				LR	LR		
	comp=Z,30µm,19.0s						
COWI	Conover	108.36	45	PFAKE		19 18 00.0	+15
COWI				LR	LR		
	comp=Z,73µm,22.0s						
HDIL	Hopedale	108.46	51	PFAKE		19 18 00.0	+15
HDIL				LR	LR		
	comp=Z,91µm,22.0s						
ARU	Arti	108.59	326	PFAKE		19 18 00.0	+15
ARU				LR	LR		
	comp=Z,24µm,19.0s						
ARU	Arti	108.59	326	P	Pdif	19 13 38.6	-0.8
AKTO	Aktyubinsk	109.68	320	Pdiff	Pdif	19 13 43.0	-1.5
	comp=Z,0.9nm,0.8s,baz=126,slow=5.5,SNR=2.9						
AKTO				PKiKP	PKiKP	19 17 46.3	-0.8

	comp=Z,2.1nm,0.6s,baz=100,slow=3.9,SNR=7.3						
BRAL	**Brewton**	**110.32**	**61**	PFAKE		19 18 00.0	+11
BRAL				LR	LR		
	comp=Z,41µm,21.0s						
GEYT	**Alibeck**	**110.54**	**306**	PKiKP	**PKiKP**	**19 17 46.6**	**-2.6**
	comp=Z,1.1nm,0.5s,baz=82,slow=2.2,SNR=3.0						
GEYT				PP	**PP**	**19 18 21.4**	**-3.8**
	comp=Z,4.7nm,0.9s,baz=82,slow=3.1,SNR=5.4						
GEYT				PKKPbc	**PKKPbc**	**19 28 50.5**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=250,slow=4.2,SNR=4.3						
JTS	**JuntasAbangare**	**110.71**	**83**	PFAKE		19 18 00.0	+10
JTS				LR	LR		
	comp=Z,16µm,19.0s						
KBS	**Kingsbay**	**110.89**	**355**	PFAKE		19 18 00.0	+11
KBS				LR	LR		
	comp=Z,19µm,20.0s						
KBS	**Kingsbay**	**110.89**	**355**	*e*PP	**PP**	**19 18 26.9**	**+0.6**
KBS				*e*SS	SS	19 33 57.4	+1.3
HOPEN	**Hopen**	**111.28**	**351**	*e*PP	**PP**	**19 18 29.3**	**+0.1**
HOPEN				*e*SP	SP	19 28 00.4	+2.3
GLMI	**Grayling**	**111.63**	**46**	PFAKE		19 18 00.0	+9.0
GLMI				LR	LR		
	comp=Z,65µm,21.0s						
UOSS	**Minazif**	**112.16**	**292**	P	**PKiKP**	**19 17 50.8**	**-1.8**
HSPB	**Hornsund (broa**	**112.20**	**353**	*e*P	**Pdif**	**19 13 56.4**	**+1.3**
HSPB				*e*		19 18 35.5	
HSPB				*e*SS	SS	19 34 13.0	-0.5
HSPB				MLR	MLR		
	comp=Z,32µm,21.0s						
HSPB	**Hornsund (broa**	**112.20**	**353**	*e*PP	**PP**	**19 18 34.8**	**-0.9**
HSPB				*e*SP	SP	19 28 07.7	+1.2
HATD	**Hatta, Dubai**	**112.22**	**292**	P	**PKiKP**	**19 17 52.7**	**-0.1**
HOPE	**Hope Point**	**112.28**	**166**	PFAKE		19 18 00.0	+8.0
HOPE				LR	LR		
	comp=Z,18µm,21.0s						
ABPO	**Ambohimpanom**	**112.42**	**244**	PFAKE		19 18 00.0	+6.5
ABPO				LR	LR		
	comp=Z,18µm,20.0s						
AAM	**Ann Arbor**	**112.58**	**49**	PFAKE		19 18 00.0	+7.1
AAM				LR	LR		
	comp=Z,58µm,20.0s						
LCO	**Las Campanas**	**112.59**	**128**	*e*PKPdf	**PKiKP**	**19 17 52.5**	**-1.3**
LCO				LR	LR		
	comp=Z,18µm,21.0s						
LCO	**Las Campanas**	**112.59**	**128**	*e*PKIKP	**PKiKP**	**19 17 52.5**	**-1.3**
LCO				MLR	MLR		
	comp=Z,18µm,21.0s						
OPO	**Ambohidratompo**	**112.61**	**245**	PKiKP	**PKiKP**	**19 17 54.6**	**+0.7**
	comp=Z,6.6nm,0.9s,baz=45,slow=3.0,SNR=5.7						
KIRV	**Kirov**	**112.93**	**329**	PKiKP	**PKiKP**	**19 17 52.4**	**-0.6**
	comp=Z,5.8nm,0.5s,baz=349,slow=0.6,SNR=4.4						
ACSO	**Alum Creek Sta**	**113.29**	**51**	PFAKE		19 18 10.0	+16
ACSO				LR	LR		
	comp=Z,53µm,20.0s						
GOGA	**Godfrey**	**113.33**	**58**	PFAKE		19 18 10.0	+15
GOGA				LR	LR		
	comp=Z,58µm,20.0s						
PRGR	**Permogore**	**113.69**	**333**	*i* PKIKP	**PKiKP**	**19 17 53.1**	**-1.3**
PRGR				pmax	pmax		
	comp=Z,11nm,1.0s						
NNA	**Nana**	**113.81**	**108**	PFAKE		19 18 10.0	+14
NNA				LR	LR		
	comp=Z,5µm,20.0s						
TRQA	**Tornquist**	**113.90**	**140**	PFAKE		19 18 10.0	+14
TRQA				LR	LR		
	comp=Z,14µm,20.0s						
LVZ	**Lovozero**	**114.82**	**342**	PFAKE		19 18 10.0	+14
LVZ				LR	LR		
	comp=Z,26µm,22.0s						
LVZ	**Lovozero**	**114.82**	**342**	*e*PKIKP	**PKiKP**	**19 17 54.9**	**-1.6**
LVZ				MLR	MLR		
	comp=Z,47µm,21.0s						
OTAV	**Otavalo**	**115.39**	**95**	PFAKE		19 18 10.0	+10
OTAV				LR	LR		
	comp=Z,20µm,20.0s						
APA	**Apatity**	**115.40**	**342**	⇓*i*PKIKP	**PKPdf**	**19 17 58.1**	**+0.6**
APA				*i*		19 24 58.0	
BCIP	**Isla Barro Col**	**115.56**	**85**	PFAKE		19 18 10.0	+11
BCIP				LR	LR		
	comp=Z,11µm,20.0s						
BLA	**Blacksburg**	**115.57**	**54**	PFAKE		19 18 10.0	+11
BLA				LR	LR		
	comp=Z,71µm,22.0s						
TMCR	**Tamitsa**	**115.70**	**337**	*e*PKIKP	**PKiKP**	**19 17 58.1**	**-0.1**
KEV	**Kevo**	**115.77**	**345**	PFAKE		19 18 10.0	+12
KEV				LR	LR		
	comp=Z,51µm,22.0s						
HAMF	**Hammerfest**	**115.92**	**347**	*e*PKPdf	**PKPdf**	**19 17 58.5**	**0.0**
NHSC	**New Hope**	**116.10**	**59**	PFAKE		19 18 10.0	+10
NHSC				LR	LR		
	comp=Z,56µm,20.0s						
ARCES	**ARCESS Array B**	**116.30**	**345**	PKP	**PKiKP**	**19 17 57.5**	**-1.8**
	comp=Z,16nm,0.7s,baz=78,slow=1.9,SNR=80						
ARCES				PKKPbc	**PKKPbc**	**19 28 24.2**	**-6.7**
	comp=Z,0.7nm,0.5s,baz=273,slow=4.5,SNR=9.3						
KLMR	**Klimovskoe**	**116.70**	**334**	*e*PKIKP	**PKPdf**	**19 17 58.3**	**-1.9**
KLMR				*e*		19 19 05.7	
KLMR				pmax	pmax		
	comp=Z,34nm,1.5s						
KLMR	**Klimovskoe**	**116.70**	**334**	*e*PKPdf	**PKPdf**	**19 17 58.4**	**-1.8**
KLMR				AMP		19 18 16.0	
	comp=Z,34nm,1.4s						
KLMR				*e*PP	**PP**	**19 19 05.7**	**-2.2**
KLMR				*e*PKKPbc	**PKKPbc**	**19 28 24.6**	**-4.7**
SUMG	**Summit**	**116.81**	**8**	*i* P	**PKPdf**	**19 18 00.0**	**-0.7**
	comp=Z,75nm,1.4s						
SUMG	**Summit**	**116.81**	**8**	*e*PKIKP	**PKPdf**	**19 18 00.0**	**-0.7**
SUMG				pmax	pmax		
	comp=Z,75nm,1.4s						
LVC	**Limon Verde**	**116.92**	**122**	PFAKE		19 18 10.0	+7.7
LVC				LR	LR		
	comp=Z,17µm,22.0s						
KTK1	**Kautokeino**	**117.24**	**346**	*e*PKPdf	**PKPdf**	**19 18 00.9**	**-0.1**
KTK1				*e*SKPdf	**SKiKP**	**19 21 36.7**	**+0.1**
SOTA	**Rioblanco**	**117.57**	**93**	*e*P	**PKiKP**	**19 18 04.5**	**+0.5**
SOTA	**Rioblanco**	**117.57**	**93**	*e*P	**PKiKP**	**19 18 04.5**	**+0.5**
POPC	**Popayan, Colom**	**117.58**	**93**	*e*P	**PKPdf**	**19 18 01.8**	**-1.8**
POPC	**Popayan, Colom**	**117.58**	**93**	*e*P	**PKPdf**	**19 18 01.8**	**-1.8**
TRO	**Tromso**	**117.74**	**347**	*e*Pdif	**Pdif**	**19 14 18.8**	**-1.0**
TRO				*e*PP	**PP**	**19 19 15.5**	**+0.7**
CNNC	**Cliffs of the**	**117.81**	**56**	PFAKE		19 18 10.0	+6.9
CNNC				LR	LR		
	comp=Z,68µm,21.0s						
CBN	**Corbin Frederi**	**117.85**	**53**	PFAKE		19 18 10.0	+6.9
CBN				LR	LR		
	comp=Z,101µm,20.0s						
MAK	**Makhachkala**	**118.01**	**313**	*i* P	**Pdif**	**19 14 14.6**	**-7.0**
MAK				*e*PPP	PPP	19 21 43.3	
MAK				*e*		19 24 46.2	
MAK				*e*PS	**PKKPdf**	**19 28 56.9**	**+3.8**
MAK				*e*SS	SS	19 35 23.5	-8.2
MAK				*e*SSS	SSS	19 39 46.2	
MAK				pmax	pmax		
	comp=Z,217nm,0.9s						
MAK				pmax	pmax		
	comp=Z,545nm,1.4s						
BINY	**Binghamton**	**118.23**	**48**	PFAKE		19 18 20.0	+16
BINY				LR	LR		
	comp=Z,66µm,21.0s						
MTDJ	**Mount Denham**	**118.63**	**75**	PFAKE		19 18 20.0	+15
MTDJ				LR	LR		
	comp=Z,10µm,20.0s						
LONY	**Lake Ozonia**	**118.71**	**45**	PFAKE		19 18 20.0	+15
LONY				LR	LR		
	comp=Z,33µm,20.0s						
PTLC	**Puerto Leguiza**	**118.94**	**96**	*e*P	**PKPdf**	**19 18 05.1**	**-0.9**
PTLC	**Puerto Leguiza**	**118.94**	**96**	*e*P	**PKPdf**	**19 18 05.1**	**-0.9**
SFJD	**Kangerlussuaq**	**119.05**	**15**	PFAKE		19 18 20.0	+15
SFJD				LR	LR		
	comp=Z,47µm,20.0s						
SFJD	**Kangerlussuaq**	**119.05**	**15**	*i* P	**PKiKP**	**19 18 06.6**	**+2.0**
	comp=Z,44µm,20.0s						
SFJD	**Kangerlussuaq**	**119.05**	**15**	*e*PKIKP	**PKiKP**	**19 18 06.6**	**+2.0**
SFJD				MLR	MLR		
	comp=Z,44µm,20.0s						
VRH	**Novokhopyorsk**	**119.53**	**323**	*e*PKIKP	**PKiKP**	**19 18 06.7**	**+0.7**
VRH				*e*		19 19 37.5	
VRH				*e*SP	SP	19 29 19.7	+5.3
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
VRH				MLR	MLR		
	comp=Z,31µm,18.0s						
STEI	**Steigen**	**119.91**	**348**	*e*PKPdf	**PKiKP**	**19 18 06.3**	**0.0**
STEI				*e*SP	SP	19 29 18.5	+1.8
MOS	**Moscow**	**119.94**	**329**	*e*PKIKP	**PKPdf**	**19 18 04.9**	**-1.7**
MOS				*e*		19 19 35.9	
MOS				*e*SS	SS	19 35 47.5	-8.2
MOS				pmax	pmax		
	comp=Z,41nm,0.6s						
SCHQ	**Schefferville**	**120.03**	**32**	PKP	**PKPdf**	**19 18 05.0**	**-1.9**
	comp=Z,13nm,0.9s,baz=31,slow=5.6,SNR=7.5						
SCHQ				PKKPbc	**PKKPab**	**19 28 13.8**	**-2.8**
	comp=Z,2.5nm,0.7s,baz=212,slow=4.1,SNR=3.7						
LOF	**Lofoten**	**120.09**	**348**	*e*PKPdf	**PKiKP**	**19 18 06.9**	**+0.3**
ZARC	**Zaragoza, Cauc**	**120.20**	**88**	*e*P	**PKPdf**	**19 18 05.8**	**-2.6**
ZARC	**Zaragoza, Cauc**	**120.20**	**88**	*e*P	**PKPdf**	**19 18 05.8**	**-2.6**
ROSC	**El Rosal**	**120.31**	**91**	PKP	**PKPdf**	**19 18 07.1**	**-1.9**
	comp=Z,9.0nm,0.4s,baz=117,slow=9.0,SNR=5.9						
SCO	**Scoresbysund**	**120.39**	**3**	*i* P	**PKiKP**	**19 18 10.5**	**+3.4**
SCO	**Scoresbysund**	**120.39**	**3**	*e*PKIKP	**PKiKP**	**19 18 10.5**	**+3.4**
LPSR	**Galich'ya Gora**	**120.60**	**325**	*e*PKIKP	**PKPdf**	**19 18 06.7**	**-1.3**
LPSR				*e*		19 19 31.8	
LPSR				*e*SP	SP	19 29 25.4	+1.5
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
LPSR				MLR	MLR		
	comp=Z,36µm,19.0s						
GNI	**Garni**	**120.61**	**310**	PKP	**PKPdf**	**19 18 08.3**	**-0.3**
GNI				LR	LR		
	comp=Z,22µm,19.0s						
GNI	**Garni**	**120.61**	**310**	P	**PKiKP**	**19 18 08.7**	**0.0**
GNI	**Garni**	**120.61**	**310**	*i* PKIKP	**PKiKP**	**19 18 09.4**	**+0.7**
GNI				MLR	MLR		
	comp=Z,48µm,20.0s						
GNI	**Garni**	**120.61**	**310**	PKP	**PKPdf**	**19 18 08.3**	**-0.3**
	comp=Z,8.1nm,0.9s,baz=75,slow=14,SNR=3.6						
ZEI	**Tsey**	**120.63**	**313**	*i* PKIKP	**PKPdf**	**19 18 07.8**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
OBN	**Obninsk**	**120.76**	**329**	PKP	**PKPdf**	**19 18 07.4**	**-0.8**
OBN				LR	LR		
	comp=Z,21µm,22.0s						
OBN	**Obninsk**	**120.76**	**329**	*c i*PKIKP	**PKPdf**	**19 18 07.5**	**-0.7**
OBN				*e*		19 19 37.8	
OBN				*e*PPP	PPP	19 22 10.3	
OBN				*e*		19 25 16.6	
OBN				pmax	pmax		
	comp=Z,24nm,1.1s						
OBN	**Obninsk**	**120.76**	**329**	PKP	**PKPdf**	**19 18 07.4**	**-0.8**
	comp=Z,5.3nm,0.6s,baz=87,slow=3.3,SNR=6.5						
VORR	**Voronezh**	**120.82**	**324**	PKIKP	**PKPdf**	**19 18 04.0**	**-4.4**
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
GTBY	**Guantanamo Bay**	**120.98**	**73**	PFAKE		19 18 20.0	+10
GTBY				LR	LR		
	comp=Z,11µm,21.0s						
VSR	**Storozhevoye**	**121.02**	**324**	*e*PKIKP	**PKPdf**	**19 18 07.0**	**-1.8**
VSR				*e*		19 19 35.6	
VSR				*e*SP	SP	19 29 26.4	-1.3
VSR				pmax	pmax		
	comp=Z,50nm,1.7s						
KBZ	**Khabaz**	**121.10**	**315**	PKP	**PKPdf**	**19 18 08.8**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=107,slow=5.7,SNR=9.7						
SMLC	**San Martn de**	**121.15**	**86**	*e*P	**PKPdf**	**19 18 08.4**	**-1.7**
SMLC	**San Martn de**	**121.15**	**86**	*e*P	**PKPdf**	**19 18 08.4**	**-1.7**
KIV	**Kislovodsk**	**121.18**	**315**	*e*PKPdf	**PKPdf**	**19 18 09.2**	**-0.3**
KIV				LR	LR		
	comp=Z,34µm,20.0s						
KIV	**Kislovodsk**	**121.18**	**315**	⇑*i*P	**PKPdf**	**19 18 07.6**	**-1.9**
KIV	**Kislovodsk**	**121.18**	**315**	*i* P	**PKPdf**	**19 18 09.0**	**-0.6**
	SNR=5.3						
KIV	**Kislovodsk**	**121.18**	**315**	*i* P	**Pdif**	**19 14 35.3**	**-0.6**
KIV				*i*		19 18 09.4	
KIV				*e*		19 19 39.0	
KIV				*e*		19 25 07.5	
KIV				*e*PS	**PS**	**19 29 30.3**	**-2.1**
KIV				*e*SS	SS	19 36 13.4	+0.6
KIV				*e*SSS	SSS	19 40 41.8	
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
MOR8	**Moi Rana**	**121.56**	**347**	*e*PKPdf	**PKPdf**	**19 18 09.2**	**-0.2**
KONS	**Konsvik**	**121.57**	**347**	*e*PKPdf	**PKPdf**	**19 18 09.3**	**-0.1**
RUSC	**La Rusia**	**121.70**	**90**	*e*P	**PKPdf**	**19 18 10.4**	**-1.4**
RUSC	**La Rusia**	**121.70**	**90**	*e*P	**PKPdf**	**19 18 10.4**	**-1.4**
FINES	**FINESS Array B**	**121.73**	**339**	PKP	**PKPdf**	**19 18 08.3**	**-1.5**
	comp=Z,4.4nm,0.6s,baz=18,slow=2.4,SNR=15						
FINES				PKKPbc	**PKKPab**	**19 28 08.3**	**-0.6**
	comp=Z,3.6nm,0.9s,baz=214,slow=3.2,SNR=6.7						
PKME	**Peaks-Kenny Pk**	**122.15**	**43**	*e*PKPdf	**PKPdf**	**19 18 10.7**	**-0.5**
PKME				LR	LR		
	comp=Z,18µm,19.0s						
PAMC	**Pamplona, Colo**	**122.30**	**88**	*e*P	**PKPdf**	**19 18 11.1**	**-1.9**
PAMC	**Pamplona, Colo**	**122.30**	**88**	*e*P	**PKPdf**	**19 18 11.1**	**-1.9**
VSU	**Vasula**	**123.43**	**336**	*e*P	**PKPdf**	**19 18 09.1**	**-4.1**
VSU				IAmb	IAmb	19 18 21.7	
	comp=Z,110nm,1.1s						
NSS	**Namsos**	**123.50**	**347**	*e*PKPdf	**PKPdf**	**19 18 12.7**	**-0.4**
NSS				*e*SS	SS	19 36 44.0	+3.8
ATD	**Arta Tunnel**	**124.04**	**277**	PKP	**PKPdf**	**19 18 13.1**	**-2.6**
	comp=Z,10nm,0.9s,baz=339,slow=16,SNR=2.2						
CPUP	**Villa Florida**	**124.07**	**132**	PKP	**PKPdf**	**19 18 14.7**	**-0.8**
	comp=Z,22nm,0.8s,baz=206,slow=6.5,SNR=3.4						
ANN	**Anapa**	**124.50**	**317**	*i* PKIKP	**PKPdf**	**19 18 15.0**	**-0.7**
ANN				*e*		19 20 00.0	
ANN				*e*SS	SS	19 36 55.9	+1.5
ANN				pmax	pmax		
	comp=Z,49nm,1.1s						
SDV	**Santo Domingo**	**124.53**	**87**	PFAKE		19 18 30.0	+13
SDV				LR	LR		
	comp=Z,13µm,21.0s						
SDV	**Santo Domingo**	**124.53**	**87**	*e*P	**PKPdf**	**19 18 15.8**	**-1.1**
SDV	**Santo Domingo**	**124.53**	**87**	*e*P	**PKPdf**	**19 18 15.8**	**-1.1**
SDDR	**Presa de Saban**	**124.57**	**75**	PFAKE		19 18 30.0	+13
SDDR				LR	LR		
	comp=Z,20µm,21.0s						
GRTK	**Grand Turk**	**124.70**	**71**	PFAKE		19 18 30.0	+13
GRTK				LR	LR		
	comp=Z,10µm,21.0s						
BOSA	**Boshof**	**125.11**	**223**	*i* P	**PKiKP**	**19 18 18.0**	**+0.1**
BOSA	**Boshof**	**125.11**	**223**	PKIKP	**PKPdf**	**19 18 16.5**	**-1.1**
BOSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BOSA	**Boshof**	**125.11**	**223**	*i* P	**PKPdf**	**19 18 17.3**	**-0.3**
BOSA	**Boshof**	**125.11**	**223**	PKP	**PKPdf**	**19 18 16.4**	**-1.1**
	comp=Z,8.8nm,0.6s,baz=129,slow=1.6,SNR=18						
SUR	**Sutherland**	**125.34**	**217**	PFAKE		19 18 30.0	+12
SUR				LR	LR		
	comp=Z,48µm,21.0s						
IZAR	**Zarasai**	**125.35**	**333**	*e*P	**PKPdf**	**19 18 15.1**	**-1.9**
IZAR				IAmb	IAmb	19 18 26.9	
	comp=Z,15nm,0.7s						
MICGM	**Minsk**	**125.36**	**331**	⇓*e*PKP	**PKPdf**	**19 18 17.0**	**0.0**
MICGM				PKPM		19 18 20.0	
	comp=Z,0.1nm,2.0s						
MICGM				*e*PP	PP	19 20 34.0	+27
MICGM				PPM		19 20 40.0	
	comp=Z,4.4nm,8.0s						
MICGM				*e*PKS		19 22 10.0	
MICGM				*e*SKS	SKSdf	19 25 48.0	+19
MICGM				*e*SKKS		19 28 08.0	
MICGM				*e*PS	PS	19 30 28.0	+19
MICGM				*e*SS	SS	19 37 20.0	+16
MICGM				*e*SSS	SSS	19 42 12.0	
MICGM				*e*LQ	LQ	19 57 50.0	
MICGM				LQM		20 00 52.0	
	comp=N,43nm,18.0s						
MICGM				LQM		20 00 54.0	
	comp=N,19nm,18.0s						
MICGM				LQM		20 01 08.0	
	comp=E,32nm,18.0s						
MICGM				LQM		20 01 08.0	
	comp=E,14nm,18.0s						
MICGM				*e*LR	LR	20 06 00.0	
MICGM				LRM	MLR	20 15 52.0	
	comp=N,31nm,18.0s						
MICGM				LRM	MLR	20 15 52.0	
	comp=N,21nm,18.0s						
MICGM				LRM	MLR	20 15 52.0	
	comp=E,31nm,18.0s						
MICGM				LRM	MLR	20 15 52.0	
	comp=E,23nm,18.0s						
MICGM				LRM	MLR	20 15 54.0	
	comp=Z,84nm,18.0s						
MICGM				LRM	MLR	20 15 54.0	
	comp=Z,71nm,18.0s						
MNK	**Minsk**	**125.36**	**331**	*e*PKIKP	**PKPdf**	**19 18 17.0**	**0.0**
MNK				*e*SS	SS	19 37 20.0	+16
MNK				pmax	pmax		
	comp=Z,140nm,2.0s						
IDID	**Didziasalis**	**125.39**	**333**	*e*P	**PKPdf**	**19 18 17.0**	**-0.1**
IDID				IAmb	IAmb	19 18 29.9	
	comp=Z,20nm,1.0s						
ISAL	**Salakas**	**125.51**	**333**	*e*P	**PKPdf**	**19 18 17.0**	**-0.3**
ISAL				IAmb	IAmb	19 18 27.2	
	comp=Z,16nm,1.0s						
NACGM	**Naroch**	**125.63**	**332**	*e*PKP	**PKiKP**	**19 18 18.0**	**+0.1**
NACGM				*e*PKP	**PKiKP**	**19 18 18.0**	**+0.1**
NACGM				*e*PP	**PP**	**19 20 04.0**	**-4.8**
NACGM				*e*PPP	PPP	19 22 36.0	
NACGM				*e*SKS	SKSdf	19 25 10.0	-19
NACGM				*e*SKKS	SKKSac	19 27 20.0	+13
NACGM				*e*PS	PS	19 30 16.0	+5.1
NACGM				*e*SS	**SS**	**19 37 14.0**	**+6.3**
NACGM				*e*SSS	SSS	19 41 48.0	
NACGM				*e*LQ	LQ	19 58 22.0	
NACGM				*e*LR	LR	20 05 48.0	
NACGM				LRM	MLR	20 12 10.0	
	comp=Z,67nm,20.0s						
SLIT	**Slitere, Latvi**	**125.75**	**337**	*e*P	**PKPdf**	**19 18 12.8**	**-4.9**
SLIT				IAmb	IAmb	19 18 19.8	
	comp=Z,482nm,1.4s						
BORG	**Borgarnes**	**126.12**	**4**	PFAKE		19 18 30.0	+11
BORG				LR	LR		
	comp=Z,8µm,19.0s						
DOMB	**Dombas**	**126.32**	**347**	*e*PKPdf	**PKiKP**	**19 18 19.4**	**+0.2**
SIM	**Simferopol'**	**126.62**	**319**	*c i*PKIKP	**PKiKP**	**19 18 20.4**	**+0.2**
SIM				*e*PS	PKKSbc	19 31 55.0	+10
SIM				pmax	pmax		
	comp=Z,67nm,1.8s						
SIM				pmax	pmax		
	comp=Z,2µm,12.4s						
AKN	**Aaknes**	**126.65**	**348**	*e*PKPdf	**PKPdf**	**19 18 19.5**	**+0.2**
NB2	**NORSAR Subarra**	**126.67**	**345**	PKPdf	**PKPdf**	**19 18 18.5**	**-0.9**
	comp=Z,33nm,1.2s,baz=33,slow=2.0						
NB2	**NORSAR Subarra**	**126.67**	**345**	PKPdf	**PKPdf**	**19 18 18.5**	**-0.9**
	baz=33,slow=2.0						
NOA	**NORSAR Array B**	**126.67**	**345**	PKP	**PKPdf**	**19 18 17.8**	**-1.7**
	comp=Z,7.0nm,0.7s,baz=33,slow=2.0,SNR=35						
HFS	**Hagfors**	**126.75**	**343**	PKIKP	**PKPdf**	**19 18 17.9**	**-1.6**
HFS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HFS	**Hagfors**	**126.75**	**343**	PKP	**PKPdf**	**19 18 17.9**	**-1.6**
	comp=Z,9.8nm,0.7s,baz=93,slow=3.0,SNR=13						
AKASG	**Malin Array Be**	**126.82**	**327**	PKP	**PKPdf**	**19 18 19.7**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=58,slow=2.0,SNR=28						
KIEV	**Kiev**	**126.83**	**327**	PFAKE		19 18 30.0	+10
KIEV				LR	LR		
	comp=Z,43µm,19.0s						
KIEV	**Kiev**	**126.83**	**327**	⇑*i*P	**PKPdf**	**19 18 19.8**	**-0.2**
KIEV	**Kiev**	**126.83**	**327**	*i* P	**PKiKP**	**19 18 20.9**	**+0.5**
	SNR=7.9						
KIEV	**Kiev**	**126.83**	**327**	⇑PKIKP	**PKPdf**	**19 18 19.8**	**-0.2**
NC602	**NORSAR Array S**	**126.84**	**344**	*e*PKPdf	**PKPdf**	**19 18 19.8**	**+0.1**
NC602				*e*PP	**PP**	**19 20 17.2**	**+0.7**
NC602				*e*SP	SP	19 30 18.4	+0.3
NC602				*e*SS	**SS**	**19 37 23.6**	**+1.3**
ANKE	**Ethiopia-Afar**	**126.89**	**274**	*e*P	**PKPdf**	**19 18 15.5**	**-6.2**
ANKE				*i* S	**PKKPdf**	**19 28 37.5**	**+1.4**
PBUR	**Paburg**	**127.00**	**335**	*e*P	**PKPdf**	**19 18 18.8**	**-1.3**
PBUR				IAmb	IAmb	19 18 24.8	
	comp=Z,54nm,0.6s						
DESE	**Dese**	**127.14**	**276**	*e*P	**PKiKP**	**19 18 27.7**	**+5.1**
KMBO	**Kilima Mbogo**	**127.36**	**260**	PKP	**PKPdf**	**19 18 22.7**	**+0.3**
KMBO				LR	LR		
	comp=Z,31µm,19.0s						
KMBO	**Kilima Mbogo**	**127.36**	**260**	PKP	**PKPdf**	**19 18 22.7**	**+0.3**
	comp=Z,5.3nm,0.9s,baz=117,slow=2.4,SNR=24						
FOO	**Floro**	**127.57**	**348**	*e*PKPdf	**PKPdf**	**19 18 21.0**	**-0.1**
FOO				*e*PP	**PP**	**19 20 23.0**	**+1.8**
MATP	**Matopo**	**127.58**	**234**	*i* P	**PKPdf**	**19 18 22.7**	**+0.2**
MATP	**Matopo**	**127.58**	**234**	*i* P	**PKPdf**	**19 18 21.7**	**-0.8**
MATP	**Matopo**	**127.58**	**234**	PKP	**PKiKP**	**19 18 23.2**	**+0.1**
	comp=Z,27nm,1.1s,baz=106,slow=2.3,SNR=4.9						
AAE	**Adis Abeba**	**127.77**	**273**	*i* P	**PKiKP**	**19 18 24.8**	**+0.9**
AAE				*e*S	**SP**	**19 30 26.1**	**-4.0**
SUW	**Suwalki**	**127.82**	**333**	*e*PKP	**PKPdf**	**19 18 21.8**	**0.0**
SUW				LMZ	LR	20 12 36.4	
	comp=Z,60µm,21.8s						
SUW	**Suwalki**	**127.82**	**333**	*e*PKIKP	**PKPdf**	**19 18 21.8**	**0.0**
SUW				MLR	MLR		
	comp=Z,60µm,21.8s						
SUE	**Sulen**	**128.12**	**348**	*e*PKPdf	**PKPdf**	**19 18 20.0**	**-2.1**
KONO	**Kongsberg**	**128.28**	**345**	*e*PKPdf	**PKPdf**	**19 18 19.5**	**-3.0**
KONO				*e*PP	**PP**	**19 20 26.5**	**+0.5**
KONO				*e*SS	SS	19 37 44.9	+4.8
ASF	**Jabal al Asfar**	**128.50**	**302**	PKP	**PKPdf**	**19 18 24.1**	**+0.2**
ASF	**Jabal al Asfar**	**128.50**	**302**	PKP	**PKPdf**	**19 18 23.7**	**-0.2**
	comp=Z,3.5nm,1.0s,baz=146,slow=0.3,SNR=14						
ASF				SKPbc	SKPbc	19 21 44.7	
	comp=Z,7.3nm,1.1s,baz=45,slow=1.4,SNR=3.2						
ASK	**Askoy**	**128.56**	**348**	*e*PKPdf	**PKPdf**	**19 18 22.6**	**-0.4**
BER	**Bergen**	**128.62**	**348**	*e*PKPdf	**PKPdf**	**19 18 22.1**	**-1.0**
ODD1	**Odda**	**128.76**	**347**	*e*PKPdf	**PKPdf**	**19 18 23.5**	**0.0**
BRTR	**Keskin Array B**	**128.92**	**313**	PKP	**PKPdf**	**19 18 22.8**	**-1.8**
	comp=Z,2.4nm,0.6s,baz=143,slow=3.4,SNR=16						
BRTR				PP	**PP**	**19 20 28.1**	**-3.5**
	comp=Z,3.2nm,1.0s,baz=105,slow=3.8,SNR=3.1						
KIS	**Kishinev**	**128.98**	**323**	*e*P	**Pdif**	**19 15 10.0**	**-0.4**
KIS	**Kishinev**	**128.98**	**323**	*e*PKP	**PKPdf**	**19 18 22.0**	**-2.2**
	comp=Z,280nm,2.4s						
KIS	**Kishinev**	**128.98**	**323**	*e*PP	PP	19 20 44.0	+13
	comp=Z,4µm,20.0s						
KIS				*e*SKP		19 22 04.0	
KIS	**Kishinev**	**128.98**	**323**	*e*PPP	PPP	19 23 20.0	
KIS				*e*SKKS	**SKKSac**	**19 27 22.0**	**-6.5**
KIS				*e*SKSP		19 30 04.0	
KIS	**Kishinev**	**128.98**	**323**	*e*PS	PS	19 30 48.0	+7.4
KIS				*e*SS	SS	19 37 38.0	-12
KIS				*e*SSS	SSS	19 40 44.0	
KIS				*e*LR	LR	20 02 00.0	
	comp=Z,32µm,22.0s						
KIS	**Kishinev**	**128.98**	**323**	*e*P	**Pdif**	**19 15 10.0**	**-0.4**
KIS				*e*		19 18 22.0	
KIS				*e*		19 23 20.0	
KIS				pmax	pmax		
	comp=Z,280nm,2.4s						
KIS				pmax	pmax		
	comp=Z,4µm,20.0s						
BLS5	**Blasjo**	**129.24**	**346**	*e*PKPdf	**PKPdf**	**19 18 21.4**	**-3.0**
BLS5				*e*		19 30 36.2	
KSDI	**Kefar Szold**	**129.29**	**304**	PKP	**PKiKP**	**19 18 26.7**	**+0.8**
SJG	**San Juan**	**129.45**	**76**	PFAKE		19 18 40.0	+13
SJG				LR	LR		
	comp=Z,14µm,22.0s						
SJG	**San Juan**	**129.45**	**76**	*e*P	**PKPdf**	**19 18 23.7**	**-2.2**
SJG	**San Juan**	**129.45**	**76**	*e*P	**PKPdf**	**19 18 23.7**	**-2.2**
ANTO	**Ankara**	**129.48**	**313**	PFAKE		19 18 40.0	+14
ANTO				LR	LR		
	comp=Z,13µm,21.0s						
ANTO	**Ankara**	**129.48**	**313**	⇑*i*P	**PKPdf**	**19 18 24.1**	**-1.4**
ANTO	**Ankara**	**129.48**	**313**	⇑PKIKP	**PKPdf**	**19 18 24.1**	**-1.4**
MMAI	**Mount Meron Ar**	**129.54**	**304**	PKP	**PKPdf**	**19 18 25.8**	**0.0**
	comp=Z,2.8nm,0.5s,baz=76,slow=8.1,SNR=11						
MMAI				SKPbc	SKPbc	19 21 48.6	+1.1
	comp=Z,40nm,1.0s,baz=29,slow=3.3,SNR=17						
MMLI	**Mount Malkishu**	**129.66**	**303**	PKP	**PKiKP**	**19 18 26.4**	**-0.4**
TLCR		**129.88**	**321**	⇑*i*P	**PKiKP**	**19 18 27.3**	**+0.6**
TLCR		**129.88**	**321**	⇑PKIKP	**PKiKP**	**19 18 27.3**	**+0.6**
SNART	**Snartemo**	**130.03**	**345**	*e*	**PKPdf**	**19 18 25.2**	**-0.6**
LVV	**L'vov**	**130.06**	**328**	*i* PKIKP	**PKPdf**	**19 18 25.6**	**-0.6**
LVV				*e*PS	PS	19 30 53.4	+3.6
CFR	**Carcaliu**	**130.30**	**321**	⇓*i*P	**PKiKP**	**19 18 27.3**	**-0.3**
CFR	**Carcaliu**	**130.30**	**321**	⇓PKIKP	**PKiKP**	**19 18 27.3**	**-0.3**
BEL	**Belsk**	**130.35**	**332**	*e*PKP	**PKiKP**	**19 18 27.6**	**+0.1**
BEL				*e*SKPdf	**SKPbc**	**19 21 52.1**	**+2.4**
BEL				LMZ	LR	20 12 45.9	
	comp=Z,41µm,22.8s						
BEL	**Belsk**	**130.35**	**332**	*e*PKIKP	**PKiKP**	**19 18 27.6**	**+0.1**
BEL				MLR	MLR		
	comp=Z,41µm,22.8s						
BSD	**Bornholm Skovb**	**130.38**	**338**	*i* P	**PKPdf**	**19 18 26.4**	**-0.2**
	comp=Z,35µm,21.0s						
BSD	**Bornholm Skovb**	**130.38**	**338**	*e*PKIKP	**PKPdf**	**19 18 26.4**	**-0.2**
BSD				MLR	MLR		
	comp=Z,35µm,21.0s						
LSZ	**Lusaka**	**130.47**	**239**	PKP	**PKiKP**	**19 18 29.4**	**+0.4**
LSZ				SKPbc	**SKPbc**	**19 21 53.1**	**+1.7**
LSZ				LR	LR		
	comp=Z,50µm,22.0s						
LSZ	**Lusaka**	**130.47**	**239**	PKP	**PKiKP**	**19 18 29.4**	**+0.4**
	comp=Z,8.5nm,0.6s,baz=95,slow=1.5,SNR=32						
LSZ				SKPbc	**SKPbc**	**19 21 53.1**	**+1.7**

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      comp=Z,18nm,1.0s,baz=107,slow=3.4,SNR=8.2
HRFI  Mount Harif      130.50 300  PKP      PKiKP    19 18 28.8 +0.3
EFOR  EFORIE           130.53 320⇑iP       PKiKP    19 18 29.5 +1.4
BIZ   Bicaz            130.59 324⇑iP       PKiKP    19 18 28.3 +0.1
MFTR  Murfatlar        130.61 320⇑iP       PKiKP    19 18 30.3 +2.1
EIL   Elat             130.65 300  PKP      PKiKP    19 18 28.8  0.0
      comp=Z,7.2nm,0.7s,baz=343,slow=1.0,SNR=14
EIL                                SKPbc    SKPab    19 21 52.1 +0.6
      comp=Z,43nm,1.1s,baz=66,slow=4.6,SNR=10
TLB   Topalu           130.65 321⇑iP       PKPdf    19 18 27.5 +0.1
TLB   Topalu           130.65 321 ⇑PKIKP   PKPdf    19 18 27.6 +0.1
BURAR Bucovina Array   130.72 325⇑iP       PKiKP    19 18 29.0 +0.5
BURAR Bucovina Array   130.72 325 ⇑PKIKP   PKiKP    19 18 29.0 +0.5
VRI   Vrincioaia       130.80 323⇑iP       PKiKP    19 18 28.5 -0.1
VRI   Vrincioaia       130.80 323 ⇑PKIKP   PKiKP    19 18 28.5 -0.1
KWP   Kalwaria Pacla   130.85 329 ePKP     PKiKP    19 18 29.2 +0.6
KWP                               ePP      PP       19 20 44.8 +1.5
KWP                               ePKS              19 21 55.5
KWP   Kalwaria Pacla   130.85 329 ePKIKP   PKiKP    19 18 29.2 +0.6
KWP                               e                 19 20 44.8
PLOR  Plostina         130.86 323⇑iP       PKiKP    19 18 28.6 -0.2
PLOR  Plostina         130.86 323 ⇑PKIKP   PKiKP    19 18 28.6 -0.2
GKP   Gorka Klasztor   130.88 335 ePKP     PKPdf    19 18 27.7 +0.1
GKP                               ePKS     PKSdf    19 22 20.9  +17
GKP                                LMZ     LR       20 09 27.2
      comp=Z,33μm,27.6s
GKP   Gorka Klasztor   130.88 335 ePKIKP   PKPdf    19 18 27.7 +0.1
ICOR  Ion Corvin       131.03 320⇑iP       PKiKP    19 18 30.5 +1.4
MUD   Monsted U'grnd   131.14 343 i P      PKPdf    19 18 27.6 -0.4
      comp=Z,31μm,20.0s
MUD   Monsted U'grnd   131.14 343 ePKIKP   PKPdf    19 18 27.6 -0.4
MUD                                MLR     MLR
      comp=Z,31μm,20.0s
OZUR                   131.24 323⇑iP       PKiKP    19 18 30.1 +0.6
MLR   Muntele Rosu     131.47 323⇑iP       PKPdf    19 18 29.1 -0.1
MLR   Muntele Rosu     131.47 323  PKP      PKPdf    19 18 29.1 -0.1
      comp=Z,5.3nm,0.7s,baz=120,slow=8.1,SNR=11
MLR                                SKPbc    SKPab    19 21 55.4 +0.8
      comp=Z,14nm,1.0s,baz=309,slow=4.0,SNR=6.7
ARCR  ARCALIA          131.50 325⇑iP       PKiKP    19 18 29.7 -0.3
DOPR  Dopca            131.54 323⇑iP       PKiKP    19 18 30.1  0.0
UZH   Uzhgorod         131.69 328 ePKIKP   PKPdf    19 18 27.6 -1.7
UZH                               i                 19 20 59.0
UZH                               e                 19 25 30.0
PRD   Provadia         131.73 319 i P      PKPdf    19 18 29.9 +0.4
TRPA  Tarpa            131.87 327⇑iP       PKPdf    19 18 29.4 -0.2
TRPA  Tarpa            131.87 327 ePKiKP   PKPdf    19 18 30.1 +0.4
TRPA                              ePP      PP       19 20 51.0 +1.2
TRPA                              eSS      SS       19 38 34.0 +8.8
ISP   Isparta          131.88 311⇑iP       PKiKP    19 18 30.8 -0.4
ISP   Isparta          131.88 311  PKIKP    PKiKP    19 18 30.8 -0.4
OJC   Ojcow            131.90 331 ePKP     PKiKP    19 18 30.3 -0.4
OJC                               ePP      PP       19 20 52.7 +2.7
OJC                               ePKS     PKSdf    19 22 23.7  +18
OJC                               eSS      SS       19 38 29.4 +4.0
OJC                                LMZ     LR       20 10 52.9
      comp=Z,30μm,25.5s
OJC   Ojcow            131.90 331 ePKIKP   PKiKP    19 18 30.3 -0.4
OJC                               e                 19 20 52.7
OJC                               eSS      SS       19 38 29.4 +4.0
OJC                                MLR     MLR
      comp=Z,30μm,25.5s
VOIR                   132.03 323⇑iP       PKPdf    19 18 30.4 +0.2
VOIR                   132.03 323  PKIKP    PKPdf    19 18 30.4 +0.2
TRIS  Tristan da Cun   132.13 182  PFAKE             19 18 40.0 +8.4
TRIS                               LR       LR
      comp=Z,42μm,21.0s
NIE   Niedzica         132.19 330 ePKP     PKiKP    19 18 31.4 +0.1
NIE                               ePP      PP       19 20 52.2 +0.3
NIE                               ePKS              19 22 27.7
NIE                               eSdiff            19 28 42.9
NIE                               eSS      SS       19 38 37.0 +7.9
NIE                                LMZ     LR       20 16 17.2
      comp=Z,23μm,22.5s
ARR   Arges            132.31 323⇑iP       PKiKP    19 18 33.2 +1.4
HUMR  Humele           132.56 322⇑iP       PKiKP    19 18 33.8 +1.6
DRGR                   132.59 326⇑iP       PKPdf    19 18 30.3 -0.9
DRGR                   132.59 326  PKIKP    PKPdf    19 18 30.3 -0.9
SZH   Strazhica        132.63 320 i P      PKiKP    19 18 32.0 -0.4
LTVH  Ltavrtes, Hu     132.67 327 ePKiKP   PKiKP    19 18 32.1 -0.2
LTVH                              ePP      PP       19 20 54.1 -0.9
LTVH                              eSS      SS       19 38 46.1  +11
LANS  Liptovska Anna   132.78 330 ePKP     PKiKP    19 18 32.5 -0.1
LANS                              ePP      PP       19 20 57.9 +2.2
ZIMR                   132.78 321⇑iP       PKPdf    19 18 29.4 -2.1
ZIMR                   132.78 321 ⇑PKIKP   PKPdf    19 18 29.4 -2.1
RUE   Ruedersdorf      132.85 337 eP       PKPdf    19 18 31.8 +0.4
RUE                                IAmb    IAmb     19 18 34.1
      comp=Z,26nm,0.8s
PVL   Pavlikeni        133.03 320 i P      PKiKP    19 18 36.2 +3.0
KSP   Ksiaz            133.06 334 ePKP     PKiKP    19 18 32.8 -0.2
KSP                               ePKS              19 22 29.1
KSP                               eSS      SS       19 38 51.5  +12
KSP                               eSSS     SSS      19 43 40.1
KSP                                LMZ     LR       20 14 29.1
      comp=Z,31μm,22.1s
KSP   Ksiaz            133.06 334 ePKIKP   PKiKP    19 18 32.8 -0.2
KSP                               eSSS     SSS      19 43 40.1
KSP                                MLR     MLR
      comp=Z,31μm,22.1s
PTGA  Pitinga          133.12 101  PFAKE             19 18 40.0 +5.8
PTGA                               LR       LR
      comp=Z,15μm,21.0s
PTGA  Pitinga          133.12 101  SKPbc    SKPbc    19 21 59.8 -1.0
      comp=Z,11nm,0.9s,baz=276,slow=1.5,SNR=6.3
MORC  Moravsky Berou   133.26 332⇑iP       PKPdf    19 18 30.7 -1.6
MORC  Moravsky Berou   133.26 332 ⇑PKIKP   PKPdf    19 18 30.7 -1.6
MORC  Moravsky Berou   133.26 332 ePKP     PKPdf    19 18 31.5 -0.8
MORC                              ePP      PP       19 20 59.5 +0.8
MORC                              e                 19 38 34.2
GZR   Gura Zlata       133.37 324⇑iP       PKPdf    19 18 29.2 -3.5
GZR   Gura Zlata       133.37 324 ⇑PKIKP   PKPdf    19 18 29.2 -3.5
PSZ   Piszkesteto      133.38 329⇑iP       PKiKP    19 18 34.7 +0.8
PSZ   Piszkesteto      133.38 329 ⇑PKIKP   PKiKP    19 18 34.7 +0.8
PSZ   Piszkesteto      133.38 329 ePKiKP   PKPdf    19 18 31.1 -1.6
PSZ                               ePP      PP       19 21 03.1 +3.4
PSZ                              ⇓eSS      SS       19 38 55.1  +11
DPC   Dobruska-Polom   133.40 333 ePKPpre  PKPpre   19 18 26.0
DPC                               ePKPDF   pPKPdf   19 18 35.0 -1.4
DPC                               ePP      PP       19 21 18.2  +19
DPC                               ex       x        19 33 21.6
DPC                               eSS      SS       19 38 56.6  +13
DPC                                AMS     AMS      20 14 30.0
      comp=Z,33μm,20.1s
UPC   Upice            133.43 334 ePKPDF   PKiKP    19 18 35.2 +1.4
UPC                               ePP      PP       19 21 18.2  +19
UPC                               ex       x        19 33 19.9
UPC                               eSS      SS       19 38 58.6  +15
UPC                                AMS     AMS      20 14 20.0
      comp=Z,31μm,20.3s
UPC   Upice            133.43 334 ePKIKP   PKiKP    19 18 35.2 +1.4
UPC                                MLR     MLR
      comp=Z,31μm,20.3s
SIRR  Siria            133.48 326⇑iP       PKPdf    19 18 30.3 -2.5
VYHS  Vyhne            133.53 330 ePKIKP   PKiKP    19 18 33.6 -0.5
VYHS                              e                 19 21 01.8
VYHS                               MLR     MLR
      comp=Z,20μm,21.4s
VYHS  Vyhne            133.53 330 ePKP     PKiKP    19 18 33.6 -0.5
VYHS                              ePP      PP       19 21 01.8 +1.3
VYHS                              ePKSpB            19 22 05.2
VYHS                              eSS      SS       19 38 51.7 +6.5
VYHS                              eL       L        20 14 57.3
ANWB  Willy Bob        133.61  76  PFAKE             19 18 50.0  +15
ANWB                               LR       LR
      comp=Z,15μm,21.0s
GRGR  Grenville        133.63  84  PFAKE             19 18 50.0  +15
GRGR                               LR       LR
      comp=Z,11μm,21.0s
KOLL  Kolacno          133.69 330 ePKIKP   PKPdf    19 18 33.7 +0.6
KOLL  Kolacno          133.69 330 ePKP     PKPdf    19 18 33.7 +0.6
HERR  Herculane        133.88 324⇑iP       PKPdf    19 18 29.3 -4.3
BZS   Buzias           133.90 325⇑iP       PKPdf    19 18 33.2 -0.4
BZS   Buzias           133.90 325  PKIKP    PKPdf    19 18 33.2 -0.4
BRG   Berggiesshubel   134.03 335 i PKP    PKPdf    19 18 33.8 +0.2
      comp=Z,181nm,2.1s
BRG                               i PP     PP       19 21 11.7 +8.3
      comp=Z,29nm,1.5s
BRG                                SKP              19 22 04.1
      comp=Z,23nm,1.4s
BRG                                SDIFF            19 29 38.0
BRG                               ePKKS             19 31 01.7
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      comp=Z,33nm,2.0s
BRG                                SS       SS       19 39 07.0  +16
      comp=N,24μm,17.3s
      comp=E,25μm,18.2s
      comp=Z,44μm,17.8s
BRG   Berggiesshubel   134.03 335 i PKIKP  PKPdf    19 18 33.8 +0.2
BRG                               i                 19 21 11.7
BRG                                pmax    pmax
      comp=Z,10.0nm,2.1s
BRG                                pmax    pmax
      comp=Z,181nm,1.5s
BRG                                pmax    pmax
      comp=N,29nm,1.4s
BRG                                MLR     MLR
      comp=N,33μm,17.3s
BRG                                MLR     MLR
      comp=E,24μm,18.2s
BRG                                MLR     MLR
      comp=Z,25μm,17.8s
PVCC  Panska Ves       134.03 335 ePKPDF   PKiKP    19 18 36.7 +1.7
PVCC                              ex       x        19 21 30.1
PVCC                               AMS     AMS      20 20 10.0
      comp=Z,34μm,18.8s
PVCC  Panska Ves       134.03 335 ePKIKP   PKiKP    19 18 36.7 +1.7
PVCC                               MLR     MLR
      comp=Z,34μm,18.8s
VRAC  Vranov           134.03 332⇑iP       PKPdf    19 18 30.7 -3.0
VRAC  Vranov           134.03 332  PKIKP    PKPdf    19 18 30.7 -3.0
VRAC  Vranov           134.03 332 ePKP     PKPdf    19 18 33.9 +0.2
VRAC                              ePP      PP       19 21 04.1 +0.5
VRAC                              e                 19 33 22.6
VRAC                              e                 19 38 45.1
VRAC  Vranov           134.03 332  PKP      PKPdf    19 18 33.7 -0.1
      comp=Z,4.0nm,0.8s,baz=69,slow=1.5,SNR=12
CLL   Collm            134.07 336 ePKPdf   PKPdf    19 18 33.0 -0.7
      comp=Z,290nm,2.6s
CLL                               i                 19 18 42.1
CLL                               ePKPlp            19 19 01.0
CLL                               e                 19 20 51.0
CLL                               ePP      PP       19 21 04.0 +0.4
CLL                               e                 19 21 11.0
CLL                               ePPlp             19 21 18.0
CLL                               eSKPbc   SKPbc    19 22 03.0 +0.2
CLL                               i PKSdf  PKSdf    19 22 08.1 -1.8
CLL                               ePKSdflp          19 22 18.0
CLL                               e(PPPP)           19 25 53.0
CLL                               eSKKSac  SKKSac   19 28 06.0 +6.5
CLL                               e(Sdif)           19 29 42.0
CLL                               e(SKSP)           19 31 05.0
CLL                               ePSKS             19 31 12.0
CLL                               ePPS     PPS      19 33 24.0
CLL                               eSKKSdf  SKKSdf   19 35 30.0 -5.1
CLL                               eSS      SS       19 39 00.0 +8.7
CLL                               eSKSSKSac         19 41 00.0
CLL                               eSSS     SSS      19 43 54.0
CLL                               e                 19 49 18.0
CLL                                Lm      MLR      20 19 00.0
      comp=Z,33μm,21.8s
CLL                                Lmax             20 20 00.0
CLL                                Lm(360           20 50 00.0
      comp=Z,9μm,19.7s
CLL   Collm            134.07 336 ePKIKP   PKPdf    19 18 34.0 +0.3
CLL                               i                 19 18 42.1
CLL                               i                 19 18 49.2
CLL                                pmax    pmax
      comp=Z,12nm,2.6s
CLL                                MLR     MLR
      comp=Z,33μm,21.8s
BUD   Budapest         134.11 329 ePKiKP   PKPdf    19 18 33.1 -0.8
BUD                               ePP      PP       19 21 02.1 -2.1
BUD                               eSS      SS       19 38 57.0 +4.8
SMOL  Smolenice        134.20 331 ePKIKP   PKiKP    19 18 34.9 -0.5
SMOL  Smolenice        134.20 331 ePKP     PKiKP    19 18 34.9 -0.5
KRUC  Moravsky         134.30 332 ePKP     PKPdf    19 18 34.5 +0.3
KRUC                              ePP      PP       19 21 05.5 +0.2
KRUC                              e                 19 33 27.2
MDVR  Moldovita        134.34 324⇑iP       PKiKP    19 18 36.6 +0.7
MODS  Modra-Piesok     134.37 331 ePKIKP   PKiKP    19 18 35.3 -0.5
MODS                              e                 19 21 07.9
MODS  Modra-Piesok     134.37 331 ePKP     PKiKP    19 18 35.3 -0.5
MODS                              ePP      PP       19 21 07.9 +2.1
MODS                              eSS      SS       19 39 03.3 +8.0
PRA   Prague           134.43 334 ePP      PP       19 21 24.3  +18
PRA                               eSS      SS       19 39 07.6  +12
PRA                                AMS     AMS      20 21 00.0
      comp=Z,39μm,18.7s
PRU   Pruhonice        134.44 334 ePKP     PKiKP    19 18 36.7 +0.9
PRU                               ex       x        19 21 24.7
PRU                               ex       x        19 33 16.2
PRU                               eSS      SS       19 39 07.2  +11
PRU                                AMS     AMS      20 21 00.0
      comp=Z,36μm,18.6s
PRU   Pruhonice        134.44 334 ePKIKP   PKiKP    19 18 36.7 +0.9
PRU                                MLR     MLR
      comp=Z,36μm,18.6s
TREC  Trest            134.54 333 ePKPDF   PKiKP    19 18 36.7 +0.6
TREC                              ex       x        19 21 26.5
TREC                              eSS      SS       19 39 09.8  +12
TREC                               AMS     AMS      20 21 50.0
      comp=Z,34μm,19.1s
TREC  Trest            134.54 333 ePKIKP   PKiKP    19 18 36.7 +0.6
TREC                               MLR     MLR
      comp=Z,34μm,19.1s
ZST   Bratislava       134.58 331 ePKP     PKPdf    19 18 34.8  0.0
ZST                               ePP      PP       19 21 07.7 +0.6
VTS   Vitosha          134.66 321⇑iP       PKPdf    19 18 33.2 -2.1
VTS   Vitosha          134.66 321  PKIKP    PKPdf    19 18 33.2 -2.1
VTS   Vitosha          134.66 321 i P      PKiKP    19 18 36.2 -0.5
ESK   Eskdalemuir      134.96 351  PFAKE             19 18 50.0  +13
ESK                                LR       LR
      comp=Z,25μm,21.0s
TIH   Tihany           135.07 329 ePKiKP   PKPdf    19 18 35.0 -0.7
TIH                               ePP      PP       19 21 11.1 +0.8
TIH                               eSS      SS       19 39 17.0  +13
NKC   Novy Kostel      135.13 336 ePP      PP       19 21 31.5  +21
NKC                               ex       x        19 33 32.6
NKC                               eSS      SS       19 39 17.8  +14
MORH  Mrgy, Hungar     135.14 328 eP       PKPdf    19 18 36.0 +0.1
MORH  Mrgy, Hungar     135.14 328 ePKiKP   PKPdf    19 18 34.0 -1.8
MORH                              ePP      PP       19 21 16.0 +5.3
MORH                              eSS      SS       19 38 57.0 -7.7
FRGS  Fruska Gora      135.19 326 eP       PKPdf    19 18 35.8 -0.2
SOP   Sopron           135.20 331 ePKiKP   PKPdf    19 18 34.1 -1.8
SOP                               ePP      PP       19 21 12.1 +1.1
SOP                               eSS      SS       19 39 15.0  +10
CONA  Conrad Observa   135.36 331  PKPdf    PKPdf    19 18 32.8 -3.6
      comp=Z,10nm,0.7s
KHC   Kasperske Hory   135.50 334 ePKPpre  PKPpre   19 18 26.8
KHC                               ePKPDF   PKiKP    19 18 38.0 -0.1
KHC                               ex       x        19 21 39.7
KHC                               ex       x        19 33 46.5
KHC                               eSS      SS       19 39 19.6  +11
KHC                                AMS     AMS      20 21 50.0
      comp=Z,41μm,17.9s
KHC   Kasperske Hory   135.50 334 ePKHKP   PKPpre   19 18 26.8
KHC                               e                 19 18 38.0
KHC                                MLR     MLR
      comp=Z,41μm,17.9s
GERES GERESS Array B   135.67 334  PKhKP    PKPpre   19 18 26.4
      comp=Z,1.7nm,0.7s,baz=35,slow=3.3,SNR=8.5
BBGH  Gun Hill         135.73  82  PFAKE             19 18 50.0  +11
BBGH                               LR       LR
      comp=Z,24μm,20.0s
IDGL  Inch Island, C   135.73 354 ePP      PP       19 21 17.7 +3.9
IDGL                              i SS     SS       19 39 12.6 +2.0
DIVS  Divibare         135.74 324 eP       PKPdf    19 18 37.5 +0.3
BEHE  Becsehely        135.93 329 ePKiKP   PKPdf    19 18 36.1 -1.3
BEHE                              ePP      PP       19 21 18.0 +2.4
BEHE                              eSS      SS       19 39 17.0 +2.9
ARSA  Arzberg          136.00 331 i PKiKP  PKPdf    19 18 38.2 +0.7
      comp=Z,12nm,1.4s
MOA   Molln            136.16 332  PKiKP    PKiKP    19 18 39.1 -0.3
      comp=Z,19nm,1.3s
KOGS  Kog              136.21 329 ePKPdf   PKPdf    19 18 37.8 -0.1
BBLS  Lazi&#263;i      136.22 325 eP       PKPdf    19 18 38.1  0.0
HAPS  Han Pijesak,Bl   136.34 325 eP       PKPdf    19 18 37.8 -0.5
TSUM  Tsumeb           136.54 227  PFAKE             19 18 50.0 +8.8
TSUM                               LR       LR
      comp=Z,71μm,22.0s
SOKA  Soboth           136.65 331 i PKPdf  PKPdf    19 18 38.0 -0.7
      comp=Z,19nm,1.2s
BLY   Banja Luka       136.88 327 eP       PKPdf    19 18 37.4 -1.8
OBKA  Obir             137.00 331 i pPKPdf PKiKP    19 18 43.3 +2.0
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      comp=Z,23nm,1.7s
CRES  Cresnjev         137.04 329 eP       PKPdf    19 18 38.8 -0.6
IDI   Anoyia           137.04 311⇑iP       PKPdf    19 18 39.8  0.0
IDI   Anoyia           137.04 311  PKhKP    PKPpre   19 18 31.4
      comp=Z,13nm,0.9s,baz=116,slow=5.8,SNR=3.2
MEM   Membach          137.15 341 ⇓PKiKP   PKiKP    19 18 41.4 +0.1
KBA   Koelnbreinsper   137.15 332 i PKPdf  PKPdf    19 18 39.7 -0.1
      comp=Z,34nm,0.9s
PDG   Podgorica        137.18 323⇓iP       PKPdf    19 18 37.0 -2.8
PDG   Podgorica        137.18 323 eP       PKPdf    19 18 38.2 -1.6
BRY   Bratogost        137.31 324 eP       PKiKP    19 18 42.6 +0.5
MYKA  Terra Mystica    137.34 332 i pPKPdf PKiKP    19 18 42.8 +0.8
      comp=Z,13nm,0.9s
LJU   Ljubljana        137.34 330 ePKPdf   PKPdf    19 18 38.2 -1.8
LJU                               ePP      PP       19 21 35.1  +11
LJU                               e                 19 24 47.0
LJU                               e                 19 31 54.8
LJU                               eSS      SS       19 39 23.8 -7.1
LJU                               e                 19 44 50.7
LJU   Ljubljana        137.34 330 eP       PKPdf    19 18 38.8 -1.2
VISS  Visnje           137.36 330 ePKPdf   PKPdf    19 18 40.3 +0.3
DRME  Dracevica, Mon   137.37 323 eP       PKPdf    19 18 39.6 -0.5
BDFB  Brasilia         137.38 128  PKhKP    PKPpre   19 18 34.5
      comp=Z,5.2nm,0.6s,baz=234,slow=6.4,SNR=5.9
BDFB                               SKPbc    SKPbc    19 22 14.0 -0.3
      comp=Z,10nm,0.9s,baz=186,slow=3.6,SNR=3.6
DSB   Dublin           137.41 353 ePP      PP       19 21 19.8 -4.5
DSB                               i SS     SS       19 39 35.2 +4.6
UCC   Uccle            137.49 343 ⇓PKiKP   PKiKP    19 18 44.6 +2.7
IGLA  Glengowla, Co    137.53 356 ePP      PP       19 21 30.3 +5.3
IGLA                              eSS      SS       19 39 33.5 +1.5
TREB  Trebinje         137.53 324 eP       PKPdf    19 18 41.3 +0.9
CEY   Cerknica         137.61 330 eP       PKPdf    19 18 39.5 -1.0
HCY   Herceg Novi      137.62 324 eP       PKPdf    19 18 39.9 -0.7
WATA  Walderalm        137.74 334 i PKPdf  PKPdf    19 18 37.2 -3.7
      comp=Z,7.0nm,0.9s
WATA                              i pPKiKP PKiKP    19 18 45.1 +2.3
      comp=Z,10nm,0.5s
ABTA  Abfaltersbach    137.77 333 i PKPdf  PKPdf    19 18 36.9 -3.9
      comp=Z,27nm,1.3s
WLF   Walferdange      137.91 340 ⇓PKiKP   PKPdf    19 18 36.1 -4.8
MOTA  Moosalm          137.94 334 i PKPdf  PKPdf    19 18 36.9 -4.4
      comp=Z,5.2nm,0.8s
MOTA                              i pPKPdf PKiKP    19 18 44.7 +1.4
      comp=Z,29nm,0.8s
RETA  Reutte           137.97 335 i pPKPdf PKiKP    19 18 44.0 +0.8
      comp=Z,24nm,1.4s
SQTA  Sankt Quirin     137.99 334 i pPKPdf PKiKP    19 18 44.0 +0.7
      comp=Z,29nm,1.0s
DOU   Dourbes          138.04 342 ⇓PKiKP   PKiKP    19 18 43.1  0.0
BFO   Black Forest     138.26 337  PFAKE             19 18 50.0 +6.3
BFO                                LR       LR
      comp=Z,1μm,20.0s
BFO   Black Forest     138.26 337 i PKIKP  PKiKP    19 18 44.1 +0.4
FETA  Feichten         138.35 334 i PKiKP  PKiKP    19 18 43.4 -0.7
      comp=Z,34nm,1.0s
DAVA  Damuels          138.50 335 i PKPdf  PKPdf    19 18 40.9 -1.3
      comp=Z,19nm,0.7s
DAVOX Davos/Dischmat   138.90 335  PKhKP    PKPpre   19 18 38.3
      comp=Z,6.1nm,0.5s,baz=219,slow=5.8,SNR=13
VAL   Valentia         139.06 356 ePP      PP       19 21 23.1  -11
VAL                               i SS     SS       19 39 53.3 +3.2
MATE  Matera           139.78 323⇑iP       PKPdf    19 18 41.2 -3.4
TIP   Timpagrande      140.65 321⇑iP       PKPdf    19 18 45.2 -1.1
MAHO  Mahon            146.87 333  PKP1     PKPab    19 19 00.8 +0.6
KEST  Kesra            147.37 323  PKPbc    PKPdf    19 18 58.2  0.0
      comp=Z,65nm,0.9s,baz=105,slow=2.9,SNR=25
H07N1 FLORES T-PHASE147.77  25 ePKP     PKiKP    19 19 03.1 -0.4
H07N1 FLORES T-PHASE147.77  25  PKPbc    PKPbc    19 19 00.8 -0.7
      SNR=28
H07S1 FLORES T-PHASE148.00  25 ePKP     PKiKP    19 19 04.3 +0.3
H07S1 FLORES T-PHASE148.00  25 eLQ      LQ       20 00 31.9
H07S1                             eLR      LR       20 08 00.3
H07S1 FLORES T-PHASE148.00  25  PKPbc    PKiKP    19 19 03.3 -0.7
      SNR=4.0
CASM  Ain Smara        148.62 327  P        PKPdf    19 19 01.8 +1.6
PBRG  Braganca         148.63 349 ePKPdf   PKPbc    19 19 03.8 +0.1
PGAV  Gavieira, Arco   148.73 351 ePKPdf   PKPdf    19 18 59.7 -0.6
PGAV  Gavieira, Arco   148.73 351 eLQ      LQ       20 01 06.7
PGAV  Gavieira, Arco   148.73 351 eLR      LR       20 11 51.8
      comp=Z,30μm,17.1s
DFRA  Djebel Bou Aff   148.73 328  P        PKPbc    19 19 03.8 -0.4
PCAB  Cabril           148.94 351 ePKPdf   PKPbc    19 19 03.4 -1.1
POLO  Lamas de Olo     149.23 350 ePKPdf   PKPdf    19 18 57.5 -3.6
POLO  Lamas de Olo     149.23 350  A        A        20 28 16.0
      comp=Z,12μm,20.3s
UCM   Universidad Co   149.24 343  PKP1     PKPab    19 19 11.5 +1.9
SET   Setif            149.25 328  P        PKPbc    19 19 06.0 +0.5
MVO   Moncorvo         149.30 349 ePKPdf   PKPdf    19 19 01.5 +0.3
MVO   Moncorvo         149.30 349 eLQ      LQ       20 01 27.3
MVO                               eLR      LR       20 09 42.4
      comp=Z,29μm,17.1s
PVRL  Vila Real        149.31 350 ePKPdf   PKPdf    19 19 02.9 +1.8
SRBC  Serra Branca     149.53  21 ePKP     PKiKP    19 19 07.9 +0.8
PGRA  Graciosa         149.55  21 ePKP     PKiKP    19 19 07.0 -0.1
PGRA  Graciosa         149.55  21 eLQ      LQ       20 01 09.3
PGRA                              eLR      LR       20 08 26.9
      comp=Z,17μm,20.0s
PCED  Cedros           149.64  23 ePKP     PKiKP    19 19 07.3  0.0
ROSA  Rosais           149.73  22 ePKP     PKiKP    19 19 07.6 +0.1
ROSA  Rosais           149.73  22 eLQ      LQ       20 01 27.1
ROSA                              eLR      LR       20 08 37.5
      comp=Z,24μm,20.0s
PMAN  Manadas          149.87  22 ePKP     PKPbc    19 19 05.7 -1.1
PCAN  Candelaria       149.87  23 ePKP     PKiKP    19 19 08.8 +1.0
PVIS  Viseu            149.89 350 ePKPdf   PKPbc    19 19 05.9 -1.0
ESDC  Sonseca Array    150.02 344  PKPbc    PKPdf    19 19 04.8 +2.5
      comp=Z,5.4nm,0.7s,baz=6.0,slow=2.9,SNR=28
MTE   Manteigas        150.14 350 ePKPdf   PKPdf    19 19 03.3 +0.8
MTE   Manteigas        150.14 350 eLQ      LQ       20 01 27.3
MTE   Manteigas        150.14 350 eLR      LR       20 13 16.4
      comp=Z,37μm,23.2s
ADH   Angra Heroismo   150.15  21 ePKP     PKiKP    19 19 09.0 +0.6
PAB   San Pablo        150.25 344  PFAKE             19 19 10.0 +1.3
PAB                                LR       LR
      comp=Z,31μm,20.0s
PCAS  Casmilo, Conde   150.63 351 ePKPdf   PKPdf    19 19 05.1 +1.9
PCAS  Casmilo, Conde   150.63 351  A        A        20 22 59.7
      comp=Z,27μm,20.5s
PCBR  Castelo Branco   150.67 349 ePKPdf   PKPdf    19 19 04.0 +0.8
PCBR  Castelo Branco   150.67 349 ePKPab   PKPab    19 19 15.6 +0.1
CART  Cartagena        150.98 338  PKP1     PKPdf    19 18 58.2 -5.5
PTOM  Tomar            151.04 351 ePKPdf   PKPdf    19 19 04.5 +0.7
PMRV  Marv??o          151.05 349 ePKPdf   PKPdf    19 19 00.3 -3.6
PMRV  Marv??o          151.05 349 eLQ      LQ       20 01 42.1
PMRV  Marv??o          151.05 349 eLR      LR       20 15 51.3
      comp=Z,31μm,19.6s
EBNR  Beni Rached      151.06 333  P        PKPbc    19 19 08.5 -1.3
ECHA  Ech Chlef        151.25 333  P        PKPbc    19 19 10.0 -0.2
PSET  Sete Cidades     151.41  19 ePKP     PKPdf    19 19 07.4 +2.9
PSET  Sete Cidades     151.41  19 eLQ      LQ       20 01 33.4
PSET                              eLR      LR       20 09 18.1
      comp=Z,29μm,22.0s
PDA   Ponta Delgada    151.50  19 ePKP     PKiKP    19 19 13.2 +2.0
PCALD Caldeiras da R   151.51  19 ePKP     PKPbc    19 19 08.5 -2.3
CMLA  Cha da Macela    151.53  19 ePKP     PKiKP    19 19 12.7 +1.4
CMLA  Cha da Macela    151.53  19 eLR      LR       20 09 27.1
      comp=Z,31μm,20.0s
CMLA  Cha da Macela    151.53  19  PFAKE             19 19 20.0 +0.9
CMLA                               LR       LR
      comp=Z,34μm,21.0s
EANR  'Ain N'Sour      151.53 333  P        PKPbc    19 19 11.0 +0.1
PMTG  Montargil        151.55 350 ePKPdf   PKPdf    19 19 04.6  0.0
PESTR Estremoz         151.63 349 ePKPdf   PKPdf    19 19 07.9 +3.1
PESTR Estremoz         151.63 349 ePKPab   PKPab    19 19 26.3 +6.8
PESTR Estremoz         151.63 349 eLR      LR       20 18 09.1
      comp=Z,32μm,25.7s
PMAFR Mafra            151.82 352 ePKPdf   PKPdf    19 19 07.1 +2.0
SHEL  Horse Pasture    151.89 198  PFAKE             19 19 20.0 -1.2
SHEL                               LR       LR
      comp=Z,11μm,21.0s
ETRT  Tiaret           151.91 332  P        PKiKP    19 19 13.0 +0.7
LIS   Lisbon           152.04 351 ePKPdf   PKPdf    19 19 03.9 -1.5
LIS                                AMS      AMS      20 29 59.0
      comp=Z,36μm,22.0s
LIS   Lisbon           152.04 351 ePKIKP   PKPdf    19 19 03.8 -1.5
PSMA  Santa Maria      152.35  19 ePKP     PKPdf    19 19 02.4 -3.5
PSMN  Pico do Norte,   152.37  19 eLQ      LQ       20 00 52.7
PSMN                              eLR      LR       20 09 02.2
      comp=Z,17μm,20.0s
PBEJ  Beja             152.50 349 ePKPdf   PKPdf    19 19 04.9 -1.2
PBEJ  Beja             152.50 349 ePKPab   PKPab    19 19 21.1 -2.0
PNCL  Nicolau / Gran   152.53 350 ePKPdf   PKPdf    19 19 09.1 +3.0
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MESJ	Messejana	152.74	349	*e*PKPdf	PKPdf	19 19 04.8	-1.7
MESJ				AMS	AMS	20 29 47.9	
	comp=Z,22µm,26.4s						
MESJ	Messejana	152.74	349	*e*PKPdf	PKPdf	19 19 05.8	-0.6
MESJ	Messejana	152.74	349	*e*PKIKP	PKPdf	19 19 04.7	-1.7
RCBR	Riachuelo	152.75	127	PFAKE		19 19 20.0	-5.0
RCBR				LR	LR		
	comp=Z,61µm,22.0s						
EMAL	Malaga-Limoner	152.87	342	PKP1	PKPdf	19 19 07.6	+0.9
PVAQ	Vaqueiros	153.07	348	*e*PKPdf	PKPdf	19 19 06.5	-0.4
PVAQ	Vaqueiros	153.07	348	*e*LQ	LQ	20 01 37.6	
PVAQ	Vaqueiros	153.07	348	*e*LR	LR	20 18 44.1	
	comp=Z,21µm,25.7s						
PTEO	Sao Teotonio	153.12	350	*e*PKPdf	PKPdf	19 19 08.3	+1.3
GIBL	Gibalbin	153.23	345	PKP	PKPdf	19 19 09.0	+1.8
PBDV	Barranco-do-Ve	153.27	349	*e*PKPdf	PKPdf	19 19 05.8	-1.5
PBDV	Barranco-do-Ve	153.27	349	*e*PKPab	PKPab	19 19 29.6	+3.2
MORF	Marmelete	153.34	350	*e*PKPdf	PKPdf	19 19 05.7	-1.8
MORF				AMS	AMS	20 28 03.4	
	comp=Z,25µm,20.0s						
MORF	Marmelete	153.34	350	*e*PKPdf	PKPdf	19 19 08.2	+0.8
MORF	Marmelete	153.34	350	*e*PKPab	PKPab	19 19 30.1	+3.3
MORF	Marmelete	153.34	350	*e*PKIKP	PKPdf	19 19 05.6	-1.8
ALJ	Aljibe	153.43	344	PKP	PKiKP	19 19 16.0	+0.7
PFVI	Vila Bisbo	153.54	350	*e*PKPdf	PKPdf	19 19 04.1	-3.5
PFVI	Vila Bisbo	153.54	350	*e*PKPab	PKiKP	19 19 19.9	+4.5
SFS	San Fernando	153.63	345	PKP1	PKPbc	19 19 13.5	-2.0
CNIL	Conil	153.69	345	PKP	PKPdf	19 19 11.5	+3.7
MELI	Melilla	153.72	339	PKP1	PKPdf	19 19 10.6	+2.7
CEU	Ceuta	153.95	343	PKP1	PKPdf	19 19 10.8	+2.5
MDT	Midelt	156.55	339	PKP	PKPdf	19 19 11.2	-0.8
	comp=Z,9.2nm,1.2s,baz=124,slow=2.8,SNR=8.6						
PMOZ	Porto Moniz, M	158.14	7	*e*LR	LR	20 13 48.6	
	comp=Z,25µm,22.4s						
ASCN	Ascension	161.17	180	PFAKE		19 19 30.0	+12
ASCN				LR	LR		
	comp=Z,17µm,19.0s						
TORD	Torodi Ar. Bea	164.22	279	PKP	PKPdf	19 19 19.3	-1.5
	comp=Z,5.7nm,0.7s,baz=160,slow=4.7,SNR=43						
KIC	Kosan Boka	169.49	245	*e*PKIKP	PKPdf	19 19 23.5	-1.3
	comp=Z,571nm,2.0s						
LIC	Lamto	169.68	243	*e*PKIKP	PKPdf	19 19 23.4	-1.5
	comp=Z,607nm,2.5s						
DBIC	Dimbokro	169.72	246	PKP	PKPdf	19 19 23.1	-1.8
	comp=Z,14nm,1.0s,baz=114,slow=2.2,SNR=13						
DBIC				PKPab	PKPab	19 20 40.7	+1.7
	comp=Z,28nm,1.2s,baz=104,slow=3.1,SNR=4.3						
DBIC				PP	PP	19 24 29.4	+0.6
	comp=Z,16nm,1.2s,baz=117,slow=8.1,SNR=4.7						
TIC	Toumodi	169.86	245	*e*PKIKP	PKPdf	19 19 23.5	-1.6
SACV	Santiago Islan	170.11	66	PFAKE		19 19 40.0	+15
SACV				LR	LR		
	comp=Z,20µm,22.0s						

MEX 07 19:02:14.6±1.0, 30°.42N×109°.57W, h3^{km}, MD3.7, Sonora

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGIG		1.37	92	*i* P	Pn	19 02 37.3	-3.5
CGIG				*e*P	Pg	19 02 38.5	-2.4
CGIG				*e*S	Sg	19 02 55.7	-3.0
HSIG		1.84	221	*i* P	Pn	19 02 44.0	-3.1
HSIG				*i* S	Sn	19 03 06.2	-4.7

*IDC **07** 19:09:01.8±0.9, 12°.15N×143°.80E, h0^{km}, mb4.5/21, mb1 4.6/21, mb1mx4.3/64, mbtmp4.5/21, Error ellipse: s-maj=24.4km s-min=17.4km az=149.0*

*ISCJB **07** 19:09:04.6±0.5, 12°.16N±0°.08×143°.66E±0°.07, h26^{km}, mb4.7/34, Error ellipse: s-maj=12.5km s-min=7.2km az=142.8*

*NEIC **07** 19:09:05.1±2.9, 12°.14N×143°.73E, h20^{km}±20^{km}, mb4.9/10, Error ellipse: s-maj=9.2km s-min=7.2km az=140.0*

ISC 07 19:09:05.9±0.8, 12°.1N±0°.1×143°.8E±0°.1, h26^{km}, n55, σ0^{s}.63/56, mb4.8/42, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.81	37	Pn	Pn	19 09 35.3	-0.1
	127nm,0.3s,baz=336,slow=12,SNR=39						
GUMO				Sn	Sn	19 09 57.3	-0.2
	138nm,0.3s,baz=220,slow=17,SNR=7.3						
LUWI	Luwuk	24.61	239	*e*P	P	19 14 23.6	-0.7
	116nm,1.0s						
MJAR	Matsushiro Arr	24.81	349	P	P	19 14 25.4	-0.6
	3.5nm,0.8s,baz=175,slow=9.6,SNR=4.1						
MAJO	Matsushiro	24.81	349	*e*P	P	19 14 25.4	-0.6
KSRS	Korea Array	28.93	333	P	P	19 15 02.7	-0.3
	2.6nm,0.9s,baz=142,slow=8.2,SNR=2.8						
KSAR	Wonju Array Be	28.94	333	P	P	19 15 02.7	-0.4
WR1	Warramunga Arr	33.20	196	*e*P	P	19 15 40.4	-0.4
	85nm,1.9s						
WRA	Warramunga Arr	33.20	196	P	P	19 15 40.4	-0.4
	1.9nm,0.8s,baz=19,slow=9.9,SNR=5.4						
BJT	Baijiatuau	36.93	324	*e*P	P	19 16 12.8	0.0
	16nm,0.9s						
CM31	Chiang Mai Arr	43.59	284	*e*P	P	19 17 08.9	+0.6
CMAR	Chiang Mai Arr	43.59	284	P	P	19 17 09.4	+1.1
	2.0nm,0.7s,baz=88,slow=6.6,SNR=12						
SONA0	Songino Array	47.31	326	*e*P	P	19 17 38.0	+0.5
SONM	Songino Array	47.31	326	P	P	19 17 38.0	+0.5
	2.6nm,0.6s,baz=150,slow=7.7,SNR=12						
SHL	Shillong	50.58	293	*e*P	P	19 18 02.9	-0.1
	49nm,1.6s						
LSA	Lhasa	51.71	298	*e*P	P	19 18 11.3	-0.4
	29nm,1.6s						
JIRN	Jiri	55.83	295	*e*P	P	19 18 42.1	+0.2
	20nm,0.5s						
GUN	Gumba	56.12	295	*e*P	P	19 18 44.0	+0.1
	40nm,0.8s						
PKI	Pulchoki	56.52	295	*e*P	P	19 18 46.3	-0.4
	18nm,0.9s						
PKIN	Phulchoki	56.53	295	*e*P	P	19 18 46.2	-0.5
	9.8nm,0.8s						
DMN	Daman	56.79	295	*e*P	P	19 18 48.5	-0.1
	13nm,0.7s						
WMQ	Urumqi	57.36	315	*e*P	P	19 18 52.2	+0.1
	15nm,0.9s						
DANN	Dangsing	58.02	296	*e*P	P	19 18 57.3	0.0
	38nm,0.5s						
KOLN	Koldanda	58.13	295	*e*P	P	19 18 58.0	0.0
	16nm,0.7s						
PYUN	Piuthan	58.68	296	*e*P	P	19 19 01.8	0.0
	26nm,0.7s						
MK32	Makanchi Array	61.79	317	*e*P	P	19 19 22.8	+0.3
MKAR	Makanchi Array	61.79	317	P	P	19 19 22.8	+0.2
	3.5nm,0.7s,baz=87,slow=7.9,SNR=13						
ZALV	Zalesovo Beam	62.18	325	P	P	19 19 24.5	-0.5
	2.2nm,0.5s,baz=109,slow=6.5,SNR=4.5						
ZAA1	Zalesovo Array	62.18	325	*e*P	P	19 19 24.5	-0.5
KURK	Kurchatov	65.00	320	*e*P	P	19 19 44.1	+0.5
KURBB	Kurchatov Arra	65.04	320	P	P	19 19 44.1	+0.2
	11nm,0.8s,baz=105,slow=6.7,SNR=23						
NIL	Nilore	67.21	301	*e*P	P	19 19 58.3	0.0
	24nm,0.8s						
GAR	Garm	69.63	307	*e*P	P	19 20 13.1	-0.3
	44nm,1.5s						
ILAR	Eielson Array	70.34	25	P	P	19 20 15.8	-1.3
	1.4nm,0.5s,baz=250,slow=5.8,SNR=19						
BVAR	Borovoye Array	70.40	322	P	P	19 20 17.9	+0.2
	7.9nm,0.5s,baz=105,slow=7.4,SNR=54						
INK	Inuvik	76.12	22	*e*P	P	19 20 50.8	-0.3
	10nm,1.0s						
INK	Inuvik	76.12	22	P	P	19 20 51.1	0.0
	10nm,1.0s,baz=261,slow=7.3,SNR=10						
ABKAR	Akbulak array	76.89	318	*e*P	P	19 20 55.4	-0.5
AKTO	Aktyubinsk	78.05	319	P	P	19 21 02.0	-0.4
	2.4nm,0.6s,baz=96,slow=9.4,SNR=5.8						
GEYT	Alibeck	79.24	307	P	P	19 21 09.9	+0.6
	8.9nm,1.1s,baz=67,slow=3.9,SNR=4.8						
WSAR	Wadi Sarin	80.89	292	P	P	19 21 18.7	+0.3
	2.7nm,0.7s,baz=132,slow=6.8,SNR=3.0						
KIRV	Kirov	82.00	328	P	P	19 21 23.6	+0.1
	7.4nm,0.5s,baz=94,slow=3.3,SNR=4.4						
YKW3	Yellowknife Ar	84.62	27	*e*P	P	19 21 36.9	0.0
	7.0nm,0.9s						
YKA	Yellowknife Ar	84.64	27	P	P	19 21 37.4	+0.3
	2.5nm,0.6s,baz=286,slow=5.0,SNR=24						
B08A	Colville Reser	85.58	42	*e*P	P	19 21 43.1	+1.0
	4.6nm,0.8s						
RES	Resolute Bay	86.21	13	*e*P	P	19 21 45.2	+0.6
	6.9nm,0.8s						
NEW	Newport	87.03	41	*e*P	P	19 21 50.8	+1.5
	24nm,1.5s						
BMO	Blue Mountains	87.78	45	*e*P	P	19 21 54.4	+1.3
	13nm,1.5s						
ARA0	ARCESS Array S	88.13	342	*e*P	P	19 21 53.7	-0.3
ARCES	ARCESS Array B	88.13	342	P	P	19 21 53.7	-0.3
	2.4nm,0.7s,baz=64,slow=5.5,SNR=6.2						
NVAR	Mina Array Bea	88.67	51	P	P	19 21 58.9	+1.3
	3.1nm,0.7s,baz=264,slow=5.5,SNR=10						
FIA0	FINESS Array S	92.01	335	*e*P	P	19 22 11.2	-1.2
FINES	FINESS Array B	92.01	335	P	P	19 22 11.2	-1.1
	3.7nm,0.6s,baz=71,slow=4.4,SNR=10.0						
PDAR	Pinedale Array	93.75	45	P	P	19 22 21.1	0.0
	0.2nm,0.6s,baz=298,slow=1.9,SNR=2.2						
NB200	NORSAR Array S	98.01	339	*e*P	P	19 22 38.5	-1.3
NOA	NORSAR Array B	98.01	339	P	P	19 22 38.5	-1.3
	1.6nm,1.0s,baz=48,slow=4.7,SNR=2.5						

*ISCJB **07** 19:12:30.9±0.4, 10°.99S±0°.05×165°.71E±0°.06, h10^{km}, mb4.4/23, Error ellipse: s-maj=8.8km s-min=7.5km az=149.5*

*IDC **07** 19:12:30.8±0.8, 11°.05S×165°.79E, h0^{km}, mb4.2/15, mb1 4.4/16, mb1mx4.2/44, mbtmp4.2/16, ML5.1/1, Error ellipse: s-maj=23.0km s-min=16.9km az=125.0*

*NEIC **07** 19:12:32.5±0.3, 10°.94S×165°.77E, h10^{km}, mb4.9/10, Error ellipse: s-maj=8.6km s-min=6.4km az=95.0*

ISC 07 19:12:32.7±0.6, 10°.95S±0°.08×165°.76E±0°.09, h10^{km}, n46, σ1^{s}.11/42, mb4.6/23, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.92	284	Pn	Pn	19 14 00.9	+0.5
	53nm,0.3s,baz=133,slow=5.5,SNR=7.4						
HNR				Sn	Sn	19 15 08.6	+0.3
	17nm,0.3s,baz=17,slow=19,SNR=2.8						
DZM	Mont Dzumac	11.08	177	*e*Pn	Pn	19 15 12.7	+1.4
DZM	Mont Dzumac	11.08	177	Pn	Pn	19 15 13.1	+1.7
	5.1nm,0.3s,baz=38,slow=7.3,SNR=9.1						
EIDS	Eidsvold	19.97	222	*e*P	Pn	19 17 06.7	-0.3
	71nm,1.4s						
MANU	Manus Island	20.29	295	*e*P	Pn	19 17 09.0	-1.8
	182nm,1.5s						
CTA	Charters Tower	20.85	242	P	Pn	19 17 15.4	-2.0
	17nm,0.9s,baz=68,slow=11,SNR=7.4						
CTAO	Charters Tower	20.85	242	*e*P	Pn	19 17 16.8	-0.6
	31nm,1.0s						
ARMA	Armidale	23.40	212	*e*P	P	19 17 42.4	+0.4
	48nm,1.5s						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	19 48 56.4	
	baz=184,SNR=4.2						
H11S3	WAKE ISLAND Hy	29.27	2	T	T	19 49 00.4	
	baz=184						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	19 48 58.6	
	baz=184						
STKA	Stephens Creek	30.52	223	P	P	19 18 45.8	-0.4
	2.2nm,0.6s,baz=29,slow=10,SNR=4.8						
THZ	Tophouse	31.32	170	*e*P	P	19 18 53.6	+0.3
	67nm,1.6s						
WR1	Warramunga Arr	31.53	250	*e*P	P	19 18 54.0	-1.3
	55nm,1.8s						
WRA	Warramunga Arr	31.53	250	P	P	19 18 54.0	-1.3
	8.1nm,1.0s,baz=83,slow=9.2,SNR=11						
KHZ	Kahutara	32.07	169	*e*P	P	19 18 59.8	0.0
	86nm,2.0s						
LTZ	Lake Taylor	32.21	171	*e*P	P	19 19 01.6	+0.6
	18nm,0.7s						
FOZ	Fox Glacier	32.65	175	*e*P	P	19 19 05.2	+0.4
	27nm,1.2s						
AS01	Alice Springs	32.80	243	*e*P	P	19 19 04.6	-2.0
AS31	Alice Springs	32.84	243	*e*P	P	19 19 06.2	-0.7
	4.0nm,1.2s						
AS31				*e*PcP	PcP	19 21 51.0	-0.8
ASAR	Alice Springs	32.84	243	P	P	19 19 05.5	-1.3
	7.1nm,0.9s,baz=65,slow=10,SNR=18						
ASAR				PcP	PcP	19 21 51.0	-0.8
	0.4nm,0.5s,baz=75,slow=3.9,SNR=4.2						
RPZ	Rata Peaks	32.96	173	P	P	19 19 06.9	-0.7
	13nm,0.7s,baz=303,slow=4.9,SNR=6.9						
MJAR	Matsushiro Arr	53.90	333	P	P	19 21 56.8	+0.4
	2.2nm,0.8s,baz=168,slow=8.7,SNR=3.4						
MAJO	Matsushiro	53.90	333	*e*P	P	19 21 56.8	+0.4
ASAJ	Asahikawa	58.71	341	P	P	19 22 31.4	+0.8
	6.8nm,1.0s,baz=180,slow=9.1,SNR=2.4						
KLR	Kul'dur	66.98	337	P	P	19 23 27.2	+1.6
	1.8nm,0.7s,baz=98,slow=7.1,SNR=2.4						
CMAR	Chiang Mai Arr	72.09	294	P	P	19 23 58.1	+0.3
	0.2nm,0.6s,baz=122,slow=4.5,SNR=2.8						
SONA0	Songino Array	78.60	324	*e*P	P	19 24 35.0	+0.2
SONM	Songino Array	78.60	324	P	P	19 24 35.0	+0.2
	0.3nm,0.4s,baz=128,slow=4.0,SNR=3.2						
HDA	Harding Lake	83.15	19	*e*P	P	19 24 58.2	-0.4
	7.9nm,1.0s						
ILAR	Eielson Array	83.42	19	P	P	19 24 59.5	-0.5
	0.8nm,0.6s,baz=239,slow=5.0,SNR=11						
NV01	Mina Array Sit	85.95	50	*e*P	P	19 25 12.3	-1.4
NVAR	Mina Array Bea	85.95	50	P	P	19 25 13.5	-0.2
	0.4nm,0.5s,baz=234,slow=7.2,SNR=4.1						
MK31	Makanchi Array	93.46	317	*e*P	P	19 25 48.3	-0.3
	4.7nm,1.3s						
MK32	Makanchi Array	93.46	317	*e*P	P	19 25 48.2	-0.4
MKAR	Makanchi Array	93.46	317	P	P	19 25 48.2	-0.4
	0.5nm,0.8s,baz=101,slow=6.0,SNR=3.3						
ZALV	Zalesovo Beam	93.49	324	P	P	19 25 48.2	-0.3
	0.3nm,0.3s,baz=108,slow=4.7,SNR=2.4						
ZAA1	Zalesovo Array	93.49	324	*e*P	P	19 25 48.2	-0.3
YKA	Yellowknife Ar	94.89	27	P	P	19 25 54.3	-0.4
	0.3nm,0.7s,baz=263,slow=4.9,SNR=3.3						
ARA0	ARCESS Array S	116.25	345	*e*PKPdf	PKPdf	19 31 14.3	-1.5
ARCES	ARCESS Array B	116.25	345	PKP	PKPdf	19 31 14.3	-1.5
	1.9nm,0.8s,baz=61,slow=2.1,SNR=5.9						
NB2	NORSAR Subarra	126.62	345	PKPdf	PKiKP	19 31 41.2	+4.7
	comp=Z,0.3nm,0.8s,baz=31,slow=1.9						
NB200	NORSAR Array S	126.62	345	*e*PKPdf	PKiKP	19 31 36.8	+0.3
NOA	NORSAR Array B	126.62	345	PKP	PKiKP	19 31 36.8	+0.3
	comp=Z,0.6nm,0.7s,baz=45,slow=1.9,SNR=2.4						
TORD	Torodi Ar. Bea	164.26	280	PKPab	PKPab	19 33 31.3	-0.2
	comp=Z,0.7nm,0.9s,baz=40,slow=3.8,SNR=2.4						
TOA1	Torodi Ar. Sit	164.26	280	*e*PKPab	PKPab	19 33 31.3	-0.2

GEN 07 19:16:43.5, 44°.30N×10°.26E, h16^{km}±2^{km}, Ml0.8, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	Equi	0.15	209	P	Pg	19 16 47.2	-0.3
EQUI				S	Sg	19 16 50.1	0.0
SARO	Sassorosso	0.15	136	P	Pg	19 16 47.5	-0.2
SARO				S	Sg	19 16 50.5	+0.2
CARD	Cardoso	0.32	149	P	Pg	19 16 46.8	-3.3
CARD				S	Sg	19 16 54.3	-0.3

*IDC **07** 19:23:27.1±0.7, 60°.87N×167°.24E, h0^{km}, mb4.0/16, mb1 4.2/19, mb1mx3.9/74, mbtmp4.0/19, ML5.3/2, Error ellipse: s-maj=21.0km s-min=9.9km az=167.0*

*ISCJB **07** 19:23:28.5±0.3, 60°.92N±0°.04×167°.12E±0°.07, h22^{km}, mb4.1/19, Error ellipse: s-maj=6.3km s-min=3.4km az=136.5*

*KRSC **07** 19:23:29.3±0.9, 60°.90N×166°.85E, h44^{km}±7^{km}, ML4.5, FELT [IV] at Khailino.*

*NEIC **07** 19:23:29.6±2.6, 60°.91N×167°.13E, h16^{km}±16^{km}, mb4.3/9, Error ellipse: s-maj=7.9km s-min=3.7km az=166.0*

*MOS **07** 19:23:30.7±1.2, 60°.93N×167°.00E, h44^{km}, mb4.3/12, Error ellipse: s-maj=16.7km s-min=6.4km az=74.8*

MOS Felt (III-IV) at Khailino.

ISC 07 19:23:30.3±0.5, 60°.91N±0°.04×167°.08E±0°.06, h22^{km}, n70, σ0^{s}.94/75, mb4.3/19, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TILK	Tilichiki	0.65	225	*e*P	Pb	19 23 41.5	-1.5
TILK				*e*S	Sb	19 23 51.0	-0.7
TILK	Tilichiki	0.65	225	PN	Pb	19 23 41.5	-1.5
TILK				S	Sb	19 23 51.0	-0.7
KMSK	Kamenskaya	1.62	345	*e*P	Pn	19 23 56.7	-0.8
KMSK				*e*S	Sn	19 24 18.1	+0.5
KMSK	Kamenskaya	1.62	345	PN	Pn	19 23 56.7	-0.8
KMSK				S	Sn	19 24 18.1	+0.5
OSSR	Ossora	2.61	232	*e*P	Pn	19 24 10.4	-0.7
OSSR				*e*S	Sn	19 24 40.9	-1.2
OSSR	Ossora	2.61	232	PN	Pn	19 24 10.4	-0.7
OSSR				S	Sn	19 24 40.9	-1.2
PALN	Palana	4.01	246	*e*P	Pn	19 24 29.8	-0.6
PALN	Palana	4.01	246	PN	Pn	19 24 29.8	-0.6
KBG	Krutoberegovo	5.20	208	*e*P	Pn	19 24 47.8	+1.2
KBG	Krutoberegovo	5.20	208	PN	Pn	19 24 47.8	+1.2
KBTR	Krutoberegovo	5.21	207	*e*P	Pn	19 24 47.7	+0.8
KBTR	Krutoberegovo	5.21	207	PN	Pn	19 24 47.7	+0.8
SMKR	Semkarok	5.23	216	*e*P	Pn	19 24 48.8	+1.6
SMKR	Semkarok	5.23	216	PN	Pn	19 24 48.8	+1.6
SRKR	Sorokina	5.26	218	*e*P	Pn	19 24 49.4	+1.8
SRKR	Sorokina	5.26	218	PN	Pn	19 24 49.4	+1.8
BDR	Baidarnaya	5.32	218	*e*P	Pn	19 24 50.1	+1.7
BDR	Baidarnaya	5.32	218	PN	Pn	19 24 50.1	+1.7
KLY	Klyuchi	5.70	219	*e*P	Pn	19 24 54.4	+0.8
KLY	Klyuchi	5.70	219	PN	Pn	19 24 54.4	+0.8
ZLN	Zelenaya	5.91	217	*e*P	Pn	19 24 58.4	+1.9
ZLN	Zelenaya	5.91	217	PN	Pn	19 24 58.4	+1.9
TUMD	Tumrok D	6.73	215	*e*P	Pn	19 25 08.4	+0.7
TUMR	Tumrok	6.73	216	PN	Pn	19 25 08.4	+0.6
BILL	Bilibino	7.17	358	*e*Pn	Pn	19 25 13.1	-0.6
BILL	Bilibino	7.17	358	*e*PN	Pn	19 25 13.1	-0.6
SEY	Seymchan	7.23	293	Pn	Pn	19 25 14.9	+0.4
	1.2nm,0.3s,baz=98,slow=15,SNR=12						
SEY				Lg	Lg	19 27 17.1	
	1.3nm,0.3s,baz=187,slow=13,SNR=4.9						
MA2	Magadan	8.22	268	*e*PN	Pn	19 25 28.2	0.0
MA2	Magadan	8.22	268	Pn	Pn	19 25 28.5	+0.3
	2.9nm,0.3s,baz=115,slow=12,SNR=16						
MA2				Sn	Sn	19 27 01.7	+1.5
	0.7nm,0.3s,baz=344,slow=23,SNR=4.3						
RDOG	Red Dog Mine	14.64	48	*e*Pn	Pn	19 26 54.4	-1.3
IM3	Indian Mountai	17.99	57	*e*Pn	Pn	19 27 38.2	-0.5
TIXI	Tiksi	18.35	322	P	Pn	19 27 44.1	+1.2
	0.1nm,0.3s,baz=116,slow=12,SNR=2.4						
MLY	Manley	19.32	59	*e*P	P	19 27 53.6	-0.1
	2.9nm,0.8s						
MCK	McKinley	20.32	63	*e*P	Pn	19 28 05.6	-0.9
	15nm,1.1s						
MCK	McKinley	20.32	63	*e*P	Pn	19 28 05.6	-1.0
MCK				pmax	pmax		
	comp=Z,15nm,1.1s						
MDM	Murphy Dome	20.39	59	*e*P	P	19 28 05.9	+0.6
	comp=Z,26nm,1.5s						
WRH	Wood River Hil	20.53	61	*e*P	P	19 28 06.5	-0.3
	comp=Z,13nm,0.9s						
KDAK	Kodiak Island	20.57	81	P	P	19 28 06.9	-0.3
	comp=Z,5.1nm,0.6s,baz=306,slow=8.7,SNR=4.3						
IL1	Eielson Array	20.99	59	*e*P	P	19 28 12.1	+0.4
ILAR	Eielson Array	20.99	59	P	P	19 28 11.8	+0.1
	comp=Z,3.2nm,0.6s,baz=276,slow=11,SNR=44						
ILB	Eielson Array	20.99	59	*e*P	P	19 28 11.3	-0.4
HDA	Harding Lake	21.03	60	*e*P	P	19 28 12.0	-0.1
	comp=Z,22nm,1.1s						
PRP	Porcupine Dome	21.42	57	*e*P	P	19 28 16.6	+0.1
	comp=Z,8.4nm,0.7s						
SCRK	Sand Creek	22.39	61	*e*P	P	19 28 26.5	-0.4
	comp=Z,11nm,1.2s						
KLR	Kul'dur	23.04	256	P	P	19 28 34.1	+0.4
	comp=Z,1.7nm,0.6s,baz=59,slow=10.0,SNR=6.3						
DAWY	Dawson	24.31	59	*e*P	P	19 28 46.0	+0.1
	comp=Z,13nm,1.3s						
INK	Inuvik	25.52	48	*e*P	P	19 28 57.8	+1.1
	comp=Z,11nm,1.0s						
INK	Inuvik	25.52	48	*e*P	P	19 28 57.8	+1.1
INK				pmax	pmax		
	comp=Z,11nm,1.0s						
INK	Inuvik	25.52	48	P	P	19 28 56.5	-0.3
	comp=Z,6.6nm,0.8s,baz=293,slow=7.3,SNR=14						
MAJO	Matsushiro	30.47	230	*e*P	P	19 29 41.6	+0.3
MAJO	Matsushiro	30.47	230	*e*P	P	19 29 41.6	+0.3
MJAR	Matsushiro Arr	30.47	230	P	P	19 29 41.6	+0.3
	comp=Z,3.0nm,0.6s,baz=26,slow=6.4,SNR=9.1						
YKA	Yellowknife Ar	35.05	52	P	P	19 30 20.6	-0.3
	comp=Z,0.7nm,0.6s,baz=73,slow=5.3,SNR=7.1						
SPITS	Spitsbergen Ar	40.02	351	P	P	19 31 03.0	+0.2
	comp=Z,23nm,1.1s,baz=55,slow=11,SNR=3.8						
ARA0	ARCESS Array S	46.99	343	*e*P	P	19 31 58.6	-0.5
ARCES	ARCESS Array B	46.99	343	P	P	19 31 58.6	-0.5
	comp=Z,3.0nm,1.0s,baz=24,slow=9.2,SNR=3.8						
KURK	Kurchatov	47.02	300	*e*P	P	19 32 01.0	+1.6
KURK	Kurchatov	47.02	300	P	P	19 32 01.0	+1.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KURBB	Kurchatov Arra	47.12	300	P	P	19 32 01.0	+0.7
	comp=Z,0.8nm,0.2s,baz=45,slow=7.8,SNR=4.9						
MK32	Makanchi Array	48.36	294	*e*P	P	19 32 10.9	+0.9
MKAR	Makanchi Array	48.36	294	P	P	19 32 10.9	+0.9
	comp=Z,0.5nm,0.9s,baz=47,slow=8.5,SNR=2.2						
PDAR	Pinedale Array	50.81	71	P	P	19 32 29.1	+0.1
	comp=Z,1.6nm,0.8s,baz=235,slow=5.2,SNR=4.1						
ULM	Lac du Bonnet	50.92	55	P	P	19 32 29.5	+0.2
	comp=Z,4.8nm,0.8s,baz=352,slow=7.5,SNR=3.1						
NB2	NORSAR Subarra	56.97	346	P	P	19 33 12.7	-0.7
	comp=Z,0.7nm,0.6s,baz=14,slow=7.4						
NB200	NORSAR Array S	56.97	346	*e*P	P	19 33 13.1	-0.4
NOA	NORSAR Array B	56.97	346	P	P	19 33 13.1	-0.4
	comp=Z,0.9nm,0.6s,baz=13,slow=7.3,SNR=4.1						
CMAR	Chiang Mai Arr	63.43	260	P	P	19 33 59.3	+1.2
	comp=Z,0.3nm,0.7s,baz=351,slow=5.2,SNR=5.5						
WR1	Warramunga Arr	84.78	211	*e*P	P	19 36 02.2	-0.3
WRA	Warramunga Arr	84.78	211	P	P	19 36 02.2	-0.3
	comp=Z,1.1nm,0.6s,baz=15,slow=5.5,SNR=5.0						
ASAR	Alice Springs	88.46	210	P	P	19 36 20.0	-0.4
	comp=Z,0.6nm,0.7s,baz=12,slow=5.8,SNR=4.1						

*ISCJB **07** 19:25:12.4±0.3, 11°.22S±0°.05×165°.84E±0°.05, h10^{km}, mb4.5/36, Error ellipse: s-maj=7.4km s-min=6.7km az=18.6*

*IDC **07** 19:25:13.1±0.7, 11°.10S×165°.84E, h0^{km}, mb4.0/14, mb1 4.3/16, mb1mx4.1/47, mbtmp4.1/16, ML4.7/2, Error ellipse: s-maj=21.1km s-min=16.2km az=113.0*

*NEIC **07** 19:25:15.6±4.4, 11°.17S×165°.82E, h20^{km}±27^{km}, mb4.9/20, Error ellipse: s-maj=10.3km s-min=8.0km az=196.0*

ISC 07 19:25:14.2±0.5, 11°.16S±0°.08×165°.86E±0°.07, h10^{km}, n69, σ1^{s}.67/68, mb4.7/36, 1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.06	286	Pn	Pn	19 26 43.0	-0.9
	21nm,0.3s,baz=146,slow=4.1,SNR=8.1						
HNR				Sn	Sn	19 27 55.4	+1.9
	baz=342,slow=20,SNR=1.7						
DZM	Mont Dzumac	10.87	177	Pn	Pn	19 27 50.1	+0.1
	5.6nm,0.3s,baz=190,slow=17,SNR=14						
PINNC	Pines Island,	11.49	173	*e*Pn	Pn	19 28 00.8	+2.3
MSVF	Nonsavu	13.49	120	*e*Pn	Pn	19 28 27.0	+1.0
MANU	Manus Island	20.46	295	*e*P	P	19 29 49.8	-2.4
	101nm,1.4s						
CTA	Charters Tower	20.84	242	P	Pn	19 29 57.7	-1.1
	21nm,1.0s,baz=79,slow=12,SNR=7.8						
CTAO	Charters Tower	20.84	242	*e*P	P	19 29 54.5	-1.8
	24nm,0.9s						
COEN	Coen	22.31	260	*e*P	P	19 30 12.4	+0.3
	6.0nm,0.9s						
BKZ	Black Stump Fm	29.46	163	*e*P	P	19 31 16.3	-2.1
	13nm,0.5s						
STKA	Stephens Creek	30.43	224	*e*P	P	19 31 24.4	-2.7
	5.4nm,1.8s						
STKA	Stephens Creek	30.43	224	P	P	19 31 28.1	+1.1
	2.6nm,0.7s,baz=87,slow=4.9,SNR=5.3						
H11N1	WAKE ISLAND Hy	30.69	2	T	T	20 05 55.7	
	baz=182,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.70	2	T	T	20 05 56.1	
	baz=182,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	30.71	2	T	T	20 05 57.1	
	baz=182,slow=76,SNR=16						
THZ	Tophouse	31.11	170	*e*P	P	19 31 31.1	-1.8
	14nm,0.9s						
WRAB	Tennant Creek	31.53	250	*e*P	P	19 31 36.4	-0.5
	5.4nm,0.8s						
WB2	Warramunga Arr	31.54	250	*e*P	P	19 31 36.9	0.0
	7.9nm,0.9s						
WR1	Warramunga Arr	31.55	250	*e*P	P	19 31 36.6	-0.4
	8.7nm,0.8s						
WRA	Warramunga Arr	31.55	250	P	P	19 31 36.6	-0.4
	6.4nm,0.9s,baz=80,slow=9.2,SNR=14						
RPZ	Rata Peaks	32.75	173	P	P	19 31 49.0	+1.8
	19nm,0.7s,baz=304,slow=0.4,SNR=13						
AS31	Alice Springs	32.84	243	*e*P	P	19 31 48.6	+0.2
	7.1nm,1.9s						
ASAR	Alice Springs	32.84	243	P	P	19 31 47.7	-0.7
	2.5nm,0.8s,baz=74,slow=9.6,SNR=17						
MJAR	Matsushiro Arr	54.12	333	P	P	19 34 39.1	-0.3
	2.2nm,0.9s,baz=167,slow=9.2,SNR=3.4						
MAJO	Matsushiro	54.12	333	*e*P	P	19 34 39.1	-0.3
KSRS	Korea Array	60.03	326	P	P	19 35 23.3	+2.0

	1.2nm,0.9s,baz=132,slow=5.6,SNR=3.4						
KSAR	Wonju Array Be	60.04	326	P	P	19 35 23.3	+1.9
NJ2	Nanjing	62.17	315	eP	P	19 35 36.7	+0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2	Changchun	65.89	329	eP	P	19 36 01.2	+1.0
KLR	Kul'dur	67.20	337	P	P	19 36 08.6	+0.1
	comp=Z,0.9nm,0.8s,baz=124,slow=3.6,SNR=2.3						
GYA	Guiyang	68.57	304	⇑iP	P	19 36 19.0	+1.3
GYA				PP	PP	19 38 52.2	+2.9
GYA				S	S	19 45 19.6	-1.0
GYA				SKS	SKSac	19 46 14.0	-3.6
GYA	Guiyang	68.57	304	SS	SS	19 49 44.5	-0.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.7s						
GYA				LR	LR		
	comp=N,550nm,18.9s						
GYA				LR	LR		
	comp=E,580nm,18.4s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
KMI	Kunming	71.27	301	P	P	19 36 37.9	+3.4
KMI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
HHC	Hu-ho-hao-te	71.99	320	eP	P	19 36 39.3	+0.9
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,16µm,5.7s						
CMAR	Chiang Mai Arr	72.25	294	P	P	19 36 41.0	+0.7
	comp=Z,0.4nm,0.7s,baz=127,slow=4.2,SNR=3.8						
LZH	Lanzhou	74.91	312	eP	P	19 36 56.0	+0.2
LZH				pP	pwP	19 37 01.1	-0.8
LZH				sP	PcP	19 37 03.6	-6.1
LZH				PP	PP	19 39 38.5	-5.1
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,120nm,4.7s						
LZH				LR	LR		
	comp=N,540nm,17.6s						
LZH				LR	LR		
	comp=E,560nm,17.0s						
LZH				LR	LR		
	comp=Z,640nm,18.8s						
ANM	Nome	78.58	12	eP	P	19 37 16.4	+0.8
	comp=Z,14nm,1.6s						
SONA0	Songino Array	78.82	324	eP	P	19 37 17.5	-0.1
SONM	Songino Array	78.82	324	P	P	19 37 17.5	-0.1
	comp=Z,0.4nm,0.9s,baz=122,slow=5.4,SNR=2.2						
GTA	Gaotai	79.21	314	eP	P	19 37 27.7	+7.8
GTA				pP	PcP	19 37 34.9	+6.7
GTA				sP	pwP	19 37 38.3	+12
CAST	Castle Rocks	81.02	18	eP	P	19 37 28.3	-0.6
	comp=Z,58nm,2.0s						
IM3	Indian Mountai	82.50	16	eP	P	19 37 37.2	+0.5
MDM	Murphy Dome	83.30	18	eP	P	19 37 40.9	0.0
	comp=Z,5.8nm,0.8s						
HDA	Harding Lake	83.31	19	eP	P	19 37 41.1	+0.1
	comp=Z,12nm,0.9s						
ILAR	Eielson Array	83.58	18	P	P	19 37 42.6	+0.3
	comp=Z,1.2nm,0.7s,baz=231,slow=5.3,SNR=15						
IL1	Eielson Array	83.58	18	eP	P	19 37 42.6	+0.3
SCRK	Sand Creek	83.98	20	eP	P	19 37 45.1	+0.5
	comp=Z,18nm,1.6s						
PAHR	Pah Rah Range	85.60	48	eP	P	19 37 53.6	+0.3
	comp=Z,22nm,1.7s						
DAWY	Dawson	85.62	21	eP	P	19 37 53.0	+0.3
	comp=Z,40nm,1.9s						
NV01	Mina Array Sit	86.01	50	eP	P	19 37 56.3	+0.8
NVAR	Mina Array Bea	86.01	50	P	P	19 37 56.1	+0.6
	comp=Z,0.5nm,0.5s,baz=211,slow=0.5,SNR=3.0						
KVN	Kaiserville	86.35	49	eP	P	19 37 56.2	-0.9
	comp=Z,32nm,1.7s						
G08A	Pilot Rock	87.65	43	eP	P	19 38 00.5	-2.7
SHPR	Sheep Range	87.87	52	eP	P	19 38 02.1	-2.4
	comp=Z,43nm,1.8s						
R11A	Troy Canyon, C	88.04	50	eP	P	19 38 03.8	-1.5
	comp=Z,21nm,1.7s						
WMQ	Urumqi	89.25	315	eP	P	19 38 11.4	+0.7
WMQ				LR	LR		
	comp=N,13µm,16.7s						
WMQ				LR	LR		
	comp=E,18µm,15.1s						
WMQ				LR	LR		
	comp=Z,14µm,18.5s						
MK32	Makanchi Array	93.68	317	eP	P	19 38 31.6	+0.5
MKAR	Makanchi Array	93.68	317	P	P	19 38 31.6	+0.5
	comp=Z,0.6nm,0.7s,baz=97,slow=4.5,SNR=6.4						
ZALV	Zalesovo Beam	93.71	324	P	P	19 38 30.5	-0.6
	comp=Z,0.2nm,0.4s,baz=106,slow=4.7,SNR=2.5						
ZAA1	Zalesovo Array	93.71	324	eP	P	19 38 30.5	-0.6
YKA	Yellowknife Ar	95.02	27	P	P	19 38 35.2	-1.6
	comp=Z,0.1nm,0.6s,baz=260,slow=4.7,SNR=2.4						
KSH	Kashi	96.91	309	P	P	19 38 43.7	-2.5
KSH				sP	pwP	19 38 55.0	+2.6
KSH				PP	PP	19 42 47.4	+5.7
KSH	Kashi	96.91	309	S	S	19 49 55.9	-13
KSH	Kashi	96.91	309	sS	sS	19 50 14.1	+1.2
KSH	Kashi	96.91	309	SS	SS	19 56 48.3	+3.2
KSH				pmax	pmax		
	comp=Z,2µm,8.9s						
KSH				LR	LR		
	comp=N,6µm,13.8s						
KSH				LR	LR		
	comp=E,8µm,16.5s						
ARA0	ARCESS Array S	116.47	345	ePKPdf	PKiKP	19 43 58.1	+0.3
ARCES	ARCESS Array B	116.47	345	PKP	PKiKP	19 43 58.1	+0.3
	comp=E,1.5nm,0.9s,baz=70,slow=3.0,SNR=3.6						
ESDC	Sonseca Array	150.19	344	PKPab	PKPab	19 45 12.8	+0.9
	comp=E,0.8nm,0.8s,baz=353,slow=2.9,SNR=4.2						
TORD	Torodi Ar. Bea	164.39	279	PKP	PKPdf	19 45 19.3	+0.1
	comp=E,0.5nm,0.9s,baz=90,slow=4.3,SNR=2.6						
TORD				PKPab	pPKPab	19 46 14.3	-1.7
	comp=E,0.5nm,0.9s,baz=85,slow=5.3,SNR=1.9						
TOA1	Torodi Ar. Sit	164.39	279	ePKPdf	PKPdf	19 45 19.3	+0.1
TOA1				ePKPab	pPKPab	19 46 14.3	-1.7

ISCJB ***07*** *19:28:00.5±0.4, 10°.87S±0°.06×165°.80E±0°.06, h10^{km}, mb4.5/25, Error ellipse: s-maj=9.0km s-min=8.3km az=19.9*

IDC ***07*** *19:28:00.8±0.9, 10°.82S×165°.92E, h0^{km}, mb4.3/14, mb1 4.4/16, mb1mx4.3/47, mbtmp4.3/16, ML4.8/2, Error ellipse: s-maj=26.4km s-min=17.7km az=110.0*

NEIC ***07*** *19:28:02.1±0.3, 10°.86S×165°.88E, h10^{km}, mb4.9/14, Error ellipse: s-maj=9.6km s-min=6.8km az=110.0*

ISC 07 19:28:02.3±0.6**, 10°.81S**±0°.08×**165°.86E**±0°.09**, h10^{km}, n53, σ0^{s}.99**/50**, mb4.6**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.98	283	ePn	Pn	19 29 32.5	+1.5
HNR				eSn	Sn	19 30 38.5	-1.1
HNR	Honiara	5.98	283	Pn	Pn	19 29 33.0	+2.1
	52nm,0.3s,baz=135,slow=6.9,SNR=11						
HNR				Sn	Sn	19 30 38.5	-1.1
	23nm,0.3s,baz=168,slow=14,SNR=3.1						
DZM	Mont Dzumac	11.22	177	ePn	Pn	19 30 43.7	+0.9
DZM	Mont Dzumac	11.22	177	Pn	Pn	19 30 44.1	+1.2
	3.5nm,0.3s,baz=328,slow=16,SNR=16						
EIDS	Eidsvold	20.15	222	eP	Pn	19 32 36.9	-1.8
	108nm,1.8s						
MANU	Manus Island	20.32	294	eP	Pn	19 32 40.2	-0.6
	102nm,1.0s						
CTA	Charters Tower	21.01	242	P	P	19 32 47.5	+1.3
	8.5nm,0.8s,baz=76,slow=12,SNR=5.2						
H11S2	WAKE ISLAND Hy	29.12	2	T	T	20 04 24.2	
	baz=181,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.13	2	T	T	20 04 24.4	
	baz=181,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	29.14	2	T	T	20 04 25.4	
	baz=181,slow=76,SNR=14						
BKZ	Black Stump Fm	29.79	163	eP	P	19 34 09.0	-0.4
	6.1nm,0.6s						
STKA	Stephens Creek	30.69	223	eP	P	19 34 17.3	-0.1
	1.1nm,1.4s						
STKA	Stephens Creek	30.69	223	P	P	19 34 17.8	+0.4
	2.7nm,0.9s,baz=52,slow=10.0,SNR=3.2						
WRAB	Tennant Creek	31.66	250	eP	P	19 34 25.4	-0.7
	20nm,1.3s						
WB2	Warramunga Arr	31.66	250	eP	P	19 34 25.4	-0.7
	16nm,1.2s						
WR1	Warramunga Arr	31.67	250	eP	P	19 34 26.2	0.0
	19nm,1.3s						
WRA	Warramunga Arr	31.67	250	P	P	19 34 26.2	0.0
	5.5nm,0.9s,baz=81,slow=9.1,SNR=9.4						
AS01	Alice Springs	32.96	243	eP	P	19 34 34.5	-3.0
AS31	Alice Springs	33.00	243	eP	P	19 34 36.5	-1.4
	0.9nm,0.7s						
ASAR	Alice Springs	33.00	243	P	P	19 34 37.1	-0.7
	4.4nm,0.8s,baz=71,slow=9.4,SNR=14						
RPZ	Rata Peaks	33.09	173	eP	P	19 34 36.8	-1.6
	23nm,1.1s						
RPZ	Rata Peaks	33.09	173	P	P	19 34 38.1	-0.2
	15nm,1.0s,baz=116,slow=3.8,SNR=3.6						
FITZ	Fitzroy Crossi	39.55	255	eP	P	19 35 33.8	-0.1
	5.7nm,0.9s						
JAGI	Jajag, Banyuwa	50.99	268	eP	P	19 37 02.9	-2.0
	22nm,1.0s						
MJAR	Matsushiro Arr	53.81	332	P	P	19 37 25.2	-0.2
	5.5nm,1.0s,baz=165,slow=8.7,SNR=4.6						
MAJO	Matsushiro	53.81	332	eP	P	19 37 25.2	-0.2
KSRS	Korea Array	59.74	325	P	P	19 38 08.6	+1.2
	1.3nm,0.7s,baz=123,slow=4.5,SNR=3.2						
KSAR	Wonju Array Be	59.76	325	P	P	19 38 08.6	+1.1
USRK	Ussuriysk Ar.	62.79	333	P	P	19 38 28.5	+0.6
	7.2nm,1.1s,baz=156,slow=5.2,SNR=4.2						
PEA0B	Petropavlovsk-	64.04	355	eP	P	19 38 36.7	+0.6
	207nm,1.7s						
PETK	Petropavlovsk-	64.04	355	eP	P	19 38 36.7	+0.6
CMAR	Chiang Mai Arr	72.12	293	P	P	19 39 28.0	+0.4
	1.4nm,1.0s,baz=111,slow=5.4,SNR=5.5						
SONA0	Songino Array	78.54	324	eP	P	19 40 05.1	+0.9
SONM	Songino Array	78.54	324	P	P	19 40 05.1	+0.9
	2.1nm,1.0s,baz=140,slow=6.8,SNR=4.4						
HDA	Harding Lake	82.98	19	eP	P	19 40 28.3	+1.0
	28nm,1.6s						
ILAR	Eielson Array	83.25	18	P	P	19 40 29.1	+0.4
	1.6nm,0.9s,baz=224,slow=7.0,SNR=7.6						
SCRK	Sand Creek	83.66	20	eP	P	19 40 30.3	-0.7
	21nm,1.9s						
MK01	Makanchi Array	93.42	317	eP	P	19 41 17.4	-0.6
MK31	Makanchi Array	93.43	317	eP	P	19 41 17.5	-0.6
	3.3nm,1.0s						
MK32	Makanchi Array	93.43	317	eP	P	19 41 17.6	-0.5
MKAR	Makanchi Array	93.43	317	eP	P	19 41 17.2	-0.9
	14nm,0.9s						
MKAR	Makanchi Array	93.43	317	P	P	19 41 17.6	-0.5
	1.8nm,0.8s,baz=99,slow=6.3,SNR=15						
ZAA0	Zalesovo Array	93.43	324	eP	P	19 41 16.9	-1.0
	4.0nm,1.1s						
ZALV	Zalesovo Beam	93.43	324	eP	P	19 41 17.0	-0.9
ZALV	Zalesovo Beam	93.43	324	P	P	19 41 17.1	-0.8
	1.3nm,0.8s,baz=90,slow=4.4,SNR=7.6						
ZAA1	Zalesovo Array	93.43	324	eP	P	19 41 17.1	-0.8
YKA	Yellowknife Ar	94.71	27	P	P	19 41 23.3	-0.2
	0.2nm,0.7s,baz=263,slow=4.8,SNR=3.3						
ARA0	ARCESS Array S	116.13	346	ePKPdf	PKPdf	19 46 45.2	-0.1
ARCES	ARCESS Array B	116.13	346	PKP	PKPdf	19 46 45.2	-0.1
	0.8nm,0.7s,baz=93,slow=1.8,SNR=3.3						
ES19	SONSECA Array	149.82	344	ePKPbc	PKiKP	19 47 53.4	-0.7
ESDC	Sonseca Array	149.86	344	PKPbc	PKiKP	19 47 53.1	-1.1
	0.6nm,0.6s,baz=1.0,slow=2.9,SNR=4.2						
TORD	Torodi Ar. Bea	164.34	280	PKPab	PKPab	19 49 01.5	0.0
	1.0nm,1.0s,baz=81,slow=1.5,SNR=3.8						
TOA1	Torodi Ar. Sit	164.34	280	ePKPab	PKPab	19 49 01.5	0.0

IDC 07 19:29:06.9±1.6**, 10°.67S**×**165°.51E, h0^{km}, mb4.0**/4**, mb1 4.3**/5**, mb1mx3.9**/46**, mbtmp4.1**/5**, ML4.4**/1**, Error ellipse: s-maj=52.7km s-min=30.1km az=123.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.37	176	Pn	Pn	19 31 49.7	-1.1
	2.4nm,0.3s,baz=340,slow=10,SNR=7.1						
WRA	Warramunga Arr	31.39	249	P	P	19 35 29.7	-0.2
	2.6nm,0.9s,baz=77,slow=9.3,SNR=4.7						
ASAR	Alice Springs	32.75	243	P	P	19 35 41.9	+0.1
	1.3nm,0.6s,baz=64,slow=9.6,SNR=4.4						
ILAR	Eielson Array	83.23	19	P	P	19 41 34.6	-0.2
	0.8nm,1.0s,baz=232,slow=4.4,SNR=3.6						
MKAR	Makanchi Array	93.09	317	P	P	19 42 23.4	+0.6
	0.5nm,0.7s,baz=88,slow=5.3,SNR=2.7						

ISCJB ***07*** *19:29:55.1±0.3, 37°.81N±0°.03×113°.08W±0°.03, h10^{km}, Error ellipse: s-maj=3.9km s-min=3.2km az=142.7*

SLC ***07*** *19:29:55.5, 37°.80N×113°.11W, h2^{km}, ML3.1*

UUSS ***07*** *19:29:55.0, 37°.80N×113°.11W, h2^{km}*

NEIC ***07*** *19:29:55.5±0.0, 37°.80N×113°.11W, h2^{km}, ML3.1(SLC), After SLC.*

NEIC Felt at Cedar City.

ANF ***07*** *19:29:58.4±1.7, 37°.70N×113°.07W, h14^{km}±11^{km}, ML3.6/10, Error ellipse: s-maj=4.8km s-min=3.1km az=11.0*

ISC 07 19:29:56.3±0.8**, 37°.80N**±0°.02×**113°.08W**±0°.02**, h10^{km}, n78, σ2^{s}.13**/87**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZCU	Shurtz Canyon	0.20	181	ePg	Pg	19 29 59.3	-1.3
CCUT	Cedar City	0.33	222	ePg	Pg	19 30 01.5	-1.5
PKCU	Pink Cliffs	0.71	120	ePg	Pg	19 30 09.9	-0.1
MTPU	Mount Pierson	0.75	71	ePg	Pg	19 30 10.6	-0.3
LCMT	Little Creek M	0.80	189	ePg	Pg	19 30 10.2	-1.4
KNB	Kanab	0.81	165	ePg	Pg	19 30 10.6	-1.3
TCRU	Three Creeks R	0.95	32	ePg	Pg	19 30 13.8	-0.9
PSUT	Pine Spring	0.95	321	ePg	Pg	19 30 13.8	-0.9
MSU	Marysvale	1.01	45	ePg	Pg	19 30 15.3	-0.4
U15A	North Rim	1.51	155	ePn	Pn	19 30 23.1	-0.5
R11A	Troy Canyon, C	2.05	286	ePn	Pn	19 30 29.5	-1.5
R11A	Troy Canyon, C	2.05	286	P	Pn	19 30 31.7	+0.8
	baz=105,SNR=28						
R11A				S	Sg	19 31 00.4	-1.8
	baz=105						
TMUT	Trail Mountain	2.10	44	ePn	Pn	19 30 32.3	+0.5
SHPR	Sheep Range	2.10	233	ePn	Pn	19 30 31.4	-0.3
NLU	North Lily Min	2.29	20	ePn	Pn	19 30 34.7	+0.4
SRU	San Rafael Swe	2.40	56	ePn	Pn	19 30 37.3	+1.5
DUG	Dugway, Tooele	2.40	5	ePn	Pn	19 30 37.2	+1.4
DUG	Dugway, Tooele	2.40	5	P	Pb	19 30 38.1	-1.6
	baz=186,SNR=16						
MPU	Maple Canyon	2.49	27	ePn	Pn	19 30 38.4	+1.4
WUAZ	Wupatki	2.66	148	ePn	Pb	19 30 43.4	-0.7
WUAZ	Wupatki	2.66	148	Pb	Pb	19 30 43.5	-0.6
	baz=329						
WUAZ				Sb	Sb	19 31 18.0	+1.1
	baz=329						
TPNV	Topopah Spring	2.66	252	ePn	Pn	19 30 39.1	-0.2
TPNV	Topopah Spring	2.66	252	P	Pn	19 30 39.2	-0.2
	baz=70,SNR=9.0						
TPNV				S	Sn	19 31 13.3	+1.6
	baz=70						
W13A	Hualapai Mount	2.77	194	ePn	Pn	19 30 41.4	+0.5
P18A	Preston Nutter	2.88	50	ePn	Pn	19 30 45.0	+2.6
CTU	Camp Tracy	3.07	19	ePn	Pb	19 30 52.2	+1.1
JLU	Jordanelle	3.07	24	ePn	Pb	19 30 51.6	+0.4
BGU	Big Grassy Mou	3.12	1	ePn	Pb	19 30 53.7	+1.7
PV05	Paradox Valley	3.16	84	ePn	Pn	19 30 45.1	-1.2
LDFC	Landfair	3.17	212	ePn	Pn	19 30 45.7	-0.6
PV09	Paradox Valley	3.19	76	ePn	Pn	19 30 44.7	-2.1
PV10	Paradox Valley	3.24	79	ePn	Pn	19 30 47.3	-0.2
PV14	Lion Creek, Pa	3.25	79	ePn	Pn	19 30 45.7	-1.9
PV23	Carpenter Ridg	3.28	77	ePn	Pn	19 30 45.3	-2.6
PV17	East Wray Mesa	3.29	80	ePn	Pn	19 30 46.4	-1.7
PV20	West Nyswonger	3.29	79	ePn	Pn	19 30 46.1	-2.0
FURC	Furnace Creek,	3.30	247	Sb	Sg	19 31 39.6	-2.7
	baz=65						
PV21	Cone Mtn., Par	3.33	76	ePn	Pn	19 30 47.2	-1.4
PV16	Nyswonger Mesa	3.33	80	ePn	Pn	19 30 46.6	-2.0
PV04	Paradox Valley	3.35	79	ePn	Pn	19 30 46.9	-2.0
PV03	Paradox Valley	3.38	81	ePn	Pn	19 30 48.9	-0.4
ELK	Elko	3.38	331	ePn	Pn	19 30 48.2	-1.2
PV13	Radium Mtn., P	3.39	83	ePn	Pn	19 30 48.0	-1.5
PV12	Saucer Basin,	3.42	80	ePn	Pn	19 30 53.7	+3.9
PV02	Paradox Valley	3.46	82	ePn	Pn	19 30 50.0	-0.4
SPUT	South Promonto	3.54	8	ePn	Pn	19 30 52.5	+1.1
PV07	Paradox Valley	3.56	78	ePn	Pn	19 30 51.5	-0.2
TCUT	Toone Canyon	3.56	21	ePn	Pn	19 30 52.4	+0.6
PV01	Paradox Valley	3.58	83	ePn	Pn	19 30 53.5	+1.4
X16A	Lo Mia Camp, P	3.63	158	ePn	Pn	19 30 50.7	-2.0
X16A				ePg	Pb	19 31 02.8	+2.2
GMRC	Granite Mounta	3.66	215	P	Pn	19 30 53.4	+0.4
	baz=34						
GMRC				Sb	Sb	19 31 48.8	+3.3
	baz=34						
PV15	Paradox Valley	3.67	80	ePn	Pn	19 30 54.7	+1.4
MVCO	Mesa Verde	3.69	98	ePn	Pn	19 30 53.3	-0.4
MVCO				ePg	Pb	19 31 04.4	+2.7
MVCO	Mesa Verde	3.69	98	P	Pn	19 30 55.2	+1.5
	baz=281						
MVCO				Sb	Sb	19 31 50.8	+4.1
	baz=281						
W18A	Petrified Fore	3.80	134	ePn	Pn	19 30 55.7	+0.6
W18A	Petrified Fore	3.80	134	P	Pn	19 30 56.6	+1.6
	baz=316,SNR=12						
W18A				Sb	Sb	19 31 53.4	+3.7
	baz=316						
GSC	Goldstone, Bar	3.90	231	ePn	Pn	19 30 55.8	-0.5
MPMC	Manual Prospec	3.93	245	Pb	Pb	19 31 07.8	+2.0
	baz=62						
HWUT	Hardware Ranch	3.98	17	ePn	Pn	19 30 57.4	-0.2
HVU	Hansel Valley	3.98	3	ePn	Pn	19 30 56.3	-1.2
IRM	Iron Mountain	4.00	205	Sb	Sg	19 32 00.2	-4.5
	baz=24						
NV11	Mina Array Sit	4.05	281	ePn	Pn	19 30 55.0	-3.5
X18A	Snowflake	4.13	141	ePn	Pn	19 31 01.8	+2.2
X18A				ePg	Pb	19 31 12.5	+3.3
KVN	Kaiserville	4.13	289	ePn	Pn	19 30 57.3	-2.3
BMN	Battle Mountai	4.16	311	ePn	Pn	19 30 57.8	-2.2
NV01	Mina Array Sit	4.17	280	ePg	Pb	19 31 11.5	+1.7
RYN	Ryan	4.36	283	ePn	Pn	19 31 02.4	-0.4
O20A	White River Ci	4.44	57	ePn	Pn	19 31 06.5	+2.7
O20A	White River Ci	4.44	57	Sb	Sg	19 32 14.6	-4.1
	baz=240						
MLAC	Mammoth, Mammo	4.56	270	Sb	Sg	19 32 18.9	-4.0
	baz=86						
GLA	Glamis	4.95	197	ePn	Pn	19 31 11.2	+0.6
GLA	Glamis	4.95	197	Sb	Sb	19 32 28.6	+6.1
	baz=16						
S22A	4UR Ranch, Cre	4.96	89	ePn	Pn	19 31 09.0	-2.1
S22A	4UR Ranch, Cre	4.96	89	Sb	Sg	19 32 30.5	-4.9
	baz=273						
SMCO	Snowmass	4.99	72	ePn	Pn	19 31 09.8	-1.8
PAHR	Pah Rah Range	5.28	293	ePg	Pb	19 31 31.9	+3.2
SDCO	Great Sand Dun	6.01	88	ePg	Pg	19 31 47.6	-3.7
ANMO	Albuquerque	6.06	116	ePn	Pn	19 31 22.5	-3.6

SJA ***07*** *19:31:14.7±0.8, 28°.11S×69°.23W, h114^{km}±12^{km}, ML3.0, MW3.4*

ISCJB ***07*** *19:31:15.0±0.6, 28°.03S±0°.04×69°.17W±0°.08, h102^{km}, mb3.7/4, Error ellipse: s-maj=9.9km s-min=5.2km az=177.0*

IDC ***07*** *19:31:18.2±6.2, 27°.97S×68°.81W, h114^{km}±42^{km}, mb3.6/4, mb1 3.6/6, mb1mx3.4/42, mbtmp3.9/6, Error ellipse: s-maj=66.4km s-min=25.4km az=44.0*

ISC 07 19:31:15.6±0.8**, 28°.07S**±0°.05×**69°.20W**±0°.07**, h102^{km}, n18, σ0^{s}.92**/21**, mb3.8**/4**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGUA	GUANDACOL	1.55	156	eP	Pn	19 31 43.5	+0.8
AGUA				eS	Sn	19 32 04.0	+0.8
LCO	Las Campanas	1.62	234	eP	Pn	19 31 43.5	-0.3
ACDV	Cuesta del Vie	2.10	178	eP	Pn	19 31 50.6	+0.9
ACDV				eS	Sn	19 32 16.4	+0.6
ACLC	CERRO LA CRUZ	2.39	125	eP	Pn	19 31 54.5	+0.9
ACLC				eS	Sn	19 32 23.1	+0.5
ACCO	Cerro Coronel	2.52	177	eP	Pn	19 31 56.2	+0.9
ACCO				eS	Sn	19 32 26.3	+0.6
CYA	Choya	3.02	98	eP	Pn	19 32 02.6	+0.9
CYA				IAML		19 32 02.8	
	comp=Z,315nm,0.3s						
RTLL	Cerro Villicun	3.31	169	IAML		19 32 44.4	
	comp=Z,274nm,0.5s						
RTLS	Leoncito	3.72	181	IAML		19 32 54.8	
	comp=Z,58nm,0.6s						
RTCV	Cerro Valdivia	3.83	172	eP	Pn	19 32 12.3	-0.2
ACAN	Cantantal	4.54	158	eP	Pn	19 32 22.1	0.0
LVC	Limon Verde	5.44	3	P	Pn	19 32 35.5	+0.8
	comp=Z,1.0nm,0.3s,baz=188,slow=8.3,SNR=11						
LVC				S	Sn	19 33 37.2	+1.0
	comp=Z,2.4nm,0.3s,baz=252,slow=9.6,SNR=3.1						
CPUP	Villa Florida	10.71	83	P	Pn	19 33 44.0	-1.9
	comp=Z,0.3nm,0.3s,baz=265,slow=12,SNR=3.2						
DBIC	Dimbokro	70.97	71	P	P	19 42 21.6	-0.9
	comp=Z,4.1nm,0.8s,baz=252,slow=4.2,SNR=3.7						
PDAR	Pinedale Array	79.67	331	P	P	19 43 13.4	+1.3
	comp=Z,0.1nm,0.5s,baz=152,slow=7.9,SNR=2.3						
TORD	Torodi Ar. Bea	79.86	69	P	P	19 43 12.2	-1.2
	comp=Z,1.1nm,0.6s,baz=247,slow=3.8,SNR=9.9						
BOSA	Boshof	80.64	117	P	P	19 43 17.4	-0.2
	comp=Z,1.0nm,0.6s,baz=214,slow=11,SNR=2.5						
ZALV	Zalesovo Beam	147.90	29	PKPbc	PKPbc	19 50 48.6	+0.2
	comp=Z,1.4nm,0.6s,baz=290,slow=4.2,SNR=7.0						
MKAR	Makanchi Array	150.88	42	PKPbc	PKiKP	19 50 56.6	-0.1
	comp=Z,1.4nm,0.6s,baz=313,slow=1.9,SNR=12						

IDC ***07*** *19:33:29.7±1.2, 10°.66S×166°.03E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx4.0/38, mbtmp4.2/10, ML4.9/2, Error ellipse: s-maj=26.5km s-min=23.7km az=102.0*

ISCJB ***07*** *19:33:30.2±0.8, 10°.77S±0°.10×165°.93E±0°.09, h10^{km}, mb4.2/12, Error ellipse: s-maj=16.2km s-min=9.1km az=37.4*

NEIC ***07*** *19:33:31.6±0.7, 10°.70S×166°.03E, h10^{km}, mb4.8/5, Error ellipse: s-maj=15.1km s-min=9.8km az=57.0*

ISC 07 19:33:31.7±1.0**, 10°.7S**±0°.1×**166°.0E**±0°.1**, h10^{km}, n18, σ0^{s}.90**/19**, mb4.1**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	281	ePn	Pn	19 35 03.7	+1.7
HNR				eSn	Sn	19 36 11.2	-0.8
HNR	Honiara	6.10	281	Pn	Pn	19 35 02.9	+0.9
	52nm,0.3s,baz=151,slow=4.9,SNR=12						
HNR				Sn	Sn	19 36 11.2	-0.8
	baz=216,slow=18,SNR=2.1						
DZM	Mont Dzumac	11.34	178	ePn	Pn	19 36 14.0	0.0
DZM	Mont Dzumac	11.34	178	Pn	Pn	19 36 14.1	+0.2
	4.7nm,0.3s,baz=41,slow=18,SNR=13						
MANU	Manus Island	20.41	294	eP	Pn	19 38 09.5	-1.7
	188nm,1.9s						
CTA	Charters Tower	21.21	241	P	P	19 38 18.3	+0.6
	7.7nm,0.9s,baz=79,slow=14,SNR=5.2						
STKA	Stephens Creek	30.89	223	P	P	19 39 48.9	+0.3
	1.3nm,0.6s,baz=19,slow=12,SNR=3.2						
THZ	Tophouse	31.55	170	eP	P	19 39 55.2	+0.9
	33nm,1.3s						
WR1	Warramunga Arr	31.86	249	eP	P	19 39 56.1	-1.2
	4.9nm,1.4s						
WRA	Warramunga Arr	31.86	249	P	P	19 39 56.1	-1.2
	1.2nm,0.7s,baz=82,slow=8.7,SNR=9.3						
LTZ	Lake Taylor	32.45	171	eP	P	19 40 01.8	-0.4
	88nm,2.0s						
AS31	Alice Springs	33.20	243	eP	P	19 40 08.1	-0.9
	3.4nm,1.5s						
ASAR	Alice Springs	33.20	243	P	P	19 40 07.9	-1.1
	1.7nm,0.6s,baz=65,slow=10,SNR=16						
RPZ	Rata Peaks	33.21	173	P	P	19 40 08.1	-0.6
	9.4nm,0.7s,baz=143,slow=5.4,SNR=5.4						
CMAR	Chiang Mai Arr	72.21	293	P	P	19 44 57.1	-0.4
	0.3nm,0.7s,baz=103,slow=4.0,SNR=2.8						
ILAR	Eielson Array	83.08	18	P	P	19 45 56.5	-0.7
	0.4nm,0.7s,baz=231,slow=5.3,SNR=2.8						
MK32	Makanchi Array	93.43	317	eP	P	19 46 48.2	+0.7
MKAR	Makanchi Array	93.43	317	P	P	19 46 48.2	+0.7
	0.4nm,0.6s,baz=88,slow=7.1,SNR=5.1						

GUC ***07*** *19:36:25.2±0.5, 30°.43S×71°.36W, h54^{km}±16^{km}, ML3.4*

SJA ***07*** *19:36:25.4±0.5, 30°.42S×71°.32W, h51^{km}±6^{km}, ML3.1, MW3.6*

ISC 07 19:36:21.1±1.6**, 30°.38S**±0°.09×**71°.6W**±0°.2**, h12^{km}**±21^{km}**, n15, σ1^{s}.19**/21**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.71	73	iP	Pn	19 36 38.2	+1.0
GO04				iS	Sn	19 36 47.1	-1.0
GO04	Tololo Observa	0.71	73	⇓iP	Pn	19 36 38.2	+1.0
GO04				eS	Sn	19 36 47.9	-0.3
CMCH	Combarbala	0.94	148	eP	Pn	19 36 41.1	+0.9
CMCH				eS	Sb	19 36 52.6	+0.8
LCO	Las Campanas	1.56	30	iP	Pg	19 36 51.6	+0.5
LCO	Las Campanas	1.56	30	eP	Pg	19 36 51.4	+0.2

LCO				eS	Sg	19 37 10.8	-0.7
LCO				IAML		19 37 11.7	
	comp=E,646nm,0.3s						
AROD	Rodeo	1.84	84	i P	Pn	19 36 53.9	+1.1
AROD				i S	Sn	19 37 15.0	-1.1
ACCO	Cerro Coronel	2.18	96	i P	Pn	19 36 58.9	+1.4
RTLS	Leoncito	2.42	126	i P	Pn	19 37 02.0	+1.2
RTLS				IAML		19 37 36.9	
	comp=Z,105nm,0.3s						
AUSP	Uspallata	2.63	135	i P	Pn	19 37 05.5	+1.8
ROCH	El Roble	2.63	169	eP	Pn	19 37 04.9	+1.3
ROCH				IAML		19 37 42.9	
	comp=N,260nm,0.6s						
ROC1	El Roble	2.64	170	i P	Pb	19 37 06.9	-1.5
RTLL	Cerro Villicun	2.84	110	i P	Pn	19 37 07.0	+0.8
PEL	Peldehue	2.86	165	eP	Pn	19 37 07.6	+1.0
PEL				eS	Sn	19 37 40.0	-1.0
RTCV	Cerro Valdivia	3.00	120	i P	Pn	19 37 09.6	+1.0
FCH	Farellones	3.14	160	eP	Pn	19 37 12.2	+1.4
FCH				IAML		19 37 57.0	
	comp=E,108nm,0.4s						

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*ISCJB **07** 19:37:48.2±1.2, 10.°9S±0.°1×165.°3E±0.°1, h35^{km}, mb3.5/4, Error ellipse: s-maj=21.8km s-min=12.3km az=30.5*

*IDC **07** 19:37:52.8±3.8, 10.°89S×165.°17E, h63^{km}±32^{km}, mb3.3/4, mb1 3.7/6, mb1mx3.4/44, mbtmp3.9/6, ML4.6/2, Error ellipse: s-maj=31.6km s-min=23.9km az=44.0*

ISC 07 19:37:50.1±1.3**, 10.°8S**±0.°1×**165.°3E**±0.°1**, h35^{km}, n6, σ1^{s}42**/7**, mb3.5**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.45	284	P	Pn	19 39 09.7	+0.8
	56nm,0.3s,baz=151,slow=11,SNR=17						
HNR				S	Sn	19 40 11.2	+0.7
	33nm,0.3s,baz=164,slow=11,SNR=4.3						
DZM	Mont Dzumac	11.29	175	P	Pn	19 40 30.1	+1.0
	1.8nm,0.3s,baz=320,slow=13,SNR=17						
WRA	Warramunga Arr	31.18	249	P	P	19 44 04.7	-1.5
	0.5nm,0.9s,baz=79,slow=9.0,SNR=4.6						
ASAR	Alice Springs	32.54	243	P	P	19 44 16.3	-1.9
	0.3nm,0.5s,baz=66,slow=10,SNR=5.3						
SONM	Songino Array	78.19	324	P	P	19 49 45.9	-0.3
	0.3nm,0.6s,baz=130,slow=5.8,SNR=2.6						
ILAR	Eielson Array	83.39	19	P	P	19 50 13.7	+0.3
	1.7nm,1.2s,baz=234,slow=5.4,SNR=3.8						

IDC 07 19:39:05.2±1.9**, 10.°84S×166.°17E, h0^{km}, mb3.5**/3**, mb1 4.0**/4**, mb1mx3.5**/44**, mbtmp3.8**/4**, ML4.4**/1**, Error ellipse: s-maj=56.7km s-min=33.0km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.17	179	Pn	Pn	19 41 46.5	+0.1
	2.7nm,0.3s,baz=351,slow=19,SNR=5.7						
WRA	Warramunga Arr	31.94	250	P	P	19 45 32.9	-0.1
	0.5nm,0.8s,baz=81,slow=9.1,SNR=2.4						
ASAR	Alice Springs	33.25	243	P	P	19 45 44.5	0.0
	0.9nm,0.8s,baz=76,slow=9.4,SNR=5.7						
ILAR	Eielson Array	83.19	18	P	P	19 51 32.9	0.0
	0.2nm,0.5s,baz=241,slow=5.1,SNR=4.4						

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*ISCJB **07** 19:43:09.8±0.3, 11.°01S±0.°04×165.°72E±0.°06, h10^{km}, mb4.4/30, Error ellipse: s-maj=8.1km s-min=5.9km az=167.9*

*IDC **07** 19:43:09.9±0.7, 10.°94S×165.°74E, h0^{km}, mb4.2/16, mb1 4.4/18, mb1mx4.2/46, mbtmp4.2/18, ML5.0/2, Error ellipse: s-maj=20.9km s-min=15.5km az=108.0*

*NEIC **07** 19:43:11.3±0.3, 10.°94S×165.°75E, h10^{km}, mb4.9/11, Error ellipse: s-maj=8.9km s-min=6.4km az=98.0*

ISC 07 19:43:11.7±0.5**, 10.°96S**±0.°06×**165.°81E**±0.°09**, h10^{km}, n63, σ1^{s}44**/57**, mb4.6**/30**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.97	284	Pn	Pn	19 44 40.3	+0.1
	62nm,0.3s,baz=154,slow=7.5,SNR=13						
HNR				Sn	Sn	19 45 47.9	-0.8
	11nm,0.3s,baz=18,slow=19,SNR=3.1						
DZM	Mont Dzumac	11.07	177	ePn	Pn	19 45 52.3	+2.0
DZM				Sn	Sn	19 47 55.1	+0.9
DZM	Mont Dzumac	11.07	177	Pn	Pn	19 45 50.5	+0.3
	8.2nm,0.3s,baz=311,slow=21,SNR=24						
DZM				Sn	Sn	19 47 55.1	+0.9
	1.1nm,0.3s,baz=161,slow=21,SNR=3.3						
ONTNC	Ouen Toro	11.30	177	ePn	Pn	19 45 55.2	+1.8
MANU	Manus Island	20.34	295	eP	Pn	19 47 50.1	-0.4
	148nm,1.5s						
CTA	Charters Tower	20.90	242	P	Pn	19 47 54.5	-2.5
	21nm,0.8s,baz=71,slow=12,SNR=10.0						
CTAO	Charters Tower	20.90	242	eP	Pn	19 47 55.3	-1.6
	29nm,0.9s						
ARMA	Armidale	23.43	212	eP	P	19 48 21.0	-0.3
	65nm,1.7s						
H11S2	WAKE ISLAND Hy	29.28	2	T	T	20 19 37.9	
	baz=181,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.28	2	T	T	20 19 38.2	
	baz=181,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	20 19 39.3	
	baz=181,slow=76,SNR=16						
WAKE	Wake Island	30.06	2	eP	P	19 49 21.8	+0.5
	282nm,1.3s						
H11N1	WAKE ISLAND Hy	30.50	2	T	T	20 21 08.7	
	baz=182						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	20 21 08.4	
	baz=182						
H11N2	WAKE ISLAND Hy	30.52	2	T	T	20 21 10.7	
	baz=182						
STKA	Stephens Creek	30.55	223	eP	P	19 49 24.6	-1.0
	1.6nm,0.9s						
STKA	Stephens Creek	30.55	223	P	P	19 49 25.3	-0.3
	4.6nm,0.8s,baz=46,slow=9.4,SNR=11						
THZ	Tophouse	31.31	170	eP	P	19 49 31.0	-1.2
	12nm,0.7s						
WRAB	Tennant Creek	31.56	250	eP	P	19 49 33.5	-1.2
	10nm,0.9s						
WB2	Warramunga Arr	31.57	250	eP	P	19 49 33.2	-1.5
WR1	Warramunga Arr	31.57	250	eP	P	19 49 33.5	-1.3
	11nm,0.9s						
WRA	Warramunga Arr	31.58	250	P	P	19 49 33.5	-1.3
	7.6nm,0.8s,baz=82,slow=9.1,SNR=27						
LTZ	Lake Taylor	32.20	171	eP	P	19 49 38.4	-1.6
	20nm,0.9s						
AS01	Alice Springs	32.85	243	eP	P	19 49 44.3	-1.7
AS31	Alice Springs	32.89	243	eP	P	19 49 44.6	-1.7
	2.7nm,0.9s						
ASAR	Alice Springs	32.89	243	P	P	19 49 44.5	-1.8
	7.7nm,0.9s,baz=71,slow=10,SNR=5.5						
RPZ	Rata Peaks	32.95	173	P	P	19 49 46.4	-0.2
	11nm,0.8s,baz=75,slow=5.1,SNR=4.7						
MJAR	Matsushiro Arr	53.93	333	P	P	19 52 34.2	-1.4
	3.1nm,0.9s,baz=170,slow=7.9,SNR=3.6						
MAJO	Matsushiro	53.93	333	eP	P	19 52 34.2	-1.4
KSRS	Korea Array	59.84	326	P	P	19 53 16.6	-0.9
	1.5nm,0.9s,baz=143,slow=6.0,SNR=4.2						
KSAR	Wonju Array Be	59.86	326	P	P	19 53 16.6	-1.1
NJ2	Nanjing	62.01	315	eP	P	19 53 33.4	+1.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USRK	Ussuriysk Ar.	62.90	333	P	P	19 53 37.9	-0.2
	comp=Z,1.1nm,0.7s,baz=168,slow=7.4,SNR=2.5						
CN2	Changchun	65.70	329	eP	P	19 53 59.2	+2.7
GYA	Guiyang	68.43	304	P	P	19 54 16.0	+1.6
GYA				PP	PP	19 56 50.2	+4.6
GYA				S	S	20 03 17.8	+1.3
GYA				SKS	SKSac	20 04 11.0	-3.0
GYA	Guiyang	68.43	304	SS	SS	20 07 41.6	+1.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.7s						
GYA				LR	LR		
	comp=N,550nm,18.9s						
GYA				LR	LR		
	comp=E,580nm,18.4s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
KMI	Kunming	71.13	301	P	P	19 54 38.0	+6.8
KMI				pmax	pmax		
	comp=Z,6.0nm,1.6s						
HHC	Hu-ho-hao-te	71.81	320	eP	P	19 54 37.4	+2.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,9µm,5.8s						
CMAR	Chiang Mai Arr	72.14	293	P	P	19 54 37.0	-0.2
	comp=Z,0.1nm,0.3s,baz=125,slow=4.0,SNR=3.0						
SEY	Seymchan	74.40	354	P	P	19 54 49.2	-0.3
	comp=Z,0.6nm,0.5s,baz=180,slow=12,SNR=2.2						
LZH	Lanzhou	74.75	312	eP	P	19 54 53.3	+0.9
LZH				pP	pwP	19 54 58.0	+2.8
LZH				sP	PcP	19 54 59.9	-6.6
LZH				PP	PP	19 57 42.9	+3.1
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,95nm,4.3s						
LZH				LR	LR		
	comp=N,540nm,17.6s						
LZH				LR	LR		
	comp=E,560nm,17.0s						
LZH				LR	LR		
	comp=Z,640nm,18.8s						
SONA0	Songino Array	78.64	324	eP	P	19 55 13.7	-0.4
SONM	Songino Array	78.64	324	P	P	19 55 13.7	-0.4
	comp=Z,0.3nm,0.5s,baz=142,slow=5.6,SNR=3.3						
GTA	Gaotai	79.05	314	eP	P	19 55 23.8	+7.3
GTA				pP	PcP	19 55 29.6	+4.6
GTA				sP	pwP	19 55 32.2	+13
GTA				pmax	pmax		
	comp=Z,4.0nm,1.8s						
HDA	Harding Lake	83.14	19	eP	P	19 55 37.1	-0.5
	comp=Z,8.8nm,0.9s						
ILAR	Eielson Array	83.41	18	P	P	19 55 38.3	-0.7
	comp=Z,0.5nm,0.8s,baz=220,slow=5.4,SNR=5.7						
IL1	Eielson Array	83.41	18	eP	P	19 55 38.5	-0.5
NV01	Mina Array Sit	85.92	50	eP	P	19 55 53.3	+0.8
NVAR	Mina Array Bea	85.92	50	P	P	19 55 53.1	+0.6
	comp=Z,2.3nm,0.9s,baz=215,slow=7.2,SNR=4.3						
WMQ	Urumqi	89.08	315	eP	P	19 56 09.4	+1.9
WMQ				LR	LR		
	comp=N,11µm,21.9s						
WMQ				LR	LR		
	comp=E,7µm,23.3s						
WMQ				LR	LR		
	comp=Z,8µm,18.9s						
PDAR	Pinedale Array	93.44	47	P	P	19 56 28.4	+0.4
	comp=Z,0.4nm,0.9s,baz=264,slow=4.3,SNR=2.5						
MK01	Makanchi Array	93.49	317	eP	P	19 56 26.6	-1.3
MK31	Makanchi Array	93.50	317	eP	P	19 56 26.2	-1.7
	comp=Z,5.6nm,1.5s						
MK32	Makanchi Array	93.50	317	eP	P	19 56 26.7	-1.2
MKAR	Makanchi Array	93.50	317	eP	P	19 56 25.9	-1.9
	comp=Z,8.2nm,0.9s						
MKAR	Makanchi Array	93.50	317	P	P	19 56 26.7	-1.2
	comp=Z,0.5nm,0.7s,baz=100,slow=5.7,SNR=6.1						
ZALV	Zalesovo Beam	93.53	324	P	P	19 56 27.1	-0.7
	comp=Z,0.4nm,0.5s,baz=96,slow=2.9,SNR=2.5						
ZAA1	Zalesovo Array	93.53	324	eP	P	19 56 27.1	-0.7
ARA0	ARCESS Array S	116.27	345	ePKPdf	PKPdf	20 01 54.8	-0.2
ARCES	ARCESS Array B	116.27	345	PKP	PKPdf	20 01 54.8	-0.2
	comp=Z,1.0nm,0.7s,baz=58,slow=2.2,SNR=3.4						
ESDC	Sonseca Array	149.99	344	PKPab	PKPab	20 03 07.9	-0.7
	comp=Z,0.6nm,0.6s,baz=20,slow=4.4,SNR=4.0						
TORD	Torodi Ar. Bea	164.32	280	PKP	PKPdf	20 03 15.4	-1.3
	comp=Z,0.7nm,1.0s,baz=321,slow=0.9,SNR=3.9						
TOA1	Torodi Ar. Sit	164.32	280	ePKPdf	PKPdf	20 03 15.4	-1.3

IDC 07 19:45:52.0±1.7**, 11.°05S×165.°46E, h0^{km}, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.7**/50**, mbtmp3.9**/5**, ML4.2**/1**, Error ellipse: s-maj=51.7km s-min=30.7km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.00	175	Pn	Pn	19 48 31.6	+0.8
	1.7nm,0.3s,baz=336,slow=20,SNR=3.5						
WRA	Warramunga Arr	31.22	250	P	P	19 52 13.7	+0.3
	2.3nm,0.8s,baz=83,slow=9.1,SNR=5.2						
ASAR	Alice Springs	32.54	243	P	P	19 52 24.5	-0.6
	0.3nm,0.4s,baz=65,slow=10,SNR=5.9						
ILAR	Eielson Array	83.60	19	P	P	19 58 21.7	-0.2
	0.7nm,0.9s,baz=235,slow=4.3,SNR=5.5						
MKAR	Makanchi Array	93.33	317	P	P	19 59 09.1	+0.1
	0.3nm,0.8s,baz=107,slow=4.8,SNR=2.7						

IDC 07 19:47:55.7±1.6**, 10.°70S×165.°90E, h0^{km}, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.6**/52**, mbtmp3.8**/5**, ML4.0**/1**, Error ellipse: s-maj=52.7km s-min=29.0km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.32	177	Pn	Pn	19 50 37.8	-1.1
	1.1nm,0.3s,baz=300,slow=19,SNR=5.5						
WRA	Warramunga Arr	31.74	249	P	P	19 54 22.3	+0.5
	0.8nm,0.9s,baz=80,slow=8.6,SNR=3.6						
ASAR	Alice Springs	33.08	243	P	P	19 54 33.4	-0.1
	1.4nm,0.8s,baz=65,slow=9.8,SNR=7.3						
ILAR	Eielson Array	83.14	18	P	P	20 00 23.6	+0.4
	0.9nm,0.7s,baz=232,slow=5.4,SNR=8.2						
MKAR	Makanchi Array	93.37	317	P	P	20 01 12.1	-0.9
	0.3nm,0.7s,baz=90,slow=5.8,SNR=2.5						

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*BJI **07** 19:48:16.2, 10.°69S×165.°91E, h6^{km}, mB6.2/10, mb5.2/64, Ms6.1/16, Ms7 5.9/17*

*IDC **07** 19:48:16.8±0.4, 10.°85S×165.°81E, h0^{km}, mb5.0/43, mb1 5.0/44, mb1mx5.0/52, mbtmp4.9/44, ML5.3/1, MS5.5/15, Ms1 5.5/15, ms1mx5.1/36, Error ellipse: s-maj=13.3km s-min=10.9km az=101.0*

*ISCJB **07** 19:48:16.9±0.1, 10.°88S±0.°02×165.°73E±0.°02, h10^{km}, mb5.4/244, MS5.7/78, Error ellipse: s-maj=3.3km s-min=2.8km az=153.4*

*NEIC **07** 19:48:18.2±0.1, 10.°85S×165.°79E, h10^{km}, mb5.5/172, MS5.8/56, Error ellipse: s-maj=2.8km s-min=2.4km az=132.0*

*MOS **07** 19:48:20.7±0.9, 10.°79S×165.°70E, h33^{km}, mb5.4/75, MS5.7/18, Error ellipse: s-maj=7.7km s-min=6.8km az=98.0*

*GCMT **07** 19:48:24.2±0.2, 10.°93S±0.°01×165.°71E±0.°01, h15^{km}±1^{km}, MW5.8/103, Moment Tensor Solution. s32,c43; s103,c205; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.42±.19; $M_{\theta\theta}$1.98±.16; $M_{\phi\phi}$-0.55±.15; $M_{r\theta}$-3.52±.69; $M_{\theta\phi}$-5.26±.14; $M_{\phi r}$2.26±.61; Best double couple: $M_0$6.38100×10^{17} NP1:ϕ_s264.00000°, δ82.00000°, λ154.00000°. NP2:ϕ_s357.00000°, δ64.00000°, λ8.00000°. Principal axes: T 7.9710, Plg24.0000°, Azm217.0000°; N -3.1780, Plg63.0000°, Azm69.0000°; P -4.7900, Plg13.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 07 19:48:17.8±0.2**, 10.°82S**±0.°04×**165.°85E**±0.°04**, h10^{km}, n681, σ1^{s}35**/683**, mb5.4**/243**, MS5.7**/78**, 28C-20D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.97	283	ePn	Pn	19 49 48.2	+1.9
HNR				eSn	Sn	19 50 56.3	+1.3
HNR	Honiara	5.97	283	eP	Pn	19 49 48.3	+1.9
HNR				e		19 50 56.3	
HNR	Honiara	5.97	283	Pn	Pn	19 49 48.7	+2.3
	222nm,0.3s,baz=135,slow=8.5,SNR=56						
HNR				Sn	Sn	19 50 56.3	+1.3
	76nm,0.3s,baz=166,slow=20,SNR=6.9						
HNR				LR	LR	19 52 06.8	
	comp=Z,33µm,18.7s,baz=56,slow=39						
MARNC	Mare, Loyalty	10.80	169	ePn	Pn	19 50 52.3	-0.4
DZM	Mont Dzumac	11.20	177	ePn	Pn	19 50 58.7	+0.5
DZM				Sn	Sn	19 52 59.8	-3.8
DZM	Mont Dzumac	11.20	177	Pn	Pn	19 50 59.3	+1.1
	22nm,0.3s,baz=357,slow=17,SNR=53						
DZM				Sn	Sn	19 52 59.8	-3.8
	0.8nm,0.3s,baz=315,slow=19,SNR=2.0						
DZM				LR	LR	19 54 38.3	
	comp=Z,23µm,21.8s,baz=4.5,slow=34						
ONTNC	Ouen Toro	11.44	177	ePn	Pn	19 51 02.3	+1.0
PINNC	Pines Island,	11.82	173	ePn	Pn	19 51 07.8	+1.2
FUNA	Funafuti	13.35	81	ePn	Pn	19 51 29.4	+1.8
MSVF	Nonsavu	13.67	122	ePn	Pn	19 51 33.3	+1.3
MSVF	Nonsavu	13.67	122	eP	Pn	19 51 33.3	+1.3
TARA	Tarawa	13.99	31	ePn	Pn	19 51 37.3	+1.0
RABL	Rabaul	15.08	295	ePn	Pn	19 51 52.4	+1.3
	232nm,0.6s						
PATS	Pohnpei	19.08	337	eP	P	19 52 39.2	-1.5
PATS				ePn	sP	19 52 43.8	-1.1
EIDS	Eidsvold	20.13	222	P	Pn	19 52 53.8	-0.2
	baz=20,SNR=12						
EIDS	Eidsvold	20.13	222	eP	Pn	19 52 52.8	-1.2
	178nm,1.0s						
MANU	Manus Island	20.32	294	eP	P	19 52 55.3	+1.0
MANU				ePn	Pn	19 52 55.5	-0.8
CTA	Charters Tower	21.00	242	P	Pn	19 53 02.8	-1.4
	67nm,0.8s,baz=72,slow=12,SNR=35						
CTA				LR	LR	20 00 31.2	
	comp=Z,19µm,18.2s,baz=50,slow=35						
CTAO	Charters Tower	21.00	242	eP	Pn	19 53 01.4	-2.8
	191nm,0.8s						
CTAO				LR	LR		
	comp=Z,25µm,20.0s						
CTAO	Charters Tower	21.00	242	eP	Pn	19 53 01.4	-2.8
CTAO				pmax	pmax		
	comp=Z,191nm,0.8s						
CTAO				MLR	MLR		
	comp=Z,25µm,20.0s						
MTSU	Mount Surprise	22.07	248	P	P	19 53 14.2	+1.1
	baz=22,SNR=30						
COEN	Coen	22.36	260	P	P	19 53 16.8	+0.4
	baz=22,SNR=9.0						
COEN	Coen	22.36	260	eP	P	19 53 16.4	0.0
	comp=Z,120nm,1.1s						
RMQ	Roma	22.43	224	P	P	19 53 17.9	+0.9
	baz=22,SNR=48						
ARMA	Armidale	23.56	212	P	P	19 53 29.6	+0.8
	baz=24,SNR=38						
ARMA	Armidale	23.56	212	eP	P	19 53 28.7	-0.1
	comp=Z,98nm,0.9s						
KNTN	Kanton	23.65	72	eP	P	19 53 31.0	+1.4
	comp=Z,227nm,1.0s						
RAO	Raoul Island	23.79	143	LR	LR	20 01 19.5	
	comp=Z,9µm,20.3s,baz=312,slow=33						
OUZ	Omahuta	25.29	165	eP	P	19 53 46.6	+2.1
	comp=Z,217nm,1.7s						
QLP	Quilpie	25.72	229	P	P	19 53 49.3	+0.8
	baz=26,SNR=4.8						
MGCD	Mangrove Creek	26.07	209	P	P	19 53 53.1	+1.4
	baz=26,SNR=6.5						
JAY	Jayapura	26.28	287	P	P	19 53 52.3	-1.5
GENI	Genyem	26.76	286	P	P	19 53 53.3	-4.8
QIS	Mount Isa	27.02	246	P	P	19 54 00.5	0.0
	baz=27,SNR=11						
CMSA	Cobar Meteorol	27.80	219	P	P	19 54 07.4	+0.2
	baz=28,SNR=19						
CNB	Canberra Magne	28.62	209	P	P	19 54 15.4	+0.7
	baz=29						
HAZ	Te Kaha	28.88	160	P	P	19 54 17.9	+1.1
MXZ	Matakaoa Point	28.89	159	P	P	19 54 18.3	+1.5
RUGZ	Raukumara Rang	29.04	161	P	P	19 54 19.5	+1.1
URZ	Urewera	29.12	162	P	P	19 54 19.3	+0.3
	comp=Z,8.8nm,0.3s,baz=264,slow=7.5,SNR=12						
URZ				LR	LR	20 03 49.1	
	comp=Z,14µm,19.1s,baz=350,slow=32						
URZ	Urewera	29.12	162	P	P	19 54 19.5	+0.5
H11S2	WAKE ISLAND Hy	29.14	2	T	T	20 24 40.1	
	baz=181,slow=76,SNR=251						
H11S3	WAKE ISLAND Hy	29.14	2	T	T	20 24 45.1	
	baz=181,slow=76,SNR=177						
WMGZ	Waiomatatini S	29.15	159	P	P	19 54 19.9	+0.7
H11S1	WAKE ISLAND Hy	29.16	2	T	T	20 24 41.5	
	baz=181,slow=76,SNR=229						
MWZ	Matawai	29.32	161	P	P	19 54 21.4	+0.6
TWGZ	Tauwhareparae	29.33	160	P	P	19 54 23.2	+2.4
RTZ	Ruatahuna	29.41	162	P	P	19 54 22.5	+0.8
CNGZ	Carnagh Statio	29.68	160	P	P	19 54 25.6	+1.7
BKZ	Black Stump Fm	29.78	163	eP	P	19 54 24.6	-0.3
	comp=Z,91nm,0.9s						
BKZ	Black Stump Fm	29.78	163	P	P	19 54 25.6	+0.8
WAKE	Wake Island	29.93	2	PFAKE		19 54 40.0	+14
WAKE				LR	LR		
	comp=Z,7µm,19.0s						
H11N1	WAKE ISLAND Hy	30.36	2	T	T	20 26 13.5	
	baz=182						
H11N3	WAKE ISLAND Hy	30.37	2	T	T	20 26 14.1	
	baz=182						
H11N2	WAKE ISLAND Hy	30.38	2	T	T	20 26 15.9	
	baz=182						
STKA	Stephens Creek	30.67	223	P	P	19 54 33.3	+0.5
	baz=31,SNR=21						
STKA	Stephens Creek	30.67	223	eP	P	19 54 33.3	+0.5
	comp=Z,6.1nm,0.8s						
STKA	Stephens Creek	30.67	223	P	P	19 54 33.0	+0.2
STKA				pmax	pmax		
	comp=Z,13nm,0.7s						
STKA				MLR	MLR		
	comp=Z,11µm,19.3s						
STKA	Stephens Creek	30.67	223	P	P	19 54 33.0	+0.2
	comp=Z,13nm,0.7s,baz=44,slow=9.7,SNR=27						
STKA				LR	LR	20 05 52.0	
	comp=Z,11µm,19.3s,baz=39,slow=34						
BFZ	Birch Farm	31.13	165	eP	P	19 54 36.3	-0.3
	comp=Z,85nm,0.6s						
SNZO	South Karori	31.35	167	eP	P	19 54 38.5	-0.1
	comp=Z,243nm,1.6s						
SNZO				LR	LR		
	comp=Z,17µm,21.0s						
THZ	Tophouse	31.44	170	eP	P	19 54 39.1	-0.3
	comp=Z,87nm,0.8s						
WRAB	Tennant Creek	31.64	250	eP	P	19 54 40.0	-1.5
	comp=Z,43nm,0.9s						
WRAB				LR	LR		
	comp=Z,12µm,19.0s						
WRAB	Tennant Creek	31.64	250	ceP	P	19 54 38.8	-2.7
WRAB				pmax	pmax		
	comp=Z,41nm,1.3s						
WB2	Warramunga Arr	31.65	250	eP	P	19 54 40.0	-1.5
WR1	Warramunga Arr	31.66	250	eP	P	19 54 41.2	-0.5
	comp=Z,68nm,0.9s						
WR1				ePcP	PcP	19 57 33.9	+0.1
WR1				eScP	ScP	20 01 18.9	+1.6
WRA	Warramunga Arr	31.66	250	P	P	19 54 41.2	-0.5
WRA						19 57 33.9	
WRA				i		20 05 03.7	
WRA				pmax	pmax		
	comp=Z,16nm,0.7s						
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRA				pmax	pmax		
	comp=N,3.0nm,1.1s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA				MLR	MLR		
	comp=Z,10µm,18.1s						
WRA	Warramunga Arr	31.66	250	P	P	19 54 41.2	-0.5
	comp=Z,15nm,0.7s,baz=82,slow=9.1,SNR=62						
WRA				PcP	PcP	19 57 33.9	+0.1
	comp=Z,4.3nm,0.8s,baz=76,slow=3.5,SNR=5.4						
WRA				ScP	ScP	20 01 19.0	+1.6
	comp=Z,2.6nm,1.1s,baz=73,slow=2.9,SNR=4.5						
WRA				PKiKP	PKiKP	20 05 03.7	+0.7
	comp=Z,0.7nm,0.9s,baz=357,slow=0.3,SNR=4.8						
WRA				LR	LR	20 07 22.9	
	comp=Z,10µm,18.1s,baz=65,slow=36						
GUMO	Guam	31.96	319	P	P	19 54 44.0	-0.3
GUMO				pmax	pmax		
	comp=Z,45nm,0.6s						
GUMO				MLR	MLR		
	comp=Z,4µm,21.2s						
GUMO	Guam	31.96	319	P	P	19 54 44.0	-0.3
	comp=Z,44nm,0.6s,baz=83,slow=8.1,SNR=3.5						
GUMO				LR	LR	20 05 34.9	
	comp=Z,4µm,21.2s,baz=143,slow=32						
TOO	Toolangi	32.31	211	P	P	19 54 48.3	+1.0
	baz=32,SNR=6.5						
TOO	Toolangi	32.31	211	eP	P	19 54 47.4	+0.2
	comp=Z,29nm,0.8s						
TOO	Toolangi	32.31	211	eP	P	19 54 47.4	+0.2
TOO				pmax	pmax		
	comp=Z,29nm,0.8s						
LTZ	Lake Taylor	32.33	171	eP	P	19 54 46.8	-0.4
	comp=Z,476nm,1.8s						
KDU	Kakadu	32.72	263	P	P	19 54 50.0	-1.0
	baz=33,SNR=10						
FOZ	Fox Glacier	32.77	175	eP	P	19 54 51.0	0.0
	comp=Z,161nm,1.3s						
OXZ	Oxford	32.83	172	eP	P	19 54 51.4	-0.1
	comp=Z,114nm,0.9s						
AS01	Alice Springs	32.94	243	eP	P	19 54 51.6	-1.3

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AS31  Alice Springs     32.98 243 eP     P      19 54 52.6 -0.7
      comp=Z,20nm,0.8s
AS31                              ePcP   PcP    19 57 37.5 +0.1
AS31                              eScP   ScP    20 01 23.4 +1.6
ASAR  Alice Springs     32.98 243  P     P      19 54 53.0 -0.2
      comp=Z,37nm,0.9s,baz=73,slow=9.5,SNR=120
ASAR                               PcP   PcP    19 57 37.5 +0.1
      comp=Z,6.0nm,0.8s,baz=69,slow=3.5,SNR=5.4
ASAR                               ScP   ScP    20 01 23.4 +1.6
      comp=Z,2.2nm,0.9s,baz=72,slow=3.0,SNR=3.4
ASAR                               LR    LR     20 07 28.4
      comp=Z,6µm,18.7s,baz=50,slow=35
RPZ   Rata Peaks        33.08 173 eP     P      19 54 53.2 -0.6
      comp=Z,503nm,1.9s
RPZ   Rata Peaks        33.08 173  P     P      19 54 53.8  0.0
      comp=Z,38nm,0.5s,baz=351,slow=1.1,SNR=25
RPZ                                LR    LR     20 06 17.4
      comp=Z,10µm,21.1s,baz=347,slow=33
MQZ   McQueen's Vall    33.29 171 eP     P      19 54 55.2 -0.3
      comp=Z,526nm,1.7s
HTT   Hallett           33.41 223  P     P      19 54 57.4 +0.5
      baz=33,SNR=18
LBZ   Lake Benmore      33.65 174 eP     P      19 54 59.8 +1.0
      comp=Z,97nm,1.5s
ARPS  Mount Arapiles    33.72 216  P     P      19 55 00.4 +1.0
      baz=34,SNR=4.8
WKZ   Wanaka            33.99 176 eP     P      19 55 03.4 +1.7
      comp=Z,423nm,1.8s
ODZ   Otahua Downs      34.35 174 eP     P      19 55 07.9 +3.1
      comp=Z,231nm,1.8s
MLZ   Mavora Lakes      34.48 177 eP     P      19 55 06.8 +0.8
      comp=Z,218nm,1.9s
DCZ   Deep Cove         34.54 178 eP     P      19 55 07.9 +1.5
      comp=Z,210nm,1.9s
RAR   Rarotonga         34.54 112  LR    LR     20 06 46.5
      comp=Z,5µm,19.0s,baz=302,slow=32
BBOO  Buckleboo         35.05 227  P     P      19 55 11.1  0.0
      baz=35,SNR=25
BBOO  Buckleboo         35.05 227 eP     P      19 55 10.1 -1.0
      comp=Z,59nm,0.9s
SWI   Sorong            35.76 284  P     P      19 55 16.2 -1.2
TAU   Tasmania Unive    35.81 204  PFAKE        19 55 30.0  +13
TAU                                LR    LR
      comp=Z,9µm,19.0s
PALU  Palau             36.07 299  P     P      19 55 21.2 +1.2
      baz=36,SNR=6.5
BNDI  Bandanaira        36.15 277  P     P      19 55 19.7 -1.0
KNRA  Kununurra         36.39 258  P     P      19 55 22.4 -0.3
      baz=36,SNR=7.7
JOHN  Johnston Islan    36.64  42  PFAKE        19 55 40.0  +15
JOHN                               LR    LR
      comp=Z,720nm,19.0s
WRKA  Warakurna         38.28 243  P     P      19 55 38.5 -0.2
      baz=38,SNR=23
FITZ  Fitzroy Crossi    39.54 255  P     P      19 55 48.6 -0.8
      baz=40,SNR=32
FITZ  Fitzroy Crossi    39.54 255 eP     P      19 55 48.5 -0.8
      comp=Z,38nm,0.8s
TNTI  Ternate           39.96 284 eP     P      19 55 52.3 -0.6
      comp=Z,123nm,1.8s
TNTI  Ternate           39.96 284  P     P      19 55 53.0 +0.1
FORT  Forrest           40.26 235  P     P      19 55 55.4 +0.2
      baz=40,SNR=22
FORT  Forrest           40.26 235 eP     P      19 55 55.0 -0.1
      comp=Z,65nm,0.8s
SANI  Sanana            40.51 280  P     P      19 55 57.0 -0.5
SOEI  Soe               40.91 268 eP     P      19 56 00.8 -0.1
      comp=Z,49nm,1.0s
SOEI  Soe               40.91 268  P     P      19 56 00.2 -0.7
BATI  Baumata           41.46 267  P     P      19 56 05.0 -0.3
MIDW  Midway            42.07  22  PFAKE        19 56 20.0  +10
MIDW                               LR    LR
      comp=Z,9µm,19.0s
MMRI  Maumere           43.02 269 eP     P      19 56 16.4 -1.6
      comp=Z,127nm,1.2s
MMRI  Maumere           43.02 269  P     P      19 56 16.7 -1.3
BBSI  Bau Bau           43.14 274  P     P      19 56 19.8 +0.8
KMSI  Cibinong          43.14 283  P     P      19 56 19.4 +0.4
EDFI  Ende, Flores      43.54 269  P     P      19 56 20.6 -1.8
DAV   Davao City (W)    43.85 292  PFAKE        19 56 40.0  +15
DAV                                LR    LR
      comp=Z,5µm,21.0s
LUWI  Luwuk             43.88 280 eP     P      19 56 24.5 -0.4
      comp=Z,117nm,1.0s
LUWI  Luwuk             43.88 280  P     P      19 56 24.5 -0.4
CBIJ  Chichi jima       44.14 329 eP     P      19 56 28.0 +1.2
JCJ   Chichijima        44.14 329  P     P      19 56 28.0 +1.2
      comp=Z,29nm,0.3s,baz=238,slow=7.6,SNR=4.1
APSI  Ampana            45.00 280  P     P      19 56 33.6 -0.3
MRSI  Marisa            45.07 282  P     P      19 56 32.5 -2.0
CTBH  Cotabato--PC H    45.12 292⇑iP     P      19 56 36.1 +1.2
MBWA  Marble Bar        45.37 251 eP     P      19 56 36.3 -0.4
      comp=Z,52nm,0.9s
MBWA                               LR    LR
      comp=Z,7µm,19.0s
BKSI  Bulukumba         45.57 273  P     P      19 56 37.2 -1.2
BNSI  Bone              45.75 274  P     P      19 56 40.1 +0.2
MSLP  Maasin            45.77 296 eP     P      19 56 40.1 +0.1
KAPI  Kappang           45.98 273  PFAKE        19 56 50.0 +8.3
KAPI                               LR    LR
      comp=Z,3µm,20.0s
SPSI  Sidrap Palu       46.16 275  P     P      19 56 42.0 -1.1
TTSI  Tana Toraja       46.29 276  P     P      19 56 44.2  0.0
PCI   Palu              46.75 279  P     P      19 56 48.4 +0.6
MPSI  Mapaga            47.00 281  P     P      19 56 48.5 -1.3
MEEK  Meekatharra       47.14 244  P     P      19 56 51.6 +0.9
      baz=47,SNR=27
PLAI  Plampang          47.37 268  P     P      19 56 51.5 -1.2
KIP   Kipapa            47.81  48  PFAKE        19 57 10.0  +14
KIP                                LR    LR
      comp=Z,11µm,19.0s
KHLU  Kahalu`u          48.30  51 eP     P      19 56 59.3 -0.6
      comp=Z,231nm,1.4s
HMH   Humu'ula Sheep    48.63  52 eP     P      19 57 03.1 +0.6
      comp=Z,807nm,1.8s
POHA  Pohakuloa         48.68  52  PFAKE        19 57 20.0  +17
POHA                               LR    LR
      comp=Z,7µm,20.0s
KLBR  Kellerberrin      48.91 237  P     P      19 57 04.5 +0.1
      baz=49,SNR=9.3
BLDU  Ballidu           49.56 239  P     P      19 57 09.8 +0.4
      baz=50,SNR=4.4
NWAO  Narrogin (SRO)    49.67 236  P     P      19 57 10.8 +0.6
      baz=50,SNR=5.5
NWAO  Narrogin (SRO)    49.67 236 eP     P      19 57 10.1  0.0
      comp=Z,88nm,1.0s
NWAO                               LR    LR
      comp=Z,10µm,20.0s
NWAO  Narrogin (SRO)    49.67 236 eP     P      19 57 10.1  0.0
NWAO                               pmax  pmax
      comp=Z,88nm,1.0s
NWAO                               MLR   MLR
      comp=Z,10µm,20.0s
KBKI  Kotabaru          49.81 275  P     P      19 57 10.5 -1.0
MORW  Morawa            49.82 241  P     P      19 57 11.9 +0.6
      baz=50,SNR=14
MORW  Morawa            49.82 241 eP     P      19 57 12.0 +0.6
      comp=Z,102nm,0.9s
SRBI  Singaraja         49.98 268  P     P      19 57 11.1 -1.6
MUN   Mundaring         50.28 237  P     P      19 57 15.3 +0.5
      baz=50,SNR=7.7
RKGY  Rocky Gully       50.32 234  P     P      19 57 16.0 +1.0
      baz=50,SNR=4.7
TGY   Tagaytay City     50.96 298  P     P      19 57 20.7 +0.5
      comp=Z,62nm,0.4s,baz=63,slow=6.8,SNR=4.3
CAUP  Cauayan           51.53 302 eP     P      19 57 25.1 +0.8
MTKI  Muara Teweh, K    51.55 277  P     P      19 57 37.9  +13
GMJI  Gumukmas          51.69 268  P     P      19 57 23.8 -1.8
KKM   Kota Kinabalu     52.17 286 eP     P      19 57 29.1 -0.2
      comp=Z,67nm,1.3s
JOW   Kunigami          52.27 316  P     P      19 57 31.0 +1.4
      comp=Z,6.4nm,0.9s,baz=144,slow=13,SNR=4.2
APYP  Conner            52.46 302 eP     P      19 57 30.3 -1.0
ABRA  Dolores           52.80 302 eP     P      19 57 30.8 -2.9
PWJI  Pagerwojo         53.34 268  P     P      19 57 37.2 -0.6
NGJI  Ngawi             53.76 269  P     P      19 57 40.7 -0.2
MJAR  Matsushiro Arr    53.82 332  P     P      19 57 41.3 +0.3
      comp=Z,20nm,1.0s,baz=170,slow=8.0,SNR=20
MAJO  Matsushiro        53.82 332 eP     P      19 57 41.4 +0.4
      comp=Z,46nm,0.9s
MAJO                               LR    LR
      comp=Z,5µm,19.0s
MAJO  Matsushiro        53.82 332 eP     P      19 57 41.4 +0.4
MAJO                               pmax  pmax
      comp=Z,46nm,0.9s
MAJO                               MLR   MLR
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      comp=Z,5µm,19.0s
MAT   Matsushiro        53.82 332  P     P      19 57 41.4 +0.4
MJB9  Matsu-Tunnel      53.83 332 eP     P      19 57 41.4 +0.4
      comp=Z,47nm,0.9s
PCJI  Pacitan           53.93 268  P     P      19 57 41.7 -0.5
UGM   Wanagama          54.61 268 eP     P      19 57 46.6 -0.6
      comp=Z,188nm,1.2s
UGM   Wanagama          54.61 268  P     P      19 57 45.2 -2.0
SMRI  Semarang          54.81 269  P     P      19 57 48.4 -0.2
SBUM  Sibu              54.96 281 eP     P      19 57 49.1 -0.6
      comp=Z,7.4nm,1.0s
JNU   Nakatsue          54.96 324 eP     P      19 57 49.7 +0.3
JNU   Nakatsue          54.96 324  P     P      19 57 49.8 +0.4
      comp=Z,28nm,0.8s,baz=117,slow=4.4,SNR=11
TATO  Taipei            56.01 310  PFAKE        19 58 10.0  +13
TATO                               LR    LR
      comp=Z,7µm,20.0s
KPJI  Karang Pucung     56.25 268  P     P      19 57 58.9 -0.1
ERM   Erimo             56.56 340  PFAKE        19 58 10.0 +9.4
ERM                                LR    LR
      comp=Z,4µm,21.0s
KSM   Kuching           56.57 279 eP     P      19 58 01.0 -0.3
      comp=Z,22nm,0.9s
CMJI  Cimerak           56.66 268  P     P      19 57 59.2 -2.7
JCJI  Jatiwangi         57.02 269  P     P      19 58 07.3 +2.8
CISI  Cisompet, Garu    57.31 268 eP     P      19 58 05.2 -1.5
      comp=Z,82nm,0.9s
CISI  Cisompet, Garu    57.31 268  P     P      19 58 05.0 -1.6
CBJI  Citeko            58.43 269  P     P      19 58 12.9 -1.5
ASAJ  Asahikawa         58.62 341  P     P      19 58 15.6 +0.5
      comp=Z,38nm,0.9s,baz=218,slow=8.3,SNR=13
SKJI  Sukabumi          58.63 268  P     P      19 58 14.6 -1.2
TNG   Tangerang         58.66 269  P     P      19 58 17.6 +1.6
KSRS  Korea Array       59.75 326  P     P      19 58 24.4 +1.3
      comp=Z,7.0nm,0.7s,baz=139,slow=6.8,SNR=19
SSE   Sheshan           59.77 316  P     P      19 58 23.4 +0.1
SSE                                pmax  pmax
      comp=Z,16nm,0.9s
SSE                                pmax  pmax
      comp=Z,4µm,14.4s
SSE   Sheshan           59.77 316 eP     P      19 58 23.1 -0.2
      comp=Z,48nm,0.8s
SSE                                LR    LR
      comp=Z,3µm,19.0s
KS15  Wonju Array Si    59.77 325 eP     P      19 58 24.1 +0.9
KSAR  Wonju Array Be    59.77 325  P     P      19 58 24.4 +1.2
KSAR  Wonju Array Be    59.77 325  P     P      19 58 24.4 +1.2
KS01  Wonju Array Si    59.78 326 eP     P      19 58 24.4 +1.1
PPBI  Pangkal Pinang    59.86 274  P     P      19 58 24.2 -0.1
KASI  Kota Agung        60.88 270  P     P      19 58 29.8 -1.5
YSS   Yuzh-Sakhalins    61.11 342 eP     P      19 58 33.8 +1.7
      comp=Z,166nm,1.3s
YSS   Yuzh-Sakhalins    61.11 342⇓iP     P      19 58 33.8 +1.7
YSS                               e             19 58 51.7
YSS                                pmax  pmax
      comp=Z,90nm,1.3s
MDSI  Maura Dua         61.36 271  P     P      19 58 32.8 -1.8
NJ2   Nanjing           61.94 315⇓iP     P      19 58 39.0 +1.0
NJ2                                pmax  pmax
      comp=Z,35nm,1.0s
NJ2                                LR    LR
      comp=Z,6µm,18.4s
NJ2                                LR    LR
      comp=Z,4µm,13.0s
NJ2                                LR    LR
      comp=Z,7µm,16.3s
PTCN  Pitcairn Islan    62.07 113  PFAKE        19 58 50.0  +11
PTCN                               LR    LR
      comp=Z,4µm,19.0s
QIZ   Qiongzhong        62.67 298  PFAKE        19 59 00.0  +17
QIZ                                LR    LR
      comp=Z,537nm,19.0s
USA0B Ussuriysk Arra    62.80 333 eP     P      19 58 45.3 +1.8
      comp=Z,191nm,1.8s
USRK  Ussuriysk Ar.     62.80 333  P     P      19 58 44.9 +1.4
      comp=Z,12nm,0.7s,baz=124,slow=7.2,SNR=19
MYKOM Kota Tinggi       62.92 278 eP     P      19 58 45.8 +0.8
      comp=Z,33nm,1.1s
PET   Petropavlovsk     63.89 355  PFAKE        19 59 00.0 +9.4
PET                                LR    LR
      comp=Z,6µm,20.0s
PET   Petropavlovsk     63.89 355 i P    P      19 58 50.2 -0.4
PET                                pmax  pmax
      comp=Z,26nm,1.3s
PETK  Petropavlovsk-    64.06 355 eP     P      19 58 53.5 +1.7
PETK  Petropavlovsk-    64.06 355 eP     P      19 58 53.5 +1.7
PETK  Petropavlovsk-    64.06 355  P     P      19 58 53.2 +1.5
      comp=Z,8.2nm,0.8s,baz=159,slow=7.9,SNR=9.4
PEA1  Petropavlovsk-    64.06 355 eP     P      19 58 53.2 +1.4
MDJ   Mudanjiang        64.20 332  P     P      19 58 54.9 +2.0
MDJ                                pmax  pmax
      comp=Z,35nm,1.1s
MDJ   Mudanjiang        64.20 332 eP     P      19 58 54.6 +1.8
      comp=Z,66nm,1.4s
MDJ                                LR    LR
      comp=Z,5µm,19.0s
ADK   Adak              64.25  12  PFAKE        19 59 10.0  +17
ADK                                LR    LR
      comp=Z,7µm,21.0s
WHN   Wuhan             64.32 311  P     P      19 58 54.3 +0.4
DL2   Dalian            64.36 323  P     P      19 58 54.0  0.0
DL2                                pmax  pmax
      comp=Z,53nm,0.9s
TYV   Tymovskoe         64.66 344 eP     P      19 58 56.7 +1.0
TYV                                pmax  pmax
      comp=Z,19nm,1.6s
BKNI  Bangkinang        65.35 275 eP     P      19 59 02.2 +1.2
      comp=Z,195nm,1.0s
CN2   Changchun         65.61 329 eP     P      19 59 02.7 +0.7
CN2                               esP    sP     19 59 09.8 +3.4
CN2                                pmax  pmax
      comp=Z,40nm,1.0s
IPM   Ipoh              66.28 280 eP     P      19 59 07.3 +0.2
      comp=Z,56nm,1.1s
GRNR  Gornyy            66.47 340 eP     P      19 59 10.0 +2.5
GRNR                               pmax  pmax
      comp=Z,29nm,1.0s
CASY  Casey             66.62 201 eP     P      19 59 09.3 +1.0
      comp=Z,57nm,1.1s
CASY                               LR    LR
      comp=Z,697nm,19.0s
VNDA  Vanda             66.72 181 eP     P      19 59 11.0 +2.3
VNDA  Vanda             66.72 181 eP     P      19 59 11.0 +2.3
VNDA  Vanda             66.72 181  P     P      19 59 10.6 +1.9
      comp=Z,5.8nm,0.8s,baz=22,slow=5.4,SNR=3.0
VNDA                               LR    LR     20 24 46.8
      comp=Z,6µm,19.1s,baz=322,slow=33
KULM  Kulim             66.84 281 eP     P      19 59 10.0 -0.6
      comp=Z,111nm,1.9s
KLR   Kul'dur           66.89 336⇓iP     P      19 59 11.6 +1.4
KLR   Kul'dur           66.89 336  P     P      19 59 10.9 +0.7
      comp=Z,14nm,0.7s,baz=136,slow=6.3,SNR=35
SBA   Scott Base        67.02 180  PFAKE        19 59 20.0 +9.4
SBA                                LR    LR
      comp=Z,5µm,19.0s
SKNT  Sakolnakorn       67.10 294  P     P      19 59 12.9 +0.8
      comp=Z,13nm,1.7s
COCO  West Island       67.47 261  PFAKE        19 59 30.0  +15
COCO                               LR    LR
      comp=Z,4µm,20.0s
ENH   Enshi             67.84 309 eP     P      19 59 16.2 -0.4
      comp=Z,29nm,1.0s
ENH                                LR    LR
      comp=Z,3µm,19.0s
SRAK  Srakaew           67.91 290  P     P      19 59 18.7 +1.4
      comp=Z,22nm,0.9s
PSI   Prapat            67.94 277  P     P      19 59 17.4 -0.4
      comp=Z,15nm,0.9s,baz=180,slow=4.4,SNR=12
NONG  Nongkai           68.22 294  P     P      19 59 19.9 +0.7
      comp=Z,0.6nm,0.9s,comp=Z,159nm
BJT   Baijiatuau        68.37 321 eP     P      19 59 20.2 +0.5
      comp=Z,25nm,1.0s
BJT                                LR    LR
      comp=Z,7µm,20.0s
BJT   Baijiatuau        68.37 321 eP     P      19 59 20.2 +0.5
BJT                                pmax  pmax
      comp=Z,25nm,1.0s
BJT                                MLR   MLR
      comp=Z,7µm,20.0s
BJI   Beijing           68.38 321⇓iP     P      19 59 20.6 +0.9
BJI                                pmax  pmax
      comp=Z,19nm,0.9s
GYA   Guiyang           68.38 304⇑iP     P      19 59 23.0 +2.8
GYA                                PP    PP     20 01 55.6 +4.3
GYA                                S     S      20 08 23.4 +1.4
GYA                                SKS   SKSac  20 09 17.7 -2.1
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GYA                                SS    SS     20 12 48.4 +2.5
GYA                                pmax  pmax
      comp=Z,40nm,1.0s
GYA                                LR    LR
      comp=Z,950nm,18.9s
GYA                                LR    LR
      comp=Z,880nm,18.4s
GYA                                LR    LR
      comp=Z,820nm,18.6s
TRTT  Trang             68.40 283  P     P      19 59 22.5 +2.1
      comp=Z,8.0nm,1.6s
CHAI  Chaiyaphum        68.55 292  P     P      19 59 25.5 +4.2
      comp=Z,2.0nm,0.7s
GSI   Gunungsitoli      68.94 276 eP     P      19 59 24.0 +0.2
      comp=Z,74nm,1.1s
TIY   Taiyuan           69.47 317 eP     P      19 59 27.6 +0.9
TIY                                pmax  pmax
      comp=Z,18nm,0.6s
PBKT  Sadao Pong        69.69 292 eP     P      19 59 27.9 -0.4
      comp=Z,16nm,1.1s
PBKT  Sadao Pong        69.69 292  P     P      19 59 29.5 +1.1
      comp=Z,14nm,1.2s
PHET  Kaeng Krachan     69.83 288  P     P      19 59 35.1 +5.8
      comp=Z,4.8nm,1.4s
XAN   Xi'an             70.05 312  P     P      19 59 30.8 +0.5
XAN                                pmax  pmax
      comp=Z,27nm,1.3s
XAN                                LR    LR
      comp=Z,5µm,15.2s
XAN                                LR    LR
      comp=Z,3µm,16.3s
XAN                                LR    LR
      comp=Z,4µm,19.5s
XAN   Xi'an             70.05 312 eP     P      19 59 30.8 +0.5
      comp=Z,23nm,0.9s
XAN   Xi'an             70.05 312 eP     P      19 59 30.8 +0.5
XAN                                pmax  pmax
      comp=Z,23nm,0.9s
UTTA  Uttaradit         70.44 293  P     P      19 59 34.8 +1.9
      comp=Z,3.5nm,0.8s
SRDT  SRDT              70.72 289  P     P      19 59 37.1 +2.4
      comp=Z,18nm,1.4s
UTHA  Uthaitani         70.78 291  P     P      19 59 36.8 +1.8
      comp=Z,4.3nm,1.0s,comp=Z,61nm
KMI   Kunming           71.09 301  P     P      19 59 38.4 +1.3
KMI                                sP    sP     19 59 48.2 +6.6
KMI                                pmax  pmax
      comp=Z,28nm,1.5s
KMI   Kunming           71.09 301 eP     P      19 59 38.4 +1.3
      comp=Z,69nm,1.5s
MA2   Magadan           71.20 352 eP     P      19 59 37.5 +0.7
MA2                                LR    LR
      comp=Z,4µm,19.0s
MA2   Magadan           71.20 352ceP     P      19 59 37.6 +0.9
MA2                                pmax  pmax
      comp=Z,17nm,1.3s
MA2   Magadan           71.20 352  P     P      19 59 37.5 +0.7
      comp=Z,4.0nm,0.5s,baz=166,slow=9.8,SNR=7.5
HHC   Hu-ho-hao-te      71.73 320 eP     P      19 59 43.0 +2.5
HHC                                pmax  pmax
      comp=Z,7.0nm,0.7s
HHC                                pmax  pmax
      comp=Z,3µm,6.8s
CM01  Chiang Mai Arr    72.09 293 eP     P      19 59 42.8 -0.2
CM31  Chiang Mai Arr    72.12 293 eP     P      19 59 43.5 +0.3
CMAR  Chiang Mai Arr    72.12 293  P     P      19 59 44.1 +1.0
      comp=Z,5.6nm,0.8s,baz=118,slow=4.0,SNR=37
CMAR                               LR    LR     20 30 38.7
      comp=Z,823nm,19.9s,baz=315,slow=35
ZEA   Zeya              72.18 337 eP     P      19 59 44.2 +1.5
ZEA                                pmax  pmax
      comp=N,93nm,1.4s
ZEA                                pmax  pmax
      comp=Z,110nm,1.4s
CMMT  Chiang Mai        72.22 294  P     P      19 59 44.6 +0.8
      comp=Z,18nm,1.6s
CHTO  Chiang Mai        72.23 294 eP     P      19 59 43.9 +0.1
      comp=Z,50nm,1.6s
CHTO                               LR    LR
      comp=Z,3µm,19.0s
CHTO  Chiang Mai        72.23 294 eP     P      19 59 43.9 +0.1
CHTO                               pmax  pmax
      comp=Z,50nm,1.6s
CHTO                               MLR   MLR
      comp=Z,3µm,19.0s
CHTO  Chiang Mai        72.23 294  P     P      19 59 44.7 +0.9
      comp=Z,80nm,1.8s
HIA   Hailar            72.23 330 eP     P      19 59 44.1 +1.0
      comp=Z,16nm,0.8s
HIA                                LR    LR
      comp=Z,3µm,21.0s
HIA   Hailar            72.23 330 i P    P      19 59 42.8 -0.4
HIA                                pmax  pmax
      comp=Z,16nm,1.0s
CD2   Chengdu           72.55 307 ⇓P     P      19 59 46.3 +0.8
CD2                                pmax  pmax
      comp=Z,70nm,0.9s
SEY   Seymchan          74.27 354ceP     P      19 59 56.2 +1.3
SEY   Seymchan          74.27 354  P     P      19 59 55.6 +0.7
      comp=Z,8.1nm,0.9s,baz=141,slow=5.9,SNR=16
LZH   Lanzhou           74.69 312 ⇑P     P      19 59 59.8 +1.7
LZH                                pP    sP     20 00 05.7 +3.1
LZH                                sP    PcP    20 00 08.9 -3.5
LZH                                PP    PP     20 02 44.0 -1.3
LZH                                pmax  pmax
      comp=Z,56nm,1.4s
LZH                                pmax  pmax
      comp=Z,230nm,4.3s
LZH                                LR    LR
      comp=Z,2µm,16.3s
LZH                                LR    LR
      comp=Z,1µm,18.4s
LZH                                LR    LR
      comp=Z,2µm,19.6s
GAMB  Gambell           76.33  10 eP     P      20 00 08.0 +1.3
      comp=Z,52nm,1.0s
KDAK  Kodiak Island     76.33  21  P     P      20 00 07.9 +1.0
      comp=Z,9.7nm,1.0s,baz=153,slow=9.0,SNR=2.0
KDAK                               LR    LR     20 25 35.4
      comp=Z,2µm,21.4s,baz=240,slow=29
CIT   Chita             77.02 330 eP     P      20 00 11.8 +0.8
CIT                               e             20 00 27.6
CIT                                pmax  pmax
      comp=Z,102nm,1.6s
SVW2  Sparrevohn        77.87  18 eP     P      20 00 16.5 +1.0
      comp=Z,50nm,1.1s
YAK   Yakutsk           77.91 343 eP     P      20 00 13.6 -2.0
YAK                               eS     S      20 10 05.5 -3.1
YAK                                pmax  pmax
      comp=E,5.0nm,1.2s
YAK                                pmax  pmax
      comp=Z,27nm,0.9s
YAK                                pmax  pmax
      comp=N,8.0nm,1.1s
YAK                                smax  smax
      comp=N,5µm,12.1s
YAK                                smax  smax
      comp=E,5µm,13.8s
ULN   Ulaanbaatar       78.18 324  PFAKE        20 00 30.0  +12
ULN                                LR    LR
      comp=Z,6µm,21.0s
ANM   Nome              78.25  12 eP     P      20 00 18.6 +1.1
      comp=Z,38nm,1.2s
ANM   Nome              78.25  12 eP     P      20 00 18.6 +1.1
ANM                                pmax  pmax
      comp=Z,38nm,1.2s
RSO   Redoubt South     78.28  20 eP     P      20 00 18.7 +0.7
BRLK  Bradley Lake      78.39  21 eP     P      20 00 19.6 +1.2
      comp=Z,44nm,1.0s
SONA0 Songino Array     78.55 324 eP     P      20 00 20.5 +0.8
SONM  Songino Array     78.55 324  P     P      20 00 20.5 +0.8
      comp=Z,9.8nm,0.7s,baz=136,slow=6.5,SNR=42
SONA1 Songino Array     78.55 324 eP     P      20 00 20.0 +0.3
BILL  Bilibino          78.66   0 eP     P      20 00 20.1 +0.5
      comp=Z,49nm,0.9s
BILL                               LR    LR
      comp=Z,6µm,19.0s
BILL  Bilibino          78.66   0⇓iP     P      20 00 20.9 +1.2
BILL                              e             20 00 27.4
BILL                              e             20 03 19.7
BILL                              ePPP   PPP    20 05 12.7
BILL                              eS     S      20 10 09.1 -7.4
BILL                               pmax  pmax
      comp=Z,55nm,0.8s
BILL                               MLR   MLR
      comp=Z,4µm,15.0s
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GTA	Gaotai	78.98	314	⇓P	P	20 00 23.9	+1.6
GTA				pP	PcP	20 00 28.6	-2.2
GTA				sP	sP	20 00 31.2	+4.4
GTA				pmax	pmax		
	comp=Z,31nm,1.2s						
GTA				LR	LR		
	comp=Z,5µm,18.4s						
GTA				LR	LR		
	comp=Z,5µm,17.5s						
GTA				LR	LR		
	comp=Z,7µm,17.1s						
QSPA	South Pole Qui	79.18	180	eP	P	20 00 23.2	+0.3
	comp=Z,38nm,0.9s						
QSPA				LR	LR		
	comp=Z,7µm,19.0s						
SUA	Susitna One	79.68	20	eP	P	20 00 25.6	+0.1
	comp=Z,56nm,1.2s						
RC01	Rabbit Creek A	79.75	20	eP	P	20 00 26.0	+0.2
	comp=Z,43nm,1.2s						
PMR	Palmer	80.31	20	eP	P	20 00 28.4	-0.4
	comp=Z,44nm,1.2s						
PMR	Palmer	80.31	20	eP	P	20 00 28.4	-0.4
PMR				pmax	pmax		
	comp=Z,44nm,1.2s						
BOD	Bodaibo	80.37	335	eP	P	20 00 29.4	+0.2
BOD				pmax	pmax		
	comp=Z,24nm,1.6s						
KNK	Knik Glacier	80.42	20	eP	P	20 00 30.6	+1.2
	comp=Z,54nm,1.2s						
SHL	Shillong	80.50	298	eP	P	20 00 31.6	+0.8
	comp=Z,61nm,1.4s						
SHL	Shillong	80.50	298	eP	P	20 00 31.7	+0.8
SHL				pmax	pmax		
	comp=Z,61nm,1.4s						
SHL	Shillong	80.50	298	eP	P	20 00 32.0	+1.1
RPN	Rapa Nui	80.58	116	PFAKE		20 00 40.0	+8.9
RPN				LR	LR		
	comp=Z,4µm,19.0s						
CAST	Castle Rocks	80.71	18	eP	P	20 00 31.1	+0.2
	comp=Z,28nm,1.0s						
SML	Sawmill	80.73	20	eP	P	20 00 32.3	+1.1
	comp=Z,101nm,1.8s						
SML	Sawmill	80.73	20	eP	P	20 00 32.3	+1.1
SML				pmax	pmax		
	comp=Z,101nm,1.8s						
DIV	Divide	81.17	22	eP	P	20 00 34.5	+1.1
	comp=Z,40nm,1.0s						
TRF	Thorofare Moun	81.28	18	eP	P	20 00 35.8	+1.7
	comp=Z,29nm,1.2s						
KLU	Klutina	81.36	21	eP	P	20 00 35.7	+1.2
	comp=Z,40nm,1.0s						
ZAK	Zakamensk	81.58	325	eP	P	20 00 35.7	-0.3
ZAK				pmax	pmax		
	comp=Z,15nm,1.4s						
RND	Reindeer	81.69	19	eP	P	20 00 37.1	+0.8
	comp=Z,67nm,1.1s						
RND	Reindeer	81.69	19	eP	P	20 00 37.1	+0.8
RND				pmax	pmax		
	comp=Z,67nm,1.1s						
RDOG	Red Dog Mine	81.79	11	eP	P	20 00 37.8	+1.3
	comp=Z,74nm,1.2s						
MCK	McKinley	81.90	19	eP	P	20 00 37.9	+0.6
	comp=Z,71nm,1.2s						
MCK	McKinley	81.90	19	eP	P	20 00 37.9	+0.6
MCK				pmax	pmax		
	comp=Z,71nm,1.2s						
DHY	Denali Highway	81.94	20	eP	P	20 00 38.0	+0.3
	comp=Z,32nm,1.2s						
TLY	Talaya	82.00	326	eP	P	20 00 37.9	-0.2
	comp=Z,46nm,1.0s						
TLY				LR	LR		
	comp=Z,2µm,19.0s						
TLY	Talaya	82.00	326	⇓iP	P	20 00 38.6	+0.5
BWN	Browne	82.05	18	eP	P	20 00 38.0	0.0
	comp=Z,118nm,1.2s						
IM3	Indian Mountai	82.18	16	eP	P	20 00 39.7	+1.0
HARP	HAARP	82.24	21	eP	P	20 00 40.0	+1.0
	comp=Z,53nm,1.0s						
MLY	Manley	82.30	17	eP	P	20 00 39.8	+0.5
	comp=Z,26nm,1.2s						
LSA	Lhasa	82.32	302	eP	P	20 00 41.5	+0.7
	comp=Z,33nm,1.8s						
LSA				LR	LR		
	comp=Z,4µm,19.0s						
LSA	Lhasa	82.32	302	eP	P	20 00 41.6	+0.7
LSA				pmax	pmax		
	comp=Z,33nm,1.8s						
LSA				MLR	MLR		
	comp=Z,4µm,19.0s						
GDXM	Geysers	82.59	48	eP	P	20 00 43.1	+1.6
	comp=Z,25nm,1.1s						
WRH	Wood River Hil	82.69	18	eP	P	20 00 41.3	0.0
	comp=Z,48nm,1.0s						
MDM	Murphy Dome	82.99	18	eP	P	20 00 43.2	+0.2
	comp=Z,56nm,1.1s						
HDA	Harding Lake	83.00	19	eP	P	20 00 43.6	+0.7
	comp=Z,98nm,1.0s						
HDA	Harding Lake	83.00	19	P	P	20 00 43.8	+0.8
	baz=227						
TCOL	CIGO, UAF Yank	83.04	18	P	P	20 00 44.1	+1.0
	baz=226						
COLA	College	83.04	18	eP	P	20 00 43.3	+0.2
	comp=Z,67nm,0.9s						
COLA				LR	LR		
	comp=Z,4µm,19.0s						
COLA	College	83.04	18	eP	P	20 00 43.3	+0.2
COLA				pmax	pmax		
	comp=Z,67nm,0.9s						
COLA				MLR	MLR		
	comp=Z,4µm,19.0s						
O02D	Mt. Diablo Mer	83.07	47	P	P	20 00 46.4	+2.4
	baz=250						
RIDG	Independ'e Rid	83.23	20	eP	P	20 00 45.5	+1.2
	comp=Z,57nm,1.1s						
IL1	Eielson Array	83.27	18	eP	P	20 00 44.1	-0.3
ILAR	Eielson Array	83.27	18	P	P	20 00 45.2	+0.8
	comp=Z,11nm,0.7s,baz=229,slow=6.2,SNR=54						
ILB	Eielson Array	83.27	18	eP	P	20 00 44.4	0.0
POKR	Poker Plat Res	83.34	18	P	P	20 00 45.4	+0.7
	baz=226						
WDC	Whiskeytown Da	83.38	47	eP	P	20 00 45.9	+0.4
	comp=Z,36nm,1.6s						
WDC	Whiskeytown Da	83.38	47	eP	P	20 00 45.9	+0.4
WDC				pmax	pmax		
	comp=Z,36nm,1.6s						
MOY	Mondy	83.45	325	eP	P	20 00 45.9	+0.1
MOY				pmax	pmax		
	comp=Z,42nm,1.8s						
YBH	Yreka Blue Hor	83.66	46	eP	P	20 00 48.8	+1.8
	comp=Z,20nm,1.0s						
YBH	Yreka Blue Hor	83.66	46	P	P	20 00 48.2	+1.2
YBH				pmax	pmax		
	comp=Z,14nm,1.0s						
YBH	Yreka Blue Hor	83.66	46	P	P	20 00 48.2	+1.2
	comp=Z,9.3nm,1.0s,baz=296,slow=6.9,SNR=8.3						
SCRK	Sand Creek	83.67	20	eP	P	20 00 47.0	+0.4
	comp=Z,70nm,1.2s						
ORV	Oroville	83.79	48	eP	P	20 00 48.6	+1.0
	comp=Z,11nm,0.8s						
ORV	Oroville	83.79	48	eP	P	20 00 48.6	+1.0
ORV				pmax	pmax		
	comp=Z,11nm,0.8s						
HUMO	Hull Mountain	83.80	45	eP	P	20 00 49.8	+2.2
	comp=Z,32nm,1.1s						
AFDM	Forest Hills D	83.98	49	eP	P	20 00 48.9	+0.3
	comp=Z,37nm,1.1s						
BESE	Bessie Mountai	84.04	27	eP	P	20 00 49.7	+1.2
	comp=Z,103nm,1.8s						
COLD	Coldfoot	84.06	16	eP	P	20 00 50.3	+1.9
	comp=Z,12nm,1.0s						
L04D	Klamath Falls	84.12	45	P	P	20 00 50.9	+1.5
	baz=250						
CMB	Columbia Colle	84.12	50	eP	P	20 00 49.8	+0.4
	comp=Z,19nm,1.1s						
CMB	Columbia Colle	84.12	50	eP	P	20 00 49.8	+0.4
CMB				pmax	pmax		
	comp=Z,19nm,1.1s						
HYT	Haines Junctio	84.14	24	eP	P	20 00 50.5	+1.4
	comp=Z,26nm,1.0s						
PRP	Porcupine Dome	84.20	18	eP	P	20 00 50.6	+1.3
	comp=Z,14nm,1.1s						
M04C	Macdoel	84.29	46	P	P	20 00 52.3	+1.9
	baz=250						
I04A	Tendick Farm,	84.59	44	P	P	20 00 53.0	+1.4
	baz=250						
BEKR	Beckworth	84.72	48	eP	P	20 00 53.5	+0.9
	comp=Z,34nm,1.4s						
MWC	Mount Wilson	84.77	54	eP	P	20 00 53.7	+0.8
	comp=Z,55nm,1.5s						
MWC	Mount Wilson	84.77	54	eP	P	20 00 53.7	+0.8
MWC				pmax	pmax		
	comp=Z,55nm,1.5s						
ISA	Isabella, Lake	84.86	52	eP	P	20 00 54.3	+1.1
	comp=Z,31nm,1.4s						
ISA	Isabella, Lake	84.86	52	eP	P	20 00 54.3	+1.1
ISA				pmax	pmax		
	comp=Z,31nm,1.4s						
ISA	Isabella, Lake	84.86	52	P	P	20 00 54.3	+1.1
	baz=253						
WAKR	Walker	84.98	49	eP	P	20 00 54.1	+0.2
	comp=Z,27nm,1.1s						
FYU	Fort Yukon	85.00	18	eP	P	20 00 54.8	+1.7
	comp=Z,33nm,1.2s						
EDW2	Edwards Air Fo	85.00	53	P	P	20 00 55.5	+1.5
	baz=253						
OMMB	Old Mammoth Mi	85.03	50	eP	P	20 00 55.9	+1.5
	comp=Z,34nm,1.3s						
H04A	Detroit Lake	85.05	43	eP	P	20 00 54.5	+0.5
	comp=Z,63nm,1.5s						
BFSC	Mount Baldy Ra	85.09	54	P	P	20 00 55.6	+1.1
	baz=253						
J05D	Fort Rock, OR	85.22	44	P	P	20 00 56.9	+1.9
	baz=250						
DAWY	Dawson	85.31	21	eP	P	20 00 56.3	+1.5
	comp=Z,33nm,1.1s						
PAHR	Pah Rah Range	85.39	48	eP	P	20 00 56.7	+0.8
	comp=Z,37nm,1.2s						
MOD	Modoc Plateau	85.42	46	eP	P	20 00 56.9	+0.9
	comp=Z,12nm,0.9s						
RAMN	Ramite	85.44	298	eP	P	20 00 57.0	+0.4
I05D	Terrebonne, OR	85.50	43	P	P	20 00 58.1	+1.8
	baz=250						
PINE	Pine Mountain	85.59	44	eP	P	20 00 56.1	-0.8
	comp=Z,28nm,1.0s						
RYN	Ryan	85.70	50	eP	P	20 00 58.3	+0.8
	comp=Z,58nm,1.3s						
MONP2	Monument Peak	85.71	56	P	P	20 00 59.0	+1.3
	baz=254						
MPMC	Manual Prospec	85.74	52	P	P	20 00 59.3	+1.5
	baz=253						
NV01	Mina Array Sit	85.80	50	eP	P	20 00 58.1	0.0
NVAR	Mina Array Bea	85.80	50	P	P	20 00 59.4	+1.3
	comp=Z,14nm,1.0s,baz=234,slow=6.5,SNR=17						
NVAR				LR	LR	20 33 11.1	
	comp=Z,5µm,19.0s,baz=324,slow=31						
PFO	Pinyon Flats O	85.87	55	eP	P	20 00 57.8	-0.6
	comp=Z,13nm,1.2s						
PFO				LR	LR		
	comp=Z,7µm,20.0s						
PFO	Pinyon Flats O	85.87	55	P	P	20 00 59.5	+1.1
	comp=Z,4.9nm,0.9s,baz=266,slow=1.0,SNR=3.4						
TPFO	Pinon Flats	85.87	55	P	P	20 00 59.3	+0.9
	baz=254						
TIXI	Tiksi	85.89	349	eP	P	20 00 57.3	-0.2
	comp=Z,27nm,1.1s						
TIXI				LR	LR		
	comp=Z,5µm,19.0s						
TIXI	Tiksi	85.89	349	eP	P	20 00 57.7	+0.2
TIXI				pmax	pmax		
	comp=Z,48nm,1.7s						
TIXI	Tiksi	85.89	349	P	P	20 00 57.9	+0.5
	comp=Z,13nm,0.9s,baz=86,slow=4.9,SNR=6.1						
NV11	Mina Array Sit	85.91	50	eP	P	20 00 59.3	+0.8
	comp=Z,2.7nm,0.6s						
JIRN	Jiri	85.97	299	eP	P	20 00 59.8	+0.5
	comp=Z,95nm,1.2s						
GSC	Goldstone, Bar	86.06	53	eP	P	20 01 00.0	+0.8
	comp=Z,23nm,0.8s						
GSC	Goldstone, Bar	86.06	53	eP	P	20 01 00.0	+0.8
GSC				pmax	pmax		
	comp=Z,23nm,0.8s						
GSC	Goldstone, Bar	86.06	53	P	P	20 01 00.6	+1.3
	baz=254						
KVN	Kaiserville	86.14	49	eP	P	20 01 00.7	+1.0
	comp=Z,30nm,1.0s						
KVN	Kaiserville	86.14	49	eP	P	20 01 00.7	+1.0
KVN				pmax	pmax		
	comp=Z,30nm,1.0s						
A04D	Lummi Island	86.14	39	P	P	20 01 03.0	+3.9
	baz=249						
DLBC	Dease Lake	86.17	28	eP	P	20 00 59.4	+0.1
	comp=Z,10nm,0.9s						
DLBC	Dease Lake	86.17	28	P	P	20 00 59.7	+0.5
	comp=Z,3.0nm,0.7s,baz=270,slow=13,SNR=5.4						
GUN	Gumba	86.30	299	eP	P	20 01 01.2	+0.3
	comp=Z,65nm,1.2s						
HEC	Hector,Ludlow	86.30	54	P	P	20 01 01.6	+1.2
	baz=254						
FURC	Furnace Creek,	86.34	52	P	P	20 01 02.4	+2.0
	baz=254						
BELC	Belle Mtn. Jos	86.34	55	P	P	20 01 02.4	+1.6
	baz=254						
PALK	Pallekele	86.62	278	eP	P	20 01 03.3	+0.9
	comp=Z,27nm,1.1s						
PALK	Pallekele	86.62	278	P	P	20 01 02.8	+0.4
PALK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PALK	Pallekele	86.62	278	P	P	20 01 02.8	+0.4
	comp=Z,9.3nm,0.9s,baz=297,slow=3.2,SNR=4.5						
PKI	Pulchoki	86.62	299	eP	P	20 01 02.4	-0.1
	comp=Z,69nm,1.3s						
PKIN	Phulchoki	86.63	299	eP	P	20 01 02.4	-0.1
	comp=Z,38nm,1.2s						
I07A	Izee	86.67	44	eP	P	20 01 02.9	+0.8
	comp=Z,27nm,1.4s						
BC3	Big Chuckawall	86.69	55	P	P	20 01 04.1	+1.7
	baz=255						
WVOR	Wild Horse Val	86.76	46	eP	P	20 01 03.0	+0.4
	comp=Z,33nm,1.4s						
WVOR				LR	LR		
	comp=Z,5µm,19.0s						
WVOR	Wild Horse Val	86.76	46	eP	P	20 01 03.0	+0.4
WVOR				pmax	pmax		
	comp=Z,33nm,1.4s						
WVOR				MLR	MLR		
	comp=Z,5µm,19.0s						
GMRC	Granite Mounta	86.82	54	P	P	20 01 04.3	+1.2
	baz=255						
DMN	Daman	86.89	299	eP	P	20 01 04.1	+0.4
	comp=Z,110nm,1.3s						
GLA	Glamis	87.04	56	eP	P	20 01 05.1	+1.0
	comp=Z,15nm,0.7s						
GLA	Glamis	87.04	56	eP	P	20 01 05.1	+1.0
GLA				pmax	pmax		
	comp=Z,15nm,0.7s						
IRM	Iron Mountain	87.07	55	P	P	20 01 05.8	+1.6
	baz=255						
J08A	Circle Bar Ran	87.15	45	eP	P	20 01 05.3	+0.8
	comp=Z,20nm,1.0s						
LDFC	Landfair	87.34	54	eP	P	20 01 06.7	+1.1
	comp=Z,266nm,1.1s						
HAWA	Hanford	87.38	42	eP	P	20 01 06.6	+1.3
	comp=Z,20nm,1.2s						
HAWA				LR	LR		
	comp=Z,4µm,19.0s						
G08A	Pilot Rock	87.41	43	eP	P	20 01 05.7	0.0
	comp=Z,24nm,1.0s						
Y12C	Blythe	87.46	55	eP	P	20 01 07.2	+1.1
	comp=Z,34nm,0.9s						
SHPR	Sheep Range	87.67	52	eP	P	20 01 08.3	+1.1
	comp=Z,114nm,0.8s						
E08A	Dider Farm, El	87.72	42	eP	P	20 01 07.3	+0.4
	comp=Z,54nm,1.4s						
R11A	Troy Canyon, C	87.83	50	eP	P	20 01 08.2	+0.3
	comp=Z,229nm,0.7s						
R11A	Troy Canyon, C	87.83	50	P	P	20 01 09.3	+1.3
	baz=254						
113A	Mohawk Valley,	87.83	56	eP	P	20 01 08.9	+1.1
	comp=Z,12nm,0.9s						
PDMCI	Parker Dam,Lak	87.91	55	P	P	20 01 09.8	+1.7
	baz=255						
D08A	Wollman Farm,	87.99	41	eP	P	20 01 09.6	+1.3
	comp=Z,46nm,1.8s						
B08A	Colville Reser	88.13	40	eP	P	20 01 08.9	0.0
	comp=Z,12nm,1.1s						
DANN	Dangsing	88.22	299	eP	P	20 01 09.6	-0.6
	comp=Z,30nm,0.9s						
KOLN	Koldanda	88.23	299	eP	P	20 01 09.5	-0.6
W13A	Hualapai Mount	88.31	54	eP	P	20 01 11.0	+0.7
	comp=Z,113nm,0.9s						
E09A	Wood Farm, Sta	88.33	42	eP	P	20 01 10.6	+0.7
	comp=Z,33nm,1.4s						
BMO	Blue Mountains	88.40	44	eP	P	20 01 11.4	+1.0
	comp=Z,16nm,1.3s						
BMO				LR	LR		
	comp=Z,9µm,20.0s						
BMO	Blue Mountains	88.40	44	eP	P	20 01 11.4	+1.0
BMO				pmax	pmax		
	comp=Z,16nm,1.3s						
BMO				MLR	MLR		
	comp=Z,9µm,20.0s						
214A	Organ Pipe Nat	88.42	57	P	P	20 01 12.6	+1.9
	baz=256						
ELK	Elko	88.72	48	eP	P	20 01 13.1	+0.8
	comp=Z,65nm,0.6s						
ELK	Elko	88.72	48	P	P	20 01 13.0	+0.8
	comp=Z,2.8nm,1.0s,baz=254,slow=5.2,SNR=6.4						
F10A	Beach Ranch, E	88.78	43	eP	P	20 01 13.3	+1.2
	comp=Z,34nm,1.4s						
PYUN	Piuthan	88.83	299	eP	P	20 01 12.1	-0.8
	comp=Z,26nm,0.9s						
WMQ	Urumqi	89.01	315	P	P	20 01 13.4	+0.1
WMQ				pP	sP	20 01 19.7	+1.9
WMQ				sP	pP	20 01 23.0	+6.4
WMQ				pmax	pmax		
	comp=Z,45nm,1.7s						
WMQ				LR	LR		
	comp=Z,8µm,19.1s						
WMQ	Urumqi	89.01	315	eP	P	20 01 14.0	+0.7
	comp=Z,28nm,1.1s						
WMQ	Urumqi	89.01	315	eP	P	20 01 14.0	+0.7
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
MFID	Camas Ranch	89.02	46	eP	P	20 01 14.2	+0.8
	comp=Z,18nm,1.0s						
PSUT	Pine Spring	89.19	51	eP	P	20 01 15.4	+1.0
	comp=Z,1µm,0.6s						
LCMT	Little Creek M	89.28	52	eP	P	20 01 15.6	+0.9
	comp=Z,392nm,1.0s						
CCUT	Cedar City	89.32	52	eP	P	20 01 15.9	+0.8
	comp=Z,5µm,1.1s						
NEW	Newport	89.51	41	P	P	20 01 16.2	+0.8
NEW				LR	LR		
	comp=Z,5µm,19.0s						
NEW	Newport	89.51	41	P	P	20 01 16.7	+1.3
	baz=253						
NEW	Newport	89.51	41	P	P	20 01 16.2	+0.8
	comp=Z,2.6nm,0.9s,baz=90,slow=2.0,SNR=3.2						
SZCU	Shurtz Canyon	89.55	52	eP	P	20 01 16.2	+0.1
	comp=Z,4µm,0.9s						
KNB	Kanab	89.61	52	eP	P	20 01 17.2	+0.8
	comp=Z,539nm,0.6s						
INK	Inuvik	89.66	19	eP	P	20 01 16.0	+0.4
	comp=Z,18nm,1.2s						
INK	Inuvik	89.66	19	eP	P	20 01 16.0	+0.4
INK				pmax	pmax		
	comp=Z,18nm,1.2s						
INK	Inuvik	89.66	19	P	P	20 01 16.2	+0.7
	comp=Z,2.2nm,0.9s,baz=219,slow=4.8,SNR=5.8						
U15A	North Rim	89.89	53	eP	P	20 01 18.8	+1.0
	comp=Z,324nm,0.8s						
HLID	Hailey	90.05	46	eP	P	20 01 18.8	+0.6
	comp=Z,14nm,1.1s						
HLID				LR	LR		
	comp=Z,5µm,21.0s						
HLID	Hailey	90.05	46	P	P	20 01 20.1	+1.8
	baz=255						
X16A	Lo Mia Camp, P	90.11	55	eP	P	20 01 20.0	+1.2
	comp=Z,87nm,0.8s						
PKCU	Pink Cliffs	90.11	52	eP	P	20 01 20.4	+1.6
	comp=Z,2µm,0.9s						
TUC	Tucson	90.18	57	eP	P	20 01 19.4	+0.4
	comp=Z,8.2nm,0.8s						
TUC				LR	LR		
	comp=Z,12µm,19.0s						
TUC	Tucson	90.18	57	eP	P	20 01 19.4	+0.4
TUC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TUC				MLR	MLR		
	comp=Z,12µm,19.0s						
TCRU	Three Creeks R	90.28	51	eP	P	20 01 19.8	+0.2
	comp=Z,752nm,0.5s						
MTPU	Mount Pierson	90.35	51	eP	P	20 01 21.5	+1.4
	comp=Z,512nm,0.5s						
DUG	Dugway, Tooele	90.38	49	eP	P	20 01 19.5	-0.3
	comp=Z,190nm,0.9s						
DUG				LR	LR		
	comp=Z,5µm,22.0s						
DUG	Dugway, Tooele	90.38	49	eP	P	20 01 19.5	-0.3
DUG				pmax	pmax		
	comp=Z,190nm,0.9s						
DUG				MLR	MLR		
	comp=Z,5µm,22.0s						
DUG	Dugway, Tooele	90.38	49	P	P	20 01 21.3	+1.5
	baz=256						
BGU	Big Grassy Mou	90.39	48	eP	P	20 01 20.5	+0.6
	comp=Z,145nm,1.2s						
WUAZ	Wupatki	90.41	54	eP	P	20 01 20.4	+0.3
	comp=Z,623nm,0.9s						
WUAZ				LR	LR		
	comp=Z,7µm,19.0s						
WUAZ	Wupatki	90.41	54	P	P	20 01 21.4	+1.3
	baz=257						
MSU	Marysvale	90.46	51	eP	P	20 01 20.4	+0.1
MSU	Marysvale	90.46	51	eP	P	20 01 20.5	+0.1
HVU	Hansel Valley	90.78	48	eP	P	20 01 22.6	+0.9
	comp=Z,230nm,1.9s						
HVU	Hansel Valley	90.78	48	eP	P	20 01 22.6	+0.9
HVU				pmax	pmax		
	comp=Z,230nm,1.9s						
DGZ	Jazzator, Alta	90.79	320	d iP	P	20 01 21.5	0.0
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NLU	North Lily Min	90.87	50	eP	P	20 01 23.0	+0.8
	comp=Z,76nm,0.5s						
SPUT	South Promonto	90.91	48	eP	P	20 01 23.3	+1.0
	comp=Z,52nm,0.8s						
MPU	Maple Canyon	91.22	50	eP	P	20 01 25.6	+1.8
	comp=Z,69nm,0.8s						
319A	Douglas	91.23	58	eP	P	20 01 24.7	+0.7
	comp=Z,12nm,0.8s						
CTU	Camp Tracy	91.28	49	eP	P	20 01 24.9	+0.9
	comp=Z,41nm,0.7s						
X18A	Snowflake	91.33	55	eP	P	20 01 25.0	+0.5
	comp=Z,145nm,0.9s						
MCMT	McKenzie Canyo	91.45	45	eP	P	20 01 25.6	+0.8
JLU	Jordanelle	91.48	49	eP	P	20 01 26.4	+1.3
	comp=Z,102nm,0.6s						
TCUT	Toone Canyon	91.63	49	eP	P	20 01 25.7	0.0
	comp=Z,120nm,0.9s						
DLMT	Dillon	91.75	44	eP	P	20 01 27.0	+0.9
	comp=Z,24nm,1.0s						
WALA	Waterton Lakes	91.77	40	eP	P	20 01 26.5	+0.4
	comp=Z,22nm,1.3s						
LRM	Limekiln Ridge	91.96	44	eP	P	20 01 28.2	+1.0
SYO	Syowa Base	92.03	197	⇓eP	P	20 01 25.4	-1.3
FXWY	Fox Creek	92.46	46	eP	P	20 01 30.5	+1.0
	comp=Z,11nm,1.3s						
IMW	Indian Meadow	92.58	46	eP	P	20 01 30.4	+0.2
	comp=Z,9.3nm,0.5s						
YHB	Horse Butte	92.58	45	eP	P	20 01 31.7	+1.6
	comp=Z,14nm,1.3s						
MOOW	Moose Ponds	92.68	46	eP	P	20 01 29.7	-0.8
	comp=Z,6.0nm,0.9s						
PV21	Cone Mtn., Par	92.92	51	eP	P	20 01 31.7	-0.1
	comp=Z,216nm,0.6s						
PV04	Paradox Valley	92.94	52	eP	P	20 01 32.9	+1.1
	comp=Z,743nm,1.5s						
BW06	Boulder Array	93.33	47	eP	P	20 01 34.8	+1.2
	comp=Z,13nm,0.6s						
BW06				LR	LR		
	comp=Z,6µm,19.0s						
PD31	Pinedale Array	93.33	47	eP	P	20 01 33.3	-0.3
PDAR	Pinedale Array	93.33	47	eP	P	20 01 33.4	-0.2
PDAR				PKKPbc	PKKPdf	20 18 40.0	-1.3
PDAR	Pinedale Array	93.33	47	P	P	20 01 34.4	+0.8
	comp=Z,4.8nm,1.1s,baz=228,slow=1.8,SNR=5.4						
PDAR				PKKPbc	PKKPdf	20 18 40.0	-1.3
	comp=Z,0.1nm,0.4s,baz=90,slow=3.6,SNR=2.6						
MK01	Makanchi Array	93.42	317	eP	P	20 01 33.8	+0.2
MK31	Makanchi Array	93.43	317	eP	P	20 01 33.7	0.0
MK32	Makanchi Array	93.43	317	eP	P	20 01 34.1	+0.4
MK32				ePP	PP	20 05 13.3	-4.7
MK32				ePKKPdf	PKKPdf	20 18 39.9	-1.0
MKAR	Makanchi Array	93.43	317	eP	P	20 01 33.4	-0.3
	comp=Z,81nm,0.8s						
MKAR				PP	PP	20 05 13.3	-4.7
MKAR				PKKPbc	PKKPdf	20 18 39.9	-1.0
MKAR	Makanchi Array	93.43	317	P	P	20 01 34.1	+0.4
	comp=Z,12nm,0.8s,baz=95,slow=6.1,SNR=111						
MKAR				PP	PP	20 05 13.3	-4.7
	comp=Z,1.4nm,0.9s,baz=88,slow=8.0,SNR=4.4						

MKAR				PKKPbc	PKKPdf	20 18 39.9	-1.0
	comp=Z,0.8nm,0.7s,baz=294,slow=0.9,SNR=7.6						
ZAA0	Zalesovo Array	93.44	324	*e*P	P	20 01 32.6	-0.8
	comp=Z,33nm,1.4s						
ZALV	Zalesovo Beam	93.44	324	*e*P	P	20 01 32.6	-0.9
ZALV				PP	PP	20 05 15.5	-2.4
ZALV	Zalesovo Beam	93.44	324	*e*P	P	20 01 32.6	-0.9
ZALV						20 05 15.5	
ZALV	Zalesovo Beam	93.44	324	P	P	20 01 33.0	-0.4
	comp=Z,4.8nm,0.6s,baz=110,slow=4.1,SNR=32						
ZALV				PP	PP	20 05 15.5	-2.4
	comp=Z,0.4nm,0.5s,baz=119,slow=5.3,SNR=2.5						
ZAA1	Zalesovo Array	93.44	324	*e*P	P	20 01 33.0	-0.4
ZAA1				*e*PP	PP	20 05 15.5	-2.4
MAKZ	Makanchi	93.64	317	*e*P	P	20 01 34.4	-0.2
	comp=Z,26nm,1.1s						
MAKZ	Makanchi	93.64	317	*e*P	P	20 01 34.4	-0.2
MAKZ				pmax	pmax		
	comp=Z,26nm,1.1s						
EGMT	Eagleton	94.23	42	*e*P	P	20 01 38.3	+0.9
	comp=Z,11nm,0.9s						
EGMT				LR	LR		
	comp=Z,5µm,19.0s						
EGMT	Eagleton	94.23	42	P	P	20 01 38.6	+1.2
	baz=259						
ANMO	Albuquerque	94.24	55	*e*P	P	20 01 38.4	+0.5
	comp=Z,14nm,1.0s						
ANMO				LR	LR		
	comp=Z,4µm,20.0s						
ANMO	Albuquerque	94.24	55	*ce*P	P	20 01 39.9	+2.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ANMO	Albuquerque	94.24	55	P	P	20 01 38.8	+1.0
	comp=Z,1.1nm,0.8s,baz=307,slow=5.1,SNR=2.5						
NVS	Novosibirsk	94.54	325	*e*P	P	20 01 38.3	-0.2
NVS				*e*		20 01 56.7	
NVS				pmax	pmax		
	comp=Z,20nm,1.5s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.7s						
NVS				pmax	pmax		
	comp=E,14nm,1.5s						
MNTX	Cornudas Mount	94.56	59	*e*P	P	20 01 39.5	+0.3
	comp=E,6.1nm,1.0s						
MNTX				LR	LR		
	comp=Z,4µm,19.0s						
MNTX	Cornudas Mount	94.56	59	P	P	20 01 39.3	+0.1
	baz=260						
YKA	Yellowknife Ar	94.73	27	P	P	20 01 38.5	-0.6
	comp=Z,1.2nm,0.6s,baz=256,slow=4.6,SNR=16						
YKA				PP	PP	20 05 27.0	-0.7
	comp=Z,2.1nm,1.2s,baz=266,slow=7.9,SNR=6.0						
YKB5	Yellowknife Ar	94.73	27	*e*P	P	20 01 38.2	-1.0
TXAR	Lajitas Array	95.63	61	P	P	20 01 44.9	+0.6
	comp=Z,0.5nm,0.6s,baz=217,slow=5.6,SNR=4.7						
TXAR				PP	PP	20 05 35.9	+0.1
	comp=Z,2.9nm,1.1s,baz=267,slow=4.9,SNR=10						
TXAR				PKKPbc	PKKPbc	20 18 33.7	-1.8
	comp=Z,0.3nm,0.7s,baz=84,slow=4.7,SNR=3.0						
LTX	Lajitas	95.63	61	*e*P	P	20 01 44.9	+0.6
LTX				*e*PP	PP	20 05 35.9	+0.1
LTX				*e*PKKPbc	PKKPbc	20 18 33.7	-1.8
LTX	Lajitas	95.63	61	*e*P	P	20 01 44.9	+0.6
LTX				*e*		20 05 35.9	
NRIK	Noril'sk	95.95	340	P	P	20 01 44.6	0.0
	comp=Z,2.9nm,0.4s,baz=109,slow=3.8,SNR=7.4						
KURK	Kurchatov	96.54	320	*e*P	P	20 01 46.8	-0.9
	comp=Z,23nm,1.5s						
KURK				LR	LR		
	comp=Z,9µm,22.0s						
KURK	Kurchatov	96.54	320	*ce*P	P	20 01 46.5	-1.2
KURK				pmax	pmax		
	comp=Z,17nm,1.5s						
KURBB	Kurchatov Arra	96.58	320	P	P	20 01 47.2	-0.7
	comp=Z,1.0nm,0.5s,baz=97,slow=4.5,SNR=15						
KURBB				PP	PP	20 05 38.0	-4.3
	comp=Z,2.4nm,1.0s,baz=101,slow=6.7,SNR=5.1						
KSH	Kashi	96.70	309	P	P	20 01 51.0	+2.1
VNA3	Neumayer Olymp	98.07	181	PKiKP	PP	20 05 58.2	+5.5
AAK	Ala-Archa	98.22	312	*e*P	Pdif	20 01 55.1	-0.7
	comp=Z,2.2nm,0.9s						
AAK				LR	LR		
	comp=Z,4µm,21.0s						
AAK	Ala-Archa	98.22	312	*ce*P	Pdif	20 01 55.4	-0.4
AAK				pmax	pmax		
	comp=Z,69nm,7.9s						
AAK	Ala-Archa	98.22	312	P	Pdif	20 01 55.3	-0.5
	comp=Z,1.4nm,0.6s,baz=167,slow=3.1,SNR=10						
VNA2	Neumayer--Watz	98.31	182	PKiKP	PP	20 06 09.3	+15
VNA1	Neumayer--Stat	98.62	182	PKiKP	PP	20 06 05.4	+8.7
FFC	Flin Flon	99.99	36	*i* P	Pdif	20 02 06.0	+2.8
BVAR	Borovoye Array	101.84	322	P	Pdif	20 02 11.2	-0.3
	comp=Z,2.7nm,0.7s,baz=111,slow=4.6,SNR=12						
BVAR				PP	PP	20 06 15.3	-7.1
	comp=Z,0.8nm,0.8s,baz=85,slow=8.0,SNR=3.0						
BRVK	Borovoye	101.90	322	*e*Pdif	Pdif	20 02 11.3	-0.4
BRVK				LR	LR		
	comp=Z,4µm,19.0s						
BRVK	Borovoye	101.90	322	*i* P	Pdif	20 02 10.8	-0.9
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RES	Resolute Bay	102.81	16	*e*Pdif	Pdif	20 02 15.6	+0.3
RES	Resolute Bay	102.81	16	*e*P	Pdif	20 02 15.6	+0.3
RES	Resolute Bay	102.81	16	P	Pdif	20 02 16.6	+1.3
	comp=Z,1.3nm,0.9s,baz=180,slow=6.1,SNR=2.4						
PRGR	Permogore	113.58	333	*i* PKIKP	PKiKP	20 06 55.3	-0.8
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
APA	Apatity	115.26	342	⇓*i*PKIKP	PKiKP	20 06 57.8	-1.4
APA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,15.0s						
ARA0	ARCESS Array S	116.15	346	*e*PKPdf	PKPdf	20 07 00.9	0.0
ARA0				*e*PKKPbc	PKKPbc	20 17 31.8	-1.6
ARCES	ARCESS Array B	116.15	346	PKP	PKPdf	20 07 00.9	0.0
	comp=Z,4.7nm,0.6s,baz=76,slow=1.5,SNR=26						
ARCES				PKKPbc	PKKPbc	20 17 31.8	-1.6
	comp=Z,2.4nm,0.9s,baz=241,slow=1.7,SNR=3.7						
KLMR	Klimovskoe	116.59	334	*e*PKIKP	PKPdf	20 06 59.9	-2.0
KLMR				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	Klimovskoe	116.59	334	*e*PKPdf	PKPdf	20 06 59.9	-2.0
KLMR				AMP		20 07 04.7	
	comp=Z,12nm,1.4s						
VRH	Novokhopyorsk	119.46	323	*e*PKIKP	PKPdf	20 07 06.2	-1.5
VRH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MOS	Moscow	119.84	329	*e*PKIKP	PKPdf	20 07 06.9	-1.4
LPAZ	La Paz	120.19	116	*e*PKPdf	PKPdf	20 07 09.1	-1.8
LPAZ	La Paz	120.19	116	*e*PKIKP	PKPdf	20 07 09.1	-1.8
LPSR	Galich'ya Gora	120.52	326	*e*PKIKP	PKiKP	20 07 09.5	-0.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEI	Tsey	120.59	313	*i* PKIKP	PKPdf	20 07 07.2	-3.3
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
OBN	Obninsk	120.67	329	⇑*e*PKIKP	PKiKP	20 07 09.8	-0.2
OBN				*e*		20 08 36.4	
OBN				pmax	pmax		
	comp=Z,28nm,1.7s						
VSR	Storozhevoye	120.94	324	*e*PKIKP	PKPdf	20 07 08.4	-2.2
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV	Kislovodsk	121.14	315	*e*PKIKP	PKiKP	20 07 12.6	+1.1
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FIA1	FINESS Array S	121.60	339	*e*PKPdf	PKiKP	20 07 11.4	-0.3
FIA0	FINESS Array S	121.60	339	*e*PKPdf	PKiKP	20 07 11.5	-0.2
FIA0	FINESS Array S	121.60	339	*e*PKIKP	PKiKP	20 07 11.5	-0.2
FINES	FINESS Array B	121.60	339	PKP	PKiKP	20 07 11.5	-0.2
	comp=Z,3.5nm,0.9s,baz=117,slow=7.2,SNR=9.0						
CPUP	Villa Florida	124.10	132	*e*PKPdf	PKiKP	20 07 16.6	-1.1
CPUP	Villa Florida	124.10	132	PKP	PKiKP	20 07 17.4	-0.3
	comp=Z,2.4nm,0.7s,baz=246,slow=0.6,SNR=6.0						
SDV	Santo Domingo	124.38	87	*e*PKPdf	PKiKP	20 07 17.9	-0.9
SDV				LR	LR		
	comp=Z,11µm,21.0s						
IZAR	Zarasai	125.23	333	*e*P	PKiKP	20 07 19.9	+0.9
IZAR				IAmb	IAmb	20 07 28.1	
	comp=Z,3.9nm,0.7s						
IDID	Didziasalis	125.28	333	*e*P	PKiKP	20 07 19.5	+0.3
IDID				IAmb	IAmb	20 07 26.7	
	comp=Z,6.5nm,1.0s						
BOSA	Boshof	125.35	223	PKP	PKiKP	20 07 20.1	-0.3
	comp=Z,2.5nm,0.6s,baz=116,slow=2.1,SNR=6.6						
ISAL	Salakas	125.40	333	*e*P	PKiKP	20 07 19.5	+0.1
ISAL				IAmb	IAmb	20 07 22.9	
	comp=Z,31nm,1.6s						
IIGN	Ignalina	125.49	333	*e*P	PKiKP	20 07 19.5	-0.1
IIGN				IAmb	IAmb	20 07 27.3	
	comp=Z,11nm,1.2s						
NB2	NORSAR Subarra	126.52	345	PKPdf	PKiKP	20 07 20.5	-1.0
	comp=Z,11nm,1.0s,baz=34,slow=2.1						
NB2	NORSAR Subarra	126.52	345	PKPdf	PKiKP	20 07 20.5	-1.0
	baz=34,slow=2.1						
NB200	NORSAR Array S	126.52	345	*e*PKPdf	PKiKP	20 07 21.0	-0.5
NOA	NORSAR Array B	126.52	345	PKP	PKiKP	20 07 21.0	-0.5
	comp=Z,2.0nm,0.7s,baz=33,slow=2.0,SNR=18						
AKASG	Malin Array Be	126.73	327	PKP	PKiKP	20 07 21.7	-0.4
	comp=Z,1.0nm,0.6s,baz=54,slow=2.0,SNR=18						
AKBB	Malin Array Si	126.73	327	*e*PKPdf	PKiKP	20 07 21.7	-0.4
KIEV	Kiev	126.75	327	*e*PKPdf	PKiKP	20 07 21.6	-0.5
KIEV				LR	LR		
	comp=Z,7µm,21.0s						
KIEV	Kiev	126.75	327	⇑*i*P	PKPdf	20 07 20.0	-1.7
KIEV	Kiev	126.75	327	⇑PKIKP	PKPdf	20 07 20.0	-1.7
AK11	Malin Array Si	126.78	327	*e*PKPdf	PKiKP	20 07 21.7	-0.5
KMBO	Kilima Mbogo	127.53	260	PKP	PKiKP	20 07 25.0	-0.2
KMBO				LR	LR		
	comp=Z,14µm,20.0s						
KMBO	Kilima Mbogo	127.53	260	PKP	PKiKP	20 07 25.0	-0.2
	comp=Z,1.1nm,0.6s,baz=167,slow=3.4,SNR=6.2						
BR101	Keskin Array S	128.89	313	*e*PKPdf	PKiKP	20 07 26.6	-0.5
BRTR	Keskin Array B	128.89	313	PKP	PKiKP	20 07 26.6	-0.5
	comp=Z,1.8nm,0.9s,baz=138,slow=2.1,SNR=9.2						
BIZ	Bicaz	130.51	324	⇑*i*P	PKiKP	20 07 29.8	-0.1
TLB	Topalu	130.59	321	⇑*i*P	PKPdf	20 07 28.2	-1.0
TLB	Topalu	130.59	321	⇑PKIKP	PKPdf	20 07 28.2	-1.0
BUR08	Bucovina Ar. S	130.63	326	*e*PKPdf	PKiKP	20 07 30.3	+0.1
BUR04	Bucovina Ar. S	130.64	326	*e*PKPdf	PKiKP	20 07 29.4	-0.9
BURAR	Bucovina Array	130.64	326	⇓*i*P	PKiKP	20 07 30.8	+0.5
BURAR	Bucovina Array	130.64	326	⇓PKIKP	PKiKP	20 07 30.8	+0.5
LSZ	Lusaka	130.69	239	*e*PKPdf	PKiKP	20 07 30.3	-1.0
MLR	Muntele Rosu	131.40	323	*e*PKPdf	PKPdf	20 07 28.9	-2.0
MLR	Muntele Rosu	131.40	323	⇑*i*P	PKiKP	20 07 31.8	-0.1
MLR	Muntele Rosu	131.40	323	⇑PKIKP	PKiKP	20 07 31.8	-0.1
DOPR	Dopca	131.46	324	⇑*i*P	PKPdf	20 07 28.8	-2.1
UZH	Uzhgorod	131.60	328	*e*PKIKP	PKiKP	20 07 32.6	+0.6
UZH				*i*		20 07 37.0	
UZH				*e*		20 09 47.0	
TRPA	Tarpa	131.78	328	⇑*i*P	PKiKP	20 07 31.3	-1.1
VOIR		131.95	323	⇑*i*P	PKPdf	20 07 29.3	-2.6
VOIR		131.95	323	⇑PKIKP	PKPdf	20 07 29.3	-2.6
ARR	Arges	132.24	323	⇑*i*P	PKiKP	20 07 33.3	-0.2
HUMR	Humele	132.49	322	⇑*i*P	PKPdf	20 07 31.8	-1.0
LTVH	Ltavrtes, Hu	132.58	327	*e*PKiKP	PKiKP	20 07 35.0	+1.0
LANS	Liptovska Anna	132.68	330	*e*PKP	PKiKP	20 07 34.5	+0.2
MORC	Moravsky Berou	133.16	332	⇑*i*P	PKPdf	20 07 30.1	-3.9
MORC	Moravsky Berou	133.16	332	⇑PKIKP	PKPdf	20 07 30.1	-3.9
MORC	Moravsky Berou	133.16	332	*e*PKP	PKiKP	20 07 33.8	-1.4
GZR	Gura Zlata	133.30	324	⇓*i*P	PKPdf	20 07 33.7	-0.7
GZR	Gura Zlata	133.30	324	⇓PKIKP	PKPdf	20 07 33.7	-0.7
SIRR	Siria	133.40	326	⇓*i*P	PKiKP	20 07 35.7	-0.1
VYHS	Vyhne	133.43	330	*e*PKIKP	PKiKP	20 07 35.7	-0.1
VYHS	Vyhne	133.43	330	*e*PKP	PKiKP	20 07 35.7	-0.1
BZS	Buzias	133.82	325	⇑*i*P	PKiKP	20 07 35.8	-0.8
BZS	Buzias	133.82	325	⇑PKIKP	PKiKP	20 07 35.8	-0.8
BRG	Berggiesshubel	133.91	336	*e*PKP	PKiKP	20 07 37.4	+0.8
	comp=Z,15nm,1.5s						
BRG	Berggiesshubel	133.91	336	*e*PKIKP	PKiKP	20 07 37.4	+0.8
BRG				pmax	pmax		
	comp=Z,44nm,1.5s						
VRAC	Vranov	133.92	332	*e*PKP	PKiKP	20 07 37.1	+0.4
CLL	Collm	133.94	337	*e*PKPdf	PKiKP	20 07 37.0	+0.3
	comp=Z,9.0nm,1.2s						
CLL				*e*(sPKPdf)		20 07 42.0	
	comp=Z,10.0nm,1.1s						
CLL				*e*		20 07 51.0	
CLL	Collm	133.94	337	*e*PKIKP	PKiKP	20 07 37.0	+0.3
CLL				*e*		20 07 42.0	
CLL				pmax	pmax		
	comp=Z,290nm,1.2s						
CLL				MLR	MLR		
	comp=Z,9µm,19.7s						
KRUC	Moravsky	134.19	332	*e*PKP	PKiKP	20 07 36.5	-0.8
MDVR	Moldovita	134.27	324	⇑*i*P	PKPdf	20 07 35.8	-0.5
MODS	Modra-Piesok	134.27	331	*e*PKIKP	PKiKP	20 07 38.0	+0.5
MODS	Modra-Piesok	134.27	331	*e*PKP	PKiKP	20 07 38.0	+0.5
PRU	Pruhonice	134.33	334	*e*PKPDF	PKiKP	20 07 38.4	+0.9
PRU	Pruhonice	134.33	334	*e*PKIKP	PKiKP	20 07 38.4	+0.9
TREC	Trest	134.43	333	*e*PKPDF	PKiKP	20 07 44.0	+6.2
TREC	Trest	134.43	333	*e*PKIKP	PKiKP	20 07 44.0	+6.2
MORH	Mrgy, Hungar	135.05	328	*e*PKiKP	PKiKP	20 07 38.1	-1.0
CONA	Conrad Observa	135.25	331	*i* P	PKiKP	20 07 42.1	+2.5
	comp=Z,7.5nm,1.3s						
KHC	Kasperske Hory	135.39	334	*e*PKPDF	PKiKP	20 07 40.3	+0.6
KHC	Kasperske Hory	135.39	334	*e*PKIKP	PKiKP	20 07 40.3	+0.6
GEC2	GERESS Array S	135.55	334	*e*PKPdf	PKiKP	20 07 38.5	-1.6
GEC2	GERESS Array S	135.55	334	*e*PKIKP	PKiKP	20 07 38.5	-1.6
GERES	GERESS Array B	135.55	334	PKhKP	PKPpre	20 07 28.7	
	comp=Z,0.5nm,0.6s,baz=64,slow=3.1,SNR=6.0						
GERES				PKP	PKiKP	20 07 39.1	-1.0
	comp=Z,3.1nm,1.0s,baz=52,slow=2.2,SNR=10						
GEA0	GERESS Array S	135.56	334	*e*PKPdf	PKPdf	20 07 37.5	-1.0
DIVS	Divibare	135.66	325	*e*PKPdf	PKPdf	20 07 36.7	-2.3
MOA	Molln	136.05	332	*i* pPKiKP	PKiKP	20 07 44.7	+3.6
	comp=Z,12nm,1.8s						
SOKA	Soboth	136.54	331	P	PKiKP	20 07 44.1	+1.9
	comp=Z,6.5nm,0.9s						
OBKA	Obir	136.90	331	*i* P	PKiKP	20 07 47.4	+4.5
	comp=Z,18nm,1.8s						
MEM	Membach	137.00	341	⇓PKiKP	PKiKP	20 07 43.5	+0.5
KBA	Koelnbreinsper	137.04	332	*i* PKiKP	PKiKP	20 07 42.4	-0.9
	comp=Z,9.8nm,1.1s						
PDG	Podgorica	137.10	323	⇓*i*P	PKPdf	20 07 40.1	-1.4
BDFB	Brasilia	137.39	128	*e*PKPdf	PKPdf	20 07 42.2	-0.8
BDFB	Brasilia	137.39	128	*e*PKIKP	PKPdf	20 07 42.2	-0.8
BDFB	Brasilia	137.39	128	PKP	PKiKP	20 07 43.2	-1.7
	comp=Z,5.3nm,0.9s,baz=145,slow=3.2,SNR=5.4						
WATA	Walderalm	137.62	334	*i* PKiKP	PKiKP	20 07 44.6	+0.1
	comp=Z,6.2nm,0.9s						
ABTA	Abfaltersbach	137.66	333	*i* PKPdf	PKiKP	20 07 42.8	-1.7
	comp=Z,7.8nm,0.8s						
WLF	Walferdange	137.78	340	⇓PKiKP	PKiKP	20 07 45.4	+0.9
MOTA	Moosalm	137.82	334	*i* PKiKP	PKiKP	20 07 43.6	-1.3
	comp=Z,14nm,1.2s						
RETA	Reutte	137.85	335	PKiKP	PKiKP	20 07 44.2	-0.6
	comp=Z,8.6nm,1.3s						
SQTA	Sankt Quirin	137.87	334	*i* pPKPdf	PKiKP	20 07 45.3	+0.4
	comp=Z,9.1nm,0.9s						
DOU	Dourbes	137.89	342	⇓PKiKP	PKiKP	20 07 45.4	+0.6
KEST	Kesra	147.30	323	PKPbc	PKPab	20 08 02.4	-1.6
	comp=Z,44nm,1.1s,baz=290,slow=2.9,SNR=7.5						
PBRG	Braganca	148.46	349	*e*PKPdf	PKPbc	20 08 04.6	-0.6
PGAV	Gavieira, Arco	148.55	352	*e*PKPdf	PKiKP	20 08 05.9	-1.1
PCAB	Cabril	148.77	351	*e*PKPdf	PKiKP	20 08 06.7	-0.7
POLO	Lamas de Olo	149.06	351	*e*PKPdf	PKiKP	20 08 07.5	-0.6
MVO	Moncorvo	149.13	349	*e*PKPdf	PKiKP	20 08 07.8	-0.4
PVRL	Vila Real	149.14	351	*e*PKPdf	PKiKP	20 08 07.9	-0.3
PVRL	Vila Real	149.14	351	*e*PKPab	PKPab	20 08 13.8	+2.7
PGRA	Graciosa	149.32	21	*e*LR	LR	20 47 30.5	
	comp=Z,14µm,22.1s						
PTO	Porto	149.41	352	*e*PKPdf	PKiKP	20 08 08.4	-0.2
ROSA	Rosais	149.50	22	*e*LR	LR	20 53 04.3	
	comp=Z,16µm,15.2s						
PVIS	Viseu	149.72	351	*e*PKPdf	PKiKP	20 08 08.9	-0.5
ES19	SONSECA Array	149.83	344	*e*PKPdf	PKPdf	20 08 03.9	-0.1
ESDC	Sonseca Array	149.87	344	PKPbc	PKiKP	20 08 09.1	-0.7
	comp=Z,8.1nm,0.9s,baz=9.1,slow=2.8,SNR=24						
ESLA	Sonseca Array	149.87	344	*e*PKPbc	PKiKP	20 08 08.6	-1.2
MTE	Manteigas	149.97	350	*e*PKPdf	PKiKP	20 08 10.1	+0.2
MTE	Manteigas	149.97	350	*e*PKPab	PKPab	20 08 15.9	+1.4
MTE	Manteigas	149.97	350	*e*PKPbc	PKiKP	20 08 09.1	-0.8
PAB	San Pablo	150.09	345	*e*PKPdf	PKPbc	20 08 06.9	-2.5
PAB				LR	LR		
	comp=Z,4µm,20.0s						
PAB	San Pablo	150.09	345	*e*PKIKP	PKPbc	20 08 06.9	-2.5
PAB				MLR	MLR		
	comp=Z,4µm,20.0s						
PCAS	Casmilo, Conde	150.46	351	*e*PKPdf	PKiKP	20 08 10.7	-0.2
PCAS	Casmilo, Conde	150.46	351	*e*PKPab	PKPab	20 08 16.8	+0.3
PCBR	Castelo Branco	150.50	350	*e*PKPdf	PKiKP	20 08 10.8	-0.2
PCBR	Castelo Branco	150.50	350	*e*PKPab	PKPab	20 08 17.0	+0.4
PTOM	Tomar	150.87	351	*e*PKPdf	PKiKP	20 08 11.9	+0.2
PTOM	Tomar	150.87	351	*e*PKPab	PKPab	20 08 17.9	-0.3
PMRV	Marv??o	150.88	349	*e*PKPdf	PKiKP	20 08 11.9	+0.1
PMRV	Marv??o	150.88	349	*e*PKPab	PKPab	20 08 18.1	-0.2
CMLA	Cha da Macela	151.29	19	*e*LR	LR	20 50 17.4	
	comp=Z,20µm,22.1s						
PMTG	Montargil	151.38	350	*e*PKPdf	PKiKP	20 08 12.7	-0.1
PMTG	Montargil	151.38	350	*e*PKPab	PKPab	20 08 18.6	-1.7
PBEJ	Beja	152.33	349	*e*PKPdf	PKiKP	20 08 16.1	+1.3
PNCL	Nicolau / Gran	152.36	350	*e*PKPdf	PKiKP	20 08 14.9	+0.1
MESJ	Messejana	152.58	350	*e*PKPdf	PKiKP	20 08 15.9	+0.6
TOA0	Torodi Ar. Sit	164.33	280	*e*PKPdf	PKPdf	20 08 20.6	-2.2
TORD	Torodi Ar. Bea	164.33	280	PKP	PKPdf	20 08 22.4	-0.4
	comp=Z,3.6nm,1.0s,baz=156,slow=1.0,SNR=16						
TORD				PKPab	PKPab	20 09 17.0	0.0
	comp=Z,4.9nm,1.0s,baz=103,slow=3.9,SNR=6.5						
TOA1	Torodi Ar. Sit	164.33	280	*e*PKPdf	PKPdf	20 08 22.4	-0.4
TOA1				*e*PKPab	PKPab	20 09 17.0	0.0
DBIC	Dimbokro	169.93	247	PKP	PKPdf	20 08 26.8	-0.2
	comp=Z,7.1nm,1.0s,baz=182,slow=2.7,SNR=4.2						
DBIC				PKPab	PKPab	20 09 41.6	-0.2
	comp=Z,3.2nm,0.7s,baz=128,slow=6.1,SNR=3.5						

IDC 07 19:56:07.1±3.6**, 11°.32S**×**167°.07E, h0^{km}, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.7**/44**, mbtmp3.9**/4**, Error ellipse: s-maj=146.3km s-min=32.4km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	32.61	251	P	P	20 02 41.0	+0.1
	1.4nm,0.8s,baz=82,slow=9.0,SNR=8.2						
ASAR	Alice Springs	33.84	244	P	P	20 02 51.4	-0.1
	1.7nm,1.0s,baz=72,slow=9.4,SNR=4.6						
ILAR	Eielson Array	83.37	18	P	P	20 08 36.0	+0.2
	0.9nm,0.8s,baz=230,slow=5.5,SNR=5.7						
MKAR	Makanchi Array	94.61	317	P	P	20 09 29.6	-0.5
	0.3nm,0.6s,baz=100,slow=5.5,SNR=3.1						

IDC ***07*** *20:00:48.8±0.8, 10°.89S×165°.96E, h0^{km}, mb4.3/14, mb1 4.5/16, mb1mx4.3/38, mbtmp4.3/16, ML4.5/2, Error ellipse: s-maj=28.3km s-min=17.7km az=127.0*

ISCJB ***07*** *20:00:49.4±0.3, 10°.92S±0°.04×165°.79E±0°.06, h10^{km}, mb4.6/39, Error ellipse: s-maj=8.4km s-min=6.1km az=179.3*

NEIC ***07*** *20:00:51.5±0.7, 10°.85S×165°.80E, h14^{km}±4^{km}, mb4.9/21, Error ellipse: s-maj=6.8km s-min=5.2km az=94.0*

ISC 07 20:00:50.7±0.5**, 10°.87S**±0°.07×**165°.95E**±0°.08**, h10^{km}, n73, σ1^{s}.30**/72**, mb4.7**/40**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.08	283	*e*Pn	Pn	20 02 20.9	+0.2
HNR	Honiara	6.08	283	Pn	Pn	20 02 21.7	+1.0
	16nm,0.3s,baz=163,slow=2.5,SNR=17						
HNR				Sn	Sn	20 03 34.2	+3.8
	4.5nm,0.3s,baz=22,slow=19,SNR=1.7						
MARNC	Mare, Loyalty	10.73	170	*e*Pn	Pn	20 03 25.3	+0.7
DZM	Mont Dzumac	11.14	178	*e*Pn	Pn	20 03 31.3	+1.0
DZM	Mont Dzumac	11.14	178	Pn	Pn	20 03 30.8	+0.5
	2.2nm,0.3s,baz=83,slow=20,SNR=3.9						
ONTNC	Ouen Toro	11.38	178	*e*Pn	Pn	20 03 34.7	+1.2
PINNC	Pines Island,	11.76	173	*e*Pn	Pn	20 03 39.8	+1.1
TARA	Tarawa	13.99	30	*e*Pn	Pn	20 04 11.1	+1.9
MANU	Manus Island	20.43	294	*e*P	Pn	20 05 29.2	-1.2
	74nm,1.0s						
CTA	Charters Tower	21.05	242	P	P	20 05 35.0	-0.2
	9.5nm,0.8s,baz=58,slow=11,SNR=6.2						
COEN	Coen	22.45	260	*e*P	P	20 05 49.7	-0.5
	32nm,1.4s						
BKZ	Black Stump Fm	29.70	163	*e*P	P	20 06 58.5	+1.5
	14nm,0.5s						
STKA	Stephens Creek	30.70	223	P	P	20 07 06.4	+0.5
	2.4nm,0.7s,baz=49,slow=9.5,SNR=6.5						
BFZ	Birch Farm	31.05	165	*e*P	P	20 07 10.5	+1.7
	96nm,1.6s						
WRAB	Tennant Creek	31.72	250	*e*P	P	20 07 13.9	-1.1
	9.2nm,0.9s						
WB2	Warramunga Arr	31.72	250	*e*P	P	20 07 12.4	-2.6
	9.9nm,0.9s						
WR1	Warramunga Arr	31.73	250	*e*P	P	20 07 14.4	-0.7
	12nm,0.9s						
WRA	Warramunga Arr	31.73	250	P	P	20 07 14.4	-0.7
	8.8nm,0.9s,baz=81,slow=9.1,SNR=25						
LTZ	Lake Taylor	32.26	171	*e*P	P	20 07 20.2	+0.6
	23nm,0.8s						
FOZ	Fox Glacier	32.71	175	*e*P	P	20 07 24.5	+1.1
	24nm,0.9s						
AS01	Alice Springs	33.01	243	*e*P	P	20 07 24.7	-1.6
AS31	Alice Springs	33.05	243	*e*P	P	20 07 24.7	-1.9
	1.3nm,0.9s						
ASAR	Alice Springs	33.05	243	P	P	20 07 25.1	-1.6
	3.5nm,0.8s,baz=69,slow=9.8,SNR=16						
ASAR				PcP	PcP	20 10 09.8	-0.7
	0.8nm,0.8s,baz=66,slow=2.7,SNR=4.5						
MJAR	Matsushiro Arr	53.91	332	P	P	20 10 14.0	-0.5
	4.8nm,0.8s,baz=157,slow=6.8,SNR=5.2						
MAJO	Matsushiro	53.91	332	*e*P	P	20 10 14.0	-0.5
KSRS	Korea Array	59.85	325	P	P	20 10 56.9	+0.3
	1.9nm,1.0s,baz=137,slow=6.8,SNR=3.3						
KSAR	Wonju Array Be	59.86	325	P	P	20 10 56.9	+0.2
USRK	Ussuriysk Ar.	62.88	333	P	P	20 11 17.3	+0.3
	2.9nm,0.7s,baz=144,slow=10,SNR=4.4						
NONG	Nongkai	68.33	294	P	P	20 11 58.6	+5.9
XAN	Xi'an	70.15	312	P	P	20 12 08.7	+4.9
XAN				pP	PcP	20 12 17.3	-8.5
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN	Xi'an	70.15	312	*e*P	P	20 12 02.6	-1.3
	comp=Z,6.2nm,0.8s						
KMI	Kunming	71.20	301	P	P	20 12 11.7	+1.1
KMI				pP	sP	20 12 16.9	+2.2
KMI				pmax	pmax		
	comp=Z,3.0nm,1.5s						
HHC	Hu-ho-hao-te	71.83	320	*e*P	P	20 12 20.8	+6.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,2µm,4.5s						
CM01	Chiang Mai Arr	72.20	293	*e*P	P	20 12 14.2	-2.3
CMAR	Chiang Mai Arr	72.23	293	P	P	20 12 15.9	-0.7
	comp=Z,1.4nm,1.0s,baz=115,slow=3.9,SNR=10						
CMMT	Chiang Mai	72.33	294	P	P	20 12 19.6	+2.3
	comp=Z,3.2nm,1.0s						
CHTO	Chiang Mai	72.34	294	P	P	20 12 19.7	+2.4
	comp=Z,15nm,1.1s						
SONA0	Songino Array	78.65	324	*e*P	P	20 12 53.0	-0.1
SONM	Songino Array	78.65	324	P	P	20 12 53.0	-0.1
	comp=Z,1.4nm,0.8s,baz=140,slow=6.3,SNR=8.4						
SONA1	Songino Array	78.65	324	*e*P	P	20 12 52.6	-0.5
BILL	Bilibino	78.71	0	*e*P	P	20 12 52.7	-0.1
	comp=Z,26nm,0.2s						
GTA	Gaotai	79.08	314	⇑P	P	20 12 56.6	+0.9
GTA				pP	PcP	20 13 02.2	-1.9
GTA				sP	sP	20 13 05.4	+5.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
QSPA	South Pole Qui	79.13	180	*e*P	P	20 12 55.2	-0.3
	comp=Z,9.8nm,0.9s						
CAST	Castle Rocks	80.72	18	*e*P	P	20 13 05.5	+1.6
	comp=Z,34nm,1.9s						
MCK	McKinley	81.92	19	*e*P	P	20 13 12.8	+2.5
	comp=Z,45nm,2.0s						
WRH	Wood River Hil	82.71	18	*e*P	P	20 13 14.7	+0.4
	comp=Z,10.0nm,1.1s						
HDA	Harding Lake	83.02	19	*e*P	P	20 13 15.8	-0.2
	comp=Z,18nm,1.0s						
ILAR	Eielson Array	83.29	18	P	P	20 13 17.8	+0.5
	comp=Z,2.5nm,0.8s,baz=242,slow=4.7,SNR=18						
IL1	Eielson Array	83.29	18	*e*P	P	20 13 17.3	0.0
NV01	Mina Array Sit	85.76	50	*e*P	P	20 13 31.9	+1.2
NVAR	Mina Array Bea	85.76	50	P	P	20 13 35.5	+4.7
	comp=Z,4.9nm,1.1s,baz=237,slow=7.8,SNR=8.4						
U15A	North Rim	89.84	53	*e*P	P	20 13 51.9	+1.5
	comp=Z,7.3nm,1.1s						
X16A	Lo Mia Camp, P	90.06	55	*e*P	P	20 13 53.3	+1.9
	comp=Z,6.1nm,0.6s						
PDAR	Pinedale Array	93.29	47	P	P	20 14 06.3	0.0
	comp=Z,0.9nm,1.0s,baz=247,slow=4.6,SNR=3.4						
MK01	Makanchi Array	93.52	317	*e*P	P	20 14 06.5	-0.4
MK31	Makanchi Array	93.53	317	*e*P	P	20 14 06.3	-0.7
	comp=Z,2.6nm,0.9s						
MK32	Makanchi Array	93.53	317	*e*P	P	20 14 06.7	-0.3
MKAR	Makanchi Array	93.53	317	*e*P	P	20 14 06.5	-0.5
	comp=Z,15nm,0.9s						
MKAR	Makanchi Array	93.53	317	P	P	20 14 06.7	-0.3
	comp=Z,2.1nm,0.8s,baz=97,slow=6.5,SNR=19						
ZAA1	Zalesovo Array	93.53	324	*e*P	P	20 14 06.2	-0.6

ZALV	Zalesovo Beam	93.53	324	P	P	20 14 06.2	-0.5
	comp=Z,0.8nm,0.7s,baz=124,slow=9.2,SNR=3.7						
MAKZ	Makanchi	93.75	317	*e*P	P	20 14 07.4	-0.5
	comp=Z,3.3nm,1.0s						
YKA	Yellowknife Ar	94.73	27	P	P	20 14 11.0	-1.0
	comp=Z,0.4nm,0.7s,baz=255,slow=4.5,SNR=3.6						
ARA0	ARCESS Array S	116.22	346	*e*PKPdf	PKPdf	20 19 32.5	-1.3
ARCES	ARCESS Array B	116.22	346	PKP	PKPdf	20 19 32.5	-1.3
	comp=Z,1.4nm,0.6s,baz=50,slow=1.4,SNR=6.6						
FIA0	FINESS Array S	121.69	339	*e*PKPdf	PKiKP	20 19 43.0	-1.7
FINES	FINESS Array B	121.69	339	PKP	PKiKP	20 19 43.0	-1.7
	comp=Z,1.5nm,0.9s,baz=75,slow=1.6,SNR=3.0						
NB200	NORSAR Array S	126.59	345	*e*PKPdf	PKiKP	20 19 53.1	-1.4
NOA	NORSAR Array B	126.59	345	PKP	PKiKP	20 19 53.1	-1.4
	comp=Z,0.5nm,0.7s,baz=336,slow=2.0,SNR=3.4						
GERES	GERESS Array B	135.64	334	PKP	PKiKP	20 20 12.6	-0.6
	comp=Z,0.2nm,0.3s,baz=132,slow=5.6,SNR=3.8						
ESDC	Sonseca Array	149.95	344	PKPbc	PKiKP	20 20 41.0	-1.8
	comp=Z,1.6nm,0.7s,baz=31,slow=2.9,SNR=5.7						
TORD	Torodi Ar. Bea	164.43	280	PKP	PKPdf	20 20 55.3	-0.5
	comp=Z,1.1nm,1.1s,baz=126,slow=3.8,SNR=3.5						
TORD				PKPab	pPKPab	20 21 51.4	-2.0
	comp=Z,0.9nm,0.9s,baz=86,slow=1.9,SNR=3.1						
TOA1	Torodi Ar. Sit	164.43	280	*e*PKPdf	PKPdf	20 20 55.3	-0.5
TOA1				*e*PKPab	pPKPab	20 21 51.4	-2.0

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*UUSS **07** 20:02:21.0, 37°.80N×113°.15W, h1^{km}*
*NEIC **07** 20:02:21.8±0.0, 37°.79N×113°.12W, h2^{km}, ML3.5(SLC), After SLC.*
NEIC Felt [III] at Cedar City.
*ANF **07** 20:02:21.4±0.3, 37°.87N×113°.17W, ML3.8/17, Error ellipse: s-maj=2.9km s-min=2.1km az=15.0*
*SLC **07** 20:02:21.8, 37°.79N×113°.12W, h2^{km}, ML3.5*
*ISCJB **07** 20:02:21.8±0.2, 37°.83N±0°.02×113°.18W±0°.02, h10^{km}, mb3.1/1, Error ellipse: s-maj=2.7km s-min=2.2km az=152.7*
*IDC **07** 20:02:23.5±1.2, 38°.01N×113°.07W, h0^{km}, mb3.1/1, mb1 3.3/5, mb1mx3.2/45, mbtmp3.0/5, ML3.1/4, Error ellipse: s-maj=15.5km s-min=10.2km az=152.0*
ISC 07 20:02:22.4±0.7**, 37°.78N**±0°.02×**113°.12W**±0°.02**, h10**^{km}**, n126, σ2**^{s}**03**/137**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZCU	Shurtz Canyon	0.18	172	*e*Pg	Pg	20 02 25.2	-1.2
CCUT	Cedar City	0.29	221	*e*Pg	Pg	20 02 26.7	-1.7
PKCU	Pink Cliffs	0.72	117	*e*Pg	Pg	20 02 35.6	-0.8
LCMT	Little Creek M	0.77	187	*e*Pg	Pg	20 02 36.0	-1.2
MTPU	Mount Pierson	0.79	70	*e*Pg	Pg	20 02 36.5	-1.1
KNB	Kanab	0.79	162	*e*Pg	Pg	20 02 36.3	-1.4
PSUT	Pine Spring	0.95	323	*e*Pg	Pg	20 02 39.6	-1.2
TCRU	Three Creeks R	0.99	32	*e*Pg	Pg	20 02 39.8	-1.6
MSU	Marysvale	1.05	45	*e*Pg	Pg	20 02 41.7	-0.8
U15A	North Rim	1.50	154	*e*Pn	Pn	20 02 49.4	-0.2
R11A	Troy Canyon, C	2.03	287	*e*Pn	Pn	20 02 56.2	-0.5
R11A	Troy Canyon, C	2.03	287	P	Pn	20 02 56.3	-0.5
	baz=105,SNR=71						
R11A				Sg	Sg	20 03 26.2	-1.4
	baz=105						
SHPR	Sheep Range	2.06	233	*e*Pn	Pn	20 02 58.0	+0.7
TMUT	Trail Mountain	2.13	44	*e*Pn	Pn	20 02 58.6	+0.3
NLU	North Lily Min	2.33	20	*e*Pn	Pn	20 03 00.8	-0.1
DUG	Dugway, Tooele	2.43	6	*e*Pn	Pn	20 03 01.8	-0.5
DUG	Dugway, Tooele	2.43	6	P	Pn	20 03 01.5	-0.8
	baz=186,SNR=45						
DUG				Sg	Sg	20 03 39.0	-1.4
	baz=186						
SRU	San Rafael Swe	2.44	56	*e*Pn	Pn	20 03 03.8	+1.4
MPU	Maple Canyon	2.52	27	*e*Pn	Pn	20 03 04.1	+0.6
TPNV	Topopah Spring	2.63	253	*e*Pn	Pn	20 03 05.4	+0.4
TPNV	Topopah Spring	2.63	253	P	Pn	20 03 05.3	+0.4
	baz=70,SNR=15						
TPNV				S	Sn	20 03 38.8	+1.8
	baz=70						
WUAZ	Wupatki	2.66	148	*e*Pn	Pn	20 03 06.7	+1.3
WUAZ	Wupatki	2.66	148	P	Pn	20 03 06.9	+1.6
	baz=328						
WUAZ				S	Sb	20 03 42.3	-0.5
	baz=328						
W13A	Hualapai Mount	2.74	193	*e*Pn	Pn	20 03 07.8	+1.1
P18A	Preston Nutter	2.91	50	*e*Pn	Pn	20 03 11.1	+2.0
CTU	Camp Tracy	3.10	20	*e*Pn	Pn	20 03 12.4	+0.9
JLU	Jordanelle	3.11	24	*e*Pn	Pn	20 03 13.0	+1.3
LDFC	Landfair	3.13	211	*e*Pn	Pn	20 03 12.0	+0.1
BGU	Big Grassy Mou	3.15	1	*e*Pn	Pn	20 03 11.5	-0.6
SHOC	Shoshone, Teco	3.15	234	Sb	Sb	20 04 00.1	+3.2
	baz=52						
PV05	Paradox Valley	3.19	83	*e*Pn	Pn	20 03 16.2	+3.3
PV09	Paradox Valley	3.23	76	*e*Pn	Pn	20 03 12.7	-0.7
NEE2	Needles Airpor	3.24	202	Sb	Sg	20 04 04.6	-1.7
	baz=21						
TUQ	Turquoise Moun	3.25	225	S	Sn	20 03 54.5	+2.3
	baz=42						
PV10	Paradox Valley	3.28	78	*e*Pn	Pn	20 03 13.9	-0.1
PV14	Lion Creek, Pa	3.29	78	*e*Pn	Pn	20 03 15.1	+0.9
PV19	Morning Glory	3.31	79	*e*Pn	Pn	20 03 15.2	+0.8
PV23	Carpenter Ridg	3.31	77	*e*Pn	Pn	20 03 15.3	+0.8
PV17	East Wray Mesa	3.32	80	*e*Pn	Pn	20 03 16.1	+1.5
PV20	West Nyswonger	3.33	79	*e*Pn	Pn	20 03 15.4	+0.7
PV21	Cone Mtn., Par	3.36	75	*e*Pn	Pn	20 03 15.6	+0.5
PV16	Nyswonger Mesa	3.36	80	*e*Pn	Pn	20 03 16.6	+1.4
PV04	Paradox Valley	3.38	78	*e*Pn	Pn	20 03 16.6	+1.2
ELK	Elko	3.39	332	Pn	Pn	20 03 15.5	-0.1
	1.1nm,0.3s,baz=152,slow=11,SNR=17						
ELK				Lg	Lg	20 04 08.8	
	9.3nm,0.3s,baz=232,slow=23,SNR=18						
PV11	David Mesa, Pa	3.39	80	*e*Pn	Pn	20 03 16.7	+1.1
PV03	Paradox Valley	3.41	81	*e*Pn	Pn	20 03 16.1	+0.4
PV13	Radium Mtn., P	3.42	82	*e*Pn	Pn	20 03 17.3	+1.3
PV12	Saucer Basin,	3.45	80	*e*Pn	Pn	20 03 17.5	+1.1
GRAC	Grapevine Rang	3.47	258	Sg	Sg	20 04 14.6	+0.8
	baz=75						
PV02	Paradox Valley	3.49	82	*e*Pn	Pn	20 03 18.3	+1.4
PDMCI	Parker Dam,Lak	3.56	194	Sb	Sg	20 04 14.1	-2.6
	baz=13						
SPUT	South Promonto	3.57	8	*e*Pn	Pn	20 03 17.9	0.0
PV07	Paradox Valley	3.59	78	*e*Pn	Pn	20 03 19.5	+1.2
TCUT	Toone Canyon	3.59	21	*e*Pn	Pn	20 03 18.5	+0.1
PV01	Paradox Valley	3.62	83	*e*Pn	Pn	20 03 19.7	+1.0
X16A	Lo Mia Camp, P	3.62	157	*e*Pn	Pn	20 03 20.5	+1.9
GMRC	Granite Mounta	3.62	215	P	Pn	20 03 19.8	+1.1
	baz=33						
GMRC				Sb	Sb	20 04 14.7	+4.1
	baz=33						
PV15	Paradox Valley	3.71	80	*e*Pn	Pn	20 03 20.5	+0.6
MVCO	Mesa Verde	3.72	97	*e*Pn	Pn	20 03 21.4	+1.3
MVCO	Mesa Verde	3.72	97	P	Pn	20 03 21.4	+1.3
	baz=280,SNR=24						
MVCO				Sb	Sb	20 04 16.8	+3.3
	baz=280						
W18A	Petrified Fore	3.81	133	*e*Pn	Pn	20 03 21.6	+0.4
W18A	Petrified Fore	3.81	133	Pb	Pb	20 03 31.2	+1.5
	baz=315						
W18A				Sb	Sb	20 04 19.8	+3.8
	baz=315						
Y14A	Wickenburg	3.83	179	*e*Pn	Pn	20 03 21.9	+0.5
GSC	Goldstone, Bar	3.86	231	*e*Pn	Pn	20 03 22.6	+0.7
MPMC	Manual Prospec	3.90	245	P	Pn	20 03 22.7	+0.2
	baz=62						
MPMC				Sg	Sg	20 04 28.9	+1.4
	baz=62						
HEC	Hector,Ludlow	3.92	222	Pb	Pb	20 03 32.5	+0.9
	baz=40						
IRM	Iron Mountain	3.97	205	Pb	Pb	20 03 35.0	+2.6
	baz=23						
IRM				Sb	Sg	20 04 27.0	-2.7
	baz=23						
HVU	Hansel Valley	4.01	4	*e*Pn	Pn	20 03 23.9	-0.1
HWUT	Hardware Ranch	4.01	17	*e*Pn	Pn	20 03 24.0	0.0
NV11	Mina Array Sit	4.03	281	*e*Pn	Pn	20 03 24.6	+0.3
KVN	Kaiserville	4.11	290	*e*Pn	Pn	20 03 25.3	-0.1
X18A	Snowflake	4.13	141	*e*Pn	Pn	20 03 26.0	+0.3
NV01	Mina Array Sit	4.14	281	*e*Pn	Pn	20 03 25.3	-0.6
NV01				*e*Lg	Lg	20 04 33.2	
NVAR	Mina Array Bea	4.14	281	Pn	Pn	20 03 26.3	+0.5
	0.3nm,0.3s,baz=101,slow=15,SNR=3.5						
NVAR				Pg	Pb	20 03 37.9	+2.5
	6.2nm,0.3s,baz=99,slow=17,SNR=40						
NVAR				Lg	Lg	20 04 33.2	
	11nm,0.3s,baz=96,slow=29,SNR=8.5						
BMN	Battle Mountai	4.15	311	*e*Pn	Pn	20 03 26.2	+0.3
Y12C	Blythe	4.17	196	Sb	Sg	20 04 32.7	-3.8
	baz=15						
RYN	Ryan	4.34	283	*e*Pn	Pn	20 03 29.6	+1.0
BELC	Belle Mtn. Jos	4.43	213	Sb	Sg	20 04 41.1	-3.6
	baz=30						
O20A	White River Ci	4.47	57	*e*Pn	Pn	20 03 32.0	+1.5
O20A	White River Ci	4.47	57	Sb	Sb	20 04 40.2	+5.0
	baz=240						
MLAC	Mammoth, Mammo	4.54	270	Sb	Sb	20 04 40.5	+3.5
	baz=86						
OMMB	Old Mammoth Mi	4.67	270	*e*Pg	Pg	20 03 51.2	-0.5
ISA	Isabella, Lake	4.79	246	*e*Pg	Pg	20 03 51.1	-3.0
GLA	Glamis	4.91	197	*e*Pn	Pn	20 03 37.8	+1.5
GLA	Glamis	4.91	197	Sb	Sg	20 04 54.9	-5.3
	baz=16						
XPFO	Pion Flat	4.96	214	*e*Pn	Pn	20 03 36.8	-0.3
PFO	Pinyon Flats O	4.96	214	*e*Pn	Pn	20 03 34.8	-2.3
PFO				Pg	Pb	20 03 53.5	+4.1
PFO				Lg	Lg	20 05 01.9	
PFO	Pinyon Flats O	4.96	214	Pg	Pb	20 03 53.5	+4.1
	0.6nm,0.3s,baz=35,slow=19,SNR=3.6						
PFO				Lg	Lg	20 05 01.9	
	0.5nm,0.3s,baz=151,slow=19,SNR=3.2						
S22A	4UR Ranch, Cre	4.99	88	*e*Pn	Pn	20 03 39.2	+1.6
S22A	4UR Ranch, Cre	4.99	88	Sb	Sb	20 04 56.3	+6.2
	baz=272						
SMCO	Snowmass	5.02	72	*e*Pn	Pn	20 03 39.0	+0.8
PNTR	Pine Nut	5.25	286	*e*Pg	Pb	20 03 52.5	-2.0
BW06	Boulder Array	5.68	28	*e*Pn	Pn	20 03 47.4	+0.4
PD31	Pinedale Array	5.68	28	*e*Pn	Pn	20 03 47.0	-0.1
PDAR	Pinedale Array	5.68	28	Pn	Pn	20 03 48.2	+1.2
	0.3nm,0.3s,baz=201,slow=10,SNR=9.1						
PDAR				Sn	Sn	20 04 47.6	-4.8
	1.4nm,0.3s,baz=66,slow=20,SNR=14						
TUC	Tucson	5.78	160	*e*Pg	Pg	20 04 09.9	-3.2
REDW	Red Top Meadow	5.84	16	*e*Pn	Pn	20 03 52.1	+2.9
HLID	Hailey	5.87	351	*e*Pn	Pn	20 03 51.6	+2.1
LAZ	Ladron	5.90	123	*e*Pn	Pn	20 03 53.7	+3.8
SNOW	Snow King Moun	5.96	17	*e*Pn	Pn	20 03 50.8	-0.1
MFID	Camas Ranch	6.00	341	*e*Pn	Pn	20 03 48.1	-3.2
RWWY	Rawlins	6.00	48	*e*Pn	Pn	20 03 50.6	-0.8
SDCO	Great Sand Dun	6.04	88	*e*Pn	Pn	20 03 49.5	-2.5
FXWY	Fox Creek	6.07	15	*e*Pn	Pn	20 03 55.9	+3.6
ANMO	Albuquerque	6.07	116	*e*Pn	Pn	20 03 53.5	+1.1
ANMO				Lg	Lg	20 05 35.4	
ANMO	Albuquerque	6.07	116	Pn	Pn	20 03 54.3	+1.9
	0.3nm,0.3s,baz=303,slow=17,SNR=5.2						
ANMO				Lg	Lg	20 05 35.4	
	1.1nm,0.3s,baz=34,slow=16,SNR=7.0						
LOHW	Long Hollow	6.14	17	*e*Pn	Pn	20 03 54.0	+0.7
LENM	Lemitar	6.15	124	*e*Pn	Pn	20 03 51.6	-1.8
ISCO	Idaho Springs	6.20	69	*e*Pn	Pn	20 03 52.9	-1.4
MOOW	Moose Ponds	6.23	16	*e*Pn	Pn	20 03 55.7	+1.1
WVOR	Wild Horse Val	6.29	319	*e*Pn	Pn	20 03 59.0	+3.8
IMW	Indian Meadow	6.33	14	*e*Pn	Pn	20 03 56.0	0.0
N23A	Red Feather La	6.38	59	*e*Pn	Pn	20 03 58.6	+2.0
BNM	Barren Site	6.39	123	*e*Pn	Pn	20 03 56.5	-0.2
FLWY	Flagg Ranch	6.56	15	*e*Pn	Pn	20 03 59.7	+0.6
YPP	Pitchstone Pla	6.72	14	*e*Pn	Pn	20 04 03.9	+2.6
PHWY	Pilot Hill	6.89	57	*e*Pg	Pg	20 04 30.2	-4.1
J08A	Circle Bar Ran	6.91	326	*e*Pn	Pn	20 04 05.0	+1.2
T25A	Trinidad	6.96	93	*e*Pg	Pg	20 04 31.6	-4.0
RLMT	Red Lodge	7.89	20	*e*Pn	Pn	20 04 17.0	-0.4
MNTX	Cornudas Mount	8.79	131	*e*Pg	Pg	20 05 08.1	-2.5
LAO	LASA Array	10.27	28	*e*Pn	Pn	20 04 50.0	+0.3
TXAR	Lajitas Array	11.53	134	Lg	Lg	20 08 22.4	
	0.1nm,0.3s,baz=318,slow=24,SNR=3.0						
DGMT	Dagmar	12.51	28	*e*Pn	Pn	20 05 18.6	-1.8
ECSD	EROS Data Cent	13.85	59	*e*Pn	Pn	20 05 35.0	-3.7
YKA	Yellowknife Ar	24.76	358	P	P	20 07 44.6	+0.7
	0.6nm,0.8s,baz=177,slow=8.3,SNR=6.1						

IDC 07 20:03:35.7±4.0**, 11°.80S**×**166°.25E, h0**^{km}**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/36**, mbtmp3.9**/4**, Error ellipse: s-maj=143.8km s-min=37.9km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.70	251	P	P	20 10 01.1	-0.3
	0.9nm,0.9s,baz=81,slow=9.3,SNR=2.6						
SONM	Songino Array	79.56	324	P	P	20 15 44.4	-0.3
	0.8nm,0.8s,baz=123,slow=5.3,SNR=4.0						
ILAR	Eielson Array	84.07	18	P	P	20 16 07.7	-0.2
	0.7nm,0.8s,baz=214,slow=6.2,SNR=4.7						
MKAR	Makanchi Array	94.41	317	P	P	20 16 58.6	+1.0
	1.0nm,0.9s,baz=109,slow=5.5,SNR=5.0						

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*IDC **07** 20:05:02.0±1.4, 11°.02S×165°.81E, h0^{km}, mb4.0/4, mb1 4.3/6, mb1mx3.8/36, mbtmp4.2/6, ML4.4/2, Error ellipse: s-maj=31.7km s-min=28.5km az=90.0*
*ISCJB **07** 20:05:02.4±0.9, 11°.02S±0°.10×165°.7E±0°.1, h10^{km}, Error ellipse: s-maj=18.3km s-min=12.5km az=149.6*
*NEIC **07** 20:05:04.0±1.0, 10°.88S×165°.73E, h10^{km}, mb4.6/1, Error ellipse: s-maj=19.1km s-min=13.4km az=56.0*
ISC 07 20:05:04.0±1.0**, 11°.0S**±0°.1×**165°.8E**±0°.1**, h10**^{km}**, n13, σ1**^{s}**26**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.92	284	*e*Pn	Pn	20 06 30.8	-1.0
HNR	Honiara	5.92	284	Pn	Pn	20 06 34.0	+2.2
	10nm,0.3s,baz=309,slow=4.1,SNR=5.0						
DZM	Mont Dzumac	11.05	177	*e*Pn	Pn	20 07 44.3	+1.9
DZM	Mont Dzumac	11.05	177	Pn	Pn	20 07 42.3	-0.1
	2.9nm,0.3s,baz=350,slow=21,SNR=7.9						
ONTNC	Ouen Toro	11.29	177	*e*Pn	Pn	20 07 46.0	+0.5
PINNC	Pines Island,	11.69	172	*e*Pn	Pn	20 07 53.1	+2.2
CTA	Charters Tower	20.84	242	P	Pn	20 09 49.3	+0.7
	7.8nm,0.8s,baz=39,slow=12,SNR=3.6						
WR1	Warramunga Arr	31.51	250	*e*P	P	20 11 25.9	-0.7
	19nm,1.5s						
WRA	Warramunga Arr	31.51	250	P	P	20 11 25.9	-0.7
	1.1nm,0.7s,baz=82,slow=9.1,SNR=7.9						
ASAR	Alice Springs	32.83	243	P	P	20 11 37.2	-0.9
	0.6nm,0.7s,baz=65,slow=10,SNR=5.8						
RPZ	Rata Peaks	32.94	173	P	P	20 11 37.9	-0.9
	6.4nm,0.6s,baz=274,slow=3.6,SNR=6.8						
ILAR	Eielson Array	83.44	19	P	P	20 17 31.1	-0.3
	0.5nm,0.6s,baz=238,slow=5.2,SNR=8.7						
W13A	Hualapai Mount	88.48	54	*e*P	P	20 17 57.8	+0.5
	3.0nm,1.0s						

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*ISCJB **07** 20:09:58.1±0.5, 10°.95S±0°.07×165°.81E±0°.06, h10^{km}, mb4.2/15, Error ellipse: s-maj=10.7km s-min=9.0km az=15.9*
*IDC **07** 20:09:58.0±0.8, 10°.83S×165°.77E, h0^{km}, mb4.1/12, mb1 4.2/14, mb1mx4.1/32, mbtmp4.1/14, ML4.2/2, Error ellipse: s-maj=26.8km s-min=18.8km az=125.0*
*NEIC **07** 20:09:59.6±0.5, 10°.85S×165°.81E, h10^{km}, mb4.8/5, Error ellipse: s-maj=12.2km s-min=10.5km az=113.0*
ISC 07 20:09:59.6±0.6**, 10°.81S**±0°.10×**165°.88E**±0°.09**, h10**^{km}**, n27, σ1**^{s}**20**/30**, mb4.2**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.00	283	Pn	Pn	20 11 28.6	+0.1
	16nm,0.3s,baz=132,slow=8.4,SNR=4.7						
HNR				Sn	Sn	20 12 39.3	+2.0
	2.2nm,0.3s,baz=37,slow=20,SNR=3.4						
DZM	Mont Dzumac	11.21	177	*e*Pn	Pn	20 12 41.6	+1.6
DZM	Mont Dzumac	11.21	177	Pn	Pn	20 12 41.1	+1.0
	0.6nm,0.3s,baz=162,slow=20,SNR=6.5						
MANU	Manus Island	20.34	294	*e*P	Pn	20 14 38.2	-0.1
	32nm,0.9s						
CTA	Charters Tower	21.02	242	P	P	20 14 44.3	+0.6
	6.6nm,0.9s,baz=65,slow=12,SNR=4.0						
STKA	Stephens Creek	30.70	223	P	P	20 16 14.9	+0.2
	1.7nm,0.6s,baz=44,slow=9.9,SNR=5.4						
WR1	Warramunga Arr	31.69	250	*e*P	P	20 16 22.3	-1.3
	29nm,1.9s						
WR1				*e*PcP	PcP	20 19 15.8	+0.2
WRA	Warramunga Arr	31.69	250	P	P	20 16 22.3	-1.3
	2.8nm,0.8s,baz=81,slow=9.2,SNR=14						
WRA				PcP	PcP	20 19 15.8	+0.2
	0.8nm,0.9s,baz=46,slow=2.4,SNR=4.2						
LTZ	Lake Taylor	32.33	171	*e*P	P	20 16 29.2	+0.2
	21nm,1.2s						
AS01	Alice Springs	32.97	243	*e*P	P	20 16 33.0	-1.9
AS31	Alice Springs	33.01	243	*e*P	P	20 16 33.8	-1.5
	2.2nm,1.1s						
ASAR	Alice Springs	33.01	243	P	P	20 16 33.1	-2.2
	5.4nm,0.9s,baz=69,slow=9.6,SNR=20						
ASAR				PcP	PcP	20 19 18.1	-1.1
	0.6nm,0.8s,baz=67,slow=2.3,SNR=6.5						
RPZ	Rata Peaks	33.09	173	P	P	20 16 35.0	-0.6
	5.6nm,0.7s,baz=342,slow=6.1,SNR=3.8						
CMAR	Chiang Mai Arr	72.14	293	P	P	20 21 23.4	-1.6
	0.5nm,0.9s,baz=108,slow=5.8,SNR=4.0						
SONA0	Songino Array	78.56	324	*e*P	P	20 22 02.9	+1.4
SONM	Songino Array	78.56	324	P	P	20 22 02.9	+1.4
	0.4nm,0.7s,baz=123,slow=5.3,SNR=3.8						
HDA	Harding Lake	82.98	19	*e*P	P	20 22 25.5	+0.8
	8.6nm,0.9s						
ILAR	Eielson Array	83.25	18	P	P	20 22 26.9	+0.9
	1.9nm,0.8s,baz=226,slow=6.1,SNR=14						
NV01	Mina Array Sit	85.77	50	*e*P	P	20 22 40.4	+0.7
NVAR	Mina Array Bea	85.77	50	P	P	20 22 41.0	+1.3
	0.3nm,0.5s,baz=235,slow=6.3,SNR=3.3						
MK32	Makanchi Array	93.44	317	*e*P	P	20 23 15.2	-0.3
MKAR	Makanchi Array	93.44	317	P	P	20 23 15.2	-0.3
	0.7nm,0.7s,baz=95,slow=6.1,SNR=9.7						
ZALV	Zalesovo Beam	93.44	324	P	P	20 23 14.4	-0.8
	0.6nm,0.6s,baz=88,slow=5.0,SNR=4.5						
ZAA1	Zalesovo Array	93.45	324	*e*P	P	20 23 14.4	-0.8
YKA	Yellowknife Ar	94.71	27	P	P	20 23 20.0	-0.8
	0.1nm,0.6s,baz=254,slow=4.7,SNR=2.7						
ARA0	ARCESS Array S	116.14	346	*e*PKPdf	PKiKP	20 28 41.6	-1.0
ARCES	ARCESS Array B	116.14	346	PKP	PKiKP	20 28 41.6	-1.0
	1.6nm,0.8s,baz=29,slow=2.1,SNR=4.7						

IDC 07 20:13:15.5±2.2**, 50°.05N**×**114°.76W, h0**^{km}**, mb1 4.1**/2**, mb1mx3.2**/46**, mbtmp3.7**/2**, ML3.7**/2**, Error ellipse: s-maj=42.7km s-min=8.2km az=116.0, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	Newport	2.36	222	Pn	Pb	20 13 58.1	-0.9
	8.9nm,0.3s,baz=54,slow=12,SNR=62						
NEW				Lg	Lg	20 14 28.1	
	13nm,0.3s,baz=0.2,slow=21,SNR=11						
I56US	NEWPORT INFRAS	2.36	222	*i*		20 32 35.0	
	baz=45,slow=321,SNR=6.8						
I10CA	LAC DU BONNET	12.03	82	*i*		21 26 50.0	
	baz=273,slow=387,SNR=1.5						
YKA	Yellowknife Ar	12.48	0	Pn	Pn	20 16 10.2	-3.9
	0.6nm,0.3s,baz=182,slow=13,SNR=33						
YKA				Sn	Sn	20 18 22.0	-12
	0.2nm,0.3s,baz=172,slow=22,SNR=4.9						
YKA				Lg	Lg	20 19 41.9	
	0.1nm,0.3s,baz=177,slow=28,SNR=3.9						

IDC 07 20:16:43.6±1.5**, 10°.74S**×**165°.66E, h0**^{km}**, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/32**, mbtmp3.8**/4**, ML3.9**/1**, Error ellipse: s-maj=54.0km s-min=29.4km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.29	176	Pn	Pn	20 19 26.6	+0.2
	0.9nm,0.3s,baz=313,slow=22,SNR=8.1						
WRA	Warramunga Arr	31.51	249	P	P	20 23 07.6	0.0
	0.2nm,0.6s,baz=80,slow=8.9,SNR=3.8						
ASAR	Alice Springs	32.85	243	P	P	20 23 19.6	+0.1
	0.9nm,0.8s,baz=69,slow=9.7,SNR=7.1						
ILAR	Eielson Array	83.25	19	P	P	20 29 12.2	+0.5
	0.8nm,0.8s,baz=238,slow=5.2,SNR=6.7						
ARCES	ARCESS Array B	116.02	345	PKP	PKiKP	20 35 27.1	-1.0
	2.7nm,1.0s,baz=38,slow=3.4,SNR=5.6						

IDC 07 20:19:15.0±1.6**, 10°.81S**×**165°.65E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/32**, mbtmp3.8**/5**, ML3.7**/1**, Error ellipse: s-maj=51.4km s-min=29.1km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.22	176	Pn	Pn	20 21 57.3	+0.5
	0.5nm,0.3s,baz=352,slow=18,SNR=4.7						
WRA	Warramunga Arr	31.47	249	P	P	20 25 38.6	-0.1
	0.6nm,0.8s,baz=81,slow=8.9,SNR=3.8						
ASAR	Alice Springs	32.81	243	P	P	20 25 50.4	0.0
	1.2nm,0.9s,baz=73,slow=9.8,SNR=4.1						
ILAR	Eielson Array	83.33	19	P	P	20 31 43.5	0.0
	0.2nm,0.6s,baz=243,slow=4.0,SNR=4.2						
MKAR	Makanchi Array	93.29	317	P	P	20 32 31.7	-0.1
	0.5nm,0.8s,baz=97,slow=5.8,SNR=4.0						

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*IDC **07** 20:20:04.4±0.4, 10°.84S×165°.83E, h0^{km}, mb4.8/21, mb1 5.0/23, mb1mx4.9/33, mbtmp4.8/23, ML5.2/2, MS4.9/2, Ms1 4.9/2, ms1mx4.2/41, Error ellipse: s-maj=15.8km s-min=13.3km az=99.0*
*ISCJB **07** 20:20:06.7±0.1, 10°.91S±0°.02×165°.68E±0°.02, h21^{km}, mb5.1/198, MS5.9/1, Error ellipse: s-maj=3.9km s-min=3.2km az=139.2*
*NEIC **07** 20:20:06.3±0.1, 10°.86S×165°.71E, h10^{km}, mb5.2/167, Error ellipse: s-maj=3.5km s-min=2.6km az=130.0*
*MOS **07** 20:20:08.8±0.8, 10°.75S×165°.59E, h34^{km}, mb5.2/55, Error ellipse: s-maj=8.6km s-min=7.9km az=46.7*
ISC 07 20:20:07.7±1.7**, 10°.89S**±0°.05×**165°.84E**±0°.05**, h20**^{km}±8^{km}**, n464, σ1**^{s}**13**/475**, mb5.2**/198**, 7C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.98	284	*e*Pn	Pn	20 21 33.6	-1.5
HNR				*e*Sn	Sn	20 22 43.2	+0.1
HNR	Honiara	5.98	284	*e*P	Pn	20 21 33.6	-1.5
HNR				*e*		20 22 43.2	
HNR	Honiara	5.98	284	Pn	Pn	20 21 35.8	+0.7
	61nm,0.3s,baz=327,slow=1.2,SNR=13						
HNR				Sn	Sn	20 22 43.2	+0.1
	14nm,0.3s,baz=204,slow=20,SNR=2.2						
HNR				LR	LR	20 23 50.1	
	comp=Z,8µm,21.7s,baz=54,slow=38						
MARNC	Mare, Loyalty	10.74	169	*e*Pn	Pn	20 22 40.8	+0.4
DZM	Mont Dzumac	11.13	177	*e*Pn	Pn	20 22 46.5	+0.5
DZM				*e*Sn	Sn	20 24 47.8	-2.1
DZM	Mont Dzumac	11.13	177	Pn	Pn	20 22 47.1	+1.2
	14nm,0.3s,baz=294,slow=23,SNR=55						
DZM				Sn	Sn	20 24 47.8	-2.1
	2.0nm,0.3s,baz=143,slow=20,SNR=3.1						
ONTNC	Ouen Toro	11.37	177	*e*Pn	Pn	20 22 50.5	+1.4
PINNC	Pines Island,	11.76	173	*e*Pn	Pn	20 22 56.0	+1.6
MSVF	Nonsavu	13.64	121	*e*Pn	P	20 23 26.6	-2.4
MSVF	Nonsavu	13.64	121	*e*P	P	20 23 26.6	-2.4
TARA	Tarawa	14.06	31	*e*Pn	Pn	20 23 27.0	+1.0
RABL	Rabaul	15.10	295	*e*Pn	Pn	20 23 40.3	+0.3
EIDS	Eidsvold	20.07	222	P	Pn	20 24 41.8	0.0
	baz=20,SNR=17						
EIDS	Eidsvold	20.07	222	*e*P	Pn	20 24 40.8	-1.0
	133nm,1.2s						
MANU	Manus Island	20.33	294	*e*P	P	20 24 42.4	-0.6
	347nm,1.1s						
CTA	Charters Tower	20.95	242	P	P	20 24 50.0	+0.5
	66nm,0.9s,baz=76,slow=11,SNR=23						
CTAO	Charters Tower	20.95	242	*e*P	P	20 24 50.2	+0.6
	86nm,0.9s						
CTAO	Charters Tower	20.95	242	*e*P	P	20 24 50.2	+0.6
CTAO				pmax	pmax		
	comp=Z,86nm,0.9s						
MTSU	Mount Surprise	22.02	248	P	P	20 25 01.8	+0.6
	baz=22,SNR=33						
COEN	Coen	22.34	260	*e*P	P	20 25 04.7	+0.2
	comp=Z,39nm,0.9s						
RMQ	Roma	22.37	224	P	P	20 25 05.7	+1.0
	baz=22,SNR=16						
ARMA	Armidale	23.49	212	P	P	20 25 17.4	+0.9
	baz=24,SNR=9.0						
ARMA	Armidale	23.49	212	*e*P	P	20 25 16.9	+0.4
	comp=Z,47nm,0.8s						
QLP	Quilpie	25.66	230	P	P	20 25 37.0	+0.6
	baz=26,SNR=7.5						
MGCD	Mangrove Creek	26.00	209	P	P	20 25 41.5	+2.0
	baz=26,SNR=5.3						
JAY	Jayapura	26.29	287	P	P	20 25 42.4	+0.1
QIS	Mount Isa	26.98	246	P	P	20 25 47.8	-0.6
	baz=27,SNR=6.6						
CMSA	Cobar Meteorol	27.73	219	P	P	20 25 55.2	+0.2
	baz=28,SNR=24						
YNG	Young	28.23	212	P	P	20 25 59.5	0.0
	baz=28						
CNB	Canberra Magne	28.55	209	P	P	20 26 03.4	+0.9

	baz=28						
URZ	Urewera	29.06	162	P	P	20 26 05.5	-1.2
	comp=Z,6.8nm,0.4s,baz=261,slow=4.2,SNR=7.9						
H11S2	WAKE ISLAND Hy	29.21	2	T	T	20 56 28.1	
	baz=181,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	29.21	2	T	T	20 56 28.5	
	baz=181,slow=76,SNR=38						
H11S1	WAKE ISLAND Hy	29.23	2	T	T	20 56 29.5	
	baz=181,slow=76,SNR=38						
KATZ	Kakaramea	29.32	164	P	P	20 26 11.1	+1.9
TWVZ	Taurewa	29.34	165	P	P	20 26 11.6	+2.2
RTZ	Ruatahuna	29.35	162	P	P	20 26 10.4	+0.9
MTHZ	Maungataniwha	29.53	162	P	P	20 26 12.5	+1.6
SNGZ	Shannon Statio	29.61	162	P	P	20 26 12.2	+0.5
RAHZ	Arahi	29.66	162	P	P	20 26 13.1	+1.0
BKZ	Black Stump Fm	29.71	163	*e*P	P	20 26 13.1	+0.5
	comp=Z,36nm,0.4s						
BKZ	Black Stump Fm	29.71	163	P	P	20 26 13.6	+1.0
MOVZ	Moawhango	29.74	164	P	P	20 26 14.3	+1.5
BHHZ	Black Hill Sta	29.90	164	P	P	20 26 15.7	+1.4
ARHZ	Aropaoanui	29.95	162	P	P	20 26 16.3	+1.6
H11N1	WAKE ISLAND Hy	30.43	2	T	T	20 58 02.9	
	baz=182,slow=76,SNR=32						
H11N3	WAKE ISLAND Hy	30.44	2	T	T	20 58 00.1	
	baz=182,slow=76,SNR=42						
H11N2	WAKE ISLAND Hy	30.45	2	T	T	20 58 01.1	
	baz=182,slow=76,SNR=35						
STKA	Stephens Creek	30.61	223	P	P	20 26 21.2	+0.6
	baz=31,SNR=16						
STKA	Stephens Creek	30.61	223	*e*P	P	20 26 20.6	0.0
	comp=Z,3.9nm,0.9s						
STKA				ScP	ScP	20 33 03.8	+3.2
STKA	Stephens Creek	30.61	223	*e*P	P	20 26 20.6	0.0
STKA						20 33 03.8	
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	30.61	223	P	P	20 26 20.9	+0.3
	comp=Z,12nm,0.8s,baz=33,slow=9.4,SNR=27						
STKA				ScP	ScP	20 33 03.8	+3.2
	comp=Z,2.9nm,0.8s,baz=31,slow=7.5,SNR=4.7						
THZ	Tophouse	31.37	170	*e*P	P	20 26 28.0	+0.8
	comp=Z,44nm,1.0s						
WRAB	Tennant Creek	31.61	250	*e*P	P	20 26 28.5	-1.0
	comp=Z,34nm,1.3s						
WRAB	Tennant Creek	31.61	250	*ce*P	P	20 26 27.6	-1.9
WRAB				pmax	pmax		
	comp=Z,61nm,2.5s						
WB2	Warramunga Arr	31.61	250	*e*P	P	20 26 28.2	-1.3
WR1	Warramunga Arr	31.62	250	*e*P	P	20 26 28.8	-0.9
	comp=Z,33nm,1.0s						
WR1				*e*PcP	PcP	20 29 22.2	+0.3
WR1				*e*ScP	ScP	20 33 07.1	+2.8
WRA	Warramunga Arr	31.62	250	P	P	20 26 28.8	-0.9
	comp=Z,14nm,0.8s,baz=81,slow=9.1,SNR=60						
WRA				PcP	PcP	20 29 22.2	+0.3
	comp=Z,2.5nm,1.0s,baz=80,slow=3.2,SNR=6.3						
WRA				ScP	ScP	20 33 07.1	+2.8
	comp=Z,3.9nm,1.3s,baz=76,slow=3.6,SNR=5.6						
KHZ	Kahutara	32.12	169	*e*P	P	20 26 33.5	-0.2
	comp=Z,43nm,1.1s						
TOO	Toolangi	32.25	211	P	P	20 26 36.1	+1.2
	baz=32,SNR=5.1						
LTZ	Lake Taylor	32.26	171	*e*P	P	20 26 35.3	+0.2
	comp=Z,52nm,0.8s						
KDU	Kakadu	32.70	263	P	P	20 26 37.8	-1.3
	baz=33,SNR=4.5						
FOZ	Fox Glacier	32.70	175	*e*P	P	20 26 39.5	+0.7
	comp=Z,47nm,0.9s						
OXZ	Oxford	32.76	172	*e*P	P	20 26 40.0	+0.7
	comp=Z,37nm,0.8s						
AS01	Alice Springs	32.90	243	*e*P	P	20 26 39.0	-1.9
AS01				*e*PcP	PcP	20 29 25.6	+0.3
AS31	Alice Springs	32.94	243	*e*P	P	20 26 39.5	-1.8
	comp=Z,11nm,0.8s						
ASAR	Alice Springs	32.94	243	P	P	20 26 39.7	-1.5
	comp=Z,38nm,0.9s,baz=73,slow=9.1,SNR=72						
ASAR				PcP	PcP	20 29 25.6	+0.2
	comp=Z,4.3nm,0.9s,baz=72,slow=2.7,SNR=9.1						
ASAR				ScP	ScP	20 33 12.3	+3.6
	comp=Z,4.1nm,1.1s,baz=58,slow=3.5,SNR=12						
RPZ	Rata Peaks	33.01	173	*e*P	P	20 26 42.4	+0.8
	comp=Z,38nm,0.8s						
RPZ	Rata Peaks	33.01	173	P	P	20 26 42.6	+1.1
	comp=Z,33nm,0.7s,baz=135,slow=4.1,SNR=18						
RPZ				LR	LR	20 39 22.3	
	comp=Z,3µm,19.0s,baz=341,slow=35						
CRLZ	Canterbury Las	33.09	171	*e*P	P	20 26 42.8	+0.6
	comp=Z,205nm,1.6s						
MQZ	McQueen's Vall	33.22	171	*e*P	P	20 26 44.1	+0.8
	comp=Z,48nm,0.8s						
BBOO	Buckleboo	34.99	227	*e*P	P	20 26 58.8	-0.2
	comp=Z,35nm,0.9s						
BNDI	Bandanaira	36.14	277	P	P	20 27 17.7	+8.7
KNRA	Kununurra	36.36	258	P	P	20 27 11.7	+0.9
	baz=36,SNR=3.5						
FITZ	Fitzroy Crossi	39.50	255	P	P	20 27 36.0	-1.4
	baz=40,SNR=11						
FITZ	Fitzroy Crossi	39.50	255	*e*P	P	20 27 36.7	-0.7
	comp=Z,22nm,1.0s						
FORT	Forrest	40.20	235	*e*P	P	20 27 42.7	-0.3
	comp=Z,27nm,0.8s						
SANI	Sanana	40.51	280	P	P	20 27 46.8	+1.0
BATI	Baumata	41.44	267	P	P	20 27 57.7	+4.2
MMRI	Maumere	43.00	269	*e*P	P	20 28 04.8	-1.4
	comp=Z,36nm,1.1s						
LUWI	Luwuk	43.87	280	*e*P	P	20 28 12.1	-1.2
	comp=Z,48nm,1.1s						
LUWI	Luwuk	43.87	280	P	P	20 28 14.5	+1.2
APSI	Ampana	44.99	280	P	P	20 28 22.8	+0.6
BNSI	Bone	45.74	274	P	P	20 28 28.0	-0.1
SPSI	Sidrap Palu	46.15	275	P	P	20 28 31.6	+0.2
PCI	Palu	46.75	279	P	P	20 28 35.6	-0.5
MPSI	Mapaga	47.00	281	P	P	20 28 39.5	+1.4
KHU	Kahuku	48.38	52	*e*P	P	20 28 49.7	+0.8
	comp=Z,169nm,1.1s						
KHU	Kahuku	48.38	52	*e*P	P	20 28 49.7	+0.8
KHU				pmax	pmax		
	comp=Z,169nm,1.1s						
AIN	Ainahou	48.57	52	*e*P	P	20 28 52.5	+2.2
	comp=Z,345nm,1.4s						
HMH	Humu'ula Sheep	48.68	52	*e*P	P	20 28 53.9	+2.5
	comp=Z,142nm,1.0s						
MORW	Morawa	49.77	241	*e*P	P	20 28 59.2	-0.1
	comp=Z,36nm,1.0s						
PWJI	Pagerwojo	53.32	268	P	P	20 29 26.5	+0.5
MJAR	Matsushiro Arr	53.88	332	P	P	20 29 29.0	-0.7
	comp=Z,7.1nm,0.9s,baz=168,slow=8.4,SNR=10						
MAJO	Matsushiro	53.88	332	*e*P	P	20 29 29.0	-0.7
MAJO	Matsushiro	53.88	332	*e*P	P	20 29 29.0	-0.7
MAT	Matsushiro	53.88	332	P	P	20 29 29.5	-0.2
PCJI	Pacitan	53.91	268	P	P	20 29 31.5	+1.1
KSRS	Korea Array	59.80	326	P	P	20 30 11.8	+0.1
	comp=Z,2.7nm,0.8s,baz=151,slow=7.8,SNR=3.8						
KS15	Wonju Array Si	59.81	326	*e*P	P	20 30 11.5	-0.3
KSAR	Wonju Array Be	59.81	326	P	P	20 30 11.8	0.0
KSAR	Wonju Array Be	59.81	326	P	P	20 30 11.8	0.0
YSS	Yuzh-Sakhalins	61.17	342	*e*P	P	20 30 21.9	+1.0
	comp=Z,57nm,1.2s						
YSS	Yuzh-Sakhalins	61.17	342	*e*P	P	20 30 22.0	+1.2
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
NJ2	Nanjing	61.98	315	*e*P	P	20 30 27.6	+1.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	Ussuriysk Ar.	62.85	333	P	P	20 30 33.4	+1.1
	comp=Z,11nm,1.1s,baz=107,slow=7.6,SNR=5.0						
PETK	Petropavlovsk-	64.13	355	P	P	20 30 39.4	-1.0
	comp=Z,4.7nm,0.8s,baz=161,slow=11,SNR=5.4						
PEA1	Petropavlovsk-	64.13	355	*e*P	P	20 30 39.4	-1.1
TYV	Tymovskoe	64.73	344	*e*P	P	20 30 47.7	+3.3
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
CN2	Changchun	65.66	329	*e*P	P	20 30 50.4	-0.2
CN2				*e*sP	sP	20 30 57.5	-1.7
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CASY	Casey	66.55	201	*e*P	P	20 30 55.4	-0.7
	comp=Z,23nm,1.3s						
VNDA	Vanda	66.64	181	P	P	20 30 58.0	+1.5
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VNDA	Vanda	66.64	181	P	P	20 30 58.0	+1.5
	comp=Z,8.1nm,1.0s,baz=344,slow=7.1,SNR=3.8						
KLR	Kul'dur	66.95	336	⇑*i*P	P	20 30 59.6	+0.8
NKL	Nikolayevsk	67.32	344	*e*P	P	20 31 00.5	-0.5
ENH	Enshi	67.87	309	*e*P	P	20 31 03.4	-1.7
	comp=Z,16nm,1.0s						
GYA	Guiyang	68.41	304	⇑*i*P	P	20 31 10.8	+2.1
GYA				PP	PP	20 33 43.0	+3.1
GYA				S	S	20 40 10.6	+1.0
GYA				SKS	SKSac	20 41 05.5	-1.6
GYA	Guiyang	68.41	304	SS	SS	20 44 36.8	+3.1
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,7.8s						
GYA				LR	LR		
	comp=N,550nm,18.2s						
GYA				LR	LR		
	comp=E,480nm,18.0s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
BJI	Beijing	68.42	321	*e*P	P	20 31 08.9	+0.6
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PBKT	Sadao Pong	69.70	292	P	P	20 31 28.3	+12
XAN	Xi'an	70.08	312	P	P	20 31 18.5	-0.3
XAN				pP	sP	20 31 29.9	+2.5
XAN				sP	PcP	20 31 35.0	-5.8
XAN				PcP	pP	20 31 41.8	+17
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				LR	LR		
	comp=N,2µm,17.3s						
XAN				LR	LR		
	comp=Z,2µm,16.3s						
XAN	Xi'an	70.08	312	*e*P	P	20 31 18.2	-0.6
	comp=Z,9.3nm,1.0s						
XAN	Xi'an	70.08	312	*e*P	P	20 31 18.2	-0.6
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI	Kunming	71.12	301	P	P	20 31 26.9	+1.4
KMI				pP	sP	20 31 34.1	0.0
KMI				sP	pP	20 31 36.2	+4.4
KMI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC	Hu-ho-hao-te	71.77	320	*e*P	P	20 31 30.9	+1.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,3µm,6.9s						
CM01	Chiang Mai Arr	72.11	293	*e*P	P	20 31 31.4	0.0
CM31	Chiang Mai Arr	72.13	293	*e*P	P	20 31 31.5	0.0
CMAR	Chiang Mai Arr	72.13	293	P	P	20 31 32.0	+0.5
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	72.13	293	P	P	20 31 31.9	+0.5
	comp=Z,2.0nm,0.8s,baz=112,slow=4.2,SNR=11						
CMMT	Chiang Mai	72.24	294	P	P	20 31 33.3	+1.2
	comp=Z,4.7nm,1.3s						
CHTO	Chiang Mai	72.24	294	*e*P	P	20 31 31.6	-0.5
	comp=Z,8.2nm,1.3s						
CHTO	Chiang Mai	72.24	294	*e*P	P	20 31 31.6	-0.5
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CHTO	Chiang Mai	72.24	294	P	P	20 31 33.4	+1.3
	comp=Z,21nm,1.3s						
CD2	Chengdu	72.58	307	P	P	20 31 36.3	+2.3
CD2				pmax	pmax		
	comp=Z,20nm,1.2s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
SEY	Seymchan	74.33	354	*i* P	P	20 31 43.3	-0.2
LZH	Lanzhou	74.72	312	*e*P	P	20 31 47.8	+1.2
LZH				pP	sP	20 31 53.2	-2.0
LZH				sP	pP	20 31 55.7	+2.8
LZH				PP	PP	20 34 31.4	-2.6
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
LZH				LR	LR		
	comp=N,740nm,17.6s						
LZH				LR	LR		
	comp=E,760nm,17.0s						
LZH				LR	LR		
	comp=Z,840nm,18.8s						
SVW2	Sparrevohn	77.94	18	*e*P	P	20 32 04.8	+0.6
	comp=Z,42nm,1.3s						
YAK	Yakutsk	77.98	343	*e*P	P	20 32 02.8	-1.4
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
ANM	Nome	78.32	12	*e*P	P	20 32 07.1	+0.9
	comp=E,20nm,1.2s						
ANM	Nome	78.32	12	*e*P	P	20 32 07.1	+0.9
ANM				pmax	pmax		
	comp=Z,20nm,1.2s						
RSO	Redoubt South	78.35	20	*e*P	P	20 32 07.3	+0.7
BRLK	Bradley Lake	78.47	21	*e*P	P	20 32 07.6	+0.6
	comp=Z,145nm,1.8s						
SONA0	Songino Array	78.60	324	*e*P	P	20 32 08.7	+0.4
SONM	Songino Array	78.60	324	P	P	20 32 08.7	+0.4
	comp=Z,3.0nm,0.8s,baz=143,slow=6.9,SNR=12						
SONA1	Songino Array	78.60	324	*e*P	P	20 32 07.6	-0.7
BILL	Bilibino	78.73	0	*e*P	P	20 32 08.5	+0.1
	comp=Z,32nm,1.1s						
BILL	Bilibino	78.73	0	⇓*i*P	P	20 32 08.8	+0.5
BILL				*e*		20 32 18.5	
BILL				*e*		20 35 06.6	
BILL				*e*S	S	20 42 16.8	+12
BILL				*e*SS	SS	20 47 08.4	-0.9
BILL				pmax	pmax		
	comp=Z,37nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,17.0s						
GTA	Gaotai	79.02	314	⇑P	P	20 32 11.8	+1.1
GTA				pP	sP	20 32 17.0	-2.4
GTA				sP	PcP	20 32 20.1	+0.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				LR	LR		
	comp=N,2µm,17.1s						
GTA				LR	LR		
	comp=E,2µm,18.4s						
GTA				LR	LR		
	comp=Z,3µm,16.8s						
QSPA	South Pole Qui	79.11	180	*e*P	P	20 32 10.2	-0.5
	comp=Z,34nm,1.4s						
SUA	Susitna One	79.75	20	*e*P	P	20 32 13.8	-0.4
	comp=Z,28nm,1.0s						
PMR	Palmer	80.39	20	*e*P	P	20 32 16.7	-0.7
	comp=Z,21nm,1.2s						
PMR	Palmer	80.39	20	*e*P	P	20 32 16.7	-0.7
PMR				pmax	pmax		
	comp=Z,21nm,1.2s						
SHL	Shillong	80.52	298	*e*P	P	20 32 20.0	+0.8
CAST	Castle Rocks	80.78	18	*e*P	P	20 32 18.9	-0.7
	comp=Z,24nm,0.8s						
SML	Sawmill	80.81	20	*e*P	P	20 32 20.0	+0.2
	comp=Z,31nm,1.1s						
SML	Sawmill	80.81	20	*e*P	P	20 32 20.0	+0.2
SML				pmax	pmax		
	comp=Z,31nm,1.1s						
DIV	Divide	81.24	22	*e*P	P	20 32 22.5	+0.3
	comp=Z,45nm,1.1s						
TRF	Thorofare Moun	81.35	18	*e*P	P	20 32 22.2	-0.6
	comp=Z,12nm,0.9s						
KLU	Klutina	81.43	21	*e*P	P	20 32 23.6	+0.5
	comp=Z,33nm,1.2s						
ZAK	Zakamensk	81.63	325	*e*P	P	20 32 22.7	-1.8
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RND	Reindeer	81.77	19	*e*P	P	20 32 25.1	+0.2
	comp=Z,39nm,1.2s						
RND	Reindeer	81.77	19	*e*P	P	20 32 25.1	+0.2
RND				pmax	pmax		
	comp=Z,39nm,1.2s						
RDOG	Red Dog Mine	81.86	11	*e*P	P	20 32 26.4	+1.2
	comp=Z,27nm,0.8s						
MCK	McKinley	81.97	19	*e*P	P	20 32 25.9	0.0
	comp=Z,42nm,1.1s						
MCK	McKinley	81.97	19	*e*P	P	20 32 25.9	0.0
MCK				pmax	pmax		
	comp=Z,42nm,1.1s						
DHY	Denali Highway	82.01	20	*e*P	P	20 32 26.7	+0.4
	comp=Z,17nm,1.0s						
TLY	Talaya	82.05	326	*e*P	P	20 32 26.2	-0.4
	comp=Z,12nm,0.9s						
TLY	Talaya	82.05	326	*e*P	P	20 32 26.3	-0.3
IM3	Indian Mountai	82.26	16	*e*P	P	20 32 27.5	+0.2
HARP	HAARP	82.31	21	*e*P	P	20 32 28.2	+0.5
	comp=Z,43nm,0.9s						
MLY	Manley	82.37	17	*e*P	P	20 32 27.8	-0.2
	comp=Z,24nm,1.4s						
GDXM	Geysers	82.65	48	*e*P	P	20 32 31.8	+1.7
	comp=Z,27nm,1.2s						
WRH	Wood River Hil	82.76	18	*e*P	P	20 32 29.5	-0.5
	comp=Z,30nm,0.9s						
SAO	San Andreas Ge	82.97	51	*e*P	P	20 32 32.5	+0.8
	comp=Z,20nm,1.0s						
MDM	Murphy Dome	83.06	18	*e*P	P	20 32 31.2	-0.4
	comp=Z,32nm,0.9s						
HDA	Harding Lake	83.07	19	*e*P	P	20 32 31.5	-0.1
	comp=Z,67nm,0.8s						
HDA	Harding Lake	83.07	19	P	P	20 32 31.6	0.0
	baz=227						
TCOL	CIGO, UAF Yank	83.11	18	P	P	20 32 32.0	+0.3
	baz=226						
COLA	College	83.12	18	*e*P	P	20 32 31.7	0.0
	comp=Z,46nm,0.8s						
COLA	College	83.12	18	*e*P	P	20 32 31.5	-0.3
COLA				pmax	pmax		
	comp=Z,45nm,0.9s						
O02D	Mt. Diablo Mer	83.13	47	P	P	20 32 34.3	+1.8
	baz=250						
RIDG	Independ'e Rid	83.30	20	*e*P	P	20 32 32.9	0.0
	comp=Z,26nm,0.9s						
ILAR	Eielson Array	83.34	18	P	P	20 32 32.6	-0.4
	comp=Z,15nm,0.8s,baz=230,slow=5.1,SNR=101						
ILB	Eielson Array	83.34	18	*e*P	P	20 32 32.6	-0.4
	comp=Z,16nm,0.8s						
IL1	Eielson Array	83.34	18	*e*P	P	20 32 32.5	-0.5
POKR	Poker Plat Res	83.41	18	P	P	20 32 33.1	-0.3
	baz=226						
WDC	Whiskeytown Da	83.44	47	*e*P	P	20 32 34.2	+0.1
	comp=Z,43nm,1.6s						
WDC	Whiskeytown Da	83.44	47	*e*P	P	20 32 34.2	+0.1
WDC				pmax	pmax		
	comp=Z,43nm,1.6s						
N02D	Trinity Center	83.46	46	P	P	20 32 36.0	+1.8
	baz=250						
M02C	Callahan	83.50	46	P	P	20 32 36.3	+1.8
	baz=250						
PKM	Mcpherson Peak	83.63	53	P	P	20 32 37.5	+2.1
	baz=252						
SCRK	Sand Creek	83.75	20	*e*P	P	20 32 35.5	+0.3
	comp=Z,52nm,1.2s						
ORV	Oroville	83.85	48	*e*P	P	20 32 36.6	+0.4
	comp=Z,16nm,1.0s						
ORV	Oroville	83.85	48	*e*P	P	20 32 36.6	+0.4
ORV				pmax	pmax		
	comp=Z,16nm,1.0s						
O03E	Paynes Creek	83.88	47	P	P	20 32 37.5	+1.1
	baz=250						
AFDM	Forest Hills D	84.04	49	*e*P	P	20 32 37.7	+0.5
	comp=Z,26nm,1.0s						
COLD	Coldfoot	84.13	16	*e*P	P	20 32 38.3	+1.3
	comp=Z,5.0nm,1.0s						
CMB	Columbia Colle	84.18	50	*e*P	P	20 32 38.3	+0.4
	comp=Z,15nm,0.9s						
CMB	Columbia Colle	84.18	50	*e*P	P	20 32 38.3	+0.4
CMB				pmax	pmax		
	comp=Z,15nm,0.9s						
L04D	Klamath Falls	84.18	45	P	P	20 32 39.3	+1.4
	baz=250						
HYT	Haines Junctio	84.21	24	*e*P	P	20 32 38.5	+0.9
	comp=Z,20nm,1.0s						
PRP	Porcupine Dome	84.28	18	*e*P	P	20 32 39.4	+1.5
	comp=Z,12nm,1.2s						
M04C	Macdoel	84.35	46	P	P	20 32 40.5	+1.7
	baz=250						
ARVC	Arvin	84.47	53	P	P	20 32 41.1	+1.7
	baz=253						
VES	Vestal, Richgr	84.49	52	P	P	20 32 41.1	+1.6
	baz=252						
J04D	Umpqua Nationa	84.67	44	P	P	20 32 41.5	+1.1
	baz=250						
MWC	Mount Wilson	84.82	54	*e*P	P	20 32 42.0	+0.5
	comp=Z,18nm,1.0s						
MWC	Mount Wilson	84.82	54	*e*P	P	20 32 42.0	+0.5
MWC				pmax	pmax		
	comp=Z,18nm,1.0s						
ISA	Isabella, Lake	84.91	52	*e*P	P	20 32 42.6	+0.8
	comp=Z,9.9nm,0.8s						
ISA	Isabella, Lake	84.91	52	*e*P	P	20 32 42.6	+0.8
ISA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ISA	Isabella, Lake	84.91	52	P	P	20 32 42.5	+0.8
	baz=253						
WAKR	Walker	85.03	49	*e*P	P	20 32 43.7	+1.2
	comp=Z,46nm,1.4s						
MDPB	Devils Postpil	85.04	50	*e*P	P	20 32 43.6	+1.0
	comp=Z,26nm,0.8s						
EDW2	Edwards Air Fo	85.06	53	P	P	20 32 43.6	+1.1
	baz=253						
OMMB	Old Mammoth Mi	85.09	50	*e*P	P	20 32 44.0	+1.1
	comp=Z,22nm,1.2s						
H04A	Detroit Lake	85.11	43	*e*P	P	20 32 43.6	+1.1
	comp=Z,46nm,1.4s						
BFSC	Mount Baldy Ra	85.14	54	P	P	20 32 43.5	+0.5
	baz=254						
J05D	Fort Rock, OR	85.28	44	P	P	20 32 45.1	+1.6
	baz=250						
TOLK	Toolik Lake Re	85.32	15	P	P	20 32 40.4	-2.6
	baz=224						
DAWY	Dawson	85.38	21	*e*P	P	20 32 44.4	+1.0
	comp=Z,22nm,1.0s						
CWC	Cottonwood Cre	85.44	52	P	P	20 32 45.6	+1.1
	baz=253						
PAHR	Pah Rah Range	85.44	48	*e*P	P	20 32 45.0	+0.6
	comp=Z,24nm,1.1s						
LRMC	Laurel Mtn Rad	85.48	53	P	P	20 32 46.0	+1.4
	baz=253						
MOD	Modoc Plateau	85.48	46	*e*P	P	20 32 45.3	+0.8
	comp=Z,12nm,0.9s						
TIN	Tinemaha, Big	85.51	51	P	P	20 32 46.4	+1.6
	baz=253						
PINE	Pine Mountain	85.65	44	*e*P	P	20 32 46.6	+1.2
	comp=Z,31nm,1.2s						
RYN	Ryan	85.75	50	*e*P	P	20 32 46.6	+0.6
	comp=Z,16nm,1.0s						
MONP2	Monument Peak	85.76	56	P	P	20 32 47.5	+1.3
	baz=254						
MPMC	Manual Prospec	85.79	52	P	P	20 32 47.2	+0.9
	baz=253						
NV01	Mina Array Sit	85.86	50	*e*P	P	20 32 47.0	+0.4
NVAR	Mina Array Bea	85.86	50	P	P	20 32 47.0	+0.4
	comp=Z,24nm,1.0s,baz=234,slow=6.3,SNR=41						
G05D	Wamic, OR	85.89	43	P	P	20 32 46.7	+0.4
	baz=250						
PFO	Pinyon Flats O	85.92	55	*e*P	P	20 32 47.1	+0.2
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	85.92	55	*e*P	P	20 32 47.1	+0.2
PFO				pmax	pmax		
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	85.92	55	P	P	20 32 48.3	+1.4
	baz=254						
TPFO	Pinon Flats	85.93	55	P	P	20 32 48.3	+1.4
	baz=254						
XPFO	Pion Flat	85.93	55	*e*P	P	20 32 47.1	+0.2
	comp=Z,11nm,0.9s						
IKP	In-Ko-Pah, Jac	85.95	56	P	P	20 32 48.3	+1.3
	baz=254						
TIXI	Tiksi	85.96	349	*e*P	P	20 32 44.2	-1.8
	comp=Z,10nm,1.1s						
TIXI	Tiksi	85.96	349	*e*P	P	20 32 45.6	-0.4
TIXI				pmax	pmax		
	comp=Z,12nm,1.3s						
NV11	Mina Array Sit	85.97	50	*e*P	P	20 32 47.8	+0.7
	comp=Z,2.3nm,1.1s						
GSC	Goldstone, Bar	86.11	53	*e*P	P	20 32 47.7	0.0
	comp=Z,13nm,1.1s						
GSC	Goldstone, Bar	86.11	53	*e*P	P	20 32 47.7	0.0
GSC				pmax	pmax		
	comp=Z,13nm,1.1s						
GSC	Goldstone, Bar	86.11	53	P	P	20 32 48.3	+0.5
	baz=254						
GRAC	Grapevine Rang	86.15	51	P	P	20 32 49.1	+1.2
	baz=253						
KVN	Kaiserville	86.19	49	*e*P	P	20 32 49.0	+0.8
	comp=Z,17nm,1.0s						
KVN	Kaiserville	86.19	49	*e*P	P	20 32 49.0	+0.8
KVN				pmax	pmax		
	comp=Z,17nm,1.0s						
A04D	Lummi Island	86.21	39	P	P	20 32 49.6	+1.9
	baz=249						

SWSC	Sam W. Stewart	86.28	56	P	P	20 32 49.7	+1.3
	baz=255						
HEC	Hector,Ludlow	86.35	54	P	P	20 32 50.0	+1.1
	baz=254						
FURC	Furnace Creek,	86.39	52	P	P	20 32 50.3	+1.4
	baz=254						
BELC	Belle Mtn. Jos	86.40	55	P	P	20 32 50.1	+0.8
	baz=254						
B05A	Bryant	86.42	40	P	P	20 32 49.8	+0.9
	baz=250						
SHOC	Shoshone, Teco	86.69	53	P	P	20 32 51.7	+1.2
	baz=254						
I07A	Izee	86.73	44	eP	P	20 32 51.3	+0.7
	comp=Z,26nm,1.4s						
BC3	Big Chuckawall	86.74	55	P	P	20 32 52.3	+1.3
	baz=255						
WVOR	Wild Horse Val	86.82	46	eP	P	20 32 51.8	+0.7
	comp=Z,22nm,1.1s						
WVOR	Wild Horse Val	86.82	46	eP	P	20 32 51.8	+0.7
WVOR				pmax	pmax		
	comp=Z,22nm,1.1s						
GMRC	Granite Mounta	86.88	54	P	P	20 32 52.3	+0.8
	baz=255						
LTY	Liberty	86.98	41	eP	P	20 32 52.1	+0.4
	comp=Z,27nm,1.4s						
F07A	Phinny Hill Vi	87.02	42	eP	P	20 32 52.4	+0.6
	comp=Z,20nm,1.0s						
GLA	Glamis	87.09	56	eP	P	20 32 53.8	+1.2
	comp=Z,22nm,0.8s						
GLA	Glamis	87.09	56	eP	P	20 32 53.8	+1.2
GLA				pmax	pmax		
	comp=Z,22nm,0.8s						
GLA	Glamis	87.09	56	P	P	20 32 53.9	+1.4
	baz=255						
IRM	Iron Mountain	87.12	55	P	P	20 32 53.9	+1.3
	baz=255						
J08A	Circle Bar Ran	87.21	45	eP	P	20 32 53.7	+0.7
	comp=Z,21nm,1.0s						
BMN	Battle Mountai	87.24	48	eP	P	20 32 54.1	+0.8
	comp=Z,5.4nm,1.0s						
BMN	Battle Mountai	87.24	48	eP	P	20 32 54.1	+0.8
BMN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HAWA	Hanford	87.44	42	eP	P	20 32 54.6	+0.7
	comp=Z,15nm,1.0s						
G08A	Pilot Rock	87.48	43	eP	P	20 32 55.0	+0.8
	comp=Z,23nm,1.1s						
Y12C	Blythe	87.52	55	eP	P	20 32 55.5	+0.9
	comp=Z,22nm,1.1s						
Y12C	Blythe	87.52	55	P	P	20 32 56.0	+1.5
	baz=255						
SHPR	Sheep Range	87.72	52	eP	P	20 32 56.8	+1.2
	comp=Z,14nm,1.2s						
E08A	Dider Farm, El	87.78	42	eP	P	20 32 56.6	+1.1
	comp=Z,40nm,1.2s						
R11A	Troy Canyon, C	87.89	50	eP	P	20 32 57.0	+0.6
	comp=Z,17nm,1.3s						
R11A	Troy Canyon, C	87.89	50	P	P	20 32 57.5	+1.1
	baz=254						
113A	Mohawk Valley,	87.89	56	eP	P	20 32 56.9	+0.6
	comp=Z,7.3nm,0.8s						
PDMCI	Parker Dam,Lak	87.96	55	P	P	20 32 58.1	+1.5
	baz=256						
D08A	Wollman Farm,	88.05	41	eP	P	20 32 56.7	-0.1
	comp=Z,21nm,1.4s						
B08A	Colville Reser	88.19	40	eP	P	20 32 57.8	+0.3
	comp=Z,10nm,1.1s						
W13A	Hualapai Mount	88.37	54	eP	P	20 32 59.9	+1.1
	comp=Z,26nm,1.4s						
E09A	Wood Farm, Sta	88.39	42	eP	P	20 32 59.4	+1.0
	comp=Z,12nm,1.1s						
BMO	Blue Mountains	88.46	44	eP	P	20 32 59.5	+0.6
	comp=Z,14nm,1.4s						
BMO	Blue Mountains	88.46	44	eP	P	20 32 59.5	+0.6
BMO				pmax	pmax		
	comp=Z,14nm,1.4s						
214A	Organ Pipe Nat	88.47	57	P	P	20 33 00.7	+1.5
	baz=256						
ELK	Elko	88.78	48	eP	P	20 33 01.0	+0.3
	comp=Z,9.7nm,1.3s						
ELK	Elko	88.78	48	eP	P	20 33 01.0	+0.3
ELK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
Y14A	Wickenburg	88.79	55	eP	P	20 33 01.9	+1.2
	comp=Z,17nm,1.3s						
F10A	Beach Ranch, E	88.84	43	eP	P	20 33 01.2	+0.6
	comp=Z,51nm,1.8s						
WMQ	Urumqi	89.05	315	P	P	20 33 01.6	-0.1
WMQ				PcP	PcP	20 33 03.1	0.0
WMQ				sP	sP	20 33 09.3	-1.0
WMQ	Urumqi	89.05	315	SKS	SKSac	20 43 23.7	-6.9
WMQ	Urumqi	89.05	315	sS	sS	20 44 03.7	+4.5
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,8µm,11.8s						
WMQ				LR	LR		
	comp=N,6µm,22.9s						
WMQ				LR	LR		
	comp=E,6µm,18.7s						
WMQ				LR	LR		
	comp=Z,4µm,22.9s						
MFID	Camas Ranch	89.08	46	eP	P	20 33 02.7	+0.8
	comp=Z,47nm,1.9s						
SLBS	Sierra La Lagu	89.10	66	eP	P	20 33 03.5	+1.2
	comp=Z,14nm,0.9s						
PSUT	Pine Spring	89.25	51	eP	P	20 33 04.1	+1.2
	comp=Z,36nm,0.6s						
LCMT	Little Creek M	89.34	52	eP	P	20 33 04.5	+1.2
	comp=Z,20nm,0.7s						
HSIG		89.37	60	eP	P	20 33 04.2	+0.8
	comp=Z,22nm,1.4s						
CCUT	Cedar City	89.38	52	eP	P	20 33 04.5	+0.9
	comp=Z,169nm,1.1s						
NEW	Newport	89.57	41	eP	P	20 33 04.0	0.0
	comp=Z,9.3nm,0.6s						
SZCU	Shurtz Canyon	89.60	52	eP	P	20 33 06.0	+1.4
	comp=Z,299nm,0.4s						
KNB	Kanab	89.67	52	eP	P	20 33 06.1	+1.2
	comp=Z,22nm,0.6s						
KNB	Kanab	89.67	52	eP	P	20 33 06.1	+1.2
KNB				pmax	pmax		
	comp=Z,22nm,0.6s						
INK	Inuvik	89.73	19	eP	P	20 33 03.5	-0.6
	comp=Z,11nm,1.4s						
INK	Inuvik	89.73	19	eP	P	20 33 03.5	-0.6
INK				pmax	pmax		
	comp=Z,11nm,1.4s						
U15A	North Rim	89.94	53	eP	P	20 33 07.7	+1.4
	comp=Z,21nm,0.6s						
HLID	Hailey	90.11	46	eP	P	20 33 08.0	+1.3
	comp=Z,7.7nm,0.9s						
HLID	Hailey	90.11	46	P	P	20 33 08.1	+1.4
	baz=255						
X16A	Lo Mia Camp, P	90.16	55	eP	P	20 33 07.9	+0.7
	comp=Z,14nm,0.9s						
PKCU	Pink Cliffs	90.17	52	eP	P	20 33 09.3	+1.9
	comp=Z,46nm,0.8s						
TUC	Tucson	90.23	57	eP	P	20 33 09.0	+1.5
	comp=Z,10nm,0.9s						
TUC	Tucson	90.23	57	P	P	20 33 09.0	+1.5
	baz=257						
TCRU	Three Creeks R	90.33	51	eP	P	20 33 09.8	+1.7
	comp=Z,27nm,0.5s						
MTPU	Mount Pierson	90.40	51	eP	P	20 33 10.1	+1.6
	comp=Z,33nm,0.4s						
DUG	Dugway, Tooele	90.43	49	eP	P	20 33 08.7	+0.4
	comp=Z,8.0nm,1.0s						
DUG	Dugway, Tooele	90.43	49	eP	P	20 33 08.7	+0.4
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DUG	Dugway, Tooele	90.43	49	P	P	20 33 09.3	+1.0
	baz=256						
BGU	Big Grassy Mou	90.45	48	eP	P	20 33 09.1	+0.7
	comp=Z,8.9nm,1.0s						
WUAZ	Wupatki	90.46	54	eP	P	20 33 09.7	+1.1
	comp=Z,15nm,0.9s						
WUAZ	Wupatki	90.46	54	P	P	20 33 10.2	+1.7
	baz=257						
MSU	Marysvale	90.52	51	eP	P	20 33 10.5	+1.6
MSU	Marysvale	90.52	51	eP	P	20 33 10.5	+1.6
DGZ	Jazzator, Alta	90.84	320	d iP	P	20 33 09.0	-1.0
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HVU	Hansel Valley	90.84	48	eP	P	20 33 10.9	+0.7
	comp=Z,19nm,1.0s						
HVU	Hansel Valley	90.84	48	eP	P	20 33 10.9	+0.7
HVU				pmax	pmax		
	comp=Z,19nm,1.0s						
NLU	North Lily Min	90.93	50	eP	P	20 33 11.0	+0.3
	comp=Z,12nm,0.9s						
SPUT	South Promonto	90.97	48	eP	P	20 33 11.9	+1.1
	comp=Z,9.8nm,1.1s						
MSO	Missoula	91.26	43	eP	P	20 33 12.0	0.0
	comp=Z,26nm,1.8s						
MSO	Missoula	91.26	43	P	P	20 33 12.3	+0.4
	baz=256						
MPU	Maple Canyon	91.27	50	eP	P	20 33 12.9	+0.6
	comp=Z,17nm,1.2s						
319A	Douglas	91.28	58	eP	P	20 33 13.5	+1.1
	comp=Z,11nm,0.8s						
CTU	Camp Tracy	91.34	49	eP	P	20 33 12.9	+0.4
	comp=Z,12nm,0.9s						
X18A	Snowflake	91.39	55	eP	P	20 33 14.1	+1.2
	comp=Z,9.1nm,0.8s						
TMUT	Trail Mountain	91.43	50	eP	P	20 33 14.6	+1.4
	comp=Z,8.8nm,1.1s						
MCMT	McKenzie Canyo	91.51	45	eP	P	20 33 14.4	+1.0
JLU	Jordanelle	91.54	49	eP	P	20 33 14.6	+1.0
	comp=Z,11nm,1.1s						
HWUT	Hardware Ranch	91.68	48	eP	P	20 33 14.9	+0.8
	comp=Z,4.6nm,1.0s						
TCUT	Toone Canyon	91.69	49	eP	P	20 33 15.2	+1.0
	comp=Z,22nm,1.0s						
DLMT	Dillon	91.81	44	eP	P	20 33 15.4	+0.8
	comp=Z,26nm,1.0s						
WALA	Waterton Lakes	91.84	40	eP	P	20 33 15.9	+1.3
	comp=Z,31nm,0.8s						
SRU	San Rafael Swe	91.91	51	eP	P	20 33 15.7	+0.4
	comp=Z,9.5nm,1.3s						
SRU	San Rafael Swe	91.91	51	eP	P	20 33 15.7	+0.4
SRU				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SYO	Syowa Base	91.95	197	⇑ iP	P	20 33 15.5	+0.9
SYO	Syowa Base	91.95	197	⇓ esP	sP	20 33 22.6	-0.6
LRM	Limekiln Ridge	92.02	44	eP	P	20 33 16.4	+0.7
QLMT	Earthquake Lak	92.50	45	eP	P	20 33 19.1	+1.2
FXWY	Fox Creek	92.52	46	eP	P	20 33 19.1	+1.0
	comp=Z,6.0nm,0.9s						
IMW	Indian Meadow	92.64	46	eP	P	20 33 19.7	+1.1
	comp=Z,6.8nm,1.0s						
YHB	Horse Butte	92.64	45	eP	P	20 33 20.0	+1.5
	comp=Z,6.1nm,1.0s						
MOOW	Moose Ponds	92.74	46	eP	P	20 33 19.4	+0.4
	comp=Z,5.0nm,1.0s						
YMR	Madison River	92.78	45	eP	P	20 33 20.7	+1.5
	comp=Z,6.4nm,0.7s						
LOHW	Long Hollow	92.81	46	eP	P	20 33 20.4	+1.0
	comp=Z,3.9nm,1.0s						
PV09	Paradox Valley	92.85	52	eP	P	20 33 20.6	+0.8
PV14	Lion Creek, Pa	92.91	52	eP	P	20 33 19.1	-0.8
	comp=Z,5.5nm,0.8s						
PV19	Morning Glory	92.92	52	eP	P	20 33 21.0	+1.0
	comp=Z,6.5nm,0.9s						
PV23	Carpenter Ridg	92.93	52	eP	P	20 33 20.3	+0.2
	comp=Z,9.8nm,0.5s						
PV17	East Wray Mesa	92.94	52	eP	P	20 33 22.1	+2.0
	comp=Z,7.5nm,0.9s						
PV21	Cone Mtn., Par	92.98	51	eP	P	20 33 21.2	+0.9
	comp=Z,9.4nm,1.2s						
H17A	Grant Village	93.00	46	eP	P	20 33 22.1	+1.8
	comp=Z,4.6nm,0.8s						
H17A	Grant Village	93.00	46	P	P	20 33 22.6	+2.3
	baz=258						
PV04	Paradox Valley	93.00	52	eP	P	20 33 21.3	+1.0
	comp=Z,26nm,1.6s						
PV12	Saucer Basin,	93.06	52	eP	P	20 33 21.4	+0.7
	comp=Z,32nm,1.6s						
PV01	Paradox Valley	93.21	52	eP	P	20 33 21.9	+0.5
	comp=Z,6.3nm,1.0s						
PV07	Paradox Valley	93.21	52	eP	P	20 33 22.3	+1.0
	comp=Z,6.3nm,0.9s						
BW06	Boulder Array	93.39	47	eP	P	20 33 22.1	0.0
	comp=Z,10.0nm,1.3s						
BW06	Boulder Array	93.39	47	P	P	20 33 22.5	+0.4
	baz=258						
PD31	Pinedale Array	93.39	47	eP	P	20 33 21.8	-0.2
	comp=Z,8.6nm,1.3s						
PDAR	Pinedale Array	93.39	47	eP	P	20 33 21.7	-0.4
PDAR	Pinedale Array	93.39	47	P	P	20 33 22.3	+0.2
	comp=Z,5.6nm,1.0s,baz=242,slow=3.2,SNR=20						
MK01	Makanchi Array	93.46	317	eP	P	20 33 21.2	-0.8
MK31	Makanchi Array	93.47	317	eP	P	20 33 21.8	-0.3
MK32	Makanchi Array	93.47	317	eP	P	20 33 21.7	-0.4
MK32				ePKKPdf	PKKPdf	20 50 28.0	-1.0
MKAR	Makanchi Array	93.47	317	eP	P	20 33 21.8	-0.3
	comp=Z,25nm,0.8s						
MKAR				PKKP	PKKPdf	20 50 28.0	-1.0
MKAR	Makanchi Array	93.47	317	P	P	20 33 21.7	-0.3
	comp=Z,3.8nm,0.8s,baz=98,slow=6.1,SNR=31						
MKAR				PKKP	PKKPdf	20 50 28.0	-1.0
	comp=Z,3.1nm,0.8s,baz=274,slow=3.4,SNR=32						
ZAA0	Zalesovo Array	93.49	324	eP	P	20 33 20.6	-1.3
	comp=Z,4.2nm,0.9s						
ZAA1	Zalesovo Array	93.49	324	eP	P	20 33 20.4	-1.5
ZALV	Zalesovo Beam	93.49	324	eP	P	20 33 20.7	-1.2
ZALV	Zalesovo Beam	93.49	324	eP	P	20 33 20.7	-1.2
ZALV	Zalesovo Beam	93.49	324	P	P	20 33 20.5	-1.4
	comp=Z,2.2nm,0.7s,baz=121,slow=5.0,SNR=15						
MAKZ	Makanchi	93.69	317	eP	P	20 33 22.9	-0.1
	comp=Z,15nm,1.5s						
MAKZ	Makanchi	93.69	317	eP	P	20 33 22.9	-0.1
MAKZ				pmax	pmax		
	comp=Z,15nm,1.5s						
RLMT	Red Lodge	94.06	45	eP	P	20 33 26.5	+1.5
	comp=Z,7.0nm,1.2s						
ANMO	Albuquerque	94.29	55	eP	P	20 33 25.9	-0.5
	comp=Z,2.9nm,0.8s						
ANMO	Albuquerque	94.29	55	c eP	P	20 33 26.3	0.0
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANMO	Albuquerque	94.29	55	P	P	20 33 27.0	+0.6
	baz=260						
EGMT	Eagleton	94.30	42	eP	P	20 33 25.9	-0.1
	comp=Z,10nm,0.6s						
EGMT	Eagleton	94.30	42	P	P	20 33 26.2	+0.3
	baz=259						
S22A	4UR Ranch, Cre	94.49	53	eP	P	20 33 28.2	+0.8
	comp=Z,20nm,2.0s						
S22A	4UR Ranch, Cre	94.49	53	P	P	20 33 28.7	+1.3
	baz=260						
NVS	Novosibirsk	94.59	325	eP	P	20 33 27.7	+0.8
NVS				pmax	pmax		
	comp=Z,7.0nm,1.6s						
MNTX	Cornudas Mount	94.61	59	eP	P	20 33 27.2	-0.4
	comp=Z,3.8nm,0.8s						
MNTX	Cornudas Mount	94.61	59	P	P	20 33 28.3	+0.7
	baz=260						
YKA	Yellowknife Ar	94.80	27	P	P	20 33 26.1	-1.6
	comp=Z,1.8nm,0.7s,baz=257,slow=4.6,SNR=33						
YKB5	Yellowknife Ar	94.80	27	eP	P	20 33 25.6	-2.1
YKW3	Yellowknife Ar	94.81	27	eP	P	20 33 26.6	-1.2
	comp=Z,5.9nm,1.2s						
TX31	Lajitas Ar. Si	95.68	61	eP	P	20 33 32.3	-0.4
LTX	Lajitas	95.68	61	eP	P	20 33 33.1	+0.4
LTX	Lajitas	95.68	61	eP	P	20 33 33.1	+0.4
TXAR	Lajitas Array	95.68	61	P	P	20 33 33.1	+0.4
	comp=Z,0.8nm,0.7s,baz=222,slow=6.7,SNR=8.8						
KURK	Kurchatov	96.58	320	eP	P	20 33 35.2	-1.0
KURK	Kurchatov	96.58	320	i P	P	20 33 35.4	-0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KURBB	Kurchatov Arra	96.62	320	P	P	20 33 35.2	-1.2
	comp=Z,0.4nm,0.7s,baz=100,slow=4.5,SNR=4.4						
AAK	Ala-Archa	98.26	312	i P	P	20 33 42.6	-1.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FFC	Flin Flon	100.06	36	i P	Pdif	20 33 52.4	+0.7
BVAR	Borovoye Array	101.89	322	P	Pdif	20 33 58.7	-1.1
	comp=Z,0.7nm,0.8s,baz=92,slow=3.6,SNR=5.2						
BRVK	Borovoye	101.95	322	i P	Pdif	20 33 58.5	-1.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARA0	ARCESS Array S	116.21	346	ePKPdf	PKiKP	20 38 48.7	-0.5
ARCES	ARCESS Array B	116.21	346	PKP	PKiKP	20 38 48.7	-0.5
	comp=Z,2.7nm,0.8s,baz=79,slow=1.7,SNR=22						
OBN	Obninsk	120.72	329	⇑ ePKIKP	PKPdf	20 38 57.9	-0.3
OBN				e		20 40 23.6	
OBN				ePPP	PPP	20 42 57.2	
OBN				e		20 45 56.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
FIA0	FINESS Array S	121.66	339	ePKPdf	PKPdf	20 38 58.3	-1.5
FIA0	FINESS Array S	121.66	339	ePKIKP	PKPdf	20 38 58.3	-1.5
FINES	FINESS Array B	121.66	339	PKP	PKPdf	20 38 58.3	-1.5
	comp=Z,2.0nm,0.8s,baz=350,slow=5.8,SNR=5.2						
CPUP	Villa Florida	124.06	132	PKP	PKPdf	20 39 05.5	-0.1
	comp=Z,7.4nm,0.9s,baz=252,slow=1.3,SNR=13						
SDV	Santo Domingo	124.40	87	ePKPdf	PKPdf	20 39 05.8	-1.0
SDV	Santo Domingo	124.40	87	PKP	PKPdf	20 39 06.3	-0.4
	comp=Z,12nm,0.8s,baz=260,slow=2.3,SNR=15						
BOSA	Boshof	125.29	223	PKP	PKiKP	20 39 08.6	+0.2
	comp=Z,2.6nm,0.7s,baz=148,slow=1.3,SNR=8.6						
NB2	NORSAR Subarra	126.58	345	PKPdf	PKPdf	20 39 08.4	-1.0
	comp=Z,3.0nm,0.9s,baz=31,slow=2.1						
NB200	NORSAR Array S	126.58	345	ePKPdf	PKPdf	20 39 08.5	-0.8
NOA	NORSAR Array B	126.58	345	PKP	PKPdf	20 39 08.5	-0.8
	comp=Z,2.2nm,0.8s,baz=33,slow=2.0,SNR=9.8						
HFS	Hagfors	126.67	343	PKP	PKPdf	20 39 08.4	-1.1
	comp=Z,1.5nm,0.8s,baz=53,slow=5.7,SNR=3.1						
AKASG	Malin Array Be	126.78	327	PKP	PKPdf	20 39 09.1	-0.9
	comp=Z,1.9nm,0.8s,baz=65,slow=2.2,SNR=7.3						
BR101	Keskin Array S	128.93	313	ePKPdf	PKPdf	20 39 14.2	-0.4
BRTR	Keskin Array B	128.93	313	PKP	PKPdf	20 39 14.2	-0.4
	comp=Z,0.5nm,0.9s,baz=90,slow=1.4,SNR=3.0						
SJG	San Juan	129.30	76	PKP	PKPdf	20 39 15.2	-0.5
	comp=Z,14nm,0.7s,baz=249,slow=5.3,SNR=5.3						
HUMP	Col San Antoni	129.58	75	ePKPdf	PKPdf	20 39 15.9	-0.3
BUR04	Bucovina Ar. S	130.69	326	ePKPdf	PKiKP	20 39 18.4	-0.1
PTGA	Pitinga	133.02	101	ePKPdf	PKPdf	20 39 22.7	-0.2
BRG	Berggiesshubel	133.96	335	ePKP	PKiKP	20 39 24.9	+0.1
	comp=Z,4.9nm,1.2s						
BRG	Berggiesshubel	133.96	335	ePKIKP	PKiKP	20 39 25.0	+0.1
BRG				pmax	pmax		
	comp=Z,15nm,1.3s						
CLL	Collm	134.00	337	ePKPdf	PKiKP	20 39 25.0	0.0
	comp=Z,9.0nm,1.4s						
CLL	Collm	134.00	337	ePKIKP	PKiKP	20 39 25.0	0.0
CLL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CONA	Conrad Observa	135.31	331	i PKiKP	PKiKP	20 39 28.0	+0.2
	comp=Z,6.1nm,1.3s						
KHC	Kasperske Hory	135.44	334	ePKPDF	PKiKP	20 39 27.7	-0.3
KHC	Kasperske Hory	135.44	334	ePKIKP	PKiKP	20 39 27.7	-0.3
GEC2	GERESS Array S	135.61	334	ePKPdf	PKPdf	20 39 26.2	-0.7
GEC2	GERESS Array S	135.61	334	ePKIKP	PKPdf	20 39 26.2	-0.7
GERES	GERESS Array B	135.61	334	PKP	PKPdf	20 39 27.2	+0.4
	comp=Z,2.4nm,1.0s,baz=331,slow=1.7,SNR=8.0						
GEA0	GERESS Array S	135.62	334	ePKPdf	PKPdf	20 39 25.9	-0.9
BDFB	Brasilia	137.36	128	PKP	PKPdf	20 39 31.2	+0.1
	comp=Z,9.6nm,0.9s,baz=237,slow=2.2,SNR=11						
FETA	Feichten	138.29	334	i pPKPdf	PKiKP	20 39 34.6	+0.6
	comp=Z,9.3nm,1.3s						
KEST	Kesra	147.35	323	ePKPdf	PKPdf	20 39 49.2	+0.9
KEST	Kesra	147.35	323	PKPbc	PKPbc	20 39 50.2	-0.4
	comp=Z,8.6nm,0.9s,baz=294,slow=5.4,SNR=4.5						
PBRG	Braganca	148.53	349	ePKPdf	PKPbc	20 39 52.5	-1.0
PGAV	Gavieira, Arco	148.62	352	ePKPdf	PKPbc	20 39 54.1	+0.3
POLO	Lamas de Olo	149.13	351	ePKPdf	PKPbc	20 39 55.5	+0.4
MVO	Moncorvo	149.20	349	ePKPdf	PKPbc	20 39 54.9	-0.4
PVRL	Vila Real	149.21	350	ePKPdf	PKPbc	20 39 55.6	+0.3
PTO	Porto	149.48	352	ePKPdf	PKPbc	20 39 56.2	+0.3
PVIS	Viseu	149.78	351	ePKPdf	PKPbc	20 39 57.1	+0.4
ES19	SONSECA Array	149.90	344	ePKPbc	PKPbc	20 39 57.5	+0.4
ESDC	Sonseca Array	149.94	344	PKPbc	PKPbc	20 39 57.5	+0.4
	comp=Z,3.8nm,0.9s,baz=23,slow=2.5,SNR=14						
MTE	Manteigas	150.03	350	ePKPdf	PKiKP	20 39 58.1	-0.2
MTE	Manteigas	150.03	350	ePKPbc	PKPbc	20 39 57.8	+0.5
PAB	San Pablo	150.16	345	ePKPbc	PKiKP	20 39 58.3	-0.3
PAB	San Pablo	150.16	345	ePKP2	PKiKP	20 39 58.3	-0.3
PCAS	Casmilo, Conde	150.53	351	ePKPdf	PKPbc	20 39 58.6	+0.1
PCBR	Castelo Branco	150.57	349	ePKPdf	PKiKP	20 39 59.0	-0.3
PTOM	Tomar	150.94	351	ePKPdf	PKiKP	20 40 00.1	0.0
PMRV	Marv??o	150.95	349	ePKPdf	PKPbc	20 39 59.2	-0.3
PMTG	Montargil	151.45	350	ePKPdf	PKPbc	20 40 00.6	0.0
PMAFR	Mafra	151.72	352	ePKPdf	PKPbc	20 40 00.9	-0.4
RCBR	Riachuelo	152.72	126	ePKPbc	PKPbc	20 40 04.0	-0.4
RCBR	Riachuelo	152.72	126	ePKIKP	PKPbc	20 40 04.0	-0.4
TORD	Torodi Ar. Bea	164.33	280	PKP	PKPdf	20 40 10.4	-0.6
	comp=Z,2.0nm,1.0s,baz=91,slow=1.2,SNR=8.0						
TORD				PKPab	PKPab	20 41 02.9	-2.3
	comp=Z,1.6nm,1.1s,baz=64,slow=3.4,SNR=4.3						
TOA1	Torodi Ar. Sit	164.33	280	ePKPdf	PKPdf	20 40 10.4	-0.6
TOA1				ePKPab	PKPab	20 41 03.0	-2.3

DDA ***07*** *20:23:45.3, 37°.86N×36°.67E, h7^{km}±4^{km}, ML2.5*

ISK ***07*** *20:23:45.1, 37°.83N×36°.68E, h8^{km}, ML2.2/7*

ISC 07 20:23:45.4±1.2**, 37°.85N**±0°.03×**36°.68E**±0°.02**, h8**^{km}±10^{km}**,**
n16, σ0^{s}.80/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	Andirin	0.38	224	i P	Pg	20 23 52.6	-0.2
ANDN				i S	Sb	20 23 58.7	-1.8
ANDN				IAML_P			
	comp=Z,2µm,0.1s						
KMRS	Kahramanmaras	0.39	153	PG	Pg	20 23 52.5	-0.5
KMRS				SG	Sg	20 23 58.1	0.0
SAIM	ADANA	0.49	285	i P	Pg	20 23 54.0	-0.9
SAIM				i S	Sb	20 24 02.8	-0.9
SAIM				IAML_P			
	comp=Z,2µm,0.2s						
KOZT	Kozan	0.77	242	PG	Pg	20 24 00.1	-0.1
KOZT				SG	Sb	20 24 11.1	-0.6
GAZ	Gaziantep	0.80	148	PG	Pb	20 24 00.9	-0.7
GAZ				SG	Sb	20 24 11.9	-0.7
GZT	Gaziantep	0.86	125	i P	Pb	20 24 02.5	-0.2
GZT				i S	Sb	20 24 14.7	+0.2
DARE	Darende-Malaty	0.96	41	PG	Pb	20 24 04.4	0.0
YAHY	KAYSERI_Yahyal	1.07	284	i P	Pb	20 24 06.2	0.0
YAHY				i S	Sn	20 24 21.9	-0.1
AKCD	Akcadag	1.08	65	i P	Pg	20 24 05.9	-0.3
AKCD				i S	Sn	20 24 22.3	0.0
AKCD				IAML_P			
	comp=Z,385nm,0.2s						
KUZU	Kuzuini	1.12	163	i P	Pn	20 24 08.7	+1.2
KUZU				i S	Sn	20 24 23.7	+0.6
BNN	Bunyan	1.20	327	PN	Pn	20 24 08.8	+0.2
KARA	Karaisali	1.42	246	PN	Pb	20 24 11.7	-0.4
TAHT	Tahtakopru-Hat	1.52	195	PN	Pn	20 24 12.9	-0.1
GULE	Gulek	1.61	250	i P	Pg	20 24 16.9	+0.5
GULE				i S	Sg	20 24 39.5	+2.2
GULE				IAML_P			
	comp=Z,303nm,0.3s						
URFA	Urfa	1.75	103	PN	Pn	20 24 16.4	+0.2
PTK	Pertek	2.37	63	PN	Pn	20 24 25.5	+0.6

ISCJB ***07*** *20:25:13.4±0.6, 9°.65S±0°.07×74°.80W±0°.06, h100^{km},*
mb4.0/5, Error ellipse: s-maj=10.3km s-min=7.0km
az=150.7

IDC ***07*** *20:25:16.1±1.8, 9°.70S×74°.96W, h117^{km}±18^{km}, mb3.7/5,*
mb1 3.8/9, mb1mx3.6/40, mbtmp4.2/9, Error ellipse:
s-maj=21.3km s-min=12.2km az=81.0

ISC 07 20:25:14.4±0.7**, 9°.65S**±0°.08×**74°.76W**±0°.08**, h100**^{km}**, n14,**
σ1^{s}.60/16**, mb3.8**/5**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	3.10	221	P	Pn	20 26 02.6	+1.1
	17nm,0.3s,baz=355,slow=6.2,SNR=16						
NNA				S	Sn	20 26 36.6	-1.2
	79nm,0.3s,baz=356,slow=22,SNR=17						
ATAH	Atahualpa	4.38	304	P	Pn	20 26 20.2	+1.0
	8.9nm,0.3s,baz=96,slow=4.5,SNR=32						
ATAH				S	Sn	20 27 08.7	-0.6
	6.6nm,0.3s,baz=343,slow=22,SNR=4.3						
PTGA	Pitinga	17.18	60	P	P	20 29 11.0	+2.5
	1.2nm,0.3s,baz=238,slow=17,SNR=14						
PTGA				S	Sn	20 32 15.8	-3.8
	0.2nm,0.3s,baz=198,slow=20,SNR=3.3						
SDV	Santo Domingo	18.86	13	P	P	20 29 28.7	+1.6
	1.6nm,0.3s,baz=331,slow=10,SNR=8.9						
PDAR	Pinedale Array	61.08	331	P	P	20 35 17.5	-0.7
	0.3nm,0.4s,baz=110,slow=7.8,SNR=3.4						
ULM	Lac du Bonnet	62.43	345	P	P	20 35 25.9	-0.9
	2.3nm,0.4s,baz=158,slow=6.6,SNR=6.6						
DBIC	Dimbokro	71.50	80	P	P	20 36 25.5	+0.5
	3.1nm,0.9s,baz=263,slow=8.1,SNR=2.9						
YKA	Yellowknife Ar	78.23	342	P	P	20 37 02.0	-0.7
	0.6nm,0.6s,baz=140,slow=5.5,SNR=7.7						
TORD	Torodi Ar. Bea	79.20	75	P	P	20 37 09.9	+0.8
	1.2nm,0.7s,baz=272,slow=5.8,SNR=7.6						
ZALV	Zalesovo Beam	132.88	16	PKP	PKPdf	20 44 18.3	+0.4
	0.5nm,0.5s,baz=238,slow=2.7,SNR=3.4						

```
ASAR  Alice Springs      136.62 220  PKP     PKPdf    20 44 24.3  -1.6
      0.4nm,0.5s,baz=143,slow=2.3,SNR=5.2
WRA   Warramunga Arr     138.95 224  PKP     PKPdf    20 44 29.4  -0.8
      0.6nm,0.5s,baz=124,slow=2.0,SNR=15
SONM  Songino Array      141.93 359  PKhKP   PKPpre   20 44 30.3
      0.4nm,0.6s,baz=339,slow=3.1,SNR=3.0
FITZ  Fitzroy Crossi     145.86 216  PKPbc   PKPdf    20 44 42.2  -0.2
      1.6nm,0.5s,baz=241,slow=2.1,SNR=7.1
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*KRNET **07** 20:27:27.9±0.1, 42°.97N×77°.78E, h20^{km}, mb3.1*
*NNC **07** 20:27:27.0±0.3, 42°.95N×77°.81E, h0^{km}±2^{km}, mb3.1, mpv3.3, Error ellipse: s-maj=3.7km s-min=1.5km az=172.0*
*SOME **07** 20:27:28.0, 42°.95N×77°.78E, h20^{km}*
ISC 07 20:27:28.5±1.0**, 42°.97N**±0°.02×**77°.76E**±0°.01**, h6**^{km}±9^{km}**,**
n96, σ1^{s}85/167**, 47C-21D, Lake Issyk-Kul region**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
KOTS  Kotyrbulak          0.54 300   P       Pg       20 27 38.8  -0.1
      76nm,0.1s
KOTS                                 S       Sg       20 27 46.6  +0.5
      66nm,0.2s
KOTS  Kotyrbulak          0.54 300   eP      Pg       20 27 38.8  -0.1
      baz=98
KOTS                                 eS      Sg       20 27 46.5  +0.5
      baz=98
KOTS  Kotyrbulak          0.54 300   eP      Pg       20 27 38.8  -0.1
      76nm,0.1s
KOTS                                 eS      Sg       20 27 46.6  +0.5
      66nm,0.2s
MDOK  Medeo               0.56 291   P       Pg       20 27 38.5  -0.7
      8.4nm,0.4s
MDOK                                 S       Sg       20 27 47.0  +0.5
      24nm,0.4s
MDOK  Medeo               0.56 291   Pg      Pg       20 27 38.8  -0.4
      19nm,0.2s
MDOK                                 Lg      Lg       20 27 46.9
      56nm,0.3s
MDOK  Medeo               0.56 291 ⇑iP      Pg       20 27 38.8  -0.4
      baz=90
MDOK                               ⇑eS      Sg       20 27 46.9  +0.5
      baz=90
MDOK  Medeo               0.56 291 ⇑iP      Pg       20 27 38.8  -0.4
      19nm,0.2s
MDOK                                 eS      Sg       20 27 47.0  +0.5
      56nm,0.3s
TNSS  Tian-Shan           0.60 277   P       Pg       20 27 39.8  -0.3
      14nm,0.2s
TNSS                                 S       Sg       20 27 48.6  +0.7
      65nm,0.2s
TNSS  Tian-Shan           0.60 277   eP      Pg       20 27 39.8  -0.3
      baz=77
TNSS                                 eS      Sg       20 27 48.6  +0.7
      baz=77
TNSS  Tian-Shan           0.60 277   eP      Pg       20 27 39.8  -0.3
      14nm,0.2s
TNSS                                 eS      Sg       20 27 48.6  +0.7
      65nm,0.2s
KURS  Kuram               0.60  30   P       Pg       20 27 39.2  -0.9
      20nm,0.1s
KURS                                 S       Sg       20 27 47.4  -0.5
      17nm,0.2s
KURS  Kuram               0.60  30   eP      Pg       20 27 39.2  -0.9
      baz=28
KURS                                 eS      Sg       20 27 47.4  -0.5
      baz=28
KURS  Kuram               0.60  30   eP      Pg       20 27 39.2  -0.9
      20nm,0.1s
KURS                                 eS      Sg       20 27 47.4  -0.5
      17nm,0.2s
KNDC  Almaty              0.63 293 ⇓P       Pg       20 27 40.1  -0.5
      3.5nm,0.3s
KNDC                               ⇑S       Sg       20 27 49.7  +0.8
      15nm,0.3s
AAA   Alma-Ata            0.66 292   P       Pg       20 27 41.3  +0.1
      48nm,0.1s
AAA                                  S       Sg       20 27 51.0  +1.1
      126nm,0.2s
AAA   Alma-Ata            0.66 292   eP      Pg       20 27 41.3  +0.1
      baz=91
AAA                                  eS      Sg       20 27 51.0  +1.1
      baz=91
AAA   Alma-Ata            0.66 292   eP      Pg       20 27 41.3  +0.1
      48nm,0.1s
AAA                                  eS      Sg       20 27 51.0  +1.1
      126nm,0.2s
PRZ   Przheval'sk         0.68 135 ⇓iP      Pg       20 27 41.1  -0.4
      baz=36
PRZ                                ⇓iS      Sg       20 27 49.6  -0.8
      baz=36
IZV   Izvestkoviy         0.84 275   P       Pb       20 27 44.2  -1.5
      16nm,0.1s
IZV                                  S       Sb       20 27 56.0  -1.3
      154nm,0.5s
IZV   Izvestkoviy         0.84 275   eP      Pb       20 27 44.2  -1.5
      baz=75
IZV                                  eS      Sb       20 27 56.0  -1.3
      baz=75
IZV   Izvestkoviy         0.84 275   eP      Pb       20 27 44.2  -1.5
      16nm,0.1s
IZV                                  eS      Sb       20 27 56.0  -1.3
      154nm,0.5s
KDJ   Kajisay             0.94 207 ⇑iP      Pg       20 27 46.4  -0.1
      baz=8.0
KDJ                                ⇑iS      Sb       20 27 58.5  -1.6
      baz=8.0
UZB   Uzynbulak           0.94  79   P       Pb       20 27 44.7  -2.7
      29nm,0.1s
UZB                                  S       Sb       20 27 56.9  -3.3
      74nm,0.1s
UZB   Uzynbulak           0.94  79   eP      Pb       20 27 44.7  -2.7
      baz=78
UZB                                  eS      Sb       20 27 56.9  -3.3
      baz=78
UZB   Uzynbulak           0.94  79   eP      Pb       20 27 44.7  -2.7
      29nm,0.1s
UZB                                  eS      Sb       20 27 56.9  -3.3
      74nm,0.1s
MTBS  Maitube             0.99 280   P       Pb       20 27 46.7  -1.3
      14nm,0.2s
MTBS                                 S       Sb       20 28 00.4  -1.0
      44nm,0.2s
MTBS  Maitube             0.99 280   eP      Pb       20 27 46.7  -1.3
      baz=80
MTBS                               ⇑iS      Sb       20 28 00.4  -1.0
      baz=80
MTBS  Maitube             0.99 280   eP      Pb       20 27 46.7  -1.3
      14nm,0.2s
MTBS                               ⇑iS      Sb       20 28 00.4  -1.0
      44nm,0.2s
CHKK  Chushkaly           1.05 328   P       Pb       20 27 47.8  -1.2
      18nm,0.2s
CHKK                                 S       Sb       20 28 01.8  -1.3
      83nm,0.3s
CHKK  Chushkaly           1.05 328   eP      Pb       20 27 47.8  -1.2
      baz=28
CHKK                                 eS      Sb       20 28 01.8  -1.3
      baz=28
CHKK  Chushkaly           1.05 328   eP      Pb       20 27 47.8  -1.2
      18nm,0.2s
CHKK                                 eS      Sb       20 28 01.8  -1.3
      83nm,0.3s
KTBS  Karatobe            1.08 314   P       Pb       20 27 48.6  -1.1
      21nm,0.1s
KTBS                                 S       Sb       20 28 03.1  -0.9
      15nm,0.1s
KTBS  Karatobe            1.08 314   eP      Pb       20 27 48.6  -1.1
      baz=9.0
KTBS                                 eS      Sb       20 28 03.2  -0.9
      baz=9.0
KTBS  Karatobe            1.08 314   eP      Pb       20 27 48.5  -1.1
      21nm,0.1s
KTBS                                 eS      Sb       20 28 03.1  -0.9
      15nm,0.1s
MNBS  Baschi              1.21  23   P       Pn       20 27 50.2  -1.8
      22nm,0.2s
MNBS                                 S       Sb       20 28 06.3  -1.4
      52nm,0.3s
MNBS  Baschi              1.21  23   eP      Pn       20 27 50.2  -1.8
      baz=27
MNBS                                 eS      Sb       20 28 06.3  -1.4
      baz=27
MNBS  Baschi              1.21  23   eP      Pn       20 27 50.2  -1.8
      22nm,0.2s
MNBS                                 eS      Sb       20 28 06.3  -1.4
      52nm,0.3s
TARG  Taragay, Kyrgy      1.24 178 ⇑iP      Pn       20 27 50.5  -2.2
      baz=79
TARG                               ⇑iS      Sb       20 28 06.7  -2.2
      baz=79
ARXS  Arharly             1.25   2   P       Pn       20 27 51.2  -1.4
      6.4nm,0.1s
ARXS                                 S       Sb       20 28 07.8  -1.0
      53nm,0.3s
ARXS  Arharly             1.25   2   eP      Pn       20 27 51.2  -1.4
      6.4nm,0.1s
ARXS                                 eS      Sb       20 28 07.8  -1.0
      53nm,0.3s
SHLS  Shalkode            1.26  81   P       Pg       20 27 56.2  +3.5
      16nm,0.1s
SHLS                                 S       Sg       20 28 17.0  +7.9
      74nm,0.4s
SHLS  Shalkode            1.26  81   eP      Pg       20 27 56.4  +3.7
      baz=82
SHLS                                 eS      Sg       20 28 17.0  +7.9
      baz=82
SHLS  Shalkode            1.26  81   eP      Pg       20 27 56.4  +3.7
      4.7nm,0.2s
SHLS                                 eS      Sg       20 28 17.0  +7.9
      74nm,0.4s
KST   Kastek              1.32 274   P       Pn       20 27 52.7  -0.9
      6.1nm,0.2s
KST                                  S       Sb       20 28 10.4  -0.5
      22nm,0.4s
KST   Kastek              1.32 274 ⇑iP      Pn       20 27 52.7  -0.9
      baz=74
KST                                ⇓iS      Sb       20 28 10.5  -0.5
      baz=74
KST   Kastek              1.32 274 ⇑iP      Pn       20 27 52.7  -0.9
      6.1nm,0.2s
KST                                ⇓iS      Sb       20 28 10.4  -0.5
      22nm,0.4s
PDGK  Podgornoye          1.32  74   P       Pn       20 27 51.2  -2.3
      6.1nm,0.2s
PDGK                                 S       Sb       20 28 08.0  -3.0
      18nm,0.2s
PDGK  Podgornoye          1.32  74 ⇓P       Pn       20 27 51.0  -2.5
      4.5nm,0.4s
PDGK                               ⇓S       Sb       20 28 08.1  -2.9
      9.0nm,0.4s
PDGK  Podgornoye          1.32  74 ⇑iP      Pn       20 27 51.3  -2.3
      baz=73
PDGK                               ⇑iS      Sb       20 28 08.5  -2.4
      baz=73
ULHL  Ulahol              1.33 238   P       Pn       20 27 52.7  -1.2
      SNR=102
ULHL  Ulahol              1.33 238 ⇓iP      Pn       20 27 52.6  -1.2
      baz=38
ULHL                               ⇓iS      Sb       20 28 10.5  -0.9
      baz=38
KUU   Kurty               1.39 312   P       Pn       20 27 53.8  -0.6
      11nm,0.2s
KUU                                  S       Sb       20 28 12.3  -0.5
      50nm,0.2s
KUU   Kurty               1.39 312 ⇓iP      Pn       20 27 53.8  -0.6
      baz=12
KUU                                ⇑iS      Sb       20 28 12.3  -0.5
      baz=12
KUU   Kurty               1.39 312 ⇓iP      Pn       20 27 53.8  -0.6
      11nm,0.2s
KUU                                ⇑iS      Sb       20 28 12.3  -0.5
      50nm,0.2s
BOOM  Boomskoye usch      1.42 251 ⇑iP      Pn       20 27 54.3  -0.7
      baz=51
BOOM                               ⇑iS      Sb       20 28 13.8  -0.2
      baz=51
DGS   Degeres             1.48 281   P       Pb       20 27 55.4  -1.0
      9.7nm,0.3s
DGS                                  S       Sb       20 28 15.0  -0.6
      34nm,0.3s
DGS   Degeres             1.48 281   eP      Pb       20 27 55.4  -1.0
      baz=81
DGS                                  eS      Sb       20 28 15.0  -0.6
      baz=81
DGS   Degeres             1.48 281   eP      Pb       20 27 55.4  -1.0
      9.7nm,0.3s
DGS                                  eS      Sb       20 28 15.0  -0.6
      34nm,0.3s
TKM2  Tokmak 2            1.59 269   P       Pb       20 27 58.0  -0.4
      SNR=8.9
TKM2  Tokmak 2            1.59 269 ⇓Pn      Pn       20 27 56.6  -0.8
      1.4nm,0.3s
TKM2                               ⇓Lg      Lg       20 28 18.8
      7.8nm,0.5s
TKM2  Tokmak 2            1.59 269 ⇑iP      Pb       20 27 57.5  -0.9
      baz=69
TKM2                               ⇑iS      Sb       20 28 19.0  +0.2
      baz=69
KTMS  Ketmen              1.96  75   P       Pb       20 28 02.1  -2.5
      14nm,0.1s
KTMS                                 S       Sb       20 28 27.3  -2.0
      28nm,0.3s
KTMS  Ketmen              1.96  75   eP      Pb       20 28 02.4  -2.2
      baz=74
KTMS                                 eS      Sb       20 28 27.3  -2.0
      baz=74
KTMS  Ketmen              1.96  75   eP      Pb       20 28 02.4  -2.2
      3.8nm,0.1s
KTMS                                 eS      Sb       20 28 27.3  -2.0
      28nm,0.3s
DJR   Jarkent             2.01  47   Pg      Pb       20 28 03.8  -1.7
      4.4nm,0.3s
DJR                                  Lg      Lg       20 28 30.3
      9.8nm,0.3s
DJR   Jarkent             2.01  47   eP      Pb       20 28 04.0  -1.4
      1.0nm,0.2s
DJR                                  eS      Sb       20 28 30.3  -0.5
      9.8nm,0.3s
NRN   Naryn               2.02 221 ⇑iP      Pb       20 28 04.3  -1.4
      baz=22
NRN                                ⇑iS      Sb       20 28 30.3  -0.9
      baz=22
KZA   Kyzart              2.06 245   P       Pb       20 28 05.8  -0.7
      SNR=8.1
KZA   Kyzart              2.06 245 ⇑iP      Pb       20 28 04.9  -1.6
      baz=46
KZA                                ⇑iS      Sb       20 28 31.1  -1.4
      baz=46
TDK   Taldyqorghan        2.09  13   Pg      Pb       20 28 05.5  -1.2
      13nm,0.2s
TDK                                  Lg      Lg       20 28 32.8
      112nm,0.4s
TDK   Taldyqorghan        2.09  13   eP      Pb       20 28 05.5  -1.2
      13nm,0.2s
TDK                                  eS      Sb       20 28 32.8  -0.2
      112nm,0.4s
KBK   Karagaybulak        2.09 262   P       Pb       20 28 06.8  -0.1
      SNR=7.5
KBK   Karagaybulak        2.09 262 ⇓iP      Pb       20 28 05.3  -1.6
      baz=63
KBK                                ⇓iS      Sb       20 28 32.2  -1.0
      baz=63
CHMS  Chumysh             2.21 272   P       Sn       20 28 37.6  +4.2
      SNR=8.0
CHMS  Chumysh             2.21 272 ⇑iP      Pb       20 28 06.4  -2.4
      baz=72
CHMS                               ⇑iS      Sb       20 28 34.8  -1.6
      baz=72
FRU1  Bishkek             2.30 267 ⇑iP      Pn       20 28 07.8  +0.7
      baz=67
FRU1                               ⇑iS      Sb       20 28 36.8  -2.4
      baz=67
USP   Ospenovka           2.40 278   P       Pb       20 28 11.7  -0.5
      SNR=8.1
USP   Ospenovka           2.40 278 ⇑iP      Pb       20 28 09.5  -2.7
      baz=78
USP                                ⇑iS      Sb       20 28 39.3  -2.8
      baz=78
AAK   Ala-Archa           2.42 263   P       Pb       20 28 11.5  -1.1
      SNR=6.0
AAK   Ala-Archa           2.42 263   Pn      Pb       20 28 11.4  -1.2
      1.8nm,0.4s
AAK                                  Lg      Lg       20 28 44.5
      11nm,0.6s
AAK   Ala-Archa           2.42 263 ⇑iP      Pn       20 28 09.7  +0.9
      baz=63
AAK                                ⇑iS      Sb       20 28 39.8  -3.0
      baz=63
UCH   Uchtor              2.51 254   P       Pb       20 28 13.3  -0.8
      SNR=7.6
UCH   Uchtor              2.51 254 ⇑iP      Pn       20 28 11.0  +0.8
      baz=54
UCH                                ⇑iS      Sb       20 28 42.2  -3.3
      baz=54
KAPS  Kapalarasan         2.59  26   Pg      Pb       20 28 14.0  -1.3
      3.2nm,0.1s
KAPS                                 Lg      Lg       20 28 46.3
      8.0nm,0.1s
KAPS  Kapalarasan         2.59  26   eP      Pb       20 28 13.6  -1.7
      2.2nm,0.2s
KAPS                                 eS      Sb       20 28 46.3  -1.1
      8.0nm,0.1s
ARLS  Aral                2.77 248 ⇑iP      Pn       20 28 14.5  +0.9
      baz=48
ARLS                               ⇑iS      Sn       20 28 48.1  +0.6
      baz=48
EKS2  Erkin-Say           2.94 265 ⇑iP      Pn       20 28 17.1  +1.2
      baz=65
EKS2                               ⇑iS      Sn       20 28 52.4  +0.7
      baz=65
AML   Almayashu           3.12 256 ⇑iP      Pn       20 28 19.2  +0.7
      baz=56
AML                                ⇑iS      Sn       20 28 56.7  +0.4
      baz=56
MNAS  Manas               3.90 265 ⇓Pg      Pb       20 28 38.3  +0.6
      0.6nm,0.6s
MNAS                               ⇓Lg      Lg       20 29 29.8
      1.6nm,0.6s
SFK   Sufi-Kurgan         4.35 229 ⇓Pg      Pb       20 28 47.7  +2.3
      0.6nm,0.5s
SFK                                ⇑Lg      Lg       20 29 47.5
      0.8nm,0.6s
MAKZ  Makanchi            4.87  37 ⇑Pg      Pb       20 28 54.9  +0.7
      1.9nm,1.0s
MAKZ                               ⇑Lg      Lg       20 29 58.3
      1.3nm,0.9s
MK31  Makanchi Array      5.00  39 ⇓Pn      Pn       20 28 44.6  +0.6
      0.2nm,0.3s,baz=213,slow=14
MK31                               ⇑Lg      Lg       20 30 03.0
      0.5nm,0.5s,baz=209,slow=19
KK31  Karatay Array       5.31 274 ⇑Lg      Lg       20 30 16.9
      1.3nm,0.6s
OTUK  Ortayu              6.50 326 ⇓Pg      Pb       20 29 23.8  +1.9
      1.1nm,0.9s
OTUK                               ⇓Lg      Lg       20 30 50.2
      1.6nm,0.9s
KURBB Kurchatov Arra      7.67   4 ⇑Lg      Lg       20 31 27.1
      3.5nm,0.8s
KURK  Kurchatov           7.77   4 ⇑Lg      Lg       20 31 28.9
      2.4nm,1.0s
```

IDC 07 20:30:47.6±3.2**, 12°.03S×165°.07E, h0**^{km}**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.7**/34**, mbtmp3.7**/5**, Error ellipse: s-maj=109.2km s-min=32.9km az=136.0, Santa Cruz Islands**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
WRA   Warramunga Arr     30.53 251   P       P        20 37 03.7  +0.7
      1.2nm,0.6s,baz=80,slow=9.0,SNR=13
ASAR  Alice Springs      31.77 244   P       P        20 37 12.6  -1.3
      0.6nm,0.8s,baz=80,slow=9.1,SNR=4.8
CMAR  Chiang Mai Arr     71.91 294   P       P        20 42 14.3  +1.0
      0.7nm,0.7s,baz=122,slow=4.1,SNR=6.3
ILAR  Eielson Array      84.65  19   P       P        20 43 23.1  +0.3
      0.2nm,0.5s,baz=236,slow=6.0,SNR=4.3
MKAR  Makanchi Array     93.79 317   P       P        20 44 05.4  -1.3
      0.3nm,0.6s,baz=115,slow=5.7,SNR=3.8
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*ATH **07** 20:31:44.4, 34°.91N×23°.05E, h40^{km}±2^{km}, ML3.6/4, Error ellipse: s-maj=4.5km s-min=2.1km az=47.0*
*ISCJB **07** 20:31:46.1±0.9, 35°.02N±0°.07×23°.11E±0°.07, h68^{km}±5^{km}, mb3.6/14, Error ellipse: s-maj=13.5km s-min=6.6km az=40.2*
*THE **07** 20:31:46.0, 35°.00N×23°.10E, h12^{km}±1^{km}, ML3.5/3, Error ellipse: s-maj=1.9km s-min=0.6km az=52.0*
*IDC **07** 20:31:47.5±2.1, 35°.13N×23°.10E, h60^{km}±16^{km}, mb3.5/14, mb1 3.6/19, mb1mx3.5/51, mbtmp3.7/19, Error ellipse: s-maj=22.1km s-min=14.4km az=19.0*
ISC 07 20:31:45.0±1.3**, 34°.91N**±0°.07×**23°.00E**±0°.06**, h46**^{km}±12^{km}**,**
n59, σ1^{s}13/67**, mb4.0**/21**, Central Mediterranean Sea**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
GVD   Gavdhos             0.90  94   P       Pn       20 32 01.8  +0.5
GVD                                  S       Sn       20 32 13.1  -0.1
GVD                                  AML     AML      20 32 19.6
      comp=E,10949µm,0.3s
GVD                                  AML     AML      20 32 22.2
      comp=N,13514µm,0.4s
GVD   Gavdhos             0.90  94   P       Pn       20 32 01.7  +0.4
GVD                                  S       Sn       20 32 13.6  +0.4
IMMV  Iera Moni Meta      0.97  56   P       Pn       20 32 02.4  +0.1
IMMV                                 S       Sn       20 32 15.3  +0.3
IMMV                                 AML     AML      20 32 20.0
      comp=N,11080µm,0.7s
IMMV                                 AML     AML      20 32 24.8
      comp=E,6316µm,0.6s
IMMV  Iera Moni Meta      0.97  56   P       Pn       20 32 02.4  +0.1
IMMV                                 S       Sn       20 32 14.6  -0.4
ANKY  Antikythira Is      0.98  15   P       Pn       20 32 03.2  +0.8
ANKY                                 S       Sn       20 32 17.4  +2.2
ANKY                                 AML     AML      20 32 23.1
      comp=E,4319µm,1.0s
ANKY                                 AML     AML      20 32 23.4
      comp=N,3891µm,1.0s
ANKY  Antikythira Is      0.98  15   P       Pn       20 32 02.2  -0.2
ANKY                                 S       Sn       20 32 15.5  +0.3
CHAN  Chania              1.05  55   P       Pn       20 32 03.6  +0.3
VAM   Vamos               1.10  63   P       Pn       20 32 04.3  +0.2
VAM                                  S       Sn       20 32 19.5  +1.4
VAM                                  AML     AML      20 32 24.2
      comp=E,3867µm,0.5s
VAM                                  AML     AML      20 32 26.7
      comp=N,6643µm,0.6s
VAM   Vamos               1.10  63   P       Pn       20 32 04.5  +0.5
PRNS  Prines Rethymn      1.31  70   P       Pn       20 32 06.7  -0.2
KTHR  Kythira             1.34   0   P       Pn       20 32 08.1  +0.7
KYTH  Kithira             1.35   2   P       Pn       20 32 08.6  +1.1
TMBK  Timbaki Herakl      1.46  83   P       Pn       20 32 09.6  +0.7
IDI   Anoyia              1.60  76   P       Pn       20 32 10.3  -0.6
IDI   Anoyia              1.60  76   P       Pn       20 32 10.6  -0.3
      comp=N,25nm,0.3s,baz=246,slow=9.8,SNR=75
IDI                                  S       Sn       20 32 30.5  +0.2
      comp=N,36nm,0.3s,baz=64,slow=21,SNR=8.6
IACM  Heraklion           1.75  76   P       Pn       20 32 14.0  +1.2
VLI   Veliai              1.80 358   P       Pn       20 32 15.2  +1.6
LAST  Lasithi             2.05  82   P       Pn       20 32 18.2  +1.1
LAST  Lasithi             2.05  82   P       Pn       20 32 18.2  +1.1
MHLO  Agia Marina, M      2.11  32   P       Pn       20 32 18.4  +0.6
MHLA  Plaka, Milos I      2.16  32   P       Pn       20 32 18.2  -0.3
NPS   Neapolis            2.17  80   P       Pn       20 32 20.0  +1.3
NPS   Neapolis            2.17  80   P       Pn       20 32 19.9  +1.2
SANT  Santorini           2.48  53   P       Pn       20 32 22.3  -0.6
STIA  Sitia Lasithi       2.56  83   P       Pn       20 32 25.5  +1.6
ZKR   Zakros              2.65  85   P       Pn       20 32 26.5  +1.2
ZKR   Zakros              2.65  85   P       Pn       20 32 26.5  +1.2
KARP  Karpathos           3.47  78   P       Pn       20 32 36.5   0.0
ARG   Arkhangelos         4.38  71   P       Pn       20 32 49.9  +1.0
VAE   Valguarnera         7.40 293   S       Sn       20 34 49.5  -3.6
      comp=N,1.1nm,0.3s,baz=204,slow=17,SNR=3.0
BRTR  Keskin Array B      9.74  57   P       Pn       20 34 02.4  -0.2
      comp=N,0.3nm,0.3s,baz=236,slow=16,SNR=7.0
MMAI  Mount Meron Ar     10.48  97   P       Pn       20 34 10.0  -2.6
      comp=N,1.6nm,0.3s,baz=290,slow=12,SNR=12
MMAI                                 S       Sn       20 35 58.5   -10
      comp=N,3.1nm,0.3s,baz=291,slow=24,SNR=7.2
MLR   Muntele Rosu       10.80  11   P       Pn       20 34 17.2  +0.1
      comp=N,0.2nm,0.3s,baz=196,slow=15,SNR=5.0
EIL   Elat               11.38 114   P       Pn       20 34 22.2  -2.8
      comp=N,0.8nm,0.3s,baz=281,slow=5.8,SNR=14
EIL                                  S       Sn       20 36 20.7   -10
      comp=N,1.2nm,0.3s,baz=260,slow=0.3,SNR=5.9
GERES GERESS Array B     15.53 337   P       Pn       20 35 20.3  -0.5
      comp=N,0.1nm,0.3s,baz=146,slow=12,SNR=2.5
AKASG Malin Array Be     16.42  14   P       Pn       20 35 31.6  -0.4
      comp=N,1.9nm,0.3s,baz=208,slow=9.5,SNR=5.6
KBZ   Khabaz             17.70  54   P       P        20 35 48.0  -0.5
      comp=N,0.1nm,0.3s,baz=235,slow=12,SNR=3.5
HFS   Hagfors            25.95 349   P       P        20 37 11.5  -1.3
      comp=N,3.1nm,0.7s,baz=162,slow=9.1,SNR=12
FINES FINESS Array B     26.62   3   P       P        20 37 17.6  -1.2
      comp=N,0.9nm,0.6s,baz=157,slow=10,SNR=5.1
NB2   NORSAR Subarra     27.22 347   P       P        20 37 25.9  +1.6
      comp=Z,0.3nm,0.4s,baz=160,slow=10
NOA   NORSAR Array B     27.22 347   P       P        20 37 23.7  -0.6
      comp=Z,0.1nm,0.3s,baz=153,slow=9.1,SNR=5.6
EKA   Eskdalemuir Ar     27.24 327   P       P        20 37 25.1  +0.6
      comp=Z,1.2nm,0.7s,baz=118,slow=7.5,SNR=4.1
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GEYT	Alibeck	28.32	74	P	P	20 37 34.3	-0.1
	comp=Z,1.1nm,0.6s,baz=268,slow=8.7,SNR=3.4						
TORD	Torodi Ar. Bea	29.00	227	P	P	20 37 43.5	+3.0
	comp=Z,0.3nm,0.5s,baz=31,slow=9.9,SNR=5.4						
ARCES	ARCESS Array B	34.70	2	P	P	20 38 28.9	-1.1
	comp=Z,0.6nm,0.7s,baz=198,slow=8.5,SNR=4.8						
MKAR	Makanchi Array	45.39	56	P	P	20 39 58.2	-0.6
	comp=Z,1.2nm,0.4s,baz=269,slow=8.2,SNR=42						
ZALV	Zalesovo Beam	46.45	46	P	P	20 40 05.3	-1.8
	comp=Z,1.6nm,0.4s,baz=268,slow=9.3,SNR=11						
PYUN	Piuthan	50.95	80	eP	P	20 40 42.5	+0.3
	comp=Z,9.9nm,0.6s						
DANN	Dangsing	51.47	79	eP	P	20 40 46.3	0.0
	comp=Z,12nm,0.5s						
DMN	Daman	52.86	80	eP	P	20 40 56.5	0.0
	comp=Z,5.2nm,0.4s						
PKIN	Phulchoki	53.10	80	eP	P	20 40 58.0	-0.4
	comp=Z,3.1nm,0.5s						
PKI	Pulchoki	53.12	80	eP	P	20 40 58.2	-0.3
	comp=Z,5.5nm,0.5s						
GUN	Gumba	53.36	79	eP	P	20 41 00.1	-0.2
	comp=Z,5.3nm,0.3s						
JIRN	Jiri	53.71	79	eP	P	20 41 02.9	0.0
	comp=Z,7.2nm,0.5s						
SONM	Songino Array	61.01	50	P	P	20 41 53.8	0.0
	comp=Z,0.8nm,0.5s,baz=280,slow=6.8,SNR=11						
CMAR	Chiang Mai Arr	68.36	82	P	P	20 42 42.0	-0.1
	comp=Z,0.6nm,0.9s,baz=291,slow=7.8,SNR=4.3						
YKA	Yellowknife Ar	77.12	341	P	P	20 43 34.8	+1.6
	comp=Z,0.5nm,0.8s,baz=35,slow=6.1,SNR=3.9						
USRK	Ussuriysk Ar.	78.26	44	P	P	20 43 39.7	-0.2
	comp=Z,0.4nm,0.3s,baz=295,slow=4.2,SNR=5.0						
KSRS	Korea Array	79.83	51	P	P	20 43 48.8	+0.1
	comp=Z,0.9nm,0.6s,baz=312,slow=4.9,SNR=4.0						

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*ISCJB **07** 20:41:36.8±0.4, 0°.39S±0°.02×124°.40E±0°.03, h64^{km}±4^{km}, mb4.5/59, Error ellipse: s-maj=4.6km s-min=3.9km az=166.7*

*NEIC **07** 20:41:38.2±0.7, 0°.41S×124°.36E, h64^{km}±7^{km}, mb4.6/30, Error ellipse: s-maj=6.9km s-min=5.0km az=53.0*

*DJA **07** 20:41:38.5±0.4, 0°S±2°×12°4E±°, h39^{km}±7^{km}, M4.8/19, mb4.8/19, mB5.3/6, MLv4.9/18, Mw(mB)4.7/6*

*IDC **07** 20:41:40.5±2.5, 0°.35S×124°.24E, h75^{km}±23^{km}, mb4.2/21, mb1 4.2/25, mb1mx4.1/46, mbtmp4.5/25, Error ellipse: s-maj=20.1km s-min=11.4km az=88.0*

ISC 07 20:41:38.8±0.8**, 0°.36S**±0°.04×**124°.43E**±0°.04**, h63**^{km}±8^{km}**, n148,** σ1^s**58**/162**, mb4.5**/59**, 2C, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.03	334	P	Pn	20 41 54.8	-2.6
KMSI				S	Sn	20 42 08.2	-2.9
LUWI	Luwuk	1.79	248	ePn	Pn	20 42 05.8	-1.7
LUWI	Luwuk	1.79	248	P	Pn	20 42 06.6	-0.9
LUWI				S	Sn	20 42 30.1	+0.9
SANI	Sanana	2.29	137	P	Pn	20 42 11.2	-3.1
SANI				S	Sn	20 42 37.9	-3.6
MRSI	Marisa	2.62	288	P	Pn	20 42 14.9	-3.9
APSI	Ampana	2.83	259	P	Pn	20 42 21.6	-0.1
TNTI	Ternate	3.15	69	ePn	Pn	20 42 26.7	+0.6
TNTI	Ternate	3.15	69	P	Pn	20 42 26.6	+0.6
KDI	Kendari	4.00	207	P	Pn	20 42 36.3	-1.4
MPSI	Mapaga	4.58	279	P	Pn	20 42 43.4	-2.2
PCI	Palu	4.62	263	P	Pn	20 42 46.0	-0.2
TTSI	Tana Toraja	5.32	240	P	Pn	20 42 55.2	-0.6
	244nm,0.6s,4μm1.4nm						
TTSI				S	Sn	20 43 54.8	-1.0
	244nm,0.6s,4μm1.4nm						
BBSI	Bau Bau	5.42	200	P	Pn	20 42 56.8	-0.3
BBSI				S	Sn	20 43 58.7	+0.5
SPSI	Sidrap Palu	5.87	232	P	Pn	20 43 02.9	-0.4
SPSI				S	Sn	20 44 09.0	-0.3
BNSI	Bone	5.89	227	P	Pn	20 43 03.0	-0.6
BKSI	Bulukumba	6.54	221	P	Pn	20 43 11.9	-0.6
BKSI				S	Sn	20 44 22.9	-2.8
SWI	Sorong	6.85	94	P	Pn	20 43 19.0	+2.3
BNDI	Bandanaira	6.86	127	P	Pn	20 43 16.5	-0.3
SMKI	Samarinda	7.22	269	P	Pn	20 43 28.6	+6.8
DAV	Davao City (W)	7.47	9	P	Pn	20 43 28.4	+3.2
	54nm,0.3s,baz=353,slow=17,SNR=4.5						
CTBH	Cotabato--PC H	7.53	359	⇑iP	Pn	20 43 28.0	+1.9
BKB	Balikpapan	7.58	263	P	Pn	20 43 29.9	+3.2
PAGZ	Pagadian	8.22	353	eP	Pn	20 43 34.6	-0.8
FAKI	Fak Fak	8.22	108	ePn	Pn	20 43 33.6	-1.9
FAKI	Fak Fak	8.22	108	P	Pn	20 43 33.3	-2.2
MMRI	Maumere	8.51	195	ePn	Pn	20 43 37.0	-2.4
MMRI	Maumere	8.51	195	P	Pn	20 43 48.3	+8.9
KBKI	Kotabaru	8.76	250	P	Pn	20 43 50.9	+8.1
EDFI	Ende, Flores	8.77	198	P	Pn	20 43 42.8	-0.3
SOEI	Soe	9.34	181	ePn	Pn	20 43 48.5	-2.3
SOEI	Soe	9.34	181	P	Pn	20 43 52.5	+1.7
BATI	Baumata	9.81	184	P	Pn	20 43 59.9	+2.6
BATI	Baumata	9.81	184	P	Pn	20 43 59.7	+2.4
	3.8nm,0.3s,baz=27,slow=3.2,SNR=8.8						
SAUI	Saumlaki	10.21	138	ePn	Pn	20 44 02.2	-0.5
SAUI	Saumlaki	10.21	138	P	Pn	20 44 03.5	+0.8
KKM	Kota Kinabalu	10.38	308	ePn	Pn	20 44 05.8	+0.8
SBUM	Sibu	12.52	283	ePn	Pn	20 44 33.3	-0.9
JAGI	Jajag, Banyuwa	13.03	232	ePn	Pn	20 44 39.8	-1.4
MTN	Manton Dam	14.07	152	ePn	Pn	20 44 55.1	-0.1
KSM	Kuching	14.23	277	eP	P	20 45 02.9	+0.1
NGJI	Ngawi	14.68	241	P	P	20 45 12.0	+4.2
PWJI	Pagerwojo	14.70	239	P	Pn	20 45 05.6	+2.2
PCJI	Pacitan	15.33	239	P	P	20 45 17.7	+2.7
KPJI	Karang Pucung	16.93	245	P	P	20 45 34.3	+1.5
FITZ	Fitzroy Crossi	17.67	176	ePn	Pn	20 45 38.6	-2.1
	12nm,1.3s						
FITZ	Fitzroy Crossi	17.67	176	P	P	20 45 41.2	+0.4
	0.7nm,0.3s,baz=8.0,slow=7.6,SNR=21						
LEM	Lembang	17.96	249	P	Pn	20 45 44.7	+0.3
	2.3nm,0.3s,baz=352,slow=20,SNR=7.9						
CISI	Cisompet, Garu	18.04	246	ePn	P	20 45 44.1	-1.0
	38nm,0.6s						
CISI	Cisompet, Garu	18.04	246	P	P	20 45 44.9	-0.2
PPBI	Pangkal Pinang	18.37	264	P	P	20 45 48.8	+0.1
APYP	Conner	18.38	350	eP	Pn	20 45 50.9	+1.6
CBJI	Citeko	18.54	251	P	Pn	20 45 51.5	+0.1
MDSI	Maura Dua	20.64	258	P	Pn	20 46 18.4	+2.2
MYKOM	Kota Tinggi	20.68	276	eP	P	20 46 14.2	+0.3
	13nm,0.8s						
LWLI	Liwa	20.86	257	P	Pn	20 46 33.0	+14
XMIS	Christmas Isla	21.20	241	eP	P	20 46 17.9	-1.5
	80nm,0.7s						
WRAB	Tennant Creek	21.75	154	eP	P	20 46 24.0	-1.2
	26nm,1.1s						
WR1	Warramunga Arr	21.75	154	eP	P	20 46 23.8	-1.5
	24nm,1.2s						
WR1				eS	S	20 50 25.1	+2.4
WRA	Warramunga Arr	21.75	154	P	P	20 46 23.8	-1.5
	3.4nm,0.5s,baz=334,slow=11,SNR=57						
WRA				PcP	PcP	20 50 25.1	+1.0
	3.8nm,1.3s,baz=332,slow=2.2,SNR=5.7						
WB2	Warramunga Arr	21.75	154	eP	P	20 46 23.0	-2.3
	27nm,1.2s						
COEN	Coen	22.95	127	eP	P	20 46 37.7	-0.4
	13nm,0.8s						
TPUB	Ta-pu	23.81	351	eP	P	20 46 44.6	-1.5
	36nm,0.9s						
IPM	Ipoh	23.87	282	eP	P	20 46 45.4	-1.4
	12nm,0.7s						
AS31	Alice Springs	24.93	159	eP	P	20 46 56.0	-0.3
	2.5nm,0.5s						
AS31				ePcP	PcP	20 50 32.0	+1.3
ASAR	Alice Springs	24.93	159	P	P	20 46 56.5	+0.1
	2.8nm,0.5s,baz=341,slow=7.5,SNR=42						
ASAR				PcP	PcP	20 50 32.0	+1.3
	2.4nm,0.5s,baz=349,slow=2.2,SNR=16						
AS01	Alice Springs	24.94	159	eP	P	20 46 57.1	+0.7
SKNT	Sakolnakorn	26.51	311	P	P	20 47 15.6	+4.9
	4.7nm,0.7s						
CHAI	Chaiyaphum	27.42	307	P	P	20 47 22.1	+3.2
	3.5nm,0.5s						
UTHA	Uthaitani	29.31	304	P	P	20 47 38.8	+3.1
	2.5nm,0.6s,51nm						
FORT	Forrest	30.45	174	eP	P	20 47 45.6	0.0
	12nm,0.6s						
CM01	Chiang Mai Arr	31.22	308	eP	P	20 47 52.8	+0.2
CM31	Chiang Mai Arr	31.25	308	eP	P	20 47 52.0	-0.9
	8.2nm,1.4s						
CMAR	Chiang Mai Arr	31.25	308	P	P	20 47 53.3	+0.4
	1.6nm,0.6s,baz=134,slow=6.8,SNR=18						
CMAR				PcP	PcP	20 50 48.0	+1.7
	1.6nm,0.7s,baz=145,slow=1.4,SNR=16						
CMMT	Chiang Mai	31.45	309	P	P	20 47 55.4	+0.8
	9.1nm,0.7s						
CHTO	Chiang Mai	31.45	309	eP	P	20 47 54.4	-0.2
	5.1nm,0.6s						
CHTO	Chiang Mai	31.45	309	P	P	20 47 55.5	+0.9
	40nm,0.7s						
NJ2	Nanjing	32.66	351	eP	P	20 48 05.3	+0.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI	Kunming	32.89	322	P	P	20 48 09.6	+2.2
KMI				pP	pP	20 48 21.7	-0.1
KMI				sP	sP	20 48 28.5	-0.2
KMI				pmax	pmax		
	comp=Z,5.0nm,1.8s						
ENH	Enshi	33.62	336	eP	P	20 48 10.7	-2.8
	comp=Z,44nm,1.9s						
JNU	Nakatsue	33.85	10	P	P	20 48 16.0	+0.6
	comp=Z,8.5nm,0.7s,baz=318,slow=2.7,SNR=6.1						
STKA	Stephens Creek	35.30	154	P	P	20 48 28.6	+0.6
	comp=Z,1.8nm,0.4s,baz=330,slow=11,SNR=6.1						
STKA				PcP	PcP	20 50 58.3	+0.9
	comp=Z,0.9nm,0.4s,baz=281,slow=5.2,SNR=3.2						
CD2	Chengdu	36.78	330	P	P	20 48 40.9	+0.3
XAN	Xi'an	37.19	338	P	P	20 48 44.0	0.0
XAN				pP	pP	20 48 53.3	-5.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN	Xi'an	37.19	338	eP	P	20 48 42.9	-1.2
	comp=Z,6.0nm,0.9s						
KSAR	Wonju Array Be	37.75	4	P	P	20 48 50.4	+1.8
KSRS	Korea Array	37.76	5	P	P	20 48 50.4	+1.6
	comp=Z,1.5nm,0.6s,baz=186,slow=10.0,SNR=7.9						
MAJO	Matsushiro	38.88	18	eP	P	20 48 58.1	-0.1
MAT	Matsushiro	38.88	18	P	P	20 48 58.1	-0.2
MJAR	Matsushiro Arr	38.88	18	P	P	20 48 58.1	-0.1
	comp=Z,5.4nm,0.7s,baz=196,slow=9.0,SNR=12						
BJT	Baijiatuau	40.89	350	eP	P	20 49 14.2	-0.6
	comp=Z,42nm,1.9s						
BJI	Beijing	40.91	350	P	P	20 49 15.0	+0.1
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LZH	Lanzhou	41.01	334	eP	P	20 49 17.8	+1.7
LZH				pP	pP	20 49 30.7	-0.1
LZH				sP	pwP	20 49 34.9	-0.5
LZH				PP	PP	20 50 52.6	+0.8
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,96nm,4.3s						
LZH				LR	LR		
	comp=N,540nm,16.6s						
LZH				LR	LR		
	comp=E,560nm,16.0s						
LZH				LR	LR		
	comp=Z,640nm,17.8s						
HHC	Hu-ho-hao-te	42.65	346	eP	P	20 49 32.0	+2.7
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,970nm,8.8s						
LSA	Lhasa	43.59	316	eP	P	20 49 38.0	+0.5
	comp=Z,9.2nm,0.6s						
USRK	Ussuriysk Ar.	44.88	8	P	P	20 49 47.6	+0.7
	comp=Z,3.9nm,0.4s,baz=195,slow=7.7,SNR=22						
RAMN	Ramite	45.39	310	eP	P	20 49 51.7	0.0
	comp=Z,21nm,0.5s						
GTA	Gaotai	45.54	333	⇑P	P	20 49 54.1	+1.5
GTA				pP	pP	20 50 02.4	-5.1
GTA				sP	pwP	20 50 06.8	-5.4
GTA				pmax	pmax		
	comp=Z,7.0nm,1.6s						
JIRN	Jiri	46.07	310	eP	P	20 49 56.4	-0.8
	comp=Z,12nm,0.4s						
GUN	Gumba	46.43	310	eP	P	20 49 59.0	-1.0
	comp=Z,14nm,0.4s						
PKI	Pulchoki	46.62	310	eP	P	20 50 00.5	-1.0
	comp=Z,4.5nm,0.5s						
PKIN	Phulchoki	46.63	310	eP	P	20 50 00.6	-0.9
	comp=Z,4.1nm,0.5s						
ASAJ	Asahikawa	47.16	18	P	P	20 50 06.2	+1.3
	comp=Z,5.9nm,0.5s,baz=232,slow=9.2,SNR=18						
KOLN	Koldanda	48.12	309	eP	P	20 50 12.1	-0.9
	comp=Z,21nm,0.6s						
DANN	Dangsing	48.27	310	eP	P	20 50 13.3	-1.0
	comp=Z,29nm,0.6s						
PYUN	Piuthan	48.75	309	eP	P	20 50 17.1	-0.7
	comp=Z,27nm,0.6s						
HIA	Hailar	49.60	356	eP	P	20 50 25.2	+1.5
	comp=Z,7.8nm,0.7s						
KLR	Kul'dur	49.80	6	P	P	20 50 25.2	0.0
	comp=Z,5.7nm,0.5s,baz=192,slow=6.1,SNR=36						
SONA0	Songino Array	50.50	344	eP	P	20 50 30.1	-0.6
SONA0				ePcP	PcP	20 51 48.3	+0.3
SONM	Songino Array	50.50	344	P	P	20 50 30.1	-0.6
	comp=Z,2.2nm,0.6s,baz=159,slow=8.5,SNR=16						
SONM				PcP	PcP	20 51 48.3	+0.3
	comp=Z,1.3nm,0.6s,baz=170,slow=3.1,SNR=4.8						
SONA1	Songino Array	50.51	344	eP	P	20 50 30.5	-0.3
WMQ	Urumqi	54.84	328	eP	P	20 51 02.7	-0.1
WMQ				LR	LR		
	comp=N,6μm,24.5s						
WMQ				LR	LR		
	comp=E,5μm,20.7s						
WMQ				LR	LR		
	comp=Z,4μm,26.5s						
NIL	Nilore	58.70	310	eP	P	20 51 28.9	-1.4
	comp=Z,5.7nm,0.5s						
PRZ	Przheval'sk	59.38	322	eP	P	20 51 34.1	-0.8
	comp=Z,12nm,0.6s						
KSH	Kashi	59.40	318	P	P	20 51 36.7	+1.6
KSH				sP	pwP	20 51 55.1	-0.3
KSH				pmax	pmax		
	comp=Z,470nm,6.7s						
MK01	Makanchi Array	59.65	328	eP	P	20 51 35.1	-1.5
MK31	Makanchi Array	59.67	328	eP	P	20 51 35.5	-1.2
MK32	Makanchi Array	59.67	328	eP	P	20 51 35.7	-1.1
MK32				ePcP	PcP	20 52 23.2	0.0
MKAR	Makanchi Array	59.67	328	eP	P	20 51 35.4	-1.3
	comp=Z,61nm,0.4s						
MKAR				PcP	PcP	20 52 23.2	0.0
MKAR	Makanchi Array	59.67	328	P	P	20 51 35.7	-1.1
	comp=Z,5.3nm,0.4s,baz=121,slow=8.2,SNR=106						
MKAR				PcP	PcP	20 52 23.2	0.0
	comp=Z,1.4nm,0.6s,baz=122,slow=3.1,SNR=4.3						
MAKZ	Makanchi	59.85	328	eP	P	20 51 36.3	-1.6
	comp=Z,4.0nm,0.6s						
PETK	Petropavlovsk-	60.06	22	P	P	20 51 41.2	+2.0
	comp=Z,3.3nm,0.5s,baz=207,slow=3.4,SNR=14						
PEA1	Petropavlovsk-	60.06	22	eP	P	20 51 41.2	+2.0
NRN	Naryn	60.34	320	eP	P	20 51 41.8	0.0
	comp=Z,3.0nm,1.1s						
KBL	Kabul	62.26	310	eP	P	20 51 53.0	-1.8
	comp=Z,6.4nm,0.5s						
GAR	Garm	63.07	315	eP	P	20 51 58.6	-1.4
	comp=Z,6.5nm,0.7s						
MA2	Magadan	63.21	15	P	P	20 52 01.3	+1.0
	comp=Z,3.2nm,0.3s,baz=183,slow=5.8,SNR=8.0						
ZAA0	Zalesovo Array	63.23	335	eP	P	20 51 58.1	-2.4
	comp=Z,9.7nm,1.7s						
ZALV	Zalesovo Beam	63.23	335	eP	P	20 51 57.9	-2.7
ZALV	Zalesovo Beam	63.23	335	P	P	20 51 58.6	-1.9
	comp=Z,1.5nm,0.4s,baz=132,slow=6.2,SNR=14						
ZAA1	Zalesovo Array	63.24	335	eP	P	20 51 58.6	-2.0
KURK	Kurchatov	64.00	330	eP	P	20 52 04.1	-1.6
	comp=Z,15nm,0.5s						
BRVK	Borovoye	69.60	329	eP	P	20 52 39.6	-1.7
	comp=Z,3.3nm,0.6s						
TIXI	Tiksi	71.95	1	eP	P	20 52 54.1	-1.0
	comp=Z,4.8nm,0.7s						
NRIK	Noril'sk	73.85	347	P	P	20 53 05.5	-0.9
	comp=Z,4.0nm,0.5s,baz=144,slow=9.1,SNR=5.1						
ABKAR	Akbulak array	73.89	322	eP	P	20 53 05.4	-1.7
ARU	Arti	77.17	329	eP	P	20 53 23.8	-2.0
	comp=Z,3.6nm,0.7s						
KBZ	Khabaz	84.12	314	P	P	20 54 02.9	-0.2
	comp=Z,1.5nm,0.7s,baz=162,slow=4.5,SNR=5.7						
KMBO	Kilima Mbogo	87.17	269	P	P	20 54 19.4	+0.2
	comp=Z,1.1nm,0.5s,baz=153,slow=2.3,SNR=3.9						
BR101	Keskin Array S	90.83	310	eP	P	20 54 33.7	-2.2
BRTR	Keskin Array B	90.83	310	P	P	20 54 33.7	-2.2
	comp=Z,0.5nm,0.7s,baz=127,slow=3.1,SNR=3.4						
ARA0	ARCESS Array S	93.46	340	eP	P	20 54 45.6	-1.6
ARCES	ARCESS Array B	93.46	340	P	P	20 54 45.6	-1.6
	comp=Z,1.3nm,0.5s,baz=79,slow=7.0,SNR=15						
FIA0	FINESS Array S	94.31	332	eP	P	20 54 49.3	-1.9
FINES	FINESS Array B	94.31	332	P	P	20 54 49.3	-1.9
	comp=Z,0.5nm,0.5s,baz=90,slow=5.7,SNR=7.9						
INK	Inuvik	94.78	21	P	P	20 54 53.8	+0.6
	comp=Z,1.5nm,0.8s,baz=255,slow=3.8,SNR=4.1						
TORD	Torodi Ar. Bea	121.88	285	PKP	PKPdf	21 00 26.9	-0.1
	comp=Z,0.6nm,0.6s,baz=99,slow=2.3,SNR=7.4						
TOA1	Torodi Ar. Sit	121.88	285	ePKPdf	PKPdf	21 00 26.9	-0.1
LCO	Las Campanas	147.41	155	ePKPbc	PKPab	21 01 18.2	-0.4

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*IDC **07** 20:41:37.0±0.7, 11°.87S×165°.40E, h0^{km}, mb4.3/14, mb1 4.5/16, mb1mx4.3/44, mbtmp4.3/16, ML4.5/2, Error ellipse: s-maj=23.5km s-min=16.9km az=133.0*

*NEIC **07** 20:41:38.8±0.2, 11°.82S×165°.35E, h10^{km}, mb4.8/29, Error ellipse: s-maj=7.0km s-min=4.7km az=144.0*

*ISCJB **07** 20:41:40.6±0.3, 11°.94S±0°.07×165°.27E±0°.07, h33^{km}, mb4.6/39, Error ellipse: s-maj=11.5km s-min=8.0km az=146.1*

ISC 07 20:41:42.4±0.6**, 11°.88S**±0°.09×**165°.3E**±0°.1**, h35**^{km}**, n63,** σ**0**^{s}**72**/62**, mb4.7**/39**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.83	294	ePn	Pn	20 43 04.9	-1.5
HNR				eSn	Sn	20 44 03.4	-8.6
HNR	Honiara	5.83	294	Pn	Pn	20 43 06.3	0.0
	19nm,0.3s,baz=17,slow=3.7,SNR=6.6						
HNR				Sn	Sn	20 44 03.4	-8.6
	23nm,0.3s,baz=202,slow=19,SNR=5.9						
DZM	Mont Dzumac	10.19	174	ePn	Pn	20 44 06.2	-0.1
DZM	Mont Dzumac	10.19	174	Pn	Pn	20 44 04.6	-1.7
	2.4nm,0.3s,baz=91,slow=4.8,SNR=19						
CTA	Charters Tower	20.06	244	P	P	20 46 13.6	+0.8
	4.9nm,0.2s,baz=82,slow=14,SNR=5.3						
CTAO	Charters Tower	20.06	244	eP	P	20 46 12.5	-0.3
	60nm,1.8s						
STKA	Stephens Creek	29.56	224	eP	P	20 47 44.6	+0.6
	7.0nm,1.9s						
STKA	Stephens Creek	29.56	224	P	P	20 47 44.3	+0.3
	3.6nm,0.8s,baz=53,slow=9.6,SNR=7.1						
WR1	Warramunga Arr	30.82	251	eP	P	20 47 54.6	-0.7
	6.8nm,0.8s						
WRA	Warramunga Arr	30.82	251	P	P	20 47 54.6	-0.7
	3.8nm,0.7s,baz=80,slow=8.9,SNR=7.5						
ASAR	Alice Springs	32.06	244	P	P	20 48 05.1	-1.1
	3.1nm,0.8s,baz=70,slow=9.5,SNR=10						
RPZ	Rata Peaks	32.10	172	P	P	20 48 06.7	+0.5
	3.7nm,0.5s,baz=0.0,slow=6.1,SNR=3.5						
FITZ	Fitzroy Crossi	38.78	256	eP	P	20 49 04.0	0.0
	8.2nm,0.9s						
FITZ	Fitzroy Crossi	38.78	256	P	P	20 49 03.7	-0.2
	6.8nm,0.8s,baz=78,slow=8.6,SNR=7.5						
CM01	Chiang Mai Arr	72.05	294	eP	P	20 53 04.1	+0.7
CM31	Chiang Mai Arr	72.08	294	eP	P	20 53 03.8	+0.2
	5.5nm,1.1s						
CMAR	Chiang Mai Arr	72.08	294	P	P	20 53 05.7	+2.0
	1.8nm,0.9s,baz=114,slow=4.5,SNR=11						
QSPA	South Pole Qui	78.13	180	eP	P	20 53 38.3	+0.5
	7.1nm,1.0s						
SONA0	Songino Array	79.10	324	eP	P	20 53 43.2	-0.2
SONM	Songino Array	79.10	324	P	P	20 53 43.2	-0.2
	1.1nm,0.9s,baz=155,slow=4.9,SNR=4.5						
CAST	Castle Rocks	81.87	18	eP	P	20 53 57.1	-0.7
	7.1nm,0.9s						
RND	Reindeer	82.86	19	eP	P	20 54 03.1	+0.1
	15nm,1.2s						
MCK	McKinley	83.06	19	eP	P	20 54 04.0	0.0
	9.3nm,1.0s						
IM3	Indian Mountai	83.34	16	eP	P	20 54 06.0	+0.7
MLY	Manley	83.45	17	eP	P	20 54 06.0	0.0
	13nm,1.6s						
WRH	Wood River Hil	83.85	18	eP	P	20 54 07.5	-0.5
	5.8nm,0.8s						
MDM	Murphy Dome	84.15	18	eP	P	20 54 09.2	-0.4
	5.9nm,1.0s						
HDA	Harding Lake	84.16	19	eP	P	20 54 09.7	+0.1
	11nm,0.8s						
RIDG	Independ'e Rid	84.40	20	eP	P	20 54 10.9	+0.1
	16nm,1.1s						
IL1	Eielson Array	84.43	19	eP	P	20 54 10.7	-0.2
ILAR	Eielson Array	84.43	19	P	P	20 54 10.6	-0.4
	2.4nm,0.6s,baz=245,slow=5.1,SNR=47						
ILB	Eielson Array	84.43	19	eP	P	20 54 10.6	-0.4
SCRK	Sand Creek	84.84	20	eP	P	20 54 13.3	+0.2
	16nm,1.1s						
PAHR	Pah Rah Range	86.47	48	eP	P	20 54 21.2	-0.7
	8.8nm,1.2s						
NV01	Mina Array Sit	86.87	50	eP	P	20 54 23.6	-0.3
NVAR	Mina Array Bea	86.87	50	P	P	20 54 23.8	-0.2
	1.8nm,0.7s,baz=232,slow=7.2,SNR=6.9						
SHPR	Sheep Range	88.72	52	eP	P	20 54 32.5	-0.3
	4.1nm,1.0s						
ELK	Elko	89.81	48	eP	P	20 54 37.6	-0.3
	4.9nm,1.3s						
PSUT	Pine Spring	90.25	51	eP	P	20 54 39.9	-0.1
	7.7nm,1.2s						
LCMT	Little Creek M	90.33	52	eP	P	20 54 40.6	+0.3
	6.5nm,1.1s						
CCUT	Cedar City	90.38	52	eP	P	20 54 41.3	+0.7
	4.7nm,1.0s						
SYO	Syowa Base	90.87	197	⇑eP	P	20 54 50.9	+8.9
U15A	North Rim	90.93	53	eP	P	20 54 43.9	+0.6
	4.1nm,0.8s						
X16A	Lo Mia Camp, P	91.13	55	eP	P	20 54 45.0	+0.9
	2.9nm,0.9s						
HLID	Hailey	91.15	46	eP	P	20 54 44.1	+0.1
	3.9nm,1.0s						
MTPU	Mount Pierson	91.40	52	eP	P	20 54 46.1	+0.5
	8.6nm,1.2s						
HVU	Hansel Valley	91.87	48	eP	P	20 54 47.8	+0.4
	4.9nm,0.8s						
NLU	North Lily Min	91.94	50	eP	P	20 54 48.1	+0.3
	4.1nm,1.1s						
FXWY	Fox Creek	93.55	46	eP	P	20 54 55.3	+0.1
	4.1nm,0.4s						
MK01	Makanchi Array	93.84	317	eP	P	20 54 56.5	+0.3
MK32	Makanchi Array	93.85	317	eP	P	20 54 56.7	+0.5
MKAR	Makanchi Array	93.85	317	P	P	20 54 56.7	+0.5
	1.2nm,0.7s,baz=97,slow=6.0,SNR=5.7						
ZALV	Zalesovo Beam	93.99	324	P	P	20 54 56.9	+0.2
	0.2nm,0.4s,baz=357,slow=3.1,SNR=3.6						
ZAA1	Zalesovo Array	94.00	324	eP	P	20 54 56.9	+0.2
PD31	Pinedale Array	94.42	47	eP	P	20 54 58.7	-0.5
PDAR	Pinedale Array	94.42	47	P	P	20 54 59.1	0.0
	1.0nm,0.9s,baz=241,slow=3.1,SNR=5.4						
S22A	4UR Ranch, Cre	95.48	53	eP	P	20 55 03.9	-0.3
	10nm,0.8s						
YKA	Yellowknife Ar	95.90	27	P	P	20 55 03.7	-1.5
	0.7nm,0.6s,baz=258,slow=4.6,SNR=12						
YKB5	Yellowknife Ar	95.90	27	eP	P	20 55 03.5	-1.7
ARA0	ARCESS Array S	117.04	345	ePKPdf	PKiKP	21 00 24.9	+1.8
ARCES	ARCESS Array B	117.04	345	PKP	PKiKP	21 00 24.9	+1.8
	0.6nm,0.7s,baz=81,slow=2.8,SNR=5.1						
ES19	SONSECA Array	150.70	343	ePKPbc	PKiKP	21 01 32.1	+0.2
ESDC	Sonseca Array	150.74	343	PKPbc	PKiKP	21 01 31.8	-0.2
	0.5nm,0.3s,baz=45,slow=1.1,SNR=7.3						

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*IDC **07** 20:42:32.5±1.1, 10°.84S×165°.62E, h0^{km}, mb4.3/6, mb1 4.5/7, mb1mx4.1/42, mbtmp4.4/7, ML4.5/1, Error ellipse: s-maj=37.4km s-min=24.7km az=101.0*

*NEIC **07** 20:42:33.6±0.6, 10°.96S×165°.58E, h10^{km}, mb4.6/1, Error ellipse: s-maj=16.0km s-min=10.0km az=65.0*

*ISCJB **07** 20:42:35.9±0.8, 11°.0S±0°.1×165°.4E±0°.1, h30^{km}, mb4.3/7, Error ellipse: s-maj=19.9km s-min=13.6km az=154.7*

ISC 07 20:42:36.8±0.9**, 11°.0S**±0°.1×**165°.5E**±0°.2**, h30**^{km}**, n17,** σ**1**^{s}**31**/17**, mb4.3**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.69	285	ePn	Pn	20 43 57.4	-1.9
MARNC	Mare, Loyalty	10.74	167	ePn	Pn	20 45 05.7	-2.8
DZM	Mont Dzumac	11.09	176	ePn	Pn	20 45 12.4	-1.0
DZM	Mont Dzumac	11.09	176	Pn	Pn	20 45 14.9	+1.5
	3.3nm,0.3s,baz=157,slow=21,SNR=7.3						
MANU	Manus Island	20.07	295	eP	P	20 47 07.7	-0.3
	68nm,0.9s						
WR1	Warramunga Arr	31.30	250	eP	P	20 48 55.1	+0.6
	7.2nm,0.9s						
WRA	Warramunga Arr	31.30	250	P	P	20 48 55.1	+0.6
	3.1nm,0.8s,baz=82,slow=8.9,SNR=3.6						
ASAR	Alice Springs	32.63	243	P	P	20 49 07.8	+1.6
	4.8nm,0.9s,baz=70,slow=9.7,SNR=8.5						
RPZ	Rata Peaks	32.99	173	P	P	20 49 10.1	+1.0
	8.6nm,0.7s,baz=164,slow=3.1,SNR=4.8						
SONA0	Songino Array	78.46	324	eP	P	20 54 36.3	+1.2

SONM	Songino Array	78.46	324	P	P	20 54 36.3	+1.2
	0.9nm,0.8s,baz=133,slow=6.1,SNR=4.2						
ILAR	Eielson Array	83.50	19	P	P	20 55 01.1	-0.3
	1.9nm,0.8s,baz=228,slow=6.5,SNR=7.1						
MK32	Makanchi Array	93.30	317	eP	P	20 55 49.3	+0.5
MKAR	Makanchi Array	93.30	317	P	P	20 55 49.3	+0.5
	0.7nm,0.7s,baz=97,slow=5.1,SNR=3.9						
ARA0	ARCESS Array S	116.19	345	ePKPdf	PKiKP	21 01 15.8	-0.8
ARCES	ARCESS Array B	116.19	345	PKP	PKiKP	21 01 15.8	-0.9
	0.9nm,0.8s,baz=64,slow=2.1,SNR=3.8						
ESDC	Sonseca Array	149.91	344	PKPbc	PKPbc	21 02 24.4	-0.2
	0.7nm,0.7s,baz=61,slow=1.6,SNR=2.9						

*ISCJB **07** 20:45:16.8±0.3, 10°97S±0°04×165°76E±0°05, h10^{km}, mb4.6/36, MS4.6/1, Error ellipse: s-maj=7.6km s-min=5.0km az=158.1*

*NEIC **07** 20:45:18.0±0.3, 10°86S×165°80E, h10^{km}, mb5.0/23, Error ellipse: s-maj=7.4km s-min=5.4km az=85.0*

*IDC **07** 20:45:23.9±2.9, 10°91S×165°71E, h50^{km}±25^{km}, mb4.1/14, mb1 4.3/16, mb1mx4.1/40, mbtmp4.4/16, ML5.0/2, MS4.7/1, Ms1 4.7/1, ms1mx3.9/38, Error ellipse: s-maj=20.4km s-min=15.6km az=55.0*

ISC 07 20:45:18.8±0.5**, 10°92S**±0°06×**165°84E**±0°08**, h10^{km}, n79, σ1^{s}41**/80**, mb4.8**/36**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.99	284	ePn	Pn	20 46 47.9	+0.3
HNR				eSn	Sn	20 47 55.6	-0.6
HNR	Honiara	5.99	284	P	Pn	20 46 48.2	+0.7
	90nm,0.3s,baz=148,slow=4.2,SNR=17						
HNR				S	Sn	20 47 55.6	-0.6
	baz=38,slow=20,SNR=3.2						
MARNC	Mare, Loyalty	10.71	169	ePn	Pn	20 47 52.7	+0.4
DZM	Mont Dzumac	11.10	177	ePn	Pn	20 47 58.1	+0.3
DZM				eSn	Sn	20 50 02.1	0.0
DZM	Mont Dzumac	11.10	177	P	Pn	20 47 59.0	+1.2
	5.3nm,0.3s,baz=338,slow=12,SNR=15						
DZM				S	Sn	20 50 02.1	0.0
	0.5nm,0.3s,baz=307,slow=20,SNR=2.2						
ONTNC	Ouen Toro	11.34	177	ePn	Pn	20 48 02.0	+1.1
PINNC	Pines Island,	11.73	173	ePn	Pn	20 48 08.8	+2.6
EIDS	Eidsvold	20.05	222	eP	P	20 49 52.2	0.0
	89nm,1.8s						
MANU	Manus Island	20.35	294	eP	P	20 49 55.6	+0.1
	171nm,1.2s						
CTA	Charters Tower	20.94	242	P	P	20 50 02.2	+0.2
	14nm,0.8s,baz=70,slow=12,SNR=7.6						
CTAO	Charters Tower	20.94	242	eP	P	20 50 02.0	0.0
	22nm,0.8s						
ARMA	Armidale	23.47	212	eP	P	20 50 26.6	-2.2
	22nm,1.1s						
RAO	Raoul Island	23.72	143	LR	LR	20 56 58.1	
	comp=Z,2μm,21.4s,baz=116,slow=29						
URZ	Urewera	29.03	162	P	P	20 51 20.2	+1.1
	5.1nm,0.6s,baz=162,slow=6.4,SNR=3.8						
H11S2	WAKE ISLAND Hy	29.24	2	T	T	21 21 39.5	
	baz=181,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.24	2	T	T	21 21 41.5	
	baz=181,slow=76,SNR=42						
H11S1	WAKE ISLAND Hy	29.26	2	T	T	21 21 44.5	
	baz=181,slow=76,SNR=52						
BKZ	Black Stump Fm	29.69	163	eP	P	20 51 24.6	-0.4
	18nm,0.5s						
H11N1	WAKE ISLAND Hy	30.46	2	T	T	21 23 14.0	
	baz=182						
H11N3	WAKE ISLAND Hy	30.46	2	T	T	21 23 14.5	
	baz=182						
H11N2	WAKE ISLAND Hy	30.48	2	T	T	21 23 15.4	
	baz=182						
STKA	Stephens Creek	30.59	223	eP	P	20 51 31.3	-1.7
	1.4nm,0.9s						
STKA	Stephens Creek	30.59	223	P	P	20 51 32.9	-0.1
	2.1nm,0.5s,baz=51,slow=10.0,SNR=4.9						
BFZ	Birch Farm	31.04	165	eP	P	20 51 35.4	-1.4
	29nm,0.8s						
THZ	Tophouse	31.34	170	eP	P	20 51 39.4	-0.1
	117nm,1.8s						
WRAB	Tennant Creek	31.60	250	eP	P	20 51 40.5	-1.6
	8.9nm,0.9s						
WB2	Warramunga Arr	31.60	250	eP	P	20 51 40.3	-1.7
WR1	Warramunga Arr	31.61	250	eP	P	20 51 40.9	-1.3
	12nm,0.9s						
WR1				ePcP	PcP	20 54 33.0	-1.6
WRA	Warramunga Arr	31.61	250	P	P	20 51 40.9	-1.3
	6.4nm,0.7s,baz=81,slow=9.0,SNR=21						
WRA				PcP	PcP	20 54 33.0	-1.6
	0.4nm,0.6s,baz=69,slow=3.9,SNR=3.0						
KHZ	Kahutara	32.09	169	eP	P	20 51 44.5	-1.5
	109nm,2.0s						
LTZ	Lake Taylor	32.23	171	eP	P	20 51 47.1	-0.3
	24nm,0.8s						
FOZ	Fox Glacier	32.67	175	eP	P	20 51 52.4	+1.3
	57nm,1.4s						
OXZ	Oxford	32.73	172	eP	P	20 51 51.3	-0.4
	29nm,0.9s						
AS01	Alice Springs	32.89	243	eP	P	20 51 52.0	-1.4
AS31	Alice Springs	32.93	243	eP	P	20 51 51.7	-2.0
	1.6nm,0.8s						
AS31				ePcP	PcP	20 54 37.5	-0.6
ASAR	Alice Springs	32.93	243	P	P	20 51 51.8	-2.0
	5.2nm,0.9s,baz=75,slow=9.0,SNR=16						
ASAR				PcP	PcP	20 54 37.5	-0.6
	1.4nm,1.0s,baz=64,slow=2.2,SNR=4.2						
RPZ	Rata Peaks	32.98	173	eP	P	20 51 54.4	+0.5
	17nm,0.8s						
RPZ	Rata Peaks	32.98	173	P	P	20 51 54.9	+1.0
	14nm,0.7s,baz=286,slow=3.8,SNR=10						
FITZ	Fitzroy Crossi	39.50	255	eP	P	20 52 48.7	-1.3
	11nm,0.9s						
FITZ	Fitzroy Crossi	39.50	255	P	P	20 52 48.6	-1.3
	8.2nm,0.8s,baz=116,slow=5.8,SNR=11						
NJ2	Nanjing	62.00	315	eP	P	20 55 39.2	-0.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CN2	Changchun	65.68	329	eP	P	20 56 05.2	+1.7
GYA	Guiyang	68.42	304	P	P	20 56 23.0	+1.6
GYA				PP	PP	20 58 56.4	+3.8
GYA				S	S	21 05 23.8	+0.3
GYA				SKS	SKiKP	21 06 18.0	+1.9
GYA	Guiyang	68.42	304	SS	SS	21 09 49.3	+1.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.7s						
GYA				LR	LR		
	comp=N,550nm,18.9s						
GYA				LR	LR		
	comp=E,580nm,18.4s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
KMI	Kunming	71.14	301	P	P	20 56 38.6	+0.3
KMI				sP	sP	20 56 51.3	+8.6
KMI				pmax	pmax		
	comp=Z,3.0nm,1.4s						
HHC	Hu-ho-hao-te	71.80	320	eP	P	20 56 43.4	+1.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,620nm,6.9s						
CM01	Chiang Mai Arr	72.12	293	eP	P	20 56 42.9	-1.2
CMAR	Chiang Mai Arr	72.15	293	P	P	20 56 44.4	+0.2
	comp=Z,0.9nm,0.9s,baz=94,slow=3.2,SNR=5.7						
LZH	Lanzhou	74.74	312	eP	P	20 56 58.1	-1.3
LZH				pP	pP	20 57 04.7	+2.0
LZH				sP	sP	20 57 07.1	+3.3
LZH				PP	PP	20 59 47.5	+0.7
LZH				pmax	pmax		
	comp=Z,28nm,1.5s						
LZH				pmax	pmax		
	comp=Z,95nm,4.3s						
LZH				LR	LR		
	comp=N,540nm,17.6s						
LZH				LR	LR		
	comp=E,560nm,17.0s						
LZH				LR	LR		
	comp=Z,640nm,18.8s						
SONA0	Songino Array	78.62	324	eP	P	20 57 20.8	-0.3
SONM	Songino Array	78.62	324	P	P	20 57 20.8	-0.3
	comp=Z,1.0nm,0.7s,baz=142,slow=6.0,SNR=6.7						
BILL	Bilibino	78.76	0	eP	P	20 57 20.2	-1.0
	comp=Z,27nm,1.7s						
GTA	Gaotai	79.04	314	eP	P	20 57 24.1	+0.6
GTA				pP	pP	20 57 29.8	+3.0
GTA				sP	sP	20 57 32.4	+4.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
QSPA	South Pole Qui	79.08	180	eP	P	20 57 22.8	-0.5
	comp=Z,20nm,1.4s						
HDA	Harding Lake	83.10	19	eP	P	20 57 43.8	-0.7
	comp=Z,10nm,1.0s						
ILAR	Eielson Array	83.37	18	P	P	20 57 44.9	-0.9
	comp=Z,1.8nm,0.8s,baz=243,slow=5.0,SNR=9.1						
ILB	Eielson Array	83.37	18	eP	P	20 57 44.5	-1.4
IL1	Eielson Array	83.37	18	eP	P	20 57 43.5	-2.3
DAWY	Dawson	85.41	21	eP	P	20 57 55.5	-0.7
	comp=Z,7.0nm,1.3s						
NV01	Mina Array Sit	85.87	50	eP	P	20 57 58.6	-0.8
NVAR	Mina Array Bea	85.87	50	P	P	20 58 00.9	+1.5
	comp=Z,0.8nm,0.8s,baz=249,slow=6.5,SNR=3.3						
WMQ	Urumqi	89.07	315	eP	P	20 58 15.4	+0.9
WMQ				LR	LR		
	comp=N,4μm,23.9s						
WMQ				LR	LR		
	comp=E,3μm,19.9s						
WMQ				LR	LR		
	comp=Z,4μm,23.9s						
U15A	North Rim	89.96	53	eP	P	20 58 19.1	+0.1
	comp=Z,5.4nm,0.9s						
SYO	Syowa Base	91.93	197⇓	epP	P	20 58 29.2	+2.0
MK01	Makanchi Array	93.48	317	eP	P	20 58 33.3	-1.6
MK31	Makanchi Array	93.50	317	eP	P	20 58 34.0	-0.9
MK32	Makanchi Array	93.50	317	eP	P	20 58 33.7	-1.2
MKAR	Makanchi Array	93.50	317	eP	P	20 58 34.2	-0.7
	comp=Z,11nm,1.0s						
MKAR	Makanchi Array	93.50	317	P	P	20 58 33.7	-1.2
	comp=Z,1.2nm,0.7s,baz=96,slow=6.3,SNR=11						
ZALV	Zalesovo Beam	93.51	324	P	P	20 58 32.2	-2.5
	comp=Z,0.5nm,0.4s,baz=104,slow=6.1,SNR=3.9						
ZAA1	Zalesovo Array	93.51	324	eP	P	20 58 32.2	-2.5
MAKZ	Makanchi	93.71	317	eP	P	20 58 35.0	-0.9
	comp=Z,7.3nm,1.4s						
YKA	Yellowknife Ar	94.82	27	P	P	20 58 38.4	-2.2
	comp=Z,0.2nm,0.6s,baz=262,slow=4.7,SNR=3.9						
ARA0	ARCESS Array S	116.24	346	ePKPdf	PKiKP	21 04 00.2	-1.8
ARCES	ARCESS Array B	116.24	346	PKP	PKiKP	21 04 00.2	-1.8
	comp=Z,1.8nm,0.7s,baz=25,slow=2.4,SNR=3.9						
ES19	SONSECA Array	149.92	344	ePKPbc	PKPdf	21 05 09.3	+4.3
ESDC	Sonseca Array	149.97	344	PKPbc	PKPdf	21 05 09.1	+4.0
	comp=Z,0.8nm,0.8s,baz=1.7,slow=3.5,SNR=4.4						
TORD	Torodi Ar. Bea	164.33	280	PKP	PKPdf	21 05 22.7	-1.0
	comp=Z,0.4nm,1.0s,baz=27,slow=1.6,SNR=2.5						
TOA1	Torodi Ar. Sit	164.34	280	ePKPdf	PKPdf	21 05 22.7	-1.0

*IDC **07** 20:51:49.7±0.7, 10°97S×165°14E, h0^{km}, mb4.6/19, mb1 4.7/21, mb1mx4.6/37, mbtmp4.6/21, ML4.7/2, Error ellipse: s-maj=20.5km s-min=14.0km az=113.0*

*NEIC **07** 20:51:51.4±0.2, 10°90S×165°08E, h10^{km}, mb4.8/30, Error ellipse: s-maj=6.7km s-min=5.4km az=101.0*

*ISCJB **07** 20:51:53.0±0.3, 10°93S±0°04×165°07E±0°05, h31^{km}, mb4.7/51, Error ellipse: s-maj=6.7km s-min=5.6km az=17.2*

ISC 07 20:51:54.7±0.5**, 10°91S**±0°07×**165°14E**±0°07**, h31^{km}, n113, σ1^{s}02**/113**, mb4.7**/51**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.32	286	ePn	Pn	20 53 11.7	-0.4
HNR				eSn	Sn	20 54 13.6	+1.3
HNR	Honiara	5.32	286	Pn	Pn	20 53 12.0	-0.1
	34nm,0.3s,baz=196,slow=4.2,SNR=13						
HNR				Sn	Sn	20 54 13.6	+1.3
	5.9nm,0.3s,baz=174,slow=19,SNR=1.9						
DZM	Mont Dzumac	11.17	174	Pn	Pn	20 54 31.5	-0.9
	3.4nm,0.3s,baz=186,slow=16,SNR=17						
EIDS	Eidsvold	19.60	221	P	Pn	20 56 23.5	+1.5
	baz=20						
MANU	Manus Island	19.72	295	eP	P	20 56 21.2	-0.7
	129nm,0.9s						
CTA	Charters Tower	20.34	241	P	P	20 56 29.1	+0.5
	66nm,0.9s,baz=69,slow=12,SNR=32						
CTAO	Charters Tower	20.34	241	eP	P	20 56 29.5	+0.9
	75nm,0.9s						
MTSU	Mount Surprise	21.39	248	P	P	20 56 40.3	+0.4
	baz=22,SNR=33						
COEN	Coen	21.66	260	P	P	20 56 42.3	-0.6
	baz=22,SNR=10						
COEN	Coen	21.66	260	eP	P	20 56 42.1	-0.8
	12nm,0.8s						
RMQ	Roma	21.89	223	P	P	20 56 46.4	+1.2
	baz=22,SNR=9.3						
ARMA	Armidale	23.12	211	P	P	20 56 58.7	+0.3
	baz=24,SNR=5.5						
ARMA	Armidale	23.12	211	eP	P	20 56 58.5	+0.2
	48nm,1.4s						
QLP	Quilpie	25.14	229	P	P	20 57 17.5	+0.3
	baz=26,SNR=9.6						
QIS	Mount Isa	26.35	246	P	P	20 57 27.6	-0.7
	baz=27,SNR=8.9						
CMSA	Cobar Meteorol	27.30	218	P	P	20 57 36.5	-0.1
	baz=28						
MXZ	Matakaoa Point	29.06	158	eP	P	20 57 52.3	+0.1
	79nm,1.3s						
H11S2	WAKE ISLAND Hy	29.26	3	T	T	21 28 34.0	
	baz=184,slow=76,SNR=6.2						
H11S3	WAKE ISLAND Hy	29.26	3	T	T	21 28 34.4	
	baz=184,slow=76,SNR=11						
URZ	Urewera	29.27	160	P	P	20 57 56.8	+2.8
	5.9nm,0.7s,baz=16,slow=18,SNR=3.3						
H11S1	WAKE ISLAND Hy	29.27	3	T	T	21 28 37.9	
	baz=184,slow=76,SNR=11						
BKZ	Black Stump Fm	29.90	162	eP	P	20 58 00.6	+0.8
	9.7nm,0.7s						
STKA	Stephens Creek	30.13	223	P	P	20 58 02.4	+0.5
	baz=30,SNR=11						
STKA	Stephens Creek	30.13	223	eP	P	20 58 01.4	-0.5
	1.8nm,0.8s						
STKA	Stephens Creek	30.13	223	P	P	20 58 02.0	+0.2
	6.6nm,0.7s,baz=29,slow=9.6,SNR=14						
H11N3	WAKE ISLAND Hy	30.49	3	T	T	21 30 03.2	
	baz=181,slow=74,SNR=6.7						
H11N2	WAKE ISLAND Hy	30.50	3	T	T	21 30 10.1	
	baz=93,slow=74,SNR=12						
WRAB	Tennant Creek	30.96	249	eP	P	20 58 08.1	-1.3
	12nm,1.0s						
WB2	Warramunga Arr	30.96	249	eP	P	20 58 06.8	-2.6
WR1	Warramunga Arr	30.97	249	eP	P	20 58 07.8	-1.6
	19nm,1.1s						
WR1				ePcP	PcP	21 01 05.7	+0.3
WRA	Warramunga Arr	30.97	249	P	P	20 58 07.8	-1.6
	7.8nm,0.9s,baz=78,slow=9.4,SNR=24						
WRA				PcP	PcP	21 01 05.7	+0.3
	1.3nm,1.0s,baz=78,slow=2.4,SNR=4.9						
THZ	Tophouse	31.48	169	eP	P	20 58 14.4	+0.7
	41nm,1.6s						
KDU	Kakadu	32.02	264	P	P	20 58 16.4	-2.2
	baz=32,SNR=4.7						
AS01	Alice Springs	32.28	243	eP	P	20 58 19.0	-2.0
AS31	Alice Springs	32.32	243	eP	P	20 58 19.5	-1.8
	2.9nm,0.7s						
ASAR	Alice Springs	32.32	243	P	P	20 58 19.6	-1.7
	9.8nm,0.7s,baz=72,slow=9.6,SNR=68						
ASAR				PcP	PcP	21 01 08.2	-0.9
	1.4nm,0.9s,baz=72,slow=3.0,SNR=5.0						
LTZ	Lake Taylor	32.35	170	eP	P	20 58 25.1	+3.8
	20nm,0.8s						
HTT	Hallett	32.87	223	P	P	20 58 26.5	+0.5
	baz=33,SNR=5.8						
RPZ	Rata Peaks	33.08	172	P	P	20 58 26.5	-1.2
	3.7nm,0.5s,baz=45,slow=8.6,SNR=3.0						
BBOO	Buckleboo	34.49	226	P	P	20 58 39.9	-0.2
	baz=35,SNR=7.3						
KNRA	Kununurra	35.69	258	P	P	20 58 49.0	-1.6
	baz=36,SNR=5.4						
WRKA	Warakurna	37.62	243	P	P	20 59 05.8	-1.2
	baz=38,SNR=14						
FITZ	Fitzroy Crossi	38.84	255	P	P	20 59 15.6	-1.7
	baz=39,SNR=5.9						
FITZ	Fitzroy Crossi	38.84	255	eP	P	20 59 16.0	-1.3
	22nm,1.6s						
FITZ	Fitzroy Crossi	38.84	255	P	P	20 59 16.3	-1.0
	2.5nm,0.6s,baz=64,slow=9.7,SNR=10						
FORT	Forrest	39.64	234	P	P	20 59 23.8	0.0
	baz=40,SNR=13						
FORT	Forrest	39.64	234	eP	P	20 59 23.6	-0.2
	57nm,0.9s						
MEEK	Meekatharra	46.48	244	P	P	21 00 19.0	-0.3
	baz=47,SNR=5.8						
KLBR	Kellerberrin	48.28	237	P	P	21 00 32.5	-0.8
	baz=49						
BLDU	Ballidu	48.92	239	P	P	21 00 37.0	-1.2
	baz=49						
NWAO	Narrogin (SRO)	49.05	236	P	P	21 00 38.9	-0.2
	baz=49,SNR=5.6						
NWAO	Narrogin (SRO)	49.05	236	eP	P	21 00 38.1	-1.0
NWAO	Narrogin (SRO)	49.05	236	P	P	21 00 38.4	-0.7
	27nm,0.9s,baz=298,slow=4.9,SNR=8.7						
MORW	Morawa	49.17	241	P	P	21 00 40.2	+0.1
	baz=50						
RKGY	Rocky Gully	49.71	234	P	P	21 00 45.0	+0.9
	baz=50						
MJAR	Matsushiro Arr	53.58	333	P	P	21 01 12.3	-0.6
	5.4nm,1.0s,baz=158,slow=10,SNR=5.9						
MAJO	Matsushiro	53.58	333	eP	P	21 01 12.3	-0.6
JNU	Nakatsue	54.63	325	eP	P	21 01 20.5	-0.1
	171nm,1.8s						
JNU	Nakatsue	54.63	325	P	P	21 01 20.9	+0.3
	33nm,0.9s,baz=89,slow=1.9,SNR=10						
KSRS	Korea Array	59.43	326	P	P	21 01 55.2	+0.7
	5.6nm,0.8s,baz=128,slow=7.2,SNR=10						
KS15	Wonju Array Si	59.45	326	eP	P	21 01 55.0	+0.4
KSAR	Wonju Array Be	59.45	326	P	P	21 01 55.2	+0.6
KS01	Wonju Array Si	59.47	326	eP	P	21 01 54.4	-0.4
NJ2	Nanjing	61.51	316	eP	P	21 02 08.5	-0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	62.56	334	P	P	21 02 16.8	+1.1
	comp=Z,7.3nm,0.8s,baz=136,slow=5.7,SNR=10						
PETK	Petropavlovsk-	64.08	355	P	P	21 02 26.4	+0.8
	comp=Z,7.3nm,0.8s,baz=161,slow=9.4,SNR=8.6						
PEA1	Petropavlovsk-	64.09	355	eP	P	21 02 26.4	+0.8
CN2	Changchun	65.32	329	eP	P	21 02 35.6	+1.8
SKNT	Sakolnakorn	66.50	294	P	P	21 02 42.7	+0.8
	comp=Z,5.0nm,1.0s						
ENH	Enshi	67.35	309	eP	P	21 02 46.6	-0.6
	comp=Z,17nm,0.8s						
GYA	Guiyang	67.85	304	eP	P	21 02 52.0	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	Beijing	68.01	321	eP	P	21 02 51.5	+0.5
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PBKT	Sadao Pong	69.08	292	eP	P	21 02 58.7	+0.5
	comp=Z,4.7nm,0.8s						
PBKT	Sadao Pong	69.08	292	P	P	21 02 59.1	+0.9
	comp=Z,6.7nm,0.9s,comp=Z,2μm						
XAN	Xi'an	69.59	313	P	P	21 03 00.9	-0.2
XAN				sP	sP	21 03 13.3	+1.0
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN				LR	LR		
	comp=N,1μm,19.5s						
XAN				LR	LR		
	comp=Z,1μm,27.3s						
XAN	Xi'an	69.59	313	eP	P	21 03 00.4	-0.7
	comp=Z,65nm,0.8s						
KMI	Kunming	70.55	302	P	P	21 03 08.5	+1.1
KMI				pP	sP	21 03 17.4	-1.2
KMI				sP	pwP	21 03 19.7	-2.1
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC	Hu-ho-hao-te	71.35	320	eP	P	21 03 13.5	+1.7
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,880nm,6.5s						
CM01	Chiang Mai Arr	71.49	294	eP	P	21 03 12.9	0.0
CM31	Chiang Mai Arr	71.52	294	eP	P	21 03 12.7	-0.5
	comp=Z,5.6nm,0.9s						
CMAR	Chiang Mai Arr	71.52	294	P	P	21 03 13.4	+0.3
	comp=Z,2.8nm,0.8s,baz=119,slow=4.5,SNR=23						
CMMT	Chiang Mai	71.62	294	P	P	21 03 14.4	+0.6
	comp=Z,3.9nm,2.5s						
CHTO	Chiang Mai	71.63	294	eP	P	21 03 13.9	+0.1
	comp=Z,5.4nm,1.1s						
CHTO	Chiang Mai	71.63	294	P	P	21 03 14.5	+0.7
	comp=Z,16nm,1.9s						
CHTO	Chiang Mai	71.63	294	P	P	21 03 14.5	+0.7
	comp=Z,16nm,1.9s						
HIA	Hailar	71.96	331	eP	P	21 03 14.8	-0.4
	comp=Z,12nm,1.0s						
CD2	Chengdu	72.05	308⇑	iP	P	21 03 16.5	+0.3
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,4μm,12.6s						
SONA0	Songino Array	78.21	324	eP	P	21 03 51.4	0.0
SONM	Songino Array	78.21	324	P	P	21 03 51.4	0.0
	comp=Z,2.9nm,1.0s,baz=132,slow=6.5,SNR=16						
SONA1	Songino Array	78.21	324	eP	P	21 03 51.1	-0.3
GTA	Gaotai	78.54	314	⇑P	P	21 03 54.8	+1.4
GTA				pP	pP	21 04 00.6	-1.0
GTA				sP	PcP	21 04 03.2	+0.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				LR	LR		
	comp=N,1μm,19.7s						
GTA				LR	LR		
	comp=E,940nm,19.4s						
GTA				LR	LR		
	comp=Z,2μm,21.3s						
BILL	Bilibino	78.75	0	eP	P	21 03 53.8	+0.1
	comp=Z,6.3nm,0.9s						
QSPA	South Pole Qui	79.09	180	eP	P	21 03 56.3	+0.3
	comp=Z,10nm,0.9s						
RDOG	Red Dog Mine	82.01	12	eP	P	21 04 11.8	+0.5
	comp=Z,8.8nm,1.1s						
HDA	Harding Lake	83.31	19	eP	P	21 04 18.1	0.0
	comp=Z,7.3nm,0.8s						
IL1	Eielson Array	83.58	19	eP	P	21 04 18.8	-0.7
ILAR	Eielson Array	83.58	19	P	P	21 04 19.8	+0.3
	comp=Z,2.1nm,0.8s,baz=233,slow=5.0,SNR=22						
ILB	Eielson Array	83.58	19	eP	P	21 04 18.8	-0.7
	comp=Z,6.8nm,1.3s						
NV01	Mina Array Sit	86.39	50	eP	P	21 04 33.4	-1.1
NVAR	Mina Array Bea	86.39	50	P	P	21 04 35.3	+0.7
	comp=Z,1.3nm,0.8s,baz=236,slow=7.0,SNR=5.5						
WMQ	Urumqi	88.58	315	eP	P	21 04 46.0	+1.2
WMQ				LR	LR		
	comp=N,4μm,16.5s						
WMQ				LR	LR		
	comp=E,5μm,19.3s						
WMQ				LR	LR		
	comp=Z,4μm,19.3s						
HLID	Hailey	90.61	46	eP	P	21 04 54.4	0.0
	comp=Z,14nm,1.9s						
MTPU	Mount Pierson	90.95	52	eP	P	21 04 56.5	+0.2
	comp=Z,4.9nm,1.2s						
HVU	Hansel Valley	91.36	48	eP	P	21 04 58.7	+0.8
	comp=Z,3.9nm,1.0s						
MK01	Makanchi Array	93.01	317	eP	P	21 05 04.7	-0.6
MK31	Makanchi Array	93.02	317	eP	P	21 05 04.6	-0.7
MK32	Makanchi Array	93.02	317	eP	P	21 05 05.0	-0.3
MKAR	Makanchi Array	93.02	317	eP	P	21 05 04.2	-1.1
	comp=Z,9.2nm,0.7s						
MKAR	Makanchi Array	93.02	317	P	P	21 05 05.0	-0.3
	comp=Z,1.3nm,0.6s,baz=92,slow=6.5,SNR=23						
ZALV	Zalesovo Beam	93.10	324	P	P	21 05 04.5	-0.9
	comp=Z,0.8nm,0.6s,baz=106,slow=2.0,SNR=5.3						
ZAA1	Zalesovo Array	93.10	324	eP	P	21 05 04.5	-1.0
YKA	Yellowknife Ar	95.13	27	P	P	21 05 13.5	-1.0
	comp=Z,0.9nm,0.8s,baz=258,slow=4.7,SNR=11						
YKB5	Yellowknife Ar	95.13	27	eP	P	21 05 12.6	-1.9

*IDC **07** 20:59:16.4±1.9, 12°36S×166°26E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/42, mbtmp4.1/8, ML4.8/1, Error ellipse: s-maj=60.9km s-min=29.3km az=143.0*

*NEIC **07** 20:59:19.2±0.8, 12°07S×165°96E, h10^{km}, mb4.6/3, Error ellipse: s-maj=23.8km s-min=19.8km az=147.0*

*ISCJB **07** 20:59:21.3±0.7, 12°2S±0°1×165°88E±0°10, h30^{km}, Error ellipse: s-maj=19.7km s-min=12.3km az=21.4*

ISC 07 20:59:22.2±0.9**, 12°1S**±0°2×**166°0E**±0°1**, h30^{km}, n20, σ1^{s}31**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.51	294	ePn	Pn	21 00 52.2	-3.8
HNR				eSn	Sn	21 02 09.5	+0.2
HNR	Honiara	6.51	294	Pn	Pn	21 00 57.7	+1.7
	16nm,0.3s,baz=220,slow=7.9,SNR=3.7						
HNR				Sn	Sn	21 02 09.5	+0.2
	9.2nm,0.3s,baz=183,slow=17,SNR=3.7						
WR1	Warramunga Arr	31.34	252	eP	P	21 05 40.7	+0.3
	7.8nm,1.3s						

WRA	**Warramunga Arr**	**31.34**	**252**	P	**P**	**21 05 40.7**	**+0.3**
	0.8nm,0.9s,baz=80,slow=7.9,SNR=5.1						
ASAR	**Alice Springs**	**32.52**	**245**	P	**P**	**21 05 50.9**	**+0.1**
	0.9nm,0.7s,baz=68,slow=9.5,SNR=7.4						
CMAR	**Chiang Mai Arr**	**72.76**	**294**	P	**P**	**21 10 49.6**	**+1.4**
	0.5nm,0.6s,baz=137,slow=5.8,SNR=5.6						
QSPA	**South Pole Qui**	**77.88**	**180**	*e*P	**P**	**21 11 16.9**	**-0.1**
	5.4nm,0.9s						
SONA0	**Songino Array**	**79.67**	**324**	*e*P	**P**	**21 11 27.7**	**+0.6**
SONM	**Songino Array**	**79.67**	**324**	P	**P**	**21 11 27.7**	**+0.6**
	0.9nm,0.6s,baz=145,slow=5.6,SNR=8.4						
ILAR	**Eielson Array**	**84.47**	**18**	P	**P**	**21 11 52.3**	**+0.6**
	0.3nm,0.8s,baz=226,slow=6.1,SNR=3.1						
MK01	**Makanchi Array**	**94.46**	**317**	*e*P	**P**	**21 12 39.3**	**-0.3**
MK31	**Makanchi Array**	**94.47**	**317**	*e*P	**P**	**21 12 40.0**	**+0.4**
	2.7nm,0.8s						
MK32	**Makanchi Array**	**94.47**	**317**	*e*P	**P**	**21 12 40.4**	**+0.7**
MKAR	**Makanchi Array**	**94.47**	**317**	*e*P	**P**	**21 12 40.0**	**+0.4**
	16nm,0.6s						
MKAR	**Makanchi Array**	**94.47**	**317**	P	**P**	**21 12 40.4**	**+0.7**
	2.9nm,0.7s,baz=95,slow=6.0,SNR=32						
ZALV	**Zalesovo Beam**	**94.57**	**324**	*e*P	**P**	**21 12 39.5**	**-0.3**
ZALV	**Zalesovo Beam**	**94.57**	**324**	P	**P**	**21 12 39.7**	**-0.2**
	1.3nm,0.7s,baz=126,slow=3.8,SNR=8.1						
ZAA1	**Zalesovo Array**	**94.57**	**324**	*e*P	**P**	**21 12 39.7**	**-0.2**
ARA0	**ARCESS Array S**	**117.44**	**345**	*e*PKPdf	**PKPdf**	**21 18 02.2**	**-2.3**
ARCES	**ARCESS Array B**	**117.44**	**345**	PKP	**PKPdf**	**21 18 02.2**	**-2.3**
	2.7nm,1.1s,baz=90,slow=0.9,SNR=3.8						

IDC 07 21:00:52.1±1.7**, 10°.94S×165°.44E, h0^{km}, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/41**, mbtmp3.8**/4**, ML3.7**/1**, Error ellipse: s-maj=53.2km s-min=30.8km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.11**	**175**	Pn	Pn	21 03 32.1	-0.3
	0.5nm,0.3s,baz=306,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**31.24**	**250**	P	P	21 07 14.2	+0.4
	1.0nm,0.6s,baz=80,slow=9.2,SNR=5.6						
ASAR	**Alice Springs**	**32.58**	**243**	P	P	21 07 25.1	-0.4
	0.5nm,0.7s,baz=66,slow=9.7,SNR=3.2						
ILAR	**Eielson Array**	**83.51**	**19**	P	P	21 13 21.5	0.0
	0.3nm,0.5s,baz=224,slow=5.0,SNR=3.0						

*IDC **07** 21:02:00.0±0.6, 10°.67S×165°.56E, h0^{km}, mb4.2/17, mb1 4.4/19, mb1mx4.2/41, mbtmp4.2/19, ML4.6/2, Error ellipse: s-maj=18.7km s-min=15.0km az=129.0*

*NEIC **07** 21:02:01.5±0.4, 10°.64S×165°.54E, h10^{km}, mb4.1/1, Error ellipse: s-maj=11.9km s-min=10.3km az=109.0*

*ISCJB **07** 21:02:03.4±0.4, 10°.80S±0°.07×165°.54E±0°.06, h31^{km}, mb4.2/23, Error ellipse: s-maj=10.7km s-min=8.7km az=24.8*

ISC 07 21:02:04.9±0.5**, 10°.71S**±0°.09×**165°.59E**±0°.09**, h31^{km}, n35, σ1.^{s}48**/34**, mb4.2**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.70**	**282**	Pn	**Pn**	**21 03 25.5**	**-1.9**
	44nm,0.3s,baz=126,slow=2.6,SNR=10.0						
HNR				Sn	**Sn**	**21 04 33.6**	**+1.8**
	11nm,0.3s,baz=204,slow=20,SNR=1.7						
DZM	**Mont Dzumac**	**11.33**	**176**	Pn	**Pn**	**21 04 44.8**	**0.0**
	1.6nm,0.3s,baz=328,slow=11,SNR=8.8						
CTA	**Charters Tower**	**20.82**	**241**	P	**P**	**21 06 44.0**	**-0.1**
	2.8nm,0.3s,baz=71,slow=17,SNR=3.5						
H11S2	**WAKE ISLAND Hy**	**29.03**	**2**	T	T	21 38 11.6	
	baz=181,slow=76,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**29.04**	**2**	T	T	21 38 11.9	
	baz=181,slow=76,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**29.05**	**2**	T	T	21 38 14.6	
	baz=181,slow=76,SNR=4.7						
URZ	**Urewera**	**29.32**	**161**	P	**P**	**21 08 06.5**	**+1.8**
	7.4nm,0.7s,baz=359,slow=8.7,SNR=4.6						
STKA	**Stephens Creek**	**30.58**	**223**	P	**P**	**21 08 17.0**	**+1.0**
	1.7nm,0.7s,baz=43,slow=13,SNR=4.6						
WRA	**Warramunga Arr**	**31.46**	**249**	P	**P**	**21 08 22.6**	**-1.3**
	1.2nm,0.6s,baz=82,slow=8.6,SNR=9.1						
ASAR	**Alice Springs**	**32.81**	**243**	P	**P**	**21 08 34.6**	**-1.1**
	1.0nm,0.6s,baz=65,slow=10.0,SNR=12						
ASAR				PcP	**PcP**	**21 11 20.4**	**-0.1**
	0.2nm,0.6s,baz=67,slow=3.1,SNR=2.7						
RPZ	**Rata Peaks**	**33.23**	**173**	P	**P**	**21 08 37.9**	**-1.2**
	5.4nm,0.7s,baz=302,slow=14,SNR=2.5						
FITZ	**Fitzroy Crossi**	**39.32**	**255**	P	**P**	**21 09 29.6**	**-2.0**
	2.9nm,1.0s,baz=34,slow=7.3,SNR=3.3						
PETK	**Petropavlovsk-**	**63.92**	**355**	P	**P**	**21 12 34.6**	**0.0**
	3.0nm,0.8s,baz=162,slow=7.0,SNR=3.6						
PBKT	**Sadao Pong**	**69.41**	**292**	P	**P**	**21 13 12.0**	**+1.6**
XAN	**Xi'an**	**69.78**	**312**	P	**P**	**21 13 12.3**	**-0.2**
XAN				pP	pP	21 13 20.6	-1.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMI	**Kunming**	**70.81**	**301**	P	**P**	**21 13 20.5**	**+1.3**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HHC	**Hu-ho-hao-te**	**71.48**	**320**	*e*P	**P**	**21 13 24.6**	**+1.8**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,450nm,5.6s						
CMAR	**Chiang Mai Arr**	**71.84**	**293**	P	**P**	**21 13 26.4**	**+1.1**
	comp=Z,2.4nm,0.9s,baz=121,slow=4.1,SNR=15						
CMMT	**Chiang Mai**	**71.94**	**294**	P	**P**	**21 13 30.3**	**+4.4**
	comp=Z,2.7nm,1.0s						
CHTO	**Chiang Mai**	**71.95**	**294**	P	**P**	**21 13 28.2**	**+2.3**
	comp=Z,12nm,1.1s						
SONM	**Songino Array**	**78.30**	**324**	P	**P**	**21 14 02.4**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=140,slow=7.0,SNR=15						
GTA	**Gaotai**	**78.72**	**314**	P	**P**	**21 14 05.5**	**+0.9**
GTA				pP	PcP	21 14 10.6	-2.8
GTA				sP	pP	21 14 12.8	-1.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
QSPA	**South Pole Qui**	**79.30**	**180**	*e*P	**P**	**21 14 08.0**	**+0.7**
	comp=Z,1.5nm,0.7s						
ILAR	**Eielson Array**	**83.24**	**19**	P	**P**	**21 14 27.8**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=243,slow=5.2,SNR=16						
NVAR	**Mina Array Bea**	**85.92**	**50**	P	**P**	**21 14 42.9**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=235,slow=9.7,SNR=4.7						
MKAR	**Makanchi Array**	**93.17**	**317**	P	**P**	**21 15 16.4**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=91,slow=6.8,SNR=9.7						
ZALV	**Zalesovo Beam**	**93.19**	**324**	P	**P**	**21 15 15.1**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=120,slow=8.7,SNR=5.4						
PDAR	**Pinedale Array**	**93.44**	**47**	P	**P**	**21 15 18.1**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=234,slow=4.0,SNR=3.4						
YKA	**Yellowknife Ar**	**94.75**	**27**	P	**P**	**21 15 21.0**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=258,slow=5.2,SNR=4.9						
TXAR	**Lajitas Array**	**95.80**	**61**	P	**P**	**21 15 29.3**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=268,slow=5.4,SNR=3.2						
ARCES	**ARCESS Array B**	**115.97**	**345**	PKP	**PKiKP**	**21 20 43.4**	**-0.7**
	comp=Z,3.6nm,1.0s,baz=66,slow=1.5,SNR=3.7						
FINES	**FINESS Array B**	**121.40**	**339**	PKP	**PKiKP**	**21 20 56.3**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=94,slow=2.2,SNR=2.7						
NOA	**NORSAR Array B**	**126.34**	**345**	PKP	**PKPdf**	**21 21 03.3**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=30,slow=3.6,SNR=2.7						
ESDC	**Sonseca Array**	**149.69**	**344**	PKPbc	**PKPbc**	**21 21 50.2**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=102,slow=2.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**164.06**	**280**	PKP	**PKPdf**	**21 22 04.9**	**-1.3**
	comp=Z,0.7nm,1.0s,baz=318,slow=2.0,SNR=3.6						

*DDA **07** 21:03:11.8, 38°.22N×42°.87E, h8^{km}±3^{km}, ML2.8*

*ISK **07** 21:03:12.3, 38°.27N×42°.73E, h23^{km}, ML2.1/7*

ISC 07 21:03:12.2±1.0**, 38°.25N**±0°.03×**42°.85E**±0°.03**, h15^{km}**±8^{km}**, n15, σ1.^{s}31**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEVA	**Gevas**	**0.18**	**68**	*i* P	**Pg**	**21 03 15.9**	**-0.8**
GEVA				*i* S	**Sg**	**21 03 19.2**	**-0.5**
GEVA				IAML_P			
	comp=Z,20μm,0.1s						
VANB	**Van**	**0.55**	**51**	PG	**Pb**	**21 03 24.2**	**+0.5**
VANB				SG	**Sn**	**21 03 33.7**	**-1.0**
ADCV	**BITLIS_Adilcev**	**0.57**	**350**	*i* P	**Pg**	**21 03 23.4**	**-0.1**
ADCV				*i* S	**Sb**	**21 03 33.3**	**+1.2**
ADCV				IAML_P			
	comp=Z,1μm,0.1s						
GURO	**Guroymak-BITLI**	**0.71**	**296**	PG	**Pg**	**21 03 25.0**	**-1.1**
GURO				SG	**Sb**	**21 03 34.7**	**-1.3**
SRTM	**Siirt_Merkez**	**0.77**	**251**	*i* P	**Pn**	**21 03 27.5**	**-1.2**
SRTM				*i* S	**Sn**	**21 03 41.1**	**+0.9**
SRTM				IAML_P			
	comp=Z,2μm,0.2s						
SIRT	**Sirnak**	**0.81**	**204**	PG	**Pg**	**21 03 27.5**	**-0.5**
SIRT				SG	**Sn**	**21 03 40.5**	**-0.6**
SIRN	**Sırnak**	**0.82**	**205**	*i* P	**Pn**	**21 03 28.8**	**-0.6**
SIRN				*i* S	**Sb**	**21 03 39.2**	**-0.1**
TUTA	**Tutak**	**1.15**	**359**	*i* P	**Pg**	**21 03 34.4**	**-0.2**
TUTA				*i* S	**Sg**	**21 03 51.7**	**+2.1**
TUTA				IAML_P			
	comp=Z,2μm,0.2s						
CUKT	**Cukurca**	**1.17**	**149**	PN	**Pg**	**21 03 34.8**	**+0.1**
CLDR	**Caldiran**	**1.23**	**43**	PN	**Pn**	**21 03 35.3**	**+0.2**
BTMN	**Batman**	**1.29**	**255**	*i* P	**Pg**	**21 03 38.1**	**+0.9**
BTMN				*i* S	**Sg**	**21 03 57.9**	**+3.8**
BTMN				IAML_P			
	comp=Z,231nm,0.3s						
AGRB	**Hanur-Agry**	**1.33**	**5**	PN	**Pn**	**21 03 35.9**	**-0.6**
EATA	**Eleskirt**	**1.64**	**350**	*i* P	**Pg**	**21 03 43.6**	**-0.1**
EATA				IAML_P			
	comp=Z,346nm,0.3s						
BNGB	**Bingl**	**1.85**	**294**	PN	**Pn**	**21 03 42.1**	**-1.5**
HANI	**Diyarbakir_Han**	**1.93**	**276**	*i* P	**Pg**	**21 03 47.5**	**-1.8**
HANI				*i* S	**Sg**	**21 04 14.9**	**+0.5**
HANI				IAML_P			
	comp=Z,243nm,0.3s						

IDC 07 21:05:11.8±4.5**, 23°.61S×175°.92W, h0^{km}, mb4.0**/5**, mb1 4.2**/5**, mb1mx3.8**/33**, mbtmp4.0**/5**, Error ellipse: s-maj=210.0km s-min=44.2km az=153.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.22**	**268**	P	P	21 12 09.2	+1.1
	3.4nm,0.8s,baz=92,slow=9.6,SNR=5.9						
ASAR	**Alice Springs**	**45.77**	**259**	P	P	21 13 34.9	-0.6
	0.6nm,0.8s,baz=97,slow=6.8,SNR=8.7						
WRA	**Warramunga Arr**	**46.16**	**265**	P	P	21 13 36.8	-1.8
	0.9nm,0.5s,baz=104,slow=8.6,SNR=18						
FITZ	**Fitzroy Crossi**	**54.58**	**264**	P	P	21 14 43.5	+1.2
	2.1nm,0.9s,baz=79,slow=7.9,SNR=3.2						
CMAR	**Chiang Mai Arr**	**92.95**	**289**	P	P	21 18 27.3	-0.2
	0.6nm,0.6s,baz=132,slow=2.7,SNR=5.8						
AKASG	**Malin Array Be**	**146.65**	**331**	PKPbc	PKPdf	21 24 52.8	-0.9
	0.5nm,0.5s,baz=40,slow=4.2,SNR=4.7						
BRTR	**Keskin Array B**	**150.33**	**310**	PKPbc	PKiKP	21 25 06.8	+0.5
	0.6nm,0.7s,baz=82,slow=1.4,SNR=3.8						

IDC 07 21:13:34.7±3.3**, 11°.42S×166°.18E, h0^{km}, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.7**/30**, mbtmp3.8**/4**, Error ellipse: s-maj=177.2km s-min=28.4km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.76**	**251**	P	P	21 20 00.5	-0.4
	0.7nm,0.8s,baz=82,slow=9.0,SNR=5.1						
ASAR	**Alice Springs**	**33.01**	**244**	P	P	21 20 12.2	+0.3
	2.1nm,0.8s,baz=71,slow=9.4,SNR=6.5						
ILAR	**Eielson Array**	**83.73**	**18**	P	P	21 26 05.4	+0.1
	0.7nm,0.8s,baz=234,slow=4.8,SNR=12						
YKA	**Yellowknife Ar**	**95.11**	**27**	P	P	21 26 59.2	-0.3
	0.1nm,0.6s,baz=258,slow=4.0,SNR=2.2						

IDC 07 21:16:26.4±3.8**, 10°.53S×165°.47E, h0^{km}, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.5**/30**, mbtmp3.4**/4**, Error ellipse: s-maj=163.4km s-min=30.6km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.41**	**249**	P	P	21 22 49.3	-0.3
	0.3nm,0.5s,baz=81,slow=8.9,SNR=3.0						
ASAR	**Alice Springs**	**32.78**	**242**	P	P	21 23 01.8	+0.2
	0.4nm,0.7s,baz=67,slow=9.5,SNR=3.3						
ILAR	**Eielson Array**	**83.11**	**19**	P	P	21 28 53.8	0.0
	0.3nm,0.8s,baz=216,slow=3.9,SNR=4.1						
MKAR	**Makanchi Array**	**92.96**	**317**	P	P	21 29 41.6	-0.1
	0.2nm,0.6s,baz=92,slow=3.2,SNR=2.5						

*IDC **07** 21:18:18.5±1.4, 10°.89S×165°.74E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx4.0/32, mbtmp4.1/10, ML4.6/2, Error ellipse: s-maj=37.8km s-min=22.6km az=121.0*

*ISCJB **07** 21:18:21.4±1.0, 11°.0S±0°.1×165°.7E±0°.1, h30^{km}, mb3.9/7, Error ellipse: s-maj=21.2km s-min=15.9km az=169.8*

ISC 07 21:18:23.2±1.1**, 10°.9S**±0°.1×**165°.7E**±0°.2**, h30^{km}, n10, σ0.^{s}91**/10**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.86**	**284**	Pn	**Pn**	**21 19 48.1**	**0.0**
	36nm,0.3s,baz=185,slow=3.4,SNR=9.3						
DZM	**Mont Dzumac**	**11.13**	**176**	Pn	**Pn**	**21 21 00.7**	**+0.1**
	1.8nm,0.3s,baz=102,slow=22,SNR=9.3						
CTA	**Charters Tower**	**20.84**	**242**	P	**P**	**21 23 03.1**	**+0.5**
	5.9nm,0.9s,baz=37,slow=10,SNR=3.5						
STKA	**Stephens Creek**	**30.53**	**223**	P	**P**	**21 24 34.5**	**+0.5**
	1.1nm,0.4s,baz=23,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**31.50**	**250**	P	**P**	**21 24 42.2**	**-0.5**
	1.7nm,0.7s,baz=81,slow=8.8,SNR=11						
ASAR	**Alice Springs**	**32.83**	**243**	P	**P**	**21 24 52.9**	**-1.5**
	2.3nm,0.8s,baz=75,slow=9.1,SNR=11						
CMAR	**Chiang Mai Arr**	**72.02**	**294**	P	**P**	**21 29 45.7**	**+0.9**
	0.8nm,1.0s,baz=93,slow=6.1,SNR=3.5						
SONM	**Songino Array**	**78.53**	**324**	P	**P**	**21 30 22.6**	**+0.8**
	0.6nm,0.7s,baz=142,slow=4.9,SNR=3.7						
ILAR	**Eielson Array**	**83.38**	**19**	P	**P**	**21 30 47.0**	**-0.2**
	1.1nm,0.7s,baz=224,slow=5.7,SNR=12						
MKAR	**Makanchi Array**	**93.39**	**317**	P	**P**	**21 31 34.6**	**-1.1**
	1.0nm,0.8s,baz=101,slow=6.3,SNR=4.9						

IDC 07 21:24:07.2±1.7**, 10°.98S×165°.58E, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.6**/41**, mbtmp3.7**/4**, ML3.8**/1**, Error ellipse: s-maj=52.9km s-min=31.4km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.06**	**176**	Pn	Pn	21 26 47.6	+0.7
	0.7nm,0.3s,baz=37,slow=20,SNR=8.8						
WRA	**Warramunga Arr**	**31.35**	**250**	P	P	21 30 30.4	+0.5
	0.9nm,0.7s,baz=82,slow=9.3,SNR=8.3						
ASAR	**Alice Springs**	**32.68**	**243**	P	P	21 30 40.7	-0.8
	0.3nm,0.6s,baz=64,slow=10,SNR=5.1						
ILAR	**Eielson Array**	**83.50**	**19**	P	P	21 36 36.5	-0.1
	0.3nm,0.6s,baz=240,slow=4.6,SNR=6.7						

*IDC **07** 21:25:50.2±2.0, 12°.12S×165°.60E, h0^{km}, mb3.9/7, mb1 4.2/7, mb1mx3.9/42, mbtmp3.9/7, Error ellipse: s-maj=73.1km s-min=26.4km az=145.0*

*ISCJB **07** 21:25:53.8±1.7, 12°.2S±0°.4×165°.5E±0°.3, h33^{km}, mb3.8/7, Error ellipse: s-maj=65.5km s-min=22.8km az=145.3*

ISC 07 21:25:55.5±1.9**, 12°.2S**±0°.4×**165°.6E**±0°.3**, h35^{km}, n7, σ0.^{s}49**/7**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**30.97**	**252**	P	**P**	**21 32 09.5**	**-0.3**
	2.9nm,1.0s,baz=80,slow=8.9,SNR=9.0						
ASAR	**Alice Springs**	**32.17**	**245**	P	**P**	**21 32 20.5**	**+0.2**
	0.8nm,0.8s,baz=76,slow=8.7,SNR=5.9						
CMAR	**Chiang Mai Arr**	**72.42**	**294**	P	**P**	**21 37 19.3**	**+0.5**
	0.3nm,0.4s,baz=115,slow=4.3,SNR=3.0						
SONM	**Songino Array**	**79.48**	**324**	P	**P**	**21 37 58.6**	**-0.1**
	0.4nm,0.8s,baz=147,slow=5.1,SNR=3.4						
ILAR	**Eielson Array**	**84.62**	**19**	P	**P**	**21 38 25.4**	**+0.4**
	0.5nm,0.5s,baz=236,slow=5.0,SNR=12						
NVAR	**Mina Array Bea**	**86.86**	**50**	P	**P**	**21 38 36.9**	**-0.2**
	0.3nm,0.3s,baz=182,slow=8.9,SNR=3.6						
MKAR	**Makanchi Array**	**94.23**	**317**	P	**P**	**21 39 10.5**	**-0.6**
	0.2nm,0.6s,baz=103,slow=7.2,SNR=2.9						

*IDC **07** 21:29:02.0±0.9, 10°.81S×165°.78E, h0^{km}, mb4.0/10, mb1 4.2/12, mb1mx4.0/49, mbtmp4.1/12, ML4.8/2, MS4.2/2, Ms1 4.2/2, ms1mx3.8/38, Error ellipse: s-maj=25.7km s-min=20.8km az=128.0*

*ISCJB **07** 21:29:02.1±0.7, 10°.95S±0°.07×165°.79E±0°.08, h10^{km}, mb4.0/9, Error ellipse: s-maj=12.6km s-min=8.3km az=145.3*

ISC 07 21:29:03.6±0.8**, 10°.83S**±0°.09×**165°.8E**±0°.1**, h10^{km}, n13, σ1.^{s}09**/15**, mb4.0**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.97**	**283**	Pn	**Pn**	**21 30 32.4**	**+0.3**
	65nm,0.3s,baz=168,slow=3.6,SNR=12						
HNR				Sn	**Sn**	**21 31 42.0**	**+1.4**
	18nm,0.3s,baz=72,slow=19,SNR=2.9						
HNR				LR	LR	21 32 40.0	
	comp=Z,2μm,20.9s,baz=94,slow=37						
DZM	**Mont Dzumac**	**11.19**	**177**	Pn	**Pn**	**21 31 45.8**	**+2.0**
	2.6nm,0.3s,baz=299,slow=7.6,SNR=17						
DZM				Sn	**Sn**	**21 33 47.9**	**-1.2**
	0.4nm,0.3s,baz=306,slow=23,SNR=2.2						
DZM				LR	LR	21 35 28.7	
	comp=Z,1μm,18.9s,baz=209,slow=34						
CTA	**Charters Tower**	**20.98**	**242**	P	**P**	**21 33 46.4**	**-0.9**
	2.3nm,0.6s,baz=63,slow=6.8,SNR=2.7						
STKA	**Stephens Creek**	**30.66**	**223**	P	**P**	**21 35 17.8**	**-0.6**
	0.8nm,0.5s,baz=25,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**31.65**	**250**	P	**P**	**21 35 26.3**	**-1.0**
	2.2nm,1.1s,baz=81,slow=8.9,SNR=8.0						
ASAR	**Alice Springs**	**32.97**	**243**	P	**P**	**21 35 37.5**	**-1.5**
	1.4nm,0.6s,baz=64,slow=10,SNR=17						
RPZ	**Rata Peaks**	**33.07**	**173**	P	**P**	**21 35 40.1**	**+0.6**
	3.4nm,0.3s,baz=39,slow=17,SNR=3.2						
SONM	**Songino Array**	**78.55**	**324**	P	**P**	**21 41 06.1**	**+0.6**
	0.8nm,1.1s,baz=123,slow=7.1,SNR=3.4						
ILAR	**Eielson Array**	**83.28**	**18**	P	**P**	**21 41 29.1**	**-1.1**
	0.5nm,0.5s,baz=226,slow=4.8,SNR=6.3						
MKAR	**Makanchi Array**	**93.43**	**317**	P	**P**	**21 42 19.4**	**0.0**
	0.6nm,0.8s,baz=102,slow=5.7,SNR=5.1						
ZALV	**Zalesovo Beam**	**93.44**	**324**	P	**P**	**21 42 19.7**	**+0.5**
	0.5nm,0.5s,baz=95,slow=8.9,SNR=3.9						
TXAR	**Lajitas Array**	**95.64**	**61**	P	**P**	**21 42 30.5**	**+0.4**
	0.2nm,0.4s,baz=309,slow=5.7,SNR=2.9						
ARCES	**ARCESS Array B**	**116.16**	**346**	PKP	**PKPdf**	**21 47 46.2**	**-0.4**
	7.3nm,1.3s,baz=92,slow=1.7,SNR=11						

*MOS **07** 21:38:20.9±0.9, 4°.32S×143°.02E, h74^{km}, mb5.1/35, Error ellipse: s-maj=9.7km s-min=5.9km az=105.3*

*ISCJB **07** 21:38:24.9±0.6, 4°.41S±0°.02×142°.98E±0°.03, h110^{km}±5^{km}, mb4.8/127, Error ellipse: s-maj=4.6km s-min=3.1km az=144.1*

*IDC **07** 21:38:25.5±2.6, 4°.41S×143°.02E, h102^{km}±24^{km}, mb4.5/33, mb1 4.5/35, mb1mx4.5/47, mbtmp4.8/35, MS5.4/1, Ms1 5.4/1, ms1mx3.9/39, Error ellipse: s-maj=11.1km s-min=8.0km az=94.0*

*DJA **07** 21:38:26.5±0.5, 4°S±3°×14°3E±°, h114^{km}±4^{km}, M5.2/60, mb5.2/60, mB5.5/18, MLv6.1/3, Mw(mB)4.9/18*

*NEIC **07** 21:38:26.2±0.5, 4°.42S×143°.01E, h111^{km}±4^{km}, mb5.0/79, Error ellipse: s-maj=3.4km s-min=2.7km az=52.0*

NEIC Felt at Kiunga and Mount Hagen.

ISC 07 21:38:25.1±0.5**, 4°.44S**±0°.04×**142°.98E**±0°.04**, h102^{km}**±4^{km}**, h102^{km}:pP-P, n571, σ1.^{s}35**/585**, mb4.9**/133**, 10C-10D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.97**	**310**	P	**Pn**	**21 39 10.4**	**-0.1**
GENI	**Genyem**	**3.35**	**303**	P	**Pn**	**21 39 16.2**	**+0.6**
MMPI	**Merauke**	**4.75**	**213**	P	**Pn**	**21 39 35.9**	**+1.4**
MMPI				S	**Sn**	**21 40 30.7**	**+2.2**
MANU	**Manus Island**	**4.99**	**62**	*e*Pn	**Pn**	**21 39 38.3**	**+0.6**
SRPI	**Serui, Papua**	**7.20**	**291**	P	**Pn**	**21 40 11.9**	**+4.2**
BAKI	**Biak**	**7.58**	**295**	P	**Pn**	**21 40 14.4**	**+1.4**
RABL	**Rabaul**	**9.16**	**89**	*e*Pn	**Pn**	**21 40 35.2**	**+0.7**
RKPI	**Ransiki, Papua**	**9.26**	**288**	P	**Pn**	**21 40 35.9**	**+0.1**
COEN	**Coen**	**9.46**	**179**	P	**Pn**	**21 40 40.7**	**+2.2**
	baz=9.5,SNR=60						
COEN	**Coen**	**9.46**	**179**	*e*Pn	**Pn**	**21 40 39.9**	**+1.5**
FAKI	**Fak Fak**	**10.81**	**278**	*e*Pn	**Pn**	**21 40 57.7**	**+0.8**
FAKI	**Fak Fak**	**10.81**	**278**	P	**Pn**	**21 40 58.0**	**+1.1**
SAUI	**Saumlaki**	**12.13**	**253**	*e*Pn	**Pn**	**21 41 16.4**	**+1.9**
SAUI	**Saumlaki**	**12.13**	**253**	P	**Pn**	**21 41 17.5**	**+3.0**
SWI	**Sorong**	**12.23**	**287**	P	**Pn**	**21 41 17.4**	**+1.5**
BNDI	**Bandanaira**	**13.03**	**269**	P	**P**	**21 41 33.6**	**+0.7**
KDU	**Kakadu**	**13.22**	**231**	P	**Pn**	**21 41 28.7**	**-0.2**
	baz=13,SNR=25						
MTSU	**Mount Surprise**	**13.67**	**175**	P	**P**	**21 41 38.1**	**-1.9**
	baz=14,SNR=15						
PALU	**Palau**	**14.46**	**324**	P	**P**	**21 41 47.1**	**-1.7**
	baz=14,SNR=6.4						
CTA	**Charters Tower**	**15.87**	**169**	P	**P**	**21 42 04.0**	**-0.5**
	0.4nm,0.3s,baz=353,slow=12,SNR=6.9						
CTAO	**Charters Tower**	**15.87**	**169**	*e*Pn	**Pn**	**21 42 03.4**	**+0.6**
	34nm,1.0s						
CTAO	**Charters Tower**	**15.87**	**169**	*e*P	**Pn**	**21 42 03.4**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,34nm,1.0s						
QIS	**Mount Isa**	**16.35**	**191**	P	**P**	**21 42 09.8**	**0.0**
	baz=16,SNR=25						
TNTI	**Ternate**	**16.43**	**288**	*e*Pn	**Pn**	**21 42 10.5**	**+0.7**
	comp=Z,96nm,1.2s						
TNTI	**Ternate**	**16.43**	**288**	P	**Pn**	**21 42 06.9**	**-2.9**
SANI	**Sanana**	**17.13**	**277**	P	**Pn**	**21 42 17.6**	**-0.7**
WRAB	**Tennant Creek**	**17.54**	**208**	*e*P	**P**	**21 42 22.9**	**0.0**
	comp=Z,37nm,0.4s						
WRAB				*e*S	**Sn**	**21 45 29.1**	**-10**
WRAB	**Tennant Creek**	**17.54**	**208**	*ce*P	**P**	**21 42 22.9**	**0.0**
WRAB				pmax	pmax		
	comp=Z,109nm,1.3s						
WB2	**Warramunga Arr**	**17.55**	**208**	*e*P	**P**	**21 42 21.7**	**-1.3**
WRA	**Warramunga Arr**	**17.55**	**208**	P	**P**	**21 42 23.4**	**+0.3**
	comp=Z,3.8nm,0.3s,baz=25,slow=12,SNR=82						
WRA				S	Sn	21 45 29.0	-10
	comp=Z,1.6nm,0.3s,baz=26,slow=23,SNR=5.4						
KNRA	**Kununurra**	**17.89**	**230**	P	**Pn**	**21 42 28.1**	**+0.7**
	baz=18,SNR=33						
GUMO	**Guam**	**18.01**	**6**	P	**P**	**21 42 25.0**	**-3.1**
	comp=Z,4.0nm,0.3s,baz=189,slow=12,SNR=2.0						
SGSI	**Sangihe**	**19.21**	**295**	P	**P**	**21 42 39.3**	**-2.0**
SOEI	**Soe**	**19.30**	**253**	*e*P	**Pn**	**21 42 44.1**	**-0.2**
	comp=Z,473nm,1.0s						
SOEI	**Soe**	**19.30**	**253**	P	**Pn**	**21 42 44.9**	**+0.5**
KMSI	**Cibinong**	**19.62**	**284**	P	**P**	**21 42 46.4**	**+0.7**
BATI	**Baumata**	**19.99**	**252**	P	Pn	21 42 52.6	+0.3
BATI	**Baumata**	**19.99**	**252**	P	Pn	21 42 51.5	-0.8
	comp=Z,278nm,0.6s,baz=226,slow=2.4,SNR=21						
KDI	**Kendari**	**20.31**	**271**	P	Pn	21 42 55.0	-1.1
BBSI	**Bau Bau**	**20.36**	**266**	P	Pn	21 42 55.6	-1.0
LUWI	**Luwuk**	**20.46**	**279**	*e*P	**P**	**21 42 56.3**	**+1.5**
	comp=Z,358nm,0.7s						
LUWI	**Luwuk**	**20.46**	**279**	P	**P**	**21 42 56.0**	**+1.2**
ANA2	**Anatahan**	**20.83**	**7**	*e*P	**P**	**21 42 59.7**	**+1.0**
	comp=Z,298nm,0.6s						
AS01	**Alice Springs**	**21.00**	**204**	*e*P	**P**	**21 43 00.4**	**-0.1**
MMRI	**Maumere**	**21.02**	**258**	*e*P	**P**	**21 43 01.1**	**+0.3**
	comp=Z,85nm,0.8s						
MMRI	**Maumere**	**21.02**	**258**	P	**P**	**21 43 01.0**	**+0.3**
AS31	**Alice Springs**	**21.02**	**204**	*e*P	**P**	**21 43 01.2**	**+0.5**
	comp=Z,44nm,0.8s						
ASAR	**Alice Springs**	**21.02**	**204**	P	**P**	**21 43 01.2**	**+0.5**
	comp=Z,7.0nm,0.8s,baz=36,slow=11,SNR=67						
ASAR				S	**S**	**21 46 42.3**	**-6.9**
	comp=Z,7.1nm,0.8s,baz=22,slow=15,SNR=1.9						
AS09	**Alice Springs**	**21.04**	**204**	P	**P**	**21 43 01.6**	**+0.7**
	baz=21						
KCP	**Kidapawan**	**21.17**	**302**⇓	*e*P	**P**	**21 43 05.7**	**+3.2**
SARN	**Sarigan**	**21.19**	**7**	*e*P	**P**	**21 43 00.1**	**-2.4**
	comp=Z,272nm,1.8s						
EDFI	**Ende, Flores**	**21.57**	**257**	P	**P**	**21 43 05.8**	**-1.0**
MRSI	**Marisa**	**21.58**	**283**	P	**P**	**21 43 06.9**	**+0.1**
APSI	**Ampana**	**21.59**	**279**	P	**P**	**21 43 08.2**	**+1.3**
FITZ	**Fitzroy Crossi**	**21.72**	**230**	*e*P	**P**	**21 43 09.5**	**+1.3**
	comp=Z,72nm,0.8s						
FITZ				S	**S**	**21 47 04.7**	**+1.9**
FITZ	**Fitzroy Crossi**	**21.72**	**230**	P	**P**	**21 43 10.4**	**+2.2**
	comp=Z,14nm,0.5s,baz=44,slow=10,SNR=50						
FITZ				S	**S**	**21 47 04.7**	**+1.9**
	comp=Z,23nm,0.9s,baz=149,slow=17,SNR=2.5						
CTBH	**Cotabato--PC H**	**21.99**	**302**⇑	*i*P	**P**	**21 43 13.2**	**+2.1**
QLP	**Quilpie**	**22.05**	**177**	P	**P**	**21 43 13.2**	**+1.6**
	baz=22,SNR=9.0						
EIDS	**Eidsvold**	**22.21**	**160**	P	**P**	**21 43 15.1**	**+1.7**
	baz=22,SNR=19						
EIDS	**Eidsvold**	**22.21**	**160**	*e*P	**P**	**21 43 14.2**	**+0.9**
	comp=Z,70nm,0.9s						
RMQ	**Roma**	**22.61**	**166**	P	**P**	**21 43 19.5**	**+2.1**
	baz=23,SNR=13						

BKSI	Bulukumba	22.79	267	P	P	21 43 19.8	+0.4
BNSI	Bone	22.80	269	P	P	21 43 20.7	+1.2
BASI	Baing, Sumba	22.94	254	P	P	21 43 20.7	-0.1
WSI	Waingapu	23.09	256	P	P	21 43 19.1	-3.2
SPSI	Sidrap Palu	23.15	270	P	P	21 43 22.8	-0.1
TTSI	Tana Toraja	23.15	273	P	P	21 43 23.8	+0.9
PCI	Palu	23.38	278	P	P	21 43 27.5	+2.5
MPSI	Mapaga	23.54	281	P	P	21 43 26.7	+0.2
PLAI	Plampang	25.40	259	P	P	21 43 39.3	-4.0
RCP	Roxas	25.65	308	⇑eP	P	21 43 49.9	+4.3
SMKI	Samarinda	26.04	278	P	P	21 43 55.5	+6.3
BKB	Balikpapan	26.24	276	P	P	21 43 54.3	+3.4
KBKI	Kotabaru	26.77	271	P	P	21 43 52.8	-2.9
CMSA	Cobar Meteorol	27.07	175	P	P	21 43 59.7	+1.5
	baz=27,SNR=4.5						
ARMA	Armidale	27.10	163	P	P	21 44 01.2	+2.7
	baz=27,SNR=9.7						
STKA	Stephens Creek	27.32	183	P	P	21 44 01.2	+0.8
	baz=27,SNR=6.1						
STKA	Stephens Creek	27.32	183	eP	P	21 44 01.5	+1.1
	comp=Z,4.2nm,0.9s						
STKA	Stephens Creek	27.32	183	P	P	21 44 01.4	+1.1
	comp=Z,12nm,0.7s,baz=356,slow=8.7,SNR=17						
SRBI	Singaraja	27.83	261	P	P	21 44 03.3	-1.8
MBWA	Marble Bar	28.03	232	eP	P	21 44 07.9	+1.1
KKM	Kota Kinabalu	28.68	291	eP	P	21 44 12.6	-0.3
	comp=Z,70nm,1.4s						
JAGI	Jajag, Banyuwa	28.91	261	eP	P	21 44 12.5	-2.3
	comp=Z,31nm,0.8s						
BBOO	Buckleboo	28.95	192	P	P	21 44 16.0	+1.1
	baz=29,SNR=12						
BBOO	Buckleboo	28.95	192	eP	P	21 44 15.0	+0.1
	comp=Z,21nm,0.9s						
KMMI	Kalianget	28.98	264	P	P	21 44 19.6	+4.3
HTT	Hallett	29.09	187	P	P	21 44 17.0	+0.9
	baz=29,SNR=10						
GMJI	Gumukmas	29.59	261	P	P	21 44 19.2	-1.6
MARNC	Mare, Loyalty	29.63	127	eP	P	21 44 20.4	-0.6
	comp=Z,166nm,0.7s						
FORT	Forrest	29.73	207	P	P	21 44 22.4	+0.6
	baz=30,SNR=16						
FORT	Forrest	29.73	207	eP	P	21 44 22.6	+0.8
	comp=Z,85nm,0.8s						
YNG	Young	30.13	171	P	P	21 44 26.2	+0.9
	baz=30						
PWJI	Pagerwojo	31.18	262	P	P	21 44 32.6	-2.2
CAN	Canberra	31.23	170	P	P	21 44 37.1	+2.1
	baz=31						
CNB	Canberra Magne	31.28	170	P	P	21 44 37.2	+1.7
	baz=31						
SBUM	Sibu	31.49	282	eP	P	21 44 38.4	+0.8
	comp=Z,9.8nm,1.1s						
PCJI	Pacitan	31.82	262	P	P	21 44 37.5	-2.9
MEEK	Meekatharra	32.09	224	P	P	21 44 44.1	+1.5
	baz=32,SNR=13						
ARPS	Mount Arapiles	32.19	182	P	P	21 44 45.4	+2.1
	baz=32,SNR=12						
UGM	Wanagama	32.44	262	P	P	21 44 44.4	-1.5
TOO	Toolangi	33.05	176	P	P	21 44 53.4	+2.5
	baz=33,SNR=4.9						
KSM	Kuching	33.17	279	eP	P	21 44 52.2	0.0
	comp=Z,44nm,1.2s						
KPJI	Karang Pucung	33.98	264	P	P	21 44 59.0	-0.3
CMJI	Cimerak	34.48	263	P	P	21 45 01.5	-2.1
CISI	Cisompet, Garu	35.10	263	eP	P	21 45 07.5	-1.5
	comp=Z,101nm,1.2s						
CISI	Cisompet, Garu	35.10	263	P	P	21 45 07.5	-1.5
LEM	Lembang	35.26	264	P	P	21 45 09.6	-0.9
LEM	Lembang	35.26	264	P	P	21 45 09.6	-0.9
	comp=Z,32nm,0.7s,baz=73,slow=9.4,SNR=7.5						
TPI	Tanjungpandan	35.29	271	P	P	21 45 11.8	+1.2
MORW	Morawa	35.38	223	P	P	21 45 12.8	+1.6
	baz=36,SNR=11						
MORW	Morawa	35.38	223	eP	P	21 45 12.0	+0.8
	comp=Z,56nm,1.2s						
KLBR	Kellerberrin	35.92	218	P	P	21 45 16.8	+1.1
	baz=36,SNR=30						
BLDU	Ballidu	35.92	221	P	P	21 45 17.2	+1.4
	baz=36,SNR=47						
FUNA	Funafuti	36.20	98	eP	P	21 45 18.1	-0.3
SKJI	Sukabumi	36.32	264	P	P	21 45 17.1	-2.3
MSVF	Nonsavu	36.77	114	eP	P	21 45 24.2	+0.9
MSVF	Nonsavu	36.77	114	i P	P	21 45 23.6	+0.3
MSVF				pmax	pmax		
	comp=Z,15nm,0.7s						
PPBI	Pangkal Pinang	36.84	272	P	P	21 45 23.8	-0.1
MUN	Mundaring	37.15	219	P	P	21 45 27.7	+1.5
	baz=37,SNR=9.8						
NWAO	Narrogin (SRO)	37.16	217	P	P	21 45 27.8	+1.6
	baz=37,SNR=12						
NWAO	Narrogin (SRO)	37.16	217	eP	P	21 45 27.1	+0.9
NWAO	Narrogin (SRO)	37.16	217	P	P	21 45 26.4	+0.1
	comp=Z,15nm,0.7s,baz=276,slow=8.4,SNR=16						
KASI	Kota Agung	38.35	267	P	P	21 45 35.1	-1.4
RKGY	Rocky Gully	38.49	216	P	P	21 45 39.9	+2.4
	baz=39,SNR=8.2						
MDSI	Maura Dua	38.68	268	P	P	21 45 39.0	-0.3
LWLI	Liwa	38.79	268	P	P	21 45 39.5	-0.8
JNU	Nakatsue	39.08	344	P	P	21 45 42.8	+0.4
	comp=Z,9.0nm,1.0s,baz=351,slow=19,SNR=3.3						
LHSI	Lahat	39.35	269	P	P	21 45 45.5	+0.6
QIZ	Qiongzhong	40.10	307	eP	P	21 45 50.8	-0.3
	comp=Z,4.4nm,0.7s						
MASI	Maura Aman, Be	40.66	270	P	P	21 45 56.6	+0.8
SSE	Sheshan	41.01	331	eP	P	21 45 58.2	-0.1
	comp=Z,24nm,1.0s						
MJAR	Matsushiro Arr	41.02	354	P	P	21 45 56.7	-1.6
	comp=Z,2.4nm,0.6s,baz=292,slow=30,SNR=8.2						
MAJO	Matsushiro	41.02	354	eP	P	21 45 57.9	-0.4
	comp=Z,8.9nm,0.6s						
MAJO	Matsushiro	41.02	354	eP	P	21 45 57.9	-0.4
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KRJI	Kerinci	41.51	272	P	P	21 46 01.8	-1.0
OUZ	Omahuta	41.69	141	eP	P	21 46 05.0	+1.1
	comp=Z,49nm,0.6s						
BKNI	Bangkinang	42.16	275	eP	P	21 46 08.1	+0.1
	comp=Z,78nm,0.9s						
BKNI	Bangkinang	42.16	275	P	P	21 46 08.8	+0.8
PDSI	Padang	42.60	273	P	P	21 46 10.7	-1.0
PPI	Padang Panjang	42.72	274	P	P	21 46 11.9	-0.6
IPM	Ipoh	42.84	281	eP	P	21 46 14.0	+0.5
	comp=Z,10nm,0.9s						
NJ2	Nanjing	42.94	329	eP	P	21 46 14.1	+0.1
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
KULM	Kulim	43.37	282	eP	P	21 46 18.3	+0.6
	comp=Z,17nm,1.0s						
SKLT	Songkhla	43.82	285	P	P	21 46 22.9	+1.5
	comp=Z,26nm,1.2s						
KSAR	Wonju Array Be	43.98	343	P	P	21 46 22.6	+0.4
KSAR	Wonju Array Be	43.98	343	P	P	21 46 22.7	+0.4
KSRS	Korea Array	43.98	343	P	P	21 46 22.6	+0.4
	comp=Z,5.3nm,0.8s,baz=161,slow=9.4,SNR=9.4						
KS01	Wonju Array Si	44.01	343	eP	P	21 46 22.4	-0.1
KS01				epP	pP	21 46 46.8	+0.4
SKNT	Sakolnakorn	44.01	300	P	P	21 46 23.3	+0.5
	comp=Z,13nm,0.9s						
SRAK	Srakaew	44.55	295	P	P	21 46 27.2	0.0
	comp=Z,21nm,0.6s,comp=Z,352nm						
PSI	Prapat	44.60	278	P	P	21 46 27.5	-0.3
	comp=Z,34nm,0.8s,baz=180,slow=1.2,SNR=30						
HIZ	Hauiti	44.61	144	eP	P	21 46 28.5	+1.2
	comp=Z,67nm,0.7s						
HIZ	Hauiti	44.61	144	P	P	21 46 30.7	+3.4
TRTT	Trang	44.87	286	P	P	21 46 30.7	+0.9
	comp=Z,8.1nm,1.1s						
NONG	Nongkai	45.20	301	P	P	21 46 32.5	+0.2
	comp=Z,0.9nm,0.7s,comp=Z,186nm						
KNTN	Kanton	45.24	90	eP	P	21 46 32.7	0.0
	comp=Z,136nm,1.0s						
CHAI	Chaiyaphum	45.32	297	P	P	21 46 33.4	+0.2
	comp=Z,11nm,0.7s,comp=Z,91nm						
FOZ	Fox Glacier	45.59	153	eP	P	21 46 34.3	-0.6
	comp=Z,28nm,0.8s						
MUGZ	Murupara	45.73	142	P	P	21 46 38.0	+1.8
THZ	Tophouse	45.77	149	eP	P	21 46 37.6	+1.0
	comp=Z,54nm,0.9s						
URZ	Urewera	45.80	142	eP	P	21 46 38.6	+1.9
	comp=Z,35nm,0.4s						
URZ	Urewera	45.80	142	P	P	21 46 37.6	+0.9
	comp=Z,30nm,0.4s,baz=258,slow=7.3,SNR=20						
URZ				LR	LR	22 05 36.5	
	comp=Z,5µm,21.1s,baz=163,slow=36						
URZ	Urewera	45.80	142	P	P	21 46 38.4	+1.7
KCSI	Kotacane, Aceh	45.86	279	P	P	21 46 36.4	-1.2
HAZ	Te Kaha	45.91	141	P	P	21 46 39.2	+1.6
RTZ	Ruatahuna	45.95	142	P	P	21 46 39.5	+1.5
RUGZ	Raukumara Rang	45.97	141	P	P	21 46 39.9	+1.6
DCZ	Deep Cove	45.99	156	eP	P	21 46 38.8	+0.7
	comp=Z,37nm,0.9s						
BKZ	Black Stump Fm	46.00	143	eP	P	21 46 38.6	+0.3
	comp=Z,51nm,0.5s						
MTHZ	Maungataniwha	46.01	143	P	P	21 46 40.3	+1.8
MWZ	Matawai	46.10	142	P	P	21 46 41.1	+1.9
MXZ	Matakaoa Point	46.12	140	eP	P	21 46 40.2	+1.0
	comp=Z,80nm,1.4s						
RAGZ	Rawiri	46.14	142	P	P	21 46 41.7	+2.2
PKGZ	Pakihiroa	46.17	141	P	P	21 46 42.1	+2.3
PKDT	Phuket	46.19	285	P	P	21 46 41.1	+0.9
	comp=Z,13nm,0.9s						
LTZ	Lake Taylor	46.19	150	eP	P	21 46 40.7	+0.9
	comp=Z,34nm,0.8s						
KIW	Kapiti Island	46.22	146	P	P	21 46 42.2	+2.2
SNGZ	Shannon Statio	46.27	142	P	P	21 46 42.3	+1.8
TWGZ	Tauwhareparae	46.29	141	P	P	21 46 42.9	+2.2
RPZ	Rata Peaks	46.30	152	eP	P	21 46 41.2	+0.6
	comp=Z,59nm,0.9s						
RPZ	Rata Peaks	46.30	152	P	P	21 46 41.0	+0.4
	comp=Z,55nm,0.7s,baz=314,slow=1.6,SNR=29						
MLZ	Mavora Lakes	46.30	156	eP	P	21 46 41.4	+0.8
	comp=Z,37nm,0.8s						
TKGZ	Te Karaka	46.37	142	P	P	21 46 42.8	+1.6
PHET	Kaeng Krachan	46.38	292	P	P	21 46 43.3	+1.7
	comp=Z,7.1nm,0.7s						
PYZ	Puysegur Point	46.38	157	eP	P	21 46 41.4	+0.2
	comp=Z,63nm,0.9s						
SNZO	South Karori	46.41	147	eP	P	21 46 41.9	+0.4
	comp=Z,167nm,1.8s						
LBZ	Lake Benmore	46.41	153	eP	P	21 46 42.0	+0.5
	comp=Z,38nm,1.0s						
MRZ	Mangatainoka R	46.45	146	P	P	21 46 42.8	+1.0
PBKT	Sadao Pong	46.48	298	eP	P	21 46 42.3	0.0
	comp=Z,22nm,1.8s						
PBKT	Sadao Pong	46.48	298	P	P	21 46 45.0	+2.7
	comp=Z,5.5nm,1.2s						
KHZ	Kahutara	46.57	149	eP	P	21 46 43.0	+0.3
	comp=Z,70nm,1.3s						
HOWZ	Holdsworth Sta	46.58	146	P	P	21 46 43.6	+0.8
CNGZ	Carnagh Statio	46.62	141	P	P	21 46 44.9	+1.8
KNZ	Kokohu	46.62	142	P	P	21 46 44.4	+1.3
WHZ	Wether Hill Ro	46.66	156	eP	P	21 46 44.2	+0.9
	comp=Z,40nm,0.9s						
MTW	Mount Morrison	46.75	146	P	P	21 46 45.1	+0.9
BFZ	Birch Farm	46.85	145	eP	P	21 46 44.9	0.0
	comp=Z,48nm,0.7s						
TMWZ	Te Maipa	46.93	146	P	P	21 46 46.1	+0.5
LHMI	Lhok Sumawe	46.97	281	P	P	21 46 46.6	+0.4
ENH	Enshi	47.10	319	eP	P	21 46 47.7	+0.7
UTTA	Uttaradit	47.30	299	P	P	21 46 49.8	+1.0
	comp=Z,5.4nm,0.9s,comp=Z,51nm						
SRDT	SRDT	47.32	294	P	P	21 46 51.0	+2.0
	comp=Z,14nm,1.3s,comp=Z,918nm						
UTHA	Uthaitani	47.45	296	P	P	21 46 50.9	+0.9
	comp=Z,6.5nm,1.0s,comp=Z,61nm						
UMPA	Umpang Tak	48.21	296	P	P	21 46 57.4	+1.5
	comp=Z,3.2nm,0.8s,comp=Z,2µm						
ASAJ	Asahikawa	48.34	360	P	P	21 46 56.1	-0.2
	comp=Z,6.8nm,0.8s,baz=282,slow=28,SNR=5.7						
KMI	Kunming	48.90	309	P	P	21 47 03.5	+2.3
KMI				pP	pP	21 47 24.6	-0.9
KMI				sP	sP	21 47 35.7	-1.3
KMI				pmax	pmax		
	comp=Z,30nm,1.1s						
KMI				pmax	pmax		
	comp=Z,420nm,6.0s						
KMI	Kunming	48.90	309	eP	P	21 47 02.3	+1.1
	comp=Z,27nm,0.9s						
KMI	Kunming	48.90	309	eP	P	21 47 02.3	+1.1
KMI				pmax	pmax		
	comp=Z,27nm,0.9s						
CM01	Chiang Mai Arr	48.96	299	eP	P	21 47 01.9	+0.3
CM01				epP	pP	21 47 24.5	-1.3
CM31	Chiang Mai Arr	48.99	299	eP	P	21 47 02.9	+1.1
CMAR	Chiang Mai Arr	48.99	299	P	P	21 47 03.3	+1.5
CMAR				pmax	pmax		
	comp=Z,13nm,0.6s						
CMAR	Chiang Mai Arr	48.99	299	P	P	21 47 03.3	+1.5
	comp=Z,14nm,0.6s,baz=116,slow=6.2,SNR=99						
CMMT	Chiang Mai	49.13	299	P	P	21 47 03.9	+1.1
	comp=Z,22nm,1.4s						
CHTO	Chiang Mai	49.13	299	eP	P	21 47 03.5	+0.6
	comp=Z,12nm,0.8s						
CHTO	Chiang Mai	49.13	299	eP	P	21 47 03.5	+0.6
CHTO				pmax	pmax		
	comp=Z,12nm,0.8s						
CHTO	Chiang Mai	49.13	299	P	P	21 47 03.9	+1.0
	comp=Z,95nm,1.4s						
USRK	Ussuriysk Ar.	49.42	350	P	P	21 47 05.6	+1.0
	comp=Z,9.7nm,0.6s,baz=152,slow=7.6,SNR=39						
XAN	Xi'an	49.98	323	P	P	21 47 09.4	+0.3
XAN				pP	pP	21 47 21.7	-12
XAN				sP	sP	21 47 27.4	-18
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
XAN				LR	LR		
	comp=N,1µm,19.5s						
XAN				LR	LR		
	comp=Z,740nm,17.3s						
XAN	Xi'an	49.98	323	eP	P	21 47 09.4	+0.3
	comp=Z,0.8nm,0.9s						
XAN	Xi'an	49.98	323	eP	P	21 47 09.4	+0.3
XAN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CN2	Changchun	50.56	344	eP	P	21 47 16.5	+3.3
CN2				epP	pP	21 47 37.2	-0.4
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
BJT	Baijiatuau	50.65	333	eP	P	21 47 14.5	+0.5
	comp=Z,36nm,1.0s						
BJT	Baijiatuau	50.65	333	eP	P	21 47 14.5	+0.5
BJT				pmax	pmax		
	comp=Z,36nm,1.0s						
BJI	Beijing	50.66	333	⇓iP	P	21 47 14.2	+0.2
BJI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
YSS	Yuzh-Sakhalins	51.18	360	eP	P	21 47 16.3	-1.4
YSS				e		21 47 32.5	
CD2	Chengdu	51.35	316	⇓iP	P	21 47 20.4	+0.9
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=N,3µm,18.4s						
CD2				LR	LR		
	comp=E,2µm,19.2s						
CD2				LR	LR		
	comp=Z,2µm,21.8s						
HHC	Hu-ho-hao-te	53.46	331	eP	P	21 47 38.4	+3.4
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
KLR	Kul'dur	54.34	351	i P	P	21 47 40.3	-0.7
KLR	Kul'dur	54.34	351	P	P	21 47 42.0	+1.0
	comp=Z,2.9nm,0.5s,baz=182,slow=5.0,SNR=26						
LZH	Lanzhou	54.46	321	⇑P	P	21 47 44.3	+1.9
LZH				pP	pP	21 48 08.9	+1.8
LZH				sP	sP	21 48 17.4	-1.1
LZH				PP	PP	21 49 56.3	+11
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,95nm,4.8s						
LZH				LR	LR		
	comp=N,740nm,15.6s						
LZH				LR	LR		
	comp=E,760nm,15.5s						
LZH				LR	LR		
	comp=Z,840nm,17.8s						
BRDH	Bariadhala	56.92	301	P	P	21 48 01.7	+1.7
	comp=Z,82nm,0.4s,baz=248,slow=17,SNR=4.0						
NKL	Nikolayevsk	57.41	358	eP	P	21 48 04.0	+1.2
SHL	Shillong	57.82	304	eP	P	21 48 07.4	+0.9
	comp=Z,23nm,0.7s						
SHL	Shillong	57.82	304	eP	P	21 48 07.4	+0.9
SHL				pmax	pmax		
	comp=Z,23nm,0.7s						
SHL	Shillong	57.82	304	⇓iP	P	21 48 08.0	+1.5
PETK	Petropavlovsk-	58.67	10	eP	P	21 48 12.3	+0.7
PETK	Petropavlovsk-	58.67	10	P	P	21 48 12.2	+0.6
	comp=Z,7.8nm,0.8s,baz=186,slow=7.0,SNR=8.0						
GTA	Gaotai	59.02	322	⇓P	P	21 48 15.6	+1.1
GTA				pP	pP	21 48 39.1	-0.5
GTA				sP	sP	21 48 50.6	-0.3
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				LR	LR		
	comp=N,510nm,19.4s						
GTA				LR	LR		
	comp=E,760nm,19.0s						
GTA				LR	LR		
	comp=Z,890nm,17.8s						
LSA	Lhasa	60.12	308	eP	P	21 48 23.6	+0.9
	comp=Z,14nm,0.8s						
LSA	Lhasa	60.12	308	eP	P	21 48 23.6	+0.9
LSA				pmax	pmax		
	comp=Z,14nm,0.8s						
SONM	Songino Array	61.15	333	P	P	21 48 29.5	+0.6
	comp=Z,1.5nm,0.7s,baz=159,slow=7.2,SNR=13						
SONA1	Songino Array	61.15	333	eP	P	21 48 29.5	+0.5
RAMN	Ramite	62.73	303	eP	P	21 48 41.7	+1.6
	comp=Z,41nm,0.6s						
PALK	Pallekele	63.23	280	eP	P	21 48 44.1	+0.8
	comp=Z,14nm,0.7s						
PALK	Pallekele	63.23	280	ceP	P	21 48 45.7	+2.4
PALK	Pallekele	63.23	280	P	P	21 48 44.9	+1.5
	comp=Z,11nm,0.8s,baz=115,slow=10,SNR=6.8						
JIRN	Jiri	63.33	304	eP	P	21 48 45.6	+1.4
	comp=Z,47nm,0.6s						
GUN	Gumba	63.67	304	eP	P	21 48 47.9	+1.5
	comp=Z,72nm,0.7s						
PKI	Pulchoki	63.95	303	eP	P	21 48 49.3	+1.1
	comp=Z,20nm,0.7s						
PKIN	Phulchoki	63.96	303	eP	P	21 48 49.2	+1.0
MA2	Magadan	64.12	4	ceP	P	21 48 47.9	-0.3
MA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MA2	Magadan	64.12	4	P	P	21 48 48.3	+0.1
	comp=Z,2.0nm,0.3s,baz=54,slow=5.0,SNR=3.0						
DMN	Daman	64.21	303	eP	P	21 48 51.4	+1.6
	comp=Z,51nm,0.6s						
TLY	Talaya	65.17	334	eP	P	21 48 56.0	+0.7
	comp=Z,5.7nm,0.6s						
TLY	Talaya	65.17	334	i P	P	21 48 55.8	+0.5
KOLN	Koldanda	65.52	303	eP	P	21 48 59.7	+1.4
	comp=Z,71nm,0.8s						
DANN	Dangsing	65.58	304	eP	P	21 48 59.9	+1.1
	comp=Z,98nm,0.6s						
CASY	Casey	65.75	194	eP	P	21 48 58.6	-0.1
	comp=Z,8.2nm,0.6s						
PYUN	Piuthan	66.14	303	eP	P	21 49 03.5	+1.3
	comp=Z,78nm,0.6s						
BOD	Bodaibo	66.31	344	eP	P	21 49 02.6	+0.2
BOD				pmax	pmax		
	comp=Z,22nm,1.3s						
MOY	Mondy	66.34	333	eP	P	21 49 04.0	+1.1
YAK	Yakutsk	67.07	353	eP	P	21 49 09.7	+2.5
YAK				e*PP	pP	21 49 29.5	-3.3
YAK				e		21 49 40.8	
YAK				ePPP	PPP	21 53 16.2	
YAK				eS	S	21 57 53.5	+0.7
YAK				e*SS	sS	21 58 34.2	-1.2
YAK				e		21 58 55.8	
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,417nm,5.2s						
YAK				smax	smax		
	comp=E,84nm,1.9s						
HYB	Hyderabad	67.17	291	i P	P	21 49 10.0	+1.3
PPT	Papeete	67.18	107	P	P	21 49 09.5	+0.7
	comp=E,36nm,0.7s,baz=70,slow=21,SNR=2.8						
WMQ	Urumqi	69.03	320	P	P	21 49 21.3	+1.4
WMQ				pP	pP	21 49 45.8	+0.1
WMQ				sP	sP	21 49 50.2	-6.6
WMQ				pmax	pmax		
	comp=Z,40nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,2µm,11.6s						
WMQ				LR	LR		
	comp=N,800nm,21.7s						
WMQ				LR	LR		
	comp=E,1µm,20.7s						
WMQ				LR	LR		
	comp=Z,1µm,22.9s						
WMQ	Urumqi	69.03	320	eP	P	21 49 20.3	+0.4
	comp=Z,17nm,0.9s						
WMQ	Urumqi	69.03	320	eP	P	21 49 20.3	+0.4
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
POO	Poona	71.78	291	eP	P	21 49 35.0	-2.1
DGZ	Jazzator, Alta	72.08	326	i P	P	21 49 38.3	-0.1
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VNDA	Vanda	73.72	176	P	P	21 49 48.1	+0.6
	comp=Z,5.8nm,0.8s,baz=330,slow=7.7,SNR=12						
MK01	Makanchi Array	73.76	321	eP	P	21 49 48.8	+0.5
MK31	Makanchi Array	73.77	321	eP	P	21 49 48.9	+0.5
MK31	Makanchi Array	73.77	321	eP	P	21 49 48.9	+0.5
MKAR	Makanchi Array	73.77	321	eP	P	21 49 49.3	+0.9
	comp=Z,64nm,0.8s						
MKAR	Makanchi Array	73.77	321	P	P	21 49 49.3	+0.9
	comp=Z,11nm,0.7s,baz=110,slow=7.2,SNR=143						
MAKZ	Makanchi	73.97	321	eP	P	21 49 49.7	+0.2
	comp=Z,17nm,0.8s						
BILL	Bilibino	74.15	9	eP	P	21 49 49.7	-0.3
	comp=Z,2.8nm,0.6s						
BILL	Bilibino	74.15	9	⇓iP	P	21 49 49.9	-0.1
BILL				e		21 50 07.4	
BILL				e*PP	pP	21 50 19.3	+3.2
BILL				e		21 52 39.9	
BILL				eS	SKiKP	21 59 06.1	-1.7
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PRZ	Przheval'sk	74.64	316	eP	P	21 49 54.4	+0.7
PRZ	Przheval'sk	74.64	316	eP	P	21 49 54.4	+0.7
KDJ	Kajisay	75.37	315	eP	P	21 49 58.3	+0.4
	comp=Z,15nm,0.9s						
KSH	Kashi	75.37	313	P	P	21 50 00.6	+2.7
KSH				pP	pP	21 50 27.7	+3.7
KSH				pmax	pmax		
	comp=Z,17nm,0.7s						
KSH				pmax	pmax		
	comp=Z,1µm,10.5s						
ZAA0	Zalesovo Array	75.59	329	eP	P	21 49 58.4	-0.2
	comp=Z,6.5nm,0.8s						
ZALV	Zalesovo Beam	75.59	329	eP	P	21 49 58.2	-0.4
ZALV	Zalesovo Beam	75.59	329	P	P	21 49 58.4	-0.3
	comp=Z,6.9nm,0.7s,baz=112,slow=5.7,SNR=32						
NIL	Nilore	75.77	306	eP	P	21 50 01.1	+0.9
NIL	Nilore	75.77	306	eP	P	21 50 01.1	+0.9
NRN	Naryn	75.97	314	eP	P	21 50 01.9	+0.4
	comp=Z,5.2nm,0.9s						
NRN	Naryn	75.97	314	eP	P	21 50 01.9	+0.4
NRN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TIXI	Tiksi	76.51	355	eP	P	21 50 03.2	-0.2
	comp=Z,3.2nm,0.6s						
TIXI	Tiksi	76.51	355	ceP	P	21 50 01.9	-1.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KZA	Kyzart	76.71	315	P	P	21 50 07.6	+1.9
	SNR=19						
TKM2	Tokmak 2	76.73	316	P	P	21 50 06.7	+1.0
	SNR=14						
NVS	Novosibirsk	76.83	329	eP	P	21 50 05.2	-0.4
NVS				e		21 50 30.4	
NVS				pmax	pmax		
	comp=Z,13nm,1.0s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.8s						
KBK	Karagaybulak	77.10	315	P	P	21 50 09.2	+1.5
	SNR=7.4						
UCH	Uchtor	77.27	315	P	P	21 50 10.7	+1.7
	SNR=11						
CHMS	Chumysh	77.35	316	P	P	21 50 09.8	+0.9
	SNR=10						
AAK	Ala-Archa	77.41	315	eP	P	21 50 10.0	+0.6
	comp=E,17nm,1.3s						
AAK	Ala-Archa	77.41	315	ceP	P	21 50 09.0	-0.4

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AAK                                   pmax      pmax
      comp=Z,9.0nm,1.3s
AAK   Ala-Archa         77.41 315    P         P          21 50 10.1 +0.7
      comp=Z,4.5nm,0.8s,baz=107,slow=6.4,SNR=21
KURK  Kurchatov         77.59 324   eP         P          21 50 10.4 +0.5
      comp=Z,24nm,1.1s
KURK  Kurchatov         77.59 324 ceP          P          21 50 08.6 -1.4
KURK                                  pmax      pmax
      comp=Z,10.0nm,1.0s
KURBB Kurchatov Arra    77.61 324    P         P          21 50 10.5 +0.4
      comp=Z,4.2nm,0.8s,baz=114,slow=5.0,SNR=31
USP   Ospenovka         77.61 316    P         P          21 50 11.5 +1.1
      SNR=23
AML   Almayashu         77.82 315    P         P          21 50 13.6 +1.6
      SNR=8.8
EKS2  Erkin-Say         77.92 315    P         P          21 50 13.8 +1.6
      SNR=13
KBL   Kabul             79.38 306   eP         P          21 50 20.8 +0.3
      comp=Z,7.9nm,0.8s
KBL   Kabul             79.38 306   eP         P          21 50 20.8 +0.3
KBL                                   pmax      pmax
      comp=Z,8.0nm,0.8s
GAR   Garm              79.44 311   eP         P          21 50 21.2 +0.6
      comp=Z,38nm,1.2s
GAR   Garm              79.44 311   eP         P          21 50 21.2 +0.6
GAR                                   pmax      pmax
      comp=Z,38nm,1.2s
CHGR  Chuyangaron       80.23 310   eP         P          21 50 25.9 +1.0
      comp=Z,37nm,0.9s
KK31  Karatay Array     80.35 315   eP         P          21 50 26.4 +1.1
KK31  Karatay Array     80.35 315   eP         P          21 50 26.4 +1.1
KKAR  Karatay Array     80.35 315   eP         P          21 50 25.6 +0.3
KKAR  Karatay Array     80.35 315   eP         P          21 50 25.6 +0.3
RDOG  Red Dog Mine      81.47  18   eP         P          21 50 31.6 +0.9
      comp=Z,18nm,0.9s
MAW   Mawson            82.14 202    P         P          21 50 35.7 +1.5
      comp=Z,59nm,1.1s,baz=54,slow=3.4,SNR=4.5
NRIK  Noril'sk          82.60 343    P         P          21 50 36.9 +0.4
      comp=Z,9.5nm,0.7s,baz=126,slow=4.8,SNR=11
BRVK  Borovoye          83.24 325   eP         P          21 50 40.5 +0.3
      comp=Z,30nm,1.0s
BRVK  Borovoye          83.24 325 ceP          P          21 50 41.0 +0.8
BRVK                                  pmax      pmax
      comp=Z,26nm,1.0s
IM3   Indian Mountai    83.50  22   eP         P          21 50 41.1 -0.1
MLY   Manley            84.23  23   eP         P          21 50 44.9 -0.2
      comp=Z,15nm,1.2s
RND   Reindeer          84.37  25   eP         P          21 50 45.1 -0.7
      comp=Z,21nm,0.8s
RND   Reindeer          84.37  25   eP         P          21 50 45.1 -0.7
RND                                   pmax      pmax
      comp=Z,21nm,0.8s
MCK   McKinley          84.45  25   eP         P          21 50 45.6 -0.6
      comp=Z,17nm,0.9s
MCK   McKinley          84.45  25   eP         P          21 50 45.6 -0.6
MCK                                   pmax      pmax
      comp=Z,17nm,0.9s
DHY   Denali Highway    84.88  25   eP         P          21 50 48.5  0.0
      comp=Z,17nm,0.9s
WRH   Wood River Hil    85.07  24   eP         P          21 50 48.8 -0.4
      comp=Z,17nm,1.0s
WRH                                 epP        pP         21 51 14.2 -1.6
COLA  College           85.31  24   eP         P          21 50 49.4 -1.0
      comp=Z,13nm,1.0s
COLA  College           85.31  24   eP         P          21 50 49.4 -1.0
COLA                                  pmax      pmax
      comp=Z,13nm,1.0s
QSPA  South Pole Qui    85.51 180   eP         P          21 50 51.8 +0.2
POKR  Poker Plat Res    85.56  23    P         P          21 50 52.8 +1.2
      baz=250
ILAR  Eielson Array     85.66  24    P         P          21 50 50.8 -1.4
      comp=Z,4.2nm,0.7s,baz=256,slow=4.8,SNR=52
ILB   Eielson Array     85.66  24   eP         P          21 50 50.8 -1.4
IL1   Eielson Array     85.66  24   eP         P          21 50 50.0 -2.2
TOLK  Toolik Lake Re    86.08  20   eP         P          21 50 54.4 +0.3
      comp=Z,16nm,1.0s
TOLK  Toolik Lake Re    86.08  20    P         P          21 50 55.2 +1.0
      baz=247
DAWY  Dawson            88.58  25   eP         P          21 51 06.3  0.0
      comp=Z,14nm,1.0s
GEYT  Alibeck           88.65 308    P         P          21 51 07.1 -0.1
      comp=Z,3.3nm,0.8s,baz=132,slow=2.2,SNR=10
GYA0B ALIBECK ARRAY     88.65 308   eP         P          21 51 07.2  0.0
      comp=Z,6.8nm,0.9s
ABKAR Akbulak array     88.79 319   eP         P          21 51 07.2 -0.3
EPYK  Eagle Plains      90.16  23    P         P          21 51 14.2 +0.6
      baz=259
ARU   Arti              90.58 326   eP         P          21 51 13.9 -1.8
      comp=Z,3.7nm,0.5s
ARU   Arti              90.58 326 d iP         P          21 51 14.5 -1.2
ARU                                                       21 54 50.8
ARU                                  S         SKSac      22 01 34.2 -3.6
ARU                                  PS        PS         22 03 11.9  -11
ARU                                  SS        SS         22 08 04.9 -1.2
ARU                                  pmax      pmax
      comp=Z,5.0nm,1.4s
SYO   Syowa Base        90.65 201⇓eP           P          21 51 13.8 -2.0
SYO   Syowa Base        90.65 201⇓ePcP         P          21 51 15.8  0.0
INK   Inuvik            91.69  22   eP         P          21 51 19.7 -0.9
      comp=Z,1.6nm,0.9s
INK   Inuvik            91.69  22   eP         P          21 51 19.7 -0.9
INK                                  pmax      pmax
      comp=Z,2.0nm,0.9s
INK   Inuvik            91.69  22    P         P          21 51 20.0 -0.6
      comp=Z,0.5nm,0.6s,baz=160,slow=7.1,SNR=3.0
HUMO  Hull Mountain     95.98  48   eP         P          21 51 40.7 -0.3
PRGR  Permogore         97.39 331   eP         P          21 51 43.9 -2.9
PRGR                                 pmax      pmax
      comp=Z,4.0nm,1.0s
NVAR  Mina Array Bea    99.58  52    P         Pdif       21 51 56.6 -0.9
      comp=Z,0.3nm,0.4s,baz=262,slow=5.2,SNR=2.0
YKA   Yellowknife Ar    99.66  27    P         Pdif       21 51 56.4 -0.5
      comp=Z,0.4nm,0.8s,baz=278,slow=4.8,SNR=6.6
YKA                                  PKiKP     PKiKP      21 56 25.8 +0.5
      comp=Z,0.4nm,0.5s,baz=270,slow=1.4,SNR=7.3
APA   Apatity          101.49 338⇓iP           Pdif       21 52 22.6  +18
APA                                  pmax      pmax
      comp=Z,5.0nm,1.2s
APA                                  MLR       MLR
      comp=Z,400nm,17.0s
ARCES ARCESS Array B   103.52 341    Pdiff     Pdif       21 52 13.2 -0.9
      comp=Z,1.2nm,0.8s,baz=56,slow=7.4,SNR=4.4
ARCES                                PKKPbc    PKKPbc     22 08 07.1 -2.7
      comp=Z,1.3nm,0.8s,baz=310,slow=0.9,SNR=5.2
PDAR  Pinedale Array   105.81  47    Pdiff     Pdif       21 52 24.9 -0.2
      comp=Z,0.4nm,0.8s,baz=175,slow=2.6,SNR=4.5
FINES FINESS Array B   106.51 333    Pdiff     Pdif       21 52 26.6 -0.9
      comp=Z,1.2nm,0.9s,baz=85,slow=6.3,SNR=3.6
FINES                                PKiKP     PKiKP      21 56 37.0 -0.8
      comp=Z,0.7nm,0.6s,baz=48,slow=2.1,SNR=2.7
MNTX  Cornudas Mount   110.71  58    P         PKiKP      21 56 47.5 +0.9
      baz=278
TXAR  Lajitas Array    112.50  60    PKiKP     PKiKP      21 56 50.8 +0.6
      comp=Z,2.1nm,0.9s,baz=230,slow=0.8,SNR=14
CBKS  Cedar Bluff      113.90  49    P         PKiKP      21 56 52.8 +0.3
      baz=284
ECSD  EROS Data Cent   114.76  44    P         PKiKP      21 56 53.8 -0.2
      baz=289
JCT   Junction City    115.63  58    P         PKiKP      21 56 56.6 +0.5
      baz=280
F38A  Pierce - Schro   117.10  40    P         PKiKP      21 56 58.6 +0.2
      baz=294
G38A  Ridgeland        117.43  41    P         PKPdf      21 56 58.7 -0.3
      baz=293
CLL   Collm            117.52 327   ePKiKP     PKiKP      21 57 00.0 +1.0
CLL   Collm            117.52 327   ePKIKP     PKiKP      21 57 00.0 +1.0
F39A  Loretta          117.73  40    P         PKiKP      21 56 59.7 +0.1
      baz=295
E39A  Mellen           117.76  39    P         PKPdf      21 56 59.7  0.0
      baz=295
G39A  Holcombe         117.82  40    P         PKPdf      21 56 59.7 -0.1
      baz=294
H39A  Augusta          118.00  41    P         PKPdf      21 57 00.1 -0.1
      baz=294
I39A  Houston          118.16  42    P         PKPdf      21 56 59.7 -0.9
      baz=293
F40A  Park Falls       118.23  39    P         PKiKP      21 57 00.7 +0.1
      baz=295
J39A  Decorah          118.24  43    P         PKPdf      21 57 00.1 -0.5
      baz=293
GERES GERESS Array B   118.34 324    PKP       PKiKP      21 57 01.3 +0.4
      comp=Z,0.6nm,0.5s,baz=84,slow=1.8,SNR=7.9
L39A  Vinton           118.50  44    P         PKPdf      21 57 00.9 -0.3
      baz=292
H40A  Chili            118.60  41    P         PKPdf      21 57 01.1 -0.2
      baz=294
E41A  Kenton           118.72  38    P         PKPdf      21 57 01.5  0.0
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      baz=296
J40A  Soldiers Grove   118.87  42    P         PKPdf      21 57 01.2 -0.7
      baz=294
K40A  Colesburg        118.87  43    P         PKPdf      21 57 01.3 -0.6
      baz=293
F41A  Three Lakes      118.95  39    P         PKiKP      21 57 02.3 +0.3
      baz=296
H41A  Junction City    119.08  41    P         PKPdf      21 57 02.0 -0.3
      baz=295
M40A  Post Highland    119.10  44    P         PKiKP      21 57 02.5 +0.1
      baz=292
J41A  Loganville       119.36  42    P         PKPdf      21 57 02.3 -0.6
      baz=294
JFWS  Jewell Farm      119.39  42   ePKPdf     PKPdf      21 57 02.4 -0.5
JFWS  Jewell Farm      119.39  42   ePKIKP     PKPdf      21 57 02.4 -0.5
JFWS  Jewell Farm      119.39  42    P         PKPdf      21 57 02.7 -0.2
      baz=294
W39A  Magazine         119.46  52   ePKPdf     PKPdf      21 57 02.8 -0.4
W39A  Magazine         119.46  52    P         PKiKP      21 57 03.3  0.0
      baz=287
K41A  Shullsburg       119.47  43    P         PKPdf      21 57 02.8 -0.3
      baz=293
G42A  Mountain         119.60  39    P         PKPdf      21 57 03.0 -0.2
      baz=296
MIAR  Mount Ida        119.81  53   ePKPdf     PKPdf      21 57 03.8 -0.1
MIAR  Mount Ida        119.81  53   ePKIKP     PKPdf      21 57 03.8 -0.1
MIAR  Mount Ida        119.81  53    P         PKiKP      21 57 04.8 +0.8
      baz=287
U40A  Yellville        119.83  50    P         PKPdf      21 57 03.7 -0.3
      baz=288
O41A  Passleys Farm,   120.02  46    P         PKPdf      21 57 04.2  0.0
      baz=292
K42A  Prairie Point,   120.05  42    P         PKPdf      21 57 03.9 -0.3
      baz=294
P41A  Barry, Barry     120.05  46    P         PKPdf      21 57 04.2 -0.1
      baz=291
L42A  Oliver, Polo     120.15  43   ePKPdf     PKPdf      21 57 04.3 -0.1
L42A  Oliver, Polo     120.15  43    P         PKPdf      21 57 04.2 -0.2
      baz=294
Q41A  Truxton          120.19  47    P         PKPdf      21 57 04.5  0.0
      baz=291
S41A  Jillco Farms,    120.28  49    P         PKPdf      21 57 04.4 -0.4
      baz=290
R41A  Rosebud          120.31  48    P         PKPdf      21 57 04.7 -0.1
      baz=290
J43A  Natural Harves   120.41  41    P         PKPdf      21 57 04.1 -0.8
      baz=295
T41A  Mountain View    120.44  49    P         PKPdf      21 57 04.7 -0.4
      baz=289
CCM   Cathedral Cave   120.49  48   ePKPdf     PKPdf      21 57 05.2  0.0
CCM   Cathedral Cave   120.49  48   ePKIKP     PKPdf      21 57 05.2  0.0
CCM   Cathedral Cave   120.49  48    P         PKPdf      21 57 04.9 -0.2
      baz=290
V41A  Mountainview     120.55  51    P         PKPdf      21 57 04.7 -0.6
      baz=288
U41A  Viola            120.55  50    P         PKPdf      21 57 04.9 -0.5
      baz=289
P42A  Winchester       120.60  46   ePKPdf     PKiKP      21 57 05.6 +0.1
P42A  Winchester       120.60  46    P         PKPdf      21 57 05.3  0.0
      baz=292
W41B  Gary Mavity, V   120.66  51    P         PKPdf      21 57 05.3 -0.2
      baz=288
L43A  Garden Prairie   120.70  43    P         PKPdf      21 57 05.3 -0.1
      baz=294
UALR  University of    120.71  52   ePKPdf     PKiKP      21 57 06.4 +0.6
R42A  Luebbering       120.75  48    P         PKPdf      21 57 05.5 -0.2
      baz=291
S42A  Caledonia        120.92  48    P         PKPdf      21 57 05.7 -0.4
      baz=290
T42A  Van Buren        120.95  49    P         PKPdf      21 57 05.8 -0.3
      baz=290
U42A  Revenden         121.07  50    P         PKPdf      21 57 05.9 -0.4
      baz=289
V42A  Cord             121.13  51    P         PKPdf      21 57 06.1 -0.4
      baz=289
P43A  Skaggs, Pawnee   121.17  46    P         PKiKP      21 57 06.5  0.0
      baz=292
R43A  Red Bud          121.38  47    P         PKPdf      21 57 06.7 -0.2
      baz=291
S43A  Fulton Ridge,    121.53  48    P         PKPdf      21 57 06.7 -0.5
      baz=291
T43A  Greenville       121.54  49    P         PKPdf      21 57 06.6 -0.6
      baz=290
E46A  Sault Ste Mari   121.59  37    P         PKPdf      21 57 07.1 +0.1
      baz=301
N44A  Piper City       121.69  44    P         PKPdf      21 57 07.4  0.0
      baz=294
P44A  Sand Creek, Wi   121.88  46    P         PKiKP      21 57 08.4 +0.4
      baz=293
CMIG  Matias Romero    121.99  73    PKP       PKPdf      21 57 08.3 -0.3
      comp=Z,9.6nm,0.6s,baz=46,slow=6.8,SNR=1.9
R44A  Waltonville      122.01  47    P         PKPdf      21 57 08.0 -0.1
      baz=292
N45A  Kentland         122.10  44    P         PKiKP      21 57 08.6 +0.2
      baz=295
E47A  Iron Bridge      122.16  36    P         PKiKP      21 57 08.3 +0.1
      baz=302
O45A  Potomac          122.20  44    P         PKiKP      21 57 08.8 +0.2
      baz=294
Q45A  Warren Harvey,   122.44  46    P         PKiKP      21 57 09.1 +0.1
      baz=293
P45A  Graceland, Par   122.48  45    P         PKiKP      21 57 09.4 +0.3
      baz=294
OLIL  Olney            122.54  46   ePKPdf     PKiKP      21 57 09.6 +0.3
R45A  Skylar, Fairfi   122.58  47    P         PKPdf      21 57 09.2 +0.1
      baz=293
N46A  Monticello       122.61  43    P         PKiKP      21 57 09.4 +0.1
      baz=296
J47A  Sunmer           122.82  40    P         PKiKP      21 57 09.7  0.0
      baz=299
P46A  Rosedale         122.82  45    P         PKiKP      21 57 09.7 -0.1
      baz=294
K47A  Vermontville     122.97  41    P         PKiKP      21 57 10.0 -0.1
      baz=298
L47A  Sherwood         123.16  42    P         PKPdf      21 57 09.8 -0.3
      baz=298
M47A  Cromwell         123.16  42    P         PKiKP      21 57 10.4  0.0
      baz=297
O47A  Sheridan         123.28  44    P         PKPdf      21 57 10.3 -0.1
      baz=296
145A  Houston Renfro   123.29  54    P         PKiKP      21 57 11.0 +0.1
      baz=288
N47A  Urbana           123.33  43    P         PKPdf      21 57 10.4 -0.2
      baz=296
T46A  Princeton        123.34  48    P         PKiKP      21 57 10.9  0.0
      baz=292
J48A  Bridge Port      123.45  40    P         PKiKP      21 57 10.9  0.0
      baz=300
K48A  Perry            123.48  40    P         PKiKP      21 57 11.0  0.0
      baz=299
BLO   Bloomington      123.49  45   ePKPdf     PKPdf      21 57 10.8 -0.1
BLO   Bloomington      123.49  45   ePKIKP     PKPdf      21 57 10.8 -0.1
P47A  Martinsville     123.53  45    P         PKPdf      21 57 11.1 +0.1
      baz=295
V46A  Holladay         123.63  49    P         PKPdf      21 57 10.7 -0.5
      baz=291
E50A  Wahnapitae       123.65  35    P         PKiKP      21 57 11.4 +0.2
      baz=304
Q47A  Bedord North L   123.65  45    P         PKiKP      21 57 11.8 +0.3
      baz=295
L48A  N Adams          123.69  41    P         PKPdf      21 57 11.2  0.0
      baz=298
WVT   Waverly          123.73  49   ePKPdf     PKPdf      21 57 11.1 -0.3
WVT   Waverly          123.73  49   ePKIKP     PKPdf      21 57 11.1 -0.3
WVT   Waverly          123.73  49    P         PKPdf      21 57 10.8 -0.6
      baz=292
N48A  Decatur          123.79  43    P         PKiKP      21 57 11.7  0.0
      baz=297
R47A  Wooly Knot Far   123.84  46    P         PKPdf      21 57 11.4 -0.2
      baz=294
O48A  Farmland         123.97  43    P         PKPdf      21 57 11.8  0.0
      baz=296
U47A  Clarksville      124.02  48    P         PKPdf      21 57 11.7 -0.3
      baz=292
L49A  Milan            124.04  41    P         PKPdf      21 57 11.9 +0.1
      baz=299
V47A  Nunnelly         124.07  49    P         PKPdf      21 57 11.5 -0.6
      baz=292
LSQQ  Lebel-sur-Quev   124.10  31    P         PKPdf      21 57 11.8  0.0
      baz=309
P48A  Milroy           124.14  44    P         PKPdf      21 57 12.2 +0.1
      baz=296
Q48A  North Vernon     124.15  45    P         PKiKP      21 57 12.7 +0.3
      baz=295
M49A  Liberty Center   124.21  42    P         PKPdf      21 57 12.3 +0.1
      baz=298
W47A  Westpoint        124.23  50    P         PKPdf      21 57 11.7 -0.7
      baz=291
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SCHQ  Schefferville    124.28  20    PKP       PKPdf      21 57 11.7 -0.3
      comp=Z,2.3nm,0.6s,baz=325,slow=6.6,SNR=3.9
X47A  Russelville      124.29  51    P         PKPdf      21 57 11.9 -0.7
      baz=291
N49A  Columbus Grove   124.33  42   ePKPdf     PKPdf      21 57 12.5 +0.1
N49A  Columbus Grove   124.33  42    P         PKiKP      21 57 12.9 +0.2
      baz=298
T48A  Bowling Green    124.42  47    P         PKiKP      21 57 13.1 +0.1
      baz=294
S48A  Wiedeman Farm,   124.44  47    P         PKPdf      21 57 12.7  0.0
      baz=294
VLDQ  Val d'Or         124.45  32   ePKPdf     PKPdf      21 57 12.1 -0.3
U48A  Cassie Pea, Po   124.55  48    P         PKPdf      21 57 12.9 -0.1
      baz=293
O49A  Covington        124.56  43   ePKPdf     PKPdf      21 57 12.2 -0.8
O49A  Covington        124.56  43    P         PKPdf      21 57 12.9  0.0
      baz=297
P49A  Miami Univ. Ec   124.60  44    P         PKiKP      21 57 13.2 -0.1
      baz=296
D52A  ZEK Kipawa Sen   124.63  33    P         PKiKP      21 57 13.1  0.0
      baz=307
V48A  Smith Brothers   124.63  49   ePKPdf     PKPdf      21 57 12.7 -0.5
V48A  Smith Brothers   124.63  49    P         PKPdf      21 57 12.8 -0.4
      baz=292
CCIG  Comitan          124.69  73   ePKPdf     PKPdf      21 57 13.7 -0.3
L50A  Kingsville       124.70  40    P         PKPdf      21 57 13.0 -0.1
      baz=300
W48A  Pulaski          124.77  50    P         PKPdf      21 57 13.0 -0.5
      baz=292
CHGQ  Chibougamau      124.83  29    P         PKPdf      21 57 13.3 +0.2
      baz=313
M50A  Fremont          124.86  41    P         PKPdf      21 57 13.6 +0.2
      baz=299
X48A  Hartselle        124.94  51    P         PKPdf      21 57 13.0 -0.8
      baz=291
ELFO  Elginfield       125.06  39    P         PKPdf      21 57 13.9 +0.1
      baz=302
U49A  Red Boiling Sp   125.11  48    P         PKPdf      21 57 13.1 -0.9
      baz=294
W49A  Belvidere        125.29  50    P         PKPdf      21 57 13.9 -0.6
      baz=292
E53A  Dumoine, Ponti   125.40  34    P         PKiKP      21 57 14.7 -0.1
      baz=307
ACSO  Alum Creek Sta   125.46  43   ePKPdf     PKPdf      21 57 14.4 -0.3
ACSO  Alum Creek Sta   125.46  43    P         PKiKP      21 57 14.9 -0.2
      baz=298
X49A  Woodville        125.47  50    P         PKPdf      21 57 14.4 -0.4
      baz=292
LRAL  Lakeview Retre   125.48  52   ePKPdf     PKPdf      21 57 15.0 +0.1
LRAL  Lakeview Retre   125.48  52    P         PKPdf      21 57 14.9  0.0
      baz=290
SADO  Sadowa           125.51  36    PKP       PKPdf      21 57 14.2 -0.3
      comp=Z,3.7nm,0.7s,baz=338,slow=4.1,SNR=3.7
Y49A  Blount Mountai   125.64  51   ePKPdf     PKPdf      21 57 15.2  0.0
Y49A  Blount Mountai   125.64  51    P         PKPdf      21 57 15.1 -0.1
      baz=291
249A  Camden           125.74  53    P         PKiKP      21 57 15.8  0.0
      baz=290
O51A  Pataskala        125.75  42    P         PKPdf      21 57 15.3 +0.1
      baz=299
P51A  Williamsport     125.76  43   ePKPdf     PKPdf      21 57 14.1 -1.1
Z49A  Columbiana       125.79  52    P         PKPdf      21 57 15.5  0.0
      baz=291
W50A  Signal Mountai   125.98  49   ePKPdf     PKPdf      21 57 15.8 -0.1
X50B  Fort Payne       126.01  50    P         PKPdf      21 57 15.5 -0.4
      baz=292
N52A  McGinn’s Farm,   126.04  41    P         PKPdf      21 57 16.0 +0.2
      baz=300
BANO  Bancroft         126.06  35    P         PKiKP      21 57 15.9 -0.2
      baz=306
Z50A  Ashland          126.24  52   ePKPdf     PKPdf      21 57 16.0 -0.3
Z50A  Ashland          126.24  52    P         PKPdf      21 57 16.1 -0.3
      baz=291
P52A  Corning          126.32  43    P         PKPdf      21 57 16.2 -0.1
      baz=299
150A  Eclectic         126.40  52    P         PKPdf      21 57 16.6  0.0
      baz=291
N53A  Lisbon           126.60  41    P         PKiKP      21 57 17.1 -0.2
      baz=301
G55A  Calabogie        126.61  34    P         PKPdf      21 57 16.8 +0.2
      baz=308
Z51A  Franklin         126.80  51    P         PKiKP      21 57 17.8 -0.1
      baz=292
T52A  Hallie           126.89  46    P         PKiKP      21 57 17.8 -0.2
      baz=296
P53A  Whipple          126.89  43    P         PKiKP      21 57 17.9  0.0
      baz=299
151A  Opelika          126.97  52    P         PKiKP      21 57 18.2 -0.1
      baz=291
M54A  Oil Creek Stat   126.99  40   ePKPdf     PKPdf      21 57 17.6 +0.1
M54A  Oil Creek Stat   126.99  40    P         PKiKP      21 57 18.0 -0.1
      baz=302
W52A  Murphy           127.06  49   ePKPdf     PKPdf      21 57 16.8 -1.1
251A  Midway           127.06  53    P         PKiKP      21 57 18.4 -0.1
      baz=291
L55A  Hinsdale         127.39  38    P         PKiKP      21 57 18.7 -0.2
      baz=304
152A  Waverly Hall     127.40  52   ePKPdf     PKiKP      21 57 19.0 -0.2
152A  Waverly Hall     127.40  52    P         PKiKP      21 57 18.9 -0.2
      baz=292
Z52A  Williamson       127.44  51    P         PKiKP      21 57 19.1 -0.1
      baz=292
Y52A  Lilburn          127.45  50   ePKPdf     PKiKP      21 57 19.3 +0.1
Y52A  Lilburn          127.45  50    P         PKiKP      21 57 19.2  0.0
      baz=293
Y53A  Monroe           127.82  50    P         PKiKP      21 57 20.0  0.0
      baz=294
Z53A  Monticello       128.06  51    P         PKiKP      21 57 20.5 +0.1
      baz=293
R55A  Marlinton        128.35  43    P         PKiKP      21 57 21.1 +0.2
      baz=300
Y54A  Tignall          128.50  50    P         PKiKP      21 57 21.3  0.0
      baz=294
SSPA  Standing Stone   128.59  40    P         PKiKP      21 57 21.3  0.0
      baz=304
254A  Abbeville        128.79  52    P         PKiKP      21 57 22.0 +0.1
      baz=292
N59A  State Game Lan   129.75  38    P         PKiKP      21 57 23.5 -0.1
      baz=306
JTS   JuntasAbangare   132.15  80   ePKPdf     PKPdf      21 57 28.3 +0.2
JTS   JuntasAbangare   132.15  80   ePKIKP     PKPdf      21 57 28.3 +0.2
LCO   Las Campanas     133.60 138   ePKPdf     PKPdf      21 57 30.5 -0.3
LCO   Las Campanas     133.60 138   ePKIKP     PKPdf      21 57 30.5 -0.3
BCIP  Isla Barro Col   137.25  81   ePKPdf     PKPdf      21 57 37.1 -0.5
OTAV  Otavalo          138.41  95   ePKPdf     PKPdf      21 57 39.6 -0.8
OTAV                                ePKPdf     PKiKP      21 57 40.2 -2.3
OTAV  Otavalo          138.41  95   ePKIKP     PKPdf      21 57 39.6 -0.8
PB11  IPOC Station P   139.90 128   ePKPpre    PKPpre     21 57 34.9
PB11                                ePKPdf     PKPdf      21 57 40.2 -2.4
MNMC  Minye Minye      140.29 127   ePKPpre    PKPpre     21 57 36.2
TOA0  Torodi Ar. Sit   140.82 285   ePKPdf     PKPdf      21 57 42.9 -1.3
TORD  Torodi Ar. Bea   140.82 285    PKhKP     PKPpre     21 57 36.3
      comp=Z,1.2nm,0.4s,baz=56,slow=3.5,SNR=17
TORD                                 SKPbc     SKiKP      22 01 15.1 +1.2
      comp=Z,6.7nm,0.8s,baz=96,slow=2.8,SNR=11
ROSC  El Rosal         142.83  88    PKhKP     PKPpre     21 57 44.4
      comp=Z,17nm,0.5s,baz=128,slow=21,SNR=10.0
LPAZ  La Paz           142.97 125   ePKPdf     PKPdf      21 57 46.2 -2.4
LPAZ  La Paz           142.97 125   ePKIKP     PKPdf      21 57 46.3 -2.4
SDDR  Presa de Saban   143.57  64   ePKPdf     PKPbc      21 57 46.5 -0.1
CPUP  Villa Florida    143.63 148   ePKPdf     PKPbc      21 57 47.2 +0.7
CPUP  Villa Florida    143.63 148    PKP       PKPbc      21 57 46.9 +0.4
      comp=Z,3.7nm,0.5s,baz=247,slow=3.0,SNR=10
SDV   Santo Domingo    146.34  81   ePKPbc     PKPdf      21 57 54.5 +0.4
KIC   Kosan Boka       147.81 275   ePKP1      PKiKP      21 58 00.6 -0.6
      comp=Z,42nm,0.7s
DBIC  Dimbokro         147.91 275   ePKPbc     PKPbc      21 57 59.7 +0.1
DBIC  Dimbokro         147.91 275    PKPbc     PKiKP      21 58 00.9 -0.5
      comp=Z,22nm,0.6s,baz=75,slow=2.6,SNR=46
OBIP  Obispado Ponce   148.06  63   ePKPbc     PKPbc      21 57 59.2 -0.7
TIC   Toumodi          148.08 275   ePKP1      PKiKP      21 58 01.2 -0.6
LIC   Lamto            148.10 275   ePKP1      PKiKP      21 58 01.3 -0.5
      comp=Z,77nm,0.6s
ICMP  Isla Caja de M   148.19  63   ePKPbc     PKPbc      21 58 00.1 -0.1
SJG   San Juan         148.44  62   ePKPbc     PKPbc      21 58 00.5 -0.3
SJG   San Juan         148.44  62   ePKP2      PKPbc      21 58 00.5 -0.3
CBYP  Canovanas        148.64  62   ePKPbc     PKPbc      21 58 00.9 -0.5
HUMP  Col San Antoni   148.69  62   ePKPbc     PKPbc      21 58 00.9 -0.6
MTP   Monte Pirata     148.97  62   ePKPdf     PKPdf      21 57 58.7 +0.6
MTP                                 ePKPbc     PKiKP      21 58 02.9 -0.5
CUPR  Culebra, Puert   149.13  61   ePKPbc     PKPbc      21 58 01.7 -0.8
STVI  Saint Thomas     149.40  61   ePKPbc     PKPbc      21 58 02.9 -0.3
CDVI  St. Croix        149.80  62   ePKPdf     PKPdf      21 57 59.6 +0.3
CDVI                                ePKPbc     PKPbc      21 58 03.4 -0.8
SMRT  St. Maarten      151.15  60   ePKPdf     PKPdf      21 58 01.3 -0.2
SMRT                                ePKPbc     PKPbc      21 58 07.2 -0.3
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PTGA   Pitinga            156.51 102 ePKPab   PKPab    21 58 38.6 +0.2
BDFB   Brasilia           157.27 152  PKP     PKPdf    21 58 11.2 +0.9
       comp=Z,5.3nm,0.8s,baz=196,slow=2.1,SNR=8.0
BDFB                                  PKPab   PKPab    21 58 41.3 -0.2
       comp=Z,3.5nm,0.5s,baz=192,slow=3.7,SNR=5.5
```

ISCJB ***07*** *21:40:51.6±0.2, 10°.92S±0°.03×165°.72E±0°.03, h10km, mb5.0/114, Error ellipse: s-maj=5.0km s-min=4.7km az=158.4*

IDC ***07*** *21:40:51.3±0.6, 10°.91S×165°.84E, h0km, mb4.8/26, mb1 4.9/28, mb1mx4.8/48, mbtmp4.8/28, ML5.6/2, Error ellipse: s-maj=17.2km s-min=14.7km az=124.0*

NEIC ***07*** *21:40:55.3±1.4, 10°.90S×165°.76E, h24km±9km, mb5.1/75, Error ellipse: s-maj=3.7km s-min=3.6km az=196.0*

MOS ***07*** *21:40:55.5±0.6, 10°.80S×165°.64E, h33km, mb5.0/45, Error ellipse: s-maj=10.0km s-min=8.6km az=121.3*

ISC 07 21:40:52.7±0.3**, 10°.93S**±0°.05×**165°.83E**±0°.06**, h10km, n240, σ1s.13**/239**, mb5.0**/121**, 4C-2D, Santa Cruz Islands**

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Code   Station Name          Δ°   AZ°     Phase ID              Time     Res
                                       Op       ISC        h  m  s      ISC
HNR    Honiara              5.98 284 ePn      Pn       21 42 21.3 -0.1
HNR                                   Sn      Sn       21 43 30.7 +0.8
HNR    Honiara              5.98 284 eP       Pn       21 42 21.3 -0.1
HNR                                                    21 43 30.7
HNR    Honiara              5.98 284  Pn      Pn       21 42 22.7 +1.4
       268nm,0.3s,baz=172,slow=2.7,SNR=37
HNR                                   Sn      Sn       21 43 30.7 +0.8
       28nm,0.3s,baz=197,slow=19,SNR=4.1
MARNC  Mare, Loyalty       10.70 169 ePn      Pn       21 43 28.2 +2.1
DZM    Mont Dzumac         11.10 177  Pn      Pn       21 43 33.6 +1.9
       26nm,0.3s,baz=4.5,slow=16,SNR=72
DZM                                   Sn      Sn       21 45 30.0 -6.0
       baz=0.0,slow=7.1,SNR=2.0
ONTNC  Ouen Toro           11.33 177 ePn      Pn       21 43 36.6 +1.8
PINNC  Pines Island,       11.72 173 ePn      Pn       21 43 42.3 +2.2
MSVF   Nonsavu             13.63 121 ePn      Pn       21 44 06.0 -0.3
MSVF   Nonsavu             13.63 121 eP       Pn       21 44 06.1 -0.3
TARA   Tarawa              14.10  30 ePn      Pn       21 44 13.8 +1.1
MANU   Manus Island        20.34 294 eP       Pn       21 45 29.8 -1.7
       237nm,1.1s
CTA    Charters Tower      20.93 242  P       Pn       21 45 37.5 -0.7
       36nm,0.8s,baz=83,slow=18,SNR=6.6
CTAO   Charters Tower      20.93 242 eP       P        21 45 35.3 -0.4
       40nm,0.8s
CTAO   Charters Tower      20.93 242 eP       P        21 45 35.3 -0.4
CTAO                                  pmax    pmax
       comp=Z,41nm,0.8s
ARMA   Armidale            23.46 212 eP       P        21 46 02.8 +0.1
       comp=Z,29nm,0.8s
H11S2  WAKE ISLAND Hy      29.25   2  T       T        22 17 19.7
       baz=181,slow=76,SNR=19
H11S3  WAKE ISLAND Hy      29.25   2  T       T        22 17 15.3
       baz=181,slow=76,SNR=7.8
H11S1  WAKE ISLAND Hy      29.26   2  T       T        22 17 21.1
       baz=181,slow=76,SNR=30
STKA   Stephens Creek      30.58 223  P       P        21 47 07.4 +0.6
       comp=Z,6.4nm,0.5s,baz=46,slow=11,SNR=3.6
BFZ    Birch Farm          31.03 165 eP       P        21 47 11.2 +0.5
       comp=Z,90nm,1.4s
THZ    Tophouse            31.34 170 eP       P        21 47 14.3 +0.9
       comp=Z,54nm,0.9s
WRA    Warramunga Arr      31.60 250  P       P        21 47 16.0  0.0
WRA                                   pmax    pmax
       comp=Z,14nm,0.8s
WRA    Warramunga Arr      31.60 250  P       P        21 47 16.0  0.0
       comp=Z,14nm,0.8s,baz=83,slow=8.9,SNR=2.8
GUMO   Guam                32.03 319 eP       P        21 47 19.3 -0.4
       comp=Z,43nm,0.6s
GUMO   Guam                32.03 319 eP       P        21 47 19.3 -0.4
GUMO                                  pmax    pmax
       comp=Z,43nm,0.6s
KHZ    Kahutara            32.08 169 eP       P        21 47 20.7 +0.8
       comp=Z,70nm,1.3s
KHZ                                  epP      pwP      21 47 26.7 +4.2
LTZ    Lake Taylor         32.23 171 eP       P        21 47 23.0 +1.8
       comp=Z,34nm,0.8s
FOZ    Fox Glacier         32.67 175 eP       P        21 47 26.6 +1.6
       comp=Z,28nm,0.8s
OXZ    Oxford              32.73 172 eP       P        21 47 26.5 +0.9
       comp=Z,67nm,1.3s
RPZ    Rata Peaks          32.98 173  P       P        21 47 28.1 +0.3
       comp=Z,46nm,0.8s,baz=50,slow=3.8,SNR=6.7
CRLZ   Canterbury Las      33.06 171 eP       P        21 47 30.0 +1.6
       comp=Z,164nm,1.4s
MQZ    McQueen’s Vall      33.19 171 eP       P        21 47 30.7 +1.1
       comp=Z,42nm,0.8s
MQZ                                  epP      pwP      21 47 36.5 +4.3
MBWA   Marble Bar          45.31 251 eP       P        21 49 11.9 +0.6
MORW   Morawa              49.75 241 eP       P        21 49 46.2 +0.5
       comp=Z,29nm,1.1s
JAGI   Jajag, Banyuwa      50.95 268 eP       P        21 49 53.7 -1.2
       comp=Z,33nm,0.7s
KKM    Kota Kinabalu       52.18 286 eP       P        21 50 03.8 -0.5
       comp=Z,30nm,1.2s
MJAR   Matsushiro Arr      53.91 332  P       P        21 50 15.7 -0.8
       comp=Z,13nm,1.0s,baz=170,slow=8.3,SNR=12
MAJO   Matsushiro          53.91 332 eP       P        21 50 16.1 -0.3
       comp=Z,17nm,0.8s
MAJO   Matsushiro          53.91 332 eP       P        21 50 16.2 -0.3
MAJO                                  pmax    pmax
       comp=Z,17nm,0.8s
MAT    Matsushiro          53.91 332  P       P        21 50 16.2 -0.3
MJB9   Matsu-Tunnel        53.91 332 eP       P        21 50 16.2 -0.3
       comp=Z,116nm,1.9s
JNU    Nakatsue            55.03 324 eP       P        21 50 25.1 +0.4
       comp=Z,96nm,1.5s
JNU    Nakatsue            55.03 324  P       P        21 50 24.2 -0.6
       comp=Z,19nm,0.9s,baz=167,slow=1.5,SNR=8.5
CISI   Cisompet, Garu      57.29 268 eP       P        21 50 39.8 -1.5
       comp=Z,74nm,1.4s
LEM    Lembang             57.59 269  P       P        21 50 43.5 -0.1
LEM                                   pmax    pmax
       comp=Z,22nm,0.4s
LEM    Lembang             57.59 269  P       P        21 50 43.5 -0.1
       comp=Z,28nm,0.5s,baz=68,slow=5.0,SNR=5.0
ASAJ   Asahikawa           58.71 341  P       P        21 50 51.6 +1.0
       comp=Z,23nm,0.8s,baz=217,slow=12,SNR=7.1
SSE    Sheshan             59.83 316 eP       P        21 50 58.4 -0.2
       comp=Z,16nm,0.6s
KSRS   Korea Array         59.83 326  P       P        21 50 58.4 -0.1
       comp=Z,3.2nm,0.6s,baz=138,slow=6.7,SNR=10
KSAR   Wonju Array Be      59.84 326  P       P        21 50 58.4 -0.2
KSAR   Wonju Array Be      59.84 326  P       P        21 50 58.4 -0.2
YSS    Yuzh-Sakhalins      61.20 342 i P      P        21 51 07.7 +0.1
YSS                                   pmax    pmax
       comp=Z,37nm,1.1s
NJ2    Nanjing             61.99 315 eP       P        21 51 14.2 +0.9
NJ2                                   pmax    pmax
       comp=Z,20nm,0.5s
USRK   Ussuriysk Ar.       62.88 333  P       P        21 51 20.4 +1.3
       comp=Z,8.3nm,0.7s,baz=126,slow=6.0,SNR=22
PETK   Petropavlovsk-      64.16 355  P       P        21 51 28.4 +1.1
       comp=Z,4.0nm,0.8s,baz=146,slow=10,SNR=4.7
MDJ    Mudanjiang          64.28 332 eP       P        21 51 29.0 +0.7
       comp=Z,6.2nm,0.6s
BKNI   Bangkinang          65.34 275 eP       P        21 51 35.8  0.0
       comp=Z,121nm,1.1s
CN2    Changchun           65.68 329 eP       P        21 51 37.8 +0.4
CN2                                  esP      sP       21 51 51.0 +9.2
CN2                                   pmax    pmax
       comp=Z,20nm,0.8s
IPM    Ipoh                66.28 280 eP       P        21 51 42.1 +0.2
       comp=Z,16nm,0.8s
KULM   Kulim               66.84 281 eP       P        21 51 45.3 -0.2
       comp=Z,18nm,1.4s
KLR    Kul'dur             66.98 336  P       P        21 51 45.9 +0.3
       comp=Z,6.7nm,0.6s,baz=141,slow=2.7,SNR=18
NKL    Nikolayevsk         67.35 344 eP       P        21 51 48.0 +0.2
NKL                                   pmax    pmax
       comp=Z,21nm,0.9s
ENH    Enshi               67.89 309 eP       P        21 51 50.5 -1.3
PSI    Prapat              67.94 278  P       P        21 51 52.1 -0.4
       comp=Z,5.5nm,0.7s,baz=358,slow=1.8,SNR=4.3
GYA    Guiyang             68.42 304  P       P        21 51 57.4 +2.0
GYA                                   PP      PP       21 54 31.2 +4.7
GYA                                   S       S        22 00 56.5 -0.9
GYA                                   SKS     SKiKP    22 01 50.0  0.0
GYA    Guiyang             68.42 304  SS      SS       22 05 23.6 +2.2
GYA                                   pmax    pmax
       comp=Z,20nm,1.0s
GYA                                   pmax    pmax
       comp=Z,120nm,7.2s
GYA                                   LR      LR
       comp=N,550nm,18.9s
GYA                                   LR      LR
       comp=E,580nm,18.4s
GYA                                   LR      LR
       comp=Z,520nm,18.6s
BJT    Baijiatuau          68.43 321 eP       P        21 51 54.3 -0.7
       comp=Z,12nm,0.8s
BJT    Baijiatuau          68.43 321 eP       P        21 51 54.3 -0.7
BJT                                   pmax    pmax
       comp=Z,12nm,0.8s
BJI    Beijing             68.44 321 eP       P        21 51 55.6 +0.6
BJI                                   pmax    pmax
       comp=Z,11nm,0.8s
TIY    Taiyuan             69.53 317 eP       P        21 52 02.7 +0.7
XAN    Xi'an               70.10 312  P       P        21 52 05.6 +0.1
XAN                                   pP      sP       21 52 13.4 +3.4
XAN                                   sP      PcP      21 52 17.2  -10
XAN                                   pmax    pmax
       comp=Z,12nm,1.0s
XAN                                   LR      LR
       comp=E,960nm,17.3s
XAN                                   LR      LR
       comp=Z,720nm,20.6s
XAN    Xi'an               70.10 312 eP       P        21 52 05.6 +0.1
XAN    Xi'an               70.10 312 eP       P        21 52 05.6 +0.1
KMI    Kunming             71.13 301  P       P        21 52 13.3 +1.1
KMI                                   pP      PcP      21 52 23.8 -8.6
KMI                                   sP      sP       21 52 26.4  +10
KMI                                   pmax    pmax
       comp=Z,11nm,1.1s
KMI                                   pmax    pmax
       comp=Z,250nm,5.8s
KMI    Kunming             71.13 301 eP       P        21 52 12.3 +0.1
       comp=Z,14nm,1.1s
KMI    Kunming             71.13 301 eP       P        21 52 12.3 +0.1
KMI                                   pmax    pmax
       comp=Z,14nm,1.1s
MA2    Magadan             71.31 352  P       P        21 52 12.3  0.0
       comp=Z,2.8nm,0.3s,baz=156,slow=7.9,SNR=4.3
HHC    Hu-ho-hao-te        71.80 320 eP       P        21 52 19.4 +3.6
HHC                                   pmax    pmax
       comp=Z,4.0nm,0.6s
HHC                                   pmax    pmax
       comp=Z,380nm,5.6s
CM01   Chiang Mai Arr      72.11 293 eP       P        21 52 18.2 +0.2
CMAR   Chiang Mai Arr      72.14 293  P       P        21 52 18.4 +0.3
       comp=Z,2.5nm,0.7s,baz=120,slow=4.4,SNR=8.7
CMMT   Chiang Mai          72.25 294  P       P        21 52 20.5 +1.7
       comp=Z,8.7nm,1.8s
CHTO   Chiang Mai          72.25 294 eP       P        21 52 18.9  0.0
       comp=Z,12nm,1.3s
CHTO   Chiang Mai          72.25 294  P       P        21 52 20.6 +1.8
       comp=Z,39nm,0.4s
ZEA    Zeya                72.27 337 eP       P        21 52 17.8 -0.3
ZEA                                   pmax    pmax
       comp=N,25nm,0.3s
ZEA                                   pmax    pmax
       comp=Z,43nm,1.2s
HIA    Hailar              72.31 330 eP       P        21 52 18.7 +0.2
       comp=Z,5.9nm,0.4s
HIA    Hailar              72.31 330 eP       P        21 52 18.7 +0.2
HIA                                   pmax    pmax
       comp=Z,6.0nm,0.4s
CD2    Chengdu             72.60 307⇑iP       P        21 52 21.2 +0.5
CD2                                   pmax    pmax
       comp=Z,40nm,0.8s
SEY    Seymchan            74.37 354  P       P        21 52 30.3  0.0
       comp=Z,1.7nm,0.3s,baz=185,slow=19,SNR=3.8
LZH    Lanzhou             74.74 312 ⇑P       P        21 52 35.0 +1.7
LZH                                   pP      PcP      21 52 41.2 -6.3
LZH                                   sP      sP       21 52 44.1 +6.3
LZH                                   PP      PP       21 55 29.3 +8.6
LZH                                   pmax    pmax
       comp=Z,27nm,1.1s
LZH                                   pmax    pmax
       comp=Z,130nm,5.4s
LZH                                   LR      LR
       comp=N,540nm,17.6s
LZH                                   LR      LR
       comp=E,560nm,17.0s
LZH                                   LR      LR
       comp=Z,640nm,18.8s
GAMB   Gambell             76.44  10 eP       P        21 52 43.0 +0.8
       comp=Z,23nm,0.8s
ANM    Nome                78.36  12 eP       P        21 52 53.7 +0.7
       comp=Z,16nm,1.3s
ANM    Nome                78.36  12 eP       P        21 52 53.7 +0.7
ANM                                   pmax    pmax
       comp=Z,17nm,1.3s
BRLK   Bradley Lake        78.50  21 eP       P        21 52 53.9 -0.1
       comp=Z,181nm,1.6s
SONM   Songino Array       78.62 324  P       P        21 52 55.4 +0.4
       comp=Z,11nm,1.1s,baz=145,slow=5.3,SNR=22
SONA1  Songino Array       78.62 324 eP       P        21 52 55.4 +0.4
BILL   Bilibino            78.76   0 eP       P        21 52 55.2 +0.1
       comp=Z,22nm,0.8s
BILL   Bilibino            78.76   0d iP      P        21 52 55.5 +0.4
BILL                                 e                 21 53 02.3
BILL                                 e                 21 55 52.9
BILL                                 eS       ScS      22 03 14.9 -1.5
BILL                                  pmax    pmax
       comp=Z,23nm,0.9s
BILL                                  MLR     MLR
       comp=Z,617nm,18.0s
GTA    Gaotai              79.04 314 ⇑P       P        21 52 57.9 +0.4
GTA                                   pP      PcP      21 53 02.7 -3.3
GTA                                   sP      sP       21 53 05.0 +3.1
GTA                                   pmax    pmax
       comp=Z,12nm,1.0s
GTA                                   LR      LR
       comp=N,550nm,18.7s
GTA                                   LR      LR
       comp=E,510nm,18.1s
GTA                                   LR      LR
       comp=Z,880nm,18.7s
QSPA   South Pole Qui      79.08 180 eP       P        21 52 57.4 +0.2
CAST   Castle Rocks        80.81  18 eP       P        21 53 06.7 +0.3
       comp=Z,21nm,1.3s
ZAK    Zakamensk           81.65 325 eP       P        21 53 08.1 -3.2
ZAK                                   pmax    pmax
       comp=Z,6.0nm,1.2s
RDOG   Red Dog Mine        81.89  11 eP       P        21 53 13.0 +0.9
       comp=Z,18nm,0.9s
MCK    McKinley            82.01  19 eP       P        21 53 14.0 +1.2
       comp=Z,27nm,1.2s
MCK    McKinley            82.01  19 eP       P        21 53 14.0 +1.2
MCK                                   pmax    pmax
       comp=Z,27nm,1.2s
TLY    Talaya              82.07 326 eP       P        21 53 13.1 -0.3
       comp=Z,16nm,0.7s
TLY    Talaya              82.07 326 i P      P        21 53 13.3  0.0
IM3    Indian Mountai      82.29  16 eP       P        21 53 14.8 +0.6
LSA    Lhasa               82.36 302 eP       P        21 53 16.1 +0.2
LSA    Lhasa               82.36 302 eP       P        21 53 16.1 +0.2
WRH    Wood River Hil      82.80  18 eP       P        21 53 17.2 +0.4
       comp=Z,17nm,1.0s
MDM    Murphy Dome         83.10  18 eP       P        21 53 18.3 -0.1
       comp=Z,28nm,1.2s
HDA    Harding Lake        83.11  19 eP       P        21 53 18.9 +0.5
       comp=Z,33nm,0.8s
HDA    Harding Lake        83.11  19  P       P        21 53 18.7 +0.2
       baz=227
TCOL   CIGO, UAF Yank      83.15  18  P       P        21 53 18.7 +0.2
       baz=226
COLA   College             83.15  18 eP       P        21 53 18.7 +0.1
       comp=Z,24nm,0.9s
COLA   College             83.15  18 eP       P        21 53 18.7 +0.1
COLA                                  pmax    pmax
       comp=Z,24nm,0.9s
IL1    Eielson Array       83.38  18 eP       P        21 53 19.3 -0.5
ILAR   Eielson Array       83.38  18  P       P        21 53 19.7 -0.1
ILAR                                  pmax    pmax
       comp=Z,6.0nm,0.7s
ILAR   Eielson Array       83.38  18  P       P        21 53 19.7 -0.1
       comp=Z,6.6nm,0.7s,baz=238,slow=4.6,SNR=12
ILB    Eielson Array       83.38  18 eP       P        21 53 20.1 +0.3
POKR   Poker Plat Res      83.45  18  P       P        21 53 19.8 -0.4
       baz=226
YBH    Yreka Blue Hor      83.75  46  P       P        21 53 23.2 +0.8
       comp=Z,4.4nm,0.9s,baz=280,slow=0.7,SNR=4.5
SCRK   Sand Creek          83.78  20 eP       P        21 53 22.9 +0.8
       comp=Z,24nm,1.2s
ORV    Oroville            83.88  48 eP       P        21 53 23.8 +0.9
       comp=Z,5.8nm,1.0s
ORV    Oroville            83.88  48 eP       P        21 53 23.8 +0.9
ORV                                   pmax    pmax
       comp=Z,6.0nm,1.0s
AFDM   Forest Hills D      84.06  49 eP       P        21 53 25.0 +1.0
       comp=Z,11nm,1.1s
CMB    Columbia Colle      84.20  50 eP       P        21 53 25.2 +0.4
CMB    Columbia Colle      84.20  50 eP       P        21 53 25.2 +0.4
EDW2   Edwards Air Fo      85.09  53  P       P        21 53 30.5 +1.2
       baz=253
TOLK   Toolik Lake Re      85.36  15  P       P        21 53 31.7 +1.9
       baz=224
DAWY   Dawson              85.42  21 eP       P        21 53 31.0 +0.8
       comp=Z,3.8nm,0.5s
PAHR   Pah Rah Range       85.47  48 eP       P        21 53 31.9 +0.7
       comp=Z,10nm,1.2s
MOD    Modoc Plateau       85.51  46 eP       P        21 53 31.6 +0.3
       comp=Z,2.5nm,0.7s
MPMC   Manual Prospec      85.82  52  P       P        21 53 33.7 +0.6
       baz=253
NV01   Mina Array Sit      85.89  50 eP       P        21 53 33.9 +0.5
NVAR   Mina Array Bea      85.89  50  P       P        21 53 33.6 +0.2
       comp=Z,4.2nm,0.9s,baz=244,slow=5.8,SNR=8.9
TIXI   Tiksi               85.99 349 eP       P        21 53 32.7 -0.1
       comp=Z,5.5nm,0.8s
TIXI   Tiksi               85.99 349 i P      P        21 53 31.8 -1.0
TIXI                                  pmax    pmax
       comp=Z,6.0nm,1.0s
TIXI   Tiksi               85.99 349  P       P        21 53 32.8 -0.1
       baz=114,slow=6.6
NV11   Mina Array Sit      86.00  50 eP       P        21 53 35.4 +1.5
       comp=Z,0.8nm,1.1s
JIRN   Jiri                86.00 299 eP       P        21 53 34.6 +0.2
       comp=Z,22nm,0.9s
KVN    Kaiserville         86.22  49 eP       P        21 53 36.2 +1.2
       comp=Z,8.8nm,1.3s
KVN    Kaiserville         86.22  49 eP       P        21 53 36.2 +1.2
KVN                                   pmax    pmax
       comp=Z,9.0nm,1.3s
DLBC   Dease Lake          86.27  28  P       P        21 53 35.9 +1.3
       comp=Z,1.7nm,0.7s,baz=156,slow=13,SNR=3.0
GUN    Gumba               86.33 299 eP       P        21 53 36.1 +0.1
       comp=Z,20nm,1.0s
PKI    Pulchoki            86.65 299 eP       P        21 53 37.3 -0.2
       comp=Z,28nm,1.2s
PKIN   Phulchoki           86.67 299 eP       P        21 53 37.2 -0.3
       comp=Z,22nm,1.2s
BC3    Big Chuckawall      86.77  55  P       P        21 53 38.5 +0.8
       baz=255
WVOR   Wild Horse Val      86.85  46 eP       P        21 53 38.2 +0.3
       comp=Z,3.6nm,0.7s
WVOR   Wild Horse Val      86.85  46 eP       P        21 53 38.2 +0.3
WVOR                                  pmax    pmax
       comp=Z,4.0nm,0.7s
DMN    Daman               86.92 299 eP       P        21 53 38.7 -0.1
       comp=Z,35nm,1.0s
G08A   Pilot Rock          87.50  43 eP       P        21 53 42.2 +1.2
       comp=Z,12nm,1.1s
EPYK   Eagle Plains        87.67  20  P       P        21 53 42.2 +0.9
       baz=236
R11A   Troy Canyon, C      87.91  50 eP       P        21 53 44.2 +1.0
       comp=Z,9.4nm,1.4s
R11A   Troy Canyon, C      87.91  50  P       P        21 53 44.4 +1.2
       baz=254
DANN   Dangsing            88.25 299 eP       P        21 53 44.4 -0.8
       comp=Z,14nm,0.9s
KOLN   Koldanda            88.26 299 eP       P        21 53 44.2 -0.9
BMO    Blue Mountains      88.49  44 eP       P        21 53 46.1 +0.4
       comp=Z,1.0nm,0.5s
BMO    Blue Mountains      88.49  44 eP       P        21 53 46.1 +0.4
BMO                                   pmax    pmax
       comp=Z,1.0nm,0.5s
PYUN   Piuthan             88.86 299 eP       P        21 53 46.8 -1.2
       comp=Z,22nm,1.0s
WMQ    Urumqi              89.07 315  P       P        21 53 48.2 -0.2
WMQ                                   pP      sP       21 53 53.8 +0.9
WMQ                                   sP      pP       21 54 02.3  +11
WMQ                                   pmax    pmax
       comp=Z,19nm,0.9s
WMQ                                   pmax    pmax
       comp=Z,3µm,11.9s
WMQ    Urumqi              89.07 315 eP       P        21 53 48.0 -0.4
       comp=Z,13nm,0.6s
WMQ    Urumqi              89.07 315 eP       P        21 53 48.0 -0.4
WMQ                                   pmax    pmax
       comp=Z,13nm,0.6s
CCUT   Cedar City          89.41  52 eP       P        21 53 51.1 +0.8
       comp=Z,26nm,1.8s
NEW    Newport             89.60  41 eP       P        21 53 50.7 -0.1
       comp=Z,1.6nm,0.6s
NEW    Newport             89.60  41  P       P        21 53 51.1 +0.3
       baz=253
SZCU   Shurtz Canyon       89.63  52 eP       P        21 53 51.7 +0.3
       comp=Z,5.5nm,1.0s
KNB    Kanab               89.70  52 eP       P        21 53 52.5 +0.8
       comp=Z,44nm,1.9s
INK    Inuvik              89.77  19 eP       P        21 53 50.5 -0.4
       comp=Z,2.9nm,0.9s
INK    Inuvik              89.77  19 eP       P        21 53 50.5 -0.4
INK                                   pmax    pmax
       comp=Z,3.0nm,0.9s
U15A   North Rim           89.97  53 eP       P        21 53 53.8 +0.7
       comp=Z,6.0nm,0.9s
HLID   Hailey              90.14  46 eP       P        21 53 54.3 +0.8
       comp=Z,9.4nm,1.5s
HLID   Hailey              90.14  46  P       P        21 53 54.4 +0.8
       baz=255
X16A   Lo Mia Camp, P      90.19  55 eP       P        21 53 54.8 +0.8
       comp=Z,3.6nm,0.9s
TUC    Tucson              90.25  57 eP       P        21 53 55.3 +1.0
       comp=Z,4.5nm,0.9s
TUC    Tucson              90.25  57 eP       P        21 53 55.3 +1.0
TUC                                   pmax    pmax
       comp=Z,4.0nm,0.9s
TUC    Tucson              90.25  57  P       P        21 53 55.7 +1.5
       baz=257
MTPU   Mount Pierson       90.43  51 eP       P        21 53 56.9 +1.6
       comp=Z,6.7nm,1.1s
DUG    Dugway, Tooele      90.46  49 eP       P        21 53 55.8 +0.7
       comp=Z,1.9nm,0.7s
DUG    Dugway, Tooele      90.46  49 eP       P        21 53 55.8 +0.7
DUG                                   pmax    pmax
       comp=Z,2.0nm,0.7s
BGU    Big Grassy Mou      90.48  48 eP       P        21 53 55.8 +0.6
       comp=Z,4.4nm,1.0s
WUAZ   Wupatki             90.49  54 eP       P        21 53 55.7 +0.4
       comp=Z,3.8nm,0.7s
DGZ    Jazzator, Alta      90.86 320d iP      P        21 53 56.3 -0.4
DGZ                                   pmax    pmax
       comp=Z,5.0nm,0.6s
HVU    Hansel Valley       90.87  48 eP       P        21 53 57.7 +0.7
       comp=Z,11nm,1.3s
HVU    Hansel Valley       90.87  48 eP       P        21 53 57.7 +0.7
HVU                                   pmax    pmax
       comp=Z,11nm,1.3s
NLU    North Lily Min      90.96  50 eP       P        21 53 58.3 +0.8
       comp=Z,12nm,1.5s
TCUT   Toone Canyon        91.72  49 eP       P        21 54 01.8 +0.8
       comp=Z,7.8nm,0.9s
DLMT   Dillon              91.84  44 eP       P        21 54 02.2 +0.8
       comp=Z,9.4nm,1.0s
WALA   Waterton Lakes      91.87  40 eP       P        21 54 02.5 +1.1
       comp=Z,9.3nm,1.2s
SYO    Syowa Base          91.92 197⇑ePcP     PcP      21 54 02.6 +0.7
FXWY   Fox Creek           92.55  46 eP       P        21 54 05.7 +0.9
       comp=Z,16nm,1.9s
IMW    Indian Meadow       92.67  46 eP       P        21 54 05.7 +0.3
       comp=Z,7.4nm,1.4s
PDAR   Pinedale Array      93.41  47 eP       P        21 54 09.0 +0.1
PDAR   Pinedale Array      93.41  47  P       P        21 54 08.7 -0.1
       comp=Z,1.3nm,0.9s,baz=187,slow=2.4,SNR=6.2
MK31   Makanchi Array      93.49 317 eP       P        21 54 09.0 +0.2
MKAR   Makanchi Array      93.49 317  P       P        21 54 08.7 -0.1
       comp=Z,7.4nm,0.7s,baz=94,slow=6.2,SNR=16
ZALV   Zalesovo Beam       93.51 324 eP       P        21 54 07.5 -1.2
ZALV   Zalesovo Beam       93.51 324  P       P        21 54 07.8 -0.9
       comp=Z,5.3nm,0.7s,baz=121,slow=4.9,SNR=9.5
EGMT   Eagleton            94.33  42 eP       P        21 54 12.8  0.0
       comp=Z,1.9nm,0.5s
YKA    Yellowknife Ar      94.83  27  P       P        21 54 13.4 -1.2
       comp=Z,0.8nm,0.6s,baz=257,slow=4.5,SNR=11
YKB5   Yellowknife Ar      94.83  27 eP       P        21 54 12.7 -1.8
TXAR   Lajitas Array       95.70  61  P       P        21 54 19.6 +0.1
       comp=Z,0.3nm,0.6s,baz=273,slow=3.4,SNR=3.2
KURK   Kurchatov           96.60 320 i P      P        21 54 23.7 +0.8
KURK                                  pmax    pmax
       comp=Z,4.0nm,1.1s
KSH    Kashi               96.75 309  P       P        21 54 27.2 +3.2
KSH                                   sP      sP       21 54 38.2  +10
KSH    Kashi               96.75 309  SKS     SKSac    22 05 01.4  0.0
```

KSH	Kashi	96.75	309	S	S	22 05 43.1	-3.0
KSH	Kashi	96.75	309	sS	sS	22 05 59.8	+8.2
KSH	Kashi	96.75	309	SS	SS	22 12 22.1	+0.8
KSH				pmax	pmax		
	comp=Z,670nm,9.3s						
KSH				LR	LR		
	comp=N,220nm,5.5s						
KSH				LR	LR		
	comp=E,190nm,4.1s						
KSH				LR	LR		
	comp=Z,610nm,6.7s						
AAK	Ala-Archa	98.28	312	eP	Pdif	21 54 30.3	-0.7
	comp=Z,0.8nm,0.5s						
AAK	Ala-Archa	98.28	312	eP	Pdif	21 54 30.3	-0.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	116.24	346	PKP	PKPdf	21 59 35.2	-0.8
	comp=Z,2.4nm,0.6s,baz=76,slow=2.0,SNR=19						
FINES	FINESS Array B	121.69	339	PKP	PKiKP	21 59 45.4	-1.3
	comp=Z,2.8nm,0.9s,baz=46,slow=5.5,SNR=5.5						
BOSA	Boshof	125.26	223	PKP	PKiKP	21 59 54.0	-1.0
	comp=Z,1.6nm,0.7s,baz=175,slow=11,SNR=3.4						
NB2	NORSAR Subarra	126.61	345	PKPdf	PKiKP	21 59 55.4	-1.2
	comp=Z,1.0nm,0.7s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.61	345	PKP	PKiKP	21 59 55.8	-0.8
	comp=Z,1.4nm,0.7s,baz=34,slow=2.0,SNR=11						
AKASG	Malin Array Be	126.81	327	PKP	PKPdf	21 59 55.4	-1.3
	comp=Z,0.2nm,0.2s,baz=74,slow=1.8,SNR=4.7						
BRTR	Keskin Array B	128.94	313	PKIKP	PKiKP	22 00 00.3	-1.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	128.94	313	PKP	PKiKP	22 00 00.2	-1.8
	comp=Z,0.2nm,0.5s,baz=168,slow=6.3,SNR=3.8						
BUR04	Bucovina Ar. S	130.71	326	ePKPdf	PKiKP	22 00 04.5	-0.8
KHC	Kasperske Hory	135.47	334	ePKPDF	PKPdf	22 00 12.1	-1.2
KHC	Kasperske Hory	135.47	334	ePKIKP	PKPdf	22 00 12.1	-1.2
GERES	GERESS Array B	135.64	334	PKIKP	PKiKP	22 00 15.0	-0.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	135.64	334	PKP	PKiKP	22 00 14.9	-0.2
	comp=Z,1.4nm,0.8s,baz=101,slow=2.7,SNR=6.1						
KEST	Kesra	147.37	323	PKPbc	PKPab	22 00 37.9	-1.4
	comp=Z,14nm,0.9s,baz=245,slow=6.9,SNR=5.3						
PBRG	Braganca	148.56	349	ePKPdf	PKPbc	22 00 39.0	-1.3
PGAV	Gavieira, Arco	148.65	352	ePKPdf	PKiKP	22 00 40.8	-1.3
POLO	Lamas de Olo	149.16	351	ePKPdf	PKiKP	22 00 42.1	-1.1
MVO	Moncorvo	149.23	349	ePKPdf	PKPbc	22 00 38.8	-3.3
PVRL	Vila Real	149.24	350	ePKPdf	PKiKP	22 00 42.3	-1.0
PTO	Porto	149.51	352	ePKPdf	PKiKP	22 00 43.1	-0.6
PVIS	Viseu	149.82	350	ePKPdf	PKiKP	22 00 43.4	-1.1
ES19	SONSECA Array	149.93	344	ePKPbc	PKiKP	22 00 43.9	-0.9
ES19				ePKPab	pPKPab	22 00 49.8	-2.8
ESDC	Sonseca Array	149.97	344	PKPbc	PKiKP	22 00 44.1	-0.8
	comp=Z,3.5nm,0.8s,baz=18,slow=2.8,SNR=17						
MTE	Manteigas	150.07	350	ePKPdf	PKiKP	22 00 44.5	-0.5
PCAS	Casmilo, Conde	150.56	351	ePKPdf	PKiKP	22 00 45.3	-0.7
PCBR	Castelo Branco	150.60	349	ePKPdf	PKiKP	22 00 45.2	-0.8
PTOM	Tomar	150.97	351	ePKPdf	PKiKP	22 00 46.7	-0.1
PMRV	Marv??o	150.98	349	ePKPdf	PKiKP	22 00 46.4	-0.5
PMTG	Montargil	151.48	350	ePKPdf	PKiKP	22 00 47.4	-0.5
PBEJ	Beja	152.43	349	ePKPdf	PKiKP	22 00 49.8	-0.1

IDC 07 21:41:29.1±375.0, 4°.75N×48°.43W, h0^{km}, Error ellipse: s-maj=249.7km s-min=181.4km az=129.0, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I09BR	BRASILIA INFRA	20.26	179	i		23 48 10.0	
	baz=359,slow=321,SNR=0.7						
I11CV	MAIO ISLAND IN	26.93	65	i		00 23 50.0	
	baz=250,slow=319,SNR=0.7						

JMA 07 21:43:13.7±0.2, 27°.88N×127°.23E, h148^{km}, M3.7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIH	Iheya	1.07	142	P	Pn	21 43 39.4	+0.5
JIH				S	Sn	21 43 58.7	+0.7
JAGN	Aguni-jima	1.29	180	P	Pn	21 43 41.3	+0.4
JOKE	Okinoerabujima	1.30	113	P	Pn	21 43 41.4	+0.4
JOKE				S	Sn	21 44 01.9	0.0
JYRO	Yoronjima	1.38	128	P	Pn	21 43 42.0	+0.2
JYRO				S	Sn	21 44 03.2	-0.1
JOW	Kunigami	1.40	138	P	Pn	21 43 42.3	+0.2
JOW				S	Sn	21 44 04.0	+0.3
JTK	Tokunoshima	1.53	93	P	Pn	21 43 43.6	+0.2
JTK				eS	Sn	21 44 06.7	+0.6
JNTH	Nagotoyohara	1.53	152	P	Pn	21 43 43.8	+0.4
JNTH				S	Sn	21 44 05.6	-0.5
JKE	Kume jima 2	1.60	194	P	Pn	21 43 44.0	-0.2
JAMN	Amaminishikomi	1.76	78	P	Pn	21 43 45.9	0.0
JAMN				S	Sn	21 44 10.9	+0.4
JJT3	Tamagusuku3	1.80	164	P	Pn	21 43 47.2	+0.8
JJT3				eS	Sn	21 44 12.3	+0.8
JAM	Amami Oshima	2.16	75	P	Pn	21 43 51.2	+0.6
JAM				S	Sn	21 44 18.9	-0.1

MEX 07 21:43:56.3±0.8, 14°.71N×93°.32W, h20^{km}±117^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.99	5	i P	Pb	21 44 11.8	-2.9
PCIG				i S	Sb	21 44 23.4	-4.0
THIG		1.03	79	i P	Pb	21 44 11.1	-4.5
CCIG	Comitan	1.93	36	eP	Pn	21 44 26.7	-1.5
CCIG				i S	Sn	21 44 53.0	+1.0

ISCJB ***07*** *21:47:15.0±1.0, 10°.9S±0°.1×165°.71E±0°.10, h10^{km}, mb3.9/5, MS4.6/1, Error ellipse: s-maj=19.3km s-min=11.9km az=28.7*

IDC ***07*** *21:47:14.9±1.3, 10°.80S×165°.73E, h0^{km}, mb4.0/5, mb1 4.2/7, mb1mx3.9/44, mbtmp4.1/7, ML4.6/2, MS4.6/1, Ms1 4.6/1, ms1mx3.6/40, Error ellipse: s-maj=34.5km s-min=25.9km az=135.0*

ISC 07 21:47:16.4±1.0, 10°.8S±0°.1×165°.8E±0°.1, h10^{km}, n10, σ0^s.92/10, mb4.0/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.90	283	Pn	Pn	21 48 44.8	+0.8
	42nm,0.3s,baz=209,slow=1.7,SNR=6.6						
HNR				Sn	Sn	21 49 52.0	+0.2
	21nm,0.3s,baz=233,slow=10,SNR=2.0						
DZM	Mont Dzumac	11.23	177	Pn	Pn	21 49 57.8	+0.5
	1.7nm,0.3s,baz=73,slow=8.9,SNR=23						
WRA	Warramunga Arr	31.61	249	P	P	21 53 38.9	-0.9
	2.8nm,0.7s,baz=81,slow=9.0,SNR=3.8						
ASAR	Alice Springs	32.94	243	P	P	21 53 50.7	-0.8
	3.7nm,0.8s,baz=70,slow=11,SNR=4.9						
JHJ	Hachijo jima 2	50.21	331	LR	LR	22 15 50.4	
	comp=Z,552nm,18.8s,baz=69,slow=34						
SONM	Songino Array	78.48	324	P	P	21 59 18.3	+0.3
	0.7nm,1.1s,baz=112,slow=4.6,SNR=3.3						
ILAR	Eielson Array	83.26	19	P	P	21 59 43.6	+0.7
	0.3nm,0.6s,baz=234,slow=4.8,SNR=4.7						
MKAR	Makanchi Array	93.36	317	P	P	22 00 31.3	-0.6
	0.5nm,0.8s,baz=110,slow=5.3,SNR=3.7						
ARCES	ARCESS Array B	116.10	346	PKP	PKPdf	22 05 60.0	+0.6
	0.8nm,0.6s,baz=66,slow=4.1,SNR=4.6						
ESDC	Sonseca Array	149.82	344	PKPab	PKPab	22 07 11.1	-1.5
	0.3nm,0.6s,baz=33,slow=4.3,SNR=2.6						

IDC 07 21:53:28.7±1.7, 10°.72S×165°.52E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.5/45, mbtmp3.6/4, ML4.0/1, Error ellipse: s-maj=54.4km s-min=30.6km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.32	176	Pn	Pn	21 56 11.7	-0.3
	1.0nm,0.3s,baz=312,slow=16,SNR=6.3						
WRA	Warramunga Arr	31.39	249	P	P	21 59 51.5	-0.2
	0.6nm,0.8s,baz=80,slow=8.2,SNR=4.6						
ASAR	Alice Springs	32.74	243	P	P	22 00 03.7	+0.1
	0.2nm,0.5s,baz=61,slow=9.6,SNR=2.8						
ILAR	Eielson Array	83.27	19	P	P	22 05 57.0	+0.1
	0.1nm,0.4s,baz=225,slow=5.0,SNR=3.9						

IDC ***07*** *21:56:23.1±0.7, 10°.90S×165°.69E, h0^{km}, mb4.3/15, mb1 4.4/17, mb1mx4.2/46, mbtmp4.3/17, ML4.6/2, Error ellipse: s-maj=21.6km s-min=16.6km az=120.0*

NEIC ***07*** *21:56:24.8±3.8, 10°.91S×165°.67E, h13^{km}±23^{km}, mb4.6/14, Error ellipse: s-maj=8.0km s-min=6.7km az=213.0*

ISCJB ***07*** *21:56:25.6±0.3, 11°.01S±0°.05×165°.64E±0°.06, h30^{km}, mb4.4/31, Error ellipse: s-maj=7.8km s-min=6.6km az=173.2*

ISC 07 21:56:27.3±0.5, 11°.01S±0°.06×165°.70E±0°.07, h30^{km}, n58, σ1^s.40/65, mb4.4/31, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.87	285	ePn	Pn	21 57 49.1	-3.3
HNR				eSn	Sn	21 58 55.6	-3.1
HNR	Honiara	5.87	285	Pn	Pn	21 57 51.3	-1.0
	25nm,0.3s,baz=166,slow=2.5,SNR=10						
HNR				Sn	Sn	21 58 59.5	+0.8
	11nm,0.3s,baz=184,slow=15,SNR=2.5						
MARNC	Mare, Loyalty	10.65	168	ePn	Pn	21 58 58.9	+0.9
DZM	Mont Dzumac	11.03	176	ePn	Pn	21 59 03.8	+0.6
DZM				Sn	Sn	22 01 03.3	-2.3
DZM	Mont Dzumac	11.03	176	Pn	Pn	21 59 04.4	+1.2
	3.1nm,0.3s,baz=308,slow=13,SNR=36						
DZM				Sn	Sn	22 01 03.3	-2.3
	0.4nm,0.3s,baz=323,slow=20,SNR=1.9						
PINNC	Pines Island,	11.66	172	ePn	Pn	21 59 12.9	+1.1
EIDS	Eidsvold	19.89	222	eP	P	22 00 57.2	+0.8
	21nm,1.0s						
MANU	Manus Island	20.25	295	eP	P	22 01 01.4	+0.8
	136nm,1.1s						
CTA	Charters Tower	20.77	242	P	P	22 01 07.1	+1.0
	18nm,1.0s,baz=75,slow=11,SNR=7.3						
CTAO	Charters Tower	20.77	242	eP	P	22 01 07.2	+1.1
	38nm,1.1s						
COEN	Coen	22.18	260	eP	P	22 01 20.3	-1.0
	41nm,1.1s						
ARMA	Armidale	23.32	212	eP	P	22 01 33.2	0.0
	17nm,0.9s						
BKZ	Black Stump Fm	29.65	163	eP	P	22 02 30.9	+0.6
	7.5nm,0.5s						
STKA	Stephens Creek	30.44	223	eP	P	22 02 37.4	0.0
	1.2nm,0.8s						
STKA	Stephens Creek	30.44	223	P	P	22 02 38.4	+1.0
	5.2nm,0.8s,baz=31,slow=10,SNR=9.0						
WB2	Warramunga Arr	31.44	250	eP	P	22 02 45.5	-0.9
WRAB	Tennant Creek	31.44	250	eP	P	22 02 46.0	-0.3
	5.5nm,0.6s						
WRA	Warramunga Arr	31.45	250	P	P	22 02 46.2	-0.2
	15nm,0.9s,baz=80,slow=9.1,SNR=57						
WRA				PcP	PcP	22 05 40.2	+0.7
	1.4nm,0.8s,baz=73,slow=3.2,SNR=7.6						
LTZ	Lake Taylor	32.17	171	eP	P	22 02 53.1	+0.6
	13nm,0.8s						
AS01	Alice Springs	32.72	243	eP	P	22 02 56.1	-1.6
ASAR	Alice Springs	32.77	243	P	P	22 02 57.3	-0.7
	2.1nm,0.9s,baz=66,slow=9.7,SNR=13						
ASAR				PcP	PcP	22 05 42.9	-0.2
	1.6nm,0.7s,baz=69,slow=2.9,SNR=11						
RPZ	Rata Peaks	32.92	173	P	P	22 03 00.5	+1.5
	4.4nm,0.7s,baz=331,slow=10,SNR=2.4						
MBWA	Marble Bar	45.16	251	eP	P	22 04 42.0	+0.3
POHA	Pohakuloa	48.91	51	eP	P	22 05 08.8	-2.4
LEM	Lembang	57.46	269	P	P	22 06 14.7	+0.4
	9.7nm,0.4s,baz=118,slow=7.8,SNR=5.5						
NJ2	Nanjing	61.96	315	eP	P	22 06 43.9	-0.8
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
USRK	Ussuriysk Ar.	62.89	333	P	P	22 06 51.7	+1.0
	comp=Z,2.3nm,0.7s,baz=142,slow=8.2,SNR=4.0						
CN2	Changchun	65.68	329	eP	P	22 07 09.5	+0.5
IPM	Ipoh	66.17	280	eP	P	22 07 12.5	-0.2
	comp=Z,13nm,1.0s						
CASY	Casey	66.40	201	eP	P	22 07 13.9	+0.7
KLR	Kul'dur	67.00	337	P	P	22 07 17.6	+0.3
	comp=Z,0.8nm,0.7s,baz=336,slow=20,SNR=3.7						
BJI	Beijing	68.42	321	P	P	22 07 27.6	+1.2
BJI				pmax	pmax		
	comp=Z,4.0nm,2.9s						
HHC	Hu-ho-hao-te	71.77	320	eP	P	22 07 47.9	+0.8
HHC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,200nm,5.5s						
CM01	Chiang Mai Arr	72.03	294	eP	P	22 07 48.6	-0.4
CMAR	Chiang Mai Arr	72.05	294	P	P	22 07 49.7	+0.6
	comp=Z,1.0nm,0.7s,baz=122,slow=4.4,SNR=8.3						
LZH	Lanzhou	74.70	312	eP	P	22 08 04.5	-0.1
LZH				pP	pP	22 08 10.0	-3.6
LZH				sP	pwP	22 08 12.3	-3.4
LZH				PP	PP	22 10 59.0	+7.0
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,81nm,4.8s						
LZH				LR	LR		
	comp=N,230nm,17.1s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
SONM	Songino Array	78.61	324	P	P	22 08 25.7	-0.7
	comp=Z,0.3nm,0.4s,baz=120,slow=8.8,SNR=3.7						
BILL	Bilibino	78.84	0	eP	P	22 08 27.0	0.0
	comp=Z,1.7nm,0.4s						
GTA	Gaotai	79.00	314	eP	P	22 08 30.5	+1.8
GTA				pP	PcP	22 08 36.2	-1.0
GTA				sP	pwP	22 08 38.8	-1.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
QSPA	South Pole Qui	79.00	180	eP	P	22 08 28.6	+0.3
IM3	Indian Mountai	82.40	16	eP	P	22 08 45.8	-0.4
MDM	Murphy Dome	83.21	18	eP	P	22 08 50.0	-0.5
	comp=Z,2.7nm,0.7s						
COLA	College	83.27	18	eP	P	22 08 50.1	-0.5
	comp=Z,4.7nm,0.6s						
IL1	Eielson Array	83.49	19	eP	P	22 08 51.2	-0.7
ILAR	Eielson Array	83.49	19	P	P	22 08 52.6	+0.7
	comp=Z,2.6nm,0.6s,baz=234,slow=5.2,SNR=40						
ILB	Eielson Array	83.49	19	eP	P	22 08 51.9	0.0
EGAK	Eagle	85.36	20	eP	P	22 09 02.4	+1.1
	comp=Z,4.8nm,0.7s						
DAWY	Dawson	85.54	21	eP	P	22 09 02.5	+0.2
	comp=Z,1.5nm,0.6s						
MOD	Modoc Plateau	85.65	46	eP	P	22 09 02.9	-0.6
	comp=Z,1.3nm,0.5s						
WMQ	Urumqi	89.03	315	eP	P	22 09 19.9	+0.2
WMQ				LR	LR		
	comp=N,570nm,17.5s						
WMQ				LR	LR		
	comp=E,500nm,23.7s						
WMQ				LR	LR		
	comp=Z,690nm,22.1s						
MK01	Makanchi Array	93.45	317	eP	P	22 09 39.5	-0.6
MKAR	Makanchi Array	93.46	317	P	P	22 09 39.0	-1.1
	comp=Z,0.9nm,0.9s,baz=103,slow=4.4,SNR=6.5						
ZALV	Zalesovo Beam	93.50	324	eP	P	22 09 38.9	-1.1
ZALV	Zalesovo Beam	93.50	324	P	P	22 09 39.0	-1.0
	comp=Z,0.3nm,0.5s,baz=90,slow=4.4,SNR=3.9						
YKA	Yellowknife Ar	94.96	27	P	P	22 09 45.9	-0.7
	comp=Z,0.2nm,0.6s,baz=258,slow=4.5,SNR=4.0						
TXAR	Lajitas Array	95.85	61	P	P	22 09 50.9	-0.7
	comp=Z,0.7nm,0.9s,baz=270,slow=4.8,SNR=3.3						
CLL	Collm	134.05	336	ePKPdf	PKPdf	22 15 42.0	+0.2
CLL				Lm	MLR	23 18 00.0	
	comp=Z,400nm,21.1s						
ESDC	Sonseca Array	150.01	344	PKPbc	PKPbc	22 16 15.5	+0.1
	comp=Z,0.2nm,0.5s,baz=11,slow=2.8,SNR=3.6						

IDC 07 22:00:37.4±7.6, 9°.90N×92°.69E, h0^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.2/51, mbtmp3.4/3, Error ellipse: s-maj=170.2km s-min=45.1km az=95.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.45	35	Pn	Pn	22 03 08.4	-0.1
	baz=226,slow=14,SNR=5.6						
WRA	Warramunga Arr	50.59	126	P	P	22 09 38.2	-0.2
	0.2nm,0.5s,baz=305,slow=8.7,SNR=8.6						
ASAR	Alice Springs	52.30	130	P	P	22 09 51.2	0.0
	0.5nm,0.6s,baz=304,slow=6.5,SNR=8.9						

IDC 07 22:05:29.0±1.6, 11°.42S×165°.79E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.6/39, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=52.3km s-min=29.9km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.61	177	Pn	Pn	22 08 03.3	+0.8
	0.4nm,0.3s,baz=114,slow=20,SNR=3.0						
WRA	Warramunga Arr	31.39	250	P	P	22 11 51.6	-0.4
	0.7nm,1.0s,baz=84,slow=9.2,SNR=4.8						
ASAR	Alice Springs	32.66	244	P	P	22 12 03.0	-0.2
	0.7nm,0.8s,baz=71,slow=9.3,SNR=7.4						
ILAR	Eielson Array	83.86	18	P	P	22 17 59.7	-0.5
	0.2nm,0.6s,baz=241,slow=5.0,SNR=3.3						
MKAR	Makanchi Array	93.82	317	P	P	22 18 49.2	+0.9
	0.3nm,0.7s,baz=116,slow=6.6,SNR=4.6						

IDC ***07*** *22:10:31.4±1.3, 10°.86S×165°.66E, h0^{km}, mb3.9/5, mb1 4.2/7, mb1mx3.8/43, mbtmp4.1/7, ML4.7/2, Error ellipse: s-maj=39.8km s-min=25.5km az=127.0*

ISCJB ***07*** *22:10:34.5±1.2, 11°.0S±0°.1×165°.6E±0°.2, h30^{km}, mb3.8/5, Error ellipse: s-maj=23.0km s-min=16.8km az=155.9*

ISC 07 22:10:36.0±1.2, 10°.9S±0°.1×165°.7E±0°.2, h30^{km}, n14, σ0^s.97/8, mb3.8/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.82	284	Pn	Pn	22 12 00.6	+0.3
	37nm,0.3s,baz=164,slow=2.3,SNR=7.2						
DZM	Mont Dzumac	11.13	176	Pn	Pn	22 13 13.2	-0.1
	3.0nm,0.3s,baz=321,slow=13,SNR=22						
H11S2	WAKE ISLAND Hy	29.22	2	T	T	22 46 57.0	
	baz=181,slow=76						
H11S3	WAKE ISLAND Hy	29.23	2	T	T	22 46 59.1	
	baz=181,slow=76						
H11S1	WAKE ISLAND Hy	29.24	2	T	T	22 46 59.3	
	baz=181,slow=76						
H11N1	WAKE ISLAND Hy	30.45	2	T	T	22 48 29.5	
H11N3	WAKE ISLAND Hy	30.45	2	T	T	22 48 27.6	
H11N2	WAKE ISLAND Hy	30.46	2	T	T	22 48 27.6	
STKA	Stephens Creek	30.49	223	P	P	22 16 47.4	+0.9
	0.5nm,0.3s,baz=43,slow=12,SNR=2.9						
WRA	Warramunga Arr	31.46	250	P	P	22 16 54.7	-0.5
	1.0nm,0.8s,baz=82,slow=9.3,SNR=5.9						
ASAR	Alice Springs	32.79	243	P	P	22 17 06.3	-0.5
	1.7nm,0.8s,baz=65,slow=10,SNR=18						
ILAR	Eielson Array	83.40	19	P	P	22 23 01.1	+1.1
	0.7nm,0.7s,baz=228,slow=5.5,SNR=8.2						
MKAR	Makanchi Array	93.36	317	P	P	22 23 47.6	-0.8
	0.3nm,0.7s,baz=95,slow=4.6,SNR=3.3						
ARCES	ARCESS Array B	116.17	345	PKP	PKiKP	22 29 14.6	-1.2
	1.3nm,0.9s,baz=70,slow=3.0,SNR=4.1						

ISCJB ***07*** *22:11:49.2±1.0, 10°.99S±0°.08×165°.77E±0°.10, h10^{km}, mb3.8/5, Error ellipse: s-maj=15.3km s-min=8.9km az=144.9*

IDC ***07*** *22:11:49.4±1.3, 10°.77S×165°.79E, h0^{km}, mb3.9/6, mb1 4.2/8, mb1mx3.9/42, mbtmp4.1/8, ML4.6/2, Error ellipse: s-maj=35.2km s-min=25.3km az=138.0*

ISC 07 22:11:50.7±1.0, 10°.88S±0°.10×165°.8E±0°.1, h10^{km}, n15, σ1^s.32/10, mb4.0/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.97	283	Pn	Pn	22 13 20.1	+0.9
	31nm,0.3s,baz=4.9,slow=8.6,SNR=5.5						
HNR				Sn	Sn	22 14 27.8	+0.1
	8.8nm,0.3s,baz=176,slow=10,SNR=2.4						
DZM	Mont Dzumac	11.15	177	Pn	Pn	22 14 32.5	+2.1
	2.5nm,0.3s,baz=150,slow=22,SNR=12						
DZM				Sn	Sn	22 16 33.2	-2.0
	0.2nm,0.3s,baz=113,slow=21,SNR=2.0						
CTA	Charters Tower	20.95	242	P	Pn	22 16 35.6	-1.0
	7.2nm,0.9s,baz=66,slow=18,SNR=2.3						
H11S2	WAKE ISLAND Hy	29.19	2	T	T	22 48 16.3	
	baz=181,slow=76,SNR=5.3						
H11S3	WAKE ISLAND Hy	29.20	2	T	T	22 48 15.7	
	baz=181,slow=76,SNR=4.0						
H11S1	WAKE ISLAND Hy	29.21	2	T	T	22 48 14.0	
	baz=181,slow=76,SNR=4.2						
H11N1	WAKE ISLAND Hy	30.42	2	T	T	22 49 47.9	
	baz=182,slow=76						
H11N3	WAKE ISLAND Hy	30.42	2	T	T	22 49 48.3	
	baz=182,slow=76						
H11N2	WAKE ISLAND Hy	30.43	2	T	T	22 49 49.1	
	baz=182,slow=76						
WRA	Warramunga Arr	31.62	250	P	P	22 18 13.4	-0.8
	1.7nm,0.9s,baz=82,slow=9.0,SNR=4.6						
ASAR	Alice Springs	32.94	243	P	P	22 18 25.3	-0.5
	2.5nm,0.8s,baz=65,slow=10,SNR=3.0						
SONM	Songino Array	78.58	324	P	P	22 23 51.7	-1.0
	0.3nm,0.9s,baz=151,slow=6.5,SNR=2.2						
ILAR	Eielson Array	83.33	18	P	P	22 24 18.2	+0.7
	0.8nm,0.6s,baz=232,slow=5.0,SNR=7.4						
MKAR	Makanchi Array	93.46	317	P	P	22 25 06.3	-0.4
	0.3nm,0.7s,baz=98,slow=4.3,SNR=2.8						
ARCES	ARCESS Array B	116.19	346	PKP	PKPdf	22 30 33.3	-0.6
	4.9nm,1.3s,baz=90,slow=2.7,SNR=7.4						

NEIC ***07*** *22:22:01.9±0.0, 14°.14N×93°.83W, h4^{km}, MD4.2(MEX), After MEX.*

MEX ***07*** *22:22:01.9±0.5, 14°.14N×93°.83W, h4^{km}±53^{km}, MD4.2*

IDC ***07*** *22:22:03.2±2.5, 14°.53N×93°.52W, h0^{km}, mb3.9/7, mb1 4.1/10, mb1mx3.8/36, mbtmp3.8/10, ML3.3/3, Error ellipse: s-maj=56.1km s-min=23.2km az=16.0*

ISC 07 22:22:07.0±1.2, 14°.4N±0°.1×93°.71W±0°.07, h35^{km}, n19, σ1^s.77/24, mb4.0/7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.40	20	eP	Pn	22 22 28.3	-1.8
PCIG				i S	Sn	22 22 48.4	+1.0
PCIG		1.40	20	eP	Pn	22 22 28.3	-1.8
PCIG				i S	Sn	22 22 48.4	+1.0
THIG		1.50	69	eP	Pn	22 22 29.5	-1.8
THIG		1.50	69	eP	Pn	22 22 29.5	-1.8
CCIG	Comitan	2.43	39	eP	Pn	22 22 45.2	+0.8
CCIG	Comitan	2.43	39	eP	Pn	22 22 45.2	+0.8
CMIG	Matias Romero	2.93	337	eP	Pn	22 22 49.1	-2.0
CMIG				Sn	Sn	22 23 23.3	-1.8
CMIG	Matias Romero	2.93	337	eP	Pn	22 22 49.1	-2.0
CMIG	Matias Romero	2.93	337	Pn	Pn	22 22 48.7	-2.3
	5.1nm,0.3s,baz=156,slow=10,SNR=47						
CMIG				Sn	Sn	22 23 23.3	-1.8
	9.5nm,0.3s,baz=200,slow=13,SNR=9.7						
APG	El Apazote	3.20	78	Pn	Pn	22 22 54.3	-0.8
	2.7nm,0.3s,baz=198,slow=13,SNR=18						
APG				Sn	Sn	22 23 28.9	-3.3
	5.9nm,0.3s,baz=292,slow=14,SNR=8.3						
TXAR	Lajitas Array	17.50	330	Pn	Pn	22 26 08.4	-0.1
	0.0nm,0.3s,baz=149,slow=13,SNR=7.4						
TKL	Tuckaleechee C	23.00	21	P	P	22 27 06.5	-2.3
	9.7nm,1.0s,baz=114,slow=19,SNR=8.4						
PDAR	Pinedale Array	31.41	337	P	P	22 28 27.6	+2.5
	0.1nm,0.4s,baz=149,slow=8.7,SNR=2.9						
NVAR	Mina Array Bea	32.35	322	P	P	22 28 35.8	+2.4
	0.3nm,0.3s,baz=123,slow=6.6,SNR=3.7						
YKA	Yellowknife Ar	50.29	348	P	P	22 30 59.6	-0.2
	1.3nm,0.8s,baz=154,slow=7.3,SNR=17						
ILAR	Eielson Array	61.84	337	P	P	22 32 23.1	+0.7
	0.6nm,0.8s,baz=158,slow=4.4,SNR=7.6						
NOA	NORSAR Array B	84.60	28	P	P	22 34 37.5	+0.7
	1.5nm,1.0s,baz=291,slow=4.9,SNR=4.3						
ARCES	ARCESS Array B	86.30	18	P	P	22 34 45.5	+0.6
	3.3nm,1.1s,baz=316,slow=5.1,SNR=4.1						
CMAR	Chiang Mai Arr	145.07	339	PKPbc	PKPab	22 41 41.0	-0.1
	1.2nm,0.8s,baz=347,slow=3.5,SNR=5.8						

IDC 07 22:22:49.5±3.9, 11°.68S×165°.35E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.6/36, mbtmp3.6/4, Error ellipse: s-maj=167.9km s-min=31.2km az=137.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.91	251	P	P	22 29 07.7	-0.6
	0.9nm,0.8s,baz=80,slow=9.3,SNR=6.9						
ASAR	Alice Springs	32.17	244	P	P	22 29 19.5	+0.1
	0.3nm,0.7s,baz=79,slow=9.5,SNR=3.1						

ILAR	**Eielson Array**	**84.24**	**19**	P	P	22 35 22.3	-0.4
	0.4nm,0.8s,baz=238,slow=5.2,SNR=4.1						
MKAR	**Makanchi Array**	**93.72**	**317**	P	P	22 36 09.1	+0.8
	0.4nm,0.9s,baz=90,slow=4.9,SNR=3.3						

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*IDC **07** 22:23:05.7±1.5,11°.32S×165°.91E,h0^{km},mb3.8/6,mb1 4.0/8,mb1mx3.8/38,mbtmp3.9/8,ML4.5/2,Error ellipse: s-maj=40.3km s-min=25.6km az=116.0*

*ISCJB **07** 22:23:06.3±1.0,11°.4S±0°.1×165°.7E±0°.1,h10^{km},mb3.7/6,Error ellipse: s-maj=19.9km s-min=11.7km az=36.3*

ISC 07 22:23:07.5±1.1,**11°.3S**±0°.1×**165°.8E**±0°.1,**h10**^{km}**,n14,**σ**1^s.37**/9**,mb3.8**/6**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.03**	**288**	Pn	**Pn**	**22 24 36.2**	**-0.7**
	46nm,0.3s,baz=145,slow=4.3,SNR=7.0						
HNR				Sn	**Sn**	**22 25 45.0**	**-1.0**
	14nm,0.3s,baz=49,slow=22,SNR=2.5						
DZM	**Mont Dzumac**	**10.72**	**177**	Pn	**Pn**	**22 25 40.1**	**-1.1**
	1.0nm,0.3s,baz=0.0,slow=20,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**29.63**	**2**	T	T	22 59 32.6	
	baz=181,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**29.63**	**2**	T	T	22 59 33.1	
	baz=181,slow=76						
H11S1	**WAKE ISLAND Hy**	**29.65**	**2**	T	T	22 59 34.3	
	baz=181,slow=76,SNR=53						
STKA	**Stephens Creek**	**30.27**	**224**	P	**P**	**22 29 20.2**	**+1.3**
	2.2nm,0.9s,baz=68,slow=11,SNR=3.7						
H11N1	**WAKE ISLAND Hy**	**30.85**	**2**	T	T	23 01 04.1	
	baz=182,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**30.86**	**2**	T	T	23 01 00.1	
	baz=182,slow=76,SNR=29						
H11N2	**WAKE ISLAND Hy**	**30.87**	**2**	T	T	23 01 05.7	
	baz=182,slow=76						
WRA	**Warramunga Arr**	**31.42**	**250**	P	**P**	**22 29 29.4**	**+0.1**
	1.0nm,0.7s,baz=82,slow=8.6,SNR=7.0						
ASAR	**Alice Springs**	**32.70**	**244**	P	**P**	**22 29 40.8**	**+0.3**
	0.9nm,0.7s,baz=68,slow=10,SNR=4.4						
SONM	**Songino Array**	**78.90**	**324**	P	**P**	**22 35 12.7**	**+1.3**
	0.2nm,0.7s,baz=182,slow=4.3,SNR=2.8						
ILAR	**Eielson Array**	**83.76**	**18**	P	**P**	**22 35 34.8**	**-1.8**
	0.4nm,0.6s,baz=245,slow=4.8,SNR=5.8						
MKAR	**Makanchi Array**	**93.74**	**317**	P	**P**	**22 36 26.0**	**+1.2**
	0.3nm,0.6s,baz=85,slow=4.2,SNR=4.5						

IDC 07 22:28:03.0±1.7**,10°.32S**×**165°.15E,h0**^{km}**,mb3.8**/4**,mb1 4.1**/5**,mb1mx3.7**/35**,mbtmp3.9**/5**,ML4.1**/1**,Error ellipse: s-maj=50.9km s-min=29.5km az=123.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.75**	**174**	Pn	Pn	22 30 50.3	-1.8
	1.1nm,0.3s,baz=66,slow=19,SNR=5.3						
H11S2	**WAKE ISLAND Hy**	**28.67**	**3**	T	T	23 04 08.1	
	baz=193,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**28.67**	**3**	T	T	23 04 06.9	
	baz=193,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**28.69**	**3**	T	T	23 04 06.6	
	baz=193,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**29.89**	**3**	T	T	23 05 37.9	
	baz=192,slow=76,SNR=50						
H11N3	**WAKE ISLAND Hy**	**29.90**	**3**	T	T	23 05 41.4	
	baz=192,slow=76,SNR=24						
H11N2	**WAKE ISLAND Hy**	**29.91**	**3**	T	T	23 05 39.0	
	baz=192,slow=76,SNR=67						
WRA	**Warramunga Arr**	**31.20**	**248**	P	P	22 34 24.2	-0.1
	1.4nm,0.8s,baz=78,slow=8.8,SNR=10						
ASAR	**Alice Springs**	**32.61**	**242**	P	P	22 34 37.1	+0.5
	1.1nm,0.6s,baz=64,slow=9.9,SNR=13						
ILAR	**Eielson Array**	**83.02**	**19**	P	P	22 40 30.4	+0.5
	0.3nm,0.6s,baz=241,slow=5.0,SNR=5.5						
MKAR	**Makanchi Array**	**92.60**	**317**	P	P	22 41 16.0	-0.6
	0.1nm,0.5s,baz=102,slow=6.1,SNR=2.6						

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*ISCJB **07** 22:31:54.3±0.5,53°.38N±0°.03×6°.23E±0°.04,h0^{km},Error ellipse: s-maj=4.8km s-min=3.0km az=158.1*

*BNS **07** 22:31:55.9±1.2,53°.54N×6°.62E,h2^{km},ML2.6*

*LDG **07** 22:31:58.1±0.1,53°.44N×6°.60E,h3^{km},Ml3.0/17,Error ellipse: s-maj=3.0km s-min=2.1km az=167.0*

*BGR **07** 22:31:59.4±0.5,53°.34N×6°.70E,h5^{km},ML2.7/5,Error ellipse: s-maj=8.9km s-min=4.4km az=117.0*

ISC 07 22:31:57.0±0.8**,53°.36N**±0°.03×**6°.51E**±0°.03**,h0**^{km}**,n54,**σ**2^s.26**/89**,The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENM4	**Eenrum**	**0.05**	**340**	*e*Pg	Pg	22 32 01.3	+3.4
	baz=56						
ENM4				*e*Sg	**Sg**	**22 32 04.4**	**+5.8**
SPY4	**Spijk (Roodesc**	**0.17**	**73**	*e*Sg	**Sg**	**22 32 02.9**	**+0.4**
WDB4	**Woudbloem 4**	**0.20**	**138**	*e*Sg	**Sg**	**22 32 06.5**	**+3.1**
NIW4	**Wetzens (Niawi**	**0.28**	**269**	*e*Pg	**Pn**	**22 32 07.1**	**-1.2**
	baz=70						
HWF4	**Haulerwijk**	**0.30**	**198**	*e*Pg	**Pb**	**22 32 06.6**	**+1.3**
	baz=27						
HWF4				*e*Sg	**Sb**	**22 32 15.7**	**+5.0**
ZL24	**Zuidlaardervee**	**0.30**	**151**	*e*Sg	**Sb**	**22 32 11.5**	**+0.7**
FSW4	**Finsterwolde 4**	**0.39**	**111**	*e*Sg	**Sg**	**22 32 11.5**	**+1.9**
ENV4	**Elp / Enerveen**	**0.47**	**171**	*e*Pg	**Pb**	**22 32 08.9**	**+0.9**
	baz=5.1						
ENV4				*e*Sg	**Sn**	**22 32 18.9**	**+6.9**
WIT	**Witteveen**	**0.56**	**170**	*e*Pg	**Pn**	**22 32 10.8**	**-1.3**
VBG4	**Venebrugge (Br**	**0.82**	**173**	*e*Pg	**Pn**	**22 32 15.6**	**-0.1**
	baz=2.0						
VBG4				*e*Sg	**Sn**	**22 32 29.5**	**+0.9**
HLG	**Helgoland**	**1.16**	**44**	*e*Pg	**Pn**	**22 32 19.8**	**-0.6**
HLG				*e*Sg	**Sn**	**22 32 35.7**	**-1.3**
IBBN	**Ibbenburen**	**1.30**	**144**	*e*Pg	**Pb**	**22 32 23.1**	**+0.9**
IBBN				*e*Sg	**Sn**	**22 32 40.6**	**+0.3**
WTSB	**Winterswijk**	**1.41**	**173**	*e*Pg	**Pg**	**22 32 23.8**	**-0.1**
WTSB				*e*Sg	**Sg**	**22 32 42.6**	**+0.5**
WTSB	**Winterswijk**	**1.41**	**173**	*e*Pg	**Pn**	**22 32 23.6**	**-0.1**
	9.3nm,0.3s						
WTSB				*e*Pg	**Pn**	**22 32 23.7**	**-0.1**
	9.1nm,0.4s						
WTSB				*e*Sg	**Sn**	**22 32 44.1**	**+1.1**
WTSB				*e*Sg	**Sn**	**22 32 44.1**	**+1.1**
RETH	**Rethem/Aller,**	**1.83**	**109**	*e*Pn	**Pn**	**22 32 29.1**	**-0.5**
RETH				*e*Sg	**Sg**	**22 32 55.7**	**0.0**
BUG	**Bochum--Univer**	**1.98**	**166**	*e*Pg	**Pg**	**22 32 35.6**	**+0.8**
BSEG	**Bad Segeberg**	**2.34**	**74**	*e*Pn	**Pb**	**22 32 39.8**	**-0.1**
BSEG				*e*Sn	**Sn**	**22 33 01.4**	**-4.6**
HOBG	**Hohbusch**	**2.43**	**168**	*e*Pg	**Pg**	**22 32 44.4**	**+0.8**
HGN	**Heimansgroeve**	**2.62**	**188**	*e*Pn	**Pn**	**22 32 40.6**	**+0.1**
HGN				*e*Pg	**Pg**	**22 32 48.3**	**+1.1**
HGN	**Heimansgroeve**	**2.62**	**188**	*e*Pg	**Pn**	**22 32 40.6**	**+0.1**
HGN				*e*Sg	**Sn**	**22 33 12.8**	**-0.2**
DREG	**Dreilaegerbach**	**2.71**	**184**	*e*Pn	**Pn**	**22 32 41.2**	**-0.5**
DREG				*e*Sn	**Sn**	**22 33 16.5**	**+1.4**
	19nm,0.3s						
KLL	**Kalltalsperre**	**2.72**	**183**	*e*Pn	**Pn**	**22 32 41.3**	**-0.6**
MEM	**Membach**	**2.77**	**187**	*e*Pg	**Pg**	**22 32 50.7**	**+0.7**
CLZ	**Clausthal**	**2.80**	**121**	*e*Pn	**Pn**	**22 32 42.7**	**-0.3**
CLZ				*e*Sn	**Sn**	**22 33 12.8**	**-4.7**
TNS	**Taunus Mts**	**3.36**	**158**	*e*Pn	**Pn**	**22 32 51.3**	**+0.6**
TNS				*e*Sn	**Sn**	**22 33 29.4**	**-2.0**
GIVF	**Givet**	**3.43**	**198**	*e*Pn	**Pn**	**22 32 51.3**	**-0.3**
GIVF				*e*Sn	**Sn**	**22 33 32.5**	**-0.4**
	11nm,0.4s						
MUD	**Monsted U'grnd**	**3.46**	**25**	*i* P	**Pb**	**22 32 58.3**	**-0.8**
BAIF	**Baives**	**3.60**	**204**	*e*Pn	**Pn**	**22 32 54.8**	**+0.8**
BAIF				*e*Sn	**Sn**	**22 33 37.8**	**+0.6**
	5.9nm,0.4s						
WLF	**Walferdange**	**3.71**	**184**	*e*Pg	**Pg**	**22 33 08.1**	**+0.1**
PAGF	**Fort de Pagny**	**4.84**	**186**	*e*Pn	**Pn**	**22 33 11.4**	**+0.4**
PAGF	**Fort de Pagny**	**4.84**	**186**	*e*Pg	**Pg**	**22 33 29.2**	**-0.4**
MEZF	**Maizieres J'vi**	**4.95**	**191**	*e*Pn	**Pn**	**22 33 12.4**	**-0.1**
MEZF	**Maizieres J'vi**	**4.95**	**191**	*e*Pg	**Pg**	**22 33 31.1**	**-0.7**
	290nm,2.3s						
CDF	**Champ du Feu**	**4.98**	**174**	*e*Pn	**Pn**	**22 33 12.5**	**-0.5**
CDF				*e*Sn	**Sn**	**22 34 09.6**	**-1.6**
BSD	**Bornholm Skovb**	**5.23**	**67**	*i* P	**Pn**	**22 33 14.5**	**-1.9**
BSD				*e*S	**Sn**	**22 34 11.0**	**-6.4**
SFTF	**Sexfontaines**	**5.24**	**191**	*e*Pn	**Pn**	**22 33 16.8**	**+0.2**
SFTF				*e*Sg	**Sg**	**22 34 44.3**	**-1.0**
	1.0nm,0.3s						
HAU	**Haudompre**	**5.36**	**181**	*e*Pn	**Pn**	**22 33 18.3**	**+0.1**
HAU	**Haudompre**	**5.36**	**181**	*e*Pg	**Pg**	**22 33 39.0**	**-0.6**
HAU				*e*Sn	**Sn**	**22 34 17.0**	**-3.6**
HAU				*e*Sg	**Sg**	**22 34 49.1**	**0.0**
	1.6nm,0.3s						
HINF	**Hinteralfeld**	**5.55**	**178**	*e*Pn	**Pn**	**22 33 20.2**	**-0.7**
LOR	**Lormes**	**6.33**	**197**	*e*Pn	**Pn**	**22 33 30.8**	**-0.7**
	baz=19						
LOR				*e*Sn	**Sn**	**22 34 41.1**	**-3.3**
	1.1nm,0.2s						
LDF	**La Druitiere**	**6.35**	**224**	*e*Pn	**Pn**	**22 33 30.6**	**-1.1**
LDF				*e*Sn	**Sn**	**22 34 41.5**	**-3.3**
	2.0nm,0.3s						
FLN	**La Foliniere**	**6.37**	**227**	*e*Pn	**Pn**	**22 33 30.9**	**-1.1**
	baz=45						
FLN				*e*Sn	**Sn**	**22 34 42.7**	**-2.7**
	1.5nm,0.2s						
SSF	**Saint Saulge**	**6.59**	**198**	*e*Pn	**Pn**	**22 33 34.4**	**-0.7**
SSF				*e*Sn	**Sn**	**22 34 47.3**	**-3.6**
	0.6nm,0.2s						
CABF	**La Chapelle**	**6.76**	**182**	*e*Pn	**Pn**	**22 33 37.3**	**-0.2**
GRR	**Gorron**	**6.82**	**226**	*e*Pn	**Pn**	**22 33 38.1**	**0.0**
GRR				*e*Sn	**Sn**	**22 34 52.6**	**-3.8**
	3.1nm,0.3s						
AVF	**Avril sur Loir**	**6.88**	**198**	*e*Pn	**Pn**	**22 33 39.0**	**0.0**
AVF				*e*Sn	**Sn**	**22 34 53.5**	**-4.5**
	0.3nm,0.2s						
SMF	**Signal de Mont**	**6.94**	**195**	*e*Pn	**Pn**	**22 33 39.1**	**-0.7**
SMF				*e*Sn	**Sn**	**22 34 56.5**	**-2.9**
	1.0nm,0.3s						
BGF	**Bois d'Agland**	**7.21**	**201**	*e*Pn	**Pn**	**22 33 42.9**	**-0.6**
BGF				*e*Sn	**Sn**	**22 35 02.1**	**-3.9**
	4.2nm,0.3s						
TCF	**Toulx Ste Croi**	**7.60**	**203**	*e*Pn	**Pn**	**22 33 48.3**	**-0.7**
SGMF	**Saint Gilles**	**7.69**	**232**	*e*Pn	**Pn**	**22 33 48.6**	**-1.4**
SGMF				*e*Sn	**Sn**	**22 35 13.6**	**-4.1**
	1.0nm,0.3s						
ROSF	**Rostrenen**	**7.97**	**235**	*e*Pn	**Pn**	**22 33 53.2**	**-0.8**
ROSF				*e*Sn	**Sn**	**22 35 20.5**	**-4.3**
	7.0nm,0.4s						
MFF	**Saint Martin d**	**8.01**	**215**	*e*Pn	**Pn**	**22 33 53.9**	**-0.6**
MFF				*e*Sn	**Sn**	**22 35 21.9**	**-3.7**
	1.6nm,0.4s						
QUIF	**Quistinic**	**8.21**	**232**	*e*Pn	**Pn**	**22 33 56.1**	**-1.2**
QUIF				*e*Sn	**Sn**	**22 35 25.4**	**-5.3**
	1.8nm,0.4s						
RJF	**Les Rejaudoux**	**8.69**	**204**	*e*Pn	**Pn**	**22 34 03.1**	**-0.8**

IDC 07 22:33:30.1±1.4**,10°.96S**×**165°.66E,h0**^{km}**,mb3.6**/3**,mb1 4.0**/4**,mb1mx3.7**/34**,mbtmp3.9**/4**,ML4.4**/1**,Error ellipse: s-maj=51.9km s-min=31.9km az=127.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.07**	**176**	Pn	Pn	22 36 09.8	-0.1
	2.8nm,0.3s,baz=357,slow=19,SNR=14						
WRA	**Warramunga Arr**	**31.43**	**250**	P	P	22 39 53.4	0.0
	1.1nm,0.8s,baz=82,slow=9.0,SNR=9.8						
WRA				PcP	PcP	22 42 47.4	+0.3
	0.4nm,0.7s,baz=71,slow=3.0,SNR=4.5						
ASAR	**Alice Springs**	**32.76**	**243**	P	P	22 40 04.5	-0.5
	0.3nm,0.4s,baz=65,slow=10,SNR=4.8						
ASAR				PcP	PcP	22 42 50.4	-0.3
	0.4nm,0.6s,baz=70,slow=3.0,SNR=3.7						
ILAR	**Eielson Array**	**83.46**	**19**	P	P	22 45 58.9	-0.3
	0.3nm,0.6s,baz=237,slow=5.9,SNR=5.4						

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*IDC **07** 22:36:12.8±1.6,0°.36N×92°.20E,h0^{km},mb3.7/5,mb1 3.9/8,mb1mx3.6/44,mbtmp3.7/8,ML4.1/3,Error ellipse: s-maj=41.8km s-min=25.2km az=40.0*

*ISCJB **07** 22:36:15.1±1.4,0°.4N±0°.2×92°.1E±0°.2,h33^{km},mb3.7/5,Error ellipse: s-maj=30.2km s-min=19.3km az=28.5*

ISC 07 22:36:17.5±1.4**,0°.4N**±0°.2×**92°.2E**±0°.1**,h35**^{km}**,n9,**σ**1^s.50**/9**,mb3.6**/5**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**7.10**	**70**	Pn	**Pn**	**22 37 57.4**	**-1.6**
	0.7nm,0.3s,baz=180,slow=22,SNR=5.0						
PALK	**Pallekele**	**13.36**	**301**	Pn	**Pn**	**22 39 22.8**	**-2.0**
	0.8nm,0.3s,baz=115,slow=13,SNR=8.4						
PALK				Sn	Sn	22 41 39.5	-13
	0.9nm,0.3s,baz=297,slow=8.8,SNR=4.2						
CMAR	**Chiang Mai Arr**	**19.10**	**20**	P	**Pn**	**22 40 38.6**	**+0.1**
	0.7nm,0.3s,baz=212,slow=12,SNR=4.8						
WRA	**Warramunga Arr**	**45.94**	**119**	P	**P**	**22 44 37.5**	**+0.1**
	0.4nm,0.6s,baz=297,slow=8.6,SNR=8.3						
MKAR	**Makanchi Array**	**47.00**	**351**	P	**P**	**22 44 46.0**	**+0.7**
	0.3nm,0.5s,baz=168,slow=9.6,SNR=5.4						
SONM	**Songino Array**	**48.81**	**13**	P	**P**	**22 45 01.2**	**+1.8**
	0.7nm,0.5s,baz=190,slow=9.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**53.70**	**355**	P	**P**	**22 45 35.1**	**-0.6**
	0.6nm,0.4s,baz=178,slow=8.6,SNR=4.2						
GERES	**GERESS Array B**	**82.14**	**319**	P	**P**	**22 48 36.5**	**+1.6**
	0.4nm,0.6s,baz=108,slow=4.3,SNR=4.9						
TXAR	**Lajitas Array**	**146.74**	**26**	PKPbc	**PKPab**	**22 55 57.8**	**0.0**
	0.2nm,0.5s,baz=48,slow=1.3,SNR=2.4						

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*IDC **07** 22:47:55.2±0.5,29°.31N×142°.09E,h0^{km},mb4.3/27,mb1 4.4/29,mb1mx4.3/50,mbtmp4.3/29,ML3.5/3,MS3.9/6,Ms1 4.0/6,ms1mx3.5/42,Error ellipse: s-maj=16.0km s-min=11.7km az=89.0*

*ISCJB **07** 22:47:56.9±1.6,29°.36N±0°.03×141°.97E±0°.04,h20^{km}±11^{km},mb4.5/97,MS4.3/8,Error ellipse: s-maj=6.4km s-min=4.5km az=171.6*

*NEIC **07** 22:47:58.5±1.3,29°.26N×141°.99E,h23^{km}±9^{km},mb4.6/42,Error ellipse: s-maj=4.0km s-min=3.4km az=111.0*

*MOS **07** 22:47:58.1±1.0,29°.24N×141°.93E,h32^{km},mb4.8/51,Error ellipse: s-maj=10.6km s-min=5.7km az=116.3*

ISC 07 22:47:57.3±2.3**,29°.33N**±0°.05×**142°.01E**±0°.07**,h13**^{km}±14^{km}**,n206,**σ**1^s.13**/216**,mb4.5**/102**,MS4.2**/9**,8C-2D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.23**	**176**	Pn	**Pn**	**22 48 33.7**	**-0.2**
CBIJ				Sn	**Sn**	**22 49 02.6**	**+1.4**
JCJ	**Chichijima**	**2.23**	**176**	Pn	**Pn**	**22 48 33.7**	**-0.2**
	36nm,0.3s,baz=300,slow=17,SNR=10.0						
JCJ				Sn	**Sn**	**22 49 02.6**	**+1.3**
	77nm,0.3s,baz=210,slow=21,SNR=7.7						
MJAR	**Matsushiro Arr**	**7.87**	**337**	Pn	**Pn**	**22 49 53.2**	**+1.8**
	1.3nm,0.3s,baz=139,slow=16,SNR=35						
MJAR				Sn	**Sn**	**22 51 19.1**	**-1.3**
	baz=165,slow=10,SNR=2.4						
MJAR				LR	LR	22 52 59.9	
	comp=Z,592nm,19.2s,baz=185,slow=39						
MAJO	**Matsushiro**	**7.87**	**337**	*e*Pn	**Pn**	**22 49 52.9**	**+1.4**
MAJO	**Matsushiro**	**7.87**	**337**	*i* P	**Pn**	**22 49 51.9**	**+0.4**
MAT	**Matsushiro**	**7.87**	**337**	P	**Pn**	**22 49 53.4**	**+1.9**
MAT				*e*S	**Sn**	**22 51 19.6**	**-0.8**
MJB9	**Matsu-Tunnel**	**7.88**	**337**	*e*Pn	**Pn**	**22 49 52.2**	**+0.7**
JNU	**Nakatsue**	**10.25**	**294**	LR	LR	22 54 02.5	
	comp=Z,717nm,20.2s,baz=112,slow=36						
KSRS	**Korea Array**	**14.28**	**308**	Pn	**P**	**22 51 24.4**	**-1.9**
	0.3nm,0.3s,baz=121,slow=12,SNR=12						
KSRS				LR	LR	22 57 04.3	
	comp=Z,314nm,18.2s,baz=155,slow=38						
KSAR	**Wonju Array Be**	**14.30**	**308**	Pn	**P**	**22 51 24.4**	**-2.1**
KSAR	**Wonju Array Be**	**14.30**	**308**	P	**P**	**22 51 24.4**	**-2.1**
USRK	**Ussuriysk Ar.**	**16.86**	**334**	Pn	**Pn**	**22 51 53.6**	**+0.8**
	0.3nm,0.3s,baz=148,slow=8.9,SNR=5.5						
SSE	**Sheshan**	**18.08**	**281**	*e*Pn	**Pn**	**22 52 08.1**	**-0.1**
	118nm,1.5s						
MDJ	**Mudanjiang**	**18.17**	**330**	*e*P	**P**	**22 52 09.7**	**+0.3**
	9.9nm,0.6s						
NACB	**Ninganchiao**	**18.93**	**259**	*e*P	**P**	**22 52 15.2**	**-2.8**
	76nm,1.4s						
YULB	**Yu-li**	**19.46**	**257**	*e*P	**P**	**22 52 23.8**	**0.0**
	92nm,1.4s						
NJ2	**Nanjing**	**20.09**	**284**	*e*P	**P**	**22 52 31.8**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KLR	**Kul'dur**	**21.37**	**341**	*i* P	**P**	**22 52 45.0**	**+0.8**
KLR	**Kul'dur**	**21.37**	**341**	P	**P**	**22 52 44.3**	**0.0**
	comp=Z,3.6nm,0.7s,baz=142,slow=8.5,SNR=11						
BJT	**Baijiatuau**	**23.70**	**304**	*e*P	**P**	**22 53 09.2**	**+0.5**
	comp=Z,6.8nm,0.9s						
BJT	**Baijiatuau**	**23.70**	**304**	*e*P	**P**	**22 53 09.3**	**+0.5**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NKL	**Nikolayevsk**	**23.82**	**358**	*e*P	**P**	**22 53 09.5**	**-0.3**
SKR	**Severo-Kuril's**	**23.83**	**23**	*e*P	**P**	**22 53 03.8**	**-6.1**
SKR				pmax	pmax		
	comp=Z,63nm,1.3s						
SKR				pmax	pmax		
	comp=Z,700nm,6.7s						
SKR				pmax	pmax		
	comp=Z,2μm,5.2s						
SKR				MLR	MLR		
	comp=Z,2μm,11.0s						
SKR				MLR	MLR		
	comp=Z,1μm,20.0s						
WHN	**Wuhan**	**23.98**	**280**	P	**P**	**22 53 11.9**	**+0.4**
TGY	**Tagaytay City**	**24.69**	**237**	LR	LR	23 01 41.6	
	comp=Z,133nm,19.3s,baz=106,slow=33						
HIA	**Hailar**	**26.16**	**326**	*e*P	**P**	**22 53 31.6**	**+0.4**
	comp=Z,18nm,0.8s						
HIA	**Hailar**	**26.16**	**326**	*e*P	**P**	**22 53 31.6**	**+0.4**
HIA				pmax	pmax		
	comp=Z,18nm,0.8s						
ZEA	**Zeya**	**26.67**	**340**	*e*P	**P**	**22 53 36.4**	**+0.7**
ZEA				*e*		22 54 19.0	
ZEA				pmax	pmax		
	comp=N,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC	**Hu-ho-hao-te**	**27.30**	**303**	*e*P	**P**	**22 53 43.5**	**+1.8**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,380nm,6.4s						
ENH	**Enshi**	**28.19**	**280**	*e*P	**P**	**22 53 48.2**	**-1.4**
XAN	**Xi'an**	**28.47**	**288**	P	**P**	**22 53 53.2**	**+1.0**
XAN				pP	pwP	22 54 02.3	+2.8
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,380nm,5.9s						
XAN				LR	LR		
	comp=N,340nm,16.3s						
XAN				LR	LR		
	comp=Z,370nm,21.7s						
XAN	**Xi'an**	**28.47**	**288**	*e*P	**P**	**22 53 51.4**	**-0.7**
	comp=Z,7.2nm,0.8s						
XAN	**Xi'an**	**28.47**	**288**	*e*P	**P**	**22 53 51.4**	**-0.7**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	**Lanzhou**	**32.66**	**292**	*e*P	**P**	**22 54 29.7**	**+0.4**
LZH				pP	pwP	22 54 39.7	+3.1
LZH				sP	sP	22 54 44.7	+11
LZH				PP	**PP**	**22 55 40.6**	**-2.4**
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,93nm,4.8s						
LZH				LR	LR		
	comp=N,740nm,14.6s						
LZH				LR	LR		
	comp=E,760nm,14.5s						
LZH				LR	LR		
	comp=Z,840nm,15.8s						
CD2	**Chengdu**	**33.02**	**282**	*e*P	**P**	**22 54 31.6**	**-0.7**
SONA1	**Songino Array**	**33.03**	**314**	*e*P	**P**	**22 54 32.6**	**+0.3**
SONM	**Songino Array**	**33.03**	**314**	P	**P**	**22 54 33.0**	**+0.6**
	comp=Z,3.4nm,0.7s,baz=120,slow=7.3,SNR=21						
SONM				PcP	**PcP**	**22 57 16.7**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=111,slow=3.2,SNR=2.7						
SEY	**Seymchan**	**34.28**	**8**	*i* P	**P**	**22 54 45.3**	**+2.4**
SEY	**Seymchan**	**34.28**	**8**	P	**P**	**22 54 43.5**	**+0.7**
	comp=Z,1.5nm,0.4s,baz=75,slow=21,SNR=3.7						
BOD	**Bodaibo**	**34.49**	**334**	*e*P	**P**	**22 54 44.9**	**+0.2**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KMI	**Kunming**	**35.06**	**273**	P	**P**	**22 54 50.9**	**+0.6**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI	**Kunming**	**35.06**	**273**	*e*P	**P**	**22 54 50.2**	**-0.1**
	comp=Z,4.9nm,0.8s						
KMI	**Kunming**	**35.06**	**273**	*e*P	**P**	**22 54 50.2**	**-0.1**
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAK	**Zakamensk**	**35.86**	**317**	*e*P	**P**	**22 54 57.0**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA	**Gaotai**	**35.97**	**298**	*e*P	**P**	**22 54 56.8**	**-1.1**
GTA				pP	pP	22 55 01.3	+0.3
GTA				sP	sP	22 55 03.8	+1.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	**Talaya**	**36.14**	**319**	*e*P	**P**	**22 55 00.3**	**+1.3**
	comp=Z,20nm,0.9s						
TLY	**Talaya**	**36.14**	**319**	*i* P	**P**	**22 55 00.4**	**+1.3**
SKNT	**Sakolnakorn**	**36.90**	**259**	P	**P**	**22 55 07.1**	**+1.2**
	comp=Z,9.3nm,1.0s,comp=Z,1μm						
NONG	**Nongkai**	**37.15**	**261**	P	**P**	**22 55 09.2**	**+1.2**
	comp=Z,1.0nm,0.9s,comp=Z,147nm						
MOY	**Mondy**	**37.66**	**318**	*e*P	**P**	**22 55 12.8**	**+0.7**
MOY				pmax	pmax		
	comp=Z,10.0nm,1.8s						
CHAI	**Chaiyaphum**	**39.09**	**259**	P	**P**	**22 55 24.8**	**+0.4**
	comp=Z,26nm,0.8s,comp=Z,198nm						
UTTA	**Uttaradit**	**39.52**	**262**	P	**P**	**22 55 28.4**	**+0.4**
	comp=Z,7.9nm,0.8s,comp=Z,56nm						
PBKT	**Sadao Pong**	**39.67**	**261**	*e*P	**P**	**22 55 29.1**	**0.0**
	comp=Z,12nm,0.7s						
PBKT	**Sadao Pong**	**39.67**	**261**	P	**P**	**22 55 30.0**	**+0.8**
	comp=Z,21nm,0.7s						
CMMT	**Chiang Mai**	**40.49**	**265**	P	**P**	**22 55 36.2**	**+0.2**
	comp=Z,17nm,1.0s						
CHTO	**Chiang Mai**	**40.49**	**265**	*e*P	**P**	**22 55 35.8**	**-0.2**
	comp=Z,13nm,0.8s						
CHTO	**Chiang Mai**	**40.49**	**265**	*e*P	**P**	**22 55 35.8**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,13nm,0.8s						
CHTO	**Chiang Mai**	**40.49**	**265**	P	**P**	**22 55 36.2**	**+0.2**
	comp=Z,79nm,0.9s						
CMAR	**Chiang Mai Arr**	**40.63**	**264**	P	**P**	**22 55 37.9**	**+0.6**
	comp=Z,2.2nm,0.3s,baz=66,slow=6.2,SNR=23						
CMAR				PcP	**PcP**	**22 57 40.5**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=61,slow=2.1,SNR=5.2						
CMAR				LR	LR	23 12 35.5	
	comp=Z,232nm,18.7s,baz=106,slow=36						
CM01	**Chiang Mai Arr**	**40.63**	**264**	*e*P	**P**	**22 55 37.0**	**-0.2**
BILL	**Bilibino**	**41.33**	**14**	*e*P	**P**	**22 55 42.1**	**-0.2**
	comp=Z,2.9nm,0.8s						
BILL	**Bilibino**	**41.33**	**14**⇑	*e*P	**P**	**22 55 45.2**	**+2.9**
BILL				*e*		22 57 20.6	
BILL				*e*SS	SS	23 04 48.9	-11
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,248nm,19.0s						
UTHA	**Uthaitani**	**41.43**	**260**	P	**P**	**22 55 45.0**	**+1.2**
	comp=Z,6.0nm,0.8s						
UMPA	**Umpang Tak**	**41.65**	**261**	P	**P**	**22 55 47.6**	**+2.0**
	comp=Z,4.6nm,0.9s						
SRDT	**SRDT**	**42.26**	**259**	P	**P**	**22 55 52.8**	**+2.2**
	comp=Z,11nm,0.8s						
PHET	**Kaeng Krachan**	**42.51**	**257**	P	**P**	**22 55 55.1**	**+2.5**
	comp=Z,4.7nm,0.8s						
TIXI	**Tiksi**	**42.98**	**354**	*e*P	**P**	**22 55 55.2**	**-0.5**
	comp=Z,3.1nm,0.6s						
TIXI	**Tiksi**	**42.98**	**354**	*i* P	**P**	**22 55 58.6**	**+2.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TRTT	**Trang**	**45.11**	**250**	P	**P**	**22 56 15.9**	**+2.4**
	comp=Z,4.9nm,0.9s						
WMQ	**Urumqi**	**45.17**	**304**	*e*P	**P**	**22 56 14.8**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.7s						
WMQ				LR	LR		
	comp=N,260nm,18.5s						
WMQ				LR	LR		
	comp=E,230nm,23.1s						
WMQ				LR	LR		
	comp=Z,290nm,20.5s						
DGZ	**Jazzator, Alta**	**45.63**	**312**	*d* *i*P	**P**	**22 56 18.7**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KULM	**Kulim**	**45.79**	**247**	*e*P	**P**	**22 56 18.9**	**0.0**
	comp=Z,12nm,0.8s						
JAGI	**Jajag, Banyuwa**	**46.17**	**220**	*e*P	**P**	**22 56 21.2**	**-0.7**
	comp=Z,17nm,1.1s						
ZAA0	**Zalesovo Array**	**47.72**	**318**	*e*P	**P**	**22 56 33.7**	**+0.1**
	comp=Z,18nm,1.1s						
ZALV	**Zalesovo Beam**	**47.72**	**318**	*e*P	**P**	**22 56 33.2**	**-0.4**

ZALV				PcP	PcP	22 58 02.1	-0.5
ZALV	Zalesovo Beam	47.72	318	eP	P	22 56 33.2	-0.4
ZALV						22 58 02.2	
ZALV	Zalesovo Beam	47.72	318	P	P	22 56 33.9	+0.3
	comp=Z,8.7nm,0.9s,baz=101,slow=6.2,SNR=37						
ZALV				PcP	PcP	22 58 02.2	-0.5
	comp=Z,1.5nm,0.8s,baz=73,slow=4.8,SNR=2.9						
RAMN	Ramite	48.53	281	eP	P	22 56 39.9	-0.6
	comp=Z,3.5nm,0.3s						
JIRN	Jiri	48.69	282	eP	P	22 56 41.5	-0.4
	comp=Z,16nm,0.6s						
NVS	Novosibirsk	48.75	319	eP	P	22 56 42.6	+1.1
NVS				pmax	pmax		
	comp=Z,19nm,1.2s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.1s						
GUN	Gumba	48.88	283	eP	P	22 56 43.1	-0.3
	comp=E,10nm,0.6s						
MK01	Makanchi Array	48.95	308	eP	P	22 56 42.9	-0.3
MK31	Makanchi Array	48.96	308	eP	P	22 56 43.0	-0.3
MK31	Makanchi Array	48.96	308	eP	P	22 56 43.0	-0.3
MKAR	Makanchi Array	48.96	308	P	P	22 56 43.4	+0.1
	comp=E,6.0nm,0.8s,baz=92,slow=9.6,SNR=72						
MKAR				PcP	PcP	22 58 07.6	+0.2
	comp=E,1.8nm,0.9s,baz=90,slow=5.9,SNR=2.8						
MAKZ	Makanchi	49.17	308	eP	P	22 56 44.3	-0.6
	comp=E,6.5nm,1.3s						
MAKZ	Makanchi	49.17	308	eP	P	22 56 44.3	-0.6
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
WRAB	Tennant Creek	49.53	189	eP	P	22 56 47.0	-0.8
	comp=Z,3.4nm,0.5s						
WRAB	Tennant Creek	49.53	189	ceP	P	22 56 46.3	-1.5
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WB2	Warramunga Arr	49.53	189	eP	P	22 56 46.4	-1.4
WRA	Warramunga Arr	49.54	189	P	P	22 56 46.9	-1.0
	comp=Z,3.9nm,0.5s,baz=9.4,slow=8.1,SNR=64						
WRA				PcP	PcP	22 58 10.1	+0.5
	comp=Z,2.9nm,0.9s,baz=7.2,slow=3.8,SNR=4.6						
DMN	Daman	49.62	283	eP	P	22 56 49.0	+0.1
	comp=Z,2.8nm,0.4s						
NRIK	Noril'sk	50.52	338	P	P	22 56 55.3	+0.5
	comp=Z,6.4nm,0.8s,baz=98,slow=8.1,SNR=9.5						
DANN	Dangsing	50.56	284	eP	P	22 56 55.8	-0.3
PYUN	Piuthan	51.28	284	eP	P	22 57 01.1	-0.3
	comp=Z,19nm,0.5s						
KURK	Kurchatov	51.33	313	eP	P	22 57 01.3	+0.2
KURK	Kurchatov	51.33	313	ceP	P	22 57 00.4	-0.8
KURK				pmax	pmax		
	comp=Z,36nm,1.3s						
KDAK	Kodiak Island	52.69	38	ceP	P	22 57 13.0	+1.8
KDAK	Kodiak Island	52.69	38	P	P	22 57 10.3	-0.9
	comp=Z,5.2nm,0.8s,baz=254,slow=4.7,SNR=7.4						
IM3	Indian Mountai	53.14	27	eP	P	22 57 14.2	-0.2
AS01	Alice Springs	53.25	189	eP	P	22 57 14.6	-1.1
ASAR	Alice Springs	53.26	189	P	P	22 57 15.0	-0.7
ASAR						22 58 24.0	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	53.26	189	P	P	22 57 15.0	-0.7
	comp=Z,1.1nm,0.5s,baz=359,slow=5.5,SNR=15						
ASAR				PcP	PcP	22 58 24.0	+0.5
	comp=Z,1.1nm,0.9s,baz=6.3,slow=4.1,SNR=3.1						
NRN	Naryn	53.97	302	eP	P	22 57 21.5	+0.2
	comp=Z,5.2nm,1.1s						
NRN	Naryn	53.97	302	eP	P	22 57 21.5	+0.2
NRN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSH	Kashi	54.33	300	P	P	22 57 27.1	+3.4
KSH				pP	pwP	22 57 38.3	+7.2
KSH				PP	PP	22 59 31.9	+6.4
KSH				S	S	23 04 59.9	-1.5
KSH				sS	sS	23 05 19.8	+13
KSH	Kashi	54.33	300	SS	SS	23 08 45.8	+2.5
KSH				pmax	pmax		
	comp=Z,190nm,4.4s						
KSH				LR	LR		
	comp=N,140nm,5.2s						
KSH				LR	LR		
	comp=E,100nm,4.2s						
KSH				LR	LR		
	comp=Z,260nm,6.2s						
AAK	Ala-Archa	54.88	304	eP	P	22 57 28.0	+0.3
	comp=Z,4.6nm,1.1s						
AAK	Ala-Archa	54.88	304	ceP	P	22 57 27.0	-0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	55.84	29	P	P	22 57 33.1	-0.9
	comp=Z,1.0nm,0.8s,baz=256,slow=6.5,SNR=9.4						
IL1	Eielson Array	55.84	29	eP	P	22 57 34.0	-0.1
BRVK	Borovoye	56.37	317	eP	P	22 57 38.0	0.0
BRVK	Borovoye	56.37	317	ceP	P	22 57 39.0	+1.0
BRVK				pmax	pmax		
	comp=Z,18nm,0.8s						
KK31	Karatay Array	57.67	305	eP	P	22 57 47.3	-0.1
KK31	Karatay Array	57.67	305	eP	P	22 57 47.3	-0.1
KKAR	Karatay Array	57.67	305	eP	P	22 57 47.5	0.0
NIL	Nilore	57.81	293	eP	P	22 57 47.4	-1.2
	comp=Z,6.0nm,0.8s						
NIL	Nilore	57.81	293	eP	P	22 57 47.4	-1.2
NIL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GAR	Garm	58.72	300	eP	P	22 57 54.6	-0.4
	comp=Z,7.6nm,0.9s						
GAR	Garm	58.72	300	eP	P	22 57 54.6	-0.4
GAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STKA	Stephens Creek	60.87	180	P	P	22 58 09.0	-0.4
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	60.87	180	P	P	22 58 09.0	-0.4
	comp=Z,1.9nm,0.7s,baz=345,slow=12,SNR=3.2						
KBL	Kabul	60.91	295	eP	P	22 58 10.0	-0.2
KBL	Kabul	60.91	295	eP	P	22 58 10.0	-0.2
INK	Inuvik	61.08	25	eP	P	22 58 10.5	0.0
	comp=Z,0.9nm,0.5s						
INK	Inuvik	61.08	25	eP	P	22 58 10.5	0.0
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	Inuvik	61.08	25	P	P	22 58 10.1	-0.3
	comp=Z,0.5nm,0.5s,baz=331,slow=7.8,SNR=3.9						
FORT	Forrest	61.23	194	eP	P	22 58 11.6	-0.3
	comp=Z,16nm,0.7s						
SVE	Sverdlovsk	61.38	322	eP	P	22 58 13.6	+0.9
SVE				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARU	Arti	62.58	322	eP	P	22 58 20.5	-0.2
ARU	Arti	62.58	322	ceP	P	22 58 20.6	-0.2
ARU				pmax	pmax		
	comp=Z,18nm,1.1s						
ABKAR	Akbulak array	63.44	313	eP	P	22 58 26.5	-0.1
PRGR	Permogore	67.56	329	eP	P	22 58 52.7	-0.3
PRGR				pmax	pmax		
	comp=Z,11nm,0.9s						
SPITS	Spitsbergen Ar	68.17	350	LR	LR	23 32 17.0	
	comp=Z,229nm,19.1s,baz=20,slow=39						
GEYT	Alibeck	68.17	302	P	P	22 58 57.4	-0.1
	comp=Z,5.2nm,0.8s,baz=64,slow=6.8,SNR=8.8						
GYA0B	ALIBECK ARRAY	68.17	302	eP	P	22 58 57.9	+0.4
	comp=Z,5.9nm,0.8s						
YKA	Yellowknife Ar	70.26	29	P	P	22 59 08.9	-1.0
	comp=Z,0.6nm,0.6s,baz=294,slow=6.3,SNR=9.0						
KLMR	Klimovskoe	70.58	330	eP	P	22 59 10.9	-0.9
KLMR				pmax	pmax		
	comp=Z,12nm,1.5s						
KLMR	Klimovskoe	70.58	330	eP	P	22 59 10.9	-0.9
KLMR				AMP		22 59 13.3	
	comp=Z,12nm,1.4s						
ARCES	ARCESS Array B	71.39	341	P	P	22 59 16.9	+0.3
	comp=Z,2.6nm,0.8s,baz=46,slow=7.0,SNR=6.3						
VRH	Novokhopyorsk	73.70	320	eP	P	22 59 29.6	-1.1
VRH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPSR	Galich'ya Gora	74.60	322	eP	P	22 59 35.2	-0.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	Obninsk	74.62	325⇓	eP	P	22 59 36.7	+0.8
OBN				e		22 59 51.0	
OBN				e		23 02 27.0	
OBN				eS	S	23 09 10.9	-0.2
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,203nm,19.0s						
VSR	Storozhevoye	75.12	321	eP	P	22 59 37.6	-1.4
VSR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NEW	Newport	75.38	43	eP	P	22 59 40.2	-0.3
	comp=Z,1.8nm,0.6s						
NEW	Newport	75.38	43	P	P	22 59 40.5	0.0
	comp=Z,2.0nm,0.8s,baz=293,slow=11,SNR=3.5						
FIA1	FINESS Array S	75.89	334	eP	P	22 59 42.4	-0.8
FINES	FINESS Array B	75.89	334	P	P	22 59 43.3	+0.2
	comp=Z,2.0nm,0.5s,baz=67,slow=4.8,SNR=16						
ZEI	Tsey	76.16	311	eP	P	22 59 45.0	-0.4
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MOD	Modoc Plateau	76.29	50	eP	P	22 59 46.5	+0.4
	comp=Z,2.2nm,0.8s						
KBZ	Khabaz	76.38	313	P	P	22 59 47.4	+1.1
	comp=Z,12nm,0.8s,baz=83,slow=4.2,SNR=36						
KIV	Kislovodsk	76.42	313	eP	P	22 59 47.4	+0.8
	comp=Z,7.7nm,0.7s						
KIV	Kislovodsk	76.42	313	eP	P	22 59 48.5	+1.9
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ORV	Oroville	76.54	52	eP	P	22 59 47.4	+0.1
	comp=Z,4.4nm,1.1s						
ORV	Oroville	76.54	52	eP	P	22 59 47.4	+0.1
ORV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GNI	Garni	76.80	309	eP	P	22 59 47.8	-1.2
GNI	Garni	76.80	309	eP	P	22 59 47.8	-1.2
BMO	Blue Mountains	76.86	46	eP	P	22 59 49.2	0.0
	comp=Z,1.0nm,0.6s						
BMO	Blue Mountains	76.86	46	eP	P	22 59 49.2	0.0
BMO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMB	Columbia Colle	78.01	53	eP	P	22 59 55.4	-0.3
CMB	Columbia Colle	78.01	53	eP	P	22 59 55.4	-0.3
SUMG	Summit	78.37	0	i P	P	22 59 58.3	+0.9
	comp=Z,11nm,0.7s						
SUMG	Summit	78.37	0	i P	P	22 59 58.3	+0.9
SUMG				pmax	pmax		
	comp=Z,11nm,0.7s						
MFID	Camas Ranch	78.49	47	eP	P	22 59 57.3	-1.0
	comp=Z,4.1nm,0.8s						
KVN	Kaiserville	79.11	51	eP	P	23 00 02.2	+0.3
	comp=Z,5.1nm,0.8s						
KVN	Kaiserville	79.11	51	eP	P	23 00 02.2	+0.3
KVN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NV01	Mina Array Sit	79.27	52	eP	P	23 00 03.2	+0.4
NVAR	Mina Array Bea	79.27	52	P	P	23 00 03.8	+1.0
	comp=Z,1.9nm,0.7s,baz=284,slow=5.6,SNR=6.6						
HLID	Hailey	79.31	46	eP	P	23 00 03.0	+0.1
	comp=Z,1.1nm,0.7s						
SIRT	Sirnak	79.63	307	eP	P	23 00 04.8	+0.2
	comp=Z,19nm,0.9s						
EGMT	Eagleton	79.76	40	eP	P	23 00 05.8	+0.7
	comp=Z,1.9nm,0.4s						
FFC	Flin Flon	79.94	32	eP	P	23 00 06.2	+0.4
	comp=Z,2.9nm,0.8s						
FFC	Flin Flon	79.94	32	ceP	P	23 00 10.6	+4.8
ELK	Elko	80.19	49	P	P	23 00 07.8	-0.1
	comp=Z,1.0nm,0.6s,baz=45,slow=10.0,SNR=4.4						
YHB	Horse Butte	80.67	44	eP	P	23 00 11.3	+1.0
	comp=Z,6.9nm,0.9s						
AKASG	Malin Array Be	80.73	324	P	P	23 00 09.9	-0.3
	comp=Z,0.9nm,0.5s,baz=50,slow=5.7,SNR=7.8						
KIEV	Kiev	80.75	324	eP	P	23 00 09.6	-0.6
	comp=Z,2.6nm,0.5s						
KIEV	Kiev	80.75	324	eP	P	23 00 09.6	-0.6
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
H17A	Grant Village	81.24	44	eP	P	23 00 13.7	+0.3
	comp=Z,4.4nm,0.8s						
NB2	NORSAR Subarra	81.49	338	P	P	23 00 13.7	-0.4
	comp=Z,7.2nm,1.2s,baz=43,slow=5.3						
NOA	NORSAR Array B	81.49	338	P	P	23 00 13.9	-0.2
	comp=Z,0.9nm,0.7s,baz=56,slow=6.4,SNR=4.9						
SUW	Suwalki	81.67	328	eP	P	23 00 15.2	+0.1
	comp=Z,14nm,0.8s						
SUW	Suwalki	81.67	328	eP	P	23 00 15.2	+0.1
SUW				pmax	pmax		
	comp=Z,14nm,0.8s						
DUG	Dugway, Tooele	82.06	48	eP	P	23 00 17.6	0.0
	comp=Z,3.0nm,0.6s						
DUG	Dugway, Tooele	82.06	48	eP	P	23 00 17.6	0.0
DUG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PDAR	Pinedale Array	82.74	45	eP	P	23 00 21.1	-0.2
PDAR	Pinedale Array	82.74	45	P	P	23 00 21.9	+0.6
	comp=Z,0.8nm,0.7s,baz=286,slow=3.4,SNR=6.1						
SRU	San Rafael Swe	84.13	48	eP	P	23 00 27.0	-1.4
	comp=Z,8.9nm,0.7s						
SRU	San Rafael Swe	84.13	48	eP	P	23 00 27.0	-1.4
SRU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BR131	Keskin Array S	84.38	313	eP	P	23 00 29.4	-0.2
BRTR	Keskin Array B	84.38	313	P	P	23 00 29.9	+0.3
	comp=Z,7.0nm,0.9s,baz=98,slow=3.4,SNR=27						
K22A	Casper	84.66	44	eP	P	23 00 31.5	+0.5
	comp=Z,9.2nm,0.8s						
BUR04	Bucovina Ar. S	84.69	323	eP	P	23 00 30.3	-0.7
CLL	Collm	88.03	331	esP	sP	23 00 57.0	+5.5
GERES	GERESS Array B	89.53	329	P	P	23 00 54.0	-0.4
GERES	GERESS Array B	89.53	329	P	P	23 00 54.0	-0.4
	comp=Z,0.3nm,0.5s,baz=17,slow=7.2,SNR=4.5						
TXAR	Lajitas Array	94.39	53	P	P	23 01 17.9	+0.6
	comp=Z,1.2nm,0.8s,baz=294,slow=2.5,SNR=4.5						
QSPA	South Pole Qui	119.09	180	ePKPdf	PKPdf	23 06 44.9	-0.2
TORD	Torodi Ar. Bea	122.99	312	PKP	PKiKP	23 06 54.8	+0.5
	comp=Z,0.7nm,1.0s,baz=343,slow=4.5,SNR=2.7						
SDV	Santo Domingo	130.68	45	ePKPdf	PKPdf	23 07 08.8	-0.3
NNA	Nana	140.00	73	ePKPdf	PKPdf	23 07 26.2	0.0
NNA	Nana	140.00	73	ePKIKP	PKPdf	23 07 26.2	0.0
LPAZ	La Paz	149.44	72	ePKPbc	PKPbc	23 07 47.8	+0.3
LPAZ	La Paz	149.44	72	ePKP2	PKPbc	23 07 47.8	+0.3
LCO	Las Campanas	151.49	97	ePKPbc	PKPbc	23 07 51.2	-0.5
LCO	Las Campanas	151.49	97	ePKIKP	PKPbc	23 07 51.2	-0.5

IDC 07 22:55:35.9±1.7**, 11°.00S**×**165°.53E, h0km, mb3.8**/3**, mb1 4.1**/5**, mbmx3.7**/45**, mbtmp4.0**/5**, ML4.2**/2**, Error ellipse: s-maj=41.2km s-min=30.4km az=134.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.71	285	Pn	Pn	22 57 02.7	+0.7
	10nm,0.3s,baz=256,slow=14,SNR=2.9						
DZM	Mont Dzumac	11.04	176	Pn	Pn	22 58 16.1	+0.8
	1.1nm,0.3s,baz=356,slow=19,SNR=9.7						
WRA	Warramunga Arr	31.30	250	P	P	23 01 58.2	+0.1
	1.5nm,0.7s,baz=81,slow=8.8,SNR=7.8						
ASAR	Alice Springs	32.62	243	P	P	23 02 09.1	-0.6
	1.3nm,0.8s,baz=71,slow=9.6,SNR=9.4						
ILAR	Eielson Array	83.54	19	P	P	23 08 05.4	0.0
	0.2nm,0.5s,baz=219,slow=6.9,SNR=3.7						

IDC 07 22:57:10.9±17.0**, 19°.21S**×**176°.43W, h376km**±66km**, mb3.4**/4**, mb1 3.6**/6**, mb1mx3.2**/42**, mbtmp4.3**/6**, Error ellipse: s-maj=228.6km s-min=29.8km az=50.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.28	257	P	P	23 00 38.0	-0.3
	1.3nm,0.3s,baz=81,slow=19,SNR=8.5						
URZ	Urewera	19.79	195	P	P	23 01 14.7	-0.2
	2.0nm,0.3s,baz=0.0,slow=4.0,SNR=10						
CTA	Charters Tower	35.10	262	P	P	23 03 30.7	+0.2
	2.3nm,0.3s,baz=95,slow=12,SNR=5.2						
CTA				ScP	ScP	23 09 01.3	-0.6
	2.6nm,0.4s,baz=153,slow=6.8,SNR=4.1						
STKA	Stephens Creek	39.68	243	P	P	23 04 08.2	-0.2
	1.0nm,0.4s,baz=102,slow=12,SNR=2.9						
WRA	Warramunga Arr	46.25	260	P	P	23 05 00.4	-0.2
	0.6nm,0.4s,baz=95,slow=7.7,SNR=15						
ASAR	Alice Springs	46.26	255	P	P	23 05 00.6	-0.1
	2.8nm,0.6s,baz=94,slow=8.2,SNR=29						

*ISCJB **07** 23:03:16.5±0.8, 3°.8S±0°.1×150°.7E±0°.3, h450km, mb3.5/10, Error ellipse: s-maj=38.1km s-min=12.6km az=15.0*

*IDC **07** 23:03:17.2±2.0, 3°.82S×150°.67E, h444km±20km, mb3.3/10, mb1 3.5/11, mb1mx3.3/32, mbtmp4.1/11, Error ellipse: s-maj=28.8km s-min=13.5km az=106.0*

ISC 07 23:03:17.5±0.8**, 3°.8S**±0°.1×**150°.8E**±0°.3**, h450km, n13, σ0^s.67**/17**, mb3.7**/10**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	16.74	195	P	P	23 06 48.3	+1.2
	1.6nm,0.3s,baz=16,slow=11,SNR=12						
WRA	Warramunga Arr	22.64	224	P	P	23 07 42.7	-0.3
	1.4nm,0.5s,baz=49,slow=10,SNR=13						
WRA				PcP	PcP	23 11 19.7	+0.1
	0.9nm,0.6s,baz=40,slow=2.1,SNR=7.5						
WRA				ScP	ScP	23 14 14.3	0.0
	1.2nm,1.0s,baz=42,slow=2.2,SNR=5.1						
ASAR	Alice Springs	25.57	218	P	P	23 08 08.1	-1.0
	1.0nm,0.5s,baz=53,slow=8.8,SNR=9.3						
ASAR				PcP	PcP	23 11 26.1	0.0
	0.6nm,0.5s,baz=30,slow=2.8,SNR=5.2						
ASAR				ScP	ScP	23 14 22.9	+0.5
	1.4nm,0.9s,baz=46,slow=3.6,SNR=9.4						
STKA	Stephens Creek	29.19	196	P	P	23 08 40.8	-0.1
	0.9nm,0.4s,baz=41,slow=14,SNR=4.4						
PETK	Petropavlovsk-	57.04	5	P	P	23 12 19.6	+0.6
	2.5nm,0.5s,baz=166,slow=7.8,SNR=6.2						
SONM	Songino Array	64.44	329	P	P	23 13 09.5	+1.0
	0.3nm,0.5s,baz=159,slow=3.9,SNR=4.4						
MKAR	Makanchi Array	78.28	319	P	P	23 14 29.9	+0.1
	0.4nm,0.6s,baz=102,slow=7.3,SNR=7.4						
ZALV	Zalesovo Beam	79.24	327	P	P	23 14 34.1	-0.7
	1.1nm,0.6s,baz=112,slow=7.2,SNR=5.5						
ILAR	Eielson Array	82.05	23	P	P	23 14 48.4	-0.9
	3.5nm,0.7s,baz=249,slow=5.3,SNR=48						
NRIK	Noril'sk	84.41	341	P	P	23 15 00.6	-0.4
	1.2nm,0.5s,baz=102,slow=5.8,SNR=5.0						
YKA	Yellowknife Ar	95.53	28	P	P	23 15 53.4	+0.5
	0.3nm,0.6s,baz=277,slow=4.8,SNR=7.1						
TORD	Torodi Ar. Bea	148.08	289	PKPbc	PKPbc	23 22 12.0	-0.6
	1.9nm,0.9s,baz=56,slow=2.7,SNR=9.2						
PTGA	Pitinga	148.96	98	PKPbc	PKiKP	23 22 15.7	-0.3
	5.6nm,0.6s,baz=278,slow=5.6,SNR=15						

*ISCJB **07** 23:19:04.5±0.2, 53°.46N±0°.01×6°.45E±0°.03, h0km, mb3.4/1, Error ellipse: s-maj=2.2km s-min=1.6km az=8.2*

*BNS **07** 23:19:07.1±1.4, 53°.54N×6°.62E, h2km±8km, ML3.1*

*IDC **07** 23:19:07.7±1.2, 53°.19N×6°.25E, h0km, mb3.2/1, mb1 3.6/9, mb1mx3.3/48, mbtmp3.4/9, ML3.0/6, Error ellipse: s-maj=19.9km s-min=14.1km az=67.0*

*NEIC **07** 23:19:08.3±0.4, 53°.41N×6°.62E, h10km, ML3.2(SZGRF), ML3.4(BGS), Error ellipse: s-maj=6.8km s-min=4.8km az=93.0*

NEIC Felt at Groningen, Groot Wetsinge, Hoofdplaat and Usquert.

*LDG **07** 23:19:09.3±0.1, 53°.41N×6°.53E, h3km, Md3.5/2, Ml3.5/32, Error ellipse: s-maj=1.8km s-min=1.3km az=111.0*

*BGR **07** 23:19:09.3±0.4, 53°.36N×6°.67E, h5km, ML3.2/15, Error ellipse: s-maj=6.7km s-min=3.3km az=123.0*

*BGS **07** 23:19:09.6±1.2, 53°.59N×6°.60E, h5km, ML3.4, ML3.4*

*UPP **07** 23:19:11.9±2.3, 53°.61N×7°.02E, h0km, ML2.8, Suspected explosion*

*PRU **07** 23:19:12.2±0.0, 53°.43N×6°.97E, h7km*

*NAO **07** 23:19:13.4±4.5, 53°.84N×6°.16E, h10km±23km, ML2.9*

ISC 07 23:19:05.9±0.5**, 53°.45N**±0°.03×**6°.61E**±0°.02**, h0km, n189, σ2^s.55**/306**, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENM4	Eenrum	0.09	243	ePg	Pg	23 19 11.9	+4.4
	baz=80						
ENM4				eSg	Sg	23 19 14.6	+6.0
SPY4	Spijk (Roodesc	0.11	108	eSg	Sg	23 19 13.7	+4.3
WDB4	Woudbloem 4	0.25	162	eSg	Sg	23 19 17.0	+3.2
NIW4	Wetzens (Niawi	0.35	255	ePg	Pn	23 19 17.7	-0.5
	baz=79						
NIW4				eSg	Sb	23 19 24.3	+3.3
ZL24	Zuidlaardervee	0.36	166	eSg	Sb	23 19 22.2	+0.8
ZLV4	Zuidlaardervee	0.36	166	eSg	Sb	23 19 22.2	+0.7
FSW4	Finsterwolde 4	0.38	127	eSg	Sb	23 19 21.9	-0.1
HWF4	Haulerwijk	0.41	203	ePg	Pb	23 19 17.1	+1.2
	baz=29						
HWF4				eSg	Sb	23 19 24.1	+1.5
ENV4	Elp / Enerveen	0.55	178	ePg	Pb	23 19 19.5	+1.1
	baz=3.2						
WIT	Witteveen	0.63	177	P	Pb	23 19 21.1	+1.3
WIT	Witteveen	0.63	177	ePg	Pb	23 19 21.4	+1.6
VBG4	Venebrugge (Br	0.90	178	ePg	Pn	23 19 26.2	+0.4
	baz=0.6						
HLG	Helgoland	1.06	45	Pg	Pn	23 19 30.3	+2.3
HLG				Sg	Sn	23 19 46.5	+3.0
HLG	Helgoland	1.06	45	ePg	Pn	23 19 30.3	+2.3
HLG				eSg	Sn	23 19 46.4	+3.0
IBBN	Ibbenburen	1.33	148	ePg	Pn	23 19 33.5	+1.8
IBBN				eSg	Sn	23 19 51.1	+0.9
WTSB	Winterswijk	1.49	175	ePn	Pn	23 19 34.3	+0.5
WTSB				eSg	Sg	23 19 53.2	-0.3
WTSB	Winterswijk	1.49	175	ePn	Pn	23 19 34.2	+0.5
	83nm,0.5s						
WTSB				ePg	Pb	23 19 39.2	+4.9
	133nm,0.5s						
WTSB				eSg	Sn	23 19 54.4	+0.6
WTSB				eSg	Sn	23 19 54.4	+0.6
RETH	Rethem/Aller,	1.81	112	ePn	Pb	23 19 39.7	-0.1
RETH				eSg	Sg	23 20 06.1	+2.3
BUG	Bochum--Univer	2.05	168	ePn	Pn	23 19 42.5	+1.0
BUG				ePg	Pg	23 19 46.9	+1.8
LAUG	Laupendahl	2.11	174	ePn	Pn	23 19 42.5	+0.1
LAUG				eSn	Sn	23 20 10.2	+1.0
	99nm,0.2s						
BSEG	Bad Segeberg	2.26	76	ePn	Pb	23 19 47.3	-0.2
BSEG				eSn	Sn	23 20 12.1	-0.9
HKB	Herkenbosch	2.28	187	Pn	Pn	23 19 45.6	+0.9
HKB				Pg	Pg	23 19 53.5	+4.1
HKB				Sg	Sg	23 20 26.9	+7.9
RODG	Roetgen-Dahlhe	2.32	187	ePn	Pn	23 19 46.8	+1.5
NRDL	Niedersach Rie	2.32	113	ePn	Pn	23 19 47.0	+1.8
BMOL	Mol	2.42	203	Pn	Pn	23 19 48.1	+1.5
BMOL				Pg	Pg	23 19 57.3	+5.0
BDSL	Dessel	2.42	204	Pn	Pn	23 19 38.2	-8.5
BDSL				Pg	Pg	23 19 53.4	+1.1
BDSL				Sg	Sg	23 20 26.1	+2.4
HOBG	Hohbusch	2.50	169	ePn	Pn	23 19 48.1	+0.3
BNS	Bensberg	2.51	172	ePn	Pn	23 19 48.5	+0.6
BEBN	Eben Emael	2.71	193	Pn	Pn	23 19 51.9	+1.2
BEBN				Pg	Pg	23 19 58.6	+0.7
BEBN				Sg	Sg	23 20 36.1	+3.1
	comp=E,47nm,0.0s						
HGN	Heimansgroeve	2.72	189	ePn	Pn	23 19 50.8	+0.1
HGN	Heimansgroeve	2.72	189	ePn	Pn	23 19 50.5	-0.2
	comp=E,30nm,1.1s						
HGN				ePg	Pg	23 19 58.6	+0.6
	comp=E,36nm,0.5s						
DREG	Dreilaegerbach	2.80	185	ePn	Pn	23 19 52.2	+0.4
GTTG	Gvttingen	2.80	131	ePn	Pn	23 19 53.4	+1.5
CLZ	Clausthal	2.80	123	ePn	Pn	23 19 53.1	+1.1
KLL	Kalltalsperre	2.81	184	ePn	Pn	23 19 52.4	+0.4
STB	Steinbach	2.86	177	ePn	Pn	23 19 54.2	+1.5
MEM	Membach	2.86	188	Pn	Pn	23 19 52.9	+0.1
MEM				Pg	Pg	23 20 01.5	+0.8
MEM				Sg	Sg	23 20 39.0	+1.1
MEM	Membach	2.86	188	ePn	Pn	23 19 52.9	+0.1
MEM				ePg	Pg	23 20 01.7	+1.0
BLCH	La Chartreuse	2.88	193	Pn	Pn	23 19 53.0	0.0
BLCH				Pg	Pg	23 20 07.9	+6.9
BLCH				Sn	Sg	23 20 43.0	+4.7
BLCH				Sg	Sb	23 20 53.8	+20
AHRW	Bad Neuenahr-A	2.92	174	ePn	Pn	23 19 54.5	+1.0
BSTI	Sart Tilman	2.94	193	Pn	Pn	23 19 53.9	+0.1
UCC	Uccle	2.99	209	ePn	Pn	23 19 55.5	+1.0
UCC	Uccle	2.99	209	Pn	Pn	23 19 56.1	+1.6
UCC	Uccle	2.99	209	ePn	Pn	23 19 56.2	+1.6
BCES	Court-Saint-Et	3.11	205	Pn	Pn	23 19 57.3	+1.2
BHOU	Houvegnez	3.12	187	Pn	Pn	23 19 56.7	+0.4
BHOU				Pg	Pb	23 20 03.1	+1.0
BHOU				Sn	Sn	23 20 33.4	-0.8
BHOU				Sg	Sb	23 20 41.8	+1.0
	comp=Z,32nm,0.0s						
HILG	Hillesheim	3.16	179	ePn	Pn	23 19 58.0	+1.2
BRQR	Ronquire	3.20	208	Pn	Pn	23 19 58.4	+1.0

BGES	Gesves	3.21	198	Pn	Pn	23 19 58.1	+0.6
BGES				Pg	Pg	23 20 09.5	+2.2
BGES				Sg	Sg	23 20 54.1	+5.3
	comp=E,40nm,0.0s						
BSKQ	Steenkerk	3.21	210	Pn	Pn	23 19 58.1	+0.6
BSKQ				Sn	Sn	23 20 35.7	-0.7
SNF	Seneffe	3.27	207	Pn	Pn	23 19 59.6	+1.2
SNF				Pg	Pg	23 20 09.1	+0.6
BGG	Burgeitz	3.27	172	ePn	Pn	23 19 59.5	+1.1
BMRD	Maredsous	3.35	201	Pn	Pn	23 19 59.8	+0.4
BMRD				Pg	Pg	23 20 12.5	+2.5
BMRD				Sg	Sg	23 20 57.1	+3.8
MUD	Monsted U'grnd	3.36	25	i P	Pn	23 20 01.5	+1.9
UBBA	Unterbreizbach	3.36	140	ePn	Pn	23 20 00.4	+0.9
LKLB	Kalborn	3.36	185	Pn	Pn	23 20 00.4	+0.7
LKLB				Pg	Pg	23 20 10.6	+0.2
LKLB				Sn	Sn	23 20 38.5	-1.7
LKLB				Sg	Sg	23 20 55.9	+2.0
TNS	Taunus Mts	3.42	160	ePn	Pn	23 20 02.1	+1.6
TNS				eSn	Sn	23 20 40.3	-1.5
BBOU	Bougnies	3.48	209	Pn	Pn	23 20 02.8	+1.7
BBOU				Pg	Pg	23 20 17.8	+5.3
LVIA	Vianden	3.52	184	Pn	Pn	23 20 02.6	+0.8
GIVF	Givet	3.53	199	ePn	Pn	23 20 02.8	+0.9
	SNR=1.0						
GIVF				eSn	Sn	23 20 41.9	-2.4
GIVF				eSg	Sg	23 20 58.7	-0.4
	comp=E,57nm,0.5s						
DOU	Dourbes	3.58	201	Pn	Pn	23 20 03.5	+0.9
DOU				Pg	Pg	23 20 20.5	+6.1
DOU				Sn	Sn	23 20 44.2	-1.3
DOU				Sg	Sg	23 21 08.1	+7.3
	comp=N,42nm,0.0s						
WACR	West Acre	3.68	261	eP	Pn	23 20 06.2	+2.3
WACR				eS	Sn	23 20 48.1	+0.2
WACR				IAML		23 20 51.4	
	comp=N,41nm,0.3s						
WACR				IAML		23 20 52.3	
	comp=E,37nm,0.2s						
BAIF	Baives	3.70	205	ePn	Pn	23 20 05.1	+0.8
	SNR=1.0						
BAIF				eSn	Sn	23 20 45.4	-3.2
BAIF				eSg	Sg	23 21 03.3	-1.5
	comp=E,68nm,0.8s						
WLF	Walferdange	3.80	184	ePn	Pn	23 20 05.8	+0.2
WLF				ePg	Pg	23 20 18.5	-0.1
WLF	Walferdange	3.80	184	Pn	Pg	23 20 18.6	-0.1
WLF	Walferdange	3.80	184	ePn	Pn	23 20 05.8	+0.2
WLF				ePg	Pg	23 20 18.8	+0.2
RGN	Rugen	4.11	72	ePn	Pn	23 20 12.4	+2.5
LMK	Market Rasen	4.15	273	P	Pn	23 20 12.7	+2.4
LMK				S	Sn	23 20 59.7	+0.2
LMK	Market Rasen	4.15	273	eP	Pn	23 20 12.7	+2.4
LMK				eS	Sn	23 20 59.7	+0.2
LMK				IAML		23 21 03.5	
	comp=E,81nm,0.3s						
LMK				IAML		23 21 09.7	
	comp=N,89nm,0.3s						
CLL	Collm	4.46	116	ePn	Pn	23 20 16.6	+1.9
CLL	Collm	4.46	116	ePn	Pn	23 20 17.0	+2.2
CLL				i		23 20 18.2	
CLL				ePg	Pg	23 20 40.0	+8.6
CLL				eSn	Sn	23 21 04.0	-3.4
CLL				eSg	Sg	23 21 31.0	+1.8
	comp=Z,9.0nm,0.9s						
CLL				e		23 21 40.0	
GDLE	Glaisdale, N Y	4.50	286	eP	Pn	23 20 17.8	+2.6
GDLE				IAML		23 21 14.5	
	comp=E,63nm,0.6s						
GDLE				IAML		23 21 28.9	
	comp=N,70nm,0.4s						
LUNU	Lund	4.54	58	P	Pn	23 20 17.1	+1.2
LUNU				S	Sn	23 21 07.3	-2.0
BJUU	Bjuv	4.55	52	P	Pn	23 20 17.5	+1.6
BJUU				S	Sn	23 21 07.8	-1.7
TANN	Tannenbergstha	4.72	128	ePn	Pn	23 20 20.3	+1.9
GRA1	Grafenberg Arr	4.73	141	ePn	Pn	23 20 16.5	-2.0
GRF	Grafenberg Arr	4.73	141	ePn	Pn	23 20 16.8	-1.7
GRFO	Grafenberg	4.73	141	ePn	Pn	23 20 17.1	-1.4
WERN	Wernitzgruen	4.77	129	ePn	Pn	23 20 20.7	+1.6
CWF	Charnwood Fore	4.82	265	P	Pn	23 20 21.6	+1.9
CWF				S	Sn	23 21 14.7	-1.5
CWF	Charnwood Fore	4.82	265	eP	Pn	23 20 21.6	+1.9
CWF				eS	Sn	23 21 14.7	-1.5
CWF				IAML		23 21 16.8	
	comp=N,20nm,0.3s						
CWF				IAML		23 21 22.0	
	comp=E,16nm,0.3s						
SNART	Snartemo	4.92	4	eP	Pn	23 20 23.4	+2.4
SNART				eS	Sn	23 21 18.2	-0.3
SNART				IAML		23 21 23.1	
	comp=Z,10nm,0.4s						
PAGF	Fort de Pagny	4.93	187	ePn	Pn	23 20 21.6	+0.5
PAGF	Fort de Pagny	4.93	187	ePg	Pg	23 20 39.4	-0.9
PAGF				eSg	Sg	23 21 42.9	-1.2
	comp=Z,115nm,0.8s,baz=3.9						
STU	Stuttgart	4.95	160	ePn	Pn	23 20 20.6	-1.0
ONAU	Onsala	4.98	35	P	Pn	23 20 23.2	+1.4
ONAU				S	Sn	23 21 17.8	-2.3
FABU	Falkenberg	4.99	42	P	Pn	23 20 23.4	+1.5
FABU				S	Sn	23 21 17.5	-2.9
MEZF	Maizieres J'vi	5.05	192	ePn	Pn	23 20 23.0	+0.2
	baz=9.5,SNR=1.0						
MEZF				eSn	Sn	23 21 18.8	-2.9
	baz=9.6						
MEZF				eSg	Sg	23 21 45.6	-2.3
	comp=Z,36nm,0.7s						
CDF	Champ du Feu	5.06	175	ePn	Pn	23 20 23.3	+0.3
	SNR=1.0						
CDF	Champ du Feu	5.06	175	ePg	Pg	23 20 42.9	+0.2
CDF				eSn	Sn	23 21 19.3	-2.8
	comp=Z,9.8nm,0.6s,SNR=1.0						
CDF				eSg	Sg	23 21 47.4	-0.8
	comp=Z,13nm,0.6s						
CDF	Champ du Feu	5.06	175	Pn	Pn	23 20 21.8	-1.2
BSD	Bornholm Skovb	5.15	68	i P	Pn	23 20 25.0	+0.9
BSD				i S	Sn	23 21 21.2	-2.9
DEL	Delary	5.17	51	P	Pn	23 20 25.9	+1.5
DEL				S	Sn	23 21 22.0	-2.6
BRG	Berggiesshubel	5.20	117	PN	Pn	23 20 26.1	+1.3
BRG				PG	Pg	23 20 58.5	+13
BRG				SN	Sn	23 21 32.0	+6.6
BRG				SG	Sg	23 22 04.4	+12
	comp=Z,8.1nm,1.2s						
EDMD	Edmundbyers	5.23	289	eP	Pn	23 20 27.2	+1.9
EDMD				eS	Sn	23 21 22.8	-3.4
EDMD				IAML		23 21 28.7	
	comp=N,37nm,0.4s						
EDMD				IAML		23 21 29.1	
	comp=E,30nm,0.2s						
BFO	Black Forest	5.24	167	ePn	Pn	23 20 26.2	+0.8
BFO	Black Forest	5.24	167	ePn	Pn	23 20 25.9	+0.5
ECH	Echery	5.25	176	ePn	Pn	23 20 25.7	+0.1
SFTF	Sexfontaines	5.34	191	ePn	Pn	23 20 27.7	+0.9
	baz=9.5						
SFTF	Sexfontaines	5.34	191	ePg	Pg	23 20 46.8	-1.4
SFTF				eSn	Sn	23 21 25.1	-3.9
SFTF				eSg	Sg	23 21 55.2	-2.1
	comp=E,7.3nm,0.3s						
TJOU	Tjoern	5.40	30	P	Pn	23 20 28.9	+1.3
TJOU				S	Sn	23 21 27.2	-3.2
HAU	Haudompre	5.45	182	ePn	Pn	23 20 28.4	+0.1
HAU	Haudompre	5.45	182	ePg	Pg	23 20 49.4	-0.8
HAU				eSg	Sg	23 21 59.6	-1.2
	comp=E,8.5nm,0.4s						
HINF	Hinteralfeld	5.64	178	ePn	Pn	23 20 32.0	+1.1
HINF	Hinteralfeld	5.64	178	ePg	Pg	23 20 53.8	-0.1
HINF				eSg	Sg	23 22 04.7	-2.2
	comp=E,6.8nm,0.5s						
KMY	Karmoy	5.83	353	eP	Pn	23 20 34.3	+0.8
KMY				eS	Sn	23 21 38.2	-2.7
KMY				IAML		23 21 44.5	
	comp=Z,6.4nm,0.3s						
VANU	Vaenersborg	5.92	29	P	Pn	23 20 36.3	+1.7
VANU				S	Sn	23 21 40.1	-2.9
BLS5	Blasjo	5.99	359	eP	Pn	23 20 38.3	+2.5
EKA	Eskdalemuir Ar	6.01	292	Pn	Pn	23 20 37.7	+1.7
EKA				Sn	Sn	23 21 42.4	-3.1
EKA	Eskdalemuir Ar	6.01	292	Pn	Pn	23 20 37.2	+1.2
	baz=111,slow=14,SNR=58						
EKA				Sn	Sn	23 21 44.1	-1.3
	baz=110,slow=27,SNR=6.8						
EKA	Eskdalemuir Ar	6.01	292	Pn	Pn	23 20 37.7	+1.7
EKA				Sn	Sn	23 21 42.4	-3.1
ESK	Eskdalemuir	6.03	292	ePn	Pn	23 20 38.1	+1.8
ESK				eSn	Sn	23 21 46.1	+0.1
ESK	Eskdalemuir	6.03	292	eP	Pn	23 20 37.9	+1.6
ESK				IAML		23 21 50.0	
	comp=E,9.5nm,0.3s						
ESK				IAML		23 21 53.4	
	comp=N,11nm,0.3s						
CLF	Chambon-Foret	6.09	209	ePn	Pn	23 20 37.7	+0.6
KHC	Kasperske Hory	6.14	132	ePn	Pn	23 20 40.7	+2.8
KHC	Kasperske Hory	6.14	132	ePN	Pn	23 20 40.7	+2.8
STRU	Stroemstad	6.16	23	eP	Pn	23 20 39.6	+1.7
STRU				eS	Sn	23 21 45.4	-3.5
STRU	Stroemstad	6.16	23	P	Pn	23 20 39.0	+1.1
STRU				S	Sn	23 21 44.8	-4.2
DRUM	Mains of Drumt	6.26	307	eP	Pn	23 20 41.2	+1.8
DRUM				eS	Sn	23 21 47.1	-4.4
DRUM				IAML		23 21 52.9	
	comp=E,18nm,0.5s						
DRUM				IAML		23 21 55.1	
	comp=N,13nm,0.5s						
GEC2	GERESS Array S	6.41	133	ePn	Pn	23 20 43.8	+2.2
GERES	GERESS Array B	6.41	133	Pn	Pn	23 20 43.2	+1.6
	comp=N,0.4nm,0.3s,baz=312,slow=15,SNR=12						
GERES				Sn	Sn	23 21 52.1	-3.4
	comp=N,0.2nm,0.3s,baz=309,slow=25,SNR=3.4						
GERES				Lg	Lg	23 22 32.3	
	comp=N,0.2nm,0.3s,baz=317,slow=30,SNR=2.6						
GEA0	GERESS Array S	6.42	133	ePn	Pn	23 20 43.9	+2.2
LOR	Lormes	6.43	197	ePn	Pn	23 20 41.8	0.0
	baz=22,SNR=1.0						
LOR				eSn	Sn	23 21 50.8	-5.0
	comp=N,7.5nm,0.4s,SNR=1.0						
LOR				eSg	Sg	23 22 29.1	-3.1
	comp=N,32nm,0.8s						
KONO	Kongsberg	6.44	14	ePn	Pn	23 20 42.8	+0.9
KONO	Kongsberg	6.44	14	eP	Pn	23 20 42.6	+0.9
LDF	La Druitiere	6.45	224	ePn	Pn	23 20 41.2	-0.8
	SNR=1.0						
LDF	La Druitiere	6.45	224	ePg	Pg	23 21 06.3	-3.1
LDF				eSn	Sn	23 21 51.4	-4.9
	comp=N,9.2nm,0.5s,SNR=1.0						
LDF				eSg	Sg	23 22 28.1	-4.8
	comp=N,5.3nm,0.3s						
FLN	La Foliniere	6.47	226	ePn	Pn	23 20 41.7	-0.6
	baz=44,SNR=1.0						
FLN				eSn	Sn	23 21 52.0	-4.8
	comp=N,12nm,0.4s,SNR=1.0						
FLN				eSg	Sg	23 22 28.7	-4.9
	comp=N,5.2nm,0.3s						
ODD1	Odda	6.48	0	eP	Pn	23 20 45.2	+2.7
DAVA	Damuels	6.51	160	Pn	Pn	23 20 46.2	+3.2
	comp=N,0.4nm,0.2s						
DAVA				Sg	Sg	23 22 43.5	+8.6
	comp=N,6.6nm,0.8s						
UPC	Upice	6.51	113	ePN	Pn	23 20 45.5	+2.6
UPC				eSN	Sn	23 21 54.6	-3.2
RETA	Reutte	6.53	154	ePn	Pn	23 20 44.2	+1.1
	comp=N,0.6nm,0.2s						
HYF	Humbligny	6.68	204	ePn	Pn	23 20 45.0	-0.2
HYF				eSn	Sn	23 21 56.9	-5.2
SSF	Saint Saulge	6.69	199	ePn	Pn	23 20 45.1	-0.3
	SNR=1.0						
SSF				eSn	Sn	23 21 57.2	-5.1
	comp=N,7.7nm,0.6s,SNR=1.0						
SSF				eSg	Sg	23 22 36.9	-3.8
	comp=N,18nm,0.7s						
MOTA	Moosalm	6.75	153	ePn	Pn	23 20 47.3	+1.0
	comp=N,1.3nm,0.3s						
MOTA				Sg	Sg	23 22 47.7	+5.2
	comp=N,0.1nm,0.2s						
CABF	La Chapelle	6.85	183	ePn	Pn	23 20 47.8	+0.2
	SNR=1.0						
CABF				eSn	Sn	23 22 01.8	-4.5
	comp=N,7.7nm,0.6s						
SQTA	Sankt Quirin	6.89	153	ePn	Pn	23 20 49.4	+1.2
	comp=N,0.6nm,0.2s						
GRR	Gorron	6.92	226	ePn	Pn	23 20 47.8	-0.7
	SNR=1.0						
GRR				eSn	Sn	23 22 01.3	-6.5
GRR				eSg	Sg	23 22 42.5	-5.5
	comp=N,8.4nm,0.4s						
FETA	Feichten	6.95	156	i Pn	Pn	23 20 50.2	+1.1
	comp=N,0.5nm,0.2s						
AVF	Avril sur Loir	6.98	199	ePn	Pn	23 20 49.1	-0.2
	SNR=1.0						
AVF				eSn	Sn	23 22 03.4	-6.0
	comp=N,2.1nm,0.4s						
BER	Bergen	6.99	355	eP	Pn	23 20 50.0	+0.6
DAVOX	Davos/Dischmat	7.00	161	Pn	Pn	23 20 50.8	+1.1
	comp=N,0.2nm,0.3s,baz=163,slow=19,SNR=4.3						
SMF	Signal de Mont	7.04	196	ePn	Pn	23 20 49.8	-0.3
	SNR=1.0						
SMF				eSn	Sn	23 22 05.6	-5.1
	comp=N,6.1nm,0.6s						
ASK	Askoy	7.10	354	eP	Pn	23 20 51.2	+0.3
SENIN	Lac Senin/Sane	7.10	176	ePn	Pn	23 20 52.7	+1.5
BGF	Bois d'Agland	7.31	201	ePn	Pn	23 20 53.6	-0.2
	SNR=1.0						
BGF				eSn	Sn	23 22 11.2	-6.2
	comp=N,13nm,0.4s,SNR=1.0						
KBA	Koelnbreinsper	7.70	143	ePn	Pn	23 21 02.0	+2.8
	comp=N,2.4nm,0.5s						
KBA				eSn	Sn	23 22 24.8	-2.3
	comp=N,2.1nm,0.7s						
SUE	Sulen	7.70	353	eP	Pn	23 20 59.5	+0.4
ABTA	Abfaltersbach	7.70	148	ePn	Pn	23 21 03.0	+3.7
	comp=N,2.3nm,0.5s						
TCF	Toulx Ste Croi	7.71	203	ePn	Pn	23 20 59.0	-0.3
	SNR=1.0						
TCF				eSn	Sn	23 22 20.9	-6.3
	comp=N,3.2nm,0.5s						
MORC	Moravsky Berou	7.73	114	ePn	Pn	23 21 01.8	+2.1
HFS	Hagfors	7.75	27	Pn	Pn	23 21 00.5	+0.7
	baz=210,slow=16						
HFS				Sn	Sn	23 22 22.5	-5.6
	baz=211,slow=28						
HFS	Hagfors	7.75	27	Pn	Pn	23 21 00.8	+1.0
	comp=N,0.4nm,0.3s,baz=207,slow=14,SNR=14						
HFS				Sn	Sn	23 22 22.2	-5.9
	comp=N,2.2nm,0.3s,baz=209,slow=18,SNR=12						
HFS	Hagfors	7.75	27	Pn	Pn	23 21 00.5	+0.7
	baz=210,slow=16						
HFS				Sn	Sn	23 22 22.5	-5.6
	baz=211,slow=28						
NAO01	NORSAR Array S	7.77	16	ePn	Pn	23 21 00.8	+0.6
NAO01				eSn	Sn	23 22 26.5	-2.3
DSB	Dublin	7.78	274	ePn	Pn	23 21 02.7	+2.5
SGMF	Saint Gilles	7.78	232	ePn	Pn	23 20 59.3	-1.0
	SNR=1.0						
SGMF				eSn	Sn	23 22 23.2	-5.9
	comp=N,4.0nm,0.3s,SNR=1.0						
NC602	NORSAR Array S	7.79	18	ePn	Pn	23 21 00.6	+0.3
NC602				eSn	Sn	23 22 24.7	-4.3
NC602	NORSAR Array S	7.79	18	eP	Pn	23 21 00.4	+0.1
NRA0	NORESS Array S	7.79	18	Pn	Pn	23 21 00.6	+0.3
	baz=205,slow=14						
NRA0				Sn	Sn	23 22 25.0	-4.1
	baz=204,slow=28						
NRA0	NORESS Array S	7.79	18	Pn	Pn	23 21 00.6	+0.3
	baz=205,slow=14						
NRA0				Sn	Sn	23 22 25.0	-4.1
	baz=204,slow=28						
NBO00	NORSAR Array S	7.93	15	ePn	Pn	23 21 03.5	+1.2
NBO00				eSn	Sn	23 22 30.9	-1.8
LPG	La Plagne	7.96	179	ePn	Pn	23 21 03.0	0.0
NB2	NORSAR Subarra	8.01	16	Pn	Pn	23 21 04.7	+1.2
	baz=195,slow=16						
NB2				Sn	Sn	23 22 33.2	-1.5
	baz=175,slow=22						
NB2	NORSAR Subarra	8.01	16	Pn	Pn	23 21 04.7	+1.2
	baz=195,slow=16						
NB2				Sn	Sn	23 22 33.2	-1.5
	baz=175,slow=22						
NOA	NORSAR Array B	8.01	16	Pn	Pn	23 21 04.5	+1.1
	comp=N,0.1nm,0.3s,baz=204,slow=13,SNR=11						
NOA				Sn	Sn	23 22 28.2	-6.5
	comp=N,0.1nm,0.3s,baz=230,slow=21,SNR=8.8						
NB201	NORSAR Array S	8.04	17	ePn	Pn	23 21 04.9	+1.1
NB201				eSn	Sn	23 22 32.4	-2.9
ROSF	Rostrenen	8.07	235	ePn	Pn	23 21 02.9	-1.4
ROSF				eSn	Sn	23 22 30.0	-6.1
	comp=N,14nm,0.4s						
MFF	Saint Martin d	8.11	215	ePn	Pn	23 21 04.1	-0.7
	SNR=1.0						
MFF				eSn	Sn	23 22 30.5	-6.6
	comp=N,9.0nm,0.5s						
NC204	NORSAR Array S	8.16	14	ePn	Pn	23 21 08.2	+2.7
NC405	NORSAR Array S	8.17	18	ePn	Pn	23 21 06.8	+1.2
NC405				eSn	Sn	23 22 38.0	-0.5
NC303	NORSAR Array S	8.21	16	ePn	Pn	23 21 07.2	+1.0
NC303				eSn	Sn	23 22 38.8	-0.7
QUIF	Quistinic	8.31	232	ePn	Pn	23 21 06.2	-1.3
	SNR=1.0						
QUIF				eSn	Sn	23 22 34.8	-7.2
	comp=N,12nm,0.6s,SNR=1.0						
ORIF	Oris-en-Rattie	8.55	183	ePn	Pn	23 21 10.9	0.0
MBDF	Montbardon	8.73	179	ePn	Pn	23 21 13.8	+0.4
AKN	Aaknes	8.76	1	eP	Pn	23 21 19.9	+6.2
RJF	Les Rejaudoux	8.80	204	ePn	Pn	23 21 13.4	-0.8
	SNR=1.0						
RJF				eSn	Sn	23 22 46.7	-7.3
	comp=N,3.0nm,0.4s						
CAF	Calviac	9.03	201	ePn	Pn	23 21 16.8	-0.6
LFF	La Frestale	9.34	207	ePn	Pn	23 21 20.7	-0.9
	SNR=1.0						
LFF				eSn	Sn	23 22 58.6	-8.6
	comp=N,3.1nm,0.3s						
MTLF	Montolieu	10.52	198	ePn	Pn	23 21 37.3	-0.5
EPF	Esparros	11.22	204	ePn	Pn	23 21 46.3	-1.2
FIA0	FINESS Array S	13.15	45	Pn	Pn	23 22 13.9	+0.3
	baz=233,slow=12						
FIA0	FINESS Array S	13.15	45	Pn	Pn	23 22 13.9	+0.3
	baz=233,slow=12						
FINES	FINESS Array B	13.15	45	Pn	Pn	23 22 14.3	+0.6
	comp=N,0.2nm,0.3s,baz=247,slow=10,SNR=7.7						
FINES				Sn	Sn	23 24 30.8	-10
	comp=N,0.1nm,0.3s,baz=252,slow=23,SNR=3.0						
ESDC	Sonseca Array	15.55	212	Pn	Pn	23 22 43.4	-2.9
	comp=N,0.3nm,0.3s,baz=27,slow=13,SNR=6.3						
ARA0	ARCESS Array S	18.34	21	P	Pn	23 23 20.9	-0.4
	baz=210,slow=14						
ARA0	ARCESS Array S	18.34	21	P	Pn	23 23 20.9	-0.4
	baz=210,slow=14						
ARCES	ARCESS Array B	18.34	21	Pn	Pn	23 23 21.2	-0.1
	comp=N,0.1nm,0.3s,baz=212,slow=12,SNR=6.2						
YKA	Yellowknife Ar	55.54	331	P	P	23 28 44.9	+2.6
	comp=N,0.2nm,0.5s,baz=46,slow=7.0,SNR=3.9						

IDC 07 23:38:38.2±1.7, **10°.76S**×**166°.24E, h0^{km}, mb3.9**/3, **mb1 4.2**/5, **mb1mx3.8**/42, **mbtmp4.1**/5, **ML4.4**/2, **MS4.3**/1, **Ms1 4.3**/1, **ms1mx2.9**/43, **Error ellipse: s-maj=43.0km s-min=29.7km az=133.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.34	281	Pn	Pn	23 40 12.8	-0.2
	22nm,0.3s,baz=333,slow=6.8,SNR=4.3						
DZM	Mont Dzumac	11.25	179	Pn	Pn	23 41 18.9	-1.5
	0.9nm,0.3s,baz=328,slow=16,SNR=14						
RAO	Raoul Island	23.61	143	LR	LR	23 51 14.6	
	comp=Z,726nm,20.0s,baz=142,slow=32						
WRA	Warramunga Arr	32.04	250	P	P	23 45 06.5	-0.3
	1.2nm,0.6s,baz=80,slow=9.2,SNR=9.0						
ASAR	Alice Springs	33.35	243	P	P	23 45 19.0	+0.6
	1.3nm,0.5s,baz=65,slow=9.9,SNR=13						
ILAR	Eielson Array	83.09	18	P	P	23 51 05.5	+0.1
	0.5nm,1.0s,baz=232,slow=5.6,SNR=3.3						

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*ISCJB **07** 23:45:47.4±1.3, 11°.1S±0°.1×165°.8E±0°.2, h10^{km}, mb3.7/4, Error ellipse: s-maj=25.8km s-min=18.8km az=152.9*

*IDC **07** 23:45:47.6±1.6, 11°.00S×165°.88E, h0^{km}, mb3.7/4, mb1 4.1/6, mb1mx3.8/42, mbtmp4.0/6, ML4.4/2, Error ellipse: s-maj=41.4km s-min=28.6km az=128.0*

ISC 07 23:45:49.0±1.3, **11°.0S**±0°.1×**165°.9E**±0°.2, **h10^{km}, n6, σ0^{s}.97**/6, **mb3.7**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.03	285	Pn	Pn	23 47 17.8	-0.5
	23nm,0.3s,baz=108,slow=11,SNR=4.5						
DZM	Mont Dzumac	10.98	177	Pn	Pn	23 48 26.0	-0.4
	1.0nm,0.3s,baz=315,slow=8.6,SNR=8.6						
WRA	Warramunga Arr	31.58	250	P	P	23 52 13.2	+1.1
	0.8nm,0.8s,baz=81,slow=9.1,SNR=7.1						
ASAR	Alice Springs	32.89	243	P	P	23 52 24.2	+0.6
	1.2nm,0.7s,baz=72,slow=9.9,SNR=13						
ILAR	Eielson Array	83.47	18	P	P	23 58 17.1	+0.5
	0.4nm,0.7s,baz=230,slow=5.9,SNR=3.8						
MKAR	Makanchi Array	93.59	317	P	P	23 59 04.8	-0.8
	0.2nm,0.7s,baz=92,slow=4.3,SNR=3.2						

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*IDC **07** 23:46:09.3±1.6, 10°.10S×165°.44E, h0^{km}, mb4.1/7, mb1 4.2/8, mb1mx3.9/41, mbtmp4.1/8, ML4.4/1, MS3.7/1, Ms1 3.7/1, ms1mx2.8/43, Error ellipse: s-maj=54.1km s-min=27.2km az=137.0*

*ISCJB **07** 23:46:11.9±1.5, 10°.3S±0°.3×165°.5E±0°.2, h33^{km}, mb4.0/7, MS3.7/1, Error ellipse: s-maj=42.1km s-min=21.2km az=150.4*

ISC 07 23:46:14.5±1.5, **10°.2S**±0°.3×**165°.5E**±0°.2, **h35^{km}, n9, σ0^{s}.91**/10, **mb4.2**/7, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.48	277	Pn	Pn	23 47 34.0	+0.3
	12nm,0.3s,baz=207,slow=11,SNR=3.4						
WRA	Warramunga Arr	31.52	248	P	P	23 52 33.6	0.0
	1.2nm,1.1s,baz=84,slow=8.4,SNR=6.3						
WRA				PcP	PcP	23 55 27.4	+1.3
	0.8nm,0.8s,baz=79,slow=3.1,SNR=6.4						
ASAR	Alice Springs	32.94	242	P	P	23 52 45.0	-1.0
	2.4nm,0.6s,baz=72,slow=9.5,SNR=13						
ASAR				PcP	PcP	23 55 31.0	+1.1
	0.9nm,0.8s,baz=83,slow=2.6,SNR=6.7						
NWAO	Narrogin (SRO)	49.71	235	LR	LR	00 16 04.5	
	comp=Z,85nm,21.5s,baz=20,slow=36						
CMAR	Chiang Mai Arr	71.50	293	P	P	23 57 31.9	-0.4
	0.9nm,0.3s,baz=121,slow=4.3,SNR=4.2						
SONM	Songino Array	77.80	324	P	P	23 58 09.0	+0.6
	0.6nm,0.7s,baz=132,slow=5.2,SNR=5.2						
ILAR	Eielson Array	82.78	19	P	P	23 58 34.6	0.0
	0.3nm,0.7s,baz=228,slow=3.5,SNR=3.1						
ZALV	Zalesovo Beam	92.69	324	P	P	23 59 21.7	-1.1
	0.7nm,0.7s,baz=132,slow=4.3,SNR=4.8						
MKAR	Makanchi Array	92.69	317	P	P	23 59 22.6	-0.5
	1.3nm,0.5s,baz=91,slow=6.4,SNR=18						

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*ISCJB **07** 23:49:50.5±0.9, 10°.9S±0°.1×165°.79E±0°.09, h10^{km}, mb4.0/8, Error ellipse: s-maj=17.5km s-min=10.4km az=34.9*

*IDC **07** 23:49:50.6±1.1, 10°.84S×165°.77E, h0^{km}, mb4.1/8, mb1 4.3/10, mb1mx4.0/46, mbtmp4.2/10, ML4.8/2, MS3.0/1, Ms1 3.0/1, ms1mx2.7/44, Error ellipse: s-maj=26.4km s-min=22.5km az=108.0*

ISC 07 23:49:52.1±1.0, **10°.9S**±0°.1×**165°.8E**±0°.1, **h10^{km}, n17, σ0^{s}.67**/12, **mb4.1**/8, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.97	283	Pn	Pn	23 51 21.4	+0.9
	40nm,0.3s,baz=206,slow=1.9,SNR=11						
HNR				Sn	Sn	23 52 29.5	+0.5
	8.3nm,0.3s,baz=335,slow=17,SNR=1.6						
DZM	Mont Dzumac	11.18	177	Pn	Pn	23 52 32.7	+0.5
	4.9nm,0.3s,baz=14,slow=18,SNR=26						
DZM				LR	LR	23 55 44.9	
	comp=Z,80nm,21.2s,baz=330,slow=32						
H11S2	WAKE ISLAND Hy	29.16	2	T	T	00 26 15.3	
	baz=181,slow=76,SNR=9.4						
H11S3	WAKE ISLAND Hy	29.17	2	T	T	00 26 15.3	
	baz=181,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	29.18	2	T	T	00 26 16.5	
	baz=181,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	30.39	2	T	T	00 27 46.5	
	baz=182,slow=76,SNR=7.5						
H11N3	WAKE ISLAND Hy	30.39	2	T	T	00 27 48.3	
	baz=182,slow=76						
H11N2	WAKE ISLAND Hy	30.40	2	T	T	00 27 47.9	
	baz=182,slow=76,SNR=7.9						
STKA	Stephens Creek	30.65	223	P	P	23 56 06.5	-0.4
	2.5nm,0.9s,baz=32,slow=9.3,SNR=3.7						
WRA	Warramunga Arr	31.64	250	P	P	23 56 14.8	-0.9
	2.3nm,0.7s,baz=80,slow=9.2,SNR=14						
ASAR	Alice Springs	32.96	243	P	P	23 56 26.5	-0.9
	1.8nm,0.8s,baz=72,slow=9.5,SNR=15						
RPZ	Rata Peaks	33.06	173	P	P	23 56 28.2	+0.4
	6.6nm,0.6s,baz=38,slow=6.7,SNR=4.0						

FITZ	**Fitzroy Crossi**	**39.52**	**255**	P	**P**	**23 57 22.8**	**-0.7**
	5.5nm,0.9s,baz=90,slow=2.9,SNR=6.9						
SONM	**Songino Array**	**78.56**	**324**	P	**P**	**00 01 53.7**	**-0.3**
	0.3nm,0.6s,baz=148,slow=6.8,SNR=3.3						
ILAR	**Eielson Array**	**83.30**	**18**	P	**P**	**00 02 19.1**	**+0.3**
	0.5nm,0.8s,baz=241,slow=4.5,SNR=4.8						
MKAR	**Makanchi Array**	**93.44**	**317**	P	**P**	**00 03 07.5**	**-0.4**
	0.6nm,0.8s,baz=90,slow=5.4,SNR=6.1						
ARCES	**ARCESS Array B**	**116.17**	**346**	PKP	**PKPdf**	**00 08 35.6**	**+0.5**
	1.2nm,0.9s,baz=5.7,slow=0.9,SNR=3.0						

IDC 07 23:54:49.5±3.1**, 10°.04S**×**165°.55E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/45**, mbtmp3.7**/4**, ML3.8**/1**, Error ellipse: s-maj=69.0km s-min=42.1km az=89.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.99**	**176**	Pn	Pn	23 57 41.1	-0.7
	0.6nm,0.3s,baz=311,slow=19,SNR=6.1						
WRA	**Warramunga Arr**	**31.66**	**248**	P	P	00 01 15.0	+0.2
	0.6nm,0.8s,baz=78,slow=8.9,SNR=4.8						
ASAR	**Alice Springs**	**33.08**	**242**	P	P	00 01 27.1	-0.2
	0.4nm,0.5s,baz=64,slow=9.2,SNR=4.3						
MKAR	**Makanchi Array**	**92.67**	**317**	P	P	00 08 03.5	+0.1
	0.1nm,0.6s,baz=82,slow=3.1,SNR=3.5						

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*IDC **07** 23:59:40.7±4.2, 11°.00S×166°.90E, h0^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.8/46, mbtmp3.8/7, MS3.8/3, Ms1 3.8/3, ms1mx3.2/39, Error ellipse: s-maj=146.0km s-min=29.0km az=134.0*

*ISCJB **07** 23:59:43.0±3.1, 11°.2S±0°.5×166°.9E±0°.6, h28^{km}, mb3.9/7, MS3.9/1, Error ellipse: s-maj=109.6km s-min=22.4km az=43.7*

ISC 07 23:59:44.9±3.5**, 11°.1S**±0°.6×**166°.9E**±0°.6**, h28^{km}, n15, σ0^{s}.33**/7**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.05**	**283**	LR	LR	00 04 10.6	
	comp=Z,894nm,18.2s,baz=125,slow=38						
DZM	**Mont Dzumac**	**10.95**	**182**	LR	LR	00 05 48.9	
	comp=Z,216nm,21.2s,baz=258,slow=33						
H11S2	**WAKE ISLAND Hy**	**29.38**	**360**	T	T	00 36 18.2	
	baz=181,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**29.38**	**360**	T	T	00 36 17.6	
	baz=181,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**29.39**	**360**	T	T	00 36 18.8	
	baz=181,slow=76,SNR=17						
H11N1	**WAKE ISLAND Hy**	**30.59**	**360**	T	T	00 37 49.6	
	baz=182,slow=76,SNR=7.5						
H11N3	**WAKE ISLAND Hy**	**30.60**	**360**	T	T	00 37 49.4	
	baz=182,slow=76,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**30.61**	**360**	T	T	00 37 50.3	
	baz=182,slow=76,SNR=6.4						
WRA	**Warramunga Arr**	**32.55**	**250**	P	**P**	**00 06 14.1**	**+0.1**
	1.5nm,0.6s,baz=83,slow=8.8,SNR=15						
ASAR	**Alice Springs**	**33.81**	**244**	P	**P**	**00 06 24.7**	**-0.2**
	0.8nm,0.9s,baz=70,slow=8.6,SNR=4.5						
FITZ	**Fitzroy Crossi**	**40.48**	**255**	P	**P**	**00 07 21.8**	**+0.2**
	3.4nm,0.7s,baz=72,slow=6.4,SNR=7.6						
FITZ				LR	LR	00 22 27.6	
	comp=Z,200nm,21.2s,baz=111,slow=34						
SONM	**Songino Array**	**79.37**	**323**	P	**P**	**00 11 48.5**	**+0.1**
	0.2nm,0.3s,baz=117,slow=6.8,SNR=2.1						
ILAR	**Eielson Array**	**83.18**	**18**	P	**P**	**00 12 08.3**	**+0.2**
	0.4nm,0.8s,baz=231,slow=5.7,SNR=2.0						
ZALV	**Zalesovo Beam**	**94.25**	**324**	P	**P**	**00 13 00.8**	**-0.5**
	0.3nm,0.4s,baz=106,slow=5.2,SNR=2.3						
MKAR	**Makanchi Array**	**94.33**	**317**	P	**P**	**00 13 01.9**	**-0.1**
	0.6nm,0.9s,baz=93,slow=5.8,SNR=5.3						

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*IDC **08** 00:00:24.0±1.8, 8°.67S×118°.41E, h0^{km}, mb3.0/2, mb1 3.5/5, mb1mx3.3/42, mbtmp3.3/5, ML3.3/3, Error ellipse: s-maj=75.7km s-min=21.6km az=44.0*

*ISCJB **08** 00:00:33.4±0.9, 9°.4S±0°.1×118°.36E±0°.06, h100^{km}, mb3.2/1, Error ellipse: s-maj=15.9km s-min=7.4km az=13.7*

*DJA **08** 00:00:36.7±0.4, 9°S±12°×11°8E±°, h77^{km}±7^{km}, M3.5/7, MLv3.5/7*

ISC 08 00:00:33.7±1.0**, 9°.4S**±0°.1×**118°.32E**±0°.07**, h100^{km}, n9, σ2^{s}.10**/12**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.81**	**319**	P	**Pn**	**00 00 52.7**	**+0.5**
PLAI				S	**Sn**	**00 01 04.8**	**-1.3**
BASI	**Baing, Sumba**	**2.36**	**109**	P	**Sn**	**00 01 36.0**	**-3.5**
EDFI	**Ende, Flores**	**3.40**	**79**	P	**Pn**	**00 01 25.7**	**+0.7**
EDFI				S	**Sn**	**00 02 03.2**	**-1.3**
MMRI	**Maumere**	**3.95**	**79**	P	**Pn**	**00 01 33.1**	**+0.8**
MMRI				S	**Sn**	**00 02 18.2**	**+0.5**
BATI	**Baumata**	**5.32**	**99**	Pn	Pn	00 01 47.1	-3.7
	4.1nm,0.3s,baz=216,slow=19,SNR=1.9						
BATI				Sn	**Sn**	**00 02 48.8**	**-2.2**
	3.7nm,0.3s,baz=90,slow=1.0,SNR=2.6						
FITZ	**Fitzroy Crossi**	**11.16**	**141**	Pn	**Pn**	**00 03 12.0**	**+1.8**
	0.1nm,0.3s,baz=330,slow=16,SNR=2.6						
FITZ				Sn	**Sn**	**00 05 10.7**	**-2.3**
	0.3nm,0.3s,baz=183,slow=21,SNR=11						
WRA	**Warramunga Arr**	**18.66**	**126**	P	**P**	**00 04 46.6**	**+2.6**
	0.1nm,0.3s,baz=302,slow=12,SNR=6.8						
ASAR	**Alice Springs**	**20.54**	**135**	P	Pn	00 05 10.9	+3.4
	0.2nm,0.3s,baz=312,slow=8.6,SNR=3.4						
MKAR	**Makanchi Array**	**64.55**	**333**	P	**P**	**00 10 58.6**	**-1.6**
	0.3nm,0.8s,baz=148,slow=7.0,SNR=3.4						

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*IDC **08** 00:01:16.3±0.7, 7°.11N×76°.73W, h0^{km}, mb4.0/19, mb1 4.1/25, mb1mx4.0/44, mbtmp4.0/25, ML3.5/6, MS3.5/11, Ms1 3.5/11, ms1mx3.3/41, Error ellipse: s-maj=18.1km s-min=12.3km az=45.0*

*RSNC **08** 00:01:19.8±0.9, 7°.02N×76°.65W, h6^{km}±6^{km}, ML4.1, Mw4.5*

*NEIC **08** 00:01:20.9±1.9, 7°.10N×76°.74W, h32^{km}±14^{km}, mb4.6/15, Error ellipse: s-maj=8.5km s-min=5.6km az=65.0*

*UCR **08** 00:01:21.4±3.3, 7°.12N×76°.85W, h20^{km}±30^{km}, MD4.3, mb4.6(NEIC)*

ISC 08 00:01:17.0±1.4**, 7°.06N**±0°.03×**76°.74W**±0°.03**, h6^{km}**±9^{km}**, n99, σ1^{s}.47**/117**, mb4.2**/27**, MS3.5**/6**, 4C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.52**	**95**	*e*Pg	**Pg**	**00 01 27.7**	**+0.5**
DBBC				*e*S	**Sg**	**00 01 34.7**	**+0.6**
DBBC				*i*		00 01 36.3	
	comp=Z,86μm,0.6s						
SOLC	**Bahia Solano**	**1.07**	**219**	⇑*e*P	**Pn**	**00 01 38.3**	**-0.2**
SOLC				*i*		00 01 45.1	
	comp=Z,3μm,0.5s						
SOLC				*e*S	**Sn**	**00 01 54.0**	**+0.4**
UREC	**San Jos de Ur**	**1.38**	**60**	⇑*e*P	**Pn**	**00 01 42.8**	**+0.1**
UREC				*e*S	**Sb**	**00 02 00.7**	**-0.3**
UREC				*i*		00 02 06.4	
	comp=Z,2μm,0.5s						
HELC	**Santa Helena**	**1.48**	**126**	⇓*e*P	**Pn**	**00 01 43.6**	**-0.9**
HELC				*e*S	**Sn**	**00 02 03.2**	**-1.1**
HELC				*i*		00 02 10.4	
	comp=Z,1μm,0.6s						
ZARC	**Zaragoza, Cauc**	**1.91**	**77**	*e*P	**Pn**	**00 01 50.5**	**+0.4**
ZARC				*e*S	**Sn**	**00 02 14.3**	**-0.2**
UPD2	**Meteti**	**1.94**	**319**	*i* P	**Pn**	**00 01 51.3**	**+0.7**
UPD2				*e*S	**Sb**	**00 02 16.7**	**-0.6**
PLMC	**San Jos del P**	**2.19**	**168**	*e*P	**Pn**	**00 01 51.7**	**-2.4**
PLMC				*i*		00 02 19.0	
	comp=Z,5μm,0.2s						
PTBC	**PUERTO BERRIO,**	**2.32**	**103**	⇓*e*P	**Pn**	**00 01 56.5**	**+0.7**
PTBC				*e*S	**Sn**	**00 02 25.2**	**+0.5**
PTBC				*i*		00 02 37.2	
	comp=Z,1μm,0.6s						
ANIL	**Santa Ana**	**2.88**	**153**	*e*P	**Pn**	**00 02 05.3**	**+1.6**
ANIL				*i*		00 02 47.9	
	comp=Z,368nm,0.4s						
BRRC	**Barranca, Sant**	**3.00**	**89**	*e*P	**Pn**	**00 02 06.9**	**+1.8**
BRRC				*e*S	**Sn**	**00 02 43.3**	**+1.9**
BRRC				*i*		00 03 05.2	
	comp=Z,407nm,0.6s						
MALC	**Bahia Malaga**	**3.09**	**191**	*e*P	**Pn**	**00 02 07.8**	**+1.4**
MALC				*i*		00 02 57.2	
	comp=N,495nm,0.6s						
MALC				*i*		00 03 10.1	
	comp=Z,216nm,0.4s						
SMLC	**San Martn de**	**3.15**	**57**	*e*P	**Pb**	**00 02 12.0**	**-1.5**
SMLC				*e*S	**Sb**	**00 02 49.3**	**-2.9**
SMLC				*i*		00 02 59.8	
	comp=E,507nm,0.5s						
SMLC				*i*		00 03 06.9	
	comp=Z,336nm,0.5s						
SJCC	**San Jacinto, C**	**3.21**	**29**	*e*P	**Pb**	**00 02 11.9**	**-2.6**
ROSC	**El Rosal**	**3.26**	**132**	*e*Pn	**Pn**	**00 02 12.1**	**+3.0**
ROSC				*e*Lg	Lg	00 03 04.1	
ROSC	**El Rosal**	**3.26**	**132**	*e*P	**Pb**	**00 02 12.8**	**-2.9**
ROSC				*i*		00 03 11.3	
	comp=Z,918nm,0.9s						
ROSC	**El Rosal**	**3.26**	**132**	Pn	**Pn**	**00 02 11.4**	**+2.3**
	comp=Z,28nm,0.3s,baz=360,slow=17,SNR=33						
ROSC				Lg	Lg	00 02 53.6	
	comp=Z,30nm,0.3s,baz=286,slow=19,SNR=7.2						
ROSC				LR	LR	00 03 02.5	
	comp=Z,171nm,21.4s,baz=279,slow=32						
FLAM	**Flamenco Islan**	**3.33**	**304**	*e*P	**Pn**	**00 02 10.7**	**+1.1**
FLAM				*e*S	**Sn**	**00 02 48.3**	**-1.2**
BARC	**Barichara**	**3.56**	**97**	*i*	**Sg**	**00 03 12.3**	**+0.8**
	comp=Z,2μm,0.7s						
OCAC	**Ocana**	**3.58**	**71**	*e*P	**Pb**	**00 02 17.6**	**-3.3**
AZU	**Azuero**	**3.58**	**282**	⇑*e*P	**Pn**	**00 02 14.6**	**+1.5**
	baz=74,slow=4.4						
AZU				*i* S	**Sn**	**00 02 54.9**	**-0.9**
ZANG	**Zanguenga, Cho**	**3.63**	**301**	*e*P	**Pn**	**00 02 14.6**	**+0.9**
ZANG				*e*S	**Sn**	**00 02 56.2**	**-0.6**
FRIJ	**El Hiral**	**3.66**	**306**	⇑*i*P	**Pn**	**00 02 15.2**	**+1.0**
FRIJ				*i* S	**Sn**	**00 02 56.3**	**-1.3**
BCIP	**Isla Barro Col**	**3.71**	**304**	*e*Pn	**Pn**	**00 02 16.0**	**+1.0**
BCIP	**Isla Barro Col**	**3.71**	**304**	⇓*i*P	**Pn**	**00 02 15.7**	**+0.8**
	baz=127,slow=7.9						
BCIP				*e*S	**Sn**	**00 02 59.6**	**+0.6**
RUSC	**La Rusia**	**3.81**	**108**	*e*P	**Pn**	**00 02 18.8**	**+2.1**
RUSC				*e*S	**Sn**	**00 03 03.0**	**+0.9**
RUSC				*i*		00 03 20.8	
	comp=Z,291nm,0.5s						
PNME	**Penonome**	**3.83**	**292**	*e*P	**Pn**	**00 02 17.6**	**+1.1**
PNME				*e*S	**Sn**	**00 03 00.8**	**-1.1**
CHIC	**Chingaza**	**3.84**	**129**	*e*P	**Pn**	**00 02 21.0**	**+3.9**
CHIC				*i*		00 03 28.9	
	comp=Z,194nm,0.7s						
PINA	**Piqa, Costa Ab**	**3.95**	**304**	*e*P	**Pn**	**00 02 19.6**	**+1.5**
PAMC	**Pamplona, Colo**	**4.01**	**86**	*e*P	**Pn**	**00 02 21.6**	**+2.1**
PAMC				*i*		00 03 30.4	
	comp=Z,527nm,0.7s						
MARP	**Paez Belalcaza**	**4.26**	**169**	*e*P	**Pn**	**00 02 24.6**	**+1.8**
MARP				*e*S	**Sn**	**00 03 11.8**	**-1.2**
MARP				*i*		00 03 16.7	
	comp=Z,123nm,0.4s						
CODC	**Agustn Codazz**	**4.33**	**49**	*e*P	**Pn**	**00 02 26.8**	**+3.4**
POPC	**Popayan, Colom**	**4.49**	**179**	*e*P	**Pn**	**00 02 25.6**	**-0.2**
POPC				*e*S	**Sn**	**00 03 16.7**	**-1.9**
POPC				*i*		00 03 19.0	
	comp=Z,170nm,0.4s						
POPC				*i*		00 03 22.2	
	comp=N,103nm,0.4s						
BETC	**Betania**	**4.54**	**163**	*e*P	**Pn**	**00 02 29.8**	**+3.5**
BETC				*i*		00 02 38.4	
	comp=Z,105nm,0.8s						
PCON	**Cinco Dias**	**4.72**	**176**	*e*P	**Pn**	**00 02 31.6**	**+2.4**
PCON				*e*S	**Sn**	**00 03 22.5**	**-2.1**
SOTA	**Rioblanco**	**4.90**	**179**	*e*P	**Pn**	**00 02 33.4**	**+1.7**
DVD	**David**	**5.83**	**284**	*e*P	**Pn**	**00 02 40.6**	**-3.4**
BRU2	**Volcan**	**6.14**	**287**	*e*P	**Pn**	**00 02 50.1**	**+1.6**
SDV	**Santo Domingo**	**6.31**	**73**	*e*Pn	**Pn**	**00 02 51.8**	**+0.9**
SDV				*e*Sn	**Sn**	**00 04 02.1**	**-1.2**
SDV	**Santo Domingo**	**6.31**	**73**	Pn	**Pn**	**00 02 50.7**	**-0.1**
	comp=Z,2.7nm,0.3s,baz=260,slow=15,SNR=17						
SDV				Sn	**Sn**	**00 04 02.1**	**-1.2**
	comp=Z,21nm,0.3s,baz=292,slow=15,SNR=3.9						
SDV				Lg	Lg	00 04 35.3	
	comp=Z,19nm,0.3s,baz=33,slow=22,SNR=8.5						
SDV				LR	LR	00 05 12.3	
	comp=Z,141nm,21.7s,baz=236,slow=38						
DRK0	**Durika**	**6.80**	**289**	*e*P	**Pn**	**00 02 57.9**	**+0.3**
OTAV	**Otavalo**	**6.99**	**194**	*e*Pn	**Pn**	**00 03 01.8**	**+1.4**
OTAV				*e*Sn	**Sn**	**00 04 20.2**	**-0.3**
JTS	**JuntasAbangare**	**8.73**	**292**	Pn	**Pn**	**00 03 24.5**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=121,slow=12,SNR=2.3						
JTS	**JuntasAbangare**	**8.73**	**292**	*e*P	**Pn**	**00 03 26.3**	**+2.3**
ESPN	**Las Esperanzas**	**9.03**	**305**	*e*Pn	**Pn**	**00 03 29.3**	**+1.2**
MTDJ	**Mount Denham**	**11.12**	**356**	*e*Pn	**Pn**	**00 03 58.8**	**+2.0**
SDDR	**Presa de Saban**	**12.98**	**24**	*e*Pn	**Pn**	**00 04 22.3**	**+0.1**
ATAH	**Atahualpa**	**14.20**	**187**	Pn	**Pn**	**00 04 40.1**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=62,slow=15,SNR=2.8						
ATAH				LR	LR	00 10 59.4	
	comp=Z,158nm,20.0s,baz=8.1,slow=41						
SJG	**San Juan**	**15.07**	**42**	Pn	**Pn**	**00 04 49.2**	**-1.4**
	comp=Z,1.7nm,0.3s,baz=233,slow=20,SNR=4.6						
SJG				LR	LR	00 10 21.4	
	comp=Z,206nm,21.8s,baz=179,slow=36						
PTGA	**Pitinga**	**18.44**	**114**	*e*P	**P**	**00 05 32.5**	**-0.8**
	comp=Z,8.6nm,1.0s						
PTGA	**Pitinga**	**18.44**	**114**	P	**P**	**00 05 31.6**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=294,slow=16,SNR=6.5						
NNA	**Nana**	**18.93**	**180**	LR	LR	00 14 11.0	
	comp=Z,134nm,20.3s,baz=358,slow=41						
CMIG	**Matias Romero**	**20.33**	**301**	LR	LR	00 15 03.6	
	comp=Z,93nm,19.2s,baz=120,slow=41						
MDP	**Montagnes des**	**24.04**	**93**	P	**P**	**00 06 33.4**	**+0.3**
	comp=Z,7.9nm,0.9s,baz=257,slow=10,SNR=2.9						
MDP				LR	LR	00 16 11.7	
	comp=Z,180nm,18.8s,baz=280,slow=37						
LPAZ	**La Paz**	**24.72**	**160**	*e*P	**P**	**00 06 39.2**	**-0.8**
LPAZ	**La Paz**	**24.72**	**160**	P	**P**	**00 06 39.0**	**-0.9**
	comp=Z,6.2nm,1.0s,baz=349,slow=5.2,SNR=11						
LPAZ				LR	LR	00 17 02.2	
	comp=Z,136nm,18.8s,baz=314,slow=38						
MNMC	**Minye Minye**	**26.96**	**165**	*e*P	**P**	**00 07 00.3**	**+0.5**
	comp=Z,9.1nm,0.9s						
PB11	**IPOC Station P**	**27.55**	**165**	*e*P	**P**	**00 07 03.9**	**-1.1**
	comp=Z,10nm,0.8s						
PB01	**IPOC Station P**	**28.82**	**166**	*e*P	**P**	**00 07 16.8**	**+0.5**
	comp=Z,19nm,0.8s						
LVC	**Limon Verde**	**30.47**	**166**	*e*P	**P**	**00 07 31.7**	**+0.6**
	comp=Z,8.6nm,0.9s						
LVC	**Limon Verde**	**30.47**	**166**	P	**P**	**00 07 31.8**	**+0.6**
	comp=Z,5.8nm,0.8s,baz=7.9,slow=5.8,SNR=5.9						
T42A	**Van Buren**	**32.57**	**338**	*e*P	**P**	**00 07 50.2**	**+1.1**
	comp=Z,4.9nm,0.8s						
GO02	**Mina Guanaco**	**32.78**	**168**	*e*P	**P**	**00 07 53.1**	**+1.7**
FVM	**French Village**	**33.19**	**340**	*e*P	**P**	**00 07 54.0**	**-0.6**
	comp=Z,9.4nm,0.6s						
CCM	**Cathedral Cave**	**33.54**	**339**	*e*P	**P**	**00 07 57.5**	**-0.1**
	comp=Z,10nm,0.7s						
LTX	**Lajitas**	**33.67**	**315**	*e*P	**P**	**00 07 59.7**	**+0.6**
TXAR	**Lajitas Array**	**33.67**	**315**	P	**P**	**00 07 59.7**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=134,slow=10,SNR=2.7						
BDFB	**Brasilia**	**36.31**	**129**	P	**P**	**00 08 24.2**	**+2.3**
	comp=Z,3.1nm,1.0s,baz=297,slow=18,SNR=2.9						
BDFB				LR	LR	00 23 56.9	
	comp=Z,239nm,19.2s,baz=163,slow=37						
SADO	**Sadowa**	**37.62**	**357**	*e*P	**P**	**00 08 33.1**	**+0.5**
	comp=Z,8.1nm,1.0s						
SADO	**Sadowa**	**37.62**	**357**	P	**P**	**00 08 33.1**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=226,slow=10,SNR=4.4						
ANMO	**Albuquerque**	**38.95**	**320**	*e*P	**P**	**00 08 44.2**	**+0.1**
	comp=Z,1.6nm,0.8s						
ANMO	**Albuquerque**	**38.95**	**320**	P	**P**	**00 08 45.3**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=133,slow=11,SNR=1.9						
SDCO	**Great Sand Dun**	**40.17**	**324**	*e*P	**P**	**00 08 54.8**	**+0.4**
	comp=Z,2.6nm,0.8s						
PD31	**Pinedale Array**	**45.83**	**326**	*e*P	**P**	**00 09 41.2**	**+1.0**
PDAR	**Pinedale Array**	**45.83**	**326**	P	**P**	**00 09 41.2**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=128,slow=5.8,SNR=2.9						
ULM	**Lac du Bonnet**	**45.92**	**343**	P	**P**	**00 09 39.6**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=184,slow=9.3,SNR=4.0						
RPN	**Rapa Nui**	**46.38**	**222**	LR	LR	00 24 43.5	
	comp=Z,56nm,21.2s,baz=14,slow=30						
SCHQ	**Schefferville**	**48.29**	**8**	*e*P	**P**	**00 09 57.8**	**-1.1**
	comp=Z,8.9nm,1.1s						
SCHQ	**Schefferville**	**48.29**	**8**	P	**P**	**00 09 57.8**	**-1.1**
	comp=Z,3.3nm,0.6s,baz=200,slow=8.4,SNR=8.2						
MDPB	**Devils Postpil**	**48.95**	**315**	*e*P	**P**	**00 10 02.4**	**-2.2**
	comp=Z,12nm,1.1s						
YKA	**Yellowknife Ar**	**61.84**	**341**	P	**P**	**00 11 36.5**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=132,slow=7.0,SNR=24						
YKB5	**Yellowknife Ar**	**61.84**	**341**	*e*P	**P**	**00 11 34.8**	**-1.8**
SUMG	**Summit**	**69.44**	**11**	*i* P	**P**	**00 12 27.6**	**+1.5**
DBIC	**Dimbokro**	**71.29**	**85**	*e*P	**P**	**00 12 39.4**	**+1.3**
	comp=Z,28nm,1.4s						
DBIC	**Dimbokro**	**71.29**	**85**	P	**P**	**00 12 39.4**	**+1.3**
	comp=Z,5.5nm,1.0s,baz=235,slow=17,SNR=4.0						
INK	**Inuvik**	**71.61**	**341**	*e*P	**P**	**00 12 36.8**	**-2.1**
	comp=Z,1.6nm,1.0s						
INK	**Inuvik**	**71.61**	**341**	P	**P**	**00 12 38.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=81,slow=2.8,SNR=6.5						
ESDC	**Sonseca Array**	**72.27**	**51**	P	**P**	**00 12 44.6**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=275,slow=5.3,SNR=3.3						
ILAR	**Eielson Array**	**75.24**	**335**	P	**P**	**00 13 00.3**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=101,slow=4.6,SNR=4.6						
ILB	**Eielson Array**	**75.24**	**335**	*e*P	**P**	**00 13 00.3**	**-0.1**
TOA1	**Torodi Ar. Sit**	**77.20**	**78**	*e*P	**P**	**00 13 12.9**	**+0.4**
TORD	**Torodi Ar. Bea**	**77.20**	**78**	P	**P**	**00 13 12.9**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=300,slow=7.6,SNR=4.5						
NB200	**NORSAR Array S**	**82.88**	**29**	*e*P	**P**	**00 13 42.9**	**+0.5**
NOA	**NORSAR Array B**	**82.88**	**29**	P	**P**	**00 13 42.9**	**+0.5**
	comp=Z,0.9nm,1.0s,baz=274,slow=4.9,SNR=2.5						
GERES	**GERESS Array B**	**85.03**	**42**	P	**P**	**00 13 53.9**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=271,slow=5.7,SNR=3.6						
RAR	**Rarotonga**	**86.08**	**248**	LR	LR	00 46 23.4	
	comp=Z,136nm,18.2s,baz=226,slow=31						
ARA0	**ARCESS Array S**	**87.69**	**20**	*e*P	**P**	**00 14 05.5**	**-0.8**
ARCES	**ARCESS Array B**	**87.69**	**20**	P	**P**	**00 14 05.5**	**-0.8**
	comp=Z,3.6nm,1.1s,baz=286,slow=7.4,SNR=3.4						
AS31	**Alice Springs**	**146.28**	**237**	*e*PKPdf	**PKPdf**	**00 20 57.5**	**-0.9**
ASAR	**Alice Springs**	**146.28**	**237**	PKPbc	**PKPdf**	**00 20 57.5**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=99,slow=3.6,SNR=2.7						

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*IDC **08** 00:01:47.3±2.1, 11°.60S×165°.06E, h0^{km}, mb3.7/6, mb1 4.0/6, mb1mx3.7/45, mbtmp3.7/6, Error ellipse: s-maj=81.9km s-min=29.2km az=143.0*

*ISCJB **08** 00:01:51.0±1.7, 11°.7S±0°.4×165°.0E±0°.3, h34^{km}, mb3.7/6, Error ellipse: s-maj=73.4km s-min=23.4km az=143.4*

ISC 08 00:01:52.4±1.9**, 11°.7S**±0°.4×**165°.1E**±0°.3**, h34^{km}, n6, σ0^{s}.60**/6**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.65**	**251**	P	**P**	**00 08 04.2**	**+0.4**
	1.6nm,1.1s,baz=79,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**31.92**	**244**	P	**P**	**00 08 14.6**	**-0.5**
	0.8nm,0.8s,baz=78,slow=8.7,SNR=2.6						
SONM	**Songino Array**	**78.80**	**324**	P	**P**	**00 13 51.5**	**-0.4**
	0.4nm,0.9s,baz=134,slow=6.2,SNR=2.2						
ILAR	**Eielson Array**	**84.33**	**19**	P	**P**	**00 14 20.1**	**-0.4**
	0.5nm,0.8s,baz=229,slow=4.8,SNR=5.5						
NVAR	**Mina Array Bea**	**86.94**	**50**	P	**P**	**00 14 34.8**	**+0.3**
	0.5nm,0.3s,baz=235,slow=4.3,SNR=2.5						
MKAR	**Makanchi Array**	**93.54**	**317**	P	**P**	**00 15 05.5**	**+0.5**
	0.1nm,0.5s,baz=86,slow=5.9,SNR=2.4						

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*IDC **08** 00:02:01.7±2.1, 11°.69S×165°.19E, h0^{km}, mb3.9/6, mb1 4.2/6, mb1mx3.8/46, mbtmp3.9/6, Error ellipse: s-maj=82.3km s-min=27.9km az=143.0*

*ISCJB **08** 00:02:05.5±1.7, 11°.8S±0°.4×165°.1E±0°.3, h34^{km}, mb3.9/6, Error ellipse: s-maj=73.5km s-min=23.4km az=143.5*

ISC 08 00:02:07.0±1.9**, 11°.7S**±0°.4×**165°.2E**±0°.3**, h34^{km}, n6, σ0^{s}.51**/6**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.71**	**251**	P	**P**	**00 08 18.8**	**-0.4**
	3.3nm,1.1s,baz=79,slow=9.7,SNR=5.6						
ASAR	**Alice Springs**	**31.98**	**244**	P	**P**	**00 08 30.6**	**+0.3**
	1.4nm,0.9s,baz=74,slow=8.1,SNR=4.5						
SONM	**Songino Array**	**78.84**	**324**	P	**P**	**00 14 07.4**	**+0.6**
	0.4nm,0.9s,baz=134,slow=6.2,SNR=2.8						
ILAR	**Eielson Array**	**84.31**	**19**	P	**P**	**00 14 34.9**	**-0.3**
	0.4nm,0.5s,baz=233,slow=4.2,SNR=10						
NVAR	**Mina Array Bea**	**86.89**	**50**	P	**P**	**00 14 49.0**	**+0.1**
	0.4nm,0.3s,baz=224,slow=2.5,SNR=1.8						
MKAR	**Makanchi Array**	**93.59**	**317**	P	**P**	**00 15 19.5**	**-0.4**
	0.4nm,0.7s,baz=86,slow=6.2,SNR=4.4						

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*IDC **08** 00:02:57.1±1.1, 10°.86S×165°.11E, h0^{km}, mb3.9/10, mb1 4.1/12, mb1mx3.9/47, mbtmp4.0/12, ML4.2/2, Error ellipse: s-maj=28.0km s-min=19.9km az=123.0*

*ISCJB **08** 00:03:00.1±0.8, 10°.88S±0°.07×165°.09E±0°.09, h31^{km}, mb3.8/9, Error ellipse: s-maj=13.5km s-min=8.5km az=145.5*

ISC 08 00:03:01.9±0.9**, 10°.81S**±0°.09×**165°.1E**±0°.1**, h31^{km}, n12, σ1^{s}.35**/14**, mb3.8**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.28**	**285**	Pn	**Pn**	**00 04 18.1**	**-0.6**
	55nm,0.3s,baz=202,slow=5.6,SNR=7.1						
HNR				Sn	**Sn**	**00 05 20.4**	**+1.8**
	48nm,0.3s,baz=37,slow=20,SNR=3.0						
DZM	**Mont Dzumac**	**11.27**	**174**	Pn	**Pn**	**00 05 40.8**	**-0.3**
	0.3nm,0.3s,baz=17,slow=20,SNR=3.1						
DZM				Sn	**Sn**	**00 07 48.1**	**+2.1**
	0.2nm,0.3s,baz=60,slow=20,SNR=2.9						
CTA	**Charters Tower**	**20.38**	**241**	P	**P**	**00 07 35.7**	**-0.5**
	5.2nm,0.8s,baz=80,slow=11,SNR=3.4						
STKA	**Stephens Creek**	**30.20**	**222**	P	**P**	**00 09 09.7**	**0.0**
	4.1nm,0.8s,baz=27,slow=10.0,SNR=7.8						
WRA	**Warramunga Arr**	**31.00**	**249**	P	**P**	**00 09 15.4**	**-1.5**
	0.6nm,0.6s,baz=80,slow=8.9,SNR=6.7						
ASAR	**Alice Springs**	**32.36**	**243**	P	**P**	**00 09 27.1**	**-1.8**
	1.1nm,0.6s,baz=65,slow=10.0,SNR=12						
FITZ	**Fitzroy Crossi**	**38.85**	**255**	P	**P**	**00 10 23.5**	**-1.2**
	1.9nm,0.6s,baz=82,slow=5.4,SNR=8.1						
CMAR	**Chiang Mai Arr**	**71.46**	**294**	P	**P**	**00 14 20.9**	**+0.9**
	0.6nm,0.4s,baz=129,slow=5.2,SNR=4.4						
SONM	**Songino Array**	**78.12**	**324**	P	**P**	**00 14 59.3**	**+1.2**
	0.2nm,0.6s,baz=133,slow=6.1,SNR=2.3						
ILAR	**Eielson Array**	**83.48**	**19**	P	**P**	**00 15 26.6**	**+0.3**
	0.6nm,0.8s,baz=241,slow=5.2,SNR=5.1						
MKAR	**Makanchi Array**	**92.93**	**317**	P	**P**	**00 16 13.2**	**+1.1**
	0.3nm,0.7s,baz=97,slow=5.7,SNR=3.2						
YKA	**Yellowknife Ar**	**95.04**	**27**	P	**P**	**00 16 20.1**	**-1.3**
	0.2nm,0.8s,baz=257,slow=5.1,SNR=3.2						

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*IDC **08** 00:05:04.1±1.8, 11°.21S×166°.99E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx3.9/49, mbtmp4.1/9, ML4.4/1, MS3.9/1, Ms1 3.9/1, ms1mx3.1/38, Error ellipse: s-maj=59.0km s-min=27.4km az=138.0*

*ISCJB **08** 00:05:07.7±1.4, 11°.2S±0°.2×166°.8E±0°.2, h28^{km}, mb4.0/8, MS3.9/1, Error ellipse: s-maj=38.3km s-min=20.9km az=148.8*

ISC 08 00:05:08.8±1.5**, 11°.2S**±0°.3×**166°.9E**±0°.2**, h28^{km}, n10, σ0^{s}.61**/11**, mb4.0**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.05**	**284**	Pn	**Pn**	**00 06 50.0**	**-0.2**
	6.0nm,0.3s,baz=195,slow=16,SNR=2.2						
WRA	**Warramunga Arr**	**32.48**	**250**	P	**P**	**00 11 37.2**	**-0.1**
	3.0nm,0.8s,baz=83,slow=9.1,SNR=14						
WRA				PcP	**PcP**	**00 14 23.1**	**-1.0**
	0.5nm,1.0s,baz=70,slow=3.5,SNR=3.0						
ASAR	**Alice Springs**	**33.73**	**244**	P	**P**	**00 11 48.1**	**0.0**
	0.9nm,0.7s,baz=73,slow=9.2,SNR=5.3						
ASAR				PcP	**PcP**	**00 14 27.9**	**+0.4**
	0.5nm,0.8s,baz=79,slow=5.0,SNR=3.0						
FITZ	**Fitzroy Crossi**	**40.42**	**255**	P	**P**	**00 12 45.7**	**+0.7**
	4.1nm,0.6s,baz=76,slow=9.5,SNR=11						
DAV	**Davao City (W)**	**44.93**	**292**	LR	LR	00 28 18.4	
	comp=Z,161nm,22.0s,baz=146,slow=31						
CMAR	**Chiang Mai Arr**	**73.20**	**293**	P	**P**	**00 16 38.2**	**+0.4**
	0.7nm,0.7s,baz=101,slow=4.8,SNR=1.8						
SONM	**Songino Array**	**79.45**	**323**	P	**P**	**00 17 13.4**	**+0.6**
	0.5nm,0.7s,baz=137,slow=6.9,SNR=3.4						
ILAR	**Eielson Array**	**83.31**	**18**	P	**P**	**00 17 32.8**	**+0.1**
	0.7nm,0.9s,baz=228,slow=4.7,SNR=4.4						
ZALV	**Zalesovo Beam**	**94.34**	**324**	P	**P**	**00 18 25.0**	**-0.7**
	0.6nm,0.6s,baz=115,slow=6.5,SNR=3.3						
MKAR	**Makanchi Array**	**94.40**	**317**	P	**P**	**00 18 25.8**	**-0.5**
	0.5nm,0.6s,baz=81,slow=6.7,SNR=5.6						

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*ISCJB **08** 00:09:26.0±1.0, 10°.9S±0°.1×165°.7E±0°.2, h10^{km}, mb3.8/6, MS4.6/1, Error ellipse: s-maj=21.7km s-min=16.4km az=164.2*

*IDC **08** 00:09:25.7±1.3, 10°.88S×165°.78E, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.8/54, mbtmp3.9/8, ML4.3/2, MS4.7/1, Ms1 4.7/1, ms1mx3.3/34, Error ellipse: s-maj=39.1km s-min=26.2km az=126.0*

ISC 08 00:09:27.5±1.1**, 10°.8S**±0°.1×**165°.8E**±0°.2**, h10^{km}, n16, σ0^{s}.86**/9**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.91	283	Pn	Pn	00 10 55.8	+0.6
	14nm,0.3s,baz=172,slow=7.1,SNR=3.2						
DZM	Mont Dzumac	11.19	177	Pn	Pn	00 12 08.3	+0.6
	1.3nm,0.3s,baz=126,slow=21,SNR=16						
H11S2	WAKE ISLAND Hy	29.15	2	T	T	00 45 48.5	
	baz=181,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.16	2	T	T	00 45 49.1	
	baz=181,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.17	2	T	T	00 45 48.8	
	baz=181,slow=76,SNR=18						
H11N1	WAKE ISLAND Hy	30.38	2	T	T	00 47 19.4	
	baz=182,slow=76						
H11N3	WAKE ISLAND Hy	30.38	2	T	T	00 47 20.0	
	baz=182,slow=76						
H11N2	WAKE ISLAND Hy	30.39	2	T	T	00 47 20.8	
	baz=182,slow=76						
WRA	Warramunga Arr	31.59	250	P	P	00 15 49.8	-0.9
	0.4nm,0.5s,baz=83,slow=9.0,SNR=4.9						
ASAR	Alice Springs	32.92	243	P	P	00 16 01.5	-0.8
	0.8nm,0.6s,baz=66,slow=9.7,SNR=8.0						
RAR	Rarotonga	34.60	112	LR	LR	00 26 46.6	
	comp=Z,1µm,22.0s,baz=267,slow=30						
SONM	Songino Array	78.52	324	P	P	00 21 30.0	+0.8
	0.3nm,0.6s,baz=115,slow=4.8,SNR=2.9						
ILAR	Eielson Array	83.30	18	P	P	00 21 54.3	+0.1
	0.6nm,0.7s,baz=244,slow=4.0,SNR=8.5						
MKAR	Makanchi Array	93.39	317	P	P	00 22 42.9	-0.2
	0.3nm,0.6s,baz=104,slow=6.1,SNR=3.4						
ZALV	Zalesovo Beam	93.41	324	P	P	00 22 42.8	-0.2
	0.4nm,0.5s,baz=130,slow=2.3,SNR=2.8						
ARCES	ARCESS Array B	116.14	346	PKP	PKPdf	00 28 09.3	-1.2
	1.1nm,0.8s,baz=352,slow=1.4,SNR=6.1						

IDC 08 00:10:48.4±1.6**,10°.88S**×**165°.56E,h0^{km},mb3.6**/4**, mb1 4.0**/5**,mb1mx3.7**/52**,mbtmp3.7**/5**,ML4.0**/1**,Error ellipse: s-maj=49.3km s-min=27.5km az=121.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.16	176	Pn	Pn	00 13 28.1	-1.2
	1.0nm,0.3s,baz=0.0,slow=20,SNR=3.0						
WRA	Warramunga Arr	31.37	250	P	P	00 17 11.7	+0.6
	1.3nm,0.8s,baz=79,slow=9.2,SNR=5.2						
ASAR	Alice Springs	32.70	243	P	P	00 17 23.0	+0.1
	0.2nm,0.5s,baz=70,slow=9.2,SNR=2.7						
SONM	Songino Array	78.42	324	P	P	00 22 50.4	-0.8
	0.2nm,0.6s,baz=134,slow=4.2,SNR=2.3						
ILAR	Eielson Array	83.42	19	P	P	00 23 17.9	+0.6
	0.3nm,0.3s,baz=235,slow=5.9,SNR=16						

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*IDC **08** 00:12:53.5±0.4, 11°.48S×165°.65E, h0^{km}, mb4.8/32, mb1 4.9/34, mb1mx4.8/50, mbtmp4.8/34, ML5.1/2, MS4.5/13, Ms1 4.5/13, ms1mx4.2/31, Error ellipse: s-maj=13.8km s-min=11.9km az=128.0*

*NEIC **08** 00:12:56.3±0.1, 11°.63S×165°.41E, h10^{km}, mb5.1/141, Error ellipse: s-maj=4.9km s-min=4.2km az=126.0*

*ISCJB **08** 00:12:57.4±0.1, 11°.70S±0°.03×165°.42E±0°.02, h24^{km}, mb5.0/187, MS4.6/17, Error ellipse: s-maj=4.4km s-min=3.2km az=153.3*

*MOS **08** 00:12:58.9±0.9, 11°.25S×165°.23E, h33^{km}, mb5.1/57, MS4.6/4, Error ellipse: s-maj=9.9km s-min=8.9km az=71.3*

ISC 08 00:12:57.9±0.3**,11°.61S**±0°.05×**165°.64E**±0°.05**,h24^{km},n480,** σ1^{s}.76/482**,mb5.1**/187**,MS4.6**/18**,12C-7D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.00	291	eP	Pn	00 14 25.0	-0.3
HNR				eS	Sn	00 15 39.0	+5.7
HNR	Honiara	6.00	291	ePn	Pn	00 14 22.4	-2.9
HNR				Sn	Sn	00 15 33.9	+0.6
HNR	Honiara	6.00	291	Pn	Pn	00 14 24.9	-0.4
	32nm,0.3s,baz=223,slow=4.7,SNR=14						
HNR				Sn	Sn	00 15 33.9	+0.6
	13nm,0.3s,baz=258,slow=20,SNR=3.3						
HNR				LR	LR	00 16 52.1	
	comp=Z,5µm,20.6s,baz=140,slow=40						
MARNC	Mare, Loyalty	10.08	167	ePn	Pn	00 15 21.2	-0.1
DZM	Mont Dzumac	10.44	176	ePn	Pn	00 15 25.9	-0.3
DZM				Sn	Sn	00 17 20.6	-1.9
DZM	Mont Dzumac	10.44	176	Pn	Pn	00 15 26.5	+0.3
	18nm,0.3s,baz=20,slow=12,SNR=52						
DZM				Sn	Sn	00 17 20.6	-1.9
	6.1nm,0.3s,baz=172,slow=23,SNR=6.4						
DZM				LR	LR	00 18 34.0	
	comp=Z,848nm,19.7s,baz=0.0,slow=32						
PINNC	Pines Island,	11.08	171	ePn	Pn	00 15 34.9	-0.1
MSVF	Nonsavu	13.46	118	ePn	Pn	00 16 10.5	+2.9
MSVF	Nonsavu	13.46	118	eP	Pn	00 16 10.5	+2.9
FUNA	Funafuti	13.70	78	ePn	Pn	00 16 08.2	-2.5
TARA	Tarawa	14.77	30	ePn	Pn	00 16 24.1	-1.3
	14nm,0.7s						
EIDS	Eidsvold	19.41	223	P	Pn	00 17 25.2	+1.4
	baz=20,SNR=23						
EIDS	Eidsvold	19.41	223	eP	Pn	00 17 23.4	-0.4
	63nm,0.9s						
CTA	Charters Tower	20.45	243	P	Pn	00 17 35.3	-0.8
	55nm,0.8s,baz=69,slow=12,SNR=39						
CTA				LR	LR	00 24 46.8	
	comp=Z,2µm,18.7s,baz=69,slow=35						
CTAO	Charters Tower	20.45	243	eP	Pn	00 17 35.0	-1.1
	92nm,0.9s						
CTAO	Charters Tower	20.45	243	eP	Pn	00 17 35.0	-1.1
CTAO				pmax	pmax		
	comp=Z,92nm,0.9s						
MANU	Manus Island	20.46	296	eP	P	00 17 34.3	+0.2
	comp=Z,542nm,1.4s						
MTSU	Mount Surprise	21.59	250	P	P	00 17 48.4	+2.2
	baz=22,SNR=54						
RMQ	Roma	21.72	225	P	P	00 17 49.7	+2.1
	baz=22,SNR=23						
COEN	Coen	22.03	261	P	P	00 17 52.5	+1.6
	baz=22,SNR=9.7						
COEN	Coen	22.03	261	eP	P	00 17 51.4	+0.5
	comp=Z,94nm,1.4s						
ARMA	Armidale	22.79	213	P	P	00 18 00.4	+1.4
	baz=23,SNR=34						
ARMA	Armidale	22.79	213	eP	P	00 17 59.5	+0.5
	comp=Z,91nm,0.9s						
OUZ	Omahuta	24.59	164	eP	P	00 18 17.0	+0.8
	comp=Z,58nm,1.1s						
QLP	Quilpie	25.06	230	P	P	00 18 21.8	+1.2
	baz=25,SNR=6.5						
MGCD	Mangrove Creek	25.29	209	P	P	00 18 24.0	+1.4
	baz=26,SNR=8.5						
RIV	Riverview	25.78	209	P	P	00 18 29.9	+2.9
	baz=26,SNR=4.6						
QIS	Mount Isa	26.52	247	P	P	00 18 35.7	+1.8
	baz=27,SNR=10						
CMSA	Cobar Meteorol	27.07	220	P	P	00 18 39.4	+0.7
	baz=27,SNR=22						
YNG	Young	27.52	212	P	P	00 18 44.9	+2.1
	baz=28,SNR=5.6						
URZ	Urewera	28.45	161	eP	P	00 18 51.4	+0.4
	comp=Z,20nm,0.9s						
URZ	Urewera	28.45	161	P	P	00 18 49.8	-1.2
	comp=Z,3.7nm,0.5s,baz=349,slow=5.2,SNR=4.4						
URZ				LR	LR	00 28 24.1	
	comp=Z,920nm,19.6s,baz=357,slow=33						
BKZ	Black Stump Fm	29.09	162	eP	P	00 18 56.5	-0.3
	comp=Z,26nm,1.0s						
H11S2	WAKE ISLAND Hy	29.93	2	T	T	00 50 26.4	
	baz=21,slow=74,SNR=6.2						
H11S3	WAKE ISLAND Hy	29.93	2	T	T	00 50 24.8	
	baz=187,slow=74,SNR=6.4						
H11S1	WAKE ISLAND Hy	29.94	2	T	T	00 50 28.3	
	SNR=3.6						
STKA	Stephens Creek	29.97	224	P	P	00 19 05.5	+1.0
	baz=30,SNR=12						
STKA	Stephens Creek	29.97	224	eP	P	00 19 05.3	+0.8
	comp=Z,4.4nm,1.0s						
STKA	Stephens Creek	29.97	224	eP	P	00 19 05.3	+0.8
STKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	Stephens Creek	29.97	224	P	P	00 19 04.5	-0.1
	comp=Z,12nm,0.8s,baz=23,slow=12,SNR=22						
STKA				LR	LR	00 31 08.2	
	comp=Z,1µm,18.3s,baz=44,slow=36						
BFZ	Birch Farm	30.43	164	eP	P	00 19 09.6	+1.0
	comp=Z,43nm,0.9s						
THZ	Tophouse	30.71	169	eP	P	00 19 11.0	0.0
	comp=Z,48nm,0.8s						
H11N1	WAKE ISLAND Hy	31.15	2	T	T	00 51 55.7	
	baz=190,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	31.15	2	T	T	00 52 00.7	
	baz=190,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	31.16	2	T	T	00 52 01.2	
	baz=190,slow=76,SNR=20						
WRAB	Tennant Creek	31.18	251	eP	P	00 19 14.7	-0.8
	comp=Z,51nm,1.4s						
WRAB	Tennant Creek	31.18	251	ceP	P	00 19 15.2	-0.3
WRAB				pmax	pmax		
	comp=Z,39nm,1.5s						
WB2	Warramunga Arr	31.18	251	eP	P	00 19 14.5	-1.0
WRA	Warramunga Arr	31.20	251	P	P	00 19 15.5	-0.1
	comp=Z,12nm,0.9s,baz=81,slow=8.6,SNR=55						
WRA				PcP	PcP	00 22 11.1	+0.9
	comp=Z,1.8nm,0.9s,baz=81,slow=3.4,SNR=3.2						
WRA				ScP	ScP	00 25 55.3	+3.4
	comp=Z,2.8nm,1.1s,baz=78,slow=3.9,SNR=5.6						
WRA				LR	LR	00 31 44.4	
	comp=Z,863nm,18.6s,baz=80,slow=36						
KHZ	Kahutara	31.46	169	eP	P	00 19 18.2	+0.7
	comp=Z,64nm,1.3s						
LTZ	Lake Taylor	31.59	171	eP	P	00 19 18.8	0.0
	comp=Z,254nm,2.0s						
FOZ	Fox Glacier	32.01	174	eP	P	00 19 23.4	+1.0
	comp=Z,73nm,0.9s						
OXZ	Oxford	32.09	171	eP	P	00 19 22.8	-0.3
	comp=Z,36nm,0.8s						
RPZ	Rata Peaks	32.33	173	eP	P	00 19 25.6	+0.4
	comp=Z,74nm,1.0s						
RPZ	Rata Peaks	32.33	173	P	P	00 19 25.5	+0.3
	comp=Z,43nm,0.8s,baz=295,slow=0.4,SNR=20						
AS01	Alice Springs	32.41	244	eP	P	00 19 25.5	-0.7
GUMO	Guam	32.42	320	LR	LR	00 32 04.6	
	comp=Z,439nm,19.3s,baz=135,slow=36						
KDU	Kakadu	32.43	265	P	P	00 19 26.2	-0.2
	baz=33,SNR=12						
AS31	Alice Springs	32.45	244	eP	P	00 19 26.2	-0.4
	comp=Z,6.5nm,0.8s						
ASAR	Alice Springs	32.45	244	P	P	00 19 26.1	-0.5
ASAR						00 22 11.3	
ASAR				pmax	pmax		
	comp=Z,25nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ASAR				pmax	pmax		
	comp=N,2.0nm,1.0s						
ASAR				MLR	MLR		
	comp=Z,1µm,19.2s						
ASAR	Alice Springs	32.45	244	P	P	00 19 26.1	-0.5
	comp=Z,25nm,0.8s,baz=75,slow=9.5,SNR=136						
ASAR				PcP	PcP	00 22 11.3	-2.3
	comp=Z,2.3nm,1.0s,baz=90,slow=3.7,SNR=2.9						
ASAR				ScP	ScP	00 25 58.9	+2.7
	comp=Z,2.3nm,1.0s,baz=89,slow=3.2,SNR=7.4						
ASAR				LR	LR	00 31 54.2	
	comp=Z,1µm,19.2s,baz=78,slow=35						
MQZ	McQueen's Vall	32.55	171	eP	P	00 19 26.9	-0.3
	comp=Z,57nm,1.1s						
HTT	Hallett	32.70	224	P	P	00 19 29.5	+0.9
	baz=33,SNR=15						
LBZ	Lake Benmore	32.90	174	eP	P	00 19 31.0	+0.8
	comp=Z,41nm,1.3s						
WKZ	Wanaka	33.23	176	eP	P	00 19 34.1	+1.0
	comp=Z,85nm,1.0s						
ODZ	Otahua Downs	33.60	174	eP	P	00 19 35.9	-0.3
	comp=Z,96nm,1.6s						
BBOO	Buckleboo	34.37	227	P	P	00 19 43.6	+0.4
	baz=34,SNR=8.6						
BBOO	Buckleboo	34.37	227	eP	P	00 19 41.7	-1.5
	comp=Z,18nm,0.8s						
KNRA	Kununurra	36.03	259	P	P	00 19 57.9	+0.2
	baz=36,SNR=7.5						
WRKA	Warakurna	37.74	244	P	P	00 20 12.1	-0.1
	baz=38,SNR=15						
FITZ	Fitzroy Crossi	39.14	256	P	P	00 20 24.0	+0.1
	baz=39,SNR=27						
FITZ	Fitzroy Crossi	39.14	256	eP	P	00 20 24.0	+0.1
	comp=Z,32nm,0.8s						
FITZ	Fitzroy Crossi	39.14	256	P	P	00 20 23.3	-0.6
	comp=Z,32nm,0.8s,baz=104,slow=6.3,SNR=49						
FORT	Forrest	39.64	235	P	P	00 20 28.4	+0.4
	baz=40,SNR=15						
FORT	Forrest	39.64	235	eP	P	00 20 27.3	-0.7
	comp=Z,45nm,0.8s						
SANI	Sanana	40.45	281	P	P	00 20 31.9	-3.0
SOEI	Soe	40.67	268	eP	P	00 20 37.1	+0.2
	comp=Z,23nm,0.9s						
BATI	Baumata	41.22	268	P	P	00 20 41.9	+0.6
BATI	Baumata	41.22	268	P	P	00 20 42.5	+1.2
	comp=Z,28nm,0.7s,baz=234,slow=3.1,SNR=12						
MMRI	Maumere	42.80	270	eP	P	00 20 53.9	-0.3
	comp=Z,71nm,1.2s						
MMRI	Maumere	42.80	270	P	P	00 20 54.3	+0.1
	comp=Z,48nm,0.9s						
EDFI	Ende, Flores	43.32	270	P	P	00 20 54.0	-4.5
PPT2	Papeete2	43.67	103	eLR	LR	00 33 22.2	
	comp=Z,894nm,23.8s						
KCP	Kidapawan	44.37	293	⇑eP	P	00 21 07.5	+0.5
JCJ	Chichijima	44.70	330	LR	LR	00 38 55.5	
	comp=Z,187nm,18.6s,baz=155,slow=35						
BKSI	Bulukumba	45.41	274	P	P	00 21 14.3	-0.8
BNSI	Bone	45.60	275	P	P	00 21 16.7	0.0
SPSI	Sidrap Palu	46.02	276	P	P	00 21 19.1	-0.9
MEEK	Meekatharra	46.61	244	P	P	00 21 25.4	+0.9
	baz=47,SNR=22						
PCI	Palu	46.68	280	P	P	00 21 25.8	+0.6
MPSI	Mapaga	46.95	281	P	P	00 21 27.1	-0.2
	comp=Z,19nm,1.7s						
PLAI	Plampang	47.14	269	P	P	00 21 28.6	-0.2
	comp=Z,68nm,1.6s,comp=Z,1000nm						
KLBR	Kellerberrin	48.32	238	P	P	00 21 37.9	+0.1
	baz=48,SNR=8.7						
OPA	Opana	48.66	47	eP	P	00 21 42.7	+2.3
	comp=Z,253nm,1.0s						
OPA	Opana	48.66	47	eP	P	00 21 42.7	+2.3
OPA				pmax	pmax		
	comp=Z,253nm,1.0s						
BLDU	Ballidu	48.99	239	P	P	00 21 43.6	+0.7
	baz=49,SNR=5.4						
NWAO	Narrogin (SRO)	49.06	236	P	P	00 21 44.1	+0.7
	baz=49,SNR=6.7						
NWAO	Narrogin (SRO)	49.06	236	eP	P	00 21 43.2	-0.2
	comp=Z,42nm,0.9s						
NWAO	Narrogin (SRO)	49.06	236	eP	P	00 21 43.2	-0.2
NWAO				pmax	pmax		
	comp=Z,42nm,0.9s						
MORW	Morawa	49.27	242	P	P	00 21 45.6	+0.6
	baz=49,SNR=6.2						
MORW	Morawa	49.27	242	eP	P	00 21 44.9	-0.1
	comp=Z,40nm,0.8s						
HMH	Humu'ula Sheep	49.27	51	eP	P	00 21 48.2	+2.8
	comp=Z,140nm,1.0s						
HPAH	Hawaii Prepara	49.36	51	eP	P	00 21 48.2	+2.4
	comp=Z,112nm,0.9s						
MUN	Mundaring	49.69	238	P	P	00 21 49.1	+0.9
	baz=50,SNR=7.2						
TSM	Tawau	50.07	286	P	P	00 21 52.5	+1.2
SDKM	Sandakan	51.15	287	P	P	00 21 59.8	+0.3
KKM	Kota Kinabalu	52.20	287	eP	P	00 22 06.5	-1.0
	comp=Z,75nm,1.2s						
TAOE	Nuku Hiva Isla	53.36	92	eS	S	00 29 52.8	+5.7
	comp=Z,136nm,27.9s						
TAOE				eLR	LR	00 37 54.0	
	comp=Z,633nm,22.7s						
UGM	Wanagama	54.38	269	eP	P	00 22 23.5	+0.1
	comp=Z,158nm,1.2s						
MJAR	Matsushiro Arr	54.42	333	P	P	00 22 21.2	-2.1
	comp=Z,4.1nm,0.8s,baz=166,slow=8.8,SNR=4.5						
MAJO	Matsushiro	54.42	333	i P	P	00 22 19.4	-3.9
SMRI	Semarang	54.59	270	eP	P	00 22 25.1	+0.1
	comp=Z,122nm,1.1s						
SBUM	Sibu	54.91	281	eP	P	00 22 28.2	+1.0
	comp=Z,21nm,1.5s						
SBUM	Sibu	54.91	281	P	P	00 22 28.4	+1.2
KSM	Kuching	56.49	280	P	P	00 22 39.1	+0.5
CISI	Cisompet, Garu	57.08	268	eP	P	00 22 42.2	-0.7
	comp=Z,158nm,1.5s						
ASAJ	Asahikawa	59.29	341	P	P	00 22 55.8	-1.8
	comp=Z,8.4nm,0.9s,baz=142,slow=19,SNR=2.4						
KSRS	Korea Array	60.28	326	P	P	00 23 03.4	-1.1
	comp=Z,1.6nm,0.6s,baz=142,slow=6.5,SNR=4.8						
KSAR	Wonju Array Be	60.29	326	P	P	00 23 03.4	-1.3
KSAR	Wonju Array Be	60.29	326	P	P	00 23 03.4	-1.3
YSS	Yuzh-Sakhalins	61.79	342	eP	P	00 23 19.1	+4.5
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
NJ2	Nanjing	62.34	316	eP	P	00 23 19.7	+1.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
MYKOM	Kota Tinggi	62.82	278	P	P	00 23 23.5	+1.3
QIZ	Qiongzhong	62.85	298	P	P	00 23 23.7	+1.4
QIZ				S	S	00 31 53.1	+2.3
QIZ				pmax	pmax		
	comp=Z,14nm,1.0s						
QIZ				LR	LR		
	comp=E,290nm,27.9s						
QIZ				LR	LR		
	comp=Z,340nm,17.2s						
KGM	Kluang	63.39	278	P	P	00 23 27.2	+1.2
USRK	Ussuriysk Ar.	63.40	334	P	P	00 23 24.6	-0.8
	comp=Z,6.7nm,1.0s,baz=149,slow=3.4,SNR=6.0						
KTGM	Kuala Trenggan	64.41	282	P	P	00 23 34.1	+1.4
WHN	Wuhan	64.69	312	P	P	00 23 31.5	-2.7
PETK	Petropavlovsk-	64.81	355	eP	P	00 23 35.5	+0.9
PETK	Petropavlovsk-	64.81	355	eP	P	00 23 35.5	+0.9
PETK	Petropavlovsk-	64.81	355	P	P	00 23 32.9	-1.7
	comp=Z,3.6nm,0.8s,baz=85,slow=11,SNR=3.0						
PETK				LR	LR	00 47 50.6	
	comp=Z,241nm,19.1s,baz=156,slow=32						
BKNI	Bangkinang	65.22	276	eP	P	00 23 38.2	+0.2
	comp=Z,94nm,1.0s						
CASY	Casey	65.82	201	eP	P	00 23 41.0	0.0
	comp=Z,32nm,0.9s						
VNDA	Vanda	65.93	181	P	P	00 23 40.7	-0.8
	comp=Z,8.3nm,1.1s,baz=36,slow=8.7,SNR=2.6						
CN2	Changchun	66.17	329	eP	P	00 23 42.9	-0.6
IPM	Ipoh	66.22	280	eP	P	00 23 45.0	+0.5
	comp=Z,72nm,1.2s						
KULM	Kulim	66.78	281	eP	P	00 23 48.4	+0.3
	comp=Z,35nm,1.3s						
SKNT	Sakolnakorn	67.22	294	P	P	00 23 51.4	+0.6
	comp=Z,9.4nm,1.0s,comp=Z,1µm						
KLR	Kul'dur	67.53	337	P	P	00 23 50.9	-1.2
KLR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KLR	Kul'dur	67.53	337	P	P	00 23 50.9	-1.2
	comp=Z,3.6nm,0.9s,baz=116,slow=7.8,SNR=5.1						
ENH	Enshi	68.17	309	eP	P	00 23 56.2	-0.4
NONG	Nongkai	68.35	295	P	P	00 23 59.1	+1.2
	comp=Z,0.4nm,0.8s,comp=Z,174nm						
TRTT	Trang	68.37	283	P	P	00 24 10.1	+12
GYA	Guiyang	68.65	304	P	P	00 23 59.4	-0.3
GYA				PP	PP	00 26 36.3	+4.7
GYA				S	S	00 33 04.8	+3.2
GYA				SKS	SKSac	00 33 57.5	-0.5
GYA	Guiyang	68.65	304	SS	SS	00 37 30.2	+3.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,540nm,18.0s						
GYA				LR	LR		
	comp=E,560nm,18.4s						
GYA				LR	LR		
	comp=Z,520nm,18.2s						
BJT	Baijiatuau	68.84	321	eP	P	00 24 00.3	-0.2
BJI	Beijing	68.85	321	P	P	00 24 00.2	-0.3
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PBKT	Sadao Pong	69.80	293	P	P	00 24 18.2	+11
TIY	Taiyuan	69.90	317	eP	P	00 24 07.5	+0.3
XAN	Xi'an	70.42	313	P	P	00 24 10.3	-0.2
XAN				pP	sP	00 24 18.9	+0.7
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
XAN	Xi'an	70.42	313	eP	P	00 24 10.3	-0.2
XAN	Xi'an	70.42	313	eP	P	00 24 10.3	-0.2
SRDT	SRDT	70.78	290	P	P	00 24 25.8	+13
UTHA	Uthaitani	70.86	291	P	P	00 24 26.5	+13
KMI	Kunming	71.32	302	P	P	00 24 17.6	+1.3
KMI				pP	pP	00 24 21.9	-0.2
KMI				sP	sP	00 24 25.8	+1.6
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
KMI				pmax	pmax		
	comp=Z,160nm,4.2s						
KMI	Kunming	71.32	302	eP	P	00 24 17.9	+1.6
KMI	Kunming	71.32	302	eP	P	00 24 17.9	+1.6
MA2	Magadan	71.95	352	ceP	P	00 24 17.9	-1.2
MA2				pmax	pmax		
	comp=Z,21nm,2.5s						
MA2	Magadan	71.95	352	LR	LR	00 51 03.1	
	comp=Z,199nm,21.0s,baz=169,slow=32						
HHC	Hu-ho-hao-te	72.19	320	eP	P	00 24 21.6	+0.5
HHC				sP	sP	00 24 28.2	-0.6
HHC				S	S	00 33 46.6	+4.1
HHC				pmax	pmax		
	comp=Z,12nm,1.3s						
HHC				pmax	pmax		
	comp=Z,350nm,6.4s						
HHC				LR	LR		
	comp=N,460nm,16.4s						
HHC				LR	LR		
	comp=E,460nm,15.4s						
HHC				LR	LR		
	comp=Z,620nm,15.5s						
CM01	Chiang Mai Arr	72.21	294	eP	P	00 24 22.0	+0.5
CMAR	Chiang Mai Arr	72.24	294	P	P	00 24 22.1	+0.4
	comp=Z,6.6nm,0.7s,baz=117,slow=4.8,SNR=23						
CMMT	Chiang Mai	72.35	294	P	P	00 24 23.9	+1.5
	comp=Z,9.8nm,1.0s						
CHTO	Chiang Mai	72.36	294	eP	P	00 24 22.4	0.0
	comp=Z,21nm,1.4s						
CHTO	Chiang Mai	72.36	294	eP	P	00 24 22.4	0.0
CHTO				pmax	pmax		
	comp=Z,21nm,1.4s						
CHTO	Chiang Mai	72.36	294	P	P	00 24 23.9	+1.5
	comp=Z,42nm,1.1s						
ZEA	Zeya	72.82	337	eP	P	00 24 23.8	-0.6
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
CD2	Chengdu	72.86	308	⇓iP	P	00 24 25.4	+0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,280nm,4.7s						
SEY	Seymchan	75.02	354	ceP	P	00 24 36.0	-1.0
SEY	Seymchan	75.02	354	P	P	00 24 35.1	-2.0
	comp=Z,5.0nm,1.0s,baz=163,slow=7.2,SNR=6.7						
LZH	Lanzhou	75.06	312	⇓P	P	00 24 38.9	+0.8
LZH				pP	sP	00 24 46.5	+0.6
LZH				sP	PcP	00 24 49.4	-2.3
LZH				PP	PP	00 27 26.1	-0.4
LZH				pmax	pmax		
	comp=Z,35nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,4.3s						
LZH				LR	LR		
	comp=N,540nm,17.6s						
LZH				LR	LR		
	comp=E,560nm,17.0s						
LZH				LR	LR		
	comp=Z,640nm,18.8s						
GAMB	Gambell	77.14	10	eP	P	00 24 52.1	+3.0
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	78.40	180	eP	P	00 24 55.8	-0.6
	comp=Z,65nm,1.1s						
YAK	Yakutsk	78.60	344	eP	P	00 24 55.8	-1.5
YAK				pmax	pmax		
	comp=Z,18nm,1.1s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
SONM	Songino Array	79.06	324	P	P	00 24 58.7	-1.6
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	Songino Array	79.06	324	P	P	00 24 58.7	-1.6
	comp=Z,2.5nm,0.5s,baz=151,slow=6.1,SNR=21						
SONA1	Songino Array	79.06	324	eP	P	00 24 59.8	-0.5
ANM	Nome	79.06	12	eP	P	00 25 00.1	+0.4
	comp=Z,11nm,1.2s						
GTA	Gaotai	79.37	314	⇓P	P	00 25 02.8	+0.6
GTA				pP	pP	00 25 07.3	-0.6
GTA				sP	sP	00 25 09.9	-0.1
GTA	Gaotai	79.37	314	S	S	00 35 03.8	+1.9
GTA	Gaotai	79.37	314	sS	sS	00 35 11.6	+0.5
GTA	Gaotai	79.37	314	SKS	SKSac	00 35 14.1	-3.2
GTA	Gaotai	79.37	314	SS	SS	00 40 14.3	+4.7
GTA				pmax	pmax		

	comp=Z,19nm,1.2s						
GTA				pmax	pmax		
	comp=Z,88nm,7.6s						
GTA				LR	LR		
	comp=N,270nm,18.4s						
GTA				LR	LR		
	comp=E,290nm,20.9s						
GTA				LR	LR		
	comp=Z,310nm,21.3s						
BILL	**Bilibino**	**79.44**	**0**	*e*P	**P**	**00 24 59.5**	**-2.3**
	comp=Z,16nm,1.1s						
BILL	**Bilibino**	**79.44**	**0**	*i* P	**P**	**00 24 59.7**	**-2.1**
BILL				*i*		00 25 10.8	
BILL				*i*		00 27 57.4	
BILL				pmax	pmax		
	comp=Z,11nm,1.0s						
SUA	**Susitna One**	**80.49**	**20**	*e*P	**P**	**00 25 09.6**	**+1.9**
	comp=Z,16nm,0.9s						
BOD	**Bodaibo**	**80.99**	**335**	*e*P	**P**	**00 25 09.4**	**-0.9**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.8s						
DIV	**Divide**	**81.97**	**22**	*e*P	**P**	**00 25 13.6**	**-1.9**
	comp=Z,22nm,0.9s						
TRF	**Thorofare Moun**	**82.08**	**18**	*e*P	**P**	**00 25 18.2**	**+2.0**
	comp=Z,13nm,1.0s						
ZAK	**Zakamensk**	**82.10**	**325**	*e*P	**P**	**00 25 14.0**	**-2.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KLU	**Klutina**	**82.16**	**21**	*e*P	**P**	**00 25 18.6**	**+2.1**
	comp=Z,18nm,0.9s						
RND	**Reindeer**	**82.50**	**19**	*e*P	**P**	**00 25 20.8**	**+2.5**
	comp=Z,22nm,1.0s						
TLY	**Talaya**	**82.53**	**326**	*ce*P	**P**	**00 25 18.5**	**-0.2**
RDOG	**Red Dog Mine**	**82.59**	**11**	*e*P	**P**	**00 25 17.3**	**-1.3**
	comp=Z,13nm,0.9s						
MCK	**McKinley**	**82.71**	**19**	*e*P	**P**	**00 25 18.0**	**-1.3**
	comp=Z,17nm,1.0s						
MCK	**McKinley**	**82.71**	**19**	*e*P	**P**	**00 25 18.0**	**-1.3**
MCK				pmax	pmax		
	comp=Z,17nm,1.0s						
DHY	**Denali Highway**	**82.75**	**20**	*e*P	**P**	**00 25 20.6**	**+0.9**
	comp=Z,42nm,1.8s						
HARP	**HAARP**	**83.04**	**21**	*e*P	**P**	**00 25 23.8**	**+2.8**
	comp=Z,23nm,0.9s						
MLY	**Manley**	**83.10**	**17**	*e*P	**P**	**00 25 19.6**	**-1.8**
	comp=Z,9.2nm,1.0s						
GDXM	**Geysers**	**83.26**	**48**	*e*P	**P**	**00 25 25.2**	**+2.3**
	comp=Z,15nm,0.9s						
SAO	**San Andreas Ge**	**83.57**	**51**	*e*P	**P**	**00 25 26.7**	**+2.4**
	comp=Z,13nm,0.9s						
O02D	**Mt. Diablo Mer**	**83.75**	**47**	P	**P**	**00 25 28.1**	**+2.7**
	baz=249,SNR=6.8						
HDA	**Harding Lake**	**83.81**	**19**	P	**P**	**00 25 27.1**	**+2.2**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.85**	**18**	P	**P**	**00 25 27.7**	**+2.6**
	baz=226						
RIDG	**Independ'e Rid**	**84.03**	**20**	*e*P	**P**	**00 25 24.0**	**-2.2**
	comp=Z,46nm,1.0s						
K02D	**Willamette Mer**	**84.05**	**44**	P	**P**	**00 25 28.8**	**+2.1**
	baz=248						
ILAR	**Eielson Array**	**84.08**	**19**	P	**P**	**00 25 23.5**	**-2.8**
	comp=Z,4.8nm,1.0s,baz=226,slow=6.2,SNR=17						
M02C	**Callahan**	**84.14**	**46**	P	**P**	**00 25 29.6**	**+2.4**
	baz=249						
POKR	**Poker Plat Res**	**84.15**	**18**	P	**P**	**00 25 29.4**	**+2.7**
	baz=226						
PKM	**Mcpherson Peak**	**84.22**	**53**	P	**P**	**00 25 29.8**	**+1.9**
	baz=252						
YBH	**Yreka Blue Hor**	**84.36**	**46**	*e*P	**P**	**00 25 30.3**	**+1.9**
	comp=Z,22nm,1.0s						
YBH	**Yreka Blue Hor**	**84.36**	**46**	P	**P**	**00 25 28.9**	**+0.5**
	comp=Z,15nm,0.9s,baz=133,slow=7.4,SNR=17						
ORV	**Oroville**	**84.47**	**48**	*e*P	**P**	**00 25 30.4**	**+1.5**
	comp=Z,12nm,0.9s						
ORV	**Oroville**	**84.47**	**48**	*e*P	**P**	**00 25 30.4**	**+1.5**
ORV				pmax	pmax		
	comp=Z,13nm,0.9s						
SCRK	**Sand Creek**	**84.48**	**20**	*e*P	**P**	**00 25 26.2**	**-2.3**
	comp=Z,36nm,0.9s						
HUMO	**Hull Mountain**	**84.50**	**45**	*e*P	**P**	**00 25 31.6**	**+2.6**
O03E	**Paynes Creek**	**84.50**	**47**	P	**P**	**00 25 31.2**	**+2.0**
	baz=250,SNR=8.6						
AFDM	**Forest Hills D**	**84.65**	**49**	*e*P	**P**	**00 25 31.1**	**+1.2**
	comp=Z,22nm,0.9s						
CMB	**Columbia Colle**	**84.78**	**50**	*e*P	**P**	**00 25 32.4**	**+1.8**
	comp=Z,14nm,0.9s						
CMB	**Columbia Colle**	**84.78**	**50**	*e*P	**P**	**00 25 32.4**	**+1.8**
CMB				pmax	pmax		
	comp=Z,14nm,0.9s						
L04D	**Klamath Falls**	**84.81**	**45**	P	**P**	**00 25 32.7**	**+2.0**
	baz=250						
COLD	**Coldfoot**	**84.86**	**16**	*e*P	**P**	**00 25 33.4**	**+3.2**
	comp=Z,4.2nm,1.1s						
WRAK	**Wrangell Islan**	**84.88**	**30**	*e*P	**P**	**00 25 33.1**	**+2.6**
	comp=Z,64nm,1.6s						
HYT	**Haines Junctio**	**84.94**	**24**	*e*P	**P**	**00 25 33.4**	**+2.5**
	comp=Z,11nm,0.8s						
M04C	**Macdoel**	**84.99**	**46**	P	**P**	**00 25 33.8**	**+2.1**
	baz=250						
I04A	**Tendick Farm,**	**85.30**	**44**	P	**P**	**00 25 35.5**	**+2.5**
	baz=249						
J04D	**Umpqua Nationa**	**85.31**	**44**	P	**P**	**00 25 35.4**	**+2.1**
	baz=250						
K04D	**Chiloquin, OR**	**85.34**	**45**	P	**P**	**00 25 35.3**	**+1.9**
	baz=250						
H04D	**Lebanon**	**85.34**	**43**	P	**P**	**00 25 35.5**	**+2.4**
	baz=249						
ISA	**Isabella, Lake**	**85.50**	**52**	*e*P	**P**	**00 25 36.8**	**+2.5**
	comp=Z,9.9nm,0.9s						
ISA	**Isabella, Lake**	**85.50**	**52**	P	**P**	**00 25 36.0**	**+1.7**
	baz=252,SNR=5.1						
RAMN	**Ramite**	**85.63**	**298**	*e*P	**P**	**00 25 35.0**	**-0.3**
MDPB	**Devils Postpil**	**85.64**	**50**	*e*P	**P**	**00 25 36.6**	**+1.5**
	comp=Z,22nm,0.9s						
EDW2	**Edwards Air Fo**	**85.64**	**53**	P	**P**	**00 25 36.7**	**+1.8**
	baz=253,SNR=8.4						
WAKR	**Walker**	**85.64**	**49**	*e*P	**P**	**00 25 37.1**	**+2.0**
	comp=Z,20nm,1.1s						
OMMB	**Old Mammoth Mi**	**85.69**	**50**	*e*P	**P**	**00 25 38.0**	**+2.6**
	comp=Z,8.0nm,1.0s						
PNTR	**Pine Nut**	**85.70**	**49**	*e*P	**P**	**00 25 38.1**	**+2.7**
	comp=Z,15nm,0.9s						
BFSC	**Mount Baldy Ra**	**85.71**	**54**	P	**P**	**00 25 37.1**	**+1.7**
	baz=253						
MURC	**Murrieta**	**85.90**	**55**	P	**P**	**00 25 38.7**	**+2.5**
	baz=253						
J05D	**Fort Rock, OR**	**85.92**	**44**	P	**P**	**00 25 38.7**	**+2.5**
	baz=250						
CWC	**Cottonwood Cre**	**86.03**	**52**	P	**P**	**00 25 39.1**	**+2.1**
	baz=253						
PAHR	**Pah Rah Range**	**86.06**	**48**	*e*P	**P**	**00 25 38.6**	**+1.6**
	comp=Z,14nm,1.0s						
TIN	**Tinemaha, Big**	**86.10**	**51**	P	**P**	**00 25 39.9**	**+2.6**
	baz=252						
MOD	**Modoc Plateau**	**86.11**	**46**	*e*P	**P**	**00 25 39.8**	**+2.5**
	comp=Z,7.6nm,0.9s						
DAWY	**Dawson**	**86.11**	**21**	*e*P	**P**	**00 25 39.0**	**+2.4**
	comp=Z,9.1nm,0.8s						
JIRN	**Jiri**	**86.17**	**299**	*e*P	**P**	**00 25 37.9**	**-0.2**
	comp=Z,29nm,0.9s						
D03D	**Eldon**	**86.21**	**40**	P	**P**	**00 25 40.3**	**+2.9**
	baz=248						
I05D	**Terrebonne, OR**	**86.21**	**43**	P	**P**	**00 25 40.5**	**+2.9**
	baz=250						
PINE	**Pine Mountain**	**86.30**	**44**	*e*P	**P**	**00 25 41.1**	**+3.0**
	comp=Z,14nm,0.9s						
MONP2	**Monument Peak**	**86.32**	**56**	P	**P**	**00 25 40.3**	**+1.8**
	baz=254,SNR=6.7						
MPMC	**Manual Prospec**	**86.38**	**52**	P	**P**	**00 25 40.5**	**+1.7**
	baz=253,SNR=8.8						
NV01	**Mina Array Sit**	**86.46**	**50**	*e*P	**P**	**00 25 40.9**	**+1.8**
NVAR	**Mina Array Bea**	**86.46**	**50**	P	**P**	**00 25 40.1**	**+1.0**
	comp=Z,15nm,0.9s,baz=231,slow=8.1,SNR=24						
NVAR				LR	LR	00 59 03.8	
	comp=Z,726nm,18.6s,baz=274,slow=32						
PFO	**Pinyon Flats O**	**86.49**	**55**	*e*P	**P**	**00 25 40.7**	**+1.4**
	comp=Z,6.9nm,0.9s						
PFO	**Pinyon Flats O**	**86.49**	**55**	*e*P	**P**	**00 25 40.7**	**+1.4**
PFO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PFO	**Pinyon Flats O**	**86.49**	**55**	P	**P**	**00 25 41.1**	**+1.8**
	baz=254						
PFO	**Pinyon Flats O**	**86.49**	**55**	P	**P**	**00 25 40.4**	**+1.1**
	comp=Z,7.8nm,0.9s,baz=294,slow=1.5,SNR=8.8						
XPFO	**Pion Flat**	**86.49**	**55**	*e*P	**P**	**00 25 41.2**	**+1.9**
	comp=Z,7.3nm,0.9s						
GUN	**Gumba**	**86.50**	**299**	*e*P	**P**	**00 25 39.4**	**-0.3**
	comp=Z,43nm,1.2s						
NV11	**Mina Array Sit**	**86.58**	**50**	*e*P	**P**	**00 25 41.7**	**+2.1**
	comp=Z,1.3nm,0.9s						
TIXI	**Tiksi**	**86.62**	**349**	*ce*P	**P**	**00 25 37.6**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TIXI	**Tiksi**	**86.62**	**349**	P	**P**	**00 25 36.7**	**-2.2**
	comp=Z,1.9nm,0.4s,baz=153,slow=11,SNR=6.5						
GSC	**Goldstone, Bar**	**86.69**	**53**	*e*P	**P**	**00 25 41.8**	**+1.6**
	comp=Z,6.8nm,1.1s						
GSC	**Goldstone, Bar**	**86.69**	**53**	*e*P	**P**	**00 25 41.8**	**+1.6**
GSC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GSC	**Goldstone, Bar**	**86.69**	**53**	P	**P**	**00 25 42.3**	**+2.1**
	baz=254						
GRAC	**Grapevine Rang**	**86.75**	**51**	P	**P**	**00 25 42.6**	**+2.2**
	baz=253						
KVN	**Kaiserville**	**86.80**	**49**	*e*P	**P**	**00 25 42.4**	**+1.6**
	comp=Z,12nm,0.9s						
KVN	**Kaiserville**	**86.80**	**49**	*e*P	**P**	**00 25 42.4**	**+1.6**
KVN				pmax	pmax		
	comp=Z,12nm,0.9s						
PKIN	**Phulchoki**	**86.83**	**299**	*e*P	**P**	**00 25 40.7**	**-0.5**
SWSC	**Sam W. Stewart**	**86.84**	**56**	P	**P**	**00 25 43.0**	**+2.2**
	baz=254						
A04D	**Lummi Island**	**86.88**	**39**	P	**P**	**00 25 43.4**	**+2.8**
	baz=249						
HEC	**Hector,Ludlow**	**86.93**	**54**	P	**P**	**00 25 43.4**	**+2.1**
	baz=254						
BELC	**Belle Mtn. Jos**	**86.97**	**55**	P	**P**	**00 25 43.5**	**+1.9**
	baz=254,SNR=6.1						
FURC	**Furnace Creek,**	**86.98**	**52**	P	**P**	**00 25 43.6**	**+2.2**
	baz=253,SNR=7.2						
DMN	**Daman**	**87.08**	**299**	*e*P	**P**	**00 25 42.2**	**-0.3**
	comp=Z,51nm,1.1s						
B05A	**Bryant**	**87.09**	**40**	P	**P**	**00 25 44.3**	**+2.7**
	baz=249						
BC3	**Big Chuckawall**	**87.31**	**55**	P	**P**	**00 25 45.2**	**+2.0**
	baz=254						
I07A	**Izee**	**87.37**	**44**	*e*P	**P**	**00 25 45.5**	**+2.2**
	comp=Z,9.0nm,1.0s						
TUQ	**Turquoise Moun**	**87.42**	**53**	P	**P**	**00 25 45.9**	**+2.1**
	baz=254						
GMRC	**Granite Mounta**	**87.45**	**54**	P	**P**	**00 25 45.6**	**+1.7**
	baz=254,SNR=6.9						
WVOR	**Wild Horse Val**	**87.45**	**46**	*e*P	**P**	**00 25 44.5**	**+0.8**
	comp=Z,20nm,1.4s						
WVOR	**Wild Horse Val**	**87.45**	**46**	*e*P	**P**	**00 25 44.5**	**+0.8**
WVOR				pmax	pmax		
	comp=Z,20nm,1.4s						
TPNV	**Topopah Spring**	**87.59**	**52**	*e*P	**P**	**00 25 46.7**	**+2.1**
	comp=Z,8.2nm,1.0s						
TPNV	**Topopah Spring**	**87.59**	**52**	*e*P	**P**	**00 25 46.7**	**+2.1**
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TPNV	**Topopah Spring**	**87.59**	**52**	P	**P**	**00 25 46.6**	**+2.1**
	baz=254						
GLA	**Glamis**	**87.65**	**56**	*e*P	**P**	**00 25 47.3**	**+2.5**
	comp=Z,15nm,0.8s						
GLA	**Glamis**	**87.65**	**56**	*e*P	**P**	**00 25 47.3**	**+2.5**
GLA				pmax	pmax		
	comp=Z,15nm,0.8s						
GLA	**Glamis**	**87.65**	**56**	P	**P**	**00 25 46.8**	**+2.0**
	baz=255						
IRM	**Iron Mountain**	**87.69**	**55**	P	**P**	**00 25 46.9**	**+2.0**
	baz=254,SNR=12						
J08A	**Circle Bar Ran**	**87.85**	**45**	*e*P	**P**	**00 25 47.9**	**+2.3**
	comp=Z,15nm,1.0s						
Y12C	**Blythe**	**88.08**	**55**	*e*P	**P**	**00 25 48.7**	**+1.9**
	comp=Z,18nm,1.0s						
Y12C	**Blythe**	**88.08**	**55**	P	**P**	**00 25 49.0**	**+2.2**
	baz=255						
G08A	**Pilot Rock**	**88.12**	**43**	*e*P	**P**	**00 25 48.9**	**+2.0**
	comp=Z,12nm,1.1s						
SHPR	**Sheep Range**	**88.31**	**52**	*e*P	**P**	**00 25 50.3**	**+2.2**
	comp=Z,6.0nm,0.9s						
KOLN	**Koldanda**	**88.42**	**299**	*e*P	**P**	**00 25 47.6**	**-1.2**
	comp=Z,17nm,0.9s						
DANN	**Dangsing**	**88.42**	**299**	*e*P	**P**	**00 25 47.7**	**-1.2**
	comp=Z,19nm,0.8s						
E08A	**Dider Farm, El**	**88.44**	**42**	*e*P	**P**	**00 25 50.2**	**+2.0**
	comp=Z,13nm,0.9s						
113A	**Mohawk Valley,**	**88.44**	**56**	*e*P	**P**	**00 25 50.5**	**+2.1**
	comp=Z,5.7nm,0.8s						
R11A	**Troy Canyon, C**	**88.48**	**50**	P	**P**	**00 25 51.1**	**+2.2**
	baz=254						
PDMCI	**Parker Dam,Lak**	**88.53**	**55**	P	**P**	**00 25 51.1**	**+2.2**
	baz=255,SNR=8.0						
D08A	**Wollman Farm,**	**88.71**	**41**	*e*P	**P**	**00 25 51.6**	**+2.2**
	comp=Z,9.3nm,1.1s						
B08A	**Colville Reser**	**88.86**	**40**	*e*P	**P**	**00 25 52.5**	**+2.3**
	comp=Z,26nm,1.8s						
W13A	**Hualapai Mount**	**88.94**	**54**	*e*P	**P**	**00 25 52.7**	**+1.6**
	comp=Z,7.8nm,1.0s						
214A	**Organ Pipe Nat**	**89.02**	**57**	P	**P**	**00 25 52.1**	**+0.8**
	baz=256,SNR=6.1						
PYUN	**Piuthan**	**89.02**	**299**	*e*P	**P**	**00 25 49.8**	**-1.8**
	comp=Z,25nm,1.1s						
BMO	**Blue Mountains**	**89.11**	**44**	*e*P	**P**	**00 25 53.5**	**+2.0**
	comp=Z,3.1nm,0.9s						
BMO	**Blue Mountains**	**89.11**	**44**	*e*P	**P**	**00 25 53.5**	**+2.0**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
Y14A	**Wickenburg**	**89.35**	**55**	*e*P	**P**	**00 25 55.3**	**+2.5**
	comp=Z,9.5nm,1.4s						
ELK	**Elko**	**89.40**	**48**	*e*P	**P**	**00 25 55.0**	**+1.9**
	comp=Z,6.2nm,1.1s						
ELK	**Elko**	**89.40**	**48**	P	**P**	**00 25 51.0**	**-2.1**
	comp=Z,4.1nm,0.9s,baz=226,slow=4.9,SNR=3.8						
WMQ	**Urumqi**	**89.42**	**315**	P	**P**	**00 25 52.7**	**-0.2**
WMQ				pP	pP	00 25 58.8	+0.1
WMQ				sP	pwP	00 26 05.5	-1.5
WMQ				pmax	pmax		
	comp=Z,22nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,320nm,4.9s						
WMQ				LR	LR		
	comp=N,200nm,22.9s						
WMQ				LR	LR		
	comp=E,150nm,23.1s						
WMQ				LR	LR		
	comp=Z,180nm,18.5s						
F10A	**Beach Ranch, E**	**89.49**	**43**	*e*P	**P**	**00 25 54.0**	**+0.7**
	comp=Z,42nm,1.9s						
MFID	**Camas Ranch**	**89.71**	**46**	*e*P	**P**	**00 25 55.6**	**+1.2**
	comp=Z,3.7nm,0.9s						
PSUT	**Pine Spring**	**89.84**	**51**	*e*P	**P**	**00 25 57.5**	**+2.2**
	comp=Z,7.0nm,0.8s						
LCMT	**Little Creek M**	**89.93**	**52**	*e*P	**P**	**00 25 57.7**	**+2.1**
	comp=Z,11nm,0.9s						
CCUT	**Cedar City**	**89.97**	**52**	*e*P	**P**	**00 25 58.2**	**+2.3**
	comp=Z,10nm,0.9s						
SZCU	**Shurtz Canyon**	**90.19**	**52**	*e*P	**P**	**00 25 59.0**	**+2.1**
	comp=Z,9.4nm,0.9s						
NEW	**Newport**	**90.23**	**41**	*e*P	**P**	**00 25 59.0**	**+2.3**
	comp=Z,6.2nm,1.0s						
NEW	**Newport**	**90.23**	**41**	P	**P**	**00 25 58.8**	**+2.2**
	baz=253						
NEW	**Newport**	**90.23**	**41**	P	**P**	**00 25 57.5**	**+0.9**
	comp=Z,3.7nm,0.8s,baz=231,slow=5.0,SNR=7.1						
KNB	**Kanab**	**90.25**	**52**	*e*P	**P**	**00 25 59.3**	**+2.1**
	comp=Z,10nm,1.0s						
INK	**Inuvik**	**90.46**	**19**	P	**P**	**00 25 56.5**	**-0.6**
	comp=Z,1.9nm,1.1s,baz=215,slow=4.8,SNR=3.9						
U15A	**North Rim**	**90.53**	**53**	*e*P	**P**	**00 26 00.6**	**+2.1**
	comp=Z,18nm,0.8s						
X16A	**Lo Mia Camp, P**	**90.72**	**55**	*e*P	**P**	**00 26 00.4**	**+0.9**
	comp=Z,8.9nm,0.8s						
HLID	**Hailey**	**90.74**	**46**	*e*P	**P**	**00 26 00.9**	**+1.6**
	comp=Z,6.4nm,0.8s						
HLID	**Hailey**	**90.74**	**46**	P	**P**	**00 26 01.6**	**+2.3**
	baz=255						
PKCU	**Pink Cliffs**	**90.75**	**52**	*e*P	**P**	**00 26 01.2**	**+1.6**
	comp=Z,16nm,0.9s						
TUC	**Tucson**	**90.77**	**57**	P	**P**	**00 26 01.8**	**+2.2**
	baz=257						
MTPU	**Mount Pierson**	**91.00**	**51**	*e*P	**P**	**00 26 02.8**	**+2.0**
	comp=Z,14nm,0.9s						
WUAZ	**Wupatki**	**91.03**	**54**	*e*P	**P**	**00 26 03.0**	**+2.2**
	comp=Z,7.7nm,0.8s						
WUAZ	**Wupatki**	**91.03**	**54**	P	**P**	**00 26 03.0**	**+2.2**
	baz=257						
DUG	**Dugway, Tooele**	**91.04**	**49**	*e*P	**P**	**00 26 02.4**	**+1.7**
	comp=Z,5.5nm,0.9s						
DUG	**Dugway, Tooele**	**91.04**	**49**	*e*P	**P**	**00 26 02.4**	**+1.7**
DUG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DUG	**Dugway, Tooele**	**91.04**	**49**	P	**P**	**00 26 03.1**	**+2.4**
	baz=256						
BGU	**Big Grassy Mou**	**91.06**	**49**	*e*P	**P**	**00 26 01.9**	**+1.1**
	comp=Z,6.9nm,0.9s						
SYO	**Syowa Base**	**91.22**	**197**	⇓*e*PcP	**PcP**	**00 26 03.0**	**+1.3**
DGZ	**Jazzator, Alta**	**91.26**	**321**	*d i*P	**P**	**00 26 00.5**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HVU	**Hansel Valley**	**91.46**	**48**	*e*P	**P**	**00 26 04.0**	**+1.4**
	comp=Z,15nm,0.9s						
HVU	**Hansel Valley**	**91.46**	**48**	*e*P	**P**	**00 26 04.0**	**+1.4**
HVU				pmax	pmax		
	comp=Z,15nm,0.9s						
NLU	**North Lily Min**	**91.53**	**50**	*e*P	**P**	**00 26 05.6**	**+2.5**
	comp=Z,12nm,0.9s						
SPUT	**South Promonto**	**91.58**	**48**	*e*P	**P**	**00 26 05.5**	**+2.3**
	comp=Z,7.1nm,0.8s						
319A	**Douglas**	**91.82**	**58**	*e*P	**P**	**00 26 07.1**	**+2.7**
	comp=Z,8.8nm,0.9s						
MPU	**Maple Canyon**	**91.88**	**50**	*e*P	**P**	**00 26 06.8**	**+2.1**
	comp=Z,5.5nm,1.1s						
MSO	**Missoula**	**91.91**	**43**	P	**P**	**00 26 06.9**	**+2.3**
	baz=255						
CTU	**Camp Tracy**	**91.95**	**49**	*e*P	**P**	**00 26 07.2**	**+2.3**
	comp=Z,8.3nm,0.9s						
X18A	**Snowflake**	**91.95**	**55**	*e*P	**P**	**00 26 07.2**	**+2.1**
	comp=Z,5.5nm,0.8s						
TMUT	**Trail Mountain**	**92.03**	**50**	*e*P	**P**	**00 26 08.0**	**+2.4**
	comp=Z,4.9nm,0.9s						
JLU	**Jordanelle**	**92.15**	**49**	*e*P	**P**	**00 26 08.5**	**+2.5**
	comp=Z,5.8nm,0.9s						
MCMT	**McKenzie Canyo**	**92.15**	**45**	*e*P	**P**	**00 26 08.2**	**+2.3**
HWUT	**Hardware Ranch**	**92.30**	**48**	*e*P	**P**	**00 26 08.2**	**+1.6**
	comp=Z,4.7nm,1.0s						
TCUT	**Toone Canyon**	**92.30**	**49**	*e*P	**P**	**00 26 08.2**	**+1.5**
	comp=Z,10nm,0.7s						
DLMT	**Dillon**	**92.45**	**44**	*e*P	**P**	**00 26 09.1**	**+1.9**
	comp=Z,12nm,0.9s						
WALA	**Waterton Lakes**	**92.50**	**40**	*e*P	**P**	**00 26 07.2**	**0.0**
	comp=Z,22nm,1.6s						
LRM	**Limekiln Ridge**	**92.66**	**44**	*e*P	**P**	**00 26 10.7**	**+2.4**
FXWY	**Fox Creek**	**93.15**	**46**	*e*P	**P**	**00 26 12.4**	**+1.9**
	comp=Z,4.0nm,0.8s						
TPAW	**Teton Pass**	**93.17**	**46**	*e*P	**P**	**00 26 12.9**	**+2.2**
	comp=Z,3.1nm,0.8s						
BOZ	**Bozeman (W)**	**93.17**	**44**	*e*P	**P**	**00 26 12.9**	**+2.4**
	comp=Z,4.3nm,0.8s						
BOZ	**Bozeman (W)**	**93.17**	**44**	P	**P**	**00 26 12.8**	**+2.4**
	baz=257						
IMW	**Indian Meadow**	**93.27**	**46**	*e*P	**P**	**00 26 13.1**	**+2.0**
	comp=Z,4.3nm,0.8s						
YHB	**Horse Butte**	**93.28**	**45**	*e*P	**P**	**00 26 13.7**	**+2.6**
	comp=Z,7.7nm,1.0s						
HRY	**Holter Researc**	**93.29**	**43**	*e*P	**P**	**00 26 12.9**	**+2.0**
121A	**Cookes Peak, D**	**93.30**	**58**	P	**P**	**00 26 13.4**	**+2.0**
	baz=258						
MOOW	**Moose Ponds**	**93.37**	**46**	*e*P	**P**	**00 26 14.0**	**+2.5**
	comp=Z,2.4nm,0.9s						
PV09	**Paradox Valley**	**93.44**	**52**	*e*P	**P**	**00 26 14.1**	**+2.1**
LOHW	**Long Hollow**	**93.44**	**46**	*e*P	**P**	**00 26 13.9**	**+2.1**
	comp=Z,11nm,1.8s						
FLWY	**Flagg Ranch**	**93.48**	**46**	*e*P	**P**	**00 26 13.9**	**+2.0**
	comp=Z,5.8nm,0.9s						
PV23	**Carpenter Ridg**	**93.52**	**52**	*e*P	**P**	**00 26 14.5**	**+2.1**
	comp=Z,6.1nm,0.8s						
H17A	**Grant Village**	**93.63**	**46**	*e*P	**P**	**00 26 14.7**	**+1.9**
	comp=Z,6.1nm,0.9s						
H17A	**Grant Village**	**93.63**	**46**	P	**P**	**00 26 15.4**	**+2.7**
	baz=258						
MVCO	**Mesa Verde**	**93.67**	**53**	P	**P**	**00 26 15.3**	**+2.3**
	baz=258						
PV01	**Paradox Valley**	**93.80**	**52**	*e*P	**P**	**00 26 15.1**	**+1.5**
	comp=Z,4.9nm,1.1s						
MK01	**Makanchi Array**	**93.84**	**317**	*e*P	**P**	**00 26 11.8**	**-1.6**
MK31	**Makanchi Array**	**93.86**	**317**	*e*P	**P**	**00 26 12.8**	**-0.6**
MK31	**Makanchi Array**	**93.86**	**317**	P	**P**	**00 26 11.4**	**-2.0**
MK31				pmax	pmax		
	comp=Z,15nm,1.0s						
MKAR	**Makanchi Array**	**93.86**	**317**	*e*P	**P**	**00 26 12.8**	**-0.7**
	comp=Z,48nm,0.8s						
MKAR				PKiKP	**PKiKP**	**00 30 56.3**	**-2.0**
MKAR				PKKP	**PKKPdf**	**00 43 14.5**	**-3.4**
MKAR	**Makanchi Array**	**93.86**	**317**	P	**P**	**00 26 12.7**	**-0.7**
	comp=Z,8.8nm,0.9s,baz=101,slow=6.4,SNR=53						
MKAR				PKiKP	**PKiKP**	**00 30 56.3**	**-2.0**
	comp=Z,0.5nm,0.9s,baz=92,slow=3.9,SNR=2.6						
MKAR				PKKP	**PKKPdf**	**00 43 14.5**	**-3.4**
	comp=Z,0.9nm,0.7s,baz=295,slow=3.5,SNR=8.5						
ZAA0	**Zalesovo Array**	**93.95**	**324**	*e*P	**P**	**00 26 11.9**	**-1.6**
	comp=Z,16nm,1.4s						
ZALV	**Zalesovo Beam**	**93.95**	**324**	P	**P**	**00 26 11.4**	**-2.2**
	comp=Z,2.6nm,0.6s,baz=108,slow=4.8,SNR=22						
BW06	**Boulder Array**	**94.01**	**47**	P	**P**	**00 26 16.9**	**+2.4**
	baz=258						
PD31	**Pinedale Array**	**94.01**	**47**	*e*P	**P**	**00 26 15.7**	**+1.3**
PDAR	**Pinedale Array**	**94.01**	**47**	*e*P	**P**	**00 26 16.3**	**+1.9**
PDAR	**Pinedale Array**	**94.01**	**47**	P	**P**	**00 26 13.6**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=222,slow=2.0,SNR=14						
MAKZ	**Makanchi**	**94.07**	**317**	*e*P	**P**	**00 26 14.0**	**-0.4**
	comp=Z,17nm,1.1s						
MAKZ	**Makanchi**	**94.07**	**317**	*e*P	**P**	**00 26 14.0**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,17nm,1.1s						
ANMO	**Albuquerque**	**94.85**	**55**	*ce*P	**P**	**00 26 21.0**	**+2.5**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ANMO	**Albuquerque**	**94.85**	**55**	P	**P**	**00 26 20.6**	**+2.1**
	baz=259						
ANMO	**Albuquerque**	**94.85**	**55**	P	**P**	**00 26 18.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=167,slow=7.3,SNR=4.0						
EGMT	**Eagleton**	**94.95**	**42**	*e*P	**P**	**00 26 20.4**	**+1.9**
	comp=Z,11nm,0.9s						
EGMT	**Eagleton**	**94.95**	**42**	P	**P**	**00 26 20.8**	**+2.4**
	baz=258						
NVS	**Novosibirsk**	**95.06**	**325**	*e*P	**P**	**00 26 15.4**	**-3.2**
S22A	**4UR Ranch, Cre**	**95.07**	**53**	*e*P	**P**	**00 26 22.3**	**+2.8**
	comp=Z,3.6nm,1.0s						
S22A	**4UR Ranch, Cre**	**95.07**	**53**	P	**P**	**00 26 21.5**	**+1.9**
	baz=259						
MNTX	**Cornudas Mount**	**95.14**	**59**	P	**P**	**00 26 21.3**	**+1.6**
	baz=260						
SMCO	**Snowmass**	**95.22**	**51**	*e*P	**P**	**00 26 23.1**	**+2.8**
	comp=Z,6.8nm,1.4s						
YKA	**Yellowknife Ar**	**95.52**	**27**	P	**P**	**00 26 16.1**	**-4.5**
	comp=Z,0.3nm,0.5s,baz=248,slow=5.2,SNR=7.0						
SDCO	**Great Sand Dun**	**96.11**	**53**	P	**P**	**00 26 25.9**	**+1.6**
	baz=260						
TXAR	**Lajitas Array**	**96.19**	**61**	P	**P**	**00 26 23.0**	**-1.6**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**96.19**	**61**	P	**P**	**00 26 22.9**	**-1.6**
	comp=Z,1.2nm,0.9s,baz=218,slow=5.7,SNR=2.9						
TXAR				PKiKP	**PKiKP**	**00 31 02.5**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=289,slow=2.8,SNR=3.3						
TXAR				LR	LR	01 01 57.8	
	comp=Z,525nm,20.3s,baz=0.0,slow=31						
NRIK	**Noril'sk**	**96.61**	**340**	P	**P**	**00 26 23.5**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=90,slow=6.9,SNR=4.1						
T25A	**Trinidad**	**96.86**	**54**	P	**P**	**00 26 29.5**	**+1.9**
	baz=261						
KSH	**Kashi**	**97.02**	**309**	P	Pdif	00 26 30.8	+2.5
KSH				pmax	pmax		
	comp=Z,120nm,4.7s						
CMIG	**Matias Romero**	**102.28**	**75**	P	**Pdif**	**00 26 52.5**	**+0.6**
	comp=Z,4.8nm,0.6s,baz=358,slow=10,SNR=8.4						
ARCES	**ARCESS Array B**	**116.85**	**345**	PKP	**PKPdf**	**00 31 37.9**	**-2.1**
	comp=Z,2.0nm,0.6s,baz=82,slow=2.1,SNR=18						
KLMR	**Klimovskoe**	**117.20**	**334**	*e*PKIKP	PKPpre	00 31 36.2	
KLMR				pmax	pmax		
	comp=Z,11nm,1.5s						
KLMR	**Klimovskoe**	**117.20**	**334**	*e*PKPdf	PKPpre	00 31 36.2	
KLMR				AMP		00 31 41.8	
	comp=Z,11nm,1.5s						
VRH	**Novokhopyorsk**	**119.96**	**323**	*e*PKIKP	**PKPdf**	**00 31 44.1**	**-2.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPAZ	**La Paz**	**120.03**	**117**	PKP	**PKiKP**	**00 31 49.0**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=23,slow=8.9,SNR=6.2						
TBLG	**Delisi**	**120.61**	**312**	*e*PKPdf	**PKiKP**	**00 31 48.5**	**+0.4**
GNI	**Garni**	**120.93**	**310**	*c i*PKIKP	**PKiKP**	**00 31 50.0**	**+1.0**
GNI				pmax	pmax		
	comp=Z,39nm,1.3s						
ZEI	**Tsey**	**120.98**	**313**	*e*PKIKP	**PKPdf**	**00 31 46.3**	**-2.6**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPSR	**Galich'ya Gora**	**121.04**	**325**	*e*PKIKP	**PKPdf**	**00 31 47.4**	**-1.0**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	**Obninsk**	**121.23**	**329**	*c i*PKIKP	**PKPdf**	**00 31 47.0**	**-1.7**

OBN				i		00 33 17.5	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VSR	Storozhevoye	121.45	324	ePKIKP	PKPdf	00 31 46.5	-2.8
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KIV	Kislovodsk	121.55	315	i PKIKP	PKPdf	00 31 47.6	-2.2
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FIA1	FINESS Array S	122.25	338	ePKPdf	PKPdf	00 31 49.1	-1.4
FINES	FINESS Array B	122.25	338	PKP	PKPdf	00 31 48.5	-2.0
	comp=Z,5.0nm,1.0s,baz=76,slow=5.9,SNR=8.2						
SIRT	Sirnak	123.22	307	ePKPdf	PKPdf	00 31 53.0	-0.3
CPUP	Villa Florida	123.73	133	PKP	PKPdf	00 31 54.5	0.0
	comp=Z,3.1nm,0.9s,baz=72,slow=0.7,SNR=4.3						
VSU	Vasula	123.93	335c	iPKIKP	PKPdf	00 31 53.7	-0.1
VSU				pmax	pmax		
	comp=Z,65nm,1.7s						
SDV	Santo Domingo	124.63	87	PKP	PKPdf	00 31 56.4	-0.3
	comp=Z,3.7nm,0.8s,baz=358,slow=6.8,SNR=4.4						
BOSA	Boshof	124.64	223	PKP	PKPdf	00 31 55.2	-1.1
	comp=Z,2.0nm,0.7s,baz=131,slow=2.1,SNR=9.2						
NB2	NORSAR Subarra	127.21	345	PKPdf	PKPdf	00 31 58.6	-1.5
	comp=Z,4.7nm,1.1s,baz=32,slow=2.0						
NOA	NORSAR Array B	127.21	345	PKP	PKPdf	00 31 58.2	-1.9
	comp=Z,1.7nm,0.8s,baz=32,slow=2.0,SNR=8.5						
AKASG	Malin Array Be	127.27	327	PKP	PKPdf	00 31 58.7	-1.7
	comp=Z,0.5nm,0.4s,baz=60,slow=2.2,SNR=11						
AK11	Malin Array Si	127.31	327	ePKPdf	PKPdf	00 31 59.5	-1.0
BRTR	Keskin Array B	129.26	312	PKP	PKPdf	00 32 03.8	-1.0
	comp=Z,2.1nm,1.0s,baz=151,slow=2.8,SNR=7.3						
BURAR	Bucovina Array	131.16	325	⇓PKIKP	PKPdf	00 32 02.4	-5.7
BUR04	Bucovina Ar. S	131.16	325	ePKPdf	PKPdf	00 32 07.7	-0.5
DRGR		133.03	325	⇑PKIKP	PKPdf	00 32 11.9	+0.3
MORC	Moravsky Berou	133.75	332	ePKPdf	PKPdf	00 32 12.5	-0.3
MORC	Moravsky Berou	133.75	332	ePKIKP	PKPdf	00 32 12.5	-0.3
MORC	Moravsky Berou	133.75	332	ePKP	PKPdf	00 32 13.3	+0.5
VYHS	Vyhne	134.00	330	ePKIKP	PKPdf	00 32 12.4	-0.9
VYHS	Vyhne	134.00	330	ePKP	PKPdf	00 32 12.4	-0.9
BZS	Buzias	134.34	325	⇓PKIKP	PKPdf	00 32 11.7	-2.3
VRAC	Vranov	134.51	332	ePKP	PKiKP	00 32 15.9	+0.2
BRG	Berggiesshubel	134.53	335	ePKP	PKPdf	00 32 13.4	-0.8
	comp=Z,3.3nm,1.0s						
	comp=N,252nm,19.3s						
	comp=E,266nm,20.6s						
	comp=Z,218nm,16.2s						
BRG	Berggiesshubel	134.53	335	ePKIKP	PKPdf	00 32 13.4	-0.8
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRG				MLR	MLR		
	comp=N,252nm,19.3s						
BRG				MLR	MLR		
	comp=E,266nm,20.6s						
BRG				MLR	MLR		
	comp=Z,218nm,16.2s						
CLL	Collm	134.57	336	ePKPdf	PKPdf	00 32 14.0	-0.3
	comp=Z,4.0nm,0.9s						
CLL				esPKPdf	pPKPdf	00 32 19.0	-0.6
CLL				e		00 32 32.0	
CLL				LmH		01 40 00.0	
	comp=N,100nm,19.2s						
CLL				LmH		01 40 00.0	
	comp=E,100nm,19.2s						
CLL				LmV		01 41 00.0	
	comp=Z,100nm,18.9s						
CLL	Collm	134.57	336	ePKIKP	PKPdf	00 32 14.0	-0.3
CLL				e		00 32 19.0	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KRUC	Moravsky	134.78	332	ePKP	PKPdf	00 32 14.3	-0.4
MODS	Modra-Piesok	134.84	330	ePKIKP	PKPdf	00 32 14.9	0.0
MODS	Modra-Piesok	134.84	330	ePKP	PKPdf	00 32 14.9	0.0
CONA	Conrad Observa	135.84	331	ePKiKP	PKiKP	00 32 18.0	-0.5
	comp=Z,6.8nm,1.2s						
KHC	Kasperske Hory	136.00	334	ePKPdf	PKPdf	00 32 16.8	-0.3
KHC	Kasperske Hory	136.00	334	ePKPDF	PKPdf	00 32 16.4	-0.7
KHC	Kasperske Hory	136.00	334	ePKIKP	PKPdf	00 32 16.4	-0.7
GEC2	GERESS Array S	136.16	333	ePKPdf	PKPdf	00 32 17.9	+0.4
GEC2	GERESS Array S	136.16	333	ePKIKP	PKPdf	00 32 17.9	+0.4
GERES	GERESS Array B	136.16	333	PKP	PKPdf	00 32 16.5	-1.0
	comp=Z,3.2nm,1.1s,baz=40,slow=2.3,SNR=13						
GEA0	GERESS Array S	136.16	333	ePKPdf	PKPdf	00 32 16.9	-0.6
DIVS	Divibare	136.17	324	ePKPdf	PKPdf	00 32 17.7	+0.1
ARSA	Arzberg	136.48	330	ePKPdf	PKPdf	00 32 18.6	+0.6
	comp=Z,2.0nm,0.9s						
BDFB	Brasilia	137.07	128	ePKPdf	PKiKP	00 32 22.3	+0.3
BDFB	Brasilia	137.07	128	PKP	PKPdf	00 32 20.8	+0.6
	comp=Z,5.8nm,0.9s,baz=177,slow=5.9,SNR=6.3						
SOKA	Soboth	137.12	330	ePKPdf	PKPdf	00 32 19.6	+0.3
	comp=Z,8.9nm,1.5s						
KBA	Koelnbreinsper	137.63	332	epPKPdf	PKiKP	00 32 22.9	+0.6
	comp=Z,5.8nm,1.2s						
MEM	Membach	137.67	341	⇑PKiKP	PKiKP	00 32 24.0	+2.0
MYKA	Terra Mystica	137.82	331	epPKPdf	PKiKP	00 32 23.8	+1.2
	comp=Z,8.8nm,1.1s						
WATA	Walderalm	138.23	333	ePKPdf	PKPdf	00 32 21.8	+0.4
	comp=Z,1.9nm,0.6s						
ABTA	Abfaltersbach	138.26	332	ePKiKP	PKiKP	00 32 23.3	-0.2
	comp=Z,4.6nm,0.9s						
MOTA	Moosalm	138.43	334	ePKiKP	PKiKP	00 32 24.2	+0.4
	comp=Z,6.4nm,1.2s						
SQTA	Sankt Quirin	138.48	334	ePKiKP	PKiKP	00 32 23.6	-0.3
	comp=Z,5.3nm,1.2s						
FETA	Feichten	138.84	334	ePKPdf	PKPdf	00 32 22.9	+0.4
	comp=Z,7.6nm,1.1s						
KEST	Kesra	147.79	322	ePKPbc	PKPbc	00 32 41.3	0.0
KEST	Kesra	147.79	322	PKPbc	PKPbc	00 32 40.8	-0.6
	comp=Z,35nm,1.0s,baz=293,slow=1.8,SNR=9.2						
POLO	Lamas de Olo	149.79	350	ePKPdf	PKPbc	00 32 45.4	-0.9
MVO	Moncorvo	149.86	349	ePKPdf	PKPbc	00 32 46.6	+0.1
PVRL	Vila Real	149.88	350	ePKPdf	PKPbc	00 32 45.7	-0.8
PVIS	Viseu	150.45	350	ePKPdf	PKPbc	00 32 47.4	-0.5
ES19	SONSECA Array	150.52	343	ePKPdf	PKPbc	00 32 46.2	-1.9
ES19				ePKPbc	PKPab	00 32 54.1	-0.5
ESDC	Sonseca Array	150.56	344	PKPbc	PKPbc	00 32 46.7	-1.5
	comp=Z,3.6nm,0.8s,baz=9.1,slow=2.9,SNR=14						
ESDC				PKPab	pPKPbc	00 32 53.8	+0.2
	comp=Z,8.4nm,0.9s,baz=14,slow=3.3,SNR=15						
MTE	Manteigas	150.70	349	ePKPdf	PKPbc	00 32 47.9	-0.6
PCBR	Castelo Branco	151.23	349	ePKPdf	PKPdf	00 32 46.5	+2.8
PTOM	Tomar	151.61	350	ePKPdf	PKPbc	00 32 50.2	-0.3
PMRV	Marv??o	151.61	349	ePKPdf	PKPbc	00 32 49.9	-0.7
PMTG	Montargil	152.11	350	ePKPdf	PKPbc	00 32 51.1	-0.6
MESJ	Messejana	153.30	349	ePKPdf	PKiKP	00 32 57.1	+2.6
TOA0	Torodi Ar. Sit	164.24	277	ePKPdf	PKPdf	00 32 58.9	-1.5
TOA0				ePKPdf	PKPdf	00 32 59.8	-0.6
TORD	Torodi Ar. Bea	164.24	277	PKP	PKPdf	00 32 58.1	-2.3
	comp=Z,4.9nm,1.1s,baz=5.4,slow=2.8,SNR=16						
TORD				PKPab	PKPab	00 33 53.4	-1.0
	comp=Z,1.1nm,0.9s,baz=57,slow=5.3,SNR=3.0						

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*IDC **08** 00:17:39.2±0.7, 29°.31N×142°.16E, h0^{km}, mb4.0/13, mb1 4.1/16, mb1mx4.0/45, mbtmp4.0/16, ML3.1/4, MS3.5/2, Ms1 3.5/2, ms1mx2.8/44, Error ellipse: s-maj=28.0km s-min=14.1km az=84.0*

*NEIC **08** 00:17:41.1±2.4, 29°.29N×142°.17E, h13^{km}±14^{km}, mb4.5/14, Error ellipse: s-maj=9.9km s-min=5.0km az=80.0*

*ISCJB **08** 00:17:42.1±0.4, 29°.33N±0°.04×142°.1E±0°.1, h30^{km}, mb4.2/27, MS4.2/1, Error ellipse: s-maj=14.2km s-min=4.5km az=168.5*

ISC 08 00:17:43.8±0.5**, 29°.32N**±0°.06×**142°.1E**±0°.1**, h30**^{km}**, n47, σ0^{s}.83**/51**, mb4.3**/27**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.22	178	ePn	Pn	00 18 17.4	-1.1
CBIJ				eSn	Sn	00 18 44.9	-0.1
JCJ	Chichijima	2.22	178	Pn	Pn	00 18 17.4	-1.1
	8.2nm,0.3s,baz=292,slow=19,SNR=4.0						
JCJ				Sn	Sn	00 18 44.9	-0.1
	30nm,0.3s,baz=68,slow=23,SNR=7.4						
MJAR	Matsushiro Arr	7.91	337	Pn	Pn	00 19 36.9	+0.1
	0.6nm,0.3s,baz=140,slow=16,SNR=16						
MJAR				Sn	Sn	00 21 03.4	-1.9
	baz=115,slow=8.8,SNR=3.2						
MJAR				LR	LR	00 22 45.2	
	comp=Z,79nm,18.4s,baz=25,slow=39						
MAJO	Matsushiro	7.91	337	ePn	Pn	00 19 36.9	+0.1
MAJO				eSn	Sn	00 21 03.4	-1.9
MAT	Matsushiro	7.91	337	P	Pn	00 19 37.8	+1.0
KSRS	Korea Array	14.34	308	Pn	Pn	00 21 04.4	-0.3
	0.1nm,0.3s,baz=119,slow=12,SNR=2.8						
KSAR	Wonju Array Be	14.36	308	Pn	Pn	00 21 04.4	-0.6
USRK	Ussuriysk Ar.	16.89	334	Pn	Pn	00 21 36.6	-1.3
	0.1nm,0.3s,baz=138,slow=42,SNR=3.2						
KLR	Kul'dur	21.40	341	P	P	00 22 29.4	+0.5
	1.3nm,0.6s,baz=92,slow=14,SNR=3.2						
HIA	Hailar	26.21	326	P	P	00 23 15.9	0.0
	4.2nm,0.8s						
SONA0	Songino Array	33.09	314	eP	P	00 24 17.2	+0.1
SONM	Songino Array	33.09	314	P	P	00 24 17.2	+0.1
	1.3nm,0.8s,baz=124,slow=8.1,SNR=7.6						
BILL	Bilibino	41.31	13	eP	P	00 25 26.3	0.0
	6.3nm,1.0s						
TIXI	Tiksi	43.00	354	P	P	00 25 40.8	+0.8
	9.7nm,1.5s						
WRAB	Tennant Creek	49.53	190	eP	P	00 26 31.8	-0.1
	0.8nm,0.3s						
WR1	Warramunga Arr	49.54	190	eP	P	00 26 31.6	-0.4
	27nm,1.8s						
WR1				ePcP	PcP	00 27 54.8	+1.3
WRA	Warramunga Arr	49.54	190	P	P	00 26 31.6	-0.4
	1.9nm,0.4s,baz=9.9,slow=8.2,SNR=22						
WRA				PcP	PcP	00 27 54.8	+1.3
	0.8nm,0.6s,baz=1.8,slow=4.0,SNR=4.4						
KURK	Kurchatov	51.39	313	eP	P	00 26 41.3	-4.4
	5.8nm,0.7s						
KDAK	Kodiak Island	52.65	38	eP	P	00 26 54.7	-0.2
	138nm,1.7s						
KDAK	Kodiak Island	52.65	38	P	P	00 26 54.7	-0.2
	8.1nm,1.0s,baz=307,slow=5.1,SNR=5.4						
AS31	Alice Springs	53.27	189	eP	P	00 26 59.8	-0.1
	1.9nm,1.3s						
ASAR	Alice Springs	53.27	189	P	P	00 26 59.8	-0.1
	0.6nm,0.5s,baz=360,slow=5.0,SNR=7.0						
BRVK	Borovoye	56.43	317	eP	P	00 27 23.5	+1.0
	5.5nm,1.0s						
KK31	Karatay Array	57.74	305	eP	P	00 27 32.9	+1.0
	5.0nm,1.0s						
KKAR	Karatay Array	57.74	305	eP	P	00 27 32.9	+1.0
	5.0nm,1.0s						
CHGR	Chuyangaron	59.76	300	eP	P	00 27 46.8	+0.6
	9.4nm,0.7s						
ARU	Arti	62.63	322	eP	P	00 28 05.2	0.0
	3.8nm,0.6s						
ABKAR	Akbulak array	63.50	314	eP	P	00 28 12.2	+1.2
	2.7nm,0.6s						
YKA	Yellowknife Ar	70.23	29	P	P	00 28 53.6	-0.1
	0.3nm,0.5s,baz=293,slow=6.4,SNR=5.9						
YKB5	Yellowknife Ar	70.23	29	eP	P	00 28 53.6	-0.1
ARA0	ARCESS Array S	71.42	341	eP	P	00 29 01.6	+0.7
ARCES	ARCESS Array B	71.42	341	P	P	00 29 01.6	+0.7
	2.6nm,1.0s,baz=67,slow=6.9,SNR=3.6						
FIA0	FINESS Array S	75.92	334	eP	P	00 29 28.0	+0.7
FINES	FINESS Array B	75.92	334	P	P	00 29 28.0	+0.7
	1.2nm,0.6s,baz=67,slow=4.7,SNR=11						
KBZ	Khabaz	76.44	313	P	P	00 29 31.8	+1.2
	3.4nm,0.8s,baz=68,slow=4.5,SNR=9.7						
AKASG	Malin Array Be	80.78	324	P	P	00 29 54.3	-0.1
	0.2nm,0.2s,baz=47,slow=5.3,SNR=3.4						
AKBB	Malin Array Si	80.78	324	eP	P	00 29 54.3	-0.1
	9.3nm,1.3s						
NB200	NORSAR Array S	81.52	338	eP	P	00 29 56.8	-1.4
NOA	NORSAR Array B	81.52	338	P	P	00 29 56.8	-1.4
	0.2nm,0.7s,baz=30,slow=7.2,SNR=3.2						
PD31	Pinedale Array	82.69	45	eP	P	00 30 05.1	+0.1
PDAR	Pinedale Array	82.69	45	P	P	00 30 05.1	+0.1
	0.5nm,0.8s,baz=319,slow=3.6,SNR=3.9						
BR101	Keskin Array S	84.44	313	eP	P	00 30 14.1	+0.2
BR131	Keskin Array S	84.44	313	eP	P	00 30 15.3	+1.4
BRTR	Keskin Array B	84.44	313	P	P	00 30 14.1	+0.2
	1.9nm,0.7s,baz=106,slow=3.1,SNR=10						
ULM	Lac du Bonnet	85.63	33	LR	LR	01 09 47.1	
	comp=Z,98nm,20.2s,baz=316,slow=36						
TOA1	Torodi Ar. Sit	123.05	312	ePKPdf	PKPdf	00 36 37.3	-0.8
TORD	Torodi Ar. Bea	123.05	312	PKP	PKPdf	00 36 37.3	-0.8
	0.8nm,1.2s,baz=355,slow=4.6,SNR=2.5						

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*IDC **08** 00:18:44.7±1.4, 10°.80S×164°.68E, h0^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.8/39, mbtmp3.9/8, ML4.0/2, Error ellipse: s-maj=34.5km s-min=28.6km az=128.0*

*ISCJB **08** 00:18:47.3±0.9, 10°.9S±0°.1×164°.70E±0°.10, h29^{km}, mb3.7/6, Error ellipse: s-maj=18.7km s-min=11.3km az=30.6*

ISC 08 00:18:49.1±1.1**, 10°.8S**±0°.1×**164°.7E**±0°.1**, h29**^{km}**, n14, σ1^{s}.27**/9**, mb3.7**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.90	286	Pn	Pn	00 20 00.1	-0.8
	8.5nm,0.3s,baz=194,slow=12,SNR=2.3						
HNR				Sn	Sn	00 20 58.6	+1.8
	42nm,0.3s,baz=114,slow=19,SNR=3.1						
DZM	Mont Dzumac	11.34	172	Pn	Pn	00 21 30.2	+1.0
	0.7nm,0.3s,baz=312,slow=9.7,SNR=5.4						
H11S2	WAKE ISLAND Hy	29.16	4	T	T	00 55 07.4	
	baz=184,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	29.16	4	T	T	00 55 05.0	
	baz=184,slow=76,SNR=25						
H11S1	WAKE ISLAND Hy	29.18	4	T	T	00 55 08.1	
	baz=184,slow=76,SNR=30						
H11N1	WAKE ISLAND Hy	30.39	4	T	T	00 56 38.5	
	baz=184,slow=76,SNR=7.0						
H11N3	WAKE ISLAND Hy	30.39	4	T	T	00 56 45.4	
	baz=184,slow=76,SNR=7.8						
H11N2	WAKE ISLAND Hy	30.40	4	T	T	00 56 38.3	
	baz=184,slow=76,SNR=7.4						
WRA	Warramunga Arr	30.64	249	P	P	00 25 00.0	-1.2
	0.4nm,0.5s,baz=78,slow=9.4,SNR=4.7						
ASAR	Alice Springs	32.02	242	P	P	00 25 12.0	-1.4
	0.5nm,0.5s,baz=61,slow=10,SNR=4.6						
SONM	Songino Array	77.88	324	P	P	00 30 45.4	+1.1
	0.3nm,0.8s,baz=141,slow=3.5,SNR=3.2						
ILAR	Eielson Array	83.59	19	P	P	00 31 14.1	-0.2
	0.6nm,0.9s,baz=219,slow=7.0,SNR=4.5						
MKAR	Makanchi Array	92.66	317	P	P	00 31 58.4	+0.1
	0.5nm,0.7s,baz=103,slow=6.5,SNR=4.1						
ZALV	Zalesovo Beam	92.77	324	P	P	00 31 58.2	-0.4
	0.3nm,0.5s,baz=97,slow=6.2,SNR=2.2						

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*IDC **08** 00:25:54.7±0.6, 11°.10S×165°.61E, h0^{km}, mb4.2/14, mb1 4.4/16, mb1mx4.2/39, mbtmp4.2/16, ML4.3/2, MS3.8/2, Ms1 3.8/2, ms1mx3.3/28, Error ellipse: s-maj=20.1km s-min=18.1km az=125.0*

*ISCJB **08** 00:25:58.6±0.3, 11°.11S±0°.05×165°.65E±0°.05, h30^{km}, mb4.5/40, MS3.8/1, Error ellipse: s-maj=8.0km s-min=6.2km az=153.8*

*NEIC **08** 00:25:59.2±2.6, 10°.99S×165°.74E, h23^{km}±18^{km}, mb4.8/22, Error ellipse: s-maj=8.7km s-min=6.1km az=56.0*

ISC 08 00:26:00.1±0.5**, 11°.07S**±0°.08×**165°.69E**±0°.07**, h30**^{km}**, n65, σ1^{s}.52**/70**, mb4.6**/40**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.88	286	ePn	Pn	00 27 25.6	+0.4
HNR				Sn	Sn	00 28 31.3	-0.4
HNR	Honiara	5.88	286	Pn	Pn	00 27 23.5	-1.7
	15nm,0.3s,baz=180,slow=7.1,SNR=1.7						
HNR				Sn	Sn	00 28 31.3	-0.4
	baz=170,slow=17,SNR=1.4						
HNR				LR	LR	00 29 52.7	
	comp=Z,764nm,19.1s,baz=136,slow=41						
MARNC	Mare, Loyalty	10.60	168	ePn	Pn	00 28 30.0	+0.1
DZM	Mont Dzumac	10.97	176	ePn	Pn	00 28 36.9	+1.8
	22nm,0.5s						
DZM				eLR	LR	00 31 12.2	
	comp=Z,318nm,26.4s						
DZM	Mont Dzumac	10.97	176	ePn	Pn	00 28 35.9	+0.8
DZM	Mont Dzumac	10.97	176	Pn	Pn	00 28 33.9	-1.2
	1.2nm,0.3s,baz=22,slow=9.4,SNR=13						
ONTNC	Ouen Toro	11.20	176	ePn	Pn	00 28 38.9	+0.6
CTA	Charters Tower	20.74	242	P	P	00 30 37.0	-1.5
	3.6nm,0.8s,baz=48,slow=14,SNR=1.9						
COEN	Coen	22.16	260	eP	P	00 30 55.1	+1.2
	9.7nm,0.9s						
ARMA	Armidale	23.27	212	eP	P	00 31 07.2	+1.8
	12nm,1.1s						
URZ	Urewera	28.94	161	P	P	00 31 56.3	-0.5
	9.9nm,1.0s,baz=26,slow=5.9,SNR=4.7						
BKZ	Black Stump Fm	29.59	163	eP	P	00 32 03.1	+0.6
	11nm,1.0s						
STKA	Stephens Creek	30.39	223	eP	P	00 32 11.4	+1.7
	0.9nm,0.8s						
STKA	Stephens Creek	30.39	223	P	P	00 32 08.0	-1.7
	2.4nm,0.5s,baz=20,slow=12,SNR=6.3						
BFZ	Birch Farm	30.93	164	eP	P	00 32 15.8	+1.5
	23nm,0.9s						
THZ	Tophouse	31.23	170	eP	P	00 32 17.9	+0.9
	20nm,0.8s						
WB2	Warramunga Arr	31.41	250	eP	P	00 32 20.3	+1.4
	12nm,0.9s						
WB2				ePcP	PcP	00 35 12.9	+0.9
WRA	Warramunga Arr	31.42	250	P	P	00 32 15.4	-3.6
	3.5nm,0.7s,baz=82,slow=8.8,SNR=5.5						
WRA				PcP	PcP	00 35 12.3	+0.2
	2.0nm,0.8s,baz=75,slow=3.1,SNR=13						
KHZ	Kahutara	31.97	169	eP	P	00 32 24.3	+0.8
	23nm,0.9s						
LTZ	Lake Taylor	32.11	171	eP	P	00 32 25.4	+0.6
	17nm,0.8s						
OXZ	Oxford	32.61	171	eP	P	00 32 29.7	+0.7
	14nm,1.0s						
ASAR	Alice Springs	32.73	243	P	P	00 32 27.0	-3.5
	0.7nm,0.5s,baz=70,slow=8.5,SNR=4.6						
ASAR				PcP	PcP	00 35 16.1	+0.5
	3.1nm,0.8s,baz=71,slow=2.5,SNR=20						
RPZ	Rata Peaks	32.86	173	eP	P	00 32 32.3	+1.0
	19nm,0.7s						
RPZ	Rata Peaks	32.86	173	P	P	00 32 28.6	-2.6
	19nm,0.8s,baz=70,slow=4.8,SNR=2.4						
PPT	Papeete	43.74	104	LR	LR	00 49 10.2	
	comp=Z,107nm,18.9s,baz=272,slow=32						
PPT2	Papeete2	43.74	104	eLR	LR	00 46 29.3	
	comp=Z,153nm,25.0s						
NJ2	Nanjing	62.00	315	eP	P	00 36 19.1	+1.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GYA	Guiyang	68.39	304	eP	P	00 37 06.0	+6.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	71.09	301	P	P	00 37 19.3	+3.1
KMI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,120nm,6.2s						
HHC	Hu-ho-hao-te	71.81	320	eP	P	00 37 19.7	-0.4
HHC				S	S	00 46 35.1	-3.8
HHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,360nm,7.6s						
HHC				LR	LR		
	comp=N,440nm,16.8s						
HHC				LR	LR		
	comp=E,740nm,17.4s						
HHC				LR	LR		
	comp=Z,500nm,16.3s						
CMAR	Chiang Mai Arr	72.07	294	P	P	00 37 21.4	-0.5
	comp=Z,0.6nm,0.3s,baz=120,slow=3.6,SNR=2.8						
LZH	Lanzhou	74.73	312	eP	P	00 37 39.5	+2.0
LZH				pP	pP	00 37 44.5	-1.6
LZH				sP	sP	00 37 48.2	-1.1
LZH				PP	PP	00 40 44.7	+20
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,97nm,4.9s						
LZH				LR	LR		
	comp=N,230nm,17.1s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
SONM	Songino Array	78.65	324	P	P	00 37 58.4	-1.0
	comp=Z,0.3nm,0.7s,baz=142,slow=6.0,SNR=3.1						
QSPA	South Pole Qui	78.94	180	eP	P	00 38 01.7	+1.0
	comp=Z,7.6nm,1.1s						
GTA	Gaotai	79.03	314	eP	P	00 38 03.9	+2.2
GTA				pP	PcP	00 38 08.8	-1.3
GTA				sP	pP	00 38 11.1	+0.8
GTA	Gaotai	79.03	314	S	S	00 48 04.2	+5.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,42nm,6.7s						
GTA				LR	LR		
	comp=N,160nm,17.5s						
GTA				LR	LR		
	comp=E,210nm,19.7s						
GTA				LR	LR		
	comp=Z,150nm,17.5s						
MCK	McKinley	82.18	19	eP	P	00 38 17.8	0.0
	comp=Z,6.3nm,1.0s						
IM3	Indian Mountai	82.46	16	eP	P	00 38 19.5	+0.2
WRH	Wood River Hil	82.97	18	eP	P	00 38 21.8	-0.1
	comp=Z,9.8nm,1.2s						
MDM	Murphy Dome	83.27	18	eP	P	00 38 24.1	+0.6
	comp=Z,5.8nm,0.9s						
HDA	Harding Lake	83.28	19	eP	P	00 38 23.1	-0.5
	comp=Z,13nm,0.9s						
IL1	Eielson Array	83.55	19	eP	P	00 38 23.9	-1.0
ILAR	Eielson Array	83.55	19	P	P	00 38 24.7	-0.2
	comp=Z,2.4nm,0.7s,baz=235,slow=5.4,SNR=34						
ILB	Eielson Array	83.55	19	eP	P	00 38 24.6	-0.2
SCRK	Sand Creek	83.96	20	eP	P	00 38 27.2	0.0
	comp=Z,9.7nm,1.2s						
AFDM	Forest Hills D	84.26	49	eP	P	00 38 29.4	+0.3
	comp=Z,6.8nm,1.1s						
MDPB	Devils Postpil	85.26	50	eP	P	00 38 34.0	-0.5
	comp=Z,5.1nm,1.0s						
NVAR	Mina Array Bea	86.08	50	P	P	00 38 37.8	-0.8
	comp=Z,0.5nm,0.3s,baz=209,slow=5.2,SNR=3.3						
G08A	Pilot Rock	87.70	43	eP	P	00 38 47.0	+0.9
	comp=Z,3.2nm,1.0s						
WMQ	Urumqi	89.07	315	eP	P	00 38 55.3	+2.7
WMQ				LR	LR		
	comp=N,150nm,16.7s						
WMQ				LR	LR		
	comp=E,170nm,18.9s						
WMQ				LR	LR		
	comp=Z,150nm,18.1s						
U15A	North Rim	90.16	53	eP	P	00 38 58.4	+0.2
	comp=Z,3.3nm,0.9s						
HVU	Hansel Valley	91.06	48	eP	P	00 39 02.4	+0.4
	comp=Z,3.9nm,1.1s						
MK01	Makanchi Array	93.49	317	eP	P	00 39 13.3	+0.3
MK31	Makanchi Array	93.50	317	eP	P	00 39 13.9	+0.9
MKAR	Makanchi Array	93.50	317	P	P	00 39 13.2	+0.1
	comp=Z,1.1nm,0.8s,baz=97,slow=6.0,SNR=10						
MKAR				PKKP	PKKPdf	00 56 19.0	-0.8
	comp=Z,0.7nm,0.8s,baz=293,slow=4.3,SNR=5.8						
ZALV	Zalesovo Beam	93.54	324	P	P	00 39 11.9	-1.1
	comp=Z,0.4nm,0.6s,baz=45,slow=2.3,SNR=4.1						
MAKZ	Makanchi	93.71	317	eP	P	00 39 14.8	+0.8
	comp=Z,3.4nm,1.1s						
YKA	Yellowknife Ar	95.02	27	P	P	00 39 18.0	-1.6
	comp=Z,0.5nm,0.8s,baz=254,slow=4.5,SNR=6.9						
TXAR	Lajitas Array	95.89	61	P	P	00 39 22.7	-1.8
	comp=Z,0.2nm,0.6s,baz=198,slow=4.7,SNR=2.3						
LPAZ	La Paz	120.22	116	PKP	PKiKP	00 44 50.0	-0.1
	comp=Z,1.3nm,0.4s,baz=297,slow=7.1,SNR=5.5						
CPUP	Villa Florida	124.05	132	PKP	PKPdf	00 44 56.4	0.0
	comp=Z,1.4nm,0.9s,baz=335,slow=3.6,SNR=3.0						
BOSA	Boshof	125.06	223	PKP	PKPdf	00 44 58.4	0.0
	comp=Z,2.1nm,0.8s,baz=172,slow=4.5,SNR=3.4						
ES19	SONSECA Array	150.02	344	ePKPbc	PKPbc	00 45 48.4	+0.3
ESDC	Sonseca Array	150.06	344	PKPbc	PKPbc	00 45 48.4	+0.2
	comp=Z,0.5nm,0.6s,baz=29,slow=2.9,SNR=3.7						
TORD	Torodi Ar. Bea	164.21	279	PKP	PKPdf	00 46 00.3	-1.4
	comp=Z,0.6nm,0.8s,baz=47,slow=1.4,SNR=3.8						
TORD				PKPab	PKPab	00 46 53.2	-2.3
	comp=Z,0.7nm,1.0s,baz=66,slow=3.5,SNR=2.7						

RSNC 08 00:32:43.6±0.9**, 6°.99N**×**76°.66W, h6**^{km}±3^{km}**, ML3.5, Mw3.9, 2C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBBC	Dabeiba	0.45	87	⇑ePg	Pg	00 32 51.3	-1.0
DBBC				eP	Pb	00 32 52.0	-2.0
DBBC				eS	Sg	00 32 58.2	+0.1
SOLC	Bahia Solano	1.06	224	eP	Pg	00 33 02.1	-1.9
SOLC				eS	Sg	00 33 16.7	-1.2
SOLC				i		00 33 23.2	
	comp=E,803nm,0.3s						
UREC	San Jos de Ur	1.35	56	⇑iP	Pn	00 33 06.8	-2.2
UREC				eS	Sb	00 33 25.3	-1.5
UREC				i		00 33 27.2	
	comp=N,720nm,0.3s						
HELC	Santa Helena	1.38	125	⇓iP	Pn	00 33 07.3	-2.4
HELC				eS	Sg	00 33 26.8	-1.2
HELC				i		00 33 31.5	

	comp=N,674nm,0.7s						
ZARC	Zaragoza, Cauc	1.85	74	*e*P	Pn	00 33 14.8	-1.1
ZARC				*e*S	Sn	00 33 38.2	-1.6
ZARC				*i*		00 33 39.7	
	comp=N,926nm,0.6s						
PLMC	San Jos del P	2.11	170	*e*P	Pn	00 33 15.4	-4.1
PLMC				*e*S	Sn	00 33 40.0	-6.1
PTBC	PUERTO BERRIO,	2.23	102	*e*P	Pn	00 33 20.4	-0.8
PTBC				*e*S	Sn	00 33 49.1	0.0
PTBC				*i*		00 33 51.0	
	comp=N,513nm,0.3s						
ANIL	Santa Ana	2.78	153	*e*P	Pn	00 33 30.7	+1.7
BRRC	Barranca, Sant	2.93	88	*e*P	Pn	00 33 31.5	+0.8
BRRC				*e*S	Sn	00 34 06.3	0.0
BRRC				*i*		00 34 13.9	
	comp=N,190nm,0.5s						
YOTC	Yotoco, Valle	3.01	174	*e*P	Pn	00 33 28.4	-3.5
YOTC				*i*		00 34 07.6	
	comp=N,90nm,0.2s						
MALC	Bahia Malaga	3.04	193	*e*P	Pn	00 33 32.6	+0.4
SMLC	San Martn de	3.13	55	*e*P	Pn	00 33 33.2	-0.3
ROSC	El Rosal	3.16	132	*e*P	Pb	00 33 37.4	-3.0
OCAC	Ocana	3.53	69	*e*P	Pn	00 33 41.9	+2.7
RUSC	La Rusia	3.72	107	*e*P	Pn	00 33 42.3	+0.2
RUSC				*e*S	Sn	00 34 27.7	+1.2
CHIC	Chingaza	3.74	129	*e*P	Pn	00 33 44.8	+2.5
CHIC				*i*		00 34 37.5	
	comp=N,53nm,0.5s						
PAMC	Pamplona, Colo	3.94	85	*e*P	Pn	00 33 45.4	+0.3
PAMC				*e*S	Sn	00 34 31.9	-0.1
PAMC				*i*		00 34 36.9	
	comp=N,107nm,0.5s						
POPC	Popayan, Colom	4.42	180	*e*P	Pn	00 33 49.4	-2.1
POPC				*e*S	Sn	00 34 39.8	-3.7

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*NNC **08** 00:39:16.1±1.6, 38°.68N×70°.73E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=11.9km s-min=7.6km az=28.0*

ISC 08 00:39:16.3±4.5**, 38°.5N**±0°.2×**70°.6E**±0°.2**, h23**^{km}**, n9, σ0^{s}.77**/13**, 8C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.74	55	⇑Pn	Pn	00 39 58.8	-0.3
	4.3nm,0.2s						
SFK				⇑Sn	Sn	00 40 31.4	-0.2
	9.1nm,0.5s						
MNAS	Manas	4.27	19	⇑Pn	Pn	00 40 19.4	-0.6
	4.0nm,0.8s						
MNAS				⇑Sn	Sn	00 41 08.9	-0.3
	6.7nm,0.7s						
MNAS				⇑Lg	Lg	00 41 22.6	
	5.3nm,0.9s						
AML	Almayashu	4.36	32	P	Pn	00 40 21.8	+0.3
	SNR=6.0						
KK31	Karatay Array	4.63	359	⇓Pn	Pn	00 40 24.9	+0.1
	1.0nm,0.4s,baz=188,slow=14,SNR=19						
KK31				⇑Sn	Sn	00 41 18.0	+0.1
	3.5nm,0.7s,baz=186,slow=25,SNR=6.2						
KK31				⇑Lg	Lg	00 41 33.6	
	3.9nm,0.6s						
EKS2	Erkin-Say	4.84	29	P	Pn	00 40 28.5	+0.7
	SNR=5.4						
AAK	Ala-Archa	5.12	34	⇓Pn	Pn	00 40 30.2	-1.4
	4.8nm,0.7s						
AAK				⇑Sn	Sn	00 41 30.3	+0.2
	3.2nm,0.8s						
KBK	Karagaybulak	5.34	37	P	Pn	00 40 36.2	+1.4
	SNR=15						
CHMS	Chumysh	5.52	34	P	Pn	00 40 37.9	+0.8
	SNR=5.7						
USP	Ospenovka	5.64	31	P	Pn	00 40 38.5	-0.2
	SNR=9.4						

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*NIED **08** 00:40:00, 39°.10N×142°.90E, h20^{km}, Mw3.9 Best double couple: $M_0$8.92000×10^{14} NP1:ϕ_s189.00000°, δ18.00000°, λ79.00000°. NP2:ϕ_s20.00000°, δ72.00000°, λ94.00000°.*

*IDC **08** 00:40:23.7±0.8, 39°.16N×142°.86E, h0^{km}, mb3.7/14, mb1 3.8/19, mb1mx3.7/44, mbtmp3.7/19, ML3.2/5, Error ellipse: s-maj=21.0km s-min=15.1km az=111.0*

*JMA **08** 00:40:26.7±0.2, 39°.13N×142°.91E, h21^{km}±2^{km}, M4.0*

ISC 08 00:40:25.7±1.9**, 39°.13N**±0°.05×**142°.87E**±0°.07**, h13**^{km}±10^{km}**, n36, σ0^{s}.91**/41**, mb3.8**/14**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.93	299	P	Pn	00 40 44.2	-0.2
OFUJ	Ofunato	0.94	267	P	Pn	00 40 44.7	+0.2
OFUJ				*e*S	Sb	00 40 57.0	+0.9
JTH	Tanohata	1.12	316	P	Pg	00 40 47.8	+0.5
JKMT	Kesennumamotoy	1.14	254	P	Pg	00 40 47.6	0.0
JKMT				*e*S	Sg	00 41 02.2	-0.2
JOM	Ohasama	1.27	286	P	Pg	00 40 49.8	-0.4
JMK	Ichinoseki	1.30	263	P	Pg	00 40 50.3	-0.4
JMK				*e*S	Sg	00 41 07.3	-0.3
JIO	Ouri	1.37	241	P	Pb	00 40 50.9	-0.2
JIO				*e*S	Sn	00 41 07.8	-0.6
JANG	Nango	1.62	320	P	Pn	00 40 54.3	+0.3
JANG				*e*S	Sb	00 41 16.0	+0.2
JRG	Rokugo	1.76	279	P	Pb	00 40 57.7	-0.1
JOU	Okura	1.89	247	P	Pb	00 40 59.4	-0.6
JOU				*e*S	Sb	00 41 23.4	-0.1
JYK	Kaneyama	1.97	265	P	Pb	00 41 00.8	-0.6
JAH	Hinai	2.02	302	P	Pb	00 41 02.4	+0.1
JMM	Marumori	2.06	233	P	Pb	00 41 01.9	-1.1
MJAR	Matsushiro Arr	4.50	236	Pn	Pn	00 41 34.8	+1.2
	1.1nm,0.3s,baz=35,slow=14,SNR=52						
MJAR				Sn	Sn	00 42 16.9	-9.0
	0.3nm,0.3s,baz=54,slow=20,SNR=2.9						
MAT	Matsushiro	4.51	236	P	Pn	00 41 37.3	+3.7
MAT				*e*S	Sn	00 42 26.9	+1.0
ASAJ	Asahikawa	4.99	358	Pn	Pn	00 41 40.5	+0.3
	2.0nm,0.3s,baz=228,slow=14,SNR=9.0						
ASAJ				Sn	Sn	00 42 37.3	-0.3
	1.0nm,0.3s,baz=307,slow=29,SNR=4.0						
USRK	Ussuriysk Ar.	9.59	305	Pn	Pn	00 42 42.1	-1.2
	0.2nm,0.3s,baz=112,slow=14,SNR=2.9						
KSRS	Korea Array	11.87	267	Pn	Pn	00 43 14.6	+0.1
	0.2nm,0.3s,baz=76,slow=16,SNR=3.7						
KLR	Kul'dur	12.85	325	Pn	Pn	00 43 28.6	+0.7
	0.1nm,0.3s,baz=149,slow=18,SNR=2.5						
MA2	Magadan	21.07	11	P	P	00 45 09.1	-0.2
	2.2nm,0.3s,baz=192,slow=9.2,SNR=6.0						
SEY	Seymchan	24.52	10	P	P	00 45 45.5	+0.9
	2.1nm,0.6s,baz=197,slow=9.8,SNR=7.1						
SONM	Songino Array	27.64	300	P	P	00 46 13.5	+0.4
	1.0nm,0.6s,baz=92,slow=7.6,SNR=8.4						
H11N2	WAKE ISLAND Hy	28.34	126	T	T	01 16 53.5	
	baz=318,slow=75,SNR=84						
H11N1	WAKE ISLAND Hy	28.35	126	T	T	01 16 54.2	
	baz=318,slow=75,SNR=74						
H11N3	WAKE ISLAND Hy	28.36	126	T	T	01 16 54.8	
	baz=318,slow=75,SNR=63						
ZALV	Zalesovo Beam	41.39	311	P	P	00 48 11.1	-0.2
	1.4nm,0.5s,baz=94,slow=7.4,SNR=8.3						
CMAR	Chiang Mai Arr	43.16	254	P	P	00 48 25.5	-0.6
	1.3nm,0.3s,baz=50,slow=7.4,SNR=3.3						
MKAR	Makanchi Array	44.01	301	P	P	00 48 32.5	-0.2
	1.7nm,0.8s,baz=82,slow=9.7,SNR=19						
ILAR	Eielson Array	47.11	33	P	P	00 48 57.8	+0.7
	0.3nm,0.7s,baz=263,slow=6.1,SNR=3.1						
WRA	Warramunga Arr	59.30	189	P	P	00 50 25.9	-1.2
	0.4nm,0.6s,baz=6.1,slow=7.4,SNR=5.0						
YKA	Yellowknife Ar	61.42	31	P	P	00 50 40.0	-1.2
	0.1nm,0.4s,baz=286,slow=4.7,SNR=2.6						
ASAR	Alice Springs	63.03	189	P	P	00 50 54.2	+1.8
	0.2nm,0.4s,baz=17,slow=6.8,SNR=2.6						
FINES	FINESS Array B	67.50	332	P	P	00 51 20.6	-0.3
	1.7nm,0.9s,baz=48,slow=13,SNR=2.7						
NOA	NORSAR Array B	72.69	338	P	P	00 51 52.9	0.0
	0.4nm,0.9s,baz=100,slow=7.5,SNR=3.0						
AKASG	Malin Array Be	73.34	323	P	P	00 51 56.1	-0.8
	0.3nm,0.3s,baz=41,slow=6.1,SNR=2.5						
BRTR	Keskin Array B	78.31	312	P	P	00 52 25.5	-0.2
	0.3nm,0.7s,baz=123,slow=4.1,SNR=3.3						

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*IDC **08** 00:42:06.9±1.6, 10°.73S×165°.38E, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.7/38, mbtmp3.8/7, ML4.2/2, MS3.7/2, Ms1 3.7/2, ms1mx3.1/23, Error ellipse: s-maj=40.8km s-min=28.5km az=121.0*

*ISCJB **08** 00:42:09.8±1.0, 10°.9S±0°.1×165°.3E±0°.2, h31^{km}, mb3.5/5, MS4.2/1, Error ellipse: s-maj=23.0km s-min=16.8km az=160.1*

ISC 08 00:42:11.6±1.2**, 10°.8S**±0°.1×**165°.3E**±0°.2**, h31**^{km}**, n14, σ1^{s}.14**/7**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.42	284	Pn	Pn	00 43 29.1	-1.2
	10.0nm,0.3s,baz=203,slow=2.7,SNR=6.0						
DZM	Mont Dzumac	11.25	174	Pn	Pn	00 44 50.0	-0.5
	1.0nm,0.3s,baz=50,slow=8.3,SNR=7.5						
DZM				LR	LR	00 48 03.7	
	comp=Z,126nm,18.2s,baz=256,slow=32						
H11S2	WAKE ISLAND Hy	29.15	3	T	T	01 18 12.5	
	baz=182,slow=76						
H11S3	WAKE ISLAND Hy	29.15	3	T	T	01 18 15.8	
	baz=182,slow=76						
H11S1	WAKE ISLAND Hy	29.17	3	T	T	01 18 13.9	
	baz=182,slow=76						
H11N1	WAKE ISLAND Hy	30.37	3	T	T	01 19 45.3	
	baz=182,slow=76						
H11N3	WAKE ISLAND Hy	30.38	3	T	T	01 19 42.9	
	baz=182,slow=76						
H11N2	WAKE ISLAND Hy	30.39	3	T	T	01 19 45.4	
	baz=182,slow=76						
WRA	Warramunga Arr	31.13	249	P	P	00 48 29.2	+1.4
	0.3nm,0.8s,baz=77,slow=8.0,SNR=2.8						
ASAR	Alice Springs	32.48	243	P	P	00 48 40.2	+0.6
	0.4nm,0.5s,baz=79,slow=9.5,SNR=4.8						
NWAO	Narrogin (SRO)	49.21	236	LR	LR	01 13 42.7	
	comp=Z,208nm,18.0s,baz=278,slow=38						
SONM	Songino Array	78.20	324	P	P	00 54 09.0	+0.7
	0.3nm,0.8s,baz=130,slow=5.8,SNR=2.5						
ILAR	Eielson Array	83.44	19	P	P	00 54 35.1	-0.6
	0.4nm,0.7s,baz=235,slow=4.8,SNR=4.6						
MKAR	Makanchi Array	93.03	317	P	P	00 55 22.6	+0.3
	0.4nm,0.8s,baz=103,slow=6.4,SNR=2.7						

IDC 08 00:46:49.5±4.0**, 11°.12S**×**167°.01E, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/38**, mbtmp3.8**/4**, Error ellipse: s-maj=172.1km s-min=31.4km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.62	250	P	P	00 53 23.5	+0.2
	1.7nm,0.8s,baz=83,slow=8.8,SNR=9.1						
ASAR	Alice Springs	33.87	244	P	P	00 53 34.3	+0.1
	0.5nm,0.7s,baz=72,slow=8.8,SNR=4.7						
ILAR	Eielson Array	83.19	18	P	P	00 59 17.7	+0.5
	0.4nm,0.8s,baz=233,slow=5.1,SNR=4.2						
MKAR	Makanchi Array	94.42	317	P	P	01 00 10.3	-1.3
	0.4nm,0.8s,baz=82,slow=3.1,SNR=4.6						

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*NIED **08** 00:54:00, 39°.10N×143°.00E, h26^{km}, Mw4.5 Best double couple: $M_0$5.44000×10^{15} NP1:ϕ_s158.00000°, δ20.00000°, λ38.00000°. NP2:ϕ_s32.00000°, δ78.00000°, λ106.00000°.*

*JMA **08** 00:54:12.6±0.1, 39°.12N×143°.00E, h20^{km}±2^{km}, M4.5*

JMA Felt I J1.

*ISCJB **08** 00:54:14.6±0.6, 39°.14N±0°.03×142°.94E±0°.04, h39^{km}±4^{km}, mb4.5/76, MS4.0/12, Error ellipse: s-maj=6.1km s-min=4.1km az=34.0*

*IDC **08** 00:54:16.4±1.6, 39°.14N×142°.90E, h42^{km}±14^{km}, mb4.0/26, mb1 4.2/32, mb1mx4.1/47, mbtmp4.3/32, ML3.9/5, MS3.9/14, Ms1 3.9/14, ms1mx3.5/48, Error ellipse: s-maj=14.3km s-min=8.6km az=115.0*

*NEIC **08** 00:54:17.4±0.5, 39°.18N×142°.88E, h48^{km}±4^{km}, mb4.6/48, Error ellipse: s-maj=5.5km s-min=3.7km az=132.0*

NEIC Recorded [1 JMA] in Iwate and Miyagi.

ISC 08 00:54:16.5±0.9**, 39°.13N**±0°.04×**142°.94E**±0°.05**, h42**^{km}±7^{km}**, n188, σ1^{s}.15**/205**, mb4.6**/81**, MS4.0**/13**, 5C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.97	297	P	Pn	00 54 31.2	-2.4
MIYJ				*e*S	Sn	00 54 45.1	-1.1
OFUJ	Ofunato	0.99	267	P	Pn	00 54 31.7	-2.1
OFUJ				*e*S	Sn	00 54 44.1	-2.5
JTH	Tanohata	1.16	315	P	Pn	00 54 34.2	-2.0
JTH				*e*S	Sn	00 54 50.7	-0.1
JKMT	Kesennumamotoy	1.18	255	P	Pn	00 54 34.6	-1.9
JKMT				*e*S	Sn	00 54 50.3	-1.1
JOM	Ohasama	1.32	285	P	Pn	00 54 36.9	-1.5
JOM				*e*S	Sn	00 54 54.5	-0.3
JMK	Ichinoseki	1.35	263	P	Pn	00 54 37.3	-1.5
JMK				*e*S	Sn	00 54 55.1	-0.4
JIO	Ouri	1.41	242	P	Pn	00 54 38.0	-1.7
JIO				*e*S	Sn	00 54 54.9	-2.1
JANG	Nango	1.65	319	P	Pn	00 54 41.4	-1.6
JRG	Rokugo	1.81	279	P	Pn	00 54 44.8	-0.3
JOU	Okura	1.93	247	P	Pn	00 54 46.4	-0.5
JOU				*e*S	Sn	00 55 10.8	+0.8
JYK	Kaneyama	2.02	265	P	Pn	00 54 47.8	-0.2
JAH	Hinai	2.06	301	P	Pn	00 54 48.4	-0.2
JMM	Marumori	2.10	234	P	Pn	00 54 48.1	-1.1
ERM	Erimo	2.88	3	*e*Pn	Pn	00 54 58.9	-1.0
MAJO	Matsushiro	4.55	237	*e*Pn	Pn	00 55 24.5	+1.7
MAJO				*e*Sn	Sn	00 56 14.5	+0.1
MAT	Matsushiro	4.55	237	P	Pn	00 55 24.4	+1.6
MAT				*e*S	Sn	00 56 12.9	-1.5
MJAR	Matsushiro Arr	4.55	237	P	Pn	00 55 23.6	+0.8
	4.7nm,0.3s,baz=35,slow=14,SNR=172						
MJAR				S	Sn	00 56 14.5	+0.1
	baz=58,slow=15,SNR=2.6						
MJAR				LR	LR	00 57 15.3	
	comp=Z,764nm,19.5s,baz=25,slow=40						
MJB9	Matsu-Tunnel	4.55	237	*e*Pn	Pn	00 55 24.6	+1.8
ASAJ	Asahikawa	4.99	357	P	Pn	00 55 27.9	-0.8
	7.2nm,0.3s,baz=232,slow=11,SNR=17						
ASAJ				S	Sn	00 56 24.1	-1.0
	10nm,0.3s,baz=350,slow=32,SNR=5.9						
ASAJ				LR	LR	00 57 33.2	
	comp=Z,686nm,20.3s,baz=188,slow=40						
INU	Inuyama	6.04	233	*e*Pn	Pn	00 55 44.5	+1.2
JHJ	Hachijo jima 2	6.52	204	P	Pn	00 55 50.3	+0.5
	14nm,0.3s,baz=55,slow=16,SNR=1.9						
JHJ				S	Sn	00 57 01.0	-1.9
	31nm,0.3s,baz=60,slow=20,SNR=3.3						
USA0B	Ussuriysk Arra	9.63	305	*e*Pn	Pn	00 56 32.6	+0.3
USRK	Ussuriysk Ar.	9.63	305	P	Pn	00 56 32.9	+0.6
	0.4nm,0.3s,baz=113,slow=14,SNR=5.0						
USRK				LR	LR	01 00 04.3	
	comp=Z,947nm,19.0s,baz=105,slow=36						
MDJ	Mudanjiang	11.35	303	P	Pn	00 56 57.6	+1.6
MDJ				sP		00 57 13.0	
MDJ				S	Sn	00 59 04.0	+2.6
MDJ				ScP	ScP	01 06 14.6	-2.1
MDJ				PcS	PcS	01 06 20.6	-0.7
MDJ	Mudanjiang	11.35	303	ScS	ScS	01 09 52.4	+0.3
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,710nm,4.9s						
MDJ				LR	LR		
	comp=N,1μm,5.7s						
MDJ				LR	LR		
	comp=E,2μm,5.3s						
MDJ				LR	LR		
	comp=Z,1μm,6.0s						
JNU	Nakatsue	11.44	242	LR	LR	01 01 44.4	
	comp=Z,823nm,18.6s,baz=53,slow=39						
KSRS	Korea Array	11.92	267	P	Pn	00 57 05.4	+1.7
	comp=Z,0.4nm,0.3s,baz=87,slow=14,SNR=7.0						
KSRS				LR	LR	01 01 21.7	
	comp=Z,409nm,18.8s,baz=71,slow=36						
KS01	Wonju Array Si	11.93	267	*e*Pn	Pn	00 57 03.5	-0.5
KS15	Wonju Array Si	11.95	267	*e*Pn	Pn	00 57 05.4	+1.3
KSAR	Wonju Array Be	11.95	267	P	Pn	00 57 05.4	+1.3
KLR	Kul'dur	12.88	325	P	Pn	00 57 15.7	-1.1
	comp=Z,0.2nm,0.3s,baz=133,slow=12,SNR=8.7						
KLR				LR	LR	01 02 20.1	
	comp=Z,388nm,18.8s,baz=140,slow=38						
HIA	Hailar	19.40	309	*e*P	P	00 58 36.5	-2.3
	comp=Z,19nm,1.0s						
SSE	Sheshan	19.48	252	*e*P	P	00 58 39.5	-0.3
	comp=Z,74nm,1.1s						
TIA	Tai'an	20.62	270	P	P	00 58 52.4	+0.2
TIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJI	Beijing	20.62	281	*e*P	P	00 58 49.2	-2.9
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BJI				LR	LR		
	comp=N,350nm,5.5s						
BJI				LR	LR		
	comp=E,360nm,12.2s						
BJI				LR	LR		
	comp=Z,230nm,22.6s						
BJT	Baijiatuau	20.63	281	*e*P	P	00 58 49.7	-2.6
	comp=Z,10nm,0.9s						
NJ2	Nanjing	20.78	258	*e*P	Pn	00 58 55.8	-0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MA2	Magadan	21.06	11	*e*P	P	00 58 56.7	0.0
	comp=Z,27nm,0.7s						
MA2	Magadan	21.06	11	P	P	00 58 56.4	-0.3
	comp=Z,30nm,0.8s,baz=202,slow=9.4,SNR=27						
TIY	Taiyuan	23.89	276	*e*P	P	00 59 27.4	+1.2
HHC	Hu-ho-hao-te	24.03	284	*e*P	P	00 59 25.8	-1.8
HHC				S	S	01 03 35.5	-6.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,270nm,4.2s						
HHC				LR	LR		
	comp=N,230nm,7.9s						
HHC				LR	LR		
	comp=E,530nm,9.4s						
HHC				LR	LR		
	comp=Z,460nm,10.8s						
SEY	Seymchan	24.51	10	P	P	00 59 31.6	+0.1
	comp=Z,11nm,0.5s,baz=197,slow=8.1,SNR=34						
WHN	Wuhan	24.90	259	P	P	00 59 32.5	-2.9
GUMO	Guam	25.50	176	LR	LR	01 09 03.3	
	comp=Z,105nm,20.1s,baz=32,slow=35						
XAN	Xi'an	27.68	270	P	P	01 00 02.5	+1.9
XAN				pP	pP	01 00 08.7	-2.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN	Xi'an	27.68	270	*e*P	P	01 00 00.0	-0.5
	comp=Z,4.9nm,0.7s						
SONA1	Songino Array	27.68	300	*e*P	P	01 00 00.3	-0.3
SONA0	Songino Array	27.69	300	*e*P	P	01 00 00.6	0.0
SONA0				*e*PcP	PcP	01 03 16.9	+0.1
SONM	Songino Array	27.69	300	P	P	01 00 00.6	0.0
	comp=Z,4.3nm,0.6s,baz=91,slow=8.2,SNR=26						
SONM				PcP	PcP	01 03 16.8	+0.1
	comp=Z,0.4nm,0.5s,baz=130,slow=3.1,SNR=3.2						
SONM				LR	LR	01 11 26.8	
	comp=Z,381nm,18.8s,baz=62,slow=37						
H11N2	WAKE ISLAND Hy	28.30	126	T	T	01 30 43.3	
	baz=318,slow=75,SNR=228						
H11N1	WAKE ISLAND Hy	28.31	126	T	T	01 30 42.7	
	baz=318,slow=75,SNR=88						
H11N3	WAKE ISLAND Hy	28.32	126	T	T	01 30 49.4	
	baz=318,slow=75,SNR=43						
ENH	Enshi	28.75	262	*e*P	P	01 00 09.8	-0.4
	comp=Z,21nm,0.8s						
H11S1	WAKE ISLAND Hy	29.10	128	T	T	01 31 41.7	
	baz=320						
H11S3	WAKE ISLAND Hy	29.10	128	T	T	01 31 44.6	
	baz=320						
H11S2	WAKE ISLAND Hy	29.12	128	T	T	01 31 51.1	
	baz=320						
TLY	Talaya	29.93	308	*e*P	P	01 00 20.3	0.0
	comp=Z,4.1nm,0.9s						
LZH	Lanzhou	30.95	277	⇑P	P	01 00 30.4	+0.7
LZH				pP	pP	01 00 41.8	+1.1
LZH				sP	sP	01 00 47.8	+2.2
LZH				PP	PnPn	01 01 32.1	+0.6
LZH				S	S	01 05 31.7	+0.2
LZH				sS	sS	01 05 45.2	-4.3
LZH				SS	SnSn	01 07 16.4	+2.5
LZH				pmax	pmax		
	comp=Z,15nm,1.6s						
LZH				pmax	pmax		
	comp=Z,68nm,4.3s						
LZH				LR	LR		
	comp=N,430nm,10.2s						
LZH				LR	LR		
	comp=E,790nm,14.1s						
LZH				LR	LR		
	comp=Z,600nm,11.9s						
GSTR	Great Sitkin T	31.04	52	*e*P	P	01 00 31.3	+1.1
GYA	Guiyang	32.79	258	⇑*i*P	P	01 00 44.1	-1.8
GYA				pP	pP	01 00 58.2	+1.3
GYA				PP	PnPn	01 01 57.6	+2.4
GYA				S	S	01 06 00.4	+0.2
GYA				sS	sS	01 06 18.7	+0.5
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
CD2	Chengdu	32.91	268	P	P	01 00 45.8	-1.0
CD2				pmax	pmax		
	comp=Z,50nm,1.0s						
CD2				pmax	pmax		
	comp=Z,130nm,5.1s						
GTA	Gaotai	33.15	284	*e*P	P	01 00 48.9	0.0
GTA				pP	pP	01 00 58.6	-1.3
GTA				sP	sP	01 01 02.6	-2.1
GTA				S	S	01 06 06.7	+1.1
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,68nm,5.9s						
GTA				LR	LR		
	comp=N,170nm,20.3s						
GTA				LR	LR		
	comp=E,470nm,20.3s						
GTA				LR	LR		
	comp=Z,500nm,18.7s						
TIXI	Tiksi	33.37	352	*e*P	P	01 00 49.0	-1.2
	comp=Z,2.3nm,0.6s						
DAV	Davao City (W)	35.55	211	LR	LR	01 13 01.1	
	comp=Z,104nm,20.9s,baz=347,slow=32						
KMI	Kunming	36.49	260	P	P	01 01 18.2	+0.2
KMI				pP	pP	01 01 27.3	-1.8
KMI				sP	sP	01 01 31.0	-2.9
KMI				pmax	pmax		
	comp=Z,31nm,0.9s						
KMI				pmax	pmax		
	comp=Z,150nm,5.1s						
KMI	Kunming	36.49	260	*e*P	P	01 01 18.2	+0.2
	comp=Z,28nm,0.9s						
WMQ	Urumqi	41.00	295	P	P	01 01 56.3	+0.8
WMQ				pP	pP	01 02 05.3	-1.3
WMQ				pmax	pmax		
	comp=Z,52nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,390nm,5.3s						
WMQ				LR	LR		
	comp=N,140nm,16.5s						
WMQ				LR	LR		
	comp=E,170nm,19.7s						
WMQ				LR	LR		
	comp=Z,160nm,19.1s						
WMQ	Urumqi	41.00	295	*e*P	P	01 01 56.2	+0.8
	comp=Z,16nm,0.7s						
ZAA0	Zalesovo Array	41.42	311	*e*P	P	01 01 58.3	-0.4
	comp=Z,6.0nm,0.7s						
ZAA1	Zalesovo Array	41.42	311	*e*P	P	01 01 58.4	-0.3
ZAA1				*e*PcP	PcP	01 03 56.2	+0.3
ZALV	Zalesovo Beam	41.42	311	P	P	01 01 58.4	-0.3
	comp=Z,5.0nm,0.5s,baz=92,slow=7.7,SNR=36						
ZALV				PcP	PcP	01 03 56.2	+0.3
	comp=Z,1.9nm,0.5s,baz=89,slow=3.3,SNR=4.3						
ZALV				LR	LR	01 19 53.2	
	comp=Z,279nm,18.7s,baz=69,slow=37						
NRIK	Noril'sk	41.89	334	LR	LR	01 20 52.9	
	comp=Z,206nm,18.1s,baz=96,slow=38						
UTTA	Uttaradit	42.45	252	P	P	01 02 09.2	+1.8
	comp=Z,2.5nm,1.1s,comp=Z,66nm						
PBKT	Sadao Pong	42.88	250	*e*P	P	01 02 11.9	+1.1
	comp=Z,6.9nm,1.1s						
PBKT	Sadao Pong	42.88	250	P	P	01 02 12.0	+1.1
	comp=Z,6.5nm,1.2s,comp=Z,1μm						
CMMT	Chiang Mai	42.98	255	P	P	01 02 12.6	+0.8
	comp=Z,7.3nm,0.8s						
CHTO	Chiang Mai	42.99	255	*e*P	P	01 02 12.3	+0.5
	comp=Z,6.3nm,0.8s						
CHTO	Chiang Mai	42.99	255	P	P	01 02 12.7	+0.9
	comp=Z,37nm,1.0s						
CM31	Chiang Mai Arr	43.20	254	*e*P	P	01 02 13.4	-0.1
CMAR	Chiang Mai Arr	43.20	254	P	P	01 02 13.4	-0.1

	comp=Z,1.0nm,0.3s,baz=45,slow=6.8,SNR=12						
CMAR				LR	LR	01 19 55.5	
	comp=Z,45nm,19.1s,baz=72,slow=36						
CM01	Chiang Mai Arr	43.21	254	*e*P	P	01 02 13.9	+0.3
MK01	Makanchi Array	44.05	301	*e*P	P	01 02 19.9	-0.2
MK31	Makanchi Array	44.05	301	*e*P	P	01 02 20.1	-0.1
	comp=Z,12nm,0.9s						
MK32	Makanchi Array	44.05	301	*e*P	P	01 02 19.7	-0.4
MK32				*e*PP	PcP	01 04 04.6	-0.3
MKAR	Makanchi Array	44.05	301	*e*P	P	01 02 20.1	-0.1
	comp=Z,63nm,0.6s						
MKAR	Makanchi Array	44.05	301	P	P	01 02 19.7	-0.4
	comp=Z,12nm,0.8s,baz=84,slow=9.3,SNR=93						
MKAR				PcP	PcP	01 04 04.6	-0.3
	comp=Z,0.9nm,0.8s,baz=57,slow=5.8,SNR=1.7						
MKAR				LR	LR	01 21 26.8	
	comp=Z,186nm,20.1s,baz=52,slow=37						
IM3	Indian Mountai	44.24	32	*e*P	P	01 02 21.8	+0.5
MAKZ	Makanchi	44.26	301	*e*P	P	01 02 21.7	0.0
	comp=Z,12nm,0.9s						
UMPA	Umpang Tak	44.67	252	P	P	01 02 39.5	+14
KURK	Kurchatov	45.61	307	*e*P	P	01 02 32.2	-0.2
	comp=Z,40nm,1.1s						
KURBB	Kurchatov Arra	45.69	307	P	P	01 02 32.6	-0.4
	comp=Z,27nm,0.6s,baz=81,slow=8.3,SNR=139						
PHET	Kaeng Krachan	46.26	248	P	P	01 02 39.4	+1.5
	comp=Z,4.9nm,0.8s						
IL1	Eielson Array	47.08	33	*e*P	P	01 02 44.0	+0.3
ILAR	Eielson Array	47.08	33	P	P	01 02 44.3	+0.5
	comp=Z,1.4nm,0.7s,baz=262,slow=5.0,SNR=15						
ILB	Eielson Array	47.08	33	*e*P	P	01 02 44.6	+0.9
	comp=Z,1.2nm,0.6s						
PRZ	Przheval'sk	47.91	296	*e*P	P	01 02 51.7	+1.0
	comp=Z,14nm,1.0s						
JIRN	Jiri	48.04	274	*e*P	P	01 02 52.3	+0.1
	comp=Z,15nm,0.4s						
RAMN	Ramite	48.07	273	*e*P	P	01 02 52.1	-0.1
	comp=Z,16nm,0.6s						
GUN	Gumba	48.16	275	*e*P	P	01 02 52.9	-0.2
	comp=Z,48nm,0.8s						
TARG	Taragay, Kyrgy	48.57	295	*e*P	P	01 02 56.8	+0.7
	comp=Z,6.3nm,0.7s						
PKIN	Phulchoki	48.70	274	*e*P	P	01 02 56.9	-0.2
DANN	Dangsing	49.59	276	*e*P	P	01 03 04.2	+0.2
	comp=Z,88nm,0.7s						
TKM2	Tokmak 2	49.71	297	P	P	01 03 05.3	+0.7
	SNR=32						
NRN	Naryn	49.95	295	*e*P	P	01 03 07.2	+0.7
	comp=Z,3.2nm,0.9s						
KOLN	Koldanda	50.00	276	*e*P	P	01 03 06.9	0.0
BVAR	Borovoye Array	50.07	311	P	P	01 03 06.7	-0.2
	comp=Z,6.9nm,0.7s,baz=70,slow=8.3,SNR=45						
BVAR				PcP	PcP	01 04 26.1	+0.1
	comp=Z,2.1nm,0.7s,baz=73,slow=4.8,SNR=3.7						
BRVK	Borovoye	50.12	311	*e*P	P	01 03 07.3	0.0
	comp=Z,9.4nm,0.9s						
KBK	Karagaybulak	50.25	297	P	P	01 03 09.2	+0.6
	SNR=19						
PYUN	Piuthan	50.31	276	*e*P	P	01 03 09.4	+0.1
	comp=Z,101nm,1.0s						
USP	Ospenovka	50.35	298	P	P	01 03 09.7	+0.5
	SNR=5.8						
AAK	Ala-Archa	50.57	297	*e*P	P	01 03 11.2	+0.2
	comp=Z,3.7nm,0.8s						
KSH	Kashi	50.67	293	P	P	01 03 16.5	+4.7
KSH				pP	sP	01 03 26.4	-1.5
KSH				PP	PP	01 05 15.6	+7.8
KSH				S	S	01 10 27.1	+3.2
KSH				sS	sS	01 10 51.3	+8.5
KSH	Kashi	50.67	293	SS	SS	01 14 01.2	+3.0
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,230nm,6.7s						
KSH				LR	LR		
	comp=N,170nm,5.4s						
KSH				LR	LR		
	comp=E,160nm,4.7s						
KSH				LR	LR		
	comp=Z,280nm,5.6s						
EKS2	Erkin-Say	51.06	298	P	P	01 03 14.7	+0.1
	SNR=8.3						
EPYK	Eagle Plains	51.11	31	*e*P	P	01 03 16.8	+2.2
	comp=Z,2.0nm,0.8s						
AML	Almayashu	51.31	297	P	P	01 03 17.6	+0.8
	SNR=12						
INK	Inuvik	51.97	28	*e*P	P	01 03 22.5	+1.6
	comp=Z,1.8nm,0.6s						
INK	Inuvik	51.97	28	P	P	01 03 21.4	+0.5
	comp=Z,1.0nm,0.5s,baz=277,slow=6.2,SNR=12						
ARSB	Arslanbob	52.10	296	*e*P	P	01 03 23.4	+1.0
	comp=Z,23nm,0.9s						
KK31	Karatay Array	53.13	299	*e*P	P	01 03 29.8	-0.1
	comp=Z,8.4nm,1.1s						
KKAR	Karatay Array	53.13	299	*e*P	P	01 03 29.8	-0.1
	comp=Z,8.4nm,1.1s						
GAR	Garm	54.90	295	*e*P	P	01 03 42.9	-0.1
	comp=Z,14nm,1.1s						
NIL	Nilore	55.11	288	*e*P	P	01 03 44.9	+0.4
	comp=Z,11nm,0.7s						
ARU	Arti	55.60	318	*e*P	P	01 03 47.4	-0.2
	comp=Z,13nm,0.9s						
CHGR	Chuyangaron	55.86	295	*e*P	P	01 03 50.0	+0.1
	comp=Z,44nm,0.8s						
ABKAR	Akbulak array	57.52	310	*e*P	P	01 04 01.1	-0.2
KBL	Kabul	57.80	290	*e*P	P	01 04 03.7	-0.2
	comp=Z,11nm,0.9s						
WB2	Warramunga Arr	59.31	189	*e*P	P	01 04 14.0	-0.1
WR1	Warramunga Arr	59.31	189	*e*P	P	01 04 13.2	-0.9
	comp=Z,4.9nm,0.9s						
WRA	Warramunga Arr	59.31	189	P	P	01 04 13.2	-0.9
	comp=Z,1.9nm,0.6s,baz=6.7,slow=7.1,SNR=22						
RES	Resolute Bay	60.27	15	*e*P	P	01 04 20.7	+0.7
	comp=Z,2.3nm,0.7s						
RES	Resolute Bay	60.27	15	P	P	01 04 19.1	-0.9
	comp=Z,1.3nm,0.4s,baz=64,slow=4.3,SNR=8.7						
YKA	Yellowknife Ar	61.39	31	P	P	01 04 27.6	-0.2
	comp=Z,0.4nm,0.6s,baz=302,slow=6.6,SNR=6.7						
YKB5	Yellowknife Ar	61.39	31	*e*P	P	01 04 27.6	-0.2
ARA0	ARCESS Array S	62.46	339	*e*P	P	01 04 34.2	-0.7
ARCES	ARCESS Array B	62.46	339	P	P	01 04 34.3	-0.7
	comp=Z,1.1nm,0.6s,baz=55,slow=6.7,SNR=8.0						
KLMR	Klimovskoe	62.63	328	*e*P	P	01 04 35.1	-1.0
KLMR				AMP		01 04 52.6	
	comp=Z,10.0nm,1.3s						
TULEG	Thule	62.86	8	*e*P	P	01 04 37.4	-0.1
	comp=Z,4.1nm,0.6s						
AS01	Alice Springs	63.03	189	*e*P	P	01 04 39.5	+0.2
ASAR	Alice Springs	63.04	189	P	P	01 04 38.5	-0.8
	comp=Z,0.5nm,0.8s,baz=15,slow=6.9,SNR=6.4						
GEYT	Alibeck	63.88	299	P	P	01 04 44.4	-0.5
	comp=Z,3.8nm,0.9s,baz=323,slow=2.2,SNR=7.6						
GYA0B	ALIBECK ARRAY	63.88	299	*e*P	P	01 04 45.2	+0.3
	comp=Z,6.7nm,1.0s						
FIA0	FINESS Array S	67.52	332	*e*P	P	01 05 07.0	-0.8
FINES	FINESS Array B	67.52	332	P	P	01 05 07.0	-0.8
	comp=Z,2.9nm,0.7s,baz=33,slow=4.5,SNR=9.5						
SUMG	Summit	68.58	0	*i* P	P	01 05 15.8	+0.9
	comp=Z,16nm,0.7s						
KIV	Kislovodsk	70.44	311	*e*P	P	01 05 27.5	+1.0
	comp=Z,17nm,1.0s						
KBZ	Khabaz	70.45	311	P	P	01 05 26.8	+0.5
	comp=Z,4.1nm,0.9s,baz=35,slow=3.8,SNR=7.5						
UOSS	Minazif	72.31	288	*e*P	P	01 05 38.6	+0.7
	comp=Z,7.0nm,0.8s						
NC405	NORSAR Array S	72.50	337	*e*P	P	01 05 38.9	+0.4
	comp=Z,3.1nm,0.8s						
NC204	NORSAR Array S	72.66	338	*e*P	P	01 05 40.0	+0.5
	comp=Z,7.4nm,0.8s						
NB201	NORSAR Array S	72.68	338	*e*P	P	01 05 39.6	+0.1
	comp=Z,1.8nm,0.8s						
NB2	NORSAR Subarra	72.71	338	P	P	01 05 39.4	-0.4
	comp=Z,1.2nm,0.6s,baz=38,slow=6.2						
NB200	NORSAR Array S	72.71	338	*e*P	P	01 05 39.3	-0.5
NOA	NORSAR Array B	72.71	338	P	P	01 05 39.3	-0.5
	comp=Z,3.1nm,0.8s,baz=39,slow=6.0,SNR=16						
NVAR	Mina Array Bea	72.78	54	P	P	01 05 41.8	+0.9
	comp=Z,0.3nm,0.3s,baz=294,slow=4.5,SNR=2.1						
NBO00	NORSAR Array S	72.85	338	*e*P	P	01 05 40.9	+0.4
	comp=Z,7.8nm,1.0s						
NAO01	NORSAR Array S	72.96	338	*e*P	P	01 05 42.7	+1.5
AKASG	Malin Array Be	73.37	323	P	P	01 05 43.2	-0.5
	comp=Z,2.1nm,0.6s,baz=43,slow=6.3,SNR=9.0						
AKBB	Malin Array Si	73.37	323	*e*P	P	01 05 43.2	-0.5
	comp=Z,4.5nm,0.8s						
AK11	Malin Array Si	73.41	323	*e*P	P	01 05 43.3	-0.7
SIRT	Sirnak	74.43	306	*e*P	P	01 05 50.5	+0.1
	comp=Z,21nm,1.1s						
PD31	Pinedale Array	75.35	47	*e*P	P	01 05 56.0	+0.3
PDAR	Pinedale Array	75.35	47	*e*P	P	01 05 55.9	+0.1
PDAR	Pinedale Array	75.35	47	P	P	01 05 56.0	+0.3
	comp=Z,0.3nm,0.4s,baz=243,slow=1.0,SNR=6.7						
BUR08	Bucovina Ar. S	77.39	322	*e*P	P	01 06 07.8	+0.8
BUR04	Bucovina Ar. S	77.40	322	*e*P	P	01 06 07.5	+0.4
BURAR	Bucovina Array	77.40	322	⇓*i*P	P	01 06 07.7	+0.6
OZUR		78.20	321	⇑*i*P	P	01 06 12.8	+1.3
BR101	Keskin Array S	78.35	312	*e*P	P	01 06 11.8	-0.8
BRTR	Keskin Array B	78.35	312	P	P	01 06 11.8	-0.8
	comp=Z,0.7nm,0.5s,baz=104,slow=3.1,SNR=9.4						
MORC	Moravsky Berou	79.25	327	⇑*i*P	P	01 06 18.0	+0.8
ARR	Arges	79.29	321	⇑*i*P	P	01 06 19.4	+1.9
VYHS	Vyhne	79.67	326	*e*P	P	01 06 20.3	+0.8
CLL	Collm	79.87	331	*e*P	P	01 06 19.8	-0.6
	comp=Z,4.8nm,0.9s						
CLL	Collm	79.87	331	*i* P	P	01 06 20.1	-0.3
	comp=Z,5.0nm,0.9s						
KHC	Kasperske Hory	81.37	329	*e*P	P	01 06 29.0	+0.4
KHC				*e*pP	pP	01 06 41.5	+0.9
GEC2	GERESS Array S	81.55	329	*e*P	P	01 06 29.6	-0.1
	comp=Z,3.0nm,1.0s						
GERES	GERESS Array B	81.55	329	P	P	01 06 29.6	-0.1
	comp=Z,1.2nm,0.8s,baz=38,slow=6.8,SNR=7.0						
GEA0	GERESS Array S	81.56	329	*e*P	P	01 06 29.1	-0.6
SCHQ	Schefferville	82.99	17	P	P	01 06 36.5	-0.4
	comp=Z,4.2nm,0.9s,baz=47,slow=9.7,SNR=3.2						
PPT	Papeete	84.52	118	LR	LR	01 38 14.8	
	comp=Z,104nm,19.7s,baz=22,slow=31						
FUORN	Ofenpass-Fuorn	84.72	329	*e*P	P	01 06 45.7	-0.6
	comp=Z,7.6nm,0.9s						
LTX	Lajitas	87.90	53	*e*P	P	01 07 02.8	+0.8
TX31	Lajitas Ar. Si	87.90	53	*e*P	P	01 07 02.6	+0.6
TXAR	Lajitas Array	87.90	53	P	P	01 07 02.8	+0.8
	comp=Z,0.4nm,0.7s,baz=305,slow=2.9,SNR=5.1						
ESDC	Sonseca Array	95.92	335	P	P	01 07 38.6	-0.3
	comp=Z,0.3nm,0.5s,baz=46,slow=4.1,SNR=3.5						
TOA1	Torodi Ar. Sit	116.66	317	*e*PKPdf	PKPdf	01 12 54.8	-1.8
TORD	Torodi Ar. Bea	116.66	317	PKP	PKPdf	01 12 54.8	-1.8
	comp=Z,0.3nm,0.8s,baz=16,slow=3.0,SNR=4.0						

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*ISCJB **08** 00:57:29.6±0.9, 10°.9S±0°.1×166°.0E±0°.1, h10^{km}, mb3.8/7, Error ellipse: s-maj=18.5km s-min=16.0km az=7.1*

*IDC **08** 00:57:29.8±1.1, 10°.81S×165°.89E, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.9/36, mbtmp4.0/8, ML4.7/1, Error ellipse: s-maj=45.8km s-min=22.5km az=130.0*

ISC 08 00:57:31.1±0.9, **10°.9S**±0°.1×**166°.0E**±0°.1, **h10**^{km}, **n16**, σ**1^{s}16**/12, **mb3.9**/7, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.16	283	Pn	Pn	00 59 03.5	+1.3
	17nm,0.3s,baz=109,slow=18,SNR=3.0						
DZM	Mont Dzumac	11.16	178	Pn	Pn	01 00 11.7	+0.7
	4.7nm,0.3s,baz=2.9,slow=3.7,SNR=23						
CTA	Charters Tower	21.14	242	P	P	01 02 16.4	-0.1
	2.0nm,0.6s,baz=74,slow=13,SNR=2.2						
H11S2	WAKE ISLAND Hy	29.16	1	T	T	01 33 54.4	
	baz=181,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	29.16	1	T	T	01 33 56.7	
	baz=181,slow=76						
H11S1	WAKE ISLAND Hy	29.18	1	T	T	01 33 55.5	
	baz=181,slow=76,SNR=31						
H11N1	WAKE ISLAND Hy	30.38	2	T	T	01 35 27.8	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	30.39	2	T	T	01 35 27.3	
	baz=182,slow=76,SNR=8.3						
H11N2	WAKE ISLAND Hy	30.40	2	T	T	01 35 27.8	
	baz=182,slow=76,SNR=8.6						
WRA	Warramunga Arr	31.82	250	P	P	01 03 54.0	-2.4
	1.1nm,0.7s,baz=82,slow=9.1,SNR=9.3						
WRA				PcP	PcP	01 06 46.8	-0.7
	0.6nm,0.8s,baz=82,slow=2.9,SNR=4.0						
ASAR	Alice Springs	33.13	243	P	P	01 04 08.4	+0.5
	2.1nm,0.6s,baz=66,slow=10,SNR=13						
ASAR				PcP	PcP	01 06 50.5	-0.6
	0.9nm,0.8s,baz=95,slow=3.2,SNR=4.6						
SONM	Songino Array	78.68	324	P	P	01 09 33.4	-0.3
	0.3nm,0.6s,baz=147,slow=6.7,SNR=2.6						
ILAR	Eielson Array	83.24	18	P	P	01 09 59.0	+1.5
	1.5nm,0.6s,baz=236,slow=5.2,SNR=32						
MKAR	Makanchi Array	93.58	317	P	P	01 10 47.2	-0.4
	0.4nm,0.7s,baz=94,slow=5.5,SNR=4.4						
YKA	Yellowknife Ar	94.67	27	P	P	01 10 51.6	-0.5
	0.2nm,0.7s,baz=259,slow=4.4,SNR=5.3						
ARCES	ARCESS Array B	116.22	346	PKP	PKPdf	01 16 13.8	-0.5
	0.3nm,0.4s,baz=85,slow=2.1,SNR=13						

IDC 08 00:58:19.2±1.6, **10°.84S**×**166°.61E**, **h0**^{km}, **mb3.6**/4, **mb1 3.9**/5, **mb1mx3.7**/37, **mbtmp3.7**/5, **ML4.4**/1, **MS3.8**/1, **Ms1 3.8**/1, **ms1mx3.0**/22, **Error ellipse: s-maj=78.1km s-min=41.8km az=90.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.17	181	Pn	Pn	01 01 00.1	-0.3
	2.6nm,0.3s,baz=27,slow=18,SNR=2.1						
URZ	Urewera	28.88	163	LR	LR	01 14 49.2	
	comp=Z,162nm,18.3s,baz=88,slow=34						
SONM	Songino Array	79.00	323	P	P	01 10 24.8	-0.4
	0.1nm,0.3s,baz=112,slow=6.9,SNR=1.5						
ILAR	Eielson Array	83.05	18	P	P	01 10 46.1	-0.2
	0.3nm,0.7s,baz=225,slow=5.7,SNR=1.8						
MKAR	Makanchi Array	93.95	317	P	P	01 11 39.8	+0.7
	0.4nm,0.8s,baz=79,slow=5.9,SNR=2.8						
YKA	Yellowknife Ar	94.40	27	P	P	01 11 40.8	+0.1
	0.1nm,0.7s,baz=264,slow=5.1,SNR=1.3						

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*DJA **08** 01:07:53.8±1.7, 9°S±7°×11°0E±°, h23^{km}±18^{km}, M4.4/17, mb4.6/6, mB5.0/4, MLv4.4/17, Mw(mB)4.4/4*

*ISCJB **08** 01:07:55.4±0.7, 8°.99S±0°.07×110°.17E±0°.03, h97^{km}±6^{km}, mb3.9/8, Error ellipse: s-maj=12.5km s-min=4.7km az=14.2*

*IDC **08** 01:07:57.5±2.6, 8°.91S×110°.22E, h95^{km}±26^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.6/37, mbtmp4.0/10, Error ellipse: s-maj=54.6km s-min=13.0km az=46.0*

ISC 08 01:07:54.9±1.3, **9°.15S**±0°.10×**110°.16E**±0°.04, **h79**^{km}±12^{km}, **n34**, σ**1^{s}83**/43, **mb4.2**/12, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	Wanagama	1.28	16	P	Pn	01 08 18.1	+0.7
UGM				S	Sn	01 08 33.9	-0.4
PCJI	Pacitan	1.38	47	P	Pn	01 08 18.9	+0.2
PCJI				S	Sn	01 08 35.1	-1.5
WOJI	Wonogiri, Jawa	1.51	30	P	Pn	01 08 24.6	+4.3
WOJI				S	Sn	01 08 38.3	-1.1
PWJI	Pagerwojo	1.98	56	P	Pn	01 08 27.3	+0.8
PWJI				S	Sn	01 08 50.0	-0.5
SMRI	Semarang	2.10	8	P	Pn	01 08 29.9	+1.7
SMRI				S	Sn	01 08 55.1	+1.5
CMJI	Cimerak	2.17	309	P	Pn	01 08 29.2	+0.2
CMJI				S	Sn	01 08 53.5	-1.6
KPJI	Karang Pucung	2.17	326	P	Pn	01 08 30.1	+1.0
NGJI	Ngawi	2.19	36	P	Pn	01 08 33.0	+3.7
CISI	Cisompet, Garu	2.81	304	P	Pn	01 08 38.0	+0.3
CISI				S	Sn	01 09 09.0	-1.6
GRJI	Gresik	3.19	46	P	Pn	01 08 44.7	+1.8
GRJI				S	Sn	01 09 20.1	+0.2
GMJI	Gumukmas	3.36	75	P	Pn	01 08 46.4	+1.2
GMJI				S	Sn	01 09 22.7	-1.3
LEM	Lembang	3.41	312	P	Pn	01 08 47.1	+1.1
	5.8nm,0.3s,baz=89,slow=16,SNR=7.9						
LEM				S	Sn	01 09 26.8	+1.3
	14nm,0.3s,baz=201,slow=22,SNR=4.9						
JAGI	Jajag, Banyuwa	4.00	81	P	Pn	01 08 55.3	+1.4
JAGI				S	Sn	01 09 37.0	-2.7
SRBI	Singaraja	5.11	78	P	Pn	01 09 10.4	+1.4
	23nm,0.7s,1µm0.2nm						
MDSI	Maura Dua	7.53	308	P	Pn	01 09 41.4	-0.6
PLAI	Plampang	7.53	88	P	Pn	01 09 43.3	+1.2
	86nm,0.7s,1µm0.3nm						
BATI	Baumata	13.36	96	P	Pn	01 11 02.1	+0.8
	12nm,0.3s,baz=284,slow=8.3,SNR=4.3						
BATI				S	Sn	01 13 23.0	-5.2
	2.6nm,0.3s,baz=174,slow=19,SNR=3.0						
FITZ	Fitzroy Crossi	17.47	122	P	P	01 11 56.5	+2.9
	0.2nm,0.3s,baz=258,slow=6.9,SNR=6.6						
FITZ				S	Sn	01 14 52.4	-15
	0.2nm,0.3s,baz=294,slow=19,SNR=3.3						
WRA	Warramunga Arr	25.71	117	P	P	01 13 19.8	+1.7
	0.8nm,0.8s,baz=291,slow=11,SNR=18						
ASAR	Alice Springs	26.91	125	P	P	01 13 30.4	+1.6
	0.3nm,0.4s,baz=301,slow=9.6,SNR=5.2						
CMAR	Chiang Mai Arr	29.58	338	P	P	01 13 52.8	+0.2
	1.7nm,0.3s,baz=174,slow=7.5,SNR=4.7						
STKA	Stephens Creek	36.89	132	P	P	01 14 58.2	+2.1
	2.2nm,0.7s,baz=290,slow=6.5,SNR=4.5						
H08S2	Diego Garcia H	37.28	269	T	T	01 54 12.5	
	baz=94						
H08S3	Diego Garcia H	37.29	269	T	T	01 54 17.1	
	baz=94						
H08S1	Diego Carcia H	37.30	269	T	T	01 54 32.9	
	baz=94						
JIRN	Jiri	43.33	328	*e*P	P	01 15 48.7	-1.1
	9.1nm,0.4s						
GUN	Gumba	43.69	328	*e*P	P	01 15 51.3	-1.4
	6.5nm,0.5s						
KOLN	Koldanda	44.81	326	*e*P	P	01 15 59.7	-1.7
	8.9nm,0.7s						
DANN	Dangsing	45.17	326	*e*P	P	01 16 03.1	-1.3
PYUN	Piuthan	45.40	325	*e*P	P	01 16 04.9	-1.2
	4.4nm,0.6s						
SONM	Songino Array	56.83	357	P	P	01 17 30.7	-0.5
	1.5nm,0.6s,baz=178,slow=8.7,SNR=17						
MKAR	Makanchi Array	60.99	338	P	P	01 17 59.5	-0.4
	3.0nm,0.5s,baz=149,slow=7.6,SNR=62						
ZALV	Zalesovo Beam	66.41	344	P	P	01 18 33.6	-1.9
	0.6nm,0.4s,baz=160,slow=5.7,SNR=5.5						
BRTR	Keskin Array B	85.58	311	P	P	01 20 25.2	+0.2
	0.7nm,0.7s,baz=111,slow=6.9,SNR=3.9						

IDC 08 01:08:29.9±1.9, **11°.08S**×**165°.91E**, **h0**^{km}, **mb3.5**/3, **mb1 3.9**/4, **mb1mx3.6**/31, **mbtmp3.7**/4, **ML4.0**/1, **Error ellipse: s-maj=54.7km s-min=33.3km az=127.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.94	177	Pn	Pn	01 11 08.0	+0.1
	1.1nm,0.3s,baz=313,slow=21,SNR=8.0						
H11S2	WAKE ISLAND Hy	29.40	2	T	T	01 44 46.7	
	baz=181,slow=74						
H11S3	WAKE ISLAND Hy	29.40	1	T	T	01 44 39.0	
	baz=181						
H11S1	WAKE ISLAND Hy	29.41	2	T	T	01 44 40.2	
	baz=181,slow=74						
H11N1	WAKE ISLAND Hy	30.62	2	T	T	01 46 09.8	
	baz=182,slow=76,SNR=7.0						
H11N3	WAKE ISLAND Hy	30.62	2	T	T	01 46 10.2	
	baz=182,slow=76,SNR=5.8						
H11N2	WAKE ISLAND Hy	30.64	2	T	T	01 46 11.6	
	baz=182,slow=76,SNR=3.4						
WRA	Warramunga Arr	31.62	250	P	P	01 14 55.1	+0.2
	0.5nm,0.7s,baz=81,slow=9.2,SNR=4.1						
ASAR	Alice Springs	32.92	243	P	P	01 15 06.1	-0.2
	0.7nm,0.6s,baz=73,slow=10.0,SNR=7.4						
ILAR	Eielson Array	83.50	18	P	P	01 20 59.2	0.0
	1.0nm,1.2s,baz=224,slow=3.8,SNR=4.1						

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*IDC **08** 01:10:21.2±1.4, 11°.58S×165°.63E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.8/29, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=48.1km s-min=27.6km az=123.0*

*ISCJB **08** 01:10:23.6±1.2, 11°.7S±0°.1×165°.6E±0°.2, h24^{km}, mb3.7/5, Error ellipse: s-maj=33.0km s-min=19.1km az=177.9*

ISC 08 01:10:25.2±1.1, **11°.6S**±0°.1×**165°.6E**±0°.3, **h24**^{km}, **n7**, σ**1^{s}39**/7, **mb3.7**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.45	176	Pn	Pn	01 12 54.0	+0.2
	1.0nm,0.3s,baz=306,slow=19,SNR=5.5						
WRA	Warramunga Arr	31.16	251	P	P	01 16 40.8	-1.8
	0.7nm,0.7s,baz=81,slow=9.3,SNR=6.5						
ASAR	Alice Springs	32.42	244	P	P	01 16 54.1	+0.5
	1.2nm,0.8s,baz=77,slow=8.5,SNR=9.5						
SONM	Songino Array	79.02	324	P	P	01 22 28.6	+1.1
	0.4nm,0.8s,baz=139,slow=5.2,SNR=3.7						
ILAR	Eielson Array	84.08	19	P	P	01 22 52.6	-1.1
	0.4nm,0.8s,baz=241,slow=5.1,SNR=3.1						
MKAR	Makanchi Array	93.82	317	P	P	01 23 41.6	+1.0
	0.6nm,0.8s,baz=93,slow=6.6,SNR=7.6						
ARCES	ARCESS Array B	116.83	345	PKP	PKPdf	01 29 06.5	-0.7
	1.2nm,0.9s,baz=67,slow=2.3,SNR=3.0						

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*ISCJB **08** 01:15:01.6±0.2, 44°.53N±0°.01×7°.19E±0°.03, h9^{km}±2^{km}, Error ellipse: s-maj=3.4km s-min=2.0km az=149.3*

*ROM **08** 01:15:01.6±0.1, 44°.524N±0°.010×7°.20E±0°.02, h10^{km}, ML2.1/2*

*LDG **08** 01:15:02.1±0.1, 44°.55N×7°.22E, h2^{km}, Md2.7/2, Ml2.7/21, Error ellipse: s-maj=2.1km s-min=1.4km az=75.0*

*GEN **08** 01:15:02.1, 44°.54N×7°.20E, h7^{km}, Ml2.2*

ISC 08 01:15:01.4±0.8, **44°.55N**±0°.02×**7°.22E**±0°.02, **h11**^{km}±4^{km}, **n49**, σ**1^{s}71**/91, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOI	San Damiano	0.05	161	P	Pg	01 15 03.9	+0.2
DOI				S	Sg	01 15 04.8	-0.5
DOI				AML	AML		
	comp=E,19450µm,0.3s						
DOI				AML	AML		
	comp=N,27250µm,0.4s						
DOI				AML	AML		
	comp=N,27250µm,0.4s						
DOI				AML	AML		
	comp=E,19450µm,0.3s						
PZZ	Stroppo	0.09	240	P	Pg	01 15 04.1	0.0
PZZ				S	Sg	01 15 05.5	-0.6
PZZ	Stroppo	0.09	240	*i* P	Pg	01 15 04.1	0.0
PZZ				S	Sg	01 15 05.5	-0.6
BHB	Bricherasio	0.29	6	P	Pg	01 15 08.5	+1.2
BHB				S	Sg	01 15 12.3	+1.0
BHB	Bricherasio	0.29	6	P	Pg	01 15 08.5	+1.2
BHB				S	Sg	01 15 12.5	+1.2
STV	Sant Anna di V	0.32	167	P	Pg	01 15 08.1	+0.4
STV				S	Sg	01 15 11.8	-0.2
STV	Sant Anna di V	0.32	167	P	Pg	01 15 08.2	+0.4
STV				S	Sg	01 15 12.2	+0.2
ENR	Entracque	0.35	157	P	Pg	01 15 09.0	+0.5
ENR				S	Sg	01 15 13.4	+0.2
MBDF	Montbardon	0.37	299	*e*Pg	Pg	01 15 09.3	+0.5
MBDF				*e*Sg	Sg	01 15 14.5	+0.8
	comp=E,269nm,0.3s						
RRL	Rocca Remolon	0.48	320	P	Pg	01 15 11.5	+0.6
RRL				S	Sg	01 15 18.2	+0.9
GBOS	Grotte di Boss	0.54	125	P	Pg	01 15 12.6	+0.7
GBOS				S	Sg	01 15 19.7	+0.7
RSP	Reno Superiore	0.60	3	P	Pg	01 15 13.5	+0.5
RSP				S	Sg	01 15 21.6	+0.6
RSP	Reno Superiore	0.60	3	P	Pg	01 15 13.5	+0.5
SAOF	Saorge	0.61	157	P	Pg	01 15 13.8	+0.4
SAOF				S	Sg	01 15 21.6	+0.2
BNI	Bardonecchia	0.63	322	P	Pg	01 15 14.3	+0.6
BNI				S	Sg	01 15 22.8	+0.7
BNI				AML	AML		
	comp=E,105µm,0.7s						
BNI				AML	AML		
	comp=N,66µm,1.6s						
BNI				AML	AML		
	comp=E,105µm,0.7s						
BNI				AML	AML		
	comp=N,66µm,1.6s						
MGRO	Montegrosso	0.66	140	P	Pg	01 15 14.8	+0.6
MGRO				S	Sg	01 15 23.4	+0.5
SBF	Sospel	0.71	167	*e*Pg	Pg	01 15 15.5	+0.5
	SNR=1.0						
SBF				*e*Sg	Sg	01 15 24.8	+0.5
	comp=N,53nm,0.2s,SNR=1.0						
RORO	Rocca Rossa	0.75	126	P	Pg	01 15 16.2	+0.4
RORO				S	Sg	01 15 26.0	+0.5
NEGI	Seborga	0.78	154	P	Pg	01 15 16.9	+0.4
NEGI				S	Sg	01 15 27.1	+0.3
IMI	Imperia	0.80	143	P	Pg	01 15 17.3	+0.4
IMI				S	Sg	01 15 27.6	+0.3
LSD	Lago del Serru	0.91	356	P	Pg	01 15 19.7	+0.8
LSD				S	Sg	01 15 30.6	-0.3
LSD	Lago del Serru	0.91	356	P	Pg	01 15 19.5	+0.5
LSD				AML	AML		
	comp=E,273µm,0.4s						
LSD				AML	AML		

	comp=N,223μm,0.3s						
LSD				AML	AML		
	comp=N,223μm,0.3s						
LSD				AML	AML		
	comp=E,273μm,0.4s						
PCP	Piancastagn	0.94	90	P	Pg	01 15 20.1	+0.5
PCP				S	Sb	01 15 33.6	+1.2
LPG	La Plagne	1.00	341	*e*Pg	Pg	01 15 21.4	+0.7
LPG				*e*Sg	Sg	01 15 34.1	+0.3
	comp=E,103nm,0.4s						
LPL	La Plagne	1.02	340	*e*Pg	Pg	01 15 21.8	+0.6
LPL				*e*Sg	Sg	01 15 34.8	+0.3
	comp=E,64nm,0.3s						
ORIF	Oris-en-Rattie	1.02	291	*e*Pg	Pg	01 15 21.4	+0.3
ORIF				*e*Sg	Sg	01 15 34.2	-0.3
	comp=E,42nm,0.2s						
ORIF	Oris-en-Rattie	1.02	291	P	Pg	01 15 21.5	+0.3
FRF	La Foret Royal	1.07	203	*e*Pg	Pg	01 15 21.8	-0.2
	SNR=1.0						
FRF				*e*Sg	Sg	01 15 35.7	-0.3
	comp=E,90nm,0.2s,SNR=1.0						
MRGE	Morge	1.22	355	P	Pg	01 15 25.3	+0.4
SMRF	Simiane la Rot	1.32	245	*e*Pg	Pg	01 15 27.6	+0.9
SMRF				*e*Sg	Sn	01 15 46.5	+3.2
	comp=E,139nm,0.4s						
LMR	La Mourre	1.32	203	*e*Pg	Pn	01 15 26.4	+0.6
	SNR=1.0						
LMR				*e*Sg	Sb	01 15 43.4	+0.3
	comp=E,71nm,0.2s,SNR=1.0						
MMK	Mattmark	1.59	19	P	Pn	01 15 29.4	-0.3
VIVF	Saint-Julien-l	1.84	280	*e*Pg	Pn	01 15 34.8	+1.8
	SNR=1.0						
VIVF				*e*Sg	Sg	01 16 01.1	+0.4
	comp=E,12nm,0.5s						
CABF	La Chapelle	2.21	339	*e*P	Pn	01 15 40.4	+2.3
	SNR=1.0						
CABF				*e*Sn	Sn	01 16 03.5	-1.9
	comp=E,2.9nm,0.2s,SNR=1.0						
PGF	Pioggiola	2.38	147	*e*Pn	Pn	01 15 40.3	-0.2
PGF				*e*Sn	Sn	01 16 07.7	-2.0
	comp=E,6.2nm,0.2s,SNR=1.0						
LASF	Ste Croix	2.46	260	*e*P	Pn	01 15 43.1	+1.6
	SNR=1.0						
LASF				*e*Sn	Sn	01 16 10.2	-1.4
	comp=E,1.7nm,0.2s,SNR=1.0						
SMF	Signal de Mont	3.17	313	*e*P	Pn	01 15 53.8	+2.7
	SNR=1.0						
SMF				*e*Sn	Sn	01 16 26.8	-2.1
SMF				*e*Sg	Sg	01 16 41.5	-1.5
	comp=E,1.7nm,0.2s						
HINF	Hinteralfeld	3.27	356	*e*P	Pn	01 15 54.4	+1.7
	SNR=1.0						
HINF				*e*Sn	Sn	01 16 28.4	-3.3
	comp=E,1.5nm,0.3s,SNR=1.0						
HAU	Haudompre	3.51	350	*e*P	Pn	01 15 57.8	+1.9
HAU				*e*Sn	Sn	01 16 34.7	-2.6
	comp=E,2.1nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	3.52	311	*e*P	Pn	01 15 59.0	+3.0
	SNR=1.0						
LOR	Lormes	3.59	320	*e*P	Pn	01 16 00.0	+3.0
	baz=140,SNR=1.0						
LOR				*e*Sn	Sn	01 16 37.8	-1.6
	comp=E,2.0nm,0.3s,baz=141,SNR=1.0						
SSF	Saint Saulge	3.61	315	*e*P	Pn	01 16 00.5	+3.2
	SNR=1.0						
SSF				*e*Sn	Sn	01 16 38.6	-1.3
	comp=E,1.4nm,0.3s,SNR=1.0						
BGF	Bois d'Agland	3.67	305	*e*P	Pn	01 16 00.9	+2.8
	SNR=1.0						
BGF				*e*Sn	Sn	01 16 39.1	-2.2
	comp=E,2.1nm,0.2s						
CAF	Calviac	3.69	278	*e*P	Pn	01 16 00.5	+2.1
	SNR=1.0						
CAF				*e*Sn	Sn	01 16 39.8	-2.2
	comp=E,1.4nm,0.2s						
MTLF	Montolieu	3.81	253	*e*P	Pn	01 16 02.3	+2.3
CDF	Champ du Feu	3.86	1	*e*P	Pn	01 16 03.7	+2.9
	SNR=1.0						
CDF				*e*Sn	Sn	01 16 43.7	-2.5
	comp=E,0.8nm,0.2s						
TCF	Toulx Ste Croi	3.93	298	*e*P	Pn	01 16 04.6	+2.9
	SNR=1.0						
SFTF	Sexfontaines	3.95	338	*e*P	Pn	01 16 05.1	+3.1
	baz=156						
SFTF				*e*Sn	Sn	01 16 45.5	-2.8
SFTF				*e*S	Sb	01 16 51.7	-7.2
	comp=E,2.7nm,0.3s						
BAIF	Baives	5.88	341	*e*P	Pn	01 16 32.0	+3.6
	SNR=1.0						

IDC 08 01:22:34.9±1.6**, 10°.82S**×**165°.83E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/29**, mbtmp3.7**/5**, ML4.3**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.7**/22**, Error ellipse: s-maj=52.1km s-min=29.4km az=123.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.20	177	Pn	Pn	01 25 16.9	+0.4
	2.2nm,0.3s,baz=350,slow=14,SNR=12						
H11S2	WAKE ISLAND Hy	29.14	2	T	T	01 58 56.6	
	baz=181,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.14	2	T	T	01 58 56.8	
	baz=181,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	29.16	2	T	T	01 58 57.5	
	baz=181,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	30.36	2	T	T	02 00 27.7	
	baz=182,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	30.37	2	T	T	02 00 28.1	
	baz=182,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	30.38	2	T	T	02 00 29.0	
	baz=182,slow=76,SNR=16						
WRA	Warramunga Arr	31.63	250	P	P	01 28 59.9	-0.1
	0.5nm,0.7s,baz=81,slow=9.2,SNR=5.0						
ASAR	Alice Springs	32.96	243	P	P	01 29 11.5	-0.1
	0.3nm,0.4s,baz=72,slow=9.8,SNR=3.3						
MJAR	Matsushiro Arr	53.81	332	LR	LR	01 55 25.4	
	comp=Z,19nm,18.6s,baz=345,slow=37						
ILAR	Eielson Array	83.28	18	P	P	01 35 03.0	-0.1
	0.1nm,0.5s,baz=230,slow=5.4,SNR=2.9						
MKAR	Makanchi Array	93.41	317	P	P	01 35 52.5	+0.2
	0.5nm,1.0s,baz=95,slow=5.7,SNR=2.7						

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*IDC **08** 01:24:55.5±2.6, 20°.05N×100°.59W, h0^{km}, mb3.4/4, mb1 3.7/6, mb1mx3.5/36, mbtmp3.3/6, ML3.0/2, Error ellipse: s-maj=82.9km s-min=27.2km az=53.0*

*ISCJB **08** 01:24:56.3±0.8, 20°.06N±0°.03×100°.51W±0°.05, h15^{km}±8^{km}, mb3.3/4, Error ellipse: s-maj=7.7km s-min=4.4km az=155.3*

*MEX **08** 01:24:58.0±2.2, 20°.12N×100°.48W, h6^{km}±29^{km}, MD3.8*

ISC 08 01:24:56.4±1.3**, 20°.07N**±0°.04×**100°.46W**±0°.04**, h11**^{km}±9^{km}**, n26, σ1^{s}.35**/36**, mb3.5**/4**, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRQG	Juriquilla Cam	0.63	1	*e*P	Pg	01 25 09.0	+0.2
JRQG				*e*S	Sg	01 25 17.1	0.0
ATVM	ATLACOMULCO	0.66	118	*i* P	Pb	01 25 09.8	-0.2
ATVM				*i* S	Sn	01 25 20.6	-1.7
IGIG	Irapuato, Guan	1.06	310	*e*P	Pb	01 25 14.5	-2.4
TOVM	TOLUCA	1.07	137	*e*P	Pg	01 25 16.9	-0.3
AZVM	Cuida Lopez Ma	1.21	113	*e*P	Pb	01 25 18.7	-0.7
AZVM				*e*S	Sb	01 25 34.0	-1.1
PTVM	Pico Tres Padr	1.35	110	*e*P	Pg	01 25 23.6	+1.2
DEIG	Demacu	1.35	80	*e*P	Pg	01 25 23.4	+0.9
DEIG				*e*S	Sg	01 25 39.8	-0.3
UNM	Universidad Na	1.41	121	*i* P	Pb	01 25 22.7	-0.2
UNM				*e*S	Sn	01 25 39.5	-1.5
VTVM	Tizayuca	1.61	100	*e*P	Pn	01 25 24.3	-0.8
ARIG	Puente Sto Nin	1.78	177	*e*P	Pn	01 25 26.8	-0.4
AMVM	AMECAMECA	1.83	120	*e*P	Pn	01 25 24.0	-4.0
PPM	Popocatepetl	1.99	120	*e*P	Pg	01 25 35.2	+0.5
PPM				*i* S	Sg	01 26 00.8	+0.2
MEIG	Mezcala	2.27	159	*e*P	Pb	01 25 36.5	-1.0
MEIG				*e*S	Sn	01 26 00.9	-1.1
ZIIG	Zihuatanejo	2.63	201	*e*P	Pn	01 25 38.7	-0.1
ZIIG				*i* S	Sn	01 26 10.9	+0.3
CAIG	El Cayaco	3.01	177	*e*P	Pn	01 25 43.7	-0.3
CAIG				*i* S	Sn	01 26 20.5	+0.4
ZAIG	Zacatecas	3.33	324	*e*P	Pb	01 25 53.7	-1.9
ZAIG				*i* S	Sb	01 26 36.5	+0.2
TPIG	Tehuac#an	3.35	119	*e*P	Pb	01 25 54.0	-1.9
LVIG	Laguna Verde	3.82	95	*e*P	Pn	01 25 54.4	-0.7
VHO	Vista Hermosa	4.62	130	*e*P	Pn	01 26 06.9	+0.5
VHO				*i* P	Pb	01 26 08.0	-10
LNIG	Linares	4.89	11	*e*P	Pn	01 26 10.4	+0.5
CMIG	Matias Romero	6.06	118	Pn	Pn	01 26 28.3	+2.4
	0.2nm,0.3s,baz=278,slow=7.1,SNR=2.4						
CMIG				Lg	Lg	01 28 06.9	
	0.3nm,0.3s,baz=37,slow=20,SNR=2.1						
TXAR	Lajitas Array	9.67	343	Pn	Pn	01 27 18.2	+2.6
	0.1nm,0.3s,baz=164,slow=14,SNR=3.6						
TXAR				Lg	Lg	01 30 00.1	
	0.1nm,0.3s,baz=166,slow=34,SNR=4.4						
PDAR	Pinedale Array	23.89	343	P	P	01 30 11.6	+1.3
	0.9nm,0.8s,baz=143,slow=11,SNR=8.3						
NVAR	Mina Array Bea	23.95	324	P	P	01 30 11.6	+0.7
	1.3nm,0.8s,baz=147,slow=12,SNR=4.4						
YKA	Yellowknife Ar	43.50	351	P	P	01 32 59.7	+0.1
	0.2nm,0.7s,baz=159,slow=7.3,SNR=4.0						
INK	Inuvik	52.44	345	P	P	01 34 08.9	+0.3
	1.0nm,0.9s,baz=131,slow=6.8,SNR=5.1						

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*IDC **08** 01:30:22.5±1.3, 11°.34S×164°.94E, h0^{km}, mb4.1/7, mb1 4.4/7, mb1mx4.0/30, mbtmp4.1/7, MS3.5/2, Ms1 3.5/2, ms1mx2.9/30, Error ellipse: s-maj=60.0km s-min=23.0km az=136.0*

*ISCJB **08** 01:30:25.9±1.2, 11°.5S±0°.3×164°.9E±0°.3, h34^{km}, mb4.1/7, MS3.4/2, Error ellipse: s-maj=51.6km s-min=19.1km az=44.9*

ISC 08 01:30:27.6±1.3**, 11°.4S**±0°.3×**165°.0E**±0°.3**, h34**^{km}**, n10, σ1^{s}.08**/9**, mb4.0**/7**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.67	223	P	P	01 36 30.9	+0.6
	2.6nm,0.8s,baz=30,slow=9.7,SNR=4.0						
STKA				LR	LR	01 47 18.6	
	comp=Z,99nm,20.5s,baz=27,slow=34						
H11S2	WAKE ISLAND Hy	29.75	3	T	T	02 07 52.5	
	baz=184						
H11S3	WAKE ISLAND Hy	29.76	3	T	T	02 07 53.0	
	baz=184						
H11S1	WAKE ISLAND Hy	29.77	3	T	T	02 08 02.4	
	baz=184						
WRA	Warramunga Arr	30.65	250	P	P	01 36 38.6	-0.5
	6.7nm,1.0s,baz=79,slow=9.2,SNR=26						
WRA				PcP	PcP	01 39 37.8	+0.8
	0.6nm,0.8s,baz=80,slow=3.2,SNR=5.2						
WRA				LR	LR	01 48 24.3	
	comp=Z,86nm,18.8s,baz=45,slow=35						
ASAR	Alice Springs	31.96	243	P	P	01 36 49.0	-1.7
	4.0nm,0.9s,baz=73,slow=9.6,SNR=23						
ASAR				PcP	PcP	01 39 41.7	+1.2
	0.2nm,0.3s,baz=83,slow=2.9,SNR=4.8						
SONM	Songino Array	78.51	324	P	P	01 42 25.4	-0.1
	0.6nm,0.9s,baz=127,slow=5.6,SNR=4.5						
ILAR	Eielson Array	84.09	19	P	P	01 42 54.1	-0.5
	0.7nm,0.9s,baz=239,slow=4.8,SNR=6.7						
NVAR	Mina Array Bea	86.83	50	P	P	01 43 08.7	-0.5
	2.3nm,1.0s,baz=239,slow=10,SNR=5.9						
MKAR	Makanchi Array	93.27	317	P	P	01 43 39.9	+1.0
	0.4nm,0.6s,baz=90,slow=6.6,SNR=6.4						

IDC 08 01:33:52.8±1.7**, 11°.37S**×**164°.94E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.6**/32**, mbtmp3.7**/4**, ML3.4**/1**, Error ellipse: s-maj=51.9km s-min=31.6km az=128.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.74	172	Pn	Pn	01 36 27.7	-0.3
	0.3nm,0.3s,baz=300,slow=20,SNR=2.5						
WRA	Warramunga Arr	30.63	250	P	P	01 40 09.2	+0.1
	0.6nm,0.8s,baz=79,slow=9.3,SNR=4.8						
ASAR	Alice Springs	31.94	243	P	P	01 40 20.5	-0.1
	0.6nm,0.5s,baz=71,slow=9.9,SNR=5.3						
ILAR	Eielson Array	84.07	19	P	P	01 46 25.1	0.0
	0.4nm,0.8s,baz=236,slow=6.2,SNR=4.1						

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*IDC **08** 01:36:33.1±1.4, 11°.34S×165°.68E, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.9/33, mbtmp3.9/8, ML4.3/1, MS4.5/1, Ms1 4.5/1, ms1mx2.9/30, Error ellipse: s-maj=42.9km s-min=25.2km az=128.0*

*ISCJB **08** 01:36:35.0±0.9, 11°.5S±0°.1×165°.7E±0°.2, h24^{km}, mb3.8/7, MS4.5/1, Error ellipse: s-maj=27.2km s-min=17.4km az=5.2*

ISC 08 01:36:36.8±1.0**, 11°.4S**±0°.1×**165°.7E**±0°.2**, h24**^{km}**, n9, σ0^{s}.86**/8**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.69	176	Pn	Pn	01 39 08.9	+0.3
	2.5nm,0.3s,baz=3.5,slow=9.9,SNR=18						
WRA	Warramunga Arr	31.33	250	P	P	01 42 54.6	-1.1
	1.3nm,0.7s,baz=82,slow=8.9,SNR=12						
ASAR	Alice Springs	32.61	244	P	P	01 43 06.6	-0.3
	0.4nm,0.7s,baz=71,slow=9.0,SNR=3.8						
JCJ	Chichijima	44.51	330	LR	LR	02 03 11.6	
	comp=Z,594nm,19.2s,baz=68,slow=36						
CMAR	Chiang Mai Arr	72.19	294	P	P	01 48 00.9	+0.6
	1.2nm,0.3s,baz=104,slow=7.5,SNR=2.2						
SONM	Songino Array	78.88	324	P	P	01 48 38.7	+0.4
	0.5nm,0.7s,baz=135,slow=7.0,SNR=4.7						
ILAR	Eielson Array	83.81	19	P	P	01 49 04.2	+0.3
	0.7nm,0.6s,baz=236,slow=5.0,SNR=17						
MKAR	Makanchi Array	93.71	317	P	P	01 49 52.1	+0.5
	0.4nm,0.6s,baz=90,slow=7.0,SNR=4.2						
YKA	Yellowknife Ar	95.26	27	P	P	01 49 57.2	-1.2
	0.2nm,0.6s,baz=255,slow=4.6,SNR=4.2						

IDC 08 01:39:36.2±1.7**, 10°.86S**×**165°.52E, h0**^{km}**, mb3.7**/4**, mb1 4.1**/5**, mb1mx3.7**/34**, mbtmp3.9**/5**, ML4.6**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.6**/27**, Error ellipse: s-maj=52.6km s-min=29.4km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.18	176	Pn	Pn	01 42 17.2	-0.3
	4.2nm,0.3s,baz=351,slow=15,SNR=20						
DZM				Sn	Sn	01 44 17.9	-5.5
	0.2nm,0.3s,baz=322,slow=17,SNR=2.1						
DZM				LR	LR	01 45 57.7	
	comp=Z,76nm,20.6s,baz=134,slow=34						
H11S2	WAKE ISLAND Hy	29.19	2	T	T	02 16 02.0	
	baz=181,slow=76,SNR=6.0						
H11S3	WAKE ISLAND Hy	29.19	2	T	T	02 15 60.0	
	baz=181,slow=76,SNR=4.5						
H11S1	WAKE ISLAND Hy	29.21	2	T	T	02 16 02.8	
	baz=181,slow=76,SNR=6.3						
H11N1	WAKE ISLAND Hy	30.41	3	T	T	02 17 30.3	
	baz=182,slow=76,SNR=5.3						
H11N3	WAKE ISLAND Hy	30.42	3	T	T	02 17 30.7	
	baz=182,slow=76,SNR=6.0						
STKA	Stephens Creek	30.42	223	P	P	01 45 51.2	+0.8
	0.9nm,0.5s,baz=38,slow=12,SNR=2.8						
H11N2	WAKE ISLAND Hy	30.43	3	T	T	02 17 31.7	
	baz=182,slow=76,SNR=4.7						
WRA	Warramunga Arr	31.34	249	P	P	01 45 58.6	-0.1
	0.7nm,0.5s,baz=81,slow=9.1,SNR=7.3						
ASAR	Alice Springs	32.68	243	P	P	01 46 09.9	-0.6
	0.8nm,0.8s,baz=70,slow=10,SNR=4.6						
ILAR	Eielson Array	83.41	19	P	P	01 52 05.1	0.0
	0.5nm,0.7s,baz=232,slow=4.9,SNR=6.8						

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*IDC **08** 01:45:00.9±1.6, 11°.02S×165°.52E, h0^{km}, mb3.9/5, mb1 4.2/6, mb1mx3.9/30, mbtmp4.0/6, ML4.1/1, Error ellipse: s-maj=50.1km s-min=27.2km az=127.0*

*ISCJB **08** 01:45:03.8±1.2, 11°.2S±0°.1×165°.5E±0°.2, h30^{km}, mb3.9/4, Error ellipse: s-maj=26.8km s-min=19.6km az=4.3*

ISC 08 01:45:05.6±1.3**, 11°.1S**±0°.2×**165°.5E**±0°.2**, h30**^{km}**, n12, σ1^{s}.38**/6**, mb3.9**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.99	176	Pn	Pn	01 47 41.1	+0.2
	1.3nm,0.3s,baz=312,slow=22,SNR=7.3						
CTA	Charters Tower	20.61	242	P	P	01 49 43.8	+1.1
	5.6nm,1.1s,baz=51,slow=9.7,SNR=3.6						
H11S2	WAKE ISLAND Hy	29.38	2	T	T	02 21 27.2	
	baz=182						
H11S3	WAKE ISLAND Hy	29.38	2	T	T	02 21 27.5	
	baz=182						
H11S1	WAKE ISLAND Hy	29.40	2	T	T	02 21 29.2	
	baz=182						
H11N1	WAKE ISLAND Hy	30.60	3	T	T	02 22 58.8	
	baz=181						
H11N3	WAKE ISLAND Hy	30.61	3	T	T	02 22 59.6	
	baz=181						
H11N2	WAKE ISLAND Hy	30.62	3	T	T	02 23 00.7	
	baz=181						
WRA	Warramunga Arr	31.29	250	P	P	01 51 22.1	-1.2
	1.4nm,0.7s,baz=82,slow=9.2,SNR=11						
ASAR	Alice Springs	32.61	243	P	P	01 51 33.9	-1.0
	1.8nm,0.8s,baz=70,slow=10.0,SNR=17						
ILAR	Eielson Array	83.59	19	P	P	01 57 29.9	-0.7
	0.6nm,0.7s,baz=233,slow=4.9,SNR=6.7						
MKAR	Makanchi Array	93.39	317	P	P	01 58 19.3	+1.2
	0.3nm,0.8s,baz=95,slow=4.6,SNR=3.4						

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*IDC **08** 01:46:49.0±2.9, 35°.96N×141°.48E, h0^{km}, mb3.6/2, mb1 3.7/3, mb1mx3.3/37, mbtmp3.5/3, ML2.4/1, MS3.1/1, Ms1 3.3/1, ms1mx2.5/42, Error ellipse: s-maj=73.0km s-min=28.6km az=46.0*

*ISCJB **08** 01:46:54.9±1.3, 35°.86N±0°.07×141°.1E±0°.1, h45^{km}±8^{km}, mb3.6/2, MS3.0/1, Error ellipse: s-maj=19.7km s-min=9.9km az=157.7*

*JMA **08** 01:46:56.3±0.2, 35°.85N×140°.96E, h39^{km}±2^{km}, M3.0*

ISC 08 01:46:54.6±2.1**, 35°.87N**±0°.05×**141°.1E**±0°.1**, h29**^{km}±12^{km}**, n13, σ0^{s}.61**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.28	233	P	Pn	01 47 03.2	+0.5
CHOJ				*e*S	Sn	01 47 08.2	+0.2
JIHU	Itakohorinouch	0.50	281	P	Pn	01 47 05.7	-0.1
JIHU				S	Sb	01 47 12.9	+0.9
JSMT	Sammumatsuo	0.60	248	P	Pn	01 47 07.1	-0.1
JHYU	Hitachinakayam	0.64	317	P	Pn	01 47 08.3	+0.6
JHYU				*e*S	Sn	01 47 16.5	-0.5
JYT	Yasato	0.84	295	P	Pb	01 47 09.8	-0.8
JHO	Hitachi	0.87	328	P	Pn	01 47 11.5	+0.7
BSO3	Boso 3	1.19	206	P	Pb	01 47 16.0	-0.2
JAG	Ashikaga	1.47	293	P	Pn	01 47 18.6	-0.5
MJAR	Matsushiro Arr	2.46	287	Pn	Pn	01 47 33.5	+0.7
	0.7nm,0.3s,baz=99,slow=8.1,SNR=11						
MJAR				Sn	Sb	01 48 07.7	-0.2
	0.5nm,0.3s,baz=85,slow=22,SNR=4.4						
MAT	Matsushiro	2.46	287	P	Pn	01 47 33.7	+0.9
MAT				*e*S	Sn	01 48 02.5	+0.6
CMAR	Chiang Mai Arr	40.99	256	LR	LR	02 12 55.7	
	comp=Z,23nm,20.9s,baz=127,slow=38						
MKAR	Makanchi Array	44.55	303	P	P	01 55 03.8	+0.1
	0.4nm,0.4s,baz=81,slow=8.9,SNR=2.0						
WRA	Warramunga Arr	55.88	188	P	P	01 56 29.3	-0.4
	0.3nm,0.5s,baz=4.5,slow=7.5,SNR=7.4						

IDC 08 01:53:37.2±1.8**, 11°.14S**×**164°.81E, h0**^{km}**, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/30**, mbtmp3.8**/4**, ML3.8**/1**, Error ellipse: s-maj=51.1km s-min=33.5km az=128.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.98	172	Pn	Pn	01 56 15.8	+0.1
	0.7nm,0.3s,baz=293,slow=16,SNR=7.2						
H11S2	WAKE ISLAND Hy	29.50	4	T	T	02 30 12.9	
	baz=183						
H11S3	WAKE ISLAND Hy	29.51	4	T	T	02 30 13.7	
	baz=183						
H11S1	WAKE ISLAND Hy	29.52	4	T	T	02 30 11.4	
	baz=183						
WRA	Warramunga Arr	30.59	250	P	P	01 59 53.0	-0.1
	0.4nm,0.4s,baz=81,slow=9.1,SNR=6.6						
H11N1	WAKE ISLAND Hy	30.73	4	T	T	02 31 49.0	
	baz=183						
H11N3	WAKE ISLAND Hy	30.73	4	T	T	02 31 44.4	
	baz=183						
H11N2	WAKE ISLAND Hy	30.75	4	T	T	02 31 48.0	
	baz=183						
ASAR	Alice Springs	31.93	243	P	P	02 00 05.0	+0.1
	0.6nm,0.5s,baz=66,slow=10,SNR=8.8						
ILAR	Eielson Array	83.90	19	P	P	02 06 08.6	0.0
	0.5nm,0.9s,baz=237,slow=5.6,SNR=4.2						

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*IDC **08** 02:00:10.4±0.9, 10°.74S×165°.35E, h0^{km}, mb4.1/10, mb1 4.4/12, mb1mx4.1/38, mbtmp4.2/12, ML5.2/2, MS3.8/7, Ms1 3.8/7, ms1mx3.4/33, Error ellipse: s-maj=33.8km s-min=18.2km az=137.0*

*ISCJB **08** 02:00:13.7±0.3, 10°.89S±0°.05×165°.41E±0°.05, h31^{km}, mb4.3/26, MS3.8/6, Error ellipse: s-maj=6.9km s-min=6.6km az=146.1*

*NEIC **08** 02:00:14.1±1.8, 10°.74S×165°.33E, h21^{km}±13^{km}, mb4.4/14, Error ellipse: s-maj=7.5km s-min=5.3km az=140.0*

ISC 08 02:00:15.7±0.5**, 10°.82S**±0°.07×**165°.44E**±0°.06**, h31**^{km}**, n66, σ1^{s}.15**/58**, mb4.3**/26**, MS3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.58	284	*e*P	Pn	02 01 36.0	-0.7
HNR				*e*S	Sn	02 02 42.0	+2.2
HNR	Honiara	5.58	284	*e*Pn	Pn	02 01 34.5	-2.2
HNR	Honiara	5.58	284	Pn	Pn	02 01 35.4	-1.3
	93nm,0.3s,baz=128,slow=5.8,SNR=9.6						
HNR				LR	LR	02 03 44.3	
	comp=Z,1μm,21.0s,baz=122,slow=39						
DZM	Mont Dzumac	11.23	175	*e*Pn	Pn	02 02 54.3	0.0
	98nm,0.6s						
DZM				*e*LR	LR	02 05 25.8	
	comp=Z,1μm,26.0s						
DZM	Mont Dzumac	11.23	175	*e*Pn	Pn	02 02 54.1	-0.2
DZM	Mont Dzumac	11.23	175	Pn	Pn	02 02 54.2	0.0
	12nm,0.3s,baz=33,slow=9.8,SNR=77						
DZM				LR	LR	02 06 37.2	
	comp=Z,842nm,18.1s,baz=26,slow=34						
ONTNC	Ouen Toro	11.47	175	*e*Pn	Pn	02 02 57.8	+0.5
PINNC	Pines Island,	11.88	171	*e*Pn	Pn	02 03 03.3	+0.2
FUNA	Funafuti	13.75	82	*e*Pn	Pn	02 03 28.9	+0.3
TARA	Tarawa	14.20	32	*e*Pn	Pn	02 03 34.3	-0.5
EIDS	Eidsvold	19.86	221	*e*P	Pn	02 04 46.0	-0.1
	16nm,1.0s						
MANU	Manus Island	19.95	295	*e*P	Pn	02 04 48.1	+0.8
	92nm,1.1s						
CTA	Charters Tower	20.64	241	P	P	02 04 52.5	-0.5
	12nm,0.8s,baz=62,slow=12,SNR=11						
CTAO	Charters Tower	20.64	241	*e*P	P	02 04 52.1	-0.9
H11S2	WAKE ISLAND Hy	29.15	2	T	T	02 36 40.1	
	baz=184,slow=76,SNR=318						
H11S3	WAKE ISLAND Hy	29.15	2	T	T	02 36 45.9	
	baz=184,slow=76,SNR=140						
H11S1	WAKE ISLAND Hy	29.17	2	T	T	02 36 45.3	
	baz=184,slow=76,SNR=108						
URZ	Urewera	29.26	161	LR	LR	02 17 15.0	
	comp=Z,196nm,18.1s,baz=340,slow=35						
BKZ	Black Stump Fm	29.90	163	*e*P	P	02 06 22.1	+1.4
	11nm,0.7s						
H11N1	WAKE ISLAND Hy	30.37	3	T	T	02 38 13.9	
	baz=182,slow=76,SNR=120						
H11N3	WAKE ISLAND Hy	30.38	3	T	T	02 38 12.9	
	baz=182,slow=76,SNR=99						
H11N2	WAKE ISLAND Hy	30.39	3	T	T	02 38 12.1	
	baz=182,slow=76,SNR=92						
STKA	Stephens Creek	30.40	223	*e*P	P	02 06 25.9	+0.6
	0.9nm,0.8s						
STKA	Stephens Creek	30.40	223	P	P	02 06 25.9	+0.6
	2.1nm,0.5s,baz=47,slow=11,SNR=6.2						
STKA				LR	LR	02 17 23.8	
	comp=Z,229nm,18.3s,baz=33,slow=34						
WRAB	Tennant Creek	31.27	249	*e*P	P	02 06 31.8	-1.3
	2.3nm,0.8s						
WB2	Warramunga Arr	31.27	249	*e*P	P	02 06 32.0	-1.1
	7.4nm,1.1s						
WR1	Warramunga Arr	31.28	249	*e*P	P	02 06 30.9	-2.3
	4.9nm,1.0s						
WRA	Warramunga Arr	31.28	249	P	P	02 06 30.8	-2.4
	1.0nm,0.5s,baz=78,slow=8.7,SNR=13						
WRA				LR	LR	02 17 59.3	
	comp=Z,108nm,19.0s,baz=55,slow=34						
THZ	Tophouse	31.51	169	*e*P	P	02 06 35.7	+0.7
	8.3nm,0.7s						
GUMO	Guam	31.70	319	LR	LR	02 18 50.2	
	comp=Z,94nm,18.2s,baz=151,slow=36						
AS01	Alice Springs	32.59	243	*e*P	P	02 06 43.7	-1.0
AS31	Alice Springs	32.63	243	*e*P	P	02 06 44.5	-0.6
	1.2nm,0.7s						

ASAR	Alice Springs	32.63	243	P	P	02 06 42.4	-2.7
	2.2nm,0.5s,baz=65,slow=10,SNR=44						
RPZ	Rata Peaks	33.13	173	LR	LR	02 18 47.4	
	comp=Z,204nm,19.4s,baz=18,slow=34						
FORT	Forrest	39.93	234	eP	P	02 07 46.2	-1.1
	21nm,0.8s						
PPT2	Papeete2	44.04	104	eLR	LR	02 21 00.0	
	comp=Z,80nm,23.8s						
NWAO	Narrogin (SRO)	49.34	236	eP	P	02 09 01.3	-1.1
NJ2	Nanjing	61.65	315	eP	P	02 10 30.3	-0.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KMI	Kunming	70.75	301	P	P	02 11 31.0	+1.4
KMI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,99nm,4.4s						
HHC	Hu-ho-hao-te	71.47	320	eP	P	02 11 35.5	+2.0
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
CD2	Chengdu	72.23	307	P	P	02 11 38.1	-0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,440nm,4.5s						
LZH	Lanzhou	74.39	312	eP	P	02 11 52.1	+1.1
LZH				pP	pP	02 11 57.7	-2.5
LZH				sP	pwP	02 12 00.1	-2.5
LZH				PP	PP	02 14 45.5	+7.9
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.3s						
SONA0	Songino Array	78.31	324	eP	P	02 12 13.3	+0.3
SONM	Songino Array	78.31	324	P	P	02 12 13.3	+0.3
	comp=Z,0.9nm,0.7s,baz=125,slow=6.5,SNR=5.7						
SONA1	Songino Array	78.31	324	eP	P	02 12 12.5	-0.5
BILL	Bilibino	78.66	0	eP	P	02 12 14.5	+0.3
	comp=Z,12nm,1.4s						
GTA	Gaotai	78.69	314	eP	P	02 12 16.1	+0.9
GTA				pP	PcP	02 12 21.9	-2.2
GTA				sP	pP	02 12 25.0	+0.5
GTA				S	S	02 22 13.4	+2.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,130nm,6.2s						
GTA				LR	LR		
	comp=N,160nm,16.8s						
GTA				LR	LR		
	comp=E,140nm,17.5s						
GTA				LR	LR		
	comp=Z,130nm,16.8s						
QSPA	South Pole Qui	79.19	180	eP	P	02 12 18.7	+1.2
IM3	Indian Mountai	82.29	16	eP	P	02 12 33.8	0.0
ILAR	Eielson Array	83.39	19	P	P	02 12 39.0	-0.6
	comp=Z,1.4nm,0.7s,baz=230,slow=5.1,SNR=17						
ILB	Eielson Array	83.39	19	eP	P	02 12 39.4	-0.2
	comp=Z,3.5nm,1.0s						
IL1	Eielson Array	83.39	19	eP	P	02 12 39.1	-0.4
CMB	Columbia Colle	84.42	50	eP	P	02 12 45.4	-0.1
EGAK	Eagle	85.27	20	eP	P	02 12 48.4	-0.7
DAWY	Dawson	85.45	21	eP	P	02 12 50.4	+0.3
	comp=Z,1.0nm,0.6s						
NV01	Mina Array Sit	86.11	50	eP	P	02 12 53.8	-0.4
NVAR	Mina Array Bea	86.11	50	P	P	02 12 54.4	+0.2
	comp=Z,1.0nm,0.7s,baz=230,slow=3.7,SNR=4.2						
WMQ	Urumqi	88.72	315	eP	P	02 13 07.4	+1.0
WMQ				pP	PcP	02 13 11.5	+3.5
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
MK01	Makanchi Array	93.14	317	eP	P	02 13 26.2	-0.6
MK31	Makanchi Array	93.15	317	eP	P	02 13 26.7	-0.3
	comp=Z,0.6nm,0.9s						
MK32	Makanchi Array	93.15	317	eP	P	02 13 24.9	-2.0
MKAR	Makanchi Array	93.15	317	P	P	02 13 24.9	-2.0
	comp=Z,0.4nm,0.7s,baz=85,slow=5.9,SNR=5.6						
PD31	Pinedale Array	93.62	47	eP	P	02 13 29.5	+0.1
PDAR	Pinedale Array	93.62	47	P	P	02 13 29.7	+0.2
	comp=Z,0.2nm,0.4s,baz=200,slow=3.9,SNR=4.0						
YKA	Yellowknife Ar	94.91	27	P	P	02 13 32.7	-1.8
	comp=Z,0.2nm,0.6s,baz=252,slow=4.7,SNR=4.5						
SDV	Santo Domingo	124.78	87	ePKPdf	PKPdf	02 19 13.8	+0.1

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*NEIC **08** 02:07:19.6±0.0, 17°.36N×102°.74W, h1^{km}, MD4.0(MEX), After MEX.*

MEX 08 02:07:19.6±0.5**, 17°.36N×102°.74W, h1^{km}, MD4.0, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	1.24	79	eP	Pg	02 07 39.5	-3.9
ZIIG				i S	Sg	02 07 56.0	-3.5
ZIIG	Zihuatanejo	1.24	79	eP	Pg	02 07 39.5	-3.9
ZIIG				i S	Sg	02 07 56.0	-3.5
CAIG	El Cayaco	2.38	97	eP	Pn	02 07 57.1	-2.7
CAIG				i S	Sn	02 08 25.6	-4.1
CAIG	El Cayaco	2.38	97	eP	Pn	02 07 57.1	-2.7
CAIG				i S	Sn	02 08 25.6	-4.1
ARIG	Puente Sto Nin	2.45	68	eP	Pn	02 07 58.5	-2.3
ARIG				eS	Sn	02 08 27.1	-4.4
ARIG	Puente Sto Nin	2.45	68	eP	Pn	02 07 58.5	-2.3
ARIG				eS	Sn	02 08 27.1	-4.4
MEIG	Mezcala	3.03	79	eP	Pn	02 08 09.2	+0.4
MEIG				eS	Sn	02 08 42.5	-3.2
MEIG	Mezcala	3.03	79	eP	Pn	02 08 09.2	+0.4
MEIG				eS	Sn	02 08 42.5	-3.2
PLIG	Platanillo	3.25	71	eP	Pn	02 08 08.8	-3.0
PLIG				eS	Sn	02 08 47.5	-3.7
PLIG	Platanillo	3.25	71	eP	Pn	02 08 08.8	-3.0
PLIG				eS	Sn	02 08 47.5	-3.7

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*ISCJB **08** 02:15:37.6±0.8, 11°.0S±0°.1×164°.5E±0°.1, h29^{km}, mb4.0/7, MS3.9/24, Error ellipse: s-maj=16.2km s-min=15.0km az=173.1*

*IDC **08** 02:15:41.5±3.3, 10°.97S×164°.43E, h49^{km}±32^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.8/35, mbtmp4.2/9, ML4.4/2, MS3.9/25, Ms1 3.9/25, ms1mx3.8/40, Error ellipse: s-maj=32.8km s-min=27.3km az=150.0*

ISC 08 02:15:39.4±0.9**, 10°.9S**±0°.1×**164°.5E**±0°.1**, h29^{km}, n33, σ0^{s}.83**/11**, mb4.1**/7**, MS4.0**/24**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.70	287	P	Pn	02 16 49.2	+0.8
	38nm,0.3s,baz=21,slow=1.7,SNR=6.7						
DZM	Mont Dzumac	11.29	171	ePn	Pn	02 18 19.0	0.0
	13nm,0.5s						
DZM				eLR	LR	02 20 50.2	
	comp=Z,1μm,24.2s						
DZM	Mont Dzumac	11.29	171	P	Pn	02 18 19.8	+0.9
	1.0nm,0.3s,baz=310,slow=19,SNR=12						
DZM				LR	LR	02 22 04.6	
	comp=Z,1μm,18.0s,baz=41,slow=34						
CTA	Charters Tower	19.80	240	P	Pn	02 20 09.5	+0.2
	0.4nm,0.3s,baz=66,slow=13,SNR=12						
STKA	Stephens Creek	29.73	222	LR	LR	02 32 46.7	
	comp=Z,377nm,19.7s,baz=29,slow=35						
WRA	Warramunga Arr	30.39	249	P	P	02 21 47.7	-1.5
	4.5nm,1.0s,baz=76,slow=9.2,SNR=15						
WRA				LR	LR	02 32 48.7	
	comp=Z,229nm,19.4s,baz=180,slow=34						
H11N1	WAKE ISLAND Hy	30.49	4	T	T	02 53 44.6	
	baz=184,slow=76,SNR=3.9						
H11N3	WAKE ISLAND Hy	30.49	4	T	T	02 53 44.5	
	baz=184,slow=76,SNR=5.6						
H11N2	WAKE ISLAND Hy	30.50	4	T	T	02 53 46.1	
	baz=184,slow=76,SNR=4.8						
GUMO	Guam	31.14	321	LR	LR	02 34 06.1	
	comp=Z,96nm,18.4s,baz=136,slow=35						
ASAR	Alice Springs	31.77	242	P	P	02 22 00.7	-0.8
	1.7nm,1.0s,baz=69,slow=9.3,SNR=8.0						
ASAR				LR	LR	02 34 44.4	
	comp=Z,296nm,18.4s,baz=71,slow=36						
FITZ	Fitzroy Crossi	38.23	255	LR	LR	02 37 38.9	
	comp=Z,197nm,20.6s,baz=82,slow=34						
PPT	Papeete	44.94	104	LR	LR	02 40 42.1	
	comp=Z,94nm,18.1s,baz=329,slow=33						
PPT2	Papeete2	44.94	104	eLR	LR	02 36 12.0	
	comp=Z,134nm,25.0s						
MJAR	Matsushiro Arr	53.26	334	LR	LR	02 46 49.3	
	comp=Z,38nm,20.4s,baz=140,slow=35						
KSRS	Korea Array	59.05	326	LR	LR	02 49 07.2	
	comp=Z,51nm,20.3s,baz=150,slow=34						
PETK	Petropavlovsk-	63.99	355	LR	LR	02 48 04.1	
	comp=Z,122nm,21.1s,baz=163,slow=30						
VNDA	Vanda	66.65	181	LR	LR	02 51 48.2	
	comp=Z,114nm,18.8s,baz=344,slow=33						
CMAR	Chiang Mai Arr	70.91	294	LR	LR	02 57 10.1	
	comp=Z,30nm,20.1s,baz=95,slow=35						
SONM	Songino Array	77.80	324	P	P	02 27 34.8	+0.6
	0.6nm,0.6s,baz=146,slow=6.3,SNR=6.8						
SONM				LR	LR	02 59 51.6	
	comp=Z,48nm,20.5s,baz=206,slow=34						
ILAR	Eielson Array	83.75	19	P	P	02 28 04.6	-0.7
	1.8nm,0.8s,baz=238,slow=6.1,SNR=16						
ILAR				LR	LR	02 59 43.4	
	comp=Z,85nm,20.3s,baz=270,slow=32						
MAW	Mawson	84.42	202	LR	LR	02 58 38.0	
	comp=Z,111nm,20.1s,baz=68,slow=31						
YBH	Yreka Blue Hor	84.66	46	LR	LR	02 57 53.6	
	comp=Z,77nm,21.6s,baz=198,slow=30						
BBB	Bella Bella	85.14	35	LR	LR	02 56 54.6	
	comp=Z,76nm,21.8s,baz=205,slow=29						
DLBC	Dease Lake	86.85	29	LR	LR	02 58 21.5	
	comp=Z,157nm,21.5s,baz=187,slow=29						
NVAR	Mina Array Bea	86.86	50	P	P	02 28 22.1	+0.2
	0.4nm,0.6s,baz=270,slow=7.4,SNR=3.8						
NVAR				LR	LR	02 59 45.1	
	comp=Z,103nm,19.8s,baz=268,slow=30						
INK	Inuvik	90.14	19	LR	LR	03 03 33.3	
	comp=Z,112nm,19.8s,baz=246,slow=32						
NEW	Newport	90.42	41	LR	LR	03 05 19.0	
	comp=Z,29nm,18.5s,baz=288,slow=33						
MKAR	Makanchi Array	92.55	317	P	P	02 28 48.0	-0.1
	1.0nm,0.7s,baz=94,slow=5.8,SNR=14						
ZALV	Zalesovo Beam	92.70	324	P	P	02 28 48.5	0.0
	0.4nm,0.5s,baz=142,slow=5.1,SNR=3.7						
ZALV				LR	LR	03 10 49.7	
	comp=Z,12nm,18.2s,baz=68,slow=36						
PDAR	Pinedale Array	94.34	47	LR	LR	03 05 21.1	
	comp=Z,51nm,18.9s,baz=266,slow=32						
NRIK	Noril'sk	95.53	340	LR	LR	03 08 55.7	
	comp=Z,55nm,22.0s,baz=66,slow=33						
TXAR	Lajitas Array	96.83	62	LR	LR	03 07 10.2	
	comp=Z,60nm,19.1s,baz=0.0,slow=32						

IDC 08 02:22:10.1±2.9**, 11°.09S**×**164°.82E, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.6**/38**, mbtmp3.7**/4**, ML4.2**/1**, Error ellipse: s-maj=62.9km s-min=42.3km az=84.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.03	172	Pn	Pn	02 24 49.0	-0.3
	1.6nm,0.3s,baz=53,slow=18,SNR=8.8						
H11S2	WAKE ISLAND Hy	29.45	4	T	T	02 58 35.1	
	baz=184,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	29.45	4	T	T	02 58 34.1	
	baz=184,slow=76,SNR=44						
H11S1	WAKE ISLAND Hy	29.46	4	T	T	02 58 34.8	
	baz=184,slow=76,SNR=45						
WRA	Warramunga Arr	30.62	250	P	P	02 28 25.8	-0.4
	0.6nm,0.8s,baz=79,slow=8.5,SNR=4.2						
H11N1	WAKE ISLAND Hy	30.67	4	T	T	03 00 06.4	
	baz=182,slow=76,SNR=36						
H11N3	WAKE ISLAND Hy	30.68	4	T	T	03 00 08.6	
	baz=182,slow=76,SNR=41						
H11N2	WAKE ISLAND Hy	30.69	4	T	T	03 00 09.4	
	baz=182,slow=76,SNR=35						
ASAR	Alice Springs	31.96	243	P	P	02 28 38.5	+0.4
	0.4nm,0.6s,baz=69,slow=10.0,SNR=5.3						
MKAR	Makanchi Array	92.93	317	P	P	02 35 25.3	0.0
	0.2nm,0.6s,baz=98,slow=6.5,SNR=2.6						

MEX 08 02:34:34.1±0.4**, 18°.07N**×**101°.93W, h16^{km}**±168^{km}**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.64	136	eP	Pg	02 34 44.3	-2.3
ZIIG				i S	Sg	02 34 52.3	-2.8
ARIG	Puente Sto Nin	1.52	82	eP	Pn	02 34 56.9	-3.7
ARIG				eS	Sn	02 35 14.3	-5.7
CAIG	El Cayaco	1.88	122	eP	Pn	02 35 02.6	-3.0
R15V		2.24	300	eP	Pg	02 35 24.2	+7.1
PLIG	Platanillo	2.33	82	i P	Pn	02 35 12.7	+0.8

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*IDC **08** 02:34:48.1±3.7, 34°.80N×22°.90E, h0^{km}, mb3.6/8, mb1 3.6/10, mb1mx3.4/50, mbtmp3.5/10, ML3.1/2, Error ellipse: s-maj=73.7km s-min=22.4km az=21.0*

*ATH **08** 02:34:53.4, 34°.96N×23°.13E, h12^{km}±3^{km}, ML3.3/3, Error ellipse: s-maj=4.4km s-min=1.7km az=43.0*

*THE **08** 02:34:55.0, 35°.03N×23°.18E, h7^{km}±4^{km}, ML3.3/3, Error ellipse: s-maj=5.0km s-min=1.4km az=89.0*

ISC 08 02:34:52.3±2.1**, 34°.92N**±0°.08×**23°.11E**±0°.06**, h16^{km}**±11^{km}**, n33, σ1^{s}.15**/40**, mb3.6**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.81	95	P	Pb	02 35 09.1	+1.1
GVD	Gavdhos	0.81	95	P	Pb	02 35 09.8	+1.8
IMMV	Iera Moni Meta	0.90	53	P	Pg	02 35 09.4	-0.4
IMMV				S	Sb	02 35 21.6	+0.3
IMMV				AML	AML	02 35 30.3	
	comp=E,6512μm,0.8s						
IMMV				AML	AML	02 35 30.6	
	comp=N,6917μm,0.5s						
IMMV	Iera Moni Meta	0.90	53	P	Pg	02 35 09.7	0.0
IMMV				S	Sg	02 35 20.7	-0.9
ANKY	Antikythira Is	0.96	10	P	Pg	02 35 10.7	-0.2
ANKY				S	Sb	02 35 24.0	+1.0
ANKY				AML	AML	02 35 31.2	
	comp=N,2878μm,0.5s						
ANKY				AML	AML	02 35 32.2	
	comp=E,2322μm,0.7s						
ANKY	Antikythira Is	0.96	10	P	Pg	02 35 10.3	-0.6
ANKY				S	Sb	02 35 23.5	+0.5
CHAN	Chania	0.97	52	P	Pn	02 35 12.0	+0.7
CHAN				S	Sb	02 35 24.0	+0.6
VAM	Vamos	1.02	61	P	Pg	02 35 11.8	-0.2
VAM				S	Sb	02 35 25.5	+0.7
VAM				AML	AML	02 35 29.6	
	comp=E,3118μm,0.5s						
VAM				AML	AML	02 35 31.1	
	comp=N,3551μm,0.4s						
VAM	Vamos	1.02	61	P	Pg	02 35 11.5	-0.6
VAM				S	Sb	02 35 25.4	+0.6
KTHR	Kythira	1.34	357	P	Pn	02 35 16.9	+0.5
KYTH	Kithira	1.34	358	P	Pb	02 35 17.9	+0.8
KYTH	Kithira	1.34	358	P	Pb	02 35 17.8	+0.6
IDI	Anoyia	1.51	75	P	Pb	02 35 20.9	+1.0
IDI	Anoyia	1.51	75	Pn	Pb	02 35 20.7	+0.8
	comp=N,8.7nm,0.3s,baz=258,slow=12,SNR=21						
VLI	Veliai	1.80	356	P	Pg	02 35 26.5	-0.4
LAST	Lasithi	1.96	82	P	Pb	02 35 28.8	+1.1
MHLO	Agia Marina, M	2.06	30	P	Pb	02 35 28.9	-0.4
NPS	Neapolis	2.08	80	P	Pb	02 35 30.5	+0.7
ITM	Ithomi	2.45	337	P	Pn	02 35 34.6	+2.9
ZKR	Zakros	2.56	85	P	Pb	02 35 36.9	-0.9
VLY	Voula,Athens	2.98	11	P	Pn	02 35 41.2	+2.3
BRTR	Keskin Array B	9.66	57	Pn	Pn	02 37 13.3	+2.5
	comp=N,0.0nm,0.3s,baz=236,slow=16,SNR=3.4						
MMAI	Mount Meron Ar	10.39	97	Pn	Pn	02 37 19.7	-1.0
	comp=N,0.6nm,0.3s,baz=302,slow=14,SNR=6.1						
AKASG	Malin Array Be	16.39	14	Pn	P	02 38 44.7	+0.4
	comp=N,1.2nm,0.3s,baz=210,slow=10.0,SNR=5.1						
HFS	Hagfors	25.96	349	P	P	02 40 23.9	+0.1
	comp=N,1.5nm,0.5s,baz=153,slow=10.0,SNR=13						
FINES	FINESS Array B	26.61	3	P	P	02 40 27.9	-1.7
	comp=N,1.2nm,0.8s,baz=150,slow=16,SNR=4.4						
NB2	NORSAR Subarra	27.23	347	P	P	02 40 37.1	+1.7
	comp=Z,0.2nm,0.4s,baz=157,slow=10						
NOA	NORSAR Array B	27.23	347	P	P	02 40 35.0	-0.4
	comp=Z,0.3nm,0.5s,baz=158,slow=9.8,SNR=5.5						
ARCES	ARCESS Array B	34.70	1	P	P	02 41 39.4	-1.6
	comp=Z,1.7nm,1.0s,baz=185,slow=8.8,SNR=5.4						
MKAR	Makanchi Array	45.31	56	P	P	02 43 08.7	-0.7
	comp=Z,0.2nm,0.4s,baz=269,slow=8.6,SNR=4.9						
ZALV	Zalesovo Beam	46.39	46	P	P	02 43 16.8	-0.9
	comp=Z,0.5nm,0.4s,baz=265,slow=8.2,SNR=3.5						
SONM	Songino Array	60.94	50	P	P	02 45 04.8	+0.2
	comp=Z,0.2nm,0.4s,baz=281,slow=7.4,SNR=3.1						
YKA	Yellowknife Ar	77.15	341	P	P	02 46 43.5	-1.3
	comp=Z,0.2nm,0.5s,baz=28,slow=5.3,SNR=3.6						

IDC 08 02:36:38.1±4.0**, 12°.39S**×**165°.54E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/41**, mbtmp3.6**/4**, Error ellipse: s-maj=168.4km s-min=31.4km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.86	252	P	P	02 42 56.4	0.0
	0.5nm,0.6s,baz=83,slow=8.9,SNR=7.4						
ASAR	Alice Springs	32.03	245	P	P	02 43 07.0	+0.2
	0.6nm,0.7s,baz=77,slow=9.5,SNR=8.3						
ILAR	Eielson Array	84.84	19	P	P	02 49 14.6	+0.3
	0.2nm,0.6s,baz=232,slow=4.7,SNR=4.0						
MKAR	Makanchi Array	94.36	317	P	P	02 49 59.2	-0.7
	0.4nm,0.9s,baz=100,slow=8.1,SNR=2.7						

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*IDC **08** 02:38:50.4±1.1, 11°.32S×165°.64E, h0^{km}, mb4.3/11, mb1 4.5/12, mb1mx4.2/42, mbtmp4.3/12, ML4.7/1, MS4.5/1, Ms1 4.5/1, ms1mx2.9/37, Error ellipse: s-maj=37.6km s-min=18.7km az=129.0*

*ISCJB **08** 02:38:52.3±0.4, 11°.39S±0°.06×165°.58E±0°.06, h24^{km}, mb4.5/22, MS4.3/1, Error ellipse: s-maj=9.4km s-min=7.9km az=174.3*

*NEIC **08** 02:38:52.6±3.1, 11°.33S×165°.66E, h15^{km}±19^{km}, mb4.6/15, Error ellipse: s-maj=9.0km s-min=6.6km az=157.0*

ISC 08 02:38:53.9±0.5**, 11°.29S**±0°.09×**165°.67E**±0°.07**, h24^{km}, n55, σ0^{s}.99**/56**, mb4.6**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.93	288	ePn	Pn	02 40 20.5	+0.3
HNR	Honiara	5.93	288	Sn	Sn	02 41 25.8	-1.6
	12nm,0.3s,baz=235,slow=23,SNR=6.0						
DZM	Mont Dzumac	10.74	176	ePn	Pn	02 41 25.9	-0.6
DZM	Mont Dzumac	10.74	176	Pn	Pn	02 41 26.1	-0.3
	5.5nm,0.3s,baz=173,slow=22,SNR=28						
FUNA	Funafuti	13.61	80	ePn	Pn	02 42 05.8	+0.3
CTA	Charters Tower	20.62	243	P	P	02 43 32.5	+0.8
	6.0nm,0.7s,baz=57,slow=12,SNR=5.8						
CTAO	Charters Tower	20.62	243	eP	P	02 43 32.0	+0.3
	19nm,0.6s						
RAO	Raoul Island	23.53	142	LR	LR	02 50 46.8	
	comp=Z,1μm,21.7s,baz=144,slow=30						
BKZ	Black Stump Fm	29.38	163	eP	P	02 44 55.9	+0.6
	5.5nm,0.6s						
STKA	Stephens Creek	30.21	224	eP	P	02 45 02.2	-0.5
	1.0nm,1.1s						
STKA	Stephens Creek	30.21	224	P	P	02 45 03.0	+0.3
	1.3nm,0.7s,baz=17,slow=7.1,SNR=5.2						
WRAB	Tennant Creek	31.32	250	eP	P	02 45 11.6	-1.0
	4.1nm,0.5s						
WB2	Warramunga Arr	31.32	250	eP	P	02 45 11.2	-1.4
WR1	Warramunga Arr	31.33	250	eP	P	02 45 11.8	-0.9
	7.4nm,0.8s						
WRA	Warramunga Arr	31.33	250	P	P	02 45 11.8	-0.9
	6.1nm,0.7s,baz=82,slow=9.1,SNR=55						
ASAR	Alice Springs	32.62	244	P	P	02 45 22.2	-1.8
	1.1nm,0.8s,baz=73,slow=9.6,SNR=11						
FITZ	Fitzroy Crossi	39.24	255	eP	P	02 46 20.3	-0.5
	6.5nm,1.1s						
FITZ	Fitzroy Crossi	39.24	255	P	P	02 46 20.3	-0.5
	2.3nm,0.7s,baz=124,slow=9.1,SNR=5.6						
CASY	Casey	66.12	201	eP	P	02 49 38.8	-0.1
	1.3nm,0.3s						
XAN	Xi'an	70.23	312	eP	P	02 50 05.7	+0.5
CM31	Chiang Mai Arr	72.14	294	eP	P	02 50 18.6	+1.6
	6.7nm,0.4s						
CMAR	Chiang Mai Arr	72.14	294	P	P	02 50 18.6	+1.6
	1.4nm,0.3s,baz=118,slow=3.7,SNR=8.6						
QSPA	South Pole Qui	78.71	180	eP	P	02 50 54.7	+0.6
SONA0	Songino Array	78.82	324	eP	P	02 50 55.4	+0.4
SONM	Songino Array	78.82	324	P	P	02 50 55.4	+0.4
	1.8nm,0.8s,baz=140,slow=6.6,SNR=16						
SONA1	Songino Array	78.82	324	eP	P	02 50 55.7	+0.7
HDA	Harding Lake	83.50	19	eP	P	02 51 19.8	+0.5
	10nm,0.9s						
COLA	College	83.54	18	eP	P	02 51 19.2	-0.3
	5.5nm,0.8s						
ILAR	Eielson Array	83.77	19	P	P	02 51 20.9	+0.2
	1.9nm,0.6s,baz=234,slow=5.2,SNR=42						
ILB	Eielson Array	83.77	19	eP	P	02 51 21.4	+0.7
	2.2nm,0.8s						
IL1	Eielson Array	83.77	19	eP	P	02 51 20.4	-0.3
SCRK	Sand Creek	84.17	20	eP	P	02 51 23.8	+0.8
	6.9nm,1.1s						
EGAK	Eagle	85.63	20	eP	P	02 51 31.0	+0.9
	8.9nm,1.0s						
DAWY	Dawson	85.81	21	eP	P	02 51 31.9	+0.8
	1.4nm,0.5s						
G08A	Pilot Rock	87.88	43	eSg	P	02 51 39.8	-1.9
F10A	Beach Ranch, E	89.24	43	eSg	P	02 51 43.7	-4.3
MK01	Makanchi Array	93.64	317	eP	P	02 52 08.4	+0.1
MK31	Makanchi Array	93.65	317	eP	P	02 52 08.9	+0.5
	1.9nm,0.8s						
MK32	Makanchi Array	93.65	317	eP	P	02 52 08.8	+0.4
MKAR	Makanchi Array	93.65	317	P	P	02 52 08.8	+0.4
	2.1nm,0.7s,baz=97,slow=6.1,SNR=25						
MKAR				PKKP	PKKPdf	03 09 13.7	-0.5
	0.6nm,0.8s,baz=287,slow=1.9,SNR=5.1						
ZALV	Zalesovo Beam	93.71	324	eP	P	02 52 08.4	-0.1
ZALV	Zalesovo Beam	93.71	324	P	P	02 52 08.3	-0.2
	1.6nm,0.7s,baz=109,slow=4.8,SNR=8.2						
ZAA1	Zalesovo Array	93.71	324	eP	P	02 52 08.3	-0.2
MAKZ	Makanchi	93.86	317	eP	P	02 52 09.2	-0.2
	3.0nm,1.0s						
YKA	Yellowknife Ar	95.22	27	P	P	02 52 14.5	-0.7
	0.4nm,0.6s,baz=258,slow=4.6,SNR=11						
YKB5	Yellowknife Ar	95.22	27	eP	P	02 52 14.5	-0.7
ARA0	ARCESS Array S	116.55	345	ePKPdf	PKPdf	02 57 35.5	+0.2
ARCES	ARCESS Array B	116.55	345	PKP	PKPdf	02 57 35.5	+0.2
	3.3nm,0.9s,baz=90,slow=2.4,SNR=5.0						
SDV	Santo Domingo	124.58	87	ePKPdf	PKPdf	02 57 53.0	+0.4
GEC2	GERESS Array S	135.89	334	ePKPdf	PKiKP	02 58 14.3	-0.2
GERES	GERESS Array B	135.89	334	PKP	PKiKP	02 58 15.4	+0.8
	0.4nm,0.7s,baz=180,slow=2.0,SNR=4.2						
KEST	Kesra	147.57	322	ePKPbc	PKPbc	02 58 37.8	+1.0
KEST	Kesra	147.57	322	PKPbc	PKPbc	02 58 38.0	+1.2
	5.4nm,0.8s,baz=14,slow=4.2,SNR=3.9						
ES19	SONSECA Array	150.23	344	ePKPbc	PKiKP	02 58 44.4	+0.2
ES19				ePKPab	pPKPbc	02 58 51.0	+1.3
ESDC	Sonseca Array	150.27	344	PKPbc	PKiKP	02 58 44.6	+0.3
	1.8nm,0.9s,baz=15,slow=2.5,SNR=5.0						

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*IDC **08** 02:41:02.3±2.7, 12°.39S×165°.58E, h0^{km}, mb4.1/7, mb1 4.3/7, mb1mx4.0/39, mbtmp4.1/7, Error ellipse: s-maj=106.7km s-min=25.6km az=143.0*

*ISCJB **08** 02:41:06.1±2.2, 12°.4S±0°.5×165°.5E±0°.4, h33^{km}, mb4.0/7, Error ellipse: s-maj=90.3km s-min=18.9km az=141.1*

ISC 08 02:41:07.7±2.5**, 12°.4S**±0°.6×**165°.6E**±0°.5**, h35^{km}, n11, σ0^{s}.41**/8**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	20.05	245	P	Pn	02 45 40.2	+0.3
	6.3nm,0.9s,baz=58,slow=13,SNR=4.0						
WRA	Warramunga Arr	30.88	252	P	P	02 47 20.5	-0.6
	3.2nm,1.0s,baz=77,slow=9.6,SNR=8.0						
H11N1	WAKE ISLAND Hy	31.92	2	T	T	03 19 20.9	
	baz=180,slow=77,SNR=5.0						
H11N3	WAKE ISLAND Hy	31.93	2	T	T	03 19 20.6	
	baz=180,slow=77,SNR=3.8						
H11N2	WAKE ISLAND Hy	31.94	2	T	T	03 19 20.9	
	baz=180,slow=77,SNR=6.1						
ASAR	Alice Springs	32.05	245	P	P	02 47 31.4	-0.1
	2.0nm,0.8s,baz=76,slow=9.8,SNR=10						
FITZ	Fitzroy Crossi	38.88	257	P	P	02 48 29.9	-0.2
	7.4nm,0.9s,baz=87,slow=7.7,SNR=9.0						
CMAR	Chiang Mai Arr	72.48	294	P	P	02 52 31.8	+0.4
	0.7nm,0.4s,baz=107,slow=4.8,SNR=4.1						
ILAR	Eielson Array	84.83	19	P	P	02 53 38.4	+0.1
	0.7nm,0.7s,baz=245,slow=5.1,SNR=4.9						
MKAR	Makanchi Array	94.37	317	P	P	02 54 23.6	-0.3
	0.6nm,0.7s,baz=102,slow=5.3,SNR=4.6						
YKA	Yellowknife Ar	96.24	27	P	P	02 54 32.0	0.0
	0.3nm,0.7s,baz=257,slow=4.9,SNR=4.4						

IDC 08 02:43:04.9±4.4, 10°.32S×163°.97E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.6/39, mbtmp3.8/3, Error ellipse: s-maj=237.1km s-min=32.0km az=138.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.11	248	P	P	02 49 17.0	+0.5
	2.1nm,0.9s,baz=78,slow=9.3,SNR=5.7						
ASAR	Alice Springs	31.58	241	P	P	02 49 29.0	-0.5
	1.2nm,0.8s,baz=64,slow=10,SNR=5.3						
ILAR	Eielson Array	83.39	19	P	P	02 55 33.7	0.0
	0.3nm,0.7s,baz=248,slow=4.8,SNR=2.9						

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*GUC **08** 02:43:25.8±0.4, 33°.70S×72°.10W, h40^{km}±3^{km}, ML3.7*
*SJA **08** 02:43:26.4±0.5, 33°.60S×72°.15W, h17^{km}±6^{km}, ML3.8, MW4.3*
ISC 08 02:43:29.0±2.5, 33°.73S±0°.07×72°.0W±0°.1, h7^{km}±15^{km}, n17, σ0^{s}.62/16, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHPI	Pichilemu	0.67	183	*e*P	Pg	02 43 39.8	-2.0
CHPI				*i* S	Sg	02 43 50.1	-0.3
ROC1	El Roble	1.09	47	*i* P	Pg	02 43 48.3	-1.5
ROC1				*i* S	Sg	02 44 04.5	+0.5
ROCH	El Roble	1.09	47	*e*P	Pg	02 43 47.9	-2.1
ROCH				*i* S	Sg	02 44 04.0	-0.1
ROCH				IAML		02 44 10.4	
	comp=E,4μm,0.6s						
PEL	Peldehue	1.21	62	*e*P	Pg	02 43 49.6	-2.6
PEL				*e*S	Sg	02 44 07.6	-0.4
PEL				IAML		02 44 12.0	
	comp=N,2μm,0.5s						
CLCH	Cerro Calan	1.23	75	*e*P	Pg	02 43 50.0	-2.6
CLCH				*i* S	Sg	02 44 08.6	0.0
CLCH				IAML		02 44 09.5	
	comp=E,2μm,0.4s						
FCH	Farellones	1.45	75	*e*P	Pn	02 43 53.8	-2.2
FCH				*i* S	Sg	02 44 15.0	-0.6
FCH				IAML		02 44 19.3	
	comp=E,2μm,0.4s						
LMEL	Las Melosas	1.47	95	*e*P	Pn	02 43 53.6	-2.4
LMEL				*i* S	Sn	02 44 14.7	-0.9
LMEL				IAML		02 44 17.7	
	comp=N,2μm,0.3s						
AUSP	Uspallata	2.63	56	*i* P	Pn	02 44 12.6	+0.5
CMCH	Combarbala	2.67	18	*e*P	Pn	02 44 09.2	-3.3
ARCO	CERRO ARCO	2.68	72	*i* P	Pn	02 44 13.3	+0.5
ARCO				IAML		02 44 59.1	
	comp=Z,306nm,0.5s						
AAGR	Agrelo	2.69	77	*i* P	Pn	02 44 13.7	+0.9
ASAL	Salagasta	2.85	68	*i* P	Pn	02 44 15.7	+0.7
AVIZ	Vizcacheras	2.88	86	*i* P	Pn	02 44 16.4	+0.9
RTLS	Leoncito	2.95	50	*i* P	Pn	02 44 16.6	0.0
RTLS				IAML		02 45 05.6	
	comp=Z,289nm,0.5s						
RTCV	Cerro Valdivia	3.43	58	*i* P	Pn	02 44 23.3	+0.4
RTLL	Cerro Villicun	3.79	52	*i* P	Pn	02 44 28.2	+0.3
AMOG	MOGNA	4.04	47	*i* P	Pn	02 44 30.9	-0.4

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*IDC **08** 02:47:02.6±0.9, 37°.78N×113°.11W, h0^{km}, mb3.6/2, mb1 3.8/8, mb1mx3.6/46, mbtmp3.5/8, ML3.4/5, MS2.9/4, Ms1 2.9/4, ms1mx2.6/46, Error ellipse: s-maj=10.3km s-min=9.7km az=114.0*
*NEIC **08** 02:47:02.6±0.0, 37°.80N×113°.14W, h6^{km}, MW3.7, ML3.7(SLC), Moment Tensor Solution. s42 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.02; $M_{\theta\theta}$0.85; $M_{\phi\phi}$4.16; $M_{r\theta}$0.68; $M_{\theta\phi}$2.12; $M_{\phi r}$0.41; Best double couple: $M_0$5.20000×10^{14} NP1:ϕ_s211.00000°, δ49.00000°, λ-83.00000°. NP2:ϕ_s21.00000°, δ42.00000°, λ-98.00000°. Principal axes: T 5.2400, Plg4.0000°, Azm296.0000°; N -0.1500, Plg5.0000°, Azm27.0000°; P -5.1000, Plg84.0000°, Azm170.0000°; After SLC.*
NEIC Felt [III] at Cedar City. Also felt at Saint George.
*UUSS **08** 02:47:02.0, 37°.77N×113°.13W, h0^{km}*
*SLC **08** 02:47:02.6, 37°.80N×113°.14W, h6^{km}, ML3.7, MW3.7(USGS)*
*ANF **08** 02:47:03.3±2.3, 37°.80N×113°.06W, h13^{km}±20^{km}, ML4.0/8, Error ellipse: s-maj=4.3km s-min=3.6km az=50.0*
ISC 08 02:47:02.4±0.6, 37°.79N±0°.02×113°.12W±0°.02, h10^{km}, n145, σ2^{s}.11/287, Utah

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCUT	Cedar City	0.31	220	*e*Pg	Pg	02 47 08.5	-0.2
PKCU	Pink Cliffs	0.72	118	*e*Pg	Pb	02 47 16.9	-0.5
PKCU				*e*Pn	Pn	02 47 25.7	+6.7
MTPU	Mount Pierson	0.78	71	*e*Pg	Pb	02 47 18.0	-0.3
MTPU				*e*Sg	Sg	02 47 27.8	0.0
LCMT	Little Creek M	0.78	188	*e*Pg	Pg	02 47 17.3	-0.2
KNB	Kanab	0.80	163	*e*Pg	Pb	02 47 17.9	-0.7
PSUT	Pine Spring	0.95	322	*e*Pg	Pb	02 47 20.8	-0.3
PSUT				*e*Sg	Sb	02 47 33.9	+0.1
TCRU	Three Creeks R	0.97	32	*e*Pg	Pg	02 47 20.7	-0.6
TCRU				*e*Sg	Sg	02 47 33.1	-0.9
MSU	Marysvale	1.03	45	*e*Pg	Pb	02 47 22.2	-0.4
MSU				*e*Sg	Sg	02 47 35.0	-0.9
U15A	North Rim	1.51	154	*e*Pn	Pb	02 47 30.6	-0.1
U15A				*e*Sn	Sn	02 47 49.1	-0.6
R11A	Troy Canyon, C	2.03	287	*e*Pn	Pn	02 47 36.8	-0.1
R11A				*e*Sn	Sg	02 48 08.0	+0.3
R11A	Troy Canyon, C	2.03	287	P	Pn	02 47 37.5	+0.6
	baz=106						
R11A				Sb	Sg	02 48 07.9	+0.2
	baz=106						
SHPR	Sheep Range	2.08	233	*e*Pn	Pn	02 47 37.9	+0.4
SHPR				*e*Sn	Sg	02 48 08.8	-0.4
TMUT	Trail Mountain	2.12	44	*e*Pn	Pn	02 47 39.3	+1.0
TMUT				*e*Sn	Sg	02 48 09.3	-1.4
NLU	North Lily Min	2.31	20	*e*Pn	Pn	02 47 41.6	+0.8
DUG	Dugway, Tooele	2.42	5	*e*Pn	Pn	02 47 42.2	0.0
DUG				*e*Sn	Sg	02 48 21.2	+1.1
DUG	Dugway, Tooele	2.42	5	P	Pn	02 47 42.7	+0.5
	baz=186						
SRU	San Rafael Swe	2.43	56	*e*Pn	Pb	02 47 44.0	-2.3
SRU				*e*Sn	Sg	02 48 19.6	-0.8
MPU	Maple Canyon	2.51	27	*e*Pn	Pn	02 47 44.8	+1.4
MPU				*e*Sn	Sg	02 48 24.4	+1.3
TPNV	Topopah Spring	2.63	252	*e*Pn	Pn	02 47 45.2	0.0
TPNV				*e*		02 47 56.0	
TPNV				*e*Lg	Lg	02 48 26.4	
TPNV	Topopah Spring	2.63	252	P	Pn	02 47 46.2	+1.0
	baz=71						
WUAZ	Wupatki	2.66	148	*e*Pn	Pn	02 47 46.7	+1.1
WUAZ				*e*Sn	Sb	02 48 24.2	+1.1
WUAZ	Wupatki	2.66	148	Pb	Pb	02 47 50.7	+0.4
	baz=329						
WUAZ				Sb	Sb	02 48 25.0	+1.9
	baz=329						
W13A	Hualapai Mount	2.75	193	*e*Pn	Pn	02 47 46.9	+0.1
W13A				*e*Pg	Pg	02 47 53.6	-1.6
P18A	Preston Nutter	2.90	50	*e*Pn	Pb	02 47 52.8	-1.7
P18A				*e*Sn	Sg	02 48 32.6	-3.0
CTU	Camp Tracy	3.09	20	*e*Pn	Pn	02 47 52.0	+0.5
CTU				*e*Pg	Pg	02 47 59.2	-2.5
JLU	Jordanelle	3.09	24	*e*Pn	Pn	02 47 52.2	+0.7
JLU				*e*Pg	Pg	02 48 00.1	-1.7
BGU	Big Grassy Mou	3.13	1	*e*Pn	Pn	02 47 52.7	+0.6
BGU				*e*Pg	Pg	02 48 03.2	+0.7
BGU				*e*Lg	Lg	02 48 46.4	
LDFC	Landfair	3.15	211	*e*Pn	Pn	02 47 52.5	+0.4
PV05	Paradox Valley	3.19	84	*e*Pn	Pn	02 47 55.4	+2.6
PV05				*e*Pg	Pg	02 48 04.9	+1.3
PV05				*e*Sg	Sg	02 48 42.8	-2.1
PV09	Paradox Valley	3.22	76	*e*Pn	Pn	02 47 54.8	+1.5
PV09				*e*Pg	Pg	02 48 02.6	-1.5
PV09				*e*Sg	Sg	02 48 42.5	-3.4
TUQ	Turquoise Moun	3.26	225	P	Pn	02 47 55.2	+1.5
	baz=43						
PV10	Paradox Valley	3.27	78	*e*Pn	Pn	02 47 54.5	+0.5
PV10				*e*Pg	Pg	02 48 03.3	-1.8
PV10				*e*Sg	Sb	02 48 42.5	+1.9
PV14	Lion Creek, Pa	3.28	78	*e*Pn	Pn	02 47 55.4	+1.2
PV14				*e*Pg	Pg	02 48 03.7	-1.6
PV14				*e*Sg	Sb	02 48 43.5	+2.5
PV19	Morning Glory	3.30	80	*e*Pn	Pn	02 47 55.0	+0.6
PV19				*e*Pg	Pg	02 48 04.6	-1.1
PV19				*e*Sg	Sg	02 48 47.1	-1.4
PV23	Carpenter Ridg	3.30	77	*e*Pn	Pn	02 47 54.5	0.0
PV23				*e*Pg	Pg	02 48 04.8	-1.0
PV23				*e*Sg	Sb	02 48 44.7	+3.0
PV17	East Wray Mesa	3.32	80	*e*Pn	Pn	02 47 56.0	+1.4
PV17				*e*Pg	Pg	02 48 05.7	-0.4
PV17				*e*Sg	Sb	02 48 45.2	+3.2
PV20	West Nyswonger	3.32	79	*e*Pn	Pn	02 47 55.7	+1.1
PV20				*e*Pg	Pg	02 48 04.7	-1.4
PV20				*e*Sg	Sg	02 48 45.9	-3.2
PV21	Cone Mtn., Par	3.35	75	*e*Pn	Pn	02 47 55.5	+0.4
PV21				*e*Pg	Pb	02 48 03.7	+1.6
PV21				*e*Sg	Sb	02 48 45.8	+2.8
PV16	Nyswonger Mesa	3.36	80	*e*Pn	Pn	02 47 55.9	+0.7
PV16				*e*Pg	Pg	02 48 06.2	-0.6
PV16				*e*Sg	Sb	02 48 45.5	+2.4
PV04	Paradox Valley	3.38	78	*e*Pn	Pn	02 47 56.5	+1.1
PV04				*e*Pg	Pg	02 48 07.9	+0.8
PV04				*e*Sg	Sb	02 48 46.8	+3.2
ELK	Elko	3.38	331	*e*Pn	Pn	02 47 55.6	+0.1
ELK				*e*Pg	Pg	02 48 08.4	+1.1
ELK				*e*Sg	Sg	02 48 47.9	-3.2
ELK	Elko	3.38	331	Pn	Pn	02 47 56.8	+1.2
	2.3nm,0.3s,baz=155,slow=9.9,SNR=66						
ELK				Lg	Lg	02 48 48.5	
	10nm,0.3s,baz=200,slow=16,SNR=18						
ELK				LR	LR	02 49 25.1	
	comp=Z,199nm,19.0s,baz=160,slow=42						
PV11	David Mesa, Pa	3.39	80	*e*Pn	Pn	02 47 56.8	+1.2
PV11				*e*Pg	Pg	02 48 08.1	+0.7
PV11				*e*Sg	Sb	02 48 46.6	+2.6
PV03	Paradox Valley	3.40	81	*e*Pn	Pn	02 47 56.7	+0.9
PV03				*e*Pg	Pg	02 48 06.7	-1.0
PV03				*e*Sg	Sb	02 48 46.7	+2.2
PV13	Radium Mtn., P	3.41	82	*e*Pn	Pn	02 47 57.2	+1.2
PV13				*e*Pg	Pg	02 48 05.8	-2.0
PV13				*e*Sg	Sb	02 48 47.8	+3.0
PV12	Saucer Basin,	3.44	80	*e*Pn	Pn	02 47 57.8	+1.4
PV12				*e*Pg	Pg	02 48 07.4	-1.1
PV12				*e*Sg	Sb	02 48 48.9	+3.2
GRAC	Grapevine Rang	3.48	258	P	Pn	02 47 58.1	+1.4
	baz=76						
PV02	Paradox Valley	3.48	82	*e*Pn	Pn	02 47 57.8	+0.9
PV02				*e*Pg	Pg	02 48 08.1	-1.1
PV02				*e*Sg	Sg	02 48 50.6	-3.8
SPUT	South Promonto	3.56	8	*e*Pn	Pn	02 47 58.3	+0.5
SPUT				*e*Pg	Pg	02 48 08.0	-2.6
SPUT				*e*Sg	Sg	02 48 54.2	-2.4
TCUT	Toone Canyon	3.58	21	*e*Pn	Pn	02 47 58.7	+0.5
TCUT				*e*Pg	Pg	02 48 12.6	+1.6
TCUT				*e*Sg	Sg	02 49 00.5	+3.1
PV07	Paradox Valley	3.58	78	*e*Pn	Pn	02 47 59.2	+0.9
PV07				*e*Pg	Pb	02 48 07.7	+1.7
PV07				*e*Sg	Sg	02 48 57.2	-0.3
PV01	Paradox Valley	3.61	83	*e*Pn	Pn	02 47 59.9	+1.2
PV01				*e*Pg	Pg	02 48 08.9	-2.7
PV01				*e*Sg	Sg	02 48 55.2	-3.1
X16A	Lo Mia Camp, P	3.62	158	*e*Pn	Pn	02 48 00.5	+1.7
X16A				*e*Pg	Pg	02 48 10.7	-1.2
X16A				*e*Sg	Sb	02 48 54.4	+3.6
PV15	Paradox Valley	3.70	80	*e*Pn	Pn	02 48 00.6	+0.7
PV15				*e*Pg	Pg	02 48 11.6	-1.8
PV15				*e*Sg	Sb	02 48 56.8	+3.8
MVCO	Mesa Verde	3.72	98	*e*Pn	Pn	02 48 01.4	+1.2
MVCO				*e*Pg	Pg	02 48 13.0	-0.7
MVCO				*e*Sg	Sg	02 48 58.9	-2.9
MVCO	Mesa Verde	3.72	98	P	Pn	02 48 02.6	+2.5
	baz=280						
W18A	Petrified Fore	3.81	133	*e*Pn	Pn	02 48 02.5	+1.1
W18A				*e*Pg	Pg	02 48 14.4	-1.0
W18A				*e*Sg	Sg	02 49 06.5	+1.7
Y14A	Wickenburg	3.84	179	*e*Pn	Pn	02 48 02.1	+0.5
Y14A				*e*Pg	Pg	02 48 13.1	-3.0
Y14A				*e*Sg	Sg	02 49 03.7	-2.1
GSC	Goldstone, Bar	3.87	231	*e*Pn	Pn	02 48 02.6	+0.5
GSC				*e*Pg	Pg	02 48 15.2	-1.4
GSC				*e*Sg	Sg	02 49 05.5	-1.3
MPMC	Manual Prospec	3.91	245	P	Pn	02 48 03.9	+1.2
	baz=62						
HVU	Hansel Valley	4.00	4	*e*Pn	Pn	02 48 04.4	+0.5
HVU				*e*Pg	Pg	02 48 17.9	-1.1
HVU				*e*Sg	Sg	02 49 11.2	+0.4
NV11	Mina Array Sit	4.03	281	*e*Pn	Pn	02 48 04.5	+0.1
NV11				*e*Pg	Pg	02 48 17.5	-2.1
NV11				*e*Sg	Sg	02 49 11.4	-0.4
KVN	Kaiserville	4.11	289	*e*Pn	Pn	02 48 06.5	+0.9
KVN				*e*Pg	Pg	02 48 19.0	-2.2
KVN				*e*Sg	Sg	02 49 13.4	-1.1
X18A	Snowflake	4.14	141	*e*Pn	Pn	02 48 06.2	+0.3
X18A				*e*Pg	Pb	02 48 18.2	+2.8
X18A				*e*Sg	Sg	02 49 11.2	-4.2
NV01	Mina Array Sit	4.14	280	*e*Pn	Pn	02 48 07.4	+1.5
NV01				*e*Pg	Pg	02 48 20.1	-1.7
NV01				*e*Sg	Sg	02 49 13.8	-1.7
NVAR	Mina Array Bea	4.14	280	Pn	Pn	02 48 07.4	+1.4
	1.4nm,0.3s,baz=105,slow=13,SNR=16						
NVAR				Lg	Lg	02 49 14.4	
	18nm,0.3s,baz=87,slow=30,SNR=7.8						
Y12C	Blythe	4.19	196	*e*Pn	Pn	02 48 07.1	+0.8
Y12C				*e*Pg	Pg	02 48 20.9	-1.8
Y12C				*e*Sg	Sg	02 49 15.9	-1.0
RYN	Ryan	4.34	283	*e*Pn	Pn	02 48 09.3	+0.6
RYN				*e*Pg	Pg	02 48 24.1	-1.5
RYN				*e*Sg	Sg	02 49 19.5	-2.4
O20A	White River Ci	4.46	57	*e*Pn	Pn	02 48 14.6	+4.2
OMMB	Old Mammoth Mi	4.67	270	*e*Pn	Pn	02 48 13.3	0.0
OMMB				*e*Pg	Pb	02 48 25.8	+1.1
OMMB				*e*Pg	Pg	02 48 31.1	-0.8
OMMB				*e*Sg	Sg	02 49 32.7	+0.2
MDPB	Devils Postpil	4.73	270	*e*Pn	Pn	02 48 14.5	+0.4
MDPB				*e*Pg	Pg	02 48 32.0	-1.1
MDPB				*e*Sg	Sg	02 49 33.1	-1.4
ISA	Isabella, Lake	4.80	245	*e*Pn	Pn	02 48 15.0	+0.1
ISA				*e*Pg	Pg	02 48 32.5	-1.8
ISA				*e*Lg	Lg	02 49 39.9	
GLA	Glamis	4.93	197	*e*Pn	Pn	02 48 16.8	+0.2
GLA				*e*Pg	Pb	02 48 26.3	-2.5
GLA				*e*Pg	Pg	02 48 35.1	-1.7
GLA				*e*Sg	Sg	02 49 36.0	-4.6
YERR	Yerington	4.96	286	*e*Pn	Pn	02 48 17.6	+0.4
YERR				*e*Pg	Pg	02 48 39.9	+2.4
XPFO	Pion Flat	4.97	214	*e*Pn	Pn	02 48 18.5	+1.2
XPFO				*e*Pg	Pg	02 48 36.8	-1.0
XPFO				*e*Lg	Lg	02 49 45.6	
PFO	Pinyon Flats O	4.98	214	*e*Pn	Pn	02 48 16.9	-0.5
PFO				*e*Pg	Pg	02 48 36.8	-1.0
PFO				*e*Lg	Lg	02 49 44.9	
PFO	Pinyon Flats O	4.98	214	Pn	Pn	02 48 19.0	+1.7
	0.3nm,0.3s,baz=49,slow=13,SNR=3.2						
PFO				Lg	Lg	02 49 41.4	
	0.5nm,0.3s,baz=167,slow=14,SNR=2.3						
S22A	4UR Ranch, Cre	4.98	89	*e*Pn	Pn	02 48 18.9	+1.3
S22A				*e*Pg	Pg	02 48 34.9	-3.0
S22A				*e*Sg	Sg	02 49 39.9	-2.5
SMCO	Snowmass	5.01	72	*e*Pn	Pn	02 48 18.7	+0.6
SMCO				*e*Pg	Pg	02 48 35.0	-3.5
SMCO				*e*Sg	Sg	02 49 38.5	-4.9
WAKR	Walker	5.04	280	*e*Pn	Pn	02 48 18.5	+0.3
WAKR				*e*Pg	Pg	02 48 36.6	-2.3
113A	Mohawk Valley,	5.04	186	*e*Pg	Pg	02 48 35.3	-3.6
113A				*e*Lg	Lg	02 49 46.7	
AHID	Auburn Hatcher	5.21	17	*e*Pn	Pn	02 48 24.0	+3.4
AHID				*e*Lg	Lg	02 49 53.0	
PNTR	Pine Nut	5.25	286	*e*Pg	Pg	02 48 42.4	-0.7
PNTR				*e*Sg	Sg	02 49 50.8	-0.3
PAHR	Pah Rah Range	5.26	293	*e*Pn	Pn	02 48 21.8	+0.5
PAHR				*e*Pg	Pg	02 48 46.1	+2.9
PAHR				*e*Sg	Sg	02 49 48.0	-3.4
VCNR	Virginia City	5.34	288	*e*Pg	Pg	02 48 42.3	-2.5
VCNR				*e*Sg	Sg	02 49 49.7	-4.2
MWC	Mount Wilson	5.36	230	*e*Pn	Pn	02 48 22.6	-0.1
PASC	Pasadena Art C	5.47	230	*e*Pn	Pn	02 48 25.7	+1.7
PASC				*e*Sg	Sg	02 49 53.6	-4.4
BW06	Boulder Array	5.67	28	*e*Pn	Pn	02 48 27.5	+0.5
BW06				*e*Pg	Pg	02 48 48.2	-2.8
BW06				*e*Sg	Sg	02 50 04.7	+0.2
PD31	Pinedale Array	5.67	28	*e*Pn	Pn	02 48 27.0	0.0
PD31				*e*Pg	Pg	02 48 47.7	-3.3
PDAR	Pinedale Array	5.67	28	*e*Pn	Pn	02 48 27.5	+0.5
PDAR				*e*Pg	Pg	02 48 48.0	-3.0
PDAR	Pinedale Array	5.67	28	Pn	Pn	02 48 29.9	+3.0
	0.3nm,0.3s,baz=208,slow=13,SNR=26						
CMB	Columbia Colle	5.76	275	*e*Pg	Pg	02 48 51.1	-1.6
CMB				*e*Sg	Sg	02 50 06.7	-0.5
TUC	Tucson	5.79	160	*e*Pn	Pn	02 48 29.4	+1.0
TUC				*e*Pg	Pg	02 48 49.0	-4.3
TUC				*e*Sg	Sg	02 50 03.7	-4.6
REDW	Red Top Meadow	5.83	16	*e*Pn	Pn	02 48 29.3	+0.2
REDW				*e*Pg	Pg	02 48 52.8	-1.3
REDW				*e*Sg	Sg	02 50 06.8	-2.8
HLID	Hailey	5.85	351	*e*Pn	Pn	02 48 29.7	+0.3
HLID				*e*Pg	Pg	02 48 52.9	-1.7
HLID				*e*Sg	Sg	02 50 08.5	-1.8
LAZ	Ladron	5.90	123	*e*Pn	Pn	02 48 33.7	+3.6
LAZ				*e*Pg	Pg	02 48 53.8	-1.7
LAZ				*e*Sg	Sg	02 50 05.8	-6.1
TPAW	Teton Pass	5.93	15	*e*Pn	Pn	02 48 31.5	+0.9
SNOW	Snow King Moun	5.95	17	*e*Pg	Pg	02 48 55.6	-0.7
MFID	Camas Ranch	5.99	341	*e*Pn	Pn	02 48 31.8	+0.6
MFID				*e*Pg	Pg	02 48 55.4	-1.8
MFID				*e*Sg	Sg	02 50 11.5	-3.2
RWWY	Rawlins	5.99	48	*e*Pn	Pn	02 48 30.7	-0.7
RWWY				*e*Pg	Pg	02 48 53.4	-3.8
RWWY				*e*Lg	Lg	02 50 17.8	
BEKR	Beckworth	6.03	292	*e*Pn	Pn	02 48 32.4	+0.6
BEKR				*e*Sg	Sg	02 50 11.1	-4.8
SDCO	Great Sand Dun	6.03	88	*e*Pn	Pn	02 48 33.0	+1.0
SDCO				*e*Pg	Pg	02 48 55.1	-2.9
SDCO				*e*Sg	Sg	02 50 13.6	-2.5
FXWY	Fox Creek	6.06	15	*e*Pn	Pn	02 48 32.6	+0.3
ANMO	Albuquerque	6.07	116	*e*Pn	Pn	02 48 33.5	+1.0
ANMO				Lg	Lg	02 50 17.2	
ANMO	Albuquerque	6.07	116	Pn	Pn	02 48 35.0	+2.5
	1.1nm,0.3s,baz=306,slow=16,SNR=23						
ANMO				Lg	Lg	02 50 17.2	
	2.7nm,0.3s,baz=183,slow=21,SNR=6.5						
ANMO				LR	LR	02 50 18.3	
	comp=Z,45nm,21.9s,baz=320,slow=32						
LOHW	Long Hollow	6.12	17	*e*Pn	Pn	02 48 33.2	0.0
LOHW				*e*Pg	Pg	02 48 58.0	-1.7
LENM	Lemitar	6.15	124	*e*Pn	Pn	02 48 33.7	+0.2
LENM				*e*Pg	Pb	02 48 47.4	-2.4
LENM				*e*Pg	Pg	02 48 55.1	-5.2
LENM				*e*Sg	Sg	02 50 12.0	-7.9
ISCO	Idaho Springs	6.19	69	*e*Pn	Pn	02 48 35.2	+1.0
ISCO				*e*Pg	Pg	02 48 56.8	-4.3
ISCO				*e*Sg	Sg	02 50 18.9	-2.4
MOOW	Moose Ponds	6.22	16	*e*Pn	Pn	02 48 35.0	+0.5
WVOR	Wild Horse Val	6.28	319	*e*Pg	Pg	02 49 01.1	-1.6
AFDM	Forest Hills D	6.28	283	*e*Pn	Pn	02 48 35.4	+0.2
AFDM				*e*Pg	Pg	02 48 59.4	-3.4
AFDM				*e*Sg	Sg	02 50 20.6	-3.5
LPM	Los Pinos Moun	6.29	121	*e*Pg	Pg	02 49 03.4	+0.4
LPM				*e*Sg	Sg	02 50 18.9	-5.6
IMW	Indian Meadow	6.32	14	*e*Pn	Pn	02 48 36.7	+0.7
N23A	Red Feather La	6.37	59	*e*Pn	Pn	02 48 37.3	+0.8
N23A				*e*Pg	Pg	02 49 02.8	-1.5
N23A				*e*Sg	Sg	02 50 21.2	-5.5
Q24A	Divide	6.37	77	*e*Pg	Pg	02 49 00.1	-4.3
BNM	Barren Site	6.39	123	*e*Pn	Pn	02 48 37.8	+0.9
BNM				*e*Pg	Pb	02 48 50.2	-3.6
BNM				*e*Pg	Pg	02 49 00.2	-4.6
BNM				*e*Sg	Sg	02 50 24.4	-3.1
FLWY	Flagg Ranch	6.55	15	*e*Pn	Pn	02 48 39.7	+0.7
YPP	Pitchstone Pla	6.71	14	*e*Pn	Pn	02 48 42.0	+0.7
YPP				*e*Pg	Pg	02 49 08.0	-2.9
H17A	Grant Village	6.87	15	*e*Pn	Pn	02 48 44.3	+0.8
H17A				*e*Pg	Pg	02 49 13.5	-0.5
MOD	Modoc Plateau	6.89	309	*e*Pn	Pn	02 48 44.3	+0.6
MOD				*e*Pg	Pg	02 49 12.7	-1.7
J08A	Circle Bar Ran	6.90	325	*e*Pn	Pn	02 48 44.3	+0.6
J08A				*e*Sg	Sg	02 50 39.3	-4.6
T25A	Trinidad	6.95	93	*e*Pg	Pg	02 49 10.8	-4.8
K22A	Casper	7.00	44	*e*Pn	Pn	02 48 45.8	+0.7
K22A				*e*Pg	Pg	02 49 10.3	-6.1
MCMT	McKenzie Canyo	7.04	2	*e*Pn	Pn	02 48 46.1	+0.4
MCMT				*e*Pg	Pg	02 49 13.4	-3.8
YMR	Madison River	7.06	13	*e*Pn	Pn	02 48 46.1	0.0
YHB	Horse Butte	7.11	11	*e*Pn	Pn	02 48 47.1	+0.5
319A	Douglas	7.13	153	*e*Pn	Pn	02 48 47.0	0.0
319A				*e*Pg	Pg	02 49 18.0	-1.0
YNR	Norris Junctio	7.16	14	*e*Pn	Pn	02 48 48.1	+0.6
DLMT	Dillon	7.58	3	*e*Pg	Pg	02 49 20.4	-7.1
BMO	Blue Mountains	7.73	337	*e*Pg	Pg	02 49 26.6	-3.8
RLMT	Red Lodge	7.88	20	*e*Pn	Pn	02 48 57.8	+0.5
BOZ	Bozeman (W)	7.88	8	*e*Pg	Pg	02 49 29.5	-3.8
HOPS	Hopland Field	7.91	282	*e*Pn	Pn	02 48 56.2	-1.3
I07A	Izee	7.93	324	*e*Pn	Pn	02 48 58.6	+0.7
F10A	Beach Ranch, E	8.73	341	*e*Pn	Pn	02 49 14.4	+5.5
RSSD	Black Hills	9.33	44	*e*Pn	Pn	02 49 17.9	+0.6
LAO	LASA Array	10.25	28	*e*Pn	Pn	02 49 31.8	+2.1
EGMT	Eagleton	10.52	12	*e*Pn	Pn	02 49 38.7	+5.3
TXAR	Lajitas Array	11.53	134	Lg	Lg	02 53 06.8	
	0.1nm,0.3s,baz=310,slow=29,SNR=6.3						
TXAR				LR	LR	02 54 32.5	
	comp=Z,86nm,20.2s,baz=0.0,slow=39						
DGMT	Dagmar	12.50	28	*e*Pn	Pn	02 50 02.0	+1.7
ULM	Lac du Bonnet	17.52	39	P	P	02 51 10.0	+2.2
	0.1nm,0.3s,baz=243,slow=16,SNR=4.4						
YKA	Yellowknife Ar	24.75	358	P	P	02 52 25.5	+1.7
	1.0nm,0.8s,baz=177,slow=8.2,SNR=21						
CMIG	Matias Romero	26.11	137	LR	LR	03 03 56.3	
	comp=Z,33nm,18.6s,baz=271,slow=39						
HDA	Harding Lake	33.34	334	*e*P	P	02 53 38.3	-2.0
ILAR	Eielson Array	33.54	334	P	P	02 53 45.4	+3.4
	1.2nm,1.0s,baz=129,slow=7.2,SNR=7.7						

IDC 08 02:49:33.6±4.0, 11°.88S×165°.09E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.6/37, mbtmp3.6/4, Error ellipse: s-maj=169.6km s-min=32.7km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.60	251	P	P	02 55 49.4	-0.2
	0.6nm,0.7s,baz=81,slow=9.4,SNR=6.1						
ASAR	Alice Springs	31.85	244	P	P	02 56 00.7	0.0
	0.7nm,0.8s,baz=79,slow=10,SNR=5.8						
ILAR	Eielson Array	84.50	19	P	P	03 02 07.9	-0.2
	0.4nm,0.7s,baz=244,slow=5.6,SNR=5.9						
MKAR	Makanchi Array	93.69	317	P	P	03 02 52.7	+0.4
	0.3nm,0.8s,baz=93,slow=4.9,SNR=3.8						

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*IDC **08** 02:51:50.5±1.4, 10°.77S×164°.27E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/37, mbtmp4.1/7, ML4.1/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/33, Error ellipse: s-maj=46.6km s-min=24.6km az=118.0*
*ISCJB **08** 02:51:52.8±1.0, 11°.0S±0°.1×164°.4E±0°.2, h29^{km}, mb3.9/6, MS3.4/6, Error ellipse: s-maj=24.0km s-min=16.7km az=6.0*
ISC 08 02:51:54.6±1.2, 10°.9S±0°.1×164°.4E±0°.2, h29^{km}, n15, σ1^{s}.53/8, mb4.0/6, MS3.3/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.64	287	LR	LR	02 54 50.7	
	comp=Z,316nm,20.6s,baz=90,slow=40						
DZM	Mont Dzumac	11.32	170	Pn	Pn	02 54 34.3	-0.4
	1.1nm,0.3s,baz=320,slow=19,SNR=5.8						
CTA	Charters Tower	19.76	240	P	P	02 56 23.8	+1.3
	0.5nm,0.3s,baz=62,slow=14,SNR=8.3						
STKA	Stephens Creek	29.71	222	P	P	02 58 00.0	+1.7
	2.7nm,0.7s,baz=25,slow=8.9,SNR=4.6						
STKA				LR	LR	03 08 26.4	
	comp=Z,126nm,20.6s,baz=24,slow=34						
WRA	Warramunga Arr	30.34	249	P	P	02 58 02.4	-1.7
	1.5nm,0.7s,baz=78,slow=8.9,SNR=9.0						
WRA				LR	LR	03 09 26.2	
	comp=Z,50nm,21.1s,baz=270,slow=35						
H11N1	WAKE ISLAND Hy	30.47	5	T	T	03 29 56.5	
	baz=184,slow=76,SNR=4.3						
H11N3	WAKE ISLAND Hy	30.47	5	T	T	03 29 56.4	
	baz=184,slow=76,SNR=5.3						
H11N2	WAKE ISLAND Hy	30.49	5	T	T	03 29 59.4	
	baz=184,slow=76,SNR=6.2						
GUMO	Guam	31.09	321	LR	LR	03 11 21.4	
	comp=Z,47nm,18.0s,baz=107,slow=38						
ASAR	Alice Springs	31.73	242	P	P	02 58 14.3	-2.0
	0.7nm,0.8s,baz=59,slow=11,SNR=4.9						
ASAR				LR	LR	03 10 49.1	

	comp=Z,84nm,18.1s,baz=49,slow=36						
RAR	**Rarotonga** comp=Z,45nm,20.9s,baz=282,slow=31	**35.83**	**111**	LR	LR	03 10 12.8	
SONM	**Songino Array** 0.6nm,0.6s,baz=150,slow=6.0,SNR=3.9	**77.75**	**324**	P	**P**	**03 03 49.5**	**+0.4**
ILAR	**Eielson Array** 1.5nm,0.7s,baz=248,slow=4.3,SNR=16	**83.74**	**19**	P	**P**	**03 04 20.7**	**+0.1**
BBB	**Bella Bella** comp=Z,42nm,20.2s,baz=190,slow=30	**85.15**	**35**	LR	LR	03 34 03.8	
MKAR	**Makanchi Array** 0.8nm,0.7s,baz=98,slow=6.5,SNR=7.6	**92.50**	**317**	P	**P**	**03 05 03.0**	**-0.1**

IDC 08 03:02:55.0±1.6, 11°.40S×164°.80E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.6/42, mbtmp3.8/4, ML4.2/1, Error ellipse: s-maj=51.6km s-min=34.2km az=118.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac** 1.8nm,0.3s,baz=357,slow=15,SNR=6.6	**10.73**	**172**	Pn	Pn	03 05 30.8	+0.7
H11S2	**WAKE ISLAND Hy** baz=184,slow=76,SNR=13	**29.76**	**4**	T	T	03 39 46.1	
H11S3	**WAKE ISLAND Hy** baz=184,slow=76,SNR=7.6	**29.76**	**4**	T	T	03 39 42.7	
H11S1	**WAKE ISLAND Hy** baz=184,slow=76,SNR=10	**29.77**	**4**	T	T	03 39 47.0	
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=79,slow=7.8,SNR=3.0	**30.50**	**250**	P	P	03 09 09.3	-0.8
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=8.1	**30.98**	**4**	T	T	03 41 15.0	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=8.3	**30.99**	**4**	T	T	03 41 14.0	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=8.1	**31.00**	**4**	T	T	03 41 13.2	
ILAR	**Eielson Array** 0.4nm,0.6s,baz=239,slow=5.0,SNR=9.1	**84.14**	**19**	P	P	03 15 26.9	-0.7
MKAR	**Makanchi Array** 0.5nm,0.9s,baz=124,slow=3.8,SNR=4.0	**93.14**	**317**	P	P	03 16 13.0	+1.8

IDC 08 03:09:02.8±1.6, 10°.53S×165°.26E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.6/45, mbtmp3.6/5, ML3.9/1, MS2.8/1, Ms1 2.8/1, ms1mx2.6/15, Error ellipse: s-maj=52.0km s-min=29.9km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara** comp=Z,112nm,21.5s,baz=245,slow=36	**5.34**	**281**	LR	LR	03 12 16.7	
DZM	**Mont Dzumac** 0.7nm,0.3s,baz=88,slow=18,SNR=7.3	**11.54**	**174**	Pn	Pn	03 11 49.2	+0.2
H11S2	**WAKE ISLAND Hy** baz=181,slow=76,SNR=68	**28.87**	**3**	T	T	03 45 08.9	
H11S3	**WAKE ISLAND Hy** baz=181,slow=76,SNR=39	**28.87**	**3**	T	T	03 45 09.2	
H11S1	**WAKE ISLAND Hy** baz=181,slow=76,SNR=54	**28.88**	**3**	T	T	03 45 10.2	
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=50	**30.09**	**3**	T	T	03 46 45.4	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=50	**30.10**	**3**	T	T	03 46 39.5	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=40	**30.11**	**3**	T	T	03 46 40.5	
WRA	**Warramunga Arr** 0.4nm,0.9s,baz=81,slow=8.9,SNR=3.4	**31.21**	**249**	P	P	03 15 24.2	0.0
ASAR	**Alice Springs** 0.4nm,0.8s,baz=64,slow=10,SNR=4.3	**32.60**	**242**	P	P	03 15 36.4	0.0
ILAR	**Eielson Array** 0.5nm,0.9s,baz=226,slow=6.2,SNR=3.7	**83.18**	**19**	P	P	03 21 30.7	+0.2
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=92,slow=6.1,SNR=3.9	**92.81**	**317**	P	P	03 22 17.0	-0.5

IDC 08 03:13:51.1±1.6, 11°.47S×164°.94E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.6/38, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=49.4km s-min=30.1km az=123.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac** 0.6nm,0.3s,baz=322,slow=17,SNR=4.9	**10.64**	**172**	Pn	Pn	03 16 25.6	+0.6
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=81,slow=9.2,SNR=4.6	**30.60**	**250**	P	P	03 20 07.3	+0.3
ASAR	**Alice Springs** 0.6nm,0.7s,baz=68,slow=9.4,SNR=7.1	**31.90**	**243**	P	P	03 20 17.7	-0.8
ILAR	**Eielson Array** 0.2nm,0.7s,baz=234,slow=4.9,SNR=4.0	**84.16**	**19**	P	P	03 26 23.3	-0.5
MKAR	**Makanchi Array** 0.4nm,0.9s,baz=132,slow=4.3,SNR=3.5	**93.29**	**317**	P	P	03 27 08.8	+0.9

PGC 08 03:16:00.7±11.0, 52°.13N×132°.44W, h21^{km}, ML3.6/14, ML3.5/15, 131km Ssw of Sandspit, Bc Haida Gwaii Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNB	**Barry Inlet**	**0.61**	**43**	P	Pb	03 16 12.5	-0.3
HG3B	**Hotspring**	**0.76**	**53**	P	Pb	03 16 14.6	-0.5
HG3B				S	Sb	03 16 20.5	-4.4
HG4B	**Hotspring**	**0.78**	**77**	P	Pb	03 16 14.7	-0.8
HG4B				S	Sb	03 16 20.9	-4.7
HG1B	**Mitchell Dam**	**0.83**	**13**	P	Pb	03 16 16.0	-0.4
MOBC	**Moresby Island**	**1.06**	**15**	P	Pn	03 16 19.9	-0.4
DIB	**Dawson Inlet,**	**1.08**	**359**	P	Pn	03 16 20.1	-0.4
NDB	**Naden**	**1.86**	**351**	Pn	Pn	03 16 29.4	-1.8
MASB	**Masset**	**1.91**	**7**	Pn	Pn	03 16 30.5	-1.4
BBB	**Bella Bella**	**2.66**	**87**	Pn	Pn	03 16 42.1	-0.1
BBB				Sn	Sn	03 17 07.4	-6.5
BBB				Sg	Sb	03 17 17.1	-2.7
PHC	**Port Hardy**	**3.44**	**112**	Pn	Pn	03 16 53.0	+0.1
PHC				Sn	Sn	03 17 28.1	-4.9
PACB	**Port Alice, BC**	**3.54**	**117**	Pn	Pn	03 16 55.7	+1.5
PACB				Sn	Sn	03 17 32.4	-2.9
WOSB	**Woss**	**4.18**	**116**	Pn	Pn	03 17 04.7	+1.4
NCRB	**Newcastle Ridg**	**4.36**	**111**	Pn	Pn	03 17 06.5	+0.7
CBB	**Campbell River**	**4.93**	**112**	Pn	Pn	03 17 16.7	+3.3
CBB				Sn	Sn	03 18 08.3	-1.4
FSB	**Fort Saint Jam**	**5.40**	**61**	Pn	Pn	03 17 20.4	+0.5
FSB				Pg	Pb	03 17 43.6	+9.4
FSB				Sg	Sb	03 18 49.2	+11
DLBC	**Dease Lake**	**6.47**	**11**	Pn	Pn	03 17 38.6	+4.0
DLBC				Sg	Sb	03 19 20.6	+11
LLLB	**Lillooet**	**6.78**	**99**	Sg	Sb	03 19 34.3	+16
FNBB	**Fort Nelson**	**8.63**	**35**	Pn	Pn	03 18 05.4	+1.3
FNBB				Sg	Sn	03 20 29.4	+49

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*NNC **08** 03:36:48.4±1.4, 42°.58N×79°.68E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=8.6km s-min=5.6km az=129.0*

*SOME **08** 03:36:50.3, 42°.65N×79°.68E, h10^{km}*

ISC 08 03:36:49.6±1.9, 42°.63N±0°.08×79°.68E±0°.05, h3^{km}±13^{km}, n16, σ0^{s}.53/27, 3C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak** 3.8nm,0.1s	**0.71**	**317**	P	**Pg**	**03 37 03.3**	**0.0**
UZB	10.0nm,0.2s			S	**Sg**	**03 37 12.8**	**+0.3**
UZB	**Uzynbulak** 3.8nm,0.1s	**0.71**	**317**	*e*P	**Pg**	**03 37 03.5**	**+0.3**
UZB	10.0nm,0.2s			*e*S	**Sg**	**03 37 13.0**	**+0.5**
PDGK	**Podgornoye** 1.5nm,0.1s	**0.72**	**349**	P	**Pg**	**03 37 03.4**	**0.0**
PDGK	2.5nm,0.2s			S	**Sg**	**03 37 12.8**	**+0.2**
PDGK	**Podgornoye** 1.2nm,0.4s	**0.72**	**349**	⇓P	**Pg**	**03 37 03.2**	**-0.2**
PDGK	4.0nm,0.5s			⇑S	**Sb**	**03 37 14.1**	**-1.1**
KTMS	**Ketmen** 2.3nm,0.1s	**0.96**	**31**	P	**Pg**	**03 37 07.9**	**-0.1**
KTMS	2.4nm,0.1s			S	**Sg**	**03 37 21.0**	**+0.6**
KTMS	**Ketmen** 2.3nm,0.1s	**0.96**	**31**	*e*P	**Pg**	**03 37 07.9**	**-0.1**
KTMS	2.4nm,0.1s			*e*S	**Sg**	**03 37 21.0**	**+0.6**
DJR	**Jarkent** 0.4nm,0.1s	**1.71**	**3**	*e*P	**Pb**	**03 37 20.9**	**-0.9**
DJR	1.8nm,0.3s			*e*S	**Sn**	**03 37 42.6**	**-0.2**
TNSS	**Tian-Shan** 1.8nm,0.3s	**2.05**	**282**	Pg	**Pg**	**03 37 28.4**	**-0.6**
TNSS	1.3nm,0.2s			Lg	Lg	03 37 55.8	
TNSS	**Tian-Shan** 0.7nm,0.1s	**2.05**	**282**	*e*P	**Pb**	**03 37 28.0**	**+0.2**
TNSS	2.6nm,0.3s			*e*S	**Sg**	**03 37 54.9**	**-0.7**
ARXS	**Arharly** 1.2nm,0.4s	**2.08**	**320**	Pg	**Pb**	**03 37 27.8**	**-0.3**
ARXS	2.5nm,0.4s			Lg	Lg	03 37 54.7	
ARXS	**Arharly** 1.2nm,0.4s	**2.08**	**320**	*e*P	**Pb**	**03 37 27.8**	**-0.3**
ARXS	2.5nm,0.4s			*e*S	**Sb**	**03 37 54.7**	**+0.2**
IZV	**Izvestkoviy** 0.6nm,0.1s	**2.29**	**281**	Pg	**Pb**	**03 37 31.0**	**-0.7**
IZV	2.7nm,0.2s			Lg	Lg	03 38 00.5	
IZV	**Izvestkoviy** 0.6nm,0.1s	**2.29**	**281**	*e*P	**Pb**	**03 37 31.1**	**-0.7**
IZV	2.7nm,0.2s			*e*S	**Sb**	**03 38 00.5**	**0.0**
KTBS	**Karatobe** 0.6nm,0.3s	**2.45**	**297**	Pg	**Pb**	**03 37 33.9**	**-0.4**
KTBS	3.6nm,0.2s			Lg	Lg	03 38 05.1	
KTBS	**Karatobe** 0.6nm,0.3s	**2.45**	**297**	*e*P	**Pb**	**03 37 34.2**	**-0.1**
KTBS	3.6nm,0.2s			*e*S	**Sb**	**03 38 05.6**	**+0.7**
TKM2	**Tokmak 2** 1.0nm,0.8s	**3.02**	**277**	⇑Pg	**Pn**	**03 37 39.3**	**+0.7**
TKM2	1.0nm,0.5s			⇑Lg	Lg	03 38 22.8	

TAP 08 03:39:17.9, 22°.15N×121°.73E, h155^{km}, ML4.1, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu** baz=237	**0.20**	**238**	P	Pn	03 39 38.7	-0.2
LAY	baz=237			S	Sn	03 39 54.2	-0.6
TAW	**Tawu** baz=280	**0.81**	**285**	*e*P	Pn	03 39 41.8	+0.2
TAW	baz=280			*e*S	Sn	03 39 58.8	-1.0
TSEB	**Hengchuen, Pin** baz=261	**0.81**	**253**	P	Pn	03 39 43.1	+1.3
TSEB	baz=261			S	Sn	03 40 00.9	+1.1
TTN	**Taitung** baz=314	**0.81**	**318**	*e*S	Sn	03 40 01.2	+1.2
ECL	**Taimali** baz=303	**0.85**	**302**	P	Pn	03 39 41.8	-0.2
ECL	baz=303			S	Sn	03 39 58.6	-1.8
EAST	**Anshuo** baz=284	**0.85**	**286**	P	Pn	03 39 42.2	+0.1
EAST	baz=284			*e*S	Sn	03 40 00.3	-0.2
TWKBT	**Hengchun** baz=264	**0.88**	**257**	*e*P	Pn	03 39 43.2	+0.9
TWKBT	baz=264			*e*S	Sn	03 40 00.7	-0.1
TWK1	**Hengchun** baz=264	**0.89**	**257**	P	Pn	03 39 43.1	+0.8
TWK1	baz=264			S	Sn	03 40 00.8	0.0
TWGBT	**Beinan** baz=319	**0.90**	**318**	P	Pn	03 39 42.1	-0.3
TWGBT	baz=319			*e*S	Sn	03 39 58.9	-2.4
TWG	**Pinlang** baz=319	**0.91**	**318**	P	Pn	03 39 42.1	-0.3
TWG	baz=319			S	Sn	03 39 58.9	-2.4
HEN	**Hengchun** baz=270	**0.93**	**262**	*e*P	Pn	03 39 43.4	+0.8
HEN	baz=270			*e*S	Sn	03 40 01.8	+0.3
CHKT	**Chengkung** baz=341	**1.01**	**340**	P	Pn	03 39 44.5	+1.2
CHKT	baz=341			S	Sn	03 40 02.0	-0.7
SCZT	**Fangliau** baz=283	**1.06**	**283**	P	Pn	03 39 43.9	+0.2
SCZT	baz=283			*e*S	Sn	03 40 02.1	-1.2
MASBT	**Mashibuluo** baz=291	**1.12**	**295**	*e*P	Pn	03 39 44.6	+0.4
MASBT	baz=291			*e*S	Sn	03 40 03.0	-1.4
SSPT	**Xinbi** baz=288	**1.13**	**288**	P	Pn	03 39 45.0	+0.7
SSPT	baz=288			*e*S	Sn	03 40 04.3	-0.2
SSD	**Sandimen** baz=296	**1.18**	**301**	P	Pn	03 39 45.3	+0.5
SSD	baz=296			*e*S	Sn	03 40 04.2	-1.2
ELDTW	**Lidau** baz=321	**1.23**	**328**	*e*P	Pn	03 39 45.7	+0.3
ELDTW	baz=321			*e*S	Sn	03 40 05.2	-1.2
TWF1	**Yuli** baz=334	**1.27**	**342**	P	Pn	03 39 45.4	-0.2
TWF1	baz=334			*e*S	Sn	03 40 05.4	-1.5
WLCH	**Liuqiu** baz=280	**1.27**	**280**	*e*P	Pn	03 39 47.4	+1.8
WLCH	baz=280			*e*S	Sn	03 40 09.5	+2.8
TWP	**Hsiaoliuchiu** baz=279	**1.29**	**279**	*e*S	Sn	03 40 09.4	+2.4
YULB	**Yu-li** baz=336	**1.30**	**342**	*e*P	Pn	03 39 45.5	-0.5
YULB	baz=336			*e*S	Sn	03 40 05.3	-2.3
SLGT	**Liugui** baz=311	**1.31**	**310**	*e*P	Pn	03 39 46.7	+0.7
SLGT	baz=311			*e*S	Sn	03 40 06.8	-0.8
STYT	**Tauyuan** baz=319	**1.36**	**318**	P	Pn	03 39 46.9	+0.3
STYT	baz=319			*e*S	Sn	03 40 07.7	-0.8
HGSD	**Ruisui** baz=353	**1.37**	**348**	*e*P	Pn	03 39 47.5	+0.9
HGSD	baz=353			*e*S	Sn	03 40 09.4	+0.7
TWM1	**Shoushan** baz=305	**1.39**	**299**	*e*P	Pn	03 39 48.3	+1.5
TWM1	baz=305			*e*S	Sn	03 40 10.4	+1.5
EHY	**Hungye** baz=340	**1.41**	**344**	P	Pn	03 39 46.6	-0.4
EHY	baz=340			*e*S	Sn	03 40 06.9	-2.5
SNJT	**Kaohsiung City** baz=302	**1.43**	**295**	*e*P	Pn	03 39 48.5	+1.4
SNJT	baz=302			*e*S	Sn	03 40 10.0	+0.5
WTP	**Ta-pu** baz=318	**1.51**	**317**	P	Pn	03 39 48.4	+0.3
WTP	baz=318			S	Sn	03 40 10.0	-1.2
CHN1	**Nanshi** baz=321	**1.52**	**313**	P	Pn	03 39 48.5	+0.3
CHN1	baz=321			*e*S	Sn	03 40 10.0	-1.3
TPUB	**Ta-pu** baz=319	**1.54**	**319**	*e*P	Pn	03 39 48.5	+0.3
TPUB	baz=319			*e*S	Sn	03 40 09.9	-1.8
EGFH	**Guangfu** baz=343	**1.54**	**350**	*e*P	Pn	03 39 48.1	-0.2
EGFH	baz=343			*e*S	Sn	03 40 09.6	-2.1
SNST	**Tainan City** baz=320	**1.56**	**313**	*e*P	Pn	03 39 48.7	+0.2
SNST	baz=320			*e*S	Sn	03 40 10.0	-2.1
CHN3	**Shinhua** baz=307	**1.57**	**306**	*e*S	Sn	03 40 13.3	+1.2
CHN4	**Tsaushan** baz=325	**1.60**	**319**	P	Pn	03 39 49.2	+0.3
CHN4	baz=325			S	Sn	03 40 11.6	-1.2
TWK	**Hsinying** baz=320	**1.60**	**314**	P	Pn	03 39 49.3	+0.3
TWK	baz=320			S	Sn	03 40 11.4	-1.5
ESL	**Shilin** baz=347	**1.68**	**351**	*e*P	Pn	03 39 49.8	-0.1
ESL	baz=347			*e*S	Sn	03 40 12.1	-2.3
VWDT	**VWDT** baz=346	**1.69**	**341**	*e*P	Pn	03 39 50.9	+1.0
VWDT	baz=346			*e*S	Sn	03 40 14.5	-0.1
CHN5	**Tsauling** baz=322	**1.74**	**326**	P	Pn	03 39 50.7	+0.1
CHN5	baz=322			*e*S	Sn	03 40 14.6	-1.1
WHYT	**Xinyi Township** baz=326	**1.74**	**332**	P	Pn	03 39 50.6	0.0
WHYT	baz=326			*e*S	Sn	03 40 13.9	-1.8
SCLT	**Jiali** baz=314	**1.75**	**306**	*e*S	Sn	03 40 15.4	-0.3
ENLB	**Shoufeng** baz=1.0	**1.75**	**356**	*e*S	Sn	03 40 17.2	+1.4
SSLB	**Suanglung** baz=329	**1.79**	**336**	*e*P	Pn	03 39 51.0	0.0
SSLB	baz=329			*e*S	Sn	03 40 14.9	-1.6
CHN2	**Minshiung** baz=321	**1.80**	**320**	*e*S	Sn	03 40 15.9	-0.9
CHY	**Chiayi** baz=319	**1.81**	**318**	*e*P	Pn	03 39 51.4	+0.2
CHY	baz=319			*e*S	Sn	03 40 14.7	-2.1
CHN8	**Yiju** baz=312	**1.84**	**311**	*e*P	Pn	03 39 51.9	+0.3
CHN8	baz=312			*e*S	Sn	03 40 16.6	-0.9
OWD	**Renai** baz=344	**1.87**	**344**	P	Pn	03 39 52.9	+0.8
OWD	baz=344			*e*S	Sn	03 40 17.4	-1.0
WLGB	**Puzi** baz=321	**1.87**	**315**	*e*S	Sn	03 40 17.1	-1.0
WDLH	**Douliu** baz=319	**1.89**	**325**	*e*P	Pn	03 39 52.3	+0.2
WDLH	baz=319			*e*S	Sn	03 40 17.1	-1.4
SMLT	**Sun Moon Lake** baz=329	**1.89**	**336**	P	Pn	03 39 52.2	-0.1
SMLT	baz=329			*e*S	Sn	03 40 18.3	-0.4
WJS	**Zhushan** baz=331	**1.91**	**331**	*e*P	Pn	03 39 52.5	+0.2
WJS	baz=331			*e*S	Sn	03 40 17.9	-0.9
TYC	**Yuchr** baz=329	**1.93**	**335**	P	Pn	03 39 52.6	0.0
TYC	baz=329			*e*S	Sn	03 40 18.7	-0.6
TWD	**Chiawan** baz=3.0	**1.93**	**356**	*e*P	Pn	03 39 52.7	+0.1
TWD	baz=3.0			*e*S	Sn	03 40 18.5	-0.8
CHGB	**Renai** baz=338	**1.98**	**345**	*e*P	Pn	03 39 54.3	+1.0
CHGB	baz=338			*e*S	Sn	03 40 20.4	-0.2
WNT	**Mingjian** baz=331	**1.98**	**331**	*e*P	Pn	03 39 53.6	+0.5
WNT	baz=331			*e*S	Sn	03 40 19.2	-1.0
NACB	**Ninganchiao** baz=2.0	**2.02**	**356**	*e*P	Pn	03 39 53.6	-0.1
NACB	baz=2.0			*e*S	Sn	03 40 20.4	-0.8
WHF	**Hehuan Shan** baz=353	**2.04**	**348**	P	Pn	03 39 54.8	+0.5
WHF	baz=353			*e*S	Sn	03 40 21.4	-0.8
WSF	**Szhu** baz=318	**2.04**	**317**	*e*S	Sn	03 40 20.1	-1.3
ETLH	**Xiulin Townshi** baz=348	**2.06**	**354**	*e*P	Pn	03 39 54.1	-0.1
ETLH	baz=348			*e*S	Sn	03 40 20.2	-2.1
RLNB	**Erlin** baz=323	**2.15**	**324**	*e*P	Pn	03 39 55.2	+0.1
RLNB	baz=323			*e*S	Sn	03 40 22.6	-1.2
TWT	**Tachien** baz=340	**2.16**	**346**	*e*P	Pn	03 39 56.9	+1.5
TWT	baz=340			*e*S	Sn	03 40 25.4	+1.1
TDCB	**Techi** baz=340	**2.16**	**346**	*e*P	Pn	03 39 56.4	+0.9
TDCB	baz=340			*e*S	Sn	03 40 24.9	+0.5
WTCT	**Ta-ch'eng** baz=326	**2.17**	**322**	*e*S	Sn	03 40 22.6	-1.6
WCHH	**Zhanghua** baz=331	**2.21**	**331**	*e*P	Pn	03 39 56.2	+0.4
WCHH	baz=331			*e*S	Sn	03 40 23.9	-1.2
WDGT	**Dungji** baz=306	**2.21**	**300**	*e*P	Pn	03 39 55.3	-0.5
WDGT	baz=306			*e*S	Sn	03 40 22.8	-2.3
TCU	**Taichung** baz=328	**2.22**	**334**	*e*P	Pn	03 39 56.4	+0.5
TCU	baz=328			*e*S	Sn	03 40 24.8	-0.4
WHP	**Taichung City** baz=341	**2.24**	**341**	*e*P	Pn	03 39 56.6	+0.3
WHP	baz=341			*e*S	Sn	03 40 25.8	-0.1
ENA	**Nanau** baz=4.0	**2.27**	**0**	*e*S	Sn	03 40 26.1	-0.3
NANB	**Nanao** baz=4.0	**2.27**	**0**	*e*P	Pn	03 39 56.9	+0.4
NANB	baz=4.0			*e*S	Sn	03 40 27.0	+0.5
NNSB	**Datong** baz=352	**2.30**	**352**	*e*P	Pn	03 39 57.7	+0.8
NNSB	baz=352			*e*S	Sn	03 40 26.6	-0.5
NNS	**Nan Shan** baz=352	**2.31**	**352**	*e*P	Pn	03 39 58.1	+1.0
NNS	baz=352			*e*S	Sn	03 40 27.4	0.0
VCHM	**Qimei** baz=302	**2.38**	**297**	*e*S	Sn	03 40 26.3	-2.2
PHUB	**P'eng-hu** baz=311	**2.42**	**305**	*e*P	Pn	03 39 57.5	-0.7
PHUB	baz=311			*e*S	Sn	03 40 26.7	-2.7
EOS1	**EOS1** baz=12	**2.42**	**9**	*e*P	Pn	03 39 59.3	+1.0
NSY	**Sanyi** baz=339	**2.43**	**339**	*e*P	Pn	03 39 58.8	+0.3
NDT	**Datong Townshi** baz=359	**2.46**	**355**	*e*P	Pn	03 39 59.6	+0.9
TWC	**Suao** baz=2.0	**2.46**	**2**	*e*P	Pn	03 39 59.5	+0.7
ENTT	**Nioudou** baz=356	**2.49**	**356**	*e*P	Pn	03 39 59.9	+0.8
ENTT	baz=356			*e*S	Sn	03 40 30.9	-0.2
YHNB	**Yeheng** baz=352	**2.54**	**353**	*e*P	Pn	03 40 00.8	+1.0
YHNB	baz=352			*e*S	Sn	03 40 32.4	+0.2
NSK	**Sanguang** baz=352	**2.54**	**352**	*e*P	Pn	03 40 01.1	+1.2
NSK	baz=352			*e*S	Sn	03 40 32.2	-0.2
NSTT	**Nanjuang** baz=345	**2.56**	**345**	*e*P	Pn	03 40 00.2	+0.1
NSTT	baz=345			*e*S	Sn	03 40 31.2	-1.5
TWE	**Neicheng** baz=353	**2.56**	**359**	*e*P	Pn	03 40 01.0	+1.0
LIOB	**Emei** baz=345	**2.58**	**345**	*e*P	Pn	03 39 59.9	-0.3

SLBB	Yuanshan	2.60	358	*e*P	Pn	03 40 02.0	+1.4
	baz=358						
SLBB				*e*S	Sn	03 40 33.6	0.0
	baz=358						
NWLT	Wulai	2.63	355	*e*P	Pn	03 40 02.2	+1.3
	baz=348						
NWLT				*e*S	Sn	03 40 33.9	-0.3
	baz=348						
TIPB	Shuangxi	2.81	2	*e*P	Pn	03 40 04.3	+1.1
	baz=8.0						
TIPB				*e*S	Sn	03 40 38.8	+0.5
	baz=8.0						
WFSB	Wu-fen Shan	2.91	1	*e*P	Pn	03 40 05.3	+0.9
	baz=351						
WFSB				*e*S	Sn	03 40 40.3	-0.1
	baz=351						
YM04	YM04	3.00	357	P	Pn	03 40 06.3	+0.8
	baz=356						
YM05	YM05	3.01	357	*e*P	Pn	03 40 06.1	+0.4
	baz=349						
VWUC	VWUC	3.52	324	*e*P	Pn	03 40 11.0	-1.1
	baz=324						
VWUC				*e*S	Sn	03 40 51.2	-3.1
	baz=324						
PTMZ	Houxiangcun	3.75	321	*e*S	Sn	03 40 56.8	-2.7
	baz=321						
PTTC	Pingtan	3.79	332	*e*P	Pn	03 40 14.6	-1.1
	baz=332						
PTTC				*e*S	Sn	03 40 57.0	-3.5
	baz=332						
MHZQ	Yeshan	4.65	328	*e*P	Pn	03 40 26.2	-0.6
	baz=329						
LYJJ	Jianjiangzhen	4.74	338	*e*P	Pn	03 40 27.2	-0.8
	baz=344						
XPSS	Dashiqiu	4.97	344	*e*P	Pn	03 40 29.9	-1.0
	baz=344						

IDC 08 03:43:50.0±4.0**, 11°.39S**×**167°.14E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/35**, mbtmp3.6**/4**, MS3.1**/3**, Ms1 3.1**/3**, ms1mx2.8**/30**, Error ellipse: s-maj=165.9km s-min=31.8km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.33	285	LR	LR	03 48 16.8	
	comp=Z,282nm,19.3s,baz=132,slow=36						
DZM	Mont Dzumac	10.64	183	LR	LR	03 49 45.2	
	comp=Z,34nm,21.6s,baz=26,slow=33						
WRA	Warramunga Arr	32.65	251	P	P	03 50 24.0	0.0
	1.0nm,0.7s,baz=83,slow=9.0,SNR=15						
ASAR	Alice Springs	33.86	244	P	P	03 50 34.8	+0.2
	0.4nm,0.7s,baz=72,slow=9.6,SNR=4.8						
PPT	Papeete	42.29	104	LR	LR	04 05 34.2	
	comp=Z,32nm,19.9s,baz=203,slow=31						
ILAR	Eielson Array	83.41	18	P	P	03 56 19.2	+0.3
	0.5nm,0.7s,baz=226,slow=6.7,SNR=6.0						
MKAR	Makanchi Array	94.71	317	P	P	03 57 12.6	-0.7
	0.1nm,0.5s,baz=81,slow=9.3,SNR=2.2						

IDC 08 03:46:36.2±1.8**, 11°.00S**×**165°.21E, h0^{km}, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.6**/36**, mbtmp3.7**/4**, ML4.1**/1**, MS3.6**/3**, Ms1 3.6**/3**, ms1mx3.1**/16**, Error ellipse: s-maj=52.2km s-min=33.5km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.07	174	Pn	Pn	03 49 15.0	-1.0
	1.3nm,0.3s,baz=354,slow=23,SNR=13						
WRA	Warramunga Arr	31.01	250	P	P	03 52 55.8	-0.1
	0.9nm,1.0s,baz=78,slow=8.2,SNR=4.9						
WRA				LR	LR	04 03 09.0	
	comp=Z,52nm,18.9s,baz=260,slow=32						
ASAR	Alice Springs	32.34	243	P	P	03 53 07.7	+0.1
	0.3nm,0.4s,baz=65,slow=10,SNR=5.3						
JNU	Nakatsue	54.74	325	LR	LR	04 17 37.6	
	comp=Z,48nm,18.2s,baz=296,slow=34						
KDAK	Kodiak Island	76.73	22	LR	LR	04 29 40.4	
	comp=Z,74nm,18.1s,baz=135,slow=34						
ILAR	Eielson Array	83.64	19	P	P	03 59 06.5	+0.2
	0.2nm,0.6s,baz=238,slow=4.9,SNR=4.4						

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*IDC **08** 03:54:39.6±0.7, 30°.44N×69°.54E, h0^{km}, mb4.2/21, mb1 4.3/23, mb1mx4.1/52, mbtmp4.2/23, ML3.8/2, MS3.2/12, Ms1 3.2/12, ms1mx3.1/42, Error ellipse: s-maj=17.6km s-min=13.9km az=37.0*

*ISCJB **08** 03:54:42.8±0.3, 30°.50N±0°.03×69°.65E±0°.03, h33^{km}, mb4.3/49, MS3.3/12, Error ellipse: s-maj=4.5km s-min=4.0km az=7.1*

*NEIC **08** 03:54:43.6±1.8, 30°.49N×69°.52E, h24^{km}±12^{km}, mb4.5/15, Error ellipse: s-maj=7.3km s-min=5.0km az=164.0*

*MOS **08** 03:54:43.3±1.1, 30°.56N×69°.57E, h31^{km}, mb4.6/17, Error ellipse: s-maj=8.5km s-min=5.0km az=96.0*

*NNC **08** 03:54:44.8±3.5, 31°.00N×68°.80E, h0^{km}, mb4.4, Error ellipse: s-maj=55.9km s-min=27.0km az=109.0*

*BJI **08** 03:54:44.4, 30°.57N×70°.07E, h10^{km}, mb4.3/33, mB4.8/20, Ms3.9/4, Ms7 3.6/5*

ISC 08 03:54:44.8±0.4**, 30°.48N**±0°.05×**69°.53E**±0°.05**, h35^{km}, n157,** σ**1^{s}.50**/158**, mb4.3**/49**, MS3.2**/12**, 22C-12D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	4.07	354	*e*Pn	Pn	03 55 45.7	+0.9
KBL	Kabul	4.07	354	*e*P	Pn	03 55 45.7	+0.9
NIL	Nilore	4.47	44	*e*Pn	Pn	03 55 51.3	+1.2
NIL	Nilore	4.47	44	*e*P	Pn	03 55 51.3	+1.2
CHGR	Chuyangaron	8.16	358	*e*Pn	Pn	03 56 41.1	+0.2
GAR	Garm	8.52	4	*e*Pn	Pn	03 56 46.0	+0.1
GAR	Garm	8.52	4	*e*P	Pn	03 56 46.0	+0.1
SFK	Sufi-Kurgan	10.05	18	⇑Pn	Pn	03 57 07.8	+0.9
	11nm,0.7s						
SFK				⇑Sn	Sn	03 58 58.3	-0.1
	22nm,1.4s						
KSH	Kashi	10.45	29	P	Pn	03 57 09.4	-2.8
KSH				pP		03 57 14.2	
KSH				S	Sn	03 59 01.0	-7.0
KSH				sS		03 59 07.5	
KSH				pmax	pmax		
	comp=Z,350nm,4.4s						
KSH				LR	LR		
	comp=N,710nm,10.1s						
KSH				LR	LR		
	comp=E,630nm,8.3s						
KSH				LR	LR		
	comp=Z,500nm,8.1s						
PYUN	Piuthan	11.99	98	*e*P	Pn	03 57 31.8	-1.6
	13nm,0.3s						
GEYT	Alibeck	12.01	311	LR	LR	04 03 22.2	
	comp=Z,62nm,20.8s,baz=95,slow=43						
AML	Almayashu	12.10	15	P	Pn	03 57 34.2	-0.9
	SNR=18						
NRN	Naryn	12.12	24	*e*Pn	Pn	03 57 34.4	-0.8
NRN	Naryn	12.12	24	*e*P	Pn	03 57 34.4	-0.8
MNAS	Manas	12.22	10	⇑Pn	Pn	03 57 35.4	-1.0
	5.3nm,0.6s						
MNAS				⇑Sn	Sn	03 59 48.3	-3.1
	12nm,1.2s						
MNAS	Manas	12.22	10	P	Pn	03 57 35.0	-1.5
UCH	Uchtor	12.39	18	P	Pn	03 57 38.0	-1.1
	SNR=22						
KZA	Kyzart	12.45	20	P	Pn	03 57 38.8	-1.2
	SNR=5.5						
BANOM	Banah	12.52	252	*i* Pn	Pn	03 57 38.7	-1.8
	SNR=11						
POO	Poona	12.53	161	*e*P	P	03 57 50.0	-1.9
DANN	Dangsing	12.59	96	*e*P	Pn	03 57 39.4	-2.3
	97nm,0.7s						
KOLN	Koldanda	12.59	99	*e*P	Pn	03 57 39.7	-2.0
	36nm,0.7s						
KK31	Karatay Array	12.62	3	*e*Pn	Pn	03 57 40.7	-1.2
KK31	Karatay Array	12.62	3	⇑Pn	Pn	03 57 40.3	-1.6
	1.2nm,0.4s,baz=183,slow=13,SNR=21						
KK31				⇓Sn	Sn	03 59 58.2	-2.9
	5.0nm,0.9s,baz=189,slow=22,SNR=6.6						
KK31	Karatay Array	12.62	3	*e*P	Pn	03 57 40.7	-1.2
KKAR	Karatay Array	12.62	3	*e*Pn	Pn	03 57 40.7	-1.2
KKAR	Karatay Array	12.62	3	*e*P	Pn	03 57 40.7	-1.2
EKS2	Erkin-Say	12.62	14	P	Pn	03 57 42.0	0.0
	SNR=5.8						
AAK	Ala-Archa	12.77	17	*e*Pn	Pn	03 57 43.2	-0.8
AAK	Ala-Archa	12.77	17	⇓Pn	Pn	03 57 42.3	-1.6
	8.6nm,0.9s						
AAK				⇓Sn	Sn	04 00 06.7	+1.8
	6.2nm,0.8s						
AAK	Ala-Archa	12.77	17	Pn	Pn	03 57 43.4	-0.6
AAK	Ala-Archa	12.77	17*c*	*e*P	Pn	03 57 49.1	+5.1
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AAK	Ala-Archa	12.77	17	Pn	Pn	03 57 43.0	-1.0
	comp=Z,0.8nm,0.3s,baz=195,slow=8.1,SNR=14						
AAK				LR	LR	04 03 05.6	
	comp=Z,80nm,18.7s,baz=197,slow=40						
MDH	Madha	12.79	249	Pn	Pn	03 57 40.7	-3.5
MSFE	Esma-Masafi	12.87	250	Pn	Pn	03 57 43.9	-1.5
UOSS	Minazif	13.03	248	*e*Pn	Pn	03 57 46.7	-0.8
ASHO	Ashiyiah	13.27	247	Pn	Pn	03 57 49.2	-1.6
TKM2	Tokmak 2	13.33	20	P	Pn	03 57 51.5	-0.2
	SNR=7.6						
TKM2	Tokmak 2	13.33	20	⇓Pn	Pn	03 57 50.8	-0.9
	comp=Z,6.3nm,0.8s						
TKM2				⇑Sn	Sn	04 00 18.2	-0.5
	comp=Z,2.5nm,0.8s						
TKM2	Tokmak 2	13.33	20	P	Pn	03 57 50.8	-0.9
NAZ	Nazwa, Dubai	13.44	249	Pn	Pn	03 57 52.4	-0.7
KKN	Kakani	14.03	97	*e*P	Pn	03 57 58.4	-2.9
	comp=Z,21nm,0.6s						
PKIN	Phulchoki	14.18	98	*e*P	Pn	03 57 59.9	-3.5
	comp=Z,13nm,0.6s						
PKI	Pulchoki	14.19	98	*e*P	Pn	03 58 00.7	-3.0
	comp=Z,14nm,0.6s						
GUN	Gumba	14.51	96	*e*P	Pn	03 58 04.7	-3.3
	comp=Z,35nm,0.4s						
JIRN	Jiri	14.84	97	*e*P	Pn	03 58 09.1	-3.4
	comp=Z,39nm,0.4s						
RAMN	Ramite	15.38	99	*e*P	Pn	03 58 15.8	-3.8
	comp=Z,6.3nm,0.4s						
HYB	Hyderabad	15.39	146	*i* P	P	03 58 26.0	+2.3
HYB				*e*S	Sn	04 01 11.0	+2.2
MAKZ	Makanchi	18.94	27	*e*P	P	03 59 01.7	-1.1
	comp=Z,9.1nm,1.3s						
MAKZ	Makanchi	18.94	27	*e*P	P	03 59 01.7	-1.1
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MK01	Makanchi Array	19.04	28	*e*P	P	03 59 03.3	-0.6
MK31	Makanchi Array	19.05	28	*e*P	P	03 59 03.3	-0.7
MK31	Makanchi Array	19.05	28	*e*P	P	03 59 03.3	-0.7
MKAR	Makanchi Array	19.05	28	*e*P	P	03 59 03.6	-0.4
	comp=Z,15nm,0.7s						
MKAR	Makanchi Array	19.05	28	P	P	03 59 03.9	-0.1
	comp=Z,0.2nm,0.3s,baz=210,slow=13,SNR=22						
MKAR				LR	LR	04 07 57.0	
	comp=Z,23nm,18.9s,baz=202,slow=42						
WMQ	Urumqi	19.61	42	*e*P	Pn	03 59 13.1	+1.3
WMQ				pP	pP	03 59 17.6	-2.2
WMQ				sP	sP	03 59 22.4	-2.0
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.5s						
WMQ				LR	LR		
	comp=Z,230nm,19.9s						
WMQ				LR	LR		
	comp=Z,170nm,23.5s						
WMQ				LR	LR		
	comp=Z,160nm,17.7s						
WMQ	Urumqi	19.61	42	*e*P	P	03 59 09.9	-0.3
	comp=Z,22nm,1.5s						
WMQ	Urumqi	19.61	42	*e*P	P	03 59 09.9	-0.3
WMQ				pmax	pmax		
	comp=Z,22nm,1.5s						
ABKAR	Akbulak array	20.11	341	*e*P	P	03 59 16.1	+0.6
SEKA	Sheki	20.97	307	P	P	03 59 24.9	-0.1
KURBB	Kurchatov Arra	21.22	16	P	P	03 59 27.6	+0.1
	comp=Z,3.8nm,0.7s,baz=208,slow=9.7,SNR=16						
KURK	Kurchatov	21.33	16	*e*P	P	03 59 28.8	+0.2
	comp=Z,5.2nm,0.8s						
KURK	Kurchatov	21.33	16*c*	*e*P	P	03 59 30.1	+1.5
KURK				pmax	pmax		
	comp=Z,13nm,1.7s						
GANJ	Ganja	21.38	305	P	P	03 59 30.7	+1.4
NAX	Nakhchivan	21.50	300	P	P	03 59 32.4	+1.7
AKTO	Aktyubinsk	21.72	340	P	P	03 59 33.7	+0.8
	comp=Z,6.9nm,0.6s,baz=157,slow=12,SNR=21						
AKTO				LR	LR	04 09 34.6	
	comp=Z,54nm,22.0s,baz=152,slow=41						
GNI	Garni	22.35	302	*e*P	P	03 59 40.8	+0.9
	comp=Z,75nm,1.7s						
GNI	Garni	22.35	302*c*	*e*P	P	03 59 40.9	+1.0
GNI				pmax	pmax		
	comp=Z,230nm,1.7s						
GNI	Garni	22.35	302	P	P	03 59 43.0	+3.1
	comp=Z,9.1nm,0.8s,baz=162,slow=4.6,SNR=10						
GNI				LR	LR	04 09 33.0	
	comp=Z,24nm,18.8s,baz=102,slow=40						
BRVK	Borovoye	22.57	1	*e*P	P	03 59 42.1	+0.2
	comp=Z,8.8nm,0.8s						
BRVK	Borovoye	22.57	1*c*	*e*P	P	03 59 44.7	+2.8
BRVK				pmax	pmax		
	comp=Z,14nm,1.3s						
DGZ	Jazzator, Alta	23.47	30*d*	*i*P	P	03 59 51.7	+0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SIRT	Sirnak	23.48	295	*e*P	P	03 59 52.7	+1.2
	comp=Z,84nm,1.3s						
ZEI	Tsey	23.85	308	*e*P	P	03 59 55.6	+0.5
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	Khabaz	24.89	309	P	P	04 00 05.0	+0.7
KBZ	Khabaz	24.89	309	P	P	04 00 05.0	+0.7
	comp=Z,3.1nm,0.7s,baz=126,slow=6.9,SNR=9.1						
KIV	Kislovodsk	25.12	310	*e*P	P	04 00 07.0	+0.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,24nm,15.0s						
ZAA0	Zalesovo Array	25.93	21	*e*P	P	04 00 14.9	+1.3
	comp=Z,8.9nm,0.8s						
ZALV	Zalesovo Beam	25.93	21	P	P	04 00 13.9	+0.3
	comp=Z,7.0nm,0.5s,baz=216,slow=7.3,SNR=41						
ZALV				LR	LR	04 11 41.7	
	comp=Z,43nm,20.2s,baz=268,slow=39						
NVS	Novosibirsk	26.25	18	*e*P	P	04 00 17.8	+1.3
GTA	Gaotai	26.28	62	⇓P	P	04 00 19.5	+2.4
GTA				pP	pP	04 00 24.3	-3.2
GTA				sP	sP	04 00 26.9	-5.0
GTA				S	S	04 04 50.6	+3.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,140nm,7.3s						
GTA				LR	LR		
	comp=Z,180nm,19.4s						
GTA				LR	LR		
	comp=Z,230nm,18.1s						
GTA				LR	LR		
	comp=Z,140nm,18.7s						
SOC	Sochi	27.00	307	*e*P	P	04 00 26.0	+2.6
SOC				*e*		04 01 12.6	
SOC				pmax	pmax		
	comp=Z,17nm,0.7s						
ARU	Arti	27.06	347*c*	*i*P	P	04 00 25.1	+1.3
ARU						04 01 11.1	
ARU				SS	SS	04 06 26.2	-27
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LZH	Lanzhou	29.13	70	*e*P	P	04 00 45.7	+3.0
LZH				pP	pP	04 00 50.0	-3.1
LZH				sP	sP	04 00 52.2	-5.3
LZH				*e*PP	PnPn	04 01 38.1	+2.3
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,82nm,4.3s						
CMAR	Chiang Mai Arr	29.23	107	P	P	04 00 44.2	+0.6
	comp=Z,2.0nm,0.3s,baz=306,slow=7.6,SNR=5.4						
CMAR				LR	LR	04 13 59.1	
	comp=Z,38nm,18.7s,baz=315,slow=40						
KMI	Kunming	29.79	92	P	P	04 00 49.3	+0.6
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,120nm,5.0s						
BRTR	Keskin Array B	30.61	297	P	P	04 00 56.3	+0.6
	comp=Z,1.2nm,0.8s,baz=111,slow=9.5,SNR=8.0						
BRTR				LR	LR	04 14 51.1	
	comp=Z,36nm,19.0s,baz=94,slow=40						
ZAK	Zakamensk	32.09	42	*e*P	P	04 01 09.8	+1.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NONG	Nongkai	32.91	104	P	P	04 01 27.5	+12
	comp=Z,1.3nm,1.9s						
SONM	Songino Array	33.04	48	P	P	04 01 19.6	+2.6
	comp=Z,0.8nm,0.6s,baz=250,slow=8.8,SNR=6.4						
OBN	Obninsk	33.98	326	*i* P	P	04 01 24.7	-0.1
OBN				*i*		04 02 44.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,134nm,18.0s						
OBN	Obninsk	33.98	326	LR	LR	04 18 28.8	
	comp=Z,38nm,19.8s,baz=174,slow=42						
PRGR	Permogore	34.88	340	*e*P	P	04 01 29.3	-3.3
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC	Hu-ho-hao-te	35.39	61	*e*P	P	04 01 38.0	+0.6
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.3s						
AKASG	Malin Array Be	36.08	316	P	P	04 01 42.9	-0.2
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	Malin Array Be	36.08	316	P	P	04 01 42.9	-0.2
	comp=Z,3.1nm,0.8s,baz=94,slow=7.3,SNR=10						
AKBB	Malin Array Si	36.08	316	*e*P	P	04 01 42.8	-0.3
	comp=Z,5.8nm,0.8s						
AKBB	Malin Array Si	36.08	316	*e*P	P	04 01 42.8	-0.3
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIEV	Kiev	36.09	316	*e*P	P	04 01 42.8	-0.3
	comp=Z,5.5nm,0.7s						
KIEV	Kiev	36.09	316	⇓*i*P	P	04 01 42.8	-0.3
KIEV	Kiev	36.09	316	*e*P	P	04 01 42.8	-0.3
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AK11	Malin Array Si	36.11	316	*e*P	P	04 01 43.3	0.0
PLOR	Plostina	36.57	307	⇑*i*P	P	04 01 47.8	+0.4
PLOR	Plostina	36.57	307	⇑P	P	04 01 47.8	+0.4
MLR	Muntele Rosu	37.00	306	*e*P	P	04 01 51.4	+0.3
	comp=Z,6.9nm,0.8s						
MLR	Muntele Rosu	37.00	306	⇑*i*P	P	04 01 52.4	+1.3
MLR	Muntele Rosu	37.00	306	⇑P	P	04 01 52.4	+1.3
MLR	Muntele Rosu	37.00	306	P	P	04 01 52.8	+1.7
	comp=Z,6.1nm,0.8s,baz=102,slow=7.1,SNR=12						
BIZ	Bicaz	37.13	309	⇑*i*P	P	04 01 52.2	+0.1
DOPR	Dopca	37.46	307	⇑*i*P	P	04 01 55.4	+0.5
VOIR		37.62	306	⇓*i*P	P	04 01 56.4	+0.1
VOIR		37.62	306	⇓P	P	04 01 56.4	+0.1
BURAR	Bucovina Array	37.85	310	⇓*i*P	P	04 01 58.1	-0.2
BURAR	Bucovina Array	37.85	310	⇓P	P	04 01 58.1	-0.2
BUR04	Bucovina Ar. S	37.86	310	*e*P	P	04 01 58.7	+0.4
BUR08	Bucovina Ar. S	37.87	310	*e*P	P	04 01 58.8	+0.3
ARR	Arges	37.90	306	⇑*i*P	P	04 01 59.5	+0.8
WHN	Wuhan	38.42	78	P	P	04 02 00.5	-2.6
TMCR	Tamitsa	39.08	339	*e*P	P	04 02 07.7	-0.5
TMCR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
DRGR		39.41	308	⇑*i*P	P	04 02 12.3	+1.0
DRGR		39.41	308	⇑P	P	04 02 12.3	+1.0
NRIK	Noril'sk	40.25	10	LR	LR	04 19 38.6	
	comp=Z,73nm,19.4s,baz=195,slow=37						
PSZ	Piszkesteto	41.45	309	*e*P	P	04 02 28.5	+0.3
	comp=Z,7.4nm,1.1s						
PSZ	Piszkesteto	41.45	309	*e*P	P	04 02 28.5	+0.3
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NJ2	Nanjing	41.90	75	*e*P	P	04 02 32.2	+0.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
FIA1	FINESS Array S	41.95	330	*e*P	P	04 02 31.2	-0.7
FINES	FINESS Array B	41.95	330	P	P	04 02 32.2	+0.3
	comp=Z,1.9nm,0.8s,baz=134,slow=8.2,SNR=7.3						
FINES				LR	LR	04 22 10.3	
	comp=Z,76nm,18.1s,baz=118,slow=39						
APA	Apatity	42.80	341	⇓*i*P	P	04 02 39.2	+0.4
APA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,300nm,17.0s						
GEA0	GERESS Array S	45.63	310	*e*P	P	04 03 01.8	-0.1
GERES	GERESS Array B	45.63	310	P	P	04 03 02.3	+0.4
	comp=Z,0.5nm,0.6s,baz=93,slow=5.9,SNR=5.7						
ARCES	ARCESS Array B	46.31	340	*e*P	P	04 03 06.5	-0.2
ARCES	ARCESS Array B	46.31	340	P	P	04 03 07.5	+0.8
	comp=Z,3.5nm,0.5s,baz=135,slow=8.1,SNR=45						
HFS	Hagfors	47.19	326	P	P	04 03 13.9	+0.1
	comp=Z,4.9nm,0.9s,baz=134,slow=8.5,SNR=6.0						
NB2	NORSAR Subarra	48.58	326	P	P	04 03 23.7	-0.9
	comp=Z,0.7nm,0.6s,baz=102,slow=7.9						
NOA	NORSAR Array B	48.58	326	P	P	04 03 23.7	-0.9
	comp=Z,1.5nm,0.8s,baz=102,slow=7.8,SNR=7.8						
NOA				LR	LR	04 27 19.4	
	comp=Z,52nm,20.4s,baz=100,slow=40						
KLR	Kul'dur	49.84	49	*i* P	P	04 03 28.4	-6.0
TIXI	Tiksi	51.82	20*c*	*e*P	P	04 03 49.0	+0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	Tiksi	51.82	20	P	P	04 03 48.6	-0.2
	comp=Z,2.7nm,0.2s,baz=309,slow=2.1,SNR=8.7						
EKA	Eskdalemuir Ar	55.88	319	P	P	04 04 18.6	-0.2
	comp=Z,1.4nm,0.5s,baz=91,slow=7.2,SNR=18						
YSS	Yuzh-Sakhalins	57.43	51	*e*P	P	04 04 36.0	+6.1
TORD	Torodi Ar. Bea	64.45	271	P	P	04 05 17.1	-1.0
	comp=Z,2.0nm,0.9s,baz=49,slow=6.4,SNR=9.7						
LBTB	Lobatse	69.40	222	*e*P	P	04 05 49.8	+0.4
	comp=Z,23nm,1.5s						
LBTB	Lobatse	69.40	222	*e*P	P	04 05 49.8	+0.4
LBTB				pmax	pmax		
	comp=Z,23nm,1.5s						
BOSA	Boshof	72.36	220	P	P	04 06 08.0	+0.6
	comp=Z,4.3nm,0.9s,baz=16,slow=4.3,SNR=6.5						
WRA	Warramunga Arr	79.95	120	P	P	04 06 50.8	+0.1
	comp=Z,1.2nm,0.6s,baz=320,slow=5.0,SNR=26						
INK	Inuvik	80.03	8	*e*P	P	04 06 51.6	+1.4
	comp=Z,13nm,1.8s						
INK	Inuvik	80.03	8	*e*P	P	04 06 51.6	+1.4
INK				pmax	pmax		
	comp=Z,13nm,1.8s						
CAST	Castle Rocks	80.77	18	*e*P	P	04 06 55.4	+1.0
	comp=Z,6.5nm,0.8s						
ILAR	Eielson Array	80.89	15	P	P	04 06 54.9	-0.1
	comp=Z,0.5nm,0.6s,baz=312,slow=5.2,SNR=8.3						
ASAR	Alice Springs	81.90	123	P	P	04 07 01.0	0.0
ASAR	Alice Springs	81.90	123	P	P	04 07 01.0	0.0
	comp=Z,1.0nm,0.5s,baz=307,slow=5.5,SNR=11						
YKA	Yellowknife Ar	87.29	2	P	P	04 07 28.0	+0.4
YKA	Yellowknife Ar	87.29	2	P	P	04 07 28.0	+0.4
	comp=Z,1.3nm,0.7s,baz=348,slow=5.1,SNR=27						
YKB5	Yellowknife Ar	87.29	2	*e*P	P	04 07 28.3	+0.7
OTAV	Otavalo	136.88	309	*e*PKPdf	PKiKP	04 14 06.0	-0.9
OTAV	Otavalo	136.88	309	*e*PKIKP	PKiKP	04 14 06.0	-0.9
NNA	Nana	143.85	293*c*	*i*PKIKP	PKPbc	04 14 14.8	-0.1

IDC 08 03:56:04.1±4.3**, 61°.98S**×**35°.46W, h0^{km}, mb3.7**/1**, mb1 3.7**/1**, mb1mx3.5**/21**, mbtmp3.7**/1**, Error ellipse: s-maj=262.5km s-min=69.0km az=154.0, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	80.36	37	P	P	04 08 17.0	+0.1
	0.6nm,0.9s,baz=210,slow=5.7,SNR=4.7						
YKA	Yellowknife Ar	137.68	317	PKP	PKPdf	04 15 28.5	+0.1
	0.2nm,0.5s,baz=139,slow=2.4,SNR=3.9						
MKAR	Makanchi Array	142.33	84	PKP	PKPdf	04 15 36.4	-1.0
	0.1nm,0.5s,baz=232,slow=1.7,SNR=3.8						
INK	Inuvik	147.45	317	PKPbc	PKPbc	04 15 47.0	-1.1
	0.7nm,0.5s,baz=137,slow=1.6,SNR=7.6						
ILAR	Eielson Array	150.50	306	PKPbc	PKPbc	04 15 55.8	-0.2
	0.7nm,0.8s,baz=140,slow=2.5,SNR=11						

IDC 08 04:03:56.4±1.9**, 10°.41S**×**164°.86E, h0^{km}, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/38**, mbtmp3.6**/4**, ML3.5**/1**, Error ellipse: s-maj=55.5km s-min=35.8km az=125.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.70	173	Pn	Pn	04 06 45.3	+0.6
	0.3nm,0.3s,baz=59,slow=12,SNR=4.9						
H11S2	WAKE ISLAND Hy	28.77	4	T	T	04 40 30.5	
	baz=181,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	28.78	4	T	T	04 40 30.5	

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      baz=181,slow=76,SNR=4.3
H11S1 WAKE ISLAND Hy 28.79   4  T          T         04 40 31.7
      baz=181,slow=76,SNR=4.4
H11N1 WAKE ISLAND Hy 30.00   4  T          T         04 42 00.7
      baz=182,slow=76,SNR=13
H11N3 WAKE ISLAND Hy 30.00   4  T          T         04 42 00.7
      baz=182,slow=76,SNR=18
H11N2 WAKE ISLAND Hy 30.02   4  T          T         04 42 00.7
      baz=182,slow=76,SNR=17
WRA   Warramunga Arr   30.90 249 P         P         04 10 15.3 +0.3
      0.5nm,0.9s,baz=82,slow=8.9,SNR=3.4
ASAR  Alice Springs    32.31 242 P         P         04 10 27.0 -0.5
      0.4nm,0.7s,baz=72,slow=9.1,SNR=2.9
ILAR  Eielson Array    83.19  19 P         P         04 16 24.1  0.0
      0.2nm,0.7s,baz=223,slow=4.9,SNR=3.2
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*ISCJB **08** 04:07:40.9±1.1, 10°.4S±0°.1×165°.21E±0°.10, h10^{km}, mb3.4/4, Error ellipse: s-maj=19.1km s-min=12.2km az=25.3*

*IDC **08** 04:07:41.2±1.8, 10°.27S×165°.18E, h0^{km}, mb3.5/5, mb1 3.8/6, mb1mx3.6/32, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=52.4km s-min=29.5km az=121.0*

ISC 08 04:07:42.5±1.3**, 10°.4S**±0°.1×**165°.2E**±0°.1**, h10^{km}, n14, σ0^{s}.92**/6**, mb3.3**/4**, 1D, Santa Cruz Islands**

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Code  Station Name      Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC        h  m  s   ISC
HNR   Honiara           5.29 279 Pn        Pn        04 09 05.1 +3.5
      16nm,0.3s,baz=168,slow=9.3,SNR=2.3
HNR                              Sn        Sn        04 10 02.8 +0.2
      14nm,0.3s,baz=221,slow=19,SNR=1.6
DZM   Mont Dzumac      11.72 174 Pn        Pn        04 10 29.8 -0.2
      0.2nm,0.3s,baz=120,slow=20,SNR=3.4
CTA   Charters Tower   20.70 240 P         Pn        04 12 23.6 -1.8
      3.7nm,0.9s,baz=53,slow=10,SNR=3.4
H11S2 WAKE ISLAND Hy 28.69   3  T          T         04 44 18.0
      baz=184,slow=76,SNR=23
H11S3 WAKE ISLAND Hy 28.69   3  T          T         04 44 19.1
      baz=184,slow=76,SNR=31
H11S1 WAKE ISLAND Hy 28.71   3  T          T         04 44 16.4
      baz=184,slow=76,SNR=24
H11N1 WAKE ISLAND Hy 29.91   3  T          T         04 45 52.0
      baz=183,slow=76,SNR=22
H11N3 WAKE ISLAND Hy 29.92   3  T          T         04 45 52.0
      baz=183,slow=76,SNR=18
H11N2 WAKE ISLAND Hy 29.93   3  T          T         04 45 54.5
      baz=183,slow=76,SNR=18
WRA   Warramunga Arr   31.26 249 P         P         04 14 02.2 -0.6
      0.2nm,0.6s,baz=79,slow=9.0,SNR=2.9
ASAR  Alice Springs    32.66 242 P         P         04 14 16.1 +1.0
      0.3nm,0.6s,baz=65,slow=10.0,SNR=3.3
SONM  Songino Array    77.81 324 P         P         04 19 39.4 -0.8
      0.1nm,0.3s,baz=116,slow=6.6,SNR=2.8
ILAR  Eielson Array    83.02  19 P         P         04 20 08.4 +0.7
      0.9nm,1.1s,baz=213,slow=6.3,SNR=3.2
MAKZ  Makanchi         92.88 317 ⇓Lg       Lg        04 20 14.8
      4.1nm,1.4s
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*IDC **08** 04:09:03.2±1.8, 10°.74S×164°.33E, h0^{km}, mb3.5/3, mb1 3.9/6, mb1mx3.7/31, mbtmp3.8/6, ML4.1/3, Error ellipse: s-maj=40.8km s-min=32.1km az=135.0*

*ISCJB **08** 04:09:04.7±1.4, 10°.9S±0°.1×164°.3E±0°.2, h24^{km}, mb3.4/3, Error ellipse: s-maj=24.8km s-min=17.7km az=138.9*

ISC 08 04:09:07.0±1.5**, 10°.8S**±0°.2×**164°.1E**±0°.1**, h24^{km}, n6, σ1^{s}.97**/7**, mb3.4**/3**, Santa Cruz Islands region**

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Code  Station Name      Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC        h  m  s   ISC
HNR   Honiara           4.35 288 Pn        Pn        04 10 12.7 +0.9
      28nm,0.3s,baz=128,slow=19,SNR=4.1
HNR                              Sn        Sb        04 11 12.4 -2.6
      9.8nm,0.3s,baz=127,slow=20,SNR=3.1
DZM   Mont Dzumac      11.41 169 Pn        Pn        04 11 47.3 -1.4
      0.8nm,0.3s,baz=348,slow=19,SNR=3.7
CTA   Charters Tower   19.54 240 P         Pn        04 13 35.4 +0.9
      0.2nm,0.3s,baz=90,slow=10,SNR=3.9
WRA   Warramunga Arr   30.09 249 P         P         04 15 17.1 +2.1
      0.2nm,0.3s,baz=80,slow=9.4,SNR=3.9
ASAR  Alice Springs    31.50 242 P         P         04 15 27.9 +0.5
      0.2nm,0.4s,baz=61,slow=10.0,SNR=3.4
ILAR  Eielson Array    83.80  19 P         P         04 21 33.6 -0.5
      0.3nm,0.7s,baz=234,slow=5.8,SNR=4.1
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*IDC **08** 04:13:18.5±0.9, 11°.00S×165°.30E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.9/27, mbtmp3.9/9, ML4.4/2, Error ellipse: s-maj=25.9km s-min=23.8km az=108.0*

*ISCJB **08** 04:13:21.5±0.8, 11°.23S±0°.07×165°.2E±0°.1, h31^{km}, mb3.7/7, Error ellipse: s-maj=18.2km s-min=9.5km az=162.0*

ISC 08 04:13:23.3±0.9**, 11°.12S**±0°.09×**165°.2E**±0°.1**, h31^{km}, n15, σ1^{s}.53**/11**, mb3.8**/7**, Santa Cruz Islands**

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Code  Station Name      Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC        h  m  s   ISC
HNR   Honiara           5.41 288 Pn        Pn        04 14 43.1 +1.3
      12nm,0.3s,baz=135,slow=11,SNR=1.8
HNR                              Sn        Sn        04 15 40.6 -2.5
      12nm,0.3s,baz=120,slow=20,SNR=2.7
DZM   Mont Dzumac      10.96 174 Pn        Pn        04 15 58.5 +0.3
      2.2nm,0.3s,baz=351,slow=22,SNR=19
DZM                              Sn        Sn        04 17 57.9 -1.9
      0.3nm,0.3s,baz=288,slow=19,SNR=2.1
URZ   Urewera          29.07 160 P         P         04 19 22.3 +1.4
      3.3nm,0.6s,baz=310,slow=7.9,SNR=5.4
H11S2 WAKE ISLAND Hy 29.46   3  T          T         04 49 57.7
      baz=183,slow=76,SNR=9.0
H11S3 WAKE ISLAND Hy 29.46   3  T          T         04 49 54.0
      baz=183,slow=76,SNR=7.8
H11S1 WAKE ISLAND Hy 29.48   3  T          T         04 50 00.0
      baz=183,slow=76,SNR=8.2
H11N1 WAKE ISLAND Hy 30.68   3  T          T         04 51 31.4
      baz=182,slow=76,SNR=7.4
H11N3 WAKE ISLAND Hy 30.69   3  T          T         04 51 30.9
      baz=182,slow=76,SNR=9.0
H11N2 WAKE ISLAND Hy 30.70   3  T          T         04 51 32.6
      baz=182,slow=76,SNR=7.6
WRA   Warramunga Arr   30.93 250 P         P         04 19 38.5 +0.8
      0.3nm,0.5s,baz=79,slow=8.5,SNR=7.3
ASAR  Alice Springs    32.26 243 P         P         04 19 49.3 -0.1
      0.6nm,0.5s,baz=69,slow=10,SNR=6.6
SONM  Songino Array    78.39 324 P         P         04 25 21.9 +0.9
      0.5nm,1.0s,baz=152,slow=6.5,SNR=2.3
ILAR  Eielson Array    83.76  19 P         P         04 25 48.1 -1.0
      0.6nm,0.8s,baz=232,slow=5.1,SNR=6.9
NVAR  Mina Array Bea   86.50  50 P         P         04 26 02.2 -1.6
      0.2nm,0.3s,baz=303,slow=5.3,SNR=2.3
MKAR  Makanchi Array   93.19 317 P         P         04 26 35.3 +0.6
      0.2nm,0.7s,baz=101,slow=3.9,SNR=2.8
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*IDC **08** 04:23:35.6±0.8, 10°.52S×165°.65E, h0^{km}, mb4.3/13, mb1 4.4/15, mb1mx4.3/33, mbtmp4.4/15, ML5.2/2, Error ellipse: s-maj=21.0km s-min=17.4km az=92.0*

*NEIC **08** 04:23:37.6±0.2, 10°.48S×165°.62E, h10^{km}, mb4.7/15, Error ellipse: s-maj=7.3km s-min=4.7km az=81.0*

*ISCJB **08** 04:23:39.2±0.3, 10°.61S±0°.04×165°.63E±0°.05, h31^{km}, mb4.5/32, MS5.4/2, Error ellipse: s-maj=7.9km s-min=4.3km az=152.9*

ISC 08 04:23:40.8±0.5**, 10°.56S**±0°.06×**165°.72E**±0°.07**, h31^{km}, n88, σ1^{s}.07**/89**, mb4.5**/33**, 2C, Santa Cruz Islands**

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Code  Station Name      Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC        h  m  s   ISC
HNR   Honiara           5.79 281 i P       Pn        04 25 05.0 +0.4
HNR                              eS        Sn        04 26 11.0 +1.0
HNR   Honiara           5.79 281 ePn       Pn        04 25 04.1 -0.5
HNR                              Sn        Sn        04 26 11.2 +1.1
HNR   Honiara           5.79 281 Pn        Pn        04 25 03.8 -0.8
      91nm,0.3s,baz=212,slow=2.6,SNR=36
HNR                              Sn        Sn        04 26 11.1 +1.1
      38nm,0.3s,baz=210,slow=20,SNR=2.5
MARNC Mare, Loyalty    11.09 169 ePn       Pn        04 26 17.8 +0.6
DZM   Mont Dzumac      11.47 177 ePn       Pn        04 26 23.1 +0.6
DZM                              Sn        Sn        04 28 29.5 -0.2
DZM   Mont Dzumac      11.47 177 Pn        Pn        04 26 22.6  0.0
      13nm,0.3s,baz=357,slow=13,SNR=103
DZM                              Sn        Sn        04 28 29.5 -0.2
      1.7nm,0.3s,baz=22,slow=19,SNR=4.2
ONTNC Ouen Toro        11.70 177 ePn       Pn        04 26 26.2 +0.5
PINNC Pines Island,    12.10 172 ePn       Pn        04 26 32.2 +1.1
EIDS  Eidsvold         20.23 221 eP        P         04 28 12.8 -0.7
      19nm,0.9s
CTA   Charters Tower   21.00 241 P         P         04 28 21.2 -0.7
      9.7nm,0.7s,baz=42,slow=18,SNR=9.9
CTAO  Charters Tower   21.00 241 eP        P         04 28 21.5 -0.4
ARMA  Armidale         23.71 212 eP        P         04 28 49.9 -0.3
      14nm,1.1s
H11S2 WAKE ISLAND Hy 28.88   2  T          T         04 59 39.7
      baz=180
H11S3 WAKE ISLAND Hy 28.89   2  T          T         04 59 44.4
      baz=180
H11S1 WAKE ISLAND Hy 28.90   2  T          T         04 59 40.1
      baz=180
OMRZ  Omania           29.05 163 P         P         04 29 42.1 +3.8
HAZ   Te Kaha          29.17 160 P         P         04 29 40.8 +1.5
RUGZ  Raukumara Rang   29.33 160 P         P         04 29 40.8 -0.1
PKGZ  Pakihiroa        29.39 160 P         P         04 29 41.8 +0.4
URZ   Urewera          29.41 162 eP        P         04 29 42.3 +0.8
      31nm,0.9s
URZ   Urewera          29.41 162 P         P         04 29 42.2 +0.8
      10nm,0.3s,baz=337,slow=3.3,SNR=13
URZ   Urewera          29.41 162 P         P         04 29 42.3 +0.8
WMGZ  Waiomatatini S   29.45 159 P         P         04 29 41.6 -0.2
MWZ   Matawai          29.61 161 P         P         04 29 43.8 +0.5
TWGZ  Tauwhareparae    29.62 160 P         P         04 29 43.8 +0.5
RTZ   Ruatahuna        29.70 162 P         P         04 29 45.0 +0.9
RAGZ  Rawiri           29.73 161 P         P         04 29 45.2 +0.8
MRHZ  Matea Rd         29.74 163 P         P         04 29 46.5 +2.1
NGZ   Ngauruhoe        29.83 164 P         P         04 29 47.8 +2.4
MTHZ  Maungataniwha    29.88 162 P         P         04 29 46.6 +0.9
SNGZ  Shannon Statio   29.96 162 P         P         04 29 47.0 +0.6
CNGZ  Carnagh Statio   29.97 160 P         P         04 29 46.7 +0.3
RAHZ  Arahi            30.01 162 P         P         04 29 47.8 +1.0
RIGZ  Rimuhau          30.03 161 P         P         04 29 47.3 +0.3
BKZ   Black Stump Fm   30.07 163 eP        P         04 29 48.3 +1.0
      33nm,0.7s
BKZ   Black Stump Fm   30.07 163 P         P         04 29 48.5 +1.2
H11N1 WAKE ISLAND Hy 30.10   2  T          T         05 01 13.9
      baz=181
H11N3 WAKE ISLAND Hy 30.11   2  T          T         05 01 16.4
      baz=181
H11N2 WAKE ISLAND Hy 30.12   2  T          T         05 01 09.4
      baz=181
BHHZ  Black Hill Sta   30.25 164 P         P         04 29 50.6 +1.6
KWHZ  Kaweka Forest    30.29 163 P         P         04 29 49.9 +0.6
MCHZ  McNeill Hill     30.38 163 P         P         04 29 51.4 +1.3
MHGZ  Mahia Peninsul   30.48 161 P         P         04 29 50.7 -0.2
STKA  Stephens Creek   30.77 223 P         P         04 29 54.1 +0.5
      3.1nm,0.6s,baz=56,slow=11,SNR=6.8
PXZ   Pawanui          30.98 163 P         P         04 29 54.9 -0.4
BFZ   Birch Farm       31.41 165 eP        P         04 29 59.5 +0.4
      32nm,0.6s
WRAB  Tennant Creek    31.61 249 eP        P         04 30 00.2 -1.0
      2.1nm,0.7s
WB2   Warramunga Arr   31.61 249 eP        P         04 30 00.2 -1.0
WRA   Warramunga Arr   31.62 249 P         P         04 29 58.9 -2.4
      2.2nm,0.8s,baz=80,slow=9.3,SNR=15
THZ   Tophouse         31.72 170 eP        P         04 30 02.6 +0.7
      13nm,0.9s
LTZ   Lake Taylor      32.61 171 eP        P         04 30 11.4 +1.7
      13nm,0.8s
ASAR  Alice Springs    32.98 243 P         P         04 30 10.9 -2.3
      1.9nm,0.7s,baz=72,slow=9.6,SNR=16
RPZ   Rata Peaks       33.36 173 P         P         04 30 14.9 -1.3
      6.1nm,0.6s,baz=22,slow=16,SNR=4.2
BBOO  Buckleboo        35.14 226 eP        P         04 30 31.4 -0.3
      14nm,0.9s
WHZ   Wether Hill Ro   35.26 177 eP        P         04 30 34.0 +1.4
POHA  Pohakuloa        48.62  52 eP        P         04 32 21.6 -0.6
SSE   Sheshan          59.48 316 eP        P         04 33 39.9 -1.3
      7.9nm,0.6s
NJ2   Nanjing          61.66 315 eP        P         04 33 56.9 +1.0
NJ2                              pmax      pmax
      comp=Z,7.0nm,0.6s
CASY  Casey            66.82 201 eP        P         04 34 29.8 +0.5
      comp=Z,2.3nm,0.6s
ENH   Enshi            67.57 309 eP        P         04 34 33.6 -1.1
XAN   Xi'an            69.77 312 eP        P         04 34 48.0 -0.4
KMI   Kunming          70.84 301 P         P         04 34 56.3 +1.0
KMI                              pP        pP        04 35 01.2 -3.4
KMI                              sP        sP        04 35 03.5 -4.5
KMI                              pmax      pmax
      comp=Z,8.0nm,0.9s
KMI                              pmax      pmax
      comp=Z,170nm,6.6s
HHC   Hu-ho-hao-te     71.44 320 eP        P         04 34 59.2 +0.7
HHC                              pmax      pmax
      comp=Z,5.0nm,1.2s
HHC                              pmax      pmax
      comp=Z,190nm,6.1s
CM01  Chiang Mai Arr   71.87 293 eP        P         04 35 01.0 -0.4
CMAR  Chiang Mai Arr   71.89 293 P         P         04 35 01.2 -0.3
      comp=Z,2.5nm,0.8s,baz=113,slow=4.6,SNR=9.3
CD2   Chengdu          72.29 307 ⇑P        P         04 35 03.9 +0.2
CD2                              pmax      pmax
      comp=Z,20nm,0.5s
CD2                              pmax      pmax
      comp=Z,120nm,5.0s
LZH   Lanzhou          74.41 312 eP        P         04 35 17.3 +1.1
LZH                              pP        pP        04 35 25.6 +0.1
LZH                              sP        sP        04 35 28.9  0.0
LZH                              PP        PP        04 38 02.3 -0.6
LZH                              pmax      pmax
      comp=Z,26nm,1.4s
LZH                              pmax      pmax
      comp=Z,98nm,4.9s
GAMB  Gambell          76.10  10 eP        P         04 35 26.1 +1.1
      comp=Z,8.9nm,1.2s
ULN   Ulaanbaatar      77.89 324 eP        P         04 35 35.9 +0.1
      comp=Z,3.9nm,0.7s
RSO   Redoubt South    78.08  20 eP        P         04 35 37.0 +0.5
SONM  Songino Array    78.26 324 P         P         04 35 38.1 +0.3
      comp=Z,2.2nm,1.0s,baz=136,slow=4.8,SNR=10
SONA1 Songino Array    78.26 324 eP        P         04 35 37.7 -0.1
BILL  Bilibino         78.40   0 eP        P         04 35 37.9  0.0
      comp=Z,7.1nm,1.0s
GTA   Gaotai           78.70 314 ⇑P        P         04 35 41.4 +1.0
GTA                              pP        PcP       04 35 45.8 -3.4
GTA                              sP        pP        04 35 48.5 -1.2
GTA                              S         S         04 45 38.4 +2.4
GTA                              pmax      pmax
      comp=Z,6.0nm,1.2s
GTA                              pmax      pmax
      comp=Z,120nm,6.8s
GTA                              LR        LR
      comp=N,2μm,18.1s
GTA                              LR        LR
      comp=E,670nm,18.1s
GTA                              LR        LR
      comp=Z,2μm,18.7s
QSPA  South Pole Qui   79.44 180 eP        P         04 35 44.4 +0.4
ILAR  Eielson Array    83.06  19 P         P         04 36 03.6 +0.7
      comp=Z,0.5nm,0.6s,baz=223,slow=5.3,SNR=14
EGAK  Eagle            84.93  20 eP        P         04 36 12.6 +0.2
      comp=Z,12nm,1.2s
WMQ   Urumqi           88.73 315 eP        P         04 36 32.6 +1.0
WMQ                              LR        LR
      comp=N,2μm,19.9s
WMQ                              LR        LR
      comp=E,2μm,23.5s
WMQ                              LR        LR
      comp=Z,2μm,24.1s
MK01  Makanchi Array   93.14 317 eP        P         04 36 51.4 -0.6
ZALV  Zalesovo Beam    93.15 324 eP        P         04 36 51.2 -0.6
ZALV  Zalesovo Beam    93.15 324 P         P         04 36 50.3 -1.4
      comp=Z,0.8nm,0.7s,baz=101,slow=6.3,SNR=4.8
MK31  Makanchi Array   93.15 317 eP        P         04 36 51.7 -0.3
MKAR  Makanchi Array   93.15 317 P         P         04 36 51.1 -0.9
      comp=Z,1.3nm,0.8s,baz=88,slow=6.7,SNR=11
MAKZ  Makanchi         93.36 317 eP        P         04 36 52.1 -0.9
      comp=Z,2.0nm,1.0s
YKA   Yellowknife Ar   94.56  27 P         P         04 36 56.8 -1.2
      comp=Z,0.1nm,0.7s,baz=264,slow=4.5,SNR=4.1
KURK  Kurchatov        96.25 320 P         P         04 37 04.8 -1.2
KURBB Kurchatov Arra   96.29 320 P         P         04 37 04.8 -1.4
      comp=Z,0.1nm,0.3s,baz=72,slow=5.9,SNR=2.6
ARCES ARCESS Array B 115.86 346  PKP       PKiKP     04 42 18.4 -1.4
      comp=Z,1.0nm,0.7s,baz=61,slow=5.6,SNR=7.4
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*IDC **08** 04:26:12.6±0.4, 10°.87S×165°.82E, h0^{km}, mb4.5/23, mb1 4.7/25, mb1mx4.7/38, mbtmp4.6/25, ML5.0/2, MS5.1/26, Ms1 5.1/26, ms1mx5.0/34, Error ellipse: s-maj=15.3km s-min=10.9km az=134.0*

*BJI **08** 04:26:14.5, 10°.75S×165°.97E, h5^{km}, mB5.4/40, mb4.9/60, Ms5.6/47, Ms7 5.2/46*

*ISCJB **08** 04:26:14.9±0.1, 11°.08S±0°.02×165°.80E±0°.03, h15^{km}, mb5.1/200, MS5.3/167, Error ellipse: s-maj=3.7km s-min=3.0km az=18.1*

*NEIC **08** 04:26:15.9±0.1, 11°.01S×165°.79E, h14^{km}, mb5.3/145, MS5.3/124, MW5.5, Error ellipse: s-maj=3.8km s-min=2.8km az=118.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.09; M$_{\theta\theta}$0.99; M$_{\phi\phi}$-1.08; M$_{r\theta}$-0.43; M$_{\theta\phi}$-2.35; M$_{\phi r}$-0.12; Best double couple: M$_0$2.60000×10^{17} NP1:φ$_s$348.00000°, δ80.00000°, λ0.00000°. NP2:φ$_s$78.00000°, δ90.00000°, λ-170.00000°. Principal axes: T 2.5600, Plg7.0000°, Azm213.0000°; N 0.0900, Plg80.0000°, Azm79.0000°; P -2.6500, Plg7.0000°, Azm304.0000°;*

*MOS **08** 04:26:17.5±1.4, 11°.02S×165°.69E, h33^{km}, mb5.2/52, MS5.2/22 Error ellipse: s-maj=8.2km s-min=7.7km az=95.7*

*GCMT **08** 04:26:18.9±0.1, 10°.92S±0°.01×165°.74E±0°.01, h12^{km}, MW5.5/132, Moment Tensor Solution. s109,c185; s132,c244; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.10±.03; M$_{\theta\theta}$1.11±.03; M$_{\phi\phi}$-1.01±.03; M$_{r\theta}$0.02±.08; M$_{\theta\phi}$-2.11±.03; M$_{\phi r}$0.97±.08; Best double couple: M$_0$2.55300×10^{17} NP1:φ$_s$166.00000°, δ85.00000°, λ-22.00000°. NP2:φ$_s$258.00000°, δ68.00000°, λ-174.00000°. Principal axes: T 2.5100, Plg11.0000°, Azm214.0000°; N 0.0920, Plg68.0000°, Azm333.0000°; P -2.5970, Plg19.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 04:26:16.9±0.5**, 11°.03S**±0°.04×**165°.80E**±0°.04**, h15^{km}**±2^{km}**, h16^{km}:pP-P, n568, σ1^{s}.78**/493**, mb5.2**/200**, MS5.3**/168**, 11C-1D, Santa Cruz Islands**

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Code  Station Name      Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC        h  m  s   ISC
HNR   Honiara           5.97 285 eP        Pn        04 27 44.0 -0.8
HNR                              eS        Sn        04 28 50.0 -3.1
HNR   Honiara           5.97 285 ePn       Pn        04 27 44.4 -0.4
HNR                              Sn        Sn        04 28 53.5 +0.5
HNR   Honiara           5.97 285 Pn        Pn        04 27 43.6 -1.2
      36nm,0.3s,baz=105,slow=1.1,SNR=6.1
HNR                              Sn        Sn        04 28 53.5 +0.5
      23nm,0.3s,baz=216,slow=19,SNR=1.6
HNR                              LR        LR        04 30 14.1
      comp=Z,32μm,18.4s,baz=120,slow=41
MARNC Mare, Loyalty    10.61 169 ePn       Pn        04 28 47.8 -0.7
DZM   Mont Dzumac      11.00 177 ePn       Pn        04 28 54.7 +0.8
      329nm,1.2s
DZM                              eLR       LR        04 31 23.2
      comp=Z,24μm,27.1s
DZM   Mont Dzumac      11.00 177 ePn       Pn        04 28 53.6 -0.3
DZM                              Sn        Sn        04 30 57.4 +0.7
DZM   Mont Dzumac      11.00 177 Pn        Pn        04 28 54.4 +0.6
      13nm,0.3s,baz=354,slow=15,SNR=15
DZM                              Sn        Sn        04 30 57.4 +0.7
      1.7nm,0.3s,baz=294,slow=19,SNR=2.7
DZM                              LR        LR        04 32 42.3
      comp=Z,9μm,21.5s,baz=7.5,slow=35
ONTNC Ouen Toro        11.23 177 ePn       Pn        04 28 57.2 +0.3
PINNC Pines Island,    11.63 172 ePn       Pn        04 29 01.8 -0.5
MSVF  Nonsavu          13.61 121 i P       Pn        04 29 31.7 +2.1
TARA  Tarawa           14.20  30 ePn       Pn        04 29 35.9 -1.7
EIDS  Eidsvold         19.94 222 P         Pn        04 30 50.3 +0.1
      baz=20,SNR=11
EIDS  Eidsvold         19.94 222 eP        P         04 30 48.2 -0.3
      259nm,1.8s
CTA   Charters Tower   20.85 242 P         P         04 30 58.5 +0.1
      41nm,0.8s,baz=73,slow=12,SNR=13
CTA                              S         S         04 34 51.1 +0.4
      1.1nm,0.2s,baz=53,slow=10,SNR=1.6
CTA                              LR        LR        04 37 45.0
      comp=Z,6μm,20.9s,baz=60,slow=33
CTAO  Charters Tower   20.85 242 eP        P         04 30 58.2 -0.2
CTAO                             LR        LR
      comp=Z,8μm,20.0s
CTAO  Charters Tower   20.85 242 eP        P         04 30 58.2 -0.2
CTAO                             MLR       MLR
      comp=Z,8μm,20.0s
MTSU  Mount Surprise   21.94 249 P         P         04 31 11.0 +0.8
      baz=22,SNR=21
RMQ   Roma             22.24 224 P         P         04 31 14.5 +1.2
      baz=22,SNR=9.7
COEN  Coen             22.28 260 P         P         04 31 13.2 -0.5
      baz=22,SNR=4.9
COEN  Coen             22.28 260 eP        P         04 31 13.4 -0.4
      comp=Z,39nm,1.0s
ARMA  Armidale         23.36 212 P         P         04 31 25.7 +0.7
      baz=24,SNR=6.8
ARMA  Armidale         23.36 212 eP        P         04 31 24.7 -0.3
      comp=Z,84nm,1.3s
RAO   Raoul Island     23.66 142 PFAKE               04 31 40.0  +12
RAO                              LR        LR
      comp=Z,8μm,19.0s
RAO   Raoul Island     23.66 142 LR        LR        04 38 47.5
      comp=Z,6μm,18.6s,baz=326,slow=32
KNTN  Kanton           23.76  71 eP        P         04 31 29.2 +0.2
      comp=Z,403nm,1.4s
QLP   Quilpie          25.55 230 P         P         04 31 45.1 -0.2
      baz=26,SNR=5.2
JAY   Jayapura         26.29 287 P         P         04 31 55.1 +2.9
      comp=Z,214nm,1.7s
GENI  Genyem           26.77 286 P         P         04 32 00.2 +3.7
      comp=Z,43nm,1.2s
QIS   Mount Isa        26.89 246 P         P         04 31 57.2 -0.3
      baz=27,SNR=5.2
CMSA  Cobar Meteorol   27.61 219 P         P         04 32 03.7 -0.1
      baz=28,SNR=13
YNG   Young            28.09 212 P         P         04 32 10.7 +2.5
      baz=28,SNR=5.3
CNB   Canberra Magne   28.42 209 P         P         04 32 11.4 +0.3
      baz=29,SNR=4.9
HIZ   Hauiti           28.54 165 eP        P         04 32 12.4 +0.3
      comp=Z,49nm,1.1s
CAN   Canberra         28.60 210 eP        P         04 32 12.5 -0.2
      comp=Z,29nm,1.2s
CAN   Canberra         28.60 210 eP        P         04 32 12.5 -0.2
CAN                              pmax      pmax
      comp=Z,29nm,1.2s
HAZ   Te Kaha          28.71 160 P         P         04 32 13.5  0.0
RUGZ  Raukumara Rang   28.86 160 P         P         04 32 15.6 +0.5
URZ   Urewera          28.95 161 eP        P         04 32 15.7  0.0
      comp=Z,20nm,0.8s
URZ                              LQ        LQ        04 38 46.2
URZ   Urewera          28.95 161 P         P         04 32 14.9 -0.7
      comp=Z,16nm,0.7s,baz=360,slow=2.0,SNR=5.5
URZ                              LQ        LQ        04 38 46.2
      comp=Z,7.3nm,1.2s,baz=307,slow=20,SNR=1.8
URZ                              LR        LR        04 41 55.8
      comp=Z,3μm,20.4s,baz=346,slow=32
WMGZ  Waiomatatini S   28.98 159 P         P         04 32 20.4 +4.5
MWZ   Matawai          29.15 161 P         P         04 32 16.5 -1.0
TWGZ  Tauwhareparae    29.15 160 P         P         04 32 16.7 -0.8
RTZ   Ruatahuna        29.23 162 P         P         04 32 17.7 -0.5
WTVZ  West Tongariro   29.30 164 P         P         04 32 19.5 +0.5
H11S2 WAKE ISLAND Hy 29.35   2  T          T         05 02 37.9
      baz=181,slow=76,SNR=290
H11S3 WAKE ISLAND Hy 29.35   2  T          T         05 02 36.8
      baz=181,slow=76,SNR=226
NGZ   Ngauruhoe        29.36 164 P         P         04 32 20.2 +0.7
H11S1 WAKE ISLAND Hy 29.36   2  T          T         05 02 37.9
      baz=181,slow=76,SNR=267
MTHZ  Maungataniwha    29.41 162 P         P         04 32 19.2 -0.6
RAHZ  Arahi            29.54 162 P         P         04 32 20.8 -0.1
RIGZ  Rimuhau          29.56 161 P         P         04 32 20.3 -0.9
BKZ   Black Stump Fm   29.60 163 eP        P         04 32 21.0 -0.5
      comp=Z,41nm,0.6s
BKZ   Black Stump Fm   29.60 163 P         P         04 32 20.7 -0.8
MOVZ  Moawhango        29.62 164 P         P         04 32 21.2 -0.5
NMHZ  Naumai           29.62 163 P         P         04 32 21.5 -0.3
WAKE  Wake Island      30.13   2 PFAKE               04 32 40.0  +14
WAKE                             LR        LR
      comp=Z,5μm,19.0s
STKA  Stephens Creek   30.49 223 P         P         04 32 30.0 +0.6
      baz=31,SNR=12
STKA  Stephens Creek   30.49 223 eP        P         04 32 29.1 -0.3
      comp=Z,5.2nm,1.1s
STKA                             LQ        LQ        04 40 47.8
STKA  Stephens Creek   30.49 223 eP        P         04 32 29.1 -0.3
STKA                             pmax      pmax
      comp=Z,5.0nm,1.1s
STKA  Stephens Creek   30.49 223 P         P         04 32 29.2 -0.3
      comp=Z,7.5nm,0.7s,baz=37,slow=11,SNR=12
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STKA                                LQ      LQ      04 40 47.8
       comp=Z,1.1nm,0.5s,baz=80,slow=6.1,SNR=2.4
STKA                                LR      LR      04 43 48.0
       comp=Z,8µm,19.8s,baz=42,slow=34
H11N1  WAKE ISLAND Hy    30.57   2  T       T       05 04 09.1
       baz=182,slow=76,SNR=23
H11N3  WAKE ISLAND Hy    30.57   2  T       T       05 04 08.7
       baz=182,slow=76,SNR=28
H11N2  WAKE ISLAND Hy    30.59   2  T       T       05 04 09.4
       baz=182,slow=76,SNR=162
BFZ    Birch Farm        30.94 164  eP      P       04 32 31.8 -1.6
       comp=Z,49nm,0.7s
SNZO   South Karori      31.16 167  PFAKE           04 32 50.0  +15
SNZO                                LR      LR
       comp=Z,6µm,19.0s
THZ    Tophouse          31.24 170  eP      P       04 32 35.8 -0.2
       comp=Z,57nm,0.7s
WRAB   Tennant Creek     31.52 250  eP      P       04 32 38.1 -0.7
       comp=Z,8.0nm,0.7s
WRAB                                LR      LR
       comp=Z,4µm,22.0s
WRAB   Tennant Creek     31.52 250c eP      P       04 32 38.0 -0.7
WRAB                                pmax    pmax
       comp=Z,45nm,1.7s
WB2    Warramunga Arr    31.53 250  eP      P       04 32 37.5 -1.3
WRA    Warramunga Arr    31.54 250  P       P       04 32 37.5 -1.4
       comp=Z,11nm,0.9s,baz=81,slow=8.8,SNR=28
WRA                                 PcP     PcP     04 35 30.5 -1.1
       comp=Z,1.5nm,0.9s,baz=76,slow=3.1,SNR=3.6
WRA                                 PKiKP   PKiKP   04 43 03.5 +2.4
       comp=Z,0.3nm,0.7s,baz=13,slow=0.7,SNR=5.1
WRA                                 LR      LR      04 43 42.6
       comp=Z,4µm,21.0s,baz=70,slow=33
KHZ    Kahutara          31.99 169  eP      P       04 32 41.7 -0.7
       comp=Z,219nm,1.6s
GUMO   Guam              32.08 319  PFAKE           04 32 50.0 +6.4
GUMO                                LR      LR
       comp=Z,4µm,19.0s
GUMO   Guam              32.08 319  LR      LR      04 44 57.5
       comp=Z,3µm,18.9s,baz=139,slow=35
TOO    Toolangi          32.11 211  P       P       04 32 44.0 +0.3
       baz=32,SNR=8.4
TOO    Toolangi          32.11 211  eP      P       04 32 43.5 -0.2
       comp=Z,50nm,1.3s
TOO    Toolangi          32.11 211  eP      P       04 32 43.5 -0.2
TOO                                 pmax    pmax
       comp=Z,51nm,1.3s
LTZ    Lake Taylor       32.13 171  eP      P       04 32 43.1 -0.7
       comp=Z,183nm,1.2s
FOZ    Fox Glacier       32.57 175  eP      P       04 32 46.8 -0.7
       comp=Z,86nm,0.8s
OXZ    Oxford            32.63 172  eP      P       04 32 47.7 -0.4
       comp=Z,442nm,1.6s
KDU    Kakadu            32.64 264  P       P       04 32 46.1 -2.4
       baz=33,SNR=4.8
AS01   Alice Springs     32.80 243  eP      P       04 32 49.3 -0.7
AS31   Alice Springs     32.84 243  eP      P       04 32 49.0 -1.3
       comp=Z,12nm,1.4s
ASAR   Alice Springs     32.84 243  P       P       04 32 48.5 -1.9
       comp=Z,8.4nm,0.9s,baz=74,slow=9.5,SNR=23
ASAR                                PcP     PcP     04 35 32.8 -2.4
       comp=Z,2.3nm,0.9s,baz=83,slow=2.5,SNR=5.2
ASAR                                S       S       04 38 09.7 +2.2
       comp=Z,0.2nm,0.3s,baz=60,slow=27,SNR=3.5
ASAR                                ScP     ScP     04 39 19.9 +0.9
       comp=Z,0.8nm,0.8s,baz=78,slow=3.7,SNR=3.2
ASAR                                LR      LR      04 45 40.6
       comp=Z,4µm,18.2s,baz=74,slow=36
RPZ    Rata Peaks        32.88 173  eP      P       04 32 49.6 -0.8
       comp=Z,152nm,0.8s
RPZ    Rata Peaks        32.88 173  P       P       04 32 49.7 -0.6
       comp=Z,81nm,0.8s,baz=32,slow=1.4,SNR=27
RPZ                                 LR      LR      04 45 32.2
       comp=Z,6µm,18.4s,baz=347,slow=35
CRLZ   Canterbury Las    32.96 171  eP      P       04 32 50.7 -0.2
       comp=Z,669nm,1.4s
MQZ    McQueen's Vall    33.09 171  eP      P       04 32 51.7 -0.4
       comp=Z,712nm,1.7s
HTT    Hallett           33.22 224  P       P       04 32 53.7 +0.2
       baz=33,SNR=7.0
LBZ    Lake Benmore      33.45 174  eP      P       04 32 54.5 -0.8
       comp=Z,238nm,1.7s
WKZ    Wanaka            33.79 176  eP      P       04 32 57.8 -0.5
       comp=Z,175nm,1.4s
ODZ    Otahua Downs      34.15 174  eP      P       04 33 00.6 -0.7
       comp=Z,241nm,1.7s
FAKI   Fak Fak           34.23 281  eP      P       04 33 02.4  0.0
       comp=Z,7.2nm,1.0s
MLZ    Mavora Lakes      34.27 177  eP      P       04 33 02.0 -0.5
       comp=Z,34nm,0.9s
DCZ    Deep Cove         34.33 178  eP      P       04 33 02.7 -0.2
       comp=Z,47nm,0.9s
RAR    Rarotonga         34.52 111  LR      LR      04 44 08.2
       comp=Z,2µm,20.7s,baz=271,slow=31
BBOO   Buckleboo         34.88 227  P       P       04 33 07.6 -0.2
       baz=35,SNR=13
BBOO   Buckleboo         34.88 227  eP      P       04 33 07.7 -0.1
       comp=Z,31nm,0.9s
TAU    Tasmania Unive    35.60 204  PFAKE           04 33 30.0  +16
TAU                                 LR      LR
       comp=Z,4µm,21.0s
BNDI   Bandanaira        36.12 277  P       P       04 33 21.7 +3.0
       comp=Z,125nm,1.4s,comp=Z,2µm
KNRA   Kununurra         36.30 259  P       P       04 33 20.3 +0.1
       baz=36,SNR=4.0
JOHN   Johnston Islan    36.83  42  PFAKE           04 33 40.0  +15
JOHN                                LR      LR
       comp=Z,352nm,19.0s
WRKA   Warakurna         38.14 243  P       P       04 33 35.2 -0.6
       baz=38,SNR=11
NLAI   Namlea            39.13 278  P       P       04 33 47.1 +2.8
       comp=Z,39nm,1.8s,comp=Z,1µm
FITZ   Fitzroy Crossi    39.43 255  P       P       04 33 45.6 -1.1
       baz=40,SNR=15
FITZ   Fitzroy Crossi    39.43 255  eP      P       04 33 45.7 -1.1
       comp=Z,21nm,0.8s
FITZ   Fitzroy Crossi    39.43 255  LR      LR      04 49 43.9
       comp=Z,4µm,18.4s,baz=81,slow=36
FORT   Forrest           40.09 235  P       P       04 33 51.8 -0.2
       baz=40,SNR=8.2
FORT   Forrest           40.09 235  eP      P       04 33 51.7 -0.4
       comp=Z,37nm,0.9s
SANI   Sanana            40.50 280  P       P       04 33 57.4 +1.8
       comp=Z,14nm,1.1s,comp=Z,1µm
BATI   Baumata           41.40 267  P       P       04 34 07.0 +3.9
       comp=Z,26nm,0.8s
BATI   Baumata           41.40 267  LR      LR      04 51 02.5
       comp=Z,3µm,21.4s,baz=124,slow=36
MIDW   Midway            42.28  22  PFAKE           04 34 20.0  +10
MIDW                                LR      LR
       comp=Z,6µm,19.0s
MMRI   Maumere           42.96 269  P       P       04 34 17.8 +2.0
PPT    Papeete           43.65 104  LR      LR      04 48 08.9
       comp=Z,2µm,20.9s,baz=276,slow=30
PPT2   Papeete2          43.65 104  eS      S       04 40 59.0 +8.0
       comp=Z,922nm,24.0s
PPT2                                eLQ     LQ      04 44 47.0
       comp=Z,10µm,27.2s
PPT2                                eLR     LR      04 46 39.9
       comp=Z,4µm,23.5s
DAV    Davao City (W)    43.88 292  LR      LR      04 52 44.1
       comp=Z,868nm,18.1s,baz=98,slow=36
JCJ    Chichijima        44.29 329  LR      LR      04 51 38.3
       comp=Z,2µm,20.0s,baz=144,slow=35
MBWA   Marble Bar        45.25 251  eP      P       04 34 33.6 -0.5
MBWA                                LR      LR
       comp=Z,3µm,20.0s
BNSI   Bone              45.71 275  P       P       04 34 38.5 +0.7
       comp=Z,31nm,1.1s,comp=Z,664nm
KAPI   Kappang           45.95 274  PFAKE           04 34 50.0  +10
KAPI                                LR      LR
       comp=Z,914nm,22.0s
SPSI   Sidrap Palu       46.12 275  P       P       04 34 43.2 +2.1
MEEK   Meekatharra       47.00 244  P       P       04 34 48.1 +0.2
       baz=47,SNR=13
PLAI   Plampang          47.32 268  P       P       04 34 52.1 +1.6
       comp=Z,42nm,1.6s,comp=Z,992nm
KLBR   Kellerberrin      48.76 238  P       P       04 35 00.6 -0.8
       baz=49,SNR=7.9
POHA   Pohakuloa         48.85  51  PFAKE           04 35 10.0 +7.6
POHA                                LR      LR
       comp=Z,2µm,19.0s
NWAO   Narrogin (SRO)    49.51 236  P       P       04 35 06.9 -0.2
       baz=50,SNR=6.3
NWAO   Narrogin (SRO)    49.51 236  eP      P       04 35 06.5 -0.7
NWAO                                LR      LR
       comp=Z,6µm,21.0s
NWAO   Narrogin (SRO)    49.51 236  eP      P       04 35 06.5 -0.7
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NWAO                                MLR     MLR
       comp=Z,6µm,21.0s
MORW   Morawa            49.68 241  P       P       04 35 08.3 -0.1
       baz=50,SNR=4.1
MORW   Morawa            49.68 241  eP      P       04 35 08.4 -0.1
       comp=Z,56nm,1.3s
JAGI   Jajag, Banyuwa    50.92 268  eP      P       04 35 17.3 -0.8
       comp=Z,48nm,1.2s
KKM    Kota Kinabalu     52.18 287  eP      P       04 35 27.5 -0.1
       comp=Z,56nm,1.5s
KKM    Kota Kinabalu     52.18 287  P       P       04 35 34.4 +6.8
TAOE   Nuku Hiva Isla    53.23  93  eS      S       04 43 13.4 +6.9
       comp=Z,521nm,25.2s
TAOE                                eLQ     LQ      04 48 34.2
       comp=Z,3µm,24.1s
INU    Inuyama           53.56 331  eP      P       04 35 37.5 +0.2
       comp=Z,142nm,1.5s
MJAR   Matsushiro Arr    53.98 333  P       P       04 35 36.9 -3.5
       comp=Z,1.5nm,0.4s,baz=170,slow=8.2,SNR=16
MAJO   Matsushiro        53.98 333  eP      P       04 35 40.4  0.0
       comp=Z,73nm,1.2s
MAJO                                LR      LR
       comp=Z,2µm,21.0s
MAJO   Matsushiro        53.98 333  eP      P       04 35 40.4  0.0
MAJO                                pmax    pmax
       comp=Z,73nm,1.2s
MAJO                                MLR     MLR
       comp=Z,2µm,21.0s
MAT    Matsushiro        53.98 333  P       P       04 35 41.9 +1.5
MAT                                 S       S       04 43 17.4 +1.6
MJB9   Matsu-Tunnel      53.99 333  eP      P       04 35 40.5 +0.1
       comp=Z,71nm,1.2s
UGM    Wanagama          54.55 268  eP      P       04 35 45.3 +0.3
       comp=Z,102nm,1.4s
JNU    Nakatsue          55.10 324  eP      P       04 35 48.3 -0.3
       comp=Z,120nm,1.4s
TATO   Taipei            56.10 310  PFAKE           04 36 10.0  +14
TATO                                LR      LR
       comp=Z,4µm,22.0s
SSE    Sheshan           59.88 316  eP      P       04 36 21.6 -0.6
       comp=Z,107nm,1.6s
SSE                                 LR      LR
       comp=Z,1µm,21.0s
KSRS   Korea Array       59.89 326  P       P       04 36 19.7 -2.6
       comp=Z,1.1nm,0.6s,baz=146,slow=6.3,SNR=3.2
KSRS                                LR      LR      05 00 44.6
       comp=Z,1µm,18.8s,baz=131,slow=35
KSAR   Wonju Array Be    59.91 326  P       P       04 36 19.7 -2.7
KSAR   Wonju Array Be    59.91 326  P       P       04 36 19.7 -2.7
KS01   Wonju Array Si    59.92 326  eP      P       04 36 22.8 +0.2
YSS    Yuzh-Sakhalins    61.29 342  PFAKE           04 36 40.0 +8.4
YSS                                 LR      LR
       comp=Z,1µm,20.0s
YSS    Yuzh-Sakhalins    61.29 342  eP      P       04 36 34.2 +2.6
YSS                                 e               04 36 46.2
YSS                                 e               04 45 12.9
YSS                                 pmax    pmax
       comp=Z,40nm,1.2s
SKR    Severo-Kuril's    62.03 353  eP      P       04 36 30.7 -5.8
SKR                                 eS      S       04 44 58.7 -1.8
SKR                                 pmax    pmax
       comp=Z,66nm,1.9s
SKR                                 pmax    pmax
       comp=Z,400nm,11.4s
SKR                                 pmax    pmax
       comp=Z,900nm,13.1s
SKR                                 MLR     MLR
       comp=Z,1µm,19.0s
SKR                                 MLR     MLR
       comp=Z,2µm,18.0s
NJ2    Nanjing           62.05 315  eP      P       04 36 37.3 +0.3
NJ2                                 pmax    pmax
       comp=Z,6.0nm,0.5s
NJ2                                 LR      LR
       comp=Z,2µm,18.5s
NJ2                                 LR      LR
       comp=Z,2µm,16.7s
NJ2                                 LR      LR
       comp=Z,2µm,18.2s
QIZ    Qiongzhong        62.72 298  P       P       04 36 41.9 +0.1
QIZ                                 S       S       04 45 12.1 +1.7
QIZ                                 sS      sS      04 45 17.5 -0.3
QIZ                                 pmax    pmax
       comp=Z,260nm,9.8s
QIZ                                 LR      LR
       comp=Z,1µm,20.6s
QIZ                                 LR      LR
       comp=Z,1µm,21.6s
QIZ                                 LR      LR
       comp=Z,2µm,23.5s
USA0B  Ussuriysk Arra    62.96 333  eP      P       04 36 44.1 +1.2
       comp=Z,124nm,1.7s
USRK   Ussuriysk Ar.     62.96 333  P       P       04 36 40.8 -2.1
       comp=Z,2.6nm,0.8s,baz=157,slow=7.8,SNR=4.4
USRK                                LR      LR      05 02 34.6
       comp=Z,648nm,20.3s,baz=130,slow=35
KGM    Kluang            63.47 278  P       P       04 36 54.1 +7.2
PET    Petropavlovsk     64.09 355  PFAKE           04 37 00.0  +10
PET                                 LR      LR
       comp=Z,2µm,20.0s
PET    Petropavlovsk     64.09 355  eP      P       04 36 59.8  +10
PETK   Petropavlovsk-    64.26 355  eP      P       04 36 51.4 +0.1
PETK   Petropavlovsk-    64.26 355  eP      P       04 36 51.4 +0.1
PETK   Petropavlovsk-    64.26 355  P       P       04 36 48.3 -3.0
       comp=Z,1.3nm,0.6s,baz=152,slow=9.5,SNR=3.6
PETK                                LR      LR      05 02 07.7
       comp=Z,973nm,19.9s,baz=170,slow=34
MDJ    Mudanjiang        64.36 332  P       P       04 36 54.4 +2.3
MDJ                                 sP      sP      04 37 00.8 +2.4
MDJ                                 S       S       04 45 34.8 +4.9
MDJ                                 sS      sS      04 45 41.2 +4.1
MDJ                                 ScS     ScS     04 46 47.8 +1.9
MDJ                                 pmax    pmax
       comp=Z,23nm,1.2s
MDJ                                 pmax    pmax
       comp=Z,1µm,4.5s
MDJ                                 LR      LR
       comp=Z,2µm,7.0s
MDJ                                 LR      LR
       comp=Z,1µm,6.8s
MDJ                                 LR      LR
       comp=Z,2µm,12.7s
MDJ    Mudanjiang        64.36 332  eP      P       04 36 52.0 -0.1
       comp=Z,45nm,1.4s
MDJ                                 LR      LR
       comp=Z,1µm,22.0s
WHN    Wuhan             64.42 312  P       P       04 36 55.8 +3.0
WHN                                 pmax    pmax
       comp=Z,110nm,1.5s
WHN                                 LR      LR
       comp=Z,6µm,20.4s
WHN                                 LR      LR
       comp=Z,5µm,19.7s
WHN                                 LR      LR
       comp=Z,6µm,25.5s
KTGM   Kuala Trenggan    64.44 281  P       P       04 37 00.4 +7.1
ADK    Adak              64.46  12  PFAKE           04 37 00.0 +7.4
ADK                                 LR      LR
       comp=Z,5µm,21.0s
DL2    Dalian            64.50 323  P       P       04 36 54.5 +1.4
DL2                                 S       S       04 45 37.8 +6.0
DL2                                 pmax    pmax
       comp=Z,27nm,1.3s
DL2                                 LR      LR
       comp=Z,1µm,15.9s
DL2                                 LR      LR
       comp=Z,1µm,17.4s
DL2                                 LR      LR
       comp=Z,2µm,18.2s
TYV    Tymovskoe         64.84 344  eP      P       04 36 58.0 +2.9
TYV                                 eS      pP      04 37 03.1 +3.4
TYV                                 pmax    pmax
       comp=Z,300nm,3.1s
CN2    Changchun         65.75 329  eP      P       04 37 04.1 +2.9
CN2                                 pmax    pmax
       comp=Z,20nm,1.1s
CN2                                 LR      LR
       comp=Z,1µm,14.0s
CN2                                 LR      LR
       comp=Z,1µm,14.0s
CN2                                 LR      LR
       comp=Z,1µm,15.0s
IPM    Ipoh              66.27 280  eP      P       04 37 05.0 -0.2
       comp=Z,22nm,1.0s
IPM    Ipoh              66.27 280  P       P       04 37 05.0 -0.2
CASY   Casey             66.41 201  eP      P       04 37 04.3 -0.8
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       comp=Z,72nm,1.3s
CASY                                LR      LR
       comp=Z,247nm,21.0s
VNDA   Vanda             66.51 181  eP      P       04 37 05.3 -0.3
       comp=Z,142nm,1.6s
VNDA   Vanda             66.51 181  eP      P       04 37 05.3 -0.3
VNDA                                pmax    pmax
       comp=Z,142nm,1.6s
VNDA   Vanda             66.51 181  P       P       04 37 04.4 -1.2
       comp=Z,15nm,1.3s,baz=7.0,slow=6.5,SNR=3.4
VNDA                                LR      LR      05 03 01.6
       comp=Z,2µm,19.3s,baz=3.0,slow=33
GRNR   Gornyy            66.65 340  eP      P       04 37 14.2 +7.4
GRNR                                pmax    pmax
       comp=Z,25nm,1.0s
SBA    Scott Base        66.81 180  PFAKE           04 37 20.0  +12
SBA                                 LR      LR
       comp=Z,2µm,19.0s
KLR    Kul'dur           67.06 337⇓ iP      P       04 37 10.5 +1.0
SKNT   Sakolnakorn       67.13 294  P       P       04 37 11.6 +1.0
       comp=Z,12nm,1.1s
COCO   West Island       67.39 261  PFAKE           04 37 20.0 +7.7
COCO                                LR      LR
       comp=Z,1µm,19.0s
NKL    Nikolayevsk       67.44 344  eP      P       04 37 10.0 -1.7
NKL                                 pmax    pmax
       comp=Z,22nm,1.0s
ENH    Enshi             67.93 309  eP      P       04 37 14.1 -1.3
       comp=Z,41nm,1.5s
ENH                                 LR      LR
       comp=Z,1µm,20.0s
NONG   Nongkai           68.25 295  P       P       04 37 22.5 +4.9
       comp=Z,0.2nm,1.2s
GYA    Guiyang           68.45 304⇑ iP      P       04 37 20.5 +1.6
GYA                                 PP      PP      04 39 54.0 +3.8
GYA                                 SKS     SKiKP   04 47 15.5 +2.7
GYA                                 SS      SS      04 50 47.0 +2.2
GYA                                 pmax    pmax
       comp=Z,30nm,1.0s
GYA                                 pmax    pmax
       comp=Z,150nm,7.6s
GYA                                 LR      LR
       comp=Z,590nm,18.0s
GYA                                 LR      LR
       comp=Z,560nm,18.4s
GYA                                 LR      LR
       comp=Z,560nm,18.2s
BJT    Baijiatuau        68.49 321  eP      P       04 37 18.4 -0.2
       comp=Z,38nm,1.4s
BJT                                 LR      LR
       comp=Z,2µm,19.0s
BJT    Baijiatuau        68.49 321  eP      P       04 37 18.5 -0.2
BJT                                 pmax    pmax
       comp=Z,38nm,1.4s
BJT                                 MLR     MLR
       comp=Z,2µm,19.0s
TIY    Taiyuan           69.58 317  eP      P       04 37 28.8 +3.2
TIY                                 pmax    pmax
       comp=Z,9.0nm,0.5s
TIY                                 LR      LR
       comp=Z,750nm,10.5s
TIY                                 LR      LR
       comp=Z,270nm,7.5s
TIY                                 LR      LR
       comp=Z,2µm,24.0s
XAN    Xi'an             70.15 312  P       P       04 37 31.0 +1.8
XAN                                 pP      pwP     04 37 37.4 +0.6
XAN                                 S       S       04 46 41.3 +1.1
XAN                                 SS      SS      04 51 15.1 +4.6
XAN                                 pmax    pmax
       comp=Z,10.0nm,1.3s
XAN                                 pmax    pmax
       comp=Z,170nm,3.8s
XAN                                 LR      LR
       comp=Z,2µm,20.2s
XAN                                 LR      LR
       comp=Z,1µm,24.9s
XAN                                 LR      LR
       comp=Z,2µm,24.0s
XAN    Xi'an             70.15 312  eP      P       04 37 27.3 -1.9
       comp=Z,42nm,1.5s
XAN    Xi'an             70.15 312  eP      P       04 37 27.3 -1.9
XAN                                 pmax    pmax
       comp=Z,42nm,1.5s
SRDT   SRDT              70.74 289  P       P       04 37 39.5 +6.5
       comp=Z,4.8nm,1.0s
UTHA   Uthaitani         70.80 291  P       P       04 37 38.7 +5.3
       comp=Z,3.1nm,1.2s
KMI    Kunming           71.16 301  P       P       04 37 36.1 +0.4
KMI                                 pP      pP      04 37 38.8 -0.9
KMI                                 sP      sP      04 37 40.7 -0.5
KMI                                 PP      PP      04 40 17.4 +3.7
KMI                                 S       S       04 46 52.8 +0.1
KMI                                 sS      sS      04 47 01.7 +1.6
KMI                                 SS      SS      04 51 22.9 -3.8
KMI                                 pmax    pmax
       comp=Z,21nm,1.2s
KMI                                 pmax    pmax
       comp=Z,220nm,5.6s
KMI                                 LR      LR
       comp=Z,910nm,14.9s
KMI                                 LR      LR
       comp=Z,850nm,16.0s
KMI                                 LR      LR
       comp=Z,1µm,25.3s
KMI    Kunming           71.16 301  eP      P       04 37 34.9 -0.8
       comp=Z,56nm,1.5s
KMI    Kunming           71.16 301  eP      P       04 37 34.9 -0.8
KMI                                 pmax    pmax
       comp=Z,56nm,1.5s
MA2    Magadan           71.40 352  PFAKE           04 37 50.0  +14
MA2                                 LR      LR
       comp=Z,2µm,20.0s
MA2    Magadan           71.40 352c eP      P       04 37 36.7 +0.5
MA2                                 pmax    pmax
       comp=Z,15nm,1.7s
HHC    Hu-ho-hao-te      71.85 320  eP      P       04 37 39.8 +0.4
HHC                                 pP      pP      04 37 43.4 -0.1
HHC                                 sP      pwP     04 37 47.1 -0.1
HHC                                 S       S       04 46 57.6 -2.3
HHC                                 ScS     SKSac   04 47 42.6 -0.5
HHC                                 SS      SS      04 51 34.6 -2.0
HHC                                 pmax    pmax
       comp=Z,7.0nm,1.1s
HHC                                 pmax    pmax
       comp=Z,170nm,6.9s
HHC                                 LR      LR
       comp=Z,2µm,16.6s
HHC                                 LR      LR
       comp=Z,1µm,17.3s
HHC                                 LR      LR
       comp=Z,2µm,16.9s
CM01   Chiang Mai Arr    72.13 293  eP      P       04 37 40.2 -1.2
CMAR   Chiang Mai Arr    72.15 294  P       P       04 37 39.6 -2.0
       comp=Z,1.2nm,0.7s,baz=103,slow=3.9,SNR=6.3
CMAR                                LR      LR      05 11 01.9
       comp=Z,509nm,18.8s,baz=120,slow=37
CMMT   Chiang Mai        72.26 294  P       P       04 37 45.0 +2.8
       comp=Z,13nm,1.3s
CHTO   Chiang Mai        72.27 294  eP      P       04 37 41.6 -0.6
       comp=Z,29nm,1.5s
CHTO                                LR      LR
       comp=Z,936nm,22.0s
CHTO   Chiang Mai        72.27 294  P       P       04 37 45.0 +2.8
       comp=Z,60nm,1.3s
ZEA    Zeya              72.35 337  eP      P       04 37 44.4 +2.4
ZEA                                 pmax    pmax
       comp=Z,55nm,1.4s
HIA    Hailar            72.38 330  eP      P       04 37 41.5 -0.8
       comp=Z,29nm,1.4s
HIA                                 LR      LR
       comp=Z,1µm,19.0s
HIA    Hailar            72.38 330  eP      P       04 37 41.5 -0.8
HIA                                 pmax    pmax
       comp=Z,29nm,1.4s
HIA                                 MLR     MLR
       comp=Z,1µm,19.0s
CD2    Chengdu           72.63 307  P       P       04 37 43.6 -0.7
CD2                                 pP      sP      04 37 48.9 -0.9
CD2                                 PP      PP      04 40 25.3 -0.8
CD2                                 S       S       04 47 09.4 +0.3
CD2                                 SS      SS      04 51 50.2 +1.4
CD2                                 pmax    pmax
       comp=Z,30nm,0.8s
CD2                                 pmax    pmax
       comp=Z,220nm,5.2s
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CD2				LR	LR		
	comp=Z,2µm,17.4s						
CD2				LR	LR		
	comp=Z,2µm,23.8s						
CD2				LR	LR		
	comp=Z,2µm,21.9s						
SEY	**Seymchan**	**74.46**	**354**	*ce*P	**P**	**04 37 54.4**	**+0.2**
LZH	**Lanzhou**	**74.78**	**312**	⇑P	**P**	**04 37 58.5**	**+1.6**
LZH				pP	pwP	04 38 03.9	-0.7
LZH				sP	PcP	04 38 06.9	-4.1
LZH				PP	**PP**	**04 40 48.0**	**+3.5**
LZH				S	**S**	**04 47 38.6**	**+5.2**
LZH				sS	sS	04 47 42.9	+2.0
LZH				SS	**SS**	**04 52 17.7**	**-4.0**
LZH				pmax	pmax		
	comp=Z,28nm,1.4s						
LZH				pmax	pmax		
	comp=Z,110nm,4.8s						
LZH				LR	LR		
	comp=Z,770nm,17.4s						
LZH				LR	LR		
	comp=Z,750nm,17.3s						
LZH				LR	LR		
	comp=Z,830nm,18.6s						
GAMB	**Gambell**	**76.55**	**10**	*e*P	**P**	**04 38 06.1**	**0.0**
	comp=Z,30nm,1.2s						
KDAK	**Kodiak Island**	**76.55**	**21**	PFAKE		04 38 20.0	+14
KDAK				LR	LR		
	comp=Z,824nm,22.0s						
SVW2	**Sparrevohn**	**78.08**	**18**	*e*P	**P**	**04 38 14.5**	**-0.4**
	comp=Z,37nm,1.4s						
YAK	**Yakutsk**	**78.10**	**344**	*e*P	**P**	**04 38 15.1**	**+0.2**
YAK				*e**PP	**pP**	**04 38 19.2**	**-0.4**
YAK				*e*		04 41 06.9	
YAK				*e*PPP	PPP	04 42 59.2	
YAK				*e*S	**S**	**04 48 09.8**	**+1.5**
YAK				*e**SS	**sS**	**04 48 17.7**	**+2.1**
YAK				*e*		04 48 34.9	
YAK				*e*SS	**SS**	**04 53 06.0**	**-4.3**
YAK				*e*SSS	SSS	04 56 28.0	
YAK				pmax	pmax		
	comp=Z,161nm,1.1s						
YAK				pmax	pmax		
	comp=N,34nm,1.1s						
YAK				pmax	pmax		
	comp=E,28nm,0.9s						
YAK				pmax	pmax		
	comp=Z,823nm,4.2s						
YAK				pmax	pmax		
	comp=N,443nm,3.5s						
YAK				pmax	pmax		
	comp=E,659nm,4.0s						
YAK				smax	smax		
	comp=N,957nm,4.3s						
YAK				smax	smax		
	comp=E,637nm,4.1s						
YAK				MLR	MLR		
	comp=Z,4µm,17.0s						
YAK				MLR	MLR		
	comp=N,2µm,16.0s						
YAK				MLR	MLR		
	comp=E,2µm,17.0s						
ULN	**Ulaanbaatar**	**78.32**	**324**	*e*P	**P**	**04 38 15.3**	**-1.4**
	comp=E,87nm,1.9s						
ULN	**Ulaanbaatar**	**78.32**	**324**	*ce*P	**P**	**04 38 15.6**	**-1.1**
ULN				pmax	pmax		
	comp=Z,23nm,1.3s						
ANM	**Nome**	**78.46**	**12**	*e*P	**P**	**04 38 17.0**	**+0.1**
	comp=Z,18nm,1.2s						
SONM	**Songino Array**	**78.68**	**324**	P	**P**	**04 38 15.8**	**-2.9**
	comp=Z,1.3nm,0.8s,baz=147,slow=8.6,SNR=8.1						
SONA1	**Songino Array**	**78.69**	**324**	*e*P	**P**	**04 38 17.6**	**-1.0**
BILL	**Bilibino**	**78.86**	**0**	*e*P	**P**	**04 38 17.8**	**-1.3**
	comp=Z,23nm,1.0s						
BILL				LR	LR		
	comp=Z,1µm,22.0s						
BILL	**Bilibino**	**78.86**	**0**	*i* P	**P**	**04 38 19.2**	**+0.2**
BILL				*i*		04 38 25.3	
BILL				*i*		04 41 18.2	
BILL				*i* S	**S**	**04 48 19.4**	**+3.0**
BILL				*e*SS	**SS**	**04 53 17.4**	**-4.3**
BILL				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL				MLR	MLR		
	comp=Z,748nm,17.0s						
QSPA	**South Pole Qui**	**78.97**	**180**	*e*P	**P**	**04 38 18.1**	**-1.9**
QSPA				LR	LR		
	comp=Z,2µm,19.0s						
GTA	**Gaotai**	**79.08**	**314**	⇑P	**P**	**04 38 20.1**	**-1.0**
GTA				pP	pP	04 38 25.0	-0.1
GTA				sP	pwP	04 38 27.8	-0.9
GTA				S	**S**	**04 48 18.0**	**-2.2**
GTA				sS	pS	04 48 25.2	-0.7
GTA				SKS	**SKSac**	**04 48 31.4**	**-5.3**
GTA				SS	**SS**	**04 53 27.6**	**+1.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,250nm,8.3s						
GTA				LR	LR		
	comp=Z,2µm,18.1s						
GTA				LR	LR		
	comp=Z,1µm,19.4s						
GTA				LR	LR		
	comp=Z,2µm,20.3s						
SUA	**Susitna One**	**79.89**	**20**	*e*P	**P**	**04 38 24.2**	**-0.7**
	comp=Z,67nm,1.4s						
BOD	**Bodaibo**	**80.54**	**335**	*e*P	**P**	**04 38 28.7**	**+0.4**
BOD				pmax	pmax		
	comp=Z,13nm,1.6s						
SHL	**Shillong**	**80.56**	**298**	*e*P	**P**	**04 38 29.3**	**-0.1**
	comp=Z,99nm,1.8s						
SHL	**Shillong**	**80.56**	**298**	*e*P	**P**	**04 38 29.3**	**-0.1**
SHL				pmax	pmax		
	comp=Z,99nm,1.8s						
CAST	**Castle Rocks**	**80.92**	**18**	*e*P	**P**	**04 38 29.7**	**-0.5**
	comp=Z,30nm,1.5s						
TRF	**Thorofare Moun**	**81.49**	**18**	*e*P	**P**	**04 38 34.0**	**+0.5**
	comp=Z,70nm,2.0s						
ZAK	**Zakamensk**	**81.72**	**325**	*e*P	**P**	**04 38 32.4**	**-2.5**
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s						
RND	**Reindeer**	**81.91**	**19**	*e*P	**P**	**04 38 36.0**	**+0.4**
	comp=Z,23nm,1.1s						
RND	**Reindeer**	**81.91**	**19**	*e*P	**P**	**04 38 36.0**	**+0.4**
RND				pmax	pmax		
	comp=Z,23nm,1.1s						
RDOG	**Red Dog Mine**	**82.00**	**11**	*e*P	**P**	**04 38 36.8**	**+0.9**
	comp=Z,18nm,1.0s						
MCK	**McKinley**	**82.11**	**19**	*e*P	**P**	**04 38 36.8**	**+0.2**
	comp=Z,51nm,1.3s						
TLY	**Talaya**	**82.14**	**326**	*e*P	**P**	**04 38 36.6**	**-0.5**
	comp=Z,18nm,0.8s						
TLY				LR	LR		
	comp=Z,541nm,20.0s						
TLY	**Talaya**	**82.14**	**326**	*ce*P	**P**	**04 38 36.9**	**-0.1**
LSA	**Lhasa**	**82.39**	**302**	PFAKE		04 38 50.0	+11
LSA				LR	LR		
	comp=Z,590nm,20.0s						
IM3	**Indian Mountai**	**82.40**	**16**	*e*P	**P**	**04 38 36.8**	**-1.2**
MLY	**Manley**	**82.51**	**17**	*e*P	**P**	**04 38 38.0**	**-0.7**
	comp=Z,22nm,1.4s						
WRH	**Wood River Hil**	**82.90**	**18**	*e*P	**P**	**04 38 40.4**	**-0.2**
	comp=Z,23nm,1.2s						
MDM	**Murphy Dome**	**83.20**	**18**	*e*P	**P**	**04 38 40.5**	**-1.8**
	comp=Z,31nm,1.1s						
HDA	**Harding Lake**	**83.21**	**19**	*e*P	**P**	**04 38 41.0**	**-1.3**
	comp=Z,57nm,1.1s						
HDA	**Harding Lake**	**83.21**	**19**	P	**P**	**04 38 41.2**	**-1.1**
	baz=226						
O02D	**Mt. Diablo Mer**	**83.25**	**47**	P	**P**	**04 38 43.4**	**+0.3**
	baz=250						
TCOL	**CIGO, UAF Yank**	**83.25**	**18**	P	**P**	**04 38 41.8**	**-0.7**
	baz=226						
COLA	**College**	**83.26**	**18**	*e*P	**P**	**04 38 41.2**	**-1.3**
	comp=Z,24nm,0.9s						
COLA				LR	LR		
	comp=Z,2µm,20.0s						
COLA	**College**	**83.26**	**18**	*e*P	**P**	**04 38 40.9**	**-1.5**
COLA				pmax	pmax		
	comp=Z,17nm,1.0s						
RIDG	**Independ'e Rid**	**83.44**	**20**	*e*P	**P**	**04 38 43.8**	**+0.2**
	comp=Z,56nm,1.3s						
IL1	**Eielson Array**	**83.48**	**18**	*e*P	**P**	**04 38 40.6**	**-3.0**
ILAR	**Eielson Array**	**83.48**	**18**	P	**P**	**04 38 40.8**	**-2.9**
	comp=Z,3.1nm,0.6s,baz=236,slow=4.7,SNR=33						
ILB	**Eielson Array**	**83.48**	**18**	*e*P	**P**	**04 38 41.8**	**-1.9**
POKR	**Poker Plat Res**	**83.55**	**18**	P	**P**	**04 38 43.4**	**-0.6**
	baz=226						
WDC	**Whiskeytown Da**	**83.56**	**47**	*e*P	**P**	**04 38 44.4**	**-0.2**
	comp=Z,26nm,1.4s						
WDC	**Whiskeytown Da**	**83.56**	**47**	*e*P	**P**	**04 38 44.4**	**-0.2**
WDC				pmax	pmax		
	comp=Z,26nm,1.4s						
MOY	**Mondy**	**83.59**	**325**	*e*P	**P**	**04 38 46.6**	**+1.9**
YBH	**Yreka Blue Hor**	**83.84**	**46**	*e*P	**P**	**04 38 46.4**	**+0.2**
	comp=Z,30nm,1.3s						
YBH	**Yreka Blue Hor**	**83.84**	**46**	*e*P	**P**	**04 38 46.4**	**+0.2**
YBH				pmax	pmax		
	comp=Z,30nm,1.3s						
SCRK	**Sand Creek**	**83.89**	**20**	*e*P	**P**	**04 38 45.5**	**-0.4**
	comp=Z,71nm,1.6s						
ORV	**Oroville**	**83.97**	**48**	*e*P	**P**	**04 38 46.8**	**+0.1**
	comp=Z,42nm,1.8s						
ORV	**Oroville**	**83.97**	**48**	*e*P	**P**	**04 38 46.8**	**+0.1**
ORV				pmax	pmax		
	comp=Z,42nm,1.8s						
HUMO	**Hull Mountain**	**83.98**	**45**	*e*P	**P**	**04 38 46.0**	**-0.8**
O03E	**Paynes Creek**	**84.00**	**47**	P	**P**	**04 38 47.7**	**+0.7**
	baz=250						
AFDM	**Forest Hills D**	**84.15**	**49**	*e*P	**P**	**04 38 47.9**	**+0.2**
	comp=Z,19nm,1.1s						
COLD	**Coldfoot**	**84.27**	**16**	*e*P	**P**	**04 38 47.6**	**-0.1**
	comp=Z,8.9nm,1.3s						
CMB	**Columbia Colle**	**84.29**	**50**	*e*P	**P**	**04 38 46.9**	**-1.6**
	comp=Z,34nm,1.6s						
CMB	**Columbia Colle**	**84.29**	**50**	*e*P	**P**	**04 38 46.9**	**-1.6**
CMB				pmax	pmax		
	comp=Z,34nm,1.6s						
WRAK	**Wrangell Islan**	**84.30**	**30**	PFAKE		04 39 00.0	+12
WRAK				LR	LR		
	comp=Z,2µm,19.0s						
HYT	**Haines Junctio**	**84.35**	**24**	*e*P	**P**	**04 38 48.0**	**-0.4**
	comp=Z,16nm,1.1s						
BBB	**Bella Bella**	**84.54**	**34**	LR	LR	05 09 30.2	
	comp=Z,2µm,20.0s,baz=268,slow=31						
MAW	**Mawson**	**84.75**	**202**	LR	LR	05 14 49.4	
	comp=Z,510nm,18.4s,baz=114,slow=34						
BEKR	**Beckworth**	**84.90**	**48**	*e*P	**P**	**04 38 51.3**	**-0.4**
	comp=Z,23nm,1.3s						
MWC	**Mount Wilson**	**84.93**	**54**	*e*P	**P**	**04 38 52.0**	**0.0**
	comp=Z,52nm,1.5s						
ISA	**Isabella, Lake**	**85.02**	**52**	*e*P	**P**	**04 38 51.8**	**-0.5**
	comp=Z,31nm,1.6s						
ISA	**Isabella, Lake**	**85.02**	**52**	*e*P	**P**	**04 38 51.8**	**-0.5**
ISA				pmax	pmax		
	comp=Z,31nm,1.6s						
NLWA	**Neilton Lookou**	**85.12**	**40**	PFAKE		04 39 00.0	+7.6
NLWA				LR	LR		
	comp=Z,2µm,21.0s						
WAKR	**Walker**	**85.15**	**49**	*e*P	**P**	**04 38 52.3**	**-0.7**
	comp=Z,28nm,1.2s						
MDPB	**Devils Postpil**	**85.15**	**50**	*e*P	**P**	**04 38 52.3**	**-0.8**
	comp=Z,20nm,1.1s						
EDW2	**Edwards Air Fo**	**85.17**	**53**	P	**P**	**04 38 51.9**	**-1.1**
	baz=253						
OMMB	**Old Mammoth Mi**	**85.20**	**50**	*e*P	**P**	**04 38 53.4**	**-0.1**
PNTR	**Pine Nut**	**85.21**	**49**	*e*P	**P**	**04 38 52.7**	**-0.6**
	comp=Z,76nm,2.0s						
VCNR	**Virginia City**	**85.24**	**49**	*e*P	**P**	**04 38 53.0**	**-0.4**
	comp=Z,11nm,1.1s						
BFSC	**Mount Baldy Ra**	**85.25**	**54**	P	**P**	**04 38 53.9**	**+0.4**
	baz=253						
EGAK	**Eagle**	**85.34**	**20**	*e*P	**P**	**04 38 51.8**	**-1.3**
	comp=Z,47nm,1.2s						
EGAK				LR	LR		
	comp=Z,1µm,20.0s						
J05D	**Fort Rock, OR**	**85.40**	**44**	P	**P**	**04 38 52.8**	**-1.3**
	baz=250						
DAWY	**Dawson**	**85.52**	**21**	*e*P	**P**	**04 38 53.3**	**-0.8**
	comp=Z,24nm,1.4s						
CWC	**Cottonwood Cre**	**85.56**	**52**	P	**P**	**04 38 53.1**	**-1.9**
	baz=253						
PAHR	**Pah Rah Range**	**85.56**	**48**	*e*P	**P**	**04 38 55.3**	**+0.3**
MOD	**Modoc Plateau**	**85.60**	**46**	*e*P	**P**	**04 38 54.4**	**-0.7**
	comp=Z,25nm,1.4s						
I05D	**Terrebonne, OR**	**85.69**	**43**	P	**P**	**04 38 55.2**	**-0.2**
	baz=250						
PINE	**Pine Mountain**	**85.78**	**44**	*e*P	**P**	**04 38 55.3**	**-0.7**
RYN	**Ryan**	**85.87**	**50**	*e*P	**P**	**04 38 56.4**	**-0.2**
	comp=Z,38nm,1.7s						
MPMC	**Manual Prospec**	**85.90**	**52**	P	**P**	**04 38 55.2**	**-1.6**
	baz=253						
NV01	**Mina Array Sit**	**85.97**	**50**	*e*P	**P**	**04 38 55.4**	**-1.8**
NVAR	**Mina Array Bea**	**85.97**	**50**	P	**P**	**04 38 55.2**	**-1.9**
	comp=Z,9.7nm,1.0s,baz=235,slow=7.3,SNR=16						
PFO	**Pinyon Flats O**	**86.03**	**55**	*e*P	**P**	**04 38 56.1**	**-1.3**
	comp=Z,9.5nm,1.2s						
PFO				LR	LR		
	comp=Z,2µm,20.0s						
PFO	**Pinyon Flats O**	**86.03**	**55**	*e*P	**P**	**04 38 56.1**	**-1.3**
PFO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PFO				MLR	MLR		
	comp=Z,2µm,20.0s						
TIXI	**Tiksi**	**86.08**	**349**	PFAKE		04 39 10.0	+13
TIXI				LR	LR		
	comp=Z,883nm,20.0s						
TIXI	**Tiksi**	**86.08**	**349**	*ce*P	**P**	**04 38 58.3**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,25nm,1.7s						
TIXI	**Tiksi**	**86.08**	**349**	LR	LR	05 18 27.1	
	comp=Z,574nm,18.2s,baz=140,slow=36						
NV11	**Mina Array Sit**	**86.09**	**50**	*e*P	**P**	**04 38 56.2**	**-1.4**
	comp=Z,1.9nm,1.2s						
GSC	**Goldstone, Bar**	**86.22**	**53**	P	**P**	**04 38 58.4**	**+0.1**
	baz=254						
GRAC	**Grapevine Rang**	**86.27**	**51**	P	**P**	**04 38 58.2**	**-0.2**
	baz=253						
KVN	**Kaiserville**	**86.31**	**49**	*e*P	**P**	**04 38 57.2**	**-1.5**
	comp=Z,17nm,1.3s						
KVN	**Kaiserville**	**86.31**	**49**	*e*P	**P**	**04 38 57.2**	**-1.5**
KVN				pmax	pmax		
	comp=Z,17nm,1.3s						
A04D	**Lummi Island**	**86.33**	**39**	P	**P**	**04 38 57.6**	**-0.8**
	baz=249						
BELC	**Belle Mtn. Jos**	**86.51**	**55**	P	**P**	**04 38 58.4**	**-1.3**
	baz=254						
I07A	**Izee**	**86.85**	**44**	*e*P	**P**	**04 39 00.6**	**-0.6**
	comp=Z,9.9nm,1.0s						
WVOR	**Wild Horse Val**	**86.94**	**46**	*e*P	**P**	**04 39 00.5**	**-1.2**
WVOR				LR	LR		
	comp=Z,1µm,20.0s						
WVOR	**Wild Horse Val**	**86.94**	**46**	*e*P	**P**	**04 39 00.5**	**-1.2**
WVOR				MLR	MLR		
	comp=Z,1µm,20.0s						
GMRC	**Granite Mounta**	**86.99**	**54**	P	**P**	**04 39 01.8**	**-0.3**
	baz=254						
LTY	**Liberty**	**87.11**	**41**	*e*P	**P**	**04 39 01.5**	**-0.8**
	comp=Z,12nm,1.1s						
TPNV	**Topopah Spring**	**87.11**	**52**	P	**P**	**04 39 02.9**	**+0.2**
	baz=254						
F07A	**Phinny Hill Vi**	**87.15**	**42**	*e*P	**P**	**04 39 02.6**	**+0.2**
	comp=Z,15nm,1.3s						
IRM	**Iron Mountain**	**87.23**	**55**	P	**P**	**04 39 01.7**	**-1.5**
	baz=255						
J08A	**Circle Bar Ran**	**87.33**	**45**	*e*P	**P**	**04 39 03.8**	**+0.3**
	comp=Z,26nm,1.3s						
BMN	**Battle Mountai**	**87.36**	**48**	*e*P	**P**	**04 39 02.5**	**-1.3**
	comp=Z,13nm,1.3s						
BMN	**Battle Mountai**	**87.36**	**48**	*e*P	**P**	**04 39 02.5**	**-1.3**
BMN				pmax	pmax		
	comp=Z,13nm,1.3s						
LDFC	**Landfair**	**87.50**	**54**	*e*P	**P**	**04 39 03.8**	**-0.8**
	comp=Z,38nm,1.2s						
HAWA	**Hanford**	**87.57**	**42**	*e*P	**P**	**04 39 02.7**	**-1.8**
	comp=Z,15nm,1.2s						
HAWA				LR	LR		
	comp=Z,1µm,19.0s						
G08A	**Pilot Rock**	**87.60**	**43**	*e*P	**P**	**04 39 04.9**	**+0.1**
	comp=Z,20nm,1.4s						
Y12C	**Blythe**	**87.62**	**55**	*e*P	**P**	**04 39 04.6**	**-0.4**
	comp=Z,17nm,1.1s						
Y12C	**Blythe**	**87.62**	**55**	P	**P**	**04 39 04.6**	**-0.4**
	baz=255						
EPYK	**Eagle Plains**	**87.78**	**20**	P	**P**	**04 39 05.7**	**+0.7**
	baz=236						
SHPR	**Sheep Range**	**87.83**	**52**	*e*P	**P**	**04 39 06.1**	**-0.1**
	comp=Z,53nm,1.9s						
E08A	**Dider Farm, El**	**87.91**	**42**	*e*P	**P**	**04 39 06.3**	**+0.3**
	comp=Z,24nm,1.2s						
113A	**Mohawk Valley,**	**87.99**	**56**	*e*P	**P**	**04 39 06.3**	**-0.4**
	comp=Z,23nm,1.4s						
R11A	**Troy Canyon, C**	**88.00**	**50**	*e*P	**P**	**04 39 07.1**	**+0.1**
	comp=Z,11nm,1.3s						
R11A	**Troy Canyon, C**	**88.00**	**50**	P	**P**	**04 39 06.8**	**-0.2**
	baz=254						
PDMCI	**Parker Dam,Lak**	**88.07**	**55**	P	**P**	**04 39 06.2**	**-0.9**
	baz=255						
D08A	**Wollman Farm,**	**88.18**	**41**	*e*P	**P**	**04 39 07.3**	**-0.1**
	comp=Z,39nm,1.8s						
B08A	**Colville Reser**	**88.32**	**40**	*e*P	**P**	**04 39 07.8**	**-0.3**
	comp=Z,18nm,1.4s						
E09A	**Wood Farm, Sta**	**88.52**	**42**	*e*P	**P**	**04 39 08.5**	**-0.4**
	comp=Z,41nm,1.8s						
214A	**Organ Pipe Nat**	**88.58**	**57**	P	**P**	**04 39 08.7**	**-1.0**
	baz=256						
BMO	**Blue Mountains**	**88.58**	**44**	*e*P	**P**	**04 39 08.8**	**-0.6**
	comp=Z,26nm,1.7s						
BMO	**Blue Mountains**	**88.58**	**44**	*e*P	**P**	**04 39 08.8**	**-0.6**
BMO				pmax	pmax		
	comp=Z,26nm,1.7s						
Y14A	**Wickenburg**	**88.90**	**55**	*e*P	**P**	**04 39 10.1**	**-1.0**
	comp=Z,11nm,1.4s						
ELK	**Elko**	**88.90**	**48**	*e*P	**P**	**04 39 11.4**	**+0.2**
	comp=Z,28nm,1.8s						
F10A	**Beach Ranch, E**	**88.96**	**43**	*e*P	**P**	**04 39 10.3**	**-0.9**
	comp=Z,63nm,1.9s						
WMQ	**Urumqi**	**89.12**	**315**	*e*P	**P**	**04 39 13.0**	**+1.0**
WMQ				sP	pwP	04 39 19.5	-0.1
WMQ				PP	**PP**	**04 42 49.0**	**+6.7**
WMQ				S	**S**	**04 49 59.1**	**-1.4**
WMQ				pmax	pmax		
	comp=Z,35nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,610nm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,21.7s						
WMQ				LR	LR		
	comp=Z,2µm,18.9s						
WMQ				LR	LR		
	comp=Z,2µm,23.5s						
WMQ	**Urumqi**	**89.12**	**315**	*e*P	**P**	**04 39 10.8**	**-1.2**
WMQ	**Urumqi**	**89.12**	**315**	*e*P	**P**	**04 39 10.8**	**-1.2**
MFID	**Camas Ranch**	**89.20**	**46**	*e*P	**P**	**04 39 12.6**	**+0.1**
	comp=Z,21nm,1.5s						
PSUT	**Pine Spring**	**89.36**	**51**	*e*P	**P**	**04 39 13.8**	**+0.4**
	comp=Z,21nm,1.5s						
LCMT	**Little Creek M**	**89.45**	**52**	*e*P	**P**	**04 39 12.7**	**-1.1**
	comp=Z,15nm,1.2s						
CCUT	**Cedar City**	**89.49**	**52**	*e*P	**P**	**04 39 12.9**	**-1.2**
	comp=Z,21nm,1.4s						
NEW	**Newport**	**89.70**	**41**	*e*P	**P**	**04 39 15.8**	**+1.2**
	comp=Z,14nm,1.5s						
NEW				LR	LR		
	comp=Z,1µm,19.0s						
NEW	**Newport**	**89.70**	**41**	P	**P**	**04 39 12.5**	**-2.0**
	comp=Z,2.4nm,0.7s,baz=245,slow=4.6,SNR=4.7						
SZCU	**Shurtz Canyon**	**89.72**	**52**	*e*P	**P**	**04 39 14.3**	**-0.8**
	comp=Z,14nm,1.1s						
KNB	**Kanab**	**89.78**	**52**	*e*P	**P**	**04 39 14.5**	**-0.9**
	comp=Z,64nm,1.7s						
INK	**Inuvik**	**89.87**	**19**	*e*P	**P**	**04 39 13.9**	**-0.9**
	comp=Z,8.8nm,1.3s						
INK	**Inuvik**	**89.87**	**19**	*e*P	**P**	**04 39 13.9**	**-0.9**
INK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
U15A	**North Rim**	**90.06**	**53**	*e*P	**P**	**04 39 16.0**	**-0.8**
	comp=Z,45nm,1.6s						
HLID	**Hailey**	**90.23**	**46**	*e*P	**P**	**04 39 16.2**	**-1.1**
	comp=Z,21nm,1.6s						
HLID				LR	LR		
	comp=Z,1µm,20.0s						
HLID	**Hailey**	**90.23**	**46**	P	**P**	**04 39 15.9**	**-1.4**
	baz=255						
X16A	**Lo Mia Camp, P**	**90.27**	**55**	*e*P	**P**	**04 39 17.0**	**-0.7**
	comp=Z,6.1nm,0.8s						
PKCU	**Pink Cliffs**	**90.28**	**52**	*e*P	**P**	**04 39 17.9**	**0.0**
	comp=Z,73nm,1.8s						
TUC	**Tucson**	**90.33**	**57**	*e*P	**P**	**04 39 16.4**	**-1.4**
	comp=Z,11nm,1.4s						
TUC				LR	LR		
	comp=Z,3µm,19.0s						
TUC	**Tucson**	**90.33**	**57**	*e*P	**P**	**04 39 16.5**	**-1.4**
TUC				pmax	pmax		
	comp=Z,11nm,1.4s						
TUC				MLR	MLR		
	comp=Z,3µm,19.0s						
TUC	**Tucson**	**90.33**	**57**	P	**P**	**04 39 16.8**	**-1.1**
	baz=257						
MTPU	**Mount Pierson**	**90.52**	**51**	*e*P	**P**	**04 39 18.8**	**-0.2**
	comp=Z,12nm,1.0s						
DUG	**Dugway, Tooele**	**90.55**	**49**	*e*P	**P**	**04 39 17.4**	**-1.5**
	comp=Z,16nm,1.4s						
DUG				LR	LR		
	comp=Z,1µm,21.0s						
DUG	**Dugway, Tooele**	**90.55**	**49**	*e*P	**P**	**04 39 17.4**	**-1.5**
DUG				pmax	pmax		
	comp=Z,16nm,1.4s						
DUG				MLR	MLR		
	comp=Z,1µm,21.0s						
DUG	**Dugway, Tooele**	**90.55**	**49**	P	**P**	**04 39 17.6**	**-1.3**
	baz=256						
BGU	**Big Grassy Mou**	**90.57**	**48**	*e*P	**P**	**04 39 17.9**	**-1.0**
	comp=Z,11nm,1.2s						
WUAZ	**Wupatki**	**90.57**	**54**	*e*P	**P**	**04 39 18.2**	**-0.9**
	comp=Z,35nm,1.6s						
WUAZ				LR	LR		
	comp=Z,1µm,21.0s						
WUAZ	**Wupatki**	**90.57**	**54**	P	**P**	**04 39 18.0**	**-1.1**
	baz=257						
MSU	**Marysvale**	**90.63**	**51**	*e*P	**P**	**04 39 18.4**	**-1.0**
MSU	**Marysvale**	**90.63**	**51**	*e*P	**P**	**04 39 18.4**	**-1.0**
DGZ	**Jazzator, Alta**	**90.92**	**321**	*e*P	**P**	**04 39 18.5**	**-1.8**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HVU	**Hansel Valley**	**90.96**	**48**	*e*P	**P**	**04 39 19.6**	**-1.1**
	comp=Z,25nm,1.3s						
HVU	**Hansel Valley**	**90.96**	**48**	*e*P	**P**	**04 39 19.6**	**-1.1**
HVU				pmax	pmax		
	comp=Z,25nm,1.3s						
NLU	**North Lily Min**	**91.04**	**50**	*e*P	**P**	**04 39 20.5**	**-0.7**
	comp=Z,18nm,1.3s						
SPUT	**South Promonto**	**91.08**	**48**	*e*P	**P**	**04 39 21.3**	**0.0**
	comp=Z,38nm,1.9s						
319A	**Douglas**	**91.38**	**58**	*e*P	**P**	**04 39 22.5**	**-0.4**
	comp=Z,16nm,1.2s						
MPU	**Maple Canyon**	**91.39**	**50**	*e*P	**P**	**04 39 22.1**	**-0.7**
	comp=Z,21nm,1.4s						
CTU	**Camp Tracy**	**91.45**	**49**	*e*P	**P**	**04 39 22.0**	**-1.0**
	comp=Z,14nm,1.3s						
X18A	**Snowflake**	**91.49**	**55**	*e*P	**P**	**04 39 22.0**	**-1.4**
TMUT	**Trail Mountain**	**91.55**	**50**	*e*P	**P**	**04 39 22.6**	**-1.1**
MCMT	**McKenzie Canyo**	**91.63**	**45**	*e*P	**P**	**04 39 23.4**	**-0.5**
JLU	**Jordanelle**	**91.66**	**49**	*e*P	**P**	**04 39 23.3**	**-0.8**
	comp=Z,25nm,1.6s						
HWUT	**Hardware Ranch**	**91.80**	**48**	PFAKE		04 39 30.0	+5.3
HWUT				LR	LR		
	comp=Z,561nm,20.0s						
TCUT	**Toone Canyon**	**91.80**	**49**	*e*P	**P**	**04 39 23.8**	**-1.0**
SYO	**Syowa Base**	**91.81**	**197**	⇑*e*PcP	**PcP**	**04 39 26.4**	**+1.6**
DGAR	**Diego Garcia**	**91.86**	**262**	PFAKE		04 39 40.0	+15
DGAR				LR	LR		
	comp=Z,716nm,20.0s						
DLMT	**Dillon**	**91.94**	**44**	*e*P	**P**	**04 39 23.8**	**-1.3**
	comp=Z,16nm,1.1s						
LRM	**Limekiln Ridge**	**92.14**	**44**	*e*P	**P**	**04 39 25.7**	**-0.6**
AHID	**Auburn Hatcher**	**92.39**	**47**	PFAKE		04 39 40.0	+13
AHID				LR	LR		
	comp=Z,873nm,21.0s						
FXWY	**Fox Creek**	**92.64**	**46**	*e*P	**P**	**04 39 27.6**	**-1.0**
	comp=Z,7.7nm,1.4s						
BOZ	**Bozeman (W)**	**92.65**	**44**	PFAKE		04 39 40.0	+12
BOZ				LR	LR		
	comp=Z,1µm,20.0s						
BOZ	**Bozeman (W)**	**92.65**	**44**	P	**P**	**04 39 28.5**	**0.0**
	baz=257						
REDW	**Red Top Meadow**	**92.70**	**46**	*e*P	**P**	**04 39 27.8**	**-1.0**
IMW	**Indian Meadow**	**92.76**	**46**	*e*P	**P**	**04 39 28.2**	**-0.9**
	comp=Z,19nm,1.7s						
YHB	**Horse Butte**	**92.76**	**45**	*e*P	P	04 39 34.3	+5.2
	comp=Z,8.2nm,1.0s						
HRY	**Holter Researc**	**92.77**	**43**	*e*P	**P**	**04 39 27.8**	**-1.1**
MOOW	**Moose Ponds**	**92.86**	**46**	*e*P	**P**	**04 39 28.7**	**-0.9**
	comp=Z,12nm,1.8s						
LOHW	**Long Hollow**	**92.93**	**46**	*e*P	**P**	**04 39 29.2**	**-0.7**
	comp=Z,22nm,1.8s						
H17A	**Grant Village**	**93.12**	**46**	*e*P	**P**	**04 39 29.9**	**-0.9**
	comp=Z,7.8nm,1.4s						
MVCO	**Mesa Verde**	**93.19**	**53**	PFAKE		04 39 40.0	+8.7

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MVCO                                 LR        LR
      comp=Z,956nm,20.0s
LKWY  Lake                93.28  45  PFAKE               04 39 40.0 +8.5
LKWY                                 LR        LR
      comp=Z,2µm,19.0s
BW06  Boulder Array       93.50  47 eP         P         04 39 31.6 -1.0
      comp=Z,11nm,1.5s
BW06                                 LR        LR
      comp=Z,868nm,21.0s
PD31  Pinedale Array      93.50  47 eP         P         04 39 31.5 -1.1
PDAR  Pinedale Array      93.50  47 eP         P         04 39 31.6 -0.9
PDAR  Pinedale Array      93.50  47  P         P         04 39 30.2 -2.4
      comp=Z,3.4nm,1.1s,baz=222,slow=2.0,SNR=8.9
MK01  Makanchi Array      93.53 317 eP         P         04 39 29.7 -2.7
MK31  Makanchi Array      93.55 317 eP         P         04 39 31.4 -1.0
MKAR  Makanchi Array      93.55 317 eP         P         04 39 31.3 -1.1
      comp=Z,48nm,0.9s
MKAR                                 PKKP      PKKPdf    04 56 35.9 -3.1
MKAR  Makanchi Array      93.55 317  P         P         04 39 29.0 -3.4
MKAR                                 pmax      pmax
      comp=Z,2.0nm,0.7s
MKAR                                 pmax      pmax
      comp=Z,1.0nm,0.8s
MKAR  Makanchi Array      93.55 317  P         P         04 39 29.0 -3.4
      comp=Z,5.9nm,0.8s,baz=91,slow=6.0,SNR=16
MKAR                                 PKKP      PKKPdf    04 56 35.9 -3.1
      comp=Z,1.2nm,0.8s,baz=282,slow=2.1,SNR=7.4
ZAA0  Zalesovo Array      93.57 324 eP         P         04 39 31.7 -0.5
ZALV  Zalesovo Beam       93.57 324 eP         P         04 39 31.2 -1.0
ZALV  Zalesovo Beam       93.57 324  P         P         04 39 29.4 -2.9
      comp=Z,5.6nm,0.9s,baz=115,slow=5.5,SNR=3.5
MAKZ  Makanchi            93.76 317 eP         P         04 39 31.6 -1.8
      comp=Z,67nm,1.9s
MAKZ  Makanchi            93.76 317 eP         P         04 39 31.6 -1.8
MAKZ                                 pmax      pmax
      comp=Z,67nm,1.9s
RLMT  Red Lodge           94.18  45  PFAKE               04 39 50.0  +14
RLMT                                 LR        LR
      comp=Z,1µm,21.0s
ANMO  Albuquerque         94.40  55 eP         P         04 39 35.4 -1.4
      comp=Z,5.8nm,1.4s
ANMO                                 LR        LR
      comp=Z,1µm,21.0s
ANMO  Albuquerque         94.40  55ceP         P         04 39 39.0 +2.2
ANMO                                 pmax      pmax
      comp=Z,2.0nm,0.9s
ANMO  Albuquerque         94.40  55  P         P         04 39 34.1 -2.7
      comp=Z,0.4nm,0.4s,baz=274,slow=8.1,SNR=2.9
EGMT  Eagleton            94.42  42 eP         P         04 39 33.4 -3.1
      comp=Z,12nm,1.1s
EGMT                                 LR        LR
      comp=Z,940nm,21.0s
S22A  4UR Ranch, Cre      94.60  53  P         P         04 39 36.2 -1.6
      baz=260
NVS   Novosibirsk         94.68 325 eP         P         04 39 37.2 -0.1
MNTX  Cornudas Mount      94.71  59 eP         P         04 39 36.6 -1.5
      comp=Z,1.4nm,0.8s
MNTX                                 LR        LR
      comp=Z,1µm,20.0s
YKA   Yellowknife Ar      94.94  27  P         P         04 39 34.8 -3.5
      comp=Z,0.6nm,0.6s,baz=257,slow=4.6,SNR=9.8
YKA                                  PP        PP        04 43 25.1 -2.4
      comp=Z,0.9nm,1.1s,baz=255,slow=6.9,SNR=4.6
YKB5  Yellowknife Ar      94.94  27 eP         P         04 39 37.1 -1.2
SDCO  Great Sand Dun      95.64  53  PFAKE               04 39 50.0 +7.5
SDCO                                 LR        LR
      comp=Z,1µm,20.0s
PMSA  Palmer Station      95.71 161  LR        LR        05 17 53.6
      comp=Z,559nm,18.4s,baz=212,slow=32
TXAR  Lajitas Array       95.78  61  P         P         04 39 40.4 -2.7
      comp=Z,0.5nm,0.8s,baz=246,slow=5.8,SNR=3.7
TXAR                                 PP        PP        04 43 34.9 -0.3
      comp=Z,3.0nm,1.2s,baz=243,slow=4.1,SNR=7.1
ISCO  Idaho Springs       95.89  51  PFAKE               04 39 50.0 +6.3
ISCO                                 LR        LR
      comp=Z,2µm,22.0s
NRIK  Noril'sk            96.13 340  P         P         04 39 41.4 -2.3
      comp=Z,1.8nm,0.3s,baz=174,slow=9.2,SNR=4.6
LAO   LASA Array          96.55  44  PFAKE               04 40 00.0  +14
LAO                                  LR        LR
      comp=Z,1µm,22.0s
KURK  Kurchatov           96.66 320 eP         P         04 39 45.5 -1.0
      comp=Z,8.1nm,0.9s
KURK                                 LR        LR
      comp=Z,2µm,20.0s
KURK  Kurchatov           96.66 320  P         P         04 39 42.9 -3.6
KURK                                 pmax      pmax
      comp=Z,1.0nm,0.6s
KURBB Kurchatov Arra      96.70 320  P         P         04 39 42.9 -3.7
      comp=Z,0.4nm,0.6s,baz=103,slow=3.6,SNR=2.8
NIL   Nilore              98.12 303  PFAKE               04 40 00.0 +6.4
NIL                                  LR        LR
      comp=Z,377nm,21.0s
DGMT  Dagmar              98.16  42  PFAKE               04 40 00.0 +6.6
DGMT                                 LR        LR
      comp=Z,1µm,20.0s
FRU   Bishkek             98.26 312 eP         P         04 39 48.0 -6.0
FRU                                  pmax      pmax
      comp=Z,100nm,1.4s
AAK   Ala-Archa           98.32 312  PFAKE               04 40 00.0 +5.5
AAK                                  LR        LR
      comp=Z,998nm,20.0s
AAK   Ala-Archa           98.32 312  LR        LR        05 27 48.2
      comp=Z,524nm,18.0s,baz=74,slow=38
OGNE  Ogallala            98.76  50  PFAKE               04 40 10.0  +14
OGNE                                 LR        LR
      comp=Z,2µm,20.0s
JCT   Junction City       99.26  61  PFAKE               04 40 10.0  +11
JCT                                  LR        LR
      comp=Z,2µm,20.0s
FFC   Flin Flon          100.19  36  PFAKE               04 40 10.0 +7.8
FFC                                  LR        LR
      comp=Z,2µm,19.0s
FFC   Flin Flon          100.19  36 i P        Pdif      04 40 06.4 +4.2
CBKS  Cedar Bluff        100.27  52  PFAKE               04 40 10.0 +6.9
CBKS                                 LR        LR
      comp=Z,1µm,20.0s
KVTX  Kingsville         100.56  64  PFAKE               04 40 20.0  +16
KVTX                                 LR        LR
      comp=Z,615nm,19.0s
WMOK  Wichita Mounta     100.61  57  PFAKE               04 40 20.0  +15
WMOK                                 LR        LR
      comp=Z,2µm,19.0s
BVAR  Borovoye Array     101.97 322  Pdif      Pdif      04 40 05.0 -5.2
BVAR  Borovoye Array     101.97 322  P         Pdif      04 40 05.0 -5.2
BVAR  Borovoye Array     101.97 322  Pdiff     Pdif      04 40 05.0 -5.2
      comp=Z,0.1nm,0.4s,baz=74,slow=7.7,SNR=2.2
BRVK  Borovoye           102.03 322  PFAKE               04 40 20.0  +10
BRVK                                 LR        LR
      comp=Z,733nm,20.0s
BRVK  Borovoye           102.03 322 i P        Pdif      04 40 10.1 -0.4
BRVK                                 pmax      pmax
      comp=Z,2.0nm,1.3s
KSU1  Kansas State U     102.73  52  PFAKE               04 40 20.0 +6.1
KSU1                                 LR        LR
      comp=Z,2µm,20.0s
ECSD  EROS Data Cent     103.00  48  PFAKE               04 40 30.0  +15
ECSD                                 LR        LR
      comp=Z,964nm,19.0s
PAYG  Puerto Ayora       103.53  93  PFAKE               04 40 30.0  +12
PAYG                                 LR        LR
      comp=Z,580nm,19.0s
NATX  Nacogdoches        103.78  60  PFAKE               04 40 30.0  +11
NATX                                 LR        LR
      comp=Z,1µm,20.0s
MIAR  Mount Ida          104.88  57  PFAKE               04 40 30.0 +6.4
MIAR                                 LR        LR
      comp=Z,1µm,19.0s
SCIA  State Center       105.44  49  PFAKE               04 44 50.0  +10
SCIA                                 LR        LR
      comp=Z,2µm,20.0s
EYMN  Ely                106.61  43  PFAKE               04 44 50.0 +8.4
EYMN                                 LR        LR
      comp=Z,2µm,20.0s
JFWS  Jewell Farm        107.63  48  PFAKE               04 44 50.0 +6.4
JFWS                                 LR        LR
      comp=Z,750nm,19.0s
COWI  Conover            108.31  45  PFAKE               04 45 00.0  +15
COWI                                 LR        LR
      comp=Z,2µm,22.0s
HDIL  Hopedale           108.39  51  PFAKE               04 45 00.0  +15
HDIL                                 LR        LR
      comp=Z,2µm,21.0s
ARU   Arti               108.64 326  PFAKE               04 45 00.0  +15
ARU                                  LR        LR
      comp=Z,467nm,21.0s
BRAL  Brewton            110.25  61  PFAKE               04 45 00.0  +11
BRAL                                 LR        LR
      comp=Z,658nm,20.0s
JTS   JuntasAbangare     110.63  83  PFAKE               04 45 00.0  +10
JTS                                  LR        LR
      comp=Z,467nm,19.0s
KBS   Kingsbay           110.91 355  PFAKE               04 45 00.0  +11
KBS                                  LR        LR
      comp=Z,802nm,20.0s
GLMI  Grayling           111.58  46  PFAKE               04 45 00.0 +9.0
GLMI                                 LR        LR
      comp=Z,1µm,21.0s
ABPO  Ambohimpanom       112.50 244  PFAKE               04 45 00.0 +6.3
ABPO                                 LR        LR
      comp=Z,360nm,19.0s
LCO   Las Campanas       112.52 128  PFAKE               04 45 00.0 +6.3
LCO                                  LR        LR
      comp=Z,925nm,20.0s
AAM   Ann Arbor          112.52  49  PFAKE               04 45 00.0 +7.2
AAM                                  LR        LR
      comp=Z,2µm,20.0s
ACSO  Alum Creek Sta     113.22  51  PFAKE               04 45 10.0  +16
ACSO                                 LR        LR
      comp=Z,2µm,20.0s
GOGA  Godfrey            113.26  58  PFAKE               04 45 10.0  +15
GOGA                                 LR        LR
      comp=Z,2µm,21.0s
NNA   Nana               113.72 108  PFAKE               04 45 10.0  +14
NNA                                  LR        LR
      comp=Z,277nm,22.0s
TRQA  Tornquist          113.84 140  PFAKE               04 45 10.0  +14
TRQA                                 LR        LR
      comp=Z,748nm,21.0s
LVZ   Lovozero           114.86 342  PFAKE               04 45 10.0  +13
LVZ                                  LR        LR
      comp=Z,506nm,21.0s
OTAV  Otavalo            115.30  95  PFAKE               04 45 10.0  +10
OTAV                                 LR        LR
      comp=Z,461nm,20.0s
BCIP  Isla Barro Col     115.47  85  PFAKE               04 45 10.0  +11
BCIP                                 LR        LR
      comp=Z,382nm,19.0s
BLA   Blacksburg         115.50  54  PFAKE               04 45 10.0  +11
BLA                                  LR        LR
      comp=Z,1µm,21.0s
KEV   Kevo               115.80 345  PFAKE               04 45 10.0  +12
KEV                                  LR        LR
      comp=Z,1µm,19.0s
NHSC  New Hope           116.03  59  PFAKE               04 45 10.0  +10
NHSC                                 LR        LR
      comp=Z,654nm,19.0s
ARCES ARCESS Array B     116.33 345  PKP       PKiKP     04 44 56.4 -3.0
      comp=Z,2.5nm,0.8s,baz=84,slow=2.0,SNR=15
KLMR  Klimovskoe         116.75 334 ePKIKP     PKPdf     04 44 56.2 -4.2
KLMR                                e                    04 55 47.9
KLMR                                 pmax      pmax
      comp=Z,7.0nm,0.9s
KLMR  Klimovskoe         116.75 334 ePKPdf     PKPdf     04 44 56.2 -4.2
KLMR                                 AMP                 04 45 15.3
      comp=Z,7.0nm,0.9s
KLMR                                ePKKP      PKKPdf    04 55 47.9 -8.0
LVC   Limon Verde        116.84 122  PFAKE               04 45 10.0 +7.8
LVC                                  LR        LR
      comp=Z,844nm,22.0s
CNNC  Cliffs of the      117.74  56  PFAKE               04 45 10.0 +6.9
CNNC                                 LR        LR
      comp=Z,2µm,22.0s
CBN   Corbin Frederi     117.78  53  PFAKE               04 45 10.0 +6.9
CBN                                  LR        LR
      comp=Z,2µm,19.0s
BINY  Binghamton         118.17  48  PFAKE               04 45 10.0 +6.2
BINY                                 LR        LR
      comp=Z,1µm,21.0s
MTDJ  Mount Denham       118.55  75  PFAKE               04 45 20.0  +15
MTDJ                                 LR        LR
      comp=Z,308nm,19.0s
LONY  Lake Ozonia        118.66  45  PFAKE               04 45 20.0  +15
LONY                                 LR        LR
      comp=Z,1µm,21.0s
SFJD  Kangerlussuaq      119.03  15  PFAKE               04 45 20.0  +15
SFJD                                 LR        LR
      comp=Z,2µm,20.0s
MOS   Moscow             120.00 329 ePKIKP     PKiKP     04 45 13.8 +7.0
GNI   Garni              120.68 310 ePKPdf     PKPdf     04 45 07.6 -1.2
GNI                                  LR        LR
      comp=Z,628nm,19.0s
OBN   Obninsk            120.82 329  PFAKE               04 45 20.0  +12
OBN                                  LR        LR
      comp=Z,411nm,19.0s
OBN   Obninsk            120.82 329 ePKIKP     PKPdf     04 45 06.4 -1.9
OBN                                  pmax      pmax
      comp=Z,5.0nm,0.6s
GTBY  Guantanamo Bay     120.90  73  PFAKE               04 45 20.0  +10
GTBY                                 LR        LR
      comp=Z,233nm,20.0s
KIV   Kislovodsk         121.25 315  PFAKE               04 45 20.0  +10
KIV                                  LR        LR
      comp=Z,728nm,21.0s
KIV   Kislovodsk         121.25 315 i PKIKP    PKiKP     04 45 10.4 +0.6
KIV                                  pmax      pmax
      comp=Z,8.0nm,1.1s
KIV                                  MLR       MLR
      comp=Z,748nm,23.0s
FINES FINESS Array B     121.78 339  PKIKP     PKPdf     04 45 07.1 -3.0
FINES                                pmax      pmax
      comp=Z,1.0nm,0.7s
FINES FINESS Array B     121.78 339  PKP       PKPdf     04 45 07.1 -3.0
      comp=Z,2.7nm,0.8s,baz=36,slow=3.5,SNR=6.7
PKME  Peaks-Kenny Pk     122.10  43  PFAKE               04 45 20.0 +8.7
PKME                                 LR        LR
      comp=Z,980nm,19.0s
CPUP  Villa Florida      124.00 132  PKP       PKPdf     04 45 12.7 -2.8
      comp=Z,2.1nm,0.9s,baz=214,slow=2.4,SNR=5.3
SDV   Santo Domingo      124.44  87 ePKPdf     PKPdf     04 45 14.6 -2.2
SDV                                  LR        LR
      comp=Z,248nm,19.0s
SDDR  Presa de Saban     124.49  75  PFAKE               04 45 30.0  +13
SDDR                                 LR        LR
      comp=Z,399nm,19.0s
GRTK  Grand Turk         124.62  71  PFAKE               04 45 30.0  +13
GRTK                                 LR        LR
      comp=Z,511nm,20.0s
BOSA  Boshof             125.16 223  PKP       PKPdf     04 45 16.7 -1.1
      comp=Z,2.6nm,0.9s,baz=135,slow=4.4,SNR=3.6
SUR   Sutherland         125.38 217  PFAKE               04 45 30.0  +11
SUR                                  LR        LR
      comp=Z,969nm,20.0s
NB2   NORSAR Subarra     126.70 345  PKPdf     PKPdf     04 45 17.0 -2.6
      comp=Z,0.9nm,0.6s,baz=32,slow=1.8
NOA   NORSAR Array B     126.70 345  PKP       PKPdf     04 45 17.1 -2.6
      comp=Z,1.3nm,0.8s,baz=34,slow=2.0,SNR=7.8
KIEV  Kiev               126.89 327  PFAKE               04 45 30.0 +9.4
KIEV                                 LR        LR
      comp=Z,988nm,20.0s
KIEV  Kiev               126.89 327 i PKIKP    PKiKP     04 45 21.2 +0.6
AK11  Malin Array Si     126.92 327 ePKPdf     PKPdf     04 45 19.8 -0.4
KMBO  Kilima Mbogo       127.44 260  PKP       PKPdf     04 45 21.6 -1.0
KMBO                                 LR        LR
      comp=Z,523nm,19.0s
KMBO  Kilima Mbogo       127.44 260  PKP       PKPdf     04 45 21.6 -1.0
      comp=Z,0.4nm,0.3s,baz=120,slow=13,SNR=3.7
BRTR  Keskin Array B     128.99 313  PKP       PKPdf     04 45 23.8 -0.9
      comp=Z,0.8nm,0.8s,baz=58,slow=8.7,SNR=4.1
SJG   San Juan           129.37  76 ePKPdf     PKPdf     04 45 25.7 -0.1
SJG                                  LR        LR
      comp=Z,310nm,19.0s
SJG   San Juan           129.37  76 ePKIKP     PKPdf     04 45 25.7 -0.1
SJG                                  MLR       MLR
      comp=Z,310nm,19.0s
ANTO  Ankara             129.55 313  PFAKE               04 45 40.0  +14
ANTO                                 LR        LR
      comp=Z,446nm,20.0s
LVV   L'vov              130.12 328 ePKHKP     PKPpre    04 45 06.7
LSZ   Lusaka             130.54 239 ePKPdf     PKPdf     04 45 27.9 -0.4
LSZ                                  LR        LR
      comp=Z,1µm,22.0s
LSZ   Lusaka             130.54 239 ePKIKP     PKPdf     04 45 27.9 -0.4
LSZ                                  MLR       MLR
      comp=Z,1µm,22.0s
UZH   Uzhgorod           131.75 328 ePKIKP     PKiKP     04 45 32.5 +2.0
UZH                                 e                    04 45 39.8
OKC   Ostrava-Krasne     132.99 332  AMS       AMS       05 51 10.0
      comp=Z,700nm,16.8s
DPC   Dobruska-Polom     133.45 333  AMS       AMS       05 47 30.0
      comp=Z,600nm,17.2s
UPC   Upice              133.47 334  AMS       AMS       05 50 10.0
      comp=Z,900nm,17.7s
ANWB  Willy Bob          133.53  76  PFAKE               04 45 40.0 +5.1
ANWB                                 LR        LR
      comp=Z,442nm,21.0s
GRGR  Grenville          133.55  84  PFAKE               04 45 40.0 +4.9
GRGR                                 LR        LR
      comp=Z,383nm,21.0s
MBAR  Mbarara            133.86 258  PFAKE               04 45 50.0  +14
MBAR                                 LR        LR
      comp=Z,906nm,19.0s
PVCC  Panska Ves         134.07 335  AMS       AMS       05 48 30.0
      comp=Z,800nm,19.3s
CLL   Collm              134.11 336 i PKPdf    PKPdf     04 45 34.0 +0.2
CLL                                 esPKPdf    sPKPdf    04 45 39.0 -0.6
CLL                                 e                    04 45 46.0
CLL                                 e                    04 49 28.0
CLL                                 ePSKS                04 58 06.0
CLL                                 e                    05 00 36.0
CLL                                 eSS        SS        05 05 54.0 +2.3
CLL                                 eSSS       SSS       05 10 54.0
CLL                                  Lm        MLR       05 48 00.0
      comp=N,500nm,19.4s
CLL                                  Lm        MLR       05 48 00.0
      comp=E,400nm,20.9s
CLL                                  Lm        MLR       05 48 00.0
      comp=Z,1µm,19.2s
CLL   Collm              134.11 336 i PKIKP    PKPdf     04 45 34.0 +0.2
CLL                                 e                    04 45 39.0
CLL                                  MLR       MLR
      comp=Z,1µm,19.2s
MODS  Modra-Piesok       134.42 331 ePKIKP     PKPdf     04 45 34.6  0.0
MODS  Modra-Piesok       134.42 331 ePKP       PKPdf     04 45 34.6  0.0
PRU   Pruhonice          134.49 334  AMS       AMS       05 50 40.0
      comp=Z,900nm,16.2s
TREC  Trest              134.59 333  AMS       AMS       05 48 50.0
      comp=Z,700nm,19.6s
CONA  Conrad Observa     135.41 331  P         PKiKP     04 45 43.8 +5.7
      comp=Z,5.5nm,1.2s
KHC   Kasperske Hory     135.55 334 ePKPDF     PKiKP     04 45 38.0 -0.3
KHC                                  AMS       AMS       05 51 30.0
      comp=Z,1µm,19.0s
KHC   Kasperske Hory     135.55 334 ePKIKP     PKiKP     04 45 38.0 -0.3
KHC                                  MLR       MLR
      comp=Z,1µm,19.0s
GERES GERESS Array B     135.71 334  PKP       PKPdf     04 45 35.2 -1.9
      comp=Z,0.9nm,0.7s,baz=73,slow=1.8,SNR=6.5
GEA0  GERESS Array S     135.72 334 ePKPdf     PKPdf     04 45 36.4 -0.7
MOA   Molln              136.21 332 epPKiKP    PKiKP     04 45 43.3 +3.7
      comp=Z,11nm,1.7s
TSUM  Tsumeb             136.59 226  PFAKE               04 45 50.0 +8.6
TSUM                                 LR        LR
      comp=Z,968nm,21.0s
SOKA  Soboth             136.70 331 ePKPdf     PKPdf     04 45 37.6 -1.4
      comp=Z,9.2nm,1.6s
KBA   Koelnbreinsper     137.20 332 eP         PKiKP     04 45 46.2 +4.4
      comp=Z,7.8nm,1.1s
BDFB  Brasilia           137.30 128  PKP       PKPdf     04 45 38.5 -2.5
      comp=Z,3.8nm,1.0s,baz=214,slow=11,SNR=4.3
ABTA  Abfaltersbach      137.82 333 ePKiKP     PKiKP     04 45 42.1 -0.9
      comp=Z,7.3nm,1.2s
MOTA  Moosalm            137.98 334 ePKiKP     PKPdf     04 45 41.3 -0.1
      comp=Z,2.7nm,0.7s
RETA  Reutte             138.02 335  pPKPdf    PKiKP     04 45 44.9 +1.5
      comp=Z,9.0nm,1.4s
SQTA  Sankt Quirin       138.03 334 epPKPdf    PKiKP     04 45 44.6 +1.1
      comp=Z,5.7nm,0.8s
FETA  Feichten           138.40 334  pPKPdf    PKiKP     04 45 44.6 +0.3
      comp=Z,15nm,1.9s
KEST  Kesra              147.44 323  PKPbc     PKPdf     04 45 59.5 +1.1
      comp=Z,28nm,0.9s,baz=4.9,slow=19,SNR=12
POLO  Lamas de Olo       149.25 351 ePKPdf     PKPbc     04 46 04.0 -1.4
MVO   Moncorvo           149.33 349 ePKPdf     PKPbc     04 46 03.8 -1.8
PVRL  Vila Real          149.34 350 ePKPdf     PKPbc     04 46 03.8 -1.8
PTO   Porto              149.61 352 ePKPdf     PKPbc     04 46 04.3 -1.9
PVIS  Viseu              149.91 350 ePKPdf     PKPbc     04 46 05.6 -1.4
ES19  SONSECA Array      150.01 344 ePKPbc     PKPbc     04 46 05.4 -2.0
ESDC  Sonseca Array      150.06 344  PKPbc     PKPbc     04 46 05.2 -2.2
      comp=Z,1.7nm,0.6s,baz=14,slow=2.7,SNR=10
MTE   Manteigas          150.16 350 ePKPdf     PKPdf     04 46 03.2 +0.6
MTE   Manteigas          150.16 350 ePKPdf     PKiKP     04 46 10.8 +2.3
PAB   San Pablo          150.28 345  PFAKE               04 46 10.0 +1.2
PAB                                  LR        LR
      comp=Z,1µm,22.0s
PCAS  Casmilo, Conde     150.66 351 ePKPdf     PKiKP     04 46 11.5 +2.0
PTOM  Tomar              151.07 351 ePKPdf     PKPbc     04 46 08.8 -0.9
PMRV  Marv??o            151.08 349 ePKPdf     PKPdf     04 46 03.6 -0.4
PMRV  Marv??o            151.08 349 ePKPdf     PKPbc     04 46 09.1 -0.7
PMTG  Montargil          151.57 350 ePKPdf     PKPdf     04 46 05.3 +0.6
PMTG  Montargil          151.57 350 ePKPdf     PKiKP     04 46 12.6 +1.2
PESTR Estremoz           151.66 349 ePKPdf     PKiKP     04 46 13.8 +2.2
PESTR Estremoz           151.66 349 ePKPab     PKPab     04 46 22.8 +3.1
MESJ  Messejana          152.77 350 ePKPdf     PKPpre    04 46 00.5
TOA0  Torodi Ar. Sit     164.31 279 ePKPdf     PKPdf     04 46 18.6 -2.4
TOA0                                ePKPdf     PKPdf     04 46 18.9 -2.0
TORD  Torodi Ar. Bea     164.31 279  PKP       PKPdf     04 46 18.0 -3.0
      comp=Z,0.5nm,0.7s,baz=128,slow=0.5,SNR=4.8
TORD                                 PKPab     PKPab     04 47 14.1 -1.1
      comp=Z,3.3nm,1.1s,baz=94,slow=4.0,SNR=3.3
SACV  Santiago Islan     170.03  66  PFAKE               04 46 30.0 +4.8
SACV                                 LR        LR
      comp=Z,585nm,20.0s
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BJI ***08*** *04:38:08.9, 36.°51N×71.°36E, h102^{km}, mB4.8/11, mb4.4/20*

ISCJB ***08*** *04:38:10.1±0.2, 36.°47N±0.°02×71.°57E±0.°03, h114^{km}, mb4.2/35, Error ellipse: s-maj=4.0km s-min=3.3km az=174.8*

IDC ***08*** *04:38:10.1±0.8, 36.°39N×71.°46E, h101^{km}±7^{km}, mb3.7/18, mb1 3.9/21, mb1mx3.7/53, mbtmp4.1/21, MS2.5/1, Ms1 2.5/1, ms1mx2.2/54, Error ellipse: s-maj=13.1km s-min=12.0km az=9.0*

NNC ***08*** *04:38:10.9±2.5, 37.°02N×70.°63E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=20.5km s-min=14.6km az=162.0*

NEIC ***08*** *04:38:10.1±0.5, 36.°52N×71.°47E, h91^{km}±5^{km}, mb4.3/14, Error ellipse: s-maj=6.4km s-min=5.7km az=137.0*

ISC 08 04:38:10.9±0.4**, 36.°50N**±0.°04×**71.°36E**±0.°04**, h114^{km}, n127, σ2.^{s}50**/147**, mb4.2**/35**, 18C-7D, Afghanistan-Tajikistan border region**

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Code  Station Name         Δ°   AZ°    Phase ID              Time      Res
                                     Op        ISC         h  m  s    ISC
GAR   Garm                2.62 342  ePn        Pn        04 38 50.4 -1.8
GAR                                 eSn        Sn        04 39 22.2 -1.8
CEP   Cherat              2.71 170   P         Pn        04 38 52.4 -1.0
CEP                                  S         Sn        04 39 26.0 -0.1
KBL   Kabul               2.72 225  ePn        Pn        04 38 52.9 -0.6
KBL                                 eSn        Sn        04 39 24.8 -1.5
CHGR  Chuyangaron         2.77 322  ePn        Pn        04 38 51.9 -2.2
CHGR                                eSn        Sn        04 39 24.2 -3.0
CHCP  Chirah Chowk        3.24 151   P         Pn        04 39 00.0 -0.3
NIL   Nilore              3.24 151  ePn        Pn        04 38 59.6 -0.7
THW   Thamme Wali         3.71 175   P         Pn        04 39 04.9 -1.7
SFK   Sufi-Kurgan         3.89  25  ⇓P         Pn        04 39 10.5 +1.4
      18nm,0.3s
SFK                                 ⇑S         Sn        04 39 56.9 +2.8
      92nm,0.3s
SARP  Sargodha            4.70 166   P         Pn        04 39 17.6 -2.2
KSH   Kashi               4.73  49   P         Pn        04 39 16.4 -3.8
KSH                                  S         Sn        04 40 04.2  -10
KSH                                  smax      smax
      comp=N,3µm,0.6s
KSH                                  smax      smax
      comp=E,1µm,0.3s
AML   Almayashu           5.91  17   P         Pn        04 39 36.2 -0.1
      SNR=230
MNAS  Manas               6.04   8  ⇓P         Pn        04 39 37.5 -0.4
      31nm,0.5s
MNAS                                ⇑S         Sn        04 40 43.3 -2.5
      79nm,0.6s
NRN   Naryn               6.11  35  ePn        Pn        04 39 37.3 -1.7
NRN                                 eSn        Sn        04 40 43.8 -4.0
UCH   Uchtor              6.22  22   P         Pn        04 39 40.6  0.0
      SNR=51
KZA   Kyzart              6.33  27   P         Pn        04 39 42.6 +0.4
      SNR=25
EKS2  Erkin-Say           6.43  16   P         Pn        04 39 43.5 +0.3
      SNR=50
AAK   Ala-Archa           6.59  21   P         Pn        04 39 45.7 +0.4
      SNR=30
AAK   Ala-Archa           6.59  21  ePn        Pn        04 39 45.2 -0.2
AAK                                 eSn        Sn        04 40 56.0 -3.1
AAK   Ala-Archa           6.59  21   P         Pn        04 39 45.5 +0.1
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             39nm,0.8s
AAK                                 ⇑S      Sn      04 40 58.7 -0.4
             47nm,0.8s
AAK    Ala-Archa            6.59  21 P      Pn      04 39 45.6 +0.3
             7.0nm,0.3s,baz=190,slow=8.7,SNR=100
AAK                                  S      Sn      04 40 57.6 -1.5
             4.1nm,0.3s,baz=130,slow=22,SNR=6.8
AAK                                  LR     LR      04 42 18.9
             comp=Z,39nm,19.6s,baz=212,slow=37
KK31   Karatay Array        6.62 355 ePn    Pn      04 39 44.6 -1.1
KK31                                 eSn    Sn      04 40 54.6 -5.1
KK31   Karatay Array        6.62 355 ⇓P     Pn      04 39 44.5 -1.1
             40nm,0.3s,baz=184,slow=14,SNR=785
KK31                                 ⇓S     Sn      04 40 54.6 -5.1
             40nm,0.6s,baz=184,slow=24,SNR=5.4
KKAR   Karatay Array        6.62 355 ePn    Pn      04 39 44.6 -1.1
KKAR                                 eSn    Sn      04 40 54.3 -5.4
KBK    Karagaybulak         6.74  23 P      Pn      04 39 48.1 +0.7
             SNR=22
ULHL   Ulahol               6.87  32 P      Pn      04 39 50.5 +1.3
             SNR=11
CHMS   Chumysh              6.99  21 P      Pn      04 39 51.4 +0.6
             SNR=14
USP    Ospenovka            7.17  19 P      Pn      04 39 52.9 -0.3
             SNR=17
TKM2   Tokmak 2             7.19  26 P      Pn      04 39 53.9 +0.3
             SNR=34
TKM2   Tokmak 2             7.19  26 ⇑P     Pn      04 39 53.5 -0.1
             28nm,0.7s
TKM2                                 ⇑S     Sn      04 41 15.6 +1.8
             25nm,1.1s
GEYT   Alibeck             10.65 282 P      Pn      04 40 34.3 -6.0
             3.2nm,0.3s,baz=98,slow=10,SNR=18
GEYT                                 S      Sn      04 42 26.1  -12
             12nm,0.3s,baz=298,slow=25,SNR=12
GYA0B  ALIBECK ARRAY       10.65 282 ePn    Pn      04 40 35.5 -4.8
PYUN   Piuthan             12.92 127 eP     Pn      04 41 05.1 -5.4
             141nm,0.5s
MAKZ   Makanchi            12.99  34 ePn    Pn      04 41 09.4 -1.7
MK01   Makanchi Array      13.11  35 ePn    Pn      04 41 11.5 -1.1
MK31   Makanchi Array      13.12  35 ePn    Pn      04 41 12.2 -0.7
MKAR   Makanchi Array      13.12  35 ePn    Pn      04 41 11.0 -1.8
MKAR   Makanchi Array      13.12  35 P      Pn      04 41 12.4 -0.5
             0.1nm,0.3s,baz=216,slow=13,SNR=4.7
DANN   Dangsing            13.25 124 eP     Pn      04 41 10.8 -4.1
             60nm,0.4s
KOLN   Koldanda            13.54 127 eP     Pn      04 41 13.7 -4.8
             20nm,0.3s
WMQ    Urumqi              14.46  55 eP     Pn      04 41 30.6 +0.4
WMQ                                  pP     P       04 41 44.0  +10
WMQ                                  pmax   pmax
             comp=Z,22nm,1.1s
WMQ                                  LR     LR
             comp=N,340nm,24.1s
WMQ                                  LR     LR
             comp=E,790nm,29.1s
WMQ                                  LR     LR
             comp=Z,240nm,26.1s
DMN    Daman               14.64 123 eP     Pn      04 41 28.1 -4.6
             78nm,0.7s
KKN    Kakani              14.64 122 eP     Pn      04 41 27.7 -5.0
             36nm,0.5s
PKIN   Phulchoki           14.85 123 eP     Pn      04 41 31.2 -4.2
             41nm,0.5s
PKI    Pulchoki            14.87 123 eP     Pn      04 41 30.8 -4.8
             46nm,0.5s
GUN    Gumba               14.97 121 eP     Pn      04 41 31.9 -5.1
             25nm,0.3s
KURBB  Kurchatov Arra      15.03  18 P      Pn      04 41 33.9 -3.3
             0.0nm,0.3s,baz=209,slow=11,SNR=5.0
KURK   Kurchatov           15.14  18 ePn    P       04 41 40.7 -0.3
             8.1nm,0.9s
AB31   Akbulak array       15.22 330 ⇓P     Pn      04 41 36.1 -3.5
             3.3nm,0.3s,baz=140,slow=12,SNR=406
AB31                                 ⇑S     Sn      04 44 16.3  -11
             8.4nm,0.7s,baz=155,slow=22,SNR=5.3
ABKAR  Akbulak array       15.22 330 ePn    Pn      04 41 36.4 -3.2
JIRN   Jiri                15.34 121 eP     Pn      04 41 37.4 -4.3
             171nm,0.6s
RAMN   Ramite              16.07 122 eP     Pn      04 41 45.9 -4.8
             71nm,0.6s
BVA0   Borovoye Array      16.53 358 ⇓P     Pn      04 41 55.9  0.0
             7.3nm,1.1s,baz=173,slow=11,SNR=19
BVAR   Borovoye Array      16.53 358 P      Pn      04 41 53.2 -2.7
             0.9nm,0.3s,baz=165,slow=13,SNR=21
BRVK   Borovoye            16.57 358 ePn    Pn      04 41 54.6 -1.7
             32nm,1.8s
BRVK   Borovoye            16.57 358 ⇑P     Pn      04 41 55.4 -0.9
             14nm,1.4s
ODAN   Odare               16.68 121 eP     Pn      04 41 53.9 -4.1
             52nm,0.6s
AKTO   Aktyubinsk          16.92 330 ⇑P     Pn      04 41 59.1 -1.5
             22nm,0.7s
AKTO                                 ⇑S     Sn      04 45 00.4 -8.4
             14nm,1.1s
AKTO   Aktyubinsk          16.92 330 P      Pn      04 41 58.4 -2.2
             1.7nm,0.3s,baz=122,slow=12,SNR=33
AKTO                                 S      Sn      04 44 57.0  -12
             0.2nm,0.3s,baz=162,slow=20,SNR=3.4
LSA    Lhasa               17.90 107 eP     P       04 42 11.9 -0.3
             8.9nm,0.9s
ZAA0   Zalesovo Array      19.79  24 eP     P       04 42 32.2 +0.1
             6.4nm,0.6s
ZALV   Zalesovo Beam       19.79  24 eP     P       04 42 31.9 -0.2
ZALV   Zalesovo Beam       19.79  24 P      P       04 42 32.4 +0.4
             1.4nm,0.3s,baz=230,slow=11,SNR=18
ZALV                                 S      Sn      04 46 15.7 -1.7
             0.1nm,0.3s,baz=226,slow=16,SNR=2.9
HYB    Hyderabad           20.05 160 i P    P       04 42 35.5 +0.3
SHL    Shillong            20.65 116 eP     P       04 42 42.5 +0.7
GNI    Garni               21.16 288 eP     P       04 42 49.3 +2.2
             23nm,0.9s
GNI    Garni               21.16 288 P      P       04 42 50.4 +3.3
             7.1nm,0.5s,baz=14,slow=4.2,SNR=5.8
ARU    Arti                21.72 341 eP     P       04 42 53.6 +0.9
GTA    Gaotai              22.59  74 ⇑P     P       04 43 05.5 +3.5
GTA                                  S      S       04 47 03.9 +2.6
GTA                                  pmax   pmax
             comp=Z,5.0nm,0.8s
GTA                                  pmax   pmax
             comp=Z,87nm,5.2s
GTA                                  LR     LR
             comp=N,230nm,15.6s
GTA                                  LR     LR
             comp=E,320nm,17.1s
GTA                                  LR     LR
             comp=Z,160nm,19.4s
KBZ    Khabaz              22.85 297 P      P       04 43 05.5 +1.1
             4.1nm,0.9s,baz=146,slow=8.6,SNR=7.8
KBZ                                  S      S       04 47 13.0 +8.0
             0.8nm,0.7s,baz=119,slow=19,SNR=2.1
KIV    Kislovodsk          23.04 298 eP     P       04 43 08.2 +1.9
             6.9nm,0.6s
LZH    Lanzhou             26.13  81 eP     P       04 43 34.9 +0.4
LZH                                  pP     pP      04 43 57.3 -3.1
LZH                                  sP     sP      04 44 13.6 -0.5
LZH                                  PP     PnPn    04 44 22.1 +2.1
LZH                                  S      S       04 47 53.7 -4.1
LZH                                  pmax   pmax
             comp=Z,17nm,1.2s
LZH                                  pmax   pmax
             comp=Z,63nm,4.9s
LZH                                  LR     LR
             comp=N,610nm,11.4s
LZH                                  LR     LR
             comp=E,670nm,14.6s
LZH                                  LR     LR
             comp=Z,650nm,12.5s
SONM   Songino Array       28.10  55 P      P       04 43 52.0 +0.1
             0.4nm,0.8s,baz=251,slow=9.0,SNR=2.7
SONA1  Songino Array       28.11  55 eP     P       04 43 52.2 +0.2
KMI    Kunming             29.12 104 P      P       04 44 03.2 +1.9
KMI                                  pmax   pmax
             comp=Z,4.0nm,0.8s
KMI                                  pmax   pmax
             comp=Z,160nm,4.6s
BRTR   Keskin Array B      29.70 288 P      P       04 44 08.7 +2.4
             0.9nm,0.7s,baz=102,slow=9.6,SNR=4.0
BRTR                                 pP     pP      04 44 30.1 -2.0
             1.0nm,0.7s,baz=103,slow=8.3,SNR=3.3
CMAR   Chiang Mai Arr      30.21 119 P      P       04 44 11.8 +1.1
             0.9nm,0.4s,baz=313,slow=8.5,SNR=4.1
HHC    Hu-ho-hao-te        31.49  70 eP     P       04 44 23.2 +1.2
HHC                                  pmax   pmax
             comp=Z,4.0nm,0.9s
AKASG  Malin Array Be      33.17 309 P      P       04 44 37.9 +1.6
             4.0nm,0.7s,baz=77,slow=8.9,SNR=35
AKBB   Malin Array Si      33.17 309 eP     P       04 44 38.6 +2.3
             6.6nm,0.8s
KIEV   Kiev                33.17 309 eP     P       04 44 38.1 +1.7
             6.3nm,0.7s
AK11   Malin Array Si      33.20 309 eP     P       04 44 38.2 +1.6
PLOR   Plostina            34.53 300⇑iP     P       04 44 51.5 +3.3
TESR   Tescani             34.53 301⇓iP     P       04 44 46.1 -2.1
MLR    Muntele Rosu        35.03 299 eP     P       04 44 55.0 +2.3
             9.4nm,0.9s
MLR    Muntele Rosu        35.03 299⇑iP     P       04 44 56.6 +4.0
BURAR  Bucovina Array      35.52 303⇑iP     P       04 45 00.3 +3.5
BUR04  Bucovina Ar. S      35.53 303 eP     P       04 44 59.5 +2.7
BUR08  Bucovina Ar. S      35.53 303 eP     P       04 44 59.4 +2.5
ZIMR                       35.54 296⇑iP     P       04 44 59.2 +2.4
VOIR                       35.66 299⇑iP     P       04 45 00.2 +2.2
ARR    Arges               35.95 299⇑iP     P       04 45 03.6 +3.1
DRGR                       37.24 302⇑iP     P       04 45 14.4 +3.0
KWP    Kalwaria Pacla      37.24 306 eP     P       04 45 14.2 +2.9
             306nm,1.7s
SUW    Suwalki             37.32 313 eP     P       04 45 14.8 +2.9
             12nm,0.9s
TRPA   Tarpa               37.33 304⇑iP     P       04 45 15.8 +3.8
FIA1   FINESS Array S      37.64 326 eP     P       04 45 16.3 +1.9
FINES  FINESS Array B      37.64 326 P      P       04 45 16.6 +2.2
             3.3nm,0.7s,baz=114,slow=11,SNR=5.3
NJ2    Nanjing             39.19  82 eP     P       04 45 27.9 +0.1
NJ2                                  pmax   pmax
             comp=Z,7.0nm,0.6s
VYHS   Vyhne               39.79 304 ePKP   P       04 45 34.6 +2.0
MORC   Moravsky Berou      40.59 306 eP     P       04 45 41.7 +2.5
             9.3nm,1.4s
ARCES  ARCESS Array B      41.25 337 eP     P       04 45 46.8 +2.5
ARCES  ARCESS Array B      41.25 337 P      P       04 45 46.6 +2.3
             5.8nm,0.7s,baz=120,slow=7.8,SNR=14
DPC    Dobruska-Polom      41.36 307 eP     P       04 45 49.2 +3.7
UPC    Upice               41.55 308 eP     P       04 45 50.2 +3.2
BRG    Berggiesshubel      42.84 308 i PKP  P       04 46 00.8 +3.3
             7.3nm,0.8s
GERES  GERESS Array B      43.16 305 P      P       04 46 02.9 +2.7
             0.6nm,0.7s,baz=76,slow=8.2,SNR=2.0
GERES                                PP     PcP     04 47 46.4 -1.3
             0.4nm,0.7s,baz=79,slow=6.9,SNR=4.0
CLL    Collm               43.41 309 eP     P       04 46 04.0 +2.0
             comp=Z,5.0nm,0.8s
CLL                                  epP    pP      04 46 26.0 -2.9
CLL                                  ePP    PcP     04 47 49.0 +0.6
CLL                                  ePPP   PPP     04 48 24.0
NC405  NORSAR Array S      44.31 323 eP     P       04 46 11.0 +1.9
NC303  NORSAR Array S      44.49 323 eP     P       04 46 12.3 +1.7
NB201  NORSAR Array S      44.51 323 eP     P       04 46 12.1 +1.4
NB2    NORSAR Subarra      44.55 323 P      P       04 46 12.6 +1.5
             comp=Z,8.3nm,0.7s,baz=96,slow=7.9
NOA    NORSAR Array B      44.55 323 P      P       04 46 12.4 +1.4
             comp=Z,10.0nm,0.8s,baz=96,slow=7.8,SNR=50
NBO00  NORSAR Array S      44.76 323 eP     P       04 46 14.3 +1.6
NC204  NORSAR Array S      44.79 323 eP     P       04 46 15.0 +2.0
TIXI   Tiksi               45.66  22 P      P       04 46 20.5 +0.8
             comp=Z,1.1nm,0.3s,baz=297,slow=3.6,SNR=1.9
SUMG   Summit              61.15 341 eP     P       04 48 16.3 +3.1
             comp=Z,8.8nm,0.8s
LSZ    Lusaka              65.66 226 eP     P       04 48 45.6 +2.3
             comp=Z,1.3nm,0.6s
TOA0   Torodi Ar. Sit      66.00 269 eP     P       04 48 45.7 +0.2
TORD   Torodi Ar. Bea      66.00 269 P      P       04 48 44.7 -0.8
             comp=Z,2.2nm,0.5s,baz=43,slow=6.4,SNR=30
INK    Inuvik              73.86   9 P      P       04 49 34.4 +1.7
             comp=Z,0.9nm,0.7s,baz=332,slow=6.7,SNR=7.5
ILAR   Eielson Array       74.70  16 P      P       04 49 38.4 +0.8
             comp=Z,0.4nm,0.9s,baz=289,slow=5.5,SNR=3.4
BOSA   Boshof              77.93 220 P      P       04 49 55.7 -0.8
             comp=Z,2.6nm,0.7s,baz=14,slow=7.3,SNR=5.1
YKA    Yellowknife Ar      81.23   3 P      P       04 50 15.2 +1.4
             comp=Z,0.6nm,0.5s,baz=351,slow=5.4,SNR=26
YKB5   Yellowknife Ar      81.23   3 eP     P       04 50 15.0 +1.2
WRA    Warramunga Arr      81.75 122 P      P       04 50 16.6 -0.6
             comp=Z,0.4nm,0.6s,baz=324,slow=4.9,SNR=6.5
WRA                                  pP     pP      04 50 43.2 -4.8
             comp=Z,0.9nm,0.8s,baz=323,slow=4.9,SNR=4.4
WRAB   Tennant Creek       81.75 122 eP     P       04 50 17.4 +0.3
             comp=Z,1.9nm,0.9s
ASAR   Alice Springs       84.02 125 P      P       04 50 29.3 +0.5
             comp=Z,0.2nm,0.3s,baz=324,slow=5.8,SNR=3.6
ASAR                                 pP     pP      04 50 55.6 -3.8
             comp=Z,0.3nm,0.3s,baz=316,slow=5.4,SNR=2.6
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*ISCJB **08** 04:38:16.7±0.2, 10°.86S±0°.04×165°.62E±0°.06, h10^{km}, mb4.6/47, Error ellipse: s-maj=8.0km s-min=6.1km az=19.3*

*IDC **08** 04:38:16.2±0.8, 10°.82S×165°.84E, h0^{km}, mb4.2/14, mb1 4.5/16, mb1mx4.3/37, mbtmp4.3/16, ML5.1/2, MS3.9/2, Ms1 3.9/2, ms1mx3.6/45, Error ellipse: s-maj=26.1km s-min=16.7km az=143.0*

*NEIC **08** 04:38:19.6±3.0, 10°.79S×165°.65E, h18^{km}±18^{km}, mb4.8/35, Error ellipse: s-maj=6.5km s-min=5.2km az=197.0*

ISC 08 04:38:18.1±0.5**, 10°.83S**±0°.06×**165°.82E**±0°.07**, h10^{km}, n84, σ1.^{s}04**/88**, mb4.7**/47**, Santa Cruz Islands**

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Code   Station Name          Δ°  AZ°   Phase ID         Time     Res
                                      Op     ISC      h  m  s    ISC
HNR    Honiara              5.94 283 ePn    Pn      04 39 44.2 -2.0
HNR                                  eSn    Sn      04 40 56.5 +2.2
HNR    Honiara              5.94 283 Pn     Pn      04 39 47.5 +1.4
             46nm,0.3s,baz=176,slow=3.1,SNR=6.9
HNR                                  Sn     Sn      04 40 56.5 +2.2
             24nm,0.3s,baz=135,slow=20,SNR=3.2
HNR                                  LR     LR      04 41 09.8
             comp=Z,1μm,21.1s,baz=156,slow=29
MARNC  Mare, Loyalty       10.81 169 ePn    Pn      04 40 53.9 +0.9
DZM    Mont Dzumac         11.20 177 ePn    Pn      04 40 59.7 +1.3
DZM    Mont Dzumac         11.20 177 Pn     Pn      04 40 59.1 +0.7
             13nm,0.3s,baz=328,slow=15,SNR=24
DZM                                  Sn     Sn      04 43 01.4 -2.4
             0.3nm,0.3s,baz=323,slow=20,SNR=2.5
DZM                                  LR     LR      04 44 40.2
             comp=Z,778nm,19.8s,baz=38,slow=34
ONTNC  Ouen Toro           11.44 177 ePn    Pn      04 41 01.8 +0.3
PINNC  Pines Island,       11.83 173 ePn    Pn      04 41 07.9 +1.0
CTA    Charters Tower      20.96 242 P      P       04 43 02.8 +1.2
             3.1nm,0.4s,baz=78,slow=11,SNR=3.6
H11S2  WAKE ISLAND Hy 29.14        2 T      T       05 14 29.4
             baz=181,slow=76,SNR=124
H11S3  WAKE ISLAND Hy 29.15        2 T      T       05 14 45.3
             baz=181,slow=76,SNR=53
H11S1  WAKE ISLAND Hy 29.16        2 T      T       05 14 30.9
             baz=181,slow=76,SNR=87
BKZ    Black Stump Fm      29.79 163 eP     P       04 44 26.5 +1.4
             24nm,1.3s
H11N1  WAKE ISLAND Hy 30.36        2 T      T       05 16 01.1
             baz=182,slow=76,SNR=95
H11N3  WAKE ISLAND Hy 30.37        2 T      T       05 16 01.5
             baz=182,slow=76,SNR=41
H11N2  WAKE ISLAND Hy 30.38        2 T      T       05 16 01.9
             baz=182,slow=76,SNR=32
THZ    Tophouse            31.44 170 eP     P       04 44 41.2 +1.5
             57nm,1.7s
WRAB   Tennant Creek       31.61 250 eP     P       04 44 40.1 -1.4
             2.4nm,0.7s
WB2    Warramunga Arr      31.61 250 eP     P       04 44 40.5 -1.0
WR1    Warramunga Arr      31.62 250 eP     P       04 44 39.9 -1.7
             12nm,1.3s
WR1                                  ePcP   PcP     04 47 34.4 +0.5
WRA    Warramunga Arr      31.62 250 P      P       04 44 39.9 -1.7
             1.8nm,0.7s,baz=82,slow=9.0,SNR=18
WRA                                  PcP    PcP     04 47 34.4 +0.5
             0.8nm,0.9s,baz=63,slow=3.6,SNR=4.1
AS01   Alice Springs       32.91 243 eP     P       04 44 51.0 -1.9
AS01                                 eS     S       04 50 11.0  0.0
AS31   Alice Springs       32.95 243 eP     P       04 44 52.5 -0.7
             1.2nm,0.6s
AS31                                 ePcP   PcP     04 47 37.6  0.0
ASAR   Alice Springs       32.95 243 P      P       04 44 52.4 -0.9
             3.9nm,0.6s,baz=74,slow=9.5,SNR=33
ASAR                                 PcP    PcP     04 47 37.6  0.0
             0.2nm,0.3s,baz=94,slow=3.6,SNR=4.8
RPZ    Rata Peaks          33.08 173 P      P       04 44 55.7 +1.6
             17nm,0.8s,baz=312,slow=19,SNR=7.5
FITZ   Fitzroy Crossi      39.50 255 eP     P       04 45 49.1 -0.1
             26nm,1.8s
FITZ   Fitzroy Crossi      39.50 255 P      P       04 45 49.5 +0.2
             2.8nm,0.7s,baz=108,slow=8.5,SNR=6.7
MJAR   Matsushiro Arr      53.81 332 P      P       04 47 40.5 -0.7
             2.4nm,0.6s,baz=118,slow=12,SNR=3.6
MAJO   Matsushiro          53.81 332 eP     P       04 47 40.5 -0.7
USRK   Ussuriysk Ar.       62.78 333 P      P       04 48 44.7 +1.0
             5.2nm,1.0s,baz=140,slow=12,SNR=2.9
CASY   Casey               66.61 201 eP     P       04 49 08.0 -0.4
             18nm,1.6s
XAN    Xi'an               70.03 312 eP     P       04 49 29.5 -0.9
CMAR   Chiang Mai Arr      72.09 293 P      P       04 49 42.8 -0.3
             0.8nm,0.4s,baz=121,slow=3.3,SNR=4.8
GAMB   Gambell             76.34  10 eP     P       04 50 07.6 +0.6
             7.1nm,1.0s
ULN    Ulaanbaatar         78.16 324 eP     P       04 50 16.9 -0.9
             3.3nm,1.0s
SONA0  Songino Array       78.53 324 eP     P       04 50 20.2 +0.4
SONM   Songino Array       78.53 324 P      P       04 50 20.2 +0.4
             1.3nm,0.9s,baz=145,slow=5.7,SNR=6.2
BILL   Bilibino            78.66   0 eP     P       04 50 20.1 +0.2
             4.7nm,0.9s
QSPA   South Pole Qui      79.18 180 eP     P       04 50 23.6 +0.5
WRH    Wood River Hil      82.70  18 eP     P       04 50 42.3 +0.7
             33nm,1.9s
MDM    Murphy Dome         83.00  18 eP     P       04 50 43.4 +0.2
             12nm,1.2s
HDA    Harding Lake        83.01  19 eP     P       04 50 43.8 +0.5
             15nm,1.0s
COLA   College             83.06  18 eP     P       04 50 43.2 -0.2
             8.0nm,0.9s
IL1    Eielson Array       83.28  18 eP     P       04 50 44.5 -0.2
ILAR   Eielson Array       83.28  18 P      P       04 50 44.4 -0.3
             2.8nm,0.9s,baz=226,slow=6.0,SNR=20
ILB    Eielson Array       83.28  18 eP     P       04 50 44.4 -0.3
             30nm,1.9s
SCRK   Sand Creek          83.69  20 eP     P       04 50 47.4 +0.5
             8.7nm,1.2s
AFDM   Forest Hills D      84.00  49 eP     P       04 50 49.9 +0.9
             3.7nm,0.9s
CMB    Columbia Colle      84.15  50 eP     P       04 50 50.1 +0.3
EGAK   Eagle               85.15  20 eP     P       04 50 55.1 +1.0
             13nm,1.1s
DAWY   Dawson              85.33  21 eP     P       04 50 56.1 +1.0
             4.7nm,1.1s
MOD    Modoc Plateau       85.44  46 eP     P       04 50 56.7 +0.4
             2.7nm,0.5s
NV01   Mina Array Sit      85.83  50 eP     P       04 50 59.2 +0.8
NVAR   Mina Array Bea      85.83  50 P      P       04 50 58.9 +0.5
             2.2nm,0.9s,baz=237,slow=7.8,SNR=8.8
NV11   Mina Array Sit      85.94  50 eP     P       04 50 59.6 +0.7
             0.4nm,1.3s
WVOR   Wild Horse Val      86.78  46 eP     P       04 51 03.4 +0.4
             2.3nm,0.8s
J08A   Circle Bar Ran      87.18  45 eP     P       04 51 06.6 +1.8
             24nm,1.9s
G08A   Pilot Rock          87.44  43 eP     P       04 51 07.2 +1.2
             17nm,1.8s
LCMT   Little Creek M      89.31  52 eP     P       04 51 16.1 +1.0
             9.1nm,1.1s
CCUT   Cedar City          89.35  52 eP     P       04 51 16.6 +1.1
             5.7nm,0.9s
U15A   North Rim           89.92  53 eP     P       04 51 19.1 +0.9
             7.5nm,0.9s
HLID   Hailey              90.08  46 eP     P       04 51 19.4 +0.8
             0.5nm,0.5s
X16A   Lo Mia Camp, P      90.14  55 eP     P       04 51 20.0 +0.9
             14nm,0.8s
TUC    Tucson              90.21  57 eP     P       04 51 20.2 +0.8
             1.3nm,0.5s
NLU    North Lily Min      90.90  50 eP     P       04 51 23.1 +0.5
             5.0nm,1.3s
DLMT   Dillon              91.78  44 eP     P       04 51 27.4 +1.0
             25nm,1.9s
BOZ    Bozeman (W)         92.49  44 eP     P       04 51 30.2 +0.5
PV01   Paradox Valley      93.18  52 eP     P       04 51 34.1 +0.8
             3.5nm,0.8s
BW06   Boulder Array       93.35  47 eP     P       04 51 33.7 -0.2
             0.8nm,0.7s
PD31   Pinedale Array      93.35  47 eP     P       04 51 34.5 +0.6
             7.1nm,1.8s
PDAR   Pinedale Array      93.35  47 P      P       04 51 33.0 -0.9
             0.8nm,1.0s,baz=252,slow=4.2,SNR=4.3
MK01   Makanchi Array      93.40 317 eP     P       04 51 33.2 -0.6
MK31   Makanchi Array      93.41 317 eP     P       04 51 33.2 -0.6
             2.3nm,1.0s
MK32   Makanchi Array      93.41 317 eP     P       04 51 33.7 -0.1
MKAR   Makanchi Array      93.41 317 P      P       04 51 33.7 -0.1
             1.5nm,0.8s,baz=98,slow=6.5,SNR=13
ZAA1   Zalesovo Array      93.42 324 eP     P       04 51 31.6 -2.0
ZALV   Zalesovo Beam       93.42 324 P      P       04 51 31.6 -2.0
             0.9nm,0.7s,baz=104,slow=6.3,SNR=4.1
YKA    Yellowknife Ar      94.75  27 P      P       04 51 37.5 -2.0
             0.2nm,0.6s,baz=251,slow=4.9,SNR=3.2
YKB5   Yellowknife Ar      94.75  27 eP     P       04 51 40.2 +0.7
ARA0   ARCESS Array S 116.14 346 ePKPdf PKiKP   04 57 00.2 -0.8
ARCES  ARCESS Array B 116.14 346 PKP    PKiKP   04 57 00.2 -0.8
             2.3nm,0.8s,baz=68,slow=1.8,SNR=20
ES19   SONSECA Array  149.82 344 ePKPbc PKPbc   04 58 09.2 +0.3
ESDC   Sonseca Array  149.87 344 PKPbc  PKPbc   04 58 08.9 -0.1
             0.7nm,0.6s,baz=348,slow=3.2,SNR=6.1
TORD   Torodi Ar. Bea 164.30 280 PKP    PKPdf   04 58 22.8 -0.2
             0.2nm,0.5s,baz=344,slow=4.8,SNR=3.3
TORD                                 PKPab  PKPab   04 59 15.3 -1.8
             1.0nm,1.0s,baz=90,slow=4.3,SNR=3.3
TOA1   Torodi Ar. Sit 164.30 280 ePKPdf PKPdf   04 58 22.8 -0.3
TOA1                                 ePKPab PKPab   04 59 15.3 -1.8
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*IDC **08** 04:48:13.8±0.6, 10°.76S×165°.38E, h0^{km}, mb4.4/20, mb1 4.6/22, mb1mx4.5/38, mbtmp4.5/22, ML5.2/2, MS4.5/6, Ms1 4.5/6, ms1mx3.9/41, Error ellipse: s-maj=18.9km s-min=14.0km az=105.0*

*NEIC **08** 04:48:18.2±0.3, 10°.93S×164°.84E, h10^{km}, mb4.8/44, Error ellipse: s-maj=8.1km s-min=6.4km az=92.0*

*ISCJB **08** 04:48:19.2±0.2, 10°.99S±0°.04×164°.86E±0°.05, h31^{km}, mb4.7/67, MS4.6/8, Error ellipse: s-maj=7.3km s-min=5.4km az=173.8*

ISC 08 04:48:20.1±0.4**, 11°.00S**±0°.05×**165°.13E**±0°.07**, h31^{km}, n112, σ2.^{s}12**/111**, mb4.8**/67**, MS4.6**/9**, 1C, Santa Cruz Islands**

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Code   Station Name          Δ°  AZ°   Phase ID         Time     Res
                                      Op     ISC      h  m  s    ISC
HNR    Honiara              5.34 286 ePn    Pn      04 49 35.9 -1.9
HNR                                  Sn     Sn      04 50 39.3 +1.1
HNR    Honiara              5.34 286 Pn     Pn      04 49 39.2 +1.5
             80nm,0.3s,baz=202,slow=2.9,SNR=9.7
HNR                                  Sn     Sn      04 50 39.3 +1.1
             baz=183,slow=18,SNR=2.4
HNR                                  LR     LR      04 51 53.6
             comp=Z,4μm,18.6s,baz=115,slow=40
MARNC  Mare, Loyalty       10.79 165 ePn    Pn      04 50 53.4 +0.8
DZM    Mont Dzumac         11.08 174 ePn    Pn      04 50 57.3 +0.7
DZM                                  Sn     Sn      04 52 56.8 -2.8
DZM    Mont Dzumac         11.08 174 Pn     Pn      04 50 58.1 +1.4
             16nm,0.3s,baz=34,slow=7.1,SNR=86
DZM                                  Sn     Sn      04 52 56.8 -2.8
             0.5nm,0.3s,baz=1.2,slow=7.5,SNR=1.7
ONTNC  Ouen Toro           11.32 174 ePn    Pn      04 51 00.6 +0.9
PINNC  Pines Island,       11.76 169 ePn    Pn      04 51 06.6 +0.7
MANU   Manus Island        19.75 296 eP     P       04 52 47.0 -0.7
             63nm,0.9s
CTA    Charters Tower      20.29 241 P      Pn      04 52 56.2 +0.5
             20nm,0.9s,baz=68,slow=12,SNR=11
CTAO   Charters Tower      20.29 241 eP     Pn      04 52 54.7 -1.0
LHI    Lord Howe Isla      21.18 194 eP     P       04 53 04.7 +1.6
             140nm,1.0s
COEN   Coen                21.64 260 eP     P       04 53 07.6 -0.6
             28nm,1.1s
ARMA   Armidale            23.04 211 eP     P       04 53 22.8 -0.2
             16nm,0.9s
URZ    Urewera             29.19 160 eP     P       04 54 20.5 +1.7
             19nm,0.9s
URZ    Urewera             29.19 160 P      P       04 54 18.6 -0.2
             17nm,0.9s,baz=326,slow=3.9,SNR=8.7
H11S2  WAKE ISLAND Hy 29.34        3 T      T       05 24 50.6
             baz=183,slow=76,SNR=18
H11S3  WAKE ISLAND Hy 29.35        3 T      T       05 24 50.1
             baz=183,slow=76,SNR=20
H11S1  WAKE ISLAND Hy 29.36        3 T      T       05 24 54.5
             baz=183,slow=76,SNR=10
BKZ    Black Stump Fm      29.82 162 eP     P       04 54 25.1 +0.6
             22nm,0.4s
STKA   Stephens Creek      30.07 223 eP     P       04 54 27.1 +0.4
             2.3nm,1.0s
STKA   Stephens Creek      30.07 223 P      P       04 54 28.2 +1.4
             7.5nm,0.9s,baz=29,slow=10,SNR=12
STKA                                 LR     LR      05 05 23.2
             comp=Z,1μm,19.9s,baz=36,slow=34
WAKE   Wake Island         30.13   3 eP     P       04 54 28.0 +0.7
WRAB   Tennant Creek       30.92 250 eP     P       04 54 34.0 -0.5
             6.2nm,0.7s
WB2    Warramunga Arr      30.93 250 eP     P       04 54 34.1 -0.4
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WRA	Warramunga Arr	30.94	250	P	P	04 54 34.1	-0.5
	9.2nm,0.8s,baz=79,slow=9.1,SNR=44						
WRA				PcP	PcP	04 57 29.9	-0.8
	0.7nm,0.9s,baz=79,slow=3.1,SNR=5.9						
WRA				LR	LR	05 07 14.3	
	comp=Z,1μm,18.4s,baz=65,slow=36						
BFZ	Birch Farm	31.15	164	eP	P	04 54 37.0	+0.8
	26nm,0.7s						
THZ	Tophouse	31.39	169	eP	P	04 54 39.8	+1.4
	15nm,0.8s						
AS01	Alice Springs	32.24	243	eP	P	04 54 45.8	-0.3
LTZ	Lake Taylor	32.27	170	eP	P	04 54 49.0	+3.0
	15nm,0.8s						
AS31	Alice Springs	32.28	243	eP	P	04 54 46.2	-0.2
	2.2nm,0.8s						
ASAR	Alice Springs	32.28	243	P	P	04 54 46.1	-0.2
	6.4nm,0.8s,baz=72,slow=9.5,SNR=39						
ASAR				PcP	PcP	04 57 34.0	-0.4
	2.2nm,0.8s,baz=88,slow=1.9,SNR=9.0						
RPZ	Rata Peaks	33.00	172	eP	P	04 54 54.0	+1.6
	8.8nm,0.8s						
RPZ	Rata Peaks	33.00	172	P	P	04 54 52.2	-0.2
	6.6nm,0.6s,baz=120,slow=3.5,SNR=5.2						
RPZ				LR	LR	05 07 14.0	
	comp=Z,631nm,18.1s,baz=320,slow=34						
CRLZ	Canterbury Las	33.10	170	eP	P	04 54 55.8	+2.6
	18nm,0.7s						
FITZ	Fitzroy Crossi	38.81	255	eP	P	04 55 42.0	-0.5
	9.3nm,1.0s						
FITZ	Fitzroy Crossi	38.81	255	P	P	04 55 43.4	+0.9
	6.2nm,0.9s,baz=106,slow=6.6,SNR=8.6						
FORT	Forrest	39.58	235	eP	P	04 55 49.1	+0.3
	68nm,0.9s						
PPT	Papeete	44.29	104	LR	LR	05 11 34.6	
	comp=Z,316nm,18.0s,baz=268,slow=32						
MBWA	Marble Bar	44.64	251	eP	P	04 56 30.6	+0.3
NWAO	Narrogin (SRO)	48.99	236	eP	P	04 57 04.6	+0.5
MJAR	Matsushiro Arr	53.66	333	P	P	04 57 36.0	-2.9
	3.0nm,0.8s,baz=167,slow=8.0,SNR=5.1						
KSRS	Korea Array	59.50	326	P	P	04 58 17.5	-3.0
	3.3nm,0.9s,baz=140,slow=6.4,SNR=6.4						
KSAR	Wonju Array Be	59.51	326	P	P	04 58 17.5	-3.1
KS01	Wonju Array Si	59.53	326	eP	P	04 58 19.1	-1.6
YSS	Yuzh-Sakhalins	61.06	343	eP	P	04 58 29.9	-1.0
NJ2	Nanjing	61.57	316	eP	P	04 58 34.9	+0.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	62.64	334	P	P	04 58 39.3	-2.3
	comp=Z,12nm,1.2s,baz=162,slow=7.6,SNR=4.8						
WHN	Wuhan	63.91	312	P	P	04 58 49.5	-0.8
WHN				pmax	pmax		
	comp=Z,52nm,1.2s						
MDJ	Mudanjiang	64.03	332	eP	P	04 58 50.0	-0.9
PETK	Petropavlovsk-	64.17	355	P	P	04 58 50.1	-1.4
	comp=Z,4.8nm,0.9s,baz=101,slow=7.7,SNR=4.5						
CN2	Changchun	65.39	329	eP	P	04 58 58.0	-1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CASY	Casey	66.21	201	eP	P	04 59 05.6	+1.0
	comp=Z,18nm,1.1s						
KLR	Kul'dur	66.78	337	P	P	04 59 07.4	-1.1
	comp=Z,6.9nm,1.0s,baz=128,slow=8.3						
ENH	Enshi	67.40	309	eP	P	04 59 11.7	-1.2
GYA	Guiyang	67.90	304	P	P	04 59 18.9	+2.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	Baijiatuau	68.06	321	eP	P	04 59 15.7	-1.2
	comp=Z,3.3nm,0.5s						
XAN	Xi'an	69.65	313	eP	P	04 59 26.1	-0.9
	comp=Z,8.9nm,1.0s						
KMI	Kunming	70.58	302	P	P	04 59 31.7	-1.4
KMI				pmax	pmax		
	comp=Z,14nm,1.3s						
KMI				pmax	pmax		
	comp=Z,320nm,5.8s						
KMI	Kunming	70.58	302	eP	P	04 59 33.9	+0.8
	comp=Z,5.6nm,0.8s						
HHC	Hu-ho-hao-te	71.41	320	eP	P	04 59 36.9	-0.7
HHC				S	S	05 09 00.3	+6.3
HHC				pmax	pmax		
	comp=Z,14nm,1.4s						
HHC				pmax	pmax		
	comp=Z,320nm,6.5s						
HHC				LR	LR		
	comp=N,400nm,17.2s						
HHC				LR	LR		
	comp=E,860nm,17.1s						
HHC				LR	LR		
	comp=Z,870nm,15.5s						
CM01	Chiang Mai Arr	71.52	294	eP	P	04 59 38.5	-0.1
CMAR	Chiang Mai Arr	71.54	294	P	P	04 59 39.1	+0.4
	comp=Z,0.8nm,0.3s,baz=110,slow=4.6,SNR=8.9						
CD2	Chengdu	72.10	308	⇑P	P	04 59 41.4	-0.5
LZH	Lanzhou	74.28	312	eP	P	04 59 55.3	+0.5
LZH				pP	pP	05 00 04.0	+1.2
LZH				sP	sP	05 00 08.2	+2.4
LZH				PP	PP	05 02 44.7	+3.5
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,17.1s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
GAMB	Gambell	76.63	10	eP	P	05 00 10.8	+3.4
ULN	Ulaanbaatar	77.91	324	eP	P	05 00 14.0	-1.2
	comp=Z,10.0nm,1.1s						
SONM	Songino Array	78.27	324	P	P	05 00 15.9	-1.4
	comp=Z,2.6nm,1.0s,baz=139,slow=5.8,SNR=11						
SONA1	Songino Array	78.28	324	eP	P	05 00 15.9	-1.3
GTA	Gaotai	78.59	314	eP	P	05 00 18.4	-0.8
GTA				pP	pP	05 00 25.7	-1.5
GTA				sP	PcP	05 00 28.9	+0.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,190nm,7.3s						
GTA				LR	LR		
	comp=N,340nm,22.2s						
GTA				LR	LR		
	comp=E,320nm,20.3s						
GTA				LR	LR		
	comp=Z,220nm,20.0s						
BILL	Bilibino	78.83	0	eP	P	05 00 17.2	-2.5
	comp=Z,17nm,1.3s						
QSPA	South Pole Qui	79.01	180	eP	P	05 00 21.0	0.0
COLA	College	83.43	18	eP	P	05 00 41.9	-2.2
	comp=Z,2.9nm,0.7s						
ILAR	Eielson Array	83.66	19	P	P	05 00 42.0	-3.4
	comp=Z,1.3nm,0.8s,baz=228,slow=5.3,SNR=16						
ORV	Oroville	84.43	48	eP	P	05 00 53.9	+4.0
	comp=Z,3.9nm,1.0s						
CMB	Columbia Colle	84.77	50	eP	P	05 00 55.3	+3.6
	comp=Z,4.6nm,0.9s						
WAKR	Walker	85.62	50	eP	P	05 00 59.6	+3.4
	comp=Z,7.2nm,1.0s						
MDPB	Devils Postpil	85.63	51	eP	P	05 00 60.0	+3.6
	comp=Z,8.7nm,1.1s						
PAHR	Pah Rah Range	86.03	48	eP	P	05 01 01.6	+3.5
	comp=Z,8.1nm,1.1s						
NVAR	Mina Array Bea	86.45	50	P	P	05 00 57.9	-2.4
	comp=Z,1.3nm,0.8s,baz=237,slow=6.8,SNR=5.6						
NVAR				LR	LR	05 33 25.1	
	comp=Z,263nm,19.4s,baz=267,slow=31						
NV11	Mina Array Sit	86.56	50	eP	P	05 01 03.4	+2.6
	comp=Z,0.6nm,1.0s						
KVN	Kaiserville	86.78	49	eP	P	05 01 05.1	+3.2
	comp=Z,8.4nm,1.1s						
I07A	Izee	87.28	44	eP	P	05 01 07.1	+3.0
	comp=Z,6.0nm,1.0s						
WVOR	Wild Horse Val	87.39	46	eP	P	05 01 07.4	+2.7
	comp=Z,5.3nm,1.1s						
J08A	Circle Bar Ran	87.78	45	eP	P	05 01 09.6	+3.2
	comp=Z,5.7nm,1.0s						
G08A	Pilot Rock	88.02	43	eP	P	05 01 10.9	+3.4
	comp=Z,6.9nm,1.1s						
E08A	Dider Farm, El	88.32	42	eP	P	05 01 11.8	+3.0
	comp=Z,2.5nm,0.8s						
WMQ	Urumqi	88.64	315	eP	P	05 01 12.4	+1.9
WMQ				pP	pP	05 01 16.6	-2.0
WMQ				sP	sP	05 01 19.7	-2.6
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,440nm,5.9s						
WMQ				LR	LR		
	comp=N,2μm,15.5s						
WMQ				LR	LR		
	comp=E,1μm,23.7s						
WMQ				LR	LR		
	comp=Z,2μm,26.3s						
LCMT	Little Creek M	89.95	52	eP	P	05 01 20.1	+3.2
	comp=Z,6.4nm,1.1s						
CCUT	Cedar City	89.98	52	eP	P	05 01 20.8	+3.6
	comp=Z,5.2nm,1.1s						
KNB	Kanab	90.28	52	eP	P	05 01 22.0	+3.5
	comp=Z,6.0nm,1.1s						
U15A	North Rim	90.56	53	eP	P	05 01 18.1	-1.8
	comp=Z,5.4nm,0.9s						
HLID	Hailey	90.67	46	eP	P	05 01 23.4	+3.2
	comp=Z,4.6nm,1.1s						
PKCU	Pink Cliffs	90.77	52	eP	P	05 01 24.7	+3.7
	comp=Z,9.5nm,1.0s						
HVU	Hansel Valley	91.42	48	eP	P	05 01 26.5	+2.9
	comp=Z,6.5nm,1.0s						
NLU	North Lily Min	91.52	50	eP	P	05 01 26.7	+2.5
	comp=Z,4.8nm,1.0s						
LRM	Limekiln Ridge	92.57	44	eP	P	05 01 32.7	+3.7
MK01	Makanchi Array	93.06	317	eP	P	05 01 29.1	-1.9
MK31	Makanchi Array	93.08	317	eP	P	05 01 29.2	-1.8
MKAR	Makanchi Array	93.08	317	P	P	05 01 29.0	-2.0
	comp=Z,1.4nm,0.8s,baz=97,slow=5.6,SNR=18						
MKAR				PKKP	PKKPdf	05 18 38.3	-2.1
	comp=Z,0.5nm,0.9s,baz=270,slow=2.9,SNR=3.7						
BOZ	Bozeman (W)	93.08	44	eP	P	05 01 34.3	+3.1
	comp=Z,4.9nm,1.0s						
ZALV	Zalesovo Beam	93.17	324	eP	P	05 01 29.4	-1.8
ZALV	Zalesovo Beam	93.17	324	P	P	05 01 28.4	-2.8
	comp=Z,1.0nm,0.7s,baz=116,slow=3.4,SNR=7.2						
MAKZ	Makanchi	93.29	317	eP	P	05 01 30.5	-1.5
	comp=Z,3.3nm,1.0s						
PDAR	Pinedale Array	93.96	47	eP	P	05 01 38.0	+2.6
PDAR	Pinedale Array	93.96	47	P	P	05 01 33.0	-2.5
	comp=Z,1.1nm,0.8s,baz=304,slow=1.1,SNR=4.0						
YKA	Yellowknife Ar	95.21	27	P	P	05 01 36.0	-4.4
YKA	Yellowknife Ar	95.21	27	P	P	05 01 36.0	-4.4
	comp=Z,0.6nm,0.8s,baz=256,slow=5.1,SNR=9.1						
ARCES	ARCESS Array B	116.14	345	PKP	PKiKP	05 06 57.7	-2.0
	comp=Z,1.4nm,0.8s,baz=75,slow=1.0,SNR=2.5						
BOSA	Boshof	124.74	224	PKP	PKPdf	05 07 15.9	-1.8
	comp=Z,2.2nm,0.8s,baz=336,slow=5.6,SNR=4.0						
ES19	SONSECA Array	149.80	343	ePKPbc	PKPbc	05 08 08.7	+1.2
ESDC	Sonseca Array	149.84	343	PKPab	PKiKP	05 08 09.9	+1.3
	comp=Z,3.4nm,1.1s,baz=353,slow=3.8,SNR=5.7						
TORD	Torodi Ar. Bea	163.66	279	PKP	PKPdf	05 08 19.0	-2.1
	comp=Z,1.5nm,1.1s,baz=124,slow=0.5,SNR=4.8						

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*JMA **08** 05:01:12.7±0.5, 32°.10N×137°.82E, h385^{km}, M3.4*
*ISCJB **08** 05:01:13.2±0.9, 32°.40N±0°.09×137°.6E±0°.1, h394^{km}, mb3.3/6, Error ellipse: s-maj=17.0km s-min=7.2km az=41.8*
*IDC **08** 05:01:14.3±1.4, 32°.52N×137°.52E, h395^{km}±18^{km}, mb3.0/6, mb1 3.1/9, mb1mx2.8/50, mbtmp3.8/9, Error ellipse: s-maj=39.9km s-min=15.8km az=71.0*
ISC 08 05:01:13.6±1.1**, 32°.4N**±0°.1×**137°.7E**±0°.1**, h394**^{km}**, n27, σ1^{s}.61**/32**, mb3.5**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK01	Tokai 1	1.33	356	P	Pn	05 02 04.2	-0.7
JKN2	Miekihoku	2.16	327	P	Pn	05 02 11.2	+1.2
JEG	Eigenji	2.91	338	P	Pn	05 02 17.4	+1.8
JNY	Yasuok	2.92	3	P	Pn	05 02 18.3	+2.6
JNY				eS	S	05 03 08.4	+2.4
JAI	Aioi	3.05	297	P	Pn	05 02 17.2	+0.5
JWT	Wachi	3.43	327	P	Pn	05 02 20.9	+0.9
JHU	Hanno	3.65	21	P	Pn	05 02 24.4	+2.4
JRY	Ryogami san	3.71	15	P	Pn	05 02 24.8	+2.3
JRY				S	S	05 03 21.1	+2.6
MJAR	Matsushiro Arr	4.12	6	P	Pn	05 02 27.4	+1.0
	0.5nm,0.3s,baz=190,slow=10,SNR=29						
MJAR				S	S	05 03 24.3	-1.2
	0.1nm,0.3s,baz=186,slow=17,SNR=3.7						
MAT	Matsushiro	4.12	6	P	Pn	05 02 27.9	+1.5
MAT	Matsushiro	4.12	6	P	Pn	05 02 28.4	+2.0
JAG	Ashikaga	4.24	19	P	Pn	05 02 28.3	+0.8
JAG				eS	S	05 03 25.5	-2.0
JHO	Hitachi	4.79	29	eS	S	05 03 34.2	-3.5
JFK	Kawauchi	5.57	27	P	Pn	05 02 42.3	+1.0
JFK				eS	S	05 03 50.5	-2.2
KSRS	Korea Array	9.46	305	P	P	05 03 25.7	+0.4
	0.3nm,0.3s,baz=119,slow=11,SNR=5.9						
KLR	Kul'dur	17.36	347	P	P	05 04 51.2	-0.2
	0.2nm,0.3s,baz=185,slow=12,SNR=3.9						
SONM	Songino Array	28.21	312	P	P	05 06 31.7	-0.4
	0.4nm,0.4s,baz=116,slow=9.8,SNR=2.7						
ZALV	Zalesovo Beam	42.93	316	P	P	05 08 34.9	-0.4
	0.5nm,0.4s,baz=96,slow=8.2,SNR=3.7						
MKAR	Makanchi Array	44.14	306	P	P	05 08 42.8	-2.2
	2.0nm,0.6s,baz=95,slow=8.9,SNR=19						
RAMN	Ramite	44.39	277	eP	P	05 08 46.8	-0.7
	7.5nm,0.5s						
JIRN	Jiri	44.50	278	eP	P	05 08 48.1	-0.4
	26nm,0.5s						
GUN	Gumba	44.68	278	eP	P	05 08 49.7	-0.1
	12nm,0.5s						
DANN	Dangsing	46.30	280	eP	P	05 09 02.4	+0.1
PYUN	Piuthan	47.03	280	eP	P	05 09 07.6	-0.2
	12nm,0.4s						
WRA	Warramunga Arr	52.18	184	P	P	05 09 46.9	+1.1
	0.3nm,0.3s,baz=0.4,slow=7.7,SNR=15						
FINES	FINESS Array B	71.44	332	P	P	05 11 52.4	+0.3
	0.5nm,0.4s,baz=66,slow=4.6,SNR=7.0						
AKASG	Malin Array Be	76.03	322	P	P	05 12 18.2	-0.4
	0.3nm,0.3s,baz=52,slow=6.3,SNR=4.3						

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*IDC **08** 05:03:41.9±0.7, 10°.83S×165°.75E, h0^{km}, mb4.1/12, mb1 4.4/14, mb1mx4.1/46, mbtmp4.3/14, ML4.9/2, MS3.9/1, Ms1 3.9/1, ms1mx3.0/39, Error ellipse: s-maj=22.2km s-min=17.1km az=112.0*
*ISCJB **08** 05:03:42.9±0.3, 11°.00S±0°.04×165°.71E±0°.06, h10^{km}, mb4.5/39, MS5.0/2, Error ellipse: s-maj=7.9km s-min=5.8km az=167.3*
*NEIC **08** 05:03:44.4±0.3, 10°.91S×165°.75E, h10^{km}, mb4.7/29, Error ellipse: s-maj=8.2km s-min=6.0km az=91.0*
ISC 08 05:03:44.5±0.5**, 10°.97S**±0°.06×**165°.76E**±0°.07**, h10**^{km}**, n72, σ1^{s}.61**/72**, mb4.5**/39**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.92	284	eP	Pn	05 05 14.0	+1.7
HNR				eS	Sn	05 06 24.0	+3.8
HNR	Honiara	5.92	284	ePn	Pn	05 05 13.8	+1.5
HNR				eSn	Sn	05 06 17.6	-2.6
HNR	Honiara	5.92	284	Pn	Pn	05 05 11.6	-0.7
	37nm,0.3s,baz=196,slow=15,SNR=8.6						
HNR				Sn	Sn	05 06 17.6	-2.6
	baz=323,slow=20,SNR=1.3						
MARNC	Mare, Loyalty	10.68	168	ePn	Pn	05 06 18.4	+0.9
DZM	Mont Dzumac	11.06	177	ePn	Pn	05 06 23.9	+1.1
DZM				Sn	Sn	05 08 24.2	-2.5
DZM	Mont Dzumac	11.06	177	Pn	Pn	05 06 24.3	+1.4
	6.2nm,0.3s,baz=360,slow=2.8,SNR=75						
DZM				Sn	Sn	05 08 24.2	-2.5
	0.5nm,0.3s,baz=156,slow=19,SNR=2.6						
DZM				LR	LR	05 10 30.3	
	comp=Z,627nm,18.9s,baz=27,slow=36						
ONTNC	Ouen Toro	11.29	177	ePn	Pn	05 06 27.7	+1.7
PINNC	Pines Island,	11.69	172	ePn	Pn	05 06 33.2	+1.8
EIDS	Eidsvold	19.96	222	eP	P	05 08 17.8	+0.9
	27nm,1.1s						
MANU	Manus Island	20.29	295	eP	Pn	05 08 22.6	-0.1
	57nm,1.0s						
CTA	Charters Tower	20.84	242	P	P	05 08 27.2	+0.6
	9.3nm,0.8s,baz=79,slow=12,SNR=7.4						
CTAO	Charters Tower	20.84	242	eP	Pn	05 08 28.0	-1.1
	13nm,0.8s						
ARMA	Armidale	23.38	212	eP	P	05 08 53.9	+0.2
	12nm,1.0s						
URZ	Urewera	29.01	161	eP	P	05 09 44.6	-0.1
	7.4nm,1.0s						
URZ	Urewera	29.01	161	P	P	05 09 44.4	-0.2
	2.1nm,0.4s,baz=342,slow=6.4,SNR=4.4						
H11S2	WAKE ISLAND Hy	29.29	2	T	T	05 39 56.8	
	baz=181,slow=76,SNR=65						
H11S3	WAKE ISLAND Hy	29.29	2	T	T	05 40 08.4	
	baz=181,slow=76,SNR=30						
H11S1	WAKE ISLAND Hy	29.31	2	T	T	05 39 58.3	
	baz=181,slow=76,SNR=42						
BKZ	Black Stump Fm	29.66	163	eP	P	05 09 50.4	-0.1
	6.9nm,0.8s						
STKA	Stephens Creek	30.50	223	eP	P	05 09 58.6	+0.7
	1.0nm,1.0s						
STKA	Stephens Creek	30.50	223	P	P	05 09 58.0	+0.1
	1.5nm,0.4s,baz=47,slow=9.6,SNR=5.7						
H11N1	WAKE ISLAND Hy	30.51	2	T	T	05 41 28.4	
	baz=182,slow=76,SNR=34						
H11N3	WAKE ISLAND Hy	30.52	2	T	T	05 41 28.8	
	baz=182,slow=76,SNR=24						
H11N2	WAKE ISLAND Hy	30.53	2	T	T	05 41 39.0	
	baz=182,slow=76,SNR=19						
BFZ	Birch Farm	31.01	164	eP	P	05 10 00.5	-1.7
	26nm,1.1s						
SNZO	South Karori	31.23	167	eP	P	05 10 05.2	+1.1
	68nm,1.1s						
THZ	Tophouse	31.31	170	eP	P	05 10 05.5	+0.5
	12nm,0.9s						
WB2	Warramunga Arr	31.51	250	eP	P	05 10 06.4	-0.6
	5.2nm,1.0s						
WR1	Warramunga Arr	31.52	250	eP	P	05 10 06.2	-0.8
	6.7nm,1.0s						
WR1				ePcP	PcP	05 12 58.7	-1.3
WRA	Warramunga Arr	31.52	250	P	P	05 10 06.2	-0.8
	2.0nm,0.7s,baz=81,slow=9.3,SNR=25						
WRA				PcP	PcP	05 12 58.7	-1.3
	0.3nm,0.9s,baz=74,slow=3.3,SNR=2.8						
KHZ	Kahutara	32.05	169	eP	P	05 10 11.9	+0.5
	23nm,1.1s						
TOO	Toolangi	32.14	211	eP	P	05 10 13.0	+0.6
	3.1nm,1.0s						
LTZ	Lake Taylor	32.20	171	eP	P	05 10 13.1	+0.3
	10nm,0.7s						
FOZ	Fox Glacier	32.63	175	eP	P	05 10 17.4	+0.9
	10nm,0.9s						
ASAR	Alice Springs	32.83	243	P	P	05 10 17.4	-1.2
	1.9nm,0.8s,baz=74,slow=10.0,SNR=18						
ASAR				PcP	PcP	05 13 02.6	-1.0
	0.4nm,0.8s,baz=85,slow=4.9,SNR=3.4						
RPZ	Rata Peaks	32.94	173	eP	P	05 10 20.3	+1.1
	15nm,0.8s						
RPZ	Rata Peaks	32.94	173	P	P	05 10 19.3	+0.1
	14nm,0.8s,baz=100,slow=8.0,SNR=6.1						
MQZ	McQueen's Vall	33.16	171	eP	P	05 10 20.6	-0.4
	32nm,1.1s						
LBZ	Lake Benmore	33.51	174	eP	P	05 10 24.8	+0.6
	14nm,1.2s						
BBOO	Buckleboo	34.88	227	eP	P	05 10 36.4	+0.1
	12nm,1.1s						
FITZ	Fitzroy Crossi	39.41	255	eP	P	05 11 14.1	-0.8
	3.0nm,0.8s						
PUH	Pauahi	48.87	52	eP	P	05 12 31.6	+0.7
	56nm,1.0s						
SSLB	Suanglung	55.78	309	eP	P	05 13 23.7	+1.6
	11nm,1.1s						
NJ2	Nanjing	61.98	315	eP	P	05 14 06.9	+1.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KLR	Kul'dur	66.99	337	P	P	05 14 36.5	-0.9
	comp=Z,1.1nm,0.8s,baz=101,slow=5.2,SNR=3.8						
KMI	Kunming	71.09	301	P	P	05 15 06.3	+2.5
KMI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,190nm,5.6s						
HHC	Hu-ho-hao-te	71.78	320	eP	P	05 15 10.8	+3.3
HHC				S	S	05 24 22.5	-5.5
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,300nm,6.5s						
HHC				LR	LR		
	comp=N,320nm,16.5s						
HHC				LR	LR		
	comp=E,440nm,15.8s						
HHC				LR	LR		
	comp=Z,520nm,15.2s						
LZH	Lanzhou	74.72	312	eP	P	05 15 29.7	+4.7
LZH				pP	PcP	05 15 35.8	-3.3
LZH				sP	sP	05 15 38.4	+10
LZH				PP	PP	05 18 25.2	+13
LZH				pmax	pmax		
	comp=Z,35nm,1.5s						
LZH				pmax	pmax		
	comp=Z,140nm,4.3s						
SONA0	Songino Array	78.61	324	eP	P	05 15 44.3	-2.4
SONM	Songino Array	78.61	324	P	P	05 15 44.3	-2.4
	comp=Z,0.4nm,0.5s,baz=144,slow=3.9,SNR=3.8						
GTA	Gaotai	79.02	314	P	P	05 15 49.2	+0.1
GTA				pP	PcP	05 15 57.9	+0.3
GTA				sP	sP	05 16 01.5	+8.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HDA	Harding Lake	83.17	19	eP	P	05 16 11.0	+0.4
	comp=Z,6.9nm,0.9s						
IL1	Eielson Array	83.44	19	eP	P	05 16 11.7	-0.2
ILAR	Eielson Array	83.44	19	P	P	05 16 09.8	-2.1
	comp=Z,1.2nm,0.6s,baz=241,slow=4.8,SNR=26						
ILB	Eielson Array	83.44	19	eP	P	05 16 11.0	-0.9
	comp=Z,2.4nm,1.0s						
DOT	Dot Lake	83.61	20	eP	P	05 16 13.6	+0.8
	comp=Z,3.5nm,1.2s						
SCRK	Sand Creek	83.84	20	eP	P	05 16 14.7	+0.5
	comp=Z,3.9nm,1.1s						
MOD	Modoc Plateau	85.59	46	eP	P	05 16 22.8	-0.7
	comp=Z,3.7nm,0.6s						
NVAR	Mina Array Bea	85.97	50	P	P	05 16 25.4	-0.1
	comp=Z,0.7nm,0.7s,baz=259,slow=7.2,SNR=3.2						
WMQ	Urumqi	89.05	315	eP	P	05 16 42.0	+1.9
WMQ				LR	LR		
	comp=N,620nm,20.5s						
WMQ				LR	LR		
	comp=E,670nm,20.5s						
WMQ				LR	LR		
	comp=Z,530nm,17.3s						
HRY	Holter Researc	92.75	43	eP	P	05 16 58.5	+1.2
SNOW	Snow King Moun	92.78	46	eP	P	05 16 58.7	+1.0
	comp=Z,2.0nm,0.8s						
PV17	East Wray Mesa	93.05	52	eP	P	05 17 01.7	+2.7
	comp=Z,1.3nm,0.6s						
MK01	Makanchi Array	93.46	317	eP	P	05 16 59.3	-1.1
MK32	Makanchi Array	93.47	317	eP	P	05 16 58.8	-1.7
MKAR	Makanchi Array	93.47	317	P	P	05 16 58.8	-1.7
	comp=Z,0.9nm,0.7s,baz=91,slow=6.1,SNR=6.3						
YKA	Yellowknife Ar	94.90	27	P	P	05 17 04.8	-1.8
	comp=Z,0.1nm,0.4s,baz=258,slow=4.6,SNR=5.1						
YKB5	Yellowknife Ar	94.90	27	eP	P	05 17 06.0	-0.6
ARCES	ARCESS Array B	116.27	345	PKP	PKiKP	05 22 25.7	-2.1
	comp=Z,0.8nm,0.6s,baz=104,slow=3.8,SNR=3.2						
SUMG	Summit	116.75	8	ePKPdf	PKPdf	05 22 28.8	-0.3
LPAZ	La Paz	120.21	116	ePKPdf	PKPdf	05 22 37.5	-0.1
ROSA	Rosais	149.67	22	ePKPdf	PKPdf	05 23 31.2	+0.9

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*TIF **08** 05:09:45.0, 41°.10N×43°.89E, h16^{km}±1^{km}*
*NORS **08** 05:09:46.9±0.0, 41°.19N×44°.14E, h3^{km}, MPVA3.5*
ISC 08 05:09:45.6±1.1**, 41°.13N**±0°.03×**43°.93E**±0°.03**, h8**^{km}±9^{km}**, n17, σ0^{s}.59**/33**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGD	Bogdanovka	0.28	298	P	Pg	05 09 50.9	-0.4
BGD				S	Sg	05 09 54.8	-0.3
TRLG	Trialeti	0.43	17	P	Pb	05 09 54.7	-0.8
TRLG				S	Sb	05 10 01.4	-0.8
KZRT	Kazreti	0.43	54	P	Pb	05 09 55.4	-0.2
KZRT				S	Sb	05 10 02.3	-0.1
EAK	Akyaka	0.51	209	i P	Pg	05 09 55.3	-0.1
EAK				i S	Sg	05 10 02.6	+0.5
EAK				IAML_P			
	comp=Z,2μm,0.1s						
DIGO	Kars	0.83	211	i P	Pg	05 10 01.6	0.0
DIGO				i S	Sg	05 10 12.6	+0.2
DIGO				IAML_P			
	comp=Z,4μm,0.1s						
TBLG	Delisi	0.85	45	P	Pb	05 10 02.9	+0.2
TBLG				S	Sb	05 10 15.0	+0.6
SEAG	Tbilisi Sea	0.91	46	P	Sn	05 10 17.5	-0.6
IGDI	IGDIR	1.27	175	i P	Pn	05 10 09.2	-0.5
IGDI				i S	Sn	05 10 26.7	-0.2
IGDI				IAML_P			
	comp=Z,154nm,0.1s						
ARTV	Artvin	1.51	273	i P	Pn	05 10 13.4	+0.2

ARTV				*i* S	Sn	05 10 32.9	-0.3
ARTV				IAML_P			
	comp=Z,2μm,0.1s						
DAGI	Agillar	1.53	269	*i* P	Pn	05 10 13.2	0.0
DAGI				*i* S	Sn	05 10 33.9	+0.5
DAGI				IAML_P			
	comp=Z,609nm,0.2s						
ZEI	Tsey	1.66	359	*e*Pg	Pg	05 10 17.0	-0.4
ZEI				*e*Sg	Sg	05 10 39.9	+1.0
DBAD	Bademkaya	1.69	267	*i* P	Pb	05 10 16.6	-0.4
DBAD				*i* S	Sb	05 10 38.7	+0.1
LACR	Lac	1.72	9	*e*Pg	Pg	05 10 18.1	-0.4
LACR				*e*Sg	Sg	05 10 41.0	+0.2
DBOC	Borcka	1.72	278	*i* P	Pn	05 10 16.4	+0.5
DBOC				*i* S	Sn	05 10 38.3	+0.1
DBOC				IAML_P			
	comp=Z,1μm,0.3s						
DIGR	Digorskoe uzhe	1.79	352	*e*Pg	Pg	05 10 19.6	-0.3
DIGR				*e*Sg	Sg	05 10 44.0	+0.9
LGD	Lagodekhi	1.87	67	P	Pg	05 10 21.0	-0.5
LGD				S	Sg	05 10 47.2	+1.5
NEY	Neytrino	2.30	337	*e*Pn	Pb	05 10 27.3	-0.1
NEY				*e*Sn	Sb	05 10 57.3	+1.2

IDC 08 05:09:48.4±1.7**, 2°.34S×139°.38E, h0km, mb3.4**/5**, mb1 3.5**/6**, mb1mx3.4**/43**, mbtmp3.4**/6**, ML3.4**/1**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.1**/27**, Error ellipse: s-maj=72.9km s-min=26.1km az=92.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BATI	Baumata	17.46	243	LR	LR	05 20 57.9	
	comp=Z,513nm,19.8s,baz=179,slow=38						
WRA	Warramunga Arr	18.18	195	P	P	05 14 03.1	+0.3
	0.1nm,0.3s,baz=18,slow=12,SNR=7.6						
ASAR	Alice Springs	21.86	194	P	P	05 14 42.3	-0.5
	0.2nm,0.4s,baz=20,slow=8.9,SNR=3.0						
MKAR	Makanchi Array	69.91	322	P	P	05 21 01.6	+0.2
	0.5nm,0.7s,baz=128,slow=7.9,SNR=5.1						
KURBB	Kurchatov Arra	73.82	325	P	P	05 21 24.8	0.0
	0.5nm,0.8s,baz=120,slow=5.9,SNR=4.7						
BVAR	Borovoye Array	79.40	325	P	P	05 21 56.0	-0.3
	0.5nm,0.6s,baz=114,slow=7.3,SNR=3.8						
ILAR	Eielson Array	85.22	24	P	P	05 22 26.8	+0.2
	0.2nm,0.7s,baz=269,slow=4.1,SNR=2.7						

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*IDC **08** 05:09:49.2±0.7, 60°.38S×27°.05W, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.2/24, mbtmp4.3/10, ML4.2/1, Error ellipse: s-maj=28.1km s-min=18.0km az=14.0*

*ISCJB **08** 05:09:56.3±1.6, 60°.62S±0°.09×26°.6W±0°.1, h69km±16km, mb4.6/29, Error ellipse: s-maj=16.4km s-min=8.3km az=35.1*

*NEIC **08** 05:09:57.0±1.5, 60°.53S×26°.61W, h49km±12km, mb4.7/25, Error ellipse: s-maj=14.4km s-min=8.4km az=212.0*

ISC 08 05:09:54.0±0.7**, 60°.5S**±0°.1×**26°.65W**±0°.10**, h28km**±4km**, h28km:pP-P, n131, σ1§22**/145**, mb4.7**/29**, 2C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HOPE	Hope Point	8.15	315	*e*Pn	Pn	05 11 56.7	+6.5
VNA1	Neumayer--Stat	12.68	151	P	Pn	05 12 52.7	+0.6
VNA3	Neumayer Olymp	12.80	155	P	Pn	05 12 54.1	+0.4
VNA2	Neumayer--Watz	13.08	151	P	Pn	05 12 58.0	+0.5
SNAA	Sanae	14.68	150	P	Pn	05 13 19.3	-0.1
SNAA	Sanae	14.68	150	*e*Pn	Pn	05 13 19.4	-0.1
SNAA	Sanae	14.68	150	Pn	Pn	05 13 19.0	-0.4
	1.0nm,0.3s,baz=310,slow=14,SNR=47						
EFI	East Falkland	19.44	283	*e*P	Pn	05 14 23.1	+4.0
	40nm,1.1s						
USHA	Ushuaia	22.75	266	P	P	05 14 49.4	-4.1
	6.1nm,0.9s,baz=145,slow=12,SNR=2.3						
GO09	Cerro Castillo	26.71	269	*e*P	P	05 15 30.3	-0.2
	3.9nm,0.9s						
QSPA	South Pole Qui	29.79	180	*e*P	P	05 15 56.6	-1.4
	4.7nm,0.8s						
TRQA	Tornquist	31.53	299	*e*P	P	05 16 14.2	+0.8
	8.8nm,0.6s						
PLCA	Paso Flores	33.28	286	*e*P	P	05 16 29.1	+0.2
	5.4nm,1.0s						
MRA	San Martin	37.92	300	*e*P	P	05 17 09.1	+0.3
ACAN	Cantantal	38.68	298	*e*P	P	05 17 14.2	-0.8
AAGR	Agrelo	38.72	296	*e*P	P	05 17 16.4	+1.0
ASAL	Salagasta	39.14	296	*e*P	P	05 17 18.8	-0.1
PEL	Peldehue	39.50	294	*e*P	P	05 17 22.4	+0.5
	65nm,1.1s						
RTCV	Cerro Valdivia	39.63	297	*e*P	P	05 17 22.9	-0.1
AUSP	Uspallata	39.70	296	*e*P	P	05 17 24.1	+0.3
ROC1	El Roble	39.80	293	*e*P	P	05 17 26.3	+1.7
	13nm,0.7s						
ROC1	El Roble	39.80	293	*e*P	P	05 17 26.6	+2.0
APLL	PUNTA DE LOS L	40.01	300	*e*P	P	05 17 25.9	-0.3
RTLS	Leoncito	40.02	296	*e*P	P	05 17 27.1	+0.6
CPUP	Villa Florida	40.03	315	*e*P	P	05 17 26.0	-0.3
	5.5nm,0.8s						
CPUP	Villa Florida	40.03	315	P	P	05 17 24.6	-1.7
	4.6nm,0.5s,baz=176,slow=5.2,SNR=21						
AMOG	MOGNA	40.39	298	*e*P	P	05 17 30.3	+0.9
ACLC	CERRO LA CRUZ	41.03	301	*e*P	P	05 17 34.8	0.0
CYA	Choya	41.41	303	*e*P	P	05 17 36.5	-1.2
AGUA	GUANDACOL	41.64	299	*e*P	P	05 17 40.8	+1.1
GO04	Tololo Observa	42.07	296	*e*P	P	05 17 43.6	+0.3
	19nm,0.6s						
LCO	Las Campanas	43.02	297	*e*P	P	05 17 51.7	+0.6
	16nm,0.6s						
GO02	Mina Guanaco	45.89	301	*e*P	P	05 18 14.5	+0.5
	32nm,0.6s						
BOSA	Boshof	46.95	71	*e*P	P	05 18 23.7	+1.5
	3.0nm,0.9s						
BOSA	Boshof	46.95	71	P	P	05 18 23.4	+1.2
	1.0nm,0.5s,baz=211,slow=8.0,SNR=2.8						
BDFB	Brasilia	47.35	332	*e*P	P	05 18 25.7	+0.3
	4.4nm,1.1s						
BDFB	Brasilia	47.35	332	P	P	05 18 23.7	-1.7
	1.0nm,0.4s,baz=168,slow=10,SNR=4.0						
PB10	IPOC Station P	47.75	301	*e*P	P	05 18 28.4	+0.2
	22nm,1.1s						
LVC	Limon Verde	47.86	303	*e*P	P	05 18 30.2	+0.7
	7.2nm,0.9s						
PB04	IPOC Station P	48.62	302	*e*P	P	05 18 36.3	+1.1
	18nm,0.8s						
PB01	IPOC Station P	49.49	303	*e*P	P	05 18 42.3	+0.5
	16nm,0.9s						
LBTB	Lobatse	50.16	69	P	P	05 18 48.2	+1.3
	1.7nm,0.9s,baz=194,slow=4.2,SNR=2.1						
PB11	IPOC Station P	50.71	304	*e*P	P	05 18 51.1	0.0
	11nm,1.0s						
MNMC	Minye Minye	51.25	304	*e*P	P	05 18 56.0	+0.8
	19nm,0.6s						
LPAZ	La Paz	53.22	307	*e*P	P	05 19 10.8	+0.4
LPAZ	La Paz	53.22	307	P	P	05 19 09.1	-1.3
	4.5nm,0.5s,baz=108,slow=6.7,SNR=28						
PTGA	Pitinga	64.84	323	*e*P	P	05 20 30.4	+0.3
	2.4nm,0.6s						
DBIC	Dimbokro	69.08	23	*e*P	P	05 20 57.4	+0.3
	7.0nm,1.0s						
DBIC	Dimbokro	69.08	23	P	P	05 20 55.5	-1.6
	5.1nm,1.0s,baz=191,slow=6.5,SNR=4.7						
OTAV	Otavalo	72.36	304	*e*P	P	05 21 19.1	+1.4
	5.4nm,0.9s						
SOTA	Rioblanco	73.35	307	*e*P	P	05 21 24.4	+0.8
SOTA	Rioblanco	73.35	307	*e*P	P	05 21 24.4	+0.8
PCON	Cinco Dias	73.44	307	*e*P	P	05 21 24.4	+0.2
PCON	Cinco Dias	73.44	307	*e*P	P	05 21 24.4	+0.2
POPC	Popayan, Colom	73.75	307	*e*P	P	05 21 23.1	-2.5
POPC	Popayan, Colom	73.75	307	*e*P	P	05 21 23.1	-2.5
CHIC	Chingaza	74.53	311	*e*P	P	05 21 27.7	-2.6
CHIC	Chingaza	74.53	311	*e*P	P	05 21 27.7	-2.6
RUSC	La Rusia	75.45	312⇑	*e*P	P	05 21 35.0	-0.7
RUSC	La Rusia	75.45	312⇑	*e*P	P	05 21 35.0	-0.7
PLMC	San Jos del P	75.75	308	*e*P	P	05 21 35.0	-1.9
PLMC	San Jos del P	75.75	308	*e*P	P	05 21 35.0	-1.9
PTBC	PUERTO BERRIO,	76.55	311	*e*P	P	05 21 39.0	-2.5
PTBC	PUERTO BERRIO,	76.55	311	*e*P	P	05 21 39.0	-2.5
HELC	Santa Helena	76.64	310	*e*P	P	05 21 41.7	-0.7
HELC	Santa Helena	76.64	310	*e*P	P	05 21 41.7	-0.7
TOA0	Torodi Ar. Sit	76.78	28	*e*P	P	05 21 44.0	+1.4
	10nm,1.1s						
TORD	Torodi Ar. Bea	76.78	28	P	P	05 21 42.0	-0.6
	3.6nm,0.4s,baz=201,slow=4.8,SNR=84						
TOA1	Torodi Ar. Sit	76.78	28	*e*P	P	05 21 42.0	-0.6
SDV	Santo Domingo	77.34	315	*e*P	P	05 21 45.2	-0.9
	4.8nm,1.0s						
TEIG	Tepich	94.43	304	*e*P	P	05 23 11.1	+0.2
	4.9nm,0.8s						
ASAR	Alice Springs	94.70	162	P	P	05 23 12.3	-0.1
	0.3nm,0.6s,baz=174,slow=4.3,SNR=3.3						
LOHW	Long Hollow	123.99	299	*e*PKPdf	PKiKP	05 28 49.9	+0.9
TPAW	Teton Pass	124.04	299	*e*PKPdf	PKiKP	05 28 49.5	+0.4
MOOW	Moose Ponds	124.16	299	*e*PKPdf	PKiKP	05 28 50.1	+0.8
FXWY	Fox Creek	124.19	299	*e*PKPdf	PKiKP	05 28 50.5	+1.1
FLWY	Flagg Ranch	124.41	300	*e*PKPdf	PKiKP	05 28 50.9	+1.1
NB200	NORSAR Array S	124.63	21	*e*PKPdf	PKPdf	05 28 46.9	-2.2
NOA	NORSAR Array B	124.63	21	PKP	PKPdf	05 28 46.9	-2.2
	0.8nm,0.9s,baz=180,slow=1.5,SNR=2.7						
FIA0	FINESS Array S	128.13	29	*e*PKPdf	PKPdf	05 28 53.6	-2.1
FINES	FINESS Array B	128.13	29	PKP	PKPdf	05 28 53.6	-2.1
	1.6nm,0.8s,baz=204,slow=3.0,SNR=3.1						
AKTO	Aktyubinsk	129.66	56	PKP	PKPdf	05 28 57.2	-1.8
	1.8nm,0.9s,baz=204,slow=10.0,SNR=2.5						
ARA0	ARCESS Array S	134.91	23	*e*PKPdf	PKiKP	05 29 09.1	-0.8
ARCES	ARCESS Array B	134.91	23	*e*PKPdf	PKiKP	05 29 10.5	+0.7
ARCES	ARCESS Array B	134.91	23	PKP	PKiKP	05 29 09.1	-0.8
	2.1nm,0.9s,baz=228,slow=1.5,SNR=4.6						
ARE0	ARCESS Array S	134.91	23	*e*PKPdf	PKiKP	05 29 10.1	+0.3
YKA	Yellowknife Ar	139.55	314	PKP	PKPdf	05 29 17.0	-0.1
	1.1nm,0.7s,baz=131,slow=2.2,SNR=12						
YKB5	Yellowknife Ar	139.55	314	*e*PKPdf	PKPdf	05 29 17.7	+0.6
ZALV	Zalesovo Beam	143.88	69	*e*PKPpre	PKPbc	05 29 23.8	+0.8
ZALV	Zalesovo Beam	143.88	69	PKP	PKPbc	05 29 23.2	+0.2
	0.8nm,0.4s,baz=230,slow=3.5,SNR=5.9						
ZAA1	Zalesovo Array	143.88	69	*e*PKPpre	PKPbc	05 29 23.2	+0.2
HYT	Haines Junctio	147.52	302	*e*PKPbc	PKPab	05 29 37.4	+1.2
INK	Inuvik	149.29	316	*e*PKPbc	PKPbc	05 29 38.3	+0.2
INK	Inuvik	149.29	316	PKPbc	PKPbc	05 29 37.7	-0.4
	3.4nm,0.7s,baz=59,slow=3.1,SNR=14						
EPYK	Eagle Plains	149.70	311	*e*PKPbc	PKPbc	05 29 39.6	+0.3
DAWY	Dawson	149.80	306	*e*PKPbc	PKPbc	05 29 39.9	+0.2
SONA0	Songino Array	150.43	94	*e*PKPbc	PKiKP	05 29 43.4	+0.9
SONA0				*e*PKPab	pPKPbc	05 29 49.5	0.0
SONM	Songino Array	150.43	94	PKPbc	PKiKP	05 29 43.4	+0.9
	1.9nm,0.7s,baz=222,slow=2.7,SNR=11						
SONM				PKPab	pPKPbc	05 29 49.5	0.0
	2.0nm,0.7s,baz=216,slow=2.3,SNR=6.8						
SONA1	Songino Array	150.44	94	*e*PKPbc	PKiKP	05 29 43.5	+0.9
KLU	Klutina	151.44	299	*e*PKPbc	PKiKP	05 29 44.0	-0.1
KLU				*e*PKPab	PKPab	05 29 52.7	+0.6
HARP	HAARP	151.49	301	*e*PKPbc	PKiKP	05 29 45.1	+1.0
DOT	Dot Lake	151.53	304	*e*PKPbc	PKiKP	05 29 44.8	+0.7
DOT				*e*PKPab	sPKPbc	05 29 54.5	+0.1
SCRK	Sand Creek	151.62	304	*e*PKPbc	PKiKP	05 29 44.8	+0.3
SCRK				*e*PKPab	PKPab	05 29 53.5	+0.6
RIDG	Independ'e Rid	151.89	304	*e*PKPbc	PKiKP	05 29 45.9	+1.0
RIDG				*e*PKPab	sPKPbc	05 29 55.7	+0.4
SCM	Sheep Creek Mo	152.19	299	*e*PKPbc	PKiKP	05 29 46.3	+0.7
SCM				*e*PKPab	sPKPbc	05 29 55.8	-0.2
SEW	Seward	152.40	295	*e*PKPdf	PKPdf	05 29 38.5	-0.2
SEW				*e*PKPbc	pPKPdf	05 29 47.0	+0.2
SEW				*e*PKPab	sPKPbc	05 29 56.3	0.0
KNK	Knik Glacier	152.51	298	*e*PKPbc	PKiKP	05 29 47.4	+1.2
KNK				*e*PKPab	PKPab	05 29 57.7	+1.1
SML	Sawmill	152.62	299	*e*PKPbc	PKiKP	05 29 47.1	+0.7
SML				*e*PKPab	PKPab	05 29 57.0	0.0
DHY	Denali Highway	152.69	301	*e*PKPbc	PKiKP	05 29 47.3	+0.6
KDAK	Kodiak Island	152.77	289	*e*PKPbc	PKiKP	05 29 47.8	+1.0
GHO	Glory Hole Cre	152.86	298	*e*PKPbc	PKiKP	05 29 48.2	+1.2
PMR	Palmer	152.88	298	*e*PKPbc	PKiKP	05 29 49.4	+2.5
BRLK	Bradley Lake	152.90	293	*e*PKPbc	PKiKP	05 29 48.0	+1.0
BRLK				*e*PKPab	PKPab	05 29 58.5	+0.2
IL1	Eielson Array	153.08	305	*e*PKPbc	PKiKP	05 29 47.7	+0.4
ILAR	Eielson Array	153.08	305	PKPbc	PKiKP	05 29 47.5	+0.3
	1.5nm,0.7s,baz=289,slow=0.4,SNR=19						
ILAR				PKPab	sPKPbc	05 29 57.2	-0.6
	1.6nm,0.7s,baz=347,slow=1.7,SNR=14						
ILB	Eielson Array	153.08	305	*e*PKPbc	PKiKP	05 29 48.8	+1.6
ILB				*e*PKPab	PKPab	05 29 58.6	-0.3
RND	Reindeer	153.44	302	*e*PKPbc	PKiKP	05 29 49.5	+1.4
RND				*e*PKPab	PKPab	05 29 59.9	-0.6
WRH	Wood River Hil	153.48	304	*e*PKPbc	PKiKP	05 29 48.6	+0.5
SUA	Susitna One	153.54	297	*e*PKPab	PKPab	05 30 01.6	+0.5
MCK	McKinley	153.59	302	*e*PKPbc	PKiKP	05 29 50.3	+2.0
MCK				*e*PKPab	PKPab	05 30 00.2	-0.9
MDM	Murphy Dome	153.69	305	*e*PKPbc	PKiKP	05 29 48.8	+0.3
BWN	Browne	153.95	303	*e*PKPbc	PKiKP	05 29 49.1	+0.1
RSO	Redoubt South	154.04	294	*e*PKPbc	PKiKP	05 29 50.4	+0.8
RSO				*e*PKPab	PKPab	05 30 03.6	+0.3
TRF	Thorofare Moun	154.06	301	*e*PKPbc	PKiKP	05 29 50.4	+0.9
BPAW	Bear Paw Mtn.	154.56	302	*e*PKPbc	PKiKP	05 29 51.4	+1.1
PPLA	Purkeypile	154.69	299	*e*PKPbc	PKiKP	05 29 53.2	+2.4
MLY	Manley	154.73	305	*e*PKPab	PKPab	05 30 05.3	-0.6
CAST	Castle Rocks	154.81	301	*e*PKPbc	PKiKP	05 29 51.4	+0.5
CAST				*e*PKPab	PKPab	05 30 06.0	-0.3
SVW2	Sparrevohn	155.57	294	*e*PKPab	PKPab	05 30 09.8	+0.2
IM3	Indian Mountai	156.18	306	*e*PKPdf	PKPdf	05 29 47.8	+3.9
TIXI	Tiksi	165.16	31	PKP	PKPdf	05 29 52.9	-0.6
	2.0nm,0.4s,baz=328,slow=4.2,SNR=7.1						

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*IDC **08** 05:14:37.5±1.4, 60°.27S×26°.74W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.8/24, mbtmp4.1/5, ML4.0/1, Error ellipse: s-maj=45.8km s-min=29.9km az=28.0*

*NEIC **08** 05:14:43.5±0.5, 60°.24S×26°.66W, h35km, mb4.4/9, Error ellipse: s-maj=17.1km s-min=12.0km az=193.0*

ISC 08 05:14:40.9±0.6**, 60°.2S**±0°.1×**26°.3W**±0°.1**, h20km, n34, σ1§43**/34**, mb4.3**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.82	152	P	Pn	05 17 40.8	-0.9
VNA3	Neumayer Olymp	12.96	156	P	Pn	05 17 42.3	-1.2
VNA2	Neumayer--Watz	13.22	152	P	Pn	05 17 46.3	-0.9
SNAA	Sanae	14.82	150	P	Pn	05 18 07.9	-1.0
SNAA	Sanae	14.82	150	*e*Pn	Pn	05 18 05.7	-3.3
SNAA	Sanae	14.82	150	Pn	Pn	05 18 07.3	-1.7
	0.7nm,0.3s,baz=328,slow=17,SNR=18						
PMSA	Palmer Station	17.81	239	*e*Pn	P	05 18 50.8	+3.1
	59nm,1.1s						
GO10	Punta Arenas	25.12	266	*e*P	P	05 20 01.4	-2.7
	27nm,1.1s						
QSPA	South Pole Qui	30.03	180	*e*P	P	05 20 50.3	+2.1
TRQA	Tornquist	31.54	298	*e*P	P	05 21 01.5	0.0
	4.2nm,1.0s						
PLCA	Paso Flores	33.36	286	*e*P	P	05 21 17.6	+0.1
	1.9nm,1.0s						
CPUP	Villa Florida	39.96	314	*e*P	P	05 22 13.8	+0.1
	1.6nm,1.0s						
CPUP	Villa Florida	39.96	314	P	P	05 22 11.6	-2.1
	1.0nm,0.6s,baz=167,slow=7.6,SNR=4.7						
GO04	Tololo Observa	42.10	295	*e*P	P	05 22 31.1	-0.4
	7.4nm,1.0s						
LCO	Las Campanas	43.05	296	*e*P	P	05 22 39.5	+0.2
	5.2nm,1.1s						
GO02	Mina Guanaco	45.89	300	*e*P	P	05 23 02.5	+0.4
	8.2nm,1.0s						
MNMC	Minye Minye	51.23	304	*e*P	P	05 23 43.1	-0.1
	4.3nm,0.6s						
LPAZ	La Paz	53.19	307	*e*P	P	05 23 58.1	0.0
LPAZ	La Paz	53.19	307	P	P	05 23 57.6	-0.6
	0.9nm,0.5s,baz=127,slow=7.0,SNR=5.4						
DBIC	Dimbokro	68.80	23	P	P	05 25 43.5	+0.1
	2.3nm,0.9s,baz=220,slow=7.9,SNR=1.6						
TOA0	Torodi Ar. Sit	76.49	28	*e*P	P	05 26 31.6	+2.5
TORD	Torodi Ar. Bea	76.49	28	P	P	05 26 30.6	+1.5
	0.6nm,0.4s,baz=198,slow=6.8,SNR=16						
TOA1	Torodi Ar. Sit	76.50	28	*e*P	P	05 26 30.6	+1.5
SZCU	Shurtz Canyon	120.25	293	*e*PKPdf	PKPdf	05 33 28.2	-1.6
YKA	Yellowknife Ar	139.49	314	PKP	PKPdf	05 34 05.2	+0.1
	0.1nm,0.5s,baz=122,slow=2.5,SNR=3.3						
EPYK	Eagle Plains	149.65	312	*e*PKPbc	PKPbc	05 34 27.4	+0.1
SONA0	Songino Array	150.29	93	*e*PKPab	PKPab	05 34 36.3	+0.4
SONM	Songino Array	150.29	93	PKPab	PKPab	05 34 36.3	+0.4
	0.5nm,0.8s,baz=209,slow=2.6,SNR=3.1						
SCRK	Sand Creek	151.61	305	*e*PKPbc	PKiKP	05 34 33.0	+0.5
IL1	Eielson Array	153.07	305	*e*PKPbc	PKiKP	05 34 35.4	+0.1
ILAR	Eielson Array	153.07	305	PKPbc	PKiKP	05 34 35.3	0.0
	0.5nm,0.9s,baz=138,slow=2.4,SNR=5.1						
HOM	Homer	153.24	293	*e*PKPbc	PKiKP	05 34 35.9	+0.1
WRH	Wood River Hil	153.47	304	*e*PKPbc	PKiKP	05 34 36.6	+0.4
BWN	Browne	153.94	303	*e*PKPbc	PKPbc	05 34 34.9	-2.2

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*NIED **08** 05:15:00, 38°.20N×143°.00E, h14km, Mw4.4 Best double couple: M0 4.01000×10¹⁵ NP1:φs344.00000°, δ31.00000°, λ-104.00000°. NP2:φs181.00000°, δ60.00000°, λ-82.00000°.*

*IDC **08** 05:15:47.1±0.5, 38°.15N×143°.14E, h0km, mb4.3/30, mb1 4.4/38, mb1mx4.4/54, mbtmp4.3/38, ML3.6/5, MS3.8/3, Ms1 3.8/3, ms1mx3.2/43, Error ellipse: s-maj=13.1km s-min=11.1km az=124.0*

*JMA **08** 05:15:48.2±0.2, 38°.18N×143°.03E, h15km±3km, M4.7*

JMA Felt I J1.

*ISCJB **08** 05:15:48.8±0.8, 38°.13N±0°.02×143°.01E±0°.03, h16km±5km, mb4.5/134, MS4.3/4, Error ellipse: s-maj=4.2km s-min=3.4km az=143.3*

*MOS **08** 05:15:51.8±1.1, 38°.19N×142°.94E, h38km, mb4.6/53, Error ellipse: s-maj=7.5km s-min=5.4km az=113.6*

*NEIC **08** 05:15:54.4±0.5, 38°.13N×142°.93E, h46km±4km, mb4.5/86, Error ellipse: s-maj=4.1km s-min=3.0km az=134.0*

NEIC Recorded [1 JMA] in Iwate and Miyagi.

ISC 08 05:15:48.0±1.3**, 38°.14N**±0°.04×**143°.08E**±0°.04**, h4km**±8km**, n297, σ1§53**/306**, mb4.5**/134**, MS4.3**/5**, 13C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.28	278	P	Pg	05 16 10.8	-1.7
JIKH				*e*S	Sg	05 16 27.3	-1.8
JIO	Ouri	1.40	283	P	Pn	05 16 12.5	-1.7
JIO				*e*S	Sg	05 16 29.5	-3.3
JKMT	Kesennumamotoy	1.43	298	P	Pn	05 16 12.9	-1.7
JKMT				*e*S	Sg	05 16 30.7	-3.1
OFUJ	Ofunato	1.45	311	P	Pn	05 16 13.2	-1.7
OFUJ				*e*S	Sg	05 16 31.3	-3.2
JMK	Ichinoseki	1.67	300	P	Pn	05 16 16.6	-1.3
JMK				*e*S	Sn	05 16 37.5	-2.3
JMM	Marumori	1.83	262	P	Pn	05 16 18.7	-1.4
JMM				*e*S	Sn	05 16 41.2	-2.5
JFK	Kawauchi	1.91	247	P	Pn	05 16 20.0	-1.4
JFK				*e*S	Sn	05 16 42.9	-3.0
JOU	Okura	1.91	277	P	Pn	05 16 20.6	-0.8
JOU				*e*S	Sn	05 16 45.4	-0.5
JOM	Ohasama	1.93	314	P	Pn	05 16 21.1	-0.4
JOM				*e*S	Sn	05 16 44.7	-1.5
JFT	Otama	2.26	255	P	Pn	05 16 26.0	-0.1
JFT				*e*S	Sn	05 16 54.4	0.0
JYK	Kaneyama	2.27	291	P	Pn	05 16 26.0	-0.2
JRG	Rokugo	2.28	304	P	Pn	05 16 26.4	-0.1
JYS	Shirataka	2.38	273	P	Pn	05 16 27.6	-0.1
JANG	Nango	2.54	332	P	Pn	05 16 31.3	+1.4
JANG				*e*S	Sn	05 17 02.8	+1.5
JNS	Sasagawa	2.99	265	P	Pn	05 16 36.5	+0.3
JAW	Awa shima	3.03	277	P	Pn	05 16 37.2	+0.5
ERM	Erimo	3.87	1	*e*Pn	Pn	05 16 51.0	+2.8
ERM				*e*Sn	Sn	05 17 33.0	-1.1
ERM	Erimo	3.87	1	*i* P	Pn	05 16 47.6	-0.6
MJAR	Matsushiro Arr	4.20	249	Pn	Pn	05 16 54.1	+1.3
	2.2nm,0.3s,baz=66,slow=11,SNR=35						
MAJO	Matsushiro	4.20	249	*e*Pn	Pn	05 16 54.3	+1.5
MAJO	Matsushiro	4.20	249	*e*P	Pn	05 16 54.3	+1.5
MAT	Matsushiro	4.20	249	P	Pn	05 16 54.5	+1.7
MAT				*e*S	Sn	05 17 42.6	+0.3
MJB9	Matsu-Tunnel	4.20	249	*e*Pn	Pn	05 16 54.5	+1.7
INU	Inuyama	5.61	242	*e*Pn	Pn	05 17 13.5	+1.3
JHJ2	Mitsune	5.68	209	*e*Pn	Pn	05 17 16.7	+3.6
JHJ	Hachijo jima 2	5.69	209	Pn	Pn	05 17 14.0	+0.8
	68nm,0.3s,baz=75,slow=20,SNR=3.2						
JHJ				Sn	Sn	05 18 13.2	-5.8
	29nm,0.3s,baz=73,slow=19,SNR=3.4						
ASAJ	Asahikawa	5.98	357	Pn	Pn	05 17 18.2	+1.0
	1.9nm,0.3s,baz=205,slow=14,SNR=6.7						
ASAJ				Sn	Sn	05 18 23.1	-3.1
	1.3nm,0.3s,baz=120,slow=20,SNR=2.4						
YUK	Yuzh-Kuril'sk	6.25	19	*e*P	Pn	05 17 20.2	-0.7
YUK				*i* S	Sn	05 18 26.9	-5.8
YUK				pmax	pmax		
	comp=N,104nm,0.5s						
YUK				pmax	pmax		
	comp=E,160nm,0.5s						
YUK				pmax	pmax		
	comp=Z,185nm,0.5s						
YUK				smax	smax		
	comp=E,298nm,0.4s						
YUK				smax	smax		
	comp=N,77nm,0.5s						
SHO	Shikotan	6.38	25	*e*P	Pn	05 17 21.0	-1.8
SHO				pmax	pmax		
	comp=Z,37nm,0.5s						
SHO				pmax	pmax		
	comp=N,20nm,0.2s						
SHO				pmax	pmax		
	comp=E,19nm,0.3s						
KUR	Kuril'sk	7.94	25	P	Pn	05 17 43.5	-0.6
KUR				*e*S	Sn	05 19 07.8	-6.5
KUR				smax	smax		
	comp=N,87nm,0.7s						
KUR				smax	smax		
	comp=E,74nm,0.6s						
YSS	Yuzh-Sakhalins	8.81	359	*e*P	Pn	05 17 48.1	-7.9
YSS				MLR	MLR		
	comp=Z,800nm,15.0s						
USA0B	Ussuriysk Arra	10.31	309	*e*Pn	Pn	05 18 20.3	+3.6
USRK	Ussuriysk Ar.	10.31	309	Pn	Pn	05 18 18.5	+1.8
	comp=Z,0.3nm,0.3s,baz=116,slow=13,SNR=5.6						
CBIJ	Chichi jima	11.04	184	*e*Pn	Pn	05 18 28.5	+1.8
CBIJ				*e*Sn	Sn	05 20 18.1	-13
JCJ	Chichijima	11.04	184	Pn	Pn	05 18 28.5	+1.8
	comp=Z,5.6nm,0.3s,baz=294,slow=20,SNR=2.2						
JCJ				Sn	Sn	05 20 18.1	-13
	comp=Z,7.5nm,0.3s,baz=323,slow=18,SNR=2.6						
JNU	Nakatsue	11.12	247	Pn	Pn	05 18 27.9	+0.1
	comp=Z,0.4nm,0.3s,baz=41,slow=11,SNR=2.3						
JNU				LR	LR	05 23 30.5	
	comp=Z,444nm,18.5s,baz=94,slow=42						
MDJ	Mudanjiang	12.01	307	P	Pn	05 18 41.2	+1.3
MDJ				sP		05 18 46.0	
MDJ				S	Sn	05 20 58.7	+4.4
MDJ				sS		05 21 03.7	
MDJ				ScP	ScP	05 27 54.7	-4.5
MDJ				PcS	PcS	05 27 56.6	-3.0
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,650nm,4.4s						
MDJ				LR	LR		
	comp=N,950nm,4.9s						
MDJ				LR	LR		
	comp=E,670nm,4.5s						
MDJ				LR	LR		
	comp=Z,880nm,6.8s						
MDJ	Mudanjiang	12.01	307	*e*Pn	Pn	05 18 45.0	+5.2
KSRS	Korea Array	12.01	271	Pn	Pn	05 18 42.3	+2.4
	comp=Z,0.4nm,0.3s,baz=80,slow=14,SNR=6.2						
KSRS				LR	LR	05 23 01.8	
	comp=Z,314nm,19.3s,baz=116,slow=36						
KS15	Wonju Array Si	12.04	271	*e*Pn	Pn	05 18 44.4	+4.0
KSAR	Wonju Array Be	12.04	271	Pn	Pn	05 18 42.3	+2.0
KSAR	Wonju Array Be	12.04	271	P	Pn	05 18 42.3	+2.0
KLR	Kul'dur	13.77	327	Pn	Pn	05 19 03.2	-0.6
	comp=Z,0.2nm,0.3s,baz=133,slow=11,SNR=5.9						
ZEA	Zeya	19.02	330	*e*P	P	05 20 10.0	-0.7
ZEA				pmax	pmax		
	comp=E,21nm,0.8s						
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
SSE	Sheshan	19.32	255	*e*P	P	05 20 14.7	+0.6
	comp=Z,79nm,1.1s						
HIA	Hailar	20.12	311	*e*P	Pn	05 20 25.3	+0.7
	comp=Z,11nm,0.9s						
HIA	Hailar	20.12	311	*e*P	Pn	05 20 25.3	+0.7
HIA				pmax	pmax		
	comp=Z,11nm,0.9s						
NJ2	Nanjing	20.70	260	*e*P	P	05 20 29.7	+0.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TIA	Tai'an	20.75	273	P	P	05 20 28.0	-1.7
TIA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BJI	Beijing	20.94	284	P	P	05 20 31.4	-0.3
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
BJI				LR	LR		
	comp=N,330nm,6.2s						
BJI				LR	LR		
	comp=E,360nm,15.2s						
BJT	Baijiatuau	20.95	284	*e*P	P	05 20 31.3	-0.5

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       comp=E,18nm,0.8s
BJT    Baijiatuau          20.95 284   eP     P      05 20 31.3  -0.5
BJT                                     pmax   pmax
       comp=Z,18nm,0.8s
SARN   Sarigan             21.49 173   eP     P      05 20 35.6  -2.2
       comp=Z,47nm,1.1s
YOJ    Yonaguni jima       21.85 237   eP     P      05 20 41.2  -0.4
       comp=Z,95nm,1.0s
YOJ    Yonaguni jima       21.85 237   eP     P      05 20 41.2  -0.4
YOJ                                     pmax   pmax
       comp=Z,95nm,1.0s
MA2    Magadan             22.01  10   eP     P      05 20 44.5  +1.4
       comp=Z,7.0nm,0.7s
MA2    Magadan             22.01  10⇑  eP     P      05 20 44.4  +1.4
MA2                                     pmax   pmax
       comp=Z,11nm,1.7s
MA2    Magadan             22.01  10    P     P      05 20 43.0   0.0
       comp=Z,7.4nm,0.7s,baz=182,slow=11,SNR=9.0
YHNB   Yeheng              22.81 240   eP     P      05 20 51.0  -1.0
       comp=Z,20nm,0.8s
NACB   Ninganchiao         22.99 239   eP     P      05 20 51.5  -2.2
       comp=Z,20nm,0.9s
SSLB   Suanglung           23.68 239   eP     P      05 21 01.7  +0.9
       comp=Z,25nm,1.1s
YULB   Yu-li               23.72 238   eP     P      05 21 02.5  +1.3
       comp=Z,13nm,0.9s
TPUB   Ta-pu               24.23 239   eP     P      05 21 06.2  +0.3
       comp=Z,19nm,0.7s
HHC    Hu-ho-hao-te        24.40 286   eP     P      05 21 04.3  -3.2
HHC                                     sP     sP     05 21 15.1  +6.7
HHC                                     S      S      05 25 16.3   -12
HHC                                     pmax   pmax
       comp=Z,12nm,1.4s
HHC                                     pmax   pmax
       comp=Z,170nm,3.9s
HHC                                     LR     LR
       comp=N,390nm,12.7s
HHC                                     LR     LR
       comp=E,850nm,12.3s
HHC                                     LR     LR
       comp=Z,860nm,13.1s
WHN    Wuhan               24.83 261    P     P      05 21 10.8  -0.6
YAK    Yakutsk             25.31 345   eP     P      05 21 16.4  +1.1
YAK                                    e*PP          05 21 22.8
YAK                                    e             05 21 52.4
YAK                                    ePPP   PPP    05 21 59.7
YAK                                    e             05 24 46.6
YAK                                     pmax   pmax
       comp=Z,48nm,0.8s
YAK                                     pmax   pmax
       comp=N,21nm,0.9s
YAK                                     pmax   pmax
       comp=E,19nm,1.0s
YAK                                     pmax   pmax
       comp=Z,268nm,2.9s
YAK                                     pmax   pmax
       comp=N,315nm,2.6s
YAK                                     pmax   pmax
       comp=E,534nm,3.0s
SEY    Seymchan            25.46  10ceP       P      05 21 17.3  +0.6
SEY    Seymchan            25.46  10    P     P      05 21 17.1  +0.4
       comp=E,8.9nm,0.7s,baz=199,slow=7.6,SNR=28
BOD    Bodaibo             27.33 325   eP     P      05 21 33.0  -0.7
BOD                                     pmax   pmax
       comp=Z,13nm,1.3s
H11N2  WAKE ISLAND Hy      27.64 125    T     T      05 50 33.2
       baz=317,slow=76,SNR=213
H11N1  WAKE ISLAND Hy      27.65 125    T     T      05 50 35.6
       baz=317,slow=76,SNR=175
H11N3  WAKE ISLAND Hy      27.66 125    T     T      05 50 34.4
       baz=317,slow=76,SNR=249
XAN    Xi'an               27.81 272    P     P      05 21 37.6  -0.7
XAN                                     pP     pP     05 21 44.6  +5.7
XAN                                     pmax   pmax
       comp=Z,6.0nm,0.6s
XAN    Xi'an               27.81 272   eP     P      05 21 37.4  -0.9
       comp=Z,11nm,0.7s
XAN    Xi'an               27.81 272   eP     P      05 21 37.4  -0.9
XAN                                     pmax   pmax
       comp=Z,11nm,0.7s
ULN    Ulaanbaatar         27.86 302   eP     P      05 21 38.6  -0.2
       comp=Z,7.4nm,0.8s
ULN    Ulaanbaatar         27.86 302ceP       P      05 21 38.0  -0.7
ULN                                     pmax   pmax
       comp=Z,9.0nm,1.0s
SONA1  Songino Array       28.29 302   eP     P      05 21 42.7  +0.2
SONA0  Songino Array       28.29 302   eP     P      05 21 42.9  +0.3
SONM   Songino Array       28.29 302    P     P      05 21 42.9  +0.3
       comp=Z,2.3nm,0.6s,baz=106,slow=8.7,SNR=13
H11S1  WAKE ISLAND Hy      28.41 127    T     T      05 51 30.4
       baz=319,slow=76,SNR=30
H11S3  WAKE ISLAND Hy      28.41 127    T     T      05 51 36.2
       baz=319,slow=76,SNR=28
H11S2  WAKE ISLAND Hy      28.43 127    T     T      05 51 37.1
       baz=319,slow=76,SNR=20
ENH    Enshi               28.75 264   eP     P      05 21 46.1  -0.6
       comp=Z,31nm,0.8s
TLY    Talaya              30.63 309ceP       P      05 22 05.1  +2.0
ZAK    Zakamensk           30.65 306   eP     P      05 22 04.0  +0.6
ZAK                                     pmax   pmax
       comp=Z,9.0nm,1.4s
LZH    Lanzhou             31.20 278  ⇑P      P      05 22 08.9  +0.4
LZH                                     pP     pP     05 22 16.1  +7.0
LZH                                     sP     sP     05 22 18.4  +9.0
LZH                                     PP     PP     05 23 15.4  -3.3
LZH                                     pmax   pmax
       comp=Z,21nm,1.0s
LZH                                     pmax   pmax
       comp=Z,110nm,5.4s
MOY    Mondy               32.26 309   eP     P      05 22 18.5  +0.9
MOY                                     pmax   pmax
       comp=Z,22nm,3.4s
BILL   Bilibino            32.59  16   i P    P      05 22 20.1  -0.1
BILL                                   i             05 22 31.0
BILL                                    pmax   pmax
       comp=Z,5.0nm,1.0s
GYA    Guiyang             32.71 260⇑iP       P      05 22 21.3  -0.5
GYA                                     pmax   pmax
       comp=Z,10.0nm,0.8s
CD2    Chengdu             33.00 269   eP     P      05 22 25.7  +1.5
GTA    Gaotai              33.52 286   eP     P      05 22 28.6  -0.1
GTA                                     pP     pP     05 22 33.3  +3.9
GTA                                     sP     sP     05 22 36.1  +6.5
GTA                                     S      S      05 27 47.9  -3.4
GTA                                     sS     sS     05 27 55.4  +3.1
GTA                                     SS     SnSn   05 29 49.7  -3.2
GTA                                     pmax   pmax
       comp=Z,5.0nm,1.2s
GTA                                     pmax   pmax
       comp=Z,290nm,7.8s
GTA                                     LR     LR
       comp=N,290nm,18.4s
GTA                                     LR     LR
       comp=E,370nm,17.1s
GTA                                     LR     LR
       comp=Z,480nm,17.5s
TIXI   Tiksi               34.36 352   i P    P      05 22 38.6  +3.1
TIXI                                    pmax   pmax
       comp=Z,2.0nm,0.9s
TIXI   Tiksi               34.36 352    P     P      05 22 35.0  -0.5
       comp=Z,1.3nm,0.3s,baz=28,slow=1.7,SNR=3.8
KMI    Kunming             36.44 261    P     P      05 22 55.3  +1.1
KMI                                     pP     pP     05 22 58.4  +3.6
KMI                                     sP     sP     05 23 03.0  +7.9
KMI                                     pmax   pmax
       comp=Z,12nm,0.9s
KMI                                     pmax   pmax
       comp=Z,410nm,5.3s
ANM    Nome                39.96  32   eP     P      05 23 25.5  +2.4
       comp=Z,4.7nm,1.0s
ANM    Nome                39.96  32   eP     P      05 23 25.5  +2.4
ANM                                     pmax   pmax
       comp=Z,5.0nm,1.0s
DGZ    Jazzator, Alta      40.83 305c iP      P      05 23 31.1  +0.4
DGZ                                     pmax   pmax
       comp=Z,12nm,0.9s
WMQ    Urumqi              41.53 296    P     P      05 23 39.0  +2.5
WMQ                                     pP     pP     05 23 42.9  +5.8
WMQ                                     sP     sP     05 23 44.8  +7.4
WMQ                                     pmax   pmax
       comp=Z,33nm,0.7s
WMQ                                     pmax   pmax
       comp=Z,410nm,5.9s
WMQ                                     LR     LR
       comp=N,610nm,20.1s
WMQ                                     LR     LR
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       comp=E,680nm,20.1s
WMQ                                     LR     LR
       comp=Z,420nm,19.3s
ZAA0   Zalesovo Array      42.16 311   eP     P      05 23 40.2  -1.2
       comp=Z,6.6nm,0.9s
ZAA1   Zalesovo Array      42.16 312   eP     P      05 23 41.4   0.0
ZALV   Zalesovo Beam       42.16 311    P     P      05 23 41.4   0.0
       comp=Z,5.0nm,0.6s,baz=91,slow=7.4,SNR=21
UTTA   Uttaradit           42.26 253    P     P      05 23 50.9  +8.3
       comp=Z,2.6nm,0.9s
PBKT   Sadao Pong          42.67 252    P     P      05 23 53.5  +7.6
       comp=Z,7.5nm,1.1s
CMMT   Chiang Mai          42.84 256    P     P      05 23 54.8  +7.4
       comp=Z,7.2nm,0.7s
CHTO   Chiang Mai          42.84 256    P     P      05 23 54.9  +7.5
       comp=Z,31nm,0.7s
CMAR   Chiang Mai Arr      43.06 256    P     P      05 23 48.6  -0.5
CMAR                                    pmax   pmax
       comp=Z,1.0nm,0.3s
CMAR   Chiang Mai Arr      43.06 256    P     P      05 23 48.6  -0.5
       comp=Z,1.8nm,0.7s,baz=47,slow=5.9,SNR=9.5
SRAK   Srakaew             43.51 248    P     P      05 23 56.8  +4.1
SVW2   Sparrevohn          43.84  38   eP     P      05 23 56.7  +1.8
       comp=Z,3.2nm,0.7s
MK01   Makanchi Array      44.66 301   eP     P      05 24 01.3  -0.4
MK31   Makanchi Array      44.66 301   eP     P      05 24 01.6  -0.1
MK31   Makanchi Array      44.66 301   eP     P      05 24 01.6  -0.1
MK32   Makanchi Array      44.66 301   eP     P      05 24 01.4  -0.3
MKAR   Makanchi Array      44.66 301   eP     P      05 24 01.5  -0.2
       comp=Z,48nm,0.7s
MKAR   Makanchi Array      44.66 301    P     P      05 24 01.4  -0.2
       comp=Z,6.1nm,0.9s,baz=88,slow=8.7,SNR=18
SHL    Shillong            44.74 269   eP     P      05 24 01.7  -1.1
       comp=Z,10nm,0.6s
SHL    Shillong            44.74 269   eP     P      05 24 01.7  -1.1
SHL                                     pmax   pmax
       comp=Z,10.0nm,0.6s
MAKZ   Makanchi            44.87 302   eP     P      05 24 02.4  -1.0
       comp=Z,8.0nm,0.9s
MAKZ   Makanchi            44.87 302   eP     P      05 24 02.4  -1.0
MAKZ                                    pmax   pmax
       comp=Z,8.0nm,0.9s
IM3    Indian Mountai      45.02  31   eP     P      05 24 05.2  +0.9
KDAK   Kodiak Island       45.39  43   eP     P      05 24 08.3  +1.0
       comp=Z,36nm,1.1s
KDAK   Kodiak Island       45.39  43    P     P      05 24 06.4  -0.9
       comp=Z,15nm,0.7s,baz=258,slow=7.5,SNR=9.5
SRDT   SRDT                45.45 251    P     P      05 24 17.5  +9.3
       comp=Z,6.4nm,1.3s,comp=Z,1µm
CAST   Castle Rocks        45.56  35   eP     P      05 24 10.9  +2.2
       comp=Z,2.6nm,1.2s
PHET   Kaeng Krachan       46.00 249    P     P      05 24 15.7  +3.1
       comp=Z,9.3nm,0.8s
SUA    Susitna One         46.18  38   eP     P      05 24 15.8  +2.2
       comp=Z,12nm,1.2s
MLY    Manley              46.21  33   eP     P      05 24 15.5  +1.8
       comp=Z,8.0nm,1.1s
KURK   Kurchatov           46.30 307   eP     P      05 24 14.4  -0.2
       comp=Z,28nm,0.8s
KURK   Kurchatov           46.30 307ceP       P      05 24 13.3  -1.3
KURK                                    pmax   pmax
       comp=Z,19nm,0.8s
TRF    Thorofare Moun      46.37  35   eP     P      05 24 17.6  +2.4
       comp=Z,2.7nm,1.1s
KURBB  Kurchatov Arra      46.37 307    P     P      05 24 14.8  -0.4
       comp=Z,8.8nm,0.6s,baz=81,slow=8.1,SNR=74
PMR    Palmer              46.95  37   eP     P      05 24 20.2  +0.8
       comp=Z,1.8nm,1.0s
PMR    Palmer              46.95  37   eP     P      05 24 20.3  +0.8
PMR                                     pmax   pmax
       comp=Z,2.0nm,1.0s
GHO    Glory Hole Cre      47.03  37   eP     P      05 24 21.4  +1.1
       comp=Z,20nm,1.2s
MDM    Murphy Dome         47.27  33   eP     P      05 24 23.8  +1.8
       comp=Z,8.6nm,1.0s
KNK    Knik Glacier        47.28  38   eP     P      05 24 23.9  +1.8
       comp=Z,5.9nm,1.0s
SML    Sawmill             47.31  37   eP     P      05 24 23.8  +1.4
SML    Sawmill             47.31  37   eP     P      05 24 23.8  +1.4
WRH    Wood River Hil      47.34  33   eP     P      05 24 23.8  +1.3
       comp=Z,4.2nm,1.1s
PDGK   Podgornoye          47.43 297    P     P      05 24 24.2  +0.5
PDGK                                    pmax   pmax
       comp=Z,7.0nm,0.9s
ODAN   Odare               47.66 273   eP     P      05 24 25.7  -0.2
SCM    Sheep Creek Mo      47.79  37   eP     P      05 24 27.4  +1.3
       comp=Z,4.6nm,0.8s
HDA    Harding Lake        47.83  33   eP     P      05 24 27.1  +0.7
       comp=Z,5.2nm,1.0s
IL1    Eielson Array       47.85  33   eP     P      05 24 27.3  +0.8
ILAR   Eielson Array       47.85  33    P     P      05 24 26.1  -0.4
       comp=Z,2.4nm,0.8s,baz=270,slow=6.6,SNR=23
ILB    Eielson Array       47.85  33   eP     P      05 24 27.2  +0.7
JIRN   Jiri                48.23 275   eP     P      05 24 30.4   0.0
       comp=Z,33nm,0.6s
RAMN   Ramite              48.24 274   eP     P      05 24 30.0  -0.4
       comp=Z,40nm,0.8s
GUN    Gumba               48.36 276   eP     P      05 24 31.7  +0.3
       comp=Z,50nm,0.7s
KLU    Klutina             48.48  37   eP     P      05 24 33.0  +1.4
       comp=Z,12nm,1.2s
KKN    Kakani              48.89 276   eP     P      05 24 35.6  +0.3
       comp=Z,28nm,0.5s
PKI    Pulchoki            48.89 275   eP     P      05 24 36.0  +0.6
       comp=Z,18nm,0.5s
PKIN   Phulchoki           48.90 275   eP     P      05 24 36.1  +0.7
       comp=Z,9.5nm,0.5s
DMN    Daman               49.11 276   eP     P      05 24 37.7  +0.7
DOT    Dot Lake            49.15  34   eP     P      05 24 37.8  +1.3
       comp=Z,3.2nm,1.0s
SCRK   Sand Creek          49.15  34   eP     P      05 24 37.7  +1.0
DANN   Dangsing            49.82 277   eP     P      05 24 42.8  +0.3
       comp=Z,75nm,0.6s
KOLN   Koldanda            50.22 277   eP     P      05 24 45.8  +0.4
       comp=Z,28nm,0.9s
TKM2   Tokmak 2            50.27 298   i P    P      05 24 46.4  +0.8
TKM2                                    pmax   pmax
       comp=Z,7.0nm,0.7s
PYUN   Piuthan             50.54 277   eP     P      05 24 48.2  +0.3
       comp=Z,70nm,1.0s
BVA0   Borovoye Array      50.81 312    P     P      05 24 50.0  +0.7
BVA0                                    pmax   pmax
       comp=Z,6.0nm,0.8s
BVAR   Borovoye Array      50.81 312    P     P      05 24 49.4  +0.1
       comp=Z,2.4nm,0.7s,baz=66,slow=8.0,SNR=16
OTUK   Ortayu              50.85 306    P     P      05 24 49.1  -0.6
OTUK                                    pmax   pmax
       comp=Z,7.0nm,0.9s
BRVK   Borovoye            50.86 312   eP     P      05 24 50.1  +0.4
       comp=Z,7.0nm,0.9s
BRVK   Borovoye            50.86 312ceP       P      05 24 50.3  +0.6
BRVK                                    pmax   pmax
       comp=Z,5.0nm,0.8s
AAK    Ala-Archa           51.13 298   eP     P      05 24 52.0  -0.1
       comp=Z,2.4nm,0.8s
AAK    Ala-Archa           51.13 298ceP       P      05 24 53.4  +1.3
AAK                                     pmax   pmax
       comp=Z,4.0nm,1.3s
AAK    Ala-Archa           51.13 298    P     P      05 24 50.2  -1.9
       comp=Z,0.6nm,0.3s,baz=74,slow=7.4,SNR=3.0
KSH    Kashi               51.16 294    P     P      05 24 57.7  +5.4
KSH                                     pP     pP     05 25 02.1  +9.1
KSH                                     PP     PP     05 26 55.8  +7.0
KSH                                     pmax   pmax
       comp=Z,410nm,6.5s
COEN   Coen                51.83 180   eP     P      05 24 58.4  +1.2
       comp=Z,4.8nm,1.0s
EPYK   Eagle Plains        51.91  30   eP     P      05 24 59.4  +2.0
       comp=Z,5.1nm,0.8s
MNAS   Manas               52.56 299   i P    P      05 25 03.1  +0.3
MNAS                                    pmax   pmax
       comp=Z,9.0nm,0.9s
ARSB   Arslanbob           52.64 297   eP     P      05 25 04.6  +1.3
       comp=Z,15nm,1.0s
SFK    Sufi-Kurgan         52.75 295   i P    P      05 25 04.6  +0.3
SFK                                     pmax   pmax
       comp=Z,8.0nm,0.8s
INK    Inuvik              52.80  28   eP     P      05 25 05.1  +1.3
       comp=Z,1.6nm,1.0s
INK    Inuvik              52.80  28   eP     P      05 25 05.1  +1.3
INK                                     pmax   pmax
       comp=Z,2.0nm,1.0s
INK    Inuvik              52.80  28    P     P      05 25 02.1  -1.7
       comp=Z,1.3nm,0.7s,baz=288,slow=8.9,SNR=11
KK31   Karatay Array       53.72 300   eP     P      05 25 11.2  +0.2
KK31   Karatay Array       53.72 300   eP     P      05 25 11.3  +0.2
KKAR   Karatay Array       53.72 300   eP     P      05 25 11.2  +0.2
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KKAR   Karatay Array       53.72 300   eP     P      05 25 11.3  +0.2
GAR    Garm                55.42 295   eP     P      05 25 23.2  -0.4
       comp=Z,5.7nm,0.6s
GAR    Garm                55.42 295   eP     P      05 25 23.2  -0.4
GAR                                     pmax   pmax
       comp=Z,6.0nm,0.6s
NIL    Nilore              55.52 288   eP     P      05 25 25.2  +0.9
       comp=Z,12nm,0.6s
NIL    Nilore              55.52 288   eP     P      05 25 25.3  +0.9
NIL                                     pmax   pmax
       comp=Z,12nm,0.6s
CHGR   Chuyangaron         56.38 295   eP     P      05 25 30.0  -0.5
       comp=Z,19nm,0.7s
ARU    Arti                56.41 318   eP     P      05 25 30.4  +0.1
       comp=Z,6.3nm,0.9s
ARU    Arti                56.41 318d iP      P      05 25 30.6  +0.3
ARU                                                  05 27 37.9
ARU                                     S      S      05 33 21.8  +0.4
ARU                                     SS     SS     05 37 05.9  -1.9
ARU                                     pmax   pmax
       comp=Z,7.0nm,0.9s
DLBC   Dease Lake          56.94  39   eP     P      05 25 35.8  +1.7
       comp=Z,6.1nm,1.1s
AB31   Akbulak array       58.24 310   i P    P      05 25 42.5  -0.8
AB31                                    pmax   pmax
       comp=Z,3.0nm,0.6s
ABKAR  Akbulak array       58.24 310   eP     P      05 25 43.1  -0.2
KBL    Kabul               58.25 291   eP     P      05 25 44.1  +0.2
       comp=Z,8.9nm,0.8s
FITZ   Fitzroy Crossi      58.29 200   eP     P      05 25 45.0  +1.0
       comp=Z,5.0nm,1.1s
WRAB   Tennant Creek       58.35 190   eP     P      05 25 43.8  -0.5
       comp=Z,9.2nm,0.8s
WRAB   Tennant Creek       58.35 190ceP       P      05 25 44.9  +0.6
WRAB                                    pmax   pmax
       comp=Z,12nm,1.7s
WB2    Warramunga Arr      58.36 190   eP     P      05 25 43.9  -0.5
       comp=Z,9.1nm,0.8s
WR1    Warramunga Arr      58.36 190   eP     P      05 25 43.9  -0.4
       comp=Z,9.3nm,0.6s
WRA    Warramunga Arr      58.36 190    P     P      05 25 43.9  -0.5
       comp=Z,8.0nm,0.7s,baz=7.8,slow=7.0,SNR=64
AKTO   Aktyubinsk          58.92 312    P     P      05 25 48.0  -0.1
       comp=Z,2.0nm,0.7s,baz=70,slow=11,SNR=8.0
PRGR   Permogore           60.56 327   eP     P      05 25 57.1  -2.0
RES    Resolute Bay        61.19  15   eP     P      05 26 03.4  +0.1
       comp=Z,2.1nm,0.8s
RES    Resolute Bay        61.19  15   eP     P      05 26 03.4  +0.1
RES                                     pmax   pmax
       comp=Z,2.0nm,0.8s
AS01   Alice Springs       62.08 189   eP     P      05 26 10.0  +0.1
ASAR   Alice Springs       62.08 190    P     P      05 26 09.3  -0.6
       comp=Z,2.0nm,0.7s,baz=9.8,slow=5.7,SNR=20
YKA    Yellowknife Ar      62.18  31    P     P      05 26 09.7  -0.5
       comp=Z,1.2nm,0.8s,baz=300,slow=6.7,SNR=19
YKB5   Yellowknife Ar      62.18  31   eP     P      05 26 10.3  +0.2
MBWA   Marble Bar          62.94 205   eP     P      05 26 15.7  +0.1
       comp=Z,15nm,1.1s
ARCES  ARCESS Array B      63.42 340   eP     P      05 26 18.5  +0.2
ARCES  ARCESS Array B      63.42 340   eP     P      05 26 18.5  +0.2
ARCES  ARCESS Array B      63.42 340    P     P      05 26 17.4  -0.9
       comp=Z,1.6nm,0.8s,baz=45,slow=12,SNR=4.3
PALK   Pallekele           63.89 258   LR     LR     05 56 05.7
       comp=Z,91nm,18.1s,baz=222,slow=38
GEYT   Alibeck             64.45 299    P     P      05 26 25.3  -0.4
       comp=Z,0.8nm,0.3s,baz=356,slow=4.3,SNR=3.5
OBN    Obninsk             68.00 324   i P    P      05 26 48.8  +0.8
OBN                                     pmax   pmax
       comp=Z,4.0nm,0.7s
FIA1   FINESS Array S      68.44 333   eP     P      05 26 51.0  +0.4
FIA0   FINESS Array S      68.44 333   eP     P      05 26 51.0  +0.3
FIA0   FINESS Array S      68.44 333   eP     P      05 26 51.0  +0.3
FINES  FINESS Array B      68.44 333    P     P      05 26 51.0  +0.3
FINES                                   pmax   pmax
       comp=Z,2.0nm,0.7s
FINES  FINESS Array B      68.44 333    P     P      05 26 51.0  +0.3
       comp=Z,2.0nm,0.7s,baz=34,slow=7.8,SNR=7.8
PINE   Pine Mountain       68.61  51   eP     P      05 26 54.8  +2.4
       comp=Z,6.9nm,1.0s
STKA   Stephens Creek      69.67 181   eP     P      05 26 59.3  +0.7
       comp=Z,0.9nm,0.6s
STKA   Stephens Creek      69.67 181   eP     P      05 26 59.3  +0.7
STKA                                    pmax   pmax
       comp=Z,1.0nm,0.6s
STKA   Stephens Creek      69.67 181    P     P      05 26 58.5  -0.1
       comp=Z,4.2nm,0.7s,baz=337,slow=7.9,SNR=8.2
WALA   Waterton Lakes      69.73  43   eP     P      05 27 00.6  +1.5
       comp=Z,4.4nm,0.9s
FORT   Forrest             69.99 194   eP     P      05 27 01.1  +0.6
       comp=Z,16nm,0.8s
VSU    Vasula              70.16 330   i P    P      05 27 02.3  +0.9
VSU                                     pmax   pmax
       comp=Z,27nm,1.3s
BBOO   Buckleboo           70.89 186   eP     P      05 27 06.4  +0.3
       comp=Z,7.5nm,0.9s
BEKR   Beckworth           71.13  54   eP     P      05 27 08.9  +0.9
       comp=Z,3.4nm,0.9s
KIV    Kislovodsk          71.17 311   eP     P      05 27 08.5  +0.5
KIV                                     pmax   pmax
       comp=Z,10.0nm,1.1s
KBZ    Khabaz              71.18 311    P     P      05 27 08.7  +0.9
       comp=Z,2.2nm,0.9s,baz=274,slow=4.2,SNR=4.2
FFC    Flin Flon           72.05  34   eP     P      05 27 13.5  +0.5
       comp=Z,7.0nm,1.0s
FFC    Flin Flon           72.05  34ceP       P      05 27 14.0  +1.0
CMB    Columbia Colle      72.15  56   eP     P      05 27 15.4  +1.5
       comp=Z,3.7nm,1.0s
CMB    Columbia Colle      72.15  56   eP     P      05 27 15.4  +1.5
CMB                                     pmax   pmax
       comp=Z,4.0nm,1.0s
EGMT   Eagleton            72.56  42   eP     P      05 27 17.4  +1.2
       comp=Z,5.2nm,0.8s
DLMT   Dillon              72.62  46   eP     P      05 27 18.0  +1.3
       comp=Z,2.5nm,0.8s
RYN    Ryan                73.01  54   eP     P      05 27 18.7  -0.5
       comp=Z,3.0nm,0.8s
BOZ    Bozeman (W)         73.02  45   eP     P      05 27 20.5  +1.4
       comp=Z,3.3nm,0.9s
BOZ    Bozeman (W)         73.02  45   eP     P      05 27 20.5  +1.4
BOZ                                     pmax   pmax
       comp=Z,3.0nm,0.9s
NVAR   Mina Array Bea      73.27  54    P     P      05 27 20.2  -0.5
       comp=Z,2.9nm,0.8s,baz=280,slow=6.1,SNR=9.8
NC204  NORSAR Array S      73.61 338   eP     P      05 27 22.9  +0.7
NB201  NORSAR Array S      73.64 338   eP     P      05 27 22.8  +0.5
NB2    NORSAR Subarra      73.67 338    P     P      05 27 22.1  -0.4
       comp=Z,2.5nm,0.8s,baz=39,slow=6.2
NB200  NORSAR Array S      73.67 338   eP     P      05 27 21.4  -1.1
NOA    NORSAR Array B      73.67 338    P     P      05 27 21.4  -1.1
       comp=Z,1.3nm,0.7s,baz=39,slow=6.0,SNR=11
AKASG  Malin Array Be      74.22 323    P     P      05 27 25.7  -0.1
       comp=Z,1.6nm,0.6s,baz=45,slow=6.1,SNR=4.2
AKBB   Malin Array Si      74.22 323   eP     P      05 27 26.6  +0.7
       comp=Z,2.9nm,0.9s
KIEV   Kiev                74.23 323   eP     P      05 27 26.5  +0.6
       comp=Z,2.5nm,0.8s
KIEV   Kiev                74.23 323   eP     P      05 27 26.5  +0.6
KIEV                                    pmax   pmax
       comp=Z,3.0nm,0.8s
IMW    Indian Meadow       74.45  46   eP     P      05 27 29.9  +2.2
       comp=Z,4.0nm,0.8s
FXWY   Fox Creek           74.56  46   eP     P      05 27 30.4  +2.1
       comp=Z,3.3nm,0.9s
MOOW   Moose Ponds         74.66  46   eP     P      05 27 30.5  +1.6
       comp=Z,2.7nm,1.0s
HVU    Hansel Valley       74.68  49   eP     P      05 27 30.1  +1.2
       comp=Z,3.3nm,0.9s
HVU    Hansel Valley       74.68  49   eP     P      05 27 30.1  +1.2
HVU                                     pmax   pmax
       comp=Z,3.0nm,0.9s
TPAW   Teton Pass          74.70  47   eP     P      05 27 30.1  +0.9
       comp=Z,2.7nm,0.8s
LOHW   Long Hollow         74.82  46   eP     P      05 27 32.2  +2.4
       comp=Z,2.1nm,1.1s
DUG    Dugway, Tooele      75.63  50   eP     P      05 27 36.1  +1.7
       comp=Z,4.2nm,0.8s
DUG    Dugway, Tooele      75.63  50   eP     P      05 27 36.1  +1.7
DUG                                     pmax   pmax
       comp=Z,4.0nm,0.8s
BW06   Boulder Array       75.94  46   eP     P      05 27 36.8  +0.6
       comp=Z,2.6nm,0.8s
PD31   Pinedale Array      75.94  46   eP     P      05 27 37.2  +0.9
PDAR   Pinedale Array      75.94  46   eP     P      05 27 36.9  +0.6
PDAR   Pinedale Array      75.94  46    P     P      05 27 36.4  +0.1
       comp=Z,2.6nm,0.7s,baz=259,slow=2.0,SNR=23
NLU    North Lily Min      76.22  50   eP     P      05 27 39.6  +1.7
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	comp=Z,1.9nm,0.8s						
MPU	Maple Canyon	76.45	50	eP	P	05 27 40.7	+1.6
	comp=Z,3.5nm,0.8s						
KNB	Kanab	77.59	53	eP	P	05 27 46.9	+1.3
	comp=Z,4.5nm,1.2s						
SRU	San Rafael Swe	77.69	50	eP	P	05 27 47.5	+1.3
	comp=Z,5.2nm,0.8s						
ULM	Lac du Bonnet	77.85	34	P	P	05 27 45.8	-0.7
	comp=Z,2.6nm,0.9s,baz=276,slow=7.4,SNR=5.4						
RSSD	Black Hills	78.12	43	eP	P	05 27 49.8	+1.3
	comp=Z,2.1nm,0.8s						
RSSD	Black Hills	78.12	43	eP	P	05 27 49.8	+1.3
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PV21	Cone Mtn., Par	78.97	49	eP	P	05 27 54.4	+1.2
	comp=Z,8.0nm,0.9s						
PV14	Lion Creek, Pa	79.06	50	eP	P	05 27 54.9	+1.1
	comp=Z,11nm,1.0s						
BR101	Keskin Array S	79.10	312	eP	P	05 27 53.9	+0.1
BRTR	Keskin Array B	79.10	312	P	P	05 27 53.9	+0.1
	comp=Z,0.5nm,0.7s,baz=51,slow=5.3,SNR=3.4						
ECSD	EROS Data Cent	82.22	39	eP	P	05 28 10.9	+0.6
	comp=Z,2.2nm,0.6s						
GERES	GERESS Array B	82.45	329	P	P	05 28 11.2	-0.3
	comp=Z,0.6nm,0.7s,baz=39,slow=6.3,SNR=4.1						
GEA0	GERESS Array S	82.46	329	eP	P	05 28 11.8	+0.2
E38A	The Farm, Brul	82.48	35	eP	P	05 28 11.7	+0.1
	comp=Z,17nm,1.1s						
ANMO	Albuquerque	82.86	51	ceP	P	05 28 14.8	+0.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
F41A	Three Lakes	84.23	34	eP	P	05 28 21.3	+0.6
	comp=Z,20nm,1.1s						
I39A	Houston	84.59	36	eP	P	05 28 22.3	-0.3
	comp=Z,8.2nm,0.8s						
LTX	Lajitas	88.40	53	eP	P	05 28 42.1	+0.5
LTX	Lajitas	88.40	53	eP	P	05 28 42.1	+0.5
TXAR	Lajitas Array	88.40	53	P	P	05 28 42.1	+0.5
	comp=Z,0.7nm,0.6s,baz=297,slow=3.5,SNR=7.6						
TOA0	Torodi Ar. Sit	117.46	317	ePKPdf	PKPdf	05 34 35.0	-0.5
FDF	Fort de France	122.70	28	ePKPdf	PKPdf	05 34 43.9	-1.7
FDF	Fort de France	122.70	28	ePKIKP	PKPdf	05 34 43.9	-1.7
QSPA	South Pole Qui	127.88	180	ePKPdf	PKPdf	05 34 53.6	-0.3
LPAZ	La Paz	144.99	60	ePKPbc	PKPdf	05 35 27.2	-0.5
LPAZ	La Paz	144.99	60	ePKIKP	PKPdf	05 35 27.2	-0.5
LPAZ	La Paz	144.99	60	PKP	PKPab	05 35 26.4	-0.5
	comp=Z,1.4nm,0.6s,baz=1.4,slow=4.4,SNR=6.6						
PB11	IPOC Station P	146.24	66	ePKPdf	PKPab	05 35 31.1	+0.1
LVC	Limon Verde	148.55	70	ePKPbc	PKiKP	05 35 37.9	-0.5
LVC	Limon Verde	148.55	70	ePKP2	PKiKP	05 35 37.9	-0.5
LCO	Las Campanas	150.55	82	ePKPbc	PKiKP	05 35 41.8	-0.4
LCO	Las Campanas	150.55	82	ePKIKP	PKiKP	05 35 41.8	-0.4
GO04	Tololo Observa	150.98	84	ePKPbc	PKiKP	05 35 43.1	+0.1
GO09	Cerro Castillo	151.91	129	ePKPbc	PKiKP	05 35 44.9	+0.9

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*IDC **08** 05:18:47.9±1.2, 11°.36S×164°.88E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.9/36, mbtmp4.0/8, ML4.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/34, Error ellipse: s-maj=32.2km s-min=26.0km az=142.0*

*NEIC **08** 05:18:50.1±4.7, 11°.31S×164°.82E, h8^{km}±29^{km}, mb4.1/6, Error ellipse: s-maj=13.0km s-min=8.8km az=207.0*

*ISCJB **08** 05:18:52.1±0.5, 11°.49S±0°.06×164°.78E±0°.07, h34^{km}, mb4.0/12, Error ellipse: s-maj=10.9km s-min=7.7km az=142.0*

ISC 08 05:18:53.5±0.7**, 11°.46S**±0°.08×**164°.85E**±0°.09**, h34**^{km}**, n30,** σ**1^{s}.83**/28**, mb4.0**/12**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.23	292	ePn	Pn	05 20 07.3	-2.1
HNR				eSn	Sn	05 21 08.3	-0.2
HNR	Honiara	5.23	292	Pn	Pn	05 20 05.8	-3.6
	18nm,0.3s,baz=195,slow=20,SNR=2.5						
HNR				Sn	Sn	05 21 08.3	-0.2
	27nm,0.3s,baz=229,slow=20,SNR=4.4						
HNR				LR	LR	05 21 35.8	
	comp=Z,333nm,18.3s,baz=150,slow=32						
MARNC	Mare, Loyalty	10.42	163	ePn	Pn	05 21 22.1	+1.5
DZM	Mont Dzumac	10.66	172	ePn	Pn	05 21 24.5	+0.5
DZM				Sn	Sn	05 23 19.6	-2.6
DZM	Mont Dzumac	10.66	172	Pn	Pn	05 21 23.0	-1.0
	1.7nm,0.3s,baz=326,slow=11,SNR=7.9						
DZM				Sn	Sn	05 23 19.6	-2.6
	0.4nm,0.3s,baz=143,slow=20,SNR=2.7						
ONTNC	Ouen Toro	10.89	172	ePn	Pn	05 21 29.4	+2.3
PINNC	Pines Island,	11.36	168	ePn	Pn	05 21 35.1	+1.6
COEN	Coen	21.29	261	eP	P	05 23 43.1	+5.7
	7.7nm,1.1s						
H11S2	WAKE ISLAND Hy	29.82	4	T	T	05 56 15.8	
	baz=184						
H11S3	WAKE ISLAND Hy	29.82	4	T	T	05 56 16.9	
	baz=184,slow=74						
H11S1	WAKE ISLAND Hy	29.84	4	T	T	05 56 16.7	
	baz=184,slow=74						
WRAB	Tennant Creek	30.51	250	eP	P	05 25 05.2	+1.4
	2.8nm,1.0s						
WB2	Warramunga Arr	30.51	250	eP	P	05 25 04.7	+0.8
	3.3nm,1.1s						
WR1	Warramunga Arr	30.52	250	eP	P	05 25 03.8	-0.1
	4.3nm,1.1s						
WRA	Warramunga Arr	30.52	250	P	P	05 25 03.8	-0.1
	0.4nm,0.4s,baz=80,slow=9.0,SNR=6.1						
H11N1	WAKE ISLAND Hy	31.04	4	T	T	05 57 48.3	
	baz=183						
H11N3	WAKE ISLAND Hy	31.05	4	T	T	05 57 42.8	
	baz=183						
H11N2	WAKE ISLAND Hy	31.06	4	T	T	05 57 47.6	
	baz=183						
ASAR	Alice Springs	31.82	243	P	P	05 25 15.2	-0.2
	0.8nm,0.9s,baz=78,slow=8.6,SNR=4.8						
SONA0	Songino Array	78.49	324	eP	P	05 30 51.6	+0.2
SONM	Songino Array	78.49	324	P	P	05 30 51.6	+0.2
	0.7nm,0.7s,baz=142,slow=7.3,SNR=2.8						
HDA	Harding Lake	83.92	19	eP	P	05 31 20.2	+0.6
	4.0nm,0.8s						
IL1	Eielson Array	84.18	19	eP	P	05 31 21.4	+0.4
ILAR	Eielson Array	84.18	19	P	P	05 31 20.1	-0.9
	0.7nm,0.7s,baz=243,slow=4.5,SNR=6.3						
SCRK	Sand Creek	84.61	20	eP	P	05 31 23.7	+0.4
	1.2nm,1.0s						
MK01	Makanchi Array	93.21	317	eP	P	05 32 05.2	+0.7
MK32	Makanchi Array	93.23	317	eP	P	05 32 04.3	-0.3
MKAR	Makanchi Array	93.23	317	P	P	05 32 04.3	-0.3
	1.2nm,0.8s,baz=98,slow=5.5,SNR=7.6						
HRY	Holter Researc	93.71	43	eP	P	05 32 07.6	+0.6
YKA	Yellowknife Ar	95.74	27	P	P	05 32 14.2	-1.5
	0.4nm,0.9s,baz=234,slow=5.3,SNR=4.8						

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*NNC **08** 05:26:31.8±0.9, 42°.59N×79°.67E, h0^{km}, mb3.4, mpv3.3, Error ellipse: s-maj=5.9km s-min=3.7km az=134.0*

*SOME **08** 05:26:32.9, 42°.58N×79°.63E, h20^{km}*

*KRNET **08** 05:26:32.6±0.1, 42°.61N×79°.67E, h20^{km}, mb3.1*

ISC 08 05:26:31.8±1.1**, 42°.54N**±0°.04×**79°.70E**±0°.04**, h10**^{km}**, n52,** σ**1^{s}.89**/92**, 25C-24D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.79	321	P	Pg	05 26 46.3	-0.7
	13nm,0.1s						
UZB				S	Sb	05 26 56.3	-2.1
	158nm,0.3s						
UZB	Uzynbulak	0.79	321	⇓eP	Pg	05 26 46.3	-0.7
	baz=19						
UZB				⇓eS	Sb	05 26 56.4	-2.1
	baz=19						
UZB	Uzynbulak	0.79	321	⇓eP	Pg	05 26 46.3	-0.7
	13nm,0.1s						
UZB				eS	Sb	05 26 56.3	-2.1
	158nm,0.3s						
PDGK	Podgornoye	0.81	349	P	Pg	05 26 46.5	-0.9
	22nm,0.3s						
PDGK				S	Sb	05 26 56.9	-2.2
	36nm,0.3s						
PDGK	Podgornoye	0.81	349	⇓P	Pg	05 26 46.2	-1.1
	16nm,0.4s						
PDGK				⇑S	Sb	05 26 56.8	-2.2
	56nm,0.7s						
PDGK	Podgornoye	0.81	349	⇓iP	Pg	05 26 46.6	-0.8
	baz=49						
PDGK				⇓iS	Sb	05 26 57.1	-1.9
	baz=49						
PRZ	Przheval'sk	0.96	267	⇑iP	Pb	05 26 50.2	-0.5
	baz=63						
PRZ				⇑iS	Sb	05 27 02.7	-0.9
	baz=63						
KTMS	Ketmen	1.03	27	P	Pg	05 26 50.6	-0.9
	9.4nm,0.2s						
KTMS				S	Sb	05 27 04.2	-1.2
	28nm,0.2s						
KTMS	Ketmen	1.03	27	⇑eP	Pg	05 26 50.7	-0.9
	baz=30						
KTMS				⇑eS	Sb	05 27 04.1	-1.2
	baz=30						
KTMS	Ketmen	1.03	27	⇑eP	Pg	05 26 50.7	-0.8
	9.4nm,0.2s						
KTMS				eS	Sb	05 27 04.2	-1.2
	28nm,0.2s						
SATY	Saty	1.09	299	eP	Pn	05 27 00.8	+7.6
	5.8nm,0.1s						
SATY				eS	Sn	05 27 15.4	+7.0
	141nm,0.1s						
KURS	Kuram	1.47	311	P	Pb	05 26 58.0	-1.3
	4.5nm,0.3s						
KURS				S	Sb	05 27 16.8	-1.3
	27nm,0.4s						
KURS	Kuram	1.47	311	eP	Pb	05 26 58.0	-1.3
	baz=9.0						
KURS				eS	Sb	05 27 16.7	-1.3
	baz=9.0						
KURS	Kuram	1.47	311	eP	Pb	05 26 58.0	-1.3
	4.5nm,0.3s						
KURS				eS	Sb	05 27 16.8	-1.3
	27nm,0.4s						
DJR	Jarkent	1.80	2	eP	Pb	05 27 04.5	-0.4
	12nm,0.2s						
DJR				eS	Sg	05 27 27.8	-1.7
	16nm,0.3s						
MNBS	Baschi	1.81	329	P	Pb	05 27 04.3	-0.8
	20nm,0.3s						
MNBS				S	Sg	05 27 27.9	-2.1
	113nm,0.3s						
MNBS	Baschi	1.81	329	⇓eP	Pb	05 27 04.4	-0.6
	20nm,0.3s						
MNBS				eS	Sg	05 27 27.9	-2.1
	113nm,0.3s						
KDJ	Kajisay	1.91	259	⇑iP	Pb	05 27 07.2	+0.3
	baz=56						
KDJ				⇑iS	Sg	05 27 32.2	-1.1
	baz=56						
MDOK	Medeo	2.05	289	Pg	Pb	05 27 08.5	-0.7
	4.2nm,0.4s						
MDOK				⇓Lg	Lg	05 27 35.2	
	28nm,0.5s						
MDOK	Medeo	2.05	289	Pg	Pb	05 27 08.4	-0.7
	6.6nm,0.1s						
MDOK				Lg	Lg	05 27 34.6	
	45nm,0.3s						
MDOK	Medeo	2.05	289	eP	Pb	05 27 08.4	-0.8
	baz=87						
MDOK				eS	Sb	05 27 34.6	-0.2
	baz=87						
MDOK	Medeo	2.05	289	eP	Pb	05 27 08.4	-0.8
	6.6nm,0.1s						
MDOK				eS	Sb	05 27 34.6	-0.2
	45nm,0.3s						
TNSS	Tian-Shan	2.09	285	eP	Pg	05 27 10.6	-1.2
	9.4nm,0.1s						
TNSS				eS	Sg	05 27 37.5	-1.4
	33nm,0.1s						
IZV	Izvestkoviy	2.33	283	Pg	Pb	05 27 13.2	-0.7
	14nm,0.2s						
IZV				Lg	Lg	05 27 43.5	
	56nm,0.3s						
IZV	Izvestkoviy	2.33	283	eP	Pb	05 27 13.2	-0.7
	baz=82						
IZV				eS	Sb	05 27 42.1	-0.7
	baz=82						
IZV	Izvestkoviy	2.33	283	eP	Pb	05 27 13.2	-0.7
	14nm,0.2s						
IZV				eS	Sb	05 27 42.2	-0.7
	56nm,0.3s						
CHKK	Chushkaly	2.38	304	eP	Pb	05 27 14.8	+0.1
	3.4nm,0.2s						
CHKK				eS	Sb	05 27 44.6	+0.4
	77nm,0.2s						
MTBS	Maitube	2.48	285	Pg	Pb	05 27 16.0	-0.5
	15nm,0.2s						
MTBS				Lg	Lg	05 27 47.5	
	40nm,0.4s						
MTBS	Maitube	2.48	285	eP	Pb	05 27 16.0	-0.5
	15nm,0.2s						
MTBS				eS	Sb	05 27 47.5	+0.4
	40nm,0.4s						
KTBS	Karatobe	2.50	299	Pg	Pb	05 27 16.1	-0.8
	7.4nm,0.1s						
KTBS				Lg	Lg	05 27 47.7	
	52nm,0.3s						
KTBS	Karatobe	2.50	299	eP	Pb	05 27 16.1	-0.8
	baz=97						
KTBS				eS	Sb	05 27 47.7	0.0
	baz=97						
KTBS	Karatobe	2.50	299	eP	Pb	05 27 16.1	-0.8
	7.4nm,0.1s						
KTBS				eS	Sb	05 27 47.7	0.0
	52nm,0.3s						
ULHL	Ulahol	2.58	265	⇓iP	Pb	05 27 16.2	-2.0
	baz=63						
ULHL				⇓iS	Sb	05 27 48.2	-1.9
	baz=63						
BOOM	Boomskoye usch	2.78	270	⇓iP	Pb	05 27 19.2	-2.5
	baz=69						
BOOM				⇓iS	Sb	05 27 53.0	-2.9
	baz=69						
KST	Kastek	2.80	282	eP	Pb	05 27 22.2	+0.3
	12nm,0.3s						
KST				eS	Sb	05 27 57.6	+1.3
	25nm,0.6s						
KUU	Kurty	2.81	300	Pg	Pb	05 27 21.0	-1.0
	1.9nm,0.1s						
KUU				Lg	Lg	05 27 56.1	
	45nm,0.4s						
KUU	Kurty	2.81	300	eP	Pb	05 27 21.0	-1.0
	1.9nm,0.1s						
KUU				eS	Sb	05 27 56.1	-0.4
	45nm,0.4s						
NRN	Naryn	2.97	249	⇓eP	Pb	05 27 22.3	-2.7
	baz=48						
NRN				⇓iS	Sb	05 27 58.7	-2.8
	baz=48						
TKM2	Tokmak 2	3.05	279	⇓Pg	Pb	05 27 26.0	-0.2
	5.5nm,0.8s						
TKM2				⇑Lg	Lg	05 28 05.5	
	12nm,0.5s						
TKM2	Tokmak 2	3.05	279	⇑iP	Pn	05 27 22.7	+2.5
	baz=77						
TKM2				⇑iS	Sb	05 27 59.4	-4.2
	baz=77						
KZA	Kyzart	3.33	264	⇓iP	Pn	05 27 26.8	+2.5
	baz=62						
KZA				⇓iS	Sn	05 28 06.7	+2.5
	baz=62						
CHMS	Chumysh	3.67	279	⇑iP	Pn	05 27 31.2	+2.5
	baz=78						
CHMS				⇑iS	Sn	05 28 14.1	+2.0
	baz=78						
AAK	Ala-Archa	3.85	273	⇓Pg	Pb	05 27 41.7	+1.9
	1.9nm,0.5s						
AAK				⇑Lg	Lg	05 28 30.1	
	9.1nm,0.8s						
AAK	Ala-Archa	3.85	273	⇑iP	Pn	05 27 34.0	+2.8
	baz=72						
AAK				⇑iS	Sn	05 28 19.0	+2.5
	baz=72						
UCH	Uchtor	3.86	267	⇑eP	Pn	05 27 34.1	+2.5
	baz=66						
UCH				⇑iS	Sn	05 28 19.2	+2.1
	baz=66						
ARLS	Aral	4.05	262	⇓eP	Pn	05 27 36.8	+2.8
	baz=61						
ARLS				⇓iS	Sn	05 28 23.4	+1.8
	baz=61						
EKS2	Erkin-Say	4.38	274	⇑iP	Pn	05 27 41.0	+2.6
	baz=73						
EKS2				⇑iS	Sn	05 28 31.5	+2.0
	baz=73						
MAKZ	Makanchi	4.57	20	⇑Pn	Pn	05 27 42.9	+2.0
	0.7nm,0.2s						
MAKZ				⇓Sn	Sn	05 28 36.2	+2.2
	0.6nm,0.3s						
MAKZ				⇑Lg	Lg	05 28 54.8	
	1.4nm,0.6s						
MK31	Makanchi Array	4.64	23	⇓Pn	Pn	05 27 43.7	+1.8
	0.2nm,0.2s,baz=205,slow=14,SNR=7.7						
MK31				⇑Sn	Sn	05 28 37.0	+1.1
	0.2nm,0.2s,baz=203,slow=24,SNR=6.2						
MK31				⇑Lg	Lg	05 28 56.9	
	1.7nm,0.7s,baz=196,slow=26,SNR=5.6						
MRKS	Merke	4.78	275	eP	Pb	05 27 58.6	+2.9
	2.4nm,0.4s						
MRKS				eS	Sg	05 28 59.8	-5.5
	5.9nm,0.4s						
MNAS	Manas	5.32	272	⇓Pg	Pg	05 28 11.1	-2.6
	2.7nm,1.3s						
MNAS				⇓Lg	Lg	05 29 19.6	
	2.4nm,0.7s						
KK31	Karatay Array	6.78	278	⇑Lg	Lg	05 30 05.3	
	0.6nm,0.5s,baz=93,slow=28,SNR=4.5						

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*IDC **08** 05:29:32.5±0.5, 11°.26S×165°.83E, h0^{km}, mb4.4/18, mb1 4.6/20, mb1mx4.5/39, mbtmp4.5/20, ML4.6/2, MS4.0/11, Ms1 4.0/11, ms1mx3.7/39, Error ellipse: s-maj=18.6km s-min=15.4km az=136.0*

*ISCJB **08** 05:29:35.0±0.2, 11°.39S±0°.04×165°.67E±0°.04, h24^{km}, mb4.7/104, MS4.0/11, Error ellipse: s-maj=5.6km s-min=5.0km az=137.2*

*NEIC **08** 05:29:35.6±3.3, 11°.32S×165°.74E, h18^{km}±20^{km}, mb4.8/83, Error ellipse: s-maj=7.0km s-min=5.5km az=188.0*

*GCMT **08** 05:29:36.6±0.4, 11°.64S±0°.04×165°.80E±0°.03, h28^{km}, MW5.0/62, Moment Tensor Solution. s24,c27; s62,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.45±.29; M$_{\theta\theta}$1.55±.20; M$_{\phi\phi}$2.90±.22; M$_{r\theta}$-2.71±.30; M$_{\theta\phi}$-1.17±.10; M$_{\phi r}$-0.43±.27; Best double couple: M$_0$4.65600×10^{16} NP1: φ$_s$124.00000°, δ57.00000°, λ-114.00000°. NP2: φ$_s$344.00000°, δ40.00000°, λ-57.00000°. Principal axes: T 3.7390, Plg9.0000°, Azm232.0000°; N 1.8350, Plg20.0000°, Azm138.0000°; P -5.5740, Plg68.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 05:29:36.9±0.4**, 11°.34S**±0°.06×**165°.66E**±0°.06**, h24**^{km}**, n176,** σ**1^{s}.61**/167**, mb4.8**/104**, MS4.1**/11**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.93	288	eP	Pn	05 31 05.0	+1.6
HNR				eS	Sb	05 32 23.0	-7.4
HNR	Honiara	5.93	288	ePn	Pn	05 31 05.0	+1.6
HNR				eSn	Sn	05 32 10.0	-0.6
HNR	Honiara	5.93	288	Pn	Pn	05 31 04.5	+1.2
	17nm,0.3s,baz=213,slow=3.9,SNR=10						
HNR				Sn	Sn	05 32 10.0	-0.6
	baz=63,slow=18,SNR=1.6						
MARNC	Mare, Loyalty	10.34	168	ePn	Pn	05 32 00.7	-3.1
DZM	Mont Dzumac	10.70	176	Pn	Pn	05 32 08.3	-0.4
	4.3nm,0.3s,baz=4.3,slow=11,SNR=37						
DZM				Sn	Sn	05 34 04.6	-3.3
	0.2nm,0.3s,baz=331,slow=19,SNR=1.8						
DZM				LR	LR	05 35 03.7	
	comp=Z,252nm,18.8s,baz=12,slow=31						
ONTNC	Ouen Toro	10.93	176	ePn	Pn	05 32 09.9	-2.0
PINNC	Pines Island,	11.34	172	ePn	Pn	05 32 17.7	+0.3
MSVF	Nonsavu	13.57	119	ePn	Pn	05 32 48.6	+0.6
EIDS	Eidsvold	19.62	223	eP	Pn	05 34 05.9	+0.6
	19nm,1.0s						
MANU	Manus Island	20.37	296	eP	P	05 34 11.2	-0.8
	134nm,1.1s						
CTA	Charters Tower	20.59	243	P	Pn	05 34 15.3	-1.4
	24nm,0.9s,baz=71,slow=11,SNR=14						
CTAO	Charters Tower	20.59	243	eP	P	05 34 14.8	+0.4
	36nm,0.9s						
COEN	Coen	22.09	261	eP	P	05 34 31.3	+0.7
	9.9nm,1.0s						
ARMA	Armidale	23.03	212	eP	P	05 34 41.4	+0.9
	28nm,1.1s						
URZ	Urewera	28.70	161	P	P	05 35 32.5	+0.3
	1.9nm,0.4s,baz=36,slow=7.8,SNR=3.0						
BKZ	Black Stump Fm	29.34	163	eP	P	05 35 37.5	-0.4
	8.2nm,0.6s						
H11S2	WAKE ISLAND Hy	29.66	2	T	T	06 06 14.2	
	baz=181,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	29.66	2	T	T	06 06 14.6	
	baz=181,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	29.68	2	T	T	06 06 04.1	
	baz=181,slow=76,SNR=17						
STKA	Stephens Creek	30.17	224	eP	P	05 35 44.0	-1.4
	2.0nm,1.0s						
STKA	Stephens Creek	30.17	224	P	P	05 35 45.3	-0.1
	5.6nm,0.8s,baz=26,slow=10,SNR=10						
STKA				LR	LR	05 47 10.9	
	comp=Z,399nm,19.9s,baz=32,slow=35						
BFZ	Birch Farm	30.68	164	eP	P	05 35 47.8	-2.0
	4.6nm,0.6s						
H11N1	WAKE ISLAND Hy	30.88	2	T	T	06 07 30.2	
	baz=182,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	30.89	2	T	T	06 07 30.5	
	baz=182,slow=76,SNR=27						
H11N2	WAKE ISLAND Hy	30.90	2	T	T	06 07 30.9	
	baz=182,slow=76,SNR=24						
THZ	Tophouse	30.96	169	eP	P	05 35 52.6	+0.3
	12nm,0.8s						
WB2	Warramunga Arr	31.30	250	eP	P	05 35 55.7	+0.3
	16nm,1.0s						
WRAB	Tennant Creek	31.30	250	eP	P	05 35 54.3	-1.1
	14nm,1.0s						
WR1	Warramunga Arr	31.31	250	eP	P	05 35 55.4	-0.1
	16nm,1.0s						
WR1				ePcP	PcP	05 38 50.5	+0.9
WR1				eScP	ScP	05 42 36.0	+4.7
WRA	Warramunga Arr	31.31	250	P	P	05 35 55.4	-0.1
	7.7nm,0.8s,baz=81,slow=9.1,SNR=48						
WRA				PcP	PcP	05 38 50.4	+0.9
	0.6nm,0.8s,baz=74,slow=3.0,SNR=2.9						
WRA				ScP	ScP	05 42 36.0	+4.7
	0.8nm,1.1s,baz=80,slow=3.4,SNR=2.8						
KHZ	Kahutara	31.71	169	eP	P	05 36 00.2	+1.4
	29nm,1.1s						
GUMO	Guam	32.23	320	LR	LR	05 48 40.4	
	comp=Z,224nm,19.7s,baz=164,slow=36						
AS01	Alice Springs	32.55	244	eP	P	05 36 05.1	-1.3
AS31	Alice Springs	32.59	244	eP	P	05 36 05.1	-1.7
	1.9nm,1.0s						
ASAR	Alice Springs	32.59	244	P	P	05 36 06.1	-0.7
	4.2nm,0.9s,baz=74,slow=9.3,SNR=21						
ASAR				PcP	PcP	05 38 54.9	+1.9
	1.1nm,0.9s,baz=90,slow=2.8,SNR=3.2						
ASAR				ScP	ScP	05 42 40.1	+4.5
	0.2nm,0.3s,baz=76,slow=3.9,SNR=2.5						
RPZ	Rata Peaks	32.59	173	eP	P	05 36 05.8	-0.8
	20nm,1.0s						
RPZ	Rata Peaks	32.59	173	P	P	05 36 06.1	-0.4
	12nm,0.9s,baz=316,slow=3.6,SNR=6.1						
RPZ				LR	LR	05 47 15.0	
	comp=Z,357nm,21.4s,baz=1.0,slow=32						
ODZ	Otahua Downs	33.86	174	eP	P	05 36 17.0	-0.5
	4.6nm,0.8s						
BBOO	Buckleboo	34.57	227	eP	P	05 36 24.2	+0.3
	9.1nm,0.9s						
FITZ	Fitzroy Crossi	39.23	255	eP	P	05 37 04.0	+0.3
	13nm,0.9s						
FITZ	Fitzroy Crossi	39.23	255	LR	LR	05 52 59.0	
	comp=Z,347nm,18.1s,baz=80,slow=36						
BATI	Baumata	41.25	267	P	P	05 37 20.4	-0.2
	7.0nm,0.3s,baz=135,slow=1.4,SNR=3.8						
BATI				LR	LR	05 54 18.1	
	comp=Z,320nm,21.9s,baz=122,slow=36						
MMRI	Maumere	42.82	269	eP	P	05 37 31.8	-1.6
	26nm,0.5s						
MCQ	Macquarie Isla	43.38	186	eP	P	05 37 38.9	+1.7
	19nm,0.8s						
PPT	Papeete	43.70	104	LR	LR	05 53 05.4	
	comp=Z,248nm,18.6s,baz=334,slow=32						
LUWI	Luwuk	43.78	280	eP	P	05 37 42.6	+1.5
	22nm,1.0s						
DAV	Davao City (W)	43.88	293	LR	LR	05 54 28.3	
	comp=Z,58nm,19.4s,baz=136,slow=34						
MORW	Morawa	49.41	241	eP	P	05 38 26.5	+1.4
	22nm,1.1s						
MJAR	Matsushiro Arr	54.19	333	P	P	05 38 58.8	-1.8
	1.0nm,0.5s,baz=160,slow=6.5,SNR=2.9						
MAJO	Matsushiro	54.20	333	eP	P	05 38 58.8	-1.8
UGM	Wanagama	54.41	268	eP	P	05 39 02.5	-0.1
	42nm,1.1s						
NJ2	Nanjing	62.17	316	eP	P	05 39 56.8	+0.3
NJ2				pmax	pmax		

	comp=Z,4.0nm,0.5s						
PETK	Petropavlovsk-	64.55	355	LR	LR	06 02 24.3	
	comp=Z,88nm,21.3s,baz=146,slow=31						
CASY	Casey	66.08	201	eP	P	05 40 22.0	+0.4
	comp=Z,7.8nm,0.9s						
IPM	Ipoh	66.19	280	eP	P	05 40 22.4	-0.9
	comp=Z,17nm,1.0s						
SKNT	Sakolnakorn	67.14	294	P	P	05 40 33.2	+4.0
	comp=Z,8.5nm,1.3s						
PSI	Prapat	67.83	278	eP	P	05 40 36.5	+2.7
	comp=Z,12nm,1.0s						
PSI	Prapat	67.83	278	P	P	05 40 34.9	+1.0
	comp=Z,4.9nm,0.7s,baz=0.3,slow=3.8						
NONG	Nongkai	68.26	295	P	P	05 40 40.7	+4.4
	comp=Z,0.4nm,1.2s						
GYA	Guiyang	68.52	304	P	P	05 40 39.0	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PBKT	Sadao Pong	69.72	292	eP	P	05 40 48.3	+2.9
	comp=Z,8.1nm,1.1s						
PBKT	Sadao Pong	69.72	292	P	P	05 40 49.9	+4.6
	comp=Z,6.6nm,1.6s,comp=Z,717nm						
XAN	Xi'an	70.26	312	P	P	05 40 51.0	+2.6
XAN				pP	pwP	05 40 59.3	-1.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN	Xi'an	70.26	312	eP	P	05 40 47.9	-0.5
	comp=Z,6.2nm,1.0s						
KMI	Kunming	71.20	302	P	P	05 40 58.7	+4.1
KMI				pP	pwP	05 41 06.2	-0.8
KMI				sP	PcP	05 41 11.0	-3.6
KMI				pmax	pmax		
	comp=Z,14nm,1.4s						
KMI				pmax	pmax		
	comp=Z,150nm,4.4s						
HHC	Hu-ho-hao-te	72.00	320	eP	P	05 40 58.8	-0.2
HHC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,340nm,6.4s						
CM01	Chiang Mai Arr	72.13	294	eP	P	05 41 01.9	+1.9
CMAR	Chiang Mai Arr	72.16	294	P	P	05 41 01.7	+1.5
	comp=Z,1.3nm,0.3s,baz=121,slow=4.0,SNR=16						
CMAR				LR	LR	06 09 52.5	
	comp=Z,27nm,21.7s,baz=300,slow=34						
CMMT	Chiang Mai	72.27	294	P	P	05 41 05.2	+4.3
	comp=Z,7.8nm,1.4s						
CHTO	Chiang Mai	72.27	294	eP	P	05 41 02.5	+1.6
	comp=Z,6.3nm,1.1s						
CHTO	Chiang Mai	72.27	294	P	P	05 41 05.2	+4.3
	comp=Z,34nm,1.4s						
CD2	Chengdu	72.72	307	P	P	05 41 04.9	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,130nm,5.0s						
LZH	Lanzhou	74.89	312	eP	P	05 41 17.7	+1.5
LZH				pP	pP	05 41 21.5	-0.8
LZH				sP	sP	05 41 24.1	-0.5
LZH				PP	PP	05 44 05.0	+0.9
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
LZH				pmax	pmax		
	comp=Z,93nm,4.9s						
GAMB	Gambell	76.87	10	eP	P	05 41 26.0	-0.6
	comp=Z,7.7nm,0.9s						
ULN	Ulaanbaatar	78.49	324	eP	P	05 41 37.2	+1.0
	comp=Z,3.9nm,1.0s						
QSPA	South Pole Qui	78.67	180	eP	P	05 41 37.4	+0.5
	comp=Z,8.2nm,0.9s						
ANM	Nome	78.79	12	eP	P	05 41 35.6	-1.7
	comp=Z,5.3nm,1.2s						
SONA0	Songino Array	78.86	324	eP	P	05 41 37.6	-0.6
SONM	Songino Array	78.86	324	P	P	05 41 37.6	-0.6
	comp=Z,0.9nm,0.8s,baz=127,slow=6.3,SNR=4.7						
SONA1	Songino Array	78.86	324	eP	P	05 41 38.1	-0.1
BILL	Bilibino	79.17	0	eP	P	05 41 38.6	-0.7
	comp=Z,6.1nm,0.9s						
GTA	Gaotai	79.20	314	⇑P	P	05 41 41.8	+1.5
GTA				pP	PcP	05 41 46.7	-1.9
GTA				sP	sP	05 41 49.1	+0.3
GTA	Gaotai	79.20	314	S	S	05 51 42.7	+3.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,8.1s						
GTA				LR	LR		
	comp=N,170nm,17.1s						
GTA				LR	LR		
	comp=E,200nm,17.5s						
GTA				LR	LR		
	comp=Z,220nm,19.0s						
CAST	Castle Rocks	81.25	18	eP	P	05 41 50.9	+0.3
	comp=Z,6.4nm,0.8s						
MCK	McKinley	82.45	19	eP	P	05 41 56.4	-0.5
	comp=Z,9.8nm,1.2s						
IM3	Indian Mountai	82.73	16	eP	P	05 41 57.7	-0.6
MLY	Manley	82.84	17	eP	P	05 41 59.4	+0.4
	comp=Z,2.1nm,1.0s						
WRH	Wood River Hil	83.23	18	eP	P	05 42 00.5	-0.5
	comp=Z,12nm,1.1s						
MDM	Murphy Dome	83.53	18	eP	P	05 42 01.7	-0.8
	comp=Z,5.2nm,1.0s						
HDA	Harding Lake	83.55	19	eP	P	05 42 01.6	-1.0
	comp=Z,14nm,0.9s						
RIDG	Independ'e Rid	83.78	20	eP	P	05 42 03.5	-0.4
	comp=Z,17nm,1.2s						
IL1	Eielson Array	83.82	19	eP	P	05 42 02.7	-1.3
ILAR	Eielson Array	83.82	19	P	P	05 42 02.0	-2.0
	comp=Z,1.5nm,0.6s,baz=244,slow=4.9,SNR=24						
ILB	Eielson Array	83.82	19	eP	P	05 42 02.9	-1.1
YBH	Yreka Blue Hor	84.16	46	eP	P	05 42 05.6	-0.7
	comp=Z,9.1nm,1.0s						
YBH	Yreka Blue Hor	84.16	46	P	P	05 42 04.9	-1.4
	comp=Z,3.0nm,1.0s,baz=229,slow=6.9,SNR=2.3						
SCRK	Sand Creek	84.22	20	eP	P	05 42 05.4	-0.8
	comp=Z,12nm,1.1s						
ORV	Oroville	84.27	48	eP	P	05 42 05.8	-1.1
	comp=Z,5.2nm,1.0s						
AFDM	Forest Hills D	84.46	49	eP	P	05 42 07.1	-0.7
	comp=Z,8.3nm,1.0s						
CMB	Columbia Colle	84.59	50	eP	P	05 42 07.4	-1.2
BEKR	Beckworth	85.20	48	eP	P	05 42 10.8	-1.0
	comp=Z,8.4nm,1.1s						
ISA	Isabella, Lake	85.32	52	eP	P	05 42 15.0	+2.7
	comp=Z,5.0nm,1.0s						
MDPB	Devils Postpil	85.45	50	eP	P	05 42 16.0	+2.8
	comp=Z,9.9nm,1.0s						
WAKR	Walker	85.45	49	eP	P	05 42 12.6	-0.5
	comp=Z,6.7nm,1.0s						
EGAK	Eagle	85.68	20	eP	P	05 42 12.0	-1.3
	comp=Z,12nm,0.9s						
DAWY	Dawson	85.86	21	eP	P	05 42 13.7	-0.7
	comp=Z,2.5nm,0.8s						
PAHR	Pah Rah Range	85.87	48	eP	P	05 42 13.9	-1.1
	comp=Z,6.6nm,1.0s						
NV01	Mina Array Sit	86.28	50	eP	P	05 42 15.7	-1.5
NVAR	Mina Array Bea	86.28	50	P	P	05 42 16.0	-1.2
	comp=Z,5.9nm,0.9s,baz=221,slow=5.4,SNR=9.1						
NVAR				LR	LR	06 13 44.7	
	comp=Z,271nm,19.5s,baz=273,slow=31						
NV11	Mina Array Sit	86.39	50	eP	P	05 42 16.4	-1.3
	comp=Z,0.6nm,1.0s						
GSC	Goldstone, Bar	86.52	53	eP	P	05 42 21.5	+3.3
	comp=Z,6.0nm,1.1s						
KVN	Kaiserville	86.61	49	eP	P	05 42 21.9	+3.1
	comp=Z,5.6nm,1.0s						
WVOR	Wild Horse Val	87.25	46	eP	P	05 42 21.3	-0.5
	comp=Z,4.5nm,1.0s						
J08A	Circle Bar Ran	87.65	45	eP	P	05 42 26.7	+3.1
	comp=Z,7.6nm,1.0s						
LDFC	Landfair	87.79	54	eP	P	05 42 24.3	-0.2
	comp=Z,18nm,0.9s						
Y12C	Blythe	87.91	55	eP	P	05 42 28.6	+3.6
	comp=Z,8.3nm,0.9s						
G08A	Pilot Rock	87.92	43	eP	P	05 42 23.9	-1.0
	comp=Z,4.7nm,1.0s						
SHPR	Sheep Range	88.13	52	eP	P	05 42 26.0	-0.2
	comp=Z,4.4nm,1.0s						
113A	Mohawk Valley,	88.27	56	eP	P	05 42 29.9	+3.2
	comp=Z,4.2nm,0.9s						
R11A	Troy Canyon, C	88.30	50	eP	P	05 42 30.1	+3.2
	comp=Z,2.4nm,0.9s						
Y14A	Wickenburg	89.18	55	eP	P	05 42 34.1	+3.1
	comp=Z,3.8nm,1.0s						
WMQ	Urumqi	89.25	315	eP	P	05 42 31.3	+0.2
WMQ				pP	pP	05 42 36.1	-1.3
WMQ				sP	pwP	05 42 42.1	-1.6
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,650nm,5.3s						
PSUT	Pine Spring	89.66	51	eP	P	05 42 33.4	+0.1
	comp=Z,2.4nm,0.8s						
LCMT	Little Creek M	89.75	52	eP	P	05 42 33.3	-0.4
	comp=Z,6.9nm,0.9s						
CCUT	Cedar City	89.79	52	eP	P	05 42 33.3	-0.7
	comp=Z,6.8nm,1.0s						
KNB	Kanab	90.08	52	eP	P	05 42 35.4	+0.1
	comp=Z,8.1nm,1.1s						
U15A	North Rim	90.35	53	eP	P	05 42 36.1	-0.7
	comp=Z,12nm,0.9s						
HLID	Hailey	90.54	46	eP	P	05 42 36.4	-0.9
	comp=Z,3.0nm,1.0s						
PKCU	Pink Cliffs	90.57	52	eP	P	05 42 39.4	+1.6
	comp=Z,16nm,1.2s						
TUC	Tucson	90.61	57	eP	P	05 42 41.3	+3.5
	comp=Z,3.9nm,0.9s						
MTPU	Mount Pierson	90.81	51	eP	P	05 42 38.0	-1.0
	comp=Z,10nm,1.1s						
WUAZ	Wupatki	90.86	54	eP	P	05 42 38.9	-0.1
	comp=Z,7.6nm,1.0s						
HVU	Hansel Valley	91.26	48	eP	P	05 42 40.2	-0.5
	comp=Z,7.7nm,1.0s						
NLU	North Lily Min	91.34	50	eP	P	05 42 39.8	-1.4
	comp=Z,4.8nm,0.8s						
CTU	Camp Tracy	91.76	49	eP	P	05 42 43.5	+0.5
	comp=Z,4.1nm,0.9s						
X18A	Snowflake	91.78	55	eP	P	05 42 47.1	+3.8
	comp=Z,5.2nm,1.1s						
DLMT	Dillon	92.25	44	eP	P	05 42 44.6	-0.6
	comp=Z,8.8nm,1.1s						
LRM	Limekiln Ridge	92.46	44	eP	P	05 42 48.3	+2.0
FXWY	Fox Creek	92.95	46	eP	P	05 42 50.6	+2.0
	comp=Z,2.1nm,0.9s						
IMW	Indian Meadow	93.07	46	eP	P	05 42 53.3	+4.1
	comp=Z,2.1nm,0.9s						
MK01	Makanchi Array	93.67	317	eP	P	05 42 51.9	+0.3
MK31	Makanchi Array	93.68	317	eP	P	05 42 51.6	0.0
MK32	Makanchi Array	93.68	317	eP	P	05 42 51.1	-0.5
MKAR	Makanchi Array	93.68	317	eP	P	05 42 51.5	-0.1
	comp=Z,13nm,0.9s						
MKAR	Makanchi Array	93.68	317	P	P	05 42 51.1	-0.5
	comp=Z,2.0nm,0.8s,baz=96,slow=6.5,SNR=20						
ZAA0	Zalesovo Array	93.75	324	eP	P	05 42 51.2	-0.4
	comp=Z,1.2nm,0.8s						
ZALV	Zalesovo Beam	93.75	324	eP	P	05 42 49.8	-1.8
ZALV	Zalesovo Beam	93.75	324	P	P	05 42 50.2	-1.4
	comp=Z,0.8nm,0.6s,baz=103,slow=3.1,SNR=3.7						
ZAA1	Zalesovo Array	93.75	324	eP	P	05 42 50.2	-1.4
PD31	Pinedale Array	93.81	47	eP	P	05 42 51.0	-1.6
PDAR	Pinedale Array	93.81	47	P	P	05 42 53.0	+0.4
PDAR	Pinedale Array	93.81	47	P	P	05 42 53.0	+0.4
	comp=Z,1.2nm,0.9s,baz=270,slow=2.7,SNR=6.7						
MAKZ	Makanchi	93.89	317	eP	P	05 42 52.7	+0.1
	comp=Z,4.0nm,1.1s						
LTX	Lajitas	96.04	61	eP	P	05 43 00.8	-2.0
TXAR	Lajitas Array	96.04	61	P	P	05 43 00.8	-2.0
	comp=Z,0.4nm,0.9s,baz=251,slow=4.7,SNR=2.8						
ARCES	ARCESS Array B	116.60	345	ePKPdf	PKiKP	05 48 17.6	-0.8
ARCES	ARCESS Array B	116.60	345	PKP	PKPdf	05 48 16.8	-1.6
	comp=Z,1.6nm,0.7s,baz=61,slow=3.0,SNR=7.8						
ARE0	ARCESS Array S	116.60	345	ePKPdf	PKiKP	05 48 19.6	+1.2
CPUP	Villa Florida	123.89	133	ePKPdf	PKPdf	05 48 32.0	-1.7
CPUP	Villa Florida	123.89	133	PKP	PKPdf	05 48 31.2	-2.5
	comp=Z,2.1nm,1.0s,baz=189,slow=3.1,SNR=4.0						
BOSA	Boshof	124.85	223	PKP	PKiKP	05 48 35.6	-0.4
	comp=Z,1.7nm,0.8s,baz=194,slow=5.2,SNR=3.6						
NB2	NORSAR Subarra	126.96	345	PKPdf	PKPdf	05 48 37.5	-1.1
	comp=Z,0.1nm,0.5s,baz=31,slow=1.9						
NB200	NORSAR Array S	126.96	345	ePKPdf	PKPdf	05 48 36.9	-1.7
NOA	NORSAR Array B	126.96	345	PKP	PKPdf	05 48 36.9	-1.7
	comp=Z,0.3nm,0.6s,baz=74,slow=1.8,SNR=4.0						
AKASG	Malin Array Be	127.06	327	PKP	PKPdf	05 48 37.2	-1.8
	comp=Z,0.2nm,0.4s,baz=66,slow=1.1,SNR=5.7						
KONO	Kongsberg	128.57	345	ePKPdf	PKiKP	05 48 41.0	-1.3
CLL	Collm	134.34	336	ePKPdf	PKiKP	05 48 54.0	-0.2
GERES	GERESS Array B	135.93	333	PKP	PKiKP	05 48 57.0	-0.7
	comp=Z,0.4nm,0.6s,baz=20,slow=3.1,SNR=3.6						
KEST	Kesra	147.60	322	ePKPbc	PKiKP	05 49 20.8	-1.2
KEST	Kesra	147.60	322	PKPbc	PKPbc	05 49 19.6	-0.3
	comp=Z,6.2nm,0.8s,baz=38,slow=6.0,SNR=4.1						
ES19	SONSECA Array	150.27	344	ePKPbc	PKiKP	05 49 26.6	-0.7
ESDC	Sonseca Array	150.32	344	PKPbc	PKiKP	05 49 26.3	-1.1
	comp=Z,1.0nm,0.7s,baz=36,slow=2.1,SNR=6.0						
PAB	San Pablo	150.54	344	ePKPbc	PKiKP	05 49 27.2	-0.6
TOA0	Torodi Ar. Sit	164.23	278	ePKPdf	PKPdf	05 49 39.4	0.0
TORD	Torodi Ar. Bea	164.23	278	PKP	PKPdf	05 49 38.8	-0.6
	comp=Z,0.8nm,0.8s,baz=207,slow=1.3,SNR=4.6						
TORD				PKPab	PKPab	05 50 35.0	+1.7
	comp=Z,0.3nm,0.9s,baz=72,slow=4.7,SNR=2.3						
TOA1	Torodi Ar. Sit	164.23	278	ePKPdf	PKPdf	05 49 38.8	-0.6
TOA1				ePKPab	PKPab	05 50 35.0	+1.7

IDC ***08*** *05:35:17.1±3.6, 16°.65S×175°.45W, h0km, mb4.2/4, mb1 4.5/4, mb1mx3.9/32, mbtmp4.2/4, Error ellipse: s-maj=184.9km s-min=28.1km az=144.0*

NEIC ***08*** *05:35:52.3±1.4, 15°.71S×176°.71W, h264km±12km, mb4.1/11, Error ellipse: s-maj=13.8km s-min=12.0km az=155.0*

ISCJB ***08*** *05:35:54.6±0.9, 15°.9S±0°.1×176°.8W±0°.1, h300km, mb4.0/13, Error ellipse: s-maj=18.8km s-min=15.9km az=42.8*

ISC 08 05:35:55.0±0.8**, 15°.7S**±0°.1×**176°.9W**±0°.1**, h300**km**, n24, σ2s.56**/22**, mb3.9**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.25	247	ePn	Pn	05 37 13.6	-1.9
RAO	Raoul Island	13.48	184	ePn	Pn	05 38 54.3	-1.1
MARNC	Mare, Loyalty	15.40	246	eP	Pn	05 39 23.8	+5.7
	53nm,1.0s						
PINNC	Pines Island,	16.30	243	eP	Pn	05 39 26.6	-2.1
	24nm,0.9s						
HIZ	Hauiti	23.83	196	eP	P	05 40 42.5	+1.0
	17nm,1.1s						
FOZ	Fox Glacier	29.94	200	eP	P	05 41 43.7	+8.0
	10nm,0.9s						
MCQ	Macquarie Isla	42.99	200	eP	P	05 43 25.9	+0.7
	61nm,0.4s						
WB2	Warramunga Arr	46.49	257	eP	P	05 43 55.0	+1.8
	1.9nm,0.9s						
WR1	Warramunga Arr	46.50	257	eP	P	05 43 54.2	+1.0
	3.0nm,1.0s						
WR1				ePcP	sP	05 45 24.7	-3.8
WRA	Warramunga Arr	46.50	257	P	P	05 43 54.3	+1.0
	1.1nm,0.7s,baz=96,slow=6.8,SNR=16						
WRA				PcP	sP	05 45 24.7	-3.8
	0.3nm,0.8s,baz=92,slow=3.6,SNR=2.4						
AS01	Alice Springs	46.78	252	eP	P	05 43 58.1	+2.8
AS31	Alice Springs	46.82	252	eP	P	05 43 58.2	+2.5
	3.8nm,0.6s						
ASAR	Alice Springs	46.82	252	P	P	05 43 58.0	+2.3
	12nm,0.6s,baz=85,slow=8.2,SNR=91						
FORT	Forrest	52.28	243	eP	P	05 44 39.3	+2.9
	9.5nm,1.1s						
FITZ	Fitzroy Crossi	54.86	259	eP	P	05 45 02.7	+7.5
	3.2nm,1.1s						
FITZ	Fitzroy Crossi	54.86	259	P	P	05 44 58.7	+3.5
	1.2nm,0.6s,baz=107,slow=7.1,SNR=2.4						
QSPA	South Pole Qui	74.30	180	eP	P	05 47 07.5	+7.9
	2.9nm,0.8s						
SLBS	Sierra La Lagu	76.22	60	eP	P	05 47 11.4	+0.2
	1.6nm,0.8s						
ILAR	Eielson Array	83.46	12	P	P	05 47 49.8	+1.0
	1.3nm,1.0s,baz=223,slow=5.7,SNR=10						
ARA0	ARCESS Array S	124.44	351	ePKPdf	PKiKP	05 54 19.5	+1.3
ARCES	ARCESS Array B	124.44	351	PKP	PKiKP	05 54 19.5	+1.3
	1.4nm,0.8s,baz=58,slow=2.6,SNR=3.9						
BR101	Keskin Array S	144.23	318	ePKPdf	PKiKP	05 54 56.8	-2.6
BRTR	Keskin Array B	144.23	318	PKPbc	PKiKP	05 54 56.8	-2.6
	1.1nm,0.9s,baz=42,slow=2.0,SNR=4.5						
GERES	GERESS Array B	145.86	348	PKPbc	PKiKP	05 55 00.9	-1.6
	0.2nm,0.3s,baz=17,slow=4.1,SNR=3.2						

IDC 08 05:42:18.4±1.7**, 10°.83S**×**165°.64E, h0**km**, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.6**/35**, mbtmp3.6**/4**, ML3.7**/1**, Error ellipse: s-maj=53.9km s-min=30.5km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.21	176	Pn	Pn	05 45 00.6	+0.5
	0.5nm,0.3s,baz=18,slow=20,SNR=9.2						
H11S2	WAKE ISLAND Hy	29.15	2	T	T	06 19 09.3	
	baz=181,slow=76,SNR=8.2						
H11S3	WAKE ISLAND Hy	29.15	2	T	T	06 19 14.5	
	baz=181,slow=76,SNR=4.6						
H11S1	WAKE ISLAND Hy	29.17	2	T	T	06 19 15.6	
	baz=181,slow=76,SNR=5.5						
H11N1	WAKE ISLAND Hy	30.37	2	T	T	06 20 34.2	
	baz=181						
H11N3	WAKE ISLAND Hy	30.38	2	T	T	06 20 33.1	
	baz=181						
H11N2	WAKE ISLAND Hy	30.39	2	T	T	06 20 22.1	
	baz=181						
WRA	Warramunga Arr	31.46	249	P	P	05 48 42.3	+0.3
	0.7nm,0.8s,baz=82,slow=9.1,SNR=4.2						
ASAR	Alice Springs	32.80	243	P	P	05 48 53.3	-0.5
	0.4nm,0.7s,baz=68,slow=10,SNR=4.0						
ILAR	Eielson Array	83.34	19	P	P	05 54 46.9	0.0
	0.3nm,0.9s,baz=232,slow=6.2,SNR=3.4						

IDC ***08*** *05:45:41.0±1.6, 3°.41S×120°.33E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/33, mbtmp3.4/4, Error ellipse: s-maj=327.1km s-min=23.5km az=58.0*

ISCJB ***08*** *05:45:48.1±0.7, 3°.93S±0°.05×120°.03E±0°.07, h33km, Error ellipse: s-maj=10.9km s-min=7.3km az=159.6*

DJA ***08*** *05:45:48.5±0.4, 4°S±2°×12°0E±°, h10km, M3.5/7, MLv3.5/7*

ISC 08 05:45:48.0±1.0**, 3°.92S**±0°.05×**120°.00E**±0°.07**, h35**km**, n10, σ2s.27**/13**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPSI	Sidrap Palu	0.23	260	P	Pn	05 45 54.2	-0.9
SPSI				S	Sn	05 45 59.6	-0.4
BNSI	Bone	0.49	167	P	Pn	05 45 57.9	-0.6
BNSI				S	Sn	05 46 05.9	+0.2
TTSI	Tana Toraja	0.89	349	P	Pn	05 46 04.6	+0.6
BKSI	Bulukumba	1.39	175	P	Pn	05 46 12.1	+1.1
BKSI				S	Sn	05 46 31.9	+3.7
APSI	Ampana	3.42	29	P	Pn	05 46 41.1	+2.3
KBKI	Kotabaru	3.87	279	P	Pn	05 46 48.9	+3.9
WRA	Warramunga Arr	21.19	140	P	P	05 50 29.5	-1.2
	0.5nm,0.9s,baz=321,slow=12,SNR=2.5						
ASAR	Alice Springs	23.78	147	P	P	05 50 58.0	+0.4
	0.2nm,0.6s,baz=316,slow=7.8,SNR=3.5						
STKA	Stephens Creek	34.42	146	P	P	05 52 32.7	+0.5
	1.2nm,0.4s,baz=315,slow=7.1,SNR=3.6						
MKAR	Makanchi Array	60.47	331	P	P	05 55 50.8	-3.5
	0.4nm,1.0s,baz=116,slow=6.6,SNR=3.0						

NNC 08 05:53:46.2±2.9**, 37°.05N**×**70°.89E, h0**km**, mb3.8, mpv3.5, 5C-3D, Error ellipse: s-maj=23.1km s-min=20.2km az=138.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.60	34	⇓Pn	Pn	05 54 43.7	+0.2
	7.9nm,0.5s						
SFK				⇓Sn	Sn	05 55 28.4	+1.6
	2.1nm,0.2s						
MNAS	Manas	5.57	12	⇑Pn	Pn	05 55 10.5	+0.1
	1.4nm,0.5s						
MNAS				⇑Sn	Sn	05 56 15.8	+0.5
	5.0nm,0.6s						
KK31	Karatay Array	6.05	357	⇓Pn	Pn	05 55 17.8	+0.8
	1.7nm,0.3s,baz=185,slow=14,SNR=37						
KK31				⇑Sn	Sn	05 56 28.7	+1.8
	1.1nm,0.3s,baz=189,slow=25,SNR=7.1						
AAK	Ala-Archa	6.23	25	⇑Pn	Pn	05 55 18.2	-1.4
	1.9nm,0.3s						
AAK				⇑Sn	Sn	05 56 32.2	+0.6
	2.3nm,0.6s						

ISCJB ***08*** *05:56:18.3±1.2, 10°.9S±0°.1×165°.8E±0°.1, h10km, mb3.9/6, MS3.6/1, Error ellipse: s-maj=20.3km s-min=8.8km az=40.0*

IDC ***08*** *05:56:18.1±1.7, 10°.90S×165°.75E, h0km, mb3.9/4, mb1 4.2/6, mb1mx3.9/31, mbtmp4.2/6, ML4.7/2, MS3.4/3, Ms1 3.4/3, ms1mx2.9/35, Error ellipse: s-maj=34.4km s-min=29.7km az=135.0*

NEIC ***08*** *05:56:20.2±1.2, 10°.80S×165°.80E, h10km, mb4.1/3, Error ellipse: s-maj=22.8km s-min=12.0km az=54.0*

ISC 08 05:56:20.1±1.4**, 10°.8S**±0°.1×**165°.8E**±0°.1**, h10**km**, n22, σ1s.11**/17**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.94	283	ePn	Pn	05 57 50.3	+2.2
HNR				eSn	Sn	05 58 56.7	+0.4
HNR	Honiara	5.94	283	Pn	Pn	05 57 47.2	-1.0
	22nm,0.3s,baz=178,slow=3.6,SNR=8.0						
HNR				Sn	Sn	05 58 56.7	+0.4
	3.2nm,0.3s,baz=218,slow=18,SNR=2.0						
HNR				LR	LR	05 59 54.2	
	comp=Z,225nm,20.1s,baz=108,slow=37						
DZM	Mont Dzumac	11.21	177	ePn	Pn	05 59 00.8	+0.3
DZM	Mont Dzumac	11.21	177	Pn	Pn	05 59 00.1	-0.5
	5.0nm,0.3s,baz=28,slow=5.8,SNR=29						
DZM				LR	LR	06 03 15.8	
	comp=Z,176nm,18.2s,baz=194,slow=38						
ONTNC	Ouen Toro	11.44	177	ePn	Pn	05 59 04.8	+1.1
PINNC	Pines Island,	11.83	173	ePn	Pn	05 59 10.2	+1.2
ARMA	Armidale	23.54	212	eP	P	06 01 31.4	+0.6
	6.5nm,0.8s						
H11S2	WAKE ISLAND Hy	29.14	2	T	T	06 32 45.9	
	baz=181,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.14	2	T	T	06 32 46.1	
	baz=181,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.15	2	T	T	06 32 47.2	
	baz=181,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	30.36	2	T	T	06 34 17.0	
	baz=182,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.36	2	T	T	06 34 17.4	
	baz=182,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.38	2	T	T	06 34 18.9	
	baz=182,slow=76,SNR=15						
STKA	Stephens Creek	30.65	223	eP	P	06 02 35.4	+0.5
	0.3nm,0.6s						
STKA	Stephens Creek	30.65	223	P	P	06 02 33.3	-1.6
	1.6nm,0.5s,baz=32,slow=11,SNR=4.3						
WR1	Warramunga Arr	31.62	250	eP	P	06 02 42.4	-1.1
	3.5nm,1.0s						
WRA	Warramunga Arr	31.62	250	P	P	06 02 42.4	-1.2
	1.0nm,0.8s,baz=83,slow=9.3,SNR=9.5						
LTZ	Lake Taylor	32.34	171	eP	P	06 02 49.4	-0.2
ASAR	Alice Springs	32.95	243	P	P	06 02 53.7	-1.5
	1.5nm,0.9s,baz=72,slow=9.6,SNR=8.9						
RPZ	Rata Peaks	33.09	173	LR	LR	06 15 23.4	
	comp=Z,108nm,18.2s,baz=5.0,slow=35						
NWAO	Narrogin (SRO)	49.64	236	eP	P	06 05 12.4	+0.3
ILAR	Eielson Array	83.28	18	P	P	06 08 46.8	+0.1
	0.3nm,0.5s,baz=235,slow=5.8,SNR=5.3						

ISCJB ***08*** *06:00:59.3±9.1, 24°S±1°×11°5W±°, h10km, mb3.8/4, MS4.0/1, Error ellipse: s-maj=267.7km s-min=33.1km az=37.6*

IDC ***08*** *06:01:00.2±1.5, 23°.58S×115°.17W, h0km, mb3.7/4, mb1 4.1/4, mb1mx3.7/33, mbtmp3.7/4, MS3.5/2, Ms1 3.5/2, ms1mx3.1/30, Error ellipse: s-maj=53.2km s-min=36.8km az=30.0*

ISC 08 06:01:00.2±1.5**, 23°.9S**±0°.4×**115°.4W**±0°.3**, h10**km**, n13, σ0s.60**/8**, mb3.9**/4**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.34	122	LR	LR	06 03 57.3	
	comp=Z,120nm,18.6s,baz=300,slow=28						
LPAZ	La Paz	44.82	89	P	P	06 09 15.8	+0.3
	2.3nm,1.1s,baz=270,slow=9.1,SNR=5.4						
LPIG	La Paz	47.92	6	LR	LR	06 24 40.3	
	comp=Z,158nm,19.9s,baz=152,slow=30						
NVAR	Mina Array Bea	62.01	357	P	P	06 11 21.7	+0.9
	1.0nm,0.8s,baz=189,slow=11,SNR=3.1						
PDAR	Pinedale Array	66.50	5	P	P	06 11 49.8	-0.4
	0.4nm,0.7s,baz=176,slow=5.9,SNR=3.8						
YKA	Yellowknife Ar	86.04	0	P	P	06 13 40.1	-0.4
	0.5nm,0.9s,baz=177,slow=5.2,SNR=9.8						
H11S2	WAKE ISLAND Hy	86.86	292	T	T	07 49 35.0	

	baz=116,slow=75,SNR=24						
H11S1	**WAKE ISLAND Hy**	**86.88**	**292**	T	T	07 49 29.2	
	baz=116,slow=75,SNR=24						
H11S3	**WAKE ISLAND Hy**	**86.88**	**292**	T	T	07 49 36.3	
	baz=116,slow=75,SNR=25						
ZALV	**Zalesovo Beam**	**146.34**	**338**	PKPbc	**PKPbc**	**06 20 41.0**	**0.0**
	0.4nm,0.4s,baz=17,slow=1.5,SNR=2.8						
CMAR	**Chiang Mai Arr**	**147.62**	**267**	PKPbc	**PKPab**	**06 20 48.2**	**+0.4**
	1.1nm,0.4s,baz=117,slow=1.4,SNR=5.0						
BRTR	**Keskin Array B**	**149.44**	**51**	PKPbc	**PKiKP**	**06 20 50.4**	**-0.7**
	1.1nm,0.8s,baz=327,slow=2.1,SNR=4.6						
MKAR	**Makanchi Array**	**153.08**	**333**	PKPbc	**PKiKP**	**06 20 58.0**	**-0.1**
	0.4nm,0.6s,baz=23,slow=1.4,SNR=4.8						

IDC 08 06:05:43.9±10.0, 24°.38S×112°.43W, h0^{km}, mb3.4/3, mb1 3.8/3, mb1mx3.6/37, mbtmp3.4/3, Error ellipse: s-maj=493.0km s-min=232.2km az=81.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVAR	**Mina Array Bea**	**62.72**	**355**	P	P	06 16 10.9	0.0
	0.2nm,0.3s,baz=184,slow=7.2,SNR=3.3						
PDAR	**Pinedale Array**	**66.86**	**2**	P	P	06 16 37.7	-0.1
	0.2nm,0.7s,baz=170,slow=7.1,SNR=2.4						
YKA	**Yellowknife Ar**	**86.58**	**359**	P	P	06 18 28.6	+0.2
	0.3nm,1.0s,baz=176,slow=4.2,SNR=2.8						

IDC 08 06:07:17.5±1.7, 11°.75S×165°.07E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.6/40, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=48.2km s-min=30.5km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.35**	**173**	Pn	Pn	06 09 46.7	-0.7
	0.5nm,0.3s,baz=288,slow=20,SNR=3.7						
H11S2	**WAKE ISLAND Hy**	**30.09**	**3**	T	T	06 45 25.4	
	baz=184,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**30.10**	**3**	T	T	06 45 30.0	
	baz=184,slow=76,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**30.11**	**3**	T	T	06 45 27.9	
	baz=184,slow=76,SNR=9.7						
WRA	**Warramunga Arr**	**30.62**	**251**	P	P	06 13 33.8	0.0
	0.5nm,1.0s,baz=77,slow=9.0,SNR=4.8						
H11N1	**WAKE ISLAND Hy**	**31.32**	**3**	T	T	06 47 01.7	
	baz=183,slow=76,SNR=7.6						
H11N3	**WAKE ISLAND Hy**	**31.32**	**3**	T	T	06 46 59.9	
	baz=183,slow=76,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	**31.34**	**3**	T	T	06 46 59.6	
	baz=183,slow=76,SNR=3.7						
ASAR	**Alice Springs**	**31.89**	**244**	P	P	06 13 44.1	-0.7
	0.5nm,0.7s,baz=70,slow=9.0,SNR=4.7						
FITZ	**Fitzroy Crossi**	**38.56**	**256**	P	P	06 14 42.8	+0.5
	1.5nm,0.7s,baz=90,slow=8.1,SNR=3.5						
ILAR	**Eielson Array**	**84.39**	**19**	P	P	06 19 51.5	+0.1
	0.3nm,0.7s,baz=239,slow=5.1,SNR=4.1						

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*KRAR **08** 06:07:42.7±0.1, 55°.56N×85°.89E, M2.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 08 06:07:44.9±3.7, 55°.48N×86°.46E, h0^{km}, mb3.8, mpv3.5, 6C-4D, Error ellipse: s-maj=51.3km s-min=27.2km az=125.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.80**	**212**	⇓Pn	Pn	06 08 17.1	-0.1
	8.3nm,0.3s						
ZAA0				⇑Lg	Lg	06 08 43.7	
	31nm,0.8s						
KURK	**Kurchatov**	**6.71**	**228**	⇑Pn	Pn	06 09 25.5	+0.9
	6.1nm,1.0s						
KURK				⇓Sn	Sn	06 10 40.2	-1.4
	3.0nm,1.0s						
KURK				⇑Lg	Lg	06 11 16.9	
	12nm,1.0s						
KURBB	**Kurchatov Arra**	**6.81**	**228**	⇓Pn	Pn	06 09 26.9	+0.9
	3.2nm,0.8s,baz=46,slow=14						
KURBB				⇑Sn	Sn	06 10 44.2	0.0
	3.6nm,0.6s						
KURBB				⇑Lg	Lg	06 11 22.3	
	22nm,1.1s,baz=48,slow=30						
MK31	**Makanchi Array**	**9.08**	**198**	⇑Sn	Sn	06 11 43.1	+3.1
	1.5nm,0.8s						
MK31				⇓Lg	Lg	06 12 31.2	
	3.7nm,0.8s,baz=30,slow=30,SNR=5.0						

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*ISCJB **08** 06:09:16.0±8.9, 24°S±1°×11°6W±°, h10^{km}, mb3.7/4, Error ellipse: s-maj=264.3km s-min=33.0km az=38.1*

*IDC **08** 06:09:16.8±1.2, 23°.59S×115°.40W, h0^{km}, mb3.6/4, mb1 4.0/4, mb1mx3.7/36, mbtmp3.6/4, Error ellipse: s-maj=47.9km s-min=36.2km az=33.0*

ISC 08 06:09:17.3±1.4, 23°.8S±0°.4×115°.6W±0°.3, h10^{km}, n15, σ0^{s}.64/11, mb3.8/4, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**45.00**	**90**	P	**P**	**06 17 34.3**	**+0.3**
	1.9nm,1.1s,baz=233,slow=7.2,SNR=5.0						
NVAR	**Mina Array Bea**	**61.95**	**358**	P	**P**	**06 19 38.8**	**+1.2**
	0.9nm,0.7s,baz=185,slow=9.8,SNR=3.6						
PDAR	**Pinedale Array**	**66.46**	**5**	P	**P**	**06 20 06.3**	**-0.8**
	0.3nm,0.7s,baz=161,slow=8.6,SNR=3.6						
YKA	**Yellowknife Ar**	**85.99**	**0**	P	**P**	**06 21 56.8**	**-0.6**
	0.3nm,0.8s,baz=177,slow=4.6,SNR=3.1						
H11S2	**WAKE ISLAND Hy**	**86.67**	**292**	T	T	07 57 50.8	
	baz=114						
H11S1	**WAKE ISLAND Hy**	**86.69**	**292**	T	T	07 57 49.9	
	baz=114						
H11S3	**WAKE ISLAND Hy**	**86.69**	**292**	T	T	07 57 52.1	
	baz=114						
H11N3	**WAKE ISLAND Hy**	**87.04**	**293**	T	T	07 58 16.4	
	baz=118						
H11N1	**WAKE ISLAND Hy**	**87.06**	**293**	T	T	07 58 18.6	
	baz=118						
H11N2	**WAKE ISLAND Hy**	**87.06**	**293**	T	T	07 58 17.2	
	baz=118						
ZALV	**Zalesovo Beam**	**146.22**	**338**	PKPbc	**PKPbc**	**06 28 57.7**	**0.0**
	0.5nm,0.5s,baz=48,slow=2.1,SNR=1.5						
CMAR	**Chiang Mai Arr**	**147.44**	**267**	PKPbc	**PKiKP**	**06 29 04.5**	**0.0**
	1.1nm,0.6s,baz=87,slow=1.9,SNR=5.1						
BRTR	**Keskin Array B**	**149.56**	**51**	PKP	**PKPdf**	**06 29 02.3**	**-0.5**
	0.2nm,0.5s,baz=207,slow=1.3,SNR=2.2						
BRTR				PKPbc	**PKPbc**	**06 29 07.2**	**-0.2**
	1.0nm,0.8s,baz=349,slow=1.5,SNR=4.0						
KURBB	**Kurchatov Arra**	**151.07**	**341**	PKPbc	**PKPbc**	**06 29 10.3**	**-0.1**
	0.5nm,0.6s,baz=28,slow=2.5,SNR=3.6						
MKAR	**Makanchi Array**	**152.95**	**332**	PKP	**PKPdf**	**06 29 08.3**	**+0.7**
	0.2nm,0.6s,baz=41,slow=3.1,SNR=3.2						
MKAR				PKPbc	**PKPbc**	**06 29 14.9**	**0.0**
	0.5nm,0.6s,baz=37,slow=4.0,SNR=4.7						

IDC 08 06:10:29.9±1.8, 10°.75S×165°.70E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.6/46, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=53.8km s-min=32.3km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.28**	**176**	Pn	Pn	06 13 12.5	0.0
	0.6nm,0.3s,baz=270,slow=3.6,SNR=12						
H11S2	**WAKE ISLAND Hy**	**29.07**	**2**	T	T	06 46 54.9	
	baz=181						
H11S3	**WAKE ISLAND Hy**	**29.08**	**2**	T	T	06 46 56.3	
	baz=181						
H11S1	**WAKE ISLAND Hy**	**29.09**	**2**	T	T	06 46 59.7	
	baz=181						
WRA	**Warramunga Arr**	**31.54**	**249**	P	P	06 16 53.5	-0.7
	0.5nm,0.8s,baz=80,slow=9.0,SNR=3.1						
ASAR	**Alice Springs**	**32.88**	**243**	P	P	06 17 06.6	+0.6
	0.9nm,0.8s,baz=78,slow=8.9,SNR=7.4						
ILAR	**Eielson Array**	**83.25**	**19**	P	P	06 22 58.0	0.0
	0.6nm,0.9s,baz=234,slow=6.1,SNR=4.9						

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*IDC **08** 06:12:08.8±1.3, 11°.57S×165°.05E, h0^{km}, mb4.0/7, mb1 4.1/8, mb1mx3.9/45, mbtmp4.0/8, ML3.7/1, Error ellipse: s-maj=43.0km s-min=23.1km az=132.0*

*ISCJB **08** 06:12:11.8±0.9, 11°.81S±0°.08×165°.1E±0°.2, h34^{km}, mb3.9/7, Error ellipse: s-maj=22.8km s-min=10.5km az=171.1*

ISC 08 06:12:13.7±0.9, 11°.67S±0°.10×165°.1E±0°.2, h34^{km}, n14, σ1^{s}.49/9, mb3.9/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.42**	**173**	Pn	**Pn**	**06 14 43.0**	**+2.1**
	0.6nm,0.3s,baz=307,slow=15,SNR=9.8						
DZM				Sn	**Sn**	**06 16 34.7**	**-2.0**
	0.2nm,0.3s,baz=9.5,slow=18,SNR=2.1						
H11S2	**WAKE ISLAND Hy**	**30.01**	**3**	T	T	06 49 39.9	
	baz=184,slow=76,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**30.01**	**3**	T	T	06 49 38.7	
	baz=184,slow=76,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**30.03**	**3**	T	T	06 49 42.3	
	baz=184,slow=76,SNR=4.9						
WRA	**Warramunga Arr**	**30.68**	**251**	P	**P**	**06 18 24.5**	**-1.0**
	2.3nm,1.0s,baz=79,slow=9.5,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**31.23**	**3**	T	T	06 51 17.2	
	baz=185						
H11N3	**WAKE ISLAND Hy**	**31.24**	**3**	T	T	06 51 16.7	
	baz=185						
H11N2	**WAKE ISLAND Hy**	**31.25**	**3**	T	T	06 51 12.1	
	baz=185						
ASAR	**Alice Springs**	**31.95**	**244**	P	**P**	**06 18 35.6**	**-1.1**
	1.6nm,0.8s,baz=74,slow=9.2,SNR=13						
FITZ	**Fitzroy Crossi**	**38.61**	**256**	P	**P**	**06 19 34.5**	**+0.5**
	1.0nm,0.7s,baz=99,slow=13,SNR=3.1						
SONM	**Songino Array**	**78.80**	**324**	P	**P**	**06 24 14.0**	**+0.8**
	1.0nm,0.8s,baz=122,slow=5.4,SNR=3.2						
ILAR	**Eielson Array**	**84.30**	**19**	P	**P**	**06 24 41.9**	**+0.1**
	0.5nm,0.6s,baz=233,slow=4.7,SNR=12						
MKAR	**Makanchi Array**	**93.54**	**317**	P	**P**	**06 25 26.5**	**+0.2**
	1.1nm,0.7s,baz=99,slow=6.3,SNR=9.7						
YKA	**Yellowknife Ar**	**95.81**	**27**	P	**P**	**06 25 34.8**	**-1.4**
	0.2nm,0.7s,baz=262,slow=4.1,SNR=3.4						

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*GRAL **08** 06:15:44.6±0.3, 32°.99N×35°.89E, h9^{km}±5^{km}, MD2.9*

*GII **08** 06:15:45.5±0.0, 33°.08N×35°.86E, h1^{km}±1^{km}, MD2.2/5*

ISC 08 06:15:43.8±1.3, 33°.07N±0°.02×35°.98E±0°.06, h10^{km}±10^{km}, n19, σ0^{s}.83/31, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NATI	**Neve Ativ**	**0.28**	**314**	Pg	**Pb**	**06 15 50.1**	**-0.8**
NATI				Sg	**Sg**	**06 15 54.5**	**+1.2**
KSDI	**Kefar Szold**	**0.29**	**295**	Pg	**Pb**	**06 15 50.6**	**-0.6**
SHBL	**Chebaa**	**0.34**	**325**	*e*P	**Pb**	**06 15 51.4**	**-0.6**
SHBL				*e*S	**Sb**	**06 15 56.7**	**-0.9**
RCY	**Rachaya**	**0.44**	**345**	*e*P	**Pb**	**06 15 53.9**	**0.0**
RCY				*e*S	**Sb**	**06 16 00.6**	**0.0**
MMA0B	**Mount Meron ar**	**0.48**	**264**	Pg	**Pb**	**06 15 53.9**	**-0.6**
MMA0B				Sg	**Sb**	**06 16 00.8**	**-0.8**
HNTI	**Hanita**	**0.67**	**271**	Pg	**Pb**	**06 15 57.7**	**+0.1**
HNTI				Sg	**Sb**	**06 16 07.0**	**0.0**
DQRL	**Deir Qamar**	**0.72**	**332**	*e*P	**Pb**	**06 15 58.4**	**-0.1**
BLGI	**Bet Lehem HaGe**	**0.74**	**243**	Pg	**Pb**	**06 15 59.0**	**+0.2**
BLGI				Sg	**Sb**	**06 16 09.5**	**+0.6**
HMDT	**Nahal Hemdat**	**0.90**	**205**	Pg	**Pn**	**06 16 02.6**	**+0.2**
HMDT				Sg	**Sn**	**06 16 15.6**	**+0.2**
OFRI	**`Ofer**	**0.94**	**242**	Pg	**Pn**	**06 16 03.2**	**0.0**
SLTI	**Sal'it**	**1.14**	**224**	Pg	**Pn**	**06 16 06.5**	**+0.7**
SLTI				Sg	**Sn**	**06 16 22.4**	**+0.9**
HWQ	**Hawqa**	**1.21**	**359**	*e*P	**Pg**	**06 16 06.9**	**-0.2**
DSI	**Dead Sea**	**1.58**	**199**	Pn	**Pg**	**06 16 13.9**	**-0.2**
DSI				Sn	**Sg**	**06 16 35.1**	**+0.6**
AMAZ	**Amatzia**	**1.77**	**211**	Pn	**Pg**	**06 16 17.3**	**-0.6**
AMAZ				Sn	**Sg**	**06 16 41.3**	**+0.4**
GHAJ	**Ghor Haditha**	**1.79**	**191**	Pn	**Pb**	**06 16 16.9**	**+0.2**
GHAJ				Sn	**Sb**	**06 16 40.3**	**+1.1**
MZDA	**Masada**	**1.83**	**197**	Pn	**Pb**	**06 16 17.7**	**+0.4**
MZDA				Sn	**Sg**	**06 16 42.2**	**-0.4**
YTIR	**Yattir**	**1.85**	**203**	Pn	**Pb**	**06 16 18.2**	**+0.4**
KZIT	**Kziot**	**2.54**	**212**	Pn	**Pb**	**06 16 27.9**	**-1.6**
PRNI	**Paran**	**2.83**	**197**	Pn	**Pb**	**06 16 31.8**	**-2.7**

MEX 08 06:16:23.7±0.3, 15°.76N×93°.91W, h103^{km}±10^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.67**	**95**	*e*P	Pn	06 16 39.8	-1.3
PCIG				*e*S	Sn	06 16 52.4	-1.7
CMIG	**Matias Romero**	**1.62**	**325**	*e*P	Pn	06 16 50.6	-1.0
CMIG				*e*S	Sn	06 17 11.0	-1.8
HUIG	**Huatulco**	**2.12**	**270**	*e*P	Pn	06 16 55.1	-2.9

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*IDC **08** 06:17:00.2±1.1, 11°.51S×165°.00E, h0^{km}, mb4.2/10, mb1 4.3/12, mb1mx4.1/43, mbtmp4.2/12, ML3.7/2, MS3.6/2, Ms1 3.5/2, ms1mx2.9/27, Error ellipse: s-maj=37.6km s-min=20.2km az=128.0*

*NEIC **08** 06:17:02.3±0.3, 11°.48S×164°.96E, h10^{km}, mb4.5/11, Error ellipse: s-maj=11.3km s-min=8.1km az=126.0*

*ISCJB **08** 06:17:04.3±0.5, 11°.63S±0°.08×164°.95E±0°.08, h34^{km}, mb4.3/19, MS3.5/2, Error ellipse: s-maj=12.7km s-min=9.8km az=34.8*

ISC 08 06:17:05.8±0.6, 11°.55S±0°.10×165°.0E±0°.1, h34^{km}, n42, σ1^{s}.06/39, mb4.3/19, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.43**	**292**	*e*Pn	**Pn**	**06 18 26.9**	**+2.4**
DZM	**Mont Dzumac**	**10.55**	**173**	*e*Pn	**Pn**	**06 19 34.7**	**-0.1**
DZM	**Mont Dzumac**	**10.55**	**173**	Pn	**Pn**	**06 19 34.3**	**-0.4**
	0.4nm,0.3s,baz=300,slow=14,SNR=14						
CTA	**Charters Tower**	**19.95**	**243**	P	**Pn**	**06 21 35.6**	**-1.5**
	0.2nm,0.3s,baz=60,slow=16,SNR=3.5						
COEN	**Coen**	**21.46**	**261**	*e*P	**P**	**06 21 51.6**	**+0.1**
	11nm,0.9s						
BKZ	**Black Stump Fm**	**29.33**	**162**	*e*P	**P**	**06 23 07.7**	**+2.3**
	7.4nm,1.1s						
STKA	**Stephens Creek**	**29.60**	**223**	P	**P**	**06 23 08.0**	**+0.1**
	0.5nm,0.4s,baz=77,slow=14,SNR=3.2						
STKA				LR	LR	06 34 05.2	
	comp=Z,119nm,20.8s,baz=28,slow=35						
H11S2	**WAKE ISLAND Hy**	**29.90**	**3**	T	T	06 54 30.7	
	baz=184,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**29.90**	**3**	T	T	06 54 35.4	
	baz=184,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**29.91**	**3**	T	T	06 54 34.1	
	baz=184,slow=76,SNR=11						
WRAB	**Tennant Creek**	**30.65**	**250**	*e*P	**P**	**06 23 17.6**	**+0.2**
	6.9nm,1.1s						
WB2	**Warramunga Arr**	**30.65**	**250**	*e*P	**P**	**06 23 16.2**	**-1.1**
	4.9nm,0.9s						
WR1	**Warramunga Arr**	**30.66**	**250**	*e*P	**P**	**06 23 15.6**	**-1.9**
	8.8nm,1.0s						
WRA	**Warramunga Arr**	**30.66**	**250**	P	**P**	**06 23 15.6**	**-1.9**
	4.6nm,1.0s,baz=82,slow=8.7,SNR=13						
WRA				LR	LR	06 35 33.8	
	comp=Z,96nm,18.0s,baz=210,slow=36						
H11N1	**WAKE ISLAND Hy**	**31.12**	**3**	T	T	06 56 07.5	
	baz=184,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**31.13**	**3**	T	T	06 56 06.8	
	baz=184,slow=76,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**31.14**	**3**	T	T	06 56 08.8	
	baz=184,slow=76,SNR=10						
ASAR	**Alice Springs**	**31.95**	**244**	P	**P**	**06 23 26.5**	**-2.2**
	4.1nm,1.0s,baz=72,slow=9.1,SNR=20						
ASAR				PcP	**PcP**	**06 26 18.2**	**-0.5**
	0.3nm,0.7s,baz=88,slow=2.9,SNR=3.8						
FITZ	**Fitzroy Crossi**	**38.58**	**255**	*e*P	**P**	**06 24 24.9**	**-0.9**
	3.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.58**	**255**	P	**P**	**06 24 24.5**	**-1.4**
	2.3nm,0.8s,baz=98,slow=5.5,SNR=5.5						
CMAR	**Chiang Mai Arr**	**71.68**	**294**	P	**P**	**06 28 26.0**	**+1.1**
	0.6nm,0.3s,baz=126,slow=4.6,SNR=4.4						
OHAK	**Old Harbor**	**76.63**	**22**	*e*P	**P**	**06 28 51.9**	**-0.9**
	22nm,1.2s						
QSPA	**South Pole Qui**	**78.45**	**180**	*e*P	**P**	**06 29 03.9**	**+0.7**
	4.1nm,1.1s						
SONA0	**Songino Array**	**78.67**	**324**	*e*P	**P**	**06 29 04.0**	**-0.7**
SONM	**Songino Array**	**78.67**	**324**	P	**P**	**06 29 04.0**	**-0.7**
	0.8nm,0.8s,baz=132,slow=4.4,SNR=3.7						
IM3	**Indian Mountai**	**83.10**	**16**	*e*P	**P**	**06 29 28.2**	**+0.4**
IL1	**Eielson Array**	**84.21**	**19**	*e*P	**P**	**06 29 33.6**	**+0.2**
ILAR	**Eielson Array**	**84.21**	**19**	P	**P**	**06 29 33.2**	**-0.2**
	0.9nm,0.8s,baz=234,slow=5.1,SNR=13						
ILB	**Eielson Array**	**84.21**	**19**	*e*P	**P**	**06 29 34.3**	**+0.9**
SCRK	**Sand Creek**	**84.63**	**20**	*e*P	**P**	**06 29 36.5**	**+0.7**
	3.8nm,1.0s						
PINE	**Pine Mountain**	**86.67**	**44**	*e*P	**P**	**06 29 47.2**	**+0.8**
	6.2nm,1.0s						
MK01	**Makanchi Array**	**93.40**	**317**	*e*P	**P**	**06 30 17.9**	**+0.1**
MK31	**Makanchi Array**	**93.42**	**317**	*e*P	**P**	**06 30 18.5**	**+0.7**
MK32	**Makanchi Array**	**93.42**	**317**	*e*P	**P**	**06 30 17.6**	**-0.2**
MKAR	**Makanchi Array**	**93.42**	**317**	*e*P	**P**	**06 30 18.6**	**+0.7**
	9.4nm,0.8s						
MKAR	**Makanchi Array**	**93.42**	**317**	P	**P**	**06 30 17.6**	**-0.2**
	1.2nm,0.7s,baz=94,slow=6.4,SNR=10						
ZALV	**Zalesovo Beam**	**93.56**	**324**	P	**P**	**06 30 17.6**	**-0.7**
	0.6nm,0.5s,baz=99,slow=6.5,SNR=3.6						
ZAA1	**Zalesovo Array**	**93.56**	**324**	*e*P	**P**	**06 30 17.6**	**-0.7**
YKA	**Yellowknife Ar**	**95.74**	**27**	P	**P**	**06 30 26.4**	**-1.6**
	0.3nm,0.7s,baz=260,slow=5.1,SNR=5.8						
PB10	**IPOC Station P**	**115.43**	**123**	*e*PKPdf	**PKiKP**	**06 35 44.2**	**-0.7**
TORD	**Torodi Ar. Bea**	**163.65**	**277**	PKP	**PKPdf**	**06 37 06.0**	**-0.3**
	0.6nm,1.0s,baz=147,slow=2.9,SNR=3.0						
TORD				PKPab	**PKPab**	**06 37 57.9**	**-0.4**
	0.8nm,1.0s,baz=98,slow=4.5,SNR=3.0						
TOA1	**Torodi Ar. Sit**	**163.65**	**277**	*e*PKPdf	**PKPdf**	**06 37 06.0**	**-0.3**
TOA1				*e*PKPab	**PKPab**	**06 37 57.9**	**-0.4**

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*IDC **08** 06:18:45.5±1.4, 23°.90S×115°.78W, h0^{km}, mb4.1/7, mb1 4.4/7, mb1mx4.0/33, mbtmp4.1/7, MS4.0/5, Ms1 4.0/5, ms1mx3.6/25, Error ellipse: s-maj=45.3km s-min=28.0km az=36.0*

*NEIC **08** 06:18:47.0±0.6, 24°.35S×115°.96W, h10^{km}, mb4.5/44, Error ellipse: s-maj=19.1km s-min=11.8km az=55.0*

ISC 08 06:18:46.1±0.8, 24°.4S±0°.2×115°.9W±0°.1, h12^{km}, n86, σ1^{s}.75/77, mb4.5/51, MS4.4/5, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**6.53**	**116**	LR	LR	06 22 16.0	
	comp=Z,610nm,18.4s,baz=304,slow=32						
PPT	**Papeete**	**32.08**	**276**	LR	LR	06 34 17.6	
	comp=Z,229nm,18.3s,baz=278,slow=29						
GO04	**Tololo Observa**	**40.32**	**108**	*e*P	**P**	**06 26 25.2**	**+1.3**
	12nm,1.1s						
PEL	**Peldehue**	**40.35**	**113**	*e*P	**P**	**06 26 26.1**	**+2.3**
	3.0nm,0.5s						
LCO	**Las Campanas**	**40.48**	**107**	*e*P	**P**	**06 26 27.6**	**+2.3**
	8.1nm,1.0s						
LVC	**Limon Verde**	**43.00**	**98**	*e*P	**P**	**06 26 47.8**	**+1.7**
	4.3nm,0.9s						
LVC	**Limon Verde**	**43.00**	**98**	P	**P**	**06 26 47.1**	**+1.0**
	6.2nm,1.1s,baz=267,slow=11,SNR=4.9						
OTAV	**Otavalo**	**43.80**	**62**	*e*P	**P**	**06 26 49.3**	**-3.5**
	2.7nm,1.0s						
LPAZ	**La Paz**	**45.36**	**89**	*e*P	**P**	**06 27 05.2**	**-0.2**
	4.6nm,0.9s						
LPAZ	**La Paz**	**45.36**	**89**	P	**P**	**06 27 04.9**	**-0.5**
	4.0nm,1.0s,baz=269,slow=8.2,SNR=13						
JTS	**JuntasAbangare**	**45.88**	**45**	*e*P	**P**	**06 27 11.4**	**+2.7**
	7.2nm,0.9s						
HDC	**Heredia**	**46.21**	**46**	*e*P	**P**	**06 27 08.9**	**-2.5**
	15nm,0.8s						
ROSC	**El Rosal**	**49.86**	**60**	LR	LR	06 44 47.4	
	comp=Z,106nm,19.1s,baz=82,slow=32						
LTX	**Lajitas**	**54.73**	**13**	*e*P	**P**	**06 28 13.5**	**-2.1**
TX31	**Lajitas Ar. Si**	**54.73**	**13**	*e*P	**P**	**06 28 18.0**	**+2.4**
	1.3nm,1.0s						
TXAR	**Lajitas Array**	**54.73**	**13**	P	**P**	**06 28 13.5**	**-2.1**
	1.1nm,1.0s,baz=201,slow=13,SNR=5.3						
319A	**Douglas**	**55.84**	**7**	*e*P	**P**	**06 28 24.8**	**+1.2**
	5.7nm,0.9s						
TUC	**Tucson**	**56.62**	**5**	*e*P	**P**	**06 28 29.9**	**+0.8**
	2.3nm,1.1s						
MNTX	**Cornudas Mount**	**56.70**	**11**	*e*P	**P**	**06 28 29.4**	**-0.2**
	3.2nm,1.0s						
JCT	**Junction City**	**56.73**	**17**	*e*P	**P**	**06 28 29.9**	**0.0**
	15nm,1.0s						
113A	**Mohawk Valley,**	**56.90**	**2**	*e*P	**P**	**06 28 32.6**	**+1.6**
	2.9nm,0.8s						
Y14A	**Wickenburg**	**58.10**	**3**	*e*P	**P**	**06 28 40.6**	**+1.2**
	2.7nm,1.1s						
LENM	**Lemitar**	**58.88**	**9**	*e*P	**P**	**06 28 44.7**	**-0.4**
SHPR	**Sheep Range**	**60.60**	**1**	*e*P	**P**	**06 28 57.4**	**+0.6**
	5.7nm,1.1s						
U15A	**North Rim**	**60.61**	**3**	*e*P	**P**	**06 28 57.5**	**+0.4**
	5.0nm,1.1s						
KNB	**Kanab**	**61.17**	**3**	*e*P	**P**	**06 29 03.2**	**+2.4**
	4.3nm,1.2s						
CCUT	**Cedar City**	**61.68**	**2**	*e*P	**P**	**06 29 04.7**	**+0.4**
	8.3nm,1.1s						
S22A	**4UR Ranch, Cre**	**62.42**	**8**	*e*P	**P**	**06 29 10.1**	**+0.8**
	2.2nm,1.1s						
R11A	**Troy Canyon, C**	**62.43**	**0**	*e*P	**P**	**06 29 09.4**	**+0.2**
	1.8nm,0.9s						
NV11	**Mina Array Sit**	**62.55**	**358**	*e*P	**P**	**06 29 10.7**	**+0.7**
	0.3nm,1.1s						
NV01	**Mina Array Sit**	**62.55**	**358**	*e*P	**P**	**06 29 08.4**	**-1.7**
NVAR	**Mina Array Bea**	**62.55**	**358**	P	**P**	**06 29 08.5**	**-1.6**
	3.2nm,1.0s,baz=191,slow=7.7,SNR=6.5						
SDCO	**Great Sand Dun**	**62.60**	**9**	*e*P	**P**	**06 29 11.4**	**+0.9**
	2.2nm,1.0s						
PSUT	**Pine Spring**	**62.65**	**2**	*e*P	**P**	**06 29 10.7**	**0.0**
	3.6nm,0.9s						
WAKR	**Walker**	**62.67**	**357**	*e*P	**P**	**06 29 13.0**	**+2.1**
	1.2nm,1.1s						
PV16	**Nyswonger Mesa**	**62.74**	**6**	*e*P	**P**	**06 29 12.5**	**+1.1**
	1.9nm,1.0s						
KEKH	**Kekaha**	**62.75**	**314**	*e*P	**P**	**06 29 12.3**	**+0.9**
	104nm,1.2s						
YERR	**Yerington**	**63.14**	**357**	*e*P	**P**	**06 29 14.7**	**+0.7**
	5.5nm,1.0s						
SRU	**San Rafael Swe**	**63.40**	**5**	*e*P	**P**	**06 29 18.9**	**+3.3**
	5.5nm,1.2s						
NLU	**North Lily Min**	**64.14**	**3**	*e*P	**P**	**06 29 23.1**	**+2.6**
	4.6nm,1.2s						
MPU	**Maple Canyon**	**64.22**	**4**	*e*P	**P**	**06 29 23.7**	**+2.6**
	4.6nm,1.1s						
ELK	**Elko**	**64.83**	**1**	*e*P	**P**	**06 29 27.2**	**+2.1**
	3.8nm,1.1s						
BGU	**Big Grassy Mou**	**65.06**	**2**	*e*P	**P**	**06 29 28.1**	**+1.6**
	2.6nm,1.0s						
WVOR	**Wild Horse Val**	**66.56**	**358**	*e*P	**P**	**06 29 37.6**	**+1.5**
	3.3nm,1.0s						
PDAR	**Pinedale Array**	**67.10**	**5**	P	**P**	**06 29 36.8**	**-2.9**
	0.9nm,0.9s,baz=159,slow=4.6,SNR=4.9						
K22A	**Casper**	**67.29**	**8**	*e*P	**P**	**06 29 43.9**	**+3.1**
	8.7nm,1.1s						
J08A	**Circle Bar Ran**	**67.48**	**358**	*e*P	**P**	**06 29 44.2**	**+2.3**
	8.0nm,1.1s						
HLID	**Hailey**	**67.66**	**1**	*e*P	**P**	**06 29 42.6**	**-0.5**
	6.8nm,1.1s						
Q44A	**Meyer Farm, Va**	**67.84**	**22**	*e*P	**P**	**06 29 45.5**	**+1.4**
	12nm,1.0s						
MOOW	**Moose Ponds**	**68.00**	**4**	*e*P	**P**	**06 29 46.0**	**+0.7**
	2.3nm,1.1s						
PINE	**Pine Mountain**	**68.03**	**356**	*e*P	**P**	**06 29 46.5**	**+1.0**
	6.2nm,1.0s						
IMW	**Indian Meadow**	**68.13**	**4**	*e*P	**P**	**06 29 46.4**	**+0.2**
	3.6nm,1.0s						
MCMT	**McKenzie Canyo**	**68.96**	**2**	*e*P	**P**	**06 29 50.7**	**-0.7**
G08A	**Pilot Rock**	**69.42**	**358**	*e*P	**P**	**06 29 54.7**	**+0.7**
	4.5nm,1.1s						
HRY	**Holter Researc**	**70.89**	**3**	*e*P	**P**	**06 30 03.0**	**0.0**
EGMT	**Eagleton**	**72.32**	**4**	*e*P	**P**	**06 30 14.8**	**+3.3**
	3.7nm,1.0s						
NEW	**Newport**	**72.35**	**359**	*e*P	**P**	**06 30 11.1**	**-0.5**
	5.0nm,1.1s						
ULM	**Lac du Bonnet**	**76.43**	**13**	P	**P**	**06 30 32.4**	**-2.9**
	1.4nm,0.5s,baz=199,slow=7.8,SNR=4.5						
FCC	**Fort Churchill**	**84.83**	**11**	*e*P	**P**	**06 31 20.2**	**+0.1**
	6.2nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**86.58**	**292**	T	T	08 07 21.7	
	baz=117						
H11S1	**WAKE ISLAND Hy**	**86.59**	**292**	T	T	08 07 22.7	
	baz=117						
H11S3	**WAKE ISLAND Hy**	**86.59**	**292**	T	T	08 07 24.0	
	baz=117						
YKA	**Yellowknife Ar**	**86.61**	**1**	P	**P**	**06 31 28.4**	**-0.5**
	1.4nm,0.9s,baz=173,slow=4.8,SNR=13						
YKB5	**Yellowknife Ar**	**86.61**	**1**	*e*P	**P**	**06 31 28.6**	**-0.3**
YKW3	**Yellowknife Ar**	**86.68**	**1**	*e*P	**P**	**06 31 30.9**	**+1.7**
	4.7nm,1.1s						
KDAK	**Kodiak Island**	**87.44**	**341**	LR	LR	06 59 56.9	
	comp=Z,188nm,20.4s,baz=150,slow=28						
MAW	**Mawson**	**88.26**	**180**	LR	LR	07 06 48.8	
	comp=Z,147nm,20.5s,baz=88,slow=32						
NJ2	**Nanjing**	**131.56**	**292**	*e*P	**PKPdf**	**06 37 54.0**	**-5.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**137.31**	**304**	*e*P	**PKPdf**	**06 38 05.1**	**-4.7**
LZH	**Lanzhou**	**143.95**	**298**	*e*PKP	PKPab	06 38 11.7	-7.6

```
LZH                                   pPKP   pPKPdf  06 38 24.9   0.0
LZH                                   sPKP           06 38 28.6
GTA    Gaotai            146.42 305  eP      PKiKP   06 38 31.7  +1.3
GTA                                   pP     sPKPab  06 38 38.4  +6.2
GTA                                   sP     sPKPbc  06 38 41.4  +10
GTA                                   pmax   pmax
       comp=Z,5.0nm,1.1s
GTA                                   pmax   pmax
       comp=Z,66nm,5.9s
GTA                                   LR     LR
       comp=N,130nm,20.6s
GTA                                   LR     LR
       comp=E,220nm,22.9s
GTA                                   LR     LR
       comp=Z,100nm,19.4s
ZAA1   Zalesovo Array    146.66 338  ePKPdf  PKPbc   06 38 27.3  -0.1
ZALV   Zalesovo Beam     146.66 338  ePKPdf  PKPbc   06 38 28.4  +0.9
ZALV   Zalesovo Beam     146.66 338   PKPbc  PKPbc   06 38 27.3  -0.2
       comp=Z,1.1nm,0.5s,baz=53,slow=2.6,SNR=6.2
CM31   Chiang Mai Arr    147.06 266  ePKPdf  PKPbc   06 38 30.1  +0.4
CMAR   Chiang Mai Arr    147.06 266   PKPbc  PKPbc   06 38 30.4  +0.7
       comp=Z,0.6nm,0.3s,baz=129,slow=4.7,SNR=4.6
BR101  Keskin Array S    150.21  52  ePKPbc  PKPbc   06 38 37.3  -0.1
BRTR   Keskin Array B    150.21  52   PKPbc  PKPbc   06 38 37.3  -0.1
       comp=Z,1.5nm,0.9s,baz=197,slow=1.3,SNR=6.4
BRVK   Borovoye          151.01 352  ePKPbc  PKPbc   06 38 38.9  +0.3
KURK   Kurchatov         151.43 340  ePKPbc  PKPbc   06 38 40.3  +0.6
MK31   Makanchi Array    153.33 331  ePKPbc  PKPbc   06 38 44.3  +0.1
MK32   Makanchi Array    153.33 331  ePKPbc  PKPbc   06 38 44.5  +0.3
MKAR   Makanchi Array    153.33 331  ePKPbc  PKiKP   06 38 45.9  +1.6
MKAR   Makanchi Array    153.33 331   PKPbc  PKPbc   06 38 44.5  +0.3
       comp=Z,1.0nm,0.9s,baz=42,slow=0.6,SNR=7.3
MK01   Makanchi Array    153.34 331  ePKPbc  PKiKP   06 38 44.8  +0.5
MAKZ   Makanchi          153.45 332  ePKPbc  PKiKP   06 38 46.8  +2.3
```

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*IDC **08** 06:19:30.5±1.2, 11°.43S×164°.90E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/39, mbtmp3.7/6, ML3.3/1, Error ellipse: s-maj=45.8km s-min=26.0km az=138.0*

*ISCJB **08** 06:19:34.0±1.0, 11°.7S±0°.1×164°.9E±0°.2, h34km, mb3.6/5, Error ellipse: s-maj=26.8km s-min=19.9km az=11.0*

ISC 08 06:19:35.6±1.0**, 11°.6S**±0°.1×**164°.9E**±0°.2**, h34km, n6, σ0s.37**/6**, mb3.5**/5**, Santa Cruz Islands region**

```
Code   Station Name        Δ°  AZ°   Phase ID        Time      Res
                                     Op      ISC     h  m  s   ISC
DZM    Mont Dzumac       10.56 172   Pn      Pn      06 22 04.9  +0.1
       0.2nm,0.3s,baz=300,slow=20,SNR=3.5
WRA    Warramunga Arr    30.56 250   P       P       06 25 46.4   0.0
       0.6nm,0.7s,baz=76,slow=8.7,SNR=4.4
ASAR   Alice Springs     31.86 244   P       P       06 25 57.3  -0.4
       0.4nm,0.7s,baz=67,slow=9.6,SNR=2.9
ILAR   Eielson Array     84.24  19   P       P       06 32 03.3  -0.1
       0.2nm,0.6s,baz=232,slow=4.4,SNR=4.4
NVAR   Mina Array Bea    86.95  50   P       P       06 32 17.6  -0.2
       0.2nm,0.3s,baz=249,slow=7.6,SNR=2.7
MKAR   Makanchi Array    93.34 317   P       P       06 32 47.7  +0.4
       0.6nm,0.8s,baz=93,slow=6.2,SNR=3.8
```

IDC 08 06:20:52.5±8.8**, 14°.18S**×**167°.20E, h162km**±89km**, mb3.1**/3**, mb1 3.4**/4**, mb1mx3.2**/40**, mbtmp3.6**/4**, Error ellipse: s-maj=77.3km s-min=31.8km az=162.0, Vanuatu Islands**

```
Code   Station Name        Δ°  AZ°   Phase ID        Time      Res
                                     Op      ISC     h  m  s   ISC
DZM    Mont Dzumac        7.88 185   P       Pn      06 22 45.2  +0.8
       2.2nm,0.3s,baz=37,slow=20,SNR=13
DZM                                  S       Sn      06 24 11.8  -0.8
       0.2nm,0.3s,baz=17,slow=19,SNR=2.1
WRA    Warramunga Arr    31.89 255   P       P       06 27 02.8  -0.1
       0.2nm,0.6s,baz=85,slow=9.1,SNR=5.3
ASAR   Alice Springs     32.81 248   P       P       06 27 10.8   0.0
       0.3nm,0.4s,baz=78,slow=9.3,SNR=6.3
ILAR   Eielson Array     86.03  18   P       P       06 33 14.2  -0.2
       0.5nm,0.7s,baz=235,slow=4.4,SNR=5.5
ARCES  ARCESS Array B   119.71 345   PKP     PKPdf   06 39 22.6  -0.1
       2.2nm,1.0s,baz=66,slow=1.9,SNR=10
```

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*IDC **08** 06:27:01.1±1.0, 11°.84S×165°.35E, h0km, mb4.0/8, mb1 4.3/9, mb1mx4.0/32, mbtmp4.0/9, ML4.1/1, Error ellipse: s-maj=44.5km s-min=20.1km az=141.0*

*NEIC **08** 06:27:03.4±0.3, 11°.89S×165°.37E, h10km, mb4.5/17, Error ellipse: s-maj=10.9km s-min=8.4km az=130.0*

*ISCJB **08** 06:27:05.3±0.4, 12°.00S±0°.07×165°.28E±0°.08, h33km, mb4.3/24, Error ellipse: s-maj=11.6km s-min=9.0km az=41.2*

ISC 08 06:27:06.8±0.6**, 11°.9S**±0°.1×**165°.4E**±0°.1**, h35km, n44, σ1s.12**/37**, mb4.3**/24**, Santa Cruz Islands**

```
Code   Station Name        Δ°  AZ°   Phase ID        Time      Res
                                     Op      ISC     h  m  s   ISC
HNR    Honiara            5.89 294  ePn      Pn      06 28 32.8  +1.1
DZM    Mont Dzumac       10.17 175  ePn      Pn      06 29 29.4  -1.0
DZM    Mont Dzumac       10.17 175   Pn      Pn      06 29 29.5  -0.9
       1.8nm,0.3s,baz=339,slow=12,SNR=17
CTA    Charters Tower    20.11 244   P       Pn      06 31 37.7  -2.1
       6.1nm,0.9s,baz=66,slow=12,SNR=2.9
URZ    Urewera           28.26 160  eP       P       06 32 58.2  +1.5
       6.5nm,1.0s
BKZ    Black Stump Fm    28.89 162  eP       P       06 33 04.7  +2.4
       0.9nm,0.5s
H11S2  WAKE ISLAND Hy    30.22   2   T       T       07 04 31.7
       baz=184,slow=76,SNR=27
H11S3  WAKE ISLAND Hy    30.22   2   T       T       07 04 32.0
       baz=184,slow=76,SNR=28
H11S1  WAKE ISLAND Hy    30.24   2   T       T       07 04 33.1
       baz=184,slow=76,SNR=34
WB2    Warramunga Arr    30.87 251  eP       P       06 33 19.9  -0.2
       4.5nm,1.1s
WRAB   Tennant Creek     30.87 251  eP       P       06 33 19.7  -0.4
       2.5nm,1.1s
WR1    Warramunga Arr    30.88 251  eP       P       06 33 19.1  -1.1
       4.4nm,1.1s
WRA    Warramunga Arr    30.88 251   P       P       06 33 19.1  -1.1
       0.9nm,0.5s,baz=80,slow=8.9,SNR=18
H11N1  WAKE ISLAND Hy    31.44   3   T       T       07 06 04.0
       baz=184,slow=76,SNR=16
H11N3  WAKE ISLAND Hy    31.45   3   T       T       07 06 13.5
       baz=184,slow=76,SNR=11
H11N2  WAKE ISLAND Hy    31.46   3   T       T       07 06 13.5
       baz=184,slow=76,SNR=20
ASAR   Alice Springs     32.12 244   P       P       06 33 29.2  -1.8
       1.4nm,0.8s,baz=77,slow=10.0,SNR=13
ANA2   Anatahan          34.15 325  eP       P       06 33 47.6  -1.2
       223nm,0.4s
FITZ   Fitzroy Crossi    38.84 256  eP       P       06 34 29.7  +0.9
       5.2nm,1.0s
CAST   Castle Rocks      81.86  18  eP       P       06 39 23.8  +1.7
       2.9nm,0.7s
SCM    Sheep Creek Mo    82.25  21  eP       P       06 39 24.7  +0.4
       7.7nm,0.9s
TRF    Thorofare Moun    82.43  18  eP       P       06 39 26.5  +1.2
       2.5nm,1.0s
IM3    Indian Mountai    83.33  16  eP       P       06 39 30.4  +0.7
WRH    Wood River Hil    83.84  18  eP       P       06 39 33.4  +1.1
       1.9nm,0.8s
MDM    Murphy Dome       84.14  18  eP       P       06 39 34.7  +0.8
       4.3nm,1.1s
HDA    Harding Lake      84.15  19  eP       P       06 39 34.6  +0.7
       7.1nm,0.9s
IL1    Eielson Array     84.42  19  eP       P       06 39 35.9  +0.6
ILAR   Eielson Array     84.42  19   P       P       06 39 35.0  -0.3
       1.5nm,0.7s,baz=246,slow=5.0,SNR=33
ILB    Eielson Array     84.42  19  eP       P       06 39 35.8  +0.5
DOT    Dot Lake          84.59  20  eP       P       06 39 37.4  +1.2
       5.2nm,0.8s
SCRK   Sand Creek        84.83  20  eP       P       06 39 38.2  +0.7
       6.0nm,1.0s
EGAK   Eagle             86.29  20  eP       P       06 39 45.5  +0.9
       4.7nm,0.8s
DAWY   Dawson            86.47  21  eP       P       06 39 46.8  +1.2
       1.1nm,0.9s
NVAR   Mina Array Bea    86.83  50   P       P       06 39 48.0  -0.2
       0.6nm,0.6s,baz=243,slow=6.5,SNR=3.8
MK01   Makanchi Array    93.90 317  eP       P       06 40 21.6  +0.7
MK31   Makanchi Array    93.91 317  eP       P       06 40 22.1  +1.2
MK32   Makanchi Array    93.91 317  eP       P       06 40 21.1  +0.2
MKAR   Makanchi Array    93.91 317  eP       P       06 40 22.1  +1.2
       5.8nm,1.0s
MKAR   Makanchi Array    93.91 317   P       P       06 40 21.1  +0.2
       0.8nm,0.8s,baz=90,slow=6.6,SNR=5.2
PDAR   Pinedale Array    94.37  47   P       P       06 40 23.7  +0.3
       0.2nm,0.5s,baz=228,slow=3.5,SNR=2.5
YKA    Yellowknife Ar    95.88  27   P       P       06 40 27.8  -1.6
       0.4nm,0.6s,baz=256,slow=4.6,SNR=7.3
ARA0   ARCESS Array S   117.07 345  ePKPdf   PKiKP   06 45 47.5   0.0
ARCES  ARCESS Array B   117.07 345   PKP     PKiKP   06 45 47.5   0.0
       1.4nm,0.8s,baz=83,slow=2.8,SNR=2.9
YLE    Yale             121.45  49  ePKPdf   PKPdf   06 45 54.4  -2.3
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*ISCJB **08** 06:28:15.8±1.1, 10°.96S±0°.09×164°.7E±0°.1, h31km, mb3.9/4, MS3.5/3, Error ellipse: s-maj=18.4km s-min=9.0km az=146.9*

*IDC **08** 06:28:21.2±3.4, 10°.98S×164°.68E, h69km±29km, mb3.6/4, mb1 3.9/7, mb1mx3.6/32, mbtmp4.0/7, MS3.6/4, Ms1 3.6/4, ms1mx3.2/23, Error ellipse: s-maj=28.7km s-min=18.6km az=53.0*

ISC 08 06:28:17.4±1.2**, 10°.9S**±0°.1×**164°.8E**±0°.1**, h31km, n10, σ1s.72**/12**, mb3.8**/4**, MS3.5**/3**, Santa Cruz Islands region**

```
Code   Station Name        Δ°  AZ°   Phase ID        Time      Res
                                     Op      ISC     h  m  s   ISC
HNR    Honiara            4.96 286  eP       Pn      06 29 30.0  +0.2
HNR                                 eS       Sn      06 30 24.0  -2.2
HNR    Honiara            4.96 286   P       Pn      06 29 31.1  +1.3
       44nm,0.3s,baz=136,slow=5.0,SNR=6.1
HNR                                  S       Sn      06 30 29.2  +3.1
       23nm,0.3s,baz=151,slow=19,SNR=3.4
HNR                                  LR      LR      06 31 28.5
       comp=Z,910nm,18.6s,baz=137,slow=38
HNR    Honiara            4.96 286  eSn      Pn      06 29 30.2  +0.3
DZM    Mont Dzumac       11.28 172   P       Pn      06 30 58.0  +1.4
       0.8nm,0.3s,baz=313,slow=19,SNR=5.3
DZM                                  S       Sn      06 33 01.0  -0.7
       0.3nm,0.3s,baz=317,slow=18,SNR=4.7
CTA    Charters Tower    20.06 241   P       P       06 32 49.2  +0.8
       0.3nm,0.3s,baz=57,slow=16,SNR=2.2
STKA   Stephens Creek    29.94 222   LR      LR      06 45 36.9
       comp=Z,104nm,18.5s,baz=25,slow=35
WRA    Warramunga Arr    30.66 249   P       P       06 34 27.8  -1.7
       0.7nm,0.5s,baz=78,slow=9.5,SNR=10
WRA                                  LR      LR      06 47 17.7
       comp=Z,107nm,18.5s,baz=60,slow=37
ASAR   Alice Springs     32.04 242   P       P       06 34 39.6  -1.9
       0.7nm,0.5s,baz=63,slow=10,SNR=10
ASAR                                 LR      LR      06 47 19.0
       comp=Z,86nm,18.6s,baz=92,slow=36
ILAR   Eielson Array     83.63  19   P       P       06 40 43.0  +0.5
       0.6nm,0.9s,baz=238,slow=5.2,SNR=3.0
MKAR   Makanchi Array    92.73 317   P       P       06 41 25.8  -0.9
       0.7nm,0.7s,baz=94,slow=5.7,SNR=5.6
```

IDC 08 06:37:45.7±1.4**, 10°.86S**×**165°.64E, h0km, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/24**, mbtmp3.8**/5**, ML3.9**/1**, Error ellipse: s-maj=49.9km s-min=29.1km az=123.0, Santa Cruz Islands**

```
Code   Station Name        Δ°  AZ°   Phase ID        Time      Res
                                     Op      ISC     h  m  s   ISC
DZM    Mont Dzumac       11.18 176   Pn      Pn      06 40 27.4  +0.4
       0.9nm,0.3s,baz=324,slow=19,SNR=12
H11S2  WAKE ISLAND Hy    29.18   2   T       T       07 14 17.7
       baz=185
H11S3  WAKE ISLAND Hy    29.18   2   T       T       07 14 19.4
       baz=185
H11S1  WAKE ISLAND Hy    29.20   2   T       T       07 14 18.9
       baz=185
H11N1  WAKE ISLAND Hy    30.40   2   T       T       07 16 01.8
       baz=182
H11N3  WAKE ISLAND Hy    30.41   2   T       T       07 15 17.1
       baz=182
H11N2  WAKE ISLAND Hy    30.42   2   T       T       07 15 14.5
       baz=182
WRA    Warramunga Arr    31.45 250   P       P       06 44 09.2  -0.1
       1.0nm,0.8s,baz=82,slow=8.9,SNR=7.3
WRA                                  PcP     PcP     06 47 02.9  +0.1
       0.4nm,0.8s,baz=86,slow=2.0,SNR=4.0
ASAR   Alice Springs     32.79 243   P       P       06 44 20.6  -0.4
       0.2nm,0.4s,baz=74,slow=9.8,SNR=3.2
ASAR                                 PcP     PcP     06 47 06.2  -0.2
       0.6nm,0.7s,baz=70,slow=2.2,SNR=6.2
ILAR   Eielson Array     83.37  19   P       P       06 50 14.1  -0.3
       0.6nm,0.7s,baz=235,slow=5.3,SNR=8.1
MKAR   Makanchi Array    93.32 317   P       P       06 51 02.8  +0.1
       0.4nm,0.8s,baz=116,slow=4.7,SNR=3.5
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*IDC **08** 06:41:07.0±2.3, 13°.42N×88°.97W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.5/25, mbtmp3.6/4, MS3.6/1, Ms1 3.6/1, ms1mx2.8/17, Error ellipse: s-maj=59.9km s-min=50.2km az=37.0*

*ISCJB **08** 06:41:15.4±0.8, 13°.24N±0°.08×89°.77W±0°.04, h52km±11km, mb3.8/3, MS3.6/1, Error ellipse: s-maj=13.9km s-min=5.0km az=21.7*

*UCR **08** 06:41:15.6±1.2, 13°.25N×89°.75W, h32km±2km, MD3.6, ML3.7*

ISC 08 06:41:16.9±1.5**, 13°.4N**±0°.1×**89°.72W**±0°.06**, h56km**±11km**, n36, σ0s.99**/50**, mb3.9**/3**, 7D, El Salvador**

```
Code   Station Name        Δ°  AZ°   Phase ID        Time      Res
                                     Op      ISC     h  m  s   ISC
CEVE   Cerro Verde        0.47  11⇓iP    Pn      06 41 27.7  -0.8
CEVE                                eS       Sn      06 41 38.7  +1.8
CEVE                                 IAML            06 41 40.3
       comp=Z,19µm,0.3s
SBLS   San Blas           0.49  11⇓iP    Pn      06 41 27.8  -0.8
SNJE   San Jose           0.52  12  i P  Pn      06 41 28.1  -0.8
RTR    El Retiro          0.54   7⇓iP    Pn      06 41 28.6  -0.6
CEDA   San Andres         0.54  35  i P  Pn      06 41 28.3  -0.7
CEDA                                eS       Sn      06 41 38.6  +0.8
CEDA                                 IAML            06 41 52.2
       comp=Z,4µm,0.4s
BOQS   Boqueron           0.56  49  eP       Pn      06 41 28.7  -0.8
SNET   Serv Nac Est T     0.57  55  i P      Pn      06 41 28.4  -1.0
SNET                                eS       Sn      06 41 38.7  +0.1
SNET                                 IAML            06 41 41.2
       comp=Z,3µm,0.4s
UEES   San Salvador       0.59  51  eP       Pn      06 41 28.7  -0.9
UEES                                eS       Sn      06 41 40.0  +1.1
UTEC   San Salvador       0.60  56  eP       Pn      06 41 29.0  -0.8
UESS   San Salvador       0.61  55  eP       Pn      06 41 29.2  -0.6
UESS                                 IAML            06 41 43.7
       comp=Z,3µm,0.1s
OPAM   San Salvador       0.61  55  eP       Pn      06 41 29.1  -0.8
OPAM                                 IAML            06 41 45.9
       comp=Z,2µm,0.3s
UNIC   Santa Ana          0.65  14  eP       Pn      06 41 29.7  -0.6
UNIC                                eS       Sn      06 41 40.9  +0.9
UNIC                                 IAML            06 41 43.7
       comp=Z,2µm,0.3s
UDBS   Soyapango          0.65  56  eP       Pn      06 41 29.6  -0.7
UDBS                                eS       Sn      06 41 40.6  +0.4
UDBS                                 IAML            06 41 41.5
       comp=Z,4µm,0.2s
LFRS   El Faro            0.69  68⇓iP    Pn      06 41 30.0  -0.8
LFU    La Fuente          0.70  56⇓iP    Pn      06 41 30.5  -0.5
LBRS   Las Brisas         0.76  60⇓iP    Pn      06 41 31.3  -0.4
PAVA   Las Pavas          0.83  65  eP       Pn      06 41 32.6  -0.1
PAVA                                eS       Sn      06 41 45.8  +1.5
SNVI   San Vicente        0.89  73  eP       Pn      06 41 33.4   0.0
SNVI                                eS       Sn      06 41 46.6  +0.9
UESV   Ojushtada          0.90  88  eP       Pn      06 41 33.8  +0.3
IXG    Ixpaco             1.08 319  eP       Pn      06 41 35.4  -0.6
LLGN   La Laguna          1.10  43  eP       Pn      06 41 35.6  -0.5
LLGN                                eS       Sn      06 41 52.4  +2.0
LLGN                                 IAML            06 41 54.5
       comp=Z,533nm,0.4s
TECA   Tecapa             1.19  83  eP       Pn      06 41 36.7  -0.7
VICT   Victoria           1.21  60⇓iP    Pn      06 41 37.1  -0.5
VICT                                eS       Sn      06 41 54.6  +1.6
VICT                                 IAML            06 41 56.8
       comp=Z,500nm,0.4s
PCG    Pacaya             1.34 320  eP       Pn      06 41 40.8  +1.2
PCG                                 eS       Sn      06 41 56.9  +0.3
PACA   Pacayal            1.36  85  eP       Pn      06 41 39.1  -0.6
PACA                                eS       Sn      06 41 58.6  +1.9
NBG    Las Nubes          1.37 333  eP       Pn      06 41 40.7  +0.8
LCY    Lacayo             1.39  87  eP       Pn      06 41 39.8  -0.2
VSM    San Miguel         1.41  87  eP       Pn      06 41 40.3  -0.1
FUG    Fuego 3            1.54 315  eP       Pn      06 41 42.3  +0.1
FUG                                 eS       Sn      06 42 01.2   0.0
LCND   La Caada           1.78  91  eP       Pn      06 41 44.6  -0.6
LCND                                eS       Sn      06 42 08.2  +1.4
LCND                                 IAML            06 42 10.9
       comp=Z,555nm,0.4s
TXAR   Lajitas Array     20.50 323   P       P       06 45 51.5  +1.0
       comp=Z,0.5nm,0.5s,baz=148,slow=9.8,SNR=7.8
NVAR   Mina Array Bea    35.58 320   P       P       06 48 10.4  +1.2
       comp=Z,1.0nm,0.6s,baz=150,slow=8.0,SNR=4.8
NVAR                                 PcP     PcP     06 50 36.7  -0.6
       comp=Z,0.4nm,0.4s,baz=121,slow=4.4,SNR=3.4
SCHQ   Schefferville     45.09  19   P       P       06 49 23.2  -4.1
       comp=Z,2.3nm,0.7s,baz=228,slow=12,SNR=4.3
SCHQ                                 LR      LR      07 08 22.2
       comp=Z,69nm,18.1s,baz=16,slow=36
YKA    Yellowknife Ar    52.17 346   P       P       06 50 18.9  -2.7
       comp=Z,0.2nm,0.4s,baz=133,slow=7.4,SNR=6.4
WRA    Warramunga Arr   137.38 255   PKP     PKPdf   07 00 35.9  +0.7
       comp=Z,0.2nm,0.5s,baz=87,slow=2.4,SNR=5.7
CMAR   Chiang Mai Arr   147.25 345   PKPbc   PKPdf   07 00 52.2  -0.5
       comp=Z,0.6nm,0.3s,baz=23,slow=4.9,SNR=2.9
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*IDC **08** 06:45:07.8±0.8, 11°.00S×164°.82E, h0km, mb4.2/10, mb1 4.4/12, mb1mx4.2/29, mbtmp4.2/12, ML4.3/2, MS3.6/3, Ms1 3.6/3, ms1mx3.1/32, Error ellipse: s-maj=31.5km s-min=20.2km az=138.0*

*NEIC **08** 06:45:10.2±0.3, 10°.86S×164°.76E, h10km, mb4.6/16, Error ellipse: s-maj=9.0km s-min=6.7km az=105.0*

*ISCJB **08** 06:45:11.7±0.3, 10°.99S±0°.05×164°.68E±0°.05, h31km, mb4.4/24, MS3.5/1, Error ellipse: s-maj=7.6km s-min=7.0km az=161.2*

ISC 08 06:45:13.1±0.5**, 10°.89S**±0°.09×**164°.76E**±0°.08**, h31km, n62, σ1s.16**/56**, mb4.4**/24**, Santa Cruz Islands region**

```
Code   Station Name        Δ°  AZ°   Phase ID        Time      Res
                                     Op      ISC     h  m  s   ISC
HNR    Honiara            4.95 287  eS       Sn      06 47 20.0  -1.6
HNR    Honiara            4.95 287  ePn      Pn      06 46 26.7  +1.3
HNR                                 eSn      Sn      06 47 21.7  +0.1
HNR    Honiara            4.95 287   Pn      Pn      06 46 25.4   0.0
       17nm,0.3s,baz=234,slow=8.3,SNR=4.8
HNR                                  Sn      Sn      06 47 21.7  +0.1
       30nm,0.3s,baz=161,slow=17,SNR=2.5
HNR                                  LR      LR      06 48 29.4
       comp=Z,916nm,20.4s,baz=105,slow=40
MARNC  Mare, Loyalty     10.99 164  ePn      Pn      06 47 48.1  -0.1
DZM    Mont Dzumac       11.23 172  ePn      Pn      06 47 49.7  -2.0
       15nm,0.5s
DZM                                 eLR      LR      06 50 23.3
       comp=Z,197nm,21.9s
DZM    Mont Dzumac       11.23 172  ePn      Pn      06 47 50.7  -1.0
DZM    Mont Dzumac       11.23 172   Pn      Pn      06 47 50.0  -1.7
       1.7nm,0.3s,baz=335,slow=13,SNR=15
DZM                                  LR      LR      06 51 26.3
       comp=Z,324nm,18.2s,baz=32,slow=34
ONTNC  Ouen Toro         11.47 172  ePn      Pn      06 47 55.4  +0.6
PINNC  Pines Island,     11.94 168  ePn      Pn      06 48 02.3  +1.1
CTA    Charters Tower    20.02 241   P       Pn      06 49 45.2  -0.2
       11nm,0.8s,baz=70,slow=12,SNR=8.5
CTAO   Charters Tower    20.02 241  eP       Pn      06 49 45.4   0.0
       19nm,1.0s
H11S2  WAKE ISLAND Hy    29.26   4   T       T       07 21 51.1
       baz=184,slow=76,SNR=12
H11S3  WAKE ISLAND Hy    29.26   4   T       T       07 22 03.6
       baz=184,slow=76,SNR=10
H11S1  WAKE ISLAND Hy    29.28   4   T       T       07 22 01.3
       baz=184,slow=76,SNR=11
BKZ    Black Stump Fm    30.04 162  eP       P       06 51 20.5  +1.1
       7.2nm,1.1s
H11N1  WAKE ISLAND Hy    30.48   4   T       T       07 23 26.4
       baz=184,slow=76,SNR=8.7
H11N3  WAKE ISLAND Hy    30.49   4   T       T       07 23 21.5
       baz=184,slow=76,SNR=8.9
H11N2  WAKE ISLAND Hy    30.50   4   T       T       07 23 23.3
       baz=184,slow=76,SNR=10
WRAB   Tennant Creek     30.61 249  eP       P       06 51 24.1  -0.6
       4.5nm,1.0s
WB2    Warramunga Arr    30.61 249  eP       P       06 51 23.9  -0.8
       8.3nm,1.1s
WR1    Warramunga Arr    30.62 249  eP       P       06 51 23.7  -1.1
WR1                                 ePcP     PcP     06 54 23.1  +0.2
WRA    Warramunga Arr    30.62 249   P       P       06 51 23.7  -1.1
       0.8nm,0.5s,baz=79,slow=9.1,SNR=13
WRA                                  PcP     PcP     06 54 23.1  +0.2
       0.5nm,0.8s,baz=74,slow=3.1,SNR=4.4
AS01   Alice Springs     31.95 243  eP       P       06 51 37.6  +1.1
AS31   Alice Springs     31.99 243  eP       P       06 51 35.7  -1.2
       1.6nm,1.1s
ASAR   Alice Springs     32.00 243   P       P       06 51 35.5  -1.4
       1.5nm,0.5s,baz=73,slow=9.4,SNR=19
ASAR                                 PcP     PcP     06 54 26.3  -0.2
       0.6nm,0.7s,baz=66,slow=3.5,SNR=4.4
BBOO   Buckleboo         34.23 226  eP       P       06 51 56.5  +0.2
       16nm,1.1s
FORT   Forrest           39.34 234  eP       P       06 52 40.4  +0.7
       14nm,0.8s
DAV    Davao City (W)    42.88 293   LR      LR      07 08 36.6
       comp=Z,60nm,20.2s,baz=352,slow=33
PPT2   Papeete2          44.68 104  eLR      LR      07 05 49.9
       comp=Z,109nm,22.8s
TAOE   Nuku Hiva Isla    54.26  93  eLR      LR      07 10 13.4
       comp=Z,73nm,23.8s
PET    Petropavlovsk     63.87 356  eP       P       06 55 43.7  +1.2
       6.3nm,0.9s
PETK   Petropavlovsk-    64.03 355  eP       P       06 55 41.7  -1.9
PETK   Petropavlovsk-    64.03 355   P       P       06 55 44.5  +0.9
       5.2nm,0.9s,baz=152,slow=6.4,SNR=5.0
PEA1   Petropavlovsk-    64.03 355  eP       P       06 55 44.5  +0.8
SONA0  Songino Array     77.97 324  eP       P       06 57 09.6  +1.1
SONM   Songino Array     77.97 324   P       P       06 57 09.6  +1.1
       1.4nm,0.8s,baz=133,slow=7.2,SNR=5.6
QSPA   South Pole Qui    79.11 180  eP       P       06 57 15.1  +0.6
       8.0nm,1.1s
GHO    Glory Hole Cre    80.95  20  eP       P       06 57 20.9  -3.5
       9.5nm,1.1s
EYAK   Cordova Ski Ar    81.25  22  eP       P       06 57 27.4  +1.6
       45nm,1.1s
IM3    Indian Mountai    82.54  16  eP       P       06 57 33.3  +0.8
WRH    Wood River Hil    83.09  19  eP       P       06 57 36.5  +1.1
       2.5nm,1.1s
HDA    Harding Lake      83.41  19  eP       P       06 57 38.3  +1.2
       14nm,1.2s
IL1    Eielson Array     83.68  19  eP       P       06 57 39.4  +0.9
ILAR   Eielson Array     83.68  19   P       P       06 57 38.3  -0.1
       1.6nm,0.8s,baz=225,slow=5.0,SNR=14
ILB    Eielson Array     83.68  19  eP       P       06 57 39.6  +1.1
SCRK   Sand Creek        84.11  20  eP       P       06 57 41.9  +1.1
BESE   Bessie Mountai    84.59  27  eP       P       06 57 41.4  -1.8
       21nm,1.1s
NVAR   Mina Array Bea    86.67  50   P       P       06 57 54.5  +0.2
       2.1nm,1.0s,baz=237,slow=5.8,SNR=6.3
HLID   Hailey            90.87  46  eP       P       06 58 15.2  +1.2
       1.9nm,0.9s
MK01   Makanchi Array    92.73 317  eP       P       06 58 23.3  +0.9
MK32   Makanchi Array    92.75 317  eP       P       06 58 22.9  +0.5
MKAR   Makanchi Array    92.75 317  eP       P       06 58 22.9  +0.5
       10.0nm,0.8s
MKAR   Makanchi Array    92.75 317   P       P       06 58 22.9  +0.5
       1.8nm,0.8s,baz=99,slow=6.3,SNR=19
ZALV   Zalesovo Beam     92.86 324   P       P       06 58 22.2  -0.5
       0.4nm,0.4s,baz=101,slow=7.7,SNR=4.1
ZAA1   Zalesovo Array    92.86 324  eP       P       06 58 22.2  -0.5
PDAR   Pinedale Array    94.16  47   P       P       06 58 28.6  -0.8
       0.3nm,0.7s,baz=237,slow=3.1,SNR=3.4
YKA    Yellowknife Ar    95.28  27   P       P       06 58 32.4  -1.3
       0.6nm,0.9s,baz=258,slow=4.3,SNR=6.4
ARA0   ARCESS Array S   115.94 345  ePKPdf   PKiKP   07 03 51.7  -0.6
ARCES  ARCESS Array B   115.94 345   PKP     PKiKP   07 03 51.7  -0.6
       0.9nm,0.8s,baz=64,slow=2.8,SNR=5.2
FSCY   Frank Sound, G   116.10  74  ePKPdf   PKPdf   07 03 51.3  -2.7
PQI    Presque Isle     123.05  41  ePKPdf   PKPdf   07 04 06.5  -0.1
CUPR   Culebra, Puert   131.14  75  ePKPdf   PKPdf   07 04 23.2  +0.3
```

IDC 08 06:46:03.4±1.7**, 11°.20S**×**164°.91E, h0km, mb3.8**/3**, mb1 4.2**/4**, mb1mx3.8**/29**, mbtmp4.0**/4**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.9**/33**, Error ellipse: s-maj=51.5km s-min=31.3km az=128.0, Santa Cruz Islands region**

```
Code   Station Name        Δ°  AZ°   Phase ID        Time      Res
                                     Op      ISC     h  m  s   ISC
DZM    Mont Dzumac       10.91 172   Pn      Pn      06 48 40.5  -0.5
       baz=312,slow=19,SNR=2.1
WRA    Warramunga Arr    30.66 250   P       P       06 52 19.8  -0.2
       1.2nm,0.8s,baz=80,slow=9.2,SNR=3.3
WRA                                  LR      LR      07 03 27.9
       comp=Z,108nm,18.6s,baz=75,slow=34
ASAR   Alice Springs     31.99 243   P       P       06 52 32.0  +0.3
       1.0nm,0.5s,baz=64,slow=10,SNR=4.7
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	83.92	19	P	P	06 58 35.0	0.0
	0.4nm,0.7s,baz=232,slow=5.9,SNR=2.7						

UCR 08 06:49:15.5±1.0, 11°.19N×86°.00W, h57^{km}±5^{km}, MD3.7, 1C-3D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONN	Concepcion	0.52	44	eP	Pn	06 49 27.7	+0.2
CONN				eS	Sn	06 49 36.6	+0.4
GBS3	Finca Las Img	0.67	128	i P	Pn	06 49 28.9	-0.3
GB1A	Borinquen Arri	0.69	122	eP	Pn	06 49 29.5	-0.2
LAPC	Finca la Perla	0.69	127	i P	Pn	06 49 29.2	-0.4
LAPC				i S	Sn	06 49 40.3	+0.5
BUEV	Buena Vista	0.70	124	eP	Pn	06 49 29.8	+0.1
NY14	Universidad de	0.70	140	i P	Pn	06 49 30.0	+0.3
NY14				i S	Sn	06 49 41.6	+1.6
BUAI	Buenos Aires	0.72	116	i P	Pn	06 49 29.9	0.0
GPS3	Bodega del ICE	0.76	125	i P	Pn	06 49 30.5	+0.1
GPS3				i S	Sn	06 49 42.1	+0.8
GPS1	Guardaparques	0.76	123	i P	Pn	06 49 30.4	0.0
GPS1				i S	Sn	06 49 41.6	+0.3
GPS2	Hotel Rincn d	0.77	125	⇓eP	Pn	06 49 30.5	0.0
LIM1	Limonal	0.88	124	i P	Pn	06 49 32.0	+0.1
MESS	Mesas	0.91	120	⇓eP	Pn	06 49 32.3	0.0
MESS				i P		06 49 32.4	
COLC	Colonia	0.94	124	i P	Pn	06 49 32.7	0.0
CUI	Cuipilapa	0.97	123	eP	Pn	06 49 33.4	+0.3
PLVR	Palo Verde	1.05	143	⇑eP	Pn	06 49 34.3	0.0
ACON	Acoyapa	1.11	46	eP	Pn	06 49 35.0	0.0
ACON				eS	Sn	06 49 50.0	+0.6
COPN	Copaltepe	1.14	329	eP	Pn	06 49 35.4	0.0
COPN				eS	Sn	06 49 50.4	+0.3
JTS	JuntasAbangare	1.36	131	eP	Pn	06 49 38.1	-0.2
ARE1	Arenal 1	1.45	120	eP	Pn	06 49 39.6	+0.1
CEDE	Laguna Cedeo	1.45	119	eP	Pn	06 49 40.5	+0.9
ESTN	Estel	1.93	349	eP	Pn	06 49 46.7	+0.6
ESPN	Las Esperanzas	1.94	59	⇓eP	Pn	06 49 46.7	+0.6
LCR2	La Lucha 2	2.43	126	eP	Pn	06 49 52.8	-0.3

IDC 08 06:57:14.4±1.8, 10°.86S×164°.75E, h0^{km}, mb3.6/4, mb1 4.0/5, mb1mx3.7/31, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=50.6km s-min=30.8km az=131.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.26	172	Pn	Pn	06 59 56.4	-0.4
	0.3nm,0.3s,baz=342,slow=20,SNR=4.8						
CTA	Charters Tower	20.03	241	P	Pn	07 01 51.2	+0.3
	5.6nm,1.0s,baz=72,slow=11,SNR=2.3						
WRA	Warramunga Arr	30.63	249	P	P	07 03 30.1	-0.6
	0.3nm,0.4s,baz=79,slow=8.9,SNR=4.8						
ASAR	Alice Springs	32.01	243	P	P	07 03 42.1	-0.7
	0.7nm,0.4s,baz=65,slow=10,SNR=12						
ILAR	Eielson Array	83.65	19	P	P	07 09 44.8	+0.2
	1.8nm,1.3s,baz=227,slow=4.1,SNR=4.5						

IDC 08 06:58:57.0±1.8, 10°.92S×165°.59E, h0^{km}, mb3.7/3, mb1 4.1/4, mb1mx3.7/33, mbtmp3.9/4, ML4.2/1, MS4.4/1, Ms1 4.4/1, ms1mx3.1/40, Error ellipse: s-maj=52.3km s-min=31.7km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.12	176	Pn	Pn	07 01 38.0	+0.6
	1.7nm,0.3s,baz=31,slow=9.9,SNR=20						
DZM				Sn	Sn	07 03 39.3	-3.2
	0.3nm,0.3s,baz=45,slow=20,SNR=3.3						
H11S2	WAKE ISLAND Hy	29.25	2	T	T	07 35 24.0	
	baz=183						
H11S3	WAKE ISLAND Hy	29.25	2	T	T	07 35 21.0	
	baz=183						
H11S1	WAKE ISLAND Hy	29.26	2	T	T	07 35 24.8	
	baz=183						
H11N1	WAKE ISLAND Hy	30.47	2	T	T	07 36 53.1	
	baz=181						
H11N3	WAKE ISLAND Hy	30.48	2	T	T	07 36 53.4	
	baz=181						
H11N2	WAKE ISLAND Hy	30.49	2	T	T	07 36 53.8	
	baz=181						
WRA	Warramunga Arr	31.38	250	P	P	07 05 20.2	+0.4
	1.0nm,0.6s,baz=82,slow=9.1,SNR=11						
ASAR	Alice Springs	32.71	243	P	P	07 05 30.9	-0.6
	0.7nm,0.7s,baz=68,slow=10,SNR=7.3						
RAR	Rarotonga	34.75	111	LR	LR	07 16 13.3	
	comp=Z,582nm,19.8s,baz=262,slow=30						
ILAR	Eielson Array	83.45	19	P	P	07 11 26.0	-0.1
	0.3nm,0.6s,baz=233,slow=5.7,SNR=5.6						

UCR 08 06:59:43.2±1.3, 7°.94N×82°.96W, h22^{km}±3^{km}, MD4.0, 7C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTJ1	Puerto Jimnez	0.68	331	eP	Pb	06 59 56.0	-0.5
PTJ1				eS	Sb	07 00 06.4	+0.9
DVD	David	0.71	46	⇑iP	Pb	06 59 56.5	-0.5
DVD				eS	Sb	07 00 06.8	+0.5
EDSV	San Vito	0.88	359	⇓eP	Pb	06 59 59.5	-0.4
EDSV				eS	Sb	07 00 11.9	+0.7
BRU2	Volcan	0.89	18	⇓iP	Pb	06 59 59.7	-0.4
BRU2				eS	Sb	07 00 12.3	+0.6
EDPN	Palmar Norte	1.13	334	⇑iP	Pn	07 00 03.0	-0.8
EDPN				eS	Sn	07 00 18.6	-0.1
EDBA	Buenos Aires	1.26	346	⇑eP	Pn	07 00 05.2	-0.3
EDBA				eS	Sb	07 00 22.9	+0.9
EDLM	Las Mercedes	1.47	335	⇑iP	Pn	07 00 08.4	-0.1
EDLM				eS	Sn	07 00 27.6	+0.5
EDDO	Dominical	1.58	326	eP	Pn	07 00 08.8	-1.2
LCR2	La Lucha 2	2.07	330	⇑iP	Pn	07 00 16.7	-0.1
LCR2				eS	Sn	07 00 42.9	+0.8
CVTR	Volcan Turrial	2.21	339	⇑eP	Pn	07 00 19.7	+0.6
CVTR				eS	Sn	07 00 47.8	+1.8
HDC	Heredia	2.35	331	⇑iP	Pn	07 00 21.3	+0.6
HDC				eS	Sn	07 00 51.0	+2.1
AZU	Azuero	2.67	93	eP	Pn	07 00 25.1	+0.1
AZU				eS	Sn	07 00 57.8	+1.2
JTS	JuntasAbangare	3.06	320	eP	Pn	07 00 29.9	-0.4
CEDE	Laguna Cedeo	3.06	326	eP	Pn	07 00 31.3	+0.9

IDC 08 07:02:08.4±1.6, 10°.89S×164°.68E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.7/31, mbtmp3.8/5, ML3.8/1, MS4.0/3, Ms1 4.1/3, ms1mx3.3/38, Error ellipse: s-maj=49.2km s-min=29.6km az=124.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.25	172	Pn	Pn	07 04 50.6	0.0
	0.6nm,0.3s,baz=328,slow=19,SNR=7.4						
WRA	Warramunga Arr	30.56	249	P	P	07 08 24.0	-0.1
	0.4nm,0.7s,baz=80,slow=9.3,SNR=4.9						
ASAR	Alice Springs	31.93	243	P	P	07 08 36.0	-0.1
	0.9nm,0.5s,baz=63,slow=10,SNR=18						
NWAO	Narrogin (SRO)	48.69	236	LR	LR	07 31 34.8	
	comp=Z,544nm,19.4s,baz=316,slow=36						
CMAR	Chiang Mai Arr	71.09	294	LR	LR	07 45 55.5	
	comp=Z,73nm,20.0s,baz=116,slow=37						
ILAR	Eielson Array	83.70	19	P	P	07 14 38.5	-0.2
	0.6nm,0.8s,baz=245,slow=5.4,SNR=7.2						
MKAR	Makanchi Array	92.70	317	P	P	07 15 22.9	+0.5
	0.5nm,0.7s,baz=84,slow=7.5,SNR=4.4						
AAK	Ala-Archa	97.42	312	LR	LR	07 59 19.8	
	comp=Z,36nm,21.9s,baz=54,slow=35						

NNC 08 07:03:31.7±1.9, 41°.69N×78°.25E, h0^{km}, mb3.0, mpv2.6, 4C-1D, Error ellipse: s-maj=13.3km s-min=8.6km az=1.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDOK	Medeo	1.72	329	P	Pn	07 04 02.2	-0.8
	4.9nm,1.2s						
MDOK				⇑S	Sn	07 04 25.9	+0.1
	2.0nm,0.6s						
PDGK	Podgornoye	1.88	29	⇑Pg	Pn	07 04 05.2	0.0
	1.0nm,0.2s						
PDGK				⇓Lg	Lg	07 04 32.6	
	0.8nm,0.2s						
TKM2	Tokmak 2	2.32	303	⇑Pg	Pb	07 04 14.5	0.0
	1.0nm,0.3s						
TKM2				⇑Lg	Lg	07 04 45.4	
	1.9nm,0.4s						
DGS	Degeres	2.40	311	Pg	Pb	07 04 16.3	+0.5
	2.1nm,0.5s						
DGS				Lg	Lg	07 04 47.7	
	6.3nm,0.4s						
ARXS	Arharly	2.54	353	Pg	Pb	07 04 17.9	-0.3
	4.6nm,0.3s						
ARXS				Lg	Lg	07 04 50.7	
	5.9nm,0.3s						

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*ISCJB **08** 07:04:08.9±1.5, 10°.98S±0°.04×164°.70E±0°.03, h6^{km}±9^{km}, mb4.7/104, MS4.3/16, Error ellipse: s-maj=6.4km s-min=5.2km az=175.3*

*IDC **08** 07:04:09.2±0.5, 10°.94S×164°.81E, h0^{km}, mb4.6/24, mb1 4.7/26, mb1mx4.6/37, mbtmp4.6/26, ML4.8/2, MS4.2/12, Ms1 4.2/12, ms1mx3.8/36, Error ellipse: s-maj=18.4km s-min=13.7km az=119.0*

*NEIC **08** 07:04:11.2±0.6, 10°.92S×164°.74E, h11^{km}±3^{km}, mb4.7/69, Error ellipse: s-maj=4.2km s-min=3.6km az=149.0*

*MOS **08** 07:04:12.0±0.8, 10°.90S×164°.65E, h24^{km}, mb4.9/29, Error ellipse: s-maj=11.6km s-min=9.3km az=127.3*

*GCMT **08** 07:04:14.2±0.2, 11°.13S±0°.02×164°.63E±0°.01, h13^{km}, MW5.0/97, Moment Tensor Solution. s57,c77; s97,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.69±.16; $M_{\theta\theta}$1.11±.10; $M_{\phi\phi}$3.58±.11; $M_{r\theta}$-1.57±.32; $M_{\theta\phi}$1.31±.08; $M_{\phi r}$0.92±.26; Best double couple: $M_0$4.70500×10^{16} NP1:ϕ_s186.00000°,δ49.00000°,λ-113.00000°. NP2: ϕ_s40.00000°,δ46.00000°,λ-66.00000°. Principal axes: T 4.1520, Plg2.0000°, Azm293.0000°; N 1.1060, Plg17.0000°, Azm202.0000°; P -5.2570, Plg73.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 07:04:13.4±1.6, 10°.96S±0°.06×164°.76E±0°.04, h25^{km}±11^{km}, n211, σ1^{s}07/218, mb4.8/104, MS4.2/16, 11C-6D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.97	287	eP	Pn	07 05 27.0	+0.4
HNR				eS	Sn	07 06 24.0	+0.7
HNR	Honiara	4.97	287	ePn	Pn	07 05 26.9	+0.4
HNR				eSn	Sn	07 06 24.0	+0.7
HNR				eSn	Sn	07 06 28.3	+5.0
HNR	Honiara	4.97	287	Pn	Pn	07 05 27.3	+0.7
	84nm,0.3s,baz=213,slow=5.4,SNR=16						
HNR				Sn	Sn	07 06 24.0	+0.7
	111nm,0.3s,baz=202,slow=21,SNR=6.6						
HNR				LR	LR	07 07 30.7	
	comp=Z,7μm,21.6s,baz=126,slow=40						
MARNC	Mare, Loyalty	10.92	164	ePn	Pn	07 06 46.7	-1.5
DZM	Mont Dzumac	11.17	172	ePn	Pn	07 06 49.8	-1.8
	41nm,0.7s						
DZM				eLR	LR	07 09 23.2	
	comp=Z,2μm,25.6s						
DZM	Mont Dzumac	11.17	172	ePn	Pn	07 06 51.3	-0.3
DZM	Mont Dzumac	11.17	172	Pn	Pn	07 06 51.5	-0.1
	2.8nm,0.3s,baz=348,slow=17,SNR=18						
DZM				LR	LR	07 10 18.4	
	comp=Z,2μm,19.0s,baz=27,slow=33						
ONTNC	Ouen Toro	11.40	172	ePn	Pn	07 06 54.7	0.0
PINNC	Pines Island,	11.87	168	ePn	Pn	07 07 01.4	+0.2
RABL	Rabaul	14.17	297	ePn	Pn	07 07 32.6	-0.1
FUNA	Funafuti	14.44	82	ePn	Pn	07 07 36.0	-0.3
MSVF	Nonsavu	14.53	119	ePn	Pn	07 07 39.4	+1.8
MSVF	Nonsavu	14.53	119	⇓eP	Pn	07 07 39.9	+2.3
MANU	Manus Island	19.40	296	eP	Pn	07 08 38.9	-0.2
	7.3nm,0.6s						
CTA	Charters Tower	19.99	241	P	Pn	07 08 45.8	-0.2
	44nm,0.9s,baz=65,slow=12,SNR=20						
CTA				S	Sn	07 12 29.1	-1.1
	5.7nm,0.9s,baz=158,slow=19,SNR=2.0						
CTAO	Charters Tower	19.99	241	eP	Pn	07 08 45.4	-0.7
	62nm,1.0s						
COEN	Coen	21.28	260	eP	P	07 08 56.8	-1.5
	10nm,0.8s						
ARMA	Armidale	22.89	210	eP	P	07 09 16.5	+1.1
	14nm,0.8s						
H11S2	WAKE ISLAND Hy	29.33	4	T	T	07 41 01.5	
	baz=184,slow=76,SNR=7.1						
H11S3	WAKE ISLAND Hy	29.33	4	T	T	07 41 11.2	
	baz=184,slow=76,SNR=9.1						
H11S1	WAKE ISLAND Hy	29.34	4	T	T	07 41 10.5	
	baz=184,slow=76,SNR=11						
STKA	Stephens Creek	29.84	222	eP	P	07 10 19.6	+0.8
	1.8nm,1.1s						
STKA	Stephens Creek	29.84	222	P	P	07 10 19.9	+1.1
	4.4nm,0.7s,baz=36,slow=11,SNR=8.6						
BKZ	Black Stump Fm	29.97	162	eP	P	07 10 20.9	+0.9
	18nm,1.2s						
H11N1	WAKE ISLAND Hy	30.55	4	T	T	07 42 32.9	
	baz=184,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.56	4	T	T	07 42 33.6	
	baz=184,slow=76,SNR=6.9						
H11N2	WAKE ISLAND Hy	30.57	4	T	T	07 42 26.0	
	baz=184,slow=76,SNR=4.5						
WRAB	Tennant Creek	30.59	249	eP	P	07 10 24.1	-1.5
	11nm,1.0s						
WRAB	Tennant Creek	30.59	249	c iP	P	07 10 25.0	-0.6
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WB2	Warramunga Arr	30.59	249	eP	P	07 10 24.4	-1.2
	comp=Z,16nm,1.1s						
WR1	Warramunga Arr	30.60	249	eP	P	07 10 24.8	-0.9
	comp=Z,16nm,1.1s						
WR1				ePcP	PcP	07 13 24.5	+0.4
WR1				eS	S	07 15 25.5	-1.1
WRA	Warramunga Arr	30.60	249	P	P	07 10 24.8	-0.9
	comp=Z,5.4nm,0.8s,baz=80,slow=9.1,SNR=23						
WRA				PcP	PcP	07 13 24.5	+0.4
	comp=Z,1.5nm,0.8s,baz=80,slow=2.6,SNR=5.8						
WRA				S	S	07 15 25.5	-1.1
	comp=Z,2.8nm,1.3s,baz=82,slow=14,SNR=4.7						
WRA				LR	LR	07 22 37.6	
	comp=Z,910nm,18.5s,baz=75,slow=36						
GUMO	Guam	31.37	321	LR	LR	07 23 18.9	
	comp=Z,330nm,19.7s,baz=137,slow=37						
TOO	Toolangi	31.65	210	eP	P	07 10 36.1	+1.4
AS01	Alice Springs	31.92	243	eP	P	07 10 36.3	-1.0
AS01				ePcP	PcP	07 13 27.5	-0.1
AS31	Alice Springs	31.96	243	eP	P	07 10 37.0	-0.7
	comp=Z,3.9nm,1.0s						
ASAR	Alice Springs	31.96	243	P	P	07 10 36.5	-1.2
	comp=Z,8.4nm,0.7s,baz=71,slow=9.3,SNR=60						
ASAR				PcP	PcP	07 13 27.7	0.0
	comp=Z,1.7nm,0.8s,baz=70,slow=2.6,SNR=8.1						
RPZ	Rata Peaks	33.09	172	LR	LR	07 23 08.4	
	comp=Z,378nm,18.0s,baz=358,slow=34						
BBOO	Buckleboo	34.18	226	eP	P	07 10 57.5	+0.5
	comp=Z,30nm,0.8s						
FITZ	Fitzroy Crossi	38.46	255	eP	P	07 11 32.9	-0.8
	comp=Z,3.8nm,0.8s						
FITZ	Fitzroy Crossi	38.46	255	P	P	07 11 32.6	-1.0
	comp=Z,3.1nm,0.7s,baz=90,slow=8.9						
FITZ				LR	LR	07 27 43.6	
	comp=Z,434nm,18.2s,baz=84,slow=37						
FORT	Forrest	39.30	234	eP	P	07 11 40.1	-0.4
	comp=Z,48nm,1.0s						
BATI	Baumata	40.38	267	LR	LR	07 29 01.5	
	comp=Z,211nm,20.5s,baz=113,slow=37						
JCJ	Chichijima	43.72	330	LR	LR	07 26 44.8	
	comp=Z,106nm,20.0s,baz=124,slow=31						
PPT2	Papeete2	44.66	104	eS	S	07 19 00.6	+0.8
	comp=Z,215nm,26.8s						
PPT2				eLR	LR	07 24 51.6	
	comp=Z,649nm,22.8s						
KEKH	Kekaha	47.82	47	eP	P	07 12 49.6	+0.3
	comp=Z,51nm,1.0s						
MJAR	Matsushiro Arr	53.45	333	P	P	07 13 31.7	+0.1
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	53.45	333	P	P	07 13 31.7	+0.1
	comp=Z,3.6nm,0.7s,baz=167,slow=10.0,SNR=4.1						
MAJO	Matsushiro	53.46	333	eP	P	07 13 31.6	+0.1
TAOE	Nuku Hiva Isla	54.25	93	eS	S	07 21 15.6	+1.1
	comp=Z,177nm,26.0s						
TAOE				eLR	LR	07 29 13.7	
	comp=Z,412nm,26.5s,baz=266						
TAOE	Nuku Hiva Isla	54.25	93	eP	P	07 13 38.5	+0.5
	comp=Z,117nm,1.2s						
KSRS	Korea Array	59.26	326	P	P	07 14 12.3	-0.6
	comp=Z,3.8nm,1.1s,baz=116,slow=5.7,SNR=5.8						
KSRS				LR	LR	07 38 21.0	
	comp=Z,78nm,19.9s,baz=132,slow=35						
KSAR	Wonju Array Be	59.28	326	P	P	07 14 12.3	-0.7
KS01	Wonju Array Si	59.30	326	eP	P	07 14 12.1	-1.1
YSS	Yuzh-Sakhalins	60.92	343	eP	P	07 14 19.6	-4.5
YSS				e		07 14 32.6	
NJ2	Nanjing	61.28	316	eP	P	07 14 27.3	+0.4
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
QIZ	Qiongzhong	61.79	299	P	P	07 14 30.7	+0.2
QIZ				S	S	07 22 53.7	+1.1
QIZ				pmax	pmax		
	comp=Z,170nm,3.9s						
QIZ				LR	LR		
	comp=N,320nm,18.6s						
QIZ				LR	LR		
	comp=E,410nm,19.6s						
QIZ				LR	LR		
	comp=Z,410nm,24.0s						
USRK	Ussuriysk Ar.	62.44	334	P	P	07 14 35.5	+1.1
	comp=Z,7.6nm,1.0s,baz=116,slow=8.7,SNR=6.2						
USRK				LR	LR	07 39 41.3	
	comp=Z,122nm,21.0s,baz=142,slow=34						
WHN	Wuhan	63.61	312	P	P	07 14 46.3	+3.8
PET	Petropavlovsk	63.94	356	⇑iP	P	07 14 44.2	0.0
PET				pmax	pmax		
	comp=Z,23nm,1.2s						
PETK	Petropavlovsk-	64.10	355	eP	P	07 14 45.2	-0.1
PETK	Petropavlovsk-	64.10	355	P	P	07 14 46.0	+0.8
PETK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PETK	Petropavlovsk-	64.10	355	P	P	07 14 46.0	+0.8
	comp=Z,7.0nm,0.8s,baz=157,slow=7.9,SNR=8.9						
PEA1	Petropavlovsk-	64.10	355	eP	P	07 14 46.0	+0.7
CASY	Casey	66.11	201	eP	P	07 14 58.4	+0.3
	comp=Z,7.1nm,1.0s						
GRNR	Gornyy	66.24	341	eP	P	07 15 00.2	+1.0
VNDA	Vanda	66.56	181	P	P	07 15 01.7	+0.7
	comp=Z,15nm,1.2s,baz=350,slow=8.4,SNR=4.5						
VNDA				LR	LR	07 40 45.6	
	comp=Z,99nm,18.8s,baz=2.5,slow=33						
KLR	Kul'dur	66.60	337	⇑iP	P	07 15 02.1	+0.6
KLR	Kul'dur	66.60	337	P	P	07 15 01.3	-0.2
	comp=Z,8.3nm,1.1s,baz=116,slow=3.9,SNR=11						
ENH	Enshi	67.09	309	eP	P	07 15 04.8	-0.3
	comp=Z,18nm,1.1s						
NKL	Nikolayevsk	67.09	345	eP	P	07 15 05.2	+0.7
NKL				pmax	pmax		
	comp=Z,25nm,1.0s						
GYA	Guiyang	67.57	305	P	P	07 15 10.2	+1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	Beijing	67.81	322	eP	P	07 15 09.5	+0.1
BJI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BJI				LR	LR		
	comp=N,320nm,5.5s						
BJI				LR	LR		
	comp=E,210nm,4.5s						
BJI				LR	LR		
	comp=Z,420nm,29.4s						
XAN	Xi'an	69.35	313	P	P	07 15 19.6	+0.4
XAN				pP	sP	07 15 30.3	+2.6
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN	Xi'an	69.35	313	eP	P	07 15 18.4	-0.8
	comp=Z,6.5nm,0.9s						
KMI	Kunming	70.25	302	P	P	07 15 26.4	+1.2
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
KMI				pmax	pmax		
	comp=Z,160nm,4.3s						
KMI				LR	LR		
	comp=N,280nm,7.2s						
KMI				LR	LR		
	comp=E,280nm,9.8s						
KMI				LR	LR		
	comp=Z,310nm,11.1s						
HHC	Hu-ho-hao-te	71.14	320	eP	P	07 15 30.4	+0.3
HHC				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC				pmax	pmax		
	comp=Z,260nm,6.3s						
CM01	Chiang Mai Arr	71.16	294	eP	P	07 15 31.3	+0.7
CMAR	Chiang Mai Arr	71.19	294	P	P	07 15 31.3	+0.6
	comp=Z,0.5nm,0.4s,baz=115,slow=3.8,SNR=7.5						
MA2	Magadan	71.20	353	eP	P	07 15 29.7	-0.2
	comp=Z,4.6nm,0.8s						
MA2	Magadan	71.20	353	d iP	P	07 15 29.2	-0.7
MA2				pmax	pmax		
	comp=Z,9.0nm,1.7s						
MA2	Magadan	71.20	353	P	P	07 15 29.5	-0.4
	comp=Z,2.2nm,0.3s,baz=132,slow=14,SNR=4.3						
CHTO	Chiang Mai	71.30	294	eP	P	07 15 31.2	-0.2
	comp=Z,4.9nm,1.1s						
CD2	Chengdu	71.78	308	⇑iP	P	07 15 34.6	+0.5
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,280nm,6.3s						
HIA	Hailar	71.82	331	eP	P	07 15 34.7	+0.7
	comp=Z,22nm,1.1s						
ZEA	Zeya	71.89	338	eP	P	07 15 34.8	+0.6
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
LZH	Lanzhou	73.98	313	eP	P	07 15 48.6	+1.4
LZH				pP	pP	07 15 53.3	-0.2
LZH				sP	sP	07 15 56.6	+0.8
LZH				PP	PP	07 18 38.0	+5.3
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZH				pmax	pmax		
	comp=Z,94nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,17.1s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
SEY	Seymchan	74.29	354	⇑iP	P	07 15 48.4	+0.2
SEY	Seymchan	74.29	354	P	P	07 15 48.6	+0.4
	comp=Z,3.9nm,0.8s,baz=167,slow=7.2,SNR=5.5						
GAMB	Gambell	76.66	11	eP	P	07 16 02.1	+0.4
	comp=Z,15nm,1.1s						
KDAK	Kodiak Island	76.86	22	LR	LR	07 44 53.5	
	comp=Z,101nm,18.9s,baz=223,slow=32						
ULN	Ulaanbaatar	77.67	324	eP	P	07 16 08.2	+0.2
	comp=Z,13nm,1.1s						
ULN	Ulaanbaatar	77.67	324	d iP	P	07 16 08.5	+0.5
ULN				pmax	pmax		
	comp=Z,23nm,1.3s						
SONA0	Songino Array	78.03	324	eP	P	07 16 10.8	+0.8
SONM	Songino Array	78.03	324	P	P	07 16 10.8	+0.8
	comp=Z,6.7nm,1.0s,baz=136,slow=5.7,SNR=18						
SONA1	Songino Array	78.03	324	eP	P	07 16 10.3	+0.3
GTA	Gaotai	78.30	314	⇑P	P	07 16 13.1	+1.4
GTA				pP	pP	07 16 17.7	-0.3
GTA				sP	PcP	07 16 20.0	-1.0
GTA				S	S	07 26 07.9	+2.2
GTA				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,7.3s						
GTA				LR	LR		
	comp=N,160nm,21.9s						
GTA				LR	LR		
	comp=E,230nm,23.5s						
GTA				LR	LR		
	comp=Z,310nm,23.2s						
ANM	Nome	78.62	13	eP	P	07 16 13.8	+1.1
	comp=Z,1.6nm,1.0s						
BILL	Bilibino	78.80	1	eP	P	07 16 13.4	-0.2
	comp=Z,17nm,1.0s						
BILL	Bilibino	78.80	1	i P	P	07 16 14.1	+0.5
BILL				i		07 16 24.4	
BILL				pmax	pmax		
	comp=Z,35nm,1.7s						
QSPA	South Pole Qui	79.04	180	eP	P	07 16 16.1	+0.8
	comp=Z,35nm,1.1s						
BOD	Bodaibo	80.04	335	eP	P	07 16 20.0	-0.6

BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ZAK	**Zakamensk**	**81.08**	**325**	*e*P	**P**	**07 16 23.1**	**-3.4**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TLY	**Talaya**	**81.52**	**327**	*e*P	**P**	**07 16 27.8**	**-0.9**
	comp=Z,15nm,0.9s						
TLY	**Talaya**	**81.52**	**327**	*c i*P	**P**	**07 16 28.9**	**+0.2**
IM3	**Indian Mountai**	**82.61**	**16**	*e*P	**P**	**07 16 34.1**	**0.0**
WRH	**Wood River Hil**	**83.16**	**19**	*e*P	**P**	**07 16 36.3**	**-0.7**
	comp=Z,9.1nm,1.1s						
MDM	**Murphy Dome**	**83.45**	**18**	*e*P	**P**	**07 16 38.0**	**-0.6**
	comp=Z,8.6nm,1.0s						
HDA	**Harding Lake**	**83.48**	**19**	*e*P	**P**	**07 16 38.1**	**-0.5**
	comp=Z,15nm,0.9s						
COLA	**College**	**83.51**	**18**	*e*P	**P**	**07 16 38.9**	**+0.2**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
IL1	**Eielson Array**	**83.74**	**19**	*e*P	**P**	**07 16 38.6**	**-1.4**
ILAR	**Eielson Array**	**83.74**	**19**	P	**P**	**07 16 39.2**	**-0.8**
	comp=Z,3.7nm,0.8s,baz=230,slow=5.1,SNR=28						
ILB	**Eielson Array**	**83.74**	**19**	*e*P	**P**	**07 16 39.2**	**-0.8**
SCRK	**Sand Creek**	**84.17**	**20**	*e*P	**P**	**07 16 42.6**	**+0.3**
	comp=Z,3.4nm,1.0s						
KNGR	**Kungurtug, Tuv**	**84.46**	**324**	⇑*e*P	**P**	**07 16 44.1**	**0.0**
ORV	**Oroville**	**84.68**	**48**	*e*P	**P**	**07 16 45.2**	**-0.1**
	comp=Z,3.9nm,1.0s						
AFDM	**Forest Hills D**	**84.88**	**49**	*e*P	**P**	**07 16 45.4**	**-0.9**
	comp=Z,14nm,1.2s						
CMB	**Columbia Colle**	**85.03**	**50**	*e*P	**P**	**07 16 46.5**	**-0.7**
	comp=Z,4.7nm,1.0s						
BEKR	**Beckworth**	**85.61**	**48**	*e*P	**P**	**07 16 50.4**	**+0.1**
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	**85.83**	**349**	*e*P	**P**	**07 16 49.6**	**-0.7**
	comp=Z,1.9nm,0.8s						
TIXI	**Tiksi**	**85.83**	**349**	⇑*i*P	**P**	**07 16 50.1**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,17nm,1.7s						
TIXI	**Tiksi**	**85.83**	**349**	P	**P**	**07 16 49.7**	**-0.6**
	comp=Z,4.8nm,1.1s,baz=133,slow=7.4,SNR=9.6						
WAKR	**Walker**	**85.88**	**50**	*e*P	**P**	**07 16 52.2**	**+0.6**
	comp=Z,2.9nm,1.0s						
MDPB	**Devils Postpil**	**85.89**	**51**	*e*P	**P**	**07 16 52.3**	**+0.5**
	comp=Z,7.9nm,1.1s						
PAHR	**Pah Rah Range**	**86.28**	**49**	*e*P	**P**	**07 16 53.6**	**+0.1**
	comp=Z,8.5nm,1.2s						
NV01	**Mina Array Sit**	**86.71**	**50**	*e*P	**P**	**07 16 55.3**	**-0.4**
NVAR	**Mina Array Bea**	**86.71**	**50**	P	**P**	**07 16 55.7**	**0.0**
	comp=Z,4.7nm,1.0s,baz=224,slow=7.9,SNR=15						
NV11	**Mina Array Sit**	**86.83**	**50**	*e*P	**P**	**07 16 56.4**	**+0.2**
	comp=Z,0.6nm,1.1s						
I07A	**Izee**	**87.52**	**44**	*e*P	**P**	**07 16 59.4**	**0.0**
	comp=Z,2.1nm,0.8s						
WVOR	**Wild Horse Val**	**87.63**	**46**	*e*P	**P**	**07 17 00.5**	**+0.5**
	comp=Z,4.5nm,1.0s						
GLA	**Glamis**	**88.01**	**56**	*e*P	**P**	**07 17 02.6**	**+0.8**
	comp=Z,5.8nm,0.9s						
J08A	**Circle Bar Ran**	**88.01**	**45**	*e*P	**P**	**07 17 02.0**	**+0.3**
	comp=Z,10nm,1.1s						
G08A	**Pilot Rock**	**88.25**	**43**	*e*P	**P**	**07 17 03.0**	**+0.2**
	comp=Z,8.7nm,1.1s						
WMQ	**Urumqi**	**88.35**	**315**	P	**P**	**07 17 03.6**	**+0.3**
WMQ				PcP	**PcP**	**07 17 06.6**	**+1.7**
WMQ				pP	pP	07 17 08.8	-0.9
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,460nm,6.1s						
WMQ				LR	LR		
	comp=N,280nm,17.1s						
WMQ				LR	LR		
	comp=E,300nm,21.7s						
WMQ				LR	LR		
	comp=Z,270nm,20.7s						
Y12C	**Blythe**	**88.43**	**55**	*e*P	**P**	**07 17 04.3**	**+0.5**
	comp=Z,6.7nm,0.9s						
SHPR	**Sheep Range**	**88.60**	**53**	*e*P	**P**	**07 17 05.2**	**+0.4**
R11A	**Troy Canyon, C**	**88.75**	**51**	*e*P	**P**	**07 17 04.7**	**-0.7**
	comp=Z,2.4nm,1.1s						
BMO	**Blue Mountains**	**89.25**	**44**	*e*P	**P**	**07 17 07.1**	**-0.4**
	comp=Z,0.9nm,0.6s						
F10A	**Beach Ranch, E**	**89.61**	**43**	*e*P	**P**	**07 17 08.8**	**-0.4**
	comp=Z,4.1nm,1.0s						
ELK	**Elko**	**89.62**	**48**	*e*P	**P**	**07 17 09.1**	**-0.4**
	comp=Z,1.4nm,0.9s						
Y14A	**Wickenburg**	**89.70**	**55**	*e*P	**P**	**07 17 10.0**	**+0.1**
DGZ	**Jazzator, Alta**	**90.22**	**321**	*ce*P	**P**	**07 17 11.8**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LCMT	**Little Creek M**	**90.22**	**52**	*e*P	**P**	**07 17 12.6**	**+0.3**
	comp=Z,9.2nm,1.1s						
CCUT	**Cedar City**	**90.25**	**52**	*e*P	**P**	**07 17 12.9**	**+0.3**
	comp=Z,6.5nm,1.0s						
KNB	**Kanab**	**90.55**	**53**	*e*P	**P**	**07 17 14.6**	**+0.7**
	comp=Z,1.1nm,0.8s						
U15A	**North Rim**	**90.83**	**53**	*e*P	**P**	**07 17 16.1**	**+0.7**
	comp=Z,7.1nm,0.9s						
HLID	**Hailey**	**90.92**	**46**	*e*P	**P**	**07 17 14.6**	**-0.8**
	comp=Z,6.9nm,1.1s						
PKCU	**Pink Cliffs**	**91.04**	**52**	*e*P	**P**	**07 17 17.8**	**+1.4**
	comp=Z,14nm,1.2s						
X16A	**Lo Mia Camp, P**	**91.07**	**55**	*e*P	**P**	**07 17 16.6**	**+0.2**
	comp=Z,3.7nm,1.0s						
TUC	**Tucson**	**91.16**	**57**	*e*P	**P**	**07 17 16.9**	**+0.2**
	comp=Z,3.9nm,1.1s						
DUG	**Dugway, Tooele**	**91.28**	**49**	*e*P	**P**	**07 17 17.7**	**+0.5**
	comp=Z,2.2nm,0.9s						
MSU	**Marysvale**	**91.38**	**51**	*e*P	**P**	**07 17 16.3**	**-1.5**
SYO	**Syowa Base**	**91.58**	**197**	⇑*i*P	**P**	**07 17 17.4**	**-0.4**
SYO	**Syowa Base**	**91.58**	**197**	⇓*i*PcP	**PcP**	**07 17 19.4**	**+0.7**
HVU	**Hansel Valley**	**91.67**	**48**	*e*P	**P**	**07 17 18.7**	**-0.3**
	comp=Z,8.8nm,1.0s						
NLU	**North Lily Min**	**91.78**	**50**	*e*P	**P**	**07 17 19.5**	**-0.1**
	comp=Z,5.4nm,1.0s						
MSO	**Missoula**	**92.03**	**43**	*e*P	**P**	**07 17 20.3**	**-0.2**
MPU	**Maple Canyon**	**92.12**	**50**	*e*P	**P**	**07 17 21.4**	**+0.2**
	comp=Z,1.8nm,1.0s						
MCMT	**McKenzie Canyo**	**92.31**	**45**	*e*P	**P**	**07 17 22.5**	**+0.6**
JLU	**Jordanelle**	**92.39**	**49**	*e*P	**P**	**07 17 22.9**	**+0.4**
	comp=Z,2.1nm,1.0s						
DLMT	**Dillon**	**92.60**	**44**	*e*P	**P**	**07 17 23.9**	**+0.7**
	comp=Z,9.3nm,1.0s						
MK01	**Makanchi Array**	**92.78**	**317**	*e*P	**P**	**07 17 23.6**	**-0.2**
MK31	**Makanchi Array**	**92.80**	**317**	*e*P	**P**	**07 17 24.0**	**+0.1**
MK32	**Makanchi Array**	**92.80**	**317**	*e*P	**P**	**07 17 24.0**	**+0.1**
MKAR	**Makanchi Array**	**92.80**	**317**	*e*P	**P**	**07 17 23.9**	**0.0**
	comp=Z,40nm,1.1s						
MKAR				PKKPbc	**PKKPdf**	**07 34 35.2**	**+0.1**
MKAR	**Makanchi Array**	**92.80**	**317**	P	**P**	**07 17 24.0**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=101,slow=6.5,SNR=24						
MKAR				PKKPbc	**PKKPdf**	**07 34 35.2**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=243,slow=6.3,SNR=6.0						
LRM	**Limekiln Ridge**	**92.80**	**44**	*e*P	**P**	**07 17 24.2**	**0.0**
ZAA0	**Zalesovo Array**	**92.92**	**324**	*e*P	**P**	**07 17 23.2**	**-1.0**
	comp=Z,1.8nm,0.9s						
ZALV	**Zalesovo Beam**	**92.92**	**324**	P	**P**	**07 17 23.4**	**-0.8**
	comp=Z,3.3nm,1.0s,baz=108,slow=4.8,SNR=13						
ZAA1	**Zalesovo Array**	**92.92**	**324**	*e*P	**P**	**07 17 23.4**	**-0.8**
MAKZ	**Makanchi**	**93.01**	**317**	*e*P	**P**	**07 17 23.7**	**-1.1**
	comp=Z,7.4nm,1.0s						
BOZ	**Bozeman (W)**	**93.31**	**44**	*e*P	**P**	**07 17 26.8**	**+0.3**
	comp=Z,1.0nm,1.0s						
FXWY	**Fox Creek**	**93.33**	**46**	*e*P	**P**	**07 17 26.9**	**+0.2**
	comp=Z,2.5nm,1.0s						
REDW	**Red Top Meadow**	**93.40**	**47**	*e*P	**P**	**07 17 26.9**	**-0.1**
	comp=Z,2.3nm,1.0s						
BW06	**Boulder Array**	**94.21**	**47**	*e*P	**P**	**07 17 30.5**	**-0.3**
	comp=Z,2.1nm,0.9s						
PD31	**Pinedale Array**	**94.21**	**47**	*e*P	**P**	**07 17 30.6**	**-0.2**
PDAR	**Pinedale Array**	**94.21**	**47**	*e*P	**P**	**07 17 30.3**	**-0.5**
PDAR	**Pinedale Array**	**94.21**	**47**	P	**P**	**07 17 30.1**	**-0.6**
	comp=Z,2.0nm,1.0s,baz=191,slow=1.5,SNR=11						
ANMO	**Albuquerque**	**95.20**	**56**	⇓*i*P	**P**	**07 17 36.9**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,7.0nm,2.5s						
YKA	**Yellowknife Ar**	**95.34**	**27**	P	**P**	**07 17 34.0**	**-1.1**
YKA	**Yellowknife Ar**	**95.34**	**27**	P	**P**	**07 17 34.0**	**-1.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**95.34**	**27**	P	**P**	**07 17 34.0**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=257,slow=4.4,SNR=14						
YKB5	**Yellowknife Ar**	**95.34**	**27**	*e*P	**P**	**07 17 34.3**	**-0.9**
NRIK	**Noril'sk**	**95.70**	**340**	P	**P**	**07 17 35.7**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=159,slow=5.3,SNR=4.7						
KURK	**Kurchatov**	**95.96**	**320**	*e*P	**P**	**07 17 36.5**	**-1.6**
KURK	**Kurchatov**	**95.96**	**320**	P	**P**	**07 17 36.6**	**-1.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURBB	**Kurchatov Arra**	**96.00**	**320**	P	**P**	**07 17 36.5**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=97,slow=4.2,SNR=5.2						
BVAR	**Borovoye Array**	**101.29**	**322**	P	**Pdif**	**07 18 01.3**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=101,slow=7.7,SNR=4.7						
BRVK	**Borovoye**	**101.35**	**322**	⇓*i*P	**Pdif**	**07 18 02.3**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARA0	**ARCESS Array S**	**116.01**	**345**	*e*PKPdf	**PKiKP**	**07 22 53.4**	**-0.2**
ARCES	**ARCESS Array B**	**116.01**	**345**	*e*PKPdf	**PKiKP**	**07 22 52.7**	**-0.9**
ARCES	**ARCESS Array B**	**116.01**	**345**	PKP	**PKiKP**	**07 22 53.4**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=46,slow=3.7,SNR=6.2						
LPAZ	**La Paz**	**121.09**	**117**	PKP	**PKPdf**	**07 23 05.8**	**0.0**
	comp=Z,3.0nm,1.1s,baz=286,slow=2.8,SNR=4.9						
FIA0	**FINESS Array S**	**121.33**	**338**	*e*PKPdf	**PKPdf**	**07 23 03.9**	**-0.2**
FINES	**FINESS Array B**	**121.33**	**338**	PKP	**PKPdf**	**07 23 03.9**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=190,slow=7.7,SNR=4.0						
CPUP	**Villa Florida**	**124.80**	**133**	PKP	**PKPdf**	**07 23 11.6**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=221,slow=3.2,SNR=5.1						
LMN	**Caledonia Moun**	**125.47**	**41**	*e*PKPdf	**PKPdf**	**07 23 12.4**	**-0.1**
AKASG	**Malin Array Be**	**126.26**	**326**	PKP	**PKPdf**	**07 23 13.2**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=60,slow=1.8,SNR=5.1						
FURI	**Furi**	**126.90**	**273**	*e*PKPdf	**PKPdf**	**07 23 14.4**	**-2.1**
CLL	**Collm**	**133.63**	**336**	*e*PKPdf	**PKiKP**	**07 23 29.0**	**-0.1**
CLL				*e*		07 23 35.0	
CLL				*e*PP	**PP**	**07 25 55.0**	**-1.0**
CLL	**Collm**	**133.63**	**336**	*e*PKIKP	**PKiKP**	**07 23 31.0**	**+1.9**
CLL				*e*		07 23 35.0	
GERES	**GERESS Array B**	**135.19**	**333**	PKP	**PKPdf**	**07 23 30.4**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=11,slow=1.4,SNR=4.5						
KEST	**Kesra**	**146.76**	**322**	*e*PKPdf	**PKPdf**	**07 23 51.2**	**-0.9**
ES19	**SONSECA Array**	**149.66**	**343**	*e*PKPbc	**PKPbc**	**07 24 01.1**	**-0.2**
ESDC	**Sonseca Array**	**149.70**	**343**	PKPbc	**PKPbc**	**07 23 59.6**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=42,slow=4.2,SNR=5.5						
TOA0	**Torodi Ar. Sit**	**163.29**	**279**	*e*PKPdf	**PKPdf**	**07 24 14.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**163.29**	**279**	PKP	**PKPdf**	**07 24 13.4**	**-1.5**
	comp=Z,1.5nm,1.0s,baz=120,slow=2.6,SNR=6.2						
TOA1	**Torodi Ar. Sit**	**163.29**	**279**	*e*PKPdf	**PKPdf**	**07 24 13.4**	**-1.5**
DBIC	**Dimbokro**	**168.89**	**248**	*e*PKPdf	**PKPdf**	**07 24 17.5**	**-1.9**
DBIC	**Dimbokro**	**168.89**	**248**	PKP	**PKPdf**	**07 24 17.2**	**-2.2**
	comp=Z,8.2nm,1.1s,baz=218,slow=2.3,SNR=3.3						
SACV	**Santiago Islan**	**170.93**	**63**	*e*PKPdf	**PKPdf**	**07 24 21.8**	**+1.3**

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*ISCJB **08** 07:04:16.8±0.6, 6°.85N±0°.03×73°.12W±0°.04, h154^{km}±5^{km}, mb3.0/2, Error ellipse: s-maj=6.6km s-min=5.4km az=14.5*

*IDC **08** 07:04:16.6±2.7, 6°.59N×72°.69W, h175^{km}±27^{km}, mb2.8/2, mb1 3.3/4, mb1mx3.0/27, mbtmp3.5/4, Error ellipse: s-maj=111.0km s-min=7.7km az=134.0*

*RSNC **08** 07:04:17.9±1.1, 6°.80N×73°.15W, h150^{km}±5^{km}, ML3.5, Mw3.5*

ISC 08 07:04:17.5±1.0**, 6°.85N**±0°.04×**73°.12W**±0°.04**, h151**^{km}±7^{km}**, n20, σ1^{s}04**/34**, 2C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**193**	*e*P	**Pn**	**07 04 38.2**	**-0.1**
BARC				*e*S	**Sn**	**07 04 53.7**	**-0.6**
BARC				*i*		07 04 55.9	
	comp=Z,427nm,0.3s						
BRRC	**Barranca, Sant**	**0.64**	**293**	⇑*i*P	**Pn**	**07 04 40.1**	**+0.4**
BRRC				*e*S	**Sn**	**07 04 57.3**	**+0.7**
BRRC				*i*		07 04 59.9	
	comp=N,522nm,0.2s						
PAMC	**Pamplona, Colo**	**0.64**	**41**	⇓*e*P	**Pn**	**07 04 41.0**	**+0.7**
PAMC				*e*S	**Sn**	**07 04 58.1**	**+0.4**
PAMC				*i*		07 04 59.3	
	comp=N,426nm,0.5s						
RUSC	**La Rusia**	**0.95**	**178**	⇓*e*P	**Pn**	**07 04 42.1**	**-0.5**
RUSC				*e*S	**Sn**	**07 05 00.4**	**-1.3**
RUSC				*i*		07 05 02.4	
	comp=N,400nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	*e*P	**Pn**	**07 04 44.7**	**-1.1**
PTBC				*e*S	**Sn**	**07 05 05.9**	**-1.4**
PTBC				*i*		07 05 11.5	
	comp=N,418nm,0.5s						
TAMC	**Tame, Arauca**	**1.39**	**107**	⇑*i*P	**Pn**	**07 04 46.4**	**+0.4**
TAMC				*e*S	**Sn**	**07 05 07.7**	**-0.1**
TAMC				*i*		07 05 08.6	
	comp=N,423nm,0.4s						
OCAC	**Ocana**	**1.39**	**352**	*e*P	**Pn**	**07 04 46.8**	**+0.6**
OCAC				*e*S	**Sn**	**07 05 08.9**	**+0.7**
OCAC				*i*		07 05 11.6	
	comp=N,838nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.84**	**290**	*e*P	**Pn**	**07 04 50.6**	**-0.2**
ZARC				*e*S	**Sn**	**07 05 16.2**	**-0.1**
	comp=N,220nm,0.2s						
ZARC				*i*		07 05 22.4	
	comp=N,220nm,0.2s						
SMLC	**San Martn de**	**2.15**	**334**	*e*P	**Pn**	**07 04 54.5**	**0.0**
SMLC				*e*S	**Sn**	**07 05 23.8**	**+0.8**
SMLC				*i*		07 05 25.3	
	comp=N,437nm,0.3s						
CHIC	**Chingaza**	**2.29**	**195**	*e*P	**Pn**	**07 04 56.1**	**-0.4**
CHIC				*e*S	**Sn**	**07 05 25.2**	**-1.4**
CHIC				*i*		07 05 33.1	
	comp=N,125nm,0.5s						
ROSC	**El Rosal**	**2.33**	**211**	*e*P	**Pn**	**07 04 57.7**	**+0.7**
ROSC				*i*		07 05 35.9	
	comp=Z,154nm,0.5s						
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**07 04 57.9**	**+0.8**
	comp=Z,25nm,0.3s,baz=318,slow=8.8,SNR=51						
ROSC				S	**Sn**	**07 05 30.4**	**+3.0**
	comp=Z,27nm,0.3s,baz=24,slow=21,SNR=21						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**07 04 58.7**	**-0.1**
HELC				*e*S	**Sn**	**07 05 30.7**	**+0.2**
HELC				*i*		07 05 36.6	
	comp=N,73nm,0.4s						
UREC	**San Jos de Ur**	**2.55**	**291**	*e*P	**Pn**	**07 04 58.0**	**-1.4**
UREC				*i*		07 05 40.5	
	comp=N,171nm,0.3s						
VILC	**Villavicencio,**	**2.78**	**192**	*e*P	**Pn**	**07 05 01.3**	**-1.0**
VILC				*i*		07 05 42.8	
	comp=N,281nm,0.6s						
CODC	**Agustn Codazz**	**3.08**	**354**	*e*P	**Pn**	**07 05 05.9**	**0.0**
CODC				*e*S	**Sn**	**07 05 43.3**	**-0.1**
CODC				*i*		07 05 49.3	
	comp=N,58nm,0.3s						
SDV	**Santo Domingo**	**3.19**	**51**	P	**Pn**	**07 05 07.6**	**+0.1**
	comp=N,19nm,0.3s,baz=215,slow=2.9,SNR=166						
SDV				S	**Sn**	**07 05 44.5**	**-1.7**
	comp=N,8.4nm,0.3s,baz=343,slow=10,SNR=15						
SJAC	**San Juan de Ar**	**3.65**	**193**	*e*P	**Pn**	**07 05 15.0**	**+1.5**
TXAR	**Lajitas Array**	**36.44**	**312**	P	**P**	**07 11 09.4**	**+1.3**
	comp=N,0.3nm,0.6s,baz=128,slow=12,SNR=3.1						
YKA	**Yellowknife Ar**	**63.23**	**340**	P	**P**	**07 14 28.3**	**-1.3**
	comp=N,0.1nm,0.5s,baz=131,slow=7.0,SNR=6.1						

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*NNC **08** 07:08:18.1±1.8, 54°.21N×86°.48E, h0^{km}, mb3.3, mpv3.1, Error ellipse: s-maj=22.7km s-min=8.9km az=177.0, Suspected Mining explosion.*

IDC 08 07:08:20.9±2.3**, 54°.10N×86°.39E, h0**^{km}**, mb1 3.2**/2**, mb1mx3.0**/46**, mbtmp3.2**/2**, ML2.9**/2**, 5C-4D, Error ellipse: s-maj=19.2km s-min=11.9km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**261**	*i*		07 13 52.2	
	baz=84,slow=347,SNR=9.3						
ZAA0	**Zalesovo Array**	**0.94**	**261**	⇑P	Pg	07 08 37.2	-1.7
	3.5nm,0.5s						
ZAA0				⇓S	Sg	07 08 51.6	+0.5
	14nm,1.1s						
ZALV	**Zalesovo Beam**	**0.94**	**261**	Pg	Pg	07 08 37.4	-1.4
	2.4nm,0.3s,baz=77,slow=17,SNR=38						
ZALV				Lg	Lg	07 08 52.4	
	3.2nm,0.3s,baz=77,slow=28,SNR=26						
KURK	**Kurchatov**	**5.84**	**238**	⇑Pn	Pn	07 09 49.3	+0.7
	4.3nm,1.3s						
KURK				⇓Lg	Lg	07 11 29.2	
	5.1nm,1.0s						
KURBB	**Kurchatov Arra**	**5.94**	**237**	⇓Pn	Pn	07 09 50.5	+0.5
	2.9nm,0.6s						
KURBB				⇑Lg	Lg	07 11 32.2	
	6.0nm,0.8s						
KURBB	**Kurchatov Arra**	**5.94**	**237**	Pn	Pn	07 09 51.2	+1.2
	0.2nm,0.3s,baz=54,slow=13,SNR=22						
KURBB				Lg	Lg	07 11 31.1	
	0.0nm,0.3s,baz=53,slow=34,SNR=5.4						
MK31	**Makanchi Array**	**7.77**	**201**	⇑Pn	Pn	07 10 14.1	-1.0
	0.5nm,0.5s,baz=26,slow=13,SNR=17						
MK31				⇓Sn	Sn	07 11 43.6	-0.2
	1.5nm,1.1s,baz=27,slow=25,SNR=4.4						
MK31				⇑Lg	Lg	07 12 28.6	
	2.6nm,1.1s,baz=28,slow=29,SNR=4.5						
MKAR	**Makanchi Array**	**7.77**	**201**	Pn	Pn	07 10 16.0	+0.9
	0.2nm,0.3s,baz=22,slow=12,SNR=19						
MKAR				Lg	Lg	07 12 24.2	
	0.1nm,0.3s,baz=21,slow=27,SNR=5.0						

IDC 08 07:08:58.1±2.7**, 54°.13N×86°.44E, h0**^{km}**, mb1 3.0**/2**, mb1mx2.8**/47**, mbtmp3.0**/2**, ML2.7**/2**, Error ellipse: s-maj=21.1km s-min=13.2km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**260**	*i*		07 14 31.8	
	baz=82,slow=348						
ZALV	**Zalesovo Beam**	**0.97**	**260**	Pg	Pg	07 09 15.6	-1.2
	1.0nm,0.3s,baz=76,slow=17,SNR=4.9						
ZALV				Lg	Lg	07 09 30.5	
	2.0nm,0.3s,baz=75,slow=28,SNR=5.8						
KURBB	**Kurchatov Arra**	**5.98**	**237**	Pn	Pn	07 10 28.9	+1.0
	0.1nm,0.3s,baz=54,slow=13,SNR=7.5						
KURBB				Lg	Lg	07 12 09.0	
	0.0nm,0.3s,baz=65,slow=35,SNR=3.9						
MKAR	**Makanchi Array**	**7.81**	**201**	Pn	Pn	07 10 53.8	+0.9
	0.1nm,0.3s,baz=22,slow=12,SNR=5.6						
MKAR				Lg	Lg	07 13 05.6	
	0.1nm,0.3s,baz=25,slow=32,SNR=2.6						

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*ISCJB **08** 07:14:46.4±0.6, 42°.87N±0°.05×143°.48E±0°.07, h115^{km}±4^{km}, mb3.4/5, Error ellipse: s-maj=9.2km s-min=8.0km az=140.8*

*JMA **08** 07:14:47.7±0.1, 42°.86N×143°.40E, h108^{km}±1^{km}, M3.0*

*IDC **08** 07:14:48.6±1.2, 45°.32N×143°.15E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.3/48, mbtmp3.4/5, Error ellipse: s-maj=34.9km s-min=18.0km az=108.0*

ISC 08 07:14:47.2±0.9**, 42°.86N**±0°.06×**143°.48E**±0°.06**, h111**^{km}±6^{km}**, n16, σ0^{s}57**/25**, mb3.5**/5**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCH	**Churui**	**0.25**	**199**	P	**Pn**	**07 15 02.9**	**0.0**
JCH				*e*S	**Sn**	**07 15 13.8**	**-0.9**
JOB	**Onbets**	**0.27**	**79**	P	**Pn**	**07 15 03.6**	**+0.6**
JOB				*e*S	**Sn**	**07 15 15.4**	**+0.6**
JAR	**Ashorobuto**	**0.49**	**26**	P	**Pn**	**07 15 04.3**	**+0.2**
JAR				*e*S	**Sn**	**07 15 16.5**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.79**	**223**	P	**Pn**	**07 15 06.7**	**+0.3**
JNBK				*e*S	**Sn**	**07 15 20.5**	**-0.3**
JBT2	**Biratori 2**	**0.82**	**265**	P	**Pn**	**07 15 06.6**	**-0.1**
JAK	**Akkeshi**	**0.91**	**81**	P	**Pn**	**07 15 07.8**	**+0.3**
JAK				*e*S	**Sn**	**07 15 23.0**	**+0.1**
JKK2	**Kamakawa 2**	**1.15**	**333**	P	**Pn**	**07 15 10.2**	**+0.1**
JMP	**Maruseppu**	**1.16**	**356**	P	**Pn**	**07 15 10.4**	**+0.2**
JMP				*e*S	**Sn**	**07 15 27.2**	**-0.3**
JTKR	**Abashiri--Toko**	**1.16**	**16**	P	**Pn**	**07 15 10.3**	**+0.1**
JTKR				*e*S	**Sn**	**07 15 27.4**	**-0.1**
ASAJ	**Asahikawa**	**1.42**	**333**	Pn	**Pn**	**07 15 13.8**	**+0.7**
	6.0nm,0.3s,baz=190,slow=12,SNR=17						
ASAJ				Sn	**Sn**	**07 15 31.8**	**-0.9**
	2.5nm,0.3s,baz=266,slow=19,SNR=2.2						
NEM2	**Nemuro 2**	**1.74**	**72**	P	**Pn**	**07 15 16.8**	**-0.1**
NEM2				*e*S	**Sn**	**07 15 38.6**	**-0.9**
ZALV	**Zalesovo Beam**	**39.40**	**307**	P	**P**	**07 22 06.3**	**+0.5**
	0.3nm,0.4s,baz=95,slow=9.0,SNR=2.1						
ILAR	**Eielson Array**	**43.78**	**35**	P	**P**	**07 22 41.1**	**-0.3**
	0.2nm,0.4s,baz=258,slow=5.0,SNR=7.5						
BVAR	**Borovoye Array**	**47.99**	**309**	P	**P**	**07 23 15.7**	**+1.1**
	0.7nm,0.4s,baz=71,slow=5.2,SNR=4.2						
YKA	**Yellowknife Ar**	**58.02**	**32**	P	**P**	**07 24 28.1**	**+0.2**
	0.1nm,0.7s,baz=307,slow=6.8,SNR=2.8						
FINES	**FINESS Array B**	**64.42**	**332**	P	**P**	**07 25 10.3**	**-0.8**
	0.4nm,0.4s,baz=58,slow=8.9,SNR=4.1						

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*ISCJB **08** 07:20:02.8±0.4, 22°.99N±0°.02×121°.59E±0°.03, h19^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=2.9km az=26.1*

*JMA **08** 07:20:02.9±0.1, 23°.00N×121°.58E, h25^{km}±3^{km}, M3.4*

*TAP **08** 07:20:04.5, 23°.03N×121°.45E, h21^{km}, ML3.2, C*

ISC 08 07:20:03.3±1.0**, 23°.00N**±0°.02×**121°.55E**±0°.03**, h24**^{km}±8^{km}**, n74, σ0^{s}77**/105**, 7C-5D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.19**	**301**	⇓*i*P	**Pb**	**07 20 08.9**	**+0.1**
	baz=316						
CHKT				*i* S	**Sb**	**07 20 12.0**	**-0.5**
	baz=316						
TWF1	**Yuli**	**0.42**	**327**	*i* P	**Pb**	**07 20 12.4**	**+0.2**
	baz=344						
TWF1				*i* S	**Sb**	**07 20 18.4**	**+0.2**
	baz=344						
TTN	**Taitung**	**0.44**	**236**	*e*P	**Pb**	**07 20 12.3**	**-0.2**
	baz=215						
TTN				*e*S	**Sb**	**07 20 19.8**	**+1.0**
	baz=215						
YULB	**Yu-li**	**0.45**	**330**	P	**Pb**	**07 20 12.9**	**+0.2**
	baz=345						
YULB				*i* S	**Sb**	**07 20 19.0**	**-0.1**
	baz=345						
TWGBT	**Beinan**	**0.47**	**247**	P	**Pb**	**07 20 13.2**	**+0.2**
	baz=252						
TWGBT				S	**Sb**	**07 20 19.3**	**-0.2**
	baz=252						
TWG	**Pinlang**	**0.47**	**248**	⇑*i*P	**Pb**	**07 20 13.3**	**+0.2**
	baz=251						
TWG				S	**Sb**	**07 20 19.1**	**-0.5**
	baz=251						
HGSD	**Ruisui**	**0.50**	**347**	⇑P	**Pb**	**07 20 13.3**	**-0.3**
	baz=6.0						
HGSD				*e*S	**Sn**	**07 20 22.3**	**-0.7**
	baz=6.0						
ELDTW	**Lidau**	**0.52**	**291**	⇓*i*P	**Pb**	**07 20 13.2**	**-0.7**
	baz=293						
ELDTW				S	**Sb**	**07 20 19.4**	**-1.8**
	baz=293						
EHY	**Hungye**	**0.54**	**338**	⇑P	**Pb**	**07 20 14.2**	**-0.1**
	baz=352						
EHY				S	**Sb**	**07 20 21.8**	**0.0**
	baz=352						
EGFH	**Guangfu**	**0.67**	**351**	*e*P	**Pb**	**07 20 16.4**	**-0.1**
	baz=10.0						
ECL	**Taimali**	**0.68**	**234**	P	**Pb**	**07 20 16.0**	**-0.5**
	baz=236						
ECL				S	**Sb**	**07 20 24.6**	**-0.9**
	baz=236						
ESL	**Shilin**	**0.82**	**353**	*e*P	**Pb**	**07 20 18.2**	**-0.7**
	baz=350						
SLGT	**Liugui**	**0.83**	**270**	*e*P	**Pb**	**07 20 18.9**	**-0.2**
	baz=265						
VWDT	**VWDT**	**0.84**	**334**	⇑P	**Pb**	**07 20 19.1**	**-0.1**
	baz=354						
VWDT				S	**Sb**	**07 20 29.6**	**-0.5**
	baz=354						
ALS	**Alishan**	**0.85**	**307**	⇓*i*P	**Pb**	**07 20 19.7**	**+0.1**
	baz=311						
ALS				*e*S	**Sb**	**07 20 29.6**	**-1.2**
	baz=311						
SSD	**Sandimen**	**0.88**	**253**	*e*P	**Pb**	**07 20 19.1**	**-0.8**
	baz=237						
EAST	**Anshuo**	**0.89**	**227**	⇑P	**Pb**	**07 20 19.4**	**-0.8**
	baz=217						
SGST	**Jiashian**	**0.89**	**275**	*e*P	**Pn**	**07 20 20.5**	**+0.1**
	baz=276						
SGST				*e*S	**Sb**	**07 20 31.3**	**-0.4**
	baz=276						
WTP	**Ta-pu**	**0.89**	**286**	*e*P	**Pn**	**07 20 20.3**	**-0.1**
	baz=286						
WTP				*e*S	**Sn**	**07 20 31.9**	**-0.8**
	baz=286						
TPUB	**Ta-pu**	**0.90**	**290**	P	**Pb**	**07 20 20.2**	**-0.1**
	baz=298						
TPUB				S	**Sn**	**07 20 31.9**	**-0.8**
	baz=298						
ENLB	**Shoufeng**	**0.90**	**3**	*e*P	**Pb**	**07 20 19.9**	**-0.4**
	baz=23						
ENLB				*e*S	**Sb**	**07 20 32.0**	**+0.1**
	baz=23						
MASBT	**Mashibuluo**	**0.93**	**246**	⇑P	**Pb**	**07 20 20.3**	**-0.4**
	baz=233						
MASBT				S	**Sb**	**07 20 31.1**	**-1.5**
	baz=233						

WHYT	Xinyi Township baz=332	0.94	318	*e*P	Pn	07 20 21.1	-0.1
CHN4	Tsaushan baz=299	0.94	292	⇓*i*P	Pn	07 20 21.4	+0.3
CHN4	baz=299			*e*S	Sn	07 20 33.9	0.0
SSLB	Suanglung baz=342	0.95	325	*e*P	Pb	07 20 20.9	-0.3
LAY	Lan-yu baz=162	0.96	180	*e*P	Pb	07 20 20.5	-0.7
SNST	Tainan City baz=283	0.99	283	*e*P	Pn	07 20 22.8	+1.0
SNST	baz=283			*e*S	Sn	07 20 35.8	+0.8
CHN5	Tsauling baz=310	0.99	307	⇓*i*P	Pn	07 20 22.5	+0.6
CHN5	baz=310			*e*S	Sn	07 20 35.9	+0.6
OWD	Renai baz=348	1.01	340	*e*P	Pb	07 20 21.4	-0.8
OWD	baz=348			*e*S	Sb	07 20 32.1	-3.1
TWK	Hsinying baz=286	1.01	285	*e*P	Pn	07 20 22.2	+0.1
TWK	baz=286			*e*S	Sn	07 20 36.1	+0.5
SSPT	Xinbi baz=234	1.04	241	*e*P	Pb	07 20 22.8	+0.1
SSPT	baz=234			*e*S	Sb	07 20 35.8	-0.1
TWM1	Shoushan baz=255	1.05	261	*e*P	Pb	07 20 23.2	+0.3
SCZT	Fangliau baz=219	1.06	234	*e*P	Pn	07 20 22.5	-0.2
SMLT	Sun Moon Lake baz=343	1.06	326	*e*P	Pn	07 20 22.7	-0.1
SMLT	baz=343			S	Sn	07 20 36.6	-0.3
TWD	Chiawan baz=24	1.08	2	*e*P	Pn	07 20 22.3	-0.7
TYC	Yuchr baz=342	1.10	325	*e*P	Pb	07 20 24.1	+0.4
TYC	baz=342			*e*S	Sn	07 20 37.9	+0.2
CHGB	Renai baz=3.0	1.11	342	⇑P	Pn	07 20 23.4	-0.3
CHGB	baz=3.0			*e*S	Sb	07 20 36.7	-1.4
WJS	Zhushan baz=323	1.11	318	*e*P	Pb	07 20 24.4	+0.5
WGK	Gukeng baz=312	1.13	307	*e*P	Pb	07 20 25.0	+0.8
SNJT	Kaohsiung City baz=253	1.14	258	*e*P	Pb	07 20 26.6	+2.2
CHY	Chiayi baz=298	1.15	296	*e*P	Pb	07 20 25.2	+0.7
WDLH	Douliu baz=311	1.15	307	*e*P	Pb	07 20 24.9	+0.3
WHF	Hehuan Shan baz=355	1.17	347	*e*P	Pn	07 20 23.8	-0.8
WHF	baz=355			*e*S	Sb	07 20 39.0	-1.1
NACB	Ninganchiao baz=23	1.17	2	*e*P	Pn	07 20 23.4	-0.9
WNT	Mingjian baz=324	1.18	318	*e*P	Pb	07 20 25.9	+0.8
ETLH	Xiulin Townshi baz=6.0	1.20	357	*e*P	Pn	07 20 24.1	-0.7
TWKBT	Hengchun baz=193	1.25	213	*e*P	Pn	07 20 24.9	-0.5
TDCB	Techi baz=352	1.30	344	*e*P	Pn	07 20 26.3	+0.1
WHP	Taichung City baz=356	1.39	337	*e*P	Pb	07 20 29.0	+0.4
NNSB	Datong baz=16	1.43	354	*e*P	Pn	07 20 28.0	+0.1
ENA	Nanau baz=24	1.43	7	*e*P	Pn	07 20 27.3	-0.6
TWQ1	Liyutan baz=339	1.52	332	*e*P	Pb	07 20 30.9	+0.1
TWQ1	baz=339			*e*S	Sb	07 20 50.7	+1.1
NSY	Sanyi baz=339	1.58	333	*e*P	Pb	07 20 31.7	-0.3
NDT	Datong Townshi baz=8.0	1.59	359	*e*P	Pn	07 20 29.7	-0.4
TWC	Suao baz=30	1.63	10	*e*P	Pn	07 20 30.2	-0.3
EOS1	EOS1 baz=38	1.63	19	*e*P	Pn	07 20 30.9	+0.3
YHNB	Yeheng baz=16	1.67	355	*e*P	Pn	07 20 31.9	+0.7
NSTT	Nanjuang baz=352	1.70	343	*e*P	Pb	07 20 32.9	-1.0
LIOB	Emei baz=352	1.71	344	*e*P	Pn	07 20 32.0	+0.3
TWE	Neicheng baz=13	1.72	4	*e*P	Pn	07 20 32.1	+0.4
NWLT	Wulai baz=20	1.77	359	*e*P	Pn	07 20 33.3	+0.8
TIPB	Shuangxi baz=5.0	1.98	7	*e*P	Pn	07 20 36.3	+0.9
YOJ	Yonaguni jima	1.98	42	P	Pn	07 20 35.7	+0.3
WFSB	Wu-fen Shan baz=16	2.07	6	*e*P	Pn	07 20 38.1	+1.5
HATJ	Hateruma jima	2.33	63	*e*S	Sn	07 21 07.9	-0.1
IRIF	Iriomote-Funau	2.40	56	P	Pn	07 20 42.7	+1.5
IRIF				S	Sn	07 21 10.6	+0.7
JKRS	Kuro-shima	2.57	61	*e*S	Sn	07 21 14.5	+0.4
JIJ	Ishigaki jima	2.74	60	P	Pn	07 20 46.9	+1.1
JIJ				S	Sn	07 21 17.7	-0.5
JISG	Ishigakijimahi	2.98	57	P	Pn	07 20 50.0	+0.8
PTMZ	Houxiangcun baz=316	3.01	313	*e*P	Pn	07 20 50.3	+0.8
JTJ	Tarama	3.32	60	P	Pn	07 20 55.0	+1.2
JTJ				*e*S	Sn	07 21 33.0	+0.5
AXDP	Jialang baz=302	3.78	301	*e*P	Pn	07 21 00.8	+0.7
MHZQ	Yeshan baz=325	3.84	324	*e*P	Pn	07 21 02.4	+1.4
LYJJ	Jianjiangzhen baz=340	3.89	336	*e*P	Pn	07 21 02.5	+0.9

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*ISCJB **08** 07:20:52.4±0.6, 50°.04N±0°.04×78°.66E±0°.07, h0^{km}, Error ellipse: s-maj=6.7km s-min=4.6km az=151.0*

*NNC **08** 07:20:53.2±0.9, 50°.07N×78°.77E, h0^{km}, mb3.2, mpv3.1, Error ellipse: s-maj=9.1km s-min=4.3km az=63.0, Suspected Mining explosion.*

*IDC **08** 07:20:54.3±0.8, 50°.09N×78°.80E, h0^{km}, mb1 2.9/3, mb1mx2.9/47, mbtmp2.9/3, ML2.6/3, Error ellipse: s-maj=12.0km s-min=5.6km az=58.0*

ISC 08 07:20:54.2±0.9, **50°.05N**±0°.05×**78°.72E**±0°.04, **h0^{km}, n13, σ1^{s}14**/19, **7C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra 26nm,0.3s	0.58	348	⇑P	Pg	07 21 04.6	-0.7
KURBB	93nm,0.7s			⇑S	Sg	07 21 13.2	+0.3
KURBB	Kurchatov Arra 4.1nm,0.3s,baz=166,slow=18,SNR=94	0.58	348	Pg	Pg	07 21 04.6	-0.7
KURBB	3.3nm,0.3s,baz=166,slow=31,SNR=40			Lg	Lg	07 21 13.5	
KURK	Kurchatov 9.5nm,0.3s	0.67	355	⇓P	Pg	07 21 06.0	-0.9
KURK	43nm,0.7s			⇓S	Sg	07 21 14.4	-1.2
SEM	Semipalatinsk 19nm,0.1s	1.04	70	P	Pg	07 21 12.6	-1.6
SEM	46nm,0.1s			S	Sg	07 21 27.8	+0.1
MAKZ	Makanchi 3.5nm,0.7s	3.91	145	⇓Pg	Pb	07 22 03.9	0.0
MAKZ	12nm,0.7s			⇑Lg	Lg	07 22 55.5	
MK31	Makanchi Array 0.2nm,0.2s,baz=333,slow=11,SNR=49	4.04	143	⇑Pn	Pn	07 21 56.9	-0.3
MK31	1.0nm,0.3s,baz=316,slow=15,SNR=19			⇑Pg	Pb	07 22 05.2	-0.9
MK31	20nm,0.7s,baz=327,slow=28,SNR=16			⇓Lg	Lg	07 22 59.4	
MKAR	Makanchi Array 0.4nm,0.3s,baz=321,slow=10,SNR=66	4.04	143	Pn	Pn	07 21 57.0	-0.2
MKAR	0.9nm,0.3s,baz=341,slow=18,SNR=19			Pg	Pb	07 22 04.9	-1.2
MKAR	0.5nm,0.3s,baz=351,slow=23,SNR=8.4			Sn	Sn	07 22 46.8	+1.6
MKAR	1.8nm,0.3s,baz=327,slow=28,SNR=21			Lg	Lg	07 23 00.0	
OTUK	Ortayu 0.6nm,0.3s	4.56	249	Pg	Pb	07 22 16.2	+1.1
OTUK	3.2nm,0.5s			Lg	Lg	07 23 16.1	
OTUK	Ortayu 0.9nm,0.2s	4.56	249	⇑Pn	Pn	07 22 03.7	-0.7
OTUK	8.2nm,0.7s			⇑Lg	Lg	07 23 20.5	
ZSN	Zaisan 0.7nm,0.1s	4.83	120	Pg	Pb	07 22 22.0	+2.4
ZSN	4.7nm,0.4s			Lg	Lg	07 23 26.3	
ZALV	Zalesovo Beam 0.9nm,0.3s,baz=231,slow=14,SNR=13	5.42	42	Pn	Pn	07 22 17.4	+1.2
ZALV	0.2nm,0.3s,baz=239,slow=27,SNR=3.1			Lg	Lg	07 23 40.8	
I46RU	ZALESOVO INFRA baz=220,slow=345,SNR=1.3	5.42	42	*i*		07 56 37.0	
BVAR	Borovoye Array 0.2nm,0.3s,baz=98,slow=16,SNR=4.9	5.99	303	Pn	Pn	07 22 24.5	+0.5
BVAR	0.4nm,0.3s,baz=121,slow=26,SNR=3.7			Sn	Sn	07 23 32.4	-0.8
BVAR	0.2nm,0.3s,baz=121,slow=26,SNR=3.6			Lg	Lg	07 24 04.4	

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*IDC **08** 07:23:45.7±1.0, 11°.48S×165°.03E, h0^{km}, mb4.1/8, mb1 4.3/9, mb1mx4.1/34, mbtmp4.0/9, ML4.0/1, Error ellipse: s-maj=39.3km s-min=22.2km az=138.0*

*NEIC **08** 07:23:46.7±0.4, 11°.55S×165°.14E, h10^{km}, mb4.5/5, Error ellipse: s-maj=13.9km s-min=9.7km az=125.0*

*ISCJB **08** 07:23:49.0±0.5, 11°.55S±0°.09×165°.02E±0°.09, h34^{km}, mb4.1/13, Error ellipse: s-maj=14.8km s-min=10.2km az=42.7*

ISC 08 07:23:50.2±0.6, **11°.57S**±0°.10×**165°.2E**±0°.1, **h34^{km}, n34, σ1^{s}29**/28, **mb4.0**/13, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.52	174	*e*Pn	Pn	07 26 18.0	-0.8
DZM	Mont Dzumac 1.1nm,0.3s,baz=328,slow=20,SNR=11	10.52	174	Pn	Pn	07 26 19.3	+0.6
FUNA	Funafuti	14.13	79	*e*P	P	07 27 14.8	-0.4
KWAJ	Kwajalein Atol	20.38	7	*e*P	P	07 28 24.1	-0.1
RAO	Raoul Island 11nm,0.5s	23.62	141	*e*P	P	07 28 59.5	+1.2
H11S2	WAKE ISLAND Hy baz=182	29.90	3	T	T	08 01 58.1	
H11S3	WAKE ISLAND Hy baz=182	29.91	3	T	T	08 02 02.7	
H11S1	WAKE ISLAND Hy baz=182	29.92	3	T	T	08 01 59.4	
WB2	Warramunga Arr 8.1nm,1.1s	30.77	250	*e*P	P	07 30 02.4	-0.5
WRAB	Tennant Creek 4.9nm,1.1s	30.77	250	*e*P	P	07 30 02.3	-0.6
WR1	Warramunga Arr	30.79	250	*e*P	P	07 30 02.9	0.0
WRA	Warramunga Arr 5.2nm,1.0s,baz=80,slow=9.4,SNR=17	30.79	250	P	P	07 30 02.9	0.0
H11N1	WAKE ISLAND Hy baz=184	31.13	3	T	T	08 03 29.6	
H11N3	WAKE ISLAND Hy baz=184	31.13	3	T	T	08 03 30.7	
H11N2	WAKE ISLAND Hy baz=184	31.14	3	T	T	08 03 31.6	
AS01	Alice Springs	32.02	244	*e*P	P	07 30 14.9	+1.0
ASAR	Alice Springs 1.9nm,0.8s,baz=75,slow=8.9,SNR=16	32.06	244	P	P	07 30 13.2	-1.0
FITZ	Fitzroy Crossi 2.2nm,1.0s	38.71	256	*e*P	P	07 31 14.9	+3.6
PETK	Petropavlovsk-	64.73	355	*e*P	P	07 34 24.1	-0.9
GSTR	Great Sitkin T	65.44	13	*e*P	P	07 34 30.8	+1.2
SONA0	Songino Array	78.76	324	*e*P	P	07 35 49.5	-0.1
SONM	Songino Array 0.5nm,0.4s,baz=159,slow=4.3,SNR=3.2	78.76	324	P	P	07 35 49.5	-0.1
IM3	Indian Mountai	83.07	16	*e*P	P	07 36 13.2	+1.3
ILAR	Eielson Array 0.8nm,0.8s,baz=236,slow=4.9,SNR=12	84.18	19	P	P	07 36 18.3	+0.7
IL1	Eielson Array	84.18	19	*e*P	P	07 36 17.4	-0.2
NV01	Mina Array Sit	86.78	50	*e*P	P	07 36 32.4	+0.8
NVAR	Mina Array Bea 1.7nm,0.8s,baz=233,slow=8.2,SNR=6.8	86.78	50	P	P	07 36 33.2	+1.6
AHID	Auburn Hatcher 7.0nm,0.6s	93.20	47	*e*P	P	07 36 59.7	-1.9
MK32	Makanchi Array	93.52	317	*e*P	P	07 37 03.3	+0.6
MKAR	Makanchi Array 0.4nm,0.7s,baz=101,slow=5.2,SNR=5.4	93.52	317	P	P	07 37 03.3	+0.6
PDAR	Pinedale Array 0.2nm,0.4s,baz=267,slow=3.0,SNR=3.6	94.31	47	P	P	07 37 08.2	+1.4
YKA	Yellowknife Ar 0.1nm,0.7s,baz=259,slow=5.0,SNR=4.1	95.69	27	P	P	07 37 11.4	-0.8
PKME	Peaks-Kenny Pk	122.90	43	*e*PKPdf	PKPdf	07 42 41.2	-1.8
MANT	Manisa	133.03	312	*e*PKPdf	PKPdf	07 43 00.5	-2.3

IDC 08 07:25:31.8±2.4, **11°.22S**×**166°.01E, h0^{km}, mb3.7**/4, **mb1 4.0**/5, **mb1mx3.7**/36, **mbtmp3.8**/5, **ML4.7**/1, **Error ellipse: s-maj=75.7km s-min=33.3km az=143.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara 18nm,0.3s,baz=204,slow=11,SNR=2.3	6.22	286	Pn	Pn	07 27 05.6	+0.5
DZM	Mont Dzumac 0.4nm,0.3s,baz=180,slow=20,SNR=2.7	10.80	178	Pn	Pn	07 28 15.1	+7.2
WRA	Warramunga Arr 0.9nm,0.6s,baz=82,slow=9.3,SNR=5.4	31.67	250	P	P	07 31 58.0	+0.7
ASAR	Alice Springs 0.5nm,0.9s,baz=65,slow=9.7,SNR=2.8	32.95	244	P	P	07 32 07.5	-1.0
ILAR	Eielson Array 0.5nm,0.8s,baz=236,slow=5.8,SNR=4.7	83.59	18	P	P	07 38 01.9	+0.3
MKAR	Makanchi Array 0.4nm,1.0s,baz=85,slow=3.5,SNR=2.1	93.83	317	P	P	07 38 50.5	-0.7

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*CNRM **08** 07:28:33.2, 32°.79N×0°.88W, h47^{km}, ml3.8*

ISC 08 07:28:31.7±1.6, **32°.78N**±0°.04×**1°.26W**±0°.08, **h4^{km}**±13^{km}, **n15, σ2^{s}82**/26, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIGM	Figuig	0.65	180	P	Pg	07 28 44.3	+0.1
FIGM				S	Sn	07 28 58.4	-0.1
JBK	JBK	1.89	325	P	Pb	07 29 07.2	+0.2
JBK				S	Sg	07 29 33.9	+1.3
MDT	Midelt	2.82	272	P	Pb	07 29 21.6	-1.0
MDT				S	Sb	07 29 57.7	+0.2
GOG	Mont Gurugu	2.83	330	P	Pn	07 29 18.8	+1.1
GOG				S	Sn	07 29 53.6	+1.4
MD31	MD31	2.95	273	P	Pb	07 29 23.2	-1.6
MD31				S	Sb	07 30 02.7	+1.5
CZD	Col de Zad	3.19	275	P	Pn	07 29 25.1	+2.2
CZD				S	Sn	07 30 04.3	+2.8
GOLM	Goulmima	3.31	252	P	Pb	07 29 29.5	-1.5
GOLM				S	Sb	07 30 10.3	-1.4
CHEFC	Chefchaouen	4.11	305	S	Sn	07 30 24.1	+0.2
RSA	Sarsar	4.34	300	S	Sn	07 30 32.2	+2.8
OUZM	OUZ	5.04	250	P	Pn	07 29 51.8	+3.6
OUZM				S	Sb	07 30 57.3	-4.1
AVE	Averroes	5.19	277	P	Pn	07 29 52.4	+2.2
AVE				S	Sn	07 30 54.8	+4.4
SRHM	Skhour des Reh	5.61	269	P	Pb	07 30 03.1	-7.1
SRHM				S	Sb	07 31 10.8	-7.0
TTIG	Tnine Tigouga,	6.51	252	P	Pn	07 30 09.3	+0.9
TTIG				S	Sn	07 31 23.7	+0.5
PVAQ	Vaqueiros	7.02	313	*e*Pn	Pn	07 30 16.5	+1.3
PVAQ				*e*Sn	Sn	07 31 29.8	-5.6
PNCL	Nicolau / Gran	7.96	314	*e*Pn	Pn	07 30 26.6	-1.6

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*IDC **08** 07:30:21.1±1.0, 10°.85S×165°.82E, h0^{km}, mb3.9/8, mb1 4.2/10, mb1mx3.9/40, mbtmp4.1/10, ML4.7/2, Error ellipse: s-maj=30.3km s-min=21.9km az=123.0*

*ISCJB **08** 07:30:22.2±0.4, 10°.99S±0°.07×165°.62E±0°.06, h10^{km}, mb4.2/16, Error ellipse: s-maj=9.8km s-min=8.7km az=6.3*

*NEIC **08** 07:30:23.6±0.4, 10°.90S×165°.74E, h10^{km}, mb4.3/8, Error ellipse: s-maj=12.5km s-min=9.8km az=119.0*

ISC 08 07:30:23.5±0.6, **10°.91S**±0°.10×**165°.70E**±0°.09, **h10^{km}, n34, σ1^{s}29**/28, **mb4.1**/16, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.86	284	*e*Pn	Pn	07 31 53.0	+2.6
HNR				*e*Sn	Sn	07 32 57.1	-0.6
HNR	Honiara 33nm,0.3s,baz=173,slow=9.6,SNR=2.7	5.86	284	Pn	Pn	07 31 51.3	+1.0
HNR	baz=338,slow=19,SNR=2.1			Sn	Sn	07 32 57.1	-0.6
DZM	Mont Dzumac 2.6nm,0.3s,baz=315,slow=9.5,SNR=30	11.12	176	Pn	Pn	07 33 03.9	+1.1
CTA	Charters Tower 2.2nm,0.4s,baz=63,slow=9.0,SNR=3.1	20.83	242	P	Pn	07 35 06.6	-1.3
ARMA	Armidale 11nm,1.1s	23.41	212	*e*P	P	07 35 29.3	-3.6
H11S2	WAKE ISLAND Hy baz=180	29.23	2	T	T	08 06 45.9	
H11S3	WAKE ISLAND Hy baz=180	29.23	2	T	T	08 06 46.6	
H11S1	WAKE ISLAND Hy baz=180	29.25	2	T	T	08 06 51.4	
BKZ	Black Stump Fm 5.2nm,0.5s	29.74	163	*e*P	P	07 36 30.3	+0.2
H11N1	WAKE ISLAND Hy baz=182,slow=76,SNR=13	30.45	2	T	T	08 08 17.8	
H11N3	WAKE ISLAND Hy baz=182,slow=76,SNR=16	30.46	2	T	T	08 07 48.2	
H11N2	WAKE ISLAND Hy baz=182,slow=76,SNR=10	30.47	2	T	T	08 07 47.7	
WB2	Warramunga Arr 4.3nm,1.1s	31.48	250	*e*P	P	07 36 45.8	+0.1
WR1	Warramunga Arr	31.49	250	*e*P	P	07 36 45.5	-0.3
WRA	Warramunga Arr 1.0nm,0.5s,baz=82,slow=9.2,SNR=10	31.49	250	P	P	07 36 45.5	-0.3
ASAR	Alice Springs 1.1nm,0.9s,baz=69,slow=9.0,SNR=9.4	32.82	243	P	P	07 36 57.1	-0.3
RPZ	Rata Peaks 3.4nm,0.7s,baz=36,slow=18,SNR=2.4	33.01	173	P	P	07 36 58.5	-0.3
MCQ	Macquarie Isla 119nm,1.1s	43.81	186	*e*P	P	07 38 30.6	+1.3
CHGN	Chignik 20nm,1.0s	73.30	20	*e*P	P	07 41 57.1	+2.2
SONA0	Songino Array	78.53	324	*e*P	P	07 42 25.9	+0.6
SONM	Songino Array 1.4nm,1.0s,baz=133,slow=8.1,SNR=2.5	78.53	324	P	P	07 42 25.9	+0.6
HDA	Harding Lake 5.7nm,1.1s	83.13	19	*e*P	P	07 42 50.0	+0.7
IL1	Eielson Array	83.40	19	*e*P	P	07 42 50.8	+0.1
ILAR	Eielson Array 0.7nm,0.5s,baz=242,slow=4.9,SNR=19	83.40	19	P	P	07 42 49.9	-0.8
ILB	Eielson Array	83.40	19	*e*P	P	07 42 50.6	-0.1
BEKR	Beckworth 1.2nm,1.0s	84.89	48	*e*P	P	07 43 00.6	+1.5
I07A	Izee 0.4nm,0.9s	86.83	44	*e*P	P	07 43 09.9	+1.4
G08A	Pilot Rock 1.3nm,1.0s	87.58	43	*e*P	P	07 43 11.8	-0.3
MK32	Makanchi Array	93.40	317	*e*P	P	07 43 38.8	-0.4
MKAR	Makanchi Array 0.5nm,0.8s,baz=91,slow=6.2,SNR=4.0	93.40	317	P	P	07 43 38.8	-0.4
YKA	Yellowknife Ar 0.1nm,0.5s,baz=253,slow=4.5,SNR=4.5	94.87	27	P	P	07 43 43.0	-2.4
YKB5	Yellowknife Ar	94.87	27	*e*P	P	07 43 45.3	-0.2
ARA0	ARCESS Array S	116.19	345	*e*PKPdf	PKPdf	07 49 05.1	-1.5
ARCES	ARCESS Array B 1.7nm,0.9s,baz=90,slow=3.8,SNR=1.9	116.19	345	PKP	PKPdf	07 49 05.1	-1.5

IDC 08 07:33:09.5±12.0, **52°.51N**×**172°.44W, h245^{km}**±99^{km}, **mb2.6**/2, **mb1 3.0**/4, **mb1mx2.7**/57, **mbtmp3.4**/4, **Error ellipse: s-maj=93.4km s-min=58.5km az=64.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island 0.4nm,0.3s,baz=290,slow=1.2,SNR=31	12.50	57	P	Pn	07 35 58.2	-0.9
KDAK	0.1nm,0.3s,baz=98,slow=14,SNR=1.1			S	S	07 38 19.4	+1.4
ILAR	Eielson Array 0.1nm,0.3s,baz=223,slow=10,SNR=6.7	17.93	37	P	P	07 37 02.1	+0.8
YKA	Yellowknife Ar 0.0nm,0.4s,baz=276,slow=6.1,SNR=1.1	31.56	49	P	P	07 39 07.6	-1.1
NVAR	Mina Array Bea 0.7nm,0.4s,baz=327,slow=4.3,SNR=6.4	39.54	89	P	P	07 40 17.1	+0.2

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*IDC **08** 07:35:02.5±0.5, 10°.91S×164°.81E, h0^{km}, mb4.7/25, mb1 4.8/27, mb1mx4.7/47, mbtmp4.7/27, ML4.8/2, MS4.3/25, Ms1 4.4/25, ms1mx4.2/40, Error ellipse: s-maj=17.2km s-min=12.7km az=108.0*

*NEIC **08** 07:35:04.3±0.1, 10°.94S×164°.80E, h10^{km}, mb4.9/99, Error ellipse: s-maj=4.6km s-min=3.5km az=130.0*

*ISCJB **08** 07:35:05.9±0.2, 11°.03S±0°.04×164°.74E±0°.03, h31^{km}, mb4.8/125, MS4.4/31, Error ellipse: s-maj=5.3km s-min=4.4km az=154.4*

*GCMT **08** 07:35:07.3±0.2, 11°.08S±0°.01×164°.65E±0°.01, h12^{km}, MW5.1/112, Moment Tensor Solution. s81,c115; s112,c190; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.48±.10; $M_{\theta\theta}$1.17±.09; $M_{\phi\phi}$5.31±.09; $M_{r\theta}$-1.45±.34; $M_{\theta\phi}$1.56±.08; $M_{\phi r}$1.77±.29; Best double couple: $M_0$6.51900×10^{16} NP1:ϕ_s184.00000°, δ52.00000°, λ-107.00000°. NP2:ϕ_s31.00000°, δ41.00000°, λ-69.00000°. Principal axes: T 5.9590, Plg6.0000°, Azm286.0000°; N 1.1220, Plg14.0000°, Azm195.0000°; P -7.0800, Plg75.0000°, Azm39.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 07:35:07.5±0.3, **11°.02S**±0°.06×**164°.86E**±0°.05, **h31^{km}, n222, σ1^{s}12**/220, **mb4.9**/125, **MS4.4**/32, **1C-1D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.09	288	*e*P	Pn	07 36 20.0	-1.7
HNR				*e*S	Sn	07 37 18.0	-1.4
HNR	Honiara	5.09	288	*e*Pn	Pn	07 36 20.6	-1.0
HNR				*e*Sn	Sn	07 37 20.4	+1.0
HNR	Honiara 56nm,0.3s,baz=164,slow=3.6,SNR=7.0	5.09	288	Pn	Pn	07 36 20.8	-0.9
HNR	48nm,0.3s,baz=197,slow=19,SNR=4.0			Sn	Sn	07 37 17.5	-1.9
HNR	comp=Z,12µm,21.5s,baz=138,slow=40			LR	LR	07 38 24.4	
MARNC	Mare, Loyalty	10.84	164	*e*Pn	Pn	07 37 41.0	+0.4
DZM	Mont Dzumac 24nm,0.3s	11.09	172	*e*Pn	Pn	07 37 44.3	+0.2
DZM	comp=Z,3µm,25.4s			*e*LR	LR	07 40 18.2	
DZM	Mont Dzumac 4.1nm,0.3s,baz=294,slow=15,SNR=33	11.09	172	Pn	Pn	07 37 44.4	+0.2
DZM	comp=Z,3µm,19.0s,baz=22,slow=33			LR	LR	07 41 12.0	
PINNC	Pines Island,	11.79	168	*e*Pn	Pn	07 37 54.1	+0.5
RABL	Rabaul	14.29	297	*e*Pn	Pn	07 38 28.8	+0.9
MSVF	Nonsavu	14.41	119	*e*P	P	07 38 35.9	-0.2
TARA	Tarawa	14.68	34	*e*Pn	Pn	07 38 35.2	+2.1
EIDS	Eidsvold 20nm,1.1s	19.34	221	*e*P	Pn	07 39 32.0	+0.3
MANU	Manus Island 111nm,1.1s	19.52	296	*e*P	Pn	07 39 33.2	-0.8
KWAJ	Kwajalein Atol 239nm,0.9s	19.88	8	*e*P	P	07 39 34.8	-1.7
CTA	Charters Tower 35nm,0.9s,baz=71,slow=12,SNR=23	20.05	241	P	Pn	07 39 39.3	-0.8
CTAO	Charters Tower	20.05	241	*e*P	P	07 39 39.1	+0.8
CTAO				*e*Pn	Pn	07 39 39.2	-1.0
COEN	Coen 16nm,0.8s	21.37	260	*e*P	P	07 39 51.7	-0.9
ARMA	Armidale 22nm,1.0s	22.89	211	*e*P	P	07 40 08.9	+0.1
KNTN	Kanton 74nm,1.0s	24.64	72	*e*P	P	07 40 24.9	-0.6
URZ	Urewera comp=Z,736nm,18.1s,baz=354,slow=34	29.26	160	LR	LR	07 51 42.7	
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=26	29.38	4	T	T	08 12 02.6	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=25	29.39	4	T	T	08 12 04.5	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=20	29.40	4	T	T	08 12 04.8	
STKA	Stephens Creek 1.4nm,0.8s	29.87	222	*e*P	P	07 41 13.2	+0.8

STKA				PcP	PcP	07 44 16.2	+1.1
STKA	Stephens Creek	29.87	222	P	P	07 41 12.4	+0.1
	4.0nm,0.7s,baz=57,slow=11,SNR=6.2						
STKA				PcP	PcP	07 44 16.2	+1.1
	0.4nm,0.2s,baz=26,slow=3.9,SNR=4.0						
STKA				LR	LR	07 52 01.8	
	comp=Z,565nm,18.1s,baz=37,slow=34						
BKZ	Black Stump Fm	29.88	162	eP	P	07 41 13.8	+1.3
	13nm,1.0s						
H11N1	WAKE ISLAND Hy	30.61	4	T	T	08 13 34.2	
	baz=184,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	30.61	4	T	T	08 13 34.6	
	baz=184,slow=76,SNR=19						
H11N2	WAKE ISLAND Hy	30.62	4	T	T	08 13 35.6	
	baz=184,slow=76,SNR=25						
WRAB	Tennant Creek	30.66	249	eP	P	07 41 17.6	-1.9
	13nm,0.8s						
WR1	Warramunga Arr	30.67	249	eP	P	07 41 18.1	-1.6
	16nm,0.9s						
WR1				ePcP	PcP	07 44 17.3	-0.2
WR1				eS	S	07 46 19.2	-1.4
WRA	Warramunga Arr	30.68	249	P	P	07 41 18.1	-1.6
	5.3nm,0.8s,baz=80,slow=9.1,SNR=29						
WRA				PcP	PcP	07 44 17.3	-0.2
	2.7nm,0.9s,baz=77,slow=3.0,SNR=9.6						
WRA				S	S	07 46 19.2	-1.4
	1.4nm,1.1s,baz=81,slow=15,SNR=4.8						
WRA				LR	LR	07 53 31.3	
	comp=Z,2µm,18.4s,baz=70,slow=36						
BFZ	Birch Farm	31.21	163	eP	P	07 41 24.5	+0.4
	20nm,1.0s						
GUMO	Guam	31.48	320	LR	LR	07 54 01.9	
	comp=Z,643nm,19.7s,baz=139,slow=36						
TOO	Toolangi	31.65	210	eP	P	07 41 28.1	+0.1
	13nm,0.8s						
AS01	Alice Springs	31.98	243	eP	P	07 41 29.1	-2.1
AS31	Alice Springs	32.02	243	eP	P	07 41 29.7	-1.9
	4.0nm,0.7s						
ASAR	Alice Springs	32.03	243	P	P	07 41 29.6	-2.0
	9.5nm,0.6s,baz=63,slow=10,SNR=112						
ASAR				PcP	PcP	07 44 20.7	-0.3
	2.6nm,0.7s,baz=71,slow=3.1,SNR=9.8						
RPZ	Rata Peaks	33.01	172	P	P	07 41 41.1	+1.2
	8.4nm,0.9s,baz=312,slow=16,SNR=3.1						
RPZ				LR	LR	07 54 19.8	
	comp=Z,942nm,18.2s,baz=7.5,slow=35						
BBOO	Buckleboo	34.21	226	eP	P	07 41 50.7	+0.2
	25nm,0.8s						
RAR	Rarotonga	35.38	111	LR	LR	07 53 30.1	
	comp=Z,868nm,21.2s,baz=241,slow=31						
FITZ	Fitzroy Crossi	38.55	255	eP	P	07 42 26.6	-1.1
	14nm,0.8s						
FITZ	Fitzroy Crossi	38.55	255	P	P	07 42 25.9	-1.8
	5.4nm,0.8s,baz=102,slow=6.6,SNR=12						
FITZ				LR	LR	07 58 37.1	
	comp=Z,859nm,18.4s,baz=80,slow=37						
FORT	Forrest	39.35	234	eP	P	07 42 35.1	+0.9
	40nm,0.9s						
BATI	Baumata	40.48	267	LR	LR	08 01 27.2	
	comp=Z,550nm,18.1s,baz=116,slow=39						
PPT	Papeete	44.55	104	LR	LR	07 58 32.6	
	comp=Z,632nm,18.6s,baz=250,slow=32						
PPT2	Papeete2	44.55	104	eLR	LR	07 56 04.1	
	comp=Z,2µm,27.8s,baz=267						
MJAR	Matsushiro Arr	53.55	333	P	P	07 44 24.0	-1.5
	2.7nm,0.7s,baz=166,slow=9.0,SNR=5.6						
MAJO	Matsushiro	53.55	333	eP	P	07 44 24.0	-1.6
TAOE	Nuku Hiva Isla	54.15	93	eLR	LR	08 00 05.0	
	comp=Z,744nm,27.0s						
JNU	Nakatsue	54.56	325	eP	P	07 44 33.0	0.0
	20nm,1.1s						
TPUB	Ta-pu	55.10	309	eP	P	07 44 37.5	+0.5
	22nm,0.8s						
LEM	Lembang	56.63	269	LR	LR	08 12 06.3	
	comp=Z,112nm,18.1s,baz=102,slow=39						
ASAJ	Asahikawa	58.49	341	P	P	07 45 00.6	-0.1
	21nm,0.9s,baz=185,slow=12,SNR=4.9						
KSRS	Korea Array	59.37	326	P	P	07 45 06.2	-0.7
	3.8nm,0.9s,baz=131,slow=6.9,SNR=7.7						
KSAR	Wonju Array Be	59.38	326	P	P	07 45 06.2	-0.8
KS01	Wonju Array Si	59.40	326	eP	P	07 45 07.8	+0.6
NJ2	Nanjing	61.39	316	eP	P	07 45 20.8	-0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
QIZ	Qiongzhong	61.90	299	P	P	07 45 24.1	-0.5
QIZ				S	S	07 53 50.1	+3.3
QIZ				LR	LR		
	comp=N,320nm,14.7s						
QIZ				LR	LR		
	comp=E,500nm,18.6s						
QIZ				LR	LR		
	comp=Z,580nm,26.0s						
USRK	Ussuriysk Ar.	62.54	334	P	P	07 45 27.7	-0.7
	comp=Z,9.7nm,0.9s,baz=133,slow=6.9,SNR=10						
USRK				LR	LR	08 10 45.1	
	comp=Z,222nm,20.8s,baz=140,slow=34						
PEA0B	Petropavlovsk-	64.17	355	eP	P	07 45 38.7	-0.2
	comp=Z,25nm,0.9s						
PETK	Petropavlovsk-	64.17	355	eP	P	07 45 38.9	0.0
PETK	Petropavlovsk-	64.17	355	P	P	07 45 37.4	-1.5
	comp=Z,16nm,0.8s,baz=156,slow=7.5,SNR=16						
PETK				LR	LR	08 08 39.7	
	comp=Z,156nm,19.8s,baz=171,slow=32						
PEA1	Petropavlovsk-	64.17	355	eP	P	07 45 37.4	-1.5
CN2	Changchun	65.28	330	eP	P	07 45 47.3	+0.9
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CASY	Casey	66.09	201	eP	P	07 45 52.1	+0.8
	comp=Z,7.7nm,0.9s						
SKNT	Sakolnakorn	66.29	294	P	P	07 45 54.5	+1.1
	comp=Z,6.7nm,1.2s						
CHBT	CHBT	66.41	289	P	P	07 46 02.4	+8.2
VNDA	Vanda	66.50	181	eP	P	07 45 54.8	+1.0
	comp=Z,6.6nm,0.9s						
VNDA	Vanda	66.50	181	P	P	07 45 54.6	+0.8
	comp=Z,6.5nm,1.0s,baz=339,slow=6.9,SNR=4.5						
VNDA				LR	LR	08 11 38.6	
	comp=Z,129nm,19.3s,baz=26,slow=33						
KLR	Kul'dur	66.69	337	P	P	07 45 55.6	+0.2
	comp=Z,11nm,1.0s,baz=127,slow=6.0,SNR=16						
PSI	Prapat	67.00	278	LR	LR	08 17 24.2	
	comp=Z,20nm,21.1s,baz=78,slow=38						
ENH	Enshi	67.21	309	eP	P	07 45 58.9	-0.2
	comp=Z,18nm,0.9s						
GYA	Guiyang	67.69	305	⇑iP	P	07 46 02.3	0.0
GYA				PP	PP	07 48 36.2	+4.2
GYA				S	S	07 55 00.6	+2.5
GYA				SKS	SKiKP	07 55 58.0	0.0
GYA	Guiyang	67.69	305	SS	SS	07 59 22.7	+2.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,520nm,18.0s						
GYA				LR	LR		
	comp=E,540nm,18.4s						
GYA				LR	LR		
	comp=Z,500nm,18.2s						
BJI	Beijing	67.92	322	eP	P	07 46 03.2	-0.1
BJI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BJI				LR	LR		
	comp=N,310nm,6.1s						
BJI				LR	LR		
	comp=E,300nm,5.7s						
BJI				LR	LR		
	comp=Z,520nm,30.9s						
XAN	Xi'an	69.46	313	P	P	07 46 12.3	-0.9
XAN				pP	pP	07 46 21.9	+0.8
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN	Xi'an	69.46	313	eP	P	07 46 12.5	-0.7
	comp=Z,10nm,0.8s						
KMI	Kunming	70.37	302	P	P	07 46 20.8	+1.7
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				pmax	pmax		
	comp=Z,240nm,4.3s						
HHC	Hu-ho-hao-te	71.25	320	eP	P	07 46 25.2	+1.2
HHC				sP	pP	07 46 33.1	+1.1
HHC				S	S	07 55 40.5	+0.9
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,6.1s						
HHC				LR	LR		
	comp=N,370nm,17.0s						
HHC				LR	LR		
	comp=E,430nm,17.6s						
HHC				LR	LR		
	comp=Z,460nm,15.5s						
MA2	Magadan	71.27	352	eP	P	07 46 23.4	-0.1
	comp=Z,9.7nm,0.8s						
MA2	Magadan	71.27	352	P	P	07 46 22.8	-0.8
	comp=Z,8.0nm,0.8s,baz=164,slow=6.3,SNR=14						
CM31	Chiang Mai Arr	71.31	294	eP	P	07 46 24.9	+0.2
	comp=Z,6.9nm,1.0s						
CMAR	Chiang Mai Arr	71.31	294	P	P	07 46 24.7	0.0
	comp=Z,1.1nm,0.3s,baz=118,slow=3.6,SNR=7.9						
CMAR				LR	LR	08 17 18.9	
	comp=Z,123nm,19.6s,baz=102,slow=36						
CD2	Chengdu	71.90	308	P	P	07 46 28.5	+0.4
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				pmax	pmax		
	comp=Z,280nm,5.0s						
HIA	Hailar	71.92	331	eP	P	07 46 27.4	-0.4
	comp=Z,30nm,1.1s						
LZH	Lanzhou	74.10	313	eP	P	07 46 43.0	+1.8
LZH				pP	pP	07 46 48.2	-1.0
LZH				sP	sP	07 46 52.5	+0.4
LZH				PP	PP	07 49 34.5	+7.5
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,86nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,17.1s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
GAMB	Gambell	76.70	10	eP	P	07 46 56.5	+1.3
	comp=Z,12nm,0.9s						
ULN	Ulaanbaatar	77.77	324	eP	P	07 47 01.3	-0.5
	comp=Z,16nm,0.9s						
SONA0	Songino Array	78.13	324	eP	P	07 47 03.5	-0.3
SONM	Songino Array	78.13	324	P	P	07 47 03.5	-0.3
	comp=Z,10.0nm,1.1s,baz=144,slow=6.3,SNR=16						
SONM				LR	LR	08 19 28.6	
	comp=Z,197nm,21.5s,baz=102,slow=34						
SONA1	Songino Array	78.14	324	eP	P	07 47 04.0	+0.1
SVW2	Sparrevohn	78.36	18	eP	P	07 47 06.2	+1.6
	comp=Z,12nm,1.0s						
GTA	Gaotai	78.42	314	⇓P	P	07 47 05.6	0.0
GTA				pP	sP	07 47 15.8	-0.7
GTA				sP	pwP	07 47 20.4	-0.3
GTA	Gaotai	78.42	314	sS	sS	07 57 20.5	+7.8
GTA	Gaotai	78.42	314	SS	SS	08 02 13.2	+10
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,130nm,7.6s						
GTA				LR	LR		
	comp=N,200nm,20.9s						
GTA				LR	LR		
	comp=E,300nm,23.5s						
GTA				LR	LR		
	comp=Z,370nm,22.5s						
ANM	Nome	78.66	13	eP	P	07 47 07.2	+1.1
	comp=Z,4.6nm,1.0s						
BILL	Bilibino	78.86	1	eP	P	07 47 07.2	0.0
	comp=Z,23nm,1.0s						
BRLK	Bradley Lake	78.93	21	eP	P	07 47 08.3	+0.5
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	78.98	180	eP	P	07 47 09.2	+1.0
	comp=Z,40nm,1.1s						
QSPA	South Pole Qui	78.98	180	LR	LR	08 17 18.1	
	comp=Z,147nm,18.9s,baz=52,slow=32						
SHL	Shillong	79.74	299	eP	P	07 47 13.0	-0.2
	comp=Z,13nm,1.2s						
CAST	Castle Rocks	81.19	18	eP	P	07 47 19.7	-0.2
	comp=Z,8.6nm,0.9s						
TLY	Talaya	81.62	327	eP	P	07 47 21.9	-0.6
	comp=Z,23nm,0.9s						
RDOG	Red Dog Mine	82.17	12	eP	P	07 47 25.7	+0.7
	comp=Z,15nm,0.9s						
IM3	Indian Mountai	82.64	16	eP	P	07 47 27.3	-0.2
HARP	HAARP	82.77	21	eP	P	07 47 29.0	+0.7
	comp=Z,22nm,1.0s						
WRH	Wood River Hil	83.18	19	eP	P	07 47 29.2	-1.1
	comp=Z,11nm,1.1s						
MDM	Murphy Dome	83.48	18	eP	P	07 47 31.0	-0.9
	comp=Z,12nm,1.0s						
HDA	Harding Lake	83.50	19	eP	P	07 47 31.9	0.0
	comp=Z,27nm,0.9s						
COLA	College	83.54	18	eP	P	07 47 32.3	+0.3
	comp=Z,16nm,0.9s						
RIDG	Independ'e Rid	83.75	20	eP	P	07 47 33.0	-0.4
	comp=Z,7.6nm,0.9s						
IL1	Eielson Array	83.77	19	eP	P	07 47 32.7	-0.6
ILAR	Eielson Array	83.77	19	P	P	07 47 31.7	-1.6
	comp=Z,6.8nm,0.9s,baz=226,slow=5.7,SNR=36						
ILAR				LR	LR	08 20 21.3	
	comp=Z,66nm,19.5s,baz=264,slow=32						
ILB	Eielson Array	83.77	19	eP	P	07 47 33.0	-0.4
	comp=Z,7.0nm,0.9s						
SCRK	Sand Creek	84.19	20	eP	P	07 47 35.7	0.0
	comp=Z,5.2nm,0.9s						
YBH	Yreka Blue Hor	84.50	46	eP	P	07 47 38.3	+0.6
	comp=Z,9.8nm,0.9s						
HUMO	Hull Mountain	84.63	45	eP	P	07 47 37.0	-1.2
	comp=Z,9.1nm,0.9s						
ORV	Oroville	84.65	48	eP	P	07 47 38.1	-0.2
	comp=Z,4.5nm,1.1s						
AFDM	Forest Hills D	84.84	49	eP	P	07 47 39.2	-0.2
	comp=Z,6.5nm,0.9s						
CMB	Columbia Colle	84.99	50	eP	P	07 47 39.7	-0.5
	comp=Z,4.6nm,0.9s						
BEKR	Beckworth	85.58	48	eP	P	07 47 43.3	0.0
	comp=Z,4.6nm,0.9s						
WAKR	Walker	85.85	50	eP	P	07 47 44.5	-0.2
	comp=Z,5.4nm,1.1s						
DAWY	Dawson	85.85	21	eP	P	07 47 43.5	-0.3
	comp=Z,4.4nm,0.9s						
MDPB	Devils Postpil	85.86	51	eP	P	07 47 44.9	+0.1
	comp=Z,6.0nm,0.9s						
TIXI	Tiksi	85.90	349	eP	P	07 47 42.9	-1.0
	comp=Z,8.7nm,1.1s						
TIXI	Tiksi	85.90	349	P	P	07 47 43.0	-0.9
	comp=Z,1.5nm,0.3s,baz=142,slow=5.1,SNR=6.3						
PAHR	Pah Rah Range	86.25	49	eP	P	07 47 46.7	+0.1
	comp=Z,4.1nm,1.0s						
PINE	Pine Mountain	86.41	44	eP	P	07 47 47.6	+0.3
	comp=Z,7.2nm,0.9s						
NV01	Mina Array Sit	86.67	50	eP	P	07 47 48.9	+0.1
NVAR	Mina Array Bea	86.67	50	P	P	07 47 48.6	-0.2
	comp=Z,7.3nm,1.0s,baz=235,slow=6.4,SNR=14						
NVAR				LR	LR	08 18 52.3	
	comp=Z,128nm,20.8s,baz=262,slow=30						
NV11	Mina Array Sit	86.79	50	eP	P	07 47 49.5	+0.2
	comp=Z,0.7nm,1.1s						
KVN	Kaiserville	87.00	49	eP	P	07 47 50.6	+0.3
	comp=Z,4.1nm,1.0s						
I07A	Izee	87.49	44	eP	P	07 47 52.9	+0.4
	comp=Z,7.6nm,1.0s						
WVOR	Wild Horse Val	87.60	46	eP	P	07 47 53.5	+0.4
	comp=Z,6.6nm,1.0s						
GLA	Glamis	87.96	56	eP	P	07 47 55.9	+1.0
	comp=Z,7.4nm,0.8s						
J08A	Circle Bar Ran	87.98	45	eP	P	07 47 54.6	-0.2
	comp=Z,11nm,1.0s						
HAWA	Hanford	88.18	42	eP	P	07 47 55.4	-0.2
	comp=Z,4.2nm,0.9s						
G08A	Pilot Rock	88.22	43	eP	P	07 47 56.1	+0.1
	comp=Z,8.8nm,1.0s						
WMQ	Urumqi	88.46	315	eP	P	07 47 57.8	+0.8
WMQ				pP	pP	07 48 02.4	-2.8
WMQ				sP	sP	07 48 06.3	-1.7
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.3s						
WMQ				LR	LR		
	comp=N,240nm,22.3s						
WMQ				LR	LR		
	comp=E,430nm,21.5s						
WMQ				LR	LR		
	comp=Z,430nm,24.5s						
R11A	Troy Canyon, C	88.71	51	eP	P	07 47 58.7	+0.2
	comp=Z,2.5nm,1.1s						
BMO	Blue Mountains	89.22	44	eP	P	07 48 00.0	-0.6
	comp=Z,2.4nm,0.9s						
ELK	Elko	89.58	48	eP	P	07 48 02.5	-0.1
	comp=Z,2.1nm,1.0s						
F10A	Beach Ranch, E	89.58	43	eP	P	07 48 02.2	-0.1
	comp=Z,3.9nm,0.8s						
INK	Inuvik	90.16	19	eP	P	07 48 04.5	+0.2
	comp=Z,2.1nm,1.1s						
INK	Inuvik	90.16	19	P	P	07 48 04.5	+0.2
	comp=Z,2.6nm,1.1s,baz=218,slow=2.2,SNR=2.9						
LCMT	Little Creek M	90.18	52	eP	P	07 48 05.9	+0.6
	comp=Z,4.9nm,0.9s						
CCUT	Cedar City	90.21	52	eP	P	07 48 06.2	+0.6
	comp=Z,6.3nm,1.0s						
SZCU	Shurtz Canyon	90.44	52	eP	P	07 48 06.5	-0.1
	comp=Z,5.8nm,0.9s						
KNB	Kanab	90.51	52	eP	P	07 48 07.8	+0.8
	comp=Z,6.0nm,1.0s						
U15A	North Rim	90.79	53	eP	P	07 48 09.0	+0.7
	comp=Z,7.8nm,0.9s						
HLID	Hailey	90.89	46	eP	P	07 48 08.2	-0.3
	comp=Z,6.0nm,0.9s						
PKCU	Pink Cliffs	91.00	52	eP	P	07 48 10.5	+1.1
	comp=Z,15nm,1.1s						
X16A	Lo Mia Camp, P	91.02	55	eP	P	07 48 09.9	+0.5
	comp=Z,4.6nm,0.9s						
TUC	Tucson	91.11	57	eP	P	07 48 09.9	+0.3
	comp=Z,2.2nm,0.8s						
TCRU	Three Creeks R	91.16	51	eP	P	07 48 10.4	+0.4
	comp=Z,6.3nm,0.9s						
MTPU	Mount Pierson	91.23	52	eP	P	07 48 11.9	+1.4
	comp=Z,5.7nm,1.0s						
BGU	Big Grassy Mou	91.25	49	eP	P	07 48 11.6	+1.4
	comp=Z,3.5nm,0.9s						
MSU	Marysvale	91.34	51	eP	P	07 48 13.7	+2.9
HVU	Hansel Valley	91.64	48	eP	P	07 48 11.8	-0.2
	comp=Z,8.2nm,0.9s						
NLU	North Lily Min	91.74	50	eP	P	07 48 11.7	-0.9
	comp=Z,5.7nm,0.9s						
SPUT	South Promonto	91.77	48	eP	P	07 48 13.1	+0.5
	comp=Z,3.0nm,0.8s						
CTU	Camp Tracy	92.15	49	eP	P	07 48 14.3	-0.1
	comp=Z,4.4nm,0.9s						
TMUT	Trail Mountain	92.25	51	eP	P	07 48 16.0	+0.9
	comp=Z,3.8nm,1.2s						
MCMT	McKenzie Canyo	92.28	45	eP	P	07 48 14.8	-0.2
JLU	Jordanelle	92.35	49	eP	P	07 48 15.0	-0.5
	comp=Z,4.3nm,1.1s						
TCUT	Toone Canyon	92.49	49	eP	P	07 48 16.1	0.0
	comp=Z,6.6nm,0.9s						
DLMT	Dillon	92.57	44	eP	P	07 48 16.7	+0.4
	comp=Z,12nm,1.0s						
LRM	Limekiln Ridge	92.78	44	eP	P	07 48 17.4	+0.1
MK01	Makanchi Array	92.90	317	eP	P	07 48 16.7	-0.8
MK31	Makanchi Array	92.91	317	eP	P	07 48 16.9	-0.7
	comp=Z,6.5nm,0.9s						
MK32	Makanchi Array	92.91	317	eP	P	07 48 16.8	-0.9
MKAR	Makanchi Array	92.91	317	eP	P	07 48 16.7	-0.9
	comp=Z,42nm,0.9s						
MKAR				PKKPbc	PKKPdf	08 05 27.6	-0.5
MKAR	Makanchi Array	92.91	317	P	P	07 48 16.8	-0.9
	comp=Z,6.9nm,0.8s,baz=95,slow=5.8,SNR=51						
MKAR				PKKPbc	PKKPdf	08 05 27.6	-0.5
	comp=Z,1.2nm,0.8s,baz=286,slow=2.8,SNR=5.8						
MKAR				LR	LR	08 29 34.3	
	comp=Z,140nm,21.5s,baz=102,slow=35						
ZAA0	Zalesovo Array	93.03	324	eP	P	07 48 15.7	-2.2
	comp=Z,5.5nm,0.6s						
ZALV	Zalesovo Beam	93.03	324	eP	P	07 48 16.2	-1.7
ZALV				PKKPbc	PKKPdf	08 05 27.7	-0.3
ZALV	Zalesovo Beam	93.03	324	P	P	07 48 16.6	-1.3
	comp=Z,4.2nm,0.8s,baz=48,slow=2.2,SNR=14						
ZALV				PKKPbc	PKKPdf	08 05 27.7	-0.3
	comp=Z,0.4nm,0.4s,baz=274,slow=3.2,SNR=2.1						
ZALV				LR	LR	08 28 53.5	
	comp=Z,134nm,21.4s,baz=70,slow=35						
ZAA1	Zalesovo Array	93.03	324	eP	P	07 48 16.6	-1.3
P18A	Preston Nutter	93.05	50	eP	P	07 48 18.6	-0.2
	comp=Z,78nm,1.0s						
MAKZ	Makanchi	93.12	317	eP	P	07 48 17.8	-0.8
	comp=Z,9.5nm,0.9s						
BOZ	Bozeman (W)	93.29	44	eP	P	07 48 19.1	-0.5
	comp=Z,4.1nm,0.9s						
FXWY	Fox Creek	93.30	46	eP	P	07 48 20.2	+0.5
	comp=Z,2.8nm,0.8s						
IMW	Indian Meadow	93.41	46	eP	P	07 48 20.6	+0.2
	comp=Z,2.6nm,0.9s						
SNOW	Snow King Moun	93.45	47	eP	P	07 48 21.2	+0.7
	comp=Z,3.0nm,0.8s						
H17A	Grant Village	93.77	46	eP	P	07 48 22.6	+0.7
	comp=Z,3.4nm,0.9s						
BW06	Boulder Array	94.18	47	eP	P	07 48 24.5	+0.6
	comp=Z,2.6nm,0.9s						
PD31	Pinedale Array	94.18	47	eP	P	07 48 23.6	-0.2
	comp=Z,2.2nm,0.9s						
PDAR	Pinedale Array	94.18	47	eP	P	07 48 23.9	0.0
PDAR				PKKPbc	PKKPdf	08 05 24.8	-1.1
PDAR	Pinedale Array	94.18	47	P	P	07 48 22.8	-1.0
	comp=Z,2.0nm,0.8s,baz=256,slow=3.1,SNR=15						
PDAR				PKKPbc	PKKPdf	08 05 24.8	-1.1
	comp=Z,0.1nm,0.5s,baz=91,slow=5.4,SNR=2.8						
PDAR				LR	LR	08 27 23.3	
	comp=Z,51nm,18.2s,baz=260,slow=33						
YKA	Yellowknife Ar	95.35	27	P	P	07 48 26.7	-1.7
	comp=Z,1.5nm,0.9s,baz=254,slow=4.5,SNR=20						
NRIK	Noril'sk	95.80	340	LR	LR	08 32 15.5	
	comp=Z,126nm,20.4s,baz=114,slow=36						
KURK	Kurchatov	96.07	320	eP	P	07 48 31.8	-0.1
KURBB	Kurchatov Arra	96.11	320	P	P	07 48 31.8	-0.3
	comp=Z,0.6nm,0.8s,baz=94,slow=4.6,SNR=6.7						
TXAR	Lajitas Array	96.58	61	LR	LR	08 23 19.4	
	comp=Z,190nm,21.8s,baz=0.0,slow=30						
BVAR	Borovoye Array	101.40	322	P	Pdif	07 48 53.1	-2.7
	comp=Z,1.7nm,0.8s,baz=96,slow=8.9,SNR=5.9						
658A	Bunnell	116.08	63	ePKPdf	PKiKP	07 53 48.7	+0.6
ARA0	ARCESS Array S	116.09	345	ePKPdf	PKiKP	07 53 45.4	-1.7
ARCES	ARCESS Array B	116.09	345	ePKPdf	PKPdf	07 53 47.4	+0.4
ARCES	ARCESS Array B	116.09	345	PKP	PKiKP	07 53 45.4	-1.7
	comp=Z,1.4nm,0.7s,baz=54,slow=0.7,SNR=8.2						
TRQ	Mont Tremblant	118.92	43	ePKPdf	PKPdf	07 53 52.4	-0.8
FIA1	FINESS Array S	121.43	338	ePKPdf	PKiKP	07 53 57.6	+0.1
FIA0	FINESS Array S	121.43	338	ePKPdf	PKPdf	07 53 56.3	-1.1
FINES	FINESS Array B	121.43	338	PKP	PKPdf	07 53 56.3	-1.1
	comp=Z,2.5nm,0.9s,baz=45,slow=0.3,SNR=4.5						
BOSA	Boshof	124.53	224	PKP	PKiKP	07 54 05.7	+0.7
	comp=Z,1.6nm,0.6s,baz=115,slow=2.5,SNR=4.0						
CPUP	Villa Florida	124.68	133	PKP	PKiKP	07 54 06.2	+1.0
	comp=Z,3.2nm,0.9s,baz=222,slow=2.4,SNR=8.1						
SDV	Santo Domingo	125.36	87	ePKPdf	PKPdf	07 54 05.8	-0.9
AKASG	Malin Array Be	126.36	326	PKP	PKPdf	07 54 06.5	-0.8
	comp=Z,0.7nm,0.6s,baz=70,slow=1.9,SNR=4.3						
AKBB	Malin Array Si	126.36	326	ePKPdf	PKPdf	07 54 07.3	0.0
NB200	NORSAR Array S	126.45	344	ePKPdf	PKPdf	07 54 06.2	-1.0
NOA	NORSAR Array B	126.45	344	PKP	PKPdf	07 54 06.2	-1.0
	comp=Z,0.9nm,0.8s,baz=31,slow=1.8,SNR=3.6						
ASF	Jabal al Asfar	127.79	302	PKP	PKPdf	07 54 09.6	-1.1
	comp=Z,1.0nm,0.4s,baz=59,slow=5.9,SNR=3.1						
BR101	Keskin Array S	128.31	312	ePKPdf	PKPdf	07 54 11.0	-0.5
BRTR	Keskin Array B	128.31	312	PKP	PKPdf	07 54 11.0	-0.5
	comp=Z,1.1nm,0.9s,baz=12,slow=2.1,SNR=3.8						
SJG	San Juan	130.26	76	ePKPdf	PKPdf	07 54 13.7	-1.9
CLL	Collm	133.73	336	ePKPdf	PKiKP	07 54 23.0	+0.5
CLL				e		07 54 40.0	
CLL				Lm	MLR	09 02 00.0	
	comp=Z,200nm,18.6s						
CLL				LmV		09 35 00.0	
	comp=Z,100nm,18.3s						
GERES	GERESS Array B	135.29	333	PKhKP	PKPpre	07 54 21.4	
	comp=Z,0.9nm,0.9s,baz=357,slow=2.0,SNR=3.9						
KEST	Kesra	146.87	322	ePKPdf	PKPdf	07 54 46.3	+0.8
KEST	Kesra	146.87	322	PKPbc	PKPdf	07 54 46.1	+0.6
	comp=Z,7.1nm,0.8s,baz=0.0,slow=8.1,SNR=3.7						
ES19	SONSECA Array	149.74	343	ePKPbc	PKPbc	07 54 54.1	-0.7
ESDC	Sonseca Array	149.78	343	PKPbc	PKiKP	07 54 55.3	-0.5
	comp=Z,1.8nm,0.7s,baz=43,slow=1.6,SNR=7.6						
TOA0	Torodi Ar. Sit	163.40	279	ePKPdf	PKPdf	07 55 07.1	-1.1
TORD	Torodi Ar. Bea	163.40	279	PKP	PKPdf	07 55 07.2	-1.0
	comp=Z,2.1nm,0.9s,baz=359,slow=2.1,SNR=8.9						
TOA1	Torodi Ar. Sit	163.40	279	ePKPdf	PKPdf	07 55 07.2	-1.0

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*IDC **08** 07:39:25.2±2.3, 3.°37S×98.°49E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.6/56, mbtmp3.8/6, MS4.1/1, Ms1 4.1/1, ms1mx2.9/49, Error ellipse: s-maj=93.0km s-min=23.3km az=55.0*

*ISCJB **08** 07:39:27.4±1.0, 3.°37S±0.°07×99.°28E±0.°08, h33^{km}, mb3.8/6, MS4.1/1, Error ellipse: s-maj=13.0km*

s-min=6.8km az=141.8
*DJA **08** 07:39:31.0±0.9, 3°S±4°×9°9E±°, h39^{km}±11^{km}, M4.3/11, mb4.8/1, MLv4.1/11*
ISC 08 07:39:29.6±1.3, **3°.32S**±0°.09×**99°.37E**±0°.10, **h35**^{km}, **n20**, σ**0^{s}.87**/18, **mb3.8**/6, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.85**	**49**	P	**Pn**	**07 39 45.9**	**+0.8**
KRJI	**Kerinci**	**2.42**	**60**	P	**Pn**	**07 40 06.9**	**0.0**
PDSI	**Padang**	**2.63**	**25**	P	**Pn**	**07 40 09.7**	**0.0**
PDSI				S	**Sn**	**07 40 40.6**	**+0.1**
MASI	**Maura Aman, Be**	**2.87**	**86**	P	**Pn**	**07 40 13.4**	**+0.4**
PPI	**Padang Panjang**	**3.03**	**20**	P	**Pn**	**07 40 16.0**	**+0.9**
SDSI	**Sungai Dareh**	**3.14**	**41**	P	**Pn**	**07 40 16.7**	**0.0**
PBSI	**Pulau Batu**	**3.42**	**341**	P	**Pn**	**07 40 21.9**	**+1.3**
PBSI				S	**Sn**	**07 40 59.2**	**-0.8**
MNAI	**Manna**	**3.73**	**106**	P	**Pn**	**07 40 25.8**	**+1.1**
MNSI	**Mandailing Nat**	**4.10**	**3**	P	**Pn**	**07 40 29.8**	**0.0**
LHSI	**Lahat**	**4.18**	**97**	P	**Pn**	**07 40 31.8**	**+0.9**
MDSI	**Maura Dua**	**4.94**	**104**	P	**Pn**	**07 40 41.1**	**-0.3**
KASI	**Kota Agung**	**5.56**	**113**	P	**Pn**	**07 40 50.4**	**+0.4**
SUKH	**Sukhothai**	**20.68**	**1**	P	Pn	07 44 11.2	+2.0
CMAR	**Chiang Mai Arr**	**21.65**	**359**	P	**P**	**07 44 19.0**	**+1.8**
	2.8nm,0.4s,baz=188,slow=11,SNR=14						
WRA	**Warramunga Arr**	**37.89**	**119**	P	P	07 46 50.8	+7.0
	0.3nm,0.5s,baz=292,slow=8.8,SNR=3.0						
ASAR	**Alice Springs**	**39.01**	**124**	P	P	07 46 59.8	+6.6
	0.5nm,0.7s,baz=300,slow=8.4,SNR=4.8						
KSRS	**Korea Array**	**48.47**	**31**	LR	LR	08 09 43.3	
	comp=Z,181nm,19.2s,baz=133,slow=37						
KURBB	**Kurchatov Arra**	**56.64**	**344**	P	**P**	**07 49 08.7**	**-0.5**
	0.5nm,0.8s,baz=155,slow=6.8,SNR=2.1						
ZALV	**Zalesovo Beam**	**58.35**	**350**	P	**P**	**07 49 20.4**	**-0.8**
	1.4nm,0.7s,baz=186,slow=4.3,SNR=1.7						
FINES	**FINESS Array B**	**84.98**	**332**	P	**P**	**07 52 00.1**	**-1.0**
	0.7nm,0.6s,baz=133,slow=9.6,SNR=1.4						

IDC 08 07:41:04.0±2.6, **54°.15N**×**86°.44E**, **h0**^{km}, **mb1 2.8**/2, **mb1mx2.8**/54, **mbtmp2.8**/2, **ML2.6**/2, **Error ellipse: s-maj=21.0km s-min=12.2km az=58.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**259**	*i*		07 46 34.8	
	baz=78,slow=346,SNR=3.4						
ZALV	**Zalesovo Beam**	**0.97**	**259**	Pg	Pg	07 41 21.2	-1.5
	3.8nm,0.3s,baz=74,slow=16,SNR=14						
ZALV				Lg	Lg	07 41 37.1	
	5.8nm,0.3s,baz=80,slow=31,SNR=12						
ZALV				Rg	Rg	07 41 41.6	
	8.3nm,0.7s,baz=75,slow=28,SNR=7.9						
KURBB	**Kurchatov Arra**	**5.99**	**237**	Pn	Pn	07 42 34.8	+1.0
	0.1nm,0.3s,baz=54,slow=13,SNR=2.8						
MKAR	**Makanchi Array**	**7.82**	**201**	Pn	Pn	07 43 00.2	+1.2
	0.2nm,0.3s,baz=25,slow=14,SNR=12						

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*IDC **08** 07:43:03.4±1.5, 11°.04S×164°.68E, h0^{km}, mb4.0/7, mb1 4.2/9, mb1mx4.0/41, mbtmp4.1/9, ML3.9/2, MS4.0/2, Ms1 4.0/2, ms1mx3.4/37, Error ellipse: s-maj=45.9km s-min=21.2km az=120.0*
*ISCJB **08** 07:43:05.9±0.6, 11°.12S±0°.07×164°.7E±0°.1, h29^{km}, mb4.1/11, MS4.1/2, Error ellipse: s-maj=14.2km s-min=10.5km az=176.3*
*NEIC **08** 07:43:05.3±0.5, 11°.02S×164°.69E, h10^{km}, mb4.3/4, Error ellipse: s-maj=11.0km s-min=8.0km az=88.0*
ISC 08 07:43:08.0±0.8, **11°.1S**±0°.1×**164°.7E**±0°.1, **h29**^{km}, **n30**, σ**0^{s}.82**/21, **mb4.1**/11, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.95**	**289**	*e*Pn	**Pn**	**07 44 21.0**	**+0.4**
MARNC	**Mare, Loyalty**	**10.85**	**163**	*e*Pn	**Pn**	**07 45 42.4**	**+0.9**
DZM	**Mont Dzumac**	**11.09**	**172**	*e*Pn	**Pn**	**07 45 44.3**	**-0.5**
DZM	**Mont Dzumac**	**11.09**	**172**	Pn	**Pn**	**07 45 44.2**	**-0.6**
	1.2nm,0.3s,baz=345,slow=18,SNR=8.0						
PINNC	**Pines Island,**	**11.79**	**168**	*e*Pn	Pn	07 45 59.3	+4.9
CTA	**Charters Tower**	**19.90**	**241**	P	**P**	**07 47 36.8**	**-0.6**
	0.2nm,0.3s,baz=65,slow=12,SNR=6.0						
H11S2	**WAKE ISLAND Hy**	**29.42**	**4**	T	T	08 20 02.0	
	baz=178						
H11S3	**WAKE ISLAND Hy**	**29.42**	**4**	T	T	08 19 59.7	
	baz=178						
H11S1	**WAKE ISLAND Hy**	**29.43**	**4**	T	T	08 20 03.8	
	baz=178						
WRAB	**Tennant Creek**	**30.51**	**249**	*e*P	**P**	**07 49 19.2**	**+0.1**
	5.5nm,0.8s						
WB2	**Warramunga Arr**	**30.52**	**249**	*e*P	**P**	**07 49 19.1**	**+0.1**
	3.7nm,1.1s						
WR1	**Warramunga Arr**	**30.53**	**249**	*e*P	**P**	**07 49 18.0**	**-1.1**
WRA	**Warramunga Arr**	**30.53**	**249**	P	**P**	**07 49 18.0**	**-1.2**
	2.3nm,1.0s,baz=80,slow=9.2,SNR=12						
H11N1	**WAKE ISLAND Hy**	**30.64**	**4**	T	T	08 21 34.3	
	baz=187						
H11N3	**WAKE ISLAND Hy**	**30.65**	**4**	T	T	08 21 33.0	
	baz=187						
H11N2	**WAKE ISLAND Hy**	**30.66**	**4**	T	T	08 21 32.6	
	baz=187						
AS31	**Alice Springs**	**31.88**	**243**	*e*P	**P**	**07 49 30.7**	**-0.4**
	0.9nm,1.0s						
ASAR	**Alice Springs**	**31.88**	**243**	P	**P**	**07 49 30.6**	**-0.5**
	2.4nm,0.8s,baz=70,slow=9.6,SNR=18						
BBOO	**Buckleboo**	**34.09**	**226**	*e*P	**P**	**07 49 51.1**	**+0.9**
	15nm,1.1s						
TGY	**Tagaytay City**	**50.08**	**299**	LR	LR	08 12 30.0	
	comp=Z,262nm,18.2s,baz=352,slow=35						
PETK	**Petropavlovsk-**	**64.18**	**355**	P	**P**	**07 53 39.2**	**-0.6**
	3.0nm,0.9s,baz=159,slow=12,SNR=3.1						
PEA1	**Petropavlovsk-**	**64.19**	**355**	*e*P	**P**	**07 53 39.2**	**-0.6**
KLR	**Kul'dur**	**66.66**	**337**	P	**P**	**07 53 56.0**	**+0.1**
	1.9nm,0.9s,baz=149,slow=9.0,SNR=3.8						
SONA0	**Songino Array**	**78.07**	**324**	*e*P	**P**	**07 55 05.0**	**+0.8**
SONM	**Songino Array**	**78.07**	**324**	P	**P**	**07 55 05.1**	**+0.8**
	0.6nm,0.6s,baz=129,slow=4.6,SNR=2.9						
ILAR	**Eielson Array**	**83.84**	**19**	P	**P**	**07 55 34.3**	**-0.2**
	0.5nm,0.7s,baz=226,slow=5.0,SNR=7.6						
MK32	**Makanchi Array**	**92.83**	**317**	*e*P	**P**	**07 56 18.3**	**+0.2**
MKAR	**Makanchi Array**	**92.83**	**317**	P	**P**	**07 56 18.3**	**+0.2**
	1.0nm,0.9s,baz=101,slow=6.5,SNR=8.7						
ANMO	**Albuquerque**	**95.29**	**56**	LR	LR	08 32 41.3	
	comp=Z,37nm,18.2s,baz=254,slow=31						
BVAR	**Borovoye Array**	**101.33**	**322**	P	**Pdif**	**07 56 54.3**	**-2.0**
	0.5nm,0.6s,baz=120,slow=8.5,SNR=3.0						

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*ISCJB **08** 07:44:01.8±0.4, 23°.16S±0°.03×68°.86W±0°.06, h101^{km}±4^{km}, mb4.1/13, Error ellipse: s-maj=9.5km s-min=4.7km az=5.4*
*IDC **08** 07:44:02.6±0.8, 23°.01S×68°.60W, h91^{km}±4^{km}, mb3.9/7, mb1 3.9/8, mb1mx3.7/33, mbtmp4.2/8, MS3.3/2, Ms1 3.2/2, ms1mx2.8/27, Error ellipse: s-maj=28.9km s-min=15.6km az=34.0*
*GUC **08** 07:44:02.2±0.5, 23°.19S×68°.96W, h96^{km}±3^{km}, ML4.3*
*NEIC **08** 07:44:02.0±0.0, 23°.19S×68°.96W, h96^{km}, mb4.0/12, ML4.3(GUC), After GUC.*
ISC 08 07:44:02.1±0.5, **23°.18S**±0°.04×**68°.89W**±0°.06, **h94**^{km}±4^{km}, **h94**^{km}**:pP-P**, **n64**, σ**1^{s}.20**/87, **mb4.1**/13, **4C-7D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.53**	**267**	⇓*i*P	**Pn**	**07 44 18.1**	**+0.4**
PB15				*i* S	**Sn**	**07 44 29.9**	**+0.5**
LVC	**Limon Verde**	**0.57**	**358**	LR	LR	07 44 07.6	
	comp=Z,44nm,21.7s,baz=213,slow=10						
LVC				P	**Pn**	**07 44 18.4**	**+0.2**
	308nm,0.3s,baz=160,slow=6.2,SNR=6644						
LVC				S	**Sn**	**07 44 30.6**	**+0.4**
	2µm,0.3s,baz=45,slow=19,SNR=111						
PB06	**IPOC Station P**	**0.79**	**307**	⇓*i*P	**Pn**	**07 44 20.4**	**+0.4**
PB06				*i* S	**Sn**	**07 44 33.9**	**+0.6**
PB06				IAML		07 44 35.3	
	comp=E,9µm,0.1s						
PB05	**IPOC Station P**	**1.25**	**285**	⇓*i*P	**Pn**	**07 44 25.3**	**+0.2**
PB05				*i* S	**Sn**	**07 44 42.9**	**+0.4**
PB05				IAML		07 44 49.8	
	comp=N,4µm,0.5s						
PB03	**IPOC Station P**	**1.38**	**325**	⇓*i*P	**Pn**	**07 44 27.2**	**+0.5**
PB03				*i* S	**Sn**	**07 44 46.2**	**+0.9**
PB03				IAML		07 44 49.2	
	comp=E,6µm,0.2s						
PB09	**IPOC Station P**	**1.42**	**347**	⇓*i*P	**Pn**	**07 44 28.6**	**+1.4**
PB09				*i* S	**Sn**	**07 44 47.8**	**+1.7**
PB04	**IPOC Station P**	**1.44**	**306**	*e*Pn	**Pn**	**07 44 27.8**	**+0.3**
PB04				*e*Sn	**Sn**	**07 44 46.6**	**+0.1**
PB04	**IPOC Station P**	**1.44**	**306**	⇓*i*P	**Pn**	**07 44 27.7**	**+0.3**
PB04				*i* S	**Sn**	**07 44 47.1**	**+0.6**
PB04				IAML		07 44 52.9	
	comp=N,8µm,0.4s						
PB10	**IPOC Station P**	**1.56**	**257**	*e*Pn	**Pn**	**07 44 29.2**	**+0.4**
PB10				*e*Sn	**Sn**	**07 44 48.7**	**-0.4**
PB10	**IPOC Station P**	**1.56**	**257**	⇑*i*P	**Pn**	**07 44 29.2**	**+0.4**
PB10				*i* S	**Sn**	**07 44 48.4**	**-0.7**
PB10				IAML		07 44 55.8	
	comp=E,5µm,0.7s						
PB07	**IPOC Station P**	**1.71**	**327**	⇓*i*P	**Pn**	**07 44 31.6**	**+0.6**
PB07				*i* S	**Sn**	**07 44 53.9**	**+1.1**
PB07				IAML		07 45 00.8	
	comp=E,4µm,0.2s						
PB14	**IPOC Station P**	**2.00**	**224**	*e*P	**Pn**	**07 44 35.2**	**+0.5**
PB14				*e*S	**Sn**	**07 45 00.7**	**+1.2**
PB14				IAML		07 45 07.1	
	comp=N,4µm,0.3s						
GO02	**Mina Guanaco**	**2.07**	**198**	*e*Pn	**Pn**	**07 44 36.4**	**+0.7**
GO02	**Mina Guanaco**	**2.07**	**198**	⇑*i*P	**Pn**	**07 44 36.5**	**+0.7**
GO02				*e*S	**Sn**	**07 45 02.6**	**+1.3**
GO02				IAML		07 45 09.2	
	comp=N,2µm,0.2s						
PB02	**IPOC Station P**	**2.07**	**333**	⇑*i*P	**Pn**	**07 44 36.2**	**+0.7**
PB02				*i* S	**Sn**	**07 45 02.5**	**+1.5**
PB02				IAML		07 45 10.8	
	comp=E,5µm,0.4s						
PB01	**IPOC Station P**	**2.20**	**345**	*e*Pn	**Pn**	**07 44 38.0**	**+0.8**
PB01				*e*Sn	**Sn**	**07 45 02.0**	**-1.9**
PB01	**IPOC Station P**	**2.20**	**345**	⇑*i*P	**Pn**	**07 44 38.0**	**+0.8**
PB01				IAML		07 45 13.7	
	comp=E,2µm,0.2s						
PB11	**IPOC Station P**	**3.48**	**348**	*e*Pn	**Pn**	**07 44 53.9**	**-0.4**
MNMC	**Minye Minye**	**4.08**	**351**	*e*Pn	**Pn**	**07 45 02.8**	**+0.2**
LCO	**Las Campanas**	**6.03**	**195**	*e*Pn	**Pn**	**07 45 26.1**	**-2.9**
LPAZ	**La Paz**	**6.89**	**6**	*e*Pn	**Pn**	**07 45 43.3**	**+2.2**
LPAZ	**La Paz**	**6.89**	**6**	P	**Pn**	**07 45 42.9**	**+1.8**
	comp=E,0.9nm,0.3s,baz=215,slow=6.8,SNR=16						
GO04	**Tololo Observa**	**7.17**	**193**	*e*Pn	**Pn**	**07 45 41.8**	**-2.7**
ROC1	**El Roble**	**9.94**	**190**	*e*Pn	**Pn**	**07 46 26.1**	**+4.0**
CPUP	**Villa Florida**	**10.96**	**109**	*e*Pn	**Pn**	**07 46 37.5**	**+1.6**
CPUP	**Villa Florida**	**10.96**	**109**	P	**Pn**	**07 46 34.4**	**-1.6**
	comp=E,0.4nm,0.3s,baz=291,slow=12,SNR=15						
CPUP				LR	LR	07 51 30.7	
	comp=E,30nm,20.7s,baz=44,slow=42						
GO06	**Curarrehue**	**16.50**	**187**	*e*Pn	**P**	**07 47 50.4**	**+1.5**
	comp=E,8.8nm,1.4s						
PLCA	**Paso Flores**	**17.56**	**184**	*e*P	**Pn**	**07 48 02.1**	**+1.3**
	comp=E,2.7nm,1.1s						
BDFB	**Brasilia**	**21.05**	**73**	*e*P	**P**	**07 48 38.7**	**-0.2**
	comp=E,3.3nm,0.8s						
BDFB	**Brasilia**	**21.05**	**73**	P	**P**	**07 48 36.2**	**-2.7**
	comp=E,3.1nm,0.6s,baz=240,slow=13,SNR=5.8						
PTGA	**Pitinga**	**23.94**	**22**	*e*P	**P**	**07 49 07.7**	**0.0**
	comp=E,4.2nm,0.9s						
PTGA	**Pitinga**	**23.94**	**22**	P	**P**	**07 49 07.0**	**-0.7**
	comp=E,2.9nm,0.6s,baz=181,slow=8.6,SNR=5.1						
RCBR	**Riachuelo**	**36.16**	**67**	*e*P	**P**	**07 50 55.7**	**0.0**
	comp=E,15nm,1.1s						
DBIC	**Dimbokro**	**69.20**	**73**	*e*P	**P**	**07 54 58.7**	**-0.5**
	comp=E,16nm,1.3s						
DBIC	**Dimbokro**	**69.20**	**73**	P	**P**	**07 54 58.2**	**-1.0**
	comp=E,5.9nm,1.0s,baz=208,slow=7.0,SNR=2.6						
TRQ	**Mont Tremblant**	**69.26**	**356**	*e*P	**P**	**07 54 59.4**	**+0.4**
SDCO	**Great Sand Dun**	**69.70**	**330**	*e*P	**P**	**07 55 03.9**	**+1.8**
	comp=E,1.2nm,0.9s						
BGNE	**Belgrade**	**69.76**	**337**	*e*P	**P**	**07 55 03.2**	**+1.2**
	comp=E,7.1nm,0.8s						
ECSD	**EROS Data Cent**	**71.29**	**339**	*e*P	**P**	**07 55 11.8**	**+0.5**
	comp=E,4.4nm,1.3s						
PV01	**Paradox Valley**	**71.47**	**328**	*e*P	**P**	**07 55 09.7**	**-3.1**
	comp=E,3.1nm,1.4s						
PDAR	**Pinedale Array**	**75.57**	**330**	P	**P**	**07 55 38.5**	**+1.8**
	comp=E,0.2nm,0.5s,baz=123,slow=5.8,SNR=2.5						
ULM	**Lac du Bonnet**	**76.92**	**343**	*e*P	**P**	**07 55 44.3**	**+0.4**
	comp=E,1.5nm,0.8s						
ULM	**Lac du Bonnet**	**76.92**	**343**	P	**P**	**07 55 44.4**	**+0.5**
	comp=E,0.9nm,0.5s,baz=137,slow=6.9,SNR=3.2						
ULM				LR	LR	08 33 56.4	
	comp=E,87nm,18.5s,baz=340,slow=39						
TOA0	**Torodi Ar. Sit**	**77.91**	**70**	*e*P	**P**	**07 55 50.2**	**0.0**
	comp=E,12nm,0.6s						
TOA1	**Torodi Ar. Sit**	**77.91**	**70**	*e*P	**P**	**07 55 48.1**	**-2.1**
TORD	**Torodi Ar. Bea**	**77.91**	**70**	P	**P**	**07 55 48.1**	**-2.1**
	comp=E,10nm,0.6s,baz=248,slow=4.6,SNR=76						
FCC	**Fort Churchill**	**84.27**	**347**	*e*P	**P**	**07 56 23.7**	**+0.8**
YKA	**Yellowknife Ar**	**92.77**	**341**	P	**P**	**07 57 04.0**	**+0.6**
	comp=E,0.7nm,0.8s,baz=139,slow=4.5,SNR=15						
YKA				pP	**pP**	**07 57 29.2**	**0.0**
	comp=E,0.7nm,0.8s,baz=137,slow=4.4,SNR=7.6						
YKA				sP	**sP**	**07 57 38.6**	**-0.9**
	comp=E,0.3nm,0.7s,baz=134,slow=4.7,SNR=3.8						
LVZ	**Lovozero**	**116.35**	**24**	*e*PKPdf	**PKPdf**	**08 02 33.9**	**-0.1**
AS01	**Alice Springs**	**128.41**	**207**	*e*PKPdf	**PKiKP**	**08 02 59.3**	**0.0**
ASAR	**Alice Springs**	**128.43**	**207**	PKP	**PKiKP**	**08 02 59.2**	**-0.1**
	comp=E,0.4nm,0.6s,baz=144,slow=1.7,SNR=5.7						
ASAR				pPKP	**pPKPdf**	**08 03 25.1**	**-0.6**
	comp=E,0.9nm,0.8s,baz=178,slow=2.0,SNR=6.5						
WB2	**Warramunga Arr**	**131.51**	**210**	*e*PKPdf	**PKiKP**	**08 03 05.6**	**+0.1**
WR1	**Warramunga Arr**	**131.51**	**210**	*e*PKPdf	**PKiKP**	**08 03 05.2**	**-0.4**
WRA	**Warramunga Arr**	**131.51**	**210**	PKP	**PKiKP**	**08 03 05.2**	**-0.4**
	comp=E,0.3nm,0.4s,baz=154,slow=1.8,SNR=6.8						
WRA				pPKP	**pPKPdf**	**08 03 31.0**	**-0.5**
	comp=E,0.6nm,0.6s,baz=155,slow=1.9,SNR=4.1						
ZAA1	**Zalesovo Array**	**143.45**	**26**	*e*PKPdf	**PKPdf**	**08 03 24.1**	**-1.2**
ZALV	**Zalesovo Beam**	**143.46**	**26**	*e*PKPdf	**PKPdf**	**08 03 26.7**	**+1.4**
ZALV	**Zalesovo Beam**	**143.46**	**26**	PKP	**PKPdf**	**08 03 24.1**	**-1.2**
	comp=E,1.1nm,0.5s,baz=308,slow=2.4,SNR=6.3						
MAKZ	**Makanchi**	**146.78**	**38**	*e*PKPbc	**PKPbc**	**08 03 32.8**	**-0.5**
MK31	**Makanchi Array**	**146.97**	**37**	*e*PKPdf	**PKPbc**	**08 03 33.1**	**-0.7**
MK31				*e*PKPbc	**PKPab**	**08 03 34.9**	**-0.5**
MK32	**Makanchi Array**	**146.97**	**37**	*e*PKPdf	**PKPbc**	**08 03 32.8**	**-1.0**
MKAR	**Makanchi Array**	**146.97**	**37**	*e*PKPdf	**PKPbc**	**08 03 33.2**	**-0.6**
MKAR				*e*PKPbc	**PKPab**	**08 03 34.9**	**-0.5**
MKAR				pPKPbc	**pPKPdf**	**08 03 59.0**	**+0.2**
MKAR	**Makanchi Array**	**146.97**	**37**	PKPbc	**PKPbc**	**08 03 32.8**	**-1.0**
	comp=E,2.1nm,0.8s,baz=7.4,slow=1.4,SNR=15						
MKAR				pPKPbc	**pPKPdf**	**08 03 59.0**	**+0.2**
	comp=E,1.4nm,0.7s,baz=321,slow=3.1,SNR=6.0						
MK01	**Makanchi Array**	**146.99**	**37**	*e*PKPbc	**PKPbc**	**08 03 33.0**	**-0.9**
KLR	**Kul'dur**	**149.33**	**333**	PKPbc	**PKiKP**	**08 03 41.0**	**0.0**
	comp=E,1.1nm,0.6s,baz=13,slow=5.1,SNR=3.4						

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*IDC **08** 07:44:59.7±0.6, 10°.94S×164°.78E, h0^{km}, mb4.5/20, mb1 4.6/22, mb1mx4.5/41, mbtmp4.5/22, ML4.4/2, MS4.1/4, Ms1 4.1/4, ms1mx3.4/47, Error ellipse: s-maj=18.0km s-min=14.4km az=111.0*
*NEIC **08** 07:45:01.5±0.2, 10°.96S×164°.78E, h10^{km}, mb4.8/22, Error ellipse: s-maj=6.8km s-min=5.2km az=109.0*
*ISCJB **08** 07:45:03.0±0.3, 11°.04S±0°.04×164°.70E±0°.05, h31^{km}, mb4.6/41, MS4.4/4, Error ellipse: s-maj=6.9km s-min=6.3km az=173.1*
ISC 08 07:45:04.7±0.4, **11°.01S**±0°.07×**164°.76E**±0°.07, **h31**^{km}, **n87**, σ**1^{s}.14**/85, **mb4.7**/41, **MS4.5**/4, **1D**, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.99**	**288**	Pn	**Pn**	**07 46 17.9**	**+0.4**
	26nm,0.3s,baz=237,slow=8.4,SNR=4.5						
HNR				Sn	**Sn**	**07 47 13.9**	**-0.3**
	19nm,0.3s,baz=221,slow=20,SNR=3.7						
HNR				LR	LR	07 48 09.2	
	comp=Z,3µm,19.6s,baz=127,slow=38						
DZM	**Mont Dzumac**	**11.12**	**172**	*e*Pn	**Pn**	**07 47 41.0**	**-0.7**
	58nm,0.8s						
DZM				*e*LR	LR	07 50 14.8	
	comp=Z,1µm,25.0s						
DZM	**Mont Dzumac**	**11.12**	**172**	*e*Pn	**Pn**	**07 47 41.5**	**-0.2**
DZM	**Mont Dzumac**	**11.12**	**172**	Pn	**Pn**	**07 47 42.1**	**+0.3**
	1.6nm,0.3s,baz=324,slow=18,SNR=14						
PINNC	**Pines Island,**	**11.82**	**168**	*e*Pn	**Pn**	**07 47 50.8**	**-0.4**
RABL	**Rabaul**	**14.20**	**298**	*e*P	**P**	**07 48 27.5**	**-3.3**
MANU	**Manus Island**	**19.42**	**296**	*e*P	**P**	**07 49 28.4**	**-0.3**
	50nm,1.0s						
CTA	**Charters Tower**	**19.96**	**241**	P	**Pn**	**07 49 36.2**	**-0.2**
	36nm,0.8s,baz=68,slow=12,SNR=23						
CTAO	**Charters Tower**	**19.96**	**241**	*e*P	**Pn**	**07 49 36.0**	**-0.4**
	54nm,0.9s						
COEN	**Coen**	**21.27**	**260**	*e*P	**P**	**07 49 49.0**	**+0.3**
	10nm,0.8s						
ARMA	**Armidale**	**22.84**	**210**	*e*P	**P**	**07 50 05.8**	**+0.3**
	34nm,1.1s						
URZ	**Urewera**	**29.30**	**160**	P	**P**	**07 51 05.1**	**+0.7**
	4.3nm,0.8s,baz=328,slow=9.5,SNR=3.7						
H11S2	**WAKE ISLAND Hy**	**29.38**	**4**	T	T	08 22 07.4	
	baz=184,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**29.38**	**4**	T	T	08 22 06.5	
	baz=184,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.39**	**4**	T	T	08 22 06.2	
	baz=184,slow=76,SNR=14						
STKA	**Stephens Creek**	**29.81**	**222**	*e*P	**P**	**07 51 10.7**	**+1.7**
	0.7nm,1.0s						
STKA	**Stephens Creek**	**29.81**	**222**	P	**P**	**07 51 09.6**	**+0.5**
	2.2nm,0.7s,baz=42,slow=14,SNR=4.9						
BKZ	**Black Stump Fm**	**29.93**	**162**	*e*P	**P**	**07 51 11.9**	**+1.9**
	11nm,1.0s						
WRAB	**Tennant Creek**	**30.57**	**249**	*e*P	**P**	**07 51 16.9**	**+1.0**
	13nm,0.8s						
WB2	**Warramunga Arr**	**30.57**	**249**	*e*P	**P**	**07 51 14.8**	**-1.1**
	17nm,0.9s						
WR1	**Warramunga Arr**	**30.58**	**249**	*e*P	**P**	**07 51 15.4**	**-0.7**
WR1				*e*PcP	**PcP**	**07 54 14.3**	**-0.1**
WRA	**Warramunga Arr**	**30.59**	**249**	P	**P**	**07 51 15.4**	**-0.7**
	11nm,0.8s,baz=77,slow=9.3,SNR=35						
WRA				PcP	**PcP**	**07 54 14.3**	**-0.1**
	1.2nm,0.8s,baz=81,slow=2.7,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**30.60**	**4**	T	T	08 23 32.1	
	baz=184,slow=76,SNR=6.2						
H11N3	**WAKE ISLAND Hy**	**30.61**	**4**	T	T	08 23 32.0	
	baz=184,slow=76,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	**30.62**	**4**	T	T	08 23 34.0	
	baz=184,slow=76,SNR=4.8						
TOO	**Toolangi**	**31.61**	**210**	*e*P	**P**	**07 51 24.9**	**0.0**
	12nm,1.1s						
AS01	**Alice Springs**	**31.90**	**243**	*e*P	**P**	**07 51 26.5**	**-1.2**
AS31	**Alice Springs**	**31.94**	**243**	*e*P	**P**	**07 51 27.3**	**-0.8**
	3.0nm,0.8s						
ASAR	**Alice Springs**	**31.94**	**243**	P	**P**	**07 51 26.8**	**-1.2**
	8.8nm,0.6s,baz=70,slow=9.9,SNR=46						
ASAR				PcP	**PcP**	**07 54 18.1**	**+0.1**
	1.7nm,0.8s,baz=76,slow=2.7,SNR=7.5						
ASAR				LR	LR	08 03 12.8	
	comp=Z,271nm,18.9s,baz=56,slow=34						
RPZ	**Rata Peaks**	**33.04**	**172**	P	**P**	**07 51 37.3**	**0.0**
	9.6nm,0.9s,baz=358,slow=8.5,SNR=4.0						
RPZ				LR	LR	08 03 38.9	
	comp=Z,548nm,18.2s,baz=245,slow=34						
WKZ	**Wanaka**	**33.90**	**175**	*e*P	**P**	**07 51 43.7**	**-1.1**
	13nm,1.0s						
BBOO	**Buckleboo**	**34.15**	**226**	*e*P	**P**	**07 51 47.4**	**+0.3**
	26nm,1.0s						
FITZ	**Fitzroy Crossi**	**38.45**	**255**	*e*P	**P**	**07 52 23.9**	**-0.1**
	8.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**38.45**	**255**	P	**P**	**07 52 23.2**	**-0.8**
	4.2nm,0.7s,baz=99,slow=6.9,SNR=10						
FORT	**Forrest**	**39.27**	**234**	*e*P	**P**	**07 52 31.5**	**+0.7**
	29nm,0.9s						
PPT2	**Papeete2**	**44.65**	**104**	*e*LR	LR	08 05 41.6	
	comp=Z,262nm,22.5s						
JCUZ	**Jacuzzi**	**49.77**	**53**	*e*P	**P**	**07 53 54.7**	**-0.1**
	279nm,0.8s						
TAOE	**Nuku Hiva Isla**	**54.25**	**93**	*e*LR	LR	08 10 03.8	
	comp=Z,188nm,27.2s						
KSRS	**Korea Array**	**59.30**	**326**	P	**P**	**07 55 03.4**	**-0.3**
	2.6nm,0.9s,baz=140,slow=8.3,SNR=7.0						
KSAR	**Wonju Array Be**	**59.32**	**326**	P	**P**	**07 55 03.4**	**-0.4**
USRK	**Ussuriysk Ar.**	**62.48**	**334**	P	**P**	**07 55 24.1**	**-1.1**
	4.5nm,0.8s,baz=141,slow=11,SNR=7.0						
PETK	**Petropavlovsk-**	**64.15**	**355**	P	**P**	**07 55 35.4**	**-0.6**
	5.0nm,0.8s,baz=139,slow=7.0,SNR=5.8						
PEA1	**Petropavlovsk-**	**64.15**	**355**	*e*P	**P**	**07 55 35.4**	**-0.6**
CN2	**Changchun**	**65.22**	**330**	*e*P	**P**	**07 55 43.5**	**+0.3**
CASY	**Casey**	**66.06**	**201**	*e*P	**P**	**07 55 48.7**	**+0.4**
	8.7nm,1.0s						
KLR	**Kul'dur**	**66.64**	**337**	P	**P**	**07 55 52.8**	**+0.5**
	5.6nm,0.9s,baz=117,slow=9.0,SNR=13						
XAN	**Xi'an**	**69.38**	**313**	*e*P	**P**	**07 56 10.6**	**+0.7**
	7.3nm,0.8s						
HHC	**Hu-ho-hao-te**	**71.18**	**320**	*e*P	**P**	**07 56 25.0**	**+4.2**
HHC				S	**S**	**08 05 36.7**	**+0.8**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,4.6s						
HHC				LR	LR		
	comp=N,330nm,9.5s						
HHC				LR	LR		
	comp=E,320nm,10.4s						
HHC				LR	LR		
	comp=Z,250nm,10.4s						
CM31	**Chiang Mai Arr**	**71.21**	**294**	*e*P	**P**	**07 56 21.3**	**0.0**
CMAR	**Chiang Mai Arr**	**71.21**	**294**	P	**P**	**07 56 20.8**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=111,slow=3.7,SNR=4.2						
ULN	**Ulaanbaatar**	**77.70**	**324**	*e*P	**P**	**07 56 59.2**	**+0.5**
	comp=Z,8.4nm,1.0s						
SONA0	**Songino Array**	**78.07**	**324**	*e*P	**P**	**07 57 00.8**	**+0.2**
SONM	**Songino Array**	**78.07**	**324**	P	**P**	**07 57 00.8**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=134,slow=6.2,SNR=6.5						
SONA1	**Songino Array**	**78.07**	**324**	*e*P	**P**	**07 57 01.0**	**+0.4**
GTA	**Gaotai**	**78.34**	**314**	⇓P	**P**	**07 57 02.9**	**+0.6**
GTA				pP	pP	07 57 10.8	+0.4
GTA				sP	sP	07 57 14.1	+0.8
GTA	**Gaotai**	**78.34**	**314**	S	**S**	**08 07 01.3**	**+5.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,110nm,7.0s						
GTA				LR	LR		
	comp=N,170nm,16.2s						
GTA				LR	LR		
	comp=E,250nm,16.5s						
GTA				LR	LR		
	comp=Z,270nm,18.1s						
BILL	**Bilibino**	**78.85**	**1**	*e*P	**P**	**07 57 05.0**	**+0.6**
	comp=Z,11nm,1.1s						
QSPA	**South Pole Qui**	**78.99**	**180**	*e*P	**P**	**07 57 06.5**	**+1.0**
	comp=Z,21nm,1.0s						
TLY	**Talaya**	**81.56**	**327**	*e*P	**P**	**07 57 19.5**	**+0.2**
	comp=Z,5.0nm,0.8s						
DHY	**Denali Highway**	**82.48**	**20**	*e*P	**P**	**07 57 26.5**	**+2.4**
	comp=Z,5.8nm,1.2s						
IM3	**Indian Mountai**	**82.65**	**16**	*e*P	**P**	**07 57 24.7**	**-0.1**
MLY	**Manley**	**82.80**	**17**	*e*P	**P**	**07 57 27.3**	**+1.8**
	comp=Z,2.6nm,1.0s						
HDA	**Harding Lake**	**83.53**	**19**	*e*P	**P**	**07 57 28.8**	**-0.5**
	comp=Z,13nm,1.0s						
ILAR	**Eielson Array**	**83.79**	**19**	P	**P**	**07 57 30.5**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=225,slow=6.2,SNR=16						
ILB	**Eielson Array**	**83.79**	**19**	*e*P	**P**	**07 57 30.8**	**+0.2**
IL1	**Eielson Array**	**83.79**	**19**	*e*P	**P**	**07 57 30.8**	**+0.2**
TIXI	**Tiksi**	**85.87**	**349**	P	**P**	**07 57 40.7**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=125,slow=8.9,SNR=4.9						
NVAR	**Mina Array Bea**	**86.74**	**50**	P	**P**	**07 57 46.0**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=231,slow=8.7,SNR=6.4						
MK32	**Makanchi Array**	**92.83**	**317**	*e*P	**P**	**07 58 14.5**	**+0.1**
MKAR	**Makanchi Array**	**92.83**	**317**	P	**P**	**07 58 14.5**	**+0.1**
	comp=Z,3.6nm,0.8s,baz=104,slow=6.0,SNR=14						
MKAR				PKKPbc	**PKKPdf**	**08 15 25.3**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=251,slow=4.4,SNR=5.2						
LRM	**Limekiln Ridge**	**92.84**	**44**	*e*P	**P**	**07 58 15.8**	**+1.0**
ZALV	**Zalesovo Beam**	**92.96**	**324**	P	**P**	**07 58 13.4**	**-1.4**
	comp=Z,2.0nm,0.8s,baz=90,slow=4.3,SNR=3.9						
ZAA1	**Zalesovo Array**	**92.96**	**324**	*e*P	**P**	**07 58 13.4**	**-1.4**
PDAR	**Pinedale Array**	**94.24**	**47**	P	**P**	**07 58 20.9**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=236,slow=1.1,SNR=7.0						
YKA	**Yellowknife Ar**	**95.39**	**27**	P	**P**	**07 58 24.2**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=254,slow=4.4,SNR=7.4						
BVAR	**Borovoye Array**	**101.33**	**322**	P	**Pdif**	**07 58 52.3**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=108,slow=9.5,SNR=3.8						
SDMD	**Soldier's Deli**	**118.80**	**51**	*e*PKPdf	**PKPdf**	**08 03 49.9**	**-0.4**
CPNY	**Central Park**	**120.70**	**49**	*e*PKPdf	**PKPdf**	**08 03 53.1**	**-0.8**
CPUP	**Villa Florida**	**124.77**	**133**	PKP	**PKPdf**	**08 04 01.8**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=340,slow=8.8,SNR=5.4						
NB200	**NORSAR Array S**	**126.41**	**344**	*e*PKPdf	**PKPdf**	**08 04 03.5**	**-0.9**
NOA	**NORSAR Array B**	**126.41**	**344**	PKP	**PKPdf**	**08 04 03.5**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=43,slow=2.3,SNR=2.4						
GERES	**GERESS Array B**	**135.24**	**333**	PKP	**PKPdf**	**08 04 21.5**	**0.0**
	comp=Z,0.3nm,0.5s,baz=327,slow=2.2,SNR=3.8						
ES19	**SONSECA Array**	**149.70**	**342**	*e*PKPbc	**PKPbc**	**08 04 52.1**	**+0.3**
ESDC	**Sonseca Array**	**149.75**	**343**	PKPbc	**PKPbc**	**08 04 51.1**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=263,slow=0.5,SNR=4.2						
TOA0	**Torodi Ar. Sit**	**163.30**	**279**	*e*PKPdf	**PKPdf**	**08 05 06.7**	**+1.4**
TORD	**Torodi Ar. Bea**	**163.30**	**279**	PKP	**PKPdf**	**08 05 04.0**	**-1.3**

	comp=Z,1.3nm,1.0s,baz=352,slow=5.0,SNR=4.3						
TOA1	**Torodi Ar. Sit**	**163.30**	**279**	*e*PKPdf	**PKPdf**	**08 05 04.0**	**-1.3**

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*KRNET **08** 07:47:51.5±0.1, 43°.15N×76°.82E, h23^{km}, mb2.4*
*SOME **08** 07:47:52.7, 43°.23N×76°.75E, h10^{km}*
*NNC **08** 07:47:52.4±0.5, 43°.10N×76°.81E, h0^{km}, mb2.7, mpv2.8, Error ellipse: s-maj=4.8km s-min=2.0km az=159.0*

ISC 08 07:47:52.3±0.7**, 43°.15N**±0°.02×**76°.83E**±0°.01**, h14**^{km}±4^{km}**, n68,** σ0^{s}74/132**, 32C-34D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAA	**Alma-Ata**	**0.09**	**43**	P	**Pg**	**07 47 55.3**	**-0.1**
	88nm,0.0s						
AAA				S	**Sg**	**07 47 57.3**	**-0.2**
	1µm,0.1s						
AAA	**Alma-Ata**	**0.09**	**43**	⇑*e*P	**Pg**	**07 47 55.3**	**-0.1**
	baz=50						
AAA				⇑*e*S	**Sg**	**07 47 56.6**	**-0.9**
	baz=50						
AAA	**Alma-Ata**	**0.09**	**43**	⇑*e*P	**Pg**	**07 47 55.3**	**-0.1**
	88nm,0.0s						
AAA				*e*S	**Sg**	**07 47 56.5**	**-0.9**
	1µm,0.1s						
KNDC	**Almaty**	**0.12**	**54**	⇓P	**Pg**	**07 47 56.9**	**+1.2**
	42nm,0.2s						
KNDC				⇓S	**Sg**	**07 47 58.2**	**+0.1**
	204nm,0.3s						
TNSS	**Tian-Shan**	**0.14**	**143**	P	**Pg**	**07 47 55.7**	**-0.6**
	33nm,0.1s						
TNSS				S	**Sg**	**07 47 57.9**	**-1.1**
	132nm,0.1s						
TNSS	**Tian-Shan**	**0.14**	**143**	⇑*e*P	**Pg**	**07 47 55.7**	**-0.6**
	baz=42						
TNSS				⇑*e*S	**Sg**	**07 47 57.9**	**-1.1**
	baz=42						
TNSS	**Tian-Shan**	**0.14**	**143**	⇑*e*P	**Pg**	**07 47 55.7**	**-0.6**
	33nm,0.1s						
TNSS				*e*S	**Sg**	**07 47 57.9**	**-1.1**
	132nm,0.1s						
MDOK	**Medeo**	**0.16**	**84**	⇑P	**Pg**	**07 47 55.8**	**-0.5**
	5.1nm,0.2s						
MDOK				S	**Sg**	**07 47 58.5**	**-0.6**
	61nm,0.2s						
MDOK	**Medeo**	**0.16**	**84**	Pg	**Pg**	**07 47 55.8**	**-0.5**
	52nm,0.1s						
MDOK				Lg	Lg	07 47 58.2	
	146nm,0.1s						
MDOK	**Medeo**	**0.16**	**84**	⇓*e*P	**Pg**	**07 47 55.8**	**-0.5**
	baz=87						
MDOK				⇓*e*S	**Sg**	**07 47 58.1**	**-0.9**
	baz=87						
MDOK	**Medeo**	**0.16**	**84**	⇓*e*P	**Pg**	**07 47 55.8**	**-0.5**
	52nm,0.1s						
MDOK				*e*S	**Sg**	**07 47 58.2**	**-0.9**
	146nm,0.1s						
IZV	**Izvestkoviy**	**0.20**	**236**	P	**Pg**	**07 47 56.8**	**-0.2**
	13nm,0.1s						
IZV				S	**Sg**	**07 47 59.9**	**-0.1**
	124nm,0.2s						
IZV	**Izvestkoviy**	**0.20**	**236**	⇓*e*P	**Pg**	**07 47 56.8**	**-0.2**
	baz=33						
IZV				⇓*e*S	**Sg**	**07 47 59.9**	**-0.1**
	baz=33						
IZV	**Izvestkoviy**	**0.20**	**236**	⇓*e*P	**Pg**	**07 47 56.8**	**-0.2**
	13nm,0.1s						
IZV				*e*S	**Sg**	**07 47 59.9**	**-0.1**
	124nm,0.2s						
KOTS	**Kotyrbulak**	**0.22**	**67**	P	**Pg**	**07 47 56.9**	**-0.4**
	6.4nm,0.1s						
KOTS				S	**Sg**	**07 48 00.1**	**-0.6**
	88nm,0.2s						
KOTS	**Kotyrbulak**	**0.22**	**67**	⇓*e*P	**Pg**	**07 47 57.0**	**-0.4**
	baz=70						
KOTS				⇓*e*S	**Sg**	**07 47 59.2**	**-1.5**
	baz=70						
KOTS	**Kotyrbulak**	**0.22**	**67**	⇓*e*P	**Pg**	**07 47 57.0**	**-0.4**
	6.4nm,0.1s						
KOTS				*e*S	**Sg**	**07 47 59.2**	**-1.5**
	88nm,0.4s						
MTBS	**Maitube**	**0.30**	**267**	P	**Pg**	**07 47 58.2**	**-0.3**
	3.2nm,0.1s						
MTBS				S	**Sg**	**07 48 02.3**	**-0.4**
	23nm,0.1s						
MTBS	**Maitube**	**0.30**	**267**	*e*P	**Pg**	**07 47 58.3**	**-0.3**
	baz=65						
MTBS				*e*S	**Sg**	**07 48 02.4**	**-0.4**
	baz=65						
MTBS	**Maitube**	**0.30**	**267**	*e*P	**Pg**	**07 47 58.2**	**-0.3**
	3.2nm,0.1s						
MTBS				*e*S	**Sg**	**07 48 02.3**	**-0.4**
	23nm,0.1s						
KTBS	**Karatobe**	**0.58**	**349**	P	**Pg**	**07 48 03.1**	**-0.5**
	9.4nm,0.1s						
KTBS				S	**Sg**	**07 48 10.7**	**-0.6**
	36nm,0.2s						
KTBS	**Karatobe**	**0.58**	**349**	⇓*e*P	**Pg**	**07 48 03.1**	**-0.5**
	baz=37						
KTBS				⇓*e*S	**Sg**	**07 48 10.7**	**-0.6**
	baz=37						
KTBS	**Karatobe**	**0.58**	**349**	⇓*e*P	**Pg**	**07 48 03.1**	**-0.5**
	9.4nm,0.1s						
KTBS				*e*S	**Sg**	**07 48 10.7**	**-0.6**
	36nm,0.2s						
KST	**Kastek**	**0.65**	**261**	P	**Pg**	**07 48 04.6**	**-0.3**
	1.5nm,0.1s						
KST				S	**Sg**	**07 48 13.4**	**-0.2**
	13nm,0.3s						
KST	**Kastek**	**0.65**	**261**	⇓*e*P	**Pg**	**07 48 04.7**	**-0.3**
	baz=60						
KST				⇓*e*S	**Sg**	**07 48 13.4**	**-0.2**
	baz=60						
KST	**Kastek**	**0.65**	**261**	⇓*e*P	**Pg**	**07 48 04.7**	**-0.3**
	1.5nm,0.1s						
KST				*e*S	**Sg**	**07 48 13.4**	**-0.2**
	13nm,0.3s						
CHKK	**Chushkaly**	**0.72**	**9**	P	**Pg**	**07 48 05.4**	**-0.8**
	12nm,0.1s						
CHKK				S	**Sg**	**07 48 14.8**	**-0.9**
	32nm,0.2s						
CHKK	**Chushkaly**	**0.72**	**9**	⇓*e*P	**Pg**	**07 48 05.6**	**-0.6**
	baz=10.0						
CHKK				⇓*e*S	**Sg**	**07 48 14.8**	**-0.9**
	baz=10.0						
CHKK	**Chushkaly**	**0.72**	**9**	⇓*e*P	**Pg**	**07 48 05.6**	**-0.6**
	12nm,0.1s						
CHKK				*e*S	**Sg**	**07 48 14.8**	**-0.9**
	32nm,0.2s						
DGS	**Degeres**	**0.78**	**277**	P	**Pg**	**07 48 06.6**	**-0.9**
	1.0nm,0.2s						
DGS				S	**Sg**	**07 48 16.7**	**-1.1**
	7.7nm,0.2s						
DGS	**Degeres**	**0.78**	**277**	*e*P	**Pg**	**07 48 06.6**	**-0.9**
	baz=77						
DGS				*e*S	**Sg**	**07 48 16.7**	**-1.1**
	baz=77						
DGS	**Degeres**	**0.78**	**277**	*e*P	**Pg**	**07 48 06.5**	**-0.9**
	1.0nm,0.2s						
DGS				*e*S	**Sg**	**07 48 16.7**	**-1.1**
	7.7nm,0.2s						
KUU	**Kurty**	**0.83**	**334**	P	**Pg**	**07 48 07.6**	**-0.8**
	1.8nm,0.1s						
KUU				S	**Sg**	**07 48 18.4**	**-0.9**
	8.1nm,0.2s						
KUU	**Kurty**	**0.83**	**334**	*e*P	**Pg**	**07 48 07.6**	**-0.8**
	baz=35						
KUU				*e*S	**Sg**	**07 48 18.4**	**-0.9**
	baz=35						
KUU	**Kurty**	**0.83**	**334**	*e*P	**Pg**	**07 48 07.6**	**-0.8**
	1.8nm,0.1s						
KUU				*e*S	**Sg**	**07 48 18.4**	**-0.9**
	8.1nm,0.2s						
BOOM	**Boomskoye usch**	**0.93**	**225**	⇑*i*P	**Pg**	**07 48 09.1**	**-1.2**
	baz=25						
BOOM				⇑*i*S	**Sg**	**07 48 21.3**	**-1.2**
	baz=25						
TKM2	**Tokmak 2**	**0.94**	**256**	⇑P	**Pg**	**07 48 10.1**	**-0.3**
	0.4nm,0.3s						
TKM2				⇑S	**Sg**	**07 48 22.6**	**-0.1**
	1.3nm,0.2s						
TKM2	**Tokmak 2**	**0.94**	**256**	⇑*i*P	**Pg**	**07 48 09.0**	**-1.4**
	baz=56						
TKM2				⇑*i*S	**Sg**	**07 48 21.2**	**-1.5**
	baz=56						
ULHL	**Ulahol**	**1.00**	**206**	⇓*i*P	**Pg**	**07 48 10.5**	**-1.1**
	baz=6.0						
ULHL				⇓*i*S	**Sg**	**07 48 23.5**	**-1.2**
	baz=6.0						
KURS	**Kuram**	**1.03**	**70**	P	**Pg**	**07 48 11.7**	**-0.5**
	0.6nm,0.1s						
KURS				S	**Sg**	**07 48 25.4**	**-0.3**
	1.9nm,0.1s						
KURS	**Kuram**	**1.03**	**70**	*e*P	**Pg**	**07 48 11.7**	**-0.5**
	baz=71						
KURS				*e*S	**Sg**	**07 48 25.4**	**-0.3**
	baz=71						
KURS	**Kuram**	**1.03**	**70**	*e*P	**Pg**	**07 48 11.7**	**-0.5**
	0.6nm,0.1s						
KURS				*e*S	**Sg**	**07 48 25.4**	**-0.3**
	1.9nm,0.1s						
KDJ	**Kajisay**	**1.05**	**166**	⇑*e*P	**Pg**	**07 48 11.1**	**-1.4**
	baz=65						
KDJ				⇑*i*S	**Sg**	**07 48 25.3**	**-0.9**
	baz=65						
ARXS	**Arharly**	**1.29**	**34**	P	**Pn**	**07 48 15.6**	**-0.3**
	3.5nm,0.1s						
ARXS				S	**Sb**	**07 48 32.1**	**-0.6**
	5.9nm,0.2s						
ARXS	**Arharly**	**1.29**	**34**	⇑*e*P	**Pn**	**07 48 15.6**	**-0.3**
	3.5nm,0.1s						
ARXS				*e*S	**Sb**	**07 48 32.1**	**-0.6**
	5.9nm,0.2s						
PRZ	**Przheval'sk**	**1.33**	**119**	⇑*i*P	**Pn**	**07 48 15.8**	**-0.8**
	baz=19						
PRZ				⇑*i*S	**Sb**	**07 48 34.4**	**+0.4**
	baz=19						
KBK	**Karagaybulak**	**1.47**	**251**	⇓*i*P	**Pn**	**07 48 18.3**	**-0.2**
	baz=51						
KBK				⇓*i*S	**Sn**	**07 48 37.5**	**-0.1**
	baz=51						
CHMS	**Chumysh**	**1.53**	**265**	⇓*i*P	**Pn**	**07 48 19.0**	**-0.2**
	baz=65						
CHMS				⇓*i*S	**Sn**	**07 48 39.0**	**0.0**
	baz=65						
KZA	**Kyzart**	**1.58**	**228**	⇑*e*P	**Pn**	**07 48 20.2**	**-0.1**
	baz=28						
KZA				⇑*i*S	**Sn**	**07 48 41.0**	**+0.3**
	baz=28						
TARG	**Taragay, Kyrgy**	**1.59**	**153**	⇑*i*P	**Pn**	**07 48 20.7**	**+0.4**
	baz=53						
TARG				⇑*i*S	**Sn**	**07 48 41.7**	**+0.9**
	baz=53						
UZB	**Uzynbulak**	**1.60**	**89**	P	**Pb**	**07 48 21.8**	**+0.1**
	0.8nm,0.1s						
UZB				S	**Sb**	**07 48 42.7**	**+0.8**
	4.6nm,0.1s						
UZB	**Uzynbulak**	**1.60**	**89**	*e*P	**Pb**	**07 48 22.1**	**+0.4**
	baz=89						
UZB				*e*S	**Sb**	**07 48 43.2**	**+1.4**
	baz=89						
UZB	**Uzynbulak**	**1.60**	**89**	*e*P	**Pb**	**07 48 22.1**	**+0.4**
	0.8nm,0.1s						
UZB				*e*S	**Sb**	**07 48 43.2**	**+1.4**
	4.6nm,0.1s						
SGDS	**Sogindy**	**1.64**	**281**	P	**Pb**	**07 48 22.1**	**-0.2**
	1.5nm,0.1s						
SGDS				S	**Sb**	**07 48 43.2**	**+0.4**
	2.6nm,0.1s						
USP	**Ospenovka**	**1.71**	**275**	⇓*e*P	**Pn**	**07 48 22.0**	**+0.3**
	baz=75						
USP				⇓*i*S	**Sn**	**07 48 44.2**	**+0.8**
	baz=75						
AAK	**Ala-Archa**	**1.79**	**254**	⇑P	**Pb**	**07 48 25.1**	**+0.2**
	1.4nm,0.9s						
AAK				⇑S	**Sb**	**07 48 48.1**	**+0.8**
	1.7nm,0.5s						
AAK	**Ala-Archa**	**1.79**	**254**	⇓*i*P	**Pn**	**07 48 23.3**	**+0.4**
	baz=54						
AAK				⇓*i*S	**Sn**	**07 48 45.9**	**+0.3**
	baz=54						
NRN	**Naryn**	**1.82**	**200**	⇑*e*P	**Pn**	**07 48 24.0**	**+0.6**
	baz=0.0						
NRN				⇑*i*S	**Sn**	**07 48 47.5**	**+1.1**
	baz=0.0						
UCH	**Uchtor**	**1.94**	**243**	⇑*e*P	**Pn**	**07 48 25.5**	**+0.3**
	baz=42						
UCH				⇑*i*S	**Sn**	**07 48 50.2**	**+0.6**
	baz=42						
PDGK	**Podgornoye**	**1.95**	**84**	⇑Pn	**Pn**	**07 48 25.2**	**+0.2**
	4.6nm,1.0s						
PDGK				⇑Lg	Lg	07 48 52.5	
	4.6nm,1.0s						
PDGK	**Podgornoye**	**1.95**	**84**	⇓*i*P	**Pn**	**07 48 25.8**	**+0.8**
	baz=84						
PDGK				⇓*i*S	**Sn**	**07 48 50.9**	**+1.5**
	baz=84						
ARLS	**Aral**	**2.26**	**236**	⇑*e*P	**Pn**	**07 48 29.8**	**+0.5**
	baz=36						
ARLS				⇑*i*S	**Sn**	**07 48 57.5**	**+0.5**
	baz=36						
EKS2	**Erkin-Say**	**2.30**	**259**	⇓*i*P	**Pn**	**07 48 30.3**	**+0.5**
	baz=59						
EKS2				⇓*i*S	**Sn**	**07 48 58.2**	**+0.3**
	baz=59						
MRKS	**Merke**	**2.68**	**263**	Pg	**Pb**	**07 48 39.8**	**-0.3**
	0.6nm,0.1s						
MRKS				Lg	Lg	07 49 13.6	
	2.2nm,0.2s						
MRKS	**Merke**	**2.68**	**263**	*e*P	**Pb**	**07 48 40.0**	**0.0**
	baz=62						
MRKS				*e*S	**Sb**	**07 49 14.3**	**+1.5**
	baz=62						
MRKS	**Merke**	**2.68**	**263**	*e*P	**Pb**	**07 48 40.0**	**0.0**
	0.6nm,0.1s						
MRKS				*e*S	**Sb**	**07 49 14.3**	**+1.5**
	2.2nm,0.2s						
KAPS	**Kapalarasan**	**2.80**	**39**	Pg	**Pb**	**07 48 41.9**	**-0.3**
	1.0nm,0.4s						
KAPS				Lg	Lg	07 49 17.2	
	2.2nm,0.2s						
KAPS	**Kapalarasan**	**2.80**	**39**	*e*P	**Pb**	**07 48 42.0**	**-0.1**
	1.0nm,0.4s						
KAPS				*e*S	**Sb**	**07 49 17.9**	**+1.6**
	2.2nm,0.2s						

IDC 08 07:50:36.7±2.0**, 10°.86S**×**165°.71E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.6**/34**, mbtmp3.7**/4**, ML3.7**/1**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx3.2**/32**, Error ellipse: s-maj=57.3km s-min=35.7km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.17**	**176**	Pn	Pn	07 53 17.3	-0.6
	0.5nm,0.3s,baz=15,slow=20,SNR=2.8						
RAO	**Raoul Island**	**23.85**	**142**	LR	LR	08 02 52.4	
	comp=Z,951nm,20.7s,baz=180,slow=31						
WRA	**Warramunga Arr**	**31.51**	**250**	P	P	07 57 00.8	+0.1
	1.4nm,0.8s,baz=80,slow=9.6,SNR=6.4						
ASAR	**Alice Springs**	**32.84**	**243**	P	P	07 57 12.3	-0.1
	0.3nm,0.7s,baz=62,slow=9.7,SNR=2.4						
ILAR	**Eielson Array**	**83.35**	**19**	P	P	08 03 05.3	0.0
	0.3nm,0.8s,baz=218,slow=5.7,SNR=2.5						

MEX 08 07:57:16.0±0.6**, 28°.03N**×**112°.30W, h10**^{km}**, MD3.8, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.71**	**176**	*e*P	Pg	07 57 27.8	-2.0
SRIG				*i* S	Sg	07 57 37.8	-1.3
GUYB	**Guaymas**	**1.27**	**96**	*i* P	Pn	07 57 35.7	-4.0
GUYB				*e*S	Sb	07 57 52.2	-4.1
HSIG		**1.54**	**50**	*e*P	Pn	07 57 40.9	-2.7
HSIG				*e*S	Sn	07 57 58.1	-5.5

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*ISCJB **08** 08:03:32.5±2.7, 11°.04S±0°.03×165°.70E±0°.03, h1^{km}±17^{km}, mb5.1/151, MS4.2/12, Error ellipse: s-maj=5.7km s-min=4.5km az=167.6*
*BJI **08** 08:03:32.5, 10°.94S×166°.05E, h8^{km}, mB5.3/30, mb4.8/49, Ms5.2/10, Ms7 4.8/8*
*IDC **08** 08:03:33.6±0.4, 11°.00S×165°.81E, h0^{km}, mb4.7/31, mb1 4.8/33, mb1mx4.7/43, mbtmp4.7/33, ML4.7/2, MS3.9/9, Ms1 3.9/9, ms1mx3.6/33, Error ellipse: s-maj=14.8km s-min=11.8km az=99.0*
*GCMT **08** 08:03:35.6±0.4, 11°.15S±0°.04×165°.89E±0°.03, h18^{km}±1^{km}, MW4.9/64, Moment Tensor Solution. s18,c20; s64,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.71±.21; $M_{\theta\theta}$0.53±.12; $M_{\phi\phi}$2.19±.13; $M_{r\theta}$1.36±.38; $M_{\theta\phi}$-0.75±.09; $M_{\phi r}$-1.37±.29; Best double couple: $M_0$3.22400×10^{16} NP1: ϕ_s326.00000°, δ63.00000°, λ-101.00000°. NP2: ϕ_s169.00000°, δ29.00000°, λ-70.00000°. Principal axes: T 3.0420, Plg18.0000°, Azm64.0000°; N 0.3690, Plg10.0000°, Azm331.0000°; P -3.4060, Plg70.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **08** 08:03:35.6±0.1, 11°.00S×165°.70E, h10^{km}, mb5.2/102 Error ellipse: s-maj=3.5km s-min=2.7km az=118.0*
*MOS **08** 08:03:37.7±0.9, 10°.94S×165°.61E, h33^{km}, mb5.2/33, Error ellipse: s-maj=8.8km s-min=8.3km az=61.6*

ISC 08 08:03:36.0±1.5**, 11°.10S**±0°.05×**165°.75E**±0°.05**, h12**^{km}±8^{km}**, n343,** σ1^{s}18/363**, mb5.1**/151**, MS4.1**/12**, 11C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.95**	**286**	*e*P	**Pn**	**08 05 05.0**	**+1.1**
HNR				*e*S	**Sn**	**08 06 14.0**	**+2.0**
HNR	**Honiara**	**5.95**	**286**	*e*Pn	**Pn**	**08 05 03.9**	**0.0**
HNR				*e*Sn	**Sn**	**08 06 13.4**	**+1.4**
HNR	**Honiara**	**5.95**	**286**	*e*P	**Pn**	**08 05 03.9**	**0.0**
HNR				*e*		08 06 13.4	
HNR	**Honiara**	**5.95**	**286**	Pn	**Pn**	**08 05 05.0**	**+1.1**
	18nm,0.3s,baz=147,slow=2.7,SNR=18						
HNR				Sn	**Sn**	**08 06 13.4**	**+1.4**
	baz=342,slow=16,SNR=1.8						
MARNC	**Mare, Loyalty**	**10.55**	**168**	*e*Pn	**Pn**	**08 06 08.5**	**+1.5**
DZM	**Mont Dzumac**	**10.93**	**177**	*e*Pn	**Pn**	**08 06 13.8**	**+1.4**
	197nm,1.2s						
DZM				*e*LR	LR	08 08 49.2	
	comp=Z,682nm,24.4s						
DZM	**Mont Dzumac**	**10.93**	**177**	*e*Pn	**Pn**	**08 06 13.7**	**+1.4**
DZM				Sn	**Sn**	**08 08 09.1**	**-5.5**
DZM				*e*Sn	Sn	08 08 15.2	+0.6
DZM	**Mont Dzumac**	**10.93**	**177**	Pn	**Pn**	**08 06 13.9**	**+1.6**
	5.7nm,0.3s,baz=0.5,slow=16,SNR=46						
DZM				Sn	**Sn**	**08 08 09.1**	**-5.5**
	baz=210,slow=20,SNR=2.8						
DZM				LR	LR	08 10 15.9	
	comp=Z,657nm,18.3s,baz=12,slow=36						
PINNC	**Pines Island,**	**11.56**	**172**	*e*Pn	**Pn**	**08 06 22.7**	**+1.8**
FUNA	**Funafuti**	**13.50**	**80**	*e*Pn	**Pn**	**08 06 49.1**	**+1.7**
TARA	**Tarawa**	**14.29**	**30**	*e*Pn	**Pn**	**08 06 58.0**	**-0.2**
RABL	**Rabaul**	**15.11**	**296**	*e*P	**P**	**08 07 12.3**	**-2.3**
	60nm,0.9s						
EIDS	**Eidsvold**	**19.86**	**222**	P	**P**	**08 08 08.5**	**+1.6**
	baz=20,SNR=8.1						
EIDS	**Eidsvold**	**19.86**	**222**	*e*P	**Pn**	**08 08 09.2**	**+0.7**
	57nm,1.1s						
MANU	**Manus Island**	**20.34**	**295**	*e*P	**P**	**08 08 12.9**	**+0.5**
	306nm,1.2s						
CTA	**Charters Tower**	**20.78**	**242**	P	**P**	**08 08 18.2**	**+1.2**
	67nm,0.9s,baz=70,slow=13,SNR=31						
CTA				LR	LR	08 15 04.4	
	comp=Z,606nm,21.5s,baz=52,slow=33						
CTAO	**Charters Tower**	**20.78**	**242**	*e*P	**P**	**08 08 18.2**	**+1.2**
	91nm,1.0s						
CTAO	**Charters Tower**	**20.78**	**242**	*e*P	**P**	**08 08 18.3**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,91nm,1.0s						
MTSU	**Mount Surprise**	**21.87**	**249**	P	**P**	**08 08 30.1**	**+1.2**
	baz=22,SNR=33						
RMQ	**Roma**	**22.16**	**224**	P	**P**	**08 08 33.0**	**+1.1**
	baz=22,SNR=7.7						
COEN	**Coen**	**22.22**	**260**	P	**P**	**08 08 32.5**	**-0.1**
	baz=22,SNR=25						
COEN	**Coen**	**22.22**	**260**	*e*P	**P**	**08 08 32.3**	**-0.3**
	comp=Z,100nm,1.1s						
ARMA	**Armidale**	**23.27**	**212**	P	**P**	**08 08 45.1**	**+1.4**
	baz=24,SNR=9.4						
ARMA	**Armidale**	**23.27**	**212**	*e*P	**P**	**08 08 45.0**	**+1.4**
	comp=Z,61nm,1.1s						
OUZ	**Omahuta**	**25.05**	**165**	*e*P	**P**	**08 09 02.3**	**+2.2**
	comp=Z,64nm,1.6s						
QLP	**Quilpie**	**25.46**	**230**	P	**P**	**08 09 04.5**	**+0.5**
	baz=26,SNR=6.8						
QIS	**Mount Isa**	**26.82**	**246**	P	**P**	**08 09 16.7**	**+0.4**
	baz=27,SNR=14						
CMSA	**Cobar Meteorol**	**27.52**	**219**	P	**P**	**08 09 23.0**	**+0.4**
	baz=28,SNR=8.1						
HIZ	**Hauiti**	**28.48**	**165**	*e*P	**P**	**08 09 31.9**	**+0.9**
	comp=Z,64nm,1.2s						
URZ	**Urewera**	**28.89**	**161**	*e*P	**P**	**08 09 35.4**	**+0.8**
	comp=Z,24nm,1.1s						
URZ	**Urewera**	**28.89**	**161**	P	**P**	**08 09 35.3**	**+0.6**
	comp=Z,7.9nm,0.7s,baz=246,slow=2.2,SNR=10						
H11S2	**WAKE ISLAND Hy**	**29.42**	**2**	T	T	08 40 06.8	
	baz=181,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**29.43**	**2**	T	T	08 40 06.5	
	baz=181,slow=76,SNR=23						
H11S1	**WAKE ISLAND Hy**	**29.44**	**2**	T	T	08 40 04.8	
	baz=181,slow=76,SNR=17						
BKZ	**Black Stump Fm**	**29.54**	**163**	*e*P	**P**	**08 09 41.1**	**+0.6**
	comp=Z,21nm,0.8s						
STKA	**Stephens Creek**	**30.40**	**223**	P	**P**	**08 09 48.9**	**+0.7**
	baz=31,SNR=19						
STKA	**Stephens Creek**	**30.40**	**223**	*e*P	**P**	**08 09 49.3**	**+1.1**
	comp=Z,4.7nm,0.9s						
STKA				PcP	**PcP**	**08 12 47.9**	**0.0**
STKA	**Stephens Creek**	**30.40**	**223**	*e*P	**P**	**08 09 49.3**	**+1.1**
STKA						08 12 47.9	
STKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	**Stephens Creek**	**30.40**	**223**	P	**P**	**08 09 48.8**	**+0.7**
	comp=Z,16nm,0.8s,baz=44,slow=8.9,SNR=28						
STKA				PcP	**PcP**	**08 12 47.9**	**0.0**
	comp=Z,4.6nm,1.1s,baz=342,slow=23,SNR=3.5						
STKA				LR	LR	08 21 29.8	
	comp=Z,586nm,18.2s,baz=35,slow=35						
H11N1	**WAKE ISLAND Hy**	**30.64**	**2**	T	T	08 41 41.2	
	baz=182,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**30.65**	**2**	T	T	08 41 31.3	
	baz=182,slow=76,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**30.66**	**2**	T	T	08 41 38.8	
	baz=182,slow=76,SNR=8.8						
BFZ	**Birch Farm**	**30.89**	**164**	*e*P	**P**	**08 09 52.3**	**0.0**
	comp=Z,51nm,1.0s						
THZ	**Tophouse**	**31.18**	**170**	*e*P	**P**	**08 09 55.8**	**+0.8**
	comp=Z,53nm,1.0s						
WC3	**Warramunga Arr**	**31.44**	**250**	*e*P	**P**	**08 09 57.5**	**-0.1**
	comp=Z,65nm,1.0s						
WRAB	**Tennant Creek**	**31.45**	**250**	*e*P	**P**	**08 09 57.2**	**-0.4**
	comp=Z,57nm,0.9s						
WRAB	**Tennant Creek**	**31.45**	**250**	*d i*P	**P**	**08 09 56.6**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,57nm,1.1s						
WB2	**Warramunga Arr**	**31.46**	**250**	*e*P	**P**	**08 09 57.0**	**-0.7**
WB2				*e*PcP	**PcP**	**08 12 51.6**	**+0.6**
WR1	**Warramunga Arr**	**31.47**	**250**	*e*P	**P**	**08 09 57.3**	**-0.5**
	comp=Z,81nm,1.0s						
WR1				*e*PcP	**PcP**	**08 12 51.6**	**+0.7**
WRA	**Warramunga Arr**	**31.47**	**250**	P	**P**	**08 09 57.3**	**-0.5**
	comp=Z,46nm,0.9s,baz=79,slow=9.2,SNR=125						
WRA				PcP	**PcP**	**08 12 51.6**	**+0.7**
	comp=Z,5.1nm,0.8s,baz=78,slow=3.0,SNR=14						
WRA				LR	LR	08 22 18.4	
	comp=Z,455nm,18.1s,baz=65,slow=36						
KHZ	**Kahutara**	**31.93**	**169**	*e*P	**P**	**08 10 02.9**	**+1.5**
	comp=Z,48nm,0.9s						
TOO	**Toolangi**	**32.02**	**211**	P	**P**	**08 10 03.2**	**+0.7**
	baz=32,SNR=6.6						
TOO	**Toolangi**	**32.02**	**211**	*e*P	**P**	**08 10 03.7**	**+1.2**
	comp=Z,14nm,0.8s						
TOO	**Toolangi**	**32.02**	**211**	*e*P	**P**	**08 10 03.7**	**+1.2**
TOO				pmax	pmax		
	comp=Z,14nm,0.8s						
LTZ	**Lake Taylor**	**32.07**	**171**	*e*P	**P**	**08 10 03.7**	**+1.0**
	comp=Z,52nm,1.1s						
FOZ	**Fox Glacier**	**32.50**	**174**	*e*P	**P**	**08 10 07.9**	**+1.4**
	comp=Z,51nm,0.9s						
OXZ	**Oxford**	**32.56**	**171**	*e*P	**P**	**08 10 08.1**	**+1.0**
	comp=Z,31nm,0.7s						
KDU	**Kakadu**	**32.59**	**264**	P	**P**	**08 10 06.2**	**-1.4**
	baz=33,SNR=7.9						
AS01	**Alice Springs**	**32.73**	**243**	*e*P	**P**	**08 10 07.9**	**-0.9**
AS01				*e*PcP	**PcP**	**08 12 54.3**	**-0.1**
AS31	**Alice Springs**	**32.77**	**243**	*e*P	**P**	**08 10 08.3**	**-0.8**
	comp=Z,2.5nm,0.8s						
AS31				*e*PcP	**PcP**	**08 12 54.7**	**+0.2**
ASAR	**Alice Springs**	**32.77**	**243**	P	**P**	**08 10 08.2**	**-1.0**
	comp=Z,7.4nm,0.9s,baz=73,slow=9.5,SNR=57						
ASAR				PcP	**PcP**	**08 12 54.4**	**-0.2**
	comp=Z,6.7nm,0.8s,baz=66,slow=2.7,SNR=20						
ASAR				ScP	**ScP**	**08 16 40.8**	**+2.2**

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          comp=Z,0.5nm,0.8s,baz=60,slow=3.7,SNR=4.2
ASAR                                 LR     LR        08 21 50.0
          comp=Z,394nm,20.6s,baz=66,slow=33
RPZ   Rata Peaks        32.81 173   eP     P         08 10 09.5 +0.3
          comp=Z,45nm,0.8s
RPZ   Rata Peaks        32.81 173    P     P         08 10 09.1 -0.2
          comp=Z,32nm,0.7s,baz=32,slow=2.8,SNR=16
CRLZ  Canterbury Las    32.90 171   eP     P         08 10 11.4 +1.4
          comp=Z,151nm,1.5s
MQZ   McQueen's Vall    33.03 171   eP     P         08 10 11.6 +0.6
          comp=Z,83nm,1.1s
HTT   Hallett           33.14 224    P     P         08 10 13.0 +0.7
          baz=34,SNR=5.5
LBZ   Lake Benmore      33.38 174   eP     P         08 10 14.9 +0.7
          comp=Z,45nm,1.1s
ODZ   Otahua Downs      34.08 174   eP     P         08 10 21.5 +1.2
          comp=Z,41nm,1.4s
RAR   Rarotonga         34.53 111    LR    LR        08 21 37.2
          comp=Z,216nm,22.0s,baz=280,slow=31
BBOO  Buckleboo         34.79 227    P     P         08 10 26.7  0.0
          baz=35,SNR=6.2
BBOO  Buckleboo         34.79 227   eP     P         08 10 26.6 -0.1
          comp=Z,42nm,1.1s
KNRA  Kununurra         36.23 259    P     P         08 10 38.7 -0.5
          baz=36,SNR=4.5
WRKA  Warakurna         38.06 243    P     P         08 10 54.2 -0.5
          baz=38,SNR=7.2
FITZ  Fitzroy Crossi    39.37 255    P     P         08 11 05.1 -0.6
          baz=40,SNR=20
FITZ  Fitzroy Crossi    39.37 255   eP     P         08 11 05.3 -0.4
          comp=Z,18nm,0.8s
TNTI  Ternate           39.94 285   eP     P         08 11 09.0 -1.4
          comp=Z,70nm,1.0s
FORT  Forrest           40.01 235   eP     P         08 11 10.4 -0.5
          comp=Z,25nm,0.8s
SANI  Sanana            40.46 280    P     P         08 11 15.0 +0.2
          comp=Z,21nm,1.4s
BATI  Baumata           41.35 267    P     P         08 11 22.5 +0.3
          comp=Z,14nm,0.4s,baz=254,slow=2.3,SNR=3.6
PPT   Papeete           43.68 104   eP     P         08 11 42.0 +0.9
PPT   Papeete           43.68 104   eP     P         08 11 42.0 +0.9
PPT   Papeete           43.68 104    LR    LR        08 25 59.6
          comp=Z,145nm,18.7s,baz=264,slow=31
PPT2  Papeete2          43.68 104   eS     S         08 18 20.6 +9.4
          comp=Z,82nm,22.5s
PPT2                                eLR    LR        08 23 58.7
          comp=Z,478nm,29.0s
MBWA  Marble Bar        45.18 251   eP     P         08 11 53.3 +0.3
          comp=Z,48nm,1.0s
BNSI  Bone              45.67 275    P     P         08 11 57.7 +0.7
          comp=Z,44nm,1.0s
SPSI  Sidrap Palu       46.09 275    P     P         08 12 00.3  0.0
          comp=Z,12nm,1.0s
MEEK  Meekatharra       46.93 244    P     P         08 12 06.2 -0.6
          baz=47,SNR=5.2
PLAI  Plampang          47.27 268    P     P         08 12 09.7 +0.1
          comp=Z,42nm,0.9s,comp=Z,591nm
KLBR  Kellerberrin      48.68 238    P     P         08 12 19.6 -0.8
          baz=49,SNR=6.8
HMH   Humu'ula Sheep    48.88  52   eP     P         08 12 22.5 +0.2
          comp=Z,191nm,1.2s
NWAO  Narrogin (SRO)    49.43 236    P     P         08 12 25.9 -0.1
          baz=50,SNR=4.5
NWAO  Narrogin (SRO)    49.43 236    P     P         08 12 26.3 +0.2
          comp=Z,17nm,0.9s,baz=307,slow=4.9,SNR=6.4
MORW  Morawa            49.60 241    P     P         08 12 26.8 -0.6
          baz=50,SNR=3.8
MORW  Morawa            49.60 241   eP     P         08 12 28.0 +0.6
          comp=Z,29nm,1.1s
MUN   Mundaring         50.05 238    P     P         08 12 31.9 +1.1
          baz=50,SNR=5.1
KKM   Kota Kinabalu     52.16 287    P     P         08 12 47.1 +0.1
JOW   Kunigami          52.40 317   eP     P         08 12 49.9 +1.4
          comp=Z,130nm,1.7s
TAOE  Nuku Hiva Isla    53.27  93   eS     S         08 20 35.2 +8.3
          comp=Z,121nm,25.5s
TAOE                                eLR    LR        08 28 07.3
          comp=Z,231nm,30.9s
PCJI  Pacitan           53.82 268    P     P         08 12 59.5 +0.4
          comp=Z,164nm,1.1s
MJAR  Matsushiro Arr    54.02 333    P     P         08 12 58.8 -1.4
          comp=Z,3.4nm,0.7s,baz=174,slow=9.4,SNR=5.0
MAJO  Matsushiro        54.02 333   eP     P         08 12 58.8 -1.4
MAJO  Matsushiro        54.02 333   eP     P         08 12 58.8 -1.4
SBUM  Sibu              54.92 281    P     P         08 13 07.6 +0.5
JNU   Nakatsue          55.13 324   eP     P         08 13 07.3 -1.1
          comp=Z,81nm,1.7s
JNU   Nakatsue          55.13 324    P     P         08 13 07.5 -0.8
          comp=Z,8.1nm,0.8s,baz=123,slow=13,SNR=3.1
CISI  Cisompet, Garu    57.21 268   eP     P         08 13 22.5 -1.1
          comp=Z,87nm,1.4s
CISI  Cisompet, Garu    57.21 268    P     P         08 13 23.6  0.0
          comp=Z,47nm,1.0s,comp=Z,6µm
LEM   Lembang           57.51 269    P     P         08 13 25.2 -0.6
          comp=Z,44nm,0.8s,baz=82,slow=5.9,SNR=7.6
LEM                                  LR    LR        08 39 41.6
          comp=Z,54nm,19.4s,baz=118,slow=38
KSRS  Korea Array       59.93 326    P     P         08 13 41.8 -0.2
          comp=Z,1.6nm,0.8s,baz=220,slow=29,SNR=5.0
KS15  Wonju Array Si    59.94 326   eP     P         08 13 41.5 -0.6
KSAR  Wonju Array Be    59.94 326    P     P         08 13 41.8 -0.3
KSAR  Wonju Array Be    59.94 326    P     P         08 13 41.8 -0.3
MDSI  Maura Dua         61.27 271    P     P         08 13 51.5 -0.2
          comp=Z,16nm,1.4s
YSS   Yuzh-Sakhalins    61.34 342   eP     P         08 13 49.1 -2.4
YSS                                 e                08 13 57.1
YSS                                 e                08 21 57.6
YSS                                  pmax  pmax
          comp=Z,10.0nm,0.8s
NJ2   Nanjing           62.06 315   eP     P         08 13 56.4 -0.3
NJ2                                  pmax  pmax
          comp=Z,6.0nm,0.5s
MYKOM Kota Tinggi       62.86 278    P     P         08 14 02.8 +0.4
USA0B Ussuriysk Arra    63.00 333   eP     P         08 14 02.4 -0.3
          comp=Z,23nm,1.1s
USRK  Ussuriysk Ar.     63.00 333    P     P         08 14 01.6 -1.0
          comp=Z,2.3nm,0.8s,baz=255,slow=3.7,SNR=4.3
KGM   Kluang            63.43 278    P     P         08 14 07.5 +1.3
PETK  Petropavlovsk-    64.33 355   eP     P         08 14 11.2  0.0
PETK  Petropavlovsk-    64.33 355   eP     P         08 14 11.2  0.0
PETK  Petropavlovsk-    64.33 355    P     P         08 14 11.4 +0.2
          comp=Z,4.7nm,0.9s,baz=148,slow=8.6,SNR=5.4
PEA1  Petropavlovsk-    64.33 355   eP     P         08 14 11.4 +0.2
MDJ   Mudanjiang        64.40 332    P     P         08 14 11.4 -0.5
MDJ                                  pmax  pmax
          comp=Z,11nm,1.0s
MDJ                                  pmax  pmax
          comp=Z,470nm,4.3s
KTGM  Kuala Trenggan    64.41 281    P     P         08 14 13.7 +1.1
WHN   Wuhan             64.43 312    P     P         08 14 27.4  +15
FRIM  Kepong            65.36 279    P     P         08 14 19.0 +0.1
CN2   Changchun         65.79 329   eP     P         08 14 20.7 -0.3
CN2                                  pmax  pmax
          comp=Z,10.0nm,0.9s
IPM   Ipoh              66.24 280    P     P         08 14 24.8 +0.3
CASY  Casey             66.33 201   eP     P         08 14 24.3 +0.2
          comp=Z,42nm,1.3s
VNDA  Vanda             66.44 181   eP     P         08 14 26.6 +2.0
          comp=Z,70nm,1.9s
VNDA  Vanda             66.44 181   eP     P         08 14 26.6 +2.0
VNDA                                 pmax  pmax
          comp=Z,70nm,1.9s
VNDA  Vanda             66.44 181    P     P         08 14 26.0 +1.4
          comp=Z,5.2nm,1.1s,baz=0.0,slow=10,SNR=2.4
GRNR  Gornyy            66.70 340   eP     P         08 14 27.4 +0.7
KULM  Kulim             66.80 281    P     P         08 14 28.1  0.0
MNSI  Mandailing Nat    66.80 276    P     P         08 14 27.6 -0.5
          comp=Z,71nm,0.9s,comp=Z,3µm
KLR   Kul'dur           67.11 337⇑eP     P         08 14 27.8 -1.5
SKNT  Sakolnakorn       67.12 294    P     P         08 14 30.7 +0.7
          comp=Z,7.5nm,1.5s
NKL   Nikolayevsk       67.50 344   eP     P         08 14 30.7 -0.9
NKL                                  pmax  pmax
          comp=Z,21nm,1.0s
PSI   Prapat            67.88 278   eP     P         08 14 33.6 -1.5
          comp=Z,31nm,1.1s
PSI   Prapat            67.88 278   eP     P         08 14 33.6 -1.5
PSI                                  pmax  pmax
          comp=Z,31nm,1.1s
PSI   Prapat            67.88 278    P     P         08 14 34.1 -1.0
          comp=Z,19nm,1.0s,baz=178,slow=3.1,SNR=15
NONG  Nongkai           68.24 295    P     P         08 14 38.0 +0.9
          comp=Z,0.3nm,1.1s,comp=Z,71nm
GYA   Guiyang           68.45 304⇑iP     P         08 14 40.0 +1.6
GYA                                  PP    PP        08 17 13.4 +3.7
GYA                                  S     S         08 23 40.8 +0.4
GYA                                  SKS   SKiKP     08 24 35.3 +2.7
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GYA                                  SS    SS        08 28 06.0 +1.5
GYA                                  pmax  pmax
          comp=Z,30nm,1.0s
GYA                                  pmax  pmax
          comp=Z,140nm,7.6s
GYA                                  LR    LR
          comp=Z,560nm,18.0s
GYA                                  LR    LR
          comp=Z,580nm,18.4s
GYA                                  LR    LR
          comp=Z,540nm,18.2s
BJT   Baijiatuau        68.52 321   eP     P         08 14 38.0 -0.4
          comp=Z,6.9nm,0.8s
BJT   Baijiatuau        68.52 321   eP     P         08 14 38.0 -0.4
BJT                                  pmax  pmax
          comp=Z,7.0nm,0.8s
BJI   Beijing           68.53 321   eP     P         08 14 38.0 -0.4
BJI                                  pmax  pmax
          comp=Z,5.0nm,1.3s
GSI   Gunungsitoli      68.87 276   eP     P         08 14 40.1 -1.0
          comp=Z,56nm,0.8s
KCSI  Kotacane, Aceh    69.17 278    P     P         08 14 51.0 +8.0
PBKT  Sadao Pong        69.71 292    P     P         08 14 47.6 +1.4
          comp=Z,7.5nm,1.1s
XAN   Xi'an             70.16 312    P     P         08 14 48.6 -0.2
XAN                                  pP    sP        08 14 54.3 +1.5
XAN                                  pmax  pmax
          comp=Z,8.0nm,1.2s
UTHA  Uthaitani         70.78 291    P     P         08 14 54.7 +1.9
          comp=Z,3.1nm,1.1s
KMI   Kunming           71.16 301    P     P         08 14 53.5 -1.7
KMI                                  pP    sP        08 14 59.7 +0.5
KMI                                  sP    pP        08 15 03.6 +5.4
KMI                                  pmax  pmax
          comp=Z,11nm,1.1s
KMI                                  pmax  pmax
          comp=Z,240nm,6.2s
MA2   Magadan           71.47 352⇑eP     P         08 14 54.8 -1.3
MA2                                  pmax  pmax
          comp=Z,8.0nm,1.7s
MA2   Magadan           71.47 352    P     P         08 14 54.5 -1.6
          comp=Z,1.4nm,0.3s,baz=143,slow=20,SNR=3.5
HHC   Hu-ho-hao-te      71.88 320   eP     P         08 15 00.0 +0.9
HHC                                  pmax  pmax
          comp=Z,13nm,1.2s
HHC                                  pmax  pmax
          comp=Z,320nm,6.9s
CM31  Chiang Mai Arr    72.14 294   eP     P         08 15 01.6 +0.6
CMAR  Chiang Mai Arr    72.14 294    P     P         08 15 01.7 +0.7
          comp=Z,1.6nm,0.3s,baz=100,slow=3.9,SNR=24
CMMT  Chiang Mai        72.25 294    P     P         08 15 02.5 +0.8
CHTO  Chiang Mai        72.25 294    P     P         08 15 02.6 +0.9
          comp=Z,42nm,1.3s
ZEA   Zeya              72.40 337   eP     P         08 15 00.5 -1.3
ZEA                                  pmax  pmax
          comp=Z,15nm,0.8s
HIA   Hailar            72.42 330⇑iP     P         08 15 01.4 -0.7
HIA                                  pmax  pmax
          comp=Z,7.0nm,1.1s
CD2   Chengdu           72.64 307 ⇑P     P         08 15 03.9 +0.1
CD2                                  pmax  pmax
          comp=Z,30nm,1.3s
CD2                                  pmax  pmax
          comp=Z,140nm,5.0s
SEY   Seymchan          74.53 354⇓eP     P         08 15 13.3 -0.8
SEY   Seymchan          74.53 354    P     P         08 15 12.7 -1.5
          comp=Z,3.1nm,0.9s,baz=140,slow=5.3,SNR=9.3
LZH   Lanzhou           74.80 312   eP     P         08 15 17.6 +1.1
LZH                                  pP    sP        08 15 23.8 +3.2
LZH                                  sP    PcP       08 15 27.4 -3.2
LZH                                  PP    PP        08 18 05.4 +1.3
LZH                                  pmax  pmax
          comp=Z,23nm,1.1s
LZH                                  pmax  pmax
          comp=Z,91nm,4.3s
LZH                                  LR    LR
          comp=Z,770nm,17.4s
LZH                                  LR    LR
          comp=Z,750nm,17.3s
LZH                                  LR    LR
          comp=Z,830nm,18.6s
GAMB  Gambell           76.63  10   eP     P         08 15 26.2 +0.1
          comp=Z,26nm,0.9s
SVW2  Sparrevohn        78.17  18   eP     P         08 15 35.0 +0.1
          comp=Z,28nm,1.1s
ULN   Ulaanbaatar       78.35 324   eP     P         08 15 35.6 -0.8
          comp=Z,7.5nm,0.9s
ULN   Ulaanbaatar       78.35 324d iP     P         08 15 36.0 -0.4
ULN                                  pmax  pmax
          comp=Z,11nm,1.3s
ANM   Nome              78.55  12   eP     P         08 15 37.3 +0.4
          comp=Z,22nm,1.3s
ANM   Nome              78.55  12   eP     P         08 15 37.3 +0.4
ANM                                  pmax  pmax
          comp=Z,22nm,1.3s
BRLK  Bradley Lake      78.69  21   eP     P         08 15 37.3 -0.5
          comp=Z,38nm,1.2s
SONA0 Songino Array     78.72 324   eP     P         08 15 38.1 -0.2
SONM  Songino Array     78.72 324    P     P         08 15 38.1 -0.2
          comp=Z,2.7nm,0.9s,baz=136,slow=5.3,SNR=9.1
QSPA  South Pole Qui    78.90 180   eP     P         08 15 39.2 +0.1
          comp=Z,9.9nm,1.0s
QSPA  South Pole Qui    78.90 180    P     P         08 15 39.0 -0.2
          comp=Z,6.6nm,1.0s,baz=14,slow=3.2,SNR=9.9
BILL  Bilibino          78.94   0   eP     P         08 15 39.0  0.0
          comp=Z,27nm,0.9s
BILL  Bilibino          78.94   0deP     P         08 15 38.3 -0.7
BILL                                 pmax  pmax
          comp=Z,20nm,0.8s
GTA   Gaotai            79.10 314 ⇑P     P         08 15 41.5 +0.8
GTA                                  pP    PcP       08 15 47.8 -1.3
GTA                                  sP    sP        08 15 50.9 +6.2
GTA                                  S     S         08 25 40.0 -0.1
GTA                                  sS    sS        08 25 49.2 +4.2
GTA                                  SKS   SKSac     08 25 53.3 -3.4
GTA                                  SS    SS        08 30 48.6 +2.1
GTA                                  pmax  pmax
          comp=Z,10.0nm,1.3s
GTA                                  pmax  pmax
          comp=Z,130nm,6.8s
GTA                                  LR    LR
          comp=Z,180nm,16.2s
GTA                                  LR    LR
          comp=Z,240nm,19.4s
PMR   Palmer            80.61  20   eP     P         08 15 47.7 -0.4
          comp=Z,48nm,1.5s
PMR   Palmer            80.61  20   eP     P         08 15 47.7 -0.4
PMR                                  pmax  pmax
          comp=Z,48nm,1.5s
CAST  Castle Rocks      81.00  18   eP     P         08 15 49.1 -1.1
          comp=Z,12nm,0.7s
DIV   Divide            81.46  22   eP     P         08 15 53.3 +0.5
          comp=Z,38nm,1.1s
TRF   Thorofare Moun    81.57  18   eP     P         08 15 52.6 -0.9
          comp=Z,26nm,1.3s
ZAK   Zakamensk         81.75 325   eP     P         08 15 53.3 -1.3
ZAK                                  pmax  pmax
          comp=Z,6.0nm,1.1s
BPAW  Bear Paw Mtn.     81.84  18   eP     P         08 15 54.5 -0.1
          comp=Z,11nm,1.4s
RND   Reindeer          81.99  19   eP     P         08 15 55.0 -0.6
          comp=Z,22nm,1.1s
RND   Reindeer          81.99  19   eP     P         08 15 55.0 -0.6
RND                                  pmax  pmax
          comp=Z,22nm,1.1s
RDOG  Red Dog Mine      82.08  11   eP     P         08 15 54.8 -1.1
          comp=Z,27nm,1.0s
TLY   Talaya            82.17 326deP     P         08 15 55.9 -0.8
MCK   McKinley          82.20  19   eP     P         08 15 56.9 +0.3
          comp=Z,38nm,1.1s
MCK   McKinley          82.20  19   eP     P         08 15 56.9 +0.3
MCK                                  pmax  pmax
          comp=Z,38nm,1.1s
DHY   Denali Highway    82.24  20   eP     P         08 15 57.5 +0.5
          comp=Z,13nm,1.1s
IM3   Indian Mountai    82.48  16   eP     P         08 15 57.7 -0.3
HARP  HAARP             82.53  21   eP     P         08 15 58.5 +0.2
          comp=Z,268nm,1.9s
MLY   Manley            82.59  17   eP     P         08 15 59.0 +0.3
          comp=Z,25nm,1.4s
KHMM  Horse Mountain    82.91  46   eP     P         08 16 02.3 +1.3
          comp=Z,68nm,1.6s
WRH   Wood River Hil    82.98  18   eP     P         08 15 59.7 -0.9
          comp=Z,24nm,0.9s
MDM   Murphy Dome       83.28  18   eP     P         08 16 01.6 -0.6
          comp=Z,26nm,0.9s
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HDA   Harding Lake      83.30  19   eP     P         08 16 01.8 -0.4
          comp=Z,44nm,0.8s
HDA   Harding Lake      83.30  19    P     P         08 16 01.4 -0.9
          baz=227
TCOL  CIGO, UAF Yank    83.34  18    P     P         08 16 01.4 -1.0
          baz=226
COLA  College           83.34  18   eP     P         08 16 02.5 +0.1
          comp=Z,36nm,0.8s
COLA  College           83.34  18c iP     P         08 16 01.0 -1.4
COLA                                 pmax  pmax
          comp=Z,16nm,0.9s
RIDG  Independ'e Rid    83.53  20   eP     P         08 16 03.3 -0.2
          comp=Z,40nm,1.4s
IL1   Eielson Array     83.57  18   eP     P         08 16 03.0 -0.6
ILAR  Eielson Array     83.57  18    P     P         08 16 02.8 -0.8
          comp=Z,4.7nm,0.8s,baz=233,slow=5.3,SNR=58
ILB   Eielson Array     83.57  18   eP     P         08 16 03.2 -0.5
POKR  Poker Plat Res    83.64  18    P     P         08 16 02.6 -1.4
          baz=226
DOT   Dot Lake          83.73  20   eP     P         08 16 04.6 +0.1
          comp=Z,27nm,1.0s
YBH   Yreka Blue Hor    83.93  46   eP     P         08 16 06.6 +0.4
          comp=Z,31nm,1.6s
YBH   Yreka Blue Hor    83.93  46   eP     P         08 16 06.6 +0.4
YBH                                  pmax  pmax
          comp=Z,31nm,1.6s
SCRK  Sand Creek        83.97  20   eP     P         08 16 05.7 -0.1
          comp=Z,34nm,1.1s
HUMO  Hull Mountain     84.07  45   eP     P         08 16 07.0 +0.2
O03E  Paynes Creek      84.08  47    P     P         08 16 06.6 -0.3
          baz=250
AFDM  Forest Hills D    84.24  49   eP     P         08 16 07.6 -0.1
          comp=Z,15nm,1.0s
CMB   Columbia Colle    84.38  50   eP     P         08 16 07.8 -0.6
          comp=Z,6.4nm,0.9s
CMB   Columbia Colle    84.38  50   eP     P         08 16 07.9 -0.6
CMB                                  pmax  pmax
          comp=Z,6.0nm,0.9s
HYT   Haines Junctio    84.44  24   eP     P         08 16 08.2 -0.1
          comp=Z,15nm,1.2s
PRP   Porcupine Dome    84.50  18   eP     P         08 16 08.4 -0.1
          comp=Z,23nm,1.7s
MAW   Mawson            84.67 202   eP     P         08 16 08.1 -1.2
          comp=Z,29nm,1.3s
MAW   Mawson            84.67 202   eP     P         08 16 08.1 -1.2
MAW                                  pmax  pmax
          comp=Z,29nm,1.3s
MAW   Mawson            84.67 202    P     P         08 16 08.0 -1.3
          comp=Z,68nm,1.1s,baz=234,slow=14,SNR=3.2
BEKR  Beckworth         84.98  48   eP     P         08 16 11.4 -0.2
          comp=Z,12nm,1.1s
ISA   Isabella, Lake    85.11  52    P     P         08 16 11.1 -1.1
          baz=253
KNGR  Kungurtug, Tuv    85.15 324⇑iP     P         08 16 11.3 -0.9
WAKR  Walker            85.23  49   eP     P         08 16 13.2 +0.3
          comp=Z,19nm,1.3s
MDPB  Devils Postpil    85.23  50   eP     P         08 16 12.8 -0.2
          comp=Z,15nm,0.9s
PNTR  Pine Nut          85.29  49   eP     P         08 16 13.1 -0.2
          comp=Z,21nm,1.3s
VCNR  Virginia City     85.32  49   eP     P         08 16 13.4  0.0
          comp=Z,30nm,1.8s
J05D  Fort Rock, OR     85.49  44    P     P         08 16 14.3 +0.2
          baz=250
DAWY  Dawson            85.61  21   eP     P         08 16 14.2 +0.2
          comp=Z,11nm,0.9s
CWC   Cottonwood Cre    85.64  52    P     P         08 16 15.0  0.0
          baz=253
PAHR  Pah Rah Range     85.64  48   eP     P         08 16 14.9  0.0
          comp=Z,21nm,1.4s
PINE  Pine Mountain     85.86  44   eP     P         08 16 16.2 +0.2
          comp=Z,13nm,0.9s
MPMC  Manual Prospec    85.98  52    P     P         08 16 16.6 -0.2
          baz=253
NV01  Mina Array Sit    86.06  50   eP     P         08 16 16.3 -0.8
NVAR  Mina Array Bea    86.06  50    P     P         08 16 16.7 -0.4
          comp=Z,3.4nm,1.0s,baz=234,slow=8.7,SNR=10
PFO   Pinyon Flats O    86.11  55   eP     P         08 16 15.9 -1.5
          comp=Z,10nm,1.3s
PFO   Pinyon Flats O    86.11  55   eP     P         08 16 15.9 -1.5
PFO                                  pmax  pmax
          comp=Z,10.0nm,1.3s
TIXI  Tiksi             86.15 349⇑iP     P         08 16 15.4 -1.1
TIXI                                 pmax  pmax
          comp=Z,12nm,1.7s
TIXI  Tiksi             86.15 349    P     P         08 16 14.9 -1.5
          comp=Z,2.0nm,0.6s,baz=119,slow=7.7,SNR=6.4
NV11  Mina Array Sit    86.17  50   eP     P         08 16 17.0 -0.6
          comp=Z,1.0nm,1.1s
PALK  Pallekele         86.56 278    P     P         08 16 20.3 +0.5
          comp=Z,7.2nm,0.9s,baz=114,slow=5.5,SNR=3.6
BELC  Belle Mtn. Jos    86.59  55    P     P         08 16 19.5 -0.2
          baz=254
I07A  Izee              86.94  44   eP     P         08 16 20.3 -0.9
          comp=Z,11nm,1.1s
WVOR  Wild Horse Val    87.02  46   eP     P         08 16 21.6  0.0
          comp=Z,20nm,1.4s
WVOR  Wild Horse Val    87.02  46   eP     P         08 16 21.6  0.0
WVOR                                 pmax  pmax
          comp=Z,20nm,1.4s
GMRC  Granite Mounta    87.07  54    P     P         08 16 21.9 -0.1
          baz=254
TPNV  Topopah Spring    87.19  52   eP     P         08 16 22.2 -0.4
          comp=Z,4.4nm,0.9s
TPNV  Topopah Spring    87.19  52   eP     P         08 16 22.2 -0.4
TPNV                                 pmax  pmax
          comp=Z,4.0nm,0.9s
TPNV  Topopah Spring    87.19  52    P     P         08 16 22.1 -0.6
          baz=254
IRM   Iron Mountain     87.31  55    P     P         08 16 22.8 -0.3
          baz=255
J08A  Circle Bar Ran    87.42  45   eP     P         08 16 23.7 +0.2
          comp=Z,9.4nm,1.0s
EPYK  Eagle Plains      87.86  20    P     P         08 16 24.3 -0.7
          baz=236
R11A  Troy Canyon, C    88.08  50    P     P         08 16 26.1 -0.8
          baz=254
PDMCI Parker Dam,Lak    88.15  55    P     P         08 16 27.0 -0.1
          baz=255
214A  Organ Pipe Nat    88.66  57    P     P         08 16 29.9 +0.4
          baz=256
WMQ   Urumqi            89.14 315    P     P         08 16 31.2 -0.4
WMQ                                  pP    sP        08 16 36.5 +0.9
WMQ                                  pmax  pmax
          comp=Z,21nm,1.3s
WMQ                                  pmax  pmax
          comp=Z,240nm,4.3s
WMQ                                  LR    LR
          comp=Z,320nm,19.3s
WMQ                                  LR    LR
          comp=Z,430nm,19.9s
WMQ                                  LR    LR
          comp=Z,420nm,22.5s
KNB   Kanab             89.86  52   eP     P         08 16 35.9 +0.6
          comp=Z,14nm,1.2s
INK   Inuvik            89.95  19   eP     P         08 16 35.0 +0.3
          comp=Z,6.9nm,1.3s
INK   Inuvik            89.95  19   eP     P         08 16 35.0 +0.3
INK                                  pmax  pmax
          comp=Z,7.0nm,1.3s
U15A  North Rim         90.14  53   eP     P         08 16 37.5 +0.8
          comp=Z,11nm,0.8s
HLID  Hailey            90.31  46    P     P         08 16 37.0 -0.3
          baz=255
X16A  Lo Mia Camp, P    90.35  55   eP     P         08 16 38.1 +0.5
          comp=Z,5.9nm,0.8s
PKCU  Pink Cliffs       90.36  52   eP     P         08 16 37.2 -0.6
          comp=Z,12nm,1.0s
TUC   Tucson            90.41  57   eP     P         08 16 38.8 +1.0
          comp=Z,3.9nm,0.9s
TUC   Tucson            90.41  57    P     P         08 16 38.0 +0.2
          baz=257
MTPU  Mount Pierson     90.60  51   eP     P         08 16 40.1 +1.2
          comp=Z,9.9nm,0.9s
DUG   Dugway, Tooele    90.63  49   eP     P         08 16 38.4 -0.3
          comp=Z,6.3nm,1.1s
DUG   Dugway, Tooele    90.63  49   eP     P         08 16 38.4 -0.3
DUG                                  pmax  pmax
          comp=Z,6.0nm,1.1s
DUG   Dugway, Tooele    90.63  49    P     P         08 16 38.6 -0.2
          baz=256
BGU   Big Grassy Mou    90.65  48   eP     P         08 16 39.3 +0.5
          comp=Z,5.8nm,1.0s
DGZ   Jazzator, Alta    90.94 321c iP     P         08 16 39.1 -0.9
DGZ                                  pmax  pmax
          comp=Z,3.0nm,1.0s
HVU   Hansel Valley     91.04  48   eP     P         08 16 40.9 +0.2
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	comp=Z,11nm,1.0s						
HVU	Hansel Valley	91.04	48	eP	P	08 16 40.9	+0.2
HVU				pmax	pmax		
	comp=Z,11nm,1.0s						
MPU	Maple Canyon	91.47	50	eP	P	08 16 42.5	-0.2
	comp=Z,6.2nm,1.1s						
LRM	Limekiln Ridge	92.23	44	eP	P	08 16 46.0	-0.2
FXWY	Fox Creek	92.72	46	eP	P	08 16 47.5	-1.0
	comp=Z,2.6nm,0.8s						
BOZ	Bozeman (W)	92.74	44	eP	P	08 16 48.4	0.0
	comp=Z,10.0nm,1.3s						
BOZ	Bozeman (W)	92.74	44	eP	P	08 16 48.4	0.0
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BOZ	Bozeman (W)	92.74	44	P	P	08 16 48.3	-0.1
	baz=257						
MK01	Makanchi Array	93.56	317	eP	P	08 16 51.6	-0.4
MK31	Makanchi Array	93.57	317	eP	P	08 16 51.7	-0.4
MK32	Makanchi Array	93.57	317	eP	P	08 16 51.5	-0.5
MKAR	Makanchi Array	93.57	317	eP	P	08 16 51.6	-0.5
	comp=Z,32nm,0.8s						
MKAR				PKKPbc	PKKPdf	08 33 56.7	-1.7
MKAR	Makanchi Array	93.57	317	P	P	08 16 51.5	-0.5
	comp=Z,3.6nm,0.9s,baz=100,slow=6.7,SNR=30						
MKAR				PKKPbc	PKKPdf	08 33 56.7	-1.7
	comp=Z,0.7nm,0.7s,baz=279,slow=2.3,SNR=10						
PD31	Pinedale Array	93.59	47	eP	P	08 16 50.6	-1.9
PDAR	Pinedale Array	93.59	47	eP	P	08 16 52.4	-0.1
PDAR	Pinedale Array	93.59	47	P	P	08 16 50.4	-2.1
	comp=Z,0.5nm,0.9s,baz=278,slow=2.2,SNR=3.9						
ZALV	Zalesovo Beam	93.61	324	P	P	08 16 50.4	-1.6
	comp=Z,2.0nm,0.9s,baz=108,slow=4.8,SNR=10						
ZAA1	Zalesovo Array	93.61	324	eP	P	08 16 50.4	-1.6
MAKZ	Makanchi	93.78	317	eP	P	08 16 52.6	-0.4
	comp=Z,11nm,1.1s						
MAKZ	Makanchi	93.78	317	eP	P	08 16 52.6	-0.4
MAKZ				pmax	pmax		
	comp=Z,11nm,1.1s						
ANMO	Albuquerque	94.48	55⇓	eP	P	08 16 53.9	-2.8
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
NVS	Novosibirsk	94.71	325	eP	P	08 16 55.5	-1.5
YKA	Yellowknife Ar	95.02	27	P	P	08 16 55.9	-2.3
	comp=Z,0.5nm,0.7s,baz=254,slow=4.6,SNR=3.8						
YKA				PKiKP	PKiKP	08 21 40.3	+0.5
	comp=Z,0.2nm,0.9s,baz=261,slow=3.1,SNR=3.8						
YKA				LR	LR	08 54 33.7	
	comp=Z,9.0nm,18.7s,baz=268,slow=32						
YKB5	Yellowknife Ar	95.02	27	eP	P	08 16 55.8	-2.5
LTX	Lajitas	95.85	61	eP	P	08 17 02.2	-0.8
LTX	Lajitas	95.85	61	eP	P	08 17 02.2	-0.8
TXAR	Lajitas Array	95.85	61	P	P	08 17 02.2	-0.8
	comp=Z,0.3nm,0.6s,baz=227,slow=3.6,SNR=2.7						
TXAR				PKKPbc	PKKPbc	08 33 53.2	+0.5
	comp=Z,0.2nm,0.5s,baz=81,slow=5.7,SNR=2.5						
KURK	Kurchatov	96.69	320	PKKPbc	PKKPbc	08 33 54.8	+3.7
KURK	Kurchatov	96.69	320⇑	eP	P	08 17 03.7	-2.4
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KURBB	Kurchatov Arra	96.73	320	PKKP		08 33 49.4	
	comp=Z,0.5nm,0.8s,baz=279,slow=2.8,SNR=3.4						
KURBB				PKKPbc	PKKPbc	08 33 54.8	+3.8
	comp=Z,0.9nm,0.8s,baz=269,slow=3.2,SNR=7.3						
KSH	Kashi	96.79	309	P	P	08 17 05.6	-1.5
KSH				pP	sP	08 17 15.4	+4.2
KSH				PP	PP	08 21 05.4	+3.1
KSH				S	S	08 28 24.3	-4.8
KSH				SS	SS	08 35 06.5	+1.9
KSH				pmax	pmax		
	comp=Z,140nm,5.7s						
KSH				LR	LR		
	comp=Z,240nm,6.1s						
ARCES	ARCESS Array B	116.39	345	ePKPdf	PKiKP	08 22 18.5	-0.6
ARCES	ARCESS Array B	116.39	345	ePKIKP	PKiKP	08 22 18.5	-0.6
ARCES	ARCESS Array B	116.39	345	PKP	PKiKP	08 22 17.2	-1.8
	comp=Z,1.3nm,0.7s,baz=60,slow=7.3,SNR=4.1						
ARE0	ARCESS Array S	116.39	345	ePKPdf	PKPdf	08 22 19.1	+0.1
TRQ	Mont Tremblant	118.38	43	ePKPdf	PKiKP	08 22 23.8	+0.1
OBN	Obninsk	120.86	329⇓	iPKIKP	PKPdf	08 22 26.7	-1.3
OBN				i		08 22 38.0	
OBN				i		08 23 53.4	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CPUP	Villa Florida	123.98	132	ePKPdf	PKiKP	08 22 35.2	0.0
CPUP	Villa Florida	123.98	132	ePKIKP	PKiKP	08 22 35.2	0.0
CPUP	Villa Florida	123.98	132	PKP	PKPdf	08 22 34.3	-0.6
	comp=Z,0.9nm,0.7s,baz=329,slow=3.5,SNR=4.2						
SDV	Santo Domingo	124.50	87	ePKPdf	PKPdf	08 22 35.7	-0.8
BOSA	Boshof	125.08	223	ePKPdf	PKPdf	08 22 37.3	+0.1
BOSA	Boshof	125.08	223	ePKIKP	PKPdf	08 22 37.3	+0.1
BOSA	Boshof	125.08	223	PKP	PKPdf	08 22 37.5	+0.4
	comp=Z,4.6nm,0.7s,baz=144,slow=2.4,SNR=9.5						
NB2	NORSAR Subarra	126.76	345	PKPdf	PKPdf	08 22 38.2	-1.0
	comp=Z,3.9nm,1.1s,baz=30,slow=2.0						
NB200	NORSAR Array S	126.76	345	ePKPdf	PKPdf	08 22 38.2	-1.0
NOA	NORSAR Array B	126.76	345	PKP	PKPdf	08 22 38.2	-1.0
	comp=Z,0.8nm,0.8s,baz=33,slow=1.9,SNR=3.6						
AKASG	Malin Array Be	126.91	327	PKP	PKPdf	08 22 38.3	-1.5
	comp=Z,0.6nm,0.6s,baz=50,slow=1.1,SNR=5.2						
AKBB	Malin Array Si	126.91	327	ePKPdf	PKPdf	08 22 38.6	-1.1
AKBB	Malin Array Si	126.91	327	ePKIKP	PKPdf	08 22 38.7	-1.1
ANTO	Ankara	129.56	313	ePKPdf	PKPdf	08 22 43.5	-1.8
ANTO	Ankara	129.56	313	ePKIKP	PKPdf	08 22 43.5	-1.8
BUR04	Bucovina Ar. S	130.81	325	ePKPdf	PKiKP	08 22 48.0	-0.4
GERES	GERESS Array B	135.76	334	PKP	PKPdf	08 22 56.7	0.0
	comp=Z,1.0nm,0.4s,baz=28,slow=2.3,SNR=5.8						
BDFB	Brasilia	137.30	128	PKP	PKPdf	08 23 00.7	+0.1
	comp=Z,1.5nm,0.5s,baz=193,slow=6.5,SNR=3.5						
KEST	Kesra	147.46	323	PKPbc	PKPbc	08 23 20.8	+0.3
	comp=Z,9.0nm,1.1s,baz=21,slow=8.6,SNR=2.7						
POLO	Lamas de Olo	149.32	350	ePKPdf	PKPbc	08 23 24.0	-1.2
PVIS	Viseu	149.98	350	ePKPdf	PKPbc	08 23 27.0	+0.3
ES19	SONSECA Array	150.07	344	ePKPbc	PKPbc	08 23 26.4	-0.6
ES19				ePKPab	PKPab	08 23 32.6	-0.1
ESDC	Sonseca Array	150.11	344	PKPbc	PKPbc	08 23 27.2	+0.1
	comp=Z,4.9nm,0.8s,baz=20,slow=1.7,SNR=8.0						
MTE	Manteigas	150.22	350	ePKPdf	PKPbc	08 23 27.6	+0.2
PAB	San Pablo	150.34	344	ePKPbc	PKPbc	08 23 27.5	-0.2
PAB				ePKPab	PKPab	08 23 34.0	+0.1
PAB	San Pablo	150.34	344	ePKIKP	PKPbc	08 23 27.5	-0.2
PAB				e		08 23 34.0	
PMRV	Marv??o	151.14	349	ePKPdf	PKPbc	08 23 29.6	+0.1
PMTG	Montargil	151.64	350	ePKPdf	PKiKP	08 23 33.4	+2.3
PESTR	Estremoz	151.72	349	ePKPdf	PKPab	08 23 40.0	+0.5
TORD	Torodi Ar. Bea	164.28	279	PKP	PKPdf	08 23 38.9	-1.6
	comp=Z,1.3nm,1.0s,baz=349,slow=4.6,SNR=5.7						
TORD				PKPab	PKPab	08 24 33.7	-0.8
	comp=Z,3.1nm,1.0s,baz=72,slow=4.8,SNR=7.1						
TOA1	Torodi Ar. Sit	164.28	279	ePKPdf	PKPdf	08 23 38.9	-1.6
TOA1				ePKPab	PKPab	08 24 33.7	-0.8

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*IDC **08** 08:10:27.6±1.6, 10°.96S×164°.74E, h0^{km}, mb4.0/4, mb1 4.3/7, mb1mx3.9/37, mbtmp4.2/7, ML4.2/3, Error ellipse: s-maj=33.7km s-min=28.0km az=139.0*

*NEIC **08** 08:10:29.5±0.8, 10°.95S×164°.73E, h10^{km}, mb4.1/3, Error ellipse: s-maj=16.3km s-min=10.5km az=54.0*

*ISCJB **08** 08:10:30.7±0.9, 11°.1S±0°.1×164°.68E±0°.09, h29^{km}, mb4.0/7, Error ellipse: s-maj=17.3km s-min=8.9km az=40.5*

ISC 08 08:10:32.5±1.1, **11°.0S**±0°.1×**164°.7E**±0°.1, **h29^{km}, n15,** σ**0^{s}.83**/16, **mb4.1**/7, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.94	288	Pn	Pn	08 11 45.4	+0.6
	25nm,0.3s,baz=194,slow=8.3,SNR=3.8						
HNR				Sn	Sn	08 12 41.8	+0.7
	12nm,0.3s,baz=210,slow=20,SNR=3.6						
DZM	Mont Dzumac	11.12	172	ePn	Pn	08 13 08.8	-0.9
DZM	Mont Dzumac	11.12	172	Pn	Pn	08 13 09.0	-0.7
	1.5nm,0.3s,baz=127,slow=24,SNR=11						
PINNC	Pines Island,	11.83	168	ePn	Pn	08 13 19.6	+0.3
CTA	Charters Tower	19.92	241	P	Pn	08 15 03.2	-0.6
	0.2nm,0.3s,baz=40,slow=11,SNR=5.0						
BKZ	Black Stump Fm	29.94	161	eP	P	08 16 39.9	+1.7
	3.2nm,1.0s						
WR1	Warramunga Arr	30.54	249	eP	P	08 16 42.9	-0.8
WRA	Warramunga Arr	30.54	249	P	P	08 16 42.9	-0.8
	0.9nm,0.5s,baz=78,slow=8.9,SNR=5.3						
AS01	Alice Springs	31.86	243	eP	P	08 16 55.3	-0.1
ASAR	Alice Springs	31.90	243	P	P	08 16 54.6	-1.0
	5.4nm,1.1s,baz=64,slow=10,SNR=14						
BBOO	Buckleboo	34.11	226	eP	P	08 17 15.1	+0.3
	9.2nm,1.0s						
FITZ	Fitzroy Crossi	38.40	255	eP	P	08 17 51.9	+0.2
	0.8nm,0.8s						
ILAR	Eielson Array	83.81	19	P	P	08 22 58.5	-0.3
	0.8nm,0.9s,baz=222,slow=4.4,SNR=5.4						
MK32	Makanchi Array	92.80	317	eP	P	08 23 41.9	-0.6
MKAR	Makanchi Array	92.80	317	P	P	08 23 41.9	-0.6
	0.6nm,0.8s,baz=94,slow=5.8,SNR=4.3						

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*IDC **08** 08:14:56.6±0.5, 10°.95S×165°.54E, h0^{km}, mb4.5/23, mb1 4.6/25, mb1mx4.5/46, mbtmp4.5/25, ML4.7/2, MS3.7/2, Ms1 3.7/2, ms1mx3.1/32, Error ellipse: s-maj=17.6km s-min=13.7km az=111.0*

*NEIC **08** 08:14:58.4±0.1, 10°.92S×165°.45E, h10^{km}, mb4.9/73, Error ellipse: s-maj=4.3km s-min=3.3km az=122.0*

*ISCJB **08** 08:14:59.8±0.2, 11°.01S±0°.03×165°.38E±0°.04, h30^{km}, mb4.8/95, Error ellipse: s-maj=5.8km s-min=4.6km az=11.7*

ISC 08 08:15:01.6±0.4, **10°.98S**±0°.06×**165°.38E**±0°.06, **h30^{km}, n157,** σ**1^{s}.24**/157, **mb4.9**/95, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.56	286	eP	Pn	08 16 22.0	-0.4
HNR				eS	Sn	08 17 17.0	-8.4
HNR	Honiara	5.56	286	Pn	Pn	08 16 23.7	+1.3
	22nm,0.3s,baz=180,slow=3.0,SNR=10						
HNR				Sn	Sn	08 17 22.4	-3.0
	20nm,0.3s,baz=270,slow=2.0,SNR=2.4						
HNR				LR	LR	08 18 27.7	
	comp=Z,636nm,21.6s,baz=127,slow=37						
MARNC	Mare, Loyalty	10.75	167	ePn	Pn	08 17 32.7	-0.8
DZM	Mont Dzumac	11.08	175	ePn	Pn	08 17 37.5	-0.7
DZM	Mont Dzumac	11.08	175	Pn	Pn	08 17 37.0	-1.1
	5.5nm,0.3s,baz=358,slow=22,SNR=26						
DZM				LR	LR	08 21 17.4	
	comp=Z,391nm,19.2s,baz=22,slow=34						
PINNC	Pines Island,	11.74	171	ePn	Pn	08 17 47.3	+0.2
MSVF	Nonsavu	13.99	120	ePn	P	08 18 24.9	-0.7
EIDS	Eidsvold	19.70	222	eP	Pn	08 19 30.7	+0.4
	13nm,0.8s						
MANU	Manus Island	19.96	295	eP	Pn	08 19 33.4	0.0
	250nm,1.0s						
CTA	Charters Tower	20.51	241	P	Pn	08 19 39.3	-0.5
	54nm,1.0s,baz=76,slow=12,SNR=13						
CTAO	Charters Tower	20.51	241	eP	Pn	08 19 39.3	-0.5
	75nm,1.0s						
COEN	Coen	21.88	260	eP	P	08 19 52.9	+0.7
	28nm,1.0s						
ARMA	Armidale	23.18	211	eP	P	08 20 06.9	+0.9
	14nm,0.9s						
OUZ	Omahuta	25.26	164	eP	P	08 20 27.2	+2.0
	35nm,1.2s						
HAZ	Te Kaha	28.89	159	P	P	08 20 58.0	+0.2
URZ	Urewera	29.13	161	eP	P	08 20 59.9	0.0
	29nm,1.0s						
URZ	Urewera	29.13	161	P	P	08 20 58.4	-1.5
	19nm,0.9s,baz=340,slow=6.9,SNR=9.3						
H11S2	WAKE ISLAND Hy	29.31	3	T	T	08 52 10.0	
	baz=181,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	29.32	3	T	T	08 52 09.8	
	baz=181,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.33	3	T	T	08 52 11.4	
	baz=181,slow=76,SNR=18						
MWZ	Matawai	29.33	160	P	P	08 21 01.7	0.0
MTHZ	Maungataniwha	29.58	162	P	P	08 21 04.6	+0.6
RAHZ	Arahi	29.72	161	P	P	08 21 05.4	+0.3
BKZ	Black Stump Fm	29.77	162	eP	P	08 21 05.5	-0.1
	25nm,0.6s						
BKZ	Black Stump Fm	29.77	162	P	P	08 21 06.5	+0.8
NMHZ	Naumai	29.80	162	P	P	08 21 06.5	+0.5
BHHZ	Black Hill Sta	29.94	163	P	P	08 21 07.7	+0.5
KWHZ	Kaweka Forest	29.98	163	P	P	08 21 08.4	+0.8
STKA	Stephens Creek	30.24	223	eP	P	08 21 10.6	+0.7
	2.6nm,0.9s						
STKA	Stephens Creek	30.24	223	P	P	08 21 10.8	+0.9
	8.9nm,0.8s,baz=29,slow=10,SNR=16						
KAHZ	Kahuranaki	30.46	162	P	P	08 21 11.5	-0.2
H11N1	WAKE ISLAND Hy	30.54	3	T	T	08 53 47.1	
	baz=182,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	30.54	3	T	T	08 53 42.0	
	baz=182,slow=76,SNR=21						
H11N2	WAKE ISLAND Hy	30.55	3	T	T	08 53 42.9	
	baz=182,slow=76,SNR=22						
BFZ	Birch Farm	31.10	164	eP	P	08 21 16.1	-1.2
	29nm,0.9s						
BFZ	Birch Farm	31.10	164	P	P	08 21 16.0	-1.3
WB2	Warramunga Arr	31.16	250	eP	P	08 21 18.3	+0.1
	19nm,1.0s						
WR1	Warramunga Arr	31.17	250	eP	P	08 21 17.6	-0.6
	18nm,0.9s						
WR1				ePcP	PcP	08 24 13.7	+0.8
WRA	Warramunga Arr	31.17	250	P	P	08 21 17.6	-0.6
	11nm,0.7s,baz=81,slow=9.1,SNR=41						
WRA				PcP	PcP	08 24 13.7	+0.8
	2.2nm,0.9s,baz=78,slow=2.9,SNR=7.3						
THZ	Tophouse	31.37	169	eP	P	08 21 20.7	+0.9
	17nm,0.8s						
LTZ	Lake Taylor	32.25	170	eP	P	08 21 27.6	+0.2
	13nm,0.8s						
AS01	Alice Springs	32.46	243	eP	P	08 21 28.3	-1.3
AS31	Alice Springs	32.50	243	eP	P	08 21 29.3	-0.6
	6.8nm,0.6s						
ASAR	Alice Springs	32.50	243	P	P	08 21 29.3	-0.6
	20nm,0.7s,baz=65,slow=10,SNR=276						
ASAR				PcP	PcP	08 24 16.9	+0.3
	2.3nm,0.8s,baz=75,slow=2.4,SNR=9.3						
RPZ	Rata Peaks	32.98	172	P	P	08 21 33.1	-0.7
	10.0nm,0.9s,baz=39,slow=6.5,SNR=3.0						
BBOO	Buckleboo	34.61	227	eP	P	08 21 48.2	0.0
	12nm,0.8s						
PYZ	Puysegur Point	35.08	178	eP	P	08 21 52.4	+0.3
	63nm,1.2s						
FITZ	Fitzroy Crossi	39.05	255	eP	P	08 22 25.4	-0.7
	4.6nm,0.8s						
FORT	Forrest	39.79	235	eP	P	08 22 32.1	0.0
	22nm,0.9s						
MORW	Morawa	49.34	241	eP	P	08 23 49.2	+0.7
	34nm,1.0s						
MJAR	Matsushiro Arr	53.75	333	P	P	08 24 20.3	-1.0
	1.6nm,0.7s,baz=168,slow=8.9,SNR=3.1						
MAJO	Matsushiro	53.75	333	eP	P	08 24 20.2	-1.0
JNU	Nakatsue	54.82	324	eP	P	08 24 28.5	-0.6
	17nm,0.9s						
JNU	Nakatsue	54.82	324	P	P	08 24 28.8	-0.3
	8.5nm,1.0s,baz=196,slow=16,SNR=3.0						
ASAJ	Asahikawa	58.61	341	eP	P	08 24 56.0	+0.2
ASAJ	Asahikawa	58.61	341	P	P	08 24 56.0	+0.2
	12nm,0.9s,baz=131,slow=9.3,SNR=2.5						
NJ2	Nanjing	61.72	316	eP	P	08 25 19.2	+1.9
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	62.73	334	P	P	08 25 23.9	+0.1
	comp=Z,2.6nm,0.8s,baz=131,slow=4.0,SNR=4.1						
PETK	Petropavlovsk-	64.17	355	P	P	08 25 32.8	-0.4
	comp=Z,3.7nm,0.9s,baz=163,slow=10,SNR=3.5						
PEA1	Petropavlovsk-	64.17	355	eP	P	08 25 32.8	-0.4
KLR	Kul'dur	66.86	337	P	P	08 25 50.8	+0.2
	comp=Z,3.6nm,0.9s,baz=56,slow=3.6,SNR=4.7						
GYA	Guiyang	68.08	304	P	P	08 26 02.8	+3.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	69.81	312	P	P	08 26 15.3	+5.8
XAN				pP	sP	08 26 23.7	+2.0
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMI	Kunming	70.78	302	P	P	08 26 19.4	+3.5
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,180nm,4.7s						
HHC	Hu-ho-hao-te	71.55	320	eP	P	08 26 22.2	+2.1
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,6.1s						
CMAR	Chiang Mai Arr	71.76	294	P	P	08 26 23.0	+1.3
	comp=Z,1.9nm,0.8s,baz=118,slow=5.6,SNR=6.4						
SEY	Seymchan	74.37	354	P	P	08 26 35.6	-0.5
	comp=Z,1.8nm,0.9s,baz=186,slow=6.8,SNR=5.7						
LZH	Lanzhou	74.45	312	eP	P	08 26 39.1	+1.7
LZH				pP	pP	08 26 43.8	-2.0
LZH				sP	pwP	08 26 46.1	-4.1
LZH				PP	PP	08 29 32.5	+8.3
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,17.1s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
ULN	Ulaanbaatar	78.04	324	eP	P	08 26 57.8	+0.3
	comp=Z,4.4nm,0.9s						
SVW2	Sparrevohn	78.16	18	eP	P	08 27 00.1	+2.4
	comp=Z,11nm,1.1s						
HOM	Homer	78.36	21	eP	P	08 26 59.7	+0.8
	comp=Z,227nm,1.2s						
SONA0	Songino Array	78.40	324	eP	P	08 26 58.7	-0.8
SONM	Songino Array	78.40	324	P	P	08 26 58.7	-0.8
	comp=Z,0.7nm,0.7s,baz=160,slow=4.6,SNR=3.3						
GTA	Gaotai	78.75	314	eP	P	08 27 02.7	+1.0
GTA				pP	PcP	08 27 06.7	-3.7
GTA				sP	pP	08 27 09.6	-0.5
GTA				S	S	08 37 02.7	+5.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,68nm,7.9s						
GTA				LR	LR		
	comp=N,140nm,18.1s						
GTA				LR	LR		
	comp=E,180nm,20.0s						
GTA				LR	LR		
	comp=Z,160nm,16.8s						
BILL	Bilibino	78.82	0	eP	P	08 27 00.9	-0.2
	comp=Z,9.3nm,0.8s						
QSPA	South Pole Qui	79.02	180	eP	P	08 27 02.5	-0.2
	comp=Z,11nm,1.0s						
IM3	Indian Mountai	82.46	16	eP	P	08 27 20.4	-0.3
WRH	Wood River Hil	82.98	18	eP	P	08 27 23.2	-0.3
	comp=Z,12nm,1.2s						
HDA	Harding Lake	83.30	19	eP	P	08 27 24.5	-0.7
	comp=Z,21nm,0.8s						
IL1	Eielson Array	83.57	19	eP	P	08 27 25.9	-0.6
ILAR	Eielson Array	83.57	19	P	P	08 27 25.8	-0.7
	comp=Z,1.5nm,0.6s,baz=240,slow=4.8,SNR=31						
ILB	Eielson Array	83.57	19	eP	P	08 27 26.0	-0.5
	comp=Z,4.9nm,0.7s						
SCRK	Sand Creek	83.98	20	eP	P	08 27 29.2	+0.4
	comp=Z,6.0nm,0.8s						
YBH	Yreka Blue Hor	84.11	46	eP	P	08 27 29.5	-0.4
	comp=Z,13nm,0.9s						
YBH	Yreka Blue Hor	84.11	46	P	P	08 27 29.5	-0.4
	comp=Z,3.6nm,0.8s,baz=185,slow=3.6,SNR=8.4						
HUMO	Hull Mountain	84.24	45	eP	P	08 27 30.0	-0.5
	comp=Z,11nm,0.9s						
ORV	Oroville	84.24	48	eP	P	08 27 29.6	-0.9
	comp=Z,6.0nm,0.8s						
AFDM	Forest Hills D	84.43	49	eP	P	08 27 30.8	-0.8
	comp=Z,13nm,1.0s						
CMB	Columbia Colle	84.58	50	eP	P	08 27 31.5	-0.9
	comp=Z,6.9nm,0.8s						
BEKR	Beckworth	85.17	48	eP	P	08 27 34.7	-0.7
	comp=Z,8.6nm,0.7s						
WAKR	Walker	85.43	50	eP	P	08 27 36.5	-0.3
	comp=Z,7.1nm,0.9s						
MDPB	Devils Postpil	85.44	50	eP	P	08 27 36.4	-0.6
	comp=Z,11nm,0.8s						
PNTR	Pine Nut	85.49	49	eP	P	08 27 36.6	-0.6
	comp=Z,8.4nm,0.8s						
DAWY	Dawson	85.63	21	eP	P	08 27 37.0	0.0
	comp=Z,8.4nm,0.8s						
PAHR	Pah Rah Range	85.84	48	eP	P	08 27 38.3	-0.5
	comp=Z,7.2nm,0.8s						
TIXI	Tiksi	85.96	349	P	P	08 27 37.6	-0.7
	comp=Z,1.5nm,0.3s,baz=130,slow=1.3,SNR=5.4						
PINE	Pine Mountain	86.03	44	eP	P	08 27 39.4	-0.3
	comp=Z,13nm,0.8s						
NV01	Mina Array Sit	86.26	50	eP	P	08 27 40.2	-0.8
NVAR	Mina Array Bea	86.26	50	P	P	08 27 40.5	-0.4
	comp=Z,3.3nm,0.8s,baz=228,slow=7.7,SNR=14						
NV11	Mina Array Sit	86.37	50	eP	P	08 27 40.4	-1.0
	comp=Z,0.7nm,0.9s						
KVN	Kaiserville	86.59	49	eP	P	08 27 41.5	-1.1
	comp=Z,3.9nm,0.8s						
I07A	Izee	87.10	44	eP	P	08 27 44.5	-0.3
	comp=Z,8.5nm,0.8s						
WVOR	Wild Horse Val	87.20	46	eP	P	08 27 44.9	-0.5
	comp=Z,3.7nm,0.9s						
J08A	Circle Bar Ran	87.59	45	eP	P	08 27 46.6	-0.5
	comp=Z,8.1nm,0.8s						
G08A	Pilot Rock	87.84	43	eP	P	08 27 47.7	-0.7
	comp=Z,5.6nm,0.8s						
R11A	Troy Canyon, C	88.29	51	eP	P	08 27 50.4	-0.4
	comp=Z,4.7nm,1.1s						
WMQ	Urumqi	88.79	315	eP	P	08 27 55.4	+2.6
WMQ				LR	LR		
	comp=N,190nm,17.1s						
WMQ				LR	LR		
	comp=E,220nm,19.9s						
WMQ				LR	LR		
	comp=Z,210nm,19.1s						
F10A	Beach Ranch, E	89.21	43	eP	P	08 27 53.9	-0.8
	comp=Z,5.8nm,0.7s						
LCMT	Little Creek M	89.75	52	eP	P	08 27 57.4	-0.1
	comp=Z,5.2nm,0.9s						
CCUT	Cedar City	89.78	52	eP	P	08 27 58.0	+0.1
	comp=Z,7.1nm,0.8s						
KNB	Kanab	90.08	52	eP	P	08 27 58.8	-0.3
	comp=Z,4.1nm,0.7s						
U15A	North Rim	90.36	53	eP	P	08 28 00.5	-0.1
	comp=Z,12nm,0.8s						
HLID	Hailey	90.49	46	eP	P	08 28 00.5	-0.4
	comp=Z,4.4nm,0.7s						
PKCU	Pink Cliffs	90.57	52	eP	P	08 28 02.2	+0.5
	comp=Z,11nm,0.9s						
X16A	Lo Mia Camp, P	90.58	55	eP	P	08 28 01.6	0.0
	comp=Z,5.2nm,0.9s						
TUC	Tucson	90.65	57	eP	P	08 28 02.0	+0.2
	comp=Z,3.0nm,0.8s						
TCRU	Three Creeks R	90.74	51	eP	P	08 28 02.3	0.0
	comp=Z,11nm,0.8s						
DUG	Dugway, Tooele	90.83	49	eP	P	08 28 02.0	-0.5
	comp=Z,3.0nm,0.8s						
BGU	Big Grassy Mou	90.84	49	eP	P	08 28 01.6	-1.0
	comp=Z,5.0nm,0.8s						
HVU	Hansel Valley	91.23	48	eP	P	08 28 04.1	-0.3
	comp=Z,8.3nm,0.7s						
NLU	North Lily Min	91.33	50	eP	P	08 28 04.4	-0.5
	comp=Z,6.3nm,1.0s						
CTU	Camp Tracy	91.73	49	eP	P	08 28 06.3	-0.5
X18A	Snowflake	91.81	55	eP	P	08 28 07.1	-0.1
	comp=Z,3.3nm,0.8s						
TMUT	Trail Mountain	91.83	50	eP	P	08 28 08.3	+0.9
	comp=Z,4.4nm,0.9s						
MCMT	McKenzie Canyo	91.89	45	eP	P	08 28 07.0	-0.5
DLMT	Dillon	92.19	44	eP	P	08 28 08.4	-0.3
	comp=Z,9.4nm,0.8s						
WALA	Waterton Lakes	92.19	41	eP	P	08 28 08.7	+0.1
	comp=Z,4.3nm,0.8s						
LRM	Limekiln Ridge	92.39	44	eP	P	08 28 08.8	-1.0
FXWY	Fox Creek	92.90	46	eP	P	08 28 11.4	-0.7
	comp=Z,3.7nm,0.8s						
BOZ	Bozeman (W)	92.90	44	eP	P	08 28 11.8	-0.3
	comp=Z,5.3nm,0.9s						
TPAW	Teton Pass	92.92	46	eP	P	08 28 11.2	-1.1
	comp=Z,2.6nm,0.6s						
HRY	Holter Researc	93.01	43	eP	P	08 28 11.9	-0.6
MOOW	Moose Ponds	93.12	46	eP	P	08 28 12.6	-0.6
	comp=Z,1.7nm,0.8s						
MK01	Makanchi Array	93.22	317	eP	P	08 28 12.8	-0.5
MK31	Makanchi Array	93.23	317	eP	P	08 28 13.3	0.0
	comp=Z,2.8nm,1.0s						
MK32	Makanchi Array	93.23	317	eP	P	08 28 12.9	-0.4
MKAR	Makanchi Array	93.23	317	eP	P	08 28 13.5	+0.1
	comp=Z,9.6nm,0.8s						
MKAR				PKKPbc	PKKPdf	08 45 20.4	-1.4
MKAR	Makanchi Array	93.23	317	P	P	08 28 12.9	-0.4
	comp=Z,0.8nm,0.8s,baz=92,slow=6.1,SNR=7.2						
MKAR				PKKPbc	PKKPdf	08 45 20.4	-1.4
	comp=Z,0.2nm,0.7s,baz=308,slow=3.4,SNR=5.5						
ZAA0	Zalesovo Array	93.29	324	eP	P	08 28 12.9	-0.5
	comp=Z,5.3nm,0.5s						
ZALV	Zalesovo Beam	93.29	324	eP	P	08 28 12.4	-1.0
MAKZ	Makanchi	93.44	317	eP	P	08 28 13.8	-0.5
	comp=Z,4.1nm,1.1s						
PDAR	Pinedale Array	93.77	47	eP	P	08 28 15.6	-0.6
PDAR	Pinedale Array	93.77	47	P	P	08 28 15.2	-1.0

	comp=Z,2.0nm,0.8s,baz=252,slow=3.0,SNR=7.4						
YKA	Yellowknife Ar	95.08	27	P	P	08 28 19.1	-2.2
	comp=Z,0.6nm,0.7s,baz=256,slow=4.7,SNR=13						
YKB5	Yellowknife Ar	95.08	27	*e*P	P	08 28 18.4	-3.0
LTX	Lajitas	96.11	61	*e*P	P	08 28 26.3	-0.8
TXAR	Lajitas Array	96.11	61	P	P	08 28 26.3	-0.8
	comp=Z,0.3nm,0.6s,baz=237,slow=8.2,SNR=2.7						
061Z	Ochoppi	115.97	67	*e*PKPdf	PKiKP	08 33 42.7	+0.5
ARA0	ARCESS Array S	116.18	345	*e*PKPdf	PKiKP	08 33 40.5	-0.9
ARCES	ARCESS Array B	116.18	345	PKP	PKiKP	08 33 40.5	-0.9
	comp=Z,0.8nm,0.6s,baz=75,slow=1.4,SNR=5.4						
FIA1	FINESS Array S	121.58	338	*e*PKPdf	PKiKP	08 33 52.0	-0.1
CPUP	Villa Florida	124.34	133	PKP	PKPdf	08 33 58.3	-0.1
	comp=Z,1.6nm,0.9s,baz=25,slow=5.3,SNR=2.9						
SDV	Santo Domingo	124.85	87	PKP	PKPdf	08 33 59.5	-0.4
	comp=Z,5.1nm,0.8s,baz=273,slow=3.5,SNR=4.0						
BOSA	Boshof	124.92	223	PKP	PKPdf	08 33 59.7	0.0
	comp=Z,3.7nm,0.5s,baz=147,slow=16,SNR=7.9						
ESDC	Sonseca Array	149.89	343	PKPbc	PKPbc	08 34 48.9	-0.5
	comp=Z,0.3nm,0.5s,baz=236,slow=34,SNR=3.0						
TORD	Torodi Ar. Bea	163.90	279	PKP	PKPdf	08 35 02.9	0.0
	comp=Z,1.4nm,1.0s,baz=30,slow=0.2,SNR=2.9						
TORD				PKPab	PKPab	08 35 58.0	+2.3
	comp=Z,0.8nm,0.9s,baz=46,slow=4.2,SNR=2.8						
TOA1	Torodi Ar. Sit	163.90	279	*e*PKPdf	PKPdf	08 35 02.9	0.0

IDC 08 08:15:49.9±1.8**, 10°.97S×165°.30E, h0^{km}, mb4.1**/4**, mb1 4.4**/5**, mb1mx3.9**/45**, mbtmp4.2**/5**, ML4.5**/1**, Error ellipse: s-maj=54.7km s-min=31.8km az=112.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.09	174	Pn	Pn	08 18 29.1	-0.8
	3.7nm,0.3s,baz=139,slow=21,SNR=7.2						
STKA	Stephens Creek	30.19	223	P	P	08 22 02.4	+0.3
	1.9nm,0.7s,baz=51,slow=9.4,SNR=3.3						
WRA	Warramunga Arr	31.10	250	P	P	08 22 10.6	+0.3
	4.8nm,0.8s,baz=80,slow=10.0,SNR=5.8						
ILAR	Eielson Array	83.58	19	P	P	08 28 20.2	+0.5
	0.8nm,0.6s,baz=234,slow=5.9,SNR=1.5						
MKAR	Makanchi Array	93.17	317	P	P	08 29 05.0	-1.2
	0.4nm,0.7s,baz=104,slow=5.0,SNR=1.2						

IDC 08 08:23:03.5±6.8**, 19°.11S×177°.26W, h0^{km}, mb4.4**/3**, mb1 4.6**/3**, mb1mx3.8**/49**, mbtmp4.4**/3**, Error ellipse: s-maj=188.4km s-min=109.9km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.03	243	P	P	08 30 31.1	-1.0
	3.5nm,0.5s,baz=89,slow=12,SNR=3.3						
WRA	Warramunga Arr	45.50	261	P	P	08 31 25.1	0.0
	6.9nm,0.8s,baz=93,slow=8.1,SNR=12						
ASAR	Alice Springs	45.53	255	P	P	08 31 25.5	+0.2
	4.2nm,0.6s,baz=89,slow=8.3,SNR=29						
AKASG	Malin Array Be	142.13	332	PKP	PKPdf	08 42 37.2	-0.4
	0.2nm,0.3s,baz=44,slow=4.7,SNR=6.6						

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*IDC **08** 08:24:00.8±0.7, 10°.88S×165°.72E, h0^{km}, mb4.3/14, mb1 4.5/16, mb1mx4.2/47, mbtmp4.3/16, ML4.9/2, Error ellipse: s-maj=20.1km s-min=16.4km az=116.0*

*NEIC **08** 08:24:02.5±0.2, 10°.92S×165°.78E, h10^{km}, mb4.6/30, Error ellipse: s-maj=6.6km s-min=5.0km az=102.0*

*ISCJB **08** 08:24:03.7±0.3, 11°.00S±0°.04×165°.72E±0°.06, h30^{km}, mb4.5/37, Error ellipse: s-maj=7.8km s-min=5.5km az=2.2*

ISC 08 08:24:05.4±0.5**, 10°.93S**±0°.06×**165°.66E**±0°.07**, h30^{km}, n70, σ1^{s}.13**/69**, mb4.5**/37**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.82	284	*e*P	Pn	08 25 32.0	+2.2
HNR				*e*S	Sn	08 26 27.0	-8.5
HNR	Honiara	5.82	284	*e*Pn	Pn	08 25 32.2	+2.4
HNR				*e*Sn	Sn	08 26 31.9	-3.7
HNR	Honiara	5.82	284	Pn	Pn	08 25 30.3	+0.6
	38nm,0.3s,baz=163,slow=4.1,SNR=6.4						
HNR				Sn	Sn	08 26 31.9	-3.7
	19nm,0.3s,baz=243,slow=11,SNR=3.6						
MARNC	Mare, Loyalty	10.74	168	*e*Pn	Pn	08 26 37.1	-0.1
DZM	Mont Dzumac	11.11	176	*e*Pn	Pn	08 26 42.3	-0.1
	54nm,0.5s						
DZM				*e*LR	LR	08 29 12.5	
	comp=Z,656nm,27.0s						
DZM	Mont Dzumac	11.11	176	*e*Pn	Pn	08 26 42.3	-0.1
DZM	Mont Dzumac	11.11	176	Pn	Pn	08 26 42.5	+0.1
	7.8nm,0.3s,baz=348,slow=11,SNR=51						
DZM				Sn	Sn	08 28 44.2	-1.5
	1.0nm,0.3s,baz=104,slow=19,SNR=2.6						
PINNC	Pines Island,	11.75	172	*e*Pn	Pn	08 26 51.2	+0.2
TARA	Tarawa	14.18	31	*e*Pn	Pn	08 27 24.3	0.0
EIDS	Eidsvold	19.93	222	*e*P	Pn	08 28 36.8	+0.1
	24nm,1.0s						
CTA	Charters Tower	20.79	242	P	P	08 28 45.7	+1.4
	9.4nm,0.8s,baz=66,slow=10,SNR=8.4						
CTAO	Charters Tower	20.79	242	*e*P	P	08 28 45.7	+1.4
	13nm,0.8s						
COEN	Coen	22.16	260	*e*P	P	08 29 00.8	+1.6
	5.8nm,1.0s						
ARMA	Armidale	23.38	212	*e*P	P	08 29 12.4	+0.6
	19nm,1.1s						
KNTN	Kanton	23.85	72	*e*P	P	08 29 15.0	-1.4
	97nm,1.0s						
MXZ	Matakaoa Point	28.86	159	*e*P	P	08 30 02.0	+0.7
	26nm,0.9s						
URZ	Urewera	29.09	161	*e*P	P	08 30 02.7	-0.6
	11nm,1.2s						
URZ	Urewera	29.09	161	P	P	08 30 02.6	-0.7
	3.2nm,0.6s,baz=269,slow=1.8,SNR=6.4						
H11S2	WAKE ISLAND Hy	29.25	2	T	T	09 00 24.4	
	baz=181,slow=76,SNR=9.1						
H11S3	WAKE ISLAND Hy	29.25	2	T	T	09 00 24.7	
	baz=181,slow=76,SNR=7.6						
H11S1	WAKE ISLAND Hy	29.27	2	T	T	09 00 31.8	
	baz=181,slow=76,SNR=30						
BKZ	Black Stump Fm	29.73	163	*e*P	P	08 30 08.6	-0.6
	7.9nm,0.6s						
STKA	Stephens Creek	30.47	223	*e*P	P	08 30 16.6	+0.8
	1.9nm,1.1s						
STKA	Stephens Creek	30.47	223	P	P	08 30 16.6	+0.8
	3.8nm,0.6s,baz=43,slow=11,SNR=3.5						
BFZ	Birch Farm	31.08	164	*e*P	P	08 30 20.2	-0.8
THZ	Tophouse	31.37	170	*e*P	P	08 30 22.9	-0.7
	21nm,1.1s						
WRAB	Tennant Creek	31.44	250	*e*P	P	08 30 21.4	-3.1
	6.9nm,0.8s						
WB2	Warramunga Arr	31.44	250	*e*P	P	08 30 24.2	-0.2
	4.9nm,0.8s						
WR1	Warramunga Arr	31.45	250	*e*P	P	08 30 24.4	-0.1
WRA	Warramunga Arr	31.45	250	P	P	08 30 24.4	-0.1
	3.5nm,0.7s,baz=82,slow=9.1,SNR=28						
KHZ	Kahutara	32.12	169	*e*P	P	08 30 29.8	-0.3
	29nm,1.2s						
LTZ	Lake Taylor	32.26	171	*e*P	P	08 30 30.5	-0.8
	14nm,0.8s						
FOZ	Fox Glacier	32.69	174	*e*P	P	08 30 35.4	+0.4
	13nm,1.0s						
OXZ	Oxford	32.75	171	*e*P	P	08 30 36.0	+0.4
	11nm,0.9s						
AS31	Alice Springs	32.77	243	*e*P	P	08 30 36.0	-0.2
	1.4nm,1.1s						
ASAR	Alice Springs	32.77	243	P	P	08 30 35.5	-0.6
	2.7nm,0.8s,baz=66,slow=10,SNR=30						
ASAR				PcP	PcP	08 33 22.0	+0.8
	0.3nm,0.6s,baz=85,slow=2.0,SNR=2.5						
RPZ	Rata Peaks	33.00	173	*e*P	P	08 30 38.2	+0.3
	14nm,1.1s						
RPZ	Rata Peaks	33.00	173	P	P	08 30 38.3	+0.5
	15nm,0.9s,baz=70,slow=0.3,SNR=6.2						
MQZ	McQueen's Vall	33.22	171	*e*P	P	08 30 39.4	-0.3
	30nm,1.1s						
LBZ	Lake Benmore	33.57	174	*e*P	P	08 30 42.8	+0.1
	5.7nm,0.9s						
BBOO	Buckleboo	34.85	227	*e*P	P	08 30 54.2	+0.1
	7.0nm,0.8s						
TAU	Tasmania Unive	35.65	203	*e*P	P	08 31 01.7	+1.0
	38nm,1.1s						
FITZ	Fitzroy Crossi	39.33	255	*e*P	P	08 31 32.9	+0.6
	3.7nm,0.8s						
FITZ	Fitzroy Crossi	39.33	255	P	P	08 31 32.5	+0.2
	3.7nm,0.7s,baz=93,slow=7.4,SNR=5.5						
FORT	Forrest	40.05	235	*e*P	P	08 31 38.4	+0.3
	11nm,0.8s						
PPT2	Papeete2	43.80	104	*e*LR	LR	08 44 47.3	
	comp=Z,167nm,22.5s						
TAOE	Nuku Hiva Isla	53.37	93	*e*LR	LR	08 49 12.0	
	comp=Z,86nm,26.1s						
USRK	Ussuriysk Ar.	62.80	333	P	P	08 34 28.4	+0.3
	1.5nm,0.5s,baz=178,slow=2.9,SNR=3.1						
KLR	Kul'dur	66.92	337	P	P	08 34 55.0	+0.1
	1.0nm,0.7s,baz=113,slow=3.5,SNR=4.0						
NIKH	Nikolski High	67.28	16	*e*P	P	08 34 57.7	+0.6
	86nm,0.9s						
CMAR	Chiang Mai Arr	71.99	294	P	P	08 35 27.6	+0.8
	0.7nm,0.3s,baz=123,slow=6.5,SNR=2.8						
QSPA	South Pole Qui	79.08	180	*e*P	P	08 36 05.8	-1.0
	5.9nm,1.0s						
CAST	Castle Rocks	80.86	18	*e*P	P	08 36 17.9	+1.7
	1.7nm,0.9s						
IM3	Indian Mountai	82.33	16	*e*P	P	08 36 23.5	-0.4
WRH	Wood River Hil	82.84	18	*e*P	P	08 36 26.6	0.0
	3.7nm,1.0s						
MDM	Murphy Dome	83.14	18	*e*P	P	08 36 29.5	+1.3
	3.5nm,0.9s						
HDA	Harding Lake	83.16	19	*e*P	P	08 36 28.2	0.0
	8.3nm,1.0s						
IL1	Eielson Array	83.42	19	*e*P	P	08 36 29.3	-0.4
ILAR	Eielson Array	83.42	19	P	P	08 36 28.8	-0.9
	1.3nm,0.7s,baz=233,slow=5.1,SNR=16						
ILB	Eielson Array	83.42	19	*e*P	P	08 36 30.3	+0.6
	2.2nm,0.8s						
NVAR	Mina Array Bea	86.01	50	P	P	08 36 44.6	+1.1
	0.2nm,0.5s,baz=213,slow=6.5,SNR=2.8						
MSU	Marysvale	90.67	51	*e*P	P	08 37 04.9	-0.8
MK32	Makanchi Array	93.38	317	*e*P	P	08 37 16.8	-1.1
MKAR	Makanchi Array	93.38	317	P	P	08 37 16.8	-1.1
	1.0nm,0.8s,baz=96,slow=2.9,SNR=6.6						
PDAR	Pinedale Array	93.53	47	P	P	08 37 19.2	+0.3
	0.6nm,0.9s,baz=298,slow=1.9,SNR=3.1						
060A	Indiantown	116.17	65	*e*PKPdf	PKiKP	08 42 46.5	+0.1
ARA0	ARCESS Array S	116.20	345	*e*PKPdf	PKiKP	08 42 44.0	-1.3
ARCES	ARCESS Array B	116.20	345	PKP	PKiKP	08 42 44.0	-1.3
	1.3nm,0.8s,baz=85,slow=1.9,SNR=4.4						
SDMD	Soldier's Deli	118.06	51	*e*PKPdf	PKPdf	08 42 48.5	-1.2
BINY	Binghamton	118.20	48	*e*PKPdf	PKiKP	08 42 50.0	0.0

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*IDC **08** 08:25:08.6±0.9, 11°.04S×164°.80E, h0^{km}, mb4.2/10, mb1 4.4/12, mb1mx4.2/48, mbtmp4.2/12, ML4.2/2, MS3.7/3, Ms1 3.7/3, ms1mx3.3/24, Error ellipse: s-maj=34.8km s-min=18.6km az=132.0*

*NEIC **08** 08:25:11.1±0.4, 10°.96S×164°.78E, h10^{km}, mb4.6/11, Error ellipse: s-maj=9.5km s-min=6.9km az=86.0*

*ISCJB **08** 08:25:12.3±0.4, 11°.07S±0°.05×164°.76E±0°.08, h31^{km}, mb4.3/18, MS3.9/1, Error ellipse: s-maj=10.9km s-min=7.3km az=172.6*

ISC 08 08:25:14.1±0.6**, 11°.00S**±0°.08×**164°.70E**±0°.10**, h31^{km}, n42, σ1^{s}.32**/38**, mb4.3**/18**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.93	288	*e*Pn	Pn	08 26 27.7	+1.5
HNR	Honiara	4.93	288	LR	LR	08 27 45.3	
	comp=Z,379nm,21.1s,baz=112,slow=31						
MARNC	Mare, Loyalty	10.90	163	*e*Pn	Pn	08 27 47.7	-0.3
DZM	Mont Dzumac	11.13	172	*e*Pn	Pn	08 27 50.9	-0.5
DZM	Mont Dzumac	11.13	172	Pn	Pn	08 27 50.3	-1.1
	1.2nm,0.3s,baz=21,slow=16,SNR=3.6						
DZM				LR	LR	08 31 37.1	
	comp=Z,403nm,18.0s,baz=16,slow=35						
ONTNC	Ouen Toro	11.37	172	*e*Pn	Pn	08 27 54.5	+0.1
PINNC	Pines Island,	11.84	168	*e*Pn	Pn	08 28 00.2	-0.7
PATS	Pohnpei	18.83	340	*e*P	Pn	08 29 32.6	+0.4
	93nm,1.0s						
CTA	Charters Tower	19.92	241	P	P	08 29 44.5	+1.0
	0.5nm,0.3s,baz=72,slow=12,SNR=7.4						
CTAO	Charters Tower	19.92	241	*e*P	P	08 29 45.1	+1.5
	18nm,0.8s						
LHI	Lord Howe Isla	21.07	193	*e*P	P	08 29 56.9	+1.0
	56nm,1.0s						
STKA	Stephens Creek	29.78	222	*e*P	P	08 31 19.5	+1.4
	0.8nm,0.8s						
STKA	Stephens Creek	29.78	222	P	P	08 31 18.0	-0.2
	3.0nm,0.7s,baz=35,slow=13,SNR=2.8						
BKZ	Black Stump Fm	29.95	161	*e*P	P	08 31 20.5	+0.8
	7.4nm,1.0s						
WB2	Warramunga Arr	30.53	249	*e*P	P	08 31 26.1	+1.1
WRA	Warramunga Arr	30.54	249	LR	LR	08 43 26.6	
	comp=Z,242nm,18.1s,baz=65,slow=36						
H11N1	WAKE ISLAND Hy	30.60	4	T	T	09 01 46.7	
	baz=182,slow=76,SNR=8.5						
H11N3	WAKE ISLAND Hy	30.60	4	T	T	09 01 46.9	
	baz=182,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.62	4	T	T	09 01 48.8	
	baz=182,slow=76,SNR=9.2						
TOO	Toolangi	31.59	210	*e*P	P	08 31 35.0	+0.9
	1.6nm,0.7s						
AS01	Alice Springs	31.86	243	*e*P	P	08 31 37.0	+0.3
AS31	Alice Springs	31.90	243	*e*P	P	08 31 36.9	-0.1
	1.9nm,0.8s						
ASAR	Alice Springs	31.90	243	P	P	08 31 35.8	-1.2
	5.1nm,0.7s,baz=64,slow=10,SNR=15						
BBOO	Buckleboo	34.11	226	*e*P	P	08 31 56.7	+0.4
	15nm,1.1s						
FITZ	Fitzroy Crossi	38.40	255	*e*P	P	08 32 31.1	-2.0
FITZ				*e*S	S	08 38 21.4	-4.9
FITZ	Fitzroy Crossi	38.40	255	P	P	08 32 30.7	-2.3
	2.4nm,0.6s,baz=80,slow=7.8,SNR=5.8						
FORT	Forrest	39.23	234	*e*P	P	08 32 40.8	+0.9
	17nm,0.9s						
KLR	Kul'dur	66.61	337	P	P	08 36 02.4	+0.9
	3.1nm,1.0s,baz=113,slow=6.6,SNR=5.4						
SONA0	Songino Array	78.03	324	*e*P	P	08 37 10.1	+0.2
SONM	Songino Array	78.03	324	P	P	08 37 10.1	+0.2
	2.1nm,0.9s,baz=121,slow=5.7,SNR=5.4						
QSPA	South Pole Qui	79.00	180	*e*P	P	08 37 15.6	+0.7
	8.8nm,1.0s						
IM3	Indian Mountai	82.66	16	*e*P	P	08 37 34.8	+0.6
HDA	Harding Lake	83.54	19	*e*P	P	08 37 39.8	+1.0
	11nm,1.2s						
ILAR	Eielson Array	83.80	19	P	P	08 37 39.1	-1.0
	1.4nm,0.9s,baz=222,slow=6.4,SNR=4.7						
NVAR	Mina Array Bea	86.78	50	P	P	08 37 54.9	-1.0
	1.2nm,1.0s,baz=241,slow=11,SNR=2.4						
MK32	Makanchi Array	92.79	317	*e*P	P	08 38 23.9	+0.2
MKAR	Makanchi Array	92.79	317	P	P	08 38 23.9	+0.2
	2.0nm,1.0s,baz=106,slow=6.4,SNR=5.4						
PDAR	Pinedale Array	94.28	47	P	P	08 38 29.7	-1.2
	0.1nm,0.4s,baz=210,slow=2.9,SNR=2.4						
YKA	Yellowknife Ar	95.41	27	P	P	08 38 33.4	-1.9
	0.5nm,1.0s,baz=258,slow=5.0,SNR=3.9						
BVAR	Borovoye Array	101.29	322	P	Pdif	08 39 02.0	+0.1
	0.3nm,0.5s,baz=63,slow=9.9,SNR=3.1						
PB10	IPOC Station P	116.00	123	*e*PKPdf	PKPdf	08 43 54.4	-0.5
ABVI	Anegada Island	132.11	75	*e*PKPdf	PKiKP	08 44 27.9	+1.2

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*ISCJB **08** 08:27:46.3±0.5, 11°.54S±0°.07×165°.88E±0°.08, h10^{km}, Error ellipse: s-maj=12.0km s-min=9.1km az=153.2*

*IDC **08** 08:27:46.4±1.0, 11°.47S×165°.83E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx3.9/43, mbtmp4.0/9, ML4.2/1, Error ellipse: s-maj=31.3km s-min=22.6km az=128.0*

*NEIC **08** 08:27:48.0±0.4, 11°.47S×165°.87E, h10^{km}, mb4.3/8, Error ellipse: s-maj=9.9km s-min=7.6km az=65.0*

ISC 08 08:27:47.2±0.6**, 11°.42S**±0°.09×**165°.8E**±0°.1**, h10^{km}, n35, σ1^{s}.20**/27**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.09	288	*e*Pn	Pn	08 29 16.8	-0.6
DZM	Mont Dzumac	10.61	177	*e*Pn	Pn	08 30 19.5	-0.1
DZM	Mont Dzumac	10.61	177	Pn	Pn	08 30 18.6	-0.9
	1.7nm,0.3s,baz=13,slow=18,SNR=7.5						
ONTNC	Ouen Toro	10.85	177	*e*Pn	Pn	08 30 22.7	0.0
PINNC	Pines Island,	11.24	172	*e*Pn	Pn	08 30 28.7	+0.6
RABL	Rabaul	15.29	297	*e*Pn	P	08 31 27.1	-1.1
	19nm,0.6s						
EIDS	Eidsvold	19.66	223	*e*P	P	08 32 13.4	-3.0
	12nm,1.0s						
CTA	Charters Tower	20.68	243	P	Pn	08 32 29.5	-0.4
	7.5nm,0.9s,baz=83,slow=15,SNR=3.7						
ARMA	Armidale	23.04	213	*e*P	P	08 32 54.2	+1.4
	7.4nm,0.8s						
RAO	Raoul Island	23.36	142	*e*P	P	08 32 55.0	-1.0
	399nm,1.0s						
BKZ	Black Stump Fm	29.23	163	*e*P	P	08 33 50.0	+0.7
	4.1nm,1.1s						
H11S2	WAKE ISLAND Hy	29.73	2	T	T	09 05 04.9	
	baz=193,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.74	2	T	T	09 05 05.1	
	baz=193,slow=76,SNR=7.6						
H11S1	WAKE ISLAND Hy	29.75	2	T	T	09 05 09.2	
	baz=193,slow=76,SNR=7.7						
H11N1	WAKE ISLAND Hy	30.95	2	T	T	09 06 37.2	
	baz=192,slow=76,SNR=20						
H11N3	WAKE ISLAND Hy	30.96	2	T	T	09 06 36.3	
	baz=192,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.97	2	T	T	09 06 37.0	
	baz=192,slow=76,SNR=23						
WR1	Warramunga Arr	31.41	250	*e*P	P	08 34 09.3	+0.5
WRA	Warramunga Arr	31.41	250	P	P	08 34 09.3	+0.5
	0.7nm,0.6s,baz=81,slow=8.8,SNR=4.9						
RPZ	Rata Peaks	32.50	173	P	P	08 34 18.5	+0.4
	10nm,0.9s,baz=7.1,slow=8.1,SNR=3.5						
AS31	Alice Springs	32.67	244	*e*P	P	08 34 20.8	+0.8
	0.7nm,0.8s						
ASAR	Alice Springs	32.68	244	P	P	08 34 20.0	0.0
	2.0nm,0.8s,baz=74,slow=9.4,SNR=8.3						
FITZ	Fitzroy Crossi	39.34	255	*e*P	P	08 35 18.4	+1.4
	2.5nm,0.9s						
FITZ	Fitzroy Crossi	39.34	255	P	P	08 35 17.8	+0.7
	1.6nm,0.8s,baz=119,slow=11,SNR=3.4						
BYL	Byron's Ledge	49.09	52	*e*P	P	08 36 35.0	-0.4
	144nm,0.9s						
QSPA	South Pole Qui	78.59	180	*e*P	P	08 39 49.0	-0.1
	7.1nm,1.1s						
ILAR	Eielson Array	83.85	18	P	P	08 40 17.2	+0.5
	0.5nm,0.9s,baz=220,slow=5.5,SNR=4.1						
ILB	Eielson Array	83.85	18	*e*P	P	08 40 17.0	+0.3
MOD	Modoc Plateau	85.86	46	*e*P	P	08 40 24.8	-2.8
	14nm,0.6s						
MK32	Makanchi Array	93.83	317	*e*P	P	08 41 06.3	+1.4
MKAR	Makanchi Array	93.83	317	P	P	08 41 06.3	+1.4
	1.1nm,0.9s,baz=91,slow=7.2,SNR=4.6						
YKA	Yellowknife Ar	95.28	27	P	P	08 41 12.5	+1.4
	0.1nm,0.6s,baz=269,slow=3.4,SNR=2.8						
AAK	Ala-Archa	98.58	312	*e*P	Pdif	08 41 30.3	+3.5
ARA0	ARCESS Array S	116.71	345	*e*PKPdf	PKiKP	08 46 32.2	+0.8
ARCES	ARCESS Array B	116.71	345	PKP	PKiKP	08 46 32.2	+0.8
	3.9nm,1.1s,baz=79,slow=1.7,SNR=8.5						

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*ISCJB **08** 08:28:34.7±0.5, 16°.62N±0°.05×94°.90W±0°.03, h98^{km}±5^{km}, mb3.7/5, Error ellipse: s-maj=8.6km s-min=5.2km az=10.0*

*NEIC **08** 08:28:36.8±0.0, 16°.63N×94°.90W, h96^{km}, MD4.2(MEX), After MEX.*

*IDC **08** 08:28:36.6±0.8, 16°.99N×94°.57W, h84^{km}±9^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.3/46, mbtmp3.7/8, Error ellipse: s-maj=44.9km s-min=10.5km az=35.0*

*MEX **08** 08:28:36.8±1.2, 16°.63N×94°.90W, h96^{km}±10^{km}, MD4.2*

ISC 08 08:28:35.7±0.7**, 16°.62N**±0°.04×**94°.91W**±0°.03**, h93^{km}**±6^{km}**, n24, σ1^{s}.09**/42**, mb3.6**/5**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.47	3	*e*P	Pn	08 28 50.3	-0.2
CMIG				*i* S	Sn	08 29 01.8	+0.3
CMIG	Matias Romero	0.47	3	*e*P	Pn	08 28 50.3	-0.2
CMIG				*i* S	Sn	08 29 01.8	+0.3
CMIG	Matias Romero	0.47	3	P	Pn	08 28 50.0	-0.5
	185nm,0.3s,baz=204,slow=7.0						
CMIG				S	Sn	08 29 01.1	-0.4
	213nm,0.3s,baz=331,slow=19,SNR=61						
HUIG	Huatulco	1.43	234	*e*P	Pn	08 28 59.5	-1.2
HUIG				*i* S	Sn	08 29 20.0	+0.4
HUIG	Huatulco	1.43	234	*e*P	Pn	08 28 59.5	-1.2
HUIG				*i* S	Sn	08 29 20.0	+0.4
TUIG	Tuzandepetl	1.48	18	*e*P	Pn	08 29 00.6	-0.7
TUIG				*i* S	Sn	08 29 20.2	-0.5
TUIG	Tuzandepetl	1.48	18	*e*P	Pn	08 29 00.6	-0.7
TUIG				*i* S	Sn	08 29 20.2	-0.5
TGBT	Tuxtla Gutierr	1.75	85	*e*P	Pn	08 29 04.5	-0.2
VHO	Vista Hermosa	1.80	285	*e*P	Pn	08 29 06.7	+1.1
VHO				*i* S	Sn	08 29 29.1	+0.8
VHO	Vista Hermosa	1.80	285	*e*P	Pn	08 29 06.7	+1.1
VHO				*i* S	Sn	08 29 29.1	+0.8
PCIG		1.87	119	*e*P	Pn	08 29 06.5	+0.2
PCIG				*e*S	Sn	08 29 29.9	+0.4
PCIG		1.87	119	*e*P	Pn	08 29 06.5	+0.2
PCIG				*e*S	Sn	08 29 29.9	+0.4
CCIG	Comitan	2.69	97	*i* P	Pn	08 29 17.4	+0.2
CCIG				*i* S	Sn	08 29 48.5	-0.6
CCIG	Comitan	2.69	97	*i* P	Pn	08 29 17.4	+0.2
CCIG				*i* S	Sn	08 29 48.5	-0.6
PNIG	Pinotepa	3.09	266	*e*P	Pn	08 29 21.3	-1.2
PNIG				*i* S	Sn	08 29 56.8	-1.9
PNIG	Pinotepa	3.09	266	*e*P	Pn	08 29 21.3	-1.2
PNIG				*i* S	Sn	08 29 56.8	-1.9
APG	El Apazote	4.58	110	P	Pn	08 29 42.2	-0.6
	4.7nm,0.3s,baz=187,slow=16,SNR=54						
APG				S	Sn	08 30 32.6	-2.3
	23nm,0.3s,baz=61,slow=20,SNR=13						
TXAR	Lajitas Array	14.99	329	P	Pn	08 32 04.2	+1.5
	0.1nm,0.3s,baz=153,slow=12,SNR=4.1						
ANMO	Albuquerque	20.97	333	P	P	08 33 12.6	+1.1
	1.0nm,0.6s,baz=137,slow=12,SNR=5.6						
NVAR	Mina Array Bea	29.88	321	P	P	08 34 35.9	+1.1
	0.9nm,0.8s,baz=126,slow=10,SNR=2.4						
ULM	Lac du Bonnet	33.55	359	P	P	08 35 03.6	-2.9
	2.6nm,1.0s,baz=172,slow=14,SNR=4.0						
LPAZ	La Paz	42.04	140	P	P	08 36 21.2	+2.1
	0.7nm,0.6s,baz=347,slow=14,SNR=3.3						
YKA	Yellowknife Ar	47.86	348	P	P	08 37 04.1	+0.2
	0.2nm,0.6s,baz=151,slow=7.3,SNR=5.3						
YKA				pP	pP	08 37 25.3	-0.9
	0.4nm,0.7s,baz=152,slow=7.4,SNR=7.5						
INK	Inuvik	57.15	344	P	P	08 38 11.6	-0.8
	4.0nm,1.4s,baz=144,slow=3.9,SNR=2.5						
INK				pP	pP	08 38 35.0	-0.3
	0.7nm,0.7s,baz=130,slow=5.2,SNR=2.4						

IDC 08 08:34:24.0±1.7**, 10°.60S×164°.97E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.6**/32**, mbtmp3.6**/4**, ML3.7**/1**, Error ellipse: s-maj=57.3km s-min=34.1km az=112.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.50	173	Pn	Pn	08 37 08.4	-1.2
	0.6nm,0.3s,baz=139,slow=19,SNR=3.8						
H11S2	WAKE ISLAND Hy	28.95	3	T	T	09 10 59.1	
	baz=184,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	28.95	3	T	T	09 11 01.0	
	baz=184,slow=76,SNR=6.5						
H11S1	WAKE ISLAND Hy	28.97	3	T	T	09 11 01.2	
	baz=184,slow=76,SNR=7.6						
H11N1	WAKE ISLAND Hy	30.18	4	T	T	09 12 28.5	
	baz=182,slow=76,SNR=7.5						
H11N3	WAKE ISLAND Hy	30.18	4	T	T	09 12 31.1	
	baz=182,slow=76,SNR=5.9						
H11N2	WAKE ISLAND Hy	30.19	4	T	T	09 12 30.1	
	baz=182,slow=76,SNR=5.2						
ASAR	Alice Springs	32.32	242	P	P	08 40 56.2	+1.0
	0.4nm,0.7s,baz=67,slow=10,SNR=5.5						
ILAR	Eielson Array	83.33	19	P	P	08 46 53.6	+1.1
	0.2nm,0.6s,baz=231,slow=5.2,SNR=5.4						
MKAR	Makanchi Array	92.67	317	P	P	08 47 36.1	-1.9
	0.2nm,0.5s,baz=100,slow=5.2,SNR=2.6						

IDC 08 08:36:50.9±1.6**, 11°.70S×165°.07E, h0^{km}, mb3.7**/3**, mb1 4.1**/4**, mb1mx3.7**/31**, mbtmp3.8**/4**, ML3.7**/1**, Error ellipse: s-maj=51.5km s-min=30.6km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.39	173	Pn	Pn	08 39 21.5	+0.1
	0.6nm,0.3s,baz=168,slow=20,SNR=5.4						
WRA	Warramunga Arr	30.64	251	P	P	08 43 07.8	+0.4
	1.3nm,0.9s,baz=81,slow=9.1,SNR=5.4						
ASAR	Alice Springs	31.91	244	P	P	08 43 18.0	-0.5
	0.5nm,0.7s,baz=73,slow=9.4,SNR=7.0						
ILAR	Eielson Array	84.34	19	P	P	08 49 24.6	0.0
	0.5nm,0.6s,baz=237,slow=5.0,SNR=11						

MEX 08 08:39:49.0±0.8**, 15°.49N×93°.18W, h101^{km}**±11^{km}**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.21	351	eP	Pn	08 40 02.0	-1.4
PCIG				eS	Sn	08 40 12.4	-1.7
THIG		1.06	123	i P	Pn	08 40 09.0	-1.1
THIG				eS	Sn	08 40 24.5	-1.6
CCIG	Comitan	1.28	52	eP	Pn	08 40 13.4	+0.6

IDC 08 08:40:53.2±1.6**, 11°.05S**×**164°.62E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.7**/35**, mbtmp3.7**/5**, ML3.5**/1**, Error ellipse: s-maj=48.6km s-min=29.1km az=125.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.10	171	Pn	Pn	08 43 33.1	-0.2
	0.4nm,0.3s,baz=331,slow=19,SNR=3.9						
WRA	Warramunga Arr	30.45	249	P	P	08 47 07.7	-0.1
	0.5nm,0.5s,baz=80,slow=9.2,SNR=4.5						
ASAR	Alice Springs	31.81	243	P	P	08 47 19.8	-0.1
	0.7nm,0.6s,baz=67,slow=9.9,SNR=17						
ILAR	Eielson Array	83.87	19	P	P	08 53 24.3	-0.2
	0.2nm,0.6s,baz=212,slow=3.2,SNR=3.3						
MKAR	Makanchi Array	92.77	317	P	P	08 54 08.0	+0.4
	0.3nm,0.8s,baz=96,slow=5.8,SNR=2.6						

MEX 08 08:44:47.5±0.4**, 16°.30N**×**98°.28W, h12^{km}**±4^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.17	58	i P	Pg	08 44 50.9	-0.5
PNIG				i S	Sg	08 44 53.7	-0.5
VHO	Vista Hermosa	1.67	62	eP	Pn	08 45 13.7	-3.0

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*ISCJB **08** 08:47:10.8±0.3, 11°.76S±0°.07×165°.06E±0°.07, h10^{km}, mb4.2/22, MS3.5/1, Error ellipse: s-maj=10.7km s-min=7.9km az=44.5*

*IDC **08** 08:47:10.6±0.7, 11°.70S×165°.12E, h0^{km}, mb4.2/12, mb1 4.4/15, mb1mx4.2/36, mbtmp4.2/15, ML4.1/3, MS3.6/1, Ms1 3.6/1, ms1mx2.9/33, Error ellipse: s-maj=25.9km s-min=17.1km az=136.0*

*NEIC **08** 08:47:12.3±0.3, 11°.72S×165°.13E, h10^{km}, mb4.5/11, Error ellipse: s-maj=8.2km s-min=6.2km az=134.0*

ISC 08 08:47:12.1±0.5**, 11°.72S**±0°.08×**165°.15E**±0°.09**, h10^{km}, n44, σ0^s.85**/40**, mb4.3**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.60	294	Pn	Pn	08 48 35.5	0.0
	31nm,0.3s,baz=212,slow=12,SNR=4.6						
DZM	Mont Dzumac	10.36	173	ePn	Pn	08 49 40.8	-0.2
DZM	Mont Dzumac	10.36	173	Pn	Pn	08 49 41.1	0.0
	1.3nm,0.3s,baz=301,slow=12,SNR=15						
CTA	Charters Tower	19.97	243	P	Pn	08 51 46.1	-0.3
	0.1nm,0.3s,baz=87,slow=10.0,SNR=4.2						
LHI	Lord Howe Isla	20.49	195	eP	P	08 51 48.9	-1.4
	143nm,1.1s						
KWAJ	Kwajalein Atol	20.54	7	eP	P	08 51 50.9	0.0
	200nm,0.8s						
BKZ	Black Stump Fm	29.13	162	eP	P	08 53 15.8	+2.4
	7.7nm,1.0s						
STKA	Stephens Creek	29.55	224	eP	P	08 53 17.9	+0.8
	0.6nm,1.0s						
STKA	Stephens Creek	29.55	224	P	P	08 53 17.4	+0.3
	0.5nm,0.3s,baz=5.9,slow=16,SNR=2.3						
WRAB	Tennant Creek	30.69	251	eP	P	08 53 27.2	-0.2
	4.3nm,1.0s						
WB2	Warramunga Arr	30.69	251	eP	P	08 53 27.7	+0.3
	6.2nm,1.1s						
WR1	Warramunga Arr	30.70	251	eP	P	08 53 27.1	-0.4
WRA	Warramunga Arr	30.70	251	P	P	08 53 27.1	-0.4
	4.2nm,1.0s,baz=80,slow=9.3,SNR=17						
H11N1	WAKE ISLAND Hy	31.29	3	T	T	09 26 16.8	
	baz=184,slow=76,SNR=9.7						
H11N3	WAKE ISLAND Hy	31.29	3	T	T	09 26 04.8	
	baz=184,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	31.30	3	T	T	09 26 03.5	
	baz=184,slow=76,SNR=13						
AS31	Alice Springs	31.96	244	eP	P	08 53 38.6	0.0
	0.8nm,0.8s						
ASAR	Alice Springs	31.97	244	P	P	08 53 37.4	-1.3
	1.9nm,0.8s,baz=73,slow=9.2,SNR=20						
RPZ	Rata Peaks	32.28	172	eP	P	08 53 42.1	+1.0
	8.4nm,1.0s						
RPZ	Rata Peaks	32.28	172	P	P	08 53 41.7	+0.6
	5.5nm,0.7s,baz=9.5,slow=18,SNR=2.1						
RAR	Rarotonga	34.87	110	eP	P	08 54 01.8	-2.1
RAR	Rarotonga	34.87	110	LR	LR	09 06 20.9	
	comp=Z,98nm,20.9s,baz=291,slow=33						
FITZ	Fitzroy Crossi	38.64	256	eP	P	08 54 36.2	+0.1
	3.9nm,0.9s						
FORT	Forrest	39.17	235	eP	P	08 54 40.6	+0.1
	9.6nm,0.8s						
USRK	Ussuriysk Ar.	63.29	334	P	P	08 57 41.5	+0.4
	1.1nm,0.6s,baz=123,slow=11,SNR=3.4						
BJT	Baijiatuau	68.63	322	eP	P	08 58 14.7	-0.9
	2.6nm,0.6s						
IM3	Indian Mountai	83.23	16	eP	P	08 59 39.3	+0.9
ILAR	Eielson Array	84.34	19	P	P	08 59 44.2	+0.1
	2.0nm,0.6s,baz=238,slow=5.3,SNR=41						
ILB	Eielson Array	84.34	19	eP	P	08 59 44.5	+0.4
YBH	Yreka Blue Hor	84.78	46	P	P	08 59 47.3	+0.3
	3.4nm,1.1s,baz=186,slow=12,SNR=3.8						
AFDM	Forest Hills D	85.09	49	eP	P	08 59 49.6	+1.0
	5.1nm,1.2s						
MDPB	Devils Postpil	86.08	50	eP	P	08 59 54.6	+0.8
	3.5nm,0.8s						
NV01	Mina Array Sit	86.91	50	eP	P	08 59 58.8	+1.0
NVAR	Mina Array Bea	86.91	50	P	P	08 59 58.0	+0.2
	2.9nm,1.0s,baz=227,slow=8.8,SNR=7.5						
NV11	Mina Array Sit	87.02	50	eP	P	08 59 58.9	+0.6
	0.3nm,1.1s						
MK32	Makanchi Array	93.61	317	eP	P	09 00 29.1	+0.4
MKAR	Makanchi Array	93.61	317	P	P	09 00 29.1	+0.4
	0.5nm,0.8s,baz=101,slow=6.4,SNR=6.0						
PDAR	Pinedale Array	94.44	47	P	P	09 00 33.4	+0.4
	0.5nm,0.9s,baz=263,slow=4.5,SNR=3.1						
YKA	Yellowknife Ar	95.84	27	P	P	09 00 37.3	-1.3
	0.6nm,0.8s,baz=256,slow=4.7,SNR=12						
YKB5	Yellowknife Ar	95.84	27	eP	P	09 00 37.6	-1.0
LTX	Lajitas	96.67	62	eP	P	09 00 44.1	+0.8
TXAR	Lajitas Array	96.67	62	P	P	09 00 44.1	+0.8
	0.4nm,0.7s,baz=230,slow=7.0,SNR=3.1						
ARA0	ARCESS Array S	116.84	345	ePKPdf	PKPdf	09 05 56.0	-0.4
ARCES	ARCESS Array B	116.84	345	PKP	PKPdf	09 05 56.0	-0.4
	3.8nm,1.2s,baz=76,slow=3.8,SNR=1.6						

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*IDC **08** 08:47:53.9±0.8, 10°.93S×164°.76E, h0^{km}, mb4.3/14, mb1 4.5/16, mb1mx4.3/35, mbtmp4.3/16, ML4.2/2, MS3.7/1, Ms1 3.7/1, ms1mx3.0/36, Error ellipse: s-maj=25.5km s-min=16.5km az=134.0*

*NEIC **08** 08:47:56.2±0.3, 10°.84S×164°.67E, h10^{km}, mb4.7/4, Error ellipse: s-maj=9.0km s-min=6.8km az=97.0*

*ISCJB **08** 08:47:57.2±0.3, 10°.98S±0°.05×164°.64E±0°.06, h29^{km}, mb4.3/16, Error ellipse: s-maj=8.3km s-min=7.1km az=169.5*

ISC 08 08:47:59.2±0.5**, 10°.89S**±0°.08×**164°.64E**±0°.08**, h29^{km}, n47, σ1^s.48**/50**, mb4.4**/16**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.84	287	Pn	Pn	08 49 11.8	+1.6
	20nm,0.3s,baz=339,slow=4.9,SNR=5.8						
HNR				Sn	Sn	08 50 09.0	+3.6
	16nm,0.3s,baz=90,slow=20,SNR=2.3						
MARNC	Mare, Loyalty	11.02	163	ePn	Pn	08 50 34.0	-0.9
DZM	Mont Dzumac	11.25	171	ePn	Pn	08 50 36.7	-1.5
	20nm,0.7s						
DZM				eLR	LR	08 52 59.2	
	comp=Z,381nm,25.5s						
DZM	Mont Dzumac	11.25	171	ePn	Pn	08 50 36.7	-1.5
DZM	Mont Dzumac	11.25	171	Pn	Pn	08 50 36.5	-1.7
	0.9nm,0.3s,baz=329,slow=12,SNR=4.3						
DZM				LR	LR	08 54 03.5	
	comp=Z,358nm,18.6s,baz=27,slow=33						
ONTNC	Ouen Toro	11.48	172	ePn	Pn	08 50 43.3	+2.0
PINNC	Pines Island,	11.96	167	ePn	Pn	08 50 47.0	-0.9
CTA	Charters Tower	19.92	240	P	Pn	08 52 30.0	-0.6
	15nm,0.8s,baz=68,slow=12,SNR=9.2						
CTAO	Charters Tower	19.92	240	eP	Pn	08 52 30.4	-0.2
	30nm,0.9s						
ARMA	Armidale	22.89	210	eP	P	08 53 03.1	+2.3
STKA	Stephens Creek	29.82	222	P	P	08 54 02.7	-1.2
	2.8nm,0.7s,baz=48,slow=10,SNR=4.9						
BKZ	Black Stump Fm	30.07	161	eP	P	08 54 07.1	+1.0
WRAB	Tennant Creek	30.51	249	eP	P	08 54 09.5	-0.7
WB2	Warramunga Arr	30.51	249	eP	P	08 54 08.7	-1.5
WRA	Warramunga Arr	30.52	249	P	P	08 54 09.6	-0.7
	2.3nm,0.9s,baz=80,slow=9.3,SNR=6.9						
WRA				PcP	PcP	08 57 08.9	-0.2
	0.9nm,0.8s,baz=66,slow=3.1,SNR=5.1						
THZ	Tophouse	31.59	168	eP	P	08 54 20.2	+0.7
TOO	Toolangi	31.65	210	eP	P	08 54 21.0	+1.0
AS01	Alice Springs	31.85	242	eP	P	08 54 20.8	-1.2
AS31	Alice Springs	31.89	242	eP	P	08 54 21.2	-1.2
ASAR	Alice Springs	31.89	242	P	P	08 54 21.2	-1.1
	2.4nm,0.5s,baz=64,slow=10.0,SNR=24						
ASAR				PcP	PcP	08 57 12.5	-0.2
	0.7nm,0.7s,baz=66,slow=3.2,SNR=4.9						
BBOO	Buckleboo	34.15	226	eP	P	08 54 42.2	+0.3
KNRA	Kununurra	35.21	258	eP	P	08 54 50.2	-1.1
PPT2	Papeete2	44.78	104	eS	S	09 02 53.0	+6.4
	70nm,26.2s						
PPT2				eLR	LR	09 08 33.7	
	comp=Z,131nm,24.5s						
USRK	Ussuriysk Ar.	62.33	334	P	P	08 58 19.4	+0.4
	2.3nm,0.9s,baz=99,slow=8.9,SNR=3.8						
PETK	Petropavlovsk-	64.02	355	P	P	08 58 29.9	-0.1
	3.6nm,0.8s,baz=171,slow=10,SNR=4.6						
ENH	Enshi	66.96	310	eP	P	08 58 49.8	+0.2
	8.1nm,0.9s						
CMAR	Chiang Mai Arr	71.06	294	P	P	08 59 14.4	-0.9
	0.7nm,0.3s,baz=116,slow=4.1,SNR=3.8						
MA2	Magadan	71.11	353	P	P	08 59 14.4	-0.2
	1.8nm,0.4s,baz=118,slow=5.0,SNR=5.1						
OHAK	Old Harbor	76.17	22	eP	P	08 59 45.6	+1.3
SONM	Songino Array	77.91	324	P	P	08 59 53.3	-1.3
	2.3nm,0.9s,baz=141,slow=5.7,SNR=4.8						
BRLK	Bradley Lake	78.89	21	eP	P	08 59 59.4	-0.2
QSPA	South Pole Qui	79.11	180	eP	P	09 00 00.7	-0.3
	7.2nm,1.2s						
HDA	Harding Lake	83.45	19	eP	P	09 00 23.9	+0.2
ILAR	Eielson Array	83.72	19	P	P	09 00 24.1	-1.0
	2.2nm,0.8s,baz=224,slow=6.3,SNR=12						
NV01	Mina Array Sit	86.76	50	eP	P	09 00 42.2	+1.1
NVAR	Mina Array Bea	86.76	50	P	P	09 00 40.6	-0.6
	2.3nm,0.9s,baz=228,slow=7.4,SNR=7.5						
HVU	Hansel Valley	91.71	48	eP	P	09 01 04.0	-0.3
MK01	Makanchi Array	92.66	317	eP	P	09 01 08.4	-0.1
MK31	Makanchi Array	92.67	317	eP	P	09 01 08.8	+0.3
MKAR	Makanchi Array	92.67	317	eP	P	09 01 08.8	+0.2
MKAR	Makanchi Array	92.67	317	P	P	09 01 08.6	0.0
	2.3nm,0.8s,baz=100,slow=6.3,SNR=18						
MAKZ	Makanchi	92.89	317	eP	P	09 01 10.2	+0.7
BOZ	Bozeman (W)	93.35	44	eP	P	09 01 10.9	-0.9
	5.4nm,1.6s						
PDAR	Pinedale Array	94.25	47	P	P	09 01 15.6	-0.6
	0.5nm,0.8s,baz=262,slow=4.5,SNR=4.9						
YKA	Yellowknife Ar	95.34	27	P	P	09 01 18.3	-2.1
	0.7nm,0.9s,baz=255,slow=4.6,SNR=7.1						
ARCES	ARCESS Array B	115.91	345	PKP	PKiKP	09 06 37.1	-1.6
	3.4nm,1.1s,baz=76,slow=3.8,SNR=4.0						
ESDC	Sonseca Array	149.60	342	PKPbc	PKPbc	09 07 46.6	+0.2
	0.7nm,0.7s,baz=318,slow=3.3,SNR=2.8						

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*IDC **08** 08:50:01.1±1.1, 10°.85S×164°.71E, h0^{km}, mb4.2/7, mb1 4.4/9, mb1mx4.1/32, mbtmp4.3/9, ML4.0/2, MS4.1/1, Ms1 4.1/1, ms1mx3.1/36, Error ellipse: s-maj=31.4km s-min=22.6km az=109.0*

*NEIC **08** 08:50:02.8±0.6, 10°.89S×164°.80E, h10^{km}, mb4.3/9, Error ellipse: s-maj=11.7km s-min=8.7km az=59.0*

*ISCJB **08** 08:50:04.4±0.7, 11°.03S±0°.08×164°.73E±0°.07, h31^{km}, mb4.2/14, MS4.2/1, Error ellipse: s-maj=13.1km s-min=7.9km az=42.5*

ISC 08 08:50:06.0±0.9**, 11°.0S**±0°.1×**164°.80E**±0°.10**, h31^{km}, n32, σ0^s.86**/30**, mb4.3**/14**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.01	287	ePn	Pn	08 51 19.4	+0.3
HNR				eSn	Sn	08 52 16.3	+0.4
HNR	Honiara	5.01	287	Sn	Sn	08 52 16.3	+0.4
	12nm,0.3s,baz=225,slow=20,SNR=3.8						
DZM	Mont Dzumac	11.18	172	ePn	Pn	08 52 43.0	-0.7
DZM	Mont Dzumac	11.18	172	Pn	Pn	08 52 42.7	-1.1
	0.8nm,0.3s,baz=5.6,slow=10,SNR=10						
PINNC	Pines Island,	11.88	168	ePn	Pn	08 52 52.9	-0.3
CTA	Charters Tower	20.03	241	P	P	08 54 36.9	+0.3
	0.3nm,0.3s,baz=69,slow=9.8,SNR=6.6						
CTAO	Charters Tower	20.03	241	eP	Pn	08 54 37.8	-0.7
	17nm,0.8s						
COEN	Coen	21.33	260	eP	P	08 54 51.7	+1.1
	4.7nm,0.9s						
ARMA	Armidale	22.92	210	eP	P	08 55 08.2	+0.6
	14nm,1.0s						
URZ	Urewera	29.35	160	P	P	08 56 07.4	+1.3
	7.7nm,1.0s,baz=180,slow=12,SNR=3.2						
STKA	Stephens Creek	29.88	222	eP	P	08 56 11.7	+0.8
	0.7nm,1.0s						
STKA	Stephens Creek	29.88	222	P	P	08 56 11.0	0.0
	1.1nm,0.6s,baz=28,slow=9.9,SNR=4.0						
BKZ	Black Stump Fm	29.97	162	eP	P	08 56 13.0	+1.3
	7.4nm,1.2s						
H11N1	WAKE ISLAND Hy	30.54	4	T	T	09 28 35.3	
	baz=186						
H11N3	WAKE ISLAND Hy	30.54	4	T	T	09 28 32.4	
	baz=186						
H11N2	WAKE ISLAND Hy	30.55	4	T	T	09 28 32.8	
	baz=186						
WRAB	Tennant Creek	30.64	249	eP	P	08 56 18.6	+0.9
	4.7nm,0.9s						
WB2	Warramunga Arr	30.64	249	eP	P	08 56 16.5	-1.2
WR1	Warramunga Arr	30.65	249	eP	P	08 56 16.6	-1.3
WRA	Warramunga Arr	30.65	249	P	P	08 56 16.6	-1.3
	3.0nm,0.7s,baz=80,slow=9.2,SNR=11						
AS01	Alice Springs	31.97	243	eP	P	08 56 28.6	-0.9
AS31	Alice Springs	32.01	243	eP	P	08 56 28.7	-1.1
	1.4nm,0.6s						
ASAR	Alice Springs	32.01	243	P	P	08 56 28.2	-1.6
	2.9nm,0.6s,baz=66,slow=9.9,SNR=12						
ASAR				PcP	PcP	08 59 19.4	0.0
	0.6nm,0.9s,baz=32,slow=3.7,SNR=4.1						
BBOO	Buckleboo	34.22	226	eP	P	08 56 48.7	-0.4
	13nm,1.0s						
JNU	Nakatsue	54.46	325	LR	LR	09 19 13.6	
	comp=Z,184nm,18.6s,baz=170,slow=32						
SONA0	Songino Array	78.04	324	eP	P	09 02 01.2	-0.5
SONM	Songino Array	78.04	324	P	P	09 02 01.2	-0.5
	0.9nm,0.6s,baz=126,slow=4.4,SNR=3.7						
QSPA	South Pole Qui	79.06	180	eP	P	09 02 07.7	+0.6
	9.9nm,1.1s						
ILAR	Eielson Array	83.72	19	P	P	09 02 30.8	-0.7
	0.7nm,1.0s,baz=236,slow=5.6,SNR=3.7						
MK01	Makanchi Array	92.80	317	eP	P	09 03 16.1	+0.5
MK32	Makanchi Array	92.81	317	eP	P	09 03 15.9	+0.3
MKAR	Makanchi Array	92.81	317	P	P	09 03 15.9	+0.3
	0.8nm,0.8s,baz=91,slow=6.1,SNR=4.8						

IDC 08 08:57:47.9±3.7**, 11°.47S**×**165°.09E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/28**, mbtmp3.5**/4**, Error ellipse: s-maj=154.7km s-min=31.3km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11S2	WAKE ISLAND Hy	29.81	3	T	T	09 34 44.3	
	baz=184,slow=76,SNR=7.8						
H11S3	WAKE ISLAND Hy	29.82	3	T	T	09 34 43.2	
	baz=184,slow=76,SNR=3.4						
H11S1	WAKE ISLAND Hy	29.83	3	T	T	09 34 44.9	
	baz=184,slow=76,SNR=5.3						
WRA	Warramunga Arr	30.73	250	P	P	09 04 05.7	+0.6
	0.3nm,0.8s,baz=82,slow=9.1,SNR=2.4						
H11N1	WAKE ISLAND Hy	31.04	3	T	T	09 36 15.9	
	baz=182,slow=76,SNR=8.2						
H11N3	WAKE ISLAND Hy	31.04	3	T	T	09 36 17.7	
	baz=182,slow=76,SNR=3.7						
H11N2	WAKE ISLAND Hy	31.06	3	T	T	09 36 17.2	
	baz=182,slow=76,SNR=4.2						
ASAR	Alice Springs	32.03	244	P	P	09 04 15.9	-0.6
	0.5nm,0.7s,baz=65,slow=10,SNR=5.7						
ILAR	Eielson Array	84.12	19	P	P	09 10 20.5	+0.1
	0.3nm,0.9s,baz=232,slow=4.4,SNR=5.0						
MKAR	Makanchi Array	93.39	317	P	P	09 11 04.9	-0.3
	0.3nm,0.7s,baz=102,slow=4.7,SNR=2.8						

IDC 08 08:58:46.0±4.0**, 10°.92S**×**164°.59E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.7**/29**, mbtmp3.7**/4**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx3.3**/38**, Error ellipse: s-maj=171.1km s-min=32.3km az=136.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.80	288	LR	LR	09 02 06.0	
	comp=Z,330nm,19.1s,baz=88,slow=42						
WRA	Warramunga Arr	30.46	249	P	P	09 05 01.0	+0.2
	0.4nm,0.7s,baz=79,slow=8.7,SNR=3.8						
ASAR	Alice Springs	31.84	242	P	P	09 05 12.6	-0.4
	0.6nm,0.5s,baz=63,slow=10,SNR=8.6						
MA2	Magadan	71.13	353	LR	LR	09 35 05.9	
	comp=Z,195nm,20.7s,baz=5.5,slow=31						
ILAR	Eielson Array	83.76	19	P	P	09 11 16.6	-0.1
	0.6nm,0.9s,baz=224,slow=5.5,SNR=4.7						
MKAR	Makanchi Array	92.66	317	P	P	09 12 00.3	+0.4
	0.5nm,0.8s,baz=113,slow=5.8,SNR=3.8						

IDC 08 09:02:08.2±2.0**, 11°.21S**×**165°.13E, h0^{km}, mb3.3**/3**, mb1 3.7**/4**, mb1mx3.5**/34**, mbtmp3.5**/4**, ML3.0**/1**, Error ellipse: s-maj=55.5km s-min=36.5km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.87	174	Pn	Pn	09 04 45.0	-0.2
	0.1nm,0.3s,baz=342,slow=20,SNR=1.4						
WRA	Warramunga Arr	30.86	250	P	P	09 08 26.1	-0.4
	0.5nm,0.9s,baz=83,slow=9.3,SNR=3.4						
ASAR	Alice Springs	32.18	243	P	P	09 08 38.6	+0.4
	0.2nm,0.8s,baz=67,slow=9.4,SNR=1.8						
ILAR	Eielson Array	83.86	19	P	P	09 14 39.4	0.0
	0.3nm,0.9s,baz=227,slow=5.2,SNR=2.1						

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*BJI **08** 09:08:59.5, 10°.59S×164°.91E, h5^{km}, mB5.8/51, mb5.2/68, Ms5.3/49, Ms7 5.2/50*

*IDC **08** 09:08:59.4±0.4, 10°.94S×164°.84E, h0^{km}, mb4.9/26, mb1 5.0/28, mb1mx4.9/39, mbtmp4.9/28, ML5.0/2, MS4.9/14, Ms1 4.9/14, ms1mx4.6/21, Error ellipse: s-maj=15.8km s-min=11.7km az=91.0*

*NEIC **08** 09:09:00.6±0.1, 10°.91S×164°.74E, h6^{km}, mb5.3/136, MS5.0/105, MW5.5, Error ellipse: s-maj=3.8km s-min=2.9km az=119.0, Moment Tensor Solution. s51 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.65; $M_{\theta\theta}$0.80; $M_{\phi\phi}$0.85; $M_{r\theta}$-0.19; $M_{\theta\phi}$0.90; $M_{\phi r}$0.98; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s202.00000°, δ59.00000°, λ-115.00000°. NP2:ϕ_s64.00000°, δ39.00000°, λ-56.00000°. Principal axes: T 1.8400, Plg10.0000°, Azm310.0000°; N 0.2400, Plg21.0000°, Azm216.0000°; P -2.0700, Plg66.0000°, Azm64.0000°;*

*ISCJB **08** 09:09:02.5±0.1, 11°.00S±0°.03×164°.70E±0°.03, h29^{km}, mb5.2/193, MS5.0/131 Error ellipse: s-maj=4.1km s-min=3.6km az=166.9*

*MOS **08** 09:09:03.5±0.9, 10°.89S×164°.68E, h33^{km}, mb5.3/57, MS5.0/9, Error ellipse: s-maj=8.3km s-min=6.9km az=96.8*

*GCMT **08** 09:09:05.6±0.1, 11°.02S±0°.01×164°.68E±0°.01, h12^{km}, MW5.5/134, Moment Tensor Solution. s120,c227; s134,c265; Duration: 1^s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.27±.02; $M_{\theta\theta}$0.62±.02; $M_{\phi\phi}$1.64±.02; $M_{r\theta}$-0.52±.05; $M_{\theta\phi}$0.82±.02; $M_{\phi r}$0.15±.05; Best double couple: $M_0$2.24000×10^{17} NP1:ϕ_s41.00000°, δ48.00000°, λ-74.00000°. NP2:ϕ_s198.00000°, δ45.00000°, λ-107.00000°. Principal axes: T 2.0980, Plg2.0000°, Azm120.0000°; N 0.2790, Plg12.0000°, Azm210.0000°; P -2.3810, Plg78.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 09:09:04.7±0.3**, 10°.97S**±0°.04×**164°.71E**±0°.04**, h29^{km}, n519, σ1^s.50**/470**, mb5.2**/193**, MS5.0**/131**, 7C-16D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.93	288	eP	Pn	09 10 17.0	+0.2
HNR				eS	Sn	09 11 07.0	-5.9
HNR	Honiara	4.93	288	ePn	Pn	09 10 16.2	-0.6
HNR				eSn	Sn	09 11 12.5	-0.4
HNR	Honiara	4.93	288	eP	Pn	09 10 16.2	-0.6
HNR				e		09 11 12.5	
HNR	Honiara	4.93	288	Pn	Pn	09 10 17.2	+0.4
	84nm,0.3s,baz=156,slow=5.7,SNR=19						
HNR				Sn	Sn	09 11 14.8	+1.9
	74nm,0.3s,baz=120,slow=18,SNR=2.2						
HNR				LR	LR	09 12 21.5	
	comp=Z,41µm,20.8s,baz=126,slow=40						
MARNC	Mare, Loyalty	10.92	163	ePn	Pn	09 11 37.6	-1.5
DZM	Mont Dzumac	11.16	172	ePn	Pn	09 11 43.2	+0.8
	130nm,0.8s						
DZM				eLR	LR	09 14 17.1	
	comp=Z,14µm,25.8s						
DZM	Mont Dzumac	11.16	172	ePn	Pn	09 11 41.7	-0.7
DZM				eSn	Sn	09 13 43.1	-3.2
DZM	Mont Dzumac	11.16	172	Pn	Pn	09 11 42.2	-0.3
	8.0nm,0.3s,baz=336,slow=14,SNR=41						
DZM				Sn	Sn	09 13 41.9	-4.5
	1.6nm,0.3s,baz=315,slow=23,SNR=1.2						
DZM				LR	LR	09 15 10.3	
	comp=Z,13µm,19.0s,baz=17,slow=33						
ONTNC	Ouen Toro	11.39	172	ePn	Pn	09 11 45.8	+0.3
ONTNC				eSn	Sn	09 13 49.3	-2.6
PINNC	Pines Island,	11.87	168	ePn	Pn	09 11 51.4	-0.6
MSVF	Nonsavu	14.56	119	⇑eP	Pn	09 12 28.7	-0.3
PATS	Pohnpei	18.80	340	eP	P	09 13 18.9	-3.1
	773nm,1.8s						
EIDS	Eidsvold	19.28	220	eP	P	09 13 27.6	+0.4
	336nm,2.0s						
MANU	Manus Island	19.36	296	eP	P	09 13 27.2	-1.0
	310nm,1.3s						
KWAJ	Kwajalein Atol	19.86	8	eP	P	09 13 32.5	-1.0
	238nm,0.9s						
KWAJ	Kwajalein Atol	19.86	8	eP	P	09 13 32.5	-1.0
KWAJ				pmax	pmax		
	comp=Z,238nm,0.9s						
CTA	Charters Tower	19.94	241	P	Pn	09 13 36.2	-0.1
	comp=Z,156nm,1.0s,baz=65,slow=11,SNR=57						
CTA				S	Sn	09 17 21.1	+1.3
	comp=Z,3.1nm,0.9s,baz=309,slow=16,SNR=1.2						
CTA				LR	LR	09 19 49.7	
	comp=Z,2µm,20.8s,baz=65,slow=32						
CTAO	Charters Tower	19.94	241	eP	Pn	09 13 36.4	+0.1
	comp=Z,202nm,1.0s						
CTAO	Charters Tower	19.94	241	eP	Pn	09 13 36.4	+0.1
CTAO				pmax	pmax		
	comp=Z,202nm,1.0s						
COEN	Coen	21.23	260	eP	P	09 13 49.2	+0.7
	comp=Z,61nm,1.1s						
ARMA	Armidale	22.85	210	eP	P	09 14 05.9	+0.1
	comp=Z,76nm,1.3s						
RAO	Raoul Island	24.37	141	PFAKE		09 14 30.0	+10
RAO				LR	LR		
	comp=Z,5µm,20.0s						
JAY	Jayapura	25.25	288	P	P	09 14 27.5	-1.1
	comp=Z,258nm,1.2s,comp=Z,9µm						
OUZ	Omahuta	25.46	163	eP	P	09 14 27.9	-2.2
	comp=Z,114nm,1.6s						
CAN	Canberra	28.13	208	eP	P	09 14 53.7	-0.7
	comp=Z,64nm,1.5s						
CAN	Canberra	28.13	208	eP	P	09 14 53.7	-0.7
CAN				pmax	pmax		
	comp=Z,64nm,1.5s						
H11S2	WAKE ISLAND Hy	29.34	4	T	T	09 45 41.2	
	baz=184,slow=76,SNR=75						
H11S3	WAKE ISLAND Hy	29.35	4	T	T	09 45 37.3	
	baz=184,slow=76,SNR=58						
URZ	Urewera	29.35	160	eP	P	09 15 04.6	-0.5
URZ				eS	S	09 20 04.7	+7.8
URZ				eScP	ScP	09 21 54.0	+3.1
URZ	Urewera	29.35	160	P	P	09 15 03.6	-1.5
	comp=Z,8.1nm,1.1s,baz=48,slow=13,SNR=2.6						
URZ				S	S	09 20 04.7	+7.8
	comp=Z,5.7nm,1.0s,baz=319,slow=21,SNR=2.0						
URZ				ScP	ScP	09 21 54.0	+3.1

	comp=Z,7.0nm,0.9s,baz=325,slow=11,SNR=3.0						
URZ				LR	LR	09 25 41.5	
	comp=Z,3µm,18.1s,baz=355,slow=34						
H11S1	**WAKE ISLAND Hy**	**29.36**	**4**	T	T	09 45 38.2	
	baz=184,slow=76,SNR=91						
STKA	**Stephens Creek**	**29.80**	**222**	*e*P	**P**	**09 15 09.1**	**-0.1**
	comp=Z,5.2nm,1.0s						
STKA	**Stephens Creek**	**29.80**	**222**	*e*P	**P**	**09 15 09.1**	**-0.1**
STKA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
STKA	**Stephens Creek**	**29.80**	**222**	P	**P**	**09 15 09.9**	**+0.7**
	comp=Z,6.8nm,0.6s,baz=34,slow=9.8,SNR=14						
BKZ	**Black Stump Fm**	**29.98**	**161**	*e*P	**P**	**09 15 09.4**	**-1.3**
	comp=Z,20nm,0.9s						
WAKE	**Wake Island**	**30.13**	**4**	PFAKE		09 15 20.0	+7.9
WAKE				LR	LR		
	comp=Z,2µm,20.0s						
WRAB	**Tennant Creek**	**30.54**	**249**	*e*P	**P**	**09 15 14.5**	**-1.4**
	comp=Z,121nm,1.3s						
WRAB				LR	LR		
	comp=Z,5µm,20.0s						
WRAB	**Tennant Creek**	**30.54**	**249**	*d* *i*P	**P**	**09 15 14.6**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,23nm,1.2s						
WB2	**Warramunga Arr**	**30.54**	**249**	*e*P	**P**	**09 15 15.2**	**-0.7**
WR1	**Warramunga Arr**	**30.55**	**249**	*e*P	**P**	**09 15 15.0**	**-1.0**
	comp=Z,116nm,1.2s						
WR1				*e*PcP	**PcP**	**09 18 14.7**	**+0.2**
WRA	**Warramunga Arr**	**30.55**	**249**	P	**P**	**09 15 15.0**	**-1.0**
	comp=Z,13nm,0.8s,baz=80,slow=8.9,SNR=63						
WRA				PcP	**PcP**	**09 18 14.7**	**+0.2**
	comp=Z,4.2nm,0.9s,baz=80,slow=2.8,SNR=7.4						
WRA				LR	LR	09 27 28.9	
	comp=Z,5µm,18.5s,baz=70,slow=36						
H11N1	**WAKE ISLAND Hy**	**30.57**	**4**	T	T	09 47 33.0	
	baz=184,slow=76,SNR=66						
H11N3	**WAKE ISLAND Hy**	**30.57**	**4**	T	T	09 47 11.8	
	baz=184,slow=76,SNR=45						
H11N2	**WAKE ISLAND Hy**	**30.59**	**4**	T	T	09 47 12.7	
	baz=184,slow=76,SNR=44						
BFZ	**Birch Farm**	**31.30**	**163**	*e*P	**P**	**09 15 20.9**	**-1.4**
	comp=Z,203nm,2.0s						
GUMO	**Guam**	**31.35**	**321**	PFAKE		09 15 30.0	+7.0
GUMO				LR	LR		
	comp=Z,4µm,19.0s						
GUMO	**Guam**	**31.35**	**321**	LR	LR	09 27 49.1	
	comp=Z,2µm,21.1s,baz=134,slow=36						
SNZO	**South Karori**	**31.47**	**165**	PFAKE		09 15 40.0	+16
SNZO				LR	LR		
	comp=Z,2µm,20.0s						
THZ	**Tophouse**	**31.50**	**168**	*e*P	**P**	**09 15 24.2**	**+0.1**
	comp=Z,33nm,1.1s						
TOO	**Toolangi**	**31.61**	**210**	*e*P	**P**	**09 15 25.8**	**+0.6**
	comp=Z,91nm,1.8s						
TOO	**Toolangi**	**31.61**	**210**	*e*P	**P**	**09 15 25.8**	**+0.6**
TOO				pmax	pmax		
	comp=Z,91nm,1.8s						
AS01	**Alice Springs**	**31.87**	**243**	*e*P	**P**	**09 15 26.3**	**-1.4**
AS31	**Alice Springs**	**31.91**	**243**	*e*P	**P**	**09 15 26.7**	**-1.3**
	comp=Z,6.5nm,0.7s						
ASAR	**Alice Springs**	**31.92**	**243**	P	**P**	**09 15 26.8**	**-1.2**
	comp=Z,20nm,0.8s,baz=66,slow=9.4,SNR=132						
ASAR				PcP	**PcP**	**09 18 17.2**	**-1.0**
	comp=Z,4.3nm,0.8s,baz=66,slow=3.3,SNR=8.0						
LTZ	**Lake Taylor**	**32.37**	**170**	*e*P	**P**	**09 15 31.0**	**-0.7**
	comp=Z,30nm,0.8s						
FOZ	**Fox Glacier**	**32.74**	**173**	*e*P	**P**	**09 15 35.2**	**+0.3**
	comp=Z,54nm,1.4s						
RPZ	**Rata Peaks**	**33.08**	**172**	*e*P	**P**	**09 15 37.4**	**-0.6**
RPZ	**Rata Peaks**	**33.08**	**172**	P	**P**	**09 15 36.9**	**-1.0**
	comp=Z,7.4nm,0.7s,baz=28,slow=7.4,SNR=4.6						
RPZ				LR	LR	09 27 09.8	
	comp=Z,3µm,21.7s,baz=351,slow=33						
BBOO	**Buckleboo**	**34.14**	**226**	*e*P	**P**	**09 15 47.4**	**+0.1**
	comp=Z,68nm,0.9s						
BNDI	**Bandanaira**	**35.05**	**278**	P	**P**	**09 15 56.6**	**+1.2**
	comp=Z,72nm,1.2s,comp=Z,2µm						
RAR	**Rarotonga**	**35.54**	**111**	LR	LR	09 27 27.1	
	comp=Z,3µm,21.5s,baz=267,slow=31						
FITZ	**Fitzroy Crossi**	**38.41**	**255**	*e*P	**P**	**09 16 23.3**	**-0.7**
	comp=Z,45nm,1.3s						
FITZ	**Fitzroy Crossi**	**38.41**	**255**	P	**P**	**09 16 23.2**	**-0.7**
	baz=96,slow=7.9						
FORT	**Forrest**	**39.25**	**234**	*e*P	**P**	**09 16 30.7**	**-0.1**
	comp=Z,511nm,1.9s						
SANI	**Sanana**	**39.43**	**280**	P	**P**	**09 16 33.4**	**+0.8**
	comp=Z,8.9nm,0.7s,comp=Z,968nm						
BATI	**Baumata**	**40.33**	**267**	LR	LR	09 34 29.3	
	comp=Z,1µm,18.4s,baz=116,slow=38						
DAV	**Davao City (W)**	**42.87**	**293**	PFAKE		09 17 10.0	+9.2
DAV				LR	LR		
	comp=Z,648nm,21.0s						
MBWA	**Marble Bar**	**44.25**	**251**	PFAKE		09 17 20.0	+8.1
MBWA				LR	LR		
	comp=Z,3µm,22.0s						
BNSI	**Bone**	**44.64**	**275**	P	**P**	**09 17 16.1**	**+1.0**
	comp=Z,13nm,1.0s,comp=Z,559nm						
PPT	**Papeete**	**44.70**	**104**	LR	LR	09 32 10.5	
	comp=Z,2µm,19.1s,baz=262,slow=31						
PPT2	**Papeete2**	**44.70**	**104**	*e*S	**S**	**09 23 58.7**	**+7.8**
	comp=Z,1µm,27.0s						
PPT2				*e*LQ	LQ	09 27 58.0	
	comp=Z,4µm,26.8s						
PPT2				*e*LR	LR	09 29 49.1	
	comp=Z,4µm,22.8s,baz=275						
KAPI	**Kappang**	**44.87**	**274**	PFAKE		09 17 30.0	+13
KAPI				LR	LR		
	comp=Z,1µm,22.0s						
SPSI	**Sidrap Palu**	**45.05**	**275**	P	P	09 17 25.3	+6.9
MPSI	**Mapaga**	**45.93**	**281**	P	**P**	**09 17 27.2**	**+1.9**
	comp=Z,7.2nm,0.9s,comp=Z,360nm						
NWAO	**Narrogin (SRO)**	**48.66**	**236**	PFAKE		09 18 00.0	+14
NWAO				LR	LR		
	comp=Z,2µm,19.0s						
KIP	**Kipapa**	**48.75**	**49**⇑	*e*P	**P**	**09 17 44.0**	**-3.1**
KIP				pmax	pmax		
	comp=Z,23nm,0.8s						
MORW	**Morawa**	**48.77**	**241**	*e*P	**P**	**09 17 47.4**	**+0.1**
	comp=Z,32nm,1.0s						
JHJ	**Hachijo jima 2**	**49.87**	**332**	P	**P**	**09 17 54.0**	**-1.5**
	comp=Z,87nm,0.4s,baz=139,slow=19,SNR=2.8						
KKM	**Kota Kinabalu**	**51.14**	**287**	*e*P	**P**	**09 18 04.9**	**-0.7**
	comp=Z,107nm,1.6s						
MJAR	**Matsushiro Arr**	**53.44**	**333**	P	**P**	**09 18 21.2**	**-1.0**
	comp=Z,8.2nm,0.7s,baz=171,slow=9.2,SNR=16						
MAJO	**Matsushiro**	**53.45**	**333**	*e*P	**P**	**09 18 21.4**	**-0.8**
	comp=Z,26nm,0.9s						
MAJO				LR	LR		
	comp=Z,2µm,19.0s						
MAJO	**Matsushiro**	**53.45**	**333**⇑	*e*P	**P**	**09 18 21.7**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,23nm,1.0s						
MAT	**Matsushiro**	**53.45**	**333**	P	**P**	**09 18 21.1**	**-1.1**
MAT				S	**S**	**09 25 52.8**	**-0.1**
MJB9	**Matsu-Tunnel**	**53.45**	**333**	*e*P	**P**	**09 18 21.4**	**-0.9**
	comp=Z,25nm,0.9s						
TAOE	**Nuku Hiva Isla**	**54.30**	**93**	*e*S	**S**	**09 26 12.9**	**+7.4**
	comp=Z,861nm,26.8s						
TAOE				*e*LQ	LQ	09 32 01.1	
	comp=Z,767nm,21.3s						
TAOE				*e*LR	LR	09 34 15.3	
	comp=Z,2µm,26.6s,baz=271						
JNU	**Nakatsue**	**54.43**	**325**	*e*P	**P**	**09 18 28.4**	**-1.1**
	comp=Z,32nm,0.9s						
JNU	**Nakatsue**	**54.43**	**325**	P	**P**	**09 18 28.5**	**-1.0**
	comp=Z,23nm,1.0s,baz=133,slow=1.8,SNR=8.3						
YULB	**Yu-li**	**54.50**	**309**	*e*P	**P**	**09 18 31.2**	**+1.1**
	comp=Z,126nm,1.6s						
NACB	**Ninganchiao**	**54.71**	**310**	*e*P	**P**	**09 18 30.3**	**-1.3**
	comp=Z,329nm,2.0s						
TPUB	**Ta-pu**	**54.96**	**309**	*e*P	**P**	**09 18 32.1**	**-1.4**
	comp=Z,89nm,1.4s						
ERM	**Erimo**	**56.33**	**341**	PFAKE		09 18 50.0	+7.1
ERM				LR	LR		
	comp=Z,865nm,20.0s						
ASAJ	**Asahikawa**	**58.40**	**341**	P	**P**	**09 18 57.8**	**+0.3**
	comp=Z,16nm,0.6s,baz=211,slow=7.9,SNR=11						
RKT	**Rikitea**	**58.57**	**110**	*e*S	**S**	**09 27 06.9**	**+5.3**
	comp=Z,3µm,34.0s						
RKT				*e*LR	LR	09 36 17.3	
	comp=Z,5µm,27.5s,baz=276						
KSRS	**Korea Array**	**59.25**	**326**	P	**P**	**09 19 03.6**	**+0.1**
	comp=Z,7.7nm,1.1s,baz=148,slow=6.9,SNR=15						
YSS	**Yuzh-Sakhalins**	**60.91**	**343**	PFAKE		09 19 30.0	+15
YSS				LR	LR		
	comp=Z,1µm,21.0s						
YSS	**Yuzh-Sakhalins**	**60.91**	**343**	*e*P	**P**	**09 19 15.2**	**+0.5**
YSS				*e*		09 19 26.4	
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
NJ2	**Nanjing**	**61.26**	**316**	*e*P	**P**	**09 19 17.6**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,28nm,1.1s						
NJ2				LR	LR		
	comp=Z,960nm,18.6s						
NJ2				LR	LR		
	comp=Z,1µm,14.9s						
NJ2				LR	LR		
	comp=Z,2µm,21.1s						
MSHR	**Mys Shultsa**	**61.51**	**332**⇑	*e*P	**P**	**09 19 17.5**	**-1.4**
QIZ	**Qiongzhong**	**61.75**	**299**	P	**P**	**09 19 21.3**	**+0.3**
QIZ				S	**S**	**09 27 44.0**	**+1.5**
QIZ				sS	**pS**	**09 27 49.3**	**-1.5**
QIZ				pmax	pmax		
	comp=Z,27nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,360nm,3.5s						
QIZ				LR	LR		
	comp=Z,580nm,21.6s						
QIZ				LR	LR		
	comp=Z,1µm,22.5s						
QIZ				LR	LR		
	comp=Z,2µm,20.6s						
QIZ	**Qiongzhong**	**61.75**	**299**	PFAKE		09 19 30.0	+9.0
QIZ				LR	LR		
	comp=Z,290nm,22.0s						
SKR	**Severo-Kuril's**	**61.85**	**354**	*e*P	**P**	**09 19 19.7**	**-1.3**
SKR				*e*S	**S**	**09 27 43.9**	**+1.3**
SKR				pmax	pmax		
	comp=Z,70nm,1.8s						
SKR				pmax	pmax		
	comp=Z,700nm,14.3s						
SKR				pmax	pmax		
	comp=Z,400nm,14.3s						
SKR				MLR	MLR		
	comp=Z,700nm,18.0s						
SKR				MLR	MLR		
	comp=Z,1µm,19.0s						
USRK	**Ussuriysk Ar.**	**62.43**	**334**	P	**P**	**09 19 25.4**	**+0.4**
	comp=Z,23nm,1.1s,baz=134,slow=5.5,SNR=16						
USRK				LR	LR	09 44 42.3	
	comp=Z,709nm,20.8s,baz=146,slow=34						
WHN	**Wuhan**	**63.59**	**312**	P	**P**	**09 19 31.9**	**-1.1**
DL2	**Dalian**	**63.81**	**324**	P	**P**	**09 19 34.2**	**-0.1**
DL2				S	**S**	**09 28 12.2**	**+4.5**
DL2				SS	**SS**	**09 32 20.0**	**+3.6**
DL2				pmax	pmax		
	comp=Z,31nm,0.9s						
DL2				LR	LR		
	comp=Z,750nm,17.0s						
DL2				LR	LR		
	comp=Z,620nm,14.6s						
DL2				LR	LR		
	comp=Z,1µm,26.8s						
MDJ	**Mudanjiang**	**63.81**	**333**	P	**P**	**09 19 35.0**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,39nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,930nm,5.2s						
MDJ	**Mudanjiang**	**63.81**	**333**	PFAKE		09 19 50.0	+16
MDJ				LR	LR		
	comp=Z,936nm,20.0s						
PET	**Petropavlovsk**	**63.95**	**356**	PFAKE		09 19 50.0	+15
PET				LR	LR		
	comp=Z,687nm,20.0s						
PET	**Petropavlovsk**	**63.95**	**356**	*e*P	**P**	**09 19 34.7**	**-0.2**
PET				*e*S	**S**	**09 28 05.6**	**-3.2**
PET				*e*SS	**SS**	**09 32 16.3**	**-1.8**
PET				pmax	pmax		
	comp=Z,47nm,1.2s						
PET				pmax	pmax		
	comp=Z,200nm,11.0s						
PEA0B	**Petropavlovsk-**	**64.11**	**355**	*e*P	**P**	**09 19 36.0**	**0.0**
	comp=Z,58nm,1.0s						
PETK	**Petropavlovsk-**	**64.11**	**355**	P	**P**	**09 19 35.8**	**-0.2**
PETK				pmax	pmax		
	comp=Z,26nm,0.8s						
PETK	**Petropavlovsk-**	**64.11**	**355**	P	**P**	**09 19 35.8**	**-0.2**
	comp=Z,25nm,0.8s,baz=160,slow=9.6,SNR=28						
PEA1	**Petropavlovsk-**	**64.11**	**355**	*e*P	**P**	**09 19 35.8**	**-0.3**
TYV	**Tymovskoe**	**64.50**	**345**	*e*P	**P**	**09 19 38.7**	**+0.1**
TYV				pmax	pmax		
	comp=Z,17nm,1.8s						
TYV				MLR	MLR		
	comp=Z,1µm,19.0s						
CN2	**Changchun**	**65.16**	**330**	*e*P	**P**	**09 19 43.2**	**+0.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=Z,890nm,13.0s						
CN2				LR	LR		
	comp=Z,680nm,13.0s						
CN2				LR	LR		
	comp=Z,720nm,14.0s						
CASY	**Casey**	**66.08**	**201**	PFAKE		09 20 00.0	+11
CASY				LR	LR		
	comp=Z,125nm,20.0s						
SKNT	**Sakolnakorn**	**66.13**	**294**	P	**P**	**09 19 50.0**	**+0.1**
	comp=Z,14nm,1.1s,comp=Z,2µm						
GRNR	**Gornyy**	**66.23**	**341**	*e*P	**P**	**09 19 51.1**	**+1.2**
GRNR				pmax	pmax		
	comp=Z,32nm,1.0s						
COCO	**West Island**	**66.34**	**261**	PFAKE		09 20 00.0	+8.8
COCO				LR	LR		
	comp=Z,973nm,19.0s						
VNDA	**Vanda**	**66.55**	**181**	*e*P	**P**	**09 19 52.6**	**+1.1**
VNDA	**Vanda**	**66.55**	**181**	P	**P**	**09 19 52.4**	**+0.9**
	comp=Z,7.7nm,0.9s,baz=3.9,slow=8.2,SNR=5.5						
VNDA				LR	LR	09 46 50.6	
	comp=Z,530nm,18.3s,baz=20,slow=34						
KLR	**Kul'dur**	**66.59**	**337**	*d* *i*P	**P**	**09 19 51.8**	**-0.3**
KLR	**Kul'dur**	**66.59**	**337**	P	**P**	**09 19 52.4**	**+0.3**
	comp=Z,22nm,1.0s,baz=136,slow=3.7,SNR=35						
KLR				LR	LR	09 43 32.1	
	comp=Z,206nm,21.8s,baz=162,slow=31						
ENH	**Enshi**	**67.06**	**310**	*e*P	**P**	**09 19 54.2**	**-1.5**
	comp=Z,52nm,1.0s						
ENH				LR	LR		
	comp=Z,1µm,21.0s						
NKL	**Nikolayevsk**	**67.09**	**345**	*e*P	**P**	**09 19 54.6**	**-0.6**
NKL				pmax	pmax		
	comp=Z,93nm,1.2s						
NONG	**Nongkai**	**67.26**	**295**	P	**P**	**09 19 57.4**	**+0.4**
	comp=Z,0.5nm,0.8s						
GYA	**Guiyang**	**67.54**	**305**⇑	*i*P	**P**	**09 19 59.3**	**+0.5**
GYA				PP	**PP**	**09 22 32.8**	**+4.7**
GYA				S	**S**	**09 28 56.5**	**+2.6**
GYA				SKS	**SKiKP**	**09 29 55.4**	**-0.1**
GYA				SS	**SS**	**09 33 19.6**	**+4.5**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.6s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
GYA				LR	LR		
	comp=Z,580nm,18.4s						
GYA				LR	LR		
	comp=Z,540nm,18.2s						
BJT	**Baijiatuau**	**67.78**	**322**	PFAKE		09 20 10.0	+10
BJT				LR	LR		
	comp=Z,1µm,22.0s						
BJI	**Beijing**	**67.79**	**322**⇓	*i*P	**P**	**09 19 59.6**	**-0.3**
BJI				pmax	pmax		
	comp=Z,12nm,1.3s						
BJI				LR	LR		
	comp=Z,1µm,24.3s						
BJI				LR	LR		
	comp=Z,810nm,23.3s						
BJI				LR	LR		
	comp=Z,2µm,31.4s						
PBKT	**Sadao Pong**	**68.71**	**293**	P	**P**	**09 20 06.8**	**+0.6**
	comp=Z,18nm,1.0s,comp=Z,779nm						
TIY	**Taiyuan**	**68.82**	**318**	*e*P	**P**	**09 20 07.1**	**+0.5**
TIY				pmax	pmax		
	comp=Z,13nm,0.6s						
XAN	**Xi'an**	**69.32**	**313**	P	**P**	**09 20 09.6**	**-0.1**
XAN				pmax	pmax		
	comp=Z,21nm,0.9s						
XAN				pmax	pmax		
	comp=Z,330nm,4.0s						
XAN				LR	LR		
	comp=Z,640nm,22.9s						
XAN				LR	LR		
	comp=Z,770nm,23.0s						
XAN				LR	LR		
	comp=Z,2µm,23.0s						
XAN	**Xi'an**	**69.32**	**313**	*e*P	**P**	**09 20 09.6**	**-0.1**
	comp=Z,22nm,0.8s						
XAN	**Xi'an**	**69.32**	**313**	*e*P	**P**	**09 20 09.6**	**-0.1**
XAN				pmax	pmax		
	comp=Z,22nm,0.8s						
UTTA	**Uttaradit**	**69.47**	**294**	P	**P**	**09 20 11.7**	**+0.8**
	comp=Z,3.1nm,0.9s						
UTHA	**Uthaitani**	**69.78**	**291**	P	**P**	**09 20 13.6**	**+0.8**
	comp=Z,3.6nm,1.0s,comp=Z,86nm						
KMI	**Kunming**	**70.22**	**302**	P	**P**	**09 20 16.9**	**+1.3**
KMI				pP	pP	09 20 20.5	-2.5
KMI				sP	sP	09 20 22.3	-3.5
KMI				PP	**PP**	**09 22 56.1**	**+4.7**
KMI				S	**S**	**09 29 28.5**	**+2.5**
KMI				sS	pS	09 29 34.4	-0.2
KMI				pmax	pmax		
	comp=Z,29nm,1.0s						
KMI				pmax	pmax		
	comp=Z,490nm,4.4s						
KMI				LR	LR		
	comp=Z,480nm,17.0s						
KMI				LR	LR		
	comp=Z,990nm,20.3s						
KMI				LR	LR		
	comp=Z,1µm,24.4s						
HHC	**Hu-ho-hao-te**	**71.12**	**320**	*e*P	**P**	**09 20 21.4**	**+0.7**
HHC				S	**S**	**09 29 39.7**	**+4.0**
HHC				ScS	**SKKSac**	**09 30 22.2**	**+0.5**
HHC				SS	**SS**	**09 34 11.3**	**+1.4**
HHC				pmax	pmax		
	comp=Z,31nm,1.3s						
HHC				pmax	pmax		
	comp=Z,500nm,6.5s						
HHC				LR	LR		
	comp=Z,980nm,18.4s						
HHC				LR	LR		
	comp=Z,1µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,19.1s						
CMAR	**Chiang Mai Arr**	**71.15**	**294**	P	**P**	**09 20 21.3**	**+0.2**
	comp=Z,4.5nm,0.6s,baz=122,slow=4.5,SNR=31						
MA2	**Magadan**	**71.20**	**353**	*e*P	**P**	**09 20 19.9**	**-0.7**
	comp=Z,17nm,0.8s						
MA2				LR	LR		
	comp=Z,994nm,19.0s						
MA2	**Magadan**	**71.20**	**353**	*d* *i*P	**P**	**09 20 19.0**	**-1.6**
MA2				pmax	pmax		
	comp=Z,39nm,1.7s						
CMMT	**Chiang Mai**	**71.26**	**294**	P	**P**	**09 20 22.3**	**+0.4**
	comp=Z,14nm,1.3s,comp=Z,459nm						
CHTO	**Chiang Mai**	**71.26**	**294**	PFAKE		09 20 30.0	+8.1
CHTO				LR	LR		
	comp=Z,661nm,20.0s						
CHTO	**Chiang Mai**	**71.26**	**294**	P	**P**	**09 20 22.4**	**+0.5**
	comp=Z,61nm,1.3s,comp=Z,2µm						
CD2	**Chengdu**	**71.75**	**308**	P	**P**	**09 20 24.7**	**+0.1**
CD2				pP	pP	09 20 27.9	-4.2
CD2				PP	**PP**	**09 23 03.9**	**-0.4**
CD2				S	**S**	**09 29 46.1**	**+2.9**
CD2				SKS	**ScS**	**09 30 28.3**	**-0.2**
CD2				SS	**SS**	**09 34 23.2**	**+3.4**
CD2				pmax	pmax		
	comp=Z,70nm,0.8s						
CD2				pmax	pmax		
	comp=Z,660nm,7.0s						
CD2				LR	LR		
	comp=Z,1µm,21.4s						
CD2				LR	LR		
	comp=Z,2µm,22.4s						
CD2				LR	LR		
	comp=Z,2µm,22.9s						
HIA	**Hailar**	**71.81**	**331**	PFAKE		09 20 40.0	+15
HIA				LR	LR		
	comp=Z,723nm,21.0s						
HIA	**Hailar**	**71.81**	**331**	*d* *i*P	**P**	**09 20 24.6**	**+0.1**
HIA				pmax	pmax		
	comp=Z,46nm,1.0s						
ZEA	**Zeya**	**71.89**	**338**	*e*P	**P**	**09 20 25.6**	**+0.8**
ZEA				pmax	pmax		
	comp=N,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,78nm,1.2s						
BTO	**Baotou**	**71.97**	**319**	*e*P	**P**	**09 20 25.5**	**-0.3**
LZH	**Lanzhou**	**73.96**	**313**	⇓P	**P**	**09 20 38.8**	**+1.0**
LZH				pP	pP	09 20 44.5	-0.4
LZH				sP	sP	09 20 48.2	+0.2
LZH				S	**S**	**09 30 08.0**	**-0.4**
LZH				sS	sS	09 30 18.8	-1.3
LZH				SS	**SS**	**09 34 52.2**	**-1.4**
LZH				pmax	pmax		
	comp=Z,43nm,1.5s						
LZH				pmax	pmax		
	comp=Z,160nm,4.8s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
LZH				LR	LR		
	comp=Z,2µm,18.4s						
LZH				LR	LR		
	comp=Z,2µm,19.2s						
SEY	**Seymchan**	**74.30**	**354**⇑	*i*P	**P**	**09 20 38.7**	**-0.2**
CIT	**Chita**	**76.59**	**330**	*e*P	**P**	**09 20 53.3**	**+0.9**
GAMB	**Gambell**	**76.68**	**11**	*e*P	**P**	**09 20 52.7**	**+0.1**
	comp=Z,43nm,1.0s						
KDAK	**Kodiak Island**	**76.89**	**22**	PFAKE		09 21 00.0	+6.1
KDAK				LR	LR		
	comp=Z,222nm,19.0s						
ULN	**Ulaanbaatar**	**77.65**	**324**	*e*P	**P**	**09 20 58.2**	**-0.3**
	comp=Z,50nm,1.1s						
ULN	**Ulaanbaatar**	**77.65**	**324**	*d* *i*P	**P**	**09 20 58.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,59nm,1.3s						
YAK	**Yakutsk**	**77.74**	**344**	*e*P	**P**	**09 20 57.9**	**-0.6**
YAK				*e*		09 21 08.8	
YAK				*e*		09 23 50.4	
YAK				*e*PPP	PPP	09 25 40.7	
YAK				*e*S	**S**	**09 30 50.3**	**+1.6**
YAK				*e**SS	**pS**	**09 30 57.1**	**-0.6**
YAK				*e*		09 31 17.7	
YAK				*e*SS	**SS**	**09 35 50.2**	**+0.7**
YAK				pmax	pmax		
	comp=Z,209nm,0.7s						
YAK				pmax	pmax		
	comp=N,76nm,0.9s						
YAK				pmax	pmax		
	comp=E,44nm,1.0s						
YAK				pmax	pmax		
	comp=Z,964nm,3.3s						
YAK				pmax	pmax		
	comp=E,459nm,3.2s						
YAK				pmax	pmax		
	comp=N,826nm,4.0s						
YAK				smax	smax		
	comp=N,542nm,3.8s						
YAK				smax	smax		
	comp=E,241nm,3.3s						
SONA0	**Songino Array**	**78.01**	**324**	*e*P	**P**	**09 21 00.9**	**+0.4**
SONM	**Songino Array**	**78.01**	**324**	P	**P**	**09 21 00.9**	**+0.4**
	comp=E,16nm,1.0s,baz=138,slow=5.7,SNR=46						
SONA1	**Songino Array**	**78.01**	**324**	*e*P	**P**	**09 20 59.6**	**-1.0**
GTA	**Gaotai**	**78.28**	**314**	⇓P	**P**	**09 21 03.1**	**+0.9**
GTA				pP	pP	09 21 07.5	-1.9
GTA				sP	PcP	09 21 10.1	-1.5
GTA				S	**S**	**09 30 58.4**	**+2.7**
GTA				sS	pS	09 31 05.7	+1.1
GTA				SKS	**SKSac**	**09 31 12.4**	**-2.7**
GTA				pmax	pmax		
	comp=E,34nm,1.1s						
GTA				pmax	pmax		
	comp=E,480nm,8.3s						
GTA				LR	LR		
	comp=E,460nm,20.9s						
GTA				LR	LR		
	comp=E,870nm,21.9s						
GTA				LR	LR		
	comp=E,1µm,21.9s						
SVW2	**Sparrevohn**	**78.37**	**18**	*e*P	**P**	**09 21 02.1**	**0.0**
	comp=E,35nm,1.4s						
ANM	**Nome**	**78.64**	**13**	*e*P	**P**	**09 21 01.9**	**-1.5**
	comp=E,26nm,1.3s						
ANM	**Nome**	**78.64**	**13**	*e*P	**P**	**09 21 02.0**	**-1.5**
ANM				pmax	pmax		
	comp=Z,26nm,1.3s						

BILL	Bilibino	78.81	1	PFAKE		09 21 20.0	+16
BILL				LR	LR		
	comp=Z,545nm,21.0s						
BILL	Bilibino	78.81	1	d *i*P	P	09 21 03.8	-0.6
BILL				*i*		09 21 10.9	
BILL				*i*		09 24 04.7	
BILL				*i* S	S	09 31 07.3	+7.2
BILL				*i* SS	SS	09 36 07.0	+1.5
BILL				pmax	pmax		
	comp=Z,49nm,1.1s						
BRLK	Bradley Lake	78.94	21	*e*P	P	09 21 04.6	-0.6
	comp=Z,193nm,1.9s						
QSPA	South Pole Qui	79.03	180	*e*P	P	09 21 06.0	0.0
	comp=Z,74nm,1.3s						
QSPA				LR	LR		
	comp=Z,843nm,20.0s						
BOD	Bodaibo	80.03	335	*e*P	P	09 21 10.2	-1.0
BOD				pmax	pmax		
	comp=Z,23nm,2.0s						
SUA	Susitna One	80.20	20	*e*P	P	09 21 10.9	-1.3
	comp=Z,74nm,1.9s						
ZAK	Zakamensk	81.06	325	*e*P	P	09 21 16.8	-0.3
ZAK				pmax	pmax		
	comp=Z,18nm,1.1s						
CAST	Castle Rocks	81.19	18	*e*P	P	09 21 16.0	-1.4
	comp=Z,18nm,1.0s						
LSA	Lhasa	81.45	302	PFAKE		09 21 30.0	+10
LSA				LR	LR		
	comp=Z,876nm,21.0s						
TLY	Talaya	81.50	327	*e*P	P	09 21 18.7	-0.6
	comp=Z,40nm,0.8s						
TLY				LR	LR		
	comp=Z,374nm,21.0s						
TLY	Talaya	81.50	327	d *i*P	P	09 21 18.7	-0.6
RDOG	Red Dog Mine	82.16	12	*e*P	P	09 21 22.8	+0.5
	comp=Z,48nm,1.2s						
MCK	McKinley	82.41	19	*e*P	P	09 21 21.4	-2.4
	comp=Z,90nm,2.0s						
MCK	McKinley	82.41	19	*e*P	P	09 21 21.4	-2.4
MCK				pmax	pmax		
	comp=Z,91nm,2.0s						
IM3	Indian Mountai	82.63	16	*e*P	P	09 21 24.5	-0.4
MLY	Manley	82.78	17	*e*P	P	09 21 24.5	-1.2
	comp=Z,6.6nm,1.0s						
WRH	Wood River Hil	83.19	19	*e*P	P	09 21 26.6	-1.1
	comp=Z,20nm,1.2s						
MDM	Murphy Dome	83.48	18	*e*P	P	09 21 28.1	-1.2
	comp=Z,15nm,1.0s						
HDA	Harding Lake	83.51	19	*e*P	P	09 21 27.9	-1.6
	comp=Z,35nm,0.8s						
HDA	Harding Lake	83.51	19	P	P	09 21 28.3	-1.1
	baz=228						
TCOL	CIGO, UAF Yank	83.53	18	P	P	09 21 28.4	-1.2
	baz=227						
COLA	College	83.54	18	PFAKE		09 21 40.0	+10
COLA				LR	LR		
	comp=Z,508nm,20.0s						
COLA	College	83.54	18	⇑*i*P	P	09 21 28.5	-1.0
COLA				pmax	pmax		
	comp=Z,21nm,1.0s						
TAPN	Taplejung	83.68	299	*e*P	P	09 21 31.4	-0.1
	comp=Z,23nm,0.9s						
RIDG	Independ'e Rid	83.76	20	*e*P	P	09 21 30.0	-0.8
	comp=Z,22nm,1.1s						
ILAR	Eielson Array	83.77	19	P	P	09 21 29.1	-1.7
	comp=Z,9.5nm,0.8s,baz=227,slow=4.6,SNR=105						
ILB	Eielson Array	83.77	19	*e*P	P	09 21 29.4	-1.3
IL1	Eielson Array	83.77	19	*e*P	P	09 21 29.4	-1.3
ODAN	Odare	83.82	299	*e*P	P	09 21 32.2	0.0
	comp=Z,74nm,0.9s						
POKR	Poker Plat Res	83.83	18	P	P	09 21 29.4	-1.7
	baz=227						
O02D	Mt. Diablo Mer	83.99	47	P	P	09 21 31.7	-0.9
	baz=250						
SCRK	Sand Creek	84.20	20	*e*P	P	09 21 31.9	-1.3
	comp=Z,13nm,0.9s						
J01E	Myrtle Point	84.22	44	P	P	09 21 33.1	-0.5
	baz=249						
K02D	Willamette Mer	84.24	45	P	P	09 21 33.1	-0.7
	baz=249						
N02D	Trinity Center	84.32	47	P	P	09 21 33.9	-0.3
	baz=250						
M02C	Callahan	84.36	46	P	P	09 21 33.7	-0.7
	baz=250						
KNGR	Kungurtug, Tuv	84.44	324	⇓*i*P	P	09 21 34.1	-0.6
COLD	Coldfoot	84.51	16	*e*P	P	09 21 33.1	-1.4
	comp=Z,5.8nm,0.9s						
RAMN	Ramite	84.53	299	*e*P	P	09 21 35.3	-0.5
	comp=Z,18nm,0.8s						
YBH	Yreka Blue Hor	84.57	46	*e*P	P	09 21 34.1	-1.4
	comp=Z,27nm,1.1s						
YBH	Yreka Blue Hor	84.57	46	*e*P	P	09 21 34.1	-1.4
YBH				pmax	pmax		
	comp=Z,27nm,1.1s						
HUMO	Hull Mountain	84.70	45	*e*P	P	09 21 35.6	-0.4
	comp=Z,21nm,1.0s						
ORV	Oroville	84.72	48	*e*P	P	09 21 35.2	-1.0
	comp=Z,37nm,1.6s						
ORV	Oroville	84.72	48	*e*P	P	09 21 35.2	-1.0
ORV				pmax	pmax		
	comp=Z,37nm,1.6s						
O03E	Paynes Creek	84.75	47	P	P	09 21 35.5	-0.9
	baz=251						
WRAK	Wrangell Islan	84.78	30	PFAKE		09 21 50.0	+14
WRAK				LR	LR		
	comp=Z,669nm,21.0s						
I03D	Drain, OR	84.81	44	P	P	09 21 35.8	-0.7
	baz=250						
AFDM	Forest Hills D	84.92	49	*e*P	P	09 21 36.7	-0.6
	comp=Z,18nm,1.0s						
L04D	Klamath Falls	85.02	45	P	P	09 21 37.0	-0.8
	baz=250						
JIRN	Jiri	85.06	299	*e*P	P	09 21 38.1	-0.5
	comp=Z,85nm,1.2s						
M04C	Macdoel	85.20	46	P	P	09 21 38.0	-0.7
	baz=251						
G03D	McMinnville, O	85.39	42	P	P	09 21 38.8	-0.5
	baz=250						
GUN	Gumba	85.39	299	*e*P	P	09 21 39.8	-0.5
	comp=Z,40nm,1.0s						
ARVC	Arvin	85.41	53	P	P	09 21 38.5	-1.2
	baz=253						
VES	Vestal, Richgr	85.42	52	P	P	09 21 38.2	-1.6
	baz=253						
I04A	Tendick Farm,	85.48	44	P	P	09 21 38.7	-1.2
	baz=250						
J04D	Umpqua Nationa	85.50	45	P	P	09 21 39.1	-1.1
	baz=250						
H04D	Lebanon	85.50	43	P	P	09 21 39.5	-0.5
	baz=250						
BEKR	Beckworth	85.66	48	*e*P	P	09 21 40.2	-0.9
	comp=Z,12nm,0.9s						
EGAK	Eagle	85.66	20	PFAKE		09 21 50.0	+10
EGAK				LR	LR		
	comp=Z,505nm,21.0s						
PKI	Pulchoki	85.71	299	*e*P	P	09 21 41.1	-0.7
PKIN	Phulchoki	85.72	299	*e*P	P	09 21 41.1	-0.7
NLWA	Neilton Lookou	85.77	40	PFAKE		09 21 50.0	+8.7
NLWA				LR	LR		
	comp=Z,611nm,21.0s						
TIXI	Tiksi	85.83	349	*e*P	P	09 21 40.0	-1.0
TIXI				LR	LR		
	comp=Z,399nm,20.0s						
TIXI	Tiksi	85.83	349	⇓*i*P	P	09 21 39.4	-1.6
TIXI				pmax	pmax		
	comp=Z,38nm,1.7s						
TIXI	Tiksi	85.83	349	P	P	09 21 39.9	-1.0
	comp=Z,9.2nm,0.9s,baz=130,slow=7.5,SNR=23						
ISA	Isabella, Lake	85.84	53	P	P	09 21 41.0	-1.0
	baz=253,SNR=6.4						
DAWY	Dawson	85.86	21	*e*P	P	09 21 40.7	-0.6
	comp=Z,17nm,1.3s						
WAKR	Walker	85.93	50	*e*P	P	09 21 41.7	-0.8
	comp=Z,72nm,1.8s						
DMN	Daman	85.98	299	*e*P	P	09 21 42.5	-0.6
	comp=Z,66nm,1.2s						
PNTR	Pine Nut	85.98	49	*e*P	P	09 21 42.4	-0.4
	comp=Z,47nm,1.6s						
EDW2	Edwards Air Fo	86.00	54	P	P	09 21 41.9	-0.8
	baz=254,SNR=7.5						
VCNR	Virginia City	86.01	49	*e*P	P	09 21 42.4	-0.5
	comp=Z,24nm,1.6s						
BFSC	Mount Baldy Ra	86.08	54	P	P	09 21 41.7	-1.6
	baz=254						
J05D	Fort Rock, OR	86.12	45	P	P	09 21 42.6	-0.6
	baz=251						
MLAC	Mammoth, Mammo	86.12	51	P	P	09 21 42.1	-1.5
	baz=253						
YERR	Yerington	86.22	49	*e*P	P	09 21 41.8	-2.1
	comp=Z,12nm,1.2s						
MURC	Murrieta	86.28	55	P	P	09 21 43.1	-1.0
	baz=254						
E04D	Cinebar	86.31	41	P	P	09 21 43.6	-0.3
	baz=250						
D03D	Eldon	86.31	40	P	P	09 21 43.2	-0.7
	baz=250						
PAHR	Pah Rah Range	86.33	49	*e*P	P	09 21 43.1	-1.3
	comp=Z,30nm,1.5s						
MOD	Modoc Plateau	86.33	46	*e*P	P	09 21 43.4	-1.0
	comp=Z,24nm,0.6s						
CWC	Cottonwood Cre	86.36	52	P	P	09 21 43.6	-1.1
	baz=254						
I05D	Terrebonne, OR	86.39	44	P	P	09 21 42.9	-1.5
	baz=251						
D04E	Lakebay	86.39	41	P	P	09 21 43.8	-0.5
	baz=250						
PINE	Pine Mountain	86.48	44	*e*P	P	09 21 44.0	-1.1
	comp=Z,17nm,0.9s						
RYN	Ryan	86.65	50	*e*P	P	09 21 45.7	-0.3
	comp=Z,14nm,1.2s						
G05D	Wamic, OR	86.70	43	P	P	09 21 45.0	-0.9
	baz=251						
MPMC	Manual Prospec	86.72	52	P	P	09 21 45.4	-1.0
	baz=254,SNR=6.9						
NV01	Mina Array Sit	86.76	50	*e*P	P	09 21 45.6	-1.0
NVAR	Mina Array Bea	86.76	50	P	P	09 21 45.7	-0.9
	comp=Z,12nm,1.0s,baz=234,slow=7.9,SNR=37						
F05D	White Salmon	86.81	42	P	P	09 21 45.4	-1.1
	baz=251						
PFO	Pinyon Flats O	86.88	55	PFAKE		09 22 00.0	+13
PFO				LR	LR		
	comp=Z,625nm,20.0s						
PFO	Pinyon Flats O	86.88	55	LR	LR	09 52 46.3	
	comp=Z,200nm,20.6s,baz=304,slow=30						
IKP	In-Ko-Pah, Jac	86.91	56	P	P	09 21 46.6	-0.7
	baz=255						
A04D	Lummi Island	86.97	39	P	P	09 21 46.8	-0.2
	baz=250						
GSC	Goldstone, Bar	87.05	53	P	P	09 21 46.7	-1.3
	baz=254						
GRAC	Grapevine Rang	87.07	52	P	P	09 21 47.0	-1.0
	baz=254						
KVN	Kaiserville	87.09	49	*e*P	P	09 21 47.5	-0.7
	comp=Z,10nm,1.1s						
KVN	Kaiserville	87.09	49	*e*P	P	09 21 47.5	-0.7
KVN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
B05A	Bryant	87.19	40	P	P	09 21 47.5	-0.7
	baz=250						
HEC	Hector,Ludlow	87.30	54	P	P	09 21 48.0	-1.1
	baz=255						
KOLN	Koldanda	87.31	299	*e*P	P	09 21 48.1	-1.4
DANN	Dangsing	87.31	299	*e*P	P	09 21 48.3	-1.3
FURC	Furnace Creek,	87.32	52	P	P	09 21 48.1	-0.9
	baz=254						
BELC	Belle Mtn. Jos	87.35	55	P	P	09 21 48.5	-0.9
	baz=255,SNR=6.9						
I07A	Izee	87.56	44	*e*P	P	09 21 49.7	-0.6
	comp=Z,37nm,1.5s						
WVOR	Wild Horse Val	87.67	46	*e*P	P	09 21 49.8	-1.0
	comp=Z,22nm,1.2s						
WVOR				LR	LR		
	comp=Z,317nm,19.0s						
WVOR	Wild Horse Val	87.67	46	*e*P	P	09 21 49.8	-1.0
WVOR				pmax	pmax		
	comp=Z,22nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,317nm,19.0s						
BC3	Big Chuckawall	87.70	55	P	P	09 21 50.4	-0.7
	baz=255						
LTY	Liberty	87.77	41	*e*P	P	09 21 50.0	-1.1
	comp=Z,6.6nm,0.9s						
GMRC	Granite Mounta	87.82	54	P	P	09 21 50.4	-1.3
	baz=255,SNR=6.3						
PYUN	Piuthan	87.92	299	*e*P	P	09 21 50.9	-1.5
	comp=Z,18nm,1.0s						
TPNV	Topopah Spring	87.92	52	P	P	09 21 51.7	-0.5
	baz=255						
GLA	Glamis	88.06	56	*e*P	P	09 21 51.4	-1.4
	comp=Z,21nm,1.0s						
GLA	Glamis	88.06	56	*e*P	P	09 21 51.4	-1.4
GLA				pmax	pmax		
	comp=Z,21nm,1.0s						
GLA	Glamis	88.06	56	P	P	09 21 52.3	-0.5
	baz=256,SNR=5.3						
J08A	Circle Bar Ran	88.06	45	*e*P	P	09 21 52.1	-0.5
	comp=Z,18nm,1.0s						
IRM	Iron Mountain	88.07	55	P	P	09 21 52.1	-0.7
	baz=255,SNR=9.4						
EPYK	Eagle Plains	88.09	20	*e*P	P	09 21 51.5	-0.6
	comp=Z,18nm,1.0s						
EPYK	Eagle Plains	88.09	20	P	P	09 21 51.7	-0.4
	baz=237						
BMN	Battle Mountai	88.12	48	*e*P	P	09 21 51.6	-1.5
BMN	Battle Mountai	88.12	48	*e*P	P	09 21 51.6	-1.5
HAWA	Hanford	88.24	42	*e*P	P	09 21 52.9	-0.4
	comp=Z,28nm,1.4s						
G08A	Pilot Rock	88.29	43	*e*P	P	09 21 53.2	-0.5
	comp=Z,17nm,1.1s						
WMQ	Urumqi	88.32	315	P	P	09 21 53.8	0.0
WMQ				sP	sP	09 22 04.4	+0.3
WMQ				SKS	SKSac	09 32 21.6	+0.8
WMQ				S	S	09 32 38.1	+0.9
WMQ				SS	SS	09 38 30.6	+3.2
WMQ				pmax	pmax		
	comp=Z,44nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,1µm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,18.9s						
WMQ				LR	LR		
	comp=Z,1µm,22.3s						
WMQ				LR	LR		
	comp=Z,2µm,22.7s						
WMQ	Urumqi	88.32	315	*e*P	P	09 21 53.6	-0.2
	comp=Z,56nm,1.6s						
WMQ	Urumqi	88.32	315	*e*P	P	09 21 53.6	-0.2
WMQ				pmax	pmax		
	comp=Z,56nm,1.6s						
Y12C	Blythe	88.47	55	*e*P	P	09 21 54.6	0.0
	comp=Z,16nm,0.9s						
Y12C	Blythe	88.47	55	P	P	09 21 54.2	-0.5
	baz=256						
E08A	Dider Farm, El	88.58	42	*e*P	P	09 21 54.7	-0.2
	comp=Z,18nm,1.1s						
SHPR	Sheep Range	88.65	53	*e*P	P	09 21 55.5	-0.1
	comp=Z,22nm,1.4s						
R11A	Troy Canyon, C	88.79	51	*e*P	P	09 21 55.7	-0.6
	comp=Z,9.0nm,1.2s						
R11A	Troy Canyon, C	88.79	51	P	P	09 21 55.2	-1.1
	baz=255						
D08A	Wollman Farm,	88.84	42	*e*P	P	09 21 55.9	-0.2
	comp=Z,12nm,1.0s						
113A	Mohawk Valley,	88.85	56	*e*P	P	09 21 56.3	-0.2
	comp=Z,12nm,1.1s						
PDMCI	Parker Dam,Lak	88.92	55	P	P	09 21 56.1	-0.6
	baz=256,SNR=8.3						
B08A	Colville Reser	88.97	40	*e*P	P	09 21 55.6	-1.1
	comp=Z,36nm,1.8s						
E09A	Wood Farm, Sta	89.19	42	*e*P	P	09 21 56.8	-1.0
	comp=Z,14nm,1.4s						
BMO	Blue Mountains	89.29	44	*e*P	P	09 21 57.0	-1.4
	comp=Z,24nm,1.6s						
BMO	Blue Mountains	89.29	44	*e*P	P	09 21 57.0	-1.4
BMO				pmax	pmax		
	comp=Z,24nm,1.6s						
W13A	Hualapai Mount	89.31	54	*e*P	P	09 21 58.0	-0.9
	comp=Z,49nm,1.8s						
214A	Organ Pipe Nat	89.45	57	P	P	09 21 59.2	-0.1
	baz=257						
F10A	Beach Ranch, E	89.65	43	*e*P	P	09 21 59.3	-0.8
	comp=Z,12nm,1.0s						
ELK	Elko	89.66	48	*e*P	P	09 22 00.0	-0.4
	comp=Z,23nm,1.5s						
ELK	Elko	89.66	48	*e*P	P	09 22 00.0	-0.4
ELK				pmax	pmax		
	comp=Z,23nm,1.5s						
Y14A	Wickenburg	89.75	55	*e*P	P	09 22 00.4	-0.4
	comp=Z,8.9nm,1.2s						
SLBS	Sierra La Lagu	90.15	66	*e*P	P	09 22 03.1	+0.3
	comp=Z,61nm,1.6s						
PSUT	Pine Spring	90.15	51	*e*P	P	09 22 02.4	-0.3
	comp=Z,14nm,1.2s						
DGZ	Jazzator, Alta	90.19	321	d *i*P	P	09 22 01.6	-1.0
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LCMT	Little Creek M	90.27	52	*e*P	P	09 22 03.1	-0.1
	comp=Z,14nm,1.0s						
CCUT	Cedar City	90.30	52	*e*P	P	09 22 03.4	0.0
	comp=Z,14nm,0.9s						
NEW	Newport	90.36	41	*e*P	P	09 22 02.4	-0.8
	comp=Z,20nm,1.8s						
NEW				LR	LR		
	comp=Z,471nm,19.0s						
NEW	Newport	90.36	41	*e*P	P	09 22 02.4	-0.8
NEW				pmax	pmax		
	comp=Z,21nm,1.8s						
NEW				MLR	MLR		
	comp=Z,471nm,19.0s						
NEW	Newport	90.36	41	P	P	09 22 02.9	-0.4
	baz=254						
KNB	Kanab	90.60	53	*e*P	P	09 22 04.8	0.0
	comp=Z,24nm,1.3s						
KNB	Kanab	90.60	53	*e*P	P	09 22 04.8	0.0
KNB				pmax	pmax		
	comp=Z,24nm,1.3s						
DGAR	Diego Garcia	90.81	262	PFAKE		09 22 20.0	+14
DGAR				LR	LR		
	comp=Z,282nm,20.0s						
U15A	North Rim	90.88	53	*e*P	P	09 22 06.0	-0.2
	comp=Z,19nm,0.9s						
HLID	Hailey	90.96	46	*e*P	P	09 22 05.7	-0.6
	comp=Z,12nm,0.9s						
HLID				LR	LR		
	comp=Z,577nm,19.0s						
HLID	Hailey	90.96	46	P	P	09 22 05.9	-0.4
	baz=256						
PKCU	Pink Cliffs	91.09	52	*e*P	P	09 22 07.9	+0.7
	comp=Z,24nm,1.1s						
X16A	Lo Mia Camp, P	91.12	55	*e*P	P	09 22 07.5	+0.2
	comp=Z,7.2nm,0.8s						
TUC	Tucson	91.20	57	*e*P	P	09 22 07.7	+0.1
	comp=Z,7.4nm,1.1s						
TUC				LR	LR		
	comp=Z,964nm,20.0s						
TUC	Tucson	91.20	57	P	P	09 22 07.2	-0.4
	baz=258						
TCRU	Three Creeks R	91.25	51	*e*P	P	09 22 08.4	+0.6
	comp=Z,13nm,0.9s						
MTPU	Mount Pierson	91.32	52	*e*P	P	09 22 08.7	+0.3
	comp=Z,13nm,0.9s						
DUG	Dugway, Tooele	91.33	49	*e*P	P	09 22 07.5	-0.6
	comp=Z,6.4nm,0.9s						
DUG				LR	LR		
	comp=Z,486nm,20.0s						
DUG	Dugway, Tooele	91.33	49	*e*P	P	09 22 07.5	-0.6
DUG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DUG				MLR	MLR		
	comp=Z,486nm,20.0s						
DUG	Dugway, Tooele	91.33	49	P	P	09 22 07.5	-0.6
	baz=257						
BGU	Big Grassy Mou	91.33	49	*e*P	P	09 22 07.3	-0.8
	comp=Z,10nm,1.0s						
WUAZ	Wupatki	91.41	54	*e*P	P	09 22 08.7	+0.1
	comp=Z,14nm,1.0s						
WUAZ				LR	LR		
	comp=Z,533nm,19.0s						
WUAZ	Wupatki	91.41	54	P	P	09 22 08.1	-0.5
	baz=258						
MSU	Marysvale	91.43	51	*e*P	P	09 22 08.6	-0.1
MSU	Marysvale	91.43	51	*e*P	P	09 22 08.6	-0.1
HVU	Hansel Valley	91.71	48	*e*P	P	09 22 08.8	-1.0
	comp=Z,23nm,0.9s						
HVU	Hansel Valley	91.71	48	*e*P	P	09 22 08.8	-1.0
HVU				pmax	pmax		
	comp=Z,23nm,0.9s						
SPUT	South Promonto	91.85	48	*e*P	P	09 22 10.2	-0.3
	comp=Z,7.8nm,0.9s						
MPU	Maple Canyon	92.17	50	*e*P	P	09 22 11.8	-0.3
	comp=Z,20nm,1.4s						
CTU	Camp Tracy	92.23	49	*e*P	P	09 22 11.8	-0.5
	comp=Z,9.8nm,0.9s						
319A	Douglas	92.27	59	*e*P	P	09 22 12.7	+0.1
	comp=Z,7.8nm,1.0s						
TMUT	Trail Mountain	92.34	51	*e*P	P	09 22 12.6	-0.3
	comp=Z,11nm,1.2s						
X18A	Snowflake	92.34	55	*e*P	P	09 22 12.4	-0.6
	comp=Z,5.8nm,0.9s						
MCMT	McKenzie Canyo	92.35	45	*e*P	P	09 22 12.2	-0.6
JLU	Jordanelle	92.43	49	*e*P	P	09 22 12.8	-0.5
	comp=Z,9.4nm,1.0s						
TCUT	Toone Canyon	92.57	49	*e*P	P	09 22 13.4	-0.5
	comp=Z,30nm,1.3s						
WALA	Waterton Lakes	92.62	41	*e*P	P	09 22 12.1	-1.7
	comp=Z,19nm,1.3s						
DLMT	Dillon	92.64	44	*e*P	P	09 22 13.4	-0.7
	comp=Z,32nm,1.2s						
MK01	Makanchi Array	92.76	317	*e*P	P	09 22 13.5	-0.9
MK31	Makanchi Array	92.77	317	*e*P	P	09 22 14.1	-0.3
MK31	Makanchi Array	92.77	317	*e*P	P	09 22 14.1	-0.3
MK32	Makanchi Array	92.77	317	*e*P	P	09 22 14.1	-0.3
MKAR	Makanchi Array	92.77	317	*e*P	P	09 22 14.1	-0.3
	comp=Z,86nm,0.8s						
MKAR	Makanchi Array	92.77	317	P	P	09 22 14.1	-0.3
	comp=Z,15nm,0.8s,baz=100,slow=5.9,SNR=137						
LRM	Limekiln Ridge	92.84	44	*e*P	P	09 22 14.3	-0.8
ZALV	Zalesovo Beam	92.90	324	P	P	09 22 13.3	-1.5
ZALV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ZALV	Zalesovo Beam	92.90	324	P	P	09 22 13.3	-1.5
	comp=Z,12nm,1.0s,baz=132,slow=4.2,SNR=14						
ZAA1	Zalesovo Array	92.90	324	*e*P	P	09 22 13.3	-1.5
MAKZ	Makanchi	92.99	317	*e*P	P	09 22 15.3	-0.1
	comp=Z,26nm,1.0s						
MAKZ	Makanchi	92.99	317	*e*P	P	09 22 15.3	-0.1
MAKZ				pmax	pmax		
	comp=Z,26nm,1.0s						
AHID	Auburn Hatcher	93.14	47	PFAKE		09 22 30.0	+14
AHID				LR	LR		
	comp=Z,393nm,21.0s						
BOZ	Bozeman (W)	93.36	44	*e*P	P	09 22 16.8	-0.5
	comp=Z,14nm,1.0s						
BOZ				LR	LR		
	comp=Z,543nm,19.0s						
BOZ	Bozeman (W)	93.36	44	*e*P	P	09 22 16.8	-0.5
BOZ				pmax	pmax		
	comp=Z,14nm,1.0s						
BOZ				MLR	MLR		
	comp=Z,543nm,19.0s						
BOZ	Bozeman (W)	93.36	44	P	P	09 22 16.6	-0.8
	baz=258						
FXWY	Fox Creek	93.37	46	*e*P	P	09 22 16.9	-0.7
	comp=Z,5.2nm,0.8s						
TPAW	Teton Pass	93.40	47	*e*P	P	09 22 16.5	-1.2
	comp=Z,19nm,1.6s						
REDW	Red Top Meadow	93.44	47	*e*P	P	09 22 17.4	-0.5
	comp=Z,24nm,1.8s						
HRY	Holter Researc	93.46	43	*e*P	P	09 22 16.7	-1.1
YHB	Horse Butte	93.48	45	*e*P	P	09 22 18.0	0.0
	comp=Z,6.8nm,0.9s						
IMW	Indian Meadow	93.49	46	*e*P	P	09 22 17.9	-0.3
	comp=Z,20nm,1.6s						
MOOW	Moose Ponds	93.60	46	*e*P	P	09 22 18.1	-0.5
	comp=Z,3.4nm,0.9s						
YMR	Madison River	93.63	45	*e*P	P	09 22 18.0	-0.7
	comp=Z,29nm,1.7s						
LOHW	Long Hollow	93.67	46	*e*P	P	09 22 18.5	-0.4
	comp=Z,4.3nm,1.1s						
FLWY	Flagg Ranch	93.69	46	*e*P	P	09 22 18.9	-0.1
	comp=Z,4.9nm,0.8s						
121A	Cookes Peak, D	93.74	58	P	P	09 22 19.2	-0.2
	baz=259						
H17A	Grant Village	93.84	46	*e*P	P	09 22 19.8	0.0
	comp=Z,6.6nm,1.0s						
H17A	Grant Village	93.84	46	P	P	09 22 20.0	+0.3
	baz=258						
PV23	Carpenter Ridg	93.85	52	*e*P	P	09 22 20.1	+0.1
	comp=Z,9.9nm,0.8s						
PV12	Saucer Basin,	93.99	52	*e*P	P	09 22 20.8	+0.3
	comp=Z,6.3nm,1.0s						
LKWY	Lake	94.00	46	PFAKE		09 22 30.0	+10
LKWY				LR	LR		
	comp=Z,756nm,19.0s						
MVCO	Mesa Verde	94.02	53	PFAKE		09 22 30.0	+9.3
MVCO				LR	LR		
	comp=Z,425nm,20.0s						
BW06	Boulder Array	94.25	47	*e*P	P	09 22 19.9	-1.7
	comp=Z,9.1nm,1.1s						
BW06				LR	LR		
	comp=Z,409nm,19.0s						

BW06	**Boulder Array**	94.25	47	P	P	09 22 20.9	-0.8
	baz=259						
PD31	**Pinedale Array**	94.25	47	*e*P	P	09 22 20.0	-1.7
PDAR	**Pinedale Array**	94.25	47	*e*P	P	09 22 19.1	-2.5
PDAR	**Pinedale Array**	94.25	47	P	P	09 22 20.3	-1.4
	comp=Z,3.7nm,0.9s,baz=243,slow=3.0,SNR=29						
O20A	**White River Ci**	94.75	50	P	P	09 22 23.1	-0.8
	baz=260						
RLMT	**Red Lodge**	94.90	45	PFAKE		09 22 30.0	+5.5
RLMT				LR	LR		
	comp=Z,662nm,19.0s						
EGMT	**Eagleton**	95.10	42	*e*P	P	09 22 24.6	-0.7
	comp=Z,11nm,0.9s						
EGMT				LR	LR		
	comp=Z,404nm,19.0s						
EGMT	**Eagleton**	95.10	42	P	P	09 22 24.5	-0.7
	baz=259						
ANMO	**Albuquerque**	95.25	56	*e*P	P	09 22 25.8	-0.6
	comp=Z,4.9nm,1.3s						
ANMO				LR	LR		
	comp=Z,482nm,19.0s						
ANMO	**Albuquerque**	95.25	56	*d* *i*P	P	09 22 25.9	-0.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ANMO	**Albuquerque**	95.25	56	P	P	09 22 25.4	-0.9
	baz=260						
YKA	**Yellowknife Ar**	95.38	27	P	P	09 22 23.5	-2.5
	comp=Z,2.5nm,0.9s,baz=255,slow=4.5,SNR=31						
YKB5	**Yellowknife Ar**	95.38	27	*e*P	P	09 22 23.1	-2.9
S22A	**4UR Ranch, Cre**	95.42	53	P	P	09 22 27.5	+0.3
	baz=260						
MNTX	**Cornudas Mount**	95.60	59	PFAKE		09 22 40.0	+12
MNTX				LR	LR		
	comp=Z,557nm,20.0s						
MNTX	**Cornudas Mount**	95.60	59	P	P	09 22 26.5	-1.3
	baz=261						
NRIK	**Noril'sk**	95.70	340	P	P	09 22 26.1	-1.2
	comp=Z,3.9nm,0.6s,baz=105,slow=4.1,SNR=9.6						
KSH	**Kashi**	95.92	309	P	P	09 22 35.4	+6.2
KSH				sP	sP	09 22 38.5	-0.9
KSH	**Kashi**	95.92	309	SKS	SKSac	09 33 04.5	+0.7
KSH	**Kashi**	95.92	309	S	S	09 33 51.9	+6.0
KSH	**Kashi**	95.92	309	sS	sS	09 33 54.4	-3.7
KSH	**Kashi**	95.92	309	SS	SS	09 40 22.2	+5.3
KSH				pmax	pmax		
	comp=Z,230nm,5.5s						
KSH				LR	LR		
	comp=N,160nm,5.9s						
KSH				LR	LR		
	comp=E,120nm,4.8s						
KSH				LR	LR		
	comp=Z,350nm,9.5s						
KURK	**Kurchatov**	95.93	320	*e*P	P	09 22 27.7	-1.1
	comp=Z,13nm,0.9s						
KURK				LR	LR		
	comp=Z,1μm,22.0s						
KURK	**Kurchatov**	95.93	320	⇓*e*P	P	09 22 27.0	-1.8
KURK				pmax	pmax		
	comp=Z,14nm,1.7s						
KURBB	**Kurchatov Arra**	95.97	320	P	P	09 22 27.5	-1.5
	comp=Z,1.9nm,1.0s,baz=94,slow=4.0,SNR=11						
SDCO	**Great Sand Dun**	96.46	53	PFAKE		09 22 40.0	+8.1
SDCO				LR	LR		
	comp=Z,391nm,19.0s						
ISCO	**Idaho Springs**	96.68	51	PFAKE		09 22 40.0	+7.1
ISCO				LR	LR		
	comp=Z,831nm,19.0s						
LTX	**Lajitas**	96.69	62	*e*P	P	09 22 32.1	-0.8
LTX	**Lajitas**	96.69	62	*e*P	P	09 22 32.1	-0.8
TXAR	**Lajitas Array**	96.69	62	P	P	09 22 32.1	-0.8
	comp=Z,0.8nm,0.9s,baz=235,slow=4.4,SNR=3.9						
Q24A	**Divide**	96.91	52	P	P	09 22 33.2	-0.8
	baz=262						
NIL	**Nilore**	97.19	303	PFAKE		09 22 50.0	+15
NIL				LR	LR		
	comp=Z,191nm,22.0s						
LAO	**LASA Array**	97.25	44	*e*P	P	09 22 34.4	-0.5
	comp=Z,24nm,1.5s						
LAO				LR	LR		
	comp=Z,481nm,20.0s						
LAO	**LASA Array**	97.25	44	P	P	09 22 34.7	-0.2
	baz=262						
AAK	**Ala-Archa**	97.49	312	PFAKE		09 22 50.0	+14
AAK				LR	LR		
	comp=Z,374nm,21.0s						
DGMT	**Dagmar**	98.84	42	Pdiff	P	09 22 40.9	-1.2
	baz=264						
AMTX	**Amarillo**	99.12	56	Pdiff	Pdif	09 22 42.1	-1.6
	baz=263						
OGNE	**Ogallala**	99.54	50	PFAKE		09 23 00.0	+15
OGNE				LR	LR		
	comp=Z,476nm,20.0s						
JCT	**Junction City**	100.17	61	PFAKE		09 23 00.0	+12
JCT				LR	LR		
	comp=Z,643nm,20.0s						
FFC	**Flin Flon**	100.78	36	PFAKE		09 23 00.0	+10
FFC				LR	LR		
	comp=Z,455nm,20.0s						
CBKS	**Cedar Bluff**	101.09	52	PFAKE		09 23 00.0	+7.7
CBKS				LR	LR		
	comp=Z,321nm,20.0s						
BVAR	**Borovoye Array**	101.27	322	P	Pdif	09 22 51.3	-1.3
	comp=Z,3.5nm,0.9s,baz=83,slow=4.9,SNR=9.9						
BRVK	**Borovoye**	101.33	322	PFAKE		09 23 00.0	+7.1
BRVK				LR	LR		
	comp=Z,593nm,21.0s						
BRVK	**Borovoye**	101.33	322	⇓*i*P	Pdif	09 22 52.1	-0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMOK	**Wichita Mounta**	101.48	57	PFAKE		09 23 00.0	+5.9
WMOK				LR	LR		
	comp=Z,553nm,19.0s						
KSU1	**Kansas State U**	103.54	52	PFAKE		09 23 10.0	+6.9
KSU1				LR	LR		
	comp=Z,595nm,19.0s						
ECSD	**EROS Data Cent**	103.75	48	PFAKE		09 23 10.0	+6.0
ECSD				LR	LR		
	comp=Z,413nm,20.0s						
PAYG	**Puerto Ayora**	104.60	94	PFAKE		09 23 20.0	+12
PAYG				LR	LR		
	comp=Z,655nm,19.0s						
NATX	**Nacogdoches**	104.68	60	PFAKE		09 23 20.0	+12
NATX				LR	LR		
	comp=Z,726nm,21.0s						
MIAR	**Mount Ida**	105.75	57	PFAKE		09 27 40.0	+14
MIAR				LR	LR		
	comp=Z,622nm,20.0s						
EYMN	**Ely**	107.31	43	PFAKE		09 27 40.0	+12
EYMN				LR	LR		
	comp=Z,505nm,19.0s						
EFI	**East Falkland**	107.51	154	PFAKE		09 27 40.0	+11
EFI				LR	LR		
	comp=Z,1μm,19.0s						
ARU	**Arti**	108.00	326	PFAKE		09 27 40.0	+11
ARU				LR	LR		
	comp=Z,288nm,20.0s						
COWI	**Conover**	109.02	45	PFAKE		09 27 40.0	+8.3
COWI				LR	LR		
	comp=Z,505nm,21.0s						
HDIL	**Hopedale**	109.19	51	PFAKE		09 27 40.0	+7.9
HDIL				LR	LR		
	comp=Z,906nm,20.0s						
KBS	**Kingsbay**	110.75	355	PFAKE		09 27 50.0	+16
KBS				LR	LR		
	comp=Z,374nm,21.0s						
ABPO	**Ambohimpanom**	111.56	244	PFAKE		09 27 50.0	+13
ABPO				LR	LR		
	comp=Z,210nm,21.0s						
JTS	**JuntasAbangare**	111.68	83	PFAKE		09 27 50.0	+12
JTS				LR	LR		
	comp=Z,732nm,20.0s						
GLMI	**Grayling**	112.31	46	PFAKE		09 27 50.0	+12
GLMI				LR	LR		
	comp=Z,582nm,19.0s						
LCO	**Las Campanas**	113.39	128	PFAKE		09 27 50.0	+9.1
LCO				LR	LR		
	comp=Z,632nm,20.0s						
ACSO	**Alum Creek Sta**	114.02	51	PFAKE		09 27 50.0	+8.7
ACSO				LR	LR		
	comp=Z,546nm,20.0s						
GOGA	**Godfrey**	114.14	58	PFAKE		09 27 50.0	+8.2
GOGA				LR	LR		
	comp=Z,699nm,19.0s						
LVZ	**Lovozero**	114.47	341	PFAKE		09 27 50.0	+8.6
LVZ				LR	LR		
	comp=Z,215nm,19.0s						
TRQA	**Tornquist**	114.56	141	PFAKE		09 27 50.0	+7.4
TRQA				LR	LR		
	comp=Z,467nm,21.0s						
NNA	**Nana**	114.75	109	PFAKE		09 27 50.0	+6.5
NNA				LR	LR		
	comp=Z,529nm,21.0s						
KEV	**Kevo**	115.47	345	PFAKE		09 27 50.0	+6.8
KEV				LR	LR		
	comp=Z,793nm,22.0s						
ARA0	**ARCESS Array S**	116.01	345	*e*PKPdf	PKiKP	09 27 42.5	-1.9
ARCES	**ARCESS Array B**	116.01	345	PKP	PKiKP	09 27 42.4	-1.9
	comp=Z,1.6nm,0.7s,baz=130,slow=0.4,SNR=7.5						
OTAV	**Otavalo**	116.37	95	PFAKE		09 28 00.0	+13
OTAV				LR	LR		
	comp=Z,308nm,22.0s						
BCIP	**Isla Barro Col**	116.53	85	PFAKE		09 28 00.0	+13
BCIP				LR	LR		
	comp=Z,449nm,20.0s						
LVC	**Limon Verde**	117.77	123	PFAKE		09 28 00.0	+10
LVC				LR	LR		
	comp=Z,931nm,19.0s						
CBN	**Corbin Frederi**	118.60	52	PFAKE		09 28 00.0	+10
CBN				LR	LR		
	comp=Z,508nm,19.0s						
BINY	**Binghamton**	118.93	48	PFAKE		09 28 00.0	+9.2
BINY				LR	LR		
	comp=Z,554nm,19.0s						
MTDJ	**Mount Denham**	119.57	75	PFAKE		09 28 00.0	+7.2
MTDJ				LR	LR		
	comp=Z,407nm,20.0s						
GNI	**Garni**	119.83	310	PFAKE		09 28 00.0	+7.2
GNI				LR	LR		
	comp=Z,390nm,21.0s						
OBN	**Obninsk**	120.21	328	PFAKE		09 28 00.0	+7.2
OBN				LR	LR		
	comp=Z,342nm,22.0s						
OBN	**Obninsk**	120.21	328	*i* PKIKP	PKPdf	09 27 52.5	-0.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIV	**Kislovodsk**	120.45	315	PFAKE		09 28 00.0	+6.2
KIV				LR	LR		
	comp=Z,405nm,20.0s						
LPAZ	**La Paz**	121.13	117	*e*PKPdf	PKPdf	09 27 55.4	-1.0
LPAZ	**La Paz**	121.13	117	PKP	PKPdf	09 27 55.9	-0.5
	comp=Z,2.7nm,0.9s,baz=230,slow=3.6,SNR=7.2						
FIA0	**FINESS Array S**	121.33	338	*e*PKPdf	PKPdf	09 27 53.4	-1.3
FIA0	**FINESS Array S**	121.33	338	*e*PKIKP	PKPdf	09 27 53.4	-1.3
FINES	**FINESS Array B**	121.33	338	PKP	PKPdf	09 27 53.4	-1.3
	comp=Z,1.9nm,0.9s,baz=54,slow=2.4,SNR=4.9						
GTBY	**Guantanamo Bay**	121.91	73	PFAKE		09 28 10.0	+13
GTBY				LR	LR		
	comp=Z,390nm,21.0s						
PKME	**Peaks-Kenny Pk**	122.79	43	PFAKE		09 28 10.0	+12
PKME				LR	LR		
	comp=Z,769nm,19.0s						
BOSA	**Boshof**	124.47	224	PKP	PKPdf	09 28 01.8	-0.2
	comp=Z,3.9nm,0.8s,baz=242,slow=1.7,SNR=5.9						
SUR	**Sutherland**	124.78	217	PFAKE		09 28 10.0	+7.1
SUR				LR	LR		
	comp=Z,916nm,19.0s						
CPUP	**Villa Florida**	124.83	133	PKP	PKPdf	09 28 01.4	-1.2
	comp=Z,4.8nm,1.0s,baz=94,slow=1.0,SNR=8.3						
SDDR	**Presa de Saban**	125.51	75	PFAKE		09 28 20.0	+16
SDDR				LR	LR		
	comp=Z,644nm,20.0s						
SDV	**Santo Domingo**	125.51	87	*e*PKPdf	PKPdf	09 28 03.5	-0.9
SDV				LR	LR		
	comp=Z,377nm,20.0s						
GRTK	**Grand Turk**	125.62	71	PFAKE		09 28 20.0	+15
GRTK				LR	LR		
	comp=Z,505nm,19.0s						
AKASG	**Malin Array Be**	126.24	326	PKP	PKPdf	09 28 03.6	-0.9
	comp=Z,1.6nm,0.7s,baz=62,slow=2.0,SNR=8.9						
AKBB	**Malin Array Si**	126.24	326	*e*PKPdf	PKPdf	09 28 04.2	-0.3
AKBB	**Malin Array Si**	126.24	326	*e*PKIKP	PKPdf	09 28 04.2	-0.3
KIEV	**Kiev**	126.25	326	PFAKE		09 28 20.0	+15
KIEV				LR	LR		
	comp=Z,425nm,20.0s						
AK11	**Malin Array Si**	126.28	326	*e*PKPdf	PKPdf	09 28 03.9	-0.6
NB2	**NORSAR Subarra**	126.36	344	PKPdf	PKPdf	09 28 01.2	-3.3
	comp=Z,2.7nm,1.0s,baz=24,slow=1.9						
NB200	**NORSAR Array S**	126.36	344	*e*PKPdf	PKPdf	09 28 01.6	-2.8
NOA	**NORSAR Array B**	126.36	344	PKP	PKPdf	09 28 01.6	-2.8
	comp=Z,1.3nm,0.8s,baz=32,slow=1.9,SNR=4.4						
KMBO	**Kilima Mbogo**	126.39	260	PFAKE		09 28 20.0	+13
KMBO				LR	LR		
	comp=Z,366nm,20.0s						
KMBO	**Kilima Mbogo**	126.39	260	PKP	PKiKP	09 28 06.5	-0.2
	comp=Z,0.7nm,0.3s,baz=243,slow=7.1,SNR=3.7						
BR101	**Keskin Array S**	128.16	312	*e*PKPdf	PKPdf	09 28 08.4	-0.3
BRTR	**Keskin Array B**	128.16	312	PKP	PKPdf	09 28 08.4	-0.3
	comp=Z,2.4nm,1.0s,baz=119,slow=1.5,SNR=6.8						
ANTO	**Ankara**	128.72	313	PFAKE		09 28 20.0	+10
ANTO				LR	LR		
	comp=Z,278nm,20.0s						
LSZ	**Lusaka**	129.65	240	PFAKE		09 28 20.0	+7.1
LSZ				LR	LR		
	comp=Z,565nm,22.0s						
BUR04	**Bucovina Ar. S**	130.12	325	*e*PKPdf	PKiKP	09 28 12.8	-0.1
SJG	**San Juan**	130.39	76	PFAKE		09 28 20.0	+5.9
SJG				LR	LR		
	comp=Z,369nm,20.0s						
CLL	**Collm**	133.62	336	*e*PKPdf	PKPdf	09 28 19.0	+0.5
	comp=Z,6.0nm,0.8s						
CLL				*e*PP	PP	09 30 48.0	+1.4
CLL				*e*SS	SS	09 48 30.0	-0.2
CLL				*e*SSS	SSS	09 53 30.0	
CLL				LmH		10 26 00.0	
	comp=Z,500nm,22.0s						
CLL				LmV		10 35 00.0	
	comp=Z,500nm,18.1s						
CLL	**Collm**	133.62	336	*e*PKIKP	PKPdf	09 28 19.0	+0.5
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL				MLR	MLR		
	comp=Z,500nm,18.1s						
PTGA	**Pitinga**	134.09	102	*e*PKPdf	PKPdf	09 28 20.3	-0.2
PTGA				LR	LR		
	comp=Z,16μm,19.0s						
GRGR	**Grenville**	134.60	84	PFAKE		09 28 30.0	+7.2
GRGR				LR	LR		
	comp=Z,297nm,19.0s						
KHC	**Kasperske Hory**	135.03	333	*e*PKPDF	PKPdf	09 28 21.6	+0.3
KHC	**Kasperske Hory**	135.03	333	*e*PKIKP	PKPdf	09 28 21.6	+0.3
GEC2	**GERESS Array S**	135.18	333	*e*PKPdf	PKPdf	09 28 20.0	-1.6
GEC2	**GERESS Array S**	135.18	333	*e*PKIKP	PKPdf	09 28 20.0	-1.6
GERES	**GERESS Array B**	135.18	333	PKP	PKPdf	09 28 21.4	-0.3
	comp=Z,1.6nm,0.8s,baz=64,slow=3.1,SNR=9.7						
GEA0	**GERESS Array S**	135.19	333	*e*PKPdf	PKPdf	09 28 21.1	-0.5
TSUM	**Tsumeb**	135.85	227	PFAKE		09 28 40.0	+15
TSUM				LR	LR		
	comp=Z,678nm,20.0s						
BFO	**Black Forest**	137.84	337	PFAKE		09 28 40.0	+12
BFO				LR	LR		
	comp=Z,24nm,20.0s						
BDFB	**Brasilia**	138.18	129	PKIKP	PKPdf	09 28 27.8	-0.3
BDFB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BDFB	**Brasilia**	138.18	129	PKP	PKPdf	09 28 27.8	-0.3
	comp=Z,1.1nm,0.3s,baz=125,slow=4.6,SNR=4.3						
KEST	**Kesra**	146.74	322	*e*PKPdf	PKPdf	09 28 41.0	-1.8
KEST	**Kesra**	146.74	322	PKPbc	PKPdf	09 28 41.9	-0.9
	comp=Z,8.0nm,0.8s,baz=328,slow=2.3,SNR=6.0						
POLO	**Lamas de Olo**	149.01	349	*e*PKPdf	PKPbc	09 28 50.0	-0.4
ES19	**SONSECA Array**	149.65	342	*e*PKPdf	PKPdf	09 28 45.6	-1.8
ES19				*e*PKPbc	PKPbc	09 28 50.9	-1.1
ES19				*e*PKPab	pPKPdf	09 28 56.0	+0.9
ESDC	**Sonseca Array**	149.69	343	PKPbc	PKPbc	09 28 51.9	-0.2
	comp=Z,4.0nm,0.9s,baz=22,slow=3.1,SNR=11						
ESDC				PKPab	pPKPdf	09 28 56.2	+1.0
	comp=Z,2.0nm,0.7s,baz=11,slow=4.3,SNR=7.8						
MTE	**Manteigas**	149.90	348	*e*PKPdf	PKPbc	09 28 52.4	-0.2
PAB	**San Pablo**	149.93	343	PFAKE		09 29 00.0	+1.8
PAB				LR	LR		
	comp=Z,459nm,20.0s						
PMRV	**Marv??o**	150.80	347	*e*PKPdf	PKPbc	09 28 54.0	-0.7
PTOM	**Tomar**	150.82	349	*e*PKPdf	PKiKP	09 28 55.2	-0.2
TOA0	**Torodi Ar. Sit**	163.25	279	*e*PKPdf	PKPdf	09 29 03.5	-2.0
TORD	**Torodi Ar. Bea**	163.25	279	PKP	PKPdf	09 29 03.7	-1.8
	comp=Z,2.9nm,1.0s,baz=330,slow=2.4,SNR=11						
TORD				PKPab	PKPab	09 29 57.0	+1.0
	comp=Z,0.6nm,0.9s,baz=87,slow=3.0,SNR=2.3						
TOA1	**Torodi Ar. Sit**	163.25	279	*e*PKPdf	PKPdf	09 29 03.7	-1.8
TOA1				*e*PKPab	PKPab	09 29 57.0	+1.0
SACV	**Santiago Islan**	170.97	63	PFAKE		09 29 20.0	+8.8
SACV				LR	LR		
	comp=Z,307nm,19.0s						

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*IDC **08** 09:10:46.5±1.6, 10°.90S×164°.71E, h0^{km}, mb4.2/5, mb1 4.4/7, mb1mx4.0/42, mbtmp4.3/7, ML4.0/2, Error ellipse: s-maj=48.8km s-min=26.5km az=131.0*

*ISCJB **08** 09:10:49.2±1.2, 11°.1S±0°.1×164°.7E±0°.2, h29^{km}, mb4.1/5, Error ellipse: s-maj=25.1km s-min=20.5km az=180.0*

ISC 08 09:10:50.9±1.3**, 11°.0S**±0°.2×**164°.7E**±0°.2**, h29**^{km}**, n7, σ0^{s}.68**/7**, mb4.2**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	11.15	172	Pn	Pn	09 13 28.7	+0.2
	1.5nm,0.3s,baz=342,slow=20,SNR=1.2						
CTA	**Charters Tower**	19.95	241	P	P	09 15 20.2	-0.6
	0.2nm,0.3s,baz=59,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	30.56	249	P	P	09 17 02.1	-0.2
	2.9nm,1.0s,baz=80,slow=9.3,SNR=2.5						
ASAR	**Alice Springs**	31.93	243	P	P	09 17 13.8	-0.5
	3.1nm,0.7s,baz=62,slow=10,SNR=4.1						
FITZ	**Fitzroy Crossi**	38.42	255	P	P	09 18 10.9	+0.6
	5.3nm,1.0s,baz=100,slow=10,SNR=2.2						
ILAR	**Eielson Array**	83.78	19	P	P	09 23 16.4	-0.6
	0.8nm,0.9s,baz=238,slow=5.0,SNR=2.4						
MKAR	**Makanchi Array**	92.79	317	P	P	09 24 01.5	+0.7
	0.8nm,0.7s,baz=108,slow=3.8,SNR=2.0						

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*JMA **08** 09:12:37.9±0.4, 31°.98N×138°.28E, h411^{km}, M3.9*

*ISCJB **08** 09:12:41.3±0.7, 32°.21N±0°.08×138°.1E±0°.1, h380^{km}, mb2.8/4, Error ellipse: s-maj=14.6km s-min=8.5km az=29.9*

*IDC **08** 09:12:42.6±1.6, 32°.16N×137°.66E, h370^{km}±43^{km}, mb2.7/4, mb1 2.8/7, mb1mx2.7/52, mbtmp3.5/7, Error ellipse: s-maj=98.6km s-min=15.3km az=68.0*

ISC 08 09:12:42.8±1.0**, 32°.33N**±0°.09×**138°.2E**±0°.1**, h380**^{km}**, n23, σ1^{s}.24**/28**, mb2.8**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	1.56	59	P	Pn	09 13 34.5	+0.3
	32nm,0.3s,baz=336,slow=21,SNR=8.3						
JHJ				S	S	09 14 20.2	+4.5
	14nm,0.3s,baz=240,slow=22,SNR=3.1						
JHJ2	**Mitsune**	1.58	60	P	Pn	09 13 34.2	-0.1
JHMK	**Hamakita**	2.50	352	P	Pn	09 13 41.5	+1.3
HMMJ	**Hamamatsu 2**	2.55	351	P	Pn	09 13 41.9	+1.2
JOD2	**Odawara 2**	3.02	14	P	Pn	09 13 45.5	+0.9
JNY	**Yasuok**	3.03	355	P	Pn	09 13 46.1	+1.4
BSO3	**Boso 3**	3.13	38	P	Pn	09 13 45.3	+0.1
BSO3				*e*S	S	09 14 36.9	+1.1
BSO4	**Boso 4**	3.20	33	P	Pn	09 13 46.1	+0.1
BSO4				*e*S	S	09 14 37.8	+0.7
BSO1	**Boso 1**	3.29	44	P	Pn	09 13 46.1	-0.1
BSO1				*e*S	S	09 14 38.8	+1.1
JHU	**Hanno**	3.63	14	P	Pn	09 13 50.4	+0.4
JHU				*e*S	S	09 14 44.0	-0.4
JRY	**Ryogami san**	3.72	9	P	Pn	09 13 52.1	+1.2
MJAR	**Matsushiro Arr**	4.20	0	P	Pn	09 13 56.0	+0.4
	0.3nm,0.3s,baz=182,slow=11,SNR=12						
MAT	**Matsushiro**	4.20	0	P	Pn	09 13 56.1	+0.5
JAG	**Ashikaga**	4.21	14	P	Pn	09 13 55.4	-0.3
JYT	**Yasato**	4.23	23	P	Pn	09 13 55.3	-0.5
JHO	**Hitachi**	4.70	24	*e*S	S	09 15 01.9	-1.8
JFK	**Kawauchi**	5.49	23	P	Pn	09 14 09.3	+0.3
JMK	**Ichinoseki**	7.05	20	P	P	09 14 27.6	+0.3
KLR	**Kul'dur**	17.56	346	P	P	09 16 23.5	+0.2
	0.2nm,0.3s,baz=170,slow=13,SNR=5.8						
MKAR	**Makanchi Array**	44.53	306	P	P	09 20 17.8	-0.5
	0.3nm,0.6s,baz=76,slow=6.4,SNR=4.2						
KURBB	**Kurchatov Arra**	46.94	311	P	P	09 20 35.7	-1.2
	0.3nm,0.6s,baz=94,slow=8.5,SNR=3.9						
WRA	**Warramunga Arr**	52.11	185	P	P	09 21 14.7	-1.0
	0.5nm,0.4s,baz=0.0,slow=7.7,SNR=13						
ASAR	**Alice Springs**	55.83	185	P	P	09 21 41.5	-0.8
	0.4nm,0.7s,baz=15,slow=12,SNR=4.3						

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*IDC **08** 09:18:41.4±0.5, 11°.79S×165°.77E, h0^{km}, mb4.5/24, mb1 4.5/25, mb1mx4.5/44, mbtmp4.4/25, ML4.0/1, Error ellipse: s-maj=17.8km s-min=12.9km az=94.0*

*NEIC **08** 09:18:42.5±0.3, 11°.88S×165°.75E, h10^{km}, mb4.7/19, Error ellipse: s-maj=9.3km s-min=6.2km az=63.0*

*ISCJB **08** 09:18:43.4±0.3, 12°.01S±0°.04×165°.77E±0°.05, h25^{km}, mb4.7/53, Error ellipse: s-maj=7.9km s-min=5.3km az=151.2*

ISC 08 09:18:43.8±2.5**, 11°.89S**±0°.08×**165°.84E**±0°.07**, h16**^{km}±15^{km}**, n112, σ1^{s}.22**/106**, mb4.7**/53**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	6.29	292	*e*Pn	Pn	09 20 10.2	-5.8
HNR				*e*Sn	Sn	09 21 26.4	-1.1
HNR	**Honiara**	6.29	292	Pn	Pn	09 20 16.7	+0.8
	11nm,0.3s,baz=298,slow=4.6,SNR=7.9						
HNR				Sn	Sn	09 21 26.4	-1.1
	6.7nm,0.3s,baz=168,slow=4.5,SNR=1.0						
MARNC	**Mare, Loyalty**	9.77	168	*e*Pn	Pn	09 21 02.3	-1.5
DZM	**Mont Dzumac**	10.15	177	*e*Pn	Pn	09 21 08.2	-0.9
DZM	**Mont Dzumac**	10.15	177	Pn	Pn	09 21 10.7	+1.6
	1.3nm,0.3s,baz=179,slow=20,SNR=16						
DZM				Sn	Sn	09 22 53.5	-9.1
	0.3nm,0.3s,baz=1.8,slow=24,SNR=1.0						
ONTNC	**Ouen Toro**	10.38	177	*e*Pn	Pn	09 21 11.3	-0.8
PINNC	**Pines Island,**	10.78	172	*e*Pn	Pn	09 21 16.0	-1.6
MSVF	**Nonsavu**	13.16	118	*e*Pn	Pn	09 21 51.4	+1.1
EIDS	**Eidsvold**	19.35	224	*e*P	P	09 23 06.6	-2.2
	26nm,1.1s						
CTA	**Charters Tower**	20.50	244	P	P	09 23 21.8	+0.3
	12nm,0.9s,baz=58,slow=14,SNR=6.4						
CTAO	**Charters Tower**	20.50	244	*e*P	P	09 23 21.3	-0.2
	32nm,1.1s						
COEN	**Coen**	22.19	262	*e*P	P	09 23 38.7	-1.0
	29nm,1.1s						
ARMA	**Armidale**	22.67	213	*e*P	P	09 23 43.8	-1.0
	65nm,1.0s						
URZ	**Urewera**	28.13	161	*e*P	P	09 24 34.4	-0.8
	5.2nm,0.9s						
URZ	**Urewera**	28.13	161	P	P	09 24 35.9	+0.7
	3.2nm,0.8s,baz=355,slow=18,SNR=2.5						
BKZ	**Black Stump Fm**	28.77	163	*e*P	P	09 24 41.5	+0.5
	3.9nm,0.7s						
STKA	**Stephens Creek**	29.91	224	P	P	09 24 51.2	+0.1
	4.1nm,0.7s,baz=20,slow=11,SNR=8.5						
STKA				PcP	PcP	09 27 54.6	+0.7
	1.9nm,0.8s,baz=68,slow=5.4,SNR=2.7						
H11S2	**WAKE ISLAND Hy**	30.20	2	T	T	09 56 42.8	
	baz=182						
H11S3	**WAKE ISLAND Hy**	30.20	2	T	T	09 56 39.2	
	baz=182						
H11S1	**WAKE ISLAND Hy**	30.21	2	T	T	09 56 43.1	
	baz=182						
THZ	**Tophouse**	30.40	170	*e*P	P	09 24 54.2	-1.2
	16nm,0.8s						
KHZ	**Kahutara**	31.15	169	*e*P	P	09 25 00.8	-1.1
	16nm,1.0s						
WRAB	**Tennant Creek**	31.28	251	*e*P	P	09 25 00.3	-3.1
	5.5nm,0.9s						
WB2	**Warramunga Arr**	31.28	251	*e*P	P	09 25 02.9	-0.5
WR1	**Warramunga Arr**	31.29	251	*e*P	P	09 25 03.1	-0.4
	11nm,1.0s						
WR1				*e*PcP	PcP	09 27 57.6	-0.2
WRA	**Warramunga Arr**	31.29	251	P	P	09 25 03.1	-0.4
	5.6nm,0.9s,baz=83,slow=9.0,SNR=34						
WRA				PcP	PcP	09 27 57.6	-0.2
	2.7nm,0.9s,baz=76,slow=2.9,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	31.42	2	T	T	09 58 15.0	
	baz=182						
H11N3	**WAKE ISLAND Hy**	31.42	2	T	T	09 58 09.6	
	baz=182						
H11N2	**WAKE ISLAND Hy**	31.43	2	T	T	09 58 16.6	
	baz=182						
FOZ	**Fox Glacier**	31.72	174	*e*P	P	09 25 07.0	0.0
	45nm,1.0s						
RPZ	**Rata Peaks**	32.03	173	P	P	09 25 10.6	+0.9
	34nm,0.9s,baz=28,slow=1.1,SNR=13						
MQZ	**McQueen’s Vall**	32.25	171	*e*P	P	09 25 10.2	-1.4
	44nm,1.2s						
AS01	**Alice Springs**	32.47	244	*e*P	P	09 25 12.6	-1.3
AS31	**Alice Springs**	32.51	244	*e*P	P	09 25 13.3	-0.9
	2.7nm,0.8s						
ASAR	**Alice Springs**	32.51	244	P	P	09 25 13.3	-0.9

	7.1nm,0.8s,baz=75,slow=9.3,SNR=62						
ASAR				PcP	**PcP**	**09 28 01.0**	**-0.1**
	3.4nm,0.9s,baz=81,slow=2.9,SNR=11						
FITZ	**Fitzroy Crossi**	**39.26**	**256**	*e*P	**P**	**09 26 11.7**	**-0.5**
	9.9nm,1.0s						
FITZ	**Fitzroy Crossi**	**39.26**	**256**	P	**P**	**09 26 11.6**	**-0.5**
	6.0nm,0.9s,baz=115,slow=6.0,SNR=9.3						
FITZ				PcP	**PcP**	**09 28 21.7**	**+0.6**
	3.6nm,1.0s,baz=117,slow=14,SNR=3.3						
MBWA	**Marble Bar**	**45.02**	**252**	*e*P	**P**	**09 26 59.9**	**+0.8**
	18nm,1.0s						
BNSI	**Bone**	**45.83**	**275**	P	**P**	**09 27 06.7**	**+1.1**
	54nm,1.1s						
SPSI	**Sidrap Palu**	**46.25**	**276**	P	**P**	**09 27 09.9**	**+1.0**
	7.5nm,1.2s						
TTSI	**Tana Toraja**	**46.41**	**277**	P	P	09 27 17.5	+7.3
NWAO	**Narrogin (SRO)**	**49.08**	**237**	P	**P**	**09 27 30.2**	**-0.4**
	20nm,1.1s,baz=310,slow=10,SNR=4.5						
PCJI	**Pacitan**	**53.88**	**268**	P	**P**	**09 28 08.5**	**+1.6**
	62nm,1.2s						
MJAR	**Matsushiro Arr**	**54.76**	**333**	P	**P**	**09 28 10.8**	**-2.0**
	2.8nm,0.8s,baz=169,slow=9.0,SNR=4.3						
MAJO	**Matsushiro**	**54.76**	**333**	*e*P	**P**	**09 28 10.8**	**-2.0**
KPJI	**Karang Pucung**	**56.22**	**269**	P	P	09 28 36.0	+12
KSRS	**Korea Array**	**60.62**	**326**	P	**P**	**09 28 53.9**	**-0.2**
	1.9nm,0.9s,baz=142,slow=7.8,SNR=4.6						
NJ2	**Nanjing**	**62.68**	**316**	*e*P	**P**	**09 29 08.1**	**0.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	**Ussuriysk Ar.**	**63.74**	**333**	P	**P**	**09 29 14.7**	**-0.2**
	comp=Z,7.0nm,1.0s,baz=142,slow=9.5,SNR=6.3						
VNDA	**Vanda**	**65.66**	**181**	*e*P	**P**	**09 29 28.1**	**+1.1**
VNDA	**Vanda**	**65.66**	**181**	P	**P**	**09 29 28.4**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=349,slow=5.2,SNR=3.9						
CN2	**Changchun**	**66.51**	**329**	*e*P	**P**	**09 29 32.3**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MNSI	**Mandailing Nat**	**66.97**	**276**	P	**P**	**09 29 36.8**	**+0.3**
	comp=Z,38nm,1.0s,comp=Z,3µm						
SKNT	**Sakolnakorn**	**67.52**	**294**	P	**P**	**09 29 41.0**	**+1.2**
	comp=Z,6.6nm,1.0s,comp=Z,619nm						
KLR	**Kul'dur**	**67.86**	**337**	P	**P**	**09 29 40.9**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=115,slow=12,SNR=6.1						
PSI	**Prapat**	**68.08**	**278**	P	**P**	**09 29 42.6**	**-1.0**
	comp=Z,8.7nm,0.9s,baz=180,slow=7.3,SNR=6.0						
GYA	**Guiyang**	**68.97**	**304**	*e*P	**P**	**09 29 50.0**	**+1.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	**Beijing**	**69.19**	**321**	⇓*i*P	**P**	**09 29 49.8**	**0.0**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BJI				LR	LR		
	comp=N,1µm,22.6s						
BJI				LR	LR		
	comp=E,790nm,23.0s						
BJI				LR	LR		
	comp=Z,2µm,30.9s						
UTHA	**Uthaitani**	**71.14**	**291**	P	**P**	**09 30 04.9**	**+2.6**
KMI	**Kunming**	**71.64**	**302**	P	**P**	**09 30 07.4**	**+2.0**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KMI				pmax	pmax		
	comp=Z,230nm,4.0s						
KMI				LR	LR		
	comp=N,300nm,12.7s						
KMI				LR	LR		
	comp=E,500nm,13.8s						
KMI				LR	LR		
	comp=Z,440nm,13.3s						
HHC	**Hu-ho-hao-te**	**72.53**	**320**	*e*P	**P**	**09 30 11.3**	**+1.0**
HHC				S	**S**	**09 39 30.3**	**-4.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,500nm,8.0s						
HHC				LR	LR		
	comp=N,570nm,17.8s						
HHC				LR	LR		
	comp=E,440nm,18.4s						
HHC				LR	LR		
	comp=Z,770nm,17.9s						
CMAR	**Chiang Mai Arr**	**72.53**	**294**	P	**P**	**09 30 11.0**	**+0.3**
	comp=Z,4.7nm,0.8s,baz=117,slow=4.2,SNR=19						
CMMT	**Chiang Mai**	**72.64**	**294**	P	**P**	**09 30 12.9**	**+1.6**
	comp=Z,7.2nm,1.2s						
CHTO	**Chiang Mai**	**72.65**	**294**	P	**P**	**09 30 13.0**	**+1.6**
	comp=Z,32nm,1.1s						
CHTO	**Chiang Mai**	**72.65**	**294**	P	**P**	**09 30 13.0**	**+1.6**
	comp=Z,32nm,1.1s						
CD2	**Chengdu**	**73.18**	**307**	P	**P**	**09 30 15.0**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
LZH	**Lanzhou**	**75.39**	**312**	*e*P	**P**	**09 30 28.7**	**+1.5**
LZH				pP	pwP	09 30 35.9	-4.4
LZH				sP	PcP	09 30 39.0	-1.4
LZH				PP	PP	09 33 25.7	+9.3
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,80nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,17.1s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
QSPA	**South Pole Qui**	**78.12**	**180**	*e*P	**P**	**09 30 41.8**	**-0.3**
	comp=Z,13nm,1.0s						
QSPA	**South Pole Qui**	**78.12**	**180**	P	**P**	**09 30 42.3**	**+0.2**
	comp=Z,8.8nm,1.0s,baz=15,slow=2.9,SNR=18						
SONA0	**Songino Array**	**79.39**	**324**	*e*P	**P**	**09 30 49.5**	**+0.2**
SONM	**Songino Array**	**79.39**	**324**	P	**P**	**09 30 49.6**	**+0.2**
	comp=Z,3.9nm,0.9s,baz=129,slow=5.8,SNR=12						
GTA	**Gaotai**	**79.70**	**314**	*e*P	**P**	**09 30 52.0**	**+0.7**
GTA				pP	pwP	09 31 03.5	-0.9
GTA				sP	PcP	09 31 08.3	+9.3
GTA	**Gaotai**	**79.70**	**314**	S	**S**	**09 40 53.6**	**+0.1**
GTA	**Gaotai**	**79.70**	**314**	sS	sS	09 41 01.4	+3.1
GTA	**Gaotai**	**79.70**	**314**	SKS	S	09 41 04.9	+11
GTA	**Gaotai**	**79.70**	**314**	SS	SS	09 46 05.4	+2.8
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,95nm,7.5s						
GTA				LR	LR		
	comp=N,330nm,17.8s						
GTA				LR	LR		
	comp=E,640nm,16.5s						
GTA				LR	LR		
	comp=Z,890nm,16.8s						
ILAR	**Eielson Array**	**84.28**	**18**	P	**P**	**09 31 15.3**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=238,slow=5.3,SNR=7.5						
NVAR	**Mina Array Bea**	**86.49**	**50**	P	**P**	**09 31 27.3**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=234,slow=7.7,SNR=5.6						
TIXI	**Tiksi**	**86.93**	**349**	*e*P	**P**	**09 31 26.8**	**-0.8**
	comp=Z,3.5nm,1.1s						
WMQ	**Urumqi**	**89.75**	**315**	*e*P	**P**	**09 31 41.8**	**+0.1**
WMQ				pP	sP	09 31 47.5	+2.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.5s						
WMQ				LR	LR		
	comp=N,660nm,19.9s						
WMQ				LR	LR		
	comp=E,820nm,15.3s						
WMQ				LR	LR		
	comp=Z,290nm,15.9s						
PDAR	**Pinedale Array**	**94.05**	**47**	P	**P**	**09 32 03.0**	**+1.0**
	comp=Z,0.1nm,0.6s,baz=258,slow=3.3,SNR=2.3						
MK01	**Makanchi Array**	**94.18**	**317**	*e*P	**P**	**09 32 02.0**	**-0.2**
MK31	**Makanchi Array**	**94.19**	**317**	*e*P	**P**	**09 32 02.3**	**+0.1**
MK32	**Makanchi Array**	**94.19**	**317**	*e*P	**P**	**09 32 01.8**	**-0.4**
MKAR	**Makanchi Array**	**94.19**	**317**	*e*P	**P**	**09 32 02.4**	**+0.2**
	comp=Z,36nm,1.0s						
MKAR	**Makanchi Array**	**94.19**	**317**	P	**P**	**09 32 01.8**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=101,slow=6.3,SNR=18						
ZAA0	**Zalesovo Array**	**94.29**	**324**	*e*P	**P**	**09 32 01.3**	**-1.1**
	comp=Z,6.3nm,0.9s						
ZALV	**Zalesovo Beam**	**94.29**	**324**	*e*P	**P**	**09 32 00.5**	**-1.9**
ZALV	**Zalesovo Beam**	**94.29**	**324**	P	**P**	**09 32 00.9**	**-1.5**
	comp=Z,9.7nm,1.1s,baz=114,slow=3.7,SNR=19						
ZAA1	**Zalesovo Array**	**94.29**	**324**	*e*P	**P**	**09 32 00.9**	**-1.5**
YKA	**Yellowknife Ar**	**95.67**	**27**	P	**P**	**09 32 06.4**	**-2.1**
	comp=Z,0.2nm,0.7s,baz=255,slow=4.6,SNR=3.6						
KURK	**Kurchatov**	**97.34**	**320**	*e*P	**P**	**09 32 15.8**	**-0.6**
KSH	**Kashi**	**97.35**	**309**	P	Pdif	09 32 21.8	+4.8
KSH				PP	**PP**	**09 36 16.1**	**+2.2**
KSH	**Kashi**	**97.35**	**309**	S	**S**	**09 43 45.1**	**+4.3**
KSH	**Kashi**	**97.35**	**309**	sS	sS	09 43 48.3	+3.1
KSH	**Kashi**	**97.35**	**309**	SS	SS	09 50 21.8	+2.3
KSH				pmax	pmax		
	comp=Z,260nm,5.2s						
KSH				LR	LR		
	comp=N,190nm,6.7s						
KSH				LR	LR		
	comp=E,190nm,4.9s						
KURBB	**Kurchatov Arra**	**97.38**	**320**	P	**P**	**09 32 15.8**	**-0.8**
	comp=E,0.6nm,0.8s,baz=97,slow=3.3,SNR=2.6						
ARA0	**ARCESS Array S**	**117.17**	**345**	*e*PKPdf	**PKPdf**	**09 37 26.6**	**-1.3**
ARCES	**ARCESS Array B**	**117.17**	**345**	PKP	**PKPdf**	**09 37 26.6**	**-1.2**
	comp=E,1.4nm,0.7s,baz=76,slow=2.8,SNR=7.5						
FIA0	**FINESS Array S**	**122.58**	**338**	*e*PKPdf	**PKPdf**	**09 37 37.5**	**-0.9**
FINES	**FINESS Array B**	**122.58**	**338**	PKP	**PKPdf**	**09 37 37.5**	**-0.9**
	comp=E,3.1nm,0.9s,baz=82,slow=6.6,SNR=5.7						
BOSA	**Boshof**	**124.57**	**223**	PKP	**PKiKP**	**09 37 43.7**	**-0.1**
	comp=E,1.9nm,0.7s,baz=301,slow=2.9,SNR=3.6						
AKASG	**Malin Array Be**	**127.61**	**327**	PKP	**PKPdf**	**09 37 46.9**	**-1.5**
	comp=E,0.5nm,0.5s,baz=67,slow=2.2,SNR=5.9						
BR101	**Keskin Array S**	**129.59**	**312**	*e*PKPdf	**PKPdf**	**09 37 52.8**	**0.0**
BRTR	**Keskin Array B**	**129.60**	**312**	PKP	**PKPdf**	**09 37 52.8**	**0.0**
	comp=E,1.2nm,0.8s,baz=150,slow=5.6,SNR=5.2						
CLL	**Collm**	**134.91**	**336**	*e*PKPdf	**PKiKP**	**09 38 03.0**	**-0.6**
GERES	**GERESS Array B**	**136.49**	**333**	PKP	**PKPdf**	**09 38 05.5**	**+0.2**
	comp=E,0.4nm,0.5s,baz=7.1,slow=5.4,SNR=5.5						
KEST	**Kesra**	**148.13**	**322**	*e*PKPbc	**PKPbc**	**09 38 30.1**	**+0.6**
KEST	**Kesra**	**148.13**	**322**	PKPbc	**PKPbc**	**09 38 29.6**	**+0.1**
	comp=E,22nm,0.8s,baz=307,slow=6.1,SNR=9.6						
ESDC	**Sonseca Array**	**150.88**	**344**	PKPbc	**PKPbc**	**09 38 35.8**	**-0.4**
	comp=E,1.6nm,0.8s,baz=27,slow=1.8,SNR=6.5						
TORD	**Torodi Ar. Bea**	**164.47**	**276**	PKP	**PKPdf**	**09 38 47.5**	**-0.5**
	comp=E,1.6nm,0.9s,baz=330,slow=4.3,SNR=7.7						
TOA1	**Torodi Ar. Sit**	**164.47**	**276**	*e*PKPdf	**PKPdf**	**09 38 47.5**	**-0.5**

KOLA ***08*** *09:20:14.2, 67°.65N×33°.99E, h0^{km}*
NAO ***08*** *09:20:15.6±1.2, 67°.69N×33°.77E, ML2.9*
HEL ***08*** *09:20:15.2±0.3, 67°.66N×33°.83E, h0^{km}, ML2.6, Explosion*
UPP ***08*** *09:20:16.9±2.8, 67°.63N×33°.49E, h0^{km}, ML2.0, Suspected explosion*
ISC 08 09:20:15.1±1.7**, 67°.66N**±0°.04×**33°.85E**±0°.08**, h0^{km}, n42,** σ1^{s}.**74**/66**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	**Apatity**	**0.19**	**243**	P	**Pg**	**09 20 18.4**	**-0.3**
APA				S	**Sg**	**09 20 21.5**	**+0.4**
APA0	**Apatity Array**	**0.33**	**262**	Pg	**Pg**	**09 20 21.1**	**-0.3**
APA0				Lg	Lg	09 20 26.4	
APA0				Rg	Rg	09 20 28.2	
APA0	**Apatity Array**	**0.33**	**262**	P	**Pg**	**09 20 21.0**	**-0.3**
APA0				S	**Sg**	**09 20 26.0**	**+0.4**
APA0	**Apatity Array**	**0.33**	**262**	Pg	**Pg**	**09 20 21.1**	**-0.3**
APA0				Sg	**Sg**	**09 20 26.4**	**+0.7**
APA0				Rg	Rg	09 20 28.2	
VRF	**Varrio**	**1.62**	**275**	*e*P	**Pn**	**09 20 44.0**	**-0.9**
VRF				*e*S	**Sn**	**09 21 05.0**	**-1.4**
VRF				*e*SN	**Sb**	**09 21 06.0**	**-0.7**
VRF				MSG		09 21 09.5	
	comp=Z,65nm,0.2s						
KU6	**Riekki**	**2.26**	**226**	*e*P	**Pn**	**09 20 53.7**	**0.0**
KU6				*e*SG	**Sb**	**09 21 24.5**	**-0.7**
MSF	**Maaselka**	**2.59**	**230**	*e*P	**Pn**	**09 20 59.0**	**+0.9**
MSF				*e*SG	**Sb**	**09 21 34.6**	**0.0**
SGF	**Sodankyl**	**2.82**	**269**	*e*P	**Pn**	**09 21 01.2**	**0.0**
SGF				*e*SG	**Sb**	**09 21 41.4**	**+0.2**
RNF	**Rovaniemi**	**3.23**	**255**	*e*P	**Pn**	**09 21 06.5**	**-0.5**
KEV	**Kevo**	**3.27**	**313**	Pn	**Pn**	**09 21 07.9**	**+0.4**
KEV				Sn	**Sn**	**09 21 46.9**	**0.0**
KEV				Lg	Lg	09 21 54.9	
KEV	**Kevo**	**3.27**	**313**	*e*P	**Pn**	**09 21 07.9**	**+0.4**
KEV				*e*S	**Sn**	**09 21 47.5**	**+0.5**
KEV	**Kevo**	**3.27**	**313**	*e*P	**Pn**	**09 21 07.8**	**+0.4**
KEV				*e*SG	**Sb**	**09 21 55.5**	**+1.4**
ARA0	**ARCESS Array S**	**3.59**	**306**	Pn	**Pn**	**09 21 11.8**	**-0.1**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**09 21 54.3**	**-0.8**
	baz=119,slow=28						
ARA0				Lg	Lg	09 22 06.4	
	baz=120,slow=37						
ARA0	**ARCESS Array S**	**3.59**	**306**	Pn	**Pn**	**09 21 11.8**	**-0.1**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**09 21 54.3**	**-0.8**
	baz=119,slow=28						
ARA0				Sg	**Sb**	**09 22 06.4**	**+2.9**
	baz=120,slow=37						
ARE0	**ARCESS Array S**	**3.59**	**306**	IAML		09 22 10.6	
	comp=Z,1.1nm,0.3s						
ARE0	**ARCESS Array S**	**3.59**	**306**	*e*P	**Pn**	**09 21 11.6**	**-0.4**
HEF	**Hetta**	**3.90**	**286**	Pn	**Pn**	**09 21 16.8**	**+0.6**
HEF				Pg	**Pb**	**09 21 26.6**	**+2.0**
HEF				Sn	**Sn**	**09 22 01.4**	**-1.2**
HEF				Lg	Lg	09 22 14.0	
HEF	**Hetta**	**3.90**	**286**	*e*P	**Pn**	**09 21 15.8**	**-0.4**
HEF				Pg	**Pb**	**09 21 26.6**	**+2.0**
HEF				Sn	**Sn**	**09 22 01.4**	**-1.2**
HEF				Sg	**Sb**	**09 22 14.0**	**+1.7**
HEF	**Hetta**	**3.90**	**286**	*e*SG	**Sb**	**09 22 15.7**	**+3.3**
HEF				MSG		09 22 20.1	
	comp=Z,18nm,0.3s						
TOF	**Tornio**	**4.08**	**252**	*e*P	**Pn**	**09 21 18.4**	**-0.2**
TOF				*e*SG	**Sb**	**09 22 19.8**	**+2.5**
TOF				MSG		09 22 25.8	
	comp=Z,9.2nm,0.3s						
OUL	**Oulu**	**4.11**	**235**	*e*PG	**Pb**	**09 21 29.4**	**+1.3**
KTK1	**Kautokeino**	**4.16**	**294**	*e*P	**Pn**	**09 21 20.8**	**+1.0**
KTK1				IAML		09 22 30.4	
	comp=Z,13nm,0.3s						
PAJU	**Pajala**	**4.20**	**266**	P	**Pn**	**09 21 19.9**	**-0.4**
LANU	**Lannavaara**	**4.51**	**281**	P	**Pn**	**09 21 23.2**	**-1.3**
LANU				S	**Sn**	**09 22 15.8**	**-1.8**
KALU	**Kalix**	**4.53**	**251**	P	**Pn**	**09 21 24.3**	**-0.5**
KALU				S	**Sn**	**09 22 14.6**	**-3.4**
MASU	**Masugnsbyn**	**4.55**	**273**	P	**Pn**	**09 21 24.4**	**-0.6**
ERTU	**Ertsjaerv**	**4.69**	**262**	P	**Pn**	**09 21 26.4**	**-0.6**
HAMF	**Hammerfest**	**4.71**	**314**	*e*P	**Pn**	**09 21 27.5**	**+0.3**
HAMF				IAML		09 22 43.1	
	comp=Z,10nm,0.5s						
KIF	**Kilpisjarvi**	**5.02**	**292**	Pn	**Pn**	**09 21 31.6**	**+0.2**
KIF				Sn	**Sn**	**09 22 29.8**	**-0.3**
KIF				Lg	Lg	09 22 49.5	
KIF	**Kilpisjarvi**	**5.02**	**292**	*e*P	**Pn**	**09 21 30.9**	**-0.6**
KUA	**Kurravaara**	**5.13**	**280**	P	**Pn**	**09 21 32.3**	**-0.7**
KUA				S	**Sn**	**09 22 29.9**	**-3.0**
SJUU	**Sjulsmark**	**5.33**	**252**	P	**Pn**	**09 21 34.9**	**-0.9**
RATU	**Laukkuluspa**	**5.42**	**278**	P	**Pn**	**09 21 36.6**	**-0.4**
NIKU	**Nikkaluokta**	**5.63**	**279**	P	**Pn**	**09 21 39.6**	**-0.2**
FIA0	**FINESS Array S**	**7.07**	**212**	Pn	**Pn**	**09 21 58.9**	**-0.7**
	baz=22,slow=14						
FIA0				Lg	Lg	09 23 50.5	
	baz=10,slow=28						
FIA0	**FINESS Array S**	**7.07**	**212**	Pn	**Pn**	**09 21 58.9**	**-0.7**
	baz=22,slow=14						
FIA0				Sg	**Sb**	**09 23 50.5**	**+7.2**
	baz=10,slow=28						
HFS	**Hagfors**	**11.59**	**239**	Pn	**Pn**	**09 22 57.2**	**-4.3**
HFS	**Hagfors**	**11.59**	**239**	Pn	**Pn**	**09 22 57.2**	**-4.3**
SPA0	**Spitsbergen Ar**	**11.66**	**342**	Pn	**Pn**	**09 22 59.8**	**-2.6**
	baz=148,slow=16						
SPA0	**Spitsbergen Ar**	**11.66**	**342**	Pn	**Pn**	**09 22 59.8**	**-2.6**
	baz=148,slow=16						
NRA0	**NORESS Array S**	**11.88**	**245**	Pn	**Pn**	**09 23 03.7**	**-1.7**
	baz=44,slow=14						
NRA0	**NORESS Array S**	**11.88**	**245**	Pn	**Pn**	**09 23 03.7**	**-1.7**
	baz=44,slow=14						

NNC ***08*** *09:26:50.1±2.4, 53°.60N×87°.59E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=20.0km s-min=10.3km az=49.0, Suspected Mining explosion.*
IDC 08 09:26:51.9±2.6**, 53°.49N×87°.62E, h0^{km}, mb1 3.4**/2**, mb1mx3.0**/42**, mbtmp3.4**/2**, ML3.0**/2**, 7C-2D, Error ellipse: s-maj=22.0km s-min=13.7km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**286**	*i*		09 41 10.0	
	baz=108,slow=355,SNR=1.4						
ZAA0	**Zalesovo Array**	**1.73**	**286**	⇑P	Pn	09 27 19.9	-3.2
	3.8nm,0.3s						
ZAA0				⇓S	Sn	09 27 43.4	-2.5
	20nm,1.1s						
ZALV	**Zalesovo Beam**	**1.73**	**286**	Pg	Pn	09 27 21.6	-1.5
	4.9nm,0.3s,baz=104,slow=14,SNR=26						
ZALV				Lg	Lg	09 27 47.9	
	6.0nm,0.3s,baz=100,slow=24,SNR=13						
KURK	**Kurchatov**	**6.20**	**247**	⇑Lg	Lg	09 30 06.4	
	14nm,1.4s						
KURBB	**Kurchatov Arra**	**6.30**	**247**	⇑Pn	Pn	09 28 26.4	+0.4
	1.9nm,0.3s						
KURBB				⇓Sn	Sn	09 29 38.7	+0.1
	7.6nm,0.9s						
KURBB				⇑Lg	Lg	09 30 11.7	
	10nm,0.8s						
KURBB	**Kurchatov Arra**	**6.30**	**247**	Pn	Pn	09 28 26.7	+0.7
	0.2nm,0.3s,baz=62,slow=14,SNR=14						
KURBB				Sn	Sn	09 29 37.5	-1.1
	0.0nm,0.3s,baz=59,slow=25,SNR=3.7						
KURBB				Lg	Lg	09 30 12.2	
	0.1nm,0.3s,baz=68,slow=31,SNR=7.6						
MK31	**Makanchi Array**	**7.53**	**209**	⇑Pn	Pn	09 28 43.9	+1.0
	0.2nm,0.3s,baz=28,slow=13,SNR=27						
MK31				⇑Sn	Sn	09 30 09.0	+0.1
	1.3nm,0.8s,baz=34,slow=28,SNR=2.8						
MK31				⇑Lg	Lg	09 30 48.0	
	1.4nm,0.6s,baz=35,slow=30,SNR=5.2						
MKAR	**Makanchi Array**	**7.53**	**209**	Pn	Pn	09 28 44.0	+1.2
	0.4nm,0.3s,baz=27,slow=13,SNR=22						
MKAR				Sn	Sn	09 30 09.6	+0.7
	0.2nm,0.3s,baz=35,slow=27,SNR=4.8						
MKAR				Lg	Lg	09 30 49.7	
	0.1nm,0.3s,baz=38,slow=31,SNR=6.6						

IDC ***08*** *09:28:06.9±0.5, 11°.10S×164°.82E, h0^{km}, mb4.4/19, mb1 4.5/22, mb1mx4.5/34, mbtmp4.4/22, ML4.7/3, MS4.2/6, Ms1 4.2/6, ms1mx3.7/35, Error ellipse: s-maj=18.4km s-min=13.7km az=94.0*
NEIC ***08*** *09:28:08.4±0.3, 11°.09S×164°.81E, h10^{km}, mb4.7/16, Error ellipse: s-maj=7.7km s-min=5.2km az=84.0*
ISCJB ***08*** *09:28:09.7±0.3, 11°.21S±0°.04×164°.77E±0°.05, h31^{km}, mb4.5/36, MS4.5/7, Error ellipse: s-maj=7.9km s-min=5.2km az=162.2*
ISC 08 09:28:11.5±0.4**, 11°.15S**±0°.06×**164°.81E**±0°.07**, h31^{km}, n92,** σ**0^{s}.78**/90**, mb4.6**/36**, MS4.7**/7**, 1C, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.08**	**289**	*e*P	**Pn**	**09 29 25.0**	**-0.6**
HNR				*e*S	**Sn**	**09 30 24.0**	**+0.8**
HNR	**Honiara**	**5.08**	**289**	Pn	**Pn**	**09 29 26.0**	**+0.4**
	66nm,0.3s,baz=152,slow=9.5,SNR=19						
HNR				Sn	**Sn**	**09 30 22.0**	**-1.2**
	44nm,0.3s,baz=189,slow=16,SNR=4.2						
HNR				LR	LR	09 31 43.1	
	comp=Z,2µm,18.9s,baz=122,slow=43						
MARNC	**Mare, Loyalty**	**10.72**	**164**	*e*Pn	**Pn**	**09 30 43.7**	**+0.6**
DZM	**Mont Dzumac**	**10.97**	**172**	*e*Pn	**Pn**	**09 30 46.9**	**+0.4**
DZM	**Mont Dzumac**	**10.97**	**172**	Pn	**Pn**	**09 30 46.5**	**0.0**
	4.8nm,0.3s,baz=314,slow=13,SNR=45						
DZM				Sn	**Sn**	**09 32 47.0**	**-1.3**
	0.4nm,0.3s,baz=114,slow=15,SNR=1.8						
DZM				LR	LR	09 34 10.2	
	comp=Z,626nm,19.4s,baz=30,slow=33						
ONTNC	**Ouen Toro**	**11.20**	**172**	*e*Pn	**Pn**	**09 30 50.6**	**+1.0**
PINNC	**Pines Island,**	**11.67**	**168**	*e*Pn	**Pn**	**09 30 57.3**	**+1.3**
CTA	**Charters Tower**	**19.94**	**241**	P	**Pn**	**09 32 41.9**	**-1.0**
	0.8nm,0.3s,baz=72,slow=14,SNR=8.5						
CTAO	**Charters Tower**	**19.94**	**241**	*e*P	**Pn**	**09 32 43.0**	**+0.1**
	15nm,0.9s						
COEN	**Coen**	**21.30**	**260**	*e*P	**P**	**09 32 56.6**	**+0.8**
	9.1nm,0.8s						
ARMA	**Armidale**	**22.75**	**211**	*e*P	**P**	**09 33 09.1**	**-2.2**
	12nm,0.8s						
URZ	**Urewera**	**29.15**	**160**	*e*P	**P**	**09 34 09.8**	**-0.1**
	11nm,1.2s						
URZ	**Urewera**	**29.15**	**160**	P	**P**	**09 34 11.5**	**+1.6**
	5.7nm,0.8s,baz=60,slow=4.4,SNR=5.5						
H11S2	**WAKE ISLAND Hy**	**29.51**	**4**	T	T	10 05 11.2	
	baz=184,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	**29.52**	**4**	T	T	10 05 17.8	
	baz=184,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.53**	**4**	T	T	10 05 18.8	
	baz=184,slow=76,SNR=21						
STKA	**Stephens Creek**	**29.74**	**223**	*e*P	**P**	**09 34 16.8**	**+1.6**
	0.8nm,0.8s						
STKA	**Stephens Creek**	**29.74**	**223**	P	**P**	**09 34 15.5**	**+0.3**
	2.1nm,0.6s,baz=52,slow=13,SNR=7.9						
STKA				PcP	**PcP**	**09 37 19.1**	**+0.3**
	1.8nm,0.7s,baz=307,slow=6.6,SNR=3.9						
BKZ	**Black Stump Fm**	**29.78**	**162**	*e*P	**P**	**09 34 15.6**	**+0.1**
	10nm,1.0s						
WRAB	**Tennant Creek**	**30.57**	**250**	*e*P	**P**	**09 34 21.8**	**-1.0**
	9.0nm,0.9s						
WB2	**Warramunga Arr**	**30.57**	**250**	*e*P	**P**	**09 34 22.2**	**-0.5**
WR1	**Warramunga Arr**	**30.58**	**250**	*e*P	**P**	**09 34 22.2**	**-0.6**
	10nm,0.8s						
WR1				*e*PcP	**PcP**	**09 37 21.8**	**+0.6**
WRA	**Warramunga Arr**	**30.58**	**250**	P	**P**	**09 34 22.2**	**-0.6**
	6.8nm,0.6s,baz=77,slow=8.9,SNR=52						
WRA				PcP	**PcP**	**09 37 21.8**	**+0.6**
	0.9nm,0.5s,baz=74,slow=3.4,SNR=9.7						
WRA				LR	LR	09 46 54.7	
	comp=Z,747nm,18.6s,baz=40,slow=37						
H11N1	**WAKE ISLAND Hy**	**30.74**	**4**	T	T	10 06 44.9	
	baz=184,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**30.75**	**4**	T	T	10 06 45.1	
	baz=184,slow=76,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**30.76**	**4**	T	T	10 06 53.0	
	baz=184,slow=76,SNR=11						
TOO	**Toolangi**	**31.51**	**210**	*e*P	**P**	**09 34 30.9**	**+0.1**
	8.8nm,0.8s						
AS01	**Alice Springs**	**31.88**	**243**	*e*P	**P**	**09 34 33.5**	**-0.8**
AS01				*e*PcP	**PcP**	**09 37 25.4**	**+0.7**
AS31	**Alice Springs**	**31.92**	**243**	*e*P	**P**	**09 34 33.3**	**-1.3**
	2.9nm,0.4s						
ASAR	**Alice Springs**	**31.92**	**243**	P	**P**	**09 34 33.9**	**-0.8**
	4.7nm,0.5s,baz=63,slow=10,SNR=129						
ASAR				PcP	**PcP**	**09 37 25.2**	**+0.5**
	1.0nm,0.5s,baz=84,slow=2.2,SNR=8.7						
RPZ	**Rata Peaks**	**32.89**	**172**	*e*P	**P**	**09 34 43.0**	**+0.1**
	7.0nm,0.7s						
RPZ	**Rata Peaks**	**32.89**	**172**	P	**P**	**09 34 42.9**	**+0.1**
	5.7nm,0.7s,baz=273,slow=1.9,SNR=6.1						
BBOO	**Buckleboo**	**34.09**	**226**	*e*P	**P**	**09 34 53.6**	**+0.2**
	12nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.46**	**255**	*e*P	**P**	**09 35 30.6**	**-0.4**
	10nm,0.8s						
DAV	**Davao City (W)**	**43.03**	**293**	LR	LR	09 53 28.7	
	comp=Z,136nm,19.0s,baz=122,slow=35						
PPT	**Papeete**	**44.56**	**104**	LR	LR	09 53 27.4	
	comp=Z,143nm,18.3s,baz=282,slow=34						
NWAO	**Narrogin (SRO)**	**48.64**	**236**	LR	LR	09 57 01.8	
	comp=Z,695nm,19.4s,baz=288,slow=36						
MJAR	**Matsushiro Arr**	**53.65**	**333**	P	**P**	**09 37 29.6**	**-0.7**
	4.1nm,0.9s,baz=167,slow=7.1,SNR=5.1						
MAJO	**Matsushiro**	**53.65**	**333**	*e*P	**P**	**09 37 29.6**	**-0.7**
ASAJ	**Asahikawa**	**58.60**	**341**	P	**P**	**09 38 06.0**	**+0.6**
	19nm,0.7s,baz=322,slow=31,SNR=9.0						
KSRS	**Korea Array**	**59.45**	**326**	P	**P**	**09 38 10.9**	**-0.5**
	2.4nm,0.9s,baz=140,slow=6.5,SNR=6.2						
NJ2	**Nanjing**	**61.45**	**316**	*e*P	**P**	**09 38 24.8**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	**Ussuriysk Ar.**	**62.63**	**334**	P	**P**	**09 38 32.9**	**0.0**
	comp=Z,3.3nm,0.6s,baz=121,slow=5.2,SNR=9.7						
PEA0B	**Petropavlovsk-**	**64.29**	**355**	*e*P	**P**	**09 38 43.2**	**-0.5**
	comp=Z,14nm,1.0s						
PETK	**Petropavlovsk-**	**64.29**	**355**	*e*P	**P**	**09 38 43.9**	**+0.1**
PETK	**Petropavlovsk-**	**64.29**	**355**	P	**P**	**09 38 43.7**	**0.0**
	comp=Z,3.9nm,0.8s,baz=194,slow=8.3,SNR=6.1						
PEA1	**Petropavlovsk-**	**64.30**	**355**	*e*P	**P**	**09 38 43.7**	**-0.1**
CN2	**Changchun**	**65.36**	**330**	*e*P	**P**	**09 38 51.3**	**+0.4**
KLR	**Kul'dur**	**66.79**	**337**	P	**P**	**09 39 00.8**	**+0.9**
	comp=Z,3.3nm,0.8s,baz=140,slow=5.0,SNR=9.4						
KMI	**Kunming**	**70.39**	**302**	P	**P**	**09 39 25.4**	**+2.1**
KMI				pmax	pmax		
	comp=Z,210nm,6.0s						
KMI				LR	LR		
	comp=N,300nm,12.7s						
KMI				LR	LR		
	comp=E,500nm,13.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KMI				LR	LR		
	comp=Z,440nm,13.3s						
CMAR	Chiang Mai Arr	71.31	294	P	P	09 39 29.4	+0.7
	comp=Z,0.8nm,0.3s,baz=120,slow=3.2,SNR=4.9						
HHC	Hu-ho-hao-te	71.32	320	eP	P	09 39 32.2	+3.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,340nm,5.0s						
CD2	Chengdu	71.94	308	P	P	09 39 32.8	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,140nm,5.2s						
LZH	Lanzhou	74.15	313	eP	P	09 39 46.6	+1.2
LZH				pP	sP	09 39 53.9	-3.2
LZH				sP	pwP	09 39 56.0	-3.1
LZH				PP	PP	09 42 41.5	+10
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
LZH				pmax	pmax		
	comp=Z,89nm,4.4s						
SONA0	Songino Array	78.21	324	eP	P	09 40 08.6	+0.4
SONM	Songino Array	78.21	324	P	P	09 40 08.6	+0.4
	comp=Z,3.4nm,1.1s,baz=134,slow=6.4,SNR=6.6						
SONA1	Songino Array	78.21	324	eP	P	09 40 07.9	-0.3
GTA	Gaotai	78.47	314	⇑P	P	09 40 11.3	+1.4
GTA				pP	PcP	09 40 18.4	-0.6
GTA				sP	pwP	09 40 21.7	-1.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,140nm,7.5s						
GTA				LR	LR		
	comp=N,180nm,19.0s						
GTA				LR	LR		
	comp=E,370nm,16.2s						
GTA				LR	LR		
	comp=Z,400nm,16.8s						
QSPA	South Pole Qui	78.85	180	eP	P	09 40 12.0	+0.5
	comp=Z,9.3nm,0.9s						
IM3	Indian Mountai	82.78	16	eP	P	09 40 32.5	+0.4
ILAR	Eielson Array	83.91	19	P	P	09 40 38.3	+0.2
	comp=Z,1.0nm,0.7s,baz=239,slow=4.6,SNR=16						
ILB	Eielson Array	83.91	19	eP	P	09 40 38.2	+0.2
TIXI	Tiksi	86.02	349	P	P	09 40 48.1	-0.4
	comp=Z,1.5nm,0.3s,baz=131,slow=6.8,SNR=4.0						
NVAR	Mina Array Bea	86.80	50	P	P	09 40 53.3	0.0
	comp=Z,2.0nm,1.1s,baz=226,slow=8.1,SNR=3.9						
WMQ	Urumqi	88.52	315	eP	P	09 41 03.0	+1.7
WMQ				LR	LR		
	comp=N,610nm,17.5s						
WMQ				LR	LR		
	comp=E,410nm,15.1s						
WMQ				LR	LR		
	comp=Z,490nm,16.5s						
MK01	Makanchi Array	92.96	317	eP	P	09 41 21.4	-0.4
MK31	Makanchi Array	92.97	317	eP	P	09 41 22.1	+0.2
	comp=Z,0.9nm,0.9s						
MK32	Makanchi Array	92.97	317	eP	P	09 41 21.9	+0.1
MKAR	Makanchi Array	92.97	317	eP	P	09 41 21.8	-0.1
	comp=Z,11nm,1.1s						
MKAR	Makanchi Array	92.97	317	P	P	09 41 22.0	+0.1
	comp=Z,1.8nm,1.0s,baz=90,slow=7.3,SNR=6.5						
PD31	Pinedale Array	94.30	47	eP	P	09 41 27.9	-0.5
PDAR	Pinedale Array	94.30	47	P	P	09 41 27.9	-0.5
	comp=Z,0.6nm,1.0s,baz=228,slow=6.8,SNR=3.1						
YKA	Yellowknife Ar	95.49	27	P	P	09 41 31.6	-1.4
	comp=Z,0.2nm,0.7s,baz=254,slow=4.5,SNR=4.3						
ARA0	ARCESS Array S	116.20	345	ePKPdf	PKPdf	09 46 51.0	-0.2
ARCES	ARCESS Array B	116.20	345	PKP	PKPdf	09 46 51.0	-0.2
	comp=Z,0.9nm,0.5s,baz=90,slow=1.7,SNR=13						
LPAZ	La Paz	120.96	117	PKP	PKiKP	09 47 03.1	+0.3
	comp=Z,1.0nm,0.7s,baz=275,slow=2.4,SNR=3.0						
FIA0	FINESS Array S	121.53	338	ePKPdf	PKiKP	09 47 01.3	-0.5
FINES	FINESS Array B	121.53	338	PKP	PKiKP	09 47 01.3	-0.5
	comp=Z,0.8nm,0.7s,baz=101,slow=1.4,SNR=3.5						
BATG	Bathurst New B	124.23	40	ePdif	Pdif	09 43 41.8	+0.3
BOSA	Boshof	124.41	224	PKP	PKiKP	09 47 08.7	0.0
	comp=Z,3.0nm,0.9s,baz=128,slow=1.4,SNR=6.4						
CPUP	Villa Florida	124.63	133	PKP	PKiKP	09 47 09.4	+0.4
	comp=Z,1.5nm,0.8s,baz=160,slow=4.7,SNR=3.3						
SDV	Santo Domingo	125.42	87	PKP	PKiKP	09 47 11.4	+0.2
	comp=Z,7.7nm,0.8s,baz=261,slow=3.5,SNR=10						
AKASG	Malin Array Be	126.45	326	PKP	PKiKP	09 47 11.8	-0.1
	comp=Z,0.6nm,0.4s,baz=41,slow=1.7,SNR=4.9						
NB200	NORSAR Array S	126.56	344	ePKPdf	PKiKP	09 47 11.2	-0.7
NOA	NORSAR Array B	126.56	344	PKP	PKiKP	09 47 11.2	-0.7
	comp=Z,0.1nm,0.4s,baz=22,slow=3.8,SNR=2.2						
TRIS	Tristan da Cun	131.96	183	ePKPdf	PKiKP	09 47 23.0	-0.4
CLL	Collm	133.83	336	ePKPdf	PKiKP	09 47 25.0	-1.7
GERES	GERESS Array B	135.39	333	PKP	PKiKP	09 47 29.1	-1.0
	comp=Z,0.2nm,0.3s,baz=48,slow=1.5,SNR=2.4						
KEST	Kesra	146.94	322	PKPbc	PKPbc	09 47 50.5	-1.0
	comp=Z,11nm,1.1s,baz=9.5,slow=6.1,SNR=2.1						
ESDC	Sonseca Array	149.89	343	PKPbc	PKPbc	09 47 58.0	-1.2
	comp=Z,0.2nm,0.3s,baz=26,slow=3.3,SNR=2.6						
TORD	Torodi Ar. Bea	163.37	279	PKP	PKPdf	09 48 12.0	-0.2
	comp=Z,0.9nm,0.9s,baz=207,slow=1.7,SNR=4.7						
TOA1	Torodi Ar. Sit	163.37	279	ePKPdf	PKPdf	09 48 12.0	-0.2

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*ISCJB **08** 09:28:42.0±0.5, 36.°45N±0.°03×35.°79E±0.°03, h6^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=3.5km az=4.0*

*DDA **08** 09:28:41.6, 36.°48N×35.°83E, h7^{km}±4^{km}, ML3.6*

*ISK **08** 09:28:41.7, 36.°48N×35.°85E, h15^{km}, ML2.6/15*

ISC 08 09:28:42.1±1.0**, 36.°47N**±0.°03×**35.°82E**±0.°02**, h13**^{km}±8^{km}**, n31, σ0.^{s}62**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAHT	Tahtakopru-Hat	0.31	107	PG	Pg	09 28 48.2	-0.3
TAHT				SG	Sg	09 28 53.2	+0.4
KRTS	Karatas	0.37	287	PG	Pb	09 28 50.2	-0.4
YURE	YUREGIR	0.39	338	PG	Pg	09 28 50.1	+0.2
YURE				SG	Sb	09 28 56.2	-0.6
YURE	YUREGIR	0.39	338	i P	Pg	09 28 50.1	+0.2
YURE				i S	Sg	09 28 55.3	+0.1
YAYL	Yayladag	0.49	151	i P	Pb	09 28 52.9	+0.2
YAYL				i S	Sb	09 28 59.6	-0.3
CEYT	Ceyhan	0.55	354	PG	Pg	09 28 52.7	-0.1
KARA	Karaisali	1.00	323	PG	Pg	09 29 01.4	-0.1
KOZT	Kozan	1.01	0	PG	Pb	09 29 01.3	-0.2
KUZU	Kuzuini	1.06	73	i P	Pn	09 29 02.5	-0.2
KUZU				i S	Sg	09 29 16.3	0.0
MERS	Mersin	1.12	291	PN	Pn	09 29 03.5	0.0
GULE	Gulek	1.17	315	i P	Pb	09 29 03.0	-1.2
GULE				i S	Sn	09 29 20.6	+0.4
ANDN	Andirin	1.19	21	i P	Pg	09 29 05.6	+0.5
ANDN				i S	Sn	09 29 21.0	+0.3
GAZ	Gaziantep	1.32	57	PN	Pn	09 29 05.8	-0.6
KIZK	Mersin	1.35	271	PN	Pb	09 29 07.5	+0.2
KIZK	Mersin	1.35	271	i P	Pb	09 29 07.3	0.0
KIZK				i S	Sg	09 29 25.5	-0.1
KIZK				IAML_P			
	comp=Z,3µm,0.1s						
KMRS	Kahramanmaras	1.35	40	PN	Pn	09 29 06.1	-0.7
SAIM	ADANA	1.52	8	i P	Pb	09 29 09.7	-0.6
SAIM				i S	Sg	09 29 31.9	+0.7
KERG	Konya-Eregli	1.65	305	i P	Pn	09 29 10.4	-0.6
KERG				i S	Sb	09 29 33.8	+0.5
GZT	Gaziantep	1.66	57	i P	Pb	09 29 13.0	+0.3
GZT				i S	Sg	09 29 35.1	-0.4
GZT				IAML_P			
	comp=Z,2µm,0.1s						
YAHY	KAYSERI_Yahyal	1.67	348	eP	Pn	09 29 11.7	+0.6
YAHY				i S	Sg	09 29 36.1	+0.3
KEBE	Keben-Mersin	1.70	270	PN	Pn	09 29 11.9	+0.4
IKL	Isikli	1.74	263	PN	Pn	09 29 12.5	+0.5
AKKU	Akkuyu-Mersin	1.86	261	PN	Pn	09 29 14.2	+0.6
GULN	MERSIN_Gulnar	1.86	262	eP	Pn	09 29 11.7	-1.9
GULN				i S	Sn	09 29 36.9	-0.1
BERE	Bereket-Mersin	2.10	268	PN	Pn	09 29 17.6	+0.5
TEKE	Tekeli-Mersin	2.21	262	PN	Pn	09 29 19.2	+0.7
SURC	SANLIURFA_SURC	2.29	79	i P	Pb	09 29 23.4	+0.2
SURC				i S	Sg	09 29 54.0	-1.6
ERMK	Ermenek	2.34	275	i P	Pb	09 29 24.2	-0.2
AKCD	Akcadag	2.48	42	i P	Pn	09 29 23.6	+1.3
DARE	Darende-Malaty	2.48	32	PN	Pn	09 29 22.5	+0.1
URFA	Urfa	2.59	67	PN	Pn	09 29 24.4	+0.5

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*IDC **08** 09:42:15.9±1.5, 15.°14N×94.°85W, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.9/34, mbtmp3.8/9, ML3.5/2, MS4.0/1, Ms1 3.9/1, ms1mx3.0/30, Error ellipse: s-maj=36.0km s-min=22.2km az=38.0*

*NEIC **08** 09:42:16.1±5.1, 14.°91N×94.°95W, h12^{km}±29^{km}, mb4.0/1, MD4.1(MEX), Error ellipse: s-maj=23.4km s-min=10.4km az=191.0*

*ISCJB **08** 09:42:17.1±0.8, 15.°07N±0.°08×94.°92W±0.°05, h22^{km}, mb3.8/7, MS4.0/1, Error ellipse: s-maj=12.5km s-min=5.7km az=20.0*

*MEX **08** 09:42:21.6±0.8, 14.°92N×95.°29W, h10^{km}, MD4.1*

ISC 08 09:42:18.1±0.9**, 15.°01N**±0.°09×**95.°02W**±0.°05**, h22**^{km}**, n29, σ1.^{s}65**/36**, mb4.0**/7**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.29	306	eP	Pn	09 42 39.3	-1.5
HUIG				eS	Sn	09 42 54.6	-2.9
HUIG	Huatulco	1.29	306	eP	Pn	09 42 39.3	-1.5
HUIG				eS	Sn	09 42 54.6	-2.9
CMIG	Matias Romero	2.07	4	Pn	Pn	09 42 50.6	-1.0
	14nm,0.3s,baz=180,slow=11,SNR=137						
CMIG				LR	LR	09 43 03.7	
	comp=Z,216nm,18.8s,baz=184,slow=25						
CMIG				Sn	Sn	09 43 15.4	-1.4
	36nm,0.3s,baz=271,slow=23,SNR=8.8						
VHO	Vista Hermosa	2.63	321	eP	Pn	09 43 00.8	+1.3
VHO				eS	Sn	09 43 30.7	0.0
VHO	Vista Hermosa	2.63	321	eP	Pn	09 43 00.8	+1.3
VHO				eS	Sn	09 43 30.7	0.0
CCIG	Comitan	3.05	65	ePn	Pn	09 43 04.7	-0.6
PNIG	Pinotepa	3.29	295	eP	Pn	09 43 08.8	+0.4
PNIG				i S	Sn	09 43 42.9	-4.0
PNIG	Pinotepa	3.29	295	eP	Pn	09 43 08.8	+0.4
PNIG				i S	Sn	09 43 42.9	-4.0
APG	El Apazote	4.40	89	Pn	Pn	09 43 23.2	-0.7
	1.0nm,0.3s,baz=304,slow=12,SNR=22						
APG				Sn	Sn	09 44 12.3	-2.3
	2.9nm,0.3s,baz=303,slow=14,SNR=3.0						
TEIG	Tepich	8.26	50	ePn	Pn	09 44 14.2	-2.5
LTX	Lajitas	16.34	332	ePn	P	09 46 08.4	-0.6
TX31	Lajitas Ar. Si	16.34	332	ePn	P	09 46 07.5	-1.6
TXAR	Lajitas Array	16.34	332	Pn	P	09 46 08.4	-0.6
	0.1nm,0.3s,baz=147,slow=16,SNR=9.8						
LRAL	Lakeview Retre	19.37	21	eP	Pn	09 46 42.7	-0.9
Z50A	Ashland	19.95	23	eP	P	09 46 48.8	+0.1
	8.9nm,1.1s						
ANMO	Albuquerque	22.36	335	P	P	09 47 14.5	-0.4
	0.5nm,0.5s,baz=152,slow=15,SNR=3.5						
NVAR	Mina Array Bea	31.08	323	P	P	09 48 37.6	+2.6
	0.5nm,0.6s,baz=114,slow=9.9,SNR=3.6						
ULM	Lac du Bonnet	35.15	359	P	P	09 49 09.2	-0.9
	2.1nm,0.8s,baz=200,slow=9.9,SNR=4.7						
SCHQ	Schefferville	45.36	23	LR	LR	10 12 36.0	
	comp=Z,170nm,18.1s,baz=344,slow=40						
YKA	Yellowknife Ar	49.41	348	P	P	09 51 06.9	+1.0
	1.8nm,0.8s,baz=152,slow=7.2,SNR=27						
YKA				PcP	PcP	09 52 28.0	-0.1
	0.5nm,1.1s,baz=145,slow=4.4,SNR=4.1						
YKB5	Yellowknife Ar	49.41	348	eP	P	09 51 06.9	+1.0
YKB5				ePcP	PcP	09 52 28.0	-0.1
ILAR	Eielson Array	60.77	337	P	P	09 52 29.6	+1.6
	1.2nm,0.9s,baz=135,slow=4.5,SNR=12						
ESDC	Sonseca Array	81.38	51	P	P	09 54 34.4	+0.9
	1.8nm,1.0s,baz=288,slow=6.1,SNR=4.7						
NB200	NORSAR Array S	84.64	28	eP	P	09 54 49.9	0.0
NOA	NORSAR Array B	84.64	28	P	P	09 54 49.9	0.0
	0.6nm,0.8s,baz=297,slow=5.0,SNR=2.6						
WR1	Warramunga Arr	132.79	257	ePKPdf	PKPdf	10 01 32.9	+0.6
WRA	Warramunga Arr	132.79	257	PKP	PKPdf	10 01 32.9	+0.6
	0.3nm,0.7s,baz=83,slow=2.4,SNR=2.9						
CM31	Chiang Mai Arr	144.01	337	ePKPpre	PKPpre	10 01 49.9	
CMAR	Chiang Mai Arr	144.01	337	PKhKP	PKPpre	10 01 49.9	
	0.4nm,0.3s,baz=12,slow=2.2,SNR=3.3						

IDC 08 09:47:52.1±25.0**, 11.°59S×165.°19E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.6**/36**, mbtmp3.7**/4**, ML3.2**/1**, Error ellipse: s-maj=438.4km s-min=50.3km az=48.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.50	174	Pn	Pn	09 50 23.9	-0.1
	0.2nm,0.3s,baz=346,slow=19,SNR=4.7						
STKA	Stephens Creek	29.68	223	P	P	09 53 59.5	-0.2
	0.6nm,0.4s,baz=23,slow=7.1,SNR=2.5						
WRA	Warramunga Arr	30.79	250	P	P	09 54 10.0	+0.3
	0.6nm,1.0s,baz=80,slow=9.1,SNR=5.2						
ASAR	Alice Springs	32.06	244	P	P	09 54 20.9	-0.1
	0.3nm,0.8s,baz=70,slow=9.9,SNR=3.9						

IDC 08 09:48:01.3±1.2**, 10.°34S×166.°29E, h0**^{km}**, mb3.6**/4**, mb1 4.0**/5**, mb1mx3.7**/36**, mbtmp3.7**/5**, ML4.1**/1**, Error ellipse: s-maj=52.8km s-min=25.7km az=135.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.67	179	Pn	Pn	09 50 50.1	+0.8
	1.2nm,0.3s,baz=0.0,slow=20,SNR=14						
WRA	Warramunga Arr	32.23	249	P	P	09 54 31.9	+0.3
	0.5nm,0.6s,baz=82,slow=9.0,SNR=4.9						
ASAR	Alice Springs	33.59	243	P	P	09 54 43.0	-0.6
	0.4nm,0.7s,baz=69,slow=9.9,SNR=4.1						
ILAR	Eielson Array	82.68	18	P	P	10 00 26.5	+0.1
	0.4nm,0.7s,baz=239,slow=5.4,SNR=8.8						
NVAR	Mina Array Bea	85.16	50	P	P	10 00 39.9	-0.1
	0.6nm,0.7s,baz=231,slow=6.9,SNR=3.1						

IDC 08 09:51:16.3±7.3**, 7.°01S×120.°44E, h429**^{km}±30^{km}**, mb3.0**/3**, mb1 3.0**/6**, mb1mx2.7**/41**, mbtmp3.7**/6**, Error ellipse: s-maj=86.4km s-min=84.2km az=142.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.50	135	P	P	09 52 35.1	+0.4
	4.1nm,0.3s,baz=315,slow=2.9,SNR=1.6						
BATI				S	S	09 53 38.9	+0.2
	9.4nm,0.3s,baz=262,slow=11,SNR=2.6						
FITZ	Fitzroy Crossi	12.13	156	P	P	09 53 56.4	-0.4
	0.1nm,0.3s,baz=355,slow=12,SNR=1.8						
FITZ				S	S	09 56 04.0	-5.4
	0.1nm,0.3s,baz=2.9,slow=22,SNR=1.9						
WRA	Warramunga Arr	18.63	135	P	P	09 55 06.5	+0.2
	0.2nm,0.3s,baz=313,slow=11,SNR=9.3						
ASAR	Alice Springs	21.01	143	P	P	09 55 28.5	+0.3
	0.4nm,0.4s,baz=319,slow=8.3,SNR=7.9						
CTA	Charters Tower	28.20	120	P	P	09 56 32.1	-0.5
	2.9nm,0.7s,baz=297,slow=9.0,SNR=1.3						
STKA	Stephens Creek	31.65	144	P	P	09 57 01.9	-0.4
	0.8nm,0.5s,baz=287,slow=14,SNR=1.7						

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*IDC **08** 09:58:00.4±1.1, 11.°39S×164.°83E, h0^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.8/37, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=33.6km s-min=24.3km az=163.0*

*ISCJB **08** 09:58:03.8±0.9, 11.°6S±0.°1×164.°81E±0.°09, h34^{km}, mb3.9/6, Error ellipse: s-maj=19.9km s-min=9.7km az=31.9*

ISC 08 09:58:05.6±1.0**, 11.°5S**±0.°1×**164.°9E**±0.°1**, h34**^{km}**, n14, σ0.^{s}34**/9**, mb3.8**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.25	293	Pn	Pn	09 59 22.0	+0.3
	21nm,0.3s,baz=155,slow=6.6,SNR=3.8						
HNR				Sn	Sn	10 00 21.3	+0.2
	baz=340,slow=8.3,SNR=1.2						
DZM	Mont Dzumac	10.62	172	Pn	Pn	10 00 35.6	+0.1
	0.5nm,0.3s,baz=315,slow=16,SNR=8.8						
H11S2	WAKE ISLAND Hy	29.86	4	T	T	10 35 30.6	
	baz=184,slow=76,SNR=5.8						
H11S3	WAKE ISLAND Hy	29.86	3	T	T	10 35 31.3	
	baz=184,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	29.88	4	T	T	10 35 32.3	
	baz=184,slow=76,SNR=5.3						
WRA	Warramunga Arr	30.51	250	P	P	10 04 15.6	-0.2
	0.5nm,0.7s,baz=80,slow=9.1,SNR=3.8						
H11N1	WAKE ISLAND Hy	31.08	4	T	T	10 37 08.0	
	baz=182						
H11N3	WAKE ISLAND Hy	31.09	4	T	T	10 37 10.2	
	baz=182						
H11N2	WAKE ISLAND Hy	31.10	4	T	T	10 37 17.3	
	baz=182						
ASAR	Alice Springs	31.81	243	P	P	10 04 27.0	-0.4
	1.1nm,0.8s,baz=68,slow=9.7,SNR=10						
RAR	Rarotonga	35.21	110	P	P	10 04 57.1	+0.3
	10nm,0.6s,baz=79,slow=14,SNR=1.7						
FITZ	Fitzroy Crossi	38.42	255	P	P	10 05 24.1	-0.2
	1.7nm,0.9s,baz=82,slow=7.1,SNR=2.5						
ILAR	Eielson Array	84.22	19	P	P	10 10 32.8	-0.4
	0.3nm,0.6s,baz=236,slow=6.0,SNR=6.6						
MKAR	Makanchi Array	93.26	317	P	P	10 11 17.1	+0.2
	0.5nm,0.7s,baz=90,slow=4.5,SNR=3.2						

MEX 08 09:58:17.6±0.5**, 14.°53N×93.°25W, h17**^{km}±810^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.03	69	eP	Pb	09 58 33.9	-3.0
THIG				eS	Sb	09 58 45.9	-4.2
PCIG		1.17	2	i P	Pn	09 58 35.5	-3.7
PCIG				i S	Sb	09 58 49.5	-4.7
CCIG	Comitan	2.05	32	eP	Pn	09 58 50.4	-1.0
CCIG				eS	Sn	09 59 13.2	-3.5

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*IDC **08** 09:59:31.1±1.5, 11.°24S×164.°86E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/36, mbtmp3.8/6, ML2.9/1, Error ellipse: s-maj=48.2km s-min=28.5km az=121.0*

*ISCJB **08** 09:59:33.7±1.1, 11.°5S±0.°1×165.°0E±0.°2, h31^{km}, mb3.8/5, Error ellipse: s-maj=29.5km s-min=18.5km az=176.6*

ISC 08 09:59:35.4±1.2**, 11.°4S**±0.°1×**165.°0E**±0.°3**, h31**^{km}**, n12, σ1.^{s}20**/6**, mb3.8**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.72	173	Pn	Pn	10 02 06.9	-0.1
	0.1nm,0.3s,baz=344,slow=4.5,SNR=1.7						
H11S2	WAKE ISLAND Hy	29.74	3	T	T	10 36 57.3	
	baz=184						
H11S3	WAKE ISLAND Hy	29.74	3	T	T	10 37 03.1	
	baz=184						
H11S1	WAKE ISLAND Hy	29.76	3	T	T	10 37 01.6	
	baz=184						
WRA	Warramunga Arr	30.64	250	P	P	10 05 47.6	+0.3
	0.6nm,0.8s,baz=79,slow=9.1,SNR=4.8						
H11N1	WAKE ISLAND Hy	30.96	4	T	T	10 38 29.9	
	baz=183						
H11N3	WAKE ISLAND Hy	30.97	4	T	T	10 38 36.0	
	baz=183						
H11N2	WAKE ISLAND Hy	30.98	4	T	T	10 38 33.2	
	baz=183						
ASAR	Alice Springs	31.95	243	P	P	10 05 58.8	-0.1
	0.9nm,0.7s,baz=67,slow=10,SNR=7.8						
ILAR	Eielson Array	84.08	19	P	P	10 12 03.3	+0.5
	0.4nm,0.6s,baz=242,slow=5.0,SNR=9.3						
MKAR	Makanchi Array	93.25	317	P	P	10 12 48.0	+0.9
	0.3nm,0.7s,baz=100,slow=6.0,SNR=3.7						
ZALV	Zalesovo Beam	93.38	324	P	P	10 12 45.7	-1.8
	0.5nm,0.6s,baz=120,slow=4.8,SNR=2.6						

IDC 08 10:06:28.8±2.8**, 53.°71N×86.°76E, h0**^{km}**, mb1 2.5**/2**, mb1mx2.5**/37**, mbtmp2.5**/2**, ML2.2**/2**, Error ellipse: s-maj=25.6km s-min=14.5km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.18	282	Pg	Pg	10 06 50.8	-0.5
	0.5nm,0.3s,baz=104,slow=12,SNR=13						
ZALV				Lg	Lg	10 07 07.3	
	0.6nm,0.3s,baz=98,slow=28,SNR=6.4						
ZALV				Rg	Rg	10 07 14.1	
	0.7nm,0.3s,baz=98,slow=21,SNR=7.2						
I46RU	ZALESOVO INFRA	1.18	283	i		10 13 19.6	
	baz=102,slow=352,SNR=1.6						
KURBB	Kurchatov Arra	5.93	242	Pn	Pn	10 07 58.5	+0.7
	0.0nm,0.3s,baz=54,slow=14,SNR=3.8						
MKAR	Makanchi Array	7.49	204	Pn	Pn	10 08 20.4	+1.1
	0.1nm,0.3s,baz=25,slow=13,SNR=5.1						

MEX 08 10:15:39.0±0.8**, 17.°14N×100.°53W, h27**^{km}±18^{km}**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.27	111	i P	Pb	10 15 44.7	-1.0
CAIG				eS	Sb	10 15 48.5	-1.8
ACP2	Acapulco	0.67	114	eP	Pb	10 15 50.1	-2.0
ACP2				i S	Sb	10 15 58.3	-2.8
ZIIG	Zihuatanejo	1.01	297	i P	Pn	10 15 54.4	-3.0
ZIIG				i S	Sb	10 16 07.1	-3.5
ARIG	Puente Sto Nin	1.14	9	eP	Pn	10 15 57.1	-2.2
ARIG				eS	Sn	10 16 10.9	-3.3
MEIG	Mezcala	1.16	48	i P	Pn	10 15 56.3	-3.4
MEIG				eS	Sn	10 16 09.0	-5.8
PLIG	Platanillo	1.58	38	i P	Pn	10 16 03.2	-2.2
PLIG				eS	Sn	10 16 21.5	-3.5

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*ISCJB **08** 10:20:32.2±1.0, 11.°0S±0.°1×165.°6E±0.°2, h10^{km}, mb3.8/6, Error ellipse: s-maj=22.1km s-min=14.7km az=169.4*

*IDC **08** 10:20:32.0±1.7, 10.°89S×165.°66E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.7/38, mbtmp3.8/6, ML4.1/1, Error ellipse: s-maj=50.0km s-min=28.2km az=126.0*

*NEIC **08** 10:20:33.8±0.8, 10.°87S×165.°64E, h10^{km}, mb4.3/2, Error ellipse: s-maj=18.3km s-min=12.3km az=80.0*

ISC 08 10:20:33.8±1.3**, 10.°9S**±0.°1×**165.°6E**±0.°3**, h10**^{km}**, n15, σ0.^{s}54**/10**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.15	176	ePn	Pn	10 23 13.6	+0.1
DZM	Mont Dzumac	11.15	176	Pn	Pn	10 23 13.2	-0.3
	1.5nm,0.3s,baz=14,slow=5.2,SNR=24						
ONTNC	Ouen Toro	11.38	176	ePn	Pn	10 23 17.1	+0.5
CTA	Charters Tower	20.74	242	P	Pn	10 25 16.9	-0.3
	3.9nm,0.8s,baz=66,slow=12,SNR=4.1						
BKZ	Black Stump Fm	29.79	163	eP	P	10 26 35.5	-5.4
	3.8nm,1.0s						
H11N1	WAKE ISLAND Hy	30.44	2	T	T	10 58 36.7	
	baz=182						
H11N3	WAKE ISLAND Hy	30.44	2	T	T	10 58 34.6	
	baz=182						
H11N2	WAKE ISLAND Hy	30.46	2	T	T	10 58 36.7	
	baz=182						
WB2	Warramunga Arr	31.38	250	eP	P	10 26 55.3	+0.1
WR1	Warramunga Arr	31.39	250	eP	P	10 26 55.6	+0.3
	6.3nm,1.0s						
WRA	Warramunga Arr	31.39	250	P	P	10 26 55.6	+0.3
	1.6nm,0.8s,baz=81,slow=9.0,SNR=12						
ASAR	Alice Springs	32.72	243	P	P	10 27 05.9	-1.0
	0.3nm,0.4s,baz=65,slow=10,SNR=11						
ILAR	Eielson Array	83.42	19	P	P	10 33 00.8	-0.3
	0.3nm,0.9s,baz=240,slow=5.2,SNR=4.0						
MK32	Makanchi Array	93.31	317	eP	P	10 33 49.4	+0.4
MKAR	Makanchi Array	93.31	317	P	P	10 33 49.4	+0.4
	0.2nm,0.8s,baz=104,slow=6.1,SNR=2.1						

IDC 08 10:22:59.2±3.6**, 10.°46S×164.°93E, h0**^{km}**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/36**, mbtmp3.5**/4**, Error ellipse: s-maj=155.1km s-min=31.0km az=136.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.94	249	P	P	10 29 17.7	-0.6
	0.3nm,0.8s,baz=80,slow=9.3,SNR=3.7						
ASAR	Alice Springs	32.35	242	P	P	10 29 31.1	+0.5
	0.3nm,0.6s,baz=64,slow=11,SNR=7.3						
ILAR	Eielson Array	83.22	19	P	P	10 35 27.1	-0.1
	0.4nm,0.7s,baz=234,slow=5.2,SNR=6.5						
MKAR	Makanchi Array	92.55	317	P	P	10 36 12.7	+0.1
	0.2nm,0.7s,baz=87,slow=5.9,SNR=2.8						

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*IDC **08** 10:23:43.0±1.4, 10.°97S×164.°67E, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.8/36, mbtmp3.8/6, ML3.9/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/43, Error ellipse: s-maj=47.2km s-min=27.2km az=136.0*

*ISCJB **08** 10:23:45.6±0.9, 11.°2S±0.°1×164.°7E±0.°2, h29^{km}, mb3.7/5,* *MS3.2/1, Error ellipse: s-maj=25.8km s-min=19.2km az=10.6*

ISC 08 10:23:47.3±1.0**, 11°.1S**±0°.1×**164°.7E**±0°.2**, h29km, n8, σ0s.24**/6**, mb3.7**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.96	289	LR	LR	10 26 52.0	
	comp=Z,347nm,19.3s,baz=106,slow=39						
DZM	Mont Dzumac	11.06	172	Pn	Pn	10 26 23.9	+0.1
	0.8nm,0.3s,baz=164,slow=14,SNR=1.5						
WRA	Warramunga Arr	30.52	249	P	P	10 29 58.2	-0.1
	0.8nm,0.6s,baz=80,slow=9.3,SNR=9.6						
GUMO	Guam	31.43	321	LR	LR	10 42 27.7	
	comp=Z,46nm,19.8s,baz=122,slow=36						
ASAR	Alice Springs	31.87	243	P	P	10 30 10.2	-0.1
	1.0nm,0.6s,baz=62,slow=10,SNR=18						
ILAR	Eielson Array	83.86	19	P	P	10 36 13.9	0.0
	0.4nm,0.8s,baz=240,slow=5.9,SNR=2.6						
NVAR	Mina Array Bea	86.82	50	P	P	10 36 29.4	-0.2
	0.7nm,0.9s,baz=242,slow=1.9,SNR=2.0						
MKAR	Makanchi Array	92.84	317	P	P	10 36 57.7	+0.3
	0.2nm,0.6s,baz=91,slow=7.6,SNR=2.1						

JMA 08 10:29:05.2, 35°.23N×137°.35E, h47km, M2.6, 1C-2D Broadband fault plane solution: P waves. NP1: ϕs146.00000°, δ87.00000°, λ121.00000°. **NP2:** ϕs242.00000°, δ32.00000°, λ6.00000°. **Principal axes:** T Plg40.0000°, Azm85.0000°; N Plg31.0000°, Azm324.0000°; P Plg34.0000°, Azm210.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAO	Obara	0.08	296	⇓P	Pn	10 29 12.7	0.0
JAO				S	Sn	10 29 18.2	+0.2
JYTA	Yamagatataniai	0.62	306	P	Pn	10 29 17.8	0.0
JYTA				S	Sn	10 29 26.7	-0.1
SHZ3	Shizuoka 3	0.72	103	P	Pn	10 29 19.0	-0.2
SHZ3				S	Sn	10 29 29.4	+0.1
TSUJ	Tsu 2	0.92	236	P	Pn	10 29 21.6	-0.2
TSUJ				S	Sn	10 29 33.8	-0.2
TK04	Tokai 4	0.95	153	P	Pn	10 29 22.4	+0.4
TK04				S	Sn	10 29 35.3	+0.9
JIE	Ise	0.99	213	⇓P	Pn	10 29 22.5	-0.2
JYN	Shimob	1.01	74	⇑P	Pn	10 29 23.6	+0.5
TK02	Tokai 2	1.32	165	*e*S	Sn	10 29 43.9	+0.5
JKG	Kaga	1.33	322	P	Pn	10 29 28.2	+0.8
MAT	Matsushiro	1.48	28	P	Pn	10 29 30.9	+1.4
MAT				S	Sn	10 29 50.4	+2.7

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*ISCJB **08** 10:46:23.3±0.6, 11°.13S±0°.07×165°.74E±0°.08, h10km, mb4.3/14 Error ellipse: s-maj=12.5km s-min=7.2km az=140.6*

*IDC **08** 10:46:23.3±1.1, 11°.04S×165°.78E, h0km, mb4.1/9, mb1 4.3/11, mb1mx4.0/41, mbtmp4.2/11, ML4.4/2, Error ellipse: s-maj=31.6km s-min=21.5km az=124.0*

*NEIC **08** 10:46:24.9±0.5, 11°.04S×165°.78E, h10km, mb4.8/6, Error ellipse: s-maj=10.3km s-min=6.0km az=66.0*

ISC 08 10:46:25.1±0.8**, 11°.15S**±0°.08×**165°.8E**±0°.1**, h10km, n31, σ1s.22**/30**, mb4.4**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.97	286	Pn	Pn	10 47 54.7	+1.1
	18nm,0.3s,baz=161,slow=8.3,SNR=2.4						
HNR				Sn	Sn	10 49 02.2	0.0
	5.5nm,0.3s,baz=187,slow=22,SNR=1.2						
MARNC	Mare, Loyalty	10.50	168	*e*Pn	Pn	10 48 57.8	+2.0
DZM	Mont Dzumac	10.88	177	*e*Pn	Pn	10 49 01.6	+0.5
DZM				*e*Sn	Sn	10 51 00.3	-2.9
DZM	Mont Dzumac	10.88	177	Pn	Pn	10 49 03.3	+2.2
	1.7nm,0.3s,baz=308,slow=20,SNR=16						
DZM				Sn	Sn	10 51 00.3	-2.9
	0.2nm,0.3s,baz=57,slow=23,SNR=1.6						
ONTNC	Ouen Toro	11.12	177	*e*Pn	Pn	10 49 04.8	+0.5
PINNC	Pines Island,	11.52	172	*e*Pn	Pn	10 49 11.2	+1.5
CTA	Charters Tower	20.77	242	P	Pn	10 51 07.9	-0.9
	3.3nm,0.8s,baz=80,slow=14,SNR=3.5						
COEN	Coen	22.23	260	*e*P	P	10 51 22.1	0.0
	19nm,1.1s						
H11S2	WAKE ISLAND Hy	29.46	2	T	T	11 22 56.9	
	baz=182						
H11S3	WAKE ISLAND Hy	29.47	2	T	T	11 22 58.3	
	baz=182						
H11S1	WAKE ISLAND Hy	29.48	2	T	T	11 23 01.4	
	baz=182						
BKZ	Black Stump Fm	29.50	163	*e*P	P	10 52 30.5	+0.9
	26nm,1.4s						
STKA	Stephens Creek	30.38	224	P	P	10 52 37.5	0.0
	1.6nm,0.3s,baz=15,slow=16,SNR=4.4						
H11N1	WAKE ISLAND Hy	30.68	2	T	T	11 24 22.4	
	baz=182						
H11N3	WAKE ISLAND Hy	30.69	2	T	T	11 24 29.2	
	baz=182						
H11N2	WAKE ISLAND Hy	30.70	2	T	T	11 24 34.0	
	baz=182						
THZ	Tophouse	31.14	170	*e*P	P	10 52 45.5	+1.4
	62nm,1.8s						
WB2	Warramunga Arr	31.46	250	*e*P	P	10 52 46.8	-0.4
WR1	Warramunga Arr	31.47	250	*e*P	P	10 52 47.2	0.0
	7.6nm,0.8s						
WR1				*e*PcP	PcP	10 55 40.0	-0.5
WRA	Warramunga Arr	31.47	250	P	P	10 52 47.2	0.0
	5.6nm,0.8s,baz=82,slow=9.1,SNR=50						
WRA				PcP	PcP	10 55 40.0	-0.5
	0.6nm,0.8s,baz=73,slow=2.9,SNR=6.4						
TOO	Toolangi	32.00	211	*e*P	P	10 52 53.2	+1.5
	48nm,1.7s						
ASAR	Alice Springs	32.77	243	P	P	10 52 58.0	-0.6
	1.4nm,0.8s,baz=64,slow=10,SNR=19						
ASAR				PcP	PcP	10 55 43.8	-0.2
	0.8nm,0.8s,baz=86,slow=2.4,SNR=6.4						
FITZ	Fitzroy Crossi	39.37	255	*e*P	P	10 53 54.2	-1.0
	18nm,1.6s						
CMAR	Chiang Mai Arr	72.17	294	P	P	10 57 50.9	+0.1
	1.4nm,0.4s,baz=116,slow=4.1,SNR=4.4						
SONA0	Songino Array	78.76	324	*e*P	P	10 58 27.3	-0.8
SONM	Songino Array	78.76	324	P	P	10 58 27.3	-0.8
	0.2nm,0.3s,baz=120,slow=5.2,SNR=2.7						
ILAR	Eielson Array	83.60	18	P	P	10 58 52.9	-0.4
	0.5nm,0.6s,baz=237,slow=5.3,SNR=13						
MK32	Makanchi Array	93.61	317	*e*P	P	10 59 40.8	-0.9
MKAR	Makanchi Array	93.61	317	P	P	10 59 40.8	-0.9
	0.6nm,0.8s,baz=95,slow=6.8,SNR=5.8						
ZAA1	Zalesovo Array	93.65	324	*e*P	P	10 59 40.9	-0.8
ZALV	Zalesovo Beam	93.65	324	P	P	10 59 40.9	-0.8
	0.2nm,0.4s,baz=111,slow=7.9,SNR=3.5						

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*IGIL **08** 10:46:34.9, 39°.30N×13°.97W, h10km*

*MDD **08** 10:46:37.6±1.7, 39°.35N×13°.49W, h0km, mb4.2/5, Error ellipse: s-maj=15.5km s-min=10.9km az=77.0, PRXIMO*

*INMG **08** 10:46:40.6±2.1, 39°.37N×13°.84W, h10km, ML2.5, Error ellipse: s-maj=10.7km s-min=6.2km az=77.0*

ISC 08 10:46:35.0±3.0**, 39°.43N**±0°.05×**13°.6W**±0°.2**, h10km, n50, σ2s.31**/97**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	3.37	97	*e*Pn	Pn	10 47 29.9	+2.2
PMAFR				*e*Sn	Sn	10 48 08.8	+1.0
PMAFR				A	A	10 48 14.2	
	13nm,0.2s						
PMAFR	Mafra	3.37	97	Pn	Pn	10 47 28.4	+0.8
	4.6nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	10 48 07.8	+0.1
	22nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	3.97	79	*e*Pn	Pn	10 47 37.6	+1.8
PCAS				*e*Sn	Sn	10 48 21.5	-0.9
PCAS				A	A	10 48 23.7	
	4.7nm,1.0s						
PCAS	Casmilo, Conde	3.97	79	Pn	Pn	10 47 37.6	+1.8
PCAS				Sn	Sn	10 48 21.5	-0.9
	4.7nm,1.0s						
PTOM	Tomar	4.00	86	*e*Pn	Pn	10 47 39.4	+3.1
PTOM				*e*Sn	Sn	10 48 24.5	+1.2
PTOM				A	A	10 48 31.1	
	9.7nm,0.5s						
PTOM	Tomar	4.00	86	Pn	Pn	10 47 39.4	+3.1
PTOM				Sn	Sn	10 48 24.5	+1.2
	4.8nm,0.5s						
PNCL	Nicolau / Gran	4.16	107	*e*Pn	Pn	10 47 39.9	+1.4
PNCL				*e*Sn	Sn	10 48 27.1	-0.1
PNCL				A	A	10 48 32.6	
	2.5nm,0.1s						
PNCL	Nicolau / Gran	4.16	107	Pn	Pn	10 47 39.9	+1.4
PNCL				Sn	Sn	10 48 27.1	-0.1
	2.5nm,0.1s						
PMTG	Montargil	4.17	93	*e*Pn	Pn	10 47 39.7	+1.0
PMTG				*e*Sn	Sn	10 48 26.9	-0.6
PMTG				A	A	10 48 33.4	
	3.9nm,0.8s						
PMTG	Montargil	4.17	93	Pn	Pn	10 47 39.7	+1.0
PMTG				Sn	Sn	10 48 26.9	-0.6
	3.9nm,0.8s						
PTEO	Sao Teotonio	4.25	115	*e*Pn	Pn	10 47 40.5	+0.8
PTEO				*e*Sn	Sn	10 48 26.3	-3.0
PTEO				A	A	10 48 30.6	
	8.7nm,0.6s						
PTEO	Sao Teotonio	4.25	115	Pn	Pn	10 47 40.5	+0.8
PTEO				Sn	Sn	10 48 26.3	-3.0
	4.3nm,0.6s						
PFVI	Vila Bisbo	4.39	120	*e*Pn	Pn	10 47 42.3	+0.7
PFVI				*e*Sn	Sn	10 48 30.8	-2.0
PFVI	Vila Bisbo	4.39	120	Pn	Pn	10 47 42.2	+0.6
	10nm,0.1s,SNR=11						
PFVI				Sn	Sn	10 48 30.6	-2.2
	3.0nm,0.1s,SNR=7.9						
MORF	Marmelete	4.42	117	*e*P	Pn	10 47 43.1	+1.0
MORF	Marmelete	4.42	117	*e*Pn	Pn	10 47 43.0	+1.0
MORF				*e*Sn	Sn	10 48 35.2	+1.6
MORF	Marmelete	4.42	117	Pn	Pn	10 47 43.0	+1.0
MORF				Sn	Sn	10 48 35.2	+1.6
MESJ	Messejana	4.49	109	*e*P	Pn	10 47 44.5	+1.5
MESJ	Messejana	4.49	109	*e*Pn	Pn	10 47 44.5	+1.5
MESJ				*e*Sn	Sn	10 48 33.7	-1.5
MESJ				A	A	10 48 39.1	
	4.2nm,0.2s						
MESJ	Messejana	4.49	109	Pn	Pn	10 47 44.5	+1.5
MESJ				Sn	Sn	10 48 33.7	-1.5
	4.2nm,0.2s						
EZAM	Zamans	4.59	52	Pn	Pn	10 47 47.0	+2.5
	3.0nm,0.2s,SNR=4.0						
EZAM				Sn	Sn	10 48 36.6	-1.3
	2.4nm,0.2s,SNR=7.9						
PESTR	Estremoz	4.69	95	*e*Pn	Pn	10 47 47.9	+2.1
PESTR				*e*Sn	Sn	10 48 39.4	-0.9
PESTR				A	A	10 48 45.1	
	3.5nm,0.5s						
PCBR	Castelo Branco	4.73	83	*e*Pn	Pn	10 47 48.7	+2.4
PCBR				*e*Sn	Sn	10 48 40.4	-0.8
PCBR				A	A	10 48 46.8	
	2.9nm,0.4s						
PCBR	Castelo Branco	4.73	83	Pn	Pn	10 47 48.7	+2.4
PCBR				Sn	Sn	10 48 40.4	-0.8
	1.4nm,0.4s						
PGAV	Gavieira, Arco	4.76	56	*e*Pn	Pn	10 47 50.7	+3.8
PGAV				*e*Sn	Sn	10 48 35.4	-6.8
PGAV	Gavieira, Arco	4.76	56	Pn	Pn	10 47 50.7	+3.8
PGAV				Sn	Sn	10 48 35.4	-6.8
PMRV	Marv??o	4.79	88	*e*Pn	Pn	10 47 49.2	+2.0
PMRV				*e*Sn	Sn	10 48 41.7	-1.1
PMRV				A	A	10 48 51.0	
	3.8nm,0.4s						
PMRV	Marv??o	4.79	88	Pn	Pn	10 47 49.2	+2.0
PMRV				Sn	Sn	10 48 41.7	-1.1
	3.8nm,0.4s						
PCAB	Cabril	4.80	60	*e*Pn	Pn	10 47 49.9	+2.5
PCAB				*e*Sn	Sn	10 48 43.1	0.0
PCAB				A	A	10 48 48.9	
	8.4nm,0.3s						
PCAB	Cabril	4.80	60	Pn	Pn	10 47 49.9	+2.5
PCAB				Sn	Sn	10 48 43.1	0.0
	4.2nm,0.3s						
POLO	Lamas de Olo	4.82	64	*e*Pn	Pn	10 47 50.7	+3.0
POLO				*e*Sn	Sn	10 48 41.6	-2.1
POLO				A	A	10 48 54.0	
	1.3nm,0.4s						
POLO	Lamas de Olo	4.82	64	Pn	Pn	10 47 50.7	+3.0
POLO				Sn	Sn	10 48 41.6	-2.1
	1.3nm,0.4s						
ELOB	Lobios	4.85	58	Pn	Pn	10 47 49.9	+1.8
	4.6nm,0.2s,SNR=14						
ELOB				Sn	Sn	10 48 42.8	-1.6
	4.9nm,0.1s,SNR=5.0						
PBDV	Barranco-do-Ve	4.95	114	*e*Pn	Pn	10 47 50.7	+1.3
PBDV				*e*Sn	Sn	10 48 44.1	-2.6
PBDV				A	A	10 48 50.0	
	3.9nm,0.1s						
PBDV	Barranco-do-Ve	4.95	114	Pn	Pn	10 47 50.7	+1.3
PBDV				Sn	Sn	10 48 44.1	-2.6
	3.9nm,0.1s						
PVAQ	Vaqueiros	5.03	112	*e*Pn	Pn	10 47 52.0	+1.6
PVAQ				*e*Sn	Sn	10 48 47.0	-1.6
PVAQ				A	A	10 48 55.4	
	3.9nm,0.6s						
PVAQ	Vaqueiros	5.03	112	Pn	Pn	10 47 52.0	+1.6
PVAQ				Sn	Sn	10 48 47.0	-1.6
	3.9nm,0.6s						
EGRO	El Granado	5.14	110	Pn	Pn	10 47 53.4	+1.4
	3.5nm,0.3s,SNR=7.7						
EGRO				Sn	Sn	10 48 48.6	-2.8
	2.5nm,0.2s						
EBAD	Badajoz	5.15	95	Pn	Pn	10 47 53.9	+1.7
	1.0nm,0.1s,SNR=7.2						
EBAD				Sn	Sn	10 48 49.8	-1.9
	4.3nm,0.2s						
MVO	Moncorvo	5.30	69	*e*Pn	Pn	10 47 57.5	+3.3
MVO				*e*Sn	Sn	10 48 55.3	-0.1
MVO				A	A	10 48 58.6	
	4.5nm,0.2s						
MVO	Moncorvo	5.30	69	Pn	Pn	10 47 57.3	+3.0
	0.6nm,0.1s,SNR=7.9						
MVO				Sn	Sn	10 48 53.5	-1.9
	4.8nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	5.34	49	Pn	Pn	10 47 56.7	+1.9
	0.9nm,0.1s,SNR=7.9						
EAGO				Sn	Sn	10 48 52.1	-4.3
	2.9nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.66	105	Pn	Pn	10 48 00.8	+1.7
	0.8nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	10 49 00.9	-3.2
	1.6nm,0.2s,SNR=7.9						
ECAL	Calabor	5.77	62	Pn	Pn	10 48 03.6	+2.8
	4.9nm,0.3s,SNR=4.0						
ECAL				Sn	Sn	10 49 05.7	-1.4
	6.6nm,0.3s,SNR=4.0						
EPLA	Plasencia	5.81	81	Pn	Pn	10 48 04.1	+2.8
	0.4nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	10 49 05.0	-3.0
	1.2nm,0.2s,SNR=4.0						
EPON	Pontenova	6.21	49	Pn	Pn	10 48 08.1	+1.4
	0.6nm,0.1s,SNR=4.0						
EPON				Sn	Sn	10 49 12.5	-5.2
	1.6nm,0.3s,SNR=7.9						
ECAB	El Cabril	6.52	99	Pn	Pn	10 48 12.3	+1.3
	0.6nm,0.2s,SNR=8.0						
ECAB				Sn	Sn	10 49 21.5	-3.9
	1.0nm,0.3s,SNR=7.9						
PAB	San Pablo	7.14	86	Pn	Pn	10 48 21.7	+2.2
	0.4nm,0.1s,SNR=7.9						
PAB				Sn	Sn	10 49 37.7	-3.0
	1.4nm,0.3s,SNR=7.9						
EADA	Adamuz	7.14	97	Pn	Pn	10 48 20.0	+0.5
	0.5nm,0.1s,SNR=7.9						
EADA				Sn	Sn	10 49 37.2	-3.6
	0.6nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	7.43	85	Pn	Pn	10 48 25.4	+1.9
	1.7nm,0.1s,baz=271,slow=12,SNR=5.5						

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*IDC **08** 10:49:21.6±1.0, 10°.49S×165°.51E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.8/42, mbtmp3.9/9, ML4.3/2, Error ellipse: s-maj=24.7km s-min=24.0km az=37.0*

*NEIC **08** 10:49:23.3±0.7, 10°.54S×165°.58E, h10km, mb4.3/3, Error ellipse: s-maj=16.5km s-min=9.6km az=61.0*

*ISCJB **08** 10:49:24.8±0.7, 10°.70S±0°.07×165°.48E±0°.09, h31km, mb3.9/10, Error ellipse: s-maj=13.8km s-min=7.5km az=149.1*

ISC 08 10:49:26.5±0.9**, 10°.61S**±0°.09×**165°.46E**±0°.10**, h31km, n23, σ1s.69**/20**, mb3.7**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.55	282	*e*Pn	Pn	10 50 49.3	+2.3
HNR				*e*Sn	Sn	10 51 44.8	-5.0
HNR	Honiara	5.55	282	Pn	Pn	10 50 47.3	+0.3
	14nm,0.3s,baz=127,slow=8.4,SNR=3.1						
HNR				Sn	Sn	10 51 52.2	+2.3
	6.6nm,0.3s,baz=185,slow=21,SNR=1.1						
MARNC	Mare, Loyalty	11.09	167	*e*Pn	Pn	10 52 02.6	-0.4
DZM	Mont Dzumac	11.44	175	Pn	Pn	10 52 08.7	+0.9
	1.2nm,0.3s,baz=314,slow=14,SNR=12						
DZM				Sn	Sn	10 54 14.3	-0.4
	0.3nm,0.3s,baz=87,slow=23,SNR=2.2						
ONTNC	Ouen Toro	11.67	175	*e*Pn	Pn	10 52 08.8	-2.2
H11S2	WAKE ISLAND Hy	28.94	2	T	T	11 25 29.1	
	baz=182						
H11S3	WAKE ISLAND Hy	28.94	2	T	T	11 25 31.9	
	baz=182						
H11S1	WAKE ISLAND Hy	28.96	2	T	T	11 25 32.5	
	baz=182						
URZ	Urewera	29.45	161	*e*P	P	10 55 28.3	+0.8
	11nm,1.2s						
URZ	Urewera	29.45	161	P	P	10 55 28.3	+0.8
	3.1nm,0.7s,baz=344,slow=20,SNR=3.4						
BKZ	Black Stump Fm	30.10	163	*e*P	P	10 55 34.2	+0.9
	6.1nm,1.1s						
H11N1	WAKE ISLAND Hy	30.16	3	T	T	11 27 00.2	
	baz=182						
H11N3	WAKE ISLAND Hy	30.17	3	T	T	11 27 00.6	
	baz=182						
H11N2	WAKE ISLAND Hy	30.18	3	T	T	11 27 01.5	
	baz=182						
WR1	Warramunga Arr	31.37	249	*e*P	P	10 55 45.6	+0.8
	1.2nm,0.9s						
WRA	Warramunga Arr	31.37	249	P	P	10 55 45.6	+0.8
	0.6nm,0.8s,baz=80,slow=9.1,SNR=4.5						
BFZ	Birch Farm	31.44	164	*e*P	P	10 55 46.1	+1.1
	14nm,0.8s						
ASAR	Alice Springs	32.74	243	P	P	10 55 55.9	-0.9
	0.4nm,0.6s,baz=64,slow=10,SNR=5.8						
CMAR	Chiang Mai Arr	71.68	294	P	P	11 00 46.0	+0.1
	1.3nm,0.3s,baz=105,slow=6.0,SNR=2.5						
ILAR	Eielson Array	83.19	19	P	P	11 01 48.9	-0.4
	0.5nm,0.7s,baz=229,slow=5.7,SNR=7.1						
MK32	Makanchi Array	93.01	317	*e*P	P	11 02 37.2	+0.2
MKAR	Makanchi Array	93.01	317	P	P	11 02 37.2	+0.2
	0.2nm,0.7s,baz=88,slow=4.6,SNR=2.8						
YKA	Yellowknife Ar	94.72	27	P	P	11 02 43.5	-1.0
	0.1nm,0.6s,baz=262,slow=4.1,SNR=3.0						

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*ISCJB **08** 10:56:06.9±0.4, 10°.80S±0°.05×164°.70E±0°.07, h10km, mb4.0/22, MS5.2/1, Error ellipse: s-maj=9.4km s-min=6.4km az=169.0*

*IDC **08** 10:56:06.7±0.6, 10°.73S×164°.76E, h0km, mb4.0/16, mb1 4.2/18, mb1mx4.1/46, mbtmp4.1/18, ML4.9/2, MS4.3/2, Ms1 4.3/2, ms1mx3.7/42, Error ellipse: s-maj=20.7km s-min=16.7km az=135.0*

*NEIC **08** 10:56:08.6±0.3, 10°.67S×164°.73E, h10km, mb4.2/10, Error ellipse: s-maj=6.8km s-min=5.6km az=85.0*

ISC 08 10:56:08.5±0.6**, 10°.72S**±0°.07×**164°.86E**±0°.07**, h10km, n48, σ1s.18**/46**, mb4.0**/22**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.01	284	*e*P	Pn	10 57 25.0	+1.3
HNR				*e*S	Sn	10 58 24.0	+2.2
HNR	Honiara	5.01	284	*e*Pn	Pn	10 57 23.6	-0.1
HNR				*e*Sn	Sn	10 58 23.9	+2.2
HNR	Honiara	5.01	284	Pn	Pn	10 57 22.3	-1.5
	37nm,0.3s,baz=171,slow=2.1,SNR=15						
HNR				Sn	Sn	10 58 23.9	+2.2
	baz=203,slow=24,SNR=2.2						
MARNC	Mare, Loyalty	11.13	165	*e*Pn	Pn	10 58 49.3	+1.5
DZM	Mont Dzumac	11.39	173	Pn	Pn	10 58 52.6	+1.1
	9.0nm,0.3s,baz=131,slow=15,SNR=71						
DZM				Sn	Sn	11 00 57.8	-1.2
	0.4nm,0.3s,baz=112,slow=17,SNR=1.8						
DZM				LR	LR	11 02 34.8	
	comp=Z,206nm,20.0s,baz=31,slow=34						
ONTNC	Ouen Toro	11.63	173	*e*Pn	Pn	10 58 56.4	+1.8
PINNC	Pines Island,	12.09	169	*e*Pn	Pn	10 59 01.9	+1.0
EIDS	Eidsvold	19.57	220	*e*P	P	11 00 36.8	+0.1
	12nm,0.9s						
CTA	Charters Tower	20.20	240	P	P	11 00 43.6	0.0
	5.8nm,0.9s,baz=53,slow=10,SNR=3.0						
CTAO	Charters Tower	20.20	240	*e*P	P	11 00 42.5	-1.1
	17nm,1.0s						
COEN	Coen	21.43	259	*e*P	P	11 00 56.2	-0.8
	5.4nm,1.0s						
H11S2	WAKE ISLAND Hy	29.08	4	T	T	11 32 27.8	
	baz=184,slow=76,SNR=50						
H11S3	WAKE ISLAND Hy	29.08	4	T	T	11 32 27.0	
	baz=184,slow=76,SNR=53						
H11S1	WAKE ISLAND Hy	29.10	4	T	T	11 32 30.4	
	baz=184,slow=76,SNR=36						
URZ	Urewera	29.54	160	*e*P	P	11 02 12.7	-0.6
	3.9nm,0.9s						
URZ	Urewera	29.54	160	P	P	11 02 12.7	-0.6
	5.3nm,1.0s,baz=354,slow=9.2,SNR=2.6						
STKA	Stephens Creek	30.09	222	P	P	11 02 17.5	-0.8
	3.3nm,0.8s,baz=58,slow=11,SNR=5.9						
BKZ	Black Stump Fm	30.17	162	*e*P	P	11 02 21.3	+2.4
	4.4nm,0.6s						
H11N1	WAKE ISLAND Hy	30.30	4	T	T	11 33 55.5	
	baz=184,slow=76,SNR=23						
H11N3	WAKE ISLAND Hy	30.31	4	T	T	11 34 00.4	
	baz=184,slow=76,SNR=22						
H11N2	WAKE ISLAND Hy	30.32	4	T	T	11 34 00.1	
	baz=184,slow=76,SNR=26						
WB2	Warramunga Arr	30.78	249	*e*P	P	11 02 22.9	-1.6
	2.7nm,1.1s						
WR1	Warramunga Arr	30.79	249	*e*P	P	11 02 22.8	-1.8
	1.9nm,1.0s						
WRA	Warramunga Arr	30.79	249	P	P	11 02 22.8	-1.8
	0.6nm,0.5s,baz=79,slow=9.3,SNR=9.6						
ASAR	Alice Springs	32.17	242	P	P	11 02 34.7	-2.1
	0.4nm,0.6s,baz=64,slow=10,SNR=7.3						
ASAR				PcP	PcP	11 05 25.4	-0.4
	0.2nm,0.7s,baz=58,slow=3.5,SNR=3.3						
BBOO	Buckleboo	34.43	226	*e*P	P	11 02 56.9	+0.6
	3.2nm,1.0s						
FITZ	Fitzroy Crossi	38.63	254	*e*P	P	11 03 31.1	-1.3
	2.7nm,0.7s						
JNU	Nakatsue	54.31	325	LR	LR	11 24 27.7	
	comp=Z,2μm,19.5s,baz=42,slow=31						
KSRS	Korea Array	59.12	326	P	P	11 06 08.5	-0.8
	0.8nm,0.7s,baz=127,slow=7.1,SNR=3.0						
KSAR	Wonju Array Be	59.13	326	P	P	11 06 08.5	-0.9
CMAR	Chiang Mai Arr	71.19	294	P	P	11 07 27.7	-0.5
	0.6nm,0.3s,baz=116,slow=4.1,SNR=2.9						
SONA0	Songino Array	77.89	324	*e*P	P	11 08 06.7	0.0
SONM	Songino Array	77.89	324	P	P	11 08 06.7	0.0
	1.4nm,1.0s,baz=120,slow=5.7,SNR=2.7						
ILAR	Eielson Array	83.48	19	P	P	11 08 35.9	-0.2
	1.1nm,0.7s,baz=231,slow=5.9,SNR=11						
NVAR	Mina Array Bea	86.48	50	P	P	11 08 52.7	+0.6
	1.3nm,0.9s,baz=228,slow=5.6,SNR=5.0						
ELK	Elko	89.38	48	P	P	11 09 05.5	-0.4
	0.3nm,0.4s,baz=288,slow=6.4,SNR=2.6						
MK01	Makanchi Array	92.68	317	*e*P	P	11 09 20.5	-0.4
MK31	Makanchi Array	92.69	317	*e*P	P	11 09 20.8	0.0
	1.2nm,0.8s						
MK32	Makanchi Array	92.69	317	*e*P	P	11 09 21.1	+0.2
MKAR	Makanchi Array	92.69	317	*e*P	P	11 09 20.8	-0.1
	6.9nm,0.6s						
MKAR	Makanchi Array	92.69	317	P	P	11 09 21.1	+0.2
	1.3nm,0.7s,baz=98,slow=5.8,SNR=15						
ZALV	Zalesovo Beam	92.78	324	P	P	11 09 20.4	-0.6
	0.2nm,0.3s,baz=130,slow=6.6,SNR=3.1						
ZAA1	Zalesovo Array	92.79	324	*e*P	P	11 09 20.4	-0.6
PDAR	Pinedale Array	93.97	47	P	P	11 09 26.2	-0.9
	0.6nm,0.9s,baz=222,slow=2.4,SNR=3.5						
YKA	Yellowknife Ar	95.08	27	P	P	11 09 31.7	+0.3
	0.2nm,0.8s,baz=249,slow=5.2,SNR=3.3						
YKB5	Yellowknife Ar	95.08	27	*e*P	P	11 09 32.3	+0.8
LTX	Lajitas	96.43	61	*e*P	P	11 09 39.7	+1.1
TXAR	Lajitas Array	96.43	61	P	P	11 09 39.7	+1.1
	0.2nm,0.4s,baz=253,slow=6.2,SNR=3.6						

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*IDC **08** 11:00:31.0±1.7, 10°.91S×165°.64E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/42, mbtmp3.8/6, ML4.0/1, Error ellipse: s-maj=50.2km s-min=28.3km az=125.0*

*ISCJB **08** 11:00:33.6±1.2, 11°.17S±0°.09×165°.7E±0°.2, h30km, mb3.6/4, Error ellipse: s-maj=26.4km s-min=11.7km az=169.1*

ISC 08 11:00:35.4±1.3,**11°.1S**±0°.1×**165°.7E**±0°.2,**h30**km,**n9**, σ**1ˢ44**/7,**mb3.5**/4,**Santa Cruz Islands**

```
Code  Station Name        Δ°   AZ°  Phase ID            Time      Res
                                    Op       ISC      h  m  s     ISC
DZM   Mont Dzumac       10.98 176   Pn       Pn       11 03 12.0 +1.4
      1.1nm,0.3s,baz=27,slow=18,SNR=23
DZM                                 Sn       Sn       11 05 11.0 -1.6
      0.1nm,0.3s,baz=58,slow=23,SNR=1.3
CTA   Charters Tower    20.77 242   P        P        11 05 15.6 +1.5
      3.1nm,0.7s,baz=74,slow=15,SNR=2.8
H11S2 WAKE ISLAND Hy    29.37   2   T        T        11 36 24.1
      baz=185
H11S3 WAKE ISLAND Hy    29.37   2   T        T        11 36 19.1
      baz=185
H11S1 WAKE ISLAND Hy    29.39   2   T        T        11 37 01.1
      baz=185
WRA   Warramunga Arr    31.45 250   P        P        11 06 53.6 -0.9
      1.5nm,0.8s,baz=82,slow=9.1,SNR=7.9
ASAR  Alice Springs     32.76 243   P        P        11 07 05.2 -0.8
      0.2nm,0.4s,baz=69,slow=9.8,SNR=4.9
ILAR  Eielson Array     83.53  19   P        P        11 13 00.0 -0.1
      0.4nm,1.0s,baz=235,slow=5.2,SNR=4.5
MKAR  Makanchi Array    93.50 317   P        P        11 13 48.2 -0.2
      0.1nm,0.6s,baz=104,slow=6.1,SNR=3.0
```

IDC 08 11:03:10.7±1.9,**10°.90S**×**164°.69E**,**h0**km,**mb3.6**/3, **mb1 3.9**/4,**mb1mx3.5**/42,**mbtmp3.7**/4,**ML3.7**/1,**Error ellipse: s-maj=52.4km s-min=35.3km az=128.0,Santa Cruz Islands region**

```
Code  Station Name        Δ°   AZ°  Phase ID            Time      Res
                                    Op       ISC      h  m  s     ISC
HNR   Honiara            4.89 287   Pn       Pn       11 04 30.8 +5.3
      16nm,0.3s,baz=69,slow=19,SNR=3.5
DZM   Mont Dzumac       11.24 172   Pn       Pn       11 05 51.8 -1.0
      0.5nm,0.3s,baz=277,slow=14,SNR=5.4
WRA   Warramunga Arr    30.56 249   P        P        11 09 26.1 -0.2
      0.4nm,0.5s,baz=76,slow=9.6,SNR=5.8
ASAR  Alice Springs     31.93 243   P        P        11 09 38.8 +0.3
      0.3nm,0.4s,baz=64,slow=10,SNR=9.0
ILAR  Eielson Array     83.71  19   P        P        11 15 41.3 +0.1
      0.3nm,0.8s,baz=226,slow=6.9,SNR=2.4
```

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*IDC **08** 11:10:20.9±1.1, 11°.81S×165°.07E, h0km, mb4.0/10, mb1 4.3/11, mb1mx4.0/42, mbtmp4.0/11, ML4.0/1, Error ellipse: s-maj=36.1km s-min=20.3km az=137.0*

*ISCJB **08** 11:10:24.3±0.7, 12°.0S±0°.1×165°.1E±0°.1, h33km, mb4.0/11, Error ellipse: s-maj=19.9km s-min=15.3km az=22.4*

ISC 08 11:10:26.1±0.8,**11°.9S**±0°.1×**165°.1E**±0°.2,**h35**km,**n12**, σ**0ˢ79**/12,**mb3.9**/11,**Santa Cruz Islands**

```
Code  Station Name        Δ°   AZ°  Phase ID            Time      Res
                                    Op       ISC      h  m  s     ISC
DZM   Mont Dzumac       10.23 173   Pn       Pn       11 12 50.8 +0.1
      1.3nm,0.3s,baz=306,slow=12,SNR=18
STKA  Stephens Creek    29.39 224   P        P        11 16 26.1 -0.2
      1.4nm,0.6s,baz=19,slow=13,SNR=3.3
WRA   Warramunga Arr    30.58 251   P        P        11 16 36.9 -0.1
      5.2nm,1.0s,baz=80,slow=9.3,SNR=29
ASAR  Alice Springs     31.84 244   P        P        11 16 47.5 -0.5
      2.2nm,0.8s,baz=71,slow=9.7,SNR=24
FITZ  Fitzroy Crossi    38.53 256   P        P        11 17 46.1 +0.4
      4.3nm,0.8s,baz=74,slow=5.7,SNR=6.6
BATI  Baumata           40.65 268   P        P        11 18 02.9 -0.5
      19nm,0.5s,baz=80,slow=6.1,SNR=2.7
CMAR  Chiang Mai Arr    71.83 294   P        P        11 21 46.7 +0.8
      0.5nm,0.5s,baz=120,slow=5.3,SNR=4.0
SONM  Songino Array     78.93 324   P        P        11 22 26.7 +0.5
      0.4nm,0.5s,baz=141,slow=4.8,SNR=2.5
ILAR  Eielson Array     84.50  19   P        P        11 22 55.4 +0.3
      0.5nm,0.8s,baz=245,slow=5.3,SNR=6.6
NVAR  Mina Array Bea    87.06  50   P        P        11 23 09.6 +0.9
      0.2nm,0.5s,baz=231,slow=9.4,SNR=3.7
MKAR  Makanchi Array    93.66 317   P        P        11 23 38.7 -0.4
      0.3nm,0.6s,baz=79,slow=7.5,SNR=3.3
YKA   Yellowknife Ar    96.00  27   P        P        11 23 47.7 -1.7
      0.8nm,1.1s,baz=254,slow=4.3,SNR=5.3
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*ISCJB **08** 11:12:11.9±0.1, 10°.88S±0°.02×166°.00E±0°.02, h21km, mb6.1/419, MS7.0/777, Error ellipse: s-maj=2.5km s-min=2.2km az=28.9*

*IDC **08** 11:12:11.0±1.4, 10°.89S×165°.94E, h6km±7km, mb5.2/41, mb1 5.3/43, mb1mx5.3/43, mbtmp5.3/43, ML5.5/2, MS6.7/32, Ms1 6.8/32, ms1mx6.7/38, Error ellipse: s-maj=9.5km s-min=9.1km az=76.0*

*NEIC **08** 11:12:11.5±0.1, 10°.84S×165°.97E, h12km, mb6.3/272, ME7.4, MS6.9/299, MW6.8, MW6.8, Error ellipse: s-maj=3.6km s-min=3.0km az=129.0, Moment Tensor Solution. s71 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.13; $M_{\theta\theta}$1.18; $M_{\phi\phi}$-1.05; $M_{r\theta}$0.10; $M_{\theta\phi}$-1.31; $M_{\phi r}$0.05; Best double couple: $M_0$1.70000×10^{19} NP1:ϕ_s250.00000°, δ89.00000°, λ-176.00000°. NP2:ϕ_s160.00000°, δ86.00000°, λ-1.00000°. Principal axes: T 1.7900, Plg2.0000°, Azm25.0000°; N -0.1300, Plg86.0000°, Azm261.0000°; P -1.6600, Plg3.0000°, Azm115.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s340.00000°, δ85.00000°, λ-5.00000°. NP2:ϕ_s70.00000°, δ85.00000°, λ-175.00000°. Principal axes: T Plg0.0000°, Azm25.0000°; N Plg0.0000°, Azm0.0000°; P Plg7.0000°, Azm295.0000°; Apparent Stress 3.31 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC The dock at Lata Wharf sustained additional damage from ground shaking.

*NEIC **08** 11:12:12.0±0.0, 10°.73S×165°.77E, h15km, Moment Tensor Solution. s41 Moment tensor: Scale 10^{19}Nm; M_{rr}0.03; $M_{\theta\theta}$1.41; $M_{\phi\phi}$-1.43; $M_{r\theta}$-0.10; $M_{\theta\phi}$-1.67; $M_{\phi r}$-0.14; Best double couple: $M_0$2.20000×10^{19} NP1:ϕ_s70.00000°, δ88.00000°, λ-176.00000°. NP2:ϕ_s340.00000°, δ86.00000°, λ-2.00000°. Principal axes: T 2.1800, Plg0.0000°, Azm204.0000°; N 0.0400, Plg85.0000°, Azm103.0000°; P -2.2100, Plg4.0000°, Azm294.0000°;*

*MOS **08** 11:12:14.0±1.2, 10°.80S×165°.87E, h33km, mb6.1/64, MS7.0/67 Error ellipse: s-maj=6.4km s-min=5.5km az=114.3*

*BJI **08** 11:12:14.2, 10°.91S×165°.84E, h20km, mb5.9/67, mB6.5/76, Ms7.1/96, Ms7 7.0/88*

*GCMT **08** 11:12:25.5±0.0, 10°.91S×165°.81E, h12km, MW6.8/154, Moment Tensor Solution. s151,c391; s154,c670; Duration: 6ˢ4 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.12±.01; $M_{\theta\theta}$1.50±.01; $M_{\phi\phi}$-1.38±.01; $M_{r\theta}$0.03±.02; $M_{\theta\phi}$-1.76±.01; $M_{\phi r}$0.05±.02; Best double couple: $M_0$2.27500×10^{19} NP1:ϕ_s250.00000°, δ89.00000°, λ-179.00000°. NP2:ϕ_s160.00000°, δ89.00000°, λ-1.00000°. Principal axes: T 2.3340, Plg0.0000°, Azm25.0000°; N -0.1210, Plg88.0000°, Azm292.0000°; P -2.2160, Plg2.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 08 11:12:13.3±0.3,**10°.87S**±0°.03×**166°.01E**±0°.03,**h13**km±1km, **h13**km**:pP-P**,**n1802**,σ**2ˢ62**/1518,**mb6.2**/422,**MS7.0**/784, **76C-34D**,**Santa Cruz Islands**

```
Code  Station Name        Δ°   AZ°  Phase ID            Time      Res
                                    Op       ISC      h  m  s     ISC
HNR   Honiara            6.14 283  iP        Pn       11 13 43.5 -0.3
HNR                                iS        Sn       11 14 59.0 +5.1
HNR   Honiara            6.14 283   Pn       Pn       11 13 43.1 -0.6
      185nm,0.3s,baz=180,slow=2.1,SNR=52
HNR                                 Sn       Sn       11 14 51.4 -2.5
      baz=99,slow=19,SNR=1.0
MARNC Mare, Loyalty     10.73 170  ePn       Pn       11 14 45.7 -1.0
DZM   Mont Dzumac       11.15 178  ePn       Pn       11 14 51.4 -1.2
      4μm,1.3s
DZM                                eLR       LR       11 17 23.8
      comp=Z,1767μm,29.2s
DZM   Mont Dzumac       11.15 178  ePn       Pn       11 14 52.2 -0.3
DZM                                eSn       Sn       11 16 59.6 +2.4
DZM   Mont Dzumac       11.15 178   Pn       Pn       11 14 51.8 -0.8
      22nm,0.3s,baz=345,slow=10,SNR=63
DZM                                 Sn       Sn       11 17 00.2 +3.0
      14nm,0.3s,baz=138,slow=22,SNR=2.7
ONTNC Ouen Toro         11.38 178  ePn       Pn       11 14 55.8 +0.1
ONTNC                              eSn       Sn       11 17 03.7 +0.9
PINNC Pines Island,     11.76 173  ePn       Pn       11 15 00.9  0.0
PINNC                              eSn       Sn       11 17 11.3 -0.8
FUNA  Funafuti          13.21  81  ePn       Pn       11 15 20.2 -0.5
MSVF  Nonsavu           13.51 122  ePn       P        11 15 33.5 -0.7
MSVF  Nonsavu           13.51 122⇑ eP        Pn       11 15 25.7 +0.8
MSVF                                MLR      MLR
      comp=Z,1460μm,16.0s
TARA  Tarawa            13.96  30  ePn       Pn       11 15 29.8 -1.2
TARA                               eSn       Sn       11 18 00.1 -5.8
RABL  Rabaul            15.24 295  ePn       Pn       11 15 49.5 +1.1
      comp=Z,1μm,0.6s
NFK   Norfolk Island    18.17 175   P        Pn       11 16 24.6 -0.8
      baz=18,SNR=5.0
PATS  Pohnpei           19.19 336  eP        Pn       11 16 42.1 +4.3
      comp=Z,5μm,1.7s
KWAJ  Kwajalein Atol    19.61   5  eP        P        11 16 40.0 -1.6
      comp=Z,2μm,0.9s
KWAJ  Kwajalein Atol    19.61   5  eP        Pn       11 16 44.8 +1.9
EIDS  Eidsvold          20.20 222   P        P        11 16 47.9 -0.1
      baz=20,SNR=57
EIDS  Eidsvold          20.20 222  eP        P        11 16 48.5 +0.5
      comp=Z,2μm,1.3s
EIDS                                LR       LR
      comp=Z,192μm,20.0s
MANU  Manus Island      20.48 294  eP        P        11 16 48.8 -2.4
      comp=Z,11μm,1.8s
MANU                                LR       LR
      comp=Z,537μm,19.0s
CTA   Charters Tower    21.11 242   P        P        11 16 57.5 -0.4
      comp=Z,209nm,1.1s,baz=73,slow=12,SNR=31
CTA                                 S        Sn       11 20 59.1 -0.2
      comp=Z,17nm,0.8s,baz=36,slow=18,SNR=1.9
CTA                                 LR       LR       11 23 39.7
      comp=Z,137μm,21.9s,baz=61,slow=33
CTAO  Charters Tower    21.11 242  eP        P        11 16 57.8 -0.2
      comp=Z,1μm,1.0s
CTAO                                LR       LR
      comp=Z,131μm,20.0s
CTAO  Charters Tower    21.11 242  eP        P        11 16 59.8 +1.9
LHI   Lord Howe Isla    21.53 196   P        P        11 17 01.6 -0.7
      baz=22,SNR=13
LHI   Lord Howe Isla    21.53 196  eP        P        11 16 59.7 -2.6
      comp=Z,1μm,1.1s
LHI                                 LR       LR
      comp=Z,536μm,21.0s
MTSU  Mount Surprise    22.19 249   P        P        11 17 08.3 -1.3
      baz=22,SNR=34
RMQ   Roma              22.50 224   P        P        11 17 12.6 -0.2
      baz=22,SNR=20
COEN  Coen              22.51 260   P        P        11 17 10.6 -2.4
      baz=22,SNR=33
COEN  Coen              22.51 260  eP        P        11 17 11.3 -1.6
      comp=Z,1μm,1.4s
COEN                                LR       LR
      comp=Z,238μm,19.0s
KNTN  Kanton            23.51  72  eP        P        11 17 22.2 -1.1
      comp=Z,2μm,1.4s
ARMA  Armidale          23.60 212   P        P        11 17 23.4 -0.8
      baz=24,SNR=14
ARMA  Armidale          23.60 212  eP        P        11 17 23.6 -0.6
      comp=Z,2μm,1.4s
ARMA                                LR       LR
      comp=Z,243μm,18.0s
RAO   Raoul Island      23.66 143  eP        P        11 17 22.2 -2.4
      comp=Z,1μm,0.9s
RAO                                eSn       S        11 21 46.9 +7.7
RAO                                 LR       LR
      comp=Z,421μm,19.0s
RAO   Raoul Island      23.66 143   P        P        11 17 25.0 +0.4
RAO                                 pmax     pmax
      comp=Z,116nm,0.4s
RAO                                 MLR      MLR
      comp=Z,318μm,18.5s
RAO   Raoul Island      23.66 143   P        P        11 17 25.0 +0.4
      comp=Z,116nm,0.4s,baz=133,slow=21,SNR=1.7
RAO                                 S        S        11 21 46.9 +7.7
      comp=Z,139nm,0.3s,baz=36,slow=23,SNR=3.9
RAO                                 LR       LR       11 25 14.6
      comp=Z,318μm,18.5s,baz=312,slow=33
NIUE  Niue              24.61 112   P        P        11 17 34.0 +0.3
      baz=25,SNR=7.3
NIUE  Niue              24.61 112  eP        P        11 17 33.0 -0.6
      comp=Z,2μm,1.4s
NIUE                                LR       LR
      comp=Z,379μm,22.0s
OUZ   Omahuta           25.20 165  eP        P        11 17 39.4 +0.7
      comp=Z,2μm,1.7s
OUZ                                 LR       LR
      comp=Z,398μm,19.0s
QLP   Quilpie           25.81 230   P        P        11 17 43.7 -0.7
      baz=26,SNR=45
MGCD  Mangrove Creek    26.11 209   P        P        11 17 47.4 +0.4
      baz=26,SNR=13
JAY   Jayapura          26.45 286   P        P        11 17 49.2 -1.1
      comp=Z,3μm,1.4s,comp=Z,105μm
RIV   Riverview         26.59 208   P        P        11 17 51.0 -0.4
      baz=26,SNR=7.1
ABAZ  Army Bay          26.83 164   P        P        11 17 54.3 +0.8
GENI  Genyem            26.93 286   P        P        11 17 54.7 +0.1
      comp=Z,538nm,2.2s,comp=Z,24μmcomp=Z,157μm
MBAZ  Motutapu North    27.01 164   P        P        11 18 01.9 +6.8
WTAZ  Waiatarua         27.07 165   P        P        11 17 57.9 +2.1
WIAZ  Waiheke Island    27.09 164   P        P        11 18 00.2 +4.3
QIS   Mount Isa         27.14 246   P        P        11 17 54.6 -2.0
      baz=27,SNR=27
KUZ   Kuaotunu          27.21 163   P        P        11 17 56.7 -0.3
AWAZ  Awhitu Peninsu    27.22 165   P        P        11 18 03.7 +6.8
MKAZ  Moumakai          27.39 164   P        P        11 17 59.0 +0.5
CMSA  Cobar Meteorol    27.86 219   P        P        11 18 01.1 -1.7
      baz=28,SNR=37
TOZ   Tahuroa Road      28.07 164   P        P        11 18 02.9 -1.7
YNG   Young             28.34 212   P        P        11 18 07.1  0.0
      baz=28,SNR=9.4
HIZ   Hauiti            28.64 165  eP        P        11 18 08.7 -1.0
      comp=Z,1μm,1.7s
HIZ                                 LR       LR
      comp=Z,572μm,18.0s
HIZ   Hauiti            28.64 165   P        P        11 18 10.2 +0.5
CNB   Canberra Magne    28.66 209   P        P        11 18 09.6 -0.4
      baz=29,SNR=16
OMRZ  Omania            28.67 163   P        P        11 18 13.0 +3.0
HAZ   Te Kaha           28.79 160   P        P        11 18 10.6 -0.3
MXZ   Matakaoa Point    28.79 159  eP        P        11 18 09.6 -1.3
      comp=Z,421nm,1.5s
MXZ                                 LR       LR
      comp=Z,632μm,20.0s
MXZ   Matakaoa Point    28.79 159   P        P        11 18 12.0 +1.0
CAN   Canberra          28.84 210  eP        P        11 18 10.7 -0.9
      comp=Z,1μm,1.8s
CAN                                 LR       LR
      comp=Z,182μm,22.0s
CAN   Canberra          28.84 210  eP        P        11 18 06.5 -5.1
RUGZ  Raukumara Rang    28.94 161   P        P        11 18 11.9 -0.6
PKGZ  Pakihiroa         29.00 160   P        P        11 18 12.0 -1.0
URZ   Urewera           29.03 162  eP        P        11 18 12.2 -0.9
URZ                                eS        S        11 23 05.8 +1.6
URZ                                 LR       LR
      comp=Z,351μm,20.0s
URZ   Urewera           29.03 162   P        P        11 18 12.2 -0.9
      comp=Z,38nm,0.9s,baz=341,slow=4.4,SNR=20
URZ                                 S        S        11 23 05.8 +1.6
      comp=Z,8.2nm,0.9s,baz=158,slow=20,SNR=2.6
URZ                                 LR       LR       11 28 09.1
      comp=Z,331μm,20.1s,baz=344,slow=33
URZ   Urewera           29.03 162   P        P        11 18 12.7 -0.4
PRRZ  Plateau Road      29.04 163   P        P        11 18 14.5 +1.2
WATZ  Wairara           29.05 164   P        P        11 18 13.4  0.0
WMGZ  Waiomatatini S    29.05 159   P        P        11 18 17.2 +3.9
MUGZ  Murupara          29.13 162   P        P        11 18 14.1  0.0
H11S2 WAKE ISLAND Hy    29.18   1   T        T        11 48 41.0
      baz=181,slow=76,SNR=2645
H11S3 WAKE ISLAND Hy    29.19   1   T        T        11 48 44.7
      baz=181,slow=76,SNR=1230
H11S1 WAKE ISLAND Hy    29.20   1   T        T        11 48 42.3
      baz=181,slow=76,SNR=1380
RATZ  Rangitukua        29.21 164   P        P        11 18 15.2 +0.4
PUZ   Puketiti          29.23 160   P        P        11 18 13.7 -1.2
MWZ   Matawai           29.23 161   P        P        11 18 13.9 -1.0
TWGZ  Tauwhareparae     29.23 160   P        P        11 18 13.9 -1.1
RTZ   Ruatahuna         29.32 162   P        P        11 18 15.2 -0.6
KRVZ  Karewarewa        29.39 165   P        P        11 18 16.9 +0.4
TKGZ  Te Karaka         29.43 161   P        P        11 18 15.2 -1.5
MTHZ  Maungataniwha     29.50 163   P        P        11 18 17.5 +0.1
SNGZ  Shannon Statio    29.58 162   P        P        11 18 16.9 -1.2
RAHZ  Arahi             29.63 162   P        P        11 18 17.1 -1.3
RIGZ  Rimuhau           29.64 161   P        P        11 18 17.2 -1.5
BKZ   Black Stump Fm    29.69 163  eP        P        11 18 18.4 -0.7
      comp=Z,608nm,1.2s
BKZ                                 LR       LR
      comp=Z,360μm,21.0s
WAKE  Wake Island       29.97   1  eP        P        11 18 21.4 -0.2
      comp=Z,2μm,1.8s
WAKE                                LR       LR
      comp=Z,242μm,20.0s
MILA  Mila              30.17 207   P        P        11 18 22.8 -0.6
      baz=30,SNR=16
H11N1 WAKE ISLAND Hy    30.40   2   T        T        11 50 17.2
      baz=182,slow=76,SNR=1432
H11N3 WAKE ISLAND Hy    30.41   2   T        T        11 50 13.0
      baz=182,slow=76,SNR=1740
H11N2 WAKE ISLAND Hy    30.42   2   T        T        11 50 13.9
      baz=182,slow=76,SNR=6870
STKA  Stephens Creek    30.75 223   P        P        11 18 27.4 -1.0
      baz=31,SNR=32
STKA  Stephens Creek    30.75 223  eP        P        11 18 27.8 -0.7
      comp=Z,159nm,1.4s
STKA                                LR       LR
      comp=Z,56μm,20.0s
STKA  Stephens Creek    30.75 223  eP        P        11 18 27.2 -1.3
STKA  Stephens Creek    30.75 223   P        P        11 18 27.7 -0.7
      comp=Z,23nm,0.8s,baz=45,slow=8.8,SNR=31
STKA                                S        S        11 23 34.9 +3.6
      comp=Z,5.5nm,0.8s,baz=343,slow=22,SNR=1.4
STKA                                LR       LR       11 30 45.7
      comp=Z,273μm,18.2s,baz=46,slow=36
SRPI  Serui, Papua      30.88 285   P        P        11 18 32.1 +2.3
      comp=Z,374nm,1.3s,comp=Z,10μm
BFZ   Birch Farm        31.04 165  eP        P        11 18 29.2 -1.7
      comp=Z,410nm,0.7s
BFZ                                 LR       LR
      comp=Z,590μm,20.0s
SNZO  South Karori      31.27 167  eP        P        11 18 31.3 -1.6
      comp=Z,2μm,1.9s
SNZO                                LR       LR
      comp=Z,453μm,18.0s
THZ   Tophouse          31.36 170  eP        P        11 18 33.4 -0.4
      comp=Z,933nm,1.2s
THZ                                 LR       LR
      comp=Z,286μm,18.0s
CMWZ  Cape Campbell     31.59 168   P        P        11 18 49.4 +14
WR0   Warramunga Arr    31.60 250   PFAKE             11 18 50.0 +14
WR0                                 LR       LR
      comp=Z,148μm,19.0s
WR9   Warramunga Arr    31.63 250   PFAKE             11 18 50.0 +14
WR9                                 LR       LR
      comp=Z,145μm,19.0s
WR8   Warramunga Arr    31.64 250   PFAKE             11 18 50.0 +13
WR8                                 LR       LR
      comp=Z,150μm,19.0s
WR7   Warramunga Arr    31.66 250   PFAKE             11 18 50.0 +13
WR7                                 LR       LR
      comp=Z,157μm,18.0s
WR6   Warramunga Arr    31.68 250   PFAKE             11 18 50.0 +13
WR6                                 LR       LR
      comp=Z,154μm,18.0s
WB0   Warramunga Arr    31.70 250   PFAKE             11 18 50.0 +13
WB0                                 LR       LR
      comp=Z,134μm,19.0s
WR5   Warramunga Arr    31.70 250   PFAKE             11 18 50.0 +13
WR5                                 LR       LR
      comp=Z,148μm,19.0s
WB8   Warramunga Arr    31.72 250   PFAKE             11 18 50.0 +13
WB8                                 LR       LR
      comp=Z,122μm,20.0s
WR4   Warramunga Arr    31.73 250   PFAKE             11 18 50.0 +13
WR4                                 LR       LR
      comp=Z,144μm,19.0s
WB6   Warramunga Arr    31.74 250   PFAKE             11 18 50.0 +13
WB6                                 LR       LR
      comp=Z,134μm,19.0s
WR3   Warramunga Arr    31.74 250   PFAKE             11 18 50.0 +13
WR3                                 LR       LR
      comp=Z,148μm,19.0s
WB5   Warramunga Arr    31.75 250   PFAKE             11 18 50.0 +13
WB5                                 LR       LR
      comp=Z,133μm,18.0s
WC2   Warramunga Arr    31.76 250   PFAKE             11 18 50.0 +12
WC2                                 LR       LR
      comp=Z,160μm,19.0s
WC3   Warramunga Arr    31.76 250  eP        P        11 18 35.6 -2.0
      comp=Z,856nm,1.1s
WC3                                 LR       LR
      comp=Z,150μm,19.0s
WB4   Warramunga Arr    31.76 250   PFAKE             11 18 50.0 +12
WB4                                 LR       LR
      comp=Z,140μm,19.0s
WR2   Warramunga Arr    31.77 250   PFAKE             11 18 50.0 +12
WR2                                 LR       LR
      comp=Z,137μm,19.0s
WB3   Warramunga Arr    31.77 250   PFAKE             11 18 50.0 +12
WB3                                 LR       LR
      comp=Z,145μm,19.0s
WRAB  Tennant Creek     31.77 250  eP        P        11 18 35.5 -2.2
      comp=Z,831nm,1.1s
WRAB                                LR       LR
      comp=Z,156μm,18.0s
WRAB  Tennant Creek     31.77 250⇓ iP        P        11 18 34.6 -3.1
WRAB                                pmax     pmax
      comp=Z,522nm,1.0s
WRAB                                MLR      MLR
      comp=Z,157μm,16.0s
WB2   Warramunga Arr    31.77 250  eP        P        11 18 35.8 -1.9
      comp=Z,896nm,1.1s
WB2                                 LR       LR
      comp=Z,138μm,19.0s
WC1   Warramunga Arr    31.78 250   PFAKE             11 18 50.0 +12
WC1                                 LR       LR
      comp=Z,109μm,19.0s
WR1   Warramunga Arr    31.79 250  eP        P        11 18 35.2 -2.6
      comp=Z,889nm,1.1s
WR1                                ePcP      PcP      11 21 25.2 -3.8
WR1                                eScP      ScP      11 25 08.8 -3.6
WR1                                 LR       LR
      comp=Z,146μm,19.0s
WRA   Warramunga Arr    31.79 250   P        P        11 18 35.2 -2.6
      comp=Z,84nm,0.9s,baz=79,slow=8.9,SNR=89
WRA                                 PcP      PcP      11 21 25.2 -3.8
      comp=Z,9.5nm,0.8s,baz=70,slow=4.5,SNR=2.2
WRA                                 S        S        11 23 46.6 -1.3
      comp=Z,11nm,1.0s,baz=78,slow=22,SNR=2.6
WRA                                 ScP      ScP      11 25 08.8 -3.6
      comp=Z,2.3nm,1.1s,baz=75,slow=3.2,SNR=2.2
WC4   Warramunga Arr    31.79 250   PFAKE             11 18 50.0 +12
WC4                                 LR       LR
      comp=Z,148μm,19.0s
INZ   Inchbonnie        32.09 172   P        P        11 18 39.7 -0.4
GUMO  Guam              32.10 319  eP        P        11 18 38.6 -1.9
GUMO                               eS        S        11 23 57.4 +4.7
GUMO                                LR       LR
      comp=Z,240μm,18.0s
GUMO  Guam              32.10 319   P        P        11 18 38.4 -2.1
      comp=Z,103nm,0.8s,baz=165,slow=8.5,SNR=3.3
GUMO                                S        S        11 23 57.4 +4.7
      comp=Z,34nm,0.7s,baz=355,slow=11,SNR=1.7
GUMO                                LR       LR       11 30 54.3
      comp=Z,196μm,19.6s,baz=133,slow=35
KHZ   Kahutara          32.11 169  eP        P        11 18 38.8 -1.5
      comp=Z,1μm,1.2s
KHZ                                 LR       LR
      comp=Z,353μm,18.0s
LTZ   Lake Taylor       32.26 171  eP        P        11 18 40.9 -0.7
      comp=Z,2μm,1.3s
LTZ                                 LR       LR
      comp=Z,274μm,21.0s
WVZ   Waitaha Valley    32.35 174   P        P        11 18 42.3  0.0
TOO   Toolangi          32.35 211   P        P        11 18 42.7 +0.1
      baz=32,SNR=21
TOO   Toolangi          32.35 211  eP        P        11 18 42.0 -0.6
      comp=Z,226nm,0.8s
TOO                                 LR       LR
      comp=Z,253μm,21.0s
TOO   Toolangi          32.35 211  eP        P        11 18 42.4 -0.2
FOZ   Fox Glacier       32.71 175  eP        P        11 18 45.2 -0.3
      comp=Z,797nm,1.0s
FOZ                                 LR       LR
      comp=Z,212μm,19.0s
FOZ   Fox Glacier       32.71 175   P        P        11 18 45.1 -0.4
OXZ   Oxford            32.76 172  eP        P        11 18 45.1 -0.9
      comp=Z,2μm,1.4s
OXZ                                 LR       LR
      comp=Z,240μm,19.0s
OXZ   Oxford            32.76 172   P        P        11 18 44.9 -1.1
KDU   Kakadu            32.87 263   P        P        11 18 45.5 -1.8
      baz=33,SNR=14
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RKPI	Ransiki, Papua	32.95	284	P	P	11 18 51.8	+3.8
	comp=Z,205nm,0.9s,comp=Z,11µm						
RPZ	Rata Peaks	33.01	173	*e*P	P	11 18 46.4	-1.9
RPZ				*e*S	S	11 24 10.4	+3.9
RPZ				LR	LR		
	comp=Z,300µm,20.0s						
RPZ	Rata Peaks	33.01	173	P	P	11 18 46.4	-1.9
	comp=Z,202nm,0.8s,baz=15,slow=1.7,SNR=64						
RPZ				S	S	11 24 10.4	+3.9
	comp=Z,4.5nm,0.5s,baz=40,slow=14,SNR=11						
RPZ				LR	LR	11 31 18.6	
	comp=Z,320µm,19.2s,baz=349,slow=35						
RPZ	Rata Peaks	33.01	173	P	P	11 18 47.1	-1.2
AS01	Alice Springs	33.06	243	*e*P	P	11 18 47.1	-1.9
CRLZ	Canterbury Las	33.09	171	*e*P	P	11 18 47.8	-1.0
	comp=Z,4µm,1.4s						
CRLZ				LR	LR		
	comp=Z,244µm,22.0s						
CRLZ	Canterbury Las	33.09	171	P	P	11 18 48.8	0.0
AS31	Alice Springs	33.10	243	*e*P	P	11 18 46.0	-3.3
	comp=Z,110nm,1.1s						
AS31				LR	LR		
	comp=Z,2µm,18.0s						
ASAR	Alice Springs	33.10	243	P	P	11 18 46.7	-2.7
	comp=Z,44nm,0.9s,baz=72,slow=9.1,SNR=100						
ASAR				PcP	PcP	11 21 27.7	-5.0
	comp=Z,6.2nm,0.7s,baz=88,slow=1.0,SNR=2.4						
ASAR				S	S	11 24 08.5	0.0
	comp=Z,12nm,1.0s,baz=64,slow=28,SNR=2.8						
ASAR				ScP	ScP	11 25 18.2	+1.3
	comp=Z,7.4nm,1.0s,baz=83,slow=3.2,SNR=2.4						
ASAR				LR	LR	11 32 26.2	
	comp=Z,76µm,18.3s,baz=74,slow=37						
JCZ	Jackson Bay	33.17	176	P	P	11 18 49.6	0.0
MQZ	McQueen's Vall	33.22	171	*e*P	P	11 18 49.2	-0.8
	comp=Z,1µm,1.0s						
MQZ				LR	LR		
	comp=Z,196µm,18.0s						
AKCZ	Akaroa Harbour	33.42	171	P	P	11 18 55.5	+3.7
HTT	Hallett	33.48	224	P	P	11 18 51.1	-1.4
	baz=33,SNR=93						
LBZ	Lake Benmore	33.59	175	*e*P	P	11 18 52.1	-1.2
	comp=Z,362nm,0.9s						
LBZ				LR	LR		
	comp=Z,192µm,20.0s						
LBZ	Lake Benmore	33.59	175	P	P	11 18 52.0	-1.2
MSZ	Milford Sound	33.72	178	P	P	11 18 57.4	+3.1
ARPS	Mount Arapiles	33.77	216	P	P	11 18 53.7	-1.2
	baz=34,SNR=16						
SARN	Sarigan	33.92	324	*e*P	P	11 18 54.1	-2.3
	comp=Z,1µm,1.6s						
WKZ	Wanaka	33.93	176	*e*P	P	11 18 56.2	-0.1
	comp=Z,3µm,2.0s						
WKZ				LR	LR		
	comp=Z,161µm,18.0s						
WKZ	Wanaka	33.93	176	P	P	11 18 56.1	-0.1
MTN	Manton Dam	34.17	263	*e*P	P	11 18 57.9	-0.8
	comp=Z,597nm,1.5s						
MTN				LR	LR		
	comp=Z,144µm,21.0s						
ODZ	Otahua Downs	34.28	174	*e*P	P	11 18 57.9	-1.3
	comp=Z,1µm,1.6s						
ODZ				LR	LR		
	comp=Z,180µm,19.0s						
ODZ	Otahua Downs	34.28	174	P	P	11 18 57.8	-1.5
SAUI	Saumlaki	34.35	272	PFAKE		11 19 10.0	+10
SAUI				LR	LR		
	comp=Z,179µm,19.0s						
SAUI	Saumlaki	34.35	272	P	P	11 19 03.3	+3.1
	comp=Z,465nm,1.1s,comp=Z,15µm						
EAZ	Earnscleugh	34.36	176	P	P	11 18 59.0	-0.9
RAR	Rarotonga	34.38	112	P	P	11 19 00.9	+0.5
RAR				LR	LR		
	comp=Z,205µm,21.0s						
RAR	Rarotonga	34.38	112	P	P	11 19 00.9	+0.5
	comp=Z,8.6nm,0.5s,baz=134,slow=20,SNR=2.6						
RAR				LR	LR	11 30 10.6	
	comp=Z,190µm,20.3s,baz=274,slow=31						
FAKI	Fak Fak	34.40	281	*e*P	P	11 18 57.5	-3.2
	comp=Z,260nm,1.6s						
FAKI				LR	LR		
	comp=Z,89µm,19.0s						
FAKI	Fak Fak	34.40	281	P	P	11 19 02.5	+1.8
	comp=Z,106nm,1.7s,comp=Z,9µmcomp=Z,77µm						
MLZ	Mavora Lakes	34.42	177	*e*P	P	11 18 58.7	-1.8
	comp=Z,336nm,1.2s						
MLZ				LR	LR		
	comp=Z,345µm,20.0s						
MLZ	Mavora Lakes	34.42	177	P	P	11 19 00.4	-0.1
DCZ	Deep Cove	34.49	179	*e*P	P	11 18 59.6	-1.4
	comp=Z,435nm,1.0s						
DCZ				LR	LR		
	comp=Z,170µm,20.0s						
WHZ	Wether Hill Ro	34.94	178	*e*P	P	11 19 03.8	-1.2
	comp=Z,331nm,1.4s						
WHZ				LR	LR		
	comp=Z,287µm,19.0s						
TUZ	Tuapeka	35.10	176	P	P	11 19 05.9	-0.4
HHSZ	Highcliff Hill	35.11	174	P	P	11 19 07.0	+0.5
BBOO	Buckleboo	35.14	227	P	P	11 19 05.8	-1.1
	baz=35,SNR=32						
BBOO	Buckleboo	35.14	227	*e*P	P	11 19 05.8	-1.1
	comp=Z,2µm,1.7s						
BBOO				LR	LR		
	comp=Z,160µm,19.0s						
PYZ	Puysegur Point	35.18	179	*e*P	P	11 19 05.7	-1.3
	comp=Z,206nm,1.1s						
PYZ				LR	LR		
	comp=Z,168µm,20.0s						
MOO	Moorlands	35.49	204	P	P	11 19 09.1	-0.6
	baz=35,SNR=23						
TAU	Tasmania Unive	35.83	204	*e*P	P	11 19 12.0	-0.6
	comp=Z,352nm,1.1s						
TAU				LR	LR		
	comp=Z,131µm,21.0s						
TAU	Tasmania Unive	35.83	204	*e*P	P	11 19 18.6	+6.0
SWI	Sorong	35.92	284	P	P	11 19 16.1	+2.3
	comp=Z,248nm,1.1s,comp=Z,6µm						
PALU	Palau	36.23	299	P	P	11 19 17.3	+0.9
	baz=36,SNR=5.7						
BNDI	Bandanaira	36.30	277	P	P	11 19 17.4	+0.3
	comp=Z,3µm,1.4s,comp=Z,32µmcomp=Z,82µm						
KNRA	Kununurra	36.53	258	P	P	11 19 18.1	-0.8
	baz=36,SNR=20						
JOHN	Johnston Islan	36.57	42	PFAKE		11 19 30.0	+11
JOHN				LR	LR		
	comp=Z,156µm,20.0s						
WRKA	Warakurna	38.39	243	P	P	11 19 32.4	-2.4
	baz=38,SNR=66						
XMAS	Kiritimati	38.55	73	PFAKE		11 19 50.0	+14
XMAS				LR	LR		
	comp=Z,86µm,19.0s						
NLAI	Namlea	39.31	278	P	P	11 19 43.9	+1.4
	comp=Z,781nm,1.8s,comp=Z,20µmcomp=Z,60µm						
FITZ	Fitzroy Crossi	39.67	255	P	P	11 19 42.7	-2.7
	baz=40,SNR=176						
FITZ	Fitzroy Crossi	39.67	255	*e*P	P	11 19 44.2	-1.3
	comp=Z,681nm,1.0s						
FITZ	Fitzroy Crossi	39.67	255	P	P	11 19 43.1	-2.4
	comp=Z,66nm,0.9s,baz=85,slow=7.5,SNR=56						
FITZ				S	S	11 25 48.6	-0.3
	comp=Z,26nm,1.2s,baz=108,slow=20,SNR=2.3						
FITZ				LR	LR	11 36 42.7	
	comp=Z,75µm,18.3s,baz=81,slow=37						
TNTI	Ternate	40.12	284	*e*P	P	11 19 46.7	-2.5
TNTI				LR	LR		
	comp=Z,55µm,19.0s						
TNTI	Ternate	40.12	284	P	P	11 19 51.9	+2.6
	comp=Z,167nm,1.6s,comp=Z,9µmcomp=Z,32µm						
FORT	Forrest	40.35	235	P	P	11 19 50.2	-0.8
	baz=40,SNR=24						
FORT	Forrest	40.35	235	*e*P	P	11 19 49.8	-1.2
	comp=Z,1µm,1.4s						
FORT				LR	LR		
	comp=Z,136µm,18.0s						
SANI	Sanana	40.67	280	P	P	11 19 53.2	-0.6
	comp=Z,473nm,1.6s,comp=Z,21µmcomp=Z,65µm						
SOEI	Soe	41.06	268	*e*P	P	11 19 54.1	-3.1
	comp=Z,548nm,1.0s						
SOEI				LR	LR		
	comp=Z,137µm,20.0s						
SOEI	Soe	41.06	268	P	P	11 19 58.1	+0.9
	comp=Z,318nm,1.4s,comp=Z,13µmcomp=Z,49µm						
BATI	Baumata	41.61	267	P	P	11 20 03.1	+1.5
	comp=Z,266nm,0.8s,comp=Z,11µmcomp=Z,23µm						
BATI	Baumata	41.61	267	P	P	11 20 00.5	-1.1
	comp=Z,57nm,0.8s,baz=96,slow=0.7,SNR=11						
BATI				LR	LR	11 38 18.6	
	comp=Z,104µm,18.4s,baz=123,slow=38						
MIDW	Midway	42.05	22	*e*P	P	11 20 07.0	+2.1
MIDW				LR	LR		
	comp=Z,199µm,21.0s						
SGSI	Sangihe	42.80	288	P	P	11 20 12.9	+1.6
MMRI	Maumere	43.17	269	*e*P	P	11 20 11.1	-3.2
	comp=Z,809nm,1.1s						
MMRI				LR	LR		
	comp=Z,50µm,20.0s						
MMRI	Maumere	43.17	269	P	P	11 20 14.9	+0.6
	comp=Z,724nm,1.3s,comp=Z,19µmcomp=Z,43µm						
BBSI	Bau Bau	43.30	274	P	P	11 20 17.6	+2.3
	comp=Z,120nm,1.0s,comp=Z,4µm						
KMSI	Cibinong	43.30	283	P	P	11 20 17.9	+2.6
	comp=Z,2µm,1.3s,comp=Z,24µm						
MATI	Mati	43.35	292	*e*P	P	11 20 16.0	+0.3
PPT	Papeete	43.49	104	*e*P	P	11 20 16.0	-0.8
PPT	Papeete	43.49	104	P	P	11 20 16.0	-0.8
PPT				pmax	pmax		
	comp=Z,41nm,0.9s						
PPT	Papeete	43.49	104	P	P	11 20 16.0	-0.8
	comp=Z,41nm,0.9s,baz=119,slow=17,SNR=2.2						
PPT				LR	LR	11 34 11.9	
	comp=Z,197µm,20.6s,baz=272,slow=30						
PAE	Paea	43.49	104	*e*P	P	11 20 22.4	+5.6
	comp=Z,26nm,0.9s						
PPT2	Papeete2	43.49	104	*e*P	P	11 20 22.7	+5.8
	comp=Z,146nm,1.2s						
PPT2				*e*S	S	11 26 50.5	+4.9
	comp=Z,97µm,26.8s						
PPT2				*e*LQ	LQ	11 30 33.7	
	comp=Z,784µm,28.0s						
PPT2				*e*LR	LR	11 32 22.9	
	comp=Z,409µm,23.0s,baz=274						
PPTF	Pamatai, Papee	43.50	104	*e*P	P	11 20 16.3	-0.7
	comp=Z,295nm,1.3s						
PPTF				LR	LR		
	comp=Z,195µm,21.0s						
DDMP	Don Marcelino,	43.51	291	*e*P	P	11 20 22.1	+5.0
EDFI	Ende, Flores	43.69	269	P	P	11 20 17.9	-0.7
	comp=Z,264nm,1.6s,comp=Z,16µm						
TIAR	Tiarei	43.71	104	*e*P	P	11 20 24.2	+5.6
	comp=Z,72nm,1.3s						
TVO	Taravao	43.81	104	*e*P	P	11 20 25.1	+5.7
	comp=Z,54nm,1.2s						
MCQ	Macquarie Isla	43.88	186	*e*P	P	11 20 17.5	-1.8
	comp=Z,413nm,1.4s						
MCQ				LR	LR		
	comp=Z,142µm,19.0s						
MCQ	Macquarie Isla	43.88	186	*e*P	P	11 20 17.5	-1.8
MCQ				pmax	pmax		
	comp=Z,413nm,1.4s						
MCQ				MLR	MLR		
	comp=Z,142µm,19.0s						
DAV	Davao City (W)	44.01	292	P	P	11 20 19.9	-1.1
DAV				LR	LR		
	comp=Z,82µm,18.0s						
DAV	Davao City (W)	44.01	292	P	P	11 20 20.1	-1.0
DAV	Davao City (W)	44.01	292	P	P	11 20 19.9	-1.1
	comp=Z,98nm,0.3s,baz=65,slow=22,SNR=2.4						
DAV				LR	LR	11 38 42.9	
	comp=Z,61µm,18.4s,baz=92,slow=36						
LUWI	Luwuk	44.04	280	*e*P	P	11 20 18.1	-3.1
	comp=Z,1µm,1.4s						
LUWI				LR	LR		
	comp=Z,58µm,19.0s						
LUWI	Luwuk	44.04	280	P	P	11 20 25.7	+4.4
	comp=Z,663nm,1.2s,comp=Z,19µm						
JCJ	Chichijima	44.26	329	P	P	11 20 20.7	-2.1
	comp=Z,174nm,0.9s,baz=215,slow=7.4,SNR=2.3						
JCJ				LR	LR	11 37 23.9	
	comp=Z,108µm,20.5s,baz=138,slow=34						
CBIJ	Chichi jima	44.26	329	*e*P	P	11 20 20.7	-2.1
BASI	Baing, Sumba	44.64	266	P	P	11 20 28.4	+2.3
	comp=Z,763nm,1.6s,comp=Z,19µm						
SKMP	Bagumbayan, Su	44.74	291	*e*P	P	11 20 30.2	+3.3
BUTP	Butuan	44.75	295	*e*P	P	11 20 32.4	+5.5
BUKP	Musuan	44.80	293	*e*P	P	11 20 33.3	+5.9
WSI	Waingapu	44.96	267	P	P	11 20 30.8	+2.1
	comp=Z,742nm,2.0s,comp=Z,25µm						
PMOR	Pomariorio Ree	45.05	100	*e*P	P	11 20 35.3	+6.0
APSI	Ampana	45.16	280	P	P	11 20 31.3	+1.1
	comp=Z,465nm,1.4s,comp=Z,9µm						
MRSI	Marisa	45.23	282	P	P	11 20 31.8	+1.0
	comp=Z,111nm,1.3s,comp=Z,5µm						
VAH	Vaihoa	45.31	101	*e*P	P	11 20 37.3	+5.9
	comp=Z,258nm,1.3s						
MBWA	Marble Bar	45.50	251	*e*P	P	11 20 31.6	-1.3
	comp=Z,647nm,1.0s						
MBWA				LR	LR		
	comp=Z,81µm,19.0s						
MBWA	Marble Bar	45.50	251	P	P	11 20 32.4	-0.5
	SNR=43						
MBWA				P	P	11 20 32.4	-0.5
	SNR=43						
BKSI	Bulukumba	45.72	273	P	P	11 20 34.9	+0.2
	comp=Z,102nm,1.2s,comp=Z,6µmcomp=Z,26µm						
BNSI	Bone	45.91	274	P	P	11 20 34.5	-1.6
	comp=Z,630nm,1.5s,comp=Z,16µm						
MSLP	Maasin	45.93	296	*e*P	P	11 20 39.2	+2.9
KAPI	Kappang	46.14	273	PFAKE		11 20 50.0	+12
KAPI				LR	LR		
	comp=Z,28µm,21.0s						
PAGZ	Pagadian	46.32	292	*e*P	P	11 20 45.0	+5.6
SPSI	Sidrap Palu	46.32	275	P	P	11 20 37.0	-2.4
	comp=Z,144nm,1.3s,comp=Z,5µmcomp=Z,26µm						
TTSI	Tana Toraja	46.45	276	P	P	11 20 41.4	+0.9
	comp=Z,246nm,1.2s,comp=Z,11µmcomp=Z,47µm						
OCLP	Ormoc	46.55	297	*e*P	P	11 20 46.0	+4.8
KEKH	Kekaha	46.87	46	*e*P	P	11 20 41.3	-2.3
	comp=Z,264nm,1.0s						
KEKH				LR	LR		
	comp=Z,148µm,22.0s						
PCI	Palu	46.91	279	P	P	11 20 46.7	+2.6
	comp=Z,913nm,1.2s,comp=Z,24µm						
IPIL	Ipil	47.03	291	*e*P	P	11 20 50.2	+5.2
MPSI	Mapaga	47.17	281	P	P	11 20 44.7	-1.3
	comp=Z,129nm,2.4s,comp=Z,6µm						
MEEK	Meekatharra	47.26	244	P	P	11 20 45.2	-1.4
	baz=47,SNR=268						
PLAI	Plampang	47.53	268	P	P	11 20 47.6	-1.3
	comp=Z,795nm,1.5s,comp=Z,19µmcomp=Z,40µm						
HON	Honolulu	47.68	48	PFAKE		11 21 00.0	+10
HON				LR	LR		
	comp=Z,105µm,22.0s						
HON	Honolulu	47.68	48	*e*P	P	11 20 56.6	+6.8
KIP	Kipapa	47.73	48	*e*P	P	11 20 49.2	-1.0
	comp=Z,208nm,1.0s						
KIP				LR	LR		
	comp=Z,96µm,21.0s						
KIP	Kipapa	47.73	48⇓	*e*P	P	11 20 49.2	-1.0
KIP				pmax	pmax		
	comp=Z,294nm,1.2s						
OPA	Opana	47.90	47	*e*P	P	11 20 51.3	-0.3
	comp=Z,1µm,1.3s						
OPA				LR	LR		
	comp=Z,117µm,22.0s						
OPA	Opana	47.90	47	*e*P	P	11 20 51.3	-0.3
OPA				pmax	pmax		
	comp=Z,1µm,1.3s						
OPA				MLR	MLR		
	comp=Z,117µm,22.0s						
PVCP	Virac	48.12	299	*e*P	P	11 20 58.7	+5.4
KKH	Kailua Kona	48.16	51	*e*P	P	11 20 53.3	-0.2
GUIM	Jordan	48.16	295	*e*P	P	11 20 57.7	+4.0
KHLU	Kahalu`u	48.21	51	*e*P	P	11 20 52.9	-1.3
	comp=Z,1µm,1.7s						
KHLU				LR	LR		
	comp=Z,89µm,20.0s						
KHU	Kahuku	48.23	52	*e*P	P	11 20 53.2	-1.2
	comp=Z,948nm,1.2s						
KHU				LR	LR		
	comp=Z,98µm,21.0s						
KHU	Kahuku	48.23	52	*e*P	P	11 20 53.2	-1.2
KHU				pmax	pmax		
	comp=Z,948nm,1.2s						
KHU				MLR	MLR		
	comp=Z,98µm,21.0s						
HUH	Hualalai	48.31	51	*e*P	P	11 20 53.6	-1.6
	comp=Z,2µm,1.9s						
HUH				LR	LR		
	comp=Z,97µm,21.0s						
MWH	Moku'aweowe	48.38	52	*e*P	P	11 20 53.7	-2.3
	comp=Z,450nm,1.2s						
MWH				LR	LR		
	comp=Z,88µm,20.0s						
AIN	Ainahou	48.42	52	*e*P	P	11 20 53.3	-2.5
	comp=Z,625nm,1.0s						
AIN				LR	LR		
	comp=Z,93µm,20.0s						
MLOA	Mauna Loa Obse	48.42	52	*e*P	P	11 20 53.4	-2.8
	comp=Z,353nm,1.1s						
MLOA				LR	LR		
	comp=Z,94µm,21.0s						
HLP	Hilina Pali	48.49	52	*e*P	P	11 21 02.5	+6.2
HLP				LR	LR		
	comp=Z,99µm,20.0s						
HMH	Humu'ula Sheep	48.53	52	*e*P	P	11 20 55.1	-1.8
	comp=Z,680nm,1.1s						
HMH				LR	LR		
	comp=Z,102µm,20.0s						
MLH	Mauna Loa	48.55	52	*e*P	P	11 20 55.2	-1.7
	comp=Z,477nm,1.2s						
MLH				LR	LR		
	comp=Z,102µm,21.0s						
MLH	Mauna Loa	48.55	52	*e*P	P	11 20 55.2	-1.7
MLH				pmax	pmax		
	comp=Z,477nm,1.2s						
MLH				MLR	MLR		
	comp=Z,102µm,21.0s						
SDHHI	Sand Hill	48.56	52	PFAKE		11 21 10.0	+13
SDHHI				LR	LR		
	comp=Z,96µm,21.0s						
WRMHI	West Rim	48.56	52	PFAKE		11 21 10.0	+13
WRMHI				LR	LR		
	comp=Z,92µm,20.0s						
RIM	Rim	48.58	52	PFAKE		11 21 10.0	+13
RIM				LR	LR		
	comp=Z,90µm,20.0s						
UWE	Uwekahuna	48.58	52	PFAKE		11 21 10.0	+13
UWE				LR	LR		
	comp=Z,99µm,21.0s						
KHLH	Kahului Airpor	48.58	49	*e*P	P	11 20 55.4	-1.4
	comp=Z,861nm,1.4s						
KHLH				LR	LR		
	comp=Z,100µm,19.0s						
NPH	North Pit	48.58	52	PFAKE		11 21 10.0	+13
NPH				LR	LR		
	comp=Z,90µm,20.0s						
KKO	Keanakako`i	48.59	52	PFAKE		11 21 10.0	+13
KKO				LR	LR		
	comp=Z,88µm,20.0s						
POHA	Pohakuloa	48.59	51	*e*P	P	11 20 56.2	-1.0
	comp=Z,424nm,0.9s						
POHA				LR	LR		
	comp=Z,98µm,19.0s						
UWB	Uwekahuna B	48.59	52	PFAKE		11 21 10.0	+13
UWB				LR	LR		
	comp=Z,100µm,20.0s						
BYL	Byron's Ledge	48.60	52	PFAKE		11 21 10.0	+13
BYL				LR	LR		
	comp=Z,93µm,20.0s						
SBLHI	Steaming Bluff	48.60	52	PFAKE		11 21 10.0	+13
SBLHI				LR	LR		
	comp=Z,96µm,20.0s						
HATHI	Halema'uma'u T	48.60	52	PFAKE		11 21 10.0	+13
HATHI				LR	LR		
	comp=Z,96µm,20.0s						
PUH	Pauahi	48.61	52	PFAKE		11 21 10.0	+13
PUH				LR	LR		
	comp=Z,98µm,20.0s						
HPAH	Hawaii Prepara	48.62	51	*e*P	P	11 20 56.1	-1.2
	comp=Z,356nm,1.0s						
HPAH				LR	LR		
	comp=Z,101µm,22.0s						
HLK	Haleakala	48.63	50	*e*P	P	11 20 56.8	-0.8
	comp=Z,490nm,1.0s						
HLK				LR	LR		
	comp=Z,79µm,18.0s						
STCH	Steam Cracks	48.69	52	PFAKE		11 21 10.0	+12
STCH				LR	LR		
	comp=Z,100µm,20.0s						
NPOC	North of Pu'u	48.70	52	PFAKE		11 21 10.0	+12
NPOC				LR	LR		
	comp=Z,100µm,20.0s						
JCUZ	Jacuzzi	48.70	52	*e*P	P	11 20 56.6	-1.3
	comp=Z,361nm,0.8s						
JCUZ				LR	LR		
	comp=Z,103µm,20.0s						
LPH	Laupahoehoe	48.82	51	*e*P	P	11 20 57.8	-0.9
KLBR	Kellerberrin	49.02	238	P	P	11 20 58.1	-2.1
	baz=49,SNR=29						
AUQP	San Andres	49.26	298	*e*P	P	11 21 08.8	+6.6
OTRP	Odiongan	49.41	297	*e*P	P	11 21 00.6	-2.6
SMKI	Samarinda	49.58	279	P	P	11 21 09.6	+4.9
	comp=Z,249nm,2.4s,comp=Z,11µmcomp=Z,40µm						
CUYO	Cuyo Island	49.65	294	*e*P	P	11 21 14.0	+8.8
BLDU	Ballidu	49.67	239	P	P	11 21 03.6	-1.6
	baz=50,SNR=15						
BKB	Balikpapan	49.69	278	P	P	11 21 09.5	+4.0
	comp=Z,440nm,1.2s,comp=Z,19µmcomp=Z,64µm						
NWAO	Narrogin (SRO)	49.77	236	P	P	11 21 04.9	-1.0
	baz=50,SNR=8.3						
NWAO	Narrogin (SRO)	49.77	236	*e*P	P	11 21 04.2	-1.7
	comp=Z,847nm,1.4s						
NWAO				LR	LR		
	comp=Z,196µm,19.0s						
NWAO	Narrogin (SRO)	49.77	236	*e*P	P	11 21 04.9	-1.0
NWAO	Narrogin (SRO)	49.77	236	P	P	11 21 04.8	-1.2
	SNR=18						
MORW	Morawa	49.93	241	P	P	11 21 06.9	-0.3
	baz=50,SNR=13						
MORW	Morawa	49.93	241	*e*P	P	11 21 06.3	-0.9
	comp=Z,2µm,1.9s						
MORW				LR	LR		
	comp=Z,136µm,21.0s						
KBKI	Kotabaru	49.97	275	P	P	11 21 10.7	+3.0
	comp=Z,59nm,1.2s,comp=Z,1µm						
BOAC	Boac	50.04	298	*e*P	P	11 21 12.8	+4.7
DNP	Denpasar	50.06	268	P	P	11 21 11.9	+3.5
	comp=Z,989nm,1.1s,comp=Z,35µm						
SRBI	Singaraja	50.13	269	P	P	11 21 08.5	-0.4
	comp=Z,411nm,1.3s,comp=Z,12µmcomp=Z,27µm						
SJMP	San Jose	50.24	296	*e*P	P	11 21 14.5	+4.8
JHJ2	Mitsune	50.37	331	*e*P	P	11 21 08.9	-1.3
	comp=Z,1µm,1.1s						
JHJ2				LR	LR		
	comp=Z,82µm,20.0s						
JHJ	Hachijo jima 2	50.39	331	P	P	11 21 09.7	-0.7
	comp=Z,287nm,0.9s,baz=30,slow=9.6,SNR=2.5						
MUN	Mundaring	50.39	237	P	P	11 21 09.8	-0.8
	baz=50,SNR=13						
RKGY	Rocky Gully	50.42	234	P	P	11 21 10.1	-0.7
	baz=50,SNR=19						
POLP	Polilio Island	50.54	299	*e*P	P	11 21 18.0	+6.1
GIRL	Giralia	50.71	250	P	P	11 21 12.5	-0.7
	baz=51,SNR=15						
GIRL	Giralia	50.71	250	*e*P	P	11 21 11.5	-1.6
	comp=Z,2µm,1.3s						
GIRL				LR	LR		
	comp=Z,211µm,18.0s						
BUSP	Coron	50.86	295	*e*P	P	11 21 20.1	+5.8
JAGI	Jajag, Banyuwa	51.13	268	*e*P	P	11 21 13.7	-2.7
	comp=Z,823nm,1.1s						
JAGI				LR	LR		
	comp=Z,30µm,20.0s						
JAGI	Jajag, Banyuwa	51.13	268	P	P	11 21 15.6	-0.8
	comp=Z,567nm,1.0s,comp=Z,13µmcomp=Z,35µm						
ENPP	El Nido	51.23	294	*e*P	P	11 21 20.2	+3.1
PALP	Palanan	51.25	302	*e*P	P	11 21 24.2	+7.0
BALP	Baler	51.32	300	*e*P	P	11 21 22.9	+5.2
KMMI	Kalianget	51.50	270	P	P	11 21 21.9	+2.7
	comp=Z,202nm,1.2s,comp=Z,2µm						
CAUP	Cauayan	51.69	302	*e*P	P	11 21 25.8	+5.3
MTKI	Muara Teweh, K	51.71	277	P	P	11 21 23.4	+2.6
	comp=Z,169nm,1.1s,comp=Z,10µm						
BATP	Bataraza	51.79	290	*e*P	P	11 21 27.0	+5.7
GMJI	Gumukmas	51.85	268	P	P	11 21 20.8	-1.0
	comp=Z,488nm,1.1s,comp=Z,11µmcomp=Z,33µm						
SMPP	San Manuel, Pa	52.27	300	*e*P	P	11 21 26.2	+1.3
KKM	Kota Kinabalu	52.34	286	*e*P	P	11 21 23.4	-2.2
	comp=Z,257nm,0.9s						
KKM				LR	LR		
	comp=Z,31µm,21.0s						
JOW	Kunigami	52.41	316	*e*P	P	11 21 24.3	-1.4
	comp=Z,307nm,1.0s						
JOW	Kunigami	52.41	316	P	P	11 21 24.5	-1.2
	comp=Z,3.3nm,0.5s,baz=174,slow=13,SNR=4.7						
APYP	Conner	52.62	302	*e*P	P	11 21 31.5	+4.1
H01W1	Cape Leeuwin H	52.74	234	P	P	11 21 26.1	-1.7
	baz=99,slow=6.5,SNR=4.2						
H01W3	Cape Leeuwin H	52.75	234	P	P	11 21 26.9	-1.1
	baz=99,slow=6.5,SNR=4.3						

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H01W2 Cape Leeuwin H   52.76 234  P         P          11 21 33.0 +5.1
      baz=99,slow=6.5,SNR=3.7
TAOE  Nuku Hiva Isla   53.03  93 eP         P          11 21 37.3 +6.6
      comp=Z,566nm,1.3s
TAOE                             eS         S          11 29 05.9 +5.1
      comp=Z,58µm,26.4s
TAOE                             eLQ        LQ         11 34 35.4
      comp=Z,193µm,24.6s
TAOE                             eLR        LR         11 36 50.6
      comp=Z,155µm,23.9s,baz=266
TAOE  Nuku Hiva Isla   53.03  93  PFAKE                11 21 40.0 +9.3
TAOE                              LR        LR
      comp=Z,90µm,22.0s
INU   Inuyama          53.53 330 eP         P          11 21 32.2 -1.6
INU                               LR        LR
      comp=Z,112µm,20.0s
NGJI  Ngawi            53.91 269  P         P          11 21 41.4 +4.3
      comp=Z,858nm,1.3s,comp=Z,21µm
MJAR  Matsushiro Arr   53.94 332  P         P          11 21 35.6 -1.2
      comp=Z,84nm,1.2s,baz=170,slow=9.0,SNR=24
MAJO  Matsushiro       53.94 332 eP         P          11 21 35.2 -1.7
      comp=Z,139nm,0.8s
MAJO                              LR        LR
      comp=Z,93µm,19.0s
MAJO  Matsushiro       53.94 332⇓eP         P          11 21 34.0 -2.8
MAJO                              pmax      pmax
      comp=Z,216nm,1.1s
MAT   Matsushiro       53.94 332  P         P          11 21 34.7 -2.1
MAT                               S         S          11 29 15.2 +3.0
MJB9  Matsu-Tunnel     53.94 332 eP         P          11 21 35.3 -1.6
      comp=Z,144nm,0.8s
MJB9                              LR        LR
      comp=Z,102µm,19.0s
PCJI  Pacitan          54.08 268  P         P          11 21 37.5 -0.8
      comp=Z,2µm,1.1s,comp=Z,20µmcomp=Z,40µm
WOJI  Wonogiri, Jawa   54.38 268  P         P          11 21 43.2 +2.7
      comp=Z,471nm,1.4s,comp=Z,14µm
PBKI  Pangkalan Bun    54.49 274  P         P          11 21 43.0 +1.7
      comp=Z,514nm,1.2s,comp=Z,12µm
YOJ   Yonaguni jima    54.72 310  PFAKE                11 21 50.0 +7.3
YOJ                               LR        LR
      comp=Z,146µm,20.0s
UGM   Wanagama         54.76 268 eP         P          11 21 41.6 -1.7
      comp=Z,2µm,1.3s
UGM                               LR        LR
      comp=Z,31µm,20.0s
UGM   Wanagama         54.76 268  P         P          11 21 44.5 +1.2
      comp=Z,1µm,1.2s,comp=Z,22µmcomp=Z,42µm
SMRI  Semarang         54.96 269  P         P          11 21 46.8 +2.1
      comp=Z,810nm,1.1s,comp=Z,24µm
JNU   Nakatsue         55.09 324 eP         P          11 21 44.0 -1.4
      comp=Z,455nm,1.1s
JNU                               LR        LR
      comp=Z,100µm,22.0s
JNU   Nakatsue         55.09 324  P         P          11 21 43.7 -1.6
      comp=Z,49nm,0.9s,baz=196,slow=1.7,SNR=11
SBUM  Sibu             55.12 281 eP         P          11 21 43.7 -2.2
      comp=Z,102nm,1.3s
SBUM                              LR        LR
      comp=Z,20µm,22.0s
TWG   Pinlang          55.30 308  PFAKE                11 22 00.0  +13
TWG                               LR        LR
      comp=Z,302µm,19.0s
YULB  Yu-li            55.43 308 eP         P          11 21 46.6 -1.3
      comp=Z,199nm,1.1s
YULB                              LR        LR
      comp=Z,80µm,21.0s
NACB  Ninganchiao      55.63 309 eP         P          11 21 45.8 -3.5
      comp=Z,2µm,1.9s
NACB                              LR        LR
      comp=Z,98µm,20.0s
TPUB  Ta-pu            55.90 308 eP         P          11 21 47.1 -4.1
      comp=Z,242nm,0.9s
TPUB                              LR        LR
      comp=Z,63µm,20.0s
SSLB  Suanglung        55.91 308 eP         P          11 21 48.5 -2.8
      comp=Z,589nm,1.7s
SSLB                              LR        LR
      comp=Z,126µm,22.0s
YHNB  Yeheng           56.07 310 eP         P          11 21 51.7 -0.9
      comp=Z,445nm,1.0s
YHNB                              LR        LR
      comp=Z,137µm,21.0s
TATO  Taipei           56.15 310 eP         P          11 21 52.3 -0.8
      comp=Z,329nm,1.0s
TATO                              LR        LR
      comp=Z,176µm,22.0s
ERM   Erimo            56.66 340 eP         P          11 21 56.2 -0.1
      comp=Z,204nm,1.2s
ERM                               LR        LR
      comp=Z,163µm,18.0s
ERM   Erimo            56.66 340⇓eP         P          11 21 54.7 -1.6
ERM                               pmax      pmax
      comp=Z,305nm,2.2s
KSM   Kuching          56.73 279 eP         P          11 21 55.8 -1.6
      comp=Z,267nm,1.3s
KSM                               LR        LR
      comp=Z,24µm,20.0s
CMJI  Cimerak          56.82 268  P         P          11 22 01.4 +3.4
      comp=Z,430nm,0.8s,comp=Z,11µm
RKT   Rikitea          57.41 110 eP         P          11 22 08.6 +6.5
      comp=Z,169nm,1.2s
RKT                              eS         S          11 30 03.4 +4.4
      comp=Z,98µm,33.5s
RKT                              eLR        LR         11 38 49.5
      comp=Z,329µm,30.5s
CISI  Cisompet, Garu   57.47 268 eP         P          11 21 58.3 -4.4
      comp=Z,588nm,0.7s
CISI                              LR        LR
      comp=Z,32µm,20.0s
CISI  Cisompet, Garu   57.47 268  P         P          11 22 01.4 -1.3
      comp=Z,923nm,1.1s,comp=Z,12µmcomp=Z,31µm
YUK   Yuzh-Kuril'sk    57.63 343d iP        P          11 22 02.0 -1.1
YUK                              i                     11 24 05.4
YUK                               S         S          11 30 02.8 +1.7
YUK                              i                     11 31 39.0
YUK                              i SS       SS         11 33 51.1 -0.6
LEM   Lembang          57.77 269  P         P          11 22 03.6 -1.3
      comp=Z,109nm,0.8s,baz=96,slow=9.3,SNR=16
KUR   Kuril'sk         58.20 345 eP         P          11 22 16.1 +9.0
KUR                              ePPP       PPP        11 25 40.6
KUR                              i S        S          11 30 15.6 +7.2
KUR                               MLR       MLR
      comp=Z,80µm,18.0s
KUR                               MLR       MLR
      comp=N,76µm,19.0s
KUR                               MLR       MLR
      comp=E,11µm,15.0s
TPI   Tanjungpandan    58.42 273  P         P          11 22 10.2 +0.9
      comp=E,448nm,1.2s,comp=E,34µm
CBJI  Citeko           58.58 269  P         P          11 22 12.3 +1.9
      comp=E,506nm,1.1s,comp=E,20µm
DBJI  Dramaga          58.66 269  P         P          11 22 14.3 +3.3
      comp=E,288nm,1.8s,comp=E,10µm
ASAJ  Asahikawa        58.72 340  P         P          11 22 10.0 -0.7
      comp=E,61nm,1.0s,baz=256,slow=16,SNR=8.5
ASAJ                              LR        LR         11 43 37.4
      comp=E,76µm,21.4s,baz=168,slow=32
SKJI  Sukabumi         58.78 268  P         P          11 22 14.5 +2.6
      comp=E,711nm,1.1s,comp=E,17µm
XMIS  Christmas Isla   59.22 264 eP         P          11 22 10.4 -4.5
      comp=E,342nm,1.1s
TJN   Taejon           59.44 324⇑eP         P          11 22 12.4 -3.5
KSRS  Korea Array      59.88 325  P         P          11 22 17.9 -1.0
      comp=E,4.9nm,0.7s,baz=139,slow=7.3,SNR=18
KS15  Wonju Array Si   59.89 325 eP         P          11 22 16.1 -2.9
KSAR  Wonju Array Be   59.89 325  P         P          11 22 17.9 -1.1
KSAR  Wonju Array Be   59.89 325  P         P          11 22 17.9 -1.1
SSE   Sheshan          59.91 316  P         P          11 22 18.0 -1.3
SSE                               S         S          11 30 31.9 +0.7
SSE                               pmax      pmax
      comp=E,91nm,0.8s
SSE                               pmax      pmax
      comp=E,3µm,11.1s
SSE   Sheshan          59.91 316 eP         P          11 22 17.1 -2.2
      comp=E,3µm,1.9s
SSE                               LR        LR
      comp=Z,87µm,22.0s
KS01  Wonju Array Si   59.91 325 eP         P          11 22 15.2 -3.9
PPBI  Pangkal Pinang   60.02 274  P         P          11 22 22.7 +2.3
      comp=Z,293nm,1.2s,comp=Z,11µmcomp=Z,20µm
HKC   Hong Kong Obse   60.56 303 ⇓P         P          11 22 30.0 +6.1
KLI   Kotabumi         60.79 270  P         P          11 22 29.1 +3.4
      comp=Z,155nm,1.8s,comp=Z,5µm
MCO   Taipa Grande     60.99 303  P         P          11 22 33.0 +6.2
KASI  Kota Agung       61.03 270  P         P          11 22 29.4 +2.1
      comp=Z,385nm,1.2s,comp=Z,7µmcomp=Z,25µm
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YSS   Yuzh-Sakhalins   61.20 342 eP         P          11 22 25.1 -2.7
      comp=Z,250nm,1.1s
YSS                               LR        LR
      comp=Z,103µm,20.0s
YSS   Yuzh-Sakhalins   61.20 342 eP         P          11 22 27.5 -0.3
YSS                              e*SP       sP         11 22 35.3 +2.3
YSS                              e                     11 22 43.3
YSS                              eS         S          11 30 43.0 -4.1
YSS                              ePS                   11 31 10.1
YSS                               pmax      pmax
      comp=Z,70nm,1.4s
YSS                               pmax      pmax
      comp=Z,3µm,3.3s
PMBI  Palembang        61.21 273  P         P          11 22 33.3 +4.7
      comp=Z,1µm,1.1s
MDSI  Maura Dua        61.52 271  P         P          11 22 32.0 +1.4
      comp=Z,184nm,1.3s,comp=Z,6µm
LWLI  Liwa             61.55 270  P         P          11 22 33.5 +2.5
      comp=Z,224nm,1.1s
GZH   Guangzhou        61.61 304⇓iP         P          11 22 32.4 +1.4
GZH                               PcP       PcP        11 23 10.6 -2.0
GZH                               PP        PP         11 24 48.6 +1.8
GZH                               S         S          11 30 57.3 +4.1
GZH                               pmax      pmax
      comp=Z,9µm,12.5s
GZH                               LR        LR
      comp=Z,68µm,21.6s
GZH                               LR        LR
      comp=Z,37µm,22.4s
TEY   Ternei           61.66 337⇓eP         P          11 22 36.3 +5.4
TEY                              eS         S          11 30 58.7 +5.6
TEY                               pmax      pmax
      comp=E,40nm,1.1s
TEY                               pmax      pmax
      comp=N,60nm,3.1s
TEY                               pmax      pmax
      comp=Z,140nm,1.2s
DSRI  Dabo             61.88 275  P         P          11 22 34.7 +1.6
      comp=Z,354nm,1.0s,comp=Z,22µmcomp=Z,301µm
SKR   Severo-Kuril's   61.90 353 eP         P          11 22 36.8 +4.4
SKR                              eS         S          11 31 03.3 +7.5
SKR                              eSSS       SSS        11 37 37.7
SKR                               pmax      pmax
      comp=Z,138nm,1.5s
SKR                               pmax      pmax
      comp=Z,4µm,18.4s
SKR                               pmax      pmax
      comp=Z,6µm,15.5s
SKR                               MLR       MLR
      comp=Z,59µm,18.0s
PTCN  Pitcairn Islan   61.91 113  PFAKE                11 22 40.0 +6.9
PTCN                              LR        LR
      comp=Z,149µm,22.0s
MSHR  Mys Shultsa      62.03 331⇓eP         P          11 22 33.3 -0.1
NJ2   Nanjing          62.08 315 eP         P          11 22 32.7 -1.3
NJ2                               S         S          11 31 03.5 +4.6
NJ2                               SS        SS         11 35 01.5 -0.5
NJ2                               pmax      pmax
      comp=Z,60nm,1.1s
NJ2                               pmax      pmax
      comp=Z,6µm,5.7s
NJ2                               LR        LR
      comp=Z,69µm,19.0s
NJ2                               LR        LR
      comp=Z,70µm,18.4s
NJ2                               LR        LR
      comp=Z,123µm,22.8s
VLA   Vladivostok      62.11 332⇑eP         P          11 22 31.2 -2.8
VLA                               pmax      pmax
      comp=Z,476nm,2.0s
TPRI  Tanjung Pinang   62.23 277  P         P          11 22 40.1 +4.7
      comp=Z,257nm,1.2s,comp=Z,31µm
LHSI  Lahat            62.28 271  P         P          11 22 36.8 +1.1
      comp=Z,398nm,1.1s,comp=Z,7µm
JMBI  JAMBI            62.57 274  P         P          11 22 42.3 +4.6
      comp=Z,693nm,1.1s,comp=Z,27µmcomp=Z,62µm
MNAI  Manna            62.74 271  PFAKE                11 22 50.0  +11
MNAI                              LR        LR
      comp=Z,29µm,20.0s
MNAI  Manna            62.74 271  P         P          11 22 40.8 +1.9
      comp=Z,557nm,1.1s,comp=Z,14µm
QIZ   Qiongzhong       62.83 298  P         P          11 22 38.7 -0.6
QIZ                               S         S          11 31 09.1 +0.3
QIZ                               pmax      pmax
      comp=Z,6µm,9.8s
QIZ                               LR        LR
      comp=Z,53µm,19.6s
QIZ                               LR        LR
      comp=Z,70µm,21.6s
QIZ                               LR        LR
      comp=Z,122µm,24.0s
QIZ   Qiongzhong       62.83 298 eP         P          11 22 37.4 -1.9
      comp=Z,316nm,1.5s
QIZ                               LR        LR
      comp=Z,118µm,22.0s
USA0B Ussuriysk Arra   62.91 333 eP         P          11 22 38.7 -0.6
      comp=Z,1µm,1.9s
USRK  Ussuriysk Ar.    62.91 333  P         P          11 22 38.9 -0.5
      comp=Z,28nm,0.9s,baz=138,slow=7.1,SNR=19
USRK                              LR        LR         11 48 20.5
      comp=Z,38µm,20.2s,baz=131,slow=34
USRK                              PKP2ab               11 51 53.3
      comp=Z,3.9nm,0.9s,baz=321,slow=1.8,SNR=4.0
MYKOM Kota Tinggi      63.08 278 eP         P          11 22 40.2 -0.8
      comp=Z,313nm,1.3s
MYKOM                             LR        LR
      comp=Z,30µm,20.0s
MASI  Maura Aman, Be   63.66 272  P         P          11 22 46.8 +1.8
      comp=Z,897nm,1.1s,comp=Z,11µm
SMY   Shemya           63.72   5  PFAKE                11 22 50.0 +5.5
SMY                               LR        LR
      comp=Z,88µm,22.0s
PET   Petropavlovsk    63.95 355 eP         P          11 22 49.1 +3.2
PET                               LR        LR
      comp=Z,85µm,20.0s
PET   Petropavlovsk    63.95 355ceP         P          11 22 46.8 +0.8
PET                              e                     11 23 22.0
PET                              eS         S          11 31 18.4 -3.1
PET                              eSS        SS         11 35 26.3 -4.2
PET                               pmax      pmax
      comp=Z,88nm,2.4s
PET                               pmax      pmax
      comp=Z,4µm,9.3s
PET                               pmax      pmax
      comp=Z,6µm,14.4s
PET                               smax      smax
      comp=E,27µm,25.1s
PET                               smax      smax
      comp=N,57µm,26.5s
PET                               MLR       MLR
      comp=Z,65µm,20.0s
RGRI  Rengat           64.10 275  P         P          11 22 49.7 +1.8
PEA0B Petropavlovsk-   64.12 354 eP         P          11 22 45.0 -2.2
      comp=Z,513nm,1.8s
PEA0B                             LR        LR
      comp=Z,92µm,20.0s
PETK  Petropavlovsk-   64.12 354 eP         P          11 22 45.6 -1.6
PETK  Petropavlovsk-   64.12 354  P         P          11 22 45.7 -1.4
      comp=Z,4.7nm,0.8s,baz=168,slow=6.2,SNR=10
PETK                              PKKPbc    PKKPdf     11 43 42.5  +18
      comp=Z,3.2nm,0.9s,baz=5.7,slow=3.0,SNR=3.6
PETK                              LR        LR         11 45 06.0
      comp=Z,68µm,21.5s,baz=170,slow=31
PEA1  Petropavlovsk-   64.12 354 eP         P          11 22 45.7 -1.4
KIWB  Kanaga Island    64.14  12 eP         P          11 22 45.3 -2.0
ADK   Adak             64.26  12 eP         P          11 22 47.5 -0.6
      comp=Z,359nm,1.3s
ADK                               LR        LR
      comp=Z,185µm,22.0s
ADK   Adak             64.26  12 eP         P          11 22 47.5 -0.6
ADK                               pmax      pmax
      comp=Z,359nm,1.3s
ADK                               MLR       MLR
      comp=Z,185µm,22.0s
MDJ   Mudanjiang       64.32 332  P         P          11 22 48.2 -0.4
MDJ                               S         S          11 31 29.0 +2.6
MDJ                               sS        sS         11 31 37.0 +4.4
MDJ                               ScS       SKSac      11 32 42.1 -0.4
MDJ                               pmax      pmax
      comp=Z,18nm,0.7s
MDJ                               pmax      pmax
      comp=Z,5µm,4.6s
MDJ                               LR        LR
      comp=Z,73µm,21.5s
MDJ                               LR        LR
      comp=Z,61µm,21.6s
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MDJ                               LR        LR
      comp=Z,38µm,22.9s
MDJ   Mudanjiang       64.32 332 eP         P          11 22 45.3 -3.3
      comp=Z,146nm,0.9s
WHN   Wuhan            64.47 311 ⇑P         P          11 22 52.2 +2.3
WHN                               PcP       PcP        11 23 20.4 -3.7
WHN                               S         S          11 31 30.5 +1.7
WHN                               pmax      pmax
      comp=Z,7µm,5.6s
WHN                               LR        LR
      comp=Z,194µm,20.4s
WHN                               LR        LR
      comp=Z,130µm,19.2s
WHN                               LR        LR
      comp=Z,360µm,22.9s
DL2   Dalian           64.50 323  P         P          11 22 48.9 -1.0
DL2                               PP        PP         11 25 13.4 +1.4
DL2                               S         S          11 31 27.6 -1.2
DL2                               SS        SS         11 35 40.2 +0.7
DL2                               pmax      pmax
      comp=Z,180nm,0.9s
DL2                               pmax      pmax
      comp=Z,5µm,5.1s
DL2                               LR        LR
      comp=Z,66µm,15.6s
DL2                               LR        LR
      comp=Z,57µm,17.6s
DL2                               LR        LR
      comp=Z,88µm,19.2s
KRJI  Kerinci          64.62 273  P         P          11 22 54.1 +2.7
      comp=Z,548nm,1.1s,comp=Z,10µm
TYV   Tymovskoe        64.75 344 eP         P          11 22 54.3 +3.0
TYV                               pmax      pmax
      comp=Z,2µm,5.3s
TYV                               pmax      pmax
      comp=Z,72nm,1.3s
SDSI  Sungai Dareh     64.87 274  P         P          11 22 56.2 +3.3
      comp=Z,305nm,1.5s,comp=Z,9µm
SNY   Shenyang         65.33 326 ⇑P         P          11 23 01.0 +5.7
SNY                               sP        sP         11 23 08.2 +7.7
SNY                               S         S          11 31 44.4 +5.4
SNY                               pmax      pmax
      comp=Z,60nm,1.6s
SNY                               pmax      pmax
      comp=Z,5µm,10.8s
SNY                               LR        LR
      comp=Z,114µm,19.1s
SNY                               LR        LR
      comp=Z,85µm,20.1s
SNY                               LR        LR
      comp=Z,106µm,23.5s
BKNI  Bangkinang       65.51 275  PFAKE                11 23 10.0  +13
BKNI                              LR        LR
      comp=Z,41µm,21.0s
BKNI  Bangkinang       65.51 275  P         P          11 23 00.4 +3.4
      comp=Z,1µm,1.2s,comp=Z,16µmcomp=Z,38µm
TIA   Tai'an           65.66 318  P         P          11 22 54.9 -2.6
TIA                               S         S          11 31 48.1 +4.8
TIA                               SS        SS         11 35 57.7 -0.1
TIA                               pmax      pmax
      comp=Z,2µm,12.3s
TIA                               LR        LR
      comp=Z,32µm,18.6s
TIA                               LR        LR
      comp=Z,50µm,21.6s
TIA                               LR        LR
      comp=Z,62µm,18.6s
CN2   Changchun        65.73 329 eP         P          11 22 56.7 -1.1
CN2                              eS         S          11 31 44.3 +0.5
CN2                               pmax      pmax
      comp=Z,20nm,0.9s
CN2                               pmax      pmax
      comp=Z,4µm,6.0s
CN2                               LR        LR
      comp=Z,52µm,16.0s
CN2                               LR        LR
      comp=Z,51µm,16.0s
CN2                               LR        LR
      comp=Z,68µm,19.0s
PDSI  Padang           65.83 274  P         P          11 23 01.0 +1.9
      comp=Z,184nm,1.3s,comp=Z,6µm
PPSI  Pulau Pagai      65.92 272  P         P          11 23 02.1 +2.4
      comp=Z,595nm,1.1s,comp=Z,15µm
IPM   Ipoh             66.45 280 eP         P          11 23 01.1 -2.0
      comp=Z,852nm,1.5s
IPM                               LR        LR
      comp=Z,29µm,19.0s
GRNR  Gornyy           66.57 340 eP         P          11 23 04.3 +1.2
GRNR                              pmax      pmax
      comp=Z,21nm,1.0s
CASY  Casey            66.64 201 eP         P          11 23 02.6 -0.7
      comp=Z,670nm,1.4s
CASY                              LR        LR
      comp=Z,71µm,20.0s
VNDA  Vanda            66.67 181 eP         P          11 23 02.7 -0.7
      comp=Z,235nm,1.3s
VNDA  Vanda            66.67 181  P         P          11 23 02.1 -1.3
      comp=Z,34nm,1.1s,baz=350,slow=7.0,SNR=13
VNDA                              LR        LR         11 48 56.8
      comp=Z,126µm,19.5s,baz=9.0,slow=33
SBA   Scott Base       66.97 180 eP         P          11 23 04.7 -0.7
      comp=Z,428nm,1.2s
SBA                               LR        LR
      comp=Z,73µm,18.0s
SBA   Scott Base       66.97 180 eP         P          11 23 05.4 +0.1
KLR   Kul'dur          67.00 336⇑iP         P          11 23 04.6 -1.3
KLR   Kul'dur          67.00 336  P         P          11 23 04.9 -0.9
KULM  Kulim            67.00 280 eP         P          11 23 04.7 -1.9
      comp=Z,379nm,1.5s
KULM                              LR        LR
      comp=Z,30µm,20.0s
MNSI  Mandailing Nat   67.03 276  P         P          11 23 04.7 -2.1
      comp=Z,441nm,1.0s,comp=Z,8µmcomp=Z,25µm
NIKH  Nikolski High    67.13  16 eP         P          11 23 04.2 -2.4
      comp=Z,586nm,1.2s
NIKH                              LR        LR
      comp=Z,101µm,22.0s
SKNT  Sakolnakorn      67.26 294  P         P          11 23 06.8 -1.4
      comp=Z,192nm,1.4s,comp=Z,3µm
NKL   Nikolayevsk      67.34 344 eP         P          11 23 07.0 -0.9
NKL                              e                     11 36 25.0
NKL                               pmax      pmax
      comp=Z,41nm,0.9s
NKL                               pmax      pmax
      comp=N,2µm,15.0s
SKLT  Songkhla         67.50 282  P         P          11 23 15.9 +6.2
COCO  West Island      67.62 261  PFAKE                11 23 20.0  +10
COCO                              LR        LR
      comp=Z,45µm,21.0s
ENH   Enshi            67.99 309 eP         P          11 23 10.2 -2.4
      comp=Z,243nm,1.0s
ENH                               LR        LR
      comp=Z,52µm,19.0s
PSI   Prapat           68.10 277 eP         P          11 23 10.9 -2.8
      comp=Z,189nm,1.1s
PSI                               LR        LR
      comp=Z,43µm,20.0s
PSI   Prapat           68.10 277 eP         P          11 23 11.0 -2.8
PSI                               pmax      pmax
      comp=Z,189nm,1.1s
PSI                               MLR       MLR
      comp=Z,43µm,20.0s
PSI   Prapat           68.10 277  P         P          11 23 11.9 -1.9
      comp=Z,16nm,0.9s,baz=180,slow=3.8,SNR=15
PBSI  Pulau Batu       68.13 274  P         P          11 23 16.2 +2.4
      comp=Z,484nm,1.3s,comp=Z,10µm
NONG  Nongkai          68.38 294  P         P          11 23 14.1 -1.1
      comp=Z,6.2nm,0.9s,comp=Z,119nm
BJT   Baijiatuau       68.50 321 eP         P          11 23 12.3 -3.2
      comp=Z,428nm,1.5s
BJT                               LR        LR
      comp=Z,128µm,20.0s
BJI   Beijing          68.51 321 eP         P          11 23 14.4 -1.1
BJI                               S         S          11 32 19.9 +2.4
BJI                               SS        SS         11 36 45.9 +4.1
BJI                               pmax      pmax
      comp=Z,28nm,1.0s
BJI                               LR        LR
      comp=Z,8µm,18.1s
BJI                               LR        LR
      comp=Z,5µm,17.2s
GYA   Guiyang          68.53 304⇑iP         P          11 23 14.7 -1.5
GYA                               pP        sP         11 23 22.6 +1.1
GYA                               PP        PP         11 25 50.0 +2.3
GYA                               S         S          11 32 16.5 -2.1
GYA                               SKS       SKiKP      11 33 10.0  0.0
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GYA                                SS      SS       11 36 42.4  -0.6
GYA                                pmax    pmax
      comp=Z,120nm,1.0s
GYA                                pmax    pmax
      comp=Z,5µm,11.8s
GYA                                LR      LR
      comp=Z,56µm,18.9s
GYA                                LR      LR
      comp=Z,46µm,22.3s
GYA                                LR      LR
      comp=Z,65µm,19.2s
TRTT  Trang            68.56 283   P       P        11 23 18.8  +2.4
      comp=Z,69nm,1.6s,comp=Z,3µm
UNV   Unalaska Valle   68.57  17  eP       P        11 23 13.0  -2.6
      comp=Z,138nm,1.1s
UNV                                LR      LR
      comp=Z,109µm,21.0s
TSI   Tuntungan        68.61 278   P       P        11 23 19.1  +2.4
      comp=Z,364nm,0.9s,comp=Z,8µm
PATY  Pattaya          68.84 288   P       P        11 23 20.3  +2.2
      comp=Z,86nm,1.0s,comp=Z,1µm
AKUT  Akutan           69.03  17  eP       P        11 23 18.1  -0.4
      comp=Z,418nm,1.5s
AKUT                               LR      LR
      comp=Z,112µm,22.0s
GSI   Gunungsitoli     69.10 276  eP       P        11 23 18.2  -1.6
      comp=Z,375nm,0.9s
GSI                                LR      LR
      comp=Z,43µm,19.0s
GSI   Gunungsitoli     69.10 276   P       P        11 23 22.0  +2.2
      comp=Z,442nm,1.0s,comp=Z,11µmcomp=Z,33µm
KRAB  Krabi            69.13 283   P       P        11 23 32.7   +13
KCSI  Kotacane, Aceh   69.39 278   P       P        11 23 22.3  +0.7
      comp=Z,164nm,0.8s,comp=Z,5µmcomp=Z,23µm
TIY   Taiyuan          69.61 317  eP       P        11 23 25.2  +2.6
TIY                                pP      sP       11 23 28.8  +0.9
TIY                                sP      pP       11 23 33.2  +6.8
TIY                                S       S        11 32 32.9  +2.1
TIY                                pmax    pmax
      comp=Z,24nm,0.7s
TIY                                pmax    pmax
      comp=Z,3µm,6.2s
TIY                                LR      LR
      comp=Z,79µm,17.0s
TIY                                LR      LR
      comp=Z,57µm,21.1s
TIY                                LR      LR
      comp=Z,101µm,22.0s
PBKT  Sadao Pong       69.85 292   PFAKE            11 23 30.0  +5.7
PBKT                               LR      LR
      comp=Z,70µm,22.0s
PBKT  Sadao Pong       69.85 292   P       P        11 23 23.7  -0.6
      comp=Z,166nm,0.9s,comp=Z,6µm
PKDT  Phuket           69.87 283   P       P        11 23 31.1  +6.5
TPTI                   69.90 278   P       P        11 23 25.0  +0.2
      comp=Z,70nm,1.4s,comp=Z,4µm
PHET  Kaeng Krachan    69.99 288   P       P        11 23 28.1  +2.8
      comp=Z,46nm,1.0s,comp=Z,492nm
XAN   Xi'an            70.20 312   P       P        11 23 24.6  -1.6
XAN                                PP      PP       11 26 03.2  +1.4
XAN                                pmax    pmax
      comp=Z,5µm,8.3s
XAN                                LR      LR
      comp=Z,67µm,22.1s
XAN                                LR      LR
      comp=Z,68µm,23.0s
XAN                                LR      LR
      comp=Z,127µm,24.0s
XAN   Xi'an            70.20 312  eP       P        11 23 24.8  -1.4
      comp=Z,522nm,1.5s
XAN                                LR      LR
      comp=Z,99µm,19.0s
XAN   Xi'an            70.20 312  eP       P        11 23 24.8  -1.4
XAN                                pmax    pmax
      comp=Z,522nm,1.5s
XAN                                MLR     MLR
      comp=Z,99µm,19.0s
FALS  False Pass       70.36  18   PFAKE            11 23 40.0   +13
FALS                               LR      LR
      comp=Z,135µm,21.0s
SNSI  Sinabang, Aceh   70.55 276   P       P        11 23 32.1  +3.3
      comp=Z,295nm,1.5s,comp=Z,10µm
LHMI  Lhok Sumawe      70.57 279   PFAKE            11 23 40.0   +11
LHMI                               LR      LR
      comp=Z,35µm,21.0s
LHMI  Lhok Sumawe      70.57 279   P       P        11 23 30.2  +1.3
      comp=Z,174nm,1.0s,comp=Z,9µmcomp=Z,34µm
SPIA  Saint Paul Isl   70.58  13   PFAKE            11 23 40.0   +12
SPIA                               LR      LR
      comp=Z,208µm,20.0s
UTTA  Uttaradit        70.60 293   P       P        11 23 30.3  +1.4
      comp=Z,31nm,0.9s,comp=Z,345nm
SRDT  SRDT             70.88 289   P       P        11 23 34.0  +3.3
      comp=Z,140nm,1.0s,comp=Z,8µm
UTHA  Uthaitani        70.94 291   P       P        11 23 31.0   0.0
      comp=Z,59nm,0.9s,comp=Z,490nm
KMI   Kunming          71.25 301   P       P        11 23 32.1  -1.0
KMI                                sP      sP       11 23 40.9  +2.6
KMI                                PP      PP       11 26 10.5  -0.8
KMI                                S       S        11 32 46.8  -4.0
KMI                                sS      sS       11 32 57.8  +0.7
KMI                                pmax    pmax
      comp=Z,46nm,1.4s
KMI                                pmax    pmax
      comp=Z,5µm,5.9s
KMI                                LR      LR
      comp=Z,32µm,19.9s
KMI                                LR      LR
      comp=Z,59µm,23.2s
KMI                                LR      LR
      comp=Z,94µm,24.5s
KMI   Kunming          71.25 301  eP       P        11 23 29.7  -3.4
      comp=Z,1µm,1.8s
KMI                                LR      LR
      comp=Z,56µm,20.0s
KMI   Kunming          71.25 301  eP       P        11 23 29.7  -3.4
KMI                                pmax    pmax
      comp=Z,1µm,1.8s
KMI                                MLR     MLR
      comp=Z,56µm,20.0s
MA2   Magadan          71.27 352  eP       P        11 23 30.6  -1.5
      comp=Z,161nm,1.5s
MA2                                LR      LR
      comp=Z,113µm,21.0s
MA2   Magadan          71.27 352⇓iP       P        11 23 32.4  +0.2
MA2                                pmax    pmax
      comp=Z,222nm,2.7s
MA2   Magadan          71.27 352   P       P        11 23 31.8  -0.3
      comp=Z,12nm,0.8s,baz=160,slow=4.6,SNR=9.5
MA2                                LR      LR       11 49 49.4
      comp=Z,99µm,21.3s,baz=168,slow=32
UMPA  Umpang Tak       71.67 291   P       P        11 23 38.6  +3.1
      comp=Z,28nm,0.9s,comp=Z,419nm
SDPT  Sand Point       71.70  19   PFAKE            11 23 40.0  +5.2
SDPT                               LR      LR
      comp=Z,82µm,19.0s
HHC   Hu-ho-hao-te     71.87 320  eP       P        11 23 39.2  +2.9
HHC                                sP      PcP      11 23 48.4  -6.7
HHC                                S       S        11 33 02.3  +5.2
HHC                                SS      SS       11 37 27.5  -6.3
HHC                                pmax    pmax
      comp=Z,33nm,1.4s
HHC                                pmax    pmax
      comp=Z,4µm,6.2s
HHC                                LR      LR
      comp=Z,82µm,18.7s
HHC                                LR      LR
      comp=Z,78µm,18.4s
HHC                                LR      LR
      comp=Z,117µm,18.8s
BSI   Banda Aceh       72.23 279   P       P        11 23 44.0  +5.1
      comp=Z,216nm,1.5s,comp=Z,17µm
CM01  Chiang Mai Arr   72.25 293  eP       P        11 23 38.7  -0.2
CM31  Chiang Mai Arr   72.28 293  eP       P        11 23 36.5  -2.6
      comp=Z,168nm,0.8s
CM31  Chiang Mai Arr   72.28 293   P       P        11 23 38.4  -0.7
      SNR=114
CMAR  Chiang Mai Arr   72.28 293   P       P        11 23 38.3  -0.8
CMAR                               pmax    pmax
      comp=Z,16nm,0.8s
CMAR  Chiang Mai Arr   72.28 293   P       P        11 23 38.3  -0.8
      comp=Z,15nm,0.8s,baz=124,slow=4.4,SNR=37
CMAR                               LR      LR       11 52 48.1
      comp=Z,29µm,21.6s,baz=118,slow=34
ZEA   Zeya             72.28 337  eP       P        11 23 37.8  -0.5
ZEA                               ePS               11 33 28.0
ZEA                                pmax    pmax
      comp=N,200nm,1.0s
ZEA                                pmax    pmax
      comp=E,120nm,1.0s
ZEA                                pmax    pmax
      comp=Z,900nm,1.8s
ZEA                                pmax    pmax
      comp=N,2µm,10.0s
ZEA                                pmax    pmax
      comp=E,1µm,10.0s
ZEA                                pmax    pmax
      comp=Z,5µm,10.0s
ZEA                                pmax    pmax
      comp=Z,4µm,11.0s
ZEA                                pmax    pmax
      comp=E,1µm,12.0s
ZEA                                pmax    pmax
      comp=N,2µm,10.0s
HIA   Hailar           72.35 330  eP       P        11 23 37.6  -1.3
      comp=N,301nm,1.5s
HIA                                LR      LR
      comp=Z,62µm,20.0s
HIA   Hailar           72.35 330  eP       P        11 23 37.6  -1.3
HIA                                pmax    pmax
      comp=Z,301nm,1.5s
HIA                                MLR     MLR
      comp=Z,62µm,20.0s
CMMT  Chiang Mai       72.39 294   P       P        11 23 39.2  -0.5
      comp=Z,138nm,1.1s,comp=Z,5µm
CHTO  Chiang Mai       72.39 294  eP       P        11 23 38.3  -1.5
      comp=Z,361nm,1.4s
CHTO                               LR      LR
      comp=Z,60µm,22.0s
CHTO  Chiang Mai       72.39 294  eP       P        11 23 38.4  -1.4
CHTO  Chiang Mai       72.39 294   P       P        11 23 39.8  +0.1
      SNR=107
CHTO                               P       P        11 23 39.8  +0.1
      SNR=107
CHTO  Chiang Mai       72.39 294   P       P        11 23 39.3  -0.5
      comp=Z,624nm,1.1s,comp=Z,21µmcomp=Z,104µm
CD2   Chengdu          72.70 307 ⇓P       P        11 23 40.1  -1.3
CD2                                pP      sP       11 23 46.0  -0.7
CD2                                PP      PP       11 26 21.8  -1.6
CD2                                S       S        11 33 05.5  -1.4
CD2                                SKS     SKSac    11 33 44.0  -2.8
CD2                                SS      SS       11 37 46.2  -0.7
CD2                                pmax    pmax
      comp=Z,330nm,0.8s
CD2                                pmax    pmax
      comp=Z,7µm,6.8s
CD2                                LR      LR
      comp=Z,112µm,24.0s
CD2                                LR      LR
      comp=Z,126µm,27.4s
CD2                                LR      LR
      comp=Z,123µm,27.8s
BTO   Baotou           72.73 319  eP       P        11 23 45.3  +3.8
BTO                                S       S        11 33 06.9   0.0
CHGN  Chignik          73.16  20   PFAKE            11 23 50.0  +6.6
CHGN                               LR      LR
      comp=Z,71µm,22.0s
CMBY  CAMPBELL BAY     73.90 281  eP       P        11 23 46.6  -2.2
CMBY                               IAmb    IAmb     11 23 57.9
      comp=Z,18µm,4.8s
SEY   Seymchan         74.33 354⇓eP       P        11 23 49.0  -1.2
SII   Sitkinak Islan   74.83  22   PFAKE            11 24 00.0  +6.7
SII                                LR      LR
      comp=Z,104µm,21.0s
LZH   Lanzhou          74.83 312 ⇑P       P        11 23 54.5  +0.5
LZH                                pP      sP       11 24 02.5  +3.2
LZH                                sP      PcP      11 24 05.4  -2.6
LZH                                PP      PP       11 26 42.7  +1.1
LZH                                S       S        11 33 33.4  +2.4
LZH                                sS      sS       11 33 42.1  +4.8
LZH                                pmax    pmax
      comp=Z,870nm,1.8s
LZH                                pmax    pmax
      comp=Z,7µm,5.4s
LZH                                LR      LR
      comp=Z,106µm,19.5s
LZH                                LR      LR
      comp=Z,103µm,19.1s
LZH                                LR      LR
      comp=Z,208µm,19.1s
OHAK  Old Harbor       75.65  21  eP       P        11 23 58.0  +0.1
      comp=Z,558nm,1.6s
OHAK                               LR      LR
      comp=Z,88µm,21.0s
PBA   Port Blair       76.14 285   PFAKE            11 24 10.0  +8.3
PBA                                LR      LR
      comp=Z,30µm,21.0s
PBA   Port Blair       76.14 285  eP       P        11 24 00.1  -1.6
KDAK  Kodiak Island    76.32  21  eP       P        11 23 59.6  -2.2
      comp=Z,152nm,1.2s
KDAK                               LR      LR
      comp=Z,92µm,21.0s
KDAK  Kodiak Island    76.32  21  eP       P        11 23 59.6  -2.2
KDAK                               pmax    pmax
      comp=Z,152nm,1.2s
KDAK                               MLR     MLR
      comp=Z,92µm,21.0s
KDAK  Kodiak Island    76.32  21   P       P        11 24 02.0  +0.3
      comp=Z,15nm,1.0s,baz=222,slow=14,SNR=3.2
KDAK                               PKPPKP           11 51 21.7
      comp=Z,8.7nm,1.0s,baz=179,slow=7.9,SNR=2.4
KDAK                               LR      LR       11 51 26.2
      comp=Z,96µm,21.3s,baz=225,slow=31
GAMB  Gambell          76.35  10  eP       P        11 24 01.6  -0.2
      comp=Z,221nm,1.0s
GAMB                               LR      LR
      comp=Z,136µm,22.0s
CIT   Chita            77.14 330  eP       P        11 24 06.4  -0.2
CIT                                pmax    pmax
      comp=Z,836nm,2.2s
SVW2  Sparrevohn       77.87  18  eP       P        11 24 10.6  +0.1
      comp=Z,416nm,1.4s
SVW2                               LR      LR
      comp=Z,82µm,20.0s
YAK   Yakutsk          78.00 343  eP       P        11 24 09.5  -1.6
YAK                               e*PP     pP       11 24 14.5  -0.4
YAK                               e                 11 24 20.7
YAK                               e                 11 27 06.4
YAK                               ePPP     PPP      11 28 59.4
YAK                               eS       S        11 34 04.0  -0.3
YAK                               e*SS     SKSac    11 34 21.1  -3.6
YAK                               eSSS     SSS      11 42 20.4
YAK                                pmax    pmax
      comp=Z,224nm,1.1s
YAK                                pmax    pmax
      comp=N,54nm,1.5s
YAK                                pmax    pmax
      comp=E,26nm,1.2s
YAK                                pmax    pmax
      comp=Z,6µm,3.0s
YAK                                pmax    pmax
      comp=N,3µm,3.3s
YAK                                pmax    pmax
      comp=E,2µm,3.0s
YAK                                smax    smax
      comp=N,13µm,8.6s
YAK                                smax    smax
      comp=E,33µm,10.4s
YAK                                MLR     MLR
      comp=Z,155µm,18.0s
YAK                                MLR     MLR
      comp=N,108µm,17.0s
YAK                                MLR     MLR
      comp=E,94µm,16.0s
HOM   Homer            78.05  20   PFAKE            11 24 20.0  +8.6
HOM                                LR      LR
      comp=Z,90µm,21.0s
ANM   Nome             78.27  12  eP       P        11 24 11.7  -0.9
      comp=Z,179nm,1.3s
ANM                                LR      LR
      comp=Z,119µm,22.0s
ANM   Nome             78.27  12  eP       P        11 24 11.7  -0.9
ANM                                pmax    pmax
      comp=Z,179nm,1.3s
ANM                                MLR     MLR
      comp=Z,119µm,22.0s
RSO   Redoubt South    78.27  19  eP       P        11 24 11.3  -1.7
ULN   Ulaanbaatar      78.31 324  eP       P        11 24 12.6  -0.8
      comp=Z,155nm,1.0s
ULN   Ulaanbaatar      78.31 324d iP      P        11 24 12.2  -1.2
ULN                                pmax    pmax
      comp=Z,174nm,1.0s
ULN                                MLR     MLR
      comp=Z,47µm,18.0s
ULN   Ulaanbaatar      78.31 324   P       P        11 24 13.0  -0.4
      SNR=108
ULN                                P       P        11 24 13.0  -0.4
      SNR=108
BRLK  Bradley Lake     78.38  21  eP       P        11 24 12.9  -0.5
      comp=Z,253nm,1.1s
BRLK                               LR      LR
      comp=Z,126µm,20.0s
SONA0 Songino Array    78.68 324  eP       P        11 24 14.8  -0.6
SONM  Songino Array    78.68 324   P       P        11 24 14.8  -0.6
      comp=Z,14nm,1.0s,baz=146,slow=7.3,SNR=19
SONM                               PKPPKP           11 51 16.2
      comp=Z,1.3nm,1.0s,baz=302,slow=2.7,SNR=3.2
SONM                               LR      LR       11 56 22.5
      comp=Z,51µm,21.9s,baz=116,slow=34
SONA1 Songino Array    78.68 324  eP       P        11 24 14.4  -1.0
BILL  Bilibino         78.70   0  eP       P        11 24 14.5  -0.4
      comp=Z,207nm,0.9s
BILL                               LR      LR
      comp=Z,57µm,22.0s
BILL  Bilibino         78.70   0d iP      P        11 24 13.1  -1.8
BILL                              i                 11 24 20.7
BILL                              i                 11 27 17.7
BILL                              i S      S        11 34 05.0  -6.7
BILL                               pmax    pmax
      comp=Z,126nm,1.6s
BILL                               MLR     MLR
      comp=Z,36µm,18.0s
GTA   Gaotai           79.12 314 ⇓P       P        11 24 17.2  -0.9
GTA                                S       S        11 34 17.9  +0.3
GTA                                SKS     SKSac    11 34 28.4  -5.7
GTA                                SS      SS       11 39 28.8  +4.7
GTA                                pmax    pmax
      comp=Z,2µm,8.6s
GTA                                LR      LR
      comp=Z,68µm,18.7s
GTA                                LR      LR
      comp=Z,80µm,21.3s
GTA                                LR      LR
      comp=Z,114µm,21.3s
SEW   Seward           79.13  21   PFAKE            11 24 30.0   +13
SEW                                LR      LR
      comp=Z,87µm,20.0s
QSPA  South Pole Qui   79.13 180  eP       P        11 24 16.5  -1.1
      comp=Z,244nm,1.0s
QSPA                               LR      LR
      comp=Z,61µm,18.0s
QSPA  South Pole Qui   79.13 180   PKKPbc  PKKPbc   11 43 14.4  +2.1
      comp=Z,5.8nm,0.9s,baz=251,slow=2.9,SNR=4.1
QSPA                               SKKPbc  SKKPbc   11 46 49.6  +1.5
      comp=Z,2.9nm,0.9s,baz=348,slow=2.9,SNR=4.1
SUA   Susitna One      79.68  20  eP       P        11 24 19.7  -0.8
      comp=Z,331nm,1.5s
SUA                                LR      LR
      comp=Z,43µm,19.0s
RC01  Rabbit Creek A   79.74  20  eP       P        11 24 20.0  -0.8
      comp=Z,522nm,1.8s
RC01                               LR      LR
      comp=Z,114µm,21.0s
MID   Middleton Isla   79.79  23   PFAKE            11 24 30.0  +9.0
MID                                LR      LR
      comp=Z,67µm,20.0s
BRDH  Bariadhala       80.06 295   LR      LR       12 03 08.5
      comp=Z,14µm,18.1s,baz=158,slow=38
PPLA  Purkeypile       80.28  18  eP       P        11 24 21.9  -2.0
      comp=Z,154nm,1.3s
PPLA                               LR      LR
      comp=Z,89µm,20.0s
PMR   Palmer           80.30  20  eP       P        11 24 21.3  -2.4
      comp=Z,398nm,1.8s
PMR                                LR      LR
      comp=Z,139µm,22.0s
PMR   Palmer           80.30  20  eP       P        11 24 21.3  -2.4
PMR                                pmax    pmax
      comp=Z,398nm,1.8s
PMR                                MLR     MLR
      comp=Z,139µm,22.0s
KNK   Knik Glacier     80.41  20  eP       P        11 24 23.5  -0.8
      comp=Z,150nm,1.1s
KNK                                LR      LR
      comp=Z,132µm,20.0s
RPN   Rapa Nui         80.42 116   PFAKE            11 24 40.0   +15
RPN                                LR      LR
      comp=Z,109µm,22.0s
BOD   Bodaibo          80.48 335  eP       P        11 24 23.5  -1.3
BOD                                pmax    pmax
      comp=Z,155nm,1.8s
GHO   Glory Hole Cre   80.50  20   PFAKE            11 24 30.0  +5.1
GHO                                LR      LR
      comp=Z,130µm,21.0s
GLI   Glacier Island   80.51  21  eP       P        11 24 22.7  -2.2
      comp=Z,216nm,1.1s
GLI                               ePcP     PcP      11 24 31.6  -0.2
GLI                                LR      LR
      comp=Z,113µm,21.0s
SHL   Shillong         80.66 298  eP       P        11 24 29.3  +2.6
SHL                                LR      LR
      comp=Z,43µm,20.0s
SHL   Shillong         80.66 298⇑iP       P        11 24 25.0  -1.7
SHL                                IAmb    IAmb     11 24 41.4
      comp=Z,8µm,4.0s
SHL                               i x      x        11 34 38.0
CAST  Castle Rocks     80.70  18  eP       P        11 24 24.9  -1.0
      comp=Z,136nm,1.2s
CAST                               LR      LR
      comp=Z,95µm,20.0s
SML   Sawmill          80.73  20  eP       P        11 24 25.7  -0.4
      comp=Z,268nm,1.3s
SML                                LR      LR
      comp=Z,108µm,20.0s
SML   Sawmill          80.73  20  eP       P        11 24 25.7  -0.4
SML                                pmax    pmax
      comp=Z,268nm,1.3s
SML                                MLR     MLR
      comp=Z,108µm,20.0s
EYAK  Cordova Ski Ar   80.77  22  eP       P        11 24 26.0  -0.3
      comp=Z,334nm,1.4s
EYAK                               LR      LR
      comp=Z,337µm,22.0s
SCM   Sheep Creek Mo   81.09  20   PFAKE            11 24 40.0   +12
SCM                                LR      LR
      comp=Z,96µm,20.0s
DIV   Divide           81.15  21  eP       P        11 24 28.1  -0.3
      comp=Z,177nm,1.1s
DIV                                LR      LR
      comp=Z,203µm,21.0s
HMT   Hamilton         81.18  23   PFAKE            11 24 40.0   +11
HMT                                LR      LR
      comp=Z,144µm,19.0s
TRF   Thorofare Moun   81.27  18  eP       P        11 24 28.1  -1.0
      comp=Z,79nm,0.8s
TRF                                LR      LR
      comp=Z,101µm,22.0s
KLU   Klutina          81.34  21  eP       P        11 24 29.3  -0.1
      comp=Z,203nm,1.3s
KLU                                LR      LR
      comp=Z,124µm,21.0s
BPAW  Bear Paw Mtn.    81.54  18  eP       P        11 24 29.6  -0.8
      comp=Z,80nm,1.3s
BPAW                               LR      LR
      comp=Z,73µm,20.0s
RND   Reindeer         81.69  19  eP       P        11 24 30.4  -0.8
      comp=Z,266nm,1.2s
RND                                LR      LR
      comp=Z,46µm,19.0s
RND   Reindeer         81.69  19  eP       P        11 24 30.4  -0.8
RND                                pmax    pmax
      comp=Z,266nm,1.2s
RND                                MLR     MLR
      comp=Z,46µm,19.0s
ZAK   Zakamensk        81.71 325  eP       P        11 24 30.2  -1.5
ZAK                               e                 11 27 44.9
ZAK                                pmax    pmax
      comp=Z,96nm,1.4s
ZAK                                pmax    pmax
      comp=Z,48nm,1.6s
RDOG  Red Dog Mine     81.80  11  eP       P        11 24 29.5  -2.1
      comp=Z,200nm,1.1s
RDOG                               LR      LR
      comp=Z,106µm,22.0s
MCK   McKinley         81.90  19  eP       P        11 24 30.8  -1.4
      comp=Z,367nm,1.4s
MCK                                LR      LR
      comp=Z,96µm,19.0s
MCK   McKinley         81.90  19  eP       P        11 24 31.8  -0.5
DHY   Denali Highway   81.93  20  eP       P        11 24 31.6  -1.1
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	comp=Z,346nm,1.8s						
DHY				LR	LR		
	comp=Z,130µm,21.0s						
BWN	**Browne**	82.05	18	*e*P	P	11 24 31.9	-1.1
	comp=Z,760nm,1.3s						
BWN				LR	LR		
	comp=Z,103µm,20.0s						
IRK	**Irkutsk**	82.05	327	*e*P	P	11 24 33.6	+0.3
IRK				pmax	pmax		
	comp=Z,280nm,2.6s						
TLY	**Talaya**	82.12	326	*e*P	P	11 24 32.3	-1.4
	comp=Z,204nm,0.9s						
TLY				LR	LR		
	comp=Z,94µm,18.0s						
TLY	**Talaya**	82.12	326*c*	*i*P	P	11 24 32.1	-1.6
TLY	**Talaya**	82.12	326	P	P	11 24 33.4	-0.3
	SNR=71						
TLY				P	P	11 24 33.4	-0.3
	SNR=71						
IM3	**Indian Mountai**	82.19	15	*e*P	P	11 24 33.5	-0.2
MCCM	**Marconi Confer**	82.21	49	PFAKE		11 24 40.0	+5.6
MCCM				LR	LR		
	comp=Z,75µm,20.0s						
HARP	**HAARP**	82.23	21	*e*P	P	11 24 33.9	-0.1
	comp=Z,231nm,0.9s						
HARP				LR	LR		
	comp=Z,74µm,21.0s						
KCPM	**Cahto Peak**	82.24	47	PFAKE		11 24 40.0	+5.3
KCPM				LR	LR		
	comp=Z,60µm,19.0s						
MLY	**Manley**	82.30	17	*e*P	P	11 24 33.8	-0.5
	comp=Z,273nm,1.6s						
MLY				LR	LR		
	comp=Z,85µm,22.0s						
JCC	**Jacoby Creek,**	82.33	46	PFAKE		11 24 40.0	+5.0
JCC				LR	LR		
	comp=Z,46µm,19.0s						
KMRM	**Mail Ridge**	82.34	47	PFAKE		11 24 40.0	+4.8
KMRM				LR	LR		
	comp=Z,89µm,20.0s						
HOPS	**Hopland Field**	82.37	48	PFAKE		11 24 40.0	+4.7
HOPS				LR	LR		
	comp=Z,55µm,20.0s						
DIB	**Dawson Inlet,**	82.41	32	PFAKE		11 24 40.0	+4.9
DIB				LR	LR		
	comp=Z,75µm,20.0s						
YKU2	**Yakutat**	82.48	25	PFAKE		11 24 40.0	+4.7
YKU2				LR	LR		
	comp=Z,193µm,20.0s						
LSA	**Lhasa**	82.48	302	P	P	11 24 36.6	-0.1
LSA				S	S	11 34 52.9	-0.9
LSA				pmax	pmax		
	comp=Z,5µm,11.6s						
LSA				LR	LR		
	comp=Z,14µm,26.1s						
LSA				LR	LR		
	comp=Z,9µm,24.1s						
LSA				LR	LR		
	comp=Z,45µm,50.2s						
LSA	**Lhasa**	82.48	302	*e*P	P	11 24 32.9	-3.7
	comp=Z,232nm,1.6s						
LSA				LR	LR		
	comp=Z,31µm,19.0s						
LSA	**Lhasa**	82.48	302	P	P	11 24 36.6	-0.1
LSA	**Lhasa**	82.48	302	*e*P	P	11 24 32.9	-3.7
LSA				pmax	pmax		
	comp=Z,232nm,1.6s						
LSA				MLR	MLR		
	comp=Z,31µm,19.0s						
PAX	**Paxson**	82.50	20	PFAKE		11 24 50.0	+14
PAX				LR	LR		
	comp=Z,55µm,20.0s						
GDXM	**Geysers**	82.51	48	*e*P	P	11 24 33.9	-2.1
	comp=Z,292nm,1.6s						
GDXM				LR	LR		
	comp=Z,71µm,20.0s						
KHMM	**Horse Mountain**	82.56	46	PFAKE		11 24 50.0	+14
KHMM				LR	LR		
	comp=Z,51µm,20.0s						
PCA	**Pinnacle**	82.59	24	PFAKE		11 24 50.0	+14
PCA				LR	LR		
	comp=Z,210µm,21.0s						
WRH	**Wood River Hil**	82.68	18	*e*P	P	11 24 35.3	-1.0
	comp=Z,216nm,1.2s						
WRH				LR	LR		
	comp=Z,92µm,20.0s						
SAO	**San Andreas Ge**	82.82	51	*e*P	P	11 24 36.2	-1.5
	comp=Z,175nm,1.3s						
SAO				LR	LR		
	comp=Z,127µm,21.0s						
SAO	**San Andreas Ge**	82.82	51	*e*P	P	11 24 37.8	+0.1
KEBM	**Edson Butte**	82.88	44	PFAKE		11 24 50.0	+12
KEBM				LR	LR		
	comp=Z,61µm,22.0s						
SIT	**Sitka**	82.98	28	PFAKE		11 24 50.0	+12
SIT				LR	LR		
	comp=Z,86µm,21.0s						
MDM	**Murphy Dome**	82.99	18	*e*P	P	11 24 37.9	-0.1
	comp=Z,248nm,1.2s						
MDM				LR	LR		
	comp=Z,84µm,20.0s						
O02D	**Mt. Diablo Mer**	82.99	47	P	P	11 24 38.4	-0.2
	baz=250						
HDA	**Harding Lake**	83.00	19	*e*P	P	11 24 37.6	-0.3
	comp=Z,258nm,0.9s						
HDA				LR	LR		
	comp=Z,58µm,21.0s						
HDA	**Harding Lake**	83.00	19	P	P	11 24 36.5	-1.5
	baz=226						
TCOL	**CIGO, UAF Yank**	83.04	18	P	P	11 24 36.5	-1.6
	baz=226						
COLA	**College**	83.04	18	*e*P	P	11 24 37.0	-1.1
	comp=Z,199nm,0.9s						
COLA				LR	LR		
	comp=Z,94µm,20.0s						
COLA	**College**	83.04	18⇑	*i*P	P	11 24 35.8	-2.3
COLA				pmax	pmax		
	comp=Z,242nm,1.2s						
L02E	**Cave Junction**	83.12	45	P	P	11 24 39.5	+0.4
	baz=249						
CRAG	**Craig**	83.21	30	PFAKE		11 24 50.0	+11
CRAG				LR	LR		
	comp=Z,102µm,22.0s						
SNCC	**San Nicolas Is**	83.21	54	PFAKE		11 24 50.0	+10
SNCC				LR	LR		
	comp=Z,88µm,20.0s						
SNCC	**San Nicolas Is**	83.21	54	P	P	11 24 39.1	-0.6
	baz=252						
RIDG	**Independ'e Rid**	83.22	20	*e*P	P	11 24 38.8	-0.5
	comp=Z,598nm,1.6s						
RIDG				LR	LR		
	comp=Z,127µm,21.0s						
J01E	**Myrtle Point**	83.26	44	P	P	11 24 39.2	-0.5
	baz=248						
IL1	**Eielson Array**	83.27	18	*e*P	P	11 24 39.1	-0.3
ILAR	**Eielson Array**	83.27	18	P	P	11 24 38.4	-0.9
	comp=Z,7.7nm,0.6s,baz=238,slow=5.1,SNR=64						
ILAR				PKKPbc	PKKPbc	11 43 05.2	+2.2
	comp=Z,1.1nm,0.6s,baz=357,slow=2.3,SNR=12						
ILAR				PKPPKP	P'P'df	11 51 01.1	-1.2
	comp=Z,1.0nm,1.0s,baz=352,slow=3.3,SNR=4.4						
ILAR				LR	LR	11 59 48.9	
	comp=Z,42µm,18.8s,baz=237,slow=34						
ILB	**Eielson Array**	83.27	18	*e*P	P	11 24 39.2	-0.1
	comp=Z,251nm,1.5s						
K02D	**Willamette Mer**	83.27	44	P	P	11 24 39.1	-0.9
	baz=249						
WDC	**Whiskeytown Da**	83.30	47	*e*P	P	11 24 40.2	+0.2
	comp=Z,272nm,1.5s						
WDC				LR	LR		
	comp=Z,71µm,19.0s						
WDC	**Whiskeytown Da**	83.30	47	*e*P	P	11 24 40.7	+0.6
N02D	**Trinity Center**	83.33	46	P	P	11 24 39.9	-0.4
	baz=250						
POKR	**Poker Plat Res**	83.34	18	P	P	11 24 39.7	0.0
	baz=226						
SCZ2	**Santa Cruz Isl**	83.35	54	P	P	11 24 39.2	-1.3
	baz=252						
M02C	**Callahan**	83.37	46	P	P	11 24 40.4	-0.1
	baz=249						
PAGB	**Antelope Grade**	83.41	52	PFAKE		11 24 50.0	+9.2
PAGB				LR	LR		
	comp=Z,93µm,19.0s						
DOT	**Dot Lake**	83.42	20	PFAKE		11 24 50.0	+10
DOT				LR	LR		
	comp=Z,73µm,22.0s						
SBC	**Santa Barbara**	83.42	53	P	P	11 24 42.1	+1.2
	baz=252						
SMMC	**Simmler**	83.47	52	P	P	11 24 39.6	-1.5
	baz=252						
PKM	**Mcpherson Peak**	83.48	53	P	P	11 24 39.5	-1.9
	baz=252						
MOY	**Mondy**	83.58	325	*e*P	P	11 24 40.4	-1.0
MOY				pmax	pmax		
	comp=Z,390nm,2.9s						
YBH	**Yreka Blue Hor**	83.59	46	*e*P	P	11 24 40.6	-1.1
	comp=Z,276nm,1.5s						
YBH				LR	LR		
	comp=Z,67µm,20.0s						
YBH	**Yreka Blue Hor**	83.59	46	*e*P	P	11 24 40.5	-1.1
YBH	**Yreka Blue Hor**	83.59	46	P	P	11 24 41.4	-0.3
	comp=Z,11nm,1.0s,baz=232,slow=1.6,SNR=18						
SCRK	**Sand Creek**	83.67	20	*e*P	P	11 24 41.2	-0.3
	comp=Z,370nm,1.3s						
SCRK				LR	LR		
	comp=Z,94µm,21.0s						
ORV	**Oroville**	83.71	48	*e*P	P	11 24 41.0	-1.1
	comp=Z,270nm,1.6s						
ORV				LR	LR		
	comp=Z,35µm,22.0s						
ORV	**Oroville**	83.71	48	*e*P	P	11 24 41.9	-0.3
HUMO	**Hull Mountain**	83.72	45	*e*P	P	11 24 42.3	+0.1
	comp=Z,121nm,1.0s						
HUMO				LR	LR		
	comp=Z,59µm,19.0s						
O03E	**Paynes Creek**	83.74	47	P	P	11 24 40.1	-2.4
	baz=250						
BLG	**Laguna Peak, P**	83.83	54	P	P	11 24 40.6	-2.4
	baz=252						
I03D	**Drain, OR**	83.85	43	P	P	11 24 41.1	-1.7
	baz=249						
AFDM	**Forest Hills D**	83.89	49	*e*P	P	11 24 43.0	-0.2
	comp=Z,217nm,1.3s						
AFDM				LR	LR		
	comp=Z,47µm,20.0s						
SCI2	**San Clemente I**	83.92	55	P	P	11 24 41.9	-1.5
	baz=253						
BESE	**Bessie Mountai**	84.01	27	PFAKE		11 24 50.0	+6.6
BESE				LR	LR		
	comp=Z,130µm,20.0s						
CMB	**Columbia Colle**	84.03	50	*e*P	P	11 24 44.6	+0.6
	comp=Z,169nm,1.4s						
CMB				LR	LR		
	comp=Z,106µm,20.0s						
CMB	**Columbia Colle**	84.03	50	*e*P	P	11 24 43.6	-0.3
L04D	**Klamath Falls**	84.04	45	P	P	11 24 42.3	-1.7
	baz=250						
JIS	**Juneau Island**	84.06	27	PFAKE		11 24 50.0	+6.5
JIS				LR	LR		
	comp=Z,136µm,21.0s						
WRAK	**Wrangell Islan**	84.06	29	PFAKE		11 24 50.0	+6.5
WRAK				LR	LR		
	comp=Z,92µm,20.0s						
COLD	**Coldfoot**	84.06	16	*e*P	P	11 24 41.8	-1.6
	comp=Z,43nm,1.1s						
COLD				LR	LR		
	comp=Z,103µm,21.0s						
HYT	**Haines Junctio**	84.12	24	*e*P	P	11 24 43.5	-0.5
CIS	**Catalina Islan**	84.14	55	P	P	11 24 45.3	+0.7
	baz=253						
PRP	**Porcupine Dome**	84.20	18	*e*P	P	11 24 43.5	-0.8
	comp=Z,143nm,1.6s						
PRP				LR	LR		
	comp=Z,56µm,21.0s						
COR	**Corvallis**	84.20	43	PFAKE		11 24 50.0	+5.5
COR				LR	LR		
	comp=Z,81µm,22.0s						
M04C	**Macdoel**	84.22	46	P	P	11 24 43.8	-1.1
	baz=250						
OSI	**Osito Audit: C**	84.26	53	PFAKE		11 24 50.0	+4.8
OSI				LR	LR		
	comp=Z,69µm,19.0s						
OSI	**Osito Audit: C**	84.26	53	P	P	11 24 45.2	0.0
	baz=253						
VOG	**Valley Oaks Go**	84.26	51	P	P	11 24 44.5	-0.5
	baz=252						
SKAG	**Skagway**	84.27	26	PFAKE		11 24 50.0	+5.4
SKAG				LR	LR		
	comp=Z,186µm,20.0s						
BBB	**Bella Bella**	84.29	34	PFAKE		11 24 50.0	+5.2
BBB				LR	LR		
	comp=Z,112µm,20.0s						
ARVC	**Arvin**	84.33	53	P	P	11 24 44.7	-0.8
	baz=253						
FMP	**Fort Macarthur**	84.33	54	P	P	11 24 44.7	-0.8
	baz=253						
VES	**Vestal, Richgr**	84.34	52	P	P	11 24 44.0	-1.5
	baz=252						
G03D	**McMinnville, O**	84.45	42	P	P	11 24 44.9	-0.9
	baz=249						
DECC	**Green Verdugo**	84.46	54	P	P	11 24 45.1	-1.0
	baz=253						
I04A	**Tendick Farm,**	84.52	44	P	P	11 24 46.7	+0.4
	baz=249						
RUBR	**Rubicon Trail**	84.53	49	PFAKE		11 25 00.0	+13
RUBR				LR	LR		
	comp=Z,62µm,20.0s						
J04D	**Umpqua Nationa**	84.53	44	P	P	11 24 46.5	-0.1
	baz=250						
PASC	**Pasadena Art C**	84.55	54	PFAKE		11 25 00.0	+13
PASC				LR	LR		
	comp=Z,67µm,20.0s						
H04D	**Lebanon**	84.56	43	P	P	11 24 45.3	-1.0
	baz=249						
K04D	**Chiloquin, OR**	84.56	45	P	P	11 24 46.4	-0.2
	baz=250						
BEKR	**Beckworth**	84.64	48	*e*P	P	11 24 46.8	-0.4
	comp=Z,238nm,1.4s						
BEKR				LR	LR		
	comp=Z,44µm,20.0s						
MWC	**Mount Wilson**	84.67	54	PFAKE		11 25 00.0	+13
MWC				LR	LR		
	comp=Z,70µm,20.0s						
TAPN	**Taplejung**	84.75	299	*e*P	P	11 24 46.7	-1.4
	comp=Z,66nm,1.0s						
ISA	**Isabella, Lake**	84.76	52	*e*P	P	11 24 44.6	-3.1
	comp=Z,433nm,1.9s						
ISA				LR	LR		
	comp=Z,58µm,20.0s						
ISA	**Isabella, Lake**	84.76	52	*e*P	P	11 24 47.6	-0.1
ISA	**Isabella, Lake**	84.76	52	P	P	11 24 47.2	-0.5
	baz=253,SNR=13						
NLWA	**Neilton Lookou**	84.87	40	PFAKE		11 25 00.0	+12
NLWA				LR	LR		
	comp=Z,48µm,20.0s						
MDPB	**Devils Postpil**	84.89	50	*e*P	P	11 24 48.5	-0.1
	comp=Z,200nm,1.3s						
WAKR	**Walker**	84.89	49	*e*P	P	11 24 48.5	+0.1
	comp=Z,507nm,1.7s						
WAKR				LR	LR		
	comp=Z,113µm,20.0s						
ODAN	**Odare**	84.90	298	*e*P	P	11 24 47.5	-1.3
	comp=Z,455nm,1.0s						
EDW2	**Edwards Air Fo**	84.91	53	P	P	11 24 47.9	-0.6
	baz=253,SNR=8.8						
F04D	**Rainier, OR**	84.94	41	P	P	11 24 48.0	-0.3
	baz=249						
PNTR	**Pine Nut**	84.95	49	*e*P	P	11 24 47.5	-1.3
	comp=Z,404nm,1.7s						
PNTR				LR	LR		
	comp=Z,60µm,20.0s						
VCNR	**Virginia City**	84.98	49	*e*P	P	11 24 47.2	-1.7
	comp=Z,270nm,1.7s						
VCNR				LR	LR		
	comp=Z,53µm,20.0s						
MAW	**Mawson**	84.98	202	P	P	11 24 48.4	+0.3
	baz=85,SNR=8.0						
MAW	**Mawson**	84.98	202	*e*P	P	11 24 48.3	+0.3
	comp=Z,132nm,1.3s						
MAW				LR	LR		
	comp=Z,10µm,21.0s						
MAW	**Mawson**	84.98	202	*e*P	P	11 24 48.4	+0.3
MAW	**Mawson**	84.98	202	P	P	11 24 47.4	-0.7
	comp=Z,75nm,1.0s,baz=263,slow=19,SNR=5.0						
MAW				LR	LR	11 58 28.6	
	comp=Z,41µm,20.8s,baz=109,slow=33						
H04A	**Detroit Lake**	84.98	43	*e*P	P	11 24 47.2	-1.4
	comp=Z,261nm,1.7s						
H04A				LR	LR		
	comp=Z,72µm,21.0s						
BFSC	**Mount Baldy Ra**	84.99	54	P	P	11 24 48.0	-1.0
	baz=253						
FYU	**Fort Yukon**	84.99	18	*e*P	P	11 24 48.7	+0.6
	comp=Z,200nm,1.4s						
FYU				LR	LR		
	comp=Z,85µm,22.0s						
109C	**Camp Elliot, M**	85.05	55	P	P	11 24 49.6	+0.4
	baz=254						
CPE	**Camp Elliot**	85.05	55	PFAKE		11 25 00.0	+11
CPE				LR	LR		
	comp=Z,90µm,21.0s						
MLAC	**Mammoth, Mammo**	85.07	50	P	P	11 24 49.5	0.0
	baz=252						
WHY	**Whitehorse**	85.11	25	*e*P	P	11 24 46.6	-2.3
	comp=Z,122nm,1.6s						
WHY				LR	LR		
	comp=Z,201µm,20.0s						
KNGR	**Kungurtug, Tuv**	85.12	323*c*	*i*P	P	11 24 47.2	-2.0
EGAK	**Eagle**	85.12	20	PFAKE		11 25 00.0	+11
EGAK				LR	LR		
	comp=Z,80µm,20.0s						
J05D	**Fort Rock, OR**	85.14	44	P	P	11 24 49.2	-0.4
	baz=250						
MURC	**Murrieta**	85.18	55	P	P	11 24 49.3	-0.5
	baz=254						
MURC				S	S	11 35 19.4	-0.4
	baz=254						
YERR	**Yerington**	85.18	49	*e*P	P	11 24 46.6	-3.3
	comp=Z,294nm,1.7s						
YERR				LR	LR		
	comp=Z,67µm,20.0s						
CWC	**Cottonwood Cre**	85.30	52	P	P	11 24 49.2	-1.4
	baz=253						
DAWY	**Dawson**	85.30	21	*e*P	P	11 24 49.7	-0.1
	comp=Z,117nm,1.0s						
PAHR	**Pah Rah Range**	85.30	48	*e*P	P	11 24 50.1	-0.4
	comp=Z,263nm,1.5s						
PAHR				LR	LR		
	comp=Z,48µm,21.0s						
LRMC	**Laurel Mtn Rad**	85.33	53	P	P	11 24 50.0	-0.7
	baz=253						
MOD	**Modoc Plateau**	85.34	46	*e*P	P	11 24 45.9	-4.7
	comp=Z,369nm,1.8s						
MOD				LR	LR		
	comp=Z,47µm,20.0s						
BAR	**Barrett**	85.34	56	PFAKE		11 25 00.0	+9.3
BAR				LR	LR		
	comp=Z,98µm,18.0s						
TIN	**Tinemaha, Big**	85.36	51	P	P	11 24 50.2	-0.6
	baz=253						
E04D	**Cinebar**	85.39	41	P	P	11 24 51.6	+1.1
	baz=249						
D03D	**Eldon**	85.41	40	P	P	11 24 51.0	+0.4
	baz=249						
I05D	**Terrebonne, OR**	85.43	43	P	P	11 24 51.4	+0.5
	baz=250						
BOK	**Bokaro**	85.46	295	*e*P	P	11 24 49.0	-2.4
BOK				IAmb	IAmb	11 25 04.9	
	comp=Z,6µm,4.2s						
PINE	**Pine Mountain**	85.52	44	*e*P	P	11 24 51.1	-0.3
	comp=Z,120nm,1.0s						
PINE				LR	LR		
	comp=Z,80µm,19.0s						
BBRC	**Big Bear Solar**	85.58	54	P	P	11 24 49.9	-2.2
	baz=254						
PAF	**Port-aux-Franc**	85.59	221	PFAKE		11 25 00.0	+8.5
PAF				LR	LR		
	comp=Z,45µm,21.0s						
PGC	**Sidney**	85.60	39	*e*P	P	11 24 46.5	-4.9
	comp=Z,376nm,1.5s						
PGC				LR	LR		
	comp=Z,141µm,21.0s						
RAMN	**Ramite**	85.60	298	*e*P	P	11 24 51.0	-1.4
MONP2	**Monument Peak**	85.61	55	P	P	11 24 52.0	-0.2
	baz=254						
RYN	**Ryan**	85.61	50	*e*P	P	11 24 50.0	-2.1
	comp=Z,340nm,1.8s						
RYN				LR	LR		
	comp=Z,96µm,20.0s						
DAC	**Darwin (Calif)**	85.62	52	PFAKE		11 25 00.0	+7.8
DAC				LR	LR		
	comp=Z,96µm,22.0s						
MPMC	**Manual Prospec**	85.64	52	P	P	11 24 50.7	-1.6
	baz=253,SNR=6.4						
RRX	**Edison Barstow**	85.69	53	P	P	11 24 52.8	+0.5
	baz=254						
NV01	**Mina Array Sit**	85.71	50	*e*P	P	11 24 50.9	-1.7
NVAR	**Mina Array Bea**	85.71	50	P	P	11 24 52.4	-0.3
	comp=Z,11nm,1.0s,baz=234,slow=7.6,SNR=31						
NVAR				PKKPbc	PKKPbc	11 42 57.8	+1.6
	comp=Z,0.8nm,0.8s,baz=174,slow=0.9,SNR=2.6						
NVAR				PKPPKP	P'P'df	11 51 02.4	+1.7
	comp=Z,2.0nm,1.0s,baz=173,slow=2.2,SNR=4.8						
NVAR				LR	LR	11 54 47.8	
	comp=Z,102µm,21.5s,baz=266,slow=30						
G05D	**Wamic, OR**	85.75	43	P	P	11 24 51.8	-0.7
	baz=250						
PFO	**Pinyon Flats O**	85.77	55	PFAKE		11 25 00.0	+7.1
PFO				LR	LR		
	comp=Z,98µm,21.0s						
PFO	**Pinyon Flats O**	85.77	55	P	P	11 24 50.4	-2.5
	baz=254						
XPFO	**Pion Flat**	85.77	55	PFAKE		11 25 00.0	+7.1
XPFO				LR	LR		
	comp=Z,104µm,21.0s						
IKP	**In-Ko-Pah, Jac**	85.79	56	P	P	11 24 52.6	-0.4
	baz=254						
NV11	**Mina Array Sit**	85.83	50	*e*P	P	11 24 52.7	-0.4
	comp=Z,18nm,1.3s						
NV11				LR	LR		
	comp=Z,8µm,21.0s						
F05D	**White Salmon**	85.88	42	P	P	11 24 51.0	-2.0
	baz=250						
LON	**Longmire**	85.95	41	*e*P	P	11 24 51.6	-1.8
	comp=Z,80nm,1.3s						
LON				LR	LR		
	comp=Z,79µm,20.0s						
LON	**Longmire**	85.95	41	*e*P	P	11 24 51.6	-1.8
LON				pmax	pmax		
	comp=Z,80nm,1.3s						
LON				MLR	MLR		
	comp=Z,79µm,20.0s						
GSC	**Goldstone, Bar**	85.96	53	PFAKE		11 25 00.0	+6.2
GSC				LR	LR		
	comp=Z,51µm,20.0s						
GSC	**Goldstone, Bar**	85.96	53	P	P	11 24 52.8	-1.0
	baz=254						
TIXI	**Tiksi**	85.97	349	*e*P	P	11 24 52.6	-0.2
	comp=Z,244nm,1.4s						
TIXI				LR	LR		
	comp=Z,48µm,21.0s						
TIXI	**Tiksi**	85.97	349⇑	*i*P	P	11 24 50.7	-2.1
TIXI				pmax	pmax		
	comp=Z,211nm,1.4s						
TIXI				MLR	MLR		
	comp=Z,35µm,19.0s						
D05A	**Enumclaw**	85.99	41	*e*P	P	11 24 53.4	-0.1
	comp=Z,735nm,1.4s						
D05A				LR	LR		
	comp=Z,61µm,19.0s						
GRAC	**Grapevine Rang**	86.01	51	P	P	11 24 55.6	+1.7
	baz=253,SNR=8.1						
KVN	**Kaiserville**	86.05	49	*e*P	P	11 24 54.0	-0.2
	comp=Z,299nm,1.7s						
KVN				LR	LR		
	comp=Z,78µm,20.0s						
KVN	**Kaiserville**	86.05	49	*e*P	P	11 24 54.0	-0.2
A04D	**Lummi Island**	86.08	39	P	P	11 24 55.7	+1.8
	baz=249						
SWSC	**Sam W. Stewart**	86.12	56	P	P	11 24 55.0	+0.6
	baz=254						
JIRN	**Jiri**	86.13	299	*e*P	P	11 24 54.0	-1.1
	comp=Z,120nm,1.2s						
DLBC	**Dease Lake**	86.13	28	PFAKE		11 25 00.0	+6.0
DLBC				LR	LR		
	comp=Z,90µm,20.0s						
DLBC	**Dease Lake**	86.13	28	PKKPbc	PKKPbc	11 42 58.3	+2.4
	baz=90,slow=1.0						
DLBC				PKPPKP	P'P'df	11 51 02.3	+4.4
	comp=Z,3.5nm,0.8s,baz=354,slow=23,SNR=2.6						
HEC	**Hector,Ludlow**	86.20	54	P	P	11 24 56.5	+1.6
	baz=254						
FURC	**Furnace Creek,**	86.24	52	P	P	11 24 51.3	-3.6
	baz=254						
BELC	**Belle Mtn. Jos**	86.25	55	P	P	11 24 57.8	+2.5
	baz=254						
B05A	**Bryant**	86.30	40	P	P	11 24 57.1	+2.1
	baz=249						
GUN	**Gumba**	86.46	299	*e*P	P	11 24 54.8	-1.9
	comp=Z,102nm,1.2s						
SHOC	**Shoshone, Teco**	86.54	53	P	P	11 24 53.9	-2.7
	baz=254						

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BC3   Big Chuckawall     86.59  55  P         P          11 24 56.2 -0.7
      baz=255
I07A  Izee               86.59  44  eP        P          11 24 56.5 -0.2
I07A                                LR        LR
      comp=Z,90µm,20.0s
WVOR  Wild Horse Val     86.68  46  eP        P          11 24 54.6 -2.6
      comp=Z,275nm,1.5s
WVOR                                LR        LR
      comp=Z,61µm,20.0s
WVOR  Wild Horse Val     86.68  46  eP        P          11 24 57.0 -0.2
TUQ   Turquoise Moun     86.69  53  P         P          11 24 57.7 +0.3
      baz=254
GMRC  Granite Mounta     86.73  54  P         P          11 24 57.2 -0.4
      baz=254
B06A  Marblemount        86.77  39  PFAKE                11 25 10.0 +13
B06A                                LR        LR
      comp=Z,76µm,21.0s
PALK  Pallekele          86.78 278  eP        P          11 24 54.5 -3.7
      comp=Z,161nm,1.1s
PALK                                LR        LR
      comp=Z,17µm,20.0s
PALK  Pallekele          86.78 278  i P       P          11 25 00.2 +2.0
      SNR=10
PALK  Pallekele          86.78 278  eP        P          11 24 58.5 +0.3
PKI   Pulchoki           86.78 299  eP        P          11 24 57.0 -1.3
PKIN  Phulchoki          86.79 299  eP        P          11 24 57.0 -1.2
TPNV  Topopah Spring     86.85  52  eP        P          11 24 54.7 -3.5
      comp=Z,356nm,1.9s
TPNV                                LR        LR
      comp=Z,103µm,22.0s
TPNV  Topopah Spring     86.85  52  eP        P          11 24 54.7 -3.5
TPNV                                pmax      pmax
      comp=Z,356nm,1.9s
TPNV                                MLR       MLR
      comp=Z,103µm,22.0s
TPNV  Topopah Spring     86.85  52  P         P          11 24 56.1 -2.1
      baz=254
LTY   Liberty            86.86  41  eP        P          11 24 56.8 -1.1
      comp=Z,158nm,1.4s
LTY                                 LR        LR
      comp=Z,72µm,20.0s
F07A  Phinny Hill Vi     86.89  42  eP        P          11 24 56.0 -1.9
      comp=Z,124nm,1.2s
F07A                                LR        LR
      comp=Z,69µm,20.0s
C06D  Leavenworth        86.94  40  P         P          11 24 59.5 +1.3
      baz=250
GLA   Glamis             86.94  56  eP        P          11 24 57.2 -1.4
      comp=Z,209nm,1.2s
GLA                                 LR        LR
      comp=Z,90µm,18.0s
GLA   Glamis             86.94  56  eP        P          11 24 57.2 -1.4
GLA                                 pmax      pmax
      comp=Z,209nm,1.2s
GLA                                 MLR       MLR
      comp=Z,90µm,18.0s
GLA   Glamis             86.94  56  P         P          11 24 57.2 -1.4
      baz=255
KKN   Kakani             86.94 299  eP        P          11 24 57.5 -1.4
H06S1 SOCORRO T          86.96  70  T         T          13 01 06.4
      SNR=55
IRM   Iron Mountain      86.97  55  P         P          11 24 55.6 -3.1
      baz=255,SNR=7.5
DMN   Daman              87.05 299  eP        P          11 24 57.9 -1.6
J08A  Circle Bar Ran     87.08  45  eP        P          11 24 58.0 -1.1
      comp=Z,181nm,1.4s
J08A                                LR        LR
      comp=Z,49µm,22.0s
BMN   Battle Mountai     87.10  48  PFAKE                11 25 10.0 +11
BMN                                 LR        LR
      comp=Z,31µm,20.0s
LDFC  Landfair           87.24  54  PFAKE                11 25 10.0 +10
LDFC                                LR        LR
      comp=Z,61µm,19.0s
LLLB  Lillooet           87.26  37  eP        P          11 24 57.5 -2.2
      comp=Z,149nm,1.5s
LLLB                                LR        LR
      comp=Z,135µm,21.0s
HAWA  Hanford            87.31  42  eP        P          11 24 57.8 -2.1
      comp=Z,238nm,1.5s
HAWA                                LR        LR
      comp=Z,65µm,20.0s
G08A  Pilot Rock         87.34  43  eP        P          11 24 58.5 -1.8
G08A                                LR        LR
      comp=Z,65µm,21.0s
Y12C  Blythe             87.36  55  eP        P          11 24 58.7 -1.8
      comp=Z,150nm,1.1s
Y12C                                LR        LR
      comp=Z,77µm,20.0s
Y12C  Blythe             87.36  55  P         P          11 25 01.8 +1.2
      baz=255
NEE2  Needles Airpor     87.55  54  P         P          11 24 59.8 -1.6
      baz=255
EPYK  Eagle Plains       87.56  20  eP        P          11 24 59.7 -1.1
      comp=Z,222nm,1.3s
EPYK                                LR        LR
      comp=Z,63µm,20.0s
EPYK  Eagle Plains       87.56  20  P         P          11 25 01.7 +0.9
      baz=236
SHPR  Sheep Range        87.57  52  eP        P          11 24 59.7 -2.0
      comp=Z,464nm,1.9s
SHPR                                LR        LR
      comp=Z,69µm,22.0s
E08A  Dider Farm, El     87.65  42  eP        P          11 25 00.7 -0.9
      comp=Z,310nm,1.5s
E08A                                LR        LR
      comp=Z,56µm,20.0s
SRIG  Santa Rosalia      87.72  62  PFAKE                11 25 10.0 +7.7
SRIG                                LR        LR
      comp=Z,62µm,21.0s
113A  Mohawk Valley,     87.73  56  PFAKE                11 25 10.0 +7.7
113A                                LR        LR
      comp=Z,105µm,19.0s
R11A  Troy Canyon, C     87.74  50  eP        P          11 25 00.7 -1.8
      comp=Z,150nm,1.5s
R11A                                LR        LR
      comp=Z,120µm,21.0s
R11A  Troy Canyon, C     87.74  50  P         P          11 25 01.8 -0.7
      baz=254
PDMCI Parker Dam,Lak     87.81  55  P         P          11 25 01.3 -1.3
      baz=255
D08A  Wollman Farm,      87.92  41  eP        P          11 25 01.7 -1.2
      comp=Z,149nm,1.4s
D08A                                LR        LR
      comp=Z,82µm,20.0s
B08A  Colville Reser     88.07  40  eP        P          11 25 01.4 -2.2
      comp=Z,124nm,1.4s
B08A                                LR        LR
      comp=Z,28µm,19.0s
W13A  Hualapai Mount     88.22  54  PFAKE                11 25 10.0 +5.1
W13A                                LR        LR
      comp=Z,43µm,19.0s
E09A  Wood Farm, Sta     88.26  42  eP        P          11 25 03.9 -0.6
      comp=Z,316nm,1.8s
E09A                                LR        LR
      comp=Z,73µm,20.0s
214A  Organ Pipe Nat     88.32  57  P         P          11 25 04.1 -1.1
      baz=256
BMO   Blue Mountains     88.33  44  eP        P          11 25 04.0 -1.0
      comp=Z,234nm,1.6s
BMO                                 LR        LR
      comp=Z,70µm,22.0s
BMO   Blue Mountains     88.33  44  eP        P          11 25 04.3 -0.7
MDRS  Chennai            88.36 284  eP        P          11 25 03.7 -1.9
MDRS                                IAmb      IAmb       11 25 19.8
      comp=Z,362nm,2.0s
DANN  Dangsing           88.38 299  eP        P          11 25 03.4 -2.5
      comp=Z,63nm,1.1s
KOLN  Koldanda           88.39 299  eP        P          11 25 03.3 -2.5
C09A  Chrisman Ranch     88.57  41  PFAKE                11 25 20.0 +14
C09A                                LR        LR
      comp=Z,73µm,20.0s
Y14A  Wickenburg         88.64  55  eP        P          11 25 05.5 -1.2
      comp=Z,98nm,1.3s
Y14A                                LR        LR
      comp=Z,80µm,21.0s
ELK   Elko               88.64  48  eP        P          11 25 05.6 -1.2
      comp=Z,174nm,1.5s
ELK                                 LR        LR
      comp=Z,46µm,21.0s
ELK   Elko               88.64  48  eP        P          11 25 06.5 -0.3
F10A  Beach Ranch, E     88.71  43  eP        P          11 25 06.1 -0.7
      comp=Z,721nm,2.0s
F10A                                LR        LR
      comp=Z,61µm,21.0s
SLBS  Sierra La Lagu     88.94  66  eP        P          11 25 08.3 -0.1
      comp=Z,149nm,1.4s
SLBS                                LR        LR
      comp=Z,48µm,18.0s
PYUN  Piuthan            88.99 299  eP        P          11 25 05.6 -3.1
      comp=Z,68nm,1.2s
PSUT  Pine Spring        89.10  51  eP        P          11 25 05.8 -3.1
      comp=Z,331nm,1.9s
PSUT                                LR        LR
      comp=Z,104µm,21.0s
WMQ   Urumqi             89.16 315  P         P          11 25 07.9 -1.0
WMQ                                 pP        sP         11 25 14.9 +0.6
WMQ                                 sP        pP         11 25 20.2 +7.4
WMQ                                 PP        PP         11 28 42.2 +2.8
WMQ                                 SKS       SKSac      11 35 35.3 -3.5
WMQ                                 S         S          11 35 54.4 -3.5
WMQ                                 SS        SS         11 41 51.2 -0.8
WMQ                                 pmax      pmax
      comp=Z,310nm,1.3s
WMQ                                 pmax      pmax
      comp=Z,6µm,6.5s
WMQ                                 LR        LR
      comp=Z,91µm,22.7s
WMQ                                 LR        LR
      comp=Z,90µm,20.5s
WMQ                                 LR        LR
      comp=Z,148µm,27.3s
WMQ   Urumqi             89.16 315  eP        P          11 25 04.7 -4.2
      comp=Z,294nm,1.4s
WMQ                                 LR        LR
      comp=Z,57µm,21.0s
WMQ   Urumqi             89.16 315  eP        P          11 25 04.7 -4.2
WMQ                                 pmax      pmax
      comp=Z,294nm,1.4s
WMQ                                 MLR       MLR
      comp=Z,57µm,21.0s
LCMT  Little Creek M     89.19  52  eP        P          11 25 05.5 -3.8
      comp=Z,151nm,1.2s
LCMT                                LR        LR
      comp=Z,45µm,20.0s
HSIG                     89.21  60  PFAKE                11 25 20.0 +11
HSIG                                LR        LR
      comp=Z,53µm,20.0s
CCUT  Cedar City         89.23  52  eP        P          11 25 07.2 -2.4
      comp=Z,168nm,1.3s
CCUT                                LR        LR
      comp=Z,102µm,22.0s
NEW   Newport            89.44  41  eP        P          11 25 09.5 -0.6
NEW                                 LR        LR
      comp=Z,54µm,20.0s
NEW   Newport            89.44  41  eP        P          11 25 09.5 -0.6
NEW   Newport            89.44  41  P         P          11 25 10.2 +0.1
      baz=253
SZCU  Shurtz Canyon      89.45  52  PFAKE                11 25 20.0 +9.3
SZCU                                LR        LR
      comp=Z,91µm,22.0s
KNB   Kanab              89.52  52  eP        P          11 25 09.3 -1.6
      comp=Z,671nm,1.6s
KNB                                 LR        LR
      comp=Z,46µm,20.0s
KNB   Kanab              89.52  52  eP        P          11 25 11.2 +0.3
INK   Inuvik             89.65  19  eP        P          11 25 08.8 -1.7
      comp=Z,74nm,1.3s
INK                                 LR        LR
      comp=Z,91µm,22.0s
INK   Inuvik             89.65  19  eP        P          11 25 09.4 -1.1
INK   Inuvik             89.65  19  PKKP      PKKPdf     11 42 42.3 -0.9
      comp=Z,1.4nm,0.7s,baz=62,slow=4.2,SNR=4.0
INK                                 PKPPKP               11 50 56.3
      comp=Z,2.8nm,1.2s,baz=50,slow=2.4,SNR=3.8
INK                                 LR        LR         11 59 00.5
      comp=Z,77µm,21.9s,baz=226,slow=31
U15A  North Rim          89.79  53  eP        P          11 25 11.4 -0.9
      comp=Z,227nm,1.2s
U15A                                LR        LR
      comp=Z,43µm,20.0s
HLID  Hailey             89.97  46  eP        P          11 25 10.9 -1.9
      comp=Z,184nm,1.6s
HLID                                LR        LR
      comp=Z,58µm,20.0s
HLID  Hailey             89.97  46  P         P          11 25 14.4 +1.5
      baz=255,SNR=8.5
X16A  Lo Mia Camp, P     90.01  55  eP        P          11 25 12.8 -0.5
      comp=Z,107nm,1.1s
X16A                                LR        LR
      comp=Z,94µm,21.0s
PKCU  Pink Cliffs        90.02  52  eP        P          11 25 10.9 -2.5
      comp=Z,372nm,1.4s
PKCU                                LR        LR
      comp=Z,59µm,22.0s
TUC   Tucson             90.07  57  eP        P          11 25 11.9 -1.6
      comp=Z,95nm,1.2s
TUC                                 LR        LR
      comp=Z,107µm,20.0s
TUC   Tucson             90.07  57  eP        P          11 25 13.9 +0.4
TUC   Tucson             90.07  57  P         P          11 25 12.3 -1.2
      baz=257
TCRU  Three Creeks R     90.19  51  eP        P          11 25 12.4 -1.7
      comp=Z,252nm,1.2s
TCRU                                LR        LR
      comp=Z,126µm,22.0s
MTPU  Mount Pierson      90.25  51  eP        P          11 25 11.7 -2.9
      comp=Z,155nm,1.2s
MTPU                                LR        LR
      comp=Z,111µm,22.0s
DUG   Dugway, Tooele     90.29  49  eP        P          11 25 13.8 -0.6
      comp=Z,296nm,1.7s
DUG   Dugway, Tooele     90.29  49  eP        P          11 25 14.1 -0.3
DUG   Dugway, Tooele     90.29  49  P         P          11 25 15.0 +0.6
      baz=256
BGU   Big Grassy Mou     90.31  48  eP        P          11 25 12.7 -1.8
      comp=Z,341nm,1.8s
BGU                                 LR        LR
      comp=Z,39µm,20.0s
WUAZ  Wupatki            90.31  54  eP        P          11 25 12.2 -2.5
      comp=Z,190nm,1.3s
WUAZ                                LR        LR
      comp=Z,56µm,21.0s
WUAZ  Wupatki            90.31  54  P         P          11 25 15.4 +0.8
      baz=257
MSU   Marysvale          90.37  51  eP        P          11 25 12.4 -2.5
MSU   Marysvale          90.37  51  eP        P          11 25 12.5 -2.5
TRD   Trivandrum         90.66 278  eP        P          11 25 14.8 -1.7
TRD                                 IAMs_20   IAMs_20    12 02 27.3
      comp=Z,42µm,31.2s
HVU   Hansel Valley      90.70  48  eP        P          11 25 13.1 -3.2
      comp=Z,351nm,1.5s
HVU                                 LR        LR
      comp=Z,48µm,21.0s
HVU   Hansel Valley      90.70  48  eP        P          11 25 16.2 -0.1
NLU   North Lily Min     90.78  50  eP        P          11 25 12.8 -4.0
      comp=Z,84nm,1.0s
HYB   Hyderabad          90.81 287  i P       P          11 25 16.0 -1.1
      comp=Z,312nm,1.4s
HYB                                 ePP       PP         11 28 52.0 -1.1
HYB                                 e                    11 29 36.0
HYB                                 eSKS      SKSac      11 35 50.0 +0.6
HYB                                 eS        SKKSac     11 36 08.0 +4.0
HYB                                 eScS      S          11 36 14.0 -0.1
HYB                                 ePS       PS         11 37 16.0 -7.1
HYB   Hyderabad          90.81 287  eP        P          11 25 15.1 -2.0
SPUT  South Promonto     90.82  48  eP        P          11 25 14.9 -2.0
      comp=Z,375nm,1.9s
SPUT                                LR        LR
      comp=Z,37µm,20.0s
DGZ   Jazzator, Alta     90.93 320d iP        P          11 25 14.8 -2.4
DGZ                                 pmax      pmax
      comp=Z,51nm,0.9s
DGZ                                 MLR       MLR
      comp=Z,37µm,18.0s
NGP   Nagpur             91.06 291⇑eP        P          11 25 15.6 -2.6
NGP                                 ex        x          11 36 28.6
NGP                                 ex        x          12 04 02.8
      comp=Z,38µm,23.4s
319A  Douglas            91.12  58  eP        P          11 25 15.8 -2.7
      comp=Z,144nm,1.2s
319A                                LR        LR
      comp=Z,69µm,20.0s
MPU   Maple Canyon       91.13  50  eP        P          11 25 15.3 -3.1
      comp=Z,205nm,1.5s
MPU                                 LR        LR
      comp=Z,99µm,20.0s
MSO   Missoula           91.13  43  eP        P          11 25 15.0 -3.1
      comp=Z,136nm,1.6s
MSO                                 LR        LR
      comp=Z,66µm,20.0s
MSO   Missoula           91.13  43  P         P          11 25 18.3 +0.2
      baz=255
CTU   Camp Tracy         91.19  49  eP        P          11 25 15.9 -2.7
      comp=Z,147nm,1.4s
CTU                                 LR        LR
      comp=Z,41µm,18.0s
X18A  Snowflake          91.23  55  eP        P          11 25 18.2 -0.8
      comp=Z,172nm,1.4s
X18A                                LR        LR
      comp=Z,58µm,20.0s
TMUT  Trail Mountain     91.28  50  eP        P          11 25 16.2 -3.1
      comp=Z,102nm,1.1s
TMUT                                LR        LR
      comp=Z,81µm,22.0s
MCMT  McKenzie Canyo     91.38  45  eP        P          11 25 18.2 -1.3
JLU   Jordanelle         91.40  49  eP        P          11 25 17.9 -1.8
      comp=Z,240nm,1.5s
JLU                                 LR        LR
      comp=Z,56µm,22.0s
W18A  Petrified Fore     91.53  55  eP        P          11 25 18.3 -2.0
      comp=Z,149nm,1.3s
W18A                                LR        LR
      comp=Z,75µm,20.0s
W18A  Petrified Fore     91.53  55  P         P          11 25 21.6 +1.2
      baz=258
TCUT  Toone Canyon       91.54  49  eP        P          11 25 19.1 -1.2
      comp=Z,145nm,0.9s
TCUT                                LR        LR
      comp=Z,40µm,20.0s
DLMT  Dillon             91.68  44  eP        P          11 25 18.7 -2.0
      comp=Z,133nm,1.1s
DLMT                                LR        LR
      comp=Z,64µm,21.0s
WALA  Waterton Lakes     91.71  40  eP        P          11 25 19.2 -1.5
      comp=Z,201nm,1.5s
WALA                                LR        LR
      comp=Z,46µm,19.0s
SRU   San Rafael Swe     91.76  51  eP        P          11 25 18.9 -2.4
      comp=Z,75nm,1.3s
SRU                                 LR        LR
      comp=Z,96µm,20.0s
SRU   San Rafael Swe     91.76  51  eP        P          11 25 22.9 +1.6
LRM   Limekiln Ridge     91.88  44  eP        P          11 25 21.1 -0.7
ZSN   Zaisan             92.00 318  eP        P          11 25 22.8 +0.8
ZSN                                 eS        S          11 36 22.1 -1.7
ZSN                                 MLR       MLR
      comp=Z,5µm,16.0s
ZSN   Zaisan             92.00 318  eP        P          11 25 22.8 +0.8
      comp=Z,791nm,4.8s
ZSN                                 eS        S          11 36 22.1 -1.7
ZSN                                 eLQ       LQ         12 01 16.0
ZSN                                 eLR       LR         12 07 41.1
      comp=Z,5µm,16.2s
SYO   Syowa Base         92.03 197⇑eP        P          11 25 18.0 -3.7
SYO   Syowa Base         92.03 197⇑iP        P          11 25 29.2 +7.5
P18A  Preston Nutter     92.08  50  PFAKE                11 25 30.0 +7.0
P18A                                LR        LR
      comp=Z,142µm,21.0s
DGAR  Diego Garcia       92.09 262  PFAKE                11 25 30.0 +6.9
DGAR                                LR        LR
      comp=Z,55µm,20.0s
AHID  Auburn Hatcher     92.13  47  PFAKE                11 25 30.0 +7.0
AHID                                LR        LR
      comp=Z,48µm,22.0s
FXWY  Fox Creek          92.38  46  eP        P          11 25 23.7 -0.4
      comp=Z,105nm,1.5s
BOZ   Bozeman (W)        92.39  44  eP        P          11 25 22.4 -1.6
      comp=Z,135nm,1.3s
BOZ                                 LR        LR
      comp=Z,55µm,20.0s
BOZ   Bozeman (W)        92.39  44  eP        P          11 25 23.8 -0.2
BOZ   Bozeman (W)        92.39  44  P         P          11 25 22.9 -1.1
      baz=257,SNR=7.2
TPAW  Teton Pass         92.40  46  eP        P          11 25 22.8 -1.5
      comp=Z,60nm,1.1s
TPAW                                LR        LR
      comp=Z,62µm,20.0s
REDW  Red Top Meadow     92.44  46  eP        P          11 25 20.1 -4.4
      comp=Z,110nm,1.3s
REDW                                LR        LR
      comp=Z,53µm,20.0s
IMW   Indian Meadow      92.50  46  eP        P          11 25 20.6 -4.2
      comp=Z,48nm,1.0s
IMW                                 LR        LR
      comp=Z,39µm,20.0s
YHB   Horse Butte        92.50  45  eP        P          11 25 20.6 -4.1
      comp=Z,111nm,1.3s
YHB                                 LR        LR
      comp=Z,81µm,20.0s
HRY   Holter Researc     92.51  43  eP        P          11 25 22.1 -2.4
SNOW  Snow King Moun     92.53  46  eP        P          11 25 25.3 +0.4
SNOW                                LR        LR
      comp=Z,63µm,21.0s
121A  Cookes Peak, D     92.60  58  P         P          11 25 23.6 -1.7
      baz=259
MOOW  Moose Ponds        92.60  46  eP        P          11 25 24.1 -1.0
      comp=Z,82nm,1.5s
YMR   Madison River      92.65  45  eP        P          11 25 22.6 -2.8
      comp=Z,290nm,1.8s
YMR                                 LR        LR
      comp=Z,63µm,20.0s
LOHW  Long Hollow        92.67  46  eP        P          11 25 21.9 -3.5
      comp=Z,108nm,1.6s
LOHW                                LR        LR
      comp=Z,53µm,20.0s
YPP   Pitchstone Pla     92.67  46  PFAKE                11 25 40.0 +14
YPP                                 LR        LR
      comp=Z,97µm,20.0s
YFT   Old Faithful       92.69  45  PFAKE                11 25 40.0 +14
YFT                                 LR        LR
      comp=Z,116µm,19.0s
PV09  Paradox Valley     92.70  51  eP        P          11 25 21.4 -4.4
FLWY  Flagg Ranch        92.71  46  eP        P          11 25 23.4 -2.2
      comp=Z,256nm,2.0s
FLWY                                LR        LR
      comp=Z,58µm,20.0s
PV10  Paradox Valley     92.75  52  PFAKE                11 25 40.0 +14
PV10                                LR        LR
      comp=Z,63µm,22.0s
PV14  Lion Creek, Pa     92.76  52  eP        P          11 25 24.1 -1.9
      comp=Z,194nm,1.5s
PV14                                LR        LR
      comp=Z,75µm,22.0s
PV23  Carpenter Ridg     92.78  52  eP        P          11 25 23.9 -2.3
      comp=Z,371nm,1.9s
PV23                                LR        LR
      comp=Z,95µm,22.0s
PV17  East Wray Mesa     92.79  52  eP        P          11 25 21.9 -4.3
      comp=Z,117nm,1.4s
PV20  West Nyswonger     92.80  52  PFAKE                11 25 40.0 +14
PV20                                LR        LR
      comp=Z,50µm,21.0s
PV16  Nyswonger Mesa     92.83  52  PFAKE                11 25 40.0 +14
PV16                                LR        LR
      comp=Z,53µm,22.0s
PV21  Cone Mtn., Par     92.83  51  eP        P          11 25 23.5 -2.9
      comp=Z,158nm,1.5s
PV21                                LR        LR
      comp=Z,86µm,22.0s
PV04  Paradox Valley     92.85  52  eP        P          11 25 21.8 -4.6
      comp=Z,158nm,1.4s
PV04                                LR        LR
      comp=Z,74µm,22.0s
YNR   Norris Junctio     92.86  45  PFAKE                11 25 40.0 +14
YNR                                 LR        LR
      comp=Z,67µm,20.0s
H17A  Grant Village      92.86  45  eP        P          11 25 24.4 -2.0
      comp=Z,83nm,1.4s
H17A                                LR        LR
      comp=Z,96µm,20.0s
H17A  Grant Village      92.86  45  P         P          11 25 28.8 +2.4
      baz=258
PV11  David Mesa, Pa     92.86  52  eP        P          11 25 22.3 -4.1
      comp=Z,122nm,1.5s
PV11                                LR        LR
      comp=Z,62µm,22.0s
PV03  Paradox Valley     92.87  52  PFAKE                11 25 40.0 +13
PV03                                LR        LR
      comp=Z,47µm,21.0s
PV13  Radium Mtn., P     92.87  52  PFAKE                11 25 40.0 +13
PV13                                LR        LR
      comp=Z,43µm,21.0s
PV12  Saucer Basin,      92.92  52  eP        P          11 25 22.5 -4.2
      comp=Z,90nm,1.2s
BHPL  Bhopal             92.94 293  eP        P          11 25 25.1 -1.8
BHPL                                IAmb      IAmb       11 25 37.4
      comp=Z,69nm,1.2s
MVCO  Mesa Verde         92.94  53  PFAKE                11 25 40.0 +13
MVCO                                LR        LR
      comp=Z,40µm,20.0s
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MVCO	**Mesa Verde**	**92.94**	**53**	P	**P**	**11 25 25.5**	**-1.4**
	baz=259						
PV02	**Paradox Valley**	**92.94**	**52**	PFAKE		11 25 40.0	+13
PV02				LR	LR		
	comp=Z,43µm,20.0s						
PV01	**Paradox Valley**	**93.06**	**52**	*e*P	**P**	**11 25 23.0**	**-4.4**
	comp=Z,64nm,1.4s						
PV01				LR	LR		
	comp=Z,41µm,20.0s						
PV07	**Paradox Valley**	**93.06**	**52**	PFAKE		11 25 40.0	+13
PV07				LR	LR		
	comp=Z,73µm,22.0s						
PV15	**Paradox Valley**	**93.17**	**52**	PFAKE		11 25 40.0	+12
PV15				LR	LR		
	comp=Z,62µm,22.0s						
BW06	**Boulder Array**	**93.24**	**47**	*e*P	**P**	**11 25 25.0**	**-3.2**
	comp=Z,84nm,1.4s						
BW06				LR	LR		
	comp=Z,44µm,22.0s						
BW06	**Boulder Array**	**93.24**	**47**	P	**P**	**11 25 29.0**	**+0.8**
	baz=258						
PD31	**Pinedale Array**	**93.24**	**47**	*e*P	**P**	**11 25 25.2**	**-2.9**
PDAR	**Pinedale Array**	**93.24**	**47**	*e*P	**P**	**11 25 26.5**	**-1.6**
PDAR	**Pinedale Array**	**93.24**	**47**	P	**P**	**11 25 26.9**	**-1.3**
	comp=Z,2.6nm,1.0s,baz=250,slow=3.0,SNR=11						
PDAR				PKKPbc	**PKKPbc**	**11 42 37.1**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=116,slow=4.1,SNR=4.8						
PDAR				PKPPKP		11 50 49.5	
	comp=Z,1.2nm,0.9s,baz=86,slow=6.1,SNR=5.2						
PDAR				LR	LR	12 00 28.2	
	comp=Z,32µm,21.6s,baz=269,slow=31						
HPIG		**93.37**	**63**	PFAKE		11 25 40.0	+11
HPIG				LR	LR		
	comp=Z,34µm,19.0s						
MK01	**Makanchi Array**	**93.56**	**317**	*e*P	**P**	**11 25 27.6**	**-1.6**
ZAA0	**Zalesovo Array**	**93.57**	**324**	*e*P	**P**	**11 25 26.5**	**-2.5**
	comp=Z,238nm,1.4s						
ZAA0				LR	LR		
	comp=Z,36µm,22.0s						
ZALV	**Zalesovo Beam**	**93.57**	**324**	P	**P**	**11 25 26.6**	**-2.4**
	comp=Z,18nm,1.0s,baz=116,slow=3.6,SNR=15						
ZALV				PKKPbc	**PKKPdf**	**11 42 33.0**	**-2.8**
	comp=Z,0.8nm,0.6s,baz=344,slow=4.6,SNR=3.5						
ZALV				PKPPKP		11 50 50.9	
	comp=Z,0.4nm,0.4s,baz=253,slow=1.5,SNR=3.0						
ZAA1	**Zalesovo Array**	**93.57**	**324**	*e*P	**P**	**11 25 26.6**	**-2.4**
MK31	**Makanchi Array**	**93.57**	**317**	*e*P	**P**	**11 25 27.3**	**-2.0**
	comp=Z,325nm,1.5s						
MK31	**Makanchi Array**	**93.57**	**317**	*i* P	**P**	**11 25 27.5**	**-1.8**
MK31				pmax	pmax		
	comp=Z,112nm,0.9s						
MK32	**Makanchi Array**	**93.57**	**317**	*e*P	**P**	**11 25 27.3**	**-2.0**
MK32				*e*PP	**PP**	**11 29 21.0**	**+6.9**
MKAR	**Makanchi Array**	**93.57**	**317**	*e*P	**P**	**11 25 26.9**	**-2.4**
	comp=Z,522nm,0.9s						
MKAR				LR	LR		
	comp=Z,7µm,21.0s						
MKAR	**Makanchi Array**	**93.57**	**317**	*e*P	**P**	**11 25 27.6**	**-1.7**
MKAR	**Makanchi Array**	**93.57**	**317**	P	**P**	**11 25 27.3**	**-2.0**
	comp=Z,22nm,0.8s,baz=97,slow=6.3,SNR=48						
MKAR				PP	**PP**	**11 29 21.0**	**+6.9**
	comp=Z,8.4nm,0.9s,baz=108,slow=8.8,SNR=4.0						
MKAR				PKKPbc	**PKKPdf**	**11 42 32.7**	**-2.9**
	comp=Z,2.1nm,0.9s,baz=268,slow=3.6,SNR=7.1						
MKAR				PKPPKP		11 50 47.6	
	comp=Z,0.4nm,0.8s,baz=48,slow=2.1,SNR=2.9						
MKAR				LR	LR	12 06 19.3	
	comp=Z,20µm,21.6s,baz=92,slow=35						
Y22D	**IRIS PASSCAL I**	**93.60**	**56**	PFAKE		11 25 40.0	+10
Y22D				LR	LR		
	comp=Z,81µm,18.0s						
DDI	**Dehra Dun**	**93.66**	**300**	*e*P	**P**	**11 25 28.6**	**-1.5**
DDI				IAmb	IAmb	11 25 42.4	
	comp=Z,195nm,1.2s						
O20A	**White River Ci**	**93.70**	**50**	*e*P	**P**	**11 25 34.0**	**+3.7**
O20A				LR	LR		
	comp=Z,82µm,22.0s						
O20A	**White River Ci**	**93.70**	**50**	P	**P**	**11 25 31.2**	**+0.9**
	baz=259						
MAKZ	**Makanchi**	**93.78**	**317**	*e*P	**P**	**11 25 26.3**	**-4.0**
	comp=Z,400nm,1.5s						
MAKZ				LR	LR		
	comp=Z,29µm,19.0s						
MAKZ	**Makanchi**	**93.78**	**317**	*e*P	**P**	**11 25 28.4**	**-1.9**
RLMT	**Red Lodge**	**93.92**	**45**	PFAKE		11 25 40.0	+8.8
RLMT				LR	LR		
	comp=Z,55µm,20.0s						
RLMT	**Red Lodge**	**93.92**	**45**	P	**P**	**11 25 32.8**	**+1.6**
	baz=259						
HMDM	**Hanimaadhoo**	**94.02**	**276**	PFAKE		11 25 40.0	+8.0
HMDM				LR	LR		
	comp=Z,21µm,20.0s						
NDI	**New Delhi**	**94.09**	**298**	*e*P	**P**	**11 25 29.0**	**-3.0**
ANMO	**Albuquerque**	**94.14**	**55**	*e*P	P	11 25 37.4	+5.0
ANMO				LR	LR		
	comp=Z,63µm,21.0s						
ANMO	**Albuquerque**	**94.14**	**55**	⇑*e*P	**P**	**11 25 31.3**	**-1.1**
ANMO				pmax	pmax		
	comp=Z,27nm,1.5s						
ANMO				MLR	MLR		
	comp=Z,54µm,17.0s						
ANMO	**Albuquerque**	**94.14**	**55**	P	**P**	**11 25 33.0**	**+0.6**
	baz=260						
EGMT	**Eagleton**	**94.17**	**42**	*e*P	**P**	**11 25 29.5**	**-2.6**
	comp=Z,150nm,1.3s						
EGMT				LR	LR		
	comp=Z,42µm,20.0s						
EGMT	**Eagleton**	**94.17**	**42**	P	**P**	**11 25 32.6**	**+0.5**
	baz=258,SNR=7.8						
S22A	**4UR Ranch, Cre**	**94.34**	**53**	*e*P	**P**	**11 25 28.9**	**-4.5**
	comp=Z,113nm,1.8s						
S22A				LR	LR		
	comp=Z,42µm,20.0s						
S22A	**4UR Ranch, Cre**	**94.34**	**53**	P	**P**	**11 25 32.4**	**-1.0**
	baz=260						
MNCI	**Minicoy**	**94.41**	**278**	PFAKE		11 25 40.0	+6.2
MNCI				LR	LR		
	comp=Z,19µm,20.0s						
MNCY	**Minicoy**	**94.43**	**278**	*e*P	**P**	**11 25 31.0**	**-2.9**
MNTX	**Cornudas Mount**	**94.45**	**59**	*e*P	**P**	**11 25 30.4**	**-3.3**
	comp=Z,26nm,1.1s						
MNTX				LR	LR		
	comp=Z,63µm,21.0s						
MNTX	**Cornudas Mount**	**94.45**	**59**	P	**P**	**11 25 35.1**	**+1.4**
	baz=260						
SMCO	**Snowmass**	**94.48**	**51**	PFAKE		11 25 40.0	+5.8
SMCO				LR	LR		
	comp=Z,104µm,22.0s						
SMLA	**Simla**	**94.55**	**301**	*e*P	**P**	**11 25 32.3**	**-1.8**
SMLA				IAmb	IAmb	11 25 49.3	
	comp=Z,4µm,3.2s						
NVS	**Novosibirsk**	**94.67**	**325**	⇑*i*P	**P**	**11 25 34.2**	**+0.1**
NVS				*e*		11 29 24.4	
NVS				*e*S	**S**	**11 36 44.9**	**-2.0**
NVS				pmax	pmax		
	comp=N,38nm,1.8s						
NVS				pmax	pmax		
	comp=E,82nm,1.8s						
NVS				pmax	pmax		
	comp=Z,159nm,1.8s						
NVS				pmax	pmax		
	comp=Z,238nm,2.4s						
NVS				pmax	pmax		
	comp=N,40nm,2.1s						
NVS				pmax	pmax		
	comp=E,115nm,2.3s						
NVS				smax	smax		
	comp=E,68nm,2.5s						
YKA	**Yellowknife Ar**	**94.70**	**27**	P	**P**	**11 25 31.5**	**-2.5**
	comp=E,1.0nm,0.7s,baz=256,slow=4.7,SNR=22						
YKA				PP	**PP**	**11 29 27.5**	**+5.1**
	comp=E,2.4nm,0.8s,baz=255,slow=7.0,SNR=7.3						
YKA				PKKPbc	**PKKPdf**	**11 42 31.0**	**-3.0**
	comp=E,0.8nm,0.6s,baz=79,slow=2.8,SNR=12						
YKA				PKPPKP	**P'P'df**	**11 50 46.5**	**+4.7**
	comp=E,0.5nm,0.9s,baz=68,slow=2.5,SNR=5.2						
YKA				LR	LR	12 02 33.0	
	comp=E,8µm,19.9s,baz=268,slow=32						
YKB5	**Yellowknife Ar**	**94.70**	**27**	*e*P	**P**	**11 25 31.8**	**-2.2**
YKW3	**Yellowknife Ar**	**94.71**	**27**	*e*P	**P**	**11 25 30.0**	**-4.1**
	comp=E,65nm,1.6s						
YKW3				LR	LR		
	comp=Z,84µm,20.0s						
RWWY	**Rawlins**	**94.75**	**49**	PFAKE		11 25 40.0	+4.8
RWWY				LR	LR		
	comp=Z,46µm,20.0s						
SHLS	**Shalkode**	**94.84**	**313**	*e*P	**P**	**11 25 31.9**	**-3.4**
SHLS				*e*		11 29 22.8	
SHLS				*e*S	**SKSac**	**11 36 09.8**	**-1.1**
SHLS				pmax	pmax		
	comp=Z,174nm,1.5s						
SHLS				smax	smax		
	comp=N,2µm,5.2s						
SHLS				MLR	MLR		
	comp=Z,12µm,20.0s						
SHLS	**Shalkode**	**94.84**	**313**	*e*P	**P**	**11 25 31.9**	**-3.4**
	comp=Z,174nm,1.5s						
SHLS				*e*PP	**PP**	**11 29 22.8**	**-1.5**
SHLS				*e*S	**SKSac**	**11 36 09.8**	**-1.1**
	comp=Z,2µm,5.2s						
SHLS				*e*LR	LR	12 08 35.4	
	comp=Z,12µm,20.0s						
PDGK	**Podgornoye**	**94.85**	**313**	P	**P**	**11 25 34.1**	**-1.3**
PDGK				pmax	pmax		
	comp=Z,56nm,1.1s						
GOA	**Goa**	**94.92**	**285**	*e*P	**P**	**11 25 33.9**	**-2.2**
UZB	**Uzynbulak**	**95.16**	**313**	*e*P	**P**	**11 25 34.6**	**-2.2**
UZB				*e*		11 29 19.2	
UZB				*e*S	**SKSac**	**11 36 10.5**	**-2.2**
UZB				pmax	pmax		
	comp=Z,79nm,0.8s						
UZB				smax	smax		
	comp=N,2µm,3.5s						
UZB				MLR	MLR		
	comp=Z,9µm,20.0s						
UZB	**Uzynbulak**	**95.16**	**313**	*e*P	**P**	**11 25 34.7**	**-2.2**
	comp=Z,79nm,0.8s						
UZB				*e*PP	**PP**	**11 29 19.2**	**-7.5**
UZB				*e*S	**SKSac**	**11 36 10.6**	**-2.2**
	comp=Z,2µm,3.5s						
UZB				*e*LR	LR	12 09 21.6	
	comp=Z,9µm,19.5s						
SDCO	**Great Sand Dun**	**95.38**	**53**	PFAKE		11 25 50.0	+12
SDCO				LR	LR		
	comp=Z,56µm,20.0s						
SDCO	**Great Sand Dun**	**95.38**	**53**	P	**P**	**11 25 37.4**	**-0.8**
	baz=260						
POO	**Poona**	**95.41**	**288**	*e*P	**P**	**11 25 37.7**	**-0.6**
POO				IAmb	IAmb	11 25 47.1	
K22A	**Casper**	**95.42**	**48**	PFAKE		11 25 50.0	+12
K22A				LR	LR		
	comp=Z,40µm,21.0s						
K22A	**Casper**	**95.42**	**48**	P	**P**	**11 25 38.7**	**+0.6**
	baz=260						
KPKS	**Kokpek**	**95.45**	**313**	*e*P	**P**	**11 25 35.3**	**-2.8**
KPKS				*e*		11 29 29.1	
KPKS				pmax	pmax		
	comp=Z,158nm,1.9s						
KPKS				MLR	MLR		
	comp=Z,18µm,18.0s						
KPKS	**Kokpek**	**95.45**	**313**	*e*P	**P**	**11 25 35.4**	**-2.8**
	comp=Z,158nm,1.9s						
KPKS				*e*PP	**PP**	**11 29 29.2**	**+0.2**
KPKS				*e*S	**SKSac**	**11 36 15.8**	**+1.6**
	comp=Z,3µm,2.9s						
KPKS				*e*LR	LR	12 08 58.0	
	comp=Z,18µm,18.1s						
DHRM	**DHARAMSHALA**	**95.47**	**302**	*e*P	**P**	**11 25 36.9**	**-1.7**
DHRM				IAmb	IAmb	11 25 49.5	
	comp=Z,89nm,0.4s						
PRZ	**Przheval'sk**	**95.50**	**312**	PFAKE		11 25 50.0	+12
PRZ				LR	LR		
	comp=Z,42µm,21.0s						
LTX	**Lajitas**	**95.52**	**61**	*e*P	**P**	**11 25 38.3**	**-0.4**
LTX				*e*PP	**PP**	**11 29 35.8**	**+5.9**
LTX	**Lajitas**	**95.52**	**61**	*e*P	**P**	**11 25 38.3**	**-0.4**
LTX				*e*		11 29 35.8	
TXAR	**Lajitas Array**	**95.52**	**61**	P	**P**	**11 25 38.3**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=229,slow=4.8,SNR=4.8						
TXAR				PP	**PP**	**11 29 35.8**	**+5.9**
	comp=Z,12nm,1.2s,baz=242,slow=5.4,SNR=8.9						
TXAR				PKKPbc	**PKKPbc**	**11 42 29.4**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=113,slow=9.6,SNR=2.9						
TXAR				PKPPKP	**P'P'df**	**11 50 43.0**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=347,slow=2.8,SNR=2.6						
TXAR				LR	LR	12 00 59.0	
	comp=Z,58µm,21.3s,baz=0.0,slow=31						
N23A	**Red Feather La**	**95.56**	**50**	PFAKE		11 25 50.0	+11
N23A				LR	LR		
	comp=Z,44µm,22.0s						
N23A	**Red Feather La**	**95.56**	**50**	P	**P**	**11 25 39.6**	**+0.8**
	baz=260						
SATY	**Saty**	**95.59**	**313**	*e*P	P	11 25 46.2	+7.4
SATY				pmax	pmax		
	comp=Z,86nm,1.6s						
SATY	**Saty**	**95.59**	**313**	*e*P	P	11 25 46.2	+7.5
	comp=Z,86nm,1.6s						
SATY				*e*S	**SKSac**	**11 36 22.8**	**+7.9**
	comp=Z,3µm,2.4s						
SATY				*e*LQ	LQ	12 02 51.1	
SATY				*e*LR	LR	12 09 26.9	
SEM	**Semipalatinsk**	**95.60**	**320**	*e*P	**P**	**11 25 34.1**	**-4.6**
SEM				*e*S	**SKSac**	**11 36 10.3**	**-4.6**
SEM				pmax	pmax		
	comp=Z,70nm,1.7s						
SEM				smax	smax		
	comp=N,4µm,8.4s						
SEM				MLR	MLR		
	comp=Z,18µm,20.0s						
SEM	**Semipalatinsk**	**95.60**	**320**	*e*P	**P**	**11 25 34.2**	**-4.6**
	comp=Z,70nm,1.7s						
SEM				*e*S	**SKSac**	**11 36 10.3**	**-4.6**
	comp=Z,4µm,8.4s						
SEM				*e*LQ	LQ	12 03 12.8	
SEM				*e*LR	LR	12 09 30.1	
	comp=Z,18µm,20.5s						
ISCO	**Idaho Springs**	**95.63**	**51**	PFAKE		11 25 50.0	+11
ISCO				LR	LR		
	comp=Z,117µm,22.0s						
ISCO	**Idaho Springs**	**95.63**	**51**	P	**P**	**11 25 38.5**	**-0.8**
	baz=261						
PMSA	**Palmer Station**	**95.79**	**161**	PFAKE		11 25 50.0	+11
PMSA				LR	LR		
	comp=Z,33µm,18.0s						
TARG	**Taragay, Kyrgy**	**95.81**	**311**	*e*P	**P**	**11 25 42.7**	**+2.5**
Q24A	**Divide**	**95.85**	**52**	PFAKE		11 25 50.0	+10
Q24A				LR	LR		
	comp=Z,66µm,22.0s						
Q24A	**Divide**	**95.85**	**52**	P	P	11 25 45.4	+5.1
	baz=261						
TDK	**Taldyqorghan**	**95.91**	**315**	*e*P	**P**	**11 25 38.2**	**-1.8**
TDK				*e*		11 29 33.7	
TDK				*i* S	**SKSac**	**11 36 17.6**	**+1.3**
TDK				smax	smax		
	comp=N,3µm,4.3s						
TDK				MLR	MLR		
	comp=Z,31µm,18.0s						
TDK	**Taldyqorghan**	**95.91**	**315**	*e*P	**P**	**11 25 38.2**	**-1.8**
TDK				*e*PP	**PP**	**11 29 33.7**	**+1.3**
TDK				⇓*i*S	**SKSac**	**11 36 17.7**	**+1.3**
	comp=Z,3µm,4.3s						
TDK				*e*LR	LR	12 09 09.4	
	comp=Z,31µm,18.1s						
PHWY	**Pilot Hill**	**95.98**	**49**	PFAKE		11 25 50.0	+9.2
PHWY				LR	LR		
	comp=Z,44µm,18.0s						
NRIK	**Noril'sk**	**96.05**	**340**	P	**P**	**11 25 38.7**	**-1.4**
	comp=Z,8.8nm,0.9s,baz=110,slow=4.1,SNR=9.7						
NRIK				PP	**PP**	**11 29 33.2**	**+0.4**
	comp=Z,6.0nm,0.8s,baz=105,slow=10.0,SNR=3.1						
NRIK				LR	LR	12 10 46.4	
	comp=Z,30µm,18.4s,baz=106,slow=37						
T25A	**Trinidad**	**96.14**	**53**	PFAKE		11 25 50.0	+8.5
T25A				LR	LR		
	comp=Z,77µm,20.0s						
T25A	**Trinidad**	**96.14**	**53**	P	**P**	**11 25 43.6**	**+2.1**
	baz=261						
LAO	**LASA Array**	**96.29**	**44**	PFAKE		11 25 50.0	+8.2
LAO				LR	LR		
	comp=Z,48µm,20.0s						
LAO	**LASA Array**	**96.29**	**44**	P	**P**	**11 25 43.8**	**+2.0**
	baz=261						
KDJ	**Kajisay**	**96.33**	**312**	PFAKE		11 25 50.0	+7.7
KDJ				LR	LR		
	comp=Z,47µm,19.0s						
BOM	**Bombay**	**96.44**	**288**	*e*P	**P**	**11 25 40.8**	**-2.2**
BOM				*e*x	x	11 36 23.7	
BOM				IAMs_20	IAMs_20	12 06 57.6	
	comp=Z,34µm,25.4s						
MDOK	**Medeo**	**96.58**	**313**	*e*P	**P**	**11 25 44.4**	**+1.1**
MDOK				MLR	MLR		
	comp=Z,12µm,17.0s						
MDOK	**Medeo**	**96.58**	**313**	*e*P	**P**	**11 25 44.4**	**+1.1**
	comp=Z,1µm,7.2s						
MDOK				⇓*i*S	**SKSac**	**11 36 24.2**	**+4.0**
MDOK				*e*LR	LR	12 09 43.5	
	comp=Z,12µm,16.8s						
KURK	**Kurchatov**	**96.67**	**320**	*e*P	**P**	**11 25 40.9**	**-2.4**
	comp=Z,6.5nm,1.5s						
KURK				*e*PP	PP	11 29 29.0	-9.1
KURK				LR	LR		
	comp=Z,76µm,22.0s						
KURK	**Kurchatov**	**96.67**	**320**	⇓*e*P	**P**	**11 25 39.9**	**-3.4**
KURK				pmax	pmax		
	comp=Z,153nm,1.6s						
KURK				MLR	MLR		
	comp=Z,51µm,18.0s						
KURK	**Kurchatov**	**96.67**	**320**	P	**P**	**11 25 42.5**	**-0.8**
	SNR=35						
KURK				P	**P**	**11 25 42.5**	**-0.8**
	SNR=35						
NVL	**N'lazarevskaya**	**96.67**	**188**	*e*P	P	11 25 50.4	+7.4
NVL				*e*		11 29 46.9	
NVL				pmax	pmax		
	comp=Z,15nm,1.0s						
AAA	**Alma-Ata**	**96.69**	**313**	*e*P	**P**	**11 25 40.3**	**-3.4**
AAA				*e*		11 29 36.1	
AAA				pmax	pmax		
	comp=Z,130nm,0.3s						
AAA				MLR	MLR		
	comp=Z,6µm,17.0s						
AAA	**Alma-Ata**	**96.69**	**313**	*e*P	**P**	**11 25 40.4**	**-3.4**
	comp=Z,130nm,0.3s						
AAA				*e*PP	**PP**	**11 29 36.1**	**-2.4**
AAA				*e*S	**SKSac**	**11 36 22.7**	**+2.1**
	comp=Z,3µm,8.0s						
AAA				*e*LR	LR	12 09 46.5	
	comp=Z,6µm,17.2s						
KURBB	**Kurchatov Arra**	**96.71**	**320**	P	**P**	**11 25 40.9**	**-2.6**
	comp=Z,1.6nm,0.9s,baz=93,slow=3.8						
KURBB				PP	PP	11 29 29.0	-9.4
	comp=Z,13nm,1.0s,baz=97,slow=6.5,SNR=5.6						
KURBB				PKKPbc	**PKKPbc**	**11 42 25.2**	**-3.1**
	comp=Z,1.2nm,0.9s,baz=276,slow=3.9,SNR=4.8						
KURBB				PKPPKP	P'P'df	11 50 48.1	+9.0
	comp=Z,0.3nm,0.8s,baz=251,slow=2.8,SNR=4.1						
KSH	**Kashi**	**96.85**	**309**	⇓*i*P	P	11 25 49.7	+5.1
KSH				PP	**PP**	**11 29 42.6**	**+2.7**
KSH				SKS	**SKSac**	**11 36 21.4**	**-0.3**
KSH				S	**ScS**	**11 37 11.0**	**+3.8**
KSH				sS	sS	11 37 16.4	+3.1
KSH				SS	**SS**	**11 43 48.2**	**+5.6**
KSH				pmax	pmax		
	comp=Z,21nm,0.9s						
KSH				pmax	pmax		
	comp=Z,2µm,6.0s						
KSH				LR	LR		
	comp=Z,14µm,14.0s						
KSH				LR	LR		
	comp=Z,27µm,13.9s						
KSH				LR	LR		
	comp=Z,27µm,21.4s						
MSTX	**Muleshoe**	**96.98**	**57**	PFAKE		11 25 50.0	+4.7
MSTX				LR	LR		
	comp=Z,63µm,20.0s						
MSTX	**Muleshoe**	**96.98**	**57**	P	**P**	**11 25 43.5**	**-1.8**
	baz=262						
ULHL	**Ulahol**	**97.04**	**312**	P	Pdif	11 25 51.5	+5.9
	SNR=8.2						
NRN	**Naryn**	**97.10**	**311**	*e*P	Pdif	11 25 48.1	+2.1
NRN				LR	LR		
	comp=Z,45µm,20.0s						
NRN	**Naryn**	**97.10**	**311**	*e*P	Pdif	11 25 48.1	+2.1
KUU	**Kurty**	**97.20**	**313**	*de*P	**P**	**11 25 43.4**	**-2.5**
KUU				*e*		11 29 40.3	
KUU				pmax	pmax		
	comp=Z,31nm,1.1s						
KUU				MLR	MLR		
	comp=Z,8µm,17.0s						
KUU	**Kurty**	**97.20**	**313**	⇓*e*P	**P**	**11 25 43.5**	**-2.5**
	comp=Z,31nm,1.1s						
KUU				*e*PP	**PP**	**11 29 40.3**	**-2.1**
KUU				⇑*i*S	**SKSac**	**11 36 27.5**	**+4.4**
	comp=Z,4µm,4.8s						
KUU				*e*LR	LR	12 10 40.9	
	comp=Z,8µm,17.3s						
SNAA	**Sanae**	**97.31**	**184**	P	**P**	**11 25 44.6**	**-1.3**
SNAA	**Sanae**	**97.31**	**184**	*e*P	**P**	**11 25 44.4**	**-1.6**
	comp=Z,47nm,1.3s						
SNAA				LR	LR		
	comp=Z,105µm,20.0s						
SNAA	**Sanae**	**97.31**	**184**	P	**P**	**11 25 44.2**	**-1.8**
	comp=Z,4.8nm,0.8s,baz=196,slow=5.8,SNR=3.6						
SNAA				PKKPbc	**PKKPbc**	**11 42 25.6**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=336,slow=17,SNR=2.0						
RSSD	**Black Hills**	**97.44**	**47**	PFAKE		11 26 00.0	+13
RSSD				LR	LR		
	comp=Z,34µm,21.0s						
RSSD	**Black Hills**	**97.44**	**47**	P	Pdif	11 25 51.3	+4.0
	baz=262						
TKM2	**Tokmak 2**	**97.60**	**312**	P	Pdif	11 25 54.0	+5.9
	SNR=6.9						
TKM2	**Tokmak 2**	**97.60**	**312**	*i* P	**P**	**11 25 45.9**	**-2.1**
TKM2				pmax	pmax		
	comp=Z,11nm,0.8s						
KZA	**Kyzart**	**97.75**	**311**	P	Pdif	11 25 55.0	+6.0
	SNR=7.8						
KSCO	**Kaye Shedlock’**	**97.80**	**52**	PFAKE		11 26 00.0	+11
KSCO				LR	LR		
	comp=Z,71µm,21.0s						
KSCO	**Kaye Shedlock’**	**97.80**	**52**	P	**P**	**11 25 48.6**	**-0.3**
	baz=262						
DGMT	**Dagmar**	**97.90**	**42**	*e*P	Pdif	11 25 54.1	+5.1
DGMT				LR	LR		
	comp=Z,45µm,21.0s						
AMTX	**Amarillo**	**98.00**	**56**	PFAKE		11 26 00.0	+10
AMTX				LR	LR		
	comp=Z,73µm,19.0s						
AMTX	**Amarillo**	**98.00**	**56**	P	Pdif	11 25 50.9	+1.0
	baz=262						
VNA3	**Neumayer Olymp**	**98.02**	**181**	P	P	11 25 44.1	-5.0
KBK	**Karagaybulak**	**98.04**	**312**	P	Pdif	11 25 51.5	+1.5
	SNR=5.2						
CRZF	**Crozet Islands**	**98.20**	**220**	PFAKE		11 26 00.0	+10
CRZF				LR	LR		
	comp=Z,25µm,20.0s						
NIL	**Nilore**	**98.21**	**303**	PFAKE		11 26 00.0	+9.2
NIL				LR	LR		
	comp=Z,44µm,22.0s						
CHMS	**Chumysh**	**98.23**	**312**	P	Pdif	11 25 56.1	+5.5
	SNR=5.7						
VNA2	**Neumayer--Watz**	**98.27**	**182**	P	**P**	**11 25 49.7**	**-0.5**
FRU1	**Bishkek**	**98.30**	**312**	PFAKE		11 26 00.0	+9.0
FRU1				LR	LR		
	comp=Z,57µm,21.0s						
FRU	**Bishkek**	**98.31**	**312**	*e*P	Pdif	11 25 52.0	+1.0
FRU				*e*S	**SKSac**	**11 36 30.0**	**+1.2**
FRU				*i*		11 37 06.0	
FRU				pmax	pmax		
	comp=Z,150nm,2.0s						
AAK	**Ala-Archa**	**98.37**	**312**	P	Pdif	11 25 57.5	+6.0
	SNR=7.0						
AAK	**Ala-Archa**	**98.37**	**312**	*e*P	**P**	**11 25 48.9**	**-2.6**
	comp=Z,2.5nm,1.0s						
AAK				LR	LR		
	comp=Z,54µm,21.0s						
AAK	**Ala-Archa**	**98.37**	**312**	*i* P	**P**	**11 25 49.9**	**-1.5**
	SNR=8.3						
AAK	**Ala-Archa**	**98.37**	**312**	*e*P	**P**	**11 25 49.8**	**-1.6**
AAK	**Ala-Archa**	**98.37**	**312**	P	**P**	**11 25 48.9**	**-2.6**
	comp=Z,2.2nm,0.8s,baz=158,slow=11,SNR=1.6						
AAK				LR	LR	12 10 26.4	
	comp=Z,25µm,20.5s,baz=68,slow=36						
OGNE	**Ogallala**	**98.50**	**50**	PFAKE		11 26 00.0	+8.1
OGNE				LR	LR		
	comp=Z,85µm,20.0s						
OGNE	**Ogallala**	**98.50**	**50**	Pdiff	P	11 25 45.0	-7.0
	baz=263						
LNIG	**Linares**	**98.56**	**66**	PFAKE		11 26 00.0	+7.5
LNIG				LR	LR		
	comp=Z,40µm,19.0s						
AML	**Almayashu**	**98.90**	**311**	P	Pdif	11 25 60.0	+5.9
	SNR=9.8						
JCT	**Junction City**	**99.00**	**61**	PFAKE		11 26 00.0	+5.6
JCT				LR	LR		
	comp=Z,76µm,20.0s						
JCT	**Junction City**	**99.00**	**61**	Pdiff		11 25 53.3	
	baz=263						
833A	**Chaparral WMA,**	**99.08**	**63**	PFAKE		11 26 00.0	+5.3

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833A                                      LR        LR
        comp=Z,54µm,18.0s
833A    Chaparral WMA,     99.08  63     Pdiff     Pdif      11 25 50.6 -4.1
        baz=263
ARSB    Arslanbob          99.34 310    ePdiff     Pdif      11 25 53.8 -2.0
        comp=Z,143nm,1.8s
ARSB                                      LR        LR
        comp=Z,69µm,20.0s
ABTX    Abilene, Hawle     99.40  59     PFAKE               11 26 10.0  +14
ABTX                                      LR        LR
        comp=Z,83µm,20.0s
ABTX    Abilene, Hawle     99.40  59     Pdiff     Pdif      11 25 56.1  0.0
        baz=263
MNAS    Manas              99.82 311     P         Pdif      11 26 00.3 +2.4
MNAS                                      pmax      pmax
        comp=Z,23nm,1.4s
GO10    Punta Arenas       99.91 149     PFAKE               11 26 10.0  +12
GO10                                      LR        LR
        comp=Z,39µm,18.0s
FFC     Flin Flon          99.94  36    ePdif      Pdif      11 25 56.8 -1.1
FFC                                       LR        LR
        comp=Z,122µm,21.0s
FFC     Flin Flon          99.94  36   i P         Pdif      11 25 57.4 -0.5
BHJ     Bhuj               99.99 292    eP         Pdif      11 25 56.9 -1.9
CBKS    Cedar Bluff       100.01  52     PFAKE               11 26 10.0  +11
CBKS                                      LR        LR
        comp=Z,51µm,20.0s
GO09    Cerro Castillo    100.26 147     PFAKE               11 26 10.0  +10
GO09                                      LR        LR
        comp=Z,38µm,19.0s
KVTX    Kingsville        100.30  64     PFAKE               11 26 10.0  +10
KVTX                                      LR        LR
        comp=Z,26µm,18.0s
U32A    Winter Ranch,     100.35  55     PFAKE               11 26 10.0  +10
U32A                                      LR        LR
        comp=Z,69µm,21.0s
WMOK    Wichita Mounta    100.36  56     PFAKE               11 26 10.0  +10
WMOK                                      LR        LR
        comp=Z,68µm,20.0s
WMOK    Wichita Mounta    100.36  56     Pdiff     Pdif      11 26 06.4 +6.2
        baz=264
MDND    Maddock           100.90  43     PFAKE               11 26 10.0 +7.6
MDND                                      LR        LR
        comp=Z,48µm,20.0s
MDND    Maddock           100.90  43     Pdiff     Pdif      11 26 06.8 +4.4
        baz=266
435B    Jarrell           100.94  61     PFAKE               11 26 10.0 +7.1
435B                                      LR        LR
        comp=Z,67µm,20.0s
435B    Jarrell           100.94  61     Pdiff     Pdif      11 26 09.0 +6.1
        baz=264
SUSD    Miller            101.10  47     Pdiff     Pdif      11 26 12.8 +9.4
        baz=266
GAR     Garm              101.15 308     PFAKE               11 26 10.0 +6.2
GAR                                       LR        LR
        comp=Z,123µm,22.0s
WHTX    Lake Whitney,     101.17  59     PFAKE               11 26 10.0 +6.1
WHTX                                      LR        LR
        comp=Z,61µm,21.0s
WHTX    Lake Whitney,     101.17  59     Pdiff     Pdif      11 26 08.0 +4.1
        baz=264
KK31    Karatay Array     101.33 312    ePdif      Pdif      11 26 02.8 -1.6
KK31    Karatay Array     101.33 312    eP         Pdif      11 26 02.8 -1.6
KKAR    Karatay Array     101.33 312    ePdif      Pdif      11 26 02.8 -1.6
KKAR    Karatay Array     101.33 312    eP         Pdif      11 26 02.8 -1.6
BGNE    Belgrade          101.46  50     PFAKE               11 26 10.0 +5.0
BGNE                                      LR        LR
        comp=Z,80µm,20.0s
BGNE    Belgrade          101.46  50     Pdiff     Pdif      11 26 07.2 +2.2
        baz=266
KBL     Kabul             101.78 303     PFAKE               11 26 20.0  +13
KBL                                       LR        LR
        comp=Z,23µm,20.0s
BVA0    Borovoye Array    101.97 322     P         Pdif      11 26 08.9 +1.9
BVA0                                      pmax      pmax
        comp=Z,19nm,1.0s
BVAR    Borovoye Array    101.97 322     P         Pdif      11 26 04.8 -2.2
        comp=Z,3.1nm,0.9s,baz=84,slow=7.6,SNR=12
BVAR                                      PP        PP       11 30 13.4 -5.0
        comp=Z,0.5nm,0.5s,baz=266,slow=38,SNR=2.6
BRVK    Borovoye          102.04 322    ePdif      Pdif      11 26 07.9 +0.7
BRVK                                      LR        LR
        comp=Z,71µm,20.0s
BRVK    Borovoye          102.04 322⇑eP            Pdif      11 26 05.3 -2.0
BRVK                                      pmax      pmax
        comp=Z,66nm,2.2s
BRVK                                      MLR       MLR
        comp=Z,57µm,18.0s
KSU1    Kansas State U    102.47  52     PFAKE               11 26 20.0  +10
KSU1                                      LR        LR
        comp=Z,68µm,20.0s
ECSD    EROS Data Cent    102.74  47     PFAKE               11 26 20.0 +9.4
ECSD                                      LR        LR
        comp=Z,50µm,19.0s
RES     Resolute Bay      102.82  16     PFAKE               11 26 20.0  +10
RES                                       LR        LR
        comp=Z,93µm,22.0s
TUL1    Leonard           102.89  56     PFAKE               11 26 20.0 +8.5
TUL1                                      LR        LR
        comp=Z,80µm,18.0s
X37A    Clayton           103.14  57     PFAKE               11 26 20.0 +7.4
X37A                                      LR        LR
        comp=Z,65µm,19.0s
MRIV    Mauritius Mete    103.19 246     PFAKE               11 26 20.0 +6.8
MRIV                                      LR        LR
        comp=Z,11µm,19.0s
PAYG    Puerto Ayora      103.33  93     PFAKE               11 26 20.0 +6.0
PAYG                                      LR        LR
        comp=Z,51µm,20.0s
ULM     Lac du Bonnet     103.45  41     Pdif      Pdif      11 26 19.9 +6.2
ULM                                       LR        LR
        comp=Z,45µm,20.0s
ULM     Lac du Bonnet     103.45  41     Pdiff     Pdif      11 26 19.9 +6.2
        comp=Z,2.7nm,0.8s,baz=250,slow=6.9,SNR=4.3
ULM                                       PP        PKiKP    11 30 31.2 -1.3
        comp=Z,2.0nm,0.8s,baz=274,slow=9.1,SNR=3.1
ULM                                       PKiKP     PP       11 30 37.1 +7.5
        comp=Z,2.1nm,0.5s,baz=282,slow=2.8,SNR=3.3
ULM                                       PKKP      PKKPbc   11 42 13.0 +4.0
        comp=Z,2.2nm,0.8s,baz=37,slow=9.2,SNR=4.0
ULM                                       PKPPKP    P'P'df   11 50 34.8 +8.3
        comp=Z,1.2nm,0.7s,baz=127,slow=5.1,SNR=3.2
NATX    Nacogdoches       103.52  60     PFAKE               11 26 20.0 +5.6
NATX                                      LR        LR
        comp=Z,49µm,20.0s
CCIG    Comitan           104.24  76     PFAKE               11 26 30.0  +12
CCIG                                      LR        LR
        comp=Z,26µm,19.0s
W39A    Magazine          104.48  56     PFAKE               11 26 30.0  +11
W39A                                      LR        LR
        comp=Z,48µm,20.0s
RER     Riviere de l'E    104.50 245     PFAKE               11 26 30.0  +11
RER                                       LR        LR
        comp=Z,20µm,21.0s
MIAR    Mount Ida         104.62  57     PFAKE               11 26 30.0  +11
MIAR                                      LR        LR
        comp=Z,74µm,21.0s
SCIA    State Center      105.17  49     PFAKE               11 30 50.0  +14
SCIA                                      LR        LR
        comp=Z,65µm,20.0s
Z41A    Richland Creek    105.19  58     PFAKE               11 30 50.0  +14
Z41A                                      LR        LR
        comp=Z,56µm,21.0s
X40A    Basin Creek Fa    105.22  57     PFAKE               11 30 50.0  +14
X40A                                      LR        LR
        comp=Z,65µm,21.0s
SPMN    Marine on St.     105.50  46     PFAKE               11 30 50.0  +14
SPMN                                      LR        LR
        comp=Z,60µm,20.0s
UALR    University of     105.64  57     PFAKE               11 30 50.0  +13
UALR                                      LR        LR
        comp=Z,72µm,19.0s
W41B    Gary Mavity, V    105.74  56     PFAKE               11 30 50.0  +13
W41B                                      LR        LR
        comp=Z,95µm,20.0s
E38A    The Farm, Brul    106.35  45     PFAKE               11 30 50.0  +12
E38A                                      LR        LR
        comp=Z,50µm,21.0s
EYMN    Ely               106.36  43     PFAKE               11 30 50.0  +12
EYMN                                      LR        LR
        comp=Z,63µm,20.0s
I39A    Houston           106.43  47     PFAKE               11 30 50.0  +12
I39A                                      LR        LR
        comp=Z,45µm,19.0s
CCM     Cathedral Cave    106.62  53     PFAKE               11 30 50.0  +11
CCM                                       LR        LR
        comp=Z,77µm,21.0s
L40A    Anamosa           106.66  49     PFAKE               11 30 50.0  +11
L40A                                      LR        LR
        comp=Z,47µm,19.0s
T42A    Van Buren         106.73  55     PFAKE               11 30 50.0  +11
T42A                                      LR        LR
        comp=Z,80µm,20.0s
GO06    Curarrehue        106.81 137     PFAKE               11 30 50.0  +11
GO06                                      LR        LR
        comp=Z,58µm,22.0s
X43A    Marvell           106.84  57     PFAKE               11 30 50.0  +11
X43A                                      LR        LR
        comp=Z,32µm,20.0s
N41A    Harden Midland    106.94  51     PFAKE               11 30 50.0  +11
N41A                                      LR        LR
        comp=Z,94µm,22.0s
EFI     East Falkland     107.03 153     PFAKE               11 30 50.0  +11
EFI                                       LR        LR
        comp=Z,36µm,22.0s
VBMS    Vicksburg         107.06  60     PFAKE               11 30 50.0  +10
VBMS                                      LR        LR
        comp=Z,39µm,21.0s
PBMO    Poplar Bluff      107.25  55     PFAKE               11 30 50.0  +10
PBMO                                      LR        LR
        comp=Z,72µm,20.0s
FVM     French Village    107.27  54     PFAKE               11 30 50.0  +10
FVM                                       LR        LR
        comp=Z,71µm,21.0s
G40A    Rib Lake          107.34  46     PFAKE               11 30 50.0  +10
G40A                                      LR        LR
        comp=Z,51µm,20.0s
P42A    Winchester        107.34  52     PFAKE               11 30 50.0  +10
P42A                                      LR        LR
        comp=Z,92µm,20.0s
JFWS    Jewell Farm       107.37  48     PFAKE               11 30 50.0  +10
JFWS                                      LR        LR
        comp=Z,43µm,18.0s
SLM     Saint Louis       107.42  53     PFAKE               11 30 50.0  +10
SLM                                       LR        LR
        comp=Z,87µm,22.0s
I41A    Arkdale           107.61  47     PFAKE               11 30 50.0  +10
I41A                                      LR        LR
        comp=Z,59µm,21.0s
MET     Memphis--Engin    107.63  57     PFAKE               11 30 50.0 +9.4
MET                                       LR        LR
        comp=Z,65µm,19.0s
H41A    Junction City     107.75  47     PFAKE               11 30 50.0 +9.4
H41A                                      LR        LR
        comp=Z,62µm,21.0s
L42A    Oliver, Polo      107.82  49     PFAKE               11 30 50.0 +9.2
L42A                                      LR        LR
        comp=Z,77µm,22.0s
PVMO    Portageville      107.84  55     PFAKE               11 30 50.0 +9.0
PVMO                                      LR        LR
        comp=Z,59µm,18.0s
C40A    Isle Royale Na    107.93  43     PFAKE               11 30 50.0 +9.2
C40A                                      LR        LR
        comp=Z,67µm,20.0s
COWI    Conover           108.05  45     PFAKE               11 30 50.0 +8.9
COWI                                      LR        LR
        comp=Z,73µm,22.0s
OXF     Oxford            108.05  57     PFAKE               11 30 50.0 +8.6
OXF                                       LR        LR
        comp=Z,39µm,20.0s
F41A    Three Lakes       108.09  45     PFAKE               11 30 50.0 +8.8
F41A                                      LR        LR
        comp=Z,80µm,20.0s
HDIL    Hopedale          108.13  51     PFAKE               11 30 50.0 +8.6
HDIL                                      LR        LR
        comp=Z,92µm,22.0s
SIUC    Southern Illin    108.23  54     PFAKE               11 30 50.0 +8.3
SIUC                                      LR        LR
        comp=Z,94µm,21.0s
I42A    Draeger Farm,     108.31  47     PFAKE               11 30 50.0 +8.3
I42A                                      LR        LR
        comp=Z,29µm,19.0s
TULEG   Thule             108.34  12     PFAKE               11 30 50.0 +9.2
TULEG                                     LR        LR
        comp=Z,47µm,21.0s
Q44A    Meyer Farm, Va    108.37  53     PFAKE               11 30 50.0 +8.1
Q44A                                      LR        LR
        comp=Z,90µm,20.0s
D41A    Chassel           108.38  44     PFAKE               11 30 50.0 +8.3
D41A                                      LR        LR
        comp=Z,61µm,20.0s
H42A    Shiocton          108.56  47     PFAKE               11 30 50.0 +7.9
H42A                                      LR        LR
        comp=Z,69µm,19.0s
G42A    Mountain          108.59  46     PFAKE               11 30 50.0 +7.9
G42A                                      LR        LR
        comp=Z,42µm,20.0s
ARU     Arti              108.63 326     PFAKE               11 30 50.0 +8.2
ARU                                       LR        LR
        comp=Z,59µm,21.0s
ARU     Arti              108.63 326     P         Pdif      11 26 41.8 +5.3
ARU                                                          11 31 09.2
ARU                                       PPP       PPP      11 33 30.3
ARU                                                          11 37 48.8
ARU                                       SP        SP       11 40 33.6 +3.2
ARU                                       SS        SS       11 46 29.7 +5.9
ARU                                       SSS       SSS      11 50 24.9
ARU                                       MLR       MLR
        comp=Z,57µm,21.0s
TGUH    Tegucigalpa,Un    108.63  79     PFAKE               11 30 50.0 +7.0
TGUH                                      LR        LR
        comp=Z,36µm,21.0s
AB31    Akbulak array     108.64 318   i P         Pdif      11 26 44.7 +8.0
AB31                                      pmax      pmax
        comp=Z,2.0nm,1.0s
T45A    Paducah           108.69  55     PFAKE               11 30 50.0 +7.4
T45A                                      LR        LR
        comp=Z,79µm,18.0s
K43A    Burlington        108.79  49     PFAKE               11 30 50.0 +7.4
K43A                                      LR        LR
        comp=Z,63µm,22.0s
147A    Livingston        108.97  59     PFAKE               11 30 50.0 +6.8
147A                                      LR        LR
        comp=Z,53µm,22.0s
M44A    Midewin, Midew    109.06  50     PFAKE               11 30 50.0 +6.9
M44A                                      LR        LR
        comp=Z,68µm,20.0s
OLIL    Olney             109.09  53     PFAKE               11 30 50.0 +6.7
OLIL                                      LR        LR
        comp=Z,72µm,20.0s
H43A    Windswept, Lux    109.10  47     PFAKE               11 30 50.0 +6.9
H43A                                      LR        LR
        comp=Z,64µm,20.0s
G43A    Wallace           109.11  46     PFAKE               11 30 50.0 +6.9
G43A                                      LR        LR
        comp=Z,51µm,20.0s
PLAL    Pickwick Lake     109.16  57     PFAKE               11 30 50.0 +6.5
PLAL                                      LR        LR
        comp=Z,55µm,20.0s
P45A    Graceland, Par    109.35  52     PFAKE               11 30 50.0 +6.3
P45A                                      LR        LR
        comp=Z,84µm,20.0s
WVT     Waverly           109.35  56     PFAKE               11 30 50.0 +6.2
WVT                                       LR        LR
        comp=Z,60µm,20.0s
USIN    University of     109.45  54     PFAKE               11 30 50.0 +6.0
USIN                                      LR        LR
        comp=Z,100µm,20.0s
E43A    Lone Tree Farm    109.51  45     PFAKE               11 30 50.0 +6.2
E43A                                      LR        LR
        comp=Z,35µm,20.0s
AKTO    Aktyubinsk        109.76 320     Pdiff     Pdif      11 26 43.1 +1.4
        comp=Z,0.9nm,0.3s,baz=95,slow=5.4,SNR=6.9
AKTO                                      PKiKP     PKiKP    11 30 47.2 +3.0
        comp=Z,3.4nm,0.7s,baz=130,slow=3.4,SNR=5.3
AKTO                                      PKKPab    PKKPbc   11 41 53.9 +4.6
        comp=Z,1.4nm,0.5s,baz=154,slow=4.5,SNR=4.0
SFIN    Lafayette         109.81  51     PFAKE               11 30 50.0 +5.4
SFIN                                      LR        LR
        comp=Z,80µm,22.0s
BRAL    Brewton           109.99  61     PFAKE               11 31 00.0  +15
BRAL                                      LR        LR
        comp=Z,25µm,19.0s
X48A    Hartselle         110.00  57     PFAKE               11 31 00.0  +15
X48A                                      LR        LR
        comp=Z,42µm,19.0s
LRAL    Lakeview Retre    110.05  59     PFAKE               11 31 00.0  +15
LRAL                                      LR        LR
        comp=Z,79µm,20.0s
WSAR    Wadi Sarin        110.08 291     PKiKP     PKiKP     11 30 49.7 +4.1
        comp=Z,4.6nm,0.9s,baz=136,slow=3.3,SNR=3.0
WSAR                                      PKKPab    PKKPab   11 41 53.7 -4.5
        comp=Z,2.7nm,0.7s,baz=304,slow=11,SNR=2.6
V48A    Smith Brothers    110.17  56     PFAKE               11 31 00.0  +15
V48A                                      LR        LR
        comp=Z,55µm,21.0s
BLO     Bloomington       110.31  52     PFAKE               11 31 00.0  +14
BLO                                       LR        LR
        comp=Z,86µm,20.0s
M46A    Old House Fiel    110.33  50     PFAKE               11 31 00.0  +14
M46A                                      LR        LR
        comp=Z,68µm,20.0s
ROC1    El Roble          110.36 131     PFAKE               11 31 00.0  +14
ROC1                                      LR        LR
        comp=Z,100nm,19.0s
JTS     JuntasAbangare    110.40  83     PFAKE               11 31 00.0  +14
JTS                                       LR        LR
        comp=Z,33µm,20.0s
PEL     Peldehue          110.52 132     PFAKE               11 31 00.0  +14
PEL                                       LR        LR
        comp=Z,36µm,20.0s
WCI     Wyandotte Cave    110.53  53     PFAKE               11 31 00.0  +14
WCI                                       LR        LR
        comp=Z,126µm,21.0s
Y49A    Blount Mountai    110.53  58     PFAKE               11 31 00.0  +14
Y49A                                      LR        LR
        comp=Z,49µm,21.0s
250A    Grady             110.66  60     PFAKE               11 31 00.0  +14
250A                                      LR        LR
        comp=Z,27µm,18.0s
GEYT    Alibeck           110.69 306     PKiKP     PKiKP     11 30 44.4 -2.0
        comp=Z,1.2nm,0.3s,baz=67,slow=5.0,SNR=5.0
GYA0B   ALIBECK ARRAY     110.69 306     PFAKE               11 31 00.0  +14
GYA0B                                     LR        LR
        comp=Z,46µm,22.0s
KBS     Kingsbay          110.77 355    ePP        PP        11 31 20.9 -1.4
Z50A    Ashland           110.95  59     PFAKE               11 31 00.0  +13
Z50A                                      LR        LR
        comp=Z,56µm,20.0s
SPITS   Spitsbergen Ar    110.98 354     PKiKP     PKiKP     11 30 49.7 +4.0
SPITS                                     PKPPKP             11 50 14.7
        comp=Z,20nm,1.0s,baz=222,slow=1.9,SNR=7.2
451A    Vernon            111.10  61     PFAKE               11 31 00.0  +13
451A                                      LR        LR
        comp=Z,29µm,20.0s
T49A    Edmonton          111.17  54     PFAKE               11 31 00.0  +13
T49A                                      LR        LR
        comp=Z,54µm,19.0s
HDC     Heredia           111.18  83     PFAKE               11 31 00.0  +12
HDC                                       LR        LR
        comp=Z,35µm,22.0s
HOPEN   Hopen             111.18 351    ePP        PP        11 31 24.2 -1.1
ESPN    Las Esperanzas    111.28  81     PFAKE               11 31 00.0  +12
ESPN                                      LR        LR
        comp=Z,24µm,21.0s
GLMI    Grayling          111.32  46     PFAKE               11 31 00.0  +13
GLMI                                      LR        LR
        comp=Z,56µm,20.0s
W50A    Signal Mountai    111.42  56     PFAKE               11 31 00.0  +12
W50A                                      LR        LR
        comp=Z,47µm,19.0s
M48A    Edgerton          111.55  50     PFAKE               11 31 00.0  +12
M48A                                      LR        LR
        comp=Z,70µm,22.0s
352A    Blakely           111.81  60     PFAKE               11 31 00.0  +11
352A                                      LR        LR
        comp=Z,22µm,20.0s
X51A    Calhoun           111.81  57     PFAKE               11 31 00.0  +11
X51A                                      LR        LR
        comp=Z,50µm,22.0s
GO04    Tololo Observa    111.84 129     PFAKE               11 31 00.0  +11
GO04                                      LR        LR
        comp=Z,21µm,19.0s
O49A    Covington         111.94  51     PFAKE               11 31 00.0  +11
O49A                                      LR        LR
        comp=Z,62µm,18.0s
152A    Waverly Hall      111.97  59     PFAKE               11 31 00.0  +11
152A                                      LR        LR
        comp=Z,62µm,20.0s
N49A    Columbus Grove    111.99  50     PFAKE               11 31 00.0  +11
N49A                                      LR        LR
        comp=Z,88µm,22.0s
HSPB    Hornsund (broa    112.08 353    eP         Pdif      11 27 03.1  +12
HSPB    Hornsund (broa    112.08 353    ePP        PP        11 31 29.6 -2.1
HSPB                                    eSKPdf     SKPdf     11 34 21.8 -1.4
V51A    Loudon            112.18  56     PFAKE               11 31 00.0  +11
V51A                                      LR        LR
        comp=Z,60µm,19.0s
AAM     Ann Arbor         112.26  49     PFAKE               11 31 00.0  +11
AAM                                       LR        LR
        comp=Z,66µm,22.0s
MDH     Madha             112.30 293     P         PKiKP     11 30 52.8 +3.1
453A    Whigham           112.33  61     PFAKE               11 31 00.0  +10
453A                                      LR        LR
        comp=Z,29µm,20.0s
HOPE    Hope Point        112.36 166     PFAKE               11 31 00.0  +11
HOPE                                      LR        LR
        comp=Z,45µm,20.0s
UOSS    Minazif           112.38 293     PFAKE               11 31 00.0  +10
UOSS                                      LR        LR
        comp=Z,13µm,22.0s
HATD    Hatta, Dubai      112.44 292     P         PKiKP     11 30 55.1 +5.1
LCO     Las Campanas      112.45 128     PFAKE               11 31 00.0  +10
LCO                                       LR        LR
        comp=Z,34µm,20.0s
253A    Americus          112.48  60     PFAKE               11 31 00.0  +10
253A                                      LR        LR
        comp=Z,34µm,20.0s
Y52A    Lilburn           112.49  58     PFAKE               11 31 00.0  +10
Y52A                                      LR        LR
        comp=Z,53µm,20.0s
ASHO    Ashiyiah          112.50 292     P         PKiKP     11 30 54.4 +4.2
W52A    Murphy            112.56  57     PFAKE               11 31 00.0  +10
W52A                                      LR        LR
        comp=Z,50µm,20.0s
TKL     Tuckaleechee C    112.66  56     PFAKE               11 31 00.0  +10
TKL                                       LR        LR
        comp=Z,53µm,19.0s
S51A    Beattyville       112.69  54     PFAKE               11 31 00.0  +10
S51A                                      LR        LR
        comp=Z,87µm,22.0s
ABPO    Ambohimpanom      112.75 244     PFAKE               11 31 00.0 +9.0
ABPO                                      LR        LR
        comp=Z,37µm,19.0s
ALNE    Al Ain            112.76 292     P         PKiKP     11 30 56.0 +5.3
Q51A    Peebles           112.78  52     PFAKE               11 31 00.0  +10
Q51A                                      LR        LR
        comp=Z,104µm,20.0s
V52A    Sevierville       112.79  56     PFAKE               11 31 00.0  +10
V52A                                      LR        LR
        comp=Z,66µm,19.0s
M50A    Fremont           112.81  50     PFAKE               11 31 00.0  +10
M50A                                      LR        LR
        comp=Z,81µm,21.0s
FAQ     Al Faqa, Dubai    112.93 292     P         PKiKP     11 30 56.6 +5.7
OPO     Ambohidratompo    112.95 244     PKiKP     PKiKP     11 30 53.6 +2.3
        comp=Z,4.3nm,0.8s,baz=122,slow=21,SNR=2.7
KIRV    Kirov             112.95 329     PKiKP     PKiKP     11 30 51.1 +1.2
        comp=Z,12nm,0.6s,baz=135,slow=1.4,SNR=3.3
TIGA    Tifton            112.95  60     PFAKE               11 31 00.0 +9.2
TIGA                                      LR        LR
        comp=Z,22µm,20.0s
ACSO    Alum Creek Sta    112.96  51     PFAKE               11 31 00.0 +9.4
ACSO                                      LR        LR
        comp=Z,78µm,21.0s
P51A    Williamsport      112.97  52     PFAKE               11 31 00.0 +9.4
P51A                                      LR        LR
        comp=Z,56µm,20.0s
GOGA    Godfrey           113.00  58     PFAKE               11 31 00.0 +9.2
GOGA                                      LR        LR
        comp=Z,52µm,20.0s
ASUD    Al Ashush, Dub    113.16 292     P         PKiKP     11 30 57.2 +5.8
154A    Montrose          113.33  59     PFAKE               11 31 00.0 +8.5
154A                                      LR        LR
        comp=Z,54µm,21.0s
V53A    Saluda            113.44  56     PFAKE               11 31 00.0 +8.3
V53A                                      LR        LR
        comp=Z,65µm,19.0s
555A    McAlpin           113.51  62     PFAKE               11 31 00.0 +8.1
555A                                      LR        LR
        comp=Z,27µm,18.0s
NNA     Nana              113.57 108     PFAKE               11 31 00.0 +7.5
NNA                                       LR        LR
        comp=Z,45µm,21.0s
PRGR    Permogore         113.69 333   i PKIKP     PKiKP     11 30 51.8 +0.5
PRGR                                   e                     11 31 44.3
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PRGR				pmax	pmax		
	comp=Z,20nm,1.0s						
TRQA	**Tornquist**	**113.83**	**140**	PFAKE		11 31 00.0	+7.6
TRQA				LR	LR		
	comp=Z,46µm,18.0s						
O52A	**Adamsville**	**113.85**	**51**	PFAKE		11 31 00.0	+7.7
O52A				LR	LR		
	comp=Z,73µm,20.0s						
255A	**Hazlehurst**	**113.89**	**60**	PFAKE		11 31 00.0	+7.5
255A				LR	LR		
	comp=Z,43µm,20.0s						
656A	**Willston**	**113.89**	**63**	PFAKE		11 31 00.0	+7.4
656A				LR	LR		
	comp=Z,39µm,20.0s						
957A	**Wimauma**	**114.17**	**65**	PFAKE		11 31 00.0	+6.8
957A				LR	LR		
	comp=Z,23µm,22.0s						
P53A	**Whipple**	**114.26**	**52**	PFAKE		11 31 00.0	+6.9
P53A				LR	LR		
	comp=Z,87µm,19.0s						
456A	**Hilliard**	**114.31**	**61**	PFAKE		11 31 00.0	+6.6
456A				LR	LR		
	comp=Z,23µm,20.0s						
KMSC	**Kings Mountain**	**114.68**	**56**	PFAKE		11 31 00.0	+6.0
KMSC				LR	LR		
	comp=Z,58µm,19.0s						
LVZ	**Lovozero**	**114.78**	**342**	PFAKE		11 31 00.0	+6.7
LVZ				LR	LR		
	comp=Z,75µm,22.0s						
LVZ	**Lovozero**	**114.78**	**342**⇑	*i*PKIKP	PKPdf	11 30 53.5	+0.2
LVZ				MLR	MLR		
	comp=Z,68µm,21.0s						
DWPF	**Disney Wildern**	**114.88**	**64**	PFAKE		11 31 00.0	+5.4
DWPF				LR	LR		
	comp=Z,34µm,19.0s						
ALLY	**Alegheny Colle**	**114.94**	**49**	PFAKE		11 31 00.0	+5.7
ALLY				LR	LR		
	comp=Z,101µm,21.0s						
ERPA	**Erie**	**114.99**	**49**	PFAKE		11 31 00.0	+5.6
ERPA				LR	LR		
	comp=Z,68µm,22.0s						
PB10	**IPOC Station P**	**114.99**	**122**	PFAKE		11 31 10.0	+15
PB10				LR	LR		
	comp=Z,36µm,22.0s						
658A	**Bunnell**	**115.01**	**63**	PFAKE		11 31 00.0	+5.2
658A				LR	LR		
	comp=Z,21µm,20.0s						
GO02	**Mina Guanaco**	**115.07**	**124**	PFAKE		11 31 10.0	+15
GO02				LR	LR		
	comp=Z,48µm,20.0s						
OTAV	**Otavalo**	**115.11**	**95**	PFAKE		11 31 10.0	+14
OTAV				LR	LR		
	comp=Z,33µm,20.0s						
257A	**Skidaway Islan**	**115.12**	**60**	PFAKE		11 31 00.0	+5.1
257A				LR	LR		
	comp=Z,42µm,20.0s						
059A	**Moore Haven**	**115.14**	**65**	PFAKE		11 31 10.0	+15
059A				LR	LR		
	comp=Z,20µm,19.0s						
N54A	**Moraine State**	**115.15**	**50**	PFAKE		11 31 00.0	+5.2
N54A				LR	LR		
	comp=Z,64µm,22.0s						
BLA	**Blacksburg**	**115.24**	**54**	PFAKE		11 31 10.0	+15
BLA				LR	LR		
	comp=Z,51µm,19.0s						
M54A	**Oil Creek Stat**	**115.32**	**49**	PFAKE		11 31 10.0	+15
M54A				LR	LR		
	comp=Z,88µm,20.0s						
APA	**Apatity**	**115.35**	**342**⇓	*i*PKIKP	**PKPdf**	**11 30 58.7**	**+4.4**
APA				*i*		11 32 01.0	
APA				*i*		11 37 58.0	
APA				*i* PS	**PKKPab**	**11 41 38.0**	**+4.4**
APA				*i* PPS	PPS	11 42 56.0	
APA				*i* SS	SS	11 47 50.0	-2.4
APA				pmax	pmax		
	comp=Z,16nm,0.9s						
MCWV	**Mont Chateau**	**115.42**	**51**	PFAKE		11 31 10.0	+15
MCWV				LR	LR		
	comp=Z,26µm,18.0s						
TMCR	**Tamitsa**	**115.67**	**337**	*e*PKIKP	**PKiKP**	**11 30 49.4**	**-5.6**
KEV	**Kevo**	**115.70**	**345**	PFAKE		11 31 00.0	+5.1
KEV				LR	LR		
	comp=Z,48µm,19.0s						
NHSC	**New Hope**	**115.77**	**59**	PFAKE		11 31 10.0	+14
NHSC				LR	LR		
	comp=Z,55µm,21.0s						
PB04	**IPOC Station P**	**115.83**	**121**	PFAKE		11 31 10.0	+13
PB04				LR	LR		
	comp=Z,38µm,20.0s						
060A	**Indiantown**	**115.84**	**65**	PFAKE		11 31 10.0	+14
060A				LR	LR		
	comp=Z,26µm,21.0s						
HAMF	**Hammerfest**	**115.84**	**347**	*e*PKPdf	**PKiKP**	**11 30 54.2**	**-0.9**
ARA0	**ARCESS Array S**	**116.23**	**346**	*e*PKPdf	**PKiKP**	**11 30 54.5**	**-1.5**
ARA0				*e*PKKPbc	**PKKPbc**	**11 41 28.2**	**+0.1**
ARA0				*e*SP	SP	11 41 50.9	+10
ARCES	**ARCESS Array B**	**116.23**	**346**	*e*PKPdf	**PKiKP**	**11 30 53.9**	**-2.1**
ARCES	**ARCESS Array B**	**116.23**	**346**	PKKP	**PKKPdf**	**11 41 50.9**	**-3.0**
ARCES	**ARCESS Array B**	**116.23**	**346**	*e*PKIKP	**PKiKP**	**11 30 53.9**	**-2.1**
ARCES	**ARCESS Array B**	**116.23**	**346**	PKP	**PKiKP**	**11 30 54.5**	**-1.5**
	comp=Z,4.7nm,0.6s,baz=64,slow=2.1,SNR=27						
ARCES				PKKPbc	**PKKPbc**	**11 41 28.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=222,slow=1.6,SNR=7.8						
ARCES				PKKP	**PKKPdf**	**11 41 50.9**	**-3.0**
	comp=Z,3.0nm,0.8s,baz=117,slow=0.3,SNR=3.7						
ARE0	**ARCESS Array S**	**116.23**	**346**	PFAKE		11 31 10.0	+14
ARE0				LR	LR		
	comp=Z,3µm,22.0s						
ARE0	**ARCESS Array S**	**116.23**	**346**	*e*PKPdf	**PKiKP**	**11 30 54.3**	**-1.7**
O56A	**Blue Knob Stat**	**116.32**	**50**	PFAKE		11 31 10.0	+13
O56A				LR	LR		
	comp=Z,63µm,21.0s						
MMNY	**Mt. Morris Dam**	**116.42**	**48**	PFAKE		11 31 10.0	+13
MMNY				LR	LR		
	comp=Z,43µm,20.0s						
SUMG	**Summit**	**116.62**	**8**	PFAKE		11 31 10.0	+13
SUMG				LR	LR		
	comp=Z,44µm,19.0s						
SUMG	**Summit**	**116.62**	**8**	*i* P	**PKiKP**	**11 31 03.5**	**+6.3**
	comp=Z,111µm,19.0s						
SUMG	**Summit**	**116.62**	**8**	*e*PKIKP	**PKiKP**	**11 31 03.5**	**+6.3**
SUMG				MLR	MLR		
	comp=Z,110µm,19.0s						
KLMR	**Klimovskoe**	**116.70**	**334**	*e*PKIKP	PKPpre	11 30 52.7	
KLMR				pmax	pmax		
	comp=Z,35nm,1.2s						
KLMR	**Klimovskoe**	**116.70**	**334**	*e*PKPdf	PKPpre	11 30 52.8	
KLMR				AMP		11 31 08.7	
	comp=Z,35nm,1.2s						
KLMR				*e*PKKPab	**PKKPbc**	**11 41 21.3**	**-4.9**
LVC	**Limon Verde**	**116.75**	**122**	PFAKE		11 31 10.0	+11
LVC				LR	LR		
	comp=Z,47µm,20.0s						
SSPA	**Standing Stone**	**116.77**	**50**	PFAKE		11 31 10.0	+12
SSPA				LR	LR		
	comp=Z,90µm,22.0s						
PB01	**IPOC Station P**	**116.93**	**120**	PFAKE		11 31 10.0	+11
PB01				LR	LR		
	comp=Z,74µm,21.0s						
ILULI	**Ilulissat**	**117.04**	**14**	PFAKE		11 31 10.0	+12
ILULI				LR	LR		
	comp=Z,49µm,20.0s						
R58B	**Mineral**	**117.16**	**53**	PFAKE		11 31 10.0	+11
R58B				LR	LR		
	comp=Z,132µm,21.0s						
KTK1	**Kautokeino**	**117.17**	**346**	*e*PKPdf	**PKPdf**	**11 30 56.1**	**-1.7**
PB11	**IPOC Station P**	**117.31**	**119**	PFAKE		11 31 10.0	+10
PB11				LR	LR		
	comp=Z,90µm,22.0s						
CNNC	**Cliffs of the**	**117.48**	**56**	PFAKE		11 31 10.0	+11
CNNC				LR	LR		
	comp=Z,67µm,22.0s						
CBN	**Corbin Frederi**	**117.52**	**53**	PFAKE		11 31 10.0	+11
CBN				LR	LR		
	comp=Z,117µm,21.0s						
MNMC	**Minye Minye**	**117.62**	**118**	PFAKE		11 31 10.0	+9.5
MNMC				LR	LR		
	comp=Z,50µm,22.0s						
TRO	**Tromso**	**117.66**	**348**	*e*PKPdf	**PKPdf**	**11 30 57.2**	**-1.5**
TRO				*e*PS	**PS**	**11 41 54.1**	**-2.1**
PAGS	**Pennsylvania G**	**117.72**	**50**	PFAKE		11 31 10.0	+10
PAGS				LR	LR		
	comp=Z,74µm,21.0s						
SDMD	**Soldier's Deli**	**117.76**	**51**	PFAKE		11 31 10.0	+10
SDMD				LR	LR		
	comp=Z,37µm,18.0s						
YOTC	**Yotoco, Valle**	**117.88**	**91**	*e*P	**PKiKP**	**11 31 03.8**	**+2.8**
YOTC	**Yotoco, Valle**	**117.88**	**91**	*e*P	**PKiKP**	**11 31 03.8**	**+2.8**
BINY	**Binghamton**	**117.91**	**48**	PFAKE		11 31 10.0	+10
BINY				LR	LR		
	comp=Z,52µm,21.0s						
MVL	**Millersville**	**118.04**	**50**	PFAKE		11 31 10.0	+10
MVL				LR	LR		
	comp=Z,48µm,21.0s						
MAK	**Makhachkala**	**118.12**	**313**	*e*P	**Pdif**	**11 27 11.7**	**-7.3**
MAK				*i*		11 30 55.6	
MAK				*e*		11 37 52.1	
MAK				*e*PS	**PS**	**11 42 05.2**	**+3.6**
MAK				*e*SS	SS	11 48 36.9	+6.7
MAK				pmax	pmax		
	comp=Z,58nm,0.5s						
MAK				pmax	pmax		
	comp=Z,97nm,0.7s						
KSPA	**Keystone Colle**	**118.19**	**49**	PFAKE		11 31 10.0	+9.4
KSPA				LR	LR		
	comp=Z,94µm,19.0s						
N59A	**State Game Lan**	**118.31**	**49**	PFAKE		11 31 10.0	+9.1
N59A				LR	LR		
	comp=Z,89µm,22.0s						
LUPA	**Lehigh Univers**	**118.67**	**50**	PFAKE		11 31 10.0	+8.4
LUPA				LR	LR		
	comp=Z,7µm,20.0s						
NCB	**Newcomb**	**118.80**	**46**	PFAKE		11 31 10.0	+8.3
NCB				LR	LR		
	comp=Z,39µm,19.0s						
SFJD	**Kangerlussuaq**	**118.82**	**16**	PFAKE		11 31 10.0	+9.0
SFJD				LR	LR		
	comp=Z,88µm,20.0s						
FRNY	**Flat Rock**	**119.04**	**45**	PFAKE		11 31 10.0	+7.9
FRNY				LR	LR		
	comp=Z,41µm,20.0s						
ODNJ	**Ogdensburg**	**119.14**	**49**	PFAKE		11 31 10.0	+7.5
ODNJ				LR	LR		
	comp=Z,75µm,21.0s						
BRNJ	**Basking Ridge**	**119.25**	**49**	PFAKE		11 31 10.0	+7.3
BRNJ				LR	LR		
	comp=Z,110µm,22.0s						
GROC	**Groznyy**	**119.29**	**314**	*i* PKIKP	**PKPdf**	**11 31 00.0**	**-2.6**
GROC				*e*		11 32 20.7	
GROC				pmax	pmax		
	comp=Z,33nm,0.6s						
ACCN	**Adirondack Com**	**119.33**	**46**	PFAKE		11 31 10.0	+7.2
ACCN				LR	LR		
	comp=Z,73µm,20.0s						
VRH	**Novokhopyorsk**	**119.59**	**323**	*e*PKIKP	**PKPdf**	**11 31 00.9**	**-2.0**
VRH				*e*		11 32 24.9	
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
VRH				MLR	MLR		
	comp=Z,29µm,18.0s						
PAL	**Palisades**	**119.68**	**49**	PFAKE		11 31 10.0	+6.5
PAL				LR	LR		
	comp=Z,83µm,22.0s						
CPNY	**Central Park**	**119.68**	**49**	PFAKE		11 31 10.0	+6.5
CPNY				LR	LR		
	comp=Z,110µm,22.0s						
SCHQ	**Schefferville**	**119.74**	**32**	*e*PKPdf	**PKPdf**	**11 31 01.2**	**-2.0**
SCHQ				LR	LR		
	comp=Z,81µm,22.0s						
SCHQ	**Schefferville**	**119.74**	**32**	PKP	**PKPdf**	**11 31 00.8**	**-2.3**
	comp=Z,4.7nm,0.9s,baz=57,slow=5.8,SNR=2.8						
SCHQ				PKKPbc	**PKKPab**	**11 41 14.4**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=182,slow=2.4,SNR=4.7						
STEI	**Steigen**	**119.83**	**348**	*e*PKPdf	**PKPdf**	**11 30 59.7**	**-3.2**
JMIC	**Jan Mayen**	**119.83**	**358**	PKKPab	PKKPab	11 41 18.8	+5.0
	comp=Z,43nm,0.7s,baz=196,slow=7.0,SNR=1.7						
MOS	**Moscow**	**119.97**	**329**	*i* PKIKP	**PKiKP**	**11 31 09.4**	**+5.8**
MOS				*e*		11 32 25.4	
MOS				pmax	pmax		
	comp=Z,68nm,1.0s						
LPAZ	**La Paz**	**120.03**	**116**	*e*PKPdf	**PKPdf**	**11 31 01.9**	**-3.7**
LPAZ	**La Paz**	**120.03**	**116**	*e*PKIKP	**PKPdf**	**11 31 01.9**	**-3.7**
LPAZ	**La Paz**	**120.03**	**116**	PKP	**PKPdf**	**11 31 03.4**	**-2.2**
	comp=Z,1.0nm,0.6s,baz=316,slow=9.6,SNR=3.6						
LPAZ				PKKPab	**PKKPab**	**11 41 18.0**	**+1.8**
	comp=Z,2.9nm,0.9s,baz=39,slow=4.2,SNR=4.1						
SCO	**Scoresbysund**	**120.23**	**3**	PFAKE		11 31 10.0	+6.3
SCO				LR	LR		
	comp=Z,58µm,22.0s						
SCO	**Scoresbysund**	**120.23**	**3**	*i* P	**PKiKP**	**11 31 08.9**	**+5.2**
SCO	**Scoresbysund**	**120.23**	**3**	*e*PKIKP	**PKiKP**	**11 31 08.9**	**+5.2**
YLE	**Yale**	**120.33**	**48**	PFAKE		11 31 10.0	+5.3
YLE				LR	LR		
	comp=Z,52µm,20.0s						
LBNH	**Lisbon**	**120.34**	**45**	PFAKE		11 31 10.0	+5.3
LBNH				LR	LR		
	comp=Z,53µm,20.0s						
CHIC	**Chingaza**	**120.56**	**91**	*e*P	**PKiKP**	**11 31 10.4**	**+3.9**
CHIC	**Chingaza**	**120.56**	**91**	*e*P	**PKiKP**	**11 31 10.4**	**+3.9**
LPSR	**Galich'ya Gora**	**120.64**	**326**	*e*PKIKP	**PKPdf**	**11 31 02.0**	**-2.9**
LPSR				*e*		11 32 28.7	
LPSR				*e*SS	SS	11 49 00.1	-1.8
LPSR				pmax	pmax		
	comp=Z,70nm,1.2s						
LPSR				MLR	MLR		
	comp=Z,48µm,18.0s						
GOF	**Gofitskoye**	**120.73**	**316**	*e*PKIKP	**PKiKP**	**11 31 09.4**	**+3.9**
GOF				pmax	pmax		
	comp=Z,50nm,1.0s						
GNI	**Garni**	**120.74**	**310**	*e*PKPdf	**PKPdf**	**11 31 03.6**	**-2.1**
GNI				LR	LR		
	comp=Z,20µm,22.0s						
GNI	**Garni**	**120.74**	**310**	*i* P	**PKiKP**	**11 31 11.0**	**+5.2**
	SNR=7.5						
GNI	**Garni**	**120.74**	**310**⇑	*i*PKIKP	**PKPdf**	**11 31 04.9**	**-0.8**
GNI				MLR	MLR		
	comp=Z,73µm,22.0s						
GNI	**Garni**	**120.74**	**310**	PKP	**PKPdf**	**11 31 03.6**	**-2.1**
	comp=Z,6.1nm,0.7s,baz=328,slow=13,SNR=1.9						
ZEI	**Tsey**	**120.74**	**313**	*i* PKIKP	**PKPdf**	**11 31 04.6**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,33nm,1.0s						
OBN	**Obninsk**	**120.79**	**329**	PKP	**PKPdf**	**11 31 03.8**	**-1.3**
OBN				LR	LR		
	comp=Z,38µm,19.0s						
OBN	**Obninsk**	**120.79**	**329**⇓	*i*PKIKP	**PKPdf**	**11 31 00.9**	**-4.2**
OBN				*i*		11 31 09.9	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,38µm,22.0s						
OBN	**Obninsk**	**120.79**	**329**	PKP	**PKPdf**	**11 31 03.8**	**-1.3**
	comp=Z,5.4nm,0.3s,baz=48,slow=21,SNR=3.2						
SMLC	**San Martn de**	**120.85**	**86**	*e*P	**PKiKP**	**11 31 11.8**	**+5.2**
SMLC	**San Martn de**	**120.85**	**86**	*e*P	**PKiKP**	**11 31 11.8**	**+5.2**
VORR	**Voronezh**	**120.87**	**324**	PKIKP	PKPpre	11 31 00.0	
VORR				pmax	pmax		
	comp=Z,250nm,1.8s						
HRV	**Adam Dziewonsk**	**121.04**	**47**	PFAKE		11 31 20.0	+14
HRV				LR	LR		
	comp=Z,80µm,20.0s						
VSR	**Storozhevoye**	**121.07**	**324**	*e*PKIKP	**PKPdf**	**11 31 02.3**	**-3.5**
VSR				*e*SS	SS	11 49 04.8	-2.7
VSR				pmax	pmax		
	comp=Z,30nm,0.7s						
VSR				MLR	MLR		
	comp=Z,46µm,19.0s						
KBZ	**Khabaz**	**121.20**	**315**	PKP	**PKPdf**	**11 31 03.3**	**-2.9**
	comp=Z,3.6nm,0.7s,baz=72,slow=2.9,SNR=2.4						
KBZ				PP	**PP**	**11 32 35.9**	**-0.6**
	comp=Z,6.5nm,0.8s,baz=148,slow=11,SNR=4.4						
WES	**Weston**	**121.24**	**47**	PFAKE		11 31 20.0	+13
WES				LR	LR		
	comp=Z,90µm,20.0s						
KVAR	**Kislovodsk Arr**	**121.28**	**315**	PKP	**PKPdf**	**11 31 03.4**	**-3.2**
	comp=Z,6.1nm,0.4s,baz=328,slow=19,SNR=3.3						
KIV	**Kislovodsk**	**121.29**	**315**	PFAKE		11 31 20.0	+13
KIV				LR	LR		
	comp=Z,41µm,20.0s						
KIV	**Kislovodsk**	**121.29**	**315**	*i* PKIKP	**PKPdf**	**11 31 06.1**	**-0.5**
KIV				*e*		11 32 36.5	
KIV				*e*PS	**PS**	**11 42 28.8**	**-1.4**
KIV				*e*SS	SS	11 49 11.5	+0.5
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
RUSC	**La Rusia**	**121.40**	**90**	*e*P	**PKiKP**	**11 31 09.2**	**+1.0**
RUSC	**La Rusia**	**121.40**	**90**	*e*P	**PKiKP**	**11 31 09.2**	**+1.0**
BARC	**Barichara**	**121.41**	**89**	*e*P	**PKiKP**	**11 31 13.8**	**+5.8**
BARC	**Barichara**	**121.41**	**89**	*e*P	**PKiKP**	**11 31 13.8**	**+5.8**
NEY	**Neytrino**	**121.45**	**314**⇑	*i*PKIKP	**PKPdf**	**11 31 06.6**	**-0.4**
NEY				MLR	MLR		
	comp=Z,32µm,20.0s						
MOR8	**Moi Rana**	**121.48**	**347**	*e*PKPdf	**PKPdf**	**11 31 04.1**	**-2.1**
KONS	**Konsvik**	**121.48**	**348**	*e*PKPdf	**PKPdf**	**11 31 04.3**	**-1.8**
CLDR	**Caldiran**	**121.58**	**309**	*e*P	**PKiKP**	**11 31 14.4**	**+6.8**
FIA1	**FINESS Array S**	**121.70**	**339**	*e*PKPdf	**PKPdf**	**11 31 04.2**	**-2.5**
FIA0	**FINESS Array S**	**121.70**	**339**	*e*PKPdf	**PKPdf**	**11 31 04.2**	**-2.4**
FIA0				*e*PKKPbc	**PKKPbc**	**11 41 08.6**	**+0.7**
FIA0	**FINESS Array S**	**121.70**	**339**	*e*PKIKP	**PKPdf**	**11 31 04.3**	**-2.4**
FINES	**FINESS Array B**	**121.70**	**339**	PKIKP	**PKPdf**	**11 31 04.3**	**-2.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	**FINESS Array B**	**121.70**	**339**	PKP	**PKPdf**	**11 31 04.3**	**-2.4**
	comp=Z,12nm,0.8s,baz=70,slow=2.3,SNR=15						
FINES				PKKPbc	**PKKPbc**	**11 41 08.6**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=180,slow=32,SNR=2.6						
PKME	**Peaks-Kenny Pk**	**121.84**	**43**	PFAKE		11 31 20.0	+12
PKME				LR	LR		
	comp=Z,42µm,20.0s						
PAMC	**Pamplona, Colo**	**122.00**	**88**	*e*P	**PKiKP**	**11 31 13.9**	**+4.5**
PAMC	**Pamplona, Colo**	**122.00**	**88**	*e*P	**PKiKP**	**11 31 13.9**	**+4.5**
VANB	**Van**	**122.10**	**309**	*e*P	PKiKP	11 31 20.6	+12
AKDM	**Akdamar-Van**	**122.47**	**309**	*e*P	**PKiKP**	**11 31 14.7**	**+5.4**
ANGG	**Ammassalik, Gr**	**122.96**	**11**	PFAKE		11 31 20.0	+11
ANGG				LR	LR		
	comp=Z,47µm,21.0s						
DAMY	**Dhamar**	**123.06**	**280**	PFAKE		11 31 20.0	+8.8
DAMY				LR	LR		
	comp=Z,23µm,19.0s						
SIRT	**Sirnak**	**123.06**	**308**	*e*P	**PKiKP**	**11 31 14.2**	**+3.8**
GURO	**Guroymak-BITLI**	**123.14**	**309**	*e*P	**PKiKP**	**11 31 12.8**	**+2.2**
VSU	**Vasula**	**123.41**	**336**⇓	*i*PKIKP	**PKPdf**	**11 31 06.9**	**-3.1**
VSU				MLR	MLR		
	comp=Z,107µm,19.0s						
VSU	**Vasula**	**123.41**	**336**	*e*P	**PKiKP**	**11 31 15.2**	**+4.9**
VSU				IAmb	IAmb	11 31 19.8	
	comp=Z,100nm,0.9s						
NSS	**Namsos**	**123.42**	**347**	*e*pPKPdf	**pPKPdf**	**11 31 12.3**	**-1.6**
NSS				*e*PP	**PP**	**11 32 49.0**	**-1.5**
CHOM	**Cayeli-Rize**	**123.44**	**312**	*e*P	**PKiKP**	**11 31 16.8**	**+5.8**
SOC	**Sochi**	**123.45**	**315**	*i* PKIKP	**PKiKP**	**11 31 15.4**	**+4.6**
SOC				*e*		11 32 53.2	
SOC				*e*SSS	SSS	11 54 06.6	
SOC				pmax	pmax		
	comp=Z,29nm,0.8s						
GGN	**Saint George**	**123.53**	**43**	PFAKE		11 31 20.0	+9.1
GGN				LR	LR		
	comp=Z,66µm,22.0s						
SVAN	**Silvan-Diyarba**	**123.87**	**309**	*e*P	**PKiKP**	**11 31 16.2**	**+4.3**
IVI	**Ivigtut**	**123.88**	**19**	PFAKE		11 31 20.0	+8.9
IVI				LR	LR		
	comp=Z,144µm,22.0s						
CPUP	**Villa Florida**	**123.95**	**132**	*e*PKPdf	**PKPdf**	**11 31 10.1**	**-2.0**
CPUP	**Villa Florida**	**123.95**	**132**	*e*PKIKP	**PKPdf**	**11 31 10.1**	**-2.0**
CPUP	**Villa Florida**	**123.95**	**132**	PKP	**PKPdf**	**11 31 10.2**	**-1.9**
	comp=Z,4.2nm,0.9s,baz=229,slow=2.4,SNR=9.2						
CPUP				PKKPbc	**PKKPbc**	**11 40 57.5**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=121,slow=13,SNR=1.9						
BNGB	**Bingl**	**124.06**	**310**	*e*P	**PKiKP**	**11 31 15.3**	**+2.9**
BAYT	**Aydıntepe-Bayb**	**124.09**	**312**	*e*P	**PKiKP**	**11 31 14.8**	**+2.3**
SDV	**Santo Domingo**	**124.23**	**87**	*e*PKPdf	**PKPdf**	**11 31 09.2**	**-3.9**
SDV				LR	LR		
	comp=Z,19µm,18.0s						
SDDR	**Presa de Saban**	**124.25**	**74**	PFAKE		11 31 20.0	+6.8
SDDR				LR	LR		
	comp=Z,31µm,21.0s						
ATD	**Arta Tunnel**	**124.32**	**277**	PFAKE		11 31 20.0	+6.5
ATD				LR	LR		
	comp=Z,32µm,19.0s						
ATD	**Arta Tunnel**	**124.32**	**277**	PKKPbc	PKKPbc	11 40 56.1	-0.4
	comp=Z,2.8nm,0.3s,baz=267,slow=19,SNR=1.7						
ANN	**Anapa**	**124.59**	**317**	*i* PKIKP	**PKPdf**	**11 31 12.5**	**-0.2**
ANN				*e*		11 33 03.5	
ANN				*e*		11 38 12.1	
ANN				*e*PS	PS	11 42 52.3	-6.8
ANN				*e*SS	SS	11 50 02.4	+10
ANN				pmax	pmax		
	comp=Z,86nm,1.2s						
ANN				MLR	MLR		
	comp=N,61µm,23.0s						
ANN				MLR	MLR		
	comp=Z,50µm,23.0s						
LMN	**Caledonia Moun**	**124.60**	**41**	PFAKE		11 31 20.0	+6.9
LMN				LR	LR		
	comp=Z,70µm,20.0s						
MAZI	**Mazidag**	**124.62**	**308**	*e*P	**PKiKP**	**11 31 18.1**	**+4.6**
NRS	**Narsarsuaq**	**124.77**	**18**	PFAKE		11 31 20.0	+7.1
NRS				LR	LR		
	comp=Z,187µm,20.0s						
TBLU	**Trondheim**	**124.91**	**347**	*e*PKPdf	**PKPdf**	**11 31 10.3**	**-2.5**
PTK	**Pertek**	**125.06**	**310**	*e*P	**PKPdf**	**11 31 13.3**	**-0.8**
BANI	**BANI**	**125.13**	**75**	*e*PKPpre	PKPpre	11 31 04.9	
IZAR	**Zarasai**	**125.35**	**333**	*e*P	**PKiKP**	**11 31 19.9**	**+5.7**
IZAR				IAmb	IAmb	11 31 24.1	
	comp=Z,23nm,1.0s						
MICGM	**Minsk**	**125.37**	**331**	*e*PKP	**PKiKP**	**11 31 14.0**	**-0.3**
MICGM				*e*PKP	**pPKPdf**	**11 31 16.0**	**-2.0**
MICGM				*e*PP	**PP**	**11 33 00.0**	**-4.0**
MICGM				*e*PKS	PKSdf	11 34 40.0	-10
MICGM				*e*PPP	PPP	11 35 18.0	
MICGM				*e*SKS	**SKSdf**	**11 38 20.0**	**-5.5**
MICGM				*e*SKKS	SKKSac	11 39 46.0	-16
MICGM				*e*SKKKS		11 40 40.0	
MICGM				*e*PS	PS	11 43 30.0	+25
MICGM				*e*SS	**SS**	**11 50 08.0**	**+6.6**
MICGM				*e*SSS	SSS	11 54 28.0	
MICGM				*e*LQ	LQ	12 01 20.0	
MICGM				LQM		12 14 42.0	
	comp=E,25nm,22.0s						
MICGM				LQM		12 14 45.0	
	comp=E,40nm,24.0s						
MICGM				LQM		12 14 52.0	
	comp=N,27nm,20.0s						
MICGM				LQM		12 14 56.0	
	comp=N,40nm,20.0s						
MICGM				*e*LR	LR	12 19 12.0	
MICGM				LRM	MLR	12 24 58.0	
	comp=Z,105nm,22.0s						
MICGM				LRM	MLR	12 25 04.0	
	comp=Z,77nm,20.0s						
MICGM				LRM	MLR	12 25 24.0	
	comp=E,37nm,22.0s						
MICGM				LRM	MLR	12 26 12.0	
	comp=E,28nm,22.0s						
MNK	**Minsk**	**125.37**	**331**	*e*PKIKP	**PKiKP**	**11 31 14.0**	**-0.3**
MNK				*e*		11 33 00.0	
MNK				*e*		11 38 20.0	
IDID	**Didziasalis**	**125.40**	**333**	*e*P	**PKiKP**	**11 31 19.9**	**+5.6**
IDID				IAmb	IAmb	11 31 21.4	
	comp=Z,26nm,0.9s						
BOSA	**Boshof**	**125.42**	**223**	*e*PKPdf	**PKPdf**	**11 31 14.1**	**-1.0**
BOSA				*e*PKPdf	**PKiKP**	**11 31 14.3**	**-1.1**
BOSA	**Boshof**	**125.42**	**223**	PKP	**PKPdf**	**11 31 14.1**	**-1.0**
	comp=Z,6.9nm,1.0s,baz=340,slow=1.0,SNR=5.8						
ISAL	**Salakas**	**125.51**	**333**	*e*P	**PKiKP**	**11 31 19.9**	**+5.4**
ISAL				IAmb	IAmb	11 31 24.4	
	comp=Z,17nm,0.8s						
NACGM	**Naroch**	**125.63**	**332**	*e*PKP	**PKPdf**	**11 31 12.0**	**-2.4**
NACGM				*e*PP	**PP**	**11 32 58.0**	**-7.7**
NACGM				*e*PPP	PPP	11 35 16.0	
NACGM				*e*SKS	SKSdf	11 38 12.0	-14
NACGM				*e*SKKS	SKKSac	11 39 40.0	-24
NACGM				*e*SKKKS		11 40 28.0	
NACGM				*e*PS	PS	11 43 54.0	+46
NACGM				*e*SS	**SS**	**11 49 54.0**	**-11**
NACGM				*e*SSS	SSS	11 54 35.0	
NACGM				*e*LQ	LQ	12 10 15.0	
NACGM				*e*LR	LR	12 17 20.0	
NACGM				LRM	MLR	12 24 04.0	
	comp=Z,74nm,24.0s						
SUR	**Sutherland**	**125.64**	**216**	*e*PKPdf	**PKPdf**	**11 31 14.3**	**-1.2**
SUR				LR	LR		
	comp=Z,30µm,20.0s						
SUR	**Sutherland**	**125.64**	**216**	PKP	**PKPdf**	**11 31 14.6**	**-0.9**
	comp=Z,11nm,1.0s,baz=204,slow=9.8,SNR=3.8						
HAL	**Halifax**	**125.85**	**42**	PFAKE		11 31 30.0	+14
HAL				LR	LR		
	comp=Z,63µm,20.0s						
URFA	**Urfa**	**125.87**	**309**	*e*P	**PKiKP**	**11 31 22.4**	**+6.4**
BORG	**Borgarnes**	**125.96**	**4**	PFAKE		11 31 20.0	+4.8
BORG				LR	LR		
	comp=Z,31µm,21.0s						
RSDY	**Resadiye-TOKAT**	**126.14**	**312**	*e*P	**PKiKP**	**11 31 20.4**	**+4.0**
DOMB	**Dombas**	**126.24**	**347**	*e*PKPdf	**PKPdf**	**11 31 13.6**	**-1.8**

NC303	NORSAR Array S	126.40	345	*e*PKPdf	PKiKP	11 31 18.0	+1.8
SVSK	Karacayir	126.53	312	*e*P	PKiKP	11 31 20.4	+3.3
AKN	Aaknes	126.57	348	*e*PKPdf	PKPdf	11 31 14.3	-1.8
DARE	Darende-Malaty	126.58	310	*e*P	PKiKP	11 31 18.8	+1.4
NB2	NORSAR Subarra	126.60	345	PKPdf	PKPdf	11 31 14.6	-1.6
	comp=Z,56nm,1.1s,baz=34,slow=2.0						
NB2	NORSAR Subarra	126.60	345	PKPdf	PKPdf	11 31 14.6	-1.6
	baz=34,slow=2.0						
NB200	NORSAR Array S	126.60	345	*e*PKPdf	PKPdf	11 31 14.6	-1.6
NOA	NORSAR Array B	126.60	345	PKP	PKPdf	11 31 14.6	-1.6
	comp=Z,2.2nm,0.6s,baz=31,slow=1.9,SNR=8.8						
SIM	Simferopol'	126.70	319	*c* *i*PKIKP	PKiKP	11 31 23.2	+5.9
SIM				*e*		11 33 18.0	
SIM				pmax	pmax		
	comp=Z,2µm,12.3s						
SIM				MLR	MLR		
	comp=Z,27µm,17.0s						
NC602	NORSAR Array S	126.78	345	*e*PKPdf	PKPdf	11 31 14.6	-1.9
KVT	Kavak	126.84	314	*e*P	PKiKP	11 31 19.5	+1.8
NAO01	NORSAR Array S	126.85	345	*e*PKPdf	PKPdf	11 31 12.2	-4.4
NAO01				*e*PKPdf	PKiKP	11 31 17.9	+0.8
AKASG	Malin Array Be	126.86	327	PKP	PKPdf	11 31 15.3	-1.6
	comp=Z,1.9nm,0.7s,baz=56,slow=2.3,SNR=11						
AKASG				PP	PP	11 33 13.7	-0.3
	comp=Z,3.5nm,0.8s,baz=51,slow=6.2,SNR=2.2						
AKBB	Malin Array Si	126.86	327	*e*PKPdf	PKiKP	11 31 18.3	+0.9
AKBB				LR	LR		
	comp=Z,54µm,22.0s						
KIEV	Kiev	126.87	327	*e*PKPdf	PKiKP	11 31 18.3	+0.9
KIEV				LR	LR		
	comp=Z,50µm,21.0s						
KIEV	Kiev	126.87	327	⇑*i*P	PKPdf	11 31 17.0	+0.1
KIEV	Kiev	126.87	327	*i* P	PKiKP	11 31 20.6	+3.2
	SNR=11						
KIEV	Kiev	126.87	327	⇑*i*PKIKP	PKPdf	11 31 14.9	-2.0
KIEV				MLR	MLR		
	comp=Z,48µm,20.0s						
AK11	Malin Array Si	126.90	327	*e*PKPdf	PKPdf	11 31 14.4	-2.6
PBUR	Paburg	126.99	336	*e*P	PKiKP	11 31 22.9	+5.4
PBUR				IAmb	IAmb	11 31 26.9	
	comp=Z,160nm,1.0s						
SNOP	Sinop	127.10	315	PFAKE		11 31 30.0	+12
SNOP				LR	LR		
	comp=Z,25µm,22.0s						
ANKE	Ethiopia-Afar	127.17	274	*e*P	PKiKP	11 31 22.6	+3.1
ANKE				*i* S	PKKPdf	11 41 37.9	+5.5
GAZ	Gaziantep	127.18	309	*e*P	PKiKP	11 31 23.2	+4.6
KMRS	Kahramanmaras	127.33	309	*e*P	PKiKP	11 31 19.9	+1.1
DESE	Dese	127.42	276	*e*P	PKiKP	11 31 33.7	+14
DESE				*e*S	SP	11 43 22.0	-2.0
LBTB	Lobatse	127.45	227	*e*PKPdf	PKPdf	11 31 17.0	-2.0
LBTB	Lobatse	127.45	227	*e*PKIKP	PKPdf	11 31 17.0	-2.0
LBTB	Lobatse	127.45	227	PKP	PKPdf	11 31 17.8	-1.2
	comp=Z,8.4nm,1.0s,baz=166,slow=3.5,SNR=4.6						
HYA	Hoyanger	127.65	348	*e*PKPdf	PKPdf	11 31 16.1	-2.0
KMBO	Kilima Mbogo	127.67	260	PKP	PKPdf	11 31 19.4	-0.5
KMBO				LR	LR		
	comp=Z,24µm,19.0s						
KMBO	Kilima Mbogo	127.67	260	PKP	PKPdf	11 31 19.4	-0.5
	comp=Z,3.1nm,0.8s,baz=76,slow=5.5,SNR=4.8						
KMBO				PP	PP	11 33 28.3	+7.1
	comp=Z,12nm,1.2s,baz=98,slow=8.3,SNR=3.1						
BNN	Bunyan	127.72	311	*e*P	PKiKP	11 31 22.7	+3.0
SUW	Suwalki	127.82	333	*e*PKP	PKiKP	11 31 22.8	+3.6
SUW				*e*SS	SS	11 50 33.5	+1.5
SUW				*e*SSS	SSS	11 55 25.5	
SUW				LMZ	LR	12 26 00.5	
	comp=Z,48µm,22.1s						
SUW	Suwalki	127.82	333	PFAKE		11 31 30.0	+11
SUW				LR	LR		
	comp=Z,53µm,19.0s						
SUW	Suwalki	127.82	333	*e*PKIKP	PKiKP	11 31 22.8	+3.6
SUW				*e*SS	SS	11 50 33.5	+1.5
SUW				MLR	MLR		
	comp=Z,48µm,22.1s						
MATP	Matopo	127.90	233	PKhKP	PKPpre	11 31 14.8	
	comp=Z,7.2nm,1.0s,baz=126,slow=1.9,SNR=5.8						
MATP				PKP	PKPdf	11 31 18.9	-1.1
	comp=Z,7.4nm,1.0s,baz=131,slow=2.7,SNR=9.2						
MATP				SKP		11 34 53.2	
	comp=Z,9.6nm,0.9s,baz=149,slow=4.5,SNR=4.3						
SUE	Sulen	128.04	349	*e*PKPdf	PKPdf	11 31 17.1	-1.7
AAE	Adis Abeba	128.06	273	*e*P	PKiKP	11 31 24.1	+2.9
FURI	Furi	128.13	273	PFAKE		11 31 30.0	+8.6
FURI				LR	LR		
	comp=Z,22µm,21.0s						
KOZT	Kozan	128.15	309	*e*P	PKiKP	11 31 20.1	-0.3
TAHT	Tahtakopru-Hat	128.19	308	*e*P	PKPdf	11 31 17.3	-2.6
KONO	Kongsberg	128.21	345	PFAKE		11 31 30.0	+10
KONO				LR	LR		
	comp=Z,30µm,20.0s						
KONO	Kongsberg	128.21	345	⇓*i*PKIKP	PKPdf	11 31 16.1	-3.1
KONO	Kongsberg	128.21	345	*e*PKPdf	PKPdf	11 31 18.1	-1.1
CEYT	Ceyhan	128.35	309	*e*P	PKPdf	11 31 18.6	-1.6
ILGA	Ilgaz	128.50	314	PFAKE		11 31 30.0	+8.7
ILGA				LR	LR		
	comp=Z,33µm,20.0s						
BER	Bergen	128.54	348	*e*Pdif	Pdif	11 28 02.2	-2.7
BER				*e*PP	PP	11 33 24.6	+0.1
ASF	Jabal al Asfar	128.67	303	P	PKiKP	11 31 28.1	+6.4
ASF	Jabal al Asfar	128.67	303	PKP	PKPdf	11 31 20.7	-0.4
	comp=Z,2.5nm,0.6s,baz=135,slow=1.4,SNR=2.5						
ASF				PP	PP	11 33 35.2	+8.1
	comp=Z,24nm,1.2s,baz=73,slow=2.0,SNR=3.3						
ODD1	Odda	128.69	347	*e*PKPdf	PKPdf	11 31 17.9	-2.3
BR101	Keskin Array S	129.04	313	*e*PKPdf	PKPdf	11 31 20.8	-0.8
BR101				*e*PP	PP	11 33 30.5	+1.4
BR131	Keskin Array S	129.04	313	*e*PKPdf	PKPdf	11 31 17.8	-3.8
BRTR	Keskin Array B	129.04	313	PKP	PKPdf	11 31 20.8	-0.8
	comp=Z,3.3nm,0.9s,baz=115,slow=1.8,SNR=6.4						
BRTR				PP	PP	11 33 30.5	+1.4
	comp=Z,6.2nm,1.1s,baz=100,slow=6.0,SNR=3.1						
KIS	Kishinev	129.04	323	*e*PKP	PKiKP	11 31 24.0	+2.1
KIS	Kishinev	129.04	323	*e*PP	PP	11 33 35.0	+6.5
	comp=Z,2µm,16.0s						
KIS	Kishinev	129.04	323	*i* PKS	PKSbc	11 34 50.0	+6.5
KIS	Kishinev	129.04	323	*e*PPP	PPP	11 36 36.0	
KIS				*e*SKS	SKSac	11 38 28.0	-1.3
KIS	Kishinev	129.04	323	*e*PKKP	PKKPdf	11 41 00.0	-29
KIS	Kishinev	129.04	323	*i* PS	PS	11 43 52.0	+14
KIS	Kishinev	129.04	323	*e*PKIKP	PKiKP	11 31 24.0	+2.1
KIS				*i*		11 31 31.0	
KIS				*e*		11 33 35.0	
KIS				*e*		11 38 28.0	
KIS				*i* PPS	PPS	11 45 16.0	
KIS				pmax	pmax		
	comp=Z,2µm,16.0s						
SJG	San Juan	129.12	76	PFAKE		11 31 30.0	+7.2
SJG				LR	LR		
	comp=Z,14µm,20.0s						
SJG	San Juan	129.12	76	*e*P	PKiKP	11 31 27.7	+4.9
SJG	San Juan	129.12	76	*e*P	PKiKP	11 31 27.7	+4.9
BLS5	Blasjo	129.17	347	*e*PKPdf	PKPdf	11 31 19.0	-2.1
HUMP	Col San Antoni	129.41	75	*e*PKPdf	PKPdf	11 31 19.8	-2.9
HUMP				LR	LR		
	comp=Z,18µm,22.0s						
KSDI	Kefar Szold	129.45	304	P	PKiKP	11 31 27.8	+4.7
	comp=Z,266nm,1.4s						
ANTO	Ankara	129.59	313	PFAKE		11 31 30.0	+6.7
ANTO				LR	LR		
	comp=Z,22µm,20.0s						
ANTO	Ankara	129.59	313	⇑*i*P	PKiKP	11 31 24.7	+1.4
ANTO	Ankara	129.59	313	⇑PKIKP	PKiKP	11 31 24.7	+1.4
KMY	Karmoy	129.62	347	*e*PKPdf	PKPdf	11 31 19.8	-2.1
MTP	Monte Pirata	129.69	76	PFAKE		11 31 30.0	+6.0
MTP				LR	LR		
	comp=Z,22µm,22.0s						
MMAI	Mount Meron Ar	129.70	304	PKhKP	PKPpre	11 31 17.2	
	comp=Z,1.2nm,0.5s,baz=315,slow=57,SNR=2.3						
MMAI				PKP	PKPdf	11 31 22.0	-1.0
	comp=Z,1.2nm,0.3s,baz=276,slow=3.3,SNR=6.4						
MMAI				PP	PP	11 33 37.5	+3.8
	comp=Z,1.4nm,0.5s,baz=108,slow=4.7,SNR=3.4						
MMAI				SKP		11 34 52.0	
	comp=Z,16nm,0.9s,baz=48,slow=5.0,SNR=6.7						
WALJ	Wala	129.70	302	P	PKiKP	11 31 30.5	+6.8
MMLI	Mount Malkishu	129.82	303	P	PKiKP	11 31 27.7	+3.7
	comp=Z,105nm,1.0s						
SNART	Snartemo	129.96	346	*e*PKPdf	PKPdf	11 31 20.9	-1.7
GHAJ	Ghor Haditha	129.96	302	PKP	PKiKP	11 31 26.8	+2.6
GHAJ	Ghor Haditha	129.96	302	P	PKiKP	11 31 26.8	+2.6
	comp=Z,44nm,1.8s,comp=Z,0.3nm						
JDRJ	Daraweish	130.00	301	P	PKiKP	11 31 31.6	+7.1
LVV	L'vov	130.09	329	*i* PKIKP	PKiKP	11 31 26.2	+2.3
LVV				*e*		11 38 29.1	
LVV				*i*		11 43 41.5	
LVV				*i* SS	SS	11 51 28.4	+28
BSD	Bornholm Skovb	130.35	339	*i* P	PKiKP	11 31 29.8	+5.6
	comp=Z,49µm,19.0s						
BEL	Belsk	130.36	332	*e*PKP	PKiKP	11 31 30.0	+5.6
BEL				*e*SS	SS	11 51 12.6	+9.3
BEL				LMZ	LR	12 23 18.3	
	comp=Z,53µm,25.6s						
CFR	Carcaliu	130.37	321	⇑*i*P	PKPdf	11 31 23.7	0.0
CFR	Carcaliu	130.37	321	⇑PKIKP	PKPdf	11 31 23.7	0.0
AMAZ	Amatzia	130.45	302	PKP	PKiKP	11 31 30.3	+5.1
AMAZ	Amatzia	130.45	302	P	PKiKP	11 31 30.3	+5.1
	comp=Z,160nm,1.9s						
TIRR	Tirgusor	130.56	321	PFAKE		11 31 30.0	+5.0
TIRR				LR	LR		
	comp=Z,28µm,19.0s						
BIZ	Bicaz	130.64	324	⇑*i*P	PKPdf	11 31 22.6	-1.7
HRFI	Mount Harif	130.68	300	PKP	PKiKP	11 31 28.9	+3.2
HRFI	Mount Harif	130.68	300	P	PKiKP	11 31 28.9	+3.2
	comp=Z,126nm,2.2s						
TLB	Topalu	130.72	321	⇑*i*P	PKPdf	11 31 24.3	-0.1
TLB	Topalu	130.72	321	⇑PKIKP	PKPdf	11 31 24.3	-0.1
AQBJ	Aqaba	130.73	300	PKP	PKiKP	11 31 32.4	+6.6
AQBJ	Aqaba	130.73	300	P	PKiKP	11 31 32.4	+6.6
	comp=Z,111nm,0.9s						
HARR	Harsova	130.74	321	⇑*i*P	PKPdf	11 31 23.2	-1.3
HARR	Harsova	130.74	321	⇑PKIKP	PKPdf	11 31 23.2	-1.3
BUR08	Bucovina Ar. S	130.76	326	*e*PKPdf	PKPdf	11 31 20.9	-3.7
BUR04	Bucovina Ar. S	130.76	326	*e*PKPdf	PKPdf	11 31 22.3	-2.3
BURAR	Bucovina Array	130.76	326	⇑*i*P	PKPdf	11 31 22.2	-2.4
BURAR	Bucovina Array	130.76	326	⇑*i*P	SKPbc	11 34 51.9	+3.4
BURAR	Bucovina Array	130.76	326	⇑PKIKP	PKPdf	11 31 22.2	-2.4
LSZ	Lusaka	130.80	239	*e*PKPdf	PKPdf	11 31 21.1	-4.5
LSZ				LR	LR		
	comp=Z,28µm,20.0s						
LSZ	Lusaka	130.80	239	PKP	PKPdf	11 31 23.1	-2.5
	comp=Z,6.0nm,0.6s,baz=195,slow=4.1,SNR=4.5						
LSZ				PP	PP	11 33 48.2	+7.3
	comp=Z,25nm,1.2s,baz=103,slow=3.8,SNR=3.8						
LSZ				SKP		11 34 54.5	
	comp=Z,34nm,1.1s,baz=139,slow=8.9,SNR=6.8						
CSS	Mathiatis	130.83	307	PFAKE		11 31 30.0	+4.1
CSS				LR	LR		
	comp=Z,24µm,22.0s						
EIL	Elat	130.83	300	PKP	PKiKP	11 31 30.6	+4.6
EIL	Elat	130.83	300	P	PKiKP	11 31 30.6	+4.6
	comp=Z,47nm,0.8s						
EIL	Elat	130.83	300	PKP	PKPdf	11 31 22.6	-2.5
	comp=Z,4.5nm,0.8s,baz=314,slow=8.1,SNR=4.4						
EIL				PP	PP	11 33 54.2	+13
	comp=Z,10nm,1.1s,baz=42,slow=2.1,SNR=3.6						
EIL				SKP		11 34 54.3	
	comp=Z,23nm,1.1s,baz=55,slow=2.7,SNR=3.3						
VRI	Vrincioaia	130.86	323	⇓*i*P	PKPdf	11 31 24.3	-0.4
VRI	Vrincioaia	130.86	323	⇓PKIKP	PKPdf	11 31 24.3	-0.4
KWP	Kalwaria Pacla	130.88	329	*e*PKP	PKiKP	11 31 28.1	+2.6
KWP				*e*SS	SS	11 51 18.6	+8.7
KWP				LMZ	LR	12 21 04.6	
	comp=Z,43µm,26.1s						
KWP	Kalwaria Pacla	130.88	329	*e*PKPdf	PKPdf	11 31 20.3	-4.3
KWP				LR	LR		
	comp=Z,525µm,20.0s						
KWP	Kalwaria Pacla	130.88	329	*e*PKIKP	PKPdf	11 31 20.3	-4.3
KWP				MLR	MLR		
	comp=Z,525µm,20.0s						
PLOR	Plostina	130.92	323	⇑*i*P	PKPdf	11 31 24.0	-0.9
PLOR	Plostina	130.92	323	⇑*i*P	SKPdf	11 34 56.4	-3.7
PLOR	Plostina	130.92	323	⇑PKIKP	PKPdf	11 31 24.0	-0.9
KZIT	Kziot	131.03	302	P	PKiKP	11 31 30.0	+3.6
	comp=Z,160nm,2.2s						
OZUR		131.29	324	⇓*i*P	PKPdf	11 31 24.0	-1.6
OZUR		131.29	324	⇑*i*P	SKPdf	11 34 58.9	-1.9
RGN	Rugen	131.36	339	PFAKE		11 31 40.0	+14
RGN				LR	LR		
	comp=Z,54µm,21.0s						
MLR	Muntele Rosu	131.53	323	*e*PKPdf	PKPdf	11 31 23.7	-2.5
MLR				*e*PKPdf	PKiKP	11 31 23.8	-3.3
MLR				*e*PKPdf	pPKPdf	11 31 29.1	-1.1
MLR				LR	LR		
	comp=Z,31µm,18.0s						
MLR	Muntele Rosu	131.53	323	⇑*i*P	PKPdf	11 31 24.6	-1.6
MLR	Muntele Rosu	131.53	323	⇑*i*P	SKPdf	11 34 59.4	-2.0
MLR	Muntele Rosu	131.53	323	⇑PKIKP	PKPdf	11 31 24.6	-1.6
MLR	Muntele Rosu	131.53	323	PKP	PKPdf	11 31 23.7	-2.5
	comp=Z,4.4nm,0.9s,baz=254,slow=6.4,SNR=2.7						
MLR				SKP		11 34 59.4	
	comp=Z,12nm,0.9s,baz=51,slow=9.2,SNR=4.5						
ARCR	ARCALIA	131.55	325	⇑*i*P	SKPdf	11 35 00.0	-1.2
DOPR	Dopca	131.59	324	⇑*i*P	PKPdf	11 31 24.0	-2.1
DOPR	Dopca	131.59	324	⇑*i*P	SKPdf	11 34 59.8	-1.5
UZH	Uzhgorod	131.72	328	*e*PKHKP	PKPpre	11 31 08.5	
UZH				*i*		11 31 22.9	
UZH				*i*		11 31 27.9	
UZH				*i*		11 33 42.5	
TRPA	Tarpa	131.90	328	⇑*i*P	PKPdf	11 31 22.7	-3.9
TRPA	Tarpa	131.90	328	*e*PKiKP	PKiKP	11 31 36.1	+8.5
TRPA				*e*PP	PP	11 33 52.0	+5.1
TRPA				*e*SS	SS	11 51 23.0	+0.5
OJC	Ojcow	131.91	331	*e*PKP	PKiKP	11 31 32.4	+4.8
OJC				*e*SS	SS	11 51 34.5	+12
OJC				*e*SSS	SSS	11 56 14.3	
OJC				LMZ	LR	12 28 55.3	
	comp=Z,49µm,23.4s						
OJC	Ojcow	131.91	331	*e*PKIKP	PKiKP	11 31 32.4	+4.8
OJC				*e*SSS	SSS	11 56 14.3	
OJC				MLR	MLR		
	comp=Z,49µm,23.4s						
SMRT	St. Maarten	132.05	76	PFAKE		11 31 40.0	+11
SMRT				LR	LR		
	comp=Z,24µm,21.0s						
VOIR		132.09	323	⇑*i*P	PKPdf	11 31 25.4	-1.7
VOIR		132.09	323	⇑*i*P	SKPdf	11 35 04.7	+2.4
VOIR		132.09	323	⇑PKIKP	PKPdf	11 31 25.4	-1.7
SEUS	St. Eustatius	132.15	76	PFAKE		11 31 40.0	+11
SEUS				LR	LR		
	comp=Z,19µm,20.0s						
CJR	Cluj-Napoca	132.19	325	⇓*i*P	PKPdf	11 31 23.6	-3.7
CJR	Cluj-Napoca	132.19	325	⇓PKIKP	PKPdf	11 31 23.6	-3.7
NIE	Niedzica	132.21	330	*e*PKP	PKiKP	11 31 33.1	+4.8
NIE				*e*SS	SS	11 51 29.6	+3.4
NIE				*e*SSS	SSS	11 56 16.2	
NIE				LMZ	LR	12 29 18.6	
	comp=Z,34µm,23.0s						
NIE	Niedzica	132.21	330	*e*PKIKP	PKiKP	11 31 33.1	+4.8
NIE				*e*SS	SS	11 51 29.7	+3.5
NIE				*e*SSS	SSS	11 56 16.2	
NIE				MLR	MLR		
	comp=Z,34µm,23.0s						
TRIS	Tristan da Cun	132.29	182	PFAKE		11 31 40.0	+11
TRIS				LR	LR		
	comp=Z,61µm,21.0s						
ARR	Arges	132.37	323	⇑*i*P	PKPdf	11 31 24.5	-3.2
ARR	Arges	132.37	323	⇑*i*P	SKPdf	11 35 04.3	+1.5
HUMR	Humele	132.62	322	⇑*i*P	PKPdf	11 31 25.9	-2.2
DRGR		132.63	326	⇑*i*P	PKPdf	11 31 24.0	-4.1
DRGR		132.63	326	⇑*i*P	SKPdf	11 35 04.4	+1.1
DRGR		132.63	326	⇑PKIKP	PKPdf	11 31 24.0	-4.1
SPB	Sao Paulo	132.64	137	PFAKE		11 31 40.0	+10
SPB				LR	LR		
	comp=Z,30µm,18.0s						
LTVH	Ltavrtes, Hu	132.71	327	*e*PKiKP	PKiKP	11 31 39.1	+10
LTVH				*e*PP	PP	11 33 53.0	+1.0
LTVH				*e*SS	SS	11 51 42.1	+10
SZH	Strazhica	132.71	320	P	PKiKP	11 31 35.0	+5.6
LANS	Liptovska Anna	132.80	330	*e*PKIKP	PKiKP	11 31 29.0	-0.5
LANS				*e*		11 31 36.1	
LANS				*e*		11 34 01.5	
LANS	Liptovska Anna	132.80	330	*e*PKP	PKiKP	11 31 29.0	-0.5
LANS				*e*		11 31 36.1	
LANS				*e*PP	PP	11 34 01.5	+8.8
RUE	Ruedersdorf	132.83	337	*e*P	PKiKP	11 31 33.0	+3.8
RUE				IAmb	IAmb	11 31 36.6	
	comp=Z,30nm,0.8s						
PTGA	Pitinga	132.86	101	PFAKE		11 31 40.0	+9.4
PTGA				LR	LR		
	comp=Z,29µm,22.0s						
OKC	Ostrava-Krasne	132.95	332	*e*pPKP	pPKPdf	11 31 34.1	+1.5
OKC				AMS	AMS	12 33 30.0	
	comp=Z,42µm,17.6s						
KSP	Ksiaz	133.05	334	*e*PKP	PKiKP	11 31 34.6	+4.8
KSP				*e*SS	SS	11 51 52.7	+17
KSP				LMZ	LR	12 21 21.2	
	comp=Z,38µm,28.5s						
KSP	Ksiaz	133.05	334	*e*PKIKP	PKiKP	11 31 34.6	+4.8
KSP				*e*SS	SS	11 51 52.7	+17
MORC	Moravsky Berou	133.27	332	*e*PKPdf	PKPdf	11 31 27.7	-1.5
MORC				LR	LR		
	comp=Z,51µm,18.0s						
MORC	Moravsky Berou	133.27	332	⇑*i*P	PKPpre	11 31 22.2	
MORC	Moravsky Berou	133.27	332	⇑PKIKP	PKPpre	11 31 22.2	
MORC	Moravsky Berou	133.27	332	*e*PKP	PKPpre	11 31 25.1	
ANWB	Willy Bob	133.29	76	PFAKE		11 31 40.0	+8.8
ANWB				LR	LR		
	comp=Z,16µm,20.0s						
GRGR	Grenville	133.32	84	PFAKE		11 31 40.0	+8.6
GRGR				LR	LR		
	comp=Z,15µm,19.0s						
KRLC	Kraliky	133.40	333	*e*PKPDF	PKPdf	11 31 25.8	-3.6
KRLC				*e*x	x	11 31 37.1	
KRLC	Kraliky	133.40	333	*e*PKIKP	PKPdf	11 31 25.8	-3.6
KRLC				*e*		11 31 37.1	
DPC	Dobruska-Polom	133.40	334	*e*PKPDF	PKPpre	11 31 24.6	
DPC				*e*pPKP	pPKPdf	11 31 33.5	0.0
DPC				*e*PP	PP	11 33 55.9	-0.5
DPC				AMS	AMS	12 30 00.0	
	comp=Z,54µm,20.3s						
DPC	Dobruska-Polom	133.40	334	*e*PKIKP	PKPdf	11 31 24.6	-4.8
DPC				*e*		11 31 33.5	
DPC				*e*		11 33 55.9	
DPC				MLR	MLR		
	comp=Z,54µm,20.3s						
PSZ	Piszkesteto	133.41	329	PFAKE		11 31 40.0	+9.2
PSZ				LR	LR		
	comp=Z,60µm,20.0s						
PSZ	Piszkesteto	133.41	329	⇓*i*P	PKPpre	11 31 23.2	
PSZ	Piszkesteto	133.41	329	*e*PKiKP	PKiKP	11 31 39.1	+8.3
PSZ				*e*PP	PP	11 34 00.1	+3.4
PSZ				*e*SS	SS	11 51 47.1	+6.2
PSZ	Piszkesteto	133.41	329	⇓PKIKP	PKPdf	11 31 23.2	-6.3
UPC	Upice	133.42	334	*e*PKPDF	PKPdf	11 31 26.5	-2.9
UPC				*e*x	x	11 31 37.0	
UPC				AMS	AMS	12 30 20.0	
	comp=Z,53µm,19.9s						
UPC	Upice	133.42	334	*e*PKIKP	PKPdf	11 31 26.5	-2.9
UPC				*e*		11 31 37.0	
UPC				MLR	MLR		
	comp=Z,53µm,19.9s						
GZR	Gura Zlata	133.43	324	⇑*i*P	PKPdf	11 31 25.7	-4.0
GZR	Gura Zlata	133.43	324	⇑PKIKP	PKPdf	11 31 25.7	-4.0
VYHS	Vyhne	133.55	330	*e*PKIKP	PKiKP	11 31 30.9	-0.1
VYHS				*e*		11 31 36.4	
VYHS				*e*		11 34 02.3	
VYHS				MLR	MLR		
	comp=Z,31µm,21.9s						
VYHS	Vyhne	133.55	330	*e*PKP	PKiKP	11 31 30.9	-0.1
VYHS				*e*		11 31 36.4	
VYHS				*e*PP	PP	11 34 02.3	+4.9
VYHS				*e*SS	SS	11 51 50.5	+8.1
VYHS				*e*		12 06 52.3	
VYHS				*e*L	L	12 31 17.4	
KOLL	Kolacno	133.70	331	*e*PKP	PKiKP	11 31 36.8	+5.6
ALN	Alexandroupoli	133.81	317	PFAKE		11 31 40.0	+8.3
ALN				LR	LR		
	comp=Z,19µm,21.0s						
HERR	Herculane	133.93	324	⇑*i*P	PKPpre	11 31 25.4	
BZS	Buzias	133.95	325	⇑*i*P	PKPpre	11 31 25.1	
BZS	Buzias	133.95	325	⇑PKIKP	PKPpre	11 31 25.1	
BRG	Berggiesshubel	134.01	336	*e*PKP	PKPpre	11 31 23.4	
	comp=Z,5.0nm,1.2s						
BRG				*e*		11 31 30.1	
	comp=Z,6.7nm,0.9s						
BRG				*i*		11 31 36.8	
	comp=Z,44nm,1.3s						
BRG				PP	PP	11 33 59.0	-1.2
BRG				*e*PKS		11 34 55.2	
	comp=Z,67nm,2.0s						
BRG				SDIFF		11 42 15.0	
BRG				*i*		11 43 56.0	
BRG				SS	SS	11 51 54.0	+6.4
	comp=N,37µm,23.7s						
	comp=E,19µm,20.0s						
	comp=Z,53µm,21.7s						
BRG	Berggiesshubel	134.01	336	*e*PKIKP	PKPpre	11 31 23.4	
BRG				*e*		11 31 30.1	
BRG				*i*		11 31 36.8	
BRG						11 33 59.0	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,67nm,2.0s						
BRG				MLR	MLR		
	comp=N,37µm,23.7s						
BRG				MLR	MLR		
	comp=E,19µm,20.0s						
BRG				MLR	MLR		
	comp=Z,53µm,21.7s						
PVCC	Panska Ves	134.02	335	*e*PKPDF	PKPdf	11 31 29.8	-0.7
PVCC				*e*pPKP	sPKPdf	11 31 37.6	+1.6
PVCC				*e*PP	PP	11 34 06.2	+6.0
PVCC				AMS	AMS	12 34 40.0	
	comp=Z,58µm,19.6s						
PVCC	Panska Ves	134.02	335	*e*PKIKP	PKPdf	11 31 29.8	-0.7
PVCC				*e*		11 31 37.6	
PVCC				*e*		11 34 06.2	
PVCC				MLR	MLR		
	comp=Z,58µm,19.6s						
VRAC	Vranov	134.04	332	⇑*i*P	PKPpre	11 31 23.6	
VRAC	Vranov	134.04	332	PKIKP	PKPdf	11 31 28.3	-2.3
VRAC						11 34 08.6	
VRAC				pmax	pmax		
	comp=Z,2.0nm,0.4s						
VRAC				pmax	pmax		
	comp=Z,2.0nm,0.4s						
VRAC	Vranov	134.04	332	*e*PKP	PKPpre	11 31 26.1	
VRAC	Vranov	134.04	332	PKP	PKPdf	11 31 28.3	-2.3
	comp=Z,2.4nm,0.4s,baz=18,slow=3.2,SNR=2.7						
VRAC				PP	PP	11 34 08.6	+8.2
	comp=Z,2.4nm,0.4s,baz=43,slow=6.2,SNR=3.0						
CLL	Collm	134.05	337	*e*PKPdf	PKPdf	11 31 28.0	-2.5
CLL				LR	LR		
	comp=Z,54µm,20.0s						
CLL	Collm	134.05	337	*e*PKPdf	PKPdf	11 31 27.0	-3.5
CLL				*i*		11 31 37.4	
	comp=Z,32nm,1.0s						
CLL				*i*		11 31 42.5	
	comp=Z,81nm,1.3s						
CLL				*e*PP	PP	11 33 57.0	-3.4
CLL				*e*PPlp		11 34 17.0	
CLL				*e*PKSdf	PKSdf	11 35 07.0	+0.3
CLL				*e*		11 35 15.0	
CLL				*e*		11 35 42.0	
CLL				*e*Sdif	Sdif	11 42 12.0	-4.8
CLL				*e*PSKS		11 44 00.0	
CLL				*e*PPS	PPS	11 46 02.0	
CLL				*e*		11 47 48.0	
CLL				*e*SS	SS	11 51 52.0	+4.0
CLL				*e*SKSSKSac		11 53 48.0	
CLL				*e*SSS	SSS	11 56 49.0	
CLL				*e*(SSSS)		12 00 06.0	
CLL				LmH		12 32 00.0	
	comp=N,33µm,20.5s						
CLL				LmH		12 32 00.0	
	comp=E,24µm,21.0s						
CLL				LmV		12 34 00.0	
	comp=Z,53µm,19.6s						
CLL				*e*Lmax		12 34 35.0	
CLL				Lm(360		13 09 00.0	
	comp=N,7µm,21.5s						
CLL				Lm(360		13 09 00.0	
	comp=E,5µm,20.9s						
CLL				Lm(360		13 09 00.0	
	comp=Z,10µm,21.6s						
CLL	Collm	134.05	337	*e*PKIKP	PKPdf	11 31 27.0	-3.5
CLL				*i*		11 31 37.4	
CLL				*i*		11 31 42.5	
CLL				MLR	MLR		
	comp=Z,53µm,19.6s						
MBAR	Mbarara	134.10	258	*e*PKPdf	PKiKP	11 31 33.4	+0.1
MBAR				LR	LR		
	comp=Z,100nm,20.0s						
MBAR	Mbarara	134.10	258	PKP	PKPdf	11 31 29.7	-2.3
	comp=Z,3.5nm,0.2s,baz=143,slow=9.4,SNR=5.8						
MBAR				SKP		11 35 08.1	
	comp=Z,4.0nm,0.2s,baz=101,slow=5.0,SNR=6.5						
BUD	Budapest	134.13	329	*e*PKiKP	PKiKP	11 31 39.1	+6.9
BUD				*e*PP	PP	11 34 02.0	+0.9

BUD				eSS	SS	11 51 53.0	+3.5
KRUC	Moravsky	134.31	332	ePKP	PKPpre	11 31 26.1	
MODS	Modra-Piesok	134.38	331	ePKIKP	PKPdf	11 31 30.2	-1.1
MODS				e		11 31 38.9	
MODS				MLR	MLR		
	comp=Z,78μm,22.9s						
MODS	Modra-Piesok	134.38	331	ePKP	PKPdf	11 31 30.2	-1.1
MODS				e		11 31 38.9	
MODS				ePP	PP	11 33 55.8	-6.9
MODS				eSS	SS	11 51 57.5	+5.1
MODS				e		12 07 01.0	
MODS				eL	L	12 30 52.4	
MDVR	Moldovita	134.40	324	⇑iP	PKPpre	11 31 27.0	
PRA	Prague	134.42	335	AMS	AMS	12 34 30.0	
	comp=Z,44μm,18.8s						
PRU	Pruhonice	134.44	334	ePKPDF	PKPdf	11 31 30.7	-0.6
PRU				epPKP	sPKPdf	11 31 38.5	+1.7
PRU				ePP	PP	11 34 02.8	-0.1
PRU				AMS	AMS	12 26 20.0	
	comp=Z,51μm,22.1s						
PRU	Pruhonice	134.44	334	ePKIKP	PKPdf	11 31 30.7	-0.6
PRU				e		11 31 38.5	
PRU				e		11 34 02.8	
PRU				MLR	MLR		
	comp=Z,51μm,22.1s						
TREC	Trest	134.54	333	eSS	SS	11 52 02.2	+7.9
TREC				AMS	AMS	12 31 00.0	
	comp=Z,50μm,21.0s						
ZST	Bratislava	134.59	331	ePP	PP	11 33 55.0	-9.0
VTS	Vitosha	134.73	321	PFAKE		11 31 40.0	+6.3
VTS				LR	LR		
	comp=Z,38μm,20.0s						
VTS	Vitosha	134.73	321	P	PKiKP	11 31 35.4	+1.7
VTS	Vitosha	134.73	321	i P	PKiKP	11 31 37.6	+3.9
ESK	Eskdalemuir	134.85	351	PFAKE		11 31 40.0	+6.6
ESK				LR	LR		
	comp=Z,35μm,21.0s						
MMB	Musomiste	134.97	320	P	PKiKP	11 31 39.2	+5.1
NVR	Nevrokopi	135.01	319	P	PKiKP	11 31 38.9	+4.7
NVR	Nevrokopi	135.01	319	P	PKiKP	11 31 38.9	+4.7
TIH	Tihany	135.10	329	ePKiKP	PKiKP	11 31 40.0	+5.9
TIH				ePP	PP	11 34 08.1	+0.8
TIH				eSS	SS	11 52 17.1	+16
NKC	Novy Kostel	135.11	336	eSS	SS	11 52 17.7	+17
NKC				AMS	AMS	12 34 50.0	
	comp=Z,48μm,20.1s						
MORH	Mrgy, Hungar	135.17	328	ePKiKP	PKiKP	11 31 39.1	+4.8
MORH				ePP	PP	11 34 08.0	+0.3
MORH				eSS	SS	11 52 07.0	+5.0
SOP	Sopron	135.21	331	ePKiKP	PKiKP	11 31 37.0	+2.7
SOP				ePP	PP	11 34 08.1	+0.1
SOP				eSS	SS	11 52 17.1	+15
KKB	Krupnik	135.23	320	i P	PKiKP	11 31 43.5	+8.9
CONA	Conrad Observa	135.37	332	PKiKP	PKPdf	11 31 32.2	-1.0
	comp=Z,13nm,0.7s						
BBGH	Gun Hill	135.42	82	PFAKE		11 31 40.0	+4.3
BBGH				LR	LR		
	comp=Z,28μm,22.0s						
KHC	Kasperske Hory	135.50	334	ePKPdf	PKPdf	11 31 31.3	-2.1
KHC				LR	LR		
	comp=Z,22μm,21.0s						
KHC	Kasperske Hory	135.50	334	ePKPpre	PKPpre	11 31 19.5	
KHC				ePKPDF	PKPdf	11 31 30.9	-2.5
KHC				epPKP	sPKPdf	11 31 39.0	+0.1
KHC				ex	x	11 31 57.0	
KHC				ePP	PP	11 33 59.3	-10
KHC				ePKKS		11 44 06.3	
KHC				eSS	SS	11 52 06.2	+0.5
KHC				AMS	AMS	12 32 50.0	
	comp=Z,54μm,20.4s						
KHC	Kasperske Hory	135.50	334	ePKIKP	PKPdf	11 31 30.9	-2.5
KHC				e		11 31 39.0	
KHC				eSS	SS	11 52 06.2	+0.5
KHC				MLR	MLR		
	comp=Z,54μm,20.4s						
GEC2	GERESS Array S	135.66	334	ePKPdf	PKPdf	11 31 31.6	-2.2
GEC2				LR	LR		
	comp=Z,57μm,21.0s						
GEC2	GERESS Array S	135.66	334	ePKIKP	PKPdf	11 31 31.6	-2.2
GEC2				MLR	MLR		
	comp=Z,57μm,21.0s						
GERES	GERESS Array B	135.66	334	PKhKP	PKPpre	11 31 25.4	
	comp=Z,3.9nm,0.7s,baz=42,slow=2.2,SNR=8.6						
GERES				SKPab	SKiKP	11 35 14.4	+3.0
	comp=Z,3.1nm,0.7s,baz=31,slow=3.1,SNR=3.4						
GEA0	GERESS Array S	135.67	334	ePKPpre	PKPpre	11 31 26.4	
DIVS	Divibare	135.79	325	ePKPpre	PKPpre	11 31 27.0	
DIVS				LR	LR		
	comp=Z,28μm,21.0s						
VAY	Valandovo	135.85	320	i PKP	PKiKP	11 31 41.2	+5.4
STIP	Stip	135.89	321	i PKP	PKiKP	11 31 44.8	+8.9
BEHE	Becsehely	135.95	329	ePKiKP	PKiKP	11 31 43.0	+7.1
BEHE				ePP	PP	11 34 02.0	-11
BEHE				⇑eSS	SS	11 52 10.1	-1.3
ARSA	Arzberg	136.01	331	pPKPdf	PKiKP	11 31 35.9	-0.1
	comp=Z,12nm,0.8s						
GRA1	Grafenberg Arr	136.02	337	PFAKE		11 31 40.0	+4.0
GRA1				LR	LR		
	comp=Z,49μm,20.0s						
GRFO	Grafenberg	136.03	337	PFAKE		11 31 40.0	+4.1
GRFO				LR	LR		
	comp=Z,46μm,20.0s						
MOA	Molln	136.16	333	PKiKP	PKPdf	11 31 33.8	-0.8
	comp=Z,7.8nm,0.7s						
LIT	Litokhoron	136.56	318	PFAKE		11 31 50.0	+13
LIT				LR	LR		
	comp=Z,27μm,21.0s						
PERS	Pernice	136.65	331	ePKPdf	PKPdf	11 31 29.9	-5.7
KRUS	Krusevo	136.65	321	i PKP	PKiKP	11 31 40.3	+2.7
SOKA	Soboth	136.66	331	PKiKP	PKPdf	11 31 35.4	-0.3
	comp=Z,32nm,1.3s						
BIA	Bitola	136.80	320	i PKP	PKiKP	11 31 44.0	+6.1
TSUM	Tsumeb	136.85	226	ePKPdf	PKPpre	11 31 30.6	
TSUM				ePKPdf	PKPdf	11 31 35.2	-1.7
TSUM				eSKPbc	SKPab	11 35 18.0	+2.1
TSUM				LR	LR		
	comp=Z,38μm,19.0s						
TSUM	Tsumeb	136.85	226	PKhKP	PKPpre	11 31 30.3	
	comp=Z,5.5nm,1.0s,baz=138,slow=3.5,SNR=6.3						
TSUM				PKP	PKPdf	11 31 35.2	-1.7
	comp=Z,20nm,1.0s,baz=133,slow=2.0,SNR=13						
TSUM				SKPab	SKPab	11 35 18.0	+2.1
	comp=Z,8.3nm,1.0s,baz=72,slow=6.8,SNR=4.0						
BLY	Banja Luka	136.91	327	ePKPdf	PKPdf	11 31 34.0	-2.0
BLY				LR	LR		
	comp=Z,33μm,20.0s						
BLY	Banja Luka	136.91	327	⇑iP	PKPpre	11 31 27.9	
ATAL	Atalanti	136.93	316	P	PKiKP	11 31 39.0	+0.9
OBKA	Obir	137.01	331	PKiKP	PKPdf	11 31 36.4	0.0
	comp=Z,14nm,0.9s						
BEBN	Eben Emael	137.04	342	⇓PP	PP	11 34 29.9	+11
OHR	Ohrid	137.08	321	i PKP	PKiKP	11 31 45.6	+7.2
MEM	Membach	137.10	341	⇑PKiKP	PKPdf	11 31 34.7	-1.5
KBA	Koelnbreinsper	137.15	333	PKiKP	PKPdf	11 31 36.6	-0.1
	comp=Z,19nm,0.8s						
IDI	Anoyia	137.16	311	ePKPdf	PKPdf	11 31 33.1	-3.9
IDI				LR	LR		
	comp=Z,13μm,20.0s						
IDI	Anoyia	137.16	311	⇑iP	PKPdf	11 31 33.8	-3.1
IDI	Anoyia	137.16	311	PKP	PKPdf	11 31 35.7	-1.3
	comp=Z,11nm,0.8s,baz=70,slow=4.5,SNR=5.8						
AGG	Agios Georgios	137.22	317	P	PKiKP	11 31 43.0	+4.2
AGG				LR	LR		
	comp=Z,37μm,21.0s						
AGG	Agios Georgios	137.22	317	P	PKiKP	11 31 43.0	+4.2
PDG	Podgorica	137.24	323	⇑iP	PKPpre	11 31 29.8	
TTG	Podgorica	137.24	323	PFAKE		11 31 50.0	+11
TTG				LR	LR		
	comp=Z,41μm,21.0s						
BDFB	Brasilia	137.24	127	ePKPdf	PKPdf	11 31 34.4	-3.2
BDFB				ePKPdf	PKPdf	11 31 36.3	-1.4
BDFB				eSKPab	SKPab	11 35 18.2	+0.5
BDFB				LR	LR		
	comp=Z,45μm,21.0s						
BDFB	Brasilia	137.24	127	PKP	PKPdf	11 31 36.3	-1.4
	comp=Z,8.0nm,0.9s,baz=189,slow=3.7,SNR=8.9						
BDFB				SKPab	SKPab	11 35 18.2	+0.5
	comp=Z,9.7nm,1.1s,baz=243,slow=4.6,SNR=4.2						
DSB	Dublin	137.30	353	PFAKE		11 31 50.0	+12
DSB				LR	LR		
	comp=Z,33μm,22.0s						
MYKA	Terra Mystica	137.35	332	pPKPdf	PKiKP	11 31 38.0	-0.8
	comp=Z,27nm,0.9s						
LJU	Ljubljana	137.36	331	i PKPdf	PKPdf	11 31 32.2	-4.7
VISS	Visnje	137.38	330	i PKPdf	PKPdf	11 31 32.2	-4.8
BOJS	Bojanci	137.39	330	i PKPdf	PKPdf	11 31 34.8	-2.1
UCC	Uccle	137.43	343	PFAKE		11 31 50.0	+11
UCC				LR	LR		
	comp=Z,42μm,18.0s						
TIR	Tirane	137.52	322	PFAKE		11 31 50.0	+11
TIR				LR	LR		
	comp=Z,52μm,20.0s						
STU	Stuttgart	137.55	337	PFAKE		11 31 50.0	+11
STU				LR	LR		
	comp=Z,42μm,19.0s						
ANX	Ano Chora	137.72	317	P	PKiKP	11 31 40.3	+0.4
WATA	Walderalm	137.74	334	PKPdf	PKPdf	11 31 35.0	-2.7
	comp=Z,5.8nm,0.5s						
GUR	Goura	137.76	316	ePKPdf	PKPdf	11 31 36.2	-1.8
GUR	Goura	137.76	316	P	PKPdf	11 31 36.2	-1.8
ABTA	Abfaltersbach	137.78	333	PKPdf	PKPdf	11 31 34.3	-3.4
	comp=Z,25nm,0.8s						
WLF	Walferdange	137.87	341	ePKPdf	PKPdf	11 31 35.7	-2.0
WLF				LR	LR		
	comp=Z,241μm,22.0s						
WLF	Walferdange	137.87	341	⇑PKiKP	PKPdf	11 31 38.1	+0.4
WLF				⇑PP	PP	11 34 24.4	+0.1
MOTA	Moosalm	137.93	335	PKPdf	PKPdf	11 31 35.6	-2.5
	comp=Z,26nm,0.8s						
RETA	Reutte	137.96	335	PKPdf	PKPdf	11 31 35.7	-2.3
	comp=Z,40nm,1.1s						
SKDS	Skadanscina	137.97	330	i PKPdf	PKPdf	11 31 33.0	-5.0
TRI	Trieste	137.97	331	PFAKE		11 31 50.0	+10
TRI				LR	LR		
	comp=Z,36μm,20.0s						
SQTA	Sankt Quirin	137.98	334	PKPdf	PKPdf	11 31 35.2	-3.0
	comp=Z,45nm,0.9s						
DOU	Dourbes	137.99	342	⇑PKiKP	PKiKP	11 31 40.2	+0.3
BFO	Black Forest	138.24	338	ePKPdf	PKPdf	11 31 33.0	-5.5
BFO				LR	LR		
	comp=Z,27μm,22.0s						
BFO	Black Forest	138.24	338	i PKIKP	PKPdf	11 31 36.0	-2.5
FETA	Feichten	138.34	335	PKPdf	PKPdf	11 31 36.2	-2.6
	comp=Z,48nm,0.9s						
ITM	Ithomi	138.43	315	PFAKE		11 31 50.0	+8.8
ITM				LR	LR		
	comp=Z,26μm,22.0s						
DAVA	Damuels	138.48	335	PKiKP	PKPdf	11 31 37.7	-1.4
	comp=Z,19nm,0.9s						
ECH	Echery	138.76	339	ePKPdf	PKPdf	11 31 35.4	-4.0
ECH				LR	LR		
	comp=Z,42μm,21.0s						
ECH	Echery	138.76	339	ePKIKP	PKPdf	11 31 35.4	-4.0
ECH				MLR	MLR		
	comp=Z,42μm,21.0s						
FUORN	Ofenpass-Fuorn	138.85	335	ePKPdf	PKPdf	11 31 36.0	-4.0
FUORN				LR	LR		
	comp=Z,57μm,19.0s						
DAVOX	Davos/Dischmat	138.89	335	SKPab	SKPab	11 35 22.2	-1.8
TUE	Stuetta	139.35	335	PFAKE		11 31 50.0	+6.9
TUE				LR	LR		
	comp=Z,50μm,20.0s						
SENIN	Lac Senin/Sane	140.26	337	ePKPdf	PKPdf	11 31 39.3	-3.2
SENIN				LR	LR		
	comp=Z,42μm,19.0s						
CLF	Chambon-Foret	140.53	343	PFAKE		11 31 50.0	+4.9
CLF				LR	LR		
	comp=Z,47μm,20.0s						
AQU	L'Aquila	140.56	328	ePKPdf	PKPdf	11 31 42.7	-0.2
AQU				LR	LR		
	comp=Z,35μm,20.0s						
TIP	Timpagrande	140.72	321	ePKPdf	PKPdf	11 31 39.8	-3.6
TIP				ePKPdf	PKiKP	11 31 44.8	-1.1
TIP				LR	LR		
	comp=Z,46μm,22.0s						
VLC	Villacollemand	140.72	332	PFAKE		11 31 50.0	+4.3
VLC				LR	LR		
	comp=Z,38μm,19.0s						
CUC	Castrocucco	140.78	323	PFAKE		11 31 50.0	+4.0
CUC				LR	LR		
	comp=Z,32μm,20.0s						
MDP	Montagnes des	141.32	95	SKPab	SKPab	11 35 32.0	-3.9
	comp=Z,28nm,1.2s,baz=269,slow=3.0,SNR=2.4						
BNI	Bardonecchia	141.59	336	ePKPpre	PKPpre	11 31 39.0	
BNI				ePKPdf	PKPdf	11 31 45.9	+1.0
BNI				LR	LR		
	comp=Z,68μm,20.0s						
CEL	Celeste	141.81	321	PFAKE		11 32 00.0	+12
CEL				LR	LR		
	comp=Z,21μm,22.0s						
SSB	Saint Sauveur	142.21	339	ePKPdf	PKPdf	11 31 42.1	-3.7
SSB				LR	LR		
	comp=Z,30μm,21.0s						
SSB	Saint Sauveur	142.21	339	ePKIKP	PKPdf	11 31 42.1	-3.7
SSB				MLR	MLR		
	comp=Z,30μm,21.0s						
CLTB	Caltabellotta	143.89	322	ePKPdf	PKPab	11 31 46.0	-0.2
CLTB				LR	LR		
	comp=Z,42μm,22.0s						
WDD	Wied Dalam	144.15	319	PFAKE		11 32 00.0	+7.0
WDD				LR	LR		
	comp=Z,21μm,20.0s						
MAHO	Mahon	146.86	334	PKP	PKiKP	11 32 00.3	+1.9
MAHO				SS	SS	11 53 58.2	-20
KEST	Kesra	147.43	323	ePKPbc	PKPbc	11 31 56.8	-0.9
KEST				LR	LR		
	comp=Z,43μm,19.0s						
KEST	Kesra	147.43	323	PKPbc	PKPbc	11 31 56.5	-1.1
	comp=Z,0.9nm,1.6s,baz=165,slow=0.5,SNR=13						
H07N1	FLORES T-PHASE	147.51	25	ePKP	PKiKP	11 32 03.9	+4.1
H07S1	FLORES T-PHASE	147.74	25	ePKP	PKPab	11 32 03.9	+3.4
CMAH	Djebel Manchou	147.88	326	P	PKPab	11 32 04.0	+2.7
ABSA	Djebel Ababsia	148.11	326	P	PKPab	11 32 05.4	+3.2
PBRG	Braganca	148.53	350	ePKPdf	PKPab	11 32 03.3	-0.4
PGAV	Gavieira, Arco	148.62	352	ePKPdf	PKPab	11 32 03.6	-0.5
CASM	Ain Smara	148.66	327	P	PKPab	11 32 06.6	+2.2
DFRA	Djebel Bou Aff	148.76	328	P	PKPab	11 32 08.1	+3.2
PCAB	Cabril	148.84	351	ePKPdf	PKiKP	11 32 03.2	+0.7
CTEI	Djebel Teioual	148.85	327	P	PKPab	11 32 06.0	+0.8
POLO	Lamas de Olo	149.13	351	ePKPdf	PKiKP	11 32 03.5	+0.3
UCM	Universidad Co	149.18	344	PKP	PKPab	11 32 06.8	+0.5
UCM				SS	SS	11 54 40.5	-3.1
MVO	Moncorvo	149.21	350	ePKPdf	PKiKP	11 32 04.0	+0.7
PVRL	Vila Real	149.21	351	ePKPdf	PKiKP	11 32 03.4	+0.1
SRBC	Serra Branca	149.28	22	ePKP	PKiKP	11 32 04.9	+1.4
PGRA	Graciosa	149.31	22	ePKP	PKiKP	11 32 04.3	+0.8
CKHR	Kef el Ahmar	149.36	328	P	PKPab	11 32 08.5	+1.2
PCED	Cedros	149.39	23	ePKP	PKiKP	11 32 04.3	+0.6
ROSA	Rosais	149.48	22	ePKP	PKiKP	11 32 04.7	+0.8
ROSA	Rosais	149.48	22	PFAKE		11 32 10.0	+2.5
ROSA				LR	LR		
	comp=Z,41μm,21.0s						
PCAN	Candelaria	149.62	23	ePKP	PKiKP	11 32 04.1	-0.1
PMAN	Manadas	149.62	22	ePKP	PKiKP	11 32 04.3	+0.2
ADH	Angra Heroismo	149.91	21	ePKP	PKPbc	11 32 02.3	-1.5
ES19	SONSECA Array	149.92	344	ePKPbc	PKPbc	11 32 02.1	-1.7
ES19				ePKPab	pPKPbc	11 32 06.4	-1.6
ABA	Alger-Bouzarea	149.95	332	P	PKPab	11 32 07.6	-1.9
ESDC	Sonseca Array	149.96	344	PKPbc	PKPbc	11 32 02.9	-1.1
	comp=Z,6.9nm,0.7s,baz=14,slow=2.8,SNR=18						
ESDC				SKP		11 35 32.6	
	comp=Z,5.3nm,0.9s,baz=14,slow=4.0,SNR=4.1						
ESLA	Sonseca Array	149.96	344	ePKPbc	PKPbc	11 32 02.3	-1.7
ESLA				ePKPab	pPKPbc	11 32 06.6	-1.4
ESLA				LR	LR		
	comp=Z,39μm,20.0s						
MTE	Manteigas	150.04	350	ePKPdf	PKiKP	11 32 05.7	+0.6
MTE	Manteigas	150.04	350	ePKPbc	PKPbc	11 32 03.2	-1.0
MTE				ePKPab	PKPab	11 32 09.9	0.0
MTE				LR	LR		
	comp=Z,38μm,19.0s						
AKET	Djebel Ketaf	150.16	330	P	PKPab	11 32 11.7	+1.1
PAB	San Pablo	150.18	345	ePKPbc	PKPbc	11 32 02.9	-1.6
PAB				ePKPab	PKiKP	11 32 06.5	+1.1
PAB				LR	LR		
	comp=Z,48μm,22.0s						
ADJB	Djebel Djouab	150.29	331	P	PKPab	11 32 09.0	-2.1
PCAS	Casmilo, Conde	150.53	351	ePKPdf	PKiKP	11 32 06.0	0.0
PCBR	Castelo Branco	150.57	350	ePKPdf	PKiKP	11 32 06.1	0.0
PTOM	Tomar	150.94	351	ePKPdf	PKPbc	11 32 05.4	-0.8
CART	Cartagena	150.95	338	ePKPdf	PKPdf	11 31 57.4	-3.2
CART				ePKPbc	pPKPdf	11 32 02.8	-1.9
CART				ePKPab	sPKPbc	11 32 12.2	+0.4
CART				LR	LR		
	comp=Z,40μm,21.0s						
CART	Cartagena	150.95	338	PKP	PKPbc	11 32 04.7	-1.6
CART				SS	SS	11 54 03.1	-60
PMRV	Marv??o	150.96	349	ePKPdf	PKPbc	11 32 05.3	-1.0
EBNR	Beni Rached	151.06	333	P	PKPab	11 32 13.0	-1.1
PSET	Sete Cidades	151.17	20	ePKP	PKPbc	11 32 04.5	-2.4
ECHA	Ech Chlef	151.24	334	P	PKiKP	11 32 11.0	+3.4
PDA	Ponta Delgada	151.26	19	ePKP	PKPbc	11 32 04.3	-2.7
PCALD	Caldeiras da R	151.27	19	ePKP	PKPbc	11 32 04.1	-3.0
GRON	Grota Negra	151.28	19	ePKP	PKPdf	11 32 03.4	+2.2
CMLA	Cha da Macela	151.29	19	ePKP	PKPdf	11 32 03.4	+2.2
CMLA	Cha da Macela	151.29	19	PFAKE		11 32 10.0	+2.4
CMLA				LR	LR		
	comp=Z,44μm,20.0s						
BART	Pico Bartolome	151.39	19	ePKP	PKPdf	11 32 03.0	+1.6
PMTG	Montargil	151.45	351	ePKPdf	PKiKP	11 32 08.4	+0.5
EANR	'Ain N'Sour	151.53	334	P	PKPbc	11 32 07.0	-0.8
PESTR	Estremoz	151.54	349	ePKPdf	PKiKP	11 32 08.4	+0.3
PESTR	Estremoz	151.54	349	PFAKE		11 32 10.0	+1.9
PESTR				LR	LR		
	comp=Z,42μm,22.0s						
ETRT	Tiaret	151.91	333	P	PKPbc	11 32 08.5	-0.3
LIS	Lisbon	151.94	352	ePKPdf	PKPdf	11 31 59.7	-2.4
LIS				AMS	AMS	12 29 38.8	
	comp=E,37μm,16.8s						
LIS	Lisbon	151.94	352	ePKIKP	PKPdf	11 31 59.7	-2.4
OJGS	Djebel Guires	152.06	334	P	PKPbc	11 32 08.0	-1.1
PSMA	Santa Maria	152.12	19	ePKP	PKPdf	11 32 04.7	+2.3
SHEL	Horse Pasture	152.12	197	ePKPdf	PKPdf	11 31 59.6	-3.5
SHEL				ePKPbc	PKiKP	11 32 10.0	0.0
SHEL				ePKPab	sPKPbc	11 32 16.7	+1.6
SHEL				LR	LR		
	comp=Z,22μm,20.0s						
SHEL	Horse Pasture	152.12	197	ePKIKP	PKPdf	11 31 59.6	-3.5
SHEL				e		11 32 10.0	
SHEL				e		11 32 16.7	
SHEL				MLR	MLR		
	comp=Z,22μm,20.0s						
PSMN	Pico do Norte,	152.13	19	ePKP	PKPdf	11 32 04.7	+2.2
OJBR	Djebel Berber	152.16	334	P	PKPab	11 32 16.0	-2.8
PBEJ	Beja	152.41	350	ePKPdf	PKiKP	11 32 09.8	-0.1
PNCL	Nicolau / Gran	152.44	351	ePKPdf	PKPbc	11 32 07.9	-1.8
ODJA	Bouhanifia	152.59	335	P	PKiKP	11 32 15.0	+4.5
RCBR	Riachuelo	152.60	126	ePKPab	PKPab	11 32 18.2	-3.0
RCBR				LR	LR		
	comp=Z,30μm,20.0s						
RCBR	Riachuelo	152.60	126	PKPbc	PKPdf	11 32 06.6	+2.8
	comp=Z,57nm,0.6s,baz=231,slow=0.1,SNR=2.8						
RCBR				PKPab	PKPab	11 32 18.2	-3.0
	comp=Z,56nm,0.7s,baz=244,slow=2.0,SNR=4.6						
MESJ	Messejana	152.65	350	ePKPdf	PKPdf	11 32 00.6	-2.6
MESJ				eSS	SS	11 55 23.4	+1.6
MESJ				AMS	AMS	12 34 30.8	
	comp=Z,35μm,25.3s						
MESJ	Messejana	152.65	350	ePKPdf	PKPbc	11 32 08.9	-1.3
MESJ	Messejana	152.65	350	ePKIKP	PKPdf	11 32 00.6	-2.6
MESJ				eSS	SS	11 55 23.3	+1.5
EMAL	Malaga-Limoner	152.81	343	PKP	PKPbc	11 32 07.8	-2.7
EMAL				SS	SS	11 55 17.3	-6.6
LIJA	Lijar	152.94	345	PKP	PKPbc	11 32 10.0	-1.0
PVAQ	Vaqueiros	152.98	349	ePKPdf	PKiKP	11 32 13.8	+2.7
PTEO	Sao Teotonio	153.02	351	ePKPdf	PKPbc	11 32 09.9	-1.1
GIBL	Gibalbin	153.16	346	PKP	PKiKP	11 32 13.0	+1.5
OLHC	Oulhaca	153.17	337	P	PKPab	11 32 19.0	-4.0
PBDV	Barranco-do-Ve	153.18	349	ePKPdf	PKPbc	11 32 10.1	-1.3
MORF	Marmelete	153.24	351	ePKPdf	PKPdf	11 32 01.6	-2.5
MORF				AMS	AMS	12 45 27.7	
	comp=Z,33μm,18.6s						
MORF	Marmelete	153.24	351	ePKPdf	PKPbc	11 32 10.2	-1.4
MORF	Marmelete	153.24	351	ePKIKP	PKPdf	11 32 01.6	-2.5
ALJ	Aljibe	153.36	345	PKP	PKPab	11 32 20.7	-3.0
PFVI	Vila Bisbo	153.44	351	PFAKE		11 32 10.0	-2.0
PFVI				LR	LR		
	comp=Z,44μm,22.0s						
SFS	San Fernando	153.56	346	PFAKE		11 32 10.0	-2.2
SFS				LR	LR		
	comp=Z,36μm,21.0s						
SFS	San Fernando	153.56	346	PKP	PKPab	11 32 23.7	-0.8
SFS				SS	SS	11 55 19.8	-12
CNIL	Conil	153.62	345	PKP	PKPab	11 32 19.5	-5.2
MELI	Melilla	153.69	339	PKP	PKPbc	11 32 10.2	-2.3
MELI				SS	SS	11 53 58.0	-96
CEU	Ceuta	153.88	344	PKP	PKPdf	11 32 07.8	+2.8
CEU				SS	SS	11 55 38.1	+2.6
RTC	Rabat Centre	156.08	345	PFAKE		11 32 20.0	+12
RTC				LR	LR		
	comp=Z,131μm,20.0s						
AVE	Averroes	156.87	346	PKP	PKPdf	11 32 12.2	+3.0
AVE				SS	SS	11 56 09.5	+1.7
TAM	Tamanrasset	157.91	305	PFAKE		11 32 20.0	+9.1
TAM				LR	LR		
	comp=Z,31μm,18.0s						
TOA0	Torodi Ar. Sit	164.49	280	ePKPdf	PKPdf	11 32 15.3	-2.6
TOA0				ePKPdf	PKPdf	11 32 16.2	-1.7
TORD	Torodi Ar. Bea	164.49	280	PKP	PKPdf	11 32 15.9	-2.0
	comp=Z,3.4nm,1.1s,baz=14,slow=2.4,SNR=13						
TORD				PKPab	PKPab	11 33 09.5	-3.2
	comp=Z,3.6nm,0.8s,baz=60,slow=3.1,SNR=2.6						
TOA1	Torodi Ar. Sit	164.49	280	ePKPdf	PKPdf	11 32 15.9	-2.1
TOA1				ePKPab	PKPab	11 33 09.5	-3.2
KIC	Kosan Boka	169.82	245	ePKIKP	PKPdf	11 32 20.0	-1.9
	comp=Z,687nm,1.7s						
LIC	Lamto	170.01	243	ePKIKP	PKPdf	11 32 19.9	-2.1
	comp=Z,479nm,1.7s						
DBIC	Dimbokro	170.06	246	ePKPdf	PKPdf	11 32 20.7	-1.3
DBIC				ePKPab	PKPab	11 33 33.3	-4.0
DBIC	Dimbokro	170.06	246	ePKIKP	PKPdf	11 32 20.7	-1.3
DBIC				e		11 33 33.3	
DBIC	Dimbokro	170.06	246	PKP	PKPdf	11 32 20.3	-1.7
	comp=Z,10nm,1.0s,baz=151,slow=5.2,SNR=4.6						
DBIC				PKPab	PKPab	11 33 33.5	-3.8
	comp=Z,9.7nm,0.8s,baz=91,slow=4.2,SNR=2.0						
TIC	Toumodi	170.19	245	ePKIKP	PKPdf	11 32 20.1	-2.0

NNC 08 11:20:20.9±3.9, 53°.50N×87°.61E, h0^{km}, mb3.6, mpv3.3, 6C-5D, Error ellipse: s-maj=29.8km s-min=15.7km az=64.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.72	286	⇓Pg	Pn	11 20 51.2	-0.7
	6.3nm,0.7s						
ZAA0				⇑Lg	Lg	11 21 17.4	
	6.8nm,0.5s						
KURK	Kurchatov	6.20	247	⇓Pn	Pn	11 21 55.0	+1.5
	6.7nm,1.0s						
KURK				⇑Sn	Sn	11 23 05.2	+0.1
	1.4nm,0.7s						
KURK				⇑Lg	Lg	11 23 38.9	
	4.1nm,0.8s						
KURBB	Kurchatov Arra	6.30	246	⇑Pn	Pn	11 21 56.2	+1.4
	1.7nm,0.3s						
KURBB				⇓Sn	Sn	11 23 07.2	-0.2
	5.7nm,0.6s						
KURBB				⇓Lg	Lg	11 23 38.9	
	8.7nm,0.7s						
MK31	Makanchi Array	7.53	209	⇑Pn	Pn	11 22 13.3	+1.4
	0.8nm,0.8s,baz=31,slow=15,SNR=3.5						
MK31				⇑Sn	Sn	11 23 39.7	+1.8
	0.8nm,0.7s						
MK31				⇓Lg	Lg	11 24 19.4	
	2.4nm,0.7s,baz=37,slow=31,SNR=5.8						

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*ISCJB **08** 11:20:56.6±0.5, 10°.91S±0°.06×165°.75E±0°.06, h10^{km}, mb4.5/19, Error ellipse: s-maj=10.0km s-min=7.2km az=139.0*

*IDC **08** 11:20:57.0±0.7, 10°.82S×165°.84E, h0^{km}, mb4.3/13, mb1 4.6/15, mb1mx4.3/44, mbtmp4.4/15, ML4.9/2, Error ellipse: s-maj=20.9km s-min=16.7km az=122.0*

*NEIC **08** 11:20:58.3±0.3, 10°.86S×165°.85E, h10^{km}, mb4.9/8, Error ellipse: s-maj=8.8km s-min=6.6km az=78.0*

ISC 08 11:20:58.4±0.6, **10°.84S**±0°.09×**165°.79E**±0°.09, **h10^{km}, n38,** σ1^{s}**02**/38, **mb4.5**/19, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.92	283	Pn	Pn	11 22 28.1	+1.9
	90nm,0.3s,baz=124,slow=6.3,SNR=4.5						
HNR				Sn	Sn	11 23 32.3	-1.9
	baz=111,slow=22,SNR=2.1						
DZM	Mont Dzumac	11.18	177	Pn	Pn	11 23 39.7	+1.2
	2.7nm,0.3s,baz=310,slow=20,SNR=5.6						
ONTNC	Ouen Toro	11.42	177	ePn	Pn	11 23 42.4	+0.8
PINNC	Pines Island,	11.81	172	ePn	Pn	11 23 46.5	-0.5

CTA	Charters Tower	20.93	242	P	Pn	11 25 43.9	-0.1
	7.0nm,0.8s,baz=64,slow=13,SNR=2.9						
CTAO	Charters Tower	20.93	242	*e*P	P	11 25 40.9	-0.7
OUZ	Omahuta	25.29	165	*e*P	P	11 26 25.8	+0.7
URZ	Urewera	29.12	161	*e*P	P	11 26 59.1	-0.4
	6.3nm,1.0s						
URZ	Urewera	29.12	161	P	P	11 26 59.9	+0.4
	3.6nm,0.7s,baz=329,slow=18,SNR=3.2						
STKA	Stephens Creek	30.62	223	P	P	11 27 12.9	+0.1
	10nm,1.1s,baz=39,slow=13,SNR=1.8						
BFZ	Birch Farm	31.12	165	*e*P	P	11 27 15.3	-1.9
THZ	Tophouse	31.43	170	*e*P	P	11 27 19.7	-0.3
	13nm,0.7s						
WB2	Warramunga Arr	31.58	250	*e*P	P	11 27 20.3	-1.2
WR1	Warramunga Arr	31.59	250	*e*P	P	11 27 21.7	0.0
	14nm,0.9s						
WRA	Warramunga Arr	31.59	250	P	P	11 27 21.7	0.0
	6.9nm,1.0s,baz=82,slow=9.1,SNR=5.5						
KHZ	Kahutara	32.17	169	*e*P	P	11 27 24.7	-1.6
	15nm,0.9s						
TOO	Toolangi	32.27	211	*e*P	P	11 27 26.9	-0.4
LTZ	Lake Taylor	32.32	171	*e*P	P	11 27 27.6	-0.1
	13nm,0.7s						
FOZ	Fox Glacier	32.75	175	*e*P	P	11 27 31.4	-0.1
	16nm,1.1s						
ASAR	Alice Springs	32.92	243	P	P	11 27 33.0	-0.3
	4.0nm,0.8s,baz=64,slow=10,SNR=5.9						
RPZ	Rata Peaks	33.07	173	P	P	11 27 34.2	-0.1
	11nm,0.6s,baz=269,slow=4.1,SNR=6.9						
MQZ	McQueen's Vall	33.28	171	*e*P	P	11 27 35.4	-0.6
	46nm,1.0s						
LBZ	Lake Benmore	33.63	174	*e*P	P	11 27 38.5	-0.7
	6.0nm,0.7s						
BBOO	Buckleboo	35.00	227	*e*P	P	11 27 51.5	+0.3
FITZ	Fitzroy Crossi	39.47	255	P	P	11 28 29.8	+0.5
	9.2nm,0.9s,baz=60,slow=6.7,SNR=2.6						
MJAR	Matsushiro Arr	53.81	332	P	P	11 30 20.1	-1.3
	1.3nm,0.7s,baz=165,slow=6.3,SNR=2.7						
MAJO	Matsushiro	53.81	332	*e*P	P	11 30 20.1	-1.4
ILAR	Eielson Array	83.31	18	P	P	11 33 25.6	+0.5
	1.4nm,0.5s,baz=235,slow=5.2,SNR=4.2						
ILB	Eielson Array	83.31	18	*e*P	P	11 33 24.6	-0.6
SCRK	Sand Creek	83.71	20	*e*PcP	PcP	11 33 32.1	+0.6
NVAR	Mina Array Bea	85.86	50	P	P	11 33 39.1	+0.2
	0.5nm,0.7s,baz=231,slow=6.5,SNR=2.1						
MK32	Makanchi Array	93.41	317	*e*P	P	11 34 16.2	+2.1
MKAR	Makanchi Array	93.41	317	P	P	11 34 16.3	+2.1
	1.3nm,0.9s,baz=93,slow=4.5,SNR=2.3						
YKA	Yellowknife Ar	94.78	27	P	P	11 34 20.0	+0.1
	0.7nm,0.9s,baz=255,slow=4.4,SNR=3.1						
LTX	Lajitas	95.70	61	*e*P	P	11 34 24.8	-0.4
TXAR	Lajitas Array	95.70	61	P	P	11 34 24.8	-0.4
	0.3nm,0.6s,baz=251,slow=5.6,SNR=2.5						
BVAR	Borovoye Array	101.82	322	P	Pdif	11 34 52.2	+0.3
	1.2nm,0.7s,baz=234,slow=40,SNR=3.4						
ESDC	Sonseca Array	149.88	344	PKPbc	PKiKP	11 40 48.8	-1.5
	0.3nm,0.4s,baz=1.7,slow=3.9,SNR=2.8						

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*ISCJB **08** 11:23:38.0±0.8, 11°.2S±0°.1×166°.0E±0°.1, h10km, mb4.1/10, Error ellipse: s-maj=19.6km s-min=15.8km az=152.9*

*IDC **08** 11:23:38.2±1.8, 11°.06S×166°.07E, h0km, mb4.0/7, mb1 4.3/8, mb1mx4.0/43, mbtmp4.1/8, ML5.1/1, Error ellipse: s-maj=61.7km s-min=22.5km az=141.0*

*NEIC **08** 11:23:39.5±0.7, 11°.13S×166°.08E, h10km, mb4.5/4, Error ellipse: s-maj=17.8km s-min=13.9km az=150.0*

ISC 08 11:23:39.5±1.0**, 11°.1S**±0°.2×**166°.1E**±0°.1**, h10**km**, n15, σ0ˢ.94**/15**, mb4.0**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.26	285	*e*Pn	Pn	11 25 12.2	+0.1
HNR	Honiara	6.26	285	Pn	Pn	11 25 11.6	-0.4
	49nm,0.3s,baz=130,slow=7.9,SNR=5.8						
CTA	Charters Tower	21.06	243	P	P	11 28 25.4	+1.4
	7.2nm,1.0s,baz=52,slow=12,SNR=2.8						
BKZ	Black Stump Fm	29.44	163	*e*P	P	11 29 43.4	-0.1
	9.9nm,1.1s						
WB2	Warramunga Arr	31.76	250	*e*P	P	11 30 04.2	0.0
	5.7nm,0.9s						
WRAB	Tennant Creek	31.76	250	*e*P	P	11 30 01.4	-2.8
	8.2nm,1.1s						
WR1	Warramunga Arr	31.77	250	*e*P	P	11 30 04.1	-0.2
	2.6nm,0.8s						
WRA	Warramunga Arr	31.77	250	P	P	11 30 04.1	-0.2
	3.9nm,0.6s,baz=81,slow=8.9,SNR=7.5						
ASAR	Alice Springs	33.06	244	P	P	11 30 15.2	-0.4
	1.1nm,0.8s,baz=64,slow=10,SNR=4.7						
FITZ	Fitzroy Crossi	39.68	255	*e*P	P	11 31 12.6	+0.4
FITZ	Fitzroy Crossi	39.68	255	P	P	11 31 12.3	+0.1
	1.8nm,0.6s,baz=87,slow=7.4,SNR=5.3						
SONA0	Songino Array	78.91	324	*e*P	P	11 35 43.5	+0.1
SONM	Songino Array	78.91	324	P	P	11 35 43.6	+0.1
	0.6nm,0.7s,baz=111,slow=7.9,SNR=3.2						
ILAR	Eielson Array	83.47	18	P	P	11 36 07.0	-0.1
	0.5nm,0.6s,baz=246,slow=3.8,SNR=3.2						
YKA	Yellowknife Ar	94.88	27	P	P	11 37 01.8	+0.2
	0.5nm,1.0s,baz=260,slow=3.1,SNR=3.2						

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*ISN **08** 11:24:27.6±1.4, 32°.68N×48°.56E, h0km±18km, ML3.7*

*ISCJB **08** 11:24:32.9±0.4, 32°.66N±0°.04×48°.34E±0°.03, h19km, Error ellipse: s-maj=5.4km s-min=3.8km az=13.9*

*TEH **08** 11:24:32.3, 32°.79N×48°.46E, h11km, ML3.6*

*THR **08** 11:24:33.1, 32°.78N×48°.39E, h17km, ML3.5*

ISC 08 11:24:32.8±0.8**, 32°.75N**±0°.03×**48°.46E**±0°.04**, h19**km**, n35, σ1ˢ.42**/39**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.70	155	*e*Pg	Pg	11 24 47.3	+0.8
SHGR	Shooshtar-Gavs	0.70	155	*e*AML	AML	11 25 03.7	
	comp=E,2μm,0.7s						
SHGR				*e*AML	AML	11 25 09.6	
	comp=N,2μm,0.6s						
SHGR	Shooshtar-Gavs	0.70	155	*e*Pg	Pg	11 24 47.3	+0.8
SHGR				*e*Sg	Sn	11 24 58.3	+0.4
IKMR	Kamar-syah	0.77	355	*e*Pg	Pb	11 24 46.2	-1.4
IKMR				IAMB	IAmb	11 25 00.1	
	comp=E,0.0nm,0.4s						
IKFM	Kafar-mosalman	0.93	327	*e*Pg	Pb	11 24 49.5	-0.8
IKFM				IAMB	IAmb	11 25 07.9	
	comp=Z,0.0nm,0.2s						
HSAM	Samen	1.47	5	*e*Pg	Pb	11 24 59.5	-0.1
KHMZ	Khomeyn	1.60	51	*e*Pg	Pg	11 25 02.9	-0.8
KHMZ	Khomeyn	1.60	51	*e*Pg	Pg	11 25 02.9	-0.8
KHMZ				*e*Sg	Sg	11 25 25.4	+0.8
IKOM	Komasi	1.63	331	*e*Pn	Pb	11 25 02.6	+0.3
IKOM				IAMB	IAmb	11 25 28.5	
	comp=Z,0.0nm,0.7s						
IPIR	Pirpir	2.05	91	*e*Pn	Pb	11 25 10.0	+0.4
IPIR				IAMB	IAmb	11 25 46.2	
	comp=Z,5μm,0.7s						
IBDR	Badra	2.16	280	*e*Pn	Pn	11 25 08.0	+0.3
IBDR				*e*Sn	Sb	11 25 37.0	-0.5
ROKH	ROKH	2.21	100	*e*Pn	Pb	11 25 11.5	-0.8
ASAO	Ashtian	2.22	36	*e*Pn	Pb	11 25 11.3	-1.2
ASAO	Ashtian	2.22	36	*e*Pn	Pb	11 25 11.3	-1.2
IGHG	Ghaleghazi	2.23	316	IAMB	IAmb	11 25 51.2	
	comp=Z,6μm,0.6s						
ILIN	Lien	2.50	331	*e*Pn	Pn	11 25 14.7	+2.1
ILIN				IAMB	IAmb	11 25 55.0	
	comp=Z,4μm,0.4s						
SNGE	Sanandaj	2.52	339	*e*Pn	Pb	11 25 15.1	-2.4
SNGE	Sanandaj	2.52	339	*e*AML	AML	11 25 57.8	
	comp=E,182nm,0.8s						
SNGE	Sanandaj	2.52	339	*e*Pn	Pb	11 25 15.1	-2.4
NSR	Nassriya	2.62	229	*e*Pn	Pn	11 25 13.0	-1.1
NSR				*e*Sn	Sn	11 25 45.0	-0.4
IKLH	Kolahrood	2.69	77	IAMB	IAmb	11 26 12.2	
	comp=Z,2μm,0.5s						
IRAZ	Razeghan	2.92	24	*e*Pn	Pb	11 25 22.1	-2.3
IRAZ				IAMB	IAmb	11 25 22.6	
	comp=Z,2μm,0.2s						
IGAR	Gharneh	3.05	95	*e*Pn	Pn	11 25 22.5	+2.4
IGAR				IAMB	IAmb	11 26 16.6	
	comp=Z,2μm,0.3s						
KLNJ	Kolanjah	3.18	122	*e*Pn	Pn	11 25 24.0	+1.9
IRAM	Ramesheh	3.45	105	*e*Pn	Pn	11 25 27.2	+1.5
IRAM				IAMB	IAmb	11 25 37.6	
	comp=Z,700nm,0.6s						
BHD	Baghdad	3.46	280	*e*Pn	Pn	11 25 26.0	+0.3
BHD				*e*Sn	Sn	11 26 08.0	+1.8
IKRK	Kirkuk	4.32	309	*e*Pn	Pn	11 25 38.0	+0.5
IKRK				*e*Sn	Sn	11 26 30.0	+2.6
MSL	Mosul	5.72	311	*e*Pn	Pn	11 25 57.0	+0.3
MSL				*e*Sn	Sn	11 27 04.0	+2.2
RTB	Rutbah	6.86	275	*e*Pn	Pn	11 26 13.0	+0.6
RTB				*e*Sn	Sn	11 27 31.0	+1.0
MSFE	Esma-Masafi	9.97	136	*e*Pn	Pn	11 26 52.4	-2.7
NAZ	Nazwa, Dubai	9.98	139	*e*Pn	Pn	11 26 55.5	+0.4
MDH	Madha	10.10	135	*e*Pn	Pn	11 26 56.6	-0.3
UOSS	Minazif	10.32	137	*e*Pn	Pn	11 27 00.2	+0.4
HATD	Hatta, Dubai	10.37	138	*e*Pn	Pn	11 27 00.8	+0.3
MZR	Muzera	10.67	154	*e*Pn	Pn	11 27 02.7	-2.0

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*ISCJB **08** 11:25:36.3±0.3, 11°.02S±0°.05×165°.83E±0°.06, h10km, mb4.6/41, MS5.4/2, Error ellipse: s-maj=9.4km s-min=5.7km az=153.8*

*IDC **08** 11:25:36.3±0.7, 10°.94S×165°.95E, h0km, mb4.3/21, mb1 4.5/23, mb1mx4.3/44, mbtmp4.4/23, ML5.2/2, Error ellipse: s-maj=19.3km s-min=14.3km az=97.0*

*NEIC **08** 11:25:37.9±0.5, 10°.97S×165°.82E, h10km, mb5.0/16, Error ellipse: s-maj=12.4km s-min=7.6km az=52.0*

ISC 08 11:25:38.0±0.5**, 11°.08S**±0°.07×**166°.02E**±0°.09**, h10**km**, n77, σ2ˢ.03**/70**, mb4.7**/42**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.20	285	*e*Pn	Pn	11 27 10.0	+0.4
HNR	Honiara	6.20	285	Pn	Pn	11 27 09.5	-0.1
	116nm,0.3s,baz=139,slow=5.1,SNR=16						
DZM	Mont Dzumac	10.94	178	Pn	Pn	11 28 17.8	+3.1
	11nm,0.3s,baz=313,slow=11,SNR=6.5						
ONTNC	Ouen Toro	11.17	178	*e*Pn	Pn	11 28 20.8	+2.9
PINNC	Pines Island,	11.55	173	*e*Pn	Pn	11 28 26.8	+3.7
MSVF	Nonsavu	13.39	121	*e*Pn	P	11 28 54.0	-3.9
CTA	Charters Tower	21.02	242	P	P	11 30 23.4	+1.3
	13nm,0.9s,baz=64,slow=12,SNR=8.1						
CTAO	Charters Tower	21.02	242	*e*P	P	11 30 17.9	-4.1
	6.8nm,1.1s						
COEN	Coen	22.48	260	*e*P	P	11 30 36.9	-0.9
ARMA	Armidale	23.43	213	*e*P	P	11 30 45.4	-2.2
OUZ	Omahuta	25.00	165	*e*P	P	11 31 03.9	+1.9
HIZ	Hauiti	28.44	165	*e*P	P	11 31 35.1	+2.1
	26nm,1.1s						
MXZ	Matakaoa Point	28.59	159	*e*P	P	11 31 37.2	+2.9
	26nm,0.9s						
URZ	Urewera	28.83	162	*e*P	P	11 31 36.8	+0.3
	9.3nm,0.8s						
URZ	Urewera	28.83	162	P	P	11 31 36.8	+0.3
	6.4nm,0.5s,baz=312,slow=1.9,SNR=6.5						
H11S2	WAKE ISLAND Hy	29.39	1	T	T	12 01 59.9	
	baz=181,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.39	1	T	T	12 02 00.5	
	baz=181,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.41	1	T	T	12 02 01.3	
	baz=181,slow=76,SNR=13						
BKZ	Black Stump Fm	29.48	163	*e*P	P	11 31 42.6	+0.2
	14nm,0.5s						
STKA	Stephens Creek	30.60	224	P	P	11 31 54.0	+1.7
	2.6nm,0.8s,baz=48,slow=14,SNR=2.4						
H11N1	WAKE ISLAND Hy	30.61	2	T	T	12 03 31.6	
	baz=182,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	30.62	2	T	T	12 03 32.0	
	baz=182,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.63	2	T	T	12 03 32.9	
	baz=182,slow=76,SNR=13						
BFZ	Birch Farm	30.84	165	*e*P	P	11 31 54.1	-0.2
	18nm,0.7s						
THZ	Tophouse	31.16	170	*e*P	P	11 31 57.3	+0.2
	11nm,0.5s						
WRAB	Tennant Creek	31.71	250	*e*P	P	11 32 01.2	-1.0
WB2	Warramunga Arr	31.71	250	*e*P	P	11 32 01.2	-1.0
WR1	Warramunga Arr	31.72	250	*e*P	P	11 32 01.8	-0.5
WRA	Warramunga Arr	31.72	250	P	P	11 32 01.8	-0.6
	5.5nm,0.6s,baz=81,slow=8.9,SNR=19						
KHZ	Kahutara	31.90	169	*e*P	P	11 32 03.0	-0.6
LTZ	Lake Taylor	32.05	171	*e*P	P	11 32 06.2	+1.3
	21nm,0.9s						
TOO	Toolangi	32.18	212	*e*P	P	11 32 04.5	-1.7
FOZ	Fox Glacier	32.50	175	*e*P	P	11 32 10.7	+1.9
	46nm,1.1s						
OXZ	Oxford	32.55	172	*e*P	P	11 32 08.0	-1.3
	7.8nm,0.6s						
RPZ	Rata Peaks	32.81	173	*e*P	P	11 32 12.6	+1.0
	19nm,0.8s						
RPZ	Rata Peaks	32.81	173	P	P	11 32 13.0	+1.4
	22nm,0.7s,baz=346,slow=2.3,SNR=13						
MQZ	McQueen's Vall	33.01	171	*e*P	P	11 32 14.2	+0.9
	39nm,1.1s						
AS31	Alice Springs	33.02	243	*e*P	P	11 32 11.0	-2.7
	0.9nm,0.8s						
ASAR	Alice Springs	33.02	243	P	P	11 32 12.6	-1.2
	2.8nm,0.6s,baz=63,slow=10,SNR=15						
LBZ	Lake Benmore	33.38	175	*e*P	P	11 32 17.9	+1.3
	20nm,1.2s						
WKZ	Wanaka	33.73	176	*e*P	P	11 32 21.0	+1.4
	14nm,0.9s						
ODZ	Otahua Downs	34.08	174	*e*P	P	11 32 23.6	+1.0
	4.9nm,0.9s						
MTN	Manton Dam	34.16	263	*e*P	P	11 32 22.2	-1.4
WHZ	Wether Hill Ro	34.73	178	*e*P	P	11 32 29.6	+1.4
FITZ	Fitzroy Crossi	39.63	255	*e*P	P	11 33 08.9	-1.4
FITZ	Fitzroy Crossi	39.63	255	P	P	11 33 08.4	-1.8
	7.7nm,0.7s,baz=106,slow=6.0,SNR=20						
BATI	Baumata	41.61	267	P	P	11 33 26.5	-0.2
	11nm,0.3s,baz=56,slow=3.6,SNR=1.9						
MBWA	Marble Bar	45.44	251	*e*P	P	11 33 54.7	-2.8
	6.6nm,0.7s						
MJAR	Matsushiro Arr	54.13	332	P	P	11 35 01.5	-1.8
	1.1nm,0.4s,baz=171,slow=8.8,SNR=3.1						
MAJO	Matsushiro	54.13	332	*e*P	P	11 35 01.5	-1.8
CISI	Cisompet, Garu	57.47	268	*e*P	P	11 35 25.4	-2.5
	17nm,0.7s						
ASAJ	Asahikawa	58.92	340	P	P	11 35 36.3	-1.0
	7.8nm,0.9s,baz=5.3,slow=18,SNR=2.0						
KSRS	Korea Array	60.06	325	P	P	11 35 44.1	-1.2
	1.2nm,0.7s,baz=149,slow=6.9,SNR=5.5						
NJ2	Nanjing	62.23	315	*e*P	P	11 36 02.4	+2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Ar.	63.10	333	P	P	11 36 05.5	-0.2
	comp=Z,2.0nm,0.6s,baz=156,slow=7.4,SNR=4.1						
VNDA	Vanda	66.46	181	*e*P	P	11 36 28.0	+0.8
VNDA	Vanda	66.46	181	P	P	11 36 27.7	+0.5
	comp=Z,4.6nm,1.1s,baz=21,slow=8.6,SNR=3.1						
KLR	Kul'dur	67.20	336	P	P	11 36 30.7	-1.5
	comp=Z,1.2nm,0.6s,baz=134,slow=6.4,SNR=4.6						
GYA	Guiyang	68.66	304	P	P	11 36 45.4	+3.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	71.37	301	P	P	11 37 01.7	+2.8
KMI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,3μm,8.6s						
KMI				LR	LR		
	comp=N,11μm,17.8s						
KMI				LR	LR		
	comp=E,8μm,15.0s						
KMI				LR	LR		
	comp=Z,12μm,16.3s						
HHC	Hu-ho-hao-te	72.03	320	*e*P	P	11 37 06.6	+4.2
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,780nm,7.0s						
CMAR	Chiang Mai Arr	72.37	293	P	P	11 37 04.3	-0.5
	comp=Z,0.9nm,0.5s,baz=126,slow=3.9,SNR=6.3						
LZH	Lanzhou	74.98	312	*e*P	P	11 37 22.9	+2.9
LZH				pP	PcP	11 37 28.3	-5.5
LZH				sP	sP	11 37 30.5	+6.7
LZH				PP	PP	11 40 13.2	+5.2
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
LZH				pmax	pmax		
	comp=Z,98nm,4.8s						
LZH				LR	LR		
	comp=N,230nm,17.1s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
SONA0	Songino Array	78.85	324	*e*P	P	11 37 41.0	-0.5
SONM	Songino Array	78.85	324	P	P	11 37 41.0	-0.5
	comp=Z,0.6nm,0.5s,baz=140,slow=6.2,SNR=3.2						
GTA	Gaotai	79.28	314	*e*P	P	11 37 50.1	+6.1
GTA				pP	PcP	11 37 54.1	+1.8
GTA				sP	sP	11 37 57.0	+9.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ILAR	Eielson Array	83.46	18	P	P	11 38 04.8	-0.7
	comp=Z,1.1nm,0.5s,baz=232,slow=5.1,SNR=14						
ILB	Eielson Array	83.46	18	*e*P	P	11 38 05.0	-0.4
NVAR	Mina Array Bea	85.84	50	P	P	11 38 19.4	+1.0
	comp=Z,0.3nm,0.6s,baz=237,slow=8.3,SNR=2.4						
TIXI	Tiksi	86.18	349	P	P	11 38 17.9	-1.1
	comp=Z,1.1nm,0.6s,baz=287,slow=2.7,SNR=3.9						
WMQ	Urumqi	89.31	315	*e*P	P	11 38 37.8	+3.0
MK32	Makanchi Array	93.73	317	*e*P	P	11 38 53.8	-1.4
MKAR	Makanchi Array	93.73	317	P	P	11 38 53.8	-1.4
	comp=Z,1.4nm,0.7s,baz=93,slow=6.3,SNR=7.4						
YKA	Yellowknife Ar	94.88	27	P	P	11 39 00.4	+0.4
	comp=Z,0.4nm,0.9s,baz=252,slow=4.9,SNR=3.4						
ARA0	ARCESS Array S	116.44	346	*e*PKPdf	PKiKP	11 44 19.7	-1.9
ARCES	ARCESS Array B	116.44	346	PKP	PKiKP	11 44 19.7	-1.9
	comp=Z,1.5nm,0.8s,baz=78,slow=2.2,SNR=4.7						
SUW	Suwalki	128.01	333	*e*Pdif	Pdif	11 41 33.9	+6.0

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*ISCJB **08** 11:26:56.2±0.4, 10°.97S±0°.05×166°.02E±0°.07, h10km, mb4.4/26, Error ellipse: s-maj=10.7km s-min=6.4km az=161.1*

*IDC **08** 11:26:56.4±0.9, 10°.94S×166°.03E, h0km, mb4.3/17, mb1 4.5/19, mb1mx4.3/43, mbtmp4.4/19, ML5.0/2, Error ellipse: s-maj=24.7km s-min=17.3km az=116.0*

*NEIC **08** 11:26:58.1±0.4, 10°.92S×166°.04E, h10km, mb4.7/12, Error ellipse: s-maj=8.8km s-min=5.6km az=70.0*

ISC 08 11:26:58.0±0.7**, 10°.92S**±0°.08×**166°.1E**±0°.1**, h10**km**, n52, σ0ˢ.96**/46**, mb4.5**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.21	283	*e*Pn	Pn	11 28 31.2	+1.4
HNR	Honiara	6.21	283	Pn	Pn	11 28 30.4	+0.7
	82nm,0.3s,baz=156,slow=3.8,SNR=7.6						
MARNC	Mare, Loyalty	10.67	170	*e*Pn	Pn	11 29 31.8	+0.8
DZM	Mont Dzumac	11.10	178	*e*Pn	Pn	11 29 38.5	+1.6
DZM	Mont Dzumac	11.10	178	Pn	Pn	11 29 38.3	+1.4
	5.2nm,0.3s,baz=306,slow=14,SNR=4.4						
ONTNC	Ouen Toro	11.33	178	*e*Pn	Pn	11 29 41.3	+1.2
PINNC	Pines Island,	11.70	174	*e*Pn	Pn	11 29 47.1	+1.9
EIDS	Eidsvold	20.20	223	*e*P	P	11 31 32.0	-1.1
CTA	Charters Tower	21.14	242	P	P	11 31 44.2	+0.9
	13nm,0.9s,baz=67,slow=13,SNR=3.4						
CTAO	Charters Tower	21.14	242	*e*P	P	11 31 44.2	+0.9
	7.5nm,0.8s						
COEN	Coen	22.56	260	*e*P	P	11 31 58.4	-0.2
OUZ	Omahuta	25.14	165	*e*P	P	11 32 25.5	+2.2
	8.1nm,1.0s						
H11S2	WAKE ISLAND Hy	29.23	1	T	T	12 03 22.0	
	baz=184						
H11S3	WAKE ISLAND Hy	29.23	1	T	T	12 03 22.2	
	baz=184						
H11S1	WAKE ISLAND Hy	29.25	1	T	T	12 03 23.1	
	baz=184						
BKZ	Black Stump Fm	29.62	163	*e*P	P	11 33 03.6	0.0
	8.2nm,0.5s						
H11N1	WAKE ISLAND Hy	30.45	2	T	T	12 04 53.9	
	baz=184						
H11N3	WAKE ISLAND Hy	30.45	2	T	T	12 04 54.3	
	baz=184						
H11N2	WAKE ISLAND Hy	30.47	2	T	T	12 04 55.3	
	baz=184						
STKA	Stephens Creek	30.75	224	P	P	11 33 12.8	-0.8
	2.8nm,0.8s,baz=308,slow=7.4,SNR=4.1						
BFZ	Birch Farm	30.98	165	*e*P	P	11 33 14.5	-1.0
	14nm,0.8s						
THZ	Tophouse	31.30	170	*e*P	P	11 33 17.4	-1.0
	11nm,0.6s						
WRAB	Tennant Creek	31.81	250	*e*P	P	11 33 22.7	-0.4
	8.6nm,0.7s						
WB2	Warramunga Arr	31.82	250	*e*P	P	11 33 22.5	-0.7
	10nm,0.8s						
WR1	Warramunga Arr	31.83	250	*e*P	P	11 33 22.2	-1.1
	11nm,0.7s						
WRA	Warramunga Arr	31.83	250	P	P	11 33 22.2	-1.1
	14nm,0.8s,baz=81,slow=9.0,SNR=12						
KHZ	Kahutara	32.05	170	*e*P	P	11 33 23.9	-0.9
LTZ	Lake Taylor	32.20	171	*e*P	P	11 33 26.6	+0.3
TOO	Toolangi	32.35	211	*e*P	P	11 33 27.2	-0.4
FOZ	Fox Glacier	32.66	175	*e*P	P	11 33 29.7	-0.4
	4.4nm,0.9s						
OXZ	Oxford	32.70	172	*e*P	P	11 33 30.4	-0.2
	13nm,1.0s						
RPZ	Rata Peaks	32.96	173	*e*P	P	11 33 33.0	+0.1
	2.5nm,0.5s						
RPZ	Rata Peaks	32.96	173	P	P	11 33 33.8	+1.0
	10nm,0.6s,baz=356,slow=3.2,SNR=4.1						
ASAR	Alice Springs	33.13	243	P	P	11 33 33.0	-1.7
	2.9nm,0.8s,baz=64,slow=10,SNR=5.6						
BBOO	Buckleboo	35.15	227	*e*P	P	11 33 51.8	-0.3
FITZ	Fitzroy Crossi	39.72	255	*e*P	P	11 34 30.6	-0.4
	10.0nm,0.8s						
FITZ	Fitzroy Crossi	39.72	255	P	P	11 34 30.0	-1.0
	11nm,0.8s,baz=102,slow=5.4,SNR=9.0						
BATI	Baumata	41.67	267	P	P	11 34 46.1	-1.1
	11nm,0.3s,baz=283,slow=7.1,SNR=3.6						
MJAR	Matsushiro Arr	54.01	332	P	P	11 36 23.6	+1.2
	2.5nm,0.9s,baz=167,slow=8.3,SNR=3.3						
MAJO	Matsushiro	54.01	332	*e*P	P	11 36 23.6	+1.1
KSRS	Korea Array	59.95	325	P	P	11 37 04.8	+0.2
	1.0nm,0.9s,baz=55,slow=29,SNR=3.0						
KSAR	Wonju Array Be	59.97	325	P	P	11 37 04.8	+0.1
USRK	Ussuriysk Ar.	62.98	333	P	P	11 37 25.0	+0.1
	3.5nm,0.8s,baz=106,slow=6.5,SNR=4.2						
KLR	Kul'dur	67.07	336	P	P	11 37 51.9	+0.5
	2.5nm,1.0s,baz=124,slow=2.7,SNR=2.4						
CMAR	Chiang Mai Arr	72.35	293	P	P	11 38 24.9	+0.2
	4.5nm,1.1s,baz=113,slow=4.3,SNR=6.4						
SONA0	Songino Array	78.75	324	*e*P	P	11 39 01.6	+0.6
SONM	Songino Array	78.75	324	P	P	11 39 01.6	+0.6
	1.0nm,0.8s,baz=141,slow=5.0,SNR=2.5						
ILAR	Eielson Array	83.29	18	P	P	11 39 25.2	+0.6
	1.0nm,0.9s,baz=238,slow=5.3,SNR=3.0						
NVAR	Mina Array Bea	85.70	50	P	P	11 39 36.6	-1.1
	0.6nm,0.7s,baz=246,slow=6.5,SNR=2.3						
MK32	Makanchi Array	93.65	317	*e*P	P	11 40 14.6	-0.2
MKAR	Makanchi Array	93.65	317	P	P	11 40 14.6	-0.2
	1.8nm,0.8s,baz=98,slow=6.7,SNR=6.0						
YKA	Yellowknife Ar	94.72	27	P	P	11 40 18.3	-0.9
	0.2nm,0.6s,baz=253,slow=4.6,SNR=3.2						

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*ISCJB **08** 11:27:44.6±0.9, 11°.17S±0°.09×166°.1E±0°.1, h10km, mb4.2/11, Error ellipse: s-maj=18.6km s-min=13.4km az=8.9*

*IDC **08** 11:27:44.4±1.4, 11°.03S×166°.19E, h0km, mb4.3/9, mb1 4.5/11, mb1mx4.1/44, mbtmp4.4/11, ML4.9/1, Error ellipse: s-maj=39.5km s-min=23.4km az=126.0*

*NEIC **08** 11:27:45.5±0.6, 11°.05S×166°.21E, h10km, mb4.3/4, Error ellipse: s-maj=14.7km s-min=10.6km az=111.0*

ISC 08 11:27:45.5±0.9**, 11°.0S**±0°.1×**166°.2E**±0°.2**, h10**km**, n25, σ0ˢ.96**/24**, mb4.3**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.39	284	Pn	Pn	11 29 19.6	-0.2
	29nm,0.3s,baz=145,slow=8.6,SNR=2.1						
DZM	Mont Dzumac	10.97	179	Pn	Pn	11 30 22.7	0.0
	baz=292,slow=11,SNR=1.4						
CTA	Charters Tower	21.23	242	P	P	11 32 31.6	-0.2
	6.1nm,0.7s,baz=63,slow=14,SNR=2.1						
CTAO	Charters Tower	21.23	242	*e*P	P	11 32 32.6	+0.8
	2.5nm,0.6s						
STKA	Stephens Creek	30.78	224	P	P	11 34 03.0	+1.7
STKA	Stephens Creek	30.78	224	P	P	11 34 03.0	+1.7
	2.9nm,0.7s,baz=18,slow=13,SNR=2.2						
WRAB	Tennant Creek	31.92	250	*e*P	P	11 34 09.7	-1.9
WB2	Warramunga Arr	31.92	250	*e*P	P	11 34 11.1	-0.6
	8.2nm,1.1s						
WR1	Warramunga Arr	31.93	250	*e*P	P	11 34 11.4	-0.3
	7.9nm,1.1s						
WRA	Warramunga Arr	31.93	250	P	P	11 34 11.4	-0.3
	13nm,0.9s,baz=80,slow=9.1,SNR=8.0						
ASAR	Alice Springs	33.22	243	P	P	11 34 22.6	-0.4
	2.3nm,0.8s,baz=73,slow=9.8,SNR=3.0						
BBOO	Buckleboo	35.18	227	*e*P	P	11 34 38.5	-1.3
FITZ	Fitzroy Crossi	39.84	255	*e*P	P	11 35 19.4	-0.1
	2.9nm,0.6s						
FITZ	Fitzroy Crossi	39.84	255	P	P	11 35 19.0	-0.5
	9.1nm,0.6s,baz=112,slow=6.0,SNR=8.0						

CMAR	Chiang Mai Arr	72.55	293	P	P	11 39 14.2	+0.8
	2.2nm,0.7s,baz=117,slow=4.2,SNR=5.2						
SONA0	Songino Array	78.94	324	*e*P	P	11 39 50.3	+0.8
SONM	Songino Array	78.94	324	P	P	11 39 50.3	+0.8
	0.7nm,0.7s,baz=116,slow=6.6,SNR=2.3						
ILAR	Eielson Array	83.36	18	P	P	11 40 13.1	+0.6
	0.5nm,0.6s,baz=229,slow=5.3,SNR=3.5						
MK32	Makanchi Array	93.84	317	*e*P	P	11 41 03.1	-0.1
MKAR	Makanchi Array	93.84	317	P	P	11 41 03.1	-0.1
	1.2nm,0.7s,baz=97,slow=6.2,SNR=3.6						
CHCP	Chirah Chowk	98.47	303	P	Pdif	11 41 27.6	+3.0
THW	Thamme Wali	99.63	302	P	Pdif	11 41 30.6	+0.8
KEST	Kesra	147.70	323	*e*PKPbc	PKPbc	11 47 30.0	-1.0
KEST	Kesra	147.70	323	PKPbc	PKiKP	11 47 31.7	-1.4
	4.5nm,0.7s,baz=338,slow=5.4,SNR=1.8						
ESDC	Sonseca Array	150.18	345	PKPbc	PKPbc	11 47 36.1	-1.1
	0.2nm,0.3s,baz=22,slow=1.4,SNR=3.3						

ISCJB 08 11:28:31.6±0.5, 10°.69S±0°.06×166°.41E±0°.07, h10^{km}, mb4.3/17, Error ellipse: s-maj=10.8km s-min=7.7km az=136.7

NEIC 08 11:28:33.3±0.7, 10°.62S×166°.40E, h10^{km}, mb4.7/9, Error ellipse: s-maj=16.3km s-min=10.5km az=69.0

IDC 08 11:28:34.0±1.0, 10°.79S×166°.17E, h0^{km}, mb4.2/10, mb1 4.4/12, mb1mx4.1/44, mbtmp4.3/12, ML4.9/1, Error ellipse: s-maj=34.9km s-min=18.5km az=140.0

ISC 08 11:28:34.1±0.6, 10°.71S±0°.09×166°.40E±0°.08, h10^{km}, n39, σ1^{s}.76/35, mb4.3/17, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.48	281	*e*Pn	Pn	11 30 10.8	+1.2
HNR				*e*Sn	Sn	11 31 24.7	+1.1
HNR	Honiara	6.48	281	Pn	Pn	11 30 10.0	+0.5
	26nm,0.3s,baz=268,slow=17,SNR=2.3						
HNR				Sn	Sn	11 31 24.7	+1.1
	7.3nm,0.3s,baz=58,slow=22,SNR=3.1						
DZM	Mont Dzumac	11.29	180	*e*Pn	Pn	11 31 15.5	-0.2
DZM	Mont Dzumac	11.29	180	Pn	Pn	11 31 16.5	+0.8
	baz=46,slow=17,SNR=1.7						
ONTNC	Ouen Toro	11.53	180	*e*Pn	Pn	11 31 21.4	+2.6
PINNC	Pines Island,	11.88	175	*e*Pn	Pn	11 31 24.7	+1.1
CTA	Charters Tower	21.52	242	P	P	11 33 23.4	-0.1
	5.2nm,0.7s,baz=67,slow=15,SNR=3.3						
H11S2	WAKE ISLAND Hy	29.02	1	T	T	12 04 08.8	
	baz=181,slow=76,SNR=7.7						
H11S3	WAKE ISLAND Hy	29.02	1	T	T	12 04 10.1	
	baz=181,slow=76,SNR=8.1						
H11S1	WAKE ISLAND Hy	29.04	1	T	T	12 04 09.9	
	baz=181,slow=76,SNR=6.5						
BKZ	Black Stump Fm	29.73	164	*e*P	P	11 34 41.7	+1.1
	1.9nm,0.4s						
H11N1	WAKE ISLAND Hy	30.24	1	T	T	12 05 40.0	
	baz=180,slow=74						
H11N3	WAKE ISLAND Hy	30.24	1	T	T	12 05 40.3	
	baz=180,slow=74						
H11N2	WAKE ISLAND Hy	30.26	1	T	T	12 05 41.4	
	baz=180						
BFZ	Birch Farm	31.09	165	*e*P	P	11 34 53.2	+0.6
STKA	Stephens Creek	31.12	224	P	P	11 34 51.9	-1.1
	2.9nm,0.7s,baz=46,slow=15,SNR=2.3						
THZ	Tophouse	31.45	171	*e*P	P	11 34 54.5	-1.3
WB2	Warramunga Arr	32.19	250	*e*P	P	11 34 59.2	-3.3
WRAB	Tennant Creek	32.19	250	*e*P	P	11 34 59.7	-2.9
KHZ	Kahutara	32.19	170	*e*P	P	11 35 01.2	-1.0
	8.7nm,0.9s						
WR1	Warramunga Arr	32.20	250	*e*P	P	11 35 01.6	-1.0
WRA	Warramunga Arr	32.20	250	P	P	11 35 01.7	-1.0
	8.0nm,0.8s,baz=89,slow=7.8,SNR=9.1						
TOO	Toolangi	32.69	212	*e*P	P	11 35 07.9	+1.2
	5.7nm,1.0s						
ASAR	Alice Springs	33.51	243	P	P	11 35 13.1	-1.0
	1.5nm,0.6s,baz=65,slow=9.9,SNR=3.0						
BBOO	Buckleboo	35.52	227	*e*P	P	11 35 30.0	-1.4
FITZ	Fitzroy Crossi	40.08	255	*e*P	P	11 36 10.0	-0.1
	1.5nm,0.5s						
FITZ	Fitzroy Crossi	40.08	255	P	P	11 36 10.0	-0.1
	6.3nm,0.7s,baz=66,slow=6.4,SNR=5.6						
MAJO	Matsushiro	53.98	332	*e*P	P	11 37 57.2	-1.2
	7.2nm,1.0s						
MJB9	Matsu-Tunnel	53.98	332	*e*P	P	11 37 57.1	-1.2
	7.6nm,1.0s						
CMAR	Chiang Mai Arr	72.57	293	P	P	11 40 01.8	-0.3
	1.0nm,0.4s,baz=123,slow=3.3,SNR=3.7						
COLA	College	82.77	18	*e*P	P	11 40 56.2	-1.8
	9.8nm,0.5s						
ILAR	Eielson Array	83.00	18	P	P	11 41 01.3	+2.1
	1.0nm,0.8s,baz=226,slow=5.9,SNR=3.0						
NVAR	Mina Array Bea	85.32	50	P	P	11 41 14.7	+2.8
	0.6nm,0.9s,baz=211,slow=4.7,SNR=2.0						
SZCU	Shurtz Canyon	89.06	52	*e*P	P	11 41 25.6	-4.4
	8.7nm,0.9s						
HRY	Holter Researc	92.13	43	*e*P	P	11 41 42.1	-1.9
MK32	Makanchi Array	93.72	317	*e*P	P	11 41 52.0	+0.7
MKAR	Makanchi Array	93.72	317	P	P	11 41 52.0	+0.7
	0.8nm,0.7s,baz=95,slow=6.3,SNR=3.1						
YKA	Yellowknife Ar	94.39	27	P	P	11 41 57.3	+3.4
	0.5nm,0.9s,baz=264,slow=4.5,SNR=3.6						
ULM	Lac du Bonnet	103.09	41	*e*Pdif	Pdif	11 42 34.4	+1.2

IDC 08 11:32:00.6±3.9, 10°.19S×165°.39E, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.8/44, mbtmp4.0/4, Error ellipse: s-maj=177.7km s-min=35.2km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.46	248	P	P	11 38 22.8	-1.4
	5.2nm,1.2s,baz=80,slow=9.1,SNR=4.2						
ASAR	Alice Springs	32.87	242	P	P	11 38 38.4	+1.7
	0.5nm,0.6s,baz=70,slow=9.3,SNR=3.5						
FITZ	Fitzroy Crossi	39.27	254	P	P	11 39 31.1	-0.3
	2.8nm,0.7s,baz=90,slow=2.0,SNR=4.7						
ILAR	Eielson Array	82.82	19	P	P	11 44 26.5	0.0
	0.8nm,0.8s,baz=225,slow=3.7,SNR=2.4						

VIE 08 11:32:53.6±0.9, 47°.81N×14°.14E, h0^{km}, mb0.1/1, ml1.5/4, Error ellipse: s-maj=7.6km s-min=3.3km az=34.0, Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOA	Molln	0.10	64	*e*Pg	Pg	11 32 55.1	-0.4
ARSA	Arzberg	1.09	120	Pg	Pg	11 33 14.2	-0.3
	0.4nm,0.2s						
ARSA				Sg	Sn	11 33 31.2	-0.8
	0.6nm,0.2s						
CONA	Conrad Observa	1.17	83	Pg	Pb	11 33 16.6	-0.1
	1.1nm,0.2s						
CONA				Sg	Sb	11 33 33.0	+0.6
	5.3nm,0.3s						

IDC 08 11:33:55.2±1.4, 11°.61S×164°.89E, h0^{km}, mb4.0/4, mb1 4.3/6, mb1mx3.9/43, mbtmp4.1/6, ML3.9/2, Error ellipse: s-maj=38.3km s-min=26.5km az=137.0

ISCJB 08 11:33:58.1±1.1, 11°.8S±0°.1×164°.8E±0°.2, h34^{km}, mb3.9/4, Error ellipse: s-maj=23.4km s-min=18.7km az=157.5

ISC 08 11:33:59.8±1.1, 11°.7S±0°.1×164°.8E±0°.2, h34^{km}, n6, σ1^{s}.60/6, mb4.0/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.26	294	Pn	Pn	11 35 14.6	-1.4
	11nm,0.3s,baz=51,slow=19,SNR=2.8						
DZM	Mont Dzumac	10.47	172	Pn	Pn	11 36 26.8	-0.9
	0.4nm,0.3s,baz=305,slow=23,SNR=6.7						
WRA	Warramunga Arr	30.40	250	P	P	11 40 10.9	+1.8
	1.6nm,0.6s,baz=81,slow=8.9,SNR=9.5						
ASAR	Alice Springs	31.68	244	P	P	11 40 21.4	+1.0
	1.4nm,0.9s,baz=76,slow=9.5,SNR=6.8						
ILAR	Eielson Array	84.39	19	P	P	11 46 29.0	+0.7
	0.8nm,0.6s,baz=241,slow=4.8,SNR=12						
YKA	Yellowknife Ar	95.95	27	P	P	11 47 22.6	-0.3
	0.4nm,0.8s,baz=260,slow=4.6,SNR=3.9						

ISCJB 08 11:34:32.0±0.5, 11°.05S±0°.06×165°.94E±0°.08, h10^{km}, mb4.1/18, Error ellipse: s-maj=11.7km s-min=7.8km az=157.5

IDC 08 11:34:32.2±0.7, 10°.96S×165°.98E, h0^{km}, mb4.0/14, mb1 4.2/16, mb1mx4.1/45, mbtmp4.1/16, ML4.8/2, Error ellipse: s-maj=20.8km s-min=16.4km az=108.0

NEIC 08 11:34:33.5±0.5, 10°.97S×165°.99E, h10^{km}, mb4.5/8, Error ellipse: s-maj=12.5km s-min=9.1km az=73.0

ISC 08 11:34:33.7±0.6, 10°.94S±0°.08×166°.0E±0°.1, h10^{km}, n44, σ1^{s}.36/36, mb4.1/19, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.15	284	Pn	Pn	11 36 05.6	+1.0
	67nm,0.3s,baz=178,slow=1.2,SNR=9.5						
DZM	Mont Dzumac	11.07	178	*e*Pn	Pn	11 37 13.0	+0.7
DZM	Mont Dzumac	11.07	178	Pn	Pn	11 37 13.2	+0.9
	1.9nm,0.3s,baz=52,slow=18,SNR=4.0						
ONTNC	Ouen Toro	11.31	178	*e*Pn	Pn	11 37 18.0	+2.6
PINNC	Pines Island,	11.69	173	*e*Pn	Pn	11 37 19.5	-1.0
MANU	Manus Island	20.51	294	*e*P	Pn	11 39 14.3	-0.1
	38nm,1.0s						
CTA	Charters Tower	21.07	242	P	P	11 39 19.3	+1.0
	3.2nm,0.6s,baz=96,slow=12,SNR=4.1						
CTAO	Charters Tower	21.07	242	*e*P	P	11 39 17.1	-1.2
	8.8nm,1.0s						
URZ	Urewera	28.96	162	P	P	11 40 32.7	-0.7
	5.5nm,1.1s,baz=24,slow=21,SNR=2.5						
H11S2	WAKE ISLAND Hy	29.26	1	T	T	12 10 55.0	
	baz=181,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.26	1	T	T	12 10 55.3	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.27	1	T	T	12 10 56.3	
	baz=181,slow=76,SNR=15						
BKZ	Black Stump Fm	29.62	163	*e*P	P	11 40 38.8	-0.4
	2.0nm,0.6s						
H11N1	WAKE ISLAND Hy	30.48	2	T	T	12 12 26.3	
	baz=182,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.48	2	T	T	12 12 26.8	
	baz=182,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	30.50	2	T	T	12 12 27.9	
	baz=182,slow=76,SNR=18						
STKA	Stephens Creek	30.69	224	P	P	11 40 50.1	+1.4
	1.3nm,0.7s,baz=39,slow=8.8,SNR=3.2						
SNZO	South Karori	31.20	167	*e*P	P	11 40 52.0	-1.1
	26nm,0.9s						
THZ	Tophouse	31.29	170	*e*P	P	11 40 54.5	+0.5
	8.2nm,0.8s						
WRAB	Tennant Creek	31.75	250	*e*P	P	11 40 54.6	-3.6
WB2	Warramunga Arr	31.75	250	*e*P	P	11 40 57.4	-0.8
WR1	Warramunga Arr	31.76	250	*e*P	P	11 40 57.4	-1.0
WRA	Warramunga Arr	31.76	250	P	P	11 40 57.3	-1.0
	4.7nm,0.8s,baz=81,slow=9.2,SNR=13						
FOZ	Fox Glacier	32.63	175	*e*P	P	11 41 02.3	-3.4
	2.7nm,0.6s						
RPZ	Rata Peaks	32.94	173	*e*P	P	11 41 07.9	-0.5
	12nm,0.8s						
RPZ	Rata Peaks	32.94	173	P	P	11 41 08.6	+0.2
	11nm,0.8s,baz=305,slow=3.0,SNR=5.5						
AS01	Alice Springs	33.02	243	*e*P	P	11 41 08.3	-1.2
AS31	Alice Springs	33.06	243	*e*P	P	11 41 08.9	-0.9
	0.5nm,0.7s						
ASAR	Alice Springs	33.07	243	P	P	11 41 08.6	-1.2
	1.0nm,0.6s,baz=63,slow=10,SNR=9.7						
FITZ	Fitzroy Crossi	39.65	255	*e*P	P	11 42 06.0	-0.1
FITZ	Fitzroy Crossi	39.65	255	P	P	11 42 05.1	-1.0
	2.4nm,0.5s,baz=102,slow=5.6,SNR=12						
KSRS	Korea Array	59.94	325	P	P	11 44 40.7	+0.6
	1.0nm,0.7s,baz=128,slow=6.4,SNR=3.8						
KSAR	Wonju Array Be	59.95	325	P	P	11 44 40.8	+0.5
PEA1	Petropavlovsk-	64.20	354	*e*P	P	11 45 06.0	-2.5
KLR	Kul'dur	67.07	336	P	P	11 45 27.5	+0.4
	0.7nm,0.6s,baz=124,slow=7.3,SNR=2.8						
SONA0	Songino Array	78.74	324	*e*P	P	11 46 36.5	-0.1
SONM	Songino Array	78.74	324	P	P	11 46 36.5	-0.1
	0.5nm,0.5s,baz=116,slow=3.4,SNR=2.7						
ILAR	Eielson Array	83.34	18	P	P	11 47 00.3	-0.2
	0.5nm,0.7s,baz=224,slow=6.2,SNR=3.2						
ILB	Eielson Array	83.34	18	*e*P	P	11 47 01.6	+1.0
NVAR	Mina Array Bea	85.76	50	P	P	11 47 13.5	-0.2
	0.2nm,0.3s,baz=218,slow=5.7,SNR=2.9						
H06S1	SOCORRO T	86.98	70	T	T	13 23 51.9	
	SNR=5.4						
MK32	Makanchi Array	93.62	317	*e*P	P	11 47 50.0	-0.3
MKAR	Makanchi Array	93.62	317	P	P	11 47 50.0	-0.3
	0.7nm,0.7s,baz=96,slow=5.9,SNR=5.2						
YKA	Yellowknife Ar	94.77	27	P	P	11 47 57.3	+2.1
	0.2nm,0.8s,baz=260,slow=4.0,SNR=2.8						

ISCJB 08 11:37:13.8±1.2, 11°.0S±0°.1×165°.9E±0°.2, h10^{km}, mb3.7/5, Error ellipse: s-maj=24.4km s-min=18.5km az=152.6

IDC 08 11:37:13.8±1.6, 10°.96S×165°.95E, h0^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.7/45, mbtmp3.9/7, ML4.4/2, Error ellipse: s-maj=41.0km s-min=28.0km az=132.0

ISC 08 11:37:15.5±1.3, 10°.9S±0°.1×166°.0E±0°.2, h10^{km}, n7, σ0^{s}.99/7, mb3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.11	284	Pn	Pn	11 38 47.1	+1.2
	22nm,0.3s,baz=142,slow=4.6,SNR=4.5						
DZM	Mont Dzumac	11.08	178	Pn	Pn	11 39 54.9	+0.7
	1.2nm,0.3s,baz=337,slow=16,SNR=2.9						
WRA	Warramunga Arr	31.72	250	P	P	11 43 39.1	-0.8
	1.5nm,0.7s,baz=81,slow=9.0,SNR=5.0						
ASAR	Alice Springs	33.03	243	P	P	11 43 50.2	-1.1
	0.5nm,0.7s,baz=65,slow=10,SNR=3.9						
FITZ	Fitzroy Crossi	39.62	255	P	P	11 44 47.3	-0.3
	2.2nm,0.7s,baz=110,slow=5.6,SNR=3.6						
ILAR	Eielson Array	83.34	18	P	P	11 49 42.5	+0.2
	0.4nm,0.8s,baz=231,slow=5.7,SNR=3.1						
MKAR	Makanchi Array	93.59	317	P	P	11 50 31.7	-0.3
	0.2nm,0.7s,baz=97,slow=6.0,SNR=2.5						

IDC 08 11:37:50.4±1.8, 10°.89S×166°.03E, h0^{km}, mb3.8/3, mb1 4.2/5, mb1mx3.8/45, mbtmp4.1/5, ML4.5/2, Error ellipse: s-maj=43.8km s-min=32.5km az=131.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.16	283	Pn	Pn	11 39 24.8	+2.1
	17nm,0.3s,baz=147,slow=5.2,SNR=3.6						
DZM	Mont Dzumac	11.12	178	Pn	Pn	11 40 32.4	+1.4
	2.4nm,0.3s,baz=107,slow=22,SNR=4.4						
WRA	Warramunga Arr	31.80	250	P	P	11 44 16.4	-0.6
	0.9nm,0.8s,baz=79,slow=9.1,SNR=2.0						
ASAR	Alice Springs	33.11	243	P	P	11 44 27.9	-0.6
	1.8nm,0.8s,baz=77,slow=9.3,SNR=9.8						
ILAR	Eielson Array	83.28	18	P	P	11 50 18.7	0.0
	0.4nm,0.8s,baz=238,slow=5.1,SNR=4.9						

ISCJB 08 11:39:40.1±0.2, 10°.98S±0°.02×165°.92E±0°.03, h10^{km}, mb4.8/88, Error ellipse: s-maj=4.8km s-min=3.3km az=157.1

IDC 08 11:39:40.4±0.5, 10°.95S×165°.93E, h0^{km}, mb4.5/27, mb1 4.6/29, mb1mx4.6/39, mbtmp4.5/29, ML5.2/2, MS5.8/1, Ms1 5.8/1, ms1mx4.8/36, Error ellipse: s-maj=16.0km s-min=12.2km az=96.0

NEIC 08 11:39:42.2±0.6, 10°.93S×165°.91E, h12^{km}±4^{km}, mb5.2/47, Error ellipse: s-maj=4.8km s-min=3.5km az=75.0

MOS 08 11:39:44.1±0.8, 10°.91S×165°.77E, h33^{km}, mb4.7/33, Error ellipse: s-maj=10.2km s-min=9.4km az=98.4

ISC 08 11:39:42.1±0.3, 10°.95S±0°.05×165°.94E±0°.05, h10^{km}, n221, σ1^{s}.11/229, mb4.9/89, 9C-6D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.08	284	*e*P	Pn	11 41 12.0	-0.1
HNR				*e*S	Sn	11 42 26.0	+4.1
HNR	Honiara	6.08	284	*e*Pn	Pn	11 41 12.2	+0.1
HNR				*e*Sn	Sn	11 42 22.5	+0.6
HNR	Honiara	6.08	284	*e*P	Pn	11 41 12.2	+0.1
HNR				*e*		11 42 22.5	
HNR	Honiara	6.08	284	Pn	Pn	11 41 12.8	+0.7
	99nm,0.3s,baz=149,slow=3.3,SNR=42						
HNR				Sn	Sn	11 42 21.8	-0.1
	baz=355,slow=23,SNR=1.9						
MARNC	Mare, Loyalty	10.66	169	*e*Pn	Pn	11 42 15.5	+0.5
DZM	Mont Dzumac	11.07	178	*e*Pn	Pn	11 42 21.7	+1.1
DZM				*e*Sn	Sn	11 44 23.6	-1.0
DZM	Mont Dzumac	11.07	178	Pn	Pn	11 42 22.2	+1.5
	8.6nm,0.3s,baz=313,slow=11,SNR=19						
DZM				Sn	Sn	11 44 23.6	-1.0
	1.8nm,0.3s,baz=124,slow=23,SNR=2.9						
ONTNC	Ouen Toro	11.31	178	*e*Pn	Pn	11 42 25.2	+1.5
PINNC	Pines Island,	11.69	173	*e*Pn	Pn	11 42 30.2	+1.2
FUNA	Funafuti	13.29	81	*e*Pn	Pn	11 42 52.7	+1.8
MSVF	Nonsavu	13.53	121	*e*Pn	Pn	11 42 55.3	+0.9
MSVF	Nonsavu	13.53	121⇑	*e*P	Pn	11 42 53.9	-0.4
TARA	Tarawa	14.06	30	*e*Pn	Pn	11 43 01.3	-0.2
RABL	Rabaul	15.21	295	*e*Pn	Pn	11 43 17.7	+0.6
	151nm,0.5s						
RABL				*e*Sn	Sn	11 46 04.2	-1.5
PATS	Pohnpei	19.23	336	*e*P	Pn	11 44 07.0	-0.6
	328nm,1.3s						
EIDS	Eidsvold	20.09	222	P	Pn	11 44 17.4	-0.4
	baz=20,SNR=7.3						
EIDS	Eidsvold	20.09	222	*e*P	Pn	11 44 16.9	-0.9
	37nm,1.0s						
MANU	Manus Island	20.44	294	*e*P	P	11 44 20.2	+0.3
	135nm,0.9s						
CTA	Charters Tower	21.01	242	P	P	11 44 26.8	+0.8
	16nm,0.8s,baz=67,slow=11,SNR=19						
CTA				S	S	11 48 17.3	-2.8
	3.1nm,0.9s,baz=128,slow=18,SNR=1.4						
CTAO	Charters Tower	21.01	242	*e*P	P	11 44 26.7	+0.7
	31nm,0.9s						
CTAO	Charters Tower	21.01	242	*e*P	P	11 44 26.7	+0.7
CTAO				pmax	pmax		
	comp=Z,31nm,0.9s						
MTSU	Mount Surprise	22.10	249	P	P	11 44 38.0	+0.3
	baz=22,SNR=13						
RMQ	Roma	22.39	224	P	P	11 44 42.0	+1.1
	baz=22,SNR=8.0						
COEN	Coen	22.42	260	P	P	11 44 40.9	-0.4
	baz=22,SNR=5.6						
COEN	Coen	22.42	260	*e*P	P	11 44 41.4	+0.2
	comp=Z,65nm,1.6s						
ARMA	Armidale	23.50	212	P	P	11 44 52.7	+0.4
	baz=24,SNR=9.4						
ARMA	Armidale	23.50	212	*e*P	P	11 44 52.8	+0.4
	comp=Z,34nm,1.0s						
OUZ	Omahuta	25.15	165	*e*P	P	11 45 08.5	+1.1
	comp=Z,96nm,1.6s						
QLP	Quilpie	25.70	230	P	P	11 45 13.0	+0.4
	baz=26,SNR=4.0						
JAY	Jayapura	26.40	287	P	P	11 45 27.0	+7.9
QIS	Mount Isa	27.04	246	P	P	11 45 25.3	+0.4
	baz=27,SNR=3.1						
CMSA	Cobar Meteorol	27.75	219	P	P	11 45 30.6	-0.4
	baz=28,SNR=12						
HIZ	Hauiti	28.59	165	*e*P	P	11 45 38.2	-0.1
	comp=Z,25nm,0.8s						
HAZ	Te Kaha	28.74	160	P	P	11 45 39.4	-0.3
MXZ	Matakaoa Point	28.74	159	*e*P	P	11 45 39.4	-0.4
	comp=Z,23nm,0.7s						
RUGZ	Raukumara Rang	28.89	161	P	P	11 45 41.2	-0.1
URZ	Urewera	28.98	162	*e*P	P	11 45 41.8	-0.1
URZ	Urewera	28.98	162	P	P	11 45 41.0	-0.9
	comp=Z,4.9nm,0.5s,baz=258,slow=2.4,SNR=10						
URZ	Urewera	28.98	162	P	P	11 45 42.4	+0.5
MUGZ	Murupara	29.08	162	P	P	11 45 42.8	0.0
MWZ	Matawai	29.18	161	P	P	11 45 42.1	-1.6
TWGZ	Tauwhareparae	29.18	160	P	P	11 45 42.9	-0.9
H11S2	WAKE ISLAND Hy	29.26	1	T	T	12 16 02.5	
	baz=181,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.27	1	T	T	12 16 06.9	
	baz=181,slow=76,SNR=32						
RTZ	Ruatahuna	29.27	162	P	P	11 45 44.8	+0.2
H11S1	WAKE ISLAND Hy	29.28	1	T	T	12 16 03.8	
	baz=181,slow=76,SNR=23						
NGZ	Ngauruhoe	29.40	165	P	P	11 45 47.8	+2.0
MTHZ	Maungataniwha	29.44	163	P	P	11 45 46.1	0.0
SNGZ	Shannon Statio	29.53	162	P	P	11 45 45.6	-1.2
RIGZ	Rimuhau	29.59	161	P	P	11 45 46.2	-1.2
BKZ	Black Stump Fm	29.63	163	*e*P	P	11 45 46.5	-1.3
	comp=Z,72nm,1.5s						
BKZ	Black Stump Fm	29.63	163	P	P	11 45 47.0	-0.7
BHHZ	Black Hill Sta	29.82	164	P	P	11 45 48.8	-0.6
KWHZ	Kaweka Forest	29.86	164	P	P	11 45 49.1	-0.6
MCHZ	McNeill Hill	29.95	163	P	P	11 45 50.0	-0.6
H11N1	WAKE ISLAND Hy	30.48	2	T	T	12 17 38.2	
	baz=182,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	30.49	2	T	T	12 17 34.5	
	baz=182,slow=76,SNR=36						
H11N2	WAKE ISLAND Hy	30.50	2	T	T	12 17 35.5	
	baz=182,slow=76,SNR=22						
STKA	Stephens Creek	30.64	223	P	P	11 45 56.9	+0.1
	baz=31,SNR=8.3						
STKA	Stephens Creek	30.64	223	*e*P	P	11 45 56.8	+0.1
	comp=Z,1.0nm,0.6s						
STKA	Stephens Creek	30.64	223	P	P	11 45 56.8	+0.1
	comp=Z,5.0nm,0.8s,baz=49,slow=9.1,SNR=9.4						
BFZ	Birch Farm	30.98	165	*e*P	P	11 45 57.9	-1.7
	comp=Z,37nm,0.7s						
SNZO	South Karori	31.21	167	*e*P	P	11 46 00.9	-0.6
	comp=Z,90nm,1.1s						
THZ	Tophouse	31.30	170	*e*P	P	11 46 02.5	+0.1
	comp=Z,48nm,0.7s						
WRAB	Tennant Creek	31.68	250	*e*P	P	11 46 04.6	-1.5
	comp=Z,65nm,1.5s						
WRAB	Tennant Creek	31.68	250⇓	*i*P	P	11 46 04.9	-1.1
WRAB				pmax	pmax		
	comp=Z,18nm,1.0s						
WB2	Warramunga Arr	31.68	250	*e*P	P	11 46 04.9	-1.2
	comp=Z,16nm,1.1s						
WR1	Warramunga Arr	31.69	250	*e*P	P	11 46 04.2	-1.9
	comp=Z,31nm,0.9s						
WR1				*e*PcP	PcP	11 48 58.5	+0.5
WRA	Warramunga Arr	31.69	250	P	P	11 46 04.2	-1.9
	comp=Z,20nm,0.9s,baz=82,slow=9.1,SNR=38						
WRA				PcP	PcP	11 48 58.5	+0.4
	comp=Z,0.9nm,0.8s,baz=69,slow=2.3,SNR=4.0						
KHZ	Kahutara	32.05	169	*e*P	P	11 46 07.8	-1.1
	comp=Z,49nm,1.1s						
LTZ	Lake Taylor	32.19	171	*e*P	P	11 46 10.0	-0.3
	comp=Z,53nm,1.1s						
TOO	Toolangi	32.25	211	P	P	11 46 12.2	+1.3
	baz=32,SNR=4.6						
TOO	Toolangi	32.25	211	*e*P	P	11 46 10.8	-0.1
	comp=Z,15nm,0.8s						
TOO	Toolangi	32.25	211	*e*P	P	11 46 10.8	-0.1
TOO				pmax	pmax		
	comp=Z,15nm,0.8s						
FOZ	Fox Glacier	32.64	175	*e*P	P	11 46 14.4	+0.3
	comp=Z,42nm,0.8s						
OXZ	Oxford	32.69	172	*e*P	P	11 46 13.4	-1.2
	comp=Z,46nm,0.8s						
KDU	Kakadu	32.79	264	P	P	11 46 13.4	-2.4
	baz=33,SNR=5.7						
RPZ	Rata Peaks	32.95	173	*e*P	P	11 46 16.8	0.0
	comp=Z,49nm,0.9s						
RPZ	Rata Peaks	32.95	173	P	P	11 46 16.9	+0.1
	comp=Z,17nm,0.6s,baz=339,slow=2.8,SNR=12						
AS01	Alice Springs	32.96	243	*e*P	P	11 46 16.3	-1.0
AS31	Alice Springs	33.00	243	*e*P	P	11 46 15.3	-2.3
	comp=Z,2.6nm,0.8s						
ASAR	Alice Springs	33.00	243	P	P	11 46 16.1	-1.5
	comp=Z,4.3nm,0.7s,baz=66,slow=10,SNR=33						
ASAR				PcP	PcP	11 49 01.0	-0.7
	comp=Z,1.0nm,1.0s,baz=81,slow=4.3,SNR=2.7						
ASAR				ScP	ScP	11 52 46.4	+0.2
	comp=Z,2.3nm,1.1s,baz=86,slow=4.8,SNR=4.2						
CRLZ	Canterbury Las	33.02	171	*e*P	P	11 46 12.9	-4.6
	comp=Z,247nm,1.3s						
MQZ	McQueen's Vall	33.15	171	*e*P	P	11 46 18.7	+0.1
	comp=Z,146nm,1.2s						
HTT	Hallett	33.37	224	P	P	11 46 20.6	-0.2
	baz=33,SNR=5.4						
LBZ	Lake Benmore	33.52	174	*e*P	P	11 46 21.1	-0.7
	comp=Z,18nm,0.7s						
ANA2	Anatahan	33.70	323	*e*P	P	11 46 22.8	-0.9
	comp=Z,114nm,0.4s						
MTN	Manton Dam	34.09	263	*e*P	P	11 46 25.7	-1.5
	comp=Z,9.3nm,0.8s						
ODZ	Otahua Downs	34.22	174	*e*P	P	11 46 27.9	+0.1
	comp=Z,38nm,1.2s						
MLZ	Mavora Lakes	34.35	177	*e*P	P	11 46 29.6	+0.5
	comp=Z,62nm,1.4s						
WHZ	Wether Hill Ro	34.87	178	*e*P	P	11 46 33.9	+0.4
	comp=Z,55nm,1.4s						
BBOO	Buckleboo	35.03	227	P	P	11 46 34.2	-0.8
	baz=35,SNR=8.3						
BBOO	Buckleboo	35.03	227	*e*P	P	11 46 34.3	-0.8
	comp=Z,46nm,1.4s						
KNRA	Kununurra	36.44	258	P	P	11 46 46.7	-0.7
	baz=36,SNR=4.0						
WRKA	Warakurna	38.29	243	P	P	11 47 02.6	-0.5
	baz=38,SNR=7.5						
NLAI	Namlea	39.25	278	P	P	11 47 11.9	+0.7
	comp=Z,22nm,1.3s						

FITZ	Fitzroy Crossi	39.58	255	P	P	11 47 12.3	-1.6
	baz=40,SNR=24						
FITZ	Fitzroy Crossi	39.58	255	*e*P	P	11 47 12.1	-1.8
	comp=Z,7.9nm,0.8s						
FORT	Forrest	40.25	235	*e*P	P	11 47 19.3	0.0
	comp=Z,50nm,1.3s						
SANI	Sanana	40.62	280	P	P	11 47 23.5	+0.9
	comp=Z,23nm,1.0s						
BATI	Baumata	41.54	267	P	P	11 47 30.6	+0.4
	comp=Z,21nm,0.6s,baz=132,slow=1.4,SNR=4.6						
BNSI	Bone	45.84	274	P	P	11 48 04.5	-0.3
	comp=Z,44nm,0.7s						
SPSI	Sidrap Palu	46.25	275	P	P	11 48 07.1	-1.0
	comp=Z,9.7nm,1.2s						
MEEK	Meekatharra	47.16	244	P	P	11 48 15.1	0.0
	baz=47,SNR=20						
NWAO	Narrogin (SRO)	49.67	236	P	P	11 48 35.9	+1.5
	comp=Z,11nm,0.9s,baz=310,slow=12,SNR=2.9						
MJAR	Matsushiro Arr	53.97	332	P	P	11 49 05.7	-0.6
	comp=Z,12nm,1.2s,baz=167,slow=7.6,SNR=7.5						
MAJO	Matsushiro	53.97	332	*e*P	P	11 49 05.7	-0.6
MAJO	Matsushiro	53.97	332	⇑*e*P	P	11 49 05.8	-0.6
MAJO				pmax	pmax		
	comp=Z,16nm,1.1s						
MAT	Matsushiro	53.97	332	P	P	11 49 07.3	+1.0
PCJI	Pacitan	54.01	268	P	P	11 49 08.5	+1.5
	comp=Z,47nm,1.6s						
JNU	Nakatsue	55.11	324	*e*P	P	11 49 14.1	-0.6
	comp=Z,53nm,1.2s						
JNU	Nakatsue	55.11	324	LR	LR	12 11 36.1	
	comp=Z,8µm,18.1s,baz=106,slow=35						
ASAJ	Asahikawa	58.77	341	P	P	11 49 40.7	+0.4
	comp=Z,23nm,1.1s,baz=275,slow=25,SNR=3.7						
KSRS	Korea Array	59.90	325	P	P	11 49 48.4	+0.1
	comp=Z,1.9nm,0.7s,baz=135,slow=6.6,SNR=8.1						
KS01	Wonju Array Si	59.94	325	*e*P	P	11 49 48.1	-0.4
YSS	Yuzh-Sakhalins	61.25	342	*e*P	P	11 49 55.0	-2.3
YSS				*e*		11 50 02.5	
MDSI	Maura Dua	61.45	271	P	P	11 50 01.7	+2.3
	comp=Z,11nm,2.6s						
NJ2	Nanjing	62.08	315	*e*P	P	11 50 03.1	-0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
USRK	Ussuriysk Ar.	62.95	333	P	P	11 50 09.3	+0.6
	comp=Z,2.2nm,0.6s,baz=114,slow=7.1,SNR=7.4						
PETK	Petropavlovsk-	64.19	354	P	P	11 50 17.4	+0.6
PETK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PETK	Petropavlovsk-	64.19	354	P	P	11 50 17.4	+0.6
	comp=Z,3.7nm,0.9s,baz=173,slow=4.6,SNR=4.4						
PEA1	Petropavlovsk-	64.19	354	*e*P	P	11 50 17.4	+0.5
CN2	Changchun	65.75	329	*e*P	P	11 50 26.4	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CASY	Casey	66.54	201	*e*P	P	11 50 31.4	-0.5
	comp=Z,9.8nm,1.0s						
VNDA	Vanda	66.59	181	*e*P	P	11 50 32.9	+0.8
VNDA	Vanda	66.59	181	*e*P	P	11 50 32.9	+0.8
VNDA	Vanda	66.59	181	P	P	11 50 33.0	+0.9
	comp=Z,2.8nm,0.9s,baz=63,slow=9.0,SNR=2.3						
GRNR	Gornyy	66.62	340	*e*P	P	11 50 40.7	+8.1
SBA	Scott Base	66.89	180	*e*P	P	11 50 33.2	-0.8
	comp=Z,100nm,1.4s						
SBA	Scott Base	66.89	180	*e*P	P	11 50 33.2	-0.8
SBA				pmax	pmax		
	comp=Z,99nm,1.4s						
KLR	Kul'dur	67.04	336	⇓*i*P	P	11 50 34.4	-1.0
KLR	Kul'dur	67.04	336	P	P	11 50 36.0	+0.7
	comp=Z,2.5nm,0.7s,baz=116,slow=3.4,SNR=13						
NKL	Nikolayevsk	67.40	344	*e*P	P	11 50 38.3	+0.8
GYA	Guiyang	68.52	304	P	P	11 50 45.9	+0.6
GYA				PP	PP	11 53 20.2	+3.5
GYA				S	S	11 59 48.6	+0.7
GYA				SKS	SKSac	12 00 42.4	-2.7
GYA	Guiyang	68.52	304	SS	SS	12 04 14.0	+1.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,530nm,18.0s						
GYA				LR	LR		
	comp=E,500nm,18.4s						
GYA				LR	LR		
	comp=Z,540nm,18.2s						
BJI	Beijing	68.52	321	*e*P	P	11 50 44.5	-0.4
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PBKT	Sadao Pong	69.81	292	*e*P	P	11 50 53.7	+0.4
	comp=Z,4.4nm,0.8s						
XAN	Xi'an	70.19	312	P	P	11 50 55.2	-0.3
XAN				pP	pwP	11 51 01.6	+1.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN	Xi'an	70.19	312	*e*P	P	11 50 55.2	-0.3
	comp=Z,6.4nm,0.9s						
XAN	Xi'an	70.19	312	*e*P	P	11 50 55.2	-0.3
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMI	Kunming	71.23	301	P	P	11 51 03.2	+1.0
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,43µm,20.4s						
KMI				LR	LR		
	comp=N,10µm,19.7s						
KMI				LR	LR		
	comp=E,5µm,18.4s						
KMI				LR	LR		
	comp=Z,9µm,19.2s						
MA2	Magadan	71.34	352	⇑*e*P	P	11 51 02.3	+0.5
MA2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC	Hu-ho-hao-te	71.88	320	*e*P	P	11 51 07.1	+1.5
HHC				pmax	pmax		
	comp=Z,12nm,1.3s						
HHC				pmax	pmax		
	comp=Z,41µm,6.1s						
CM01	Chiang Mai Arr	72.22	293	*e*P	P	11 51 06.7	-1.3
CMAR	Chiang Mai Arr	72.25	293	P	P	11 51 07.6	-0.5
	comp=Z,2.3nm,0.9s,baz=118,slow=4.3,SNR=14						
ZEA	Zeya	72.33	337	*e*P	P	11 51 08.0	+0.2
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
CHTO	Chiang Mai	72.36	294	P	P	11 51 11.3	+2.5
HIA	Hailar	72.38	330	⇑*i*P	P	11 51 08.2	-0.1
HIA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CD2	Chengdu	72.69	307	P	P	11 51 10.6	0.0
SEY	Seymchan	74.40	354	⇑*e*P	P	11 51 19.4	-0.5
LZH	Lanzhou	74.83	312	*e*P	P	11 51 23.7	+0.5
LZH				pP	pwP	11 51 28.8	+0.7
LZH				sP	sP	11 51 31.3	+4.3
LZH				PP	PP	11 54 11.9	+1.1
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
LZH				LR	LR		
	comp=N,340nm,17.1s						
LZH				LR	LR		
	comp=E,360nm,17.2s						
LZH				LR	LR		
	comp=Z,340nm,18.8s						
GAMB	Gambell	76.44	10	*e*P	P	11 51 31.6	+0.1
	comp=Z,7.0nm,0.8s						
ULN	Ulaanbaatar	78.33	324	*e*P	P	11 51 42.3	-0.5
	comp=Z,7.4nm,0.8s						
ULN	Ulaanbaatar	78.33	324	⇓*e*P	P	11 51 42.6	-0.2
ULN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SONA0	Songino Array	78.70	324	*e*P	P	11 51 44.9	+0.1
SONM	Songino Array	78.70	324	P	P	11 51 44.9	+0.1
	comp=Z,2.7nm,0.7s,baz=143,slow=6.4,SNR=7.1						
BILL	Bilibino	78.78	0	*i* P	P	11 51 45.2	+0.6
BILL				*i*		11 51 51.1	
BILL				*i*		11 54 41.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
QSPA	South Pole Qui	79.06	180	P	P	11 51 45.9	-0.6
	comp=Z,8.3nm,0.9s,baz=12,slow=2.0,SNR=7.3						
CAST	Castle Rocks	80.80	18	*e*P	P	11 51 55.8	+0.1
	comp=Z,11nm,1.2s						
ZAK	Zakamensk	81.73	325	*e*P	P	11 52 04.2	+3.2
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY	Talaya	82.15	326	⇑*i*P	P	11 52 02.7	-0.4
MDM	Murphy Dome	83.08	18	*e*P	P	11 52 07.2	-0.4
	comp=Z,6.3nm,0.8s						
HDA	Harding Lake	83.09	19	*e*P	P	11 52 07.5	-0.1
	comp=Z,14nm,0.8s						
COLA	College	83.14	18	⇑*e*P	P	11 52 07.1	-0.8
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
IL1	Eielson Array	83.36	18	*e*P	P	11 52 08.5	-0.6
ILAR	Eielson Array	83.36	18	P	P	11 52 08.1	-1.0
	comp=Z,3.3nm,0.8s,baz=238,slow=4.7,SNR=23						
ILB	Eielson Array	83.36	18	*e*P	P	11 52 08.4	-0.6
SCRK	Sand Creek	83.76	20	*e*P	P	11 52 10.9	-0.4
	comp=Z,31nm,1.6s						
KNGR	Kungurtug, Tuv	85.14	324	⇑*i*P	P	11 52 17.7	-0.9
NVAR	Mina Array Bea	85.82	50	P	P	11 52 23.4	+1.0
	comp=Z,0.9nm,0.7s,baz=232,slow=6.6,SNR=2.9						
TIXI	Tiksi	86.03	349	⇑*i*P	P	11 52 21.7	-0.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WMQ	Urumqi	89.16	315	*e*P	P	11 52 38.8	+0.6
WMQ				pP	pwP	11 52 43.6	+0.6
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
INK	Inuvik	89.75	19	P	P	11 52 41.1	+0.9
	comp=Z,0.7nm,0.8s,baz=243,slow=2.3,SNR=2.6						
DGZ	Jazzator, Alta	90.94	320	⇓*i*P	P	11 52 45.1	-1.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SYO	Syowa Base	91.93	197	⇓*e*pP	pP	11 52 53.0	-0.4
PDAR	Pinedale Array	93.35	47	P	P	11 52 58.9	+1.0
	comp=Z,0.7nm,0.9s,baz=256,slow=2.7,SNR=2.6						
MK01	Makanchi Array	93.57	317	*e*P	P	11 52 56.7	-1.8
MK31	Makanchi Array	93.58	317	*e*P	P	11 52 58.1	-0.5
MK32	Makanchi Array	93.58	317	*e*P	P	11 52 57.6	-0.9
MK32				*e*PP	PP	11 56 41.7	-1.8
MKAR	Makanchi Array	93.58	317	*e*P	P	11 52 58.2	-0.4
	comp=Z,23nm,0.6s						
MKAR	Makanchi Array	93.58	317	P	P	11 52 57.6	-0.9
	comp=Z,4.1nm,0.7s,baz=95,slow=6.3,SNR=36						
MKAR				PP	PP	11 56 41.7	-1.8
	comp=Z,0.2nm,0.8s,baz=92,slow=8.7,SNR=3.9						
ZALV	Zalesovo Beam	93.59	324	*e*P	P	11 52 57.9	-0.4
ZALV	Zalesovo Beam	93.59	324	*e*P	P	11 52 57.9	-0.4
ZALV	Zalesovo Beam	93.59	324	P	P	11 52 57.2	-1.2
	comp=Z,0.8nm,0.5s,baz=115,slow=3.6,SNR=7.9						
ZAA1	Zalesovo Array	93.59	324	*e*P	P	11 52 57.2	-1.2
YKA	Yellowknife Ar	94.80	27	P	P	11 53 02.4	-1.3
	comp=Z,0.7nm,0.6s,baz=255,slow=4.7,SNR=7.6						
LTX	Lajitas	95.62	61	*e*P	P	11 53 08.3	-0.1
LTX	Lajitas	95.62	61	*e*P	P	11 53 08.3	-0.1
TXAR	Lajitas Array	95.62	61	P	P	11 53 08.3	-0.1
	comp=Z,0.4nm,0.7s,baz=234,slow=4.0,SNR=2.6						
KURK	Kurchatov	96.69	320	*e*P	P	11 53 11.0	-1.6
KURK	Kurchatov	96.69	320	P	P	11 53 11.0	-1.6
KURBB	Kurchatov Arra	96.73	320	P	P	11 53 11.0	-1.8
	comp=Z,0.4nm,0.7s,baz=86,slow=4.0,SNR=4.2						
KSH	Kashi	96.84	309	P	P	11 53 16.6	+2.8
KSH				pmax	pmax		
	comp=Z,2µm,10.7s						
BVAR	Borovoye Array	101.99	322	P	Pdif	11 53 36.5	+0.2
	comp=Z,0.8nm,0.6s,baz=243,slow=36,SNR=3.2						
ARA0	ARCESS Array S	116.29	346	*e*PKPdf	PKiKP	11 58 23.7	-1.6
ARCES	ARCESS Array B	116.29	346	PKP	PKiKP	11 58 23.7	-1.6
	comp=Z,2.6nm,0.7s,baz=64,slow=2.8,SNR=14						
SCHQ	Schefferville	119.85	32	PKP	PKPdf	11 58 32.2	-0.4
	comp=Z,5.6nm,1.1s,baz=6.6,slow=13,SNR=2.5						
VSR	Storozhevoye	121.09	324	⇓*i*PKIKP	PKPdf	11 58 34.8	-0.3
FIA0	FINESS Array S	121.75	339	*e*PKPdf	PKPdf	11 58 34.6	-1.4
FIA0	FINESS Array S	121.75	339	*e*PKIKP	PKPdf	11 58 34.6	-1.4
FINES	FINESS Array B	121.75	339	PKP	PKPdf	11 58 34.6	-1.4
	comp=Z,0.7nm,0.5s,baz=48,slow=2.8,SNR=5.5						
CPUP	Villa Florida	123.95	132	PKP	PKPdf	11 58 41.1	-0.3
	comp=Z,0.8nm,0.5s,baz=207,slow=4.1,SNR=2.8						
BOSA	Boshof	125.31	223	PKP	PKPdf	11 58 44.1	0.0
	comp=Z,2.9nm,0.7s,baz=79,slow=0.9,SNR=3.3						
NB2	NORSAR Subarra	126.66	345	PKPdf	PKPdf	11 58 45.2	-0.3
	comp=Z,1.7nm,0.7s,baz=29,slow=1.9						
NB200	NORSAR Array S	126.66	345	*e*PKPdf	PKPdf	11 58 45.5	-0.1
NOA	NORSAR Array B	126.66	345	PKP	PKPdf	11 58 45.5	-0.1
	comp=Z,0.7nm,0.7s,baz=38,slow=2.1,SNR=2.9						
AKASG	Malin Array Be	126.88	327	PKP	PKPdf	11 58 44.8	-1.4
	comp=Z,0.3nm,0.4s,baz=57,slow=2.4,SNR=2.6						
BR101	Keskin Array S	129.03	313	*e*PKPdf	PKPdf	11 58 51.0	+0.1
BRTR	Keskin Array B	129.03	313	PKP	PKPdf	11 58 50.9	+0.1
	comp=Z,0.6nm,0.7s,baz=130,slow=2.3,SNR=2.9						
GERES	GERESS Array B	135.70	334	PKP	PKiKP	11 59 04.6	-0.1
	comp=Z,0.8nm,0.7s,baz=54,slow=2.3,SNR=4.6						
POLO	Lamas de Olo	149.20	351	*e*PKPdf	PKPbc	11 59 31.3	0.0
MVO	Moncorvo	149.27	350	*e*PKPdf	PKPab	11 59 38.8	+2.9
PVIS	Viseu	149.85	351	*e*PKPdf	PKiKP	11 59 33.4	-0.5
ES19	SONSECA Array	149.97	344	*e*pPKPdf	pPKPdf	11 59 31.3	0.0
ES19				*e*PKPab	PKPab	11 59 38.9	+0.1
ESDC	Sonseca Array	150.02	344	PKPbc	PKPbc	11 59 33.1	-0.2
	comp=Z,1.9nm,0.7s,baz=26,slow=2.9,SNR=7.3						
ESDC				PKPab	PKPab	11 59 39.3	+0.3
	comp=Z,1.4nm,0.5s,baz=11,slow=3.2,SNR=9.1						
PTOM	Tomar	151.01	351	*e*PKPdf	PKiKP	11 59 36.3	+0.1
PMRV	Marv??o	151.02	349	*e*PKPdf	PKPab	11 59 40.2	-2.9
MESJ	Messejana	152.71	350	*e*PKPdf	PKPab	11 59 50.6	+0.5
TORD	Torodi Ar. Bea	164.43	280	PKP	PKPdf	11 59 47.4	+0.3
	comp=Z,0.7nm,0.9s,baz=23,slow=4.7,SNR=3.1						
TORD				PKPab	PKPab	12 00 42.7	+1.0
	comp=Z,0.7nm,0.9s,baz=93,slow=4.5,SNR=2.4						
TOA1	Torodi Ar. Sit	164.43	280	*e*PKPdf	PKPdf	11 59 47.4	+0.3
TOA1				*e*PKPab	PKPab	12 00 42.7	+1.0
DBIC	Dimbokro	169.96	246	PKPab	PKPab	12 01 07.1	+1.0
	comp=Z,9.7nm,1.1s,baz=156,slow=7.7,SNR=3.2						

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*IDC **08** 11:40:27.8±4.0, 36°.27N×70°.84E, h159^{km}±34^{km}, mb3.3/7, mb1 3.4/12, mb1mx3.2/69, mbtmp3.8/12, Error ellipse: s-maj=27.6km s-min=21.4km az=21.0*

*ISCJB **08** 11:40:30.8±0.5, 36°.50N±0°.03×70°.74E±0°.07, h204^{km}, mb3.3/6, Error ellipse: s-maj=8.1km s-min=4.2km az=165.7*

*NNC **08** 11:40:33.6±5.5, 37°.14N×69°.77E, h0^{km}, mb4.7, mpv4.6, Error ellipse: s-maj=44.3km s-min=30.1km az=175.0*

ISC 08 11:40:31.4±0.6**, 36°.50N**±0°.05×**70°.62E**±0°.08**, h204^{km}, n40, σ2^{s}00**/50**, mb3.4**/6**, 6C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.87	158	P	Pn	11 41 19.3	-0.6
CEP				S	S	11 41 55.0	-2.1
SFK	Sufi-Kurgan	4.18	32	⇓P	Pn	11 41 40.2	+4.5
	56nm,0.4s						
SFK				⇓S	S	11 42 29.3	+3.4
	29nm,0.3s						
SARP	Sargodha	4.87	159	P	Pn	11 41 43.1	-1.2
AML	Almayashu	6.11	22	P	Pn	11 41 59.7	-0.7
	SNR=171						
MNAS	Manas	6.16	13	⇓P	Pn	11 42 00.4	-0.4
	20nm,0.4s						
MNAS				⇑S	S	11 43 07.7	-3.7
	15nm,0.5s						
UCH	Uchtor	6.47	27	P	Pn	11 42 04.5	-0.7
	SNR=54						
NRN	Naryn	6.47	39	*e*P	Pn	11 42 02.6	-2.4
	6.3nm,0.4s						
KK31	Karatay Array	6.60	359	⇑P	Pn	11 42 06.1	-0.3
	25nm,0.6s,baz=185,slow=12,SNR=206						
KK31				⇓S	S	11 43 16.5	-5.2
	19nm,0.6s,baz=190,slow=22,SNR=9.2						
EKS2	Erkin-Say	6.62	21	P	Pn	11 42 06.5	-0.3
	SNR=40						
KZA	Kyzart	6.63	31	P	Pn	11 42 05.8	-1.4
	SNR=18						
AAK	Ala-Archa	6.82	25	P	Pn	11 42 09.1	-0.4
	SNR=34						
AAK	Ala-Archa	6.82	25	*e*P	Pn	11 42 09.0	-0.4
	26nm,0.4s						
AAK	Ala-Archa	6.82	25	⇓P	Pn	11 42 08.7	-0.7
	10nm,0.3s						
AAK				⇑S	S	11 43 25.5	-1.6
	12nm,0.7s						
AAK	Ala-Archa	6.82	25	P	Pn	11 42 09.0	-0.4
	13nm,0.3s,baz=172,slow=5.7,SNR=136						
AAK				S	S	11 43 24.0	-3.1
	1.6nm,0.3s,baz=127,slow=23,SNR=8.1						
KBK	Karagaybulak	7.00	27	P	Pn	11 42 11.6	-0.1
	SNR=14						
FRU1	Bishkek	7.02	25	*e*P	Pn	11 42 12.2	+0.3
	61nm,0.5s						
ULHL	Ulahol	7.21	35	P	Pn	11 42 13.2	-1.3
	SNR=7.2						
CHMS	Chumysh	7.23	25	P	Pn	11 42 13.8	-0.8
	SNR=13						
USP	Ospenovka	7.39	23	P	Pn	11 42 15.6	-1.1
	SNR=28						
TKM2	Tokmak 2	7.47	29	P	Pn	11 42 17.4	-0.5
	SNR=68						
TKM2	Tokmak 2	7.47	29	⇓P	Pn	11 42 17.7	-0.2
	26nm,0.4s						
TKM2				⇓S	S	11 43 42.0	-0.5
	5.5nm,0.8s						
PYUN	Piuthan	13.39	125	*e*P	Pn	11 43 32.7	-1.1
	11nm,0.4s						
MKAR	Makanchi Array	13.47	37	P	Pn	11 43 35.0	+0.5
	0.2nm,0.3s,baz=213,slow=12,SNR=7.9						
MKAR				S	S	11 46 03.3	-1.0
	0.0nm,0.3s,baz=238,slow=29,SNR=2.5						
DANN	Dangsing	13.74	122	*e*P	Pn	11 43 37.9	-0.4
	12nm,0.4s						
AB31	Akbulak array	14.94	332	⇓P	P	11 43 53.0	-0.1
	0.7nm,0.4s,baz=145,slow=12,SNR=23						
AB31				⇑S	S	11 46 32.3	-5.8
	1.7nm,0.7s,baz=156,slow=24,SNR=4.0						
KKN	Kakani	15.14	121	*e*P	Pn	11 43 54.9	-0.4
	6.8nm,0.3s						
KURBB	Kurchatov Arra	15.23	19	P	Pn	11 43 55.0	-0.9
	0.1nm,0.3s,baz=205,slow=11,SNR=5.6						
PKIN	Phulchoki	15.35	121	*e*P	Pn	11 43 57.1	-0.9
	19nm,0.5s						
GUN	Gumba	15.48	119	*e*P	Pn	11 43 59.0	-0.7
	9.8nm,0.3s						
JIRN	Jiri	15.85	119	*e*P	P	11 44 02.8	-1.0
	14nm,0.3s						
BVAR	Borovoye Array	16.53	360	P	Pn	11 44 12.1	+0.4
	0.8nm,0.3s,baz=171,slow=12,SNR=8.7						
AKTO	Aktyubinsk	16.63	331	⇑P	Pn	11 44 13.9	+1.0
	4.1nm,0.8s						
AKTO				⇑S	S	11 47 12.3	-2.8
	4.9nm,1.4s						
AKTO	Aktyubinsk	16.63	331	P	Pn	11 44 15.0	+2.1
	0.6nm,0.3s,baz=143,slow=9.9,SNR=6.6						
ZALV	Zalesovo Beam	20.05	25	P	P	11 44 50.1	+1.4
	2.5nm,0.3s,baz=219,slow=11,SNR=11						
NOA	NORSAR Array B	44.20	323	P	P	11 48 22.5	+2.6
	0.4nm,0.6s,baz=97,slow=7.7,SNR=2.8						
TORD	Torodi Ar. Bea	65.41	268	P	P	11 50 54.7	+2.2
	0.3nm,0.8s,baz=57,slow=5.3,SNR=2.5						
INK	Inuvik	73.96	9	P	P	11 51 47.0	+3.3
	0.8nm,0.5s,baz=342,slow=5.8,SNR=7.3						
YKA	Yellowknife Ar	81.26	2	P	P	11 52 26.7	+2.4
	0.3nm,0.3s,baz=350,slow=5.3,SNR=9.2						
WRA	Warramunga Arr	82.25	122	P	P	11 52 29.3	-0.8
	0.6nm,0.5s,baz=325,slow=5.0,SNR=6.1						
ASAR	Alice Springs	84.50	125	P	P	11 52 42.0	+0.5
	0.4nm,0.5s,baz=317,slow=4.5,SNR=5.4						

IDC 08 11:46:09.8±2.9**, 11°.37S**×**164°.93E, h0^{km}, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.8**/32**, mbtmp3.8**/5**, Error ellipse: s-maj=138.7km s-min=29.5km az=140.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.62	250	P	P	11 52 26.1	+0.1
	3.6nm,1.0s,baz=80,slow=8.9,SNR=8.2						
ASAR	Alice Springs	31.93	243	P	P	11 52 36.9	-0.6
	1.4nm,0.9s,baz=67,slow=9.4,SNR=4.0						
ILAR	Eielson Array	84.08	19	P	P	11 58 42.3	+0.2
	0.4nm,0.8s,baz=232,slow=4.4,SNR=4.8						
MKAR	Makanchi Array	93.21	317	P	P	11 59 27.2	+0.9
	0.6nm,0.9s,baz=104,slow=6.1,SNR=3.2						
YKA	Yellowknife Ar	95.63	27	P	P	11 59 36.1	-0.8
	0.2nm,0.8s,baz=257,slow=6.2,SNR=3.3						

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*IDC **08** 11:48:19.4±0.9, 10°.01S×167°.73E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.8/33, mbtmp3.8/7, Error ellipse: s-maj=34.7km s-min=22.6km az=131.0*

*ISCJB **08** 11:48:22.6±0.9, 10°.0S±0°.2×167°.7E±0°.2, h33^{km}, mb3.8/8, Error ellipse: s-maj=27.8km s-min=19.7km az=37.8*

ISC 08 11:48:24.4±0.9**, 10°.0S**±0°.2×**167°.7E**±0°.2**, h35^{km}, n10, σ1^{s}50**/10**, mb3.8**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	22.97	242	P	P	11 53 26.4	+0.3
	5.1nm,1.0s,baz=38,slow=12,SNR=2.6						
URZ	Urewera	29.43	165	P	P	11 54 24.8	0.0
	7.7nm,0.9s,baz=329,slow=16,SNR=3.7						
WRA	Warramunga Arr	33.63	249	P	P	11 55 03.4	+1.4
	1.1nm,0.7s,baz=81,slow=9.0,SNR=4.6						
ASAR	Alice Springs	34.96	243	P	P	11 55 12.4	-1.1
	0.3nm,0.6s,baz=64,slow=10,SNR=4.4						
SONM	Songino Array	78.92	323	P	P	12 00 25.9	+1.4
	0.5nm,0.6s,baz=127,slow=3.8,SNR=2.2						
ILAR	Eielson Array	81.89	18	P	P	12 00 40.8	+0.9
	0.4nm,0.9s,baz=225,slow=4.8,SNR=3.9						
YKA	Yellowknife Ar	93.15	27	P	P	12 01 34.1	-0.5
	0.1nm,0.4s,baz=252,slow=5.8,SNR=3.5						
MKAR	Makanchi Array	94.02	317	P	P	12 01 36.1	-3.0
	0.4nm,0.8s,baz=94,slow=6.1,SNR=3.1						
CPUP	Villa Florida	123.33	131	PKP	PKPdf	12 07 18.7	+0.2
	0.9nm,0.3s,baz=240,slow=2.5,SNR=3.5						
ESDC	Sonseca Array	149.48	347	PKPbc	PKPbc	12 08 11.2	+0.8
	0.2nm,0.3s,baz=32,slow=24,SNR=3.7						

IDC 08 11:50:55.5±2.1**, 11°.56S**×**166°.09E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.7**/35**, mbtmp3.8**/5**, ML4.8**/1**, Error ellipse: s-maj=67.5km s-min=28.5km az=142.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.40	289	Pn	Pn	11 52 30.8	-0.3
	20nm,0.3s,baz=153,slow=10,SNR=5.2						
CTA	Charters Tower	20.87	244	P	Pn	11 55 43.3	+1.6
	4.5nm,0.8s,baz=66,slow=16,SNR=2.1						
WRA	Warramunga Arr	31.63	251	P	P	11 57 20.5	-0.1
	0.6nm,0.7s,baz=81,slow=8.8,SNR=4.6						
ASAR	Alice Springs	32.87	244	P	P	11 57 31.4	-0.1
	0.3nm,0.8s,baz=66,slow=9.2,SNR=3.1						
FITZ	Fitzroy Crossi	39.58	256	P	P	11 58 28.3	-0.6
	baz=100,slow=11						
ILAR	Eielson Array	83.89	18	P	P	12 03 26.2	-0.6
	0.4nm,0.9s,baz=224,slow=5.0,SNR=3.9						
MKAR	Makanchi Array	94.12	317	P	P	12 04 17.5	+1.4
	0.4nm,0.8s,baz=89,slow=6.2,SNR=3.0						

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*ISCJB **08** 11:54:03.2±0.4, 11°.08S±0°.05×165°.85E±0°.06, h10^{km}, mb4.6/29, Error ellipse: s-maj=9.3km s-min=6.1km az=139.8*

*IDC **08** 11:54:03.1±0.7, 10°.96S×165°.87E, h0^{km}, mb4.3/16, mb1 4.4/18, mb1mx4.3/40, mbtmp4.3/18, ML4.6/2, Error ellipse: s-maj=19.3km s-min=15.9km az=127.0*

*NEIC **08** 11:54:04.5±0.3, 10°.98S×165°.85E, h10^{km}, mb5.0/19, Error ellipse: s-maj=8.2km s-min=5.9km az=69.0*

ISC 08 11:54:04.5±0.6**, 10°.99S**±0°.08×**165°.90E**±0°.09**, h10^{km}, n59, σ1^{s}06**/51**, mb4.8**/29**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.06	284	Pn	Pn	11 55 34.0	-0.2
	18nm,0.3s,baz=126,slow=2.7,SNR=6.7						
HNR				Sn	Sn	11 56 46.1	+2.5
	8.7nm,0.3s,baz=263,slow=13,SNR=3.7						
MARNC	Mare, Loyalty	10.63	169	*e*Pn	Pn	11 56 38.4	+1.4
DZM	Mont Dzumac	11.03	177	*e*Pn	Pn	11 56 44.4	+1.8
DZM	Mont Dzumac	11.03	177	Pn	Pn	11 56 43.7	+1.2
	3.1nm,0.3s,baz=359,slow=22,SNR=11						
ONTNC	Ouen Toro	11.27	177	*e*Pn	Pn	11 56 44.9	-0.7
PINNC	Pines Island,	11.65	173	*e*Pn	Pn	11 56 49.9	-1.1
EIDS	Eidsvold	20.03	222	*e*P	Pn	11 58 37.6	-2.0
	13nm,0.8s						
MANU	Manus Island	20.43	294	*e*P	Pn	11 58 44.7	+0.4
	135nm,1.7s						
CTA	Charters Tower	20.95	242	P	Pn	11 58 48.0	-2.4
	7.1nm,0.6s,baz=76,slow=12,SNR=8.9						
CTAO	Charters Tower	20.95	242	*e*P	P	11 58 47.2	-0.7
	19nm,1.1s						
COEN	Coen	22.38	260	*e*P	P	11 59 03.0	-0.2
	13nm,1.1s						
ARMA	Armidale	23.44	212	*e*P	P	11 59 14.0	-0.3
	18nm,1.2s						

URZ	Urewera	28.95	162	eP	P	12 00 05.0	+0.9
	22nm,1.4s						
URZ	Urewera	28.95	162	P	P	12 00 05.0	+0.9
	2.4nm,0.6s,baz=268,slow=5.6,SNR=4.8						
H11S2	WAKE ISLAND Hy	29.31	2	T	T	12 30 30.9	
	baz=182						
H11S3	WAKE ISLAND Hy	29.31	2	T	T	12 30 29.9	
	baz=182						
H11S1	WAKE ISLAND Hy	29.32	2	T	T	12 30 31.0	
	baz=182						
BKZ	Black Stump Fm	29.60	163	eP	P	12 00 10.3	+0.3
	54nm,1.8s						
H11N1	WAKE ISLAND Hy	30.53	2	T	T	12 32 02.4	
	baz=183						
H11N3	WAKE ISLAND Hy	30.53	2	T	T	12 32 02.0	
	baz=183						
H11N2	WAKE ISLAND Hy	30.55	2	T	T	12 32 02.0	
	baz=183						
STKA	Stephens Creek	30.58	223	eP	P	12 00 18.7	0.0
	0.7nm,0.8s						
STKA	Stephens Creek	30.58	223	P	P	12 00 19.4	+0.7
	2.1nm,0.6s,baz=56,slow=9.0,SNR=5.6						
BFZ	Birch Farm	30.95	165	eP	P	12 00 21.5	-0.3
	117nm,1.6s						
THZ	Tophouse	31.26	170	eP	P	12 00 24.5	-0.1
	13nm,0.7s						
WRAB	Tennant Creek	31.63	250	eP	P	12 00 24.9	-3.2
WB2	Warramunga Arr	31.63	250	eP	P	12 00 28.0	-0.1
WR1	Warramunga Arr	31.64	250	eP	P	12 00 28.1	0.0
	18nm,0.9s						
WRA	Warramunga Arr	31.64	250	P	P	12 00 28.1	0.0
	12nm,0.8s,baz=82,slow=9.0,SNR=38						
KHZ	Kahutara	32.01	169	eP	P	12 00 30.0	-1.1
	66nm,1.6s						
LTZ	Lake Taylor	32.15	171	eP	P	12 00 31.9	-0.5
	41nm,1.5s						
TOO	Toolangi	32.19	211	eP	P	12 00 34.5	+1.6
	25nm,1.4s						
FOZ	Fox Glacier	32.60	175	eP	P	12 00 37.4	+1.2
	17nm,1.0s						
AS01	Alice Springs	32.91	243	eP	P	12 00 38.1	-1.1
RPZ	Rata Peaks	32.91	173	P	P	12 00 38.8	-0.1
	15nm,0.7s,baz=358,slow=3.7,SNR=11						
ASAR	Alice Springs	32.95	243	P	P	12 00 39.1	-0.5
	2.7nm,0.9s,baz=65,slow=10,SNR=18						
MQZ	McQueen's Vall	33.12	171	eP	P	12 00 41.9	+1.2
	50nm,1.3s						
LBZ	Lake Benmore	33.48	174	eP	P	12 00 45.1	+1.2
	43nm,1.4s						
WKZ	Wanaka	33.82	176	eP	P	12 00 47.6	+0.6
	133nm,1.7s						
BBOO	Buckleboo	34.97	227	eP	P	12 00 55.7	-1.4
	52nm,1.6s						
FITZ	Fitzroy Crossi	39.53	255	eP	P	12 01 35.9	-0.1
	8.9nm,0.8s						
FITZ	Fitzroy Crossi	39.53	255	P	P	12 01 36.0	-0.1
	8.1nm,0.7s,baz=94,slow=6.3,SNR=21						
NWAO	Narrogin (SRO)	49.61	236	P	P	12 02 56.5	+0.1
	14nm,1.0s,baz=290,slow=8.1,SNR=3.7						
USRK	Ussuriysk Ar.	62.97	333	P	P	12 04 32.1	+0.8
	2.6nm,0.9s,baz=141,slow=9.3,SNR=2.5						
CMAR	Chiang Mai Arr	72.23	293	P	P	12 05 30.4	-0.1
	0.4nm,0.3s,baz=119,slow=4.9,SNR=5.4						
SONA0	Songino Array	78.71	324	eP	P	12 06 07.0	-0.3
SONM	Songino Array	78.71	324	P	P	12 06 07.0	-0.3
	0.5nm,0.5s,baz=133,slow=6.3,SNR=2.3						
ILAR	Eielson Array	83.42	18	P	P	12 06 31.6	-0.3
	1.2nm,1.0s,baz=229,slow=5.2,SNR=8.1						
ILB	Eielson Array	83.42	18	eP	P	12 06 32.1	+0.3
YBH	Yreka Blue Hor	83.75	46	P	P	12 06 35.6	+1.4
	2.7nm,1.1s,baz=106,slow=6.1,SNR=3.5						
NVAR	Mina Array Bea	85.88	50	P	P	12 06 45.5	+0.4
	0.4nm,0.7s,baz=234,slow=7.7,SNR=3.0						
MK32	Makanchi Array	93.58	317	eP	P	12 07 20.6	-0.4
MKAR	Makanchi Array	93.58	317	P	P	12 07 20.6	-0.4
	1.2nm,0.8s,baz=100,slow=5.2,SNR=10.0						
YKA	Yellowknife Ar	94.86	27	P	P	12 07 27.4	+0.9
	0.3nm,0.7s,baz=254,slow=4.9,SNR=6.2						
ARA0	ARCESS Array S	116.32	346	ePKPdf	PKiKP	12 12 45.9	-1.9
ARCES	ARCESS Array B	116.32	346	PKP	PKiKP	12 12 45.9	-1.9
	2.8nm,1.0s,baz=57,slow=4.5,SNR=3.8						
ESDC	Sonseca Array	150.05	344	PKPbc	PKPbc	12 13 54.8	-1.1
	0.3nm,0.4s,baz=13,slow=2.2,SNR=3.5						
TORD	Torodi Ar. Bea	164.40	279	PKPab	PKPab	12 15 03.4	-0.7
	0.8nm,1.0s,baz=48,slow=2.1,SNR=3.2						
TOA1	Torodi Ar. Sit	164.40	280	ePKPab	PKPab	12 15 03.4	-0.7

*IDC **08** 11:55:45.9±1.5, 11°.06S×165°.89E, h0km, mb3.9/6, mb1 4.1/8, mb1mx3.9/40, mbtmp4.0/8, ML4.7/1, Error ellipse: s-maj=40.0km s-min=26.1km az=128.0*

*ISCJB **08** 11:55:46.1±1.1, 11°.1S±0°.1×165°.9E±0°.2, h10km, mb3.9/6, Error ellipse: s-maj=23.1km s-min=17.6km az=160.2*

ISC 08 11:55:47.8±1.2**, 11°.0S**±0°.1×**165°.9E**±0°.2**, h10km, n8, σ1^s.25**/8**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
						h m s	ISC
HNR	Honiara	6.07	285	Pn	Pn	11 57 18.7	+1.0
	19nm,0.3s,baz=164,slow=7.4,SNR=3.1						
DZM	Mont Dzumac	11.00	177	Pn	Pn	11 58 26.3	+0.9
	baz=330,slow=16,SNR=3.3						
WRA	Warramunga Arr	31.63	250	P	P	12 02 10.3	-1.1
	2.8nm,1.0s,baz=80,slow=9.1,SNR=5.7						
ASAR	Alice Springs	32.94	243	P	P	12 02 21.4	-1.4
	0.7nm,0.8s,baz=68,slow=10,SNR=2.9						
FITZ	Fitzroy Crossi	39.53	255	P	P	12 03 18.4	-0.8
	1.8nm,0.7s,baz=97,slow=8.1,SNR=4.8						
SONM	Songino Array	78.73	324	P	P	12 07 51.9	+1.2
	0.5nm,0.4s,baz=113,slow=7.0,SNR=4.2						
ILAR	Eielson Array	83.44	18	P	P	12 08 14.5	-0.7
	0.5nm,0.9s,baz=230,slow=5.2,SNR=3.9						
MKAR	Makanchi Array	93.61	317	P	P	12 09 04.2	-0.2
	0.5nm,0.8s,baz=90,slow=4.5,SNR=3.1						

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*ISCJB **08** 11:56:09.5±0.2, 10°.96S±0°.03×165°.89E±0°.04, h10km, mb4.8/72, Error ellipse: s-maj=6.2km s-min=3.9km az=157.0*

*IDC **08** 11:56:09.5±0.5, 10°.91S×165°.91E, h0km, mb4.5/25, mb1 4.6/27, mb1mx4.5/42, mbtmp4.5/27, ML5.1/2, Error ellipse: s-maj=15.4km s-min=12.9km az=93.0*

*NEIC **08** 11:56:11.6±0.7, 10°.90S×165°.94E, h14km±4km, mb5.1/39, Error ellipse: s-maj=6.1km s-min=4.0km az=78.0*

*MOS **08** 11:56:12.9±0.8, 10°.90S×165°.87E, h33km, mb4.8/27, Error ellipse: s-maj=10.4km s-min=9.7km az=116.1*

ISC 08 11:56:11.1±0.4**, 10°.96S**±0°.05×**165°.96E**±0°.06**, h10km, n148, σ1^s.16**/154**, mb4.9**/73**, 8C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
						h m s	ISC
HNR	Honiara	6.11	284	eP	Pn	11 57 42.0	+0.4
HNR				eS	Sn	11 58 52.0	+0.4
HNR	Honiara	6.11	284	Pn	Pn	11 57 42.3	+0.7
	87nm,0.3s,baz=149,slow=5.4,SNR=14						
HNR				Sn	Sn	11 58 51.1	-0.5
	baz=270,slow=11,SNR=1.8						
MARNC	Mare, Loyalty	10.65	170	ePn	Pn	11 58 44.8	+1.0
DZM	Mont Dzumac	11.06	178	Pn	Pn	11 58 51.4	+1.9
	8.6nm,0.3s,baz=44,slow=17,SNR=15						
DZM				Sn	Sn	12 00 49.4	-3.9
	0.5nm,0.3s,baz=285,slow=21,SNR=1.7						
ONTNC	Ouen Toro	11.29	178	ePn	Pn	11 58 54.1	+1.5
PINNC	Pines Island,	11.67	173	ePn	Pn	11 59 00.0	+2.2
MSVF	Nonsavu	13.51	121⇑	eP	Pn	11 59 24.5	+1.5
EIDS	Eidsvold	20.10	223	eP	P	12 00 44.4	-0.8
	93nm,1.8s						
MANU	Manus Island	20.47	294	eP	Pn	12 00 50.1	-1.3
	140nm,1.2s						
CTA	Charters Tower	21.02	242	P	P	12 00 56.2	+1.0
	12nm,0.7s,baz=65,slow=12,SNR=11						
CTAO	Charters Tower	21.02	242	eP	P	12 00 56.5	+1.3
	60nm,1.4s						
CTAO	Charters Tower	21.02	242	eP	P	12 00 56.5	+1.3
CTAO				pmax	pmax		
	comp=Z,60nm,1.4s						
COEN	Coen	22.45	260	eP	P	12 01 10.4	-0.1
	comp=Z,54nm,1.4s						
ARMA	Armidale	23.50	212	eP	P	12 01 22.1	+0.7
	comp=Z,39nm,1.3s						
RAO	Raoul Island	23.62	143	P	P	12 01 23.9	+1.4
	comp=Z,160nm,0.3s,baz=37,slow=23,SNR=2.5						
OUZ	Omahuta	25.13	165	eP	P	12 01 37.8	+1.5
	comp=Z,18nm,0.9s						
HAZ	Te Kaha	28.71	160	P	P	12 02 09.7	+1.2
URZ	Urewera	28.96	162	P	P	12 02 10.9	+0.2
	comp=Z,4.2nm,0.7s,baz=21,slow=4.7,SNR=4.7						
URZ	Urewera	28.96	162	P	P	12 02 11.5	+0.8
MWZ	Matawai	29.16	161	P	P	12 02 13.1	+0.5
TWGZ	Tauwhareparae	29.16	160	P	P	12 02 13.5	+0.9
H11S2	WAKE ISLAND Hy	29.27	1	T	T	12 32 40.6	
	baz=182						
H11S3	WAKE ISLAND Hy	29.28	1	T	T	12 32 40.9	
	baz=182						
H11S1	WAKE ISLAND Hy	29.29	1	T	T	12 32 42.1	
	baz=182						
SNGZ	Shannon Statio	29.51	162	P	P	12 02 15.7	0.0
RAHZ	Arahi	29.56	162	P	P	12 02 16.2	+0.1
RIGZ	Rimuhau	29.57	161	P	P	12 02 16.5	+0.3
BKZ	Black Stump Fm	29.61	163	eP	P	12 02 16.9	+0.2
	comp=Z,13nm,0.6s						
BKZ	Black Stump Fm	29.61	163	P	P	12 02 17.0	+0.3
NMHZ	Naumai	29.64	163	P	P	12 02 18.1	+1.2
BHHZ	Black Hill Sta	29.80	164	P	P	12 02 18.4	+0.1
KWHZ	Kaweka Forest	29.84	164	P	P	12 02 19.8	+1.2
KAHZ	Kahuranaki	30.31	163	P	P	12 02 22.9	+0.2
H11N1	WAKE ISLAND Hy	30.50	2	T	T	12 34 12.2	
	baz=183						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	12 34 12.6	
	baz=183						
H11N2	WAKE ISLAND Hy	30.51	2	T	T	12 34 13.5	
	baz=183						
STKA	Stephens Creek	30.65	224	eP	P	12 02 27.0	+1.2
	comp=Z,7.1nm,1.8s						
STKA	Stephens Creek	30.65	224	P	P	12 02 26.1	+0.3
	comp=Z,2.4nm,0.8s,baz=21,slow=10,SNR=2.9						
BFZ	Birch Farm	30.96	165	eP	P	12 02 28.0	-0.5
	comp=Z,70nm,1.4s						
THZ	Tophouse	31.28	170	eP	P	12 02 31.3	0.0
	comp=Z,24nm,0.8s						
WRAB	Tennant Creek	31.70	250	eP	P	12 02 34.4	-0.9
	comp=Z,18nm,0.9s						
WRAB	Tennant Creek	31.70	250⇑	iP	P	12 02 34.4	-0.9
WRAB				pmax	pmax		
	comp=Z,20nm,1.1s						
WR1	Warramunga Arr	31.71	250	eP	P	12 02 34.5	-0.8
	comp=Z,23nm,0.9s						
WR1				ePcP	PcP	12 05 27.1	0.0
WRA	Warramunga Arr	31.71	250	P	P	12 02 34.5	-0.8
	comp=Z,14nm,0.7s,baz=81,slow=9.0,SNR=27						
WRA				PcP	PcP	12 05 27.1	0.0
	comp=Z,1.1nm,0.8s,baz=85,slow=3.2,SNR=4.5						
KHZ	Kahutara	32.03	169	eP	P	12 02 37.6	-0.2
	comp=Z,34nm,1.2s						
LTZ	Lake Taylor	32.17	171	eP	P	12 02 39.9	+0.7
	comp=Z,24nm,0.7s						
TOO	Toolangi	32.25	211	eP	P	12 02 40.8	+0.9
	comp=Z,22nm,1.3s						
TOO	Toolangi	32.25	211	eP	P	12 02 40.8	+0.9
TOO				pmax	pmax		
	comp=Z,22nm,1.3s						
FOZ	Fox Glacier	32.62	175	eP	P	12 02 44.2	+1.2
	comp=Z,22nm,0.9s						
RPZ	Rata Peaks	32.93	173	P	P	12 02 46.4	+0.6
	comp=Z,22nm,0.7s,baz=344,slow=2.2,SNR=14						
AS01	Alice Springs	32.98	243	eP	P	12 02 45.8	-0.7
ASAR	Alice Springs	33.02	243	P	P	12 02 45.5	-1.4
	comp=Z,3.7nm,0.7s,baz=64,slow=10,SNR=16						
ASAR				PcP	PcP	12 05 30.2	-0.5
	comp=Z,2.1nm,0.9s,baz=71,slow=2.6,SNR=6.6						
MQZ	McQueen's Vall	33.14	171	eP	P	12 02 47.7	+0.2
	comp=Z,189nm,1.9s						
LBZ	Lake Benmore	33.50	175	eP	P	12 02 51.3	+0.5
	comp=Z,98nm,2.0s						
WKZ	Wanaka	33.85	176	eP	P	12 02 54.8	+1.0
	comp=Z,207nm,1.8s						
WHZ	Wether Hill Ro	34.85	178	eP	P	12 03 03.0	+0.6
	comp=Z,89nm,1.7s						
BBOO	Buckleboo	35.04	227	eP	P	12 03 04.2	0.0
	comp=Z,56nm,1.6s						
TAU	Tasmania Unive	35.73	204	eP	P	12 03 10.9	+0.9
	comp=Z,193nm,1.8s						
TAU	Tasmania Unive	35.73	204	eP	P	12 03 10.9	+0.9
TAU				pmax	pmax		
	comp=Z,193nm,1.8s						
FITZ	Fitzroy Crossi	39.60	255	eP	P	12 03 42.5	-0.6
	comp=Z,8.9nm,0.8s						
FITZ	Fitzroy Crossi	39.60	255	P	P	12 03 42.1	-1.1
	comp=Z,13nm,0.7s,baz=99,slow=6.2,SNR=20						
BATI	Baumata	41.56	267	P	P	12 03 58.9	-0.5
	comp=Z,31nm,0.6s						
MJAR	Matsushiro Arr	53.99	332	P	P	12 05 34.8	-0.7
	comp=Z,3.4nm,0.7s,baz=176,slow=8.2,SNR=6.9						
MAJO	Matsushiro	54.00	332	eP	P	12 05 34.8	-0.7
MAJO	Matsushiro	54.00	332	eP	P	12 05 34.8	-0.7
JNU	Nakatsue	55.14	324	eP	P	12 05 43.4	-0.5
	comp=Z,28nm,0.9s						
JNU	Nakatsue	55.14	324	P	P	12 05 43.7	-0.2
	comp=Z,8.9nm,0.6s						
CISI	Cisompet, Garu	57.42	268	eP	P	12 05 59.2	-1.4
	comp=Z,35nm,0.8s						
ASAJ	Asahikawa	58.79	340	P	P	12 06 09.9	+0.4
ASAJ				pmax	pmax		
	comp=Z,18nm,1.2s						
ASAJ	Asahikawa	58.79	340	P	P	12 06 09.9	+0.4
	comp=Z,7.5nm,0.6s,baz=165,slow=20,SNR=5.2						
KSRS	Korea Array	59.93	325	P	P	12 06 17.6	+0.1
	comp=Z,2.0nm,0.8s,baz=144,slow=7.8,SNR=7.5						
NJ2	Nanjing	62.11	315	eP	P	12 06 32.2	-0.3
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
USRK	Ussuriysk Ar.	62.97	333	P	P	12 06 38.5	+0.5
	comp=Z,4.3nm,0.6s,baz=124,slow=5.7,SNR=9.2						
PETK	Petropavlovsk-	64.20	354	P	P	12 06 46.4	+0.5
	comp=Z,3.2nm,0.8s,baz=158,slow=5.4,SNR=3.1						
PEA1	Petropavlovsk-	64.21	354	eP	P	12 06 46.4	+0.4
IPM	Ipoh	66.42	280	eP	P	12 07 01.1	-0.1
	comp=Z,22nm,1.1s						
CASY	Casey	66.53	201	eP	P	12 07 01.1	+0.2
	comp=Z,18nm,1.1s						
VNDA	Vanda	66.58	181	P	P	12 07 02.5	+1.4
	comp=Z,3.0nm,1.0s,baz=12,slow=9.5,SNR=2.6						
KLR	Kul'dur	67.06	336⇑	iP	P	12 07 04.8	+0.3
GYA	Guiyang	68.55	304	P	P	12 07 16.0	+1.5
GYA				PP	PP	12 09 49.2	+3.2
GYA				S	S	12 16 17.8	+0.5
GYA				SKS	SKSac	12 17 11.9	-2.4
GYA	Guiyang	68.55	304	SS	SS	12 20 43.6	+1.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,530nm,18.0s						
GYA				LR	LR		
	comp=E,500nm,18.4s						
GYA				LR	LR		
	comp=Z,540nm,18.2s						
PBKT	Sadao Pong	69.84	292	eP	P	12 07 22.6	+0.1
	comp=Z,17nm,1.7s						
XAN	Xi'an	70.22	312	P	P	12 07 24.5	-0.2
XAN				pP	sP	12 07 32.0	+3.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI	Kunming	71.26	301	P	P	12 07 32.1	+0.7
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,10μm,15.0s						
KMI				LR	LR		
	comp=N,4μm,16.7s						
KMI				LR	LR		
	comp=E,5μm,17.2s						
KMI				LR	LR		
	comp=Z,9μm,16.6s						
MA2	Magadan	71.36	352⇑	eP	P	12 07 30.3	-0.6
MA2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC	Hu-ho-hao-te	71.91	320	eP	P	12 07 35.9	+1.1
HHC				S	S	12 16 59.6	+3.6
HHC				pmax	pmax		
	comp=Z,18nm,1.2s						
HHC				pmax	pmax		
	comp=Z,6μm,6.1s						
HHC				LR	LR		
	comp=N,6μm,16.9s						
HHC				LR	LR		
	comp=E,8μm,16.1s						
HHC				LR	LR		
	comp=Z,9μm,17.4s						
CM01	Chiang Mai Arr	72.25	293	eP	P	12 07 36.5	-0.6
CM31	Chiang Mai Arr	72.27	293	eP	P	12 07 37.9	+0.6
CMAR	Chiang Mai Arr	72.27	293	P	P	12 07 37.6	+0.3
	comp=Z,3.3nm,0.9s,baz=111,slow=4.1,SNR=14						
ZEA	Zeya	72.35	337	eP	P	12 07 37.0	0.0
CHTO	Chiang Mai	72.38	294	P	P	12 07 39.1	+1.1
	comp=Z,22nm,1.3s						
HIA	Hailar	72.40	330	i P	P	12 07 37.4	-0.1
HIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CD2	Chengdu	72.72	307	P	P	12 07 39.6	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
SEY	Seymchan	74.42	354⇑	iP	P	12 07 48.7	-0.3
LZH	Lanzhou	74.86	312	eP	P	12 07 53.3	+0.9
LZH				pP	sP	12 07 59.4	+3.2
LZH				sP	PcP	12 08 01.5	-4.9
LZH				PP	PP	12 10 44.7	+4.6
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
LZH				LR	LR		
	comp=N,340nm,17.1s						
LZH				LR	LR		
	comp=E,360nm,17.2s						
LZH				LR	LR		
	comp=Z,340nm,18.8s						
GAMB	Gambell	76.45	10	eP	P	12 08 01.6	+1.0
	comp=Z,9.1nm,1.0s						
ULN	Ulaanbaatar	78.36	324	eP	P	12 08 11.9	0.0
	comp=Z,6.3nm,0.7s						
ULN	Ulaanbaatar	78.36	324⇓	iP	P	12 08 11.5	-0.4
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ANM	Nome	78.36	12	eP	P	12 08 12.3	+1.0
	comp=Z,10nm,1.5s						
ANM	Nome	78.36	12	eP	P	12 08 12.4	+1.0
ANM				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SONA0	Songino Array	78.72	324	eP	P	12 08 13.8	-0.1
SONM	Songino Array	78.72	324	P	P	12 08 13.8	-0.1
	comp=Z,1.8nm,0.7s,baz=140,slow=6.4,SNR=6.8						
SONA1	Songino Array	78.73	324	eP	P	12 08 14.1	+0.1
BILL	Bilibino	78.80	0	eP	P	12 08 13.3	-0.4
	comp=Z,13nm,1.0s						
BILL	Bilibino	78.80	0	i P	P	12 08 12.5	-1.2
BILL				i		12 08 19.3	
BILL				i		12 11 11.0	
BILL				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	Gaotai	79.15	314	eP	P	12 08 16.7	+0.2
GTA				pP	PcP	12 08 24.5	-0.3
GTA				sP	sP	12 08 27.6	+7.3
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ZAK	Zakamensk	81.75	325	eP	P	12 08 29.4	-0.8
ZAK				pmax	pmax		
	comp=Z,40nm,1.3s						
TLY	Talaya	82.17	326⇑	eP	P	12 08 31.7	-0.5
WRH	Wood River Hil	82.78	18	eP	P	12 08 35.0	-0.1
	comp=Z,24nm,1.6s						
HDA	Harding Lake	83.10	19	eP	P	12 08 36.5	-0.2
	comp=Z,14nm,1.1s						
COLA	College	83.14	18⇓	eP	P	12 08 35.7	-1.2
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IL1	Eielson Array	83.37	18	eP	P	12 08 38.2	0.0
ILAR	Eielson Array	83.37	18	P	P	12 08 37.8	-0.3
	comp=Z,1.9nm,0.8s,baz=236,slow=4.9,SNR=19						
ILB	Eielson Array	83.37	18	eP	P	12 08 37.4	-0.8
YBH	Yreka Blue Hor	83.68	46	P	P	12 08 41.3	+0.9
	comp=Z,0.9nm,0.7s,baz=235,slow=16,SNR=2.5						
SCRK	Sand Creek	83.77	20	eP	P	12 08 40.9	+0.5
	comp=Z,11nm,1.1s						
MOD	Modoc Plateau	85.44	46	eP	P	12 08 52.4	+3.0
	comp=Z,11nm,0.6s						
NV01	Mina Array Sit	85.81	50	eP	P	12 08 51.8	+0.4
NVAR	Mina Array Bea	85.81	50	P	P	12 08 51.9	+0.5
	comp=Z,1.1nm,0.8s,baz=244,slow=7.4,SNR=4.8						
TIXI	Tiksi	86.05	349⇑	iP	P	12 08 50.6	-0.9
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WMQ	Urumqi	89.19	315	eP	P	12 09 07.8	+0.5
WMQ				pP	sP	12 09 12.6	+1.4
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
HVU	Hansel Valley	90.79	48	eP	P	12 09 15.8	+0.8
	comp=Z,11nm,1.5s						
HVU	Hansel Valley	90.79	48	eP	P	12 09 15.8	+0.8
HVU				pmax	pmax		
	comp=Z,11nm,1.5s						
SYO	Syowa Base	91.92	197⇓	ePKiKP	PKiKP	12 14 08.6	-1.3
PD31	Pinedale Array	93.34	47	eP	P	12 09 26.1	-0.8
PDAR	Pinedale Array	93.34	47	P	P	12 09 26.6	-0.3
	comp=Z,0.3nm,0.8s,baz=263,slow=7.2,SNR=3.1						
MK01	Makanchi Array	93.59	317	eP	P	12 09 26.7	-1.0
MK31	Makanchi Array	93.61	317	eP	P	12 09 27.2	-0.5
MK32	Makanchi Array	93.61	317	eP	P	12 09 27.1	-0.6
MKAR	Makanchi Array	93.61	317	eP	P	12 09 27.2	-0.6
	comp=Z,21nm,0.8s						
MKAR	Makanchi Array	93.61	317	P	P	12 09 27.1	-0.6
	comp=Z,3.1nm,0.7s,baz=95,slow=6.5,SNR=25						
ZALV	Zalesovo Beam	93.61	324	eP	P	12 09 24.9	-2.6
ZALV	Zalesovo Beam	93.61	324	P	P	12 09 25.9	-1.6
	comp=Z,1.9nm,0.8s,baz=116,slow=3.4,SNR=7.3						
ZAA1	Zalesovo Array	93.61	324	eP	P	12 09 25.9	-1.6
MAKZ	Makanchi	93.82	317	eP	P	12 09 28.0	-0.7
	comp=Z,4.9nm,0.9s						
MAKZ	Makanchi	93.82	317	eP	P	12 09 28.0	-0.7
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YKA	Yellowknife Ar	94.80	27	P	P	12 09 31.0	-1.7
	comp=Z,0.3nm,0.7s,baz=258,slow=4.5,SNR=6.5						
KURK	Kurchatov	96.71	320	eP	P	12 09 40.5	-1.2
KURK	Kurchatov	96.71	320⇑	eP	P	12 09 41.8	0.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURBB	Kurchatov Arra	96.75	320	P	P	12 09 40.5	-1.4
	comp=Z,0.2nm,0.4s,baz=50,slow=4.9,SNR=3.1						
ARA0	ARCESS Array S	116.31	346	ePKPdf	PKPdf	12 14 53.2	-1.2
ARCES	ARCESS Array B	116.31	346	PKP	PKPdf	12 14 53.2	-1.2
	comp=Z,1.1nm,0.6s,baz=70,slow=1.7,SNR=12						
BOSA	Boshof	125.32	223	PKP	PKiKP	12 15 13.0	-0.5
	comp=Z,2.0nm,0.8s,baz=135,slow=2.9,SNR=3.1						
TRIS	Tristan da Cun	132.20	182	ePKPdf	PKPdf	12 15 23.4	-2.4
KEST	Kesra	147.48	323	PKPbc	PKPbc	12 15 54.0	-2.1
	comp=Z,5.7nm,0.9s,baz=153,slow=2.3,SNR=2.8						
ESDC	Sonseca Array	150.03	344	PKPbc	PKiKP	12 16 01.3	-2.1
	comp=Z,2.9nm,0.8s,baz=4.1,slow=2.6,SNR=5.7						
ESDC				PKPab	pPKPab	12 16 08.1	-2.9
	comp=Z,0.8nm,0.5s,baz=11,slow=3.5,SNR=7.3						
TORD	Torodi Ar. Bea	164.46	280	PKP	PKPdf	12 16 15.1	-1.1
	comp=Z,0.4nm,0.7s,baz=147,slow=2.9,SNR=3.0						
TORD				PKPab	PKPab	12 17 09.7	-1.2
	comp=Z,1.7nm,1.1s,baz=118,slow=3.4,SNR=4.7						
TOA1	Torodi Ar. Sit	164.46	280	ePKPdf	PKPdf	12 16 15.1	-1.1
TOA1				ePKPab	PKPab	12 17 09.7	-1.2

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*IDC **08** 12:01:41.6±1.4, 11°.80S×164°.78E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.7/39, mbtmp3.8/6, ML4.0/2, Error ellipse: s-maj=37.4km s-min=29.1km az=130.0*

*ISCJB **08** 12:01:44.2±1.2, 11°.9S±0°.1×164°.8E±0°.2, h33km, mb3.5/4, Error ellipse: s-maj=26.9km s-min=16.8km az=150.6*

ISC 08 12:01:46.6±1.2**, 11°.9S**±0°.1×**164°.8E**±0°.2**, h35km, n7, σ1^s.49**/7**, mb3.5**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
						h m s	ISC
HNR	Honiara	5.34	297	Pn	Pn	12 03 04.3	+0.4
	6.2nm,0.3s,baz=199,slow=18,SNR=3.3						
DZM	Mont Dzumac	10.27	171	Pn	Pn	12 04 11.7	+0.1
	1.2nm,0.3s,baz=343,slow=20,SNR=5.7						
WRA	Warramunga Arr	30.32	251	P	P	12 07 55.6	+0.4
	0.5nm,0.8s,baz=82,slow=9.9,SNR=3.4						
ASAR	Alice Springs	31.59	244	P	P	12 08 05.5	-0.8
	0.2nm,0.7s,baz=68,slow=9.7,SNR=3.0						
ILAR	Eielson Array	84.59	19	P	P	12 14 15.6	-0.4
	0.4nm,0.6s,baz=227,slow=5.3,SNR=6.5						
MKAR	Makanchi Array	93.48	317	P	P	12 14 57.5	-1.3
	0.3nm,0.9s,baz=101,slow=5.1,SNR=2.5						
ARCES	ARCESS Array B	116.89	345	PKP	PKiKP	12 20 29.5	+2.5
	1.2nm,0.9s,baz=42,slow=2.4,SNR=2.5						

*IDC **08** 12:02:19.0±4.4, 36°.07N×68°.75E, h0^{km}, mb3.4/2, mb1 3.6/6, mb1mx3.3/53, mbtmp3.5/6, ML3.1/4, Error ellipse: s-maj=95.6km s-min=28.6km az=152.0*

*NNC **08** 12:02:32.3±2.4, 36°.97N×69°.06E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=19.0km s-min=16.5km az=131.0*

ISC 08 12:02:23.7±1.8, **36°.5N**±0°.2×**68°.6E**±0°.1, **h10**^{km}, **n17**, σ**2^{s}.29**/24, **7C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**5.18**	**46**	Pn	**Pn**	**12 03 43.3**	**+1.7**
	3.6nm,0.3s						
SFK				Pg	**Pb**	**12 03 56.1**	**+1.5**
	8.2nm,0.5s						
SFK				⇑Sn	**Sn**	**12 04 41.2**	**-0.3**
	4.6nm,0.3s						
SFK				⇑Lg	Lg	12 04 58.1	
	23nm,1.0s						
MNAS	**Manas**	**6.67**	**25**	Pn	**Pn**	**12 04 04.5**	**+2.7**
	2.9nm,0.6s						
MNAS				⇓Sn	**Sn**	**12 05 16.8**	**-1.3**
	2.9nm,0.6s						
MNAS				⇑Lg	Lg	12 05 48.0	
	13nm,1.1s						
KK31	**Karatay Array**	**6.74**	**12**	⇑Pn	**Pn**	**12 04 07.2**	**+4.6**
	2.0nm,0.5s,baz=194,slow=12,SNR=31						
KK31				⇓Sn	**Sn**	**12 05 18.0**	**-1.4**
	1.1nm,0.4s,baz=209,slow=27,SNR=4.0						
KK31				⇑Lg	Lg	12 05 51.2	
	6.0nm,0.8s,baz=198,slow=31,SNR=3.8						
AML	**Almayashu**	**6.84**	**33**	P	**Pn**	**12 04 06.7**	**+2.2**
	SNR=18						
UCH	**Uchtor**	**7.30**	**37**	P	**Pn**	**12 04 12.6**	**+1.9**
	SNR=14						
AAK	**Ala-Archa**	**7.60**	**35**	P	**Pn**	**12 04 16.9**	**+2.2**
	SNR=9.2						
AAK	**Ala-Archa**	**7.60**	**35**	⇑Pn	**Pn**	**12 04 16.5**	**+1.8**
	3.6nm,0.4s						
AAK				⇓Sn	**Sn**	**12 05 37.3**	**-3.7**
	7.0nm,0.8s						
AAK				⇓Lg	Lg	12 06 16.6	
	20nm,0.9s						
AAK	**Ala-Archa**	**7.60**	**35**	Pn	**Pn**	**12 04 15.9**	**+1.2**
	2.1nm,0.3s,baz=215,slow=8.7,SNR=27						
AAK				Sn	**Sn**	**12 05 38.3**	**-2.7**
	0.6nm,0.3s,baz=150,slow=20,SNR=3.7						
CHMS	**Chumysh**	**8.00**	**34**	P	**Pn**	**12 04 22.1**	**+2.0**
	SNR=11						
USP	**Ospenovka**	**8.11**	**32**	P	**Pn**	**12 04 23.2**	**+1.7**
	SNR=5.2						
TKM2	**Tokmak 2**	**8.35**	**38**	P	**Pn**	**12 04 25.9**	**+1.0**
	SNR=6.5						
TKM2	**Tokmak 2**	**8.35**	**38**	⇓Pn	**Pn**	**12 04 25.6**	**+0.7**
	3.5nm,0.7s						
TKM2				⇑Sn	**Sn**	**12 05 55.3**	**-4.0**
	2.8nm,0.9s						
TKM2				⇓Lg	Lg	12 06 37.7	
	3.5nm,0.9s						
GEYT	**Alibeck**	**8.51**	**283**	Pn	**Pn**	**12 04 25.5**	**-1.5**
	0.4nm,0.3s,baz=100,slow=16,SNR=2.7						
MKAR	**Makanchi Array**	**14.46**	**41**	Pn	**Pn**	**12 05 49.0**	**+0.7**
	0.0nm,0.3s,baz=227,slow=14,SNR=2.7						
KURBB	**Kurchatov Arra**	**15.80**	**24**	Pn	**Pn**	**12 06 03.8**	**-2.3**
	0.0nm,0.3s,baz=210,slow=12,SNR=3.6						
ZALV	**Zalesovo Beam**	**20.74**	**28**	P	**P**	**12 07 05.1**	**+0.8**
	1.5nm,0.4s,baz=212,slow=11,SNR=8.0						
YKA	**Yellowknife Ar**	**81.30**	**2**	P	**P**	**12 14 39.6**	**-0.2**
	0.2nm,0.8s,baz=345,slow=4.6,SNR=2.6						

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*IDC **08** 12:03:09.9±1.1, 11°.43S×165°.12E, h0^{km}, mb4.0/6, mb1 4.3/8, mb1mx3.9/39, mbtmp4.1/8, ML4.2/2, Error ellipse: s-maj=38.0km s-min=21.4km az=149.0*

*ISCJB **08** 12:03:13.4±0.8, 11°.7S±0°.1×165°.2E±0°.2, h34^{km}, mb3.9/6, Error ellipse: s-maj=23.7km s-min=17.9km az=35.6*

ISC 08 12:03:14.9±1.0, **11°.6S**±0°.2×**165°.2E**±0°.2, **h34**^{km}, **n8**, σ**0^{s}.85**/7, **mb3.9**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.58**	**292**	Pn	Pn	12 04 31.0	-4.6
	12nm,0.3s,baz=139,slow=19,SNR=2.9						
DZM	**Mont Dzumac**	**10.49**	**174**	Pn	**Pn**	**12 05 43.1**	**0.0**
	0.9nm,0.3s,baz=47,slow=19,SNR=2.5						
WRA	**Warramunga Arr**	**30.79**	**250**	P	**P**	**12 09 27.9**	**+0.2**
	2.7nm,0.8s,baz=81,slow=9.1,SNR=9.4						
ASAR	**Alice Springs**	**32.06**	**244**	P	**P**	**12 09 39.2**	**+0.3**
	0.5nm,0.7s,baz=66,slow=10,SNR=3.5						
FITZ	**Fitzroy Crossi**	**38.71**	**256**	P	**P**	**12 10 35.8**	**-0.3**
	1.9nm,0.6s,baz=80,slow=4.1,SNR=6.3						
ILAR	**Eielson Array**	**84.20**	**19**	P	**P**	**12 15 42.8**	**+0.3**
	0.4nm,0.8s,baz=233,slow=4.5,SNR=3.8						
NVAR	**Mina Array Bea**	**86.79**	**50**	P	**P**	**12 15 57.1**	**+0.8**
	1.1nm,0.8s,baz=217,slow=6.7,SNR=4.9						
PDAR	**Pinedale Array**	**94.32**	**47**	P	**P**	**12 16 30.1**	**-1.3**
	0.3nm,0.7s,baz=255,slow=3.5,SNR=2.9						

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*IDC **08** 12:03:36.6±0.6, 11°.01S×166°.22E, h0^{km}, mb4.6/20, mb1 4.7/22, mb1mx4.6/39, mbtmp4.6/22, ML4.5/2, Error ellipse: s-maj=17.8km s-min=14.0km az=112.0*

*ISCJB **08** 12:03:37.6±0.2, 11°.02S±0°.03×166°.10E±0°.04, h10^{km}, mb4.8/71, Error ellipse: s-maj=5.9km s-min=5.0km az=170.7*

*NEIC **08** 12:03:39.3±0.3, 10°.93S×166°.04E, h10^{km}, mb4.9/46, Error ellipse: s-maj=7.1km s-min=5.8km az=89.0*

ISC 08 12:03:38.3±0.4, **10°.99S**±0°.05×**166°.20E**±0°.06, **h10**^{km}, **n137**, σ**1^{s}.52**/142, **mb4.8**/71, **2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.35**	**284**	*e*Pn	**Pn**	**12 05 09.2**	**-2.8**
HNR				*e*Sn	**Sn**	**12 06 26.4**	**+1.7**
HNR	**Honiara**	**6.35**	**284**	Pn	**Pn**	**12 05 12.1**	**0.0**
	32nm,0.3s,baz=202,slow=5.4,SNR=4.6						
HNR				Sn	**Sn**	**12 06 26.4**	**+1.7**
	baz=169,slow=16,SNR=1.7						
DZM	**Mont Dzumac**	**11.03**	**179**	*e*Pn	Pn	12 06 19.1	+2.8
DZM				*e*Sn	**Sn**	**12 08 17.8**	**-2.0**
DZM	**Mont Dzumac**	**11.03**	**179**	Pn	**Pn**	**12 06 17.2**	**+0.9**
	1.4nm,0.3s,baz=15,slow=20,SNR=4.3						
DZM				Sn	**Sn**	**12 08 17.8**	**-2.0**
	baz=342,slow=20,SNR=1.4						
ONTNC	**Ouen Toro**	**11.26**	**179**	*e*Pn	**Pn**	**12 06 22.1**	**+2.6**
PINNC	**Pines Island,**	**11.62**	**174**	*e*Pn	Pn	12 06 27.5	+3.1
TARA	**Tarawa**	**13.96**	**29**	*e*Pn	**Pn**	**12 06 55.2**	**-1.2**
RABL	**Rabaul**	**15.46**	**295**	*e*Pn	**Pn**	**12 07 12.8**	**-3.9**
	25nm,0.6s						
EIDS	**Eidsvold**	**20.25**	**223**	P	Pn	12 08 16.0	+0.2
	baz=20,SNR=6.9						
EIDS	**Eidsvold**	**20.25**	**223**	*e*P	Pn	12 08 13.9	-1.9
	33nm,0.9s						
MANU	**Manus Island**	**20.70**	**294**	*e*P	Pn	12 08 20.4	-0.9
	149nm,1.1s						
CTA	**Charters Tower**	**21.23**	**242**	P	**P**	**12 08 24.2**	**-0.4**
	15nm,0.9s,baz=62,slow=14,SNR=8.4						
CTAO	**Charters Tower**	**21.23**	**242**	*e*P	**P**	**12 08 25.2**	**+0.7**
	27nm,1.0s						
MTSU	**Mount Surprise**	**22.33**	**249**	P	**P**	**12 08 36.9**	**+0.5**
	baz=22,SNR=7.1						
RMQ	**Roma**	**22.55**	**224**	P	**P**	**12 08 40.4**	**+1.6**
	baz=23,SNR=14						
COEN	**Coen**	**22.68**	**260**	P	**P**	**12 08 42.5**	**+2.3**
	baz=23,SNR=4.6						
COEN	**Coen**	**22.68**	**260**	*e*P	**P**	**12 08 38.7**	**-1.5**
	16nm,1.0s						
ARMA	**Armidale**	**23.61**	**213**	P	**P**	**12 08 51.1**	**+1.4**
	baz=24,SNR=4.1						
ARMA	**Armidale**	**23.61**	**213**	*e*P	**P**	**12 08 49.8**	**+0.1**
	27nm,1.0s						
NIUE	**Niue**	**24.39**	**112**	P	**P**	**12 08 53.4**	**-3.6**
	baz=24,SNR=3.2						
QLP	**Quilpie**	**25.88**	**230**	P	**P**	**12 09 10.7**	**+0.2**
	baz=26,SNR=6.0						
QIS	**Mount Isa**	**27.27**	**246**	P	**P**	**12 09 23.1**	**0.0**
	baz=28,SNR=6.3						
CMSA	**Cobar Meteorol**	**27.90**	**220**	P	**P**	**12 09 29.2**	**+0.6**
	baz=28,SNR=5.7						
BKZ	**Black Stump Fm**	**29.52**	**164**	*e*P	**P**	**12 09 43.8**	**+0.8**
	10nm,0.5s						
STKA	**Stephens Creek**	**30.80**	**224**	*e*P	**P**	**12 09 54.0**	**-0.4**
	1.0nm,0.8s						
STKA	**Stephens Creek**	**30.80**	**224**	P	**P**	**12 09 55.0**	**+0.6**
	3.5nm,0.6s,baz=31,slow=7.9,SNR=4.4						
BFZ	**Birch Farm**	**30.88**	**165**	*e*P	**P**	**12 09 55.6**	**+0.6**
	9.4nm,0.9s						
THZ	**Tophouse**	**31.22**	**170**	*e*P	**P**	**12 09 59.4**	**+1.4**
	24nm,1.1s						
WRAB	**Tennant Creek**	**31.91**	**250**	*e*P	**P**	**12 10 03.8**	**-0.5**
	39nm,1.1s						
WB2	**Warramunga Arr**	**31.91**	**250**	*e*P	**P**	**12 10 04.3**	**-0.1**
WR1	**Warramunga Arr**	**31.93**	**250**	*e*P	**P**	**12 10 03.8**	**-0.7**
	46nm,1.0s						
WR1				*e*PcP	**PcP**	**12 12 55.1**	**+0.1**
WRA	**Warramunga Arr**	**31.93**	**250**	P	**P**	**12 10 03.8**	**-0.7**
	24nm,0.9s,baz=80,slow=8.9,SNR=31						
WRA				PcP	**PcP**	**12 12 55.1**	**+0.1**
	0.7nm,0.7s,baz=76,slow=3.3,SNR=3.8						
KHZ	**Kahutara**	**31.96**	**170**	*e*P	**P**	**12 10 04.7**	**+0.3**
	11nm,1.0s						
TOO	**Toolangi**	**32.36**	**212**	P	**P**	**12 10 09.5**	**+1.4**
	baz=33,SNR=4.1						
TOO	**Toolangi**	**32.36**	**212**	*e*P	**P**	**12 10 09.1**	**+1.0**
	14nm,1.1s						
FOZ	**Fox Glacier**	**32.58**	**175**	*e*P	P	12 10 13.1	+3.2
	24nm,0.9s						
RPZ	**Rata Peaks**	**32.88**	**174**	*e*P	**P**	**12 10 13.2**	**+0.7**
RPZ	**Rata Peaks**	**32.88**	**174**	P	**P**	**12 10 13.0**	**+0.5**
	16nm,0.9s,baz=26,slow=4.9,SNR=4.1						
KDU	**Kakadu**	**33.05**	**264**	P	**P**	**12 10 13.9**	**-0.3**
	baz=33,SNR=5.0						
MQZ	**McQueen's Vall**	**33.08**	**171**	*e*P	**P**	**12 10 15.4**	**+1.2**
	25nm,1.0s						
AS01	**Alice Springs**	**33.18**	**243**	*e*P	**P**	**12 10 14.8**	**-0.7**
AS31	**Alice Springs**	**33.22**	**243**	*e*P	**P**	**12 10 14.8**	**-1.0**
	2.7nm,1.0s						
ASAR	**Alice Springs**	**33.22**	**243**	P	**P**	**12 10 14.6**	**-1.3**
	6.1nm,1.0s,baz=74,slow=9.3,SNR=10						
ASAR				PcP	**PcP**	**12 12 56.6**	**-2.0**
	1.0nm,1.0s,baz=74,slow=3.3,SNR=2.2						
LBZ	**Lake Benmore**	**33.46**	**175**	*e*P	**P**	**12 10 19.1**	**+1.5**
	3.8nm,0.7s						
HTT	**Hallett**	**33.53**	**224**	P	**P**	**12 10 19.0**	**+0.6**
	baz=34,SNR=4.1						
WKZ	**Wanaka**	**33.81**	**176**	*e*P	**P**	**12 10 22.3**	**+1.7**
	24nm,1.0s						
MLZ	**Mavora Lakes**	**34.30**	**178**	*e*P	**P**	**12 10 27.0**	**+2.1**
	17nm,1.2s						
WHZ	**Wether Hill Ro**	**34.82**	**178**	*e*P	**P**	**12 10 31.9**	**+2.6**
	16nm,1.2s						
BBOO	**Buckleboo**	**35.20**	**227**	*e*P	**P**	**12 10 32.9**	**+0.1**
KNRA	**Kununurra**	**36.70**	**259**	P	**P**	**12 10 45.6**	**-0.2**
	baz=37,SNR=9.2						
XMAS	**Kiritimati**	**38.41**	**72**	*e*P	**P**	**12 11 02.2**	**+1.9**
	110nm,1.1s						
WRKA	**Warakurna**	**38.51**	**244**	P	**P**	**12 11 00.6**	**-0.6**
	baz=39,SNR=5.3						
FITZ	**Fitzroy Crossi**	**39.83**	**255**	P	**P**	**12 11 11.8**	**-0.4**
	baz=40,SNR=38						
FITZ	**Fitzroy Crossi**	**39.83**	**255**	*e*P	**P**	**12 11 11.2**	**-1.0**
	39nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.83**	**255**	P	**P**	**12 11 11.7**	**-0.5**
	53nm,1.0s,baz=97,slow=7.0,SNR=27						
SOEI	**Soe**	**41.25**	**268**	*e*P	**P**	**12 11 22.1**	**-2.1**
	17nm,1.0s						
BATI	**Baumata**	**41.80**	**267**	P	**P**	**12 11 29.0**	**+0.4**
	44nm,0.9s,baz=161,slow=7.6,SNR=7.8						
MMRI	**Maumere**	**43.36**	**269**	*e*P	**P**	**12 11 39.6**	**-1.7**
	66nm,1.1s						
MBWA	**Marble Bar**	**45.64**	**251**	*e*P	**P**	**12 11 59.8**	**+0.4**
	50nm,1.0s						
MEEK	**Meekatharra**	**47.38**	**244**	P	**P**	**12 12 13.6**	**+0.5**
	baz=48,SNR=7.5						
MORW	**Morawa**	**50.05**	**241**	P	**P**	**12 12 34.0**	**+0.4**
	baz=50,SNR=3.7						
MJAR	**Matsushiro Arr**	**54.13**	**332**	P	**P**	**12 13 03.6**	**-0.1**
	6.5nm,1.0s,baz=169,slow=8.5,SNR=6.6						
MAJO	**Matsushiro**	**54.13**	**332**	*e*P	**P**	**12 13 03.6**	**-0.1**
JNU	**Nakatsue**	**55.30**	**324**	P	**P**	**12 13 12.6**	**+0.4**
	12nm,0.9s,baz=160,slow=3.9,SNR=3.6						
KSM	**Kuching**	**56.94**	**279**	*e*P	**P**	**12 13 25.3**	**+0.9**
	7.4nm,1.0s						
CISI	**Cisompet, Garu**	**57.66**	**268**	*e*P	**P**	**12 13 29.2**	**-0.3**
	50nm,0.9s						
ASAJ	**Asahikawa**	**58.89**	**340**	P	**P**	**12 13 38.2**	**+0.8**
	34nm,1.1s,baz=229,slow=11,SNR=4.3						
USRK	**Ussuriysk Ar.**	**63.10**	**333**	P	**P**	**12 14 06.6**	**+0.6**
	7.9nm,1.0s,baz=119,slow=4.5,SNR=6.2						
BKNI	**Bangkinang**	**65.71**	**275**	*e*P	**P**	**12 14 26.3**	**+2.5**
	42nm,0.6s						
CN2	**Changchun**	**65.92**	**329**	*e*P	**P**	**12 14 25.0**	**+0.5**
VNDA	**Vanda**	**66.56**	**181**	P	**P**	**12 14 27.6**	**-0.5**
	3.0nm,0.9s,baz=37,slow=8.5,SNR=3.3						
IPM	**Ipoh**	**66.66**	**280**	*e*P	**P**	**12 14 31.8**	**+1.9**
	16nm,0.9s						
SKNT	**Sakolnakorn**	**67.48**	**294**	P	**P**	**12 14 37.4**	**+2.4**
	8.7nm,1.4s						
ENH	**Enshi**	**68.21**	**309**	*e*P	**P**	**12 14 40.5**	**+1.0**
	15nm,1.1s						
PSI	**Prapat**	**68.31**	**277**	*e*P	**P**	**12 14 41.5**	**+1.0**
	12nm,1.0s						
NONG	**Nongkai**	**68.60**	**294**	P	**P**	**12 14 44.3**	**+2.3**
	0.4nm,1.0s						
BJI	**Beijing**	**68.72**	**321**	*e*P	**P**	**12 14 44.0**	**+1.7**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GYA	**Guiyang**	**68.76**	**304**	P	**P**	**12 14 44.0**	**+1.0**
GYA				PP	**PP**	**12 17 16.8**	**+1.7**
GYA				S	**S**	**12 23 45.5**	**-1.5**
GYA				SKS	**SKSac**	**12 24 39.6**	**-3.5**
GYA	**Guiyang**	**68.76**	**304**	SS	SS	12 28 11.2	-1.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,550nm,18.5s						
GYA				LR	LR		
	comp=E,530nm,18.4s						
GYA				LR	LR		
	comp=Z,510nm,18.3s						
PBKT	**Sadao Pong**	**70.07**	**292**	P	**P**	**12 14 53.8**	**+2.6**
	comp=Z,7.2nm,1.7s						
XAN	**Xi'an**	**70.41**	**312**	P	**P**	**12 14 54.4**	**+1.4**
XAN				pP	sP	12 15 02.6	+5.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN	**Xi'an**	**70.41**	**312**	*e*P	**P**	**12 14 54.6**	**+1.6**
	comp=Z,14nm,1.1s						
UTTA	**Uttaradit**	**70.82**	**293**	P	P	12 14 59.2	+3.4
	comp=Z,1.3nm,1.0s						
KMI	**Kunming**	**71.47**	**301**	P	**P**	**12 15 02.0**	**+2.1**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,11µm,15.3s						
KMI				LR	LR		
	comp=N,4µm,15.9s						
KMI				LR	LR		
	comp=E,3µm,15.0s						
KMI				LR	LR		
	comp=Z,6µm,16.4s						
HHC	**Hu-ho-hao-te**	**72.08**	**319**	*e*P	**P**	**12 15 04.5**	**+1.4**
HHC				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC				pmax	pmax		
	comp=Z,3µm,6.7s						
CM01	**Chiang Mai Arr**	**72.48**	**293**	*e*P	**P**	**12 15 05.8**	**0.0**
CM31	**Chiang Mai Arr**	**72.50**	**293**	*e*P	**P**	**12 15 08.5**	**+2.6**
	comp=Z,8.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**72.50**	**293**	P	**P**	**12 15 06.1**	**+0.2**
	comp=Z,6.1nm,0.9s,baz=113,slow=4.4,SNR=24						
CMMT	**Chiang Mai**	**72.61**	**294**	P	**P**	**12 15 09.0**	**+2.5**
CHTO	**Chiang Mai**	**72.61**	**294**	*e*P	**P**	**12 15 05.8**	**-0.7**
	comp=Z,5.8nm,0.9s						
CHTO	**Chiang Mai**	**72.61**	**294**	P	**P**	**12 15 09.1**	**+2.5**
CHTO	**Chiang Mai**	**72.61**	**294**	P	**P**	**12 15 09.1**	**+2.5**
CD2	**Chengdu**	**72.92**	**307**	*e*P	**P**	**12 15 09.6**	**+1.4**
LZH	**Lanzhou**	**75.05**	**312**	*e*P	**P**	**12 15 20.7**	**0.0**
LZH				pP	sP	12 15 26.0	+1.3
LZH				sP	PcP	12 15 29.4	-5.0
LZH				PP	**PP**	**12 18 05.8**	**-3.1**
LZH				pmax	pmax		
	comp=Z,31nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,4.8s						
LZH				LR	LR		
	comp=N,340nm,17.1s						
LZH				LR	LR		
	comp=E,360nm,17.2s						
LZH				LR	LR		
	comp=Z,340nm,18.8s						
SONA0	**Songino Array**	**78.88**	**324**	*e*P	**P**	**12 15 42.7**	**+0.7**
SONM	**Songino Array**	**78.88**	**324**	P	**P**	**12 15 42.7**	**+0.7**
	comp=Z,4.5nm,0.9s,baz=134,slow=6.4,SNR=10						
SONA1	**Songino Array**	**78.89**	**324**	*e*P	**P**	**12 15 41.7**	**-0.3**
GTA	**Gaotai**	**79.34**	**314**	⇑P	**P**	**12 15 46.7**	**+2.0**
GTA				pP	PcP	12 15 51.0	-1.9
GTA				sP	sP	12 15 53.8	+5.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SHL	**Shillong**	**80.89**	**298**	*e*P	**P**	**12 15 52.3**	**-1.1**
	comp=Z,9.4nm,1.1s						
HDA	**Harding Lake**	**83.04**	**19**	*e*P	**P**	**12 16 05.7**	**+2.0**
	comp=Z,14nm,0.9s						
COLA	**College**	**83.09**	**18**	*e*P	**P**	**12 16 06.1**	**+2.2**
	comp=Z,7.1nm,0.8s						
IL1	**Eielson Array**	**83.31**	**18**	*e*P	**P**	**12 16 05.8**	**+0.7**
ILAR	**Eielson Array**	**83.31**	**18**	P	**P**	**12 16 05.1**	**0.0**
	comp=Z,2.6nm,0.8s,baz=229,slow=5.6,SNR=15						
ILB	**Eielson Array**	**83.31**	**18**	*e*P	**P**	**12 16 06.8**	**+1.8**
SCRK	**Sand Creek**	**83.71**	**20**	*e*P	P	12 16 10.5	+3.3
	comp=Z,5.0nm,1.0s						
NV01	**Mina Array Sit**	**85.64**	**50**	*e*P	**P**	**12 16 17.8**	**0.0**
NVAR	**Mina Array Bea**	**85.64**	**50**	P	**P**	**12 16 17.7**	**0.0**
	comp=Z,1.7nm,1.0s,baz=234,slow=7.4,SNR=4.4						
TIXI	**Tiksi**	**86.12**	**349**	*e*P	**P**	**12 16 20.2**	**+1.2**
	comp=Z,3.3nm,0.9s						
WMQ	**Urumqi**	**89.37**	**315**	*e*P	**P**	**12 16 35.8**	**+0.4**
WMQ				pP	sP	12 16 39.4	0.0
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				LR	LR		
	comp=N,6µm,17.5s						
WMQ				LR	LR		
	comp=E,7µm,17.5s						
WMQ				LR	LR		
	comp=Z,5µm,21.5s						
U15A	**North Rim**	**89.71**	**53**	*e*P	**P**	**12 16 39.0**	**+1.6**
	comp=Z,3.5nm,0.8s						
MTPU	**Mount Pierson**	**90.18**	**51**	*e*P	**P**	**12 16 40.7**	**+1.0**
	comp=Z,3.4nm,0.9s						
HVU	**Hansel Valley**	**90.63**	**48**	*e*P	**P**	**12 16 42.6**	**+1.1**
	comp=Z,4.9nm,1.1s						
SYO	**Syowa Base**	**91.97**	**197**	⇓*e*X	**P**	**12 16 45.0**	**-1.9**
SYO	**Syowa Base**	**91.97**	**197**	⇑*i*pP	pP	12 16 49.4	-0.4
PD31	**Pinedale Array**	**93.18**	**47**	*e*P	**P**	**12 16 54.0**	**+0.7**
PDAR	**Pinedale Array**	**93.18**	**47**	P	**P**	**12 16 54.4**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=167,slow=4.3,SNR=4.3						
ZAA0	**Zalesovo Array**	**93.77**	**324**	*e*P	**P**	**12 16 56.0**	**+0.5**
	comp=Z,4.9nm,1.1s						
ZALV	**Zalesovo Beam**	**93.77**	**324**	*e*P	**P**	**12 16 55.5**	**+0.1**
ZALV	**Zalesovo Beam**	**93.77**	**324**	P	**P**	**12 16 53.8**	**-1.6**
	comp=Z,4.9nm,1.1s,baz=119,slow=5.2,SNR=11						
ZAA1	**Zalesovo Array**	**93.77**	**324**	*e*P	**P**	**12 16 53.8**	**-1.6**
MK01	**Makanchi Array**	**93.77**	**317**	*e*P	**P**	**12 16 55.0**	**-0.8**
MK31	**Makanchi Array**	**93.79**	**317**	*e*P	**P**	**12 16 57.3**	**+1.6**
	comp=Z,4.4nm,0.9s						
MK32	**Makanchi Array**	**93.79**	**317**	*e*P	**P**	**12 16 54.6**	**-1.1**
MKAR	**Makanchi Array**	**93.79**	**317**	*e*P	**P**	**12 16 57.5**	**+1.7**
	comp=Z,32nm,1.0s						
MKAR	**Makanchi Array**	**93.79**	**317**	P	**P**	**12 16 54.6**	**-1.1**
	comp=Z,5.3nm,0.9s,baz=105,slow=5.7,SNR=31						
MAKZ	**Makanchi**	**94.00**	**317**	*e*P	**P**	**12 16 58.0**	**+1.3**
	comp=Z,5.5nm,0.9s						
YKA	**Yellowknife Ar**	**94.71**	**27**	P	**P**	**12 16 57.7**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=257,slow=4.8,SNR=7.8						
YKB5	**Yellowknife Ar**	**94.71**	**27**	*e*P	**P**	**12 17 00.9**	**+1.3**
ARA0	**ARCESS Array S**	**116.39**	**346**	*e*PKPdf	**PKiKP**	**12 22 20.3**	**-1.5**
ARCES	**ARCESS Array B**	**116.39**	**346**	PKP	**PKiKP**	**12 22 20.3**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=26,slow=2.3,SNR=4.1						
FIA0	**FINESS Array S**	**121.88**	**339**	*e*PKPdf	**PKiKP**	**12 22 33.9**	**+1.3**
FINES	**FINESS Array B**	**121.88**	**339**	PKP	**PKiKP**	**12 22 33.9**	**+1.3**
	comp=Z,3.1nm,1.1s,baz=68,slow=7.7,SNR=2.5						
KEST	**Kesra**	**147.64**	**323**	PKPbc	**PKPab**	**12 23 24.4**	**-1.4**
	comp=Z,14nm,1.0s,baz=326,slow=5.3,SNR=4.3						
ES19	**SONSECA Array**	**150.08**	**345**	*e*PKPdf	**PKPdf**	**12 23 21.0**	**-3.8**
ES19				*e*PKPbc	**pPKPbc**	**12 23 31.5**	**-1.3**
ES19				*e*PKPab	**pPKPab**	**12 23 37.2**	**-1.2**
ESDC	**Sonseca Array**	**150.12**	**345**	PKPbc	**PKPbc**	**12 23 27.4**	**-2.5**
	comp=Z,0.4nm,0.5s,baz=33,slow=2.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**164.70**	**280**	PKP	**PKPdf**	**12 23 44.5**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=163,slow=1.5,SNR=3.5						
TORD				PKPab	**pPKPab**	**12 24 39.8**	**-2.3**
	comp=Z,1.6nm,1.0s,baz=57,slow=2.3,SNR=4.7						
TOA1	**Torodi Ar. Sit**	**164.70**	**280**	*e*PKPdf	**PKPdf**	**12 23 44.5**	**+0.9**
TOA1				*e*PKPab	**pPKPab**	**12 24 39.8**	**-2.3**

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*ISCJB **08** 12:06:40.0±0.8, 11°.13S±0°.09×166°.1E±0°.1, h10^{km}, mb4.1/10, Error ellipse: s-maj=17.9km s-min=10.4km az=145.2*

*IDC **08** 12:06:40.3±1.6, 10°.98S×166°.05E, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx3.9/38, mbtmp4.1/8, ML4.6/2, Error ellipse: s-maj=41.2km s-min=25.9km az=133.0*

*NEIC **08** 12:06:41.6±0.7, 11°.03S×166°.12E, h10^{km}, mb4.4/6, Error ellipse: s-maj=14.7km s-min=8.8km az=52.0*

ISC 08 12:06:41.7±1.1, **11°.0S**±0°.1×**166°.1E**±0°.1, **h10**^{km}, **n27**, σ**1^{s}.35**/21, **mb4.2**/10, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.23**	**284**	*e*P	**Pn**	**12 08 10.0**	**-3.8**
HNR				*e*S	Sg	12 10 10.0	+8.1
HNR	**Honiara**	**6.23**	**284**	*e*Pn	**Pn**	**12 08 16.0**	**+2.2**
HNR	**Honiara**	**6.23**	**284**	Pn	**Pn**	**12 08 15.3**	**+1.6**
	27nm,0.3s,baz=121,slow=5.9,SNR=4.8						
DZM	**Mont Dzumac**	**11.00**	**178**	*e*Pn	**Pn**	**12 09 20.6**	**+1.3**
DZM	**Mont Dzumac**	**11.00**	**178**	Pn	**Pn**	**12 09 20.4**	**+1.2**
	2.3nm,0.3s,baz=322,slow=22,SNR=6.1						
ONTNC	**Ouen Toro**	**11.23**	**178**	*e*Pn	**Pn**	**12 09 21.1**	**-1.3**
PINNC	**Pines Island,**	**11.61**	**174**	*e*Pn	**Pn**	**12 09 27.9**	**+0.4**
CTA	**Charters Tower**	**21.10**	**242**	P	**P**	**12 11 27.6**	**+1.1**
	4.3nm,0.8s,baz=63,slow=14,SNR=3.2						
CTAO	**Charters Tower**	**21.10**	**242**	*e*P	**P**	**12 11 26.4**	**-0.1**
	11nm,1.1s						
URZ	**Urewera**	**28.87**	**162**	*e*P	**P**	**12 12 40.6**	**+0.1**
	11nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**29.33**	**1**	T	T	12 43 50.4	
	baz=181,slow=76,SNR=9.1						
H11S3	**WAKE ISLAND Hy**	**29.33**	**1**	T	T	12 43 51.5	
	baz=181,slow=76,SNR=6.7						
H11S1	**WAKE ISLAND Hy**	**29.34**	**1**	T	T	12 43 52.5	
	baz=181,slow=76,SNR=5.2						
BKZ	**Black Stump Fm**	**29.53**	**163**	*e*P	**P**	**12 12 46.0**	**-0.5**
	4.7nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**30.55**	**2**	T	T	12 45 22.7	
	baz=182,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**30.55**	**2**	T	T	12 45 23.1	
	baz=182,slow=76,SNR=9.0						
H11N2	**WAKE ISLAND Hy**	**30.57**	**2**	T	T	12 45 24.1	
	baz=182,slow=76,SNR=10						
BFZ	**Birch Farm**	**30.88**	**165**	*e*P	**P**	**12 12 57.1**	**-1.2**
	29nm,1.1s						
WB2	**Warramunga Arr**	**31.78**	**250**	*e*P	**P**	**12 13 07.2**	**+0.6**
WR1	**Warramunga Arr**	**31.79**	**250**	*e*P	**P**	**12 13 05.6**	**-1.1**
	4.4nm,1.0s						
WRA	**Warramunga Arr**	**31.79**	**250**	P	**P**	**12 13 05.6**	**-1.1**
	3.6nm,0.6s,baz=81,slow=8.8,SNR=9.7						
ASAR	**Alice Springs**	**33.09**	**243**	P	**P**	**12 13 18.6**	**+0.6**
	0.7nm,0.6s,baz=61,slow=10,SNR=6.0						
FITZ	**Fitzroy Crossi**	**39.70**	**255**	*e*P	**P**	**12 14 14.3**	**-0.2**
	1.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.70**	**255**	P	**P**	**12 14 13.7**	**-0.7**
	3.9nm,0.8s,baz=96,slow=7.0,SNR=5.8						
ILAR	**Eielson Array**	**83.38**	**18**	P	**P**	**12 19 09.2**	**+0.4**
	0.4nm,0.8s,baz=221,slow=5.5,SNR=4.0						
MK32	**Makanchi Array**	**93.72**	**317**	*e*P	**P**	**12 19 58.8**	**0.0**
MKAR	**Makanchi Array**	**93.72**	**317**	P	**P**	**12 19 58.8**	**0.0**
	0.3nm,0.7s,baz=103,slow=6.1,SNR=2.8						

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*ISCJB **08** 12:07:27.8±0.4, 11°.08S±0°.06×165°.90E±0°.07, h10^{km}, mb4.3/26, Error ellipse: s-maj=11.0km s-min=6.8km az=151.7*

*IDC **08** 12:07:27.5±0.7, 11°.00S×165°.98E, h0^{km}, mb4.0/14, mb1 4.2/16, mb1mx4.1/38, mbtmp4.0/16, ML4.9/2, Error ellipse: s-maj=24.2km s-min=17.1km az=134.0*

*NEIC **08** 12:07:29.1±0.4, 10°.96S×165°.96E, h10^{km}, mb4.6/16, Error ellipse: s-maj=10.4km s-min=6.8km az=64.0*

ISC 08 12:07:29.2±0.6, **10°.98S**±0°.09×**166°.0E**±0°.1, **h10**^{km}, **n46**, σ**1^{s}.06**/45, **mb4.3**/27, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.14**	**284**	*e*Pn	**Pn**	**12 09 01.3**	**+1.2**
HNR	**Honiara**	**6.14**	**284**	Pn	**Pn**	**12 09 01.0**	**+0.9**

	76nm,0.3s,baz=136,slow=6.5,SNR=8.6						
MARNC	Mare, Loyalty	10.62	170	*e*Pn	Pn	12 10 03.0	+1.4
DZM	Mont Dzumac	11.04	178	*e*Pn	Pn	12 10 07.6	+0.3
DZM	Mont Dzumac	11.04	178	Pn	Pn	12 10 07.8	+0.5
	3.2nm,0.3s,baz=313,slow=16,SNR=11						
ONTNC	Ouen Toro	11.27	178	*e*Pn	Pn	12 10 13.7	+3.2
PINNC	Pines Island,	11.65	173	*e*Pn	Pn	12 10 16.8	+1.1
RABL	Rabaul	15.27	295	*e*Pn	Pn	12 11 05.5	+0.5
	22nm,0.6s						
CTA	Charters Tower	21.04	242	P	P	12 12 14.8	+1.3
	2.8nm,0.7s,baz=66,slow=13,SNR=3.8						
CTAO	Charters Tower	21.04	242	*e*P	P	12 12 13.0	-0.5
	10nm,0.9s						
OUZ	Omahuta	25.10	165	*e*P	P	12 12 54.6	+0.4
URZ	Urewera	28.93	162	*e*P	P	12 13 28.1	-0.5
	6.9nm,1.0s						
BKZ	Black Stump Fm	29.59	163	*e*P	P	12 13 35.4	+0.9
	7.7nm,1.0s						
STKA	Stephens Creek	30.65	224	*e*P	P	12 13 45.4	+1.4
STKA	Stephens Creek	30.65	224	P	P	12 13 43.0	-0.9
	2.4nm,0.5s,baz=26,slow=7.0,SNR=4.6						
BFZ	Birch Farm	30.94	165	*e*P	P	12 13 45.6	-0.7
	18nm,1.0s						
THZ	Tophouse	31.26	170	*e*P	P	12 13 48.3	-0.9
	12nm,0.9s						
WRAB	Tennant Creek	31.72	250	*e*P	P	12 13 52.5	-1.0
	1.9nm,0.8s						
WB2	Warramunga Arr	31.72	250	*e*P	P	12 13 52.3	-1.2
WR1	Warramunga Arr	31.73	250	*e*P	P	12 13 52.0	-1.6
	3.8nm,0.8s						
WRA	Warramunga Arr	31.73	250	P	P	12 13 52.0	-1.6
	1.0nm,0.5s,baz=82,slow=9.1,SNR=5.8						
KHZ	Kahutara	32.00	169	*e*P	P	12 13 54.6	-1.1
	18nm,1.0s						
TOO	Toolangi	32.25	211	*e*P	P	12 13 56.4	-1.6
	12nm,1.1s						
FOZ	Fox Glacier	32.60	175	*e*P	P	12 14 02.2	+1.3
	9.9nm,0.7s						
RPZ	Rata Peaks	32.91	173	P	P	12 14 03.4	-0.3
	12nm,0.7s,baz=283,slow=3.4,SNR=7.4						
ASAR	Alice Springs	33.04	243	P	P	12 14 04.1	-1.0
	0.7nm,0.6s,baz=70,slow=9.8,SNR=3.1						
MQZ	McQueen's Vall	33.11	171	*e*P	P	12 14 06.8	+1.4
	21nm,0.9s						
LBZ	Lake Benmore	33.48	175	*e*P	P	12 14 08.1	-0.6
	3.6nm,0.7s						
WKZ	Wanaka	33.83	176	*e*P	P	12 14 10.0	-1.7
	17nm,1.2s						
BBOO	Buckleboo	35.05	227	*e*P	P	12 14 22.4	0.0
	12nm,1.0s						
FITZ	Fitzroy Crossi	39.63	255	*e*P	P	12 14 60.0	-1.5
	3.0nm,0.8s						
FITZ	Fitzroy Crossi	39.63	255	P	P	12 15 02.0	+0.6
	1.9nm,0.6s,baz=76,slow=7.9,SNR=3.5						
CMAR	Chiang Mai Arr	72.31	293	P	P	12 18 54.8	-0.8
	0.3nm,0.5s,baz=126,slow=4.4,SNR=2.8						
SONA0	Songino Array	78.76	324	*e*P	P	12 19 32.2	0.0
SONM	Songino Array	78.76	324	P	P	12 19 32.2	0.0
	0.5nm,0.8s,baz=148,slow=8.5,SNR=1.8						
ILAR	Eielson Array	83.38	18	P	P	12 19 57.0	+0.7
ILAR	Eielson Array	83.38	18	P	P	12 19 57.0	+0.7
	0.7nm,0.6s,baz=238,slow=4.6,SNR=7.6						
NVAR	Mina Array Bea	85.80	50	P	P	12 20 10.0	+0.6
	0.1nm,0.3s,baz=244,slow=5.9,SNR=2.3						
PDAR	Pinedale Array	93.33	47	P	P	12 20 44.8	-0.2
	1.0nm,1.2s,baz=297,slow=6.0,SNR=3.1						
MK32	Makanchi Array	93.64	317	*e*P	P	12 20 45.6	-0.4
MKAR	Makanchi Array	93.64	317	P	P	12 20 45.6	-0.4
	0.4nm,0.7s,baz=106,slow=4.6,SNR=3.6						
ZAA1	Zalesovo Array	93.64	324	*e*P	P	12 20 47.3	+1.6
ZALV	Zalesovo Beam	93.64	324	P	P	12 20 47.3	+1.6
	0.3nm,0.3s,baz=96,slow=7.4,SNR=2.3						
YKA	Yellowknife Ar	94.81	27	P	P	12 20 50.0	-0.9
	0.1nm,0.8s,baz=249,slow=4.5,SNR=3.1						
ARA0	ARCESS Array S	116.33	346	*e*PKPdf	PKPdf	12 26 11.3	-1.3
ARCES	ARCESS Array B	116.33	346	PKP	PKPdf	12 26 11.3	-1.3
	2.9nm,1.1s,baz=50,slow=1.5,SNR=2.6						

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*IDC **08** 12:09:17.0±0.6, 10°.98S×166°.01E, h0^{km}, mb4.3/18, mb1 4.5/19, mb1mx4.4/36, mbtmp4.3/19, ML5.4/2, MS5.2/1, Ms1 5.2/1, ms1mx4.2/43, Error ellipse: s-maj=18.2km s-min=14.8km az=114.0*

*ISCJB **08** 12:09:17.5±0.3, 11°.01S±0°.04×165°.91E±0°.05, h10^{km}, mb4.7/54, Error ellipse: s-maj=7.5km s-min=5.5km az=162.2*

*NEIC **08** 12:09:19.9±2.9, 10°.91S×165°.97E, h16^{km}±18^{km}, mb5.0/34, Error ellipse: s-maj=6.7km s-min=5.9km az=56.0*

ISC 08 12:09:19.0±0.4**, 10°.97S**±0°.05×**165°.97E**±0°.07**, h10**^{km}**, n98, σ1s.72**/101**, mb4.9**/55**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.12	284	*i* P	Pn	12 10 51.0	+1.5
HNR				*e*S	Pb	12 11 03.0	-2.7
HNR	Honiara	6.12	284	Pn	Pn	12 10 51.0	+1.5
	220nm,0.3s,baz=144,slow=5.4,SNR=23						
MARNC	Mare, Loyalty	10.64	170	*e*Pn	Pn	12 11 52.1	+0.5
DZM	Mont Dzumac	11.05	178	*e*Pn	Pn	12 11 58.4	+1.1
DZM				*e*Sn	Sn	12 13 58.0	-3.1
DZM	Mont Dzumac	11.05	178	Pn	Pn	12 11 58.0	+0.7
	10nm,0.3s,baz=340,slow=10,SNR=15						
DZM				Sn	Sn	12 13 58.0	-3.1
	baz=287,slow=19,SNR=2.7						
ONTNC	Ouen Toro	11.29	178	*e*Pn	Pn	12 12 01.7	+1.2
PINNC	Pines Island,	11.67	173	*e*Pn	Pn	12 12 04.9	-0.8
TARA	Tarawa	14.06	30	*e*Pn	Pn	12 12 35.9	-2.5
EIDS	Eidsvold	20.10	223	*e*P	P	12 13 53.7	+0.7
	14nm,0.8s						
MANU	Manus Island	20.48	294	*e*P	Pn	12 13 58.6	-0.8
	99nm,0.9s						
CTA	Charters Tower	21.03	242	P	P	12 14 04.3	+1.2
	13nm,0.7s,baz=76,slow=12,SNR=11						
CTAO	Charters Tower	21.03	242	*e*P	P	12 14 04.0	+0.9
	31nm,0.9s						
COEN	Coen	22.45	260	*e*P	P	12 14 18.2	-0.3
	24nm,1.0s						
ARMA	Armidale	23.50	212	*e*P	P	12 14 29.3	0.0
	31nm,1.1s						
KNTN	Kanton	23.59	71	*e*P	P	12 14 32.5	+2.3
	72nm,1.0s						
NIUE	Niue	24.62	112	*e*P	P	12 14 41.6	+1.8
	98nm,1.0s						
URZ	Urewera	28.95	162	P	P	12 15 18.1	-0.5
	4.8nm,0.9s,baz=27,slow=4.5,SNR=4.3						
H11S2	WAKE ISLAND Hy	29.28	1	T	T	12 45 41.3	
	baz=181,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.28	1	T	T	12 45 42.5	
	baz=181,slow=76,SNR=9.3						
H11S1	WAKE ISLAND Hy	29.30	1	T	T	12 45 43.3	
	baz=181,slow=76,SNR=10.0						
BKZ	Black Stump Fm	29.61	163	*e*P	P	12 15 25.0	+0.5
	10.0nm,0.5s						
H11N1	WAKE ISLAND Hy	30.50	2	T	T	12 47 12.5	
	baz=182,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	30.51	2	T	T	12 47 12.9	
	baz=182,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	30.52	2	T	T	12 47 13.9	
	baz=182,slow=76,SNR=16						
STKA	Stephens Creek	30.65	224	*e*P	P	12 15 33.8	+0.1
	1.9nm,0.9s						
STKA	Stephens Creek	30.65	224	P	P	12 15 33.4	-0.3
	5.7nm,0.8s,baz=27,slow=11,SNR=6.6						
SNZO	South Karori	31.19	167	*e*P	P	12 15 39.6	+1.3
	23nm,0.8s						
THZ	Tophouse	31.27	170	*e*P	P	12 15 39.7	+0.5
	12nm,0.7s						
WRAB	Tennant Creek	31.70	250	*e*P	P	12 15 42.9	-0.2
	48nm,1.0s						
WB2	Warramunga Arr	31.70	250	*e*P	P	12 15 43.0	-0.2
WR1	Warramunga Arr	31.71	250	*e*P	P	12 15 42.1	-1.2
	60nm,1.0s						
WRA	Warramunga Arr	31.71	250	P	P	12 15 42.1	-1.2
	34nm,0.9s,baz=80,slow=9.1,SNR=33						
LTZ	Lake Taylor	32.17	171	*e*P	P	12 15 47.7	+0.7
	30nm,0.9s						
TOO	Toolangi	32.25	211	*e*P	P	12 15 49.8	+2.0
	14nm,0.9s						
FOZ	Fox Glacier	32.62	175	*e*P	P	12 15 51.6	+0.7
	18nm,0.9s						
OXZ	Oxford	32.67	172	*e*P	P	12 15 51.5	+0.2
	31nm,1.0s						
RPZ	Rata Peaks	32.92	173	*e*P	P	12 15 54.3	+0.7
RPZ	Rata Peaks	32.92	173	P	P	12 15 53.1	-0.5
	9.7nm,0.6s,baz=302,slow=4.5,SNR=6.6						
AS01	Alice Springs	32.98	243	*e*P	P	12 15 53.5	-0.9
CRLZ	Canterbury Las	33.00	171	*e*P	P	12 15 51.0	-3.2
	26nm,1.2s						
AS31	Alice Springs	33.02	243	*e*P	P	12 15 53.9	-0.8
	1.9nm,0.8s						
ASAR	Alice Springs	33.02	243	P	P	12 15 53.6	-1.2
	5.2nm,0.8s,baz=64,slow=9.9,SNR=14						
ASAR				PcP	PcP	12 18 37.4	-1.2
	0.8nm,1.0s,baz=78,slow=2.4,SNR=2.5						
FITZ	Fitzroy Crossi	39.61	255	*e*P	P	12 16 51.2	+0.1
	26nm,0.8s						
FITZ	Fitzroy Crossi	39.61	255	P	P	12 16 50.8	-0.3
	21nm,0.8s,baz=79,slow=6.3,SNR=28						
SOEI	Soe	41.01	268	*e*P	P	12 17 04.3	+1.4
	21nm,1.1s						
BATI	Baumata	41.56	267	P	P	12 17 08.1	+0.7
	26nm,0.7s,baz=26,slow=1.1,SNR=6.6						
MMRI	Maumere	43.12	269	*e*P	P	12 17 19.6	-0.5
	29nm,1.0s						
MBWA	Marble Bar	45.43	251	*e*P	P	12 17 38.5	+0.1
	32nm,0.9s						
TGY	Tagaytay City	51.13	298	LR	LR	12 39 19.9	
	comp=Z,2µm,18.3s,baz=45,slow=35						
MJAR	Matsushiro Arr	54.00	332	P	P	12 18 41.6	-1.8
	1.7nm,0.9s,baz=170,slow=8.7,SNR=4.1						
MAJO	Matsushiro	54.00	332	*e*P	P	12 18 41.6	-1.9
KSM	Kuching	56.70	279	*e*P	P	12 19 03.1	-0.2
	12nm,1.0s						
ERM	Erimo	56.74	340	*e*P	P	12 19 02.5	-0.4
	61nm,1.0s						
CISI	Cisompet, Garu	57.42	268	*e*P	P	12 19 07.2	-1.3
	36nm,0.9s						
KSRS	Korea Array	59.94	325	P	P	12 19 26.0	+0.5
	0.9nm,0.8s,baz=149,slow=7.0,SNR=3.1						
NJ2	Nanjing	62.12	315	*e*P	P	12 19 43.5	+3.1
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
USRK	Ussuriysk Ar.	62.98	333	P	P	12 19 47.4	+1.4
	comp=Z,1.3nm,0.6s,baz=120,slow=5.2,SNR=2.8						
IPM	Ipoh	66.42	280	*e*P	P	12 20 08.2	-0.9
	comp=Z,14nm,1.0s						
CASY	Casey	66.53	201	*e*P	P	12 20 09.2	+0.4
	comp=Z,9.2nm,0.9s						
GYA	Guiyang	68.55	304	P	P	12 20 25.5	+3.0
GYA				PP	PP	12 22 58.9	+4.9
GYA				S	S	12 29 26.5	+1.2
GYA				SKS	SKSac	12 30 20.0	-2.3
GYA	Guiyang	68.55	304	SS	SS	12 33 52.6	+2.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,550nm,18.5s						
GYA				LR	LR		
	comp=E,530nm,18.4s						
GYA				LR	LR		
	comp=Z,510nm,18.3s						
BJI	Beijing	68.56	321	*e*P	P	12 20 21.6	-0.4
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN	Xi'an	70.23	312	P	P	12 20 32.6	0.0
XAN				pP	pwP	12 20 42.4	+5.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMI	Kunming	71.27	301	P	P	12 20 41.7	+2.4
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,5µm,17.1s						
KMI				LR	LR		
	comp=N,3µm,18.3s						
KMI				LR	LR		
	comp=E,3µm,18.6s						
KMI				LR	LR		
	comp=Z,3µm,20.2s						
HHC	Hu-ho-hao-te	71.91	320	*e*P	P	12 20 42.1	-0.6
HHC				S	S	12 29 57.0	-7.0
HHC				pmax	pmax		
	comp=Z,24nm,1.2s						
HHC				pmax	pmax		
	comp=Z,4µm,7.4s						
HHC				LR	LR		
	comp=N,5µm,16.7s						
HHC				LR	LR		
	comp=E,4µm,18.7s						
HHC				LR	LR		
	comp=Z,3µm,16.8s						
CM01	Chiang Mai Arr	72.25	293	*e*P	P	12 20 45.5	+0.4
CM31	Chiang Mai Arr	72.28	293	*e*P	P	12 20 45.8	+0.5
	comp=Z,4.1nm,0.8s						
CMAR	Chiang Mai Arr	72.28	293	P	P	12 20 44.8	-0.5
	comp=Z,2.7nm,0.9s,baz=112,slow=4.3,SNR=12						
LZH	Lanzhou	74.87	312	*e*P	P	12 21 02.0	+1.7
LZH				pP	pwP	12 21 07.5	+2.3
LZH				sP	PcP	12 21 09.6	-4.7
LZH				PP	PP	12 23 54.6	+6.6
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,4.3s						
LZH				LR	LR		
	comp=N,540nm,17.6s						
LZH				LR	LR		
	comp=E,560nm,17.0s						
LZH				LR	LR		
	comp=Z,640nm,18.8s						
SONA0	Songino Array	78.73	324	*e*P	P	12 21 21.9	0.0
SONM	Songino Array	78.73	324	P	P	12 21 21.9	0.0
	comp=Z,0.3nm,0.3s,baz=142,slow=7.3,SNR=2.9						
QSPA	South Pole Qui	79.04	180	*e*P	P	12 21 23.9	+0.6
	comp=Z,7.5nm,0.8s						
GTA	Gaotai	79.16	314	⇑P	P	12 21 25.2	+0.8
GTA				pP	PcP	12 21 32.4	-0.4
GTA				sP	pwP	12 21 35.8	+6.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HDA	Harding Lake	83.10	19	*e*P	P	12 21 45.5	+0.8
	comp=Z,14nm,0.9s						
IL1	Eielson Array	83.37	18	*e*P	P	12 21 45.4	-0.7
ILAR	Eielson Array	83.37	18	P	P	12 21 45.8	-0.3
	comp=Z,1.2nm,0.6s,baz=235,slow=5.1,SNR=11						
ILB	Eielson Array	83.37	18	*e*P	P	12 21 46.2	+0.1
	comp=Z,2.7nm,1.1s						
NV01	Mina Array Sit	85.81	50	*e*P	P	12 21 57.8	-1.5
NVAR	Mina Array Bea	85.81	50	P	P	12 21 58.7	-0.6
	comp=Z,0.1nm,0.3s,baz=240,slow=8.8,SNR=2.6						
WMQ	Urumqi	89.19	315	*e*P	P	12 22 16.9	+1.6
WMQ				LR	LR		
	comp=N,5µm,16.9s						
WMQ				LR	LR		
	comp=E,6µm,19.3s						
WMQ				LR	LR		
	comp=Z,4µm,20.3s						
SYO	Syowa Base	91.92	197	⇓*e*P	P	12 22 28.3	+0.9
PDAR	Pinedale Array	93.34	47	P	P	12 22 35.5	+0.7
	comp=Z,0.2nm,0.5s,baz=325,slow=4.5,SNR=2.4						
MK01	Makanchi Array	93.60	317	*e*P	P	12 22 35.1	-0.5
MK31	Makanchi Array	93.61	317	*e*P	P	12 22 34.9	-0.7
	comp=Z,2.6nm,1.0s						
MK32	Makanchi Array	93.61	317	*e*P	P	12 22 35.0	-0.6
MKAR	Makanchi Array	93.61	317	*e*P	P	12 22 35.2	-0.4
	comp=Z,15nm,1.0s						
MKAR	Makanchi Array	93.61	317	P	P	12 22 35.0	-0.6
	comp=Z,1.3nm,0.7s,baz=97,slow=6.0,SNR=9.2						
MKAR				PKKPbc	PKKPbc	12 39 45.6	+3.0
	comp=Z,0.4nm,0.8s,baz=299,slow=2.4,SNR=4.4						
ZALV	Zalesovo Beam	93.62	324	P	P	12 22 34.7	-0.8
	comp=Z,0.3nm,0.3s,baz=108,slow=4.7,SNR=3.1						
ZAA1	Zalesovo Array	93.62	324	*e*P	P	12 22 34.7	-0.8
MAKZ	Makanchi	93.83	317	*e*P	P	12 22 35.9	-0.7
	comp=Z,3.3nm,1.1s						
YKA	Yellowknife Ar	94.81	27	P	P	12 22 38.6	-2.1
	comp=Z,0.3nm,0.7s,baz=256,slow=4.4,SNR=3.5						
KSH	Kashi	96.87	309	P	P	12 22 52.9	+2.0
ARA0	ARCESS Array S	116.31	346	*e*PKPdf	PKiKP	12 28 01.4	-0.9
ARCES	ARCESS Array B	116.31	346	PKP	PKiKP	12 28 01.4	-0.9
	comp=Z,1.2nm,0.8s,baz=50,slow=3.8,SNR=3.6						
KEST	Kesra	147.48	323	*e*PKPbc	PKiKP	12 29 05.9	-0.3
KEST	Kesra	147.48	323	PKPbc	PKPbc	12 29 04.0	+0.1
	comp=Z,4.9nm,0.7s,baz=58,slow=13,SNR=3.5						
TORD	Torodi Ar. Bea	164.46	280	PKP	PKPdf	12 29 21.8	-2.3
	comp=Z,0.9nm,1.0s,baz=99,slow=0.6,SNR=3.2						
TORD				PKPab	PKPab	12 30 17.7	-1.0
	comp=Z,0.8nm,1.0s,baz=90,slow=4.3,SNR=2.3						
TOA1	Torodi Ar. Sit	164.47	280	*e*PKPdf	PKPdf	12 29 21.8	-2.3
TOA1				*e*PKPab	PKPab	12 30 17.7	-1.0

IDC 08 12:14:37.7±2.2**, 10°.72S**×**166°.00E, h0**^{km}**, mb3.8**/5**, mb1 4.0**/6**, mb1mx3.7**/34**, mbtmp3.9**/6**, ML4.4**/1**, Error ellipse: s-maj=73.9km s-min=28.5km az=142.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	282	Pn	Pn	12 16 09.2	0.0
	10nm,0.3s,baz=75,slow=20,SNR=2.3						
WRA	Warramunga Arr	31.84	249	P	P	12 21 04.5	-0.1
	1.8nm,0.8s,baz=80,slow=9.0,SNR=7.8						
ASAR	Alice Springs	33.17	243	P	P	12 21 15.5	-0.8
	0.7nm,0.7s,baz=66,slow=9.5,SNR=5.8						
FITZ	Fitzroy Crossi	39.71	255	P	P	12 22 12.7	+0.5
	1.8nm,0.6s,baz=112,slow=8.5,SNR=5.5						
ILAR	Eielson Array	83.12	18	P	P	12 27 05.0	-0.2
	0.2nm,0.8s,baz=225,slow=6.2,SNR=3.0						
MKAR	Makanchi Array	93.46	317	P	P	12 27 55.8	+0.5
	0.4nm,0.8s,baz=86,slow=5.5,SNR=3.7						

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*ISCJB **08** 12:15:33.6±1.1, 11°.0S±0°.1×166°.1E±0°.1, h10^{km}, mb4.1/11, Error ellipse: s-maj=21.3km s-min=11.8km az=143.5*

*IDC **08** 12:15:34.2±1.6, 10°.80S×165°.97E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/34, mbtmp4.0/8, ML3.9/1, Error ellipse: s-maj=44.1km s-min=25.4km az=124.0*

*NEIC **08** 12:15:35.5±1.1, 10°.93S×166°.06E, h10^{km}, mb4.5/5, Error ellipse: s-maj=20.1km s-min=10.8km az=54.0*

ISC 08 12:15:35.4±1.3**, 10°.9S**±0°.1×**166°.1E**±0°.2**, h10**^{km}**, n16, σ1s.12**/16**, mb4.2**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.22	283	*e*Pn	Pn	12 17 08.3	+0.8
DZM	Mont Dzumac	11.10	178	Pn	Pn	12 18 16.9	+2.5
	0.8nm,0.3s,baz=22,slow=19,SNR=3.4						
ONTNC	Ouen Toro	11.34	178	*e*Pn	Pn	12 18 15.9	-1.7
PINNC	Pines Island,	11.71	174	*e*Pn	Pn	12 18 21.5	-1.1
CTA	Charters Tower	21.16	242	P	P	12 20 19.6	-1.4
	3.6nm,0.8s,baz=41,slow=9.3,SNR=2.9						
STKA	Stephens Creek	30.77	224	P	P	12 21 51.6	+0.4
	1.5nm,0.7s,baz=45,slow=5.7,SNR=2.7						
THZ	Tophouse	31.31	170	*e*P	P	12 21 56.9	+1.0
	7.1nm,0.9s						
WRAB	Tennant Creek	31.84	250	*e*P	P	12 21 59.7	-1.1
	6.5nm,1.0s						
WB2	Warramunga Arr	31.84	250	*e*P	P	12 22 00.9	+0.1
	5.2nm,0.9s						
WR1	Warramunga Arr	31.85	250	*e*P	P	12 22 00.5	-0.4
	5.0nm,0.8s						
WRA	Warramunga Arr	31.85	250	P	P	12 22 00.5	-0.4
	5.6nm,0.8s,baz=81,slow=9.1,SNR=21						
ASAR	Alice Springs	33.15	243	P	P	12 22 11.6	-0.8
	0.7nm,0.7s,baz=68,slow=9.2,SNR=5.0						
FITZ	Fitzroy Crossi	39.74	255	*e*P	P	12 23 08.4	-0.2
	5.2nm,0.8s						
FITZ	Fitzroy Crossi	39.74	255	P	P	12 23 08.4	-0.2
	4.0nm,0.6s,baz=100,slow=6.0,SNR=17						
CMAR	Chiang Mai Arr	72.37	293	P	P	12 27 02.4	+0.2
	0.6nm,0.6s,baz=97,slow=4.6,SNR=3.7						
ILAR	Eielson Array	83.28	18	P	P	12 28 01.6	-0.4
	0.7nm,1.0s,baz=226,slow=6.1,SNR=3.4						

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*ISCJB **08** 12:16:37.8±0.5, 11°.04S±0°.07×165°.85E±0°.09, h10^{km}, mb4.4/17, Error ellipse: s-maj=13.4km s-min=8.3km az=152.5*

*IDC **08** 12:16:37.9±0.9, 11°.00S×165°.89E, h0^{km}, mb4.1/9, mb1 4.3/11, mb1mx4.0/34, mbtmp4.2/11, ML4.4/2, Error ellipse: s-maj=23.4km s-min=21.1km az=82.0*

*NEIC **08** 12:16:39.3±0.5, 10°.93S×165°.90E, h10^{km}, mb4.6/8, Error ellipse: s-maj=12.5km s-min=7.8km az=63.0*

ISC 08 12:16:39.5±0.8**, 10°.9S**±0°.1×**165°.9E**±0°.1**, h10**^{km}**, n27, σ1s.07**/27**, mb4.4**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.08	284	*e*Pn	Pn	12 18 11.1	+1.5
HNR	Honiara	6.08	284	Pn	Pn	12 18 10.5	+1.0
	17nm,0.3s,baz=185,slow=8.6,SNR=4.3						
MARNC	Mare, Loyalty	10.67	169	*e*Pn	Pn	12 19 13.0	+0.5
DZM	Mont Dzumac	11.08	178	*e*Pn	Pn	12 19 20.0	+1.7
DZM	Mont Dzumac	11.08	178	Pn	Pn	12 19 18.4	+0.2
	1.7nm,0.3s,baz=336,slow=9.5,SNR=8.9						
ONTNC	Ouen Toro	11.32	178	*e*Pn	Pn	12 19 21.8	+0.5
PINNC	Pines Island,	11.70	173	*e*Pn	Pn	12 19 28.5	+2.0
URZ	Urewera	28.99	162	P	P	12 22 39.3	-0.1
	2.0nm,0.7s,baz=356,slow=19,SNR=4.5						
BKZ	Black Stump Fm	29.64	163	*e*P	P	12 22 45.0	-0.3
	6.1nm,0.5s						
BFZ	Birch Farm	30.99	165	*e*P	P	12 22 56.1	-1.1
	16nm,0.8s						
THZ	Tophouse	31.31	170	*e*P	P	12 22 59.0	-1.0
	9.7nm,0.8s						
WB2	Warramunga Arr	31.68	250	*e*P	P	12 23 02.0	-1.5
	5.0nm,0.9s						
WRAB	Tennant Creek	31.68	250	*e*P	P	12 23 02.0	-1.5
	4.7nm,0.9s						
WR1	Warramunga Arr	31.70	250	*e*P	P	12 23 03.2	-0.4
	6.6nm,1.0s						
WRA	Warramunga Arr	31.70	250	P	P	12 23 03.2	-0.4
	4.4nm,0.9s,baz=80,slow=9.1,SNR=10						
FOZ	Fox Glacier	32.65	175	*e*P	P	12 23 11.4	-0.2
	19nm,1.1s						
RPZ	Rata Peaks	32.96	173	P	P	12 23 12.8	-1.5
	9.8nm,0.8s,baz=4.6,slow=4.2,SNR=5.5						
ASAR	Alice Springs	33.01	243	P	P	12 23 14.1	-1.1
	0.8nm,0.6s,baz=73,slow=9.7,SNR=4.9						
FITZ	Fitzroy Crossi	39.59	255	*e*P	P	12 24 10.5	-0.9
	3.8nm,0.8s						
FITZ	Fitzroy Crossi	39.59	255	P	P	12 24 11.0	-0.4
	4.5nm,0.9s,baz=127,slow=5.5,SNR=6.7						
SONA0	Songino Array	78.69	324	*e*P	P	12 28 42.5	+0.4
SONM	Songino Array	78.69	324	P	P	12 28 42.5	+0.4
	0.5nm,0.6s,baz=96,slow=5.8,SNR=3.0						
ILAR	Eielson Array	83.35	18	P	P	12 29 06.5	+0.1
	0.7nm,1.0s,baz=238,slow=4.4,SNR=4.3						
NVAR	Mina Array Bea	85.81	50	P	P	12 29 21.1	+1.4
	0.4nm,0.7s,baz=233,slow=10.0,SNR=3.1						
P18A	Preston Nutter	92.18	50	*e*P	P	12 29 49.8	-0.3
	106nm,1.1s						
MK32	Makanchi Array	93.57	317	*e*P	P	12 29 54.8	-1.2
MKAR	Makanchi Array	93.57	317	P	P	12 29 54.8	-1.2
	0.6nm,0.8s,baz=99,slow=6.3,SNR=5.1						

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*ISCJB **08** 12:20:54.9±1.2, 10°.9S±0°.1×165°.9E±0°.2, h10^{km}, mb3.7/4, Error ellipse: s-maj=23.8km s-min=17.7km az=153.4*

*IDC **08** 12:20:54.9±1.6, 10°.87S×165°.89E, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.7/33, mbtmp3.9/6, ML4.1/2, Error ellipse: s-maj=41.7km s-min=29.3km az=129.0*

ISC 08 12:20:56.6±1.3**, 10°.9S**±0°.1×**165°.9E**±0°.2**, h10**^{km}**, n12, σ1s.25**/6**, mb3.8**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.07	283	Pn	Pn	12 22 27.5	+1.1
	12nm,0.3s,baz=41,slow=15,SNR=5.0						
DZM	Mont Dzumac	11.17	178	Pn	Pn	12 23 37.1	+0.6
	0.4nm,0.3s,baz=63,slow=16,SNR=3.7						
H11S2	WAKE ISLAND Hy	29.16	1	T	T	12 57 17.7	
	baz=181,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.17	1	T	T	12 57 19.2	
	baz=181,slow=76,SNR=7.7						
H11S1	WAKE ISLAND Hy	29.18	1	T	T	12 57 18.5	
	baz=181,slow=76,SNR=9.3						
H11N1	WAKE ISLAND Hy	30.38	2	T	T	12 58 48.7	
	baz=182,slow=76,SNR=8.3						
H11N3	WAKE ISLAND Hy	30.39	2	T	T	12 58 49.1	
	baz=182,slow=76,SNR=9.4						
H11N2	WAKE ISLAND Hy	30.40	2	T	T	12 58 50.1	
	baz=182,slow=76,SNR=9.2						
WRA	Warramunga Arr	31.73	250	P	P	12 27 20.2	-0.8
	1.2nm,0.8s,baz=81,slow=9.2,SNR=8.2						
ASAR	Alice Springs	33.05	243	P	P	12 27 31.4	-1.3
	0.4nm,0.6s,baz=64,slow=10,SNR=4.2						
ILAR	Eielson Array	83.27	18	P	P	12 33 23.6	+0.5
	0.6nm,1.0s,baz=236,slow=5.1,SNR=3.4						
MKAR	Makanchi Array	93.51	317	P	P	12 34 12.0	-0.8
	0.4nm,0.9s,baz=88,slow=4.8,SNR=3.5						

IDC 08 12:23:16.3±1.7**, 10°.67S**×**166°.32E, h0**^{km}**, mb3.7**/3,

mb1 4.1/5, mb1mx3.7/37, mbtmp4.0/5, ML4.1/2, Error ellipse: s-maj=44.1km s-min=30.0km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.39	281	Pn	Pn	12 24 53.8	+2.0
	10nm,0.3s,baz=120,slow=20,SNR=4.2						
DZM	Mont Dzumac	11.33	179	Pn	Pn	12 26 00.6	+1.0
	0.6nm,0.3s,baz=15,slow=19,SNR=3.0						
H11S2	WAKE ISLAND Hy	28.98	1	T	T	12 59 43.0	
	baz=181,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	28.99	1	T	T	12 59 43.4	
	baz=181,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	29.00	1	T	T	12 59 44.3	
	baz=181,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	30.20	1	T	T	13 01 14.7	
	baz=182						
H11N3	WAKE ISLAND Hy	30.21	1	T	T	13 01 14.8	
	baz=182						
H11N2	WAKE ISLAND Hy	30.22	1	T	T	13 01 15.8	
	baz=182						
WRA	Warramunga Arr	32.14	249	P	P	12 29 45.6	-0.2
	2.9nm,0.8s,baz=80,slow=9.1,SNR=12						
ASAR	Alice Springs	33.46	243	P	P	12 29 56.5	-0.8
	0.6nm,1.0s,baz=65,slow=11,SNR=4.8						
ILAR	Eielson Array	82.98	18	P	P	12 35 43.0	+0.1
	0.3nm,0.8s,baz=225,slow=5.0,SNR=2.8						

IDC 08 12:24:54.8±1.7, 11°.05S×165°.64E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.5/39, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=53.9km s-min=30.9km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.99	176	Pn	Pn	12 27 33.6	+0.2
	0.4nm,0.3s,baz=22,slow=19,SNR=7.1						
WRA	Warramunga Arr	31.38	250	P	P	12 31 18.1	+0.5
	0.4nm,0.6s,baz=81,slow=9.1,SNR=4.5						
ASAR	Alice Springs	32.69	243	P	P	12 31 28.7	-0.5
	0.2nm,0.6s,baz=67,slow=10,SNR=3.4						
ILAR	Eielson Array	83.55	19	P	P	12 37 24.4	0.0
	0.2nm,0.8s,baz=238,slow=5.0,SNR=3.2						

IDC 08 12:27:33.3±1.7, 11°.09S×165°.39E, h0^{km}, mb3.4/3, mb1 3.8/5, mb1mx3.5/43, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=40.9km s-min=30.6km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.61	287	Pn	Pn	12 28 58.6	+0.6
	7.7nm,0.3s,baz=148,slow=7.1,SNR=3.6						
DZM	Mont Dzumac	10.97	175	Pn	Pn	12 30 11.7	+0.1
	0.2nm,0.3s,baz=313,slow=19,SNR=4.1						
WRA	Warramunga Arr	31.14	250	P	P	12 33 54.5	+0.5
	0.4nm,0.6s,baz=80,slow=9.1,SNR=4.4						
ASAR	Alice Springs	32.46	243	P	P	12 34 04.9	-0.7
	0.2nm,0.6s,baz=66,slow=9.9,SNR=4.1						
ILAR	Eielson Array	83.67	19	P	P	12 40 03.5	0.0
	0.8nm,1.1s,baz=232,slow=3.0,SNR=2.8						

ISCJB 08 12:28:57.4±0.5, 10°.89S±0°.06×165°.82E±0°.08, h10^{km}, mb4.4/15, Error ellipse: s-maj=11.2km s-min=9.1km az=0.0
IDC 08 12:28:57.1±1.1, 10°.92S×165°.86E, h0^{km}, mb4.0/9, mb1 4.2/11, mb1mx4.0/43, mbtmp4.1/11, ML3.7/2, Error ellipse: s-maj=35.8km s-min=19.7km az=138.0
NEIC 08 12:28:58.8±0.5, 10°.77S×165°.87E, h10^{km}, mb4.6/8, Error ellipse: s-maj=11.5km s-min=9.5km az=86.0
ISC 08 12:28:58.9±0.8, 10°.8S±0°.1×165°.77E±0°.09, h10^{km}, n31, σ1^{s}56/28, mb4.3/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.89	283	eP	Pn	12 30 24.0	-2.3
HNR				eS	Sg	12 32 06.0	-2.1
HNR	Honiara	5.89	283	ePn	Pn	12 30 29.9	+3.6
HNR	Honiara	5.89	283	Pn	Pn	12 30 29.1	+2.8
	1.7nm,0.3s,baz=184,slow=15,SNR=2.0						
MARNC	Mare, Loyalty	10.83	169	ePn	Pn	12 31 35.2	+1.2
DZM	Mont Dzumac	11.22	177	ePn	Pn	12 31 40.4	+0.9
DZM	Mont Dzumac	11.22	177	Pn	Pn	12 31 37.3	-2.2
	0.7nm,0.3s,baz=333,slow=18,SNR=4.1						
ONTNC	Ouen Toro	11.45	177	ePn	Pn	12 31 43.1	+0.6
PINNC	Pines Island,	11.85	172	ePn	Pn	12 31 50.1	+2.1
EIDS	Eidsvold	20.08	222	eP	Pn	12 33 34.6	+0.1
	13nm,1.1s						
CTA	Charters Tower	20.93	242	P	Pn	12 33 43.9	-0.6
	2.1nm,0.6s,baz=70,slow=14,SNR=2.7						
BKZ	Black Stump Fm	29.81	163	eP	P	12 35 04.0	-2.2
	7.6nm,1.2s						
STKA	Stephens Creek	30.62	223	P	P	12 35 13.8	+0.4
	2.6nm,0.6s,baz=38,slow=12,SNR=2.7						
WB2	Warramunga Arr	31.57	249	eP	P	12 35 21.4	-0.5
	11nm,1.0s						
WRAB	Tennant Creek	31.57	250	eP	P	12 35 21.9	0.0
	14nm,1.1s						
WR1	Warramunga Arr	31.58	249	eP	P	12 35 21.4	-0.6
	12nm,1.0s						
WRA	Warramunga Arr	31.58	249	P	P	12 35 21.4	-0.6
	8.3nm,0.9s,baz=81,slow=9.0,SNR=9.3						
TOO	Toolangi	32.28	211	eP	P	12 35 29.9	+2.0
	4.0nm,0.9s						
AS01	Alice Springs	32.88	243	eP	P	12 35 34.9	+1.6
ASAR	Alice Springs	32.92	243	P	P	12 35 32.7	-1.0
	0.7nm,0.7s,baz=64,slow=10,SNR=7.2						
FITZ	Fitzroy Crossi	39.46	255	eP	P	12 36 29.6	0.0
	10nm,1.0s						
FITZ	Fitzroy Crossi	39.46	255	P	P	12 36 29.4	-0.3
	4.4nm,0.7s,baz=96,slow=6.2,SNR=14						
ILAR	Eielson Array	83.28	19	P	P	12 41 24.9	-0.5
	0.9nm,0.9s,baz=228,slow=4.7,SNR=7.3						
NVAR	Mina Array Bea	85.86	50	P	P	12 41 40.0	+0.7
	0.2nm,0.5s,baz=256,slow=7.3,SNR=2.8						
PV09	Paradox Valley	92.85	52	eP	P	12 42 10.5	-2.1
PV14	Lion Creek, Pa	92.91	52	eP	P	12 42 11.9	-0.8
	8.6nm,0.9s						
MK01	Makanchi Array	93.35	317	eP	P	12 42 15.3	+1.0
MK32	Makanchi Array	93.37	317	eP	P	12 42 14.9	+0.5
MKAR	Makanchi Array	93.37	317	P	P	12 42 14.9	+0.5
	1.0nm,0.8s,baz=88,slow=5.5,SNR=6.9						
ZALV	Zalesovo Beam	93.38	324	P	P	12 42 15.3	+1.2
	0.4nm,0.5s,baz=108,slow=4.7,SNR=3.4						
ZAA1	Zalesovo Array	93.38	324	eP	P	12 42 15.3	+1.2
AMTX	Amarillo	98.17	56	eP	Pdif	12 42 35.5	-1.1
	15nm,0.8s						

IDC 08 12:30:31.8±1.6, 10°.91S×165°.72E, h0^{km}, mb3.9/5, mb1 4.1/7, mb1mx3.7/44, mbtmp4.0/7, ML3.8/2, Error ellipse: s-maj=41.0km s-min=29.6km az=130.0
ISCJB 08 12:30:34.7±1.2, 11°.0S±0°.1×165°.6E±0°.2, h30^{km}, mb3.9/5, Error ellipse: s-maj=23.5km s-min=17.5km az=152.6
ISC 08 12:30:36.4±1.3, 11°.0S±0°.1×165°.6E±0°.2, h30^{km}, n13, σ1^{s}08/7, mb3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.80	285	Pn	Pn	12 31 59.3	-1.1
	3.7nm,0.3s,baz=176,slow=19,SNR=1.8						
DZM	Mont Dzumac	11.09	176	Pn	Pn	12 33 12.5	-0.5
	0.4nm,0.3s,baz=292,slow=8.6,SNR=4.5						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	13 06 54.0	
	baz=181,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.28	2	T	T	13 06 54.3	
	baz=181,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	13 06 55.3	
	baz=181,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	30.50	2	T	T	13 08 25.6	
	baz=182,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	13 08 25.9	
	baz=182,slow=76,SNR=23						
H11N2	WAKE ISLAND Hy	30.51	2	T	T	13 08 27.0	
	baz=182,slow=76,SNR=26						
WRA	Warramunga Arr	31.42	250	P	P	12 36 55.2	0.0
	2.5nm,0.8s,baz=83,slow=9.1,SNR=7.0						
ASAR	Alice Springs	32.74	243	P	P	12 37 07.3	+0.5
	0.6nm,0.5s,baz=66,slow=10,SNR=6.3						
FITZ	Fitzroy Crossi	39.30	255	P	P	12 38 04.2	+1.2
	2.2nm,0.7s,baz=94,slow=10.0,SNR=3.5						
ILAR	Eielson Array	83.46	19	P	P	12 43 00.0	-0.7
	0.4nm,0.6s,baz=235,slow=5.0,SNR=4.6						
MKAR	Makanchi Array	93.38	317	P	P	12 43 49.8	+1.0
	0.1nm,0.3s,baz=101,slow=7.5,SNR=3.6						

IDC 08 12:34:00.1±0.5, 1°.09N×126°.35E, h0^{km}, mb4.3/21, mb1 4.5/23, mb1mx4.3/46, mbtmp4.3/23, ML4.0/2, Error ellipse: s-maj=22.3km s-min=12.1km az=87.0
NEIC 08 12:34:02.1±2.7, 1°.13N×126°.47E, h14^{km}±17^{km}, mb4.5/29, Error ellipse: s-maj=6.9km s-min=4.8km az=55.0
DJA 08 12:34:07.9±0.7, 1°N±7°×12°7E±°, h18^{km}±7^{km}, M4.6/15, mb4.7/15, mB6.0/1, MLv4.6/12, Mw(mB)5.6/1
ISC 08 12:34:01.6±1.7, 1°.13N±0°.05×126°.48E±0°.04, h9^{km}±11^{km}, n116, σ1^{s}69/123, mb4.4/56, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.96	112	ePn	Pn	12 34 22.9	+1.6
TNTI				eSn	Sg	12 34 32.7	+0.2
TNTI	Ternate	0.96	112	P	Pn	12 34 22.7	+1.4
TNTI				S	Sn	12 34 36.3	+1.2
SANI	Sanana	3.20	189	P	Pn	12 34 54.1	+2.0
SANI				S	Sn	12 35 30.1	-0.3
LUWI	Luwuk	4.29	240	ePn	Pn	12 35 09.6	+2.4
LUWI	Luwuk	4.29	240	P	Pn	12 35 11.7	+4.5
NLAI	Namlea	4.38	172	P	Pn	12 35 11.2	+2.7
SWI	Sorong	5.17	112	P	Pn	12 35 23.4	+4.0
	36nm,0.9s,0.2nm						
KDI	Kendari	6.36	217	P	Pn	12 35 41.9	+6.3
	70nm,0.8s,0.3nm						
CTBH	Cotabato--PC H	6.45	340⇑	iP	Pn	12 35 37.7	+0.9
BNDI	Bandanaira	6.58	149	P	Pn	12 35 43.9	+5.3
	128nm,1.6s,0.6nm						
PCI	Palu	6.94	253	P	Pn	12 35 47.4	+3.7
	56nm,1.0s,0.2nm						
FAKI	Fak Fak	7.03	125	ePn	Pn	12 35 45.4	+0.5
FAKI				eSn	Sn	12 37 04.0	-1.1
FAKI	Fak Fak	7.03	125	P	Pn	12 35 49.9	+5.0
	143nm,0.9s,0.5nm						
BBSI	Bau Bau	7.64	211	P	Pb	12 36 10.9	-3.6
TTSI	Tana Toraja	7.84	238	P	Pn	12 36 01.2	+5.2
	80nm,0.8s,0.3nm						
SPSI	Sidrap Palu	8.40	233	P	Pn	12 36 07.6	+3.9
	33nm,0.9s						
BNSI	Bone	8.41	229	P	Pn	12 36 07.3	+3.5
	67nm,0.7s,0.2nm						
BKSI	Bulukumba	9.02	225	P	Pn	12 36 17.4	+5.2
	28nm,0.8s						
BAKI	Biak	9.90	103	P	Pn	12 36 34.7	+10
SOEI	Soe	11.04	191	ePn	Pn	12 36 38.8	-1.1
BATI	Baumata	11.61	194	Pn	Pn	12 36 45.9	-1.8
	0.9nm,0.3s,baz=344,slow=20,SNR=2.0						
GENI	Genyem	14.18	105	P	P	12 37 34.6	+4.2
SBUM	Sibu	14.31	275	ePn	Pn	12 37 24.9	+0.3
SRBI	Singaraja	14.49	231	P	P	12 37 37.7	+3.8
MTN	Manton Dam	14.63	162	ePn	Pn	12 37 27.9	-1.1
KMMI	Kalianget	14.90	237	P	P	12 37 42.5	+4.1
JAGI	Jajag, Banyuwa	15.55	232	ePn	Pn	12 37 40.5	-0.9
	30nm,1.0s						
GMJI	Gumukmas	16.00	234	P	P	12 37 54.9	+4.2
KSM	Kuching	16.17	271	ePn	Pn	12 37 50.4	+1.1
	17nm,0.8s						
NGJI	Ngawi	17.20	240	P	P	12 38 15.0	+11
PWJI	Pagerwojo	17.23	238	P	P	12 38 06.1	+1.8
	51nm,0.8s						
FITZ	Fitzroy Crossi	19.13	182	eP	P	12 38 25.1	-0.1
	7.1nm,0.8s						
FITZ	Fitzroy Crossi	19.13	182	P	P	12 38 24.5	-0.7
	0.4nm,0.3s,baz=38,slow=8.0,SNR=6.1						
WRAB	Tennant Creek	22.31	160	eP	P	12 38 59.1	-0.7
	38nm,0.7s						
WR1	Warramunga Arr	22.32	160	eP	P	12 38 59.7	-0.1
	48nm,0.7s						
WR1				ePcP	PcP	12 42 54.9	-0.8
WR1				eScP	ScP	12 46 33.1	-0.5
WRA	Warramunga Arr	22.32	160	P	P	12 38 59.7	-0.1
	25nm,0.6s,baz=339,slow=11,SNR=128						
WRA				PcP	PcP	12 42 54.9	-0.8
	1.0nm,0.8s,baz=343,slow=2.7,SNR=3.1						
WRA				ScP	ScP	12 46 33.1	-0.5
	0.7nm,1.1s,baz=346,slow=1.7,SNR=2.7						
WB2	Warramunga Arr	22.32	160	eP	P	12 38 60.0	+0.1
COEN	Coen	22.32	133	eP	P	12 38 58.5	-1.5
	7.1nm,0.9s						
YULB	Yu-li	22.69	348	eP	P	12 39 01.6	-2.1
	12nm,0.9s						
TPUB	Ta-pu	22.76	346	eP	P	12 39 03.4	-1.0
	32nm,0.9s						
MBWA	Marble Bar	23.11	196	eP	P	12 39 08.0	-0.2
	12nm,1.0s						
XMIS	Christmas Isla	23.72	240	eP	P	12 39 14.1	-0.2
	52nm,0.9s						
YHNB	Yeheng	23.92	348	eP	P	12 39 13.7	-2.5
IPM	Ipoh	25.64	278	eP	P	12 39 31.9	0.0
	7.0nm,0.7s						
AS31	Alice Springs	25.68	164	eP	P	12 39 32.4	+0.1
	5.3nm,0.8s						
ASAR	Alice Springs	25.68	164	P	P	12 39 32.4	+0.1
	13nm,0.9s,baz=347,slow=8.4,SNR=56						
ASAR				PcP	PcP	12 43 02.8	-0.1
	1.2nm,0.7s,baz=351,slow=2.9,SNR=4.4						
AS01	Alice Springs	25.70	164	eP	P	12 39 32.7	+0.3
PDSI	Padang	26.09	266	P	P	12 39 40.1	+4.0
	15nm,1.1s,3μm						
KULM	Kulim	26.11	280	eP	P	12 39 36.7	+0.4
	6.4nm,0.8s						
MNSI	Mandailing Nat	26.90	270	P	P	12 39 50.1	+6.8
PSI	Prapat	27.59	274	P	P	12 39 47.9	-1.8
	4.8nm,0.7s,baz=359,slow=1.5,SNR=4.1						
NJ2	Nanjing	31.59	348	eP	P	12 40 24.1	-0.7
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FORT	Forrest	31.77	177	eP	P	12 40 26.1	-0.3
	comp=Z,23nm,0.7s						
CM01	Chiang Mai Arr	32.01	304	eP	P	12 40 26.0	-2.7
CMAR	Chiang Mai Arr	32.04	304	P	P	12 40 27.6	-1.3
	comp=Z,0.9nm,0.6s,baz=101,slow=4.7,SNR=5.4						
CMAR				PcP	PcP	12 43 19.9	+1.1
	comp=Z,0.4nm,0.4s,baz=184,slow=3.1,SNR=4.7						
CHTO	Chiang Mai	32.21	305	eP	P	12 40 30.1	-0.4
	comp=Z,2.5nm,0.8s						
KMI	Kunming	33.08	318	P	P	12 40 40.3	+2.0
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,3μm,11.7s						
BBOO	Buckleboo	34.95	166	eP	P	12 40 53.6	-0.5
	comp=Z,8.7nm,0.8s						
NWAO	Narrogin (SRO)	34.98	194	eP	P	12 40 53.9	-0.5
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	35.82	158	eP	P	12 41 01.4	-0.3
	comp=Z,2.0nm,0.9s						
KSRS	Korea Array	36.17	2	P	P	12 41 04.5	-0.1
	comp=Z,1.3nm,0.8s,baz=180,slow=9.6,SNR=5.5						
KSRS				PcP	PcP	12 43 31.0	+0.8
	comp=Z,1.0nm,0.8s,baz=165,slow=5.0,SNR=3.9						
XAN	Xi'an	36.63	335	P	P	12 41 10.9	+2.3
XAN				pP	pwP	12 41 18.6	+4.8
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAJO	Matsushiro	36.87	16	eP	P	12 41 10.1	-0.6
MJAR	Matsushiro Arr	36.87	16	P	P	12 41 10.1	-0.5
	comp=Z,2.9nm,0.8s,baz=188,slow=9.8,SNR=5.5						
ARMA	Armidale	39.47	145	eP	P	12 41 32.1	-0.6
	comp=Z,4.8nm,0.9s						
BJI	Beijing	39.85	348	eP	P	12 41 36.8	+1.2
BJI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LZH	Lanzhou	40.63	331	eP	P	12 41 42.8	+0.5
LZH				pP	pwP	12 41 47.6	+0.1
LZH				sP	sP	12 41 50.7	+5.7
LZH				ePP	PnPn	12 43 18.4	-1.5
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,97nm,4.8s						
HHC	Hu-ho-hao-te	41.78	343	eP	P	12 41 51.6	-0.1
HHC				pmax	pmax		
	comp=Z,15nm,1.2s						
HHC				pmax	pmax		
	comp=Z,1μm,6.2s						
USRK	Ussuriysk Ar.	43.16	6	P	P	12 42 02.0	-0.7
	comp=Z,2.3nm,0.7s,baz=186,slow=8.4,SNR=4.8						
ASAJ	Asahikawa	45.14	16	P	P	12 42 19.6	+1.1
	comp=Z,22nm,1.0s,baz=180,slow=20,SNR=2.9						
GTA	Gaotai	45.20	331	eP	P	12 42 21.0	+1.6
GTA				pP	pwP	12 42 27.3	+2.8
GTA				sP	sP	12 42 30.4	+8.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAMN	Ramite	46.08	307	eP	P	12 42 26.2	-0.4
	comp=Z,4.0nm,0.4s						
JIRN	Jiri	46.72	308	eP	P	12 42 31.8	0.0
	comp=Z,7.4nm,0.5s						
GUN	Gumba	47.08	308	eP	P	12 42 34.4	-0.2
	comp=Z,12nm,0.6s						
KLR	Kul'dur	48.13	5	P	P	12 42 42.4	+0.4
	comp=Z,2.1nm,0.6s,baz=148,slow=6.7,SNR=5.7						
KOLN	Koldanda	48.83	307	eP	P	12 42 47.4	-0.6
	comp=Z,15nm,0.8s						
DANN	Dangsing	48.95	308	eP	P	12 42 48.1	-0.9
	comp=Z,20nm,0.7s						
PYUN	Piuthan	49.46	307	eP	P	12 42 52.4	-0.4
	comp=Z,11nm,0.5s						
SONA0	Songino Array	49.67	342	eP	P	12 42 52.3	-1.7
SONA0				ePcP	PcP	12 44 15.2	-0.1
SONM	Songino Array	49.67	342	P	P	12 42 52.3	-1.7
	comp=Z,0.6nm,0.5s,baz=155,slow=7.9,SNR=2.7						
SONM				PcP	PcP	12 44 15.2	-0.1
	comp=Z,1.3nm,0.8s,baz=132,slow=2.1,SNR=2.4						
WMQ	Urumqi	54.72	326	eP	P	12 43 32.7	+1.2
WMQ				pP	pwP	12 43 37.3	+0.6
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
PETK	Petropavlovsk-	57.92	22	P	P	12 43 54.7	+0.6
	comp=Z,3.7nm,0.8s,baz=187,slow=7.5,SNR=3.9						
PEA1	Petropavlovsk-	57.92	22	eP	P	12 43 54.7	+0.6
MK01	Makanchi Array	59.53	326	eP	P	12 44 04.7	-0.8
MK31	Makanchi Array	59.55	326	eP	P	12 44 05.5	-0.1
	comp=Z,3.0nm,1.0s						
MK32	Makanchi Array	59.55	326	eP	P	12 44 05.7	0.0
MKAR	Makanchi Array	59.55	326	eP	P	12 44 05.8	+0.2
	comp=Z,21nm,0.4s						
MKAR	Makanchi Array	59.55	326	P	P	12 44 05.7	0.0
	comp=Z,2.4nm,0.4s,baz=121,slow=8.2,SNR=41						
MAKZ	Makanchi	59.73	326	eP	P	12 44 05.6	-1.3
	comp=Z,2.9nm,0.8s						
MA2	Magadan	61.27	14	P	P	12 44 18.6	+1.4
	comp=Z,4.5nm,0.5s,baz=204,slow=7.3,SNR=13						
ZAA0	Zalesovo Array	62.78	334	eP	P	12 44 27.3	-0.1
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	62.78	334	eP	P	12 44 27.2	-0.2
ZALV	Zalesovo Beam	62.78	334	P	P	12 44 26.9	-0.5
	comp=Z,1.3nm,0.5s,baz=130,slow=6.3,SNR=7.3						
ZAA1	Zalesovo Array	62.79	334	eP	P	12 44 26.9	-0.5
KBL	Kabul	62.92	309	eP	P	12 44 28.8	-0.2
	comp=Z,3.0nm,0.9s						
GAR	Garm	63.51	314	eP	P	12 44 32.7	0.0
	comp=Z,8.9nm,0.8s						
KKAR	Karatay Array	64.97	318	eP	P	12 44 41.9	-0.2
	comp=Z,2.2nm,0.8s						
BRVK	Borovoye	69.43	328	eP	P	12 45 09.9	-0.2
	comp=Z,3.0nm,0.6s						
TIXI	Tiksi	70.43	1	eP	P	12 45 15.9	0.0
	comp=Z,3.3nm,0.8s						
NRIK	Noril'sk	72.88	347	P	P	12 45 31.4	+0.7
	comp=Z,4.7nm,0.6s,baz=127,slow=7.2,SNR=3.9						
ABKAR	Akbulak array	74.00	321	eP	P	12 45 36.9	-0.9
	comp=Z,1.6nm,0.8s						
ARU	Arti	76.99	328	eP	P	12 45 53.6	-1.1
	comp=Z,9.5nm,0.8s						
OPO	Ambohidratompo	80.21	251	P	P	12 46 13.2	-0.3
	comp=Z,2.4nm,0.8s,baz=92,slow=12,SNR=2.2						
VNDA	Vanda	80.90	173	P	P	12 46 14.4	-1.4
	comp=Z,3.4nm,0.8s,baz=315,slow=1.4,SNR=4.4						
KBZ	Khabaz	84.58	314	P	P	12 46 34.5	-1.0
	comp=Z,1.5nm,0.8s,baz=159,slow=8.5,SNR=3.8						
ILAR	Eielson Array	87.54	25	P	P	12 46 48.2	-1.6
	comp=Z,0.7nm,0.9s,baz=251,slow=4.3,SNR=5.6						
BR101	Keskin Array S	91.47	310	eP	P	12 47 08.8	-0.2
BRTR	Keskin Array B	91.47	310	P	P	12 47 08.8	-0.2
	comp=Z,0.5nm,0.7s,baz=85,slow=5.6,SNR=4.0						
ARA0	ARCESS Array S	92.78	340	eP	P	12 47 15.0	+0.7
ARCES	ARCESS Array B	92.78	340	P	P	12 47 15.0	+0.7
	comp=Z,2.0nm,0.9s,baz=61,slow=7.4,SNR=3.8						
BUR04	Bucovina Ar. S	96.76	318	eP	P	12 47 32.8	-0.3
YKA	Yellowknife Ar	101.95	25	P	Pdif	12 47 53.2	-2.6
	comp=Z,0.3nm,0.9s,baz=295,slow=4.1,SNR=3.2						
LTX	Lajitas	123.36	53	ePKPdf	PKiKP	12 53 00.6	+0.2
TXAR	Lajitas Array	123.36	53	PKP	PKiKP	12 53 00.6	+0.2
	comp=Z,0.7nm,0.7s,baz=236,slow=1.4,SNR=5.4						
TORD	Torodi Ar. Bea	123.45	286	PKP	PKPdf	12 52 59.6	-0.9
	comp=Z,1.0nm,0.8s,baz=36,slow=1.8,SNR=6.2						
TOA1	Torodi Ar. Sit	123.45	286	ePKPdf	PKPdf	12 52 59.6	-0.9

ISCJB 08 12:34:40.3±0.4, 10°.95S±0°.05×165°.91E±0°.06, h10^{km}, mb4.4/28, MS4.8/1, Error ellipse: s-maj=9.6km s-min=6.0km az=148.8
IDC 08 12:34:40.2±0.7, 10°.96S×165°.95E, h0^{km}, mb4.3/18, mb1 4.4/20, mb1mx4.3/42, mbtmp4.3/20, ML4.9/2, MS5.0/1, Ms1 5.0/1, ms1mx4.2/40, Error ellipse: s-maj=20.4km s-min=15.8km az=131.0
NEIC 08 12:34:41.8±0.3, 10°.86S×165°.97E, h10^{km}, mb4.7/13, Error ellipse: s-maj=9.8km s-min=5.7km az=72.0
ISC 08 12:34:41.8±0.6, 10°.99S±0°.07×165°.97E±0°.08, h10^{km}, n55, σ1^{s}54/52, mb4.4/29, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.12	284	eP	Pn	12 36 14.0	+1.5
HNR				eS	Sn	12 37 20.0	-2.7
HNR	Honiara	6.12	284	ePn	Pn	12 36 13.9	+1.4
HNR				eSn	Sn	12 37 22.7	0.0
HNR	Honiara	6.12	284	Pn	Pn	12 36 12.8	+0.3
	51nm,0.3s,baz=151,slow=2.5,SNR=22						
HNR				Sn	Sn	12 37 22.7	0.0
	baz=75,slow=19,SNR=2.2						
MARNC	Mare, Loyalty	10.62	170	ePn	Pn	12 37 16.2	+2.0
DZM	Mont Dzumac	11.03	178	Pn	Pn	12 37 21.9	+2.0
	4.2nm,0.3s,baz=9.0,slow=20,SNR=18						
DZM				Sn	Sn	12 39 17.3	-6.2
	0.3nm,0.3s,baz=307,slow=20,SNR=2.0						
ONTNC	Ouen Toro	11.27	178	ePn	Pn	12 37 25.7	+2.7
PINNC	Pines Island,	11.65	173	ePn	Pn	12 37 31.1	+2.9
CTA	Charters Tower	21.02	242	P	P	12 39 25.5	-0.4
	3.9nm,0.7s,baz=79,slow=13,SNR=4.4						
ARMA	Armidale	23.48	212	eP	P	12 39 54.1	+2.1
	4.6nm,0.8s						
RAO	Raoul Island	23.59	143	LR	LR	12 46 24.1	
	comp=Z,3μm,18.4s,baz=68,slow=30						
OUZ	Omahuta	25.10	165	eP	P	12 40 05.7	-1.1
	7.6nm,1.1s						
URZ	Urewera	28.93	162	eP	P	12 40 41.4	+0.1
	4.9nm,0.7s						
H11S2	WAKE ISLAND Hy	29.30	1	T	T	13 11 05.2	
	baz=181,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	29.30	1	T	T	13 11 05.4	
	baz=181,slow=76,SNR=7.7						
H11S1	WAKE ISLAND Hy	29.32	1	T	T	13 11 06.6	
	baz=181,slow=76,SNR=20						
BKZ	Black Stump Fm	29.59	163	eP	P	12 40 47.7	+0.6
	6.9nm,0.5s						
H11N1	WAKE ISLAND Hy	30.52	2	T	T	13 12 36.8	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	30.52	2	T	T	13 12 37.1	
	baz=182,slow=76,SNR=10.0						
H11N2	WAKE ISLAND Hy	30.54	2	T	T	13 12 38.1	
	baz=182,slow=76,SNR=11						
STKA	Stephens Creek	30.64	224	eP	P	12 40 58.9	+2.5
	2.0nm,0.9s						
STKA	Stephens Creek	30.64	224	P	P	12 40 57.1	+0.7
	4.6nm,0.6s,baz=340,slow=10.0,SNR=3.2						
BFZ	Birch Farm	30.94	165	eP	P	12 40 59.1	+0.1
	27nm,1.0s						
THZ	Tophouse	31.26	170	eP	P	12 41 04.6	+2.8
	12nm,0.8s						
WR1	Warramunga Arr	31.71	250	eP	P	12 41 05.3	-0.8
	15nm,0.9s						
WRA	Warramunga Arr	31.71	250	P	P	12 41 05.3	-0.8
	7.6nm,0.8s,baz=78,slow=9.0,SNR=7.9						
KHZ	Kahutara	32.00	169	eP	P	12 41 09.3	+1.0
	7.3nm,0.8s						
LTZ	Lake Taylor	32.15	171	eP	P	12 41 10.5	+0.8
	14nm,0.7s						
FOZ	Fox Glacier	32.60	175	eP	P	12 41 15.2	+1.7
	20nm,1.1s						
RPZ	Rata Peaks	32.91	173	eP	P	12 41 17.8	+1.6
RPZ	Rata Peaks	32.91	173	P	P	12 41 16.0	-0.2
	12nm,0.7s,baz=356,slow=3.6,SNR=7.9						
ASAR	Alice Springs	33.01	243	P	P	12 41 17.6	+0.1

	3.3nm,0.9s,baz=68,slow=9.4,SNR=5.1						
MQZ	McQueen's Vall	33.11	171	*e*P	P	12 41 18.9	+0.9
	47nm,1.1s						
FITZ	Fitzroy Crossi	39.61	255	*e*P	P	12 42 13.5	-0.4
	7.9nm,0.8s						
FITZ	Fitzroy Crossi	39.61	255	P	P	12 42 13.1	-0.8
	6.6nm,0.7s,baz=101,slow=6.0,SNR=9.9						
BATI	Baumata	41.57	267	P	P	12 42 28.9	-1.4
	16nm,0.7s,baz=108,slow=3.2,SNR=3.4						
KSRS	Korea Array	59.95	325	P	P	12 44 48.6	+0.2
	1.0nm,0.7s,baz=135,slow=7.7,SNR=4.1						
KSAR	Wonju Array Be	59.97	325	P	P	12 44 48.6	+0.1
USRK	Ussuriysk Ar.	62.99	333	P	P	12 45 08.5	-0.4
	3.4nm,0.8s,baz=107,slow=6.6,SNR=4.6						
KLR	Kul'dur	67.09	336	P	P	12 45 35.6	+0.2
	1.0nm,0.8s,baz=113,slow=7.7,SNR=4.2						
CMAR	Chiang Mai Arr	72.29	293	P	P	12 46 08.9	+0.7
	1.6nm,0.9s,baz=114,slow=4.6,SNR=9.1						
SONA0	Songino Array	78.75	324	*e*P	P	12 46 45.3	+0.5
SONM	Songino Array	78.75	324	P	P	12 46 45.3	+0.5
	0.8nm,0.6s,baz=140,slow=5.6,SNR=3.8						
ILAR	Eielson Array	83.39	18	P	P	12 47 09.2	+0.2
	1.2nm,0.7s,baz=239,slow=4.5,SNR=8.9						
NVAR	Mina Array Bea	85.82	50	P	P	12 47 22.5	+0.3
	0.2nm,0.4s,baz=260,slow=5.2,SNR=2.6						
PDAR	Pinedale Array	93.35	47	P	P	12 47 57.2	-0.4
	0.2nm,0.5s,baz=234,slow=7.7,SNR=2.4						
MK01	Makanchi Array	93.62	317	*e*P	P	12 47 58.3	-0.2
MK32	Makanchi Array	93.63	317	*e*P	P	12 47 58.4	-0.2
MKAR	Makanchi Array	93.63	317	P	P	12 47 58.4	-0.2
	1.3nm,0.7s,baz=95,slow=6.1,SNR=8.5						
ZAA1	Zalesovo Array	93.64	324	*e*P	P	12 47 56.7	-1.7
ZALV	Zalesovo Beam	93.64	324	P	P	12 47 56.7	-1.7
	0.3nm,0.3s,baz=50,slow=2.3,SNR=3.3						
YKA	Yellowknife Ar	94.82	27	P	P	12 48 02.6	-1.0
	0.3nm,0.8s,baz=278,slow=4.7,SNR=5.2						
ARA0	ARCESS Array S	116.33	346	*e*PKPdf	PKPdf	12 53 24.4	-0.9
ARCES	ARCESS Array B	116.33	346	PKP	PKPdf	12 53 24.4	-0.9
	0.7nm,0.6s,baz=61,slow=2.3,SNR=3.2						
TORD	Torodi Ar. Bea	164.47	280	PKP	PKPdf	12 54 46.1	-0.8
	0.3nm,0.7s,baz=66,slow=2.0,SNR=2.4						
TOA1	Torodi Ar. Sit	164.47	280	*e*PKPdf	PKPdf	12 54 46.1	-0.8

IDC 08 12:37:28.9±1.8**,10°.99S**×**166°.14E,h0^{km},mb3.9**/5**, mb1 4.2**/6**,mb1mx3.8**/39**,mbtmp4.0**/6**,ML4.1**/1**,Error ellipse: s-maj=47.9km s-min=31.4km az=122.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.02	179	Pn	Pn	12 40 09.2	+1.1
	1.3nm,0.3s,baz=0.0,slow=20,SNR=3.7						
WRA	Warramunga Arr	31.87	250	P	P	12 43 55.2	-0.9
	1.6nm,0.8s,baz=82,slow=9.2,SNR=3.2						
FITZ	Fitzroy Crossi	39.77	255	P	P	12 45 03.5	-0.4
	2.7nm,0.7s,baz=94,slow=13,SNR=3.2						
CMAR	Chiang Mai Arr	72.45	293	P	P	12 48 59.6	+1.7
	0.8nm,0.7s,baz=116,slow=4.1,SNR=4.0						
ILAR	Eielson Array	83.34	18	P	P	12 49 57.3	-0.2
	0.3nm,0.6s,baz=240,slow=4.9,SNR=4.5						
MKAR	Makanchi Array	93.75	317	P	P	12 50 46.3	-1.5
	0.4nm,0.8s,baz=117,slow=5.0,SNR=4.4						

IDC 08 12:42:03.4±4.0**,9°.85S**×**66°.48E,h0^{km},mb3.7**/6**,mb1 3.9**/6**, mb1mx3.6**/40**,mbtmp3.7**/6**,Error ellipse: s-maj=113.8km s-min=29.2km az=65.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N3	Diego Garcia H	5.66	52	T	T	12 49 21.8	
	baz=228,slow=75,SNR=2276						
H08N1	Diego Carcia H	5.68	53	T	T	12 49 22.3	
	baz=228,slow=75,SNR=1401						
H08N2	Diego Garcia H	5.68	52	T	T	12 49 21.2	
	baz=228,slow=75,SNR=1642						
H08S1	Diego Carcia H	6.32	70	T	T	12 50 04.9	
	baz=246,slow=76,SNR=66						
H08S3	Diego Garcia H	6.33	70	T	T	12 50 04.6	
	baz=246,slow=76,SNR=48						
H08S2	Diego Garcia H	6.33	70	T	T	12 50 05.7	
	baz=246,slow=76,SNR=76						
CMAR	Chiang Mai Arr	42.63	49	P	P	12 50 01.5	-0.3
	0.7nm,0.3s,baz=244,slow=7.7,SNR=4.6						
H01W3	Cape Leeuwin H	50.02	128	T	T	13 44 04.8	
	baz=288,slow=74,SNR=15						
H01W2	Cape Leeuwin H	50.03	128	T	T	13 44 05.4	
	baz=288,slow=74,SNR=17						
H01W1	Cape Leeuwin H	50.04	128	T	T	13 44 07.6	
	baz=288,slow=74,SNR=17						
MKAR	Makanchi Array	58.13	13	P	P	12 51 58.6	-0.1
	0.4nm,0.8s,baz=209,slow=7.3,SNR=3.2						
ZALV	Zalesovo Beam	65.43	12	P	P	12 52 47.7	-0.1
	0.4nm,0.4s,baz=207,slow=4.8,SNR=3.9						
ASAR	Alice Springs	65.50	112	P	P	12 52 48.5	-0.5
	0.6nm,0.9s,baz=282,slow=6.3,SNR=4.0						
WRA	Warramunga Arr	65.98	107	P	P	12 52 52.7	+0.6
	1.5nm,1.0s,baz=280,slow=5.6,SNR=5.4						
SONM	Songino Array	67.44	28	P	P	12 53 01.2	+0.2
	0.6nm,0.6s,baz=197,slow=4.5,SNR=2.7						

*IDC **08** 12:43:53.8±1.0,11°.65S×165°.34E,h0^{km},mb3.9/10, mb1 4.1/11,mb1mx4.0/34,mbtmp3.9/11,ML3.2/1,Error ellipse: s-maj=36.4km s-min=21.8km az=142.0*
*ISCJB **08** 12:43:55.7±0.7,11°.8S±0°.1×165°.3E±0°.2,h24^{km},mb3.8/10, Error ellipse: s-maj=21.7km s-min=16.1km az=16.3*
ISC 08 12:43:57.4±0.8**,11°.7S**±0°.1×**165°.4E**±0°.2**,h24^{km},n11, σ0ˢ.75**/11**,mb3.9**/10**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.36	174	Pn	Pn	12 46 24.6	0.0
	0.2nm,0.3s,baz=354,slow=18,SNR=2.0						
WRA	Warramunga Arr	30.91	251	P	P	12 50 12.3	-0.2
	4.5nm,0.9s,baz=80,slow=9.2,SNR=24						
ASAR	Alice Springs	32.16	244	P	P	12 50 23.4	-0.1
	1.6nm,0.9s,baz=69,slow=9.2,SNR=13						
CMAR	Chiang Mai Arr	72.03	294	P	P	12 55 21.1	+1.2
	0.2nm,0.3s,baz=131,slow=4.1,SNR=2.9						
SONM	Songino Array	78.97	324	P	P	12 55 59.0	-0.3
	0.7nm,0.6s,baz=126,slow=2.5,SNR=2.4						
ILAR	Eielson Array	84.25	19	P	P	12 56 26.8	+0.2
	0.6nm,0.7s,baz=238,slow=4.9,SNR=14						
NVAR	Mina Array Bea	86.73	50	P	P	12 56 41.0	+1.1
	0.8nm,0.8s,baz=232,slow=7.0,SNR=5.1						
MKAR	Makanchi Array	93.74	317	P	P	12 57 11.5	-0.8
	0.3nm,0.6s,baz=89,slow=6.7,SNR=5.1						
ZALV	Zalesovo Beam	93.87	324	P	P	12 57 12.4	-0.2
	0.2nm,0.4s,baz=158,slow=4.7,SNR=2.2						
PDAR	Pinedale Array	94.27	47	P	P	12 57 15.2	0.0
	0.3nm,0.8s,baz=254,slow=5.5,SNR=2.5						
YKA	Yellowknife Ar	95.73	27	P	P	12 57 20.0	-0.9
	0.2nm,0.8s,baz=257,slow=4.2,SNR=4.7						

*KRNET **08** 12:48:59.8±0.1,42°.57N×72°.80E,h18^{km},mb2.0*
*NNC **08** 12:48:59.6±0.3,42°.58N×72°.80E,h0^{km},mb2.4,mpv2.5, Error ellipse: s-maj=8.6km s-min=1.7km az=163.0*
*SOME **08** 12:49:00.2,42°.55N×72°.82E,h10^{km}*
ISC 08 12:48:59.8±0.9**,42°.56N**±0°.04×**72°.80E**±0°.02**,h12**^{km}±8^{km}**, n26,σ0ˢ.56**/49**,28C-9D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAS	Manas	0.23	252	⇓P	Pg	12 49 04.6	-0.1
	4.7nm,0.2s						
MNAS				⇑S	Sg	12 49 07.7	-0.4
	14nm,0.2s						
MNAS	Manas	0.23	252	P	Pg	12 49 04.7	-0.1
	14nm,0.1s						
MNAS				S	Sg	12 49 08.0	-0.2
	44nm,0.1s						
MNAS	Manas	0.23	252	⇑*i*P	Pg	12 49 04.7	-0.1
	baz=50						
MNAS				⇑*i*S	Sg	12 49 07.9	-0.2
	baz=50						
MRKS	Merke	0.37	59	P	Pg	12 49 07.3	+0.1
	8.4nm,0.1s						
MRKS				S	Sg	12 49 12.6	+0.4
	26nm,0.1s						
MRKS	Merke	0.37	59	⇑*e*P	Pg	12 49 07.3	+0.1
	baz=61						
MRKS				⇑*e*S	Sg	12 49 12.6	+0.4
	baz=61						
MRKS	Merke	0.37	59	⇑*e*P	Pg	12 49 07.3	+0.1
	8.4nm,0.1s						
MRKS				*e*S	Sg	12 49 12.6	+0.4
	26nm,0.1s						
EKS2	Erkin-Say	0.73	82	⇑*i*P	Pg	12 49 14.0	0.0
	baz=82						
EKS2				⇑*i*S	Sg	12 49 23.9	+0.3
	baz=82						
AML	Almayashu	0.79	122	⇑*i*P	Pg	12 49 15.1	-0.1
	baz=23						
AML				⇑*i*S	Sg	12 49 25.9	+0.3
	baz=23						
ARK	Arkit	0.98	220	⇑*i*P	Pg	12 49 18.8	+0.1
	baz=18						
ARK				⇑*i*S	Sb	12 49 32.3	+0.5
	baz=18						
ARSB	Arslanbob	1.24	174	⇑*e*P	Pn	12 49 22.9	-0.2
	baz=74						
ARSB				⇑*i*S	Sg	12 49 39.8	0.0
	baz=74						
AAK	Ala-Archa	1.25	86	⇑P	Pg	12 49 24.1	+0.1
	0.7nm,0.6s						
AAK				⇑S	Sb	12 49 39.5	-0.2
	1.3nm,0.4s						
AAK	Ala-Archa	1.25	86	⇑*i*P	Pn	12 49 23.2	-0.1
	baz=86						
AAK				⇑*i*S	Sb	12 49 40.0	+0.3
	baz=86						
UCH	Uchtor	1.31	104	⇑*i*P	Pn	12 49 24.3	-0.1
	baz=4.0						
UCH				⇑*i*S	Sn	12 49 42.1	0.0
	baz=4.0						
ARLS	Aral	1.33	121	⇑*i*P	Pn	12 49 24.6	+0.2
	baz=21						
ARLS				⇑*i*S	Sg	12 49 42.5	-0.2
	baz=21						
USP	Ospenovka	1.44	60	⇑*i*P	Pn	12 49 26.0	+0.3
	baz=60						
USP				⇑*i*S	Sb	12 49 45.2	+0.4
	baz=60						
CHMS	Chumysh	1.50	72	⇓*i*P	Pb	12 49 27.5	-0.2
	baz=73						
CHMS				⇓*i*S	Sb	12 49 47.3	+0.5
	baz=73						
KBK	Karagaybulak	1.59	86	⇓*i*P	Pb	12 49 29.1	-0.2
	baz=86						
KBK				⇓*i*S	Sg	12 49 50.3	-0.7
	baz=86						
SGDS	Sogindy	1.61	56	P	Pb	12 49 29.1	-0.5
	3.9nm,0.3s						
SGDS				S	Sb	12 49 50.6	+0.6
	6.2nm,0.2s						
KK31	Karatay Array	1.77	289	⇑P	Pb	12 49 32.7	+0.5
	0.3nm,0.3s,baz=105,slow=15,SNR=4.9						
KK31				⇓S	Sb	12 49 53.9	-0.4
	0.6nm,0.2s,baz=107,slow=27,SNR=13						
KZA	Kyzart	1.88	104	⇓*i*P	Pb	12 49 34.1	-0.2
	baz=4.0						
KZA				⇓*i*S	Sb	12 49 59.0	+1.0
	baz=4.0						
TKM2	Tokmak 2	2.09	79	⇓Pn	Pb	12 49 37.1	-0.8
	0.8nm,0.3s						
TKM2				⇑Lg	Lg	12 50 05.2	
	1.2nm,0.2s						
TKM2	Tokmak 2	2.09	79	⇑*i*P	Pb	12 49 36.9	-1.0
	baz=79						
TKM2				⇑*i*S	Sb	12 50 04.0	+0.1
	baz=79						
DGS	Degeres	2.29	72	Pg	Pb	12 49 41.2	+0.1
	2.0nm,0.4s						
DGS				Lg	Lg	12 50 11.2	
	4.7nm,0.3s						
DGS	Degeres	2.29	72	*e*P	Pb	12 49 41.8	+0.7
	2.0nm,0.4s						
DGS				*e*S	Sg	12 50 11.6	-1.8
	4.7nm,0.3s						
KST	Kastek	2.38	77	Pg	Pb	12 49 43.4	+0.8
KST				Lg	Lg	12 50 14.6	
KST	Kastek	2.38	77	*e*P	Pb	12 49 43.4	+0.8
	2.1nm,0.8s						
KST				*e*S	Sg	12 50 14.6	-1.7
	6.3nm,0.5s						

IDC 08 12:49:47.4±4.6**,10°.44S**×**165°.36E,h0^{km},mb3.4**/3**, mb1 3.7**/3**,mb1mx3.5**/30**,mbtmp3.4**/3**,Error ellipse: s-maj=240.9km s-min=31.7km az=138.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.34	249	P	P	12 56 10.0	+0.1
	0.3nm,0.6s,baz=81,slow=9.1,SNR=3.7						
ASAR	Alice Springs	32.73	242	P	P	12 56 21.9	-0.2
	0.3nm,0.6s,baz=61,slow=10,SNR=5.8						
ILAR	Eielson Array	83.07	19	P	P	13 02 14.5	0.0
	0.5nm,1.0s,baz=229,slow=8.2,SNR=3.1						

IDC 08 12:50:37.3±1.6**,10°.65S**×**166°.02E,h0^{km},mb3.5**/4**, mb1 3.8**/5**,mb1mx3.6**/30**,mbtmp3.6**/5**,ML3.9**/1**,Error ellipse: s-maj=53.0km s-min=28.9km az=124.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.36	178	Pn	Pn	12 53 21.7	+0.6
	0.8nm,0.3s,baz=338,slow=19,SNR=6.3						
H11S2	WAKE ISLAND Hy	28.97	1	T	T	13 27 02.7	
	baz=178						
H11S3	WAKE ISLAND Hy	28.97	1	T	T	13 27 02.9	
	baz=178						
H11S1	WAKE ISLAND Hy	28.98	1	T	T	13 27 03.6	
	baz=178						
H11N1	WAKE ISLAND Hy	30.19	2	T	T	13 28 34.1	
	baz=182						
H11N3	WAKE ISLAND Hy	30.19	2	T	T	13 28 34.1	
	baz=182						
H11N2	WAKE ISLAND Hy	30.20	2	T	T	13 28 35.0	
	baz=182						
WRA	Warramunga Arr	31.87	249	P	P	12 57 04.4	-0.2
	1.3nm,0.8s,baz=81,slow=9.1,SNR=11						
ASAR	Alice Springs	33.21	243	P	P	12 57 15.8	-0.4
	0.4nm,0.7s,baz=62,slow=10,SNR=6.9						
ILAR	Eielson Array	83.06	18	P	P	13 03 04.0	-0.4
	0.1nm,0.7s,baz=225,slow=6.1,SNR=3.8						
MKAR	Makanchi Array	93.42	317	P	P	13 03 55.6	+0.8
	0.1nm,0.6s,baz=116,slow=3.4,SNR=2.2						

*ISCJB **08** 12:52:59.9±0.8,10°.88S±0°.08×166°.0E±0°.1,h10^{km}, mb4.7/1,Error ellipse: s-maj=17.2km s-min=11.4km az=160.1*
*IDC **08** 12:53:00.0±1.5,10°.75S×166°.03E,h0^{km},mb3.6/5, mb1 3.9/7,mb1mx3.7/29,mbtmp3.8/7,ML4.2/2,Error ellipse: s-maj=41.9km s-min=27.9km az=135.0*
*NEIC **08** 12:53:01.4±0.9,10°.80S×166°.02E,h10^{km},mb4.7/2,Error ellipse: s-maj=18.5km s-min=12.5km az=70.0*
ISC 08 12:53:01.4±1.0**,10°.90S**±0°.09×**166°.1E**±0°.1**,h10^{km},n21, σ1ˢ.77**/17**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.21	283	*e*Pn	Pn	12 54 34.7	+1.5
HNR	Honiara	6.21	283	Pn	Pn	12 54 33.1	-0.1
	13nm,0.3s,baz=66,slow=1.1,SNR=7.8						
DZM	Mont Dzumac	11.11	178	*e*Pn	Pn	12 55 42.8	+2.2
DZM				*e*Sn	Sn	12 57 42.8	-2.2
DZM	Mont Dzumac	11.11	178	Pn	Pn	12 55 43.2	+2.7
	0.9nm,0.3s,baz=347,slow=19,SNR=5.6						
DZM				Sn	Sn	12 57 42.9	-2.2
	0.1nm,0.3s,baz=319,slow=20,SNR=2.6						
ONTNC	Ouen Toro	11.35	178	*e*Pn	Pn	12 55 45.8	+2.1
PINNC	Pines Island,	11.72	174	*e*Pn	Pn	12 55 50.4	+1.7
H11S2	WAKE ISLAND Hy	29.21	1	T	T	13 29 27.7	
	baz=182						
H11S3	WAKE ISLAND Hy	29.22	1	T	T	13 29 28.1	
	baz=182						
H11S1	WAKE ISLAND Hy	29.23	1	T	T	13 29 27.8	
	baz=182						
H11N1	WAKE ISLAND Hy	30.43	2	T	T	13 30 54.9	
	baz=182,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.44	2	T	T	13 30 55.4	
	baz=182,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.45	2	T	T	13 30 56.2	
	baz=182,slow=76,SNR=10.0						
WRAB	Tennant Creek	31.83	250	*e*P	P	12 59 23.5	-3.1
	21nm,1.9s						
WB2	Warramunga Arr	31.83	250	*e*P	P	12 59 25.6	-1.1
WR1	Warramunga Arr	31.84	250	*e*P	P	12 59 26.8	0.0
	16nm,1.5s						
WRA	Warramunga Arr	31.84	250	P	P	12 59 26.8	0.0
	1.1nm,0.8s,baz=80,slow=9.0,SNR=8.2						
ASAR	Alice Springs	33.15	243	P	P	12 59 38.1	-0.1
	0.4nm,0.7s,baz=72,slow=10,SNR=5.5						
ILAR	Eielson Array	83.27	18	P	P	13 05 27.1	-0.8
	0.2nm,0.6s,baz=233,slow=5.6,SNR=2.5						
MK32	Makanchi Array	93.64	317	*e*P	P	13 06 17.7	-0.5
MKAR	Makanchi Array	93.64	317	P	P	13 06 17.7	-0.5
	0.3nm,0.7s,baz=103,slow=5.2,SNR=3.3						
YKA	Yellowknife Ar	94.70	27	P	P	13 06 22.9	+0.4
	0.1nm,0.8s,baz=257,slow=5.1,SNR=2.0						

*IDC **08** 13:01:59.6±1.7,21°.61S×70°.78W,h0^{km},mb3.7/4, mb1 3.9/5,mb1mx3.7/24,mbtmp3.7/5,ML3.9/1,Error ellipse: s-maj=52.4km s-min=35.2km az=2.0*
*ISCJB **08** 13:02:06.7±1.0,21°.19S±0°.04×70°.70W±0°.09,h52^{km}±11^{km}, mb3.6/4,Error ellipse: s-maj=14.3km s-min=6.7km az=0.2*
*GUC **08** 13:02:08.3±0.4,21°.21S×70°.54W,h56^{km}±5^{km},ML3.9*
ISC 08 13:02:07.1±1.6**,21°.21S**±0°.04×**70°.72W**±0°.10**,h43**^{km}±16^{km}**, n14,σ1ˢ.04**/22**,mb3.5**/4**,6C-2D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB02	IPOC Station P	0.77	99	⇓*i*P	Pn	13 02 21.7	-0.1
PB02				*e*S	Sn	13 02 31.6	-0.7
PB07	IPOC Station P	0.93	124	⇑*i*P	Pn	13 02 24.0	+0.1
PB07				*e*S	Sn	13 02 36.2	-0.1
PB07				IAML		13 02 36.7	
	comp=E,9μm,0.3s						
PB01	IPOC Station P	1.16	82	⇑*i*P	Pn	13 02 26.8	-0.2
PB01				*e*S	Sn	13 02 40.5	-1.1
PB01				IAML		13 02 41.8	
	comp=N,6μm,0.2s						
PB03	IPOC Station P	1.23	133	⇑*i*P	Pn	13 02 28.2	+0.2
PB03				*e*S	Sn	13 02 43.7	+0.2
PB03				IAML		13 02 45.4	
	comp=N,3μm,0.6s						
PB04	IPOC Station P	1.24	155	⇑*i*P	Pn	13 02 28.6	+0.4
PB04				*e*S	Sn	13 02 44.0	+0.2
PB04				IAML		13 02 45.0	
	comp=E,4μm,0.5s						
PB09	IPOC Station P	1.49	113	⇑*i*P	Pn	13 02 32.8	+1.2
PB09				*e*S	Sn	13 02 51.4	+1.4
PB09				IAML		13 02 52.3	
	comp=N,4μm,0.6s						
PSGC	Pisagua	1.69	19	⇓*e*P	Pn	13 02 33.7	-0.7
PSGC				*e*S	Sn	13 02 53.6	-1.3
PB05	IPOC Station P	1.71	164	⇑*i*P	Pn	13 02 34.7	+0.1
PB05				*e*S	Sn	13 02 54.5	-0.7
LPAZ	La Paz	5.47	27	Pn	Pn	13 03 29.9	+3.2
	comp=N,1.7nm,0.3s,baz=222,slow=7.7,SNR=18						
BDFB	Brasilia	22.23	79	P	P	13 06 59.9	-0.5
	comp=N,2.2nm,0.3s,baz=247,slow=15,SNR=2.5						
NVAR	Mina Array Bea	74.23	323	P	P	13 13 40.0	+0.1
	comp=N,0.3nm,0.6s,baz=133,slow=7.5,SNR=2.3						
TORD	Torodi Ar. Bea	78.85	71	P	P	13 14 05.4	-0.8
	comp=N,0.4nm,0.6s,baz=240,slow=5.8,SNR=6.3						
YKA	Yellowknife Ar	90.36	341	P	P	13 15 03.5	+0.3
	comp=N,0.1nm,0.4s,baz=139,slow=4.8,SNR=3.6						
WRA	Warramunga Arr	132.32	213	PKP	PKPdf	13 21 17.4	0.0
	comp=N,0.5nm,1.0s,baz=149,slow=1.7,SNR=2.2						

IDC 08 13:04:24.4±1.6**,10°.81S**×**165°.81E,h0^{km},mb3.7**/5**, mb1 3.9**/6**,mb1mx3.7**/44**,mbtmp3.7**/6**,ML3.6**/1**,Error ellipse: s-maj=50.0km s-min=27.7km az=129.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.94	283	Pn	Pn	13 05 58.6	+4.9
	4.1nm,0.3s,baz=309,slow=2.8,SNR=4.1						
DZM	Mont Dzumac	11.21	177	Pn	Pn	13 07 05.9	-0.2
	0.4nm,0.3s,baz=315,slow=18,SNR=2.9						
WRA	Warramunga Arr	31.63	250	P	P	13 10 49.6	+0.2
	1.8nm,0.8s,baz=80,slow=9.1,SNR=12						
ASAR	Alice Springs	32.96	243	P	P	13 11 00.5	-0.7
	0.2nm,0.7s,baz=62,slow=11,SNR=3.6						
FITZ	Fitzroy Crossi	39.50	255	P	P	13 11 57.6	+0.5
	2.0nm,0.7s,baz=85,slow=11,SNR=6.2						
ILAR	Eielson Array	83.27	18	P	P	13 16 52.8	+0.2
	0.5nm,1.0s,baz=224,slow=5.0,SNR=3.2						
MKAR	Makanchi Array	93.40	317	P	P	13 17 41.4	-0.4
	0.2nm,0.8s,baz=107,slow=5.0,SNR=2.6						

*ISCJB **08** 13:04:58.3±0.9,11°.0S±0°.1×165°.83E±0°.09,h10^{km}, mb3.9/7,Error ellipse: s-maj=17.0km s-min=10.4km az=29.5*
*IDC **08** 13:04:58.3±1.1,10°.84S×165°.77E,h0^{km},mb4.0/8, mb1 4.2/9,mb1mx3.9/46,mbtmp4.1/9,ML4.5/1,Error ellipse: s-maj=32.1km s-min=21.9km az=130.0*
ISC 08 13:05:00.0±1.0**,10°.9S**±0°.1×**165°.9E**±0°.1**,h10^{km},n16, σ1ˢ.09**/10**,mb3.9**/7**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.03	283	Pn	Pn	13 06 30.5	+1.3
	17nm,0.3s,baz=149,slow=8.9,SNR=5.0						
HNR				Sn	Sn	13 07 38.8	+0.4
	5.4nm,0.3s,baz=39,slow=19,SNR=4.5						
DZM	Mont Dzumac	11.13	177	Pn	Pn	13 07 40.6	+1.1
	3.1nm,0.3s,baz=358,slow=18,SNR=11						
CTA	Charters Tower	20.99	242	P	Pn	13 09 43.6	-2.7
	6.3nm,0.8s,baz=67,slow=15,SNR=5.4						
H11S2	WAKE ISLAND Hy	29.21	2	T	T	13 41 22.7	
	baz=182						
H11S3	WAKE ISLAND Hy	29.21	2	T	T	13 41 23.0	
	baz=182						
H11S1	WAKE ISLAND Hy	29.22	2	T	T	13 41 24.1	
	baz=182						
H11N1	WAKE ISLAND Hy	30.43	2	T	T	13 42 54.3	
	baz=184						
H11N3	WAKE ISLAND Hy	30.43	2	T	T	13 42 54.7	
	baz=184,slow=74						
H11N2	WAKE ISLAND Hy	30.45	2	T	T	13 42 55.6	
	baz=184,slow=74						
STKA	Stephens Creek	30.65	223	P	P	13 11 14.1	-0.7
	1.3nm,0.8s,baz=88,slow=14,SNR=4.1						
WRA	Warramunga Arr	31.67	250	P	P	13 11 22.4	-1.5
	3.7nm,0.9s,baz=81,slow=9.1,SNR=14						
ASAR	Alice Springs	32.98	243	P	P	13 11 34.2	-1.2
	1.4nm,0.9s,baz=73,slow=10,SNR=8.3						
RPZ	Rata Peaks	33.01	173	P	P	13 11 35.4	+0.1
	5.3nm,0.7s,baz=53,slow=5.1,SNR=4.1						
FITZ	Fitzroy Crossi	39.55	255	P	P	13 12 30.8	-0.8
	2.3nm,0.7s,baz=100,slow=6.4,SNR=6.1						
ILAR	Eielson Array	83.32	18	P	P	13 17 26.4	-0.4
	0.5nm,0.8s,baz=238,slow=4.6,SNR=8.8						
YKA	Yellowknife Ar	94.77	27	P	P	13 18 22.0	+0.5
	0.1nm,0.6s,baz=239,slow=4.3,SNR=3.8						

*IDC **08** 13:06:28.9±0.6,10°.51S×166°.41E,h0^{km},mb4.5/20, mb1 4.7/20,mb1mx4.5/44,mbtmp4.5/20,MS4.8/1, Ms1 4.8/1,ms1mx4.1/37,Error ellipse: s-maj=19.5km s-min=15.2km az=143.0*
*NEIC **08** 13:06:30.2±0.2,10°.54S×166°.40E,h10^{km},mb4.8/16,Error ellipse: s-maj=8.0km s-min=5.6km az=125.0*
*ISCJB **08** 13:06:32.5±0.3,10°.58S±0°.05×166°.35E±0°.07,h36^{km}, mb4.6/35,MS4.6/1,Error ellipse: s-maj=9.9km s-min=7.3km az=22.9*
ISC 08 13:06:34.3±0.4**,10°.49S**±0°.08×**166°.51E**±0°.09**,h36^{km},n83, σ1ˢ.50**/76**,mb4.8**/35**,1D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.55	279	*e*P	Pn	13 08 10.0	+1.8
HNR	Honiara	6.55	279	*e*Pn	Pn	13 08 11.9	+3.7
HNR	Honiara	6.55	279	Pn	Pn	13 08 13.6	+5.5
	9.8nm,0.3s,baz=275,slow=14,SNR=4.4						
DZM	Mont Dzumac	11.52	180	*e*Pn	Pn	13 09 19.4	+3.0
DZM	Mont Dzumac	11.52	180	Pn	Pn	13 09 20.0	+3.6
	1.2nm,0.3s,baz=43,slow=18,SNR=4.9						
ONTNC	Ouen Toro	11.75	180	*e*Pn	Pn	13 09 23.6	+4.1
PINNC	Pines Island,	12.09	176	*e*Pn	Pn	13 09 23.5	-0.6
RABL	Rabaul	15.54	293	*e*Pn	Pn	13 10 09.8	-1.1

	76nm,0.5s						
EIDS	Eidsvold	20.81	223	*e*P	P	13 11 11.0	-1.7
	34nm,0.8s						
CTA	Charters Tower	21.72	242	P	P	13 11 21.9	-0.7
	3.3nm,0.6s,baz=70,slow=13,SNR=4.5						
CTA				LR	LR	13 18 10.6	
	comp=Z,2μm,20.7s,baz=58,slow=32						
CTAO	Charters Tower	21.72	242	*e*P	P	13 11 20.4	-2.2
	31nm,1.4s						
ARMA	Armidale	24.19	213	*e*P	P	13 11 46.4	-1.2
	27nm,1.1s						
H11S2	WAKE ISLAND Hy	28.80	0	T	T	13 42 41.8	
	baz=181,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	28.80	0	T	T	13 42 42.1	
	baz=181,slow=76,SNR=36						
H11S1	WAKE ISLAND Hy	28.81	0	T	T	13 42 43.2	
	baz=181,slow=76,SNR=29						
H11N1	WAKE ISLAND Hy	30.02	1	T	T	13 44 00.4	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	30.02	1	T	T	13 44 05.7	
	baz=182,slow=76,SNR=9.5						
H11N2	WAKE ISLAND Hy	30.03	1	T	T	13 44 13.2	
	baz=182,slow=76,SNR=9.1						
STKA	Stephens Creek	31.36	224	P	P	13 12 53.5	+1.8
	2.5nm,0.7s,baz=33,slow=13,SNR=4.2						
WRAB	Tennant Creek	32.37	249	*e*P	P	13 12 57.0	-3.7
	31nm,1.3s						
WB2	Warramunga Arr	32.37	249	*e*P	P	13 12 58.6	-2.1
WR1	Warramunga Arr	32.38	249	*e*P	P	13 12 59.2	-1.6
WRA	Warramunga Arr	32.38	249	P	P	13 12 59.2	-1.6
	13nm,1.0s,baz=79,slow=9.1,SNR=29						
RPZ	Rata Peaks	33.34	174	P	P	13 13 09.4	+0.5
	14nm,1.1s,baz=45,slow=7.1,SNR=3.9						
AS01	Alice Springs	33.67	243	*e*P	P	13 13 09.7	-2.4
AS01				*e*PcP	PcP	13 15 50.4	-1.3
AS31	Alice Springs	33.71	243	*e*P	P	13 13 10.2	-2.3
	3.2nm,0.9s						
ASAR	Alice Springs	33.71	243	P	P	13 13 10.3	-2.1
	11nm,0.8s,baz=66,slow=10,SNR=54						
ASAR				PcP	PcP	13 15 51.0	-0.8
	2.0nm,0.9s,baz=89,slow=2.9,SNR=7.1						
RAR	Rarotonga	34.07	112	*e*P	P	13 13 16.1	+0.6
	33nm,1.1s						
RAR	Rarotonga	34.07	112	P	P	13 13 16.1	+0.6
	22nm,0.4s,baz=25,slow=19,SNR=5.8						
FITZ	Fitzroy Crossi	40.25	254	*e*P	P	13 14 06.3	-1.8
	12nm,0.6s						
FITZ	Fitzroy Crossi	40.25	254	P	P	13 14 07.0	-1.1
	11nm,0.6s,baz=82,slow=6.7,SNR=39						
MJAR	Matsushiro Arr	53.83	332	P	P	13 15 53.0	-0.7
	2.3nm,0.9s,baz=171,slow=8.1,SNR=4.2						
MAJO	Matsushiro	53.84	332	*e*P	P	13 15 53.0	-0.7
LEM	Lembang	58.27	268	P	P	13 16 25.6	-0.5
	16nm,0.7s,baz=120,slow=20,SNR=4.1						
KSRS	Korea Array	59.85	325	P	P	13 16 35.5	-0.8
	2.2nm,0.9s,baz=167,slow=5.9,SNR=6.5						
KSAR	Wonju Array Be	59.86	325	P	P	13 16 35.5	-1.0
USRK	Ussuriysk Ar.	62.80	333	P	P	13 16 56.9	+0.8
	5.8nm,1.1s,baz=126,slow=3.3,SNR=4.7						
PETK	Petropavlovsk-	63.79	354	P	P	13 17 03.6	+1.0
	3.1nm,0.8s,baz=165,slow=6.0,SNR=3.2						
PEA1	Petropavlovsk-	63.80	354	*e*P	P	13 17 03.5	+0.9
CN2	Changchun	65.66	329	*e*P	P	13 17 15.8	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	Baijiatuau	68.52	321	*e*P	P	13 17 33.8	+0.6
	comp=Z,7.1nm,0.8s						
XAN	Xi'an	70.31	312	P	P	13 17 45.0	+0.5
XAN				pP	pP	13 17 53.0	-2.1
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC	Hu-ho-hao-te	71.90	319	*e*P	P	13 17 58.0	+3.9
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,4.0s						
CMAR	Chiang Mai Arr	72.58	293	P	P	13 17 59.0	+0.5
	comp=Z,0.7nm,0.3s,baz=110,slow=4.6,SNR=7.0						
CMMT	Chiang Mai	72.69	293	P	P	13 18 04.1	+5.0
CHTO	Chiang Mai	72.69	293	P	P	13 18 04.1	+5.0
CHTO	Chiang Mai	72.69	293	P	P	13 18 04.1	+5.0
ULN	Ulaanbaatar	78.30	324	*e*P	P	13 18 31.0	+0.2
	comp=Z,7.9nm,0.8s						
BILL	Bilibino	78.33	360	P	P	13 18 30.1	-0.3
	comp=Z,8.8nm,1.0s						
SONA0	Songino Array	78.67	323	*e*P	P	13 18 33.5	+0.6
SONM	Songino Array	78.67	323	P	P	13 18 33.5	+0.6
	comp=Z,3.6nm,0.8s,baz=132,slow=6.2,SNR=10						
GTA	Gaotai	79.22	314	⇓P	P	13 18 37.1	+1.0
GTA				pP	PcP	13 18 42.7	-1.6
GTA				sP	pP	13 18 45.6	-0.9
QSPA	South Pole Qui	79.51	180	*e*P	P	13 18 35.2	-2.0
	comp=Z,11nm,1.2s						
MDM	Murphy Dome	82.47	18	*e*P	P	13 18 52.1	-0.7
	comp=Z,16nm,1.4s						
HDA	Harding Lake	82.48	19	*e*P	P	13 18 53.0	+0.3
	comp=Z,13nm,1.0s						
IL1	Eielson Array	82.75	18	*e*P	P	13 18 54.7	+0.5
ILAR	Eielson Array	82.75	18	P	P	13 18 54.2	+0.1
	comp=Z,3.9nm,0.7s,baz=240,slow=5.1,SNR=48						
ILB	Eielson Array	82.75	18	*e*P	P	13 18 54.6	+0.4
SCRK	Sand Creek	83.14	20	*e*P	P	13 18 57.1	+0.7
	comp=Z,12nm,1.2s						
NVAR	Mina Array Bea	85.09	50	P	P	13 19 08.2	+1.2
	comp=Z,1.4nm,0.8s,baz=234,slow=9.5,SNR=9.7						
I07A	Izee	85.98	44	*e*P	P	13 19 11.9	+0.8
	comp=Z,7.1nm,1.0s						
INK	Inuvik	89.14	19	P	P	13 19 25.9	+0.3
	comp=Z,2.1nm,1.2s,baz=194,slow=4.2,SNR=2.7						
PDAR	Pinedale Array	92.62	47	*e*P	P	13 19 41.5	-1.2
PDAR	Pinedale Array	92.62	47	P	P	13 19 43.4	+0.6
	comp=Z,0.3nm,0.6s,baz=203,slow=3.9,SNR=3.5						
ZALV	Zalesovo Beam	93.55	324	*e*P	P	13 19 45.2	-1.2
ZALV	Zalesovo Beam	93.55	324	P	P	13 19 45.6	-0.8
	comp=Z,3.8nm,0.8s,baz=108,slow=4.8,SNR=17						
ZAA1	Zalesovo Array	93.55	324	*e*P	P	13 19 45.6	-0.8
MK01	Makanchi Array	93.62	317	*e*P	P	13 19 47.4	+0.4
MK31	Makanchi Array	93.63	317	*e*P	P	13 19 47.3	+0.3
MK32	Makanchi Array	93.63	317	*e*P	P	13 19 47.2	+0.2
MKAR	Makanchi Array	93.63	317	P	P	13 19 47.2	+0.2
	comp=Z,6.8nm,0.8s,baz=94,slow=6.0,SNR=54						
MKAR				PKKPbc	PKKPdf	13 36 50.6	-2.2
	comp=Z,0.4nm,0.7s,baz=273,slow=3.8,SNR=5.3						
YKA	Yellowknife Ar	94.14	27	P	P	13 19 48.1	-0.8
	comp=Z,0.5nm,0.7s,baz=258,slow=4.5,SNR=12						
ARCES	ARCESS Array B	115.99	346	PKP	PKiKP	13 25 12.7	-0.1
	comp=Z,2.3nm,0.6s,baz=70,slow=0.9,SNR=15						
FINES	FINESS Array B	121.53	339	PKP	PKPdf	13 25 23.5	-0.2
	comp=Z,1.4nm,0.7s,baz=19,slow=4.7,SNR=4.6						
NB2	NORSAR Subarra	126.36	345	PKPdf	PKPdf	13 25 32.9	-0.2
	comp=Z,0.3nm,0.5s,baz=28,slow=2.0						
NOA	NORSAR Array B	126.36	345	PKP	PKPdf	13 25 32.0	-1.1
	comp=Z,0.7nm,0.6s,baz=33,slow=2.1,SNR=4.0						
AKASG	Malin Array Be	126.81	327	PKP	PKPdf	13 25 33.6	-0.5
	comp=Z,1.1nm,0.8s,baz=68,slow=2.5,SNR=2.5						
CLL	Collm	133.89	337	*e*PKPdf	PKPdf	13 25 48.0	+0.4
GERES	GERESS Array B	135.54	334	PKP	PKPdf	13 25 50.3	-0.6
	comp=Z,1.0nm,0.8s,baz=116,slow=3.1,SNR=5.2						
KEST	Kesra	147.42	324	PKPbc	PKPbc	13 26 14.7	-0.3
	comp=Z,12nm,0.9s,baz=264,slow=4.7,SNR=6.2						
ESDC	Sonseca Array	149.72	345	PKPbc	PKiKP	13 26 21.6	-0.2
	comp=Z,6.0nm,1.1s,baz=17,slow=1.9,SNR=9.8						
TORD	Torodi Ar. Bea	164.91	282	PKPab	PKPab	13 27 30.8	-1.2
	comp=Z,1.2nm,1.0s,baz=50,slow=4.6,SNR=3.7						
TOA1	Torodi Ar. Sit	164.91	282	*e*PKPab	PKPab	13 27 30.8	-1.2

NEIC ***08*** *13:10:21.8±0.4, 10°.60S×166°.50E, h10^{km}, mb4.8/9, Error ellipse: s-maj=16.8km s-min=7.2km az=133.0*

ISCJB ***08*** *13:10:24.6±0.5, 10°.57S±0°.07×166°.34E±0°.09, h36^{km}, mb4.3/24, Error ellipse: s-maj=14.9km s-min=8.0km az=32.1*

IDC ***08*** *13:10:30.1±3.5, 10°.72S×166°.41E, h75^{km}±30^{km}, mb3.9/17, mb1 4.1/19, mb1mx3.9/49, mbtmp4.2/19, Error ellipse: s-maj=25.1km s-min=18.5km az=128.0*

ISC 08 13:10:25.9±0.6**, 10°.6S**±0°.1×**166°.6E**±0°.1**, h36^{km}, n55, σ1^{s}15**/50**, mb4.3**/24**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.61	279	P	Pn	13 12 03.1	+2.5
	11nm,0.3s,baz=172,slow=5.4,SNR=6.3						
DZM	Mont Dzumac	11.45	181	P	Pn	13 13 08.9	+2.0
	0.8nm,0.3s,baz=327,slow=17,SNR=4.6						
EIDS	Eidsvold	20.79	223	*e*P	Pn	13 15 04.8	-1.9
	71nm,1.4s						
CTA	Charters Tower	21.73	242	P	P	13 15 13.9	-0.3
	6.7nm,1.0s,baz=53,slow=16,SNR=2.7						
ARMA	Armidale	24.15	213	*e*P	P	13 15 38.4	-0.5
	46nm,1.4s						
H11S2	WAKE ISLAND Hy	28.87	0	T	T	13 46 36.4	
	baz=181,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	28.87	0	T	T	13 46 33.7	
	baz=181,slow=76,SNR=25						
H11S1	WAKE ISLAND Hy	28.89	0	T	T	13 46 35.1	
	baz=181,slow=76,SNR=28						
H11N1	WAKE ISLAND Hy	30.09	1	T	T	13 47 59.3	
	baz=182,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	30.09	1	T	T	13 48 08.2	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.10	1	T	T	13 48 08.7	
	baz=182,slow=76,SNR=22						
STKA	Stephens Creek	31.34	224	P	P	13 16 42.4	-0.7
	1.3nm,0.7s,baz=54,slow=8.7,SNR=2.6						
WRAB	Tennant Creek	32.39	249	*e*P	P	13 16 51.8	-0.7
	34nm,1.5s						
WB2	Warramunga Arr	32.39	249	*e*P	P	13 16 51.2	-1.2
WR1	Warramunga Arr	32.40	249	*e*P	P	13 16 50.9	-1.7
WRA	Warramunga Arr	32.40	249	P	P	13 16 50.9	-1.7
	4.8nm,0.9s,baz=82,slow=8.9,SNR=15						
AS31	Alice Springs	33.72	243	*e*P	P	13 17 02.2	-1.9
	4.1nm,1.3s						
AS31				*e*PcP	PcP	13 19 42.8	-0.6
ASAR	Alice Springs	33.72	243	P	P	13 17 02.0	-2.1
	4.5nm,0.7s,baz=66,slow=10,SNR=34						
ASAR				PcP	PcP	13 19 42.8	-0.6
	0.6nm,0.9s,baz=94,slow=2.8,SNR=3.5						
FITZ	Fitzroy Crossi	40.28	255	*e*P	P	13 17 57.7	-2.1
	6.9nm,0.7s						
FITZ	Fitzroy Crossi	40.28	255	P	P	13 17 58.3	-1.5
	6.1nm,0.6s,baz=92,slow=5.8,SNR=26						
MJAR	Matsushiro Arr	53.92	332	P	P	13 19 47.1	+1.2
	2.0nm,0.8s,baz=146,slow=9.1,SNR=2.7						
MAJO	Matsushiro	53.92	332	*e*P	P	13 19 47.1	+1.2
KSRS	Korea Array	59.94	325	P	P	13 20 29.2	+0.7
	0.9nm,0.9s,baz=134,slow=7.1,SNR=3.6						
KSAR	Wonju Array Be	59.95	325	P	P	13 20 29.2	+0.6
USRK	Ussuriysk Ar.	62.88	333	P	P	13 20 49.6	+1.3
	6.8nm,1.1s,baz=147,slow=11,SNR=7.2						
KLR	Kul'dur	66.94	336	P	P	13 21 14.8	+0.3
	1.3nm,0.7s,baz=138,slow=7.4,SNR=3.7						
CMAR	Chiang Mai Arr	72.66	293	P	P	13 21 50.5	+0.1
	0.6nm,0.6s,baz=114,slow=4.4,SNR=5.7						
ULN	Ulaanbaatar	78.38	324	*e*P	P	13 22 22.4	-0.5
	7.2nm,0.8s						
SONA0	Songino Array	78.75	323	*e*P	P	13 22 23.6	-1.3
SONM	Songino Array	78.75	323	P	P	13 22 23.6	-1.3
	1.3nm,0.6s,baz=145,slow=5.4,SNR=7.3						
IM3	Indian Mountai	81.75	15	*e*P	P	13 22 40.5	+0.1
MDM	Murphy Dome	82.53	18	*e*P	P	13 22 45.0	+0.4
	7.6nm,1.1s						
HDA	Harding Lake	82.53	19	*e*P	P	13 22 45.3	+0.7
	9.5nm,1.1s						
IL1	Eielson Array	82.80	18	*e*P	P	13 22 46.2	+0.2
ILAR	Eielson Array	82.80	18	P	P	13 22 46.6	+0.6
	0.9nm,0.5s,baz=247,slow=5.3,SNR=23						
ILB	Eielson Array	82.80	18	*e*P	P	13 22 46.7	+0.6
SCRK	Sand Creek	83.19	20	*e*P	P	13 22 48.9	+0.7
	9.5nm,1.3s						
NV01	Mina Array Sit	85.10	50	*e*P	P	13 23 00.5	+1.9
NVAR	Mina Array Bea	85.10	50	P	P	13 23 01.0	+2.4
	1.0nm,0.8s,baz=210,slow=14,SNR=4.2						
PDAR	Pinedale Array	92.64	47	P	P	13 23 33.4	-1.0
	0.3nm,0.7s,baz=338,slow=1.0,SNR=3.2						
ZALV	Zalesovo Beam	93.63	324	P	P	13 23 37.6	-0.7
	1.2nm,0.6s,baz=116,slow=3.4,SNR=7.6						
ZAA1	Zalesovo Array	93.64	324	*e*P	P	13 23 37.6	-0.7
MK01	Makanchi Array	93.71	317	*e*P	P	13 23 38.9	-0.1
MK31	Makanchi Array	93.72	317	*e*P	P	13 23 39.0	0.0
MK32	Makanchi Array	93.72	317	*e*P	P	13 23 39.0	0.0
MKAR	Makanchi Array	93.72	317	P	P	13 23 39.0	0.0
	2.4nm,0.7s,baz=90,slow=6.3,SNR=22						
YKA	Yellowknife Ar	94.18	27	P	P	13 23 39.9	-0.7
	0.2nm,0.5s,baz=255,slow=4.5,SNR=7.6						
YKB5	Yellowknife Ar	94.18	27	*e*P	P	13 23 39.9	-0.7
ARA0	ARCESS Array S	116.07	346	*e*PKPdf	PKiKP	13 29 04.0	-0.5
ARCES	ARCESS Array B	116.07	346	PKP	PKiKP	13 29 04.0	-0.5
	1.1nm,0.6s,baz=86,slow=1.6,SNR=10						
FIA0	FINESS Array S	121.61	339	*e*PKPdf	PKiKP	13 29 15.5	-0.1
FINES	FINESS Array B	121.61	339	PKP	PKiKP	13 29 15.5	-0.1
	2.0nm,0.9s,baz=323,slow=4.4,SNR=3.7						
NB200	NORSAR Array S	126.44	345	*e*PKPdf	PKPdf	13 29 23.4	-1.4
NOA	NORSAR Array B	126.44	345	PKP	PKPdf	13 29 23.4	-1.4
	0.5nm,0.8s,baz=36,slow=2.2,SNR=2.6						
ESDC	Sonseca Array	149.81	345	PKPbc	PKPbc	13 30 12.2	-0.4
	1.0nm,0.7s,baz=352,slow=4.5,SNR=4.5						

IDC 08 13:15:29.8±3.2**, 18°.17S**×**172°.64W, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/45**, mbtmp4.0**/3**, Error ellipse: s-maj=75.0km s-min=47.4km az=97.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	21.93	202	P	P	13 20 24.8	-0.1
	2.2nm,0.3s,baz=290,slow=2.8,SNR=6.4						
WRA	Warramunga Arr	49.98	259	P	P	13 24 26.0	-0.2
	0.6nm,0.5s,baz=97,slow=7.5,SNR=19						
ASAR	Alice Springs	50.00	254	P	P	13 24 26.4	+0.1
	2.7nm,0.7s,baz=89,slow=8.2,SNR=15						
BRTR	Keskin Array B	148.73	319	PKPbc	PKPbc	13 35 19.0	-0.7
	0.7nm,0.8s,baz=26,slow=8.0,SNR=4.0						

ISCJB ***08*** *13:15:54.3±0.5, 10°.85S±0°.07×166°.60E±0°.09, h10^{km}, mb4.6/28, Error ellipse: s-maj=13.8km s-min=8.5km az=33.2*

IDC ***08*** *13:15:54.3±0.8, 10°.85S×166°.67E, h0^{km}, mb4.5/17, mb1 4.6/19, mb1mx4.4/42, mbtmp4.5/19, ML3.7/2, Error ellipse: s-maj=26.2km s-min=17.1km az=140.0*

NEIC ***08*** *13:15:55.8±0.4, 10°.81S×166°.67E, h10^{km}, mb4.9/8, Error ellipse: s-maj=11.6km s-min=7.1km az=129.0*

ISC 08 13:15:55.7±0.6**, 10°.8S**±0°.1×**166°.7E**±0°.1**, h10^{km}, n57, σ0^{s}94**/52**, mb4.8**/28**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.81	281	Pn	Pn	13 17 35.8	0.0
	5.4nm,0.3s,baz=119,slow=3.8,SNR=4.7						
DZM	Mont Dzumac	11.21	181	Pn	Pn	13 18 36.6	+0.3
	0.2nm,0.3s,baz=205,slow=12,SNR=3.0						
EIDS	Eidsvold	20.73	224	*e*P	Pn	13 20 36.9	-2.0
	27nm,0.9s						
CTA	Charters Tower	21.77	242	P	P	13 20 49.0	+1.2
	4.4nm,0.6s,baz=70,slow=14,SNR=3.7						
ARMA	Armidale	24.05	214	*e*P	P	13 21 12.4	+1.1
	35nm,1.5s						
H11S2	WAKE ISLAND Hy	29.10	360	T	T	13 52 10.8	
	baz=181,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.11	360	T	T	13 52 13.1	
	baz=181,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	29.12	360	T	T	13 52 14.2	
	baz=181,slow=76,SNR=23						
H11N1	WAKE ISLAND Hy	30.32	0	T	T	13 53 45.5	
	baz=182,slow=76,SNR=3.5						
H11N3	WAKE ISLAND Hy	30.32	0	T	T	13 53 45.8	
	baz=182,slow=76,SNR=5.5						
H11N2	WAKE ISLAND Hy	30.34	0	T	T	13 53 46.3	
	baz=182,slow=76,SNR=5.0						
WRAB	Tennant Creek	32.46	250	*e*P	P	13 22 24.8	-1.8
	23nm,1.0s						
WB2	Warramunga Arr	32.46	250	*e*P	P	13 22 25.3	-1.3
WR1	Warramunga Arr	32.47	250	*e*P	P	13 22 25.8	-0.9
WRA	Warramunga Arr	32.47	250	P	P	13 22 25.8	-0.9
	17nm,1.0s,baz=79,slow=8.9,SNR=62						
AS01	Alice Springs	33.72	243	*e*P	P	13 22 36.2	-1.3
AS31	Alice Springs	33.76	243	*e*P	P	13 22 36.8	-1.1
	2.9nm,0.8s						
ASAR	Alice Springs	33.76	243	P	P	13 22 36.8	-1.2
	9.9nm,0.8s,baz=66,slow=9.9,SNR=112						
FITZ	Fitzroy Crossi	40.37	255	*e*P	P	13 23 33.5	-0.7
	14nm,0.6s						
BATI	Baumata	42.32	267	P	P	13 23 50.4	+0.1
	9.2nm,0.4s,baz=132,slow=9.9,SNR=2.8						
JNU	Nakatsue	55.45	323	P	P	13 25 30.8	0.0
	14nm,1.0s,baz=213,slow=4.2,SNR=4.0						
ASAJ	Asahikawa	58.89	340	P	P	13 25 55.6	+0.8
	9.7nm,0.9s,baz=197,slow=17,SNR=3.0						
KSRS	Korea Array	60.22	325	P	P	13 26 04.5	+0.3
	2.9nm,0.9s,baz=134,slow=7.2,SNR=7.6						
KSAR	Wonju Array Be	60.24	325	P	P	13 26 04.5	+0.2
USRK	Ussuriysk Ar.	63.16	333	P	P	13 26 24.7	+0.8
	10nm,1.2s,baz=86,slow=8.8,SNR=6.1						
CN2	Changchun	66.03	328	*e*P	P	13 26 43.0	+0.4
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
KLR	Kul'dur	67.22	336	P	P	13 26 50.9	+0.8
	comp=Z,4.4nm,1.0s,baz=117,slow=4.7,SNR=6.9						
XAN	Xi'an	70.67	312	P	P	13 27 11.8	-0.2
XAN				pP	pwP	13 27 20.0	+2.8
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC	Hu-ho-hao-te	72.27	319	*e*P	P	13 27 22.1	+0.5
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,3.8s						
CMAR	Chiang Mai Arr	72.90	293	P	P	13 27 25.8	+0.1
	comp=Z,2.0nm,0.9s,baz=118,slow=4.6,SNR=12						
ULN	Ulaanbaatar	78.67	324	*e*P	P	13 27 59.3	+1.0
	comp=Z,16nm,1.1s						
SONA0	Songino Array	79.04	323	*e*P	P	13 28 01.0	+0.7
SONM	Songino Array	79.04	323	P	P	13 28 01.0	+0.7
	comp=Z,3.0nm,0.9s,baz=145,slow=6.1,SNR=11						
SONA1	Songino Array	79.04	323	*e*P	P	13 27 59.7	-0.6
GTA	Gaotai	79.58	314	⇑P	P	13 28 04.4	+1.0
GTA				pP	PcP	13 28 12.9	+1.6
GTA				sP	pwP	13 28 16.5	+7.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HDA	Harding Lake	82.70	18	*e*P	P	13 28 20.1	+0.8
	comp=Z,18nm,1.3s						
ILAR	Eielson Array	82.98	18	P	P	13 28 21.5	+0.8
	comp=Z,2.8nm,0.8s,baz=246,slow=4.9,SNR=32						
ILB	Eielson Array	82.98	18	*e*P	P	13 28 21.1	+0.4
IL1	Eielson Array	82.98	18	*e*P	P	13 28 21.1	+0.3
BEKR	Beckworth	84.07	48	*e*P	P	13 28 24.8	-2.4
	comp=Z,5.1nm,0.6s						
NVAR	Mina Array Bea	85.13	50	P	P	13 28 34.6	+2.0
	comp=Z,1.3nm,0.9s,baz=237,slow=8.9,SNR=8.0						
PDAR	Pinedale Array	92.68	47	P	P	13 29 09.2	+0.8
	comp=Z,0.5nm,0.8s,baz=241,slow=2.7,SNR=4.0						
ZALV	Zalesovo Beam	93.92	324	P	P	13 29 12.6	-0.9
	comp=Z,3.9nm,1.0s,baz=104,slow=4.7,SNR=12						
ZAA1	Zalesovo Array	93.92	324	*e*P	P	13 29 12.6	-0.9
MK01	Makanchi Array	93.99	317	*e*P	P	13 29 13.4	-0.7
MK31	Makanchi Array	94.00	317	*e*P	P	13 29 14.1	-0.1
MK32	Makanchi Array	94.00	317	*e*P	P	13 29 14.2	0.0
MKAR	Makanchi Array	94.00	317	P	P	13 29 14.2	0.0
	comp=Z,3.6nm,0.7s,baz=93,slow=6.1,SNR=40						
YKA	Yellowknife Ar	94.31	27	P	P	13 29 14.6	-0.6
	comp=Z,0.2nm,0.5s,baz=254,slow=4.2,SNR=4.9						
ARCES	ARCESS Array B	116.33	346	PKP	PKiKP	13 34 39.1	0.0
	comp=Z,1.3nm,0.6s,baz=85,slow=1.9,SNR=8.4						
FINES	FINESS Array B	121.89	339	PKP	PKiKP	13 34 49.9	-0.2
	comp=Z,2.3nm,1.0s,baz=64,slow=9.4,SNR=3.0						
NOA	NORSAR Array B	126.71	345	PKP	PKPdf	13 34 57.1	-2.2
	comp=Z,0.9nm,0.9s,baz=34,slow=1.9,SNR=2.9						
GERES	GERESS Array B	135.90	334	PKP	PKiKP	13 35 18.2	-0.5
	comp=Z,0.5nm,0.7s,baz=331,slow=3.7,SNR=3.2						
KEST	Kesra	147.79	324	PKPbc	PKPbc	13 35 40.2	-1.3
	comp=Z,7.3nm,0.9s,baz=285,slow=12,SNR=3.6						
ESDC	Sonseca Array	150.07	346	PKPbc	PKiKP	13 35 47.4	-0.7
	comp=Z,1.4nm,0.8s,baz=45,slow=2.3,SNR=5.6						
TORD	Torodi Ar. Bea	165.17	281	PKP	PKPdf	13 36 02.3	+0.9
	comp=Z,0.5nm,0.9s,baz=143,slow=5.0,SNR=3.8						
TORD				PKPab	PKPab	13 36 58.0	-0.6
	comp=Z,0.8nm,1.1s,baz=11,slow=9.4,SNR=4.2						
TOA1	Torodi Ar. Sit	165.17	281	*e*PKPdf	PKPdf	13 36 02.3	+0.9
TOA1				*e*PKPab	PKPab	13 36 58.0	-0.6

ISCJB ***08*** *13:18:11.4±0.5, 11°.04S±0°.07×165°.84E±0°.09, h10^{km}, mb4.3/17, Error ellipse: s-maj=12.7km s-min=10.2km az=24.3*

IDC ***08*** *13:18:11.1±0.8, 11°.02S×165°.93E, h0^{km}, mb4.3/15, mb1 4.4/17, mb1mx4.2/40, mbtmp4.3/17, ML4.3/2, Error ellipse: s-maj=23.1km s-min=16.7km az=130.0*

NEIC ***08*** *13:18:12.8±0.5, 10°.95S×165°.92E, h10^{km}, mb4.7/6, Error ellipse: s-maj=12.4km s-min=9.5km az=116.0*

ISC 08 13:18:12.8±0.7**, 10°.96S**±0°.10×**165°.9E**±0°.1**, h10^{km}, n39, σ1^{s}13**/30**, mb4.3**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.03	284	Pn	Pn	13 19 41.8	-0.3
	4.9nm,0.3s,baz=129,slow=13,SNR=3.4						
HNR	Honiara	6.03	284	*e*S	Pn	13 19 41.0	-1.1
DZM	Mont Dzumac	11.06	177	*e*Pn	Pn	13 20 51.1	-0.2
DZM	Mont Dzumac	11.06	177	Pn	Pn	13 20 51.3	0.0
	2.9nm,0.3s,baz=348,slow=13,SNR=11						
EIDS	Eidsvold	20.04	222	*e*P	Pn	13 22 48.2	+0.3
	44nm,1.2s						
MANU	Manus Island	20.39	294	*e*P	Pn	13 22 51.7	-0.5
	62nm,1.1s						
CTA	Charters Tower	20.95	242	P	Pn	13 22 57.3	-1.3
	5.8nm,0.7s,baz=74,slow=13,SNR=4.2						
ARMA	Armidale	23.45	212	*e*P	P	13 23 24.4	+1.7
	32nm,1.4s						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	13 54 33.9	
	baz=181,slow=76,SNR=7.7						
H11S3	WAKE ISLAND Hy	29.28	2	T	T	13 54 32.3	
	baz=181,slow=76,SNR=5.6						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	13 54 34.3	
	baz=181,slow=76,SNR=7.2						
H11N1	WAKE ISLAND Hy	30.50	2	T	T	13 56 01.8	
	baz=182,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	13 56 02.2	
	baz=182,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.52	2	T	T	13 56 03.1	
	baz=182,slow=76,SNR=18						
STKA	Stephens Creek	30.59	223	*e*P	P	13 24 28.1	+1.1
	2.3nm,1.2s						
STKA	Stephens Creek	30.59	223	P	P	13 24 25.1	-1.9
	2.9nm,0.7s,baz=63,slow=14,SNR=3.7						
WRAB	Tennant Creek	31.62	250	*e*P	P	13 24 34.7	-1.6
	31nm,1.3s						
WB2	Warramunga Arr	31.62	250	*e*P	P	13 24 35.2	-1.0
WR1	Warramunga Arr	31.63	250	*e*P	P	13 24 36.1	-0.2
WRA	Warramunga Arr	31.63	250	P	P	13 24 36.1	-0.2
	12nm,1.0s,baz=81,slow=9.3,SNR=18						
ASAR	Alice Springs	32.94	243	P	P	13 24 47.0	-0.9
	1.9nm,0.7s,baz=63,slow=11,SNR=6.6						
RPZ	Rata Peaks	32.94	173	P	P	13 24 47.9	+0.4
	16nm,0.8s,baz=333,slow=4.5,SNR=5.9						
FITZ	Fitzroy Crossi	39.52	255	*e*P	P	13 25 44.3	+0.1
	8.6nm,0.8s						
BATI	Baumata	41.47	267	P	P	13 26 01.5	+1.1
	10nm,0.4s,baz=117,slow=6.8,SNR=2.3						
USRK	Ussuriysk Ar.	62.93	333	P	P	13 28 40.4	+1.1
	2.5nm,0.8s,baz=171,slow=9.9,SNR=3.1						
CMAR	Chiang Mai Arr	72.19	293	P	P	13 29 38.2	-0.3
	0.8nm,0.6s,baz=111,slow=5.0,SNR=3.4						
SONA0	Songino Array	78.67	324	*e*P	P	13 30 16.9	+1.5
SONM	Songino Array	78.67	324	P	P	13 30 16.9	+1.6
	0.9nm,0.5s,baz=134,slow=4.1,SNR=3.7						
ILAR	Eielson Array	83.39	18	P	P	13 30 40.0	0.0
	0.8nm,0.6s,baz=232,slow=5.1,SNR=8.8						
NVAR	Mina Array Bea	85.87	50	P	P	13 30 53.1	-0.3
	0.7nm,0.8s,baz=231,slow=5.7,SNR=3.9						
PDAR	Pinedale Array	93.40	47	P	P	13 31 28.8	-0.1
	0.1nm,0.5s,baz=281,slow=5.4,SNR=2.6						
MK01	Makanchi Array	93.53	317	*e*P	P	13 31 26.4	-2.7
MK32	Makanchi Array	93.55	317	*e*P	P	13 31 29.8	+0.7
MKAR	Makanchi Array	93.55	317	P	P	13 31 29.8	+0.7
	2.1nm,0.8s,baz=100,slow=6.2,SNR=15						
ZALV	Zalesovo Beam	93.56	324	P	P	13 31 29.8	+0.9
	0.9nm,0.7s,baz=107,slow=5.0,SNR=4.8						
ZAA1	Zalesovo Array	93.56	324	*e*P	P	13 31 29.8	+0.9
YKA	Yellowknife Ar	94.84	27	P	P	13 31 32.9	-1.7
	0.2nm,0.8s,baz=256,slow=4.3,SNR=3.8						
ARA0	ARCESS Array S	116.28	346	*e*PKPdf	PKPdf	13 36 55.4	-0.7
ARCES	ARCESS Array B	116.28	346	PKP	PKPdf	13 36 55.4	-0.7
	1.0nm,0.8s,baz=45,slow=1.7,SNR=9.4						

IDC 08 13:21:56.1±1.8**, 10°.68S**×**166°.54E, h0^{km}, mb4.1**/4**, mb1 4.3**/5**, mb1mx3.8**/40**, mbtmp4.1**/5**, ML3.6**/1**, MS5.0**/2**, Ms1 5.0**/2**, ms1mx4.0**/44**, Error ellipse: s-maj=56.4km s-min=29.5km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.33	180	Pn	Pn	13 24 38.8	-0.6
	0.4nm,0.3s,baz=121,slow=19,SNR=1.2						
RAO	Raoul Island	23.50	144	LR	LR	13 34 59.0	
	comp=Z,1μm,20.9s,baz=310,slow=33						

H11S2	WAKE ISLAND Hy	28.99	0	T	T	13 58 18.1	
	baz=182						
H11S3	WAKE ISLAND Hy	28.99	0	T	T	13 58 23.7	
	baz=182,slow=74						
H11S1	WAKE ISLAND Hy	29.00	0	T	T	13 58 21.0	
	baz=182,slow=74						
H11N1	WAKE ISLAND Hy	30.20	1	T	T	13 59 39.9	
	baz=184						
H11N3	WAKE ISLAND Hy	30.21	1	T	T	13 59 53.2	
	baz=184						
H11N2	WAKE ISLAND Hy	30.22	1	T	T	13 59 42.0	
	baz=184						
WRA	Warramunga Arr	32.34	250	P	P	13 28 27.8	+0.4
	2.8nm,0.9s,baz=80,slow=9.1,SNR=11						
ASAR	Alice Springs	33.65	243	P	P	13 28 38.8	-0.2
	2.3nm,0.8s,baz=69,slow=10.0,SNR=15						
QSPA	South Pole Qui	79.32	180	LR	LR	14 05 01.3	
	comp=Z,2µm,20.0s,baz=216,slow=33						
ILAR	Eielson Array	82.92	18	P	P	13 34 22.8	+0.3
	0.8nm,1.0s,baz=243,slow=5.7,SNR=5.4						
MKAR	Makanchi Array	93.79	317	P	P	13 35 14.7	-0.5
	1.0nm,0.9s,baz=94,slow=7.3,SNR=7.9						

IDC 08 13:26:52.9±1.8**, 11°.44S**×**166°.23E, h0km, mb3.8**/6, **mb1 4.1**/7**, mb1mx3.8**/34**, mbtmp3.9**/7**, ML4.7**/1**, Error ellipse: s-maj=65.5km s-min=26.6km az=149.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.50	287	Pn	Pn	13 28 29.0	-0.9
	18nm,0.3s,baz=157,slow=7.0,SNR=7.2						
WRA	Warramunga Arr	31.80	251	P	P	13 33 19.6	+0.1
	0.9nm,0.7s,baz=82,slow=8.9,SNR=11						
ASAR	Alice Springs	33.05	244	P	P	13 33 30.1	-0.4
	0.2nm,0.5s,baz=71,slow=9.7,SNR=4.2						
CMAR	Chiang Mai Arr	72.71	294	P	P	13 38 24.1	+0.8
	0.8nm,0.4s,baz=120,slow=5.3,SNR=4.0						
ILAR	Eielson Array	83.73	18	P	P	13 39 23.9	+0.4
	0.5nm,0.6s,baz=227,slow=5.0,SNR=7.6						
MKAR	Makanchi Array	94.14	317	P	P	13 40 12.8	-0.9
	0.6nm,0.8s,baz=99,slow=4.8,SNR=5.7						
YKA	Yellowknife Ar	95.10	27	P	P	13 40 16.7	-0.9
	0.2nm,0.5s,baz=256,slow=4.5,SNR=4.7						
ARCES	ARCESS Array B	116.83	346	PKP	PKPdf	13 45 38.9	0.0
	1.1nm,0.8s,baz=54,slow=4.6,SNR=5.8						

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*IDC **08** 13:28:06.3±0.8, 11°.05S×167°.03E, h0km, mb4.3/16, mb1 4.5/16, mb1mx4.4/33, mbtmp4.3/16, MS4.3/1, Ms1 4.3/1, ms1mx3.8/45, Error ellipse: s-maj=26.2km s-min=16.4km az=125.0*

*NEIC **08** 13:28:08.4±0.3, 11°.08S×166°.97E, h10km, mb4.9/31, Error ellipse: s-maj=11.3km s-min=6.6km az=147.0*

*ISCJB **08** 13:28:10.1±0.3, 10°.99S±0°.09×166°.84E±0°.06, h28km, mb4.7/57, Error ellipse: s-maj=13.2km s-min=7.1km az=158.7*

ISC 08 13:28:10.5±0.6**, 11°.13S**±0°.10×**167°.1E**±0°.1**, h28km, n75,** σ**1^{s}30**/75**, mb4.9**/57**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.21	283	*e*Pn	Pn	13 29 53.6	-0.5
DZM	Mont Dzumac	10.90	183	LR	LR	13 33 54.7	
	comp=Z,1µm,18.8s,baz=29,slow=32						
EIDS	Eidsvold	20.73	225	*e*P	Pn	13 32 51.8	+0.3
	63nm,1.1s						
CTA	Charters Tower	21.92	243	P	P	13 33 02.5	+0.7
	9.4nm,0.9s,baz=41,slow=15,SNR=5.6						
COEN	Coen	23.50	261	*e*P	P	13 33 18.0	-0.3
	34nm,1.2s						
THZ	Tophouse	30.94	172	*e*P	P	13 34 23.5	-1.6
	10nm,0.8s						
STKA	Stephens Creek	31.29	225	*e*P	P	13 34 30.0	+1.7
	2.5nm,1.1s						
STKA	Stephens Creek	31.29	225	P	P	13 34 29.6	+1.3
	4.6nm,0.9s,baz=47,slow=10,SNR=7.2						
RPZ	Rata Peaks	32.65	175	P	P	13 34 39.9	-0.2
	10nm,0.9s,baz=213,slow=4.9,SNR=3.2						
WRA	Warramunga Arr	32.68	250	P	P	13 34 39.9	-0.8
	6.8nm,1.0s,baz=81,slow=8.9,SNR=18						
ASAR	Alice Springs	33.92	244	P	P	13 34 50.5	-1.1
	4.5nm,0.9s,baz=74,slow=9.6,SNR=20						
FITZ	Fitzroy Crossi	40.62	255	*e*P	P	13 35 48.0	-0.3
	25nm,1.1s						
MJAR	Matsushiro Arr	54.66	332	P	P	13 37 36.7	-0.3
	2.4nm,0.8s,baz=170,slow=9.1,SNR=4.9						
NJ2	Nanjing	63.00	315	*e*P	P	13 38 32.8	-2.3
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
USRK	Ussuriysk Ar.	63.62	333	P	P	13 38 39.0	+0.2
	comp=Z,13nm,1.2s,baz=116,slow=13,SNR=5.5						
PETK	Petropavlovsk-	64.48	354	P	P	13 38 42.8	-1.6
	comp=Z,2.3nm,0.8s,baz=163,slow=10,SNR=3.0						
WHN	Wuhan	65.43	311	P	P	13 38 45.6	-5.4
CN2	Changchun	66.49	328	*e*P	P	13 38 57.5	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BJI	Beijing	69.37	320	*e*P	P	13 39 15.9	+0.1
BJI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BJI				LR	LR		
	comp=N,3µm,20.6s						
BJI				LR	LR		
	comp=E,2µm,22.5s						
BJI				LR	LR		
	comp=Z,4µm,21.6s						
GYA	Guiyang	69.55	304	P	P	13 39 18.2	+0.9
GYA				PP	PP	13 41 52.9	+1.4
GYA				S	S	13 48 23.0	-0.9
GYA				SKS	SKSac	13 49 14.4	-2.1
GYA	Guiyang	69.55	304	SS	SS	13 52 51.8	-0.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,550nm,18.5s						
GYA				LR	LR		
	comp=E,530nm,18.4s						
GYA				LR	LR		
	comp=Z,510nm,18.3s						
XAN	Xi'an	71.14	312	P	P	13 39 26.7	-0.2
XAN				pP	pP	13 39 32.6	-2.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KMI	Kunming	72.28	301	P	P	13 39 34.4	+0.3
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,520nm,7.1s						
KMI				LR	LR		
	comp=N,1µm,19.0s						
KMI				LR	LR		
	comp=E,660nm,17.7s						
KMI				LR	LR		
	comp=Z,2µm,19.5s						
HHC	Hu-ho-hao-te	72.74	319	*e*P	P	13 39 37.2	+0.8
HHC				pmax	pmax		
	comp=Z,24nm,1.3s						
HHC				pmax	pmax		
	comp=Z,270nm,3.8s						
CMAR	Chiang Mai Arr	73.34	293	P	P	13 39 40.4	+0.1
	comp=Z,0.8nm,0.8s,baz=119,slow=5.4,SNR=5.8						
CD2	Chengdu	73.69	307	P	P	13 39 41.9	-0.3
CD2				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH	Lanzhou	75.78	312	*e*P	P	13 39 55.3	+1.0
LZH				pP	pP	13 40 02.5	+0.3
LZH				sP	sP	13 40 05.4	0.0
LZH				PP	PP	13 42 48.8	+4.1
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,93nm,4.3s						
LZH				LR	LR		
	comp=N,340nm,17.1s						
LZH				LR	LR		
	comp=E,360nm,17.2s						
LZH				LR	LR		
	comp=Z,340nm,18.8s						
QSPA	South Pole Qui	78.88	180	*e*P	P	13 40 11.1	0.0
	comp=Z,24nm,1.4s						
SONM	Songino Array	79.51	323	P	P	13 40 15.0	+0.3
	comp=Z,2.4nm,1.0s,baz=137,slow=5.2,SNR=8.5						
GTA	Gaotai	80.06	314	⇑P	P	13 40 18.8	+0.8
GTA				pP	pP	13 40 26.1	+0.2
GTA				sP	sP	13 40 29.3	+0.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
IM3	Indian Mountai	82.16	15	*e*P	P	13 40 28.7	+0.3
HDA	Harding Lake	82.91	18	*e*P	P	13 40 32.6	+0.3
	comp=Z,18nm,1.0s						
MDM	Murphy Dome	82.91	18	*e*P	P	13 40 32.2	-0.2
	comp=Z,13nm,1.2s						
ILAR	Eielson Array	83.18	18	P	P	13 40 33.5	-0.2
	comp=Z,4.9nm,0.9s,baz=226,slow=6.3,SNR=24						
ILB	Eielson Array	83.18	18	*e*P	P	13 40 34.0	+0.2
IL1	Eielson Array	83.18	18	*e*P	P	13 40 32.4	-1.3
BEKR	Beckworth	84.04	48	*e*P	P	13 40 40.5	+1.5
	comp=Z,18nm,1.3s						
MDPB	Devils Postpil	84.25	50	*e*P	P	13 40 41.8	+1.6
	comp=Z,13nm,1.2s						
WAKR	Walker	84.26	49	*e*P	P	13 40 41.6	+1.5
	comp=Z,21nm,1.3s						
PNTR	Pine Nut	84.33	49	*e*P	P	13 40 41.4	+0.8
	comp=Z,16nm,1.2s						
YERR	Yerington	84.56	49	*e*P	P	13 40 42.1	+0.4
	comp=Z,12nm,1.4s						
PAHR	Pah Rah Range	84.69	48	*e*P	P	13 40 42.8	+0.6
	comp=Z,18nm,1.3s						
RYN	Ryan	84.98	49	*e*P	P	13 40 44.3	+0.6
	comp=Z,10nm,1.3s						
NV01	Mina Array Sit	85.08	49	*e*P	P	13 40 45.3	+1.0
NVAR	Mina Array Bea	85.08	49	P	P	13 40 45.9	+1.6
	comp=Z,2.9nm,0.8s,baz=232,slow=8.2,SNR=18						
NV11	Mina Array Sit	85.19	50	*e*P	P	13 40 46.4	+1.7
	comp=Z,0.7nm,1.1s						
KVN	Kaiserville	85.43	49	*e*P	P	13 40 47.6	+1.6
	comp=Z,8.1nm,1.1s						
I07A	Izee	86.05	44	*e*P	P	13 40 50.5	+1.7
WVOR	Wild Horse Val	86.11	46	*e*P	P	13 40 50.9	+1.7
	comp=Z,18nm,1.4s						
J08A	Circle Bar Ran	86.52	45	*e*P	P	13 40 52.4	+1.3
	comp=Z,8.4nm,1.1s						
G08A	Pilot Rock	86.82	43	*e*P	P	13 40 54.0	+1.4
	comp=Z,12nm,1.3s						
SHPR	Sheep Range	86.91	52	*e*P	P	13 40 55.5	+2.2
	comp=Z,7.8nm,1.2s						
E09A	Wood Farm, Sta	87.75	42	*e*P	P	13 40 58.2	+1.3
	comp=Z,12nm,1.4s						
BMO	Blue Mountains	87.79	44	*e*P	P	13 40 58.5	+1.2
	comp=Z,6.4nm,1.1s						
ELK	Elko	88.03	48	*e*P	P	13 41 00.3	+1.6
	comp=Z,2.7nm,1.0s						
F10A	Beach Ranch, E	88.19	43	*e*P	P	13 41 00.3	+1.2
	comp=Z,6.4nm,1.1s						
HLID	Hailey	89.40	45	*e*P	P	13 41 06.9	+1.8
	comp=Z,8.9nm,1.4s						
DUG	Dugway, Tooele	89.67	49	*e*P	P	13 41 08.1	+1.8
	comp=Z,13nm,1.4s						
BGU	Big Grassy Mou	89.69	48	*e*P	P	13 41 08.2	+1.8
	comp=Z,8.8nm,1.2s						
MSU	Marysvale	89.72	51	*e*P	P	13 41 09.1	+2.4
WMQ	Urumqi	90.08	315	*e*P	P	13 41 08.7	+0.7
WMQ				pP	pP	13 41 14.4	-1.7
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				LR	LR		
	comp=N,2µm,17.9s						
WMQ				LR	LR		
	comp=E,2µm,18.5s						
WMQ				LR	LR		
	comp=Z,2µm,19.1s						
HVU	Hansel Valley	90.10	47	*e*P	P	13 41 10.3	+2.0
	comp=Z,22nm,1.3s						
NLU	North Lily Min	90.15	49	*e*P	P	13 41 10.7	+2.0
	comp=Z,8.6nm,1.1s						
DLMT	Dillon	91.13	44	*e*P	P	13 41 14.9	+1.8
	comp=Z,20nm,1.4s						
BOZ	Bozeman (W)	91.85	44	*e*P	P	13 41 18.1	+1.8
	comp=Z,11nm,1.4s						
PDAR	Pinedale Array	92.65	47	*e*P	P	13 41 19.5	-0.7
PDAR	Pinedale Array	92.65	47	P	P	13 41 20.6	+0.3
	comp=Z,0.8nm,1.0s,baz=237,slow=3.1,SNR=5.5						
ZALV	Zalesovo Beam	94.39	324	P	P	13 41 26.4	-1.2
	comp=Z,1.4nm,0.8s,baz=145,slow=5.3,SNR=6.9						
YKA	Yellowknife Ar	94.45	27	P	P	13 41 26.7	-1.0
	comp=Z,0.4nm,0.8s,baz=257,slow=4.6,SNR=7.1						
MK01	Makanchi Array	94.46	317	*e*P	P	13 41 27.6	-0.6
MK31	Makanchi Array	94.48	317	*e*P	P	13 41 28.1	-0.2
MKAR	Makanchi Array	94.48	317	P	P	13 41 28.1	-0.2
	comp=Z,2.4nm,0.8s,baz=102,slow=6.1,SNR=19						
CLL	Collm	134.69	337	*i* PKPdf	PKiKP	13 47 27.3	-0.6
GERES	GERESS Array B	136.35	335	PKP	PKiKP	13 47 30.7	-0.8
	comp=Z,0.4nm,0.8s,baz=304,slow=5.5,SNR=3.5						
TORD	Torodi Ar. Bea	165.56	279	PKP	PKPdf	13 48 13.4	-0.1
	comp=Z,0.7nm,1.0s,baz=132,slow=2.1,SNR=3.6						

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*IDC **08** 13:29:44.7±1.2, 11°.06S×165°.43E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.9/33, mbtmp4.0/7, ML4.5/1, Error ellipse: s-maj=49.0km s-min=23.4km az=126.0*

*ISCJB **08** 13:29:47.3±0.9, 11°.2S±0°.1×165°.5E±0°.2, h30km, mb3.8/6, Error ellipse: s-maj=26.6km s-min=16.9km az=14.7*

ISC 08 13:29:49.1±1.0**, 11°.1S**±0°.1×**165°.5E**±0°.2**, h30km, n13,** σ**0^{s}78**/9**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.94	175	Pn	Pn	13 32 24.0	+0.2
	3.6nm,0.3s,baz=165,slow=23,SNR=8.2						
H11S2	WAKE ISLAND Hy	29.44	2	T	T	14 06 50.9	
	baz=182						
H11S3	WAKE ISLAND Hy	29.44	2	T	T	14 06 52.7	
	baz=182						
H11S1	WAKE ISLAND Hy	29.46	2	T	T	14 06 53.7	
	baz=182						
STKA	Stephens Creek	30.20	223	P	P	13 35 56.6	-0.4
	2.7nm,0.8s,baz=63,slow=11,SNR=2.6						
H11N1	WAKE ISLAND Hy	30.66	3	T	T	14 08 09.0	
	baz=180						
H11N3	WAKE ISLAND Hy	30.67	3	T	T	14 08 10.9	
	baz=180						
H11N2	WAKE ISLAND Hy	30.68	3	T	T	14 08 17.9	
	baz=180						
WRA	Warramunga Arr	31.19	250	P	P	13 36 06.0	0.0
	3.4nm,1.2s,baz=80,slow=9.2,SNR=5.3						
WRA				PcP	PcP	13 39 02.0	+1.5
	0.5nm,0.8s,baz=74,slow=3.3,SNR=3.4						
ASAR	Alice Springs	32.51	243	P	P	13 36 17.1	-0.4
	1.1nm,1.0s,baz=64,slow=10.0,SNR=3.2						
ASAR				PcP	PcP	13 39 04.0	-0.1
	0.6nm,0.8s,baz=84,slow=2.6,SNR=4.5						
ILAR	Eielson Array	83.67	19	P	P	13 42 14.8	+0.3
	0.6nm,0.6s,baz=234,slow=5.4,SNR=4.1						
MKAR	Makanchi Array	93.37	317	P	P	13 43 02.0	+0.5
	0.4nm,0.7s,baz=103,slow=4.8,SNR=2.4						
YKA	Yellowknife Ar	95.16	27	P	P	13 43 08.4	-0.9
	0.1nm,0.6s,baz=260,slow=4.4,SNR=2.9						

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*ISCJB **08** 13:33:16.1±0.8, 11°.8N±0°.2×86°.4W±0°.3, h10km, mb3.3/5, Error ellipse: s-maj=47.5km s-min=9.6km az=137.6*

*IDC **08** 13:33:17.2±1.3, 11°.94N×86°.38W, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.6/34, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=79.6km s-min=12.1km az=52.0*

ISC 08 13:33:18.2±0.9**, 11°.9N**±0°.2×**86°.3W**±0°.3**, h10km, n7,** σ**1^{s}10**/8**, mb3.3**/5**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	JuntasAbangare	2.08	139	Pn	Pn	13 33 52.6	-0.5
	3.8nm,0.3s,baz=171,slow=21,SNR=9.1						
JTS				Pg	Pb	13 33 56.5	+0.5
	10.0nm,0.3s,baz=2.7,slow=14,SNR=48						
JTS				Lg	Lg	13 34 27.8	
	20nm,0.3s,baz=30,slow=23,SNR=5.7						
CMIG	Matias Romero	9.77	303	Pn	Pn	13 35 39.3	+0.5
	0.5nm,0.3s,baz=96,slow=8.1,SNR=4.8						
CMIG				Sn	Sn	13 37 10.3	-18
	0.2nm,0.3s,baz=48,slow=15,SNR=3.3						
TXAR	Lajitas Array	23.71	320	P	P	13 38 30.9	+0.3
	0.8nm,0.7s,baz=129,slow=9.9,SNR=5.7						
PDAR	Pinedale Array	36.80	331	P	P	13 40 24.9	-1.6
	0.2nm,0.6s,baz=128,slow=5.8,SNR=2.7						
ULM	Lac du Bonnet	39.07	350	P	P	13 40 46.8	+1.5
	2.2nm,0.8s,baz=180,slow=11,SNR=3.8						
YKA	Yellowknife Ar	54.46	344	P	P	13 42 45.2	-0.3
	0.2nm,0.7s,baz=137,slow=7.1,SNR=5.1						
ILAR	Eielson Array	66.99	336	P	P	13 44 10.7	-0.3
	0.1nm,0.5s,baz=137,slow=4.4,SNR=5.3						

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*ISCJB **08** 13:39:26.1±0.3, 10°.98S±0°.05×165°.95E±0°.06, h10km, mb4.6/44, Error ellipse: s-maj=8.5km s-min=5.9km az=153.2*

*IDC **08** 13:39:26.1±0.5, 10°.89S×165°.99E, h0km, mb4.4/20, mb1 4.5/22, mb1mx4.4/38, mbtmp4.4/22, ML4.9/2, Error ellipse: s-maj=17.9km s-min=13.7km az=93.0*

*NEIC **08** 13:39:27.6±0.3, 10°.91S×165°.99E, h10km, mb5.0/16, Error ellipse: s-maj=8.9km s-min=6.4km az=78.0*

ISC 08 13:39:27.7±0.5**, 10°.88S**±0°.08×**166°.01E**±0°.08**, h10km, n85,** σ**1^{s}41**/75**, mb4.8**/50**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.14	283	Pn	Pn	13 40 59.5	+1.0
	56nm,0.3s,baz=164,slow=2.5,SNR=36						
HNR				Sn	Sn	13 42 09.3	+0.5
	baz=342,slow=20,SNR=1.6						
DZM	Mont Dzumac	11.14	178	*e*Pn	Pn	13 42 06.9	-0.3
DZM	Mont Dzumac	11.14	178	Pn	Pn	13 42 07.5	+0.3
	4.2nm,0.3s,baz=350,slow=11,SNR=22						
ONTNC	Ouen Toro	11.38	178	*e*Pn	Pn	13 42 10.0	-0.3
RABL	Rabaul	15.24	295	*e*Pn	P	13 43 05.1	-3.1
	87nm,0.6s						
EIDS	Eidsvold	20.20	222	*e*P	Pn	13 44 04.5	-0.1
	44nm,1.4s						
CTA	Charters Tower	21.11	242	P	P	13 44 13.1	+0.4
	25nm,1.0s,baz=80,slow=11,SNR=8.0						
CTAO	Charters Tower	21.11	242	*e*P	P	13 44 13.1	+0.4
	31nm,1.0s						
URZ	Urewera	29.02	162	P	P	13 45 27.5	-0.4
	9.5nm,0.8s,baz=231,slow=1.6,SNR=3.9						
H11S2	WAKE ISLAND Hy	29.19	1	T	T	14 15 48.8	
	baz=181,slow=76,SNR=92						
H11S3	WAKE ISLAND Hy	29.19	1	T	T	14 15 49.3	
	baz=181,slow=76,SNR=71						
H11S1	WAKE ISLAND Hy	29.20	1	T	T	14 15 49.0	
	baz=181,slow=76,SNR=54						
BKZ	Black Stump Fm	29.68	163	*e*P	P	13 45 33.3	-0.6
	11nm,0.6s						
H11N1	WAKE ISLAND Hy	30.41	2	T	T	14 17 23.5	
	baz=182,slow=76,SNR=58						
H11N3	WAKE ISLAND Hy	30.41	2	T	T	14 17 19.2	
	baz=182,slow=76,SNR=47						
H11N2	WAKE ISLAND Hy	30.43	2	T	T	14 17 20.1	
	baz=182,slow=76,SNR=49						
STKA	Stephens Creek	30.74	223	*e*P	P	13 45 43.1	-0.2
	1.9nm,1.1s						
STKA	Stephens Creek	30.74	223	P	P	13 45 43.0	-0.3
	3.3nm,0.7s,baz=37,slow=10,SNR=6.9						
THZ	Tophouse	31.36	170	*e*P	P	13 45 48.2	-0.4
	25nm,0.8s						
WRAB	Tennant Creek	31.77	250	*e*P	P	13 45 50.9	-1.6
	26nm,1.0s						
WB2	Warramunga Arr	31.77	250	*e*P	P	13 45 51.5	-1.0
WRA	Warramunga Arr	31.78	250	P	P	13 45 51.5	-1.1
	21nm,1.0s,baz=80,slow=9.1,SNR=41						
LTZ	Lake Taylor	32.25	171	*e*P	P	13 45 56.8	+0.3
	20nm,0.8s						
FOZ	Fox Glacier	32.70	175	*e*P	P	13 46 00.2	-0.1
	34nm,1.0s						
OXZ	Oxford	32.75	172	*e*P	P	13 46 00.8	+0.1
	33nm,0.9s						
RPZ	Rata Peaks	33.01	173	*e*P	P	13 46 03.2	+0.2
	42nm,0.9s						
RPZ	Rata Peaks	33.01	173	P	P	13 46 01.9	-1.1
	36nm,0.8s,baz=165,slow=3.7,SNR=11						
AS01	Alice Springs	33.06	243	*e*P	P	13 46 01.6	-2.1
AS31	Alice Springs	33.10	243	*e*P	P	13 46 02.4	-1.7
	2.6nm,1.1s						
ASAR	Alice Springs	33.10	243	P	P	13 46 02.3	-1.8
	11nm,1.1s,baz=64,slow=10,SNR=40						
ASAR				PcP	PcP	13 48 48.8	+1.3
	1.2nm,0.7s,baz=79,slow=2.1,SNR=5.4						
BBOO	Buckleboo	35.13	227	*e*P	P	13 46 19.1	-2.5
	17nm,1.0s						
FITZ	Fitzroy Crossi	39.67	255	*e*P	P	13 46 59.0	-1.3
	15nm,0.8s						
MJAR	Matsushiro Arr	53.94	332	P	P	13 48 51.6	-0.1
	6.1nm,1.1s,baz=155,slow=8.1,SNR=5.4						
KSRS	Korea Array	59.88	325	P	P	13 49 34.0	+0.3
	0.7nm,0.6s,baz=129,slow=8.5,SNR=3.5						
KSAR	Wonju Array Be	59.90	325	P	P	13 49 34.0	+0.1
KS01	Wonju Array Si	59.92	325	*e*P	P	13 49 33.6	-0.4
NJ2	Nanjing	62.08	315	*e*P	P	13 49 50.1	+1.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	62.91	333	P	P	13 49 55.5	+1.3
	comp=Z,5.2nm,0.9s,baz=113,slow=11,SNR=3.2						
BKNI	Bangkinang	65.51	275	P	P	13 50 14.1	+2.2
CN2	Changchun	65.73	329	*e*P	P	13 50 17.7	+5.0
VNDA	Vanda	66.67	181	P	P	13 50 19.9	+1.6
	comp=Z,5.6nm,1.1s,baz=20,slow=12,SNR=2.8						
KLR	Kul'dur	67.01	336	P	P	13 50 21.4	+0.7
	comp=Z,2.0nm,0.8s,baz=93,slow=7.0,SNR=4.1						
ENH	Enshi	67.99	309	*e*P	P	13 50 27.0	-0.4
	comp=Z,12nm,0.9s						
BJI	Beijing	68.51	321	*e*P	P	13 50 30.5	+0.1
BJI				pmax	pmax		
	comp=Z,5.0nm,1.8s						
GYA	Guiyang	68.54	304	*e*P	P	13 50 32.8	+1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PBKT	Sadao Pong	69.86	292	P	P	13 50 46.1	+6.9
	comp=Z,5.6nm,0.7s,comp=Z,0.0nm						
XAN	Xi'an	70.20	312	P	P	13 50 41.1	0.0
XAN				pP	sP	13 50 45.9	+0.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMI	Kunming	71.25	301	P	P	13 50 50.8	+2.9
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				LR	LR		
	comp=N,1µm,18.5s						
KMI				LR	LR		
	comp=E,800nm,15.7s						
KMI				LR	LR		
	comp=Z,2µm,18.8s						
HHC	Hu-ho-hao-te	71.87	320	*e*P	P	13 50 51.6	+0.4
HHC				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC				pmax	pmax		
	comp=Z,290nm,6.3s						
CM01	Chiang Mai Arr	72.26	293	*e*P	P	13 50 53.8	0.0
CMAR	Chiang Mai Arr	72.28	293	P	P	13 50 54.5	+0.5
	comp=Z,1.9nm,0.9s,baz=108,slow=4.6,SNR=11						
CMMT	Chiang Mai	72.39	294	P	P	13 51 00.3	+5.7
	comp=Z,5.8nm,1.2s						
CHTO	Chiang Mai	72.39	294	P	P	13 51 00.6	+6.0
	comp=Z,26nm,1.2s						
CHTO	Chiang Mai	72.39	294	P	P	13 51 00.6	+6.0
	comp=Z,26nm,1.2s						
CD2	Chengdu	72.71	307	*e*P	P	13 50 56.3	0.0
LZH	Lanzhou	74.84	312	*e*P	P	13 51 09.8	+0.9
LZH				pP	sP	13 51 15.6	+2.7
LZH				sP	PcP	13 51 17.8	-5.0
LZH				PP	PP	13 53 50.8	-5.7
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,96nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,16.5s						
LZH				LR	LR		
	comp=E,260nm,16.7s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
ULN	Ulaanbaatar	78.32	324	*e*P	P	13 51 28.8	+0.5
	comp=Z,6.6nm,0.8s						
SONM	Songino Array	78.68	324	P	P	13 51 30.7	+0.4
	comp=Z,0.8nm,0.7s,baz=132,slow=6.2,SNR=3.2						
SONA1	Songino Array	78.69	324	*e*P	P	13 51 31.6	+1.3
GTA	Gaotai	79.13	314	⇑P	P	13 51 33.8	+0.9
GTA				pP	PcP	13 51 38.5	-2.8
GTA				sP	sP	13 51 41.0	+4.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
QSPA	South Pole Qui	79.13	180	*e*P	P	13 51 33.4	+0.9
	comp=Z,13nm,1.1s						
ILAR	Eielson Array	83.27	18	P	P	13 51 54.1	-0.2
	comp=Z,0.9nm,0.9s,baz=236,slow=5.1,SNR=13						
ODAN	Odare	84.90	298	*e*P	P	13 52 07.8	+4.1
	comp=Z,30nm,0.9s						
NVAR	Mina Array Bea	85.72	50	P	P	13 52 08.1	+0.6

	comp=Z,1.5nm,0.9s,baz=246,slow=8.5,SNR=5.5						
JIRN	Jiri	86.13	299	*e*P	P	13 52 14.0	+4.0
	comp=Z,28nm,1.0s						
GUN	Gumba	86.46	299	*e*P	P	13 52 15.2	+3.6
DMN	Daman	87.05	299	*e*P	P	13 52 18.3	+3.9
	comp=Z,32nm,1.1s						
DANN	Dangsing	88.38	299	*e*P	P	13 52 23.8	+3.0
	comp=Z,15nm,0.9s						
KOLN	Koldanda	88.39	299	*e*P	P	13 52 23.3	+2.6
	comp=Z,12nm,1.0s						
PYUN	Piuthan	88.99	299	*e*P	P	13 52 26.6	+3.1
	comp=Z,15nm,0.9s						
WMQ	Urumqi	89.16	315	*e*P	P	13 52 24.9	+1.1
WMQ				pP	sP	13 52 28.1	+0.2
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
WMQ				LR	LR		
	comp=N,2µm,17.3s						
WMQ				LR	LR		
	comp=E,2µm,19.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.3s						
PDAR	Pinedale Array	93.25	47	P	P	13 52 43.6	+0.5
	comp=Z,0.2nm,0.6s,baz=256,slow=7.3,SNR=2.3						
MK01	Makanchi Array	93.56	317	*e*P	P	13 52 43.2	-0.9
ZALV	Zalesovo Beam	93.57	324	P	P	13 52 43.1	-0.8
	comp=Z,1.9nm,0.8s,baz=85,slow=3.3,SNR=3.0						
MK31	Makanchi Array	93.58	317	*e*P	P	13 52 43.8	-0.4
MKAR	Makanchi Array	93.58	317	P	P	13 52 43.6	-0.5
	comp=Z,1.7nm,0.7s,baz=100,slow=6.0,SNR=13						
MKAR				PKKPbc	PKKPdf	14 09 48.8	-1.7
	comp=Z,0.1nm,0.8s,baz=291,slow=4.5,SNR=1.9						
YKA	Yellowknife Ar	94.70	27	P	P	13 52 47.3	-1.6
	comp=Z,0.1nm,0.5s,baz=258,slow=4.3,SNR=3.8						
NRIK	Noril'sk	96.06	340	P	P	13 52 54.8	-0.2
	comp=Z,1.6nm,0.3s,baz=158,slow=19,SNR=2.9						
ARCES	ARCESS Array B	116.24	346	PKP	PKPdf	13 58 09.7	-1.1
	comp=Z,1.6nm,0.6s,baz=81,slow=1.2,SNR=9.6						
FINES	FINESS Array B	121.71	339	PKP	PKiKP	13 58 21.2	-0.5
	comp=Z,1.7nm,0.9s,baz=346,slow=10.0,SNR=3.6						
NOA	NORSAR Array B	126.61	345	PKP	PKiKP	13 58 31.3	-0.2
	comp=Z,0.6nm,0.7s,baz=34,slow=2.0,SNR=3.5						
AKASG	Malin Array Be	126.86	327	PKP	PKiKP	13 58 33.4	+1.2
	comp=Z,0.9nm,0.6s,baz=48,slow=3.1,SNR=2.5						
KEST	Kesra	147.44	323	PKPbc	PKPbc	13 59 10.1	-2.4
	comp=Z,4.7nm,0.9s,baz=67,slow=7.7,SNR=2.4						
ESDC	Sonseca Array	149.97	344	PKPbc	PKiKP	13 59 18.8	-1.0
	comp=Z,1.4nm,0.7s,baz=8.4,slow=3.2,SNR=2.9						
ESDC				PKPab	PKPab	13 59 24.2	-0.2
	comp=Z,0.8nm,0.6s,baz=5.6,slow=4.7,SNR=5.1						
TORD	Torodi Ar. Bea	164.49	280	PKP	PKPdf	13 59 32.6	-0.2
	comp=Z,0.9nm,0.9s,baz=29,slow=3.3,SNR=2.3						
TORD				PKPab	PKPab	14 00 26.9	-0.7
	comp=Z,2.8nm,1.1s,baz=83,slow=3.2,SNR=7.3						

*IDC **08** 13:43:03.4±1.0, 11°.95S×165°.26E, h0^{km}, mb4.2/10, mb1 4.3/12, mb1mx4.1/40, mbtmp4.1/12, ML3.7/2, Error ellipse: s-maj=35.6km s-min=20.0km az=142.0*

*NEIC **08** 13:43:05.0±0.4, 11°.94S×165°.25E, h10^{km}, mb4.5/4, Error ellipse: s-maj=13.0km s-min=7.8km az=134.0*

*ISCJB **08** 13:43:06.7±0.5, 12°.10S±0°.10×165°.2E±0°.1, h33^{km}, mb4.2/14, Error ellipse: s-maj=17.2km s-min=10.8km az=43.3*

ISC 08 13:43:08.6±0.7**, 12°.0S**±0°.1×**165°.3E**±0°.2**, h35^{km}, n26, σ0^{s}.76**/26**, mb4.3**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.06	174	Pn	Pn	13 45 31.2	+0.3
	1.4nm,0.3s,baz=336,slow=5.2,SNR=17						
CTA	Charters Tower	19.94	244	P	P	13 47 36.0	-1.7
	0.1nm,0.3s,baz=79,slow=16,SNR=2.5						
WR1	Warramunga Arr	30.72	251	*e*P	P	13 49 21.3	+0.7
WRA	Warramunga Arr	30.72	251	P	P	13 49 21.3	+0.7
	1.4nm,0.8s,baz=80,slow=9.0,SNR=5.5						
AS31	Alice Springs	31.94	244	*e*P	P	13 49 30.7	-0.7
	0.8nm,1.0s						
ASAR	Alice Springs	31.94	244	P	P	13 49 30.7	-0.7
	0.9nm,0.8s,baz=76,slow=9.0,SNR=5.2						
FITZ	Fitzroy Crossi	38.68	256	*e*P	P	13 50 30.2	+0.9
	6.3nm,0.8s						
CMAR	Chiang Mai Arr	72.07	294	P	P	13 54 30.8	+1.0
	1.2nm,0.8s,baz=122,slow=4.7,SNR=6.7						
SONA0	Songino Array	79.17	324	*e*P	P	13 55 10.5	+0.5
SONM	Songino Array	79.17	324	P	P	13 55 10.5	+0.5
	1.1nm,1.0s,baz=116,slow=5.3,SNR=2.7						
WRH	Wood River Hil	83.99	18	*e*P	P	13 55 34.9	0.0
	5.8nm,1.0s						
IL1	Eielson Array	84.58	19	*e*P	P	13 55 38.0	0.0
ILAR	Eielson Array	84.58	19	P	P	13 55 37.7	-0.2
	3.3nm,0.7s,baz=242,slow=5.4,SNR=40						
ILB	Eielson Array	84.58	19	*e*P	P	13 55 37.8	-0.2
SCRK	Sand Creek	84.98	20	*e*P	P	13 55 40.5	+0.3
	8.9nm,1.0s						
NV01	Mina Array Sit	87.01	50	*e*P	P	13 55 51.1	+0.2
NVAR	Mina Array Bea	87.01	50	P	P	13 55 51.1	+0.3
	1.6nm,0.8s,baz=232,slow=8.8,SNR=8.9						
MK01	Makanchi Array	93.89	317	*e*P	P	13 56 22.4	-0.2
MK31	Makanchi Array	93.90	317	*e*P	P	13 56 22.7	0.0
MK32	Makanchi Array	93.90	317	*e*P	P	13 56 22.5	-0.2
MKAR	Makanchi Array	93.90	317	P	P	13 56 22.5	-0.1
	1.1nm,0.8s,baz=101,slow=6.5,SNR=10						
ZALV	Zalesovo Beam	94.06	324	P	P	13 56 22.5	-0.6
	0.5nm,0.5s,baz=150,slow=12,SNR=3.5						
ZAA1	Zalesovo Array	94.06	324	*e*P	P	13 56 22.5	-0.6
PDAR	Pinedale Array	94.55	47	P	P	13 56 27.0	+1.0
	0.3nm,0.8s,baz=232,slow=4.4,SNR=3.5						
YKA	Yellowknife Ar	96.05	27	P	P	13 56 30.8	-1.2
	1.1nm,0.8s,baz=256,slow=4.7,SNR=21						
YKB5	Yellowknife Ar	96.05	27	*e*P	P	13 56 30.5	-1.5

*IDC **08** 13:45:54.0±1.1, 10°.82S×164°.53E, h0^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.8/41, mbtmp4.0/9, ML4.6/3, Error ellipse: s-maj=31.1km s-min=20.6km az=142.0*

*ISCJB **08** 13:45:56.8±0.8, 11°.0S±0°.1×164°.49E±0°.09, h29^{km}, mb3.7/6, Error ellipse: s-maj=16.2km s-min=11.8km az=30.2*

ISC 08 13:45:58.4±1.0**, 10°.9S**±0°.1×**164°.6E**±0°.1**, h29^{km}, n16, σ1^{s}.26**/12**, mb3.8**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.78	287	*e*P	Pn	13 47 08.0	-0.6
HNR				*e*S	Sn	13 48 06.0	+2.9
HNR	Honiara	4.78	287	Pn	Pn	13 47 08.6	0.0
	84nm,0.3s,baz=137,slow=4.0,SNR=18						
HNR				Sn	Sn	13 48 02.2	-0.8
	2.8nm,0.3s,baz=155,slow=19,SNR=1.7						
DZM	Mont Dzumac	11.27	171	Pn	Pn	13 48 38.6	+0.9
	2.5nm,0.3s,baz=3.3,slow=14,SNR=15						
CTA	Charters Tower	19.88	240	P	P	13 50 27.4	-0.1
	0.7nm,0.3s,baz=78,slow=8.1,SNR=6.5						
H11S2	WAKE ISLAND Hy	29.26	4	T	T	14 22 40.4	
	baz=180						
H11S3	WAKE ISLAND Hy	29.26	4	T	T	14 22 31.3	
	baz=180						
H11S1	WAKE ISLAND Hy	29.27	4	T	T	14 22 44.1	
	baz=180						
STKA	Stephens Creek	29.79	222	P	P	13 52 02.7	-0.1
	2.2nm,1.0s,baz=51,slow=13,SNR=2.0						
WRA	Warramunga Arr	30.47	249	P	P	13 52 09.2	+0.2
	0.7nm,0.5s,baz=79,slow=9.0,SNR=9.8						
H11N1	WAKE ISLAND Hy	30.48	4	T	T	14 24 10.2	
	baz=182,slow=76,SNR=4.1						
H11N3	WAKE ISLAND Hy	30.49	4	T	T	14 24 10.5	
	baz=182,slow=76,SNR=3.1						
H11N2	WAKE ISLAND Hy	30.50	4	T	T	14 24 12.2	
	baz=182,slow=76,SNR=5.3						
ASAR	Alice Springs	31.85	242	P	P	13 52 19.3	-1.9
	0.4nm,0.5s,baz=64,slow=10,SNR=9.6						
ILAR	Eielson Array	83.72	19	P	P	13 58 24.4	+0.2
	0.9nm,0.8s,baz=239,slow=6.2,SNR=9.0						
NVAR	Mina Array Bea	86.79	50	P	P	13 58 40.9	+0.4
	0.1nm,0.3s,baz=246,slow=5.8,SNR=2.4						
MKAR	Makanchi Array	92.62	317	P	P	13 59 06.9	-0.6
	0.3nm,0.6s,baz=97,slow=5.7,SNR=4.0						

IDC 08 13:48:04.0±10.0**, 10°.96S**×**165°.15E, h0^{km}, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.5**/42**, mbtmp3.6**/3**, Error ellipse: s-maj=320.1km s-min=57.7km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.96	249	P	P	13 54 22.4	-0.7
	0.9nm,1.1s,baz=80,slow=9.5,SNR=1.6						
ASAR	Alice Springs	32.30	243	P	P	13 54 35.6	+0.7
	0.3nm,0.7s,baz=72,slow=9.8,SNR=1.1						
MKAR	Makanchi Array	93.06	317	P	P	14 01 19.6	-0.1
	0.6nm,0.7s,baz=89,slow=7.3,SNR=4.5						

IDC 08 13:50:44.0±4.0**, 11°.46S**×**165°.26E, h0^{km}, mb3.8**/4**, mb1 3.9**/5**, mb1mx3.6**/45**, mbtmp3.9**/5**, ML4.1**/1**, Error ellipse: s-maj=78.5km s-min=54.8km az=113.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.60	291	Pn	Pn	13 52 09.0	+0.4
	5.6nm,0.3s,baz=22,slow=4.7,SNR=2.2						
WRA	Warramunga Arr	30.90	250	P	P	13 57 02.7	+0.1
	1.3nm,0.7s,baz=81,slow=9.2,SNR=8.8						
ASAR	Alice Springs	32.19	244	P	P	13 57 13.6	-0.3
	0.3nm,0.6s,baz=62,slow=10,SNR=5.2						
FITZ	Fitzroy Crossi	38.82	255	P	P	13 58 10.9	-0.1
	2.1nm,1.0s,baz=68,slow=5.4,SNR=8.5						
MKAR	Makanchi Array	93.50	317	P	P	14 04 01.7	-0.1
	0.2nm,0.6s,baz=117,slow=7.0,SNR=3.3						

*ISCJB **08** 13:54:06.8±0.4, 10°.83S±0°.05×165°.73E±0°.06, h10^{km}, mb4.3/22, Error ellipse: s-maj=8.9km s-min=7.9km az=11.2*

*IDC **08** 13:54:06.8±0.9, 10°.80S×165°.67E, h0^{km}, mb4.3/19, mb1 4.4/20, mb1mx4.3/47, mbtmp4.3/20, ML4.7/1, Error ellipse: s-maj=29.4km s-min=16.3km az=128.0*

*NEIC **08** 13:54:08.7±0.3, 10°.75S×165°.68E, h10^{km}, mb4.4/5, Error ellipse: s-maj=9.8km s-min=6.9km az=104.0*

ISC 08 13:54:08.5±0.6**, 10°.76S**±0°.09×**165°.80E**±0°.09**, h10^{km}, n54, σ1^{s}.16**/48**, mb4.2**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.91	282	*e*P	Pn	13 55 36.0	-0.2
HNR				*e*S	Sn	13 56 46.0	+1.9
HNR	Honiara	5.91	282	*e*Pn	Pn	13 55 37.8	+1.5
HNR				*e*Pn	Pn	13 55 38.1	+1.9
HNR	Honiara	5.91	282	Pn	Pn	13 55 37.8	+1.5
	22nm,0.3s,baz=165,slow=3.3,SNR=14						
MARNC	Mare, Loyalty	10.87	169	*e*Pn	Pn	13 56 45.7	+1.4
DZM	Mont Dzumac	11.26	177	Pn	Pn	13 56 50.5	+0.8
	4.9nm,0.3s,baz=188,slow=22,SNR=35						
ONTNC	Ouen Toro	11.50	177	*e*Pn	Pn	13 56 54.2	+1.4
CTA	Charters Tower	20.98	241	P	Pn	13 58 52.9	-1.8
	11nm,0.8s,baz=61,slow=14,SNR=7.1						
H11S2	WAKE ISLAND Hy	29.08	2	T	T	14 30 34.5	
	baz=175						
H11S3	WAKE ISLAND Hy	29.08	2	T	T	14 30 33.8	
	baz=175						
H11S1	WAKE ISLAND Hy	29.10	2	T	T	14 30 35.1	
	baz=175						
H11N1	WAKE ISLAND Hy	30.30	2	T	T	14 32 11.0	
	baz=179						
H11N3	WAKE ISLAND Hy	30.31	2	T	T	14 32 07.7	
	baz=179						
H11N2	WAKE ISLAND Hy	30.32	2	T	T	14 32 11.2	
	baz=179						
STKA	Stephens Creek	30.68	223	*e*P	P	14 00 23.2	-0.4
	1.4nm,1.1s						
STKA	Stephens Creek	30.68	223	P	P	14 00 23.7	+0.1
	1.0nm,0.4s,baz=50,slow=8.8,SNR=4.5						
WR1	Warramunga Arr	31.63	249	*e*P	P	14 00 30.1	-2.0
WRA	Warramunga Arr	31.63	249	P	P	14 00 30.1	-2.0
	2.4nm,0.6s,baz=82,slow=9.2,SNR=33						
AS01	Alice Springs	32.92	243	*e*P	P	14 00 41.5	-1.9
AS31	Alice Springs	32.96	243	*e*P	P	14 00 42.4	-1.4
	1.9nm,0.6s						
ASAR	Alice Springs	32.97	243	P	P	14 00 42.1	-1.7
	6.5nm,0.8s,baz=65,slow=10,SNR=84						
FITZ	Fitzroy Crossi	39.50	255	*e*P	P	14 01 38.0	-1.7
	4.1nm,0.9s						
FITZ	Fitzroy Crossi	39.50	255	P	P	14 01 38.0	-1.7
	3.2nm,0.6s,baz=103,slow=7.9,SNR=12						
MJAR	Matsushiro Arr	53.74	332	P	P	14 03 31.3	+0.2
	2.8nm,0.9s,baz=171,slow=8.6,SNR=5.1						
MAJO	Matsushiro	53.75	332	*e*P	P	14 03 31.3	+0.1
ASAJ	Asahikawa	58.55	341	P	P	14 04 06.5	+1.2
	15nm,0.9s,baz=165,slow=19,SNR=2.9						
KLR	Kul'dur	66.82	336	P	P	14 05 01.1	+0.7
	1.2nm,0.7s,baz=53,slow=3.2,SNR=5.3						
MA2	Magadan	71.14	352	P	P	14 05 26.3	-0.8
	1.0nm,0.2s,baz=122,slow=16,SNR=3.1						
CMAR	Chiang Mai Arr	72.05	293	P	P	14 05 32.9	-0.5
	0.5nm,0.3s,baz=111,slow=4.4,SNR=5.5						
SEY	Seymchan	74.20	354	P	P	14 05 45.5	+0.4
	0.6nm,0.7s,baz=196,slow=7.8,SNR=3.7						
SONA0	Songino Array	78.47	324	*e*P	P	14 06 10.3	+0.4
SONM	Songino Array	78.47	324	P	P	14 06 10.3	+0.4
	1.0nm,0.6s,baz=123,slow=5.5,SNR=4.7						
WRH	Wood River Hil	82.65	18	*e*P	P	14 06 32.4	+0.6
	5.8nm,0.8s						
MDM	Murphy Dome	82.95	18	*e*P	P	14 06 34.1	+0.6
	7.3nm,1.0s						
IL1	Eielson Array	83.23	18	*e*P	P	14 06 36.2	+1.3
ILAR	Eielson Array	83.23	18	P	P	14 06 35.6	+0.7
	4.0nm,0.7s,baz=236,slow=5.2,SNR=58						
ILB	Eielson Array	83.23	18	*e*P	P	14 06 35.6	+0.7
NVAR	Mina Array Bea	85.80	50	P	P	14 06 49.8	+1.0
	1.4nm,0.9s,baz=225,slow=7.9,SNR=5.9						
TIXI	Tiksi	85.82	349	P	P	14 06 47.4	-0.4
	0.5nm,0.3s,baz=60,slow=1.5,SNR=4.6						
PDAR	Pinedale Array	93.32	47	P	P	14 07 24.2	0.0
	0.5nm,0.9s,baz=222,slow=1.2,SNR=4.2						
MK01	Makanchi Array	93.34	317	*e*P	P	14 07 23.5	-0.5
MK31	Makanchi Array	93.35	317	*e*P	P	14 07 24.0	0.0
MK32	Makanchi Array	93.35	317	*e*P	P	14 07 23.7	-0.3
MKAR	Makanchi Array	93.35	317	P	P	14 07 23.7	-0.3
	1.6nm,0.8s,baz=94,slow=6.3,SNR=20						
ZALV	Zalesovo Beam	93.36	324	*e*P	P	14 07 22.8	-1.0
ZALV	Zalesovo Beam	93.36	324	P	P	14 07 23.4	-0.4
	1.1nm,0.5s,baz=140,slow=4.7,SNR=5.7						
ZAA1	Zalesovo Array	93.36	324	*e*P	P	14 07 23.4	-0.4
YKA	Yellowknife Ar	94.70	27	P	P	14 07 28.8	-0.9
	0.6nm,0.8s,baz=255,slow=4.7,SNR=11						
YKB5	Yellowknife Ar	94.70	27	*e*P	P	14 07 28.8	-0.9
KURK	Kurchatov	96.46	320	*e*P	P	14 07 36.1	-1.9
KURBB	Kurchatov Arra	96.50	320	P	P	14 07 36.1	-2.1
	0.8nm,0.6s,baz=119,slow=3.6,SNR=9.9						
ARA0	ARCESS Array S	116.07	346	*e*PKPdf	PKPdf	14 12 50.5	-0.9
ARCES	ARCESS Array B	116.07	346	PKP	PKPdf	14 12 50.5	-0.9
	0.9nm,0.7s,baz=79,slow=2.6,SNR=13						
PB11	IPOC Station P	117.55	119	*e*PKPdf	PKiKP	14 12 57.7	+1.8
ESDC	Sonseca Array	149.80	344	PKPbc	PKiKP	14 13 59.1	-1.2
	0.2nm,0.3s,baz=351,slow=3.8,SNR=4.2						

*KRNET **08** 13:54:48.6±0.1, 42°.57N×79°.70E, h8^{km}, mb2.6*

*NNC **08** 13:54:48.3±1.2, 42°.58N×79°.66E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=7.4km s-min=4.2km az=133.0*

*SOME **08** 13:54:49.2, 42°.60N×79°.65E, h15^{km}*

ISC 08 13:54:46.6±1.7**, 42°.50N**±0°.05×**79°.73E**±0°.04**, h4^{km}**±15^{km}**, n51, σ0^{s}.95**/91**, 13C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.83	322	P	Pg	13 55 03.0	+0.5
	3.5nm,0.1s						
UZB				S	Sg	13 55 13.1	-0.3
	30nm,0.1s						
UZB	Uzynbulak	0.83	322	⇓*e*P	Pg	13 55 03.1	+0.5
	baz=20						
UZB				⇓*e*S	Sg	13 55 13.1	-0.3
	baz=20						
UZB	Uzynbulak	0.83	322	⇓*e*P	Pg	13 55 03.1	+0.5
	3.5nm,0.1s						
UZB				*e*S	Sg	13 55 13.1	-0.3
	30nm,0.1s						
PDGK	Podgornoye	0.85	348	P	Pg	13 55 03.4	+0.4
	1.9nm,0.1s						
PDGK				S	Sg	13 55 13.9	-0.1
	7.7nm,0.2s						
PDGK	Podgornoye	0.85	348	⇑P	Pg	13 55 02.5	-0.5
	0.7nm,0.3s						
PDGK				⇑S	Sg	13 55 13.8	-0.1
	4.1nm,0.3s						
PDGK	Podgornoye	0.85	348	⇑*i*P	Pg	13 55 03.3	+0.4
	baz=48						
PDGK				⇑*i*S	Sg	13 55 13.9	-0.1
	baz=48						
PRZ	Przheval'sk	0.98	270	⇓*i*P	Pg	13 55 06.9	+1.4
	baz=65						
PRZ				⇓*i*S	Sb	13 55 19.6	-0.1
	baz=65						
KTMS	Ketmen	1.05	26	P	Pg	13 55 07.8	+0.9
KTMS				S	Sb	13 55 21.4	-0.4
KTMS	Ketmen	1.05	26	*e*P	Pg	13 55 07.8	+0.9
	baz=28						
KTMS				*e*S	Sb	13 55 21.4	-0.4
	baz=28						
KTMS	Ketmen	1.05	26	*e*P	Pg	13 55 07.8	+0.9
	0.9nm,0.1s						
KTMS				*e*S	Sb	13 55 21.4	-0.4
	2.9nm,0.2s						
SATY	Saty	1.12	300	P	Pg	13 55 08.2	+0.1
SATY				S	Sg	13 55 22.0	-0.7
SATY	Saty	1.12	300	*e*P	Pg	13 55 08.2	+0.1
	0.8nm,0.1s						
SATY				*e*S	Sg	13 55 22.0	-0.7
	24nm,0.2s						
DJR	Jarkent	1.83	1	P	Pb	13 55 21.4	+0.6
	1.3nm,0.2s						
DJR				S	Sg	13 55 44.4	-1.1
	3.1nm,0.3s						
DJR	Jarkent	1.83	1	*e*P	Pb	13 55 20.9	+0.1
	1.3nm,0.2s						
DJR				*e*S	Sb	13 55 43.9	-0.3
	3.1nm,0.3s						
MNBS	Baschi	1.85	329	P	Pb	13 55 21.3	+0.1
	3.9nm,0.2s						
MNBS				S	Sg	13 55 44.6	-1.6
	8.2nm,0.1s						
MNBS	Baschi	1.85	329	*e*P	Pb	13 55 21.3	+0.1
	baz=29						
MNBS				*e*S	Sg	13 55 44.6	-1.6
	baz=29						
MNBS	Baschi	1.85	329	*e*P	Pb	13 55 21.3	+0.1
	3.9nm,0.2s						
MNBS				*e*S	Sg	13 55 44.6	-1.6
	8.2nm,0.1s						
KDJ	Kajisay	1.92	260	⇑*i*P	Pb	13 55 23.8	+1.4
	baz=57						
KDJ				⇑*i*S	Sg	13 55 48.9	+0.5
	baz=57						
KOTS	Kotyrbulak	2.06	292	Pg	Pb	13 55 25.7	+1.0
	2.9nm,0.2s						
KOTS				Lg	Lg	13 55 52.1	
	8.2nm,0.3s						
KOTS	Kotyrbulak	2.06	292	*e*P	Pb	13 55 25.7	+1.0
	baz=90						
KOTS				*e*S	Sg	13 55 52.1	-0.7
	baz=90						
KOTS	Kotyrbulak	2.06	292	*e*P	Pb	13 55 25.7	+1.0
	2.9nm,0.2s						
KOTS				*e*S	Sg	13 55 52.1	-0.7
	8.2nm,0.3s						
MDOK	Medeo	2.08	290	⇑Pg	Pb	13 55 24.9	-0.1
	2.7nm,0.5s						
MDOK				Lg	Lg	13 55 50.9	
	4.1nm,0.6s						
MDOK	Medeo	2.08	290	Pg	Pb	13 55 24.7	-0.3
	3.3nm,0.4s						
MDOK				Lg	Lg	13 55 51.0	
	3.1nm,0.5s						
MDOK	Medeo	2.08	290	*e*P	Pb	13 55 24.9	-0.1
	baz=88						
MDOK				*e*S	Sb	13 55 50.7	-0.6
	baz=88						
MDOK	Medeo	2.08	290	*e*P	Pb	13 55 24.9	-0.1
	3.3nm,0.4s						
MDOK				*e*S	Sb	13 55 50.7	-0.6
	3.1nm,0.5s						
TNSS	Tian-Shan	2.12	286	Pg	Pb	13 55 26.9	+1.1
TNSS				Lg	Lg	13 55 53.6	
TNSS	Tian-Shan	2.12	286	*e*P	Pb	13 55 26.2	+0.4
	baz=84						
TNSS				*e*S	Sb	13 55 53.2	+0.6
	baz=84						
TNSS	Tian-Shan	2.12	286	*e*P	Pb	13 55 26.2	+0.4
	2.4nm,0.2s						
TNSS				*e*S	Sb	13 55 53.3	+0.6
	3.5nm,0.3s						
ARXS	Arharly	2.21	322	Pg	Pb	13 55 27.6	+0.5
ARXS				Lg	Lg	13 55 55.1	
ARXS	Arharly	2.21	322	*e*P	Pb	13 55 27.6	+0.5
	2.9nm,0.5s						
ARXS				*e*S	Sg	13 55 55.1	-2.4
	18nm,0.4s						
IZV	Izvestkoviy	2.35	284	Pg	Pb	13 55 30.4	+0.6
	2.1nm,0.2s						
IZV				Lg	Lg	13 55 60.0	
	9.7nm,0.2s						
IZV	Izvestkoviy	2.35	284	*e*P	Pb	13 55 30.4	+0.6
	baz=83						
IZV				*e*S	Sb	13 56 00.0	+0.7
	baz=83						
IZV	Izvestkoviy	2.35	284	*e*P	Pb	13 55 30.4	+0.6
	2.1nm,0.2s						
IZV				*e*S	Sb	13 55 60.0	+0.7
	9.7nm,0.2s						
CHKK	Chushkaly	2.42	305	Pg	Pb	13 55 31.3	+0.5
CHKK				Lg	Lg	13 56 01.3	
CHKK	Chushkaly	2.42	305	*e*P	Pb	13 55 31.3	+0.5
	baz=4.0						
CHKK				*e*S	Sb	13 56 01.3	+0.3
	baz=4.0						
CHKK	Chushkaly	2.42	305	*e*P	Pb	13 55 31.3	+0.5
	1.0nm,0.1s						
CHKK				*e*S	Sb	13 56 01.3	+0.3
	15nm,0.3s						
KTBS	Karatobe	2.54	300	Pg	Pb	13 55 33.6	+0.8
KTBS				Lg	Lg	13 56 05.3	
KTBS	Karatobe	2.54	300	*e*P	Pb	13 55 33.6	+0.8
	baz=97						
KTBS				*e*S	Sb	13 56 05.3	+0.9
	baz=97						
KTBS	Karatobe	2.54	300	*e*P	Pb	13 55 33.6	+0.8
	0.8nm,0.2s						
KTBS				*e*S	Sb	13 56 05.3	+0.9
	18nm,0.3s						
ULHL	Ulahol	2.59	266	⇑*i*P	Pb	13 55 34.0	+0.1
	baz=64						
ULHL				⇑*i*S	Sb	13 56 05.9	-0.3
	baz=64						
BOOM	Boomskoye usch	2.80	271	⇓*i*P	Pb	13 55 36.2	-1.1
	baz=70						
BOOM				⇓*i*S	Sb	13 56 10.2	-1.9
	baz=70						
KAPS	Kapalarasan	2.80	355	Pg	Pb	13 55 35.8	-1.4
KAPS				Lg	Lg	13 56 09.8	
KAPS	Kapalarasan	2.80	355	*e*P	Pb	13 55 38.1	+0.9
	0.5nm,0.2s						
KAPS				*e*S	Sb	13 56 13.1	+1.2
	5.2nm,0.3s						
KUU	Kurty	2.84	301	*e*P	Pb	13 55 38.4	+0.4
	baz=99						
KUU				*e*S	Sb	13 56 13.8	+0.7
	baz=99						
KUU	Kurty	2.84	301	*e*P	Pb	13 55 38.4	+0.4
	0.5nm,0.2s						
KUU				*e*S	Sb	13 56 13.9	+0.7
	5.3nm,0.4s						
NRN	Naryn	2.98	250	⇑*i*P	Pb	13 55 39.5	-0.9
	baz=49						
NRN				⇑*i*S	Sb	13 56 16.2	-1.1
	baz=49						
DGS	Degeres	3.00	286	Pg	Pb	13 55 42.4	+1.7
	1.4nm,0.5s						
DGS				Lg	Lg	13 56 19.8	
	10.0nm,0.5s						
DGS	Degeres	3.00	286	*e*P	Pb	13 55 41.7	+1.0
	baz=84						
DGS				*e*S	Sb	13 56 19.4	+1.6
	baz=84						
DGS	Degeres	3.00	286	*e*P	Pb	13 55 41.7	+1.0
	1.4nm,0.5s						
DGS				*e*S	Sb	13 56 19.4	+1.6
	10.0nm,0.5s						
TKM2	Tokmak 2	3.07	279	⇑Pg	Pb	13 55 41.0	-1.0
	1.2nm,0.8s						
TKM2				⇑Lg	Lg	13 56 21.8	
	2.4nm,0.5s						
TKM2	Tokmak 2	3.07	279	⇓*i*P	Pb	13 55 39.8	-2.2
	baz=78						
TKM2				⇓*i*S	Sb	13 56 16.6	-3.4

baz=78

IDC ***08*** *13:54:56.0±0.7, 30°.32S×177°.50W, h0^{km}, mb4.6/9, mb1 4.7/12, mb1mx4.4/39, mbtmp4.5/12, ML3.8/3, Error ellipse: s-maj=23.1km s-min=17.6km az=141.0*

NEIC ***08*** *13:54:57.2±0.3, 30°.35S×177°.54W, h10^{km}, mb4.6/5, Error ellipse: s-maj=10.3km s-min=5.9km az=112.0*

ISCJB ***08*** *13:54:59.6±0.6, 30°.45S±0°.05×177°.7W±0°.1, h33^{km}, mb4.6/12, Error ellipse: s-maj=13.8km s-min=6.6km az=16.7*

ISC 08 13:55:01.1±0.6**, 30°.31S**±0°.06×**177°.7W**±0°.1**, h33**^{km}**, n54, σ1^s.43**/57**, mb4.7**/11**, 1C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.07	349	ePn	Pn	13 55 19.1	-0.7
RAO				eSn	Sn	13 55 30.9	-2.6
RAO	Raoul Island	1.07	349	Pn	Pn	13 55 18.7	-1.1
	772nm,0.3s,baz=23,slow=21,SNR=44						
RAO				Sn	Sn	13 55 30.5	-3.0
	6μm,0.3s,baz=90,slow=20,SNR=63						
MXZ	Matakaoa Point	7.96	204	ePn	Pn	13 56 53.7	-0.8
URZ	Urewera	9.02	207	ePn	Pn	13 57 07.2	-1.8
URZ				eSn	Sn	13 58 50.3	+1.0
URZ	Urewera	9.02	207	Pn	Pn	13 57 07.0	-1.9
	1.2nm,0.3s,baz=270,slow=4.1,SNR=14						
URZ				Sn	Sn	13 58 47.9	-1.5
	7.0nm,0.3s,baz=202,slow=22,SNR=20						
BKZ	Black Stump Fm	10.04	207	ePn	Pn	13 57 20.7	-2.4
THZ	Tophouse	13.72	211	ePn	Pn	13 58 13.9	+0.6
THZ				eSn	Sn	14 00 38.6	-5.9
LTZ	Lake Taylor	14.82	210	ePn	Pn	13 58 27.4	-0.8
RPZ	Rata Peaks	16.10	211	Pn	Pn	13 58 43.5	-1.4
	0.4nm,0.3s,baz=34,slow=8.9,SNR=3.0						
DZM	Mont Dzumac	16.42	296	Pn	Pn	13 58 49.1	-0.1
	0.2nm,0.3s,baz=15,slow=16,SNR=3.0						
WKZ	Wanaka	17.88	212	ePn	Pn	13 59 05.4	-1.8
	21nm,1.0s						
CTA	Charters Tower	34.05	279	P	P	14 01 44.7	+2.3
	23nm,0.4s,baz=103,slow=10,SNR=60						
STKA	Stephens Creek	34.76	257	eP	P	14 01 51.1	+2.6
	4.2nm,0.6s						
STKA	Stephens Creek	34.76	257	P	P	14 01 51.0	+2.6
	20nm,0.7s,baz=99,slow=11,SNR=40						
AS01	Alice Springs	43.34	267	eP	P	14 03 00.5	+0.2
AS31	Alice Springs	43.38	267	eP	P	14 03 01.1	+0.5
	4.3nm,0.4s						
ASAR	Alice Springs	43.38	267	P	P	14 03 00.6	-0.1
	9.9nm,0.5s,baz=105,slow=7.3,SNR=146						
WB2	Warramunga Arr	44.35	272	eP	P	14 03 08.2	-0.2
WRAB	Tennant Creek	44.35	272	eP	P	14 03 08.6	+0.1
	22nm,0.7s						
WR1	Warramunga Arr	44.36	272	eP	P	14 03 09.6	+1.0
WRA	Warramunga Arr	44.36	272	P	P	14 03 09.6	+1.0
	19nm,0.3s,baz=111,slow=7.8,SNR=664						
FITZ	Fitzroy Crossi	52.63	270	eP	P	14 04 12.4	+0.2
	6.5nm,0.7s						
FITZ	Fitzroy Crossi	52.63	270	P	P	14 04 13.3	+1.2
	6.1nm,0.7s,baz=114,slow=4.5,SNR=24						
SYO	Syowa Base	77.26	193⇑	eP	P	14 06 52.4	+0.8
PETK	Petropavlovsk-	85.79	345	P	P	14 07 36.9	+0.3
	2.8nm,0.6s,baz=118,slow=6.9,SNR=9.0						
PEA1	Petropavlovsk-	85.80	345	eP	P	14 07 36.9	+0.3
NVAR	Mina Array Bea	87.99	43	P	P	14 07 49.5	+1.4
	1.3nm,0.7s,baz=222,slow=8.1,SNR=8.5						
KLR	Kul'dur	91.09	330	P	P	14 08 03.1	+1.2
	0.9nm,0.6s,baz=163,slow=5.4,SNR=5.7						
LTX	Lajitas	92.11	57	eP	P	14 08 06.3	-1.1
TXAR	Lajitas Array	92.11	57	P	P	14 08 06.3	-1.1
	0.2nm,0.4s,baz=198,slow=5.7,SNR=2.7						
ILAR	Eielson Array	97.78	13	P	Pdif	14 08 33.4	+1.1
	0.4nm,0.9s,baz=216,slow=7.5,SNR=3.5						
MKAR	Makanchi Array	117.92	310	PKP	PKPdf	14 13 43.3	-0.7
	0.5nm,0.6s,baz=223,slow=1.8,SNR=5.2						
ZALV	Zalesovo Beam	118.14	318	PKP	PKPdf	14 13 43.7	-0.5
	0.2nm,0.3s,baz=301,slow=0.8,SNR=2.8						
KURK	Kurchatov	121.18	314	ePKPdf	PKPdf	14 13 49.5	-0.6
KURBB	Kurchatov Arra	121.22	314	PKP	PKPdf	14 13 49.5	-0.7
	1.8nm,0.7s,baz=112,slow=1.7,SNR=19						
AAK	Ala-Archa	122.28	304	PKP	PKiKP	14 13 53.1	+0.2
	1.0nm,0.7s,baz=195,slow=3.5,SNR=4.4						
GEYT	Alibeck	133.76	295	PKP	PKPdf	14 14 14.6	0.0
	0.8nm,0.5s,baz=355,slow=3.3,SNR=3.4						
ARCES	ARCESS Array B	138.56	348	PKhKP	PKPpre	14 14 19.9	
	1.6nm,0.7s,baz=52,slow=7.9,SNR=3.5						
ARCES				PKP	pPKPdf	14 14 28.4	-3.7
	1.7nm,0.8s,baz=24,slow=0.8,SNR=5.3						
FIA1	FINESS Array S	145.15	340	ePKPbc	PKPbc	14 14 33.7	-0.3
FIA0	FINESS Array S	145.15	340	ePKPbc	PKPbc	14 14 33.6	-0.5
FINES	FINESS Array B	145.15	340	PKPbc	PKPbc	14 14 33.6	-0.5
	15nm,0.7s,baz=64,slow=4.4,SNR=51						
KBZ	Khabaz	145.28	304	PKPbc	PKPbc	14 14 34.7	-0.3
	2.9nm,0.8s,baz=356,slow=3.5,SNR=4.8						
NB200	NORSAR Array S	148.70	352	ePKPbc	PKPbc	14 14 44.3	0.0
NOA	NORSAR Array B	148.70	352	PKPbc	PKPbc	14 14 44.3	0.0
	3.4nm,0.8s,baz=16,slow=4.3,SNR=12						
HFS	Hagfors	149.21	349	PKPbc	PKPbc	14 14 43.9	-1.7
	5.1nm,0.8s,baz=132,slow=2.2,SNR=7.7						
AKASG	Malin Array Be	151.39	323	PKPbc	PKPbc	14 14 50.9	-0.1
	5.9nm,0.6s,baz=48,slow=2.8,SNR=23						
AK11	Malin Array Si	151.43	323	ePKPbc	PKPbc	14 14 51.0	-0.1
MMAI	Mount Meron Ar	151.76	284	PKPbc	PKiKP	14 14 53.3	+0.3
	6.8nm,0.7s,baz=76,slow=6.1,SNR=9.0						
EIL	Elat	151.77	277	PKPbc	PKiKP	14 14 53.2	+0.2
	5.0nm,0.7s,baz=58,slow=3.4,SNR=6.2						
BR101	Keskin Array S	152.79	299	ePKPbc	PKiKP	14 14 55.1	+0.1
BRTR	Keskin Array B	152.79	299	PKPbc	PKiKP	14 14 55.1	+0.1
	0.8nm,0.4s,baz=123,slow=2.1,SNR=6.2						
CLL	Collm	157.56	342	ePKPab	PKPab	14 15 25.0	-0.5
TORD	Torodi Ar. Bea	162.91	178	PKPab	PKPab	14 15 50.5	+0.8
	0.8nm,0.6s,baz=181,slow=4.3,SNR=5.9						
TOA1	Torodi Ar. Sit	162.92	178	ePKPab	PKPab	14 15 50.5	+0.8

ISCJB ***08*** *13:58:55.7±0.6, 10°.97S±0°.09×166°.00E±0°.07, h10^{km}, mb4.2/15, Error ellipse: s-maj=13.2km s-min=9.2km az=16.2*

IDC ***08*** *13:58:55.5±0.7, 10°.85S×166°.05E, h0^{km}, mb4.2/12, mb1 4.4/13, mb1mx4.1/47, mbtmp4.3/13, ML5.0/1, Error ellipse: s-maj=21.5km s-min=17.1km az=137.0*

NEIC ***08*** *13:58:56.9±0.4, 10°.88S×166°.05E, h10^{km}, mb4.2/5, Error ellipse: s-maj=11.3km s-min=9.6km az=143.0*

ISC 08 13:58:56.9±0.7**, 10°.9S**±0°.1×**166°.08E**±0°.09**, h10**^{km}**, n33, σ1^s.18**/28**, mb4.1**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.21	283	eP	Pn	14 00 29.0	+0.3
HNR	Honiara	6.21	283	Pn	Pn	14 00 30.0	+1.3
	32nm,0.3s,baz=140,slow=5.4,SNR=10						
HNR				Sn	Sn	14 01 40.0	+0.1
	3.7nm,0.3s,baz=352,slow=15,SNR=1.3						
CTA	Charters Tower	21.16	242	P	P	14 03 43.4	+0.9
	6.4nm,0.7s,baz=78,slow=12,SNR=4.6						
URZ	Urewera	28.99	162	P	P	14 04 58.1	+1.3
	4.5nm,0.7s,baz=273,slow=3.2,SNR=3.6						
H11S2	WAKE ISLAND Hy	29.20	1	T	T	14 35 12.6	
	baz=179						
H11S3	WAKE ISLAND Hy	29.21	1	T	T	14 35 17.9	
	baz=179						
H11S1	WAKE ISLAND Hy	29.22	1	T	T	14 35 19.7	
	baz=179						
BKZ	Black Stump Fm	29.65	164	eP	P	14 05 02.8	+0.1
	11nm,0.9s						
H11N1	WAKE ISLAND Hy	30.42	2	T	T	14 36 45.4	
	baz=190						
H11N3	WAKE ISLAND Hy	30.43	2	T	T	14 36 52.2	
	baz=190						
H11N2	WAKE ISLAND Hy	30.44	2	T	T	14 36 45.7	
	baz=190						
STKA	Stephens Creek	30.78	224	eP	P	14 05 12.7	-0.1
	1.4nm,1.1s						
STKA	Stephens Creek	30.78	224	P	P	14 05 13.1	+0.3
	1.8nm,0.7s,baz=27,slow=6.8,SNR=2.4						
WB2	Warramunga Arr	31.84	250	eP	P	14 05 22.0	-0.3
	17nm,1.3s						
WR1	Warramunga Arr	31.85	250	eP	P	14 05 22.0	-0.3
WRA	Warramunga Arr	31.85	250	P	P	14 05 22.0	-0.3
	7.7nm,0.8s,baz=80,slow=9.1,SNR=19						
RPZ	Rata Peaks	32.98	173	P	P	14 05 32.8	+0.8
	21nm,0.8s,baz=93,slow=1.7,SNR=9.6						
AS31	Alice Springs	33.16	243	eP	P	14 05 29.8	-4.0
	0.7nm,0.9s						
ASAR	Alice Springs	33.16	243	P	P	14 05 32.5	-1.3
	1.5nm,0.9s,baz=63,slow=10,SNR=6.0						
FITZ	Fitzroy Crossi	39.74	255	eP	P	14 06 28.2	-1.8
	5.5nm,0.8s						
FITZ	Fitzroy Crossi	39.74	255	P	P	14 06 30.0	-0.1
	6.0nm,0.7s,baz=121,slow=5.7,SNR=9.9						
ILAR	Eielson Array	83.26	18	P	P	14 11 23.8	+0.4
	0.8nm,0.7s,baz=235,slow=4.9,SNR=16						
ILB	Eielson Array	83.26	18	eP	P	14 11 23.8	+0.4
NVAR	Mina Array Bea	85.67	50	P	P	14 11 37.3	+0.8
	0.8nm,0.8s,baz=206,slow=6.0,SNR=3.7						
TIXI	Tiksi	86.00	349	P	P	14 11 37.7	+0.6
	1.3nm,0.3s,baz=348,slow=2.0,SNR=6.0						
MK01	Makanchi Array	93.62	317	eP	P	14 12 13.5	-0.1
MK32	Makanchi Array	93.64	317	eP	P	14 12 14.0	+0.3
MKAR	Makanchi Array	93.64	317	P	P	14 12 14.0	+0.3
	0.7nm,0.7s,baz=94,slow=6.5,SNR=9.5						
YKA	Yellowknife Ar	94.69	27	P	P	14 12 17.5	-0.5
	0.1nm,0.3s,baz=258,slow=4.8,SNR=4.1						
ARCES	ARCESS Array B	116.27	346	PKP	PKPdf	14 17 40.1	-0.1
	1.7nm,0.7s,baz=72,slow=4.0,SNR=5.3						
LPAZ	La Paz	119.95	116	PKP	PKiKP	14 17 48.7	-0.9
	0.6nm,0.5s,baz=230,slow=7.9,SNR=2.2						
KEST	Kesra	147.49	323	PKPbc	PKPbc	14 18 39.6	-2.3
	3.8nm,0.6s,baz=14,slow=4.2,SNR=3.5						
ESDC	Sonseca Array	150.00	345	PKPbc	PKiKP	14 18 48.2	-0.9
	0.4nm,0.5s,baz=340,slow=2.6,SNR=3.4						

IDC ***08*** *14:03:01.0±1.3, 11°.62S×165°.19E, h0^{km}, mb3.7/6, mb1 3.8/7, mb1mx3.6/41, mbtmp3.7/7, ML3.8/1, Error ellipse: s-maj=50.3km s-min=25.3km az=125.0*

ISCJB ***08*** *14:03:04.1±1.0, 11°.8S±0°.1×165°.2E±0°.2, h34^{km}, mb3.5/6, Error ellipse: s-maj=27.6km s-min=18.2km az=13.8*

ISC 08 14:03:05.7±1.0**, 11°.7S**±0°.1×**165°.2E**±0°.2**, h34**^{km}**, n7, σ1^s.12**/7**, mb3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.37	174	Pn	Pn	14 05 32.1	-0.2
	0.8nm,0.3s,baz=12,slow=8.5,SNR=7.0						
STKA	Stephens Creek	29.62	224	P	P	14 09 07.8	-0.2
	0.6nm,0.4s,baz=73,slow=14,SNR=2.6						
WRA	Warramunga Arr	30.79	251	P	P	14 09 18.9	+0.5
	0.2nm,0.7s,baz=77,slow=8.1,SNR=2.5						
ASAR	Alice Springs	32.05	244	P	P	14 09 30.5	+0.9
	0.4nm,0.7s,baz=72,slow=9.1,SNR=3.0						
ILAR	Eielson Array	84.30	19	P	P	14 15 34.9	+1.1
	0.8nm,0.6s,baz=242,slow=5.5,SNR=11						
MKAR	Makanchi Array	93.66	317	P	P	14 16 17.2	-1.6
	0.3nm,0.9s,baz=112,slow=5.5,SNR=3.2						
YKA	Yellowknife Ar	95.79	27	P	P	14 16 28.0	-0.1
	0.1nm,0.5s,baz=257,slow=4.6,SNR=3.8						

IDC 08 14:03:07.9±10.0**, 11°.57S**×**168°.28E, h0**^{km}**, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.6**/40**, mbtmp3.8**/4**, Error ellipse: s-maj=319.6km s-min=60.2km az=127.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.65	251	P	P	14 09 50.5	-0.2
	0.9nm,1.1s,baz=80,slow=8.8,SNR=3.3						
ASAR	Alice Springs	34.80	245	P	P	14 10 00.4	-0.3
	0.4nm,0.6s,baz=75,slow=9.4,SNR=5.1						
FITZ	Fitzroy Crossi	41.65	256	P	P	14 10 58.7	+0.3
	1.9nm,0.7s,baz=108,slow=9.7,SNR=2.6						
MKAR	Makanchi Array	95.60	316	P	P	14 16 35.2	-0.1
	0.1nm,0.3s,baz=95,slow=4.2,SNR=2.7						

IDC 08 14:05:04.4±2.3**, 13°.07S**×**165°.97E, h0**^{km}**, mb3.8**/7**, mb1 4.1**/7**, mb1mx3.8**/40**, mbtmp3.8**/7**, Error ellipse: s-maj=119.4km s-min=23.6km az=148.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.05	253	P	P	14 11 24.0	-0.4
	0.3nm,0.7s,baz=80,slow=9.0,SNR=3.3						
ASAR	Alice Springs	32.13	246	P	P	14 11 33.7	-0.2
	0.3nm,0.8s,baz=71,slow=9.3,SNR=3.2						
FITZ	Fitzroy Crossi	39.11	257	P	P	14 12 34.0	+0.2
	2.1nm,0.8s,baz=97,slow=8.2,SNR=5.4						
ILAR	Eielson Array	85.35	18	P	P	14 17 42.5	-0.7
	1.1nm,0.7s,baz=240,slow=5.3,SNR=5.0						
NVAR	Mina Array Bea	87.16	50	P	P	14 17 54.1	+1.1
	0.3nm,0.5s,baz=260,slow=8.9,SNR=4.0						
MKAR	Makanchi Array	95.14	317	P	P	14 18 30.6	+0.8
	0.2nm,0.5s,baz=86,slow=4.9,SNR=2.6						
YKA	Yellowknife Ar	96.66	27	P	P	14 18 34.8	-1.4
	0.5nm,0.8s,baz=258,slow=5.1,SNR=4.7						

IDC ***08*** *14:06:05.9±1.1, 10°.88S×165°.68E, h0^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.8/44, mbtmp4.0/10, ML4.3/2, Error ellipse: s-maj=24.2km s-min=24.0km az=170.0*

ISCJB ***08*** *14:06:08.4±0.9, 11°.1S±0°.1×165°.71E±0°.10, h30^{km}, mb3.8/7, Error ellipse: s-maj=18.6km s-min=11.1km az=32.6*

ISC 08 14:06:10.3±1.1**, 11°.0S**±0°.1×**165°.7E**±0°.1**, h30**^{km}**, n10, σ1^s.50**/11**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.91	285	Pn	Pn	14 07 34.9	-0.9
	12nm,0.3s,baz=102,slow=12,SNR=5.0						
HNR				Sn	Sn	14 08 44.5	+1.9
	3.0nm,0.3s,baz=204,slow=20,SNR=1.3						
DZM	Mont Dzumac	11.04	177	Pn	Pn	14 08 45.1	-1.1
	1.3nm,0.3s,baz=340,slow=17,SNR=7.4						
CTA	Charters Tower	20.82	242	P	P	14 10 50.5	+1.0
	2.9nm,0.6s,baz=20,slow=12,SNR=2.6						
URZ	Urewera	29.00	161	P	P	14 12 09.7	+2.3
	3.6nm,0.7s,baz=314,slow=8.0,SNR=2.4						
WRA	Warramunga Arr	31.50	250	P	P	14 12 28.7	-1.1
	2.3nm,0.9s,baz=80,slow=8.9,SNR=10.0						
ASAR	Alice Springs	32.81	243	P	P	14 12 40.1	-1.2
	0.3nm,0.5s,baz=66,slow=10,SNR=3.4						
FITZ	Fitzroy Crossi	39.39	255	P	P	14 13 37.4	-0.2
	1.8nm,0.8s,baz=98,slow=11,SNR=3.4						
ILAR	Eielson Array	83.46	19	P	P	14 18 33.9	-0.7
	0.3nm,0.6s,baz=236,slow=5.2,SNR=2.7						
MKAR	Makanchi Array	93.48	317	P	P	14 19 22.4	-0.7
	0.2nm,0.7s,baz=108,slow=5.3,SNR=2.8						
ZALV	Zalesovo Beam	93.51	324	P	P	14 19 24.4	+1.4
	0.2nm,0.4s,baz=114,slow=5.1,SNR=2.4						

ISCJB ***08*** *14:10:34.8±0.2, 10°.96S±0°.03×165°.98E±0°.04, h10^{km}, mb4.8/69, Error ellipse: s-maj=6.4km s-min=3.9km az=153.7*

IDC ***08*** *14:10:35.4±0.6, 10°.93S×165°.83E, h0^{km}, mb4.5/24, mb1 4.6/25, mb1mx4.5/46, mbtmp4.5/25, ML4.7/1, Error ellipse: s-maj=18.1km s-min=13.1km az=117.0*

BJI ***08*** *14:10:35.7, 11°.03S×165°.62E, h8^{km}, mB5.5/20, mb4.8/44, Ms5.2/17, Ms7 5.0/17*

NEIC ***08*** *14:10:36.9±0.3, 10°.90S×165°.93E, h10^{km}, mb5.2/22, Error ellipse: s-maj=7.6km s-min=5.5km az=90.0*

MOS ***08*** *14:10:39.3±1.4, 10°.96S×165°.74E, h33^{km}, mb4.8/11, Error ellipse: s-maj=11.9km s-min=10.9km az=163.6*

ISC 08 14:10:36.9±0.4**, 10°.92S**±0°.06×**165°.98E**±0°.08**, h10**^{km}**, n178, σ1^s.22**/175**, mb4.8**/69**, 9C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.12	283	iP	Pn	14 12 09.0	+1.5
HNR	Honiara	6.12	283	Pn	Pn	14 12 08.8	+1.3
	47nm,0.3s,baz=154,slow=3.3,SNR=92						
MARNC	Mare, Loyalty	10.69	170	ePn	Pn	14 13 09.9	-0.3
DZM	Mont Dzumac	11.10	178	Pn	Pn	14 13 16.7	+0.8
	5.3nm,0.3s,baz=343,slow=12,SNR=22						
ONTNC	Ouen Toro	11.33	178	ePn	Pn	14 13 19.6	+0.6
PINNC	Pines Island,	11.71	173	ePn	Pn	14 13 25.3	+1.1
TARA	Tarawa	14.01	30	ePn	Pn	14 13 55.2	-0.6
	12nm,0.7s						
EIDS	Eidsvold	20.14	222	P	Pn	14 15 10.4	-2.9
	baz=20,SNR=4.9						
EIDS	Eidsvold	20.14	222	eP	Pn	14 15 12.8	-0.5
	46nm,1.0s						
MANU	Manus Island	20.47	294	eP	Pn	14 15 16.1	-1.2
	315nm,1.2s						
CTA	Charters Tower	21.06	242	P	P	14 15 21.5	0.0
	34nm,1.0s,baz=70,slow=12,SNR=16						
CTAO	Charters Tower	21.06	242	eP	P	14 15 21.4	0.0
	132nm,1.4s						
CTAO	Charters Tower	21.06	242	eP	P	14 15 21.5	0.0
CTAO				pmax	pmax		
	comp=Z,132nm,1.4s						
MTSU	Mount Surprise	22.15	249	P	P	14 15 32.4	-0.8
	baz=22,SNR=20						
RMQ	Roma	22.45	224	P	P	14 15 37.2	+0.9
	baz=22,SNR=47						
COEN	Coen	22.47	260	P	P	14 15 35.6	-1.0
	baz=22,SNR=9.6						
COEN	Coen	22.47	260	eP	P	14 15 36.5	-0.1
	comp=Z,44nm,1.0s						
ARMA	Armidale	23.55	212	P	P	14 15 48.6	+0.9
	baz=23,SNR=9.3						
ARMA	Armidale	23.55	212	eP	P	14 15 48.7	+1.0
	comp=Z,76nm,1.3s						
QLP	Quilpie	25.75	230	P	P	14 16 08.3	+0.3
	baz=25,SNR=10						
JAY	Jayapura	26.43	287	P	P	14 16 15.1	+0.8
GENI	Genyem	26.91	286	P	P	14 16 19.5	+0.9
QIS	Mount Isa	27.09	246	P	P	14 16 20.0	-0.2
	baz=26,SNR=14						
CMSA	Cobar Meteorol	27.80	219	P	P	14 16 26.5	+0.1
	baz=27,SNR=13						
URZ	Urewera	28.99	162	P	P	14 16 36.0	-0.9
	comp=Z,8.1nm,0.9s,baz=8.8,slow=3.4,SNR=3.5						
NGZ	Ngauruhoe	29.42	165	P	P	14 16 41.4	+0.6
COVZ	Chateau Observ	29.43	165	P	P	14 16 42.1	+1.2
BKZ	Black Stump Fm	29.65	163	eP	P	14 16 41.8	-1.0
	comp=Z,25nm,0.5s						
BKZ	Black Stump Fm	29.65	163	P	P	14 16 41.7	-1.1
NMHZ	Naumai	29.68	163	P	P	14 16 42.6	-0.5
WAZ	Wanganui	29.81	166	P	P	14 16 45.0	+0.9
BHHZ	Black Hill Sta	29.83	164	P	P	14 16 43.7	-0.8
MCHZ	McNeill Hill	29.97	163	P	P	14 16 45.7	+0.2
KAHZ	Kahuranaki	30.34	163	P	P	14 16 48.0	-0.9
QRZ	Quartz Range	30.34	170	P	P	14 16 51.4	+2.5
PXZ	Pawanui	30.56	163	P	P	14 16 49.2	-1.5
DUWZ	D'Urville Isla	30.58	168	P	P	14 16 51.5	+0.5
DVHZ	Dannevirke	30.62	165	P	P	14 16 49.1	-2.3
STKA	Stephens Creek	30.69	223	P	P	14 16 52.3	+0.2
	baz=30,SNR=8.9						
STKA	Stephens Creek	30.69	223	eP	P	14 16 52.4	+0.4
	comp=Z,2.8nm,0.9s						
STKA	Stephens Creek	30.69	223	eP	P	14 16 52.4	+0.4
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	Stephens Creek	30.69	223	P	P	14 16 51.8	-0.2
	comp=Z,9.4nm,0.8s,baz=44,slow=7.7,SNR=14						
MRZ	Mangatainoka R	30.81	166	P	P	14 16 51.3	-1.7
OGWZ	Otaki Gorge	30.86	166	P	P	14 16 52.0	-1.4
NNZ	Nelson	30.88	169	P	P	14 16 55.0	+1.5
BFZ	Birch Farm	31.00	165	P	P	14 16 52.7	-2.0
HOWZ	Holdsworth Sta	31.02	166	P	P	14 16 52.9	-2.0
CAW	Cannon Point	31.12	167	P	P	14 16 54.1	-1.6
MTW	Mount Morrison	31.27	166	P	P	14 16 55.1	-1.9
THZ	Tophouse	31.32	170	eP	P	14 16 58.2	+0.6
	comp=Z,47nm,1.0s						
MSWZ	Moikau Station	31.45	167	P	P	14 16 56.9	-1.8
TRWZ	Traveller	31.54	166	P	P	14 16 58.0	-1.4
WRAB	Tennant Creek	31.73	250	eP	P	14 17 00.8	-0.6
	comp=Z,82nm,0.9s						
WRAB	Tennant Creek	31.73	250	d iP	P	14 17 00.1	-1.3
WRAB				pmax	pmax		
	comp=Z,75nm,1.0s						
WB2	Warramunga Arr	31.73	250	eP	P	14 17 00.8	-0.6
WRA	Warramunga Arr	31.74	250	P	P	14 17 00.2	-1.2
	comp=Z,63nm,0.9s,baz=80,slow=9.2,SNR=209						
LTZ	Lake Taylor	32.21	171	eP	P	14 17 04.2	-1.1
	comp=Z,43nm,0.9s						
TOO	Toolangi	32.30	211	P	P	14 17 06.9	+0.7
	baz=32,SNR=4.6						
TOO	Toolangi	32.30	211	eP	P	14 17 05.2	-1.0
	comp=Z,30nm,1.1s						
TOO	Toolangi	32.30	211	eP	P	14 17 05.2	-1.0
TOO				pmax	pmax		
	comp=Z,30nm,1.1s						
FOZ	Fox Glacier	32.66	175	eP	P	14 17 08.6	-0.6
	comp=Z,26nm,0.8s						
KDU	Kakadu	32.83	264	P	P	14 17 09.4	-1.6
	baz=32,SNR=9.7						
RPZ	Rata Peaks	32.97	173	eP	P	14 17 12.4	+0.5
	comp=Z,41nm,0.8s						
RPZ	Rata Peaks	32.97	173	P	P	14 17 11.4	-0.5
	comp=Z,18nm,0.7s,baz=50,slow=9.7,SNR=9.8						
AS01	Alice Springs	33.01	243	eP	P	14 17 10.8	-1.8
AS31	Alice Springs	33.05	243	eP	P	14 17 11.8	-1.2
	comp=Z,3.9nm,0.8s						
ASAR	Alice Springs	33.05	243	P	P	14 17 11.6	-1.4
	comp=Z,11nm,0.9s,baz=64,slow=9.8,SNR=77						
MQZ	McQueen's Vall	33.17	171	eP	P	14 17 13.9	+0.2
	comp=Z,59nm,1.1s						
HTT	Hallett	33.42	224	P	P	14 17 16.0	-0.1
	baz=33,SNR=8.8						
BBOO	Buckleboo	35.08	227	P	P	14 17 30.2	-0.3
	baz=35,SNR=7.3						
BBOO	Buckleboo	35.08	227	eP	P	14 17 29.8	-0.6
	comp=Z,30nm,0.9s						
BNDI	Bandanaira	36.28	277	P	P	14 17 40.6	-0.4
KNRA	Kununurra	36.49	258	P	P	14 17 41.4	-1.4
	baz=36,SNR=4.6						
WRKA	Warakurna	38.34	243	P	P	14 17 57.3	-1.1
	baz=38,SNR=9.9						
NLAI	Namlea	39.29	278	P	P	14 18 05.4	-1.0
FITZ	Fitzroy Crossi	39.63	255	P	P	14 18 08.0	-1.2
	baz=39,SNR=47						
FITZ	Fitzroy Crossi	39.63	255	eP	P	14 18 08.3	-0.9
	comp=Z,60nm,0.8s						
FITZ	Fitzroy Crossi	39.63	255	P	P	14 18 08.6	-0.7
	comp=Z,52nm,0.8s,baz=90,slow=7.5,SNR=98						
FORT	Forrest	40.30	235	eP	P	14 18 14.4	-0.2
	comp=Z,48nm,1.0s						
SANI	Sanana	40.65	280	P	P	14 18 16.0	-1.8
SOEI	Soe	41.03	268	P	P	14 18 20.9	-0.1
BATI	Baumata	41.58	267	P	P	14 18 24.0	-1.4
BATI	Baumata	41.58	267	P	P	14 18 24.1	-1.3
	comp=Z,57nm,0.9s,baz=110,slow=2.7,SNR=13						
MMRI	Maumere	43.14	269	P	P	14 18 36.4	-1.7
KMSI	Cibinong	43.28	283	P	P	14 18 38.9	-0.4
EDFI	Ende, Flores	43.66	269	P	P	14 18 43.2	+0.7
LUWI	Luwuk	44.02	280	P	P	14 18 45.9	+0.7
	comp=Z,79nm,1.3s						
MBWA	Marble Bar	45.45	251	eP	P	14 18 56.3	-0.3
BKSI	Bulukumba	45.70	273	P	P	14 18 58.7	+0.1
BNSI	Bone	45.88	274	P	P	14 18 59.3	-0.7
SPSI	Sidrap Palu	46.29	275	P	P	14 19 03.7	+0.4
TTSI	Tana Toraja	46.43	276	P	P	14 19 03.1	-1.3
PCI	Palu	46.89	279	P	P	14 19 07.4	-0.6
	comp=Z,122nm,1.4s,comp=Z,2μm						
MEEK	Meekatharra	47.21	244	P	P	14 19 09.6	-0.8
	baz=47,SNR=21						
PLAI	Plampang	47.50	268	P	P	14 19 11.6	-1.1
	comp=Z,110nm,1.2s						
KLBR	Kellerberrin	48.97	238	P	P	14 19 23.2	-0.7
	baz=48,SNR=8.7						
NWAO	Narrogin (SRO)	49.72	236	P	P	14 19 28.5	-1.1
	comp=Z,12nm,0.8s,baz=263,slow=11,SNR=3.2						
MORW	Morawa	49.88	241	P	P	14 19 31.0	+0.1
	baz=49,SNR=6.8						
MORW	Morawa	49.88	241	eP	P	14 19 31.1	+0.1
	comp=Z,34nm,0.9s						
SRBI	Singaraja	50.10	269	P	P	14 19 32.0	-0.8
	comp=Z,36nm,1.1s						
MUN	Mundaring	50.34	237	P	P	14 19 34.8	+0.5
	baz=50,SNR=6.0						
JAGI	Jajag, Banyuwa	51.10	268	P	P	14 19 39.1	-1.2
	comp=Z,104nm,1.2s,comp=Z,1μm						
KMMI	Kalianget	51.47	270	P	P	14 19 44.0	+0.9
	comp=Z,26nm,1.1s						
GMJI	Gumukmas	51.82	268	P	P	14 19 45.1	-0.6
	comp=Z,39nm,1.1s						
PWJI	Pagerwojo	53.46	268	P	P	14 19 57.1	-0.7
	comp=Z,52nm,0.8s						
MJAR	Matsushiro Arr	53.97	332	P	P	14 20 00.0	-1.2
MJAR	Matsushiro Arr	53.97	332	P	P	14 19 60.0	-1.2
	comp=Z,4.2nm,1.1s,baz=153,slow=7.0,SNR=4.7						
MAJO	Matsushiro	53.97	332⇑	eP	P	14 20 04.6	+3.5
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SBUM	Sibu	55.10	281	P	P	14 20 10.5	+0.7
JNU	Nakatsue	55.11	324	P	P	14 20 08.5	-1.1
	comp=Z,8.2nm,0.9s,baz=112,slow=16,SNR=3.2						
KSM	Kuching	56.71	279	P	P	14 20 22.0	+0.6
ASAJ	Asahikawa	58.75	340	P	P	14 20 36.9	+1.8
	comp=Z,11nm,0.8s,baz=211,slow=19,SNR=3.4						

KSRS	Korea Array	59.90	325	P	P	14 20 42.8	-0.4
	comp=Z,1.4nm,0.9s,baz=168,slow=12,SNR=4.3						
KSAR	Wonju Array Be	59.92	325	P	P	14 20 42.8	-0.5
KSAR	Wonju Array Be	59.92	325	P	P	14 20 42.8	-0.5
YSS	Yuzh-Sakhalins	61.24	342	eP	P	14 20 50.5	-1.6
YSS				e		14 20 57.5	
YSS				e		14 21 31.5	
USRK	Ussuriysk Ar.	62.94	333	P	P	14 21 03.7	+0.1
	comp=Z,4.1nm,1.0s,baz=143,slow=42,SNR=3.5						
MYKOM	Kota Tinggi	63.06	278	P	P	14 21 05.0	0.0
KGM	Kluang	63.63	278	P	P	14 21 09.4	+0.6
MDJ	Mudanjiang	64.35	332	P	P	14 21 13.0	+0.1
MDJ				pmax	pmax		
	comp=Z,20nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,990nm,5.3s						
WHN	Wuhan	64.48	311	P	P	14 21 19.9	+5.8
KTGM	Kuala Trenggan	64.60	281	P	P	14 21 15.7	+0.5
FRIM	Kepong	65.55	279	P	P	14 21 21.2	-0.2
CN2	Changchun	65.75	329	eP	P	14 21 26.8	+4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
IPM	Ipoh	66.43	280	P	P	14 21 27.0	-0.1
CASY	Casey	66.58	201	eP	P	14 21 26.8	-0.3
KULM	Kulim	66.98	281	P	P	14 21 30.2	-0.4
KLR	Kul'dur	67.03	336	⇑eP	P	14 21 30.1	-0.1
SKNT	Sakolnakorn	67.25	294	P	P	14 21 32.1	-0.1
	comp=Z,7.2nm,1.1s						
ENH	Enshi	68.00	309	P	P	14 21 35.4	-1.4
	comp=Z,13nm,1.0s						
NONG	Nongkai	68.37	294	P	P	14 21 39.3	+0.1
	comp=Z,0.3nm,0.9s						
BJI	Beijing	68.53	321	eP	P	14 21 38.8	-1.0
GYA	Guiyang	68.54	304	P	P	14 21 43.0	+2.7
GYA				PP	PP	14 24 17.2	+5.4
GYA				S	S	14 30 45.5	+2.5
GYA				SKS	ScS	14 31 38.3	-2.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=Z,560nm,18.5s						
GYA				LR	LR		
	comp=Z,580nm,18.4s						
GYA				LR	LR		
	comp=Z,540nm,18.3s						
CHAI	Chaiyaphum	68.71	292	P	P	14 21 48.8	+7.4
PBKT	Sadao Pong	69.84	292	P	P	14 21 48.7	+0.3
	comp=Z,9.5nm,1.5s						
XAN	Xi'an	70.21	312	P	P	14 21 49.6	-0.8
XAN				pP	sP	14 21 56.0	+1.4
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SRDT	SRDT	70.87	289	P	P	14 21 55.8	+1.1
	comp=Z,10nm,1.3s						
UTHA	Uthaitani	70.93	291	P	P	14 21 56.0	+0.9
	comp=Z,2.8nm,1.0s,comp=Z,46nm						
KMI	Kunming	71.25	301	P	P	14 21 57.4	+0.2
KMI				pP	pwP	14 22 03.6	+3.3
KMI				pmax	pmax		
	comp=Z,12nm,1.6s						
KMI				LR	LR		
	comp=Z,400nm,13.1s						
KMI				LR	LR		
	comp=Z,490nm,14.2s						
KMI				LR	LR		
	comp=Z,730nm,17.9s						
HHC	Hu-ho-hao-te	71.89	320	eP	P	14 22 01.6	+1.1
HHC				S	S	14 31 19.4	-2.3
HHC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,310nm,6.1s						
HHC				LR	LR		
	comp=Z,750nm,17.2s						
HHC				LR	LR		
	comp=Z,710nm,17.9s						
CMAR	Chiang Mai Arr	72.27	293	P	P	14 22 03.5	+0.3
	comp=Z,4.2nm,0.9s,baz=115,slow=4.2,SNR=29						
HIA	Hailar	72.38	330	⇑eP	P	14 22 03.4	+0.2
HIA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMMT	Chiang Mai	72.38	294	P	P	14 22 03.7	-0.1
	comp=Z,9.0nm,1.5s						
CHTO	Chiang Mai	72.38	294	eP	P	14 22 01.6	-2.2
	comp=Z,9.5nm,1.1s						
CHTO	Chiang Mai	72.38	294	eP	P	14 22 01.6	-2.2
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CHTO	Chiang Mai	72.38	294	P	P	14 22 03.8	0.0
	comp=Z,40nm,1.7s						
CD2	Chengdu	72.71	307	P	P	14 22 05.2	-0.4
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
SEY	Seymchan	74.38	354	⇓eP	P	14 22 18.3	+3.7
SEY	Seymchan	74.38	354	P	P	14 22 14.6	0.0
	comp=Z,1.0nm,0.8s,baz=159,slow=7.9,SNR=3.7						
LZH	Lanzhou	74.84	312	⇑P	P	14 22 18.8	+0.6
LZH				pP	PcP	14 22 25.5	-6.6
LZH				sP	sP	14 22 28.9	+6.5
LZH				PP	PP	14 25 06.2	+0.4
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,84nm,4.8s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,16.8s						
LZH				LR	LR		
	comp=Z,2µm,18.4s						
ULN	Ulaanbaatar	78.33	324	eP	P	14 22 36.4	-1.3
	comp=Z,7.2nm,0.9s						
ULN	Ulaanbaatar	78.33	324	⇑iP	P	14 22 37.7	0.0
ULN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	Songino Array	78.70	324	P	P	14 22 38.5	-1.1
	comp=Z,2.5nm,1.1s,baz=131,slow=4.1,SNR=7.7						
BILL	Bilibino	78.75	0	eP	P	14 22 38.6	-0.7
	comp=Z,15nm,1.0s						
BILL	Bilibino	78.75	0	⇓eP	P	14 22 39.5	+0.2
BILL				i		14 22 49.2	
BILL				i		14 25 37.1	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
QSPA	South Pole Qui	79.08	180	eP	P	14 22 44.1	+2.6
GTA	Gaotai	79.14	314	⇑P	P	14 22 42.6	+0.4
GTA				pP	PcP	14 22 47.8	-2.8
GTA				sP	pwP	14 22 50.6	+5.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ZAK	Zakamensk	81.73	325	eP	P	14 22 54.4	-1.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
TLY	Talaya	82.15	326	i P	P	14 22 57.3	-0.6
ILAR	Eielson Array	83.32	18	P	P	14 23 05.1	+1.3
	comp=Z,3.3nm,0.7s,baz=238,slow=5.2,SNR=2.0						
YBH	Yreka Blue Hor	83.64	46	P	P	14 23 08.8	+2.7
	comp=Z,4.5nm,1.0s,baz=170,slow=11,SNR=3.3						
KNGR	Kungurtug, Tuv	85.14	323	i P	P	14 23 12.1	-1.4
NVAR	Mina Array Bea	85.77	50	P	P	14 23 18.4	+1.4
	comp=Z,4.7nm,1.0s,baz=236,slow=6.7,SNR=12						
TIXI	Tiksi	86.01	349	⇑eP	P	14 23 20.1	+3.0
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TIXI	Tiksi	86.01	349	P	P	14 23 16.1	-1.1
	comp=Z,0.7nm,0.5s,baz=130,slow=7.6,SNR=6.1						
WMQ	Urumqi	89.17	315	eP	P	14 23 31.7	-1.4
WMQ				sP	pwP	14 23 42.0	+5.7
WMQ				pmax	pmax		
	comp=Z,15nm,1.5s						
WMQ				LR	LR		
	comp=Z,1µm,17.9s						
WMQ				LR	LR		
	comp=Z,860nm,20.9s						
WMQ				LR	LR		
	comp=Z,1µm,24.5s						
SYO	Syowa Base	91.97	197	⇑eP	P	14 23 46.4	+0.8
PDAR	Pinedale Array	93.30	47	P	P	14 23 53.9	+1.4
	comp=Z,1.4nm,1.0s,baz=266,slow=5.8,SNR=3.8						
MKAR	Makanchi Array	93.59	317	P	P	14 23 52.0	-1.5
	comp=Z,2.2nm,0.9s,baz=92,slow=6.1,SNR=15						
ZALV	Zalesovo Beam	93.59	324	P	P	14 23 51.7	-1.5
	comp=Z,1.6nm,0.9s,baz=117,slow=2.3,SNR=7.8						
YKA	Yellowknife Ar	94.76	27	P	P	14 23 58.8	+0.4
	comp=Z,0.4nm,0.7s,baz=256,slow=4.4,SNR=7.1						
KSH	Kashi	96.86	309	P	P	14 24 14.1	+5.4
KSH				PP	PP	14 28 07.7	+3.6
KSH				SKS	SKSac	14 34 47.2	+1.0
KSH				S	ScS	14 35 35.9	+4.2
KSH				sS	sS	14 35 40.6	+4.1
KSH				SS	SS	14 42 10.6	+3.5
KSH				pmax	pmax		
	comp=Z,600nm,12.0s						
KSH				LR	LR		
	comp=Z,230nm,5.1s						
KSH				LR	LR		
	comp=Z,200nm,5.7s						
KSH				LR	LR		
	comp=Z,1µm,17.0s						
AAK	Ala-Archa	98.38	312	⇑eP	Pdif	14 24 16.1	+0.5
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ARCES	ARCESS Array B	116.27	346	PKP	PKiKP	14 29 18.5	-1.7
	comp=Z,1.0nm,0.7s,baz=56,slow=3.2,SNR=6.4						
AKASG	Malin Array Be	126.88	327	PKP	PKiKP	14 29 39.7	-1.9
	comp=Z,0.2nm,0.4s,baz=56,slow=2.5,SNR=2.9						
BRTR	Keskin Array B	129.05	313	PKP	PKiKP	14 29 44.9	-1.6
	comp=Z,0.4nm,0.6s,baz=84,slow=2.0,SNR=3.5						
ESDC	Sonseca Array	150.00	344	PKPbc	PKPbc	14 30 26.6	-1.6
	comp=Z,0.2nm,0.3s,baz=0.1,slow=3.8,SNR=3.0						
TORD	Torodi Ar. Bea	164.47	280	PKP	PKPdf	14 30 42.3	+0.2
	comp=Z,1.8nm,1.1s,baz=127,slow=2.9,SNR=5.9						
TORD				PKPab	PKPab	14 31 35.5	-1.3
	comp=Z,1.7nm,1.1s,baz=122,slow=3.9,SNR=3.9						

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*ISCJB **08** 14:14:06.1±0.3, 11°.00S±0°.04×166°.07E±0°.06, h10^{km}, mb4.6/41, Error ellipse: s-maj=8.3km s-min=5.6km az=163.0*

*IDC **08** 14:14:06.0±0.6, 10°.99S×166°.10E, h0^{km}, mb4.4/23, mb1 4.6/25, mb1mx4.4/52, mbtmp4.5/25, ML5.1/2, Error ellipse: s-maj=17.6km s-min=13.0km az=94.0*

*NEIC **08** 14:14:07.8±0.4, 10°.92S×166°.10E, h10^{km}, mb5.2/12, Error ellipse: s-maj=10.1km s-min=7.2km az=97.0*

ISC 08 14:14:07.4±0.4**, 10°.94S**±0°.06×**166°.20E**±0°.07**, h10^{km}, n73, σ1^{s}.87**/78**, mb4.7**/41**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.33	283	eP	Pn	14 15 42.0	+1.2
HNR				eS	Sn	14 16 52.0	-1.3
HNR	Honiara	6.33	283	ePn	Pn	14 15 41.4	+0.6
HNR				Sn	Sn	14 16 53.5	+0.2
HNR	Honiara	6.33	283	Pn	Pn	14 15 40.5	-0.3
	80nm,0.3s,baz=152,slow=7.2,SNR=11						
HNR				Sn	Sn	14 16 53.5	+0.2
	10nm,0.3s,baz=58,slow=19,SNR=1.6						
DZM	Mont Dzumac	11.07	179	ePn	Pn	14 16 47.6	+1.6
DZM				Sn	Sn	14 18 49.2	-0.9
DZM	Mont Dzumac	11.07	179	Pn	Pn	14 16 46.7	+0.6
	6.7nm,0.3s,baz=339,slow=11,SNR=11						
DZM				Sn	Sn	14 18 49.2	-0.9
	0.8nm,0.3s,baz=139,slow=20,SNR=2.7						
ONTNC	Ouen Toro	11.31	179	ePn	Pn	14 16 51.0	+1.9
TARA	Tarawa	13.92	29	ePn	Pn	14 17 23.9	-1.0
EIDS	Eidsvold	20.27	223	eP	Pn	14 18 44.3	-0.9
	182nm,1.4s						
MANU	Manus Island	20.67	294	eP	Pn	14 18 48.6	-1.4
	210nm,1.4s						
CTA	Charters Tower	21.24	242	P	P	14 18 53.4	-0.4
	20nm,0.8s,baz=69,slow=12,SNR=6.5						
CTAO	Charters Tower	21.24	242	eP	P	14 18 54.9	+1.1
	209nm,2.0s						
ARMA	Armidale	23.65	213	eP	P	14 19 18.4	-0.8
	181nm,1.8s						
URZ	Urewera	28.91	162	P	P	14 20 08.6	+2.0
	3.0nm,0.4s,baz=260,slow=5.1,SNR=8.0						
BKZ	Black Stump Fm	29.57	164	eP	P	14 20 12.2	-0.3
	19nm,0.4s						
STKA	Stephens Creek	30.82	224	P	P	14 20 23.2	-0.4
	8.6nm,0.9s,baz=53,slow=9.6,SNR=13						
THZ	Tophouse	31.27	170	eP	P	14 20 30.2	+2.7
	18nm,0.6s						
WRAB	Tennant Creek	31.92	250	eP	P	14 20 32.1	-1.4
	46nm,1.1s						
WB2	Warramunga Arr	31.93	250	eP	P	14 20 32.0	-1.5
WRA	Warramunga Arr	31.94	250	P	P	14 20 32.4	-1.2
	17nm,0.7s,baz=83,slow=9.3,SNR=23						
TOO	Toolangi	32.40	212	eP	P	14 20 38.1	+0.6
	19nm,1.0s						
FOZ	Fox Glacier	32.63	175	eP	P	14 20 40.8	+1.5
	40nm,1.2s						
RPZ	Rata Peaks	32.93	174	P	P	14 20 41.3	-0.7
	11nm,1.0s,baz=295,slow=2.5,SNR=6.2						
AS31	Alice Springs	33.23	243	eP	P	14 20 43.5	-1.6
	2.7nm,0.6s						
ASAR	Alice Springs	33.24	243	P	P	14 20 43.1	-1.9
	6.5nm,0.6s,baz=64,slow=10,SNR=15						
FITZ	Fitzroy Crossi	39.84	255	eP	P	14 21 40.7	-0.7
	33nm,1.0s						
FITZ	Fitzroy Crossi	39.84	255	P	P	14 21 40.6	-0.7
	27nm,0.9s,baz=76,slow=7.5,SNR=28						
MJAR	Matsushiro Arr	54.08	332	P	P	14 23 33.9	+1.5
	1.1nm,0.6s,baz=173,slow=8.7,SNR=2.0						
JNU	Nakatsue	55.25	324	P	P	14 23 42.3	+1.3
	8.8nm,1.0s,baz=211,slow=5.9,SNR=2.1						
ASAJ	Asahikawa	58.84	340	P	P	14 24 08.1	+1.9
	12nm,0.9s,baz=175,slow=11,SNR=4.5						
NJ2	Nanjing	62.25	315	eP	P	14 24 29.9	+0.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
USRK	Ussuriysk Ar.	63.05	333	P	P	14 24 35.1	+0.4
	comp=Z,1.2nm,0.7s,baz=141,slow=44,SNR=3.5						
PETK	Petropavlovsk-	64.20	354	P	P	14 24 41.4	-0.9
	comp=Z,1.3nm,0.7s,baz=170,slow=13,SNR=3.1						
WHN	Wuhan	64.65	311	P	P	14 24 44.9	-0.7
VNDA	Vanda	66.61	181	P	P	14 24 57.1	-0.4
	comp=Z,7.1nm,1.0s,baz=350,slow=9.1,SNR=6.1						
GYA	Guiyang	68.72	304	P	P	14 25 14.0	+2.1
GYA				PP	PP	14 27 47.2	+3.4
GYA				S	S	14 34 15.8	+0.1
GYA				SKS	SKSac	14 35 09.6	-2.3
GYA	Guiyang	68.72	304	SS	SS	14 38 41.0	+0.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,560nm,18.5s						
GYA				LR	LR		
	comp=E,580nm,18.4s						
GYA				LR	LR		
	comp=Z,540nm,18.3s						
KRAB	Krabi	69.33	283	P	P	14 25 14.0	-1.7
XAN	Xi'an	70.38	312	P	P	14 25 21.3	-0.6
XAN				pP	sP	14 25 27.6	+1.8
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMI	Kunming	71.44	301	P	P	14 25 31.2	+2.4
KMI				pP	sP	14 25 32.9	+0.2
KMI				sP	pP	14 25 36.4	+4.8
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMI				LR	LR		
	comp=N,420nm,11.3s						
KMI				LR	LR		
	comp=E,620nm,15.6s						
KMI				LR	LR		
	comp=Z,700nm,18.9s						
HHC	Hu-ho-hao-te	72.04	319	eP	P	14 25 34.5	+2.6
HHC				S	SKiKP	14 35 00.8	-8.7
HHC				pmax	pmax		
	comp=Z,11nm,1.3s						
HHC				pmax	pmax		
	comp=Z,2µm,6.3s						
HHC				LR	LR		
	comp=N,740nm,16.0s						
HHC				LR	LR		
	comp=E,430nm,15.2s						
HHC				LR	LR		
	comp=Z,820nm,17.6s						
CM01	Chiang Mai Arr	72.45	293	eP	P	14 25 34.9	+0.2
CMAR	Chiang Mai Arr	72.47	293	P	P	14 25 35.0	+0.2
	comp=Z,1.2nm,0.6s,baz=124,slow=5.0,SNR=5.6						
CD2	Chengdu	72.89	307	P	P	14 25 37.5	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CD2				pmax	pmax		
	comp=Z,1µm,8.9s						
LZH	Lanzhou	75.01	312	eP	P	14 25 50.3	+0.7
LZH				pP	sP	14 25 56.1	+2.6
LZH				sP	PcP	14 25 59.7	-3.6
LZH				PP	PP	14 28 35.4	-2.2
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
LZH				LR	LR		
	comp=N,680nm,16.7s						
LZH				LR	LR		
	comp=E,750nm,17.8s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
SONM	Songino Array	78.84	324	P	P	14 26 10.6	-0.2
	comp=Z,0.6nm,0.4s,baz=106,slow=3.1,SNR=3.4						
QSPA	South Pole Qui	79.07	180	P	P	14 26 11.0	-0.8
	comp=Z,3.8nm,0.8s,baz=190,slow=12,SNR=5.6						
GTA	Gaotai	79.30	314	eP	P	14 26 13.8	+0.2
GTA				pP	PcP	14 26 19.5	-2.3
GTA				sP	sP	14 26 22.6	+5.1
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
IL1	Eielson Array	83.27	18	eP	P	14 26 36.3	+2.4
ILAR	Eielson Array	83.27	18	P	P	14 26 33.5	-0.4
	comp=Z,0.8nm,0.5s,baz=232,slow=5.5,SNR=11						
ILB	Eielson Array	83.27	18	eP	P	14 26 37.1	+3.2
NV01	Mina Array Sit	85.62	50	eP	P	14 26 50.8	+4.1
NVAR	Mina Array Bea	85.62	50	P	P	14 26 47.9	+1.2
	comp=Z,1.5nm,0.7s,baz=236,slow=8.2,SNR=8.0						
TIXI	Tiksi	86.07	349	P	P	14 26 48.7	+0.9
	comp=Z,0.7nm,0.3s,baz=106,slow=2.0,SNR=3.8						
SHPR	Sheep Range	87.47	52	eP	P	14 27 00.1	+4.3
	comp=Z,22nm,1.9s						
WMQ	Urumqi	89.33	315	eP	P	14 27 05.0	+0.7
WMQ				sP	sP	14 27 14.5	+6.2
WMQ				pmax	pmax		
	comp=Z,16nm,1.5s						
WMQ				LR	LR		
	comp=N,1µm,20.5s						
WMQ				LR	LR		
	comp=E,940nm,19.9s						
WMQ				LR	LR		
	comp=Z,1µm,20.9s						
SYO	Syowa Base	92.02	197	⇓eP	P	14 27 16.6	+0.4
PDAR	Pinedale Array	93.15	47	P	P	14 27 22.7	+0.4
	comp=Z,0.4nm,0.9s,baz=211,slow=1.1,SNR=3.2						
ZALV	Zalesovo Beam	93.73	324	P	P	14 27 23.9	-0.5
	comp=Z,0.5nm,0.4s,baz=117,slow=5.2,SNR=5.3						
MK01	Makanchi Array	93.73	317	eP	P	14 27 23.4	-1.2
MK31	Makanchi Array	93.75	317	eP	P	14 27 22.6	-2.1
MKAR	Makanchi Array	93.75	317	P	P	14 27 22.9	-1.8
	comp=Z,2.6nm,0.7s,baz=85,slow=5.6,SNR=12						
YKA	Yellowknife Ar	94.67	27	P	P	14 27 25.7	-2.8
	comp=Z,0.2nm,0.6s,baz=258,slow=4.8,SNR=3.6						
KURK	Kurchatov	96.84	320	P	P	14 27 37.1	-1.5
KURBB	Kurchatov Arra	96.88	320	P	P	14 27 37.1	-1.7
	comp=Z,0.3nm,0.4s,baz=93,slow=4.9,SNR=2.5						
KSH	Kashi	97.03	309	P	P	14 27 43.1	+3.1
KSH				pP	sP	14 27 48.6	+4.7
KSH				PP	PP	14 31 41.3	+5.4
KSH	Kashi	97.03	309	SKS	SKSac	14 38 16.6	-0.9
KSH	Kashi	97.03	309	S	S	14 39 01.3	-1.9
KSH	Kashi	97.03	309	SS	SS	14 45 43.8	+3.8
KSH				pmax	pmax		
	comp=Z,540nm,7.1s						
KSH				LR	LR		
	comp=N,230nm,5.1s						
KSH				LR	LR		
	comp=E,200nm,5.7s						
KSH				LR	LR		
	comp=Z,1µm,17.0s						
ARCES	ARCESS Array B	116.34	346	PKP	PKPdf	14 32 50.2	-0.6
	comp=Z,3.5nm,1.1s,baz=57,slow=3.3,SNR=3.3						
FINES	FINESS Array B	121.83	339	PKP	PKiKP	14 33 01.6	0.0
	comp=Z,2.1nm,1.1s,baz=321,slow=2.0,SNR=2.9						
KEST	Kesra	147.59	323	PKPbc	PKPab	14 33 53.1	-1.6
	comp=Z,5.1nm,0.8s,baz=76,slow=4.2,SNR=3.2						
ESDC	Sonseca Array	150.07	345	PKPbc	PKiKP	14 34 00.2	+0.5
	comp=Z,0.2nm,0.3s,baz=43,slow=3.4,SNR=3.4						
TORD	Torodi Ar. Bea	164.68	280	PKP	PKPdf	14 34 14.4	+1.8
	comp=Z,0.5nm,0.9s,baz=236,slow=1.6,SNR=2.3						

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*IDC **08** 14:21:03.0±0.7, 10°.95S×166°.04E, h0^{km}, mb4.0/14, mb1 4.2/16, mb1mx4.1/44, mbtmp4.1/16, ML4.7/2, MS4.4/1, Ms1 4.4/1, ms1mx3.7/37, Error ellipse: s-maj=20.4km s-min=17.0km az=106.0*

*ISCJB **08** 14:21:03.0±0.5, 10°.95S±0°.06×165°.97E±0°.07, h10^{km}, mb4.1/16, MS4.5/1, Error ellipse: s-maj=10.5km s-min=7.7km az=141.1*

*NEIC **08** 14:21:04.7±0.5, 10°.88S×165°.99E, h10^{km}, mb4.4/3, Error ellipse: s-maj=11.0km s-min=8.2km az=77.0*

ISC 08 14:21:04.7±0.7**, 10°.90S**±0°.09×**166°.03E**±0°.09**, h10^{km}, n28, σ1^{s}.04**/28**, mb4.0**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.16	283	Pn	Pn	14 22 37.0	+1.1
	26nm,0.3s,baz=140,slow=4.8,SNR=14						
HNR				Sn	Sn	14 23 46.3	-0.1
	baz=192,slow=19,SNR=1.5						
DZM	Mont Dzumac	11.12	178	Pn	Pn	14 23 44.3	+0.4
	3.0nm,0.3s,baz=298,slow=21,SNR=6.8						
ONTNC	Ouen Toro	11.36	178	ePn	Pn	14 23 49.2	+2.1
PINNC	Pines Island,	11.73	174	ePn	Pn	14 23 53.5	+1.3
CTA	Charters Tower	21.12	242	P	P	14 25 49.6	-0.2
	3.6nm,0.6s,baz=77,slow=8.8,SNR=5.5						
CTAO	Charters Tower	21.12	242	eP	P	14 25 48.7	-1.1
	21nm,1.4s						
COEN	Coen	22.52	260	eP	P	14 26 03.8	-1.2
	7.6nm,0.9s						
BKZ	Black Stump Fm	29.66	163	eP	P	14 27 09.8	-0.8
	24nm,1.5s						
STKA	Stephens Creek	30.74	224	P	P	14 27 20.4	+0.1
	1.2nm,0.6s,baz=23,slow=7.9,SNR=3.8						
WR1	Warramunga Arr	31.80	250	eP	P	14 27 28.6	-1.1
WRA	Warramunga Arr	31.80	250	P	P	14 27 28.6	-1.2
	3.7nm,0.8s,baz=82,slow=9.1,SNR=26						
RPZ	Rata Peaks	32.99	173	P	P	14 27 41.0	+1.2
	12nm,0.7s,baz=280,slow=2.3,SNR=6.8						
ASAR	Alice Springs	33.11	243	P	P	14 27 39.8	-1.4
	0.8nm,0.6s,baz=64,slow=9.9,SNR=12						
TGY	Tagaytay City	51.15	298	LR	LR	14 49 54.0	
	comp=Z,466nm,21.9s,baz=124,slow=34						
KSRS	Korea Array	59.91	325	P	P	14 31 12.2	+1.2
	0.7nm,0.7s,baz=150,slow=6.4,SNR=3.9						
KSAR	Wonju Array Be	59.92	325	P	P	14 31 12.2	+1.1
USRK	Ussuriysk Ar.	62.94	333	P	P	14 31 31.8	+0.4
	1.8nm,0.8s,baz=134,slow=10,SNR=3.1						
CMAR	Chiang Mai Arr	72.31	293	P	P	14 32 31.2	+0.1
	0.3nm,0.3s,baz=102,slow=4.0,SNR=4.5						
SONA0	Songino Array	78.71	324	eP	P	14 33 08.1	+0.6
SONM	Songino Array	78.71	324	P	P	14 33 08.1	+0.6
	0.4nm,0.6s,baz=96,slow=4.3,SNR=2.2						
QSPA	South Pole Qui	79.11	180	P	P	14 33 07.9	-1.4
	1.1nm,0.8s,baz=132,slow=1.5,SNR=4.0						
ILAR	Eielson Array	83.28	18	P	P	14 33 31.7	+0.4
	0.5nm,0.8s,baz=235,slow=5.4,SNR=6.4						
NVAR	Mina Array Bea	85.71	50	P	P	14 33 42.9	-1.6
	0.3nm,0.6s,baz=246,slow=6.3,SNR=3.5						
PFO	Pinyon Flats O	85.77	55	P	P	14 33 44.6	-0.2
	3.9nm,0.4s,baz=43,slow=8.7,SNR=4.1						
MK31	Makanchi Array	93.60	317	eP	P	14 34 20.3	-1.0
MK32	Makanchi Array	93.60	317	eP	P	14 34 20.9	-0.4
MKAR	Makanchi Array	93.60	317	P	P	14 34 20.9	-0.4
	0.6nm,0.7s,baz=96,slow=6.2,SNR=7.0						
ARCES	ARCESS Array B	116.26	346	PKP	PKPdf	14 39 48.5	+0.6
	1.0nm,0.8s,baz=45,slow=0.1,SNR=3.0						

MEX 08 14:26:36.4±0.8**, 14°.57N×93°.27W, h48^{km}**±46^{km}**, MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.03	71	eP	Pn	14 26 53.2	-1.3
THIG				i S	Sn	14 27 06.5	-1.2
PCIG		1.13	2	eP	Pn	14 26 54.7	-1.2
PCIG				eS	Sn	14 27 07.8	-2.4
CCIG	Comitan	2.02	33	eP	Pn	14 27 07.4	-0.8
CCIG				eS	Sn	14 27 30.5	-1.8

*ISCJB **08** 14:26:36.2±0.6, 10°.91S±0°.07×165°.92E±0°.07, h10^{km}, mb4.1/13, Error ellipse: s-maj=11.8km s-min=8.3km az=138.6*

*IDC **08** 14:26:36.6±1.0, 10°.85S×166°.01E, h0^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.9/36, mbtmp4.0/11, ML4.4/2, Error ellipse: s-maj=29.2km s-min=19.0km az=133.0*

*NEIC **08** 14:26:38.0±0.6, 10°.79S×165°.85E, h10^{km}, mb4.4/5, Error ellipse: s-maj=12.7km s-min=9.3km az=77.0*

ISC 08 14:26:37.7±0.7, 10°.93S±0°.08×165°.96E±0°.09, h10^{km}, n24, σ1^{s}.96/28, mb4.0/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.11	284	*e*Pn	Pn	14 28 04.7	-3.3
HNR				*e*Sn	Sn	14 29 19.2	+1.2
HNR	Honiara	6.11	284	Pn	Pn	14 28 10.4	+2.4
	20nm,0.3s,baz=115,slow=3.0,SNR=12						
HNR				Sn	Sn	14 29 19.2	+1.2
	baz=42,slow=19,SNR=1.2						
MARNC	Mare, Loyalty	10.68	170	*e*Pn	Pn	14 29 12.5	+1.7
DZM	Mont Dzumac	11.09	178	Pn	Pn	14 29 18.3	+1.7
	1.3nm,0.3s,baz=16,slow=19,SNR=13						
DZM				Sn	Sn	14 31 18.3	-2.5
	0.6nm,0.3s,baz=167,slow=16,SNR=2.5						
ONTNC	Ouen Toro	11.33	178	*e*Pn	Pn	14 29 21.5	+1.8
PINNC	Pines Island,	11.71	173	*e*Pn	Pn	14 29 28.6	+3.7
CTA	Charters Tower	21.04	242	P	P	14 31 23.4	+1.4
	3.7nm,0.9s,baz=86,slow=13,SNR=2.4						
CTAO	Charters Tower	21.04	242	*e*P	P	14 31 20.8	-1.2
	26nm,1.4s						
STKA	Stephens Creek	30.67	223	*e*P	P	14 32 48.8	-3.8
	4.7nm,1.6s						
STKA	Stephens Creek	30.67	223	P	P	14 32 53.2	+0.6
	1.5nm,0.8s,baz=211,slow=18,SNR=2.4						
WRAB	Tennant Creek	31.71	250	*e*P	P	14 33 00.6	-1.4
	6.9nm,0.8s						
WB2	Warramunga Arr	31.71	250	*e*P	P	14 33 00.4	-1.6
	9.1nm,0.9s						
WR1	Warramunga Arr	31.72	250	*e*P	P	14 33 02.8	+0.8
WRA	Warramunga Arr	31.72	250	P	P	14 33 02.8	+0.8
	8.6nm,0.9s,baz=80,slow=9.1,SNR=40						
GUMO	Guam	32.11	319	P	P	14 33 05.0	-0.4
	56nm,0.8s,baz=177,slow=21,SNR=14						
AS31	Alice Springs	33.03	243	*e*P	P	14 33 10.1	-3.5
	0.7nm,0.8s						
ASAR	Alice Springs	33.03	243	P	P	14 33 13.6	0.0
	0.7nm,0.6s,baz=64,slow=10,SNR=18						
ASAR				PcP	PcP	14 35 59.4	+2.1
	0.5nm,1.0s,baz=101,slow=2.3,SNR=2.8						
CMAR	Chiang Mai Arr	72.26	293	P	P	14 38 05.3	+1.4
	0.5nm,0.6s,baz=126,slow=4.7,SNR=3.8						
ILAR	Eielson Array	83.33	18	P	P	14 39 04.3	-0.2
	0.4nm,0.8s,baz=238,slow=4.9,SNR=4.6						
ILB	Eielson Array	83.33	18	*e*P	P	14 39 02.6	-2.0
NVAR	Mina Array Bea	85.79	50	P	P	14 39 18.5	+0.6
	0.1nm,0.3s,baz=245,slow=5.8,SNR=2.6						
MK32	Makanchi Array	93.58	317	*e*P	P	14 39 54.2	0.0
MKAR	Makanchi Array	93.58	317	P	P	14 39 54.2	0.0
	0.6nm,0.8s,baz=96,slow=6.1,SNR=7.2						
YKA	Yellowknife Ar	94.77	27	P	P	14 39 58.3	-0.9
	0.1nm,0.5s,baz=266,slow=9.0,SNR=3.6						

ISC 08 14:28:55.9±0.9, 50°.15N±0°.05×19°.03E±0°.04, h0^{km}, n6, σ0^{s}.59/12, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.14	350	*e*Pg	Pg	14 28 59.0	+0.2
CHZP				*e*Sg	Sg	14 29 00.7	+0.1
OJC	Ojcow	0.50	81	*e*Pg	Pg	14 29 04.9	-0.6
OJC				*e*Sg	Sg	14 29 11.9	-0.1
MORC	Moravsky Berou	1.03	249	*e*PG	Pb	14 29 16.1	-0.6
MORC				*e*SG	Sg	14 29 29.6	+0.6
LANS	Liptovska Anna	1.04	164	*e*PG	Pb	14 29 16.9	+0.1
LANS				*e*SG	Sb	14 29 31.5	+0.5
NIE	Niedzica	1.10	131	*e*Pg	Pn	14 29 19.0	+0.3
NIE				*e*Sg	Sb	14 29 33.9	+1.1
VYHS	Vyhne	1.66	184	*e*PN	Pn	14 29 25.9	-0.4
VYHS				*e*SN	Sn	14 29 47.9	-0.4
VYHS				*e*LG	Lg	14 29 50.7	

IDC 08 14:34:29.9±1.9, 10°.86S×165°.92E, h0^{km}, mb3.8/3, mb1 4.1/5, mb1mx3.7/37, mbtmp4.0/5, ML3.8/2, Error ellipse: s-maj=42.3km s-min=32.9km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.05	283	Pn	Pn	14 36 02.3	+1.5
	6.4nm,0.3s,baz=129,slow=6.5,SNR=4.2						
DZM	Mont Dzumac	11.16	178	Pn	Pn	14 37 12.3	+1.3
	0.3nm,0.3s,baz=158,slow=19,SNR=3.1						
WRA	Warramunga Arr	31.71	250	P	P	14 40 56.2	+0.5
	2.0nm,0.8s,baz=81,slow=9.1,SNR=12						
ASAR	Alice Springs	33.03	243	P	P	14 41 05.9	-1.4
	0.4nm,0.7s,baz=63,slow=10,SNR=7.4						
ILAR	Eielson Array	83.28	18	P	P	14 46 58.1	0.0
	0.9nm,1.1s,baz=235,slow=4.3,SNR=4.0						

IDC 08 14:37:33.8±2.9, 12°.10S×165°.73E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.7/38, mbtmp3.7/6, Error ellipse: s-maj=120.2km s-min=28.4km az=142.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.12	251	P	P	14 43 55.2	+0.8
	0.5nm,0.7s,baz=81,slow=9.0,SNR=4.8						
ASAR	Alice Springs	32.31	245	P	P	14 44 04.3	-0.6
	0.5nm,0.8s,baz=69,slow=9.6,SNR=5.6						
CMAR	Chiang Mai Arr	72.52	294	P	P	14 49 02.9	-0.2
	0.3nm,0.4s,baz=109,slow=6.6,SNR=3.3						
ILAR	Eielson Array	84.52	18	P	P	14 50 08.7	+0.3
	0.7nm,0.6s,baz=234,slow=5.5,SNR=17						
MKAR	Makanchi Array	94.28	317	P	P	14 50 55.0	-0.2
	0.6nm,0.9s,baz=92,slow=4.9,SNR=5.5						
YKA	Yellowknife Ar	95.92	27	P	P	14 51 01.8	-0.5
	0.1nm,0.6s,baz=258,slow=5.0,SNR=2.6						

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*IDC **08** 14:38:49.4±1.7, 11°.98S×165°.35E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/40, mbtmp3.7/6, ML3.7/1, MS4.1/1, Ms1 4.1/1, ms1mx3.6/36, Error ellipse: s-maj=46.2km s-min=30.8km az=119.0*

*ISCJB **08** 14:38:52.6±1.2, 12°.2S±0°.1×165°.3E±0°.2, h33^{km}, mb3.6/5, MS4.1/1, Error ellipse: s-maj=31.0km s-min=19.8km az=172.6*

ISC 08 14:38:54.5±1.3, 12°.1S±0°.1×165°.4E±0°.2, h35^{km}, n7, σ1^{s}.12/6, mb3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.00	174	Pn	Pn	14 41 16.0	+0.2
	0.7nm,0.3s,baz=307,slow=16,SNR=5.0						
WRA	Warramunga Arr	30.81	251	P	P	14 45 06.7	-0.7
	0.3nm,0.4s,baz=80,slow=8.7,SNR=6.2						
ASAR	Alice Springs	32.02	245	P	P	14 45 17.3	-0.7
	0.5nm,0.9s,baz=70,slow=9.6,SNR=3.1						
DAV	Davao City (W)	43.91	294	LR	LR	15 05 21.4	
	comp=Z,204nm,18.2s,baz=132,slow=36						
CMAR	Chiang Mai Arr	72.20	294	P	P	14 50 18.0	+1.5
	0.6nm,0.7s,baz=137,slow=4.2,SNR=4.6						
ILAR	Eielson Array	84.59	19	P	P	14 51 23.4	-0.5
	0.5nm,0.9s,baz=239,slow=4.6,SNR=5.0						
MKAR	Makanchi Array	94.02	317	P	P	14 52 08.8	-0.4
	0.4nm,0.7s,baz=103,slow=5.4,SNR=4.6						

MEX 08 14:40:58.0±0.8, 16°.17N×98°.21W, h3^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.23	19	*i* P	Pg	14 41 01.7	-0.9
PNIG				*i* S	Sg	14 41 06.2	+0.6
VHO	Vista Hermosa	1.67	57	*e*P	Pn	14 41 21.7	-6.7
VHO				*i* S	Sn	14 41 45.6	-4.9
HUIG	Huatulco	2.06	101	*e*P	Pn	14 41 34.7	+1.2
HUIG				*e*S	Sb	14 42 02.0	-0.1

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*ISCJB **08** 14:44:00.3±1.3, 17°.2S±0°.5×178°.9W±0°.4, h539^{km}, mb3.3/8, Error ellipse: s-maj=84.5km s-min=16.3km az=148.7*

*IDC **08** 14:44:03.6±6.7, 17°.27S×178°.85W, h570^{km}±77^{km}, mb2.9/8, mb1 3.3/8, mb1mx3.0/37, mbtmp3.8/8, Error ellipse: s-maj=83.3km s-min=24.0km az=148.0*

ISC 08 14:44:00.9±1.4, 17°.2S±0°.5×178°.8W±0°.4, h539^{km}, n8, σ0^{s}.52/10, mb3.2/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.61	240	P	P	14 50 38.2	+0.1
	1.6nm,0.4s,baz=90,slow=9.1,SNR=5.5						
WRA	Warramunga Arr	44.37	259	P	P	14 51 23.9	+0.1
	0.9nm,0.6s,baz=96,slow=7.2,SNR=8.7						
WRA				PcP	PcP	14 52 55.5	-0.7
	0.5nm,1.0s,baz=100,slow=3.5,SNR=2.9						
ASAR	Alice Springs	44.60	254	P	P	14 51 26.1	+0.5
	9.3nm,0.6s,baz=89,slow=7.9,SNR=303						
ASAR				PcP	PcP	14 52 56.3	-0.6
	0.3nm,0.4s,baz=105,slow=3.9,SNR=4.7						
NVAR	Mina Array Bea	79.22	44	P	P	14 55 11.1	+0.5
	0.6nm,0.7s,baz=243,slow=9.8,SNR=4.0						
ILAR	Eielson Array	85.33	13	P	P	14 55 40.6	0.0
	0.1nm,0.4s,baz=222,slow=5.5,SNR=5.1						
TXAR	Lajitas Array	85.97	58	P	P	14 55 44.9	+0.3
	0.2nm,0.6s,baz=216,slow=4.5,SNR=2.4						
PDAR	Pinedale Array	87.14	44	P	P	14 55 49.4	-0.7
	0.2nm,0.4s,baz=188,slow=3.0,SNR=3.9						
YKA	Yellowknife Ar	93.89	25	P	P	14 56 20.5	0.0
	0.1nm,0.6s,baz=252,slow=4.5,SNR=3.4						

IDC 08 14:49:37.4±1.7, 10°.84S×165°.50E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/41, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=48.9km s-min=27.8km az=119.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.21	175	Pn	Pn	14 52 19.1	0.0
	0.7nm,0.3s,baz=315,slow=12,SNR=9.6						
WRA	Warramunga Arr	31.33	249	P	P	14 56 00.2	+0.4
	0.6nm,0.5s,baz=82,slow=8.9,SNR=10						
ASAR	Alice Springs	32.67	243	P	P	14 56 11.4	-0.2
	1.3nm,0.7s,baz=66,slow=10,SNR=31						
SONM	Songino Array	78.36	324	P	P	15 01 39.5	-0.4
	0.3nm,0.5s,baz=136,slow=5.3,SNR=2.4						
ILAR	Eielson Array	83.39	19	P	P	15 02 06.6	+0.3
	0.2nm,0.5s,baz=236,slow=4.5,SNR=5.9						

IDC 08 14:51:02.1±3.1, 10°.28S×164°.99E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/40, mbtmp3.6/4, Error ellipse: s-maj=113.3km s-min=29.6km az=133.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.06	248	P	P	14 57 22.7	+0.6
	1.2nm,0.8s,baz=80,slow=9.1,SNR=7.7						
ASAR	Alice Springs	32.48	242	P	P	14 57 34.2	-0.5
	0.2nm,0.6s,baz=67,slow=10,SNR=3.5						
SONM	Songino Array	77.62	324	P	P	15 03 00.2	-0.3
	0.5nm,0.6s,baz=108,slow=4.7,SNR=2.6						
ILAR	Eielson Array	83.03	19	P	P	15 03 29.3	+0.2
	0.3nm,0.8s,baz=238,slow=6.2,SNR=3.4						

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*IDC **08** 14:53:21.0±2.9, 10°.54N×125°.67E, h0^{km}, mb3.1/3, mb1 3.3/3, mb1mx3.2/44, mbtmp3.1/3, Error ellipse: s-maj=224.3km s-min=26.2km az=65.0*

*MAN **08** 14:53:20.6, 10°.01N×125°.16E, h18^{km}, MS3.2*

*ISCJB **08** 14:53:24.6±0.7, 10°.16N±0°.04×124°.93E±0°.05, h22^{km}±5^{km}, mb3.1/3, Error ellipse: s-maj=8.6km s-min=6.9km az=17.4*

ISC 08 14:53:24.6±1.0, 10°.23N±0°.04×124°.96E±0°.05, h15^{km}±6^{km}, n12, σ1^{s}.62/17, mb3.2/3, 2C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.14	224	*e*P	Pg	14 53 28.5	+0.1
MSLP				*e*S	Sg	14 53 31.8	+0.9
SCPH	Surigao	0.69	130	⇑*e*P	Pn	14 53 39.6	-0.3
OCLP	Ormoc	0.88	337	*e*P	Pg	14 53 40.5	-1.2
OCLP				*e*S	Sb	14 53 56.1	+2.9
PLP	Palo	0.93	1	⇑*e*P	Pg	14 53 41.3	-1.3
PLP				*i* S	Sg	14 53 55.6	+0.9
LLP	Lapu-Lapu	0.98	275	⇓*e*P	Pg	14 53 41.4	-2.2
LLP				*e*S	Sg	14 53 54.5	-1.9
TBP	Tagbilaran	1.20	244	*e*P	Pn	14 53 47.0	0.0
BUTP	Butuan	1.42	152	*e*P	Pg	14 53 40.4	-12
BESP	Borongan	1.44	19	*e*P	Pb	14 53 50.7	-0.5
BESP				*e*S	Sg	14 54 11.1	0.0
GUIM	Jordan	2.36	280	*e*P	Pn	14 54 02.9	+0.1
GUIM				*e*S	Sn	14 54 34.4	+2.8
WRA	Warramunga Arr	31.38	163	P	P	14 59 43.3	-1.8
	0.3nm,0.9s,baz=345,slow=9.0,SNR=3.6						
ASAR	Alice Springs	34.81	166	P	P	15 00 16.1	+1.0
	0.1nm,0.6s,baz=338,slow=7.4,SNR=6.0						
MKAR	Makanchi Array	51.28	323	P	P	15 02 28.0	-0.1
	0.2nm,0.7s,baz=118,slow=7.6,SNR=3.1						

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*IDC **08** 14:54:00.8±0.6, 10°.85S×165°.87E, h0^{km}, mb4.3/19, mb1 4.5/21, mb1mx4.4/40, mbtmp4.3/21, ML5.0/2, Error ellipse: s-maj=17.8km s-min=14.9km az=116.0*

*ISCJB **08** 14:54:01.0±0.3, 10°.88S±0°.05×165°.79E±0°.06, h10^{km}, mb4.3/27, MS5.0/1, Error ellipse: s-maj=8.7km s-min=6.2km az=161.7*

*NEIC **08** 14:54:02.5±0.3, 10°.79S×165°.83E, h10^{km}, mb4.7/11, Error ellipse: s-maj=8.6km s-min=6.1km az=83.0*

ISC 08 14:54:02.5±0.5, 10°.85S±0°.07×165°.80E±0°.08, h10^{km}, n58, σ1^{s}.45/58, mb4.4/27, 1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.93	283	*e*P	Pn	14 55 33.0	+2.5
HNR				*e*S	Sn	14 56 32.0	-6.5
HNR	Honiara	5.93	283	Pn	Pn	14 55 32.1	+1.6
	63nm,0.3s,baz=176,slow=2.1,SNR=20						
HNR				Sn	Sn	14 56 39.8	+1.3
	17nm,0.3s,baz=176,slow=19,SNR=3.3						
MARNC	Mare, Loyalty	10.79	169	*e*Pn	Pn	14 56 38.8	+1.6
DZM	Mont Dzumac	11.18	177	*e*Pn	Pn	14 56 43.9	+1.3
DZM				*e*Sn	Sn	14 58 36.8	-11
DZM				Sn	Sn	14 58 45.2	-2.5
DZM	Mont Dzumac	11.18	177	Pn	Pn	14 56 43.1	+0.5
	6.9nm,0.3s,baz=23,slow=6.6,SNR=41						
DZM				Sn	Sn	14 58 45.2	-2.5
	0.4nm,0.3s,baz=300,slow=20,SNR=2.8						
ONTNC	Ouen Toro	11.41	177	*e*Pn	Pn	14 56 47.4	+1.7
PINNC	Pines Island,	11.81	173	*e*Pn	Pn	14 56 53.0	+1.9
MANU	Manus Island	20.28	294	*e*P	Pn	14 58 39.8	-0.7
	47nm,0.8s						
CTA	Charters Tower	20.94	242	P	Pn	14 58 47.2	-1.0
	6.5nm,0.6s,baz=66,slow=11,SNR=12						
CTAO	Charters Tower	20.94	242	*e*P	Pn	14 58 47.8	-0.4
	18nm,1.1s						
ARMA	Armidale	23.51	212	*e*P	P	14 59 11.7	-1.2
	8.0nm,1.0s						
URZ	Urewera	29.12	161	P	P	15 00 02.9	-0.7
	2.4nm,0.4s,baz=277,slow=2.8,SNR=5.1						
H11S2	WAKE ISLAND Hy	29.16	2	T	T	15 30 29.0	
	baz=181,slow=76,SNR=81						
H11S3	WAKE ISLAND Hy	29.17	2	T	T	15 30 29.3	
	baz=181,slow=76,SNR=47						
H11S1	WAKE ISLAND Hy	29.18	2	T	T	15 30 30.4	
	baz=181,slow=76,SNR=66						
BKZ	Black Stump Fm	29.77	163	*e*P	P	15 00 09.9	+0.5
	12nm,0.5s						
STKA	Stephens Creek	30.62	223	P	P	15 00 17.8	+0.8
	1.4nm,0.5s,baz=54,slow=9.4,SNR=4.8						
THZ	Tophouse	31.42	170	*e*P	P	15 00 24.8	+0.8
	17nm,0.9s						
WR1	Warramunga Arr	31.60	250	*e*P	P	15 00 25.7	-0.1
WRA	Warramunga Arr	31.60	250	P	P	15 00 25.7	-0.1
	2.7nm,0.6s,baz=81,slow=9.1,SNR=12						
WRA				PcP	PcP	15 03 18.4	+0.1
	1.0nm,1.0s,baz=77,slow=3.0,SNR=6.4						
LTZ	Lake Taylor	32.31	171	*e*P	P	15 00 32.3	+0.5
	16nm,0.8s						
AS01	Alice Springs	32.88	243	*e*P	P	15 00 36.7	-0.4
AS31	Alice Springs	32.93	243	*e*P	P	15 00 36.5	-1.0
	1.2nm,0.5s						
ASAR	Alice Springs	32.93	243	P	P	15 00 37.0	-0.4
	4.5nm,0.8s,baz=64,slow=10,SNR=56						
ASAR				PcP	PcP	15 03 22.4	+0.5
	1.1nm,0.8s,baz=73,slow=3.5,SNR=7.9						
RPZ	Rata Peaks	33.06	173	*e*P	P	15 00 38.3	0.0
	19nm,1.0s						
RPZ	Rata Peaks	33.06	173	P	P	15 00 38.3	0.0
	14nm,0.8s,baz=278,slow=4.9,SNR=8.4						
FITZ	Fitzroy Crossi	39.48	255	P	P	15 01 32.4	-1.1
	3.4nm,0.8s,baz=56,slow=7.4,SNR=9.1						
FITZ				PcP	PcP	15 03 42.4	+0.9
	1.9nm,0.8s,baz=84,slow=8.5,SNR=3.2						
MJAR	Matsushiro Arr	53.82	332	P	P	15 03 24.7	-0.9
	3.8nm,0.8s,baz=173,slow=10,SNR=7.3						
MAJO	Matsushiro	53.82	332	*e*P	P	15 03 24.7	-0.9
KSRS	Korea Array	59.74	326	P	P	15 04 08.4	+0.8
	1.0nm,0.7s,baz=143,slow=8.2,SNR=5.0						
KSAR	Wonju Array Be	59.76	326	P	P	15 04 08.4	+0.7
USRK	Ussuriysk Ar.	62.79	333	P	P	15 04 29.4	+1.2
	2.8nm,0.7s,baz=122,slow=4.8,SNR=6.0						
HHC	Hu-ho-hao-te	71.72	320	*e*P	P	15 05 26.7	+1.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.5s						
CMAR	Chiang Mai Arr	72.08	293	P	P	15 05 28.5	+0.9
	comp=Z,0.6nm,0.5s,baz=113,slow=4.2,SNR=4.5						
ULN	Ulaanbaatar	78.17	324	*e*P	P	15 06 02.7	+0.4
	comp=Z,4.7nm,0.7s						
SONA0	Songino Array	78.54	324	*e*P	P	15 06 05.2	+0.9
SONM	Songino Array	78.54	324	P	P	15 06 05.2	+0.9
	comp=Z,1.1nm,0.5s,baz=133,slow=5.7,SNR=5.9						
GTA	Gaotai	78.96	314	⇑P	P	15 06 08.6	+1.8
GTA				pP	PcP	15 06 12.8	-2.6
GTA				sP	sP	15 06 15.7	+4.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,51nm,7.0s						
GTA				LR	LR		
	comp=N,1μm,20.0s						
GTA				LR	LR		
	comp=E,620nm,18.7s						
GTA				LR	LR		
	comp=Z,470nm,20.6s						
HDA	Harding Lake	83.04	19	*e*P	P	15 06 29.0	+1.1
	comp=Z,9.6nm,0.9s						
ILAR	Eielson Array	83.31	18	P	P	15 06 29.4	+0.2
	comp=Z,2.2nm,0.9s,baz=243,slow=4.9,SNR=18						
ILB	Eielson Array	83.31	18	*e*P	P	15 06 29.9	+0.7
IL1	Eielson Array	83.31	18	*e*P	P	15 06 30.0	+0.8
NVAR	Mina Array Bea	85.86	50	P	P	15 06 43.7	+0.7
	comp=Z,2.5nm,1.0s,baz=232,slow=7.2,SNR=7.6						
PDAR	Pinedale Array	93.38	47	P	P	15 07 18.2	-0.3
	comp=Z,0.6nm,1.0s,baz=282,slow=7.4,SNR=3.7						
MK01	Makanchi Array	93.40	317	*e*P	P	15 07 18.3	+0.1
MK31	Makanchi Array	93.41	317	*e*P	P	15 07 17.3	-0.9
MK32	Makanchi Array	93.41	317	*e*P	P	15 07 18.7	+0.5
MKAR	Makanchi Array	93.41	317	P	P	15 07 18.7	+0.5
	comp=Z,2.0nm,0.7s,baz=92,slow=6.4,SNR=22						
ZALV	Zalesovo Beam	93.43	324	*e*P	P	15 07 15.9	-2.1
ZALV	Zalesovo Beam	93.43	324	P	P	15 07 17.1	-0.9
	comp=Z,1.2nm,0.6s,baz=115,slow=4.8,SNR=5.5						
ZAA1	Zalesovo Array	93.43	324	*e*P	P	15 07 17.1	-0.9
YKA	Yellowknife Ar	94.77	27	P	P	15 07 22.3	-1.8
	comp=Z,0.2nm,0.7s,baz=255,slow=4.6,SNR=4.1						
LTX	Lajitas	95.69	61	*e*P	P	15 07 28.1	-1.1
TXAR	Lajitas Array	95.69	61	P	P	15 07 28.1	-1.1
	comp=Z,0.6nm,1.0s,baz=280,slow=5.1,SNR=2.9						
ARCES	ARCESS Array B	116.16	346	PKP	PKPdf	15 12 44.5	-1.1
	comp=Z,1.2nm,0.8s,baz=85,slow=2.6,SNR=5.6						
FINES	FINESS Array B	121.61	339	PKP	PKiKP	15 12 55.5	-0.8
	comp=Z,1.8nm,0.9s,baz=79,slow=2.8,SNR=2.6						
NOA	NORSAR Array B	126.52	345	PKP	PKiKP	15 13 04.3	-1.9
	comp=Z,0.7nm,0.8s,baz=49,slow=2.2,SNR=2.8						
ESDC	Sonseca Array	149.88	344	PKPbc	PKPbc	15 13 51.6	-1.8
	comp=Z,0.2nm,0.3s,baz=18,slow=2.8,SNR=4.1						

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*ISCJB **08** 14:59:55.4±1.0, 11°.0S±0°.1×166°.0E±0°.1, h10^{km}, mb4.1/10, Error ellipse: s-maj=21.1km s-min=17.3km az=34.2*

*IDC **08** 14:59:55.5±1.1, 10°.97S×166°.01E, h0^{km}, mb4.2/10, mb1 4.4/11, mb1mx4.1/38, mbtmp4.3/11, ML5.0/1, Error ellipse: s-maj=25.7km s-min=23.8km az=44.0*

ISC 08 14:59:57.1±1.1, 11°.0S±0°.2×166°.0E±0°.1, h10^{km}, n11, σ0^{s}.68/11, mb4.2/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.18	284	Pn	Pn	15 01 29.1	+0.6
	35nm,0.3s,baz=139,slow=1.9,SNR=17						
CTA	Charters Tower	21.08	242	P	P	15 04 42.3	+0.5
	8.5nm,1.0s,baz=51,slow=8.5,SNR=4.6						
URZ	Urewera	28.93	162	P	P	15 05 56.9	+0.5
	6.3nm,1.0s,baz=315,slow=17,SNR=3.7						
STKA	Stephens Creek	30.68	224	P	P	15 06 12.1	0.0
	1.5nm,0.9s,baz=308,slow=12,SNR=3.2						
WRA	Warramunga Arr	31.77	250	P	P	15 06 21.2	-0.6
	5.5nm,0.6s,baz=81,slow=9.3,SNR=52						
ASAR	Alice Springs	33.07	243	P	P	15 06 32.1	-1.2
	2.2nm,0.6s,baz=64,slow=10,SNR=42						
FITZ	Fitzroy Crossi	39.67	255	P	P	15 07 29.2	-0.4
	5.5nm,0.6s,baz=90,slow=5.6,SNR=23						
VNDA	Vanda	66.57	181	P	P	15 10 46.8	-0.1
	2.4nm,0.8s,baz=45,slow=5.1,SNR=3.4						
CMAR	Chiang Mai Arr	72.34	293	P	P	15 11 24.1	+0.4
	0.8nm,0.8s,baz=105,slow=4.6,SNR=6.0						
ILAR	Eielson Array	83.36	18	P	P	15 12 24.2	+0.2
	0.5nm,0.9s,baz=232,slow=4.3,SNR=5.2						
MKAR	Makanchi Array	93.66	317	P	P	15 13 13.2	-0.8
	0.7nm,0.8s,baz=101,slow=6.3,SNR=8.1						

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*ISCJB **08** 15:00:10.8±0.1, 10°.95S±0°.02×165°.87E±0°.02, h10^{km}, mb5.1/153, MS5.5/11, Error ellipse: s-maj=3.4km s-min=3.1km az=158.1*

*IDC **08** 15:00:10.2±0.4, 10°.89S×165°.94E, h0^{km}, mb4.9/28, mb1 5.0/30, mb1mx5.0/38, mbtmp4.9/30, ML5.6/2, Error ellipse: s-maj=14.0km s-min=11.5km az=104.0*

*NEIC **08** 15:00:12.1±0.2, 10°.93S×165°.89E, h10^{km}, mb5.2/77, Error ellipse: s-maj=5.4km s-min=4.3km az=109.0*

*MOS **08** 15:00:14.4±1.0, 10°.83S×165°.74E, h33^{km}, mb5.2/58, Error ellipse: s-maj=8.7km s-min=7.7km az=106.3*

*GCMT **08** 15:00:16.1±0.2, 10°.88S±0°.01×165°.82E±0°.01, h22^{km}±1^{km}, MW5.8/111, Moment Tensor Solution. s77,c106; s111,c197; Duration: 1^{s}.9 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.71±.16; $M_{\theta\theta}$5.91±.14; $M_{\phi\phi}$-5.20±.14; $M_{r\theta}$0.10±.24; $M_{\theta\phi}$-2.71±.12; $M_{\phi r}$-0.64±.26; Best double couple: $M_0$6.21900×10^{17} NP1:ϕ_s328.00000°, δ87.00000°, λ-6.00000°. NP2:ϕ_s58.00000°, δ84.00000°, λ-177.00000°. Principal axes: T 6.5440, Plg2.0000°, Azm13.0000°; N -0.6480, Plg83.0000°, Azm119.0000°; P -5.8950, Plg7.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 08 15:00:11.7±0.3, 10°.90S±0°.04×166°.00E±0°.05, h10^{km}, n426, σ1^{s}.51/412, mb5.2/161, MS5.4/12, 20C-6D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.14	283	*i* P	Pn	15 01 43.0	+0.5
HNR				*i* S	Sn	15 02 53.0	+0.2
HNR	Honiara	6.14	283	Pn	Pn	15 01 43.3	+0.8
	165nm,0.3s,baz=124,slow=6.8,SNR=78						
HNR				Sn	Sn	15 02 53.9	+1.1
	52nm,0.3s,baz=143,slow=20,SNR=1.6						
MARNC	Mare, Loyalty	10.70	170	*e*Pn	Pn	15 02 43.3	-1.8
DZM	Mont Dzumac	11.12	178	*e*Pn	Pn	15 02 52.6	+1.7
	515nm,0.6s						
DZM				*e*LR	LR	15 05 24.4	
	comp=Z,48μm,24.9s						
DZM	Mont Dzumac	11.12	178	*e*Pn	Pn	15 02 52.8	+1.9
DZM				Sn	Sn	15 04 54.6	-0.7
DZM	Mont Dzumac	11.12	178	Pn	Pn	15 02 52.2	+1.3
	32nm,0.3s,baz=31,slow=18,SNR=18						
DZM				Sn	Sn	15 04 54.6	-0.7
	3.0nm,0.3s,baz=127,slow=20,SNR=3.1						
ONTNC	Ouen Toro	11.35	178	*e*Pn	Pn	15 02 55.7	+1.7
PINNC	Pines Island,	11.73	173	*e*Pn	Pn	15 03 01.2	+2.0
MSVF	Nonsavu	13.50	122	Pn	Pn	15 03 23.0	-0.6
	260nm,1.0s						
MSVF	Nonsavu	13.50	122	P	Pn	15 03 23.0	-0.6

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MSVF                                pmax     pmax
      comp=Z,260nm,1.0s
TARA  Tarawa            13.99  30 ePn      Pn          15 03 30.4 +0.2
RABL  Rabaul            15.25 295 ePn      P           15 03 47.9 -4.3
      comp=Z,461nm,1.3s
RABL                              eSn      Sn          15 06 37.1 +0.8
PATS  Pohnpei           19.21 336  P       Pn          15 04 36.1 -0.9
      baz=19,SNR=3.4
PATS  Pohnpei           19.21 336 eP       Pn          15 04 37.7 +0.8
      comp=Z,756nm,1.4s
EIDS  Eidsvold          20.17 222  P       Pn          15 04 47.4 -1.0
      baz=20,SNR=11
EIDS  Eidsvold          20.17 222 eP       Pn          15 04 48.5 +0.1
      comp=Z,136nm,1.1s
CTA   Charters Tower    21.09 242  P       P           15 04 57.1 +0.6
      comp=Z,31nm,0.8s,baz=70,slow=11,SNR=26
CTAO  Charters Tower    21.09 242 eP       P           15 04 58.2 +1.7
      comp=Z,103nm,1.0s
CTAO  Charters Tower    21.09 242 eP       P           15 04 58.2 +1.7
CTAO                               pmax    pmax
      comp=Z,103nm,1.0s
MTSU  Mount Surprise    22.18 249  P       P           15 05 10.1 +1.9
      baz=22,SNR=16
RMQ   Roma              22.47 224  P       P           15 05 12.6 +1.3
      baz=23,SNR=19
COEN  Coen              22.50 260  P       P           15 05 11.3 -0.4
      baz=22,SNR=9.7
COEN  Coen              22.50 260 eP       P           15 05 11.3 -0.4
      comp=Z,109nm,1.4s
ARMA  Armidale          23.57 212  P       P           15 05 23.6 +0.9
      baz=24,SNR=15
ARMA  Armidale          23.57 212 eP       P           15 05 22.6 -0.1
      comp=Z,48nm,1.0s
QLP   Quilpie           25.78 230  P       P           15 05 43.2 +0.2
      baz=26,SNR=18
MGCD  Mangrove Creek    26.08 209  P       P           15 05 47.9 +2.3
      baz=26,SNR=4.6
JAY   Jayapura          26.45 287  P       P           15 05 49.1 -0.1
RIV   Riverview         26.56 208  P       P           15 05 50.7 +0.7
      baz=27,SNR=4.9
GENI  Genyem            26.93 286  P       P           15 05 54.6 +1.1
QIS   Mount Isa         27.12 246  P       P           15 05 56.1 +0.9
      baz=27,SNR=6.1
CMSA  Cobar Meteorol    27.83 219  P       P           15 06 01.3 -0.1
      baz=28,SNR=23
YNG   Young             28.30 212  P       P           15 06 06.3 +0.7
      baz=28,SNR=7.1
CNB   Canberra Magne    28.63 209  P       P           15 06 09.6 +1.0
      baz=29,SNR=8.8
OMRZ  Omania            28.64 163  P       P           15 06 11.7 +3.1
HAZ   Te Kaha           28.76 160  P       P           15 06 09.5  0.0
MXZ   Matakaoa Point    28.76 159  P       P           15 06 11.1 +1.6
RUGZ  Raukumara Rang    28.91 161  P       P           15 06 11.0 -0.1
URZ   Urewera           29.00 162 eP       P           15 06 11.4 -0.3
URZ   Urewera           29.00 162  P       P           15 06 12.1 +0.3
      comp=Z,23nm,0.8s,baz=28,slow=2.1,SNR=14
URZ   Urewera           29.00 162  P       P           15 06 10.6 -1.1
PRRZ  Plateau Road      29.01 163  P       P           15 06 13.9 +2.1
WMGZ  Waiomatatini S    29.03 159  P       P           15 06 14.1 +2.2
MUGZ  Murupara          29.10 162  P       P           15 06 12.7 +0.1
VRZ   Vera Road         29.17 166  P       P           15 06 17.7 +4.4
MWZ   Matawai           29.20 161  P       P           15 06 14.0 +0.5
PUZ   Puketiti          29.20 160  P       P           15 06 16.4 +2.8
TWGZ  Tauwhareparae     29.20 160  P       P           15 06 14.7 +1.1
H11S2 WAKE ISLAND Hy    29.21   1  T       T           15 36 32.4
      baz=181,slow=76,SNR=192
H11S3 WAKE ISLAND Hy    29.22   1  T       T           15 36 33.9
      baz=181,slow=76,SNR=185
H11S1 WAKE ISLAND Hy    29.23   1  T       T           15 36 33.8
      baz=181,slow=76,SNR=186
KATZ  Kakaramea         29.26 164  P       P           15 06 16.5 +2.3
TWVZ  Taurewa           29.29 165  P       P           15 06 16.2 +1.8
RTZ   Ruatahuna         29.29 162  P       P           15 06 14.5 +0.1
MRHZ  Matea Rd          29.33 163  P       P           15 06 15.5 +0.8
COVZ  Chateau Observ    29.44 165  P       P           15 06 18.4 +2.7
MTHZ  Maungataniwha     29.47 163  P       P           15 06 17.7 +1.7
FWVZ  Far West T-bar    29.49 165  P       P           15 06 18.1 +1.7
TRVZ  Turoa             29.53 165  P       P           15 06 18.5 +1.8
SNGZ  Shannon Statio    29.55 162  P       P           15 06 16.1 -0.5
RAHZ  Arahi             29.60 162  P       P           15 06 16.6 -0.5
RIGZ  Rimuhau           29.61 161  P       P           15 06 16.7 -0.5
BKZ   Black Stump Fm    29.66 163  P       P           15 06 17.4 -0.2
MOVZ  Moawhango         29.68 165  P       P           15 06 18.2 +0.3
H11N1 WAKE ISLAND Hy    30.43   2  T       T           15 38 05.3
      baz=182,slow=76,SNR=210
H11N3 WAKE ISLAND Hy    30.44   2  T       T           15 38 04.4
      baz=182,slow=76,SNR=169
H11N2 WAKE ISLAND Hy    30.45   2  T       T           15 38 05.3
      baz=182,slow=76,SNR=177
STKA  Stephens Creek    30.72 223  P       P           15 06 27.7 +0.6
      baz=31,SNR=29
STKA  Stephens Creek    30.72 223 eP       P           15 06 27.7 +0.6
STKA  Stephens Creek    30.72 223  P       P           15 06 27.5 +0.4
      comp=Z,21nm,0.7s,baz=33,slow=9.3,SNR=39
BFZ   Birch Farm        31.01 165 eP       P           15 06 28.2 -1.3
      comp=Z,53nm,0.6s
WRAB  Tennant Creek     31.76 250 eP       P           15 06 35.6 -0.8
      comp=Z,34nm,0.8s
WRAB  Tennant Creek     31.76 250⇓eP       P           15 06 35.5 -0.8
WRAB                               pmax    pmax
      comp=Z,31nm,0.6s
WRA   Warramunga Arr    31.77 250ceP       P           15 06 34.5 -2.0
WRA                                pmax    pmax
      comp=Z,34nm,0.6s
WRA   Warramunga Arr    31.77 250  P       P           15 06 35.6 -0.9
      comp=Z,34nm,0.6s,baz=81,slow=8.9,SNR=98
WRA                                ScP     ScP         15 13 11.6  0.0
      comp=Z,3.2nm,1.0s,baz=78,slow=3.8,SNR=5.4
KHZ   Kahutara          32.08 169 eP       P           15 06 38.6 -0.2
      comp=Z,58nm,0.7s
LTZ   Lake Taylor       32.23 171 eP       P           15 06 40.7 +0.5
      comp=Z,76nm,0.7s
TOO   Toolangi          32.32 211  P       P           15 06 41.8 +0.6
      baz=32,SNR=14
TOO   Toolangi          32.32 211 eP       P           15 06 41.1  0.0
      comp=Z,20nm,0.8s
TOO   Toolangi          32.32 211 eP       P           15 06 41.2  0.0
TOO                                pmax    pmax
      comp=Z,20nm,0.8s
FOZ   Fox Glacier       32.68 175 eP       P           15 06 44.2 +0.1
      comp=Z,104nm,0.9s
KDU   Kakadu            32.86 263  P       P           15 06 43.6 -2.5
      baz=33,SNR=4.1
RPZ   Rata Peaks        32.98 173  P       P           15 06 46.9  0.0
      comp=Z,100nm,0.7s,baz=271,slow=1.4,SNR=37
AS01  Alice Springs     33.04 243 eP       P           15 06 46.2 -1.4
CRLZ  Canterbury Las    33.06 171 eP       P           15 06 47.8 +0.4
      comp=Z,254nm,1.3s
AS31  Alice Springs     33.08 243 eP       P           15 06 46.2 -1.8
      comp=Z,6.6nm,0.7s
ASAR  Alice Springs     33.08 243  P       P           15 06 47.0 -1.0
ASAR                                                   15 09 32.0
ASAR                               pmax    pmax
      comp=Z,19nm,0.7s
ASAR                               pmax    pmax
      comp=Z,2.0nm,0.8s
ASAR                               pmax    pmax
      comp=N,2.0nm,1.0s
ASAR  Alice Springs     33.08 243  P       P           15 06 47.0 -1.0
      comp=N,18nm,0.7s,baz=63,slow=10,SNR=76
ASAR                               PcP     PcP         15 09 32.0 +0.5
      comp=N,1.8nm,0.8s,baz=63,slow=2.2,SNR=2.8
ASAR                               ScP     ScP         15 13 17.0 +1.0
      comp=N,1.8nm,1.0s,baz=75,slow=3.9,SNR=4.8
MQZ   McQueen's Vall    33.19 171 eP       P           15 06 48.0 -0.5
      comp=N,103nm,1.0s
HTT   Hallett           33.45 224  P       P           15 06 51.0 -0.1
      baz=34,SNR=18
LBZ   Lake Benmore      33.56 175 eP       P           15 06 51.0 -0.9
      comp=N,52nm,1.1s
BBOO  Buckleboo         35.11 227  P       P           15 07 05.1 -0.4
      baz=35,SNR=24
BBOO  Buckleboo         35.11 227 eP       P           15 07 05.0 -0.4
      comp=N,41nm,0.7s
MOO   Moorlands         35.46 204  P       P           15 07 09.2 +0.9
      baz=36,SNR=5.0
PALU  Palau             36.24 299  P       P           15 07 17.1 +1.8
      baz=36,SNR=4.6
BNDI  Bandanaira        36.30 277  P       P           15 07 15.8 -0.1
      comp=N,406nm,1.3s,comp=N,5µm
KNRA  Kununurra         36.52 258  P       P           15 07 17.2 -0.5
      baz=36,SNR=14
WRKA  Warakurna         38.37 243  P       P           15 07 33.4  0.0
      baz=38,SNR=12
NLAI  Namlea            39.31 278  P       P           15 07 42.1 +0.7
      comp=N,89nm,1.7s,comp=N,3µm
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FITZ  Fitzroy Crossi    39.66 255  P       P           15 07 43.6 -0.6
      baz=40,SNR=9.2
FITZ  Fitzroy Crossi    39.66 255  P       P           15 07 43.5 -0.7
      comp=N,51nm,0.6s,baz=93,slow=6.0,SNR=88
TNTI  Ternate           40.12 284  P       P           15 07 56.1 +8.0
FORT  Forrest           40.33 235  P       P           15 07 50.5 +0.9
      baz=40,SNR=7.4
FORT  Forrest           40.33 235 eP       P           15 07 49.6  0.0
      comp=N,48nm,0.8s
SANI  Sanana            40.67 280  P       P           15 07 52.9 +0.2
      comp=N,65nm,0.9s,comp=N,2µm
SOEI  Soe               41.05 268 eP       P           15 07 55.4 -0.6
SOEI  Soe               41.05 268  P       P           15 08 00.3 +4.3
BATI  Baumata           41.60 267  P       P           15 08 02.0 +1.6
      comp=N,52nm,0.6s,comp=N,1µm
BATI  Baumata           41.60 267  P       P           15 08 00.3  0.0
      comp=N,60nm,0.5s,baz=174,slow=2.1,SNR=21
MMRI  Maumere           43.16 269  P       P           15 08 13.6 +0.5
      comp=N,135nm,1.4s,comp=N,2µm
BBSI  Bau Bau           43.29 274  P       P           15 08 29.7  +16
KMSI  Cibinong          43.30 283  P       P           15 08 15.5 +1.3
      comp=N,275nm,0.9s
MATI  Mati              43.35 292 eP       P           15 08 23.5 +8.9
PPT2  Papeete2          43.49 104 eS       S           15 14 54.2 +9.4
      comp=N,3µm,26.2s
PPT2                              eLQ      LQ          15 18 39.9
      comp=N,13µm,27.8s
PPT2                              eLR      LR          15 20 26.8
      comp=N,8µm,24.5s,baz=273
EDFI  Ende, Flores      43.69 269  P       P           15 08 18.0 +0.6
      comp=N,56nm,1.4s
LUWI  Luwuk             44.03 280  P       P           15 08 21.3 +1.2
      comp=N,107nm,1.2s,comp=N,3µm
KCP   Kidapawan         44.44 292⇑eP       P           15 08 23.1 -0.3
SKMP  Bagumbayan, Su    44.75 291 eP       P           15 08 23.9 -1.9
BUTP  Butuan            44.76 295 eP       P           15 08 30.4 +4.6
BUKP  Musuan            44.81 293 eP       P           15 08 26.6 +0.3
CTBH  Cotabato--PC H    45.29 292⇑iP       P           15 08 29.3 -0.8
MBWA  Marble Bar        45.48 251 eP       P           15 08 31.3 -0.3
      comp=N,163nm,0.9s
BKSI  Bulukumba         45.72 273  P       P           15 08 34.0 +0.5
      comp=N,16nm,0.8s,comp=N,559nm
BNSI  Bone              45.90 274  P       P           15 08 35.1 +0.2
      comp=N,125nm,1.5s,comp=N,2µm
MSLP  Maasin            45.94 296 eP       P           15 08 35.9 +0.7
SPSI  Sidrap Palu       46.31 275  P       P           15 08 37.6 -0.6
      comp=N,19nm,0.8s,comp=N,534nm
PAGZ  Pagadian          46.32 292 eP       P           15 08 37.0 -1.2
TTSI  Tana Toraja       46.45 276  P       P           15 08 55.2  +16
PCI   Palu              46.91 279  P       P           15 08 45.2 +2.3
      comp=N,174nm,1.3s,comp=N,4µm
IPIL  Ipil              47.04 291 eP       P           15 08 51.5 +7.6
MEEK  Meekatharra       47.24 244  P       P           15 08 45.3  0.0
      baz=47,SNR=7.9
PLAI  Plampang          47.52 268  P       P           15 08 47.4 -0.3
      comp=N,103nm,2.0s,comp=N,3µm
GUIM  Jordan            48.16 295 eP       P           15 08 53.7 +1.1
KLBR  Kellerberrin      49.00 238  P       P           15 08 58.2 -0.6
      baz=49,SNR=11
OTRP  Odiongan          49.41 297 eP       P           15 09 02.1 -0.1
BLDU  Ballidu           49.65 239  P       P           15 09 04.7 +0.8
      baz=50,SNR=9.1
NWAO  Narrogin (SRO)    49.75 236  P       P           15 09 04.7 +0.1
      baz=50,SNR=6.1
MORW  Morawa            49.91 241  P       P           15 09 05.9 +0.1
      baz=50,SNR=14
MORW  Morawa            49.91 241 eP       P           15 09 06.1 +0.2
      comp=N,49nm,0.8s
SRBI  Singaraja         50.13 269  P       P           15 09 07.9 +0.2
      comp=N,46nm,0.8s,comp=N,1µm
SJMP  San Jose          50.25 296 eP       P           15 09 09.1 +0.6
MUN   Mundaring         50.37 237  P       P           15 09 10.3 +1.0
      baz=50,SNR=4.1
GIRL  Giralia           50.69 250  P       P           15 09 13.6 +1.7
      baz=51,SNR=4.0
BUSP  Coron             50.87 295 eP       P           15 09 20.8 +7.5
JAGI  Jajag, Banyuwa    51.12 268  P       P           15 09 15.3 +0.1
      comp=N,135nm,1.2s,comp=N,1µm
ENPP  El Nido           51.23 294 eP       P           15 09 12.2 -3.8
CAUP  Cauayan           51.70 302 eP       P           15 09 21.9 +2.4
BATP  Bataraza          51.79 290 eP       P           15 09 21.1 +0.9
GMJI  Gumukmas          51.84 268  P       P           15 09 21.4 +0.8
      comp=N,51nm,0.9s,comp=N,1µm
KKM   Kota Kinabalu     52.34 286  P       P           15 09 26.2 +1.7
TAOE  Nuku Hiva Isla    53.04  93 eS       S           15 17 10.0  +10
      comp=N,2µm,26.3s
TAOE                              eLR      LR          15 24 51.8
      comp=N,3µm,23.6s,baz=259
NGJI  Ngawi             53.91 269  P       P           15 09 45.2 +9.3
MJAR  Matsushiro Arr    53.96 332  P       P           15 09 35.0 -0.9
MJAR                               pmax    pmax
      comp=Z,10.0nm,1.0s
MJAR  Matsushiro Arr    53.96 332  P       P           15 09 35.0 -0.9
      comp=Z,12nm,0.9s,baz=171,slow=8.9,SNR=13
MAJO  Matsushiro        53.96 332 eP       P           15 09 36.1 +0.2
      comp=Z,25nm,1.0s
MAJO  Matsushiro        53.96 332⇑eP       P           15 09 35.9  0.0
MAJO                               pmax    pmax
      comp=Z,73nm,2.1s
MAT   Matsushiro        53.96 332  P       P           15 09 34.4 -1.5
MAT                                S       S           15 17 15.6 +3.9
PCJI  Pacitan           54.08 268  P       P           15 09 37.8 +0.7
      comp=Z,192nm,1.2s,comp=Z,3µm
BTM   Bintulu           54.49 282  P       P           15 09 43.4 +3.3
JNU   Nakatsue          55.11 324 eP       P           15 09 44.3  0.0
      comp=Z,69nm,1.5s
JNU   Nakatsue          55.11 324  P       P           15 09 43.5 -0.9
      comp=Z,15nm,0.8s,baz=236,slow=1.5,SNR=10.0
SBUM  Sibu              55.12 281  P       P           15 09 46.0 +1.3
RKT   Rikitea           57.40 110 eS       S           15 18 05.7 +7.6
      comp=Z,3µm,33.5s
RKT                               eLR      LR          15 26 53.0
      comp=Z,4µm,28.0s,baz=272
CISI  Cisompet, Garu    57.46 268 eP       P           15 09 59.7 -1.8
      comp=Z,68nm,0.7s
CISI  Cisompet, Garu    57.46 268  P       P           15 10 01.3 -0.2
      comp=Z,114nm,0.8s,comp=Z,1µm
LEM   Lembang           57.76 269  P       P           15 10 03.7 -0.1
      baz=70,slow=11
CBJI  Citeko            58.57 269  P       P           15 10 19.4  +10
DBJI  Dramaga           58.65 269  P       P           15 10 20.9  +11
ASAJ  Asahikawa         58.74 340  P       P           15 10 10.7 +0.8
      comp=Z,23nm,0.9s,baz=182,slow=13,SNR=6.8
KSRS  Korea Array       59.90 325  P       P           15 10 18.0  0.0
KSRS                               pmax    pmax
      comp=Z,2.0nm,0.7s
KSRS  Korea Array       59.90 325  P       P           15 10 17.9  0.0
      comp=Z,2.3nm,0.7s,baz=136,slow=6.3,SNR=10
KSAR  Wonju Array Be    59.91 325  P       P           15 10 17.9 -0.1
KSAR  Wonju Array Be    59.91 325  P       P           15 10 18.0 -0.1
SSE   Sheshan           59.92 316 eP       P           15 10 16.3 -1.9
      comp=Z,28nm,0.9s
PPBI  Pangkal Pinang    60.01 274  P       P           15 10 20.1 +0.9
      comp=Z,14nm,1.3s,comp=Z,15µm
YSS   Yuzh-Sakhalins    61.23 342 eP       P           15 10 27.5 +0.7
YSS                               e                    15 10 35.9
YSS                               e                    15 11 05.9
YSS                                pmax    pmax
      comp=Z,20nm,1.0s
MDSI  Maura Dua         61.51 271  P       P           15 10 29.7 +0.3
      comp=Z,20nm,1.5s
TEY   Ternei            61.69 337⇓eP       P           15 10 34.5 +4.5
TEY                                pmax    pmax
      comp=Z,200nm,2.4s
SKR   Severo-Kuril's    61.93 353 eP       P           15 10 21.5  -10
SKR                               eS       S           15 18 43.5  -12
SKR                                pmax    pmax
      comp=Z,83nm,1.5s
SKR                                pmax    pmax
      comp=Z,1µm,19.4s
SKR                                pmax    pmax
      comp=Z,800nm,13.5s
NJ2   Nanjing           62.09 315 eP       P           15 10 33.8 +0.8
NJ2                                pmax    pmax
      comp=Z,29nm,0.9s
NJ2                                LR      LR
      comp=N,2µm,15.7s
NJ2                                LR      LR
      comp=E,4µm,17.9s
NJ2                                LR      LR
      comp=Z,4µm,21.1s
USA0B Ussuriysk Arra    62.93 333 eP       P           15 10 40.1 +1.8
      comp=Z,88nm,1.4s
USRK  Ussuriysk Ar.     62.93 333  P       P           15 10 38.7 +0.3
      comp=Z,4.8nm,0.6s,baz=132,slow=5.8,SNR=11
MYKOM Kota Tinggi       63.08 278  P       P           15 10 40.0  0.0
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KGM   Kluang            63.65 278  P       P           15 10 44.5 +0.8
PETK  Petropavlovsk-    64.15 354  P       P           15 10 46.6 +0.4
      comp=Z,4.4nm,0.9s,baz=160,slow=4.6,SNR=4.1
MDJ   Mudanjiang        64.34 332  P       P           15 10 48.6 +1.0
MDJ                                pP      sP          15 10 53.4 +1.7
MDJ                                sP      pP          15 10 55.9 +5.3
MDJ                                S       S           15 19 29.2 +3.3
MDJ                                pmax    pmax
      comp=Z,30nm,1.8s
MDJ                                pmax    pmax
      comp=Z,580nm,4.8s
MDJ                                LR      LR
      comp=N,2µm,19.2s
MDJ                                LR      LR
      comp=E,2µm,17.3s
MDJ                                LR      LR
      comp=Z,1µm,18.6s
MDJ   Mudanjiang        64.34 332  P       P           15 10 45.1 -2.5
      comp=Z,33nm,1.0s
WHN   Wuhan             64.49 311  P       P           15 10 48.8 -0.1
WHN                                S       S           15 19 16.7  -11
WHN                                LR      LR
      comp=N,6µm,19.4s
WHN                                LR      LR
      comp=E,5µm,18.1s
WHN                                LR      LR
      comp=Z,8µm,22.4s
DL2   Dalian            64.52 323  P       P           15 10 49.6 +0.7
DL2                                S       S           15 19 27.1 -1.1
DL2                                pmax    pmax
      comp=Z,38nm,1.3s
DL2                                pmax    pmax
      comp=Z,850nm,6.5s
DL2                                LR      LR
      comp=N,2µm,16.5s
DL2                                LR      LR
      comp=E,2µm,15.9s
DL2                                LR      LR
      comp=Z,3µm,18.0s
KTGM  Kuala Trenggan    64.62 281  P       P           15 10 50.7 +0.7
BKNI  Bangkinang        65.50 275  P       P           15 10 57.4 +1.5
      comp=Z,130nm,1.2s,comp=Z,5µm
FRIM  Kepong            65.57 279  P       P           15 10 56.4 +0.1
TIA   Tai'an            65.68 318  P       P           15 10 55.6 -0.9
TIA                                pmax    pmax
      comp=Z,7.0nm,2.4s
CN2   Changchun         65.75 329 eP       P           15 10 56.3 -0.5
CN2                                pmax    pmax
      comp=Z,20nm,0.8s
PDSI  Padang            65.82 274  P       P           15 11 07.2 +9.2
IPM   Ipoh              66.44 280  P       P           15 11 02.3 +0.3
GRNR  Gornyy            66.59 340 eP       P           15 11 05.0 +2.9
GRNR                               pmax    pmax
      comp=Z,21nm,1.0s
CASY  Casey             66.60 201 eP       P           15 11 01.7 -0.3
      comp=Z,54nm,1.3s
VNDA  Vanda             66.64 181  P       P           15 11 02.5 +0.5
      comp=Z,16nm,1.1s,baz=6.7,slow=8.2,SNR=6.4
KULM  Kulim             67.00 281  P       P           15 11 05.6 +0.1
KLR   Kul'dur           67.03 336⇑eP       P           15 11 05.9 +1.0
MNSI  Mandailing Nat    67.03 276  P       P           15 11 04.7 -1.0
      comp=Z,43nm,0.8s
SKNT  Sakolnakorn       67.27 294  P       P           15 11 07.2 +0.1
      comp=Z,22nm,1.3s,comp=Z,420nm
NKL   Nikolayevsk       67.37 344 eP       P           15 11 06.2 -0.7
ENH   Enshi             68.00 309 eP       P           15 11 09.4 -2.1
      comp=Z,37nm,1.0s
SRAK  Srakaew           68.08 290  P       P           15 11 20.4 +8.2
PSI   Prapat            68.10 277  P       P           15 11 11.2 -1.3
      comp=Z,9.9nm,0.9s,baz=181,slow=2.2,SNR=11
BJT   Baijiatuau        68.52 321  P       P           15 11 13.5 -1.0
      comp=Z,44nm,1.2s
BJT   Baijiatuau        68.52 321  P       P           15 11 13.5 -1.0
BJT                                pmax    pmax
      comp=Z,44nm,1.2s
BJI   Beijing           68.53 321 eP       P           15 11 14.5  0.0
BJI                                S       S           15 20 19.6 +2.8
BJI                                pmax    pmax
      comp=Z,10.0nm,1.0s
BJI                                LR      LR
      comp=N,2µm,26.5s
BJI                                LR      LR
      comp=E,1µm,28.4s
BJI                                LR      LR
      comp=Z,2µm,27.5s
GYA   Guiyang           68.55 304⇑iP       P           15 11 12.5 -2.6
GYA                                PP      PP          15 13 51.2 +4.6
GYA                                S       S           15 20 19.6 +1.7
GYA   Guiyang           68.55 304  SS      SS          15 24 45.0 +2.7
GYA                                pmax    pmax
      comp=Z,30nm,1.0s
GYA                                pmax    pmax
      comp=Z,140nm,7.8s
GYA                                LR      LR
      comp=N,590nm,18.5s
GYA                                LR      LR
      comp=E,580nm,18.4s
GYA                                LR      LR
      comp=Z,560nm,18.3s
TRTT  Trang             68.56 283  P       P           15 11 17.8 +2.5
      comp=Z,6.1nm,1.3s
GSI   Gunungsitoli      69.09 276  P       P           15 11 32.2  +14
KCSI  Kotacane, Aceh    69.38 278  P       P           15 11 21.5 +1.0
      comp=Z,22nm,0.8s
TIY   Taiyuan           69.63 317 eP       P           15 11 21.9 +0.4
TIY                                pP      sP          15 11 33.3 +7.6
TIY                                pmax    pmax
      comp=Z,12nm,0.6s
TIY                                LR      LR
      comp=N,2µm,16.5s
TIY                                LR      LR
      comp=E,730nm,11.1s
TIY                                LR      LR
      comp=Z,3µm,19.3s
PBKT  Sadao Pong        69.86 292  P       P           15 11 23.7 +0.5
      comp=Z,20nm,1.2s,comp=Z,686nm
XAN   Xi'an             70.21 312  P       P           15 11 24.7 -0.5
XAN                                pP      sP          15 11 32.0 +2.7
XAN                                PP      PP          15 16 13.0
XAN                                S       SKiKP       15 21 00.4  -11
XAN   Xi'an             70.21 312  P       P           15 11 22.1 -3.1
XAN   Xi'an             70.21 312  P       P           15 11 22.1 -3.1
UTTA  Uttaradit         70.61 293  P       P           15 11 28.9 +1.1
      comp=Z,5.1nm,1.3s,comp=Z,61nm
SRDT  SRDT              70.88 289  P       P           15 11 30.8 +1.2
      comp=Z,24nm,1.3s,comp=Z,3µm
UTHA  Uthaitani         70.94 291  P       P           15 11 31.1 +1.2
      comp=Z,7.5nm,1.1s,comp=Z,96nm
KMI   Kunming           71.26 301  P       P           15 11 33.3 +1.3
KMI                                pP      sP          15 11 37.5 +1.3
KMI                                sP      PcP         15 11 46.1 -5.8
KMI                                PP      PP          15 14 14.6 +4.4
KMI                                S       S           15 20 50.9 +0.9
KMI                                sS      SKiKP       15 21 09.6 -3.7
KMI   Kunming           71.26 301  SS      SS          15 25 46.3  +22
KMI                                pmax    pmax
      comp=Z,18nm,1.0s
KMI                                pmax    pmax
      comp=Z,590nm,12.8s
KMI                                LR      LR
      comp=N,2µm,8.3s
KMI                                LR      LR
      comp=E,4µm,9.1s
KMI                                LR      LR
      comp=Z,7µm,12.1s
MA2   Magadan           71.30 352⇓eP       P           15 11 30.2 -1.0
MA2                                pmax    pmax
      comp=Z,15nm,2.0s
SUKH  Sukhothai         71.36 293  P       P           15 11 43.3  +11
HHC   Hu-ho-hao-te      71.89 320 eP       P           15 11 35.6 +0.3
HHC                                sP      PcP         15 11 47.0 -7.0
HHC                                S       S           15 20 56.9 +0.5
HHC                                SKS     SKSac       15 21 27.3  -12
HHC   Hu-ho-hao-te      71.89 320  SS      SS          15 25 13.4  -20
HHC                                pmax    pmax
      comp=Z,16nm,1.3s
HHC                                pmax    pmax
      comp=Z,200nm,6.6s
HHC                                LR      LR
      comp=N,2µm,17.8s
HHC                                LR      LR
      comp=E,2µm,17.2s
HHC                                LR      LR
      comp=Z,1µm,17.1s
CM01  Chiang Mai Arr    72.26 293 eP       P           15 11 37.5 -0.4
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CM31	Chiang Mai Arr	72.29	293	eP	P	15 11 38.5	+0.5
CMAR	Chiang Mai Arr	72.29	293	P	P	15 11 38.1	+0.1
CMAR				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	72.29	293	P	P	15 11 38.1	+0.1
	comp=Z,13nm,0.9s,baz=117,slow=4.4,SNR=46						
ZEA	Zeya	72.31	337	eP	P	15 11 37.8	+0.4
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,64nm,1.2s						
HIA	Hailar	72.37	330	eP	P	15 11 38.3	+0.4
	comp=Z,9.7nm,1.1s						
HIA	Hailar	72.37	330	⇑iP	P	15 11 38.2	+0.3
HIA				pmax	pmax		
	comp=Z,15nm,1.2s						
CMMT	Chiang Mai	72.39	294	P	P	15 11 38.5	-0.2
	comp=Z,29nm,1.3s,comp=Z,501nm						
CHTO	Chiang Mai	72.40	294	eP	P	15 11 37.3	-1.4
	comp=Z,47nm,1.4s						
CHTO	Chiang Mai	72.40	294	eP	P	15 11 37.3	-1.4
CHTO				pmax	pmax		
	comp=Z,47nm,1.4s						
CHTO	Chiang Mai	72.40	294	P	P	15 11 38.8	+0.1
	comp=Z,130nm,1.4s,comp=Z,2µm						
CD2	Chengdu	72.72	307	P	P	15 11 39.9	-0.5
CD2				S	S	15 21 06.4	+0.2
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,220nm,5.0s						
CD2				LR	LR		
	comp=N,2µm,24.8s						
CD2				LR	LR		
	comp=E,2µm,23.8s						
CD2				LR	LR		
	comp=Z,2µm,22.8s						
BTO	Baotou	72.75	319	eP	P	15 11 47.8	+7.4
SEY	Seymchan	74.36	354	⇑iP	P	15 11 49.2	-0.1
LZH	Lanzhou	74.85	312	⇑P	P	15 11 53.2	+0.3
LZH				pP	PcP	15 12 00.8	-6.1
LZH				sP	sP	15 12 05.6	+8.5
LZH				PP	PP	15 14 44.7	+4.1
LZH				S	S	15 21 33.2	+2.9
LZH				sS	sS	15 21 41.0	+5.8
LZH	Lanzhou	74.85	312	SS	SS	15 26 25.0	+6.3
LZH				pmax	pmax		
	comp=Z,65nm,1.3s						
LZH				pmax	pmax		
	comp=Z,510nm,4.8s						
LZH				LR	LR		
	comp=N,3µm,18.6s						
LZH				LR	LR		
	comp=E,3µm,18.6s						
LZH				LR	LR		
	comp=Z,3µm,19.2s						
KDAK	Kodiak Island	76.36	21	P	P	15 12 02.4	+1.6
	comp=Z,12nm,1.1s,baz=224,slow=17,SNR=1.6						
GAMB	Gambell	76.39	10	eP	P	15 12 02.5	+1.6
	comp=Z,14nm,0.8s						
CIT	Chita	77.16	330	eP	P	15 12 06.5	+0.9
CIT				e		15 12 24.8	
CIT				pmax	pmax		
	comp=Z,86nm,3.3s						
SVW2	Sparrevohn	77.90	18	eP	P	15 12 11.4	+1.8
	comp=Z,25nm,1.4s						
YAK	Yakutsk	78.03	343	eP	P	15 12 10.0	-0.2
YAK				pmax	pmax		
	comp=Z,91nm,1.3s						
YAK				pmax	pmax		
	comp=N,21nm,1.3s						
YAK				pmax	pmax		
	comp=E,14nm,1.1s						
ANM	Nome	78.30	12	eP	P	15 12 12.4	+0.8
	comp=E,22nm,1.4s						
ANM	Nome	78.30	12	eP	P	15 12 12.4	+0.8
ANM				pmax	pmax		
	comp=Z,22nm,1.4s						
ULN	Ulaanbaatar	78.33	324	eP	P	15 12 11.8	-0.6
	comp=Z,19nm,1.0s						
ULN	Ulaanbaatar	78.33	324	deP	P	15 12 12.7	+0.3
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
SONM	Songino Array	78.70	324	P	P	15 12 15.0	+0.6
	comp=Z,2.7nm,0.7s,baz=139,slow=5.6,SNR=11						
SONA1	Songino Array	78.70	324	eP	P	15 12 14.6	+0.1
BILL	Bilibino	78.74	0	eP	P	15 12 13.6	-0.4
	comp=Z,30nm,0.9s						
BILL	Bilibino	78.74	0	ceP	P	15 12 14.0	0.0
BILL				pmax	pmax		
	comp=Z,26nm,1.7s						
QSPA	South Pole Qui	79.10	180	eP	P	15 12 15.8	-0.6
	comp=Z,17nm,0.9s						
GTA	Gaotai	79.14	314	⇑P	P	15 12 17.3	+0.3
GTA				pP	PcP	15 12 23.3	-2.1
GTA				sP	sP	15 12 26.6	+5.4
GTA				S	S	15 22 15.6	-1.3
GTA	Gaotai	79.14	314	sS	sS	15 22 27.1	+5.2
GTA	Gaotai	79.14	314	SS	SS	15 27 26.2	+2.8
GTA				pmax	pmax		
	comp=Z,14nm,1.1s						
GTA				pmax	pmax		
	comp=Z,460nm,8.4s						
SUA	Susitna One	79.71	20	eP	P	15 12 20.2	+0.7
	comp=Z,15nm,0.9s						
BOD	Bodaibo	80.51	335	eP	P	15 12 22.8	-1.0
BOD				pmax	pmax		
	comp=Z,33nm,1.7s						
SHL	Shillong	80.67	298	eP	P	15 12 27.0	+1.3
CAST	Castle Rocks	80.74	18	eP	P	15 12 26.2	+1.3
	comp=Z,14nm,0.8s						
ZAK	Zakamensk	81.73	325	eP	P	15 12 30.1	-0.5
ZAK				pmax	pmax		
	comp=Z,19nm,1.6s						
RDOG	Red Dog Mine	81.83	11	eP	P	15 12 33.7	+3.0
	comp=Z,22nm,1.0s						
MCK	McKinley	81.93	19	eP	P	15 12 32.9	+1.6
	comp=Z,31nm,1.4s						
IRK	Irkutsk	82.08	327	eP	P	15 12 40.8	+8.5
IRK				pmax	pmax		
	comp=Z,67nm,2.5s						
TLY	Talaya	82.14	326	eP	P	15 12 31.9	-0.7
	comp=Z,19nm,0.9s						
TLY	Talaya	82.14	326	ceP	P	15 12 32.4	-0.3
TLY				pmax	pmax		
	comp=Z,20nm,1.0s						
IM3	Indian Mountai	82.22	15	eP	P	15 12 32.6	-0.1
LSA	Lhasa	82.49	302	eP	P	15 12 36.3	+0.7
	comp=Z,14nm,1.1s						
LSA	Lhasa	82.49	302	eP	P	15 12 36.3	+0.7
LSA				pmax	pmax		
	comp=Z,14nm,1.1s						
WRH	Wood River Hil	82.72	18	eP	P	15 12 36.3	+0.9
	comp=Z,13nm,0.8s						
MDM	Murphy Dome	83.02	18	eP	P	15 12 38.1	+1.1
	comp=Z,10nm,0.8s						
HDA	Harding Lake	83.03	19	eP	P	15 12 35.8	-1.2
	comp=Z,30nm,0.8s						
HDA	Harding Lake	83.03	19	P	P	15 12 38.6	+1.6
	baz=226						
TCOL	CIGO, UAF Yank	83.07	18	P	P	15 12 38.7	+1.6
	baz=226						
COLA	College	83.07	18	eP	P	15 12 38.1	+1.0
	comp=Z,21nm,0.8s						
COLA	College	83.07	18	d iP	P	15 12 38.0	+0.8
COLA				pmax	pmax		
	comp=Z,16nm,0.8s						
RIDG	Independ'e Rid	83.26	20	eP	P	15 12 39.3	+1.0
	comp=Z,22nm,1.3s						
ILAR	Eielson Array	83.30	18	P	P	15 12 37.1	-1.3
	comp=Z,7.6nm,0.8s,baz=227,slow=5.9,SNR=22						
ILB	Eielson Array	83.30	18	eP	P	15 12 37.9	-0.5
POKR	Poker Plat Res	83.37	18	P	P	15 12 39.8	+1.0
	baz=226						
MOY	Mondy	83.60	325	eP	P	15 12 40.4	0.0
MOY				pmax	pmax		
	comp=Z,48nm,3.4s						
ORV	Oroville	83.73	48	eP	P	15 12 42.4	+1.2
	comp=Z,10.0nm,1.1s						
ORV	Oroville	83.73	48	eP	P	15 12 42.4	+1.2
ORV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
O03E	Paynes Creek	83.76	47	P	P	15 12 42.3	+0.9
	baz=250						
AFDM	Forest Hills D	83.92	49	eP	P	15 12 44.4	+2.2
	comp=Z,18nm,1.1s						
CMB	Columbia Colle	84.06	50	eP	P	15 12 42.9	-0.1
	comp=Z,88nm,1.0s						
CMB	Columbia Colle	84.06	50	eP	P	15 12 42.9	-0.1
CMB				pmax	pmax		
	comp=Z,88nm,1.0s						
L04D	Klamath Falls	84.07	45	P	P	15 12 44.6	+1.5
	baz=250						
M04C	Macdoel	84.24	46	P	P	15 12 46.3	+2.4
	baz=250						
J04D	Umpqua Nationa	84.56	44	P	P	15 12 47.3	+1.8
	baz=250						
BEKR	Beckworth	84.67	48	eP	P	15 12 47.9	+1.7
	comp=Z,14nm,1.2s						
ISA	Isabella, Lake	84.79	52	eP	P	15 12 49.0	+2.3
	comp=Z,8.4nm,1.0s						
ISA	Isabella, Lake	84.79	52	eP	P	15 12 49.0	+2.3
ISA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ISA	Isabella, Lake	84.79	52	P	P	15 12 49.0	+2.3
	baz=253						
EDW2	Edwards Air Fo	84.93	53	P	P	15 12 48.6	+1.1
	baz=253						
MAW	Mawson	84.95	202	P	P	15 12 46.6	-0.2
	comp=Z,23nm,1.0s,baz=90,slow=7.1,SNR=2.6						
BFSC	Mount Baldy Ra	85.01	54	P	P	15 12 50.0	+2.0
	baz=253						
KNGR	Kungurtug, Tuv	85.14	323	⇑iP	P	15 12 47.9	-0.3
J05D	Fort Rock, OR	85.17	44	P	P	15 12 50.5	+1.9
	baz=250						
YERR	Yerington	85.21	49	eP	P	15 12 51.8	+2.9
	comp=Z,16nm,1.4s						
CWC	Cottonwood Cre	85.32	52	P	P	15 12 50.9	+1.3
	baz=253						
PAHR	Pah Rah Range	85.33	48	eP	P	15 12 51.4	+2.0
	comp=Z,18nm,1.3s						
DAWY	Dawson	85.33	21	eP	P	15 12 50.3	+1.5
	comp=Z,10nm,1.2s						
E04D	Cinebar	85.42	41	P	P	15 12 52.4	+2.9
	baz=249						
RAMN	Ramite	85.61	298	eP	P	15 12 50.2	-1.1
RYN	Ryan	85.64	50	eP	P	15 12 53.4	+2.4
	comp=Z,13nm,1.1s						
DAC	Darwin (Calif)	85.65	52	eP	P	15 12 53.0	+1.8
	comp=Z,7.7nm,1.1s						
DAC	Darwin (Calif)	85.65	52	eP	P	15 12 53.0	+1.8
DAC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MPMC	Manual Prospec	85.67	52	P	P	15 12 53.1	+1.8
	baz=253						
NV01	Mina Array Sit	85.74	50	eP	P	15 12 52.9	+1.3
NVAR	Mina Array Bea	85.74	50	P	P	15 12 52.9	+1.2
	comp=Z,4.4nm,0.9s,baz=229,slow=6.8,SNR=18						
TIXI	Tiksi	86.00	349	⇑iP	P	15 12 50.4	-1.4
TIXI				pmax	pmax		
	comp=Z,15nm,1.7s						
A04D	Lummi Island	86.11	39	P	P	15 12 53.6	+0.7
	baz=249						
JIRN	Jiri	86.14	299	eP	P	15 12 53.0	-1.0
	comp=Z,48nm,1.0s						
GUN	Gumba	86.47	299	eP	P	15 12 54.3	-1.3
	comp=Z,21nm,0.8s						
WVOR	Wild Horse Val	86.71	46	eP	P	15 12 58.5	+2.3
	comp=Z,18nm,1.3s						
WVOR	Wild Horse Val	86.71	46	eP	P	15 12 58.5	+2.3
WVOR				pmax	pmax		
	comp=Z,18nm,1.3s						
PKIN	Phulchoki	86.80	299	eP	P	15 12 55.9	-1.3
	comp=Z,27nm,1.1s						
TPNV	Topopah Spring	86.88	52	P	P	15 12 58.8	+1.6
	baz=254						
IRM	Iron Mountain	86.99	55	P	P	15 12 59.8	+2.1
	baz=255						
DMN	Daman	87.06	299	eP	P	15 12 57.4	-1.0
	comp=Z,47nm,1.1s						
HAWA	Hanford	87.34	42	eP	P	15 13 01.3	+2.3
	comp=Z,7.7nm,1.1s						
R11A	Troy Canyon, C	87.76	50	eP	P	15 13 03.2	+1.7
	comp=Z,10nm,1.4s						
R11A	Troy Canyon, C	87.76	50	P	P	15 13 03.1	+1.7
	baz=254						
PDMCI	Parker Dam,Lak	87.83	55	P	P	15 13 03.6	+1.9
	baz=255						
W13A	Hualapai Mount	88.24	54	eP	P	15 13 06.3	+2.4
	comp=Z,13nm,1.4s						
BMO	Blue Mountains	88.35	44	eP	P	15 13 05.9	+1.9
	comp=Z,14nm,1.4s						
BMO	Blue Mountains	88.35	44	eP	P	15 13 05.9	+1.9
BMO				pmax	pmax		
	comp=Z,14nm,1.4s						
DANN	Dangsing	88.39	299	eP	P	15 13 02.6	-2.2
	comp=Z,24nm,0.8s						
KOLN	Koldanda	88.40	299	eP	P	15 13 02.6	-2.2
	comp=Z,17nm,0.9s						
ELK	Elko	88.67	48	eP	P	15 13 08.1	+2.3
	comp=Z,14nm,1.5s						
ELK	Elko	88.67	48	eP	P	15 13 08.1	+2.3
ELK				pmax	pmax		
	comp=Z,14nm,1.5s						
F10A	Beach Ranch, E	88.73	43	eP	P	15 13 07.4	+1.6
	comp=Z,29nm,1.5s						
PYUN	Piuthan	89.00	299	eP	P	15 13 05.1	-2.5
	comp=Z,27nm,0.9s						
WMQ	Urumqi	89.17	315	P	P	15 13 07.4	-0.5
WMQ				sP	sP	15 13 18.4	+6.3
WMQ				PP	PP	15 16 35.7	-2.6
WMQ	Urumqi	89.17	315	S	S	15 23 56.5	-0.7
WMQ	Urumqi	89.17	315	SS	SS	15 29 53.1	+1.7
WMQ				pmax	pmax		
	comp=Z,51nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,630nm,7.7s						
INK	Inuvik	89.69	19	eP	P	15 13 09.4	-0.1
	comp=Z,9.4nm,1.2s						
INK	Inuvik	89.69	19	eP	P	15 13 09.4	-0.1
INK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HLID	Hailey	90.00	46	P	P	15 13 13.0	+1.1
	baz=255						
X16A	Lo Mia Camp, P	90.03	55	eP	P	15 13 14.2	+2.0
	comp=Z,6.3nm,1.0s						
TUC	Tucson	90.10	57	eP	P	15 13 12.2	-0.3
	comp=Z,6.9nm,1.1s						
TUC	Tucson	90.10	57	eP	P	15 13 12.2	-0.3
TUC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DUG	Dugway, Tooele	90.32	49	eP	P	15 13 15.1	+1.7
	comp=Z,3.6nm,0.9s						
DUG	Dugway, Tooele	90.32	49	eP	P	15 13 15.1	+1.7
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DUG	Dugway, Tooele	90.32	49	P	P	15 13 15.2	+1.8
	baz=256						
BGU	Big Grassy Mou	90.33	48	eP	P	15 13 14.8	+1.3
	comp=Z,5.6nm,1.1s						
HVU	Hansel Valley	90.72	48	eP	P	15 13 16.9	+1.6
	comp=Z,14nm,1.1s						
HVU	Hansel Valley	90.72	48	eP	P	15 13 16.9	+1.6
HVU				pmax	pmax		
	comp=Z,14nm,1.1s						
HYB	Hyderabad	90.81	287	i P	P	15 13 15.5	-0.5
DGZ	Jazzator, Alta	90.95	320	⇑iP	P	15 13 15.7	-0.4
MSO	Missoula	91.16	43	P	P	15 13 18.8	+1.7
	baz=255						
MCMT	McKenzie Canyo	91.40	45	eP	P	15 13 20.1	+1.6
W18A	Petrified Fore	91.55	55	P	P	15 13 21.4	+2.1
	baz=258						
DLMT	Dillon	91.70	44	eP	P	15 13 21.5	+1.8
	comp=Z,12nm,1.0s						
WALA	Waterton Lakes	91.74	40	eP	P	15 13 22.0	+2.2
	comp=Z,16nm,1.3s						
SYO	Syowa Base	91.99	197	⇑eP	P	15 13 18.0	-2.4
SYO	Syowa Base	91.99	197	⇑esP	sP	15 13 25.5	+1.4
BOZ	Bozeman (W)	92.42	44	eP	P	15 13 25.4	+2.3
	comp=Z,11nm,1.1s						
BOZ	Bozeman (W)	92.42	44	eP	P	15 13 25.4	+2.3
BOZ				pmax	pmax		
	comp=Z,11nm,1.1s						
BOZ	Bozeman (W)	92.42	44	P	P	15 13 24.8	+1.7
	baz=257						
PDAR	Pinedale Array	93.27	47	eP	P	15 13 28.0	+0.9
PDAR	Pinedale Array	93.27	47	P	P	15 13 28.3	+1.1
	comp=Z,2.4nm,1.1s,baz=248,slow=1.6,SNR=7.2						
ZAA0	Zalesovo Array	93.59	324	eP	P	15 13 26.9	-1.1
	comp=Z,17nm,1.4s						
ZALV	Zalesovo Beam	93.59	324	eP	P	15 13 25.9	-2.1
ZALV	Zalesovo Beam	93.59	324	P	P	15 13 26.8	-1.3
	comp=Z,2.3nm,0.7s,baz=106,slow=4.8,SNR=13						
MKAR	Makanchi Array	93.59	317	ceP	P	15 13 27.0	-1.3
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	Makanchi Array	93.59	317	P	P	15 13 27.5	-0.8
	comp=Z,6.7nm,0.8s,baz=92,slow=5.5,SNR=46						
MKAR				PP	PP	15 17 14.2	+1.1
	comp=Z,0.5nm,0.9s,baz=87,slow=6.9,SNR=3.7						
MKAR				PKKPbc	PKKPdf	15 30 32.8	-1.7
	comp=Z,0.9nm,0.8s,baz=268,slow=4.6,SNR=8.4						
MAKZ	Makanchi	93.80	317	eP	P	15 13 28.3	-0.9
	comp=Z,13nm,1.0s						
MAKZ	Makanchi	93.80	317	eP	P	15 13 28.3	-0.9
MAKZ				pmax	pmax		
	comp=Z,13nm,1.0s						
EGMT	Eagleton	94.19	42	P	P	15 13 32.3	+1.2
	baz=258						
NVS	Novosibirsk	94.69	325	eP	P	15 13 31.0	-2.0
NVS				e		15 24 07.8	
NVS				eS	S	15 24 39.6	-6.6
NVS				pmax	pmax		
	comp=N,13nm,1.9s						
NVS				pmax	pmax		
	comp=Z,38nm,1.9s						
NVS				pmax	pmax		
	comp=E,15nm,1.8s						
NVS				smax	smax		
	comp=E,23nm,2.4s						
YKA	Yellowknife Ar	94.73	27	P	P	15 13 32.2	-0.9
	comp=E,0.9nm,0.7s,baz=255,slow=4.6,SNR=13						
YKB5	Yellowknife Ar	94.73	27	eP	P	15 13 31.5	-1.6
SDCO	Great Sand Dun	95.40	53	P	P	15 13 39.3	+2.1
	baz=260						
TXAR	Lajitas Array	95.54	61	P	P	15 13 38.3	+0.6
	comp=E,0.5nm,0.8s,baz=238,slow=5.2,SNR=3.2						
TXAR				PP	PP	15 17 29.6	+0.7
	comp=E,0.1nm,0.4s,baz=252,slow=7.4,SNR=3.2						
NRIK	Noril'sk	96.08	340	P	P	15 13 38.5	-0.6
	comp=E,1.9nm,0.9s,baz=123,slow=4.6,SNR=4.3						
KURK	Kurchatov	96.69	320	eP	P	15 13 42.7	+0.4
	comp=E,13nm,1.4s						
KURK	Kurchatov	96.69	320	⇓eP	P	15 13 42.0	-0.3
KURK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KSH	Kashi	96.86	309	P	P	15 13 45.3	+1.8
KSH				sP	sP	15 13 53.2	+5.4
KSH				PP	PP	15 17 45.5	+6.6
KSH	Kashi	96.86	309	SKS	SKSac	15 24 20.6	-0.4
KSH	Kashi	96.86	309	S	S	15 25 05.0	-1.1
KSH	Kashi	96.86	309	SS	SS	15 31 47.8	+5.9
KSH				pmax	pmax		
	comp=Z,260nm,7.2s						
KSH				LR	LR		
	comp=N,4µm,9.9s						
KSH				LR	LR		
	comp=E,1µm,5.2s						
AAK	Ala-Archa	98.39	312	⇑eP	Pdif	15 13 49.5	-0.9
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRVK	Borovoye	102.06	322	⇑eP	Pdif	15 14 05.1	-1.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ARCES	ARCESS Array B	116.26	346	PKIKP	PKiKP	15 18 53.3	-1.7
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARCES	ARCESS Array B	116.26	346	PKP	PKiKP	15 18 53.3	-1.7
	comp=Z,3.6nm,0.8s,baz=68,slow=1.6,SNR=23						
ARCES				PKKPbc	PKKPbc	15 29 25.9	-0.9
	comp=Z,3.6nm,1.1s,baz=245,slow=1.9,SNR=3.8						
VRH	Novokhopyorsk	119.61	323	ePKIKP	PKiKP	15 19 00.7	-1.2
VRH				pmax	pmax		
	comp=Z,9.0nm,0.4s						
LPSR	Galich'ya Gora	120.67	326	ePKIKP	PKPdf	15 19 00.5	-3.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	120.81	329	i PKIKP	PKiKP	15 19 03.9	-0.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VSR	Storozhevoye	121.09	324	ePKIKP	PKiKP	15 19 03.7	-1.1
VSR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KIV	Kislovodsk	121.30	315	ePKIKP	PKPdf	15 19 03.2	-2.3
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FINES	FINESS Array B	121.73	339	PKhKP	PKPpre	15 19 00.6	
	comp=Z,2.9nm,0.9s,baz=38,slow=3.4,SNR=5.6						
CPUP	Villa Florida	123.94	132	PKP	PKiKP	15 19 11.6	+0.3
	comp=Z,1.3nm,0.4s,baz=195,slow=2.8,SNR=3.0						
SDV	Santo Domingo	124.24	87	ePKPdf	PKiKP	15 19 12.2	-0.2
NB2	NORSAR Subarra	126.63	345	PKPdf	PKiKP	15 19 14.4	-1.2
	comp=Z,1.1nm,0.8s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.63	345	PKP	PKiKP	15 19 14.3	-1.2
	comp=Z,1.2nm,0.7s,baz=31,slow=2.0,SNR=10						
HFS	Hagfors	126.72	343	PKP	PKiKP	15 19 15.3	-0.5
	comp=Z,2.8nm,0.8s,baz=103,slow=4.6,SNR=3.7						
AKASG	Malin Array Be	126.88	327	PKP	PKiKP	15 19 15.5	-0.8
	comp=Z,0.2nm,0.3s,baz=47,slow=2.2,SNR=4.4						
BRTR	Keskin Array B	129.05	313	PKP	PKiKP	15 19 19.9	-1.3
	comp=Z,1.0nm,0.8s,baz=107,slow=1.3,SNR=4.8						
VYHS	Vyhne	133.57	330	ePP	PP	15 22 06.0	+10
CLL	Collm	134.07	337	ePKPdf	PKiKP	15 19 32.0	+1.2
CLL				e		15 19 39.0	
CLL				e		15 19 58.0	
CLL				Lm	MLR	15 33 00.0	
	comp=Z,400nm,21.9s						
CLL	Collm	134.07	337	ePKIKP	PKiKP	15 19 32.0	+1.2
CLL				e		15 19 39.0	
GERES	GERESS Array B	135.69	334	PKP	PKiKP	15 19 32.9	-1.4
	comp=Z,1.0nm,0.7s,baz=101,slow=2.0,SNR=6.9						
BDFB	Brasilia	137.22	127	PKP	PKiKP	15 19 36.6	-1.8
	comp=Z,2.9nm,0.7s,baz=180,slow=5.1,SNR=3.0						
KEST	Kesra	147.45	323	PKPbc	PKPab	15 19 56.5	-2.0
	comp=Z,15nm,0.9s,baz=246,slow=2.0,SNR=7.9						
PBRG	Braganca	148.56	350	ePKPdf	PKPab	15 20 01.3	-1.4
POLO	Lamas de Olo	149.16	351	ePKPdf	PKiKP	15 20 01.8	-0.4
MVO	Moncorvo	149.24	350	ePKPdf	PKiKP	15 20 01.0	-1.3
PVRL	Vila Real	149.24	351	ePKPdf	PKiKP	15 20 00.6	-1.7
PVIS	Viseu	149.82	351	ePKPdf	PKiKP	15 20 02.8	-0.7
ESDC	Sonseca Array	149.99	344	PKPbc	PKiKP	15 20 02.9	-1.0
	comp=Z,2.6nm,0.7s,baz=12,slow=2.8,SNR=12						
MTE	Manteigas	150.07	350	ePKPdf	PKiKP	15 20 03.4	-0.6
PTOM	Tomar	150.97	351	ePKPdf	PKiKP	15 20 06.1	+0.3
PMRV	Marv??o	150.99	349	ePKPdf	PKiKP	15 20 06.1	+0.2
PMTG	Montargil	151.48	351	ePKPdf	PKiKP	15 20 06.7	-0.2
PESTR	Estremoz	151.57	349	ePKPab	PKPab	15 20 19.5	+4.5
PBEJ	Beja	152.44	349	ePKPab	PKPab	15 20 14.7	-3.9
TORD	Torodi Ar. Bea	164.49	280	PKP	PKPdf	15 20 16.5	-0.3
	comp=Z,1.3nm,0.7s,baz=5.7,slow=3.0,SNR=7.7						
TORD				PKPab	PKPab	15 21 10.5	-1.0
	comp=Z,2.8nm,1.0s,baz=78,slow=3.2,SNR=4.5						
TORD				PP	PP	15 24 54.8	-3.2
	comp=Z,0.9nm,0.9s,baz=106,slow=7.1,SNR=2.9						
DBIC	Dimbokro	170.03	246	PKP	PKPdf	15 20 20.3	-0.6
	comp=Z,4.9nm,0.9s,baz=212,slow=2.1,SNR=3.4						

IDC 08 15:09:31.3±3.1, 10°.53S×165°.92E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.6/25, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=69.5km s-min=42.5km az=90.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.49	178	Pn	Pn	15 12 17.0	+0.2
	1.4nm,0.3s,baz=342,slow=20,SNR=7.1						
WRA	Warramunga Arr	31.83	249	P	P	15 15 58.5	+0.4
	1.3nm,0.8s,baz=80,slow=9.0,SNR=5.8						
ASAR	Alice Springs	33.18	243	P	P	15 16 09.5	-0.5
	0.6nm,0.7s,baz=69,slow=10,SNR=5.0						
MKAR	Makanchi Array	93.27	317	P	P	15 22 48.0	-0.1
	0.1nm,0.5s,baz=104,slow=6.1,SNR=2.1						

IDC 08 15:13:33.6±1.7, 10°.98S×165°.05E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/30, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=52.5km s-min=31.2km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.11	173	Pn	Pn	15 16 13.9	-0.1
	0.4nm,0.3s,baz=63,slow=5.4,SNR=6.2						
WRA	Warramunga Arr	30.86	249	P	P	15 19 52.0	0.0
	0.3nm,0.8s,baz=80,slow=8.8,SNR=3.8						
ASAR	Alice Springs	32.21	243	P	P	15 20 03.7	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.4nm,0.8s,baz=70,slow=8.0,SNR=4.5						
ILAR	**Eielson Array** 0.4nm,0.7s,baz=231,slow=5.7,SNR=2.6	83.67	19	P	P	15 26 03.9	0.0

IDC 08 15:17:06.4±1.6**,10°.99S**×**164°.58E,h0^{km},mb3.6**/4**, mb1 3.8**/5**,mb1mx3.6**/29**,mbtmp3.6**/5**,ML3.4**/1**,Error ellipse: s-maj=48.4km s-min=29.2km az=124.0,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 0.3nm,0.3s,baz=156,slow=20,SNR=3.7	11.16	171	Pn	Pn	15 19 46.1	-1.4
WRA	**Warramunga Arr** 1.0nm,0.8s,baz=77,slow=8.9,SNR=8.0	30.43	249	P	P	15 23 21.0	+0.1
ASAR	**Alice Springs** 0.5nm,0.7s,baz=63,slow=10.0,SNR=12	31.80	243	P	P	15 23 32.8	-0.1
ILAR	**Eielson Array** 0.5nm,1.0s,baz=236,slow=6.4,SNR=3.1	83.83	19	P	P	15 29 37.5	0.0
MKAR	**Makanchi Array** 0.1nm,0.6s,baz=94,slow=5.2,SNR=2.5	92.70	317	P	P	15 30 20.7	+0.2

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*KRNET **08** 15:18:10.9±0.1, 43°.20N×78°.45E, h30^{km}, mb2.0*
*NNC **08** 15:18:10.5±0.4, 43°.16N×78°.41E, h0^{km}, mb2.5, mpv2.5, Error ellipse: s-maj=5.3km s-min=2.3km az=178.0*
*SOME **08** 15:18:11.0, 43°.17N×78°.47E, h0^{km}*
ISC 08 15:18:11.5±0.9**,43°.15N**±0°.02×**78°.43E**±0°.02**,h7^{km}**±6^{km}**, n32,**σ**0^{s}87**/62**,13C-8D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty** 163nm,0.1s	0.09	189	P	Pg	15 18 13.7	-0.1
SATY	408nm,0.1s			S	Sg	15 18 15.4	0.0
SATY	**Saty** 163nm,0.1s	0.09	189	⇑eP	Pg	15 18 13.7	-0.1
SATY	408nm,0.1s			eS	Sg	15 18 15.4	0.0
KURS	**Kuram**	0.39	331	P	Pg	15 18 18.8	-0.3
KURS				S	Sg	15 18 24.3	+0.2
KURS	**Kuram** baz=24	0.39	331	eP	Pg	15 18 18.8	-0.3
KURS	baz=24			eS	Sg	15 18 24.4	+0.2
KURS	**Kuram** 0.7nm,0.1s	0.39	331	eP	Pg	15 18 18.8	-0.3
KURS	4.1nm,0.5s			eS	Sg	15 18 24.3	+0.2
UZB	**Uzynbulak** 0.9nm,0.1s	0.44	90	P	Pg	15 18 19.8	-0.2
UZB	18nm,0.1s			S	Sg	15 18 25.7	0.0
UZB	**Uzynbulak** baz=98	0.44	90	eP	Pg	15 18 19.8	-0.2
UZB	baz=98			eS	Sg	15 18 25.7	0.0
UZB	**Uzynbulak** 0.9nm,0.1s	0.44	90	eP	Pg	15 18 19.8	-0.2
UZB	18nm,0.1s			eS	Sg	15 18 25.7	0.0
PRZ	**Przheval'sk** baz=82	0.67	182	⇑iP	Pb	15 18 25.6	+0.1
PRZ	baz=82			⇑iS	Sb	15 18 36.0	+1.0
PDGK	**Podgornoye**	0.80	77	P	Pg	15 18 25.8	-1.0
PDGK				S	Sg	15 18 36.9	-0.3
PDGK	**Podgornoye** 2.4nm,1.1s	0.80	77	⇓P	Pg	15 18 26.1	-0.7
PDGK	1.5nm,0.6s			⇓S	Sg	15 18 37.0	-0.3
PDGK	**Podgornoye** baz=80	0.80	77	⇑iP	Pg	15 18 25.9	-0.9
PDGK	baz=80			⇑iS	Sg	15 18 36.7	-0.5
MDOK	**Medeo** 2.1nm,0.9s	1.01	271	⇓P	Pg	15 18 29.9	-0.9
MDOK	4.3nm,1.2s			⇓S	Sg	15 18 42.3	-1.7
ARXS	**Arharly** 1.0nm,0.2s	1.15	338	P	Pg	15 18 32.8	-0.7
ARXS	2.1nm,0.3s			S	Sg	15 18 47.7	-0.7
ARXS	**Arharly** 1.0nm,0.2s	1.15	338	eP	Pg	15 18 32.2	-1.3
ARXS	2.1nm,0.3s			eS	Sg	15 18 47.7	-0.7
CHKK	**Chushkaly** 0.7nm,0.1s	1.26	304	P	Pg	15 18 34.9	-0.8
CHKK	3.5nm,0.3s			S	Sg	15 18 51.7	-0.3
CHKK	**Chushkaly** baz=2.0	1.26	304	eP	Pg	15 18 34.9	-0.8
CHKK	baz=2.0			eS	Sg	15 18 51.7	-0.3
CHKK	**Chushkaly** 0.7nm,0.1s	1.26	304	eP	Pg	15 18 34.9	-0.8
CHKK	3.5nm,0.3s			eS	Sg	15 18 51.7	-0.3
KDJ	**Kajisay** baz=21	1.37	222	⇓eP	Pg	15 18 36.6	-1.2
KDJ	baz=21			⇓iS	Sg	15 18 54.7	-0.9
KTBS	**Karatobe**	1.39	294	P	Pb	15 18 38.2	+0.5
KTBS				S	Sn	15 18 58.2	+2.3
KTBS	**Karatobe** baz=91	1.39	294	eP	Pg	15 18 37.3	-0.8
KTBS	baz=91			eS	Sb	15 18 56.5	+0.8
KTBS	**Karatobe** 1.1nm,0.2s	1.39	294	eP	Pg	15 18 37.3	-0.8
KTBS	7.0nm,0.2s			eS	Sb	15 18 56.5	+0.8
KTMS	**Ketmen**	1.44	77	P	Pb	15 18 38.5	-0.2
KTMS				S	Sn	15 18 58.7	+1.5
TARG	**Taragay, Kyrgy** baz=98	1.49	198	⇑iP	Pn	15 18 38.5	-0.5
TARG	baz=98			⇑iS	Sg	15 18 57.3	-2.2
DJR	**Jarkent**	1.54	39	P	Pg	15 18 39.8	-1.3
DJR				S	Sn	15 19 00.4	+0.7
DJR	**Jarkent** 0.1nm,0.1s	1.54	39	eP	Pg	15 18 39.8	-1.3
DJR	0.9nm,0.1s			eS	Sn	15 19 00.4	+0.7
ULHL	**Ulahol** baz=40	1.85	241	⇓iP	Pn	15 18 44.2	+0.5
ULHL	baz=40			⇓iS	Sn	15 19 08.1	+0.7
BOOM	**Boomskoye usch** baz=50	1.94	251	⇑iP	Pn	15 18 45.1	+0.1
BOOM	baz=50			⇑iS	Sn	15 19 08.9	-0.9
TKM2	**Tokmak 2** 3.2nm,1.3s	2.09	265	⇑Pg	Pn	15 18 47.6	+0.5
TKM2	1.0nm,0.6s			⇑Lg	Lg	15 19 18.0	
TKM2	**Tokmak 2** baz=63	2.09	265	⇑iP	Pn	15 18 48.1	+1.1
TKM2	baz=63			⇑iS	Sn	15 19 14.4	+1.0
KAPS	**Kapalarasan** 1.1nm,0.5s	2.24	17	Pg	Pb	15 18 51.8	-0.5
KAPS	3.1nm,0.3s			Lg	Lg	15 19 21.2	
KAPS	**Kapalarasan** 1.1nm,0.5s	2.24	17	eP	Pb	15 18 51.8	-0.5
KAPS	3.1nm,0.3s			eS	Sg	15 19 21.2	-2.1

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*PRE **08** 15:18:25.6±2.0, 24°.84S×27°.34E, h2^{km}, ML2.6*
ISC 08 15:18:26.6±1.6**,24°.88S**±0°.03×**27°.37E**±0°.05**,h11^{km}**±13^{km}**, n12,**σ**1^{s}27**/22**,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSR	**Koster**	1.06	204	eP	Pb	15 18 46.9	-0.2
KSR				eS	Sn	15 19 02.1	-0.3
KSR	comp=Z,69nm,0.5s			AML	AML	15 19 06.9	
SLR	**Silverton**	1.19	136	eP	Pb	15 18 49.0	-0.2
SLR				eS	Sn	15 19 05.5	+0.1
SLR	comp=Z,80nm,0.6s			AML	AML	15 19 17.4	
WDLM	**Western Deep L**	1.54	178	eP	Pg	15 18 56.7	+0.5
WDLM				eS	Sg	15 19 16.2	-0.1
WDLM	comp=Z,162nm,0.3s			AML	AML	15 19 22.2	
LBTB	**Lobatse**	1.62	265	eP	Pn	15 18 54.2	-0.9
LBTB				eS	Sn	15 19 15.8	-0.3
LBTB	comp=Z,191nm,0.8s			AML	AML	15 19 27.8	
ERPM	**east rand prop**	1.66	152	eP	Pn	15 18 55.3	-0.5
ERPM				eS	Sn	15 19 16.9	-0.2
ERPM	comp=Z,42nm,0.6s			AML	AML	15 19 19.8	
PRYS	**Parys**	2.04	180	eP	Pb	15 19 03.1	-0.6
PRYS				eS	Sb	15 19 29.7	+0.5
PRYS	comp=Z,76nm,0.2s			AML	AML	15 19 34.8	
SWZ	**Schweizer**	2.94	218	eP	Pn	15 19 14.6	+1.2
SWZ				eS	Sn	15 19 49.0	+0.2
SWZ	comp=Z,51nm,0.3s			AML	AML	15 20 03.5	
MSNA	**Messina**	3.50	45	eP	Pn	15 19 21.6	+0.6
MSNA				eS	Sn	15 20 00.8	-1.6
MSNA	comp=Z,31nm,0.4s			AML	AML	15 20 20.2	
MATP	**Matopo**	4.55	13	i P	Pn	15 19 35.4	-0.1
MATP				i S	Sb	15 20 40.7	-0.8
MATP	**Matopo**	4.55	13	i S	Sb	15 20 40.7	-0.8
BLWY	**Bulawayo**	4.85	14	i P	Pn	15 19 37.7	-1.9
BLWY				i S	Sb	15 20 50.8	+0.7
BLWY	**Bulawayo**	4.85	14	i S	Sn	15 20 40.0	+4.2

IDC 08 15:18:46.8±1.9**,11°.14S**×**166°.10E,h0^{km},mb3.9**/4**, mb1 4.2**/5**,mb1mx3.8**/30**,mbtmp4.0**/5**,ML4.4**/1**,Error ellipse: s-maj=53.1km s-min=29.5km az=150.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 8.1nm,0.3s,baz=72,slow=19,SNR=3.8	6.29	285	Pn	Pn	15 20 21.2	+0.4
HNR	4.3nm,0.3s,baz=327,slow=18,SNR=1.7			Sn	Sn	15 21 33.7	+0.3
H11S2	**WAKE ISLAND Hy** baz=181,slow=76,SNR=4.1	29.44	1	T	T	15 55 13.4	
H11S3	**WAKE ISLAND Hy** baz=181,slow=76,SNR=4.1	29.45	1	T	T	15 55 13.2	
H11S1	**WAKE ISLAND Hy** baz=181,slow=76,SNR=5.1	29.46	1	T	T	15 55 14.0	
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=8.1	30.66	1	T	T	15 56 44.1	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=7.5	30.67	2	T	T	15 56 44.6	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=5.6	30.68	1	T	T	15 56 45.5	
WRA	**Warramunga Arr** 1.9nm,0.9s,baz=82,slow=9.3,SNR=11	31.78	250	P	P	15 25 13.2	0.0
ASAR	**Alice Springs** 1.3nm,1.0s,baz=67,slow=10,SNR=8.1	33.06	244	P	P	15 25 24.3	-0.1
CMAR	**Chiang Mai Arr** 1.0nm,0.3s,baz=104,slow=3.8,SNR=3.7	72.47	293	P	P	15 30 15.9	+0.1
ILAR	**Eielson Array** 0.3nm,0.6s,baz=240,slow=5.4,SNR=3.6	83.49	18	P	P	15 31 16.0	-0.1

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*KRNET **08** 15:22:34.7±0.1, 40°.85N×74°.11E, h14^{km}, mb2.4*
*NNC **08** 15:22:34.8±0.3, 40°.81N×74°.09E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=5.9km s-min=1.7km az=111.0*
*SOME **08** 15:22:37.8, 40°.77N×74°.10E, h35^{km}*
ISC 08 15:22:33.6±1.4**,40°.79N**±0°.03×**74°.12E**±0°.03**,h4^{km}**±13^{km}**, n50,**σ**1^{s}24**/81**,33C-17D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 2.7nm,0.3s	0.91	211	⇑P	Pb	15 22 52.7	+0.7
SFK	8.0nm,0.4s			⇑S	Sb	15 23 05.0	+0.5
SFK	**Sufi-Kurgan** baz=10.0	0.91	211	⇓iP	Pb	15 22 52.7	+0.7
SFK	baz=10.0			⇓iS	Sn	15 23 05.7	-1.2
ARSB	**Arslanbob** baz=0.0	1.01	302	⇑iP	Pb	15 22 53.5	-0.2
ARSB	baz=0.0			⇑iS	Sg	15 23 07.0	+0.9
ARLS	**Aral** baz=9.0	1.08	8	⇑iP	Pb	15 22 54.0	-1.0
ARLS	baz=9.0			⇑iS	Sb	15 23 07.8	-1.7
AML	**Almayashu** SNR=34	1.38	347	P	Pn	15 22 59.7	-0.3
AML	**Almayashu** baz=46	1.38	347	⇓iP	Pn	15 22 59.6	-0.3
AML	baz=46			⇓iS	Sb	15 23 17.5	-0.7
UCH	**Uchtor** SNR=17	1.47	12	P	Pb	15 23 01.7	0.0
UCH	**Uchtor** baz=12	1.47	12	⇓iP	Pn	15 23 01.4	+0.2
UCH	baz=12			⇓iS	Sb	15 23 20.5	-0.4
KZA	**Kyzart** SNR=12	1.54	33	P	Pb	15 23 03.3	+0.3
KZA	**Kyzart** baz=34	1.54	33	⇑iP	Pb	15 23 02.8	-0.2
KZA	baz=34			⇑iS	Sb	15 23 23.1	+0.1
NRN	**Naryn** baz=67	1.56	65	⇓iP	Pn	15 23 03.0	+0.6
NRN	baz=67			⇓iS	Sb	15 23 23.9	+0.4
AAK	**Ala-Archa** SNR=5.0	1.87	9	P	Pg	15 23 10.8	+1.4
AAK	**Ala-Archa** 1.5nm,0.3s	1.87	9	⇓P	Pg	15 23 10.2	+0.8
AAK	2.6nm,0.3s			⇑S	Sb	15 23 32.6	+0.5
AAK	**Ala-Archa** baz=9.0	1.87	9	⇑iP	Pb	15 23 08.6	+0.2
AAK	baz=9.0			⇑iS	Sb	15 23 32.8	+0.7
EKS2	**Erkin-Say** SNR=13	1.89	352	P	Pb	15 23 09.0	+0.3
EKS2	**Erkin-Say** baz=52	1.89	352	⇑iP	Pb	15 23 08.3	-0.4
EKS2	baz=52			⇑iS	Sg	15 23 33.5	-0.7
ARK	**Arkit** baz=1.0	1.91	303	⇑eP	Pb	15 23 09.3	+0.3
ARK	baz=1.0			⇑iS	Sb	15 23 34.0	+0.7
KBK	**Karagaybulak** SNR=13	1.97	18	P	Pg	15 23 11.3	0.0
KBK	**Karagaybulak** baz=19	1.97	18	⇑iP	Pb	15 23 10.3	+0.2
KBK	baz=19			⇑iS	Sb	15 23 35.8	+0.8
MRKS	**Merke** 7.3nm,0.4s	2.06	341	Pg	Pb	15 23 12.7	+1.0
MRKS	10.0nm,0.3s			Lg	Lg	15 23 40.5	
MRKS	**Merke** 7.3nm,0.4s	2.06	341	eP	Pb	15 23 12.2	+0.5
MRKS	10.0nm,0.3s			eS	Sb	15 23 38.6	+0.9
MNAS	**Manas** 2.0nm,0.5s	2.08	325	⇓Pg	Pb	15 23 12.3	+0.3
MNAS	4.4nm,0.5s			⇑Lg	Lg	15 23 40.1	
MNAS	**Manas** 1.2nm,0.3s	2.08	325	Pg	Pb	15 23 12.3	+0.3
MNAS	4.0nm,0.3s			Lg	Lg	15 23 40.3	
MNAS	**Manas** baz=24	2.08	325	⇓iP	Pb	15 23 11.9	-0.1
MNAS	baz=24			⇓eS	Sb	15 23 38.6	+0.3
ULHL	**Ulahol** SNR=14	2.16	47	P	Pb	15 23 14.6	+1.2
ULHL	**Ulahol** baz=48	2.16	47	⇑iP	Pb	15 23 13.1	-0.3
ULHL	baz=48			⇑iS	Sb	15 23 41.0	+0.4
BOOM	**Boomskoye usch** baz=39	2.18	38	⇑iP	Pb	15 23 13.1	-0.6
BOOM	baz=39			⇑iS	Sb	15 23 41.5	+0.4
CHMS	**Chumysh** baz=12	2.26	12	⇑eP	Pb	15 23 14.1	-0.8
CHMS	baz=12			⇑iS	Sb	15 23 43.0	-0.2
TKM2	**Tokmak 2** 0.8nm,0.5s	2.40	27	⇓Pg	Pb	15 23 18.7	+1.2
TKM2	8.1nm,0.8s			⇑Lg	Lg	15 23 49.6	
TKM2	**Tokmak 2** baz=28	2.40	27	⇑iP	Pb	15 23 16.4	-1.1
TKM2	baz=28			⇑iS	Sb	15 23 46.6	-0.9
USP	**Ospenovka** baz=7.0	2.49	6	⇓eP	Pb	15 23 17.5	-1.4
USP	baz=7.0			⇓iS	Sb	15 23 48.3	-1.7
BTK	**Batken** baz=54	2.62	255	⇑iP	Pb	15 23 20.0	-1.1
BTK	baz=54			⇑iS	Sb	15 23 53.0	-0.7
KST	**Kastek** 3.2nm,0.3s	2.64	31	Pg	Pb	15 23 22.7	+1.2
KST	8.6nm,0.3s			Lg	Lg	15 23 57.8	
KST	**Kastek** 3.2nm,0.3s	2.64	31	eP	Pb	15 23 22.7	+1.2
KST	8.6nm,0.3s			eS	Sb	15 23 56.6	+2.3
KDJ	**Kajisay** baz=60	2.66	59	⇑iP	Pb	15 23 20.0	-2.0
KDJ	baz=60			⇑iS	Sb	15 23 53.5	-1.6
DGS	**Degeres** 2.9nm,0.5s	2.74	26	Pg	Pb	15 23 25.0	+1.8
DGS	8.8nm,0.5s			Lg	Lg	15 24 01.1	
DGS	**Degeres** 2.9nm,0.5s	2.74	26	eP	Pb	15 23 25.1	+1.8
DGS	8.8nm,0.5s			eS	Sg	15 24 01.1	-0.6
MTBS	**Maitube** 3.9nm,0.2s	2.91	36	eP	Pb	15 23 26.7	+0.7
MTBS	10nm,0.3s			⇓iS	Sb	15 24 03.6	+1.6
IZV	**Izvestkoviy** 4.1nm,0.3s	2.92	39	Pg	Pb	15 23 27.9	+1.6
IZV	11nm,0.3s			Lg	Lg	15 24 06.5	
IZV	**Izvestkoviy** 4.1nm,0.3s	2.92	39	eP	Pb	15 23 28.0	+1.8
IZV	11nm,0.3s			eS	Sg	15 24 05.8	-1.5
TNSS	**Tian-Shan** 4.7nm,0.3s	3.08	42	Pg	Pb	15 23 30.9	+1.7
TNSS	4.9nm,0.5s			Lg	Lg	15 24 11.3	
TNSS	**Tian-Shan** 4.7nm,0.3s	3.08	42	eP	Pb	15 23 30.9	+1.7
TNSS	4.9nm,0.5s			eS	Sg	15 24 11.3	-1.3
KOTS	**Kotyrbulak** 2.4nm,0.3s	3.31	41	Pg	Pb	15 23 33.8	+0.9
KOTS	6.6nm,0.6s			Lg	Lg	15 24 17.6	
KOTS	**Kotyrbulak** 2.4nm,0.3s	3.31	41	eP	Pb	15 23 34.5	+1.6
KOTS	6.6nm,0.6s			eS	Sg	15 24 17.6	-2.2
IUG	**Iuzhnay** 2.1nm,0.3s	3.35	295	Pg	Pb	15 23 35.2	+1.5
IUG	14nm,0.4s			Lg	Lg	15 24 19.0	
IUG	**Iuzhnay** 2.1nm,0.3s	3.35	295	eP	Pb	15 23 35.2	+1.5
IUG	14nm,0.4s			eS	Sg	15 24 19.0	-2.4
KUU	**Kurty** 1.3nm,0.1s	3.51	27	eP	Pb	15 23 37.6	+1.3
KUU	9.9nm,0.5s			⇑iS	Sb	15 24 22.6	+3.4
KK31	**Karatay Array** 0.4nm,0.5s,baz=137,slow=16,SNR=4.8	3.54	312	⇑Pg	Pb	15 23 38.3	+1.5
KK31	1.3nm,0.4s,baz=137,slow=29,SNR=6.4			⇓Lg	Lg	15 24 24.0	
CHKK	**Chushkaly**	3.73	34	Pg	Pb	15 23 42.2	+2.1
CHKK				Lg	Lg	15 24 30.8	
CHKK	**Chushkaly** 0.6nm,0.2s	3.73	34	eP	Pb	15 23 42.2	+2.1
CHKK	5.3nm,0.4s			eS	Sg	15 24 30.8	-2.5

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*IDC **08** 15:26:34.5±0.3, 10°.89S×166°.12E, h0^{km}, mb5.4/30, mb1 5.4/32, mb1mx5.4/32, mbtmp5.4/32, ML5.9/2, MS6.7/34, Ms1 6.7/34, ms1mx6.6/45, Error ellipse: s-maj=8.9km s-min=7.3km az=87.0*
*BJI **08** 15:26:37.8, 11°.01S×165°.96E, h20^{km}, mb5.8/70, mB6.8/69, Ms7.2/92, Ms7 6.9/87*
*ISCJB **08** 15:26:37.3±0.1, 10°.92S±0°.02×166°.01E±0°.02, h24^{km}, mb5.9/178, MS6.8/222, Error ellipse: s-maj=2.5km s-min=2.3km az=156.0*
*NEIC **08** 15:26:38.5±0.1, 10°.93S×166°.02E, h21^{km}, mb6.4/18, ME7.5, MS6.9/132, MW7.0, MW7.1, MW7.1, Error ellipse: s-maj=3.2km s-min=2.6km az=129.0, Moment Tensor Solution. s72 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.08; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-0.16; $M_{r\theta}$0.16; $M_{\theta\phi}$-3.29; $M_{\phi r}$0.66; Best double couple: $M_0$3.40000×10^{19} NP1:ϕ_s269.00000°, δ79.00000°, λ-177.00000°. NP2:ϕ_s178.00000°, δ87.00000°, λ-11.00000°. Principal axes: T 3.3700, Plg6.0000°, Azm224.0000°; N 0.0000, Plg78.0000°, Azm342.0000°; P -3.3600, Plg10.0000°, Azm133.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s85.00000°, δ85.00000°, λ175.00000°. NP2: ϕ_s175.00000°, δ85.00000°, λ5.00000°. Principal axes: T Plg7.0000°, Azm40.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm130.0000°; Apparent Stress 3.20 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IX] at Lata.
*NEIC **08** 15:26:39.0±0.0, 10°.51S×165°.96E, h19^{km}, Moment Tensor Solution. s58 Moment tensor: Scale 10^{19}Nm; M_{rr}0.27; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-0.85; $M_{r\theta}$-0.44; $M_{\theta\phi}$-4.71; $M_{\phi r}$1.51; Best double couple: $M_0$5.00000×10^{19} NP1:ϕ_s356.00000°, δ86.00000°, λ18.00000°. NP2:ϕ_s265.00000°, δ72.00000°, λ175.00000°. Principal axes: T 5.0000, Plg15.0000°, Azm222.0000°; N 0.0400, Plg71.0000°, Azm9.0000°; P -5.0400, Plg9.0000°, Azm129.0000°;*
*MOS **08** 15:26:40.3±1.1, 10°.73S×165°.84E, h42^{km}, mb5.9/40, MS6.9/49 Error ellipse: s-maj=6.8km s-min=5.7km az=99.2*
*GCMT **08** 15:26:53.5±0.1, 10°.72S×165°.92E, h24^{km}, MW7.0/155, Moment Tensor Solution. s151,c400; s155,c730; Duration: 8^{s}2 Moment tensor: Scale 10^{19}Nm; M_{rr}0.03±.02; $M_{\theta\theta}$0.43±.02; $M_{\phi\phi}$-0.45±.02; $M_{r\theta}$-0.49±.06; $M_{\theta\phi}$-4.62±.01; $M_{\phi r}$0.65±.06; Best double couple: $M_0$4.71100×10^{19} NP1:ϕ_s358.00000°, δ85.00000°, λ8.00000°. NP2:ϕ_s267.00000°, δ82.00000°, λ175.00000°. Principal axes: T 4.7610, Plg10.0000°, Azm222.0000°; N -0.1010, Plg80.0000°, Azm31.0000°; P -4.6610, Plg2.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **08** 15:27:06.0±0.0, 10°.45S×166°.14E, h34^{km}, Moment Tensor Solution. s58 Moment tensor: Scale 10^{19}Nm; M_{rr}0.29; $M_{\theta\theta}$0.30; $M_{\phi\phi}$-0.59; $M_{r\theta}$-0.11; $M_{\theta\phi}$-4.94; $M_{\phi r}$-1.55; Best double couple: $M_0$5.20000×10^{19} NP1:ϕ_s358.00000°, δ90.00000°, λ-17.00000°. NP2:ϕ_s88.00000°, δ73.00000°, λ-180.00000°. Principal axes: T 5.0200, Plg12.0000°, Azm44.0000°; N 0.3500, Plg73.0000°, Azm176.0000°; P -5.3700, Plg12.0000°, Azm311.0000°;*
ISC 08 15:26:38.8±0.4**,10°.89S**±0°.03×**166°.15E**±0°.03**,h22^{km}**±2^{km}**, h22^{km}:pP-P,n1285,**σ**2^{s}10**/1251**,mb6.0**/179**,MS6.9**/231**, 70C-37D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

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HNR   Honiara           6.27 283  iP      Pn      15 28 10.0  0.0
HNR                               iS      Sn      15 29 26.0 +4.9
HNR   Honiara           6.27 283  ePn     Pn      15 28 10.3 +0.3
HNR                               eSn     Sn      15 29 30.9  +10
HNR   Honiara           6.27 283  Pn      Pn      15 28 09.8 -0.2
      566nm,0.3s,baz=128,slow=6.9,SNR=268
HNR                               Sn      Sn      15 29 22.1 +1.0
      baz=177,slow=17,SNR=1.2
HNR                               LR      LR      15 29 45.8
      comp=Z,307µm,21.9s,baz=316,slow=31
MARNC Mare, Loyalty    10.68 170  ePn     Pn      15 29 10.7 +0.2
MARNC                             eSn     Sn      15 31 17.6 +8.1
DZM   Mont Dzumac      11.12 179  ePn     Pn      15 29 17.3 +0.7
      9µm,1.4s
DZM                               eLR     LR      15 31 57.9
      comp=Z,1458µm,27.2s
DZM   Mont Dzumac      11.12 179  ePn     Pn      15 29 17.3 +0.7
DZM                               eSn     Sn      15 31 30.0  +10
DZM   Mont Dzumac      11.12 179  Pn      Pn      15 29 16.1 -0.4
      33nm,0.3s,baz=356,slow=17,SNR=127
DZM                               Sn      Sn      15 31 22.3 +1.9
      baz=307,slow=20,SNR=1.3
I22FR PORTLAGUERRE I11.25 177  i                  16 40 00.0
      baz=351,slow=327,SNR=0.7
ONTNC Ouen Toro        11.35 179  ePn     Pn      15 29 20.3 +0.6
ONTNC                             eSn     Sn      15 31 33.7 +7.7
PINNC Pines Island,    11.72 174  ePn     Pn      15 29 25.0 +0.3
FUNA  Funafuti         13.08  81  ePn     Pn      15 29 44.2 +0.8
MSVF  Nonsavu          13.39 122  ePn     P       15 29 53.3 -3.7
MSVF  Nonsavu          13.39 122⇑eP      Pn      15 29 49.4 +1.8
TARA  Tarawa           13.91  29  ePn     Pn      15 29 53.5 -1.2
TARA                              eSn     Sn      15 32 21.4 -7.1
RABL  Rabaul           15.37 295  ePn     Pn      15 30 13.7 -0.8
NFK   Norfolk Island   18.14 175  P       P       15 30 50.2 +0.8
      baz=18,SNR=8.3
PATS  Pohnpei          19.26 336  P       Pn      15 31 03.5 +0.5
      baz=19,SNR=15
PATS  Pohnpei          19.26 336  eP      Pn      15 31 03.4 +0.4
KWAJ  Kwajalein Atol   19.62   4  eP      Pn      15 31 07.4 +0.1
KWAJ                              eS      Sn      15 34 48.8 +1.7
KWAJ  Kwajalein Atol   19.62   4  eP      Pn      15 31 07.4 +0.1
EIDS  Eidsvold         20.27 223  P       P       15 31 13.7 +0.7
      baz=20,SNR=134
EIDS  Eidsvold         20.27 223  eP      P       15 31 13.6 +0.7
MANU  Manus Island     20.61 294  eP      P       15 31 16.8 +0.1
CTA   Charters Tower   21.22 242  P       P       15 31 23.6 +0.4
      82nm,0.7s,baz=70,slow=12,SNR=45
CTA                               S       S       15 35 19.7 +1.5
      43nm,1.0s,baz=180,slow=20,SNR=1.8
CTA                               LR      LR      15 39 09.8
      comp=Z,587µm,18.4s,baz=64,slow=36
CTAO  Charters Tower   21.22 242  eP      P       15 31 23.9 +0.7
CTAO                              LR      LR
      comp=Z,726µm,19.0s
CTAO  Charters Tower   21.22 242  eP      P       15 31 23.9 +0.7
LHI   Lord Howe Isla   21.55 197  P       P       15 31 27.1 +0.4
      baz=22,SNR=7.7
LHI   Lord Howe Isla   21.55 197  eP      P       15 31 27.1 +0.4
MTSU  Mount Surprise   22.31 249  P       P       15 31 35.0  0.0
      baz=22,SNR=92
RMQ   Roma             22.58 224  P       P       15 31 37.9 +0.2
      baz=23,SNR=180
COEN  Coen             22.64 260  P       P       15 31 37.4 -1.1
      baz=23,SNR=12
COEN  Coen             22.64 260  eP      P       15 31 37.5 -1.0
KNTN  Kanton           23.39  71  eP      P       15 31 48.1 +1.9
RAO   Raoul Island     23.56 143  P       P       15 31 50.3 +2.6
RAO                               S       S       15 36 04.4 +3.6
RAO                               pmax    pmax
      comp=Z,165nm,0.3s
RAO                               smax    smax
      comp=N,255nm,0.3s
RAO                               MLR     MLR
      comp=Z,280µm,21.6s
RAO   Raoul Island     23.56 143  P       P       15 31 50.3 +2.6
      comp=Z,164nm,0.3s,baz=90,slow=20,SNR=1.5
RAO                               S       S       15 36 04.4 +3.6
      comp=Z,255nm,0.3s,baz=82,slow=19,SNR=3.2
RAO                               LR      LR      15 39 26.4
      comp=Z,280µm,21.6s,baz=305,slow=33
ARMA  Armidale         23.66 213  P       P       15 31 48.6 -0.2
      baz=24,SNR=114
ARMA  Armidale         23.66 213  eP      P       15 31 48.7 -0.2
NIUE  Niue             24.48 112  eP      P       15 32 00.8 +4.3
OUZ   Omahuta          25.15 166  eP      P       15 32 03.9 +1.6
QLP   Quilpie          25.89 230  P       P       15 32 08.4 -0.8
      baz=26,SNR=53
MGCD  Mangrove Creek   26.16 210  P       P       15 32 11.8 +0.3
      baz=26,SNR=27
JAY   Jayapura         26.58 286  P       P       15 32 13.5 -2.1
      comp=Z,6µm,1.6s,comp=Z,284µm
RIV   Riverview        26.64 209  P       P       15 32 16.4 +0.5
      baz=27,SNR=10
WIAZ  Waiheke Island   27.03 164  P       P       15 32 27.9 +8.5
GENI  Genyem           27.06 286  P       P       15 32 18.0 -1.9
      comp=Z,1µm,1.6s,comp=Z,51µmcomp=Z,211µm
ETAZ  East Tamaki Re   27.13 164  P       P       15 32 30.1  +10
QIS   Mount Isa        27.25 246  P       P       15 32 21.6  0.0
      baz=27,SNR=52
CMSA  Cobar Meteorol   27.93 220  P       P       15 32 26.6 -0.9
      baz=28,SNR=50
TOZ   Tahuroa Road     28.01 164  P       P       15 32 30.0 +1.8
TOZ                               P       P       15 32 32.5 +4.4
TGRZ  Tauranga         28.22 163  P       P       15 32 33.0 +3.0
KMRZ  Kaimai           28.24 163  P       P       15 32 34.3 +4.0
YNG   Young            28.39 212  P       P       15 32 31.3 -0.2
      baz=28,SNR=37
OPRZ  Ohinepanea       28.42 163  P       P       15 32 34.3 +2.5
HIZ   Hauiti           28.59 166  eP      P       15 32 35.1 +1.9
HIZ   Hauiti           28.59 166  P       P       15 32 35.2 +1.9
TLZ   Tolley Road      28.59 164  P       P       15 32 35.3 +2.0
CNB   Canberra Magne   28.70 209  P       P       15 32 34.1 -0.3
      baz=29,SNR=36
HAZ   Te Kaha          28.72 161  P       P       15 32 34.3 -0.2
MXZ   Matakaoa Point   28.72 160  eP      P       15 32 35.0 +0.6
MXZ   Matakaoa Point   28.72 160  P       P       15 32 35.2 +0.8
CAN   Canberra         28.89 210  eP      P       15 32 35.6 -0.4
CAN   Canberra         28.89 210  eP      P       15 32 35.6 -0.4
PKGZ  Pakihiroa        28.93 160  P       P       15 32 36.9 +0.4
URZ   Urewera          28.97 162  P       P       15 32 35.9 -0.8
      comp=Z,13nm,0.5s,baz=283,slow=3.3,SNR=17
URZ                               S       S       15 37 29.6 +3.3
      comp=Z,18nm,0.9s,baz=9.0,slow=19,SNR=3.1
URZ   Urewera          28.97 162  P       P       15 32 35.7 -0.9
WMGZ  Waiomatatini S   28.99 160  P       P       15 32 35.7 -1.1
MUGZ  Murupara         29.07 163  P       P       15 32 37.1 -0.5
VRZ   Vera Road        29.14 166  P       P       15 32 42.8 +4.6
PUZ   Puketiti         29.16 160  P       P       15 32 36.7 -1.7
TWGZ  Tauwhareparae    29.16 161  P       P       15 32 38.0 -0.5
H11S2 WAKE ISLAND Hy 29.20   1  T       T       16 03 08.6
      baz=181,slow=76,SNR=5511
H11S3 WAKE ISLAND Hy 29.21   1  T       T       16 03 13.1
      baz=181,slow=76,SNR=5685
H11S1 WAKE ISLAND Hy 29.22   1  T       T       16 03 09.9
      baz=181,slow=76,SNR=8441
KATZ  Kakaramea        29.23 165  P       P       15 32 40.9 +1.7
TWVZ  Taurewa          29.26 165  P       P       15 32 39.7 +0.3
RAGZ  Rawiri           29.28 162  P       P       15 32 40.4 +0.9
RITZ  Rihia Road       29.28 164  P       P       15 32 42.5 +3.1
KRVZ  Karewarewa       29.33 165  P       P       15 32 42.1 +2.1
WTVZ  West Tongariro   29.34 165  P       P       15 32 42.7 +2.6
TKGZ  Te Karaka        29.36 161  P       P       15 32 39.2 -1.0
COVZ  Chateau Observ   29.41 165  P       P       15 32 43.1 +2.4
PKVZ  Pokaka           29.44 165  P       P       15 32 43.0 +2.1
FWVZ  Far West T-bar   29.46 165  P       P       15 32 42.5 +1.2
TRVZ  Turoa            29.50 165  P       P       15 32 43.3 +1.6
SNGZ  Shannon Statio   29.52 162  P       P       15 32 41.3 -0.2
BKZ   Black Stump Fm   29.63 164  eP      P       15 32 41.5 -1.1
BKZ   Black Stump Fm   29.63 164  P       P       15 32 41.1 -1.5
NMHZ  Naumai           29.65 163  P       P       15 32 42.2 -0.6
WHHZ  Waihua           29.76 162  P       P       15 32 44.5 +0.9
WAZ   Wanganui         29.80 166  P       P       15 32 45.8 +1.8
KWHZ  Kaweka Forest    29.85 164  P       P       15 32 44.7 +0.1
MCHZ  McNeill Hill     29.94 163  P       P       15 32 44.8 -0.5
WAKE  Wake Island      29.99   1  PFAKE           15 33 00.0  +14
WAKE                              LR      LR
      comp=Z,98µm,19.0s
MILA  Mila             30.22 208  P       P       15 32 48.6 +0.8
      baz=30,SNR=6.7
H11N1 WAKE ISLAND Hy 30.42   1  T       T       16 04 40.4
      baz=182,slow=76,SNR=2988
H11N3 WAKE ISLAND Hy 30.43   1  T       T       16 04 39.3
      baz=182,slow=76,SNR=2530
H11N2 WAKE ISLAND Hy 30.44   1  T       T       16 04 40.2
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      baz=182,slow=76,SNR=2167
STKA  Stephens Creek   30.82 224  P       P       15 32 52.6 -0.6
      baz=31,SNR=47
STKA  Stephens Creek   30.82 224  eP      P       15 32 53.0 -0.2
STKA                              S       S       15 37 57.8 +2.1
STKA  Stephens Creek   30.82 224  eP      P       15 32 53.0 -0.2
STKA                              S       S       15 37 57.8 +2.1
STKA  Stephens Creek   30.82 224  P       P       15 32 52.3 -0.9
      comp=Z,28nm,0.6s,baz=48,slow=9.3,SNR=53
STKA                              S       S       15 37 57.8 +2.1
      comp=Z,23nm,1.1s,baz=324,slow=19,SNR=1.3
STKA                              LR      LR      15 45 16.3
      comp=Z,501µm,18.4s,baz=46,slow=36
BFZ   Birch Farm       30.98 165  eP      P       15 32 53.5 -1.0
SRPI  Serui, Papua     31.01 285  P       P       15 32 56.3 +1.3
      comp=Z,392nm,2.6s,comp=Z,25µm
SNZO  South Karori     31.22 168  eP      P       15 32 55.8 -0.7
SNZO                              LR      LR
      comp=Z,279µm,20.0s
THZ   Tophouse         31.32 170  eP      P       15 32 56.1 -1.4
WRAB  Tennant Creek    31.89 250  eP      P       15 33 01.3 -1.5
WRAB                              LR      LR
      comp=Z,228µm,20.0s
WRAB  Tennant Creek    31.89 250c iP      P       15 33 00.5 -2.3
WRAB                              pmax    pmax
      comp=Z,1µm,1.5s
WRAB                              MLR     MLR
      comp=Z,504µm,16.0s
WB2   Warramunga Arr   31.89 250  eP      P       15 33 01.3 -1.5
WRA   Warramunga Arr   31.90 250  P       P       15 33 01.5 -1.3
      comp=Z,153nm,0.9s,baz=83,slow=9.4,SNR=195
WRA                               PcP     PcP     15 35 53.3  0.0
      comp=Z,18nm,0.8s,baz=67,slow=2.1,SNR=3.1
WRA                               S       S       15 38 14.7 +1.8
      comp=Z,11nm,1.1s,baz=82,slow=26,SNR=2.4
WRA                               ScP     ScP     15 39 37.3 +1.7
      comp=Z,31nm,1.0s,baz=76,slow=3.4,SNR=5.1
WRA                               PKiKP   PKiKP   15 43 21.4 -0.6
      comp=Z,2.2nm,1.0s,baz=54,slow=0.1,SNR=4.7
WRA                               LR      LR      15 46 01.6
      comp=Z,329µm,18.1s,baz=75,slow=37
KHZ   Kahutara         32.06 170  eP      P       15 33 02.9 -1.0
GUMO  Guam             32.21 319  P       P       15 33 04.5 -1.0
      comp=Z,8µm,2.3s
GUMO                              S       S       15 38 20.2 +2.7
GUMO  Guam             32.21 319  P       P       15 33 04.4 -1.0
      comp=Z,116nm,0.7s,baz=192,slow=10,SNR=6.4
GUMO                              S       S       15 38 20.2 +2.7
      comp=Z,29nm,0.7s,baz=170,slow=18,SNR=1.5
GUMO                              LR      LR      15 45 53.8
      comp=Z,92µm,18.1s,baz=130,slow=36
LTZ   Lake Taylor      32.21 172  eP      P       15 33 04.0 -1.3
TOO   Toolangi         32.41 212  P       P       15 33 06.9 -0.3
      baz=32,SNR=54
TOO   Toolangi         32.41 212  eP      P       15 33 06.8 -0.3
TOO   Toolangi         32.41 212  eP      P       15 33 06.8 -0.3
FOZ   Fox Glacier      32.67 175  eP      P       15 33 08.5 -0.8
OXZ   Oxford           32.72 172  eP      P       15 33 08.2 -1.4
RPZ   Rata Peaks       32.98 173  P       P       15 33 11.2 -0.7
      comp=Z,176nm,0.8s,baz=346,slow=2.3,SNR=43
RPZ                               S       S       15 38 31.3 +2.3
      comp=Z,10nm,0.8s,baz=41,slow=9.3,SNR=2.1
RPZ                               LR      LR      15 46 02.5
      comp=Z,447µm,19.5s,baz=350,slow=35
KDU   Kakadu           33.00 263  P       P       15 33 10.1 -2.4
      baz=33,SNR=128
CRLZ  Canterbury Las   33.04 171  eP      P       15 33 11.6 -0.9
RKPI  Ransiki, Papua   33.08 284  P       P       15 33 14.5 +1.2
      comp=Z,322nm,2.2s,comp=Z,26µm
AS01  Alice Springs    33.17 243  eP      P       15 33 12.8 -1.2
MQZ   McQueen’s Vall   33.18 171  eP      P       15 33 12.8 -0.8
MQZ                               ePcP    PcP     15 35 55.6 -0.7
AS31  Alice Springs    33.21 243  eP      P       15 33 13.2 -1.1
ASAR  Alice Springs    33.21 243  P       P       15 33 12.8 -1.5
      comp=Z,50nm,0.7s,baz=68,slow=10,SNR=266
ASAR                              S       S       15 38 34.5 +1.3
      comp=Z,24nm,1.1s,baz=61,slow=31,SNR=3.1
ASAR                              ScP     ScP     15 39 42.4 +2.3
      comp=Z,22nm,1.0s,baz=100,slow=3.0,SNR=5.5
ASAR                              LR      LR      15 45 45.2
      comp=Z,253µm,19.9s,baz=73,slow=35
ASAR                              P3KPbc          16 04 26.4
      comp=Z,0.7nm,0.8s,baz=247,slow=2.3,SNR=2.4
LBZ   Lake Benmore     33.55 175  eP      P       15 33 16.6 -0.3
HTT   Hallett          33.55 224  P       P       15 33 16.6 -0.7
      baz=34,SNR=24
ARPS  Mount Arapiles   33.83 216  P       P       15 33 19.6 +0.1
      baz=34,SNR=17
WKZ   Wanaka           33.90 176  eP      P       15 33 19.8 -0.2
ODZ   Otahua Downs     34.25 174  eP      P       15 33 21.2 -1.8
RAR   Rarotonga        34.25 112  P       P       15 33 22.2 -1.1
      comp=Z,13nm,0.8s,baz=300,slow=14,SNR=2.2
RAR                               LR      LR      15 45 43.8
      comp=Z,67µm,19.8s,baz=280,slow=34
SAUI  Saumlaki         34.48 272  P       P       15 33 26.7 +1.3
      comp=Z,677nm,2.7s,comp=Z,36µm
FAKI  Fak Fak          34.54 281  P       P       15 33 33.7 +7.8
WHZ   Wether Hill Ro   34.91 178  eP      P       15 33 29.1 +0.4
BBOO  Buckleboo        35.22 227  P       P       15 33 30.9 -0.7
      baz=35,SNR=56
BBOO  Buckleboo        35.22 227  eP      P       15 33 30.9 -0.7
BBOO                              ePcP    PcP     15 36 00.4 -2.0
MOO   Moorlands        35.52 204  P       P       15 33 33.5 -0.6
      baz=36,SNR=20
TAU   Tasmania Unive   35.86 204  eP      P       15 33 36.9  0.0
TAU                               LR      LR
      comp=Z,159µm,22.0s
TAU   Tasmania Unive   35.86 204  eP      P       15 33 36.9  0.0
SWI   Sorong           36.06 284  P       P       15 33 43.3 +4.3
      comp=Z,170nm,1.4s,comp=Z,12µm
PALU  Palau            36.36 299  P       P       15 33 41.9 +0.3
      baz=36,SNR=4.7
I39PW PALAU INFRASON36.39 299  i                  19 12 10.0
      baz=122,slow=315,SNR=0.5
BNDI  Bandanaira       36.44 277  P       P       15 33 40.4 -1.9
      comp=Z,5µm,1.4s,comp=Z,97µmcomp=Z,88µm
JOHN  Johnston Islan   36.50  42  PFAKE           15 34 00.0  +17
JOHN                              LR      LR
      comp=Z,7µm,21.0s
KNRA  Kununurra        36.66 258  P       P       15 33 43.2 -0.9
      baz=37,SNR=80
WRKA  Warakurna        38.50 243  P       P       15 33 58.6 -1.1
      baz=38,SNR=45
NLAI  Namlea           39.45 278  P       P       15 34 07.3 -0.4
      comp=Z,1µm,1.7s,comp=Z,43µmcomp=Z,75µm
FITZ  Fitzroy Crossi   39.80 255  P       P       15 34 09.0 -1.6
      baz=40,SNR=381
FITZ  Fitzroy Crossi   39.80 255  eP      P       15 34 09.3 -1.3
FITZ                              ePcP    PcP     15 36 13.0 -3.6
FITZ                              S       S       15 40 14.1 +0.2
FITZ  Fitzroy Crossi   39.80 255  P       P       15 34 09.2 -1.3
      comp=Z,194nm,0.7s,baz=80,slow=7.3,SNR=257
FITZ                              S       S       15 40 14.1 +0.2
      comp=Z,21nm,1.0s,baz=15,slow=20,SNR=2.0
FITZ                              LR      LR      15 49 24.8
      comp=Z,229µm,21.1s,baz=80,slow=34
TNTI  Ternate          40.26 284  eP      P       15 34 13.4 -1.1
TNTI  Ternate          40.26 284  P       P       15 34 14.5 +0.1
      comp=Z,214nm,1.3s,comp=Z,22µmcomp=Z,53µm
FORT  Forrest          40.45 235  P       P       15 34 15.0 -0.8
      baz=40,SNR=30
FORT  Forrest          40.45 235  eP      P       15 34 15.0 -0.8
SANI  Sanana           40.81 280  P       P       15 34 17.8 -1.2
      comp=Z,547nm,1.3s,comp=Z,54µmcomp=Z,124µm
SOEI  Soe              41.19 268  eP      P       15 34 21.7 -0.5
SOEI  Soe              41.19 268  P       P       15 34 21.8 -0.5
      comp=Z,540nm,1.0s,comp=Z,28µm
BATI  Baumata          41.74 267  P       P       15 34 26.4 -0.3
      comp=Z,597nm,1.3s,comp=Z,19µm
MIDW  Midway           42.02  22  PFAKE           15 34 40.0  +11
MIDW                              LR      LR
      comp=Z,135µm,19.0s
PPT   Papeete          43.35 104  P       P       15 34 39.0 -0.7
PPT                               pmax    pmax
      comp=Z,34nm,0.9s
PPT   Papeete          43.35 104  P       P       15 34 39.0 -0.7
      comp=Z,34nm,0.9s,baz=256,slow=15,SNR=2.6
PPT                               LR      LR      15 50 12.0
      comp=Z,89µm,18.1s,baz=276,slow=33
PAE   Paea             43.35 104  eP      P       15 34 41.3 +1.6
      comp=Z,29nm,1.2s
PPT2  Papeete2         43.35 104  eP      P       15 34 41.8 +2.0
      comp=Z,191nm,1.3s
PPT2                              eS      S       15 41 09.3 +2.6
      comp=Z,78µm,28.2s
PPT2                              eLQ     LQ      15 45 02.4
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      comp=Z,1426µm,29.5s
PPT2                              eLR     LR      15 46 50.8
      comp=Z,196µm,25.2s,baz=253
BBSI  Bau Bau          43.43 274  P       P       15 34 41.7 +1.3
      comp=Z,146nm,1.1s,comp=Z,10µm
MATI  Mati             43.48 292  eP      P       15 34 44.0 +3.3
TIAR  Tiarei           43.57 104  eP      P       15 34 43.7 +2.2
DDMP  Don Marcelino,   43.65 291  eP      P       15 34 50.1 +8.0
KDI   Kendari          43.67 276  P       P       15 34 43.5 +1.2
      comp=Z,232nm,1.4s,comp=Z,19µmcomp=Z,104µm
TVO   Taravao          43.67 104  eP      P       15 34 44.3 +2.0
      comp=Z,69nm,1.0s
DAV   Davao City (W)   44.14 292  P       P       15 34 45.3 -0.8
DAV   Davao City (W)   44.14 292  P       P       15 34 52.1 +6.0
      comp=Z,163nm,0.4s,baz=180,slow=6.7,SNR=3.8
DAV                               LR      LR      15 52 60.0
      comp=Z,58µm,18.3s,baz=109,slow=36
LUWI  Luwuk            44.17 280  eP      P       15 34 45.9 -0.5
LUWI                              ePP     PP      15 36 29.2 -0.4
LUWI  Luwuk            44.17 280  P       P       15 34 46.4  0.0
      comp=Z,856nm,1.4s,comp=Z,36µmcomp=Z,93µm
CBIJ  Chichi jima      44.35 329  P       P       15 34 46.0 -1.4
JCJ   Chichijima       44.35 329  P       P       15 34 46.0 -1.5
      comp=Z,103nm,0.8s,baz=90,slow=2.0,SNR=2.6
JCJ                               LR      LR      15 50 36.8
      comp=Z,57µm,21.4s,baz=128,slow=32
KCP   Kidapawan        44.57 292⇓eP      P       15 34 50.3 +0.7
BASI  Baing, Sumba     44.77 266  P       P       15 34 52.0 +0.9
      comp=Z,2µm,1.2s,comp=Z,28µm
SKMP  Bagumbayan, Su   44.88 291  eP      P       15 34 50.4 -1.6
BUTP  Butuan           44.88 295  eP      P       15 34 58.1 +6.1
PMOR  Pomariorio Ree   44.92 100  eP      P       15 34 54.1 +1.8
      comp=Z,1µm,1.3s
BUKP  Musuan           44.94 293  eP      P       15 34 54.4 +1.9
WSI   Waingapu         45.10 267  P       P       15 34 56.1 +2.4
      comp=Z,1µm,1.2s,comp=Z,36µm
VAH   Vaihoa           45.17 101  eP      P       15 34 55.7 +1.4
      comp=Z,636nm,1.3s
CTBH  Cotabato--PC H   45.42 292⇑eP      P       15 34 55.3 -1.0
CGP   Cagayan de Oro   45.50 293⇓eP      P       15 35 04.5 +7.6
MBWA  Marble Bar       45.62 251  eP      P       15 34 58.2 +0.4
MBWA                              LR      LR
      comp=Z,143µm,19.0s
BKSI  Bulukumba        45.86 273  P       P       15 34 58.6 -1.2
      comp=Z,179nm,1.1s,comp=Z,13µmcomp=Z,40µm
BNSI  Bone             46.04 274  P       P       15 35 00.4 -0.8
      comp=Z,1µm,1.1s,comp=Z,32µmcomp=Z,77µm
MSLP  Maasin           46.06 296  eP      P       15 35 00.0 -1.3
BESP  Borongan         46.21 298  eP      P       15 35 09.7 +7.2
KAPI  Kappang          46.28 273  PFAKE           15 35 10.0 +6.9
KAPI                              LR      LR
      comp=Z,66µm,21.0s
PLP   Palo             46.41 297⇑eP      P       15 35 09.4 +5.3
SPSI  Sidrap Palu      46.45 275  P       P       15 35 02.8 -1.7
      comp=Z,177nm,1.0s,comp=Z,10µmcomp=Z,35µm
TTSI  Tana Toraja      46.59 276  P       P       15 35 08.7 +3.2
      comp=Z,351nm,2.8s,comp=Z,23µmcomp=Z,68µm
OCLP  Ormoc            46.69 297  eP      P       15 35 04.9 -1.3
DCPH  Dipolog City     46.77 293⇓eP      P       15 35 08.8 +1.9
LLP   Lapu-Lapu        46.93 295  eP      P       15 35 13.9 +5.7
PCI   Palu             47.05 279  P       P       15 35 09.8 +0.6
      comp=Z,1µm,1.0s,comp=Z,52µm
IPIL  Ipil             47.17 291  eP      P       15 35 17.0 +7.0
SNPH  Sibulan          47.18 294  eP      P       15 35 22.9  +13
MEEK  Meekatharra      47.37 244  P       P       15 35 11.0 -0.5
      baz=47,SNR=78
KIP   Kipapa           47.65  48  eP      P       15 35 16.8 +3.2
      comp=Z,4µm,1.2s
KIP                               LR      LR
      comp=Z,95µm,19.0s
KIP   Kipapa           47.65  48⇑eP      P       15 35 12.6 -1.0
KIP                               pmax    pmax
      comp=Z,671nm,1.3s
KIP                               MLR     MLR
      comp=Z,47µm,18.0s
PLAI  Plampang         47.66 268  P       P       15 35 12.2 -1.7
      comp=Z,767nm,1.0s,comp=Z,28µm
OPA   Opana            47.81  47  eP      P       15 35 17.7 +2.8
OPA   Opana            47.81  47  eP      P       15 35 17.7 +2.8
KHLU  Kahalu`u         48.12  51  eP      P       15 35 20.1 +2.6
KHU   Kahuku           48.14  52  eP      P       15 35 20.1 +2.4
KHU   Kahuku           48.14  52  eP      P       15 35 20.1 +2.4
HUH   Hualalai         48.22  51  eP      P       15 35 21.5 +3.1
PVCP  Virac            48.24 299  eP      P       15 35 20.9 +2.6
MWH   Moku‘aweowe      48.29  51  eP      P       15 35 21.1 +1.9
GUIM  Jordan           48.29 295  eP      P       15 35 19.5 +0.8
AIN   Ainahou          48.33  52  eP      P       15 35 21.3 +2.2
MLOA  Mauna Loa Obse   48.33  51  eP      P       15 35 22.5 +3.0
HMH   Humu‘ula Sheep   48.44  51  eP      P       15 35 22.9 +2.7
MLH   Mauna Loa        48.46  52  eP      P       15 35 22.3 +2.1
MLH   Mauna Loa        48.46  52  eP      P       15 35 22.9 +2.7
MHA   Mahukona         48.46  51  eP      P       15 35 21.0 +1.1
MHA   Mahukona         48.46  51  eP      P       15 35 21.0 +1.1
WRMHI West Rim         48.47  52  eP      P       15 35 20.8 +0.6
UWE   Uwekahuna        48.49  52  eP      P       15 35 21.9 +1.6
KHLH  Kahului Airpor   48.49  49  eP      P       15 35 22.9 +2.7
KKO   Keanakako`i      48.49  52  eP      P       15 35 20.9 +0.5
POHA  Pohakuloa        48.49  51  eP      P       15 35 21.8 +1.3
POHA                              LR      LR
      comp=Z,52µm,20.0s
PUH   Pauahi           48.52  52  eP      P       15 35 21.3 +0.8
HPAH  Hawaii Prepara   48.53  51  eP      P       15 35 22.0 +1.4
HLK   Haleakala        48.54  50  eP      P       15 35 22.2 +1.3
KLBR  Kellerberrin     49.12 238  P       P       15 35 24.2 -0.7
      baz=49,SNR=29
SGKI  Sangatta, Kali   49.31 279  P       P       15 35 42.3  +16
AUQP  San Andres       49.39 298  eP      P       15 35 35.7 +8.6
OTRP  Odiongan         49.53 297  eP      P       15 35 34.3 +6.1
SMKI  Samarinda        49.71 279  P       P       15 35 39.4  +10
BLDU  Ballidu          49.77 239  P       P       15 35 28.1 -1.8
      baz=50,SNR=16
CUYO  Cuyo Island      49.79 294  eP      P       15 35 33.3 +3.1
BKB   Balikpapan       49.83 278  P       P       15 35 41.1  +11
GQP   Guinayangan      49.85 299⇑eP      P       15 35 37.2 +6.5
NWAO  Narrogin (SRO)   49.87 236  P       P       15 35 30.0 -0.6
      baz=50,SNR=26
NWAO  Narrogin (SRO)   49.87 236  eP      P       15 35 29.9 -0.8
NWAO                              LR      LR
      comp=Z,583µm,19.0s
NWAO  Narrogin (SRO)   49.87 236  eP      P       15 35 29.9 -0.8
NWAO  Narrogin (SRO)   49.87 236  P       P       15 35 30.1 -0.6
      comp=Z,56nm,0.7s,baz=313,slow=6.6,SNR=28
MORW  Morawa           50.04 241  P       P       15 35 31.6 -0.4
      baz=50,SNR=22
MORW  Morawa           50.04 241  eP      P       15 35 32.1 +0.1
KBKI  Kotabaru         50.11 275  P       P       15 35 32.7  0.0
      comp=Z,71nm,1.2s,comp=Z,2µm
BOAC  Boac             50.17 298  eP      P       15 35 39.7 +6.6
DNP   Denpasar         50.20 268  P       P       15 35 34.1 +0.7
      comp=Z,1µm,1.4s,comp=Z,60µm
SRBI  Singaraja        50.27 269  P       P       15 35 32.4 -1.5
      comp=Z,358nm,1.2s,comp=Z,22µm
TSM   Tawau            50.36 285  P       P       15 35 35.2 +0.6
SJMP  San Jose         50.37 296  eP      P       15 35 33.7 -0.9
JHJ   Hachijo jima 2   50.47 331  P       P       15 35 34.1 -1.0
      comp=Z,159nm,0.8s,baz=172,slow=7.1,SNR=2.2
MUN   Mundaring        50.49 237  P       P       15 35 35.6 +0.2
      baz=50,SNR=8.7
RKGY  Rocky Gully      50.52 234  P       P       15 35 35.4 -0.1
      baz=50,SNR=9.3
POLP  Polilio Island   50.67 299  eP      P       15 35 55.6  +19
GIRL  Giralia          50.83 250  P       P       15 35 36.6 -1.4
      baz=51,SNR=11
BUSP  Coron            50.99 295  eP      P       15 35 44.0 +4.7
JAGI  Jajag, Banyuwa   51.26 268  eP      P       15 35 39.2 -2.3
JAGI  Jajag, Banyuwa   51.26 268  P       P       15 35 39.4 -2.0
      comp=Z,567nm,1.2s,comp=Z,20µmcomp=Z,51µm
ENPP  El Nido          51.36 294  eP      P       15 35 43.2 +1.2
PALP  Palanan          51.37 302  eP      P       15 35 41.3 -0.8
SDKM  Sandakan         51.42 286  P       P       15 35 43.6 +1.0
BALP  Baler            51.45 300  eP      P       15 35 48.1 +5.3
KMMI  Kalianget        51.63 270  P       P       15 35 45.5 +1.3
      comp=Z,141nm,1.1s,comp=Z,2µm
CAUP  Cauayan          51.82 302  eP      P       15 35 49.6 +4.1
MTKI  Muara Teweh, K   51.85 277  P       P       15 35 53.0 +7.2
BATP  Bataraza         51.92 290  eP      P       15 35 52.9 +6.6
GMJI  Gumukmas         51.98 268  P       P       15 35 47.1 +0.3
      comp=Z,178nm,1.0s,comp=Z,18µm
SGCP  Mt. Cagua        52.27 303  eP      P       15 35 54.8 +6.0
KKM   Kota Kinabalu    52.47 286  eP      P       15 35 50.2 -0.3
KKM   Kota Kinabalu    52.47 286  P       P       15 35 50.3 -0.2
APYP  Conner           52.75 302  eP      P       15 35 54.6 +2.3
H01W1 Cape Leeuwin H   52.84 234  P       P       15 35 56.3 +3.7
      baz=102,slow=5.8,SNR=8.9
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H01W3 Cape Leeuwin H    52.85 234   P       P        15 35 50.9  -1.8
      baz=102,slow=5.8,SNR=15
H01W2 Cape Leeuwin H    52.85 234   P       P        15 35 53.2  +0.6
      baz=102,slow=5.8,SNR=9.6
SCZP  Santa Cruz        52.89 299  eP       P        15 35 59.7  +6.3
TAOE  Nuku Hiva Isla    52.90  93  eP       P        15 35 55.5  +1.8
      comp=Z,680nm,1.4s
TAOE                               eS       S        15 43 21.2  -0.8
      comp=Z,74µm,28.7s
TAOE                               eLQ      LQ       15 49 03.9
      comp=Z,211µm,22.8s
TAOE                               eLR      LR       15 51 12.6
      comp=Z,59µm,25.1s
TAOE  Nuku Hiva Isla    52.90  93  eT       T        16 32 03.3
      comp=Z,82nm,0.2s
ABRA  Dolores           53.08 302  eP       P        15 35 57.0  +2.2
BOLP  Bolinao           53.16 300  eP       P        15 36 15.8  +20
INU   Inuyama           53.61 330  eP       P        15 35 57.3  -1.2
PWJI  Pagerwojo         53.62 268   P       P        15 35 57.6  -1.3
      comp=Z,390nm,0.9s
MJAR  Matsushiro Arr    54.02 332   P       P        15 35 59.9  -1.5
      comp=Z,35nm,1.1s,baz=166,slow=7.4,SNR=24
MJAR                                S       S        15 43 39.3  +2.9
      comp=Z,2.3nm,1.0s,baz=352,slow=15,SNR=2.6
MAJO  Matsushiro        54.02 332  eP       P        15 36 00.2  -1.2
MAJO                                LR      LR
      comp=Z,86µm,20.0s
MAJO  Matsushiro        54.02 332⇑iP       P        15 35 59.9  -1.5
MAJO                                pmax    pmax
      comp=Z,233nm,1.2s
MAT   Matsushiro        54.02 332   P       P        15 35 59.4  -2.0
MAT                                 S       S        15 43 39.0  +2.7
MJB9  Matsu-Tunnel      54.02 332  eP       P        15 36 00.3  -1.2
NGJI  Ngawi             54.05 269   P       P        15 36 06.0  +4.0
      comp=Z,410nm,0.9s,comp=Z,42µm
PCJI  Pacitan           54.22 268   P       P        15 36 02.8  -0.5
      comp=Z,834nm,1.0s,comp=Z,24µm
WOJI  Wonogiri, Jawa    54.51 268   P       P        15 36 12.5  +7.1
BTM   Bintulu           54.62 282   P       P        15 36 09.1  +2.9
UGM   Wanagama          54.90 268  eP       P        15 36 07.7  -0.5
UGM   Wanagama          54.90 268   P       P        15 36 11.1  +2.8
      comp=Z,800nm,1.2s,comp=Z,37µmcomp=Z,65µm
SMRI  Semarang          55.10 269   P       P        15 36 12.8  +3.1
      comp=Z,501nm,0.9s,comp=Z,41µm
JNU   Nakatsue          55.19 324  eP       P        15 36 09.7  -0.3
JNU   Nakatsue          55.19 324   LR      LR       15 59 26.8
      comp=Z,39µm,18.0s,baz=122,slow=36
SBUM  Sibu              55.26 281  eP       P        15 36 10.7  -0.1
YULB  Yu-li             55.55 308  eP       P        15 36 15.2  +2.4
NACB  Ninganchiao       55.75 309  eP       P        15 36 14.5  +0.3
TPUB  Ta-pu             56.02 308  eP       P        15 36 16.7  +0.6
SSLB  Suanglung         56.03 308  eP       P        15 36 16.3  +0.1
YHNB  Yeheng            56.19 310  eP       P        15 36 16.3  -1.1
TATO  Taipei            56.27 310   PFAKE            15 36 30.0  +12
TATO                                LR      LR
      comp=Z,155µm,20.0s
ERM   Erimo             56.73 340   PFAKE            15 36 30.0  +9.2
ERM                                 LR      LR
      comp=Z,66µm,19.0s
ERM   Erimo             56.73 340⇓eP       P        15 36 16.6  -4.2
ERM                                 pmax    pmax
      comp=Z,203nm,1.9s
KSM   Kuching           56.87 279  eP       P        15 36 21.1  -1.2
CMJI  Cimerak           56.95 268   P       P        15 36 22.9   0.0
      comp=Z,270nm,0.8s,comp=Z,13µm
RKT   Rikitea           57.27 110  eP       P        15 36 27.0  +1.9
      comp=Z,281nm,1.3s
RKT                                eS       S        15 44 21.8  +1.5
      comp=Z,93µm,34.5s
RKT                                eLQ      LQ       15 50 54.4
      comp=Z,310µm,31.5s
RKT                                eLR      LR       15 53 21.6
      comp=Z,112µm,32.0s,baz=273
CISI  Cisompet, Garu    57.60 268  eP       P        15 36 25.7  -1.9
CISI  Cisompet, Garu    57.60 268   P       P        15 36 26.4  -1.2
      comp=Z,431nm,1.0s,comp=Z,16µm
LEM   Lembang           57.90 269   LR      LR       16 05 38.5
      comp=Z,21µm,18.4s,baz=100,slow=40
KUR   Kuril'sk          58.25 345  eP       P        15 36 31.7  +0.3
KUR                                 pmax    pmax
      comp=Z,663nm,1.5s
KUR                                 pmax    pmax
      comp=Z,11µm,4.4s
KUR                                 MLR     MLR
      comp=Z,47µm,16.0s
KUR                                 MLR     MLR
      comp=N,44µm,13.0s
KUR                                 MLR     MLR
      comp=E,12µm,13.0s
TPI   Tanjungpandan     58.55 273   P       P        15 36 35.3  +1.1
      comp=E,196nm,1.0s,comp=E,15µm
CBJI  Citeko            58.72 269   P       P        15 36 34.8  -0.6
      comp=E,692nm,1.1s,comp=E,26µm
DBJI  Dramaga           58.79 269   P       P        15 36 36.1  +0.2
      comp=E,249nm,1.2s,comp=E,13µm
SKJI  Sukabumi          58.92 268   P       P        15 36 40.4  +3.6
      comp=E,1µm,1.3s,comp=E,25µm
TJN   Taejon            59.53 324⇓eP       P        15 36 39.1  -1.4
KSRS  Korea Array       59.98 325   P       P        15 36 42.9  -0.7
      comp=E,6.5nm,0.7s,baz=138,slow=7.0,SNR=21
KSRS                                S       S        15 44 57.1  +2.3
      comp=E,0.7nm,0.8s,baz=135,slow=29,SNR=2.6
KSRS                                LR      LR       15 59 39.7
      comp=E,50µm,21.2s,baz=127,slow=33
KSRS                                PKP2bc           16 06 18.1
      comp=E,1.6nm,0.9s,baz=299,slow=1.3,SNR=2.7
KS15  Wonju Array Si    59.99 325  eP       P        15 36 45.1  +1.4
KSAR  Wonju Array Be    59.99 325   P       P        15 36 42.9  -0.8
KSAR                                S       S        15 44 57.1  +2.1
KSAR                              ⇑e                 16 06 18.1
KSAR  Wonju Array Be    59.99 325   P       P        15 36 42.9  -0.8
KSAR                                S       S        15 44 57.1  +2.1
KS01  Wonju Array Si    60.01 325  eP       P        15 36 43.0  -0.8
SSE   Sheshan           60.02 316   P       P        15 36 44.5  +0.5
SSE                                 S       S        15 44 57.1  +1.5
SSE                                 pmax    pmax
      comp=E,87nm,1.0s
SSE                                 pmax    pmax
      comp=E,6µm,5.3s
SSE   Sheshan           60.02 316  eP       P        15 36 43.4  -0.6
SSE                                 LR      LR
      comp=Z,59µm,20.0s
PPBI  Pangkal Pinang    60.15 274   P       P        15 36 45.0  -0.3
      comp=Z,142nm,2.2s,comp=Z,9µm
BLSI  Bandar Lampung    60.46 270   P       P        15 36 56.0  +8.6
HKC   Hong Kong Obse    60.69 303  ⇑P       P        15 37 06.0  +17
MCO   Taipa Grande      61.12 303   P       P        15 36 48.0  -3.7
KASI  Kota Agung        61.17 270   P       P        15 36 53.5  +1.3
      comp=Z,277nm,0.9s,comp=Z,10µm
YSS   Yuzh-Sakhalins    61.26 342  eP       P        15 36 51.8  -0.3
YSS                                ePcP     PcP      15 37 34.7  +0.2
YSS                                 LR      LR
      comp=Z,114µm,20.0s
YSS   Yuzh-Sakhalins    61.26 342  eP       P        15 36 51.4  -0.7
YSS                                e                 15 37 04.2
YSS                                e                 15 37 27.3
YSS                                eS       S        15 45 11.9  +1.0
YSS                                ePS      PnS      15 45 34.3  +7.7
YSS                                 pmax    pmax
      comp=Z,70nm,1.3s
YSS                                 pmax    pmax
      comp=Z,2µm,4.0s
PMBI  Palembang         61.35 273   P       P        15 37 01.8  +8.4
MDSI  Maura Dua         61.65 271   P       P        15 36 54.1  -1.4
      comp=Z,142nm,1.3s,comp=Z,10µm
LWLI  Liwa              61.68 270   P       P        15 36 58.3  +2.5
      comp=Z,175nm,0.9s,comp=Z,8µm
GZH   Guangzhou         61.73 304   P       P        15 36 56.3  +0.5
GZH                                 sP      sP       15 37 09.0  +3.8
GZH                                 PcP     PcP      15 37 36.0  -1.0
GZH                                 ScP     ScP      15 41 34.6  -3.1
GZH                                 S       S        15 45 17.4  -0.3
GZH                                 SS      SS       15 49 19.3  -0.6
GZH                                 LR      LR
      comp=Z,49µm,21.8s
GZH                                 LR      LR
      comp=Z,41µm,21.4s
TEY   Ternei            61.74 337⇓eP       P        15 36 52.5  -2.9
TEY                                e                 15 37 06.9
TEY                                e                 15 45 35.5
TEY                                 pmax    pmax
      comp=E,30nm,1.2s
TEY                                 pmax    pmax
      comp=Z,20nm,1.0s
PTCN  Pitcairn Islan    61.77 113   PFAKE            15 37 10.0  +14
PTCN                                LR      LR
      comp=Z,51µm,19.0s
SKR   Severo-Kuril's    61.94 353  eP       P        15 37 10.5  +14
SKR                                ePPP     PPP      15 40 48.3
SKR                                eS       S        15 45 35.2  +16
SKR                                ePS               15 46 41.9
SKR                                 pmax    pmax
      comp=Z,311nm,1.6s
SKR                                 pmax    pmax
      comp=Z,5µm,9.2s
SKR                                 pmax    pmax
      comp=Z,7µm,10.0s
SKR                                 MLR     MLR
      comp=Z,74µm,17.0s
DSRI  Dabo              62.02 275   P       P        15 37 00.9  +2.9
      comp=Z,430nm,1.1s,comp=Z,38µmcomp=Z,560µm
MSHR  Mys Shultsa       62.11 331⇓eP       P        15 36 56.4  -1.6
NJ2   Nanjing           62.19 315  eP       P        15 36 58.3  -0.4
NJ2                                 pP      pP       15 37 05.6  +0.1
NJ2                                 S       S        15 45 24.4  +1.2
NJ2                                 SS      SS       15 49 27.3  +0.5
NJ2                                 pmax    pmax
      comp=Z,40nm,1.1s
NJ2                                 pmax    pmax
      comp=Z,1µm,5.1s
NJ2                                 LR      LR
      comp=Z,71µm,20.6s
NJ2                                 LR      LR
      comp=Z,108µm,19.5s
NJ2                                 LR      LR
      comp=Z,118µm,19.5s
VLA   Vladivostok       62.19 332⇑eP       P        15 36 57.0  -1.5
VLA                                 pmax    pmax
      comp=Z,359nm,1.7s
LHSI  Lahat             62.41 271   P       P        15 37 03.2  +2.6
      comp=Z,195nm,1.0s,comp=Z,11µm
JMBI  JAMBI             62.70 274   P       P        15 37 08.3  +5.8
MNAI  Manna             62.88 271   P       P        15 37 12.4  +8.7
QIZ   Qiongzhong        62.96 298   PFAKE            15 37 20.0  +16
QIZ                                 LR      LR
      comp=Z,14µm,22.0s
USA0B Ussuriysk Arra    62.99 333  eP       P        15 37 03.7  -0.1
USRK  Ussuriysk Ar.     62.99 333   P       P        15 37 03.1  -0.7
      comp=Z,24nm,0.8s,baz=139,slow=6.7,SNR=35
USRK                                S       S        15 45 35.7  +2.9
      comp=Z,2.2nm,0.9s,baz=119,slow=20,SNR=2.4
USRK                                LR      LR       16 04 15.8
      comp=Z,17µm,19.2s,baz=134,slow=36
USRK                                PKPPKP           16 06 03.7
      comp=Z,1.7nm,0.8s,baz=64,slow=9.8,SNR=4.1
MYKOM Kota Tinggi       63.22 278  eP       P        15 37 05.4  -0.6
MYKOM Kota Tinggi       63.22 278   P       P        15 37 05.7  -0.3
KGM   Kluang            63.78 278   P       P        15 37 10.3  +0.5
MASI  Maura Aman, Be    63.79 272   P       P        15 37 15.2  +5.4
PET   Petropavlovsk     63.98 355   PFAKE            15 37 20.0  +10
PET                                 LR      LR
      comp=Z,54µm,19.0s
PET   Petropavlovsk     63.98 355deP       P        15 37 14.8  +4.6
PET                                eS       S        15 45 47.7  +2.8
PET                                 pmax    pmax
      comp=Z,151nm,2.2s
PET                                 pmax    pmax
      comp=Z,6µm,6.6s
PET                                 pmax    pmax
      comp=Z,6µm,10.0s
PET                                 smax    smax
      comp=E,42µm,9.0s
PET                                 smax    smax
      comp=N,12µm,8.6s
PET                                 smax    smax
      comp=E,64µm,14.8s
PET                                 smax    smax
      comp=N,24µm,17.3s
PETK  Petropavlovsk-    64.16 354  eP       P        15 37 11.4  +0.1
PETK                                S       S        15 45 53.6  +6.6
PETK  Petropavlovsk-    64.16 354  eP       P        15 37 11.4  +0.1
PETK  Petropavlovsk-    64.16 354   P       P        15 37 10.9  -0.4
      comp=N,14nm,0.9s,baz=155,slow=3.5,SNR=11
PETK                                S       S        15 45 53.6  +6.6
      comp=N,7.4nm,1.1s,baz=212,slow=19,SNR=2.1
RGRI  Rengat            64.24 275   P       P        15 37 18.3  +5.6
ADK   Adak              64.26  12   PFAKE            15 37 20.0  +8.0
ADK                                 LR      LR
      comp=Z,82µm,19.0s
MDJ   Mudanjiang        64.40 332   P       P        15 37 12.5  -0.6
MDJ                                 sP      sP       15 37 24.0  +1.4
MDJ                                 ScS     SKSac    15 47 06.4  +0.4
MDJ                                 pmax    pmax
      comp=Z,33nm,1.0s
MDJ                                 pmax    pmax
      comp=Z,1µm,5.1s
MDJ                                 LR      LR
      comp=Z,152µm,19.1s
MDJ                                 LR      LR
      comp=Z,113µm,19.0s
MDJ                                 LR      LR
      comp=Z,92µm,20.1s
MDJ   Mudanjiang        64.40 332  eP       P        15 37 12.8  -0.4
MDJ                                ePcP     PcP      15 37 46.0  -1.4
MDJ                                 LR      LR
      comp=Z,68µm,20.0s
WHN   Wuhan             64.59 311⇑iP       P        15 37 20.8  +6.2
WHN                                 sP      sP       15 37 31.7  +7.6
WHN                                 LR      LR
      comp=Z,193µm,15.4s
WHN                                 LR      LR
      comp=Z,30µm,14.0s
WHN                                 LR      LR
      comp=Z,185µm,22.5s
DL2   Dalian            64.60 323   P       P        15 37 20.9  +6.4
DL2                                 S       S        15 45 59.8  +6.8
DL2                                 pmax    pmax
      comp=Z,310nm,1.2s
DL2                                 pmax    pmax
      comp=Z,14µm,8.0s
DL2                                 LR      LR
      comp=Z,113µm,15.9s
DL2                                 LR      LR
      comp=Z,83µm,19.2s
DL2                                 LR      LR
      comp=Z,100µm,20.1s
KRJI  Kerinci           64.75 273   P       P        15 37 24.1  +7.9
TYV   Tymovskoe         64.81 344  eP       P        15 37 21.1  +5.5
TYV                                 pmax    pmax
      comp=Z,700nm,4.2s
SDSI  Sungai Dareh      65.01 274   P       P        15 37 25.0  +7.3
SNY   Shenyang          65.42 326  ⇑P       P        15 37 26.2  +6.4
SNY                                 pP      sP       15 37 30.4  +1.1
SNY                                 sP      pP       15 37 33.8  +7.1
SNY                                 S       S        15 46 11.3  +8.2
SNY                                 SS      SS       15 50 22.3  +5.3
SNY                                 pmax    pmax
      comp=Z,47nm,1.3s
SNY                                 pmax    pmax
      comp=Z,10µm,4.7s
SNY                                 LR      LR
      comp=Z,136µm,18.6s
SNY                                 LR      LR
      comp=Z,81µm,19.6s
SNY                                 LR      LR
      comp=Z,114µm,20.6s
BKNI  Bangkinang        65.64 275   P       P        15 37 22.1  +0.2
      comp=Z,1µm,1.0s,comp=Z,29µm
FRIM  Kepong            65.71 279   P       P        15 37 22.1  -0.2
TIA   Tai'an            65.77 318   P       P        15 37 20.3  -1.9
TIA                                 pmax    pmax
      comp=Z,5µm,7.9s
TIA                                 LR      LR
      comp=Z,51µm,16.2s
TIA                                 LR      LR
      comp=Z,35µm,17.2s
TIA                                 LR      LR
      comp=Z,48µm,20.1s
CN2   Changchun         65.81 329  eP       P        15 37 21.5  -0.8
CN2                                epP      pP       15 37 29.1  -0.3
CN2                                esP      sP       15 37 32.7  +0.9
CN2                                eS       S        15 46 15.4  +7.6
CN2                                 pmax    pmax
      comp=Z,30nm,1.1s
CN2                                 pmax    pmax
      comp=Z,12µm,5.0s
CN2                                 LR      LR
      comp=Z,51µm,17.0s
CN2                                 LR      LR
      comp=Z,55µm,17.0s
CN2                                 LR      LR
      comp=Z,66µm,17.0s
PDSI  Padang            65.96 274   P       P        15 37 23.4  -0.5
      comp=Z,103nm,1.7s,comp=Z,9µm
PPSI  Pulau Pagai       66.05 272   P       P        15 37 33.6  +9.1
IPM   Ipoh              66.58 280  eP       P        15 37 26.7  -1.2
IPM   Ipoh              66.58 280   P       P        15 37 27.2  -0.7
GRNR  Gornyy            66.64 340  eP       P        15 37 28.6  +1.1
GRNR                                pmax    pmax
      comp=Z,21nm,1.0s
VNDA  Vanda             66.65 181  eP       P        15 37 26.1  -1.1
VNDA                                S       S        15 46 19.5  +2.4
VNDA  Vanda             66.65 181  eP       P        15 37 26.1  -1.1
VNDA  Vanda             66.65 181   P       P        15 37 26.7  -0.5
      comp=Z,37nm,0.9s,baz=348,slow=6.4,SNR=23
VNDA                                S       S        15 46 19.5  +2.4
      comp=Z,4.8nm,1.1s,baz=270,slow=3.0,SNR=2.9
VNDA                                LR      LR       16 03 41.7
      comp=Z,105µm,19.1s,baz=10.0,slow=33
CASY  Casey             66.66 201  eP       P        15 37 26.3  -1.1
CASY                                LR      LR
      comp=Z,18µm,19.0s
SBA   Scott Base        66.95 180  eP       P        15 37 29.4  +0.4
SBA                                 LR      LR
      comp=Z,78µm,19.0s
SBA   Scott Base        66.95 180  eP       P        15 37 29.5  +0.4
KLR   Kul'dur           67.08 336⇑eP       P        15 37 28.3  -2.0
KLR   Kul'dur           67.08 336   PKPPKP  P'P'bc   16 05 57.9  +0.1
      comp=Z,3.8nm,1.2s,baz=314,slow=3.3,SNR=2.7
NIKH  Nikolski High     67.12  16  eP       P        15 37 35.4  +5.0
KULM  Kulim             67.14 280  eP       P        15 37 30.2  -1.2
MNSI  Mandailing Nat    67.17 275   P       P        15 37 29.8  -1.8
      comp=Z,258nm,0.8s,comp=Z,11µm
SKNT  Sakolnakorn       67.39 294   P       P        15 37 31.9  -1.1
      comp=Z,113nm,1.2s,comp=Z,5µm
NKL   Nikolayevsk       67.40 344  eP       P        15 37 31.0  -1.2
NKL                                 pmax    pmax
      comp=Z,66nm,0.9s
SKLT  Songkhla          67.64 282   P       P        15 37 42.1  +7.5
COCO  West Island       67.75 261   PFAKE            15 37 50.0  +15
COCO                                LR      LR
      comp=Z,52µm,22.0s
ENH   Enshi             68.11 309  eP       P        15 37 35.6  -1.7
ENH                                 LR      LR
      comp=Z,44µm,22.0s
SRAK  Srakaew           68.21 290   P       P        15 37 36.2  -1.9
      comp=Z,147nm,1.4s,comp=Z,4µm
PSI   Prapat            68.24 277  eP       P        15 37 36.6  -1.9
PSI                                ePcP     PcP      15 37 59.3  -4.9
PSI                                 P'P'             16 05 59.0
PSI   Prapat            68.24 277  eP       P        15 37 36.6  -1.9
PSI                                e                 15 37 59.3
PSI   Prapat            68.24 277   PKPPKP  P'P'bc   16 05 59.0  -0.5
      comp=Z,1.7nm,0.3s,baz=359,slow=4.3,SNR=3.7
PSI                                 LR      LR       16 08 06.0
      comp=Z,13µm,21.3s,baz=90,slow=36
PBSI  Pulau Batu        68.27 274   P       P        15 37 46.1  +7.5
NONG  Nongkai           68.51 294   P       P        15 37 39.1  -0.9
      comp=Z,5.1nm,0.9s,comp=Z,264nm
BJT   Baijiatuau        68.60 321  eP       P        15 37 39.3  -0.8
BJT                                 LR      LR
      comp=Z,102µm,21.0s
BJT   Baijiatuau        68.60 321  eP       P        15 37 39.3  -0.8
BJT                                 MLR     MLR
      comp=Z,102µm,21.0s
BJI   Beijing           68.61 321⇓iP       P        15 37 38.7  -1.4
BJI                                 sP      sP       15 37 53.1  +3.5
BJI                                 S       S        15 46 46.3  +4.7
BJI                                 SS      SS       15 51 10.1  +3.6
GYA   Guiyang           68.66 304⇑iP       P        15 37 39.9  -1.0
GYA                                 pP      sP       15 37 51.3  +0.9
GYA                                 PP      PP       15 40 16.8  +4.0
GYA                                 S       S        15 46 42.1  -0.9
GYA                                 sS      sS       15 46 56.5  +2.2
GYA                                 SKS     SKiKP    15 47 35.3  +2.4
GYA                                 SS      SS       15 51 08.9  +0.9
GYA                                 pmax    pmax
      comp=Z,110nm,1.0s
GYA                                 pmax    pmax
      comp=Z,14µm,10.5s
GYA                                 LR      LR
      comp=Z,52µm,18.6s
GYA                                 LR      LR
      comp=Z,42µm,20.5s
GYA                                 LR      LR
      comp=Z,68µm,22.0s
TRTT  Trang             68.69 283   P       P        15 37 41.3  +0.1
      comp=Z,42nm,1.8s,comp=Z,5µm
TSI   Tuntungan         68.75 278   P       P        15 37 42.8  +1.3
      comp=Z,397nm,1.2s,comp=Z,13µm
CHAI  Chaiyaphum        68.85 292   P       P        15 37 41.3  -0.8
      comp=Z,34nm,0.8s,comp=Z,406nm
PATY  Pattaya           68.98 288   P       P        15 37 43.6  +0.7
      comp=Z,67nm,0.9s,comp=Z,2µm
GSI   Gunungsitoli      69.23 276  eP       P        15 37 43.7  -1.0
GSI   Gunungsitoli      69.23 276   P       P        15 37 44.5  -0.1
      comp=Z,481nm,1.1s,comp=Z,17µm
KCSI  Kotacane, Aceh    69.52 278   P       P        15 37 44.8  -1.6
      comp=Z,162nm,0.8s,comp=Z,7µm
TIY   Taiyuan           69.72 317  eP       P        15 37 46.8  -0.4
TIY                                 pP      pP       15 37 53.1  -1.0
TIY                                 pmax    pmax
      comp=Z,150nm,1.2s
TIY                                 pmax    pmax
      comp=Z,8µm,7.5s
TIY                                 LR      LR
      comp=Z,88µm,16.2s
TIY                                 LR      LR
      comp=Z,27µm,15.1s
TIY                                 LR      LR
      comp=Z,76µm,21.8s
PBKT  Sadao Pong        69.99 292  eP       P        15 37 48.9  -0.2
PBKT  Sadao Pong        69.99 292   P       P        15 37 48.5  -0.6
      comp=Z,227nm,2.1s,comp=Z,12µm
PKDT  Phuket            70.01 283   P       P        15 37 53.1  +3.7
      comp=Z,43nm,1.2s,comp=Z,4µm
TPTI                    70.04 278   P       P        15 37 56.2  +6.6
PHET  Kaeng Krachan     70.12 288   P       P        15 37 50.5  +0.5
      comp=Z,47nm,1.2s,comp=Z,571nm
XAN   Xi'an             70.31 312   P       P        15 37 49.7  -1.2
XAN                                 pP      pP       15 37 56.5  -1.3
XAN                                 PP      PP       15 40 25.7  -1.2
XAN                                 S       S        15 47 08.0  +5.9
XAN                                 pmax    pmax
      comp=Z,28nm,1.0s
XAN                                 pmax    pmax
      comp=Z,2µm,6.4s
XAN                                 LR      LR
      comp=Z,93µm,23.0s
XAN                                 LR      LR
      comp=Z,65µm,22.1s
XAN                                 LR      LR
      comp=Z,96µm,26.9s
XAN   Xi'an             70.31 312  eP       P        15 37 49.5  -1.4
XAN   Xi'an             70.31 312  eP       P        15 37 49.5  -1.4
SNSI  Sinabang, Aceh    70.69 276   P       P        15 38 02.2  +8.7
LHMI  Lhok Sumawe       70.71 279   P       P        15 38 02.9  +9.3
UTTA  Uttaradit         70.73 293   P       P        15 37 53.6  -0.1
      comp=Z,33nm,1.1s,comp=Z,432nm
SRDT  SRDT              71.01 289   P       P        15 37 55.5  +0.1
      comp=Z,253nm,1.5s,comp=Z,12µm
UTHA  Uthaitani         71.07 291   P       P        15 37 55.7  -0.1
      comp=Z,41nm,1.2s,comp=Z,566nm
MA2   Magadan           71.31 352  eP       P        15 37 55.0  -1.4
MA2                                 P'P'             16 05 51.4
MA2                                 LR      LR
      comp=Z,80µm,19.0s
MA2   Magadan           71.31 352  eP       P        15 37 55.0  -1.4
MA2   Magadan           71.31 352   PKPPKP  P'P'df   16 05 51.4  +4.3
      comp=Z,0.9nm,0.3s,baz=343,slow=19,SNR=2.2
KMI   Kunming           71.38 301   P       P        15 37 56.9  -0.9
KMI                                 pP      pP       15 38 04.8  +0.1
KMI                                 PP      PP       15 40 37.7  +1.3
KMI                                 S       S        15 47 08.0  -7.2
KMI                                 pmax    pmax
      comp=Z,39nm,1.2s
KMI                                 pmax    pmax
      comp=Z,13µm,5.9s
KMI                                 LR      LR
      comp=Z,50µm,21.7s
KMI                                 LR      LR
      comp=Z,62µm,20.9s
KMI                                 LR      LR
      comp=Z,103µm,20.4s
KMI   Kunming           71.38 301  eP       P        15 37 57.8   0.0
SUKH  Sukhothai         71.49 293   P       P        15 37 58.7  +0.4
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	comp=Z,29nm,1.0s,comp=Z,614nm						
UMPA	Umpang Tak	71.80	291	P	P	15 38 01.2	+1.0
	comp=Z,31nm,1.7s,comp=Z,394nm						
HHC	Hu-ho-hao-te	71.97	319	*e*P	P	15 38 00.7	-0.2
HHC				pP	pP	15 38 08.1	+0.3
HHC				sP	sP	15 38 11.4	+1.0
HHC				PP	PP	15 40 47.9	+6.8
HHC				S	S	15 47 17.0	-4.2
HHC				SKS	SKSac	15 47 59.0	-4.8
HHC				SS	SS	15 52 00.6	+2.1
HHC				pmax	pmax		
	comp=Z,20nm,1.2s						
HHC				pmax	pmax		
	comp=Z,900nm,6.1s						
HHC				LR	LR		
	comp=Z,112µm,17.6s						
HHC				LR	LR		
	comp=Z,51µm,16.6s						
HHC				LR	LR		
	comp=Z,94µm,18.6s						
ZEA	Zeya	72.36	337	*e*P	P	15 38 00.5	-2.2
ZEA				*e*		15 40 44.0	
ZEA				pmax	pmax		
	comp=N,5µm,8.0s						
ZEA				pmax	pmax		
	comp=E,4µm,8.0s						
ZEA				pmax	pmax		
	comp=Z,10µm,8.0s						
ZEA				pmax	pmax		
	comp=E,370nm,1.4s						
ZEA				pmax	pmax		
	comp=N,190nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,910nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,8µm,10.0s						
ZEA				pmax	pmax		
	comp=E,1µm,9.0s						
ZEA				pmax	pmax		
	comp=N,3µm,10.0s						
ZEA				MLR	MLR		
	comp=Z,65µm,16.0s						
ZEA				MLR	MLR		
	comp=N,43µm,15.0s						
ZEA				MLR	MLR		
	comp=E,30µm,15.0s						
BSI	Banda Aceh	72.37	279	P	P	15 38 05.5	+1.8
	comp=E,169nm,1.5s,comp=E,57µm						
CM01	Chiang Mai Arr	72.39	293	*e*P	P	15 38 03.6	-0.1
CM31	Chiang Mai Arr	72.41	293	*e*P	P	15 38 03.7	-0.1
CM31	Chiang Mai Arr	72.41	293	P	P	15 38 10.6	+6.8
	SNR=112						
CMAR	Chiang Mai Arr	72.41	293	P	P	15 38 03.3	-0.5
	comp=E,8.9nm,0.7s,baz=120,slow=4.6,SNR=61						
CMAR				PKPPKP		16 05 47.5	
	comp=E,1.4nm,0.9s,baz=290,slow=3.2,SNR=5.2						
CMAR				LR	LR	16 08 55.7	
	comp=E,19µm,19.3s,baz=104,slow=35						
HIA	Hailar	72.43	330	*e*P	P	15 38 03.2	-0.2
HIA				LR	LR		
	comp=Z,72µm,21.0s						
HIA	Hailar	72.43	330	⇑*i*P	P	15 38 01.2	-2.1
HIA				pmax	pmax		
	comp=Z,315nm,2.6s						
HIA				MLR	MLR		
	comp=Z,71µm,18.0s						
CMMT	Chiang Mai	72.52	294	P	P	15 38 03.6	-0.9
	comp=Z,219nm,1.8s,comp=Z,11µm						
CHTO	Chiang Mai	72.52	294	*e*P	P	15 38 03.9	-0.6
CHTO				LR	LR		
	comp=Z,38µm,21.0s						
CHTO	Chiang Mai	72.52	294	*e*P	P	15 38 03.5	-1.0
CHTO	Chiang Mai	72.52	294	P	P	15 38 10.8	+6.3
	SNR=74						
CHTO	Chiang Mai	72.52	294	P	P	15 38 03.7	-0.8
	comp=Z,978nm,1.8s,comp=Z,48µm						
CD2	Chengdu	72.82	307	P	P	15 38 05.3	-0.8
CD2				pP	pP	15 38 13.8	+0.7
CD2				PP	PP	15 40 47.2	-1.3
CD2				S	S	15 47 30.0	-1.2
CD2				SKS	SKSac	15 48 08.2	-2.4
CD2				SS	SS	15 52 11.1	-0.7
CD2				pmax	pmax		
	comp=Z,340nm,0.9s						
CD2				pmax	pmax		
	comp=Z,20µm,5.4s						
CD2				LR	LR		
	comp=Z,100µm,17.5s						
CD2				LR	LR		
	comp=Z,84µm,19.3s						
CD2				LR	LR		
	comp=Z,91µm,16.1s						
BTO	Baotou	72.84	319	*e*P	P	15 38 09.6	+3.6
BTO				S	SKiKP	15 47 40.3	+1.7
CMBY	CAMPBELL BAY	74.04	281	*e*P	P	15 38 12.6	-0.9
CMBY				IAmb	IAmb	15 38 26.7	
	comp=Z,5µm,3.2s						
SEY	Seymchan	74.37	354	⇓*e*P	P	15 38 12.1	-2.3
SEY	Seymchan	74.37	354	PKP2bc	P'P'df	16 05 34.5	-7.4
	comp=Z,0.5nm,0.2s,baz=13,slow=18,SNR=6.3						
LZH	Lanzhou	74.95	312	⇓P	P	15 38 18.2	-0.4
LZH				pP	sP	15 38 27.4	-0.7
LZH				sP	PcP	15 38 30.5	-1.9
LZH				S	S	15 48 00.2	+5.0
LZH				sS	sS	15 48 09.4	+2.8
LZH				SS	SS	15 52 45.0	+0.8
LZH				pmax	pmax		
	comp=Z,260nm,1.1s						
LZH				pmax	pmax		
	comp=Z,12µm,4.8s						
LZH				LR	LR		
	comp=Z,75µm,16.8s						
LZH				LR	LR		
	comp=Z,119µm,17.9s						
LZH				LR	LR		
	comp=Z,178µm,19.0s						
OHAK	Old Harbor	75.62	21	*e*P	P	15 38 23.0	+1.3
PBA	Port Blair	76.28	285	*e*P	P	15 38 25.7	-0.7
KDAK	Kodiak Island	76.30	21	P	P	15 38 26.3	+0.7
	comp=Z,312nm,1.1s						
KDAK	Kodiak Island	76.30	21	P	P	15 38 26.3	+0.7
KDAK				pmax	pmax		
	comp=Z,312nm,1.1s						
KDAK	Kodiak Island	76.30	21	LR	LR	16 07 11.0	
	comp=Z,56µm,19.9s,baz=227,slow=32						
GAMB	Gambell	76.35	10	*e*P	P	15 38 26.0	+0.3
CIT	Chita	77.23	330	*e*P	P	15 38 30.2	-0.9
CIT				pmax	pmax		
	comp=Z,1µm,2.8s						
SVW2	Sparrevohn	77.85	18	*e*P	P	15 38 34.6	+0.3
YAK	Yakutsk	78.06	343	*e*P	P	15 38 34.1	-1.3
YAK				*e*		15 38 42.0	
YAK				*e*S	S	15 48 28.7	+0.8
YAK				*e**SS	sS	15 48 39.1	-0.7
YAK				*e*		15 48 54.4	
YAK				*e*SS	SS	15 53 25.2	-4.7
YAK				pmax	pmax		
	comp=Z,257nm,0.8s						
YAK				pmax	pmax		
	comp=N,84nm,1.0s						
YAK				pmax	pmax		
	comp=E,66nm,0.9s						
YAK				smax	smax		
	comp=N,1µm,3.1s						
YAK				smax	smax		
	comp=E,219nm,1.5s						
RSO	Redoubt South	78.25	19	*e*P	P	15 38 37.0	+0.2
ANM	Nome	78.26	12	*e*P	P	15 38 37.4	+1.0
BRLK	Bradley Lake	78.36	21	*e*P	P	15 38 38.4	+1.3
ULN	Ulaanbaatar	78.41	324	*e*P	P	15 38 37.3	-0.6
ULN	Ulaanbaatar	78.41	324	*d* *i*P	P	15 38 36.9	-1.0
ULN				pmax	pmax		
	comp=Z,282nm,1.2s						
ULN	Ulaanbaatar	78.41	324	P	P	15 38 41.8	+3.9
	SNR=66						
BILL	Bilibino	78.73	0	*e*P	P	15 38 39.1	+0.1
BILL				LR	LR		
	comp=Z,61µm,22.0s						
BILL	Bilibino	78.73	0	*d* *i*P	P	15 38 38.0	-1.0
BILL				*i*		15 38 45.8	
BILL				*i*		15 38 57.9	
BILL				*e*S	S	15 48 40.6	+5.8
BILL				pmax	pmax		
	comp=Z,870nm,3.6s						
SONM	Songino Array	78.78	324	P	P	15 38 39.2	-0.6
	comp=Z,9.4nm,0.5s,baz=136,slow=5.2,SNR=30						
SONM				S	S	15 48 39.5	+3.0
	comp=Z,1.2nm,0.9s,baz=16,slow=11,SNR=2.5						
SONM				PKP2bc		16 05 25.7	
	comp=Z,0.5nm,0.7s,baz=281,slow=0.8,SNR=3.7						
SONM				LR	LR	16 11 21.2	
	comp=Z,65µm,21.0s,baz=116,slow=34						
SONA1	Songino Array	78.78	324	*e*P	P	15 38 39.5	-0.4
SEW	Seward	79.11	21	*e*P	P	15 38 42.3	+1.2
QSPA	South Pole Qui	79.11	180	*e*P	P	15 38 39.9	-1.6
QSPA				S	S	15 48 31.3	-8.2
QSPA				PKKPbc	PKKPbc	15 57 36.8	+0.6
QSPA				P'P'		16 05 36.7	
QSPA				LR	LR		
	comp=Z,88µm,20.0s						
QSPA	South Pole Qui	79.11	180	P	P	15 38 41.1	-0.4
	comp=Z,27nm,0.7s,baz=20,slow=1.1,SNR=74						
QSPA				S	S	15 48 31.3	-8.2
	comp=Z,4.0nm,1.0s,baz=114,slow=20,SNR=2.0						
QSPA				PKKPbc	PKKPbc	15 57 36.8	+0.6
	comp=Z,5.7nm,1.2s,baz=206,slow=2.9,SNR=2.6						
QSPA				PKPPKP	P'P'df	16 05 36.7	-2.0
	comp=Z,3.6nm,1.1s,baz=239,slow=2.9,SNR=5.5						
GTA	Gaotai	79.24	314	⇓P	P	15 38 41.9	-0.7
GTA				pP	pP	15 38 49.8	+0.2
GTA				sP	sP	15 38 52.8	+0.6
GTA				S	S	15 48 40.8	-0.9
GTA				SKS	SKSac	15 48 51.3	-6.4
GTA				sS	sS	15 48 53.2	-0.1
GTA				SS	SS	15 53 49.3	+0.5
GTA				pmax	pmax		
	comp=Z,25nm,1.4s						
GTA				LR	LR		
	comp=Z,58µm,19.4s						
GTA				LR	LR		
	comp=Z,71µm,19.0s						
GTA				LR	LR		
	comp=Z,80µm,20.6s						
SUA	Susitna One	79.65	19	*e*P	P	15 38 44.7	+0.3
RC01	Rabbit Creek A	79.72	20	*e*P	P	15 38 44.9	+0.4
PPLA	Purkeypile	80.26	18	*e*P	P	15 38 49.0	+1.4
PMR	Palmer	80.28	20	*e*P	P	15 38 48.8	+1.3
PMR	Palmer	80.28	20	*e*P	P	15 38 48.8	+1.3
RPN	Rapa Nui	80.28	116	LR	LR	16 08 26.1	
	comp=Z,41µm,19.2s,baz=266,slow=31						
KNK	Knik Glacier	80.38	20	*e*P	P	15 38 48.5	+0.4
GLI	Glacier Island	80.48	21	*e*P	P	15 38 49.5	+0.8
BOD	Bodaibo	80.56	335	*e*P	P	15 38 47.8	-1.3
BOD				pmax	pmax		
	comp=Z,204nm,1.6s						
CAST	Castle Rocks	80.69	18	*e*P	P	15 38 50.4	+0.7
SML	Sawmill	80.70	20	*e*P	P	15 38 51.2	+1.3
SML	Sawmill	80.70	20	*e*P	P	15 38 51.2	+1.3
SHL	Shillong	80.79	298	*e*P	P	15 38 50.8	-0.6
SHL	Shillong	80.79	298	*e*P	P	15 38 50.8	-0.6
SHL	Shillong	80.79	298	*e*P	P	15 38 50.0	-1.4
SHL				IAMs_20	IAMs_20	16 08 21.5	
	comp=Z,44µm,30.4s						
DIV	Divide	81.12	21	*e*P	P	15 38 52.5	+0.3
TRF	Thorofare Moun	81.25	18	*e*P	P	15 38 54.1	+1.1
KLU	Klutina	81.32	21	*e*P	P	15 38 54.7	+1.5
BPAW	Bear Paw Mtn.	81.52	18	*e*P	P	15 38 55.4	+1.2
RND	Reindeer	81.67	19	*e*P	P	15 38 55.8	+0.8
RND	Reindeer	81.67	19	*e*P	P	15 38 55.8	+0.8
RDOG	Red Dog Mine	81.80	11	*e*P	P	15 38 56.0	+0.5
ZAK	Zakamensk	81.80	325	*e*P	P	15 38 54.5	-1.6
ZAK				pmax	pmax		
	comp=Z,198nm,1.2s						
MCK	McKinley	81.88	19	*e*P	P	15 38 56.6	+0.5
MCK	McKinley	81.88	19	*e*P	P	15 38 56.6	+0.5
IRK	Irkutsk	82.15	327	*e*P	P	15 38 56.8	-0.9
IRK				pmax	pmax		
	comp=Z,707nm,3.8s						
KCPM	Cahto Peak	82.16	47	*e*P	P	15 39 00.9	+2.6
HARP	HAARP	82.20	21	*e*P	P	15 38 59.3	+1.5
TLY	Talaya	82.22	326	*e*P	P	15 38 56.8	-1.3
	comp=Z,332nm,0.9s						
TLY				LR	LR		
	comp=Z,45µm,20.0s						
TLY	Talaya	82.22	326	*d* *i*P	P	15 38 56.2	-1.9
TLY	Talaya	82.22	326	P	P	15 39 01.9	+3.7
	SNR=34						
HOPS	Hopland Field	82.28	48	*e*P	P	15 39 00.6	+1.9
	comp=Z,528nm,1.3s						
LSA	Lhasa	82.61	302	P	P	15 39 00.7	-0.5
LSA				S	S	15 49 16.5	-1.4
LSA				pmax	pmax		
	comp=Z,1µm,7.3s						
LSA				LR	LR		
	comp=Z,22µm,41.0s						
LSA				LR	LR		
	comp=Z,14µm,41.0s						
LSA				LR	LR		
	comp=Z,52µm,53.1s						
LSA	Lhasa	82.61	302	*e*P	P	15 39 01.0	-0.2
LSA				LR	LR		
	comp=Z,47µm,21.0s						
LSA	Lhasa	82.61	302	*e*P	P	15 39 01.0	-0.2
LSA				MLR	MLR		
	comp=Z,47µm,21.0s						
WRH	Wood River Hil	82.66	18	*e*P	P	15 38 59.6	-0.6
O02D	Mt. Diablo Mer	82.90	47	P	P	15 39 03.0	+1.0
	baz=249						
MDM	Murphy Dome	82.97	18	*e*P	P	15 39 01.8	+0.1
HDA	Harding Lake	82.97	19	*e*P	P	15 39 02.9	+1.1
HDA	Harding Lake	82.97	19	P	P	15 39 02.2	+0.4
	baz=226						
TCOL	CIGO, UAF Yank	83.02	18	P	P	15 39 02.0	+0.1
	baz=225						
COLA	College	83.02	18	*e*P	P	15 39 02.1	+0.2
COLA				LR	LR		
	comp=Z,65µm,19.0s						
COLA	College	83.02	18	*c* *i*P	P	15 39 01.9	0.0
COLA				pmax	pmax		
	comp=Z,237nm,1.2s						
L02E	Cave Junction	83.04	45	P	P	15 39 03.1	+0.5
	baz=249						
SNCC	San Nicolas Is	83.12	54	P	P	15 39 03.1	-0.1
	baz=252						
J01E	Myrtle Point	83.18	44	P	P	15 39 03.6	+0.4
	baz=248						
K02D	Willamette Mer	83.19	44	P	P	15 39 04.2	+0.7
	baz=248						
RIDG	Independ'e Rid	83.20	20	*e*P	P	15 39 03.3	+0.2
WDC	Whiskeytown Da	83.22	47	*e*P	P	15 39 04.3	+0.7
WDC	Whiskeytown Da	83.22	47	*e*P	P	15 39 04.3	+0.7
N02D	Trinity Center	83.24	46	P	P	15 39 04.5	+0.7
	baz=249						
ILAR	Eielson Array	83.25	18	P	P	15 39 02.3	-0.8
	comp=Z,18nm,0.7s,baz=226,slow=4.7,SNR=149						
ILAR				PKKPbc	PKKPbc	15 57 22.6	-4.2
	comp=Z,1.0nm,0.6s,baz=358,slow=2.3,SNR=10						
ILAR				PKPPKP	P'P'df	16 05 28.7	+2.2
	comp=Z,1.4nm,1.0s,baz=354,slow=4.7,SNR=6.8						
ILAR				LR	LR	16 10 39.7	
	comp=Z,26µm,20.9s,baz=242,slow=32						
ILB	Eielson Array	83.25	18	*e*P	P	15 39 03.0	-0.2
IL1	Eielson Array	83.25	18	*e*P	P	15 39 03.0	-0.1
SCZ2	Santa Cruz Isl	83.26	54	P	P	15 39 03.8	-0.1
	baz=252						
M02C	Callahan	83.29	46	P	P	15 39 04.7	+0.7
	baz=249						
POKR	Poker Plat Res	83.32	18	P	P	15 39 04.5	+1.0
	baz=226						
SBC	Santa Barbara	83.33	53	P	P	15 39 04.7	+0.5
	baz=252						
SMMC	Simmler	83.38	52	P	P	15 39 04.9	+0.3
	baz=252						
PKM	Mcpherson Peak	83.39	53	P	P	15 39 05.3	+0.5
	baz=252						
YBH	Yreka Blue Hor	83.51	45	*e*P	P	15 39 06.1	+1.0
YBH	Yreka Blue Hor	83.51	45	LR	LR	16 06 48.5	
	comp=Z,17µm,21.9s,baz=256,slow=29						
ORV	Oroville	83.62	48	*e*P	P	15 39 05.5	-0.2
ORV	Oroville	83.62	48	*e*P	P	15 39 05.5	-0.2
SCRK	Sand Creek	83.64	20	*e*P	P	15 39 05.3	-0.1
HUMO	Hull Mountain	83.65	45	*e*P	P	15 39 06.2	+0.5
O03E	Paynes Creek	83.65	47	P	P	15 39 05.9	0.0
	baz=250						
MOY	Mondy	83.68	325	*e*P	P	15 39 03.8	-2.0
MOY				pmax	pmax		
	comp=Z,539nm,3.4s						
BLG	Laguna Peak, P	83.74	54	P	P	15 39 06.7	+0.3
	baz=252						
I03D	Drain, OR	83.77	43	P	P	15 39 05.5	-0.8
	baz=249						
AFDM	Forest Hills D	83.81	49	*e*P	P	15 39 06.7	0.0
SCI2	San Clemente I	83.82	55	P	P	15 39 05.8	-1.0
	baz=253						
CMB	Columbia Colle	83.94	50	*e*P	P	15 39 07.3	-0.1
CMB	Columbia Colle	83.94	50	*e*P	P	15 39 07.3	-0.1
L04D	Klamath Falls	83.96	45	P	P	15 39 07.2	-0.4
	baz=250						
WRAK	Wrangell Islan	84.02	29	*e*P	P	15 39 09.1	+1.8
WRAK				LR	LR		
	comp=Z,67µm,20.0s						
CIS	Catalina Islan	84.05	54	P	P	15 39 08.3	+0.2
	baz=253						
HYT	Haines Junctio	84.09	24	*e*P	P	15 39 07.5	-0.2
M04C	Macdoel	84.14	46	P	P	15 39 08.4	0.0
	baz=250						
OSI	Osito Audit: C	84.16	53	P	P	15 39 08.4	-0.2
	baz=253						
VOG	Valley Oaks Go	84.17	51	P	P	15 39 08.3	-0.2
	baz=252						
PRP	Porcupine Dome	84.18	18	*e*P	P	15 39 07.4	-0.7
ARVC	Arvin	84.23	53	P	P	15 39 08.3	-0.6
	baz=252,SNR=8.5						
FMP	Fort Macarthur	84.24	54	P	P	15 39 08.4	-0.5
	baz=253						
VES	Vestal, Richgr	84.25	52	P	P	15 39 08.0	-0.9
	baz=252,SNR=11						
DECC	Green Verdugo	84.36	54	P	P	15 39 09.8	+0.2
	baz=253						
G03D	McMinnville, O	84.38	42	P	P	15 39 09.4	0.0
	baz=249						
I04A	Tendick Farm,	84.44	44	P	P	15 39 09.2	-0.6
	baz=249						
J04D	Umpqua Nationa	84.45	44	P	P	15 39 09.6	-0.5
	baz=250						
H04D	Lebanon	84.48	43	P	P	15 39 10.2	+0.3
	baz=249						
K04D	Chiloquin, OR	84.48	45	P	P	15 39 10.1	0.0
	baz=250						
BEKR	Beckworth	84.56	48	*e*P	P	15 39 09.2	-1.4
MWC	Mount Wilson	84.57	54	*e*P	P	15 39 11.4	+0.5
ISA	Isabella, Lake	84.67	52	*e*P	P	15 39 11.2	0.0
ISA	Isabella, Lake	84.67	52	*e*P	P	15 39 11.2	0.0
ISA	Isabella, Lake	84.67	52	P	P	15 39 10.5	-0.7
	baz=253,SNR=6.1						
NLWA	Neilton Lookou	84.80	40	*e*P	P	15 39 13.2	+1.7
	comp=Z,304nm,1.4s						
NLWA				LR	LR		
	comp=Z,45µm,19.0s						
MDPB	Devils Postpil	84.80	50	*e*P	P	15 39 12.2	+0.1
WAKR	Walker	84.80	49	*e*P	P	15 39 12.9	+0.9
EDW2	Edwards Air Fo	84.81	53	P	P	15 39 10.5	-1.4
	baz=253,SNR=13						
PNTR	Pine Nut	84.86	49	*e*P	P	15 39 13.0	+0.7
BFSC	Mount Baldy Ra	84.89	54	P	P	15 39 10.4	-2.0
	baz=253,SNR=9.7						
H04A	Detroit Lake	84.91	43	*e*P	P	15 39 12.2	0.0
MLAC	Mammoth, Mammo	84.98	50	P	P	15 39 11.6	-1.4
	baz=252,SNR=11						
MAW	Mawson	85.01	202	P	P	15 39 12.2	+0.1
	baz=85,SNR=6.2						
MAW	Mawson	85.01	202	*e*P	P	15 39 12.3	+0.1
MAW	Mawson	85.01	202	*e*P	P	15 39 12.3	+0.1
MAW	Mawson	85.01	202	P	P	15 39 11.7	-0.5
	comp=Z,46nm,0.9s,baz=114,slow=4.6,SNR=6.2						
MAW				LR	LR	16 12 38.9	
	comp=Z,48µm,21.2s,baz=102,slow=32						
J05D	Fort Rock, OR	85.07	44	P	P	15 39 11.7	-1.4
	baz=250						
WHY	Whitehorse	85.07	25	*e*P	P	15 39 12.9	+0.3
MURC	Murrieta	85.08	55	P	P	15 39 11.7	-1.5
	baz=254,SNR=8.3						
YERR	Yerington	85.10	49	*e*P	P	15 39 14.1	+0.7
EGAK	Eagle	85.10	20	PFAKE		15 39 20.0	+7.4
EGAK				LR	LR		
	comp=Z,43µm,19.0s						
CWC	Cottonwood Cre	85.20	52	P	P	15 39 12.8	-1.2
	baz=253						
KNGR	Kungurtug, Tuv	85.22	323	⇑*i*P	P	15 39 11.2	-2.4
PAHR	Pah Rah Range	85.22	48	*e*P	P	15 39 14.0	+0.1
LRMC	Laurel Mtn Rad	85.23	53	P	P	15 39 13.4	-0.7
	baz=253,SNR=6.9						
TIN	Tinemaha, Big	85.27	51	P	P	15 39 14.5	+0.3
	baz=253						
DAWY	Dawson	85.27	21	*e*P	P	15 39 13.9	+0.4
E04D	Cinebar	85.32	41	P	P	15 39 14.5	+0.5
	baz=249						
D03D	Eldon	85.34	40	P	P	15 39 14.4	+0.2
	baz=248						
I05D	Terrebonne, OR	85.36	43	P	P	15 39 14.0	-0.4
	baz=250						
BBRC	Big Bear Solar	85.49	54	P	P	15 39 16.0	+0.5
	baz=254						
MONP2	Monument Peak	85.51	55	P	P	15 39 15.0	-0.7
	baz=254,SNR=8.8						
RYN	Ryan	85.52	49	*e*P	P	15 39 16.0	+0.5
PGC	Sidney	85.53	39	*e*P	P	15 39 16.1	+1.1
DAC	Darwin (Calif)	85.53	52	*e*P	P	15 39 15.7	0.0
DAC	Darwin (Calif)	85.53	52	*e*P	P	15 39 15.7	0.0
MPMC	Manual Prospec	85.55	52	P	P	15 39 15.2	-0.6
	baz=253,SNR=15						
BOK	Bokaro	85.59	295	*e*P	P	15 39 14.6	-1.3
BOK				IAmb	IAmb	15 39 22.4	
	comp=Z,1µm,3.1s						
RRX	Edison Barstow	85.60	53	P	P	15 39 16.0	+0.2
	baz=254						
NV01	Mina Array Sit	85.63	50	*e*P	P	15 39 16.4	+0.3
NVAR	Mina Array Bea	85.63	50	P	P	15 39 15.8	-0.3
	comp=Z,6.2nm,0.7s,baz=237,slow=5.6,SNR=40						
NVAR				PKKPbc	PKKPbc	15 57 17.2	-3.0
	comp=Z,0.9nm,0.6s,baz=110,slow=4.2,SNR=3.6						
NVAR				PKPPKP	P'P'df	16 05 24.8	0.0
	comp=Z,1.2nm,0.8s,baz=41,slow=4.9,SNR=5.3						
NVAR				LR	LR	16 10 27.9	
	comp=Z,54µm,20.7s,baz=264,slow=31						
PFO	Pinyon Flats O	85.67	55	*e*P	P	15 39 16.8	+0.5
PFO				LR	LR		
	comp=Z,47µm,19.0s						
PFO	Pinyon Flats O	85.67	55	*i* P	P	15 39 18.3	+2.0
PFO	Pinyon Flats O	85.67	55	P	P	15 39 15.5	-0.9
	baz=254,SNR=5.5						
XPFO	Pion Flat	85.68	55	*e*P	P	15 39 16.8	+0.5
G05D	Wamic, OR	85.68	43	P	P	15 39 16.1	+0.1
	baz=250						
IKP	In-Ko-Pah, Jac	85.69	56	P	P	15 39 15.8	-0.6
	baz=254,SNR=8.4						
RAMN	Ramite	85.73	298	*e*P	P	15 39 15.5	-1.4
	comp=Z,296nm,1.3s						
NV11	Mina Array Sit	85.74	50	*e*P	P	15 39 17.1	+0.6
F05D	White Salmon	85.81	42	P	P	15 39 16.9	+0.4
	baz=250						
GSC	Goldstone, Bar	85.87	53	*e*P	P	15 39 17.8	+0.6
GSC	Goldstone, Bar	85.87	53	P	P	15 39 17.1	-0.1
	baz=254						
LON	Longmire	85.88	41	*e*P	P	15 39 17.8	+0.8
GRAC	Grapevine Rang	85.92	51	P	P	15 39 17.4	+0.1
	baz=253,SNR=18						
KVN	Kaiserville	85.96	49	*e*P	P	15 39 17.6	-0.2
KVN	Kaiserville	85.96	49	*e*P	P	15 39 17.6	-0.2
A04D	Lummi Island	86.02	39	P	P	15 39 17.5	0.0
	baz=249						
TIXI	Tiksi	86.02	349	*e*P	P	15 39 16.6	-0.4
TIXI				LR	LR		
	comp=Z,42µm,21.0s						
TIXI	Tiksi	86.02	349	*d* *i*P	P	15 39 15.2	-1.8
TIXI				pmax	pmax		
	comp=Z,749nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,35µm,20.0s						
SWSC	Sam W. Stewart	86.03	56	P	P	15 39 17.1	-0.8
	baz=254,SNR=6.5						
DLBC	Dease Lake	86.09	28	LR	LR	16 12 09.8	
	comp=Z,57µm,19.0s,baz=260,slow=32						
HEC	Hector,Ludlow	86.11	54	P	P	15 39 17.5	-0.9
	baz=254,SNR=8.0						
BELC	Belle Mtn. Jos	86.15	54	P	P	15 39 18.0	-0.7
	baz=254,SNR=7.3						
FURC	Furnace Creek,	86.15	52	P	P	15 39 17.5	-1.0
	baz=254,SNR=7.9						
B05A	Bryant	86.23	39	P	P	15 39 18.3	-0.2
	baz=249						
JIRN	Jiri	86.26	299	*e*P	P	15 39 18.3	-1.4
	comp=Z,570nm,1.3s						
SHOC	Shoshone, Teco	86.45	53	P	P	15 39 18.9	-1.1
	baz=254,SNR=12						
BC3	Big Chuckawall	86.49	55	P	P	15 39 19.5	-0.9

	baz=255,SNR=10						
I07A	Izee	86.52	44	eP	P	15 39 19.8	-0.4
GUN	Gumba	86.59	299	eP	P	15 39 19.8	-1.4
	comp=Z,475nm,1.3s						
TUQ	Turquoise Moun	86.60	53	P	P	15 39 19.6	-1.2
	baz=254,SNR=5.8						
WVOR	Wild Horse Val	86.60	46	eP	P	15 39 20.5	-0.2
WVOR				LR	LR		
	comp=Z,30µm,19.0s						
WVOR	Wild Horse Val	86.60	46	eP	P	15 39 20.5	-0.2
WVOR				MLR	MLR		
	comp=Z,30µm,19.0s						
GMRC	Granite Mounta	86.63	54	P	P	15 39 20.3	-0.8
	baz=254,SNR=11						
TPNV	Topopah Spring	86.76	52	eP	P	15 39 22.3	+0.6
TPNV	Topopah Spring	86.76	52	eP	P	15 39 22.3	+0.6
TPNV	Topopah Spring	86.76	52	P	P	15 39 21.3	-0.3
	baz=254,SNR=14						
LTY	Liberty	86.78	41	eP	P	15 39 22.4	+1.0
GLA	Glamis	86.84	56	eP	P	15 39 23.4	+1.4
GLA	Glamis	86.84	56	eP	P	15 39 23.4	+1.4
GLA	Glamis	86.84	56	P	P	15 39 21.5	-0.5
	baz=255,SNR=7.5						
C06D	Leavenworth	86.87	40	P	P	15 39 22.4	+0.7
	baz=250						
IRM	Iron Mountain	86.87	55	P	P	15 39 22.3	+0.2
	baz=255,SNR=8.5						
PKI	Pulchoki	86.91	299	eP	P	15 39 20.8	-2.0
	comp=Z,468nm,1.3s						
PALK	Pallekele	86.92	278	eP	P	15 39 23.4	+0.7
	comp=Z,374nm,1.6s						
PKIN	Phulchoki	86.92	299	eP	P	15 39 20.9	-1.9
	comp=Z,336nm,1.4s						
DMN	Daman	87.18	299	eP	P	15 39 22.5	-1.5
	comp=Z,661nm,1.2s						
HAWA	Hanford	87.24	42	eP	P	15 39 23.6	0.0
	comp=Z,436nm,1.4s						
HAWA				LR	LR		
	comp=Z,25µm,19.0s						
Y12C	Blythe	87.27	55	P	P	15 39 24.3	+0.4
	baz=255						
NEE2	Needles Airpor	87.45	54	P	P	15 39 25.0	+0.1
	baz=255						
SHPR	Sheep Range	87.48	52	eP	P	15 39 25.8	+0.6
EPYK	Eagle Plains	87.53	20	eP	P	15 39 25.2	+0.7
EPYK	Eagle Plains	87.53	20	P	P	15 39 25.3	+0.7
	baz=236						
R11A	Troy Canyon, C	87.65	50	eP	P	15 39 26.4	+0.4
R11A	Troy Canyon, C	87.65	50	P	P	15 39 25.8	-0.1
	baz=254						
PDMCI	Parker Dam,Lak	87.72	55	P	P	15 39 25.9	-0.2
	baz=255,SNR=9.4						
D08A	Wollman Farm,	87.85	41	eP	P	15 39 26.9	+0.4
W13A	Hualapai Mount	88.12	54	eP	P	15 39 29.1	+0.7
214A	Organ Pipe Nat	88.22	57	P	P	15 39 28.3	-0.4
	baz=256						
BMO	Blue Mountains	88.25	44	eP	P	15 39 28.4	-0.2
	comp=Z,261nm,1.3s						
BMO				LR	LR		
	comp=Z,36µm,19.0s						
BMO	Blue Mountains	88.25	44	eP	P	15 39 28.4	-0.2
BMO				pmax	pmax		
	comp=Z,261nm,1.3s						
BMO				MLR	MLR		
	comp=Z,36µm,19.0s						
MDRS	Chennai	88.50	284	eP	P	15 39 30.2	0.0
MDRS				IAmb	IAmb	15 39 41.8	
	comp=Z,1µm,3.1s						
DANN	Dangsing	88.51	299	eP	P	15 39 28.0	-2.4
	comp=Z,102nm,0.7s						
KOLN	Koldanda	88.52	298	eP	P	15 39 28.0	-2.4
	comp=Z,149nm,1.1s						
ELK	Elko	88.55	48	eP	P	15 39 30.2	-0.1
ELK	Elko	88.55	48	eP	P	15 39 30.2	-0.1
F10A	Beach Ranch, E	88.63	43	eP	P	15 39 30.6	+0.2
LCMT	Little Creek M	89.10	52	eP	P	15 39 33.6	+0.8
PYUN	Piuthan	89.11	299	eP	P	15 39 30.6	-2.6
	comp=Z,187nm,1.1s						
CCUT	Cedar City	89.14	52	eP	P	15 39 33.7	+0.6
WMQ	Urumqi	89.27	315	P	P	15 39 32.1	-1.2
WMQ				pP	pP	15 39 39.7	-0.7
WMQ				sP	sP	15 39 48.1	+5.1
WMQ				PP	PP	15 43 09.6	+5.3
WMQ				SKS	SKSac	15 49 59.9	-2.3
WMQ				S	S	15 50 19.0	-2.8
WMQ				sS	sS	15 50 39.7	+6.2
WMQ				SS	SS	15 56 16.0	-0.7
WMQ				pmax	pmax		
	comp=Z,380nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,13µm,5.1s						
WMQ				LR	LR		
	comp=Z,148µm,18.3s						
WMQ				LR	LR		
	comp=Z,81µm,21.7s						
WMQ				LR	LR		
	comp=Z,131µm,24.9s						
WMQ	Urumqi	89.27	315	eP	P	15 39 31.9	-1.4
WMQ	Urumqi	89.27	315	eP	P	15 39 31.9	-1.4
NEW	Newport	89.37	41	eP	P	15 39 33.5	-0.2
NEW				LR	LR		
	comp=Z,28µm,20.0s						
NEW	Newport	89.37	41	eP	P	15 39 33.5	-0.2
NEW				MLR	MLR		
	comp=Z,28µm,20.0s						
NEW	Newport	89.37	41	P	P	15 39 34.0	+0.3
	baz=253,SNR=5.7						
KNB	Kanab	89.43	52	eP	P	15 39 35.1	+0.7
INK	Inuvik	89.63	19	eP	P	15 39 34.9	+0.6
INK				P'P'		16 05 16.8	
INK	Inuvik	89.63	19	eP	P	15 39 34.9	+0.6
INK	Inuvik	89.63	19	PKPPKP	P'P'df	16 05 16.8	+2.1
	comp=Z,0.6nm,0.9s,baz=94,slow=1.7,SNR=1.7						
INK				LR	LR	16 14 31.0	
	comp=Z,58µm,20.7s,baz=226,slow=32						
U15A	North Rim	89.70	53	eP	P	15 39 36.5	+0.7
HLID	Hailey	89.89	46	eP	P	15 39 37.2	+0.8
HLID				LR	LR		
	comp=Z,48µm,19.0s						
HLID	Hailey	89.89	46	P	P	15 39 36.5	+0.1
	baz=255,SNR=69						
X16A	Lo Mia Camp, P	89.91	55	eP	P	15 39 37.4	+0.7
TUC	Tucson	89.97	57	eP	P	15 39 38.0	+1.1
TUC				LR	LR		
	comp=Z,98µm,20.0s						
TUC	Tucson	89.97	57	P	P	15 39 37.6	+0.7
	baz=257						
MTPU	Mount Pierson	90.17	51	eP	P	15 39 39.0	+0.9
DUG	Dugway, Tooele	90.20	49	eP	P	15 39 37.6	-0.3
	comp=Z,596nm,1.7s						
DUG				LR	LR		
	comp=Z,35µm,20.0s						
DUG	Dugway, Tooele	90.20	49	eP	P	15 39 37.6	-0.3
DUG				pmax	pmax		
	comp=Z,596nm,1.7s						
DUG				MLR	MLR		
	comp=Z,35µm,20.0s						
DUG	Dugway, Tooele	90.20	49	P	P	15 39 37.9	0.0
	baz=256						
WUAZ	Wupatki	90.21	54	eP	P	15 39 39.3	+1.2
WUAZ				LR	LR		
	comp=Z,40µm,19.0s						
WUAZ	Wupatki	90.21	54	P	P	15 39 38.7	+0.6
	baz=257						
BGU	Big Grassy Mou	90.22	48	eP	P	15 39 38.0	0.0
MSU	Marysvale	90.28	51	eP	P	15 39 39.9	+1.5
MSU	Marysvale	90.28	51	eP	P	15 39 39.9	+1.5
HVU	Hansel Valley	90.61	48	eP	P	15 39 40.6	+0.8
HVU	Hansel Valley	90.61	48	eP	P	15 39 40.6	+0.8
NLU	North Lily Min	90.70	50	eP	P	15 39 40.9	+0.5
JBP	Jabalpur	90.74	293	eP	P	15 39 40.4	-0.2
JBP				ex	x	15 45 52.2	
JBP				AMS	AMS	16 13 14.5	
	comp=Z,25µm,31.0s						
TRD	Trivandrum	90.79	278	eP	P	15 39 40.7	-0.3
TRD				IAmb	IAmb	15 40 06.7	
	comp=Z,1µm,3.1s						
HYB	Hyderabad	90.94	287	i P	P	15 39 41.5	-0.2
	comp=Z,188nm,1.4s						
HYB				ePP	PP	15 43 20.0	+1.9
HYB				eSKS	SKSac	15 50 12.0	-1.0
HYB				ePS	PS	15 51 50.0	+1.2
HYB	Hyderabad	90.94	287	eP	P	15 39 41.5	-0.2
DGZ	Jazzator, Alta	91.03	320	⇑eP	P	15 39 40.0	-1.5
MPU	Maple Canyon	91.04	50	eP	P	15 39 42.9	+1.0
MSO	Missoula	91.05	43	P	P	15 39 41.7	0.0
	baz=255,SNR=6.3						
CTU	Camp Tracy	91.11	49	eP	P	15 39 43.3	+1.2
NGP	Nagpur	91.20	291	⇑eP	P	15 39 41.3	-1.5
NGP				IAmb	IAmb	15 39 52.4	
	comp=Z,6µm,6.0s						
NGP				ex	x	15 50 44.4	
NGP				ex	x	16 20 14.9	
	comp=Z,23µm,24.1s						
TMUT	Trail Mountain	91.20	50	eP	P	15 39 43.8	+1.0
MCMT	McKenzie Canyo	91.30	45	eP	P	15 39 43.6	+0.6
JLU	Jordanelle	91.31	49	eP	P	15 39 43.9	+0.7
W18A	Petrified Fore	91.43	55	eP	P	15 39 44.6	+0.8
W18A	Petrified Fore	91.43	55	P	P	15 39 43.6	-0.2
	baz=258						
TCUT	Toone Canyon	91.46	49	eP	P	15 39 44.5	+0.6
DLMT	Dillon	91.60	44	eP	P	15 39 45.2	+0.9
WALA	Waterton Lakes	91.64	40	eP	P	15 39 44.8	+0.5
SRU	San Rafael Swe	91.67	51	eP	P	15 39 46.1	+1.3
SRU	San Rafael Swe	91.67	51	eP	P	15 39 46.1	+1.3
LRM	Limekiln Ridge	91.81	44	eP	P	15 39 45.7	+0.3
SYO	Syowa Base	92.04	197	⇑eP	P	15 39 44.4	-1.3
SYO	Syowa Base	92.04	197	⇑iP	P	15 39 55.0	+9.3
AHID	Auburn Hatcher	92.05	47	eP	P	15 39 46.0	-0.5
	comp=Z,139nm,1.3s						
AHID				LR	LR		
	comp=Z,38µm,21.0s						
ZSN	Zaisan	92.11	318	eP	P	15 39 44.6	-1.8
ZSN				pmax	pmax		
	comp=Z,56nm,0.9s						
ZSN				MLR	MLR		
	comp=Z,5µm,18.0s						
ZSN	Zaisan	92.11	318	eP	P	15 39 44.6	-1.8
	comp=Z,56nm,0.8s						
ZSN				eLR	LR	16 22 34.0	
	comp=Z,5µm,18.0s						
DGAR	Diego Garcia	92.22	262	PFAKE		15 40 00.0	+12
DGAR				LR	LR		
	comp=Z,22µm,19.0s						
FXWY	Fox Creek	92.30	46	eP	P	15 39 48.1	+0.5
BOZ	Bozeman (W)	92.32	44	eP	P	15 39 48.1	+0.5
BOZ				LR	LR		
	comp=Z,32µm,19.0s						
BOZ	Bozeman (W)	92.32	44	eP	P	15 39 48.1	+0.5
BOZ				MLR	MLR		
	comp=Z,32µm,19.0s						
BOZ	Bozeman (W)	92.32	44	P	P	15 39 47.7	+0.1
	baz=257						
TPAW	Teton Pass	92.32	46	eP	P	15 39 47.5	-0.3
YHB	Horse Butte	92.43	45	eP	P	15 39 49.8	+1.6
HRY	Holter Researc	92.43	43	eP	P	15 39 48.0	-0.1
121A	Cookes Peak, D	92.50	58	P	P	15 39 49.3	+0.5
	baz=259						
MOOW	Moose Ponds	92.52	46	eP	P	15 39 49.2	+0.5
YMR	Madison River	92.57	45	eP	P	15 39 50.2	+1.4
LOHW	Long Hollow	92.59	46	eP	P	15 39 49.3	+0.3
FLWY	Flagg Ranch	92.63	46	eP	P	15 39 49.2	+0.1
PV03	Paradox Valley	92.78	52	eP	P	15 39 51.5	+1.5
H17A	Grant Village	92.78	45	eP	P	15 39 52.1	+2.2
H17A	Grant Village	92.78	45	P	P	15 39 50.7	+0.7
	baz=258						
MVCO	Mesa Verde	92.84	53	PFAKE		15 40 00.0	+10
MVCO				LR	LR		
	comp=Z,36µm,20.0s						
MVCO	Mesa Verde	92.84	53	P	P	15 39 49.9	-0.4
	baz=259						
LKWY	Lake	92.94	45	eP	P	15 39 52.3	+1.7
	comp=Z,196nm,1.4s						
LKWY				LR	LR		
	comp=Z,59µm,19.0s						
BHPL	Bhopal	93.07	293	eP	P	15 39 49.0	-2.4
BHPL				IAmb	IAmb	15 39 56.4	
	comp=Z,1µm,4.1s						
BW06	Boulder Array	93.16	47	eP	P	15 39 51.9	+0.3
BW06				LR	LR		
	comp=Z,35µm,19.0s						
BW06	Boulder Array	93.16	47	P	P	15 39 51.0	-0.6
	baz=258						
PD31	Pinedale Array	93.16	47	eP	P	15 39 51.9	+0.1
PDAR	Pinedale Array	93.16	47	eP	P	15 39 51.8	+0.1
PDAR				PKKPbc	PKKPdf	15 57 00.5	+0.1
PDAR				P'P'		16 05 11.8	
PDAR	Pinedale Array	93.16	47	P	P	15 39 51.4	-0.3
	comp=Z,4.5nm,1.0s,baz=241,slow=2.7,SNR=17						
PDAR				PKKPbc	PKKPdf	15 57 00.5	+0.1
	comp=Z,0.9nm,0.6s,baz=92,slow=5.3,SNR=6.4						
PDAR				PKPPKP		16 05 11.8	
	comp=Z,1.1nm,0.9s,baz=54,slow=4.6,SNR=5.1						
PDAR				LR	LR	16 18 04.5	
	comp=Z,23µm,18.6s,baz=272,slow=33						
LENM	Lemitar	93.48	56	eP	P	15 39 54.5	+1.2
O20A	White River Ci	93.61	50	P	P	15 39 53.6	-0.2
	baz=259						
ZAA0	Zalesovo Array	93.66	324	eP	P	15 39 51.7	-1.7
ZALV	Zalesovo Beam	93.66	324	P	P	15 39 51.9	-1.5
	comp=Z,25nm,1.0s,baz=113,slow=3.7,SNR=52						
ZALV				PKKPbc	PKKPdf	15 56 58.6	-0.9
	comp=Z,1.5nm,0.7s,baz=259,slow=3.0,SNR=3.7						
ZALV				PKPPKP		16 05 09.7	
	comp=Z,0.3nm,0.3s,baz=320,slow=4.3,SNR=2.4						
MK01	Makanchi Array	93.67	317	eP	P	15 39 52.3	-1.3
MK31	Makanchi Array	93.68	317	eP	P	15 39 52.5	-1.2
MK31	Makanchi Array	93.68	317	eP	P	15 39 52.5	-1.2
MKAR	Makanchi Array	93.68	317	ceP	P	15 39 51.9	-1.8
MKAR				pmax	pmax		
	comp=Z,26nm,0.7s						
MKAR	Makanchi Array	93.68	317	P	P	15 39 52.5	-1.2
	comp=Z,26nm,0.7s,baz=91,slow=5.5,SNR=148						
MKAR				PP	PP	15 43 37.5	-1.5
	comp=Z,6.6nm,0.9s,baz=98,slow=5.5,SNR=3.0						
MKAR				S	SKSac	15 50 29.0	+1.9
	comp=Z,2.6nm,1.2s,baz=46,slow=8.3,SNR=3.4						
MKAR				PKKPbc	PKKPdf	15 56 57.6	-1.7
	comp=Z,2.3nm,0.6s,baz=276,slow=2.7,SNR=11						
MKAR				PKPPKP		16 05 09.4	
	comp=Z,0.2nm,0.7s,baz=321,slow=1.1,SNR=2.0						
MKAR				LR	LR	16 21 43.1	
	comp=Z,23µm,21.4s,baz=94,slow=35						
BNM	Barren Site	93.76	56	eP	P	15 39 55.9	+1.3
DDI	Dehra Dun	93.78	300	eP	P	15 39 51.9	-2.7
RLMT	Red Lodge	93.84	45	eP	P	15 39 55.4	+0.7
RLMT				LR	LR		
	comp=Z,39µm,20.0s						
RLMT	Red Lodge	93.84	45	P	P	15 39 54.6	-0.1
	baz=259						
MAKZ	Makanchi	93.89	317	eP	P	15 39 54.3	-0.4
MAKZ	Makanchi	93.89	317	P	P	15 39 53.7	-1.0
MAKZ				pmax	pmax		
	comp=Z,129nm,1.2s						
ANMO	Albuquerque	94.04	55	eP	P	15 39 55.2	-0.6
	comp=Z,80nm,1.1s						
ANMO				LR	LR		
	comp=Z,33µm,20.0s						
ANMO	Albuquerque	94.04	55	ceP	P	15 39 54.6	-1.3
ANMO				pmax	pmax		
	comp=Z,71nm,1.0s						
ANMO	Albuquerque	94.04	55	P	P	15 39 55.3	-0.6
	baz=260						
EGMT	Eagleton	94.09	42	eP	P	15 39 56.0	+0.3
EGMT				LR	LR		
	comp=Z,24µm,20.0s						
EGMT	Eagleton	94.09	42	P	P	15 39 56.1	+0.4
	baz=258						
S22A	4UR Ranch, Cre	94.25	53	P	P	15 39 56.7	-0.2
	baz=260						
MNTX	Cornudas Mount	94.35	59	eP	P	15 39 56.8	-0.4
	comp=Z,66nm,1.1s						
MNTX				LR	LR		
	comp=Z,62µm,21.0s						
MNTX	Cornudas Mount	94.35	59	P	P	15 39 56.4	-0.8
	baz=260						
MNCY	Minicoy	94.56	278	eP	P	15 39 57.6	-0.8
YKA	Yellowknife Ar	94.66	27	P	P	15 39 55.7	-2.0
	comp=Z,3.2nm,0.6s,baz=257,slow=4.6,SNR=44						
YKA				PP	PP	15 43 45.2	-1.0
	comp=Z,5.1nm,1.1s,baz=262,slow=7.0,SNR=2.9						
YKA				PKKPbc	PKKPdf	15 56 48.4	-10
	comp=Z,0.8nm,0.7s,baz=74,slow=2.7,SNR=7.6						
YKA				PKPPKP	P'P'df	16 05 07.5	+1.6
	comp=Z,0.7nm,0.9s,baz=74,slow=2.7,SNR=3.9						
YKA				LR	LR	16 15 06.6	
	comp=Z,6µm,21.8s,baz=260,slow=31						
SMLA	Simla	94.68	301	eP	P	15 39 56.1	-2.5
SMLA				IAmb	IAmb	15 40 06.0	
NVS	Novosibirsk	94.76	325	eP	P	15 39 57.2	-1.2
NVS				eS	SKKSac	15 50 53.3	-1.2
NVS				pmax	pmax		
	comp=Z,205nm,1.7s						
NVS				pmax	pmax		
	comp=N,46nm,1.6s						
NVS				pmax	pmax		
	comp=E,100nm,1.6s						
NVS				pmax	pmax		
	comp=N,44nm,2.0s						
NVS				pmax	pmax		
	comp=E,200nm,2.2s						
NVS				smax	smax		
	comp=E,108nm,2.5s						
SHLS	Shalkode	94.96	313	eP	P	15 39 54.8	-5.0
SHLS				e		15 43 46.9	
SHLS				pmax	pmax		
	comp=Z,146nm,1.1s						
SHLS				MLR	MLR		
	comp=Z,5µm,16.0s						
SHLS	Shalkode	94.96	313	eP	P	15 39 54.9	-4.9
	comp=Z,146nm,1.1s						
SHLS				ePP	PP	15 43 46.9	-2.3
SHLS				eS	SKSac	15 50 36.1	+1.7
SHLS				eLQ	LQ	16 16 15.2	
SHLS				eLR	LR	16 23 45.8	
	comp=Z,5µm,16.2s						
PDGK	Podgornoye	94.97	313	P	P	15 39 57.1	-2.7
PDGK				pmax	pmax		
	comp=Z,109nm,1.4s						
GOA	Goa	95.06	285	eP	P	15 40 00.8	+0.2
GOA				IAmb	IAmb	15 40 12.8	
	comp=Z,3µm,4.3s						
GOA				IAMs_20	IAMs_20	16 36 39.2	
	comp=Z,41µm,14.4s						
SDCO	Great Sand Dun	95.28	53	PFAKE		15 40 10.0	+8.4
SDCO				LR	LR		
	comp=Z,33µm,19.0s						
K22A	Casper	95.34	48	P	P	15 40 00.6	-1.0
	baz=260						
TX31	Lajitas Ar. Si	95.41	61	eP	P	15 40 01.9	-0.2
TXAR	Lajitas Array	95.41	61	P	P	15 40 01.3	-0.9
	comp=Z,1.0nm,0.7s,baz=222,slow=6.2,SNR=9.1						
TXAR				PP	PP	15 43 52.5	-0.6
	comp=Z,2.8nm,1.0s,baz=251,slow=5.6,SNR=2.7						
TXAR				PKKPbc	PKKPbc	15 56 54.7	-0.3
	comp=Z,0.7nm,0.6s,baz=96,slow=3.3,SNR=5.4						
TXAR				PKPPKP	P'P'df	16 05 06.6	-0.9
	comp=Z,0.6nm,0.9s,baz=152,slow=5.5,SNR=3.5						
TXAR				LR	LR	16 15 12.4	
	comp=Z,70µm,20.6s,baz=0.0,slow=31						
N23A	Red Feather La	95.47	50	P	P	15 40 02.2	-0.1
	baz=260						
ISCO	Idaho Springs	95.54	51	PFAKE		15 40 10.0	+7.2
ISCO				LR	LR		
	comp=Z,48µm,20.0s						
ISCO	Idaho Springs	95.54	51	P	P	15 40 02.5	-0.2
	baz=260						
POO	Poona	95.55	288	eP	P	15 40 00.9	-2.0
POO				IAmb	IAmb	15 40 08.4	
	comp=Z,329nm,2.0s						
KPKS	Kokpek	95.57	313	deP	P	15 40 00.4	-2.1
KPKS				i		15 43 53.4	
KPKS				i S	SKSac	15 50 37.9	+0.4
KPKS				pmax	pmax		
	comp=Z,161nm,0.9s						
KPKS				MLR	MLR		
	comp=Z,17µm,18.0s						
KPKS	Kokpek	95.57	313	eP	P	15 40 00.5	-2.1
	comp=Z,161nm,0.9s						
KPKS				⇓iPP	PP	15 43 53.5	-0.4
KPKS				⇓iS	SKSac	15 50 37.9	+0.4
KPKS				eLQ	LQ	16 16 54.9	
KPKS				eLR	LR	16 24 44.8	
	comp=Z,17µm,18.0s						
DHRM	DHARAMSHALA	95.59	302	eP	P	15 40 01.9	-1.2
DHRM				IAmb	IAmb	15 40 17.4	
	comp=Z,639nm,2.4s						
SEM	Semipalatinsk	95.70	320	eP	P	15 39 59.3	-3.8
SEM				pmax	pmax		
	comp=Z,133nm,1.5s						
SEM				MLR	MLR		
	comp=Z,16µm,18.0s						
SEM	Semipalatinsk	95.70	320	eP	P	15 39 59.4	-3.8
	comp=Z,133nm,1.4s						
SEM				ePP	PP	15 43 40.6	-14
SEM				eS	SKSac	15 50 40.3	+2.1
SEM				eLQ	LQ	16 16 59.3	
SEM				eLR	LR	16 24 11.2	
	comp=Z,16µm,17.9s						
SATY	Saty	95.70	313	deP	P	15 40 02.5	-0.7
SATY				e		15 43 56.1	
SATY				eS	SKSac	15 50 38.7	+0.4
SATY				pmax	pmax		
	comp=Z,317nm,1.4s						
SATY				MLR	MLR		
	comp=Z,12µm,17.0s						
SATY	Saty	95.70	313	eP	P	15 40 02.5	-0.7
	comp=Z,317nm,1.4s						
SATY				⇓ePP	PP	15 43 56.2	+1.2
SATY				eS	SKSac	15 50 38.7	+0.4
SATY				eLQ	LQ	16 17 08.1	
SATY				eLR	LR	16 24 17.0	
	comp=Z,12µm,16.9s						
PMSA	Palmer Station	95.73	161	PFAKE		15 40 10.0	+7.3
PMSA				LR	LR		
	comp=Z,33µm,19.0s						
Q24A	Divide	95.76	52	P	P	15 40 04.0	+0.2
	baz=261						
TARG	Taragay, Kyrgy	95.92	311	eP	P	15 40 02.6	-2.0
TDK	Taldyqorghan	96.02	315	eP	P	15 40 01.8	-2.6
TDK				e		15 44 00.1	
TDK				eS	SKSac	15 50 41.4	+1.8
TDK				MLR	MLR		
	comp=Z,31µm,21.0s						
TDK	Taldyqorghan	96.02	315	eP	P	15 40 01.8	-2.6
	comp=Z,480nm,0.8s						
TDK				ePP	PP	15 44 00.1	+2.9
TDK				eS	SKSac	15 50 41.5	+1.8
TDK				eLR	LR	16 21 51.7	
	comp=Z,31µm,21.4s						
T25A	Trinidad	96.04	53	P	P	15 40 05.2	+0.2
	baz=261						
NRIK	Noril'sk	96.12	340	P	P	15 40 03.0	-1.3
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,27µm,21.0s						
NRIK	Noril'sk	96.12	340	P	P	15 40 03.0	-1.3
	comp=Z,7.6nm,0.9s,baz=104,slow=5.0,SNR=15						
NRIK				PKKPbc	PKKPbc	15 56 53.2	-1.2
	comp=Z,1.1nm,0.3s,baz=346,slow=19,SNR=2.1						
NRIK				LR	LR	16 21 16.5	
	comp=Z,27µm,21.0s,baz=108,slow=34						
LAO	LASA Array	96.21	44	eP	P	15 40 03.8	-1.5
	comp=Z,246nm,1.4s						
LAO				LR	LR		
	comp=Z,24µm,20.0s						
LAO	LASA Array	96.21	44	P	P	15 40 05.3	0.0
	baz=261						
BOM	Bombay	96.58	288	i P	P	15 40 05.7	-1.8
BOM				IAMs_20	IAMs_20	16 35 07.2	
	comp=Z,25µm,9.1s						
NVL	N'lazarevskaya	96.67	188	eP	P	15 40 17.3	+10
NVL				e		15 44 09.3	
NVL				pmax	pmax		
	comp=Z,47nm,1.1s						
MDOK	Medeo	96.70	313	deP	P	15 40 04.3	-3.4
MDOK				pmax	pmax		
	comp=Z,105nm,1.4s						
MDOK				MLR	MLR		
	comp=Z,13µm,17.0s						
MDOK	Medeo	96.70	313	eP	P	15 40 04.4	-3.4
	comp=Z,105nm,1.4s						
MDOK				⇓ePP	PP	15 43 51.0	-12
MDOK				eS	SKSac	15 50 50.6	+7.0
	comp=Z,4µm,12.7s						
MDOK				eLQ	LQ	16 15 59.6	
MDOK				eLR	LR	16 25 24.2	
	comp=Z,13µm,16.8s						
KURK	Kurchatov	96.78	320	eP	P	15 40 05.6	-2.1
KURK				PKKPbc	PKKPbc	15 56 49.6	-2.4
KURK				P'P'		16 05 03.7	
KURK				LR	LR		
	comp=Z,90µm,20.0s						
KURK	Kurchatov	96.78	320	c iP	P	15 40 05.9	-1.8
KURK				pmax	pmax		

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        comp=Z,121nm,1.4s
AAA     Alma-Ata            96.80 313  eP       P         15 40 10.3 +2.2
AAA                                    eS       SKSac     15 50 42.0 -2.0
AAA                                     MLR     MLR
        comp=Z,8µm,20.0s
AAA     Alma-Ata            96.80 313  eP       P         15 40 10.3 +2.2
AAA                                    ePP      PP        15 43 52.0  -11
AAA                                    eS       SKSac     15 50 42.0 -2.0
AAA                                    eLQ      LQ        16 17 42.4
AAA                                    eLR      LR        16 24 56.8
        comp=Z,8µm,20.0s
KURBB   Kurchatov Arra      96.82 320   PKKPbc  PKKPbc    15 56 49.6 -2.2
        comp=Z,1.2nm,0.7s,baz=278,slow=3.4,SNR=4.0
KURBB                                   PKPPKP            16 05 03.7
        comp=Z,0.5nm,0.8s,baz=300,slow=2.3,SNR=2.9
CHKK    Chushkaly           96.84 313  eP       P         15 40 05.6 -2.6
CHKK                                   e                  15 44 01.2
CHKK                                   eS       SKSac     15 50 43.8 -0.2
CHKK    Chushkaly           96.84 313  eP       P         15 40 05.7 -2.6
CHKK                                   ePP      PP        15 44 01.2 -2.5
CHKK                                   eS       SKSac     15 50 43.9 -0.2
KSH     Kashi               96.97 309   P       P         15 40 11.1 +2.1
KSH                                     sP      sP        15 40 21.7 +3.0
KSH                                     PP      PP        15 44 13.2 +8.3
KSH                                     SKS     SKSac     15 50 46.1 +1.0
KSH                                     S       S         15 51 27.8 -2.9
KSH                                     SS      SS        15 58 13.6 +6.3
KSH                                     pmax    pmax
        comp=Z,30nm,0.9s
KSH                                     pmax    pmax
        comp=Z,5µm,5.5s
KSH                                     LR      LR
        comp=Z,28µm,14.6s
KSH                                     LR      LR
        comp=Z,10µm,14.2s
KSH                                     LR      LR
        comp=Z,64µm,15.4s
SNAA    Sanae               97.29 183   P       Pdif      15 40 13.3 +3.4
SNAA    Sanae               97.29 183⇑eP        P         15 40 09.4 -0.4
SNAA                                    MLR     MLR
        comp=Z,2918µm,17.0s
KUU     Kurty               97.31 313  eP       P         15 40 07.4 -2.9
KUU                                    i                  15 44 05.3
KUU                                    i S      SKSac     15 50 46.7 +0.3
KUU                                     pmax    pmax
        comp=Z,90nm,0.6s
KUU                                     MLR     MLR
        comp=Z,7µm,18.0s
KUU     Kurty               97.31 313  eP       P         15 40 07.4 -2.9
        comp=Z,90nm,0.7s
KUU                                   ⇓iPP      PP        15 44 05.3 -2.0
KUU                                   ⇓iS       SKSac     15 50 46.8 +0.3
KUU                                    eLQ      LQ        16 17 05.3
KUU                                    eLR      LR        16 23 56.2
        comp=Z,7µm,17.9s
RSSD    Black Hills         97.36  47   P       Pdif      15 40 11.3 +0.4
        baz=262
TKM2    Tokmak 2            97.72 312  i P      P         15 40 10.9 -1.5
TKM2                                    pmax    pmax
        comp=Z,15nm,1.1s
DGMT    Dagmar              97.83  42  eP       P         15 40 11.7 -0.9
        comp=Z,136nm,0.9s
DGMT                                    LR      LR
        comp=Z,26µm,19.0s
DGMT    Dagmar              97.83  42   P       P         15 40 12.5  0.0
        baz=263
AMTX    Amarillo            97.91  56   P       P         15 40 13.1 -0.2
        baz=262
VNA2    Neumayer--Watz      98.25 182   P       P         15 40 12.3 -1.7
OGNE    Ogallala            98.41  50   PFAKE             15 40 30.0  +15
OGNE                                    LR      LR
        comp=Z,35µm,20.0s
FRU     Bishkek             98.42 312  eP       Pdif      15 40 20.0 +4.6
FRU                                     pmax    pmax
        comp=Z,150nm,2.0s
AAK     Ala-Archa           98.49 312  eP       P         15 40 14.2 -1.6
AAK                                     PKKPbc  PKKPbc    15 56 45.5 -1.7
AAK                                     P'P'              16 05 01.2
AAK                                     LR      LR
        comp=Z,61µm,22.0s
AAK     Ala-Archa           98.49 312⇑eP        P         15 40 14.7 -1.1
AAK                                     pmax    pmax
        comp=Z,13nm,1.0s
AAK     Ala-Archa           98.49 312   PKKPbc  PKKPbc    15 56 45.5 -1.7
        comp=Z,0.6nm,0.5s,baz=227,slow=5.1,SNR=3.6
AAK                                     PKPPKP            16 05 01.2
        comp=Z,0.8nm,0.8s,baz=166,slow=8.3,SNR=3.2
JCT     Junction City       98.90  61   PFAKE             15 40 30.0  +12
JCT                                     LR      LR
        comp=Z,86µm,20.0s
SFK     Sufi-Kurgan         98.92 309  i P      P         15 40 16.8 -1.1
SFK                                     pmax    pmax
        comp=Z,34nm,1.1s
ARSB    Arslanbob           99.46 310  eP       Pdif      15 40 18.7 -1.5
FFC     Flin Flon           99.88  36  ePdif    Pdif      15 40 21.8 +0.2
        comp=Z,66nm,1.3s
FFC                                     LR      LR
        comp=Z,72µm,19.0s
FFC     Flin Flon           99.88  36  i P      Pdif      15 40 22.1 +0.6
CBKS    Cedar Bluff         99.92  52   PFAKE             15 40 30.0 +7.8
CBKS                                    LR      LR
        comp=Z,25µm,21.0s
MNAS    Manas               99.93 311  i P      Pdif      15 40 21.7 -0.6
MNAS                                    pmax    pmax
        comp=Z,23nm,1.1s
BHJ     Bhuj               100.13 292  eP       Pdif      15 40 21.0 -2.4
BHJ                                     IAMs_20 IAMs_20   16 16 17.8
        comp=Z,36µm,26.7s
KVTX    Kingsville         100.19  64   PFAKE             15 40 40.0  +16
KVTX                                    LR      LR
        comp=Z,31µm,19.0s
WMOK    Wichita Mounta     100.26  56   PFAKE             15 40 40.0  +16
WMOK                                    LR      LR
        comp=Z,73µm,20.0s
KK31    Karatay Array      101.45 312  i P      Pdif      15 40 27.1 -1.7
KK31                                    pmax    pmax
        comp=Z,8.0nm,0.8s
IUG     Iuzhnay            101.73 311deP        Pdif      15 40 30.2  0.0
IUG                                    i                  15 44 42.0
IUG                                     pmax    pmax
        comp=Z,229nm,3.5s
IUG                                     MLR     MLR
        comp=Z,10µm,18.0s
IUG     Iuzhnay            101.73 311  eP       Pdif      15 40 30.3  0.0
        comp=Z,229nm,3.5s
IUG                                   ⇓iPP      PP        15 44 42.0 +0.9
IUG                                    eLQ      LQ        16 20 09.4
IUG                                    eLR      LR        16 27 27.5
        comp=Z,10µm,18.0s
BVAR    Borovoye Array     102.07 322   P       Pdif      15 40 29.9 -1.5
        comp=Z,2.5nm,0.7s,baz=92,slow=4.5,SNR=14
BVAR                                    PKKPbc  PKKPbc    15 56 35.3 -1.7
        comp=Z,0.2nm,0.4s,baz=347,slow=25,SNR=2.3
BRVK    Borovoye           102.14 322  ePdif    Pdif      15 40 31.1 -0.5
        comp=Z,145nm,1.4s
BRVK                                    LR      LR
        comp=Z,39µm,19.0s
BRVK    Borovoye           102.14 322⇑iP        Pdif      15 40 30.2 -1.4
BRVK                                    pmax    pmax
        comp=Z,17nm,1.1s
BRVK                                    MLR     MLR
        comp=Z,64µm,19.0s
KSU1    Kansas State U     102.38  52   PFAKE             15 40 40.0 +7.0
KSU1                                    LR      LR
        comp=Z,33µm,20.0s
ECSD    EROS Data Cent     102.66  47   PFAKE             15 40 50.0  +16
ECSD                                    LR      LR
        comp=Z,26µm,20.0s
PAYG    Puerto Ayora       103.19  93   PFAKE             15 40 50.0  +13
PAYG                                    LR      LR
        comp=Z,22µm,21.0s
ULM     Lac du Bonnet      103.39  41   Pdiff   Pdif      15 40 36.3 -0.9
        comp=Z,0.6nm,0.3s,baz=297,slow=2.3,SNR=2.4
ULM                                     PKiKP   PKiKP     15 44 55.6 -0.6
        comp=Z,8.8nm,1.1s,baz=280,slow=6.3,SNR=3.3
ULM                                     PKKPbc  PKKPbc    15 56 30.9 -2.2
        comp=Z,2.1nm,0.7s,baz=106,slow=7.4,SNR=2.3
NATX    Nacogdoches        103.42  60   PFAKE             15 40 50.0  +12
NATX                                    LR      LR
        comp=Z,71µm,20.0s
FCC     Fort Churchill     104.31  32  ePdif    Pdif      15 40 41.3 +0.2
FCC     Fort Churchill     104.31  32  eP       Pdif      15 40 41.3 +0.2
MIAR    Mount Ida          104.52  57   PFAKE             15 40 50.0 +7.4
MIAR                                    LR      LR
        comp=Z,71µm,19.0s
SCIA    State Center       105.09  49   PFAKE             15 45 10.0  +10
SCIA                                    LR      LR
        comp=Z,41µm,20.0s
EYMN    Ely                106.28  43   PFAKE             15 45 10.0 +8.4
EYMN                                    LR      LR
        comp=Z,42µm,19.0s
EFI     East Falkland      106.95 153   PFAKE             15 45 10.0 +7.2
EFI                                     LR      LR
        comp=Z,38µm,22.0s
JFWS    Jewell Farm        107.29  48   PFAKE             15 45 20.0  +16
JFWS                                    LR      LR
        comp=Z,26µm,20.0s
COWI    Conover            107.97  45   PFAKE             15 45 20.0  +15
COWI                                    LR      LR
        comp=Z,33µm,19.0s
HDIL    Hopedale           108.04  51   PFAKE             15 45 20.0  +15
HDIL                                    LR      LR
        comp=Z,43µm,22.0s
ARU     Arti               108.72 326   PFAKE             15 45 20.0  +14
ARU                                     LR      LR
        comp=Z,30µm,21.0s
ARU     Arti               108.72 326   P       Pdif      15 41 05.5 +4.7
ARU                                     SS      SS        16 00 47.1 -1.0
ARU                                     MLR     MLR
        comp=Z,50µm,20.0s
AB31    Akbulak array      108.75 318   P       Pdif      15 40 58.9 -2.2
AB31                                    pmax    pmax
        comp=Z,1.0nm,0.8s
AKTO    Aktyubinsk         109.86 320   PKiKP   PKiKP     15 45 08.3 +0.1
        comp=Z,3.0nm,0.9s,baz=34,slow=3.6,SNR=2.0
AKTO                                    PKKPbc  PKKPbc    15 56 11.2 -1.7
        comp=Z,1.0nm,0.6s,baz=274,slow=4.4,SNR=2.1
BRAL    Brewton            109.88  61   PFAKE             15 45 20.0  +11
BRAL                                    LR      LR
        comp=Z,45µm,21.0s
JTS     JuntasAbangare     110.27  83   PFAKE             15 45 20.0  +10
JTS                                     LR      LR
        comp=Z,33µm,20.0s
KBS     Kingsbay           110.81 355   PFAKE             15 45 20.0  +11
KBS                                     LR      LR
        comp=Z,48µm,22.0s
GEYT    Alibeck            110.81 306   Pdiff   Pdif      15 41 09.9 -0.7
        comp=Z,0.6nm,0.4s,baz=212,slow=1.4,SNR=2.1
GEYT                                    PKiKP   PKiKP     15 45 10.4  0.0
        comp=Z,4.2nm,0.9s,baz=27,slow=10.0,SNR=5.3
GEYT                                    PP      PP        15 45 48.9 +0.9
        comp=Z,14nm,0.9s,baz=103,slow=1.9,SNR=7.1
GEYT                                    PKKPbc  PKKPbc    15 56 08.6 -0.9
        comp=Z,2.5nm,0.4s,baz=235,slow=4.8,SNR=4.8
GLMI    Grayling           111.24  46   PFAKE             15 45 20.0 +9.0
GLMI                                    LR      LR
        comp=Z,57µm,19.0s
HSPB    Hornsund (broa     112.12 353  eP       Pdif      15 41 33.1  +18
HSPB                                   e                  15 52 23.7
HSPB                                   eSS      SS        16 01 44.1  +12
AAM     Ann Arbor          112.18  49   PFAKE             15 45 20.0 +7.2
AAM                                     LR      LR
        comp=Z,45µm,19.0s
HOPE    Hope Point         112.30 166   PFAKE             15 45 20.0 +7.2
HOPE                                    LR      LR
        comp=Z,24µm,20.0s
LCO     Las Campanas       112.33 128   PFAKE             15 45 30.0  +16
LCO                                     LR      LR
        comp=Z,24µm,22.0s
ABPO    Ambohimpanom       112.86 244   PFAKE             15 45 30.0  +15
ABPO                                    LR      LR
        comp=Z,16µm,19.0s
ACSO    Alum Creek Sta     112.87  51   PFAKE             15 45 30.0  +16
ACSO                                    LR      LR
        comp=Z,48µm,19.0s
GOGA    Godfrey            112.90  58   PFAKE             15 45 30.0  +16
GOGA                                    LR      LR
        comp=Z,64µm,20.0s
KIRV    Kirov              113.04 329   PKiKP   PKiKP     15 45 13.4 -0.5
        comp=Z,5.0nm,0.6s,baz=117,slow=3.6,SNR=2.8
NNA     Nana               113.44 108   PFAKE             15 45 30.0  +14
NNA                                     LR      LR
        comp=Z,14µm,20.0s
TRQA    Tornquist          113.72 140   PFAKE             15 45 30.0  +14
TRQA                                    LR      LR
        comp=Z,14µm,20.0s
PRGR    Permogore          113.78 333  i PKIKP  PKiKP     15 45 12.0 -3.3
PRGR                                    pmax    pmax
        comp=Z,10.0nm,0.8s
DAG     Danmarks Havn      114.09   1  i P      PKiKP     15 45 35.0  +19
LVZ     Lovozero           114.84 342   PFAKE             15 45 30.0  +13
LVZ                                     LR      LR
        comp=Z,22µm,21.0s
OTAV    Otavalo            114.97  95   PFAKE             15 45 30.0  +10
OTAV                                    LR      LR
        comp=Z,21µm,19.0s
BCIP    Isla Barro Col     115.12  85   PFAKE             15 45 30.0  +11
BCIP                                    LR      LR
        comp=Z,16µm,20.0s
BLA     Blacksburg         115.15  54   PFAKE             15 45 30.0  +11
BLA                                     LR      LR
        comp=Z,42µm,20.0s
APA     Apatity            115.42 342⇓iPKIKP    PKPdf     15 45 21.4 +3.1
APA                                    i                  15 52 06.0
APA                                    i SS     SS        16 02 13.0 -3.3
APA                                     pmax    pmax
        comp=Z,14nm,1.0s
NHSC    New Hope           115.67  59   PFAKE             15 45 30.0  +10
NHSC                                    LR      LR
        comp=Z,57µm,20.0s
TMCR    Tamitsa            115.75 337  ePKIKP   PKPdf     15 45 28.6  +10
TMCR                                    pmax    pmax
        comp=Z,48nm,1.4s
KEV     Kevo               115.76 345   PFAKE             15 45 30.0  +11
KEV                                     LR      LR
        comp=Z,49µm,20.0s
ARCES   ARCESS Array B     116.29 346   PKP     PKiKP     15 45 18.6 -1.4
        comp=Z,4.9nm,0.6s,baz=72,slow=1.6,SNR=38
ARCES                                   PKKPbc  PKKPbc    15 55 48.8 -3.0
        comp=Z,1.5nm,0.6s,baz=201,slow=2.0,SNR=6.7
ARE0    ARCESS Array S     116.29 346  ePKPdf   PKiKP     15 45 19.4 -0.5
SUMG    Summit             116.62   8  i P      PKiKP     15 45 44.8  +24
LVC     Limon Verde        116.62 122   PKP     PKPdf     15 45 21.7 -0.8
LVC                                     PKKPbc  PKKPbc    15 55 47.9 -1.9
LVC                                     LR      LR
        comp=Z,34µm,21.0s
LVC     Limon Verde        116.62 122   PKP     PKPdf     15 45 21.7 -0.8
        comp=Z,2.1nm,0.7s,baz=243,slow=4.5,SNR=3.4
LVC                                     PKKPbc  PKKPbc    15 55 47.9 -1.9
        comp=Z,2.7nm,0.5s,baz=93,slow=3.7,SNR=4.8
KLMR    Klimovskoe         116.78 334  eP       Pdif      15 41 38.4 +1.9
KLMR                                   e                  15 45 21.2
KLMR                                   e                  15 46 39.0
KLMR                                    pmax    pmax
        comp=Z,5.0nm,1.0s
KLMR    Klimovskoe         116.78 334  ePdif    Pdif      15 41 38.4 +1.9
KLMR                                    AMP               15 41 44.6
        comp=Z,5.0nm,1.1s
KLMR                                   ePKPdf   PKiKP     15 45 21.3 +0.2
KLMR                                   ePP      PP        15 46 39.1  +10
KLMR                                   ePKKPab  PKKPbc    15 55 50.2 +0.4
CNNC    Cliffs of the      117.38  56   PFAKE             15 45 30.0 +7.0
CNNC                                    LR      LR
        comp=Z,47µm,21.0s
CBN     Corbin Frederi     117.43  53   PFAKE             15 45 30.0 +6.9
CBN                                     LR      LR
        comp=Z,58µm,20.0s
BINY    Binghamton         117.83  48   PFAKE             15 45 40.0  +16
BINY                                    LR      LR
        comp=Z,38µm,21.0s
MTDJ    Mount Denham       118.18  75   PFAKE             15 45 40.0  +15
MTDJ                                    LR      LR
        comp=Z,15µm,20.0s
MAK     Makhachkala        118.24 313  eP       Pdif      15 41 36.3 -7.1
MAK                                    e                  15 46 36.0
MAK                                    eSS      SS        16 03 04.4  +10
MAK                                    eSSS     SSS       16 07 12.0
MAK                                     pmax    pmax
        comp=Z,57nm,0.6s
MAK                                     pmax    pmax
        comp=Z,65nm,0.6s
LONY    Lake Ozonia        118.32  45   PFAKE             15 45 40.0  +15
LONY                                    LR      LR
        comp=Z,36µm,20.0s
SFJD    Kangerlussuaq      118.81  16   PFAKE             15 45 40.0  +15
SFJD                                    LR      LR
        comp=Z,35µm,19.0s
VRH     Novokhopyorsk      119.69 323  ePKIKP   PKiKP     15 45 27.9 +0.9
VRH                                    e                  15 46 45.5
VRH                                     pmax    pmax
        comp=Z,10.0nm,0.8s
VRH                                     MLR     MLR
        comp=Z,32µm,17.0s
SCHQ    Schefferville      119.69  32   PKP     PKPdf     15 45 26.2 -0.8
        comp=Z,2.7nm,0.6s,baz=247,slow=2.1,SNR=5.1
SCHQ                                    PKKPbc  PKKPab    15 55 37.9 -0.9
        comp=Z,9.9nm,0.8s,baz=109,slow=3.6,SNR=6.3
ROSC    El Rosal           119.88  91   PKP     PKPdf     15 45 28.2 -0.8
        comp=Z,8.9nm,0.5s,baz=347,slow=7.6,SNR=2.6
LPAZ    La Paz             119.90 116  ePKPdf   PKPdf     15 45 28.4 -0.8
LPAZ    La Paz             119.90 116  ePKIKP   PKPdf     15 45 28.4 -0.8
LPAZ    La Paz             119.90 116   PKP     PKPdf     15 45 28.1 -1.1
        comp=Z,2.0nm,0.6s,baz=302,slow=4.8,SNR=5.9
MOS     Moscow             120.05 329  i PKIKP  PKPdf     15 45 27.0 -0.5
MOS                                    ePPP     PPP       15 49 31.8
MOS                                    ePS      PS        15 56 43.2 +0.8
MOS                                    eSS      SS        16 03 26.5 +9.5
TBLG    Delisi             120.51 312  eP       PKiKP     15 45 42.3  +13
LPSR    Galich'ya Gora     120.74 326  ePKIKP   PKiKP     15 45 32.4 +3.3
LPSR                                   e                  15 46 55.4
LPSR                                    pmax    pmax
        comp=Z,40nm,1.2s
LPSR                                    MLR     MLR
        comp=Z,50µm,19.0s
GOF     Gofitskoye         120.84 316  ePKIKP   PKiKP     15 45 33.6 +4.1
GOF                                     pmax    pmax
        comp=Z,30nm,1.3s
ZEI     Tsey               120.85 314  i PKIKP  PKiKP     15 45 30.2 +0.3
ZEI                                     pmax    pmax
        comp=Z,21nm,1.3s
GNI     Garni              120.86 310  eP       PKiKP     15 45 35.9 +6.0
GNI     Garni              120.86 310   PKP     PKPdf     15 45 29.0 -0.8
GNI                                    ePKPdf   PKiKP     15 45 29.3 -0.6
GNI                                     LR      LR
        comp=Z,29µm,22.0s
GNI     Garni              120.86 310⇑iPKIKP    PKPdf     15 45 27.2 -2.6
GNI                                     pmax    pmax
        comp=Z,136nm,1.7s
GNI     Garni              120.86 310   PKP     PKPdf     15 45 29.0 -0.8
        comp=Z,5.1nm,0.6s,baz=70,slow=5.2,SNR=1.9
OBN     Obninsk            120.88 329   PKP     PKPdf     15 45 28.7 -0.4
OBN                                     LR      LR
        comp=Z,20µm,20.0s
OBN     Obninsk            120.88 329  i PKIKP  PKPdf     15 45 28.7 -0.4
OBN                                    i                  15 45 41.0
OBN                                     pmax    pmax
        comp=Z,17nm,1.1s
OBN     Obninsk            120.88 329   PKP     PKPdf     15 45 28.7 -0.4
        comp=Z,2.4nm,0.3s,baz=207,slow=2.3,SNR=5.1
VORR    Voronezh           120.96 325   PKIKP   PKPdf     15 45 25.0 -4.4
VORR                                    pmax    pmax
        comp=Z,250nm,2.6s
VSR     Storozhevoye       121.17 324  ePKIKP   PKPdf     15 45 28.1 -1.7
VSR                                    e                  15 46 54.1
VSR                                     pmax    pmax
        comp=Z,30nm,1.4s
VSR                                     MLR     MLR
        comp=Z,39µm,19.0s
KBZ     Khabaz             121.31 315   PKP     PKPdf     15 45 29.7 -0.6
        comp=Z,2.0nm,0.9s,baz=142,slow=3.1,SNR=3.0
KVAR    Kislovodsk Arr     121.39 315   PKP     PKiKP     15 45 30.9 +0.1
        comp=Z,1.4nm,0.4s,baz=198,slow=3.2,SNR=1.7
KIV     Kislovodsk         121.40 315   PFAKE             15 45 40.0 +9.2
KIV                                     LR      LR
        comp=Z,54µm,22.0s
KIV     Kislovodsk         121.40 315  eP       Pdif      15 41 52.6 -5.0
KIV                                    i                  15 45 26.5
KIV                                    e                  15 46 56.5
KIV                                    ePS      PS        15 56 48.6 -6.6
KIV                                    eSS      SS        16 03 30.7 -4.8
KIV                                     pmax    pmax
        comp=Z,18nm,1.1s
KIV                                     MLR     MLR
        comp=Z,48µm,23.0s
CLDR    Caldiran           121.69 309  eP       PKiKP     15 45 45.1  +13
PKME    Peaks-Kenny Pk     121.77  43   PFAKE             15 45 40.0 +8.7
PKME                                    LR      LR
        comp=Z,29µm,20.0s
FINES   FINESS Array B     121.77 339   PKP     PKPdf     15 45 29.4 -1.3
        comp=Z,2.7nm,0.6s,baz=12,slow=2.3,SNR=11
FINES                                   PKKPbc  PKKPab    15 55 30.0 +0.4
        comp=Z,3.7nm,1.0s,baz=225,slow=2.4,SNR=3.4
PQI     Presque Isle       122.15  41  ePKPdf   PKPdf     15 45 31.8  0.0
VANB    Van                122.22 309  eP       PKiKP     15 45 51.6  +19
AGRB    Hanur-Agry         122.30 310  eP       PKiKP     15 45 38.9 +6.1
CUKT    Cukurca            122.33 307  eP       PKiKP     15 45 44.7  +12
AKDM    Akdamar-Van        122.59 309  eP       PKiKP     15 45 36.9 +3.5
BCA     Borcka             122.84 313  eP       PKiKP     15 45 36.6 +3.0
KOPR    Koprukoy-ERZUR123.05 311  eP       PKiKP     15 45 41.3 +7.0
SIRT    Sirnak             123.18 308  eP       PKiKP     15 45 53.7  +19
BATG    Bathurst New B     123.19  40  ePKPdf   PKPdf     15 45 32.4 -1.5
GURO    Guroymak-BITLI     123.26 309  eP       PKiKP     15 45 36.1 +1.4
VSU     Vasula             123.49 336⇑iPKIKP    PKPdf     15 45 33.5 -0.5
VSU     Vasula             123.49 336  eP       PKiKP     15 45 39.7 +5.4
VSU                                     IAmb    IAmb      15 46 00.4
        comp=Z,128nm,1.1s
SOC     Sochi              123.56 315  i PKIKP  PKiKP     15 45 40.5 +5.6
SOC                                     MLR     MLR
        comp=Z,29µm,17.0s
CPUP    Villa Florida      123.84 132  ePKPdf   PKPdf     15 45 35.0 -0.8
CPUP    Villa Florida      123.84 132   PKP     PKPdf     15 45 34.9 -0.9
        comp=Z,6.0nm,0.9s,baz=275,slow=2.5,SNR=5.4
SVAN    Silvan-Diyarba     123.99 309  eP       PKiKP     15 45 42.7 +6.7
SDV     Santo Domingo      124.09  87  ePKPdf   PKPdf     15 45 35.4 -1.4
SDV                                     LR      LR
        comp=Z,16µm,20.0s
SDDR    Presa de Saban     124.13  74   PFAKE             15 45 50.0  +13
SDDR                                    LR      LR
        comp=Z,40µm,20.0s
BNGB    Bingl              124.18 310  eP       PKPdf     15 45 34.6 -1.6
GRTK    Grand Turk         124.25  71   PFAKE             15 45 50.0  +13
GRTK                                    LR      LR
        comp=Z,20µm,21.0s
KTUT    Trabzon            124.31 312  i P      PKiKP     15 45 53.1  +17
ANN     Anapa              124.69 317  i P      Pdif      15 42 20.0 +7.9
ANN                                    e                  15 47 29.9
ANN                                    eSS      SS        16 04 05.1  -12
ANN                                    eSSS     SSS       16 08 45.6
ANN                                     pmax    pmax
        comp=Z,63nm,1.2s
ANN                                     MLR     MLR
        comp=Z,53µm,23.0s
ANN                                     MLR     MLR
        comp=N,32µm,23.0s
MAZI    Mazidag            124.74 308  eP       PKiKP     15 45 38.3 +0.7
PTK     Pertek             125.17 310  eP       PKiKP     15 45 39.9 +1.3
IZAR    Zarasai            125.43 333  eP       PKiKP     15 45 43.0 +4.8
IZAR                                    IAmb    IAmb      15 46 06.6
        comp=Z,31nm,1.1s
MICGM   Minsk              125.45 332  ePKP     PKiKP     15 45 39.0 +0.7
MICGM                                  ePP      PP        15 47 30.0 +1.5
MICGM                                  ePKS     PKSdf     15 49 08.0 -6.3
MICGM                                  eSKS     SKSac     15 52 16.0  -25
MICGM                                  eSKKS    SKKSac    15 53 58.0  -28
MICGM                                  eSKKKS             15 55 22.0
MICGM                                  eSS      SS        16 04 46.0  +21
MICGM                                  eSSS     SSS       16 09 34.0
MICGM                                  eLQ      LQ        16 18 16.0
MICGM                                   LQM               16 28 32.0
        comp=E,96nm,28.0s
MICGM                                   LQM               16 28 38.0
        comp=E,54nm,26.0s
MICGM                                   LQM               16 28 44.0
        comp=N,8.6nm,28.0s
MICGM                                   LQM               16 28 50.0
        comp=N,50nm,26.0s
MICGM                                  eLR      LR        16 37 06.0
MICGM                                   LRM     MLR       16 43 12.0
        comp=N,36nm,20.0s
MICGM                                   LRM     MLR       16 43 16.0
        comp=N,26nm,18.0s
MICGM                                   LRM     MLR       16 43 24.0
        comp=E,53nm,24.0s
MICGM                                   LRM     MLR       16 43 28.0
        comp=E,33nm,20.0s
MICGM                                   LRM     MLR       16 43 32.0
        comp=Z,92nm,20.0s
MICGM                                   LRM     MLR       16 43 36.0
        comp=Z,75nm,18.0s
MNK     Minsk              125.45 332  ePKIKP   PKiKP     15 45 39.0 +0.7
MNK                                    e                  15 47 30.0
MNK                                    eSS      SS        16 04 46.0  +21
IDID    Didziasalis        125.48 333  eP       PKiKP     15 45 39.0 +0.7
IDID                                    IAmb    IAmb      15 46 05.6
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              comp=Z,27nm,0.8s
ISAL   Salakas            125.59 333  eP        PKiKP     15 45 38.4  -0.2
ISAL                                   IAmb     IAmb      15 46 05.8
              comp=Z,26nm,1.1s
SUR    Sutherland         125.70 216  ePKPdf    PKPdf     15 45 39.4  -0.1
SUR                                    LR       LR
              comp=Z,64µm,19.0s
NACGM  Naroch             125.72 332  ePKIKP    PKiKP     15 45 41.0  +2.2
NACGM                                 ePKHKP    PKPpre    15 45 50.0
NACGM                                 ePP       PP        15 47 44.0  +14
NACGM                                 ePPP      PPP       15 50 11.0
NACGM                                 eSKS      SKSac     15 52 16.0  -26
NACGM                                 eSKKS     SKKSac    15 54 40.0  +13
NACGM                                 eSKSP               15 57 18.0
NACGM                                 ePS       PS        15 57 40.0 +7.5
NACGM                                 eSS       SS        16 04 56.0  +27
NACGM                                 eSSS      SSS       16 09 40.0
NACGM                                 eLQ       LQ        16 20 30.0
NACGM                                 eLR       LR        16 28 04.0
NACGM                                  LRM      MLR       16 41 20.0
              comp=Z,91nm,22.0s
SLIT   Slitere, Latvi     125.80 337  eP        PKiKP     15 45 48.3 +9.4
SLIT                                   IAmb     IAmb      15 46 11.9
              comp=Z,628nm,1.5s
BORG   Borgarnes          125.97   4   PFAKE              15 45 50.0  +11
BORG                                   LR       LR
              comp=Z,9µm,22.0s
URFA   Urfa               125.99 309  eP        PKiKP     15 45 46.2 +6.1
SIV    San Ignacio        126.17 119   PKP      PKPdf     15 45 39.3  -1.2
              comp=Z,3.0nm,0.8s,baz=136,slow=1.1,SNR=7.9
RSDY   Resadiye-TOKAT     126.26 312  eP        PKPdf     15 45 33.8  -6.2
NC303  NORSAR Array S     126.46 345  ePKPdf    PKPdf     15 45 39.4  -0.3
SVSK   Karacayir          126.65 312  eP        PKiKP     15 45 42.4  +1.2
NB2    NORSAR Subarra     126.66 345   PKPdf    PKPdf     15 45 39.5  -0.7
              comp=Z,65nm,1.2s,baz=35,slow=2.0
NB2    NORSAR Subarra     126.66 345   PKPdf    PKPdf     15 45 39.5  -0.7
              baz=35,slow=2.0
NOA    NORSAR Array B     126.66 345   PKP      PKPdf     15 45 39.3  -0.8
              comp=Z,2.1nm,0.7s,baz=34,slow=2.0,SNR=14
DARE   Darende-Malaty     126.70 310  eP        PKPdf     15 45 39.9  -1.1
HFS    Hagfors            126.76 343   PKP      PKPdf     15 45 39.4  -0.9
              comp=Z,7.1nm,0.8s,baz=64,slow=3.4,SNR=6.1
SIM    Simferopol'        126.81 319  i PKIKP   PKiKP     15 45 42.0  +0.6
SIM                                   e                   15 57 37.0
SIM                                   e                   15 59 12.0
SIM                                    pmax     pmax
              comp=Z,3µm,10.7s
SIM                                    MLR      MLR
              comp=Z,25µm,16.0s
NC602  NORSAR Array S     126.83 345  ePKPdf    PKPdf     15 45 40.5   0.0
TOKT   Tokat              126.85 313  eP        PKiKP     15 45 57.9  +16
AKASG  Malin Array Be     126.95 327   PKP      PKPdf     15 45 40.0  -0.9
              comp=Z,2.0nm,0.6s,baz=54,slow=2.2,SNR=12
AKBB   Malin Array Si     126.95 327  ePKPdf    PKPdf     15 45 39.2  -1.7
AKBB   Malin Array Si     126.95 327  ePKIKP    PKPdf     15 45 39.2  -1.7
KVT    Kavak              126.95 314  eP        PKiKP     15 45 52.9  +11
KIEV   Kiev               126.96 327  ePKPdf    PKPdf     15 45 39.2  -1.7
KIEV                                   LR       LR
              comp=Z,43µm,20.0s
KIEV   Kiev               126.96 327⇑iPKIKP    PKPdf     15 45 39.4  -1.6
KIEV                                   MLR      MLR
              comp=Z,41µm,19.0s
AK11   Malin Array Si     126.99 327  ePKPdf    PKPdf     15 45 41.1  +0.1
PBUR   Paburg             127.06 336  eP        PKiKP     15 45 43.7  +2.2
PBUR                                   IAmb     IAmb      15 46 09.4
              comp=Z,107nm,0.8s
SNOP   Sinop              127.21 315  eP        PKiKP     15 45 51.9  +10
GAZ    Gaziantep          127.30 309  eP        PKiKP     15 45 44.0  +1.3
DIKM   Dikmen             127.31 315  eP        PKiKP     15 45 51.4 +8.9
KMRS   Kahramanmaras      127.44 309  eP        PKiKP     15 45 43.3  +0.4
LBTB   Lobatse            127.53 227  ePKPdf    PKPdf     15 45 43.1  +0.1
LBTB   Lobatse            127.53 227  ePKIKP    PKPdf     15 45 43.1  +0.1
KMBO   Kilima Mbogo       127.80 260   PKP      PKPdf     15 45 43.9  -0.1
KMBO                                   LR       LR
              comp=Z,27µm,20.0s
KMBO   Kilima Mbogo       127.80 260c iPKIKP    PKiKP     15 45 44.5  -0.1
KMBO                                   pmax     pmax
              comp=Z,5.0nm,0.9s
KMBO   Kilima Mbogo       127.80 260  i P       PKiKP     15 45 47.8  +3.2
KMBO   Kilima Mbogo       127.80 260   PKP      PKPdf     15 45 43.9  -0.1
              comp=Z,4.7nm,1.0s,baz=83,slow=2.4,SNR=8.2
BNN    Bunyan             127.83 311   P        PKPdf     15 45 43.0  -0.2
SUW    Suwalki            127.90 333  ePKP      PKiKP     15 45 48.6  +5.4
SUW                                   ePP       PP        15 48 06.8  +22
SUW                                   ePPP      PPP       15 50 39.5
SUW                                   eSKKSac   SKKSac    15 54 37.7  -3.5
SUW                                   eSS       SS        16 05 18.0  +22
SUW                                    LME                16 24 59.0
              comp=Z,110µm,48.1s
SUW    Suwalki            127.90 333  ePKIKP    PKiKP     15 45 48.6  +5.4
SUW                                   eSS       SS        16 05 18.0  +22
MATP   Matopo             128.00 233  i P       PKiKP     15 45 44.3  -0.3
MATP   Matopo             128.00 233  i P       PKiKP     15 45 44.3  -0.3
KONO   Kongsberg          128.27 345⇑iPKIKP    PKPdf     15 45 42.1  -1.1
KONO                                   pmax     pmax
              comp=Z,22nm,1.7s
KONO                                   MLR      MLR
              comp=Z,29µm,20.0s
KOZT   Kozan              128.27 309  eP        PKiKP     15 45 50.3  +5.8
TAHT   Tahtakopru-Hat     128.31 308  eP        PKiKP     15 45 47.7  +3.1
CEYT   Ceyhan             128.47 309  eP        PKiKP     15 45 47.4  +2.5
KARA   Karaisali          128.92 309  eP        PKiKP     15 45 49.4  +3.6
SJG    San Juan           129.00  76  ePKPdf    PKPdf     15 45 45.7  -0.1
SJG                                    LR       LR
              comp=Z,16µm,20.0s
KIS    Kishinev           129.14 323  ePKP      PKPdf     15 45 43.0  -2.2
KIS    Kishinev           129.14 323  i PP      PP        15 48 00.0 +6.9
              comp=Z,4µm,20.0s
KIS    Kishinev           129.14 323  i PKS     PKSdf     15 49 20.0  -1.6
KIS                                   eSKS      SKSac     15 52 30.0  -22
KIS                                   eSKKS     SKKSac    15 55 00.0  +11
KIS    Kishinev           129.14 323  ePKIKP    PKPdf     15 45 43.0  -2.2
KIS                                   i                   15 46 03.0
KIS                                   i                   15 48 00.0
KIS                                   i PS      PKKSdf    15 59 30.0  +0.1
KIS                                    pmax     pmax
              comp=Z,4µm,20.0s
KIS                                    MLR      MLR
              comp=Z,36µm,22.0s
BR131  Keskin Array S     129.15 313  ePKPdf    PKPdf     15 45 45.8  +0.1
BRTR   Keskin Array B     129.15 313c iPKIKP    PKPdf     15 45 45.5  -0.2
BRTR                                   pmax     pmax
              comp=Z,4.0nm,0.8s
BRTR   Keskin Array B     129.15 313   PKP      PKPdf     15 45 43.5  -2.2
              comp=Z,2.6nm,0.9s,baz=139,slow=3.5,SNR=8.5
BRTR                                   PP       PP        15 47 54.9  +1.1
              comp=Z,3.8nm,1.1s,baz=88,slow=3.4,SNR=2.1
HUMP   Col San Antoni     129.29  75  ePKPdf    PKPdf     15 45 45.5  -0.8
ANTO   Ankara             129.70 313  ePKPdf    PKiKP     15 45 47.9  +0.5
ANTO                                   LR       LR
              comp=Z,24µm,22.0s
ANTO   Ankara             129.70 313⇑iP        PKPdf     15 45 46.4  -0.3
ANTO   Ankara             129.70 313 ⇑PKIKP    PKPdf     15 45 46.4  -0.3
MMAI   Mount Meron Ar     129.82 304   PKP      PKPdf     15 45 46.3  -0.7
              baz=64,slow=3.4
MMAI                                   SKPbc    SKPbc     15 49 09.9  +1.7
              comp=Z,14nm,1.0s,baz=77,slow=3.6,SNR=3.9
LVV    L'vov              130.18 329  i PKIKP   PKiKP     15 45 49.2  +1.2
LVV                                   i SS      SS        16 05 38.5  +14
CFR    Carcaliu           130.47 322⇑iP        PKPdf     15 45 47.3  -0.5
CFR    Carcaliu           130.47 322 ⇑PKIKP    PKPdf     15 45 47.3  -0.5
BIZ    Bicaz              130.74 324⇑iP        PKiKP     15 45 49.0  -0.2
BURAR  Bucovina Array     130.86 326⇑iP        PKPdf     15 45 41.5  -7.1
BURAR  Bucovina Array     130.86 326 ⇑PKIKP    PKPdf     15 45 41.5  -7.1
LSZ    Lusaka             130.91 239  ePKPdf    PKPdf     15 45 48.3  -1.4
LSZ                                    PKP      PKPdf     15 45 49.0  -0.7
LSZ                                    SKPbc    SKPab     15 49 14.9  +1.9
LSZ                                    LR       LR
              comp=Z,58µm,20.0s
LSZ    Lusaka             130.91 239   PKIKP    PKPdf     15 45 49.0  -0.7
LSZ                                    pmax     pmax
              comp=N,25nm,1.1s
LSZ    Lusaka             130.91 239   PKP      PKPdf     15 45 49.0  -0.7
              baz=127,slow=1.5
LSZ                                    SKPbc    SKPab     15 49 14.9  +1.9
              comp=N,25nm,1.1s,baz=116,slow=5.0,SNR=6.4
GKP    Gorka Klasztor     130.94 336  ePKP      PKiKP     15 45 53.3  +4.0
GKP                                   ePP       PP        15 48 20.2  +16
GKP                                   eSKS      SKSdf     15 52 52.2  -6.4
GKP                                   eSS       SS        16 06 08.3  +35
GKP                                    LMZ      LR        16 35 28.2
              comp=N,66µm,27.8s
GKP    Gorka Klasztor     130.94 336  ePKIKP    PKiKP     15 45 53.3  +4.0
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GKP                                   e                   15 52 52.2
EIL    Elat               130.96 300   SKPbc    SKPab     15 49 14.4  +1.8
              comp=N,15nm,1.1s,baz=78,slow=6.5,SNR=2.1
VRI    Vrincioaia         130.96 323⇑iP        PKiKP     15 46 00.1  +10
VRI    Vrincioaia         130.96 323 ⇑PKIKP    PKiKP     15 46 00.1  +10
KWP    Kalwaria Pacla     130.97 329  ePKP      PKiKP     15 45 55.1  +5.6
KWP                                   ePP       PP        15 48 10.1  +5.3
KWP                                   eSKKSac   SKKSac    15 54 50.1  -10
KWP                                   eSS       SS        16 05 54.8  +21
KWP                                    LMZ      LR        16 31 27.6
              comp=N,68µm,36.8s
KWP    Kalwaria Pacla     130.97 329  ePKIKP    PKiKP     15 45 55.1  +5.6
KWP                                   e                   15 48 10.1
KWP                                   eSS       SS        16 05 54.8  +21
OZUR                      131.39 324⇑iP        PKiKP     15 45 53.2  +2.6
RGN    Rugen              131.43 339  eP        PKiKP     15 45 53.0  +2.7
RGN                                    IAmb     IAmb      15 46 14.5
              comp=Z,48nm,0.7s
MLR    Muntele Rosu       131.63 323⇑iP        PKPdf     15 45 43.9  -6.3
MLR    Muntele Rosu       131.63 323 ⇑PKIKP    PKPdf     15 45 43.9  -6.3
MLR    Muntele Rosu       131.63 323   PKP      PKPdf     15 45 49.2  -1.0
              comp=Z,3.3nm,0.8s,baz=315,slow=2.9,SNR=4.7
DOPR   Dopca              131.69 324⇑iP        PKPdf     15 45 49.3  -0.9
UZH    Uzhgorod           131.81 328  ePKHKP    PKPpre    15 45 33.0
UZH                                   i                   15 45 51.0
TRPA   Tarpa              132.00 328⇑iP        PKiKP     15 45 54.4  +2.8
TRPA   Tarpa              132.00 328  ePKiKP    PKiKP     15 45 59.0  +7.4
TRPA                                  ePP       PP        15 48 23.1  +12
TRPA                                ⇓eSS       SS        16 05 55.1 +8.5
OJC    Ojcow              132.00 331  ePKP      PKPdf     15 45 51.0  +0.4
OJC                                   ePP       PP        15 48 10.7  -0.7
OJC                                   eSS       SS        16 05 41.5  -5.0
OJC                                    LMZ      LR        16 34 05.8
              comp=Z,44µm,25.7s
OJC    Ojcow              132.00 331  ePKIKP    PKPdf     15 45 51.0  +0.4
OJC                                   e                   15 48 10.7
OJC                                   eSS       SS        16 05 41.5  -5.0
OJC                                    MLR      MLR
              comp=Z,44µm,25.7s
VOIR                      132.18 323⇓iP        PKiKP     15 45 54.9  +2.6
VOIR                      132.18 323 ⇓PKIKP    PKiKP     15 45 54.9  +2.6
TRIS   Tristan da Cun     132.27 182   PFAKE              15 46 00.0 +7.4
TRIS                                   LR       LR
              comp=Z,35µm,21.0s
NIE    Niedzica           132.30 330  ePKP      PKiKP     15 45 54.8  +2.5
NIE                                   ePP       PP        15 48 13.4   0.0
NIE                                   eSKS      SKSdf     15 53 11.7  +10
NIE                                   eSS       SS        16 06 11.1  +21
NIE                                    LMZ      LR        16 32 35.6
              comp=Z,22µm,32.6s
NIE    Niedzica           132.30 330  ePKIKP    PKiKP     15 45 54.8  +2.5
NIE                                   e                   15 48 13.4
NIE                                   eSS       SS        16 06 11.1  +21
ARR    Arges              132.47 324⇓iP        PKPdf     15 45 39.1  -13
ITZ    Itezhi-Tezhi       132.47 237  i P       PKiKP     15 46 17.8  +24
ITZ                                  ⇑i                   15 55 49.6
PTGA   Pitinga            132.73 101  ePKPdf    PKPdf     15 45 52.0  -1.1
PTGA                                   LR       LR
              comp=Z,14µm,20.0s
PTGA   Pitinga            132.73 101   PKP      PKPdf     15 45 51.9  -1.1
              comp=Z,4.0nm,0.6s,baz=190,slow=1.3,SNR=9.5
LTVH   Ltavrtes, Hu       132.80 327  ePKiKP    PKiKP     15 45 56.0  +2.7
LTVH                                  ePP       PP        15 48 31.0  +14
LTVH                                  eSS       SS        16 06 19.1  +23
RUE    Ruedersdorf        132.90 337  eP        PKiKP     15 45 57.6  +4.3
RUE                                    IAmb     IAmb      15 46 21.7
              comp=Z,50nm,1.1s
OKC    Ostrava-Krasne     133.03 332  ePP       PP        15 48 27.0 +9.0
OKC                                    AMS      AMS       16 49 10.0
              comp=Z,29µm,17.3s
BPA    Boggy Peak         133.11  77  eP        PKiKP     15 46 07.1  +12
KSP    Ksiaz              133.13 334  ePKP      PKiKP     15 45 53.6  -0.3
KSP                                   ePP       PP        15 48 13.7  -4.9
KSP                                   eSS       SS        16 06 22.1  +22
KSP                                    LMZ      LR        16 38 22.3
              comp=Z,38µm,26.5s
KSP    Ksiaz              133.13 334  ePKIKP    PKiKP     15 45 53.6  -0.3
KSP                                   e                   15 48 13.7
KSP                                   eSS       SS        16 06 22.1  +22
KSP                                    MLR      MLR
              comp=Z,38µm,26.5s
ANWB   Willy Bob          133.16  76   PFAKE              15 46 10.0  +15
ANWB                                   LR       LR
              comp=Z,15µm,20.0s
ANWB   Willy Bob          133.16  76  eP        PKiKP     15 46 15.7  +21
GRGR   Grenville          133.19  84   PFAKE              15 46 10.0  +15
GRGR                                   LR       LR
              comp=Z,15µm,19.0s
TPP    Pointe-a-Pierr     133.25  86  eP        PKiKP     15 46 07.9  +13
MORC   Moravsky Berou     133.35 332⇑iP        PKPpre    15 45 43.6
MORC   Moravsky Berou     133.35 332 ⇑PKHKP    PKPpre    15 45 43.6
MORC   Moravsky Berou     133.35 332  ePKP      PKiKP     15 45 54.2  -0.2
DPC    Dobruska-Polom     133.48 334  ePP       PP        15 48 32.8  +12
DPC                                   ex        x         16 00 38.6
DPC                                    AMS      AMS       16 44 20.0
              comp=Z,38µm,18.5s
BBL    Barber's Block     133.49  79  eP        PKiKP     15 46 02.9  +7.3
PSZ    Piszkesteto        133.50 329⇑iP        PKiKP     15 45 57.4  +2.6
PSZ    Piszkesteto        133.50 329 ⇑PKIKP    PKiKP     15 45 57.4  +2.6
PSZ    Piszkesteto        133.50 329  ePKiKP    PKiKP     15 45 57.0  +2.2
PSZ                                   ePP       PP        15 48 34.0  +13
PSZ                                   eSS       SS        16 06 26.1  +21
UPC    Upice              133.50 334  ePKPDF    PKiKP     15 45 55.1  +0.4
UPC                                   ePP       PP        15 48 29.9 +9.0
UPC                                   eSS       SS        16 06 27.3  +23
UPC                                    AMS      AMS       16 44 50.0
              comp=Z,46µm,23.5s
UPC    Upice              133.50 334  ePKIKP    PKiKP     15 45 55.1  +0.4
UPC                                   e                   15 48 29.9
UPC                                   eSS       SS        16 06 27.3  +23
UPC                                    MLR      MLR
              comp=Z,46µm,23.5s
GZR    Gura Zlata         133.52 325⇓iP        PKiKP     15 45 58.0  +3.1
GZR    Gura Zlata         133.52 325 ⇓PKIKP    PKiKP     15 45 58.0  +3.1
MDN    Morne-Daniel       133.56  79  eP        PKiKP     15 46 06.3  +11
SIRR   Siria              133.62 326⇑iP        PKPdf     15 45 42.5  -11
VYHS   Vyhne              133.63 330  ePKIKP    PKiKP     15 45 56.2  +1.2
VYHS                                  e                   15 48 26.1
VYHS                                  e                   16 00 10.7
VYHS                                   MLR      MLR
              comp=Z,29µm,21.8s
VYHS   Vyhne              133.63 330  ePKP      PKiKP     15 45 56.2  +1.2
VYHS                                  ePP       PP        15 48 26.1  +4.2
VYHS                                  e                   15 48 39.6
VYHS                                  e                   16 00 10.7
VYHS                                  eSS       SS        16 06 19.7  +13
VYHS                                  eL        L         16 45 45.4
DWS    Wesley             133.64  79  eP        PKiKP     15 46 03.5 +7.7
SVB    Belmont            133.64  82  eP        PKiKP     15 46 15.3  +19
DLPL   La Plaine          133.70  79  eP        PKPdf     15 45 51.4  -3.4
SSV    Crater Summit      133.70  82  eP        PKiKP     15 46 07.3  +11
FDF    Fort de France     133.79  80  eP        PKiKP     15 46 09.0  +13
MCLT   Moule a Chique     133.96  81  eP        PKiKP     15 46 17.1  +20
TPR    Prospect           133.98  85  eP        PKiKP     15 46 03.1  +6.4
BOT    Bacolet            134.04  85  eP        PKiKP     15 46 11.3  +15
BZS    Buzias             134.04 325⇑iP        PKPdf     15 45 50.4  -4.2
BZS    Buzias             134.04 325 ⇑PKIKP    PKPdf     15 45 50.4  -4.2
BRG    Berggiesshubel     134.09 336  ePKP      PKiKP     15 45 57.0  +1.2
              comp=Z,14nm,1.5s
BRG                                   i                   15 46 09.5
              comp=Z,68nm,1.5s
BRG                                   i PP      PP        15 48 30.1  +5.5
              comp=Z,37nm,1.3s
BRG                                   i PKS               15 49 27.4
              comp=Z,54nm,1.5s
BRG                                    SDIFF              15 56 59.0
BRG                                    SS       SS        16 06 27.0  +15
              comp=N,41µm,20.0s
              comp=E,52µm,19.9s
              comp=Z,45µm,24.6s
BRG    Berggiesshubel     134.09 336  ePKIKP    PKiKP     15 45 57.0  +1.2
BRG                                   i                   15 46 09.5
BRG                                   i                   15 48 30.1
BRG                                    pmax     pmax
              comp=Z,14nm,1.5s
BRG                                    pmax     pmax
              comp=Z,37nm,1.3s
BRG                                    MLR      MLR
              comp=N,41µm,20.0s
BRG                                    MLR      MLR
              comp=E,52µm,19.9s
BRG                                    MLR      MLR
              comp=Z,45µm,24.6s
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PVCC   Panska Ves         134.10 335  ePKPDF    PKiKP     15 45 55.2  -0.6
PVCC                                  ePP       PP        15 48 28.5  +3.8
PVCC                                   AMS      AMS       16 46 50.0
              comp=Z,45µm,19.5s
PVCC   Panska Ves         134.10 335  ePKIKP    PKiKP     15 45 55.2  -0.6
PVCC                                  e                   15 48 28.5
PVCC                                   MLR      MLR
              comp=Z,45µm,19.5s
VRAC   Vranov             134.12 332   PKP      PKPdf     15 45 55.2  +0.6
              comp=Z,3.4nm,0.4s,baz=243,slow=2.3,SNR=2.1
CLL    Collm              134.12 337  ePKPdf    PKiKP     15 45 56.0  +0.1
CLL                                   epPKPdf   pPKPdf    15 46 00.0  -1.9
              comp=Z,12nm,0.9s
CLL                                   esPKPdf   sPKPdf    15 46 04.0  -0.4
CLL                                   i                   15 46 09.0
              comp=Z,70nm,1.5s
CLL                                   e                   15 46 14.0
CLL                                   e                   15 46 36.0
CLL                                   ePP       PP        15 48 22.0  -2.8
CLL                                   epPP                15 48 30.0
CLL                                   ePPmax              15 48 46.0
              comp=Z,140nm,1.7s
CLL                                   ePPlp               15 48 47.0
CLL                                   eSKPbc    SKPbc     15 49 23.0  +0.3
CLL                                   ePKSdf    PKSdf     15 49 28.0  -2.7
CLL                                   ePKSmax             15 50 12.0
CLL                                   eSKSac    SKSac     15 53 06.0  +0.3
CLL                                   eSKKSac   SKKSac    15 55 24.0  +4.4
CLL                                   eSdif     Sdif      15 56 54.0  +14
CLL                                   ePSKS               15 58 30.0
CLL                                   e                   15 59 54.0
CLL                                   ePPS      PPS       16 00 36.0
CLL                                   ePPPrev             16 01 54.0
CLL                                   eSS       SS        16 06 12.0  +0.2
CLL                                   e                   16 07 30.0
CLL                                   eSKSSKSac           16 08 12.0
CLL                                   eSSS      SSS       16 11 12.0
CLL                                   e(SSSS)             16 14 30.0
CLL                                    Lmax               16 46 00.0
CLL                                    LmV(360            17 22 00.0
              comp=Z,9µm,21.7s
CLL    Collm              134.12 337  ePKIKP    PKiKP     15 45 56.0  +0.1
CLL                                   i                   15 46 09.0
CLL                                    MLR      MLR
              comp=Z,46µm,22.4s
MBAR   Mbarara            134.22 258   PKP      PKPdf     15 45 56.2  +0.1
MBAR                                   SKPbc    SKPbc     15 49 25.7  +1.2
MBAR                                   LR       LR
              comp=Z,464nm,19.0s
MBAR   Mbarara            134.22 258   PKP      PKPdf     15 45 56.2  +0.1
              comp=Z,5.3nm,0.2s,baz=33,slow=5.8,SNR=4.2
MBAR                                   SKPbc    SKPbc     15 49 25.7  +1.2
              comp=Z,6.7nm,0.6s,baz=80,slow=6.4,SNR=3.2
BUD    Budapest           134.22 329  ePKiKP    PKiKP     15 45 59.0  +2.8
BUD                                   ePP       PP        15 48 33.0  +7.4
BUD                                 ⇑eSS       SS        16 06 19.1 +5.6
TOSP   Speyside           134.23  85  eP        PKiKP     15 46 18.5  +21
KRUC   Moravsky           134.39 332  ePKP      PKiKP     15 45 56.7  +0.2
MODS   Modra-Piesok       134.47 331  ePKIKP    PKiKP     15 45 57.6  +0.9
MODS                                  eSS       SS        16 06 18.6 +2.2
MODS   Modra-Piesok       134.47 331  ePKP      PKiKP     15 45 57.6  +0.9
MODS                                  e                   15 48 44.9
MODS                                  e                   16 00 50.9
MODS                                  eSS       SS        16 06 18.6 +2.2
MODS                                  eL        L         16 35 23.2
MDVR   Moldovita          134.49 325⇑iP        PKiKP     15 46 00.7  +3.8
PRA    Prague             134.50 335  ePP       PP        15 48 32.9 +5.7
PRA                                    AMS      AMS       16 39 00.0
              comp=Z,64µm,23.5s
PRU    Pruhonice          134.52 334  ePKPDF    PKPdf     15 45 55.9  +0.6
PRU                                   epPKP     pPKPdf    15 46 01.6  -1.1
PRU                                   ex        x         15 46 08.0
PRU                                   ePP       PP        15 48 31.4  +4.0
PRU                                    AMS      AMS       16 38 50.0
              comp=Z,65µm,24.6s
PRU    Pruhonice          134.52 334  ePKIKP    PKPdf     15 45 55.9  +0.6
PRU                                   e                   15 46 08.0
PRU                                   e                   15 48 31.4
PRU                                    MLR      MLR
              comp=Z,65µm,24.6s
TREC   Trest              134.63 333  ePP       PP        15 48 31.4 +3.3
TREC                                  eSS       SS        16 06 29.0  +11
TREC                                   AMS      AMS       16 46 30.0
              comp=Z,33µm,18.4s
VTS    Vitosha            134.83 321⇑iP        PKPdf     15 45 48.4  -8.0
VTS    Vitosha            134.83 321 ⇑PKIKP    PKPdf     15 45 48.4  -8.0
EKA    Eskdalemuir Ar     134.88 351   PKP      PKPdf     15 45 55.4  -0.5
              comp=Z,1.9nm,0.6s,baz=30,slow=3.0,SNR=2.2
EKA                                    PP       PP        15 48 29.3  +0.1
              comp=Z,3.5nm,1.0s,baz=50,slow=6.6,SNR=2.4
ESK    Eskdalemuir        134.90 351   PFAKE              15 46 10.0  +13
ESK                                    LR       LR
              comp=Z,33µm,20.0s
NKC    Novy Kostel        135.19 336  ePKPDF    PKiKP     15 45 57.8  -0.3
NKC                                   ex        x         15 48 43.2
NKC                                   eSS       SS        16 06 10.3  -14
NKC                                    AMS      AMS       16 44 10.0
              comp=Z,44µm,23.2s
NKC    Novy Kostel        135.19 336  ePKIKP    PKiKP     15 45 57.8  -0.3
NKC                                    MLR      MLR
              comp=Z,44µm,23.2s
TIH    Tihany             135.19 329  ePKiKP    PKiKP     15 46 06.0 +7.9
TIH                                   ePP       PP        15 48 43.0  +11
TIH                                   eSS       SS        16 06 32.1 +7.0
MORH   Mrgy, Hungar       135.26 328  ePKiKP    PKiKP     15 45 58.0  -0.3
MORH                                  ePP       PP        15 48 41.0 +8.7
MORH                                  eSS       SS        16 06 36.1  +10
BBGH   Gun Hill           135.29  82   PFAKE              15 46 10.0  +11
BBGH                                   LR       LR
              comp=Z,23µm,21.0s
BBGH   Gun Hill           135.29  82  eP        PKiKP     15 46 19.0  +20
SOP    Sopron             135.30 331  ePKiKP    PKiKP     15 46 00.1  +1.7
SOP                                   ePP       PP        15 48 43.1  +11
SOP                                 ⇓eSS       SS        16 06 31.1 +4.8
CONA   Conrad Observa     135.45 332   PKPdf    PKPdf     15 45 55.7  -1.5
              comp=Z,9.3nm,0.8s
KHC    Kasperske Hory     135.58 334  ePKPpre   PKPpre    15 45 45.5
KHC                                   ePKPDF    PKiKP     15 45 58.6  -0.4
KHC                                   epPKP     pPKPdf    15 46 03.9  -0.8
KHC                                   ePP       PP        15 48 31.5  -2.6
KHC                                    AMS      AMS       16 43 50.0
              comp=Z,40µm,18.7s
KHC    Kasperske Hory     135.58 334  ePKIKP    PKPdf     15 45 54.0  -3.4
KHC                                   e                   15 46 03.9
KHC                                   e                   15 48 39.1
KHC                                    MLR      MLR
              comp=Z,40µm,18.7s
IDGL   Inch Island, C     135.65 355  eP        PKiKP     15 46 16.1  +17
IDGL                                  ePP       PP        15 48 58.1  +24
IDGL                                  eSS       SS        16 06 24.1  -5.4
GERES  GERESS Array B     135.74 334   PKhKP    PKPpre    15 45 44.5
              comp=Z,0.3nm,0.4s,baz=67,slow=3.5,SNR=3.5
GERES                                  PKP      PKPdf     15 45 56.7  -1.0
              comp=Z,2.3nm,0.7s,baz=46,slow=3.9,SNR=12
VAY    Valandovo          135.96 320  ePKP      PKPpre    15 45 42.0
BEHE   Becsehely          136.04 330  ePKiKP    PKiKP     15 46 08.0 +8.1
BEHE                                  ePP       PP        15 48 47.1  +10
BEHE                                  eSS       SS        16 07 06.1  +31
ARSA   Arzberg            136.10 331   PKPdf    PKPdf     15 45 56.4  -2.1
              comp=Z,13nm,1.3s
MOA    Molln              136.24 333   PKPdf    PKPdf     15 45 56.7  -1.9
              comp=Z,3.5nm,0.9s
SOKA   Soboth             136.74 331   PKPdf    PKPdf     15 45 58.0  -1.7
              comp=Z,19nm,1.0s
KRUS   Krusevo            136.76 321  ePKP      PKPpre    15 45 44.5
TSUM   Tsumeb             136.94 226   PKP      PKPdf     15 45 59.9  -1.0
TSUM                                   LR       LR
              comp=Z,91µm,21.0s
TSUM   Tsumeb             136.94 226   PKP      PKPdf     15 45 59.9  -1.0
              comp=Z,13nm,0.9s,baz=129,slow=4.4
OBKA   Obir               137.10 331   PKPdf    PKPdf     15 45 59.7  -0.7
              comp=Z,10nm,1.0s
BEBN   Eben Emael         137.10 342 ⇑PKiKP    PKiKP     15 46 09.4  +7.5
BEBN                                 ⇑PP       PP        15 48 58.2  +15
BDFB   Brasilia           137.12 127   PKhKP    PKPpre    15 45 54.8
              comp=Z,3.3nm,0.7s,baz=0.0,slow=3.0,SNR=4.6
BDFB                                   PKP      PKPdf     15 46 01.2  -0.1
              comp=Z,9.7nm,0.7s,baz=249,slow=3.2,SNR=12
MEM    Membach            137.16 341 ⇑PKiKP    PKPdf     15 46 00.8  +0.6
MEM                                  ⇑PP       PP        15 48 56.0  +12
OHR    Ohrid              137.18 321  ePKP      PKPpre    15 45 44.9
KBA    Koelnbreinsper     137.23 333   PKPdf    PKPdf     15 46 00.3  -0.4
              comp=Z,18nm,0.7s
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IDI	**Anoyia**	**137.28**	**311**	⇑*i*P	**PKPdf**	**15 46 00.5**	**-0.5**
IDI	**Anoyia**	**137.28**	**311**	PKP	**PKPdf**	**15 45 59.8**	**-1.3**
	comp=Z,6.3nm,0.6s,baz=315,slow=2.9						
DSB	**Dublin**	**137.34**	**353**	*e*P	PKiKP	15 46 19.9	+18
DSB				*e*PP	PP	15 49 03.8	+19
DSB				*e*SS	SS	16 06 39.5	-10
PDG	**Podgorica**	**137.34**	**323**	⇑*i*P	**PKiKP**	**15 46 04.5**	**+1.8**
MYKA	**Terra Mystica**	**137.43**	**332**	PKPdf	**PKPdf**	**15 45 59.7**	**-1.2**
	comp=Z,17nm,1.1s						
IGLA	**Glengowla, Co**	**137.44**	**356**	*e*P	PKiKP	15 46 19.5	+17
IGLA				*e*PP	PP	15 49 07.9	+23
IGLA				*e*SS	SS	16 06 45.9	-4.9
BOJS	**Bojanci**	**137.48**	**330**	*i* PKPdf	**PKPdf**	**15 45 57.8**	**-3.2**
UCC	**Uccle**	**137.49**	**343**	⇑PKiKP	**PKiKP**	**15 46 06.5**	**+3.8**
UCC				⇑PP	PP	15 48 53.9	+8.1
WATA	**Walderalm**	**137.81**	**334**	PKPdf	**PKPdf**	**15 45 60.0**	**-1.8**
	comp=Z,14nm,0.9s						
ABTA	**Abfaltersbach**	**137.86**	**333**	PKPdf	**PKPdf**	**15 46 00.7**	**-1.0**
	comp=Z,37nm,1.3s						
WLF	**Walferdange**	**137.94**	**341**	⇑PKiKP	**PKiKP**	**15 46 07.1**	**+3.4**
WLF				⇑PP	**PP**	**15 48 52.2**	**+3.5**
MOTA	**Moosalm**	**138.01**	**335**	PKPdf	**PKPdf**	**15 46 00.7**	**-1.4**
	comp=Z,7.9nm,0.6s						
RETA	**Reutte**	**138.04**	**335**	PKPdf	**PKPdf**	**15 46 01.3**	**-0.7**
	comp=Z,24nm,1.4s						
DOU	**Dourbes**	**138.05**	**342**	⇓PKiKP	PKiKP	15 46 14.9	+11
DOU				⇓PP	PP	15 49 07.3	+18
SQTA	**Sankt Quirin**	**138.06**	**334**	PKPdf	**PKPdf**	**15 46 01.4**	**-0.8**
	comp=Z,7.9nm,0.7s						
BFO	**Black Forest**	**138.31**	**338**	PFAKE		15 46 10.0	+5.5
BFO				LR	LR		
	comp=Z,1µm,22.0s						
BFO	**Black Forest**	**138.31**	**338**	*i* PKIKP	**PKiKP**	**15 46 05.0**	**+0.5**
FETA	**Feichten**	**138.42**	**335**	*e*PKPdf	**PKPdf**	**15 46 00.6**	**-2.3**
	comp=Z,7.3nm,1.6s						
DAVA	**Damuels**	**138.56**	**336**	PKPdf	**PKPdf**	**15 46 01.0**	**-2.1**
	comp=Z,19nm,1.1s						
VAL	**Valentia**	**138.96**	**357**	*e*P	PKiKP	15 46 25.4	+20
VAL				*e*PP	PP	15 49 16.5	+22
VAL				*e*SS	SS	16 07 05.2	-3.6
DAVOX	**Davos/Dischmat**	**138.97**	**335**	PKhKP	PKPpre	15 45 53.7	
	comp=Z,5.7nm,0.6s,baz=148,slow=7.2,SNR=7.9						
MATE	**Matera**	**139.94**	**323**	⇑*i*P	PKPpre	15 45 57.6	
MDP	**Montagnes des**	**141.19**	**95**	PKP	**PKPdf**	**15 46 08.3**	**-0.4**
	comp=Z,13nm,1.0s,baz=50,slow=0.5,SNR=2.2						
VAE	**Valguarnera**	**143.32**	**321**	PKP	PKPbc	15 46 09.8	+0.9
	comp=Z,9.2nm,0.3s,baz=90,slow=1.0						
CLTB	**Caltabellotta**	**143.99**	**322**	*e*PKPpre	PKPpre	15 46 10.1	
MAHO	**Mahon**	**146.94**	**334**	PKP	**PKiKP**	**15 46 22.7**	**+0.3**
MAHO				SS	SS	16 08 36.9	-4.9
H07N1	**FLORES T-PHASE**	**147.48**	**25**	*e*PKP	PKiKP	15 46 31.5	+7.9
KEST	**Kesra**	**147.53**	**323**	*e*PKPbc	**PKPbc**	**15 46 21.4**	**-0.4**
KEST	**Kesra**	**147.53**	**323**	PKPbc	**PKPbc**	**15 46 21.2**	**-0.6**
	comp=Z,44nm,0.7s,baz=222,slow=0.4,SNR=27						
H07S1	**FLORES T-PHASE**	**147.70**	**26**	*e*PKP	PKPab	15 46 32.5	+8.2
CMAH	**Djebel Manchou**	**147.98**	**327**	P	**PKPbc**	**15 46 23.0**	**+0.1**
CAEH	**'Ain El Ouahch**	**148.17**	**327**	P	**PKiKP**	**15 46 24.6**	**-0.5**
ABSA	**Djebel Ababsia**	**148.21**	**326**	P	**PKPbc**	**15 46 22.0**	**-1.6**
PBRG	**Braganca**	**148.58**	**350**	*e*PKPdf	**PKPdf**	**15 46 20.9**	**+0.2**
PBRG	**Braganca**	**148.58**	**350**	*i* LQ	LQ	16 09 25.8	
PGAV	**Gavieira, Arco**	**148.66**	**352**	*e*PKPdf	**PKPdf**	**15 46 19.8**	**-1.1**
PGAV	**Gavieira, Arco**	**148.66**	**352**	*e*LQ	LQ	16 28 14.4	
PGAV				*e*LR	LR	16 36 52.2	
	comp=Z,35µm,20.0s						
CASM	**Ain Smara**	**148.75**	**327**	P	**PKPbc**	**15 46 25.3**	**+0.4**
DFRA	**Djebel Bou Aff**	**148.85**	**328**	P	**PKiKP**	**15 46 26.5**	**-0.2**
PCAB	**Cabril**	**148.88**	**352**	*e*PKPdf	**PKPab**	**15 46 29.2**	**+0.3**
CTEI	**Djebel Teioual**	**148.94**	**327**	P	**PKPbc**	**15 46 26.1**	**+0.6**
POLO	**Lamas de Olo**	**149.17**	**351**	*e*PKPdf	**PKPdf**	**15 46 22.1**	**+0.4**
POLO	**Lamas de Olo**	**149.17**	**351**	*e*LQ	LQ	16 28 37.7	
UCM	**Universidad Co**	**149.23**	**344**	PKP	PKPab	15 46 45.8	+15
UCM				SS	SS	16 09 25.5	+18
SRBC	**Serra Branca**	**149.25**	**22**	*e*PKP	**PKPab**	**15 46 34.7**	**+4.2**
MVO	**Moncorvo**	**149.25**	**350**	*e*PKPdf	**PKPbc**	**15 46 26.1**	**0.0**
MVO	**Moncorvo**	**149.25**	**350**	*i* LQ	LQ	16 15 07.9	
MVO	**Moncorvo**	**149.25**	**350**	*e*LQ	LQ	16 28 16.0	
MVO				*e*LR	LR	16 37 35.6	
	comp=Z,29µm,18.0s						
PVRL	**Vila Real**	**149.26**	**351**	*e*PKPdf	**PKiKP**	**15 46 26.7**	**-0.6**
PGRA	**Graciosa**	**149.28**	**22**	*e*PKP	**PKPab**	**15 46 31.6**	**+1.0**
PCED	**Cedros**	**149.36**	**23**	*e*PKP	**PKPab**	**15 46 34.9**	**+4.0**
SET	**Setif**	**149.36**	**328**	P	**PKiKP**	**15 46 29.0**	**+1.3**
CKHR	**Kef el Ahmar**	**149.45**	**328**	P	**PKPbc**	**15 46 27.1**	**+0.3**
ROSA	**Rosais**	**149.45**	**22**	*e*PKP	**PKPab**	**15 46 33.1**	**+1.8**
PTO	**Porto**	**149.52**	**352**	*e*PKPdf	**PKPab**	**15 46 31.4**	**-0.1**
PCAN	**Candelaria**	**149.58**	**23**	*e*PKP	PKPab	15 46 39.9	+8.0
PVIS	**Viseu**	**149.83**	**351**	*e*PKPdf	**PKiKP**	**15 46 29.2**	**+0.7**
ADH	**Angra Heroismo**	**149.88**	**21**	*e*PKP	**PKPab**	**15 46 34.1**	**+1.1**
ES19	**SONSECA Array**	**149.98**	**345**	*e*PKPbc	**PKPbc**	**15 46 26.9**	**-1.0**
ESDC	**Sonseca Array**	**150.02**	**345**	PKPbc	**PKPbc**	**15 46 27.6**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=12,slow=2.7,SNR=18						
ESDC				PP	**PP**	**15 50 03.1**	**+2.0**
	comp=Z,3.5nm,0.8s,baz=12,slow=6.6,SNR=2.7						
ESLA	**Sonseca Array**	**150.02**	**345**	*e*PKPbc	**PKiKP**	**15 46 29.1**	**+0.2**
MTE	**Manteigas**	**150.09**	**350**	*e*PKPdf	**PKiKP**	**15 46 29.0**	**0.0**
MTE				*i* LQ	LQ	15 50 17.3	
MTE	**Manteigas**	**150.09**	**350**	*e*LQ	LQ	16 28 55.8	
MTE	**Manteigas**	**150.09**	**350**	*e*LR	LR	16 41 06.2	
	comp=Z,31µm,18.0s						
PAB	**San Pablo**	**150.24**	**345**	PFAKE		15 46 30.0	+0.6
PAB				LR	LR		
	comp=Z,30µm,20.0s						
PCAS	**Casmilo, Conde**	**150.57**	**352**	*e*PKPdf	**PKPbc**	**15 46 29.1**	**-0.1**
PCBR	**Castelo Branco**	**150.62**	**350**	*e*PKPdf	**PKiKP**	**15 46 29.7**	**-0.3**
PTOM	**Tomar**	**150.99**	**351**	*e*PKPdf	**PKiKP**	**15 46 31.1**	**+0.3**
PMRV	**Marv??o**	**151.01**	**350**	*e*PKPdf	**PKPdf**	**15 46 27.2**	**+2.6**
PMRV	**Marv??o**	**151.01**	**350**	*e*LQ	LQ	16 28 52.5	
PMRV	**Marv??o**	**151.01**	**350**	*e*LR	LR	16 41 18.2	
	comp=Z,31µm,20.0s						
CART	**Cartagena**	**151.02**	**339**	PKP	**PKPab**	**15 46 44.5**	**+6.7**
CART				SS	SS	16 09 04.7	-23
EBNR	**Beni Rached**	**151.13**	**334**	P	**PKPab**	**15 46 35.0**	**-3.4**
PSET	**Sete Cidades**	**151.15**	**20**	*e*PKP	**PKPab**	**15 46 37.4**	**-0.9**
PDA	**Ponta Delgada**	**151.23**	**20**	*e*PKP	**PKPab**	**15 46 39.9**	**+1.3**
PCALD	**Caldeiras da R**	**151.25**	**19**	*e*PKP	**PKiKP**	**15 46 34.7**	**+3.3**
GRON	**Grota Negra**	**151.26**	**19**	*e*PKP	**PKPab**	**15 46 37.8**	**-1.0**
CMLA	**Cha da Macela**	**151.26**	**19**	*e*PKP	**PKiKP**	**15 46 32.9**	**+1.4**
CMLA	**Cha da Macela**	**151.26**	**19**	PFAKE		15 46 40.0	+1.2
CMLA				LR	LR		
	comp=Z,31µm,20.0s						
ECHA	**Ech Chlef**	**151.32**	**334**	P	**PKiKP**	**15 46 32.0**	**+0.4**
BART	**Pico Bartolome**	**151.37**	**19**	*e*PKP	**PKPab**	**15 46 38.4**	**-0.9**
PMTG	**Montargil**	**151.50**	**351**	*e*PKPdf	**PKPbc**	**15 46 30.5**	**-0.9**
PESTR	**Estremoz**	**151.59**	**350**	*e*PKPdf	**PKPbc**	**15 46 31.8**	**+0.1**
PESTR	**Estremoz**	**151.59**	**350**	*i* LQ	LQ	16 16 48.8	
EANR	**'Ain N'Sour**	**151.61**	**334**	P	**PKPbc**	**15 46 31.0**	**-0.9**
PMAFR	**Mafra**	**151.76**	**352**	*e*PKPdf	**PKPab**	**15 46 39.2**	**-1.6**
PMAFR	**Mafra**	**151.76**	**352**	*i* LQ	LQ	16 10 42.8	
PMST	**Lisbon--Monsan**	**151.96**	**352**	*e*PKPdf	PKPab	15 46 52.7	+11
LIS	**Lisbon**	**151.98**	**352**	*e*PKPdf	**PKPdf**	**15 46 25.9**	**-0.2**
LIS				AMS	AMS	16 44 30.6	
	comp=E,45µm,22.8s						
LIS	**Lisbon**	**151.98**	**352**	*e*PKPdf	**PKPab**	**15 46 47.5**	**+5.8**
LIS	**Lisbon**	**151.98**	**352**	*e*PKIKP	**PKPdf**	**15 46 25.8**	**-0.2**
ETRT	**Tiaret**	**151.99**	**333**	P	**PKiKP**	**15 46 37.0**	**+3.8**
PSMA	**Santa Maria**	**152.09**	**20**	*e*PKP	**PKPab**	**15 46 39.9**	**-2.3**
PSMN	**Pico do Norte,**	**152.11**	**19**	*e*PKP	**PKPab**	**15 46 38.1**	**-4.2**
OJGS	**Djebel Guires**	**152.14**	**334**	P	**PKPab**	**15 46 41.0**	**-1.6**
SHEL	**Horse Pasture**	**152.14**	**197**	PFAKE		15 46 40.0	-3.0
SHEL				LR	LR		
	comp=Z,12µm,20.0s						
PBEJ	**Beja**	**152.45**	**350**	*e*PKPdf	**PKiKP**	**15 46 34.8**	**+0.9**
PBEJ				*i* LQ	LQ	15 50 22.9	
RCBR	**Riachuelo**	**152.48**	**126**	PKPbc	**PKiKP**	**15 46 35.3**	**+0.6**
	comp=Z,41nm,0.7s,baz=179,slow=1.2,SNR=2.7						
PNCL	**Nicolau / Gran**	**152.48**	**351**	*e*PKPdf	**PKPdf**	**15 46 24.3**	**-2.5**
PNCL	**Nicolau / Gran**	**152.48**	**351**	*i* LQ	LQ	16 10 24.2	
ODJA	**Bouhanifia**	**152.67**	**335**	P	**PKPab**	**15 46 47.0**	**+2.2**
MESJ	**Messejana**	**152.69**	**350**	*e*PKPdf	**PKPdf**	**15 46 26.9**	**-0.2**
MESJ				*e*SS	SS	16 09 48.6	+3.3
MESJ				AMS	AMS	17 04 58.4	
	comp=Z,24µm,17.6s						
MESJ	**Messejana**	**152.69**	**350**	*e*PKPdf	**PKPbc**	**15 46 32.2**	**-2.0**
MESJ				*i* LQ	LQ	15 50 36.2	
MESJ	**Messejana**	**152.69**	**350**	*e*PKIKP	**PKPdf**	**15 46 26.9**	**-0.2**
MESJ				*e*SS	SS	16 09 48.5	+3.2
EMAL	**Malaga-Limoner**	**152.87**	**343**	PKP	PKPab	15 47 00.3	+15
EMAL				SS	SS	16 09 38.5	-9.0
LIJA	**Lijar**	**153.00**	**345**	PKP	**PKPdf**	**15 46 29.0**	**+1.3**
PVAQ	**Vaqueiros**	**153.03**	**349**	*e*PKPdf	**PKPdf**	**15 46 28.3**	**+0.7**
PVAQ	**Vaqueiros**	**153.03**	**349**	*i* LQ	LQ	16 15 53.2	
PVAQ	**Vaqueiros**	**153.03**	**349**	*e*LQ	LQ	16 29 36.0	
PVAQ	**Vaqueiros**	**153.03**	**349**	*e*LR	LR	16 42 03.9	
	comp=Z,27µm,20.0s						
PTEO	**Sao Teotonio**	**153.06**	**351**	*e*PKPdf	**PKiKP**	**15 46 35.5**	**+0.4**
GIBL	**Gibalbin**	**153.21**	**346**	PKP	**PKPbc**	**15 46 32.0**	**-3.4**
PBDV	**Barranco-do-Ve**	**153.23**	**349**	*e*PKPdf	**PKPab**	**15 46 41.6**	**-5.4**
PBDV	**Barranco-do-Ve**	**153.23**	**349**	*i* LQ	LQ	16 16 15.8	
OLHC	**Oulhaca**	**153.24**	**337**	P	**PKPab**	**15 46 45.0**	**-2.2**
MORF	**Marmelete**	**153.29**	**351**	*e*PKPdf	**PKPdf**	**15 46 27.9**	**-0.2**
MORF				AMS	AMS	16 59 08.1	
	comp=Z,47µm,16.9s						
MORF	**Marmelete**	**153.29**	**351**	*e*PKPdf	**PKiKP**	**15 46 41.4**	**+5.7**
MORF	**Marmelete**	**153.29**	**351**	*i* LQ	LQ	16 16 15.8	
MORF	**Marmelete**	**153.29**	**351**	*e*PKIKP	**PKPdf**	**15 46 27.8**	**-0.2**
PFVI	**Vila Bisbo**	**153.48**	**351**	*e*PKPdf	**PKPbc**	**15 46 35.5**	**-0.4**
PFVI	**Vila Bisbo**	**153.48**	**351**	*i* LQ	LQ	16 10 18.4	
SFS	**San Fernando**	**153.62**	**346**	PKP	PKPab	15 47 04.7	+16
SFS				SS	SS	16 10 06.9	+11
CNIL	**Conil**	**153.67**	**346**	PKP	**PKPbc**	**15 46 35.0**	**-1.3**
MELI	**Melilla**	**153.76**	**339**	PKP	**PKPab**	**15 46 52.0**	**+2.7**
MELI				SS	SS	16 09 57.9	+0.7
CEU	**Ceuta**	**153.94**	**344**	PKP	**PKPab**	**15 46 52.0**	**+2.0**
CEU				SS	SS	16 10 19.0	+20
AVE	**Averroes**	**156.93**	**346**	PKP	**PKPab**	**15 46 55.9**	**-7.0**
AVE				SS	SS	16 10 43.0	+12
PMPS	**Porto Santo**	**157.82**	**6**	*e*PKPdf	**PKPdf**	**15 46 34.2**	**0.0**
PMPS				*i* LQ	LQ	15 50 59.3	
PMOZ	**Porto Moniz, M**	**157.96**	**8**	*e*PKPdf	PKPab	15 46 51.3	-16
PMOZ	**Porto Moniz, M**	**157.96**	**8**	*i* LQ	LQ	16 17 14.5	
PMOZ	**Porto Moniz, M**	**157.96**	**8**	*e*LQ	LQ	16 32 00.2	
PMOZ				*e*LR	LR	16 40 55.8	
	comp=Z,27µm,20.0s						
PMAR	**Madeira**	**158.09**	**7**	*e*PKPdf	PKPdf	15 46 48.3	+14
ASCN	**Ascension**	**161.29**	**178**	PFAKE		15 46 50.0	+11
ASCN				LR	LR		
	comp=Z,27µm,20.0s						
TOA0	**Torodi Ar. Sit**	**164.63**	**280**	*e*PKPdf	**PKPdf**	**15 46 41.0**	**-0.9**
TOA0	**Torodi Ar. Sit**	**164.63**	**280**	P	**PKPdf**	**15 46 40.6**	**-1.2**
	SNR=23						
TORD	**Torodi Ar. Bea**	**164.63**	**280**	PKP	**PKPdf**	**15 46 40.5**	**-1.4**
	comp=Z,2.6nm,0.6s,baz=143,slow=3.0,SNR=20						
SACV	**Santiago Islan**	**169.67**	**66**	PFAKE		15 47 00.0	+14
SACV				LR	LR		
	comp=Z,18µm,19.0s						
KIC	**Kosan Boka**	**169.93**	**244**	*e*P	**PKPdf**	**15 46 43.3**	**-2.5**
	comp=Z,295nm,1.3s						
LIC	**Lamto**	**170.12**	**243**	*e*P	**PKPdf**	**15 46 44.5**	**-1.4**
	comp=Z,330nm,1.6s						
DBIC	**Dimbokro**	**170.17**	**245**	*e*PKPdf	**PKPdf**	**15 46 44.7**	**-1.3**
DBIC				PKPab	**PKPab**	**15 48 01.8**	**+0.1**
DBIC	**Dimbokro**	**170.17**	**245**	*e*PKIKP	**PKPdf**	**15 46 44.7**	**-1.3**
DBIC	**Dimbokro**	**170.17**	**245**	PKP	**PKPdf**	**15 46 44.0**	**-1.9**
	comp=Z,5.8nm,0.6s,baz=139,slow=1.3,SNR=7.1						
DBIC				PKPab	**PKPab**	**15 48 01.8**	**+0.1**
	comp=Z,35nm,1.2s,baz=128,slow=6.7,SNR=2.1						
TIC	**Toumodi**	**170.30**	**245**	*e*P	**PKPdf**	**15 46 44.7**	**-1.4**

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*IDC **08** 15:34:51.4±1.4, 15°.90N×147°.16E, h0^{km}, mb4.2/6, mb1 4.4/8, mb1mx4.2/50, mbtmp4.3/8, ML4.1/2, Error ellipse: s-maj=38.0km s-min=22.2km az=99.0*

*ISCJB **08** 15:34:54.5±1.3, 15°.92N±0°.10×146°.9E±0°.2, h30^{km}, mb4.2/6, Error ellipse: s-maj=29.3km s-min=9.6km az=21.5*

ISC 08 15:34:56.2±1.4**, 15°.9N**±0°.1×**147°.0E**±0°.2**, h30^{km}, n8,** σ**0ˢ.86**/9**, mb4.3**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.05**	**222**	Pn	**Pn**	**15 35 42.2**	**-0.3**
	6.0nm,0.3s,baz=93,slow=17,SNR=3.8						
GUMO				Sn	**Sn**	**15 36 17.0**	**-1.0**
	24nm,0.3s,baz=32,slow=19,SNR=4.8						
JCJ	**Chichijima**	**12.03**	**339**	Pn	**Pn**	**15 37 44.9**	**-0.8**
	3.3nm,0.3s,baz=117,slow=18,SNR=1.5						
KSRS	**Korea Array**	**27.33**	**326**	P	**P**	**15 40 38.8**	**+0.3**
	1.8nm,0.9s,baz=133,slow=7.4,SNR=2.6						
WRA	**Warramunga Arr**	**37.69**	**200**	P	**P**	**15 42 09.6**	**+0.4**
	5.0nm,1.2s,baz=21,slow=9.8,SNR=3.5						
CMAR	**Chiang Mai Arr**	**45.88**	**280**	P	**P**	**15 43 17.6**	**+1.3**
	3.9nm,0.7s,baz=79,slow=6.6,SNR=9.9						
ZALV	**Zalesovo Beam**	**61.01**	**323**	P	**P**	**15 45 06.5**	**-0.3**
	2.6nm,0.7s,baz=101,slow=3.9,SNR=3.3						
MKAR	**Makanchi Array**	**61.31**	**315**	P	**P**	**15 45 09.6**	**+0.6**
	3.9nm,0.8s,baz=96,slow=5.1,SNR=4.3						
YKA	**Yellowknife Ar**	**79.90**	**28**	P	**P**	**15 47 01.4**	**-0.5**
	0.7nm,0.7s,baz=285,slow=5.5,SNR=3.2						

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*ISCJB **08** 15:39:56.6±0.6, 10°.91S±0°.06×166°.07E±0°.07, h10^{km}, mb4.3/12, Error ellipse: s-maj=11.1km s-min=8.0km az=154.0*

*IDC **08** 15:39:56.9±0.9, 10°.86S×166°.07E, h0^{km}, mb4.3/9, mb1 4.5/11, mb1mx4.2/40, mbtmp4.4/11, ML4.7/2, Error ellipse: s-maj=22.6km s-min=18.9km az=126.0*

*NEIC **08** 15:39:59.0±0.7, 10°.73S×165°.98E, h10^{km}, mb4.4/4, Error ellipse: s-maj=15.4km s-min=11.6km az=94.0*

ISC 08 15:39:58.4±0.8**, 10°.86S**±0°.08×**166°.12E**±0°.10**, h10^{km}, n31,** σ**1ˢ.03**/25**, mb4.2**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.24**	**283**	Pn	**Pn**	**15 41 31.8**	**+1.3**
	37nm,0.3s,baz=100,slow=18,SNR=10						
HNR				Sn	**Sn**	**15 42 42.5**	**+0.6**
	9.5nm,0.3s,baz=168,slow=20,SNR=2.8						
DZM	**Mont Dzumac**	**11.16**	**178**	*e*Pn	Pn	15 42 43.0	+4.8
DZM				Sn	**Sn**	**15 44 42.6**	**-0.5**
DZM	**Mont Dzumac**	**11.16**	**178**	Pn	**Pn**	**15 42 40.0**	**+1.8**
	3.0nm,0.3s,baz=12,slow=20,SNR=3.3						
DZM				Sn	**Sn**	**15 44 42.6**	**-0.5**
	0.8nm,0.3s,baz=311,slow=19,SNR=2.8						
ONTNC	**Ouen Toro**	**11.39**	**178**	*e*Pn	Pn	15 42 45.2	+3.9
EIDS	**Eidsvold**	**20.28**	**223**	*e*P	Pn	15 44 35.5	-0.8
CTA	**Charters Tower**	**21.21**	**242**	P	**P**	**15 44 45.6**	**+1.1**
	15nm,0.9s,baz=66,slow=10.0,SNR=6.4						
CTAO	**Charters Tower**	**21.21**	**242**	*e*P	**P**	**15 44 44.5**	**0.0**
	27nm,1.0s						
ARMA	**Armidale**	**23.67**	**213**	*e*P	**P**	**15 45 09.6**	**-0.8**
	6.0nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.17**	**1**	T	T	16 16 22.3	
	baz=181,slow=76,SNR=6.6						
H11S3	**WAKE ISLAND Hy**	**29.17**	**1**	T	T	16 16 24.0	
	baz=181,slow=76,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**29.18**	**1**	T	T	16 16 23.1	
	baz=181,slow=76,SNR=3.4						
H11N1	**WAKE ISLAND Hy**	**30.39**	**1**	T	T	16 17 54.4	
	baz=182,slow=76,SNR=9.8						
H11N3	**WAKE ISLAND Hy**	**30.39**	**1**	T	T	16 17 53.5	
	baz=182,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**30.40**	**1**	T	T	16 17 55.8	
	baz=182,slow=76,SNR=9.0						
WRAB	**Tennant Creek**	**31.88**	**250**	*e*P	**P**	**15 46 21.5**	**-2.6**
WR1	**Warramunga Arr**	**31.89**	**250**	*e*P	**P**	**15 46 23.7**	**-0.6**
WRA	**Warramunga Arr**	**31.89**	**250**	P	**P**	**15 46 23.7**	**-0.6**
	16nm,0.9s,baz=81,slow=9.2,SNR=21						
RPZ	**Rata Peaks**	**33.02**	**173**	P	**P**	**15 46 33.5**	**-0.3**
	12nm,0.8s,baz=15,slow=4.8,SNR=4.7						
AS31	**Alice Springs**	**33.20**	**243**	*e*P	**P**	**15 46 34.8**	**-1.0**
	1.2nm,0.6s						
ASAR	**Alice Springs**	**33.20**	**243**	P	**P**	**15 46 34.8**	**-1.0**
	11nm,0.9s,baz=64,slow=10,SNR=38						
FITZ	**Fitzroy Crossi**	**39.78**	**255**	*e*P	**P**	**15 47 31.1**	**-0.8**
	24nm,0.9s						
FITZ	**Fitzroy Crossi**	**39.78**	**255**	P	**P**	**15 47 31.1**	**-0.8**
	16nm,0.8s,baz=57,slow=7.7,SNR=22						
MJAR	**Matsushiro Arr**	**53.97**	**332**	P	**P**	**15 49 23.0**	**+0.3**
	1.9nm,0.9s,baz=174,slow=8.0,SNR=2.3						
MAJO	**Matsushiro**	**53.97**	**332**	*e*P	**P**	**15 49 23.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**72.37**	**293**	P	**P**	**15 51 24.6**	**-0.6**
	0.7nm,0.7s,baz=113,slow=3.6,SNR=4.9						
ILAR	**Eielson Array**	**83.22**	**18**	P	**P**	**15 52 23.9**	**-0.8**
	0.5nm,0.7s,baz=236,slow=5.1,SNR=4.7						
NVAR	**Mina Array Bea**	**85.62**	**50**	P	**P**	**15 52 39.1**	**+1.3**
	0.9nm,1.0s,baz=245,slow=8.6,SNR=1.9						
MK32	**Makanchi Array**	**93.63**	**317**	*e*P	**P**	**15 53 14.2**	**-0.9**
MKAR	**Makanchi Array**	**93.63**	**317**	P	**P**	**15 53 14.3**	**-0.9**
	0.8nm,1.0s,baz=103,slow=7.4,SNR=4.1						
ARA0	**ARCESS Array S**	**116.24**	**346**	*e*PKPdf	**PKPdf**	**15 58 42.0**	**+0.4**
ARCES	**ARCESS Array B**	**116.24**	**346**	PKP	**PKPdf**	**15 58 42.0**	**+0.4**
	1.3nm,0.9s,baz=96,slow=0.9,SNR=3.4						

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*IDC **08** 15:42:56.8±0.6, 10°.94S×166°.10E, h0^{km}, mb4.3/20, mb1 4.5/22, mb1mx4.4/43, mbtmp4.4/22, ML5.1/2, Error ellipse: s-maj=17.1km s-min=14.5km az=92.0*

*ISCJB **08** 15:42:57.5±0.4, 10°.94S±0°.05×166°.01E±0°.07, h10^{km}, mb4.4/31, Error ellipse: s-maj=10.2km s-min=6.7km az=170.8*

*NEIC **08** 15:42:59.0±0.3, 10°.84S×166°.04E, h10^{km}, mb4.6/10, Error ellipse: s-maj=8.8km s-min=6.4km az=88.0*

ISC 08 15:42:59.1±0.6**, 10°.91S**±0°.08×**166°.00E**±0°.08**, h10^{km}, n54,** σ**1ˢ.27**/46**, mb4.4**/31**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.14**	**283**	*e*Pn	**Pn**	**15 44 32.0**	**+2.0**
HNR				Sn	**Sn**	**15 45 37.4**	**-2.9**
HNR	**Honiara**	**6.14**	**283**	Pn	**Pn**	**15 44 31.6**	**+1.6**
	87nm,0.3s,baz=145,slow=4.7,SNR=11						
HNR				Sn	**Sn**	**15 45 37.4**	**-2.9**
	21nm,0.3s,baz=187,slow=16,SNR=2.2						
MARNC	**Mare, Loyalty**	**10.69**	**170**	*e*Pn	Pn	15 45 34.7	+2.3
DZM	**Mont Dzumac**	**11.11**	**178**	*e*Pn	**Pn**	**15 45 39.9**	**+1.7**
DZM	**Mont Dzumac**	**11.11**	**178**	Pn	**Pn**	**15 45 38.1**	**-0.1**
	7.0nm,0.3s,baz=132,slow=22,SNR=8.8						
ONTNC	**Ouen Toro**	**11.34**	**178**	*e*Pn	**Pn**	**15 45 43.3**	**+2.0**
PINNC	**Pines Island,**	**11.72**	**173**	*e*Pn	Pn	15 45 48.8	+2.3
EIDS	**Eidsvold**	**20.16**	**223**	*e*P	Pn	15 47 35.3	-0.4
	25nm,0.8s						
CTA	**Charters Tower**	**21.08**	**242**	P	**P**	**15 47 45.1**	**+1.2**
	13nm,0.9s,baz=85,slow=13,SNR=6.3						
CTAO	**Charters Tower**	**21.08**	**242**	*e*P	**P**	**15 47 44.7**	**+0.8**
	7.3nm,0.6s						
ARMA	**Armidale**	**23.56**	**212**	*e*P	**P**	**15 48 10.7**	**+0.6**
	17nm,1.0s						
URZ	**Urewera**	**28.99**	**162**	P	**P**	**15 48 58.3**	**-0.8**
	1.6nm,0.4s,baz=288,slow=6.4,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**29.22**	**1**	T	T	16 19 20.8	
	baz=180,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.23**	**1**	T	T	16 19 21.2	
	baz=180						
H11S1	**WAKE ISLAND Hy**	**29.24**	**1**	T	T	16 19 22.2	
	baz=180,slow=74						
BKZ	**Black Stump Fm**	**29.65**	**163**	*e*P	**P**	**15 49 04.6**	**-0.4**
	14nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**30.45**	**2**	T	T	16 20 52.1	
	baz=181						
H11N3	**WAKE ISLAND Hy**	**30.45**	**2**	T	T	16 20 54.8	
	baz=181						
H11N2	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	16 20 53.8	
	baz=181						
STKA	**Stephens Creek**	**30.71**	**223**	P	**P**	**15 49 14.6**	**+0.2**
	4.6nm,0.8s,baz=39,slow=8.6,SNR=4.1						
THZ	**Tophouse**	**31.32**	**170**	*e*P	**P**	**15 49 19.6**	**-0.1**
	17nm,0.8s						
WRA	**Warramunga Arr**	**31.76**	**250**	P	**P**	**15 49 23.6**	**-0.3**
	8.3nm,0.9s,baz=82,slow=9.2,SNR=8.5						
RPZ	**Rata Peaks**	**32.98**	**173**	*e*P	**P**	**15 49 33.7**	**-0.5**
	17nm,0.9s						
RPZ	**Rata Peaks**	**32.98**	**173**	P	**P**	**15 49 33.2**	**-1.0**
	19nm,0.7s,baz=320,slow=2.0,SNR=10						
AS31	**Alice Springs**	**33.07**	**243**	*e*P	**P**	**15 49 34.8**	**-0.6**
	2.3nm,0.8s						
ASAR	**Alice Springs**	**33.08**	**243**	P	**P**	**15 49 34.4**	**-1.0**
	7.4nm,0.8s,baz=74,slow=9.4,SNR=21						
FITZ	**Fitzroy Crossi**	**39.66**	**255**	*e*P	**P**	**15 50 31.4**	**-0.2**
	6.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.66**	**255**	P	**P**	**15 50 31.4**	**-0.2**
	9.1nm,0.6s,baz=102,slow=7.5,SNR=24						
BATI	**Baumata**	**41.60**	**267**	P	**P**	**15 50 47.6**	**-0.2**
	14nm,0.6s,baz=88,slow=3.3,SNR=4.6						
MJAR	**Matsushiro Arr**	**53.97**	**332**	P	**P**	**15 52 23.5**	**+0.2**
	3.8nm,0.9s,baz=167,slow=7.3,SNR=3.2						
KSRS	**Korea Array**	**59.91**	**325**	P	**P**	**15 53 05.9**	**+0.5**
	0.9nm,0.9s,baz=146,slow=7.0,SNR=3.0						
KSAR	**Wonju Array Be**	**59.92**	**325**	P	**P**	**15 53 05.9**	**+0.4**
NJ2	**Nanjing**	**62.10**	**315**	*e*P	**P**	**15 53 22.3**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VNDA	**Vanda**	**66.63**	**181**	P	**P**	**15 53 48.5**	**-0.9**
	comp=Z,4.5nm,1.1s,baz=37,slow=5.1,SNR=2.6						
PSI	**Prapat**	**68.10**	**277**	P	**P**	**15 53 59.4**	**-0.6**
	comp=Z,2.3nm,0.4s,baz=180,slow=7.1,SNR=4.6						
KMI	**Kunming**	**71.27**	**301**	P	**P**	**15 54 22.4**	**+2.9**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HHC	**Hu-ho-hao-te**	**71.89**	**320**	*e*P	**P**	**15 54 24.4**	**+1.6**
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,9µm,6.3s						
CMAR	**Chiang Mai Arr**	**72.29**	**293**	P	**P**	**15 54 25.3**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=118,slow=4.3,SNR=9.7						
LZH	**Lanzhou**	**74.85**	**312**	*e*P	**P**	**15 54 40.1**	**-0.3**
LZH				pP	pwP	15 54 44.7	+1.2
LZH				sP	PcP	15 54 48.6	-5.8
LZH				PP	PP	15 57 18.8	-9.3
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,120nm,4.8s						
SONM	**Songino Array**	**78.71**	**324**	P	**P**	**15 55 01.9**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=139,slow=6.8,SNR=2.3						
QSPA	**South Pole Qui**	**79.09**	**180**	P	**P**	**15 55 02.5**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=33,slow=0.9,SNR=10						
GTA	**Gaotai**	**79.15**	**314**	⇑P	P	15 55 08.3	+3.8
GTA				pP	PcP	15 55 14.2	+1.3
GTA				sP	pwP	15 55 17.0	+9.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
IM3	**Indian Mountai**	**82.23**	**15**	*e*P	**P**	**15 55 20.8**	**+0.6**
MLY	**Manley**	**82.34**	**17**	*e*P	**P**	**15 55 20.4**	**-0.5**
	comp=Z,1.2nm,1.0s						
HDA	**Harding Lake**	**83.04**	**19**	*e*P	**P**	**15 55 24.0**	**-0.4**
	comp=Z,6.8nm,1.0s						
ILAR	**Eielson Array**	**83.31**	**18**	P	**P**	**15 55 24.7**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=231,slow=4.5,SNR=8.1						
ILB	**Eielson Array**	**83.31**	**18**	*e*P	**P**	**15 55 26.8**	**+1.0**
IL1	**Eielson Array**	**83.31**	**18**	*e*P	**P**	**15 55 26.7**	**+0.8**
NVAR	**Mina Array Bea**	**85.75**	**50**	P	**P**	**15 55 38.3**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=237,slow=8.2,SNR=2.2						
WMQ	**Urumqi**	**89.18**	**315**	*e*P	**P**	**15 55 57.3**	**+2.0**
PDAR	**Pinedale Array**	**93.28**	**47**	P	**P**	**15 56 14.5**	**-0.1**
	comp=Z,1.2nm,1.1s,baz=209,slow=1.7,SNR=3.0						
MKAR	**Makanchi Array**	**93.60**	**317**	P	**P**	**15 56 14.1**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=100,slow=4.2,SNR=4.9						
YKA	**Yellowknife Ar**	**94.74**	**27**	P	**P**	**15 56 19.5**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=255,slow=4.8,SNR=3.2						
ARCES	**ARCESS Array B**	**116.27**	**346**	PKP	**PKPdf**	**16 01 40.7**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=46,slow=2.6,SNR=3.3						

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*IDC **08** 15:43:59.8±2.0, 10°.57S×166°.07E, h0^{km}, mb4.4/5, mb1 4.6/6, mb1mx4.1/41, mbtmp4.5/6, ML4.9/1, Error ellipse: s-maj=45.1km s-min=27.0km az=38.0*

*ISCJB **08** 15:44:00.6±3.7, 10°.8S±0°.4×166°.0E±0°.3, h10^{km}, mb4.4/5, Error ellipse: s-maj=71.5km s-min=19.9km az=39.2*

ISC 08 15:44:01.2±2.1**, 10°.6S**±0°.2×**166°.1E**±0°.3**, h10^{km}, n10,** σ**0ˢ.38**/7**, mb4.3**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.45**	**178**	Pn	**Pn**	**15 46 45.0**	**0.0**
	8.8nm,0.3s,baz=328,slow=13,SNR=6.7						
URZ	**Urewera**	**29.30**	**162**	P	**P**	**15 50 04.0**	**+0.1**
	2.3nm,0.5s,baz=270,slow=4.0,SNR=2.4						
H11N1	**WAKE ISLAND Hy**	**30.10**	**2**	T	T	16 21 42.2	
	baz=181						
H11N3	**WAKE ISLAND Hy**	**30.11**	**2**	T	T	16 21 39.1	
	baz=181						
H11N2	**WAKE ISLAND Hy**	**30.12**	**2**	T	T	16 21 39.1	
	baz=181						
WRA	**Warramunga Arr**	**31.94**	**249**	P	**P**	**15 50 27.7**	**+0.1**
	6.0nm,0.8s,baz=82,slow=9.0,SNR=3.8						
ASAR	**Alice Springs**	**33.29**	**243**	P	**P**	**15 50 38.7**	**-0.6**
	1.2nm,0.5s,baz=65,slow=10,SNR=4.2						
RPZ	**Rata Peaks**	**33.31**	**173**	P	**P**	**15 50 39.3**	**+0.1**
	6.8nm,0.5s,baz=0.0,slow=1.0,SNR=3.5						
FITZ	**Fitzroy Crossi**	**39.81**	**254**	P	**P**	**15 51 35.3**	**+0.3**
	4.1nm,0.6s,baz=104,slow=8.3,SNR=4.1						
ARCES	**ARCESS Array B**	**115.95**	**346**	PKP	**PKPdf**	**16 02 43.8**	**-0.1**
	0.6nm,0.8s,baz=72,slow=3.2,SNR=2.2						

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*IDC **08** 15:46:10.9±0.7, 10°.73S×166°.12E, h0^{km}, mb4.5/12, mb1 4.7/14, mb1mx4.4/43, mbtmp4.6/14, ML5.0/2, Error ellipse: s-maj=19.8km s-min=18.2km az=133.0*

*ISCJB **08** 15:46:11.0±0.4, 10°.79S±0°.05×166°.12E±0°.06, h10^{km},*

mb4.6/23, Error ellipse: s-maj=8.4km s-min=7.5km az=151.7

*NEIC **08** 15:46:12.5±0.4, 10°.70S×166°.13E, h10^{km}, mb4.8/9, Error ellipse: s-maj=9.7km s-min=7.8km az=110.0*

ISC 08 15:46:12.8±0.6, **10°.75S**±0°.08×**166°.17E**±0°.08, **h10^{km}, n45,** σ**1^{s}09**/41, **mb4.7**/23, **1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.26	281	ePn	Pn	15 47 46.6	+1.2
HNR				Sn	Sn	15 48 57.2	+0.1
HNR	Honiara	6.26	281	Pn	Pn	15 47 46.1	+0.7
	75nm,0.3s,baz=158,slow=11,SNR=10						
HNR				Sn	Sn	15 48 57.2	+0.1
	22nm,0.3s,baz=294,slow=19,SNR=3.1						
DZM	Mont Dzumac	11.26	179	ePn	Pn	15 48 55.9	+1.8
DZM	Mont Dzumac	11.26	179	Pn	Pn	15 48 55.7	+1.6
	6.1nm,0.3s,baz=326,slow=23,SNR=7.2						
ONTNC	Ouen Toro	11.50	179	ePn	Pn	15 48 58.5	+1.3
TARA	Tarawa	13.77	30	ePn	Pn	15 49 28.4	+0.1
EIDS	Eidsvold	20.39	223	eP	Pn	15 50 51.1	-1.1
	70nm,1.0s						
CTA	Charters Tower	21.31	242	P	P	15 50 59.8	-0.2
	20nm,0.9s,baz=54,slow=16,SNR=4.4						
CTAO	Charters Tower	21.31	242	eP	P	15 51 00.3	+0.3
	56nm,1.0s						
ARMA	Armidale	23.79	213	eP	P	15 51 26.7	+0.7
	3.8nm,0.8s						
H11S2	WAKE ISLAND Hy	29.06	1	T	T	16 22 34.4	
	baz=181						
H11S3	WAKE ISLAND Hy	29.06	1	T	T	16 22 34.4	
	baz=181						
H11S1	WAKE ISLAND Hy	29.07	1	T	T	16 22 34.4	
	baz=181						
URZ	Urewera	29.10	162	P	P	15 52 13.5	-0.2
	5.2nm,0.8s,baz=9.5,slow=6.1,SNR=3.1						
BKZ	Black Stump Fm	29.76	164	eP	P	15 52 19.3	-0.4
	10nm,0.5s						
H11N1	WAKE ISLAND Hy	30.28	1	T	T	16 24 03.8	
	baz=181						
H11N3	WAKE ISLAND Hy	30.28	1	T	T	16 24 03.9	
	baz=181						
H11N2	WAKE ISLAND Hy	30.29	1	T	T	16 24 04.9	
	baz=181						
STKA	Stephens Creek	30.94	223	P	P	15 52 30.1	-0.1
	2.9nm,0.8s,baz=32,slow=13,SNR=5.7						
WRAB	Tennant Creek	31.96	250	eP	P	15 52 38.1	-1.3
	20nm,0.9s						
WRA	Warramunga Arr	31.98	250	P	P	15 52 38.1	-1.3
	16nm,0.8s,baz=80,slow=9.1,SNR=20						
WRA				PcP	PcP	15 55 29.0	-0.6
	0.9nm,0.6s,baz=75,slow=3.4,SNR=5.1						
OXZ	Oxford	32.86	172	eP	P	15 52 45.5	-1.4
RPZ	Rata Peaks	33.12	174	eP	P	15 52 48.8	-0.4
	13nm,0.7s						
RPZ	Rata Peaks	33.12	174	P	P	15 52 48.6	-0.5
	12nm,0.7s,baz=314,slow=3.8,SNR=9.9						
AS01	Alice Springs	33.26	243	eP	P	15 52 48.5	-2.1
AS31	Alice Springs	33.30	243	eP	P	15 52 49.5	-1.5
	2.6nm,0.7s						
ASAR	Alice Springs	33.30	243	P	P	15 52 49.4	-1.6
	12nm,0.9s,baz=74,slow=9.4,SNR=20						
ASAR				PcP	PcP	15 55 32.2	-1.0
	0.9nm,0.7s,baz=80,slow=2.7,SNR=5.7						
FITZ	Fitzroy Crossi	39.86	255	eP	P	15 53 45.7	-1.3
	12nm,0.7s						
NJ2	Nanjing	62.10	315	eP	P	15 56 34.1	-0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CN2	Changchun	65.70	329	eP	P	15 56 59.0	+1.4
PSI	Prapat	68.24	277	P	P	15 57 13.9	-0.7
	comp=Z,2.0nm,0.4s,baz=180,slow=3.0,SNR=3.0						
GYA	Guiyang	68.60	304	eP	P	15 57 18.0	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	71.32	301	P	P	15 57 34.2	+0.7
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	Hu-ho-hao-te	71.88	319	eP	P	15 57 36.4	0.0
HHC				pmax	pmax		
	comp=Z,18nm,1.3s						
HHC				pmax	pmax		
	comp=Z,20µm,6.3s						
CM01	Chiang Mai Arr	72.35	293	eP	P	15 57 38.1	-1.4
CMAR	Chiang Mai Arr	72.38	293	P	P	15 57 39.4	-0.3
	comp=Z,2.5nm,0.7s,baz=123,slow=4.5,SNR=11						
LZH	Lanzhou	74.87	312	eP	P	15 57 55.7	+1.5
LZH				pP	PcP	15 58 01.3	-6.8
LZH				sP	sP	15 58 04.0	+5.3
LZH				PP	PP	16 00 05.2	-37
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
BMRM	Bremner River	81.30	22	eP	P	15 58 29.1	0.0
	comp=Z,6.3nm,0.8s						
ILAR	Eielson Array	83.10	18	P	P	15 58 38.6	+0.2
	comp=Z,1.8nm,0.8s,baz=231,slow=5.2,SNR=7.1						
NVAR	Mina Array Bea	85.51	50	P	P	15 58 52.6	+0.9
	comp=Z,1.9nm,0.8s,baz=243,slow=7.7,SNR=2.2						
WMQ	Urumqi	89.18	315	eP	P	15 59 09.8	+0.8
SYO	Syowa Base	92.19	197⇑	epP	pP	15 59 24.0	-1.7
MKAR	Makanchi Array	93.59	317	P	P	15 59 28.5	-0.9
	comp=Z,1.9nm,0.8s,baz=113,slow=3.4,SNR=4.9						
YKA	Yellowknife Ar	94.52	27	P	P	15 59 32.0	-1.2
	comp=Z,0.3nm,0.6s,baz=262,slow=4.6,SNR=4.8						
ARCES	ARCESS Array B	116.15	346	PKP	PKPdf	16 04 54.0	-1.9
	comp=Z,0.7nm,0.7s,baz=64,slow=2.1,SNR=4.7						

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*IDC **08** 15:48:00.9±1.6, 11°.19S×165°.40E, h0^{km}, mb4.2/5, mb1 4.4/6, mb1mx3.9/43, mbtmp4.2/6, ML4.2/1, Error ellipse: s-maj=50.3km s-min=27.2km az=120.0*

*ISCJB **08** 15:48:03.5±1.3, 11°.4S±0°.1×165°.4E±0°.2, h30^{km}, mb4.2/5, Error ellipse: s-maj=31.5km s-min=20.5km az=2.0*

ISC 08 15:48:05.3±1.3, **11°.3S**±0°.1×**165°.4E**±0°.2, **h30^{km}, n6,** σ**0^{s}50**/6, **mb4.1**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.79	175	Pn	Pn	15 50 37.7	-0.1
	1.7nm,0.3s,baz=342,slow=9.6,SNR=3.7						
STKA	Stephens Creek	30.07	223	P	P	15 54 12.7	+0.6
	3.2nm,0.9s,baz=66,slow=14,SNR=3.7						
WRA	Warramunga Arr	31.13	250	P	P	15 54 21.4	-0.1
	7.4nm,0.8s,baz=80,slow=9.3,SNR=5.4						
ASAR	Alice Springs	32.43	243	P	P	15 54 32.4	-0.6
	3.0nm,0.7s,baz=74,slow=9.7,SNR=5.2						
ILAR	Eielson Array	83.82	19	P	P	16 00 31.6	+0.1
	1.3nm,1.0s,baz=242,slow=4.9,SNR=3.2						
MKAR	Makanchi Array	93.48	317	P	P	16 01 18.1	-0.1
	0.4nm,0.6s,baz=102,slow=4.2,SNR=2.7						

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*ISCJB **08** 15:52:32.9±0.9, 10°.91S±0°.08×165°.98E±0°.09, h10^{km}, mb4.1/8, MS5.7/1, Error ellipse: s-maj=15.2km s-min=8.1km az=139.5*

*IDC **08** 15:52:32.7±1.0, 10°.86S×166°.01E, h0^{km}, mb4.2/8, mb1 4.4/10, mb1mx4.0/49, mbtmp4.4/10, ML5.0/2, MS5.7/1, Ms1 5.7/1, ms1mx4.8/39, Error ellipse: s-maj=24.8km s-min=20.0km az=65.0*

ISC 08 15:52:34.3±1.0, **10°.8S**±0°.1×**166°.1E**±0°.1, **h10^{km}, n18,** σ**0^{s}86**/13, **mb4.2**/8, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.17	282	Pn	Pn	15 54 06.7	+1.0
	64nm,0.3s,baz=142,slow=6.4,SNR=26						
HNR				Sn	Sn	15 55 16.3	0.0
	5.6nm,0.3s,baz=232,slow=20,SNR=1.6						
DZM	Mont Dzumac	11.20	178	Pn	Pn	15 55 15.5	+0.9
	6.5nm,0.3s,baz=342,slow=11,SNR=24						
DZM				Sn	Sn	15 57 20.6	+0.6
	1.2nm,0.3s,baz=244,slow=17,SNR=2.3						
URZ	Urewera	29.07	162	P	P	15 58 34.4	-0.5
	1.7nm,0.4s,baz=21,slow=16,SNR=3.7						
H11S2	WAKE ISLAND Hy	29.13	1	T	T	16 28 58.5	
	baz=182						
H11S3	WAKE ISLAND Hy	29.13	1	T	T	16 28 59.1	
	baz=182						
H11S1	WAKE ISLAND Hy	29.15	1	T	T	16 29 00.0	
	baz=182						
H11N1	WAKE ISLAND Hy	30.35	2	T	T	16 30 30.3	
	baz=181						
H11N3	WAKE ISLAND Hy	30.35	2	T	T	16 30 30.5	
	baz=181						
H11N2	WAKE ISLAND Hy	30.37	2	T	T	16 30 28.8	
	baz=181						
STKA	Stephens Creek	30.82	223	P	P	15 58 50.5	0.0
	3.5nm,0.8s,baz=60,slow=6.8,SNR=4.9						
WRA	Warramunga Arr	31.85	250	P	P	15 58 58.7	-1.2
	2.7nm,0.9s,baz=82,slow=8.8,SNR=9.3						
RPZ	Rata Peaks	33.06	173	P	P	15 59 09.9	-0.2
	9.5nm,0.8s,baz=41,slow=3.2,SNR=6.3						
ASAR	Alice Springs	33.17	243	P	P	15 59 09.8	-1.6
	2.0nm,1.0s,baz=65,slow=10,SNR=12						
TGY	Tagaytay City	51.14	298	LR	LR	16 21 51.1	
	comp=Z,7µm,18.5s,baz=124,slow=34						
QSPA	South Pole Qui	79.19	180	P	P	16 04 38.9	-0.5
	0.9nm,0.8s,baz=36,slow=1.7,SNR=4.2						
ILAR	Eielson Array	83.20	18	P	P	16 05 01.0	+0.5
	0.5nm,0.7s,baz=236,slow=4.7,SNR=8.2						
MKAR	Makanchi Array	93.57	317	P	P	16 05 51.3	+0.5
	2.5nm,1.2s,baz=90,slow=4.5,SNR=2.8						
ARCES	ARCESS Array B	116.19	346	PKP	PKPdf	16 11 16.9	-0.6
	0.9nm,0.7s,baz=64,slow=2.8,SNR=5.4						

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*IDC **08** 15:55:58.1±0.7, 10°.69S×166°.42E, h0^{km}, mb4.1/12, mb1 4.3/13, mb1mx4.1/45, mbtmp4.2/13, ML5.3/1, Error ellipse: s-maj=20.3km s-min=17.2km az=136.0*

*NEIC **08** 15:55:59.5±0.3, 10°.73S×166°.43E, h10^{km}, mb4.8/3, Error ellipse: s-maj=10.1km s-min=7.6km az=135.0*

ISC 08 15:56:04.1±0.6, **10°.6S**±0°.1×**166°.34E**±0°.09, **h36^{km}, n61,** σ**1^{s}58**/38, **mb4.6**/31, **1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.40	280	eP	Pn	15 57 36.0	+0.1
HNR				eS	Sn	15 59 03.0	+15
HNR	Honiara	6.40	280	Pn	Pn	15 57 35.4	-0.5
	60nm,0.3s,baz=144,slow=7.4,SNR=12						
HNR				Sn	Sn	15 58 49.3	+1.5
	15nm,0.3s,baz=204,slow=20,SNR=3.6						
MSVF	Nonsavu	13.37	123	ePn	P	15 59 25.9	+5.5
EIDS	Eidsvold	20.59	223	eP	P	16 00 38.0	-2.1
	84nm,1.0s						
EIDS	Eidsvold	20.59	223	eP	P	16 00 38.6	-1.4
	84nm,1.0s						
CTA	Charters Tower	21.50	242	P	P	16 00 50.6	+0.7
	9.1nm,0.7s,baz=72,slow=12,SNR=8.4						
CTAO	Charters Tower	21.50	242	eP	P	16 00 50.8	+0.8
	19nm,1.0s						
CTAO	Charters Tower	21.50	242	eP	P	16 00 46.4	-3.5
	11nm,0.8s						
ARMA	Armidale	23.97	213	eP	P	16 01 12.7	-2.6
	38nm,1.1s						
ARMA	Armidale	23.97	213	eP	P	16 01 14.8	-0.5
	38nm,1.1s						
H11S2	WAKE ISLAND Hy	28.95	1	T	T	16 32 30.0	
	baz=181,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	28.95	1	T	T	16 32 28.1	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	28.96	1	T	T	16 32 30.9	
	baz=181,slow=76,SNR=8.0						
URZ	Urewera	29.15	162	P	P	16 02 00.6	-1.2
	2.8nm,0.7s,baz=14,slow=4.2,SNR=2.0						
BKZ	Black Stump Fm	29.82	164	eP	P	16 02 10.1	+2.3
	7.1nm,0.6s						
H11N1	WAKE ISLAND Hy	30.16	1	T	T	16 33 54.9	
	baz=182,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.17	1	T	T	16 34 00.3	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.18	1	T	T	16 34 03.6	
	baz=182,slow=76,SNR=12						
STKA	Stephens Creek	31.13	224	P	P	16 02 17.7	-1.7
	3.7nm,0.8s,baz=19,slow=12,SNR=3.8						
WRAB	Tennant Creek	32.16	249	eP	P	16 02 29.0	+0.4
	25nm,0.9s						
WR1	Warramunga Arr	32.17	249	eP	P	16 02 28.1	-0.6
WRA	Warramunga Arr	32.17	249	P	P	16 02 28.1	-0.6
	22nm,0.9s,baz=79,slow=9.2,SNR=32						
FOZ	Fox Glacier	32.91	175	eP	P	16 02 36.8	+1.9
	19nm,0.9s						
RPZ	Rata Peaks	33.21	174	eP	P	16 02 40.6	+3.1
	33nm,1.0s						
RPZ	Rata Peaks	33.21	174	P	P	16 02 35.6	-1.9
	9.3nm,0.8s,baz=53,slow=4.6,SNR=2.5						
AS01	Alice Springs	33.45	243	eP	P	16 02 39.2	-0.7
AS31	Alice Springs	33.49	243	eP	P	16 02 40.0	-0.2
	1.5nm,0.8s						
ASAR	Alice Springs	33.49	243	P	P	16 02 39.9	-0.4
	7.0nm,0.9s,baz=73,slow=9.5,SNR=27						
FITZ	Fitzroy Crossi	40.05	255	eP	P	16 03 36.8	+0.8
	20nm,0.8s						
NJ2	Nanjing	62.14	315	eP	P	16 06 29.8	+8.0
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
GYA	Guiyang	68.67	304	P	P	16 07 14.0	+10
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	71.41	301	P	P	16 07 30.8	+10
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KMI				LR	LR		
	comp=N,8µm,14.9s						
KMI				LR	LR		
	comp=E,9µm,18.4s						
KMI				LR	LR		
	comp=Z,12µm,16.8s						
HHC	Hu-ho-hao-te	71.90	319	eP	P	16 07 32.3	+8.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,19µm,6.5s						
CMAR	Chiang Mai Arr	72.48	293	P	P	16 07 27.9	+0.3
	comp=Z,1.7nm,0.9s,baz=115,slow=5.2,SNR=6.7						
LZH	Lanzhou	74.92	312	eP	P	16 07 49.0	+7.3
LZH				pP	sP	16 07 58.1	+1.8
LZH				sP	PcP	16 08 00.1	+4.6
LZH				PP	PP	16 10 51.3	+21
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH				LR	LR		
	comp=N,230nm,16.5s						
LZH				LR	LR		
	comp=E,260nm,16.7s						
LZH				LR	LR		
	comp=Z,240nm,18.8s						
GTA	Gaotai	79.20	314	P	P	16 08 12.6	+6.9
GTA				pP	pP	16 08 17.1	+0.8
GTA				sP	sP	16 08 19.8	-0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
QSPA	South Pole Qui	79.36	180	P	P	16 08 05.9	-0.2
	baz=28,slow=6.2						
IL1	Eielson Array	82.95	18	eP	P	16 08 39.4	+15
ILAR	Eielson Array	82.95	18	P	P	16 08 24.2	-0.7
	comp=Z,1.1nm,1.1s,baz=209,slow=5.2,SNR=4.6						
ILB	Eielson Array	82.95	18	eP	P	16 08 39.4	+14
NV01	Mina Array Sit	85.32	50	eP	P	16 08 51.9	+14
NVAR	Mina Array Bea	85.32	50	P	P	16 08 37.2	-0.7
	comp=Z,0.4nm,0.7s,baz=253,slow=2.7,SNR=2.3						
CCUT	Cedar City	88.84	52	eP	P	16 09 08.1	+13
	comp=Z,10nm,1.2s						
WMQ	Urumqi	89.22	315	eP	P	16 09 06.8	+10
BGU	Big Grassy Mou	89.91	48	eP	P	16 09 16.4	+17
	comp=Z,4.1nm,1.1s						
MSU	Marysvale	89.98	51	eP	P	16 09 14.9	+15
HVU	Hansel Valley	90.31	48	eP	P	16 09 17.4	+16
	comp=Z,9.5nm,1.2s						
NLU	North Lily Min	90.39	50	eP	P	16 09 17.3	+15
	comp=Z,9.5nm,1.1s						
MPU	Maple Canyon	90.73	50	eP	P	16 09 21.0	+17
	comp=Z,3.8nm,0.8s						
TMUT	Trail Mountain	90.89	50	eP	P	16 09 19.1	+14
	comp=Z,9.1nm,1.2s						
SYO	Syowa Base	92.34	197⇑	ePcP	PcP	16 09 16.2	+5.1
PDAR	Pinedale Array	92.85	47	P	P	16 09 13.0	-0.5
	comp=Z,0.1nm,0.6s,baz=286,slow=1.3,SNR=2.7						
ZALV	Zalesovo Beam	93.57	324	P	P	16 09 16.1	-0.1
	comp=Z,0.3nm,0.4s,baz=100,slow=6.0,SNR=2.3						
ZAA1	Zalesovo Array	93.57	324	eP	P	16 09 16.1	-0.1
MK32	Makanchi Array	93.62	317	eP	P	16 09 16.7	0.0
MKAR	Makanchi Array	93.62	317	P	P	16 09 16.7	0.0
	comp=Z,1.4nm,0.9s,baz=93,slow=5.4,SNR=8.0						
YKA	Yellowknife Ar	94.35	27	P	P	16 09 20.3	+0.7
	comp=Z,0.1nm,0.5s,baz=254,slow=4.4,SNR=3.2						
ARA0	ARCESS Array S	116.09	346	ePKPdf	PKPdf	16 14 42.7	-0.1
ARCES	ARCESS Array B	116.09	346	PKP	PKPdf	16 14 42.7	-0.1
	comp=Z,2.1nm,0.9s,baz=112,slow=1.0,SNR=3.1						
TORD	Torodi Ar. Bea	164.76	281	PKP	PKPdf	16 16 04.5	-0.7
	comp=Z,0.2nm,0.4s,baz=46,slow=1.7,SNR=2.9						
TOA1	Torodi Ar. Sit	164.76	281	ePKPdf	PKPdf	16 16 04.5	-0.7

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*NEIC **08** 15:57:44.0±0.0, 34°.92S×71°.84W, h64^{km}, ML4.0(GUC), After GUC.*

NEIC Felt [III] at Talca and [II] at Chepica, Curico and Romeral.

*GUC **08** 15:57:44.8±0.4, 34°.92S×71°.84W, h64^{km}±7^{km}, ML4.0*

*SJA **08** 15:57:44.8±0.7, 34°.77S×71°.98W, h40^{km}±33^{km}, ML3.3, MW3.8*

ISC 08 15:57:39.8±1.9, **34°.96S**±0°.04×**71°.69W**±0°.09, **h13^{km}**±15^{km}**, n27,** σ**1^{s}67**/30, **5C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.62	336⇑	eP	Pn	15 57 57.2	+2.9
CHPI				eS	Sn	15 58 04.4	+0.3
LMEL	Las Melosas	1.66	48	eP	Pg	15 58 13.0	+1.3
LMEL				eS	Sg	15 58 33.9	+0.7
LMEL				IAML		15 58 39.3	
	comp=N,3µm,0.1s						
CCHI	Chillan	1.67	191⇑	eP	Pg	15 58 17.7	+5.9
CCHI				eS	Sg	15 58 43.1	+10
CLCH	Cerro Calan	1.83	32⇑	eP	Pg	15 58 14.6	-0.4
CLCH				eS	Sg	15 58 37.1	-1.7
CLCH				IAML		15 58 44.1	
	comp=N,2µm,0.4s						
PEL	Peldehue	2.00	25	ePn	Pb	15 58 16.7	+0.7
PEL	Peldehue	2.00	25	i P	Pb	15 58 16.9	+0.9
PEL	Peldehue	2.00	25⇑	eP	Pb	15 58 16.5	+0.5
PEL				IAML		15 58 45.2	
	comp=N,1µm,0.5s						
FCH	Farellones	2.00	36	eP	Pg	15 58 17.4	-0.9
FCH				eS	Sb	15 58 42.2	+1.0
FCH				IAML		15 58 45.8	
	comp=N,1µm,0.4s						
ROC1	El Roble	2.06	16	ePn	Pb	15 58 17.3	+0.1
ROC1	El Roble	2.06	16	i P	Pb	15 58 17.6	+0.4
ROC1				i S	Sb	15 58 41.6	-1.1
ROCH	El Roble	2.06	16⇑	eP	Pb	15 58 17.3	0.0
ROCH				eS	Sb	15 58 42.6	-0.3
ROCH				IAML		15 58 52.4	
	comp=N,1µm,0.5s						
RFA	San Rafael	2.66	87⇓	iP	Pg	15 58 30.2	-0.6
AAGR	Agrelo	3.03	53	i P	Pb	15 58 34.1	+0.5
ARCO	CERRO ARCO	3.12	48	i P	Pb	15 58 35.2	-0.1
ARCO				IAML		15 59 00.6	
	comp=Z,78nm,0.4s						
AUSP	Uspallata	3.34	36	i P	Pb	15 58 37.8	-1.2
ASAL	Salagasta	3.35	46	i P	Pb	15 58 38.3	-0.9
GO06	Curarrehue	4.62	178	ePn	Pb	15 58 59.2	-1.5
GO04	Tololo Observa	4.83	9	ePn	Pn	15 58 54.2	+1.8
PLCA	Paso Flores	5.83	171	ePn	Pb	15 59 15.1	-6.4
GO07	Milladeo Hill,	8.29	190	ePn	Pn	15 59 43.5	+3.9
TRQA	Tornquist	8.41	114	ePn	Pn	15 59 49.2	+7.9
GO02	Mina Guanaco	9.93	11	ePn	Pn	16 00 03.0	+0.4
PB01	IPOC Station P	14.00	9	ePn	P	16 01 06.0	0.0
PB11	IPOC Station P	15.25	7	ePn	Pn	16 01 13.3	-1.6
MNMC	Minye Minye	15.88	7	ePn	Pn	16 01 24.6	+1.3
LPAZ	La Paz	18.87	11	eP	P	16 01 57.8	-2.6
NNA	Nana	23.34	347	eP	P	16 02 43.6	-4.3

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*IDC **08** 15:59:31.4±1.1, 34°.61N×26°.74E, h0^{km}, mb3.7/8, mb1 3.7/14, mb1mx3.5/55, mbtmp3.5/14, ML3.7/5, Error ellipse: s-maj=22.2km s-min=13.8km az=1.0*

*THE **08** 15:59:35.5, 34°.60N×26°.39E, h0^{km}±1^{km}, ML3.1/2, Error ellipse: s-maj=2.6km s-min=0.8km az=174.0*

*ATH **08** 15:59:38.0, 34°.88N×26°.44E, h31^{km}±1^{km}, ML3.1/7, Error ellipse: s-maj=5.2km s-min=1.3km az=344.0*

ISC 08 15:59:35.4±1.6, **34°.59N**±0°.07×**26°.54E**±0°.04, **h28^{km}**±11^{km}**, n38,** σ**1^{s}69**/44, **mb3.6**/8, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.59	334	P	Pb	15 59 46.2	-0.9
ZKR				S	Sb	15 59 50.8	-4.4
ZKR				AML	AML	15 59 58.2	
	comp=E,5246µm,0.3s						
ZKR				AML	AML	16 00 06.9	
	comp=N,2083µm,0.4s						
ZKR	Zakros	0.59	334	P	Pb	15 59 46.3	-0.9
STIA	Sitia Lasithi	0.71	329	P	Pn	15 59 48.6	-1.0
STIA				S	Sn	15 59 59.1	-0.5
NPS	Neapolis	1.01	312	P	Pn	15 59 54.3	+0.6
NPS				S	Sn	16 00 05.5	-1.6
NPS				AML	AML	16 00 18.0	
	comp=N,2107µm,0.6s						
NPS				AML	AML	16 00 19.8	
	comp=E,3441µm,0.6s						
NPS	Neapolis	1.01	312	P	Pn	15 59 54.1	+0.4
NPS				S	Sb	16 00 07.7	+0.4
LAST	Lasithi	1.04	304	P	Pn	15 59 54.0	-0.2
LAST				AML	AML	16 00 12.3	
	comp=E,1878µm,0.6s						
LAST				AML	AML	16 00 16.0	
	comp=N,3216µm,0.9s						
LAST	Lasithi	1.04	304	P	Pn	15 59 54.0	-0.2
LAST				S	Sb	16 00 08.4	+0.3
KARP	Karpathos	1.08	28	P	Pb	15 59 55.3	-0.3
KARP				AML	AML	16 00 25.5	
	comp=N,2237µm,0.6s						
KARP				AML	AML	16 00 27.7	
	comp=E,2227µm,0.7s						
KARP	Karpathos	1.08	28	P	Pb	15 59 56.7	+1.1
KARP				S	Sb	16 00 14.0	+4.6
IDI	Anoyia	1.52	298	P	Pb	16 00 03.0	0.0
IDI				AML	AML	16 00 35.7	
	comp=N,700µm,0.5s						
IDI				AML	AML	16 00 38.0	
	comp=E,721µm,0.7s						
IDI	Anoyia	1.52	298	Pn	Pb	16 00 03.7	+0.7
	comp=E,6.5nm,0.3s,baz=138,slow=8.3,SNR=28						
IDI				Sn	Sb	16 00 25.6	+3.7
	comp=E,25nm,0.3s,baz=37,slow=20,SNR=11						
GVD	Gavdhos	2.03	278	P	Pb	16 00 11.4	-0.2
GVD				AML	AML	16 00 46.9	
	comp=N,775µm,0.4s						
GVD				AML	AML	16 00 58.2	
	comp=E,908µm,0.4s						
ARG	Arkhangelos	2.08	38	P	Pn	16 00 10.2	+1.8
VAM	Vamos	2.08	294	P	Pb	16 00 11.1	-1.4
VAM				AML	AML	16 00 44.9	
	comp=E,624µm,0.8s						
VAM				AML	AML	16 01 03.6	
	comp=N,1051µm,1.1s						
IMMV	Iera Moni Meta	2.27	293	P	Pn	16 00 12.6	+1.6
AMGA	Amorgos Island	2.30	347	P	Pn	16 00 12.1	+0.7
IOSP	Ios island	2.36	335	P	Pn	16 00 12.1	-0.2
APE	Apeiranthos	2.60	342	P	Pn	16 00 16.9	+1.3
MHLO	Agia Marina, M	2.72	321	P	Pn	16 00 18.2	+1.0
KYTH	Kithira	3.30	301	P	Pn	16 00 27.9	+2.7
VLI	Veliai	3.62	307	P	Pn	16 00 30.3	+0.8
DID	Didima	3.95	318	P	Pn	16 00 35.3	+1.1
ITM	Ithomi	4.55	306	P	Pn	16 00 43.7	+1.4
MMAI	Mount Meron Ar	7.55	100	Pn	Pn	16 01 20.6	-2.9
	comp=N,1.3nm,0.3s,baz=277,slow=13,SNR=7.6						
MMAI				Sn	Sn	16 02 44.0	-4.3
	comp=N,2.2nm,0.3s,baz=268,slow=22,SNR=6.5						
BRTR	Keskin Array B	7.64	46	Pn	Pn	16 01 24.4	-0.6
	comp=N,0.1nm,0.3s,baz=197,slow=13,SNR=2.4						
BRTR				Sn	Sn	16 02 49.1	-1.6
	comp=N,0.1nm,0.3s,baz=214,slow=28,SNR=2.8						
EIL	Elat	8.66	122	Pn	Pn	16 01 35.8	-3.0
	comp=N,0.5nm,0.3s,baz=233,slow=1.8,SNR=7.0						
EIL				Sn	Sn	16 03 06.3	-9.2
	comp=N,0.7nm,0.3s,baz=8.7,slow=13,SNR=2.9						
ASF	Jabal al Asfar	8.99	103	Sn	Sn	16 03 16.6	-7.2
	comp=N,0.2nm,0.3s,baz=54,slow=18,SNR=3.4						
KBZ	Khabaz	15.61	49	Pn	Pn	16 03 13.0	-0.3
	comp=N,0.1nm,0.3s,baz=220,slow=4.6,SNR=1.8						
AKASG	Malin Array Be	16.22	6	Pn	Pn	16 03 20.9	-0.2
	comp=N,0.9nm,0.3s,baz=192,slow=11,SNR=5.5						
GERES	GERESS Array B	17.13	330	P	Pn	16 03 33.2	+0.5
	comp=N,0.1nm,0.3s,baz=147,slow=11,SNR=4.0						
ESDC	Sonseca Array	24.77	291	P	P	16 04 56.4	+1.6
	comp=N,0.3nm,0.3s,baz=89,slow=8.5,SNR=4.4						
GEYT	Alibeck	25.62	73	P	P	16 05 02.7	+0.2
	comp=N,2.3nm,0.8s,baz=297,slow=9.8,SNR=4.5						
FINES	FINESS Array B	26.87	360	P	P	16 05 12.2	-1.2

	comp=N,0.6nm,0.3s,baz=170,slow=12,SNR=5.9						
TORD	**Torodi Ar. Bea**	**31.02**	**233**	P	**P**	**16 05 51.3**	**+0.6**
	comp=N,0.5nm,0.5s,baz=47,slow=8.4,SNR=4.8						
ARCES	**ARCESS Array B**	**35.00**	**359**	P	**P**	**16 06 23.2**	**-1.8**
	comp=N,0.9nm,0.6s,baz=174,slow=8.7,SNR=13						
MKAR	**Makanchi Array**	**43.15**	**56**	P	**P**	**16 07 33.1**	**-0.3**
	comp=N,0.3nm,0.5s,baz=277,slow=6.0,SNR=6.7						
ZALV	**Zalesovo Beam**	**44.59**	**46**	P	**P**	**16 07 44.0**	**-0.7**
	comp=N,0.5nm,0.3s,baz=260,slow=7.6,SNR=3.6						
YKA	**Yellowknife Ar**	**78.33**	**343**	P	**P**	**16 11 33.3**	**+0.7**
	comp=N,0.2nm,0.7s,baz=21,slow=5.2,SNR=3.6						

IDC 08 16:02:01.0±4.2,10°.91S×166°.00E,h56km±37km,mb3.7/4, mb1 4.1/6,mb1mx3.5/41,mbtmp4.1/6,ML4.2/2,Error ellipse: s-maj=38.6km s-min=31.6km az=133.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.14**	**283**	P	Pn	16 03 28.7	-0.5
	6.6nm,0.3s,baz=187,slow=1.7,SNR=4.0						
DZM	**Mont Dzumac**	**11.11**	**178**	P	Pn	16 04 37.7	+0.5
	1.6nm,0.3s,baz=304,slow=18,SNR=5.0						
WRA	**Warramunga Arr**	**31.77**	**250**	P	P	16 08 20.5	+0.2
	4.9nm,0.7s,baz=81,slow=9.1,SNR=14						
ASAR	**Alice Springs**	**33.08**	**243**	P	P	16 08 31.4	-0.3
	3.5nm,0.9s,baz=76,slow=9.6,SNR=14						
ILAR	**Eielson Array**	**83.30**	**18**	P	P	16 14 21.3	-0.1
	0.4nm,0.9s,baz=238,slow=4.7,SNR=4.1						
MKAR	**Makanchi Array**	**93.59**	**317**	P	P	16 15 11.2	0.0
	0.3nm,0.9s,baz=116,slow=6.6,SNR=2.7						

IDC 08 16:02:30.9±4.1,11°.00S×165°.03E,h0km,mb4.2/3, mb1 4.5/3,mb1mx3.7/38,mbtmp4.2/3,Error ellipse: s-maj=208.9km s-min=32.3km az=139.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**30.84**	**249**	P	P	16 08 49.3	+0.2
	4.4nm,0.8s,baz=79,slow=9.2,SNR=7.1						
ASAR	**Alice Springs**	**32.19**	**243**	P	P	16 09 00.6	-0.3
	3.2nm,0.9s,baz=78,slow=8.5,SNR=6.6						
ILAR	**Eielson Array**	**83.69**	**19**	P	P	16 15 01.3	0.0
	1.2nm,0.8s,baz=227,slow=5.9,SNR=7.0						

IDC 08 16:10:59.2±1.8,10°.73S×165°.18E,h0km,mb3.4/3, mb1 3.8/4,mb1mx3.5/40,mbtmp3.6/4,ML3.8/1,Error ellipse: s-maj=53.7km s-min=32.8km az=128.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.35**	**174**	Pn	Pn	16 13 42.7	-0.1
	0.6nm,0.3s,baz=347,slow=19,SNR=3.1						
WRA	**Warramunga Arr**	**31.07**	**249**	P	P	16 17 19.9	+0.5
	0.4nm,0.9s,baz=79,slow=7.9,SNR=4.1						
ASAR	**Alice Springs**	**32.44**	**243**	P	P	16 17 31.0	-0.5
	0.4nm,1.0s,baz=64,slow=10,SNR=2.8						
ILAR	**Eielson Array**	**83.39**	**19**	P	P	16 23 28.0	0.0
	1.0nm,1.2s,baz=240,slow=4.9,SNR=4.6						

DJA 08 16:13:28.0±0.4,1°S±2°×10°0E±°,h10km,M3.6/3,MLv3.6/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**0.59**	**28**	P	Pg	16 13 39.1	-0.5
PDSI				S	Sg	16 13 48.0	+0.6
PPSI	**Pulau Pagai**	**1.32**	**187**	P	Pn	16 13 50.1	-2.5
PPSI				S	Sb	16 14 10.0	0.0
SDSI	**Sungai Dareh**	**1.35**	**68**	P	Pn	16 13 51.3	-1.6
SDSI				S	Sb	16 14 09.5	-1.1
KRJI	**Kerinci**	**1.44**	**117**	P	Pn	16 13 53.5	-0.7
KRJI				S	Sn	16 14 12.6	-0.6
BKNI	**Bangkinang**	**1.95**	**26**	P	Pn	16 14 01.1	-0.1
BKNI				S	Sn	16 14 26.5	+0.7
MNSI	**Mandailing Nat**	**2.30**	**345**	P	Pn	16 14 05.8	-0.2
MNSI				S	Sn	16 14 35.8	+1.4
MASI	**Maura Aman, Be**	**2.66**	**129**	P	Pn	16 14 10.4	-0.6
KLI	**Kotabumi**	**5.78**	**126**	P	Pn	16 14 50.2	-3.6

IDC 08 16:18:19.2±1.9,10°.79S×165°.62E,h0km,mb3.4/3, mb1 3.8/4,mb1mx3.5/42,mbtmp3.6/4,ML3.8/1,Error ellipse: s-maj=54.3km s-min=33.1km az=127.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.25**	**176**	Pn	Pn	16 21 01.2	-0.2
	0.7nm,0.3s,baz=326,slow=21,SNR=9.1						
WRA	**Warramunga Arr**	**31.46**	**249**	P	P	16 24 43.0	+0.2
	0.3nm,0.7s,baz=81,slow=8.8,SNR=3.2						
ASAR	**Alice Springs**	**32.80**	**243**	P	P	16 24 54.4	-0.2
	0.4nm,0.9s,baz=63,slow=9.5,SNR=3.0						
ILAR	**Eielson Array**	**83.31**	**19**	P	P	16 30 47.7	0.0
	0.7nm,1.0s,baz=234,slow=6.2,SNR=4.2						

IDC 08 16:22:12.4±4.0,10°.85S×166°.08E,h56km±35km,mb3.8/8, mb1 4.0/10,mb1mx3.7/40,mbtmp4.1/10,ML4.5/2,Error ellipse: s-maj=35.7km s-min=26.9km az=128.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.20**	**283**	P	Pn	16 23 41.5	+0.1
	26nm,0.3s,baz=142,slow=5.2,SNR=8.0						
DZM	**Mont Dzumac**	**11.17**	**178**	P	Pn	16 24 49.3	-0.2
	1.4nm,0.3s,baz=318,slow=20,SNR=9.5						
CTA	**Charters Tower**	**21.18**	**242**	P	P	16 26 54.0	+0.7
	4.5nm,0.8s,baz=67,slow=11,SNR=6.2						
H11S2	**WAKE ISLAND Hy**	**29.16**	**1**	T	T	16 58 32.0	
	baz=181,slow=76,SNR=7.3						
H11S3	**WAKE ISLAND Hy**	**29.16**	**1**	T	T	16 58 32.0	
	baz=181,slow=76,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**29.17**	**1**	T	T	16 58 33.0	
	baz=181,slow=76,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	**30.38**	**2**	T	T	17 00 04.4	
	baz=182,slow=76,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**30.38**	**2**	T	T	17 00 05.4	
	baz=182,slow=76,SNR=7.4						
H11N2	**WAKE ISLAND Hy**	**30.39**	**2**	T	T	17 00 04.7	
	baz=182,slow=76,SNR=6.6						
STKA	**Stephens Creek**	**30.81**	**224**	P	P	16 28 24.1	+1.0
	1.4nm,0.8s,baz=12,slow=9.3,SNR=3.0						
WRA	**Warramunga Arr**	**31.86**	**250**	P	P	16 28 32.2	-0.3
	6.7nm,0.9s,baz=80,slow=9.2,SNR=30						
ASAR	**Alice Springs**	**33.18**	**243**	P	P	16 28 43.0	-1.0
	1.8nm,0.6s,baz=64,slow=10,SNR=40						
FITZ	**Fitzroy Crossi**	**39.75**	**255**	P	P	16 29 39.9	-0.1
	8.5nm,0.8s,baz=93,slow=6.3,SNR=21						
CMAR	**Chiang Mai Arr**	**72.33**	**293**	P	P	16 33 33.6	+0.7
	0.2nm,0.3s,baz=122,slow=3.5,SNR=5.1						
ILAR	**Eielson Array**	**83.22**	**18**	P	P	16 34 32.4	0.0
	0.5nm,0.7s,baz=243,slow=5.0,SNR=7.8						
MKAR	**Makanchi Array**	**93.60**	**317**	P	P	16 35 22.0	-0.7
	0.4nm,0.7s,baz=96,slow=6.2,SNR=4.6						

*NEIC **08** 16:23:32.5±0.9,11°.42S×167°.04E,h10km,mb4.3/4,Error ellipse: s-maj=28.9km s-min=13.5km az=138.0*

*IDC **08** 16:23:32.1±2.3,11°.18S×166°.77E,h0km,mb4.0/9, mb1 4.2/9,mb1mx4.0/36,mbtmp4.0/9,Error ellipse: s-maj=85.4km s-min=22.2km az=139.0*

ISC 08 16:23:33.8±1.5,11°.2S±0°.3×166°.8E±0°.3,h10km,n24, σ0s.81/18,mb4.0/10,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.91**	**284**	*e*Pn	Pn	16 25 21.3	+6.1
EIDS	**Eidsvold**	**20.49**	**224**	*e*P	Pn	16 28 15.4	+1.2
	36nm,1.1s						
CTA	**Charters Tower**	**21.62**	**243**	P	**P**	**16 28 25.9**	**+1.6**
	5.8nm,0.8s,baz=74,slow=11,SNR=4.2						
CTAO	**Charters Tower**	**21.62**	**243**	*e*P	**P**	**16 28 24.9**	**+0.5**
	7.3nm,0.9s						
ARMA	**Armidale**	**23.77**	**214**	*e*P	**P**	**16 28 46.7**	**0.0**
	4.8nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**29.46**	**360**	T	T	17 00 33.6	
	baz=181,slow=76,SNR=6.4						
H11S3	**WAKE ISLAND Hy**	**29.46**	**360**	T	T	17 00 31.1	
	baz=181,slow=76,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**29.47**	**360**	T	T	17 00 37.3	
	baz=181,slow=76,SNR=6.6						
WR1	**Warramunga Arr**	**32.37**	**250**	*e*P	**P**	**16 30 03.2**	**-0.6**
WRA	**Warramunga Arr**	**32.37**	**250**	P	**P**	**16 30 03.2**	**-0.6**
	3.2nm,0.9s,baz=79,slow=9.1,SNR=8.4						
ASAR	**Alice Springs**	**33.63**	**244**	P	**P**	**16 30 13.9**	**-0.9**
	1.3nm,0.9s,baz=79,slow=10.0,SNR=5.0						
FITZ	**Fitzroy Crossi**	**40.30**	**255**	*e*P	**P**	**16 31 10.4**	**-1.2**
	11nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.30**	**255**	P	**P**	**16 31 11.8**	**+0.1**
	18nm,1.1s,baz=81,slow=6.5,SNR=13						
CMAR	**Chiang Mai Arr**	**73.06**	**293**	P	**P**	**16 35 05.1**	**+0.4**
	1.3nm,0.9s,baz=102,slow=4.3,SNR=8.1						
SONA0	**Songino Array**	**79.34**	**323**	*e*P	**P**	**16 35 40.2**	**+0.3**
SONM	**Songino Array**	**79.34**	**323**	P	**P**	**16 35 40.2**	**+0.3**
	0.3nm,0.4s,baz=101,slow=3.1,SNR=3.4						
IM3	**Indian Mountai**	**82.27**	**15**	*e*P	P	16 36 01.1	+6.1
ILAR	**Eielson Array**	**83.31**	**18**	P	**P**	**16 36 01.2**	**+0.8**
	6.8nm,0.8s,baz=238,slow=4.1,SNR=11						
ILB	**Eielson Array**	**83.31**	**18**	*e*P	**P**	**16 36 01.3**	**+0.8**
IL1	**Eielson Array**	**83.31**	**18**	*e*P	**P**	**16 36 01.0**	**+0.5**
MK01	**Makanchi Array**	**94.26**	**317**	*e*P	**P**	**16 36 53.0**	**-0.4**
MK32	**Makanchi Array**	**94.27**	**317**	*e*P	**P**	**16 36 52.5**	**-1.0**
MKAR	**Makanchi Array**	**94.27**	**317**	P	**P**	**16 36 52.5**	**-1.0**
	0.3nm,0.7s,baz=84,slow=6.4,SNR=3.2						
YKA	**Yellowknife Ar**	**94.62**	**27**	P	**P**	**16 36 54.1**	**-0.5**
	0.1nm,0.4s,baz=261,slow=4.3,SNR=2.9						

IDC 08 16:28:24.8±3.3,11°.03S×166°.76E,h0km,mb3.7/3, mb1 3.9/4,mb1mx3.6/32,mbtmp3.8/4,ML3.5/1,Error ellipse: s-maj=72.8km s-min=42.6km az=92.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.98**	**182**	Pn	Pn	16 31 03.1	-0.3
	0.3nm,0.3s,baz=299,slow=19,SNR=2.9						
WRA	**Warramunga Arr**	**32.42**	**250**	P	P	16 34 56.8	0.0
	1.0nm,1.0s,baz=83,slow=9.3,SNR=5.6						
ASAR	**Alice Springs**	**33.69**	**244**	P	P	16 35 08.0	+0.1
	0.9nm,0.9s,baz=66,slow=9.8,SNR=5.4						
MKAR	**Makanchi Array**	**94.19**	**317**	P	P	16 41 45.5	-0.2
	0.3nm,0.9s,baz=95,slow=3.5,SNR=2.4						

IDC 08 16:32:25.5±1.8,11°.45S×166°.01E,h0km,mb3.6/4, mb1 3.9/5,mb1mx3.6/30,mbtmp3.7/5,ML3.6/1,Error ellipse: s-maj=55.0km s-min=31.0km az=124.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.57**	**178**	Pn	Pn	16 34 58.1	-0.3
	0.5nm,0.3s,baz=5.3,slow=4.6,SNR=3.1						
WRA	**Warramunga Arr**	**31.59**	**251**	P	P	16 38 51.2	+1.0
	0.7nm,0.9s,baz=81,slow=9.2,SNR=4.5						
ASAR	**Alice Springs**	**32.84**	**244**	P	P	16 39 00.5	-0.7
	0.5nm,1.0s,baz=66,slow=10,SNR=3.2						
ILAR	**Eielson Array**	**83.82**	**18**	P	P	16 44 56.7	+0.2
	0.5nm,0.9s,baz=230,slow=4.6,SNR=5.6						
MKAR	**Makanchi Array**	**93.99**	**317**	P	P	16 45 45.2	-0.4
	0.3nm,0.7s,baz=103,slow=6.4,SNR=4.2						

*ISCJB **08** 16:33:49.5±0.4,50°.29N±0°.03×18°.71E±0°.03,h0km,Error ellipse: s-maj=4.2km s-min=2.3km az=10.4*

*PRU **08** 16:33:50.9±0.0,50°.28N×18°.75E,h0km*

*IPEC **08** 16:33:51.0±0.2,50°.27N×18°.79E,h1km±2km,ML2.4/3, Error ellipse: s-maj=2.5km s-min=1.1km az=167.0*

*VIE **08** 16:33:51.9±1.3,50°.38N×18°.47E,h0km,mb2.4/2,ml2.8/4, Error ellipse: s-maj=16.2km s-min=8.5km az=125.0, Suspected Mining induced.*

*IDC **08** 16:33:53.2±1.6,50°.29N×18°.57E,h0km,mb1 3.5/3, mb1mx3.1/38,mbtmp3.4/3,ML2.7/3,Error ellipse: s-maj=31.0km s-min=8.2km az=131.0*

ISC 08 16:33:49.5±0.7,50°.32N±0°.03×18°.79E±0°.02,h0km,n33, σ1s.55/57,2C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHZP	**Chorzow**	**0.14**	**104**	*e*Pg	**Pg**	**16 33 54.2**	**+2.1**
CHZP				*e*Sg	**Sg**	**16 33 56.2**	**+2.3**
OKC	**Ostrava-Krasne**	**0.64**	**220**	*e*PG	**Pg**	**16 34 02.8**	**+1.1**
OKC				*e*SG	**Sg**	**16 34 09.6**	**-0.4**
	comp=Z,75nm,0.6s						
OJC	**Ojcow**	**0.66**	**99**	*e*Pg	**Pg**	**16 34 03.5**	**+1.4**
OJC				*e*Sg	**Sg**	**16 34 12.4**	**+1.7**
MORC	**Moravsky Berou**	**0.97**	**236**	⇑*i*P	**Pg**	**16 34 08.9**	**+0.8**
MORC	**Moravsky Berou**	**0.97**	**236**	*e*PG	**Pg**	**16 34 08.9**	**+0.8**
MORC				*e*SG	**Sg**	**16 34 20.7**	**0.0**
MORC	**Moravsky Berou**	**0.97**	**236**	*e*Pg	**Pg**	**16 34 08.8**	**+0.7**
	baz=58						
MORC				*e*Sg	**Sg**	**16 34 20.7**	**0.0**
	84nm,0.4s,baz=58						
LANS	**Liptovska Anna**	**1.25**	**159**	*e*PG	**Pg**	**16 34 13.9**	**+0.3**
LANS				*e*SG	**Sg**	**16 34 29.9**	**+0.1**
KRLC	**Kraliky**	**1.31**	**260**	*e*PG	**Pg**	**16 34 14.9**	**+0.3**
KRLC				*e*SG	**Sg**	**16 34 31.4**	**-0.2**
	comp=Z,20nm,0.4s						
NIE	**Niedzica**	**1.33**	**132**	*e*Pg	**Pg**	**16 34 15.7**	**+0.6**
NIE				*e*Sg	**Sg**	**16 34 33.5**	**+1.1**
DPC	**Dobruska-Polom**	**1.58**	**272**	*e*PG	**Pn**	**16 34 20.0**	**+1.2**
DPC				*e*SG	**Sn**	**16 34 40.6**	**+0.6**
KSP	**Ksiaz**	**1.67**	**289**	*e*Pg	**Pg**	**16 34 23.3**	**+1.7**
KSP				*e*Sg	**Sg**	**16 34 45.4**	**+2.2**
VRAC	**Vranov**	**1.75**	**235**	⇑*i*P	**Pn**	**16 34 21.5**	**+0.4**
VRAC	**Vranov**	**1.75**	**235**	*e*PN	**Pn**	**16 34 21.9**	**+0.8**
VRAC				*e*SG	**Sn**	**16 34 44.7**	**+0.7**
VRAC	**Vranov**	**1.75**	**235**	*e*Pn	**Pn**	**16 34 21.8**	**+0.7**
	baz=55						
VRAC				*e*Sg	**Sn**	**16 34 44.7**	**+0.7**
	32nm,0.3s,baz=55						
VRAC	**Vranov**	**1.75**	**235**	Pn	**Pn**	**16 34 22.4**	**+1.3**
	3.1nm,0.3s,baz=55,slow=12,SNR=16						
VRAC				Lg	Lg	16 34 44.6	
	12nm,0.3s,baz=348,slow=22,SNR=18						
UPC	**Upice**	**1.78**	**277**	*e*SG	**Sg**	**16 34 47.6**	**+0.8**
	comp=Z,36nm,0.5s						
VYHS	**Vyhne**	**1.83**	**179**	*e*PN	**Pn**	**16 34 21.9**	**-0.4**
VYHS				*e*SN	**Sn**	**16 34 44.5**	**-1.7**
VYHS				*e*LG	Lg	16 34 49.2	
KRUC	**Moravsky**	**2.00**	**232**	*e*PN	**Pn**	**16 34 25.7**	**+1.1**
KRUC				*e*SG	**Sb**	**16 34 52.5**	**+0.2**
KRUC	**Moravsky**	**2.00**	**232**	*e*Pn	**Pn**	**16 34 25.6**	**+1.0**
	baz=51						
KRUC				*e*Sg	**Sb**	**16 34 52.4**	**+0.2**
	22nm,0.4s,baz=51						
PRU	**Pruhonice**	**2.75**	**265**	*e*PG	**Pb**	**16 34 39.9**	**+0.4**
PRU				*e*SG	**Sb**	**16 35 15.7**	**+1.9**
	comp=Z,14nm,0.3s						
CONA	**Conrad Observa**	**3.07**	**220**	*e*Pn	**Pn**	**16 34 39.8**	**+0.5**
	0.3nm,0.1s						
CONA				Sn	**Sn**	**16 35 16.2**	**-0.7**
	9.1nm,0.5s						
BRG	**Berggiesshubel**	**3.13**	**282**	PG	**Pg**	**16 34 50.7**	**+1.1**
BRG				*i*		16 35 08.6	
BRG	**Berggiesshubel**	**3.13**	**282**	SG	**Sg**	**16 35 30.6**	**+0.4**
	18nm,0.6s						
KHC	**Kasperske Hory**	**3.58**	**253**	*e*PN	**Pn**	**16 34 47.5**	**+1.1**
KHC				*e*PG	**Pb**	**16 34 53.9**	**+0.1**
KHC				*e*SG	**Sg**	**16 35 44.4**	**-0.2**
	comp=Z,24nm,0.4s						
GERES	**GERESS Array B**	**3.62**	**248**	Pn	**Pn**	**16 34 48.4**	**+1.4**
	0.2nm,0.3s,baz=72,slow=14,SNR=3.6						
GERES				Pg	**Pg**	**16 34 57.5**	**-1.4**
	0.7nm,0.3s,baz=67,slow=16,SNR=9.9						
GERES				Sn	**Sn**	**16 35 28.7**	**-1.8**
	1.1nm,0.3s,baz=62,slow=19,SNR=8.3						
GERES				Lg	Lg	16 35 43.1	
	4.1nm,0.3s,baz=63,slow=27,SNR=14						
ARSA	**Arzberg**	**3.76**	**216**	*i* Pn	**Pn**	**16 34 50.5**	**+1.8**
	0.9nm,0.3s						
ARSA				*e*Sg	**Sg**	**16 35 54.2**	**+4.0**
	2.4nm,0.3s						
CLL	**Collm**	**3.80**	**287**	*e*Pg	**Pg**	**16 35 05.0**	**+2.7**
CLL				*e*Pn	Pb	16 35 08.0	+11
CLL				*e*Sg	**Sg**	**16 35 53.0**	**+1.6**
	comp=Z,15nm,0.6s						
NKC	**Novy Kostel**	**4.07**	**271**	*e*SG	**Sg**	**16 35 57.8**	**-2.3**
DRGR		**4.39**	**142**	⇓*i*P	**Pn**	**16 34 58.6**	**+1.1**
BZS	**Buzias**	**5.08**	**157**	⇓*i*P	**Pn**	**16 35 08.0**	**+1.1**
AKASG	**Malin Array Be**	**6.67**	**83**	Sn	**Sn**	**16 36 42.7**	**-2.6**
	comp=Z,1.0nm,0.3s,baz=263,slow=22,SNR=3.8						
FINES	**FINESS Array B**	**11.86**	**17**	Pn	**Pn**	**16 36 38.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=18						
FINES				Sn	**Sn**	**16 38 47.1**	**-5.6**
	comp=Z,0.3nm,0.3s,baz=199,slow=21,SNR=6.3						
ARCES	**ARCESS Array B**	**19.54**	**7**	Pn	**P**	**16 38 17.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=5.6						

*SOME **08** 16:34:27.3,42°.57N×79°.65E,h10km*

*KRNET **08** 16:34:27.3±0.1,42°.60N×79°.65E,h15km,mb2.4*

*NNC **08** 16:34:27.2±1.0,42°.61N×79°.64E,h0km,mb2.8,mpv2.5, Error ellipse: s-maj=6.1km s-min=3.4km az=134.0*

ISC 08 16:34:27.6±1.2,42°.58N±0°.04×79°.67E±0°.04,h10km,n50, σ1s.21/88,15C-11D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**0.74**	**320**	P	**Pg**	**16 34 41.0**	**-0.9**
	6.0nm,0.1s						
UZB				S	**Sg**	**16 34 51.4**	**-0.3**
	26nm,0.2s						
UZB	**Uzynbulak**	**0.74**	**320**	⇑*e*P	**Pg**	**16 34 41.0**	**-0.9**
	baz=20						
UZB				⇑*e*S	**Sg**	**16 34 51.3**	**-0.3**
	baz=20						
UZB	**Uzynbulak**	**0.74**	**320**	⇑*e*P	**Pg**	**16 34 41.0**	**-0.9**
	6.0nm,0.1s						
UZB				*e*S	**Sg**	**16 34 51.3**	**-0.3**
	26nm,0.2s						
PDGK	**Podgornoye**	**0.76**	**350**	P	**Pg**	**16 34 41.4**	**-0.9**
	1.1nm,0.1s						
PDGK				S	**Sg**	**16 34 51.8**	**-0.5**
	4.9nm,0.1s						
PDGK	**Podgornoye**	**0.76**	**350**	⇓P	**Pg**	**16 34 41.2**	**-1.2**
	1.1nm,0.4s						
PDGK				⇑S	**Sg**	**16 34 51.5**	**-0.8**
	3.2nm,0.3s						
PDGK	**Podgornoye**	**0.76**	**350**	⇑*i*P	**Pg**	**16 34 41.4**	**-0.9**
	baz=50						
PDGK				⇑*i*S	**Sg**	**16 34 51.7**	**-0.6**
	baz=50						
PRZ	**Przheval'sk**	**0.94**	**265**	⇑*e*P	**Pg**	**16 34 45.1**	**-0.6**
	baz=63						
PRZ				⇑*i*S	**Sg**	**16 34 57.2**	**-0.8**
	baz=63						
KTMS	**Ketmen**	**1.00**	**30**	P	**Pg**	**16 34 46.4**	**-0.5**
KTMS				S	**Sb**	**16 34 59.8**	**-0.7**
KTMS	**Ketmen**	**1.00**	**30**	*e*P	**Pg**	**16 34 46.4**	**-0.5**
	baz=30						
KTMS				*e*S	**Sb**	**16 34 59.8**	**-0.7**
	baz=30						
KTMS	**Ketmen**	**1.00**	**30**	*e*P	**Pg**	**16 34 46.4**	**-0.5**
	1.7nm,0.1s						
KTMS				*e*S	**Sb**	**16 34 59.8**	**-0.7**
	4.7nm,0.1s						
SATY	**Saty**	**1.04**	**298**	P	**Pg**	**16 34 46.6**	**-1.1**
SATY				S	**Sg**	**16 35 00.3**	**-1.1**
SATY	**Saty**	**1.04**	**298**	*e*P	**Pg**	**16 34 46.6**	**-1.1**
	1.5nm,0.1s						
SATY				*e*S	**Sg**	**16 35 00.2**	**-1.1**
	10nm,0.2s						
KURS	**Kuram**	**1.43**	**310**	P	**Pn**	**16 34 53.3**	**-0.3**
	1.3nm,0.3s						
KURS				S	**Sg**	**16 35 12.5**	**-1.0**
	4.7nm,0.5s						
KURS	**Kuram**	**1.43**	**310**	*e*P	**Pb**	**16 34 53.5**	**-0.8**
	baz=10.0						
KURS				*e*S	**Sg**	**16 35 12.5**	**-1.0**
	baz=10.0						
KURS	**Kuram**	**1.43**	**310**	*e*P	**Pb**	**16 34 53.5**	**-0.8**
	1.3nm,0.3s						
KURS				*e*S	**Sg**	**16 35 12.5**	**-1.0**
	4.7nm,0.5s						
DJR	**Jarkent**	**1.76**	**3**	P	**Pb**	**16 34 59.5**	**-0.4**
	1.2nm,0.2s						
DJR				S	**Sg**	**16 35 22.9**	**-1.2**
	2.9nm,0.2s						
DJR	**Jarkent**	**1.76**	**3**	*e*P	**Pb**	**16 34 59.5**	**-0.4**
	1.2nm,0.2s						
DJR				*e*S	**Sg**	**16 35 22.9**	**-1.2**
	2.9nm,0.2s						
MNBS	**Baschi**	**1.76**	**329**	P	**Pb**	**16 34 59.5**	**-0.6**
	1.4nm,0.2s						
MNBS				S	**Sg**	**16 35 22.9**	**-1.3**
	16nm,0.2s						
MNBS	**Baschi**	**1.76**	**329**	⇑*e*P	**Pb**	**16 34 59.6**	**-0.6**
	1.4nm,0.2s						
MNBS				*e*S	**Sg**	**16 35 22.9**	**-1.3**
	16nm,0.2s						
KDJ	**Kajisay**	**1.90**	**257**	⇓*i*P	**Pb**	**16 35 02.6**	**+0.2**
	baz=56						
KDJ				⇓*i*S	**Sg**	**16 35 27.5**	**-1.1**
	baz=56						
KOTS	**Kotyrbulak**	**1.99**	**290**	Pg	**Pb**	**16 35 03.9**	**-0.1**
KOTS				Lg	Lg	16 35 29.7	
KOTS	**Kotyrbulak**	**1.99**	**290**	*e*P	**Pb**	**16 35 03.8**	**-0.1**
	baz=90						
KOTS				*e*S	**Sg**	**16 35 29.7**	**-1.8**
	baz=90						
KOTS	**Kotyrbulak**	**1.99**	**290**	*e*P	**Pb**	**16 35 03.8**	**-0.1**
	1.5nm,0.2s						
KOTS				*e*S	**Sg**	**16 35 29.7**	**-1.8**
	12nm,0.3s						
MDOK	**Medeo**	**2.01**	**288**	⇑Pg	**Pb**	**16 35 03.9**	**-0.5**
	1.9nm,0.8s						
MDOK				⇑Lg	Lg	16 35 29.4	
	4.9nm,0.5s						
MDOK	**Medeo**	**2.01**	**288**	Pg	**Pb**	**16 35 03.6**	**-0.8**
MDOK				Lg	Lg	16 35 29.5	
MDOK	**Medeo**	**2.01**	**288**	*e*P	**Pb**	**16 35 03.6**	**-0.8**
	baz=87						
MDOK				*e*S	**Sb**	**16 35 29.6**	**0.0**
	baz=87						
MDOK	**Medeo**	**2.01**	**288**	*e*P	**Pb**	**16 35 03.6**	**-0.8**
	0.8nm,0.1s						
MDOK				*e*S	**Sb**	**16 35 29.5**	**0.0**
	5.9nm,0.4s						
TNSS	**Tian-Shan**	**2.05**	**284**	Pg	**Pb**	**16 35 04.4**	**-0.8**
TNSS				Lg	Lg	16 35 31.1	
TNSS	**Tian-Shan**	**2.05**	**284**	*e*P	**Pb**	**16 35 04.4**	**-0.8**
	baz=83						
TNSS				*e*S	**Sb**	**16 35 31.1**	**+0.1**
	baz=83						
TNSS	**Tian-Shan**	**2.05**	**284**	*e*P	**Pb**	**16 35 04.4**	**-0.8**
	2.7nm,0.2s						
TNSS				*e*S	**Sb**	**16 35 31.1**	**+0.1**
	4.7nm,0.2s						
IZV	**Izvestkoviy**	**2.29**	**283**	Pg	**Pb**	**16 35 08.4**	**-0.8**
	1.4nm,0.2s						
IZV				Lg	Lg	16 35 38.4	
	11nm,0.3s						
IZV	**Izvestkoviy**	**2.29**	**283**	*e*P	**Pb**	**16 35 08.4**	**-0.8**
	1.4nm,0.2s						
IZV				*e*S	**Sb**	**16 35 38.4**	**+0.7**
	11nm,0.3s						
CHKK	**Chushkaly**	**2.34**	**304**	Pg	**Pb**	**16 35 08.7**	**-1.1**
CHKK				Lg	Lg	16 35 39.2	
CHKK	**Chushkaly**	**2.34**	**304**	*e*P	**Pb**	**16 35 08.8**	**-1.0**
	0.5nm,0.1s						
CHKK				*e*S	**Sb**	**16 35 39.2**	**+0.4**
	12nm,0.2s						
MTBS	**Maitube**	**2.44**	**284**	Pg	**Pb**	**16 35 11.3**	**-0.4**
MTBS				Lg	Lg	16 35 42.7	
MTBS	**Maitube**	**2.44**	**284**	*e*P	**Pb**	**16 35 11.3**	**-0.4**
	3.6nm,0.2s						
MTBS				*e*S	**Sb**	**16 35 42.7**	**+0.8**
	7.2nm,0.3s						
KTBS	**Karatobe**	**2.46**	**298**	Pg	**Pb**	**16 35 11.0**	**-0.9**
	1.0nm,0.3s						
KTBS				Lg	Lg	16 35 43.2	
	7.7nm,0.3s						
KTBS	**Karatobe**	**2.46**	**298**	*e*P	**Pb**	**16 35 11.0**	**-0.9**
	1.0nm,0.3s						
KTBS				*e*S	**Sb**	**16 35 43.2**	**+0.8**
	7.7nm,0.3s						
KAPS	**Kapalarasan**	**2.72**	**355**	Pg	**Pb**	**16 35 15.1**	**-1.3**
	0.6nm,0.4s						
KAPS				Lg	Lg	16 35 49.1	
	3.7nm,0.2s						
KAPS	**Kapalarasan**	**2.72**	**355**	*e*P	**Pb**	**16 35 16.1**	**-0.2**
	0.6nm,0.4s						
KAPS				*e*S	**Sb**	**16 35 51.0**	**+1.2**
	5.2nm,0.3s						
BOOM	**Boomskoye usch**	**2.75**	**269**	⇑*e*P	**Pb**	**16 35 14.9**	**-2.2**
	baz=69						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM				⇑iS	Sb	16 35 48.9	-2.0
	baz=69						
KST	Kastek	2.76	281	Pg	Pb	16 35 17.0	-0.2
KST				Lg	Lg	16 35 52.4	
KST	Kastek	2.76	281	eP	Pb	16 35 17.0	-0.2
	0.9nm,0.1s						
KST				eS	Sb	16 35 52.4	+1.3
	4.5nm,0.6s						
DGS	Degeres	2.94	284	Pg	Pb	16 35 19.8	-0.3
	1.0nm,0.4s						
DGS				Lg	Lg	16 35 57.3	
	12nm,0.4s						
DGS	Degeres	2.94	284	eP	Pb	16 35 19.9	-0.3
	1.0nm,0.4s						
DGS				eS	Sb	16 35 57.3	+1.2
	12nm,0.4s						
NRN	Naryn	2.96	249	⇓iP	Pb	16 35 18.4	-2.3
	baz=48						
NRN				⇓eS	Sb	16 35 54.9	-2.1
	baz=48						
TKM2	Tokmak 2	3.02	278	⇑Pg	Pb	16 35 21.2	-0.3
	3.5nm,1.1s						
TKM2				⇑Lg	Lg	16 35 59.9	
	3.2nm,0.7s						
TKM2	Tokmak 2	3.02	278	⇓iP	Pb	16 35 18.5	-3.0
	baz=78						
TKM2				⇓iS	Sb	16 35 55.1	-3.4
	baz=78						
KZA	Kyzart	3.31	263	⇓iP	Pn	16 35 22.8	+2.9
	baz=62						
KZA				⇓eS	Sn	16 36 02.4	+2.9
	baz=62						
KBK	Karagaybulak	3.48	273	⇓eP	Pn	16 35 25.0	+3.0
	baz=73						
KBK				⇓iS	Sn	16 36 06.1	+2.7
	baz=73						

IDC 08 16:35:14.2±3.9, 11°.28S×165°.58E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/30, mbtmp3.6/3, Error ellipse: s-maj=197.5km s-min=32.5km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.25	250	P	P	16 41 34.8	-1.2
	1.1nm,0.9s,baz=82,slow=9.1,SNR=5.5						
ASAR	Alice Springs	32.54	244	P	P	16 41 48.3	+1.1
	0.8nm,0.9s,baz=76,slow=10,SNR=5.7						
ILAR	Eielson Array	83.78	19	P	P	16 47 45.0	0.0
	0.3nm,0.9s,baz=210,slow=7.1,SNR=2.4						

IDC 08 16:36:21.6±2.7, 11°.62S×164°.75E, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.9/30, mbtmp4.0/6, ML3.7/1, Error ellipse: s-maj=59.5km s-min=33.2km az=89.0

ISCJB 08 16:36:24.6±2.0, 11°.8S±0°.2×164°.8E±0°.3, h33km, mb3.9/5, Error ellipse: s-maj=43.7km s-min=21.2km az=157.4

ISC 08 16:36:26.4±2.1, 11°.7S±0°.2×164°.9E±0°.3, h35km, n6, σ1s.43/6, mb4.1/5, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.41	172	Pn	Pn	16 38 53.5	0.0
	0.6nm,0.3s,baz=315,slow=18,SNR=5.0						
STKA	Stephens Creek	29.36	223	P	P	16 42 26.8	+0.6
	1.0nm,0.7s,baz=36,slow=14,SNR=2.6						
WRA	Warramunga Arr	30.43	251	P	P	16 42 35.1	-0.7
	3.3nm,1.1s,baz=80,slow=8.7,SNR=9.8						
ASAR	Alice Springs	31.71	244	P	P	16 42 46.1	-1.0
	2.6nm,1.0s,baz=65,slow=10,SNR=18						
CMAR	Chiang Mai Arr	71.57	294	P	P	16 47 46.3	+1.7
	0.4nm,0.7s,baz=121,slow=3.4,SNR=4.2						
MKAR	Makanchi Array	93.40	317	P	P	16 49 37.0	-1.2
	0.6nm,0.7s,baz=98,slow=6.2,SNR=8.7						

IDC 08 16:38:51.7±4.0, 11°.24S×165°.50E, h54km±37km, mb3.3/3, mb1 3.7/5, mb1mx3.3/32, mbtmp3.8/5, ML4.1/2, Error ellipse: s-maj=37.5km s-min=32.8km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.75	288	P	Pn	16 40 14.5	0.0
	8.9nm,0.3s,baz=339,slow=2.3,SNR=4.2						
DZM	Mont Dzumac	10.81	175	P	Pn	16 41 23.8	0.0
	0.8nm,0.3s,baz=306,slow=11,SNR=6.3						
H11S2	WAKE ISLAND Hy	29.57	2	T	T	17 16 26.5	
	baz=181,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	29.57	2	T	T	17 16 25.3	
	baz=181,slow=76,SNR=8.6						
H11S1	WAKE ISLAND Hy	29.58	2	T	T	17 16 26.4	
	baz=181,slow=76,SNR=9.9						
H11N1	WAKE ISLAND Hy	30.79	3	T	T	17 17 56.5	
	baz=182,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.79	3	T	T	17 17 57.0	
	baz=182,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	30.81	3	T	T	17 17 57.9	
	baz=182,slow=76,SNR=14						
WRA	Warramunga Arr	31.19	250	P	P	16 45 06.4	+0.4
	0.9nm,0.8s,baz=81,slow=9.1,SNR=4.9						
ASAR	Alice Springs	32.49	243	P	P	16 45 17.1	-0.4
	0.3nm,0.8s,baz=67,slow=10,SNR=3.3						
ILAR	Eielson Array	83.77	19	P	P	16 51 14.8	0.0
	0.4nm,0.9s,baz=224,slow=7.6,SNR=3.4						

IDC 08 16:39:41.8±4.0, 11°.16S×165°.90E, h62km±36km, mb3.4/4, mb1 3.7/6, mb1mx3.4/32, mbtmp3.8/6, ML4.0/2, Error ellipse: s-maj=37.1km s-min=32.3km az=126.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	286	P	Pn	16 41 09.4	0.0
	6.0nm,0.3s,baz=90,slow=2.0,SNR=2.8						
DZM	Mont Dzumac	10.87	177	P	Pn	16 42 14.5	-0.2
	0.8nm,0.3s,baz=336,slow=18,SNR=5.0						
WRA	Warramunga Arr	31.58	250	P	P	16 45 59.1	+0.3
	0.8nm,0.7s,baz=82,slow=8.9,SNR=6.6						
ASAR	Alice Springs	32.87	243	P	P	16 46 10.1	-0.1
	0.4nm,0.7s,baz=66,slow=10,SNR=4.4						
ILAR	Eielson Array	83.57	18	P	P	16 52 03.2	+0.3
	0.6nm,1.0s,baz=227,slow=5.7,SNR=3.4						
MKAR	Makanchi Array	93.70	317	P	P	16 52 51.1	-0.7
	0.4nm,0.9s,baz=90,slow=7.2,SNR=3.2						

IDC 08 16:40:15.1±3.9, 11°.39S×165°.24E, h60km±36km, mb3.4/3, mb1 3.9/5, mb1mx3.5/32, mbtmp4.0/5, ML4.3/2, Error ellipse: s-maj=36.5km s-min=33.0km az=129.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.56	290	P	Pn	16 41 35.2	-0.1
	17nm,0.3s,baz=100,slow=4.2,SNR=5.7						
DZM	Mont Dzumac	10.69	174	P	Pn	16 42 45.6	0.0
	1.5nm,0.3s,baz=353,slow=23,SNR=5.8						
WRA	Warramunga Arr	30.90	250	P	P	16 46 26.4	+0.1
	0.6nm,0.7s,baz=81,slow=9.0,SNR=3.7						
ASAR	Alice Springs	32.20	243	P	P	16 46 37.5	-0.2
	0.5nm,0.7s,baz=75,slow=9.0,SNR=4.2						
ILAR	Eielson Array	83.99	19	P	P	16 52 38.6	0.0
	0.7nm,0.9s,baz=229,slow=6.4,SNR=3.5						

IDC 08 16:42:04.1±5.1, 10°.96S×165°.78E, h54km±37km, mb3.5/4, mb1 3.8/6, mb1mx3.5/34, mbtmp3.9/6, ML4.0/2, Error ellipse: s-maj=56.8km s-min=36.3km az=66.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.94	284	P	Pn	16 43 29.8	+0.3
	8.2nm,0.3s,baz=124,slow=3.6,SNR=4.5						
DZM	Mont Dzumac	11.07	177	P	Pn	16 44 39.4	-0.3
	0.5nm,0.3s,baz=342,slow=19,SNR=2.3						
WRA	Warramunga Arr	31.54	250	P	P	16 48 21.7	+0.1
	1.9nm,0.8s,baz=80,slow=9.1,SNR=9.1						
ASAR	Alice Springs	32.86	243	P	P	16 48 33.0	-0.1
	1.5nm,0.9s,baz=64,slow=10,SNR=4.2						
CMAR	Chiang Mai Arr	72.11	294	P	P	16 53 23.1	-0.3
	0.3nm,0.8s,baz=120,slow=5.3,SNR=3.0						
MKAR	Makanchi Array	93.48	317	P	P	16 55 14.3	+0.3
	0.3nm,0.8s,baz=90,slow=8.6,SNR=3.5						

IDC 08 16:43:20.7±4.2, 10°.38S×165°.30E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.6/32, mbtmp3.9/3, Error ellipse: s-maj=218.2km s-min=31.2km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.30	249	P	P	16 49 43.6	+0.6
	1.8nm,0.8s,baz=80,slow=9.1,SNR=9.3						
ASAR	Alice Springs	32.70	242	P	P	16 49 54.5	-0.7
	1.0nm,0.7s,baz=63,slow=10,SNR=9.5						
ILAR	Eielson Array	83.02	19	P	P	16 55 47.7	0.0
	0.7nm,1.0s,baz=216,slow=7.5,SNR=2.9						

ISCJB 08 16:46:49.9±1.2, 11°.1S±0°.1×165°.8E±0°.2, h10km, mb3.8/6, Error ellipse: s-maj=22.7km s-min=17.0km az=161.8

IDC 08 16:46:57.0±3.6, 11°.06S×165°.73E, h48km±32km, mb3.6/7, mb1 3.9/9, mb1mx3.7/35, mbtmp4.0/9, ML4.3/2, Error ellipse: s-maj=36.1km s-min=28.5km az=117.0

ISC 08 16:46:51.6±1.3, 11°.0S±0°.1×165°.9E±0°.2, h10km, n9, σ1s.35/9, mb3.9/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.03	284	P	Pn	16 48 22.2	+1.3
	19nm,0.3s,baz=141,slow=6.2,SNR=7.9						
DZM	Mont Dzumac	11.04	177	P	Pn	16 49 30.2	+0.4
	1.1nm,0.3s,baz=327,slow=12,SNR=11						
CTA	Charters Tower	20.93	242	P	P	16 51 35.6	+0.9
	2.7nm,0.6s,baz=84,slow=9.2,SNR=3.9						
STKA	Stephens Creek	30.56	223	P	P	16 53 05.8	+0.2
	1.1nm,0.5s,baz=21,slow=6.2,SNR=3.9						
WRA	Warramunga Arr	31.61	250	P	P	16 53 14.2	-0.8
	3.2nm,0.7s,baz=81,slow=9.1,SNR=24						
ASAR	Alice Springs	32.92	243	P	P	16 53 25.0	-1.5
	1.1nm,0.9s,baz=64,slow=10,SNR=19						
CMAR	Chiang Mai Arr	72.20	293	P	P	16 58 16.4	-0.9
	0.4nm,0.6s,baz=130,slow=5.0,SNR=4.5						
ILAR	Eielson Array	83.42	18	P	P	16 59 20.4	+1.4
	0.4nm,0.8s,baz=220,slow=5.2,SNR=4.9						
MKAR	Makanchi Array	93.56	317	P	P	17 00 06.5	-1.5
	0.4nm,0.7s,baz=93,slow=6.2,SNR=5.2						

ISCJB 08 16:49:06.1±1.1, 10°.8S±0°.1×166°.1E±0°.2, h35km, mb4.0/7, Error ellipse: s-maj=22.2km s-min=17.3km az=166.6

IDC 08 16:49:11.0±3.9, 10°.79S×166°.06E, h65km±33km, mb3.8/7, mb1 4.0/9, mb1mx3.7/40, mbtmp4.2/9, ML4.4/2, Error ellipse: s-maj=34.2km s-min=27.2km az=120.0

ISC 08 16:49:07.7±1.2, 10°.7S±0°.1×166°.2E±0°.2, h35km, n9, σ1s.37/10, mb4.0/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.27	281	P	Pn	16 50 39.5	+1.7
	16nm,0.3s,baz=359,slow=10,SNR=8.3						
DZM	Mont Dzumac	11.34	179	P	Pn	16 51 48.6	+1.2
	1.7nm,0.3s,baz=147,slow=23,SNR=14						
CTA	Charters Tower	21.36	242	P	P	16 53 52.3	0.0
	3.6nm,0.6s,baz=68,slow=12,SNR=5.6						
STKA	Stephens Creek	31.02	223	P	P	16 55 22.1	-0.1
	0.9nm,0.6s,baz=66,slow=6.8,SNR=3.0						
WRA	Warramunga Arr	32.03	249	P	P	16 55 29.8	-1.4
	8.7nm,0.8s,baz=80,slow=9.0,SNR=44						
ASAR	Alice Springs	33.35	243	P	P	16 55 40.8	-2.1
	2.4nm,0.6s,baz=64,slow=10,SNR=43						
ASAR				PcP	PcP	16 58 23.0	-1.3
	0.8nm,1.0s,baz=66,slow=2.0,SNR=5.0						
CMAR	Chiang Mai Arr	72.37	293	P	P	17 00 30.9	+0.2
	1.1nm,0.7s,baz=122,slow=4.2,SNR=11						
ILAR	Eielson Array	83.02	18	P	P	17 01 29.7	+0.7
	0.4nm,0.8s,baz=220,slow=5.5,SNR=3.9						
MKAR	Makanchi Array	93.55	317	P	P	17 02 19.6	-0.5
	0.6nm,0.7s,baz=95,slow=5.4,SNR=6.3						

IDC 08 16:58:00.7±2.1, 2°.39N×128°.37E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/35, mbtmp3.4/4, Error ellipse: s-maj=107.2km s-min=21.1km az=63.0

ISCJB 08 16:58:13.8±1.7, 0°.1S±0°.1×123°.06E±0°.08, h35km, mb3.4/4, Error ellipse: s-maj=17.2km s-min=10.6km az=9.5

DJA 08 16:58:17.7±0.3, 0°S±4°×12°3E±°, h46km±12km, M4.2/5, MLv4.2/5

ISC 08 16:58:12.9±1.3, 0°.1S±0°.1×123°.13E±0°.07, h35km, n10, σ2s.17/11, mb3.4/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.01	201	P	Pn	16 58 32.0	+1.4
LUWI				S	Sn	16 58 43.8	+0.2
PCI	Palu	3.39	256	P	Pn	16 59 05.5	+2.2
PCI				S	Sn	16 59 43.6	+1.3
SANI	Sanana	3.46	124	P	Pn	16 59 07.4	+3.0
TTSI	Tana Toraja	4.42	228	P	Pn	16 59 18.9	+1.4
SPSI	Sidrap Palu	5.11	221	P	Pn	16 59 28.6	+1.6
BNSI	Bone	5.24	215	P	Pn	16 59 29.8	+1.0
WRA	Warramunga Arr	22.58	152	P	P	17 03 07.4	-3.1
	0.9nm,0.7s,baz=339,slow=9.9,SNR=7.4						
ASAR	Alice Springs	25.67	157	P	P	17 03 37.9	-1.8
	0.5nm,0.8s,baz=343,slow=14,SNR=12						
CMAR	Chiang Mai Arr	30.07	309	P	P	17 04 39.3	+20
	0.8nm,0.8s,baz=134,slow=7.7,SNR=5.0						
MKAR	Makanchi Array	58.76	328	P	P	17 08 06.3	-1.2
	0.3nm,0.4s,baz=128,slow=8.4,SNR=9.7						

NEIC 08 17:08:27.0±1.4, 10°.59S×166°.19E, h10km, mb4.3/2, Error ellipse: s-maj=28.6km s-min=10.8km az=57.0

ISCJB 08 17:08:29.3±1.4, 10°.8S±0°.1×166°.1E±0°.2, h35km, mb3.9/5, Error ellipse: s-maj=28.8km s-min=10.8km az=146.2

IDC 08 17:08:32.2±5.3, 10°.77S×166°.17E, h51km±38km, mb3.5/4, mb1 3.8/6, mb1mx3.4/40, mbtmp3.9/6, ML4.0/2, Error ellipse: s-maj=56.8km s-min=39.4km az=63.0

ISC 08 17:08:30.9±2.1, 10°.7S±0°.2×166°.2E±0°.2, h35km, n15, σ0s.93/15, mb4.0/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.27	281	ePn	Pn	17 10 01.8	+0.8
HNR	Honiara	6.27	281	P	Pn	17 10 02.3	+1.3
	6.6nm,0.3s,baz=162,slow=6.4,SNR=4.2						
MARNC	Mare, Loyalty	10.88	171	ePn	Pn	17 11 05.5	+1.3
DZM	Mont Dzumac	11.32	179	ePn	Pn	17 11 09.6	-0.8
DZM	Mont Dzumac	11.32	179	P	Pn	17 11 10.3	0.0
	0.6nm,0.3s,baz=6.0,slow=19,SNR=4.7						
ONTNC	Ouen Toro	11.56	179	ePn	Pn	17 11 13.5	0.0
PINNC	Pines Island,	11.92	174	ePn	Pn	17 11 19.0	+0.6
WB2	Warramunga Arr	32.01	249	eP	P	17 14 52.6	-1.6
WR1	Warramunga Arr	32.02	249	eP	P	17 14 53.9	-0.5
	6.5nm,1.3s						
WRA	Warramunga Arr	32.02	249	P	P	17 14 53.9	-0.5
	1.9nm,0.8s,baz=81,slow=8.9,SNR=9.3						
ASAR	Alice Springs	33.34	243	P	P	17 15 04.6	-1.4
	0.3nm,0.6s,baz=64,slow=10,SNR=6.6						
FITZ	Fitzroy Crossi	39.90	255	eP	P	17 16 02.1	+0.3
	11nm,1.6s						
FITZ	Fitzroy Crossi	39.90	255	P	P	17 16 01.6	-0.2
	1.8nm,0.8s,baz=60,slow=2.7,SNR=3.9						
MK32	Makanchi Array	93.56	317	eP	P	17 21 43.0	-0.4
MKAR	Makanchi Array	93.56	317	P	P	17 21 43.0	-0.4
	0.2nm,0.6s,baz=90,slow=4.3,SNR=3.0						

ISCJB 08 17:10:31.0±0.5, 18°.80N±0°.06×68°.71W±0°.03, h168km±6km, Error ellipse: s-maj=10.6km s-min=4.5km az=13.0

NEIC 08 17:10:32.7±0.0, 18°.66N×68°.55W, h182km, MD3.9(RSPR), After RSPR.

RSPR 08 17:10:32.7, 18°.66N×68°.55W, h182km±2km, MD3.9/13

ISC 08 17:10:30.8±0.9, 18°.63N±0°.08×68°.81W±0°.03, h167km±7km, n54, σ1s.45/71, 10C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDD	Santo Domingo	1.06	261	ePn	Pn	17 10 56.5	-1.2
SDD				eSn	Sn	17 11 14.4	-3.8
IDE	Isla Desecheo	1.29	100	⇓eP	Pn	17 11 00.5	+0.8
IDE	Isla Desecheo	1.29	100	eS	Sn	17 11 22.0	+0.2
BANI	BANI	1.49	261	ePn	Pn	17 11 00.8	-0.8
BANI				eSn	Sn	17 11 22.6	-2.8
AGP	Aguadilla	1.60	98	ePn	Pn	17 11 04.0	+1.3
AGP				eSn	Sn	17 11 28.9	+1.7
AGPR	Aguadilla, PR	1.62	95	eS	Sn	17 11 28.9	+1.3
AGPR	Aguadilla, PR	1.62	95	⇑eP	Pn	17 11 03.9	+1.0
AGPR	Aguadilla, PR	1.62	95	⇑eP	Pn	17 11 03.9	+1.0
AGPR				eS	Sn	17 11 28.9	+1.3
MPR	Mayaguez	1.64	104	ePn	Pn	17 11 04.6	+1.6
LSP	Las Mesas	1.70	105	eS	Sn	17 11 30.0	+0.9
LSP	Las Mesas	1.70	105	⇑eP	Pn	17 11 04.7	+0.9
LSP	Las Mesas	1.70	105	eSn	Sn	17 11 30.0	+0.9
GBPR	Guanica, Bosqu	1.94	109	eS	Sn	17 11 34.3	+0.5
GBPR	Guanica, Bosqu	1.94	109	⇓eP	Pn	17 11 07.1	+0.7
GBPR	Guanica, Bosqu	1.94	109	ePn	Pn	17 11 07.1	+0.7
GBPR				eSn	Sn	17 11 34.3	+0.5
EMPR	Esperanza - Ma	2.17	94	eS	Sn	17 11 37.5	-0.8
EMPR	Esperanza - Ma	2.17	94	⇑eP	Pn	17 11 09.2	+0.3
EMPR	Esperanza - Ma	2.17	94	ePn	Pn	17 11 09.2	+0.3
OBIP	Obispado Ponce	2.17	105	eS	Sn	17 11 39.0	+0.6
OBIP	Obispado Ponce	2.17	105	⇑eP	Pn	17 11 09.9	+1.0
OBIP	Obispado Ponce	2.17	105	ePn	Pn	17 11 09.4	+0.5
OBIP				eSn	Sn	17 11 39.0	+0.6
CELP	Cerrillos	2.19	104	⇑eP	Pn	17 11 09.4	+0.3
CELP				eS	Sn	17 11 39.3	+0.6
CELP	Cerrillos	2.19	104	ePn	Pn	17 11 09.4	+0.3
CELP				eSn	Sn	17 11 39.3	+0.6
ICMP	Isla Caja de M	2.29	108	ePn	Pn	17 11 09.7	-0.6
ICMP				eSn	Sn	17 11 41.5	+0.6
SDDR	Presa de Saban	2.37	279	ePn	Pn	17 11 11.6	+0.2
SDDR				eSn	Sn	17 11 45.2	+2.5
SJG	San Juan	2.58	101	⇓eP	Pn	17 11 14.2	+0.5
SJG	San Juan	2.58	101	eS	Sn	17 11 45.6	-1.3
SJG	San Juan	2.58	101	ePn	Pn	17 11 12.1	-1.6
SJG				eSn	Sn	17 11 45.6	-1.3
CBYP	Canovanas	2.83	97	⇓eP	Pn	17 11 17.0	+0.3
CBYP	Canovanas	2.83	97	ePn	Pn	17 11 16.5	-0.3
CBYP				eSn	Sn	17 11 49.4	-3.0
HUMP	Col San Antoni	2.85	99	⇑eP	Pn	17 11 17.3	+0.3
HUMP	Col San Antoni	2.85	99	eS	Sn	17 11 51.5	-1.4
HUMP	Col San Antoni	2.85	99	ePn	Pn	17 11 17.2	+0.2
HUMP				eSn	Sn	17 11 49.1	-3.8
MTP	Monte Pirata	3.14	99	⇑eP	Pn	17 11 21.0	+0.4
MTP	Monte Pirata	3.14	99	eS	Sn	17 11 57.7	-1.5
MTP	Monte Pirata	3.14	99	ePn	Pn	17 11 20.8	+0.2
MTP				eSn	Sn	17 11 57.7	-1.5
CUPR	Culebra, Puert	3.36	95	⇑eP	Pn	17 11 23.1	-0.3
CUPR	Culebra, Puert	3.36	95	eS	Sn	17 12 02.6	-1.7
CUPR	Culebra, Puert	3.36	95	ePn	Pn	17 11 22.7	-0.7
CUPR				eSn	Sn	17 12 00.8	-3.5
LGNH	Logne	3.60	269	ePn	Pn	17 11 30.6	+4.2
GRTK	Grand Turk	3.61	323	ePn	Pn	17 11 26.6	+0.1
GRTK				eSn	Sn	17 12 08.6	-1.3
STVI	Saint Thomas	3.67	94	⇓eP	Pn	17 11 27.6	+0.3
STVI	Saint Thomas	3.67	94	eS	Sn	17 12 10.1	-1.1
STVI	Saint Thomas	3.67	94	ePn	Pn	17 11 27.2	-0.1
STVI				eSn	Sn	17 12 08.3	-2.9
ABVI	Anegada Island	4.25	88	ePn	Pn	17 11 35.5	+0.8
ABV	Anegada	4.25	88	⇑eP	Pn	17 11 35.5	+0.8
ABV	Anegada	4.25	88	eS	Sn	17 12 24.2	-0.4
SMRT	St. Maarten	5.48	95	ePn	Pn	17 11 48.9	-1.9
ANWB	Willy Bob	6.75	97	ePn	Pn	17 12 02.2	-5.4
SDV	Santo Domingo	9.84	191	ePn	Pn	17 12 48.5	-0.3
PTBC	PUERTO BERRIO,	13.21	205	eP	P	17 13 36.5	+0.4
RUSC	La Rusia	13.32	199	eP	P	17 13 37.7	-0.2
CHIC	Chingaza	14.72	200	eP	P	17 13 54.4	+1.1
CLNB	Carlsbad	34.29	300	epP	pP	17 17 36.5	-0.2
CLNB				eS	S	17 22 17.5	+1.1

SOME 08 17:13:37.8, 42°.50N×79°.63E, h20km

KRNET 08 17:13:38.5±0.1, 42°.58N×79°.63E, h19km, mb3.2

NNC 08 17:13:38.3±0.8, 42°.57N×79°.59E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=5.1km s-min=2.8km az=138.0

ISCJB 08 17:13:39.7±0.6, 42°.57N±0°.03×79°.69E±0°.04, h10km, Error ellipse: s-maj=5.8km s-min=2.8km az=141.9

ISC 08 17:13:40.4±1.0, 42°.63N±0°.04×79°.57E±0°.03, h10km, n66, σ1s.41/116, 28C-14D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.65	322	P	Pg	17 13 52.4	-0.6
	39nm,0.1s						
UZB				S	Sb	17 14 02.8	-0.4
	61nm,0.1s						
UZB	Uzynbulak	0.65	322	eP	Pg	17 13 52.4	-0.6
	baz=22						
UZB				eS	Sb	17 14 02.7	-0.4
	baz=22						
UZB	Uzynbulak	0.65	322	eP	Pg	17 13 52.4	-0.6
	39nm,0.1s						
UZB				eS	Sb	17 14 02.8	-0.4
	102nm,0.3s						
PDGK	Podgornoye	0.70	355	P	Pg	17 13 53.2	-0.7
	19nm,0.2s						
PDGK				S	Sb	17 14 04.0	-0.5
	18nm,0.1s						
PDGK	Podgornoye	0.70	355	⇑P	Pg	17 13 53.1	-0.7
	12nm,0.3s						
PDGK				⇑S	Sg	17 14 03.6	+0.5
	16nm,0.4s						
PDGK	Podgornoye	0.70	355	⇓iP	Pg	17 13 53.2	-0.7
	baz=52						
PDGK				⇓iS	Sb	17 14 04.0	-0.5
	baz=52						
PRZ	Przheval'sk	0.87	260	⇑iP	Pg	17 13 55.2	-2.1
	baz=65						
PRZ				⇑iS	Sg	17 14 08.0	-0.7
	baz=65						
SATY	Saty	0.95	297	P	Pg	17 13 57.6	-1.1
	5.2nm,0.3s						
SATY				S	Sg	17 14 11.1	0.0
	76nm,0.1s						
SATY	Saty	0.95	297	eP	Pg	17 13 57.6	-1.1
	5.2nm,0.3s						
SATY				eS	Sg	17 14 11.2	0.0
	76nm,0.1s						
KTMS	Ketmen	0.99	35	P	Pg	17 13 58.1	-1.5
	12nm,0.1s						
KTMS				S	Sg	17 14 11.8	-0.7
	27nm,0.2s						
KTMS	Ketmen	0.99	35	eP	Pg	17 13 58.1	-1.5
	baz=30						
KTMS				eS	Sg	17 14 11.9	-0.7
	baz=30						
KTMS	Ketmen	0.99	35	eP	Pg	17 13 58.1	-1.5
	12nm,0.1s						
KTMS				eS	Sg	17 14 11.8	-0.7
	27nm,0.2s						
KURS	Kuram	1.33	310	P	Pn	17 14 04.8	-0.4
	3.6nm,0.2s						
KURS				S	Sn	17 14 23.3	+0.3
	37nm,0.5s						
KURS	Kuram	1.33	310	eP	Pn	17 14 04.6	-0.5
	baz=11						
KURS				eS	Sn	17 14 23.3	+0.3
	baz=11						
KURS	Kuram	1.33	310	eP	Pn	17 14 04.6	-0.5
	3.6nm,0.2s						
KURS				eS	Sn	17 14 23.3	+0.3
	37nm,0.5s						
MNBS	Baschi	1.68	330	P	Pb	17 14 10.6	-0.8
	11nm,0.2s						
MNBS				S	Sg	17 14 34.4	+0.1
	33nm,0.4s						
MNBS	Baschi	1.68	330	eP	Pb	17 14 10.6	-0.8
	11nm,0.2s						
MNBS				eS	Sg	17 14 34.4	+0.1
	33nm,0.4s						
DJR	Jarkent	1.71	5	P	Pb	17 14 10.8	-1.1
	4.3nm,0.2s						
DJR				S	Sg	17 14 35.0	-0.3
	12nm,0.2s						
DJR	Jarkent	1.71	5	eP	Pb	17 14 10.8	-1.1
	4.3nm,0.2s						
DJR				eS	Sg	17 14 35.0	-0.3
	12nm,0.2s						
KDJ	Kajisay	1.84	255	⇑iP	Pb	17 14 12.9	-1.3
	baz=57						
KDJ				⇑iS	Sb	17 14 37.4	+0.1
	baz=57						
KOTS	Kotyrbulak	1.90	289	Pg	Pb	17 14 14.0	-1.2
	8.6nm,0.2s						
KOTS				Lg	Lg	17 14 40.4	
	94nm,0.3s						
KOTS	Kotyrbulak	1.90	289	eP	Pb	17 14 14.0	-1.2
	baz=90						
KOTS				eS	Sg	17 14 40.4	-1.0

baz=90

KOTS	Kotyrbulak 8.6nm,0.2s	1.90	289	eP	Pb	17 14 14.0	-1.2
KOTS	94nm,0.3s			eS	Sg	17 14 40.4	-1.0
MDOK	Medeo 1.9nm,0.2s	1.92	287	Pg	Pn	17 14 14.0	+0.6
MDOK	42nm,0.6s			⇓Lg	Lg	17 14 40.4	
MDOK	Medeo 8.7nm,0.2s	1.92	287	Pg	Pb	17 14 14.2	-1.5
MDOK	49nm,0.6s			Lg	Lg	17 14 40.5	
MDOK	Medeo baz=88	1.92	287	eP	Pb	17 14 14.2	-1.5
MDOK	baz=88			eS	Sb	17 14 40.5	+0.7
MDOK	Medeo 8.7nm,0.2s	1.92	287	eP	Pb	17 14 14.2	-1.5
MDOK	49nm,0.6s			eS	Sb	17 14 40.5	+0.7
TNSS	Tian-Shan 12nm,0.3s	1.97	283	Pg	Pn	17 14 14.7	+0.5
TNSS	33nm,0.3s			Lg	Lg	17 14 41.8	
TNSS	Tian-Shan baz=84	1.97	283	eP	Pn	17 14 14.7	+0.5
TNSS	baz=84			eS	Sb	17 14 41.8	+0.5
TNSS	Tian-Shan 12nm,0.3s	1.97	283	eP	Pn	17 14 14.7	+0.5
TNSS	33nm,0.3s			eS	Sb	17 14 41.8	+0.5
ARXS	Arharly 10nm,0.4s	2.02	322	Pg	Pb	17 14 16.1	-1.2
ARXS	36nm,0.4s			Lg	Lg	17 14 44.4	
ARXS	Arharly 10nm,0.4s	2.02	322	eP	Pb	17 14 16.1	-1.2
ARXS	36nm,0.4s			eS	Sg	17 14 44.4	-1.0
IZV	Izvestkoviy 18nm,0.2s	2.21	281	Pg	Pb	17 14 18.8	-1.8
IZV	46nm,0.3s			Lg	Lg	17 14 48.6	
IZV	Izvestkoviy baz=83	2.21	281	eP	Pb	17 14 18.8	-1.8
IZV	baz=83			eS	Sb	17 14 48.6	+0.6
IZV	Izvestkoviy 18nm,0.2s	2.21	281	eP	Pb	17 14 18.8	-1.8
IZV	46nm,0.3s			eS	Sb	17 14 48.6	+0.6
CHKK	Chushkaly 2.5nm,0.2s	2.24	304	Pg	Pb	17 14 20.2	-0.8
CHKK	65nm,0.2s			Lg	Lg	17 14 50.6	
CHKK	Chushkaly 2.5nm,0.2s	2.24	304	eP	Pb	17 14 20.2	-0.8
CHKK	65nm,0.2s			eS	Sb	17 14 50.6	+1.7
MTBS	Maitube 12nm,0.2s	2.36	283	Pg	Pb	17 14 21.8	-1.2
MTBS	35nm,0.3s			Lg	Lg	17 14 53.2	
MTBS	Maitube 12nm,0.2s	2.36	283	eP	Pb	17 14 21.8	-1.2
MTBS	35nm,0.3s			eS	Sb	17 14 53.2	+1.0
KTBS	Karatobe 4.5nm,0.1s	2.37	298	Pg	Pb	17 14 21.9	-1.3
KTBS	57nm,0.4s			Lg	Lg	17 14 52.9	
KTBS	Karatobe 4.5nm,0.1s	2.37	298	eP	Pb	17 14 21.9	-1.3
KTBS	57nm,0.4s			eS	Sb	17 14 52.9	+0.4
ULHL	Ulahol baz=64	2.49	262	⇑iP	Pn	17 14 22.4	+1.2
ULHL	baz=64			⇑iS	Sb	17 14 54.4	-1.8
KAPS	Kapalarasan 2.2nm,0.1s	2.65	357	Pg	Pb	17 14 27.5	-0.6
KAPS	9.2nm,0.3s			Lg	Lg	17 15 03.6	
KAPS	Kapalarasan 2.2nm,0.1s	2.65	357	eP	Pb	17 14 27.5	-0.6
KAPS	9.2nm,0.3s			eS	Sg	17 15 03.6	-2.1
KUU	Kurty	2.67	299	Pg	Pb	17 14 27.4	-1.0
KUU				Lg	Lg	17 15 02.8	
KUU	Kurty	2.67	299	eP	Pb	17 14 27.4	-1.0
KUU				eS	Sb	17 15 02.8	+1.6
KST	Kastek 8.0nm,0.2s	2.68	280	eP	Pb	17 14 26.3	-2.3
KST	16nm,0.6s			eS	Sb	17 15 01.7	+0.2
BOOM	Boomskoye usch baz=70	2.68	268	⇓iP	Pn	17 14 25.2	+1.4
BOOM	baz=70			⇓iS	Sb	17 14 59.2	-2.4
DGS	Degeres 5.3nm,0.3s	2.85	284	Pg	Pb	17 14 29.6	-1.8
DGS	41nm,0.6s			Lg	Lg	17 15 07.5	
DGS	Degeres 5.3nm,0.3s	2.85	284	eP	Pb	17 14 29.6	-1.8
DGS	41nm,0.6s			eS	Sb	17 15 07.5	+1.1
NRN	Naryn baz=48	2.92	247	⇑iP	Pn	17 14 28.4	+1.3
NRN	baz=48			⇑iS	Sn	17 15 04.6	+2.2
TKM2	Tokmak 2 1.4nm,0.3s	2.94	277	⇓Pg	Pb	17 14 30.5	-2.5
TKM2	12nm,0.6s			⇓Lg	Lg	17 15 10.8	
TKM2	Tokmak 2 baz=78	2.94	277	⇓iP	Pn	17 14 28.8	+1.5
TKM2	baz=78			⇓iS	Sn	17 15 05.5	+2.8
KZA	Kyzart baz=63	3.25	262	⇓iP	Pn	17 14 33.0	+1.2
KZA	baz=63			⇓iS	Sn	17 15 13.0	+2.3
CHMS	Chumysh baz=78	3.56	277	⇓eP	Pn	17 14 37.1	+1.4
CHMS	baz=78			⇓iS	Sn	17 15 20.5	+2.6
FRU1	Bishkek baz=75	3.64	274	⇑iP	Pn	17 14 38.3	+1.4
FRU1	baz=75			⇑iS	Sn	17 15 22.4	+2.5
AAK	Ala-Archa 1.6nm,0.4s	3.74	272	⇑Pg	Pb	17 14 46.3	-0.4
AAK	6.0nm,0.8s			⇑Lg	Lg	17 15 34.6	
AAK	Ala-Archa baz=73	3.74	272	⇑iP	Pn	17 14 39.8	+1.4
AAK	baz=73			⇑iS	Sn	17 15 24.7	+2.1
UCH	Uchtor baz=66	3.76	265	⇑iP	Pn	17 14 40.2	+1.3
UCH	baz=66			⇑iS	Sn	17 15 25.5	+2.0
ARLS	Aral baz=62	3.97	261	⇑eP	Pn	17 14 42.5	+1.0
ARLS	baz=62			⇑iS	Sn	17 15 29.6	+1.5
EKS2	Erkin-Say baz=73	4.27	272	⇑iP	Pn	17 14 47.4	+1.8
EKS2	baz=73			⇑iS	Sn	17 15 37.4	+1.9
MAKZ	Makanchi 2.6nm,1.1s	4.51	22	⇓Pn	Pn	17 14 49.7	+0.9
MAKZ	0.3nm,0.3s			⇑Sn	Sn	17 15 43.7	+2.3
MAKZ	3.9nm,1.4s			⇑Lg	Lg	17 16 03.8	
MK31	Makanchi Array 0.1nm,0.2s,baz=208,slow=13,SNR=15	4.59	24	Pn	Pn	17 14 50.8	+0.9
MK31	0.3nm,0.3s,baz=204,slow=26,SNR=3.8			⇑Sn	Sn	17 15 44.7	+1.4
MK31	0.7nm,0.4s,baz=204,slow=26,SNR=4.7			⇑Lg	Lg	17 16 04.4	
MRKS	Merke	4.67	273	Pg	Pb	17 15 03.2	+0.6
MRKS				Lg	Lg	17 16 04.7	
MRKS	Merke	4.67	273	eP	Pb	17 15 03.2	+0.6
MRKS				eS	Sg	17 16 04.7	-5.8
MNAS	Manas 0.8nm,0.5s	5.22	271	⇑Pg	Pb	17 15 14.9	+3.1
MNAS	0.8nm,0.4s			⇑Lg	Lg	17 16 23.2	

IDC 08 17:17:14.7±1.9, 10°.93S×165°.33E, h0km, mb3.7/3, mb1 4.1/4, mb1mx3.6/37, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=53.1km s-min=33.2km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.7nm,0.3s,baz=303,slow=16,SNR=8.4	11.13	175	Pn	Pn	17 19 55.4	+0.1
WRA	Warramunga Arr 1.1nm,0.9s,baz=81,slow=9.3,SNR=5.0	31.14	250	P	P	17 23 35.9	+0.5
ASAR	Alice Springs 1.1nm,0.7s,baz=66,slow=10,SNR=15	32.48	243	P	P	17 23 46.8	-0.4
ILAR	Eielson Array 0.4nm,0.8s,baz=241,slow=5.8,SNR=4.1	83.53	19	P	P	17 29 44.2	0.0

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*NEIC **08** 17:18:31.3±1.0, 10°.88S×165°.96E, h10km, mb4.7/5, Error ellipse: s-maj=20.5km s-min=14.9km az=223.0*
*ISCJB **08** 17:18:32.7±1.1, 11°.0S±0°.1×166°.0E±0°.1, h35km, Error ellipse: s-maj=22.2km s-min=11.6km az=42.4*
*IDC **08** 17:18:37.7±4.0, 10°.95S×165°.86E, h61km±36km, mb3.6/4, mb1 3.9/6, mb1mx3.5/36, mbtmp4.0/6, ML4.1/2, Error ellipse: s-maj=38.1km s-min=29.9km az=142.0*
ISC 08 17:18:34.6±1.1, 11°.0S±0°.2×166°.0E±0°.2, h35km, n23, σ0ˢ.37/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.13	284	ePn	Pn	17 20 04.3	+1.6
HNR	Honiara 8.3nm,0.3s,baz=154,slow=6.7,SNR=4.9	6.13	284	P	Pn	17 20 04.4	+1.6
DZM	Mont Dzumac 0.7nm,0.3s,baz=15,slow=20,SNR=5.1	11.00	178	P	Pn	17 21 13.1	+3.6
PINNC	Pines Island,	11.61	173	ePn	Pn	17 21 21.9	+4.1
H11S2	WAKE ISLAND Hy baz=181,slow=76,SNR=7.9	29.33	1	T	T	17 54 54.5	
H11S3	WAKE ISLAND Hy baz=181,slow=76,SNR=6.1	29.34	1	T	T	17 54 55.0	
H11S1	WAKE ISLAND Hy baz=181,slow=76,SNR=8.7	29.35	1	T	T	17 54 55.7	
BKZ	Black Stump Fm 55nm,2.0s	29.55	163	eP	P	17 24 36.2	+0.2
H11N1	WAKE ISLAND Hy baz=182,slow=76,SNR=13	30.55	2	T	T	17 56 26.5	
H11N3	WAKE ISLAND Hy baz=182,slow=76,SNR=15	30.56	2	T	T	17 56 27.4	
H11N2	WAKE ISLAND Hy baz=182,slow=76,SNR=13	30.57	2	T	T	17 56 27.5	
BFZ	Birch Farm 52nm,1.3s	30.91	165	eP	P	17 24 47.2	-0.7
THZ	Tophouse 58nm,1.9s	31.22	170	eP	P	17 24 51.4	+0.6
WB2	Warramunga Arr 6.3nm,1.1s	31.68	250	eP	P	17 24 55.2	+0.1
WR1	Warramunga Arr 22nm,1.8s	31.70	250	eP	P	17 24 55.4	+0.2
WRA	Warramunga Arr 1.8nm,0.8s,baz=80,slow=9.0,SNR=10	31.70	250	P	P	17 24 55.4	+0.2
AS01	Alice Springs	32.96	243	eP	P	17 25 06.0	-0.3
AS31	Alice Springs 0.6nm,1.0s	33.00	243	eP	P	17 25 06.3	-0.3
ASAR	Alice Springs 0.8nm,0.6s,baz=64,slow=10,SNR=14	33.00	243	P	P	17 25 06.3	-0.3
FITZ	Fitzroy Crossi 13nm,1.7s	39.60	255	eP	P	17 26 02.9	-0.1
FITZ	Fitzroy Crossi 2.2nm,0.6s,baz=70,slow=7.8,SNR=10	39.60	255	P	P	17 26 02.8	-0.2
ILAR	Eielson Array 0.3nm,0.7s,baz=230,slow=5.6,SNR=2.8	83.42	18	P	P	17 30 58.1	+0.1
BEKR	Beckworth	84.77	48	eSKSac	S	17 41 31.4	-0.1

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*NEIC **08** 17:19:33.9±0.9, 11°.02S×165°.74E, h10km, mb5.0/6, Error ellipse: s-maj=19.1km s-min=10.4km az=49.0*
*ISCJB **08** 17:19:35.2±0.8, 11°.14S±0°.09×165°.7E±0°.1, h30km, Error ellipse: s-maj=17.3km s-min=9.4km az=139.0*
*IDC **08** 17:19:39.1±3.7, 11°.06S×165°.64E, h46km±33km, mb3.3/3, mb1 3.8/5, mb1mx3.4/35, mbtmp3.9/5, ML4.2/2, Error ellipse: s-maj=37.8km s-min=34.6km az=128.0*
ISC 08 17:19:37.2±0.9, 11°.1S±0°.1×165°.7E±0°.1, h30km, n19, σ1ˢ.18/20, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.89	286	ePn	Pn	17 21 03.3	+0.8
HNR	Honiara 11nm,0.3s,baz=163,slow=7.6,SNR=3.6	5.89	286	P	Pn	17 21 03.9	+1.4
HNR	Honiara	5.89	286	eSn	Pn	17 21 03.3	+0.8
MARNC	Mare, Loyalty	10.59	168	ePn	Pn	17 22 06.9	0.0
DZM	Mont Dzumac	10.96	176	ePn	Pn	17 22 12.9	+0.8
DZM	Mont Dzumac 1.2nm,0.3s,baz=360,slow=19,SNR=4.7	10.96	176	P	Pn	17 22 13.2	+1.1
PINNC	Pines Island,	11.60	172	ePn	Pn	17 22 22.2	+1.4
RABL	Rabaul 39nm,0.6s	15.05	296	ePn	Pn	17 23 06.9	-1.0
BKZ	Black Stump Fm 19nm,1.3s	29.58	163	eP	P	17 25 40.3	+0.8
STKA	Stephens Creek 1.8nm,1.4s	30.39	223	eP	P	17 25 47.0	+0.2
BFZ	Birch Farm 47nm,1.3s	30.93	164	eP	P	17 25 51.8	+0.4
THZ	Tophouse 73nm,2.0s	31.22	170	eP	P	17 25 51.6	-2.4
WB2	Warramunga Arr	31.42	250	eP	P	17 25 55.9	-0.1
WR1	Warramunga Arr 11nm,1.5s	31.43	250	eP	P	17 25 55.9	-0.2
WRA	Warramunga Arr 0.8nm,0.7s,baz=79,slow=8.7,SNR=4.3	31.43	250	P	P	17 25 55.9	-0.2
ASAR	Alice Springs 0.4nm,0.8s,baz=64,slow=10,SNR=3.2	32.74	243	P	P	17 26 06.4	-1.2
ASAR	0.5nm,0.9s,baz=92,slow=1.9,SNR=5.0			PcP	PcP	17 28 53.3	+0.5
RPZ	Rata Peaks 41nm,1.4s	32.85	173	eP	P	17 26 05.7	-2.6
ILAR	Eielson Array 0.3nm,0.6s,baz=234,slow=5.9,SNR=5.0	83.55	19	P	P	17 32 01.6	-0.4
Y22D	IRIS PASSCAL I 103nm,0.3s	93.96	56	eP	P	17 32 53.2	+0.5

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*JMA **08** 17:25:11.5±0.1, 24°.04N×120°.99E, h0km, M3.5*
*TAP **08** 17:25:12.3, 24°.01N×121°.00E, h16km, ML3.7, B*
*ISCJB **08** 17:25:13.2±0.1, 24°.024N±0°.010×121°.01E±0°.01, h18km±2km, Error ellipse: s-maj=2.0km s-min=1.4km az=36.4*
ISC 08 17:25:12.8±0.8, 24°.03N±0°.01×121°.00E±0°.01, h17km±5km, n117, σ0ˢ.92/187, 4C-22D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGB	Renai baz=73	0.16	78	⇓P	Pg	17 25 17.3	0.0
CHGB	baz=73			S	Sg	17 25 20.4	0.0
SMLT	Sun Moon Lake baz=204	0.17	212	⇑iP	Pg	17 25 17.0	-0.2
SMLT	baz=204			i S	Sg	17 25 20.2	0.0
OWD	Renai baz=109	0.18	113	⇓iP	Pg	17 25 17.4	0.0
OWD	baz=109			eS	Sg	17 25 20.6	0.0
TYC	Yuchr baz=227	0.18	227	⇓iP	Pg	17 25 17.1	-0.2
TYC	baz=227			S	Sg	17 25 19.8	-0.4
SSLB	Suanglung baz=184	0.24	190	⇑P	Pg	17 25 17.7	-0.6
SSLB	baz=184			S	Sg	17 25 21.3	-0.7
WHP	Taichung City baz=350	0.26	349	eP	Pb	17 25 18.4	-0.6
WHP	baz=350			eS	Sb	17 25 23.2	0.0
TDCB	Techi baz=32	0.27	33	⇑P	Pb	17 25 18.6	-0.7
TDCB	baz=32			S	Sg	17 25 22.4	-0.5
WHF	Hehuan Shan baz=71	0.27	64	⇓iP	Pb	17 25 19.4	-0.1
WHF	baz=71			i S	Sb	17 25 23.7	-0.3
TWT	Tachien baz=33	0.28	36	⇓iP	Pb	17 25 18.7	-0.8
TWT	baz=33			i S	Sg	17 25 22.6	-0.7
VWDT	VWDT baz=153	0.30	154	⇓P	Pb	17 25 19.3	-0.5
VWDT	baz=153			S	Sb	17 25 23.3	-1.1
TCU	Taichung baz=295	0.32	292	⇓iP	Pb	17 25 20.5	+0.5
TCU	baz=295			eS	Sb	17 25 26.6	+1.6
WJS	Zhushan baz=227	0.32	231	⇓iP	Pb	17 25 20.1	0.0
WJS	baz=227			S	Sb	17 25 25.8	+0.8
WNT	Mingjian baz=243	0.32	243	⇓iP	Pb	17 25 20.3	+0.1
WNT	baz=243			S	Sb	17 25 26.2	+1.1
WHYT	Xinyi Township baz=198	0.35	202	P	Pb	17 25 20.2	-0.5
WHYT	baz=198			eS	Sb	17 25 25.7	-0.3
TWQ1	Liyutan baz=340	0.38	327	⇑P	Pb	17 25 21.5	+0.3
TWQ1	baz=340			S	Sb	17 25 28.1	+1.3
WCHH	Zhanghua baz=278	0.41	278	⇓P	Pb	17 25 21.8	+0.3
WCHH	baz=278			eS	Sb	17 25 29.0	+1.6
NSY	Sanyi baz=334	0.45	331	P	Pb	17 25 23.0	+0.8
NSY	baz=334			S	Sb	17 25 30.8	+2.2
ESL	Shilin baz=116	0.45	118	⇓iP	Pb	17 25 21.8	-0.5
ESL	baz=116			S	Sb	17 25 27.9	-0.8
WDJ	Dajia District baz=317	0.46	315	⇓iP	Pb	17 25 23.3	+0.9
WDJ	baz=317			eS	Sb	17 25 31.2	+2.2
ETLH	Xiulin Townshi baz=66	0.48	68	eP	Pb	17 25 22.2	-0.6
ETLH	baz=66			eS	Sg	17 25 28.6	-0.3
CHN5	Tsauling baz=213	0.52	215	⇓iP	Pb	17 25 23.4	-0.1
CHN5	baz=213			i S	Sb	17 25 31.1	+0.3
WGK	Gukeng baz=227	0.52	230	⇓iP	Pb	17 25 23.6	+0.1
WGK	baz=227			S	Sb	17 25 32.1	+1.3
EGFH	Guangfu baz=126	0.53	132	P	Pb	17 25 23.1	-0.5
EGFH	baz=126			S	Sb	17 25 30.7	-0.3
NNSB	Datong baz=41	0.53	41	⇓P	Pg	17 25 22.9	-0.6
NNSB	baz=41			eS	Sg	17 25 30.2	-0.5
NNS	Nan Shan baz=40	0.54	40	eP	Pb	17 25 23.2	-0.7
NNS	baz=40			eS	Sg	17 25 29.7	-1.1
WDLH	Douliu baz=230	0.54	232	P	Pb	17 25 23.9	+0.1
WDLH	baz=230			eS	Sb	17 25 32.7	+1.5
NMLH	Miaoli baz=342	0.54	340	eP	Pn	17 25 24.9	-0.9
NMLH	baz=342			eS	Sn	17 25 33.5	-1.0
TWD	Chiawan baz=91	0.55	84	⇓iP	Pg	17 25 23.2	-0.5
TWD	baz=91			S	Sg	17 25 30.8	-0.3
HWA	Hwalien baz=94	0.56	95	eP	Pb	17 25 24.0	-0.1
HWA	baz=94			eS	Sb	17 25 32.2	+0.4
ENLB	Shoufeng baz=101	0.56	102	⇓P	Pb	17 25 23.6	-0.6
ENLB	baz=101			S	Sb	17 25 31.8	-0.2
NACB	Ninganchiao baz=71	0.56	75	⇓P	Pb	17 25 23.6	-0.6
NACB	baz=71			S	Sg	17 25 31.2	-0.4
EHY	Hungye baz=144	0.60	150	⇓P	Pb	17 25 24.2	-0.6
EHY	baz=144			eS	Sg	17 25 31.5	-1.1
RLNB	Erlin baz=257	0.60	257	eP	Pb	17 25 24.6	-0.2
RLNB	baz=257			S	Sb	17 25 34.0	+1.0
NSTT	Nanjuang baz=9.0	0.60	0	P	Pb	17 25 25.3	+0.3
NSTT	baz=9.0			S	Sb	17 25 33.2	+0.1
LIOB	Emei baz=10.0	0.62	1	P	Pb	17 25 25.1	-0.1
LIOB	baz=10.0			S	Sb	17 25 33.7	+0.1
HGSD	Ruisui baz=143	0.66	144	eP	Pb	17 25 25.6	-0.3
HGSD	baz=143			eS	Sb	17 25 35.5	+0.8
WTCT	Ta-ch'eng baz=256	0.68	256	P	Pb	17 25 25.8	-0.4
CHN2	Minshiung baz=223	0.69	224	⇓iP	Pb	17 25 26.4	+0.1
CHN2	baz=223			S	Sb	17 25 37.0	+1.5
YULB	Yu-li baz=147	0.69	156	eP	Pg	17 25 25.6	-0.7
YULB	baz=147			eS	Sg	17 25 34.8	-0.7
TWF1	Yuli baz=149	0.72	158	P	Pb	17 25 26.4	-0.5
TWF1	baz=149			S	Sb	17 25 36.6	0.0
NSK	Sanguang baz=36	0.73	27	⇓iP	Pb	17 25 26.7	-0.3
NSK	baz=36			eS	Sg	17 25 35.7	-1.0
YHNB	Yeheng baz=37	0.73	28	P	Pb	17 25 26.6	-0.5
YHNB	baz=37			eS	Sg	17 25 35.0	-1.8
NDT	Datong Townshi baz=32	0.74	39	eP	Pg	17 25 26.6	-0.8
NDT	baz=32			eS	Sb	17 25 38.2	+1.0
CHY	Chiayi baz=223	0.74	225	P	Pb	17 25 27.3	0.0
CHY	baz=223			S	Sb	17 25 38.4	+1.2
SBCB	Hsinchu baz=1.0	0.76	359	eP	Pn	17 25 28.5	-0.4
SBCB	baz=1.0			eS	Sn	17 25 39.5	-0.5
CHN4	Tsaushan baz=207	0.77	209	eP	Pb	17 25 27.5	-0.2
CHN4	baz=207			eS	Sb	17 25 38.6	+0.7
HSN	Hsinchu baz=1.0	0.77	358	eP	Pb	17 25 27.9	+0.1
ENA	Nanau baz=59	0.79	59	⇓iP	Pb	17 25 27.8	-0.3
ENA	baz=59			eS	Sg	17 25 37.8	-0.8
TPUB	Ta-pu baz=203	0.80	205	P	Pb	17 25 27.8	-0.5
TPUB	baz=203			eS	Sb	17 25 39.7	+1.0
ENTT	Nioudou baz=41	0.80	40	eP	Pg	17 25 27.4	-1.0
WSF	Szhu baz=240	0.81	242	P	Pb	17 25 27.9	-0.5

WSF				eS	Sb	17 25 39.9	+0.8
	baz=240						
ELDTW	Lidau	0.83	179	eP	Pg	17 25 28.3	-0.8
	baz=177						
WLGB	Puzi	0.84	230	eP	Pg	17 25 28.1	-1.0
	baz=228						
WLGB				eS	Sb	17 25 40.6	+0.7
	baz=228						
WTP	Ta-pu	0.85	204	eP	Pg	17 25 28.5	-0.9
	baz=202						
WTP				eS	Sb	17 25 40.4	0.0
	baz=202						
NWLT	Wulai	0.88	31	eP	Pg	17 25 28.9	-1.0
	baz=39						
STYT	Tauyuan	0.89	194	eP	Pb	17 25 29.3	-0.4
	baz=192						
STYT				eS	Sb	17 25 41.3	-0.1
	baz=192						
TWK	Hsinying	0.89	212	eP	Pg	17 25 29.1	-1.0
	baz=211						
TWE	Neicheng	0.92	41	eP	Pg	17 25 29.8	-0.9
	baz=43						
SNST	Tainan City	0.92	210	eP	Pb	17 25 30.0	-0.4
	baz=208						
SNST				eS	Sb	17 25 43.6	+1.2
	baz=208						
CHN1	Nanshi	0.94	207	eP	Pn	17 25 31.0	-0.3
	baz=205						
CHN1				eS	Sb	17 25 43.4	+0.4
	baz=205						
NCUH	Zhongli	0.95	10	eP	Pn	17 25 31.8	+0.3
	baz=10.0						
NCU	National Centr	0.96	10	eP	Pn	17 25 31.3	-0.2
	baz=11						
TWC	Suao	0.97	53	eP	Pb	17 25 31.0	-0.1
	baz=53						
TWC				eS	Sg	17 25 43.5	-0.8
	baz=53						
CHKT	Chengkung	0.98	160	eP	Pg	17 25 30.4	-1.5
	baz=142						
CHN8	Yiju	0.99	227	eP	Pg	17 25 30.9	-1.1
	baz=224						
CHN8				eS	Sb	17 25 45.2	+1.0
	baz=224						
ILA	Ilan	1.00	43	eP	Pn	17 25 32.2	+0.1
	baz=44						
SGST	Jiashian	1.01	202	eP	Pb	17 25 31.9	-0.1
	baz=210						
SGST				S	Sn	17 25 46.9	+0.8
	baz=210						
TATO	Taipei	1.05	25	eP	Pn	17 25 32.7	0.0
	baz=28						
TATO				eS	Sn	17 25 48.8	+1.9
	baz=28						
NHDH	Xindian Distri	1.05	27	eP	Pn	17 25 32.8	0.0
	baz=32						
SLGT	Liugui	1.08	198	eP	Pb	17 25 33.1	+0.1
	baz=195						
SLGT				eS	Sn	17 25 48.0	+0.3
	baz=195						
TWA	Mucha	1.09	29	eP	Pg	17 25 32.8	-1.2
	baz=33						
TWA				eS	Sn	17 25 50.1	+2.0
	baz=33						
CHN3	Shinhua	1.11	212	eP	Pn	17 25 34.2	+0.6
	baz=211						
NTC	Toucheng	1.12	42	eP	Pn	17 25 33.9	+0.2
	baz=35						
EOS1	EOS1	1.16	63	eP	Pn	17 25 34.7	+0.5
	baz=64						
TWG	Pinlang	1.20	177	eP	Pb	17 25 34.8	-0.3
	baz=169						
TWG				eS	Sn	17 25 52.2	+1.4
	baz=169						
TWGBT	Beinan	1.21	176	eP	Pn	17 25 35.1	+0.2
	baz=169						
TWGBT				eS	Sn	17 25 52.2	+1.4
	baz=169						
NTST	Danshui	1.21	20	eP	Pg	17 25 36.0	-0.1
	baz=2.0						
TIPB	Shuangxi	1.21	38	eP	Pn	17 25 35.2	+0.3
	baz=39						
TIPB				eS	Sg	17 25 50.8	-1.1
	baz=39						
TAI1	Yung-k'ang	1.21	216	eP	Pb	17 25 35.0	-0.3
	baz=228						
YM04	YM04	1.23	23	eP	Pg	17 25 36.2	-0.3
	baz=3.0						
YM01	YM01	1.23	25	eP	Pb	17 25 34.6	-1.1
	baz=25						
YM05	YM05	1.25	24	eP	Pb	17 25 35.8	-0.1
	baz=4.0						
YM11	YM11	1.25	25	eP	Pg	17 25 36.4	-0.6
	baz=25						
NWF	Wu-fen Shan	1.26	34	eP	Pg	17 25 37.2	0.0
	baz=36						
WFSB	Wu-fen Shan	1.26	34	eP	Pg	17 25 37.1	0.0
	baz=36						
YM08	YM08	1.28	25	eP	Pg	17 25 36.4	-1.0
	baz=25						
TWM1	Shoushan	1.31	204	eP	Pg	17 25 37.2	-0.8
	baz=203						
SSD	Sandimen	1.32	195	eP	Pn	17 25 36.5	0.0
	baz=185						
TWB1	Santiao Chiao	1.33	42	eP	Pg	17 25 37.8	-0.7
	baz=45						
SGLT	Jiouru	1.38	200	eP	Pb	17 25 38.0	0.0
	baz=199						
PHUB	P'eng-hu	1.40	249	eP	Pn	17 25 36.3	-1.3
	baz=248						
ECL	Taimali	1.42	182	eP	Pb	17 25 38.6	-0.3
	baz=165						
WDGT	Dungji	1.45	238	eP	Pn	17 25 36.3	-1.8
	baz=248						
MASBT	Mashibuluo	1.45	193	eP	Pn	17 25 38.7	+0.4
	baz=191						
MASBT				eS	Sb	17 25 57.9	+0.5
	baz=191						
SSPT	Xinbi	1.58	195	eP	Pn	17 25 40.5	+0.4
	baz=195						
EAST	Anshuo	1.64	185	eP	Pn	17 25 41.6	+0.7
	baz=203						
VCHM	Qimei	1.65	241	eP	Pn	17 25 40.2	-0.9
	baz=239						
VCHM				eS	Sn	17 26 02.0	+0.1
	baz=239						
SCZT	Fangliau	1.68	192	eP	Pn	17 25 42.0	+0.6
	baz=201						
VWUC	VWUC	1.71	305	eP	Pn	17 25 40.1	-1.7
	baz=305						
PTTC	Pingtan	1.84	323	eP	Pn	17 25 42.1	-1.5
	baz=323						
YOJ	Yonaguni jima	1.89	76	P	Pb	17 25 46.2	-0.6
YOJ				eS	Sb	17 26 10.6	+0.5
PTMZ	Houxiangcun	1.99	301	eP	Pn	17 25 45.1	-0.5
	baz=301						
TWKBT	Hengchun	2.08	185	eP	Pn	17 25 47.3	+0.3
	baz=200						
MATB	Ma-tsu	2.32	336	eP	Pn	17 25 49.8	-0.5
	baz=334						
KNMB	Chin-men Tao	2.42	281	eP	Pn	17 25 50.6	-1.0
	baz=281						
IRIF	Iriomote-Funau	2.51	82	P	Pn	17 25 54.0	+1.1
IRIF				eS	Sn	17 26 26.1	+2.9
HATJ	Hateruma jima	2.57	89	P	Pn	17 25 55.6	+2.0
HATJ				eS	Sb	17 26 28.0	-1.7
MHZQ	Yeshan	2.73	320	eP	Pn	17 25 54.9	-0.9
	baz=319						
LYJJ	Jianjiangzhen	2.75	336	eP	Pn	17 25 55.4	-0.8
	baz=335						
JKRS	Kuro-shima	2.76	85	P	Pn	17 25 57.4	+1.1
JKRS				S	Sn	17 26 32.2	+3.0
JIJ	Ishigaki jima	2.89	83	P	Pn	17 25 59.8	+1.7
JIJ				eS	Sn	17 26 34.8	+2.3
AXDP	Jialang	2.89	288	eP	Pn	17 25 57.4	-0.8
	baz=288						
ZPLA	Ao Xicun	2.97	269	eP	Pn	17 25 58.2	-1.0
	baz=268						
XPSS	Dashiqiu	2.98	346	eP	Pn	17 25 58.3	-1.1
	baz=343						
JISG	Ishigakijimahi	3.07	79	P	Pn	17 26 01.1	+0.5
JISG				S	Sn	17 26 37.6	+0.6
ZZJH	Jiuhuzhen	3.11	279	eP	Pn	17 25 60.0	-1.1
	baz=278						
JTJ	Tarama	3.43	79	eS	Sn	17 26 49.2	+3.3

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*ISCJB **08** 17:26:12.9±1.1, 10°.8S±0°.1×166°.1E±0°.2, h35^{km}, mb3.9/6, Error ellipse: s-maj=22.5km s-min=17.5km az=156.9*

*IDC **08** 17:26:17.4±3.9, 10°.88S×166°.12E, h63^{km}±34^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.7/34, mbtmp4.1/8, ML4.3/2, Error ellipse: s-maj=36.4km s-min=27.8km az=142.0*

ISC 08 17:26:14.4±1.2**, 10°.7S**±0°.1×**166°.2E**±0°.2**, h35^{km}, n15, σ1.^{s}31**/9**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.30	281	P	Pn	17 27 46.5	+1.5
	20nm,0.3s,baz=148,slow=4.0,SNR=12						
DZM	Mont Dzumac	11.29	179	P	Pn	17 28 54.5	+1.0
	0.8nm,0.3s,baz=140,slow=23,SNR=6.3						
H11S2	WAKE ISLAND Hy	29.03	1	T	T	18 02 37.3	
	baz=181,slow=76,SNR=8.4						
H11S3	WAKE ISLAND Hy	29.03	1	T	T	18 02 38.8	
	baz=181,slow=76,SNR=6.5						
H11S1	WAKE ISLAND Hy	29.05	1	T	T	18 02 40.3	
	baz=181,slow=76,SNR=7.9						
H11N1	WAKE ISLAND Hy	30.25	1	T	T	18 04 09.0	
	baz=182,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	30.25	1	T	T	18 04 09.4	
	baz=182,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	30.27	1	T	T	18 04 10.4	
	baz=182,slow=76,SNR=20						
WRA	Warramunga Arr	32.03	250	P	P	17 32 36.7	-1.3
	2.0nm,0.8s,baz=80,slow=9.0,SNR=13						
ASAR	Alice Springs	33.35	243	P	P	17 32 47.8	-1.8
	0.7nm,0.6s,baz=67,slow=10,SNR=16						
FITZ	Fitzroy Crossi	39.91	255	P	P	17 33 44.8	-0.7
	4.8nm,0.6s,baz=118,slow=5.3						
CMAR	Chiang Mai Arr	72.41	293	P	P	17 37 38.0	+0.3
	0.4nm,0.7s,baz=111,slow=4.2,SNR=4.6						
ILAR	Eielson Array	83.06	18	P	P	17 38 36.6	+0.6
	0.6nm,0.6s,baz=235,slow=5.3,SNR=11						
MKAR	Makanchi Array	93.60	317	P	P	17 39 26.8	-0.3
	0.6nm,0.7s,baz=88,slow=6.4,SNR=8.6						
ARCES	ARCESS Array B	116.14	346	PKP	PKiKP	17 44 52.4	-1.0
	1.1nm,0.9s,baz=31,slow=2.1,SNR=3.0						

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*NEIC **08** 17:26:55.4±0.4, 10°.95S×165°.96E, h10^{km}, mb5.1/29, Error ellipse: s-maj=9.9km s-min=6.6km az=66.0*

*ISCJB **08** 17:26:57.3±0.4, 11°.03S±0°.05×165°.90E±0°.06, h35^{km}, mb5.0/35, Error ellipse: s-maj=9.4km s-min=5.8km az=143.8*

*IDC **08** 17:27:00.5±3.6, 11°.03S×165°.99E, h48^{km}±32^{km}, mb4.0/8, mb1 4.2/10, mb1mx3.9/35, mbtmp4.4/10, ML4.4/2, Error ellipse: s-maj=36.1km s-min=28.4km az=143.0*

ISC 08 17:26:59.3±0.6**, 10°.96S**±0°.08×**165°.94E**±0°.09**, h35^{km}, n56, σ1.^{s}10**/57**, mb5.2**/36**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.09	284	eP	Pn	17 28 27.0	+0.1
HNR				eS	Sn	17 29 36.0	+0.5
HNR	Honiara	6.09	284	ePn	Pn	17 28 27.2	+0.3
HNR	Honiara	6.09	284	P	Pn	17 28 27.9	+0.9
	21nm,0.3s,baz=180,slow=0.8,SNR=11						
MARNC	Mare, Loyalty	10.65	169	ePn	Pn	17 29 30.4	+1.0
DZM	Mont Dzumac	11.05	178	ePn	Pn	17 29 35.2	+0.1
DZM	Mont Dzumac	11.05	178	P	Pn	17 29 36.2	+1.0
	1.3nm,0.3s,baz=14,slow=22,SNR=6.5						
PINNC	Pines Island,	11.67	173	ePn	Pn	17 29 46.2	+2.7
MANU	Manus Island	20.45	294	eP	P	17 31 35.5	+1.4
	30nm,0.9s						
CTA	Charters Tower	21.00	242	P	P	17 31 41.1	+1.1
	5.1nm,0.7s,baz=62,slow=13,SNR=5.3						
CTAO	Charters Tower	21.00	242	eP	P	17 31 40.9	+0.9
	69nm,1.9s						
LHI	Lord Howe Isla	21.42	196	eP	P	17 31 43.4	-0.9
	98nm,0.9s						
COEN	Coen	22.42	260	eP	P	17 31 54.6	-0.7
	26nm,1.5s						
BKZ	Black Stump Fm	29.62	163	eP	P	17 33 01.2	-0.2
	30nm,1.6s						
BFZ	Birch Farm	30.97	165	eP	P	17 33 11.9	-1.3
	68nm,1.3s						
THZ	Tophouse	31.28	170	eP	P	17 33 15.2	-0.8
	82nm,1.9s						
WRAB	Tennant Creek	31.68	250	eP	P	17 33 19.0	-0.8
	7.4nm,0.8s						
WB2	Warramunga Arr	31.68	250	eP	P	17 33 18.8	-1.0
WR1	Warramunga Arr	31.69	250	eP	P	17 33 19.4	-0.5
	10nm,0.8s						
WRA	Warramunga Arr	31.69	250	P	P	17 33 19.4	-0.5
	6.4nm,0.8s,baz=81,slow=9.1,SNR=24						
KHZ	Kahutara	32.03	169	eP	P	17 33 23.0	+0.5
	53nm,1.5s						
FOZ	Fox Glacier	32.62	175	eP	P	17 33 26.0	-1.7
	59nm,1.6s						
RPZ	Rata Peaks	32.93	173	eP	P	17 33 31.3	+0.8
	17nm,1.0s						
AS01	Alice Springs	32.96	243	eP	P	17 33 29.6	-1.4
AS31	Alice Springs	33.00	243	eP	P	17 33 29.9	-1.4
	0.7nm,0.9s						
ASAR	Alice Springs	33.00	243	P	P	17 33 30.1	-1.3
	1.8nm,0.9s,baz=66,slow=9.9,SNR=10						
CRLZ	Canterbury Las	33.00	171	eP	P	17 33 30.9	-0.2
	74nm,1.4s						
MQZ	McQueen's Vall	33.14	171	eP	P	17 33 30.4	-1.8
	76nm,1.6s						
LBZ	Lake Benmore	33.50	174	eP	P	17 33 35.3	-0.1
	71nm,1.7s						
SARN	Sarigan	33.96	324	eP	P	17 33 40.0	+0.3
	279nm,2.0s						
MLZ	Mavora Lakes	34.33	177	eP	P	17 33 43.3	+0.7
	154nm,1.9s						
FITZ	Fitzroy Crossi	39.58	255	eP	P	17 34 27.4	-0.2
	5.3nm,0.7s						
FITZ	Fitzroy Crossi	39.58	255	P	P	17 34 27.6	-0.1
	4.9nm,0.7s,baz=118,slow=10,SNR=7.5						
TNTI	Ternate	40.08	284	eP	P	17 34 32.6	+0.8
	12nm,1.4s						
BATI	Baumata	41.54	267	P	P	17 34 45.5	+1.6
	9.3nm,0.6s,baz=102,slow=2.9,SNR=4.5						
JNU	Nakatsue	55.13	324	eP	P	17 36 28.3	-0.1
	61nm,1.5s						
YHNB	Yeheng	56.08	310	eP	P	17 36 37.0	+1.6
	213nm,1.6s						
CISI	Cisompet, Garu	57.40	268	eP	P	17 36 43.9	-1.1
	50nm,1.3s						
XMIS	Christmas Isla	59.15	264	eP	P	17 36 55.0	-2.2
	127nm,1.6s						
SSE	Sheshan	59.93	316	eP	P	17 37 01.5	-0.7
	141nm,1.8s						
KS01	Wonju Array Si	59.95	325	eP	P	17 37 01.4	-0.7
NIKH	Nikolski High	67.24	16	eP	P	17 37 49.4	-0.6
	254nm,1.4s						
COCO	West Island	67.54	261	eP	P	17 37 50.0	-2.7
	706nm,1.6s						
CM01	Chiang Mai Arr	72.23	293	eP	P	17 38 21.6	+0.2
CM31	Chiang Mai Arr	72.25	293	eP	P	17 38 22.2	+0.6
CMAR	Chiang Mai Arr	72.25	293	P	P	17 38 22.4	+0.8
	1.3nm,0.9s,baz=111,slow=4.5,SNR=7.6						
ULN	Ulaanbaatar	78.35	324	eP	P	17 38 56.5	+0.2
	2.3nm,0.8s						
SUA	Susitna One	79.79	20	eP	P	17 39 03.9	+0.1
	48nm,2.0s						
ILAR	Eielson Array	83.38	18	P	P	17 39 22.3	-0.2
	0.5nm,0.6s,baz=238,slow=4.8,SNR=4.9						
MOD	Modoc Plateau	85.45	46	eP	P	17 39 35.9	+2.1
	14nm,0.9s						
MK01	Makanchi Array	93.58	317	eP	P	17 40 10.8	-1.1
MK31	Makanchi Array	93.59	317	eP	P	17 40 11.3	-0.7
	1.6nm,0.9s						
MK32	Makanchi Array	93.59	317	eP	P	17 40 11.6	-0.4
MKAR	Makanchi Array	93.59	317	eP	P	17 40 11.6	-0.4
	7.6nm,0.8s						
MKAR	Makanchi Array	93.59	317	P	P	17 40 11.6	-0.4
	1.1nm,0.8s,baz=100,slow=6.3,SNR=11						
ARA0	ARCESS Array S	116.30	346	ePKPdf	PKPdf	17 45 37.3	-1.3
ARCES	ARCESS Array B	116.30	346	PKP	PKPdf	17 45 37.3	-1.3
	3.8nm,1.1s,baz=270,slow=0.6,SNR=5.1						

IDC 08 17:30:05.7±4.0**, 10°.70S**×**165°.49E, h67^{km}**±36^{km}**, mb3.4**/3**, mb1 3.8**/5**, mb1mx3.4**/35**, mbtmp4.0**/5**, ML4.0**/2**, Error ellipse: s-maj=37.7km s-min=34.5km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.60	283	P	Pn	17 31 26.4	-0.1
	6.7nm,0.3s,baz=113,slow=7.7,SNR=4.1						
DZM	Mont Dzumac	11.34	175	P	Pn	17 32 45.2	+0.1
	0.5nm,0.3s,baz=311,slow=18,SNR=5.4						
WRA	Warramunga Arr	31.37	249	P	P	17 36 21.2	+0.8
	0.9nm,0.8s,baz=80,slow=8.7,SNR=5.4						
ASAR	Alice Springs	32.72	243	P	P	17 36 31.2	-1.1
	0.9nm,1.0s,baz=69,slow=10,SNR=4.1						
ILAR	Eielson Array	83.27	19	P	P	17 42 24.7	0.0
	0.6nm,0.7s,baz=239,slow=5.0,SNR=5.2						

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*NNC **08** 17:31:34.6±3.7, 42°.56N×79°.56E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=24.0km s-min=15.7km az=128.0*

*SOME **08** 17:31:35.5, 42°.57N×79°.65E, h15^{km}*

*KRNET **08** 17:31:35.0±0.1, 42°.58N×79°.67E, h16^{km}, mb2.2*

ISC 08 17:31:35.1±1.8**, 42°.59N**±0°.05×**79°.50E**±0°.05**, h1^{km}**±12^{km}**, n24, σ1.^{s}18**/45**, 9C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.66	328	P	Pb	17 31 49.2	-0.4
	2.9nm,0.2s						
UZB				S	Sb	17 31 59.2	-0.1
	10nm,0.2s						
UZB	Uzynbulak	0.66	328	eP	Pb	17 31 49.2	-0.4
	baz=20						
UZB				eS	Sb	17 31 59.3	-0.1
	baz=20						
UZB	Uzynbulak	0.66	328	eP	Pb	17 31 49.2	-0.4
	2.9nm,0.2s						
UZB				eS	Sb	17 31 59.2	-0.1
	10nm,0.2s						
PDGK	Podgornoye	0.74	359	P	Pg	17 31 49.7	+0.4
	1.1nm,0.2s						
PDGK				S	Sb	17 32 00.4	-1.3
	3.7nm,0.2s						
PDGK	Podgornoye	0.74	359	⇑P	Pg	17 31 46.6	-2.7
	1.5nm,0.8s						
PDGK				⇑S	Sb	17 32 00.2	-1.5
	5.1nm,0.5s						
PDGK	Podgornoye	0.74	359	⇑iP	Pg	17 31 48.9	-0.4
	baz=50						
PDGK				⇑iS	Sb	17 32 00.1	-1.5
	baz=50						
PRZ	Przheval'sk	0.82	263	⇓iP	Pn	17 31 53.0	-1.0
	baz=64						
PRZ				⇓iS	Sn	17 32 05.5	-1.4
	baz=64						
KTMS	Ketmen	1.06	36	P	Pn	17 31 58.2	+0.9
KTMS				S	Sn	17 32 14.6	+1.7
KTMS	Ketmen	1.06	36	eP	Pn	17 31 58.2	+0.9
	5.6nm,0.1s						
KTMS				eS	Sn	17 32 14.6	+1.7
	11nm,0.1s						
MNBS	Baschi	1.69	332	P	Pg	17 32 08.1	+0.5
MNBS				S	Sg	17 32 31.0	+1.5
MNBS	Baschi	1.69	332	eP	Pg	17 32 08.1	+0.5
	1.0nm,0.1s						
MNBS				eS	Sg	17 32 31.0	+1.5
	9.4nm,0.1s						
DJR	Jarkent	1.76	7	P	Pb	17 32 08.0	-0.2
	0.8nm,0.3s						
DJR				S	Sg	17 32 31.2	-0.3
	1.3nm,0.3s						
DJR	Jarkent	1.76	7	eP	Pb	17 32 08.0	-0.2
	0.8nm,0.3s						
DJR				eS	Sg	17 32 31.2	-0.3
	1.3nm,0.3s						
KDJ	Kajisay	1.78	256	⇓iP	Pg	17 32 09.8	+0.6
	baz=57						
KDJ				⇓iS	Sg	17 32 34.9	+2.6
	baz=57						
MDOK	Medeo	1.89	289	Pg	Pb	17 32 10.0	-0.6
	3.3nm,1.2s						
MDOK				⇓Lg	Lg	17 32 37.0	
	3.5nm,1.0s						
IZV	Izvestkoviy	2.17	283	Pg	Pg	17 32 16.7	-0.1
IZV				Lg	Lg	17 32 46.3	
IZV	Izvestkoviy	2.17	283	eP	Pb	17 32 15.7	+0.4
	baz=82						
IZV				eS	Sg	17 32 45.3	+0.4
	baz=82						
IZV	Izvestkoviy	2.17	283	eP	Pg	17 32 16.7	-0.1
	2.0nm,0.1s						
IZV				eS	Sg	17 32 46.3	+1.4
	3.9nm,0.1s						
ULHL	Ulahol	2.44	263	⇓iP	Pb	17 32 19.4	-0.5
	baz=64						
ULHL				⇓iS	Sb	17 32 51.6	+1.1
	baz=64						
BOOM	Boomskoye usch	2.63	269	⇑iP	Pb	17 32 22.2	-1.0
	baz=69						
BOOM				⇑iS	Sb	17 32 56.2	+0.1
	baz=69						
KAPS	Kapalarasan	2.70	358	eP	Pb	17 32 24.7	+0.5
	0.2nm,0.1s						
KAPS				eS	Sg	17 32 60.0	-1.8
	0.9nm,0.3s						
NRN	Naryn	2.85	247	⇓iP	Pb	17 32 25.1	-1.9
	baz=48						
NRN				⇓iS	Sb	17 33 01.7	-0.9
	baz=48						
TKM2	Tokmak 2	2.90	278	⇓Pg	Pb	17 32 28.8	+1.1
	1.8nm,1.0s						
TKM2				⇑Lg	Lg	17 33 07.7	
	0.6nm,0.4s						
TKM2	Tokmak 2	2.90	278	⇑iP	Pb	17 32 25.8	-1.9
	baz=78						
TKM2				⇑iS	Sb	17 33 02.6	-1.1
	baz=78						

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*NEIC **08** 17:31:55.9±0.7, 11°.25S×165°.86E, h10^{km}, mb4.9/15, Error ellipse: s-maj=15.8km s-min=10.1km az=222.0*

*ISCJB **08** 17:31:58.0±0.7, 11°.34S±0°.09×165°.80E±0°.09, h35^{km}, mb4.5/20, Error ellipse: s-maj=15.0km s-min=9.2km az=44.6*

*IDC **08** 17:32:02.3±4.0, 11°.11S×165°.75E, h53^{km}±35^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.5/34, mbtmp3.9/7, ML4.0/2, Error ellipse: s-maj=37.3km s-min=30.1km az=137.0*

ISC 08 17:31:59.2±1.1**, 11°.3S**±0°.1×**165°.9E**±0°.2**, h35^{km}, n29, σ0.^{s}94**/22**, mb4.7**/20**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.13	287	P	Pn	17 33 28.0	+0.6
	6.2nm,0.3s,baz=150,slow=8.1,SNR=2.8						
MARNC	Mare, Loyalty	10.31	169	ePn	Pn	17 34 27.7	+3.1
DZM	Mont Dzumac	10.70	177	ePn	Pn	17 34 34.4	+4.3
DZM	Mont Dzumac	10.70	177	P	Pn	17 34 35.6	+5.5
	0.7nm,0.3s,baz=9.0,slow=19,SNR=5.1						
PINNC	Pines Island,	11.33	173	ePn	Pn	17 34 44.3	+5.7
COEN	Coen	22.31	261	eP	P	17 36 53.2	-0.7
	19nm,1.4s						
BKZ	Black Stump Fm	29.29	163	eP	P	17 38 00.7	+2.4
	21nm,1.6s						
BFZ	Birch Farm	30.64	164	eP	P	17 38 10.3	+0.1
	105nm,1.7s						
THZ	Tophouse	30.94	170	eP	P	17 38 14.3	+1.4
	34nm,1.5s						
WRAB	Tennant Creek	31.50	250	eP	P	17 38 16.6	-1.5
	8.9nm,1.3s						
WB2	Warramunga Arr	31.50	250	eP	P	17 38 17.9	-0.2
WR1	Warramunga Arr	31.51	250	eP	P	17 38 19.4	+1.2
	4.5nm,0.9s						
WRA	Warramunga Arr	31.51	250	P	P	17 38 19.4	+1.2
	2.2nm,0.7s,baz=81,slow=9.0,SNR=12						
KHZ	Kahutara	31.69	169	eP	P	17 38 18.4	-1.0
	33nm,1.4s						
TOO	Toolangi	31.90	212	eP	P	17 38 20.9	-0.5
	16nm,1.4s						
FOZ	Fox Glacier	32.27	175	eP	P	17 38 25.5	+1.0
	17nm,1.1s						
RPZ	Rata Peaks	32.58	173	eP	P	17 38 27.6	+0.3
	31nm,1.3s						
AS01	Alice Springs	32.74	244	eP	P	17 38 30.7	+1.7
AS31	Alice Springs	32.78	244	eP	P	17 38 29.2	-0.2
	0.9nm,1.1s						
ASAR	Alice Springs	32.79	244	P	P	17 38 30.0	+0.6
	0.5nm,0.6s,baz=64,slow=10,SNR=6.5						
MQZ	McQueen's Vall	32.79	171	eP	P	17 38 28.9	-0.2
	36nm,1.3s						
LBZ	Lake Benmore	33.15	174	eP	P	17 38 33.1	+0.9
	32nm,1.4s						
BBOO	Buckleboo	34.74	227	eP	P	17 38 46.0	-0.2
	28nm,1.4s						
FITZ	Fitzroy Crossi	39.44	255	eP	P	17 39 26.8	+0.6

	16nm,1.6s						
FITZ	**Fitzroy Crossi**	**39.44**	**255**	P	**P**	**17 39 27.6**	**+1.4**
	2.0nm,0.6s,baz=87,slow=8.4,SNR=6.4						
ILAR	**Eielson Array**	**83.73**	**18**	P	**P**	**17 44 24.9**	**+0.7**
	0.3nm,0.7s,baz=231,slow=4.4,SNR=4.5						
LKWY	**Lake**	**93.42**	**45**	*e*P	P	17 45 13.3	+1.9
	3.8nm,0.4s						
MK32	**Makanchi Array**	**93.81**	**317**	*e*P	**P**	**17 45 11.7**	**-1.1**
MKAR	**Makanchi Array**	**93.81**	**317**	P	**P**	**17 45 11.7**	**-1.1**
	0.5nm,0.9s,baz=107,slow=4.8,SNR=3.4						

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*ISCJB **08** 17:32:55.7±0.4, 10.°82S±0.°05×166.°14E±0.°05, h10km, mb4.8/34, MS4.5/1, Error ellipse: s-maj=8.7km s-min=6.1km az=43.9*

*NEIC **08** 17:32:57.5±0.4, 10.°77S×166.°13E, h10km, mb5.0/28, Error ellipse: s-maj=7.8km s-min=6.1km az=56.0*

*IDC **08** 17:33:03.0±3.4, 10.°85S×166.°05E, h48km±32km, mb4.0/10, mb1 4.3/12, mb1mx4.0/34, mbtmp4.4/12, ML4.8/2, MS4.7/1, Ms1 4.7/1, ms1mx4.0/53, Error ellipse: s-maj=23.9km s-min=22.6km az=158.0*

ISC 08 17:32:57.9±0.7**, 10.°76S**±0.°09×**166.°16E**±0.°08**, h10**km**, n62, σ1.s27**/55**, mb4.8**/34**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.25**	**282**	*e*P	**Pn**	**17 34 30.0**	**-0.3**
HNR	**Honiara**	**6.25**	**282**	*e*Pn	**Pn**	**17 34 31.0**	**+0.7**
HNR				*e*Sn	**Sn**	**17 35 44.3**	**+2.4**
HNR	**Honiara**	**6.25**	**282**	P	**Pn**	**17 34 31.4**	**+1.1**
	36nm,0.3s,baz=167,slow=2.2,SNR=10						
MARNC	**Mare, Loyalty**	**10.81**	**171**	*e*Pn	**Pn**	**17 35 33.9**	**+1.1**
DZM	**Mont Dzumac**	**11.25**	**179**	*e*Pn	**Pn**	**17 35 39.5**	**+0.6**
DZM	**Mont Dzumac**	**11.25**	**179**	P	**Pn**	**17 35 39.9**	**+1.0**
	3.5nm,0.3s,baz=336,slow=23,SNR=12						
PINNC	**Pines Island,**	**11.85**	**174**	*e*Pn	**Pn**	**17 35 48.5**	**+1.5**
KWAJ	**Kwajalein Atol**	**19.49**	**4**	*e*P	**Pn**	**17 37 25.8**	**-0.7**
	252nm,0.8s						
EIDS	**Eidsvold**	**20.38**	**223**	*e*P	Pn	17 37 35.8	-1.1
	19nm,0.8s						
CTA	**Charters Tower**	**21.29**	**242**	P	**P**	**17 37 45.2**	**+0.4**
	7.4nm,0.9s,baz=50,slow=12,SNR=4.4						
CTAO	**Charters Tower**	**21.29**	**242**	*e*P	**P**	**17 37 44.6**	**-0.2**
	18nm,1.2s						
COEN	**Coen**	**22.67**	**260**	*e*P	**P**	**17 37 59.8**	**+0.1**
	19nm,1.3s						
RAO	**Raoul Island**	**23.66**	**143**	LR	LR	17 45 47.8	
	comp=Z,2μm,20.3s,baz=176,slow=32						
ARMA	**Armidale**	**23.77**	**213**	*e*P	**P**	**17 38 10.8**	**-0.1**
	32nm,1.6s						
NIUE	**Niue**	**24.52**	**113**	*e*P	**P**	**17 38 18.9**	**+1.1**
	949nm,1.8s						
H11S2	**WAKE ISLAND Hy**	**29.07**	**1**	T	T	18 09 15.8	
	baz=181,slow=76,SNR=3.9						
H11S3	**WAKE ISLAND Hy**	**29.07**	**1**	T	T	18 09 17.7	
	baz=181,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**29.09**	**1**	T	T	18 09 18.5	
	baz=181,slow=76,SNR=12						
URZ	**Urewera**	**29.09**	**162**	*e*P	**P**	**17 38 58.3**	**-0.4**
	9.5nm,1.0s						
BKZ	**Black Stump Fm**	**29.75**	**164**	*e*P	**P**	**17 39 03.4**	**-1.3**
	12nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**30.29**	**1**	T	T	18 10 48.7	
	baz=182,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**30.30**	**1**	T	T	18 10 48.5	
	baz=182,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**30.31**	**1**	T	T	18 10 50.3	
	baz=182,slow=76,SNR=17						
STKA	**Stephens Creek**	**30.92**	**223**	*e*P	**P**	**17 39 14.3**	**-0.8**
	1.0nm,1.0s						
STKA	**Stephens Creek**	**30.92**	**223**	P	**P**	**17 39 14.7**	**-0.4**
	1.9nm,0.7s,baz=6.3,slow=13,SNR=4.1						
BFZ	**Birch Farm**	**31.11**	**165**	*e*P	**P**	**17 39 14.4**	**-2.1**
	100nm,1.6s						
THZ	**Tophouse**	**31.45**	**170**	*e*P	**P**	**17 39 19.0**	**-0.6**
WRAB	**Tennant Creek**	**31.95**	**250**	*e*P	**P**	**17 39 21.1**	**-3.1**
	8.1nm,0.8s						
WB2	**Warramunga Arr**	**31.95**	**250**	*e*P	**P**	**17 39 21.8**	**-2.5**
WR1	**Warramunga Arr**	**31.96**	**250**	*e*P	**P**	**17 39 23.2**	**-1.1**
	8.7nm,0.9s						
WRA	**Warramunga Arr**	**31.96**	**250**	P	**P**	**17 39 23.2**	**-1.1**
	5.9nm,0.7s,baz=81,slow=9.2,SNR=34						
KHZ	**Kahutara**	**32.19**	**170**	*e*P	**P**	**17 39 24.8**	**-1.2**
	110nm,1.8s						
LTZ	**Lake Taylor**	**32.34**	**172**	*e*P	**P**	**17 39 26.3**	**-1.2**
	11nm,0.8s						
TOO	**Toolangi**	**32.52**	**211**	*e*P	**P**	**17 39 30.9**	**+1.8**
	44nm,1.8s						
FOZ	**Fox Glacier**	**32.80**	**175**	*e*P	**P**	**17 39 30.6**	**-0.8**
	80nm,1.8s						
OXZ	**Oxford**	**32.84**	**172**	*e*P	**P**	**17 39 31.0**	**-0.7**
	36nm,1.3s						
RPZ	**Rata Peaks**	**33.11**	**173**	*e*P	**P**	**17 39 33.1**	**-1.0**
	20nm,0.7s						
RPZ	**Rata Peaks**	**33.11**	**173**	P	**P**	**17 39 33.4**	**-0.6**
	15nm,0.8s,baz=85,slow=4.6,SNR=10						
AS01	**Alice Springs**	**33.24**	**243**	*e*P	**P**	**17 39 34.3**	**-1.2**
AS31	**Alice Springs**	**33.28**	**243**	*e*P	**P**	**17 39 34.5**	**-1.4**
	1.0nm,0.8s						
ASAR	**Alice Springs**	**33.28**	**243**	P	**P**	**17 39 34.2**	**-1.7**
	2.8nm,0.6s,baz=63,slow=11,SNR=38						
MQZ	**McQueen's Vall**	**33.30**	**171**	*e*P	**P**	**17 39 34.5**	**-1.2**
	22nm,1.0s						
LBZ	**Lake Benmore**	**33.68**	**175**	*e*P	**P**	**17 39 38.3**	**-0.8**
	150nm,1.9s						
WKZ	**Wanaka**	**34.03**	**176**	*e*P	**P**	**17 39 41.4**	**-0.7**
	54nm,1.3s						
ODZ	**Otahua Downs**	**34.38**	**174**	*e*P	**P**	**17 39 43.6**	**-1.5**
	81nm,1.9s						
SAUI	**Saumlaki**	**34.49**	**272**	*e*P	**P**	**17 39 46.5**	**0.0**
	65nm,0.9s						
BBOO	**Buckleboo**	**35.32**	**227**	*e*P	**P**	**17 39 52.2**	**-1.2**
	80nm,1.9s						
FITZ	**Fitzroy Crossi**	**39.84**	**255**	P	**P**	**17 40 30.9**	**-1.0**
	8.4nm,0.7s,baz=78,slow=6.7,SNR=20						
FORT	**Forrest**	**40.53**	**235**	*e*P	**P**	**17 40 37.3**	**-0.2**
	22nm,1.1s						
MBWA	**Marble Bar**	**45.67**	**251**	*e*P	**P**	**17 41 18.8**	**-0.4**
	92nm,1.6s						
MORW	**Morawa**	**50.11**	**241**	*e*P	**P**	**17 41 54.2**	**+0.6**
	92nm,1.9s						
CM01	**Chiang Mai Arr**	**72.34**	**293**	*e*P	**P**	**17 44 23.6**	**-1.0**
CM31	**Chiang Mai Arr**	**72.37**	**293**	*e*P	**P**	**17 44 24.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**72.37**	**293**	P	**P**	**17 44 24.7**	**0.0**
	1.4nm,0.8s,baz=113,slow=4.6,SNR=9.5						
CHTO	**Chiang Mai**	**72.48**	**294**	*e*P	**P**	**17 44 24.7**	**-0.7**
	8.6nm,1.5s						
ILAR	**Eielson Array**	**83.12**	**18**	P	**P**	**17 45 23.4**	**-0.2**
	0.8nm,0.6s,baz=236,slow=5.0,SNR=7.1						
ILB	**Eielson Array**	**83.12**	**18**	*e*P	**P**	**17 45 27.7**	**+4.1**
	3.9nm,1.0s						
IL1	**Eielson Array**	**83.12**	**18**	*e*P	**P**	**17 45 23.5**	**-0.1**
NV01	**Mina Array Sit**	**85.53**	**50**	*e*P	**P**	**17 45 36.8**	**0.0**
NVAR	**Mina Array Bea**	**85.53**	**50**	P	**P**	**17 45 37.8**	**+1.0**
	0.3nm,0.3s,baz=234,slow=7.7,SNR=2.8						
MK32	**Makanchi Array**	**93.59**	**317**	*e*P	**P**	**17 46 13.2**	**-1.2**
MKAR	**Makanchi Array**	**93.59**	**317**	P	**P**	**17 46 13.2**	**-1.2**
	0.4nm,0.5s,baz=89,slow=5.8,SNR=5.3						

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*ISCJB **08** 17:35:48.8±0.8, 11.°01S±0.°09×166.°0E±0.°1, h10km, mb4.6/17, Error ellipse: s-maj=18.0km s-min=8.6km az=141.1*

*NEIC **08** 17:35:50.3±0.6, 10.°93S×165.°99E, h10km, mb4.7/8, Error ellipse: s-maj=14.6km s-min=7.1km az=51.0*

*IDC **08** 17:35:55.5±3.9, 11.°04S×165.°92E, h44km±35km, mb3.6/6, mb1 4.0/8, mb1mx3.7/34, mbtmp4.0/8, ML4.4/2, Error ellipse: s-maj=37.9km s-min=32.0km az=138.0*

ISC 08 17:35:50.5±1.1**, 10.°9S**±0.°1×**166.°0E**±0.°1**, h10**km**, n26, σ0.s95**/26**, mb4.7**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.16**	**283**	*e*Pn	**Pn**	**17 37 22.5**	**+0.9**
HNR	**Honiara**	**6.16**	**283**	P	**Pn**	**17 37 22.8**	**+1.2**
	10nm,0.3s,baz=205,slow=4.0,SNR=3.6						
MARNC	**Mare, Loyalty**	**10.67**	**170**	*e*Pn	**Pn**	**17 38 24.7**	**+1.2**
DZM	**Mont Dzumac**	**11.09**	**178**	*e*Pn	**Pn**	**17 38 30.1**	**+0.7**
DZM	**Mont Dzumac**	**11.09**	**178**	P	**Pn**	**17 38 30.4**	**+1.1**
	2.8nm,0.3s,baz=2.0,slow=11,SNR=7.9						
PINNC	**Pines Island,**	**11.70**	**173**	*e*Pn	**Pn**	**17 38 38.5**	**+0.9**
COEN	**Coen**	**22.51**	**260**	*e*P	**P**	**17 40 49.7**	**-0.9**
	24nm,1.5s						
OUZ	**Omahuta**	**25.15**	**165**	*e*P	**P**	**17 41 16.1**	**+0.2**
	88nm,1.7s						
BKZ	**Black Stump Fm**	**29.63**	**163**	*e*P	**P**	**17 41 54.9**	**-1.3**
	18nm,1.3s						
BFZ	**Birch Farm**	**30.98**	**165**	*e*P	**P**	**17 42 06.9**	**-1.2**
	63nm,1.4s						
THZ	**Tophouse**	**31.31**	**170**	*e*P	**P**	**17 42 08.8**	**-2.1**
	15nm,1.1s						
WR1	**Warramunga Arr**	**31.77**	**250**	*e*P	**P**	**17 42 14.4**	**-0.9**
	5.8nm,1.0s						
WRA	**Warramunga Arr**	**31.77**	**250**	P	**P**	**17 42 14.4**	**-0.9**
	2.3nm,0.8s,baz=80,slow=9.0,SNR=7.6						
KHZ	**Kahutara**	**32.05**	**169**	*e*P	**P**	**17 42 17.7**	**+0.3**
	69nm,1.5s						
FOZ	**Fox Glacier**	**32.65**	**175**	*e*P	**P**	**17 42 22.6**	**-0.1**
	38nm,1.4s						
RPZ	**Rata Peaks**	**32.96**	**173**	*e*P	**P**	**17 42 25.7**	**+0.3**
	20nm,1.1s						
AS01	**Alice Springs**	**33.04**	**243**	*e*P	**P**	**17 42 25.6**	**-0.9**
ASAR	**Alice Springs**	**33.08**	**243**	P	**P**	**17 42 25.6**	**-1.3**
	0.7nm,0.8s,baz=65,slow=11,SNR=5.0						
MQZ	**McQueen's Vall**	**33.16**	**171**	*e*P	**P**	**17 42 26.7**	**-0.4**
	52nm,1.4s						
LBZ	**Lake Benmore**	**33.53**	**175**	*e*P	**P**	**17 42 30.6**	**+0.2**
	106nm,1.9s						
FITZ	**Fitzroy Crossi**	**39.67**	**255**	*e*P	**P**	**17 43 22.6**	**-0.5**
	16nm,1.8s						
FITZ	**Fitzroy Crossi**	**39.67**	**255**	P	**P**	**17 43 22.5**	**-0.5**
	1.8nm,0.7s,baz=112,slow=7.8,SNR=5.6						
CMAR	**Chiang Mai Arr**	**72.31**	**293**	P	**P**	**17 47 17.5**	**+0.6**
	0.5nm,0.8s,baz=122,slow=5.2,SNR=4.2						
ILAR	**Eielson Array**	**83.32**	**18**	P	**P**	**17 48 17.6**	**+0.4**
	0.4nm,0.6s,baz=237,slow=5.2,SNR=5.8						
MK32	**Makanchi Array**	**93.62**	**317**	*e*P	**P**	**17 49 06.8**	**-0.4**
MKAR	**Makanchi Array**	**93.62**	**317**	P	**P**	**17 49 06.8**	**-0.4**
	0.5nm,0.7s,baz=99,slow=5.2,SNR=5.8						

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*IDC **08** 17:42:31.2±0.7, 10.°96S×165.°55E, h0km, mb4.3/13, mb1 4.5/15, mb1mx4.3/40, mbtmp4.4/15, ML5.0/2, Error ellipse: s-maj=21.7km s-min=16.3km az=131.0*

*NEIC **08** 17:42:32.8±0.1, 10.°94S×165.°48E, h10km, mb5.1/117, Error ellipse: s-maj=4.6km s-min=3.4km az=110.0*

*ISCJB **08** 17:42:34.1±0.2, 11.°02S±0.°03×165.°44E±0.°03, h30km, mb5.0/131, Error ellipse: s-maj=4.8km s-min=4.1km az=21.4*

ISC 08 17:42:35.9±0.4**, 11.°01S**±0.°06×**165.°50E**±0.°06**, h30**km**, n180, σ1.s01**/173**, mb5.1**/131**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.68**	**285**	Pn	**Pn**	**17 43 58.5**	**+0.2**
	37nm,0.3s,baz=138,slow=5.7,SNR=25						
HNR				Sn	**Sn**	**17 45 03.6**	**+0.9**
	8.1nm,0.3s,baz=21,slow=18,SNR=2.2						
HNR	**Honiara**	**5.68**	**285**	*e*S	**Pn**	**17 43 58.0**	**-0.4**
MARNC	**Mare, Loyalty**	**10.70**	**167**	*e*Pn	**Pn**	**17 45 05.4**	**-1.8**
DZM	**Mont Dzumac**	**11.04**	**175**	*e*Pn	**Pn**	**17 45 12.1**	**+0.1**
DZM	**Mont Dzumac**	**11.04**	**175**	Pn	**Pn**	**17 45 12.5**	**+0.5**
	14nm,0.3s,baz=342,slow=12,SNR=92						
ONTNC	**Ouen Toro**	**11.28**	**175**	*e*Pn	**Pn**	**17 45 15.6**	**+0.4**
PINNC	**Pines Island,**	**11.69**	**171**	*e*Pn	**Pn**	**17 45 20.4**	**-0.4**
MSVF	**Nonsavu**	**13.88**	**120**	*e*Pn	**Pn**	**17 45 52.0**	**+1.3**
RABL	**Rabaul**	**14.84**	**296**	*e*Pn	Pn	17 45 55.6	-8.3
PATS	**Pohnpei**	**19.11**	**338**	*e*P	**P**	**17 46 55.9**	**-0.7**
	266nm,1.3s						
EIDS	**Eidsvold**	**19.76**	**222**	*e*P	**P**	**17 47 04.3**	**+0.6**
	35nm,1.2s						
KWAJ	**Kwajalein Atol**	**19.79**	**6**	*e*P	**P**	**17 47 03.8**	**-0.2**
	282nm,1.0s						
MANU	**Manus Island**	**20.08**	**295**	*e*P	**P**	**17 47 06.8**	**-0.3**
	272nm,1.4s						
CTA	**Charters Tower**	**20.60**	**242**	P	**P**	**17 47 13.9**	**+1.0**
	10nm,0.8s,baz=66,slow=12,SNR=6.9						
CTAO	**Charters Tower**	**20.60**	**242**	*e*P	**P**	**17 47 13.4**	**+0.6**
	166nm,1.8s						
COEN	**Coen**	**21.99**	**260**	*e*P	**P**	**17 47 28.2**	**+0.4**
	49nm,1.4s						
ARMA	**Armidale**	**23.22**	**212**	*e*P	**P**	**17 47 41.7**	**+1.0**
	38nm,1.4s						
RAO	**Raoul Island**	**23.86**	**142**	*e*P	**P**	**17 47 47.9**	**+1.0**
	486nm,1.0s						
NIUE	**Niue**	**25.03**	**112**	*e*P	**P**	**17 47 57.8**	**+0.2**
	224nm,1.1s						
OUZ	**Omahuta**	**25.21**	**164**	*e*P	**P**	**17 48 01.3**	**+2.3**
	138nm,2.0s						
CAN	**Canberra**	**28.48**	**209**	*e*P	**P**	**17 48 28.2**	**-0.3**
	96nm,1.8s						
MXZ	**Matakaoa Point**	**28.84**	**159**	*e*P	**P**	**17 48 32.4**	**+0.7**
	49nm,1.1s						
URZ	**Urewera**	**29.07**	**161**	*e*P	**P**	**17 48 33.8**	**+0.2**
	18nm,1.0s						
URZ	**Urewera**	**29.07**	**161**	P	**P**	**17 48 33.9**	**+0.2**
	7.5nm,0.8s,baz=309,slow=5.3,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**29.33**	**2**	T	T	18 19 12.5	
	baz=181,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**29.34**	**2**	T	T	18 19 08.9	
	baz=181,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.35**	**2**	T	T	18 19 09.4	
	baz=181,slow=76,SNR=11						
BKZ	**Black Stump Fm**	**29.71**	**163**	*e*P	**P**	**17 48 40.8**	**+1.4**
	22nm,0.5s						
STKA	**Stephens Creek**	**30.30**	**223**	*e*P	**P**	**17 48 45.2**	**+0.4**
	8.0nm,1.9s						
STKA	**Stephens Creek**	**30.30**	**223**	P	**P**	**17 48 45.8**	**+1.0**
	2.6nm,0.6s,baz=53,slow=12,SNR=6.8						
H11N1	**WAKE ISLAND Hy**	**30.56**	**3**	T	T	18 20 42.4	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**30.56**	**3**	T	T	18 20 41.1	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.57**	**3**	T	T	18 20 43.1	
	baz=182						
BFZ	**Birch Farm**	**31.05**	**164**	*e*P	**P**	**17 48 50.9**	**-0.3**
	123nm,1.7s						
WRAB	**Tennant Creek**	**31.25**	**250**	*e*P	**P**	**17 48 52.7**	**-0.6**
	44nm,1.7s						
WB2	**Warramunga Arr**	**31.26**	**250**	*e*P	**P**	**17 48 52.1**	**-1.2**
WRA	**Warramunga Arr**	**31.27**	**250**	P	**P**	**17 48 52.4**	**-1.1**
	2.6nm,0.6s,baz=81,slow=9.2,SNR=41						
THZ	**Tophouse**	**31.32**	**169**	*e*P	**P**	**17 48 54.0**	**+0.3**
	26nm,1.1s						
TOO	**Toolangi**	**31.98**	**211**	*e*P	**P**	**17 48 59.2**	**-0.3**
	53nm,1.8s						
KHZ	**Kahutara**	**32.07**	**169**	*e*P	**P**	**17 49 01.2**	**+1.1**
	121nm,1.9s						
LTZ	**Lake Taylor**	**32.20**	**171**	*e*P	**P**	**17 49 02.8**	**+1.4**
	77nm,1.8s						
AS01	**Alice Springs**	**32.55**	**243**	*e*P	**P**	**17 49 02.9**	**-1.9**
AS01				*e*PcP	**PcP**	**17 51 51.6**	**+0.5**
AS31	**Alice Springs**	**32.59**	**243**	*e*P	**P**	**17 49 03.8**	**-1.3**
	2.1nm,0.6s						
ASAR	**Alice Springs**	**32.59**	**243**	P	**P**	**17 49 04.2**	**-0.9**
	6.4nm,0.8s,baz=63,slow=10,SNR=128						
ASAR				PcP	**PcP**	**17 51 51.7**	**+0.6**
	0.6nm,0.6s,baz=68,slow=2.6,SNR=6.5						
FOZ	**Fox Glacier**	**32.62**	**174**	*e*P	**P**	**17 49 07.4**	**+2.5**
	17nm,1.0s						
RPZ	**Rata Peaks**	**32.94**	**173**	*e*P	**P**	**17 49 07.8**	**0.0**
	61nm,1.5s						
MQZ	**McQueen's Vall**	**33.17**	**170**	*e*P	**P**	**17 49 09.3**	**-0.4**
	86nm,1.7s						
SAUI	**Saumlaki**	**33.85**	**272**	*e*P	**P**	**17 49 13.4**	**-2.7**
	53nm,0.9s						
BBOO	**Buckleboo**	**34.68**	**227**	*e*P	**P**	**17 49 22.9**	**-0.2**
	78nm,1.8s						
WHZ	**Wether Hill Ro**	**34.83**	**177**	*e*P	**P**	**17 49 24.4**	**+0.3**
	151nm,1.7s						
FITZ	**Fitzroy Crossi**	**39.15**	**255**	*e*P	**P**	**17 50 00.2**	**-1.1**
	18nm,1.6s						
FITZ	**Fitzroy Crossi**	**39.15**	**255**	P	**P**	**17 50 00.6**	**-0.7**
	2.1nm,0.8s,baz=100,slow=9.1,SNR=7.7						
FORT	**Forrest**	**39.87**	**235**	*e*P	**P**	**17 50 05.8**	**-1.3**
	36nm,1.3s						
MORW	**Morawa**	**49.43**	**241**	*e*P	**P**	**17 51 22.9**	**-0.6**
	22nm,1.1s						
MJAR	**Matsushiro Arr**	**53.82**	**333**	P	**P**	**17 51 55.7**	**-0.4**
	1.8nm,0.7s,baz=178,slow=7.4,SNR=4.3						
MJB9	**Matsu-Tunnel**	**53.83**	**333**	*e*P	**P**	**17 51 55.4**	**-0.7**
	88nm,1.8s						
NJ2	**Nanjing**	**61.82**	**316**	*e*P	**P**	**17 52 51.1**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PEA0B	**Petropavlovsk-**	**64.20**	**355**	*e*P	**P**	**17 53 07.6**	**-0.2**
	comp=Z,151nm,1.8s						
PETK	**Petropavlovsk-**	**64.20**	**355**	*e*P	**P**	**17 53 08.4**	**+0.6**
PETK	**Petropavlovsk-**	**64.20**	**355**	P	**P**	**17 53 08.2**	**+0.4**
	comp=Z,3.5nm,0.8s,baz=162,slow=6.1,SNR=5.1						
CN2	**Changchun**	**65.58**	**329**	*e*P	**P**	**17 53 20.1**	**+3.2**
CASY	**Casey**	**66.33**	**201**	*e*P	**P**	**17 53 21.4**	**0.0**
	comp=Z,24nm,1.6s						
ENH	**Enshi**	**67.68**	**309**	*e*P	**P**	**17 53 29.9**	**-0.7**
	comp=Z,15nm,1.3s						
GYA	**Guiyang**	**68.19**	**304**	⇑*i*P	**P**	**17 53 35.0**	**+0.9**
GYA				PP	**PP**	**17 56 08.2**	**+3.3**
GYA				S	**S**	**18 02 33.6**	**+0.8**
GYA				SKS	**SKiKP**	**18 03 28.0**	**+0.6**
GYA	**Guiyang**	**68.19**	**304**	SS	SS	18 06 58.5	+2.2
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.8s						
GYA				LR	LR		
	comp=N,590nm,18.5s						
GYA				LR	LR		
	comp=E,580nm,18.4s						
GYA				LR	LR		
	comp=Z,560nm,18.3s						
BJT	**Baijiatuau**	**68.29**	**321**	*e*P	**P**	**17 53 33.2**	**-1.0**
	comp=Z,10nm,1.3s						
UNV	**Unalaska Valle**	**68.84**	**17**	*e*P	**P**	**17 53 37.7**	**+0.3**
	comp=Z,126nm,1.6s						
XAN	**Xi'an**	**69.91**	**312**	P	P	17 53 51.2	+6.7
XAN				pP	pwP	17 54 00.3	+3.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KMI	**Kunming**	**70.89**	**301**	P	**P**	**17 53 52.0**	**+1.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,770nm,15.1s						
KMI				LR	LR		
	comp=N,1μm,19.1s						
KMI				LR	LR		
	comp=E,1μm,17.8s						
KMI				LR	LR		
	comp=Z,2μm,19.6s						
HHC	**Hu-ho-hao-te**	**71.64**	**320**	*e*P	**P**	**17 53 56.4**	**+1.4**
HHC				pmax	pmax		
	comp=Z,22nm,1.3s						
HHC				pmax	pmax		
	comp=Z,270nm,6.7s						
CM01	**Chiang Mai Arr**	**71.85**	**294**	*e*P	**P**	**17 53 57.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**71.87**	**294**	P	**P**	**17 53 58.6**	**+1.9**
	comp=Z,1.2nm,0.9s,baz=111,slow=3.9,SNR=8.0						
CMMT	**Chiang Mai**	**71.98**	**294**	P	P	17 54 04.7	+7.4
CHTO	**Chiang Mai**	**71.98**	**294**	*e*P	**P**	**17 53 58.4**	**+1.1**
	comp=Z,11nm,1.5s						
CHTO	**Chiang Mai**	**71.98**	**294**	P	P	17 54 04.8	+7.5
	comp=Z,16nm,1.4s						
CHTO	**Chiang Mai**	**71.98**	**294**	P	P	17 54 04.8	+7.5
CD2	**Chengdu**	**72.38**	**307**	P	**P**	**17 54 00.9**	**+1.3**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
LZH	**Lanzhou**	**74.55**	**312**	*e*P	**P**	**17 54 12.2**	**-0.1**
LZH				pP	pP	17 54 18.2	-2.8
LZH				sP	sP	17 54 21.7	-2.5
LZH				PP	PP	17 57 14.7	+15
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.2s						
LZH				LR	LR		
	comp=N,540nm,17.6s						
LZH				LR	LR		
	comp=E,560nm,17.0s						
LZH				LR	LR		
	comp=Z,640nm,18.8s						
OHAK	**Old Harbor**	**75.96**	**22**	*e*P	**P**	**17 54 20.8**	**+1.1**
	comp=Z,110nm,1.8s						
GAMB	**Gambell**	**76.57**	**10**	*e*P	**P**	**17 54 23.2**	**+0.1**
	comp=Z,18nm,1.2s						
ULN	**Ulaanbaatar**	**78.12**	**324**	*e*P	**P**	**17 54 32.5**	**+0.2**
	comp=Z,5.6nm,1.0s						
SVW2	**Sparrevohn**	**78.15**	**18**	*e*P	**P**	**17 54 32.8**	**+0.8**
	comp=Z,22nm,1.3s						
HOM	**Homer**	**78.35**	**21**	*e*P	**P**	**17 54 34.1**	**+1.0**
	comp=Z,89nm,0.9s						
SONA1	**Songino Array**	**78.49**	**324**	*e*P	**P**	**17 54 34.7**	**+0.3**
ANM	**Nome**	**78.50**	**12**	*e*P	**P**	**17 54 35.1**	**+1.2**
	comp=Z,12nm,1.3s						
RSO	**Redoubt South**	**78.57**	**20**	*e*P	**P**	**17 54 35.0**	**+0.5**
BRLK	**Bradley Lake**	**78.69**	**21**	*e*P	**P**	**17 54 34.5**	**-0.5**
	comp=Z,32nm,1.1s						
BILL	**Bilibino**	**78.84**	**0**	*e*P	**P**	**17 54 35.1**	**-0.5**
	comp=Z,14nm,1.1s						
GTA	**Gaotai**	**78.85**	**314**	*e*P	**P**	**17 54 38.0**	**+1.4**
GTA				pP	PcP	17 54 42.1	-3.1
GTA				sP	pP	17 54 45.5	+0.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
QSPA	**South Pole Qui**	**79.00**	**180**	*e*P	**P**	**17 54 36.4**	**-0.5**
	comp=Z,12nm,1.1s						
SEW	**Seward**	**79.44**	**21**	*e*P	**P**	**17 54 37.8**	**-1.3**
	comp=Z,103nm,1.9s						
SUA	**Susitna One**	**79.97**	**20**	*e*P	**P**	**17 54 40.5**	**-1.6**
	comp=Z,25nm,1.5s						
KNK	**Knik Glacier**	**80.71**	**21**	*e*P	**P**	**17 54 47.7**	**+1.8**
	comp=Z,82nm,1.9s						
GHO	**Glory Hole Cre**	**80.80**	**20**	*e*P	**P**	**17 54 46.9**	**+0.4**
	comp=Z,85nm,1.9s						
GLI	**Glacier Island**	**80.82**	**21**	*e*P	**P**	**17 54 45.9**	**-0.6**
	comp=Z,28nm,1.0s						
CAST	**Castle Rocks**	**80.98**	**18**	*e*P	**P**	**17 54 48.0**	**+0.6**
	comp=Z,8.3nm,0.9s						
DIV	**Divide**	**81.46**	**22**	*e*P	**P**	**17 54 50.0**	**0.0**
	comp=Z,20nm,1.0s						
HMT	**Hamilton**	**81.50**	**23**	*e*P	**P**	**17 54 50.3**	**+0.1**
	comp=Z,104nm,1.4s						
TRF	**Thorofare Moun**	**81.56**	**18**	*e*P	**P**	**17 54 50.1**	**-0.5**
	comp=Z,29nm,1.8s						
KLU	**Klutina**	**81.65**	**21**	*e*P	**P**	**17 54 50.3**	**-0.7**
	comp=Z,25nm,1.2s						
RND	**Reindeer**	**81.98**	**19**	*e*P	**P**	**17 54 52.3**	**-0.4**
	comp=Z,22nm,1.2s						
RDOG	**Red Dog Mine**	**82.03**	**11**	*e*P	**P**	**17 54 51.9**	**-0.9**
	comp=Z,23nm,1.3s						
MCK	**McKinley**	**82.18**	**19**	*e*P	**P**	**17 54 53.4**	**-0.4**
	comp=Z,32nm,1.4s						
DHY	**Denali Highway**	**82.23**	**20**	*e*P	**P**	**17 54 53.3**	**-0.8**
	comp=Z,20nm,1.5s						
BWN	**Browne**	**82.33**	**18**	*e*P	**P**	**17 54 54.3**	**-0.2**
	comp=Z,30nm,1.2s						
IM3	**Indian Mountai**	**82.45**	**16**	*e*P	**P**	**17 54 55.2**	**+0.1**
HARP	**HAARP**	**82.53**	**21**	*e*P	**P**	**17 54 55.7**	**+0.1**
	comp=Z,128nm,1.7s						
MLY	**Manley**	**82.57**	**17**	*e*P	**P**	**17 54 55.7**	**-0.1**
	comp=Z,7.1nm,1.3s						
KMRM	**Mail Ridge**	**82.80**	**47**	*e*P	**P**	**17 54 58.4**	**+0.8**
	comp=Z,193nm,2.0s						
WRH	**Wood River Hil**	**82.97**	**18**	*e*P	**P**	**17 54 58.6**	**+0.8**
	comp=Z,13nm,1.1s						
KHMM	**Horse Mountain**	**83.02**	**46**	*e*P	**P**	**17 54 58.1**	**-0.7**
	comp=Z,78nm,1.5s						
MDM	**Murphy Dome**	**83.27**	**18**	*e*P	**P**	**17 54 58.3**	**-1.0**
	comp=Z,15nm,1.1s						
HDA	**Harding Lake**	**83.28**	**19**	*e*P	**P**	**17 54 58.7**	**-0.7**
	comp=Z,23nm,1.0s						
COLA	**College**	**83.33**	**18**	*e*P	**P**	**17 54 58.6**	**-0.9**
	comp=Z,16nm,0.9s						
RIDG	**Independ'e Rid**	**83.52**	**20**	*e*P	**P**	**17 54 59.9**	**-0.8**
	comp=Z,44nm,1.5s						
ILAR	**Eielson Array**	**83.55**	**19**	P	**P**	**17 54 60.0**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=236,slow=4.8,SNR=22						
ILB	**Eielson Array**	**83.55**	**19**	*e*P	**P**	**17 54 59.8**	**-1.0**
IL1	**Eielson Array**	**83.55**	**19**	*e*P	**P**	**17 55 00.1**	**-0.7**
DOT	**Dot Lake**	**83.72**	**20**	*e*P	**P**	**17 55 00.5**	**-1.2**
	comp=Z,16nm,1.1s						
SCRK	**Sand Creek**	**83.96**	**20**	*e*P	**P**	**17 55 03.1**	**0.0**
	comp=Z,26nm,1.2s						
YBH	**Yreka Blue Hor**	**84.04**	**46**	*e*P	**P**	**17 55 03.3**	**-0.6**
	comp=Z,21nm,1.3s						
ORV	**Oroville**	**84.17**	**48**	*e*P	**P**	**17 55 03.4**	**-1.1**
	comp=Z,6.9nm,1.0s						
HUMO	**Hull Mountain**	**84.17**	**45**	*e*P	**P**	**17 55 04.4**	**-0.1**
	comp=Z,13nm,1.0s						
AFDM	**Forest Hills D**	**84.36**	**49**	*e*P	**P**	**17 55 04.9**	**-0.6**
	comp=Z,13nm,1.0s						
HYT	**Haines Junctio**	**84.45**	**24**	*e*P	**P**	**17 55 05.8**	**+0.2**
	comp=Z,13nm,1.0s						
CMB	**Columbia Colle**	**84.50**	**50**	*e*P	**P**	**17 55 06.0**	**-0.3**
	comp=Z,8.8nm,1.1s						
SKAG	**Skagway**	**84.61**	**26**	*e*P	**P**	**17 55 05.7**	**-0.6**
	comp=Z,41nm,1.4s						

BEKR	Beckworth	85.10	48	eP	P	17 55 09.3	-0.1
	comp=Z,15nm,0.7s						
ISA	Isabella, Lake	85.24	52	eP	P	17 55 09.2	-0.9
	comp=Z,8.1nm,1.1s						
WAKR	Walker	85.36	50	eP	P	17 55 09.9	-0.9
	comp=Z,14nm,1.3s						
MDPB	Devils Postpil	85.36	50	eP	P	17 55 10.3	-0.6
	comp=Z,10nm,1.0s						
OMMB	Old Mammoth Mi	85.42	50	eP	P	17 55 11.6	+0.3
	comp=Z,11nm,1.4s						
DAWY	Dawson	85.61	21	eP	P	17 55 11.7	+0.5
	comp=Z,11nm,1.1s						
PAHR	Pah Rah Range	85.77	48	eP	P	17 55 12.8	+0.1
	comp=Z,9.9nm,1.1s						
MOD	Modoc Plateau	85.79	46	eP	P	17 55 10.3	-2.5
	comp=Z,9.8nm,1.0s						
PINE	Pine Mountain	85.96	44	eP	P	17 55 13.5	-0.2
	comp=Z,13nm,1.0s						
TIXI	Tiksi	86.00	349	eP	P	17 55 13.5	+0.5
	comp=Z,14nm,1.7s						
PGC	Sidney	86.02	39	eP	P	17 55 13.8	+0.3
	comp=Z,92nm,1.9s						
RYN	Ryan	86.08	50	eP	P	17 55 14.2	-0.1
	comp=Z,13nm,1.3s						
DAC	Darwin (Calif)	86.10	52	eP	P	17 55 14.2	-0.3
	comp=Z,9.9nm,1.3s						
NV01	Mina Array Sit	86.19	50	eP	P	17 55 14.5	-0.4
NVAR	Mina Array Bea	86.19	50	P	P	17 55 14.9	0.0
	comp=Z,2.5nm,0.8s,baz=235,slow=9.0,SNR=8.3						
NV11	Mina Array Sit	86.30	50	eP	P	17 55 14.9	-0.4
	comp=Z,0.9nm,1.1s						
KVN	Kaiserville	86.52	49	eP	P	17 55 16.0	-0.5
	comp=Z,6.5nm,1.0s						
I07A	Izee	87.04	44	eP	P	17 55 19.1	+0.2
	comp=Z,14nm,1.3s						
WVOR	Wild Horse Val	87.14	46	eP	P	17 55 22.1	+2.7
	comp=Z,7.7nm,1.0s						
J08A	Circle Bar Ran	87.53	45	eP	P	17 55 21.3	+0.1
	comp=Z,17nm,0.7s						
LDFC	Landfair	87.72	54	eP	P	17 55 22.7	+0.4
	comp=Z,62nm,0.4s						
HAWA	Hanford	87.75	42	eP	P	17 55 21.2	-0.8
	comp=Z,14nm,1.4s						
G08A	Pilot Rock	87.78	43	eP	P	17 55 22.1	-0.3
	comp=Z,9.9nm,1.0s						
Y12C	Blythe	87.85	55	eP	P	17 55 22.2	-0.7
	comp=Z,34nm,1.7s						
EPYK	Eagle Plains	87.86	20	eP	P	17 55 23.6	+1.5
	comp=Z,17nm,1.1s						
E08A	Dider Farm, El	88.09	42	eP	P	17 55 22.1	-1.5
	comp=Z,13nm,1.0s						
B08A	Colville Reser	88.49	40	eP	P	17 55 25.0	-0.6
	comp=Z,12nm,1.4s						
E09A	Wood Farm, Sta	88.70	42	eP	P	17 55 25.7	-0.8
	comp=Z,18nm,1.7s						
W13A	Hualapai Mount	88.70	54	eP	P	17 55 25.9	-1.2
	comp=Z,13nm,1.4s						
BMO	Blue Mountains	88.77	44	eP	P	17 55 26.9	-0.2
	comp=Z,5.4nm,1.1s						
WMQ	Urumqi	88.89	315	eP	P	17 55 27.8	+0.2
WMQ				LR	LR		
	comp=N,3µm,14.1s						
WMQ				LR	LR		
	comp=E,3µm,16.7s						
WMQ				LR	LR		
	comp=Z,3µm,19.1s						
ELK	Elko	89.10	48	eP	P	17 55 29.4	+0.5
	comp=Z,11nm,1.7s						
F10A	Beach Ranch, E	89.15	43	eP	P	17 55 28.8	0.0
	comp=Z,6.9nm,0.9s						
LCMT	Little Creek M	89.67	52	eP	P	17 55 30.5	-1.1
	comp=Z,12nm,0.6s						
CCUT	Cedar City	89.71	52	eP	P	17 55 31.0	-0.8
	comp=Z,8.1nm,1.0s						
HLID	Hailey	90.42	46	eP	P	17 55 35.4	+0.5
	comp=Z,4.8nm,1.0s						
MTPU	Mount Pierson	90.73	51	eP	P	17 55 37.7	+1.0
	comp=Z,10nm,1.0s						
HVU	Hansel Valley	91.16	48	eP	P	17 55 38.5	+0.1
	comp=Z,14nm,1.1s						
NLU	North Lily Min	91.25	50	eP	P	17 55 38.7	-0.2
	comp=Z,5.8nm,0.9s						
DLMT	Dillon	92.12	44	eP	P	17 55 42.4	-0.4
	comp=Z,17nm,1.1s						
LRM	Limekiln Ridge	92.33	44	eP	P	17 55 43.5	-0.3
BOZ	Bozeman (W)	92.84	44	eP	P	17 55 46.4	+0.3
	comp=Z,6.9nm,1.0s						
HRY	Holter Researc	92.95	43	eP	P	17 55 47.1	+0.6
MK01	Makanchi Array	93.31	317	eP	P	17 55 47.5	-0.5
MK31	Makanchi Array	93.33	317	eP	P	17 55 47.1	-1.0
MKAR	Makanchi Array	93.33	317	P	P	17 55 47.9	-0.2
	comp=Z,0.4nm,0.6s,baz=91,slow=7.3,SNR=6.3						
ZALV	Zalesovo Beam	93.38	324	eP	P	17 55 45.9	-2.3
PDAR	Pinedale Array	93.70	47	eP	P	17 55 47.6	-2.6
YKA	Yellowknife Ar	95.05	27	P	P	17 55 54.0	-1.6
	comp=Z,0.5nm,0.6s,baz=253,slow=4.7,SNR=8.8						
YKB5	Yellowknife Ar	95.05	27	eP	P	17 55 53.8	-1.8
SDCO	Great Sand Dun	95.86	53	eP	P	17 55 57.9	-2.4
	comp=Z,6.9nm,0.9s						
KSH	Kashi	96.54	309	P	P	17 56 08.5	+5.4
ARCES	ARCESS Array B	116.23	345	PKP	PKiKP	18 01 15.3	-0.6
	comp=Z,0.8nm,0.7s,baz=87,slow=2.0,SNR=4.6						

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*NEIC **08** 17:48:00.5±1.3, 19°.69N×76°.08W, h8^{km}±9^{km}, mb4.7/11, Error ellipse: s-maj=7.3km s-min=4.8km az=186.0*

*JSN **08** 17:48:01.8±0.6, 19°.91N×76°.03W, h28^{km}±923^{km}, MD4.3*

*ISCJB **08** 17:48:02.7±0.3, 19°.78N±0°.03×76°.12W±0°.03, h35^{km}, mb4.2/16, MS4.8/2, Error ellipse: s-maj=5.1km s-min=4.0km az=140.9*

*IDC **08** 17:48:04.3±1.2, 19°.73N×76°.20W, h34^{km}±5^{km}, mb3.9/12, mb1 4.0/14, mb1mx3.9/33, mbtmp4.1/14, ML3.2/2, MS4.8/2, Ms1 4.8/2, ms1mx4.0/40, Error ellipse: s-maj=30.9km s-min=18.6km az=30.0*

ISC 08 17:48:04.1±0.4**, 19°.71N**±0°.05×**76°.07W**±0°.04**, h35**^{km}**, n70,** σ**1^{s}89**/73**, mb4.2**/16**, 3C-6D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTBY	Guantanamo Bay	0.93	76	ePg	Pn	17 48 19.5	-1.2
GTBY				eSg	Sn	17 48 32.3	-0.5
BNJ	Bonny Gate	1.62	211	⇑iP	Pn	17 48 30.2	0.0
GWJ	Greenwich	1.75	201	⇑iP	Pn	17 48 32.1	0.0
STH	Stony Hill	1.77	203	⇓iP	Pn	17 48 32.2	-0.1
HOJ	Hope	1.82	201	⇓iP	Pn	17 48 33.2	+0.3
CVJ	Coleyville	2.03	223	⇓iP	Pn	17 48 35.6	-0.4
MTDJ	Mount Denham	2.03	223	ePn	Pn	17 48 35.2	-0.8
PCJ	Portland Cotta	2.21	208	⇓iP	Pn	17 48 39.0	+0.6
MCJ	Malvern	2.35	221	⇑iP	Pn	17 48 40.6	+0.3
MCJ				iS	Sn	17 49 09.4	+1.4
LGNH	Logne	3.48	109	ePn	Pn	17 48 56.8	+1.0
SDDR	Presa de Saban	4.57	98	ePn	Pn	17 49 10.4	-0.5
FSCY	Frank Sound, G	4.84	266	ePn	Pn	17 49 12.3	-2.2
FSCY				eSn	Sn	17 50 02.7	-6.7
GRTK	Grand Turk	4.96	68	ePn	Pn	17 49 15.2	-0.9
GRTK				eSn	Sn	17 50 09.7	-2.6
WBCY	West Bay, Gran	5.04	267	ePn	Pn	17 49 15.4	-1.8
BANI	BANI	5.56	103	ePn	Pn	17 49 23.6	-0.9
SDD	Santo Domingo	5.95	101	ePn	Pn	17 49 29.9	+0.1
061Z	Ochoppi	7.58	325	ePn	Pn	17 49 52.7	+0.6
059A	Moore Haven	8.60	328	ePn	Pn	17 50 02.1	-3.9
HUMP	Col San Antoni	9.80	97	ePn	Pn	17 50 17.3	-5.3
MTP	Monte Pirata	10.08	97	ePn	Pn	17 50 24.3	-2.3
CUPR	Culebra, Puert	10.30	96	ePn	Pn	17 50 25.9	-3.6
STVI	Saint Thomas	10.60	96	ePn	Pn	17 50 26.1	-7.5
CDVI	St. Croix	10.88	98	ePn	Pn	17 50 35.0	-2.5
ESPN	Las Esperanzas	10.88	228	ePn	Pn	17 50 29.5	-8.0
TEIG	Tepich	11.49	275	ePn	Pn	17 50 45.4	-0.4
BOAB	BOACO BROADBAN	11.71	233	ePn	Pn	17 50 48.5	-0.3
UREC	San Jos de Ur	11.90	177	eP	Pn	17 50 49.4	-2.1
SDV	Santo Domingo	11.98	153	ePn	Pn	17 50 55.6	+2.9
SDV				Sn	Sn	17 52 59.5	-5.8
SDV	Santo Domingo	11.98	153	Pn	Pn	17 50 55.3	+2.6
	1.6nm,0.3s,baz=339,slow=10,SNR=12						
SDV				Sn	Sn	17 52 59.5	-5.8
	1.6nm,0.3s,baz=334,slow=23,SNR=8.7						
555A	McAlpin	12.10	330	ePn	Pn	17 50 54.0	-0.1
ZARC	Zaragoza, Cauc	12.20	174	eP	Pn	17 51 00.0	+4.4
JTS	JuntasAbangare	12.70	224	ePn	Pn	17 51 02.3	-0.1
257A	Skidaway Islan	13.00	341	ePn	Pn	17 51 06.2	-0.2
Z50A	Ashland	16.10	329	ePn	Pn	17 51 46.2	-1.7
	32nm,1.7s						
BBSR	BB Station	16.21	37	ePn	Pn	17 51 49.4	+0.2
	232nm,1.5s						
CMIG	Matias Romero	18.05	265	P	Pn	17 52 10.0	-2.3
	0.1nm,0.3s,baz=95,slow=12,SNR=2.5						
O56A	Blue Knob Stat	20.60	355	eP	Pn	17 52 41.7	-1.0
	79nm,1.6s						
SSPA	Standing Stone	20.91	356	eP	Pn	17 52 46.1	-0.2
	43nm,1.5s						
T42A	Van Buren	21.69	326	eP	P	17 52 55.4	+3.4
	69nm,2.0s						
SADO	Sadowa	25.12	355	eP	P	17 53 26.6	+0.9
	31nm,1.3s						
SADO	Sadowa	25.12	355	P	P	17 53 26.1	+0.4
	7.8nm,0.9s,baz=200,slow=8.4,SNR=3.8						
TXAR	Lajitas Array	26.82	296	PcP	PcP	17 57 05.1	+1.4
	0.3nm,0.7s,baz=112,slow=2.9,SNR=3.6						
SCHQ	Schefferville	35.76	9	eP	P	17 54 59.5	-0.1
	8.6nm,1.1s						
SCHQ	Schefferville	35.76	9	P	P	17 54 59.3	-0.3
	2.2nm,0.6s,baz=221,slow=8.3,SNR=3.7						
PDAR	Pinedale Array	36.35	317	P	P	17 55 05.1	0.0
	0.3nm,0.3s,baz=90,slow=6.3,SNR=4.1						
MOOW	Moose Ponds	37.58	317	eP	P	17 55 15.4	-0.1
	3.4nm,1.2s						
PSUT	Pine Spring	37.63	308	eP	P	17 55 17.8	+1.8
	7.6nm,1.2s						
SIV	San Ignacio	38.42	156	LR	LR	18 12 00.8	
	comp=Z,1µm,19.1s,baz=108,slow=37						
LVC	Limon Verde	42.64	170	LR	LR	18 16 08.5	
	comp=Z,990nm,18.4s,baz=336,slow=40						
YKA	Yellowknife Ar	50.27	338	P	P	17 56 56.3	-0.5
	0.4nm,0.6s,baz=131,slow=8.5,SNR=8.9						
YKA				PcP	PcP	17 58 15.0	-0.3
	0.4nm,0.7s,baz=126,slow=4.4,SNR=4.0						
ESDC	Sonseca Array	64.11	55	P	P	17 58 36.1	+1.0
	0.4nm,0.6s,baz=281,slow=7.3,SNR=4.4						
ILAR	Eielson Array	64.18	333	P	P	17 58 34.5	-0.5
	0.6nm,0.8s,baz=104,slow=5.7,SNR=6.5						
ILB	Eielson Array	64.18	333	eP	P	17 58 34.5	-0.5
DBIC	Dimbokro	70.12	90	eP	P	17 59 14.0	+0.5
	32nm,1.6s						
DBIC	Dimbokro	70.12	90	P	P	17 59 14.5	+0.9
	1.6nm,0.5s,baz=292,slow=6.7,SNR=3.6						
NB2	NORSAR Subarra	71.66	31	P	P	17 59 22.8	+0.6
	comp=Z,1.3nm,0.7s,baz=280,slow=6.2						
NB200	NORSAR Array S	71.66	31	eP	P	17 59 23.1	+1.0
NOA	NORSAR Array B	71.66	31	P	P	17 59 23.1	+1.0
	comp=Z,2.1nm,0.8s,baz=279,slow=6.0,SNR=6.0						
NOA				pP	sP	17 59 34.0	-1.0
	comp=Z,1.0nm,0.6s,baz=279,slow=6.0,SNR=4.5						
TOA1	Torodi Ar. Sit	74.31	81	eP	P	17 59 39.4	+0.8
TOA0	Torodi Ar. Sit	74.32	81	eP	P	17 59 39.7	+1.1
TORD	Torodi Ar. Bea	74.32	81	P	P	17 59 39.4	+0.7
	comp=Z,2.6nm,0.9s,baz=311,slow=7.2,SNR=13						
GERES	GERESS Array B	75.27	43	P	P	17 59 44.6	+0.9
	comp=Z,1.1nm,0.7s,baz=270,slow=5.3,SNR=8.1						
GERES				pP	pP	17 59 54.9	+1.4
	comp=Z,0.5nm,0.6s,baz=274,slow=3.9,SNR=3.0						
GEA0	GERESS Array S	75.28	43	eP	P	17 59 43.8	0.0
ARA0	ARCESS Array S	75.68	21	eP	P	17 59 45.5	0.0
ARCES	ARCESS Array B	75.68	21	P	P	17 59 45.5	0.0
	comp=Z,1.6nm,0.6s,baz=284,slow=4.6,SNR=9.0						
ARCES				pP	pP	17 59 56.3	+1.4
	comp=Z,1.0nm,0.5s,baz=287,slow=3.7,SNR=2.0						
FIA0	FINESS Array S	78.53	29	eP	P	18 00 02.3	+0.7
FINES	FINESS Array B	78.53	29	P	P	18 00 02.3	+0.7
	comp=Z,3.3nm,0.6s,baz=278,slow=4.4,SNR=23						
FINES				pP	sP	18 00 13.2	-1.4
	comp=Z,2.7nm,0.6s,baz=275,slow=3.0,SNR=4.6						
VOIR		83.67	44	⇓iP	P	18 00 30.4	+0.9
MLR	Muntele Rosu	84.24	44	eP	P	18 00 34.3	+1.9
	comp=Z,11nm,1.0s						
MLR	Muntele Rosu	84.24	44	⇓iP	P	18 00 34.7	+2.3

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*ISCJB **08** 17:48:50.1±0.9, 6°.13S±0°.03×148°.94E±0°.04, h71^{km}±8^{km}, mb4.8/91, Error ellipse: s-maj=6.5km s-min=4.4km az=20.2*

*IDC **08** 17:48:50.4±0.8, 6°.04S×149°.01E, h53^{km}±6^{km}, mb4.2/14, mb1 4.4/16, mb1mx4.1/37, mbtmp4.5/16, Error ellipse: s-maj=20.9km s-min=11.9km az=100.0*

*NEIC **08** 17:48:52.1±0.7, 6°.10S×148°.92E, h76^{km}±6^{km}, mb4.9/74, Error ellipse: s-maj=5.3km s-min=3.6km az=100.0*

ISC 08 17:48:49.8±0.6**, 6°.19S**±0°.04×**148°.90E**±0°.05**, h52**^{km}±6^{km}**, n134,** σ**1^{s}52**/151**, mb5.0**/91**, 1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.80	59	ePn	Pn	17 49 46.5	+0.6
MANU	Manus Island	4.39	340	ePn	Pn	17 49 54.9	+1.0
COEN	Coen	9.56	216	ePn	Pn	17 51 06.5	+1.6
COEN				eSn	Sn	17 52 48.8	-2.2
HNR	Honiara	11.41	107	ePn	Pn	17 51 38.8	+8.6
CTA	Charters Tower	14.06	190	P	P	17 52 10.2	-2.4
	0.9nm,0.3s,baz=323,slow=13,SNR=7.4						
CTAO	Charters Tower	14.06	190	ePn	Pn	17 52 08.8	+2.5
PATS	Pohnpei	15.98	36	ePn	Pn	17 52 31.7	+0.3
	212nm,1.2s						
EIDS	Eidsvold	19.19	174	eP	P	17 53 09.7	+0.3
	14nm,0.9s						
WRAB	Tennant Creek	19.66	225	eP	Pn	17 53 17.2	+0.8
	39nm,0.5s						
WRAB				eS	S	17 56 47.5	-6.3
WB2	Warramunga Arr	19.67	225	eP	Pn	17 53 15.8	-0.6
WR1	Warramunga Arr	19.68	225	eP	Pn	17 53 17.3	+0.7
	55nm,0.4s						
WR1				eS	S	17 56 50.5	-3.6
WR1				ePcP	PcP	17 57 33.0	+0.6
WRA	Warramunga Arr	19.68	225	P	Pn	17 53 17.3	+0.7
	8.2nm,0.3s,baz=51,slow=11,SNR=205						
WRA				S	S	17 56 50.5	-3.6
	0.3nm,0.3s,baz=40,slow=21,SNR=6.1						
WRA				PcP	PcP	17 57 33.0	+0.6
	0.2nm,0.3s,baz=45,slow=1.9,SNR=5.9						
GUMO	Guam	20.05	348	eP	Pn	17 53 20.1	-0.8
	257nm,1.4s						
AS01	Alice Springs	22.56	218	eP	P	17 53 46.8	+1.0
AS01				ePcP	PcP	17 57 37.6	-0.3
AS01				eS	S	17 57 51.5	+1.7
TNTI	Ternate	22.58	287	eP	P	17 53 47.4	+1.2
	8.2nm,1.1s						
AS31	Alice Springs	22.59	218	eP	P	17 53 47.8	+1.7
	11nm,0.5s						
AS31				ePcP	PcP	17 57 38.2	+0.2
AS31				eS	S	17 57 52.0	+1.7
ASAR	Alice Springs	22.59	218	P	P	17 53 48.4	+2.2
	10nm,0.5s,baz=56,slow=9.2,SNR=230						
ASAR				PcP	PcP	17 57 38.8	+0.7
	3.4nm,0.8s,baz=36,slow=2.6,SNR=7.7						
ASAR				S	S	17 57 52.5	+2.2
	11nm,0.9s,baz=30,slow=23,SNR=20						
SARN	Sarigan	22.95	352	eP	P	17 53 49.7	-0.2
	86nm,1.2s						
DZM	Mont Dzumac	23.17	135	eP	P	17 53 52.6	+0.5
	39nm,1.2s						
DZM	Mont Dzumac	23.17	135	P	P	17 53 52.9	+0.8
	17nm,1.0s,baz=298,slow=9.0,SNR=3.5						
PINNC	Pines Island,	24.23	134	eP	P	17 54 00.2	-1.7
	147nm,1.4s						
ARMA	Armidale	24.24	174	eP	P	17 54 03.2	+1.1
	61nm,1.8s						
SOEI	Soe	24.65	260	eP	P	17 54 07.0	+1.0
	25nm,0.8s						
BATI	Baumata	25.29	259	P	P	17 54 13.5	+1.8
	65nm,0.7s,baz=124,slow=1.3,SNR=27						
FITZ	Fitzroy Crossi	25.60	240	eP	P	17 54 15.5	+1.1
	85nm,0.8s						
FITZ	Fitzroy Crossi	25.60	240	P	P	17 54 15.8	+1.5
	18nm,0.5s,baz=61,slow=7.8,SNR=44						
STKA	Stephens Creek	26.46	194	eP	P	17 54 24.5	+2.5
	6.3nm,1.7s						
STKA	Stephens Creek	26.46	194	P	P	17 54 25.2	+3.2
	5.0nm,1.0s,baz=337,slow=7.7,SNR=5.4						
MMRI	Maumere	26.55	263	eP	P	17 54 21.6	-1.5
	51nm,0.6s						
LUWI	Luwuk	26.57	280	eP	P	17 54 23.2	0.0
	25nm,1.2s						
CAN	Canberra	29.00	180	eP	P	17 54 46.0	+1.2
	72nm,1.8s						
BBOO	Buckleboo	29.07	203	eP	P	17 54 47.0	+1.6
	28nm,1.5s						
FUNA	Funafuti	30.13	96	eP	P	17 54 55.7	+0.7
	148nm,1.3s						
MSVF	Nonsavu	30.68	115	eP	P	17 54 59.7	-0.3
	22nm,1.1s						
WAKE	Wake Island	30.76	34	eP	P	17 55 00.6	+0.2
	896nm,1.9s						
FORT	Forrest	31.33	216	eP	P	17 55 06.1	+0.7
	18nm,0.6s						
TOO	Toolangi	31.40	185	eP	P	17 55 07.2	+1.2
	42nm,1.8s						
MBWA	Marble Bar	31.93	239	eP	P	17 55 11.2	+0.5
	147nm,1.9s						
JAGI	Jajag, Banyuwa	34.53	264	eP	P	17 55 29.9	-3.7
	17nm,0.8s						
TAU	Tasmania Unive	36.60	182	eP	P	17 55 51.8	+0.9
	203nm,2.0s						
OUZ	Omahuta	36.77	145	eP	P	17 55 52.3	-0.1
	78nm,1.6s						
GIRL	Giralia	37.21	240	eP	P	17 55 55.2	-1.2
	531nm,1.6s						
SBUM	Sibu	37.62	282	eP	P	17 55 57.2	-2.7
	12nm,2.0s						
UGM	Wanagama	38.12	265	eP	P	17 56 03.3	-1.0
	313nm,1.9s						
MORW	Morawa	38.48	230	eP	P	17 56 06.3	-0.7
	67nm,1.7s						
KNTN	Kanton	39.40	87	eP	P	17 56 11.8	-3.1
	126nm,1.3s						
YULB	Yu-li	39.89	318	eP	P	17 56 18.3	-0.5
	94nm,1.8s						
SSLB	Suanglung	40.39	319	eP	P	17 56 21.9	-1.1
	67nm,1.6s						
YHNB	Yeheng	40.73	320	eP	P	17 56 24.6	-1.3
	336nm,1.9s						
BKZ	Black Stump Fm	41.20	147	eP	P	17 56 28.2	-1.3
	35nm,1.9s						
THZ	Tophouse	41.36	153	eP	P	17 56 29.9	-0.9
	31nm,1.4s						
RPZ	Rata Peaks	42.15	156	eP	P	17 56 37.2	0.0
	60nm,1.7s						
KHZ	Kahutara	42.17	153	eP	P	17 56 37.7	+0.4
	149nm,2.0s						
BFZ	Birch Farm	42.17	149	eP	P	17 56 38.5	+1.1
	163nm,1.9s						
DCZ	Deep Cove	42.22	161	eP	P	17 56 37.9	+0.2
	76nm,1.5s						
JNU	Nakatsue	42.67	337	eP	P	17 56 41.6	0.0
	43nm,1.3s						
JNU	Nakatsue	42.67	337	P	P	17 56 41.6	0.0
	6.7nm,0.7s,baz=125,slow=3.3,SNR=5.5						
INU	Inuyama	42.80	346	eP	P	17 56 42.3	-0.2
	94nm,1.6s						
MJAR	Matsushiro Arr	43.67	348	P	P	17 56 49.3	-0.2
	5.4nm,0.9s,baz=173,slow=7.3,SNR=8.1						
MJAR				pP	pP	17 57 02.9	-0.4
	5.0nm,0.8s,baz=170,slow=7.4,SNR=6.4						
MAJO	Matsushiro	43.67	347	eP	P	17 56 48.6	-0.9
MAT	Matsushiro	43.67	347	P	P	17 56 48.9	-0.6
MJB9	Matsu-Tunnel	43.67	347	eP	P	17 56 48.6	-0.9
	49nm,1.4s						
NJ2	Nanjing	47.60	325	eP	P	17 57 20.1	-0.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSRS	Korea Array	47.62	337	P	P	17 57 20.8	0.0
	comp=Z,3.0nm,0.8s,baz=154,slow=7.7,SNR=7.8						
KSRS				pP	pP	17 57 34.7	0.0
	comp=Z,3.4nm,0.8s,baz=156,slow=8.2,SNR=8.0						
KS15	Wonju Array Si	47.63	337	eP	P	17 57 19.9	-0.9
KSAR	Wonju Array Be	47.63	337	P	P	17 57 20.8	0.0
KS01	Wonju Array Si	47.66	337	eP	P	17 57 19.0	-2.0
KMI	Kunming	54.62	307	P	P	17 58 15.7	+2.0
KMI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,1µm,15.7s						
KMI				LR	LR		
	comp=N,1µm,18.7s						
KMI				LR	LR		
	comp=E,1µm,16.9s						
KMI				LR	LR		
	comp=Z,1µm,16.5s						
XAN	Xi'an	55.04	319	P	P	17 58 18.9	+2.5
XAN				pP	pP	17 58 29.6	-1.0
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KLR	Kul'dur	57.18	347	P	P	17 58 32.8	+1.4
	comp=Z,3.4nm,0.9s,baz=192,slow=4.9,SNR=6.8						
KLR				pP	pP	17 58 45.1	-0.6
	comp=Z,2.6nm,0.6s,baz=151,slow=5.3,SNR=4.7						
HHC	Hu-ho-hao-te	58.00	327	eP	P	17 58 38.2	+0.8
HHC				S	S	18 06 37.9	+3.6
HHC				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC				pmax	pmax		
	comp=Z,840nm,6.4s						
HHC				LR	LR		
	comp=N,4µm,14.4s						
HHC				LR	LR		
	comp=E,3µm,14.7s						
HHC				LR	LR		
	comp=Z,3µm,15.3s						
PETK	Petropavlovsk-	59.54	6	P	P	17 58 48.1	+0.4
	comp=Z,5.8nm,0.7s,baz=166,slow=6.5,SNR=15						
PETK				pP	pP	17 59 01.4	-0.7
	comp=Z,6.5nm,0.6s,baz=174,slow=8.5,SNR=5.2						
PEA1	Petropavlovsk-	59.54	6	eP	P	17 58 48.1	+0.4
LZH	Lanzhou	59.59	318	eP	P	17 58 51.3	+2.6
LZH				pP	sP	17 59 12.5	+3.6
LZH				sP	pP	17 59 18.8	+16
LZH				PP	PP	18 01 05.3	+4.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
GTA	Gaotai	64.10	319	eP	P	17 59 20.8	+1.9
GTA				pP	sP	17 59 40.0	+0.7
GTA				sP	PcP	17 59 47.9	-5.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONA1	Songino Array	65.50	330	eP	P	17 59 25.2	-2.7
MA2	Magadan	65.57	1	eP	P	17 59 27.7	-0.1
	comp=Z,7.1nm,1.0s						
CASY	Casey	65.59	196	eP	P	17 59 28.5	+0.6
	comp=Z,7.0nm,0.8s						
NIKH	Nikolski High	68.91	26	eP	P	17 59 49.7	+0.7
	comp=Z,85nm,1.0s						
UNV	Unalaska Valle	70.53	26	eP	P	17 59 58.9	-0.1
	comp=Z,229nm,1.9s						
AKUT	Akutan	71.05	26	eP	P	18 00 02.2	0.0
	comp=Z,319nm,1.8s						
VNDA	Vanda	71.62	177	eP	P	18 00 06.8	+1.5
	comp=Z,35nm,1.6s						
VNDA	Vanda	71.62	177	P	P	18 00 07.0	+1.7
	comp=Z,3.1nm,0.7s,baz=342,slow=6.0,SNR=8.2						
WMQ	Urumqi	74.17	319	eP	P	18 00 22.1	+1.0
WMQ				pP	sP	18 00 41.6	-0.1
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				LR	LR		
	comp=N,5µm,17.1s						
WMQ				LR	LR		
	comp=E,3µm,15.7s						
WMQ				LR	LR		
	comp=Z,4µm,19.3s						
ANM	Nome	78.28	18	eP	P	18 00 44.0	+0.2
	comp=Z,2.8nm,0.7s						
TIXI	Tiksi	78.79	354	eP	P	18 00 46.0	-0.5
	comp=Z,2.7nm,0.8s						
MK01	Makanchi Array	78.83	320	eP	P	18 00 46.2	-1.2
MK31	Makanchi Array	78.85	320	eP	P	18 00 46.0	-1.5
MK32	Makanchi Array	78.85	320	eP	P	18 00 47.2	-0.3
MKAR	Makanchi Array	78.85	320	eP	P	18 00 46.0	-1.5
	comp=Z,4.9nm,0.6s						
MKAR	Makanchi Array	78.85	320	P	P	18 00 47.2	-0.3
	comp=Z,0.5nm,0.6s,baz=104,slow=8.0,SNR=5.3						
MAKZ	Makanchi	79.05	320	eP	P	18 00 47.8	-0.8
	comp=Z,4.1nm,1.5s						
SVW2	Sparrevohn	79.64	24	eP	P	18 00 51.1	-0.3
	comp=Z,7.8nm,1.2s						
ZALV	Zalesovo Beam	80.18	327	eP	P	18 00 52.8	-1.6
ZALV	Zalesovo Beam	80.18	327	P	P	18 00 53.5	-1.0
	comp=Z,1.6nm,0.6s,baz=120,slow=6.2,SNR=7.7						
ZAA1	Zalesovo Array	80.18	327	eP	P	18 00 53.5	-1.0
SUA	Susitna One	81.82	25	eP	P	18 01 02.3	-0.9
	comp=Z,48nm,2.0s						
PPLA	Purkeypile	81.95	23	eP	P	18 01 03.8	-0.1
	comp=Z,31nm,1.8s						
CAST	Castle Rocks	82.26	23	eP	P	18 01 04.3	-1.0
	comp=Z,5.6nm,1.0s						
KURK	Kurchatov	82.49	323	eP	P	18 01 07.4	+0.6
	comp=Z,12nm,1.8s						
GHO	Glory Hole Cre	82.73	25	eP	P	18 01 07.2	-0.7
	comp=Z,15nm,1.3s						
MID	Middleton Isla	82.83	28	eP	P	18 01 05.9	-2.5

	comp=Z,251nm,1.0s						
TRF	Thorofare Moun	82.97	23	*e*P	P	18 01 07.8	-1.5
	comp=Z,38nm,1.9s						
IM3	Indian Mountai	83.00	20	*e*P	P	18 01 09.2	0.0
SML	Sawmill	83.00	25	*e*P	P	18 01 08.8	-0.5
	comp=Z,72nm,1.9s						
BPAW	Bear Paw Mtn.	83.02	23	*e*P	P	18 01 08.2	-1.1
	comp=Z,20nm,1.9s						
GLI	Glacier Island	83.12	26	*e*P	P	18 01 09.2	-0.6
	comp=Z,47nm,1.4s						
RND	Reindeer	83.52	24	*e*P	P	18 01 10.6	-1.3
	comp=Z,8.2nm,0.7s						
MLY	Manley	83.58	22	*e*P	P	18 01 11.4	-0.8
	comp=Z,3.4nm,0.6s						
MCK	McKinley	83.64	23	*e*P	P	18 01 11.8	-0.7
	comp=Z,9.2nm,0.9s						
BWN	Browne	83.64	23	*e*P	P	18 01 12.0	-0.5
	comp=Z,13nm,1.0s						
QSPA	South Pole Qui	83.78	180	*e*P	P	18 01 13.8	+0.4
	comp=Z,16nm,1.0s						
KLU	Klutina	83.89	26	*e*P	P	18 01 12.1	-1.8
	comp=Z,28nm,1.8s						
DHY	Denali Highway	83.97	24	*e*P	P	18 01 13.9	-0.5
	comp=Z,45nm,1.9s						
WRH	Wood River Hil	84.31	23	*e*P	P	18 01 14.5	-1.3
	comp=Z,16nm,1.5s						
HDA	Harding Lake	84.73	23	*e*P	P	18 01 16.8	-1.2
	comp=Z,32nm,2.0s						
IL1	Eielson Array	84.91	23	*e*P	P	18 01 16.8	-2.1
ILAR	Eielson Array	84.91	23	P	P	18 01 17.1	-1.8
	comp=Z,3.5nm,0.6s,baz=248,slow=5.1,SNR=58						
ILB	Eielson Array	84.91	23	*e*P	P	18 01 17.2	-1.7
KBL	Kabul	85.18	305	*e*P	P	18 01 18.8	-2.3
	comp=Z,2.2nm,0.8s						
RIDG	Independ'e Rid	85.28	24	*e*P	P	18 01 19.1	-1.7
	comp=Z,18nm,1.4s						
DOT	Dot Lake	85.56	24	*e*P	P	18 01 19.8	-2.4
	comp=Z,6.1nm,0.9s						
SCRK	Sand Creek	85.73	24	*e*P	P	18 01 21.1	-2.1
	comp=Z,16nm,1.5s						
DAWY	Dawson	87.64	25	*e*P	P	18 01 32.7	+0.3
	comp=Z,23nm,1.7s						
WHY	Whitehorse	88.65	29	*e*P	P	18 01 37.1	-0.2
	comp=Z,8.1nm,1.1s						
SYO	Syowa Base	91.07	200	⇓*i*P	P	18 01 37.2	-11
INK	Inuvik	91.14	21	*e*P	P	18 01 47.6	-1.0
	comp=Z,4.1nm,1.3s						
INK	Inuvik	91.14	21	P	P	18 01 47.8	-0.7
	comp=Z,2.1nm,1.0s,baz=231,slow=2.6,SNR=4.6						
TOA0	Torodi Ar. Sit	146.97	285	*e*PKPdf	PKPdf	18 08 24.7	-1.0
TORD	Torodi Ar. Bea	146.97	285	PKPbc	PKPdf	18 08 25.7	0.0
	comp=Z,1.4nm,0.5s,baz=49,slow=4.0,SNR=9.0						
TOA1	Torodi Ar. Sit	146.97	285	*e*PKPdf	PKPdf	18 08 25.7	0.0
PTGA	Pitinga	150.37	102	*e*PKPdf	PKPdf	18 08 30.1	-1.2
PTGA				*e*PKPbc	PKPbc	18 08 35.7	-0.9
BDFB	Brasilia	152.59	142	*e*PKPdf	PKPdf	18 08 33.8	-0.9
BDFB				*e*PKPbc	PKPbc	18 08 41.0	-0.7
BDFB	Brasilia	152.59	142	PKPbc	PKPbc	18 08 41.7	0.0
	comp=Z,15nm,0.5s,baz=122,slow=0.5,SNR=18						

ISCJB ***08*** *17:51:59.8±0.7, 12.°98N±0.°04×119.°89E±0.°06, h52^{km}±8^{km}, mb4.5/15, Error ellipse: s-maj=9.8km s-min=5.4km az=155.1*

MAN ***08*** *17:51:59.1, 12.°96N×119.°88E, h64^{km}, MS3.5*

NEIC ***08*** *17:52:00.9±0.8, 12.°99N×119.°89E, h47^{km}±8^{km}, mb4.6/12, Error ellipse: s-maj=9.9km s-min=7.8km az=60.0*

IDC ***08*** *17:52:02.0±4.0, 12.°99N×119.°93E, h50^{km}±48^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.4/50, mbtmp4.1/5, Error ellipse: s-maj=29.1km s-min=19.0km az=62.0*

ISC 08 17:51:59.6±1.0, **13.°02N**±0.°04×**119.°82E**±0.°07, **h36**^{km}±3^{km}, **n38**, σ**1.^{s}26**/42, **mb4.6**/15, **1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUSP	Coron	1.07	160	*e*P	Pn	17 52 18.1	0.0
SJMP	San Jose	1.38	113	*e*P	Pn	17 52 22.4	+0.1
SJMP				*e*S	Sn	17 52 39.3	-0.2
TGY	Tagaytay City	1.53	45	P	Pn	17 52 25.3	+0.8
	172nm,0.3s,baz=227,slow=4.1,SNR=19						
TGY				S	Sn	17 52 44.7	+1.5
	666nm,0.3s,baz=337,slow=23,SNR=62						
BOAC	Boac	2.02	77	*e*P	Pn	17 52 31.9	+0.8
OTRP	Odiongan	2.25	107	*e*P	Pn	17 52 34.2	0.0
OTRP				*e*S	Sn	17 52 57.9	-2.8
CUYO	Cuyo Island	2.45	151	*e*P	Pn	17 52 37.1	0.0
CUYO				*e*S	Sn	17 53 05.0	-0.8
SCZP	Santa Cruz	2.75	2	*e*P	Pn	17 52 42.0	+0.9
SCZP				*e*S	Sn	17 53 10.0	-3.0
JAP	San Jose, Anti	3.07	137	⇓*e*P	Pn	17 52 47.0	+1.4
RCP	Roxas	3.21	117	⇑*e*P	Pn	17 52 47.5	+0.1
RCP				*e*S	Sn	17 53 23.5	-1.0
GUIM	Jordan	3.61	131	*e*P	Pn	17 52 54.4	+1.4
GUIM				*e*S	Sn	17 53 35.0	+0.7
CAUP	Cauayan	4.36	26	*e*P	Pn	17 53 04.6	+1.3
TWG	Pinlang	9.82	7	*e*Pn	Pn	17 54 17.8	-0.5
QIZ	Qiongzhong	11.30	303	*e*Pn	Pn	17 54 38.5	-0.1
KSM	Kuching	14.84	220	*e*Pn	Pn	17 55 26.7	-0.2
CM01	Chiang Mai Arr	20.78	288	*e*P	Pn	17 56 39.8	-0.5
CM31	Chiang Mai Arr	20.80	288	*e*P	Pn	17 56 40.4	-0.2
CMAR	Chiang Mai Arr	20.80	288	P	Pn	17 56 40.8	+0.2
	1.0nm,0.7s,baz=98,slow=9.6,SNR=7.8						
BATI	Baumata	23.39	170	P	P	17 57 06.4	+1.1
	36nm,0.8s,baz=96,slow=1.0,SNR=5.9						
FITZ	Fitzroy Crossi	31.45	169	*e*P	P	17 58 17.9	+0.2
	11nm,1.3s						
WRAB	Tennant Creek	35.73	156	*e*P	P	17 58 54.9	-0.2
	5.1nm,0.7s						
WR1	Warramunga Arr	35.73	156	*e*P	P	17 58 54.9	-0.2
	8.7nm,1.1s						
WRA	Warramunga Arr	35.73	156	P	P	17 58 54.9	-0.2
	3.2nm,0.7s,baz=336,slow=9.5,SNR=6.3						
WB2	Warramunga Arr	35.74	156	*e*P	P	17 58 54.8	-0.4
	6.6nm,0.6s						
AS31	Alice Springs	38.97	159	*e*P	P	17 59 23.0	+0.4
	1.4nm,0.9s						
ASAR	Alice Springs	38.97	159	P	P	17 59 23.1	+0.6
	3.8nm,0.7s,baz=341,slow=6.8,SNR=14						
AS01	Alice Springs	38.99	159	*e*P	P	17 59 23.2	+0.5
FORT	Forrest	44.26	170	*e*P	P	18 00 05.4	-0.3
	15nm,0.8s						
MK01	Makanchi Array	46.06	324	*e*P	P	18 00 20.6	+0.7
MK32	Makanchi Array	46.08	324	*e*P	P	18 00 21.4	+1.3
MKAR	Makanchi Array	46.08	324	*e*P	P	18 00 18.5	-1.6
	6.3nm,0.8s						
MKAR	Makanchi Array	46.08	324	P	P	18 00 21.4	+1.3
	0.3nm,0.7s,baz=128,slow=8.8,SNR=3.3						
MKAR				pP	pwP	18 00 34.2	+0.4
	0.9nm,0.8s,baz=123,slow=8.5,SNR=6.5						
EIDS	Eidsvold	48.83	141	*e*P	P	18 00 39.8	-1.8
	21nm,0.9s						
FRU1	Bishkek	48.93	316	*e*P	P	18 00 42.3	0.0
	7.8nm,0.3s						
GAR	Garm	50.69	310	*e*P	P	18 00 58.3	+2.4
	23nm,1.8s						
KK31	Karatay Array	51.84	315	*e*P	P	18 01 06.0	+1.6
	5.3nm,1.6s						
KKAR	Karatay Array	51.84	315	*e*P	P	18 01 05.7	+1.4
	5.3nm,1.6s						
KWP	Kalwaria Pacla	84.75	320	*e*pP	pP	18 04 45.8	+5.3
MVCO	Mesa Verde	112.50	40	*e*Pdif	Pdif	18 06 34.4	-2.9

ISCJB ***08*** *17:55:35.9±0.4, 11.°06S±0.°05×165.°91E±0.°06, h10^{km}, mb4.8/33, Error ellipse: s-maj=8.3km s-min=6.4km az=147.2*

NEIC ***08*** *17:55:37.1±0.4, 10.°96S×165.°98E, h10^{km}, mb4.8/23, Error ellipse: s-maj=8.3km s-min=5.8km az=56.0*

IDC ***08*** *17:55:42.4±3.6, 11.°03S×165.°93E, h45^{km}±33^{km}, mb3.9/6, mb1 4.2/8, mb1mx3.8/48, mbtmp4.3/8, ML4.4/2, Error ellipse: s-maj=36.3km s-min=29.7km az=136.0*

ISC 08 17:55:37.7±0.5, **11.°04S**±0.°07×**166.°03E**±0.°06, **h10**^{km}, **n59**, σ**1.^{s}70**/54, **mb4.9**/34, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.20	284	*e*P	Pn	17 57 10.0	+0.6
HNR				*e*S	Sn	17 58 27.0	+6.6
HNR	Honiara	6.20	284	*e*Pn	Pn	17 57 09.5	+0.1
HNR	Honiara	6.20	284	P	Pn	17 57 09.9	+0.5
	22nm,0.3s,baz=184,slow=3.4,SNR=23						
MARNC	Mare, Loyalty	10.55	170	*e*Pn	Pn	17 58 08.6	-0.5
DZM	Mont Dzumac	10.97	178	*e*Pn	Pn	17 58 16.5	+1.6
DZM	Mont Dzumac	10.97	178	P	Pn	17 58 17.4	+2.5
	1.1nm,0.3s,baz=300,slow=10.0,SNR=15						
ONTNC	Ouen Toro	11.21	178	*e*Pn	Pn	17 58 20.1	+2.1
PINNC	Pines Island,	11.59	173	*e*Pn	Pn	17 58 26.0	+2.8
FUNA	Funafuti	13.21	80	*e*Pn	Pn	17 58 50.2	+4.7
TARA	Tarawa	14.09	30	*e*P	P	17 59 03.2	-2.1
KWAJ	Kwajalein Atol	19.78	5	*e*P	Pn	18 00 12.4	+2.7
	273nm,1.0s						
EIDS	Eidsvold	20.09	223	*e*P	P	18 00 09.4	-2.2
	11nm,1.0s						
CTAO	Charters Tower	21.05	242	*e*P	P	18 00 22.2	+0.1
	22nm,1.4s						
COEN	Coen	22.50	260	*e*P	P	18 00 36.3	-1.4
	12nm,1.1s						
ARMA	Armidale	23.47	213	*e*P	P	18 00 47.0	-0.7
	14nm,1.2s						
RAO	Raoul Island	23.51	143	*e*P	P	18 00 47.1	-0.9
	262nm,0.7s						
OUZ	Omahuta	25.03	165	*e*P	P	18 01 03.6	+1.5
	40nm,1.6s						
URZ	Urewera	28.86	162	*e*P	P	18 01 37.3	+0.9
	15nm,1.2s						
H11S2	WAKE ISLAND Hy	29.35	1	T	T	18 32 02.6	
	baz=186						
H11S3	WAKE ISLAND Hy	29.36	1	T	T	18 32 00.8	
	baz=186						
H11S1	WAKE ISLAND Hy	29.37	1	T	T	18 31 59.5	
	baz=186,SNR=9.7						
BKZ	Black Stump Fm	29.52	163	*e*P	P	18 01 42.3	0.0
	37nm,1.5s						
H11N1	WAKE ISLAND Hy	30.57	2	T	T	18 33 34.4	
	baz=188						
H11N3	WAKE ISLAND Hy	30.58	2	T	T	18 33 35.0	
	baz=188						
H11N2	WAKE ISLAND Hy	30.59	2	T	T	18 33 32.4	
	baz=188						
BFZ	Birch Farm	30.87	165	*e*P	P	18 01 53.4	-0.9
	35nm,1.1s						
THZ	Tophouse	31.19	170	*e*P	P	18 01 56.9	-0.2
	10nm,0.7s						
WB2	Warramunga Arr	31.74	250	*e*P	P	18 02 01.1	-1.1
WR1	Warramunga Arr	31.75	250	*e*P	P	18 02 01.2	-1.1
	7.8nm,0.9s						
WRA	Warramunga Arr	31.75	250	P	P	18 02 01.2	-1.1
	5.0nm,0.8s,baz=80,slow=9.1,SNR=17						
KHZ	Kahutara	31.93	169	*e*P	P	18 02 03.9	+0.3
	54nm,1.6s						
LTZ	Lake Taylor	32.08	171	*e*P	P	18 02 05.3	+0.3
	29nm,1.3s						
TOO	Toolangi	32.22	212	*e*P	P	18 02 06.8	+0.6
	68nm,1.9s						
GUMO	Guam	32.24	319	*e*P	P	18 02 06.9	+0.3
	216nm,1.3s						
FOZ	Fox Glacier	32.54	175	*e*P	P	18 02 09.7	+0.9
	13nm,0.9s						
RPZ	Rata Peaks	32.84	173	*e*P	P	18 02 10.3	-1.3
	24nm,1.3s						
AS01	Alice Springs	33.00	243	*e*P	P	18 02 11.8	-1.5
AS31	Alice Springs	33.04	243	*e*P	P	18 02 12.0	-1.7
	2.2nm,1.5s						
ASAR	Alice Springs	33.05	243	P	P	18 02 12.4	-1.3
	1.1nm,0.8s,baz=64,slow=10,SNR=8.2						
MQZ	McQueen's Vall	33.05	171	*e*P	P	18 02 13.7	+0.4
	56nm,1.3s						
LBZ	Lake Benmore	33.42	175	*e*P	P	18 02 16.5	-0.1
	93nm,2.0s						
WKZ	Wanaka	33.76	176	*e*P	P	18 02 20.5	+0.9
	206nm,1.9s						
MTN	Manton Dam	34.18	263	*e*P	P	18 02 23.2	-0.4
	14nm,1.6s						
WHZ	Wether Hill Ro	34.77	178	*e*P	P	18 02 29.1	+0.8
	82nm,1.7s						
BBOO	Buckleboo	35.04	227	*e*P	P	18 02 30.9	+0.1
	45nm,1.8s						
XMAS	Kiritimati	38.58	72	*e*P	P	18 03 01.7	+0.5
	85nm,1.0s						
FITZ	Fitzroy Crossi	39.65	255	*e*P	P	18 03 08.9	-1.3
	6.3nm,0.8s						
FITZ	Fitzroy Crossi	39.65	255	P	P	18 03 09.7	-0.4
	5.4nm,0.8s,baz=119,slow=8.3,SNR=12						
MBWA	Marble Bar	45.47	251	*e*P	P	18 03 57.6	+0.2
	41nm,1.4s						
CM01	Chiang Mai Arr	72.34	293	*e*P	P	18 07 03.8	-0.6
CMAR	Chiang Mai Arr	72.37	293	P	P	18 07 04.2	-0.3
	1.2nm,0.8s,baz=120,slow=4.2,SNR=8.7						
BRLK	Bradley Lake	78.54	21	*e*P	P	18 07 37.2	-1.8
	51nm,1.6s						
SONA1	Songino Array	78.83	324	*e*P	P	18 07 38.4	-2.8
QSPA	South Pole Qui	78.96	180	*e*P	P	18 07 40.0	-1.5
	9.4nm,1.4s						
ILAR	Eielson Array	83.42	18	P	P	18 08 04.4	-0.5
	0.7nm,0.6s,baz=241,slow=5.3,SNR=3.2						
PV15	Paradox Valley	93.26	52	*e*P	P	18 08 53.1	-0.1
	47nm,1.2s						
MK01	Makanchi Array	93.70	317	*e*P	P	18 08 53.1	-1.6
MK32	Makanchi Array	93.71	317	*e*P	P	18 08 53.7	-1.1
MKAR	Makanchi Array	93.71	317	P	P	18 08 53.7	-1.1
	1.1nm,0.8s,baz=104,slow=5.1,SNR=11						

NEIC ***08*** *17:55:59.5±0.8, 10.°65S×166.°29E, h10^{km}, mb5.0/18, Error ellipse: s-maj=15.5km s-min=8.3km az=215.0*

ISCJB ***08*** *17:56:01.9±0.8, 10.°78S±0.°09×166.°24E±0.°08, h36^{km}, mb4.8/22, Error ellipse: s-maj=15.2km s-min=7.3km az=35.8*

IDC ***08*** *17:56:05.7±4.0, 10.°66S×166.°25E, h62^{km}±36^{km}, mb3.9/4, mb1 4.3/6, mb1mx3.7/49, mbtmp4.4/6, ML4.6/2, Error ellipse: s-maj=39.2km s-min=30.5km az=141.0*

ISC 08 17:56:03.6±1.1, **10.°7S**±0.°1×**166.°3E**±0.°1, **h36**^{km}, **n30**, σ**1.^{s}30**/30, **mb4.8**/22, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.41	281	*e*Sn	Sn	17 58 48.2	+0.6
HNR	Honiara	6.41	281	P	Pn	17 57 36.4	+0.8
	31nm,0.3s,baz=338,slow=16,SNR=8.1						
MARNC	Mare, Loyalty	10.83	172	*e*Pn	Pn	17 58 36.1	-0.1
DZM	Mont Dzumac	11.30	179	*e*Pn	Pn	17 58 43.7	+1.1
DZM	Mont Dzumac	11.30	179	P	Pn	17 58 45.1	+2.5
	1.4nm,0.3s,baz=125,slow=23,SNR=7.2						
ONTNC	Ouen Toro	11.53	179	*e*Pn	Pn	17 58 47.6	+1.8
BKZ	Black Stump Fm	29.75	164	*e*P	P	18 02 07.4	+0.7
	20nm,1.3s						
BFZ	Birch Farm	31.11	165	*e*P	P	18 02 16.5	-2.2
	108nm,1.8s						
THZ	Tophouse	31.46	171	*e*P	P	18 02 21.5	-0.4
	20nm,1.2s						
WB2	Warramunga Arr	32.13	250	*e*P	P	18 02 26.3	-1.6
	5.5nm,0.8s						
WR1	Warramunga Arr	32.14	250	*e*P	P	18 02 26.9	-1.1
	7.1nm,0.9s						
WRA	Warramunga Arr	32.14	250	P	P	18 02 26.9	-1.1
	4.8nm,0.8s,baz=80,slow=9.2,SNR=7.6						
KHZ	Kahutara	32.21	170	*e*P	P	18 02 29.2	+0.9
	33nm,1.4s						
LTZ	Lake Taylor	32.37	172	*e*P	P	18 02 30.6	+0.8
	9.8nm,0.8s						
TOO	Toolangi	32.66	212	*e*P	P	18 02 32.0	-0.3
	62nm,2.0s						
FOZ	Fox Glacier	32.84	175	*e*P	P	18 02 34.1	+0.3
	15nm,0.9s						
RPZ	Rata Peaks	33.14	174	*e*P	P	18 02 37.4	+1.0
	25nm,1.0s						
MQZ	McQueen's Vall	33.33	172	*e*P	P	18 02 36.1	-1.9
	48nm,1.3s						
AS01	Alice Springs	33.41	243	*e*P	P	18 02 37.3	-1.8
AS31	Alice Springs	33.45	243	*e*P	P	18 02 38.0	-1.6
	1.0nm,0.8s						
ASAR	Alice Springs	33.45	243	P	P	18 02 38.0	-1.5
	2.8nm,0.9s,baz=65,slow=10,SNR=9.5						
LBZ	Lake Benmore	33.72	175	*e*P	P	18 02 41.4	-0.1
	79nm,2.0s						
WKZ	Wanaka	34.07	177	*e*P	P	18 02 45.4	+0.8
	90nm,1.4s						
ODZ	Otahua Downs	34.41	175	*e*P	P	18 02 47.2	-0.2
	21nm,1.4s						
BBOO	Buckleboo	35.48	227	*e*P	P	18 02 56.5	-0.4
	79nm,2.0s						
FITZ	Fitzroy Crossi	40.02	255	P	P	18 03 35.1	-0.4
	5.8nm,0.9s,baz=90,slow=6.9,SNR=6.1						
FORT	Forrest	40.70	235	*e*P	P	18 03 39.4	-1.6
	18nm,0.9s						
RSO	Redoubt South	78.02	19	*e*P	P	18 08 00.5	+2.1
QSPA	South Pole Qui	79.29	180	*e*P	P	18 08 05.2	-0.2
	10.0nm,1.5s						
ILAR	Eielson Array	83.02	18	P	P	18 08 23.8	-1.0
	0.8nm,1.0s,baz=238,slow=5.2,SNR=3.3						

IDC ***08*** *17:57:47.3±3.1, 10.°98S×166.°77E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.8/49, mbtmp3.9/6, Error ellipse: s-maj=112.7km s-min=28.7km az=137.0*

ISCJB ***08*** *17:57:49.3±3.4, 11.°2S±0.°6×166.°8E±0.°6, h28^{km}, mb3.9/6, Error ellipse: s-maj=121.7km s-min=26.7km az=136.5*

ISC 08 17:57:51.1±3.5, **11.°1S**±0.°6×**166.°8E**±0.°6, **h28**^{km}, **n6**, σ**0.^{s}55**/6, **mb3.8**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.48	250	P	P	18 04 19.2	-0.2
	2.2nm,0.8s,baz=80,slow=8.8,SNR=7.5						
ASAR	Alice Springs	33.73	244	P	P	18 04 30.3	-0.1
	0.7nm,0.8s,baz=68,slow=10,SNR=4.6						
FITZ	Fitzroy Crossi	40.41	255	P	P	18 05 27.3	+0.2
	4.0nm,0.7s,baz=103,slow=6.0,SNR=9.7						
CMAR	Chiang Mai Arr	73.13	293	P	P	18 09 20.1	+0.5
	0.3nm,0.4s,baz=120,slow=6.3,SNR=4.4						
ILAR	Eielson Array	83.23	18	P	P	18 10 14.8	+0.2
	0.5nm,0.8s,baz=237,slow=5.6,SNR=4.1						
MKAR	Makanchi Array	94.30	317	P	P	18 11 07.4	-0.7
	0.4nm,0.8s,baz=86,slow=7.7,SNR=3.5						

BJI ***08*** *17:59:49.2, 6.°01S×155.°16E, h74^{km}, mb5.5/75, mB5.6/28, Ms5.7/32, Ms7 5.4/31*

ISCJB ***08*** *17:59:50.4±0.7, 6.°26S±0.°02×154.°74E±0.°02, h72^{km}±6^{km}, mb5.6/466, Error ellipse: s-maj=3.4km s-min=2.6km az=5.8*

MOS ***08*** *17:59:51.9±1.0, 6.°14S×154.°56E, h83^{km}, mb5.8/69, Error ellipse: s-maj=6.7km s-min=4.8km az=91.1*

IDC ***08*** *17:59:53.0±1.7, 6.°24S×154.°78E, h83^{km}±15^{km}, mb5.4/44, mb1 5.5/47, mb1mx5.4/53, mbtmp5.7/47, MS5.0/5, Ms1 5.0/5, ms1mx4.4/38, Error ellipse: s-maj=8.4km s-min=7.7km az=65.0*

NEIC ***08*** *17:59:53.8±0.5, 6.°32S×154.°74E, h93^{km}±4^{km}, mb5.7/299, Error ellipse: s-maj=2.4km s-min=2.3km az=182.0*

DJA ***08*** *17:59:57.8±0.8, 6°S±3°×15°5E±°, h118^{km}±7^{km}, M5.7/98, mb5.7/98, mB6.1/59, Mw(mB)5.7/59*

ISC 08 17:59:53.7±0.4, **6.°25S**±0.°03×**154.°84E**±0.°03, **h94**^{km}±3^{km}, **h94**^{km}**:pP-P**, **n1694**, σ**1.^{s}19**/1712, **mb5.7**/443, **53C-44D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.36	307	*e*Pn	Pn	18 00 42.6	-1.6
RABL				*e*Sn	Sn	18 01 28.5	+5.3
HNR	Honiara	5.96	122	*i* P	Pn	18 01 18.0	-1.5
HNR				*i* S	Sn	18 02 30.0	+3.5
HNR	Honiara	5.96	122	*e*Pn	Pn	18 01 18.0	-1.5
HNR				*e*Sn	Sn	18 02 28.4	+2.0
HNR				*e*		18 03 36.7	
HNR	Honiara	5.96	122	*e*P	Pn	18 01 18.0	-1.5
HNR				*e*		18 02 29.1	
HNR	Honiara	5.96	122	P	Pn	18 01 18.4	-1.1
	224nm,0.3s,baz=235,slow=1.8,SNR=66						
HNR				S	Sn	18 02 28.5	+2.0
	345nm,0.3s,baz=120,slow=22,SNR=11						
HNR				LR	LR	18 03 36.7	
	comp=Z,11µm,20.1s,baz=298,slow=37						
MANU	Manus Island	8.54	299	*e*Pn	Pn	18 01 54.0	-0.7
PATS	Pohnpei	13.45	15	P	Pn	18 02 58.3	-2.6
	baz=14,SNR=8.8						
PATS	Pohnpei	13.45	15	*e*Pn	Pn	18 02 57.6	-3.2
COEN	Coen	13.80	235	P	Pn	18 03 03.2	-2.2
	baz=14,SNR=32						
COEN	Coen	13.80	235	*e*Pn	Pn	18 03 02.7	-2.7
MMPI	Merauke	14.51	260	P	Pn	18 03 14.0	-0.5
	558nm,1.4s,8µm						
JAY	Jayapura	14.57	284	P	Pn	18 03 14.4	-1.0
	679nm,1.2s,16µm						
GENI	Genyem	15.07	283	P	Pn	18 03 22.2	+0.5
	211nm,0.9s,3µm						
MTSU	Mount Surprise	15.65	220	P	Pn	18 03 29.2	+0.2
	baz=16,SNR=29						
CTA	Charters Tower	16.09	210	P	Pn	18 03 34.0	-0.5
CTA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CTA				MLR	MLR		
	comp=Z,3µm,20.4s						
CTA	Charters Tower	16.09	210	P	Pn	18 03 34.0	-0.5
	comp=Z,2.7nm,0.3s,baz=24,slow=14,SNR=28						
CTA				LR	LR	18 09 31.5	
	comp=Z,3µm,20.4s,baz=206,slow=36						
CTAO	Charters Tower	16.09	210	*e*Pn	Pn	18 03 33.8	-0.6
	comp=Z,107nm,1.0s						
CTAO	Charters Tower	16.09	210	*e*P	Pn	18 03 33.8	-0.6
CTAO				pmax	pmax		
	comp=Z,107nm,1.0s						
SRPI	Serui, Papua	19.05	282	P	Pn	18 04 11.0	+0.5
	comp=Z,79nm,1.2s						
DZM	Mont Dzumac	19.32	146	*e*P	P	18 04 10.7	-0.9
	comp=Z,1µm,1.1s						
DZM	Mont Dzumac	19.32	146	*e*P	P	18 04 11.8	+0.1
	comp=Z,521nm,0.9s						
DZM	Mont Dzumac	19.32	146	P	P	18 04 12.5	+0.9
	comp=Z,26nm,0.3s,baz=317,slow=13,SNR=133						
EIDS	Eidsvold	19.35	190	P	P	18 04 12.6	+0.8
	baz=19,SNR=26						
EIDS	Eidsvold	19.35	190	*e*P	P	18 04 12.0	+0.2
	comp=Z,76nm,0.9s						
TARA	Tarawa	19.57	68	*e*P	P	18 04 14.7	+0.4
	comp=Z,1µm,1.0s						
KWAJ	Kwajalein Atol	19.64	41	*e*P	Pn	18 04 16.8	-0.5
	comp=Z,1µm,0.6s						
KWAJ	Kwajalein Atol	19.64	41	*e*P	Pn	18 04 16.8	-0.5
KWAJ				pmax	pmax		
	comp=Z,2µm,0.7s						
MARNC	Mare, Loyalty	19.80	141	*e*P	P	18 04 16.6	-0.2
	comp=Z,1µm,0.9s						
PINNC	Pines Island,	20.31	144	*e*P	P	18 04 21.9	-0.4
	comp=Z,348nm,0.9s						
QIS	Mount Isa	20.51	225	P	P	18 04 25.0	+0.5
	baz=20,SNR=67						
RMQ	Roma	20.94	195	P	P	18 04 29.8	+0.7
	baz=21,SNR=78						
RKPI	Ransiki, Papua	21.14	282	P	P	18 04 31.9	+0.6
	comp=Z,158nm,0.9s,comp=Z,3µm						
GUMO	Guam	22.06	333	*e*P	P	18 04 40.7	-0.3
	comp=Z,283nm,0.8s						
GUMO				LR	LR		
	comp=Z,2µm,20.0s						
GUMO	Guam	22.06	333	*e*P	P	18 04 40.7	-0.3
GUMO				pmax	pmax		
	comp=Z,280nm,0.9s						
GUMO	Guam	22.06	333	P	P	18 04 41.1	0.0
	comp=Z,331nm,0.9s,baz=180,slow=9.7,SNR=13						
FAKI	Fak Fak	22.76	277	*e*P	P	18 04 47.8	-0.6
	comp=Z,405nm,1.0s						
FAKI	Fak Fak	22.76	277	P	P	18 04 48.1	-0.3
	comp=Z,472nm,1.2s,comp=Z,6µm						
KDU	Kakadu	22.96	252	P	P	18 04 49.6	-0.7
	baz=23,SNR=36						
SAUI	Saumlaki	23.42	264	*e*P	P	18 04 54.9	+0.1
	comp=Z,519nm,1.1s						
SAUI	Saumlaki	23.42	264	P	P	18 04 54.9	+0.1
	comp=Z,600nm,1.1s,comp=Z,9µm						
WRAB	Tennant Creek	24.11	234	*e*P	P	18 05 01.0	+0.1
	comp=Z,263nm,1.0s						
WRAB				LR	LR		
	comp=Z,5µm,19.0s						
WRAB	Tennant Creek	24.11	234	*c* *i*P	P	18 05 01.3	+0.4
WRAB				pmax	pmax		
	comp=Z,511nm,1.7s						
WB2	Warramunga Arr	24.11	234	*e*P	P	18 04 59.9	-1.0
WR1	Warramunga Arr	24.12	234	*e*P	P	18 05 01.4	+0.4
	comp=Z,284nm,1.0s						
WR1				*e*PcP	PcP	18 08 41.0	+1.0
WR1				*e*S	S	18 09 13.4	+1.1
WRA	Warramunga Arr	24.12	234	*i* P	P	18 04 59.9	-1.1
WRA				pmax	pmax		
	comp=Z,181nm,0.8s						
WRA	Warramunga Arr	24.12	234	P	P	18 05 01.4	+0.4
	comp=Z,177nm,0.8s,baz=58,slow=9.4,SNR=239						
WRA				PcP	PcP	18 08 41.0	+1.0
	comp=Z,43nm,0.8s,baz=57,slow=2.0,SNR=12						
WRA				S	S	18 09 13.4	+1.1
	comp=Z,7.1nm,1.0s,baz=55,slow=16,SNR=4.8						
SWI	Sorong	24.13	282	P	P	18 05 02.8	+1.7
	comp=Z,212nm,0.9s,comp=Z,2µm						

ANA2	Anatahan	24.20	338	eP	P	18 05 02.1	+0.5
	comp=Z,354nm,0.6s						
ARMA	Armidale	24.23	187	P	P	18 05 02.9	+1.0
	baz=24,SNR=63						
ARMA	Armidale	24.23	187	eP	P	18 05 02.2	+0.2
	comp=Z,260nm,1.3s						
FUNA	Funafuti	24.26	97	eP	P	18 05 01.2	-1.1
	comp=Z,150nm,0.8s						
FUNA				LR	LR		
	comp=Z,16µm,21.0s						
MTN	Manton Dam	24.27	253	eP	P	18 05 02.0	-0.3
	comp=Z,280nm,1.1s						
PALU	Palau	24.40	303	P	P	18 05 04.3	+0.8
	baz=24,SNR=48						
SARN	Sarigan	24.50	339	eP	P	18 05 04.1	-0.3
	comp=Z,80nm,1.2s						
BNDI	Bandanaira	24.88	273	P	P	18 05 08.3	+0.3
	comp=Z,286nm,0.8s,comp=Z,4µm						
MSVF	Nonsavu	25.37	119	eP	P	18 05 11.9	-0.5
	comp=Z,70nm,0.7s						
MSVF				ePcP	PcP	18 08 44.7	+1.8
MSVF				LR	LR		
	comp=Z,6µm,19.0s						
MSVF	Nonsavu	25.37	119	ceP	P	18 05 10.6	-1.9
MSVF				pmax	pmax		
	comp=Z,59nm,0.7s						
LHI	Lord Howe Isla	25.45	172	P	P	18 05 13.1	+0.2
	baz=26,SNR=6.2						
LHI	Lord Howe Isla	25.45	172	eP	P	18 05 11.2	-1.7
	comp=Z,217nm,0.8s						
NFK	Norfolk Island	25.83	153	P	P	18 05 16.6	+0.2
	baz=26,SNR=3.6						
AS01	Alice Springs	26.52	227	eP	P	18 05 22.2	-0.6
AS31	Alice Springs	26.55	227	eP	P	18 05 22.8	-0.3
	comp=Z,33nm,0.6s						
AS31				ePcP	PcP	18 08 46.2	+0.7
ASAR	Alice Springs	26.56	227	P	P	18 05 22.7	-0.4
ASAR						18 08 46.6	
ASAR				pmax	pmax		
	comp=Z,58nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,49nm,0.8s						
ASAR	Alice Springs	26.56	227	P	P	18 05 22.7	-0.4
	comp=Z,59nm,0.7s,baz=58,slow=8.4,SNR=322						
ASAR				PcP	PcP	18 08 46.6	+1.1
	comp=Z,49nm,0.8s,baz=56,slow=2.7,SNR=18						
CMSA	Cobar Meteorol	26.58	198	P	P	18 05 22.8	-0.2
	baz=27,SNR=124						
MGCD	Mangrove Creek	27.05	187	P	P	18 05 28.3	+1.0
	baz=27,SNR=16						
H11S3	WAKE ISLAND Hy	27.22	25	T	T	18 34 08.1	
	baz=201						
H11S2	WAKE ISLAND Hy	27.23	25	T	T	18 33 51.6	
	baz=201						
KNRA	Kununurra	27.23	248	P	P	18 05 29.3	+0.1
	baz=27,SNR=30						
H11S1	WAKE ISLAND Hy	27.24	25	T	T	18 34 11.2	
	baz=201						
RIV	Riverview	27.66	187	P	P	18 05 33.6	+1.0
	baz=28,SNR=5.5						
NLAI	Namlea	27.80	275	P	P	18 05 35.5	+1.2
	comp=Z,114nm,1.0s						
WAKE	Wake Island	27.91	24	eP	P	18 05 35.7	+0.6
	comp=Z,202nm,1.2s						
TNTI	Ternate	28.30	283	eP	P	18 05 38.9	+0.2
	comp=Z,55nm,1.1s						
TNTI	Ternate	28.30	283	P	P	18 05 39.2	+0.5
	comp=Z,52nm,1.0s						
STKA	Stephens Creek	28.34	204	P	P	18 05 38.7	-0.2
	baz=28,SNR=6.6						
STKA	Stephens Creek	28.34	204	eP	P	18 05 38.3	-0.5
	comp=Z,6.9nm,0.8s						
STKA				ePcP	PcP	18 08 50.2	+0.6
STKA	Stephens Creek	28.34	204	eP	P	18 05 38.3	-0.5
STKA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STKA	Stephens Creek	28.34	204	P	P	18 05 38.4	-0.5
	comp=Z,26nm,0.7s,baz=11,slow=8.8,SNR=54						
STKA				PcP	PcP	18 08 50.5	+0.9
	comp=Z,33nm,0.8s,baz=39,slow=2.8,SNR=6.6						
YNG	Young	28.54	191	P	P	18 05 41.0	+0.4
	baz=29,SNR=6.6						
SANI	Sanana	29.07	277	P	P	18 05 45.4	-0.2
	comp=Z,274nm,1.3s,comp=Z,3µm						
CNB	Canberra Magne	29.36	189	P	P	18 05 48.8	+0.9
	baz=29,SNR=11						
CAN	Canberra	29.43	190	P	P	18 05 49.6	+1.1
	baz=30						
CAN	Canberra	29.43	190	eP	P	18 05 49.0	+0.5
	comp=Z,20nm,0.9s						
CAN	Canberra	29.43	190	eP	P	18 05 49.0	+0.5
CAN				pmax	pmax		
	comp=Z,52nm,1.2s						
SOEI	Soe	30.47	261	eP	P	18 05 58.4	+0.3
	comp=Z,109nm,0.7s						
SOEI	Soe	30.47	261	P	P	18 05 58.8	+0.8
	comp=Z,172nm,0.8s,comp=Z,2µm						
FITZ	Fitzroy Crossi	30.82	245	P	P	18 06 00.5	-0.5
	baz=31,SNR=67						
FITZ	Fitzroy Crossi	30.82	245	eP	P	18 06 00.3	-0.6
	comp=Z,97nm,0.6s						
FITZ	Fitzroy Crossi	30.82	245	P	P	18 06 00.4	-0.6
	comp=Z,75nm,0.7s,baz=76,slow=9.0,SNR=96						
FITZ				LR	LR	18 19 11.1	
	comp=Z,5µm,18.9s,baz=11,slow=38						
HTT	Hallett	30.82	207	P	P	18 06 00.8	-0.1
	baz=31,SNR=33						
SGSI	Sangihe	30.89	288	P	P	18 06 03.8	+2.2
	comp=Z,281nm,0.9s,comp=Z,7µm						
BATI	Baumata	31.10	261	P	P	18 06 04.7	+1.2
	comp=Z,60nm,0.7s,comp=Z,1µm						
BATI	Baumata	31.10	261	P	P	18 06 04.7	+1.2
	comp=Z,63nm,0.6s,baz=161,slow=1.3,SNR=26						
MILA	Mila	31.10	189	P	P	18 06 04.5	+1.2
	baz=31,SNR=6.0						
MATI	Mati	31.39	294	eP	P	18 06 05.0	-1.0
KMSI	Cibinong	31.54	281	P	P	18 06 07.9	+0.5
	comp=Z,1µm,0.9s,comp=Z,10µm						
WRKA	Warakurna	31.54	231	P	P	18 06 06.5	-0.8
	baz=32,SNR=153						
BBOO	Buckleboo	31.69	211	P	P	18 06 07.8	-0.7
	baz=32,SNR=5.1						
BBOO	Buckleboo	31.69	211	eP	P	18 06 07.7	-0.7
	comp=Z,76nm,0.8s						
DAV	Davao City (W)	32.05	294	eP	P	18 06 10.8	-1.1
	comp=Z,180nm,0.8s						
DAV				LR	LR		
	comp=Z,1µm,19.0s						
DAV	Davao City (W)	32.05	294	P	P	18 06 13.3	+1.5
	comp=Z,162nm,0.6s,baz=35,slow=5.2,SNR=8.4						
BBSI	Bau Bau	32.11	270	P	P	18 06 18.4	+6.1
TOO	Toolangi	32.32	194	P	P	18 06 14.6	+0.7
	baz=32,SNR=11						
TOO	Toolangi	32.32	194	eP	P	18 06 14.0	+0.1
	comp=Z,27nm,0.9s						
TOO	Toolangi	32.32	194	eP	P	18 06 14.0	+0.1
TOO				pmax	pmax		
	comp=Z,27nm,1.0s						
LUWI	Luwuk	32.41	278	eP	P	18 06 15.3	+0.3
	comp=Z,650nm,1.1s						
LUWI	Luwuk	32.41	278	P	P	18 06 15.6	+0.6
	comp=Z,582nm,1.2s,comp=Z,6µm						
MMRI	Maumere	32.41	264	eP	P	18 06 13.7	-1.3
	comp=Z,388nm,0.6s						
MMRI				eS	S	18 11 22.7	-0.1
MMRI	Maumere	32.41	264	P	P	18 06 14.4	-0.6
	comp=Z,583nm,0.8s,comp=Z,8µm						
KCP	Kidapawan	32.48	293	⇑eP	P	18 06 16.2	+0.6
ARPS	Mount Arapiles	32.62	200	P	P	18 06 17.1	+0.5
	baz=33,SNR=22						
SKMP	Bagumbayan, Su	32.79	292	eP	P	18 06 18.3	+0.1
BUTP	Butuan	32.82	297	eP	P	18 06 18.7	+0.2
BUKP	Musuan	32.85	295	eP	P	18 06 19.1	+0.2
EDFI	Ende, Flores	32.95	264	P	P	18 06 18.9	-1.0
	comp=Z,387nm,1.0s,comp=Z,4µm						
CTBH	Cotabato--PC H	33.33	293	⇑iP	P	18 06 23.1	+0.2
CGP	Cagayan de Oro	33.42	296	⇓eP	P	18 06 24.9	+1.2
KNTN	Kanton	33.51	86	eP	P	18 06 24.4	-0.2
	comp=Z,394nm,1.5s						
MRSI	Marisa	33.51	280	P	P	18 06 23.7	-0.9
	comp=Z,100nm,1.1s,comp=Z,956nm						
APSI	Ampana	33.54	278	P	P	18 06 25.4	+0.6
	comp=Z,292nm,1.2s,comp=Z,3µm						
OUZ	Omahuta	33.61	152	eP	P	18 06 26.4	+1.3
	comp=Z,160nm,0.9s						
MSLP	Maasin	34.01	298	eP	P	18 06 28.6	-0.3
BASI	Baing, Sumba	34.12	261	P	P	18 06 30.6	+0.7
	comp=Z,422nm,1.0s,comp=Z,7µm						
BESP	Borongan	34.21	301	eP	P	18 06 31.6	+1.0
PAGZ	Pagadian	34.36	294	eP	P	18 06 32.8	+0.9
WSI	Waingapu	34.37	262	P	P	18 06 32.1	+0.1
	comp=Z,941nm,1.1s,comp=Z,13µm						
BKSI	Bulukumba	34.55	270	P	P	18 06 33.5	-0.1
	comp=Z,23nm,0.8s						
BNSI	Bone	34.63	271	P	P	18 06 34.9	+0.6
	comp=Z,63nm,1.1s,comp=Z,1µm						
OCLP	Ormoc	34.65	300	eP	P	18 06 34.3	-0.1
LLP	Lapu-Lapu	34.88	298	eP	P	18 06 35.0	-1.3
KAPI	Kappang	34.94	270	PFAKE		18 06 50.0	+13
KAPI				LR	LR		
	comp=Z,3µm,22.0s						
SPSI	Sidrap Palu	35.00	272	P	P	18 06 37.0	-0.5
	comp=Z,31nm,0.8s						
FORT	Forrest	35.03	223	P	P	18 06 37.3	-0.1
	baz=35,SNR=38						
FORT	Forrest	35.03	223	eP	P	18 06 36.9	-0.6
	comp=Z,399nm,0.6s						
TTSI	Tana Toraja	35.05	274	P	P	18 06 45.2	+7.4
PCI	Palu	35.32	277	P	P	18 06 42.1	+1.8
	comp=Z,450nm,1.0s,comp=Z,4µm						
MPSI	Mapaga	35.48	279	P	P	18 06 41.0	-0.6
	comp=Z,176nm,0.9s						
GUIM	Jordan	36.23	297	eP	P	18 06 47.5	-0.4
RCP	Roxas	36.51	299	⇓eP	P	18 06 51.3	+1.0
MOO	Moorlands	36.67	189	P	P	18 06 52.9	+1.5
	baz=37,SNR=10						
PLAI	Plampang	36.82	264	P	P	18 06 51.5	-1.5
	comp=Z,463nm,0.8s,comp=Z,4µm						
HIZ	Hauiti	36.88	153	eP	P	18 06 54.5	+1.3
	comp=Z,156nm,0.9s						
HIZ				ePcP	PcP	18 09 13.7	+0.6
MBWA	Marble Bar	37.07	243	eP	P	18 06 54.8	-0.3
	comp=Z,110nm,0.6s						
TAU	Tasmania Unive	37.11	189	eP	P	18 06 56.2	+1.2
	comp=Z,158nm,0.9s						
TAU				ePcP	PcP	18 09 14.8	+1.2
TAU				LR	LR		
	comp=Z,5µm,22.0s						
TAU	Tasmania Unive	37.11	189	eP	P	18 06 56.2	+1.2
TAU				e		18 09 15.6	
TAU				pmax	pmax		
	comp=Z,160nm,0.9s						
OTRP	Odiongan	37.50	300	eP	P	18 06 58.1	-0.6
URZ	Urewera	37.73	151	eP	P	18 07 00.5	+0.1
	comp=Z,204nm,0.8s						
URZ	Urewera	37.73	151	P	P	18 07 01.0	+0.6
	comp=Z,144nm,0.7s,baz=312,slow=3.0,SNR=69						
MXZ	Matakaoa Point	37.78	149	eP	P	18 07 00.9	+0.1
	comp=Z,167nm,0.7s						
BKZ	Black Stump Fm	38.16	152	eP	P	18 07 03.8	-0.2
	comp=Z,167nm,0.6s						
BOAC	Boac	38.17	301	eP	P	18 07 05.3	+0.9
SJMP	San Jose	38.33	299	eP	P	18 07 06.6	+0.9
TSM	Tawau	38.37	285	P	P	18 07 06.7	+0.6
KBKI	Kotabaru	38.64	273	P	P	18 07 09.4	+1.0
	comp=Z,8.6nm,0.8s,comp=Z,145nm						
POLP	Polilio Island	38.71	303	eP	P	18 07 09.3	+0.4
THZ	Tophouse	38.84	158	eP	P	18 07 09.5	-0.2
	comp=Z,294nm,0.8s						
BUSP	Coron	38.93	298	eP	P	18 07 11.3	+0.5
SNZO	South Karori	39.15	156	eP	P	18 07 12.1	-0.1
	comp=Z,114nm,0.6s						
BFZ	Birch Farm	39.27	154	eP	P	18 07 12.7	-0.6
	comp=Z,160nm,0.6s						
ENPP	El Nido	39.28	296	eP	P	18 07 14.8	+1.1
SRBI	Singaraja	39.35	265	P	P	18 07 13.5	-0.8
	comp=Z,56nm,1.0s						
DNP	Denpasar	39.36	264	P	P	18 07 13.0	-1.3
	comp=Z,404nm,0.6s,comp=Z,11µm						
SDKM	Sandakan	39.39	287	P	P	18 07 14.8	+0.1
FOZ	Fox Glacier	39.40	163	eP	P	18 07 14.3	+0.1
	comp=Z,103nm,0.8s						
LTZ	Lake Taylor	39.51	160	eP	P	18 07 15.7	+0.4
	comp=Z,136nm,0.9s						
BALP	Baler	39.53	304	eP	P	18 07 16.1	+0.4
PALP	Palanan	39.54	306	eP	P	18 07 16.4	+0.7
KHZ	Kahutara	39.65	158	eP	P	18 07 15.5	-0.8
	comp=Z,165nm,0.7s						
BATP	Bataraza	39.84	292	eP	P	18 07 19.1	+0.8
OXZ	Oxford	39.92	160	eP	P	18 07 17.8	-0.8
	comp=Z,359nm,1.4s						
RPZ	Rata Peaks	39.95	162	eP	P	18 07 18.6	-0.3
	comp=Z,156nm,0.9s						
RPZ	Rata Peaks	39.95	162	P	P	18 07 18.8	0.0
	comp=Z,142nm,0.8s,baz=350,slow=1.5,SNR=55						
CAUP	Cauayan	39.96	306	eP	P	18 07 19.9	+0.7
MEEK	Meekatharra	40.00	235	P	P	18 07 19.7	+0.1
	baz=40,SNR=92						
KDM	Kudat	40.12	288	P	P	18 07 22.3	+1.7
MTKI	Muara Teweh, K	40.20	276	P	P	18 07 22.0	+0.7
	comp=Z,97nm,0.9s,comp=Z,6µm						
LBZ	Lake Benmore	40.29	163	eP	P	18 07 20.7	-0.9
	comp=Z,130nm,1.1s						
CRLZ	Canterbury Las	40.33	160	eP	P	18 07 22.2	+0.2
	comp=Z,323nm,1.0s						
WKZ	Wanaka	40.37	164	eP	P	18 07 22.2	-0.2
	comp=Z,65nm,0.9s						
JAGI	Jajag, Banyuwa	40.40	264	eP	P	18 07 20.8	-2.3
	comp=Z,234nm,0.9s						
JAGI	Jajag, Banyuwa	40.40	264	P	P	18 07 21.4	-1.6
	comp=Z,285nm,1.4s,comp=Z,2µm						
KKM	Kota Kinabalu	40.44	287	eP	P	18 07 23.1	-0.4
	comp=Z,326nm,1.1s						
KKM	Kota Kinabalu	40.44	287	P	P	18 07 24.4	+0.9
MQZ	McQueen's Vall	40.46	160	eP	P	18 07 22.4	-0.6
	comp=Z,91nm,0.6s						
SMPP	San Manuel, Pa	40.48	304	eP	P	18 07 23.0	-0.5
DCZ	Deep Cove	40.50	167	eP	P	18 07 23.4	+0.1
	comp=Z,56nm,1.0s						
KMMI	Kalianget	40.60	266	P	P	18 07 25.9	+1.3
	comp=Z,43nm,0.9s,comp=Z,471nm						
MLZ	Mavora Lakes	40.64	166	eP	P	18 07 24.7	+0.1
	comp=Z,220nm,0.9s						
APYP	Conner	40.92	306	eP	P	18 07 25.6	-1.5
ODZ	Otahua Downs	41.03	163	eP	P	18 07 26.9	-0.8
	comp=Z,52nm,1.0s						
PYZ	Puysegur Point	41.06	167	eP	P	18 07 27.4	-0.6
	comp=Z,66nm,0.8s						
WHZ	Wether Hill Ro	41.09	166	eP	P	18 07 27.4	-0.8
	comp=Z,44nm,0.9s						
GMJI	Gumukmas	41.10	265	P	P	18 07 28.1	-0.6
	comp=Z,71nm,1.0s						
ABRA	Dolores	41.23	306	eP	P	18 07 28.8	-0.9
JOW	Kunigami	41.76	323	eP	P	18 07 33.9	0.0
	comp=Z,67nm,0.7s						
JOHN	Johnston Islan	41.99	57	PFAKE		18 07 50.0	+14
JOHN				LR	LR		
	comp=Z,643nm,20.0s						
GRJI	Gresik	42.08	267	P	P	18 07 37.6	+0.9
	comp=Z,72nm,1.1s						
GIRL	Giralia	42.38	243	P	P	18 07 39.9	+0.8
	baz=42,SNR=8.1						
GIRL	Giralia	42.38	243	eP	P	18 07 39.4	+0.3
	comp=Z,420nm,1.1s						
PWJI	Pagerwojo	42.73	265	P	P	18 07 41.0	-1.0
	comp=Z,201nm,1.3s,comp=Z,2µm						
BTM	Bintulu	42.74	282	P	P	18 07 44.3	+2.2
KLBR	Kellerberrin	42.85	229	P	P	18 07 42.1	-0.6
	baz=43,SNR=50						
MORW	Morawa	43.07	233	P	P	18 07 44.6	0.0
	baz=43,SNR=27						
MORW	Morawa	43.07	233	eP	P	18 07 44.0	-0.6
	comp=Z,117nm,0.8s						
NGJI	Ngawi	43.08	266	P	P	18 07 46.4	+1.6
	comp=Z,91nm,1.1s						
BLDU	Ballidu	43.20	231	P	P	18 07 45.4	-0.2
	baz=43,SNR=41						
PCJI	Pacitan	43.34	265	P	P	18 07 46.7	-0.3
	comp=Z,449nm,1.3s,comp=Z,6µm						
SBUM	Sibu	43.42	280	eP	P	18 07 48.6	+1.0
	comp=Z,49nm,1.1s						
SBUM	Sibu	43.42	280	P	P	18 07 49.1	+1.5
MIDW	Midway	43.51	37	eP	P	18 07 49.2	+1.2
	comp=Z,200nm,0.7s						
WOJI	Wonogiri, Jawa	43.60	265	P	P	18 07 49.9	+0.9
	comp=Z,115nm,1.6s						
NWAO	Narrogin (SRO)	43.87	228	P	P	18 07 50.8	-0.2
	baz=44,SNR=13						
NWAO	Narrogin (SRO)	43.87	228	eP	P	18 07 50.0	-1.0
	comp=Z,71nm,0.9s						
NWAO				ePP	PcP	18 09 35.7	0.0
NWAO	Narrogin (SRO)	43.87	228	eP	P	18 07 50.0	-1.0
NWAO				pmax	pmax		
	comp=Z,71nm,0.9s						
TWG	Pinlang	43.88	312	eP	P	18 07 50.4	-0.7
	comp=Z,166nm,0.8s						
TWG				ePP	PP	18 09 34.6	-0.6
UGM	Wanagama	44.00	265	eP	P	18 07 51.9	-0.4
	comp=Z,291nm,1.0s						
UGM	Wanagama	44.00	265	P	P	18 07 52.6	+0.3
	comp=Z,337nm,1.2s						
YULB	Yu-li	44.06	313	eP	P	18 07 52.6	0.0
	comp=Z,77nm,0.8s						
SMRI	Semarang	44.10	266	eP	P	18 07 53.0	-0.1
	comp=Z,126nm,0.9s						
SMRI				ePP	PP	18 09 38.3	+0.7
SMRI	Semarang	44.10	266	P	P	18 07 53.8	+0.8
	comp=Z,185nm,1.1s,comp=Z,3µm						
MUN	Mundaring	44.20	230	P	P	18 07 53.6	0.0
	baz=44,SNR=24						
NACB	Ninganchiao	44.33	314	eP	P	18 07 54.8	+0.1
	comp=Z,177nm,1.1s						
TPUB	Ta-pu	44.49	312	eP	P	18 07 55.6	-0.5
	comp=Z,94nm,0.6s						
SSLB	Suanglung	44.55	313	eP	P	18 07 56.5	-0.1
	comp=Z,95nm,0.8s						
INU	Inuyama	44.65	339	eP	P	18 07 57.8	+0.7
	comp=Z,24nm,1.0s						
YHNB	Yeheng	44.80	315	eP	P	18 07 58.7	+0.2
	comp=Z,114nm,0.9s						
RKGY	Rocky Gully	44.89	226	P	P	18 07 59.8	+0.8
	baz=45,SNR=21						
TATO	Taipei	44.91	315	eP	P	18 08 00.4	+1.1
	comp=Z,158nm,1.0s						
KSM	Kuching	45.12	278	eP	P	18 08 00.9	-0.3
	comp=Z,116nm,0.8s						
KSM	Kuching	45.12	278	P	P	18 08 01.8	+0.7
JNU	Nakatsue	45.29	331	eP	P	18 08 01.8	-0.5
	comp=Z,132nm,0.8s						
JNU	Nakatsue	45.29	331	P	P	18 08 01.8	-0.5
	comp=Z,143nm,0.8s,baz=113,slow=2.7,SNR=44						
MJAR	Matsushiro Arr	45.33	341	P	P	18 08 01.6	-0.9
	comp=Z,5.5nm,0.7s,baz=168,slow=6.7,SNR=30						
MJAR				PcP	PcP	18 09 40.8	+0.2
	comp=Z,18nm,0.9s,baz=172,slow=3.4,SNR=9.5						
MAJO	Matsushiro	45.33	341	eP	P	18 08 02.7	+0.3
	comp=Z,36nm,1.1s						
MAJO				ePcP	PcP	18 09 41.8	+1.2
MAJO	Matsushiro	45.33	341	⇓iP	P	18 08 02.4	-0.1
MAJO				pmax	pmax		
	comp=Z,100nm,2.5s						
MAT	Matsushiro	45.33	341	P	P	18 08 03.4	+0.9
MAT				eS	S	18 14 35.6	-0.7
MJB9	Matsu-Tunnel	45.34	341	eP	P	18 08 03.1	+0.6
	comp=Z,35nm,1.1s						
KPJI	Karang Pucung	45.59	266	P	P	18 08 05.1	+0.3
	comp=Z,319nm,1.0s,comp=Z,3µm						
CMJI	Cimerak	46.05	265	P	P	18 08 08.3	-0.2
	comp=Z,354nm,1.0s,comp=Z,3µm						
JCJI	Jatiwangi	46.27	267	P	P	18 08 10.8	+0.6
	comp=Z,529nm,1.0s,comp=Z,7µm						
RAR	Rarotonga	46.34	113	eP	P	18 08 10.0	-0.7
	comp=Z,17nm,1.0s						
RAR	Rarotonga	46.34	113	eP	P	18 08 10.0	-0.7
RAR				pmax	pmax		
	comp=Z,94nm,1.2s						
RAR	Rarotonga	46.34	113	P	P	18 08 10.4	-0.3
	comp=Z,56nm,0.8s,baz=242,slow=9.0,SNR=13						
CISI	Cisompet, Garu	46.69	266	eP	P	18 08 12.3	-1.2
	comp=Z,423nm,0.8s						
CISI				ePcP	PcP	18 09 46.5	+0.6
CISI	Cisompet, Garu	46.69	266	P	P	18 08 12.7	-0.9
	comp=Z,492nm,0.9s,comp=Z,6µm						
LEM	Lembang	46.91	267	P	P	18 08 15.6	+0.2
	comp=Z,180nm,0.7s,baz=45,slow=6.3,SNR=59						
TPI	Tanjungpandan	47.16	272	P	P	18 08 18.3	+1.1
	comp=Z,92nm,1.5s,comp=Z,18µm						
CBJI	Citeko	47.68	267	P	P	18 08 20.3	-0.9
	comp=Z,343nm,0.9s						
DBJI	Dramaga	47.78	267	P	P	18 08 21.6	-0.4
	comp=Z,73nm,0.9s						
SKJI	Sukabumi	47.95	266	P	P	18 08 22.7	-0.6
	comp=Z,523nm,0.7s,comp=Z,4µm						
MCQ	Macquarie Isla	48.22	177	P	P	18 08 26.4	+1.7
	baz=48,SNR=4.8						
MCQ	Macquarie Isla	48.22	177	eP	P	18 08 25.8	+1.1
	comp=Z,232nm,0.9s						
MCQ	Macquarie Isla	48.22	177	eP	P	18 08 25.8	+1.1
MCQ				pmax	pmax		
	comp=Z,230nm,1.0s						
XMAS	Kiritimati	48.35	82	eP	P	18 08 26.8	+0.4
	comp=Z,129nm,0.7s						
PPBI	Pangkal Pinang	48.73	273	P	P	18 08 29.8	+0.5
	comp=Z,36nm,1.7s						
XMIS	Christmas Isla	48.81	262	eP	P	18 08 30.2	+0.3
	comp=Z,91nm,0.8s						
SSE	Sheshan	49.13	321	eP	P	18 08 31.3	-0.7
	comp=Z,36nm,0.8s						
ERM	Erimo	49.20	349	PFAKE		18 08 40.0	+7.6
ERM				LR	LR		
	comp=Z,2µm,20.0s						
TJN	Taejon	49.62	331	d iP	P	18 08 36.0	+0.4
KLI	Kotabumi	49.75	269	P	P	18 08 37.8	+0.7
	comp=Z,43nm,0.9s						
KASI	Kota Agung	50.07	268	P	P	18 08 37.7	-1.8
	comp=Z,170nm,0.9s,comp=Z,2µm						
KSRS	Korea Array	50.21	332	P	P	18 08 39.9	-0.2
KSRS						18 09 58.7	
KSRS				pmax	pmax		
	comp=Z,29nm,0.7s						
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSRS	Korea Array	50.21	332	P	P	18 08 39.9	-0.2
	comp=Z,41nm,0.9s,baz=149,slow=8.5,SNR=94						
KSRS				PcP	PcP	18 09 58.7	+0.7
	comp=Z,9.2nm,0.7s,baz=160,slow=4.1,SNR=9.0						
KS15	Wonju Array Si	50.22	332	eP	P	18 08 40.2	0.0
	comp=Z,47nm,0.9s						
KS15				ePcP	PcP	18 09 58.5	+0.5
KSAR	Wonju Array Be	50.22	332	P	P	18 08 39.9	-0.3
KSAR				PcP	PcP	18 09 58.7	+0.6
KSAR	Wonju Array Be	50.22	332	P	P	18 08 39.9	-0.3
KSAR						18 09 58.7	
KS01	Wonju Array Si	50.24	332	eP	P	18 08 40.1	-0.3
KS01				ePcP	PcP	18 09 58.4	+0.2
MDSI	Maura Dua	50.46	269	P	P	18 08 41.0	-1.4
	comp=Z,93nm,1.2s,comp=Z,1µm						
LWLI	Liwa	50.54	269	P	P	18 08 42.2	-1.0
	comp=Z,84nm,1.1s,comp=Z,11µm						
QIZ	Qiongzhong	50.95	301	eP	P	18 08 47.0	+0.9
	comp=Z,82nm,0.9s						
LHSI	Lahat	51.16	270	P	P	18 08 47.7	0.0
	comp=Z,78nm,1.5s						
NJ2	Nanjing	51.25	320	eP	P	18 08 48.9	+0.9
NJ2				pP	pP	18 09 05.5	-5.1
NJ2				pmax	pmax		
	comp=Z,34nm,1.1s						
NJ2				LR	LR		
	comp=Z,4µm,17.4s						
NJ2				LR	LR		
	comp=Z,2µm,18.4s						
NJ2				LR	LR		
	comp=Z,5µm,16.8s						
JMBI	JAMBI	51.26	273	P	P	18 08 50.3	+1.8
	comp=Z,360nm,1.4s,comp=Z,4µm						
ASAJ	Asahikawa	51.34	349	P	P	18 08 50.0	+1.5
	comp=Z,22nm,0.7s,baz=239,slow=16,SNR=11						
MYKOM	Kota Tinggi	51.53	277	eP	P	18 08 50.9	+0.4
	comp=Z,119nm,1.0s						
MYKOM	Kota Tinggi	51.53	277	P	P	18 08 51.0	+0.6
MNAI	Manna	51.68	269	eP	P	18 08 49.4	-2.3
	comp=Z,177nm,1.1s						
MNAI				ePcP	PcP	18 10 03.0	-1.0
KGM	Kluang	52.09	277	P	P	18 08 55.7	+1.0
MASI	Maura Aman, Be	52.50	271	P	P	18 08 57.5	-0.2
	comp=Z,104nm,0.9s						
KTGM	Kuala Trenggan	52.88	281	P	P	18 09 01.3	+0.8
MSHR	Mys Shultsa	53.16	338	⇓eP	P	18 09 00.5	-1.5
WHN	Wuhan	53.30	316	⇑P	P	18 09 04.1	+0.8
WHN				pmax	pmax		
	comp=Z,190nm,1.0s						
KRJI	Kerinci	53.38	272	P	P	18 09 03.5	-0.8
	comp=Z,308nm,1.0s,comp=Z,4µm						
SDSI	Sungai Dareh	53.54	273	P	P	18 09 05.0	-0.3
	comp=Z,312nm,1.1s,comp=Z,3µm						
TEY	Ternei	53.62	344	⇓eP	P	18 09 05.6	+0.4
TEY				pmax	pmax		
	comp=Z,10.0nm,2.2s						
KIP	Kipapa	53.79	58	eP	P	18 09 08.4	+1.4
	comp=Z,64nm,1.0s						
KIP				LR	LR		

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       comp=Z,8µm,20.0s
KIP    Kipapa            53.79  58⇑eP       P        18 09 08.8 +1.8
KIP                                 pmax    pmax
       comp=Z,100nm,1.5s
OPA    Opana             53.91  58 eP       P        18 09 09.7 +1.9
       comp=Z,271nm,1.0s
OPA    Opana             53.91  58 eP       P        18 09 09.7 +1.9
OPA                                 pmax    pmax
       comp=Z,270nm,1.0s
YSS    Yuzh-Sakhalins    54.05 350 eP       P        18 09 09.1 +0.7
       comp=Z,23nm,0.6s
YSS                                ePcP     PcP      18 10 13.4 +1.2
YSS    Yuzh-Sakhalins    54.05 350⇑eP       P        18 09 09.1 +0.7
YSS                                 pmax    pmax
       comp=Z,20nm,0.6s
YSS                                 MLR     MLR
       comp=Z,2µm,17.0s
BKNI   Bangkinang        54.09 275 eP       P        18 09 09.3  0.0
       comp=Z,380nm,0.9s
BKNI   Bangkinang        54.09 275  P       P        18 09 09.5 +0.1
       comp=Z,449nm,0.9s,comp=Z,4µm
USA0B  Ussuriysk Arra    54.28 340 eP       P        18 09 10.4 +0.3
       comp=Z,54nm,1.1s
USRK   Ussuriysk Ar.     54.28 340  P       P        18 09 10.5 +0.4
       comp=Z,31nm,1.0s,baz=153,slow=4.6,SNR=28
DL2    Dalian            54.46 328⇑iP       P        18 09 11.2 -0.3
DL2                                 pmax    pmax
       comp=Z,99nm,0.9s
PDSI   Padang            54.50 273  P       P        18 09 10.5 -1.9
       comp=Z,231nm,0.8s,comp=Z,2µm
IPM    Ipoh              54.78 280 eP       P        18 09 13.5 -0.8
       comp=Z,143nm,1.0s
IPM                                ePcP     PcP      18 10 16.4 +0.6
KKH    Kailua Kona       54.78  61 eP       P        18 09 15.3 +1.1
KKH    Kailua Kona       54.78  61 eP       P        18 09 15.3 +1.1
KHLU   Kahalu`u          54.86  61 eP       P        18 09 16.2 +1.3
       comp=Z,245nm,1.0s
KHLH   Kahului Airpor    54.92  59 eP       P        18 09 16.9 +1.7
       comp=Z,145nm,0.9s
HUH    Hualalai          54.95  61 eP       P        18 09 17.3 +1.6
       comp=Z,174nm,1.0s
HPO    Honuapo           54.96  62 eP       P        18 09 16.6 +1.1
KHU    Kahuku            54.97  61 eP       P        18 09 17.1 +1.2
       comp=Z,404nm,1.0s
KHU    Kahuku            54.97  61 eP       P        18 09 17.1 +1.2
KHU                                 pmax    pmax
       comp=Z,400nm,1.0s
MHA    Mahukona          55.08  60 eP       P        18 09 18.2 +1.8
TIA    Tai'an            55.08 323  P       P        18 09 15.5 -0.6
TIA                                 pmax    pmax
       comp=Z,22nm,1.1s
MLOA   Mauna Loa Obse    55.12  61 eP       P        18 09 18.3 +1.1
       comp=Z,188nm,1.3s
AIN    Ainahou           55.16  61 eP       P        18 09 18.4 +1.3
       comp=Z,312nm,1.0s
HPAH   Hawaii Prepara    55.20  60 eP       P        18 09 18.6 +1.3
       comp=Z,195nm,0.9s
HMH    Humu‘ula Sheep    55.22  61 eP       P        18 09 18.8 +1.0
       comp=Z,279nm,1.0s
POHA   Pohakuloa         55.24  61 eP       P        18 09 18.4 +0.6
       comp=Z,266nm,0.9s
HLP    Hilina Pali       55.26  61 eP       P        18 09 18.5 +0.7
       comp=Z,189nm,1.0s
MLH    Mauna Loa         55.26  61 eP       P        18 09 18.1 +0.1
       comp=Z,96nm,0.9s
MLH    Mauna Loa         55.26  61 eP       P        18 09 18.1 +0.1
MLH                                 pmax    pmax
       comp=Z,96nm,0.9s
KULM   Kulim             55.30 281 eP       P        18 09 17.6 -0.5
       comp=Z,53nm,0.8s
WRMHI  West Rim          55.31  61 eP       P        18 09 19.5 +1.3
       comp=Z,137nm,0.7s
SKNT   Sakolnakorn       55.31 295  P       P        18 09 19.0 +0.9
       comp=Z,92nm,1.1s,comp=Z,1µm
MDJ    Mudanjiang        55.50 338  P       P        18 09 19.0 +0.1
MDJ                                 PcS     PcS      18 14 16.9 -1.0
MDJ                                 pmax    pmax
       comp=Z,61nm,0.9s
MDJ                                 pmax    pmax
       comp=Z,1µm,5.3s
MDJ                                 LR      LR
       comp=Z,2µm,15.9s
MDJ                                 LR      LR
       comp=Z,2µm,15.9s
MDJ                                 LR      LR
       comp=Z,3µm,17.8s
MDJ    Mudanjiang        55.50 338 eP       P        18 09 19.1 +0.2
       comp=Z,57nm,1.0s
TIAR   Tiarei            55.58 107 eP       P        18 09 20.0  0.0
       comp=Z,29nm,1.0s
MNSI   Mandailing Nat    55.60 275  P       P        18 09 19.0 -1.2
       comp=Z,302nm,0.9s
TVO    Taravao           55.68 107 eP       P        18 09 21.0 +0.2
       comp=Z,13nm,0.8s
SKLT   Songkhla          55.71 283  P       P        18 09 21.7 +0.7
       comp=Z,94nm,1.1s,comp=Z,1µm
SNY    Shenyang          55.72 332 ⇑P       P        18 09 20.0 -0.5
SNY                                 pmax    pmax
       comp=Z,19nm,1.2s
SRAK   Srakaew           56.12 291  P       P        18 09 21.0 -2.9
       comp=Z,101nm,0.9s,comp=Z,999nm
NONG   Nongkai           56.44 296  P       P        18 09 26.9 +0.8
       comp=Z,9.4nm,0.8s
CN2    Changchun         56.46 335 ⇑P       P        18 09 25.3 -0.5
CN2                                esP      pP       18 09 53.0 +4.1
CN2                                 PcP     PcP      18 10 20.8 -0.8
CN2                                 pmax    pmax
       comp=Z,50nm,1.1s
PSI    Prapat            56.55 277 eP       P        18 09 25.4 -1.8
       comp=Z,121nm,1.4s
PSI    Prapat            56.55 277 eP       P        18 09 25.4 -1.8
PSI                                 pmax    pmax
       comp=Z,121nm,1.4s
PSI    Prapat            56.55 277  P       P        18 09 25.8 -1.4
       comp=Z,30nm,0.8s,baz=179,slow=2.7,SNR=36
ENH    Enshi             56.62 313 eP       P        18 09 27.1 -0.2
       comp=Z,91nm,0.9s
ENH                                 LR      LR
       comp=Z,3µm,20.0s
SKR    Severo-Kuril’s    56.71   1 eP       P        18 09 39.6  +12
SKR                                 MLR     MLR
       comp=Z,2µm,18.0s
SKR                                 MLR     MLR
       comp=Z,1µm,18.0s
TRTT   Trang             56.76 284  P       P        18 09 28.4 -0.1
       comp=Z,30nm,1.4s
CHAI   Chaiyaphum        56.76 294  P       P        18 09 29.1 +0.7
       comp=Z,34nm,0.9s,comp=Z,248nm
PBSI   Pulau Batu        56.77 274  P       P        18 09 33.6 +5.0
PMOR   Pomariorio Ree    56.82 104 eP       P        18 09 29.3 +0.5
       comp=Z,293nm,1.1s
GYA    Guiyang           56.88 307⇑iP       P        18 09 29.9 +0.6
GYA                                 pP      pP       18 09 51.0 -1.2
GYA                                 PP      PP       18 11 41.2 +4.4
GYA                                 ScP     ScP      18 14 17.8 +2.7
GYA                                 S       S        18 17 18.0 +1.8
GYA                                 sS      sS       18 17 52.2 -3.8
GYA                                 SS      SS       18 21 08.9 +2.8
GYA                                 pmax    pmax
       comp=Z,50nm,1.0s
GYA                                 pmax    pmax
       comp=Z,160nm,6.5s
GYA                                 LR      LR
       comp=Z,4µm,18.0s
GYA                                 LR      LR
       comp=Z,4µm,18.4s
GYA                                 LR      LR
       comp=Z,4µm,18.6s
PATY   Pattaya           56.91 290  P       P        18 09 31.2 +1.7
       comp=Z,35nm,0.9s
TSI    Tuntungan         57.02 278  P       P        18 09 30.0 -0.3
       comp=Z,140nm,1.1s
VAH    Vaihoa            57.08 104 eP       P        18 09 31.0 +0.3
       comp=Z,143nm,1.1s
COCO   West Island       57.47 260  PFAKE            18 09 50.0  +17
COCO                                LR      LR
       comp=Z,2µm,21.0s
COCO   West Island       57.47 260 i P      P        18 09 36.1 +2.6
GSI    Gunungsitoli      57.66 275 eP       P        18 09 33.2 -1.7
       comp=Z,234nm,0.9s
GSI                                eS       S        18 17 24.9 -1.6
GSI    Gunungsitoli      57.66 275  P       P        18 09 34.0 -0.8
       comp=Z,271nm,0.9s
KCSI   Kotacane, Aceh    57.80 278  P       P        18 09 33.8 -2.1
       comp=Z,69nm,0.9s
TYV    Tymovskoe         57.85 351 eP       P        18 09 36.3 +0.9
TYV                                 pmax    pmax
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       comp=Z,42nm,0.8s
PBKT   Sadao Pong        57.90 294 eP       P        18 09 37.6 +1.2
       comp=Z,138nm,0.9s
PBKT   Sadao Pong        57.90 294  P       P        18 09 37.7 +1.3
       comp=Z,170nm,1.2s,comp=Z,2µm
PHET   Kaeng Krachan     58.06 289  P       P        18 09 39.0 +1.4
       comp=Z,76nm,0.9s,comp=Z,608nm
PKDT   Phuket            58.08 283  P       P        18 09 38.0 +0.2
       comp=Z,36nm,1.1s
BJT    Baijiatuau        58.21 326 eP       P        18 09 37.7 -0.5
       comp=Z,49nm,0.6s
BJT                                 LR      LR
       comp=Z,3µm,20.0s
BJT    Baijiatuau        58.21 326 eP       P        18 09 37.7 -0.5
BJT                                 pmax    pmax
       comp=Z,49nm,0.6s
BJT                                 MLR     MLR
       comp=Z,3µm,20.0s
BJI    Beijing           58.22 326⇑iP       P        18 09 37.7 -0.5
BJI                                 pmax    pmax
       comp=Z,18nm,0.8s
BJI                                 LR      LR
       comp=Z,1µm,16.2s
BJI                                 LR      LR
       comp=Z,2µm,16.7s
BJI                                 LR      LR
       comp=Z,2µm,19.6s
TPTI                     58.34 278  P       P        18 09 39.1 -0.5
       comp=Z,38nm,0.9s
UTTA   Uttaradit         58.65 295  P       P        18 09 42.8 +1.2
       comp=Z,149nm,0.9s,comp=Z,1µm
KLR    Kul'dur           58.81 343c iP      P        18 09 42.3 +0.1
LHMI   Lhok Sumawe       58.91 280 eP       P        18 09 43.0 -0.5
       comp=Z,222nm,1.1s
LHMI   Lhok Sumawe       58.91 280  P       P        18 09 44.1 +0.6
       comp=Z,207nm,1.1s,comp=Z,3µm
TIY    Taiyuan           58.92 321 eP       P        18 09 43.0 -0.3
TIY                                 pmax    pmax
       comp=Z,23nm,1.0s
SRDT   SRDT              58.93 291  P       P        18 09 45.1 +1.5
       comp=Z,283nm,1.2s,comp=Z,3µm
GRNR   Gornyy            58.98 346 eP       P        18 09 45.1 +1.8
GRNR                                pmax    pmax
       comp=Z,21nm,1.0s
UTHA   Uthaitani         58.98 292  P       P        18 09 45.2 +1.2
       comp=Z,119nm,0.9s,comp=Z,809nm
XAN    Xi'an             59.07 316  P       P        18 09 44.2 -0.1
XAN                                 pmax    pmax
       comp=Z,78nm,1.0s
XAN    Xi'an             59.07 316 eP       P        18 09 43.5 -0.8
       comp=Z,72nm,0.8s
XAN    Xi'an             59.07 316 eP       P        18 09 43.5 -0.8
XAN                                 pmax    pmax
       comp=Z,72nm,0.8s
PET    Petropavlovsk     59.14   3 eP       P        18 09 45.3 +1.0
       comp=Z,179nm,0.7s
PET    Petropavlovsk     59.14   3 eP       P        18 09 45.7 +1.4
PET                                 pmax    pmax
       comp=Z,180nm,0.7s
PEA0B  Petropavlovsk-    59.18   2 eP       P        18 09 46.0 +1.3
       comp=Z,200nm,0.7s
PETK   Petropavlovsk-    59.18   2  P       P        18 09 45.8 +1.1
       comp=Z,194nm,0.7s,baz=165,slow=3.7,SNR=93
PETK                                LR      LR       18 31 46.9
       comp=Z,906nm,21.4s,baz=103,slow=32
PEA1   Petropavlovsk-    59.19   2 eP       P        18 09 45.8 +1.1
SUKH   Sukhothai         59.40 294  P       P        18 09 48.3 +1.5
       comp=Z,180nm,0.8s,comp=Z,1µm
KMI    Kunming           59.48 304  P       P        18 09 49.0 +1.5
KMI                                 PP      PP       18 12 04.1 +4.1
KMI                                 S       S        18 17 57.0 +6.8
KMI                                 SS      SS       18 21 48.5 +1.4
KMI                                 pmax    pmax
       comp=Z,210nm,1.0s
KMI                                 pmax    pmax
       comp=Z,870nm,10.1s
KMI                                 LR      LR
       comp=Z,1µm,17.5s
KMI                                 LR      LR
       comp=Z,1µm,17.5s
KMI                                 LR      LR
       comp=Z,2µm,17.5s
KMI    Kunming           59.48 304 eP       P        18 09 48.2 +0.7
       comp=Z,205nm,1.0s
KMI    Kunming           59.48 304 eP       P        18 09 48.2 +0.7
KMI                                 pmax    pmax
       comp=Z,205nm,1.0s
UMPA   Umpang Tak        59.71 293  P       P        18 09 50.2 +1.2
       comp=Z,98nm,0.9s,comp=Z,1µm
CM01   Chiang Mai Arr    60.30 295 eP       P        18 09 54.3 +1.3
CM31   Chiang Mai Arr    60.33 295 eP       P        18 09 54.4 +1.2
CM31   Chiang Mai Arr    60.33 295  P       P        18 09 54.9 +1.7
       SNR=222
CMAR   Chiang Mai Arr    60.33 295  P       P        18 09 54.6 +1.4
       comp=Z,318nm,0.8s,baz=116,slow=5.1,SNR=1096
CMAR                                PKPPKP  P'P'df   18 39 12.7 -3.8
       comp=Z,4.0nm,1.2s,baz=293,slow=3.4,SNR=7.4
NKL    Nikolayevsk       60.38 350 i P      P        18 09 53.0 +0.2
NKL                                 pmax    pmax
       comp=N,16nm,0.9s
NKL                                 pmax    pmax
       comp=Z,110nm,0.9s
CMMT   Chiang Mai        60.44 296  P       P        18 09 54.7 +0.7
       comp=Z,286nm,1.1s,comp=Z,3µm
CHTO   Chiang Mai        60.44 296 eP       P        18 09 54.8 +0.8
       comp=Z,284nm,1.0s
CHTO                                LR      LR
       comp=Z,1µm,19.0s
CHTO   Chiang Mai        60.44 296 eP       P        18 09 54.8 +0.8
CHTO                                pmax    pmax
       comp=Z,284nm,1.0s
CHTO                                MLR     MLR
       comp=Z,1µm,19.0s
CHTO   Chiang Mai        60.44 296  P       P        18 09 55.2 +1.2
       SNR=115
CHTO   Chiang Mai        60.44 296  P       P        18 09 54.7 +0.8
       comp=Z,1µm,1.1s,comp=Z,12µm
BSI    Banda Aceh        60.57 280  P       P        18 09 53.8 -1.2
       comp=Z,92nm,1.1s,comp=Z,42µm
SMY    Shemya            60.99  13 eP       P        18 09 58.2 +1.2
SMY    Shemya            60.99  13 eP       P        18 09 58.2 +1.2
CD2    Chengdu           61.22 310  P       P        18 09 59.4 +0.3
CD2                                 S       S        18 18 14.5 +2.6
CD2                                 pmax    pmax
       comp=Z,210nm,0.5s
CD2                                 pmax    pmax
       comp=Z,520nm,6.0s
CD2                                 LR      LR
       comp=Z,3µm,16.9s
CD2                                 LR      LR
       comp=Z,2µm,16.4s
CD2                                 LR      LR
       comp=Z,3µm,18.4s
HHC    Hu-ho-hao-te      61.41 324 eP       P        18 10 00.4 +0.2
HHC                                 pP      pP       18 10 22.6 -0.9
HHC                                 sP      sP       18 10 28.2 -5.8
HHC                                 S       S        18 18 08.5 -5.6
HHC                                 pmax    pmax
       comp=Z,34nm,1.2s
HHC                                 pmax    pmax
       comp=Z,640nm,6.9s
HHC                                 LR      LR
       comp=Z,2µm,17.2s
HHC                                 LR      LR
       comp=Z,2µm,14.0s
HHC                                 LR      LR
       comp=Z,2µm,16.7s
KIWB   Kanaga Island     62.64  19 eP       P        18 10 09.8 +1.7
KIWB                               ePcP     PcP      18 10 47.4 +1.2
ADK    Adak              62.82  19 eP       P        18 10 11.1 +1.8
       comp=Z,341nm,0.8s
ADK                                 LR      LR
       comp=Z,3µm,19.0s
ADK    Adak              62.82  19 eP       P        18 10 11.5 +2.2
ADK                                 pmax    pmax
       comp=Z,340nm,0.8s
HIA    Hailar            63.19 335 eP       P        18 10 11.8  0.0
       comp=Z,116nm,0.9s
HIA                                 LR      LR
       comp=Z,2µm,20.0s
HIA    Hailar            63.19 335c iP      P        18 10 12.0 +0.2
HIA                                 pmax    pmax
       comp=Z,108nm,0.9s
LZH    Lanzhou           63.68 315 ⇑P       P        18 10 16.8 +1.3
LZH                                 pP      pP       18 10 37.7 -1.3
LZH                                 sP      sP       18 10 45.8 -3.5
LZH                                 PP      PP       18 12 40.0 +3.2
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LZH                                 pmax    pmax
       comp=Z,35nm,1.3s
LZH                                 pmax    pmax
       comp=Z,120nm,5.5s
LZH                                 LR      LR
       comp=Z,3µm,15.2s
LZH                                 LR      LR
       comp=Z,4µm,15.2s
LZH                                 LR      LR
       comp=Z,5µm,15.2s
ZEA    Zeya              64.12 342 eP       P        18 10 18.0 +0.1
ZEA                                 pmax    pmax
       comp=N,73nm,0.8s
ZEA                                 pmax    pmax
       comp=E,21nm,0.8s
ZEA                                 pmax    pmax
       comp=Z,110nm,0.8s
PBA    Port Blair        64.28 286 eP       P        18 10 19.4 -0.2
       comp=Z,63nm,1.1s
TAOE   Nuku Hiva Isla    64.43  97 eP       P        18 10 20.8  0.0
       comp=Z,308nm,1.0s
TAOE   Nuku Hiva Isla    64.43  97 eP       P        18 10 20.4 -0.4
       comp=Z,163nm,1.0s
MA2    Magadan           65.70 358 eP       P        18 10 27.6 -0.3
       comp=Z,148nm,0.7s
MA2    Magadan           65.70 358c iP      P        18 10 28.1 +0.2
MA2                                 pmax    pmax
       comp=Z,121nm,0.8s
MA2    Magadan           65.70 358  P       P        18 10 28.4 +0.5
       comp=Z,136nm,0.7s,baz=161,slow=6.2,SNR=138
NIKH   Nikolski High     66.52  23 eP       P        18 10 35.1 +1.7
       comp=Z,275nm,0.8s
MOKO   MOKOCHONG         66.79 302 eP       P        18 10 35.6 -0.2
MOKO                                IAmb    IAmb     18 10 36.2
       comp=Z,80nm,0.9s
SAIH   SAIHA             66.88 298 eP       P        18 10 36.8 +0.3
KOHI   KOHIMA            66.94 301 eP       P        18 10 33.4 -3.4
KOHI                                IAmb    IAmb     18 10 38.0
       comp=Z,482nm,1.5s
CASY   Casey             67.25 198 eP       P        18 10 37.7  0.0
       comp=Z,41nm,0.9s
CASY                               ePcP     pwP      18 11 05.2 +0.2
CASY                                LR      LR
       comp=Z,647nm,19.0s
ZIRO   ZIRO              67.76 303 eP       P        18 10 42.5 +0.5
GTA    Gaotai            68.09 317 ⇑P       P        18 10 44.5 +0.7
GTA                                 pP      pP       18 11 03.2 -4.3
GTA                                 sP      PcP      18 11 12.0 +2.8
GTA                                 pmax    pmax
       comp=Z,47nm,1.3s
UNV    Unalaska Valle    68.11  24 eP       P        18 10 44.4 +1.1
       comp=Z,82nm,0.8s
BRDH   Bariadhala        68.13 297  P       P        18 10 45.5 +1.4
       comp=Z,136nm,0.4s,baz=71,slow=8.2,SNR=16
ULN    Ulaanbaatar       68.30 328 eP       P        18 10 45.6 +0.8
       comp=Z,51nm,0.9s
ULN    Ulaanbaatar       68.30 328c iP      P        18 10 45.7 +0.8
ULN                                 pmax    pmax
       comp=Z,65nm,1.0s
ULN    Ulaanbaatar       68.30 328  P       P        18 10 45.8 +0.9
       SNR=22
TEZP   TEZPUR            68.34 302 eP       P        18 10 45.6 +0.2
TEZP                                IAmb    IAmb     18 10 46.0
       comp=Z,180nm,1.2s
BELO   BELONIA           68.47 298 eP       P        18 10 48.0 +1.8
BELO                                IAmb    IAmb     18 10 48.8
       comp=Z,2µm,0.2s
AKUT   Akutan            68.61  24 eP       P        18 10 47.5 +1.0
       comp=Z,195nm,1.0s
SONA0  Songino Array     68.63 327 eP       P        18 10 47.6 +0.7
SONA0                              eP'P'df  P'P'df   18 39 02.2 +1.4
SONM   Songino Array     68.63 327  P       P        18 10 47.6 +0.7
       comp=Z,47nm,0.9s,baz=131,slow=5.5,SNR=121
SONM                                PKP2bc           18 39 02.2
       comp=Z,4.7nm,0.9s,baz=290,slow=2.0,SNR=15
SONA1  Songino Array     68.63 327 eP       P        18 10 46.9  0.0
SHL    Shillong          68.79 300 eP       P        18 10 48.6 +0.1
       comp=Z,141nm,0.9s
SHL    Shillong          68.79 300 eP       P        18 10 48.9 +0.5
SHL    Shillong          68.79 300 eP       P        18 10 48.4 -0.1
SHL                                 IAmb    IAmb     18 10 49.1
       comp=Z,157nm,1.1s
SHL                                ex       x        18 19 50.0
SEY    Seymchan          69.01 359  P       P        18 10 49.5 +0.7
       comp=Z,57nm,0.8s,baz=167,slow=5.1,SNR=86
SPIA   Saint Paul Isl    69.31  19 eP       P        18 10 52.2 +1.5
       comp=Z,413nm,0.9s
TAWA   Tawang            69.45 302 eP       P        18 10 53.7 +1.1
TAWA                                IAmb    IAmb     18 10 55.5
       comp=Z,4µm,0.1s
FALS   False Pass        70.08  24 eP       P        18 10 56.3 +0.8
       comp=Z,175nm,0.9s
LSA    Lhasa             70.73 304  P       P        18 11 01.5 +0.9
LSA                                 pmax    pmax
       comp=Z,54nm,0.9s
LSA    Lhasa             70.73 304 eP       P        18 11 01.0 +0.4
       comp=Z,41nm,0.8s
LSA    Lhasa             70.73 304 eP       P        18 11 01.0 +0.4
LSA                                 pmax    pmax
       comp=Z,41nm,0.8s
YAK    Yakutsk           70.80 348c iP      P        18 11 00.3 +0.6
YAK                                e                 18 11 18.5
YAK                                e*PP     pP       18 11 27.0 +3.1
YAK                                e                 18 13 36.2
YAK                                ePPP     PPP      18 15 23.4
YAK                                eS       S        18 20 10.3 +3.4
YAK                                e*SS     sS       18 20 44.0 -4.1
YAK                                e                 18 20 52.1
YAK                                eSS      SS       18 24 37.8 -3.5
YAK                                 pmax    pmax
       comp=Z,589nm,0.9s
YAK                                 pmax    pmax
       comp=N,254nm,1.2s
YAK                                 pmax    pmax
       comp=E,119nm,1.1s
YAK                                 pmax    pmax
       comp=Z,2µm,6.2s
YAK                                 pmax    pmax
       comp=N,3µm,7.2s
YAK                                 pmax    pmax
       comp=E,1µm,5.2s
YAK                                 smax    smax
       comp=N,303nm,1.5s
YAK                                 smax    smax
       comp=E,240nm,1.4s
VNDA   Vanda             71.33 178 eP       P        18 11 03.5 +0.7
       comp=E,34nm,0.9s
VNDA                                PKKP    PKKPdf   18 30 40.8 -0.8
VNDA   Vanda             71.33 178 eP       P        18 11 03.5 +0.7
VNDA                                pmax    pmax
       comp=Z,34nm,0.9s
VNDA   Vanda             71.33 178  P       P        18 11 03.6 +0.8
       comp=Z,19nm,0.7s,baz=329,slow=6.1,SNR=38
VNDA                                PKKP    PKKPdf   18 30 40.8 -0.8
       comp=Z,1.5nm,0.4s,baz=66,slow=1.2,SNR=13
SDPT   Sand Point        71.64  25 eP       P        18 11 04.5 -0.4
       comp=Z,192nm,1.2s
ZAK    Zakamensk         71.78 328 eP       P        18 11 06.5 +0.4
ZAK                                 pmax    pmax
       comp=Z,89nm,0.9s
SBA    Scott Base        71.84 177 eP       P        18 11 07.4 +1.6
       comp=Z,56nm,1.0s
SBA    Scott Base        71.84 177 eP       P        18 11 07.4 +1.6
SBA                                 pmax    pmax
       comp=Z,56nm,1.0s
BOD    Bodaibo           71.87 338⇓iP       P        18 11 05.8 -0.5
BOD                                 pmax    pmax
       comp=Z,40nm,1.2s
GTK    Tadong            72.12 301 eP       P        18 11 09.4 +0.7
GTK                                 IAmb    IAmb     18 11 11.4
       comp=Z,218nm,1.5s
TLY    Talaya            72.35 329 eP       P        18 11 09.7 +0.4
       comp=Z,38nm,0.9s
TLY                                 LR      LR
       comp=Z,752nm,22.0s
TLY    Talaya            72.35 329c iP      P        18 11 09.7 +0.4
TLY    Talaya            72.35 329  P       P        18 11 09.9 +0.6
       SNR=14
IRK    Irkutsk           72.36 330 eP       P        18 11 09.1 -0.3
IRK                                 pmax    pmax
       comp=Z,66nm,1.1s
CHGN   Chignik           73.15  25 eP       P        18 11 14.8 +1.0
       comp=Z,86nm,1.0s
BOK    Bokaro            73.52 297 eP       P        18 11 17.2 +0.4
BOK                                 IAmb    IAmb     18 11 19.4
       comp=Z,105nm,1.0s
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MOY   Mondy             73.70 328   eP      P        18 11 18.0 +0.6
MOY                                  pmax   pmax
      comp=Z,71nm,1.5s
RAMN  Ramite            73.73 300   eP      P        18 11 18.5 +0.2
      comp=Z,63nm,0.5s
GAMB  Gambell           74.24  15   eP      P        18 11 21.7 +1.6
      comp=Z,96nm,0.8s
JIRN  Jiri              74.27 301   eP      P        18 11 22.0 +0.4
      comp=Z,207nm,0.7s
BILL  Bilibino          74.56   4   eP      P        18 11 23.1 +1.2
      comp=Z,192nm,0.8s
BILL                                 LR     LR
      comp=Z,3µm,19.0s
BILL  Bilibino          74.56   4c iP       P        18 11 22.8 +0.9
BILL                               i                 18 11 38.2
BILL                               i                 18 14 07.6
BILL                                 pmax   pmax
      comp=Z,154nm,0.8s
GUN   Gumba             74.61 301   eP      P        18 11 23.9 +0.4
      comp=Z,343nm,0.7s
PKI   Pulchoki          74.92 301   eP      P        18 11 25.3  0.0
      comp=Z,150nm,0.9s
PKIN  Phulchoki         74.93 301   eP      P        18 11 25.2 -0.1
      comp=Z,56nm,0.4s
SII   Sitkinak Islan    75.14  26   eP      P        18 11 26.8 +1.3
      comp=Z,134nm,0.7s
PALK  Pallekele         75.17 279   eP      P        18 11 27.2 +0.5
      comp=Z,222nm,1.0s
PALK  Pallekele         75.17 279    P      P        18 11 27.8 +1.1
      SNR=19
PALK  Pallekele         75.17 279    P      P        18 11 27.6 +1.0
      comp=Z,146nm,0.9s,baz=116,slow=5.6,SNR=87
DMN   Daman             75.19 301   eP      P        18 11 27.1 +0.4
      comp=Z,229nm,0.7s
OHAK  Old Harbor        75.93  26   eP      P        18 11 31.4 +1.4
      comp=Z,104nm,1.0s
KOLN  Koldanda          76.52 300   eP      P        18 11 34.1 -0.1
      comp=Z,348nm,0.8s
DANN  Dangsing          76.53 301   eP      P        18 11 33.9 -0.5
      comp=Z,255nm,0.7s
ANM   Nome              76.56  17   eP      P        18 11 34.9 +1.5
      comp=Z,109nm,0.8s
ANM   Nome              76.56  17   eP      P        18 11 34.9 +1.5
ANM                                  pmax   pmax
      comp=Z,109nm,0.8s
KDAK  Kodiak Island     76.57  26   eP      P        18 11 35.1 +1.5
      comp=Z,112nm,1.1s
KDAK                                 LR     LR
      comp=Z,1µm,21.0s
KDAK  Kodiak Island     76.57  26   i P     P        18 11 34.7 +1.1
KDAK  Kodiak Island     76.57  26    P      P        18 11 35.1 +1.5
      comp=Z,70nm,0.9s,baz=190,slow=1.5,SNR=19
PYUN  Piuthan           77.12 301   eP      P        18 11 37.2 -0.5
      comp=Z,384nm,0.9s
SVW2  Sparrevohn        77.37  22   eP      P        18 11 39.8 +1.8
      comp=Z,64nm,0.8s
HOM   Homer             78.06  25   eP      P        18 11 42.6 +0.7
      comp=Z,526nm,0.9s
RSO   Redoubt South     78.08  24   eP      P        18 11 42.2 -0.1
WMQ   Urumqi            78.18 317    P      P        18 11 43.7 +0.7
WMQ                                  pP     pP       18 12 04.2 -3.2
WMQ                                  sP     sP       18 12 15.0 -2.5
WMQ                                  pmax   pmax
      comp=Z,92nm,1.3s
WMQ                                  pmax   pmax
      comp=Z,2µm,11.7s
WMQ   Urumqi            78.18 317   eP      P        18 11 43.2 +0.2
      comp=Z,49nm,1.1s
WMQ   Urumqi            78.18 317   eP      P        18 11 43.2 +0.2
WMQ                                  pmax   pmax
      comp=Z,49nm,1.1s
BRLK  Bradley Lake      78.43  25   eP      P        18 11 44.5 +0.5
      comp=Z,99nm,1.0s
HYB   Hyderabad         78.88 289   i P     P        18 11 47.0 -0.4
SEW   Seward            79.22  25   eP      P        18 11 49.5 +1.3
      comp=Z,116nm,1.0s
SUA   Susitna One       79.46  23   eP      P        18 11 49.9 +0.2
      comp=Z,49nm,0.7s
TIXI  Tiksi             79.60 352⇓iP      P        18 11 49.9 -0.2
TIXI                                 pmax   pmax
      comp=Z,37nm,1.3s
TIXI  Tiksi             79.60 352    P      P        18 11 49.8 -0.2
      comp=Z,14nm,0.4s,baz=136,slow=5.6,SNR=42
RC01  Rabbit Creek A    79.65  24   eP      P        18 11 51.0 +0.5
      comp=Z,107nm,1.0s
PPLA  Purkeypile        79.74  22   eP      P        18 11 51.4 +0.2
      comp=Z,66nm,1.4s
RDOG  Red Dog Mine      79.84  15   eP      P        18 11 52.9 +1.4
      comp=Z,118nm,0.8s
CAST  Castle Rocks      80.09  21   eP      P        18 11 53.0 +0.1
      comp=Z,52nm,0.8s
CAST                                esP     pP       18 12 21.1 +3.3
PMR   Palmer            80.17  24   eP      P        18 11 53.6 +0.3
      comp=Z,54nm,0.9s
PMR   Palmer            80.17  24   eP      P        18 11 53.9 +0.6
MID   Middleton Isla    80.20  26   eP      P        18 11 55.4 +1.9
      comp=Z,358nm,1.2s
MID   Middleton Isla    80.20  26   eP      P        18 11 55.4 +1.9
MID                                  pmax   pmax
      comp=Z,359nm,1.2s
KNK   Knik Glacier      80.35  24   eP      P        18 11 54.9 +0.6
      comp=Z,114nm,1.2s
GHO   Glory Hole Cre    80.36  24   eP      P        18 11 54.7 +0.2
      comp=Z,53nm,0.8s
DGZ   Jazzator, Alta    80.46 323c iP       P        18 11 55.3 -0.1
DGZ                                  pmax   pmax
      comp=Z,56nm,1.0s
SML   Sawmill           80.61  24   eP      P        18 11 56.1 +0.3
      comp=Z,162nm,1.0s
SML   Sawmill           80.61  24   eP      P        18 11 56.1 +0.3
SML                                  pmax   pmax
      comp=Z,163nm,1.0s
GLI   Glacier Island    80.62  25   eP      P        18 11 57.2 +1.4
      comp=Z,66nm,0.7s
TRF   Thorofare Moun    80.77  22   eP      P        18 11 55.7 -1.1
      comp=Z,36nm,0.7s
BPAW  Bear Paw Mtn.     80.89  21   eP      P        18 11 57.0 -0.2
      comp=Z,29nm,1.1s
EYAK  Cordova Ski Ar    81.03  26   eP      P        18 11 58.8 +0.9
      comp=Z,76nm,1.2s
SCM   Sheep Creek Mo    81.03  24   eP      P        18 11 58.7 +0.6
      comp=Z,77nm,1.0s
SCM   Sheep Creek Mo    81.03  24   eP      P        18 11 58.7 +0.6
SCM                                  pmax   pmax
      comp=Z,77nm,1.0s
IM3   Indian Mountai    81.08  19   eP      P        18 11 58.7 +0.6
IM3                                 esP     pP       18 12 27.0 +3.9
RND   Reindeer          81.28  22   eP      P        18 11 59.1 -0.3
      comp=Z,66nm,0.7s
RND   Reindeer          81.28  22   eP      P        18 11 59.1 -0.3
RND                                  pmax   pmax
      comp=Z,66nm,0.7s
ZSN   Zaisan            81.28 320c iP       P        18 11 58.0 -1.6
ZSN                                  pmax   pmax
      comp=Z,153nm,1.4s
ZSN   Zaisan            81.28 320⇑iP      P        18 11 58.1 -1.6
      comp=Z,153nm,1.4s
DIV   Divide            81.31  25   eP      P        18 12 00.5 +0.9
      comp=Z,45nm,0.7s
MCK   McKinley          81.43  22   eP      P        18 11 60.0 -0.1
      comp=Z,146nm,0.8s
MCK   McKinley          81.43  22   eP      P        18 12 00.0 -0.1
MCK                                  pmax   pmax
      comp=Z,146nm,0.8s
BWN   Browne            81.48  21   eP      P        18 12 01.1 +0.8
      comp=Z,139nm,1.2s
MLY   Manley            81.51  20   eP      P        18 12 00.7 +0.2
      comp=Z,52nm,0.7s
HMT   Hamilton          81.56  26   eP      P        18 12 02.6 +1.8
      comp=Z,59nm,0.9s
DHY   Denali Highway    81.67  23   eP      P        18 12 02.2 +0.7
      comp=Z,49nm,1.0s
DGAR  Diego Garcia      81.69 263    PFAKE                18 12 10.0 +7.5
DGAR                                 LR     LR
      comp=Z,935nm,19.0s
WRH   Wood River Hil    82.14  22   eP      P        18 12 03.5 -0.3
      comp=Z,65nm,1.2s
HARP  HAARP             82.20  24   eP      P        18 12 05.3 +1.1
      comp=Z,53nm,0.8s
MDM   Murphy Dome       82.36  21   eP      P        18 12 04.7 -0.2
      comp=Z,46nm,1.2s
TCOL  CIGO, UAF Yank    82.44  21    P      P        18 12 05.1 -0.1
      baz=238
COLA  College           82.45  21   eP      P        18 12 05.2 -0.1
      comp=Z,71nm,0.7s
COLA                                 LR     LR
      comp=Z,2µm,22.0s
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COLA  College           82.45  21c iP       P        18 12 05.0 -0.3
COLA                                 pmax   pmax
      comp=Z,71nm,0.9s
HDA   Harding Lake      82.53  22   eP      P        18 12 05.4 -0.4
      comp=Z,32nm,0.8s
HDA   Harding Lake      82.53  22    P      P        18 12 05.8  0.0
      baz=238
POKR  Poker Plat Res    82.73  21    P      P        18 12 06.7 -0.1
      baz=238
MK01  Makanchi Array    82.73 319   eP      P        18 12 06.7 -0.6
IL1   Eielson Array     82.74  22   eP      P        18 12 05.8 -1.1
ILAR  Eielson Array     82.74  22    P      P        18 12 06.3 -0.5
      comp=Z,32nm,0.9s,baz=252,slow=5.1,SNR=119
ILAR                                 PKPPKP P'P'df   18 38 27.0 -7.9
      comp=Z,0.7nm,0.9s,baz=6.4,slow=3.6,SNR=5.3
ILAR                                 LR     LR       18 45 17.6
      comp=Z,1µm,20.8s,baz=233,slow=33
ILB   Eielson Array     82.74  22   eP      P        18 12 06.1 -0.8
MK31  Makanchi Array    82.75 319   eP      P        18 12 06.9 -0.5
MK31  Makanchi Array    82.75 319   eP      P        18 12 07.1 -0.3
MK32  Makanchi Array    82.75 319   eP      P        18 12 07.2 -0.1
MK32                                ePKKPbc PKKPbc   18 30 31.4 -1.7
MKAR  Makanchi Array    82.75 319   eP      P        18 12 06.8 -0.6
      comp=Z,660nm,0.8s
MKAR                                 PKKPbc PKKPbc   18 30 31.4 -1.7
MKAR  Makanchi Array    82.75 319   eP      P        18 12 07.1 -0.3
MKAR  Makanchi Array    82.75 319    P      P        18 12 07.2 -0.1
      comp=Z,96nm,0.7s,baz=100,slow=5.2,SNR=403
MKAR                                 PKKPbc PKKPbc   18 30 31.4 -1.7
      comp=Z,1.7nm,0.9s,baz=283,slow=2.3,SNR=8.0
MNCI  Minicoy           82.81 279   eP      P        18 12 09.8 +1.5
      comp=Z,255nm,1.0s
COLD  Coldfoot          82.96  19   eP      P        18 12 08.9 +1.0
      comp=Z,36nm,1.1s
MAKZ  Makanchi          82.96 319   eP      P        18 12 07.8 -0.6
      comp=Z,169nm,0.9s
MAKZ  Makanchi          82.96 319   eP      P        18 12 08.4  0.0
RIDG  Independ'e Rid    82.98  23   eP      P        18 12 08.3  0.0
      comp=Z,115nm,1.2s
SCRK  Sand Creek        83.43  23   eP      P        18 12 11.2 +0.6
      comp=Z,53nm,1.2s
SCRK                                esP     pP       18 12 38.8 +3.1
ZAA0  Zalesovo Array    83.48 326   eP      P        18 12 09.8 -1.1
      comp=Z,104nm,0.8s
ZALV  Zalesovo Beam     83.48 326   eP      P        18 12 09.4 -1.5
ZALV                                 PKKPbc PKKPbc   18 30 29.4 -2.3
ZALV  Zalesovo Beam     83.48 326   eP      P        18 12 09.4 -1.5
ZALV  Zalesovo Beam     83.48 326    P      P        18 12 09.9 -1.0
      comp=Z,54nm,0.4s,baz=111,slow=5.3,SNR=351
ZALV                                 PKKPbc PKKPbc   18 30 29.4 -2.3
      comp=Z,1.2nm,0.6s,baz=215,slow=0.6,SNR=5.2
ZAA1  Zalesovo Array    83.48 326   eP      P        18 12 09.9 -1.0
ZAA1                                ePKKPbc PKKPbc   18 30 29.4 -2.3
SHLS  Shalkode          83.69 315ceP      P        18 12 09.3 -3.1
SHLS                                 pmax   pmax
      comp=Z,573nm,1.5s
SHLS  Shalkode          83.69 315⇑eP      P        18 12 09.4 -3.1
      comp=Z,573nm,1.5s
PDGK  Podgornoye        83.71 315    P      P        18 12 12.3 -0.2
PDGK                                 pmax   pmax
      comp=Z,46nm,1.0s
QSPA  South Pole Qui    83.72 180   eP      P        18 12 12.5 +0.3
      comp=Z,265nm,0.8s
UZB   Uzynbulak         84.00 314deP      P        18 12 11.5 -2.5
UZB                                  pmax   pmax
      comp=Z,517nm,1.3s
UZB   Uzynbulak         84.00 314⇓eP      P        18 12 11.6 -2.5
      comp=Z,517nm,1.3s
FYU   Fort Yukon        84.25  20   eP      P        18 12 15.7 +1.1
      comp=Z,54nm,1.2s
KPKS  Kokpek            84.32 315deP      P        18 12 13.2 -2.3
KPKS                                 pmax   pmax
      comp=Z,843nm,1.5s
KPKS  Kokpek            84.32 315⇓eP      P        18 12 13.2 -2.3
      comp=Z,843nm,1.4s
SATY  Saty              84.42 314c iP       P        18 12 14.6 -1.5
SATY                                 pmax   pmax
      comp=Z,750nm,1.3s
SATY  Saty              84.42 314⇑iP      P        18 12 14.7 -1.4
      comp=Z,750nm,1.3s
ZHN   Zhinishke         84.42 314c iP       P        18 12 14.2 -1.9
ZHN                                  pmax   pmax
      comp=Z,275nm,1.4s
ZHN   Zhinishke         84.42 314⇑iP      P        18 12 14.2 -1.9
      comp=Z,274nm,1.4s
SIT   Sitka             84.45  31   eP      P        18 12 17.3 +1.6
      comp=Z,64nm,1.0s
SIT   Sitka             84.45  31   eP      P        18 12 17.3 +1.6
SIT                                  pmax   pmax
      comp=Z,64nm,1.0s
TARG  Taragay, Kyrgy    84.54 313   eP      P        18 12 16.8 -0.3
      comp=Z,53nm,0.8s
NVS   Novosibirsk       84.65 327⇓iP      P        18 12 16.6 -0.2
NVS                                  pmax   pmax
      comp=N,28nm,1.2s
NVS                                  pmax   pmax
      comp=E,56nm,1.2s
NVS                                  pmax   pmax
      comp=Z,82nm,1.2s
DIB   Dawson Inlet,     84.74  35   eP      P        18 12 18.6 +1.3
      comp=Z,72nm,1.1s
HYT   Haines Junctio    84.78  27   eP      P        18 12 19.4 +1.8
      comp=Z,60nm,0.8s
TDK   Taldyqorghan      84.88 316d iP       P        18 12 16.3 -1.9
TDK                                  pmax   pmax
      comp=Z,1µm,1.7s
TDK   Taldyqorghan      84.88 316⇓iP      P        18 12 16.4 -1.9
      comp=Z,1µm,1.7s
EGAK  Eagle             84.89  23    PFAKE                18 12 30.0 +12
EGAK                                 LR     LR
      comp=Z,3µm,19.0s
MAW   Mawson            85.02 203    P      P        18 12 19.6 +1.1
      baz=85,SNR=29
MAW   Mawson            85.02 203   eP      P        18 12 19.0 +0.6
      comp=Z,25nm,0.7s
MAW   Mawson            85.02 203   eP      P        18 12 19.0 +0.6
MAW                                  pmax   pmax
      comp=Z,25nm,0.7s
MAW   Mawson            85.02 203    P      P        18 12 19.5 +1.1
      comp=Z,99nm,0.6s,baz=103,slow=6.1,SNR=40
SEM   Semipalatinsk     85.07 322c iP       P        18 12 16.2 -3.1
SEM                                  pmax   pmax
      comp=Z,1µm,1.1s
SEM   Semipalatinsk     85.07 322⇑iP      P        18 12 16.3 -3.1
      comp=Z,1µm,1.1s
KDJ   Kajisay           85.08 313   eP      P        18 12 20.4 +0.8
      comp=Z,106nm,0.8s
BESE  Bessie Mountai    85.22  30   eP      P        18 12 21.5 +1.8
      comp=Z,44nm,0.8s
DAWY  Dawson            85.28  24   eP      P        18 12 21.0 +1.1
      comp=Z,28nm,1.0s
SKAG  Skagway           85.29  29   eP      P        18 12 21.8 +1.9
      comp=Z,47nm,1.0s
JIS   Juneau Island     85.35  30   eP      P        18 12 22.2 +2.0
      comp=Z,46nm,1.1s
MDOK  Medeo             85.41 314ceP      P        18 12 18.6 -2.5
MDOK                                 pmax   pmax
      comp=Z,466nm,1.2s
MDOK  Medeo             85.41 314⇑eP      P        18 12 18.7 -2.4
      comp=Z,466nm,1.2s
KSH   Kashi             85.42 310⇑iP      P        18 12 23.0 +1.8
KSH                                  pP     pP       18 12 45.2 -0.7
KSH                                  PP     PP       18 15 44.3 +3.6
KSH                                  SKS    SKSac    18 22 35.1 -3.1
KSH                                  S      S        18 22 43.9 -1.1
KSH                                  sS     sS       18 23 25.2 -1.8
KSH                                  pmax   pmax
      comp=Z,210nm,0.8s
KSH                                  LR     LR
      comp=Z,620nm,9.5s
KSH                                  LR     LR
      comp=Z,2µm,13.4s
KSH                                  LR     LR
      comp=Z,3µm,17.8s
TNSS  Tian-Shan         85.45 314   eP      P        18 12 20.3 -1.3
TNSS                                 pmax   pmax
      comp=Z,532nm,1.3s
TNSS  Tian-Shan         85.45 314   eP      P        18 12 20.4 -1.3
      comp=Z,532nm,1.3s
AAA   Alma-Ata          85.51 314deP      P        18 12 20.1 -1.4
AAA                                  pmax   pmax
      comp=Z,289nm,0.7s
AAA   Alma-Ata          85.51 314⇓eP      P        18 12 20.2 -1.4
      comp=Z,289nm,0.7s
CHKK  Chushkaly         85.60 315   eP      P        18 12 20.1 -1.8
CHKK                                 pmax   pmax
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      comp=Z,420nm,1.3s
CHKK  Chushkaly         85.60 315   eP      P        18 12 20.2 -1.8
      comp=Z,420nm,1.3s
ULHL  Ulahol            85.79 313    P      P        18 12 23.9 +0.8
      SNR=9.4
NRN   Naryn             85.79 312   eP      P        18 12 22.9 -0.4
      comp=Z,22nm,1.1s
NRN   Naryn             85.79 312   eP      P        18 12 22.9 -0.4
NRN                                  pmax   pmax
      comp=Z,22nm,1.1s
WRAK  Wrangell Islan    85.80  32   eP      P        18 12 24.2 +1.8
      comp=Z,79nm,0.9s
MTBS  Maitube           85.84 314⇓iP      P        18 12 21.8 -1.3
MTBS                                 pmax   pmax
      comp=Z,541nm,1.5s
MTBS  Maitube           85.84 314⇓iP      P        18 12 21.9 -1.3
      comp=Z,541nm,1.5s
WHY   Whitehorse        85.92  28   eP      P        18 12 24.3 +1.1
      comp=Z,34nm,1.1s
KUU   Kurty             86.07 315deP      P        18 12 21.4 -2.8
KUU                                  pmax   pmax
      comp=Z,689nm,1.1s
KUU   Kurty             86.07 315⇓eP      P        18 12 21.5 -2.8
      comp=Z,689nm,1.1s
KURK  Kurchatov         86.16 322   eP      P        18 12 23.4 -1.0
      comp=Z,51nm,1.0s
KURK                                 LR     LR
      comp=Z,2µm,20.0s
KURK  Kurchatov         86.16 322c iP       P        18 12 23.4 -1.0
KURK                                 pmax   pmax
      comp=Z,91nm,1.3s
KURK  Kurchatov         86.16 322    P      P        18 12 23.6 -0.8
      SNR=25
KURBB Kurchatov Arra    86.19 322    P      P        18 12 23.6 -0.9
      comp=Z,22nm,0.6s,baz=102,slow=4.6,SNR=233
TKM2  Tokmak 2          86.39 314    P      P        18 12 25.8 -0.3
      SNR=63
TKM2  Tokmak 2          86.39 314   i P     P        18 12 25.0 -1.1
TKM2                                 pmax   pmax
      comp=Z,38nm,0.6s
NIL   Nilore            86.47 304   eP      P        18 12 25.9 -0.5
      comp=Z,77nm,0.5s
NIL                                  LR     LR
      comp=Z,636nm,20.0s
NIL   Nilore            86.47 304   eP      P        18 12 25.9 -0.5
NIL                                  pmax   pmax
      comp=Z,77nm,0.5s
NIL                                  MLR    MLR
      comp=Z,636nm,20.0s
KZA   Kyzart            86.47 313    P      P        18 12 27.0 +0.3
      SNR=44
KBK   Karagaybulak      86.81 313    P      P        18 12 27.9 -0.1
      SNR=48
CHMS  Chumysh           87.02 314    P      P        18 12 28.3 -0.6
      SNR=48
UCH   Uchtor            87.04 313    P      P        18 12 29.9 +0.3
      SNR=34
FRU1  Bishkek           87.07 313   eP      P        18 12 29.2 +0.1
      comp=Z,26nm,0.8s
FRU   Bishkek           87.08 313   eP      P        18 12 26.0 -3.2
AAK   Ala-Archa         87.13 313    P      P        18 12 29.8 +0.2
      SNR=49
AAK   Ala-Archa         87.13 313   eP      P        18 12 29.1 -0.5
      comp=Z,39nm,0.6s
AAK                                  LR     LR
      comp=Z,1µm,19.0s
AAK   Ala-Archa         87.13 313c iP       P        18 12 29.4 -0.2
AAK                                  pmax   pmax
      comp=Z,25nm,0.8s
AAK   Ala-Archa         87.13 313    P      P        18 12 29.5 -0.2
      SNR=17
EPYK  Eagle Plains      87.23  22   eP      P        18 12 30.3 +0.9
      comp=Z,205nm,1.1s
EPYK  Eagle Plains      87.23  22    P      P        18 12 30.7 +1.3
      baz=248
USP   Ospenovka         87.25 314    P      P        18 12 29.9 -0.1
      SNR=54
SFK   Sufi-Kurgan       87.38 311   i P     P        18 12 31.4 +0.5
SFK                                  pmax   pmax
      comp=Z,55nm,0.9s
KCPM  Cahto Peak        87.50  50   eP      P        18 12 33.7 +2.3
      comp=Z,73nm,0.9s
DLBC  Dease Lake        87.58  31   eP      P        18 12 33.1 +1.8
      comp=Z,88nm,1.1s
DLBC  Dease Lake        87.58  31    P      P        18 12 33.2 +2.0
      comp=Z,38nm,0.9s,baz=251,slow=6.1,SNR=37
KHMM  Horse Mountain    87.60  49   eP      P        18 12 33.8 +1.9
      comp=Z,26nm,0.8s
AML   Almayashu         87.62 313    P      P        18 12 32.5 +0.2
      SNR=86
EKS2  Erkin-Say         87.66 313    P      P        18 12 32.0  0.0
      SNR=65
HOPS  Hopland Field     87.77  51   eP      P        18 12 34.5 +2.0
      comp=Z,59nm,1.0s
J01E  Myrtle Point      87.87  46    P      P        18 12 35.0 +2.2
      baz=260
L02E  Cave Junction     87.92  47    P      P        18 12 35.2 +2.0
      baz=260
GDXM  Geysers           87.95  51   eP      P        18 12 36.0 +2.5
      comp=Z,52nm,0.9s
K02D  Willamette Mer    87.97  47    P      P        18 12 34.1 +0.6
      baz=260
NRIK  Noril'sk          87.99 341    P      P        18 12 32.1 -0.8
      comp=Z,107nm,0.9s,baz=112,slow=4.9,SNR=75
ARSB  Arslanbob         88.00 312   eP      P        18 12 33.6 -0.2
      comp=Z,36nm,0.8s
O02D  Mt. Diablo Mer    88.19  49    P      P        18 12 36.2 +1.6
      baz=260,SNR=18
M02C  Callahan          88.34  48    P      P        18 12 36.0 +0.7
      baz=260,SNR=8.4
I03D  Drain, OR         88.38  46    P      P        18 12 36.8 +1.5
      baz=260
N02D  Trinity Center    88.38  49    P      P        18 12 37.2 +1.8
      baz=260
WDC   Whiskeytown Da    88.44  49   eP      P        18 12 36.5 +0.8
      comp=Z,9.3nm,0.7s
WDC   Whiskeytown Da    88.44  49   eP      P        18 12 36.5 +0.8
WDC                                  pmax   pmax
      comp=Z,9.0nm,0.7s
HUMO  Hull Mountain     88.47  47   eP      P        18 12 37.5 +1.7
      comp=Z,59nm,1.1s
YBH   Yreka Blue Hor    88.51  48   eP      P        18 12 36.8 +0.7
      comp=Z,19nm,0.9s
YBH   Yreka Blue Hor    88.51  48   eP      P        18 12 37.2 +1.1
YBH   Yreka Blue Hor    88.51  48    P      P        18 12 36.7 +0.7
      comp=Z,16nm,0.8s,baz=264,slow=1.1,SNR=26
MNAS  Manas             88.55 313   i P     P        18 12 35.4 -0.9
MNAS                                 pmax   pmax
      comp=Z,44nm,1.0s
F03A  Seaside           88.63  44   eP      P        18 12 38.8 +2.4
      comp=Z,86nm,1.0s
NLWA  Neilton Lookou    88.69  42   eP      P        18 12 38.2 +1.5
      comp=Z,16nm,0.8s
G03D  McMinnville, O    88.71  44    P      P        18 12 38.8 +2.0
      baz=260
L04D  Klamath Falls     88.89  47    P      P        18 12 39.3 +1.4
      baz=261,SNR=5.7
O03E  Paynes Creek      88.95  49    P      P        18 12 39.0 +0.8
      baz=261,SNR=18
H04D  Lebanon           88.96  45    P      P        18 12 39.5 +1.5
      baz=260,SNR=5.6
F04D  Rainier, OR       89.03  44    P      P        18 12 39.6 +1.3
      baz=260
I04A  Tendick Farm,     89.07  46    P      P        18 12 39.5 +0.9
      baz=260
ORV   Oroville          89.07  50   eP      P        18 12 40.0 +1.4
      comp=Z,31nm,0.9s
ORV   Oroville          89.07  50   eP      P        18 12 40.3 +1.7
INK   Inuvik            89.08  21    P      P        18 12 38.7 +0.7
      comp=Z,26nm,0.9s,baz=247,slow=3.1,SNR=59
M04C  Macdoel           89.16  48    P      P        18 12 40.4 +1.2
      baz=261
PGC   Sidney            89.19  41   eP      P        18 12 39.5 +0.5
      comp=Z,41nm,1.0s
J04D  Umpqua Nationa    89.19  47    P      P        18 12 40.6 +1.2
      baz=261,SNR=17
D03D  Eldon             89.23  42    P      P        18 12 40.1 +0.9
      baz=260,SNR=8.1
K04D  Chiloquin, OR     89.35  47    P      P        18 12 41.3 +1.3
      baz=261
H04A  Detroit Lake      89.37  45   eP      P        18 12 40.7 +0.7
      comp=Z,40nm,1.1s
AFDM  Forest Hills D    89.38  51   eP      P        18 12 41.6 +1.5
      comp=Z,50nm,0.9s
D04E  Lakebay           89.38  43    P      P        18 12 41.1 +1.3
      baz=260
E04D  Cinebar           89.42  43    P      P        18 12 41.1 +1.0
      baz=260,SNR=7.4
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BTK	Batken	89.42	310	*e*P	P	18 12 41.3	+0.9
	comp=Z,55nm,1.1s						
DZA	Taraz	89.47	313	*e*P	P	18 12 38.6	-1.9
DZA				pmax	pmax		
	comp=Z,213nm,1.1s						
DZA	Taraz	89.47	313	*e*P	P	18 12 38.6	-1.9
	comp=Z,213nm,1.1s						
PAGB	Antelope Grade	89.49	54	*e*P	P	18 12 42.8	+2.1
	comp=Z,52nm,1.0s						
SMMC	Simmler	89.64	55	P	P	18 12 43.4	+2.0
	baz=262						
OTUK	Ortayu	89.64	318	P	P	18 12 39.9	-1.2
OTUK				pmax	pmax		
	comp=Z,20nm,0.9s						
GAR	Garm	89.65	309	*e*P	P	18 12 41.1	-0.4
	comp=Z,62nm,0.5s						
GAR	Garm	89.65	309	*e*P	P	18 12 41.2	-0.4
GAR				pmax	pmax		
	comp=Z,62nm,0.5s						
A04D	Lummi Island	89.69	41	P	P	18 12 41.9	+0.6
	baz=260,SNR=15						
CMB	Columbia Colle	89.70	52	*e*P	P	18 12 43.0	+1.3
	comp=Z,12nm,0.8s						
CMB	Columbia Colle	89.70	52	*e*P	P	18 12 43.6	+1.9
PKM	Mcpherson Peak	89.73	55	P	P	18 12 43.8	+1.7
	baz=262						
SNCC	San Nicolas Is	89.75	57	P	P	18 12 44.5	+2.5
	baz=262						
SCZ2	Santa Cruz Isl	89.76	56	P	P	18 12 43.7	+1.7
	baz=262						
J05D	Fort Rock, OR	89.83	47	P	P	18 12 43.0	+0.7
	baz=261,SNR=35						
D05A	Enumclaw	89.91	43	*e*P	P	18 12 43.4	+1.0
	comp=Z,47nm,1.0s						
I05D	Terrebonne, OR	89.92	46	P	P	18 12 43.7	+1.2
	baz=261,SNR=9.2						
LON	Longmire	89.96	43	*e*P	P	18 12 42.9	+0.2
	comp=Z,8.6nm,0.8s						
LON	Longmire	89.96	43	*e*P	P	18 12 42.9	+0.2
LON				pmax	pmax		
	comp=Z,9.0nm,0.8s						
B05A	Bryant	90.01	42	P	P	18 12 43.7	+0.9
	baz=261,SNR=8.3						
KBL	Kabul	90.05	305	*e*P	P	18 12 42.2	-1.4
	comp=Z,21nm,0.6s						
KBL	Kabul	90.05	305	*e*P	P	18 12 42.2	-1.4
KBL				pmax	pmax		
	comp=Z,21nm,0.6s						
F05D	White Salmon	90.07	44	P	P	18 12 43.9	+0.7
	baz=261,SNR=8.0						
G05D	Wamic, OR	90.07	45	P	P	18 12 43.9	+0.6
	baz=261,SNR=6.9						
KK31	Karatay Array	90.10	313	*e*P	P	18 12 42.6	-0.8
KK31	Karatay Array	90.10	313	*e*P	P	18 12 42.6	-0.8
KKAR	Karatay Array	90.10	313	*e*P	P	18 12 42.6	-0.8
KKAR	Karatay Array	90.10	313	*e*P	P	18 12 42.6	-0.8
PINE	Pine Mountain	90.12	46	*e*P	P	18 12 45.2	+1.5
	comp=Z,28nm,0.8s						
BLG	Laguna Peak, P	90.24	56	P	P	18 12 45.5	+1.3
	baz=263						
IUG	Iuzhnay	90.31	312	*e*P	P	18 12 42.9	-1.6
IUG				pmax	pmax		
	comp=Z,150nm,0.8s						
IUG	Iuzhnay	90.31	312	*e*P	P	18 12 43.0	-1.6
	comp=Z,150nm,0.8s						
MOD	Modoc Plateau	90.31	48	*e*P	P	18 12 45.6	+1.0
	comp=Z,33nm,1.0s						
VES	Vestal, Richgr	90.44	54	P	P	18 12 45.4	+0.3
	baz=263,SNR=9.6						
VCNR	Virginia City	90.45	51	*e*P	P	18 12 47.3	+2.0
	comp=Z,41nm,0.9s						
B06A	Marblemount	90.46	41	*e*P	P	18 12 45.6	+0.7
	comp=Z,29nm,0.9s						
PNTR	Pine Nut	90.46	51	*e*P	P	18 12 47.4	+1.9
	comp=Z,69nm,0.7s						
WAKR	Walker	90.51	51	*e*P	P	18 12 47.5	+1.8
	comp=Z,34nm,0.7s						
LLLB	Lillooet	90.53	39	*e*P	P	18 12 46.2	+0.9
	comp=Z,32nm,1.1s						
SCI2	San Clemente I	90.53	57	P	P	18 12 47.0	+1.4
	baz=263						
ARVC	Arvin	90.56	55	P	P	18 12 46.7	+1.0
	baz=263,SNR=6.9						
OSI	Osito Audit: C	90.58	55	P	P	18 12 48.1	+2.2
	baz=263						
MDPB	Devils Postpil	90.68	52	*e*P	P	18 12 48.1	+1.6
	comp=Z,38nm,0.8s						
CIS	Catalina Islan	90.69	57	P	P	18 12 47.8	+1.4
	baz=263,SNR=8.2						
PAHR	Pah Rah Range	90.71	50	*e*P	P	18 12 48.2	+1.8
	comp=Z,53nm,0.9s						
YERR	Yerington	90.72	51	*e*P	P	18 12 48.1	+1.4
	comp=Z,38nm,0.8s						
OMMB	Old Mammoth Mi	90.74	52	*e*P	P	18 12 48.5	+1.6
	comp=Z,20nm,0.9s						
C06D	Leavenworth	90.76	42	P	P	18 12 47.3	+0.9
	baz=262						
LTY	Liberty	90.81	43	*e*P	P	18 12 47.4	+0.7
	comp=Z,22nm,0.9s						
DECC	Green Verdugo	90.86	56	P	P	18 12 48.8	+1.7
	baz=263						
MLAC	Mammoth, Mammo	90.87	52	P	P	18 12 49.1	+1.7
	baz=263						
ISA	Isabella, Lake	90.92	54	*e*P	P	18 12 48.5	+1.1
	comp=Z,36nm,1.1s						
ISA	Isabella, Lake	90.92	54	*e*P	P	18 12 49.6	+2.2
ISA	Isabella, Lake	90.92	54	P	P	18 12 48.9	+1.4
	baz=263,SNR=9.7						
PASC	Pasadena Art C	90.97	56	*e*P	P	18 12 49.5	+1.8
	comp=Z,65nm,0.8s						
MWC	Mount Wilson	91.08	56	*e*P	P	18 12 50.0	+1.6
	comp=Z,173nm,1.0s						
MWC	Mount Wilson	91.08	56	*e*P	P	18 12 50.6	+2.2
F07A	Phinny Hill Vi	91.13	44	*e*P	P	18 12 49.0	+0.9
	comp=Z,33nm,0.9s						
I07A	Izee	91.19	46	*e*P	P	18 12 49.0	+0.4
	comp=Z,18nm,0.9s						
EDW2	Edwards Air Fo	91.21	55	P	P	18 12 50.8	+2.0
	baz=263,SNR=45						
RYN	Ryan	91.23	51	*e*P	P	18 12 50.4	+1.5
	comp=Z,69nm,0.9s						
RYN				*e*sP	pP	18 13 17.8	+3.5
TIN	Tinemaha, Big	91.28	53	P	P	18 12 51.0	+1.9
	baz=263						
CWC	Cottonwood Cre	91.32	54	P	P	18 12 51.3	+1.9
	baz=263						
NV01	Mina Array Sit	91.38	52	*e*P	P	18 12 50.7	+1.0
NV01				*e*PKKPdf	PKKPbc	18 30 13.4	+1.4
NVAR	Mina Array Bea	91.38	52	P	P	18 12 51.6	+1.8
	comp=Z,100nm,0.9s,baz=252,slow=6.7,SNR=237						
NVAR				PKKPbc	PKKPbc	18 30 12.9	+0.8
	comp=Z,2.7nm,0.8s,baz=105,slow=3.2,SNR=8.2						
NVAR				PKPPKP	P'P'df	18 38 20.9	-0.2
	comp=Z,0.6nm,0.6s,baz=64,slow=3.4,SNR=3.6						
BFSC	Mount Baldy Ra	91.41	56	P	P	18 12 51.6	+1.8
	baz=263,SNR=26						
HAWA	Hanford	91.47	44	*e*P	P	18 12 50.5	+0.9
	comp=Z,42nm,0.9s						
HAWA				LR	LR		
	comp=Z,2µm,21.0s						
NV11	Mina Array Sit	91.50	52	*e*P	P	18 12 51.8	+1.6
	comp=Z,6.6nm,0.9s						
NV11				*e*sP	pP	18 13 18.7	+3.3
LRMC	Laurel Mtn Rad	91.53	55	P	P	18 12 52.1	+1.7
	baz=264,SNR=7.6						
WVOR	Wild Horse Val	91.61	48	*e*P	P	18 12 51.8	+1.2
	comp=Z,22nm,0.9s						
WVOR	Wild Horse Val	91.61	48	*e*P	P	18 12 51.8	+1.2
BVA0	Borovoye Array	91.61	323	*i* P	P	18 12 48.7	-1.5
BVA0				pmax	pmax		
	comp=Z,76nm,0.9s						
BVAR	Borovoye Array	91.61	323	P	P	18 12 48.6	-1.6
	comp=Z,69nm,0.8s,baz=101,slow=5.3,SNR=237						
KVN	Kaiserville	91.61	51	*e*P	P	18 12 52.2	+1.4
	comp=Z,66nm,0.8s						
KVN	Kaiserville	91.61	51	*e*P	P	18 12 52.6	+1.8
BRVK	Borovoye	91.68	323	*e*P	P	18 12 48.5	-2.0
	comp=Z,68nm,1.0s						
BRVK				LR	LR		
	comp=Z,649nm,20.0s						
BRVK	Borovoye	91.68	323*c*	*i*P	P	18 12 48.9	-1.6
BRVK				pmax	pmax		
	comp=Z,59nm,0.9s						
BRVK	Borovoye	91.68	323	P	P	18 12 49.2	-1.3
	SNR=24						
DAC	Darwin (Calif)	91.70	54	*e*P	P	18 12 52.8	+1.6
	comp=Z,92nm,1.0s						
DAC	Darwin (Calif)	91.70	54	*e*P	P	18 12 52.8	+1.6
DAC				pmax	pmax		
	comp=Z,92nm,1.0s						
109C	Camp Elliot, M	91.72	57	P	P	18 12 53.3	+2.1
	baz=264						
CPE	Camp Elliot	91.72	57	*e*P	P	18 12 53.2	+2.1
	comp=Z,52nm,0.9s						
CPE				*e*sP	pP	18 13 20.1	+3.9
MURC	Murrieta	91.72	57	P	P	18 12 52.7	+1.5
	baz=264,SNR=9.7						
G08A	Pilot Rock	91.72	45	*e*P	P	18 12 51.3	+0.3
	comp=Z,38nm,1.1s						
MPMC	Manual Prospec	91.75	54	P	P	18 12 53.4	+1.9
	baz=264,SNR=52						
E08A	Dider Farm, El	91.80	44	*e*P	P	18 12 52.1	+0.9
	comp=Z,34nm,0.9s						
J08A	Circle Bar Ran	91.84	47	*e*P	P	18 12 52.5	+1.0
	comp=Z,24nm,0.6s						
B08A	Colville Reser	91.85	42	*e*P	P	18 12 51.5	+0.1
GRAC	Grapevine Rang	91.96	53	P	P	18 12 54.1	+1.9
	baz=264,SNR=11						
D08A	Wollman Farm,	91.97	43	*e*P	P	18 12 52.3	+0.4
	comp=Z,34nm,1.0s						
BBRC	Big Bear Solar	92.02	56	P	P	18 12 54.4	+1.6
	baz=264						
RRX	Edison Barstow	92.03	55	P	P	18 12 54.6	+2.0
	baz=264						
GSC	Goldstone, Bar	92.23	55	*e*P	P	18 12 55.3	+1.7
	comp=Z,38nm,0.8s						
GSC	Goldstone, Bar	92.23	55	*e*P	P	18 12 55.3	+1.7
GSC				pmax	pmax		
	comp=Z,38nm,0.8s						
GSC	Goldstone, Bar	92.23	55	P	P	18 12 55.5	+1.9
	baz=264,SNR=15						
MONP2	Monument Peak	92.29	57	P	P	18 12 56.0	+1.9
	baz=264,SNR=10						
FURC	Furnace Creek,	92.30	54	P	P	18 12 55.7	+2.0
	baz=264,SNR=35						
PFO	Pinyon Flats O	92.34	57	*e*P	P	18 12 55.5	+1.4
	comp=Z,66nm,1.1s						
PFO				LR	LR		
	comp=Z,3µm,21.0s						
PFO	Pinyon Flats O	92.34	57	*e*P	P	18 12 55.5	+1.4
PFO				pmax	pmax		
	comp=Z,67nm,1.1s						
PFO				MLR	MLR		
	comp=Z,3µm,21.0s						
PFO	Pinyon Flats O	92.34	57	P	P	18 12 56.0	+1.8
	baz=264,SNR=11						
PFO	Pinyon Flats O	92.34	57	P	P	18 12 56.3	+2.1
	comp=Z,45nm,0.9s,baz=268,slow=3.7,SNR=25						
XPFO	Pion Flat	92.34	57	*e*P	P	18 12 55.8	+1.7
	comp=Z,70nm,1.1s						
RPN	Rapa Nui	92.34	117	PFAKE		18 13 10.0	+16
RPN				LR	LR		
	comp=Z,2µm,22.0s						
E09A	Wood Farm, Sta	92.43	44	*e*P	P	18 12 54.9	+0.8
	comp=Z,57nm,1.0s						
C09A	Chrisman Ranch	92.49	42	*e*P	P	18 12 54.7	+0.4
	comp=Z,22nm,0.8s						
IKP	In-Ko-Pah, Jac	92.53	58	P	P	18 12 57.1	+2.1
	baz=264						
HEC	Hector,Ludlow	92.56	55	P	P	18 12 56.9	+1.8
	baz=264,SNR=27						
SHOC	Shoshone, Teco	92.72	54	P	P	18 12 57.5	+1.8
	baz=264,SNR=38						
BELC	Belle Mtn. Jos	92.76	56	P	P	18 12 58.1	+2.0
	baz=264,SNR=25						
SWSC	Sam W. Stewart	92.82	57	P	P	18 12 58.3	+2.1
	baz=264,SNR=5.9						
BMO	Blue Mountains	92.84	45	*e*P	P	18 12 56.6	+0.4
	comp=Z,15nm,0.8s						
BMO	Blue Mountains	92.84	45	*e*P	P	18 12 56.9	+0.7
TPNV	Topopah Spring	92.84	53	*e*P	P	18 12 57.9	+1.4
	comp=Z,77nm,1.0s						
TPNV	Topopah Spring	92.84	53	*e*P	P	18 12 58.2	+1.8
TPNV	Topopah Spring	92.84	53	P	P	18 12 58.1	+1.6
	baz=264,SNR=60						
TUQ	Turquoise Moun	92.96	55	P	P	18 12 58.4	+1.4
	baz=264,SNR=9.3						
SYO	Syowa Base	92.97	199⇓	*e*P	P	18 12 55.0	-1.1
SYO	Syowa Base	92.97	199⇓	*e*PcP	PcP	18 12 57.0	+0.3
F10A	Beach Ranch, E	93.01	44	*e*P	P	18 12 57.4	+0.5
	comp=Z,40nm,1.0s						
GMRC	Granite Mounta	93.11	56	P	P	18 12 59.4	+1.7
	baz=265,SNR=52						
BC3	Big Chuckawall	93.18	57	P	P	18 13 00.1	+2.1
	baz=265,SNR=23						
NEW	Newport	93.31	42	*e*P	P	18 12 58.2	0.0
	comp=Z,50nm,1.1s						
NEW	Newport	93.31	42	*e*P	P	18 12 58.5	+0.3
NEW	Newport	93.31	42	P	P	18 12 58.9	+0.7
	baz=264						
NEW	Newport	93.31	42	P	P	18 12 58.9	+0.7
	comp=Z,36nm,1.0s,baz=180,slow=4.5,SNR=3.1						
IRM	Iron Mountain	93.48	56	P	P	18 13 01.4	+2.2
	baz=265,SNR=68						
R11A	Troy Canyon, C	93.50	52	*e*P	P	18 13 00.7	+1.3
	comp=Z,45nm,1.0s						
R11A	Troy Canyon, C	93.50	52	P	P	18 13 01.3	+1.9
	baz=265						
GLA	Glamis	93.64	57	*e*P	P	18 13 02.4	+2.3
	comp=Z,38nm,0.8s						
GLA	Glamis	93.64	57	*e*P	P	18 13 02.4	+2.3
GLA				pmax	pmax		
	comp=Z,38nm,0.8s						
GLA	Glamis	93.64	57	P	P	18 13 01.7	+1.7
	baz=265,SNR=6.2						
SHPR	Sheep Range	93.67	54	*e*P	P	18 13 02.0	+1.7
	comp=Z,60nm,0.9s						
Y12C	Blythe	93.96	57	*e*P	P	18 13 03.5	+2.1
	comp=Z,39nm,1.0s						
Y12C	Blythe	93.96	57	P	P	18 13 03.2	+1.7
	baz=265,SNR=9.0						
NEE2	Needles Airpor	93.96	56	P	P	18 13 03.3	+1.9
	baz=265,SNR=9.8						
ELK	Elko	93.97	50	*e*P	P	18 13 02.6	+1.0
	comp=Z,29nm,1.0s						
ELK	Elko	93.97	50	*e*P	P	18 13 02.7	+1.0
ELK				pmax	pmax		
	comp=Z,29nm,1.0s						
ELK	Elko	93.97	50	P	P	18 13 03.0	+1.4
	comp=Z,21nm,1.0s,baz=269,slow=5.1,SNR=56						
PDMCI	Parker Dam,Lak	94.32	56	P	P	18 13 05.0	+2.0
	baz=265,SNR=22						
W13A	Hualapai Mount	94.59	55	*e*P	P	18 13 06.4	+1.8
	comp=Z,45nm,0.9s						
MRIV	Mauritius Mete	94.70	249	*e*P	P	18 13 04.6	-0.6
	comp=Z,12nm,0.9s						
HLID	Hailey	94.80	47	*e*P	P	18 13 05.8	+0.4
	comp=Z,11nm,1.0s						
HLID				LR	LR		
	comp=Z,2µm,21.0s						
HLID	Hailey	94.80	47	P	P	18 13 06.9	+1.6
	baz=266						
PSUT	Pine Spring	94.87	52	*e*P	P	18 13 07.7	+1.9
	comp=Z,30nm,0.9s						
CCUT	Cedar City	95.19	53	*e*P	P	18 13 09.2	+1.9
	comp=Z,22nm,0.8s						
LCMT	Little Creek M	95.25	53	*e*P	P	18 13 09.8	+2.4
	comp=Z,28nm,1.1s						
MSO	Missoula	95.34	44	*e*P	P	18 13 08.1	+0.5
	comp=Z,8.8nm,1.0s						
MSO	Missoula	95.34	44	P	P	18 13 08.4	+0.7
	baz=267						
WALA	Waterton Lakes	95.49	41	*e*P	P	18 13 09.2	+0.9
	comp=Z,57nm,1.0s						
KNB	Kanab	95.58	53	*e*P	P	18 13 11.1	+2.1
	comp=Z,46nm,1.1s						
BGU	Big Grassy Mou	95.66	50	*e*P	P	18 13 10.3	+1.1
	comp=Z,9.9nm,1.0s						
YKW3	Yellowknife Ar	95.75	28	*e*P	P	18 13 09.4	+0.5
	comp=Z,32nm,0.8s						
YKA	Yellowknife Ar	95.75	28	P	P	18 13 09.8	+0.9
	comp=Z,25nm,0.7s,baz=267,slow=4.6,SNR=281						
YKA				PP	PP	18 16 56.3	-5.4
	comp=Z,1.7nm,0.9s,baz=270,slow=7.4,SNR=4.5						
YKA				PKiKP	PKiKP	18 17 48.3	+0.3
	comp=Z,0.4nm,0.4s,baz=255,slow=1.2,SNR=5.8						
YKA				PKKPbc	PKKPbc	18 29 58.3	-3.0
	comp=Z,3.6nm,0.6s,baz=85,slow=2.8,SNR=34						
YKB5	Yellowknife Ar	95.75	28	*e*P	P	18 13 09.1	+0.2
YKB5				*e*PKKPbc	PKKPbc	18 29 57.9	-3.3
DUG	Dugway, Tooele	95.78	50	*e*P	P	18 13 10.9	+1.1
	comp=Z,8.8nm,1.0s						
DUG				LR	LR		
	comp=Z,3µm,21.0s						
DUG	Dugway, Tooele	95.78	50	*e*P	P	18 13 10.9	+1.1
DUG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DUG				MLR	MLR		
	comp=Z,3µm,21.0s						
DUG	Dugway, Tooele	95.78	50	P	P	18 13 11.1	+1.3
	baz=267						
HVU	Hansel Valley	95.90	49	*e*P	P	18 13 11.7	+1.4
	comp=Z,26nm,0.9s						
HVU	Hansel Valley	95.90	49	*e*P	P	18 13 11.7	+1.4
HVU				pmax	pmax		
	comp=Z,26nm,0.9s						
U15A	North Rim	95.97	54	*e*P	P	18 13 13.2	+2.2
	comp=Z,36nm,0.9s						
MCMT	McKenzie Canyo	96.00	46	*e*P	P	18 13 11.9	+1.1
PKCU	Pink Cliffs	96.02	53	*e*P	P	18 13 13.8	+2.6
	comp=Z,41nm,0.9s						
SPUT	South Promonto	96.11	49	*e*P	P	18 13 12.4	+1.1
	comp=Z,16nm,1.0s						
MTPU	Mount Pierson	96.15	52	*e*P	P	18 13 13.7	+1.9
	comp=Z,42nm,0.9s						
MSU	Marysvale	96.18	52	*e*P	P	18 13 13.7	+1.9
MSU	Marysvale	96.18	52	*e*P	P	18 13 13.7	+1.9
DLMT	Dillon	96.20	45	*e*P	P	18 13 12.3	+0.7
	comp=Z,8.1nm,1.0s						
LRM	Limekiln Ridge	96.32	45	*e*P	P	18 13 13.2	+0.9
NLU	North Lily Min	96.33	51	*e*P	P	18 13 14.1	+1.7
	comp=Z,19nm,1.1s						
CTU	Camp Tracy	96.61	50	*e*P	P	18 13 15.0	+1.3
	comp=Z,11nm,1.0s						
MPU	Maple Canyon	96.67	51	*e*P	P	18 13 15.7	+1.7
	comp=Z,15nm,1.1s						
HRY	Holter Researc	96.79	44	*e*P	P	18 13 14.9	+0.7
HWUT	Hardware Ranch	96.79	49	*e*P	P	18 13 15.1	+0.6
	comp=Z,7.3nm,0.8s						
JLU	Jordanelle	96.84	50	*e*P	P	18 13 15.3	+0.6
	comp=Z,14nm,1.0s						
BOZ	Bozeman (W)	96.89	45	*e*P	P	18 13 14.9	+0.1
	comp=Z,9.6nm,0.9s						
BOZ				LR	LR		
	comp=Z,2µm,21.0s						
BOZ	Bozeman (W)	96.89	45	*e*P	P	18 13 14.9	+0.1
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BOZ				MLR	MLR		
	comp=Z,2µm,21.0s						
BOZ	Bozeman (W)	96.89	45	P	P	18 13 16.0	+1.2
	baz=268						
TMUT	Trail Mountain	96.97	51	*e*P	P	18 13 17.1	+1.7
	comp=Z,27nm,0.8s						
TUC	Tucson	96.99	58	P	P	18 13 15.6	+0.2
	baz=267						
QLMT	Earthquake Lak	97.01	46	*e*P	Pdif	18 13 16.6	+1.2
YHB	Horse Butte	97.17	46	*e*P	Pdif	18 13 17.8	+1.6
	comp=Z,12nm,0.9s						
AHID	Auburn Hatcher	97.18	48	*e*P	Pdif	18 13 16.7	+0.4
	comp=Z,15nm,1.1s						
AHID				LR	LR		
	comp=Z,2µm,22.0s						
SLBS	Sierra La Lagu	97.24	67	*e*P	Pdif	18 13 18.3	+1.6
	comp=Z,11nm,0.7s						
FXWY	Fox Creek	97.26	47	*e*P	Pdif	18 13 17.8	+1.1
	comp=Z,7.2nm,0.8s						
TPAW	Teton Pass	97.31	47	*e*P	Pdif	18 13 17.0	+0.1
	comp=Z,13nm,1.0s						
IMW	Indian Meadow	97.33	47	*e*P	Pdif	18 13 18.1	+1.0
	comp=Z,14nm,1.1s						
REDW	Red Top Meadow	97.38	47	*e*P	Pdif	18 13 18.2	+1.0
	comp=Z,12nm,0.9s						
YFT	Old Faithful	97.42	46	*e*P	Pdif	18 13 19.8	+2.5
	comp=Z,28nm,1.0s						
YPP	Pitchstone Pla	97.44	46	*e*P	Pdif	18 13 18.4	+0.9
	comp=Z,3.7nm,1.1s						
SNOW	Snow King Moun	97.45	47	*e*P	Pdif	18 13 18.5	+1.0
	comp=Z,8.8nm,0.8s						
MOOW	Moose Ponds	97.47	47	*e*P	Pdif	18 13 18.3	+0.7
	comp=Z,9.9nm,1.1s						
SVE	Sverdlovsk	97.49	326⇑	*e*P	P	18 13 15.6	-1.4
SVE				pmax	pmax		
	comp=Z,17nm,0.9s						
SRU	San Rafael Swe	97.50	51	*e*P	Pdif	18 13 18.9	+1.2
	comp=Z,14nm,0.8s						
SRU	San Rafael Swe	97.50	51	*e*P	Pdif	18 13 19.0	+1.3
SRU				pmax	pmax		
	comp=Z,14nm,0.8s						
FLWY	Flagg Ranch	97.51	46	*e*P	Pdif	18 13 18.3	+0.6
	comp=Z,8.7nm,0.9s						
YNR	Norris Junctio	97.54	46	*e*P	Pdif	18 13 19.8	+2.0
	comp=Z,15nm,1.0s						
H17A	Grant Village	97.61	46	*e*P	Pdif	18 13 19.9	+1.7
	comp=Z,14nm,1.0s						
H17A	Grant Village	97.61	46	P	Pdif	18 13 19.5	+1.3
	baz=269						
LKWY	Lake	97.73	46	*e*P	Pdif	18 13 21.6	+2.8
	comp=Z,8.0nm,0.9s						
LKWY				LR	LR		
	comp=Z,2µm,20.0s						
LKWY	Lake	97.73	46	*e*P	Pdif	18 13 21.6	+2.8
LKWY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LKWY				MLR	MLR		
	comp=Z,2µm,20.0s						
AB31	Akbulak array	97.89	319	P	P	18 13 15.8	-3.1
AB31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	97.89	319	*e*P	P	18 13 16.6	-2.3
WSAR	Wadi Sarin	98.13	293	P	Pdif	18 13 20.9	+0.3
	comp=Z,4.8nm,0.8s,baz=161,slow=5.8,SNR=4.9						
EGMT	Eagleton	98.22	42	*e*P	Pdif	18 13 20.7	+0.1
	comp=Z,18nm,0.9s						
EGMT				LR	LR		
	comp=Z,2µm,20.0s						
EGMT	Eagleton	98.22	42	Pdiff	Pdif	18 13 21.3	+0.7
	baz=270						
GCMT	Greycliff	98.27	45	*e*P	Pdif	18 13 22.4	+1.5
BW06	Boulder Array	98.31	48	*e*P	P	18 13 21.1	-0.2
	comp=Z,11nm,0.9s						
BW06				LR	LR		
	comp=Z,2µm,20.0s						
BW06	Boulder Array	98.31	48	Pdiff	Pdif	18 13 21.5	+0.2
	baz=269						
PD31	Pinedale Array	98.32	48	*e*P	P	18 13 21.1	-0.2
PDAR	Pinedale Array	98.32	48	*e*P	P	18 13 21.1	-0.2
PDAR				PP	PP	18 17 19.3	-3.0
PDAR				PKKPbc	PKKPbc	18 29 52.4	-1.4
PDAR				P'P'		18 38 09.5	
PDAR	Pinedale Array	98.32	48	P	Pdif	18 13 21.6	+0.2
	comp=Z,6.1nm,0.6s,baz=233,slow=2.4,SNR=60						
PDAR				PP	PP	18 17 19.3	-3.0
	comp=Z,2.5nm,1.0s,baz=239,slow=5.1,SNR=4.5						
PDAR				PKKPbc	PKKPbc	18 29 52.4	-1.4
	comp=Z,0.8nm,0.6s,baz=95,slow=5.3,SNR=6.9						
PDAR				PKPPKP	P'P'df	18 38 09.5	+1.7
	comp=Z,0.5nm,0.8s,baz=116,slow=3.4,SNR=4.7						
RLMT	Red Lodge	98.55	45	*e*P	Pdif	18 13 23.7	+1.4
	comp=Z,12nm,0.9s						
RLMT				LR	LR		
	comp=Z,2µm,19.0s						
RLMT	Red Lodge	98.55	45	Pdiff	Pdif	18 13 23.6	+1.3
	baz=270						
PV05	Paradox Valley	98.58	53	*e*P	Pdif	18 13 24.3	+1.6
	comp=Z,14nm,0.9s						
ARU	Arti	98.65	326	PFAKE		18 13 30.0	+7.8
ARU				LR	LR		
	comp=Z,573nm,20.0s						
ARU	Arti	98.65	326*c*	*i*P	P	18 13 19.8	-2.3
ARU						18 17 20.8	
ARU				S	SKSac	18 23 51.0	-0.5
ARU				SP	SP	18 26 12.2	+3.6
ARU				pmax	pmax		
	comp=Z,25nm,0.8s						
PV23	Carpenter Ridg	98.66	52	*e*P	Pdif	18 13 24.6	+1.5
	comp=Z,39nm,1.0s						
PV19	Morning Glory	98.68	52	*e*P	Pdif	18 13 24.8	+1.7
	comp=Z,18nm,1.0s						
PV04	Paradox Valley	98.74	52	*e*P	Pdif	18 13 24.4	+1.1
	comp=Z,32nm,0.7s						
PV11	David Mesa, Pa	98.77	52	*e*P	Pdif	18 13 25.6	+2.2
	comp=Z,22nm,0.8s						
PV03	Paradox Valley	98.78	52	*e*P	Pdif	18 13 25.4	+1.9
	comp=Z,15nm,1.0s						
PV12	Saucer Basin,	98.82	52	*e*P	Pdif	18 13 26.0	+2.3
	comp=Z,39nm,1.1s						
PV07	Paradox Valley	98.95	52	*e*P	Pdif	18 13 25.9	+1.6
	comp=Z,14nm,0.8s						
MVCO	Mesa Verde	99.04	53	*e*P	Pdif	18 13 26.7	+2.0
	comp=Z,10nm,0.6s						
MVCO	Mesa Verde	99.04	53	Pdiff	Pdif	18 13 25.6	+0.9

	baz=269						
PV15	Paradox Valley	99.08	52	eP	Pdif	18 13 25.9	+1.0
	comp=Z,14nm,1.1s						
GEYT	Alibeck	99.11	307	P	Pdif	18 13 23.9	-0.9
	comp=Z,2.9nm,0.6s,baz=134,slow=6.4,SNR=6.7						
GEYT				PP	PP	18 17 28.0	-0.2
	comp=Z,7.5nm,1.0s,baz=140,slow=5.1,SNR=4.2						
AKTO	Aktyubinsk	99.13	320	P	Pdif	18 13 21.8	-2.7
AKTO				pmax	pmax		
	comp=Z,11nm,0.9s						
O20A	White River Ci	99.28	50	eP	Pdif	18 13 26.9	+1.3
	comp=Z,22nm,1.0s						
O20A	White River Ci	99.28	50	Pdiff	Pdif	18 13 26.7	+1.0
	baz=270						
SMCO	Snowmass	100.26	51	ePdif	Pdif	18 13 32.2	+1.9
S22A	4UR Ranch, Cre	100.38	53	ePdif	Pdif	18 13 33.3	+2.6
S22A	4UR Ranch, Cre	100.38	53	Pdiff	Pdif	18 13 32.9	+2.2
	baz=270						
K22A	Casper	100.55	48	ePdif	Pdif	18 13 31.2	0.0
K22A	Casper	100.55	48	Pdiff	Pdif	18 13 31.6	+0.4
	baz=271						
LAO	LASA Array	100.65	44	ePdif	Pdif	18 13 32.2	+0.8
LAO	LASA Array	100.65	44	Pdiff	Pdif	18 13 32.4	+1.0
	baz=272						
ANMO	Albuquerque	100.67	56	ePdif	Pdif	18 13 34.2	+2.3
ANMO				LR	LR		
	comp=Z,2µm,20.0s						
ANMO	Albuquerque	100.67	56	⇓iP	Pdif	18 13 32.0	0.0
ANMO				pmax	pmax		
	comp=Z,21nm,2.9s						
ANMO	Albuquerque	100.67	56	Pdiff	Pdif	18 13 33.2	+1.2
	baz=270						
ANMO	Albuquerque	100.67	56	P	Pdif	18 13 34.3	+2.3
	comp=Z,5.3nm,0.9s,baz=250,slow=4.0,SNR=8.7						
SNAA	Sanae	100.86	187	⇑eP	Pdif	18 13 31.5	-0.4
SNAA				pmax	pmax		
	comp=Z,1µm,1.2s						
N23A	Red Feather La	101.02	50	ePdif	Pdif	18 13 34.8	+1.3
N23A	Red Feather La	101.02	50	Pdiff	Pdif	18 13 34.4	+0.9
	baz=271						
RES	Resolute Bay	101.29	15	P	Pdif	18 13 33.9	+0.4
	comp=Z,4.6nm,0.8s,baz=315,slow=6.4,SNR=18						
ISCO	Idaho Springs	101.30	51	ePdif	Pdif	18 13 36.3	+1.5
ISCO				LR	LR		
	comp=Z,4µm,20.0s						
ISCO	Idaho Springs	101.30	51	eP	Pdif	18 13 36.3	+1.5
ISCO				MLR	MLR		
	comp=Z,4µm,20.0s						
ISCO	Idaho Springs	101.30	51	Pdiff	Pdif	18 13 35.4	+0.6
	baz=271						
PHWY	Pilot Hill	101.38	49	ePdif	Pdif	18 13 36.3	+1.2
SDCO	Great Sand Dun	101.43	53	PFAKE		18 13 50.0	+15
SDCO				LR	LR		
	comp=Z,3µm,20.0s						
MNTX	Cornudas Mount	101.56	59	PFAKE		18 13 50.0	+14
MNTX				LR	LR		
	comp=Z,3µm,20.0s						
Q24A	Divide	101.68	52	Pdiff	Pdif	18 13 37.1	+0.6
	baz=271						
DGMT	Dagmar	101.92	42	ePdif	Pdif	18 13 37.6	+0.6
DGMT				LR	LR		
	comp=Z,2µm,22.0s						
DGMT	Dagmar	101.92	42	Pdiff	Pdif	18 13 37.5	+0.5
	baz=274						
RSSD	Black Hills	102.31	46	ePdif	Pdif	18 13 39.4	+0.4
RSSD	Black Hills	102.31	46	eP	Pdif	18 13 39.4	+0.4
RSSD	Black Hills	102.31	46	Pdiff	Pdif	18 13 39.6	+0.6
	baz=273						
FFC	Flin Flon	102.69	35	ePdif	Pdif	18 13 40.8	+0.7
FFC				LR	LR		
	comp=Z,3µm,21.0s						
FFC	Flin Flon	102.69	35	i P	Pdif	18 13 41.8	+1.6
LTX	Lajitas	103.04	61	ePdif	Pdif	18 13 44.3	+1.8
LTX				ePP	PP	18 17 54.6	-3.7
LTX				ePKiKP	PKiKP	18 18 03.2	+1.1
LTX				ePKKPbc	PKKPbc	18 29 38.5	-1.0
LTX	Lajitas	103.04	61	eP	Pdif	18 13 44.3	+1.8
LTX				i		18 18 03.2	
TXAR	Lajitas Array	103.04	61	Pdiff	Pdif	18 13 44.3	+1.8
	comp=Z,1.2nm,0.8s,baz=262,slow=3.6,SNR=12						
TXAR				PP	PP	18 17 54.6	-3.7
	comp=Z,0.9nm,0.9s,baz=269,slow=6.3,SNR=4.3						
TXAR				PKiKP	PKiKP	18 18 03.2	+1.1
	comp=Z,3.1nm,1.0s,baz=135,slow=0.2,SNR=6.7						
TXAR				PKKPbc	PKKPbc	18 29 38.5	-1.0
	comp=Z,5.5nm,0.8s,baz=111,slow=4.9,SNR=24						
MSTX	Muleshoe	103.73	57	ePdif	Pdif	18 13 46.9	+1.4
MSTX	Muleshoe	103.73	57	Pdiff	Pdif	18 13 45.8	+0.4
	baz=272						
ABPO	Ambohimpanom	104.45	249	PFAKE		18 14 00.0	+11
ABPO				LR	LR		
	comp=Z,868nm,22.0s						
PRGR	Permogore	104.55	332	⇑iP	Pdif	18 13 46.3	-2.0
PRGR				pmax	pmax		
	comp=Z,38nm,0.8s						
KBS	Kingsbay	105.03	353	PFAKE		18 18 20.0	+16
KBS				LR	LR		
	comp=Z,947nm,21.0s						
TULEG	Thule	105.88	10	ePdif	Pdif	18 13 54.8	+0.9
CBKS	Cedar Bluff	105.91	52	PFAKE		18 18 20.0	+13
CBKS				LR	LR		
	comp=Z,2µm,21.0s						
CBKS	Cedar Bluff	105.91	52	PKiKP	PKiKP	18 18 07.1	0.0
	baz=275						
JCT	Junction City	106.37	60	PFAKE		18 18 20.0	+12
JCT				LR	LR		
	comp=Z,4µm,20.0s						
JCT	Junction City	106.37	60	PKiKP	PKiKP	18 18 07.7	-0.4
	baz=272						
ABTX	Abilene, Hawle	106.41	58	PKiKP	PKiKP	18 18 08.2	+0.1
	baz=273						
LVZ	Lovozero	106.81	340	PFAKE		18 18 20.0	+12
LVZ				LR	LR		
	comp=Z,466nm,19.0s						
BGNE	Belgrade	106.86	49	PKiKP	PKiKP	18 18 09.0	+0.2
	baz=277						
MAK	Makhachkala	106.91	313	eP	Pdif	18 13 56.8	-2.4
MAK				i		18 18 24.0	
MAK				ePPP	PPP	18 20 40.0	
MAK				e		18 24 31.3	
MAK				eSSS	SSS	18 37 27.9	
MAK				pmax	pmax		
	comp=Z,58nm,1.0s						
WMOK	Wichita Mounta	106.99	56	PKiKP	PKiKP	18 18 09.2	+0.1
	baz=274						
TMCR	Tamitsa	107.08	336	eP	Pdif	18 13 57.7	-1.8
TMCR				pmax	pmax		
	comp=Z,18nm,0.9s						
ULM	Lac du Bonnet	107.08	39	eP	Pdif	18 14 00.8	+1.0
ULM	Lac du Bonnet	107.08	39	Pdiff	Pdif	18 14 00.6	+0.8
	comp=Z,6.6nm,1.0s,baz=290,slow=6.0,SNR=6.3						
ULM				PKiKP	PKiKP	18 18 08.8	0.0
	comp=Z,4.7nm,0.8s,baz=301,slow=3.3,SNR=8.7						
ULM				PKKPbc	PKKPbc	18 29 26.0	-1.9
	comp=Z,3.4nm,0.6s,baz=91,slow=5.9,SNR=7.1						
APA	Apatity	107.39	340	⇓iP	Pdif	18 13 58.4	-2.4
APA				i PPS	PPS	18 27 38.0	
APA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,900nm,21.0s						
KLMR	Klimovskoe	107.61	332	eP	Pdif	18 13 59.0	-2.9
KLMR				e		18 18 25.6	
KLMR				pmax	pmax		
	comp=Z,21nm,1.0s						
KLMR	Klimovskoe	107.61	332	ePdif	Pdif	18 13 59.0	-2.9
KLMR				AMP		18 14 01.3	
	comp=Z,21nm,1.0s						
KLMR				ePP	PP	18 18 25.7	-5.0
ECSD	EROS Data Cent	107.68	46	PFAKE		18 18 20.0	+10
ECSD				LR	LR		
	comp=Z,2µm,19.0s						
ECSD	EROS Data Cent	107.68	46	PKiKP	PKiKP	18 18 10.1	0.0
	baz=278						
KVTX	Kingsville	108.17	63	PFAKE		18 18 20.0	+8.5
KVTX				LR	LR		
	comp=Z,2µm,20.0s						
KEV	Kevo	108.28	343	PFAKE		18 18 20.0	+10
KEV				LR	LR		
	comp=Z,1µm,19.0s						
KSU1	Kansas State U	108.30	51	PFAKE		18 18 20.0	+8.6
KSU1				LR	LR		
	comp=Z,3µm,20.0s						
KSU1	Kansas State U	108.30	51	PKiKP	PKiKP	18 18 11.3	-0.1
	baz=277						
ARA0	ARCESS Array S	108.84	343	ePdif	Pdif	18 14 07.7	+0.5
ARA0				ePKiKP	PKiKP	18 18 12.9	+1.4
ARA0				ePKKPbc	PKKPbc	18 29 18.9	-4.1
ARCES	ARCESS Array B	108.84	343	Pdiff	Pdif	18 14 07.7	+0.5
	comp=Z,2.5nm,0.8s,baz=44,slow=4.5,SNR=11						
ARCES				PKiKP	PKiKP	18 18 12.9	+1.4
	comp=Z,7.5nm,0.9s,baz=45,slow=1.9,SNR=15						
ARCES				PKKPbc	PKKPbc	18 29 18.9	-4.1
	comp=Z,1.8nm,0.6s,baz=254,slow=2.6,SNR=10						
TUL1	Leonard	109.32	54	PKiKP	PKiKP	18 18 13.7	+0.2
	baz=276						
GNI	Garni	109.35	310	PFAKE		18 18 30.0	+16
GNI				LR	LR		
	comp=Z,1µm,22.0s						
DAG	Danmarks Havn	109.43	358	i P	PKKPbc	18 29 16.8	-4.3
DAG				i		18 29 28.2	
ZEI	Tsey	109.56	313	eP	Pdif	18 14 08.8	-2.5
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SPMN	Marine on St.	110.11	44	PKiKP	PKiKP	18 18 14.9	+0.3
	baz=282						
F37A	Hinrichs Farm,	110.12	44	PKiKP	PKiKP	18 18 14.9	+0.3
	baz=282						
KIV	Kislovodsk	110.22	315	PFAKE		18 18 30.0	+15
KIV				LR	LR		
	comp=Z,609nm,20.0s						
NEY	Neytrino	110.33	314	d iPKIKP	PKiKP	18 18 16.2	+0.8
EYMN	Ely	110.39	41	PFAKE		18 18 30.0	+15
EYMN				LR	LR		
	comp=Z,2µm,21.0s						
EYMN	Ely	110.39	41	PKiKP	PKiKP	18 18 14.9	-0.2
	baz=284						
SCIA	State Center	110.44	48	PKiKP	PKiKP	18 18 15.7	+0.3
	baz=280						
F38A	Pierce - Schro	110.58	43	PKiKP	PKiKP	18 18 15.9	+0.4
	baz=283						
E38A	The Farm, Brul	110.66	42	PKiKP	PKiKP	18 18 15.7	+0.1
	baz=283						
NATX	Nacogdoches	110.68	59	PKiKP	PKiKP	18 18 16.2	+0.1
	baz=276						
G38A	Ridgeland	110.77	44	PKiKP	PKiKP	18 18 15.8	-0.1
	baz=282						
W39A	Magazine	111.03	55	PKiKP	PKiKP	18 18 16.6	-0.1
	baz=277						
OBN	Obninsk	111.04	327	PFAKE		18 18 30.0	+14
OBN				LR	LR		
	comp=Z,592nm,21.0s						
OBN	Obninsk	111.04	327	i PKIKP	PKiKP	18 18 18.6	+2.6
OBN				i		18 18 54.8	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
G39A	Holcombe	111.22	44	PKiKP	PKiKP	18 18 16.9	+0.2
	baz=283						
F39A	Loretta	111.25	43	PKiKP	PKiKP	18 18 16.6	-0.2
	baz=284						
K39A	Oelwein	111.26	47	PKiKP	PKiKP	18 18 16.4	-0.5
	baz=282						
J39A	Decorah	111.26	46	PKiKP	PKiKP	18 18 16.9	0.0
	baz=282						
H39A	Augusta	111.28	44	PKiKP	PKiKP	18 18 16.3	-0.5
	baz=283						
MIAR	Mount Ida	111.28	55	PKiKP	PKiKP	18 18 16.2	-0.9
	baz=277						
I39A	Houston	111.28	45	PKiKP	PKiKP	18 18 16.4	-0.6
	baz=282						
M39A	Webster	111.29	48	PKiKP	PKiKP	18 18 16.8	-0.2
	baz=281						
L39A	Vinton	111.29	47	PKiKP	PKiKP	18 18 16.8	-0.2
	baz=281						
E39A	Mellen	111.38	43	PKiKP	PKiKP	18 18 17.0	-0.1
	baz=284						
U40A	Yellville	111.62	53	PKiKP	PKiKP	18 18 17.8	0.0
	baz=278						
F40A	Park Falls	111.79	43	PKiKP	PKiKP	18 18 17.6	-0.2
	baz=284						
M40A	Post Highland	111.79	48	PKiKP	PKiKP	18 18 18.1	+0.2
	baz=281						
K40A	Colesburg	111.80	46	PKiKP	PKiKP	18 18 17.6	-0.4
	baz=282						
E40A	Wakefield	111.81	42	PKiKP	PKiKP	18 18 17.7	-0.2
	baz=284						
N40A	Mertquake, Sal	111.84	48	PKiKP	PKiKP	18 18 18.0	-0.1
	baz=281						
L40A	Anamosa	111.87	47	PKiKP	PKiKP	18 18 17.7	-0.4
	baz=282						
G40A	Rib Lake	111.89	44	PKiKP	PKiKP	18 18 17.8	-0.2
	baz=284						
H40A	Chili	111.91	44	PKiKP	PKiKP	18 18 17.6	-0.4
	baz=283						
I40A	Norwalk	111.92	45	PKiKP	PKiKP	18 18 17.5	-0.6
	baz=283						
C40A	Isle Royale Na	111.92	41	PKiKP	PKiKP	18 18 17.7	-0.3
	baz=286						
J40A	Soldiers Grove	111.94	46	PKiKP	PKiKP	18 18 17.7	-0.5
	baz=283						
V41A	Mountainview	112.26	54	PKiKP	PKiKP	18 18 18.4	-0.7
	baz=279						
W41B	Gary Mavity, V	112.28	55	PKiKP	PKiKP	18 18 19.3	+0.2
	baz=278						
S41A	Jillco Farms,	112.30	52	PKiKP	PKiKP	18 18 18.4	-0.7
	baz=280						
S41A	Jillco Farms,	112.30	52	P	PKKPbc	18 29 10.6	0.0
	baz=269						
U41A	Viola	112.36	53	PKiKP	PKiKP	18 18 19.0	-0.2
	baz=279						
T41A	Mountain View	112.38	53	PKiKP	PKiKP	18 18 18.7	-0.6
	baz=279						
T41A	Mountain View	112.38	53	P	PKKPbc	18 29 10.1	-0.3
	baz=269						
JFWS	Jewell Farm	112.40	46	PFAKE		18 18 30.0	+11
JFWS				LR	LR		
	comp=Z,2µm,21.0s						
JFWS	Jewell Farm	112.40	46	PKiKP	PKiKP	18 18 18.8	-0.3
	baz=283						
L41A	Preston	112.40	47	PKiKP	PKiKP	18 18 18.7	-0.4
	baz=282						
I41A	Arkdale	112.40	45	PKiKP	PKiKP	18 18 18.3	-0.7
	baz=284						
COWI	Conover	112.41	43	PFAKE		18 18 30.0	+11
COWI				LR	LR		
	comp=Z,3µm,21.0s						
H41A	Junction City	112.42	44	PKiKP	PKiKP	18 18 18.8	-0.2
	baz=284						
K41A	Shullsburg	112.42	46	PKiKP	PKiKP	18 18 19.1	0.0
	baz=283						
E41A	Kenton	112.43	42	PKiKP	PKiKP	18 18 18.8	-0.2
	baz=285						
P41A	Barry, Barry	112.46	50	PKiKP	PKiKP	18 18 19.4	+0.1
	baz=281						
J41A	Loganville	112.46	46	PKiKP	PKiKP	18 18 18.8	-0.4
	baz=283						
Q41A	Truxton	112.46	50	PKiKP	PKiKP	18 18 19.4	+0.1
	baz=280						
R41A	Rosebud	112.47	51	PKiKP	PKiKP	18 18 19.4	+0.1
	baz=280						
O41A	Passleys Farm,	112.51	49	PKiKP	PKiKP	18 18 19.2	-0.1
	baz=281						
M41A	Milan	112.51	48	PKiKP	PKiKP	18 18 19.2	-0.1
	baz=282						
F41A	Three Lakes	112.52	43	PKiKP	PKiKP	18 18 19.4	+0.1
	baz=285						
D41A	Chassel	112.53	41	PKiKP	PKiKP	18 18 18.9	-0.3
	baz=286						
CCM	Cathedral Cave	112.61	51	PKiKP	PKiKP	18 18 19.0	-0.6
	baz=280						
CCM	Cathedral Cave	112.61	51	P	PKKPbc	18 29 09.4	-0.2
	baz=269						
X42A	Stuttgart	112.87	55	PKiKP	PKiKP	18 18 19.5	-0.7
	baz=278						
V42A	Cord	112.87	54	PKiKP	PKiKP	18 18 19.8	-0.3
	baz=279						
U42A	Revenden	112.91	53	PKiKP	PKiKP	18 18 19.8	-0.4
	baz=280						
T42A	Van Buren	112.91	52	PKiKP	PKiKP	18 18 19.7	-0.5
	baz=280						
T42A	Van Buren	112.91	52	P	PKKPbc	18 29 08.3	-0.2
	baz=269						
R42A	Luebbering	112.92	51	PKiKP	PKiKP	18 18 19.8	-0.4
	baz=281						
N42A	Yates City	113.00	48	PKiKP	PKiKP	18 18 19.9	-0.4
	baz=282						
Q42A	Golden Eagle	113.01	50	PKiKP	PKiKP	18 18 20.2	-0.1
	baz=281						
S42A	Caledonia	113.02	52	PKiKP	PKiKP	18 18 20.0	-0.4
	baz=280						
S42A	Caledonia	113.02	52	P	PKKPbc	18 29 14.5	+6.3
	baz=269						
L42A	Oliver, Polo	113.02	47	PKiKP	PKiKP	18 18 19.8	-0.4
	baz=283						
P42A	Winchester	113.02	50	PKiKP	PKiKP	18 18 20.3	0.0
	baz=281						
P42A	Winchester	113.02	50	P	PKKPbc	18 29 14.4	+6.1
	baz=270						
K42A	Prairie Point,	113.07	46	PKiKP	PKiKP	18 18 20.5	+0.2
	baz=284						
O42A	Bath	113.10	49	PKiKP	PKiKP	18 18 20.4	-0.1
	baz=282						
J42A	Columbus	113.11	45	PKiKP	PKiKP	18 18 20.5	+0.1
	baz=284						
G42A	Mountain	113.11	43	PKiKP	PKiKP	18 18 20.4	0.0
	baz=285						
I42A	Draeger Farm,	113.11	45	PKiKP	PKiKP	18 18 20.2	-0.2
	baz=284						
E42A	Champion	113.14	42	PKiKP	PKiKP	18 18 20.5	+0.2
	baz=286						
FIA0	FINESS Array S	113.20	336	ePdif	Pdif	18 14 25.6	-1.2
FIA0				ePKiKP	PKiKP	18 18 20.0	0.0
FIA0				ePKKPbc	PKKPbc	18 29 05.5	-2.9
FIA0	FINESS Array S	113.20	336	eP	Pdif	18 14 25.6	-1.2
FIA0				i		18 18 20.0	
FINES	FINESS Array B	113.20	336	Pdiff	Pdif	18 14 25.6	-1.2
	comp=Z,2.5nm,0.7s,baz=57,slow=5.2,SNR=11						
FINES				PKiKP	PKiKP	18 18 20.0	0.0
	comp=Z,1.0nm,0.4s,baz=95,slow=2.1,SNR=9.8						
FINES				PKKPbc	PKKPbc	18 29 05.5	-2.9
	comp=Z,3.9nm,0.7s,baz=204,slow=3.0,SNR=11						
H42A	Shiocton	113.23	44	PKiKP	PKiKP	18 18 20.4	-0.2
	baz=285						
SUMG	Summit	113.24	4	i P	PKKPbc	18 29 06.2	-2.9
	comp=Z,23nm,0.9s						
SUMG				i		18 29 14.3	
T43A	Greenville	113.53	52	P	PKKPbc	18 29 12.1	+5.7
	baz=270						
U43A	Rector	113.57	53	PKiKP	PKiKP	18 18 21.3	-0.2
	baz=280						
J43A	Natural Harves	113.59	45	PKiKP	PKiKP	18 18 21.1	-0.3
	baz=284						
R43A	Red Bud	113.59	51	PKiKP	PKiKP	18 18 21.0	-0.4
	baz=281						
R43A	Red Bud	113.59	51	P	PKKPbc	18 29 11.9	+5.6
	baz=270						
G43A	Wallace	113.61	43	PKiKP	PKiKP	18 18 21.1	-0.2
	baz=286						
HDIL	Hopedale	113.61	48	PFAKE		18 18 30.0	+8.6
HDIL				LR	LR		
	comp=Z,3µm,20.0s						
HDIL	Hopedale	113.61	48	PKiKP	PKiKP	18 18 21.4	0.0
	baz=283						
S43A	Fulton Ridge,	113.61	52	PKiKP	PKiKP	18 18 21.1	-0.4
	baz=281						
N43A	Stutzman Famil	113.61	48	PKiKP	PKiKP	18 18 21.4	0.0
	baz=283						
P43A	Skaggs, Pawnee	113.63	49	PKiKP	PKiKP	18 18 21.4	-0.1
	baz=282						
Q43A	New Douglas	113.64	50	P	PKKPbc	18 29 12.1	+5.9
	baz=270						
O43A	Sugar Creek Fa	113.65	49	PKiKP	PKiKP	18 18 21.7	+0.1
	baz=282						
M43A	Waltham Townsh	113.66	47	PKiKP	PKiKP	18 18 21.9	+0.4
	baz=283						
ANN	Anapa	113.69	316	i P	Pdif	18 14 31.1	+1.8
ANN				pmax	pmax		
	comp=Z,63nm,1.7s						
E43A	Lone Tree Farm	113.76	42	PKiKP	PKiKP	18 18 21.6	+0.1
	baz=287						
F43A	Flat Rock, Esc	113.80	42	PKiKP	PKiKP	18 18 21.5	-0.2
	baz=286						
U44A	Portageville	114.11	53	PKiKP	PKPdf	18 18 22.2	-0.3
	baz=280						
Y44A	Strider, Charl	114.12	56	PKiKP	PKPdf	18 18 22.6	0.0
	baz=279						
S44A	Carbondale	114.23	51	PKiKP	PKiKP	18 18 23.1	+0.4
	baz=281						
R44A	Waltonville	114.25	51	PKiKP	PKiKP	18 18 22.9	+0.2
	baz=282						
F44A	Big Bay de Noc	114.26	42	PKiKP	PKiKP	18 18 22.6	+0.1
	baz=287						
O44A	Mansfield	114.31	49	PKiKP	PKiKP	18 18 23.1	+0.3
	baz=283						
M44A	Midewin, Midew	114.34	47	PKiKP	PKiKP	18 18 22.8	0.0
	baz=284						
P44A	Sand Creek, Wi	114.35	49	PKiKP	PKPdf	18 18 22.8	-0.1
	baz=283						
N44A	Piper City	114.42	48	PKiKP	PKiKP	18 18 23.0	+0.1
	baz=284						
OXF	Oxford	114.69	55	PKiKP	PKPdf	18 18 23.5	-0.1
	baz=280						
S45A	Carrier Mills	114.76	51	PKiKP	PKPdf	18 18 23.4	-0.3
	baz=282						
Q45A	Warren Harvey,	114.83	50	PKiKP	PKiKP	18 18 23.8	0.0
	baz=283						
V45A	Humboldt	114.83	54	PKiKP	PKPdf	18 18 23.5	-0.4
	baz=281						
O45A	Potomac	114.85	48	PKiKP	PKiKP	18 18 23.6	-0.2
	baz=284						
R45A	Skylar, Fairfi	114.86	51	PKiKP	PKiKP	18 18 23.7	-0.2
	baz=282						
N45A	Kentland	114.86	48	PKiKP	PKiKP	18 18 23.7	-0.1
	baz=284						
F45A	CMU Biological	114.95	42	PKiKP	PKiKP	18 18 23.7	-0.2
	baz=288						
E45A	Wooded Hills,	114.97	41	PKiKP	PKiKP	18 18 23.7	-0.2
	baz=288						
P45A	Graceland, Par	115.00	49	PKiKP	PKPdf	18 18 24.4	+0.3
	baz=283						
SFIN	Lafayette	115.28	48	PKiKP	PKPdf	18 18 24.8	+0.1
	baz=284						
U46A	Springville	115.34	53	PKiKP	PKPdf	18 18 24.9	+0.1
	baz=282						
X46A	Booneville	115.35	55	PKiKP	PKiKP	18 18 24.3	-0.7
	baz=280						
P46A	Rosedale	115.38	49	PKiKP	PKPdf	18 18 25.1	+0.2
	baz=284						
APG	El Apazote	115.42	76	PKP	PKiKP	18 18 26.0	+0.2
	comp=Z,12nm,0.8s,baz=334,slow=12,SNR=7.9						
N46A	Monticello	115.42	48	PKiKP	PKPdf	18 18 25.0	+0.1
	baz=285						
T46A	Princeton	115.42	52	PKiKP	PKPdf	18 18 25.4	+0.4
	baz=282						
F46A	Macinaw City C	115.43	42	PKiKP	PKPdf	18 18 25.1	+0.3
	baz=288						
S46A	Don Dixon Farm	115.43	51	PKiKP	PKiKP	18 18 24.6	-0.4
	baz=282						
L46A	Eue Claire	115.45	46	PKiKP	PKPdf	18 18 25.1	+0.2
	baz=286						
R46A	Gibon Southern	115.47	51	PKiKP	PKiKP	18 18 24.7	-0.4
	baz=283						
V46A	Holladay	115.49	53	PKiKP	PKPdf	18 18 24.9	-0.3
	baz=281						
H46A	Fife Lake	115.50	43	PKiKP	PKPdf	18 18 25.4	+0.4
	baz=288						
E46A	Sault Ste Mari	115.53	41	PKiKP	PKPdf	18 18 25.0	0.0
	baz=289						
J46A	Howard City	115.55	45	PKiKP	PKiKP	18 18 24.9	-0.2
	baz=287						
K46A	Dorr	115.64	45	PKiKP	PKiKP	18 18 25.0	-0.3
	baz=286						
WVT	Waverly	115.66	53	PKiKP	PKPdf	18 18 25.2	-0.3
	baz=282						
EFI	East Falkland	115.79	158	PFAKE		18 18 40.0	+15
EFI				LR	LR		
	comp=Z,1µm,20.0s						
GLMI	Grayling	115.82	43	PFAKE		18 18 40.0	+14
GLMI				LR	LR		
	comp=Z,2µm,19.0s						
147A	Livingston	115.93	57	PKiKP	PKPdf	18 18 25.4	-0.7
	baz=280						
X47A	Russelville	115.95	55	PKiKP	PKPdf	18 18 25.3	-0.9
	baz=281						
V47A	Nunnelly	115.96	53	PKiKP	PKPdf	18 18 25.6	-0.5
	baz=282						
O47A	Sheridan	116.00	48	PKiKP	PKPdf	18 18 26.0	0.0
	baz=285						
BLO	Bloomington	116.00	49	ePKPdf	PKPdf	18 18 25.8	-0.3
BLO	Bloomington	116.00	49	ePKIKP	PKPdf	18 18 25.8	-0.3
W47A	Westpoint	116.02	54	PKiKP	PKPdf	18 18 25.9	-0.4
	baz=281						
W47A	Westpoint	116.02	54	P	PKKPbc	18 29 18.1	+20
	baz=270						
U47A	Clarksville	116.02	52	PKiKP	PKPdf	18 18 25.9	-0.3
	baz=282						
T47A	Sharon Grove	116.05	52	ePKPdf	PKPdf	18 18 26.2	0.0
T47A	Sharon Grove	116.05	52	PKiKP	PKPdf	18 18 26.2	0.0
	baz=282						
D47A	Chapleau	116.08	40	PKiKP	PKiKP	18 18 26.1	0.0
	baz=290						
S47A	Hartford	116.09	51	PKiKP	PKiKP	18 18 26.4	+0.1

	baz=283						
M47A	Cromwell	116.11	47	PKiKP	PKPdf	18 18 26.2	0.0
	baz=286						
P47A	Martinsville	116.11	49	PKiKP	PKiKP	18 18 26.4	+0.1
	baz=284						
Q47A	Bedord North L	116.13	50	PKiKP	PKPdf	18 18 26.3	0.0
	baz=284						
J47A	Sunmer	116.15	45	PKiKP	PKiKP	18 18 26.4	+0.2
	baz=287						
E47A	Iron Bridge	116.18	41	PKiKP	PKiKP	18 18 26.4	+0.2
	baz=290						
N47A	Urbana	116.19	47	PKiKP	PKPdf	18 18 26.2	-0.2
	baz=285						
K47A	Vermontville	116.19	45	PKiKP	PKPdf	18 18 26.3	-0.1
	baz=287						
R47A	Wooly Knot Far	116.20	50	PKiKP	PKPdf	18 18 26.2	-0.3
	baz=284						
L47A	Sherwood	116.25	46	PKiKP	PKPdf	18 18 26.5	0.0
	baz=286						
WCI	Wyandotte Cave	116.40	50	*e*PKPdf	PKPdf	18 18 26.8	-0.1
WCI	Wyandotte Cave	116.40	50	PKiKP	PKPdf	18 18 26.7	-0.1
	baz=284						
V48A	Smith Brothers	116.54	53	*e*PKPdf	PKPdf	18 18 26.0	-1.3
V48A	Smith Brothers	116.54	53	PKiKP	PKPdf	18 18 26.9	-0.4
	baz=282						
W48A	Pulaski	116.57	54	PKiKP	PKPdf	18 18 26.8	-0.5
	baz=282						
T48A	Bowling Green	116.58	52	PKiKP	PKiKP	18 18 27.5	+0.2
	baz=283						
U48A	Cassie Pea, Po	116.60	52	PKiKP	PKPdf	18 18 27.0	-0.3
	baz=283						
X48A	Hartselle	116.62	55	*e*PKPdf	PKPdf	18 18 26.1	-1.3
X48A	Hartselle	116.62	55	PKiKP	PKPdf	18 18 26.9	-0.5
	baz=281						
Y48A	Jasper	116.62	55	PKiKP	PKPdf	18 18 26.8	-0.6
	baz=281						
Q48A	North Vernon	116.66	49	PKiKP	PKiKP	18 18 27.5	+0.2
	baz=284						
N48A	Decatur	116.68	47	PKiKP	PKPdf	18 18 27.2	-0.1
	baz=286						
R48A	Northridge Ran	116.68	50	PKiKP	PKiKP	18 18 27.4	0.0
	baz=284						
S48A	Wiedeman Farm,	116.71	51	PKiKP	PKPdf	18 18 27.2	-0.2
	baz=284						
O48A	Farmland	116.75	48	PKiKP	PKPdf	18 18 27.2	-0.3
	baz=286						
P48A	Milroy	116.75	49	PKiKP	PKPdf	18 18 27.5	-0.1
	baz=285						
K48A	Perry	116.77	45	PKiKP	PKPdf	18 18 27.4	0.0
	baz=288						
L48A	N Adams	116.81	46	PKiKP	PKPdf	18 18 27.5	0.0
	baz=287						
F48A	Evansville	116.82	41	PKiKP	PKPdf	18 18 27.0	-0.4
	baz=290						
AKASG	Malin Array Be	116.85	325	PKP	PKPdf	18 18 26.8	-0.5
	comp=Z,4.5nm,0.6s,baz=62,slow=2.3,SNR=21						
AKASG				PP	PP	18 19 34.5	-2.3
	comp=Z,2.7nm,0.8s,baz=56,slow=7.6,SNR=6.2						
AKASG				PKKPbc	PKKPbc	18 28 53.6	-1.8
	comp=Z,2.0nm,0.6s,baz=258,slow=4.2,SNR=12						
AKBB	Malin Array Si	116.85	325	*e*PKPdf	PKPdf	18 18 26.9	-0.5
AKBB				*e*PP	PP	18 19 34.7	-2.2
AKBB				*e*PKKPbc	PKKPbc	18 28 53.7	-1.8
J48A	Bridge Port	116.86	44	PKiKP	PKiKP	18 18 29.1	+1.5
	baz=288						
KIEV	Kiev	116.86	325	*e*PKPdf	PKPdf	18 18 26.6	-0.8
KIEV				LR	LR		
	comp=Z,963nm,21.0s						
KIEV	Kiev	116.86	325	*d i*PKIKP	PKPdf	18 18 27.1	-0.2
D48A	Paudash Townsh	116.87	40	PKiKP	PKPdf	18 18 27.5	0.0
	baz=292						
SFJD	Kangerlussuaq	116.89	11	*i* P	PKKPbc	18 28 53.4	-2.4
	comp=Z,15nm,0.8s						
E48A	Lockeyer	116.89	41	PKiKP	PKPdf	18 18 27.5	0.0
	baz=291						
AK11	Malin Array Si	116.89	325	*e*PKPdf	PKPdf	18 18 26.5	-0.9
LRAL	Lakeview Retre	116.92	56	*e*PKPdf	PKPdf	18 18 27.7	-0.4
LRAL	Lakeview Retre	116.92	56	PKiKP	PKiKP	18 18 28.1	+0.1
	baz=281						
249A	Camden	117.01	57	PKiKP	PKiKP	18 18 28.4	+0.2
	baz=280						
349A	Repton	117.06	58	PKiKP	PKiKP	18 18 28.6	+0.2
	baz=280						
W49A	Belvidere	117.11	54	PKiKP	PKPdf	18 18 27.6	-0.7
	baz=282						
149A	Jones	117.17	57	PKiKP	PKPdf	18 18 28.4	-0.1
	baz=280						
X49A	Woodville	117.19	54	PKiKP	PKPdf	18 18 28.1	-0.4
	baz=282						
U49A	Red Boiling Sp	117.19	52	PKiKP	PKPdf	18 18 28.0	-0.4
	baz=283						
BRAL	Brewton	117.21	58	PFAKE		18 18 40.0	+11
BRAL				LR	LR		
	comp=Z,2µm,21.0s						
F49A	Sandfield	117.22	41	PKiKP	PKiKP	18 18 28.3	+0.1
	baz=291						
L49A	Milan	117.23	46	PKiKP	PKiKP	18 18 28.4	0.0
	baz=288						
R49A	Shelbyville	117.24	50	PKiKP	PKPdf	18 18 28.4	0.0
	baz=284						
Y49A	Blount Mountai	117.25	55	*e*PKPdf	PKPdf	18 18 28.0	-0.6
Y49A	Blount Mountai	117.25	55	PKiKP	PKPdf	18 18 28.4	-0.2
	baz=281						
T49A	Edmonton	117.25	51	*e*PKPdf	PKPdf	18 18 28.2	-0.4
T49A	Edmonton	117.25	51	PKiKP	PKiKP	18 18 28.6	+0.1
	baz=284						
AAM	Ann Arbor	117.25	45	PFAKE		18 18 40.0	+12
AAM				LR	LR		
	comp=Z,3µm,19.0s						
AAM	Ann Arbor	117.25	45	PKiKP	PKiKP	18 18 28.6	+0.2
	baz=288						
V49A	McMinnville	117.26	53	PKiKP	PKPdf	18 18 28.2	-0.4
	baz=283						
P49A	Miami Univ. Ec	117.27	49	PKiKP	PKPdf	18 18 28.4	-0.1
	baz=286						
M49A	Liberty Center	117.27	46	PKiKP	PKiKP	18 18 28.5	+0.1
	baz=287						
Q49A	Aurora	117.27	49	PKiKP	PKPdf	18 18 28.3	-0.2
	baz=285						
KMBO	Kilima Mbogo	117.27	266	PKP	PKiKP	18 18 29.7	+0.1
KMBO				LR	LR		
	comp=Z,1µm,21.0s						
KMBO	Kilima Mbogo	117.27	266	PKP	PKiKP	18 18 29.7	+0.1
	comp=Z,3.7nm,0.8s,baz=72,slow=4.0,SNR=8.9						
S49A	Springfield	117.28	51	PKiKP	PKPdf	18 18 28.3	-0.3
	baz=284						
N49A	Columbus Grove	117.28	47	*e*PKPdf	PKiKP	18 18 28.6	+0.1
N49A	Columbus Grove	117.28	47	PKiKP	PKPdf	18 18 28.4	0.0
	baz=287						
I49A	Point Hope	117.32	43	PKiKP	PKPdf	18 18 28.4	-0.1
	baz=289						
TEIG	Tepich	117.34	71	*e*PKPdf	PKiKP	18 18 29.2	+0.1
O49A	Covington	117.37	48	*e*PKPdf	PKPdf	18 18 28.3	-0.4
O49A	Covington	117.37	48	PKiKP	PKiKP	18 18 28.7	0.0
	baz=286						
PLCA	Paso Flores	117.40	142	*e*PKPdf	PKiKP	18 18 29.1	+0.2
X50B	Fort Payne	117.74	54	PKiKP	PKPdf	18 18 29.0	-0.6
	baz=282						
350A	Dozier	117.77	58	PKiKP	PKiKP	18 18 29.8	+0.1
	baz=280						
Z50A	Ashland	117.77	56	*e*PKPdf	PKPdf	18 18 29.0	-0.7
Z50A	Ashland	117.77	56	PKiKP	PKPdf	18 18 29.5	-0.2
	baz=281						
BR101	Keskin Array S	117.78	312	*e*PKPdf	PKPdf	18 18 29.0	-0.7
BR101				*e*PKKPbc	PKKPbc	18 28 52.1	+0.1
BR131	Keskin Array S	117.78	312	*e*PKPdf	PKPdf	18 18 28.8	-0.9
BRTR	Keskin Array B	117.78	312	PKP	PKPdf	18 18 29.0	-0.7
	comp=Z,2.9nm,0.6s,baz=137,slow=3.7,SNR=18						
BRTR				PKKPbc	PKKPbc	18 28 52.1	+0.1
	comp=Z,2.0nm,0.8s,baz=217,slow=4.1,SNR=7.8						
Y50A	Piedmont	117.79	55	PKiKP	PKPdf	18 18 29.4	-0.3
	baz=282						
T50A	Nancy	117.81	51	PKiKP	PKPdf	18 18 29.0	-0.6
	baz=284						
150A	Eclectic	117.81	56	PKiKP	PKiKP	18 18 29.8	+0.1
	baz=281						
E50A	Wahnapitae	117.83	40	PKiKP	PKPdf	18 18 29.1	-0.2
	baz=292						
W50A	Signal Mountai	117.86	53	*e*PKPdf	PKPdf	18 18 29.6	-0.3
W50A	Signal Mountai	117.86	53	PKiKP	PKPdf	18 18 29.5	-0.3
	baz=283						
R50A	Paris	117.89	50	PKiKP	PKPdf	18 18 29.4	-0.3
	baz=285						
O50A	Cable	117.91	48	PKiKP	PKPdf	18 18 29.7	-0.1
	baz=287						
V50A	Pikevile	117.92	53	PKiKP	PKPdf	18 18 29.6	-0.3
	baz=283						
P50A	Jamestown	117.93	48	PKiKP	PKPdf	18 18 29.5	-0.3
	baz=286						
L50A	Kingsville	117.93	45	PKiKP	PKPdf	18 18 29.4	-0.3
	baz=288						
U50A	Jamestown	117.95	52	PKiKP	PKPdf	18 18 29.8	-0.2
	baz=284						
M50A	Fremont	117.96	46	*e*PKPdf	PKiKP	18 18 29.9	+0.1
M50A	Fremont	117.96	46	PKiKP	PKPdf	18 18 29.6	-0.2
	baz=288						
S50A	Richmond	117.98	51	PKiKP	PKPdf	18 18 29.8	-0.1
	baz=285						
Q50A	Georgetown	118.00	49	PKiKP	PKPdf	18 18 29.6	-0.3
	baz=286						
N50A	Nevada	118.07	47	PKiKP	PKiKP	18 18 30.1	0.0
	baz=287						
BASO	Ashfield	118.08	43	PKiKP	PKPdf	18 18 29.6	-0.3
	baz=290						
BRCO	Bruce Peninsul	118.15	43	PKiKP	PKiKP	18 18 30.2	+0.1
	baz=290						
BMRO	Meriville Lake	118.18	42	PKiKP	PKiKP	18 18 30.2	0.0
	baz=291						
W51A	Cleveland	118.31	53	PKiKP	PKPdf	18 18 30.2	-0.4
	baz=283						
Y51A	Rockmart	118.34	55	PKiKP	PKPdf	18 18 30.3	-0.5
	baz=282						
ACSO	Alum Creek Sta	118.35	47	*e*PKPdf	PKPdf	18 18 30.1	-0.5
ACSO				LR	LR		
	comp=Z,2µm,20.0s						
ACSO	Alum Creek Sta	118.35	47	PKiKP	PKPdf	18 18 30.5	-0.1
	baz=287						
MATQ	Matagami	118.36	36	PKiKP	PKPdf	18 18 30.2	-0.1
	baz=296						
X51A	Calhoun	118.36	54	PKiKP	PKPdf	18 18 30.7	-0.1
	baz=283						
ANTO	Ankara	118.36	312	PFAKE		18 18 40.0	+9.3
ANTO				LR	LR		
	comp=Z,635nm,21.0s						
Z51A	Franklin	118.37	56	PKiKP	PKPdf	18 18 30.7	-0.1
	baz=282						
151A	Opelika	118.40	56	PKiKP	PKiKP	18 18 31.1	+0.2
	baz=281						
251A	Midway	118.42	57	PKiKP	PKiKP	18 18 31.0	0.0
	baz=281						
Q51A	Peebles	118.43	49	*e*PKPdf	PKPdf	18 18 30.4	-0.4
Q51A	Peebles	118.43	49	PKiKP	PKPdf	18 18 30.4	-0.4
	baz=286						
D51A	Lot 18 Range I	118.44	39	PKiKP	PKPdf	18 18 30.5	0.0
	baz=294						
V51A	Loudon	118.48	53	*e*PKPdf	PKPdf	18 18 30.6	-0.3
V51A	Loudon	118.48	53	PKiKP	PKPdf	18 18 30.9	-0.1
	baz=284						
SUW	Suwalki	118.51	330	*e*PKP	PKiKP	18 18 30.7	+0.2
SUW	Suwalki	118.51	330	*e*PKPdf	PKPdf	18 18 30.3	-0.1
SUW	Suwalki	118.51	330	*e*PKIKP	PKiKP	18 18 30.7	+0.2
P51A	Williamsport	118.51	48	*e*PKPdf	PKPdf	18 18 30.5	-0.4
P51A	Williamsport	118.51	48	PKiKP	PKPdf	18 18 30.5	-0.4
	baz=287						
TGUH	Tegucigalpa,Un	118.51	77	*e*PKPdf	PKiKP	18 18 32.0	+0.5
T51A	Gray	118.52	51	PKiKP	PKiKP	18 18 31.2	+0.1
	baz=285						
F51A	Arnstein	118.55	40	PKiKP	PKiKP	18 18 31.1	+0.3
	baz=293						
E51A	G1948 Merrick	118.58	40	PKiKP	PKiKP	18 18 31.0	+0.2
	baz=293						
I51A	Listowel	118.59	43	PKiKP	PKiKP	18 18 31.1	+0.1
	baz=290						
M51A	Elyria	118.60	46	PKiKP	PKPdf	18 18 30.8	-0.2
	baz=288						
ELFO	Elginfield	118.60	44	PKiKP	PKPdf	18 18 30.7	-0.2
	baz=290						
U51A	La Follette	118.61	52	PKiKP	PKPdf	18 18 31.1	-0.1
	baz=284						
S51A	Beattyville	118.61	50	*e*PKPdf	PKiKP	18 18 31.4	+0.2
S51A	Beattyville	118.61	50	PKiKP	PKPdf	18 18 31.2	0.0
	baz=285						
K51A	Iona Station	118.62	44	PKiKP	PKPdf	18 18 31.0	0.0
	baz=290						
O51A	Pataskala	118.65	47	PKiKP	PKiKP	18 18 31.3	+0.1
	baz=287						
452A	Marianna	118.84	58	PKiKP	PKiKP	18 18 32.0	+0.2
	baz=281						
152A	Waverly Hall	118.88	56	*e*PKPdf	PKPdf	18 18 31.8	0.0
152A	Waverly Hall	118.88	56	PKiKP	PKiKP	18 18 31.9	+0.1
	baz=282						
TZTN	Tazewell	118.93	52	*e*PKPdf	PKiKP	18 18 32.0	+0.1
TZTN	Tazewell	118.93	52	PKiKP	PKiKP	18 18 31.9	+0.1
	baz=285						
352A	Blakely	118.94	58	PKiKP	PKiKP	18 18 32.0	0.0
	baz=281						
NB2	NORSAR Subarra	118.95	341	PKPdf	PKPdf	18 18 30.6	-0.6
	comp=Z,2.7nm,0.7s,baz=42,slow=1.9						
NB200	NORSAR Array S	118.95	341	*e*PKPdf	PKPdf	18 18 30.4	-0.7
NOA	NORSAR Array B	118.95	341	PKP	PKPdf	18 18 30.4	-0.7
	comp=Z,4.4nm,0.8s,baz=44,slow=1.9,SNR=24						
TKL	Tuckaleechee C	118.97	53	*e*PKPdf	PKiKP	18 18 32.2	+0.3
F52A	Sundridge	118.98	40	PKiKP	PKPdf	18 18 31.4	-0.2
	baz=293						
W52A	Murphy	118.98	53	*e*PKPdf	PKiKP	18 18 32.1	+0.1
W52A	Murphy	118.98	53	PKiKP	PKiKP	18 18 32.2	+0.1
	baz=284						
252A	Lumpkin	119.00	57	PKiKP	PKPdf	18 18 31.9	-0.2
	baz=282						
S52A	Salyersville	119.00	50	PKiKP	PKiKP	18 18 32.2	+0.2
	baz=286						
Z52A	Williamson	119.02	56	PKiKP	PKiKP	18 18 32.4	+0.3
	baz=282						
LSQQ	Lebel-sur-Quev	119.06	36	PKiKP	PKPdf	18 18 31.7	0.0
	baz=297						
BUKO	Buck Lake	119.07	41	PKiKP	PKiKP	18 18 32.0	+0.1
	baz=293						
NC602	NORSAR Array S	119.07	340	*e*PKPdf	PKPdf	18 18 30.7	-0.6
V52A	Sevierville	119.07	52	*e*PKPdf	PKiKP	18 18 32.6	+0.4
V52A	Sevierville	119.07	52	PKiKP	PKiKP	18 18 32.5	+0.4
	baz=284						
D52A	ZEK Kipawa Sen	119.08	39	PKiKP	PKPdf	18 18 31.5	-0.3
	baz=294						
NBO00	NORSAR Array S	119.10	341	*e*PKPdf	PKPdf	18 18 31.3	-0.1
U52A	Thorn Hill	119.11	52	PKiKP	PKiKP	18 18 32.4	+0.2
	baz=285						
N52A	McGinn’s Farm,	119.12	46	PKiKP	PKPdf	18 18 32.0	0.0
	baz=288						
M52A	Chesterland	119.12	46	PKiKP	PKiKP	18 18 32.4	+0.3
	baz=289						
X52A	Dahlonega	119.13	54	PKiKP	PKPdf	18 18 32.3	0.0
	baz=284						
R52A	Catlettsburg	119.15	49	PKiKP	PKPdf	18 18 32.1	0.0
	baz=286						
P52A	Corning	119.15	48	PKiKP	PKiKP	18 18 32.2	0.0
	baz=288						
Y52A	Lilburn	119.16	55	*e*PKPdf	PKiKP	18 18 32.7	+0.3
Y52A	Lilburn	119.16	55	PKiKP	PKiKP	18 18 32.5	+0.1
	baz=283						
VLDQ	Val d'Or	119.19	37	*e*PKPdf	PKPdf	18 18 31.1	-0.8
E52A	Mattawa	119.21	40	PKiKP	PKPdf	18 18 32.0	0.0
	baz=294						
T52A	Hallie	119.22	51	PKiKP	PKPdf	18 18 32.4	+0.1
	baz=286						
O52A	Adamsville	119.22	47	*e*PKPdf	PKPdf	18 18 32.0	-0.2
O52A	Adamsville	119.22	47	PKiKP	PKPdf	18 18 32.1	-0.2
	baz=288						
Q52A	Bidwell	119.25	49	PKiKP	PKiKP	18 18 32.5	+0.1
	baz=287						
ACTO	Acton	119.31	43	PKiKP	PKiKP	18 18 32.6	+0.2
	baz=291						
D53A	Lac Vacive, Po	119.48	39	PKiKP	PKiKP	18 18 32.7	+0.1
	baz=295						
253A	Americus	119.49	57	PKiKP	PKPdf	18 18 32.8	-0.2
	baz=282						
SADO	Sadowa	119.49	41	*e*PKPdf	PKPdf	18 18 32.0	-0.6
Y53A	Monroe	119.55	55	PKiKP	PKPdf	18 18 33.2	0.0
	baz=283						
353A	Camilla	119.56	58	PKiKP	PKiKP	18 18 33.5	+0.3
	baz=282						
453A	Whigham	119.57	58	*e*PKPdf	PKiKP	18 18 33.5	+0.2
453A	Whigham	119.57	58	PKiKP	PKiKP	18 18 33.4	+0.2
	baz=281						
W53A	Cullowhee	119.58	53	PKiKP	PKiKP	18 18 33.6	+0.3
	baz=284						
553A	Crawfordville	119.60	59	PKiKP	PKiKP	18 18 33.7	+0.4
	baz=281						
T53A	Wise	119.60	51	PKiKP	PKiKP	18 18 33.6	+0.3
	baz=286						
TYNO	Tyneside	119.62	43	PKiKP	PKiKP	18 18 33.2	+0.2
	baz=291						
X53A	Estanollee	119.63	54	PKiKP	PKPdf	18 18 33.1	-0.1
	baz=284						
M53A	WI Miller and	119.64	45	PKiKP	PKPdf	18 18 33.0	0.0
	baz=290						
O53A	New Philadelph	119.64	47	PKiKP	PKPdf	18 18 32.9	-0.1
	baz=288						
R53A	Hurricane	119.67	49	PKiKP	PKPdf	18 18 33.0	-0.1
	baz=287						
Z53A	Monticello	119.69	55	PKiKP	PKPdf	18 18 33.3	0.0
	baz=283						
G53A	Haliburton	119.69	41	PKiKP	PKPdf	18 18 33.0	0.0
	baz=293						
S53A	Williamson	119.72	50	PKiKP	PKPdf	18 18 33.3	0.0
	baz=286						
V53A	Saluda	119.73	52	PKiKP	PKiKP	18 18 33.6	+0.1
	baz=285						
N53A	Lisbon	119.73	46	PKiKP	PKiKP	18 18 33.4	+0.1
	baz=289						
ALGO	Algonquin Park	119.73	40	PKiKP	PKiKP	18 18 33.1	0.0
	baz=294						
U53A	Fall Branch	119.73	52	PKiKP	PKiKP	18 18 33.6	+0.1
	baz=285						
GOGA	Godfrey	119.74	55	PFAKE		18 18 50.0	+16
GOGA				LR	LR		
	comp=Z,3µm,20.0s						
GOGA	Godfrey	119.74	55	PKiKP	PKPdf	18 18 33.4	-0.1
	baz=283						
P53A	Whipple	119.74	48	*e*PKPdf	PKPdf	18 18 33.3	+0.1
P53A	Whipple	119.74	48	PKiKP	PKPdf	18 18 33.3	+0.1
	baz=288						
L53A	Girard	119.75	45	PKiKP	PKPdf	18 18 33.1	-0.2
	baz=290						
CFR	Carcaliu	119.78	319	⇓*i*P	PKPdf	18 18 32.3	-0.8
CFR	Carcaliu	119.78	319	⇓PKIKP	PKPdf	18 18 32.3	-0.8
E53A	Dumoine, Ponti	119.80	39	PKiKP	PKPdf	18 18 32.9	-0.3
	baz=295						
ERPA	Erie	119.89	45	PKiKP	PKPdf	18 18 33.2	-0.3
	baz=290						
STCO	Saint Catharin	120.06	43	PKiKP	PKPdf	18 18 33.6	-0.1
	baz=292						
TIGA	Tifton	120.07	57	*e*PKPdf	PKiKP	18 18 34.9	+0.7
TIGA	Tifton	120.07	57	PKiKP	PKPdf	18 18 33.9	-0.3
	baz=282						
E54A	Lac Daplat, Po	120.08	39	PKiKP	PKPdf	18 18 33.5	-0.2
	baz=295						
TLB	Topalu	120.08	319	⇓*i*P	PKiKP	18 18 34.2	+0.4
TLB	Topalu	120.08	319	⇓PKIKP	PKiKP	18 18 34.2	+0.4
D54A	Lac Fusel, La	120.10	38	PKiKP	PKPdf	18 18 33.6	-0.1
	baz=296						
DRWO	Darlington Wes	120.11	42	PKiKP	PKiKP	18 18 34.0	+0.1
	baz=292						
DRCO	St. Marys Ceme	120.12	42	PKiKP	PKiKP	18 18 33.9	0.0
	baz=292						
CHGQ	Chibougamau	120.16	34	PKiKP	PKPdf	18 18 33.2	-0.5
	baz=300						
454A	Quitman	120.18	58	PKiKP	PKPdf	18 18 34.1	-0.3
	baz=282						
BANO	Bancroft	120.19	41	PKiKP	PKiKP	18 18 34.1	0.0
	baz=294						
254A	Abbeville	120.21	57	PKiKP	PKPdf	18 18 34.4	+0.1
	baz=282						
154A	Montrose	120.22	56	PKiKP	PKiKP	18 18 34.9	+0.4
	baz=283						
554A	Perry	120.25	59	PKiKP	PKiKP	18 18 35.0	+0.4
	baz=281						
O54A	Avella	120.26	47	PKiKP	PKiKP	18 18 34.9	+0.6
	baz=289						
Y54A	Tignall	120.27	54	PKiKP	PKPdf	18 18 34.4	-0.1
	baz=284						
N54A	Moraine State	120.28	46	*e*PKPdf	PKPdf	18 18 34.4	+0.1
N54A	Moraine State	120.28	46	PKiKP	PKiKP	18 18 34.9	+0.5
	baz=290						
Z54A	Sparta	120.29	55	PKiKP	PKPdf	18 18 34.4	-0.1
	baz=283						
Q54A	Coxs Mills	120.31	48	PKiKP	PKPdf	18 18 34.2	-0.2
	baz=288						
WLVO	Wesleyville	120.31	42	PKiKP	PKPdf	18 18 34.1	-0.1
	baz=293						
T54A	Tazewell	120.32	51	PKiKP	PKPdf	18 18 34.3	-0.3
	baz=286						
M54A	Oil Creek Stat	120.33	45	*e*PKPdf	PKPdf	18 18 34.4	+0.1
M54A	Oil Creek Stat	120.33	45	PKiKP	PKPdf	18 18 34.3	-0.1
	baz=290						
BIZ	Bicaz	120.33	322	⇑*i*P	PKiKP	18 18 34.7	+0.4
PEMO	Pembroke	120.36	40	PKiKP	PKiKP	18 18 34.4	+0.1
	baz=295						
P54A	Burton	120.38	47	PKiKP	PKiKP	18 18 34.7	+0.1
	baz=289						
R54A	Victor	120.44	49	PKiKP	PKiKP	18 18 34.8	0.0
	baz=288						
MEDO	Medina	120.56	43	PKiKP	PKiKP	18 18 35.1	+0.3
	baz=292						
BUR08	Bucovina Ar. S	120.57	323	*e*PKPdf	PKiKP	18 18 35.0	+0.2
BURAR	Bucovina Array	120.57	323	⇑*i*P	PKiKP	18 18 35.7	+0.8
BURAR	Bucovina Array	120.57	323	⇑PKIKP	PKiKP	18 18 35.7	+0.8
BUR04	Bucovina Ar. S	120.57	323	*e*PKPdf	PKiKP	18 18 35.0	+0.2
455A	Stateville	120.68	58	PKiKP	PKPdf	18 18 35.1	-0.2
	baz=282						
PLVO	Plevna	120.73	40	PKiKP	PKiKP	18 18 35.5	+0.3
	baz=295						
155A	Kite	120.74	56	PKiKP	PKiKP	18 18 35.6	+0.1
	baz=283						
JTS	JuntasAbangare	120.76	82	*e*PKPdf	PKPdf	18 18 35.8	-0.1
JTS				LR	LR		
	comp=Z,1µm,21.0s						
JTS	JuntasAbangare	120.76	82	PKP	PKPdf	18 18 35.9	0.0
	comp=Z,31nm,0.7s,baz=4.4,slow=2.9,SNR=23						
MCWV	Mont Chateau	120.82	47	*e*PKPdf	PKPdf	18 18 35.0	-0.4
MCWV	Mont Chateau	120.82	47	PKiKP	PKiKP	18 18 35.6	+0.1
	baz=289						
555A	McAlpin	120.86	59	PKiKP	PKiKP	18 18 35.8	+0.1
	baz=282						
F55A	Otter Lake	120.86	39	PKiKP	PKiKP	18 18 35.4	0.0
	baz=296						
H55A	Tweed	120.86	41	PKiKP	PKiKP	18 18 35.5	+0.1
	baz=294						
Q55A	Buckhannon	120.86	48	PKiKP	PKiKP	18 18 36.1	+0.5
	baz=289						
G55A	Calabogie	120.87	40	PKiKP	PKiKP	18 18 35.6	+0.2
	baz=295						
Z55A	Blythe	120.87	55	PKiKP	PKiKP	18 18 36.1	+0.4
	baz=284						
P55A	Reedsville	120.89	47	PKiKP	PKiKP	18 18 35.7	0.0
	baz=289						
255A	Hazlehurst	120.89	57	PKiKP	PKPdf	18 18 35.7	0.0
	baz=283						
S55A	Lewisburg	120.93	49	PKiKP	PKiKP	18 18 35.9	+0.1
	baz=288						
L55A	Hinsdale	120.94	44	PKiKP	PKiKP	18 18 35.8	+0.1
	baz=292						
J55A	Hilton	120.95	43	PKiKP	PKiKP	18 18 35.6	0.0
	baz=293						
M55A	Ridgway	120.97	45	PKiKP	PKiKP	18 18 35.7	0.0
	baz=291						
K55A	Perry	120.99	43	PKiKP	PKiKP	18 18 35.8	+0.1
	baz=292						
O55A	Ligonier	121.03	46	PKiKP	PKiKP	18 18 36.1	+0.2
	baz=290						
KMSC	Kings Mountain	121.03	53	*e*PKPdf	PKPdf	18 18 35.9	0.0
KMSC	Kings Mountain	121.03	53	PKiKP	PKiKP	18 18 36.1	+0.1
	baz=286						
KWP	Kalwaria Pacla	121.05	326	*e*PKP	PKiKP	18 18 36.1	+0.5
KWP	Kalwaria Pacla	121.05	326	*e*PKPdf	PKiKP	18 18 35.7	+0.1
KWP	Kalwaria Pacla	121.05	326	*e*PKIKP	PKiKP	18 18 36.1	+0.5
R55A	Marlinton	121.06	49	PKiKP	PKiKP	18 18 36.1	+0.1
	baz=288						
N55A	Marion Center	121.06	46	PKiKP	PKiKP	18 18 36.0	+0.1
	baz=291						
MLR	Muntele Rosu	121.06	320	*e*PKPdf	PKPdf	18 18 35.0	-0.8
MLR	Muntele Rosu	121.06	320	⇑*i*P	PKPdf	18 18 35.0	-0.8
MLR	Muntele Rosu	121.06	320	⇑PKIKP	PKPdf	18 18 35.0	-0.8
BLA	Blacksburg	121.16	50	PFAKE		18 18 50.0	+14
BLA				LR	LR		
	comp=Z,4µm,22.0s						
BLA	Blacksburg	121.16	50	PKiKP	PKiKP	18 18 36.2	0.0
	baz=287						
SCHQ	Schefferville	121.19	27	PKP	PKiKP	18 18 35.8	+0.1
	comp=Z,3.4nm,0.4s,baz=223,slow=2.8,SNR=8.4						
SCHQ				PKKPab	PKKPab	18 28 37.2	-1.7
	comp=Z,14nm,1.0s,baz=159,slow=3.5,SNR=8.8						
DOPR	Dopca	121.20	321	⇑*i*P	PKiKP	18 18 36.5	+0.4
356A	Blackshear	121.31	57	PKiKP	PKiKP	18 18 36.9	+0.2
	baz=283						
556A	Lake Butler	121.36	59	PKiKP	PKiKP	18 18 37.2	+0.4
	baz=282						
256A	Glennville	121.36	56	PKiKP	PKiKP	18 18 37.1	+0.4
	baz=283						
656A	Willston	121.37	59	PKiKP	PKPdf	18 18 36.4	-0.2
	baz=281						
ESPN	Las Esperanzas	121.42	80	*e*PKPdf	PKiKP	18 18 37.6	+0.3

H56A	**Elgin**	**121.45**	**41**	PKiKP	**PKPdf**	**18 18 36.2**	**-0.2**
	baz=295						
156A	**Sylvania**	**121.53**	**55**	PKiKP	**PKPdf**	**18 18 36.9**	**0.0**
	baz=284						
O56A	**Blue Knob Stat**	**121.54**	**46**	*e*PKPdf	**PKiKP**	**18 18 37.0**	**+0.1**
O56A	**Blue Knob Stat**	**121.54**	**46**	PKiKP	**PKiKP**	**18 18 36.9**	**0.0**
	baz=291						
LBTB	**Lobatse**	**121.68**	**236**	*e*PKPdf	**PKiKP**	**18 18 37.8**	**0.0**
PEL	**Peldehue**	**121.70**	**135**	*e*PKPdf	**PKPdf**	**18 18 37.1**	**-0.2**
SUR	**Sutherland**	**121.80**	**226**	*e*PKPdf	**PKiKP**	**18 18 38.7**	**+0.8**
SUR				LR	LR		
	comp=Z,2µm,20.0s						
857A	**Zephyrhills**	**121.85**	**61**	PKiKP	**PKiKP**	**18 18 37.7**	**-0.1**
	baz=281						
757A	**Oxford**	**121.86**	**60**	PKiKP	**PKiKP**	**18 18 37.9**	**+0.1**
	baz=281						
ALFO	**Alfred**	**121.87**	**39**	PKiKP	**PKiKP**	**18 18 37.2**	**-0.1**
	baz=297						
SSPA	**Standing Stone**	**121.89**	**46**	*e*PKPdf	**PKiKP**	**18 18 37.6**	**0.0**
SSPA	**Standing Stone**	**121.89**	**46**	PKiKP	**PKPdf**	**18 18 37.4**	**+0.1**
	baz=291						
657A	**Interlachen**	**121.90**	**59**	PKiKP	**PKiKP**	**18 18 37.8**	**0.0**
	baz=282						
TRPA	**Tarpa**	**121.91**	**324**	⇓*i*P	**PKPdf**	**18 18 37.1**	**0.0**
557A	**Orange Park**	**121.93**	**59**	PKiKP	**PKiKP**	**18 18 38.2**	**+0.3**
	baz=282						
HUMR	**Humele**	**122.09**	**320**	⇓*i*P	**PKPdf**	**18 18 37.7**	**+0.1**
LATQ	**La Tuque**	**122.32**	**36**	PKiKP	**PKiKP**	**18 18 38.2**	**+0.1**
	baz=300						
OJC	**Ojcow**	**122.33**	**328**	*e*PKP	**PKiKP**	**18 18 38.3**	**+0.2**
OJC	**Ojcow**	**122.33**	**328**	*e*PKIKP	**PKiKP**	**18 18 38.3**	**+0.2**
958A	**Wauchula**	**122.39**	**61**	PKiKP	**PKiKP**	**18 18 38.9**	**+0.1**
	baz=281						
058A	**Arcadia**	**122.44**	**62**	PKiKP	**PKPdf**	**18 18 38.8**	**0.0**
	baz=280						
NHSC	**New Hope**	**122.49**	**55**	PFAKE		18 18 50.0	+11
NHSC				LR	LR		
	comp=Z,4µm,19.0s						
NHSC	**New Hope**	**122.49**	**55**	PKiKP	**PKPdf**	**18 18 38.8**	**+0.1**
	baz=285						
NIE	**Niedzica**	**122.50**	**327**	*e*PKP	**PKiKP**	**18 18 39.2**	**+0.7**
NIE	**Niedzica**	**122.50**	**327**	*e*PKIKP	**PKiKP**	**18 18 39.2**	**+0.7**
LONY	**Lake Ozonia**	**122.51**	**40**	*e*PKPdf	**PKPdf**	**18 18 38.1**	**-0.4**
LONY	**Lake Ozonia**	**122.51**	**40**	PKiKP	**PKiKP**	**18 18 39.0**	**+0.4**
	baz=297						
DWPF	**Disney Wildern**	**122.57**	**61**	PKiKP	**PKPdf**	**18 18 39.0**	**0.0**
	baz=281						
758A	**Lake Helen**	**122.60**	**60**	PKiKP	**PKPdf**	**18 18 39.1**	**+0.1**
	baz=282						
858A	**St. Cloud**	**122.61**	**61**	PKiKP	**PKiKP**	**18 18 39.2**	**0.0**
	baz=281						
BINY	**Binghamton**	**122.61**	**43**	PFAKE		18 18 50.0	+11
BINY				LR	LR		
	comp=Z,3µm,20.0s						
BINY	**Binghamton**	**122.61**	**43**	PKiKP	**PKPdf**	**18 18 38.8**	**+0.1**
	baz=294						
R58B	**Mineral**	**122.83**	**48**	*e*PKPdf	**PKPdf**	**18 18 39.1**	**-0.1**
R58B	**Mineral**	**122.83**	**48**	PKiKP	**PKiKP**	**18 18 39.6**	**+0.1**
	baz=290						
PAGS	**Pennsylvania G**	**122.87**	**46**	*e*PKPdf	**PKPdf**	**18 18 39.2**	**-0.1**
LSZ	**Lusaka**	**122.99**	**247**	*e*PKPpre	PKPpre	18 18 31.0	
LSZ				*e*PKPdf	**PKiKP**	**18 18 40.7**	**+0.1**
AAGR	**Agrelo**	**123.02**	**136**	*e*P	**PKiKP**	**18 18 40.7**	**+0.5**
NCB	**Newcomb**	**123.03**	**41**	*e*PKPdf	**PKiKP**	**18 18 39.6**	**-0.1**
859A	**Kempfer Cattle**	**123.04**	**61**	PKiKP	**PKiKP**	**18 18 40.3**	**+0.2**
	baz=282						
FRNY	**Flat Rock**	**123.05**	**39**	*e*PKPdf	**PKPdf**	**18 18 39.1**	**-0.3**
SDMD	**Soldier's Deli**	**123.09**	**47**	*e*PKPpre	PKPpre	18 18 30.1	
SDMD				*e*PKPdf	**PKPdf**	**18 18 39.7**	**0.0**
GZR	**Gura Zlata**	**123.10**	**321**	⇓*i*P	**PKPdf**	**18 18 39.4**	**-0.2**
GZR	**Gura Zlata**	**123.10**	**321**	⇓PKIKP	**PKPdf**	**18 18 39.4**	**-0.2**
LANS	**Liptovska Anna**	**123.10**	**327**	*e*PKP	**PKiKP**	**18 18 40.0**	**+0.3**
AUSP	**Uspallata**	**123.12**	**135**	*e*P	**PKiKP**	**18 18 41.2**	**+0.6**
CBN	**Corbin Frederi**	**123.13**	**48**	PFAKE		18 18 50.0	+10
CBN				LR	LR		
	comp=Z,4µm,20.0s						
CBN	**Corbin Frederi**	**123.13**	**48**	PKiKP	**PKiKP**	**18 18 40.0**	**0.0**
	baz=290						
GO04	**Tololo Observa**	**123.22**	**132**	*e*PKPdf	**PKPdf**	**18 18 39.5**	**-1.1**
GO04	**Tololo Observa**	**123.22**	**132**	*e*P	**PKPdf**	**18 18 40.3**	**-0.3**
MVL	**Millersville**	**123.22**	**46**	*e*PKPdf	**PKiKP**	**18 18 40.4**	**+0.3**
N59A	**State Game Lan**	**123.27**	**44**	*e*PKPdf	**PKiKP**	**18 18 40.2**	**-0.1**
N59A	**State Game Lan**	**123.27**	**44**	PKiKP	**PKiKP**	**18 18 40.2**	**-0.1**
	baz=293						
ASAL	**Salagasta**	**123.30**	**136**	*e*P	**PKiKP**	**18 18 40.8**	**+0.1**
RTLS	**Leoncito**	**123.42**	**135**	*e*P	**PKiKP**	**18 18 41.7**	**+0.5**
061Z	**Ochoppi**	**123.44**	**63**	*e*PKPdf	**PKiKP**	**18 18 41.1**	**+0.1**
061Z	**Ochoppi**	**123.44**	**63**	PKiKP	**PKiKP**	**18 18 41.2**	**+0.2**
	baz=280						
PSZ	**Piszkesteto**	**123.53**	**325**	⇓*i*P	**PKiKP**	**18 18 40.8**	**+0.1**
060Z	**West Palm Beac**	**123.65**	**62**	PKiKP	**PKiKP**	**18 18 41.8**	**+0.4**
	baz=281						
MOQ	**Mont Orford**	**123.66**	**38**	*e*PKPdf	**PKPdf**	**18 18 40.5**	**-0.2**
BZS	**Buzias**	**123.70**	**322**	⇓*i*P	**PKPdf**	**18 18 40.7**	**0.0**
BZS	**Buzias**	**123.70**	**322**	⇓PKIKP	**PKPdf**	**18 18 40.7**	**0.0**
CNNC	**Cliffs of the**	**123.70**	**52**	*e*PKPdf	**PKiKP**	**18 18 41.9**	**+0.7**
CNNC				LR	LR		
	comp=Z,3µm,21.0s						
CNNC	**Cliffs of the**	**123.70**	**52**	PKiKP	**PKiKP**	**18 18 41.6**	**+0.4**
	baz=288						
MORC	**Moravsky Berou**	**123.78**	**328**	*e*PKPdf	**PKiKP**	**18 18 41.1**	**0.0**
MORC	**Moravsky Berou**	**123.78**	**328**	⇓*i*P	**PKiKP**	**18 18 41.7**	**+0.7**
MORC	**Moravsky Berou**	**123.78**	**328**	⇓PKIKP	**PKiKP**	**18 18 41.7**	**+0.7**
MORC	**Moravsky Berou**	**123.78**	**328**	*e*PKP	**PKPdf**	**18 18 40.8**	**0.0**
MORC	**Moravsky Berou**	**123.78**	**328**	*e*PKP	**PKKPab**	**18 28 29.1**	**+1.2**
KSP	**Ksiaz**	**123.78**	**330**	*e*PKP	**PKiKP**	**18 18 40.9**	**0.0**
KSP	**Ksiaz**	**123.78**	**330**	*e*PKIKP	**PKiKP**	**18 18 40.9**	**0.0**
MBAR	**Mbarara**	**123.80**	**265**	PFAKE		18 18 50.0	+7.7
MBAR				LR	LR		
	comp=Z,880nm,22.0s						
VYHS	**Vyhne**	**123.81**	**326**	*e*PKIKP	**PKiKP**	**18 18 41.5**	**+0.4**
VYHS	**Vyhne**	**123.81**	**326**	*e*PKP	**PKiKP**	**18 18 41.5**	**+0.4**
WBCY	**West Bay, Gran**	**123.86**	**71**	*e*PKPdf	**PKPdf**	**18 18 41.4**	**-0.3**
RTCV	**Cerro Valdivia**	**123.92**	**135**	*e*P	**PKiKP**	**18 18 42.0**	**0.0**
TRY	**Troy**	**123.95**	**42**	*e*PKPdf	**PKiKP**	**18 18 41.5**	**0.0**
KRLC	**Kraliky**	**124.00**	**329**	*e*PKP	**PKKPab**	**18 28 27.3**	**+0.3**
ZON	**Zonda**	**124.00**	**135**	*e*P	**PKiKP**	**18 18 42.1**	**+0.1**
ODNJ	**Ogdensburg**	**124.01**	**44**	*e*PKPdf	**PKPdf**	**18 18 41.0**	**-0.4**
MDVR	**Moldovita**	**124.05**	**321**	⇓*i*P	**PKiKP**	**18 18 41.7**	**0.0**
DPC	**Dobruska-Polom**	**124.07**	**329**	*e*PKPDF	**PKiKP**	**18 18 41.7**	**+0.1**
DPC	**Dobruska-Polom**	**124.07**	**329**	*e*PKP	**PKKPab**	**18 28 28.7**	**+2.0**
DPC	**Dobruska-Polom**	**124.07**	**329**	*e*PKIKP	**PKiKP**	**18 18 41.7**	**+0.1**
VTS	**Vitosha**	**124.07**	**318**	*e*PKPdf	**PKPdf**	**18 18 40.9**	**-0.8**
VTS	**Vitosha**	**124.07**	**318**	⇑*i*P	**PKPdf**	**18 18 41.5**	**-0.1**
VTS	**Vitosha**	**124.07**	**318**	⇑PKIKP	**PKPdf**	**18 18 41.6**	**-0.1**
FSCY	**Frank Sound, G**	**124.07**	**71**	*e*PKPdf	**PKiKP**	**18 18 42.6**	**+0.2**
UPC	**Upice**	**124.13**	**329**	*e*PKPDF	**PKPdf**	**18 18 41.5**	**+0.1**
UPC	**Upice**	**124.13**	**329**	*e*PKP	**PKKPab**	**18 28 27.2**	**+0.9**
UPC	**Upice**	**124.13**	**329**	*e*PKIKP	**PKPdf**	**18 18 41.5**	**+0.1**
AROD	**Rodeo**	**124.19**	**133**	*e*P	**PKiKP**	**18 18 43.4**	**+0.6**
ACCO	**Cerro Coronel**	**124.26**	**134**	*e*P	**PKiKP**	**18 18 43.0**	**0.0**
CFA	**Coronel Fontan**	**124.28**	**135**	*e*P	**PKPdf**	**18 18 41.9**	**-0.4**
LBNH	**Lisbon**	**124.38**	**39**	PKiKP	**PKiKP**	**18 18 42.5**	**+0.2**
	baz=299						
HNH	**Hanover**	**124.40**	**40**	*e*PKPdf	**PKiKP**	**18 18 42.5**	**+0.1**
AMOG	**MOGNA**	**124.47**	**134**	*e*P	**PKiKP**	**18 18 43.1**	**+0.1**
PAL	**Palisades**	**124.53**	**44**	*e*PKPdf	**PKiKP**	**18 18 42.8**	**+0.1**
PAL	**Palisades**	**124.53**	**44**	*e*PKIKP	**PKiKP**	**18 18 42.8**	**+0.1**
PAL	**Palisades**	**124.53**	**44**	PKiKP	**PKiKP**	**18 18 42.8**	**+0.1**
	baz=295						
VRAC	**Vranov**	**124.55**	**328**	⇓*i*P	**PKiKP**	**18 18 43.3**	**+0.7**
VRAC	**Vranov**	**124.55**	**328**	⇓PKIKP	**PKiKP**	**18 18 43.3**	**+0.7**
VRAC	**Vranov**	**124.55**	**328**	*e*PKP	**PKiKP**	**18 18 43.2**	**+0.7**
ACAN	**Cantantal**	**124.62**	**136**	*e*P	**PKPdf**	**18 18 42.5**	**-0.5**
MODS	**Modra-Piesok**	**124.74**	**327**	*e*PKIKP	**PKiKP**	**18 18 43.4**	**+0.4**
MODS	**Modra-Piesok**	**124.74**	**327**	*e*PKP	**PKiKP**	**18 18 43.4**	**+0.4**
KRUC	**Moravsky**	**124.81**	**328**	*e*PKP	**PKPdf**	**18 18 42.8**	**+0.1**
KRUC	**Moravsky**	**124.81**	**328**	*e*PKP	**PKKPab**	**18 28 24.3**	**+0.8**
PVCC	**Panska Ves**	**124.84**	**330**	*e*PKPDF	**PKiKP**	**18 18 43.7**	**+0.7**
PVCC	**Panska Ves**	**124.84**	**330**	*e*PKIKP	**PKiKP**	**18 18 43.7**	**+0.7**
BRG	**Berggiesshubel**	**124.92**	**331**	*i* PKP	**PKiKP**	**18 18 43.3**	**+0.1**
	comp=Z,27nm,1.2s						
BRG				*e*PP	PP	18 20 09.4	-22
	comp=Z,5.2nm,1.1s						
BRG	**Berggiesshubel**	**124.92**	**331**	*i* PKIKP	**PKiKP**	**18 18 43.3**	**+0.1**
BRG				pmax	pmax		
	comp=Z,27nm,1.2s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VAY	**Valandovo**	**125.09**	**317**	*i* PKP	**PKPdf**	**18 18 42.0**	**-1.5**
CLL	**Collm**	**125.09**	**332**	*e*PKPdf	**PKPdf**	**18 18 42.9**	**-0.2**
CLL	**Collm**	**125.09**	**332**	⇑*i*PKPdf	**PKPdf**	**18 18 43.3**	**+0.1**
	comp=Z,16nm,0.9s						
CLL				*e*		18 19 08.0	
CLL				*e*PP	**PP**	**18 20 31.0**	**-1.8**
CLL	**Collm**	**125.09**	**332**	*i* PKPbc	**PKKPbc**	**18 28 23.8**	**-0.8**
	comp=Z,5.0nm,0.8s						
CLL	**Collm**	**125.09**	**332**	*e*PKIKP	**PKPdf**	**18 18 42.9**	**-0.2**
TREC	**Trest**	**125.14**	**329**	*e*PKPDF	**PKiKP**	**18 18 43.6**	**-0.1**
TREC	**Trest**	**125.14**	**329**	*e*PKIKP	**PKiKP**	**18 18 43.6**	**-0.1**
PRU	**Pruhonice**	**125.19**	**330**	*e*PKPDF	**PKiKP**	**18 18 43.7**	**-0.1**
PRU	**Pruhonice**	**125.19**	**330**	*e*PKP	**PKKPab**	**18 28 23.8**	**+2.0**
PRU	**Pruhonice**	**125.19**	**330**	*e*PKIKP	**PKiKP**	**18 18 43.7**	**-0.1**
ATAH	**Atahualpa**	**125.25**	**103**	PKP	**PKiKP**	**18 18 46.6**	**+1.1**
	comp=Z,37nm,0.9s,baz=194,slow=2.0,SNR=26						
AGUA	**GUANDACOL**	**125.28**	**133**	*e*P	**PKiKP**	**18 18 45.4**	**+0.6**
DIVS	**Divibare**	**125.46**	**321**	*e*PKPpre	PKPpre	18 18 35.2	
DIVS				*e*PKPdf	**PKPdf**	**18 18 44.4**	**+0.2**
PQI	**Presque Isle**	**125.47**	**35**	*e*PKPdf	**PKPdf**	**18 18 43.3**	**-0.7**
PKME	**Peaks-Kenny Pk**	**125.48**	**37**	*e*PKPdf	**PKiKP**	**18 18 44.5**	**0.0**
PKME	**Peaks-Kenny Pk**	**125.48**	**37**	PKiKP	**PKiKP**	**18 18 44.7**	**+0.3**
	baz=302						
NNA	**Nana**	**125.51**	**109**	*e*PKPdf	**PKPdf**	**18 18 45.3**	**+0.2**
NNA				*e*PKPdf	**PKiKP**	**18 18 45.7**	**+0.3**
NNA				LR	LR		
	comp=Z,736nm,21.0s						
NNA	**Nana**	**125.51**	**109**	PKP	**PKiKP**	**18 18 45.7**	**+0.3**
	comp=Z,20nm,0.9s,baz=269,slow=6.5,SNR=9.2						
MRA	**San Martin**	**125.53**	**137**	*e*P	**PKPdf**	**18 18 44.2**	**-0.5**
CONA	**Conrad Observa**	**125.77**	**327**	*e*PKiKP	**PKiKP**	**18 18 45.3**	**+0.2**
	comp=Z,18nm,1.4s						
BCIP	**Isla Barro Col**	**125.78**	**83**	*e*PKPdf	**PKPdf**	**18 18 45.4**	**-0.1**
BCIP				LR	LR		
	comp=Z,1µm,19.0s						
KRUS	**Krusevo**	**125.95**	**318**	*i* PKP	**PKPdf**	**18 18 44.4**	**-0.9**
BIA	**Bitola**	**126.06**	**317**	*i* PKP	**PKiKP**	**18 18 45.9**	**+0.1**
NKC	**Novy Kostel**	**126.06**	**331**	*e*PKPDF	**PKPdf**	**18 18 45.1**	**0.0**
NKC	**Novy Kostel**	**126.06**	**331**	*e*PKP	PKKPab	18 28 28.5	+10
NKC	**Novy Kostel**	**126.06**	**331**	*e*PKIKP	**PKPdf**	**18 18 45.1**	**0.0**
APLL	**PUNTA DE LOS L**	**126.17**	**135**	*e*P	**PKPdf**	**18 18 46.0**	**0.0**
BATG	**Bathurst New B**	**126.22**	**34**	*e*PKPdf	**PKiKP**	**18 18 45.7**	**-0.2**
KHC	**Kasperske Hory**	**126.22**	**329**	*e*PKPdf	**PKiKP**	**18 18 45.8**	**-0.2**
KHC	**Kasperske Hory**	**126.22**	**329**	*e*PKPDF	**PKPdf**	**18 18 44.9**	**-0.6**
KHC				*e*x	x	18 19 15.5	
KHC	**Kasperske Hory**	**126.22**	**329**	*e*PKIKP	**PKPdf**	**18 18 44.9**	**-0.6**
KHC				*e*		18 19 15.5	
AGG	**Agios Georgios**	**126.23**	**315**	*e*PKPdf	**PKPdf**	**18 18 45.1**	**-0.7**
GEC2	**GERESS Array S**	**126.34**	**329**	*e*PKPdf	**PKPdf**	**18 18 44.9**	**-0.9**
GEC2	**GERESS Array S**	**126.34**	**329**	*e*PKIKP	**PKPdf**	**18 18 44.9**	**-0.9**
GERES	**GERESS Array B**	**126.34**	**329**	PKP	**PKPdf**	**18 18 46.0**	**+0.2**
	comp=Z,12nm,0.9s,baz=52,slow=2.2,SNR=54						
GEA0	**GERESS Array S**	**126.34**	**329**	*e*PKPdf	**PKPdf**	**18 18 45.6**	**-0.2**
ARSA	**Arzberg**	**126.35**	**327**	*e*PKiKP	**PKPdf**	**18 18 45.7**	**-0.1**
	comp=Z,7.4nm,1.2s						
OHR	**Ohrid**	**126.37**	**318**	*i* PKP	**PKPdf**	**18 18 45.6**	**-0.4**
ACLC	**CERRO LA CRUZ**	**126.42**	**134**	*e*P	**PKPdf**	**18 18 46.9**	**+0.2**
OTAV	**Otavalo**	**126.49**	**94**	*e*PKPdf	**PKPdf**	**18 18 47.3**	**-0.2**
MOA	**Molln**	**126.67**	**328**	*e*PKiKP	**PKPdf**	**18 18 46.5**	**+0.2**
	comp=Z,4.0nm,0.8s						
GO02	**Mina Guanaco**	**126.70**	**128**	*e*PKPdf	**PKiKP**	**18 18 47.8**	**-0.1**
PERS	**Pernice**	**126.94**	**326**	*i* PKPdf	**PKPdf**	**18 18 46.9**	**0.0**
SOKA	**Soboth**	**126.96**	**326**	*i* PKiKP	**PKPdf**	**18 18 46.9**	**-0.1**
	comp=Z,11nm,1.1s						
GRGC	**Isla de Gorgon**	**127.08**	**91**	*e*P	**PKPdf**	**18 18 48.3**	**+0.2**
GRGC	**Isla de Gorgon**	**127.08**	**91**	*e*P	**PKPdf**	**18 18 48.3**	**+0.2**
CMBC	**Cumbal**	**127.20**	**94**	*e*P	**PKiKP**	**18 18 49.9**	**+0.5**
CMBC	**Cumbal**	**127.20**	**94**	*e*P	**PKiKP**	**18 18 49.9**	**+0.5**
BOJS	**Bojanci**	**127.53**	**325**	*i* PKPdf	**PKiKP**	**18 18 48.4**	**-0.2**
VISS	**Visnje**	**127.59**	**325**	*i* PKPdf	**PKiKP**	**18 18 48.5**	**-0.2**
PB04	**IPOC Station P**	**127.60**	**124**	*e*PKPdf	**PKPdf**	**18 18 49.2**	**+0.2**
MTDJ	**Mount Denham**	**127.62**	**72**	*e*PKPdf	**PKPdf**	**18 18 48.7**	**-0.4**
KBA	**Koelnbreinsper**	**127.64**	**327**	*e*PKPdf	**PKPdf**	**18 18 48.0**	**-0.4**
	comp=Z,16nm,1.0s						
MYKA	**Terra Mystica**	**127.75**	**327**	*e*PKPdf	**PKPdf**	**18 18 48.1**	**-0.5**
	comp=Z,7.6nm,1.0s						
LMN	**Caledonia Moun**	**127.76**	**34**	*e*PKPdf	**PKiKP**	**18 18 49.1**	**+0.1**
CYA	**Choya**	**127.81**	**133**	*e*P	**PKPdf**	**18 18 49.4**	**+0.2**
JAVS	**Javornik**	**127.97**	**326**	*i* PKPdf	**PKiKP**	**18 18 50.2**	**+0.6**
MALC	**Bahia Malaga**	**128.00**	**90**	*e*P	**PKiKP**	**18 18 51.2**	**+0.8**
MALC	**Bahia Malaga**	**128.00**	**90**	*e*P	**PKiKP**	**18 18 51.2**	**+0.8**
ESK	**Eskdalemuir**	**128.01**	**344**	PFAKE		18 19 00.0	+11
ESK				LR	LR		
	comp=Z,1µm,20.0s						
CRUC	**La Cruz**	**128.14**	**93**	*e*P	**PKiKP**	**18 18 51.5**	**+0.4**
CRUC	**La Cruz**	**128.14**	**93**	*e*P	**PKiKP**	**18 18 51.5**	**+0.4**
ABTA	**Abfaltersbach**	**128.29**	**328**	*e*PKPdf	**PKPdf**	**18 18 49.3**	**-0.3**
	comp=Z,16nm,0.9s						
WATA	**Walderalm**	**128.40**	**329**	*i* PKiKP	**PKPdf**	**18 18 49.9**	**+0.1**
	comp=Z,6.9nm,0.6s						
LVC	**Limon Verde**	**128.48**	**125**	*e*PKPdf	**PKPdf**	**18 18 51.0**	**+0.1**
LVC				*e*PKPdf	**PKiKP**	**18 18 52.1**	**+0.4**
LVC	**Limon Verde**	**128.48**	**125**	PKP	**PKiKP**	**18 18 52.1**	**+0.4**
	comp=Z,19nm,0.8s,baz=278,slow=2.9,SNR=16						
POPC	**Popayan, Colom**	**128.52**	**92**	*e*P	**PKPdf**	**18 18 51.3**	**+0.2**
POPC	**Popayan, Colom**	**128.52**	**92**	*e*P	**PKPdf**	**18 18 51.3**	**+0.2**
SOTA	**Rioblanco**	**128.55**	**92**	*e*P	**PKiKP**	**18 18 51.9**	**-0.3**
SOTA	**Rioblanco**	**128.55**	**92**	*e*P	**PKiKP**	**18 18 51.9**	**-0.3**
STU	**Stuttgart**	**128.61**	**331**	*e*PKPdf	**PKPdf**	**18 18 50.1**	**+0.1**
MOTA	**Moosalm**	**128.64**	**329**	*e*PKiKP	**PKPdf**	**18 18 50.2**	**-0.1**
	comp=Z,31nm,1.2s,SNR=7.9						
SQTA	**Sankt Quirin**	**128.67**	**329**	*e*PKiKP	**PKPdf**	**18 18 50.6**	**+0.2**
	comp=Z,18nm,0.9s,SNR=6.1						
MEM	**Membach**	**128.71**	**335**	⇑PKiKP	**PKPdf**	**18 18 50.4**	**+0.3**
RETA	**Reutte**	**128.72**	**329**	*i* PKiKP	**PKiKP**	**18 18 50.7**	**-0.3**
	comp=Z,9.3nm,1.0s						
PB01	**IPOC Station P**	**128.73**	**123**	*e*PKPdf	**PKiKP**	**18 18 51.5**	**-0.3**
PCON	**Cinco Dias**	**128.78**	**92**	*e*P	**PKiKP**	**18 18 52.7**	**0.0**
PCON	**Cinco Dias**	**128.78**	**92**	*e*P	**PKiKP**	**18 18 52.7**	**0.0**
YOTC	**Yotoco, Valle**	**128.98**	**90**	*e*P	**PKPdf**	**18 18 52.1**	**+0.2**
YOTC	**Yotoco, Valle**	**128.98**	**90**	*e*P	**PKPdf**	**18 18 52.1**	**+0.2**
FETA	**Feichten**	**129.04**	**329**	*e*PKiKP	**PKiKP**	**18 18 51.7**	**-0.1**
	comp=Z,23nm,0.9s,SNR=6.7						
HAL	**Halifax**	**129.18**	**35**	*e*PKPdf	**PKPdf**	**18 18 51.5**	**+0.4**
MARP	**Paez Belalcaza**	**129.27**	**91**	*e*P	**PKPdf**	**18 18 52.6**	**0.0**
MARP	**Paez Belalcaza**	**129.27**	**91**	*e*P	**PKPdf**	**18 18 52.6**	**0.0**
DAVA	**Damuels**	**129.30**	**330**	*i* PKiKP	**PKPdf**	**18 18 51.7**	**+0.2**
	comp=Z,15nm,0.8s						
BFO	**Black Forest**	**129.33**	**332**	PFAKE		18 19 00.0	+7.9
BFO				LR	LR		
	comp=Z,33nm,21.0s						
BFO	**Black Forest**	**129.33**	**332**	*i* PKIKP	**PKiKP**	**18 18 52.2**	**+0.1**
WLF	**Walferdange**	**129.35**	**334**	*e*PKPdf	**PKiKP**	**18 18 52.1**	**+0.1**
WLF	**Walferdange**	**129.35**	**334**	⇓PKiKP	**PKiKP**	**18 18 53.1**	**+1.1**
MNMC	**Minye Minye**	**129.49**	**121**	*e*PKPdf	**PKiKP**	**18 18 53.3**	**-0.3**
FUORN	**Ofenpass-Fuorn**	**129.55**	**329**	*e*PKPpre	PKPpre	18 18 43.1	
FUORN				*e*PKPdf	**PKPdf**	**18 18 52.5**	**+0.3**
HELC	**Santa Helena**	**129.94**	**87**	*e*P	**PKPdf**	**18 18 54.2**	**+0.2**
HELC	**Santa Helena**	**129.94**	**87**	*e*P	**PKPdf**	**18 18 54.2**	**+0.2**
ANIL	**Santa Ana**	**129.96**	**89**	*e*P	**PKPdf**	**18 18 53.8**	**-0.1**
ANIL	**Santa Ana**	**129.96**	**89**	*e*P	**PKPdf**	**18 18 53.8**	**-0.1**
ECH	**Echery**	**129.96**	**332**	*e*PKPdf	**PKPdf**	**18 18 52.9**	**+0.3**
UREC	**San Jos de Ur**	**130.00**	**85**	*e*P	**PKPdf**	**18 18 54.0**	**+0.4**
UREC	**San Jos de Ur**	**130.00**	**85**	*e*P	**PKPdf**	**18 18 54.0**	**+0.4**
NORC	**Norcasia**	**130.56**	**88**	*e*P	**PKPdf**	**18 18 54.6**	**-0.2**
NORC	**Norcasia**	**130.56**	**88**	*e*P	**PKPdf**	**18 18 54.6**	**-0.2**
ZARC	**Zaragoza, Cauc**	**130.66**	**86**	*e*P	**PKPdf**	**18 18 54.7**	**-0.2**
ZARC	**Zaragoza, Cauc**	**130.66**	**86**	*e*P	**PKPdf**	**18 18 54.7**	**-0.2**
TSUM	**Tsumeb**	**130.89**	**238**	*e*PKPdf	**PKiKP**	**18 18 56.0**	**-0.2**
PTBC	**PUERTO BERRIO,**	**131.03**	**87**	*e*P	**PKPdf**	**18 18 54.1**	**-1.5**
PTBC	**PUERTO BERRIO,**	**131.03**	**87**	*e*P	**PKPdf**	**18 18 54.1**	**-1.5**
ROSC	**El Rosal**	**131.06**	**89**	*e*PKPdf	**PKiKP**	**18 18 56.7**	**-0.3**
ROSC	**El Rosal**	**131.06**	**89**	*e*P	**PKiKP**	**18 18 56.8**	**-0.3**
ROSC	**El Rosal**	**131.06**	**89**	*e*P	**PKiKP**	**18 18 56.8**	**-0.3**
ROSC	**El Rosal**	**131.06**	**89**	PKP	**PKiKP**	**18 18 57.1**	**0.0**
	comp=Z,81nm,0.6s,baz=104,slow=5.7,SNR=33						
SMLC	**San Martn de**	**131.47**	**84**	*e*P	**PKPdf**	**18 18 56.5**	**+0.1**
SMLC	**San Martn de**	**131.47**	**84**	*e*P	**PKPdf**	**18 18 56.5**	**+0.1**
CHIC	**Chingaza**	**131.63**	**89**	*e*P	**PKPdf**	**18 18 56.8**	**-0.4**
CHIC	**Chingaza**	**131.63**	**89**	*e*P	**PKPdf**	**18 18 56.8**	**-0.4**
LPAZ	**La Paz**	**131.95**	**118**	*e*PKPpre	PKPpre	18 18 46.4	
LPAZ				*e*PKPdf	**PKiKP**	**18 18 58.6**	**-0.4**
LPAZ	**La Paz**	**131.95**	**118**	*e*PKHKP	PKPpre	18 18 46.4	
LPAZ				*e*		18 18 58.6	
CODC	**Agustn Codazz**	**132.09**	**82**	*e*P	**PKPdf**	**18 18 57.7**	**+0.2**
CODC	**Agustn Codazz**	**132.09**	**82**	*e*P	**PKPdf**	**18 18 57.7**	**+0.2**
BARC	**Barichara**	**132.29**	**87**	*e*P	**PKPdf**	**18 18 57.5**	**-0.7**
BARC	**Barichara**	**132.29**	**87**	*e*P	**PKPdf**	**18 18 57.5**	**-0.7**
PAMC	**Pamplona, Colo**	**132.80**	**86**	*e*P	**PKPdf**	**18 18 59.8**	**+0.3**
PAMC	**Pamplona, Colo**	**132.80**	**86**	*e*P	**PKPdf**	**18 18 59.8**	**+0.3**
GRTK	**Grand Turk**	**133.06**	**66**	PFAKE		18 19 10.0	+10
GRTK				LR	LR		
	comp=Z,1µm,22.0s						
SDDR	**Presa de Saban**	**133.39**	**70**	*e*PKPdf	**PKPdf**	**18 19 00.3**	**+0.3**
URIC	**Uribia, Colomb**	**133.47**	**80**	*e*P	**PKiKP**	**18 19 01.1**	**-0.2**
URIC	**Uribia, Colomb**	**133.47**	**80**	*e*P	**PKiKP**	**18 19 01.1**	**-0.2**
SDV	**Santo Domingo**	**134.87**	**84**	*e*PKPpre	PKPpre	18 18 50.4	
SDV				*e*PKPdf	**PKPdf**	**18 19 03.5**	**+0.4**
SDV	**Santo Domingo**	**134.87**	**84**	PKP	**PKPdf**	**18 19 03.6**	**+0.6**
	comp=Z,206nm,0.7s,baz=203,slow=1.1,SNR=130						
CPUP	**Villa Florida**	**135.03**	**137**	*e*PKPdf	**PKPdf**	**18 19 02.7**	**-0.1**
CPUP	**Villa Florida**	**135.03**	**137**	PKP	**PKPdf**	**18 19 03.2**	**+0.4**
	comp=Z,13nm,0.8s,baz=251,slow=1.6,SNR=3.7						
MPR	**Mayaguez**	**137.40**	**70**	*e*PKPpre	PKPpre	18 18 59.9	
EMPR	**Esperanza - Ma**	**137.91**	**69**	*e*PKPdf	**PKPdf**	**18 19 08.6**	**+0.4**
OBIP	**Obispado Ponce**	**137.93**	**70**	*e*PKPdf	**PKPdf**	**18 19 08.9**	**+0.5**
ICMP	**Isla Caja de M**	**138.03**	**70**	*e*PKPdf	**PKPdf**	**18 19 09.1**	**+0.6**
SIV	**San Ignacio**	**138.14**	**122**	PKhKP	PKPpre	18 18 58.3	
	comp=Z,3.1nm,0.7s,baz=277,slow=2.2,SNR=11						
SIV				PKP	**PKPdf**	**18 19 09.2**	**+0.3**
	comp=Z,14nm,0.8s,baz=256,slow=0.8,SNR=22						
SJG	**San Juan**	**138.34**	**70**	*e*PKPpre	PKPpre	18 18 58.7	
SJG				*e*PKPdf	**PKPdf**	**18 19 09.2**	**+0.1**
SJG	**San Juan**	**138.34**	**70**	*e*PKHKP	PKPpre	18 18 58.7	
SJG				*e*		18 19 09.2	
SJG	**San Juan**	**138.34**	**70**	PKhKP	PKPpre	18 18 58.8	
	comp=Z,17nm,0.6s,baz=333,slow=4.1,SNR=6.8						
SJG				PKP	**PKPdf**	**18 19 10.1**	**+1.0**
	comp=Z,98nm,0.7s,baz=50,slow=4.6,SNR=18						
CBYP	**Canovanas**	**138.58**	**69**	*e*PKPdf	**PKPdf**	**18 19 08.8**	**-0.8**
HUMP	**Col San Antoni**	**138.61**	**70**	*e*PKPpre	PKPpre	18 19 00.2	
HUMP				*e*PKPdf	**PKPdf**	**18 19 10.3**	**+0.7**
MTP	**Monte Pirata**	**138.90**	**70**	*e*PKPpre	PKPpre	18 18 59.8	
MTP				*e*PKPdf	**PKPdf**	**18 19 09.7**	**-0.4**
CUPR	**Culebra, Puert**	**139.11**	**69**	*e*PKPdf	**PKPdf**	**18 19 06.7**	**-3.8**
SMRT	**St. Maarten**	**141.21**	**69**	*e*PKPpre	PKPpre	18 19 09.0	
SMRT				*e*PKPdf	**PKPdf**	**18 19 14.4**	**+0.1**
ES19	**SONSECA Array**	**141.59**	**333**	*e*PKPpre	PKPpre	18 19 08.9	
ESDC	**Sonseca Array**	**141.64**	**333**	PKhKP	PKPpre	18 19 09.5	
	comp=Z,0.8nm,0.5s,baz=2.4,slow=4.6,SNR=4.9						
ESDC				PP	**PP**	**18 22 17.4**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=25,slow=6.6,SNR=5.3						
POLO	**Lamas de Olo**	**141.75**	**339**	*e*PKPdf	**PKPdf**	**18 19 09.6**	**-5.2**
PAB	**San Pablo**	**141.92**	**334**	*e*PKPpre	PKPpre	18 19 08.0	
PAB				*e*PKPdf	**PKPdf**	**18 19 14.7**	**-0.5**
PAB	**San Pablo**	**141.92**	**334**	*e*PKHKP	PKPpre	18 19 08.0	
PAB				*e*		18 19 14.7	
PVIS	**Viseu**	**142.36**	**338**	*e*PKPdf	**PKPdf**	**18 19 12.0**	**-3.9**
ANWB	**Willy Bob**	**142.49**	**69**	PFAKE		18 19 30.0	+10
ANWB				LR	LR		
	comp=Z,999nm,20.0s						
PCBR	**Castelo Branco**	**142.97**	**337**	*e*PKPdf	**PKPdf**	**18 19 14.5**	**-2.4**
PCAS	**Casmilo, Conde**	**143.16**	**338**	*e*PKPdf	**PKPdf**	**18 19 17.9**	**+0.7**
PMRV	**Marv??o**	**143.29**	**337**	*e*PKPdf	PKPbc	18 19 14.9	+0.2
PTOM	**Tomar**	**143.51**	**338**	*e*PKPdf	PKPbc	18 19 15.7	+0.4
GRGR	**Grenville**	**143.53**	**78**	PFAKE		18 19 30.0	+8.1
GRGR				LR	LR		
	comp=Z,861nm,21.0s						
PESTR	**Estremoz**	**143.85**	**336**	*e*PKPdf	PKPbc	18 19 16.1	-0.3
PESTR	**Estremoz**	**143.85**	**336**	*e*PKPpre	PKPpre	18 19 14.1	
PMTG	**Montargil**	**143.92**	**337**	*e*PKPdf	PKPbc	18 19 16.6	+0.1
PMAFR	**Mafra**	**144.42**	**338**	*e*PKPdf	PKPbc	18 19 18.5	+0.4
LIJA	**Lijar**	**144.55**	**332**	PKP	**PKPdf**	**18 19 19.9**	**0.0**
PTGA	**Pitinga**	**144.57**	**100**	*e*PKPdf	**PKPab**	**18 19 18.4**	**-0.7**
PTGA	**Pitinga**	**144.57**	**100**	PKP	**PKPab**	**18 19 19.2**	**+0.1**
	comp=Z,166nm,0.7s,baz=257,slow=4.4,SNR=271						
PBEJ	**Beja**	**144.68**	**336**	*e*PKPdf	**PKPdf**	**18 19 20.2**	**+0.3**
REAL	**Reales**	**144.80**	**332**	PKP	PKPbc	18 19 19.6	0.0
GIBL	**Gibalbin**	**144.87**	**333**	PKP	**PKPdf**	**18 19 20.9**	**+0.6**
PNCL	**Nicolau / Gran**	**144.87**	**337**	*e*PKPdf	**PKPdf**	**18 19 20.0**	**-0.2**
ALJ	**Aljibe**	**144.97**	**332**	PKP	**PKPdf**	**18 19 21.1**	**+0.6**
MESJ	**Messejana**	**144.98**	**336**	*e*PKPdf	**PKPab**	**18 19 20.0**	**+0.1**
MESJ	**Messejana**	**144.98**	**336**	*e*PKPdf	**PKPdf**	**18 19 20.3**	**-0.1**
PVAQ	**Vaqueiros**	**145.15**	**335**	*e*PKPdf	**PKPdf**	**18 19 21.1**	**+0.3**
SFS	**San Fernando**	**145.28**	**333**	*e*PKPbc	**PKPab**	**18 19 21.7**	**+0.7**
SFS	**San Fernando**	**145.28**	**333**	*e*PKIKP	**PKPab**	**18 19 21.7**	**+0.7**
SFS	**San Fernando**	**145.28**	**333**	PKP	**PKPab**	**18 19 22.0**	**+1.0**
CNIL	**Conil**	**145.29**	**332**	PKP	**PKPab**	**18 19 22.7**	**+1.7**
PBDV	**Barranco-do-Ve**	**145.38**	**335**	*e*PKPdf	**PKPab**	**18 19 22.1**	**+0.7**
BBGH	**Gun Hill**	**145.44**	**76**	PFAKE		18 19 30.0	+4.2
BBGH				LR	LR		
	comp=Z,2µm,20.0s						
PTEO	**Sao Teotonio**	**145.44**	**337**	*e*PKPdf	**PKPab**	**18 19 22.6**	**+1.0**
MORF	**Marmelete**	**145.62**	**336**	*e*PKPdf	**PKPdf**	**18 19 21.0**	**-0.6**
MORF	**Marmelete**	**145.62**	**336**	*e*PKPdf	**PKPab**	**18 19 22.7**	**+0.4**
PFVI	**Vila Bisbo**	**145.84**	**336**	*e*PKPdf	**PKPab**	**18 19 23.6**	**+0.5**
PFVI	**Vila Bisbo**	**145.84**	**336**	*e*PKPdf	**PKPbc**	**18 19 22.5**	**-0.1**
TAM	**Tamanrasset**	**146.17**	**302**	*e*PKPdf	**PKPdf**	**18 19 23.1**	**0.0**
TAM	**Tamanrasset**	**146.17**	**302**	*e*PKP2	**PKPdf**	**18 19 23.1**	**0.0**
BDFB	**Brasilia**	**148.61**	**134**	PKP	**PKPdf**	**18 19 28.0**	**+0.7**
	comp=Z,42nm,0.8s,baz=195,slow=2.4,SNR=32						
BDFB				PKPbc	**PKPbc**	**18 19 30.9**	**-0.1**
	comp=Z,66nm,0.8s,baz=219,slow=0.4,SNR=27						
CMLA	**Cha da Macela**	**148.63**	**1**	PFAKE		18 19 40.0	+6.0
CMLA				LR	LR		
	comp=Z,1µm,19.0s						
SHEL	**Horse Pasture**	**150.74**	**221**	PFAKE		18 19 40.0	+3.2
SHEL				LR	LR		
	comp=Z,528nm,20.0s						
SHEL	**Horse Pasture**	**150.74**	**221**	*i* PKIKP	**PKiKP**	**18 19 38.7**	**+1.9**
MDP	**Montagnes des**	**152.63**	**91**	PKP	**PKPdf**	**18 19 34.4**	**+0.9**
	comp=Z,57nm,1.0s,baz=216,slow=2.8,SNR=10.0						
MDP				PKPbc	**PKiKP**	**18 19 41.3**	**+0.5**
	comp=Z,166nm,0.7s,baz=251,slow=3.6,SNR=71						
MDP				PKPab	**PKPab**	**18 19 51.8**	**+0.3**
	comp=Z,21nm,0.5s,baz=61,slow=22,SNR=7.3						
TOA0	**Torodi Ar. Sit**	**152.68**	**287**	*e*PKPdf	**PKPdf**	**18 19 31.5**	**-1.9**
TOA0				*e*PKPdf	**PKPdf**	**18 19 32.5**	**-1.0**
TOA0				*e*PKPbc	**PKPbc**	**18 19 39.6**	**-1.0**
TOA0				*e*PKPbc	**PKPbc**	**18 19 40.5**	**-0.1**
TOA0				*e*PKPab	**PKPab**	**18 19 50.9**	**-0.7**
TOA0				*e*PKPab	**PKPab**	**18 19 51.0**	**-0.5**
TOA0				*e*		18 19 55.4	
TOA0				*e*		18 19 55.5	
TORD	**Torodi Ar. Bea**	**152.68**	**287**	PKP	**PKPdf**	**18 19 32.5**	**-0.9**
	comp=Z,11nm,0.9s,baz=339,slow=2.1,SNR=44						
TORD				PKPbc	**PKPbc**	**18 19 40.0**	**-0.5**
	comp=Z,35nm,0.8s,baz=14,slow=2.5,SNR=40						
TORD				PKPab	**PKPab**	**18 19 51.5**	**-0.1**
	comp=Z,23nm,0.8s,baz=51,slow=2.4,SNR=8.0						
TORD				PP	**PP**	**18 23 20.7**	**-4.1**
	comp=Z,3.5nm,0.9s,baz=47,slow=2.6,SNR=4.6						
TOA1	**Torodi Ar. Sit**	**152.68**	**287**	*e*PKPdf	**PKPdf**	**18 19 32.5**	**-0.9**
TOA1				*e*PKPbc	**PKPbc**	**18 19 40.0**	**-0.5**
TOA1				*e*PKPab	**PKPab**	**18 19 51.5**	**-0.1**
TOA1				*e*PP	**PP**	**18 23 20.7**	**-4.1**
KIC	**Kosan Boka**	**159.71**	**271**	*e*PKIKP	**PKPdf**	**18 19 42.4**	**-0.3**
	comp=Z,54nm,1.2s						
KIC	**Kosan Boka**	**159.71**	**271**	*e*PKP1	**PKPab**	**18 20 21.8**	**0.0**
	comp=Z,327nm,1.0s						
DBIC	**Dimbokro**	**159.82**	**272**	*e*PKPdf	**PKPdf**	**18 19 42.1**	**-0.7**
DBIC				*e*PKPab	**PKPab**	**18 20 22.1**	**-0.2**
DBIC				*e*pPKPab	**pPKPab**	**18 20 38.7**	**-8.1**
DBIC				PP	**PP**	**18 24 03.4**	**-1.2**
DBIC	**Dimbokro**	**159.82**	**272**	*e*PKIKP	**PKPdf**	**18 19 42.1**	**-0.7**
DBIC				*e*		18 20 22.1	
DBIC						18 24 03.4	
DBIC	**Dimbokro**	**159.82**	**272**	PKP	**PKPdf**	**18 19 43.1**	**+0.3**
	comp=Z,10nm,0.9s,baz=82,slow=3.2,SNR=8.7						
DBIC				PKPab	**PKPab**	**18 20 23.1**	**+0.7**
	comp=Z,67nm,0.9s,baz=80,slow=5.8,SNR=30						
DBIC				PP	**PP**	**18 24 03.4**	**-1.2**
	comp=Z,9.4nm,0.9s,baz=68,slow=2.0,SNR=3.1						
TIC	**Toumodi**	**159.98**	**272**	*e*PKIKP	**PKPdf**	**18 19 42.7**	**-0.3**
TIC	**Toumodi**	**159.98**	**272**	*e*PKP1	**PKPab**	**18 20 22.6**	**-0.5**
LIC	**Lamto**	**159.99**	**271**	*e*PKIKP	**PKPdf**	**18 19 42.6**	**-0.4**
	comp=Z,47nm,0.9s						
LIC	**Lamto**	**159.99**	**271**	*e*PKP1	**PKPab**	**18 20 22.7**	**-0.4**
	comp=Z,337nm,1.1s						
SACV	**Santiago Islan**	**171.20**	**350**	PFAKE		18 20 00.0	+7.9
SACV				LR	LR		
	comp=Z,585nm,20.0s						

ISCJB ***08*** *18:07:45.8±0.1, 10°.90S±0°.02×166°.60E±0°.02, h10*^{km}*, mb5.4/288, MS5.5/102, Error ellipse: s-maj=3.7km s-min=2.9km az=138.8*

NEIC ***08*** *18:07:46.9±0.1, 10°.87S×166°.63E, h10*^{km}*, mb5.6/240, MS5.5/84, Error ellipse: s-maj=4.1km s-min=3.1km az=129.0*

GCMT ***08*** *18:07:49.9±0.3, 10°.93S±0°.04×166°.90E±0°.02, h21*^{km}*±1*^{km}*, MW5.9/90, Moment Tensor Solution. s29,c30; s90,c152; Duration: 2*^{s}*2 Moment tensor: Scale 10*^{18}*Nm;* M_{rr}*-1.07±.07;* $M_{\theta\theta}$*0.33±.04;* $M_{\phi\phi}$*0.74±.04;* $M_{r\theta}$*-0.22±.08;* $M_{\theta\phi}$*-0.21±.02;* $M_{\phi r}$*-0.23±.06; Best double couple:* M_0*0.99000×10*^{18} *NP1:*ϕ_s*350.00000°, δ50.00000°, λ-75.00000°. NP2:*ϕ_s*147.00000°, δ42.00000°,* *λ-108.00000°. Principal axes: T 0.8400, Plg4.0000°, Azm69.0000°; N 0.3030, Plg12.0000°, Azm160.0000°; P -1.1400, Plg78.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **08** 18:07:49.9±0.9, 10°.91S×166°.56E, h40^{km}, mb5.6/60, MS5.4/9 Error ellipse: s-maj=7.9km s-min=6.9km az=92.2*

*IDC **08** 18:07:51.0±5.1, 10°.89S×166°.64E, h33^{km}±37^{km}, mb4.8/34, mb1 4.9/36, mb1mx4.8/52, mbtmp5.0/36, ML4.7/2, MS5.7/6, Ms1 5.7/6, ms1mx5.0/24, Error ellipse: s-maj=15.7km s-min=12.5km az=108.0*

*BJI **08** 18:07:52.4, 10°.54S×166°.96E, h59^{km}, mb5.1/67, mB6.0/34, Ms5.7/30, Ms7 5.5/31*

ISC 08 18:07:47.5±0.2**, 10°.83S**±0°.05×**166°.57E**±0°.05**, h10^{km}, n702, σ1^{s}.54**/646**, mb5.5**/287**, MS5.5**/103**, 18C-15D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.67	281	ePn	Pn	18 09 28.7	+3.0
HNR	Honiara	6.67	281	eP	Pn	18 09 28.7	+3.0
HNR	Honiara	6.67	281	Pn	Pn	18 09 29.8	+4.1
	40nm,0.3s,baz=48,slow=0.3,SNR=16						
HNR				LR	LR	18 12 16.3	
	comp=Z,77µm,19.0s,baz=116,slow=39						
MARNC	Mare, Loyalty	10.68	173	ePn	Pn	18 10 21.8	+1.1
DZM	Mont Dzumac	11.18	181	ePn	Pn	18 10 29.4	+1.8
	55nm,0.7s						
DZM				eLR	LR	18 13 10.3	
	comp=Z,28µm,27.4s						
DZM	Mont Dzumac	11.18	181	ePn	Pn	18 10 29.2	+1.6
DZM	Mont Dzumac	11.18	181	Pn	Pn	18 10 29.8	+2.2
	1.9nm,0.3s,baz=25,slow=20,SNR=8.1						
DZM				LR	LR	18 13 15.0	
	comp=Z,3µm,20.1s,baz=9.0,slow=29						
PINNC	Pines Island,	11.75	176	ePn	Pn	18 10 36.9	+1.6
FUNA	Funafuti	12.65	81	ePn	Pn	18 10 49.3	+1.6
MSVF	Nonsavu	13.06	123	ePn	Pn	18 10 55.1	+1.7
MSVF	Nonsavu	13.06	123	⇑eP	Pn	18 10 55.9	+2.5
TARA	Tarawa	13.65	28	ePn	Pn	18 11 00.8	-0.5
RABL	Rabaul	15.73	294	ePn	P	18 11 33.4	0.0
	964nm,1.9s						
PATS	Pohnpei	19.38	335	eP	Pn	18 12 19.1	+4.3
	594nm,1.5s						
KWAJ	Kwajalein Atol	19.53	3	eP	Pn	18 12 17.8	+1.2
	362nm,1.0s						
KWAJ	Kwajalein Atol	19.53	3	eP	Pn	18 12 17.8	+1.2
EIDS	Eidsvold	20.61	223	P	Pn	18 12 28.4	-0.9
	baz=21,SNR=46						
EIDS	Eidsvold	20.61	223	eP	P	18 12 28.2	+1.1
	198nm,1.0s						
MANU	Manus Island	20.97	293	eP	Pn	18 12 34.9	+1.3
	983nm,1.5s						
CTA	Charters Tower	21.62	242	P	P	18 12 39.4	+1.4
	32nm,0.8s,baz=71,slow=12,SNR=12						
CTA				LR	LR	18 20 03.3	
	comp=Z,18µm,19.2s,baz=123,slow=34						
CTAO	Charters Tower	21.62	242	eP	P	18 12 38.7	+0.7
	383nm,1.5s						
CTAO				LR	LR		
	comp=Z,27µm,21.0s						
CTAO	Charters Tower	21.62	242	eP	P	18 12 38.7	+0.7
LHI	Lord Howe Isla	21.73	198	eP	P	18 12 40.8	+1.6
	comp=Z,170nm,0.9s						
MTSU	Mount Surprise	22.73	249	P	P	18 12 51.9	+2.0
	baz=23,SNR=30						
RMQ	Roma	22.92	225	P	P	18 12 52.7	+0.8
	baz=23,SNR=27						
COEN	Coen	23.06	260	P	P	18 12 55.2	+1.8
	baz=23,SNR=8.9						
COEN	Coen	23.06	260	eP	P	18 12 56.0	+2.5
	comp=Z,160nm,1.4s						
RAO	Raoul Island	23.36	144	eP	P	18 13 00.2	+3.9
	comp=Z,511nm,0.9s						
RAO	Raoul Island	23.36	144	eP	P	18 13 00.2	+3.9
RAO	Raoul Island	23.36	144	LR	LR	18 19 59.1	
	comp=Z,8µm,20.6s,baz=234,slow=31						
ARMA	Armidale	23.94	213	P	P	18 13 01.8	-0.3
	baz=24,SNR=17						
ARMA	Armidale	23.94	213	eP	P	18 13 01.4	-0.7
	comp=Z,305nm,1.4s						
NIUE	Niue	24.11	113	eP	P	18 13 01.2	-2.5
	comp=Z,594nm,1.1s						
OUZ	Omahuta	25.11	166	eP	P	18 13 14.1	+1.6
	comp=Z,164nm,1.6s						
MGCD	Mangrove Creek	26.42	210	P	P	18 13 26.7	+2.2
	baz=27,SNR=4.1						
JAY	Jayapura	26.97	286	P	P	18 13 32.1	+2.4
GENI	Genyem	27.45	285	P	P	18 13 35.8	+1.8
QIS	Mount Isa	27.67	246	P	P	18 13 37.2	+1.3
	baz=28,SNR=5.6						
CMSA	Cobar Meteorol	28.25	220	P	P	18 13 39.8	-1.1
	baz=28,SNR=8.2						
YNG	Young	28.67	213	P	P	18 13 44.5	-0.2
	baz=29,SNR=6.5						
URZ	Urewera	28.90	163	eP	P	18 13 49.2	+2.5
	comp=Z,77nm,1.5s						
CNB	Canberra Magne	28.97	210	P	P	18 13 47.5	+0.1
	baz=29,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.13	0	T	T	18 44 26.3	
	baz=181,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.14	0	T	T	18 44 24.5	
	baz=181,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	29.15	0	T	T	18 44 26.7	
	baz=181,slow=76,SNR=18						
CAN	Canberra	29.15	210	eP	P	18 13 47.6	-1.4
	comp=Z,55nm,1.4s						
CAN	Canberra	29.15	210	eP	P	18 13 47.6	-1.4
BKZ	Black Stump Fm	29.57	164	eP	P	18 13 50.5	-2.2
	comp=Z,36nm,1.2s						
H11N1	WAKE ISLAND Hy	30.35	1	T	T	18 45 55.0	
	baz=182,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.36	1	T	T	18 45 55.2	
	baz=182,slow=76,SNR=8.5						
H11N2	WAKE ISLAND Hy	30.37	1	T	T	18 45 56.3	
	baz=182,slow=76,SNR=10.0						
BFZ	Birch Farm	30.94	166	eP	P	18 14 03.7	-1.0
	comp=Z,44nm,1.1s						
STKA	Stephens Creek	31.16	224	P	P	18 14 07.8	+1.0
	baz=31,SNR=11						
STKA	Stephens Creek	31.16	224	eP	P	18 14 06.1	-0.7
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	31.16	224	eP	P	18 14 06.1	-0.7
STKA	Stephens Creek	31.16	224	P	P	18 14 08.7	+1.9
	comp=Z,19nm,0.9s,baz=31,slow=10,SNR=12						
STKA				LR	LR	18 25 54.5	
	comp=Z,14µm,19.8s,baz=60,slow=35						
SNZO	South Karori	31.20	168	eP	P	18 14 07.2	+0.3
	comp=Z,101nm,1.2s						
THZ	Tophouse	31.31	171	eP	P	18 14 07.1	-0.9
	comp=Z,33nm,0.8s						
LTZ	Lake Taylor	32.22	172	eP	P	18 14 14.5	-1.5
	comp=Z,36nm,0.7s						
WB2	Warramunga Arr	32.31	250	eP	P	18 14 15.7	-1.4
WRAB	Tennant Creek	32.31	250	eP	P	18 14 17.1	0.0
	comp=Z,97nm,1.1s						
WRAB				LR	LR		
	comp=Z,12µm,20.0s						
WRAB	Tennant Creek	32.31	250	⇓eP	P	18 14 16.0	-1.1
WRAB				pmax	pmax		
	comp=Z,91nm,1.3s						
WR1	Warramunga Arr	32.32	250	eP	P	18 14 16.3	-0.9
	comp=Z,116nm,1.1s						
WRA	Warramunga Arr	32.32	250	eP	P	18 14 16.5	-0.7
WRA				pmax	pmax		
	comp=Z,41nm,0.8s						
WRA	Warramunga Arr	32.32	250	P	P	18 14 16.3	-0.9
	comp=Z,42nm,0.8s,baz=80,slow=9.0,SNR=47						
GUMO	Guam	32.44	318	PFAKE		18 14 30.0	+12
GUMO				LR	LR		
	comp=Z,3µm,20.0s						
TOO	Toolangi	32.68	212	P	P	18 14 19.2	-0.9
	baz=33,SNR=11						
TOO	Toolangi	32.68	212	eP	P	18 14 19.3	-0.9
	comp=Z,47nm,1.1s						
FOZ	Fox Glacier	32.70	176	eP	P	18 14 18.0	-2.2
	comp=Z,35nm,0.8s						
OXZ	Oxford	32.72	173	eP	P	18 14 19.4	-0.9
	comp=Z,46nm,0.8s						
RPZ	Rata Peaks	32.99	174	eP	P	18 14 21.6	-1.2
	comp=Z,57nm,0.9s						
RPZ	Rata Peaks	32.99	174	P	P	18 14 21.8	-0.9
	comp=Z,49nm,0.8s,baz=158,slow=1.5,SNR=14						
CRLZ	Canterbury Las	33.05	172	eP	P	18 14 22.4	-0.7
MQZ	McQueen's Vall	33.18	172	eP	P	18 14 22.5	-1.8
	comp=Z,40nm,0.8s						
KDU	Kakadu	33.42	263	P	P	18 14 26.5	-0.3
	baz=34,SNR=14						
AS01	Alice Springs	33.58	243	eP	P	18 14 27.0	-1.1
LBZ	Lake Benmore	33.58	175	eP	P	18 14 25.0	-2.9
	comp=Z,37nm,1.2s						
AS31	Alice Springs	33.62	243	eP	P	18 14 27.2	-1.3
	comp=Z,12nm,0.9s						
ASAR	Alice Springs	33.62	243	P	P	18 14 26.9	-1.6
	comp=Z,15nm,0.9s,baz=72,slow=9.4,SNR=23						
ASAR				PcP	PcP	18 17 08.9	+0.1
	comp=Z,4.5nm,0.9s,baz=95,slow=1.9,SNR=4.9						
ASAR				LR	LR	18 27 29.2	
	comp=Z,12µm,19.3s,baz=92,slow=35						
RAR	Rarotonga	33.88	112	eP	P	18 14 32.7	+2.0
	comp=Z,158nm,1.7s						
HTT	Hallett	33.89	224	P	P	18 14 32.3	+1.5
	baz=34,SNR=6.6						
WKZ	Wanaka	33.94	177	eP	P	18 14 29.2	-1.9
	comp=Z,207nm,1.7s						
ARPS	Mount Arapiles	34.13	217	P	P	18 14 34.5	+1.7
	baz=34						
ODZ	Otahua Downs	34.27	175	eP	P	18 14 32.9	-0.9
	comp=Z,167nm,2.0s						
MLZ	Mavora Lakes	34.44	178	eP	P	18 14 34.8	-0.5
	comp=Z,66nm,1.3s						
DCZ	Deep Cove	34.52	179	eP	P	18 14 35.3	-0.6
	comp=Z,107nm,1.3s						
SAUI	Saumlaki	34.90	272	eP	P	18 14 40.6	+0.9
	comp=Z,104nm,1.1s						
WHZ	Wether Hill Ro	34.96	178	eP	P	18 14 40.5	+0.7
	comp=Z,83nm,1.4s						
PYZ	Puysegur Point	35.22	180	eP	P	18 14 41.9	-0.1
	comp=Z,325nm,1.6s						
BBOO	Buckleboo	35.57	227	P	P	18 14 44.5	-0.8
	baz=36,SNR=19						
BBOO	Buckleboo	35.57	227	eP	P	18 14 44.2	-1.0
	comp=Z,66nm,0.9s						
TAU	Tasmania Unive	36.09	204	PFAKE		18 15 00.0	+10
TAU				LR	LR		
	comp=Z,5µm,22.0s						
JOHN	Johnston Islan	36.17	41	PFAKE		18 15 00.0	+10
JOHN				LR	LR		
	comp=Z,643nm,20.0s						
BNDI	Bandanaira	36.85	277	P	P	18 14 58.4	+2.0
	comp=Z,596nm,1.6s,comp=Z,8µm						
KNRA	Kununurra	37.08	258	P	P	18 14 57.9	-0.4
	baz=37,SNR=5.6						
WRKA	Warakurna	38.91	243	P	P	18 15 12.6	-1.2
	baz=39,SNR=7.8						
NLAI	Namlea	39.86	278	P	P	18 15 26.1	+4.3
	comp=Z,144nm,1.6s						
FITZ	Fitzroy Crossi	40.22	255	P	P	18 15 24.4	-0.4
	baz=40,SNR=40						
FITZ	Fitzroy Crossi	40.22	255	eP	P	18 15 23.9	-0.8
	comp=Z,68nm,0.9s						
FITZ	Fitzroy Crossi	40.22	255	P	P	18 15 24.2	-0.5
	comp=Z,54nm,0.8s,baz=88,slow=6.5,SNR=38						
TNTI	Ternate	40.65	284	eP	P	18 15 28.6	+0.3
	comp=Z,50nm,1.2s						
TNTI	Ternate	40.65	284	P	P	18 15 32.6	+4.3
	comp=Z,38nm,1.2s,comp=Z,900nm						
FORT	Forrest	40.83	235	P	P	18 15 29.1	-0.5
	baz=41,SNR=14						
FORT	Forrest	40.83	235	eP	P	18 15 28.5	-1.2
	comp=Z,90nm,0.8s						
SANI	Sanana	41.22	279	P	P	18 15 34.8	+1.8
	comp=Z,56nm,1.7s,comp=Z,2µm						
SOEI	Soe	41.62	267	eP	P	18 15 35.5	-1.0
	comp=Z,79nm,1.0s						
BATI	Baumata	42.17	267	P	P	18 15 42.6	+1.8
	comp=Z,31nm,0.8s,baz=35,slow=2.6,SNR=9.4						
PPT2	Papeete2	42.96	104	eS	S	18 22 15.2	+2.4
	comp=Z,6µm,25.5s						
PPT2				eLQ	LQ	18 25 53.9	
	comp=Z,9µm,27.8s						
PPT2				eLR	LR	18 27 52.7	
	comp=Z,10µm,23.8s,baz=282						
MMRI	Maumere	43.73	269	eP	P	18 15 53.0	-0.5
	comp=Z,239nm,1.3s						
DAV	Davao City (W)	44.51	292	PFAKE		18 16 10.0	+10
DAV				LR	LR		
	comp=Z,2µm,20.0s						
LUWI	Luwuk	44.58	280	eP	P	18 16 00.9	+0.6
	comp=Z,193nm,1.3s						
MBWA	Marble Bar	46.04	251	eP	P	18 16 11.7	-0.1
	comp=Z,83nm,0.8s						
KAPI	Kappang	46.69	273	PFAKE		18 16 30.0	+13
KAPI				LR	LR		
	comp=Z,2µm,21.0s						
KIP	Kipapa	47.29	47	PFAKE		18 16 30.0	+8.5
KIP				LR	LR		
	comp=Z,8µm,20.0s						
MEEK	Meekatharra	47.77	244	P	P	18 16 25.5	+0.2
	baz=48,SNR=15						
AIN	Ainahou	47.96	51	eP	P	18 16 32.6	+5.6
	comp=Z,455nm,1.7s						
HMH	Humu'ula Sheep	48.08	51	eP	P	18 16 31.7	+3.7
	comp=Z,120nm,1.0s						
MLH	Mauna Loa	48.09	51	eP	P	18 16 28.5	+0.5
	comp=Z,140nm,1.3s						
MLH	Mauna Loa	48.09	51	eP	P	18 16 28.5	+0.5
MLH				pmax	pmax		
	comp=Z,140nm,1.3s						
BLDU	Ballidu	50.17	239	P	P	18 16 44.3	+0.7
	baz=50						
NWAO	Narrogin (SRO)	50.26	236	P	P	18 16 43.6	-0.7
	baz=50,SNR=8.2						
NWAO	Narrogin (SRO)	50.26	236	eP	P	18 16 43.5	-0.7
	comp=Z,54nm,0.9s						
NWAO	Narrogin (SRO)	50.26	236	eP	P	18 16 43.6	-0.7
NWAO				pmax	pmax		
	comp=Z,54nm,0.9s						
NWAO	Narrogin (SRO)	50.26	236	LR	LR	18 38 08.9	
	comp=Z,20µm,18.7s,baz=314,slow=36						
MORW	Morawa	50.44	241	P	P	18 16 46.3	+0.6
	baz=51,SNR=7.5						
MORW	Morawa	50.44	241	eP	P	18 16 45.6	-0.1
	comp=Z,89nm,1.3s						
MUN	Mundaring	50.88	238	P	P	18 16 49.6	+0.6
	baz=51,SNR=4.9						
GIRL	Giralia	51.25	250	eP	P	18 16 51.1	-0.8
	comp=Z,869nm,1.5s						
JAGI	Jajag, Banyuwa	51.69	268	eP	P	18 16 54.9	-0.4
	comp=Z,70nm,0.9s						
TAOE	Nuku Hiva Isla	52.48	93	eLR	LR	18 31 47.8	
	comp=Z,7µm,27.0s,baz=273						
TAOE	Nuku Hiva Isla	52.48	93	eP	P	18 17 02.9	+1.6
	comp=Z,274nm,1.8s						
KKM	Kota Kinabalu	52.86	286	eP	P	18 17 04.6	+0.5
	comp=Z,230nm,1.8s						
KKM	Kota Kinabalu	52.86	286	P	P	18 17 01.8	-2.3
INU	Inuyama	53.77	330	eP	P	18 17 11.1	+0.8
	comp=Z,102nm,1.4s						
MJAR	Matsushiro Arr	54.16	332	P	P	18 17 12.3	-0.9
	comp=Z,16nm,0.9s,baz=169,slow=8.9,SNR=27						
MAJO	Matsushiro	54.16	332	eP	P	18 17 13.8	+0.6
	comp=Z,34nm,1.0s						
MAJO	Matsushiro	54.16	332	⇓eP	P	18 17 14.2	+1.0
MAJO				pmax	pmax		
	comp=Z,113nm,2.1s						
MAT	Matsushiro	54.16	332	P	P	18 17 14.0	+0.8
MJB9	Matsu-Tunnel	54.16	332	eP	P	18 17 14.2	+1.0
	comp=Z,35nm,1.0s						
UGM	Wanagama	55.32	268	eP	P	18 17 20.9	-1.2
	comp=Z,298nm,1.6s						
JNU	Nakatsue	55.39	323	eP	P	18 17 23.6	+1.5
	comp=Z,90nm,1.1s						
SBUM	Sibu	55.66	280	eP	P	18 17 23.9	-0.6
	comp=Z,12nm,1.2s						
SBUM	Sibu	55.66	280	P	P	18 17 26.2	+1.7
YULB	Yu-li	55.84	308	eP	P	18 17 25.0	-0.6
	comp=Z,190nm,1.9s						
NACB	Ninganchiao	56.03	309	eP	P	18 17 28.3	+1.4
	comp=Z,67nm,1.1s						
YHNB	Yeheng	56.47	309	eP	P	18 17 30.1	0.0
	comp=Z,378nm,1.9s						
ERM	Erimo	56.82	339	PFAKE		18 17 40.0	+7.9
ERM				LR	LR		
	comp=Z,1µm,20.0s						
ERM	Erimo	56.82	339	⇑iP	P	18 17 32.5	+0.4
ERM				pmax	pmax		
	comp=Z,102nm,1.2s						
RKT	Rikitea	56.90	111	eLR	LR	18 34 21.2	
	comp=Z,7µm,26.2s						
KSM	Kuching	57.27	279	P	P	18 17 30.0	-6.0
CISI	Cisompet, Garu	58.03	268	eP	P	18 17 40.5	-0.8
	comp=Z,175nm,1.5s						
LEM	Lembang	58.32	269	P	P	18 17 43.4	-0.1
	comp=Z,25nm,0.6s,baz=67,slow=3.5,SNR=8.5						
ASAJ	Asahikawa	58.87	340	P	P	18 17 48.7	+2.2
	comp=Z,39nm,0.8s,baz=219,slow=10,SNR=11						
XMIS	Christmas Isla	59.78	264	eP	P	18 17 51.8	-1.7
	comp=Z,67nm,1.2s						
KSRS	Korea Array	60.16	325	P	P	18 17 57.0	+1.4
	comp=Z,6.6nm,0.8s,baz=135,slow=7.5,SNR=24						
KS15	Wonju Array Si	60.18	325	eP	P	18 17 56.6	+0.9
KSAR	Wonju Array Be	60.18	325	P	P	18 17 57.0	+1.3
KSAR	Wonju Array Be	60.18	325	P	P	18 17 57.0	+1.3
KS01	Wonju Array Si	60.20	325	eP	P	18 17 56.4	+0.6
YSS	Yuzh-Sakhalins	61.34	342	eP	P	18 18 05.4	+2.1
	comp=Z,149nm,1.3s						
YSS	Yuzh-Sakhalins	61.34	342	⇓eP	P	18 18 05.9	+2.5
YSS				e		18 18 13.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.3s						
NJ2	Nanjing	62.44	315	eP	P	18 18 12.9	+1.8
NJ2				pmax	pmax		
	comp=Z,29nm,1.4s						
NJ2				LR	LR		
	comp=Z,2µm,15.2s						
NJ2				LR	LR		
	comp=Z,2µm,17.9s						
NJ2				LR	LR		
	comp=Z,2µm,15.2s						
USRK	Ussuriysk Ar.	63.12	333	P	P	18 18 17.2	+1.8
	comp=Z,39nm,1.1s,baz=131,slow=5.5,SNR=34						
USA0B	Ussuriysk Arra	63.12	333	eP	P	18 18 17.1	+1.7
	comp=Z,263nm,1.6s						
MNAI	Manna	63.30	271	eP	P	18 18 15.7	-1.6
	comp=Z,347nm,1.5s						
MYKOM	Kota Tinggi	63.63	277	eP	P	18 18 18.5	-0.9
	comp=Z,51nm,1.4s						
MYKOM	Kota Tinggi	63.63	277	P	P	18 18 22.0	+2.6
SMY	Shemya	63.63	5	eP	P	18 18 20.2	+1.6
SMY	Shemya	63.63	5	eP	P	18 18 20.2	+1.6
ADK	Adak	64.11	11	PFAKE		18 18 30.0	+8.2
ADK				LR	LR		
	comp=Z,2µm,20.0s						
PEA0B	Petropavlovsk-	64.13	354	eP	P	18 18 23.4	+1.5
	comp=Z,93nm,1.2s						
PETK	Petropavlovsk-	64.13	354	eP	P	18 18 23.2	+1.2
PETK	Petropavlovsk-	64.13	354	eP	P	18 18 23.2	+1.2
PETK	Petropavlovsk-	64.13	354	P	P	18 18 23.7	+1.8
	comp=Z,12nm,0.8s,baz=152,slow=6.5,SNR=7.3						
PEA1	Petropavlovsk-	64.14	354	eP	P	18 18 23.7	+1.7
KGM	Kluang	64.19	278	P	P	18 18 24.7	+1.6
GSTR	Great Sitkin T	64.43	12	eP	P	18 18 26.8	+2.8
MDJ	Mudanjiang	64.54	332	P	P	18 18 26.3	+1.5
MDJ				S	S	18 27 05.6	+1.4
MDJ				sS	sS	18 27 20.0	+12
MDJ				pmax	pmax		
	comp=Z,73nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,3µm,4.3s						
MDJ				LR	LR		
	comp=Z,2µm,13.3s						
MDJ				LR	LR		
	comp=Z,2µm,16.3s						
MDJ				LR	LR		
	comp=Z,660nm,6.8s						
MDJ	Mudanjiang	64.54	332	eP	P	18 18 26.4	+1.6
	comp=Z,84nm,1.2s						
DL2	Dalian	64.80	322	P	P	18 18 26.9	+0.3
DL2				pmax	pmax		
	comp=Z,44nm,1.1s						
WHN	Wuhan	64.86	311	P	P	18 18 28.8	+1.6
TYV	Tymovskoe	64.87	344	eP	P	18 18 16.5	-10
TYV				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KTGM	Kuala Trenggan	65.15	281	P	P	18 18 31.7	+2.3
SNY	Shenyang	65.61	326	⇑P	P	18 18 34.2	+2.5
SNY				pmax	pmax		
	comp=Z,22nm,1.6s						
CN2	Changchun	65.98	329	eP	P	18 18 34.7	+0.6
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
BKNI	Bangkinang	66.06	275	eP	P	18 18 34.9	-0.4
	comp=Z,80nm,0.8s						
FRIM	Kepong	66.12	278	P	P	18 18 37.2	+1.5
GRNR	Gornyy	66.72	340	eP	P	18 18 41.1	+2.4
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
VNDA	Vanda	66.72	181	eP	P	18 18 38.5	+0.1
	comp=Z,52nm,1.3s						
VNDA	Vanda	66.72	181	eP	P	18 18 38.5	+0.1
VNDA				pmax	pmax		
	comp=Z,52nm,1.3s						
VNDA	Vanda	66.72	181	P	P	18 18 38.5	+0.1
	comp=Z,22nm,1.1s,baz=359,slow=8.9,SNR=9.5						
CASY	Casey	66.88	201	eP	P	18 18 38.1	-1.4
	comp=Z,57nm,1.6s						
CASY				LR	LR		
	comp=Z,647nm,19.0s						
IPM	Ipoh	66.99	280	eP	P	18 18 39.5	-1.8
	comp=Z,50nm,1.2s						
IPM	Ipoh	66.99	280	P	P	18 18 41.3	+0.1
SBA	Scott Base	67.01	180	eP	P	18 18 40.6	+0.3
	comp=Z,125nm,1.3s						
SBA	Scott Base	67.01	180	eP	P	18 18 40.6	+0.3
SBA				pmax	pmax		
	comp=Z,130nm,1.3s						
KLR	Kul'dur	67.19	336	ceP	P	18 18 43.1	+1.4
KLR	Kul'dur	67.19	336	P	P	18 18 42.1	+0.3
	comp=Z,24nm,1.1s,baz=130,slow=3.1,SNR=26						
NKL	Nikolayevsk	67.46	343	eP	P	18 18 42.8	-0.5
NKL				pmax	pmax		
	comp=Z,42nm,0.9s						
KULM	Kulim	67.54	280	eP	P	18 18 43.8	-0.9
	comp=Z,60nm,1.8s						
KULM	Kulim	67.54	280	P	P	18 18 40.5	-4.2
SKNT	Sakolnakorn	67.75	293	P	P	18 18 47.7	+1.7
	comp=Z,20nm,1.2s						
COCO	West Island	68.17	261	PFAKE		18 19 00.0	+11
COCO				LR	LR		
	comp=Z,3µm,21.0s						
ENH	Enshi	68.40	309	eP	P	18 18 49.2	-0.6
	comp=Z,39nm,1.1s						
ENH				LR	LR		
	comp=Z,3µm,20.0s						
PSI	Prapat	68.65	277	eP	P	18 18 51.4	-0.5
	comp=Z,24nm,1.1s						
PSI	Prapat	68.65	277	eP	P	18 18 51.4	-0.5
PSI				pmax	pmax		
	comp=Z,24nm,1.1s						
PSI	Prapat	68.65	277	P	P	18 18 52.2	+0.3
	comp=Z,10nm,0.8s,baz=178,slow=0.4,SNR=12						
BJT	Baijiatuau	68.82	321	eP	P	18 18 52.5	+0.3
	comp=Z,70nm,1.5s						
BJT				LR	LR		
	comp=Z,2µm,20.0s						
BJT	Baijiatuau	68.82	321	eP	P	18 18 52.5	+0.3
BJT				pmax	pmax		
	comp=Z,70nm,1.5s						
BJT				MLR	MLR		
	comp=Z,2µm,20.0s						
BJI	Beijing	68.83	321	⇓iP	P	18 18 52.1	-0.1
BJI				pmax	pmax		
	comp=Z,21nm,1.5s						
BJI				LR	LR		
	comp=Z,2µm,16.7s						
BJI				LR	LR		
	comp=Z,2µm,17.7s						
BJI				LR	LR		
	comp=Z,1µm,16.7s						
NONG	Nongkai	68.87	294	P	P	18 18 54.9	+2.0
	comp=Z,0.8nm,0.9s						
GYA	Guiyang	68.97	304	⇑iP	P	18 18 54.7	+1.1
GYA				pP	PcP	18 19 11.0	-6.9
GYA				PP	PP	18 21 30.5	+4.4
GYA				S	S	18 27 54.4	-4.4
GYA				SKS	SKiKP	18 28 45.5	-0.1
GYA				SS	SS	18 32 23.0	-1.7
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				LR	LR		
	comp=Z,710nm,18.0s						
GYA				LR	LR		
	comp=Z,680nm,18.4s						
GYA				LR	LR		
	comp=Z,640nm,18.2s						
TRTT	Trang	69.09	283	P	P	18 19 08.8	+14
CHAI	Chaiyaphum	69.22	292	P	P	18 18 56.9	+1.7
	comp=Z,4.8nm,1.0s,comp=Z,51nm						

GSI	Gunungsitoli	69.65	275	eP	P	18 18 57.3	-0.6
	comp=Z,46nm,0.9s						
TIY	Taiyuan	69.96	317	eP	P	18 19 01.1	+1.7
TIY				pmax	pmax		
	comp=Z,29nm,1.1s						
TIY				LR	LR		
	comp=Z,1µm,16.0s						
TIY				LR	LR		
	comp=Z,870nm,12.2s						
TIY				LR	LR		
	comp=Z,2µm,20.2s						
PBKT	Sadao Pong	70.35	292	eP	P	18 19 01.8	-0.4
PBKT	Sadao Pong	70.35	292	P	P	18 19 04.6	+2.5
	comp=Z,13nm,2.5s						
PHET	Kaeng Krachan	70.51	288	P	P	18 19 18.1	+15
XAN	Xi'an	70.58	312	P	P	18 19 03.7	+0.4
XAN				pmax	pmax		
	comp=Z,42nm,1.1s						
XAN	Xi'an	70.58	312	eP	P	18 19 03.3	0.0
	comp=Z,36nm,0.9s						
XAN	Xi'an	70.58	312	eP	P	18 19 03.3	0.0
XAN				pmax	pmax		
	comp=Z,36nm,0.9s						
UTTA	Uttaradit	71.10	293	P	P	18 19 17.3	+11
MA2	Magadan	71.31	352	eP	P	18 19 07.1	0.0
	comp=Z,104nm,1.9s						
MA2	Magadan	71.31	352d	iP	P	18 19 07.6	+0.5
MA2				pmax	pmax		
	comp=Z,41nm,1.7s						
MA2	Magadan	71.31	352	P	P	18 19 07.7	+0.5
	comp=Z,11nm,0.9s,baz=150,slow=6.1,SNR=13						
SRDT	SRDT	71.39	289	P	P	18 19 13.3	+4.8
	comp=Z,12nm,1.8s,comp=Z,2µm						
UTHA	Uthaitani	71.44	290	P	P	18 19 11.4	+2.6
	comp=Z,4.0nm,0.9s,comp=Z,56nm						
SDPT	Sand Point	71.48	19	eP	P	18 19 08.5	+0.4
	comp=Z,95nm,1.0s						
KMI	Kunming	71.71	301	P	P	18 19 11.8	+1.3
KMI				pP	PcP	18 19 23.8	-5.8
KMI				sP	pwP	18 19 30.8	+15
KMI				pmax	pmax		
	comp=Z,32nm,1.5s						
KMI				pmax	pmax		
	comp=Z,650nm,5.4s						
KMI				LR	LR		
	comp=Z,880nm,16.2s						
KMI				LR	LR		
	comp=Z,1µm,19.7s						
KMI				LR	LR		
	comp=Z,2µm,21.6s						
KMI	Kunming	71.71	301	eP	P	18 19 10.3	-0.1
	comp=Z,96nm,1.6s						
KMI	Kunming	71.71	301	eP	P	18 19 10.4	-0.1
KMI				pmax	pmax		
	comp=Z,96nm,1.6s						
HHC	Hu-ho-hao-te	72.20	319	eP	P	18 19 14.8	+1.8
HHC				pP	PcP	18 19 30.4	-0.8
HHC				S	S	18 28 35.6	-0.2
HHC				pmax	pmax		
	comp=Z,30nm,1.3s						
HHC				pmax	pmax		
	comp=Z,2µm,6.3s						
HHC				LR	LR		
	comp=Z,2µm,17.6s						
HHC				LR	LR		
	comp=Z,1µm,16.3s						
HHC				LR	LR		
	comp=Z,720nm,16.3s						
ZEA	Zeya	72.46	337	eP	P	18 19 15.4	+1.3
ZEA				pmax	pmax		
	comp=N,170nm,1.6s						
ZEA				pmax	pmax		
	comp=E,49nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,240nm,1.6s						
HIA	Hailar	72.59	330	eP	P	18 19 16.4	+1.3
	comp=Z,111nm,1.6s						
HIA				LR	LR		
	comp=Z,1µm,20.0s						
HIA	Hailar	72.59	330c	iP	P	18 19 15.8	+0.8
HIA				pmax	pmax		
	comp=Z,37nm,1.3s						
CM01	Chiang Mai Arr	72.75	293	eP	P	18 19 16.9	+0.3
CM31	Chiang Mai Arr	72.77	293	eP	P	18 19 17.0	+0.3
	comp=Z,18nm,1.0s						
CMAR	Chiang Mai Arr	72.77	293	P	P	18 19 16.7	0.0
	comp=Z,7.9nm,0.8s,baz=120,slow=4.3,SNR=42						
CMMT	Chiang Mai	72.88	294	P	P	18 19 19.2	+1.8
	comp=Z,17nm,2.2s						
CHTO	Chiang Mai	72.88	294	eP	P	18 19 17.3	-0.1
	comp=Z,46nm,1.5s						
CHTO				LR	LR		
	comp=Z,2µm,20.0s						
CHTO	Chiang Mai	72.88	294	eP	P	18 19 17.3	-0.1
CHTO				pmax	pmax		
	comp=Z,46nm,1.5s						
CHTO	Chiang Mai	72.88	294	P	P	18 19 19.3	+1.9
	comp=Z,76nm,1.7s						
BTO	Baotou	73.07	318	eP	P	18 19 20.4	+2.2
CD2	Chengdu	73.12	307	P	P	18 19 19.0	+0.4
CD2				S	S	18 28 40.1	-6.6
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,550nm,6.0s						
CD2				LR	LR		
	comp=Z,3µm,15.9s						
CD2				LR	LR		
	comp=Z,3µm,20.9s						
CD2				LR	LR		
	comp=Z,4µm,17.9s						
SEY	Seymchan	74.35	353⇓	iP	P	18 19 25.4	+0.3
SEY	Seymchan	74.35	353	P	P	18 19 24.0	-1.0
	comp=Z,9.8nm,0.8s,baz=146,slow=5.6,SNR=24						
SII	Sitkinak Islan	74.58	21	eP	P	18 19 27.2	+0.7
	comp=Z,170nm,1.5s						
LZH	Lanzhou	75.22	312	⇓P	P	18 19 32.1	+1.2
LZH				pP	PcP	18 19 49.0	+4.7
LZH				sP	pwP	18 19 55.0	+19
LZH				pmax	pmax		
	comp=Z,32nm,1.7s						
LZH				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH				LR	LR		
	comp=Z,2µm,14.1s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
OHAK	Old Harbor	75.41	21	eP	P	18 19 30.5	-0.8
	comp=Z,42nm,1.1s						
KDAK	Kodiak Island	76.08	21	eP	P	18 19 34.9	-0.2
	comp=Z,45nm,1.4s						
KDAK				LR	LR		
	comp=Z,1µm,21.0s						
KDAK	Kodiak Island	76.08	21	eP	P	18 19 34.9	-0.2
KDAK				pmax	pmax		
	comp=Z,45nm,1.3s						
KDAK	Kodiak Island	76.08	21	P	P	18 19 35.8	+0.7
	comp=Z,10nm,0.9s,baz=59,slow=4.6,SNR=3.7						
GAMB	Gambell	76.22	10	eP	P	18 19 35.1	-0.6
	comp=Z,20nm,0.9s						
PBA	Port Blair	76.67	285	eP	P	18 19 37.0	-2.4
	comp=Z,61nm,1.3s						
CIT	Chita	77.39	330	eP	P	18 19 44.2	+1.5
CIT				e		18 19 52.2	
CIT				e		18 20 00.0	
CIT				pmax	pmax		
	comp=Z,263nm,1.5s						
SVW2	Sparrevohn	77.66	18	eP	P	18 19 44.2	+0.2
	comp=Z,47nm,1.4s						
RSO	Redoubt South	78.05	19	eP	P	18 19 46.0	-0.4
ANM	Nome	78.11	12	eP	P	18 19 46.3	-0.1
	comp=Z,63nm,1.8s						
ANM	Nome	78.11	12	eP	P	18 19 46.3	-0.1
YAK	Yakutsk	78.12	343	eP	P	18 19 46.6	+0.1
YAK				e		18 19 54.6	
YAK				ePPP	PPP	18 24 29.2	
YAK				eS	S	18 29 33.6	-7.0
YAK				e		18 29 55.1	
YAK				e*SS	ScS	18 30 20.0	+14
YAK				eSSS	SSS	18 38 08.2	
YAK				pmax	pmax		
	comp=Z,536nm,1.3s						
YAK				pmax	pmax		
	comp=N,134nm,1.0s						
YAK				pmax	pmax		
	comp=E,103nm,1.0s						
YAK				pmax	pmax		
	comp=Z,1µm,4.8s						
YAK				pmax	pmax		
	comp=N,909nm,4.6s						
YAK				pmax	pmax		
	comp=E,406nm,2.8s						
YAK				smax	smax		
	comp=N,209nm,2.6s						
YAK				smax	smax		
	comp=E,326nm,3.0s						
BRLK	Bradley Lake	78.15	20	eP	P	18 19 46.9	+0.1
	comp=E,97nm,1.4s						
ULN	Ulaanbaatar	78.61	324	eP	P	18 19 48.4	-1.4
	comp=E,46nm,1.1s						
ULN	Ulaanbaatar	78.61	324⇓	eP	P	18 19 49.5	-0.3
ULN				pmax	pmax		
	comp=Z,79nm,1.7s						
BILL	Bilibino	78.66	360	eP	P	18 19 48.5	-1.0
	comp=Z,132nm,1.2s						
BILL				LR	LR		
	comp=Z,2µm,20.0s						
BILL	Bilibino	78.66	360	i P	P	18 19 48.3	-1.1
BILL				i		18 19 56.6	
BILL				pmax	pmax		
	comp=Z,34nm,1.1s						
SONA0	Songino Array	78.98	323	eP	P	18 19 52.1	+0.4
SONM	Songino Array	78.98	323	P	P	18 19 52.1	+0.4
	comp=Z,12nm,1.1s,baz=140,slow=4.9,SNR=32						
SONA1	Songino Array	78.98	323	eP	P	18 19 51.3	-0.4
QSPA	South Pole Qui	79.17	180	eP	P	18 19 50.4	-2.1
	comp=Z,47nm,1.3s						
SUA	Susitna One	79.45	19	eP	P	18 19 52.4	-1.7
	comp=Z,37nm,1.2s						
GTA	Gaotai	79.50	314	⇑P	P	18 19 55.8	+1.0
GTA				pmax	pmax		
	comp=Z,16nm,1.8s						
RC01	Rabbit Creek A	79.51	20	eP	P	18 19 53.6	-0.6
	comp=Z,16nm,1.0s						
RPN	Rapa Nui	79.93	116	PFAKE		18 20 10.0	+13
RPN				LR	LR		
	comp=Z,2µm,22.0s						
PPLA	Purkeypile	80.07	18	eP	P	18 19 56.9	-0.5
	comp=Z,64nm,1.6s						
PMR	Palmer	80.08	20	eP	P	18 19 56.8	-0.4
	comp=Z,28nm,1.1s						
PMR	Palmer	80.08	20	eP	P	18 19 56.8	-0.4
KNK	Knik Glacier	80.17	20	eP	P	18 19 57.6	-0.2
	comp=Z,112nm,1.7s						
GLI	Glacier Island	80.27	21	eP	P	18 19 58.5	+0.2
	comp=Z,96nm,1.5s						
GHO	Glory Hole Cre	80.27	20	eP	P	18 19 58.1	-0.3
	comp=Z,81nm,1.6s						
CAST	Castle Rocks	80.50	18	eP	P	18 19 58.4	-1.1
	comp=Z,32nm,0.9s						
SML	Sawmill	80.50	20	eP	P	18 20 00.0	+0.4
	comp=Z,81nm,1.4s						
SML	Sawmill	80.50	20	eP	P	18 19 59.6	0.0
EYAK	Cordova Ski Ar	80.52	22	eP	P	18 19 58.8	-0.8
	comp=Z,122nm,1.5s						
BOD	Bodaibo	80.69	334	eP	P	18 20 01.1	+0.5
BOD				pmax	pmax		
	comp=Z,68nm,1.8s						
TRF	Thorofare Moun	81.06	18	eP	P	18 20 02.4	-0.3
	comp=Z,117nm,1.9s						
KLU	Klutina	81.11	21	eP	P	18 20 02.6	-0.2
	comp=Z,32nm,1.1s						
BPAW	Bear Paw Mtn.	81.33	17	eP	P	18 20 03.0	-1.0
	comp=Z,53nm,2.0s						
RND	Reindeer	81.47	19	eP	P	18 20 04.3	-0.5
	comp=Z,100nm,1.6s						
RND	Reindeer	81.47	19	eP	P	18 20 04.3	-0.5
RND				pmax	pmax		
	comp=Z,100nm,1.6s						
RDOG	Red Dog Mine	81.65	11	eP	P	18 20 05.8	+0.2
	comp=Z,129nm,1.9s						
MCK	McKinley	81.68	18	eP	P	18 20 05.3	-0.5
	comp=Z,90nm,1.6s						
MCK	McKinley	81.68	18	eP	P	18 20 05.3	-0.5
MCK				pmax	pmax		
	comp=Z,90nm,1.6s						
DHY	Denali Highway	81.71	19	eP	P	18 20 06.2	+0.1
	comp=Z,121nm,2.0s						
BWN	Browne	81.84	18	eP	P	18 20 07.2	+0.6
	comp=Z,117nm,1.2s						
HARP	HAARP	81.99	21	eP	P	18 20 08.4	+0.9
	comp=Z,68nm,1.0s						
ZAK	Zakamensk	81.99	325	eP	P	18 20 08.2	+0.3
ZAK				pmax	pmax		
	comp=Z,23nm,1.3s						
IM3	Indian Mountai	82.00	15	eP	P	18 20 07.3	-0.1
GDXM	Geysers	82.06	48	eP	P	18 20 08.8	+0.3
	comp=Z,103nm,1.7s						
MLY	Manley	82.10	17	eP	P	18 20 08.2	+0.2
	comp=Z,43nm,1.6s						
TLY	Talaya	82.40	326	eP	P	18 20 10.0	+0.2
	comp=Z,28nm,0.9s						
TLY				LR	LR		
	comp=Z,733nm,20.0s						
TLY	Talaya	82.40	326j	iP	P	18 20 09.9	0.0
WRH	Wood River Hil	82.47	18	eP	P	18 20 09.7	-0.2
	comp=Z,30nm,1.0s						
O02D	Mt. Diablo Mer	82.55	47	P	P	18 20 11.9	+0.9
	baz=249						
MDM	Murphy Dome	82.78	18	eP	P	18 20 10.7	-0.8
	comp=Z,42nm,1.1s						
HDA	Harding Lake	82.78	19	eP	P	18 20 10.2	-1.3
	comp=Z,72nm,1.0s						
HDA	Harding Lake	82.78	19	P	P	18 20 10.8	-0.8
	baz=226						
TCOL	CIGO, UAF Yank	82.83	18	P	P	18 20 11.7	0.0
	baz=225						
COLA	College	82.83	18	eP	P	18 20 11.1	-0.6
	comp=Z,41nm,0.9s						
COLA				LR	LR		
	comp=Z,2µm,20.0s						
COLA	College	82.83	18	eP	P	18 20 11.1	-0.6
COLA				pmax	pmax		
	comp=Z,41nm,0.9s						
COLA				MLR	MLR		
	comp=Z,2µm,20.0s						
WDC	Whiskeytown Da	82.87	46	eP	P	18 20 12.2	-0.4
	comp=Z,116nm,1.9s						
WDC	Whiskeytown Da	82.87	46	eP	P	18 20 13.9	+1.3
N02D	Trinity Center	82.89	46	P	P	18 20 13.3	+0.6
	baz=249						
LSA	Lhasa	82.93	302	eP	P	18 20 12.2	-1.5
	comp=Z,40nm,1.6s						
M02C	Callahan	82.94	46	P	P	18 20 13.9	+0.9
	baz=249						
RIDG	Independ'e Rid	83.00	20	eP	P	18 20 11.7	-1.0
	comp=Z,219nm,2.0s						
IL1	Eielson Array	83.05	18	eP	P	18 20 10.5	-2.4
ILAR	Eielson Array	83.05	18	P	P	18 20 11.6	-1.4
	comp=Z,20nm,0.8s,baz=234,slow=6.0,SNR=67						
ILB	Eielson Array	83.05	18	eP	P	18 20 12.0	-0.9
POKR	Poker Plat Res	83.13	18	P	P	18 20 13.2	-0.2
	baz=225						
YBH	Yreka Blue Hor	83.16	45	eP	P	18 20 13.0	-1.2
	comp=Z,52nm,1.5s						
YBH	Yreka Blue Hor	83.16	45	eP	P	18 20 13.0	-1.2
YBH				pmax	pmax		
	comp=Z,52nm,1.5s						
YBH	Yreka Blue Hor	83.16	45	P	P	18 20 14.0	-0.1
	comp=Z,7.8nm,0.9s,baz=246,slow=7.1,SNR=10						
ORV	Oroville	83.27	48	eP	P	18 20 13.6	-1.0
	comp=Z,40nm,1.5s						
ORV	Oroville	83.27	48	eP	P	18 20 13.6	-1.0
ORV				pmax	pmax		
	comp=Z,40nm,1.5s						
O03E	Paynes Creek	83.30	47	P	P	18 20 16.0	+1.1
	baz=250						
HUMO	Hull Mountain	83.31	44	eP	P	18 20 15.2	+0.4
	comp=Z,29nm,1.1s						
SCRK	Sand Creek	83.44	20	eP	P	18 20 13.9	-1.2
	comp=Z,200nm,1.8s						
AFDM	Forest Hills D	83.45	48	eP	P	18 20 13.9	-1.7
	comp=Z,33nm,1.1s						
CMB	Columbia Colle	83.58	49	eP	P	18 20 15.9	-0.4
	comp=Z,27nm,1.3s						
CMB	Columbia Colle	83.58	49	eP	P	18 20 15.9	-0.4
CMB				pmax	pmax		
	comp=Z,27nm,1.3s						
L04D	Klamath Falls	83.62	45	P	P	18 20 16.8	+0.2
	baz=249						
BESE	Bessie Mountai	83.72	27	eP	P	18 20 16.5	-0.1
	comp=Z,76nm,1.2s						
M04C	Macdoel	83.79	46	P	P	18 20 18.9	+1.4
	baz=250						
HYT	Haines Junctio	83.86	24	eP	P	18 20 17.6	+0.3
	comp=Z,77nm,1.6s						
ARVC	Arvin	83.86	53	P	P	18 20 18.3	+0.5
	baz=252						
MOY	Mondy	83.86	325	eP	P	18 20 17.7	+0.1
MOY				pmax	pmax		
	comp=Z,113nm,3.5s						
COLD	Coldfoot	83.87	16	eP	P	18 20 19.1	+1.9
	comp=Z,15nm,1.1s						
I04A	Tendick Farm,	84.10	44	P	P	18 20 19.3	+0.4
	baz=249						
J04D	Umpqua Nationa	84.11	44	P	P	18 20 19.8	+0.6
	baz=249						
K04D	Chiloquin, OR	84.14	45	P	P	18 20 19.9	+0.7
	baz=250						
BEKR	Beckworth	84.20	48	eP	P	18 20 20.0	+0.4
	comp=Z,46nm,1.2s						
ISA	Isabella, Lake	84.30	52	eP	P	18 20 20.0	-0.1
	comp=Z,59nm,1.5s						
ISA	Isabella, Lake	84.30	52	eP	P	18 20 20.0	-0.1
ISA				pmax	pmax		
	comp=Z,59nm,1.5s						
MDPB	Devils Postpil	84.44	50	eP	P	18 20 20.0	-1.0
	comp=Z,40nm,1.2s						
EDW2	Edwards Air Fo	84.44	53	P	P	18 20 21.1	+0.2
	baz=253						
WAKR	Walker	84.44	49	eP	P	18 20 20.6	-0.4
	comp=Z,85nm,1.6s						
OMMB	Old Mammoth Mi	84.49	50	eP	P	18 20 20.9	-0.4
	comp=Z,37nm,1.4s						
PNTR	Pine Nut	84.50	49	eP	P	18 20 21.0	-0.2
	comp=Z,104nm,1.6s						
H04A	Detroit Lake	84.57	43	eP	P	18 20 21.4	+0.2
	comp=Z,60nm,1.5s						
J05D	Fort Rock, OR	84.73	44	P	P	18 20 23.2	+1.0
	baz=250						
YERR	Yerington	84.74	49	eP	P	18 20 21.8	-0.6
	comp=Z,111nm,1.9s						
FYU	Fort Yukon	84.79	17	eP	P	18 20 22.1	+0.3
	comp=Z,38nm,1.2s						
CWC	Cottonwood Cre	84.83	52	P	P	18 20 23.1	+0.2
	baz=252						
PAHR	Pah Rah Range	84.86	48	eP	P	18 20 22.0	-0.9
	comp=Z,61nm,1.4s						
EGAK	Eagle	84.90	20	PFAKE		18 20 30.0	+7.7
EGAK				LR	LR		
	comp=Z,3µm,19.0s						
MOD	Modoc Plateau	84.91	46	eP	P	18 20 21.7	-1.4
	comp=Z,52nm,1.3s						
D03D	Eldon	85.02	40	P	P	18 20 24.3	+0.9
	baz=248						
DAWY	Dawson	85.06	21	eP	P	18 20 23.2	-0.1
	comp=Z,38nm,1.4s						
PINE	Pine Mountain	85.10	44	eP	P	18 20 23.5	-0.6
	comp=Z,38nm,1.1s						
RYN	Ryan	85.16	49	eP	P	18 20 24.6	+0.1
	comp=Z,81nm,1.6s						
DAC	Darwin (Calif)	85.16	52	eP	P	18 20 23.8	-0.8
	comp=Z,26nm,1.2s						
DAC	Darwin (Calif)	85.16	52	eP	P	18 20 23.8	-0.8
DAC				pmax	pmax		
	comp=Z,26nm,1.2s						
MPMC	Manual Prospec	85.18	52	P	P	18 20 25.0	+0.3
	baz=253						
PGC	Sidney	85.22	39	eP	P	18 20 24.1	-0.2
	comp=Z,46nm,1.1s						
NV01	Mina Array Sit	85.26	50	eP	P	18 20 23.2	-1.9
NVAR	Mina Array Bea	85.26	50	P	P	18 20 23.8	-1.3
	comp=Z,8.2nm,0.8s,baz=232,slow=7.5,SNR=21						
PFO	Pinyon Flats O	85.29	55	PFAKE		18 20 40.0	+15
PFO				LR	LR		
	comp=Z,3µm,21.0s						
PFO	Pinyon Flats O	85.29	55	P	P	18 20 25.5	+0.3
	baz=254						
G05D	Wamic, OR	85.35	42	P	P	18 20 25.7	+0.6
	baz=250						
NV11	Mina Array Sit	85.38	50	eP	P	18 20 24.8	-0.7
	comp=Z,10nm,1.9s						
GSC	Goldstone, Bar	85.49	53	eP	P	18 20 25.6	-0.6
	comp=Z,42nm,1.5s						
GSC	Goldstone, Bar	85.49	53	eP	P	18 20 25.6	-0.6
GSC				pmax	pmax		
	comp=Z,42nm,1.5s						
GSC	Goldstone, Bar	85.49	53	P	P	18 20 26.2	0.0
	baz=253						
LON	Longmire	85.55	41	eP	P	18 20 26.6	+0.4
	comp=Z,48nm,1.6s						
LON	Longmire	85.55	41	eP	P	18 20 30.3	+4.2
LON				e*PP	pwP	18 20 42.3	+11
D05A	Enumclaw	85.59	40	eP	P	18 20 26.1	-0.1
	comp=Z,113nm,1.4s						
KVN	Kaiserville	85.60	49	eP	P	18 20 26.2	-0.5
	comp=Z,91nm,1.9s						
KVN	Kaiserville	85.60	49	eP	P	18 20 26.2	-0.5
KVN				pmax	pmax		
	comp=Z,91nm,1.9s						
A04D	Lummi Island	85.70	39	P	P	18 20 27.9	+1.2
	baz=248						
FURC	Furnace Creek,	85.78	52	P	P	18 20 27.9	+0.5
	baz=253						
DLBC	Dease Lake	85.83	28	eP	P	18 20 28.1	+0.8
	comp=Z,46nm,1.4s						
DLBC	Dease Lake	85.83	28	P	P	18 20 28.4	+1.1
	comp=Z,7.6nm,0.9s,baz=243,slow=6.8,SNR=8.2						
TIXI	Tiksi	86.03	349	eP	P	18 20 26.8	-1.1
	comp=Z,101nm,1.3s						
TIXI	Tiksi	86.03	349c	eP	P	18 20 27.6	-0.3
TIXI				pmax	pmax		
	comp=Z,114nm,1.7s						
TIXI	Tiksi	86.03	349	P	P	18 20 27.6	-0.3
	comp=Z,26nm,1.0s,baz=125,slow=6.6,SNR=49						
RAMN	Ramite	86.07	298	eP	P	18 20 30.0	+0.6
BC3	Big Chuckawall	86.11	55	P	P	18 20 29.8	+0.5
	baz=254						
I07A	Izee	86.18	44	eP	P	18 20 29.1	-0.3
	comp=Z,113nm,1.9s						
TUQ	Turquoise Moun	86.22	53	P	P	18 20 30.1	+0.3
	baz=254						
WVOR	Wild Horse Val	86.25	46	eP	P	18 20 29.2	-0.6
	comp=Z,57nm,1.4s						
WVOR	Wild Horse Val	86.25	46	eP	P	18 20 29.2	-0.6
WVOR				pmax	pmax		
	comp=Z,57nm,1.4s						
TPNV	Topopah Spring	86.39	52	eP	P	18 20 29.6	-1.1
	comp=Z,82nm,1.9s						
TPNV	Topopah Spring	86.39	52	eP	P	18 20 29.6	-1.1
TPNV				pmax	pmax		
	comp=Z,82nm,1.9s						
TPNV	Topopah Spring	86.39	52	P	P	18 20 30.8	+0.1
	baz=254						
LTY	Liberty	86.46	41	eP	P	18 20 30.1	-0.5
	comp=Z,75nm,1.9s						
IRM	Iron Mountain	86.49	54	P	P	18 20 31.4	+0.4
	baz=254						
JIRN	Jiri	86.60	299	eP	P	18 20 32.4	+0.3
	comp=Z,211nm,1.7s						
J08A	Circle Bar Ran	86.66	45	eP	P	18 20 30.3	-1.4
	comp=Z,24nm,1.1s						
BMN	Battle Mountai	86.66	48	eP	P	18 20 31.7	-0.2
BMN	Battle Mountai	86.66	48	eP	P	18 20 31.7	-0.2
Y12C	Blythe	86.89	55	eP	P	18 20 31.6	-1.4
	comp=Z,40nm,1.3s						
LLLB	Lillooet	86.89	37	eP	P	18 20 32.0	-0.6
	comp=Z,26nm,1.3s						
HAWA	Hanford	86.91	42	eP	P	18 20 32.1	-0.6
HAWA				LR	LR		
	comp=Z,2µm,21.0s						
GUN	Gumba	86.92	299	eP	P	18 20 33.3	-0.4
G08A	Pilot Rock	86.93	43	eP	P	18 20 32.2	-0.8
	comp=Z,27nm,1.2s						
SHPR	Sheep Range	87.11	52	eP	P	18 20 33.6	-0.6
	comp=Z,41nm,1.2s						
PKI	Pulchoki	87.25	299	eP	P	18 20 35.0	-0.3
	comp=Z,154nm,1.8s						
E08A	Dider Farm, El	87.25	42	eP	P	18 20 34.2	-0.2
	comp=Z,54nm,1.3s						
PKIN	Phulchoki	87.26	299	eP	P	18 20 35.0	-0.2
	comp=Z,76nm,1.5s						
R11A	Troy Canyon, C	87.28	50	eP	P	18 20 34.1	-1.0
	comp=Z,46nm,1.6s						
R11A	Troy Canyon, C	87.28	50	P	P	18 20 35.5	+0.5
	baz=254						
PALK	Pallekele	87.32	278	eP	P	18 20 33.6	-1.9
	comp=Z,73nm,1.9s						

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PALK  Pallekele         87.32 278  eP        P         18 20 33.6 -1.9
PALK                                pmax     pmax
      comp=Z,73nm,1.9s
PALK  Pallekele         87.32 278   P        P         18 20 35.0 -0.5
      comp=Z,6.3nm,0.7s,baz=115,slow=4.4,SNR=9.3
EPYK  Eagle Plains      87.33  20  eP        P         18 20 34.2 -0.2
      comp=Z,53nm,1.3s
EPYK  Eagle Plains      87.33  20   P        P         18 20 35.5 +1.1
      baz=235
PDMCI Parker Dam,Lak    87.33  55   P        P         18 20 35.5 +0.4
      baz=255
DMN   Daman             87.52 299  eP        P         18 20 36.5  0.0
      comp=Z,222nm,1.8s
D08A  Wollman Farm,     87.52  41  eP        P         18 20 35.1 -0.6
      comp=Z,30nm,1.3s
B08A  Colville Reser    87.68  40  eP        P         18 20 36.0 -0.5
      comp=Z,49nm,1.5s
W13A  Hualapai Mount    87.74  54  eP        P         18 20 36.8 -0.6
      comp=Z,24nm,1.2s
E09A  Wood Farm, Sta    87.86  42  eP        P         18 20 36.4 -0.9
      comp=Z,53nm,1.5s
BMO   Blue Mountains    87.91  44  eP        P         18 20 36.7 -1.1
      comp=Z,80nm,1.9s
BMO                                 LR       LR
      comp=Z,514nm,19.0s
BMO   Blue Mountains    87.91  44  eP        P         18 20 36.7 -1.1
BMO                                 pmax     pmax
      comp=Z,80nm,1.9s
BMO                                 MLR      MLR
      comp=Z,514nm,19.0s
Y14A  Wickenburg        88.16  55  eP        P         18 20 39.5 +0.4
      comp=Z,31nm,1.4s
C09A  Chrisman Ranch    88.17  41  eP        P         18 20 36.8 -2.0
      comp=Z,32nm,1.5s
ELK   Elko              88.20  48  eP        P         18 20 38.3 -1.1
      comp=Z,53nm,1.7s
ELK   Elko              88.20  48  eP        P         18 20 38.3 -1.1
ELK                                 pmax     pmax
      comp=Z,53nm,1.7s
ELK   Elko              88.20  48   P        P         18 20 39.2 -0.2
      comp=Z,3.2nm,0.9s,baz=268,slow=5.6,SNR=11
F10A  Beach Ranch, E    88.30  43  eP        P         18 20 38.8 -0.8
      comp=Z,109nm,1.7s
PSUT  Pine Spring       88.64  50  eP        P         18 20 40.9 -0.6
      comp=Z,64nm,1.6s
LCMT  Little Creek M    88.73  52  eP        P         18 20 41.3 -0.6
      comp=Z,70nm,1.6s
CCUT  Cedar City        88.77  52  eP        P         18 20 41.4 -0.8
      comp=Z,59nm,1.3s
DANN  Dangsing          88.85 299  eP        P         18 20 42.5 -0.3
      comp=Z,41nm,1.1s
KOLN  Koldanda          88.86 298  eP        P         18 20 41.8 -1.0
      comp=Z,46nm,1.3s
NEW   Newport           89.05  40  eP        P         18 20 41.6 -1.4
      comp=Z,69nm,1.8s
NEW   Newport           89.05  40  eP        P         18 20 41.6 -1.4
NEW                                 pmax     pmax
      comp=Z,69nm,1.8s
NEW   Newport           89.05  40   P        P         18 20 43.4 +0.4
      baz=253
NEW   Newport           89.05  40   P        P         18 20 43.0  0.0
      comp=Z,5.7nm,0.9s,baz=243,slow=4.6,SNR=9.4
KNB   Kanab             89.06  52  eP        P         18 20 43.1 -0.4
      comp=Z,117nm,1.5s
KNB   Kanab             89.06  52  eP        P         18 20 45.3 +1.8
U15A  North Rim         89.33  53  eP        P         18 20 44.1 -0.8
      comp=Z,57nm,1.3s
INK   Inuvik            89.44  19  eP        P         18 20 43.4 -0.8
      comp=Z,14nm,1.4s
INK   Inuvik            89.44  19  eP        P         18 20 43.4 -0.8
INK                                 pmax     pmax
      comp=Z,14nm,1.4s
PYUN  Piuthan           89.45 299  eP        P         18 20 44.9 -0.7
      comp=Z,66nm,1.4s
WMQ   Urumqi            89.52 315   P        P         18 20 46.0 +0.7
WMQ                                 pP       pwP       18 21 03.3  +12
WMQ                                 sP       sP        18 21 11.2  +22
WMQ                                 pmax     pmax
      comp=Z,51nm,1.3s
WMQ                                 pmax     pmax
      comp=Z,4µm,11.9s
WMQ                                 LR       LR
      comp=Z,2µm,15.7s
WMQ                                 LR       LR
      comp=Z,2µm,18.7s
WMQ                                 LR       LR
      comp=Z,2µm,26.1s
WMQ   Urumqi            89.52 315  eP        P         18 20 44.0 -1.3
      comp=Z,93nm,1.8s
WMQ   Urumqi            89.52 315  eP        P         18 20 44.0 -1.3
WMQ                                 pmax     pmax
      comp=Z,93nm,1.8s
X16A  Lo Mia Camp, P    89.53  55  eP        P         18 20 44.6 -1.1
      comp=Z,50nm,1.4s
HLID  Hailey            89.55  46  eP        P         18 20 45.1 -0.5
      comp=Z,52nm,1.4s
HLID                                LR       LR
      comp=Z,2µm,21.0s
HLID  Hailey            89.55  46   P        P         18 20 46.3 +0.7
      baz=255
PKCU  Pink Cliffs       89.56  52  eP        P         18 20 45.4 -0.5
      comp=Z,128nm,1.4s
TUC   Tucson            89.58  57  eP        P         18 20 45.3 -0.6
      comp=Z,66nm,1.8s
TUC   Tucson            89.58  57  eP        P         18 20 49.2 +3.3
TCRU  Three Creeks R    89.73  51  eP        P         18 20 48.6 +2.0
      comp=Z,82nm,1.3s
MTPU  Mount Pierson     89.80  51  eP        P         18 20 47.2 +0.1
      comp=Z,93nm,1.7s
DUG   Dugway, Tooele    89.84  49  eP        P         18 20 46.8 -0.2
      comp=Z,27nm,1.2s
DUG                                 LR       LR
      comp=Z,3µm,21.0s
DUG   Dugway, Tooele    89.84  49  eP        P         18 20 46.8 -0.2
DUG                                 pmax     pmax
      comp=Z,27nm,1.2s
DUG                                 MLR      MLR
      comp=Z,3µm,21.0s
DUG   Dugway, Tooele    89.84  49   P        P         18 20 47.4 +0.4
      baz=256
BGU   Big Grassy Mou    89.86  48  eP        P         18 20 46.8 -0.4
      comp=Z,67nm,1.6s
MSU   Marysvale         89.91  51  eP        P         18 20 46.9 -0.6
MSU   Marysvale         89.91  51  eP        P         18 20 46.9 -0.6
HVU   Hansel Valley     90.26  48  eP        P         18 20 48.8 -0.2
      comp=Z,113nm,1.4s
HVU   Hansel Valley     90.26  48  eP        P         18 20 48.8 -0.2
HVU                                 pmax     pmax
      comp=Z,113nm,1.4s
NLU   North Lily Min    90.33  49  eP        P         18 20 49.0 -0.5
      comp=Z,70nm,1.5s
SPUT  South Promonto    90.38  48  eP        P         18 20 49.6  0.0
      comp=Z,92nm,1.7s
319A  Douglas           90.63  58  eP        P         18 20 50.1 -0.7
      comp=Z,27nm,1.1s
MSO   Missoula          90.72  42  eP        P         18 20 49.1 -1.8
      comp=Z,33nm,1.5s
MSO   Missoula          90.72  42   P        P         18 20 51.3 +0.3
      baz=255
CTU   Camp Tracy        90.75  49  eP        P         18 20 51.0 -0.3
      comp=Z,50nm,1.3s
TMUT  Trail Mountain    90.83  50  eP        P         18 20 51.7 -0.2
      comp=Z,22nm,0.9s
JLU   Jordanelle        90.95  49  eP        P         18 20 52.0 -0.4
      comp=Z,95nm,1.6s
MCMT  McKenzie Canyo    90.96  45  eP        P         18 20 51.3 -0.9
HWUT  Hardware Ranch    91.10  48  eP        P         18 20 51.8 -1.1
      comp=Z,44nm,1.6s
TCUT  Toone Canyon      91.10  48  eP        P         18 20 52.2 -0.8
      comp=Z,57nm,1.1s
DGZ   Jazzator, Alta    91.25 320d iP        P         18 20 53.4  0.0
DGZ                                 pmax     pmax
      comp=Z,9.0nm,1.0s
DLMT  Dillon            91.26  44  eP        P         18 20 52.6 -0.9
      comp=Z,88nm,1.5s
SRU   San Rafael Swe    91.31  51  eP        P         18 20 52.8 -1.1
      comp=Z,14nm,1.1s
SRU   San Rafael Swe    91.31  51  eP        P         18 20 52.8 -1.1
SRU                                 pmax     pmax
      comp=Z,14nm,1.1s
WALA  Waterton Lakes    91.32  40  eP        P         18 20 52.0 -1.6
      comp=Z,96nm,1.6s
HYB   Hyderabad         91.33 287  i P       P         18 20 55.0 +0.7
LRM   Limekiln Ridge    91.47  44  eP        P         18 20 54.5 -0.1
AHID  Auburn Hatcher    91.70  47   PFAKE              18 21 10.0  +14
AHID                                LR       LR
      comp=Z,2µm,22.0s
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QLMT  Earthquake Lak    91.94  45  eP        P         18 20 57.1 +0.3
FXWY  Fox Creek         91.95  46  eP        P         18 20 56.6 -0.3
      comp=Z,18nm,1.3s
TPAW  Teton Pass        91.97  46  eP        P         18 20 55.9 -1.2
      comp=Z,100nm,1.9s
BOZ   Bozeman (W)       91.98  44  eP        P         18 20 56.0 -0.9
      comp=Z,39nm,1.4s
BOZ                                 LR       LR
      comp=Z,2µm,21.0s
BOZ   Bozeman (W)       91.98  44  eP        P         18 20 56.0 -0.9
BOZ                                 pmax     pmax
      comp=Z,39nm,1.4s
BOZ                                 MLR      MLR
      comp=Z,2µm,21.0s
BOZ   Bozeman (W)       91.98  44   P        P         18 20 57.9 +1.0
      baz=256
REDW  Red Top Meadow    92.01  46  eP        P         18 20 56.1 -1.1
      comp=Z,62nm,1.6s
IMW   Indian Meadow     92.07  46  eP        P         18 20 56.7 -0.8
      comp=Z,25nm,1.3s
YHB   Horse Butte       92.08  45  eP        P         18 20 54.9 -2.6
      comp=Z,38nm,1.4s
HRY   Holter Researc    92.10  43  eP        P         18 20 54.6 -2.8
MOOW  Moose Ponds       92.17  46  eP        P         18 20 56.3 -1.6
      comp=Z,45nm,1.8s
LOHW  Long Hollow       92.24  46  eP        P         18 20 56.7 -1.5
      comp=Z,54nm,1.9s
YPP   Pitchstone Pla    92.25  45  eP        P         18 20 57.6 -0.8
      comp=Z,42nm,1.9s
YFT   Old Faithful      92.27  45  eP        P         18 20 57.9 -0.4
      comp=Z,49nm,1.7s
FLWY  Flagg Ranch       92.28  46  eP        P         18 20 57.3 -1.1
      comp=Z,53nm,1.5s
PV21  Cone Mtn., Par    92.37  51  eP        P         18 20 57.5 -1.4
      comp=Z,106nm,1.0s
YNR   Norris Junctio    92.43  45  eP        P         18 20 58.0 -1.1
      comp=Z,52nm,1.6s
H17A  Grant Village     92.43  45  eP        P         18 20 58.1 -1.0
      comp=Z,22nm,1.3s
H17A  Grant Village     92.43  45   P        P         18 21 00.3 +1.2
      baz=257
LKWY  Lake              92.59  45  eP        P         18 21 02.4 +2.5
      comp=Z,26nm,1.4s
LKWY                                LR       LR
      comp=Z,2µm,20.0s
LKWY  Lake              92.59  45  eP        P         18 21 02.4 +2.5
LKWY                                pmax     pmax
      comp=Z,26nm,1.4s
LKWY                                MLR      MLR
      comp=Z,2µm,20.0s
DGAR  Diego Garcia      92.64 262   PFAKE              18 21 10.0  +10
DGAR                                LR       LR
      comp=Z,935nm,19.0s
BW06  Boulder Array     92.81  47  eP        P         18 20 59.5 -1.4
      comp=Z,60nm,1.8s
BW06                                LR       LR
      comp=Z,2µm,20.0s
BW06  Boulder Array     92.81  47   P        P         18 21 01.1 +0.2
      baz=258
PD31  Pinedale Array    92.81  47  eP        P         18 20 59.2 -1.6
      comp=Z,55nm,1.8s
PDAR  Pinedale Array    92.81  47  eP        P         18 20 58.8 -2.1
PDAR  Pinedale Array    92.81  47   P        P         18 20 59.5 -1.3
      comp=Z,1.8nm,0.8s,baz=242,slow=3.2,SNR=9.8
LENM  Lemitar           93.09  56  eP        P         18 21 00.1 -2.2
GCMT  Greycliff         93.36  44  eP        P         18 21 00.8 -2.4
RLMT  Red Lodge         93.50  45  eP        P         18 21 02.6 -1.4
      comp=Z,48nm,1.8s
RLMT                                LR       LR
      comp=Z,2µm,19.0s
RLMT  Red Lodge         93.50  45   P        P         18 21 04.6 +0.6
      baz=258
ANMO  Albuquerque       93.66  55   PFAKE              18 21 20.0  +15
ANMO                                LR       LR
      comp=Z,2µm,20.0s
EGMT  Eagleton          93.76  42  eP        P         18 21 04.3 -0.6
      comp=Z,73nm,1.4s
EGMT                                LR       LR
      comp=Z,2µm,21.0s
EGMT  Eagleton          93.76  42   P        P         18 21 05.4 +0.5
      baz=258
ZAA0  Zalesovo Array    93.86 324  eP        P         18 21 03.6 -1.4
      comp=Z,16nm,1.0s
ZALV  Zalesovo Beam     93.86 324  eP        P         18 21 03.6 -1.4
ZALV                                PKKP     PKKPdf    18 38 08.7 -1.3
ZALV  Zalesovo Beam     93.86 324  eP        P         18 21 03.7 -1.4
ZALV  Zalesovo Beam     93.86 324   P        P         18 21 04.0 -1.1
      comp=Z,8.4nm,0.8s,baz=113,slow=5.1,SNR=24
ZALV                                PKKP     PKKPdf    18 38 08.7 -1.3
      comp=Z,0.1nm,0.3s,baz=325,slow=2.3,SNR=3.7
ZAA1  Zalesovo Array    93.86 324  eP        P         18 21 04.0 -1.1
ZAA1                               ePKKPdf   PKKPdf    18 38 08.7 -1.3
S22A  4UR Ranch, Cre    93.87  52  eP        P         18 21 04.0 -2.0
      comp=Z,8.6nm,1.0s
MK01  Makanchi Array    93.91 317  eP        P         18 21 03.4 -2.1
MK31  Makanchi Array    93.92 317  eP        P         18 21 04.4 -1.2
      comp=Z,19nm,1.0s
MK31  Makanchi Array    93.92 317  eP        P         18 21 04.7 -0.9
MK32  Makanchi Array    93.92 317  eP        P         18 21 04.5 -1.1
MK32                               ePKKPdf   PKKPdf    18 38 07.5 -2.2
MKAR  Makanchi Array    93.92 317  eP        P         18 21 04.2 -1.4
      comp=Z,87nm,0.9s
MKAR                                PKKP     PKKPdf    18 38 07.5 -2.2
MKAR  Makanchi Array    93.92 317  eP        P         18 21 04.2 -1.4
MKAR                                pmax     pmax
      comp=Z,87nm,0.9s
MKAR  Makanchi Array    93.92 317   P        P         18 21 04.5 -1.1
      comp=Z,11nm,0.8s,baz=92,slow=6.2,SNR=44
MKAR                                PKKP     PKKPdf    18 38 07.5 -2.2
      comp=Z,1.4nm,0.8s,baz=274,slow=2.9,SNR=11
MNTX  Cornudas Mount    93.96  59   PFAKE              18 21 20.0  +14
MNTX                                LR       LR
      comp=Z,3µm,20.0s
MAKZ  Makanchi          94.14 317  eP        P         18 21 04.9 -1.7
      comp=Z,84nm,1.7s
MAKZ  Makanchi          94.14 317  eP        P         18 21 05.1 -1.5
YKA   Yellowknife Ar    94.41  27   P        P         18 21 04.3 -3.1
      comp=Z,2.0nm,0.9s,baz=257,slow=4.7,SNR=11
YKB5  Yellowknife Ar    94.41  27  eP        P         18 21 04.2 -3.2
YKW3  Yellowknife Ar    94.42  27  eP        P         18 21 04.7 -2.8
      comp=Z,22nm,1.4s
SDCO  Great Sand Dun    94.91  53   PFAKE              18 21 20.0 +9.3
SDCO                                LR       LR
      comp=Z,3µm,20.0s
NVS   Novosibirsk       94.95 325  eP        P         18 21 09.4 -0.7
NVS                                e                   18 24 58.8
NVS                                 pmax     pmax
      comp=Z,23nm,1.8s
NVS                                 pmax     pmax
      comp=E,8.0nm,1.4s
K22A  Casper            94.98  48   P        P         18 21 11.5 +0.7
      baz=260
N23A  Red Feather La    95.11  49  eP        P         18 21 08.3 -3.2
      comp=E,66nm,2.0s
ISCO  Idaho Springs     95.17  51   PFAKE              18 21 20.0 +8.1
ISCO                                LR       LR
      comp=Z,4µm,20.0s
LAO   LASA Array        95.88  44  eP        P         18 21 13.7 -0.9
      comp=Z,40nm,1.5s
LAO   LASA Array        95.88  44   P        P         18 21 15.8 +1.1
      baz=260
NRIK  Noril'sk          96.20 339   P        P         18 21 14.8 -0.7
      comp=Z,6.2nm,0.8s,baz=108,slow=4.9,SNR=9.8
KURK  Kurchatov         97.00 320  eP        P         18 21 16.8 -2.7
      comp=Z,19nm,1.3s
KURK                               ePKKPbc   PKKPbc    18 37 59.9 -2.3
KURK                                LR       LR
      comp=Z,2µm,19.0s
KURK  Kurchatov         97.00 320⇓iP         P         18 21 19.1 -0.4
KURK                                pmax     pmax
      comp=Z,15nm,1.3s
KURBB Kurchatov Arra    97.04 320   P        P         18 21 18.3 -1.4
      comp=Z,1.3nm,0.8s,baz=100,slow=4.0,SNR=10
KURBB                               PKKP     PKKPbc    18 37 59.9 -2.2
      comp=Z,1.1nm,0.8s,baz=272,slow=2.9,SNR=7.3
KSH   Kashi             97.25 309   P        Pdif      18 21 24.0 +2.8
KSH                                 pP       pwP       18 21 41.6  +15
KSH                                 PP       PP        18 25 24.8 +7.0
KSH                                 SKS      SKSac     18 31 52.3 -6.5
KSH                                 S        S         18 32 42.1 -3.2
KSH                                 SS       SS        18 39 23.7 +0.4
KSH                                 pmax     pmax
      comp=Z,380nm,4.6s
KSH                                 LR       LR
      comp=Z,180nm,4.8s
KSH                                 LR       LR
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      comp=Z,220nm,6.2s
KSH                                 LR       LR
      comp=Z,2µm,16.4s
DGMT  Dagmar            97.50  42   PFAKE              18 21 30.0 +8.0
DGMT                                LR       LR
      comp=Z,2µm,22.0s
JCT   Junction City     98.50  61   PFAKE              18 21 40.0  +13
JCT                                 LR       LR
      comp=Z,4µm,20.0s
NIL   Nilore            98.65 303   PFAKE              18 21 40.0  +13
NIL                                 LR       LR
      comp=Z,482nm,20.0s
AAK   Ala-Archa         98.76 312   PFAKE              18 21 40.0  +12
AAK                                 LR       LR
      comp=Z,1µm,21.0s
AAK   Ala-Archa         98.76 312⇑eP         Pdif      18 21 28.3 +0.4
AAK                                 pmax     pmax
      comp=Z,2.0nm,1.1s
CBKS  Cedar Bluff       99.55  52   PFAKE              18 21 40.0 +8.7
CBKS                                LR       LR
      comp=Z,2µm,21.0s
FFC   Flin Flon         99.58  36  eP        Pdif      18 21 28.8 -2.2
      comp=Z,22nm,1.4s
FFC                                 LR       LR
      comp=Z,3µm,21.0s
FFC   Flin Flon         99.58  36  eP        Pdif      18 21 28.8 -2.2
FFC                                 pmax     pmax
      comp=Z,22nm,1.4s
FFC                                 MLR      MLR
      comp=Z,3µm,21.0s
BVAR  Borovoye Array   102.28 322   P        Pdif      18 21 43.5 +0.5
      comp=Z,1.3nm,0.8s,baz=60,slow=11,SNR=4.5
ECSD  EROS Data Cent   102.30  47   PFAKE              18 21 50.0 +6.6
ECSD                                LR       LR
      comp=Z,2µm,19.0s
BRVK  Borovoye         102.34 322   PFAKE              18 21 50.0 +6.6
BRVK                                LR       LR
      comp=Z,655nm,20.0s
EYMN  Ely              105.94  43   PFAKE              18 26 20.0 +8.1
EYMN                                LR       LR
      comp=Z,2µm,21.0s
EFI   East Falkland    106.81 153   PFAKE              18 26 20.0 +6.6
EFI                                 LR       LR
      comp=Z,1µm,20.0s
JFWS  Jewell Farm      106.93  48   PFAKE              18 26 20.0 +6.2
JFWS                                LR       LR
      comp=Z,2µm,21.0s
COWI  Conover          107.62  45   PFAKE              18 26 30.0  +15
COWI                                LR       LR
      comp=Z,3µm,21.0s
HDIL  Hopedale         107.68  51   PFAKE              18 26 30.0  +15
HDIL                                LR       LR
      comp=Z,3µm,20.0s
ARU   Arti             108.90 326   PFAKE              18 26 30.0  +13
ARU                                 LR       LR
      comp=Z,573nm,20.0s
BRAL  Brewton          109.48  61   PFAKE              18 26 30.0  +11
BRAL                                LR       LR
      comp=Z,2µm,21.0s
JTS   JuntasAbangare   109.84  83   PFAKE              18 26 30.0  +10
JTS                                 LR       LR
      comp=Z,1µm,21.0s
KBS   Kingsbay         110.78 355   PFAKE              18 26 30.0  +10
KBS                                 LR       LR
      comp=Z,768nm,22.0s
GLMI  Grayling         110.89  46   PFAKE              18 26 30.0 +8.8
GLMI                                LR       LR
      comp=Z,2µm,19.0s
AAM   Ann Arbor        111.82  49   PFAKE              18 26 30.0 +7.0
AAM                                 LR       LR
      comp=Z,3µm,19.0s
ACSO  Alum Creek Sta   112.51  51   PFAKE              18 26 40.0  +16
ACSO                                LR       LR
      comp=Z,2µm,20.0s
GOGA  Godfrey          112.51  58   PFAKE              18 26 40.0  +15
GOGA                                LR       LR
      comp=Z,3µm,20.0s
NNA   Nana             113.06 108   PFAKE              18 26 40.0  +14
NNA                                 LR       LR
      comp=Z,736nm,21.0s
ABPO  Ambohimpanom     113.27 244   PFAKE              18 26 40.0  +13
ABPO                                LR       LR
      comp=Z,868nm,22.0s
BCIP  Isla Barro Col   114.69  85   PFAKE              18 26 40.0  +11
BCIP                                LR       LR
      comp=Z,1µm,19.0s
BLA   Blacksburg       114.77  54   PFAKE              18 26 40.0  +11
BLA                                 LR       LR
      comp=Z,4µm,22.0s
LVZ   Lovozero         114.91 342   PFAKE              18 26 40.0  +12
LVZ                                 LR       LR
      comp=Z,367nm,21.0s
NHSC  New Hope         115.27  59   PFAKE              18 26 40.0  +10
NHSC                                LR       LR
      comp=Z,4µm,19.0s
APA   Apatity          115.49 342⇓iPKIKP     PKPdf     18 26 35.2 +5.9
APA                                 pmax     pmax
      comp=Z,5.0nm,1.1s
APA                                 MLR      MLR
      comp=Z,900nm,21.0s
KEV   Kevo             115.80 345   PFAKE              18 26 40.0  +10
KEV                                 LR       LR
      comp=Z,1µm,19.0s
ARA0  ARCESS Array S   116.33 346  ePKPdf    PKiKP     18 26 30.0 -0.9
ARCES ARCESS Array B   116.33 346   PKP      PKiKP     18 26 30.0 -0.9
      comp=Z,3.5nm,0.7s,baz=42,slow=2.0,SNR=9.6
KLMR  Klimovskoe       116.91 334  ePKIKP    PKPdf     18 26 30.5 -1.7
KLMR                                pmax     pmax
      comp=Z,9.0nm,1.5s
KLMR  Klimovskoe       116.91 334  ePKPdf    PKPdf     18 26 30.5 -1.7
KLMR                                AMP                18 26 34.2
      comp=Z,9.0nm,1.5s
CNNC  Cliffs of the    116.99  56   PFAKE              18 26 40.0 +6.8
CNNC                                LR       LR
      comp=Z,3µm,21.0s
CBN   Corbin Frederi   117.06  53   PFAKE              18 26 40.0 +6.8
CBN                                 LR       LR
      comp=Z,4µm,20.0s
BINY  Binghamton       117.47  48   PFAKE              18 26 40.0 +6.1
BINY                                LR       LR
      comp=Z,3µm,20.0s
VRH   Novokhopyorsk    119.89 323  ePKIKP    PKPdf     18 26 35.7 -2.5
VRH                                 pmax     pmax
      comp=Z,7.0nm,0.7s
LPSR  Galich'ya Gora   120.92 326  ePKIKP    PKPdf     18 26 40.0 -0.2
LPSR                                pmax     pmax
      comp=Z,10.0nm,1.0s
OBN   Obninsk          121.04 329   PFAKE              18 26 50.0  +10
OBN                                 LR       LR
      comp=Z,592nm,21.0s
OBN   Obninsk          121.04 329  i PKIKP   PKiKP     18 26 40.5 +0.1
OBN                                 pmax     pmax
      comp=Z,6.0nm,1.0s
GNI   Garni            121.14 310   PFAKE              18 26 50.0 +8.6
GNI                                 LR       LR
      comp=Z,1µm,22.0s
GNI   Garni            121.14 310⇑iPKIKP     PKiKP     18 26 42.5 +1.1
GNI                                 pmax     pmax
      comp=Z,33nm,1.3s
VSR   Storozhevoye     121.36 324  ePKIKP    PKPpre    18 26 36.1
VSR                                 pmax     pmax
      comp=Z,10.0nm,1.4s
KIV   Kislovodsk       121.65 315   PFAKE              18 26 50.0 +7.9
KIV                                 LR       LR
      comp=Z,586nm,19.0s
KIV   Kislovodsk       121.65 315  ePKIKP    PKPdf     18 26 40.2 -1.8
KIV                                 pmax     pmax
      comp=Z,5.0nm,1.0s
FIA0  FINESS Array S   121.87 339  ePKPdf    PKPdf     18 26 39.5 -2.2
FINES FINESS Array B   121.87 339   PKP      PKPdf     18 26 39.5 -2.2
      comp=Z,5.3nm,0.9s,baz=52,slow=3.1,SNR=8.1
SDV   Santo Domingo    123.67  86  ePKPdf    PKPdf     18 26 43.4 -3.5
GRTK  Grand Turk       123.83  71   PFAKE              18 27 00.0  +13
GRTK                                LR       LR
      comp=Z,1µm,22.0s
SUR   Sutherland       126.00 216   PFAKE              18 27 00.0 +8.7
SUR                                 LR       LR
      comp=Z,2µm,20.0s
NB2   NORSAR Subarra126.70 345      PKPdf    PKPdf     18 26 49.0 -2.1
      comp=Z,1.3nm,0.8s,baz=31,slow=1.9
NB200 NORSAR Array S 126.70 345    ePKPdf    PKPdf     18 26 50.0 -1.1
NB200                              ePP       PP        18 28 46.5 -0.7
NOA   NORSAR Array B 126.70 345     PKP      PKPdf     18 26 50.0 -1.1
      comp=Z,2.1nm,0.8s,baz=33,slow=1.9,SNR=11
NOA                                 PP       PP        18 28 46.5 -0.7
      comp=Z,1.8nm,0.8s,baz=42,slow=3.6,SNR=8.7
```

AKASG	**Malin Array Be**	**127.12**	**327**	PKP	**PKPdf**	**18 26 51.2**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=53,slow=1.8,SNR=13						
AKBB	**Malin Array Si**	**127.12**	**327**	*e*PKPdf	**PKPdf**	**18 26 50.2**	**-2.0**
KIEV	**Kiev**	**127.14**	**327**	PFAKE		18 27 00.0	+7.3
KIEV				LR	LR		
	comp=Z,958nm,21.0s						
KIEV	**Kiev**	**127.14**	**327**	⇑*i*P	**PKiKP**	**18 26 53.2**	**+0.5**
KIEV	**Kiev**	**127.14**	**327**	*c* *i*PKIKP	**PKPdf**	**18 26 52.2**	**+0.1**
AK11	**Malin Array Si**	**127.17**	**327**	*e*PKPdf	**PKPdf**	**18 26 50.9**	**-1.3**
KMBO	**Kilima Mbogo**	**128.23**	**260**	PFAKE		18 27 10.0	+14
KMBO				LR	LR		
	comp=Z,1μm,21.0s						
KMBO	**Kilima Mbogo**	**128.23**	**260**	*i* PKIKP	**PKiKP**	**18 26 56.2**	**-0.1**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HUMP	**Col San Antoni**	**128.86**	**75**	*e*PKPdf	**PKPdf**	**18 26 53.6**	**-2.8**
BR101	**Keskin Array S**	**129.41**	**313**	*e*PKPdf	**PKiKP**	**18 26 57.8**	**0.0**
BRTR	**Keskin Array B**	**129.41**	**313**	PKP	**PKiKP**	**18 26 57.8**	**0.0**
	comp=Z,0.7nm,0.8s,baz=156,slow=6.5,SNR=4.4						
ANTO	**Ankara**	**129.97**	**314**	*e*Pdif	**Pdif**	**18 23 40.1**	**-6.5**
ANTO				*e*PKPdf	**PKPdf**	**18 26 56.7**	**-1.3**
ANTO				LR	LR		
	comp=Z,628nm,21.0s						
ANTO	**Ankara**	**129.97**	**314**	*e*P	**Pdif**	**18 23 40.1**	**-6.5**
ANTO				*e*		18 26 56.7	
ANTO				MLR	MLR		
	comp=Z,628nm,21.0s						
BIZ	**Bicaz**	**130.93**	**325**	⇑*i*P	**PKiKP**	**18 27 08.1**	**+7.7**
BUR04	**Bucovina Ar. S**	**131.04**	**326**	*e*PKPdf	**PKPdf**	**18 26 59.7**	**-0.2**
BURAR	**Bucovina Array**	**131.04**	**326**	⇑*i*P	**PKPdf**	**18 27 00.4**	**+0.5**
HARR	**Harsova**	**131.06**	**321**	⇓*i*P	**PKPdf**	**18 26 57.8**	**-2.0**
LSZ	**Lusaka**	**131.30**	**239**	*e*PKPdf	**PKPdf**	**18 26 59.2**	**-2.1**
LSZ	**Lusaka**	**131.30**	**239**	*e*PKIKP	**PKPdf**	**18 26 59.2**	**-2.1**
LSZ	**Lusaka**	**131.30**	**239**	PKP	**PKiKP**	**18 27 01.9**	**-0.3**
	comp=Z,1.1nm,0.2s,baz=96,slow=2.1,SNR=8.1						
MLR	**Muntele Rosu**	**131.83**	**323**	⇑*i*P	**PKiKP**	**18 27 02.4**	**-0.1**
ANWB	**Willy Bob**	**132.74**	**76**	PFAKE		18 27 10.0	+5.1
ANWB				LR	LR		
	comp=Z,999nm,20.0s						
GRGR	**Grenville**	**132.77**	**83**	PFAKE		18 27 10.0	+5.0
GRGR				LR	LR		
	comp=Z,861nm,21.0s						
LANS	**Liptovska Anna**	**133.03**	**331**	*e*PKP	**PKiKP**	**18 27 04.7**	**0.0**
VYHS	**Vyhne**	**133.79**	**331**	*e*PKIKP	**PKiKP**	**18 27 05.8**	**-0.4**
VYHS	**Vyhne**	**133.79**	**331**	*e*PKP	**PKiKP**	**18 27 05.8**	**-0.4**
BRG	**Berggiesshubel**	**134.20**	**336**	*e*PKP	**PKiKP**	**18 27 07.4**	**+0.5**
	comp=Z,21nm,1.4s						
BRG	**Berggiesshubel**	**134.20**	**336**	*e*PKIKP	**PKiKP**	**18 27 07.4**	**+0.5**
BRG				pmax	pmax		
	comp=Z,21nm,1.4s						
BZS	**Buzias**	**134.23**	**326**	⇓*i*P	**PKPdf**	**18 27 06.2**	**+0.4**
CLL	**Collm**	**134.23**	**337**	⇑*i*PKPdf	**PKiKP**	**18 27 07.5**	**+0.6**
	comp=Z,10.0nm,1.1s						
CLL				*i* (sPKPdf)		18 27 12.1	
CLL				*e*(PP)		18 29 32.0	
CLL				Lm	MLR	19 30 00.0	
	comp=Z,800nm,20.3s						
CLL	**Collm**	**134.23**	**337**	PKIKP	**PKiKP**	**18 27 07.5**	**+0.6**
KRUC	**Moravsky**	**134.53**	**333**	*e*PKP	**PKiKP**	**18 27 07.2**	**-0.4**
MODS	**Modra-Piesok**	**134.62**	**331**	*e*PKIKP	**PKiKP**	**18 27 07.4**	**-0.5**
MODS				*e*		18 27 14.4	
MODS	**Modra-Piesok**	**134.62**	**331**	*e*PKP	**PKiKP**	**18 27 07.4**	**-0.5**
MODS				*e*		18 27 14.4	
MBAR	**Mbarara**	**134.65**	**258**	PFAKE		18 27 20.0	+11
MBAR				LR	LR		
	comp=Z,1μm,22.0s						
BBGH	**Gun Hill**	**134.86**	**82**	PFAKE		18 27 20.0	+11
BBGH				LR	LR		
	comp=Z,2μm,20.0s						
ESK	**Eskdalemuir**	**134.90**	**352**	PFAKE		18 27 20.0	+12
ESK				LR	LR		
	comp=Z,1μm,20.0s						
CONA	**Conrad Observa**	**135.59**	**332**	*e*PKiKP	**PKiKP**	**18 27 09.3**	**-0.7**
	comp=Z,4.2nm,0.9s						
KHC	**Kasperske Hory**	**135.70**	**335**	*e*PKPdf	**PKPdf**	**18 27 07.5**	**-1.0**
KHC	**Kasperske Hory**	**135.70**	**335**	*e*PKPDF	**PKPdf**	**18 27 08.0**	**-0.5**
KHC				*e*PP	**PP**	**18 29 46.5**	**+0.9**
KHC	**Kasperske Hory**	**135.70**	**335**	*e*PKIKP	**PKPdf**	**18 27 07.5**	**-1.0**
GEC2	**GERESS Array S**	**135.87**	**334**	*e*PKPdf	**PKPdf**	**18 27 07.7**	**-1.2**
GEC2	**GERESS Array S**	**135.87**	**334**	*e*PKIKP	**PKPdf**	**18 27 07.7**	**-1.2**
GERES	**GERESS Array B**	**135.87**	**334**	PKP	**PKPdf**	**18 27 08.9**	**0.0**
	comp=Z,2.2nm,0.8s,baz=105,slow=2.1,SNR=12						
GEA0	**GERESS Array S**	**135.87**	**334**	*e*PKPpre	PKPpre	18 26 55.3	
GEA0				*e*PKPdf	**PKPdf**	**18 27 08.6**	**-0.3**
MOA	**Molln**	**136.38**	**333**	*e*P	**PKiKP**	**18 27 12.6**	**+1.1**
	comp=Z,12nm,1.9s						
SOKA	**Soboth**	**136.89**	**331**	*e*pPKPdf	**PKiKP**	**18 27 13.1**	**+0.4**
	comp=Z,7.4nm,1.2s						
MEM	**Membach**	**137.24**	**342**	⇑PKiKP	**PKPdf**	**18 27 12.1**	**+0.9**
KBA	**Koelnbreinsper**	**137.37**	**333**	*e*P	**PKiKP**	**18 27 14.4**	**+0.6**
	comp=Z,9.2nm,1.2s						
ABTA	**Abfaltersbach**	**137.99**	**333**	*e*PKiKP	**PKPdf**	**18 27 13.1**	**+0.2**
	comp=Z,8.4nm,1.1s						
WLF	**Walferdange**	**138.02**	**341**	⇓PKiKP	**PKPdf**	**18 27 12.7**	**0.0**
RETA	**Reutte**	**138.16**	**335**	*e*PKPdf	**PKPdf**	**18 27 09.9**	**-3.2**
	comp=Z,7.7nm,1.2s						
SQTA	**Sankt Quirin**	**138.18**	**335**	*e*PKPdf	**PKPdf**	**18 27 11.9**	**-1.4**
	comp=Z,5.1nm,0.9s						
BFO	**Black Forest**	**138.41**	**338**	PFAKE		18 27 20.0	+4.4
BFO				LR	LR		
	comp=Z,33nm,21.0s						
DAVA	**Damuels**	**138.68**	**336**	*i* PKiKP	**PKPdf**	**18 27 14.7**	**+0.5**
	comp=Z,17nm,1.5s						
FUORN	**Ofenpass-Fuorn**	**139.05**	**335**	*e*PKPpre	PKPpre	18 27 02.9	
FUORN				*e*PKPdf	**PKPdf**	**18 27 13.4**	**-1.6**
KEST	**Kesra**	**147.73**	**324**	*e*PKPbc	**PKiKP**	**18 27 34.8**	**-0.4**
KEST	**Kesra**	**147.73**	**324**	PKPbc	**PKPbc**	**18 27 32.3**	**-0.9**
	comp=Z,27nm,0.9s,baz=290,slow=1.9,SNR=9.9						
PBRG	**Braganca**	**148.59**	**350**	*e*PKPdf	**PKPbc**	**18 27 35.4**	**+0.2**
POLO	**Lamas de Olo**	**149.17**	**352**	*e*PKPdf	**PKiKP**	**18 27 37.5**	**-0.5**
PVRL	**Vila Real**	**149.26**	**352**	*e*PKPdf	**PKiKP**	**18 27 38.0**	**-0.1**
MVO	**Moncorvo**	**149.26**	**351**	*e*PKPdf	**PKiKP**	**18 27 38.2**	**0.0**
PVIS	**Viseu**	**149.83**	**352**	*e*PKPdf	**PKiKP**	**18 27 39.5**	**+0.2**
ES19	**SONSECA Array**	**150.03**	**345**	*e*PKPdf	**PKPdf**	**18 27 33.4**	**-0.5**
ES19				*e*PKPbc	**PKiKP**	**18 27 39.9**	**+0.2**
ESDC	**Sonseca Array**	**150.07**	**345**	PKP	**PKPdf**	**18 27 34.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=319,slow=29,SNR=3.9						
ESDC				PKPbc	**PKiKP**	**18 27 39.8**	**0.0**
	comp=Z,4.7nm,0.8s,baz=1.6,slow=2.6,SNR=17						
ESLA	**Sonseca Array**	**150.07**	**345**	*e*PKPbc	**PKPbc**	**18 27 38.8**	**-0.2**
MTE	**Manteigas**	**150.09**	**351**	*e*PKPdf	**PKiKP**	**18 27 40.2**	**+0.3**
MTE	**Manteigas**	**150.09**	**351**	*e*PKPdf	**PKPdf**	**18 27 32.6**	**-1.5**
MTE				*e*PKPbc	**PKiKP**	**18 27 39.8**	**-0.1**
PAB	**San Pablo**	**150.28**	**346**	*e*PKPdf	**PKPdf**	**18 27 30.4**	**-4.0**
PAB				*e*PKPbc	**PKiKP**	**18 27 40.5**	**+0.1**
PAB	**San Pablo**	**150.28**	**346**	*e*PKIKP	**PKPdf**	**18 27 30.4**	**-4.0**
PAB				*e*		18 27 40.5	
PCAS	**Casmilo, Conde**	**150.57**	**352**	*e*PKPdf	**PKiKP**	**18 27 41.2**	**+0.4**
PCBR	**Castelo Branco**	**150.63**	**351**	*e*PKPdf	**PKiKP**	**18 27 41.3**	**+0.4**
PTOM	**Tomar**	**150.98**	**352**	*e*PKPdf	**PKiKP**	**18 27 42.4**	**+0.7**
PMRV	**Marv??o**	**151.02**	**350**	*e*PKPdf	**PKiKP**	**18 27 42.0**	**+0.2**
CMLA	**Cha da Macela**	**151.06**	**20**	PFAKE		18 27 50.0	+1.2
CMLA				LR	LR		
	comp=Z,1μm,19.0s						
PMTG	**Montargil**	**151.50**	**351**	*e*PKPdf	**PKPab**	**18 27 48.5**	**-2.0**
PESTR	**Estremoz**	**151.60**	**350**	*e*PKPdf	**PKPab**	**18 27 53.2**	**+2.3**
PESTR	**Estremoz**	**151.60**	**350**	*e*PKPab	PKPab	18 27 59.7	+8.8
PESTR	**Estremoz**	**151.60**	**350**	*e*PKPdf	**PKPdf**	**18 27 33.6**	**-2.7**
PESTR				*e*PKPab	**pPKPab**	**18 27 52.7**	**-0.9**
SHEL	**Horse Pasture**	**152.32**	**196**	PFAKE		18 27 50.0	-4.5
SHEL				LR	LR		
	comp=Z,528nm,20.0s						
PBEJ	**Beja**	**152.46**	**350**	*e*PKPdf	**PKiKP**	**18 27 46.5**	**+1.7**
PNCL	**Nicolau / Gran**	**152.48**	**352**	*e*PKPdf	**PKPdf**	**18 27 39.2**	**+1.6**
MESJ	**Messejana**	**152.70**	**351**	*e*PKPdf	**PKPdf**	**18 27 36.9**	**-1.1**
MESJ	**Messejana**	**152.70**	**351**	*e*PKPdf	**PKPbc**	**18 27 42.3**	**-2.7**
PVAQ	**Vaqueiros**	**153.04**	**350**	*e*PKPdf	**PKiKP**	**18 27 47.1**	**+1.1**
PTEO	**Sao Teotonio**	**153.06**	**352**	*e*PKPdf	**PKiKP**	**18 27 48.0**	**+2.0**
MORF	**Marmelete**	**153.29**	**352**	*e*PKPdf	**PKPdf**	**18 27 37.3**	**-1.6**
PFVI	**Vila Bisbo**	**153.48**	**352**	*e*PKPdf	**PKiKP**	**18 27 50.9**	**+4.0**
MDT	**Midelt**	**156.66**	**341**	PKP	**PKPdf**	**18 27 43.9**	**+0.2**
	comp=Z,5.8nm,1.1s,baz=359,slow=3.1,SNR=4.2						
MDT				PKPab	**PKPab**	**18 28 13.8**	**+1.1**
	comp=Z,7.9nm,1.1s,baz=50,slow=4.4,SNR=5.6						
ASCN	**Ascension**	**161.34**	**177**	PFAKE		18 28 00.0	+10
ASCN				LR	LR		
	comp=Z,14μm,19.0s						
TOA0	**Torodi Ar. Sit**	**165.03**	**280**	*e*PKPdf	**PKPdf**	**18 27 50.3**	**-2.8**
TORD	**Torodi Ar. Bea**	**165.03**	**280**	PKP	**PKPdf**	**18 27 52.5**	**-0.6**
	comp=Z,5.2nm,1.2s,baz=119,slow=1.7,SNR=9.9						
TORD				PKPab	**PKPab**	**18 28 50.6**	**+0.8**
	comp=Z,3.6nm,1.1s,baz=57,slow=3.6,SNR=4.5						
TOA1	**Torodi Ar. Sit**	**165.03**	**280**	*e*PKPdf	**PKPdf**	**18 27 52.5**	**-0.6**
TOA1				*e*PKPab	**PKPab**	**18 28 50.6**	**+0.8**
SACV	**Santiago Islan**	**169.25**	**66**	PFAKE		18 28 10.0	+14
SACV				LR	LR		
	comp=Z,585nm,20.0s						
DBIC	**Dimbokro**	**170.58**	**245**	*e*PKPdf	**PKPdf**	**18 27 54.1**	**-2.9**
DBIC	**Dimbokro**	**170.58**	**245**	*e*PKIKP	**PKPdf**	**18 27 54.1**	**-2.9**
DBIC	**Dimbokro**	**170.58**	**245**	PKP	**PKPdf**	**18 27 56.9**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=80,slow=1.6,SNR=4.8						

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*ISCJB **08** 18:09:27.8±1.0, 10°.8S±0°.1×166°.1E±0°.1, h10^{km}, mb5.0/23, MS4.9/2, Error ellipse: s-maj=21.8km s-min=9.0km az=39.4*

*NEIC **08** 18:09:28.9±0.8, 10°.70S×166°.12E, h10^{km}, mb5.0/16, Error ellipse: s-maj=16.6km s-min=7.1km az=215.0*

*IDC **08** 18:09:35.1±5.1, 10°.85S×166°.07E, h51^{km}±37^{km}, mb4.3/5, mb1 4.6/7, mb1mx3.9/50, mbtmp4.7/7, ML5.0/2, MS4.9/2, Ms1 4.9/2, ms1mx4.3/25, Error ellipse: s-maj=52.0km s-min=37.9km az=65.0*

ISC 08 18:09:29.0±1.7, **10°.7S**±0°.2×**166°.2E**±0°.2, **h10^{km}, n33,** σ**0^{s}.95**/30, **mb5.0**/23, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.24**	**281**	*e*Pn	**Pn**	**18 11 00.4**	**-0.8**
HNR	**Honiara**	**6.24**	**281**	P	**Pn**	**18 11 03.5**	**+2.2**
	46nm,0.3s,baz=106,slow=19,SNR=3.7						
DZM	**Mont Dzumac**	**11.32**	**179**	P	**Pn**	**18 12 11.9**	**+1.0**
	8.5nm,0.3s,baz=334,slow=12,SNR=13						
EIDS	**Eidsvold**	**20.43**	**222**	*e*P	Pn	18 14 07.3	-1.4
	38nm,1.0s						
CTA	**Charters Tower**	**21.32**	**242**	P	**P**	**18 14 18.2**	**+1.9**
	11nm,0.9s,baz=68,slow=11,SNR=2.3						
CTAO	**Charters Tower**	**21.32**	**242**	*e*P	**P**	**18 14 16.6**	**+0.3**
	94nm,1.5s						
BKZ	**Black Stump Fm**	**29.82**	**164**	*e*P	**P**	**18 15 36.0**	**-0.4**
	42nm,1.6s						
BFZ	**Birch Farm**	**31.17**	**165**	*e*P	**P**	**18 15 47.6**	**-0.7**
	37nm,1.2s						
SNZO	**South Karori**	**31.41**	**168**	*e*P	**P**	**18 15 51.2**	**+0.9**
	135nm,1.6s						
THZ	**Tophouse**	**31.51**	**170**	*e*P	**P**	**18 15 50.9**	**-0.4**
	22nm,1.0s						
WRAB	**Tennant Creek**	**31.97**	**249**	*e*P	**P**	**18 15 54.2**	**-1.3**
	90nm,1.8s						
WB2	**Warramunga Arr**	**31.97**	**249**	*e*P	**P**	**18 15 54.2**	**-1.4**
	23nm,1.1s						
WR1	**Warramunga Arr**	**31.98**	**249**	*e*P	**P**	**18 15 55.2**	**-0.5**
	19nm,1.1s						
WRA	**Warramunga Arr**	**31.98**	**249**	P	**P**	**18 15 55.2**	**-0.5**
	6.6nm,0.8s,baz=83,slow=9.2,SNR=2.8						
GUMO	**Guam**	**32.06**	**318**	LR	LR	18 29 17.4	
	comp=Z,2μm,18.5s,baz=108,slow=37						
KHZ	**Kahutara**	**32.26**	**170**	*e*P	**P**	**18 15 57.1**	**-0.5**
	18nm,1.1s						
LTZ	**Lake Taylor**	**32.41**	**172**	*e*P	**P**	**18 15 59.0**	**-0.1**
	15nm,0.9s						
TOO	**Toolangi**	**32.58**	**211**	*e*P	**P**	**18 16 00.4**	**-0.3**
	19nm,1.1s						
FOZ	**Fox Glacier**	**32.87**	**175**	*e*P	**P**	**18 16 04.0**	**+1.0**
	102nm,1.9s						
RPZ	**Rata Peaks**	**33.17**	**174**	*e*P	**P**	**18 16 05.4**	**-0.4**
	30nm,1.0s						
AS01	**Alice Springs**	**33.27**	**243**	*e*P	**P**	**18 16 06.2**	**-0.7**
AS31	**Alice Springs**	**33.31**	**243**	*e*P	**P**	**18 16 06.0**	**-1.3**
	3.8nm,1.3s						
ASAR	**Alice Springs**	**33.31**	**243**	P	**P**	**18 16 06.3**	**-1.0**
	2.5nm,0.7s,baz=64,slow=10,SNR=3.3						
MQZ	**McQueen's Vall**	**33.37**	**171**	*e*P	**P**	**18 16 07.4**	**0.0**
	123nm,2.0s						
LBZ	**Lake Benmore**	**33.75**	**175**	*e*P	**P**	**18 16 10.6**	**-0.2**
	101nm,1.9s						
WKZ	**Wanaka**	**34.10**	**176**	*e*P	**P**	**18 16 13.6**	**-0.2**
	40nm,1.3s						
MTN	**Manton Dam**	**34.34**	**263**	*e*P	**P**	**18 16 16.4**	**+0.1**
	28nm,1.2s						
FITZ	**Fitzroy Crossi**	**39.86**	**255**	*e*P	**P**	**18 17 03.1**	**-0.1**
	13nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.86**	**255**	P	**P**	**18 17 03.0**	**-0.2**
	13nm,0.6s,baz=84,slow=7.5,SNR=5.6						
MBWA	**Marble Bar**	**45.69**	**251**	*e*P	**P**	**18 17 48.8**	**-1.7**
	65nm,1.8s						
ZALV	**Zalesovo Beam**	**93.51**	**324**	LR	LR	19 03 59.1	
	comp=Z,440nm,21.3s,baz=80,slow=35						
MK32	**Makanchi Array**	**93.54**	**317**	*e*P	**P**	**18 22 45.9**	**+0.6**
MKAR	**Makanchi Array**	**93.54**	**317**	P	**P**	**18 22 45.9**	**+0.6**
	1.5nm,0.9s,baz=92,slow=6.0,SNR=3.1						

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*ISCJB **08** 18:10:43.3±0.1, 10°.79S±0°.03×165°.91E±0°.03, h10^{km}, mb5.2/175, Error ellipse: s-maj=5.3km s-min=3.8km az=30.1*

*NEIC **08** 18:10:44.9±0.2, 10°.74S×165°.96E, h10^{km}, mb5.4/157, Error ellipse: s-maj=6.5km s-min=4.2km az=120.0*

*BJI **08** 18:10:45.8, 10°.38S×165°.81E, h12^{km}, mb4.7/16, mB5.5/7, Ms5.5/5, Ms7 5.3/5*

*MOS **08** 18:10:46.2±1.4, 10°.57S×165°.73E, h28^{km}, mb5.3/25, Error ellipse: s-maj=13.4km s-min=8.6km az=50.9*

*IDC **08** 18:10:50.1±3.6, 10°.63S×166°.06E, h53^{km}±32^{km}, mb4.2/15, mb1 4.5/17, mb1mx4.1/51, mbtmp4.6/17, ML5.1/2, Error ellipse: s-maj=22.4km s-min=18.5km az=103.0*

ISC 08 18:10:44.9±0.3, **10°.74S**±0°.06×**166°.03E**±0°.06, **h10^{km}, n282,** σ**1^{s}.53**/280, **mb5.3**/175, **6C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.13**	**282**	P	**Pn**	**18 12 18.2**	**+2.6**
	103nm,0.3s,baz=153,slow=5.7,SNR=7.9						
MARNC	**Mare, Loyalty**	**10.86**	**170**	*e*Pn	**Pn**	**18 13 22.7**	**+2.3**
DZM	**Mont Dzumac**	**11.28**	**178**	*e*Pn	**Pn**	**18 13 29.1**	**+2.8**
DZM	**Mont Dzumac**	**11.28**	**178**	P	**Pn**	**18 13 30.2**	**+3.9**
	5.6nm,0.3s,baz=350,slow=16,SNR=3.7						
PINNC	**Pines Island,**	**11.89**	**174**	*e*Pn	**Pn**	**18 13 35.5**	**+0.9**
MSVF	**Nonsavu**	**13.56**	**122**	*e*Pn	**P**	**18 14 09.5**	**+2.8**
MSVF	**Nonsavu**	**13.56**	**122**	*i* P	**Pn**	**18 13 54.9**	**-2.7**
TARA	**Tarawa**	**13.83**	**30**	*e*Pn	**Pn**	**18 13 59.7**	**-1.4**
RABL	**Rabaul**	**15.21**	**294**	*e*Pn	**Pn**	**18 14 20.4**	**+0.5**
	97nm,0.6s						
EIDS	**Eidsvold**	**20.31**	**222**	*e*P	**P**	**18 15 20.3**	**-0.9**
	84nm,1.0s						
MANU	**Manus Island**	**20.45**	**294**	*e*P	Pn	18 15 23.7	-1.2
	115nm,1.1s						
CTA	**Charters Tower**	**21.19**	**242**	P	**P**	**18 15 32.4**	**+1.6**
	24nm,0.8s,baz=75,slow=12,SNR=5.9						
CTAO	**Charters Tower**	**21.19**	**242**	*e*P	**P**	**18 15 29.1**	**-1.7**
	42nm,1.0s						
CTAO	**Charters Tower**	**21.19**	**242**	*e*P	**P**	**18 15 29.1**	**-1.7**
LHI	**Lord Howe Isla**	**21.67**	**196**	*e*P	**P**	**18 15 34.0**	**-1.7**
	156nm,1.3s						
KNTN	**Kanton**	**23.45**	**72**	*e*P	**P**	**18 15 54.0**	**-0.7**
	133nm,1.1s						
ARMA	**Armidale**	**23.73**	**212**	*e*P	**P**	**18 15 58.0**	**+0.6**
	161nm,1.4s						
OUZ	**Omahuta**	**25.33**	**165**	*e*P	**P**	**18 16 10.8**	**-1.1**
	30nm,1.2s						
CAN	**Canberra**	**28.97**	**210**	*e*P	**P**	**18 16 46.4**	**+1.6**
	63nm,1.6s						
H11S2	**WAKE ISLAND Hy**	**29.05**	**1**	T	T	18 47 05.5	
	baz=181,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**29.05**	**1**	T	T	18 47 07.0	
	baz=181,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**29.07**	**1**	T	T	18 47 11.3	
	baz=181,slow=76,SNR=9.9						
URZ	**Urewera**	**29.15**	**162**	*e*P	**P**	**18 16 45.4**	**-0.8**
	21nm,1.2s						
BKZ	**Black Stump Fm**	**29.81**	**164**	*e*P	**P**	**18 16 51.9**	**-0.3**
	12nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**30.27**	**2**	T	T	18 48 38.5	
	baz=182,slow=76,SNR=29						
H11N3	**WAKE ISLAND Hy**	**30.27**	**2**	T	T	18 48 39.1	
	baz=182,slow=76,SNR=18						
H11N2	**WAKE ISLAND Hy**	**30.29**	**2**	T	T	18 48 40.2	
	baz=182,slow=76,SNR=15						
STKA	**Stephens Creek**	**30.86**	**223**	*e*P	**P**	**18 17 01.4**	**-0.1**
	3.7nm,1.1s						
STKA	**Stephens Creek**	**30.86**	**223**	P	**P**	**18 17 03.4**	**+2.0**
	3.9nm,0.7s,baz=43,slow=11,SNR=3.5						
BFZ	**Birch Farm**	**31.16**	**165**	*e*P	**P**	**18 17 02.9**	**-1.1**
	37nm,1.1s						
THZ	**Tophouse**	**31.49**	**170**	*e*P	**P**	**18 17 05.8**	**-1.2**
	165nm,1.9s						
WC3	**Warramunga Arr**	**31.83**	**249**	*e*P	**P**	**18 17 08.0**	**-2.2**
	17nm,0.9s						
WRAB	**Tennant Creek**	**31.84**	**249**	*e*P	**P**	**18 17 08.7**	**-1.6**
	18nm,1.0s						
WRAB	**Tennant Creek**	**31.84**	**249**	⇑*i*P	**P**	**18 17 07.6**	**-2.7**
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WB2	**Warramunga Arr**	**31.84**	**249**	*e*P	**P**	**18 17 09.2**	**-1.2**
	comp=Z,23nm,0.9s						
WR1	**Warramunga Arr**	**31.85**	**249**	*e*P	**P**	**18 17 09.8**	**-0.6**
	comp=Z,22nm,0.9s						
WR1				*e*PcP	**PcP**	**18 20 00.3**	**-1.0**
WRA	**Warramunga Arr**	**31.86**	**249**	*i* P	**P**	**18 17 11.3**	**+0.9**
WRA				pmax	pmax		
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**31.86**	**249**	P	**P**	**18 17 09.8**	**-0.6**
	comp=Z,11nm,0.8s,baz=81,slow=9.1,SNR=5.5						
WRA				PcP	**PcP**	**18 20 00.3**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=75,slow=3.5,SNR=4.8						
KHZ	**Kahutara**	**32.23**	**170**	*e*P	**P**	**18 17 11.3**	**-2.1**
	comp=Z,36nm,1.0s						
LTZ	**Lake Taylor**	**32.39**	**171**	*e*P	**P**	**18 17 14.8**	**0.0**
	comp=Z,48nm,1.2s						
TOO	**Toolangi**	**32.48**	**211**	*e*P	**P**	**18 17 16.0**	**+0.3**
	comp=Z,66nm,1.7s						
TOO	**Toolangi**	**32.48**	**211**	*e*P	**P**	**18 17 16.0**	**+0.3**
FOZ	**Fox Glacier**	**32.84**	**175**	*e*P	**P**	**18 17 18.4**	**-0.3**
	comp=Z,51nm,1.2s						
OXZ	**Oxford**	**32.89**	**172**	*e*P	**P**	**18 17 18.1**	**-1.1**
	comp=Z,80nm,1.3s						
AS01	**Alice Springs**	**33.14**	**243**	*e*P	**P**	**18 17 20.4**	**-1.3**
RPZ	**Rata Peaks**	**33.15**	**173**	*e*P	**P**	**18 17 21.2**	**-0.2**
	comp=Z,41nm,1.0s						
RPZ	**Rata Peaks**	**33.15**	**173**	P	**P**	**18 17 22.0**	**+0.6**
	comp=Z,30nm,0.9s,baz=69,slow=3.8,SNR=5.2						
AS31	**Alice Springs**	**33.18**	**243**	*e*P	**P**	**18 17 20.2**	**-1.9**
	comp=Z,3.2nm,0.9s						
ASAR	**Alice Springs**	**33.18**	**243**	P	**P**	**18 17 21.4**	**-0.6**
	comp=Z,11nm,1.1s,baz=90,slow=3.5,SNR=4.6						
ASAR				PcP	**PcP**	**18 20 03.8**	**-1.2**
	comp=Z,1.7nm,0.6s,baz=74,slow=2.1,SNR=5.9						
CRLZ	**Canterbury Las**	**33.21**	**171**	*e*P	**P**	**18 17 21.5**	**-0.4**
	comp=Z,108nm,1.1s						
MQZ	**McQueen's Vall**	**33.35**	**171**	*e*P	**P**	**18 17 21.7**	**-1.4**
	comp=Z,59nm,1.1s						
LBZ	**Lake Benmore**	**33.72**	**175**	*e*P	**P**	**18 17 26.9**	**+0.5**
	comp=Z,41nm,1.3s						
WKZ	**Wanaka**	**34.07**	**176**	*e*P	**P**	**18 17 29.0**	**-0.4**
	comp=Z,219nm,2.0s						
ODZ	**Otahua Downs**	**34.42**	**174**	*e*P	**P**	**18 17 32.3**	**-0.1**
	comp=Z,53nm,1.5s						
MLZ	**Mavora Lakes**	**34.55**	**177**	*e*P	**P**	**18 17 34.1**	**+0.4**
	comp=Z,131nm,1.8s						
DCZ	**Deep Cove**	**34.62**	**179**	*e*P	**P**	**18 17 35.0**	**+0.8**
	comp=Z,129nm,1.8s						
WHZ	**Wether Hill Ro**	**35.07**	**178**	*e*P	**P**	**18 17 38.4**	**+0.3**
	comp=Z,87nm,1.5s						
BBOO	**Buckleboo**	**35.24**	**227**	*e*P	**P**	**18 17 38.8**	**-1.0**
	comp=Z,65nm,1.4s						
JOHN	**Johnston Islan**	**36.46**	**42**	*e*P	**P**	**18 17 51.2**	**+1.0**
	comp=Z,178nm,0.9s						
FITZ	**Fitzroy Crossi**	**39.73**	**255**	*e*P	**P**	**18 18 18.4**	**+0.4**
	comp=Z,11nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.73**	**255**	P	**P**	**18 18 18.0**	**0.0**
	comp=Z,14nm,1.0s,baz=103,slow=7.5,SNR=4.0						
FORT	**Forrest**	**40.45**	**235**	*e*P	**P**	**18 18 24.1**	**+0.3**
	comp=Z,31nm,0.9s						
BATI	**Baumata**	**41.64**	**267**	P	**P**	**18 18 34.5**	**+0.6**
	comp=Z,14nm,0.6s,baz=169,slow=3.3,SNR=5.4						
NWAO	**Narrogin (SRO)**	**49.87**	**236**	*e*P	**P**	**18 19 38.1**	**-0.5**
	comp=Z,39nm,0.9s						
NWAO	**Narrogin (SRO)**	**49.87**	**236**	*e*P	**P**	**18 19 38.2**	**-0.5**
MORW	**Morawa**	**50.02**	**241**	*e*P	**P**	**18 19 38.8**	**-1.1**
	comp=Z,28nm,1.0s						
MJAR	**Matsushiro Arr**	**53.83**	**332**	P	**P**	**18 20 06.4**	**-1.7**
	comp=Z,3.3nm,0.8s,baz=172,slow=9.0,SNR=5.6						
MAJO	**Matsushiro**	**53.83**	**332**	*e*P	**P**	**18 20 06.4**	**-1.7**
MAJO	**Matsushiro**	**53.83**	**332**	*e*P	**P**	**18 20 06.4**	**-1.7**
JNU	**Nakatsue**	**55.00**	**324**	*e*P	**P**	**18 20 15.7**	**-0.9**
	comp=Z,26nm,1.2s						
CISI	**Cisompet, Garu**	**57.50**	**268**	*e*P	**P**	**18 20 31.3**	**-3.7**
	comp=Z,63nm,1.3s						
KSRS	**Korea Array**	**59.78**	**325**	P	**P**	**18 20 49.4**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=127,slow=7.4,SNR=4.2						
KSAR	**Wonju Array Be**	**59.80**	**325**	P	**P**	**18 20 49.4**	**-1.0**
KSAR	**Wonju Array Be**	**59.80**	**325**	P	**P**	**18 20 49.4**	**-1.0**
NJ2	**Nanjing**	**62.00**	**315**	*e*P	**P**	**18 21 06.2**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
QIZ	**Qiongzhong**	**62.78**	**298**	P	**P**	**18 21 11.6**	**+0.6**
QIZ				S	**S**	**18 29 39.6**	**-1.0**
QIZ				LR	LR		
	comp=Z,2μm,19.6s						
QIZ				LR	LR		
	comp=Z,2μm,21.6s						
QIZ				LR	LR		
	comp=Z,3μm,23.0s						
USRK	**Ussuriysk Ar.**	**62.80**	**333**	P	**P**	**18 21 10.1**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=102,slow=7.2,SNR=4.3						
GSTR	**Great Sitkin T**	**64.45**	**12**	*e*P	P	18 21 27.1	+5.7
GRNR	**Gornyy**	**66.45**	**340**	*e*P	P	18 21 39.5	+5.1
CASY	**Casey**	**66.77**	**201**	*e*P	**P**	**18 21 35.5**	**-0.7**
	comp=Z,20nm,1.0s						
VNDA	**Vanda**	**66.81**	**181**	*e*P	**P**	**18 21 36.2**	**-0.1**
	comp=Z,13nm,1.1s						
VNDA	**Vanda**	**66.81**	**181**	*e*P	**P**	**18 21 36.2**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,13nm,1.1s						
KLR	**Kul'dur**	**66.89**	**336**	⇑*e*P	**P**	**18 21 35.9**	**-1.3**
NKL	**Nikolayevsk**	**67.22**	**344**	*e*P	**P**	**18 21 36.6**	**-2.6**
GYA	**Guiyang**	**68.48**	**304**	⇑*i*P	**P**	**18 21 49.3**	**+1.4**
GYA				PP	**PP**	**18 24 23.0**	**+3.8**
GYA				S	**S**	**18 30 49.6**	**-0.7**
GYA				SKS	**SKiKP**	**18 31 43.8**	**+1.5**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.8s						
GYA				LR	LR		
	comp=Z,590nm,18.5s						
GYA				LR	LR		
	comp=Z,580nm,18.4s						
GYA				LR	LR		
	comp=Z,560nm,18.3s						
GSI	**Gunungsitoli**	**69.11**	**276**	*e*P	**P**	**18 21 50.3**	**-1.6**
	comp=Z,50nm,1.3s						
MA2	**Magadan**	**71.14**	**352**	⇑*e*P	**P**	**18 22 01.3**	**-2.1**
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KMI	**Kunming**	**71.20**	**301**	P	**P**	**18 22 06.2**	**+1.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,230nm,8.7s						
KMI				LR	LR		
	comp=Z,880nm,17.1s						
KMI				LR	LR		
	comp=Z,1μm,19.5s						
KMI				LR	LR		
	comp=Z,2μm,21.3s						
HHC	**Hu-ho-hao-te**	**71.78**	**319**	*e*P	**P**	**18 22 09.6**	**+1.8**
HHC				pmax	pmax		
	comp=Z,17nm,1.2s						
HHC				pmax	pmax		
	comp=Z,560nm,6.2s						
CM01	**Chiang Mai Arr**	**72.22**	**293**	*e*P	**P**	**18 22 10.5**	**-0.3**
CM31	**Chiang Mai Arr**	**72.25**	**293**	*e*P	**P**	**18 22 10.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**72.25**	**293**	P	**P**	**18 22 10.8**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=128,slow=5.0,SNR=4.1						
SEY	**Seymchan**	**74.20**	**354**	⇑*e*P	**P**	**18 22 20.8**	**-0.7**
LZH	**Lanzhou**	**74.76**	**312**	*e*P	**P**	**18 22 28.4**	**+2.8**
LZH				pP	PcP	18 22 37.2	-2.5
LZH				sP	sP	18 22 40.1	+10
LZH				PP	**PP**	**18 25 18.0**	**+5.0**
LZH				pmax	pmax		
	comp=Z,15nm,1.8s						
GAMB	**Gambell**	**76.22**	**10**	*e*P	**P**	**18 22 32.6**	**-0.5**
	comp=Z,61nm,1.4s						
SVW2	**Sparrevohn**	**77.73**	**18**	*e*P	**P**	**18 22 41.6**	**-0.2**
	comp=Z,53nm,1.4s						
ANM	**Nome**	**78.13**	**12**	*e*P	**P**	**18 22 43.9**	**0.0**
	comp=Z,38nm,1.4s						
ANM	**Nome**	**78.13**	**12**	*e*P	**P**	**18 22 43.9**	**0.0**
ANM				pmax	pmax		
	comp=Z,38nm,1.4s						
ULN	**Ulaanbaatar**	**78.22**	**324**	⇑*e*P	**P**	**18 22 43.1**	**-1.8**
ULN				pmax	pmax		
	comp=Z,14nm,1.9s						
BRLK	**Bradley Lake**	**78.25**	**21**	*e*P	**P**	**18 22 43.3**	**-1.3**
	comp=Z,103nm,1.8s						

BILL	Bilibino	78.57	0	*e*P	P	18 22 45.4	-0.9
	comp=Z,55nm,1.5s						
BILL	Bilibino	78.57	0	*i* P	P	18 22 49.1	+2.9
BILL				*i*		18 22 53.5	
BILL				*i*		18 23 02.2	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA	Gaotai	79.05	314	*e*P	P	18 22 47.8	-1.9
GTA				pP	pP	18 22 53.2	+0.2
GTA				sP	PcP	18 22 56.4	-1.8
SUA	Susitna One	79.54	20	*e*P	P	18 22 51.5	-0.4
	comp=Z,22nm,1.3s						
MID	Middleton Isla	79.66	23	*e*P	P	18 22 55.2	+2.9
	comp=Z,238nm,1.0s						
MID	Middleton Isla	79.66	23	*e*P	P	18 22 55.2	+2.9
MID				pmax	pmax		
	comp=Z,238nm,1.0s						
KNK	Knik Glacier	80.27	20	*e*P	P	18 22 58.3	+2.6
	comp=Z,43nm,1.4s						
GHO	Glory Hole Cre	80.37	20	*e*P	P	18 22 59.9	+3.6
	comp=Z,42nm,1.5s						
GLI	Glacier Island	80.38	21	*e*P	P	18 22 55.3	-0.9
	comp=Z,126nm,2.0s						
SCM	Sheep Creek Mo	80.95	20	*e*P	P	18 22 59.6	+0.2
	comp=Z,59nm,1.4s						
SCM	Sheep Creek Mo	80.95	20	*e*P	P	18 22 59.6	+0.2
SCM				pmax	pmax		
	comp=Z,59nm,1.4s						
HMT	Hamilton	81.05	23	*e*P	P	18 23 02.3	+2.4
	comp=Z,261nm,1.9s						
TRF	Thorofare Moun	81.14	18	*e*P	P	18 22 59.2	-1.2
	comp=Z,24nm,1.3s						
KLU	Klutina	81.21	21	*e*P	P	18 23 00.5	-0.3
	comp=Z,61nm,1.6s						
RND	Reindeer	81.56	19	*e*P	P	18 23 01.0	-1.6
	comp=Z,43nm,1.5s						
RND	Reindeer	81.56	19	*e*P	P	18 23 01.0	-1.6
RND				pmax	pmax		
	comp=Z,43nm,1.5s						
RDOG	Red Dog Mine	81.67	11	*e*P	P	18 23 01.8	-1.2
	comp=Z,32nm,1.2s						
MCK	McKinley	81.76	19	*e*P	P	18 23 04.5	+0.9
	comp=Z,46nm,1.5s						
MCK	McKinley	81.76	19	*e*P	P	18 23 04.5	+0.9
MCK				pmax	pmax		
	comp=Z,47nm,1.5s						
DHY	Denali Highway	81.80	20	*e*P	P	18 23 04.1	+0.1
	comp=Z,40nm,1.5s						
IM3	Indian Mountai	82.05	15	*e*P	P	18 23 04.6	-0.4
HARP	HAARP	82.09	21	*e*P	P	18 23 04.3	-1.1
	comp=Z,53nm,1.3s						
MLY	Manley	82.16	17	*e*P	P	18 23 05.2	-0.5
	comp=Z,20nm,1.4s						
KHMM	Horse Mountain	82.45	46	*e*P	P	18 23 08.3	+0.4
	comp=Z,62nm,1.3s						
WRH	Wood River Hil	82.55	18	*e*P	P	18 23 06.9	-0.7
	comp=Z,21nm,1.2s						
SAO	San Andreas Ge	82.72	51	*e*P	P	18 23 09.1	-0.1
	comp=Z,30nm,1.1s						
SAO	San Andreas Ge	82.72	51	*e*P	P	18 23 09.1	-0.1
SAO				pmax	pmax		
	comp=Z,30nm,1.1s						
MDM	Murphy Dome	82.85	18	*e*P	P	18 23 08.2	-1.1
	comp=Z,33nm,1.2s						
HDA	Harding Lake	82.86	19	*e*P	P	18 23 08.1	-1.2
	comp=Z,60nm,1.2s						
HDA	Harding Lake	82.86	19	P	P	18 23 07.9	-1.4
	baz=226						
O02D	Mt. Diablo Mer	82.88	47	P	P	18 23 10.4	+0.4
	baz=250						
COLA	College	82.91	18	*e*P	P	18 23 11.7	+2.2
	comp=Z,19nm,1.0s						
COLA	College	82.91	18⇓	*e*P	P	18 23 09.0	-0.5
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RIDG	Independ’e Rid	83.09	20	*e*P	P	18 23 13.4	+2.9
	comp=Z,34nm,1.1s						
ILAR	Eielson Array	83.13	18	P	P	18 23 09.4	-1.3
	comp=Z,3.0nm,0.8s,baz=235,slow=5.1,SNR=6.0						
ILB	Eielson Array	83.13	18	*e*P	P	18 23 10.0	-0.7
	comp=Z,25nm,1.0s						
IL1	Eielson Array	83.13	18	*e*P	P	18 23 09.0	-1.7
WDC	Whiskeytown Da	83.19	47	*e*P	P	18 23 11.3	-0.3
	comp=Z,42nm,1.6s						
WDC	Whiskeytown Da	83.19	47	*e*P	P	18 23 11.3	-0.3
WDC				pmax	pmax		
	comp=Z,42nm,1.6s						
DOT	Dot Lake	83.29	20	*e*P	P	18 23 10.9	-0.7
	comp=Z,22nm,1.0s						
YBH	Yreka Blue Hor	83.48	46	*e*P	P	18 23 13.4	+0.3
	comp=Z,32nm,1.3s						
YBH	Yreka Blue Hor	83.48	46	*e*P	P	18 23 13.4	+0.3
YBH				pmax	pmax		
	comp=Z,32nm,1.3s						
SCRK	Sand Creek	83.53	20	*e*P	P	18 23 12.9	0.0
	comp=Z,63nm,1.5s						
ORV	Oroville	83.60	48	*e*P	P	18 23 13.5	-0.2
	comp=Z,26nm,1.3s						
ORV	Oroville	83.60	48	*e*P	P	18 23 13.5	-0.2
ORV				pmax	pmax		
	comp=Z,26nm,1.3s						
HUMO	Hull Mountain	83.61	45	*e*P	P	18 23 14.3	+0.6
	comp=Z,30nm,1.3s						
AFDM	Forest Hills D	83.79	49	*e*P	P	18 23 14.0	-0.7
	comp=Z,26nm,1.1s						
BESE	Bessie Mountai	83.88	27	*e*P	P	18 23 16.2	+1.5
	comp=Z,84nm,1.6s						
CMB	Columbia Colle	83.93	50	*e*P	P	18 23 14.9	-0.6
	comp=Z,27nm,1.3s						
CMB	Columbia Colle	83.93	50	*e*P	P	18 23 14.9	-0.6
CMB				pmax	pmax		
	comp=Z,27nm,1.3s						
WRAK	Wrangell Islan	83.93	29	*e*P	P	18 23 19.0	+4.1
	comp=Z,117nm,1.8s						
HYT	Haines Junctio	83.99	24	*e*P	P	18 23 18.3	+2.9
	comp=Z,29nm,1.5s						
BEKR	Beckworth	84.53	48	*e*P	P	18 23 18.2	-0.5
	comp=Z,24nm,1.1s						
MWC	Mount Wilson	84.57	54	*e*P	P	18 23 17.8	-1.2
	comp=Z,107nm,1.8s						
MWC	Mount Wilson	84.57	54	*e*P	P	18 23 17.8	-1.2
MWC				pmax	pmax		
	comp=Z,107nm,1.8s						
ISA	Isabella, Lake	84.66	52	*e*P	P	18 23 18.4	-0.9
	comp=Z,33nm,1.3s						
ISA	Isabella, Lake	84.66	52	*e*P	P	18 23 18.4	-0.9
ISA				pmax	pmax		
	comp=Z,33nm,1.3s						
WAKR	Walker	84.78	49	*e*P	P	18 23 19.3	-0.7
	comp=Z,43nm,1.2s						
MDPB	Devils Postpil	84.79	50	*e*P	P	18 23 19.7	-0.4
	comp=Z,40nm,1.2s						
EDW2	Edwards Air Fo	84.81	53	P	P	18 23 19.5	-0.5
	baz=253						
OMMB	Old Mammoth Mi	84.84	50	*e*P	P	18 23 22.3	+1.8
	comp=Z,36nm,1.4s						
PNTR	Pine Nut	84.84	49	*e*P	P	18 23 19.6	-0.8
	comp=Z,35nm,1.2s						
H04A	Detroit Lake	84.87	43	*e*P	P	18 23 24.1	+4.0
	comp=Z,40nm,1.5s						
VCNR	Virginia City	84.87	49	*e*P	P	18 23 22.0	+1.5
	comp=Z,15nm,1.1s						
CPE	Camp Elliot	84.96	55	*e*P	P	18 23 19.4	-1.4
	comp=Z,53nm,1.4s						
J05D	Fort Rock, OR	85.03	44	P	P	18 23 20.9	-0.2
	baz=250						
YERR	Yerington	85.08	49	*e*P	P	18 23 20.0	-1.4
	comp=Z,38nm,1.8s						
DAWY	Dawson	85.17	21	*e*P	P	18 23 21.4	+0.3
	comp=Z,18nm,1.1s						
CWC	Cottonwood Cre	85.19	52	P	P	18 23 21.6	-0.5
	baz=253						
PAHR	Pah Rah Range	85.19	48	*e*P	P	18 23 21.6	-0.3
	comp=Z,32nm,1.2s						
MOD	Modoc Plateau	85.23	46	*e*P	P	18 23 21.6	-0.5
	comp=Z,21nm,1.3s						
BAR	Barrett	85.25	56	*e*P	P	18 23 23.0	+0.7
	comp=Z,33nm,1.4s						
PINE	Pine Mountain	85.40	44	*e*P	P	18 23 22.8	-0.2
	comp=Z,35nm,1.3s						
PGC	Sidney	85.48	39	*e*P	P	18 23 24.4	+1.4
	comp=Z,40nm,1.4s						
RYN	Ryan	85.50	50	*e*P	P	18 23 23.1	-0.4
	comp=Z,31nm,1.3s						
MONP2	Monument Peak	85.51	55	P	P	18 23 22.6	-1.2
	baz=254						
DAC	Darwin (Calif)	85.52	52	*e*P	P	18 23 23.4	-0.4
	comp=Z,26nm,1.3s						
DAC	Darwin (Calif)	85.52	52	*e*P	P	18 23 23.4	-0.4
DAC				pmax	pmax		
	comp=Z,26nm,1.3s						
MPMC	Manual Prospec	85.54	52	P	P	18 23 24.1	+0.2
	baz=253						
NV01	Mina Array Sit	85.61	50	*e*P	P	18 23 23.9	-0.3
NVAR	Mina Array Bea	85.61	50	P	P	18 23 23.7	-0.5
	comp=Z,4.2nm,0.9s,baz=239,slow=6.7,SNR=5.5						
NV11	Mina Array Sit	85.72	50	*e*P	P	18 23 24.0	-0.6
	comp=Z,2.3nm,1.1s						
TIXI	Tiksi	85.84	349	*e*P	P	18 23 24.2	0.0
	comp=Z,12nm,1.2s						
TIXI	Tiksi	85.84	349⇓	*e*P	P	18 23 25.0	+0.8
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GSC	Goldstone, Bar	85.86	53	*e*P	P	18 23 24.9	-0.4
	comp=Z,24nm,1.4s						
GSC	Goldstone, Bar	85.86	53	*e*P	P	18 23 24.9	-0.4
GSC				pmax	pmax		
	comp=Z,24nm,1.4s						
GRAC	Grapevine Rang	85.90	51	P	P	18 23 26.0	+0.6
	baz=253						
A04D	Lummi Island	85.96	39	P	P	18 23 27.0	+1.6
	baz=249						
HEC	Hector,Ludlow	86.11	54	P	P	18 23 26.2	-0.3
	baz=254						
FURC	Furnace Creek,	86.14	52	P	P	18 23 26.6	+0.1
	baz=254						
B05A	Bryant	86.18	40	P	P	18 23 26.7	+0.2
	baz=249						
I07A	Izee	86.48	44	*e*P	P	18 23 27.4	-0.8
	comp=Z,32nm,1.3s						
BC3	Big Chuckawall	86.50	55	P	P	18 23 28.6	+0.1
	baz=255						
WVOR	Wild Horse Val	86.57	46	*e*P	P	18 23 26.9	-1.8
	comp=Z,36nm,1.3s						
WVOR	Wild Horse Val	86.57	46	*e*P	P	18 23 26.9	-1.8
WVOR				pmax	pmax		
	comp=Z,36nm,1.3s						
GMRC	Granite Mounta	86.63	54	P	P	18 23 28.8	-0.3
	baz=255						
LTY	Liberty	86.74	41	*e*P	P	18 23 30.5	+1.2
	comp=Z,22nm,1.4s						
TPNV	Topopah Spring	86.75	52	*e*P	P	18 23 30.5	+0.7
TPNV	Topopah Spring	86.75	52	*e*P	P	18 23 30.5	+0.7
F07A	Phinny Hill Vi	86.78	42	*e*P	P	18 23 31.4	+2.0
	comp=Z,13nm,0.9s						
GLA	Glamis	86.84	56	*e*P	P	18 23 33.3	+3.2
	comp=Z,76nm,1.4s						
GLA	Glamis	86.84	56	*e*P	P	18 23 33.3	+3.2
GLA				pmax	pmax		
	comp=Z,76nm,1.4s						
IRM	Iron Mountain	86.87	55	P	P	18 23 30.7	+0.4
	baz=255						
J08A	Circle Bar Ran	86.97	45	*e*P	P	18 23 34.2	+3.6
	comp=Z,24nm,1.1s						
LLLB	Lillooet	87.14	37	*e*P	P	18 23 32.0	+0.8
	comp=Z,38nm,1.8s						
LDFC	Landfair	87.14	54	*e*P	P	18 23 32.1	+0.4
	comp=Z,93nm,1.2s						
HAWA	Hanford	87.19	42	*e*P	P	18 23 31.5	0.0
	comp=Z,32nm,1.3s						
G08A	Pilot Rock	87.23	43	*e*P	P	18 23 31.8	-0.1
	comp=Z,25nm,1.1s						
Y12C	Blythe	87.27	55	*e*P	P	18 23 32.1	-0.1
	comp=Z,27nm,1.1s						
Y12C	Blythe	87.27	55	P	P	18 23 32.5	+0.4
	baz=255						
EPYK	Eagle Plains	87.42	20	*e*P	P	18 23 31.9	-0.3
	comp=Z,119nm,2.0s						
SHPR	Sheep Range	87.47	52	*e*P	P	18 23 33.2	-0.1
	comp=Z,22nm,1.3s						
E08A	Dider Farm, El	87.54	42	*e*P	P	18 23 33.5	+0.4
	comp=Z,31nm,1.1s						
SRIG	Santa Rosalia	87.63	62	*e*P	P	18 23 34.6	+0.6
	comp=Z,23nm,1.2s						
R11A	Troy Canyon, C	87.64	50	*e*P	P	18 23 33.8	-0.2
	comp=Z,16nm,1.2s						
R11A	Troy Canyon, C	87.64	50	P	P	18 23 33.6	-0.4
	baz=254						
PDMCI	Parker Dam,Lak	87.71	55	P	P	18 23 34.9	+0.7
	baz=255						
D08A	Wollman Farm,	87.80	41	*e*P	P	18 23 35.5	+1.1
	comp=Z,30nm,1.3s						
B08A	Colville Reser	87.95	40	*e*P	P	18 23 36.3	+1.2
	comp=Z,19nm,1.4s						
W13A	Hualapai Mount	88.12	54	*e*P	P	18 23 36.8	+0.3
	comp=Z,56nm,1.8s						
E09A	Wood Farm, Sta	88.14	42	*e*P	P	18 23 37.8	+1.7
	comp=Z,16nm,1.2s						
BMO	Blue Mountains	88.21	44	*e*P	P	18 23 37.8	+1.3
	comp=Z,24nm,1.5s						
BMO	Blue Mountains	88.21	44	*e*P	P	18 23 37.8	+1.3
BMO				pmax	pmax		
	comp=Z,24nm,1.5s						
C09A	Chrisman Ranch	88.45	41	*e*P	P	18 23 40.7	+3.2
	comp=Z,21nm,1.6s						
ELK	Elko	88.53	48	*e*P	P	18 23 40.3	+2.0
	comp=Z,9.8nm,1.3s						
ELK	Elko	88.53	48	*e*P	P	18 23 40.3	+2.0
ELK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
Y14A	Wickenburg	88.54	55	*e*P	P	18 23 39.0	+0.8
	comp=Z,15nm,1.1s						
F10A	Beach Ranch, E	88.59	43	*e*P	P	18 23 41.2	+2.9
	comp=Z,20nm,1.3s						
SLBS	Sierra La Lagu	88.86	66	*e*P	P	18 23 42.6	+2.6
PSUT	Pine Spring	89.00	51	*e*P	P	18 23 42.2	+1.7
	comp=Z,26nm,1.3s						
WMQ	Urumqi	89.08	315	*e*P	P	18 23 41.2	+0.6
WMQ				pmax	pmax		
	comp=Z,28nm,1.9s						
LCMT	Little Creek M	89.09	52	*e*P	P	18 23 41.3	+0.4
	comp=Z,38nm,1.3s						
HSIG		89.12	60	*e*P	P	18 23 41.1	0.0
	comp=Z,74nm,1.7s						
CCUT	Cedar City	89.13	52	*e*P	P	18 23 41.5	+0.3
	comp=Z,31nm,1.2s						
SZCU	Shurtz Canyon	89.35	52	*e*P	P	18 23 41.1	-1.2
	comp=Z,39nm,1.2s						
U15A	North Rim	89.69	53	*e*P	P	18 23 43.6	-0.3
	comp=Z,57nm,1.3s						
HLID	Hailey	89.86	46	*e*P	P	18 23 44.6	+0.2
	comp=Z,22nm,1.3s						
HLID	Hailey	89.86	46	P	P	18 23 44.6	+0.2
	baz=255						
PKCU	Pink Cliffs	89.92	52	*e*P	P	18 23 44.6	-0.4
	comp=Z,75nm,1.2s						
TUC	Tucson	89.98	57	*e*P	P	18 23 46.0	+1.0
	comp=Z,30nm,1.4s						
TUC	Tucson	89.98	57	*e*P	P	18 23 46.1	+1.0
TUC				pmax	pmax		
	comp=Z,30nm,1.4s						
MTPU	Mount Pierson	90.15	51	*e*P	P	18 23 47.6	+1.5
	comp=Z,35nm,1.2s						
DUG	Dugway, Tooele	90.18	49	*e*P	P	18 23 47.5	+1.5
BGU	Big Grassy Mou	90.20	48	*e*P	P	18 23 45.9	-0.1
	comp=Z,31nm,1.4s						
MSU	Marysvale	90.27	51	*e*P	P	18 23 46.8	+0.3
MSU	Marysvale	90.27	51	*e*P	P	18 23 46.8	+0.3
HVU	Hansel Valley	90.59	48	*e*P	P	18 23 48.0	+0.2
	comp=Z,53nm,1.3s						
HVU	Hansel Valley	90.59	48	*e*P	P	18 23 48.0	+0.2
HVU				pmax	pmax		
	comp=Z,53nm,1.3s						
NLU	North Lily Min	90.68	50	*e*P	P	18 23 48.5	+0.1
	comp=Z,28nm,1.2s						
MSO	Missoula	91.01	43	*e*P	P	18 23 49.5	-0.1
	comp=Z,13nm,1.4s						
319A	Douglas	91.03	58	*e*P	P	18 23 51.4	+1.3
	comp=Z,38nm,1.4s						
CTU	Camp Tracy	91.09	49	*e*P	P	18 23 51.7	+1.5
	comp=Z,35nm,1.5s						
TMUT	Trail Mountain	91.18	50	*e*P	P	18 23 53.4	+2.5
	comp=Z,14nm,1.0s						
MCMT	McKenzie Canyo	91.26	45	*e*P	P	18 23 53.4	+2.4
JLU	Jordanelle	91.29	49	*e*P	P	18 23 51.3	0.0
	comp=Z,31nm,1.3s						
TCUT	Toone Canyon	91.44	49	*e*P	P	18 23 52.2	+0.3
	comp=Z,36nm,1.2s						
DLMT	Dillon	91.56	44	*e*P	P	18 23 53.9	+1.6
	comp=Z,41nm,1.2s						
WALA	Waterton Lakes	91.59	40	*e*P	P	18 23 54.5	+2.2
	comp=Z,26nm,1.3s						
SRU	San Rafael Swe	91.66	51	*e*P	P	18 23 55.7	+2.8
	comp=Z,8.9nm,1.2s						
SRU	San Rafael Swe	91.66	51	*e*P	P	18 23 55.7	+2.8
SRU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LRM	Limekiln Ridge	91.77	44	*e*P	P	18 23 56.5	+3.2
SYO	Syowa Base	92.16	197⇓	*e*pP	pP	18 23 56.0	-1.6
QLMT	Earthquake Lak	92.25	45	*e*P	P	18 23 59.1	+3.5
BOZ	Bozeman (W)	92.28	44	*e*P	P	18 23 58.7	+3.1
	comp=Z,25nm,1.2s						
BOZ	Bozeman (W)	92.28	44	*e*P	P	18 23 58.7	+3.1
BOZ				pmax	pmax		
	comp=Z,25nm,1.2s						
BOZ	Bozeman (W)	92.28	44	P	P	18 23 56.8	+1.2
	baz=257						
REDW	Red Top Meadow	92.33	46	*e*P	P	18 23 58.5	+2.5
	comp=Z,21nm,1.4s						
YHB	Horse Butte	92.39	45	*e*P	P	18 23 57.7	+1.5
	comp=Z,23nm,1.3s						
HRY	Holter Researc	92.39	43	*e*P	P	18 23 58.4	+2.3
MOOW	Moose Ponds	92.49	46	*e*P	P	18 23 59.0	+2.3
	comp=Z,8.7nm,1.4s						
LOHW	Long Hollow	92.56	46	*e*P	P	18 23 58.8	+1.7
	comp=Z,14nm,1.5s						
YNR	Norris Junctio	92.74	45	*e*P	P	18 23 57.4	-0.4
	comp=Z,16nm,1.4s						
PV04	Paradox Valley	92.75	52	*e*P	P	18 23 55.7	-2.3
	comp=Z,66nm,0.9s						
BW06	Boulder Array	93.14	47	*e*P	P	18 24 03.6	+3.9
	comp=Z,20nm,1.8s						
PD31	Pinedale Array	93.14	47	*e*P	P	18 24 01.6	+1.8
PDAR	Pinedale Array	93.14	47	*e*P	P	18 23 58.6	-1.2
MK32	Makanchi Array	93.49	317	*e*P	P	18 23 59.3	-1.7
MKAR	Makanchi Array	93.49	317	P	P	18 23 59.3	-1.7
	comp=Z,0.7nm,0.7s,baz=88,slow=6.2,SNR=3.0						
YKA	Yellowknife Ar	94.57	27	P	P	18 24 03.0	-2.5
	comp=Z,0.3nm,0.6s,baz=257,slow=4.6,SNR=3.3						
YKB5	Yellowknife Ar	94.57	27	*e*P	P	18 24 03.2	-2.3
CLNB	Carlsbad	95.72	58	*e*P	P	18 24 11.2	-0.4
KSH	Kashi	96.78	309	P	P	18 24 19.4	+3.1

IDC 08 18:15:53.5±1.6**, 11.°34S×164.°96E, h0^{km}, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.6**/37**, mbtmp3.8**/5**, ML3.8**/1**, MS4.7**/1**, Ms1 4.7**/1**, ms1mx3.9**/33**, Error ellipse: s-maj=49.4km s-min=30.7km az=123.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.77	173	Pn	Pn	18 18 28.6	-0.5
	0.8nm,0.3s,baz=61,slow=19,SNR=6.1						
WRA	Warramunga Arr	30.66	250	P	P	18 22 10.4	+0.5
	0.8nm,0.7s,baz=82,slow=9.6,SNR=3.4						
ASAR	Alice Springs	31.97	243	P	P	18 22 21.6	0.0
	0.5nm,0.8s,baz=63,slow=10.0,SNR=4.7						
KSRS	Korea Array	59.68	326	LR	LR	18 46 29.3	
	comp=Z,607nm,21.1s,baz=165,slow=31						
ILAR	Eielson Array	84.03	19	P	P	18 28 26.1	+0.5
	0.9nm,0.8s,baz=225,slow=5.8,SNR=5.8						
MKAR	Makanchi Array	93.20	317	P	P	18 29 08.9	-1.0
	0.2nm,0.7s,baz=113,slow=3.1,SNR=2.2						

ISCJB ***08*** *18:39:52.1±0.3, 11.°00S±0.°04×165.°89E±0.°05, h10^{km}, mb4.7/36, MS4.9/2, Error ellipse: s-maj=6.8km s-min=5.6km az=157.8*

NEIC ***08*** *18:39:53.7±0.2, 10.°94S×165.°89E, h10^{km}, mb5.0/20, Error ellipse: s-maj=6.6km s-min=5.2km az=88.0*

IDC ***08*** *18:39:57.4±6.3, 10.°99S×165.°90E, h33^{km}±46^{km}, mb4.0/13, mb1 4.2/15, mb1mx4.1/32, mbtmp4.2/15, ML4.4/2, MS4.9/2, Ms1 4.9/2, ms1mx4.0/38, Error ellipse: s-maj=28.0km s-min=21.6km az=118.0*

ISC 08 18:39:53.6±0.5**, 10.°95S**±0.°07×**165.°98E**±0.°07**, h10^{km}, n77, σ1^{s}27**/80**, mb4.8**/37**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.13	284	*e*Pn	Pn	18 41 24.9	+0.7
HNR				*e*Sn	Sn	18 42 35.5	+1.1
HNR	Honiara	6.13	284	Pn	Pn	18 41 24.9	+0.7
	18nm,0.3s,baz=172,slow=0.8,SNR=13						
MARNC	Mare, Loyalty	10.65	170	*e*Pn	Pn	18 42 27.5	+1.2
DZM	Mont Dzumac	11.06	178	*e*Pn	Pn	18 42 33.6	+1.6
DZM	Mont Dzumac	11.06	178	Pn	Pn	18 42 33.9	+1.8
	1.4nm,0.3s,baz=309,slow=14,SNR=11						
PINNC	Pines Island,	11.68	173	*e*Pn	Pn	18 42 40.3	0.0
TARA	Tarawa	14.04	30	*e*Pn	Pn	18 43 14.1	+1.4
RABL	Rabaul	15.25	295	*e*Pn	Pn	18 43 28.9	-0.2
	30nm,0.6s						
PATS	Pohnpei	19.25	336	*e*P	P	18 44 18.3	0.0
	390nm,1.5s						
EIDS	Eidsvold	20.12	223	*e*P	Pn	18 44 29.4	-0.2
	18nm,1.2s						
MANU	Manus Island	20.49	294	*e*P	P	18 44 31.1	-0.7
	81nm,1.1s						
CTA	Charters Tower	21.04	242	P	P	18 44 38.5	+0.6
	4.2nm,0.6s,baz=70,slow=13,SNR=6.5						
CTAO	Charters Tower	21.04	242	*e*P	P	18 44 38.0	+0.1
	23nm,1.1s						
COEN	Coen	22.46	260	*e*P	P	18 44 52.4	-0.7
	19nm,1.1s						
HIZ	Hauiti	28.57	165	*e*P	P	18 45 51.0	+1.3
	94nm,1.6s						
BKZ	Black Stump Fm	29.62	163	*e*P	P	18 45 59.1	0.0
	52nm,1.9s						
STKA	Stephens Creek	30.66	224	*e*P	P	18 46 08.4	0.0
	1.4nm,1.1s						
STKA	Stephens Creek	30.66	224	P	P	18 46 08.8	+0.4
	2.2nm,0.7s,baz=41,slow=8.4,SNR=4.5						
BFZ	Birch Farm	30.97	165	*e*P	P	18 46 10.8	-0.2
	81nm,1.4s						
THZ	Tophouse	31.29	170	*e*P	P	18 46 14.8	+1.0
	20nm,1.0s						
WRAB	Tennant Creek	31.72	250	*e*P	P	18 46 15.7	-2.2
	11nm,0.9s						
WB2	Warramunga Arr	31.72	250	*e*P	P	18 46 16.1	-1.8
WR1	Warramunga Arr	31.73	250	*e*P	P	18 46 16.9	-1.1
	15nm,0.9s						
WR1				*e*PcP	PcP	18 49 09.9	+0.3
WRA	Warramunga Arr	31.73	250	P	P	18 46 16.9	-1.1
	9.7nm,0.8s,baz=82,slow=9.2,SNR=9.6						
WRA				PcP	PcP	18 49 10.0	+0.3
	1.0nm,0.8s,baz=77,slow=3.6,SNR=6.8						
KHZ	Kahutara	32.03	169	*e*P	P	18 46 20.4	+0.1
	59nm,1.5s						
LTZ	Lake Taylor	32.18	171	*e*P	P	18 46 23.1	+1.4
	71nm,1.9s						
TOO	Toolangi	32.27	211	*e*P	P	18 46 22.8	+0.3
	45nm,1.8s						
RPZ	Rata Peaks	32.94	173	*e*P	P	18 46 29.5	+1.3
	19nm,0.7s						
AS01	Alice Springs	33.00	243	*e*P	P	18 46 28.4	-0.7
AS31	Alice Springs	33.04	243	*e*P	P	18 46 27.5	-2.0
	0.8nm,0.8s						
ASAR	Alice Springs	33.04	243	P	P	18 46 27.8	-1.7
	2.9nm,1.0s,baz=65,slow=10.0,SNR=16						
ASAR				PcP	PcP	18 49 13.4	+0.2
	1.9nm,0.8s,baz=66,slow=2.5,SNR=12						
MQZ	McQueen’s Vall	33.14	171	*e*P	P	18 46 30.6	+0.7
	51nm,1.4s						
FITZ	Fitzroy Crossi	39.62	255	*e*P	P	18 47 25.3	-0.4
	8.2nm,0.8s						
FITZ	Fitzroy Crossi	39.62	255	LR	LR	19 00 59.1	
	comp=Z,2µm,21.0s,baz=84,slow=32						
MMRI	Maumere	43.14	269	*e*P	P	18 47 51.3	-3.5
	44nm,1.0s						
KSRS	Korea Array	59.93	325	P	P	18 50 00.8	+0.8
	1.0nm,0.7s,baz=130,slow=8.4,SNR=3.8						
KS15	Wonju Array Si	59.94	325	*e*P	P	18 50 00.8	+0.7
KSAR	Wonju Array Be	59.94	325	P	P	18 50 00.8	+0.7
USRK	Ussuriysk Ar.	62.97	333	P	P	18 50 20.9	+0.4
	2.7nm,0.8s,baz=129,slow=5.6,SNR=4.4						
HHC	Hu-ho-hao-te	71.91	320	*e*P	P	18 51 19.6	+2.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,3.8s						
CM01	Chiang Mai Arr	72.26	293	*e*P	P	18 51 20.1	+0.4
CM31	Chiang Mai Arr	72.29	293	*e*P	P	18 51 20.2	+0.3
CMAR	Chiang Mai Arr	72.29	293	P	P	18 51 20.2	+0.3
	comp=Z,2.7nm,1.1s,baz=116,slow=4.0,SNR=10						
CHTO	Chiang Mai	72.40	294	P	P	18 51 22.4	+1.9
	comp=Z,18nm,2.4s						
KDAK	Kodiak Island	76.41	21	LR	LR	19 19 59.2	
	comp=Z,664nm,19.4s,baz=226,slow=31						
GAMB	Gambell	76.44	10	*e*P	P	18 51 44.0	+1.0
	comp=Z,5.7nm,0.9s						

SONA0	Songino Array	78.73	324	*e*P	P	18 51 57.0	+0.6
SONM	Songino Array	78.73	324	P	P	18 51 57.0	+0.6
	comp=Z,1.2nm,0.8s,baz=138,slow=4.5,SNR=6.7						
BILL	Bilibino	78.79	0	*e*P	P	18 51 56.8	+0.7
	comp=Z,9.3nm,1.0s						
GTA	Gaotai	79.16	314	⇑P	P	18 52 00.0	+1.0
GTA				pP	PcP	18 52 05.7	-1.6
GTA				sP	pwP	18 52 08.8	+4.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MDM	Murphy Dome	83.07	18	*e*P	P	18 52 19.5	+0.4
	comp=Z,4.8nm,1.1s						
ILAR	Eielson Array	83.35	18	P	P	18 52 20.7	+0.2
	comp=Z,1.7nm,0.6s,baz=234,slow=5.1,SNR=33						
ILB	Eielson Array	83.35	18	*e*P	P	18 52 21.0	+0.5
NV01	Mina Array Sit	85.79	50	*e*P	P	18 52 34.5	+0.8
NVAR	Mina Array Bea	85.79	50	P	P	18 52 34.5	+0.8
	comp=Z,1.4nm,1.0s,baz=239,slow=8.3,SNR=4.1						
MTPU	Mount Pierson	90.33	51	*e*P	P	18 52 58.0	+2.4
	comp=Z,9.8nm,1.0s						
PV21	Cone Mtn., Par	92.91	51	*e*P	P	18 53 07.9	+0.4
	comp=Z,75nm,1.0s						
PV03	Paradox Valley	92.94	52	*e*P	P	18 53 05.0	-2.5
	comp=Z,32nm,0.9s						
MK01	Makanchi Array	93.60	317	*e*P	P	18 53 09.6	-0.6
MK31	Makanchi Array	93.61	317	*e*P	P	18 53 10.1	-0.2
MK32	Makanchi Array	93.61	317	*e*P	P	18 53 09.7	-0.5
MKAR	Makanchi Array	93.61	317	*e*P	P	18 53 10.1	-0.2
	comp=Z,9.9nm,0.8s						
MKAR	Makanchi Array	93.61	317	P	P	18 53 09.7	-0.5
	comp=Z,1.6nm,0.8s,baz=96,slow=6.2,SNR=19						
ZALV	Zalesovo Beam	93.62	324	P	P	18 53 09.3	-0.7
	comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=4.8						
ZAA1	Zalesovo Array	93.62	324	*e*P	P	18 53 09.3	-0.7
YKA	Yellowknife Ar	94.79	27	P	P	18 53 14.1	-1.1
	comp=Z,0.4nm,0.7s,baz=250,slow=4.9,SNR=5.5						
YKB5	Yellowknife Ar	94.79	27	*e*P	P	18 53 14.1	-1.1
CLNB	Carlsbad	95.88	58	*e*S	S	19 04 33.6	-6.1
ARA0	ARCESS Array S	116.30	346	*e*PKPdf	PKiKP	18 58 36.5	-0.3
ARCES	ARCESS Array B	116.30	346	PKP	PKiKP	18 58 36.5	-0.3
	comp=Z,0.9nm,0.6s,baz=27,slow=3.0,SNR=8.0						
NB200	NORSAR Array S	126.67	345	*e*PKPdf	PKPdf	18 58 55.8	-1.3
NOA	NORSAR Array B	126.67	345	PKP	PKPdf	18 58 55.8	-1.3
	comp=Z,0.8nm,0.8s,baz=36,slow=2.0,SNR=3.7						
KEST	Kesra	147.48	323	PKPbc	PKPbc	18 59 38.8	+0.3
	comp=Z,7.8nm,1.1s,baz=342,slow=3.2,SNR=3.4						
ES19	SONSECA Array	149.99	344	*e*PKPbc	PKPbc	18 59 45.0	+0.3
ESDC	Sonseca Array	150.03	344	PKPbc	PKPbc	18 59 44.8	-0.1
	comp=Z,0.6nm,0.5s,baz=5.2,slow=3.3,SNR=5.8						
TORD	Torodi Ar. Bea	164.47	280	PKP	PKPdf	18 59 58.2	-0.4
	comp=Z,0.6nm,0.9s,baz=180,slow=0.9,SNR=3.3						
TORD				PKPab	PKPab	19 00 52.9	-0.5
	comp=Z,0.8nm,1.0s,baz=57,slow=5.3,SNR=3.3						
TOA1	Torodi Ar. Sit	164.48	280	*e*PKPdf	PKPdf	18 59 58.2	-0.4
TOA1				*e*PKPab	PKPab	19 00 52.9	-0.5

IDC 08 18:58:40.0±3.2**, 3°.86S×136°.46E, h0^{km}, mb3.3**/2**, mb1 3.7**/4**, mb1mx3.5**/31**, mbtmp3.6**/4**, ML3.9**/2**, Error ellipse: s-maj=129.0km s-min=27.4km az=91.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.12	187	Pn	Pn	19 02 24.0	-4.1
	0.2nm,0.3s,baz=8.3,slow=12,SNR=9.7						
FITZ	Fitzroy Crossi	17.68	216	P	Pn	19 02 47.2	-0.6
	0.2nm,0.3s,baz=41,slow=10.0,SNR=8.9						
ASAR	Alice Springs	19.84	187	P	P	19 03 12.9	+0.2
	0.4nm,0.3s,baz=14,slow=11,SNR=46						
SONM	Songino Array	57.84	336	P	P	19 08 33.1	-0.4
	0.2nm,0.6s,baz=129,slow=11,SNR=3.6						
MKAR	Makanchi Array	69.35	323	P	P	19 09 50.0	+0.4
	0.1nm,0.5s,baz=105,slow=7.9,SNR=4.4						

ISCJB ***08*** *19:09:07.4±0.3, 10°.91S±0°.04×166°.05E±0°.04, h10^{km}, mb4.9/52, Error ellipse: s-maj=6.8km s-min=5.0km az=145.3*

IDC ***08*** *19:09:07.6±1.1, 10°.81S×166°.10E, h0^{km}, mb4.5/10, mb1 4.6/11, mb1mx4.3/37, mbtmp4.5/11, ML4.6/1, MS4.3/1, Ms1 4.3/1, ms1mx3.4/39, Error ellipse: s-maj=29.7km s-min=20.7km az=107.0*

NEIC ***08*** *19:09:11.8±1.3, 10°.86S×166°.08E, h29^{km}±8^{km}, mb5.1/39, Error ellipse: s-maj=6.2km s-min=5.1km az=62.0*

ISC 08 19:09:09.2±0.5**, 10°.87S**±0°.06×**166°.12E**±0°.06**, h10^{km}, n86, σ1^{s}21**/85**, mb5.0**/52**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.24	283	*e*Pn	Pn	19 10 42.4	+1.0
HNR				*e*Sn	Sn	19 11 51.8	-1.1
HNR	Honiara	6.24	283	Pn	Pn	19 10 43.5	+2.0
	65nm,0.3s,baz=213,slow=6.1,SNR=23						
MARNC	Mare, Loyalty	10.71	170	*e*Pn	Pn	19 11 44.2	+1.4
DZM	Mont Dzumac	11.15	178	*e*Pn	Pn	19 11 50.1	+1.2
DZM	Mont Dzumac	11.15	178	Pn	Pn	19 11 50.6	+1.7
	4.4nm,0.3s,baz=343,slow=11,SNR=20						
DZM				LR	LR	19 15 42.9	
	comp=Z,1µm,18.3s,baz=358,slow=35						
PINNC	Pines Island,	11.75	174	*e*Pn	Pn	19 12 00.0	+3.0
MSVF	Nonsavu	13.43	122	*e*Pn	Pn	19 12 18.7	-1.4
TARA	Tarawa	13.90	30	*e*Pn	Pn	19 12 26.4	-0.1
RABL	Rabaul	15.33	295	*e*Pn	Pn	19 12 44.8	-1.1
EIDS	Eidsvold	20.27	223	*e*P	P	19 13 45.2	+0.1
	100nm,1.3s						
MANU	Manus Island	20.57	294	*e*P	P	19 13 49.0	+0.6
	150nm,1.5s						
CTA	Charters Tower	21.20	242	P	P	19 13 56.7	+1.4
	12nm,0.8s,baz=84,slow=12,SNR=5.1						
LHI	Lord Howe Isla	21.57	197	*e*P	P	19 13 59.1	+0.1
	125nm,1.1s						
COEN	Coen	22.61	260	*e*P	P	19 14 09.2	-1.3
	11nm,1.0s						
KNTN	Kanton	23.41	72	*e*P	P	19 14 20.5	+1.8
	121nm,1.1s						
ARMA	Armidale	23.66	213	*e*P	P	19 14 22.3	+1.2
	103nm,1.5s						
OUZ	Omahuta	25.18	165	*e*P	P	19 14 36.3	+1.4
	90nm,1.8s						
CAN	Canberra	28.89	210	*e*P	P	19 15 06.3	-2.2
	65nm,1.8s						
URZ	Urewera	29.00	162	*e*P	P	19 15 08.4	-0.8
	40nm,1.8s						
H11S2	WAKE ISLAND Hy	29.18	1	T	T	19 45 28.6	
	baz=181,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	29.18	1	T	T	19 45 30.8	
	baz=181,slow=76,SNR=25						
H11S1	WAKE ISLAND Hy	29.19	1	T	T	19 45 32.2	
	baz=181,slow=76,SNR=30						
BKZ	Black Stump Fm	29.66	164	*e*P	P	19 15 14.9	-0.3
	9.5nm,0.6s						
H11N1	WAKE ISLAND Hy	30.40	1	T	T	19 47 02.1	
	baz=182,slow=76,SNR=29						
H11N3	WAKE ISLAND Hy	30.40	1	T	T	19 47 00.0	
	baz=182,slow=76,SNR=30						
H11N2	WAKE ISLAND Hy	30.41	1	T	T	19 47 03.5	
	baz=182,slow=76,SNR=24						
STKA	Stephens Creek	30.82	224	*e*P	P	19 15 25.3	-0.2
	1.9nm,1.0s						
STKA	Stephens Creek	30.82	224	P	P	19 15 26.0	+0.5
	8.2nm,1.0s,baz=22,slow=8.2,SNR=9.1						
BFZ	Birch Farm	31.02	165	*e*P	P	19 15 25.3	-1.8
	42nm,1.0s						
SNZO	South Karori	31.25	167	*e*P	P	19 15 28.3	-0.9
	102nm,1.2s						
THZ	Tophouse	31.35	170	*e*P	P	19 15 29.1	-0.9
	14nm,0.7s						
WRAB	Tennant Creek	31.87	250	*e*P	P	19 15 32.5	-2.4
	26nm,1.0s						
WB2	Warramunga Arr	31.87	250	*e*P	P	19 15 33.7	-1.3
WR1	Warramunga Arr	31.89	250	*e*P	P	19 15 34.4	-0.7
	33nm,1.0s						
WR1				*e*ScP	ScP	19 22 09.9	+0.4
WRA	Warramunga Arr	31.89	250	P	P	19 15 34.4	-0.7
	19nm,0.9s,baz=79,slow=9.2,SNR=41						
WRA				ScP	ScP	19 22 09.9	+0.4
	1.1nm,1.0s,baz=77,slow=3.5,SNR=5.8						
KHZ	Kahutara	32.09	170	*e*P	P	19 15 35.7	-0.8
	92nm,1.6s						
LTZ	Lake Taylor	32.24	171	*e*P	P	19 15 38.5	+0.6
	14nm,0.8s						
TOO	Toolangi	32.41	211	*e*P	P	19 15 40.5	+1.0
	27nm,1.3s						
FOZ	Fox Glacier	32.70	175	*e*P	P	19 15 41.9	0.0
	18nm,0.9s						
OXZ	Oxford	32.75	172	*e*P	P	19 15 43.2	+0.9
	16nm,0.6s						
RPZ	Rata Peaks	33.01	173	*e*P	P	19 15 44.6	0.0
	23nm,0.9s						
RPZ	Rata Peaks	33.01	173	P	P	19 15 44.6	0.0
	18nm,0.8s,baz=291,slow=2.6,SNR=10.0						
CRLZ	Canterbury Las	33.07	171	*e*P	P	19 15 45.7	+0.6
	57nm,1.2s						
AS01	Alice Springs	33.16	243	*e*P	P	19 15 44.9	-1.3
AS31	Alice Springs	33.20	243	*e*P	P	19 15 45.4	-1.2
	3.1nm,0.8s						
ASAR	Alice Springs	33.20	243	P	P	19 15 45.4	-1.2
	14nm,1.0s,baz=73,slow=9.4,SNR=47						
ASAR				ScP	ScP	19 22 14.7	+0.8
	0.9nm,1.0s,baz=86,slow=3.8,SNR=4.3						
MQZ	McQueen's Vall	33.21	171	*e*P	P	19 15 45.6	-0.6
	48nm,1.4s						
LBZ	Lake Benmore	33.58	175	*e*P	P	19 15 48.8	-0.8
	134nm,1.9s						
WKZ	Wanaka	33.93	176	*e*P	P	19 15 52.9	+0.2
	85nm,1.4s						
ODZ	Otahua Downs	34.28	174	*e*P	P	19 15 54.9	-0.7
	133nm,2.0s						
MLZ	Mavora Lakes	34.42	178	*e*P	P	19 15 55.5	-1.4
	129nm,1.9s						
DCZ	Deep Cove	34.49	179	*e*P	P	19 15 57.9	+0.6
	84nm,1.5s						
WHZ	Wether Hill Ro	34.94	178	*e*P	P	19 16 00.9	-0.4
	167nm,1.9s						
BBOO	Buckleboo	35.22	227	*e*P	P	19 16 03.3	-0.6
	75nm,1.9s						
TAU	Tasmania Unive	35.88	204	*e*P	P	19 16 10.0	+0.6
	281nm,1.9s						
FITZ	Fitzroy Crossi	39.78	255	*e*P	P	19 16 41.3	-1.4
	12nm,0.8s						
FITZ	Fitzroy Crossi	39.78	255	P	P	19 16 42.5	-0.2
	13nm,0.8s,baz=97,slow=6.3,SNR=24						
FORT	Forrest	40.44	235	*e*P	P	19 16 48.5	+0.4
	42nm,1.1s						
NJ2	Nanjing	62.15	315	*e*P	P	19 19 30.4	-0.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SKNT	Sakolnakorn	67.35	294	P	P	19 20 08.9	+3.7
	comp=Z,2.5nm,1.1s						
GYA	Guiyang	68.62	304	⇑*i*P	P	19 20 14.2	+1.1
GYA				PP	PP	19 22 48.0	+3.2
GYA				S	S	19 29 15.3	-1.0
GYA				SKS	SKiKP	19 30 07.0	+0.2
GYA	Guiyang	68.62	304	SS	SS	19 33 40.2	-0.8
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.8s						
GYA				LR	LR		
	comp=N,560nm,18.0s						
GYA				LR	LR		
	comp=E,550nm,18.1s						
GYA				LR	LR		
	comp=Z,570nm,18.3s						
KMI	Kunming	71.34	301	P	P	19 20 28.7	-1.3
KMI				pmax	pmax		
	comp=Z,8.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,320nm,8.8s						
HHC	Hu-ho-hao-te	71.93	319	*e*P	P	19 20 33.1	0.0
HHC				S	S	19 29 53.2	-1.3
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,280nm,6.2s						
HHC				LR	LR		
	comp=N,280nm,16.7s						
HHC				LR	LR		
	comp=E,340nm,16.2s						
HHC				LR	LR		
	comp=Z,560nm,17.6s						
CM01	Chiang Mai Arr	72.35	293	*e*P	P	19 20 35.1	-0.8
CMAR	Chiang Mai Arr	72.38	293	P	P	19 20 36.2	+0.2
	comp=Z,0.9nm,0.6s,baz=115,slow=4.5,SNR=8.1						
LZH	Lanzhou	74.91	312	*e*P	P	19 20 57.8	+7.0
LZH				pP	PcP	19 21 04.7	0.0
LZH				sP	sP	19 21 07.2	+12
LZH				PP	PP	19 23 48.0	+9.4
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,65nm,4.7s						
LZH				LR	LR		
	comp=N,590nm,15.8s						
LZH				LR	LR		
	comp=E,560nm,14.6s						
LZH				LR	LR		
	comp=Z,720nm,18.0s						
ULN	Ulaanbaatar	78.37	324	*e*P	P	19 21 09.2	-1.0
	comp=Z,5.2nm,1.3s						
SONA0	Songino Array	78.74	324	*e*P	P	19 21 12.5	+0.3
SONM	Songino Array	78.74	324	P	P	19 21 12.5	+0.3
	comp=Z,0.9nm,0.8s,baz=154,slow=6.7,SNR=6.2						
QSPA	South Pole Qui	79.14	180	*e*P	P	19 21 13.4	-0.7
	comp=Z,21nm,1.6s						
GTA	Gaotai	79.20	314	*e*P	P	19 21 17.8	+2.9
GTA				pP	PcP	19 21 25.4	+2.2
GTA				sP	sP	19 21 28.6	+10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MCK	McKinley	81.86	19	*e*P	P	19 21 29.5	+1.0
	comp=Z,22nm,1.5s						
HDA	Harding Lake	82.96	19	*e*P	P	19 21 33.9	-0.3
	comp=Z,8.7nm,1.0s						
IL1	Eielson Array	83.23	18	*e*P	P	19 21 34.5	-1.1
ILAR	Eielson Array	83.23	18	P	P	19 21 35.2	-0.3
	comp=Z,0.6nm,0.8s,baz=237,slow=5.2,SNR=10						
ILB	Eielson Array	83.23	18	*e*P	P	19 21 34.9	-0.7
BEKR	Beckworth	84.56	48	*e*SKSac	SKSac	19 32 06.3	-1.4
NV01	Mina Array Sit	85.63	50	*e*P	P	19 21 49.1	+0.5
WMQ	Urumqi	89.23	315	*e*P	P	19 22 05.9	+0.2
SYO	Syowa Base	92.06	197	⇓*e*P	P	19 22 16.6	-1.7
PV02	Paradox Valley	92.86	52	*e*P	P	19 22 23.6	+0.6
	comp=Z,29nm,1.0s						
MK32	Makanchi Array	93.64	317	*e*P	P	19 22 25.1	-0.9
MKAR	Makanchi Array	93.64	317	P	P	19 22 25.1	-0.9
	comp=Z,1.4nm,0.8s,baz=96,slow=6.2,SNR=8.4						
N59A	State Game Lan	118.23	49	*e*Sdif	Sdif	19 36 58.6	-3.4
ANTO	Ankara	129.66	313	*e*PKPpre	PKPpre	19 28 08.7	
ANTO				*e*PKPdf	PKPdf	19 28 18.3	-0.8

IDC 08 19:14:40.8±3.1**, 11°.01S×165°.71E, h0^{km}, mb3.7**/3**, mb1 3.8**/4**, mb1mx3.6**/25**, mbtmp3.7**/4**, ML3.3**/1**, Error ellipse: s-maj=66.2km s-min=42.0km az=88.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.02	176	Pn	Pn	19 17 19.9	+0.1
	0.2nm,0.3s,baz=331,slow=19,SNR=4.8						
WRA	Warramunga Arr	31.46	250	P	P	19 21 04.5	+0.2
	0.7nm,0.7s,baz=82,slow=8.9,SNR=7.6						
ASAR	Alice Springs	32.77	243	P	P	19 21 15.6	-0.3
	0.4nm,0.6s,baz=63,slow=10,SNR=7.7						
MKAR	Makanchi Array	93.47	317	P	P	19 27 58.3	-0.1
	0.3nm,0.8s,baz=93,slow=6.5,SNR=3.2						

MEX 08 19:14:59.8±0.7**, 17°.33N×100°.64W, h20^{km}**±19^{km}**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.46	128	*e*P	Pb	19 15 07.0	-2.1
CAIG				*e*S	Sb	19 15 14.2	-1.3
ZIIG	Zihuatanejo	0.83	289	*e*P	Pb	19 15 12.9	-2.7
ZIIG				*e*S	Sb	19 15 23.7	-2.7
ARIG	Puente Sto Nin	0.98	16	*e*P	Pb	19 15 14.9	-3.3
ARIG				*i* S	Sb	19 15 27.2	-3.5
MEIG	Mezcala	1.14	59	*e*P	Pn	19 15 17.3	-3.4
MEIG				*e*S	Sb	19 15 31.9	-3.3
PLIG	Platanillo	1.51	46	*i* P	Pn	19 15 23.4	-2.5

IDC 08 19:31:24.2±1.7**, 10°.72S×166°.14E, h0^{km}, mb3.6**/3**, mb1 3.9**/5**, mb1mx3.6**/40**, mbtmp3.9**/5**, ML4.2**/2**, Error ellipse: s-maj=43.9km s-min=33.4km az=121.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.23	281	Pn	Pn	19 32 56.8	-0.6
	12nm,0.3s,baz=149,slow=2.8,SNR=8.0						
DZM	Mont Dzumac	11.29	179	Pn	Pn	19 34 06.1	-0.8
	0.6nm,0.3s,baz=331,slow=19,SNR=9.1						
H11S2	WAKE ISLAND Hy	29.04	1	T	T	20 07 50.4	
	baz=181,slow=76,SNR=8.3						
H11S3	WAKE ISLAND Hy	29.04	1	T	T	20 07 50.8	
	baz=181,slow=76,SNR=3.2						
H11S1	WAKE ISLAND Hy	29.05	1	T	T	20 07 51.6	
	baz=181,slow=76,SNR=5.6						
H11N1	WAKE ISLAND Hy	30.25	1	T	T	20 09 22.4	
	baz=182,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	30.26	1	T	T	20 09 22.9	
	baz=182,slow=76,SNR=7.3						
H11N2	WAKE ISLAND Hy	30.27	1	T	T	20 09 23.8	
	baz=182,slow=76,SNR=5.7						
ASAR	Alice Springs	33.28	243	P	P	19 38 04.4	+0.6
	0.6nm,0.7s,baz=78,slow=8.6,SNR=6.5						
ILAR	Eielson Array	83.09	18	P	P	19 43 51.8	+0.4
	0.4nm,0.8s,baz=230,slow=5.4,SNR=4.6						
MKAR	Makanchi Array	93.55	317	P	P	19 44 41.5	-0.7
	0.1nm,0.3s,baz=93,slow=8.7,SNR=3.7						

MAN ***08*** *19:31:43.1, 4°.07N×126°.42E, h155^{km}, MS4.2*

ISCJB ***08*** *19:31:47.3±0.3, 4°.41N±0°.02×126°.13E±0°.05, h166^{km}±3^{km}, mb4.5/55, Error ellipse: s-maj=7.6km s-min=3.7km az=171.7*

NEIC ***08*** *19:31:47.7±0.5, 4°.45N×126°.16E, h153^{km}±5^{km}, mb4.7/47, Error ellipse: s-maj=5.9km s-min=3.2km az=74.0*

NEIC Felt at General Santos, Philippines.

IDC ***08*** *19:31:48.9±1.1, 4°.34N×126°.02E, h157^{km}±9^{km}, mb3.8/13, mb1 3.9/15, mb1mx3.5/51, mbtmp4.2/15, Error ellipse: s-maj=32.8km s-min=9.0km az=74.0*

DJA ***08*** *19:31:49.1±0.5, 4°N±5°×12°6E±°, h122^{km}±8^{km}, M4.9/2, mb4.6/2, mB5.7/1, MLv5.0/1, Mw(mB)5.2/1*

ISC 08 19:31:47.8±0.7**, 4°.34N**±0°.04×**126°.17E**±0°.06**, h151^{km}**±6^{km}**, n111, σ1^{s}64**/138**, mb4.5**/56**, 4C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.81	345	*e*P	Pn	19 32 20.0	-0.9
DDMP				*e*S	Sn	19 32 42.4	-4.0
MATI	Mati	2.59	2	*e*P	Pn	19 32 30.3	+0.2
MATI				*e*S	Sn	19 33 05.1	+2.3
SKMP	Bagumbayan, Su	2.70	323	*e*P	Pn	19 32 30.8	-0.7
SKMP				*e*S	Sn	19 33 02.6	-2.7
DAV	Davao City (W)	2.77	348	*e*Pn	Pn	19 32 32.0	-0.4
DAV				S	Sn	19 33 09.1	+2.1
DAV	Davao City (W)	2.77	348	P	Pn	19 32 33.0	+0.6
	24nm,0.3s,baz=237,slow=12,SNR=6.5						
DAV				S	Sn	19 33 09.1	+2.1
	108nm,0.3s,baz=306,slow=22,SNR=11						
DMPH	Davao City--Mi	2.80	346	⇑*e*P	Pn	19 32 33.6	+0.8
DMPH				*e*S	Sn	19 33 05.0	-2.6
KCP	Kidapawan	2.86	338	⇑*i*P	Pn	19 32 33.9	+0.3
KCP				*i* S	Sn	19 33 17.2	+8.3
CTBH	Cotabato--PC H	3.44	326	⇑*i*P	Pn	19 32 40.1	-0.9
BUKP	Musuan	3.68	343	*e*P	Pn	19 32 43.8	-0.3
BUKP				*e*S	Sn	19 33 28.0	+0.2
TNTI	Ternate	3.74	161	*e*Pn	Pn	19 32 45.0	+0.1
TNTI				*e*Sn	Sn	19 33 28.0	-1.1
TNTI	Ternate	3.74	161	P	Pn	19 32 44.9	+0.1
BIPH	Bislig	3.82	3	⇑*e*P	Pn	19 32 45.7	-0.1
BIPH				*e*S	Sn	19 33 28.5	-2.4
CGP	Cagayan de Oro	4.34	340	⇓*e*P	Pn	19 32 53.7	+1.1
CGP				*e*S	Sn	19 33 50.5	+7.4
PAGZ	Pagadian	4.45	322	*e*P	Pn	19 32 52.9	-1.2
BUTP	Butuan	4.63	353	*e*P	Pn	19 32 57.7	+1.3
BUTP				*e*S	Sn	19 33 53.2	+3.3
MSLP	Maasin	5.90	347	*e*P	Pn	19 33 13.4	+0.2
MSLP				*e*S	Sn	19 34 08.5	-12
LUWI	Luwuk	6.34	213	*e*Pn	Pn	19 33 19.9	+0.8
LUWI				*e*Sn	Sn	19 34 31.6	+1.1
LUWI	Luwuk	6.34	213	P	Pn	19 33 18.9	-0.2
SANI	Sanana	6.35	182	P	Pn	19 33 16.5	-2.8
	97nm,0.5s,8µm						
NLAI	Namlea	7.59	173	P	Pn	19 33 36.5	+0.7
FAKI	Fak Fak	9.43	140	*e*Pn	Pn	19 34 02.1	+1.8
KKM	Kota Kinabalu	10.06	280	*e*Pn	Pn	19 34 11.7	+3.0
SBUM	Sibu	14.05	263	*e*P	P	19 35 05.3	+1.7
SOEI	Soe	14.13	188	*e*P	P	19 35 04.2	-0.3
BATI	Baumata	14.67	190	P	P	19 35 09.5	-0.9
BATI	Baumata	14.67	190	P	P	19 35 09.6	-0.9
	4.4nm,0.3s,baz=48,slow=5.3,SNR=10						
KSM	Kuching	16.10	260	*e*Pn	P	19 35 26.3	+0.1
	6.3nm,0.9s						
JAGI	Jajag, Banyuwa	17.48	223	*e*P	Pn	19 35 42.3	-0.3
	44nm,0.7s						
MTN	Manton Dam	17.77	164	*e*P	P	19 35 45.2	+0.6
	16nm,1.4s						
TWG	Pinlang	19.02	345	*e*P	P	19 35 56.2	-2.0
	246nm,1.4s						
YULB	Yu-li	19.52	346	*e*P	P	19 36 00.8	-2.8
	96nm,1.7s						
TPUB	Ta-pu	19.59	345	*e*P	P	19 36 02.8	-1.6
	92nm,1.4s						
UGM	Wanagama	19.80	232	*e*P	P	19 36 07.7	+1.0
	91nm,1.3s						
SSLB	Suanglung	19.98	346	*e*P	P	19 36 07.2	-1.4
	109nm,1.9s						
NACB	Ninganchiao	20.20	348	*e*P	P	19 36 09.2	-1.7
	45nm,1.2s						
YHNB	Yeheng	20.73	348	*e*P	P	19 36 15.3	-1.4
	157nm,1.6s						
TATO	Taipei	21.00	348	*e*P	P	19 36 17.7	-1.8
	552nm,1.7s						
CISI	Cisompet, Garu	21.80	237	*e*P	P	19 36 27.8	-0.4
	77nm,1.6s						
FITZ	Fitzroy Crossi	22.30	181	*e*P	P	19 36 33.1	+0.1
	15nm,1.1s						
FITZ	Fitzroy Crossi	22.30	181	P	P	19 36 33.5	+0.5
	6.9nm,0.3s,baz=6.6,slow=8.6,SNR=99						
MYKOM	Kota Tinggi	22.43	264	*e*P	P	19 36 34.0	-0.4
	6.7nm,0.8s						
IPM	Ipoh	25.07	271	*e*P	P	19 36 57.2	-1.4
	9.1nm,1.4s						
BKNI	Bangkinang	25.42	262	*e*P	P	19 37 00.2	-1.5
	54nm,0.5s						
WRAB	Tennant Creek	25.43	162	*e*P	P	19 37 02.5	+0.8
	6.3nm,0.7s						
WR1	Warramunga Arr	25.43	162	*e*P	P	19 37 02.2	+0.5
	3.9nm,0.7s						
WRA	Warramunga Arr	25.43	162	P	P	19 37 02.2	+0.5
	1.5nm,0.5s,baz=338,slow=10,SNR=40						
WB2	Warramunga Arr	25.44	162	*e*P	P	19 37 01.5	-0.3
KULM	Kulim	25.45	273	*e*P	P	19 37 02.0	+0.1
	7.4nm,1.2s						
MBWA	Marble Bar	26.12	194	*e*P	P	19 37 07.0	-0.8
	155nm,1.9s						
SSE	Sheshan	27.02	351	*e*P	P	19 37 11.7	-4.1
	140nm,1.8s						
NJ2	Nanjing	28.41	347	*e*P	P	19 37 27.1	-1.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GSI	Gunungsitoli	28.72	265	*e*P	P	19 37 29.6	-1.6
	comp=Z,19nm,0.9s						
AS31	Alice Springs	28.84	165	*e*P	P	19 37 32.6	+0.4
	comp=Z,0.8nm,1.0s						
ASAR	Alice Springs	28.84	165	P	P	19 37 32.7	+0.5
	comp=Z,0.4nm,0.3s,baz=336,slow=7.4,SNR=24						
ASAR				PcP	PcP	19 40 39.2	+1.1
	comp=Z,0.5nm,0.6s,baz=339,slow=2.4,SNR=7.2						
ASAR				ScP	ScP	19 44 06.8	+1.2
	comp=Z,0.7nm,1.1s,baz=349,slow=2.5,SNR=4.8						
AS01	Alice Springs	28.85	165	*e*P	P	19 37 33.0	+0.7
JNU	Nakatsue	28.97	8	*e*P	P	19 37 31.1	-2.1
	comp=Z,97nm,1.8s						
LHMI	Lhok Sumawe	29.14	273	*e*P	P	19 37 34.4	-0.4
	comp=Z,36nm,1.0s						
GIRL	Giralia	29.25	203	*e*P	P	19 37 36.7	+1.0
	comp=Z,348nm,1.5s						
CMAR	Chiang Mai Arr	30.09	300	P	P	19 37 43.1	-0.1
	comp=Z,0.9nm,0.7s,baz=110,slow=6.9,SNR=10.0						
CMAR				PcP	PcP	19 40 42.7	+1.3
	comp=Z,0.2nm,0.4s,baz=171,slow=2.8,SNR=4.1						
CHTO	Chiang Mai	30.23	301	*e*P	P	19 37 43.6	-1.0
	comp=Z,2.3nm,0.8s						
KMI	Kunming	30.56	315	P	P	19 37 47.6	0.0
KMI				pmax	pmax		

	comp=Z,6.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,240nm,4.9s						
XAN	Xi'an	33.62	334	P	P	19 38 13.2	-0.8
XAN				pP	pP	19 38 21.6	-24
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
XAN	Xi'an	33.62	334	*e*P	P	19 38 11.8	-2.2
	comp=Z,14nm,1.8s						
PBA	Port Blair	33.86	284	*e*P	P	19 38 15.2	-1.1
	comp=Z,24nm,1.0s						
MORW	Morawa	34.62	196	*e*P	P	19 38 22.4	-0.2
	comp=Z,32nm,1.4s						
FORT	Forrest	34.97	177	*e*P	P	19 38 25.9	+0.4
	comp=Z,20nm,1.1s						
BJT	Baijiatuau	36.65	347	*e*P	P	19 38 39.4	-0.4
	comp=Z,13nm,1.6s						
LZH	Lanzhou	37.70	330	*e*P	P	19 38 50.3	+1.4
LZH				pP	pP	19 39 21.3	0.0
LZH				sP	sP	19 39 34.0	-4.4
LZH				PP	PnPn	19 40 25.0	+3.9
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
NWAO	Narrogin (SRO)	38.02	192	*e*P	P	19 38 52.0	+0.5
	comp=Z,54nm,1.4s						
BBOO	Buckleboo	38.12	166	*e*P	P	19 38 53.1	+0.9
	comp=Z,20nm,1.4s						
EIDS	Eidsvold	38.17	142	*e*P	P	19 38 52.4	-0.4
	comp=Z,39nm,1.7s						
HHC	Hu-ho-hao-te	38.65	342	*e*P	P	19 38 58.5	+1.8
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
STKA	Stephens Creek	38.90	159	*e*P	P	19 38 59.3	+0.6
	comp=Z,3.6nm,1.6s						
STKA	Stephens Creek	38.90	159	P	P	19 39 00.2	+1.4
	comp=Z,1.3nm,0.3s,baz=352,slow=5.8,SNR=6.9						
SHL	Shillong	39.07	306	*e*P	P	19 38 59.4	-1.2
	comp=Z,25nm,0.3s						
LSA	Lhasa	41.62	311	*e*P	P	19 39 21.7	-0.1
	comp=Z,3.2nm,0.6s						
KLR	Kul'dur	44.98	5	P	P	19 39 49.1	+1.3
	comp=Z,0.8nm,0.4s,baz=187,slow=7.6,SNR=8.6						
SONA0	Songino Array	46.55	342	*e*P	P	19 39 59.9	-0.4
SONA0				*e*PcP	PcP	19 41 32.5	+0.4
SONM	Songino Array	46.55	342	P	P	19 39 59.9	-0.4
	comp=Z,0.8nm,1.1s,baz=152,slow=8.6,SNR=3.2						
SONM				PcP	PcP	19 41 32.5	+0.4
	comp=Z,0.6nm,0.6s,baz=173,slow=3.1,SNR=5.2						
SONA1	Songino Array	46.55	342	*e*P	P	19 39 59.2	-1.2
SONA1				*e*PcP	PcP	19 41 32.0	-0.2
TARA	Tarawa	46.78	92	*e*P	P	19 40 02.0	-0.6
	comp=Z,378nm,1.6s						
DZM	Mont Dzumac	47.34	125	*e*P	P	19 40 06.5	-0.3
	comp=Z,59nm,1.5s						
WMQ	Urumqi	51.91	325	*e*P	P	19 40 41.9	+0.8
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
MK01	Makanchi Array	56.72	325	*e*P	P	19 41 14.7	-1.1
MK01				*e*PcP	PcP	19 42 10.1	0.0
MK31	Makanchi Array	56.74	325	*e*P	P	19 41 14.7	-1.2
MK31				*e*PcP	PcP	19 42 10.1	0.0
MK32	Makanchi Array	56.74	325	*e*P	P	19 41 15.0	-0.9
MK32				*e*PcP	PcP	19 42 10.2	+0.1
MK32				*e*ScP	ScP	19 45 56.8	+1.2
MKAR	Makanchi Array	56.74	325	P	P	19 41 15.0	-0.9
	comp=Z,1.2nm,0.5s,baz=122,slow=7.4,SNR=25						
MKAR				PcP	PcP	19 42 10.2	+0.1
	comp=Z,2.2nm,0.6s,baz=118,slow=4.2,SNR=14						
MKAR				ScP	ScP	19 45 56.8	+1.2
	comp=Z,0.7nm,0.6s,baz=115,slow=5.3,SNR=7.9						
MAKZ	Makanchi	56.92	325	*e*P	P	19 41 16.6	-0.7
MAKZ				*e*PcP	PcP	19 42 10.7	-0.1
KDJ	Kajisay	57.52	318	*e*P	P	19 41 21.9	+0.2
	comp=Z,5.2nm,0.9s						
AAK	Ala-Archa	59.53	318	*e*P	P	19 41 36.0	+0.4
	comp=Z,5.0nm,1.6s						
ZALV	Zalesovo Beam	59.79	333	*e*P	P	19 41 35.8	-1.1
ZALV				*e*PcP	PcP	19 42 20.8	-1.2
ZALV	Zalesovo Beam	59.79	333	PcP	PcP	19 42 21.4	-0.6
	comp=Z,0.6nm,0.5s,baz=113,slow=3.4,SNR=4.7						
ZAA1	Zalesovo Array	59.80	333	*e*PcP	PcP	19 42 21.4	-0.6
KURBB	Kurchatov Arra	60.93	327	P	P	19 41 45.1	+0.4
	comp=Z,1.1nm,0.3s,baz=131,slow=6.8,SNR=7.8						
KURK	Kurchatov	60.93	328	*e*P	P	19 41 43.9	-0.8
	comp=Z,3.3nm,0.6s						
GAR	Garm	61.10	313	*e*P	P	19 41 44.5	-1.7
	comp=Z,3.5nm,0.6s						
LBZ	Lake Benmore	62.50	146	*e*P	P	19 41 56.6	+1.3
	comp=Z,91nm,1.8s						
THZ	Tophouse	62.52	142	*e*P	P	19 41 56.6	+1.0
	comp=Z,21nm,1.1s						
TIXI	Tiksi	67.24	1	*e*P	P	19 42 25.6	+0.1
	comp=Z,3.9nm,0.4s						
NRIK	Noril'sk	69.71	346	P	P	19 42 39.5	-1.3
	comp=Z,3.1nm,0.5s,baz=129,slow=5.1,SNR=4.3						
ABKAR	Akbulak array	71.33	321	*e*P	P	19 42 49.9	-1.1
	comp=Z,3.8nm,1.4s						
CASY	Casey	71.36	187	*e*P	P	19 42 53.0	+2.2
	comp=Z,16nm,1.3s						
ARU	Arti	74.12	328	*e*P	P	19 43 06.1	-1.3
	comp=Z,12nm,1.7s						
IM3	Indian Mountai	82.01	24	*e*P	P	19 43 52.9	+2.2
ARA0	ARCESS Array S	89.69	340	*e*P	P	19 44 27.6	-0.8
ARCES	ARCESS Array B	89.69	340	P	P	19 44 27.6	-0.8
	comp=Z,1.9nm,0.7s,baz=87,slow=7.5,SNR=8.3						
FIA0	FINESS Array S	91.03	332	*e*P	P	19 44 33.9	-0.9
FINES	FINESS Array B	91.03	332	P	P	19 44 33.9	-0.9
	comp=Z,1.8nm,0.8s,baz=62,slow=4.5,SNR=7.1						
NB2	NORSAR Subarra	97.99	334	P	P	19 45 05.1	-1.6
	comp=Z,0.6nm,0.6s,baz=65,slow=4.6						
NB200	NORSAR Array S	97.99	334	*e*P	P	19 45 05.5	-1.2
NOA	NORSAR Array B	97.99	334	P	P	19 45 05.5	-1.2
	comp=Z,0.9nm,0.7s,baz=66,slow=4.5,SNR=5.6						

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*ISCJB **08** 19:32:03.1±0.3, 36°.07N±0°.03×70°.11E±0°.04, h100^{km}, mb4.1/19, Error ellipse: s-maj=4.5km s-min=3.7km az=21.5*

*IDC **08** 19:32:03.6±5.2, 36°.01N×70°.10E, h88^{km}±29^{km}, mb3.5/10, mb1 3.7/15, mb1mx3.4/50, mbtmp4.0/15, Error ellipse: s-maj=60.1km s-min=16.9km az=156.0*

*NEIC **08** 19:32:04.5±0.7, 36°.08N×70°.03E, h94^{km}±7^{km}, mb4.2/11, Error ellipse: s-maj=9.2km s-min=7.5km az=155.0*

*NNC **08** 19:32:05.1±2.1, 36°.60N×69°.64E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=20.8km s-min=9.6km az=156.0*

*BJI **08** 19:32:05.4, 36°.19N×70°.04E, h98^{km}, mB4.8/1, mb4.4/6*

ISC 08 19:32:04.1±0.6, 36°.06N±0°.05×69°.98E±0°.05, h100^{km}, n90, σ2^{s}.19/108, mb4.0/19, 9C-8D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	1.70	207	*e*Pn	Pn	19 32 33.6	+0.5
KBL				*e*Sn	Sn	19 32 57.1	+2.1
GAR	Garm	2.94	5	*e*Pn	Pn	19 32 50.4	+1.2
GAR				*e*Sn	Sn	19 33 25.1	+1.2
NIL	Nilore	3.61	131	*e*Pn	Pn	19 32 58.3	+0.2
BTK	Batken	4.04	9	*e*Pn	Pn	19 33 07.2	+3.3
BTK				*e*Sn	Sn	19 33 52.8	+2.6
SFK	Sufi-Kurgan	4.83	34	⇑P	Pn	19 33 16.2	+1.6
	11nm,0.3s						
SFK				⇑S	Sn	19 34 10.5	+1.0
	68nm,0.4s						
ARSB	Arslanbob	5.75	23	*e*Pn	Pn	19 33 26.9	-0.2
ARSB				*e*Sn	Sn	19 34 26.2	-5.6
KSH	Kashi	5.87	52	P	Pn	19 33 25.6	-3.0
KSH				S	Sn	19 34 23.5	-11
KSH				smax	smax		
	comp=N,260nm,0.4s						
KSH				smax	smax		
	comp=E,110nm,0.2s						
MNAS	Manas	6.71	16	⇓P	Pn	19 33 40.4	+0.4
	7.6nm,0.4s						
MNAS				⇑S	Sn	19 34 53.0	-2.0
	28nm,0.8s						
AML	Almayashu	6.71	24	P	Pn	19 33 40.6	+0.3
	SNR=185						
KK31	Karatay Array	7.04	3	*e*Pn	Pn	19 33 44.6	+0.1
KK31				*e*Sn	Sn	19 35 00.1	-2.9
KK31	Karatay Array	7.04	3	⇑P	Pn	19 33 44.5	-0.1
	5.2nm,0.3s,baz=194,slow=15,SNR=144						
KK31				⇓S	Sn	19 35 00.8	-2.2
	19nm,0.7s,baz=196,slow=25,SNR=5.6						
KKAR	Karatay Array	7.04	3	*e*Pn	Pn	19 33 44.5	0.0
KKAR				*e*Sn	Sn	19 35 00.5	-2.5
UCH	Uchtor	7.09	28	P	Pn	19 33 45.6	0.0
	SNR=41						
NRN	Naryn	7.13	39	*e*Pn	Pn	19 33 44.9	-1.1
NRN				*e*Sn	Sn	19 35 01.7	-4.0
EKS2	Erkin-Say	7.21	23	P	Pn	19 33 47.5	+0.5
	SNR=25						
KZA	Kyzart	7.27	33	P	Pn	19 33 48.0	0.0
	SNR=29						
AAK	Ala-Archa	7.44	27	P	Pn	19 33 50.6	+0.5
	SNR=44						
AAK	Ala-Archa	7.44	27	*e*Pn	Pn	19 33 50.2	+0.2
AAK				*e*Sn	Sn	19 35 11.6	-1.3
AAK	Ala-Archa	7.44	27	⇑P	Pn	19 33 50.3	+0.3
	18nm,0.5s						
AAK				⇑S	Sn	19 35 12.3	-0.6
	25nm,0.5s						
AAK	Ala-Archa	7.44	27	P	Pn	19 33 50.5	+0.5
	12nm,0.3s,baz=189,slow=7.2,SNR=206						
AAK				S	Sn	19 35 12.0	-0.8
	3.4nm,0.3s,baz=154,slow=22,SNR=12						
KBK	Karagaybulak	7.62	29	P	Pn	19 33 53.2	+0.6
	SNR=19						
FRU1	Bishkek	7.64	27	*e*Pn	Pn	19 33 53.4	+0.8
FRU1				*e*Sn	Sn	19 35 19.4	+1.9
CHMS	Chumysh	7.84	27	P	Pn	19 33 55.5	0.0
	SNR=55						
ULHL	Ulahol	7.86	36	P	Pn	19 33 56.4	+0.6
	SNR=18						
ULHL	Ulahol	7.86	36	⇑*i*S	Pn	19 33 56.1	+0.3
	baz=64						
USP	Ospenovka	7.99	24	P	Pn	19 33 57.1	-0.3
	SNR=91						
TKM2	Tokmak 2	8.11	31	P	Pn	19 33 59.3	+0.1
	SNR=24						
TKM2	Tokmak 2	8.11	31	⇓P	Pn	19 33 58.9	-0.3
	7.1nm,0.3s						
TKM2				⇓S	Sn	19 35 28.1	-1.1
	8.3nm,0.8s						
KDJ	Kajisay	8.25	41	*e*Pn	Pn	19 34 01.0	0.0
TARG	Taragay, Kyrgy	8.32	45	*e*Pn	Pn	19 34 02.4	+0.1
PRZ	Przheval'sk	9.15	43	*e*Pn	Pn	19 34 12.3	-1.0
GEYT	Alibeck	9.67	285	P	Pn	19 34 19.9	-0.4
	3.1nm,0.3s,baz=110,slow=10,SNR=29						
GYA0B	ALIBECK ARRAY	9.67	285	*e*Pn	Pn	19 34 19.1	-1.2
GYA0B				*e*Sn	Sn	19 36 01.3	-5.7
GYA0B	ALIBECK ARRAY	9.67	285	⇑P	Pn	19 34 20.1	-0.2
	3.9nm,0.4s						
GYA0B				⇓S	Sn	19 36 05.4	-1.6
	16nm,0.6s						
PYUN	Piuthan	13.58	122	*e*P	Pn	19 35 08.6	-4.2
	7.0nm,0.3s						
DANN	Dangsing	13.97	120	*e*P	Pn	19 35 13.7	-4.2
	4.4nm,0.3s						
MAKZ	Makanchi	13.99	36	*e*Pn	Pn	19 35 16.6	-1.2
MK01	Makanchi Array	14.12	37	*e*Pn	Pn	19 35 17.9	-1.5
MK31	Makanchi Array	14.13	37	*e*Pn	Pn	19 35 17.0	-2.6
MKAR	Makanchi Array	14.13	37	*e*Pn	Pn	19 35 17.6	-2.0
MKAR	Makanchi Array	14.13	37	P	Pn	19 35 18.0	-1.6
	0.1nm,0.3s,baz=215,slow=13,SNR=6.4						
KOLN	Koldanda	14.21	122	*e*P	Pn	19 35 17.6	-3.3
	4.5nm,0.3s						
AB31	Akbulak array	15.09	334	⇓P	Pn	19 35 30.8	-1.0
	2.6nm,0.3s,baz=153,slow=13,SNR=175						
AB31				⇑S	Sn	19 38 11.3	-6.9
	3.0nm,0.5s,baz=160,slow=23,SNR=12						
ABKAR	Akbulak array	15.09	334	*e*Pn	Pn	19 35 30.9	-0.9
	11nm,0.3s						
DMN	Daman	15.36	119	*e*P	Pn	19 35 32.1	-3.5
	7.3nm,0.5s						
PKIN	Phulchoki	15.59	119	*e*P	Pn	19 35 35.4	-3.1
	6.3nm,0.4s						
PKI	Pulchoki	15.60	119	*e*P	Pn	19 35 35.6	-3.1
	9.9nm,0.6s						
WMQ	Urumqi	15.62	55	*e*P	P	19 35 42.1	+1.4
GUN	Gumba	15.74	117	*e*P	Pn	19 35 37.5	-2.9
	5.9nm,0.3s						
KURBB	Kurchatov Arra	15.81	20	P	Pn	19 35 38.3	-2.4
	0.1nm,0.3s,baz=211,slow=12,SNR=4.5						
KURK	Kurchatov	15.92	20	*e*Pn	P	19 35 44.6	+0.8
	1.9nm,0.8s						
JIRN	Jiri	16.11	117	*e*P	Pn	19 35 43.6	-1.5
	14nm,0.3s						
AKTO	Aktyubinsk	16.77	333	⇓P	P	19 35 54.0	+0.7
	4.0nm,0.7s						
AKTO				⇓S	Sn	19 38 52.3	-6.4
	2.4nm,0.5s						
AKTO	Aktyubinsk	16.77	333	P	P	19 35 53.9	+0.7
	0.9nm,0.3s,baz=146,slow=13,SNR=16						
RAMN	Ramite	16.82	118	*e*P	P	19 35 53.5	-0.7
	6.6nm,0.4s						
BVAR	Borovoye Array	16.96	1	P	P	19 35 56.7	+1.3
	1.0nm,0.3s,baz=167,slow=15,SNR=18						
LSA	Lhasa	18.86	104	*e*P	Pn	19 36 19.4	+0.8
	2.3nm,1.0s						
GNI	Garni	20.25	289	*e*P	P	19 36 33.2	+1.7
	16nm,1.0s						
GNI	Garni	20.25	289	P	Pn	19 36 34.1	-0.3
	12nm,0.8s,baz=21,slow=2.2,SNR=11						
ZAA0	Zalesovo Array	20.66	25	*e*P	P	19 36 36.5	+0.9
	5.9nm,0.6s						
ZALV	Zalesovo Beam	20.66	25	P	Pn	19 36 37.0	-1.8
	4.4nm,0.4s,baz=220,slow=11,SNR=36						
ARU	Arti	21.79	343	*e*P	P	19 36 50.1	+2.5
	10nm,1.0s						
KBZ	Khabaz	22.07	299	P	P	19 36 53.3	+2.5
	1.3nm,0.6s,baz=128,slow=9.0,SNR=5.5						
KIV	Kislovodsk	22.27	299	*e*P	P	19 36 56.0	+3.1
	28nm,2.0s						
GTA	Gaotai	23.78	73	*e*P	P	19 37 09.9	+2.3
GTA				pP	pP	19 37 30.7	+0.7
GTA				sP	sP	19 37 42.8	-0.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LZH	Lanzhou	27.30	80	*e*P	P	19 37 43.0	+3.6
LZH				pP	pP	19 38 04.5	+1.7
LZH				sP	sP	19 38 17.0	+2.1
LZH				PP	PP	19 38 35.0	-7.8
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
BRTR	Keskin Array B	28.78	288	P	P	19 37 54.6	+2.0
	0.5nm,0.6s,baz=102,slow=9.0,SNR=4.0						
KMI	Kunming	30.11	102	P	P	19 38 07.7	+3.2
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
AKASG	Malin Array Be	32.58	310	P	P	19 38 26.7	+1.0
	0.5nm,0.4s,baz=82,slow=7.3,SNR=6.7						
BUR04	Bucovina Ar. S	34.84	303	*e*P	P	19 38 46.0	+0.6
FINES	FINESS Array B	37.39	327	P	P	19 39 08.3	+1.4
	1.6nm,0.8s,baz=141,slow=9.3,SNR=3.7						
KEV	Kevo	40.90	339	*e*P	P	19 39 37.4	+1.4
	36nm,1.6s						
ARCES	ARCESS Array B	41.24	338	*e*P	P	19 39 40.1	+1.3
ARCES	ARCESS Array B	41.24	338	P	P	19 39 40.5	+1.7
	1.6nm,0.8s,baz=112,slow=8.9,SNR=16						
ARE0	ARCESS Array S	41.24	338	*e*P	P	19 39 40.3	+1.6
	1.9nm,1.5s						
NC405	NORSAR Array S	44.00	324	*e*P	P	19 40 02.1	+0.9
NC602	NORSAR Array S	44.04	323	*e*P	P	19 40 01.9	+0.4
NC303	NORSAR Array S	44.18	324	*e*P	P	19 40 03.7	+1.1
NB201	NORSAR Array S	44.20	323	*e*P	P	19 40 03.7	+0.9
NB2	NORSAR Subarra	44.23	323	P	P	19 40 03.5	+0.4
	comp=Z,0.7nm,0.4s,baz=99,slow=8.6						
NOA	NORSAR Array B	44.23	323	P	P	19 40 03.6	+0.4
	comp=Z,1.1nm,0.5s,baz=99,slow=7.9,SNR=8.6						
NAO01	NORSAR Array S	44.37	323	*e*P	P	19 40 05.0	+0.8
NBO00	NORSAR Array S	44.44	323	*e*P	P	19 40 05.2	+0.4
NC204	NORSAR Array S	44.48	324	*e*P	P	19 40 06.1	+1.0
KONO	Kongsberg	44.91	321	*e*P	P	19 40 08.9	+0.5
	comp=Z,54nm,1.9s						
TIXI	Tiksi	46.49	22	*e*P	P	19 40 21.4	+0.7
	comp=Z,15nm,2.0s						
MJB9	Matsu-Tunnel	53.88	68	*e*P	P	19 41 18.1	+1.1
	comp=Z,85nm,1.8s						
MAJO	Matsushiro	53.88	68	*e*P	P	19 41 17.4	+0.4
	comp=Z,86nm,1.8s						
INK	Inuvik	74.46	9	P	P	19 43 32.3	+1.3
	comp=Z,0.7nm,0.5s,baz=343,slow=5.6,SNR=5.1						
YKA	Yellowknife Ar	81.71	2	P	P	19 44 11.4	+0.4
	comp=Z,0.1nm,0.4s,baz=351,slow=4.9,SNR=4.7						

KRNET 08 19:32:41.2±0.1, 42°.57N×79°.65E, h19^{km}, mb1.8, 5C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	0.77	351	⇑*i*P	Pb	19 32 55.9	-0.2
	baz=51						
PDGK				⇑*i*S	Sg	19 33 06.7	0.0
	baz=51						
PRZ	Przheval'sk	0.93	265	⇑*e*P	Pb	19 32 58.4	-0.3
	baz=65						
PRZ				⇑*i*S	Sb	19 33 11.1	+0.4
	baz=65						
KDJ	Kajisay	1.88	257	⇓*i*P	Pb	19 33 15.2	+0.2
	baz=57						
KDJ				⇓*i*S	Sg	19 33 40.3	-1.5
	baz=57						
ULHL	Ulahol	2.54	264	⇑*i*P	Pb	19 33 24.7	-1.6
	baz=64						

IDC 08 19:33:46.4±1.6, 11°.73S×164°.95E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.7/35, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=49.6km s-min=30.2km az=125.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.38	172	Pn	Pn	19 36 16.5	-0.2
	0.4nm,0.3s,baz=315,slow=20,SNR=6.8						
WRA	Warramunga Arr	30.52	251	P	P	19 40 01.9	+0.2
	0.9nm,0.6s,baz=78,slow=9.0,SNR=5.2						
ASAR	Alice Springs	31.79	244	P	P	19 40 12.7	-0.3
	0.4nm,0.8s,baz=81,slow=9.0,SNR=4.3						
ILAR	Eielson Array	84.41	19	P	P	19 46 20.4	0.0
	0.7nm,0.6s,baz=229,slow=5.6,SNR=11						
MKAR	Makanchi Array	93.49	317	P	P	19 47 04.3	+0.1
	0.2nm,0.7s,baz=93,slow=5.3,SNR=3.8						

SJA 08 19:37:49.6±0.5, 29°.62S×72°.80W, h40^{km}±999^{km}, ML2.9, MW3.5, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	1.83	108	*i* P	Pn	19 38 20.4	+1.7
GO04				*i* S	Sn	19 38 43.3	+2.5
LCO	Las Campanas	1.93	72	*i* P	Pn	19 38 22.0	+1.8
LCO				*i* S	Sn	19 38 45.8	+2.3
AROD	Rodeo	2.94	102	*i* P	Pn	19 38 36.9	+2.7
ROC1	El Roble	3.68	156	*i* P	Pn	19 38 46.7	+2.4
RTLS	Leoncito	3.72	127	*i* P	Pn	19 38 47.9	+3.1
RTLS				IAML		19 39 37.7	
	comp=Z,21nm,0.6s						
AGUA	GUANDACOL	3.76	89	*i* P	Pn	19 38 48.0	+2.8
AMOG	MOGNA	3.96	111	*i* P	Pn	19 38 50.9	+3.0

IDC 08 19:49:38.7±3.8, 11°.72S×165°.43E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.4/36, mbtmp3.4/3, Error ellipse: s-maj=182.4km s-min=34.7km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.97	251	P	P	19 55 58.1	+0.1
	0.3nm,0.5s,baz=82,slow=8.6,SNR=6.2						
ASAR	Alice Springs	32.22	244	P	P	19 56 08.8	-0.2
	0.4nm,0.9s,baz=66,slow=10,SNR=4.1						
ILAR	Eielson Array	84.24	19	P	P	20 02 11.9	0.0
	0.3nm,0.6s,baz=248,slow=4.7,SNR=4.9						

IDC 08 19:50:03.2±1.5, 11°.09S×165°.10E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.5/37, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=51.8km s-min=28.4km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.00	173	Pn	Pn	19 52 41.8	-0.3
	0.3nm,0.3s,baz=3.6,slow=19,SNR=4.5						
STKA	Stephens Creek	29.98	223	P	P	19 56 14.1	+0.5
	1.1nm,0.8s,baz=27,slow=11,SNR=2.0						
WRA	Warramunga Arr	30.87	250	P	P	19 56 22.0	+0.4
	0.4nm,0.5s,baz=83,slow=9.2,SNR=4.8						
ASAR	Alice Springs	32.21	243	P	P	19 56 32.7	-0.7
	0.3nm,0.7s,baz=64,slow=9.2,SNR=6.8						
ASAR				PcP	PcP	19 59 21.8	-0.5
	0.0nm,29.3s,baz=86,slow=3.8,SNR=4.0						
ILAR	Eielson Array	83.75	19	P	P	20 02 33.9	0.0
	0.3nm,0.8s,baz=250,slow=5.3,SNR=3.8						

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*NIED **08** 19:50:00, 36°.90N×141°.30E, h5^{km}, Mw3.8 Best double couple: $M_0$5.72000×10^{14} NP1:ϕ_s235.00000°, δ47.00000°, λ-49.00000°. NP2:ϕ_s3.00000°, δ56.00000°, λ-125.00000°.*

*ISCJB **08** 19:50:58.9±1.2, 36°.85N±0°.03×141°.38E±0°.07, h17^{km}±7^{km}, mb3.8/12, Error ellipse: s-maj=9.9km s-min=4.9km az=8.5*

*JMA **08** 19:50:59.4±0.1, 36°.86N×141°.34E, h31^{km}±1^{km}, M4.2*

JMA Felt II J1.

*IDC **08** 19:51:05.9±2.6, 36°.83N×141°.07E, h56^{km}±24^{km}, mb3.6/12, mb1 3.8/14, mb1mx3.5/42, mbtmp3.9/14, ML3.1/2, Error ellipse: s-maj=24.3km s-min=12.5km az=80.0*

ISC 08 19:50:59.7±1.6, 36°.90N±0°.03×141°.24E±0°.06, h8^{km}±10^{km}, n33, σ0^{s}.83/38, mb4.0/12, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.41	300	P	Pb	19 51 09.5	+0.3
ONAJ				*e*S	Sb	19 51 16.8	+1.2
JFK	Kawauchi	0.55	328	P	Pb	19 51 11.7	+0.1
JFK				S	Sb	19 51 20.2	+0.5
JFFD	Fukushimafurud	0.57	289	P	Pb	19 51 12.1	0.0
JFFD				S	Sb	19 51 20.9	+0.5
JHO	Hitachi	0.61	242	P	Pb	19 51 12.2	-0.5
JHO				S	Sb	19 51 21.4	0.0
JHYU	Hitachinakayam	0.77	223	P	Pg	19 51 14.1	-0.4
JHYU				*e*S	Sg	19 51 24.7	+0.3
JFT	Otama	0.95	311	P	Pb	19 51 18.7	+0.3
JFT				S	Sn	19 51 32.3	-0.8
JMM	Marumori	1.03	340	P	Pg	19 51 18.9	-0.5
JMM				S	Sb	19 51 33.6	+0.2
JFY	Yanaizu	1.32	293	P	Pn	19 51 24.7	+0.1
JFY				S	Sg	19 51 42.9	+0.6
JAG	Ashikaga	1.51	252	P	Pn	19 51 25.8	-1.3
JOU	Okura	1.53	343	P	Pn	19 51 27.6	+0.2
JOU				S	Sn	19 51 47.9	+0.4
JIO	Ouri	1.55	3	P	Pn	19 51 26.3	-1.4
MJAR	Matsushiro Arr	2.46	263	P	Pn	19 51 40.5	+0.3
	1.0nm,0.3s,baz=92,slow=14,SNR=40						
MAT	Matsushiro	2.46	263	P	Pn	19 51 40.6	+0.4
MAT				*e*S	Sb	19 52 14.5	-0.2
JHJ	Hachijo jima 2	3.96	198	P	Pn	19 52 02.4	+1.6
	16nm,0.3s,baz=122,slow=22,SNR=4.3						
JHJ				S	Sn	19 52 47.5	+0.1
	16nm,0.3s,baz=122,slow=23,SNR=3.8						
SEY	Seymchan	26.95	11	P	P	19 56 44.2	+2.9
	0.7nm,0.7s,baz=204,slow=12,SNR=4.8						
SONM	Songino Array	27.74	304	P	P	19 56 49.1	+0.3
	1.2nm,0.6s,baz=107,slow=9.6,SNR=9.5						
H11N2	WAKE ISLAND Hy	28.20	120	T	T	20 26 16.8	
	baz=313,slow=75,SNR=175						
H11N1	WAKE ISLAND Hy	28.21	120	T	T	20 26 21.0	
	baz=313,slow=75,SNR=163						
H11N3	WAKE ISLAND Hy	28.22	120	T	T	20 26 19.9	
	baz=313,slow=75,SNR=119						
H11S1	WAKE ISLAND Hy	28.91	122	T	T	20 27 43.9	
	baz=314,slow=76,SNR=181						
H11S3	WAKE ISLAND Hy	28.91	122	T	T	20 27 44.0	
	baz=314,slow=76,SNR=112						
H11S2	WAKE ISLAND Hy	28.92	122	T	T	20 27 45.2	
	baz=314,slow=76,SNR=90						
ZALV	Zalesovo Beam	41.90	312	P	P	19 58 49.6	-0.7
	2.5nm,0.7s,baz=94,slow=6.3,SNR=11						
MKAR	Makanchi Array	44.07	302	P	P	19 59 07.8	-0.4
	2.0nm,0.6s,baz=89,slow=10.0,SNR=36						
ILAR	Eielson Array	49.68	32	P	P	19 59 51.9	+0.1
	0.8nm,0.8s,baz=275,slow=6.5,SNR=7.5						
CTA	Charters Tower	56.88	174	P	P	20 00 45.0	-0.1
	7.5nm,1.0s,baz=73,slow=11,SNR=5.1						
WRA	Warramunga Arr	56.91	188	P	P	20 00 44.1	-1.2
	1.3nm,0.8s,baz=5.6,slow=7.4,SNR=20						
ASAR	Alice Springs	60.64	188	P	P	20 01 10.3	-1.0
	0.8nm,0.7s,baz=17,slow=7.7,SNR=14						
YKA	Yellowknife Ar	63.99	30	P	P	20 01 33.8	+0.6

	0.2nm,0.7s,baz=279,slow=6.3,SNR=4.2						
FINES	FINESS Array B	68.87	332	P	P	20 02 04.0	-0.4
	1.4nm,0.7s,baz=40,slow=10.0,SNR=4.4						
KBZ	Khabaz	70.88	311	P	P	20 02 17.2	0.0
	1.3nm,0.8s,baz=32,slow=4.4,SNR=5.1						
NB2	NORSAR Subarra	74.25	337	P	P	20 02 36.3	-0.7
	comp=Z,0.4nm,0.7s,baz=39,slow=6.2						
NOA	NORSAR Array B	74.25	337	P	P	20 02 36.5	-0.6
	comp=Z,0.7nm,0.7s,baz=39,slow=5.8,SNR=4.3						

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*ISCJB **08** 19:55:55.7±0.6, 10.°93S±0.°07×166.°09E±0.°07, h10^{km}, mb4.6/17, Error ellipse: s-maj=11.3km s-min=7.5km az=43.2*

*NEIC **08** 19:55:58.2±0.7, 10.°94S×166.°01E, h10^{km}, mb5.0/13, Error ellipse: s-maj=15.8km s-min=12.0km az=74.0*

*IDC **08** 19:56:02.8±4.1, 10.°90S×166.°06E, h55^{km}±35^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.7/36, mbtmp4.2/7, ML4.6/2, Error ellipse: s-maj=37.1km s-min=28.2km az=119.0*

ISC 08 19:55:58.2±0.7**, 10.°96S**±0.°09×**166.°09E**±0.°09**, h10^{km}, n39, σ1.^{s}70**/32**, mb4.5**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.24	284	ePn	Pn	19 57 31.1	+0.8
HNR				eSn	Sn	19 58 42.3	+0.6
HNR	Honiara	6.24	284	P	Pn	19 57 32.5	+2.1
	39nm,0.3s,baz=166,slow=6.6,SNR=8.5						
MARNC	Mare, Loyalty	10.63	170	ePn	Pn	19 58 33.0	+2.3
DZM	Mont Dzumac	11.06	178	ePn	Pn	19 58 34.9	-1.7
DZM	Mont Dzumac	11.06	178	P	Pn	19 58 38.2	+1.5
	1.8nm,0.3s,baz=354,slow=16,SNR=9.2						
ONTNC	Ouen Toro	11.29	178	ePn	Pn	19 58 42.5	+2.8
PINNC	Pines Island,	11.66	174	ePn	Pn	19 58 48.2	+3.4
KWAJ	Kwajalein Atol	19.69	4	eP	Pn	20 00 30.7	+1.5
	478nm,1.4s						
EIDS	Eidsvold	20.19	223	eP	Pn	20 00 34.1	-0.9
	20nm,0.8s						
CTAO	Charters Tower	21.14	242	eP	P	20 00 44.7	+1.1
	20nm,1.3s						
ARMA	Armidale	23.57	213	eP	P	20 01 09.6	+0.3
	11nm,1.0s						
H11S2	WAKE ISLAND Hy	29.27	1	T	T	20 32 22.9	
	baz=181,slow=76,SNR=6.6						
H11S3	WAKE ISLAND Hy	29.27	1	T	T	20 32 23.2	
	baz=181,slow=76,SNR=3.9						
H11S1	WAKE ISLAND Hy	29.28	1	T	T	20 32 24.4	
	baz=181,slow=76,SNR=3.8						
BKZ	Black Stump Fm	29.58	163	eP	P	20 02 02.0	-1.5
	21nm,1.3s						
H11N1	WAKE ISLAND Hy	30.49	1	T	T	20 33 54.1	
	baz=182,slow=76,SNR=5.2						
H11N3	WAKE ISLAND Hy	30.49	2	T	T	20 33 54.0	
	baz=182,slow=76,SNR=7.2						
H11N2	WAKE ISLAND Hy	30.50	1	T	T	20 33 55.3	
	baz=182,slow=76,SNR=8.6						
STKA	Stephens Creek	30.74	224	eP	P	20 02 14.4	+0.7
	2.1nm,1.4s						
STKA	Stephens Creek	30.74	224	P	P	20 02 13.8	+0.1
	1.4nm,0.6s,baz=57,slow=10,SNR=5.8						
BFZ	Birch Farm	30.94	165	eP	P	20 02 13.3	-2.1
	73nm,1.4s						
WB2	Warramunga Arr	31.82	250	eP	P	20 02 21.7	-1.8
WR1	Warramunga Arr	31.83	250	eP	P	20 02 22.4	-1.1
WRA	Warramunga Arr	31.83	250	P	P	20 02 22.4	-1.1
	5.6nm,0.8s,baz=80,slow=9.2,SNR=30						
KHZ	Kahutara	32.01	170	eP	P	20 02 24.8	0.0
	69nm,1.6s						
TOO	Toolangi	32.33	212	eP	P	20 02 27.0	-0.7
	29nm,1.8s						
FOZ	Fox Glacier	32.62	175	eP	P	20 02 28.9	-1.2
	78nm,1.8s						
AS01	Alice Springs	33.09	243	eP	P	20 02 33.1	-1.5
AS31	Alice Springs	33.13	243	eP	P	20 02 33.3	-1.7
	1.0nm,0.9s						
ASAR	Alice Springs	33.14	243	P	P	20 02 33.5	-1.4
	2.0nm,0.7s,baz=67,slow=10.0,SNR=20						
BBOO	Buckleboo	35.14	227	eP	P	20 02 51.8	-0.4
	32nm,1.4s						
FITZ	Fitzroy Crossi	39.73	255	eP	P	20 03 30.2	-1.1
	6.5nm,0.7s						
VNDA	Vanda	66.59	181	eP	P	20 06 47.2	-1.1
	38nm,1.6s						
ILAR	Eielson Array	83.32	18	P	P	20 08 23.2	-1.8
	0.3nm,0.7s,baz=230,slow=5.6,SNR=3.2						
MK32	Makanchi Array	93.69	317	eP	P	20 09 13.1	-2.2
MKAR	Makanchi Array	93.69	317	P	P	20 09 13.1	-2.2
	0.7nm,0.8s,baz=94,slow=6.4,SNR=8.0						
RLMT	Red Lodge	93.92	45	eP	P	20 09 19.6	+3.0
	13nm,1.5s						
CLNB	Carlsbad	95.78	58	eP	P	20 09 25.2	-0.1
BANI	BANI	125.07	75	ePKPpre	PKPpre	20 14 50.5	

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*ISCJB **08** 20:00:28.2±0.6, 11.°08S±0.°07×165.°72E±0.°08, h10^{km}, mb4.1/13, Error ellipse: s-maj=12.5km s-min=7.5km az=140.5*

*IDC **08** 20:00:28.4±1.3, 10.°97S×165.°75E, h0^{km}, mb3.8/9, mb1 4.0/11, mb1mx3.9/35, mbtmp3.9/11, ML4.7/2, Error ellipse: s-maj=33.4km s-min=23.1km az=123.0*

*NEIC **08** 20:00:29.8±0.5, 10.°99S×165.°72E, h10^{km}, mb4.3/6, Error ellipse: s-maj=10.6km s-min=6.5km az=70.0*

ISC 08 20:00:29.8±0.9**, 11.°0S**±0.°1×**165.°8E**±0.°1**, h10^{km}, n34, σ0.^{s}75**/28**, mb4.0**/13**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.95	285	ePn	Pn	20 01 49.5	-8.5
HNR				eSn	Sn	20 03 06.5	+0.3
HNR	Honiara	5.95	285	Pn	Pn	20 01 58.6	+0.6
	46nm,0.3s,baz=171,slow=9.9,SNR=8.3						
HNR				Sn	Sn	20 03 06.5	+0.3
	17nm,0.3s,baz=161,slow=15,SNR=2.1						
MARNC	Mare, Loyalty	10.64	169	ePn	Pn	20 03 01.9	-0.5
DZM	Mont Dzumac	11.02	177	ePn	Pn	20 03 07.6	-0.1
DZM	Mont Dzumac	11.02	177	Pn	Pn	20 03 07.8	+0.1
	2.8nm,0.3s,baz=327,slow=21,SNR=14						
ONTNC	Ouen Toro	11.26	177	ePn	Pn	20 03 12.7	+1.9
PINNC	Pines Island,	11.65	172	ePn	Pn	20 03 16.3	0.0
CTA	Charters Tower	20.84	242	P	P	20 05 11.1	-0.9
	2.0nm,0.5s,baz=63,slow=14,SNR=1.9						
CTAO	Charters Tower	20.84	242	eP	Pn	20 05 13.0	-1.4
	30nm,1.5s						
H11S2	WAKE ISLAND Hy	29.32	2	T	T	20 36 51.1	
	baz=176,slow=74						
H11S3	WAKE ISLAND Hy	29.33	2	T	T	20 36 53.2	
	baz=176						
H11S1	WAKE ISLAND Hy	29.34	2	T	T	20 36 53.5	
	baz=176,slow=74						
BKZ	Black Stump Fm	29.62	163	eP	P	20 06 35.8	+0.4
	19nm,1.4s						
STKA	Stephens Creek	30.49	223	eP	P	20 06 41.3	-1.8
	7.1nm,1.9s						
STKA	Stephens Creek	30.49	223	P	P	20 06 44.3	+1.2
	1.9nm,0.9s,baz=26,slow=11,SNR=3.1						
H11N1	WAKE ISLAND Hy	30.55	2	T	T	20 38 26.8	
	baz=182,slow=76,SNR=5.4						
H11N3	WAKE ISLAND Hy	30.55	2	T	T	20 38 30.1	
	baz=182,slow=76,SNR=5.1						
H11N2	WAKE ISLAND Hy	30.56	2	T	T	20 38 35.4	
	baz=182,slow=76,SNR=6.8						
BFZ	Birch Farm	30.97	164	eP	P	20 06 47.9	+0.6
	185nm,1.7s						
WB2	Warramunga Arr	31.51	250	eP	P	20 06 51.3	-1.0
WR1	Warramunga Arr	31.52	250	eP	P	20 06 52.1	-0.4
	13nm,1.6s						
WRA	Warramunga Arr	31.52	250	P	P	20 06 52.1	-0.4
	0.5nm,0.5s,baz=81,slow=9.1,SNR=8.7						
AS01	Alice Springs	32.80	243	eP	P	20 07 03.5	-0.1
AS31	Alice Springs	32.84	243	eP	P	20 07 03.3	-0.6
	1.6nm,1.4s						
ASAR	Alice Springs	32.84	243	P	P	20 07 03.7	-0.3
	0.7nm,0.6s,baz=65,slow=10,SNR=12						
FITZ	Fitzroy Crossi	39.42	255	eP	P	20 08 00.1	-0.2
	7.1nm,1.3s						
CMAR	Chiang Mai Arr	72.12	294	P	P	20 11 55.8	+0.6
	0.2nm,0.5s,baz=104,slow=3.8,SNR=2.6						
SONA0	Songino Array	78.65	324	eP	P	20 12 32.0	-0.2
SONM	Songino Array	78.65	324	P	P	20 12 32.0	-0.2
	0.5nm,0.7s,baz=139,slow=6.2,SNR=3.6						
ILAR	Eielson Array	83.47	18	P	P	20 12 57.8	+0.4
	0.5nm,0.7s,baz=227,slow=5.5,SNR=6.8						
MK32	Makanchi Array	93.51	317	eP	P	20 13 45.7	-0.3
MKAR	Makanchi Array	93.51	317	P	P	20 13 45.7	-0.3
	0.4nm,0.7s,baz=94,slow=5.7,SNR=6.1						
ZALV	Zalesovo Beam	93.54	324	P	P	20 13 45.2	-0.7
	0.5nm,0.6s,baz=111,slow=7.9,SNR=3.5						
ZAA1	Zalesovo Array	93.54	324	eP	P	20 13 45.1	-0.8

IDC 08 20:03:20.1±1.9**, 10.°63S×165.°73E, h0^{km}, mb3.5**/4**, mb1 3.7**/5**, mb1mx3.5**/33**, mbtmp3.6**/5**, ML3.4**/1**, Error ellipse: s-maj=54.9km s-min=32.9km az=121.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.40	177	Pn	Pn	20 06 04.1	-0.4
	0.2nm,0.3s,baz=90,slow=20,SNR=5.5						
WRA	Warramunga Arr	31.62	249	P	P	20 09 45.6	+0.5
	0.6nm,0.8s,baz=80,slow=9.0,SNR=4.6						
ASAR	Alice Springs	32.97	243	P	P	20 09 56.6	-0.3
	0.2nm,0.6s,baz=64,slow=10,SNR=5.8						
ILAR	Eielson Array	83.12	19	P	P	20 15 47.8	+0.2
	0.1nm,0.7s,baz=204,slow=6.4,SNR=1.2						
MKAR	Makanchi Array	93.21	317	P	P	20 16 36.2	-0.4
	0.5nm,1.0s,baz=94,slow=5.8,SNR=2.3						

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*ISCJB **08** 20:03:38.7±0.5, 10.°80S±0.°05×166.°18E±0.°06, h10^{km}, mb4.6/23, MS4.2/2, Error ellipse: s-maj=9.6km s-min=6.5km az=141.7*

*IDC **08** 20:03:38.4±1.4, 10.°72S×166.°27E, h0^{km}, mb4.1/6, mb1 4.3/8, mb1mx4.0/33, mbtmp4.2/8, ML4.6/2, MS4.1/2, Ms1 4.1/2, ms1mx3.3/35, Error ellipse: s-maj=36.0km s-min=24.6km az=132.0*

*NEIC **08** 20:03:40.6±0.5, 10.°74S×166.°17E, h10^{km}, mb4.9/19, Error ellipse: s-maj=10.7km s-min=7.3km az=69.0*

ISC 08 20:03:40.7±0.7**, 10.°76S**±0.°08×**166.°21E**±0.°09**, h10^{km}, n44, σ1.^{s}18**/37**, mb4.8**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.30	282	Pn	Pn	20 05 14.7	+1.0
	48nm,0.3s,baz=351,slow=6.4,SNR=7.2						
HNR				Sn	Sn	20 06 26.8	+0.9
	4.8nm,0.3s,baz=216,slow=18,SNR=1.5						
MARNC	Mare, Loyalty	10.80	171	ePn	Pn	20 06 17.1	+1.6
DZM	Mont Dzumac	11.25	179	ePn	Pn	20 06 22.4	+0.6
DZM	Mont Dzumac	11.25	179	Pn	Pn	20 06 22.5	+0.7
	1.2nm,0.3s,baz=66,slow=20,SNR=7.2						
ONTNC	Ouen Toro	11.49	179	ePn	Pn	20 06 27.1	+2.2
PINNC	Pines Island,	11.85	174	ePn	Pn	20 06 29.1	-0.7
TARA	Tarawa	13.77	29	ePn	Pn	20 06 58.0	+1.9
RABL	Rabaul	15.37	294	ePn	Pn	20 07 16.9	-1.0
	28nm,0.6s						
EIDS	Eidsvold	20.41	223	eP	P	20 08 17.7	-0.4
	21nm,1.4s						
CTA	Charters Tower	21.33	242	P	P	20 08 29.1	+0.9
	13nm,1.4s,baz=61,slow=10,SNR=3.2						
CTAO	Charters Tower	21.33	242	eP	P	20 08 29.3	+1.2
	13nm,1.0s						
LHI	Lord Howe Isla	21.69	197	eP	P	20 08 31.3	-0.6
	137nm,1.3s						
H11S2	WAKE ISLAND Hy	29.07	1	T	T	20 40 05.9	
	baz=181						
H11S3	WAKE ISLAND Hy	29.07	1	T	T	20 40 06.2	
	baz=181,slow=74						
H11S1	WAKE ISLAND Hy	29.09	1	T	T	20 40 07.2	
	baz=181,slow=74						
BKZ	Black Stump Fm	29.74	164	eP	P	20 09 46.9	-0.5
	28nm,1.6s						
H11N1	WAKE ISLAND Hy	30.29	1	T	T	20 41 37.2	
	baz=182,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.29	1	T	T	20 41 37.6	
	baz=182,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.30	1	T	T	20 41 38.9	
	baz=182,slow=76,SNR=44						
STKA	Stephens Creek	30.96	224	eP	P	20 09 59.7	+1.5
	2.3nm,1.3s						
BFZ	Birch Farm	31.10	165	eP	P	20 09 58.5	-0.8
	34nm,1.1s						
THZ	Tophouse	31.44	170	eP	P	20 10 00.6	-1.8
	16nm,1.1s						
WRAB	Tennant Creek	31.99	250	eP	P	20 10 05.9	-1.5
	8.8nm,0.9s						
WB2	Warramunga Arr	32.00	250	eP	P	20 10 06.0	-1.5
WR1	Warramunga Arr	32.01	250	eP	P	20 10 06.5	-1.1
	12nm,1.1s						
WRA	Warramunga Arr	32.01	250	P	P	20 10 06.5	-1.1
	5.6nm,0.8s,baz=81,slow=9.1,SNR=29						
TOO	Toolangi	32.55	211	eP	P	20 10 11.8	-0.4
	81nm,1.9s						
FOZ	Fox Glacier	32.80	175	eP	P	20 10 14.6	+0.4
	25nm,1.5s						
RPZ	Rata Peaks	33.10	174	eP	P	20 10 16.5	-0.4
	14nm,1.0s						
MQZ	McQueen’s Vall	33.30	171	eP	P	20 10 19.9	+1.3
	103nm,1.9s						
ASAR	Alice Springs	33.32	243	P	P	20 10 18.0	-1.1
	1.3nm,0.7s,baz=70,slow=9.9,SNR=25						
MTN	Manton Dam	34.38	263	eP	P	20 10 27.5	-0.8
	29nm,1.8s						
BBOO	Buckleboo	35.35	227	eP	P	20 10 39.2	+2.6
	17nm,1.3s						
TAU	Tasmania Unive	36.01	204	eP	P	20 10 41.3	-0.7
	107nm,1.6s						
FITZ	Fitzroy Crossi	39.89	255	eP	P	20 11 14.9	-0.2
	11nm,0.7s						
MBWA	Marble Bar	45.72	251	eP	P	20 12 01.4	-1.0
	94nm,1.8s						
NWAO	Narrogin (SRO)	50.00	236	LR	LR	20 34 37.4	
	comp=Z,554nm,20.7s,baz=310,slow=37						
CMAR	Chiang Mai Arr	72.41	293	P	P	20 15 08.1	+0.3
	1.0nm,0.9s,baz=104,slow=3.7,SNR=6.4						
SONA0	Songino Array	78.70	324	eP	P	20 15 42.9	-0.6
SONM	Songino Array	78.70	324	P	P	20 15 42.9	-0.6
	0.1nm,0.4s,baz=135,slow=7.0,SNR=2.3						
ILAR	Eielson Array	83.10	18	P	P	20 16 05.0	-1.4
	0.7nm,0.7s,baz=224,slow=4.7,SNR=7.3						
MK32	Makanchi Array	93.62	317	eP	P	20 16 56.9	-0.5
MKAR	Makanchi Array	93.62	317	P	P	20 16 56.9	-0.5
	0.7nm,0.7s,baz=93,slow=6.1,SNR=7.4						
NRIK	Noril'sk	96.01	340	LR	LR	20 54 22.9	
	comp=Z,40nm,20.7s,baz=151,slow=32						

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*IDC **08** 20:05:46.1±0.6, 11.°00S×166.°09E, h0^{km}, mb4.2/18, mb1 4.3/20, mb1mx4.3/40, mbtmp4.2/20, ML3.2/1, MS4.3/7, Ms1 4.3/7, ms1mx3.8/40, Error ellipse: s-maj=21.9km s-min=15.6km az=116.0*

*ISCJB **08** 20:05:47.2±0.2, 10.°98S±0.°03×165.°87E±0.°04, h10^{km}, mb5.0/89, Error ellipse: s-maj=5.3km s-min=4.2km az=161.9*

*NEIC **08** 20:05:48.8±0.2, 10.°92S×165.°89E, h10^{km}, mb5.1/66, Error ellipse: s-maj=5.4km s-min=4.1km az=84.0*

ISC 08 20:05:49.0±0.3**, 10.°96S**±0.°06×**165.°91E**±0.°06**, h10^{km}, n154, σ1.^{s}33**/149**, mb5.0**/89**, 2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.06	284	Pn	Pn	20 07 19.6	+0.9
	58nm,0.3s,baz=135,slow=6.2,SNR=8.2						
HNR				Sn	Sn	20 08 28.6	+0.3
	baz=330,slow=20,SNR=1.3						
HNR				LR	LR	20 09 59.0	
	comp=Z,4µm,19.9s,baz=133,slow=40						
MARNC	Mare, Loyalty	10.66	169	ePn	Pn	20 08 23.4	+1.6
DZM	Mont Dzumac	11.06	177	ePn	Pn	20 08 29.4	+1.9
	30nm,0.5s						
DZM				eLR	LR	20 11 02.8	
	comp=Z,916nm,21.6s						
DZM	Mont Dzumac	11.06	177	ePn	Pn	20 08 28.7	+1.2
DZM	Mont Dzumac	11.06	177	Pn	Pn	20 08 25.4	-2.1
	0.2nm,0.3s,baz=150,slow=20,SNR=1.9						
ONTNC	Ouen Toro	11.30	177	ePn	Pn	20 08 32.0	+1.4
PINNC	Pines Island,	11.68	173	ePn	Pn	20 08 38.9	+3.0
TARA	Tarawa	14.08	30	ePn	Pn	20 09 09.7	+1.0
RABL	Rabaul	15.19	295	ePn	Pn	20 09 24.5	+0.7
	39nm,0.7s						
KWAJ	Kwajalein Atol	19.70	5	eP	P	20 10 16.4	-2.3
	193nm,0.8s						
EIDS	Eidsvold	20.07	222	eP	Pn	20 10 24.1	-0.4
	52nm,1.4s						
MANU	Manus Island	20.43	294	eP	Pn	20 10 27.8	-1.0
	397nm,2.0s						
CTA	Charters Tower	20.98	242	P	P	20 10 33.8	+1.1
	2.7nm,0.6s,baz=62,slow=16,SNR=3.1						
CTA				LR	LR	20 18 01.2	
	comp=Z,737nm,18.5s,baz=40,slow=35						
CTAO	Charters Tower	20.98	242	eP	Pn	20 10 34.3	-0.9
	42nm,1.2s						
COEN	Coen	22.40	260	eP	P	20 10 47.7	-0.2
	24nm,1.1s						
ARMA	Armidale	23.48	212	eP	P	20 11 00.2	+1.1
	46nm,1.3s						
KNTN	Kanton	23.63	71	eP	P	20 11 00.0	-0.6
	327nm,1.5s						
RAO	Raoul Island	23.65	143	eP	P	20 11 03.2	+2.6
	662nm,1.3s						
NIUE	Niue	24.67	112	eP	P	20 11 10.2	0.0
	497nm,1.6s						
OUZ	Omahuta	25.15	165	eP	P	20 11 15.4	+1.0
	104nm,1.8s						
MXZ	Matakaoa Point	28.74	159	eP	P	20 11 48.6	+1.9
	51nm,1.0s						
URZ	Urewera	28.98	162	P	P	20 11 46.6	-2.2
	5.8nm,0.9s,baz=69,slow=5.3,SNR=3.5						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	20 42 17.1	
	baz=181,slow=76,SNR=103						
H11S3	WAKE ISLAND Hy	29.27	2	T	T	20 42 17.4	
	baz=181,slow=76,SNR=90						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	20 42 18.7	
	baz=181,slow=76,SNR=12						
BKZ	Black Stump Fm	29.63	163	eP	P	20 11 54.4	-0.3
	18nm,1.1s						
WAKE	Wake Island	30.06	1	eP	P	20 12 00.2	+1.7
	657nm,1.8s						
H11N1	WAKE ISLAND Hy	30.49	2	T	T	20 43 48.8	
	baz=182,slow=76,SNR=74						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	20 43 49.0	
	baz=182,slow=76,SNR=46						
H11N2	WAKE ISLAND Hy	30.51	2	T	T	20 43 48.8	
	baz=182,slow=76,SNR=19						
STKA	Stephens Creek	30.62	223	eP	P	20 12 04.0	+0.5
	2.2nm,1.0s						
STKA	Stephens Creek	30.62	223	P	P	20 12 03.9	+0.4
	1.5nm,0.6s,baz=32,slow=8.0,SNR=3.7						
STKA				LR	LR	20 23 57.4	
	comp=Z,817nm,18.1s,baz=44,slow=36						
BFZ	Birch Farm	30.98	165	eP	P	20 12 05.9	-0.7
	123nm,1.6s						
THZ	Tophouse	31.30	170	eP	P	20 12 09.8	+0.5
	19nm,0.8s						
WRAB	Tennant Creek	31.65	250	eP	P	20 12 12.3	-0.4
	21nm,0.9s						
WB2	Warramunga Arr	31.66	250	eP	P	20 12 12.0	-0.8
	41nm,1.3s						
WR1	Warramunga Arr	31.67	250	eP	P	20 12 12.4	-0.4
	44nm,1.2s						
WR1				ePcP	PcP	20 15 03.5	-1.4
WRA	Warramunga Arr	31.67	250	P	P	20 12 12.4	-0.4
	14nm,1.0s,baz=79,slow=8.8,SNR=23						
WRA				PcP	PcP	20 15 03.5	-1.4
	0.9nm,0.8s,baz=74,slow=2.8,SNR=4.7						
WRA				LR	LR	20 25 06.3	
	comp=Z,570nm,18.9s,baz=60,slow=36						
KHZ	Kahutara	32.04	169	eP	P	20 12 15.0	-0.8
	36nm,1.3s						
GUMO	Guam	32.10	319	eP	P	20 12 18.0	+1.4
	513nm,1.8s						
GUMO	Guam	32.10	319	LR	LR	20 26 03.8	
	comp=Z,171nm,18.1s,baz=145,slow=38						
LTZ	Lake Taylor	32.19	171	eP	P	20 12 17.8	+0.6
	23nm,0.9s						
TOO	Toolangi	32.23	211	eP	P	20 12 17.3	-0.3
	15nm,0.9s						
FOZ	Fox Glacier	32.63	175	eP	P	20 12 20.3	-0.7
	17nm,0.9s						
OXZ	Oxford	32.69	172	eP	P	20 12 20.9	-0.6
	23nm,0.9s						
AS01	Alice Springs	32.94	243	eP	P	20 12 23.0	-1.1
RPZ	Rata Peaks	32.94	173	eP	P	20 12 24.4	+0.7
	36nm,1.0s						
ASAR	Alice Springs	32.98	243	P	P	20 12 23.3	-1.1
	3.4nm,0.9s,baz=71,slow=9.7,SNR=9.8						
ASAR				PcP	PcP	20 15 08.2	-0.3
	0.9nm,0.7s,baz=90,slow=2.5,SNR=4.5						
ASAR				LR	LR	20 24 39.8	
	comp=Z,489nm,21.1s,baz=81,slow=34						
CRLZ	Canterbury Las	33.02	171	eP	P	20 12 24.2	-0.1
	120nm,1.5s						
MQZ	McQueen’s Vall	33.15	171	eP	P	20 12 25.5	0.0
	25nm,0.9s						
LBZ	Lake Benmore	33.51	174	eP	P	20 12 27.9	-0.9
	99nm,1.9s						
ODZ	Otahua Downs	34.21	174	eP	P	20 12 33.4	-1.4
	61nm,1.5s						
SAUI	Saumlaki	34.26	272	eP	P	20 12 35.4	-0.1
	42nm,1.0s						
MLZ	Mavora Lakes	34.34	177	eP	P	20 12 34.6	-1.4
	144nm,1.9s						
BBOO	Buckleboo	35.01	227	eP	P	20 12 41.1	-0.7
	67nm,1.8s						
TAU	Tasmania Unive	35.71	204	eP	P	20 12 48.3	+0.5
	249nm,1.9s						
XMAS	Kiritimati	38.67	73	eP	P	20 13 14.5	+1.3
	149nm,1.1s						
FITZ	Fitzroy Crossi	39.56	255	eP	P	20 13 20.4	-0.3
	21nm,1.2s						
FITZ	Fitzroy Crossi	39.56	255	LR	LR	20 28 44.8	
	comp=Z,464nm,20.2s,baz=94,slow=35						
FORT	Forrest	40.23	235	eP	P	20 13 26.3	+0.3
	20nm,1.0s						
SOEI	Soe	40.96	268	eP	P	20 13 30.3	-2.2
	22nm,1.1s						
MMRI	Maumere	43.07	269	eP	P	20 13 49.3	-0.3
	41nm,1.0s						
PPT2	Papeete2	43.56	104	eLQ	LQ	20 24 15.0	
	488nm,26.5s						
PPT2				eLR	LR	20 26 02.2	
	comp=Z,533nm,22.5s						
LUWI	Luwuk	43.96	280	eP	P	20 13 55.9	-0.8
	59nm,1.4s						
KHLU	Kahalu`u	48.34	51	eP	P	20 14 31.8	+0.5
	98nm,1.2s						
JHJ2	Mitsune	50.39	331	eP	P	20 14 47.1	+0.5
	3µm,2.0s						
JAGI	Jajag, Banyuwa	51.03	268	eP	P	20 14 50.6	-1.3
	114nm,0.8s						
JOW	Kunigami	52.40	316	eP	P	20 15 01.6	-0.2
	50nm,1.1s						
MJAR	Matsushiro Arr	53.97	332	P	P	20 15 12.7	-0.5
	2.5nm,0.7s,baz=164,slow=9.1,SNR=5.1						
MAJO	Matsushiro	53.97	332	eP	P	20 15 12.7	-0.5
JNU	Nakatsue	55.10	324	eP	P	20 15 20.5	-1.1
	88nm,1.8s						
SSLB	Suanglung	55.89	309	eP	P	20 15 28.3	+0.9
	127nm,1.9s						
KSM	Kuching	56.65	279	eP	P	20 15 32.0	-1.0
	20nm,1.3s						
KSRS	Korea Array	59.90	326	P	P	20 15 53.7	-1.5
	1.2nm,0.7s,baz=148,slow=7.0,SNR=4.8						
KSAR	Wonju Array Be	59.91	325	P	P	20 15 53.7	-1.6
KS01	Wonju Array Si	59.93	326	eP	P	20 15 54.2	-1.3
NJ2	Nanjing	62.07	315	eP	P	20 16 11.3	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
USRK	Ussuriysk Ar.	62.94	333	P	P	20 16 15.9	+0.3
	comp=Z,3.2nm,0.8s,baz=116,slow=7.0,SNR=6.1						
MYKOM	Kota Tinggi	63.00	278	eP	P	20 16 16.2	-0.5
	comp=Z,18nm,1.3s						
SMY	Shemya	63.82	6	eP	P	20 16 22.0	+0.7
	comp=Z,335nm,0.4s						
PETK	Petropavlovsk-	64.19	355	eP	P	20 16 25.1	+1.3
BKNI	Bangkinang	65.42	275	eP	P	20 16 30.5	-2.2
	comp=Z,68nm,0.5s						
CN2	Changchun	65.75	329	eP	P	20 16 34.4	+0.3
IPM	Ipoh	66.37	280	eP	P	20 16 37.6	-1.1
	comp=Z,15nm,1.0s						
CASY	Casey	66.52	201	eP	P	20 16 39.1	+0.3
	comp=Z,32nm,1.1s						
KLR	Kul'dur	67.04	336	P	P	20 16 42.4	+0.1
	comp=Z,2.4nm,0.8s,baz=153,slow=4.5						
ENH	Enshi	67.97	309	eP	P	20 16 48.2	-0.3
	comp=Z,16nm,1.1s						
PSI	Prapat	68.02	278	eP	P	20 16 48.0	-1.4
	comp=Z,8.2nm,1.0s						
GYA	Guiyang	68.50	304	⇑iP	P	20 16 54.2	+2.1
GYA				PP	PP	20 19 27.8	+4.3
GYA				S	S	20 25 53.4	-1.3
GYA				SKS	SKiKP	20 26 47.5	+1.1
GYA	Guiyang	68.50	304	SS	SS	20 30 19.2	+0.3
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.8s						
GYA				LR	LR		

	comp=N,580nm,18.0s						
GYA				LR	LR		
	comp=E,550nm,18.1s						
GYA				LR	LR		
	comp=Z,570nm,18.3s						
BJT	Baijiatuau	68.51	321	eP	P	20 16 51.4	-0.3
	comp=Z,8.3nm,1.1s						
BJI	Beijing	68.52	321	eP	P	20 16 52.4	+0.7
BJI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
XAN	Xi'an	70.18	312	P	P	20 17 02.7	+0.4
XAN				pP	pwP	20 17 09.7	+2.5
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN	Xi'an	70.18	312	eP	P	20 17 02.3	0.0
	comp=Z,6.3nm,0.9s						
KMI	Kunming	71.21	301	P	P	20 17 10.4	+1.4
KMI				pP	pwP	20 17 18.1	+4.2
KMI				sP	PcP	20 17 30.6	+1.6
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC	Hu-ho-hao-te	71.87	320	eP	P	20 17 12.7	+0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,280nm,6.3s						
CM01	Chiang Mai Arr	72.20	293	eP	P	20 17 14.8	+0.1
CM31	Chiang Mai Arr	72.23	293	eP	P	20 17 15.8	+0.9
	comp=Z,4.8nm,0.9s						
CMAR	Chiang Mai Arr	72.23	293	P	P	20 17 15.3	+0.3
	comp=Z,2.7nm,0.9s,baz=116,slow=4.2,SNR=18						
CHTO	Chiang Mai	72.34	294	eP	P	20 17 16.1	+0.5
	comp=Z,4.4nm,1.0s						
CHTO	Chiang Mai	72.34	294	P	P	20 17 17.0	+1.4
	comp=Z,19nm,1.3s						
CD2	Chengdu	72.68	307	P	P	20 17 19.5	+2.0
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SEY	Seymchan	74.40	354	P	P	20 17 25.9	-0.9
	comp=Z,1.5nm,1.0s,baz=163,slow=19,SNR=4.4						
LZH	Lanzhou	74.82	312	eP	P	20 17 30.2	+0.1
LZH				pP	pwP	20 17 39.2	+4.2
LZH				sP	PcP	20 17 42.6	-1.5
LZH				PP	PP	20 19 51.0	-27
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				LR	LR		
	comp=N,690nm,16.8s						
LZH				LR	LR		
	comp=E,560nm,16.6s						
LZH				LR	LR		
	comp=Z,620nm,17.0s						
GAMB	Gambell	76.45	10	eP	P	20 17 39.2	+0.7
	comp=Z,12nm,1.2s						
ULN	Ulaanbaatar	78.33	324	eP	P	20 17 49.4	-0.3
ANM	Nome	78.37	12	eP	P	20 17 50.4	+1.1
	comp=Z,18nm,1.8s						
SONA0	Songino Array	78.69	324	eP	P	20 17 51.1	-0.5
SONM	Songino Array	78.69	324	P	P	20 17 51.1	-0.5
	comp=Z,1.5nm,0.8s,baz=138,slow=6.5,SNR=11						
BILL	Bilibino	78.79	0	eP	P	20 17 51.3	-0.3
QSPA	South Pole Qui	79.05	180	eP	P	20 17 52.4	-0.9
GTA	Gaotai	79.11	314	⇑P	P	20 17 55.3	+1.1
GTA				pP	PcP	20 18 02.6	0.0
GTA				sP	pwP	20 18 06.4	+7.3
GTA				S	S	20 27 50.9	-3.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,5.9s						
GTA				LR	LR		
	comp=N,180nm,18.1s						
GTA				LR	LR		
	comp=E,280nm,19.0s						
GTA				LR	LR		
	comp=Z,180nm,19.0s						
MCK	McKinley	82.01	19	eP	P	20 18 10.0	+1.0
	comp=Z,14nm,1.3s						
MDM	Murphy Dome	83.10	18	eP	P	20 18 14.4	-0.2
	comp=Z,12nm,1.5s						
HDA	Harding Lake	83.11	19	eP	P	20 18 14.1	-0.6
	comp=Z,9.1nm,1.0s						
ILAR	Eielson Array	83.38	18	P	P	20 18 15.2	-0.8
	comp=Z,1.3nm,0.7s,baz=234,slow=4.7,SNR=13						
ILB	Eielson Array	83.38	18	eP	P	20 18 15.6	-0.5
	comp=Z,12nm,1.3s						
IL1	Eielson Array	83.38	18	eP	P	20 18 15.6	-0.5
SCRK	Sand Creek	83.78	20	eP	P	20 18 18.5	+0.2
	comp=Z,8.7nm,1.1s						
NV01	Mina Array Sit	85.84	50	eP	P	20 18 29.2	-0.3
NVAR	Mina Array Bea	85.84	50	P	P	20 18 28.2	-1.2
	comp=Z,1.0nm,0.8s,baz=219,slow=6.5,SNR=3.9						
TIXI	Tiksi	86.03	349	P	P	20 18 28.4	-0.9
	baz=149,slow=5.6						
WVOR	Wild Horse Val	86.81	46	eP	P	20 18 35.7	+1.7
	comp=Z,12nm,1.5s						
WMQ	Urumqi	89.15	315	eP	P	20 18 45.8	+0.8
WMQ				pP	pwP	20 18 55.1	+5.2
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
INK	Inuvik	89.77	19	P	P	20 18 45.5	-1.7
	comp=Z,0.4nm,0.6s,baz=180,slow=1.0,SNR=2.1						
TCRU	Three Creeks R	90.32	51	eP	P	20 18 51.0	+0.1
	comp=Z,12nm,0.3s						
SYO	Syowa Base	91.92	197	⇓eX	P	20 18 50.0	-7.4
MK01	Makanchi Array	93.56	317	eP	P	20 19 05.0	-0.4
MK31	Makanchi Array	93.57	317	eP	P	20 19 04.8	-0.7
	comp=Z,3.4nm,0.9s						
MK32	Makanchi Array	93.57	317	eP	P	20 19 04.6	-0.8
MKAR	Makanchi Array	93.57	317	eP	P	20 19 05.0	-0.4
	comp=Z,23nm,0.9s						
MKAR	Makanchi Array	93.57	317	P	P	20 19 04.6	-0.8
	comp=Z,2.5nm,0.8s,baz=100,slow=6.3,SNR=18						
ZAA0	Zalesovo Array	93.58	324	eP	P	20 19 04.1	-1.1
	comp=Z,3.4nm,0.9s						
ZAA1	Zalesovo Array	93.58	324	eP	P	20 19 04.0	-1.3
ZALV	Zalesovo Beam	93.58	324	eP	P	20 19 03.8	-1.5
ZALV	Zalesovo Beam	93.58	324	P	P	20 19 04.0	-1.3
	comp=Z,1.1nm,0.7s,baz=83,slow=4.6,SNR=6.5						
MAKZ	Makanchi	93.78	317	eP	P	20 19 05.9	-0.6
YKA	Yellowknife Ar	94.82	27	P	P	20 19 07.9	-2.8
	comp=Z,0.2nm,0.6s,baz=256,slow=4.7,SNR=3.1						
KSH	Kashi	96.83	309	P	P	20 19 20.6	0.0
KSH				pP	pwP	20 19 34.5	+9.0
KSH				PP	PP	20 23 22.5	+6.6
KSH				pmax	pmax		
	comp=Z,200nm,5.2s						
ARA0	ARCESS Array S	116.29	346	ePKPdf	PKiKP	20 24 30.6	-1.7
ARCES	ARCESS Array B	116.29	346	PKP	PKiKP	20 24 30.6	-1.7
	comp=Z,1.7nm,0.8s,baz=90,slow=2.4,SNR=5.4						
FIA0	FINESS Array S	121.75	339	ePKPdf	PKPdf	20 24 41.3	-1.7
FINES	FINESS Array B	121.75	339	PKP	PKPdf	20 24 41.3	-1.7
	comp=Z,1.2nm,0.8s,baz=264,slow=4.2,SNR=3.1						
AKASG	Malin Array Be	126.88	327	PKP	PKPdf	20 24 51.6	-1.6
	comp=Z,0.2nm,0.2s,baz=46,slow=2.7,SNR=2.7						
CBYP	Canovanas	129.52	75	ePKPpre	PKPpre	20 24 50.5	
SPB	Sao Paulo	132.65	137	ePKPpre	PKPpre	20 24 55.4	
CLL	Collm	134.09	337	ePKPdf	PKPdf	20 25 07.0	+0.2
GEC2	GERESS Array S	135.70	334	ePKPdf	PKPdf	20 25 08.1	-2.0
GERES	GERESS Array B	135.70	334	PKP	PKPdf	20 25 08.0	-2.0
	comp=Z,0.3nm,0.6s,baz=17,slow=1.0,SNR=3.8						
KEST	Kesra	147.44	323	PKPbc	PKPbc	20 25 33.7	-0.2
	comp=Z,11nm,1.1s,baz=353,slow=9.3,SNR=3.9						
ES19	SONSECA Array	149.97	344	epPKPdf	pPKPdf	20 25 39.0	+0.7
ESDC	Sonseca Array	150.02	344	PKPbc	PKPbc	20 25 37.9	-2.4
	comp=Z,1.3nm,0.8s,baz=15,slow=2.2,SNR=6.1						
ESDC				PKPab	PKPab	20 25 46.9	+0.9
	comp=Z,2.1nm,0.8s,baz=25,slow=2.8,SNR=7.6						
TORD	Torodi Ar. Bea	164.41	280	PKP	PKPdf	20 25 53.6	-0.5
	comp=Z,0.5nm,0.8s,baz=48,slow=2.1,SNR=3.2						
TORD				PKPab	PKPab	20 26 46.5	-2.0
	comp=Z,1.0nm,0.9s,baz=73,slow=5.0,SNR=3.9						
TOA1	Torodi Ar. Sit	164.41	280	ePKPdf	PKPdf	20 25 53.6	-0.5
TOA1				ePKPab	PKPab	20 26 46.5	-2.0

MEX 08 20:08:16.8±0.9, 16.°30N×98.°25W, h14km±4km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.15	52	i P	Pg	20 08 19.8	-0.8
PNIG				i S	Sg	20 08 23.0	-0.3
VHO	Vista Hermosa	1.65	62	eP	Pn	20 08 43.5	-2.0
VHO				i S	Sn	20 09 06.5	-0.2
MEIG	Mezcala	2.08	321	eP	Pn	20 08 48.6	-2.9
MEIG				eS	Sn	20 09 13.1	-4.2
HUIG	Huatulco	2.13	104	eP	Pb	20 08 53.6	-1.5
TPIG	Tehuac#an	2.27	22	eP	Pn	20 08 51.1	-3.0
TPIG				eS	Sb	20 09 26.2	+0.4

IDC 08 20:10:29.5±1.6, 10.°85S×165.°36E, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.6/43, mbtmp3.8/7, ML4.2/2, Error ellipse: s-maj=35.3km s-min=27.4km az=139.0

ISCJB 08 20:10:32.5±1.1, 11.°0S±0.°1×165.°3E±0.°1, h30km, mb3.5/4, Error ellipse: s-maj=20.3km s-min=11.5km az=33.3

ISC 08 20:10:34.2±1.3, 10.°9S±0.°1×165.°3E±0.°1, h30km, n13, σ0.s97/8, mb3.6/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.51	285	Pn	Pn	20 11 54.8	+0.6
	19nm,0.3s,baz=171,slow=12,SNR=3.5						
HNR				Sn	Sn	20 12 56.2	-0.3
	4.5nm,0.3s,baz=204,slow=20,SNR=1.8						
DZM	Mont Dzumac	11.17	175	Pn	Pn	20 13 12.3	+0.3
	0.7nm,0.3s,baz=329,slow=20,SNR=7.0						
CTA	Charters Tower	20.53	241	P	P	20 15 10.3	0.0
	4.8nm,0.9s,baz=63,slow=10,SNR=2.6						
H11S2	WAKE ISLAND Hy	29.22	3	T	T	20 46 52.6	
	baz=187,slow=74						
H11S3	WAKE ISLAND Hy	29.23	3	T	T	20 46 56.5	
	baz=187,slow=74						
H11S1	WAKE ISLAND Hy	29.24	3	T	T	20 47 02.0	
	baz=187						
H11N1	WAKE ISLAND Hy	30.45	3	T	T	20 48 29.7	
	baz=192,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	30.45	3	T	T	20 48 23.8	
	baz=192,slow=76,SNR=9.3						
H11N2	WAKE ISLAND Hy	30.46	3	T	T	20 48 25.0	
	baz=192,slow=76,SNR=21						
WRA	Warramunga Arr	31.17	249	P	P	20 16 49.8	-1.0
	0.4nm,0.7s,baz=79,slow=8.8,SNR=3.1						
ASAR	Alice Springs	32.51	243	P	P	20 17 01.9	-0.7
	0.5nm,0.6s,baz=64,slow=11,SNR=6.8						
ILAR	Eielson Array	83.49	19	P	P	20 22 57.8	-1.0
	0.4nm,0.8s,baz=238,slow=4.8,SNR=5.1						
MKAR	Makanchi Array	93.14	317	P	P	20 23 46.8	+1.3
	0.1nm,0.4s,baz=94,slow=6.2,SNR=2.4						

ISCJB 08 20:16:05.4±0.9, 59.°4S±0.°2×151.°2W±0.°3, h10km, mb4.4/9, MS4.1/8, Error ellipse: s-maj=34.2km s-min=18.1km az=23.4

IDC 08 20:16:06.5±0.8, 59.°47S×151.°04W, h0km, mb4.0/5, mb1 4.2/5, mb1mx4.0/30, mbtmp4.0/5, MS4.1/8, Ms1 4.1/8, ms1mx3.8/22, Error ellipse: s-maj=42.7km s-min=24.3km az=9.0

NEIC 08 20:16:09.3±0.4, 59.°54S×151.°72W, h10km, mb4.8/4, Error ellipse: s-maj=18.5km s-min=11.9km az=195.0

ISC 08 20:16:08.2±0.7, 59.°5S±0.°2×151.°2W±0.°2, h10km, n43, σ1.s03/23, mb4.4/9, MS4.1/8, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	23.80	203	LR	LR	20 28 32.0	
	comp=Z,350nm,18.1s,baz=112,slow=31						
QSPA	South Pole Qui	30.68	180	eP	P	20 22 23.1	+0.4
QSPA	South Pole Qui	30.68	180	P	P	20 22 23.4	+0.7
	5.6nm,1.0s,baz=79,slow=5.1,SNR=5.1						
RKT	Rikitea	38.08	25	eT	T	21 03 24.0	
	2.2nm,0.2s						
RAR	Rarotonga	38.69	347	LR	LR	20 35 09.2	
	comp=Z,410nm,18.8s,baz=139,slow=30						
PPT2	Papeete2	41.82	2	eLR	LR	20 35 33.0	
	comp=Z,703nm,25.2s,baz=183						
PPT	Papeete	41.84	2	LR	LR	20 36 48.7	
	comp=Z,343nm,21.9s,baz=174,slow=30						
RPN	Rapa Nui	43.21	60	LR	LR	20 38 13.9	
	comp=Z,214nm,18.9s,baz=279,slow=31						
VAH	Vaihoa	44.23	5	eT	T	21 10 24.5	
	41nm,0.2s						
DZM	Mont Dzumac	47.83	303	LR	LR	20 41 23.6	
	comp=Z,49nm,20.8s,baz=165,slow=32						
MAW	Mawson	50.80	196	LR	LR	20 44 06.1	
	comp=Z,300nm,20.2s,baz=225,slow=33						
TAOE	Nuku Hiva Isla	51.18	14	eLR	LR	20 39 41.9	
	comp=Z,331nm,28.4s						
STKA	Stephens Creek	51.67	271	LR	LR	20 43 56.2	
	comp=Z,175nm,20.7s,baz=198,slow=32						
HNR	Honiara	61.86	303	eP	P	20 26 27.8	+0.3
	48nm,0.8s						
AS01	Alice Springs	62.25	270	eP	P	20 26 28.4	-1.7
AS31	Alice Springs	62.28	270	eP	P	20 26 29.8	-0.5
	4.8nm,1.9s						
ASAR	Alice Springs	62.28	270	P	P	20 26 29.9	-0.4
	1.3nm,1.0s,baz=136,slow=6.3,SNR=8.0						
ASAR				LR	LR	20 49 18.1	
	comp=Z,230nm,21.4s,baz=232,slow=32						
H01W1	Cape Leeuwin H	62.90	247	T	T	21 35 22.9	
	baz=144						
H01W2	Cape Leeuwin H	62.90	247	T	T	21 35 20.9	
	baz=144						
H01W3	Cape Leeuwin H	62.91	247	T	T	21 35 20.9	
	baz=144						
WR1	Warramunga Arr	65.15	273	eP	P	20 26 48.9	-0.4
	13nm,1.4s						
WRA	Warramunga Arr	65.15	273	P	P	20 26 48.9	-0.4
	0.6nm,0.7s,baz=153,slow=5.7,SNR=6.6						
WRAB	Tennant Creek	65.15	273	eP	P	20 26 47.7	-1.6
	13nm,1.5s						
CPUP	Villa Florida	69.62	107	P	P	20 27 15.3	-2.1
	2.3nm,0.9s,baz=203,slow=6.6,SNR=4.5						
LPAZ	La Paz	72.61	93	eP	P	20 27 38.6	+2.1
	12nm,1.5s						
LPAZ	La Paz	72.61	93	P	P	20 27 35.5	-0.9
	0.8nm,0.7s,baz=246,slow=5.8,SNR=5.2						
H10S2	ASCENSION HYDR	103.50	136	T	T	22 26 31.9	
	baz=204						
H10S3	ASCENSION HYDR	103.50	136	T	T	22 26 27.4	
	baz=204						
H10S1	ASCENSION HYDR	103.51	136	T	T	22 26 34.3	
	baz=204						
H10N3	ASCENSION HYDR	104.58	135	T	T	22 27 55.6	
	baz=207						
H10N1	ASCENSION HYDR	104.59	135	T	T	22 27 46.1	
	baz=207						
H10N2	ASCENSION HYDR	104.60	135	T	T	22 27 47.9	
	baz=207						
ILAR	Eielson Array	123.95	2	PKP	PKiKP	20 35 06.6	+1.4
	1.4nm,1.1s,baz=224,slow=1.3,SNR=2.9						
YKA	Yellowknife Ar	124.82	20	PKP	PKiKP	20 35 07.4	+0.5
	0.2nm,0.8s,baz=193,slow=2.5,SNR=2.8						
NRN	Naryn	145.86	259	ePKPdf	PKPab	20 35 47.7	0.0
MK01	Makanchi Array	146.43	272	ePKPdf	PKPdf	20 35 47.6	+0.6
MK31	Makanchi Array	146.45	272	ePKPdf	PKPdf	20 35 47.5	+0.5
MK32	Makanchi Array	146.45	272	ePKPdf	PKPbc	20 35 48.2	-0.2
MKAR	Makanchi Array	146.45	272	ePKPdf	PKPbc	20 35 48.1	-0.4
MKAR	Makanchi Array	146.45	272	PKPbc	PKPbc	20 35 48.2	-0.2
	1.7nm,0.8s,baz=111,slow=3.6,SNR=13						
ZALV	Zalesovo Beam	149.56	285	PKPbc	PKiKP	20 35 57.0	-0.5
	0.2nm,0.3s,baz=131,slow=4.4,SNR=2.6						
ZAA1	Zalesovo Array	149.56	285	ePKPbc	PKiKP	20 35 57.0	-0.5
ANTO	Ankara	160.23	189	ePKPdf	PKPdf	20 36 08.1	+1.0

IDC 08 20:17:17.6±3.8, 11.°77S×165.°14E, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.5/42, mbtmp3.6/3, Error ellipse: s-maj=188.8km s-min=32.2km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.68	251	P	P	20 23 34.6	+0.3
	0.5nm,0.5s,baz=81,slow=9.0,SNR=7.0						
ASAR	Alice Springs	31.94	244	P	P	20 23 45.0	-0.4
	0.8nm,0.9s,baz=74,slow=9.7,SNR=4.5						
ILAR	Eielson Array	84.39	19	P	P	20 29 51.5	0.0
	0.4nm,0.6s,baz=233,slow=5.4,SNR=9.4						

IDC 08 20:18:45.5±1.8, 47.°72N×153.°89E, h0km, mb3.6/8, mb1 3.9/11, mb1mx3.6/57, mbtmp3.6/11, ML4.9/1, Error ellipse: s-maj=35.2km s-min=24.6km az=38.0

ISCJB 08 20:18:53.1±0.9, 47.°9N±0.°1×153.°9E±0.°1, h64km, mb3.7/9, Error ellipse: s-maj=16.9km s-min=12.3km az=160.3

NEIC 08 20:18:53.6±3.5, 47.°83N×153.°89E, h55km±23km, mb4.2/2, Error ellipse: s-maj=36.4km s-min=9.2km az=177.0

ISC 08 20:18:55.1±1.4, 47.°9N±0.°2×153.°9E±0.°1, h64km, n27, σ0.s65/21, mb3.8/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEA0B	Petropavlovsk-	5.72	24	ePn	Pn	20 20 17.7	+0.4
PETK	Petropavlovsk-	5.72	24	ePn	Pn	20 20 17.6	+0.3
PETK	Petropavlovsk-	5.72	24	Pn	Pn	20 20 16.5	-0.8
	1.3nm,0.3s,baz=181,slow=11,SNR=21						
PEA1	Petropavlovsk-	5.72	24	ePn	Pn	20 20 16.5	-0.9
MA2	Magadan	11.81	352	Pn	Pn	20 21 40.4	0.0
	0.7nm,0.3s,baz=172,slow=14,SNR=5.0						
SEY	Seymchan	15.06	357	Pn	Pn	20 22 24.4	+0.6
	0.1nm,0.3s,baz=173,slow=16,SNR=4.7						
H11N2	WAKE ISLAND Hy	30.05	155	T	T	20 56 59.6	
	baz=342,slow=74						
H11N1	WAKE ISLAND Hy	30.06	155	T	T	20 57 03.5	
	baz=342						
H11N3	WAKE ISLAND Hy	30.06	155	T	T	20 57 00.1	
	baz=342,slow=74						
H11S1	WAKE ISLAND Hy	31.16	156	T	T	20 58 12.9	
	baz=343,slow=74						
H11S3	WAKE ISLAND Hy	31.16	156	T	T	20 58 21.2	
	baz=343,slow=74						
H11S2	WAKE ISLAND Hy	31.17	156	T	T	20 58 11.3	
	baz=343						
IM3	Indian Mountai	32.50	37	eP	P	20 25 19.4	+0.3
ILAR	Eielson Array	35.30	40	P	P	20 25 42.9	-0.5
	0.5nm,0.9s,baz=269,slow=7.8,SNR=4.1						
INK	Inuvik	40.37	33	P	P	20 26 26.0	0.0
	0.7nm,0.5s,baz=256,slow=4.2,SNR=3.6						
MK31	Makanchi Array	46.88	297	eP	P	20 27 18.3	-0.3
	2.6nm,1.5s						
MK32	Makanchi Array	46.88	297	eP	P	20 27 18.4	-0.3
MKAR	Makanchi Array	46.88	297	eP	P	20 27 18.3	-0.3
	4.3nm,0.9s						
MKAR	Makanchi Array	46.88	297	P	P	20 27 18.4	-0.3
	0.5nm,0.8s,baz=64,slow=8.2,SNR=5.1						
MK01	Makanchi Array	46.88	297	eP	P	20 27 18.2	-0.4
YKA	Yellowknife Ar	49.66	38	P	P	20 27 39.7	0.0
	0.3nm,0.7s,baz=299,slow=8.4,SNR=4.4						
NVAR	Mina Array Bea	61.42	63	P	P	20 29 04.0	-0.8
	0.4nm,0.5s,baz=305,slow=6.5,SNR=3.2						
ELK	Elko	61.74	60	P	P	20 29 06.2	-0.8
	0.8nm,0.7s,baz=284,slow=8.3,SNR=3.6						
DGMT	Dagmar	62.61	47	ePcP	PcP	20 29 52.6	+1.8
PDAR	Pinedale Array	63.62	55	P	P	20 29 19.1	-0.3
	0.5nm,0.8s,baz=336,slow=3.3,SNR=4.0						
LTX	Lajitas	76.45	61	eP	P	20 30 38.2	+0.2
TXAR	Lajitas Array	76.45	61	P	P	20 30 38.2	+0.2
	0.6nm,0.7s,baz=294,slow=4.1,SNR=4.4						

ISCJB 08 20:20:58.8±0.7, 10.°99S±0.°09×166.°1E±0.°1, h10km, mb4.3/13, Error ellipse: s-maj=17.3km s-min=10.7km az=153.2

IDC 08 20:20:59.2±1.6, 10.°91S×166.°07E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.8/44, mbtmp3.9/10, ML4.2/2, Error ellipse: s-maj=39.4km s-min=24.9km az=119.0

NEIC 08 20:21:00.4±0.9, 10.°89S×166.°10E, h10km, mb4.5/3, Error ellipse: s-maj=21.0km s-min=12.8km az=64.0

ISC 08 20:21:00.6±1.0, 10.°9S±0.°1×166.°1E±0.°2, h10km, n24, σ1.s48/21, mb4.1/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.21	283	Pn	Pn	20 22 31.1	-1.3
	8.7nm,0.3s,baz=229,slow=11,SNR=2.8						
DZM	Mont Dzumac	11.12	178	ePn	Pn	20 23 39.1	-0.8
DZM	Mont Dzumac	11.12	178	Pn	Pn	20 23 39.6	-0.3
	1.1nm,0.3s,baz=307,slow=10.0,SNR=7.3						
PINNC	Pines Island,	11.73	174	ePn	Pn	20 23 50.5	+2.4
H11N1	WAKE ISLAND Hy	30.43	2	T	T	20 58 53.8	
	baz=185						
H11N3	WAKE ISLAND Hy	30.43	2	T	T	20 58 57.5	
	baz=185						
H11N2	WAKE ISLAND Hy	30.44	2	T	T	20 58 57.6	
	baz=185						
STKA	Stephens Creek	30.78	224	P	P	20 27 16.9	+0.4
	0.8nm,0.5s,baz=61,slow=10,SNR=3.6						
BFZ	Birch Farm	31.00	165	eP	P	20 27 15.7	-2.6
	96nm,1.5s						
THZ	Tophouse	31.33	170	eP	P	20 27 20.7	-0.5
	70nm,1.8s						
WB2	Warramunga Arr	31.83	250	eP	P	20 27 25.6	-0.4
WR1	Warramunga Arr	31.84	250	eP	P	20 27 25.6	-0.4
	4.9nm,1.0s						
WRA	Warramunga Arr	31.84	250	P	P	20 27 25.6	-0.4
	1.6nm,0.7s,baz=81,slow=9.2,SNR=13						
KHZ	Kahutara	32.07	170	eP	P	20 27 26.3	-1.4
	114nm,1.8s						
ASAR	Alice Springs	33.15	243	P	P	20 27 36.5	-1.0
	0.5nm,0.8s,baz=62,slow=9.6,SNR=5.8						
BBOO	Buckleboo	35.17	227	eP	P	20 27 57.6	+2.7
	35nm,1.5s						
FITZ	Fitzroy Crossi	39.73	255	eP	P	20 28 34.0	+0.2
	4.6nm,0.8s						
FITZ	Fitzroy Crossi	39.73	255	P	P	20 28 34.2	+0.5
	3.9nm,0.6s,baz=86,slow=7.7,SNR=16						
CMAR	Chiang Mai Arr	72.35	293	P	P	20 32 28.1	+0.9
	1.1nm,1.1s,baz=131,slow=4.5,SNR=5.0						
SONA0	Songino Array	78.74	324	eP	P	20 33 05.4	+1.9
SONM	Songino Array	78.74	324	P	P	20 33 05.4	+1.9
	0.5nm,0.9s,baz=119,slow=5.2,SNR=4.3						
ILAR	Eielson Array	83.27	18	P	P	20 33 27.0	-0.1
	0.3nm,0.7s,baz=234,slow=5.1,SNR=4.0						
MK32	Makanchi Array	93.64	317	eP	P	20 34 15.8	-1.6
MKAR	Makanchi Array	93.64	317	P	P	20 34 15.8	-1.6
	0.5nm,0.7s,baz=104,slow=5.8,SNR=4.9						

ISCJB 08 20:21:44.2±0.9, 11.°00S±0.°10×165.°9E±0.°1, h10km, mb4.1/11, MS3.9/1, Error ellipse: s-maj=22.6km s-min=11.3km az=155.0

IDC 08 20:21:45.9±1.2, 10.°94S×165.°62E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/43, mbtmp3.9/9, ML3.8/1, MS3.6/2, Ms1 3.6/2, ms1mx3.0/47, Error ellipse: s-maj=33.1km s-min=24.1km az=100.0

NEIC 08 20:21:46.5±0.8, 10.°99S×165.°82E, h10km, mb4.4/3, Error ellipse: s-maj=21.3km s-min=11.9km az=69.0

ISC 08 20:21:46.9±1.0, 11.°0S±0.°1×165.°7E±0.°2, h10km, n20, σ1.s29/19, mb4.0/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.03	177	ePn	Pn	20 24 25.6	+0.7
DZM	Mont Dzumac	11.03	177	Pn	Pn	20 24 26.1	+1.2
	0.7nm,0.3s,baz=308,slow=20,SNR=1.7						
DZM				LR	LR	20 28 07.3	
	comp=Z,218nm,21.6s,baz=320,slow=34						
PINNC	Pines Island,	11.67	172	ePn	Pn	20 24 33.2	-0.3
BFZ	Birch Farm	30.99	164	eP	P	20 28 02.8	-1.7
	54nm,1.3s						
THZ	Tophouse	31.29	170	eP	P	20 28 05.9	-1.3
	15nm,1.2s						
WB2	Warramunga Arr	31.47	250	eP	P	20 28 09.7	+0.7
WR1	Warramunga Arr	31.48	250	eP	P	20 28 10.1	+1.0
	4.9nm,1.0s						
WRA	Warramunga Arr	31.48	250	P	P	20 28 10.0	+1.0
	2.2nm,0.8s,baz=81,slow=9.0,SNR=7.5						
ASAR	Alice Springs	32.79	243	P	P	20 28 21.1	+0.4
	0.4nm,0.5s,baz=65,slow=10,SNR=5.6						
RPZ	Rata Peaks	32.92	173	eP	P	20 28 21.2	-0.2
	71nm,1.8s						
RPZ	Rata Peaks	32.92	173	P	P	20 28 21.6	+0.1
	7.7nm,0.8s,baz=320,slow=16,SNR=4.0						
FITZ	Fitzroy Crossi	39.37	255	eP	P	20 29 18.4	+1.5
	8.0nm,1.4s						
FITZ	Fitzroy Crossi	39.37	255	P	P	20 29 17.7	+0.8
	1.8nm,0.7s,baz=109,slow=6.7,SNR=2.6						
USRK	Ussuriysk Ar.	62.90	333	LR	LR	20 55 03.4	
	comp=Z,93nm,21.7s,baz=12,slow=32						
CMAR	Chiang Mai Arr	72.07	294	P	P	20 33 10.2	-1.7
	0.3nm,0.6s,baz=127,slow=5.8,SNR=2.5						
SONA0	Songino Array	78.62	324	eP	P	20 33 49.5	+0.4
SONM	Songino Array	78.62	324	P	P	20 33 49.5	+0.4
	0.1nm,0.5s,baz=132,slow=2.1,SNR=2.4						
ILAR	Eielson Array	83.48	19	P	P	20 34 16.8	+2.3
	0.5nm,0.7s,baz=239,slow=4.9,SNR=6.7						
MK32	Makanchi Array	93.47	317	eP	P	20 35 01.1	-1.8
MKAR	Makanchi Array	93.47	317	P	P	20 35 01.1	-1.8
	0.3nm,0.8s,baz=99,slow=2.9,SNR=2.1						

IDC 08 20:23:36.3±2.0, 11.°10S×166.°23E, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.8/43, mbtmp3.8/8, ML4.8/1, Error

ellipse: s-maj=65.2km s-min=26.7km az=143.0
*ISCJB **08** 20:23:37.1±0.7, 11.°0S±0.°1×166.°1E±0.°1, h10^{km}, mb4.0/10, Error ellipse: s-maj=16.1km s-min=13.8km az=33.3*
*NEIC **08** 20:23:38.4±0.6, 10.°86S×166.°04E, h10^{km}, mb4.5/3, Error ellipse: s-maj=16.5km s-min=15.6km az=109.0*
ISC 08 20:23:38.6±0.8**, 10.°9S**±0.°1×**166.°2E**±0.°1**, h10^{km}, n23, σ1^{s}51**/17**, mb4.0**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.28	282	Pn	Pn	20 25 13.2	+1.8
	19nm,0.3s,baz=4.0,slow=2.1,SNR=8.5						
DZM	Mont Dzumac	11.16	179	*e*Pn	Pn	20 26 19.7	+1.4
NIUE	Niue	24.48	112	*e*P	P	20 28 57.6	-0.5
	244nm,1.3s						
H11S2	WAKE ISLAND Hy	29.16	1	T	T	21 00 07.3	
	baz=181						
H11S3	WAKE ISLAND Hy	29.17	1	T	T	21 00 07.7	
	baz=181						
H11S1	WAKE ISLAND Hy	29.18	1	T	T	21 00 08.9	
	baz=181						
H11N1	WAKE ISLAND Hy	30.39	1	T	T	21 01 42.3	
	baz=182,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.39	1	T	T	21 01 40.0	
	baz=182,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.40	1	T	T	21 01 40.4	
	baz=182,slow=76,SNR=13						
WB2	Warramunga Arr	31.92	250	*e*P	P	20 30 00.5	-4.2
	12nm,1.6s						
WR1	Warramunga Arr	31.93	250	*e*P	P	20 30 03.8	-1.0
	15nm,1.7s						
WRA	Warramunga Arr	31.93	250	P	P	20 30 03.8	-1.1
	0.3nm,0.6s,baz=80,slow=9.0,SNR=7.6						
ASAR	Alice Springs	33.24	243	P	P	20 30 15.2	-1.1
	0.5nm,0.9s,baz=68,slow=10,SNR=4.1						
FITZ	Fitzroy Crossi	39.83	255	*e*P	P	20 31 12.0	-0.4
	16nm,1.8s						
FITZ	Fitzroy Crossi	39.83	255	P	P	20 31 12.1	-0.3
	1.5nm,0.7s,baz=90,slow=6.6,SNR=5.1						
CMAR	Chiang Mai Arr	72.42	293	P	P	20 35 05.4	-0.2
	0.4nm,0.7s,baz=116,slow=4.1,SNR=3.9						
SONA0	Songino Array	78.76	324	*e*P	P	20 35 41.8	+0.2
SONM	Songino Array	78.76	324	P	P	20 35 41.8	+0.2
	0.3nm,0.5s,baz=130,slow=5.8,SNR=3.2						
ILAR	Eielson Array	83.20	18	P	P	20 36 06.2	+1.4
	0.4nm,0.5s,baz=235,slow=4.9,SNR=9.4						
MK32	Makanchi Array	93.67	317	*e*P	P	20 36 54.9	-0.6
MKAR	Makanchi Array	93.67	317	P	P	20 36 54.9	-0.6
	0.8nm,0.9s,baz=116,slow=4.9,SNR=0.9						
ARA0	ARCESS Array S	116.25	346	*e*PKPdf	PKiKP	20 42 20.8	-1.0
ARCES	ARCESS Array B	116.25	346	PKP	PKiKP	20 42 20.8	-1.0
	1.4nm,1.0s,baz=58,slow=3.0,SNR=3.6						

IDC 08 20:27:30.6±1.6**, 10.°99S**×**165.°80E, h0^{km}, mb3.5**/5**, mb1 3.7**/6**, mb1mx3.6**/38**, mbtmp3.6**/6**, ML3.8**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.9**/23**, Error ellipse: s-maj=50.4km s-min=27.8km az=119.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.97	284	LR	LR	20 31 23.3	
	comp=Z,276nm,21.9s,baz=140,slow=39						
DZM	Mont Dzumac	11.04	177	Pn	Pn	20 30 11.1	+1.1
	0.7nm,0.3s,baz=159,slow=5.7,SNR=2.2						
WRA	Warramunga Arr	31.56	250	P	P	20 33 54.7	-0.4
	0.6nm,0.8s,baz=81,slow=8.7,SNR=5.2						
ASAR	Alice Springs	32.87	243	P	P	20 34 06.1	-0.6
	0.3nm,0.7s,baz=69,slow=10,SNR=3.8						
SONM	Songino Array	78.65	324	P	P	20 39 35.2	+0.5
	0.1nm,0.5s,baz=122,slow=7.4,SNR=1.9						
ILAR	Eielson Array	83.44	18	P	P	20 39 58.8	-0.9
	0.3nm,0.6s,baz=226,slow=5.4,SNR=6.3						
MKAR	Makanchi Array	93.52	317	P	P	20 40 49.5	+1.0
	0.3nm,0.9s,baz=94,slow=5.8,SNR=3.3						

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*ISCJB **08** 20:36:10.1±0.6, 11.°03S±0.°06×165.°93E±0.°06, h10^{km}, mb4.7/1, MS3.6/1, Error ellipse: s-maj=10.9km s-min=6.9km az=135.4*
*IDC **08** 20:36:10.3±1.6, 10.°90S×165.°91E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.6/38, mbtmp3.8/6, ML4.3/2, MS3.5/2, Ms1 3.6/2, ms1mx3.1/26, Error ellipse: s-maj=36.1km s-min=29.8km az=142.0*
*NEIC **08** 20:36:11.8±0.5, 10.°92S×165.°93E, h10^{km}, mb4.7/5, Error ellipse: s-maj=11.1km s-min=8.4km az=45.0*
ISC 08 20:36:12.0±0.8**, 10.°96S**±0.°09×**165.°95E**±0.°08**, h10^{km}, n23, σ0^{s}94**/18**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	284	Pn	Pn	20 37 42.3	0.0
	12nm,0.3s,baz=152,slow=6.4,SNR=4.9						
HNR				Sn	Sn	20 38 53.1	+0.9
	5.4nm,0.3s,baz=15,slow=20,SNR=2.0						
HNR				LR	LR	20 40 10.6	
	comp=Z,303nm,19.1s,baz=86,slow=40						
MARNC	Mare, Loyalty	10.65	169	*e*Pn	Pn	20 38 45.2	+0.5
DZM	Mont Dzumac	11.05	178	Pn	Pn	20 38 52.1	+1.7
	1.2nm,0.3s,baz=343,slow=15,SNR=10						
DZM				Sn	Sn	20 40 53.4	-0.8
	0.3nm,0.3s,baz=102,slow=18,SNR=4.2						
PINNC	Pines Island,	11.67	173	*e*Pn	Pn	20 38 59.1	+0.4
FUNA	Funafuti	13.28	81	*e*Pn	Pn	20 39 21.4	+0.6
H11S2	WAKE ISLAND Hy	29.28	1	T	T	21 12 35.9	
	baz=181						
H11S3	WAKE ISLAND Hy	29.28	1	T	T	21 12 37.9	
	baz=181,slow=74						
H11S1	WAKE ISLAND Hy	29.30	1	T	T	21 12 39.6	
	baz=181,slow=74						
BKZ	Black Stump Fm	29.61	163	*e*P	P	20 42 18.0	+0.5
	28nm,1.7s						
H11N1	WAKE ISLAND Hy	30.50	2	T	T	21 14 09.8	
	baz=182,slow=76						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	21 14 09.0	
	baz=182,slow=76						
H11N2	WAKE ISLAND Hy	30.52	2	T	T	21 14 10.4	
	baz=182,slow=76						
BFZ	Birch Farm	30.97	165	*e*P	P	20 42 27.4	-2.0
	59nm,1.4s						
THZ	Tophouse	31.28	170	*e*P	P	20 42 33.1	+0.8
	55nm,1.9s						
WR1	Warramunga Arr	31.70	250	*e*P	P	20 42 35.7	-0.5
	5.2nm,1.1s						
WRA	Warramunga Arr	31.70	250	P	P	20 42 35.7	-0.5
	0.5nm,0.6s,baz=81,slow=9.3,SNR=4.1						
KHZ	Kahutara	32.03	169	*e*P	P	20 42 38.3	-0.4
	13nm,1.0s						
ASAR	Alice Springs	33.01	243	P	P	20 42 46.7	-1.0
	0.6nm,0.7s,baz=68,slow=9.6,SNR=4.0						
FITZ	Fitzroy Crossi	39.59	255	*e*P	P	20 43 44.7	+0.8
	18nm,1.9s						
CMAR	Chiang Mai Arr	72.26	293	LR	LR	21 17 56.3	
	comp=Z,38nm,20.6s,baz=138,slow=35						
ILAR	Eielson Array	83.37	18	P	P	20 48 39.0	-0.1
	0.7nm,0.9s,baz=235,slow=4.6,SNR=5.7						
MK32	Makanchi Array	93.60	317	*e*P	P	20 49 27.9	-0.8
MKAR	Makanchi Array	93.60	317	P	P	20 49 27.9	-0.7
	0.3nm,0.9s,baz=98,slow=4.4,SNR=3.7						

IDC 08 20:49:21.0±2.8**, 10.°86S**×**165.°60E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/39**, mbtmp3.7**/4**, ML3.6**/1**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.9**/25**, Error ellipse: s-maj=66.0km s-min=35.7km az=96.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.18	176	Pn	Pn	20 52 02.4	+0.1
	0.4nm,0.3s,baz=299,slow=20,SNR=6.1						
H11S2	WAKE ISLAND Hy	29.18	2	T	T	21 25 42.6	
	baz=180						
H11S3	WAKE ISLAND Hy	29.19	2	T	T	21 25 43.5	
	baz=180						
H11S1	WAKE ISLAND Hy	29.20	2	T	T	21 25 43.1	
	baz=180						
H11N1	WAKE ISLAND Hy	30.41	2	T	T	21 27 12.7	
	baz=185						
H11N3	WAKE ISLAND Hy	30.41	2	T	T	21 27 13.7	
	baz=185						
H11N2	WAKE ISLAND Hy	30.42	2	T	T	21 27 14.7	
	baz=185						
WRA	Warramunga Arr	31.41	249	P	P	20 55 44.3	+0.1
	0.5nm,0.7s,baz=81,slow=8.9,SNR=6.0						
ASAR	Alice Springs	32.75	243	P	P	20 55 55.7	-0.2
	0.5nm,0.6s,baz=63,slow=10,SNR=5.3						
RAR	Rarotonga	34.76	112	LR	LR	21 07 01.2	
	comp=Z,93nm,21.2s,baz=146,slow=30						
SONM	Songino Array	78.43	324	P	P	21 01 23.9	0.0
	0.2nm,0.4s,baz=134,slow=6.2,SNR=3.4						

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*ISCJB **08** 20:56:22.3±0.9, 10.°7S±0.°1×166.°0E±0.°1, h10^{km}, mb4.1/8, Error ellipse: s-maj=16.5km s-min=12.7km az=137.2*
*IDC **08** 20:56:22.3±1.2, 10.°64S×166.°06E, h0^{km}, mb3.9/5, mb1 4.2/7, mb1mx3.7/49, mbtmp4.0/7, ML4.1/2, Error ellipse: s-maj=41.5km s-min=21.8km az=144.0*
*NEIC **08** 20:56:23.8±1.0, 10.°60S×166.°04E, h10^{km}, mb4.3/3, Error ellipse: s-maj=18.0km s-min=13.1km az=48.0*
ISC 08 20:56:23.8±1.0**, 10.°6S**±0.°1×**166.°1E**±0.°1**, h10^{km}, n21, σ1^{s}47**/15**, mb4.1**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.17	280	Pn	Pn	20 57 55.5	+0.5
	5.2nm,0.3s,baz=174,slow=6.3,SNR=3.7						
MARNC	Mare, Loyalty	10.96	170	*e*Pn	Pn	20 58 58.4	-2.4
DZM	Mont Dzumac	11.40	178	*e*Pn	Pn	20 59 09.4	+2.6
DZM	Mont Dzumac	11.40	178	Pn	Pn	20 59 08.2	+1.4
	1.2nm,0.3s,baz=339,slow=19,SNR=18						
PINNC	Pines Island,	12.00	174	*e*Pn	Pn	20 59 17.1	+2.0
CTA	Charters Tower	21.30	241	P	P	21 01 11.6	+0.6
	4.6nm,0.9s,baz=61,slow=10,SNR=2.5						
CTAO	Charters Tower	21.30	241	*e*P	P	21 01 10.1	-0.8
	30nm,1.5s						
H11S2	WAKE ISLAND Hy	28.93	1	T	T	21 32 47.4	
	baz=181,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	28.93	1	T	T	21 32 47.9	
	baz=181,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	28.94	1	T	T	21 32 49.2	
	baz=181,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	30.15	1	T	T	21 34 21.2	
	baz=182,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.15	2	T	T	21 34 21.6	
	baz=182,slow=76,SNR=9.9						
H11N2	WAKE ISLAND Hy	30.16	2	T	T	21 34 21.7	
	baz=182,slow=76,SNR=10						
THZ	Tophouse	31.60	170	*e*P	P	21 02 46.2	-0.7
	69nm,2.0s						
WB2	Warramunga Arr	31.94	249	*e*P	P	21 02 48.8	-1.4
WR1	Warramunga Arr	31.95	249	*e*P	P	21 02 49.3	-0.9
	5.8nm,1.0s						
WRA	Warramunga Arr	31.95	249	P	P	21 02 49.3	-0.9
	1.9nm,0.9s,baz=82,slow=8.9,SNR=14						
AS31	Alice Springs	33.29	243	*e*P	P	21 03 01.1	-0.9
	1.0nm,1.0s						
ASAR	Alice Springs	33.29	243	P	P	21 03 00.8	-1.2
	2.2nm,0.8s,baz=73,slow=9.8,SNR=20						
ILAR	Eielson Array	83.00	18	P	P	21 08 49.3	+0.4
	0.7nm,0.9s,baz=226,slow=6.3,SNR=3.8						
NVAR	Mina Array Bea	85.48	50	P	P	21 09 02.8	+0.3
	0.5nm,0.5s,baz=230,slow=5.6,SNR=3.0						

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*IDC **08** 21:03:32.9±1.4, 11.°25S×165.°20E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.8/44, mbtmp3.9/9, ML4.1/2, Error ellipse: s-maj=33.0km s-min=25.9km az=113.0*
*ISCJB **08** 21:03:36.6±0.9, 11.°4S±0.°1×165.°1E±0.°1, h34^{km}, mb3.7/7, Error ellipse: s-maj=19.3km s-min=11.3km az=39.8*
ISC 08 21:03:38.2±1.1**, 11.°3S**±0.°1×**165.°2E**±0.°1**, h34^{km}, n9, σ0^{s}74**/10**, mb3.8**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.46	289	Pn	Pn	21 04 57.7	+0.5
	15nm,0.3s,baz=204,slow=3.6,SNR=3.8						
HNR				Sn	Sn	21 05 58.0	-0.9
	baz=285,slow=20,SNR=2.6						
DZM	Mont Dzumac	10.78	174	Pn	Pn	21 06 10.1	-0.2
	0.6nm,0.3s,baz=310,slow=21,SNR=11						
STKA	Stephens Creek	29.87	223	P	P	21 09 43.2	+0.6
	1.5nm,0.6s,baz=62,slow=9.8,SNR=4.1						
WRA	Warramunga Arr	30.86	250	P	P	21 09 51.5	-0.2
	2.0nm,1.0s,baz=83,slow=9.0,SNR=12						
ASAR	Alice Springs	32.17	243	P	P	21 10 02.2	-0.9
	0.7nm,0.7s,baz=66,slow=10.0,SNR=11						
CMAR	Chiang Mai Arr	71.70	294	P	P	21 14 57.8	+0.5
	0.2nm,0.3s,baz=125,slow=5.6,SNR=1.6						
SONM	Songino Array	78.54	324	P	P	21 15 37.0	+0.7
	0.5nm,0.9s,baz=134,slow=6.2,SNR=2.9						
ILAR	Eielson Array	83.94	19	P	P	21 16 03.5	-0.9
	0.5nm,0.7s,baz=240,slow=5.3,SNR=4.7						
MKAR	Makanchi Array	93.32	317	P	P	21 16 49.7	-0.1
	0.3nm,0.7s,baz=111,slow=7.9,SNR=2.8						

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*UCR **08** 21:06:06.9±1.2, 15.°05N×92.°95W, h112^{km}±20^{km}, MD4.5, ML4.5, mb4.7(NEIC)*
*ISCJB **08** 21:06:10.7±0.4, 15.°04N±0.°02×92.°70W±0.°03, h109^{km}±3^{km}, mb4.6/118, Error ellipse: s-maj=4.9km s-min=3.0km az=143.2*
*MEX **08** 21:06:10.4±0.7, 14.°82N×92.°88W, h66^{km}±11^{km}, MD4.4*
*NEIC **08** 21:06:11.2±0.6, 15.°01N×92.°62W, h98^{km}±5^{km}, mb4.7/135, MD4.8(MEX), Error ellipse: s-maj=6.9km s-min=3.9km az=224.0*
NEIC Felt [II] at Tapachula. Also felt at Jiquipilas. Felt at Quetzaltenango, Guatemala.
*IDC **08** 21:06:15.9±1.7, 15.°32N×92.°14W, h130^{km}±14^{km}, mb4.0/21, mb1 4.2/23, mb1mx4.0/46, mbtmp4.4/23, MS3.6/5, Ms1 3.6/5, ms1mx3.1/35, Error ellipse: s-maj=27.2km s-min=10.5km az=48.0*
ISC 08 21:06:09.8±0.7**, 15.°09N**±0.°05×**92.°79W**±0.°05**, h84^{km}**±6^{km}**, n464, σ1^{s}62**/476**, mb4.7**/118**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.54	110	*e*P	Pn	21 06 22.5	-1.8
THIG				*e*S	Sn	21 06 32.2	-2.8
PCIG		0.74	326	*i* P	Pn	21 06 26.7	+0.5
PCIG				*e*S	Sn	21 06 38.9	+0.5
CCIG	Comitan	1.34	28	*e*Pn	Pn	21 06 36.0	+2.6
CCIG	Comitan	1.34	28	*i* P	Pn	21 06 36.1	+2.6
CCIG				*i* S	Sn	21 06 55.2	+3.9
FUG	Fuego 3	1.99	109	*e*P	Pn	21 06 42.8	+1.0
FUG				*e*S	Sn	21 07 09.0	+2.7
PCG	Pacaya	2.22	108	*e*P	Pn	21 06 46.3	+1.3
PCG				*e*S	Sn	21 07 13.9	+2.0
APG	El Apazote	2.25	92	P	Pn	21 06 46.1	+0.8
	93nm,0.3s,baz=324,slow=13,SNR=365						
APG				S	Sn	21 07 14.1	+1.6
	398nm,0.3s,baz=331,slow=19,SNR=17						
NBG	Las Nubes	2.41	102	*e*P	Pn	21 06 49.0	+1.4
IXG	Ixpaco	2.44	112	*e*P	Pn	21 06 47.9	+0.1
CMIG	Matias Romero	2.83	315	P	Pn	21 06 53.9	+0.9
	40nm,0.3s,baz=134,slow=7.9,SNR=94						
CMIG				S	Sn	21 07 25.2	-0.9
	289nm,0.3s,baz=102,slow=18,SNR=15						
MRL	Marmol	2.99	90	*e*P	Pn	21 06 56.2	+0.9
MRL				*e*S	Sn	21 07 33.9	+3.5
RTR	El Retiro	3.27	111	*e*P	Pn	21 06 59.2	+0.2
HUIG	Huatulco	3.27	282	*e*P	Pn	21 06 57.5	-1.4
HUIG				*i* S	Sn	21 07 34.6	-2.2
SBLS	San Blas	3.31	112	*e*P	Pn	21 06 59.5	-0.2
CEVE	Cerro Verde	3.31	112	*e*P	Pn	21 06 59.9	+0.1
CEVE				IAML		21 07 50.1	
	comp=Z,5µm,0.4s						
SNJE	San Jose	3.31	111	*e*P	Pn	21 06 59.4	-0.3
MTO3	Montecristo	3.39	101	*e*P	Pn	21 07 01.9	+1.2
BOQS	Boqueron	3.66	111	*e*P	Pn	21 07 04.6	+0.2
SNET	Serv Nac Est T	3.72	112	*e*P	Pn	21 07 06.1	+1.1
SNET				*e*S	Sn	21 07 50.2	+2.3
LFU	La Fuente	3.80	110	*e*P	Pn	21 07 06.5	+0.4
LBRS	Las Brisas	3.87	110	*e*P	Pn	21 07 07.8	+0.7
LFRS	El Faro	3.90	112	*e*P	Pn	21 07 07.3	-0.2
PAVA	Las Pavas	3.98	110	*e*P	Pn	21 07 08.2	-0.4
PACA	Pacayal	4.62	110	*e*P	Pn	21 07 18.4	+1.1
PACA				*e*S	Sn	21 08 13.1	+3.2
LCND	La Caada	5.07	110	*e*P	Pn	21 07 23.6	+0.2
LCND				*e*S	Sn	21 08 24.2	+3.5
LCND				IAML		21 08 40.2	
	comp=Z,601nm,0.5s						
CNCH	Conchagua	5.13	110	*e*P	Pn	21 07 24.6	+0.2
CNCH				*e*S	Sn	21 08 25.0	+2.6
TGUH	Tegucigalpa,Un	5.44	100	*e*Pn	Pn	21 07 28.6	+0.2
TGUH	Tegucigalpa,Un	5.44	100	*e*P	Pn	21 07 28.6	+0.2
LVIG	Laguna Verde	5.76	324	*e*Pn	Pn	21 07 32.2	-0.6
CRIN	San Cristobal	6.06	112	*e*P	Pn	21 07 37.7	+0.8
CRIN				*e*S	Sn	21 08 48.0	+3.1
CRIN				IAML		21 09 07.6	
	comp=N,580nm,0.5s						
CNGN	Cerro Negro	6.45	113	*e*P	Pn	21 07 42.2	-0.1
MYIG	Mrida	6.52	26	*e*Pn	Pn	21 07 43.7	+0.7
ESTN	Estel	6.54	107	*e*Pn	Pn	21 07 44.0	+0.5
ESTN	Estel	6.54	107	*e*P	Pn	21 07 44.0	+0.5
MOMN	Momotombo	6.63	113	*e*P	Pn	21 07 44.7	0.0
TEIG	Tepich	6.68	39	*e*Pn	Pn	21 07 45.2	0.0
TEIG	Tepich	6.68	39	*e*P	Pn	21 07 45.1	-0.2
COPN	Copaltepe	6.68	115	*e*P	Pn	21 07 44.8	-0.6
MATN	Matagalpa	7.00	107	*e*P	Pn	21 07 50.1	+0.3
MATN				*e*S	Sn	21 09 11.7	+3.7
BOAB	BOACO BROADBAN	7.40	110	*e*Pn	Pn	21 07 52.4	-2.8
ACON	Acoyapa	8.03	112	*e*P	Pn	21 08 03.5	-0.2
ESPN	Las Esperanzas	8.74	108	*e*Pn	Pn	21 08 10.8	-2.6
JTS	JuntasAbangare	9.01	121	*e*Pn	Pn	21 08 16.7	-0.5
JTS				*e*S	Sn	21 09 58.5	+1.4
JTS	JuntasAbangare	9.01	121	P	Pn	21 08 17.9	+0.7
	comp=N,11nm,0.3s,baz=355,slow=8.5,SNR=20						
JTS				S	Sn	21 10 01.2	+4.1
	comp=N,0.2nm,0.3s,baz=131,slow=20,SNR=2.4						
LNIG	Linares	11.60	328	*e*Pn	Pn	21 08 54.1	+1.8
WBCY	West Bay, Gran	11.69	67	*e*Pn	Pn	21 08 53.7	+0.2
FSCY	Frank Sound, G	11.86	68	*e*Pn	Pn	21 08 56.6	+0.8
ZAIG	Zacatecas	11.99	311	*e*Pn	Pn	21 09 01.4	+3.4
833A	Chaparral WMA,	14.52	336	*e*Pn	Pn	21 09 32.7	+1.6
833A	Chaparral WMA,	14.52	336	P	Pn	21 09 33.1	+2.0
	baz=155,SNR=9.5						
MTDJ	Mount Denham	14.95	76	*e*Pn	P	21 09 39.7	-0.6
061Z	Ochoppi	15.44	44	*e*Pn	Pn	21 09 41.1	-1.8
	comp=N,185nm,0.8s						
061Z	Ochoppi	15.44	44	P	Pn	21 09 42.4	-0.4
	baz=228,SNR=8.3						
058A	Arcadia	15.70	39	P	Pn	21 09 46.0	-0.1
	baz=222						
059A	Moore Haven	16.04	41	P	Pn	21 09 50.1	-0.3
	baz=224						
958A	Wauchula	16.12	38	P	Pn	21 09 51.3	0.0
	baz=221						
435B	Jarrell	16.23	345	*e*Pn	Pn	21 09 55.2	+2.5
	comp=N,44nm,0.8s						
435B	Jarrell	16.23	345	P	Pn	21 09 54.9	+2.2
	baz=164						
857A	Zephyrhills	16.36	35	P	Pn	21 09 53.7	-0.7
	baz=218						
448A	Bay Minette	16.40	15	P	Pn	21 09 55.8	+1.0
	baz=197						
449A	Pace	16.41	17	P	Pn	21 09 56.2	+1.3
	baz=199						
552A	Lynn Haven	16.48	23	P	Pn	21 09 56.7	+0.9
	baz=206						
959A	Okeechobee	16.60	40	P	Pn	21 09 57.5	+0.1
	baz=224						
JCT	Junction City	16.62	338	*e*Pn	Pn	21 10 00.0	+2.4
	comp=N,19nm,1.0s						
JCT				*e*Sn	Sn	21 12 53.5	-8.2
JCT	Junction City	16.62	338	P	Pn	21 09 59.4	+1.8
	baz=156						
NATX	Nacogdoches	16.68	354	*e*Pn	Pn	21 10 00.1	+1.8
	comp=N,38nm,0.7s						
NATX				*e*S	Sn	21 12 50.5	-13
NATX	Nacogdoches	16.68	354	P	Pn	21 09 59.4	+1.1
	baz=174						
DWPF	Disney Wildern	16.70	37	*e*Pn	Pn	21 09 58.2	-0.3
DWPF	Disney Wildern	16.70	37	P	Pn	21 09 58.5	0.0
	baz=221						
451A	Vernon	16.75	22	P	P	21 10 00.3	+0.3
	baz=204,SNR=5.7						
HPIG		16.82	317	*e*Pn	P	21 10 04.3	+3.2
	comp=N,25nm,0.6s						
655A	Horseshoe Beac	16.83	30	P	Pn	21 10 00.3	+0.2
	baz=213						
BRAL	Brewton	16.84	17	*e*Pn	P	21 10 03.6	+2.5
	comp=N,258nm,1.0s						
BRAL				*e*S	Sn	21 12 58.2	-8.9
BRAL	Brewton	16.84	17	P	Pn	21 10 01.3	+1.0
	baz=199,SNR=10						
553A	Crawfordville	16.88	26	P	P	21 10 02.0	+0.5
	baz=209						
349A	Repton	16.98	17	P	P	21 10 04.5	+1.9
	baz=199,SNR=23						
757A	Oxford	16.98	34	P	P	21 10 02.9	+0.3
	baz=218						
859A	Kempfer Cattle	16.98	39	P	Pn	21 10 02.3	+0.3
	baz=222						
656A	Willston	17.07	32	*e*Pn	Pn	21 10 02.6	-0.5
	comp=N,172nm,1.0s						
656A	Willston	17.07	32	P	P	21 10 04.1	+0.5
	baz=216						
554A	Perry	17.11	28	P	P	21 10 05.0	+1.0
	baz=211						
452A	Marianna	17.17	23	P	P	21 10 05.6	+1.0
	baz=206,SNR=7.4						
VBMS	Vicksburg	17.18	7	*e*P	Pn	21 10 04.9	+0.5
	comp=N,65nm,0.8s						
VBMS	Vicksburg	17.18	7	P	P	21 10 07.0	+2.2
	baz=188						
350A	Dozier	17.29	19	P	Pn	21 10 08.1	+2.3
	baz=201						
WHTX	Lake Whitney,	17.35	347	*e*P	Pn	21 10 12.4	+5.8
	comp=N,32nm,0.7s						
WHTX				*e*Sn	Sn	21 13 09.4	-10
WHTX	Lake Whitney,	17.35	347	P	Pn	21 10 09.4	+2.8
	baz=165,SNR=8.8						
TXAR	Lajitas Array	17.37	326	P	Pn	21 10 11.1	+4.2
	comp=N,1.4nm,0.3s,baz=153,slow=11,SNR=65						
TX31	Lajitas Ar. Si	17.37	326	*e*P	Pn	21 10 11.4	+4.5
351A	Pinckard	17.40	21	P	Pn	21 10 08.8	+1.7
	baz=204,SNR=12						
758A	Lake Helen	17.47	36	P	Pn	21 10 08.5	+0.5
	baz=220						
555A	McAlpin	17.48	29	P	Pn	21 10 09.4	+1.3
	baz=213,SNR=5.4						
453A	Whigham	17.51	25	P	Pn	21 10 10.7	+2.3
	baz=208						
GTBY	Guantanamo Bay	17.53	72	*e*P	Pn	21 10 09.7	+0.9
	comp=N,32nm,0.8s						
249A	Camden	17.59	16	P	Pn	21 10 11.2	+1.8
	baz=198,SNR=10.0						
145A	Houston Renfro	17.63	8	P	Pn	21 10 11.6	+1.7
	baz=189						
556A	Lake Butler	17.65	31	P	Pn	21 10 10.8	+0.6
	baz=215						
454A	Quitman	17.68	27	P	Pn	21 10 11.3	+0.8
	baz=210						
658A	Bunnell	17.79	35	P	Pn	21 10 12.2	+0.3
	baz=219						
352A	Blakely	17.83	22	*e*P	P	21 10 12.4	+0.4
	comp=N,339nm,1.0s						
352A	Blakely	17.83	22	P	Pn	21 10 14.0	+1.7
	baz=205,SNR=21						
250A	Grady	17.83	18	*e*P	Pn	21 10 15.1	+2.7
	comp=N,103nm,1.0s						
250A	Grady	17.83	18	P	Pn	21 10 14.1	+1.7
	baz=201,SNR=7.1						
455A	Stateville	17.97	28	P	Pn	21 10 15.6	+1.5
	baz=212						
147A	Livingston	17.98	12	*e*P	Pn	21 10 17.3	+3.2
	comp=N,68nm,0.7s						
147A	Livingston	17.98	12	P	Pn	21 10 16.4	+2.3
	baz=194						
353A	Camilla	17.98	24	P	Pn	21 10 15.8	+1.6
	baz=208,SNR=9.5						
557A	Orange Park	18.01	33	P	Pn	21 10 15.4	+0.8
	baz=216						
Z41A	Richland Creek	18.09	360	P	Pn	21 10 16.7	+1.3
	baz=180,SNR=6.2						
251A	Midway	18.21	20	P	Pn	21 10 17.7	+0.7
	baz=203,SNR=13						
149A	Jones	18.26	16	P	Pn	21 10 18.3	+0.7
	baz=199						
TIGA	Tifton	18.32	26	P	Pn	21 10 18.5	+0.2
	baz=209						
252A	Lumpkin	18.36	22	P	Pn	21 10 19.7	+0.9
	baz=205,SNR=9.4						
150A	Eclectic	18.49	18	P	Pn	21 10 20.8	+0.5
	baz=201,SNR=14						
ABTX	Abilene, Hawle	18.54	342	*e*P	P	21 10 22.1	+2.4
	comp=N,22nm,0.7s						
ABTX	Abilene, Hawle	18.54	342	P	P	21 10 21.6	+1.8
	baz=159						
355A	Pearson	18.56	28	P	P	21 10 20.7	+0.7
	baz=211						
LRAL	Lakeview Retre	18.62	15	*e*P	Pn	21 10 22.8	+0.9
	comp=N,55nm,1.0s						
LRAL	Lakeview Retre	18.62	15	P	Pn	21 10 22.4	+0.5

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      baz=198,SNR=9.5
151A  Opelika             18.64  20  P     Pn    21 10 22.2 +0.1
      baz=203,SNR=6.1
253A  Americus            18.65  24  P     P     21 10 22.1 +1.2
      baz=207
356A  Blackshear          18.88  29  P     P     21 10 24.0 +0.6
      baz=213
254A  Abbeville           18.89  26  P     P     21 10 24.4 +0.9
      baz=209,SNR=6.0
Z49A  Columbiana          18.90  16  P     Pn    21 10 25.7 +0.6
      baz=199,SNR=17
152A  Waverly Hall        18.98  21  eP    Pn    21 10 26.4 +0.3
      comp=N,77nm,1.3s
152A  Waverly Hall        18.98  21  P     P     21 10 25.8 +1.2
      baz=204,SNR=9.3
Z50A  Ashland             19.12  18  eP    Pn    21 10 28.1 +0.3
      comp=N,40nm,0.9s
Z50A  Ashland             19.12  18  P     Pn    21 10 28.0 +0.1
      baz=200,SNR=7.4
ZARC  Zaragoza, Cauc      19.13 111  eP    P     21 10 22.8  -3.6
ZARC  Zaragoza, Cauc      19.13 111  eP    P     21 10 22.8  -3.6
255A  Hazlehurst          19.22  28  P     Pn    21 10 28.6  -0.3
      baz=211
153A  Fort Valley         19.29  23  P     Pn    21 10 29.6  -0.2
      baz=207
X41A  Kaden, Bauxite      19.32   1  P     Pn    21 10 30.8 +0.6
      baz=181
MIAR  Mount Ida           19.38 358  eP    Pn    21 10 33.0 +2.1
      comp=N,136nm,0.9s
MIAR                                 eS    S     21 13 52.2  -12
MIAR  Mount Ida           19.38 358  P     P     21 10 31.0 +2.0
      baz=178,SNR=33
Y48A  Jasper              19.42  14  P     Pn    21 10 31.4 +0.1
      baz=196
X43A  Marvell             19.42   5  P     Pn    21 10 31.6 +0.3
      baz=186,SNR=6.4
256A  Glennville          19.53  29  P     P     21 10 31.7 +1.1
      baz=213
154A  Montrose            19.54  25  eP    P     21 10 32.1 +1.5
      comp=N,138nm,0.8s
154A  Montrose            19.54  25  P     P     21 10 31.5 +0.8
      baz=209,SNR=5.8
Z52A  Williamson          19.55  21  P     Pn    21 10 32.7  -0.2
      baz=205,SNR=6.3
Y49A  Blount Mountai      19.55  16  eP    P     21 10 32.0 +1.2
      comp=N,28nm,1.0s
Y49A  Blount Mountai      19.55  16  P     P     21 10 32.5 +1.7
      baz=199
OXF   Oxford              19.58   8  eP    Pn    21 10 33.9 +0.7
      comp=N,156nm,1.0s
OXF                                  eS    S     21 13 58.1  -10
OXF   Oxford              19.58   8  P     P     21 10 32.9 +1.8
      baz=190,SNR=16
YOTC  Yotoco, Valle       19.59 123  eP    P     21 10 30.8  -0.8
YOTC  Yotoco, Valle       19.59 123  eP    P     21 10 30.8  -0.8
UALR  University of       19.60   1  eP    Pn    21 10 35.6 +2.1
      comp=N,43nm,0.8s
Y50A  Piedmont            19.77  18  P     P     21 10 34.5 +1.2
      baz=200,SNR=9.0
155A  Kite                19.82  26  P     Pn    21 10 35.3  -0.7
      baz=210
X47A  Russelville         19.85  12  P     P     21 10 34.9 +0.9
      baz=194,SNR=10
Z53A  Monticello          19.95  23  P     P     21 10 36.0 +1.0
      baz=207,SNR=15
X48A  Hartselle           19.96  14  eP    P     21 10 36.5 +1.3
      comp=N,72nm,0.8s
X48A  Hartselle           19.96  14  P     P     21 10 36.8 +1.6
      baz=196,SNR=12
Y51A  Rockmart            19.99  19  P     P     21 10 37.1 +1.6
      baz=202
W41B  Gary Mavity, V      20.00   1  eP    Pn    21 10 38.4 +0.3
      comp=N,43nm,1.0s
W41B  Gary Mavity, V      20.00   1  P     P     21 10 37.9 +2.3
      baz=182,SNR=9.4
GDL2  Guadalupe Moun      20.04 330  eP    P     21 10 38.9 +2.7
W39A  Magazine            20.04 358  eP    P     21 10 38.3 +2.3
      comp=N,25nm,0.9s
W39A  Magazine            20.04 358  P     P     21 10 38.3 +2.3
      baz=178
GOGA  Godfrey             20.10  23  eP    P     21 10 38.1 +1.3
      comp=N,103nm,1.0s
GOGA                                 eS    S     21 14 16.5  -1.5
GOGA  Godfrey             20.10  23  P     P     21 10 38.2 +1.4
      baz=207,SNR=6.2
MNTX  Cornudas Mount      20.14 327  eP    P     21 10 39.8 +2.6
      comp=N,12nm,0.8s
MNTX  Cornudas Mount      20.14 327  P     P     21 10 39.3 +2.1
      baz=143,SNR=19
Z54A  Sparta              20.19  25  P     P     21 10 38.2 +0.4
      baz=209,SNR=5.9
X49A  Woodville           20.20  16  P     P     21 10 39.7 +1.9
      baz=198,SNR=18
POPC  Popayan, Colom      20.20 127  eP    Pn    21 10 39.6  -1.3
POPC  Popayan, Colom      20.20 127  eP    Pn    21 10 39.6  -1.3
W45A  Hickory Valley      20.24   9  P     P     21 10 39.5 +1.2
      baz=190,SNR=10
PLAL  Pickwick Lake       20.26  11  eP    Pn    21 10 43.5 +2.4
      comp=N,26nm,0.8s
156A  Sylvania            20.28  28  P     P     21 10 39.8 +1.1
      baz=213
Y52A  Lilburn             20.29  21  eP    P     21 10 40.0 +1.3
      comp=N,82nm,0.9s
Y52A  Lilburn             20.29  21  P     P     21 10 40.1 +1.3
      baz=205,SNR=17
WMOK  Wichita Mounta      20.29 346  eP    P     21 10 40.9 +2.0
      comp=N,11nm,0.6s
WMOK                                 eS    S     21 14 17.7  -4.1
WMOK  Wichita Mounta      20.29 346  P     P     21 10 40.7 +1.8
      baz=164,SNR=14
X50B  Fort Payne          20.33  17  P     P     21 10 40.9 +1.6
      baz=200,SNR=16
W46A  Michie              20.35  10  P     P     21 10 41.0 +1.6
      baz=192
Y53A  Monroe              20.45  22  P     P     21 10 41.2 +0.7
      baz=206,SNR=12
OTAV  Otavalo             20.46 135  eP    Pn    21 10 41.7  -2.4
      comp=N,1.0nm,0.4s
Z55A  Blythe              20.47  26  P     P     21 10 41.8 +1.0
      baz=210,SNR=5.2
SOTA  Rioblanco           20.51 127  eP    Pn    21 10 42.6  -2.2
SOTA  Rioblanco           20.51 127  eP    Pn    21 10 42.6  -2.2
PCON  Cinco Dias          20.55 127  eP    Pn    21 10 43.9  -1.4
PCON  Cinco Dias          20.55 127  eP    Pn    21 10 43.9  -1.4
MARP  Paez Belalcaza      20.58 125  eP    Pn    21 10 44.0  -1.4
MARP  Paez Belalcaza      20.58 125  eP    Pn    21 10 44.0  -1.4
W47A  Westpoint           20.61  12  P     P     21 10 43.3 +1.1
      baz=194,SNR=7.1
CRUC  La Cruz             20.61 129  eP    Pn    21 10 44.9  -1.0
CRUC  La Cruz             20.61 129  eP    Pn    21 10 44.9  -1.0
V41A  Mountainview        20.62   1  P     P     21 10 44.3 +2.0
      baz=182
W48A  Pulaski             20.64  14  P     P     21 10 43.7 +1.0
      baz=196
V42A  Cord                20.67   3  P     P     21 10 44.6 +1.7
      baz=184
X51A  Calhoun             20.67  19  eP    P     21 10 41.8  -1.1
      comp=N,70nm,0.8s
X51A  Calhoun             20.67  19  P     P     21 10 44.3 +1.4
      baz=202,SNR=8.8
W49A  Belvidere           20.79  15  P     P     21 10 45.3 +1.2
      baz=198
Y54A  Tignall             20.80  24  P     P     21 10 45.1 +0.8
      baz=208,SNR=8.2
MSTX  Muleshoe            20.85 336  eP    P     21 10 47.0 +2.0
MSTX  Muleshoe            20.85 336  P     P     21 10 46.3 +1.4
      baz=153
TUL1  Leonard             20.91 353  eP    P     21 10 47.1 +1.7
      comp=N,30nm,0.8s
TUL1  Leonard             20.91 353  P     P     21 10 47.4 +1.9
      baz=172
SDDR  Presa de Saban      20.91  76  eP    P     21 10 45.7  -0.1
      comp=N,31nm,0.6s
BARC  Barichara           21.01 112  eP    P     21 10 45.8  -1.2
BARC  Barichara           21.01 112  eP    P     21 10 45.8  -1.2
X52A  Dahlonega           21.02  21  P     P     21 10 47.3 +0.6
      baz=204
V46A  Holladay            21.04  11  P     P     21 10 47.6 +0.8
      baz=193
W50A  Signal Mountai      21.12  17  eP    P     21 10 48.7 +0.9
      comp=N,64nm,1.1s
W50A  Signal Mountai      21.12  17  P     P     21 10 49.4 +1.6
      baz=200,SNR=8.8
X53A  Estanollee          21.14  22  P     P     21 10 48.6 +0.7
      baz=206
PAMC  Pamplona, Colo      21.14 109  eP    P     21 10 47.4  -1.3
PAMC  Pamplona, Colo      21.14 109  eP    P     21 10 47.4  -1.3
U40A  Yellville           21.18 360  P     P     21 10 48.9 +0.5
      baz=180
U41A  Viola               21.18   2  P     P     21 10 49.2 +0.8
      baz=182
V47A  Nunnelly            21.18  12  P     P     21 10 49.3 +0.9
      baz=194,SNR=6.5
U42A  Revenden            21.22   3  P     P     21 10 50.1 +1.4
      baz=184,SNR=6.5
V48A  Smith Brothers      21.25  13  eP    P     21 10 49.1 +0.1
      comp=N,20nm,1.1s
V48A  Smith Brothers      21.25  13  P     P     21 10 49.2 +0.1
      baz=196
W51A  Cleveland           21.25  18  P     P     21 10 49.1 +0.1
      baz=202
AMTX  Amarillo            21.27 339  eP    P     21 10 50.5 +1.1
      comp=N,53nm,0.8s
NHSC  New Hope            21.28  30  eP    P     21 10 51.6 +2.3
      comp=N,122nm,0.9s
NHSC  New Hope            21.28  30  P     P     21 10 50.2 +0.9
      baz=215
WVT   Waverly             21.42  11  eP    P     21 10 51.5 +0.6
      comp=N,14nm,0.7s
WVT   Waverly             21.42  11  P     P     21 10 51.8 +0.9
      baz=193
CHIC  Chingaza            21.44 117  eP    P     21 10 50.7  -1.0
CHIC  Chingaza            21.44 117  eP    P     21 10 50.7  -1.0
V49A  McMinnville         21.49  15  P     P     21 10 52.6 +0.9
      baz=198
PBMO  Poplar Bluff        21.70   5  eP    P     21 10 54.3 +0.4
      comp=N,41nm,0.6s
W53A  Cullowhee           21.78  22  P     P     21 10 56.1 +1.2
      baz=206
T42A  Van Buren           21.90   4  eP    P     21 10 55.7  -0.3
      comp=N,15nm,0.8s
T42A  Van Buren           21.90   4  P     P     21 10 57.5 +1.5
      baz=185
V51A  Loudon              21.97  19  P     P     21 10 57.8 +1.1
      baz=202
T43A  Greenville          22.02   5  P     P     21 10 58.1 +0.9
      baz=187
TKL   Tuckaleechee C      22.02  20  eP    P     21 10 58.1 +0.8
      comp=N,35nm,0.8s
TKL                                  S     S     21 14 57.8 +2.5
TKL   Tuckaleechee C      22.02  20  P     P     21 10 59.1 +1.9
      comp=N,23nm,0.8s,baz=186,slow=15,SNR=6.1
TKL                                  S     S     21 14 57.8 +2.5
      comp=N,6.8nm,0.7s,baz=285,slow=5.7,SNR=2.2
121A  Cookes Peak, D      22.08 324  P     P     21 11 00.6 +2.4
      baz=139
319A  Douglas             22.14 320  eP    P     21 10 57.9  -1.0
      comp=N,19nm,0.9s
U49A  Red Boiling Sp      22.23  15  P     P     21 10 59.7 +0.1
      baz=198
V52A  Sevierville         22.24  20  P     P     21 11 00.1 +0.3
      baz=204
T46A  Princeton           22.29  10  P     P     21 11 01.2 +1.0
      baz=193,SNR=5.9
V53A  Saluda              22.36  22  eP    P     21 11 00.8  -0.2
      comp=N,25nm,0.8s
V53A  Saluda              22.36  22  P     P     21 11 01.2 +0.2
      baz=206
T47A  Sharon Grove        22.39  12  P     P     21 11 01.5 +0.3
      baz=195
U50A  Jamestown           22.39  17  P     P     21 11 01.0  -0.3
      baz=200
S41A  Jillco Farms,       22.43   2  P     P     21 11 02.0 +0.3
      baz=183
KMSC  Kings Mountain      22.46  25  P     P     21 11 02.0  -0.1
      baz=210
S43A  Fulton Ridge,       22.52   6  P     P     21 11 02.6  0.0
      baz=187
SDV   Santo Domingo       22.52 103  eP    P     21 10 58.9  -4.2
      comp=N,13nm,0.7s
SDV                                  ePcP  PcP   21 14 51.9  -2.3
SDV   Santo Domingo       22.52 103  P     P     21 10 58.9  -4.2
      comp=N,7.0nm,0.5s,baz=314,slow=9.0,SNR=7.4
SDV                                  LR    LR    21 21 27.9
      comp=N,50nm,18.6s,baz=252,slow=42
S42A  Caledonia           22.66   4  P     P     21 11 04.1  0.0
      baz=185
BNM   Barren Site         22.72 329  eP    P     21 11 06.8 +1.8
S44A  Carbondale          22.73   7  P     P     21 11 04.5  -0.3
      baz=189
SIUC  Southern Illin      22.75   7  eP    P     21 11 04.3  -0.7
      comp=N,36nm,1.0s
U52A  Thorn Hill          22.82  20  P     P     21 11 05.5  -0.3
      baz=204
LPM   Los Pinos Moun      22.85 329  eP    P     21 11 09.1 +2.8
T49A  Edmonton            22.86  15  P     P     21 11 05.8  -0.3
      baz=198
TZTN  Tazewell            22.90  19  eP    P     21 11 07.9 +1.4
      comp=N,35nm,0.7s
TZTN  Tazewell            22.90  19  P     P     21 11 07.2 +0.7
      baz=203
LENM  Lemitar             22.91 329  eP    P     21 11 08.6 +1.7
CCM   Cathedral Cave      22.91   3  eP    P     21 11 07.7 +1.0
      comp=N,23nm,0.9s
CCM   Cathedral Cave      22.91   3  P     P     21 11 06.5  -0.2
      baz=184
S46A  Don Dixon Farm      22.95  10  P     P     21 11 06.9  -0.2
      baz=193
U53A  Fall Branch         23.07  21  P     P     21 11 08.0  -0.2
      baz=206
R41A  Rosebud             23.15   3  P     P     21 11 08.8  -0.2
      baz=184
T51A  Gray                23.16  18  P     P     21 11 08.3  -0.8
      baz=202
R42A  Luebbering          23.17   4  P     P     21 11 09.7 +0.6
      baz=185
LAZ   Ladron              23.18 329  eP    P     21 11 10.8 +1.3
ANMO  Albuquerque         23.28 331  eP    P     21 11 12.3 +1.8
      comp=N,9.5nm,0.8s
ANMO  Albuquerque         23.28 331  P     P     21 11 12.3 +1.8
      baz=145
ANMO  Albuquerque         23.28 331  P     P     21 11 12.4 +2.0
      comp=N,7.5nm,0.7s,baz=139,slow=11,SNR=23
R46A  Gibon Southern      23.50  10  P     P     21 11 13.2 +1.1
      baz=193
S49A  Springfield         23.56  15  P     P     21 11 12.9 +0.1
      baz=198
T52A  Hallie              23.60  20  P     P     21 11 13.2  0.0
      baz=204
S50A  Richmond            23.70  17  P     P     21 11 14.4 +0.4
      baz=200
TUC   Tucson              23.71 319  eP    P     21 11 18.6 +4.3
      comp=N,13nm,1.1s
TUC   Tucson              23.71 319  P     P     21 11 14.2  0.0
      baz=133
WCI   Wyandotte Cave      23.75  13  eP    P     21 11 14.1  -0.3
      comp=N,77nm,0.8s
WCI   Wyandotte Cave      23.75  13  P     P     21 11 14.3  -0.1
      baz=196
R47A  Wooly Knot Far      23.77  12  P     P     21 11 14.7 +0.2
      baz=195
Q41A  Truxton             23.81   3  P     P     21 11 14.2  -0.7
      baz=184
T54A  Tazewell            24.05  22  P     P     21 11 17.4 +0.2
      baz=207
CNNC  Cliffs of the       24.11  31  P     P     21 11 17.5  -0.2
      baz=217
KSU1  Kansas State U      24.15 353  eP    P     21 11 17.9  -0.1
      comp=N,21nm,0.7s
KSU1  Kansas State U      24.15 353  P     P     21 11 18.4 +0.4
      baz=171
T25A  Trinidad            24.27 337  eP    P     21 11 21.7 +2.3
      comp=N,26nm,0.8s
R50A  Paris               24.28  16  P     P     21 11 19.3 +0.1
      baz=200
P41A  Barry, Barry        24.54   3  P     P     21 11 22.0 +0.6
      baz=184
P45A  Graceland, Par      24.74   9  eP    P     21 11 22.6  -0.7
      comp=N,16nm,0.8s
SDCO  Great Sand Dun      25.22 336  eP    P     21 11 29.4 +1.3
      comp=N,8.3nm,1.0s
SDCO  Great Sand Dun      25.22 336  P     P     21 11 26.8  -1.3
      baz=151
Q51A  Peebles             25.25  17  eP    P     21 11 28.0  0.0
      comp=N,11nm,0.7s
P49A  Miami Univ. Ec      25.36  15  P     P     21 11 28.9  -0.1
      baz=198
O45A  Potomac             25.45   9  P     P     21 11 30.5 +0.7
      baz=192
Q52A  Bidwell             25.52  19  P     P     21 11 30.1  -0.4
      baz=204
N40A  Mertquake, Sal      25.72   2  P     P     21 11 33.7 +1.5
      baz=183
P51A  Williamsport        25.75  18  P     P     21 11 34.7 +2.2
      baz=202
S22A  4UR Ranch, Cre      25.77 334  eP    P     21 11 34.6 +1.5
      comp=N,11nm,1.0s
S22A  4UR Ranch, Cre      25.77 334  P     P     21 11 34.0 +0.9
      baz=148,SNR=7.6
N43A  Stutzman Famil      25.95   6  P     P     21 11 34.9 +0.6
      baz=188
Q54A  Coxs Mills          26.02  22  P     P     21 11 35.4 +0.4
      baz=207
MVCO  Mesa Verde          26.08 331  eP    P     21 11 38.2 +2.3
      comp=N,34nm,0.7s
MVCO  Mesa Verde          26.08 331  P     P     21 11 38.0 +2.2
      baz=144,SNR=15
P52A  Corning             26.17  19  P     P     21 11 36.6 +0.2
      baz=204
N48A  Decatur             26.55  13  P     P     21 11 39.4  -0.3
      baz=197
O52A  Adamsville          26.71  19  P     P     21 11 40.9  -0.3
      baz=204
GLA   Glamis              26.82 316  P     P     21 11 43.2 +0.8
      baz=127
L40A  Anamosa             26.91   3  P     P     21 11 43.6 +0.6
      baz=184
PV05  Paradox Valley      27.06 331  eP    P     21 11 46.8 +2.2
      comp=N,23nm,0.8s
PV11  David Mesa, Pa      27.13 331  eP    P     21 11 46.9 +1.7
      comp=N,44nm,1.3s
PV07  Paradox Valley      27.14 332  eP    P     21 11 47.3 +2.0
      comp=N,12nm,0.9s
PV17  East Wray Mesa      27.16 331  eP    P     21 11 47.6 +2.1
      comp=N,22nm,0.8s
PV19  Morning Glory       27.19 331  eP    P     21 11 47.9 +2.1
      comp=N,20nm,1.1s
PV20  West Nyswonger      27.21 331  eP    P     21 11 47.6 +1.7
      comp=N,17nm,0.9s
O54A  Avella              27.25  21  P     P     21 11 45.4  -0.6
      baz=207
PV23  Carpenter Ridg      27.32 331  eP    P     21 11 46.1  -0.9
      comp=N,22nm,0.8s
L48A  N Adams             27.71  13  P     P     21 11 49.2  -1.0
      baz=198
N54A  Moraine State       28.08  21  P     P     21 11 54.0 +0.6
      baz=207
M52A  Chesterland         28.16  18  P     P     21 11 54.4 +0.3
      baz=204
O20A  White River Ci      28.37 335  P     P     21 11 57.2 +1.0
      baz=148
GMRC  Granite Mounta      28.42 318  P     P     21 11 56.9 +0.2
      baz=129
SRU   San Rafael Swe      28.56 330  eP    P     21 11 59.5 +1.6
      comp=N,9.6nm,1.2s
ECSD  EROS Data Cent      28.73 354  eP    P     21 11 57.4  -1.8
      comp=N,9.3nm,1.5s
ECSD  EROS Data Cent      28.73 354  P     P     21 11 58.9  -0.3
      baz=173
CCUT  Cedar City          28.86 325  eP    P     21 12 01.3 +0.6
      comp=N,4.6nm,1.0s
J47A  Sunmer              28.87  12  P     P     21 12 00.5 +0.1
      baz=196
MPU   Maple Canyon        29.80 330  eP    P     21 12 08.9  -0.1
      comp=N,7.8nm,0.9s
PSUT  Pine Spring         29.84 325  eP    P     21 12 09.5 +0.2
      comp=N,3.8nm,1.0s
SPMN  Marine on St.       30.04 360  P     P     21 12 10.4  -0.4
      baz=180
TPNV  Topopah Spring      30.15 321  P     P     21 12 13.0 +1.0
      baz=131
MPMC  Manual Prospec      30.38 318  P     P     21 12 14.9 +0.9
      baz=128
TCUT  Toone Canyon        30.56 332  eP    P     21 12 17.1 +1.4
      comp=N,17nm,0.8s
R11A  Troy Canyon, C      30.68 323  P     P     21 12 17.1 +0.4
      baz=133
HWUT  Hardware Ranch      31.02 332  eP    P     21 12 20.9 +1.2
      comp=N,14nm,1.4s
PDAR  Pinedale Array      31.12 336  eP    P     21 12 21.1 +0.5
PDAR                                 PcP   PcP   21 15 15.2 +1.1
PDAR  Pinedale Array      31.12 336  P     P     21 12 23.5 +2.9
      comp=N,0.9nm,0.6s,baz=132,slow=8.8,SNR=7.4
PDAR                                 PcP   PcP   21 15 15.2 +1.1
      comp=N,1.0nm,0.6s,baz=142,slow=3.4,SNR=5.2
HVU   Hansel Valley       31.71 331  eP    P     21 12 27.6 +1.9
      comp=N,20nm,1.4s
AHID  Auburn Hatcher      31.75 334  eP    P     21 12 27.4 +1.3
      comp=N,6.3nm,0.9s
REDW  Red Top Meadow      32.14 335  eP    P     21 12 31.1 +1.5
      comp=N,17nm,0.9s
ELK   Elko                32.16 327  eP    P     21 12 31.5 +1.7
ELK   Elko                32.16 327  P     P     21 12 33.1 +3.3
      comp=N,2.7nm,0.7s,baz=138,slow=7.9,SNR=13
SNOW  Snow King Moun      32.18 335  eP    P     21 12 31.6 +1.7
      comp=N,22nm,0.8s
LOHW  Long Hollow         32.24 335  eP    P     21 12 31.7 +1.2
      comp=N,4.7nm,0.8s
NV11  Mina Array Sit      32.26 321  eP    P     21 12 32.3 +1.8
      comp=N,0.4nm,0.8s
TPAW  Teton Pass          32.28 335  eP    P     21 12 31.2 +0.3
      comp=N,7.6nm,0.9s
NV01  Mina Array Sit      32.35 321  eP    P     21 12 34.8 +3.4
NVAR  Mina Array Bea      32.35 321  P     P     21 12 35.1 +3.7
      comp=N,5.4nm,0.6s,baz=137,slow=8.8,SNR=25
NVAR                                 PcP   PcP   21 15 19.4 +1.9
      comp=N,1.9nm,0.8s,baz=119,slow=3.2,SNR=4.5
MOOW  Moose Ponds         32.41 335  eP    P     21 12 33.3 +1.4
      comp=N,5.1nm,1.0s
FXWY  Fox Creek           32.44 335  eP    P     21 12 33.4 +1.2
      comp=N,3.0nm,0.8s
IMW   Indian Meadow       32.61 335  eP    P     21 12 35.8 +2.0
      comp=N,4.4nm,1.0s
IMW                                  ePcP  PcP   21 15 20.5 +2.3
KVN   Kaiserville         32.62 322  eP    P     21 12 33.9 +0.1
      comp=N,5.3nm,0.9s
FLWY  Flagg Ranch         32.67 336  eP    P     21 12 34.1  -0.1
      comp=N,11nm,1.4s
NCB   Newcomb             32.84  25  eP    P     21 12 34.4  -1.1
      comp=N,12nm,1.1s
RLMT  Red Lodge           33.02 338  P     P     21 12 37.8 +0.6
      baz=150
YMR   Madison River       33.27 336  eP    P     21 12 39.6 +0.2
      comp=N,5.4nm,0.9s
FRNY  Flat Rock           33.81  25  eP    P     21 12 42.9  -0.9
HLID  Hailey              33.86 331  eP    P     21 12 46.6 +2.1
      comp=N,5.8nm,0.7s
HLID  Hailey              33.86 331  P     P     21 12 45.5 +1.1
      baz=141,SNR=9.7
MCMT  McKenzie Canyo      34.16 334  eP    P     21 12 50.6 +3.4
BOZ   Bozeman (W)         34.30 336  P     P     21 12 48.6 +0.3
      baz=147
MFID  Camas Ranch         34.42 330  eP    P     21 12 51.6 +2.3
      comp=N,6.1nm,0.6s
DLMT  Dillon              34.49 335  eP    P     21 12 51.2 +1.3
      comp=N,17nm,1.3s
ULM   Lac du Bonnet       35.16 357  P     P     21 12 54.0  -1.3
      comp=N,2.1nm,0.5s,baz=169,slow=11,SNR=5.7
WVOR  Wild Horse Val      35.16 326  eP    P     21 12 56.4 +0.7
      comp=N,9.7nm,1.2s
HRY   Holter Researc      35.31 337  eP    P     21 12 57.6 +0.8
EGMT  Eagleton            35.71 340  P     P     21 13 00.5 +0.3
      baz=152
J08A  Circle Bar Ran      35.72 327  eP    P     21 13 02.3 +1.9
      comp=N,22nm,0.8s
BMO   Blue Mountains      36.20 330  eP    P     21 13 03.6  -0.9
      comp=N,4.4nm,0.8s
MSO   Missoula            36.23 335  P     P     21 13 05.0 +0.3
      baz=144
LSQQ  Lebel-sur-Quev      36.27  18  P     P     21 13 04.6  -0.3
      baz=206
I07A  Izee                36.76 327  eP    P     21 13 11.1 +1.9
      comp=N,18nm,1.5s
F10A  Beach Ranch, E      36.99 331  eP    P     21 13 12.3 +1.1
      comp=N,29nm,0.7s
G08A  Pilot Rock          37.32 329  eP    P     21 13 15.8 +1.7
      comp=N,2.1nm,0.8s
E09A  Wood Farm, Sta      37.82 331  eP    P     21 13 18.4 +0.4
      comp=N,7.1nm,0.7s
D08A  Wollman Farm,       38.58 331  eP    P     21 13 25.3 +0.8
      comp=N,16nm,1.4s
H04A  Detroit Lake        38.59 326  eP    P     21 13 27.1 +2.5
      comp=N,12nm,0.9s
NEW   Newport             38.69 334  P     P     21 13 25.9 +0.5
      baz=141
H04D  Lebanon             38.78 325  P     P     21 13 26.5 +0.3
      baz=130
C09A  Chrisman Ranch      38.84 332  eP    P     21 13 28.1 +1.5
      comp=N,9.9nm,0.7s
F05D  White Salmon        39.00 328  P     P     21 13 28.9 +0.9
      baz=133
LTY   Liberty             39.55 330  eP    P     21 13 33.1 +0.4
      comp=N,6.9nm,0.6s
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LPAZ	La Paz	39.56	141	eP	P	21 13 31.8	-1.8
	comp=N,2.2nm,0.7s						
LPAZ	La Paz	39.56	141	P	P	21 13 33.5	-0.2
	comp=N,1.3nm,0.5s,baz=316,slow=9.5,SNR=6.1						
LON	Longmire	39.77	329	eP	P	21 13 35.5	+1.1
	comp=N,8.2nm,0.8s						
C06D	Leavenworth	40.13	331	P	P	21 13 39.0	+1.6
	baz=136						
B05A	Bryant	40.95	330	P	P	21 13 44.4	+0.4
	baz=134						
MNMC	Minye Minye	40.96	145	eP	P	21 13 44.0	-0.7
	comp=N,12nm,1.0s						
A04D	Lummi Island	41.55	330	P	P	21 13 49.5	+0.5
	baz=134						
SCHQ	Schefferville	44.48	21	LR	LR	21 33 59.4	
	comp=N,106nm,19.2s,baz=180,slow=38						
GO02	Mina Guanaco	45.96	150	eP	P	21 14 24.3	-0.7
	comp=N,5.8nm,0.8s						
GO04	Tololo Observa	49.74	155	eP	P	21 14 52.0	-2.1
	comp=N,7.6nm,0.9s						
YKA	Yellowknife Ar	49.80	347	P	P	21 14 53.6	-0.1
	comp=N,2.9nm,0.5s,baz=151,slow=7.4,SNR=48						
YKA				PcP	PcP	21 16 13.8	+0.5
	comp=N,1.4nm,0.6s,baz=152,slow=4.0,SNR=6.9						
YKB5	Yellowknife Ar	49.80	347	eP	P	21 14 52.5	-1.2
YKB5				ePcP	PcP	21 16 13.4	+0.1
YKW3	Yellowknife Ar	49.86	347	eP	P	21 14 53.4	-0.7
	comp=N,4.3nm,0.6s						
DLBC	Dease Lake	51.35	336	eP	P	21 15 07.6	+2.0
	comp=N,18nm,0.7s						
DLBC	Dease Lake	51.35	336	P	P	21 15 09.0	+3.4
	comp=N,14nm,0.6s,baz=132,slow=4.2,SNR=34						
FRB	Frobisher Bay	51.43	14	P	P	21 15 04.9	-1.1
	comp=N,2.0nm,0.6s,baz=244,slow=9.5,SNR=3.4						
CPUP	Villa Florida	53.70	140	LR	LR	21 37 14.1	
	comp=N,62nm,21.9s,baz=239,slow=35						
BDFB	Brasilia	53.75	123	eP	P	21 15 22.1	-1.8
	comp=N,14nm,1.2s						
BDFB	Brasilia	53.75	123	P	P	21 15 22.8	-1.2
	comp=N,5.5nm,0.6s,baz=289,slow=7.7,SNR=9.7						
GO06	Curarrehue	57.91	161	eP	P	21 15 52.4	-0.9
	comp=N,8.9nm,1.3s						
DAWY	Dawson	58.38	338	eP	P	21 15 56.7	+0.5
	comp=N,5.2nm,0.8s						
INK	Inuvik	59.18	344	eP	P	21 16 02.0	+0.5
	comp=N,13nm,0.8s						
INK	Inuvik	59.18	344	P	P	21 16 02.1	+0.5
	comp=N,12nm,0.6s,baz=128,slow=6.2,SNR=48						
PLCA	Paso Flores	59.25	160	eP	P	21 16 02.5	0.0
	comp=N,7.1nm,1.0s						
RES	Resolute Bay	59.60	359	P	P	21 16 05.6	+1.2
	comp=N,1.2nm,0.7s,baz=180,slow=1.2,SNR=5.6						
DOT	Dot Lake	59.92	336	eP	P	21 16 07.4	+0.6
	comp=N,10nm,0.8s						
SCRK	Sand Creek	60.05	337	eP	P	21 16 08.6	+0.7
	comp=N,15nm,1.5s						
RIDG	Independ'e Rid	60.27	336	eP	P	21 16 10.3	+1.1
	comp=N,18nm,1.1s						
GHO	Glory Hole Cre	61.08	333	eP	P	21 16 15.5	+0.7
	comp=N,19nm,0.8s						
PMR	Palmer	61.10	333	eP	P	21 16 15.2	+0.4
	comp=N,9.8nm,0.8s						
RC01	Rabbit Creek A	61.17	332	eP	P	21 16 15.8	+0.5
	comp=N,13nm,0.8s						
KDAK	Kodiak Island	61.39	328	P	P	21 16 18.6	+1.8
	comp=N,5.0nm,0.6s,baz=122,slow=6.7,SNR=4.8						
HDA	Harding Lake	61.40	336	eP	P	21 16 17.6	+0.7
	comp=N,7.5nm,0.7s						
HDA	Harding Lake	61.40	336	P	P	21 16 17.4	+0.6
	baz=117						
IL1	Eielson Array	61.54	337	eP	P	21 16 18.4	+0.7
ILAR	Eielson Array	61.54	337	P	P	21 16 18.7	+0.9
	comp=N,7.8nm,0.8s,baz=127,slow=5.3,SNR=60						
ILAR				PcP	PcP	21 16 58.6	-0.1
	comp=N,1.5nm,0.8s,baz=168,slow=2.5,SNR=4.5						
ILB	Eielson Array	61.54	337	eP	P	21 16 18.2	+0.5
RND	Reindeer	61.72	335	eP	P	21 16 20.5	+1.4
	comp=N,26nm,0.8s						
SUA	Susitna One	61.77	332	eP	P	21 16 21.1	+1.6
	comp=N,16nm,0.7s						
WRH	Wood River Hil	61.87	336	eP	P	21 16 20.3	+0.3
	comp=N,4.7nm,0.8s						
MCK	McKinley	61.89	335	eP	P	21 16 20.6	+0.4
	comp=N,10nm,0.8s						
POKR	Poker Plat Res	61.91	337	P	P	21 16 20.4	+0.2
	baz=117						
COLA	College	61.96	337	eP	P	21 16 20.9	+0.4
	comp=N,8.7nm,0.6s						
MDM	Murphy Dome	62.14	337	eP	P	21 16 22.9	+1.1
	comp=N,6.5nm,1.0s						
TRF	Thorofare Moun	62.33	335	eP	P	21 16 24.6	+1.3
	comp=N,18nm,0.8s						
RSO	Redoubt South	62.34	331	eP	P	21 16 25.1	+1.7
BPAW	Bear Paw Mtn.	62.87	335	eP	P	21 16 27.6	+0.9
	comp=N,14nm,1.0s						
PPLA	Purkeypile	62.92	334	eP	P	21 16 27.9	+0.7
	comp=N,6.6nm,0.6s						
CAST	Castle Rocks	63.07	334	eP	P	21 16 28.6	+0.6
	comp=N,9.9nm,0.7s						
MLY	Manley	63.14	336	eP	P	21 16 29.7	+1.2
	comp=N,17nm,0.7s						
COLD	Coldfoot	63.84	339	eP	P	21 16 35.4	+2.4
	comp=N,3.8nm,0.8s						
SVW2	Sparrevohn	63.85	331	eP	P	21 16 33.8	+0.6
	comp=N,8.2nm,0.9s						
TOLK	Toolik Lake Re	64.24	340	eP	P	21 16 34.2	-1.5
	comp=N,12nm,0.6s						
TOLK	Toolik Lake Re	64.24	340	P	P	21 16 33.7	-2.0
	baz=116						
IM3	Indian Mountai	64.66	337	eP	P	21 16 37.4	-1.0
PPT	Papeete	64.72	242	LR	LR	21 36 46.8	
	comp=N,131nm,20.2s,baz=191,slow=28						
RDOG	Red Dog Mine	68.70	338	eP	P	21 17 04.9	+0.8
	comp=N,12nm,1.2s						
ANM	Nome	69.01	334	eP	P	21 17 07.4	+1.4
	comp=N,4.3nm,0.8s						
ESDC	Sonseca Array	79.64	52	P	P	21 18 05.5	-2.8
	comp=N,0.8nm,0.6s,baz=286,slow=5.4,SNR=6.7						
ES19	SONSECA Array	79.69	52	eP	P	21 18 05.7	-2.8
BILL	Bilibino	80.17	338	eP	P	21 18 11.6	+1.1
	comp=N,18nm,0.9s						
NB2	NORSAR Subarra	83.55	28	P	P	21 18 27.1	-1.4
	comp=Z,0.8nm,0.6s,baz=292,slow=5.3						
NOA	NORSAR Array B	83.55	28	P	P	21 18 27.1	-1.4
	comp=Z,1.0nm,0.7s,baz=291,slow=5.1,SNR=11						
NOA				LR	LR	21 54 10.8	
	comp=Z,28nm,21.9s,baz=280,slow=35						
ARCES	ARCESS Array B	85.34	18	P	P	21 18 36.1	-1.2
	comp=Z,1.2nm,0.7s,baz=288,slow=5.0,SNR=8.7						
SEY	Seymchan	87.45	335	P	P	21 18 48.8	+1.2
	comp=Z,2.5nm,0.6s,baz=91,slow=4.5,SNR=13						
TIXI	Tiksi	89.04	348	eP	P	21 18 54.9	-0.1
	comp=Z,7.0nm,0.6s						
FINES	FINESS Array B	89.84	25	P	P	21 18 56.7	-2.3
	comp=Z,1.7nm,0.8s,baz=300,slow=3.8,SNR=6.3						
TORD	Torodi Ar. Bea	90.86	76	P	P	21 19 01.6	-3.1
	comp=Z,0.2nm,0.7s,baz=296,slow=4.8,SNR=2.7						
SONM	Songino Array	115.05	346	PKP	PKPdf	21 24 42.3	+0.8
	comp=Z,0.3nm,0.6s,baz=272,slow=1.5,SNR=3.9						
KSRS	Korea Array	115.21	325	PKP	PKPdf	21 24 43.5	+1.7
	comp=Z,1.0nm,0.6s,baz=14,slow=1.5,SNR=5.2						
KSAR	Wonju Array Be	115.24	325	PKP	PKPdf	21 24 43.5	+1.6
MKAR	Makanchi Array	118.24	4	PKP	PKiKP	21 24 48.1	+0.6
	comp=Z,0.4nm,0.6s,baz=331,slow=1.9,SNR=4.5						
GEYT	Alibeck	120.60	27	PKP	PKiKP	21 24 52.5	+0.1
	comp=Z,1.8nm,0.7s,baz=285,slow=2.9,SNR=4.9						
GAR	Garm	123.92	16	ePKPdf	PKiKP	21 24 59.8	+0.8
CHGR	Chuyangaron	123.92	17	ePKPdf	PKiKP	21 24 59.7	+0.7
LZH	Lanzhou	126.72	343	ePKP	PKiKP	21 25 05.0	+0.3
LZH				pPKP	sPKPdf	21 25 42.4	+5.6
XAN	Xi'an	126.95	337	ePKPdf	PKiKP	21 25 06.1	+1.0
STKA	Stephens Creek	127.92	241	PKP	PKPdf	21 25 05.8	-0.5
	comp=Z,1.7nm,0.6s,baz=96,slow=4.0,SNR=6.9						
ENH	Enshi	130.05	335	ePKPdf	PKiKP	21 25 12.6	+1.2
WB2	Warramunga Arr	134.90	257	ePKPpre	PKPpre	21 25 13.7	
WRA	Warramunga Arr	134.91	257	PKP	PKPdf	21 25 19.8	-0.1
	comp=Z,1.1nm,0.7s,baz=84,slow=2.0,SNR=14						
FITZ	Fitzroy Crossi	143.09	260	PKhKP	PKPpre	21 25 32.3	
	comp=Z,1.8nm,0.8s,baz=118,slow=2.7,SNR=3.7						
CM31	Chiang Mai Arr	144.72	340	ePKPbc	PKPdf	21 25 37.5	-0.3
CMAR	Chiang Mai Arr	144.72	340	PKP	PKPdf	21 25 37.4	-0.3
	comp=Z,5.7nm,0.7s,baz=341,slow=3.3,SNR=52						
CM01	Chiang Mai Arr	144.75	340	ePKPbc	PKPab	21 25 36.4	-0.3
HYB	Hyderabad	146.59	15	i PKP	PKPdf	21 25 41.5	+0.5

JMA 08 21:06:36.2±0.2**, 37°.03N**×**143°.41E, h50**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.00	310	P	Pn	21 07 08.5	+0.9
JIKH				eS	Sn	21 07 32.4	+1.0
JFK	Kawauchi	2.05	280	P	Pn	21 07 09.2	+0.9
JFK				eS	Sn	21 07 33.2	+0.5
ONAJ	Iwakimizuishiy	2.09	273	eS	Sn	21 07 34.3	+0.6
JIO	Ouri	2.17	312	P	Pn	21 07 10.9	+1.1
JIO				S	Sn	21 07 36.1	+0.7
JMM	Marumori	2.24	293	P	Pn	21 07 12.1	+1.2
JMM				eS	Sn	21 07 38.4	+1.1
JFT	Otama	2.50	282	P	Pn	21 07 16.2	+1.8
JFT				S	Sn	21 07 45.5	+1.8
JMK	Ichinoseki	2.58	319	P	Pn	21 07 16.8	+1.3
JMK				eS	Sn	21 07 46.9	+1.2
JOM	Ohasama	2.95	326	P	Pn	21 07 22.0	+1.4
JOM				S	Sn	21 07 55.7	+0.9
JYK	Kaneyama	3.06	309	P	Pn	21 07 24.0	+1.9
JYK				eS	Sn	21 07 59.7	+2.3
BSO1	Boso 1	3.09	221	P	Pn	21 07 22.4	+0.5
BSO1				eS	Sn	21 07 58.3	+1.0
JAG	Ashikaga	3.23	260	P	Pn	21 07 25.8	+1.3
JANG	Nango	3.65	337	P	Pn	21 07 31.6	+1.4
JRY	Ryogami san	3.77	256	P	Pn	21 07 32.9	+1.1
JRY				S	Sn	21 08 15.0	+0.1
JOD2	Odawara 2	3.92	245	P	Pn	21 07 35.0	+1.2
MAT	Matsushiro	4.21	265	P	Pn	21 07 40.4	+2.6
MAT				eS	Sn	21 08 27.4	+1.8
JOT	Ohata	4.72	338	P	Pn	21 07 46.5	+1.7

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*ISCJB **08** 21:07:29.4±0.5, 42°.55N±0°.06×140°.88E±0°.08, h147^{km}±4^{km}, mb3.6/6, Error ellipse: s-maj=12.3km s-min=6.7km az=142.9*

*JMA **08** 21:07:30.8±0.1, 42°.57N×140°.86E, h139^{km}±1^{km}, M2.8*

*IDC **08** 21:07:31.3±1.9, 42°.60N×141°.08E, h158^{km}±21^{km}, mb3.3/6, mb1 3.4/6, mb1mx3.1/46, mbtmp3.8/6, Error ellipse: s-maj=30.9km s-min=22.9km az=76.0*

ISC 08 21:07:30.3±0.8**, 42°.55N**±0°.06×**140°.86E**±0°.06**, h143**^{km}±6^{km}**, n24,** σ**0**^{s}**.51**/33**, mb3.6**/6**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNB	Noboribetsu	0.15	123	P	Pn	21 07 49.5	-0.1
JNB				eS	Sn	21 08 03.9	-0.4
JEW	Eniwo	0.52	56	P	Pn	21 07 51.2	+0.3
JEW				eS	Sn	21 08 06.9	+0.2
JYM2	Yakumo 2	0.57	220	P	Pn	21 07 51.6	+0.4
JYM2				eS	Sn	21 08 06.8	-0.3
JSH	Shimam	0.61	279	P	Pn	21 07 51.7	+0.3
JKB	Kayabe	0.68	169	P	Pn	21 07 51.8	-0.1
JHST	Hiyamasetana	0.74	260	P	Pn	21 07 52.3	0.0
JIAM	Iburiatsuma	0.78	85	P	Pn	21 07 53.2	+0.6
JIAM				eS	Sn	21 08 10.4	+0.8
JSK	Shakotan	0.85	341	P	Pn	21 07 53.0	-0.1
JSR	Shiriuchi	1.07	198	P	Pn	21 07 55.5	+0.4
JBT2	Biratori 2	1.13	78	P	Pn	21 07 55.5	-0.1
JBT2				eS	Sn	21 08 15.5	+0.7
JOSM	Okushiri--Mats	1.13	246	P	Pn	21 07 55.9	+0.3
JOT	Ohata	1.18	173	P	Pn	21 07 56.3	+0.2
JHR	Hokuryu	1.35	28	P	Pn	21 07 58.3	+0.6
JFR	Furan	1.41	64	P	Pn	21 07 58.1	-0.3
JFR				eS	Sn	21 08 19.1	-0.8
JNBK	Urakawa-nobuka	1.43	100	P	Pn	21 07 58.6	+0.1
JCH	Churui	1.85	87	P	Pn	21 08 03.7	+0.5
JCH				eS	Sn	21 08 28.0	-0.4
JKK2	Kamakawa 2	1.91	46	P	Pn	21 08 04.4	+0.5
JKK2				eS	Sn	21 08 29.1	-0.6
ASAJ	Asahikawa	2.01	38	P	Pn	21 08 05.8	+0.7
	3.8nm,0.3s,baz=250,slow=10,SNR=19						
ASAJ				S	Sn	21 08 32.1	+0.2
	2.3nm,0.3s,baz=66,slow=20,SNR=6.7						
SEY	Seymchan	21.51	14	P	P	21 12 06.2	-1.3
	1.5nm,0.5s,baz=44,slow=23,SNR=14						
SONM	Songino Array	24.72	294	P	P	21 12 38.5	+0.3
	1.3nm,0.8s,baz=86,slow=8.1,SNR=10						
ZALV	Zalesovo Beam	38.05	307	P	P	21 14 35.3	+0.8
	2.9nm,0.7s,baz=86,slow=7.3,SNR=12						
MKAR	Makanchi Array	41.04	297	P	P	21 14 59.6	+0.2
	0.4nm,0.5s,baz=82,slow=9.8,SNR=8.8						
WRA	Warramunga Arr	62.47	187	P	P	21 17 38.2	-0.1
	0.5nm,1.0s,baz=6.0,slow=6.9,SNR=5.4						
FINES	FINESS Array B	63.76	331	P	P	21 17 46.1	-0.2
	0.7nm,0.4s,baz=57,slow=7.0,SNR=8.6						

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*ISCJB **08** 21:07:57.5±0.7, 10°.8S±0°.1×166°.16E±0°.08, h10^{km}, mb4.1/8, Error ellipse: s-maj=15.9km s-min=9.5km az=25.3*

*IDC **08** 21:07:57.5±1.3, 10°.76S×166°.16E, h0^{km}, mb4.1/8, mb1 4.3/10, mb1mx4.0/41, mbtmp4.2/10, ML4.4/2, Error ellipse: s-maj=33.6km s-min=22.8km az=124.0*

*NEIC **08** 21:07:59.1±0.6, 10°.75S×166°.19E, h10^{km}, mb4.6/1, Error ellipse: s-maj=12.4km s-min=11.2km az=213.0*

ISC 08 21:07:59.2±0.8**, 10°.85S**±0°.09×**166°.20E**±0°.09**, h10**^{km}**, n14,** σ**1**^{s}**.39**/16**, mb4.3**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.32	282	Pn	Pn	21 09 33.2	+0.7
	16nm,0.3s,baz=156,slow=11,SNR=3.2						
HNR				Sn	Sn	21 10 44.9	+0.1
	16nm,0.3s,baz=167,slow=19,SNR=6.0						
DZM	Mont Dzumac	11.16	179	Pn	Pn	21 10 41.1	+2.1
	1.4nm,0.3s,baz=359,slow=17,SNR=9.9						
DZM				Sn	Sn	21 12 40.5	-3.4
	0.2nm,0.3s,baz=128,slow=19,SNR=2.4						
CTA	Charters Tower	21.28	242	P	P	21 12 46.2	+0.1
	6.3nm,0.7s,baz=70,slow=10,SNR=5.8						
CTAO	Charters Tower	21.28	242	eP	P	21 12 46.5	+0.4
	17nm,0.6s						
STKA	Stephens Creek	30.89	224	P	P	21 14 17.3	+1.2
	2.2nm,0.6s,baz=67,slow=12,SNR=7.3						
SNZO	South Karori	31.25	168	P	P	21 14 20.0	+1.0
WRA	Warramunga Arr	31.97	250	P	P	21 14 24.8	-1.0
	8.6nm,0.8s,baz=81,slow=9.3,SNR=6.8						
ASAR	Alice Springs	33.28	243	P	P	21 14 35.9	-1.3
	3.3nm,0.7s,baz=73,slow=9.7,SNR=37						
RAR	Rarotonga	34.21	112	eP	P	21 14 45.6	+0.3
CMAR	Chiang Mai Arr	72.45	293	P	P	21 19 25.8	-0.6
	0.6nm,0.7s,baz=120,slow=4.3,SNR=5.6						
SONM	Songino Array	78.78	324	P	P	21 20 02.6	+0.3
	0.3nm,0.5s,baz=142,slow=4.9,SNR=4.2						
ILAR	Eielson Array	83.19	18	P	P	21 20 25.1	-0.3
	0.4nm,0.7s,baz=228,slow=4.9,SNR=4.5						
MKAR	Makanchi Array	93.69	317	P	P	21 21 15.6	-0.6
	1.0nm,0.7s,baz=94,slow=5.9,SNR=11						
ARCES	ARCESS Array B	116.26	346	PKP	PKPdf	21 26 41.0	-1.5
	1.3nm,1.0s,baz=96,slow=2.7,SNR=1.3						

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*IDC **08** 21:18:49.1±1.3, 10°.76S×165°.69E, h0^{km}, mb4.1/6, mb1 4.3/7, mb1mx3.9/41, mbtmp4.2/7, ML4.3/1, MS3.7/2, Ms1 3.7/2, ms1mx3.0/35, Error ellipse: s-maj=34.6km s-min=25.7km az=115.0*

*ISCJB **08** 21:18:52.0±1.1, 10°.9S±0°.1×165°.7E±0°.2, h30^{km}, mb4.1/5, MS3.6/2, Error ellipse: s-maj=25.3km s-min=18.6km az=172.3*

ISC 08 21:18:53.7±1.2**, 10°.8S**±0°.1×**165°.7E**±0°.2**, h30**^{km}**, n9,** σ**0**^{s}**.61**/7**, mb4.0**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.22	176	Pn	Pn	21 21 31.9	-0.2
	2.1nm,0.3s,baz=306,slow=11,SNR=25						
CTA	Charters Tower	20.87	241	P	P	21 23 34.2	+0.8
	8.7nm,0.9s,baz=58,slow=12,SNR=4.3						
STKA	Stephens Creek	30.58	223	LR	LR	21 36 10.8	
	comp=Z,134nm,18.1s,baz=28,slow=34						
WRA	Warramunga Arr	31.52	249	P	P	21 25 13.2	-0.2
	1.5nm,0.7s,baz=82,slow=8.9,SNR=14						
ASAR	Alice Springs	32.85	243	P	P	21 25 24.3	-0.8
	3.8nm,0.9s,baz=71,slow=10,SNR=6.9						
RPZ	Rata Peaks	33.11	173	P	P	21 25 27.3	+0.3
	6.6nm,0.8s,baz=278,slow=7.1,SNR=5.1						
FITZ	Fitzroy Crossi	39.40	255	LR	LR	21 41 49.4	
	comp=Z,107nm,20.4s,baz=91,slow=35						
ILAR	Eielson Array	83.31	19	P	P	21 31 17.2	0.0
	0.7nm,0.7s,baz=238,slow=5.2,SNR=10						
MKAR	Makanchi Array	93.32	317	P	P	21 32 05.9	0.0
	0.3nm,0.8s,baz=90,slow=5.8,SNR=3.8						

IDC 08 21:38:58.2±2.0**, 11°.39S**×**165°.02E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.5**/39**, mbtmp3.7**/4**, ML3.7**/1**, Error ellipse: s-maj=52.0km s-min=35.4km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.71	173	Pn	Pn	21 41 32.7	-0.4
	0.6nm,0.3s,baz=165,slow=17,SNR=5.6						
WRA	Warramunga Arr	30.70	250	P	P	21 45 15.0	0.0
	1.4nm,0.9s,baz=81,slow=9.6,SNR=6.8						
ASAR	Alice Springs	32.00	243	P	P	21 45 26.6	0.0
	0.3nm,0.4s,baz=63,slow=10,SNR=8.6						
ILAR	Eielson Array	84.06	19	P	P	21 51 30.5	0.0
	0.2nm,0.6s,baz=260,slow=5.4,SNR=1.6						

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*ISCJB **08** 21:44:27.3±0.9, 10°.95S±0°.07×166°.15E±0°.09, h10^{km}, mb4.0/8, MS3.7/4, Error ellipse: s-maj=14.5km s-min=8.6km az=148.9*

*IDC **08** 21:44:27.6±1.2, 10°.90S×166°.15E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx4.0/32, mbtmp4.1/10, ML4.3/2, MS3.7/5, Ms1 3.7/5, ms1mx3.1/37, Error ellipse: s-maj=30.2km s-min=21.5km az=115.0*

ISC 08 21:44:29.1±1.0**, 10°.87S**±0°.09×**166°.2E**±0°.1**, h10**^{km}**, n12,** σ**1**^{s}**.18**/13**, mb4.0**/8**, MS3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.31	283	Pn	Pn	21 46 01.6	-0.7
	10nm,0.3s,baz=173,slow=3.0,SNR=12						
HNR				Sn	Sn	21 47 15.8	+1.3
	12nm,0.3s,baz=140,slow=18,SNR=2.1						
HNR				LR	LR	21 48 34.4	
	comp=Z,566nm,19.1s,baz=119,slow=39						
DZM	Mont Dzumac	11.14	179	Pn	Pn	21 47 09.0	+0.4
	1.7nm,0.3s,baz=346,slow=15,SNR=18						
DZM				Sn	Sn	21 49 13.8	+0.4
	0.4nm,0.3s,baz=180,slow=20,SNR=2.6						
CTA	Charters Tower	21.27	242	P	P	21 49 15.8	0.0
	2.9nm,0.7s,baz=58,slow=13,SNR=3.1						
RAO	Raoul Island	23.55	143	LR	LR	21 56 45.9	
	comp=Z,265nm,18.8s,baz=130,slow=31						
STKA	Stephens Creek	30.87	224	P	P	21 50 45.6	-0.1
	1.9nm,0.7s,baz=54,slow=6.7,SNR=5.8						
STKA				LR	LR	22 02 05.4	
	comp=Z,131nm,20.8s,baz=27,slow=34						
WRA	Warramunga Arr	31.95	250	P	P	21 50 53.9	-1.6
	5.6nm,1.0s,baz=81,slow=9.1,SNR=23						
WRA				PcP	PcP	21 53 47.2	+1.4
	0.8nm,1.1s,baz=73,slow=3.6,SNR=3.1						
ASAR	Alice Springs	33.26	243	P	P	21 51 05.1	-1.8
	1.0nm,0.5s,baz=67,slow=10.0,SNR=11						
ASAR				LR	LR	22 03 29.1	
	comp=Z,76nm,19.8s,baz=80,slow=34						
CMAR	Chiang Mai Arr	72.44	293	P	P	21 55 58.0	+1.7
	1.3nm,0.9s,baz=111,slow=4.2,SNR=7.7						
SONM	Songino Array	78.79	324	P	P	21 56 32.8	+0.5
	0.5nm,0.7s,baz=144,slow=3.5,SNR=5.0						
ILAR	Eielson Array	83.21	18	P	P	21 56 54.5	-0.8
	0.6nm,0.7s,baz=236,slow=5.1,SNR=7.8						
NVAR	Mina Array Bea	85.58	50	LR	LR	22 29 42.9	
	comp=Z,51nm,18.0s,baz=248,slow=32						
MKAR	Makanchi Array	93.70	317	P	P	21 57 45.7	-0.4
	1.3nm,0.9s,baz=93,slow=5.7,SNR=12						

IDC 08 21:50:31.9±1.4**, 11°.02S**×**165°.97E, h0**^{km}**, mb3.9**/5**, mb1 4.1**/7**, mb1mx3.8**/31**, mbtmp4.0**/7**, ML4.2**/2**, Error ellipse: s-maj=33.0km s-min=28.3km az=92.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.14	284	Pn	Pn	21 52 05.7	+1.8
	20nm,0.3s,baz=340,slow=21,SNR=4.9						
DZM	Mont Dzumac	11.00	178	Pn	Pn	21 53 12.6	+1.8
	0.5nm,0.3s,baz=127,slow=20,SNR=4.9						
WRA	Warramunga Arr	31.70	250	P	P	21 56 56.2	-1.5
	1.0nm,0.9s,baz=82,slow=8.9,SNR=4.4						
RPZ	Rata Peaks	32.87	173	P	P	21 57 07.4	-0.2
	6.8nm,1.0s,baz=23,slow=17,SNR=3.4						
ASAR	Alice Springs	33.01	243	P	P	21 57 09.1	0.0
	1.0nm,0.7s,baz=67,slow=9.5,SNR=9.5						
ILAR	Eielson Array	83.42	18	P	P	22 03 00.1	-0.7
	0.3nm,0.7s,baz=242,slow=5.2,SNR=4.8						
MKAR	Makanchi Array	93.65	317	P	P	22 03 51.9	+1.4
	0.4nm,0.7s,baz=94,slow=5.8,SNR=4.7						

IDC 08 21:59:40.6±2.9**, 10°.45S**×**166°.46E, h0**^{km}**, mb3.9**/3**, mb1 4.1**/5**, mb1mx3.7**/33**, mbtmp4.1**/5**, ML4.3**/2**, Error ellipse: s-maj=52.3km s-min=38.1km az=53.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.50	278	Pn	Pn	22 01 18.7	+1.2
	11nm,0.3s,baz=207,slow=16,SNR=3.6						
HNR				Sn	Sn	22 02 35.5	+3.1
	7.3nm,0.3s,baz=199,slow=17,SNR=2.0						
DZM	Mont Dzumac	11.56	180	Pn	Pn	22 02 29.2	+2.1
	1.4nm,0.3s,baz=313,slow=19,SNR=16						
WRA	Warramunga Arr	32.35	249	P	P	22 06 11.5	-0.5
	1.5nm,0.8s,baz=81,slow=9.1,SNR=10						
ASAR	Alice Springs	33.69	243	P	P	22 06 22.9	-0.8
	1.0nm,0.8s,baz=72,slow=8.3,SNR=6.2						
MKAR	Makanchi Array	93.57	317	P	P	22 12 58.8	+0.1
	0.5nm,1.0s,baz=94,slow=4.6,SNR=3.2						

IDC 08 22:11:20.7±2.9**, 10°.72S**×**166°.15E, h0**^{km}**, mb3.9**/3**, mb1 4.2**/5**, mb1mx3.7**/32**, mbtmp4.2**/5**, ML4.6**/2**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.7**/36**, Error ellipse: s-maj=51.4km s-min=36.2km az=53.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.24	281	Pn	Pn	22 12 55.7	+1.6
	23nm,0.3s,baz=348,slow=3.5,SNR=7.5						
HNR				Sn	Sn	22 14 08.0	+1.7
	14nm,0.3s,baz=218,slow=12,SNR=2.2						
HNR				LR	LR	22 14 27.3	
	comp=Z,73nm,20.2s,baz=118,slow=30						
DZM	Mont Dzumac	11.30	179	Pn	Pn	22 14 05.1	+1.5
	3.0nm,0.3s,baz=338,slow=13,SNR=20						
DZM				Sn	Sn	22 16 04.6	-6.0
	0.2nm,0.3s,baz=128,slow=17,SNR=2.5						
DZM				LR	LR	22 17 48.1	
	comp=Z,175nm,21.3s,baz=290,slow=34						
WRA	Warramunga Arr	31.97	249	P	P	22 17 48.5	-0.2
	1.6nm,0.7s,baz=81,slow=9.1,SNR=19						
ASAR	Alice Springs	33.30	243	P	P	22 17 59.8	-0.7
	0.8nm,0.5s,baz=64,slow=10,SNR=13						
MKAR	Makanchi Array	93.56	317	P	P	22 24 38.6	-0.1
	0.3nm,0.6s,baz=95,slow=6.2,SNR=4.1						

DJA 08 22:18:46.6±0.5**, 1°S**±2°×**10°0E**±°**, h10**^{km}**, M3.8**/4**, MLv3.8**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	0.55	20	P	Pg	22 18 56.1	-1.2
PDSI				S	Sg	22 19 04.7	+0.1
SDSI	Sungai Dareh	1.26	67	P	Pn	22 19 08.5	-1.8
SDSI				S	Sb	22 19 26.7	0.0
KRJI	Kerinci	1.36	119	P	Pn	22 19 09.5	-2.3
KRJI				S	Sg	22 19 30.3	-0.2
BKNI	Bangkinang	1.91	24	P	Pn	22 19 19.3	+0.1
BKNI				S	Sb	22 19 44.4	-1.0
MNSI	Mandailing Nat	2.32	343	P	Pn	22 19 25.1	+0.3
MNSI				S	Sn	22 19 54.9	+1.5
MASI	Maura Aman, Be	2.60	131	P	Pn	22 19 29.1	+0.3
MTKI	Muara Teweh, K	14.63	88	P	P	22 22 25.5	+5.2

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*IDC **08** 22:25:24.7±0.7, 10°.93S×166°.01E, h0^{km}, mb4.3/13, mb1 4.5/15, mb1mx4.3/35, mbtmp4.3/15, ML4.7/2, Error ellipse: s-maj=21.9km s-min=17.3km az=130.0*

*ISCJB **08** 22:25:25.0±0.4, 11°.01S±0°.05×165°.89E±0°.06, h10^{km}, mb4.6/38, Error ellipse: s-maj=8.7km s-min=7.6km az=155.2*

*NEIC **08** 22:25:26.7±0.4, 10°.91S×165°.88E, h10^{km}, mb4.9/19, Error*

ellipse: s-maj=9.7km s-min=8.4km az=94.0

ISC 08 22:25:26.5±0.5**, 10°.99S**±0°.08×**166°.00E**±0°.07**, h10^{km}, n81, σ1ˢ.61**/76**, mb4.7**/39**, 1C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.15	284	eP	Pn	22 26 59.0	+1.5
HNR				eS	Sn	22 28 09.0	+1.0
HNR	Honiara	6.15	284	ePn	Pn	22 26 57.3	-0.3
HNR				Sn	Sn	22 28 09.9	+1.8
HNR	Honiara	6.15	284	Pn	Pn	22 26 58.8	+1.3
	30nm,0.3s,baz=173,slow=3.0,SNR=42						
HNR				Sn	Sn	22 28 09.9	+1.8
	20nm,0.3s,baz=205,slow=14,SNR=2.4						
MARNC	Mare, Loyalty	10.61	170	ePn	Pn	22 28 01.6	+2.9
DZM	Mont Dzumac	11.03	178	ePn	Pn	22 28 02.8	-1.7
	34nm,0.5s						
DZM				eLR	LR	22 30 23.5	
	comp=Z,990nm,25.2s						
DZM	Mont Dzumac	11.03	178	ePn	Pn	22 28 06.5	+2.0
DZM	Mont Dzumac	11.03	178	Pn	Pn	22 28 03.3	-1.1
	3.3nm,0.3s,baz=322,slow=18,SNR=12						
ONTNC	Ouen Toro	11.26	178	ePn	Pn	22 28 09.4	+1.8
MSVF	Nonsavu	13.46	121	ePn	P	22 28 46.4	-0.8
MANU	Manus Island	20.52	294	eP	P	22 30 05.3	+0.2
	130nm,1.1s						
CTA	Charters Tower	21.04	242	P	P	22 30 11.4	+0.6
	7.6nm,0.8s,baz=72,slow=11,SNR=4.9						
COEN	Coen	22.48	260	eP	P	22 30 22.3	-3.9
	43nm,1.4s						
ARMA	Armidale	23.50	213	eP	P	22 30 36.3	-0.4
	27nm,1.1s						
URZ	Urewera	28.92	162	P	P	22 31 26.3	+0.5
	2.5nm,0.7s,baz=139,slow=19,SNR=2.3						
H11S2	WAKE ISLAND Hy	29.30	1	T	T	23 01 47.8	
	baz=181,slow=76,SNR=71						
H11S3	WAKE ISLAND Hy	29.31	1	T	T	23 01 53.1	
	baz=181,slow=76,SNR=51						
H11S1	WAKE ISLAND Hy	29.32	1	T	T	23 01 49.2	
	baz=181,slow=76,SNR=59						
H11N1	WAKE ISLAND Hy	30.52	2	T	T	23 03 19.5	
	baz=182,slow=76,SNR=52						
H11N3	WAKE ISLAND Hy	30.53	2	T	T	23 03 20.2	
	baz=182,slow=76,SNR=77						
H11N2	WAKE ISLAND Hy	30.54	2	T	T	23 03 20.8	
	baz=182,slow=76,SNR=60						
STKA	Stephens Creek	30.65	224	P	P	22 31 42.4	+1.2
	3.0nm,0.8s,baz=64,slow=9.1,SNR=4.7						
WRAB	Tennant Creek	31.72	250	eP	P	22 31 50.3	-0.6
	36nm,1.0s						
WB2	Warramunga Arr	31.72	250	eP	P	22 31 49.6	-1.3
WRA	Warramunga Arr	31.73	250	P	P	22 31 50.7	-0.3
	25nm,0.9s,baz=80,slow=9.2,SNR=78						
AS01	Alice Springs	33.00	243	eP	P	22 32 00.9	-1.1
AS31	Alice Springs	33.04	243	eP	P	22 32 02.0	-0.4
	1.2nm,0.8s						
ASAR	Alice Springs	33.04	243	P	P	22 32 01.8	-0.6
	3.7nm,0.9s,baz=72,slow=9.0,SNR=24						
BNDI	Bandanaira	36.31	277	P	P	22 32 16.0	-15
FITZ	Fitzroy Crossi	39.63	255	eP	P	22 32 59.2	+0.4
	22nm,0.9s						
SANI	Sanana	40.68	280	P	P	22 33 04.5	-3.0
	20nm,1.0s						
BATI	Baumata	41.59	267	P	P	22 33 02.9	-12
	14nm,1.2s						
MMRI	Maumere	43.16	269	P	P	22 33 20.3	-7.5
PPT2	Papeete2	43.47	104	eLR	LR	22 45 52.6	
	comp=Z,271nm,23.8s						
LUWI	Luwuk	44.05	280	eP	P	22 33 35.7	+0.7
	38nm,1.0s						
LUWI	Luwuk	44.05	280	P	P	22 33 36.7	+1.7
	38nm,1.3s						
BKSI	Bulukumba	45.72	273	P	P	22 33 44.6	-3.7
	5.9nm,1.2s						
BNSI	Bone	45.90	275	P	P	22 33 47.8	-1.9
SPSI	Sidrap Palu	46.32	275	P	P	22 33 51.1	-1.9
PLAI	Plampang	47.51	268	P	P	22 34 01.0	-1.4
	46nm,1.2s						
SRBI	Singaraja	50.12	269	P	P	22 34 14.4	-8.0
JAGI	Jajag, Banyuwa	51.11	268	eP	P	22 34 28.9	-1.1
	58nm,1.1s						
MYKOM	Kota Tinggi	63.09	278	eP	P	22 35 55.4	+0.6
	22nm,1.2s						
IPM	Ipoh	66.46	280	eP	P	22 36 16.7	-0.1
	17nm,1.1s						
ENH	Enshi	68.06	309	eP	P	22 36 26.5	-0.2
	15nm,1.4s						
GYA	Guiyang	68.59	304	eP	P	22 36 31.8	+1.6
GYA				pP	sP	22 36 43.2	+9.2
GYA				PP	PP	22 39 05.0	+3.2
GYA				S	S	22 45 30.6	-2.6
GYA				SKS	SKiKP	22 46 24.2	+0.2
GYA	Guiyang	68.59	304	SS	SS	22 49 56.0	-1.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,500nm,18.4s						
GYA				LR	LR		
	comp=E,520nm,18.1s						
GYA				LR	LR		
	comp=Z,550nm,18.6s						
XAN	Xi'an	70.27	312	P	P	22 36 40.3	0.0
XAN				pP	sP	22 36 46.9	+2.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
XAN	Xi'an	70.27	312	eP	P	22 36 38.9	-1.4
	comp=Z,11nm,1.4s						
KMI	Kunming	71.31	301	P	P	22 36 48.1	+1.1
KMI				pP	PcP	22 37 01.9	-5.0
KMI				sP	sP	22 37 09.6	+19
KMI				pmax	pmax		
	comp=Z,10.0nm,1.7s						
HHC	Hu-ho-hao-te	71.95	320	eP	P	22 36 56.2	+5.7
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,93nm,4.6s						
CM01	Chiang Mai Arr	72.29	293	eP	P	22 36 53.0	+0.2
CMAR	Chiang Mai Arr	72.32	293	P	P	22 36 53.1	+0.2
	comp=Z,2.9nm,1.0s,baz=116,slow=4.5,SNR=19						
CHTO	Chiang Mai	72.43	294	eP	P	22 36 52.8	-0.8
	comp=Z,8.8nm,1.3s						
CHTO	Chiang Mai	72.43	294	P	P	22 36 54.7	+1.1
	comp=Z,26nm,1.4s						
LZH	Lanzhou	74.91	312	eP	P	22 37 09.2	+1.1
LZH				pP	PcP	22 37 18.8	-3.1
LZH				sP	sP	22 37 23.0	+11
LZH				PP	PP	22 39 59.5	+3.7
LZH				pmax	pmax		
	comp=Z,23nm,1.6s						
LZH				LR	LR		
	comp=N,520nm,15.1s						
LZH				LR	LR		
	comp=E,560nm,15.6s						
LZH				LR	LR		
	comp=Z,580nm,16.3s						
ULN	Ulaanbaatar	78.40	324	eP	P	22 37 27.1	-0.5
	comp=Z,8.5nm,1.5s						
SONM	Songino Array	78.77	324	P	P	22 37 28.6	-1.0
	comp=Z,1.6nm,1.0s,baz=132,slow=7.1,SNR=6.4						
SONA1	Songino Array	78.77	324	eP	P	22 37 29.2	-0.4
QSPA	South Pole Qui	79.01	180	eP	P	22 37 30.6	-0.1
	comp=Z,11nm,1.2s						
GTA	Gaotai	79.20	314	⇑P	P	22 37 32.8	+0.7
GTA				pP	PcP	22 37 43.6	+3.2
GTA				sP	sP	22 37 47.0	+11
GTA				S	S	22 47 31.1	-1.2
GTA	Gaotai	79.20	314	sS	sS	22 47 45.7	+8.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,50nm,6.4s						
GTA				LR	LR		
	comp=N,160nm,20.9s						
GTA				LR	LR		
	comp=E,180nm,21.3s						
GTA				LR	LR		
	comp=Z,170nm,21.9s						
ILAR	Eielson Array	83.38	18	P	P	22 37 54.1	+0.6
	comp=Z,0.4nm,0.6s,baz=232,slow=5.3,SNR=9.1						
IL1	Eielson Array	83.38	18	eP	P	22 37 56.5	+2.9
NV01	Mina Array Sit	85.80	50	eP	P	22 38 07.0	+0.3
NVAR	Mina Array Bea	85.80	50	P	P	22 38 06.3	-0.4
	comp=Z,0.3nm,0.5s,baz=268,slow=5.9,SNR=2.8						
TIXI	Tiksi	86.08	349	eP	P	22 38 05.5	-1.6
	comp=Z,2.7nm,0.5s						
TIXI	Tiksi	86.08	349	P	P	22 38 06.7	-0.3
	comp=Z,2.9nm,0.4s,baz=358,slow=4.8						
KVN	Kaiserville	86.14	49	eP	P	22 38 11.9	+3.6
	comp=Z,3.7nm,1.0s						
WMQ	Urumqi	89.23	315	eP	P	22 38 23.9	+1.0
WMQ				LR	LR		
	comp=N,370nm,24.7s						
WMQ				LR	LR		
	comp=E,270nm,21.7s						
WMQ				LR	LR		
	comp=Z,310nm,20.3s						
SYO	Syowa Base	91.91	197⇓	eP	P	22 38 33.2	-1.6
SYO	Syowa Base	91.91	197⇓	ePcP	PcP	22 38 37.8	+2.2
PV01	Paradox Valley	93.14	52	eP	P	22 38 40.8	-0.6
	comp=Z,12nm,0.9s						
MKAR	Makanchi Array	93.65	317	eP	P	22 38 41.5	-1.8
	comp=Z,11nm,0.8s						
MKAR	Makanchi Array	93.65	317	P	P	22 38 41.9	-1.4
	comp=Z,2.5nm,1.0s,baz=93,slow=6.5,SNR=14						
ZALV	Zalesovo Beam	93.66	324	eP	P	22 38 41.2	-1.9
ZALV	Zalesovo Beam	93.66	324	P	P	22 38 40.9	-2.3
	comp=Z,0.5nm,0.5s,baz=102,slow=6.2,SNR=6.2						
MAKZ	Makanchi	93.86	317	eP	P	22 38 42.5	-1.8
	comp=Z,6.0nm,1.3s						
YKA	Yellowknife Ar	94.81	27	P	P	22 38 48.4	+0.2
	comp=Z,0.2nm,0.7s,baz=281,slow=3.3,SNR=2.6						
ARCES	ARCESS Array B	116.34	346	PKP	PKiKP	22 44 07.9	-2.0
	comp=Z,2.9nm,1.0s,baz=29,slow=2.8,SNR=5.7						
KEST	Kesra	147.52	323	PKPbc	PKPbc	22 45 11.2	-0.4
	comp=Z,14nm,1.2s,baz=101,slow=9.9,SNR=6.0						
ESDC	Sonseca Array	150.07	344	PKPbc	PKPbc	22 45 17.7	-0.2
	comp=Z,0.2nm,0.4s,baz=52,slow=2.1,SNR=2.9						
ESDC				PKPab	PKPab	22 45 23.3	-0.3
	comp=Z,0.6nm,0.7s,baz=15,slow=4.9,SNR=4.0						

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*ISCJB **08** 22:29:34.8±0.9, 10°.95S±0°.09×165°.8E±0°.1, h10^{km}, mb3.8/8, Error ellipse: s-maj=21.8km s-min=11.5km az=158.7*

*NEIC **08** 22:29:38.9±2.8, 11°.06S×165°.56E, h10^{km}, mb4.1/2, Error ellipse: s-maj=54.8km s-min=11.5km az=52.0*

*IDC **08** 22:29:41.4±3.8, 10°.95S×165°.97E, h48^{km}±35^{km}, mb3.5/5, mb1 3.9/7, mb1mx3.6/40, mbtmp4.0/7, ML4.5/2, Error ellipse: s-maj=38.5km s-min=34.0km az=119.0*

ISC 08 22:29:37.1±1.0**, 10°.9S**±0°.1×**165°.8E**±0°.2**, h10^{km}, n18, σ1ˢ.72**/16**, mb3.8**/8**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.93	284	ePn	Pn	22 31 04.5	-0.6
HNR	Honiara	5.93	284	P	Pn	22 31 09.5	+4.5
	24nm,0.3s,baz=101,slow=4.1,SNR=4.8						
DZM	Mont Dzumac	11.10	177	ePn	Pn	22 32 16.0	0.0
DZM	Mont Dzumac	11.10	177	P	Pn	22 32 17.2	+1.1
	1.8nm,0.3s,baz=339,slow=10,SNR=7.9						
ONTNC	Ouen Toro	11.34	177	ePn	Pn	22 32 19.1	-0.1
PINNC	Pines Island,	11.73	172	ePn	Pn	22 32 25.6	+1.0
WB2	Warramunga Arr	31.54	250	eP	P	22 35 57.4	-2.5
	3.5nm,1.1s						
WRA	Warramunga Arr	31.55	250	P	P	22 36 01.0	+1.0
	2.1nm,0.8s,baz=82,slow=9.2,SNR=7.0						
AS31	Alice Springs	32.87	243	eP	P	22 36 05.6	-6.0
	1.2nm,1.1s						
ASAR	Alice Springs	32.87	243	P	P	22 36 12.1	+0.5
	0.5nm,0.6s,baz=64,slow=10,SNR=4.3						
FITZ	Fitzroy Crossi	39.44	255	eP	P	22 37 07.8	0.0
	2.7nm,0.8s						
CM01	Chiang Mai Arr	72.07	293	eP	P	22 41 03.0	+0.9
SONM	Songino Array	78.59	324	P	P	22 41 38.9	-0.3
	0.2nm,0.5s,baz=116,slow=7.1,SNR=3.1						
ILAR	Eielson Array	83.39	18	P	P	22 42 02.6	-1.7
	0.3nm,0.6s,baz=231,slow=4.9,SNR=5.1						
WMQ	Urumqi	89.03	315	eP	P	22 42 36.9	+4.3
SYO	Syowa Base	91.90	197⇑	eP	P	22 42 43.4	-2.0
MKAR	Makanchi Array	93.46	317	P	P	22 42 52.5	-0.6
	0.4nm,0.7s,baz=100,slow=4.5,SNR=3.7						
KEST	Kesra	147.34	323	PKPbc	PKPdf	22 49 20.7	+1.4
	9.1nm,1.2s,baz=30,slow=16,SNR=3.6						

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*ISCJB **08** 22:30:11.8±0.3, 10°.97S±0°.05×165°.77E±0°.06, h10^{km}, mb4.5/27, Error ellipse: s-maj=8.7km s-min=5.9km az=146.7*

*NEIC **08** 22:30:13.5±0.3, 10°.86S×165°.74E, h10^{km}, mb4.7/16, Error ellipse: s-maj=9.3km s-min=6.9km az=83.0*

*IDC **08** 22:30:19.0±3.4, 10°.93S×165°.68E, h50^{km}±29^{km}, mb4.1/13, mb1 4.3/15, mb1mx4.0/42, mbtmp4.4/15, ML4.8/2, MS4.3/2, Ms1 4.3/2, ms1mx3.4/29, Error ellipse: s-maj=22.1km s-min=15.4km az=58.0*

ISC 08 22:30:13.4±0.6**, 10°.88S**±0°.08×**165°.83E**±0°.08**, h10^{km}, n56, σ1ˢ.09**/59**, mb4.6**/27**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.97	283	eP	Pn	22 31 43.0	+1.2
HNR				eS	Sn	22 32 52.0	+1.7
HNR	Honiara	5.97	283	P	Pn	22 31 43.2	+1.4
	46nm,0.3s,baz=234,slow=8.0,SNR=6.4						
HNR				S	Sn	22 32 50.5	+0.2
	baz=162,slow=20,SNR=1.6						
DZM	Mont Dzumac	11.14	177	ePn	Pn	22 32 55.0	+2.1
	31nm,0.5s						
DZM				eLR	LR	22 35 40.5	
	comp=Z,2μm,25.9s						
DZM	Mont Dzumac	11.14	177	ePn	Pn	22 32 54.4	+1.5
DZM	Mont Dzumac	11.14	177	P	Pn	22 32 54.8	+1.9
	4.1nm,0.3s,baz=334,slow=13,SNR=8.1						
DZM				LR	LR	22 36 48.7	
	comp=Z,873nm,19.1s,baz=25,slow=35						
ONTNC	Ouen Toro	11.38	177	ePn	Pn	22 32 56.6	+0.5
PINNC	Pines Island,	11.77	173	ePn	Pn	22 33 02.8	+1.4
MSVF	Nonsavu	13.66	121	ePn	P	22 33 35.8	-0.4
EIDS	Eidsvold	20.07	222	eP	Pn	22 34 48.5	-0.3
	22nm,1.0s						
CTA	Charters Tower	20.95	242	P	P	22 34 56.5	-0.2
	11nm,1.0s,baz=74,slow=11,SNR=4.2						
CTAO	Charters Tower	20.95	242	eP	P	22 34 56.0	-0.6
	35nm,1.3s						
COEN	Coen	22.33	260	eP	P	22 35 09.8	-1.7
	32nm,1.3s						
ARMA	Armidale	23.50	212	eP	P	22 35 24.3	+0.7
	25nm,1.3s						
URZ	Urewera	29.07	162	eP	P	22 36 14.5	+0.4
	19nm,1.4s						
URZ	Urewera	29.07	162	P	P	22 36 14.4	+0.4
	4.0nm,0.5s,baz=261,slow=4.1,SNR=6.1						
BKZ	Black Stump Fm	29.73	163	eP	P	22 36 20.4	+0.5
	9.2nm,0.6s						
STKA	Stephens Creek	30.61	223	P	P	22 36 27.8	-0.1
	2.9nm,0.5s,baz=48,slow=9.3,SNR=7.9						
STKA				LR	LR	22 47 53.6	
	comp=Z,924nm,19.2s,baz=47,slow=35						
MRZ	Mangatainoka R	30.89	165	P	P	22 36 29.6	-0.5
OGWZ	Otaki Gorge	30.93	166	P	P	22 36 30.2	-0.3
BFZ	Birch Farm	31.07	165	eP	P	22 36 30.4	-1.4
	105nm,1.5s						
BFZ	Birch Farm	31.07	165	P	P	22 36 30.5	-1.3
HOWZ	Holdsworth Sta	31.09	166	P	P	22 36 31.2	-0.8
THZ	Tophouse	31.38	170	eP	P	22 36 34.1	-0.4
	17nm,0.8s						
THZ	Tophouse	31.38	170	P	P	22 36 35.3	+0.8
MSWZ	Moikau Station	31.52	166	P	P	22 36 35.0	-0.7
PAWZ	Paruwai Farm	31.53	166	P	P	22 36 34.6	-1.2
WB2	Warramunga Arr	31.60	250	eP	P	22 36 35.8	-0.9
TRWZ	Traveller	31.61	166	P	P	22 36 35.8	-0.7
WRA	Warramunga Arr	31.61	250	P	P	22 36 35.6	-1.2
	6.9nm,0.8s,baz=81,slow=9.0,SNR=18						
WRA				PcP	PcP	22 39 29.6	+0.4
	0.9nm,1.0s,baz=77,slow=3.2,SNR=2.4						
PLWZ	Palliser	31.67	166	P	P	22 36 36.5	-0.5
LTZ	Lake Taylor	32.27	171	eP	P	22 36 42.7	+0.4
	23nm,1.1s						
AS31	Alice Springs	32.94	243	eP	P	22 36 47.3	-1.1
	1.8nm,0.8s						
ASAR	Alice Springs	32.94	243	P	P	22 36 47.2	-1.2
	5.3nm,0.8s,baz=72,slow=9.4,SNR=21						
ASAR				PcP	PcP	22 39 32.2	-0.5
	1.3nm,1.0s,baz=94,slow=3.4,SNR=4.1						
RPZ	Rata Peaks	33.02	173	eP	P	22 36 49.9	+1.0
	17nm,0.6s						
RPZ	Rata Peaks	33.02	173	P	P	22 36 48.9	+0.1
	12nm,0.5s,baz=328,slow=3.3,SNR=11						
PPT2	Papeete2	43.66	104	eLQ	LQ	22 48 46.0	
	808nm,27.8s						
PPT2				eLR	LR	22 50 59.6	
	comp=Z,322nm,24.0s						
KLR	Kul'dur	66.94	336	P	P	22 41 05.7	-0.4
	1.6nm,0.9s,baz=111,slow=5.3,SNR=3.5						
CMAR	Chiang Mai Arr	72.12	293	P	P	22 41 38.0	-0.8
	0.9nm,0.8s,baz=111,slow=4.5,SNR=4.4						
LZH	Lanzhou	74.71	312	eP	P	22 41 54.9	+1.1
LZH				pP	PcP	22 42 04.9	-3.1
LZH				sP	sP	22 42 09.6	+12
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
ULN	Ulaanbaatar	78.22	324	eP	P	22 42 13.9	+0.5
	comp=Z,5.4nm,1.2s						
SONM	Songino Array	78.58	324	P	P	22 42 15.1	-0.3
	comp=Z,1.0nm,1.0s,baz=157,slow=4.2,SNR=5.3						
SONA1	Songino Array	78.59	324	eP	P	22 42 13.6	-1.9
GTA	Gaotai	79.00	314	⇑P	P	22 42 18.8	+0.9
GTA				pP	PcP	22 42 29.2	+2.7
GTA				sP	sP	22 42 33.4	+11
GTA				S	S	22 52 16.4	-0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,6.8s						
GTA				LR	LR		
	comp=N,160nm,21.6s						
GTA				LR	LR		
	comp=E,180nm,21.3s						
GTA				LR	LR		
	comp=Z,190nm,21.3s						
QSPA	South Pole Qui	79.12	180	eP	P	22 42 16.1	-2.1
	comp=Z,8.6nm,1.3s						
HDA	Harding Lake	83.06	19	eP	P	22 42 39.4	+0.6
	comp=Z,8.3nm,1.0s						
ILAR	Eielson Array	83.33	18	P	P	22 42 39.8	-0.4
	comp=Z,1.1nm,0.8s,baz=234,slow=5.2,SNR=9.4						
SCRK	Sand Creek	83.74	20	eP	P	22 42 43.2	+0.7
	comp=Z,3.3nm,1.2s						
DAWY	Dawson	85.38	21	eP	P	22 42 52.2	+1.5
	comp=Z,8.7nm,1.3s						
NV01	Mina Array Sit	85.86	50	eP	P	22 42 55.2	+1.3
NVAR	Mina Array Bea	85.86	50	P	P	22 42 56.1	+2.2
	comp=Z,1.2nm,0.8s,baz=264,slow=8.1,SNR=3.8						
WMQ	Urumqi	89.04	315	eP	P	22 43 09.5	+0.6
WMQ				LR	LR		
	comp=N,390nm,24.5s						
WMQ				LR	LR		
	comp=E,270nm,21.9s						
WMQ				LR	LR		
	comp=Z,320nm,20.9s						
MK01	Makanchi Array	93.45	317	eP	P	22 43 28.2	-1.0
MKAR	Makanchi Array	93.46	317	P	P	22 43 28.5	-0.9
	comp=Z,1.7nm,1.0s,baz=101,slow=6.3,SNR=7.6						
ZALV	Zalesovo Beam	93.47	324	P	P	22 43 27.0	-2.2
	comp=Z,0.3nm,0.3s,baz=67,slow=3.7,SNR=3.0						
MAKZ	Makanchi	93.67	317	eP	P	22 43 29.8	-0.5
	comp=Z,5.5nm,1.3s						
ESDC	Sonseca Array	149.93	344	PKPbc	PKiKP	22 50 05.3	-0.1
	comp=Z,0.4nm,0.7s,baz=37,slow=7.5,SNR=3.2						

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*IDC **08** 22:31:34.9±1.4, 10°.62S×165°.60E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/43, mbtmp4.0/7, ML4.1/1, Error ellipse: s-maj=46.9km s-min=25.5km az=126.0*

*ISCJB **08** 22:31:37.6±0.9, 10°.8S±0°.1×165°.6E±0°.2, h31^{km}, mb3.9/6, Error ellipse: s-maj=29.2km s-min=18.0km az=8.1*

ISC 08 22:31:39.4±1.0**, 10°.7S**±0°.1×**165°.6E**±0°.2**, h31^{km}, n7, σ0ˢ.78**/7**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.34	176	Pn	Pn	22 34 19.6	+0.1
	1.2nm,0.3s,baz=37,slow=15,SNR=3.9						
WRA	Warramunga Arr	31.50	249	P	P	22 37 59.2	+0.3
	3.7nm,1.0s,baz=79,slow=9.2,SNR=3.5						
ASAR	Alice Springs	32.86	243	P	P	22 38 10.4	-0.3
	1.5nm,0.7s,baz=70,slow=9.3,SNR=4.1						
SONM	Songino Array	78.32	324	P	P	22 43 36.6	-0.2
	0.4nm,0.7s,baz=132,slow=5.1,SNR=2.3						
ILAR	Eielson Array	83.22	19	P	P	22 44 03.5	+1.1
	1.0nm,0.8s,baz=225,slow=5.9,SNR=3.7						
MKAR	Makanchi Array	93.19	317	P	P	22 44 50.9	0.0
	0.9nm,0.7s,baz=101,slow=6.3,SNR=4.8						
YKA	Yellowknife Ar	94.71	27	P	P	22 44 56.4	-1.0
	0.1nm,0.4s,baz=253,slow=5.1,SNR=2.9						

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*IDC **08** 22:34:51.3±1.5, 10°.99S×164°.81E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.8/44, mbtmp3.9/6, ML3.1/1, Error ellipse: s-maj=47.1km s-min=27.5km az=118.0*

*ISCJB **08** 22:34:54.2±1.1, 11°.2S±0°.1×164°.8E±0°.2, h31^{km}, mb3.7/5, Error ellipse: s-maj=31.8km s-min=19.5km az=175.5*

ISC 08 22:34:56.0±1.2**, 11°.1S**±0°.1×**164°.8E**±0°.3**, h31^{km}, n6, σ0ˢ.91**/6**, mb3.8**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.07	172	Pn	Pn	22 37 32.6	+0.3
	0.1nm,0.3s,baz=121,slow=19,SNR=8.9						
WRA	Warramunga Arr	30.63	249	P	P	22 41 07.5	-0.3
	0.6nm,0.6s,baz=80,slow=9.1,SNR=5.0						
ASAR	Alice Springs	31.98	243	P	P	22 41 19.1	-0.6
	1.2nm,0.6s,baz=62,slow=10,SNR=17						
SONM	Songino Array	78.13	324	P	P	22 46 53.4	+1.1
	0.2nm,0.4s,baz=134,slow=8.3,SNR=3.5						
ILAR	Eielson Array	83.80	19	P	P	22 47 21.1	-0.8
	0.7nm,1.1s,baz=219,slow=6.5,SNR=2.9						
MKAR	Makanchi Array	92.90	317	P	P	22 48 06.2	+0.1
	0.6nm,0.8s,baz=98,slow=6.2,SNR=5.9						

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*IDC **08** 22:35:41.3±1.5, 11°.00S×164°.64E, h0^{km}, mb3.9/5, mb1 4.1/6, mb1mx3.8/42, mbtmp3.9/6, ML3.8/1, Error ellipse: s-maj=46.2km s-min=27.1km az=119.0*

*ISCJB **08** 22:35:43.9±1.1, 11°.2S±0°.1×164°.6E±0°.2, h29^{km}, mb3.8/5, Error ellipse: s-maj=31.4km s-min=19.4km az=174.8*

ISC 08 22:35:45.7±1.2**, 11°.1S**±0°.1×**164°.6E**±0°.3**, h29^{km}, n6, σ0ˢ.34**/6**, mb3.8**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.10	171	Pn	Pn	22 38 22.7	+0.1
	0.6nm,0.3s,baz=343,slow=19,SNR=5.1						
WRA	Warramunga Arr	30.46	249	P	P	22 41 55.9	-0.3
	0.8nm,0.5s,baz=81,slow=9.1,SNR=8.6						
ASAR	Alice Springs	31.82	243	P	P	22 42 08.2	0.0
	1.8nm,0.5s,baz=62,slow=10,SNR=22						
SONM	Songino Array	78.03	324	P	P	22 47 42.1	+0.4
	0.3nm,0.5s,baz=131,slow=5.9,SNR=3.1						
ILAR	Eielson Array	83.86	19	P	P	22 48 12.0	-0.3
	0.3nm,0.7s,baz=222,slow=5.6,SNR=3.8						
MKAR	Makanchi Array	92.78	317	P	P	22 48 55.5	0.0
	0.6nm,0.8s,baz=85,slow=6.6,SNR=5.3						

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*ISCJB **08** 22:37:51.0±1.1, 11°.4S±0°.1×165°.8E±0°.2, h10^{km}, mb3.9/7, Error ellipse: s-maj=30.4km s-min=17.3km az=1.7*

*IDC **08** 22:37:51.4±1.4, 11°.25S×165°.78E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/42, mbtmp4.0/8, ML4.2/1, Error ellipse: s-maj=44.5km s-min=24.1km az=119.0*

ISC 08 22:37:52.9±1.1**, 11°.3S**±0°.1×**165°.8E**±0°.2**, h10^{km}, n9, σ0ˢ.66**/9**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.76	177	Pn	Pn	22 40 27.3	0.0
	1.8nm,0.3s,baz=336,slow=10,SNR=10						
STKA	Stephens Creek	30.31	224	P	P	22 44 04.5	-0.1
	2.0nm,0.6s,baz=54,slow=6.0,SNR=4.4						
WRA	Warramunga Arr	31.45	250	P	P	22 44 14.7	-0.2
	1.7nm,0.9s,baz=81,slow=9.0,SNR=7.4						
ASAR	Alice Springs	32.73	244	P	P	22 44 25.9	-0.3
	1.4nm,0.8s,baz=71,slow=9.7,SNR=10.0						
CMAR	Chiang Mai Arr	72.24	294	P	P	22 49 20.0	+1.0
	0.8nm,0.6s,baz=129,slow=5.1,SNR=5.3						
SONM	Songino Array	78.87	324	P	P	22 49 55.9	-0.7
	0.4nm,0.7s,baz=134,slow=6.4,SNR=4.6						
ILAR	Eielson Array	83.71	18	P	P	22 50 21.4	-0.3
	0.4nm,0.6s,baz=256,slow=4.7,SNR=9.0						
MKAR	Makanchi Array	93.71	317	P	P	22 51 09.8	-0.2
	1.1nm,0.7s,baz=89,slow=7.0,SNR=12						

ARCES	ARCESS Array B	116.56	345	PKP	PKiKP	22 56 37.6	+0.9
	1.4nm,0.9s,baz=51,slow=1.4,SNR=5.8						

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*ISCJB **08** 22:38:20.6±0.7, 10°.94S±0°.08×165°.95E±0°.08, h10^{km}, mb4.2/10, Error ellipse: s-maj=14.3km s-min=8.5km az=137.5*

*IDC **08** 22:38:20.6±1.1, 10°.89S×165°.96E, h0^{km}, mb4.2/7, mb1 4.4/9, mb1mx4.0/43, mbtmp4.3/9, ML4.5/2, Error ellipse: s-maj=27.0km s-min=23.7km az=86.0*

*NEIC **08** 22:38:22.5±2.8, 10°.91S×165°.96E, h10^{km}, mb4.4/3, Error ellipse: s-maj=27.9km s-min=15.2km az=50.0*

ISC 08 22:38:22.1±0.8**, 10°.8S**±0°.1×**166°.1E**±0°.1**, h10**^{km}**, n23, σ1^{s}.20**/25**, mb4.2**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.17	282	ePn	Pn	22 39 53.9	+0.4
HNR				eSn	Sn	22 41 05.3	+1.2
HNR	Honiara	6.17	282	Pn	Pn	22 39 53.3	-0.1
	14nm,0.3s,baz=354,slow=3.1,SNR=8.1						
HNR				Sn	Sn	22 41 05.3	+1.2
	7.0nm,0.3s,baz=180,slow=15,SNR=1.6						
MARNC	Mare, Loyalty	10.76	170	ePn	Pn	22 40 56.8	+0.5
DZM	Mont Dzumac	11.18	178	ePn	Pn	22 41 04.0	+1.8
DZM	Mont Dzumac	11.18	178	Pn	Pn	22 41 02.8	+0.6
	2.9nm,0.3s,baz=22,slow=19,SNR=6.7						
PINNC	Pines Island,	11.79	174	ePn	Pn	22 41 11.6	+1.1
WRAB	Tennant Creek	31.83	250	eP	P	22 44 46.4	-1.0
	7.1nm,0.9s						
WB2	Warramunga Arr	31.83	250	eP	P	22 44 45.2	-2.3
WRA	Warramunga Arr	31.84	250	P	P	22 44 46.2	-1.3
	5.2nm,0.7s,baz=81,slow=9.2,SNR=20						
RPZ	Rata Peaks	33.05	173	P	P	22 44 57.6	-0.2
	9.6nm,0.7s,baz=128,slow=5.5,SNR=5.8						
AS31	Alice Springs	33.16	243	eP	P	22 44 57.1	-1.9
	1.0nm,0.7s						
ASAR	Alice Springs	33.16	243	P	P	22 44 57.1	-2.0
	2.7nm,0.8s,baz=66,slow=10,SNR=13						
FITZ	Fitzroy Crossi	39.73	255	eP	P	22 45 53.9	-1.4
	7.6nm,0.8s						
CM31	Chiang Mai Arr	72.31	293	eP	P	22 49 49.0	+0.5
CMAR	Chiang Mai Arr	72.31	293	P	P	22 49 49.0	+0.5
	1.1nm,0.6s,baz=117,slow=5.1,SNR=6.3						
SONA0	Songino Array	78.68	324	eP	P	22 50 24.6	-0.1
SONM	Songino Array	78.68	324	P	P	22 50 24.6	-0.1
	0.3nm,0.5s,baz=147,slow=5.8,SNR=3.3						
ILAR	Eielson Array	83.22	18	P	P	22 50 49.6	+1.2
	0.5nm,0.6s,baz=246,slow=5.0,SNR=5.5						
ILB	Eielson Array	83.22	18	eP	P	22 50 49.6	+1.2
MK32	Makanchi Array	93.58	317	eP	P	22 51 38.1	-0.5
MKAR	Makanchi Array	93.58	317	P	P	22 51 38.1	-0.5
	0.9nm,0.7s,baz=100,slow=6.3,SNR=5.6						
ARA0	ARCESS Array S	116.21	346	ePKPdf	PKiKP	22 57 04.2	-1.0
ARCES	ARCESS Array B	116.21	346	PKP	PKiKP	22 57 04.2	-1.0
	1.5nm,0.8s,baz=65,slow=2.4,SNR=3.3						

JMA 08 22:42:38.0±0.1**, 38°.31N×144°.59E, h44**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.41	290	P	Pn	22 43 16.3	+1.4
OFUJ				eS	Sn	22 43 44.6	+1.4
JIKH	Ishinomakikobu	2.46	271	eS	Sn	22 43 45.7	+1.4
JKMT	Kesennumamotoy	2.49	283	P	Pn	22 43 17.3	+1.3
JKMT				S	Sn	22 43 46.6	+1.4
MIYJ	Miyakonagasawa	2.50	301	P	Pn	22 43 17.4	+1.2
MIYJ				eS	Sn	22 43 46.4	+0.9
JMK	Ichinoseki	2.72	285	P	Pn	22 43 20.7	+1.6
JMK				eS	Sn	22 43 53.1	+2.4
JOM	Ohasama	2.82	295	P	Pn	22 43 22.2	+1.6
JOM				eS	Sn	22 43 56.0	+2.6
JANG	Nango	3.15	312	P	Pn	22 43 26.2	+1.1
JYK	Kaneyama	3.37	282	P	Pn	22 43 30.4	+2.3
JYK				eS	Sn	22 44 09.4	+2.6
JFT	Otama	3.46	258	P	Pn	22 43 31.2	+1.9
JFT				S	Sn	22 44 10.7	+1.7
JOT	Ohata	4.10	319	P	Pn	22 43 39.7	+1.5
JOT				eS	Sn	22 44 25.2	+0.3
JCH	Churui	4.40	348	P	Pn	22 43 42.7	+0.5
JCH				eS	Sn	22 44 31.2	-1.0
JKB	Kayabe	4.50	324	P	Pn	22 43 46.1	+2.6
JRY	Ryogami san	5.09	245	P	Pn	22 43 52.8	+1.1
JRY				eS	Sn	22 44 48.0	-1.2
NEM2	Nemuro 2	5.12	9	P	Pn	22 43 50.7	-1.5
NEM2				eS	Sn	22 44 45.6	-4.4
JOD2	Odawara 2	5.36	237	P	Pn	22 43 56.8	+1.3
JOD2				eS	Sn	22 44 53.0	-2.9
MAT	Matsushiro	5.38	253	P	Pn	22 43 58.8	+3.1
MAT				eS	Sn	22 45 00.3	+4.0
JTKR	Abashiri--Toko	5.68	355	P	Pn	22 43 59.5	-0.3
JTKR				eS	Sn	22 45 01.3	-2.3
JHR	Hokuryu	5.84	339	P	Pn	22 44 04.7	+2.7
JHR				eS	Sn	22 45 09.3	+1.6

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*ISCJB **08** 22:45:06.7±0.2, 10°.93S±0°.03×165°.91E±0°.04, h10^{km}, mb4.8/79, MS4.4/12, Error ellipse: s-maj=6.4km s-min=4.8km az=168.3*

*NEIC **08** 22:45:08.1±0.2, 10°.85S×165°.96E, h10^{km}, mb5.0/43, Error ellipse: s-maj=6.5km s-min=4.8km az=91.0*

*IDC **08** 22:45:12.8±2.7, 10°.97S×166°.02E, h48^{km}±24^{km}, mb4.2/19, mb1 4.4/21, mb1mx4.4/30, mbtmp4.5/21, ML5.1/2, MS4.3/9, Ms1 4.3/9, ms1mx3.9/40, Error ellipse: s-maj=19.0km s-min=12.2km az=65.0*

ISC 08 22:45:07.8±0.4**, 10°.92S**±0°.06×**166°.09E**±0°.06**, h10**^{km}**, n138, σ1^{s}.44**/140**, mb4.8**/80**, MS4.3**/14**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.22	283	iP	Pn	22 46 41.0	+1.2
HNR				eS	Sn	22 47 54.0	+3.0
HNR	Honiara	6.22	283	ePn	Pn	22 46 39.8	0.0
HNR				S	Sn	22 47 52.6	+1.6
HNR	Honiara	6.22	283	P	Pn	22 46 40.3	+0.6
	55nm,0.3s,baz=164,slow=3.5,SNR=69						
HNR				S	Sn	22 47 52.6	+1.6
	35nm,0.3s,baz=220,slow=16,SNR=2.3						
HNR				LR	LR	22 49 19.5	
	comp=Z,3μm,18.8s,baz=138,slow=40						
MARNC	Mare, Loyalty	10.67	170	ePn	Pn	22 47 41.6	+0.8
DZM	Mont Dzumac	11.10	178	ePn	Pn	22 47 49.0	+2.2
	96nm,0.4s						
DZM				eLR	LR	22 50 23.3	
	comp=Z,4μm,24.4s						
DZM	Mont Dzumac	11.10	178	ePn	Pn	22 47 49.0	+2.2
DZM				S	Sn	22 49 49.4	-1.8
DZM	Mont Dzumac	11.10	178	P	Pn	22 47 48.4	+1.6
	13nm,0.3s,baz=342,slow=10.0,SNR=56						
DZM				S	Sn	22 49 49.4	-1.8
	0.8nm,0.3s,baz=131,slow=19,SNR=3.5						
ONTNC	Ouen Toro	11.33	178	ePn	Pn	22 47 52.7	+2.8
PINNC	Pines Island,	11.71	174	ePn	Pn	22 47 58.1	+3.1
MSVF	Nonsavu	13.43	122	ePn	Pn	22 48 24.9	+6.2
EIDS	Eidsvold	20.22	223	eP	Pn	22 49 44.5	-0.5
	46nm,1.1s						
MANU	Manus Island	20.57	294	eP	Pn	22 49 47.6	-1.6
	214nm,1.0s						
CTA	Charters Tower	21.15	242	P	P	22 49 53.5	+0.2
	18nm,0.7s,baz=79,slow=12,SNR=15						
CTAO	Charters Tower	21.15	242	eP	P	22 49 53.5	+0.2
	30nm,0.8s						
COEN	Coen	22.57	260	eP	P	22 50 07.5	-1.1
	34nm,1.2s						
ARMA	Armidale	23.61	213	eP	P	22 50 20.2	+1.1
	21nm,1.0s						
URZ	Urewera	28.96	162	P	P	22 51 07.9	+0.4
	5.3nm,0.4s,baz=327,slow=1.0,SNR=11						
URZ				LR	LR	23 02 00.1	
	comp=Z,632nm,18.2s,baz=343,slow=35						
BKZ	Black Stump Fm	29.62	163	eP	P	22 51 14.8	+1.3
	22nm,0.6s						
BKZ				ePcP	PcP	22 54 16.5	-1.6
STKA	Stephens Creek	30.76	224	eP	P	22 51 24.4	+0.8
	1.9nm,0.9s						
STKA	Stephens Creek	30.76	224	P	P	22 51 23.0	-0.6
	6.5nm,0.7s,baz=28,slow=10.0,SNR=16						
STKA				LR	LR	23 03 34.4	
	comp=Z,774nm,18.1s,baz=44,slow=36						
BFZ	Birch Farm	30.98	165	eP	P	22 51 25.5	+0.2
	34nm,0.6s						
THZ	Tophouse	31.30	170	eP	P	22 51 29.6	+1.3
	39nm,0.6s						
WRAB	Tennant Creek	31.83	250	eP	P	22 51 32.4	-0.8
	27nm,0.9s						
WB2	Warramunga Arr	31.83	250	eP	P	22 51 32.4	-0.7
WRA	Warramunga Arr	31.84	250	P	P	22 51 31.7	-1.6
	24nm,0.8s,baz=82,slow=9.1,SNR=127						
WRA				LR	LR	23 04 13.5	
	comp=Z,772nm,18.4s,baz=65,slow=36						
KHZ	Kahutara	32.05	170	eP	P	22 51 36.0	+1.3
	23nm,0.7s						
LTZ	Lake Taylor	32.20	171	eP	P	22 51 37.0	+0.8
	45nm,0.8s						
TOO	Toolangi	32.36	211	eP	P	22 51 38.5	+0.9
	11nm,0.8s						
FOZ	Fox Glacier	32.66	175	eP	P	22 51 41.8	+1.8
	50nm,0.7s						
OXZ	Oxford	32.70	172	eP	P	22 51 41.3	+0.9
	94nm,1.3s						
RPZ	Rata Peaks	32.96	173	eP	P	22 51 43.5	+0.8
	59nm,0.7s						
RPZ	Rata Peaks	32.96	173	P	P	22 51 42.6	-0.1
	57nm,0.6s,baz=315,slow=1.5,SNR=35						
RPZ				LR	LR	23 03 52.6	
	comp=Z,521nm,19.1s,baz=346,slow=34						
CRLZ	Canterbury Las	33.03	171	eP	P	22 51 44.4	+1.1
	190nm,1.5s						
AS01	Alice Springs	33.11	243	eP	P	22 51 41.7	-2.7
AS31	Alice Springs	33.15	243	eP	P	22 51 43.3	-1.4
	2.3nm,0.6s						
ASAR	Alice Springs	33.15	243	P	P	22 51 43.5	-1.2
	9.3nm,0.8s,baz=74,slow=9.5,SNR=72						
ASAR				PcP	PcP	22 54 27.8	0.0
	1.3nm,0.8s,baz=67,slow=2.8,SNR=5.7						
ASAR				LR	LR	23 04 43.8	
	comp=Z,432nm,18.6s,baz=72,slow=35						
MQZ	McQueen’s Vall	33.16	171	eP	P	22 51 44.9	+0.4
	67nm,0.9s						
LBZ	Lake Benmore	33.54	175	eP	P	22 51 49.4	+1.6
	23nm,0.8s						
RAR	Rarotonga	34.30	112	LR	LR	23 03 48.7	
	comp=Z,244nm,18.7s,baz=310,slow=32						
BBOO	Buckleboo	35.16	227	eP	P	22 52 01.8	-0.2
	24nm,1.0s						
FITZ	Fitzroy Crossi	39.73	255	eP	P	22 52 38.8	-2.2
FORT	Forrest	40.39	235	eP	P	22 52 46.2	0.0
	27nm,0.8s						
SANI	Sanana	40.76	280	P	P	22 52 47.8	-1.7
	21nm,1.1s						
BATI	Baumata	41.69	267	P	P	22 52 55.7	-1.5
	15nm,1.0s						
MMRI	Maumere	43.24	269	eP	P	22 53 08.4	-1.4
	103nm,1.4s						
MMRI	Maumere	43.24	269	P	P	22 53 07.7	-2.1
	41nm,1.1s						
PPT	Papeete	43.40	104	LR	LR	23 10 05.1	
	comp=Z,350nm,18.9s,baz=304,slow=34						
PPT2	Papeete2	43.40	104	eLQ	LQ	23 03 38.6	
	574nm,24.8s						
PPT2				eLR	LR	23 05 31.6	
	comp=Z,569nm,24.5s						
EDFI	Ende, Flores	43.77	269	P	P	22 53 09.3	-4.9
LUWI	Luwuk	44.12	280	eP	P	22 53 16.3	-0.6
	67nm,1.3s						
LUWI	Luwuk	44.12	280	P	P	22 53 15.6	-1.3
	41nm,1.5s						
APSI	Ampana	45.24	280	P	P	22 53 25.8	0.0
	19nm,1.2s						
MRSI	Marisa	45.32	282	P	P	22 53 37.7	+11
BKSI	Bulukumba	45.80	273	P	P	22 53 29.3	-1.0
	5.9nm,0.9s						
BNSI	Bone	45.98	274	P	P	22 53 31.5	-0.2
	62nm,1.2s						
SPSI	Sidrap Palu	46.40	275	P	P	22 53 34.0	-1.0
	12nm,1.1s						
PCI	Palu	47.00	279	P	P	22 53 39.7	0.0
	69nm,1.3s						
PLAI	Plampang	47.60	268	P	P	22 53 42.9	-1.5
	60nm,1.2s,712nm						
MORW	Morawa	49.98	241	eP	P	22 54 02.8	+0.3
	16nm,0.8s						
SRBI	Singaraja	50.21	269	P	P	22 54 03.6	-0.8
	17nm,1.0s						
JAGI	Jajag, Banyuwa	51.20	268	eP	P	22 54 09.3	-2.7
	68nm,1.1s						
JAGI	Jajag, Banyuwa	51.20	268	P	P	22 54 09.9	-2.1
	57nm,1.3s						
MJAR	Matsushiro Arr	54.01	332	P	P	22 54 33.6	+1.3
	3.5nm,0.9s,baz=174,slow=7.7,SNR=5.0						
PCJI	Pacitan	54.16	268	P	P	22 54 32.1	-1.7
	97nm,1.3s						
JNU	Nakatsue	55.17	324	P	P	22 54 40.9	0.0
	6.4nm,0.6s,baz=196,slow=3.6,SNR=6.5						
ASAJ	Asahikawa	58.78	340	LR	LR	23 18 00.1	
	comp=Z,150nm,19.5s,baz=156,slow=33						
KSRS	Korea Array	59.96	325	P	P	22 55 14.0	-0.5
	0.9nm,0.7s,baz=138,slow=7.0,SNR=4.7						
KSAR	Wonju Array Be	59.97	325	P	P	22 55 14.0	-0.6
PPBI	Pangkal Pinang	60.10	274	P	P	22 55 12.3	-3.6
	25nm,0.4s,5μm						
MDSI	Maura Dua	61.59	271	P	P	22 55 22.5	-3.6
	11nm,1.4s						
NJ2	Nanjing	62.16	315	eP	P	22 55 29.2	-0.4
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
USRK	Ussuriysk Ar.	62.98	333	P	P	22 55 34.9	+0.1
	comp=Z,2.0nm,0.6s,baz=109,slow=8.2,SNR=6.0						
CN2	Changchun	65.80	329	eP	P	22 55 53.4	+0.1
VNDA	Vanda	66.63	181	P	P	22 55 58.8	+0.7
	comp=Z,8.0nm,1.1s,baz=353,slow=12,SNR=4.4						
MNSI	Mandailing Nat	67.11	276	P	P	22 56 01.1	-1.2
	comp=Z,14nm,0.8s						
ENH	Enshi	68.08	309	eP	P	22 56 06.6	-1.5
	comp=Z,7.8nm,0.9s						
BJI	Beijing	68.59	321	eP	P	22 56 09.7	-1.4
BJI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BJI				LR	LR		
	comp=Z,170nm,45.5s						
GYA	Guiyang	68.62	304	P	P	22 56 13.0	+1.3
GYA				pP	sP	22 56 24.3	+8.4
GYA				PP	PP	22 58 46.6	+3.2
GYA				S	S	23 05 11.0	-3.9
GYA				SKS	SKiKP	23 06 06.9	+1.5
GYA	Guiyang	68.62	304	SS	SS	23 09 38.2	-1.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,500nm,18.4s						
GYA				LR	LR		
	comp=E,520nm,18.1s						
GYA				LR	LR		
	comp=Z,550nm,18.6s						
XAN	Xi'an	70.28	312	P	P	22 56 22.0	+0.3
XAN				pP	sP	22 56 28.8	+2.8
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN	Xi'an	70.28	312	eP	P	22 56 22.1	+0.3
	comp=Z,5.9nm,0.9s						
KMI	Kunming	71.34	301	P	P	22 56 29.2	+0.6
KMI				pP	sP	22 56 36.4	+3.6
KMI				sP	PcP	22 56 56.8	+8.4
KMI				pmax	pmax		
	comp=Z,11nm,1.3s						
KMI				pmax	pmax		
	comp=Z,150nm,5.1s						
HHC	Hu-ho-hao-te	71.95	319	eP	P	22 56 33.0	+1.2
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,240nm,6.6s						
CM01	Chiang Mai Arr	72.34	293	eP	P	22 56 34.5	+0.1
CMAR	Chiang Mai Arr	72.37	293	P	P	22 56 35.0	+0.4
	comp=Z,0.8nm,0.4s,baz=126,slow=4.6,SNR=12						
CHTO	Chiang Mai	72.48	294	eP	P	22 56 35.4	+0.1
	comp=Z,3.1nm,1.0s						
CHTO	Chiang Mai	72.48	294	P	P	22 56 36.5	+1.2
	comp=Z,17nm,1.5s						
CD2	Chengdu	72.79	307	P	P	22 56 38.0	+1.0
LZH	Lanzhou	74.92	312	eP	P	22 56 50.5	+1.0
LZH				pP	PcP	22 57 00.7	-2.7
LZH				sP	sP	22 57 05.8	+12
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,63nm,4.7s						
LZH				LR	LR		
	comp=N,530nm,15.8s						
LZH				LR	LR		
	comp=E,560nm,15.3s						
LZH				LR	LR		
	comp=Z,660nm,17.3s						
GAMB	Gambell	76.38	10	eP	P	22 56 57.9	+0.9
	comp=Z,8.5nm,1.0s						
SVW2	Sparrevohn	77.89	18	eP	P	22 57 07.6	+2.0
	comp=Z,17nm,1.4s						
ANM	Nome	78.29	12	eP	P	22 57 09.8	+2.0
	comp=Z,7.2nm,1.2s						
ULN	Ulaanbaatar	78.39	324	eP	P	22 57 09.1	+0.2
	comp=Z,6.9nm,1.0s						
BILL	Bilibino	78.75	0	eP	P	22 57 10.7	+0.5
	comp=Z,8.7nm,0.9s						
SONM	Songino Array	78.76	324	P	P	22 57 10.8	-0.1
	comp=Z,2.2nm,0.9s,baz=142,slow=6.2,SNR=15						
SONA1	Songino Array	78.76	324	eP	P	22 57 10.6	-0.3
QSPA	South Pole Qui	79.09	180	eP	P	22 57 12.4	0.0
	comp=Z,16nm,1.2s						
GTA	Gaotai	79.21	314	⇑P	P	22 57 14.2	+0.7
GTA				pP	PcP	22 57 22.1	+0.3
GTA				sP	sP	22 57 25.4	+7.6
GTA				S	S	23 07 13.0	-0.8
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,65nm,7.8s						
GTA				LR	LR		
	comp=N,240nm,20.6s						
GTA				LR	LR		
	comp=E,230nm,21.3s						
GTA				LR	LR		
	comp=Z,190nm,20.9s						
MCK	McKinley	81.92	19	eP	P	22 57 28.3	+0.9
	comp=Z,21nm,1.4s						
IM3	Indian Mountai	82.21	15	eP	P	22 57 29.1	+0.3
WRH	Wood River Hil	82.70	18	eP	P	22 57 32.5	+1.1
	comp=Z,6.6nm,1.1s						
MDM	Murphy Dome	83.00	18	eP	P	22 57 33.2	+0.1
	comp=Z,13nm,1.3s						
HDA	Harding Lake	83.01	19	eP	P	22 57 33.6	+0.5
	comp=Z,21nm,1.3s						
RIDG	Independ’e Rid	83.24	20	eP	P	22 57 35.2	+0.9
	comp=Z,23nm,1.4s						
IL1	Eielson Array	83.28	18	eP	P	22 57 33.5	-0.9
ILAR	Eielson Array	83.28	18	P	P	22 57 34.4	0.0
	comp=Z,2.1nm,0.7s,baz=233,slow=5.1,SNR=19						
ILB	Eielson Array	83.28	18	eP	P	22 57 34.9	+0.4
SCRK	Sand Creek	83.68	20	eP	P	22 57 37.0	+0.3
	comp=Z,10nm,1.2s						
NV01	Mina Array Sit	85.69	50	eP	P	22 57 45.9	-1.6
NVAR	Mina Array Bea	85.69	50	P	P	22 57 48.2	+0.7
	comp=Z,1.0nm,0.5s,baz=232,slow=4.9,SNR=4.8						
TIXI	Tiksi	86.03	349	eP	P	22 57 47.5	-0.6
	comp=Z,7.2nm,1.4s						
G08A	Pilot Rock	87.32	43	eP	P	22 57 57.5	+2.3
	comp=Z,6.3nm,1.3s						
CCUT	Cedar City	89.20	52	eP	P	22 58 07.5	+3.1
	comp=Z,5.2nm,1.2s						
WMQ	Urumqi	89.24	315	eP	P	22 58 04.9	+0.6
WMQ				LR	LR		
	comp=N,470nm,30.1s						
WMQ				LR	LR		
	comp=E,260nm,22.1s						
WMQ				LR	LR		
	comp=Z,260nm,23.5s						
PDAR	Pinedale Array	93.22	47	P	P	22 58 23.5	+0.4
	comp=Z,0.5nm,0.8s,baz=267,slow=5.4,SNR=4.3						
MK01	Makanchi Array	93.64	317	eP	P	22 58 24.0	-0.6
ZALV	Zalesovo Beam	93.65	324	P	P	22 58 23.0	-1.4
	comp=Z,1.7nm,0.8s,baz=113,slow=3.9,SNR=9.0						
MK31	Makanchi Array	93.66	317	eP	P	22 58 24.4	-0.3
MKAR	Makanchi Array	93.66	317	eP	P	22 58 24.4	-0.3
	comp=Z,23nm,0.9s						
MKAR	Makanchi Array	93.66	317	P	P	22 58 24.1	-0.6
	comp=Z,3.8nm,0.8s,baz=101,slow=6.3,SNR=33						
MAKZ	Makanchi	93.87	317	eP	P	22 58 25.3	-0.3
	comp=Z,4.9nm,1.0s						
YKA	Yellowknife Ar	94.71	27	P	P	22 58 27.2	-1.8
	comp=Z,0.2nm,0.4s,baz=259,slow=4.8,SNR=5.6						
TXAR	Lajitas Array	95.47	61	P	P	22 58 33.2	-0.4
	comp=Z,0.3nm,0.6s,baz=232,slow=4.4,SNR=3.2						
KSH	Kashi	96.93	309	P	P	22 58 41.7	+1.7
KSH				pP	sP	22 58 51.9	+7.6
KSH				PP	PP	23 02 40.1	+4.5
KSH				pmax	pmax		
	comp=Z,310nm,5.2s						
ARCES	ARCESS Array B	116.29	346	PKP	PKiKP	23 03 49.8	-1.3
	comp=Z,2.4nm,0.8s,baz=72,slow=1.8,SNR=11						
FINES	FINESS Array B	121.77	339	PKP	PKPdf	23 03 59.9	-1.9
	comp=Z,2.3nm,0.8s,baz=5.7,slow=3.8,SNR=8.0						
SDV	Santo Domingo	124.16	87	ePKPdf	PKiKP	23 04 10.5	+2.2
NB2	NORSAR Subarra	126.66	345	PKPdf	PKPdf	23 04 10.1	-1.2
	comp=Z,0.5nm,0.7s,baz=41,slow=1.9						
NOA	NORSAR Array B	126.66	345	PKP	PKPdf	23 04 10.5	-0.8
	comp=Z,0.9nm,0.8s,baz=36,slow=2.0,SNR=4.3						
AKASG	Malin Array Be	126.94	327	PKP	PKPdf	23 04 11.4	-0.7
	comp=Z,0.1nm,0.3s,baz=55,slow=2.9,SNR=2.7						
BRTR	Keskin Array B	129.12	313	PKP	PKPdf	23 04 14.1	-2.8
	comp=Z,1.0nm,1.0s,baz=194,slow=4.7,SNR=3.8						
CLL	Collm	134.12	337	ePKPdf	PKPdf	23 04 26.0	+0.3
CLL				Lm	MLR	00 09 00.0	
	comp=Z,100nm,19.5s						
GERES	GERESS Array B	135.74	334	PKP	PKPdf	23 04 27.7	-1.2
	comp=Z,0.9nm,0.8s,baz=45,slow=0.2,SNR=6.1						
KEST	Kesra	147.51	323	PKPbc	PKPbc	23 04 52.9	0.0
	comp=Z,10nm,0.9s,baz=324,slow=2.9,SNR=8.8						
ES19	SONSECA Array	149.98	344	ePKPbc	PKPbc	23 04 58.5	-0.6
ESDC	Sonseca Array	150.02	345	PKPbc	PKPbc	23 04 58.2	-0.9
	comp=Z,1.4nm,0.7s,baz=21,slow=2.7,SNR=8.0						
TOA0	Torodi Ar. Sit	164.57	280	ePKPdf	PKPdf	23 05 12.8	-0.3
TORD	Torodi Ar. Bea	164.57	280	PKP	PKPdf	23 05 12.2	-0.8
	comp=Z,1.5nm,1.1s,baz=358,slow=4.9,SNR=4.5						

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*ISCJB **08** 22:48:08.7±1.1, 11°.0S±0°.1×165°.8E±0°.2, h10^{km}, mb4.0/7, Error ellipse: s-maj=23.9km s-min=17.4km az=169.7*

*IDC **08** 22:48:08.7±1.5, 10°.90S×165°.77E, h0^{km}, mb4.0/7, mb1 4.3/9, mb1mx4.0/34, mbtmp4.2/9, ML4.6/2, Error ellipse: s-maj=39.7km s-min=25.5km az=127.0*

ISC 08 22:48:10.4±1.2**, 10°.9S**±0°.1×**165°.8E**±0°.2**, h10**^{km}**, n10, σ0^{s}.79**/9**, mb4.1**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.92	283	eP	Pn	22 49 42.0	+3.8
HNR	Honiara	5.92	283	Pn	Pn	22 49 39.0	+0.8
	35nm,0.3s,baz=84,slow=2.7,SNR=4.3						
DZM	Mont Dzumac	11.16	177	Pn	Pn	22 50 50.8	+0.6
	2.2nm,0.3s,baz=35,slow=16,SNR=4.2						
WRA	Warramunga Arr	31.58	250	P	P	22 54 32.9	-0.6
	5.9nm,0.8s,baz=81,slow=8.8,SNR=13						
ASAR	Alice Springs	32.90	243	P	P	22 54 44.5	-0.7
	1.4nm,0.6s,baz=65,slow=10,SNR=5.9						
FITZ	Fitzroy Crossi	39.46	255	P	P	22 55 40.4	-0.9
	4.7nm,0.6s,baz=89,slow=5.4,SNR=7.0						
CMAR	Chiang Mai Arr	72.07	293	P	P	22 59 35.7	+0.3
	0.5nm,0.7s,baz=107,slow=4.8,SNR=3.1						
SONM	Songino Array	78.54	324	P	P	23 00 13.0	+0.7
	0.3nm,0.5s,baz=128,slow=4.6,SNR=4.0						
ILAR	Eielson Array	83.33	18	P	P	23 00 37.1	-0.2
	0.4nm,0.6s,baz=237,slow=4.9,SNR=3.2						
MKAR	Makanchi Array	93.42	317	P	P	23 01 25.5	-0.7
	0.6nm,0.8s,baz=94,slow=6.7,SNR=5.2						

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*IDC **08** 22:52:46.9±1.6, 11°.00S×165°.67E, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.7/35, mbtmp3.9/6, ML4.4/2, Error ellipse: s-maj=35.3km s-min=30.0km az=142.0*

*ISCJB **08** 22:52:49.4±1.2, 11°.1S±0°.1×165°.7E±0°.1, h30^{km}, mb3.7/4, Error ellipse: s-maj=22.3km s-min=12.3km az=32.9*

ISC 08 22:52:51.1±1.3**, 11°.0S**±0°.1×**165°.7E**±0°.1**, h30**^{km}**, n6, σ1^{s}.20**/7**, mb3.7**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.90	285	Pn	Pn	22 54 15.4	-1.1
	20nm,0.3s,baz=193,slow=17,SNR=2.8						
HNR				Sn	Sn	22 55 24.7	+1.6
	13nm,0.3s,baz=180,slow=12,SNR=1.6						
DZM	Mont Dzumac	10.99	176	Pn	Pn	22 55 26.7	+0.3
	1.3nm,0.3s,baz=358,slow=21,SNR=7.7						
WRA	Warramunga Arr	31.45	250	P	P	22 59 10.4	+0.1

	1.1nm,0.8s,baz=81,slow=9.3,SNR=6.3						
ASAR	**Alice Springs**	**32.76**	**243**	P	**P**	**22 59 21.4**	**-0.3**
	0.5nm,0.9s,baz=69,slow=10,SNR=3.2						
ILAR	**Eielson Array**	**83.52**	**19**	P	**P**	**23 05 16.8**	**+1.0**
	0.4nm,0.7s,baz=233,slow=5.1,SNR=5.0						
MKAR	**Makanchi Array**	**93.50**	**317**	P	**P**	**23 06 03.1**	**-0.9**
	0.4nm,0.8s,baz=106,slow=4.7,SNR=4.4						

IDC ***08*** *23:02:35.8±1.2, 30°.06N×72°.86E, h0^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.5/55, mbtmp3.7/11, ML3.6/2, Error ellipse: s-maj=24.1km s-min=23.3km az=178.0*

ISCJB ***08*** *23:02:36.3±0.6, 29°.93N±0°.09×73°.20E±0°.07, h33^{km}, mb3.6/9, Error ellipse: s-maj=13.2km s-min=6.8km az=24.3*

ISC 08 23:02:39.1±0.8**, 30°.15N**±0°.08×**73°.23E**±0°.07**, h35^{km}, n21, σ2ˢ.48**/24**, mb3.6**/8**, India-Pakistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYUN	**Piuthan**	**8.78**	**101**	*e*P	**Pn**	**23 04 44.8**	**+1.0**
	23nm,0.3s						
DANN	**Dangsing**	**9.37**	**98**	*e*P	**Pn**	**23 04 53.2**	**+1.2**
	21nm,0.3s						
KOLN	**Koldanda**	**9.39**	**102**	*e*P	**Pn**	**23 04 53.0**	**+0.8**
	10.0nm,0.3s						
DMN	**Daman**	**10.71**	**101**	*e*P	**Pn**	**23 05 10.0**	**-0.4**
	11nm,0.4s						
PKIN	**Phulchoki**	**10.97**	**101**	*e*P	**Pn**	**23 05 13.3**	**-0.6**
	13nm,0.4s						
PKI	**Pulchoki**	**10.98**	**101**	*e*P	**Pn**	**23 05 13.5**	**-0.6**
	14nm,0.4s						
PKI				*e*S	**Sn**	**23 07 12.0**	**-3.9**
GUN	**Gumba**	**11.30**	**98**	*e*P	**Pn**	**23 05 18.4**	**0.0**
	58nm,0.3s						
JIRN	**Jiri**	**11.63**	**99**	*e*P	**Pn**	**23 05 22.4**	**-0.5**
	66nm,0.7s						
RAMN	**Ramite**	**12.18**	**102**	*e*P	**Pn**	**23 05 29.2**	**-1.2**
	40nm,0.5s						
AAK	**Ala-Archa**	**12.50**	**4**	Pn	**Pn**	**23 05 36.6**	**+1.9**
	0.6nm,0.3s,baz=175,slow=6.9,SNR=10						
AAK				Sn	**Sn**	**23 07 47.6**	**-5.1**
	0.2nm,0.3s,baz=66,slow=20,SNR=2.0						
WSAR	**Wadi Sarin**	**14.74**	**246**	Pn	**Pn**	**23 06 01.5**	**-3.7**
	0.2nm,0.3s,baz=81,slow=12,SNR=4.3						
WSAR				Sn	Sn	23 08 30.6	-17
	0.2nm,0.3s,baz=348,slow=19,SNR=4.1						
MKAR	**Makanchi Array**	**18.05**	**20**	P	**Pn**	**23 06 46.9**	**-0.2**
	0.2nm,0.3s,baz=207,slow=11,SNR=12						
MKAR				S	**Sn**	**23 10 02.9**	**-4.4**
	0.1nm,0.3s,baz=202,slow=26,SNR=3.6						
KURBB	**Kurchatov Arra**	**20.83**	**10**	P	**P**	**23 07 19.0**	**+1.4**
	2.3nm,0.7s,baz=200,slow=11,SNR=14						
BVAR	**Borovoye Array**	**22.95**	**356**	P	**P**	**23 07 42.3**	**+2.1**
	2.0nm,0.8s,baz=164,slow=10,SNR=11						
AKTO	**Aktyubinsk**	**23.26**	**335**	P	**P**	**23 07 45.5**	**+2.1**
	0.7nm,0.5s,baz=138,slow=8.8,SNR=4.4						
ZALV	**Zalesovo Beam**	**25.22**	**16**	P	**P**	**23 08 05.3**	**+3.8**
	1.1nm,0.4s,baz=207,slow=9.4,SNR=8.0						
CMAR	**Chiang Mai Arr**	**26.10**	**111**	P	**P**	**23 08 13.9**	**+4.1**
	0.5nm,0.3s,baz=291,slow=9.7,SNR=8.9						
BRTR	**Keskin Array B**	**33.60**	**297**	P	**P**	**23 09 15.9**	**-0.3**
	0.2nm,0.6s,baz=98,slow=11,SNR=2.2						
FINES	**FINESS Array B**	**43.84**	**329**	P	**P**	**23 10 41.5**	**0.0**
	2.3nm,1.0s,baz=115,slow=10.0,SNR=2.6						
ARCES	**ARCESS Array B**	**47.72**	**339**	P	**P**	**23 11 13.7**	**+1.7**
	1.2nm,0.9s,baz=99,slow=7.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**67.65**	**273**	P	**P**	**23 13 33.1**	**+0.1**
	0.4nm,0.7s,baz=80,slow=5.8,SNR=3.4						

ISCJB ***08*** *23:02:51.8±1.1, 11°.0S±0°.1×166°.0E±0°.2, h10^{km}, mb3.6/6, MS4.5/1, Error ellipse: s-maj=32.0km s-min=18.3km az=179.1*

IDC ***08*** *23:02:52.0±1.7, 10°.93S×165°.98E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.7/39, mbtmp3.7/7, ML4.0/1, MS4.6/1, Ms1 4.6/1, ms1mx3.1/38, Error ellipse: s-maj=48.3km s-min=27.9km az=118.0*

ISC 08 23:02:53.5±1.2**, 11°.0S**±0°.1×**166°.0E**±0°.3**, h10^{km}, n8, σ0ˢ.37**/7**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.07**	**178**	Pn	**Pn**	**23 05 32.1**	**0.0**
	1.0nm,0.3s,baz=322,slow=11,SNR=9.6						
RAO	**Raoul Island**	**23.62**	**143**	LR	LR	23 15 43.8	
	comp=Z,2µm,21.9s,baz=54,slow=33						
WRA	**Warramunga Arr**	**31.73**	**250**	P	**P**	**23 09 17.7**	**-0.3**
	0.9nm,0.8s,baz=82,slow=9.1,SNR=8.3						
ASAR	**Alice Springs**	**33.04**	**243**	P	**P**	**23 09 29.4**	**0.0**
	0.2nm,0.5s,baz=65,slow=10.0,SNR=3.3						
CMAR	**Chiang Mai Arr**	**72.28**	**293**	P	**P**	**23 14 20.3**	**+0.5**
	0.3nm,0.3s,baz=104,slow=7.5,SNR=3.8						
SONM	**Songino Array**	**78.72**	**324**	P	**P**	**23 14 56.3**	**0.0**
	0.3nm,0.5s,baz=132,slow=6.8,SNR=3.1						
ILAR	**Eielson Array**	**83.35**	**18**	P	**P**	**23 15 20.5**	**0.0**
	0.4nm,0.5s,baz=226,slow=5.0,SNR=5.7						
MKAR	**Makanchi Array**	**93.61**	**317**	P	**P**	**23 16 09.7**	**-0.4**
	0.6nm,0.7s,baz=98,slow=6.8,SNR=6.2						

ISCJB ***08*** *23:07:50.8±0.9, 11°.1S±0°.1×165°.76E±0°.09, h10^{km}, mb3.8/6, Error ellipse: s-maj=17.7km s-min=11.6km az=24.0*

IDC ***08*** *23:07:51.0±1.2, 11°.00S×165°.79E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.9/38, mbtmp4.0/8, ML4.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/46, Error ellipse: s-maj=35.3km s-min=24.4km az=142.0*

ISC 08 23:07:52.4±1.0**, 11°.0S**±0°.1×**165°.8E**±0°.1**, h10^{km}, n8, σ0ˢ.77**/9**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.99**	**284**	Pn	**Pn**	**23 09 20.7**	**-0.4**
	13nm,0.3s,baz=175,slow=4.7,SNR=3.6						
HNR				Sn	**Sn**	**23 10 30.4**	**+0.6**
	30nm,0.3s,baz=265,slow=9.5,SNR=3.5						
HNR				LR	LR	23 11 48.9	
	comp=Z,338nm,18.4s,baz=175,slow=40						
DZM	**Mont Dzumac**	**11.03**	**177**	Pn	**Pn**	**23 10 30.8**	**+0.3**
	baz=140,slow=8.6,SNR=3.4						
WRA	**Warramunga Arr**	**31.57**	**250**	P	**P**	**23 14 15.4**	**0.0**
	1.7nm,0.8s,baz=82,slow=9.2,SNR=14						
ASAR	**Alice Springs**	**32.88**	**243**	P	**P**	**23 14 26.4**	**-0.6**
	2.3nm,0.7s,baz=65,slow=9.5,SNR=5.0						
SONM	**Songino Array**	**78.67**	**324**	P	**P**	**23 19 55.8**	**+0.8**
	0.5nm,0.8s,baz=108,slow=4.7,SNR=3.2						
ILAR	**Eielson Array**	**83.44**	**18**	P	**P**	**23 20 20.6**	**+0.8**
	1.1nm,0.8s,baz=240,slow=5.1,SNR=9.8						
MKAR	**Makanchi Array**	**93.53**	**317**	P	**P**	**23 21 08.0**	**-0.7**
	0.3nm,0.7s,baz=98,slow=5.2,SNR=4.2						
YKA	**Yellowknife Ar**	**94.89**	**27**	P	**P**	**23 21 13.7**	**-0.8**
	0.1nm,0.6s,baz=262,slow=4.3,SNR=2.6						

ISCJB ***08*** *23:08:31.6±0.9, 10°.9S±0°.1×166°.41E±0°.09, h10^{km}, mb3.6/6, MS4.4/1, Error ellipse: s-maj=17.4km s-min=11.8km az=17.7*

IDC ***08*** *23:08:31.6±1.3, 10°.79S×166°.43E, h0^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.8/38, mbtmp3.8/8, ML4.1/2, MS4.4/1, Ms1 4.4/1, ms1mx3.1/45, Error ellipse: s-maj=35.7km s-min=24.8km az=140.0*

ISC 08 23:08:33.2±1.0**, 10°.8S**±0°.1×**166°.5E**±0°.1**, h10^{km}, n9, σ1ˢ.13**/9**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.57**	**281**	Pn	**Pn**	**23 10 10.6**	**+0.7**
	16nm,0.3s,baz=159,slow=14,SNR=2.7						
HNR				Sn	**Sn**	**23 11 25.1**	**+0.2**
	14nm,0.3s,baz=258,slow=20,SNR=2.2						
DZM	**Mont Dzumac**	**11.24**	**180**	Pn	**Pn**	**23 11 14.5**	**+0.4**
	0.3nm,0.3s,baz=331,slow=19,SNR=2.3						
WRA	**Warramunga Arr**	**32.25**	**250**	P	**P**	**23 15 00.3**	**-1.9**
	1.1nm,0.7s,baz=83,slow=9.2,SNR=6.0						
ASAR	**Alice Springs**	**33.56**	**243**	P	**P**	**23 15 13.8**	**+0.2**
	0.5nm,0.6s,baz=78,slow=8.9,SNR=2.3						
JHJ	**Hachijo jima 2**	**50.52**	**331**	LR	LR	23 33 45.7	
	comp=Z,429nm,20.8s,baz=138,slow=30						
SONM	**Songino Array**	**78.87**	**323**	P	**P**	**23 20 37.7**	**+0.8**
	0.1nm,0.6s,baz=110,slow=6.5,SNR=2.3						
ILAR	**Eielson Array**	**83.03**	**18**	P	**P**	**23 20 59.0**	**+0.5**
	0.8nm,0.9s,baz=228,slow=4.9,SNR=4.0						
MKAR	**Makanchi Array**	**93.81**	**317**	P	**P**	**23 21 49.4**	**-1.4**
	0.3nm,0.6s,baz=102,slow=6.1,SNR=3.2						
YKA	**Yellowknife Ar**	**94.40**	**27**	P	**P**	**23 21 53.0**	**0.0**
	0.2nm,0.8s,baz=257,slow=5.6,SNR=3.6						

IDC 08 23:13:46.8±1.7**, 11°.01S**×**166°.07E, h0^{km}, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/45**, mbtmp3.7**/4**, ML3.3**/1**, Error ellipse: s-maj=55.2km s-min=30.6km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.01**	**178**	Pn	Pn	23 16 25.7	0.0
	0.2nm,0.3s,baz=121,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**31.80**	**250**	P	P	23 20 13.5	+0.1
	1.3nm,1.0s,baz=80,slow=9.0,SNR=6.9						
ASAR	**Alice Springs**	**33.10**	**243**	P	P	23 20 24.5	-0.2
	0.3nm,0.6s,baz=76,slow=9.6,SNR=3.4						
ILAR	**Eielson Array**	**83.38**	**18**	P	P	23 26 15.6	0.0
	0.9nm,1.0s,baz=210,slow=7.0,SNR=4.0						

ISCJB ***08*** *23:15:33.4±0.1, 10°.91S±0°.02×165°.79E±0°.03, h10^{km}, mb4.9/119, MS5.0/1, Error ellipse: s-maj=4.6km s-min=3.3km az=170.5*

IDC ***08*** *23:15:33.7±0.4, 10°.91S×165°.76E, h0^{km}, mb4.5/29, mb1 4.6/30, mb1mx4.5/47, mbtmp4.5/30, ML5.3/2, Error ellipse: s-maj=16.0km s-min=12.3km az=94.0*

NEIC ***08*** *23:15:34.9±0.1, 10°.86S×165°.79E, h10^{km}, mb5.0/86, Error ellipse: s-maj=4.3km s-min=3.3km az=107.0*

ISC 08 23:15:34.9±0.3**, 10°.91S**±0°.05×**165°.93E**±0°.06**, h10^{km}, n242, σ1ˢ.44**/243**, mb4.9**/120**, 1C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.07**	**283**	*i* P	**Pn**	**23 17 05.0**	**+0.3**
HNR	**Honiara**	**6.07**	**283**	*e*Pn	**Pn**	**23 17 04.8**	**0.0**
HNR	**Honiara**	**6.07**	**283**	Pn	**Pn**	**23 17 04.4**	**-0.4**
	85nm,0.3s,baz=222,slow=4.9,SNR=32						
MARNC	**Mare, Loyalty**	**10.70**	**169**	*e*Pn	**Pn**	**23 18 09.7**	**+1.4**
DZM	**Mont Dzumac**	**11.11**	**178**	*e*Pn	**Pn**	**23 18 14.3**	**+0.3**
	242nm,0.5s						
DZM				*e*LR	LR	23 20 45.7	
	comp=Z,11µm,26.4s						
DZM	**Mont Dzumac**	**11.11**	**178**	Pn	**Pn**	**23 18 15.2**	**+1.2**
	16nm,0.3s,baz=16,slow=18,SNR=51						
DZM				Sn	**Sn**	**23 20 16.5**	**-1.9**
	2.8nm,0.3s,baz=32,slow=9.5,SNR=2.9						
ONTNC	**Ouen Toro**	**11.34**	**178**	*e*Pn	**Pn**	**23 18 19.9**	**+2.7**
PINNC	**Pines Island,**	**11.73**	**173**	*e*Pn	**Pn**	**23 18 25.0**	**+2.7**
MSVF	**Nonsavu**	**13.56**	**121**	*e*Pn	**Pn**	**23 18 51.5**	**+4.0**
EIDS	**Eidsvold**	**20.11**	**222**	P	Pn	23 20 11.0	+0.1
	baz=20,SNR=10						
EIDS	**Eidsvold**	**20.11**	**222**	*e*P	**P**	**23 20 09.5**	**+0.4**
	124nm,1.3s						
MANU	**Manus Island**	**20.42**	**294**	*e*P	Pn	23 20 13.3	-1.3
	304nm,1.3s						
CTA	**Charters Tower**	**21.02**	**242**	P	**P**	**23 20 18.5**	**-0.4**
	17nm,0.8s,baz=67,slow=11,SNR=14						
CTAO	**Charters Tower**	**21.02**	**242**	*e*P	**P**	**23 20 18.0**	**-0.9**
	81nm,1.0s						
MTSU	**Mount Surprise**	**22.10**	**249**	P	**P**	**23 20 30.6**	**0.0**
	baz=22,SNR=11						
RMQ	**Roma**	**22.42**	**224**	P	**P**	**23 20 34.5**	**+0.6**
	baz=22,SNR=59						
COEN	**Coen**	**22.42**	**260**	P	**P**	**23 20 33.2**	**-0.8**
	baz=22,SNR=9.4						
COEN	**Coen**	**22.42**	**260**	*e*P	**P**	**23 20 32.9**	**-1.1**
	108nm,1.4s						
ARMA	**Armidale**	**23.53**	**212**	P	**P**	**23 20 47.5**	**+2.0**
	baz=24,SNR=15						
ARMA	**Armidale**	**23.53**	**212**	*e*P	**P**	**23 20 45.3**	**-0.1**
	90nm,1.2s						
QIS	**Mount Isa**	**27.05**	**246**	P	**P**	**23 21 16.6**	**-1.2**
	baz=27,SNR=7.4						
CMSA	**Cobar Meteorol**	**27.78**	**219**	P	**P**	**23 21 24.0**	**-0.1**
	baz=28,SNR=14						
OMRZ	**Omania**	**28.65**	**163**	P	**P**	**23 21 35.3**	**+3.4**
HAZ	**Te Kaha**	**28.77**	**160**	P	**P**	**23 21 34.3**	**+1.5**
MXZ	**Matakaoa Point**	**28.78**	**159**	P	**P**	**23 21 34.2**	**+1.3**
PKGZ	**Pakihiroa**	**28.99**	**160**	P	**P**	**23 21 35.9**	**+1.0**
URZ	**Urewera**	**29.02**	**162**	*e*P	**P**	**23 21 36.8**	**+1.7**
	13nm,0.8s						
URZ	**Urewera**	**29.02**	**162**	P	**P**	**23 21 35.9**	**+0.8**
	9.0nm,0.5s,baz=342,slow=19,SNR=5.4						
URZ	**Urewera**	**29.02**	**162**	P	**P**	**23 21 36.3**	**+1.3**
WMGZ	**Waiomatatini S**	**29.05**	**159**	P	**P**	**23 21 35.8**	**+0.5**
MUGZ	**Murupara**	**29.11**	**162**	P	**P**	**23 21 37.2**	**+1.2**
PUZ	**Puketiti**	**29.22**	**160**	P	**P**	**23 21 39.4**	**+2.5**
TWGZ	**Tauwhareparae**	**29.22**	**160**	P	**P**	**23 21 37.9**	**+1.0**
RTZ	**Ruatahuna**	**29.30**	**162**	P	**P**	**23 21 39.6**	**+1.9**
WTVZ	**West Tongariro**	**29.38**	**165**	P	**P**	**23 21 41.1**	**+2.7**
NGZ	**Ngauruhoe**	**29.44**	**165**	P	**P**	**23 21 41.9**	**+3.0**
MTHZ	**Maungataniwha**	**29.48**	**163**	P	**P**	**23 21 41.1**	**+1.9**
FWVZ	**Far West T-bar**	**29.50**	**165**	P	**P**	**23 21 42.0**	**+2.4**
TRVZ	**Turoa**	**29.54**	**165**	P	**P**	**23 21 42.7**	**+2.7**
CNGZ	**Carnagh Statio**	**29.57**	**160**	P	**P**	**23 21 39.8**	**-0.2**
RAHZ	**Arahi**	**29.61**	**162**	P	**P**	**23 21 41.2**	**+0.8**
RIGZ	**Rimuhau**	**29.63**	**161**	P	**P**	**23 21 40.4**	**-0.1**
BKZ	**Black Stump Fm**	**29.67**	**163**	*e*P	**P**	**23 21 41.8**	**+0.8**
	38nm,0.5s						
BKZ	**Black Stump Fm**	**29.67**	**163**	P	**P**	**23 21 41.4**	**+0.5**
MOVZ	**Moawhango**	**29.70**	**165**	P	**P**	**23 21 44.6**	**+3.4**
NMHZ	**Naumai**	**29.70**	**163**	P	**P**	**23 21 42.6**	**+1.4**
WHHZ	**Waihua**	**29.81**	**162**	P	**P**	**23 21 42.8**	**+0.7**
BHHZ	**Black Hill Sta**	**29.86**	**164**	P	**P**	**23 21 43.4**	**+0.8**
KWHZ	**Kaweka Forest**	**29.89**	**164**	P	**P**	**23 21 44.1**	**+1.2**
ARHZ	**Aropaoanui**	**29.91**	**163**	P	**P**	**23 21 43.7**	**+0.7**
MCHZ	**McNeill Hill**	**29.99**	**163**	P	**P**	**23 21 44.2**	**+0.5**
KAHZ	**Kahuranaki**	**30.36**	**163**	P	**P**	**23 21 47.7**	**+0.7**
PXZ	**Pawanui**	**30.58**	**163**	P	**P**	**23 21 49.3**	**+0.4**
DVHZ	**Dannevirke**	**30.64**	**165**	P	**P**	**23 21 49.8**	**+0.3**
STKA	**Stephens Creek**	**30.66**	**223**	P	**P**	**23 21 50.2**	**+0.5**
	baz=31,SNR=5.1						
STKA	**Stephens Creek**	**30.66**	**223**	*e*P	**P**	**23 21 49.8**	**0.0**
	5.8nm,1.2s						
STKA	**Stephens Creek**	**30.66**	**223**	P	**P**	**23 21 48.8**	**-1.0**
	17nm,1.0s,baz=39,slow=12,SNR=6.9						
PRHZ	**Porangahau**	**30.74**	**164**	P	**P**	**23 21 50.3**	**0.0**
MRZ	**Mangatainoka R**	**30.83**	**166**	P	**P**	**23 21 51.9**	**+0.8**
ANWZ	**Angora Road**	**30.88**	**164**	P	**P**	**23 21 51.3**	**-0.2**
BFZ	**Birch Farm**	**31.02**	**165**	*e*P	**P**	**23 21 54.2**	**+1.4**
	41nm,0.7s						
BFZ	**Birch Farm**	**31.02**	**165**	P	**P**	**23 21 52.6**	**-0.2**
CAW	**Cannon Point**	**31.14**	**167**	P	**P**	**23 21 55.1**	**+1.3**
TMWZ	**Te Maipa**	**31.33**	**165**	P	**P**	**23 21 55.4**	**-0.1**
THZ	**Tophouse**	**31.34**	**170**	*e*P	**P**	**23 21 57.9**	**+2.2**
	42nm,0.8s						
PAWZ	**Paruwai Farm**	**31.48**	**166**	P	**P**	**23 21 56.9**	**0.0**
TRWZ	**Traveller**	**31.56**	**166**	P	**P**	**23 21 57.5**	**0.0**
PLWZ	**Palliser**	**31.62**	**167**	P	**P**	**23 21 57.6**	**-0.5**
WRAB	**Tennant Creek**	**31.68**	**250**	*e*P	**P**	**23 21 57.0**	**-2.0**
	75nm,1.5s						
WB2	**Warramunga Arr**	**31.69**	**250**	*e*P	**P**	**23 21 56.9**	**-2.0**
	68nm,1.4s						
WRA	**Warramunga Arr**	**31.70**	**250**	P	**P**	**23 21 57.3**	**-1.7**
	8.2nm,0.7s,baz=79,slow=8.8,SNR=42						
KHZ	**Kahutara**	**32.08**	**169**	*e*P	**P**	**23 22 04.3**	**+2.2**
	62nm,1.2s						
LTZ	**Lake Taylor**	**32.23**	**171**	*e*P	**P**	**23 22 03.2**	**-0.3**
	30nm,0.8s						
TOO	**Toolangi**	**32.28**	**211**	*e*P	**P**	**23 22 02.1**	**-1.8**
	16nm,0.9s						
FOZ	**Fox Glacier**	**32.67**	**175**	*e*P	**P**	**23 22 07.3**	**+0.1**
	32nm,0.9s						
OXZ	**Oxford**	**32.73**	**172**	*e*P	**P**	**23 22 07.7**	**-0.1**
	90nm,1.3s						
KDU	**Kakadu**	**32.78**	**264**	P	**P**	**23 22 06.5**	**-2.1**
	baz=33,SNR=3.7						
AS01	**Alice Springs**	**32.97**	**243**	*e*P	**P**	**23 22 07.6**	**-2.6**
RPZ	**Rata Peaks**	**32.98**	**173**	*e*P	**P**	**23 22 09.8**	**-0.2**
	33nm,0.8s						
RPZ	**Rata Peaks**	**32.98**	**173**	P	**P**	**23 22 09.5**	**-0.5**
	29nm,0.9s,baz=113,slow=1.9,SNR=14						
AS31	**Alice Springs**	**33.01**	**243**	*e*P	**P**	**23 22 09.2**	**-1.4**
	9.3nm,1.4s						
ASAR	**Alice Springs**	**33.01**	**243**	P	**P**	**23 22 08.9**	**-1.6**
	3.9nm,0.5s,baz=72,slow=9.3,SNR=37						
ASAR				PcP	**PcP**	**23 24 54.3**	**-0.2**
	2.4nm,0.7s,baz=89,slow=2.5,SNR=5.1						
CRLZ	**Canterbury Las**	**33.06**	**171**	*e*P	**P**	**23 22 10.6**	**0.0**
	202nm,1.4s						
MQZ	**McQueen's Vall**	**33.19**	**171**	*e*P	**P**	**23 22 10.7**	**-1.0**
	66nm,0.9s						
HTT	**Hallett**	**33.40**	**224**	P	**P**	**23 22 13.7**	**-0.2**
	baz=34,SNR=6.6						
ARPS	**Mount Arapiles**	**33.69**	**216**	P	**P**	**23 22 18.5**	**+2.2**
	baz=34						
BBOO	**Buckleboo**	**35.05**	**227**	P	**P**	**23 22 27.7**	**-0.4**
	baz=35,SNR=7.0						
BBOO	**Buckleboo**	**35.05**	**227**	*e*P	**P**	**23 22 27.7**	**-0.4**
	28nm,0.9s						
WRKA	**Warakurna**	**38.30**	**243**	P	**P**	**23 22 55.1**	**-0.9**
	baz=38,SNR=10						
NLAI	**Namlea**	**39.24**	**278**	P	**P**	**23 23 05.0**	**+1.1**
FITZ	**Fitzroy Crossi**	**39.59**	**255**	P	**P**	**23 23 06.0**	**-0.8**
	baz=40,SNR=6.8						
FITZ	**Fitzroy Crossi**	**39.59**	**255**	*e*P	**P**	**23 23 06.0**	**-0.8**
	11nm,0.6s						
FORT	**Forrest**	**40.27**	**235**	*e*P	**P**	**23 23 10.8**	**-1.4**
	37nm,1.1s						
SANI	**Sanana**	**40.60**	**280**	P	**P**	**23 23 14.8**	**-0.5**
	24nm,1.4s,1µm						
BATI	**Baumata**	**41.53**	**267**	P	**P**	**23 23 24.6**	**+1.6**
	13nm,0.9s						
PPT2	**Papeete2**	**43.55**	**104**	*e*S	**S**	**23 30 03.0**	**-5.9**
	896nm,25.5s						
PPT2				*e*LQ	LQ	23 33 43.7	
	5µm,25.8s						
PPT2				*e*LR	LR	23 35 29.7	
	comp=Z,4µm,23.5s						
LUWI	**Luwuk**	**43.97**	**280**	*e*P	**P**	**23 23 41.7**	**-1.0**
	81nm,1.3s						
LUWI	**Luwuk**	**43.97**	**280**	P	**P**	**23 23 43.0**	**+0.3**
	53nm,1.5s,1µm						
MEEK	**Meekatharra**	**47.17**	**244**	P	**P**	**23 24 08.0**	**0.0**
	baz=47,SNR=20						
MORW	**Morawa**	**49.84**	**241**	P	**P**	**23 24 29.2**	**+0.6**
	baz=50,SNR=3.3						
MORW	**Morawa**	**49.84**	**241**	*e*P	**P**	**23 24 28.0**	**-0.6**
	86nm,1.5s						
MUN	**Mundaring**	**50.30**	**237**	P	**P**	**23 24 32.3**	**+0.4**
	baz=50,SNR=3.8						
JAGI	**Jajag, Banyuwa**	**51.05**	**268**	*e*P	**P**	**23 24 35.1**	**-2.8**
	78nm,1.5s						
TAOE	**Nuku Hiva Isla**	**53.11**	**93**	*e*S	**S**	**23 32 18.6**	**-5.6**
	864nm,25.3s						
TAOE				*e*LR	LR	23 39 52.9	
	comp=Z,2µm,27.8s						
MJAR	**Matsushiro Arr**	**53.94**	**332**	P	**P**	**23 24 57.9**	**-1.0**
	7.9nm,1.1s,baz=158,slow=7.4,SNR=7.1						
MAT	**Matsushiro**	**53.94**	**332**	P	**P**	**23 24 58.3**	**-0.6**
JNU	**Nakatsue**	**55.08**	**324**	P	**P**	**23 25 06.3**	**-0.9**
	9.1nm,0.9s,baz=94,slow=19,SNR=2.9						
KPJI	**Karang Pucung**	**56.32**	**268**	P	**P**	**23 25 18.3**	**+1.8**
	30nm,1.5s						
ASAJ	**Asahikawa**	**58.73**	**341**	P	**P**	**23 25 33.2**	**+0.3**
	10nm,0.7s,baz=90,slow=20,SNR=1.9						
KSRS	**Korea Array**	**59.87**	**325**	P	**P**	**23 25 41.4**	**+0.5**
	0.8nm,0.5s,baz=157,slow=7.6,SNR=5.1						
KSAR	**Wonju Array Be**	**59.88**	**325**	P	**P**	**23 25 41.4**	**+0.4**
KS01	**Wonju Array Si**	**59.90**	**325**	*e*P	**P**	**23 25 40.2**	**-0.9**
MDSI	**Maura Dua**	**61.44**	**271**	P	**P**	**23 25 52.0**	**-0.1**
	14nm,1.5s						
NJ2	**Nanjing**	**62.05**	**315**	*e*P	**P**	**23 25 55.2**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
QIZ	**Qiongzhong**	**62.77**	**298**	P	**P**	**23 26 01.5**	**+0.5**
QIZ				S	**S**	**23 34 28.6**	**-1.8**
QIZ				pmax	pmax		
	comp=Z,220nm,5.1s						
QIZ				pmax	pmax		
	comp=Z,390nm,4.9s						
QIZ				LR	LR		
	comp=N,620nm,18.6s						
QIZ				LR	LR		
	comp=E,700nm,20.6s						
QIZ				LR	LR		
	comp=Z,1µm,22.6s						
USRK	**Ussuriysk Ar.**	**62.91**	**333**	P	**P**	**23 26 01.9**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=123,slow=7.0,SNR=9.0						
USA0B	**Ussuriysk Arra**	**62.91**	**333**	*e*P	**P**	**23 26 01.7**	**+0.4**
	comp=Z,15nm,1.3s						
PETK	**Petropavlovsk-**	**64.15**	**354**	P	**P**	**23 26 10.1**	**+0.7**
	comp=Z,9.4nm,1.1s,baz=243,slow=9.7,SNR=3.7						
IPM	**Ipoh**	**66.38**	**280**	*e*P	**P**	**23 26 24.0**	**-0.7**
	comp=Z,19nm,1.0s						
CASY	**Casey**	**66.57**	**201**	*e*P	**P**	**23 26 24.4**	**-0.6**
	comp=Z,45nm,1.3s						
VNDA	**Vanda**	**66.63**	**181**	P	**P**	**23 26 26.4**	**+1.2**
	comp=Z,2.8nm,1.0s,baz=0.0,slow=5.1,SNR=2.8						
KLR	**Kul'dur**	**67.01**	**336**	P	**P**	**23 26 28.7**	**+0.8**
	comp=Z,16nm,1.4s,baz=117,slow=3.9,SNR=9.3						
CHBT	**CHBT**	**67.36**	**289**	P	**P**	**23 26 29.3**	**-1.6**
	comp=Z,68nm,1.4s						
ENH	**Enshi**	**67.95**	**309**	*e*P	**P**	**23 26 33.0**	**-1.4**
	comp=Z,8.0nm,1.1s						
NONG	**Nongkai**	**68.32**	**294**	P	P	23 26 47.4	+11
GYA	**Guiyang**	**68.49**	**304**	P	**P**	**23 26 39.7**	**+1.7**
GYA				pP	sP	23 26 50.0	+7.7
GYA				PP	**PP**	**23 29 13.2**	**+3.9**
GYA				S	**S**	**23 35 37.8**	**-2.6**
GYA				SKS	**SKiKP**	**23 36 31.0**	**-1.3**
GYA	**Guiyang**	**68.49**	**304**	SS	SS	23 40 03.3	-1.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,500nm,18.4s						
GYA				LR	LR		
	comp=E,520nm,18.1s						
GYA				LR	LR		
	comp=Z,550nm,18.6s						
PBKT	**Sadao Pong**	**69.79**	**292**	P	P	23 26 56.7	+11
XAN	**Xi'an**	**70.16**	**312**	*e*P	**P**	**23 26 47.8**	**-0.3**
	comp=Z,18nm,1.4s						
SRDT	**SRDT**	**70.82**	**289**	P	P	23 27 03.1	+11
KMI	**Kunming**	**71.20**	**301**	P	**P**	**23 26 55.2**	**+0.4**
KMI				pP	sP	23 27 04.4	+5.2
KMI				sP	PcP	23 27 17.9	+3.1
KMI				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KMI				pmax	pmax		
	comp=Z,370nm,6.2s						
KMI				LR	LR		
	comp=N,320nm,12.9s						
KMI				LR	LR		
	comp=E,560nm,15.6s						
KMI				LR	LR		
	comp=Z,600nm,20.4s						
MA2	**Magadan**	**71.30**	**352**	P	**P**	**23 26 54.4**	**0.0**
	comp=Z,2.0nm,0.3s,baz=151,slow=5.0,SNR=3.8						
HHC	**Hu-ho-hao-te**	**71.85**	**320**	*e*P	**P**	**23 26 59.0**	**+0.8**
HHC				S	**S**	**23 36 22.8**	**+3.7**
HHC				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC				pmax	pmax		
	comp=Z,180nm,6.1s						
HHC				LR	LR		
	comp=N,620nm,17.4s						
HHC				LR	LR		
	comp=E,420nm,17.0s						
HHC				LR	LR		
	comp=Z,600nm,16.7s						
CM01	**Chiang Mai Arr**	**72.20**	**293**	*e*P	**P**	**23 26 59.5**	**-1.2**
CMAR	**Chiang Mai Arr**	**72.22**	**293**	P	**P**	**23 27 00.4**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=115,slow=4.0,SNR=13						
CMMT	**Chiang Mai**	**72.33**	**294**	P	**P**	**23 27 02.6**	**+1.1**
	comp=Z,5.6nm,1.3s,comp=Z,421nm						
CHTO	**Chiang Mai**	**72.33**	**294**	*e*P	**P**	**23 27 00.3**	**-1.2**
	comp=Z,8.0nm,1.2s						
CHTO	**Chiang Mai**	**72.33**	**294**	P	**P**	**23 27 02.6**	**+1.1**
	comp=Z,25nm,1.3s,comp=Z,2µm						
SEY	**Seymchan**	**74.36**	**354**	P	**P**	**23 27 12.5**	**0.0**
	comp=Z,1.0nm,0.5s,baz=163,slow=5.0,SNR=7.0						
LZH	**Lanzhou**	**74.80**	**312**	⇓P	**P**	**23 27 16.4**	**+0.6**
LZH				pP	PcP	23 27 26.6	-3.3
LZH				sP	sP	23 27 30.0	+10
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
GAMB	**Gambell**	**76.41**	**10**	*e*P	**P**	**23 27 23.7**	**-0.5**
	comp=Z,20nm,1.1s						
SVW2	**Sparrevohn**	**77.93**	**18**	*e*P	**P**	**23 27 33.7**	**+0.9**
	comp=Z,14nm,1.1s						
ULN	**Ulaanbaatar**	**78.30**	**324**	*e*P	**P**	**23 27 34.9**	**-0.4**
	comp=Z,9.0nm,1.1s						
ANM	**Nome**	**78.32**	**12**	*e*P	**P**	**23 27 34.7**	**-0.3**
	comp=Z,14nm,1.3s						
SONM	**Songino Array**	**78.66**	**324**	P	**P**	**23 27 37.2**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=146,slow=5.6,SNR=14						

SONA1	Songino Array	78.67	324	eP	P	23 27 36.5	-0.9
BILL	Bilibino	78.75	0	eP	P	23 27 37.4	+0.2
	comp=Z,19nm,1.1s						
QSPA	South Pole Qui	79.09	180	eP	P	23 27 39.1	-0.4
	comp=Z,11nm,0.9s						
GTA	Gaotai	79.09	314	⇓P	P	23 27 40.3	+0.4
GTA				pP	PcP	23 27 50.4	+2.0
GTA				sP	sP	23 27 54.6	+10
GTA				S	S	23 37 35.6	-4.0
GTA	Gaotai	79.09	314	SKS	S	23 37 47.5	+7.9
GTA	Gaotai	79.09	314	sS	sS	23 37 52.6	+7.8
GTA	Gaotai	79.09	314	SS	SS	23 42 43.4	-2.5
GTA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,250nm,7.0s						
GTA				LR	LR		
	comp=N,510nm,17.8s						
GTA				LR	LR		
	comp=E,390nm,18.1s						
GTA				LR	LR		
	comp=Z,540nm,20.3s						
SUA	Susitna One	79.74	20	eP	P	23 27 43.0	+0.1
	comp=Z,11nm,1.2s						
SHL	Shillong	80.61	298	eP	P	23 27 51.0	+2.5
CAST	Castle Rocks	80.77	18	eP	P	23 27 47.5	-0.8
	comp=Z,12nm,1.1s						
SCM	Sheep Creek Mo	81.15	20	eP	P	23 27 51.0	+0.5
	comp=Z,43nm,1.5s						
RND	Reindeer	81.75	19	eP	P	23 27 53.2	-0.4
	comp=Z,20nm,1.2s						
RDOG	Red Dog Mine	81.86	11	eP	P	23 27 54.5	+0.5
	comp=Z,24nm,1.4s						
MCK	McKinley	81.96	19	eP	P	23 27 54.3	-0.3
	comp=Z,29nm,1.5s						
IM3	Indian Mountai	82.25	16	eP	P	23 27 55.8	-0.3
HARP	HAARP	82.29	21	eP	P	23 27 57.2	+0.8
	comp=Z,20nm,0.9s						
MLY	Manley	82.36	17	eP	P	23 27 56.1	-0.6
	comp=Z,5.7nm,1.1s						
WRH	Wood River Hil	82.75	18	eP	P	23 27 58.0	-0.7
	comp=Z,9.1nm,1.0s						
MDM	Murphy Dome	83.05	18	eP	P	23 28 00.7	+0.4
	comp=Z,11nm,1.0s						
HDA	Harding Lake	83.06	19	eP	P	23 28 00.5	+0.2
	comp=Z,19nm,0.9s						
RIDG	Independ'e Rid	83.29	20	eP	P	23 28 02.2	+0.6
	comp=Z,35nm,1.4s						
ILAR	Eielson Array	83.33	18	P	P	23 28 01.3	-0.4
	comp=Z,2.3nm,0.6s,baz=237,slow=5.0,SNR=43						
ILB	Eielson Array	83.33	18	eP	P	23 28 01.0	-0.7
IL1	Eielson Array	83.33	18	eP	P	23 28 00.9	-0.8
DOT	Dot Lake	83.49	20	eP	P	23 28 02.8	+0.1
	comp=Z,19nm,1.2s						
YBH	Yreka Blue Hor	83.67	46	P	P	23 28 04.8	+0.6
	comp=Z,1.5nm,0.4s,baz=318,slow=4.1,SNR=5.0						
SCRK	Sand Creek	83.73	20	eP	P	23 28 04.0	0.0
	comp=Z,22nm,1.2s						
ORV	Oroville	83.79	48	eP	P	23 28 04.7	+0.1
	comp=Z,8.2nm,1.1s						
AFDM	Forest Hills D	83.98	49	eP	P	23 28 05.7	0.0
	comp=Z,12nm,1.2s						
CMB	Columbia Colle	84.12	50	eP	P	23 28 06.7	+0.3
	comp=Z,9.4nm,1.1s						
WAKR	Walker	84.98	49	eP	P	23 28 11.0	+0.1
	comp=Z,17nm,1.3s						
DAWY	Dawson	85.37	21	eP	P	23 28 12.2	+0.1
	comp=Z,5.8nm,0.9s						
PAHR	Pah Rah Range	85.39	48	eP	P	23 28 12.9	0.0
	comp=Z,18nm,1.4s						
DAC	Darwin (Calif)	85.71	52	eP	P	23 28 13.5	-1.2
	comp=Z,6.1nm,1.2s						
NV01	Mina Array Sit	85.80	50	eP	P	23 28 15.4	+0.3
NVAR	Mina Array Bea	85.80	50	P	P	23 28 16.2	+1.1
	comp=Z,3.9nm,0.8s,baz=233,slow=7.3,SNR=6.4						
NV11	Mina Array Sit	85.91	50	eP	P	23 28 16.0	+0.4
	comp=Z,0.7nm,1.1s						
TIXI	Tiksi	85.99	349	eP	P	23 28 14.7	-0.3
	comp=Z,23nm,1.5s						
KVN	Kaiserville	86.14	49	eP	P	23 28 16.6	-0.1
	comp=Z,14nm,1.5s						
I07A	Izee	86.68	44	eP	P	23 28 18.2	-1.0
	comp=Z,13nm,1.5s						
J08A	Circle Bar Ran	87.16	45	eP	P	23 28 21.7	+0.2
	comp=Z,17nm,1.5s						
HAWA	Hanford	87.39	42	eP	P	23 28 22.1	-0.4
	comp=Z,14nm,1.4s						
G08A	Pilot Rock	87.43	43	eP	P	23 28 22.7	-0.1
	comp=Z,10nm,1.1s						
E08A	Dider Farm, El	87.73	42	eP	P	23 28 23.8	-0.2
	comp=Z,15nm,1.2s						
R11A	Troy Canyon, C	87.83	50	eP	P	23 28 24.6	-0.3
	comp=Z,6.9nm,1.3s						
B08A	Colville Reser	88.15	40	eP	P	23 28 25.8	-0.3
	comp=Z,7.7nm,1.3s						
BMO	Blue Mountains	88.41	44	eP	P	23 28 27.6	+0.2
	comp=Z,6.9nm,1.4s						
ELK	Elko	88.72	48	eP	P	23 28 29.2	0.0
	comp=Z,8.1nm,1.4s						
ELK	Elko	88.72	48	P	P	23 28 30.4	+1.2
	comp=Z,0.3nm,0.3s,baz=274,slow=4.0,SNR=4.5						
F10A	Beach Ranch, E	88.79	43	eP	P	23 28 29.3	+0.1
	comp=Z,7.2nm,1.3s						
WMQ	Urumqi	89.13	315	P	P	23 28 29.1	-1.7
WMQ				pP	sP	23 28 41.1	+5.8
WMQ				sP	pP	23 28 45.8	+12
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,350nm,6.3s						
WMQ				LR	LR		
	comp=N,810nm,17.1s						
WMQ				LR	LR		
	comp=E,670nm,15.7s						
WMQ				LR	LR		
	comp=Z,510nm,19.3s						
PSUT	Pine Spring	89.19	51	eP	P	23 28 32.1	+0.7
	comp=Z,4.3nm,1.0s						
CCUT	Cedar City	89.32	52	eP	P	23 28 32.9	+0.8
	comp=Z,7.4nm,1.1s						
INK	Inuvik	89.72	19	eP	P	23 28 37.0	+4.2
	comp=Z,6.5nm,1.2s						
INK	Inuvik	89.72	19	P	P	23 28 34.3	+1.4
	comp=Z,5.8nm,1.2s,baz=181,slow=2.0,SNR=4.4						
U15A	North Rim	89.88	53	eP	P	23 28 35.7	+0.8
	comp=Z,6.9nm,0.9s						
HLID	Hailey	90.06	46	eP	P	23 28 36.3	+0.9
	comp=Z,7.1nm,1.4s						
MTPU	Mount Pierson	90.34	51	eP	P	23 28 37.8	+0.7
	comp=Z,6.7nm,1.1s						
BGU	Big Grassy Mou	90.39	48	eP	P	23 28 37.3	+0.3
	comp=Z,7.2nm,1.3s						
HVU	Hansel Valley	90.78	48	eP	P	23 28 38.7	-0.1
	comp=Z,14nm,1.3s						
NLU	North Lily Min	90.87	50	eP	P	23 28 38.8	-0.5
	comp=Z,7.4nm,1.0s						
DLMT	Dillon	91.76	44	eP	P	23 28 41.3	-1.9
	comp=Z,11nm,1.2s						
SYO	Syowa Base	91.96	197	⇑iP	P	23 28 42.2	-1.3
LRM	Limekiln Ridge	91.97	44	eP	P	23 28 44.1	-0.2
BOZ	Bozeman (W)	92.48	44	eP	P	23 28 47.0	+0.5
	comp=Z,17nm,1.5s						
PDAR	Pinedale Array	93.33	47	eP	P	23 28 52.1	+1.5
PDAR	Pinedale Array	93.33	47	P	P	23 28 51.9	+1.2
	comp=Z,1.7nm,1.0s,baz=242,slow=3.2,SNR=7.8						
MK01	Makanchi Array	93.53	317	eP	P	23 28 50.2	-1.0
MK31	Makanchi Array	93.55	317	eP	P	23 28 50.8	-0.5
MKAR	Makanchi Array	93.55	317	eP	P	23 28 50.8	-0.5
	comp=Z,18nm,1.0s						
MKAR				PKKPbc	PKKPdf	23 45 57.7	-0.1
MKAR	Makanchi Array	93.55	317	P	P	23 28 50.0	-1.3
	comp=Z,2.4nm,0.8s,baz=92,slow=7.3,SNR=13						
MKAR				PKKPbc	PKKPdf	23 45 57.7	-0.1
	comp=Z,0.8nm,0.7s,baz=275,slow=4.0,SNR=6.2						
ZAA0	Zalesovo Array	93.55	324	eP	P	23 28 50.4	-0.7
	comp=Z,4.7nm,1.0s						
ZALV	Zalesovo Beam	93.55	324	eP	P	23 28 49.1	-1.9
ZALV	Zalesovo Beam	93.55	324	P	P	23 28 49.7	-1.3
	comp=Z,1.6nm,0.8s,baz=113,slow=6.9,SNR=8.9						
MAKZ	Makanchi	93.76	317	eP	P	23 28 51.7	-0.5
	comp=Z,21nm,1.5s						
YKA	Yellowknife Ar	94.77	27	P	P	23 28 56.5	+0.1
	comp=Z,0.6nm,0.7s,baz=255,slow=4.7,SNR=8.5						
YKB5	Yellowknife Ar	94.77	27	eP	P	23 28 56.0	-0.4
TXAR	Lajitas Array	95.61	61	P	P	23 29 02.4	+1.2
	comp=Z,0.5nm,0.9s,baz=268,slow=5.3,SNR=2.9						
NRIK	Noril'sk	96.06	340	P	P	23 29 01.7	-0.5
	comp=Z,0.6nm,0.3s,baz=127,slow=4.0,SNR=5.9						
ARCES	ARCESS Array B	116.25	346	PKP	PKiKP	23 34 17.5	-0.6
	comp=Z,1.6nm,0.6s,baz=48,slow=1.8,SNR=9.9						
LPAZ	La Paz	120.08	116	PKP	PKiKP	23 34 28.9	+1.1
	comp=Z,0.6nm,0.6s,baz=335,slow=2.9,SNR=4.4						
FINES	FINESS Array B	121.71	339	PKP	PKiKP	23 34 30.1	+1.2
	comp=Z,2.2nm,0.9s,baz=39,slow=4.6,SNR=3.4						
CPUP	Villa Florida	123.98	132	PKP	PKiKP	23 34 35.0	+0.5
	comp=Z,1.4nm,0.6s,baz=199,slow=2.0,SNR=4.1						
SDV	Santo Domingo	124.31	87	PKP	PKiKP	23 34 35.9	+0.2
	comp=Z,2.9nm,0.7s,baz=325,slow=3.5,SNR=4.4						
NB2	NORSAR Subarra	126.62	345	PKPdf	PKiKP	23 34 38.6	-0.2
	comp=Z,1.6nm,0.9s,baz=32,slow=2.0						
NOA	NORSAR Array B	126.62	345	PKP	PKPdf	23 34 37.2	-1.1
	comp=Z,0.7nm,0.7s,baz=32,slow=2.1,SNR=5.8						
AKASG	Malin Array Be	126.85	327	PKP	PKPdf	23 34 38.5	-0.4
	comp=Z,0.2nm,0.3s,baz=55,slow=2.0,SNR=7.7						
BRTR	Keskin Array B	129.00	313	PKP	PKiKP	23 34 44.6	+0.3
	comp=Z,1.0nm,0.9s,baz=222,slow=1.7,SNR=3.7						
LSZ	Lusaka	130.71	239	ePKPdf	PKPdf	23 34 44.6	-2.9
CLL	Collm	134.05	337	ePKPdf	PKiKP	23 34 54.0	+0.1
CLL				e		23 35 05.0	
GERES	GERESS Array B	135.66	334	PKP	PKPdf	23 34 55.5	-0.3
	comp=Z,0.8nm,0.9s,baz=167,slow=6.6,SNR=6.1						
GEA0	GERESS Array S	135.67	334	ePKPdf	PKPpre	23 34 51.3	
KEST	Kesra	147.42	323	PKPbc	PKPbc	23 35 19.6	-0.1
	comp=Z,6.7nm,1.0s,baz=217,slow=17,SNR=4.9						
ES19	SONSECA Array	149.94	344	ePKPdf	PKPdf	23 35 20.7	-0.4
ESDC	Sonseca Array	149.98	344	PKPbc	PKiKP	23 35 26.8	-0.3
	comp=Z,1.4nm,0.7s,baz=11,slow=5.1,SNR=7.7						
TOA0	Torodi Ar. Sit	164.42	280	ePKPdf	PKPdf	23 35 39.9	-0.1
TORD	Torodi Ar. Bea	164.42	280	PKP	PKPdf	23 35 41.4	+1.5
	comp=Z,0.5nm,0.6s,baz=318,slow=2.7,SNR=4.4						

IDC ***08*** *23:16:24.5±0.6, 11°.12S×166°.96E, h0^{km}, mb4.9/27, mb1 5.0/28, mb1mx4.8/49, mbtmp4.9/28, ML5.2/1, MS4.9/6, Ms1 4.9/6, ms1mx4.5/16, Error ellipse: s-maj=19.7km s-min=14.8km az=136.0*

NEIC ***08*** *23:16:26.8±0.1, 11°.02S×166°.76E, h10^{km}, mb5.3/139, MS5.2/115, MW5.5, Error ellipse: s-maj=6.3km s-min=3.8km az=149.0, Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.62; $M_{\theta\theta}$0.50; $M_{\phi\phi}$1.12; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.90; $M_{\phi r}$0.73; Best double couple: $M_0$1.90000×10^{17} NP1:ϕ_s308.00000°, δ39.00000°, λ-117.00000°. NP2:ϕ_s161.00000°, δ56.00000°, λ-70.00000°. Principal axes: T 1.8400, Plg9.0000°, Azm237.0000°; N 0.0100, Plg17.0000°, Azm329.0000°; P -1.8600, Plg71.0000°, Azm120.0000°;*

GCMT ***08*** *23:16:27.8±0.1, 11°.00S±0°.01×166°.90E±0°.01, h12^{km}, MW5.4/113, Moment Tensor Solution. s83,c125; s113,c185; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.47±.02; $M_{\theta\theta}$0.27±.02; $M_{\phi\phi}$1.20±.02; $M_{r\theta}$-0.70±.07; $M_{\theta\phi}$-0.58±.02; $M_{\phi r}$-0.24±.06; Best double couple: $M_0$1.63100×10^{17} NP1:ϕ_s133.00000°, δ51.00000°, λ-120.00000°. NP2:ϕ_s355.00000°, δ48.00000°, λ-59.00000°. Principal axes: T 1.4850, Plg2.0000°, Azm243.0000°; N 0.2960, Plg23.0000°, Azm153.0000°; P -1.7780, Plg67.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISCJB ***08*** *23:16:28.4±0.2, 10°.97S±0°.05×166°.62E±0°.03, h28^{km}, mb5.2/174, MS5.1/132 Error ellipse: s-maj=7.0km s-min=4.2km az=159.7*

MOS ***08*** *23:16:29.2±0.9, 10°.95S×166°.66E, h33^{km}, mb5.3/56, MS5.0/10, Error ellipse: s-maj=8.6km s-min=7.4km az=105.7*

BJI ***08*** *23:16:30.5, 10°.75S×166°.36E, h36^{km}, mB5.6/35, mb5.1/52, Ms5.2/35, Ms7 4.9/36*

ISC 08 23:16:29.3±0.3**, 11°.03S**±0°.06×**166°.75E**±0°.07**, h28**^{km}**, n454,** σ**1^{s}22**/373**, mb5.3**/174**, MS5.2**/132**, 16C-13D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.88	283	ePn	Pn	23 18 08.6	+0.1
HNR	Honiara	6.88	283	eP	Pn	23 18 08.6	+0.1
HNR	Honiara	6.88	283	Pn	Pn	23 18 11.3	+2.8
	43nm,0.3s,baz=21,slow=14,SNR=9.8						
HNR				LR	LR	23 20 47.3	
	comp=Z,29µm,20.6s,baz=130,slow=37						
HNR	Honiara	6.88	283	i S	Pn	23 18 11.0	+2.6
HNR	Honiara	6.88	283	eSn	Pn	23 18 11.1	+2.6
ONTNC	Ouen Toro	11.21	181	ePn	Pn	23 19 06.2	-1.7
MSVF	Nonsavu	12.81	123	⇑eP	Pn	23 19 29.1	-0.6
EIDS	Eidsvold	20.58	224	eP	Pn	23 21 07.8	-0.8
	121nm,1.2s						
CTA	Charters Tower	21.68	243	P	P	23 21 20.3	+2.2
	13nm,0.9s,baz=72,slow=15,SNR=1.7						
CTA				LR	LR	23 28 53.5	
	comp=Z,7µm,18.2s,baz=52,slow=34						
CTAO	Charters Tower	21.68	243	eP	P	23 21 19.0	+0.9
	37nm,0.9s						
CTAO				LR	LR		
	comp=Z,9µm,19.0s						
CTAO	Charters Tower	21.68	243	eP	P	23 21 19.0	+0.9
CTAO				pmax	pmax		
	comp=Z,37nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,9µm,19.0s						
RAO	Raoul Island	23.10	144	PFAKE		23 21 40.0	+7.0
RAO				LR	LR		
	comp=Z,3µm,20.0s						
COEN	Coen	23.20	260	eP	P	23 21 35.1	+0.9
	comp=Z,148nm,1.3s						
ARMA	Armidale	23.87	214	eP	P	23 21 42.1	+1.4
	comp=Z,40nm,0.8s						
URZ	Urewera	28.66	163	LR	LR	23 31 33.3	
	comp=Z,2µm,21.5s,baz=339,slow=32						
WAKE	Wake Island	30.12	360	PFAKE		23 22 50.0	+13
WAKE				LR	LR		
	comp=Z,4µm,20.0s						
SNZO	South Karori	30.96	168	PFAKE		23 23 00.0	+16
SNZO				LR	LR		
	comp=Z,1µm,21.0s						
STKA	Stephens Creek	31.14	224	eP	P	23 22 46.0	+0.2
	comp=Z,4.4nm,1.0s						
STKA	Stephens Creek	31.14	224	P	P	23 22 45.7	-0.1
	comp=Z,12nm,1.0s,baz=51,slow=7.0,SNR=5.8						
WC3	Warramunga Arr	32.39	250	eP	P	23 22 57.2	+0.2
	comp=Z,54nm,1.0s						
WRAB	Tennant Creek	32.41	250	eP	P	23 22 57.0	-0.1
	comp=Z,66nm,1.3s						
WRAB				LR	LR		
	comp=Z,5µm,19.0s						
WRAB	Tennant Creek	32.41	250	d iP	P	23 22 57.6	+0.5
WRAB				pmax	pmax		
	comp=Z,44nm,1.3s						
WRA	Warramunga Arr	32.42	250	ceP	P	23 22 58.0	+0.8
WRA				pmax	pmax		
	comp=Z,26nm,0.9s						
WRA	Warramunga Arr	32.42	250	P	P	23 22 57.5	+0.3
	comp=Z,26nm,0.9s,baz=80,slow=8.9,SNR=11						
WRA				LR	LR	23 36 15.9	
	comp=Z,5µm,18.3s,baz=75,slow=37						
TOO	Toolangi	32.60	212	eP	P	23 22 58.5	-0.1
	comp=Z,41nm,1.4s						
TOO	Toolangi	32.60	212	eP	P	23 22 58.5	-0.1
TOO				pmax	pmax		
	comp=Z,41nm,1.4s						
GUMO	Guam	32.71	318	PFAKE		23 23 10.0	+10
GUMO				LR	LR		
	comp=Z,1µm,22.0s						
GUMO	Guam	32.71	318	LR	LR	23 36 10.8	
	comp=Z,675nm,18.1s,baz=150,slow=36						
RPZ	Rata Peaks	32.77	174	eP	P	23 23 01.1	+1.1
	comp=Z,28nm,0.9s						
ASAR	Alice Springs	33.68	244	P	P	23 23 08.6	+0.3
	comp=Z,6.4nm,0.7s,baz=71,slow=9.4,SNR=5.8						
BBOO	Buckleboo	35.56	228	eP	P	23 23 25.0	+0.6
	comp=Z,61nm,1.1s						
JOHN	Johnston Islan	36.21	41	PFAKE		23 23 40.0	+10
JOHN				LR	LR		
	comp=Z,447nm,22.0s						
FITZ	Fitzroy Crossi	40.34	255	eP	P	23 24 05.1	+0.2
	comp=Z,66nm,0.9s						
FORT	Forrest	40.86	235	eP	P	23 24 09.1	+0.1
	comp=Z,67nm,1.0s						
MMRI	Maumere	43.90	269	eP	P	23 24 33.0	-1.0
	comp=Z,189nm,1.5s						
DAV	Davao City (W)	44.75	292	PFAKE		23 24 50.0	+9.2
DAV				LR	LR		
	comp=Z,584nm,20.0s						
LUWI	Luwuk	44.78	280	eP	P	23 24 41.2	+0.1
	comp=Z,88nm,1.2s						
MBWA	Marble Bar	46.14	251	P	P	23 24 52.4	+0.7
	comp=Z,202nm,1.0s						
MBWA				LR	LR		
	comp=Z,3µm,21.0s						
KAPI	Kappang	46.88	273	PFAKE		23 25 10.0	+12
KAPI				LR	LR		
	comp=Z,740nm,21.0s						
POHA	Pohakuloa	48.12	51	PFAKE		23 25 20.0	+13
POHA				LR	LR		
	comp=Z,3µm,19.0s						
NWAO	Narrogin (SRO)	50.29	236	eP	P	23 25 24.0	+0.4
	comp=Z,64nm,1.1s						
NWAO				LR	LR		
	comp=Z,7µm,19.0s						
NWAO	Narrogin (SRO)	50.29	236	eP	P	23 25 24.0	+0.4
NWAO				pmax	pmax		
	comp=Z,64nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,7µm,19.0s						
MORW	Morawa	50.50	241	eP	P	23 25 26.1	+0.9
	comp=Z,87nm,1.4s						
JAGI	Jajag, Banyuwa	51.85	268	eP	P	23 25 34.2	-1.4
	comp=Z,44nm,1.1s						
KKM	Kota Kinabalu	53.08	286	eP	P	23 25 43.5	-1.3
	comp=Z,56nm,1.1s						
INU	Inuyama	54.03	330	eP	P	23 25 51.0	-0.2
	comp=Z,60nm,1.2s						
MJAR	Matsushiro Arr	54.42	332	P	P	23 25 54.0	-0.2
MJAR				pmax	pmax		
	comp=Z,18nm,0.8s						
MJAR	Matsushiro Arr	54.42	332	P	P	23 25 54.0	-0.2
	comp=Z,18nm,0.8s,baz=170,slow=8.7,SNR=18						
MAJO	Matsushiro	54.42	332	eP	P	23 25 53.4	-0.8
	comp=Z,25nm,0.8s						
MAJO	Matsushiro	54.42	332	⇑eP	P	23 25 53.0	-1.1
MAJO				pmax	pmax		
	comp=Z,27nm,0.9s						
MAT	Matsushiro	54.42	332	P	P	23 25 53.7	-0.4
MAT				S	S	23 33 42.6	+12
MJB9	Matsu-Tunnel	54.43	332	eP	P	23 25 54.6	+0.4
	comp=Z,26nm,0.9s						
JNU	Nakatsue	55.65	323	eP	P	23 26 02.4	-0.7
	comp=Z,61nm,1.0s						
JNU	Nakatsue	55.65	323	P	P	23 26 03.7	+0.6
	comp=Z,42nm,0.9s,baz=106,slow=4.7,SNR=11						
SBUM	Sibu	55.87	281	eP	P	23 26 05.6	+0.6
	comp=Z,8.2nm,1.1s						
TATO	Taipei	56.82	310	PFAKE		23 26 20.0	+8.5
TATO				LR	LR		
	comp=Z,2µm,20.0s						
ERM	Erimo	57.07	339	⇑eP	P	23 26 12.2	-0.7
ERM				pmax	pmax		
	comp=Z,52nm,1.1s						
LEM	Lembang	58.49	269	LR	LR	23 57 07.9	
	comp=Z,226nm,18.2s,baz=104,slow=42						
ASAJ	Asahikawa	59.12	340	P	P	23 26 27.6	+0.3
	comp=Z,37nm,0.9s,baz=212,slow=8.8,SNR=8.1						
TJN	Taejon	60.00	324	⇑eP	P	23 26 34.2	+0.7
KSRS	Korea Array	60.43	325	P	P	23 26 37.4	+0.9
	comp=Z,5.3nm,0.8s,baz=138,slow=7.1,SNR=11						
KSAR	Wonju Array Be	60.44	325	P	P	23 26 37.4	+0.8
KSAR	Wonju Array Be	60.44	325	P	P	23 26 37.4	+0.8
KS01	Wonju Array Si	60.46	325	eP	P	23 26 36.5	-0.1
SSE	Sheshan	60.54	315	PFAKE		23 26 50.0	+13
SSE				LR	LR		
	comp=Z,554nm,21.0s						
YSS	Yuzh-Sakhalins	61.58	342	eP	P	23 26 46.1	+2.0
	comp=Z,130nm,1.4s						
YSS	Yuzh-Sakhalins	61.58	342	⇓eP	P	23 26 45.8	+1.7
YSS				eS	S	23 35 02.7	-1.5
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS				MLR	MLR		
	comp=N,500nm,19.0s						
MSHR	Mys Shultsa	62.52	331	⇑eP	P	23 26 50.9	+0.4
NJ2	Nanjing	62.71	315	eP	P	23 26 53.1	+1.1
NJ2				pmax	pmax		
	comp=N,20nm,0.8s						
USA0B	Ussuriysk Arra	63.38	333	eP	P	23 26 57.4	+1.2
	comp=N,158nm,1.4s						
USRK	Ussuriysk Ar.	63.38	333	P	P	23 26 57.5	+1.3
	comp=N,43nm,1.1s,baz=130,slow=6.0,SNR=23						
QIZ	Qiongzhong	63.55	298	PFAKE		23 27 10.0	+12
QIZ				LR	LR		
	comp=Z,143nm,22.0s						
MYKOM	Kota Tinggi	63.83	277	eP	P	23 26 58.8	-1.0
	comp=Z,23nm,1.1s						
PET	Petropavlovsk	64.18	355	PFAKE		23 27 10.0	+8.8
PET				LR	LR		
	comp=Z,894nm,21.0s						
ADK	Adak	64.28	11	PFAKE		23 27 10.0	+8.1
ADK				LR	LR		
	comp=Z,3µm,19.0s						
PETK	Petropavlovsk-	64.35	354	eP	P	23 27 02.8	+0.4
PETK	Petropavlovsk-	64.35	354	eP	P	23 27 02.8	+0.4
PETK	Petropavlovsk-	64.35	354	P	P	23 27 02.4	-0.1
	comp=Z,18nm,0.9s,baz=141,slow=9.6,SNR=8.1						
MDJ	Mudanjiang	64.81	332	eP	P	23 27 06.2	+0.6
	comp=Z,92nm,1.2s						
MDJ				LR	LR		
	comp=Z,400nm,22.0s						
CN2	Changchun	66.24	329	eP	P	23 27 16.2	+1.4
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
TIA	Tai'an	66.27	318	P	P	23 27 14.1	-1.1
VNDA	Vanda	66.52	181	P	P	23 27 14.6	-1.6
	comp=Z,7.8nm,1.1s,baz=65,slow=22,SNR=3.3						
CASY	Casey	66.75	201	PFAKE		23 27 30.0	+12
CASY				LR	LR		
	comp=Z,177nm,20.0s						
GRNR	Gornyy	66.97	340	eP	P	23 27 20.2	+0.8
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
IPM	Ipoh	67.19	280	eP	P	23 27 22.0	+0.4
	comp=Z,25nm,1.0s						
KLR	Kul'dur	67.44	336	d iP	P	23 27 23.0	+0.6
KLR	Kul'dur	67.44	336	P	P	23 27 22.9	+0.6
	comp=Z,19nm,1.1s,baz=107,slow=3.1,SNR=15						
NKL	Nikolayevsk	67.71	343	eP	P	23 27 24.8	+0.9
NKL				pmax	pmax		
	comp=Z,53nm,1.0s						
COCO	West Island	68.32	261	PFAKE		23 27 40.0	+11
COCO				LR	LR		
	comp=Z,2µm,20.0s						
ENH	Enshi	68.66	309	eP	P	23 27 30.8	+0.3
	comp=Z,25nm,1.0s						
ENH				LR	LR		
	comp=Z,671nm,22.0s						
BJT	Baijiatuau	69.09	321	eP	P	23 27 33.7	+0.8
	comp=Z,28nm,1.0s						
BJT				LR	LR		
	comp=Z,855nm,21.0s						
BJT	Baijiatuau	69.09	321	eP	P	23 27 33.7	+0.8
BJT				pmax	pmax		
	comp=Z,28nm,1.0s						
BJT				MLR	MLR		
	comp=Z,855nm,21.0s						
GYA	Guiyang	69.23	304	P	P	23 27 36.0	+1.8
GYA				pP	sP	23 27 47.8	+2.0
GYA				PP	PP	23 30 12.2	+4.6
GYA				S	S	23 36 39.0	0.0
GYA				SKS	SKSac	23 37 29.8	-3.1
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.6s						
GYA				LR	LR		
	comp=Z,580nm,18.4s						
GYA				LR	LR		
	comp=Z,620nm,18.1s						
GYA				LR	LR		
	comp=Z,640nm,18.6s						
GSI	Gunungsitoli	69.84	275	eP	P	23 27 37.8	-0.3
	comp=Z,34nm,0.9s						
XAN	Xi'an	70.85	312	P	P	23 27 44.7	+0.8
XAN				pP	pwP	23 27 54.7	-0.1
XAN				S	S	23 36 51.1	-6.4
XAN				pmax	pmax		
	comp=Z,30nm,1.1s						
XAN				pmax	pmax		

	comp=Z,390nm,4.7s						
XAN				LR	LR		
	comp=Z,540nm,17.3s						
XAN				LR	LR		
	comp=Z,490nm,19.2s						
XAN				LR	LR		
	comp=Z,700nm,22.3s						
XAN	**Xi'an**	**70.85**	**312**	*e*P	**P**	**23 27 44.0**	**+0.1**
	comp=Z,54nm,1.3s						
XAN	**Xi'an**	**70.85**	**312**	*e*P	**P**	**23 27 44.0**	**+0.1**
XAN				pmax	pmax		
	comp=Z,54nm,1.3s						
MA2	**Magadan**	**71.54**	**352**	*e*P	**P**	**23 27 46.6**	**-0.8**
	comp=Z,16nm,1.0s						
MA2				LR	LR		
	comp=Z,786nm,19.0s						
MA2	**Magadan**	**71.54**	**352** *d*	*i*P	**P**	**23 27 47.4**	**-0.1**
MA2				pmax	pmax		
	comp=Z,30nm,1.7s						
MA2	**Magadan**	**71.54**	**352**	P	**P**	**23 27 47.3**	**-0.2**
	comp=Z,8.5nm,0.6s,baz=146,slow=6.8,SNR=9.8						
KMI	**Kunming**	**71.96**	**301**	P	**P**	**23 27 52.5**	**+1.5**
KMI				pP	pwP	23 28 01.2	-0.8
KMI				sP	PcP	23 28 09.6	0.0
KMI				PP	**PP**	**23 30 34.2**	**+3.0**
KMI				S	**S**	**23 37 04.8**	**-6.3**
KMI				SS	**SS**	**23 41 43.5**	**-5.0**
KMI				pmax	pmax		
	comp=Z,27nm,1.4s						
KMI				pmax	pmax		
	comp=Z,410nm,4.4s						
KMI				LR	LR		
	comp=Z,420nm,14.5s						
KMI				LR	LR		
	comp=Z,560nm,15.2s						
KMI				LR	LR		
	comp=Z,680nm,21.3s						
KMI	**Kunming**	**71.96**	**301**	*e*P	**P**	**23 27 50.6**	**-0.4**
	comp=Z,54nm,1.4s						
KMI	**Kunming**	**71.96**	**301**	*e*P	**P**	**23 27 50.7**	**-0.4**
KMI				pmax	pmax		
	comp=Z,55nm,1.4s						
HHC	**Hu-ho-hao-te**	**72.47**	**319**	*e*P	**P**	**23 27 54.6**	**+1.0**
HHC				pP	pP	23 28 02.8	+1.0
HHC				S	**S**	**23 37 10.6**	**-5.5**
HHC				pmax	pmax		
	comp=Z,34nm,1.3s						
HHC				pmax	pmax		
	comp=Z,470nm,6.4s						
HHC				LR	LR		
	comp=Z,620nm,16.2s						
HHC				LR	LR		
	comp=Z,400nm,15.5s						
HHC				LR	LR		
	comp=Z,370nm,15.3s						
ZEA	**Zeya**	**72.72**	**337**	*e*P	**P**	**23 27 56.4**	**+1.8**
ZEA				pmax	pmax		
	comp=N,86nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.2s						
HIA	**Hailar**	**72.85**	**330**	*e*P	**P**	**23 27 56.8**	**+1.2**
	comp=Z,63nm,1.3s						
HIA				LR	LR		
	comp=Z,414nm,20.0s						
HIA	**Hailar**	**72.85**	**330** *d*	*i*P	**P**	**23 27 56.5**	**+0.9**
HIA				pmax	pmax		
	comp=Z,35nm,1.1s						
CM01	**Chiang Mai Arr**	**72.99**	**293**	*e*P	**P**	**23 27 57.6**	**+0.6**
CM31	**Chiang Mai Arr**	**73.02**	**293**	*e*P	**P**	**23 27 57.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**73.02**	**293**	P	**P**	**23 27 58.6**	**+1.4**
	comp=Z,6.8nm,0.8s,baz=117,slow=4.3,SNR=12						
CMMT	**Chiang Mai**	**73.12**	**294**	P	**P**	**23 27 59.5**	**+1.7**
CHTO	**Chiang Mai**	**73.12**	**294**	*e*P	**P**	**23 27 58.3**	**+0.5**
	comp=Z,30nm,1.4s						
CHTO				LR	LR		
	comp=Z,452nm,21.0s						
CHTO	**Chiang Mai**	**73.12**	**294**	*e*P	**P**	**23 27 58.3**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,31nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,452nm,21.0s						
CHTO	**Chiang Mai**	**73.12**	**294**	P	**P**	**23 27 59.6**	**+1.8**
CD2	**Chengdu**	**73.38**	**307**	P	**P**	**23 28 00.4**	**+1.2**
CD2				S	**SKiKP**	**23 37 28.0**	**-0.8**
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				pmax	pmax		
	comp=Z,400nm,8.4s						
CD2				LR	LR		
	comp=Z,830nm,14.4s						
CD2				LR	LR		
	comp=Z,750nm,19.9s						
CD2				LR	LR		
	comp=Z,780nm,17.9s						
SEY	**Seymchan**	**74.57**	**353** ⇓	*i*P	**P**	**23 28 06.0**	**+0.7**
SEY	**Seymchan**	**74.57**	**353**	P	**P**	**23 28 05.6**	**+0.3**
	comp=Z,8.8nm,0.8s,baz=160,slow=6.2,SNR=15						
LZH	**Lanzhou**	**75.48**	**312** ⇓	P	**P**	**23 28 13.5**	**+2.1**
LZH				pP	PcP	23 28 24.3	-0.1
LZH				sP	sP	23 28 27.6	+4.9
LZH				S	**S**	**23 37 52.5**	**+2.1**
LZH				pmax	pmax		
	comp=Z,74nm,1.5s						
LZH				pmax	pmax		
	comp=Z,480nm,7.1s						
LZH				LR	LR		
	comp=Z,530nm,15.0s						
LZH				LR	LR		
	comp=Z,820nm,15.2s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
KDAK	**Kodiak Island**	**76.21**	**21**	PFAKE		23 28 30.0	+15
KDAK				LR	LR		
	comp=Z,653nm,20.0s						
GAMB	**Gambell**	**76.39**	**10**	*e*P	**P**	**23 28 15.8**	**+0.1**
	comp=Z,20nm,1.0s						
CIT	**Chita**	**77.65**	**330**	*e*P	**P**	**23 28 24.9**	**+1.7**
CIT				*e*		23 28 32.5	
CIT				pmax	pmax		
	comp=Z,201nm,1.3s						
SVW2	**Sparrevohn**	**77.80**	**18**	*e*P	**P**	**23 28 24.2**	**+0.4**
	comp=Z,32nm,1.3s						
ANM	**Nome**	**78.27**	**12**	*e*P	**P**	**23 28 26.9**	**+0.6**
	comp=Z,26nm,1.2s						
ANM	**Nome**	**78.27**	**12**	*e*P	**P**	**23 28 26.9**	**+0.6**
ANM				pmax	pmax		
	comp=Z,26nm,1.2s						
BRLK	**Bradley Lake**	**78.28**	**20**	*e*P	**P**	**23 28 27.1**	**+0.6**
	comp=Z,32nm,1.0s						
YAK	**Yakutsk**	**78.37**	**343** *d*	*i*P	**P**	**23 28 27.4**	**+0.6**
YAK				*e*		23 28 35.0	
YAK				*e*S	**S**	**23 38 19.6**	**-0.8**
YAK				*e**SS	**SKKSac**	**23 38 40.8**	**+0.5**
YAK				*e*		23 39 06.2	
YAK				pmax	pmax		
	comp=Z,417nm,1.1s						
YAK				pmax	pmax		
	comp=N,150nm,1.1s						
YAK				pmax	pmax		
	comp=E,132nm,1.1s						
YAK				pmax	pmax		
	comp=Z,1µm,4.3s						
YAK				pmax	pmax		
	comp=N,809nm,4.6s						
YAK				pmax	pmax		
	comp=E,715nm,4.3s						
YAK				smax	smax		
	comp=E,1µm,4.1s						
YAK				smax	smax		
	comp=N,1µm,4.4s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s						
YAK				MLR	MLR		
	comp=N,741nm,16.0s						
YAK				MLR	MLR		
	comp=E,1µm,18.0s						
BILL	**Bilibino**	**78.87**	**360**	*e*P	**P**	**23 28 29.7**	**+0.2**
	comp=E,63nm,1.3s						
BILL				LR	LR		
	comp=Z,489nm,20.0s						
BILL	**Bilibino**	**78.87**	**360**	*i* P	**P**	**23 28 30.1**	**+0.6**
BILL				*i*		23 28 36.9	
BILL				*i*		23 31 24.2	
BILL				pmax	pmax		
	comp=Z,33nm,1.2s						
ULN	**Ulaanbaatar**	**78.88**	**324**	*e*P	**P**	**23 28 30.6**	**+0.4**
	comp=Z,58nm,1.3s						
ULN				LR	LR		
	comp=Z,402nm,20.0s						
ULN	**Ulaanbaatar**	**78.88**	**324** ⇓	*e*P	**P**	**23 28 29.8**	**-0.4**
ULN				pmax	pmax		
	comp=Z,31nm,1.1s						
QSPA	**South Pole Qui**	**78.97**	**180**	*e*P	**P**	**23 28 30.2**	**-0.2**
	comp=Z,60nm,1.4s						
QSPA				LR	LR		
	comp=Z,1µm,19.0s						
SONM	**Songino Array**	**79.24**	**323**	P	**P**	**23 28 33.2**	**+1.1**
	comp=Z,14nm,1.1s,baz=135,slow=5.2,SNR=19						
SONA1	**Songino Array**	**79.25**	**323**	*e*P	**P**	**23 28 32.4**	**+0.1**
SUA	**Susitna One**	**79.58**	**19**	*e*P	**P**	**23 28 32.7**	**-1.0**
	comp=Z,18nm,1.1s						
RC01	**Rabbit Creek A**	**79.64**	**20**	*e*P	**P**	**23 28 35.1**	**+1.2**
	comp=Z,31nm,1.2s						
GTA	**Gaotai**	**79.76**	**314**	*e*P	**P**	**23 28 36.9**	**+1.7**
GTA				pP	sP	23 28 46.9	+0.3
GTA				sP	pwP	23 28 51.2	+5.0
GTA				S	**S**	**23 38 36.7**	**+0.2**
GTA				sS	SKKSac	23 38 54.8	+2.5
GTA				pmax	pmax		
	comp=Z,23nm,1.3s						
GTA				pmax	pmax		
	comp=Z,430nm,9.0s						
GTA				LR	LR		
	comp=Z,510nm,17.1s						
GTA				LR	LR		
	comp=Z,390nm,18.1s						
GTA				LR	LR		
	comp=Z,540nm,20.6s						
PMR	**Palmer**	**80.21**	**20**	*e*P	**P**	**23 28 37.0**	**+0.1**
	comp=Z,22nm,1.2s						
PMR	**Palmer**	**80.21**	**20**	*e*P	**P**	**23 28 37.0**	**+0.1**
PMR				pmax	pmax		
	comp=Z,22nm,1.2s						
SML	**Sawmill**	**80.63**	**20**	*e*P	**P**	**23 28 39.4**	**+0.1**
	comp=Z,39nm,1.3s						
SML	**Sawmill**	**80.63**	**20**	*e*P	**P**	**23 28 39.4**	**+0.1**
SML				pmax	pmax		
	comp=Z,39nm,1.3s						
CAST	**Castle Rocks**	**80.64**	**17**	*e*P	**P**	**23 28 39.8**	**+0.5**
	comp=Z,23nm,1.0s						
BOD	**Bodaibo**	**80.94**	**334**	*e*P	**P**	**23 28 40.8**	**-0.1**
BOD				pmax	pmax		
	comp=Z,20nm,1.6s						
TRF	**Thorofare Moun**	**81.20**	**18**	*e*P	**P**	**23 28 42.3**	**-0.1**
	comp=Z,22nm,1.1s						
BPAW	**Bear Paw Mtn.**	**81.47**	**17**	*e*P	**P**	**23 28 45.0**	**+1.4**
	comp=Z,14nm,1.2s						
RND	**Reindeer**	**81.61**	**19**	*e*P	**P**	**23 28 44.3**	**-0.2**
	comp=Z,30nm,1.3s						
RND	**Reindeer**	**81.61**	**19**	*e*P	**P**	**23 28 44.3**	**-0.2**
RND				pmax	pmax		
	comp=Z,30nm,1.3s						
RDOG	**Red Dog Mine**	**81.82**	**11**	*e*P	**P**	**23 28 45.5**	**+0.1**
	comp=Z,29nm,1.2s						
DHY	**Denali Highway**	**81.84**	**19**	*e*P	**P**	**23 28 46.0**	**+0.2**
	comp=Z,26nm,1.3s						
IM3	**Indian Mountai**	**82.15**	**15**	*e*P	**P**	**23 28 47.5**	**+0.4**
MLY	**Manley**	**82.24**	**17**	*e*P	**P**	**23 28 47.9**	**+0.2**
	comp=Z,28nm,1.4s						
ZAK	**Zakamensk**	**82.26**	**325**	*e*P	**P**	**23 28 48.7**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,20nm,1.2s						
O02D	**Mt. Diablo Mer**	**82.56**	**47**	P	**P**	**23 28 51.3**	**+1.3**
	baz=249						
IRK	**Irkutsk**	**82.59**	**327**	*e*P	**P**	**23 28 49.9**	**+0.1**
IRK				pmax	pmax		
	comp=Z,83nm,3.6s						
WRH	**Wood River Hil**	**82.61**	**18**	*e*P	**P**	**23 28 49.4**	**-0.2**
	comp=Z,36nm,1.2s						
TLY	**Talaya**	**82.67**	**326**	*e*P	**P**	**23 28 51.0**	**+0.8**
	comp=Z,43nm,0.9s						
TLY				LR	LR		
	comp=Z,247nm,20.0s						
TLY	**Talaya**	**82.67**	**326** *c*	*i*P	**P**	**23 28 50.7**	**+0.5**
K02D	**Willamette Mer**	**82.87**	**44**	P	**P**	**23 28 52.5**	**+1.0**
	baz=248						
WDC	**Whiskeytown Da**	**82.89**	**46**	*e*P	**P**	**23 28 52.4**	**+0.8**
	comp=Z,28nm,1.4s						
N02D	**Trinity Center**	**82.91**	**46**	P	**P**	**23 28 53.5**	**+1.7**
	baz=249						
HDA	**Harding Lake**	**82.92**	**18**	*e*P	**P**	**23 28 50.8**	**-0.4**
	comp=Z,76nm,1.1s						
HDA	**Harding Lake**	**82.92**	**18**	P	**P**	**23 28 51.4**	**+0.2**
	baz=226						
MDM	**Murphy Dome**	**82.92**	**18**	*e*P	**P**	**23 28 50.8**	**-0.4**
	comp=Z,48nm,1.2s						
M02C	**Callahan**	**82.96**	**46**	P	**P**	**23 28 53.7**	**+1.7**
	baz=249						
TCOL	**CIGO, UAF Yank**	**82.97**	**18**	P	**P**	**23 28 51.5**	**+0.1**
	baz=225						
COLA	**College**	**82.97**	**18**	*e*P	**P**	**23 28 51.6**	**+0.2**
	comp=Z,29nm,0.9s						
COLA				LR	LR		
	comp=Z,1µm,20.0s						
COLA	**College**	**82.97**	**18** *d*	*i*P	**P**	**23 28 51.1**	**-0.3**
COLA				pmax	pmax		
	comp=Z,20nm,1.1s						
RIDG	**Independ'e Rid**	**83.13**	**20**	*e*P	**P**	**23 28 52.1**	**-0.3**
	comp=Z,42nm,1.1s						
YBH	**Yreka Blue Hor**	**83.18**	**45**	*e*P	**P**	**23 28 53.0**	**-0.2**
	comp=Z,24nm,1.1s						
YBH	**Yreka Blue Hor**	**83.18**	**45**	P	**P**	**23 28 53.5**	**+0.3**
	comp=Z,10nm,1.0s,baz=308,slow=2.3,SNR=6.4						
LSA	**Lhasa**	**83.19**	**302**	PFAKE		23 29 10.0	+16
LSA				LR	LR		
	comp=Z,676nm,22.0s						
IL1	**Eielson Array**	**83.19**	**18**	*e*P	**P**	**23 28 51.8**	**-0.8**
ILAR	**Eielson Array**	**83.19**	**18**	P	**P**	**23 28 52.5**	**-0.2**
	comp=Z,15nm,0.8s,baz=225,slow=6.1,SNR=20						
ILB	**Eielson Array**	**83.19**	**18**	*e*P	**P**	**23 28 52.8**	**+0.1**
POKR	**Poker Plat Res**	**83.27**	**18**	P	**P**	**23 28 52.1**	**-0.9**
	baz=225						
ORV	**Oroville**	**83.27**	**48**	*e*P	**P**	**23 28 53.1**	**-0.5**
	comp=Z,14nm,1.0s						
ORV	**Oroville**	**83.27**	**48**	*e*P	**P**	**23 28 53.1**	**-0.5**
ORV				pmax	pmax		
	comp=Z,14nm,1.0s						
O03E	**Paynes Creek**	**83.31**	**47**	P	**P**	**23 28 55.1**	**+1.2**
	baz=250						
HUMO	**Hull Mountain**	**83.33**	**44**	*e*P	**P**	**23 28 55.7**	**+1.8**
	comp=Z,22nm,1.2s						
AFDM	**Forest Hills D**	**83.45**	**48**	*e*P	**P**	**23 28 54.8**	**+0.2**
	comp=Z,24nm,1.0s						
CMB	**Columbia Colle**	**83.58**	**49**	*e*P	**P**	**23 28 56.4**	**+1.1**
	comp=Z,18nm,1.0s						
CMB	**Columbia Colle**	**83.58**	**49**	*e*P	**P**	**23 28 56.4**	**+1.1**
CMB				pmax	pmax		
	comp=Z,18nm,1.0s						
M04C	**Macdoel**	**83.81**	**45**	P	**P**	**23 28 58.0**	**+1.5**
	baz=249						
WRAK	**Wrangell Islan**	**83.84**	**29**	PFAKE		23 29 10.0	+14
WRAK				LR	LR		
	comp=Z,1µm,20.0s						
COLD	**Coldfoot**	**84.02**	**15**	*e*P	**P**	**23 28 59.3**	**+2.4**
	comp=Z,8.2nm,0.9s						
J04D	**Umpqua Nationa**	**84.14**	**44**	P	**P**	**23 28 59.1**	**+0.9**
	baz=249						
H04D	**Lebanon**	**84.18**	**43**	P	**P**	**23 28 59.7**	**+1.5**
	baz=248						
BEKR	**Beckworth**	**84.21**	**48**	*e*P	**P**	**23 28 59.3**	**+0.7**
	comp=Z,23nm,1.1s						
ISA	**Isabella, Lake**	**84.28**	**52**	*e*P	**P**	**23 29 00.9**	**+1.9**
	comp=Z,12nm,1.1s						
ISA	**Isabella, Lake**	**84.28**	**52**	*e*P	**P**	**23 29 00.9**	**+1.9**
ISA				pmax	pmax		
	comp=Z,12nm,1.1s						
EDW2	**Edwards Air Fo**	**84.42**	**53**	P	**P**	**23 29 01.1**	**+1.4**
	baz=252						
MDPB	**Devils Postpil**	**84.43**	**50**	*e*P	**P**	**23 29 01.3**	**+1.3**
	comp=Z,26nm,1.0s						
WAKR	**Walker**	**84.44**	**49**	*e*P	**P**	**23 29 01.4**	**+1.6**
	comp=Z,39nm,1.1s						
OMMB	**Old Mammoth Mi**	**84.48**	**50**	*e*P	**P**	**23 29 02.3**	**+2.1**
	comp=Z,18nm,1.1s						
PNTR	**Pine Nut**	**84.51**	**49**	*e*P	**P**	**23 29 00.7**	**+0.5**
	comp=Z,34nm,1.0s						
NLWA	**Neilton Lookou**	**84.52**	**40**	PFAKE		23 29 10.0	+10
NLWA				LR	LR		
	comp=Z,2µm,22.0s						
YERR	**Yerington**	**84.74**	**49**	*e*P	**P**	**23 29 01.3**	**-0.1**
	comp=Z,18nm,1.1s						
J05D	**Fort Rock, OR**	**84.75**	**44**	P	**P**	**23 29 02.4**	**+1.1**
	baz=250						
CWC	**Cottonwood Cre**	**84.82**	**52**	P	**P**	**23 29 02.8**	**+1.0**
	baz=252						
LRMC	**Laurel Mtn Rad**	**84.84**	**53**	P	**P**	**23 29 02.4**	**+0.6**
	baz=253						
PAHR	**Pah Rah Range**	**84.86**	**48**	*e*P	**P**	**23 29 02.4**	**+0.4**
	comp=Z,34nm,1.1s						
MOD	**Modoc Plateau**	**84.93**	**46**	*e*P	**P**	**23 29 01.9**	**-0.3**
	comp=Z,17nm,1.0s						
FYU	**Fort Yukon**	**84.93**	**17**	*e*P	**P**	**23 29 01.5**	**+0.1**
	comp=Z,23nm,1.3s						
I05D	**Terrebonne, OR**	**85.05**	**43**	P	**P**	**23 29 04.1**	**+1.5**
	baz=249						
MONP2	**Monument Peak**	**85.09**	**55**	P	**P**	**23 29 04.8**	**+1.5**
	baz=254						
PINE	**Pine Mountain**	**85.13**	**44**	*e*P	**P**	**23 29 04.8**	**+1.6**
	comp=Z,24nm,1.2s						
DAC	**Darwin (Calif)**	**85.15**	**52**	*e*P	**P**	**23 29 04.8**	**+1.3**
	comp=Z,18nm,1.1s						
DAC	**Darwin (Calif)**	**85.15**	**52**	*e*P	**P**	**23 29 04.8**	**+1.3**
DAC				pmax	pmax		
	comp=Z,18nm,1.1s						
RYN	**Ryan**	**85.16**	**49**	*e*P	**P**	**23 29 04.7**	**+1.3**
	comp=Z,18nm,1.0s						
MPMC	**Manual Prospec**	**85.17**	**52**	P	**P**	**23 29 04.5**	**+0.9**
	baz=253						
TOLK	**Toolik Lake Re**	**85.23**	**15**	*e*P	**P**	**23 29 03.4**	**+0.5**
	comp=Z,15nm,1.1s						
TOLK	**Toolik Lake Re**	**85.23**	**15**	P	**P**	**23 29 04.1**	**+1.1**
	baz=223						
NV01	**Mina Array Sit**	**85.26**	**50**	*e*P	**P**	**23 29 04.4**	**+0.3**
NVAR	**Mina Array Bea**	**85.26**	**50**	P	**P**	**23 29 04.2**	**+0.1**
	comp=Z,6.9nm,0.8s,baz=229,slow=8.2,SNR=8.8						
PFO	**Pinyon Flats O**	**85.27**	**55**	PFAKE		23 29 20.0	+16
PFO				LR	LR		
	comp=Z,2µm,21.0s						
NV11	**Mina Array Sit**	**85.37**	**50**	*e*P	**P**	**23 29 04.3**	**-0.2**
	comp=Z,1.9nm,1.0s						
GRAC	**Grapevine Rang**	**85.54**	**51**	P	**P**	**23 29 06.4**	**+1.1**
	baz=253						
KVN	**Kaiserville**	**85.60**	**49**	*e*P	**P**	**23 29 06.0**	**+0.4**
	comp=Z,19nm,1.0s						
KVN	**Kaiserville**	**85.60**	**49**	*e*P	**P**	**23 29 06.1**	**+0.4**
KVN				pmax	pmax		
	comp=Z,19nm,1.0s						
D05A	**Enumclaw**	**85.64**	**40**	*e*P	**P**	**23 29 06.1**	**+0.8**
	comp=Z,68nm,1.4s						
KNGR	**Kungurtug, Tuv**	**85.68**	**323** ⇑	*e*P	**P**	**23 29 06.2**	**+0.5**
A04D	**Lummi Island**	**85.75**	**39**	P	**P**	**23 29 07.5**	**+1.7**
	baz=248						
FURC	**Furnace Creek,**	**85.77**	**52**	P	**P**	**23 29 07.4**	**+1.2**
	baz=253						
DLBC	**Dease Lake**	**85.93**	**28**	*e*P	**P**	**23 29 07.0**	**+0.3**
	comp=Z,15nm,1.1s						
DLBC	**Dease Lake**	**85.93**	**28**	P	**P**	**23 29 06.8**	**+0.1**
	comp=Z,5.9nm,1.0s,baz=204,slow=11,SNR=6.5						
B05A	**Bryant**	**85.96**	**39**	P	**P**	**23 29 08.0**	**+1.0**
	baz=249						
I07A	**Izee**	**86.20**	**44**	*e*P	**P**	**23 29 09.2**	**+0.8**
	comp=Z,20nm,1.0s						
TUQ	**Turquoise Moun**	**86.20**	**53**	P	**P**	**23 29 10.0**	**+1.3**
	baz=254						
TIXI	**Tiksi**	**86.27**	**349**	*e*P	**P**	**23 29 08.1**	**+0.1**
	comp=Z,70nm,1.2s						
TIXI				LR	LR		
	comp=Z,437nm,21.0s						
TIXI	**Tiksi**	**86.27**	**349** *d*	*e*P	**P**	**23 29 07.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,76nm,1.3s						
WVOR	**Wild Horse Val**	**86.27**	**46**	PFAKE		23 29 20.0	+11
WVOR				LR	LR		
	comp=Z,678nm,20.0s						
TPNV	**Topopah Spring**	**86.38**	**51**	*e*P	**P**	**23 29 10.7**	**+1.2**
	comp=Z,9.6nm,1.0s						
TPNV	**Topopah Spring**	**86.38**	**51**	*e*P	**P**	**23 29 10.7**	**+1.2**
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TPNV	**Topopah Spring**	**86.38**	**51**	P	**P**	**23 29 10.6**	**+1.0**
	baz=253						
IRM	**Iron Mountain**	**86.47**	**54**	P	**P**	**23 29 11.5**	**+1.6**
	baz=254						
LTY	**Liberty**	**86.50**	**41**	*e*P	**P**	**23 29 10.7**	**+1.0**
	comp=Z,13nm,1.1s						
J08A	**Circle Bar Ran**	**86.67**	**45**	*e*P	**P**	**23 29 11.8**	**+1.1**
	comp=Z,24nm,1.3s						
LDFC	**Landfair**	**86.75**	**54**	*e*P	**P**	**23 29 12.1**	**+0.8**
	comp=Z,50nm,1.1s						
LLLB	**Lillooet**	**86.94**	**37**	*e*P	**P**	**23 29 11.9**	**+0.1**
	comp=Z,12nm,1.1s						
HAWA	**Hanford**	**86.94**	**42**	*e*P	**P**	**23 29 12.7**	**+0.9**
	comp=Z,19nm,1.1s						
HAWA				LR	LR		
	comp=Z,972nm,21.0s						
G08A	**Pilot Rock**	**86.96**	**43**	*e*P	**P**	**23 29 12.7**	**+0.5**
	comp=Z,17nm,1.0s						
SHPR	**Sheep Range**	**87.10**	**52**	*e*P	**P**	**23 29 14.7**	**+1.7**
	comp=Z,16nm,1.0s						
R11A	**Troy Canyon, C**	**87.28**	**50**	*e*P	**P**	**23 29 13.5**	**-0.4**
	comp=Z,7.4nm,1.0s						
R11A	**Troy Canyon, C**	**87.28**	**50**	P	**P**	**23 29 15.3**	**+1.4**
	baz=254						
E08A	**Dider Farm, El**	**87.28**	**42**	*e*P	**P**	**23 29 13.3**	**-0.1**
	comp=Z,35nm,1.2s						
PDMCI	**Parker Dam,Lak**	**87.31**	**54**	P	**P**	**23 29 15.0**	**+1.1**
	baz=255						
B08A	**Colville Reser**	**87.72**	**40**	*e*P	**P**	**23 29 15.4**	**-0.2**
	comp=Z,17nm,1.3s						
BMO	**Blue Mountains**	**87.94**	**44**	*e*P	**P**	**23 29 17.1**	**+0.3**
	comp=Z,12nm,1.1s						
BMO	**Blue Mountains**	**87.94**	**44**	*e*P	**P**	**23 29 17.1**	**+0.3**
BMO				pmax	pmax		
	comp=Z,12nm,1.1s						
ELK	**Elko**	**88.20**	**48**	*e*P	**P**	**23 29 18.6**	**+0.3**
	comp=Z,6.9nm,1.1s						
ELK	**Elko**	**88.20**	**48**	*e*P	**P**	**23 29 18.7**	**+0.3**
ELK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ELK	**Elko**	**88.20**	**48**	P	**P**	**23 29 17.5**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=212,slow=3.5,SNR=4.9						
F10A	**Beach Ranch, E**	**88.33**	**43**	*e*P	**P**	**23 29 18.8**	**+0.1**
	comp=Z,15nm,1.0s						
MFID	**Camas Ranch**	**88.53**	**45**	*e*P	**P**	**23 29 21.1**	**+1.4**
	comp=Z,12nm,1.0s						
CCUT	**Cedar City**	**88.76**	**52**	*e*P	**P**	**23 29 22.2**	**+1.1**
	comp=Z,22nm,1.3s						
NEW	**Newport**	**89.09**	**40**	*e*P	**P**	**23 29 20.9**	**-1.2**
	comp=Z,9.3nm,1.1s						
NEW				LR	LR		
	comp=Z,896nm,20.0s						
NEW	**Newport**	**89.09**	**40**	P	**P**	**23 29 22.8**	**+0.7**
	baz=252						
NEW	**Newport**	**89.09**	**40**	P	**P**	**23 29 21.8**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=247,slow=6.9,SNR=6.5						
U15A	**North Rim**	**89.31**	**53**	*e*P	**P**	**23 29 22.2**	**-1.5**
	comp=Z,31nm,1.0s						
TUC	**Tucson**	**89.55**	**57**	*e*P	**P**	**23 29 26.8**	**+2.1**
	comp=Z,12nm,1.1s						
TUC				LR	LR		
	comp=Z,2µm,21.0s						
TUC	**Tucson**	**89.55**	**57**	P	**P**	**23 29 25.8**	**+1.1**
	baz=257						
HLID	**Hailey**	**89.56**	**45**	*e*P	**P**	**23 29 25.0**	**+0.4**
	comp=Z,12nm,1.1s						
HLID				LR	LR		
	comp=Z,691nm,21.0s						
HLID	**Hailey**	**89.56**	**45**	P	**P**	**23 29 25.9**	**+1.3**
	baz=254						
MTPU	**Mount Pierson**	**89.78**	**51**	*e*P	**P**	**23 29 27.6**	**+1.6**
	comp=Z,21nm,1.0s						
WMQ	**Urumqi**	**89.79**	**315**	P	**P**	**23 29 26.2**	**+0.7**
WMQ				pP	sP	23 29 37.0	-0.3
WMQ				sP	pwP	23 29 44.6	+8.0
WMQ				pmax	pmax		
	comp=Z,45nm,1.5s						
WMQ				LR	LR		
	comp=Z,630nm,24.9s						
WMQ				LR	LR		
	comp=Z,420nm,19.1s						
WMQ				LR	LR		
	comp=Z,510nm,29.7s						
WMQ	**Urumqi**	**89.79**	**315**	*e*P	**P**	**23 29 25.2**	**-0.3**
	comp=Z,39nm,1.4s						
WMQ	**Urumqi**	**89.79**	**315**	*e*P	**P**	**23 29 25.2**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,39nm,1.4s						
WUAZ	**Wupatki**	**89.81**	**54**	PFAKE		23 29 40.0	+14
WUAZ				LR	LR		
	comp=Z,956nm,20.0s						
DUG	**Dugway, Tooele**	**89.84**	**49**	PFAKE		23 29 40.0	+14

DUG				LR	LR		
	comp=Z,1µm,22.0s						
DUG	Dugway, Tooele	89.84	49	P	P	23 29 26.4	+0.5
	baz=255						
BGU	Big Grassy Mou	89.87	48	*e*P	P	23 29 26.3	+0.3
	comp=Z,15nm,1.1s						
MSU	Marysvale	89.91	51	*e*P	P	23 29 25.9	-0.5
MSU	Marysvale	89.91	51	*e*P	P	23 29 25.9	-0.5
HVU	Hansel Valley	90.27	48	*e*P	P	23 29 28.9	+1.0
	comp=Z,45nm,1.1s						
HVU	Hansel Valley	90.27	48	*e*P	P	23 29 28.9	+1.0
HVU				pmax	pmax		
	comp=Z,45nm,1.1s						
NLU	North Lily Min	90.33	49	*e*P	P	23 29 29.1	+0.7
	comp=Z,25nm,1.0s						
MPU	Maple Canyon	90.68	49	*e*P	P	23 29 31.8	+1.9
	comp=Z,43nm,1.4s						
CTU	Camp Tracy	90.75	49	*e*P	P	23 29 30.6	+0.4
	comp=Z,31nm,1.2s						
MSO	Missoula	90.75	42	P	P	23 29 31.0	+1.0
	baz=255						
TMUT	Trail Mountain	90.83	50	*e*P	P	23 29 31.7	+0.9
	comp=Z,16nm,0.9s						
JLU	Jordanelle	90.95	49	*e*P	P	23 29 32.3	+1.0
	comp=Z,19nm,1.0s						
MCMT	McKenzie Canyo	90.98	45	*e*P	P	23 29 32.2	+0.9
TCUT	Toone Canyon	91.10	48	*e*P	P	23 29 32.5	+0.6
	comp=Z,43nm,1.0s						
HWUT	Hardware Ranch	91.10	48	*e*P	P	23 29 29.9	-2.0
	comp=Z,8.7nm,0.9s						
HWUT				LR	LR		
	comp=Z,783nm,22.0s						
DLMT	Dillon	91.28	44	*e*P	P	23 29 34.2	+1.7
	comp=Z,27nm,1.0s						
SRU	San Rafael Swe	91.30	51	*e*P	P	23 29 30.7	-2.1
	comp=Z,6.9nm,0.9s						
SRU	San Rafael Swe	91.30	51	*e*P	P	23 29 30.7	-2.1
SRU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LRM	Limekiln Ridge	91.50	44	*e*P	P	23 29 34.9	+1.3
DGZ	Jazzator, Alta	91.52	320	*de*P	P	23 29 33.1	-0.4
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HYB	Hyderabad	91.55	287	*i* P	P	23 29 34.5	+0.2
AHID	Auburn Hatcher	91.71	47	*e*P	P	23 29 34.5	-0.2
	comp=Z,14nm,1.2s						
AHID				LR	LR		
	comp=Z,703nm,19.0s						
FXWY	Fox Creek	91.96	46	*e*P	P	23 29 37.0	+1.2
	comp=Z,17nm,1.4s						
TPAW	Teton Pass	91.98	46	*e*P	P	23 29 35.0	-1.0
	comp=Z,11nm,1.3s						
BOZ	Bozeman (W)	92.00	44	*e*P	P	23 29 37.0	+1.1
	comp=Z,25nm,1.3s						
BOZ				LR	LR		
	comp=Z,1µm,22.0s						
BOZ	Bozeman (W)	92.00	44	*e*P	P	23 29 37.0	+1.1
BOZ				pmax	pmax		
	comp=Z,25nm,1.3s						
BOZ				MLR	MLR		
	comp=Z,1µm,22.0s						
BOZ	Bozeman (W)	92.00	44	P	P	23 29 37.4	+1.5
	baz=256						
REDW	Red Top Meadow	92.02	46	*e*P	P	23 29 34.3	-1.8
	comp=Z,32nm,1.4s						
SYO	Syowa Base	92.08	197	⇑*e*P	P	23 29 35.2	-0.4
IMW	Indian Meadow	92.08	46	*e*P	P	23 29 37.5	+1.0
	comp=Z,16nm,1.1s						
YHB	Horse Butte	92.10	45	*e*P	P	23 29 36.3	-0.2
	comp=Z,14nm,1.0s						
HRY	Holter Researc	92.13	43	*e*P	P	23 29 35.6	-0.8
MOOW	Moose Ponds	92.19	46	*e*P	P	23 29 34.8	-2.1
	comp=Z,14nm,1.4s						
LOHW	Long Hollow	92.26	46	*e*P	P	23 29 35.5	-1.7
	comp=Z,12nm,1.4s						
FLWY	Flagg Ranch	92.30	46	*e*P	P	23 29 39.0	+1.7
	comp=Z,17nm,1.3s						
MVCO	Mesa Verde	92.45	53	PFAKE		23 29 50.0	+12
MVCO				LR	LR		
	comp=Z,759nm,20.0s						
H17A	Grant Village	92.45	45	P	P	23 29 40.4	+2.3
	baz=257						
PV02	Paradox Valley	92.47	52	*e*P	P	23 29 37.3	-1.1
	comp=Z,10nm,1.0s						
PV01	Paradox Valley	92.58	52	*e*P	P	23 29 38.4	-0.5
	comp=Z,44nm,1.2s						
LKWY	Lake	92.61	45	PFAKE		23 29 50.0	+11
LKWY				LR	LR		
	comp=Z,1µm,21.0s						
DGAR	Diego Garcia	92.79	262	PFAKE		23 29 50.0	+10
DGAR				LR	LR		
	comp=Z,432nm,19.0s						
BW06	Boulder Array	92.82	47	*e*P	P	23 29 40.5	+0.7
	comp=Z,9.4nm,1.1s						
BW06				LR	LR		
	comp=Z,694nm,20.0s						
BW06	Boulder Array	92.82	47	P	P	23 29 40.5	+0.7
	baz=258						
PD31	Pinedale Array	92.82	47	*e*P	P	23 29 39.9	0.0
PDAR	Pinedale Array	92.82	47	*e*P	P	23 29 39.7	-0.1
PDAR	Pinedale Array	92.82	47	P	P	23 29 39.5	-0.3
	comp=Z,1.8nm,0.9s,baz=251,slow=4.5,SNR=7.4						
RLMT	Red Lodge	93.52	45	*e*P	P	23 29 43.2	+0.3
	comp=Z,8.2nm,1.4s						
RLMT				LR	LR		
	comp=Z,1µm,21.0s						
ANMO	Albuquerque	93.63	55	PFAKE		23 30 00.0	+16
ANMO				LR	LR		
	comp=Z,1µm,22.0s						
ANMO	Albuquerque	93.63	55	⇑*e*P	P	23 29 43.5	-0.2
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
EGMT	Eagleton	93.80	42	*e*P	P	23 29 44.1	0.0
	comp=Z,11nm,1.0s						
EGMT				LR	LR		
	comp=Z,602nm,20.0s						
EGMT	Eagleton	93.80	42	P	P	23 29 44.8	+0.8
	baz=258						
MNTX	Cornudas Mount	93.91	59	PFAKE		23 30 00.0	+15
MNTX				LR	LR		
	comp=Z,2µm,21.0s						
MNTX	Cornudas Mount	93.91	59	P	P	23 29 45.9	+1.0
	baz=260						
ZAA0	Zalesovo Array	94.12	324	*e*P	P	23 29 44.1	-1.1
	comp=Z,14nm,1.0s						
ZALV	Zalesovo Beam	94.12	324	*e*P	P	23 29 43.9	-1.3
ZALV	Zalesovo Beam	94.12	324	P	P	23 29 45.1	-0.1
	comp=Z,11nm,1.0s,baz=108,slow=4.8,SNR=13						
MK01	Makanchi Array	94.18	317	*e*P	P	23 29 45.2	-0.6
MK31	Makanchi Array	94.19	317	*e*P	P	23 29 45.8	0.0
MKAR	Makanchi Array	94.19	317	*e*P	P	23 29 45.7	-0.1
	comp=Z,96nm,1.1s						
MKAR	Makanchi Array	94.19	317	P	P	23 29 46.2	+0.4
	comp=Z,12nm,0.9s,baz=101,slow=6.3,SNR=14						
MAKZ	Makanchi	94.40	317	*e*P	P	23 29 46.8	0.0
	comp=Z,31nm,1.2s						
YKA	Yellowknife Ar	94.51	27	P	P	23 29 45.5	-1.3
	comp=Z,1.2nm,0.7s,baz=257,slow=4.6,SNR=10.0						
YKB5	Yellowknife Ar	94.51	27	*e*P	P	23 29 45.1	-1.7
SDCO	Great Sand Dun	94.89	53	PFAKE		23 30 00.0	+10
SDCO				LR	LR		
	comp=Z,1µm,22.0s						
ISCO	Idaho Springs	95.16	51	PFAKE		23 30 00.0	+9.2
ISCO				LR	LR		
	comp=Z,3µm,22.0s						
NVS	Novosibirsk	95.22	325	*e*P	P	23 29 49.2	-1.0
NVS				*e*		23 33 35.0	
LAO	LASA Array	95.90	44	PFAKE		23 30 10.0	+16
LAO				LR	LR		
	comp=Z,1µm,19.0s						
NRIK	Noril'sk	96.46	339	P	P	23 29 55.1	-0.5
	comp=Z,3.9nm,0.9s,baz=96,slow=5.3,SNR=8.8						
RSSD	Black Hills	97.02	47	P	P	23 29 58.5	-0.5
	baz=262						
KURK	Kurchatov	97.26	320	*e*P	P	23 29 58.2	-1.4
	comp=Z,11nm,1.4s						
KURK				LR	LR		
	comp=Z,570nm,20.0s						
KURK	Kurchatov	97.26	320	⇑*e*P	P	23 29 58.8	-0.8
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
OGNE	Ogallala	98.04	50	PFAKE		23 30 10.0	+6.4
OGNE				LR	LR		
	comp=Z,2µm,21.0s						
JCT	Junction City	98.45	61	PFAKE		23 30 20.0	+14
JCT				LR	LR		
	comp=Z,2µm,22.0s						
NIL	Nilore	98.91	303	PFAKE		23 30 20.0	+12
NIL				LR	LR		
	comp=Z,194nm,20.0s						
AAK	Ala-Archa	99.03	312	PFAKE		23 30 20.0	+12
AAK				LR	LR		
	comp=Z,369nm,21.0s						
AAK	Ala-Archa	99.03	312	⇑*e*P	Pdif	23 30 06.3	-1.7
AAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
CBKS	Cedar Bluff	99.53	52	PFAKE		23 30 20.0	+10
CBKS				LR	LR		
	comp=Z,1µm,19.0s						
FFC	Flin Flon	99.64	36	PFAKE		23 30 20.0	+10
FFC				LR	LR		
	comp=Z,1µm,20.0s						
KVTX	Kingsville	99.72	64	PFAKE		23 30 20.0	+8.8
KVTX				LR	LR		
	comp=Z,729nm,20.0s						
WMOK	Wichita Mounta	99.83	56	PFAKE		23 30 20.0	+8.4
WMOK				LR	LR		
	comp=Z,2µm,20.0s						
KSU1	Kansas State U	101.99	52	PFAKE		23 30 30.0	+9.0
KSU1				LR	LR		
	comp=Z,870nm,21.0s						
ECSD	EROS Data Cent	102.31	47	PFAKE		23 30 30.0	+7.6
ECSD				LR	LR		
	comp=Z,996nm,22.0s						
PAYG	Puerto Ayora	102.59	93	PFAKE		23 30 40.0	+16
PAYG				LR	LR		
	comp=Z,697nm,19.0s						
BRVK	Borovoye	102.61	322	PFAKE		23 30 40.0	+17
BRVK				LR	LR		
	comp=Z,269nm,19.0s						
BRVK	Borovoye	102.61	322	*ce*P	Pdif	23 30 23.3	-0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NATX	Nacogdoches	102.97	60	PFAKE		23 30 40.0	+14
NATX				LR	LR		
	comp=Z,3µm,21.0s						
MIAR	Mount Ida	104.09	57	PFAKE		23 30 40.0	+10
MIAR				LR	LR		
	comp=Z,2µm,22.0s						
SCIA	State Center	104.72	49	PFAKE		23 30 40.0	+6.9
SCIA				LR	LR		
	comp=Z,1µm,21.0s						
EYMN	Ely	105.97	43	PFAKE		23 35 00.0	+9.2
EYMN				LR	LR		
	comp=Z,923nm,19.0s						
JFWS	Jewell Farm	106.93	48	PFAKE		23 35 00.0	+7.3
JFWS				LR	LR		
	comp=Z,567nm,19.0s						
COWI	Conover	107.64	45	PFAKE		23 35 10.0	+16
COWI				LR	LR		
	comp=Z,2µm,20.0s						
HDIL	Hopedale	107.67	51	PFAKE		23 35 10.0	+16
HDIL				LR	LR		
	comp=Z,2µm,21.0s						
ARU	Arti	109.17	326	PFAKE		23 35 10.0	+14
ARU				LR	LR		
	comp=Z,223nm,20.0s						
JTS	JuntasAbangare	109.70	83	PFAKE		23 35 10.0	+11
JTS				LR	LR		
	comp=Z,729nm,22.0s						
KBS	Kingsbay	111.00	355	PFAKE		23 35 10.0	+11
KBS				LR	LR		
	comp=Z,327nm,20.0s						
LCO	Las Campanas	111.77	127	PFAKE		23 35 10.0	+7.4
LCO				LR	LR		
	comp=Z,687nm,19.0s						
AAM	Ann Arbor	111.82	49	PFAKE		23 35 10.0	+8.1
AAM				LR	LR		
	comp=Z,2µm,20.0s						
GOGA	Godfrey	112.46	58	PFAKE		23 35 20.0	+17
GOGA				LR	LR		
	comp=Z,2µm,20.0s						
ACSO	Alum Creek Sta	112.50	51	PFAKE		23 35 20.0	+17
ACSO				LR	LR		
	comp=Z,2µm,22.0s						
NNA	Nana	112.83	108	PFAKE		23 35 20.0	+15
NNA				LR	LR		
	comp=Z,263nm,20.0s						
TRQA	Tornquist	113.23	140	PFAKE		23 35 20.0	+15
TRQA				LR	LR		
	comp=Z,3.0nm,22.0s						
ABPO	Ambohimpanom	113.34	244	PFAKE		23 35 20.0	+14
ABPO				LR	LR		
	comp=Z,278nm,21.0s						
OTAV	Otavalo	114.36	95	PFAKE		23 35 20.0	+12
OTAV				LR	LR		
	comp=Z,591nm,20.0s						
BCIP	Isla Barro Col	114.53	85	PFAKE		23 35 20.0	+12
BCIP				LR	LR		
	comp=Z,519nm,22.0s						
BLA	Blacksburg	114.74	54	PFAKE		23 35 20.0	+12
BLA				LR	LR		
	comp=Z,3µm,19.0s						
LVZ	Lovozero	115.16	342	PFAKE		23 35 20.0	+12
LVZ				LR	LR		
	comp=Z,317nm,22.0s						
NHSC	New Hope	115.23	59	PFAKE		23 35 20.0	+11
NHSC				LR	LR		
	comp=Z,1µm,19.0s						
LVC	Limon Verde	116.04	122	PFAKE		23 35 20.0	+8.9
LVC				LR	LR		
	comp=Z,543nm,21.0s						
KEV	Kevo	116.04	346	PFAKE		23 35 20.0	+11
KEV				LR	LR		
	comp=Z,581nm,20.0s						
CNNC	Cliffs of the	116.96	56	PFAKE		23 35 20.0	+8.1
CNNC				LR	LR		
	comp=Z,2µm,20.0s						
MTDJ	Mount Denham	117.64	75	PFAKE		23 35 30.0	+16
MTDJ				LR	LR		
	comp=Z,534nm,21.0s						
SFJD	Kangerlussuaq	118.78	16	PFAKE		23 35 30.0	+15
SFJD				LR	LR		
	comp=Z,2µm,19.0s						
OBN	Obninsk	121.30	329	PFAKE		23 35 30.0	+10
OBN				LR	LR		
	comp=Z,217nm,19.0s						
OBN	Obninsk	121.30	329	⇑*i*PKIKP	PKiKP	23 35 21.1	+1.3
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GNI	Garni	121.40	310	PFAKE		23 35 30.0	+9.3
GNI				LR	LR		
	comp=Z,272nm,20.0s						
GNI	Garni	121.40	310	⇑*i*PKIKP	PKPdf	23 35 18.6	-2.0
PKME	Peaks-Kenny Pk	121.46	43	PFAKE		23 35 30.0	+10
PKME				LR	LR		
	comp=Z,1µm,21.0s						
KIV	Kislovodsk	121.92	315	PFAKE		23 35 30.0	+8.5
KIV				LR	LR		
	comp=Z,291nm,21.0s						
KIV	Kislovodsk	121.92	315	*i* PKIKP	PKPdf	23 35 18.9	-2.5
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,276nm,23.0s						
FINES	FINESS Array B	122.12	339	PKP	PKPdf	23 35 20.2	-0.8
	comp=Z,4.4nm,1.0s,baz=116,slow=8.7,SNR=6.1						
SDV	Santo Domingo	123.51	87	PKP	PKPdf	23 35 23.7	-1.7
SDV				LR	LR		
	comp=Z,394nm,19.0s						
SDV	Santo Domingo	123.51	87	PKP	PKPdf	23 35 23.7	-1.7
	comp=Z,2.2nm,0.3s,baz=68,slow=6.8,SNR=3.4						
SDDR	Presa de Saban	123.59	75	PFAKE		23 35 40.0	+15
SDDR				LR	LR		
	comp=Z,782nm,20.0s						
GRTK	Grand Turk	123.73	72	PFAKE		23 35 40.0	+14
GRTK				LR	LR		
	comp=Z,773nm,20.0s						
VSU	Vasula	123.86	336	⇓*i*PKIKP	PKPdf	23 35 24.0	-0.5
SUR	Sutherland	125.94	216	PFAKE		23 35 40.0	+10
SUR				LR	LR		
	comp=Z,776nm,19.0s						
NB2	NORSAR Subarra	126.94	345	PKPdf	PKPdf	23 35 30.2	-0.2
	comp=Z,12nm,1.4s,baz=36,slow=2.0						
NB2	NORSAR Subarra	126.94	345	PKPdf	PKPdf	23 35 30.2	-0.2
	baz=36,slow=2.0						
NOA	NORSAR Array B	126.94	345	PKP	PKPdf	23 35 29.5	-0.9
	comp=Z,1.7nm,0.9s,baz=33,slow=2.1,SNR=4.4						
AKASG	Malin Array Be	127.39	327	PKIKP	PKiKP	23 35 32.0	0.0
AKASG	Malin Array Be	127.39	327	PKP	PKiKP	23 35 32.0	0.0
	comp=Z,0.4nm,0.4s,baz=52,slow=1.8,SNR=7.2						
AKBB	Malin Array Si	127.39	327	*e*PKPdf	PKPdf	23 35 30.8	-0.7
AKBB	Malin Array Si	127.39	327	*e*PKIKP	PKPdf	23 35 30.8	-0.7
KIEV	Kiev	127.40	327	PFAKE		23 35 40.0	+8.0
KIEV				LR	LR		
	comp=Z,442nm,21.0s						
KIEV	Kiev	127.40	327	⇑*i*PKIKP	PKiKP	23 35 32.0	0.0
AK11	Malin Array Si	127.43	327	*e*PKPdf	PKPdf	23 35 31.2	-0.4
KMBO	Kilima Mbogo	128.36	260	PFAKE		23 35 50.0	+15
KMBO				LR	LR		
	comp=Z,370nm,20.0s						
SJG	San Juan	128.46	76	PFAKE		23 35 50.0	+15
SJG				LR	LR		
	comp=Z,528nm,22.0s						
BRTR	Keskin Array B	129.68	313	PKP	PKPdf	23 35 36.6	+0.2
	comp=Z,1.2nm,1.0s,baz=71,slow=5.4,SNR=3.6						
ANTO	Ankara	130.23	313	PFAKE		23 35 50.0	+12
ANTO				LR	LR		
	comp=Z,275nm,19.0s						
LSZ	Lusaka	131.34	238	PFAKE		23 35 50.0	+8.8
LSZ				LR	LR		
	comp=Z,1µm,21.0s						
GRGR	Grenville	132.61	84	PFAKE		23 35 50.0	+6.4
GRGR				LR	LR		
	comp=Z,447nm,19.0s						
ANWB	Willy Bob	132.62	76	PFAKE		23 35 50.0	+6.5
ANWB				LR	LR		
	comp=Z,882nm,20.0s						
BRG	Berggiesshubel	134.46	336	*e*PKP	PKiKP	23 35 46.0	-0.3
	comp=Z,19nm,1.5s						
	comp=N,299nm,17.2s						
	comp=E,224nm,15.4s						
	comp=Z,476nm,19.0s						
BRG	Berggiesshubel	134.46	336	*e*PKIKP	PKiKP	23 35 46.0	-0.3
BRG				pmax	pmax		
	comp=Z,19nm,1.5s						
BRG				MLR	MLR		
	comp=N,299nm,17.2s						
BRG				MLR	MLR		
	comp=E,224nm,15.4s						
BRG				MLR	MLR		
	comp=Z,476nm,19.0s						
CLL	Collm	134.48	337	*e*PKPdf	PKPdf	23 35 43.0	-1.9
CLL				*e*PKPdfmax		23 35 46.0	
	comp=Z,11nm,1.3s						
CLL				*i*		23 35 53.2	
CLL				LmV		00 46 00.0	
	comp=Z,300nm,20.0s						
CLL	Collm	134.48	337	*e*PKIKP	PKPdf	23 35 42.0	-2.9
CLL				*e*		23 35 47.0	
CLL				*i*		23 35 53.2	
CLL				MLR	MLR		
	comp=Z,300nm,20.0s						
MBAR	Mbarara	134.78	258	PFAKE		23 36 00.0	+12
MBAR				LR	LR		
	comp=Z,588nm,20.0s						
ESK	Eskdalemuir	135.12	352	PFAKE		23 36 00.0	+13
ESK				LR	LR		
	comp=Z,320nm,19.0s						
KHC	Kasperske Hory	135.96	335	*e*PKPDF	PKiKP	23 35 49.9	+0.5
KHC				*e*x	x	23 35 58.4	
KHC	Kasperske Hory	135.96	335	*e*PKIKP	PKiKP	23 35 49.9	+0.5
KHC				*e*		23 35 58.4	
GERES	GERESS Array B	136.13	334	PKP	PKPdf	23 35 48.4	+0.1
	comp=Z,2.2nm,0.9s,baz=29,slow=3.0,SNR=7.5						
GEA0	GERESS Array S	136.13	334	*e*PKPdf	PKPdf	23 35 46.6	-1.6
SOKA	Soboth	137.15	331	*e*PKPdf	PKPdf	23 35 48.9	-1.3
	comp=Z,9.8nm,1.7s						
TSUM	Tsumeb	137.27	226	PFAKE		23 36 00.0	+6.9
TSUM				LR	LR		
	comp=Z,820nm,20.0s						
WATA	Walderalm	138.20	335	*e*PKiKP	PKiKP	23 35 53.5	-0.7
	comp=Z,5.2nm,1.0s						
MOTA	Moosalm	138.39	335	*e*PKiKP	PKiKP	23 35 53.8	-0.8
	comp=Z,5.2nm,1.0s						
RETA	Reutte	138.41	335	*e*PKiKP	PKiKP	23 35 54.2	-0.4
	comp=Z,11nm,1.9s						
FETA	Feichten	138.80	335	*e*PKiKP	PKPdf	23 35 54.1	+0.9
	comp=Z,8.3nm,1.3s						
KEST	Kesra	148.00	324	*e*PKPbc	PKiKP	23 36 14.6	0.0
KEST	Kesra	148.00	324	PKPbc	PKPdf	23 36 10.9	+1.2
	comp=Z,28nm,1.0s,baz=301,slow=4.5,SNR=7.4						
PGAV	Gavieira, Arco	148.88	353	*e*LR	LR	00 37 25.1	
	comp=Z,726nm,20.0s						
POLO	Lamas de Olo	149.40	352	*e*PKPdf	PKiKP	23 36 17.1	-0.2
PVRL	Vila Real	149.49	352	*e*PKPdf	PKiKP	23 36 17.2	-0.2
MVO	Moncorvo	149.49	351	*e*PKPfb	PKPbc	23 36 16.4	0.0
MVO	Moncorvo	149.49	351	*e*LR	LR	00 35 47.9	
	comp=Z,501nm,18.0s						
PVIS	Viseu	150.06	352	*e*PKPdf	PKiKP	23 36 19.0	+0.3
ES19	SONSECA Array	150.27	345	*e*PKPbc	PKPbc	23 36 18.1	-0.1
ESDC	Sonseca Array	150.31	345	PKPbc	PKPbc	23 36 16.7	-1.7
	comp=Z,3.5nm,0.8s,baz=20,slow=2.3,SNR=6.7						
MTE	Manteigas	150.32	351	*e*LR	LR	00 38 29.9	
	comp=Z,575nm,20.0s						
PAB	San Pablo	150.52	346	*e*PKPbc	PKiKP	23 36 20.3	+0.6
PAB				LR	LR		
	comp=Z,682nm,20.0s						
PTOM	Tomar	151.21	352	*e*PKPdf	PKiKP	23 36 21.4	+0.4
PMRV	Marv??o	151.25	351	*e*PKPdf	PKiKP	23 36 21.1	0.0
PMRV	Marv??o	151.25	351	*e*LR	LR	00 39 22.1	
	comp=Z,497nm,20.0s						
PMTG	Montargil	151.72	352	*e*PKPdf	PKPbc	23 36 21.3	-0.3
PESTR	Estremoz	151.82	351	*e*PKPdf	PKPab	23 36 32.8	+2.0
PESTR	Estremoz	151.82	351	*e*PKPab	PKPab	23 36 32.6	+1.8
SHEL	Horse Pasture	152.17	196	PFAKE		23 36 30.0	-2.8
SHEL				LR	LR		
	comp=Z,282nm,19.0s						
PBEJ	Beja	152.69	351	*e*PKPdf	PKPab	23 36 37.1	+2.7
PNCL	Nicolau / Gran	152.71	352	*e*PKPdf	PKPab	23 36 35.8	+1.3
PVAQ	Vaqueiros	153.28	350	*e*PKPdf	PKiKP	23 36 26.5	+1.2
TOA0	Torodi Ar. Sit	165.24	280	*e*PKPdf	PKPdf	23 36 31.2	-0.9
TOA0				*e*PKPdf	PKPdf	23 36 32.3	+0.2
TOA0				*e*PKPab	PKPab	23 37 29.4	-0.2
TORD	Torodi Ar. Bea	165.24	280	PKP	PKPdf	23 36 32.8	+0.7
	comp=Z,4.1nm,1.1s,baz=42,slow=2.9,SNR=8.3						
SACV	Santiago Islan	169.17	68	PFAKE		23 36 50.0	+15
SACV				LR	LR		
	comp=Z,471nm,21.0s						
DBIC	Dimbokro	170.65	243	*e*PKPdf	PKPdf	23 36 36.0	+0.1
DBIC	Dimbokro	170.65	243	*e*PKIKP	PKPdf	23 36 36.0	+0.1

IDC 08 23:21:07.2±1.6**, 13°.15N**×**87°.02W, h0**km**, mb3.4**/3**, mb1 3.7**/5**, mb1mx3.4**/47**, mbtmp3.3**/5**, ML2.7**/2**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/28**, Error ellipse: s-maj=82.4km s-min=22.5km az=52.0, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	JuntasAbangare	3.49	144	Pn	Pn	23 22 02.3	-0.5
	1.0nm,0.3s,baz=180,slow=20,SNR=2.9						
JTS				Sn	Sn	23 22 47.2	+2.4
	1.2nm,0.3s,baz=205,slow=17,SNR=3.7						
APG	El Apazote	3.82	299	Pn	Pn	23 22 08.3	+0.7
	0.4nm,0.3s,baz=240,slow=20,SNR=1.9						
SJG	San Juan	20.68	74	LR	LR	23 33 38.5	
	comp=Z,32nm,18.8s,baz=264,slow=36						
TXAR	Lajitas Array	22.32	319	P	P	23 26 05.7	-1.0
	1.6nm,0.7s,baz=138,slow=10,SNR=19						
PDAR	Pinedale Array	35.37	331	P	P	23 28 05.8	+1.0
	0.2nm,0.4s,baz=129,slow=12,SNR=4.1						
YKA	Yellowknife Ar	53.05	344	P	P	23 30 25.5	-0.4
	0.3nm,0.6s,baz=130,slow=8.4,SNR=4.5						

IDC 08 23:26:42.0±2.1**, 2°.00N**×**126°.31E, h0**km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/35**, mbtmp3.2**/3**, Error ellipse: s-maj=180.1km s-min=26.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.19	161	P	P	23 31 50.5	-0.2
	0.3nm,0.5s,baz=339,slow=11,SNR=7.5						
ASAR	Alice Springs	26.57	164	P	P	23 32 22.2	+0.3
	0.2nm,0.4s,baz=350,slow=9.3,SNR=4.0						
MKAR	Makanchi Array	58.73	326	P	P	23 36 41.6	-0.2
	0.1nm,0.4s,baz=121,slow=8.1,SNR=4.7						

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*ISCJB **08** 23:41:04.7±0.4, 6°.95S±0°.04×127°.62E±0°.06, h315km, mb3.7/13, Error ellipse: s-maj=8.1km s-min=5.1km az=178.7*

*DJA **08** 23:41:06.7±0.3, 7°S±3°×12°8E±°, h186km±9km, M4.4/12, mb4.3/12, mB4.8/6, MLv4.7/12, Mw(mB)4.1/6*

*IDC **08** 23:41:07.7±1.5, 7°.03S×127°.37E, h344km±17km, mb3.5/13, mb1 3.7/17, mb1mx3.6/30, mbtmp4.3/17, Error ellipse: s-maj=17.9km s-min=8.8km az=65.0*

ISC 08 23:41:05.0±0.5**, 7°.02S**±0°.05×**127°.58E**±0°.07**, h315**km**, n35,** σ**1**^{s}**95**/38**, mb3.8**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	3.39	43	P	Pn	23 41 58.3	-7.4
NLAI	Namlea	3.78	353	P	Pn	23 42 11.2	+1.4
NLAI				S	S	23 43 02.2	+0.4
SAUI	Saumlaki	3.81	105	P	Pn	23 41 56.0	-14
SOEI	Soe	4.26	230	P	Pn	23 42 17.5	+2.4
SOEI				S	S	23 43 07.8	-3.5
BATI	Baumata	5.01	230	P	Pn	23 42 25.9	+2.6
BATI				S	S	23 43 25.5	-0.8
BATI	Baumata	5.01	230	P	Pn	23 42 26.1	+2.8
	66nm,0.3s,baz=94,slow=2.9,SNR=32						
BATI				S	S	23 43 27.2	+0.9
	66nm,0.3s,baz=310,slow=3.1,SNR=16						
SANI	Sanana	5.18	342	P	Pn	23 42 29.2	+3.9
BBSI	Bau Bau	5.21	287	P	Pn	23 42 31.3	+5.7
	10nm,0.9s,445nm0.1nm						
MMRI	Maumere	5.54	253	P	Pn	23 42 33.8	+4.4
KDI	Kendari	5.80	301	P	Pn	23 42 41.2	+8.7
	28nm,0.6s,3µm0.2nm						
EDFI	Ende, Flores	6.09	253	P	Pn	23 42 40.5	+4.6
SWI	Sorong	7.13	31	P	Pn	23 42 50.1	+1.8
SWI				S	S	23 44 11.7	-0.2
BKSI	Bulukumba	7.61	282	P	Pn	23 42 55.6	+1.5
BASI	Baing, Sumba	7.62	245	P	Pn	23 42 59.9	+5.7
WSI	Waingapu	7.68	249	P	Pn	23 43 03.4	+8.5
	149nm,0.6s						
FITZ	Fitzroy Crossi	11.18	190	P	P	23 43 38.6	-0.5
	4.6nm,0.3s,baz=14,slow=9.7,SNR=76						
FITZ				S	S	23 45 43.6	+1.1
	0.3nm,0.3s,baz=156,slow=18,SNR=2.1						
WRA	Warramunga Arr	14.43	154	P	Pn	23 44 17.2	+0.9
	3.7nm,0.3s,baz=328,slow=12,SNR=260						
WRA				S	S	23 46 50.9	-2.1
	0.7nm,0.3s,baz=324,slow=20,SNR=11						
ASAR	Alice Springs	17.63	161	P	Pn	23 44 52.5	-1.2
	1.2nm,0.3s,baz=339,slow=12,SNR=110						
ASAR				S	S	23 47 55.1	-1.6
	0.5nm,0.3s,baz=344,slow=22,SNR=13						
LEM	Lembang	19.82	269	P	P	23 45 12.1	-1.5
	3.0nm,0.3s,baz=17,slow=19,SNR=3.7						
CTA	Charters Tower	22.29	127	P	P	23 45 39.5	+2.9
	5.6nm,0.8s,baz=312,slow=12,SNR=7.7						
NWAO	Narrogin (SRO)	27.52	199	P	P	23 46 23.0	-0.4
	4.1nm,0.5s,baz=40,slow=4.8,SNR=4.1						
STKA	Stephens Creek	27.98	154	P	P	23 46 28.9	+1.4
	1.8nm,0.5s,baz=337,slow=9.2,SNR=6.2						
CMAR	Chiang Mai Arr	37.94	312	P	P	23 47 53.1	-0.2
	0.7nm,0.4s,baz=146,slow=8.3,SNR=2.9						
KSRS	Korea Array	44.24	0	P	P	23 48 44.4	+0.4
	0.7nm,0.6s,baz=181,slow=9.8,SNR=4.2						
MJAR	Matsushiro Arr	44.46	12	P	P	23 48 44.7	-1.0
	1.9nm,0.9s,baz=186,slow=11,SNR=4.2						
USRK	Ussuriysk Ar.	51.13	4	P	P	23 49 36.2	-0.2
	0.8nm,0.6s,baz=199,slow=7.5,SNR=4.2						
SONM	Songino Array	57.73	343	P	P	23 50 23.9	+0.2
	0.6nm,0.5s,baz=171,slow=6.9,SNR=7.6						
PETK	Petropavlovsk-	65.11	19	P	P	23 51 13.2	+0.7
	4.9nm,0.8s,baz=186,slow=6.7,SNR=4.4						
MKAR	Makanchi Array	66.95	328	P	P	23 51 23.6	-0.6
	1.4nm,0.4s,baz=118,slow=8.2,SNR=40						
ZALV	Zalesovo Beam	70.56	335	P	P	23 51 44.9	-1.3
	3.7nm,0.6s,baz=132,slow=6.0,SNR=14						
NRIK	Noril'sk	81.01	347	P	P	23 52 43.0	-1.7
	0.9nm,0.4s,baz=155,slow=7.8,SNR=5.1						
ILAR	Eielson Array	94.39	25	P	P	23 53 47.4	-1.6
	0.5nm,1.0s,baz=249,slow=6.0,SNR=4.5						
TORD	Torodi Ar. Bea	126.46	281	PKP	PKPdf	23 59 30.3	-1.4
	0.2nm,0.5s,baz=95,slow=2.5,SNR=4.1						
CPUP	Villa Florida	146.51	172	PKPbc	PKPbc	00 00 09.9	-0.3
	1.3nm,0.4s,baz=265,slow=1.6,SNR=5.1						
LPAZ	La Paz	152.11	146	PKPbc	PKPbc	00 00 24.8	-0.3
	0.7nm,0.4s,baz=153,slow=6.8,SNR=4.6						
LPAZ				PKPab	PKPab	00 00 36.6	+0.9
	1.5nm,0.7s,baz=193,slow=3.1,SNR=6.3						

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*MIRAS **08** 23:42:52.1±0.0, 60°.30N×59°.94E, h1km, ML2.7/4*

ISC 08 23:42:51.5±2.4**, 60°.5N**±0°.2×**60°.49E**±0°.08**, h35**km**, n6,** σ**2**^{s}**17**/11**, 3C, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PR1R	Pomanovo	2.29	238	*e*P	Pn	23 43 26.4	-0.3
PR1R				*e*S	Sn	23 43 51.9	-1.7
	133µm,0.4s						
PR0R	Verkhnechusovs	2.85	219	*e*P	Pn	23 43 35.0	+0.7
PR0R				*e*S	Sn	23 44 06.5	-0.9
	765µm,26.5s						
PR4R	Vlasy	3.56	226	*i* S	Sn	23 44 24.9	0.0
ARU	Arti	4.17	195	*e*P	Pn	23 43 54.4	+1.8
	5µm,6.5s						
ARU				*e*S	Sn	23 44 41.6	+1.6
	5µm,6.5s						
BRVK	Borovoye	9.15	140	⇑Pn	Pn	23 45 03.2	+2.2
	2.1nm,1.5s						
BRVK				⇑Sn	Sn	23 46 41.0	-1.7
	1.1nm,0.8s						
BVA0	Borovoye Array	9.22	140	Pn	Pn	23 45 04.1	+2.3
	2.2nm,1.4s,baz=329,slow=13,SNR=8.0						
BVA0				⇑Sn	Sn	23 46 40.3	-3.9
	2.5nm,1.4s,baz=322,slow=26,SNR=4.1						

IDC 08 23:47:01.1±4.0**, 10°.47S**×**166°.08E, h0**km**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/43**, mbtmp3.5**/3**, Error ellipse: s-maj=202.4km s-min=32.1km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.99	249	P	P	23 53 29.1	-0.3
	0.3nm,0.6s,baz=81,slow=9.2,SNR=4.0						
ASAR	Alice Springs	33.35	243	P	P	23 53 41.5	+0.2
	0.3nm,0.5s,baz=61,slow=10,SNR=4.3						
ILAR	Eielson Array	82.87	18	P	P	23 59 27.2	0.0
	0.8nm,1.0s,baz=218,slow=6.9,SNR=3.2						

IDC 08 23:49:50.9±2.9**, 10°.89S**×**166°.00E, h0**km**, mb3.6**/3**, mb1 3.9**/5**, mb1mx3.6**/49**, mbtmp3.9**/5**, ML4.4**/2**, Error ellipse: s-maj=56.2km s-min=38.7km az=73.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.13	283	Pn	Pn	23 51 24.6	+1.7
	17nm,0.3s,baz=59,slow=19,SNR=2.1						
DZM	Mont Dzumac	11.12	178	Pn	Pn	23 52 33.2	+1.8
	1.2nm,0.3s,baz=285,slow=18,SNR=16						
WRA	Warramunga Arr	31.77	250	P	P	23 56 17.9	+0.6
	0.7nm,0.7s,baz=82,slow=9.4,SNR=7.7						
ASAR	Alice Springs	33.08	243	P	P	23 56 27.2	-1.6
	0.4nm,0.8s,baz=66,slow=11,SNR=3.0						
MKAR	Makanchi Array	93.58	317	P	P	00 03 08.9	-0.2
	0.2nm,0.7s,baz=108,slow=4.4,SNR=3.3						

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*IDC **08** 23:56:02.2±1.3, 11°.03S×164°.70E, h0km, mb4.1/9, mb1 4.3/12, mb1mx4.0/52, mbtmp4.2/12, ML4.2/3, MS3.5/4, Ms1 3.5/4, ms1mx3.2/27, Error ellipse: s-maj=33.4km s-min=21.3km az=127.0*

*ISCJB **08** 23:56:04.7±0.7, 11°.13S±0°.10×164°.67E±0°.09, h29km, mb4.1/9, MS3.6/3, Error ellipse: s-maj=14.8km s-min=10.9km az=31.9*

ISC 08 23:56:06.6±0.9**, 11°.1S**±0°.1×**164°.7E**±0°.1**, h29**km**, n14,** σ**0**^{s}**50**/13**, mb4.2**/9**, MS3.5**/3**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.94	289	Pn	Pn	23 57 18.7	-0.2
	15nm,0.3s,baz=269,slow=7.1,SNR=3.8						
HNR				Sn	Sn	23 58 15.9	+0.7
	44nm,0.3s,baz=197,slow=19,SNR=3.9						
HNR				LR	LR	23 59 21.4	
	comp=Z,433nm,21.3s,baz=94,slow=40						
DZM	Mont Dzumac	11.06	171	Pn	Pn	23 58 43.5	+0.5
	0.8nm,0.3s,baz=188,slow=8.0,SNR=3.0						
DZM				Sn	Sn	00 00 38.0	-7.8
	0.3nm,0.3s,baz=249,slow=18,SNR=7.2						
CTA	Charters Tower	19.87	241	P	Pn	00 00 37.5	+0.1
	0.4nm,0.3s,baz=63,slow=12,SNR=11						
WRA	Warramunga Arr	30.50	249	P	P	00 02 16.7	-0.7
	3.4nm,0.8s,baz=81,slow=9.2,SNR=32						
GUMO	Guam	31.42	321	LR	LR	00 13 23.7	
	comp=Z,115nm,21.9s,baz=117,slow=33						
ASAR	Alice Springs	31.85	243	P	P	00 02 28.8	-0.6
	4.5nm,0.6s,baz=64,slow=10,SNR=66						
DAV	Davao City (W)	42.89	293	LR	LR	00 18 44.5	
	comp=Z,58nm,20.4s,baz=37,slow=32						
KLR	Kul'dur	66.68	337	P	P	00 06 55.4	+0.8
	2.7nm,1.0s,baz=149,slow=6.1,SNR=5.0						
CMAR	Chiang Mai Arr	71.17	294	P	P	00 07 23.3	+0.1
	0.3nm,0.4s,baz=120,slow=5.3,SNR=2.8						
SEY	Seymchan	74.40	354	P	P	00 07 41.5	0.0
	0.8nm,0.6s,baz=140,slow=3.2,SNR=4.4						
SONM	Songino Array	78.08	324	P	P	00 08 02.9	0.0
	1.2nm,0.8s,baz=146,slow=6.6,SNR=7.2						
SONM				LR	LR	00 37 59.6	
	comp=Z,44nm,21.8s,baz=344,slow=32						
ILAR	Eielson Array	83.88	19	P	P	00 08 32.9	-0.4
	0.8nm,0.9s,baz=230,slow=5.5,SNR=6.0						
MKAR	Makanchi Array	92.84	317	P	P	00 09 16.6	-0.1
	1.4nm,0.7s,baz=98,slow=6.1,SNR=17						
ZALV	Zalesovo Beam	92.98	324	P	P	00 09 16.9	-0.2
	0.6nm,0.6s,baz=329,slow=1.7,SNR=3.8						

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*IDC **09** 00:02:31.7±2.1, 38°.73N×123°.06W, h0km, mb1 3.8/5, mb1mx3.3/56, mbtmp3.4/5, ML3.5/5, Error ellipse: s-maj=23.4km s-min=14.9km az=54.0*

*NEIC **09** 00:02:32.1±0.0, 38°.81N×122°.82W, h2km, ML3.0(NCEDC), After NCEDC.*

NEIC Felt at Cloverdale and Middletown.

ISC 09 00:02:32.2±1.2**, 38°.83N**±0°.04×**122°.75W**±0°.05**, h4**km±10km**, n33,** σ**2**^{s}**44**/36**, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	Geysers	0.04	232	*e*Pg	Pg	00 02 32.8	-0.5
HOPS	Hopland Field	0.30	303	*e*Pg	Pg	00 02 38.1	+0.2
MCCM	Marconi Confer	0.69	188	*e*Pg	Pb	00 02 46.2	-0.6
KCPM	Cahto Peak	1.07	323	*e*Pn	Pn	00 02 54.0	0.0
ORV	Oroville	1.21	53	*e*Pn	Pg	00 03 01.3	+5.9
AFDM	Forest Hills D	1.40	85	*e*Pn	Pn	00 02 57.2	-1.2
AFDM				*e*Sn	Sn	00 03 12.6	-4.8
KMRM	Mail Ridge	1.57	332	*e*Pn	Pg	00 03 03.4	+1.1
WDC	Whiskeytown Da	1.75	5	*e*Pn	Pg	00 03 05.5	-0.3
CMB	Columbia Colle	2.02	112	*e*Pn	Pn	00 03 06.8	-0.3
RUBR	Rubicon Trail	2.04	83	*e*Pn	Pn	00 03 08.2	+0.7
BEKR	Beckworth	2.12	60	*e*Pn	Pb	00 03 10.2	-1.1
JCC	Jacoby Creek,	2.21	334	*e*Pn	Pg	00 03 13.3	-1.3
SAO	San Andreas Ge	2.31	153	*e*Pn	Pn	00 03 10.8	-0.2
VCNR	Virginia City	2.46	78	*e*Pn	Pn	00 03 13.7	+0.5
PNTR	Pine Nut	2.47	83	*e*Pn	Pb	00 03 15.7	-1.6
PNTR				*e*Sn	Sn	00 03 40.0	-4.2
WAKR	Walker	2.62	96	*e*Pn	Pn	00 03 17.5	+2.1
YERR	Yerington	2.75	86	*e*Pn	Pn	00 03 18.6	+1.5
PAHR	Pah Rah Range	2.76	70	*e*Pn	Pn	00 03 19.0	+1.7
YBH	Yreka Blue Hor	2.90	1	Pn	Pb	00 03 21.8	-2.7
YBH				*e*Sn	Sn	00 03 56.6	+2.2
YBH	Yreka Blue Hor	2.90	1	Pn	Pb	00 03 21.8	-2.7
	0.1nm,0.3s,baz=202,slow=9.1,SNR=3.4						
YBH				Lg	Lg	00 04 15.3	
	0.1nm,0.3s,baz=67,slow=4.7,SNR=3.2						
MDPB	Devils Postpil	3.13	111	*e*Pn	Pn	00 03 24.7	+2.2
MDPB				*e*Sn	Sn	00 03 51.3	-9.2
OMMB	Old Mammoth Mi	3.20	111	*e*Pn	Pn	00 03 26.0	+2.6
RYN	Ryan	3.31	92	*e*Pn	Pn	00 03 23.0	-1.9
NV01	Mina Array Sit	3.51	95	*e*Pn	Pn	00 03 28.9	+1.2
NVAR	Mina Array Bea	3.51	95	Pn	Pn	00 03 29.4	+1.8
	1.0nm,0.3s,baz=272,slow=15,SNR=7.6						
NVAR				Pg	Pb	00 03 36.5	+1.6
	2.9nm,0.3s,baz=277,slow=15,SNR=33						
NVAR				Lg	Lg	00 04 28.2	
	1.3nm,0.3s,baz=293,slow=30,SNR=2.8						
NV11	Mina Array Sit	3.62	95	*e*Pn	Pn	00 03 30.4	+1.2
KVN	Kaiserville	3.63	85	*e*Pn	Pn	00 03 30.6	+1.2
ISA	Isabella, Lake	4.65	132	*e*Pn	Pn	00 03 44.2	+0.9
ISA				*e*Sn	Sn	00 04 31.9	-5.9
ELK	Elko	6.09	69	Pn	Pn	00 04 07.8	+4.6
	0.1nm,0.3s,baz=254,slow=15,SNR=6.7						
PFO	Pinyon Flats O	7.28	134	Pn	Pn	00 04 21.9	+2.4
	1.0nm,0.3s,baz=39,slow=12,SNR=3.8						
PDAR	Pinedale Array	10.75	64	Pn	Pn	00 05 14.5	+7.5
	0.1nm,0.3s,baz=243,slow=13,SNR=12						
LTX	Lajitas	18.40	115	*e*Pn	Pn	00 06 51.8	+3.5
TXAR	Lajitas Array	18.40	115	P	Pn	00 06 51.8	+3.5
	0.0nm,0.3s,baz=297,slow=11,SNR=5.2						

IDC 09 00:14:49.9±1.7**, 10°.59S**×**164°.85E, h0**km**, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/37**, mbtmp3.7**/5**, ML4.4**/1**, Error ellipse: s-maj=49.9km s-min=30.8km az=121.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.96	283	Sn	Sn	00 17 09.9	+6.0
	12nm,0.3s,baz=34,slow=21,SNR=2.3						
DZM	Mont Dzumac	11.52	173	Pn	Pn	00 17 35.7	-0.1
	2.5nm,0.3s,baz=314,slow=22,SNR=44						
WRA	Warramunga Arr	30.82	249	P	P	00 21 07.9	0.0
	0.2nm,0.5s,baz=80,slow=9.3,SNR=9.4						
ASAR	Alice Springs	32.21	242	P	P	00 21 20.1	0.0
	0.3nm,0.8s,baz=64,slow=10,SNR=4.5						
ILAR	Eielson Array	83.37	19	P	P	00 27 18.7	+0.1
	0.2nm,0.6s,baz=235,slow=4.9,SNR=4.7						
MKAR	Makanchi Array	92.59	317	P	P	00 28 03.3	-0.2
	0.4nm,0.9s,baz=86,slow=5.9,SNR=2.8						

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*MOS **09** 00:15:29.5±0.0, 42°.50N×41°.12E, h11km, MPVA3.6*

*TIF **09** 00:15:29.7, 42°.33N×40°.96E, h23km±2km*

*ISK **09** 00:15:29.0, 42°.33N×40°.91E, h9km, ML2.9/2*

*NORS **09** 00:15:31.6±0.0, 42°.50N×41°.36E, h6km, MPVA3.3*

*DDA **09** 00:15:39.9, 41°.51N×40°.96E, h7km±6km, ML2.6*

ISC 09 00:15:28.8±1.1**, 42°.40N**±0°.02×**40°.95E**±0°.03**, h13**km±11km**, n23,** σ**0**^{s}**92**/43**, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	Batumi	0.97	145	PG	Pb	00 15 47.5	+0.1
BATM				SG	Sn	00 16 01.3	-0.3
BATM	Batumi	0.97	145	P	Pn	00 15 48.0	-0.1
BATM				S	Sb	00 16 00.5	+0.5
DOMR	Dombai	1.02	29	*i* Pg	Pg	00 15 48.0	-0.5
DOMR				*i* Sg	Sg	00 16 01.4	-0.5
BCA	Borcka	1.08	152	PG	Pb	00 15 49.0	-0.3
BCA				SG	Sb	00 16 03.5	+0.3
DBOC	Borcka	1.18	153	*i* P	Pn	00 15 51.3	+0.3
DBOC				*i* S	Sn	00 16 06.8	-0.1
DBOC				IAML_P			
	comp=Z,1µm,0.1s						
ARXR	Arkhyz	1.19	11	*i* Pg	Pn	00 15 51.7	+0.5
ARXR				*i* Sg	Sg	00 16 07.2	+0.1
CHOM	Cayeli-Rize	1.31	186	PN	Pb	00 15 53.1	-0.1
CHOM				SN	Sg	00 16 10.5	-0.5
RPOR	Krasnaya Polya	1.39	339	*i* Pg	Pg	00 15 56.2	+0.6
RPOR				*i* Sg	Sg	00 16 16.1	+2.3
ARTV	Artvin	1.42	149	*i* P	Pb	00 15 54.8	-0.4
ARTV				IAML_P			
	comp=Z,2µm,0.1s						
DBAD	Bademkaya	1.49	158	*i* P	Pb	00 15 55.7	-0.6
DBAD				IAML_P			
	comp=Z,713nm,0.1s						
SOC	Sochi	1.49	323	*i* Pg	Pg	00 15 58.3	+0.8
SOC				*i* Sg	Sg	00 16 19.6	+2.7
DAGI	Agillar	1.50	151	*i* P	Pb	00 15 56.2	-0.4
DAGI				IAML_P			
	comp=Z,278nm,0.1s						
NEY	Neytrino	1.55	56	*e*Pg	Pb	00 15 57.1	-0.4
NEY				*i* Sg	Sb	00 16 17.2	+0.1
DDEM	Demirkent	1.62	158	*i* P	Pb	00 15 58.1	-0.5
DDEM				*i* S	Sn	00 16 18.2	+0.3
DDEM				IAML_P			
	comp=Z,491nm,0.1s						
MACK	Trabzon	1.71	212	*i* P	Pb	00 16 00.0	0.0
MACK				IAML_P			
	comp=Z,2µm,0.1s						
SHA1	Shidzhatmaz	1.83	42	*e*Pg	Pb	00 16 02.4	+0.2
SHA1				*i* Pg	Pg	00 16 02.7	-1.2
SHA1				*i* Sg	Sb	00 16 25.2	+0.1
SHA1				*i* Sg	Sg	00 16 25.9	-1.8
LZRR	Lazarevskoye	1.92	324	*i* Pg	Pg	00 16 05.0	-0.6
LZRR				*i* Sg	Sg	00 16 30.0	-0.5
KIV	Kislovodsk	2.01	39	PN	Pb	00 16 05.1	-0.1
KIV0	Kislovodsk Arr	2.01	39	*e*Pg	Pb	00 16 05.5	+0.3
KIV0				*i* Sg	Sb	00 16 31.3	+1.1
BEYR	Belyy Ugol+	2.11	40	*e*Pg	Pb	00 16 06.3	-0.6
BEYR				*i* Sg	Sb	00 16 34.0	+1.0
TRLG	Trialeti	2.50	109	P	Pb	00 16 14.7	+1.0
TRLG				S	Sb	00 16 45.4	+1.1
VOZR	Vozrozhdenie	2.93	318	*e*Pn	Pb	00 16 19.1	-1.7
VOZR				*e*Sn	Sb	00 16 55.8	-0.8
ANN	Anapa	3.51	314	*e*Pn	Pb	00 16 30.3	-0.4
ANN				*e*Sn	Sb	00 17 11.6	-1.5

IDC 09 00:19:29.5±1.8**, 11°.01S**×**166°.35E, h0**km**, mb3.9**/5**, mb1 4.1**/6**, mb1mx3.7**/37**, mbtmp3.9**/6**, ML3.5**/1**, Error ellipse: s-maj=51.0km s-min=28.9km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.01	180	Pn	Pn	00 22 08.4	0.0
	0.4nm,0.3s,baz=281,slow=18,SNR=5.0						
WRA	Warramunga Arr	32.05	250	P	P	00 25 58.2	-0.1
	1.7nm,0.7s,baz=81,slow=9.1,SNR=9.7						
ASAR	Alice Springs	33.34	244	P	P	00 26 09.3	-0.3
	1.0nm,0.7s,baz=70,slow=8.8,SNR=9.1						
FITZ	Fitzroy Crossi	39.96	255	P	P	00 27 06.3	+0.2
	1.8nm,0.7s,baz=103,slow=6.4,SNR=5.3						
ILAR	Eielson Array	83.29	18	P	P	00 31 57.9	0.0
	0.5nm,0.9s,baz=240,slow=5.5,SNR=4.8						
MKAR	Makanchi Array	93.90	317	P	P	00 32 49.1	-0.1
	0.2nm,0.4s,baz=118,slow=6.8,SNR=6.7						

IDC 09 00:20:41.2±1.8**, 10°.98S**×**165°.43E, h0**km**, mb3.9**/3**, mb1 4.2**/4**, mb1mx3.7**/34**, mbtmp4.0**/4**, ML4.0**/1**, Error ellipse: s-maj=52.9km s-min=31.6km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.07	175	Pn	Pn	00 23 22.0	+1.0
	1.1nm,0.3s,baz=103,slow=2.9,SNR=13						
CTA	Charters Tower	20.56	242	P	Pn	00 25 25.4	+1.6
	4.6nm,0.9s,baz=77,slow=12,SNR=3.2						
WRA	Warramunga Arr	31.22	250	P	P	00 27 02.6	0.0
	0.5nm,0.6s,baz=83,slow=9.1,SNR=5.4						
ASAR	Alice Springs	32.55	243	P	P	00 27 14.1	-0.2
	1.5nm,0.8s,baz=76,slow=9.7,SNR=10						
ILAR	Eielson Array	83.55	19	P	P	00 33 10.7	-0.1
	1.2nm,1.0s,baz=212,slow=6.3,SNR=6.1						

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*KRNET **09** 00:27:25.0±0.1, 42°.56N×79°.60E, h14km, mb2.8*

*SOME **09** 00:27:25.1, 42°.53N×79°.62E, h15km*

*NNC **09** 00:27:26.3±0.9, 42°.63N×79°.62E, h0km, mb2.7, mpv2.9, Error ellipse: s-maj=6.3km s-min=3.3km az=131.0*

ISC 09 00:27:24.5±1.6**, 42°.53N**±0°.05×**79°.57E**±0°.05**, h6**km±10km**, n44,** σ**1**^{s}**08**/78**, 10C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.74	327	*e*P	Pg	00 27 39.0	+0.2
	baz=24						
UZB				*e*S	Sb	00 27 49.2	-1.1
	baz=24						
UZB	Uzynbulak	0.74	327	*e*P	Pg	00 27 39.0	+0.2
	9.0nm,0.1s						
UZB				*e*S	Sb	00 27 49.2	-1.1
	28nm,0.2s						
PDGK	Podgornoye	0.81	356	P	Pg	00 27 39.6	-0.4
	6.5nm,0.1s						
PDGK				S	Sg	00 27 50.1	-0.4
	12nm,0.2s						
PDGK	Podgornoye	0.81	356	⇓P	Pg	00 27 39.6	-0.4
	2.1nm,0.2s						
PDGK				⇑S	Sg	00 27 50.1	-0.4
	6.9nm,0.3s						
PDGK	Podgornoye	0.81	356	⇓*i*P	Pg	00 27 39.6	-0.4
	baz=54						
PDGK				⇓*i*S	Sg	00 27 50.1	-0.4
	baz=54						
PRZ	Przheval'sk	0.86	268	⇓*i*P	Pg	00 27 41.4	+0.3
	baz=66						
PRZ				⇓*i*S	Sg	00 27 53.7	+1.3
	baz=66						
SATY	Saty	1.01	302	P	Pn	00 27 44.9	-0.5
	2.4nm,0.1s						
SATY				S	Sn	00 27 58.7	-1.1
	19nm,0.1s						
SATY	Saty	1.01	302	*e*P	Pn	00 27 44.9	-0.5
	2.4nm,0.1s						
SATY				*e*S	Sn	00 27 58.8	-1.1
	19nm,0.1s						
KURS	Kuram	1.41	314	P	Pg	00 27 51.6	+0.1
	1.6nm,0.4s						
KURS				S	Sg	00 28 10.3	+0.6
	3.0nm,0.2s						
KURS	Kuram	1.41	314	*e*P	Pg	00 27 51.6	+0.1
	baz=12						
KURS				*e*S	Sg	00 28 10.3	+0.6
	baz=12						
KURS	Kuram	1.41	314	*e*P	Pg	00 27 51.6	+0.1
	1.6nm,0.4s						
KURS				*e*S	Sg	00 28 10.3	+0.6
	3.0nm,0.2s						
MNBS	Baschi	1.77	332	P	Pb	00 27 57.5	0.0
	4.0nm,0.1s						
MNBS				S	Sg	00 28 20.7	-0.7
	15nm,0.2s						
MNBS	Baschi	1.77	332	*e*P	Pb	00 27 57.5	0.0
	4.0nm,0.1s						
MNBS				*e*S	Sg	00 28 20.7	-0.7
	15nm,0.2s						
DJR	Jarkent	1.81	5	P	Pb	00 27 57.8	-0.3
	1.4nm,0.2s						
DJR				S	Sg	00 28 21.2	-1.6
	3.2nm,0.2s						
DJR	Jarkent	1.81	5	*e*P	Pb	00 27 57.9	-0.3
	1.4nm,0.2s						
DJR				*e*S	Sg	00 28 21.2	-1.6
	3.2nm,0.2s						
KDJ	Kajisay	1.81	258	⇑*i*P	Pb	00 27 58.8	+0.6
	baz=57						
KDJ				⇑*i*S	Sg	00 28 23.6	+0.8
	baz=57						
KOTS	Kotyrbulak	1.94	292	Pg	Pg	00 28 02.6	+0.9
	2.6nm,0.1s						
KOTS				Lg	Lg	00 28 29.7	
	28nm,0.2s						
KOTS	Kotyrbulak	1.94	292	*e*P	Pg	00 28 02.6	+0.9
	2.6nm,0.1s						
KOTS				*e*S	Sg	00 28 29.7	+2.9
	28nm,0.2s						
MDOK	Medeo	1.96	290	⇑P	Pb	00 28 01.7	+1.0
	4.5nm,0.8s						
MDOK				S	Sg	00 28 28.0	+0.5
	8.3nm,0.6s						
TNSS	Tian-Shan	2.00	286	Pg	Pb	00 28 02.4	+0.9
	2.8nm,0.1s						
TNSS				Lg	Lg	00 28 29.0	
	8.7nm,0.3s						
TNSS	Tian-Shan	2.00	286	*e*P	Pb	00 28 02.4	+0.9
	baz=85						
TNSS				*e*S	Sg	00 28 29.1	+0.4
	baz=85						
TNSS	Tian-Shan	2.00	286	*e*P	Pb	00 28 02.4	+0.9
	2.8nm,0.1s						
TNSS				*e*S	Sg	00 28 29.0	+0.4
	8.7nm,0.3s						
IZV	Izvestkoviy	2.23	284	Pg	Pb	00 28 06.7	+1.3
	4.1nm,0.2s						
IZV				Lg	Lg	00 28 36.4	
	32nm,0.4s						
IZV	Izvestkoviy	2.23	284	*e*P	Pb	00 28 06.7	+1.3
	4.1nm,0.2s						
IZV				*e*S	Sg	00 28 36.4	+0.1
	32nm,0.4s						
CHKK	Chushkaly	2.31	306	Pg	Pb	00 28 07.3	+0.8
	1.3nm,0.1s						
CHKK				Lg	Lg	00 28 37.6	
	15nm,0.3s						
CHKK	Chushkaly	2.31	306	*e*P	Pb	00 28 07.3	+0.8
	1.3nm,0.1s						

CHKK				eS	**Sg**	**00 28 37.6**	**-1.0**
	15nm,0.3s						
MTBS	**Maitube**	**2.38**	**286**	Pg	**Pb**	**00 28 09.2**	**+1.2**
	3.9nm,0.2s						
MTBS				Lg	Lg	00 28 41.0	
	11nm,0.3s						
MTBS	**Maitube**	**2.38**	**286**	eP	**Pb**	**00 28 09.1**	**+1.2**
	3.9nm,0.2s						
MTBS				eS	**Sg**	**00 28 41.0**	**-0.2**
	11nm,0.3s						
KTBS	**Karatobe**	**2.42**	**300**	Pg	**Pb**	**00 28 09.6**	**+1.0**
	1.4nm,0.2s						
KTBS				Lg	Lg	00 28 41.3	
	13nm,0.4s						
KTBS	**Karatobe**	**2.42**	**300**	eP	**Pb**	**00 28 09.6**	**+1.0**
	baz=98						
KTBS				eS	**Sg**	**00 28 41.4**	**-1.0**
	baz=98						
KTBS	**Karatobe**	**2.42**	**300**	eP	**Pb**	**00 28 09.6**	**+1.0**
	1.4nm,0.2s						
KTBS				eS	**Sg**	**00 28 41.3**	**-1.0**
	13nm,0.4s						
ULHL	**Ulahol**	**2.48**	**265**	⇑iP	**Pb**	**00 28 08.7**	**-0.9**
	baz=64						
ULHL				⇑iS	**Sb**	**00 28 40.7**	**+0.2**
	baz=64						
BOOM	**Boomskoye usch**	**2.68**	**270**	i P	**Pb**	**00 28 11.3**	**-1.7**
	baz=70						
BOOM				i S	**Sb**	**00 28 44.8**	**-1.4**
	baz=70						
KST	**Kastek**	**2.70**	**282**	Pg	**Pb**	**00 28 14.5**	**+1.2**
	2.0nm,0.1s						
KST				Lg	Lg	00 28 50.1	
	8.0nm,0.5s						
KST	**Kastek**	**2.70**	**282**	eP	**Pb**	**00 28 14.4**	**+1.0**
	2.0nm,0.1s						
KST				eS	**Sg**	**00 28 50.1**	**-1.2**
	8.0nm,0.5s						
KUU	**Kurty**	**2.73**	**301**	Pg	**Pb**	**00 28 14.0**	**+0.3**
	0.8nm,0.1s						
KUU				Lg	Lg	00 28 49.3	
	8.0nm,0.3s						
KUU	**Kurty**	**2.73**	**301**	eP	**Pb**	**00 28 14.8**	**+1.1**
	0.6nm,0.1s						
KUU				eS	**Sg**	**00 28 50.3**	**-1.8**
	8.0nm,0.3s						
KAPS	**Kapalarasan**	**2.76**	**357**	Pg	**Pb**	**00 28 14.2**	**-0.1**
	0.7nm,0.2s						
KAPS				Lg	Lg	00 28 49.7	
	5.0nm,0.7s						
KAPS	**Kapalarasan**	**2.76**	**357**	eP	**Pb**	**00 28 14.2**	**-0.1**
	0.7nm,0.2s						
KAPS				eS	**Sb**	**00 28 49.7**	**+1.2**
	5.0nm,0.7s						
NRN	**Naryn**	**2.87**	**249**	⇓iP	**Pb**	**00 28 14.3**	**-2.1**
	baz=48						
NRN				⇓iS	**Sb**	**00 28 51.0**	**-0.9**
	baz=48						
TKM2	**Tokmak 2**	**2.95**	**279**	⇑Pn	**Pb**	**00 28 17.0**	**-0.6**
	1.9nm,0.8s						
TKM2				⇓Lg	Lg	00 29 00.9	
	3.7nm,0.5s						
TKM2	**Tokmak 2**	**2.95**	**279**	⇑iP	**Pb**	**00 28 15.1**	**-2.6**
	baz=78						
TKM2				⇑iS	**Sb**	**00 28 52.0**	**-2.1**
	baz=78						
MAKZ	**Makanchi**	**4.61**	**21**	⇓Pn	**Pn**	**00 28 36.7**	**+1.9**
	0.1nm,0.2s						
MAKZ				⇑Sn	**Sn**	**00 29 30.4**	**+1.7**
	0.7nm,0.9s						
MAKZ				⇓Lg	Lg	00 29 47.9	
	0.6nm,0.8s						
MK31	**Makanchi Array**	**4.69**	**24**	Pn	**Pn**	**00 28 37.4**	**+1.6**
	0.1nm,0.3s,baz=207,slow=13,SNR=14						
MK31				⇓Sn	**Sn**	**00 29 31.4**	**+0.8**
	0.1nm,0.3s,baz=205,slow=26,SNR=4.0						
MK31				⇓Lg	Lg	00 29 50.5	
	0.2nm,0.5s,baz=198,slow=28,SNR=4.0						

IDC 09 00:50:34.6±1.8, 12°.70S×166°.43E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.6/30, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=53.3km s-min=31.9km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.32**	**180**	Pn	Pn	00 52 49.0	-1.4
	0.4nm,0.3s,baz=48,slow=12,SNR=5.3						
WRA	**Warramunga Arr**	**31.59**	**253**	P	P	00 56 58.7	-0.7
	1.0nm,0.9s,baz=81,slow=9.8,SNR=4.7						
ASAR	**Alice Springs**	**32.69**	**246**	P	P	00 57 10.0	+0.9
	0.4nm,0.8s,baz=70,slow=8.2,SNR=3.7						
ILAR	**Eielson Array**	**84.86**	**18**	P	P	01 03 11.0	+0.1
	0.3nm,0.8s,baz=236,slow=6.6,SNR=6.4						

MAN 09 00:53:35.3, 10°.24N×123°.21E, h330^{km}, mb4.0, ML2.8, MS2.4, 1C, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.73**	**302**	eP	Pn	00 54 19.3	+1.4
LLP	**Lapu-Lapu**	**0.74**	**84**	eS	S	00 54 56.3	+4.3
RCP	**Roxas**	**1.39**	**341**	⇑eP	Pn	00 54 20.9	+0.1
MSLP	**Maasin**	**1.62**	**93**	eP	Pn	00 54 22.8	+0.6
IPIL	**Ipil**	**2.51**	**195**	eP	Pn	00 54 29.3	+0.4

IDC 09 00:53:45.3±8.4, 5°.34S×154°.05E, h209^{km}±89^{km}, mb3.3/9, mb1 3.4/9, mb1mx3.3/29, mbtmp3.8/9, MS3.2/1, Ms1 3.2/1, ms1mx2.6/16, Error ellipse: s-maj=30.9km s-min=20.5km az=147.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**20.51**	**145**	P	P	00 58 07.6	-0.2
	2.2nm,0.5s,baz=244,slow=9.3,SNR=6.8						
WRA	**Warramunga Arr**	**24.05**	**231**	P	P	00 58 41.9	+0.2
	0.8nm,0.6s,baz=56,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**26.62**	**225**	P	P	00 59 04.8	0.0
	1.4nm,1.1s,baz=64,slow=9.0,SNR=7.2						
RPZ	**Rata Peaks**	**41.05**	**161**	LR	LR	01 18 26.5	
	comp=Z,30nm,19.6s,baz=136,slow=36						
KSRS	**Korea Array**	**49.04**	**332**	P	P	01 02 10.9	-0.4
	0.6nm,0.5s,baz=148,slow=7.2,SNR=3.8						
PETK	**Petropavlovsk-**	**58.31**	**3**	P	P	01 03 19.0	+0.8
	6.6nm,1.0s,baz=169,slow=8.4,SNR=4.0						
SONM	**Songino Array**	**67.44**	**327**	P	P	01 04 18.2	-0.5
	0.6nm,0.5s,baz=122,slow=5.2,SNR=5.2						
MKAR	**Makanchi Array**	**81.55**	**319**	P	P	01 05 40.0	+0.2
	0.3nm,0.3s,baz=106,slow=6.2,SNR=16						
ILAR	**Eielson Array**	**82.19**	**22**	P	P	01 05 42.5	-0.2
	0.2nm,0.7s,baz=252,slow=5.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**82.29**	**326**	P	P	01 05 43.3	-0.1
	0.9nm,0.5s,baz=107,slow=6.4,SNR=6.4						

IDC 09 00:59:46.9±4.0, 11°.23S×166°.91E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.5/27, mbtmp3.5/4, MS3.6/2, Ms1 3.6/2, ms1mx3.1/20, Error ellipse: s-maj=171.5km s-min=31.1km az=137.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.08**	**284**	LR	LR	01 04 15.5	
	comp=Z,460nm,18.3s,baz=122,slow=38						
WRA	**Warramunga Arr**	**32.50**	**251**	P	P	01 06 20.0	+0.4
	0.4nm,0.6s,baz=83,slow=8.8,SNR=7.2						
WRA				LR	LR	01 19 44.6	
	comp=Z,78nm,18.8s,baz=20,slow=37						
ASAR	**Alice Springs**	**33.74**	**244**	P	P	01 06 30.2	-0.2
	0.2nm,0.5s,baz=66,slow=10,SNR=3.1						
ILAR	**Eielson Array**	**83.32**	**18**	P	P	01 12 15.7	+0.4
	0.8nm,1.0s,baz=238,slow=5.2,SNR=3.4						
MKAR	**Makanchi Array**	**94.44**	**317**	P	P	01 13 08.0	-1.0
	0.2nm,0.6s,baz=112,slow=3.9,SNR=4.4						

ISCJB ***09*** *01:07:29.8±0.5, 43°.18N±0°.02×18°.37E±0°.03, h18^{km}±7^{km}, Error ellipse: s-maj=4.5km s-min=3.7km az=41.8*
SAR ***09*** *01:07:29.7±0.3, 43°.19N×18°.41E, h5^{km}±3^{km}, ML2.1/8*
BEO ***09*** *01:07:29.6±0.3, 43°.17N×18°.41E, h17^{km}±1^{km}, ML2.0/8*
PDG ***09*** *01:07:30.1±0.3, 43°.16N×18°.46E, h12^{km}±1^{km}, MD2.5/1, ML2.4/9, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

ISC 09 01:07:29.7±0.9, 43°.17N±0°.02×18°.42E±0°.02, h15^{km}±7^{km}, n41, σ0^{s}87/72, 11C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRY	**Bratogost**	**0.28**	**162**	⇑iPg	**Pg**	**01 07 35.3**	**-0.5**
BRY				i Sg	**Sg**	**01 07 40.1**	**+0.2**
BRY	**Bratogost**	**0.28**	**162**	⇑iPg	**Pg**	**01 07 35.1**	**-0.7**
BRY				eSg	**Sg**	**01 07 40.4**	**+0.5**
TREB	**Trebinje**	**0.45**	**187**	ePg	**Pg**	**01 07 38.3**	**-0.5**
TREB				eSg	**Sb**	**01 07 46.1**	**+0.2**
TREB	**Trebinje**	**0.45**	**187**	⇓iPg	**Pg**	**01 07 38.1**	**-0.7**
TREB				eSg	**Sb**	**01 07 45.8**	**-0.1**
NKY	**Niksic**	**0.55**	**130**	⇓iPg	**Pb**	**01 07 39.8**	**-1.3**
NKY				i Sg	**Sb**	**01 07 48.6**	**-0.2**
NKME	**Niksic**	**0.56**	**136**	⇑iPg	**Pb**	**01 07 39.8**	**-1.4**
NKME				i Sg	**Sb**	**01 07 49.0**	**0.0**
STON	**Ston**	**0.61**	**241**	ePg	**Pb**	**01 07 40.8**	**-1.1**
STON				Sg	**Sg**	**01 07 50.0**	**+0.4**
HCY	**Herceg Novi**	**0.72**	**176**	⇑iPg	**Pb**	**01 07 43.1**	**-0.9**
HCY				i Sg	**Sn**	**01 07 54.9**	**-1.2**
HCY	**Herceg Novi**	**0.72**	**176**	ePg	**Pb**	**01 07 43.2**	**-0.8**
HCY				eSg	**Sg**	**01 07 54.2**	**+0.9**
PLE	**Pljevlja**	**0.72**	**77**	⇓iPg	**Pb**	**01 07 43.2**	**-0.9**
PLE				i Sg	**Sg**	**01 07 54.4**	**+0.9**
KOME	**Kolasin**	**0.86**	**111**	⇑iPg	**Pb**	**01 07 45.6**	**-0.8**
KOME				i Sg	**Sg**	**01 07 59.0**	**+1.2**
BUM	**Brajici-Budva**	**0.94**	**158**	⇑iPg	**Pb**	**01 07 47.2**	**-0.4**
BUM				i Sg	**Sn**	**01 08 01.6**	**+0.2**
PDG	**Podgorica**	**0.96**	**140**	ePg	**Pb**	**01 07 46.7**	**-1.3**
PDG				eSg	**Sn**	**01 08 01.9**	**0.0**
PDG	**Podgorica**	**0.96**	**140**	ePg	**Pb**	**01 07 46.5**	**-1.5**
PDG				eSg	**Sg**	**01 08 01.3**	**+0.5**
TTG	**Podgorica**	**0.96**	**140**	⇑iPg	**Pb**	**01 07 47.0**	**-1.0**
TTG				i Sg	**Sn**	**01 08 02.2**	**+0.3**
HAPS	**Han Pijesak,Bl**	**0.99**	**23**	ePg	**Pb**	**01 07 48.4**	**-0.3**
HAPS				eSg	**Sn**	**01 08 03.2**	**+0.2**
HAPS	**Han Pijesak,Bl**	**0.99**	**23**	ePg	**Pb**	**01 07 47.2**	**-1.5**
HAPS				eSg	**Sb**	**01 08 01.2**	**-0.4**
BBLS	**Lazići**	**1.00**	**45**	ePg	**Pb**	**01 07 48.3**	**-0.4**
BBLS				eSg	**Sb**	**01 08 02.3**	**+0.6**
BBLS	**Lazići**	**1.00**	**45**	⇑iPg	**Pb**	**01 07 48.0**	**-0.7**
BBLS				eSg	**Sb**	**01 08 01.8**	**+0.1**
IVA	**Berane**	**1.12**	**105**	⇓iPg	**Pn**	**01 07 50.8**	**-0.1**
IVA				i Sg	**Sg**	**01 08 07.5**	**+1.6**
DRME	**Dracevica, Mon**	**1.13**	**150**	⇓iPg	**Pb**	**01 07 50.9**	**0.0**
DRME				i Sg	**Sg**	**01 08 09.1**	**+2.8**
DRME	**Dracevica, Mon**	**1.13**	**150**	⇑iPg	**Pb**	**01 07 50.9**	**0.0**
DRME				eSg	**Sg**	**01 08 06.6**	**+0.3**
SJES	**Sjenica**	**1.14**	**85**	ePg	**Pn**	**01 07 51.0**	**-0.2**
SJES				eSg	**Sn**	**01 08 06.3**	**-0.3**
PVY	**Plav**	**1.27**	**116**	⇑iPg	**Pn**	**01 07 53.1**	**+0.1**
PVY				i Sg	**Sg**	**01 08 12.7**	**+2.0**
IVAS	**Ivanjica**	**1.33**	**72**	ePg	**Pn**	**01 07 53.1**	**-0.6**
IVAS				eSg	**Sn**	**01 08 11.2**	**+0.1**
ULC	**Ulcinj**	**1.35**	**153**	⇑iPg	**Pb**	**01 07 55.0**	**+0.3**
ULC				i Sg	**Sg**	**01 08 15.8**	**+2.6**
DIVS	**Divibare**	**1.47**	**50**	ePg	**Pn**	**01 07 55.3**	**-0.4**
DIVS				eSg	**Sb**	**01 08 15.6**	**+0.3**
DIVS	**Divibare**	**1.47**	**50**	ePg	**Pn**	**01 07 55.3**	**-0.4**
DIVS				eSg	**Sb**	**01 08 15.9**	**+0.6**
TEKS	**Tekeris**	**1.60**	**30**	ePn	**Pb**	**01 07 58.9**	**0.0**
TEKS				eSn	**Sb**	**01 08 19.0**	**+0.2**
TRUS	**Trudelj**	**1.79**	**53**	ePn	**Pn**	**01 07 59.5**	**-0.5**
TRUS	**Trudelj**	**1.79**	**53**	ePn	**Pn**	**01 07 59.5**	**-0.5**
BLY	**Banja Luka**	**1.81**	**331**	ePg	**Pb**	**01 08 02.9**	**+0.3**
BLY				eSg	**Sg**	**01 08 28.1**	**0.0**
BLY	**Banja Luka**	**1.81**	**331**	ePn	**Pn**	**01 08 01.2**	**+0.8**
BLY				eSn	**Sb**	**01 08 25.1**	**0.0**
GRUS	**Gruza**	**1.82**	**66**	ePn	**Pn**	**01 08 00.1**	**-0.3**
SELS	**Selova**	**1.97**	**88**	ePn	**Pn**	**01 08 02.6**	**0.0**
FRGS	**Fruska Gora**	**2.23**	**26**	ePn	**Pn**	**01 08 04.7**	**-1.3**
BARS	**Barje**	**2.52**	**97**	ePn	**Pn**	**01 08 11.0**	**+1.0**
NVLJ	**Novalja**	**2.92**	**300**	ePn	**Pn**	**01 08 16.9**	**+1.3**
ZAPS	**Zavoj**	**3.08**	**87**	ePn	**Pn**	**01 08 17.9**	**+0.1**
CRES	**Cresnjev**	**3.40**	**322**	ePn	**Pn**	**01 08 22.4**	**+0.2**
CEY	**Cerknica**	**3.84**	**313**	ePn	**Pn**	**01 08 28.6**	**+0.3**

IDC 09 01:14:32.0±1.8, 11°.02S×165°.81E, h0^{km}, mb3.7/3, mb1 4.1/5, mb1mx3.7/30, mbtmp3.9/5, ML4.1/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/35, Error ellipse: s-maj=41.2km s-min=32.6km az=131.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.99**	**285**	Pn	Pn	01 16 03.2	+1.3
	9.9nm,0.3s,baz=79,slow=5.2,SNR=3.4						
DZM	**Mont Dzumac**	**11.00**	**177**	Pn	Pn	01 17 12.4	+1.6
	0.7nm,0.3s,baz=73,slow=7.3,SNR=11						
H11S2	**WAKE ISLAND Hy**	**29.34**	**2**	T	T	01 50 57.1	
	baz=183,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.34**	**2**	T	T	01 50 56.4	
	baz=183						
H11S1	**WAKE ISLAND Hy**	**29.36**	**2**	T	T	01 50 57.7	
	baz=183,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.56**	**2**	T	T	01 52 27.6	
	baz=182,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**30.57**	**2**	T	T	01 52 27.8	
	baz=182,slow=76,SNR=8.0						
H11N2	**WAKE ISLAND Hy**	**30.58**	**2**	T	T	01 52 27.4	
	baz=182,slow=76,SNR=9.0						
WRA	**Warramunga Arr**	**31.55**	**250**	P	P	01 20 56.9	+0.5
	2.0nm,0.7s,baz=81,slow=9.2,SNR=16						
ASAR	**Alice Springs**	**32.86**	**243**	P	P	01 21 06.4	-1.4
	0.6nm,0.7s,baz=76,slow=9.0,SNR=8.0						
ASAJ	**Asahikawa**	**58.80**	**341**	LR	LR	01 44 46.9	
	comp=Z,42nm,20.6s,baz=38,slow=31						
ILAR	**Eielson Array**	**83.47**	**18**	P	P	01 27 01.2	-0.1
	0.2nm,0.6s,baz=230,slow=5.0,SNR=4.3						

IDC ***09*** *01:22:49.8±0.6, 11°.09S×166°.97E, h0^{km}, mb4.3/17, mb1 4.5/18, mb1mx4.4/29, mbtmp4.3/18, ML4.9/1, MS4.3/27, Ms1 4.3/27, ms1mx4.2/39, Error ellipse: s-maj=19.9km s-min=16.3km az=123.0*
GCMT ***09*** *01:22:52.8±0.2, 11°.01S±0°.02×166°.96E±0°.01, h12^{km}, MW5.1/97, Moment Tensor Solution. s39,c45; s97,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.41±.23; $M_{\theta\theta}$1.36±.15; $M_{\phi\phi}$4.05±.17; $M_{r\theta}$-0.86±.45; $M_{\theta\phi}$-2.06±.12; $M_{\phi r}$-1.63±.43; Best double couple: $M_0$5.57800×10^{16} NP1:ϕ_s346.00000°, δ52.00000°, λ-72.00000°. NP2: ϕ_s138.00000°, δ41.00000°, λ-111.00000°. Principal axes: T 5.2670, Plg6.0000°, Azm63.0000°; N 0.6220, Plg14.0000°, Azm155.0000°; P -5.8890, Plg75.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISCJB ***09*** *01:22:53.2±0.2, 11°.00S±0°.05×166°.81E±0°.05, h28^{km}, mb4.6/56, MS4.4/26 Error ellipse: s-maj=8.1km s-min=5.6km az=149.2*
NEIC ***09*** *01:22:53.8±2.2, 11°.01S×166°.88E, h23^{km}±15^{km}, mb4.7/35, Error ellipse: s-maj=5.9km s-min=5.2km az=134.0*

ISC 09 01:22:54.5±0.4, 10°.99S±0°.07×166°.96E±0°.06, h28^{km}, n122, σ1^{s}02/109, mb4.7/56, MS4.5/26, 1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.07**	**282**	eP	**Pn**	**01 24 35.0**	**-1.2**
HNR				eS	**Sn**	**01 25 59.0**	**+3.2**
HNR	**Honiara**	**7.07**	**282**	ePn	**Pn**	**01 24 35.2**	**-1.1**
HNR				eSn	**Sn**	**01 25 57.2**	**+1.5**
HNR	**Honiara**	**7.07**	**282**	Pn	**Pn**	**01 24 37.0**	**+0.7**
	19nm,0.3s,baz=231,slow=2.6,SNR=11						
HNR				Sn	**Sn**	**01 25 57.2**	**+1.5**
	9.7nm,0.3s,baz=87,slow=18,SNR=1.9						
HNR				LR	LR	01 27 22.9	
	comp=Z,7μm,19.2s,baz=118,slow=38						
DZM	**Mont Dzumac**	**11.03**	**182**	ePn	**Pn**	**01 25 34.4**	**+3.8**
	12nm,0.7s						
DZM				eLR	LR	01 28 03.9	
	comp=Z,3μm,26.8s						
DZM	**Mont Dzumac**	**11.03**	**182**	ePn	**Pn**	**01 25 30.1**	**-0.5**
DZM	**Mont Dzumac**	**11.03**	**182**	Pn	**Pn**	**01 25 31.3**	**+0.7**
	0.2nm,0.3s,baz=18,slow=19,SNR=2.9						
DZM				LR	LR	01 28 28.3	
	comp=Z,347nm,20.4s,baz=352,slow=31						
KWAJ	**Kwajalein Atol**	**19.67**	**2**	eP	**P**	**01 27 20.9**	**-0.7**
EIDS	**Eidsvold**	**20.75**	**224**	eP	**P**	**01 27 33.9**	**+0.7**
	29nm,0.8s						
CTA	**Charters Tower**	**21.88**	**243**	P	**P**	**01 27 45.5**	**0.0**
	8.4nm,0.9s,baz=94,slow=11,SNR=5.5						
CTA				LR	LR	01 35 17.2	
	comp=Z,2μm,18.9s,baz=55,slow=34						
CTAO	**Charters Tower**	**21.88**	**243**	eP	**P**	**01 27 44.9**	**-0.6**
COEN	**Coen**	**23.40**	**260**	eP	**P**	**01 28 01.1**	**-0.3**
	29nm,1.4s						
ARMA	**Armidale**	**24.01**	**214**	eP	**P**	**01 28 07.7**	**+0.5**
	18nm,0.8s						
URZ	**Urewera**	**28.64**	**163**	P	**P**	**01 28 46.5**	**-2.2**
	1.6nm,0.6s,baz=11,slow=7.7,SNR=3.2						
URZ				LR	LR	01 38 43.2	
	comp=Z,171nm,18.5s,baz=336,slow=33						
H11S2	**WAKE ISLAND Hy**	**29.30**	**360**	T	T	01 59 36.8	
	baz=181,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**29.30**	**359**	T	T	01 59 36.3	
	baz=181,slow=76,SNR=18						
H11S1	**WAKE ISLAND Hy**	**29.31**	**360**	T	T	01 59 37.1	
	baz=181,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**30.51**	**360**	T	T	02 01 06.0	
	baz=182,slow=76,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**30.52**	**360**	T	T	02 01 02.4	
	baz=182,slow=76,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	**30.53**	**360**	T	T	02 01 08.7	
	baz=182,slow=76,SNR=4.3						
STKA	**Stephens Creek**	**31.31**	**225**	eP	**P**	**01 29 12.4**	**-0.1**
	2.1nm,1.1s						
STKA	**Stephens Creek**	**31.31**	**225**	P	**P**	**01 29 11.0**	**-1.5**
	4.4nm,0.8s,baz=34,slow=10,SNR=6.2						
STKA				LR	LR	01 40 59.0	
	comp=Z,1μm,20.2s,baz=45,slow=35						
WC3	**Warramunga Arr**	**32.59**	**250**	eP	**P**	**01 29 22.4**	**-1.6**
	9.3nm,1.0s						
WRAB	**Tennant Creek**	**32.61**	**250**	eP	**P**	**01 29 22.4**	**-1.7**
	2.7nm,0.6s						
WB2	**Warramunga Arr**	**32.61**	**250**	eP	**P**	**01 29 22.2**	**-1.8**
WR1	**Warramunga Arr**	**32.62**	**250**	eP	**P**	**01 29 22.9**	**-1.2**
	8.8nm,0.8s						
WRA	**Warramunga Arr**	**32.62**	**250**	P	**P**	**01 29 22.9**	**-1.3**
	7.3nm,0.8s,baz=83,slow=8.7,SNR=34						
WRA				LR	LR	01 42 32.1	
	comp=Z,1μm,18.5s,baz=80,slow=36						
RPZ	**Rata Peaks**	**32.80**	**175**	P	**P**	**01 29 24.9**	**-0.5**
	6.8nm,0.8s,baz=138,slow=9.9,SNR=3.8						
RPZ				LR	LR	01 41 12.3	
	comp=Z,174nm,21.9s,baz=345,slow=34						
AS01	**Alice Springs**	**33.84**	**244**	eP	**P**	**01 29 32.9**	**-1.9**
AS31	**Alice Springs**	**33.88**	**244**	eP	**P**	**01 29 34.5**	**-0.7**
	1.5nm,1.0s						
AS31				ePcP	**PcP**	**01 32 12.1**	**-1.6**
ASAR	**Alice Springs**	**33.88**	**244**	P	**P**	**01 29 33.9**	**-1.3**
	1.8nm,0.7s,baz=69,slow=9.9,SNR=16						
ASAR				PcP	**PcP**	**01 32 12.0**	**-1.6**
	0.7nm,0.9s,baz=64,slow=2.2,SNR=3.6						
ASAR				LR	LR	01 42 34.1	
	comp=Z,1μm,19.1s,baz=76,slow=35						
FITZ	**Fitzroy Crossi**	**40.54**	**255**	eP	**P**	**01 30 31.4**	**-0.3**
	14nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.54**	**255**	LR	LR	01 46 30.7	
	comp=Z,1μm,19.9s,baz=82,slow=35						
FORT	**Forrest**	**41.05**	**235**	eP	**P**	**01 30 36.2**	**+0.5**
	20nm,0.9s						
BATI	**Baumata**	**42.54**	**267**	LR	LR	01 48 19.1	
	comp=Z,629nm,21.0s,baz=123,slow=36						
PPT	**Papeete**	**42.55**	**104**	LR	LR	01 47 01.8	
	comp=Z,443nm,18.5s,baz=284,slow=34						
PPT2	**Papeete2**	**42.55**	**104**	eS	**S**	**01 37 11.7**	**+2.2**
	221nm,25.2s						
PPT2				eLQ	LQ	01 40 41.4	
	926nm,28.5s						
PPT2				eLR	LR	01 42 27.8	
	comp=Z,1μm,27.0s,baz=278						
DAV	**Davao City (W)**	**44.92**	**292**	LR	LR	01 49 08.4	
	comp=Z,139nm,18.9s,baz=118,slow=35						
MBWA	**Marble Bar**	**46.34**	**251**	eP	**P**	**01 31 18.4**	**-0.1**
NWAO	**Narrogin (SRO)**	**50.48**	**236**	LR	LR	01 53 14.0	
	comp=Z,2μm,18.6s,baz=306,slow=36						
TGY	**Tagaytay City**	**52.00**	**298**	LR	LR	01 52 33.4	
	comp=Z,200nm,20.1s,baz=134,slow=34						
TAOE	**Nuku Hiva Isla**	**52.09**	**93**	eS	**S**	**01 39 26.3**	**+0.8**
	232nm,24.7s						
TAOE				eLR	LR	01 46 50.6	
	comp=Z,608nm,29.4s						
MJAR	**Matsushiro Arr**	**54.48**	**332**	P	**P**	**01 32 18.5**	**-1.2**
	3.8nm,0.9s,baz=160,slow=7.3,SNR=5.8						
MAJO	**Matsushiro**	**54.48**	**332**	eP	**P**	**01 32 18.5**	**-1.2**
KSRS	**Korea Array**	**60.51**	**325**	P	**P**	**01 33 02.3**	**+0.1**
	1.0nm,0.7s,baz=137,slow=6.5,SNR=3.8						
KSAR	**Wonju Array Be**	**60.52**	**325**	P	**P**	**01 33 02.3**	**0.0**
USRK	**Ussuriysk Ar.**	**63.44**	**333**	P	**P**	**01 33 23.4**	**+1.6**
	8.7nm,1.1s,baz=123,slow=7.0,SNR=7.7						
MDJ	**Mudanjiang**	**64.86**	**331**	eP	**P**	**01 33 31.6**	**+0.5**
	4.7nm,0.5s						
CN2	**Changchun**	**66.31**	**328**	eP	**P**	**01 33 40.6**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VNDA	**Vanda**	**66.57**	**181**	LR	LR	01 59 22.7	
	comp=Z,113nm,20.8s,baz=329,slow=33						
ENH	**Enshi**	**68.79**	**309**	eP	**P**	**01 33 55.4**	**-1.0**
XAN	**Xi'an**	**70.97**	**312**	P	**P**	**01 34 09.9**	**+0.1**
XAN				pP	pP	01 34 16.8	-1.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN	**Xi'an**	**70.97**	**312**	eP	**P**	**01 34 10.0**	**+0.2**
HHC	**Hu-ho-hao-te**	**72.56**	**319**	eP	**P**	**01 34 22.1**	**+2.7**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,85nm,3.6s						
HIA	**Hailar**	**72.92**	**330**	eP	**P**	**01 34 21.4**	**+0.3**
	comp=Z,16nm,1.3s						
CMAR	**Chiang Mai Arr**	**73.18**	**293**	P	**P**	**01 34 23.7**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=117,slow=4.6,SNR=5.0						
CMAR				LR	LR	02 05 57.2	
	comp=Z,49nm,20.2s,baz=122,slow=35						
KDAK	**Kodiak Island**	**76.10**	**21**	LR	LR	02 02 58.2	
	comp=Z,304nm,19.4s,baz=148,slow=32						
BILL	**Bilibino**	**78.83**	**360**	eP	**P**	**01 34 54.4**	**0.0**
ULN	**Ulaanbaatar**	**78.96**	**324**	eP	**P**	**01 34 55.9**	**+0.1**
	comp=Z,8.5nm,1.1s						
QSPA	**South Pole Qui**	**79.01**	**180**	eP	**P**	**01 34 56.3**	**+0.4**
SONA0	**Songino Array**	**79.33**	**323**	eP	**P**	**01 34 58.2**	**+0.3**
SONM	**Songino Array**	**79.33**	**323**	P	**P**	**01 34 58.2**	**+0.3**
	comp=Z,2.1nm,1.0s,baz=133,slow=5.8,SNR=11						
SONA1	**Songino Array**	**79.33**	**323**	eP	**P**	**01 34 58.1**	**+0.3**
GTA	**Gaotai**	**79.88**	**314**	⇑P	**P**	**01 35 02.3**	**+1.3**
GTA				pP	sP	01 35 13.2	+1.3
GTA				sP	pwP	01 35 17.2	+5.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,160nm,7.0s						
GTA				LR	LR		
	comp=N,170nm,20.6s						
GTA				LR	LR		
	comp=E,210nm,20.3s						
GTA				LR	LR		
	comp=Z,210nm,20.9s						
CAST	**Castle Rocks**	**80.54**	**17**	eP	**P**	**01 35 04.1**	**+0.2**
	comp=Z,6.1nm,1.0s						
IM3	**Indian Mountai**	**82.06**	**15**	eP	**P**	**01 35 12.1**	**+0.2**
TLY	**Talaya**	**82.74**	**326**	eP	**P**	**01 35 15.8**	**0.0**
	comp=Z,4.2nm,0.4s						
MDM	**Murphy Dome**	**82.81**	**18**	eP	**P**	**01 35 16.1**	**+0.2**
	comp=Z,10nm,1.3s						
COLA	**College**	**82.87**	**18**	eP	**P**	**01 35 16.1**	**+0.1**
	comp=Z,7.5nm,1.0s						
IL1	**Eielson Array**	**83.09**	**18**	eP	**P**	**01 35 17.1**	**-0.2**
ILAR	**Eielson Array**	**83.09**	**18**	P	**P**	**01 35 17.4**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=224,slow=6.6,SNR=24						
ILAR				LR	LR	02 06 58.7	
	comp=Z,119nm,19.2s,baz=184,slow=32						
ILB	**Eielson Array**	**83.09**	**18**	eP	**P**	**01 35 17.0**	**-0.3**
	comp=Z,7.1nm,0.9s						
CMB	**Columbia Colle**	**83.40**	**49**	eP	**P**	**01 35 19.8**	**+0.2**
BBB	**Bella Bella**	**83.86**	**34**	LR	LR	02 08 02.6	
	comp=Z,223nm,18.7s,baz=240,slow=32						
MOD	**Modoc Plateau**	**84.75**	**46**	eP	**P**	**01 35 26.8**	**+0.3**
	comp=Z,4.1nm,0.8s						
EGAK	**Eagle**	**84.92**	**20**	eP	**P**	**01 35 27.3**	**+0.7**
NV01	**Mina Array Sit**	**85.08**	**50**	eP	**P**	**01 35 28.5**	**+0.2**
NVAR	**Mina Array Bea**	**85.08**	**50**	P	**P**	**01 35 29.5**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=225,slow=8.3,SNR=5.0						
NVAR				LR	LR	02 05 21.6	
	comp=Z,445nm,21.0s,baz=272,slow=30						
NV11	**Mina Array Sit**	**85.19**	**50**	eP	**P**	**01 35 28.8**	**+0.1**
	comp=Z,1.9nm,1.8s						
MAW	**Mawson**	**85.22**	**202**	LR	LR	02 06 52.8	

	comp=Z,264nm,19.4s,baz=102,slow=31						
KVN	**Kaiserville**	**85.42**	**49**	*e*P	**P**	**01 35 30.5**	**+0.5**
	comp=Z,5.0nm,1.0s						
DLBC	**Dease Lake**	**85.80**	**28**	LR	LR	02 04 08.3	
	comp=Z,144nm,21.1s,baz=280,slow=29						
TIXI	**Tiksi**	**86.27**	**349**	*e*P	**P**	**01 35 33.2**	**+0.1**
	comp=Z,5.2nm,0.7s						
G08A	**Pilot Rock**	**86.79**	**43**	*e*P	**P**	**01 35 36.9**	**+0.4**
	comp=Z,4.5nm,1.1s						
BMO	**Blue Mountains**	**87.77**	**44**	*e*P	**P**	**01 35 41.1**	**-0.1**
	comp=Z,9.9nm,1.6s						
KNB	**Kanab**	**88.86**	**52**	*e*P	**P**	**01 35 47.1**	**+0.4**
	comp=Z,24nm,1.6s						
NEW	**Newport**	**88.93**	**40**	*e*P	**P**	**01 35 47.1**	**+0.6**
	comp=Z,1.1nm,0.6s						
NEW	**Newport**	**88.93**	**40**	LR	LR	02 07 50.6	
	comp=Z,179nm,20.5s,baz=286,slow=30						
U15A	**North Rim**	**89.12**	**53**	*e*P	**P**	**01 35 48.5**	**+0.4**
	comp=Z,5.8nm,1.0s						
HLID	**Hailey**	**89.39**	**45**	*e*P	**P**	**01 35 49.4**	**+0.5**
	comp=Z,4.3nm,1.3s						
BGU	**Big Grassy Mou**	**89.69**	**48**	*e*P	**P**	**01 35 51.0**	**+0.5**
	comp=Z,4.7nm,1.1s						
HVU	**Hansel Valley**	**90.09**	**47**	*e*P	**P**	**01 35 53.0**	**+0.7**
	comp=Z,14nm,1.3s						
NLU	**North Lily Min**	**90.15**	**49**	*e*P	**P**	**01 35 52.6**	**-0.1**
	comp=Z,9.1nm,1.4s						
TMUT	**Trail Mountain**	**90.64**	**50**	*e*P	**P**	**01 35 56.4**	**+1.3**
	comp=Z,6.0nm,1.1s						
JLU	**Jordanelle**	**90.77**	**49**	*e*P	**P**	**01 35 56.9**	**+1.3**
	comp=Z,8.9nm,1.4s						
TCUT	**Toone Canyon**	**90.92**	**48**	*e*P	**P**	**01 35 57.8**	**+1.5**
	comp=Z,8.8nm,0.9s						
BOZ	**Bozeman (W)**	**91.83**	**44**	*e*P	**P**	**01 36 01.7**	**+1.4**
	comp=Z,3.8nm,1.3s						
REDW	**Red Top Meadow**	**91.85**	**46**	*e*P	**P**	**01 36 01.3**	**+0.8**
	comp=Z,33nm,2.0s						
PDAR	**Pinedale Array**	**92.64**	**47**	P	**P**	**01 36 05.2**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=221,slow=5.9,SNR=4.2						
PDAR				LR	LR	02 12 38.9	
	comp=Z,94nm,18.1s,baz=298,slow=32						
ZAA0	**Zalesovo Array**	**94.21**	**324**	*e*P	**P**	**01 36 10.2**	**-0.6**
	comp=Z,2.6nm,0.9s						
ZALV	**Zalesovo Beam**	**94.21**	**324**	*e*P	**P**	**01 36 09.6**	**-1.2**
ZALV	**Zalesovo Beam**	**94.21**	**324**	P	**P**	**01 36 10.1**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=108,slow=4.8,SNR=8.5						
ZAA1	**Zalesovo Array**	**94.21**	**324**	*e*P	**P**	**01 36 10.1**	**-0.7**
MK01	**Makanchi Array**	**94.29**	**317**	*e*P	**P**	**01 36 10.7**	**-0.7**
MK31	**Makanchi Array**	**94.30**	**317**	*e*P	**P**	**01 36 11.2**	**-0.2**
MK32	**Makanchi Array**	**94.30**	**317**	*e*P	**P**	**01 36 11.2**	**-0.3**
MKAR	**Makanchi Array**	**94.30**	**317**	P	**P**	**01 36 11.2**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=102,slow=5.4,SNR=19						
MKAR				LR	LR	02 17 45.6	
	comp=Z,58nm,21.9s,baz=78,slow=35						
YKA	**Yellowknife Ar**	**94.38**	**27**	P	**P**	**01 36 10.6**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=259,slow=4.7,SNR=11						
YKB5	**Yellowknife Ar**	**94.38**	**27**	*e*P	**P**	**01 36 10.7**	**-0.7**
MAKZ	**Makanchi**	**94.51**	**317**	*e*P	**P**	**01 36 12.4**	**0.0**
	comp=Z,7.8nm,1.3s						
TXAR	**Lajitas Array**	**94.76**	**61**	LR	LR	02 11 00.8	
	comp=Z,276nm,20.6s,baz=0.0,slow=30						
NRIK	**Noril'sk**	**96.49**	**339**	LR	LR	02 19 25.7	
	comp=Z,17nm,19.8s,baz=102,slow=35						
ARA0	**ARCESS Array S**	**116.58**	**346**	*e*PKPdf	**PKPdf**	**01 41 35.2**	**-0.2**
ARCES	**ARCESS Array B**	**116.58**	**346**	PKP	**PKPdf**	**01 41 35.2**	**-0.2**
	comp=Z,3.4nm,1.0s,baz=101,slow=2.3,SNR=3.9						
FIA0	**FINESS Array S**	**122.15**	**339**	*e*PKPdf	**PKiKP**	**01 41 46.8**	**+0.3**
FINES	**FINESS Array B**	**122.15**	**339**	PKP	**PKiKP**	**01 41 46.8**	**+0.3**
	comp=Z,3.2nm,1.1s,baz=332,slow=7.9,SNR=3.9						
NB200	**NORSAR Array S**	**126.95**	**346**	*e*PKPdf	**PKiKP**	**01 41 56.2**	**+0.1**
NOA	**NORSAR Array B**	**126.95**	**346**	PKP	**PKiKP**	**01 41 56.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=340,slow=1.9,SNR=2.4						
SJG	**San Juan**	**128.25**	**76**	*e*PKPdf	**PKPdf**	**01 41 59.1**	**-0.2**
KEST	**Kesra**	**148.08**	**324**	PKPbc	**PKPdf**	**01 42 36.2**	**+1.2**
	comp=Z,5.7nm,1.0s,baz=283,slow=14,SNR=3.0						
ESDC	**Sonseca Array**	**150.32**	**346**	PKPbc	**PKPbc**	**01 42 42.4**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=8.8,slow=4.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**165.43**	**280**	PKP	**PKPdf**	**01 42 56.6**	**-0.9**
	comp=Z,1.3nm,1.1s,baz=115,slow=2.1,SNR=5.5						
TORD				PKPab	**PKPab**	**01 43 56.0**	**+0.4**
	comp=Z,0.7nm,1.0s,baz=68,slow=5.0,SNR=2.7						
TOA1	**Torodi Ar. Sit**	**165.43**	**280**	*e*PKPdf	**PKPdf**	**01 42 56.6**	**-0.9**
TOA1				*e*PKPab	**PKPab**	**01 43 56.0**	**+0.3**

IDC 09 01:25:45.5±1.3**, 10°.89S**×**165°.78E, h0^{km}, mb3.7**/6**, mb1 4.0**/7**, mb1mx3.8**/28**, mbtmp3.8**/7**, ML4.2**/1**, Error ellipse: s-maj=49.3km s-min=23.3km az=132.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.14**	**177**	Pn	Pn	01 28 27.1	+0.8
	1.5nm,0.3s,baz=353,slow=18,SNR=12						
CTA	**Charters Tower**	**20.91**	**242**	P	Pn	01 30 31.4	-0.9
	7.8nm,1.2s,baz=49,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**31.57**	**250**	P	P	01 32 09.8	-0.3
	0.8nm,0.7s,baz=82,slow=9.4,SNR=5.4						
ASAR	**Alice Springs**	**32.90**	**243**	P	P	01 32 20.5	-1.3
	0.3nm,0.4s,baz=68,slow=9.9,SNR=4.5						
ILAR	**Eielson Array**	**83.35**	**18**	P	P	01 38 14.7	+0.5
	0.5nm,0.5s,baz=236,slow=5.0,SNR=10						
MKAR	**Makanchi Array**	**93.43**	**317**	P	P	01 39 03.6	+0.6
	0.3nm,0.8s,baz=89,slow=6.1,SNR=4.5						
YKA	**Yellowknife Ar**	**94.82**	**27**	P	P	01 39 07.8	-1.1
	0.1nm,0.6s,baz=257,slow=4.3,SNR=3.0						

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*ISCJB **09** 01:27:23.0±0.6, 18°.3S±0°.1×177°.9W±0°.1, h557^{km}, mb3.9/15, Error ellipse: s-maj=19.2km s-min=11.6km az=44.3*

*IDC **09** 01:27:25.6±3.0, 18°.39S×177°.89W, h580^{km}±36^{km}, mb3.4/16, mb1 3.6/17, mb1mx3.5/31, mbtmp4.3/17, Error ellipse: s-maj=19.2km s-min=16.6km az=170.0*

ISC 09 01:27:23.6±0.7**, 18°.3S**±0°.2×**178°.0W**±0°.1**, h557^{km}, n62, σ1^{s}12**/64**, mb4.0**/15**, 19C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.09**	**253**	P	**P**	**01 30 35.9**	**+1.9**
	0.6nm,0.3s,baz=91,slow=22,SNR=3.7						
URZ	**Urewera**	**20.33**	**191**	P	**P**	**01 31 21.3**	**-0.9**
	6.9nm,0.5s,baz=26,slow=1.1,SNR=10						
RPZ	**Rata Peaks**	**26.96**	**198**	P	**P**	**01 32 22.1**	**+1.0**
	5.3nm,0.6s,baz=267,slow=22,SNR=3.6						
CTA	**Charters Tower**	**33.78**	**261**	P	**P**	**01 33 21.5**	**+1.5**
	1.9nm,0.4s,baz=61,slow=10,SNR=4.2						
STKA	**Stephens Creek**	**38.79**	**242**	P	**P**	**01 34 01.4**	**+0.3**
	1.3nm,0.7s,baz=14,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**44.96**	**260**	P	**P**	**01 34 50.8**	**+0.9**
	2.0nm,0.4s,baz=97,slow=6.9,SNR=69						
WRA				PcP	**PcP**	**01 36 18.8**	**-0.4**
	1.3nm,0.8s,baz=89,slow=3.5,SNR=7.3						
WRA				S	**S**	**01 40 43.4**	**-4.8**
	1.1nm,0.8s,baz=98,slow=13,SNR=4.1						
ASAR	**Alice Springs**	**45.07**	**255**	P	**P**	**01 34 51.8**	**+1.0**
	2.8nm,0.4s,baz=92,slow=7.8,SNR=62						
ASAR				PcP	**PcP**	**01 36 19.2**	**-0.3**
	1.3nm,0.5s,baz=104,slow=3.9,SNR=10						
ASAR				S	**S**	**01 40 47.3**	**-2.4**
	3.8nm,1.0s,baz=86,slow=16,SNR=18						
FITZ	**Fitzroy Crossi**	**53.36**	**261**	P	**P**	**01 35 52.9**	**+1.1**
	0.7nm,0.3s,baz=97,slow=6.7,SNR=8.0						
MJAR	**Matsushiro Arr**	**68.47**	**323**	P	**P**	**01 37 29.6**	**-1.0**
	3.4nm,0.6s,baz=175,slow=6.0,SNR=10						
PETK	**Petropavlovsk-**	**74.17**	**345**	P	**P**	**01 38 04.0**	**+0.5**
	8.1nm,0.7s,baz=147,slow=8.2,SNR=7.3						
KSRS	**Korea Array**	**75.27**	**318**	P	**P**	**01 38 11.3**	**+1.3**
	1.0nm,0.7s,baz=128,slow=6.0,SNR=5.2						
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**01 38 33.8**	**+0.9**
	1.2nm,0.6s,baz=227,slow=9.0,SNR=5.2						
TXAR	**Lajitas Array**	**85.87**	**57**	P	**P**	**01 39 06.6**	**+1.4**
	1.4nm,0.8s,baz=218,slow=5.5,SNR=11						
ILAR	**Eielson Array**	**86.19**	**13**	P	**P**	**01 39 04.9**	**-0.9**
	1.6nm,0.5s,baz=218,slow=5.0,SNR=30						
PDAR	**Pinedale Array**	**87.37**	**43**	P	**P**	**01 39 12.3**	**+0.1**
	0.7nm,0.6s,baz=219,slow=3.9,SNR=7.7						
CMAR	**Chiang Mai Arr**	**89.40**	**290**	P	**P**	**01 39 23.4**	**+1.5**
	2.3nm,0.8s,baz=111,slow=3.1,SNR=10						
YKA	**Yellowknife Ar**	**94.53**	**25**	P	**P**	**01 39 43.8**	**-0.6**
	0.6nm,0.6s,baz=241,slow=4.5,SNR=13						
CPUP	**Villa Florida**	**107.27**	**126**	PKiKP	**PKiKP**	**01 44 45.4**	**-2.2**
	0.4nm,0.3s,baz=72,slow=3.2,SNR=2.8						
MKAR	**Makanchi Array**	**109.71**	**314**	PKiKP	**PKiKP**	**01 44 49.9**	**-1.6**
	0.3nm,0.5s,baz=134,slow=0.7,SNR=8.0						
ARCES	**ARCESS Array B**	**126.78**	**350**	PKP	**PKPdf**	**01 45 22.6**	**-1.0**
	1.5nm,0.7s,baz=335,slow=2.1,SNR=7.3						
FINES	**FINESS Array B**	**133.69**	**344**	PKhKP	PKPpre	01 45 31.9	
	1.9nm,1.0s,baz=111,slow=15,SNR=3.3						
FINES				PKP	**PKPdf**	**01 45 35.9**	**-1.0**
	1.8nm,1.0s,baz=90,slow=5.6,SNR=4.9						
AKASG	**Malin Array Be**	**141.10**	**332**	PKhKP	PKPpre	01 45 44.5	
	1.0nm,0.4s,baz=46,slow=4.2,SNR=6.4						
LEOM	**Leova**	**144.56**	**328**	⇑*i*P	**PKPdf**	**01 45 56.4**	**-0.6**
BURAR	**Bucovina Array**	**145.16**	**332**	⇓*i*P	**PKPab**	**01 45 59.9**	**-0.3**
BIZ	**Bicaz**	**145.26**	**331**	⇑*i*P	**PKPbc**	**01 45 59.9**	**+0.6**
BRTR	**Keskin Array B**	**145.35**	**315**	PKPbc	**PKPdf**	**01 45 59.3**	**+0.5**
	4.0nm,0.9s,baz=136,slow=4.0,SNR=13						
CFR	**Carcaliu**	**145.50**	**327**	⇑*i*P	**PKPbc**	**01 45 59.6**	**-0.4**
TRPA	**Tarpa**	**145.88**	**335**	⇑*i*P	**PKPbc**	**01 46 00.8**	**-0.2**
ARCR	**ARCALIA**	**145.94**	**332**	⇑*i*P	**PKPbc**	**01 46 01.5**	**+0.2**
CLL	**Collm**	**145.94**	**348**	⇓*i*PKPbc	**PKPbc**	**01 46 00.5**	**-0.6**
	comp=Z,15nm,0.7s						
OKC	**Ostrava-Krasne**	**145.99**	**341**	*e*PKP	**PKPbc**	**01 46 01.1**	**-0.2**
UPC	**Upice**	**145.99**	**344**	*e*PKP	**PKPbc**	**01 46 01.3**	**0.0**
OZUR		**146.03**	**330**	⇑*i*P	**PKPbc**	**01 46 01.5**	**-0.1**
DPC	**Dobruska-Polom**	**146.05**	**344**	*e*PKP	**PKPbc**	**01 46 01.6**	**+0.1**
DPC				*e*x	x	01 46 04.1	
BRG	**Berggiesshubel**	**146.15**	**346**	*i* PKP	**PKPbc**	**01 46 01.2**	**-0.5**
	comp=Z,5.0nm,0.6s						
MORC	**Moravsky Berou**	**146.22**	**342**	⇑*i*P	**PKPbc**	**01 46 02.1**	**+0.1**
DOPR	**Dopca**	**146.31**	**330**	⇑*i*P	**PKPbc**	**01 46 02.4**	**+0.1**
PVCC	**Panska Ves**	**146.33**	**346**	*e*PKP	**PKPbc**	**01 46 02.4**	**+0.2**
MLR	**Muntele Rosu**	**146.39**	**329**	⇑*i*P	**PKPbc**	**01 46 02.6**	**-0.1**
PRA	**Prague**	**146.79**	**345**	*e*PKP	**PKPdf**	**01 46 00.8**	**+0.1**
PRU	**Pruhonice**	**146.84**	**345**	*e*PKP	**PKPbc**	**01 46 03.2**	**-0.4**
DRGR		**146.88**	**334**	⇑*i*P	**PKPbc**	**01 46 03.4**	**-0.5**
VRAC	**Vranov**	**146.92**	**342**	⇑*i*P	**PKPab**	**01 46 07.2**	**+0.2**
PSZ	**Piszkesteto**	**147.06**	**338**	⇑*i*P	**PKPbc**	**01 46 03.3**	**-1.1**
ARR	**Arges**	**147.11**	**330**	⇑*i*P	**PKPbc**	**01 46 05.2**	**+0.6**
KHC	**Kasperske Hory**	**147.87**	**346**	*e*PKP	**PKPbc**	**01 46 06.0**	**-0.4**
KHC				*e*x	x	01 46 11.3	
GZR	**Gura Zlata**	**147.94**	**332**	⇑*i*P	**PKPbc**	**01 46 05.6**	**-1.1**
GERES	**GERESS Array B**	**148.10**	**345**	PKPbc	**PKPbc**	**01 46 06.6**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=28,slow=3.2,SNR=20						
VLAD	**Vladila**	**148.22**	**329**	⇑*i*P	**PKPbc**	**01 46 05.5**	**-1.8**
BZS	**Buzias**	**148.28**	**333**	⇑*i*P	**PKPbc**	**01 46 06.6**	**-0.8**
CONA	**Conrad Observa**	**148.37**	**342**	*i* PKPbc	**PKPbc**	**01 46 07.9**	**+0.1**
	comp=Z,7.5nm,1.1s						
HERR	**Herculane**	**148.50**	**332**	⇑*i*P	**PKPbc**	**01 46 06.5**	**-1.5**
MOA	**Molln**	**148.89**	**344**	*i* PKPbc	**PKPbc**	**01 46 09.3**	**+0.4**
	comp=Z,6.9nm,1.4s						
VTS	**Vitosha**	**149.81**	**328**	⇑*i*P	**PKPbc**	**01 46 10.4**	**-1.1**
KBA	**Koelnbreinsper**	**149.84**	**345**	*i* PKPbc	**PKPbc**	**01 46 10.2**	**-1.2**
	comp=Z,4.7nm,0.8s,SNR=4.3						
WATA	**Walderalm**	**150.01**	**347**	*i* PKPbc	**PKPbc**	**01 46 10.9**	**-0.9**
	comp=Z,3.6nm,0.7s						
RETA	**Reutte**	**150.03**	**348**	*i* PKPbc	**PKPbc**	**01 46 11.2**	**-0.5**
	comp=Z,2.8nm,0.9s						
MOTA	**Moosalm**	**150.10**	**348**	*i* PKPbc	**PKPbc**	**01 46 11.2**	**-0.8**
	comp=Z,5.2nm,0.9s						
SQTA	**Sankt Quirin**	**150.20**	**347**	*i* PKPbc	**PKPbc**	**01 46 11.7**	**-0.5**
	comp=Z,3.7nm,0.7s						
ABTA	**Abfaltersbach**	**150.35**	**345**	*i* PKPbc	**PKPbc**	**01 46 11.5**	**-1.0**
	comp=Z,8.6nm,0.7s,SNR=9.0						
FETA	**Feichten**	**150.49**	**348**	*i* PKPbc	**PKPbc**	**01 46 12.7**	**-0.2**
	comp=Z,7.2nm,1.6s						
PDG	**Podgorica**	**151.84**	**332**	⇑*i*P	PKPdf	01 45 57.5	-11

IDC 09 01:33:02.4±3.8**, 10°.90S**×**166°.77E, h0^{km}, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.7**/36**, mbtmp3.9**/5**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.8**/34**, Error ellipse: s-maj=154.5km s-min=31.2km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.87**	**282**	LR	LR	01 36 48.2	
	comp=Z,138nm,18.3s,baz=309,slow=33						
WRA	**Warramunga Arr**	**32.48**	**250**	P	P	01 39 35.0	+0.1
	1.8nm,0.8s,baz=81,slow=9.1,SNR=11						
ASAR	**Alice Springs**	**33.75**	**244**	P	P	01 39 45.7	-0.3
	0.7nm,0.9s,baz=72,slow=9.7,SNR=4.8						
FITZ	**Fitzroy Crossi**	**40.39**	**255**	P	P	01 40 42.5	+0.1
	2.1nm,0.6s,baz=77,slow=11,SNR=7.8						
ILAR	**Eielson Array**	**83.06**	**18**	P	P	01 45 29.6	+0.2
	0.5nm,0.8s,baz=232,slow=4.4,SNR=4.1						
MKAR	**Makanchi Array**	**94.10**	**317**	P	P	01 46 22.4	-0.5
	0.5nm,0.9s,baz=84,slow=5.9,SNR=3.7						

MEX 09 01:34:48.7±0.4**, 16°.38N**×**96°.06W, h40^{km}**±69^{km}**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.61**	**184**	*e*P	Pn	01 34 59.1	-1.8
HUIG				*e*S	Sn	01 35 08.2	-1.5
CMIG	**Matias Romero**	**1.33**	**58**	*e*P	Pn	01 35 09.1	-1.7
CMIG				*i* S	Sn	01 35 24.9	-2.6

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*IDC **09** 01:37:05.6±1.3, 11°.55S×165°.23E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.9/39, mbtmp3.9/7, ML3.4/1, Error ellipse: s-maj=47.3km s-min=23.7km az=133.0*

*ISCJB **09** 01:37:09.0±1.0, 11°.7S±0°.1×165°.2E±0°.1, h34^{km}, mb3.9/5, Error ellipse: s-maj=18.4km s-min=12.0km az=34.8*

ISC 09 01:37:10.6±1.0**, 11°.6S**±0°.1×**165°.3E**±0°.1**, h34^{km}, n8, σ0^{s}89**/8**, mb3.9**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.66**	**292**	Sn	**Sn**	**01 39 36.2**	**-0.1**
	7.4nm,0.3s,baz=120,slow=20,SNR=4.7						
DZM	**Mont Dzumac**	**10.46**	**174**	Pn	**Pn**	**01 39 38.5**	**+0.2**
	0.3nm,0.3s,baz=48,slow=15,SNR=4.5						
CTA	**Charters Tower**	**20.12**	**243**	P	**P**	**01 41 42.3**	**+0.5**
	5.9nm,1.0s,baz=71,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**30.85**	**251**	P	**P**	**01 43 23.6**	**-0.2**
	2.5nm,0.8s,baz=81,slow=8.7,SNR=25						
ASAR	**Alice Springs**	**32.12**	**244**	P	**P**	**01 43 34.0**	**-1.0**
	0.9nm,0.8s,baz=70,slow=9.4,SNR=6.4						
ILAR	**Eielson Array**	**84.20**	**19**	P	**P**	**01 49 38.9**	**+0.7**
	0.8nm,0.5s,baz=240,slow=5.1,SNR=18						
MKAR	**Makanchi Array**	**93.61**	**317**	P	**P**	**01 50 24.3**	**+0.8**
	0.4nm,0.8s,baz=93,slow=5.2,SNR=4.1						
YKA	**Yellowknife Ar**	**95.69**	**27**	P	**P**	**01 50 31.4**	**-1.2**
	0.2nm,0.6s,baz=254,slow=4.4,SNR=4.0						

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*IDC **09** 01:44:31.6±1.6, 7°.92S×109°.14E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.6/39, mbtmp3.8/5, Error ellipse: s-maj=93.7km s-min=21.4km az=46.0*

*ISCJB **09** 01:44:43.2±0.8, 8°.2S±0°.1×109°.12E±0°.05, h116^{km}±6^{km}, mb3.6/5, Error ellipse: s-maj=24.3km s-min=6.4km az=13.9*

*DJA **09** 01:44:45.4±0.7, 8°S±5°×10°9E±°, h59^{km}±15^{km}, M3.7/6, MLv3.7/6*

ISC 09 01:44:44.0±1.2**, 8°.3S**±0°.2×**109°.11E**±0°.06**, h108^{km}**±9^{km}**, n15, σ1^{s}03**/17**, mb3.6**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.81**	**306**	P	**Pn**	**01 45 02.9**	**-0.3**
CMJI				S	**Sn**	**01 45 16.9**	**-0.8**
KPJI	**Karang Pucung**	**0.95**	**349**	P	**Pn**	**01 45 06.0**	**+1.4**
KPJI				S	**Sn**	**01 45 20.4**	**+0.4**
UGM	**Wanagama**	**1.45**	**76**	P	**Pn**	**01 45 10.2**	**+0.1**
UGM				S	**Sn**	**01 45 29.2**	**-0.8**
CISI	**Cisompet, Garu**	**1.46**	**299**	P	**Pn**	**01 45 11.8**	**+1.4**
CISI				S	**Sn**	**01 45 28.9**	**-1.4**
PCJI	**Pacitan**	**2.05**	**88**	P	**Pn**	**01 45 18.1**	**+0.5**
PCJI				S	**Sn**	**01 45 42.4**	**-0.8**
PWJI	**Pagerwojo**	**2.68**	**85**	P	**Pn**	**01 45 26.5**	**+0.7**
PWJI				S	**Sn**	**01 45 57.3**	**-0.6**
WSI	**Waingapu**	**11.14**	**98**	P	Pn	01 47 14.9	-5.3
WRA	**Warramunga Arr**	**27.04**	**118**	P	**P**	**01 50 16.9**	**+0.6**
	0.7nm,0.9s,baz=292,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**28.26**	**126**	P	**P**	**01 50 28.5**	**+1.3**
	0.5nm,0.5s,baz=306,slow=9.4,SNR=8.7						
H08S2	**Diego Garcia H**	**36.26**	**268**	T	T	02 30 16.5	
	baz=95						
H08S3	**Diego Garcia H**	**36.27**	**268**	T	T	02 30 18.0	
	baz=95						
H08S1	**Diego Carcia H**	**36.28**	**268**	T	T	02 30 18.2	
	baz=95						
MKAR	**Makanchi Array**	**59.80**	**339**	P	**P**	**01 54 36.9**	**-1.0**
	0.9nm,0.5s,baz=151,slow=7.8,SNR=33						
ZALV	**Zalesovo Beam**	**65.29**	**344**	P	**P**	**01 55 12.9**	**-1.2**
	1.0nm,0.3s,baz=153,slow=7.4,SNR=7.7						
BRTR	**Keskin Array B**	**84.23**	**311**	P	**P**	**01 57 04.0**	**+0.1**
	0.6nm,0.8s,baz=123,slow=5.3,SNR=2.9						

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*IDC **09** 01:45:50.9±2.7, 11°.89N×87°.81W, h67^{km}±26^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.3/36, mbtmp3.4/7, Error ellipse: s-maj=60.9km s-min=17.3km az=51.0*

ISC 09 01:45:48.0±1.4**, 11°.8N**±0°.3×**88°.0W**±0°.3**, h35^{km}, n8, σ2^{s}02**/8**, mb3.6**/5**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**3.31**	**117**	P	**Pn**	**01 46 40.0**	**+2.6**
	0.8nm,0.3s,baz=21,slow=14,SNR=6.4						
JTS				S	Sn	01 47 33.2	+18
	1.2nm,0.3s,baz=280,slow=21,SNR=4.6						
APG	**El Apazote**	**4.00**	**323**	P	**Pn**	**01 46 49.8**	**+2.6**
	0.3nm,0.3s,baz=30,slow=20,SNR=3.5						
TXAR	**Lajitas Array**	**22.76**	**322**	P	**P**	**01 50 48.5**	**+0.9**
	1.6nm,0.7s,baz=139,slow=10,SNR=9.6						
TKL	**Tuckaleechee C**	**24.04**	**8**	P	**P**	**01 50 59.1**	**-0.8**
	0.8nm,0.4s,baz=165,slow=12,SNR=2.5						
PDAR	**Pinedale Array**	**36.10**	**333**	P	**P**	**01 52 46.5**	**-0.4**
	0.2nm,0.6s,baz=150,slow=9.3,SNR=2.2						
SIV	**San Ignacio**	**38.35**	**136**	P	**P**	**01 53 04.7**	**-1.3**
	1.6nm,0.8s,baz=302,slow=9.5						
YKA	**Yellowknife Ar**	**54.09**	**345**	P	**P**	**01 55 07.3**	**-1.8**
	0.2nm,0.8s,baz=142,slow=7.3,SNR=7.1						
CMAR	**Chiang Mai Arr**	**149.16**	**347**	PKPbc	**PKPbc**	**02 05 33.4**	**-0.4**
	1.1nm,0.5s,baz=3.4,slow=4.5,SNR=3.8						

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*IDC **09** 01:50:56.7±1.6, 10°.97S×165°.70E, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.7/42, mbtmp3.8/7, ML4.1/2, Error ellipse: s-maj=40.6km s-min=27.7km az=133.0*

*ISCJB **09** 01:50:59.4±1.3, 11°.1S±0°.1×165°.7E±0°.2, h30^{km}, mb3.6/5, Error ellipse: s-maj=24.7km s-min=18.2km az=150.5*

ISC 09 01:51:01.1±1.3**, 11°.0S**±0°.1×**165°.7E**±0°.2**, h30^{km}, n7, σ1^{s}05**/7**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.88**	**285**	Pn	**Pn**	**01 52 26.5**	**+0.4**
	10nm,0.3s,baz=45,slow=4.3,SNR=2.0						
DZM	**Mont Dzumac**	**11.01**	**176**	Pn	**Pn**	**01 53 36.7**	**0.0**
	0.6nm,0.3s,baz=311,slow=19,SNR=7.9						
WRA	**Warramunga Arr**	**31.45**	**250**	P	**P**	**01 57 20.3**	**+0.2**
	1.3nm,0.8s,baz=80,slow=9.0,SNR=8.6						
ASAR	**Alice Springs**	**32.76**	**243**	P	**P**	**01 57 31.7**	**0.0**
	0.6nm,0.8s,baz=77,slow=9.0,SNR=4.7						
FITZ	**Fitzroy Crossi**	**39.34**	**255**	P	**P**	**01 58 28.2**	**+0.2**
	1.7nm,0.8s,baz=76,slow=7.6,SNR=5.9						
ILAR	**Eielson Array**	**83.51**	**19**	P	**P**	**02 03 26.8**	**+1.1**
	0.2nm,0.7s,baz=238,slow=5.0,SNR=3.8						
MKAR	**Makanchi Array**	**93.47**	**317**	P	**P**	**02 04 12.2**	**-1.7**
	0.2nm,0.8s,baz=88,slow=5.0,SNR=2.2						

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*IDC **09** 01:59:19.4±1.9, 8°.19S×124°.71E, h0^{km}, mb3.2/1, mb1 3.7/3, mb1mx3.5/34, mbtmp3.5/3, ML3.7/2, Error ellipse: s-maj=186.1km s-min=31.5km az=59.0*

*ISCJB **09** 01:59:27.8±1.2, 8°.8S±0°.1×124°.1E±0°.1, h100^{km}, mb2.9/1, Error ellipse: s-maj=20.5km s-min=8.9km az=135.5*

*DJA **09** 01:59:30.5±0.4, 9°S±4°×12°4E±°, h108^{km}±4^{km}, M4.0/6, mb5.1/1, mB5.9/1, MLv3.5/6, Mw(mB)5.5/1*

ISC 09 01:59:29.3±1.2**, 8°.9S**±0°.1×**124°.0E**±0°.1**, h100^{km}, n10, σ1^{s}63**/11**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.90**	**162**	P	**Pn**	**01 59 50.2**	**+1.3**
SOEI				S	**Sn**	**02 00 05.0**	**+1.5**
BATI	**Baumata**	**1.34**	**194**	P	**Pn**	**01 59 54.1**	**+0.4**
MMRI	**Maumere**	**1.74**	**278**	P	**Pn**	**01 59 59.1**	**+0.5**
EDFI	**Ende, Flores**	**2.27**	**273**	P	**Pn**	**02 00 06.5**	**+1.0**
BASI	**Baing, Sumba**	**3.61**	**248**	P	**Pn**	**02 00 23.2**	**0.0**
WRA	**Warramunga Arr**	**14.87**	**139**	Pn	**Pn**	**02 02 51.3**	**-3.1**
	0.3nm,0.3s,baz=316,slow=13,SNR=26						
WRA				Sn	Sn	02 05 25.2	-13
	0.8nm,0.3s,baz=313,slow=24,SNR=11						
TPI	**Tanjungpandan**	**17.34**	**290**	P	**P**	**02 03 23.5**	**-1.6**
ASAR	**Alice Springs**	**17.49**	**148**	P	**Pn**	**02 03 28.4**	**+1.4**
	0.4nm,0.3s,baz=325,slow=11,SNR=18						
ASAR				S	Sn	02 06 30.8	-11
	0.2nm,0.3s,baz=312,slow=22,SNR=8.0						
KRJI	**Kerinci**	**23.40**	**285**	P	**P**	**02 04 29.2**	**-0.5**
MKAR	**Makanchi Array**	**66.71**	**330**	P	**P**	**02 10 10.9**	**+1.2**
	0.1nm,0.5s,baz=132,slow=6.7,SNR=5.2						

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*ISCJB **09** 02:16:55.9±0.2, 7°.07S±0°.03×117°.12E±0°.03, h617^{km}±3^{km}, mb4.5/79, Error ellipse: s-maj=4.8km s-min=3.2km az=39.6*

*NEIC **09** 02:16:56.1±0.2, 7°.06S×117°.11E, h605^{km}±3^{km}, mb4.5/36, Error ellipse: s-maj=5.3km s-min=3.4km az=51.0*

*IDC **09** 02:16:56.8±0.7, 7°.03S×117°.10E, h609^{km}±8^{km}, mb3.9/26, mb1 4.1/28, mb1mx4.0/35, mbtmp4.9/28, Error ellipse: s-maj=12.1km s-min=7.1km az=67.0*

*DJA **09** 02:16:57.6±0.1, 7°S±2°×11°7E±°, h599^{km}±2^{km}, M4.6/45, mb4.8/45, mB5.1/22, MLv4.9/31, Mw(mB)4.5/22*

ISC 09 02:16:56.2±0.4**, 7°.12S**±0°.04×**117°.11E**±0°.05**, h607^{km}**±4^{km}**, n428, σ1^{s}27**/420**, mb4.5**/86**, 4C-2D, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.83**	**159**	P	**P**	**02 18 09.5**	**-1.0**
SRBI	**Singaraja**	**2.11**	**243**	P	**P**	**02 18 11.2**	**-0.4**
DNP	**Denpasar**	**2.44**	**230**	P	**P**	**02 18 12.0**	**-1.1**
KMMI	**Kalianget**	**3.12**	**271**	P	**P**	**02 18 17.9**	**+1.3**
JAGI	**Jajag, Banyuwa**	**3.22**	**245**	*e*P	**P**	**02 18 15.8**	**-1.5**
JAGI				*e*S	**S**	**02 19 19.3**	**-4.0**
JAGI	**Jajag, Banyuwa**	**3.22**	**245**	P	**P**	**02 18 15.9**	**-1.4**
BKSI	**Bulukumba**	**3.49**	**59**	P	**P**	**02 18 19.2**	**+0.3**
GMJI	**Gumukmas**	**3.81**	**252**	P	**P**	**02 18 20.1**	**-0.8**
KBKI	**Kotabaru**	**3.91**	**346**	P	**P**	**02 18 22.3**	**+0.7**
BNSI	**Bone**	**4.02**	**48**	P	**P**	**02 18 23.6**	**+1.2**
WSI	**Waingapu**	**4.05**	**129**	P	P	02 18 12.1	-10
SPSI	**Sidrap Palu**	**4.10**	**40**	P	**P**	**02 18 23.1**	**+0.2**
BASI	**Baing, Sumba**	**4.61**	**132**	P	**P**	**02 18 27.2**	**+0.6**
TTSI	**Tana Toraja**	**4.86**	**34**	P	**P**	**02 18 29.5**	**+1.0**
MMRI	**Maumere**	**5.30**	**107**	*e*P	**P**	**02 18 30.8**	**-1.2**
MMRI				*e*S	**S**	**02 19 46.3**	**-3.8**
MMRI	**Maumere**	**5.30**	**107**	P	**P**	**02 18 30.6**	**-1.4**
	1µm,0.8s,19µm5.2nm						
PWJI	**Pagerwojo**	**5.33**	**260**	P	**P**	**02 18 32.3**	**+0.1**
	127nm,0.9s,0.8nm						
NGJI	**Ngawi**	**5.61**	**267**	P	**P**	**02 18 37.3**	**+2.8**
	56nm,1.0s,0.5nm						
BBSI	**Bau Bau**	**5.67**	**74**	P	**P**	**02 18 36.6**	**+1.6**
	274nm,0.9s,2µm0.9nm						
PCJI	**Pacitan**	**5.97**	**259**	P	**P**	**02 18 38.1**	**+0.6**
	246nm,0.7s,4µm1.5nm						
KDI	**Kendari**	**6.32**	**61**	P	**P**	**02 18 42.0**	**+1.5**
	491nm,0.9s,4µm1.6nm						
MTKI	**Muara Teweh, K**	**6.52**	**340**	P	**P**	**02 18 43.3**	**+1.0**
	751nm,0.9s,2.3nm						
SGKI	**Sangatta, Kali**	**6.56**	**4**	P	P	02 18 54.3	+12
UGM	**Wanagama**	**6.58**	**263**	*e*P	**P**	**02 18 42.6**	**-0.2**
UGM				*e*S	**S**	**02 20 08.7**	**-1.3**
SMRI	**Semarang**	**6.62**	**270**	*e*P	**P**	**02 18 43.2**	**+0.1**
SMRI				*e*S	**S**	**02 20 09.9**	**-0.7**
SMRI	**Semarang**	**6.62**	**270**	P	**P**	**02 18 44.7**	**+1.5**
	193nm,1.8s,0.7nm						
SMKI	**Samarinda**	**6.63**	**1**	P	**P**	**02 18 45.5**	**+2.2**
	267nm,0.9s,7µm0.9nm						
PCI	**Palu**	**6.74**	**24**	P	**P**	**02 18 47.1**	**+2.8**
	79nm,0.8s,0.9nm						
PBKI	**Pangkalan Bun**	**6.97**	**309**	P	**P**	**02 18 48.1**	**+1.8**
	952nm,1.1s,10µm3.5nm						
BATI	**Baumata**	**7.17**	**116**	P	**P**	**02 18 47.8**	**-0.4**
	242nm,0.7s,2µm1.1nm						
BATI	**Baumata**	**7.17**	**116**	P	**P**	**02 18 48.0**	**-0.1**
	64nm,0.3s,baz=278,slow=1.3,SNR=62						
BATI				S	**S**	**02 20 16.6**	**-3.2**
	70nm,0.3s,baz=138,slow=6.3,SNR=14						
SOEI	**Soe**	**7.55**	**111**	*e*P	**P**	**02 18 50.2**	**-1.6**
SOEI				*e*S	**S**	**02 20 20.3**	**-6.0**
SOEI	**Soe**	**7.55**	**111**	P	**P**	**02 18 50.7**	**-1.1**
	696nm,0.8s,5µm6.1nm						
KPJI	**Karang Pucung**	**8.12**	**268**	P	**P**	**02 18 58.5**	**+1.6**
	167nm,0.6s,3µm0.9nm						
LUWI	**Luwuk**	**8.26**	**43**	*e*P	**P**	**02 18 57.6**	**-0.7**
LUWI	**Luwuk**	**8.26**	**43**	P	**P**	**02 18 59.1**	**+0.7**
	395nm,0.8s,6µm1.4nm						

CISI	Cisompet, Garu	9.23	267	*e*P	P	02 19 07.4	-0.3
CISI				*e*S	S	02 20 51.8	-3.7
SANI	Sanana	10.18	61	P	P	02 19 16.5	-0.5
	271nm,0.8s,2µm						
CBJI	Citeko	10.21	273	P	P	02 19 16.9	-0.4
	127nm,0.6s						
NLAI	Namlea	10.67	69	P	P	02 19 22.5	+0.7
	242nm,0.7s,3µm						
SBUM	Sibu	10.68	333	*e*P	P	02 19 22.7	+0.7
KSM	Kuching	10.90	321	*e*P	P	02 19 24.3	+0.2
XMIS	Christmas Isla	11.80	253	*e*P	P	02 19 32.5	-0.7
PPBI	Pangkal Pinang	11.99	294	P	P	02 19 36.1	+1.1
KASI	Kota Agung	12.63	276	P	P	02 19 41.6	+0.2
	71nm,0.6s						
BNDI	Bandanaira	12.99	79	P	P	02 19 48.6	+3.7
KKM	Kota Kinabalu	13.10	356	*e*P	P	02 19 44.9	-1.3
MDSI	Maura Dua	13.12	281	P	P	02 19 46.3	0.0
	28nm,0.9s						
FITZ	Fitzroy Crossi	13.72	143	P	P	02 19 52.3	+0.1
	baz=14,SNR=334						
FITZ	Fitzroy Crossi	13.72	143	*e*P	P	02 19 51.7	-0.5
FITZ				S	S	02 22 15.4	-0.8
FITZ				ScP	ScP	02 27 03.8	-0.3
FITZ	Fitzroy Crossi	13.72	143	P	P	02 19 52.2	+0.1
	16nm,0.3s,baz=333,slow=6.5,SNR=392						
FITZ				S	S	02 22 15.4	-0.8
	0.3nm,0.3s,baz=352,slow=16,SNR=6.0						
FITZ				ScP	ScP	02 27 03.8	-0.3
	0.5nm,0.3s,baz=299,slow=2.4,SNR=6.9						
LHSI	Lahat	13.91	283	P	P	02 19 55.4	+1.3
	112nm,1.4s						
MBWA	Marble Bar	14.19	170	*e*P	P	02 19 57.0	+0.3
KNRA	Kununurra	14.24	128	P	P	02 19 56.9	-0.3
	baz=14,SNR=55						
MNAI	Manna	14.34	280	*e*P	P	02 19 56.9	-1.4
JMBI	JAMBI	14.48	291	P	P	02 20 04.8	+5.2
MASI	Maura Aman, Be	15.32	284	P	P	02 20 10.0	+2.7
	113nm,0.8s,3µm						
FAKI	Fak Fak	15.65	75	*e*P	P	02 20 08.6	-1.6
	32nm,0.8s						
FAKI				*e*S	S	02 22 46.1	-2.1
FAKI	Fak Fak	15.65	75	P	P	02 20 11.8	+1.6
	39nm,0.6s						
GIRL	Giralia	15.69	190	P	P	02 20 12.1	+1.8
	baz=16,SNR=28						
GIRL	Giralia	15.69	190	*e*P	P	02 20 11.8	+1.4
	346nm,0.9s						
MYKOM	Kota Tinggi	15.91	303	*e*P	P	02 20 13.2	+0.5
	15nm,0.8s						
KDU	Kakadu	16.11	111	P	P	02 20 14.6	+0.3
	baz=16,SNR=55						
KRJI	Kerinci	16.37	287	P	P	02 20 18.7	+1.8
	126nm,1.1s						
BKNI	Bangkinang	17.65	294	P	P	02 20 31.0	+2.5
	134nm,0.5s,2µm						
PDSI	Padang	17.70	290	P	P	02 20 27.2	-1.8
RKPI	Ransiki, Papua	17.90	73	P	P	02 20 33.6	+2.8
MNSI	Mandailing Nat	19.17	294	P	P	02 20 42.4	+0.1
	25nm,0.8s						
MEEK	Meekatharra	19.47	176	P	P	02 20 45.7	+0.8
	baz=20,SNR=22						
WRKA	Warakurna	20.79	150	P	P	02 20 57.8	+1.1
	baz=21,SNR=244						
WRA	Warramunga Arr	21.02	129	P	P	02 20 59.6	+0.7
	90nm,0.7s,baz=311,slow=9.7,SNR=946						
WRA				S	S	02 24 11.9	-2.6
	5.9nm,0.9s,baz=304,slow=15,SNR=5.4						
WRA				ScP	ScP	02 27 19.0	-0.6
	2.9nm,0.7s,baz=299,slow=1.9,SNR=5.9						
WRAB	Tennant Creek	21.03	129	*e*P	P	02 20 59.4	+0.4
WB2	Warramunga Arr	21.03	129	*e*P	P	02 20 58.7	-0.3
GSI	Gunungsitoli	21.21	292	*e*P	P	02 20 60.0	-0.7
	29nm,1.0s						
TGY	Tagaytay City	21.42	10	P	P	02 21 02.6	+0.1
	103nm,0.3s,baz=55,slow=5.8,SNR=3.9						
MORW	Morawa	21.86	183	P	P	02 21 07.5	+1.3
	baz=22,SNR=24						
MORW	Morawa	21.86	183	*e*P	P	02 21 07.0	+0.8
	65nm,0.5s						
KCSI	Kotacane, Aceh	22.00	298	P	P	02 21 08.2	+0.4
	12nm,1.0s						
AS31	Alice Springs	23.04	137	*e*P	P	02 21 17.3	+0.4
	33nm,0.5s						
ASAR	Alice Springs	23.04	137	P	P	02 21 17.9	+1.0
	61nm,0.4s,baz=314,slow=8.2,SNR=1030						
ASAR				S	S	02 24 45.1	-1.2
	6.2nm,0.9s,baz=100,slow=26,SNR=4.7						
ASAR				ScP	ScP	02 27 24.4	-0.4
	7.7nm,0.5s,baz=316,slow=2.4,SNR=28						
AS01	Alice Springs	23.07	137	*e*P	P	02 21 17.4	+0.3
BLDU	Ballidu	23.38	181	P	P	02 21 20.6	+0.8
	baz=24,SNR=49						
KLBR	Kellerberrin	24.36	179	P	P	02 21 29.3	+0.9
	baz=25,SNR=11						
MUN	Mundaring	24.75	182	P	P	02 21 32.8	+1.0
	baz=25,SNR=4.9						
QIS	Mount Isa	25.56	124	P	P	02 21 40.1	+0.9
	baz=26,SNR=27						
FORT	Forrest	25.68	158	P	P	02 21 41.6	+1.6
	baz=26,SNR=125						
NWAO	Narrogin (SRO)	25.68	180	P	P	02 21 41.5	+1.4
	baz=26,SNR=25						
NWAO	Narrogin (SRO)	25.68	180	P	P	02 21 41.5	+1.4
	63nm,0.7s,baz=231,slow=8.1,SNR=39						
NWAO				ScP	ScP	02 27 31.5	-0.6
	12nm,1.0s,baz=28,slow=11,SNR=3.2						
SRAK	Srakaew	25.77	325	P	P	02 21 38.7	-2.3
	149nm,0.6s,1µm						
COEN	Coen	26.50	107	P	P	02 21 47.9	+0.5
	baz=26,SNR=41						
COEN	Coen	26.50	107	*e*P	P	02 21 47.0	-0.4
	26nm,0.9s						
CHAI	Chaiyaphum	27.34	327	P	P	02 21 56.1	+1.4
	13nm,0.7s,127nm						
RKGY	Rocky Gully	27.36	180	P	P	02 21 57.0	+2.3
	baz=28,SNR=14						
PBKT	Sadao Pong	28.44	326	P	P	02 22 05.2	+0.9
	27nm,0.8s						
UTHA	Uthaitani	28.52	322	P	P	02 22 06.9	+1.9
	4.8nm,0.9s,303nm						
MTSU	Mount Surprise	28.68	115	P	P	02 22 07.8	+1.4
	baz=29,SNR=64						
UTTA	Uttaradit	29.62	327	P	P	02 22 15.8	+1.3
	7.9nm,0.7s,81nm						
SUKH	Sukhothai	29.93	325	P	P	02 22 18.9	+1.8
	6.6nm,0.8s						
BBOO	Buckleboo	31.04	148	P	P	02 22 27.4	+1.0
	baz=31,SNR=105						
BBOO	Buckleboo	31.04	148	*e*P	P	02 22 27.0	+0.6
	79nm,0.8s						
CTA	Charters Tower	31.05	117	P	P	02 22 28.4	+1.7
	19nm,0.8s,baz=298,slow=9.9,SNR=16						
CTA				ScP	ScP	02 27 48.2	-1.2
	3.5nm,0.9s,baz=327,slow=12,SNR=3.0						
CTAO	Charters Tower	31.05	117	*e*P	P	02 22 27.3	+0.5
CM01	Chiang Mai Arr	31.06	325	*e*P	P	02 22 27.2	+0.5
CM01				*e*PcP	PcP	02 25 04.4	+1.3
CMAR	Chiang Mai Arr	31.09	325	P	P	02 22 28.6	+1.5
	2.5nm,0.5s,baz=146,slow=6.5,SNR=10						
CMAR				PcP	PcP	02 25 04.3	+1.1
	2.5nm,0.6s,baz=176,slow=3.4,SNR=7.5						
CMAR				ScP	ScP	02 27 50.5	+1.0
	2.0nm,0.5s,baz=188,slow=3.0,SNR=9.1						
CMMT	Chiang Mai	31.38	325	P	P	02 22 31.2	+1.7
	11nm,1.0s						
CHTO	Chiang Mai	31.38	325	*e*P	P	02 22 29.5	0.0
	8.7nm,0.9s						
CHTO	Chiang Mai	31.38	325	P	P	02 22 31.2	+1.7
	49nm,1.0s						
HTT	Hallett	33.08	145	P	P	02 22 45.3	+1.6
	baz=33,SNR=51						
STKA	Stephens Creek	33.59	140	P	P	02 22 49.5	+1.5
	baz=34,SNR=100						
STKA	Stephens Creek	33.59	140	*e*P	P	02 22 48.7	+0.8
	15nm,0.6s						
STKA				ScP	ScP	02 27 57.1	-0.9
STKA	Stephens Creek	33.59	140	P	P	02 22 49.5	+1.5
	67nm,0.5s,baz=315,slow=8.7,SNR=259						
STKA				ScP	ScP	02 27 57.1	-0.9
	1.9nm,0.5s,baz=350,slow=10,SNR=3.3						
GYA	Guiyang	34.88	343	⇑*i*P	P	02 22 59.3	+0.4
GYA				pP	PP	02 24 41.0	-2.0
GYA				PcP	PcP	02 25 15.3	+1.3
GYA				S	S	02 27 53.2	+4.6
GYA				sS	sS	02 30 52.0	-0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI	Kunming	34.97	337	P	P	02 23 01.8	+2.1
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				pmax	pmax		
	comp=Z,150nm,4.1s						
RMQ	Roma	35.74	126	P	P	02 23 08.0	+2.1
	baz=36,SNR=6.0						
CMSA	Cobar Meteorol	36.09	136	P	P	02 23 10.4	+1.7
	baz=36,SNR=16						
ARPS	Mount Arapiles	37.14	146	P	P	02 23 18.6	+1.4
	baz=37,SNR=14						
EIDS	Eidsvold	37.16	123	P	P	02 23 18.9	+1.4
	baz=37,SNR=5.6						
WHN	Wuhan	37.54	356	⇓P	P	02 23 21.3	+0.9
ENH	Enshi	37.89	349	*e*P	P	02 23 22.9	-0.4
NJ2	Nanjing	38.98	2	*e*P	P	02 23 32.2	+0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PALK	Pallekele	39.02	291	*e*P	P	02 23 32.2	-0.6
PALK	Pallekele	39.02	291	P	P	02 23 32.3	-0.4
	comp=Z,6.9nm,0.6s,baz=116,slow=9.2,SNR=5.5						
YNG	Young	39.55	138	P	P	02 23 38.4	+1.7
	baz=40,SNR=11						
TOO	Toolangi	39.78	144	P	P	02 23 40.9	+2.4
	baz=40,SNR=21						
TOO	Toolangi	39.78	144	*e*P	P	02 23 39.9	+1.3
	comp=Z,29nm,0.7s						
ARMA	Armidale	39.80	130	P	P	02 23 41.3	+2.5
	baz=40,SNR=9.0						
ARMA	Armidale	39.80	130	*e*P	P	02 23 39.5	+0.6
	comp=Z,16nm,0.8s						
CD2	Chengdu	39.91	342	⇑P	P	02 23 40.3	+0.7
CD2				pmax	pmax		
	comp=Z,100nm,0.6s						
CD2				pmax	pmax		
	comp=Z,490nm,4.7s						
CAN	Canberra	40.55	138	*e*P	P	02 23 45.4	+0.7
	comp=Z,30nm,1.0s						
CNB	Canberra Magne	40.78	138	P	P	02 23 48.1	+1.6
	baz=41,SNR=6.1						
MGCD	Mangrove Creek	40.82	134	P	P	02 23 49.3	+2.6
	baz=41,SNR=15						
XAN	Xi'an	41.66	350	P	P	02 23 52.8	-0.6
XAN				pP	pP	02 24 00.9	-97
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	Xi'an	41.66	350	*e*P	P	02 23 52.5	-0.9
	comp=Z,14nm,1.1s						
JNU	Nakatsue	42.10	17	P	P	02 23 56.1	-0.7
	comp=Z,9.2nm,0.7s,baz=182,slow=4.5,SNR=4.6						
LZH	Lanzhou	44.74	345	*e*P	P	02 24 18.2	+0.8
LZH				pP	pP	02 26 08.3	+4.2
LZH				sP	sP	02 27 11.0	-0.8
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,97nm,4.5s						
RAMN	Ramite	44.95	320	*e*P	P	02 24 19.9	+0.7
	comp=Z,42nm,0.6s						
HYB	Hyderabad	45.23	303	*i* P	P	02 24 20.5	-0.7
KSAR	Wonju Array Be	45.45	12	P	P	02 24 23.0	+0.5
KSRS	Korea Array	45.48	12	P	P	02 24 23.0	+0.4
	comp=Z,9.9nm,0.7s,baz=192,slow=8.1,SNR=41						
KS01	Wonju Array Si	45.49	12	*e*P	P	02 24 22.4	-0.4
JIRN	Jiri	45.70	320	*e*P	P	02 24 25.3	+0.2
	comp=Z,73nm,0.6s						
GUN	Gumba	46.08	320	*e*P	P	02 24 28.0	+0.2
	comp=Z,56nm,0.7s						
PKI	Pulchoki	46.14	320	*e*P	P	02 24 28.0	-0.3
	comp=Z,25nm,0.6s						
PKIN	Phulchoki	46.15	320	*e*P	P	02 24 27.9	-0.4
	comp=Z,22nm,0.5s						
DMN	Daman	46.36	319	*e*P	P	02 24 29.8	-0.1
	comp=Z,24nm,0.6s						
BJT	Baijiatuau	46.91	359	*e*P	P	02 24 32.9	-0.5
	comp=Z,11nm,0.7s						
BJI	Beijing	46.93	359	P	P	02 24 32.7	-0.8
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KOLN	Koldanda	47.45	318	*e*P	P	02 24 37.8	-0.2
	comp=Z,24nm,0.6s						
MJAR	Matsushiro Arr	47.73	23	P	P	02 24 38.6	-1.0
	comp=Z,8.8nm,0.8s,baz=202,slow=8.4,SNR=15						
DANN	Dangsing	47.74	319	*e*P	P	02 24 40.1	-0.1
	comp=Z,80nm,0.6s						
HHC	Hu-ho-hao-te	48.00	354	*e*P	P	02 24 44.0	+2.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,5.2s						
PYUN	Piuthan	48.07	318	*e*P	P	02 24 42.5	-0.1
	comp=Z,44nm,0.5s						
GTA	Gaotai	48.98	342	⇑P	P	02 24 50.0	+1.0
GTA				PcP	PcP	02 26 02.6	+1.3
GTA				pP	pP	02 26 40.2	+1.3
GTA				sP	sP	02 27 44.1	-1.3
GTA				ScP	ScP	02 29 00.0	+0.8
GTA				S	S	02 31 13.1	+3.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,80nm,7.0s						
CN2	Changchun	51.24	8	*e*P	P	02 25 04.8	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ	Mudanjiang	52.71	11	*e*P	P	02 25 15.4	-0.2
	comp=Z,11nm,0.9s						
USRK	Ussuriysk Ar.	52.82	13	P	P	02 25 16.4	0.0
	comp=Z,5.4nm,0.5s,baz=188,slow=6.2,SNR=16						
ULN	Ulaanbaatar	55.46	352	*e*P	P	02 25 34.6	-0.5
	comp=Z,2.3nm,0.5s						
SONM	Songino Array	55.52	351	P	P	02 25 35.5	0.0
	comp=Z,3.1nm,0.4s,baz=171,slow=7.8,SNR=29						
SONM				PcP	PcP	02 26 26.3	+0.2
	comp=Z,1.3nm,0.5s,baz=177,slow=4.4,SNR=4.0						
SONA1	Songino Array	55.54	351	*e*P	P	02 25 35.2	-0.4
WMQ	Urumqi	57.26	335	P	P	02 25 48.2	+0.8
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,200nm,3.9s						
NIL	Nilore	58.06	317	*e*P	P	02 25 51.7	-1.2
RPZ	Rata Peaks	59.45	137	*e*P	P	02 26 02.5	+0.4
	comp=Z,37nm,0.7s						
KSH	Kashi	59.99	324	⇓*i*P	P	02 26 05.6	-0.2
KSH				pP	pP	02 28 02.0	-0.8
KSH				PP	PP	02 28 31.9	+3.2
KSH				S	S	02 33 24.0	-9.0
KSH	Kashi	59.99	324	sS	sS	02 37 01.7	-0.4
KSH	Kashi	59.99	324	SS	SS	02 37 49.5	+4.9
KSH				pmax	pmax		
	comp=Z,300nm,4.5s						
KSH				pmax	pmax		
	comp=Z,67nm,0.6s						
KSH				LR	LR		
	comp=N,180nm,4.3s						
KSH				LR	LR		
	comp=E,150nm,5.0s						
KSH				LR	LR		
	comp=Z,480nm,6.2s						
THZ	Tophouse	60.07	134	*e*P	P	02 26 06.7	+0.5
	comp=Z,24nm,0.7s						
NRN	Naryn	61.24	326	*e*P	P	02 26 13.5	-0.7
	comp=Z,9.9nm,0.6s						
KBL	Kabul	61.44	316	*e*P	P	02 26 14.9	-0.6
	comp=Z,17nm,0.6s						
MK01	Makanchi Array	61.92	334	*e*P	P	02 26 17.4	-0.8
MK01				*e*pP	pP	02 28 17.4	+1.2
MK31	Makanchi Array	61.94	334	*e*P	P	02 26 17.8	-0.5
MKAR	Makanchi Array	61.94	334	P	P	02 26 18.4	+0.1
	comp=Z,10nm,0.4s,baz=153,slow=6.4,SNR=302						
MKAR				PcP	PcP	02 26 51.4	-0.4
	comp=Z,2.6nm,0.5s,baz=140,slow=5.9,SNR=6.7						
MKAR				pP	pP	02 28 19.0	+2.5
	comp=Z,1.5nm,0.7s,baz=144,slow=8.1,SNR=3.8						
BKZ	Black Stump Fm	61.95	131	*e*P	P	02 26 18.5	-0.1
	comp=Z,12nm,0.6s						
KZA	Kyzart	62.09	326	P	P	02 26 20.1	+0.3
	SNR=7.3						
MAKZ	Makanchi	62.09	333	*e*P	P	02 26 18.5	-0.8
	comp=Z,4.4nm,0.6s						
UCH	Uchtor	62.60	326	P	P	02 26 23.6	+0.5
	SNR=6.0						
KBK	Karagaybulak	62.64	326	P	P	02 26 23.9	+0.9
	SNR=8.6						
AAK	Ala-Archa	62.88	326	P	P	02 26 25.1	+0.6
	SNR=7.0						
AAK	Ala-Archa	62.88	326	*e*P	P	02 26 24.4	-0.1
	comp=Z,9.3nm,0.7s						
ARSB	Arslanbob	62.90	324	*e*P	P	02 26 24.6	-0.1
	comp=Z,38nm,0.8s						
AML	Almayashu	63.00	325	P	P	02 26 26.1	+0.5
	SNR=16						
GAR	Garm	63.11	320	*e*P	P	02 26 26.1	0.0
EKS2	Erkin-Say	63.30	325	P	P	02 26 27.8	+0.6
	SNR=8.1						
BTK	Batken	63.42	322	*e*P	P	02 26 28.6	+0.6
	comp=Z,6.5nm,0.7s						
KURK	Kurchatov	66.49	334	*e*P	P	02 26 46.2	-0.7
	comp=Z,8.5nm,0.4s						
ZAA0	Zalesovo Array	66.63	340	*e*P	P	02 26 46.1	-1.6
	comp=Z,11nm,0.9s						
ZALV	Zalesovo Beam	66.63	340	P	P	02 26 46.7	-0.9
	comp=Z,9.7nm,0.3s,baz=146,slow=5.2,SNR=57						
ZALV				pP	pP	02 28 48.4	+0.1
	comp=Z,0.9nm,0.4s,baz=153,slow=4.1,SNR=3.5						
ZALV				S	S	02 34 47.0	-5.3
	comp=Z,1.3nm,0.7s,baz=146,slow=10.0,SNR=6.8						
PETK	Petropavlovsk-	69.14	25	P	P	02 27 03.5	+0.7
	comp=Z,1.8nm,0.5s,baz=202,slow=3.9,SNR=7.3						
GEYT	Alibeck	70.79	314	P	P	02 27 13.5	+0.4
	comp=Z,9.0nm,0.7s,baz=151,slow=3.4,SNR=18						
BRVK	Borovoye	71.84	332	*e*P	P	02 27 18.1	-0.6
	comp=Z,5.2nm,0.5s						
VNDA	Vanda	74.13	171	P	P	02 27 31.7	+0.3
	comp=Z,3.7nm,0.9s,baz=313,slow=8.8,SNR=7.0						
ABKAR	Akbulak array	74.95	325	*e*P	P	02 27 35.6	-0.8
DAMY	Dhamar	75.24	287	*e*P	P	02 27 39.9	+0.7
	comp=Z,20nm,0.8s						
SYO	Syowa Base	78.93	201	⇑*e*P	P	02 27 57.2	-0.5
TIXI	Tiksi	78.99	4	*e*P	P	02 27 56.7	-1.1
	comp=Z,5.9nm,0.9s						
ARU	Arti	79.32	331	*e*P	P	02 27 59.0	-0.9
	comp=Z,4.1nm,0.4s						
KMBO	Kilima Mbogo	79.80	270	P	P	02 28 04.7	+1.0
	comp=Z,12nm,0.6s,baz=62,slow=7.5,SNR=14						
GNI	Garni	81.29	312	*e*P	P	02 28 10.9	+0.1
	comp=Z,6.3nm,0.8s						
TBLG	Delisi	81.76	314	*e*P	P	02 28 13.4	+0.5
	comp=Z,25nm,1.1s						
SIRT	Sirnak	82.29	309	*e*P	P	02 28 16.2	+0.4
	comp=Z,33nm,1.1s						
KBZ	Khabaz	83.63	315	P	P	02 28 22.5	+0.4
	comp=Z,5.7nm,0.8s,baz=166,slow=2.6,SNR=20						
LSZ	Lusaka	87.12	255	*e*P	P	02 28 39.8	+0.1
	comp=Z,10nm,0.8s						
BOSA	Boshof	88.26	242	P	P	02 28 45.5	+0.7
	comp=Z,4.3nm,0.7s,baz=94,slow=3.6,SNR=15						
LBTB	Lobatse	88.39	245	*e*P	P	02 28 46.5	+1.0
	comp=Z,3.9nm,0.6s						
BR131	Keskin Array S	89.50	310	*e*P	P	02 28 49.7	-0.6
BRTR	Keskin Array B	89.50	310	P	P	02 28 49.4	-1.0
	comp=Z,2.4nm,0.8s,baz=133,slow=4.9,SNR=16						
AKASG	Malin Array Be	94.11	320	P	P	02 29 09.1	-1.9
	comp=Z,0.7nm,0.5s,baz=80,slow=4.9,SNR=3.7						
RSO	Redoubt South	96.20	30	*e*P	P	02 29 24.4	+3.9
BUR04	Bucovina Ar. S	96.48	317	*e*P	P	02 29 21.2	-0.7
TSUM	Tsumeb	96.60	250	*e*P	P	02 29 23.4	+0.3
	comp=Z,1.6nm,0.5s						
FINES	FINESS Array B	96.69	331	P	P	02 29 21.4	-0.9
	comp=Z,2.9nm,0.7s,baz=86,slow=7.8,SNR=9.5						
FINES				PKiKP	PKiKP	02 33 55.0	-0.1
	comp=Z,1.3nm,0.9s,baz=140,slow=1.1,SNR=4.9						
ARCES	ARCESS Array B	97.18	339	P	Pdif	02 29 22.8	-1.6
	comp=Z,2.2nm,1.0s,baz=86,slow=6.7,SNR=5.1						
ILAR	Eielson Array	98.96	26	P	Pdif	02 29 31.1	-1.3
	comp=Z,0.2nm,0.7s,baz=262,slow=5.0,SNR=4.4						
ILAR				PKKPbc	PKKPbc	02 45 56.1	-2.7
	comp=Z,0.3nm,0.7s,baz=109,slow=1.0,SNR=5.1						
YKA	Yellowknife Ar	113.23	23	PKiKP	PKiKP	02 34 25.2	-0.3
	comp=Z,1.2nm,0.4s,baz=306,slow=1.8,SNR=43						
YKA				SKP		02 37 03.5	
	comp=Z,0.4nm,0.5s,baz=311,slow=2.1,SNR=10						
TOA0	Torodi Ar. Sit	116.27	281	*e*PKPdf	PKPdf	02 34 31.3	-1.5
TORD	Torodi Ar. Bea	116.27	281	PKP	PKPdf	02 34 31.5	-1.3
	comp=Z,3.2nm,0.6s,baz=39,slow=2.1,SNR=47						
ESDC	Sonseca Array	118.26	311	PKP	PKiKP	02 34 36.3	+0.2
	comp=Z,0.4nm,0.5s,baz=18,slow=3.0,SNR=4.6						
MSO	Missoula	121.19	39	*e*PKPdf	PKPdf	02 34 41.3	-0.2
MSO	Missoula	121.19	39	P	PKiKP	02 34 41.7	+0.1
	baz=296						
NVAR	Mina Array Bea	121.24	49	PKP	PKiKP	02 34 43.1	+0.9
	comp=Z,1.1nm,0.7s,baz=264,slow=3.4,SNR=2.7						
HLID	Hailey	122.23	42	*e*PKPdf	PKiKP	02 34 44.5	+0.5
DBIC	Dimbokro	122.42	273	PKP	PKPdf	02 34 44.2	-0.4
	comp=Z,4.4nm,0.6s,baz=58,slow=1.4,SNR=7.8						
MPMC	Manual Prospec	122.55	52	P	PKiKP	02 34 44.7	-0.1
	baz=286						
LRMC	Laurel Mtn Rad	122.56	52	P	PKiKP	02 34 44.9	+0.1
	baz=286						
EGMT	Eagleton	123.14	36	*e*PKPdf	PKiKP	02 34 45.4	0.0
EGMT	Eagleton	123.14	36	P	PKiKP	02 34 45.5	0.0
	baz=300						
FFC	Flin Flon	123.17	26	*e*PKPdf	PKiKP	02 34 45.1	-0.1
BOZ	Bozeman (W)	123.17	39	P	PKiKP	02 34 46.0	+0.3
	baz=297						
FCC	Fort Churchill	123.19	19	*e*PKPdf	PKPdf	02 34 44.4	-0.4
BW06	Boulder Array	125.79	41	P	PKiKP	02 34 51.5	+0.4
	baz=297						
PDAR	Pinedale Array	125.79	41	PKP	PKiKP	02 34 51.4	+0.3
	comp=Z,0.4nm,0.4s,baz=130,slow=1.4,SNR=9.5						
PDAR				PKKPbc	PKKPab	02 44 28.2	-0.6
	comp=Z,0.6nm,0.5s,baz=121,slow=6.4,SNR=9.0						
LAO	LASA Array	125.89	36	P	PKiKP	02 34 51.6	+0.6
	baz=303						
K22A	Casper	127.81	40	P	PKiKP	02 34 55.0	0.0
	baz=300						
PV21	Cone Mtn., Par	128.03	46	*e*PKPdf	PKiKP	02 34 55.3	-0.4
PV04	Paradox Valley	128.15	46	*e*Pdif	Pdif	02 31 41.7	-1.4
RSSD	Black Hills	128.58	37	P	PKiKP	02 34 56.7	0.0
	baz=304						
ULM	Lac du Bonnet	128.96	27	SKPbc	SKPbc	02 37 20.1	
	comp=Z,1.6nm,0.7s,baz=310,slow=5.2,SNR=8.8						
Q24A	Divide	130.52	44	P	PKPdf	02 35 00.0	+0.2
	baz=299						
ANMO	Albuquerque	131.37	49	SKPbc	SKPab	02 37 31.4	-0.7
	comp=Z,4.7nm,0.8s,baz=295,slow=5.3,SNR=10						
SCHQ	Schefferville	132.31	3	PKP	PKiKP	02 35 03.6	0.0
	comp=Z,3.1nm,0.9s,baz=316,slow=0.7,SNR=7.4						
SCHQ				SKPbc	SKPbc	02 37 33.4	+0.1
	comp=Z,3.1nm,0.7s,baz=5.8,slow=4.4,SNR=6.3						
C40A	Isle Royale Na	133.61	24	P	PKiKP	02 35 06.5	+0.2
	baz=323						
E39A	Mellen	134.21	27	P	PKiKP	02 35 07.7	0.0
	baz=320						
F39A	Loretta	134.40	27	P	PKiKP	02 35 08.0	0.0
	baz=319						
E40A	Wakefield	134.45	26	P	PKiKP	02 35 08.2	0.0
	baz=321						
G38A	Ridgeland	134.52	29	P	PKiKP	02 35 08.2	-0.1
	baz=318						
D41A	Chassel	134.53	25	P	PKiKP	02 35 08.3	+0.1
	baz=323						
F40A	Park Falls	134.76	27	P	PKiKP	02 35 08.4	-0.4
	baz=320						
G39A	Holcombe	134.76	28	P	PKiKP	02 35 08.1	-0.6
	baz=319						
H39A	Augusta	135.16	29	P	PKiKP	02 35 09.2	-0.4
	baz=318						
G40A	Rib Lake	135.22	27	P	PKiKP	02 35 09.4	-0.3
	baz=320						
TXAR	Lajitas Array	135.74	55	PKhKP	PKPpre	02 35 00.9	
	comp=Z,0.4nm,0.7s,baz=258,slow=2.6,SNR=3.1						
TXAR				PKP	PKiKP	02 35 11.0	-0.4
	comp=Z,0.2nm,0.5s,baz=329,slow=1.1,SNR=3.2						
TXAR				SKPbc	SKPbc	02 37 45.0	-0.2
	comp=Z,1.7nm,0.9s,baz=240,slow=3.6,SNR=9.2						
J39A	Decorah	135.94	30	P	PKiKP	02 35 10.8	-0.4
	baz=317						
KSU1	Kansas State U	136.02	38	P	PKiKP	02 35 11.6	0.0
	baz=308						
CHGQ	Chibougamau	136.27	11	P	PKiKP	02 35 11.5	-0.2
	baz=343						
K40A	Colesburg	136.69	31	P	PKiKP	02 35 12.6	-0.1
	baz=317						
JFWS	Jewell Farm	136.97	30	P	PKiKP	02 35 13.1	-0.3
	baz=318						
JCT	Junction City	138.34	51	*e*PKPdf	PKiKP	02 35 15.3	-1.3
O41A	Passleys Farm,	138.68	33	P	PKiKP	02 35 16.4	-0.5
	baz=315						
R41A	Rosebud	139.66	35	P	PKiKP	02 35 18.7	-0.3
	baz=313						
S41A	Jillco Farms,	139.93	37	P	PKiKP	02 35 19.2	-0.4
	baz=312						

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U40A  Yellville          140.06  39  P        PKiKP  02 35 19.3 -0.6
      baz=310
S42A  Caledonia          140.36  36  P        PKiKP  02 35 19.6 -0.9
      baz=313
L48A  N Adams            140.41  25  P        PKiKP  02 35 20.2 -0.2
      baz=325
Q48A  North Vernon       142.22  30  P        PKPdf  02 35 18.1 -2.9
      baz=321
P49A  Miami Univ. Ec     142.23  28  P        PKPdf  02 35 18.5 -2.5
      baz=323
O50A  Cable              142.23  26  P        PKPdf  02 35 18.1 -2.9
      baz=325
R47A  Wooly Knot Far     142.31  31  P        PKPdf  02 35 18.4 -2.7
      baz=320
WCI   Wyandotte Cave     142.48  31  P        PKPdf  02 35 19.1 -2.3
      baz=320
N52A  McGinn's Farm,     142.49  24  P        PKPdf  02 35 19.3 -2.1
      baz=328
T46A  Princeton          142.51  34  P        PKPdf  02 35 19.3 -2.2
      baz=317,SNR=7.7
U45A  Rockin P Farm,     142.51  35  P        PKPdf  02 35 19.3 -2.2
      baz=315
Q49A  Aurora             142.56  29  P        PKPdf  02 35 19.4 -2.2
      baz=322
P50A  Jamestown          142.59  27  P        PKPdf  02 35 19.4 -2.2
      baz=324
M54A  Oil Creek Stat     142.65  21  P        PKPdf  02 35 19.5 -2.2
      baz=332
O51A  Pataskala          142.67  25  P        PKPdf  02 35 19.6 -2.2
      baz=327
U46A  Springville        142.84  35  P        PKPdf  02 35 20.2 -1.9
      baz=316
R49A  Shelbyville        142.99  30  P        PKPdf  02 35 20.6 -1.8
      baz=322,SNR=6.5
M55A  Ridgway            142.99  20  P        PKPdf  02 35 20.4 -1.9
      baz=333
O52A  Adamsville         143.01  24  P        PKPbc  02 35 20.3 -0.3
      baz=328
P51A  Williamsport       143.02  26  ePKPdf   PKPbc  02 35 20.3 -0.4
P51A  Williamsport       143.02  26  P        PKPbc  02 35 20.4 -0.3
      baz=326
S48A  Wiedeman Farm,     143.03  31  P        PKPbc  02 35 20.5 -0.3
      baz=320,SNR=5.8
W45A  Hickory Valley     143.09  37  P        PKPab  02 35 20.5  0.0
      baz=313,SNR=5.3
Q50A  Georgetown         143.12  28  P        PKPbc  02 35 20.7 -0.3
      baz=324
O53A  New Philadelph     143.15  24  P        PKPbc  02 35 21.0 -0.1
      baz=329
BINY  Binghamton         143.19  16  P        PKPbc  02 35 21.1  0.0
      baz=338
WVT   Waverly            143.20  35  ePKPdf   PKPbc  02 35 21.4 +0.1
WVT   Waverly            143.20  35  P        PKPbc  02 35 21.1 -0.2
      baz=316
Q51A  Peebles            143.27  27  ePKPdf   PKPbc  02 35 21.2 -0.2
Q51A  Peebles            143.27  27  P        PKPab  02 35 21.0 -0.2
      baz=325,SNR=7.1
T48A  Bowling Green      143.27  32  P        PKPbc  02 35 21.3 -0.2
      baz=319
V46A  Holladay           143.27  35  P        PKPbc  02 35 21.2 -0.3
      baz=315
U47A  Clarksville        143.28  34  P        PKPbc  02 35 21.5  0.0
      baz=317,SNR=8.7
P52A  Corning            143.30  25  P        PKPab  02 35 21.1 -0.1
      baz=327
LCO   Las Campanas       143.30 169  ePKPdf   PKPbc  02 35 22.4 +0.2
S49A  Springfield        143.33  30  P        PKPbc  02 35 21.4 -0.3
      baz=321,SNR=10
OXF   Oxford             143.39  38  ePKPdf   PKPbc  02 35 21.7 -0.2
OXF   Oxford             143.39  38  P        PKPbc  02 35 21.7 -0.2
      baz=312,SNR=6.6
R50A  Paris              143.41  29  P        PKPab  02 35 21.5 -0.2
      baz=323,SNR=6.9
N55A  Marion Center      143.53  21  P        PKPbc  02 35 22.2  0.0
      baz=333
W46A  Michie             143.59  36  P        PKPab  02 35 22.2 -0.2
      baz=314
V47A  Nunnelly           143.59  35  P        PKPbc  02 35 22.5  0.0
      baz=316
U48A  Cassie Pea, Po     143.64  33  P        PKPbc  02 35 22.6  0.0
      baz=318,SNR=8.0
T49A  Edmonton           143.72  31  ePKPbc   PKPab  02 35 22.8 -0.1
T49A  Edmonton           143.72  31  P        PKPab  02 35 22.9  0.0
      baz=320,SNR=8.8
P53A  Whipple            143.73  25  ePKPbc   PKPab  02 35 22.7 -0.2
P53A  Whipple            143.73  25  P        PKPab  02 35 23.0 +0.1
      baz=328,SNR=6.5
R51A  Hillsboro          143.75  28  P        PKPab  02 35 22.9 -0.1
      baz=324
Q52A  Bidwell            143.80  26  P        PKPbc  02 35 22.8 -0.2
      baz=326
S50A  Richmond           143.85  30  P        PKPbc  02 35 22.8 -0.4
      baz=322,SNR=5.5
X46A  Booneville         143.86  37  P        PKPbc  02 35 23.0 -0.3
      baz=313,SNR=6.0
O55A  Ligonier           143.92  22  P        PKPab  02 35 23.5 -0.1
      baz=332
HRV   Adam Dziewonsk     143.93  11  P        PKPdf  02 35 23.6 -0.3
      baz=345
W47A  Westpoint          143.96  36  P        PKPab  02 35 23.6 -0.3
      baz=315
P54A  Burton             144.00  23  P        PKPdf  02 35 23.9 -0.2
      baz=330,SNR=7.8
SSPA  Standing Stone     144.03  20  P        PKPbc  02 35 23.6 -0.1
      baz=334
U49A  Red Boiling Sp     144.04  32  P        PKPab  02 35 23.9 -0.3
      baz=319,SNR=12
V48A  Smith Brothers     144.05  34  P        PKPbc  02 35 23.6 -0.4
      baz=317
O56A  Blue Knob Stat     144.13  21  P        PKPdf  02 35 24.2 -0.2
      baz=333
T50A  Nancy              144.14  31  P        PKPbc  02 35 24.0 -0.1
      baz=321,SNR=6.2
R52A  Catlettsburg       144.15  27  P        PKPdf  02 35 24.1 -0.3
      baz=325
VBMS  Vicksburg          144.15  42  P        PKPab  02 35 24.9 +0.2
      baz=308
MCWV  Mont Chateau       144.20  23  P        PKPab  02 35 24.5 -0.1
      baz=330
S51A  Beattyville        144.27  29  P        PKPbc  02 35 24.3 -0.3
      baz=323
X47A  Russelville        144.32  37  P        PKPbc  02 35 24.2 -0.6
      baz=314,SNR=7.1
P55A  Reedsville         144.33  23  P        PKPab  02 35 24.9 -0.3
      baz=330
Q54A  Coxs Mills         144.38  24  P        PKPab  02 35 25.1 -0.3
      baz=328,SNR=5.0
W48A  Pulaski            144.42  35  P        PKPdf  02 35 24.6 -0.3
      baz=316,SNR=6.0
N59A  State Game Lan     144.43  17  P        PKPab  02 35 25.1 -0.4
      baz=338
R53A  Hurricane          144.46  26  P        PKPbc  02 35 25.0 -0.1
      baz=326
V49A  McMinnville        144.53  33  P        PKPbc  02 35 25.2 -0.2
      baz=318
U50A  Jamestown          144.61  31  P        PKPab  02 35 25.9 -0.5
      baz=320,SNR=13
T51A  Gray               144.63  30  P        PKPbc  02 35 25.8 +0.1
      baz=322
Q55A  Buckhannon         144.68  23  P        PKPab  02 35 26.0 -0.6
      baz=330
W49A  Belvidere          144.81  34  P        PKPbc  02 35 26.2 -0.1
      baz=317
X48A  Hartselle          144.84  36  ePKPdf   PKPdf  02 35 25.7  0.0
X48A  Hartselle          144.84  36  P        PKPdf  02 35 25.8 +0.1
      baz=315
PAL   Palisades          144.85  15  P        PKPab  02 35 26.6 -0.5
      baz=341
S53A  Williamson         144.92  27  P        PKPbc  02 35 26.5 -0.1
      baz=326
R54A  Victor             145.00  25  P        PKPbc  02 35 26.5 -0.2
      baz=328
V50A  Pikevile           145.04  32  P        PKPbc  02 35 26.7 -0.3
      baz=319
U51A  La Follette        145.06  31  P        PKPbc  02 35 27.0  0.0
      baz=322
Y48A  Jasper             145.15  37  P        PKPbc  02 35 26.9 -0.4
      baz=315
TZTN  Tazewell           145.16  30  P        PKPbc  02 35 27.2 -0.1
      baz=322
X49A  Woodville          145.22  35  P        PKPbc  02 35 27.3 -0.1
      baz=316
R55A  Marlinton          145.27  24  P        PKPbc  02 35 27.6 -0.1
      baz=329
W50A  Signal Mountai     145.28  33  ePKPdf   PKPbc  02 35 26.9 -0.8
W50A  Signal Mountai     145.28  33  P        PKPbc  02 35 27.7  0.0
      baz=318
T53A  Wise               145.30  28  P        PKPbc  02 35 27.9 +0.2
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      baz=324
147A  Livingston         145.32  39  P        PKPbc  02 35 27.9 +0.1
      baz=312
V51A  Loudon             145.33  32  P        PKPbc  02 35 28.0 +0.2
      baz=320
U52A  Thorn Hill         145.37  30  P        PKPbc  02 35 28.1 +0.2
      baz=322
S55A  Lewisburg          145.55  25  P        PKPbc  02 35 28.2 -0.2
      baz=328
W51A  Cleveland          145.60  33  P        PKPbc  02 35 28.4 -0.2
      baz=319
Y49A  Blount Mountai     145.63  36  ePKPdf   PKPbc  02 35 28.7  0.0
Y49A  Blount Mountai     145.63  36  P        PKPbc  02 35 28.5 -0.2
      baz=316
X50B  Fort Payne         145.64  34  P        PKPbc  02 35 28.5 -0.3
      baz=317
T54A  Tazewell           145.68  27  P        PKPbc  02 35 28.8 -0.1
      baz=326
V52A  Sevierville        145.69  31  ePKPbc   PKPbc  02 35 29.4 +0.6
V52A  Sevierville        145.69  31  P        PKPbc  02 35 29.2 +0.4
      baz=322
U53A  Fall Branch        145.78  29  P        PKPbc  02 35 29.2 +0.2
      baz=324
LRAL  Lakeview Retre     145.86  38  ePKPbc   PKPbc  02 35 28.8 -0.5
LRAL  Lakeview Retre     145.86  38  P        PKPbc  02 35 29.6 +0.2
      baz=314
X51A  Calhoun            146.00  34  P        PKPbc  02 35 29.7  0.0
      baz=319
Y50A  Piedmont           146.00  35  P        PKPbc  02 35 29.7  0.0
      baz=317
Z49A  Columbiana         146.03  37  P        PKPbc  02 35 29.9 +0.1
      baz=315
W52A  Murphy             146.10  32  P        PKPbc  02 35 30.2 +0.2
      baz=320
V53A  Saluda             146.22  30  P        PKPbc  02 35 30.7 +0.4
      baz=323
149A  Jones              146.29  38  P        PKPbc  02 35 30.9 +0.4
      baz=314
CPUP  Villa Florida      146.32 189  ePKPbc   PKPbc  02 35 31.3 +0.5
CPUP                                 SKPbc    SKPbc  02 38 11.9 -0.4
CPUP  Villa Florida      146.32 189  PKPbc    PKPbc  02 35 31.6 +0.8
      comp=Z,9.6nm,0.7s,baz=142,slow=1.6,SNR=26
CPUP                                 SKPbc    SKPbc  02 38 11.9 -0.4
      comp=Z,2.6nm,0.8s,baz=62,slow=3.4,SNR=4.8
Z50A  Ashland            146.35  36  ePKPbc   PKPbc  02 35 30.0 -0.7
Z50A  Ashland            146.35  36  P        PKPbc  02 35 30.8 +0.1
      baz=316
Y51A  Rockmart           146.38  35  P        PKPbc  02 35 30.5 -0.3
      baz=318
CBN   Corbin Frederi     146.38  21  P        PKPbc  02 35 30.8 +0.2
      baz=334
R58B  Mineral            146.42  22  P        PKPbc  02 35 30.8 +0.1
      baz=332
W53A  Cullowhee          146.43  31  P        PKPbc  02 35 31.5 +0.5
      baz=322
X52A  Dahlonega          146.49  32  P        PKPbc  02 35 31.6 +0.5
      baz=320
249A  Camden             146.51  39  P        PKPbc  02 35 31.7 +0.5
      baz=313
Z51A  Franklin           146.74  35  P        PKPbc  02 35 31.8  0.0
      baz=317
150A  Eclectic           146.75  37  P        PKPbc  02 35 32.0 +0.2
      baz=315
349A  Repton             146.88  40  P        PKiKP  02 35 33.0 -1.1
      baz=312
X53A  Estanollee         146.88  32  P        PKPbc  02 35 32.8 +0.7
      baz=321
Y52A  Lilburn            146.96  33  ePKPbc   PKPbc  02 35 32.8 +0.5
Y52A  Lilburn            146.96  33  P        PKiKP  02 35 33.1 -1.0
      baz=319
250A  Grady              147.04  38  P        PKPbc  02 35 33.1 +0.5
      baz=314
BRAL  Brewton            147.09  40  P        PKiKP  02 35 33.6 -0.8
      baz=312
151A  Opelika            147.22  37  P        PKPbc  02 35 33.4 +0.4
      baz=316
Y53A  Monroe             147.23  33  P        PKPbc  02 35 33.6 +0.6
      baz=320
GO02  Mina Guanaco       147.26 169  ePKPbc   PKPbc  02 35 34.1 +0.3
Z52A  Williamson         147.26  35  P        PKPbc  02 35 33.8 +0.6
      baz=318
KMSC  Kings Mountain     147.36  29  P        PKPbc  02 35 33.7 +0.4
      baz=325
350A  Dozier             147.38  39  P        PKPbc  02 35 33.9 +0.4
      baz=313
152A  Waverly Hall       147.47  36  ePKPbc   PKPbc  02 35 34.2 +0.5
152A  Waverly Hall       147.47  36  P        PKPbc  02 35 34.1 +0.4
      baz=317
251A  Midway             147.48  37  P        PKPbc  02 35 34.2 +0.5
      baz=315
GOGA  Godfrey            147.63  33  P        PKiKP  02 35 34.6 -0.9
      baz=320
Z53A  Monticello         147.67  34  P        PKPbc  02 35 34.6 +0.5
      baz=319
Y54A  Tignall            147.70  32  P        PKiKP  02 35 34.8 -0.8
      baz=321
351A  Pinckard           147.93  39  P        PKiKP  02 35 35.4 -0.8
      baz=314
252A  Lumpkin            147.95  37  P        PKiKP  02 35 35.4 -0.8
      baz=316
Z54A  Sparta             148.10  33  P        PKPbc  02 35 35.6 +0.4
      baz=320
253A  Americus           148.26  36  P        PKiKP  02 35 36.3 -0.5
      baz=317
452A  Marianna           148.48  39  P        PKiKP  02 35 37.0 -0.3
      baz=314
353A  Camilla            148.72  37  P        PKiKP  02 35 37.5 -0.3
      baz=316
155A  Kite               148.77  33  P        PKiKP  02 35 37.7 -0.2
      baz=320
453A  Whigham            149.01  38  P        PKiKP  02 35 38.4  0.0
      baz=315
TIGA  Tifton             149.02  36  P        PKiKP  02 35 38.4  0.0
      baz=317
156A  Sylvania           149.26  32  P        PKiKP  02 35 39.0 +0.2
      baz=322
255A  Hazlehurst         149.29  34  P        PKiKP  02 35 39.1 +0.1
      baz=320
355A  Pearson            149.52  35  P        PKiKP  02 35 39.7 +0.2
      baz=318
454A  Quitman            149.52  37  P        PKiKP  02 35 39.7 +0.2
      baz=316
NHSC  New Hope           149.57  29  P        PKiKP  02 35 39.7 +0.2
      baz=325
455A  Stateville         149.86  36  P        PKiKP  02 35 40.3 +0.2
      baz=317
LVC   Limon Verde        149.88 169  ePKPbc   PKiKP  02 35 41.4 +0.4
PB04  IPOC Station P     149.88 167  ePKPbc   PKiKP  02 35 41.7 +0.9
554A  Perry              149.94  38  P        PKiKP  02 35 40.8 +0.5
      baz=316
356A  Blackshear         149.94  34  P        PKiKP  02 35 40.7 +0.3
      baz=319
257A  Skidaway Islan     150.04  32  P        PKiKP  02 35 40.8 +0.3
      baz=322
357A  Townsend           150.22  33  P        PKiKP  02 35 41.4 +0.5
      baz=321
555A  McAlpin            150.35  37  P        PKiKP  02 35 41.4 +0.2
      baz=317
456A  Hilliard           150.45  35  P        PKiKP  02 35 41.8 +0.4
      baz=319
556A  Lake Butler        150.77  36  P        PKiKP  02 35 42.4 +0.4
      baz=318
656A  Willston           151.15  37  P        PKiKP  02 35 42.6 -0.3
      baz=316
557A  Orange Park        151.15  35  P        PKiKP  02 35 43.0 +0.1
      baz=319
657A  Interlachen        151.39  36  P        PKiKP  02 35 43.3  0.0
      baz=318
757A  Oxford             151.74  37  P        PKiKP  02 35 43.8 -0.3
      baz=317
BDFB  Brasilia           153.01 213  ePKPdf   PKPdf  02 35 38.6 -0.7
BDFB                                 PKPbc    PKiKP  02 35 47.1 -0.1
BDFB                                 ePKPab   PKPab  02 36 02.3 +0.7
BDFB  Brasilia           153.01 213  PKPbc    PKiKP  02 35 47.1 -0.1
      comp=Z,1.0nm,0.4s,baz=167,slow=9.9,SNR=4.8
BDFB                                 PKPab    PKPab  02 36 03.0 +1.5
      comp=Z,8.6nm,0.7s,baz=126,slow=3.6,SNR=10
```

IDC ***09*** *02:23:53.0±1.2, 1°.91S×133°.64E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.7/31, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=55.9km s-min=21.8km az=86.0*
ISCJB ***09*** *02:23:55.4±0.6, 2°.10S±0°.05×133°.75E±0°.07, h25^{km}, mb3.6/4, Error ellipse: s-maj=11.0km s-min=5.9km az=33.5*
DJA ***09*** *02:23:55.4±0.9, 2°S±8°×13°4E±1°4, h26^{km}±16^{km}, M4.0/6, MLv4.0/6*
ISC 09 02:23:56.1±0.8**, 2°.11S**±0°.07×**133°.81E**±0°.10**, h25^{km}, n10, σ1^{s}60**/13**, mb3.6**/4**, Irian Jaya region**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time        Res
                                     Op      ISC      h  m  s     ISC
RKPI  Ransiki, Papua     0.70  31    P       Pb       02 24 09.5 -0.2
RKPI                                 S       Sn       02 24 20.5  0.0
FAKI  Fak Fak            1.75 243    P       Pn       02 24 24.4 -0.5
FAKI                                 S       Sn       02 24 46.6 +0.1
SWI   Sorong             2.84 296    P       Pn       02 24 40.8 +1.0
BNDI  Bandanaira         4.58 238    P       Pn       02 25 03.2 -0.5
WRA   Warramunga Arr    17.73 178    P       P        02 28 04.7 +2.6
      0.4nm,0.3s,baz=355,slow=12,SNR=6.8
WRA                                  S       Sn       02 31 16.5 -1.8
      0.1nm,0.3s,baz=349,slow=24,SNR=5.3
FITZ  Fitzroy Crossi    17.80 206    P       Pn       02 28 01.7 -0.5
      0.3nm,0.3s,baz=44,slow=12,SNR=6.3
FITZ                                 S       Sn       02 31 08.4  -11
      0.1nm,0.3s,baz=174,slow=2.7,SNR=3.2
ASAR  Alice Springs     21.43 180    P       P        02 28 45.9 +3.5
      1.3nm,0.6s,baz=4.5,slow=13,SNR=5.6
SONM  Songino Array     55.21 338    P       P        02 33 26.2 -0.8
      0.4nm,0.8s,baz=157,slow=7.8,SNR=2.3
MKAR  Makanchi Array    66.38 324    P       P        02 34 42.7 -0.3
      1.0nm,0.7s,baz=112,slow=8.1,SNR=13
ILAR  Eielson Array     87.34  25    P       P        02 36 39.8 -0.8
      0.4nm,1.0s,baz=262,slow=4.9,SNR=3.8
```

ISCJB ***09*** *02:27:18.3±0.6, 36°.50N±0°.03×9°.77W±0°.04, h35^{km}, Error ellipse: s-maj=4.9km s-min=3.9km az=171.2*
MDD ***09*** *02:27:20.7±1.2, 36°.53N×9°.88W, h40^{km}±12^{km}, mbLg2.6/2, Error ellipse: s-maj=10.8km s-min=8.1km az=40.0, PRXIMO*
INMG ***09*** *02:27:21.9±1.2, 36°.53N×9°.83W, h31^{km}, ML2.4, Error ellipse: s-maj=4.2km s-min=2.8km az=72.0*
IGIL ***09*** *02:27:21.7, 36°.52N×9°.81W, h30^{km}, ML2.4*
CNRM ***09*** *02:27:22.8, 36°.20N×9°.16W, h30^{km}, ml2.9*
ISC 09 02:27:18.3±1.8**, 36°.51N**±0°.06×**9°.89W**±0°.08**, h35^{km}, n75, σ1^{s}76**/134**, 6C-1D, West of Gibraltar**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time        Res
                                     Op      ISC      h  m  s     ISC
PFVI  Vila Bisbo         1.06  53⇑iP         Pn       02 27 38.3 +1.7
PFVI                                eS       Sn       02 27 50.4 +0.3
PFVI                                 A       A        02 27 51.4
      52nm,0.3s
PFVI  Vila Bisbo         1.06  53 ⇑Pg        Pn       02 27 38.3 +1.7
      18nm,0.3s,SNR=18
PFVI                                 Lg      Lg       02 27 50.3
      26nm,0.3s,SNR=18
PFVI  Vila Bisbo         1.06  53    P       Pn       02 27 39.9 +3.3
PFVI                                 S       Sn       02 27 51.1 +1.0
MORF  Marmelete          1.27  51   eP       Pn       02 27 41.3 +1.8
MORF                                eS       Sn       02 27 55.8 +0.3
MORF                                 AML     AML      02 27 56.7
      comp=N,73nm,0.2s
MORF  Marmelete          1.27  51⇑eP         Pn       02 27 41.4 +1.8
MORF                                eS       Sn       02 27 56.1 +0.6
MORF                                 A       A        02 27 56.8
      comp=N,53nm,0.1s
MORF  Marmelete          1.27  51    Pg      Pn       02 27 41.4 +1.8
MORF                                 Lg      Lg       02 27 56.1
      comp=N,53nm,0.1s
PTEO  Sao Teotonio       1.39  42   eP       Pn       02 27 43.1 +1.9
PTEO                                eS       Sn       02 27 59.0 +0.6
PTEO                                 A       A        02 28 00.7
      comp=N,32nm,0.4s
PTEO  Sao Teotonio       1.39  42    Pn      Pn       02 27 43.1 +1.9
PTEO                                 Sn      Sn       02 27 59.0 +0.6
      comp=N,16nm,0.4s
PBDV  Barranco-do-Ve     1.73  64⇑iPn        Pn       02 27 47.8 +1.9
PBDV                                eSn      Sn       02 28 06.9 +0.1
PBDV                                 A       A        02 28 10.6
      comp=N,15nm,0.4s
PBDV  Barranco-do-Ve     1.73  64    Pn      Pn       02 27 47.8 +1.9
PBDV                                 Sn      Sn       02 28 06.9 +0.1
      comp=N,15nm,0.4s
MESJ  Messejana          1.88  44   eP       Pn       02 27 49.8 +1.8
MESJ                                eS       Sn       02 28 10.2 -0.3
MESJ                                 AML     AML      02 28 13.0
      comp=E,27nm,0.2s
MESJ  Messejana          1.88  44⇓ePn        Pn       02 27 49.8 +1.8
MESJ                                eSn      Sn       02 28 10.9 +0.4
MESJ                                 A       A        02 28 23.8
      comp=E,11nm,0.3s
MESJ  Messejana          1.88  44    Pn      Pn       02 27 49.8 +1.8
MESJ                                 Sn      Sn       02 28 10.9 +0.4
      comp=E,11nm,0.3s
PNCL  Nicolau / Gran     1.94  34   ePn      Pn       02 27 50.3 +1.6
PNCL                                eSn      Sn       02 28 11.9 +0.2
PNCL                                 A       A        02 28 13.7
      comp=E,27nm,0.1s
PNCL  Nicolau / Gran     1.94  34    Pn      Pn       02 27 50.3 +1.6
PNCL                                 Sn      Sn       02 28 11.9 +0.2
      comp=E,27nm,0.1s
PVAQ  Vaqueiros          1.96  62⇑iPn        Pn       02 27 50.8 +1.9
PVAQ                                eSn      Sn       02 28 12.4 +0.1
PVAQ                                 A       A        02 28 14.1
      comp=E,15nm,0.1s
PVAQ  Vaqueiros          1.96  62    Pn      Pn       02 27 50.8 +1.9
PVAQ                                 Sn      Sn       02 28 12.4 +0.1
      comp=E,15nm,0.1s
PVAQ  Vaqueiros          1.96  62    P       Pn       02 27 50.5 +1.6
PVAQ                                 S       Sn       02 28 11.1 -1.2
EGRO  El Granado         2.18  61    Pn      Pn       02 27 53.8 +1.7
      comp=E,1.5nm,0.3s,SNR=14
EGRO                                 Sn      Sn       02 28 17.8  0.0
      comp=E,8.3nm,0.3s,SNR=13
PBEJ  Beja               2.21  46   ePn      Pn       02 27 55.0 +2.5
PBEJ                                eSn      Sn       02 28 19.6 +0.9
PBEJ                                 A       A        02 28 20.5
      comp=E,8.1nm,0.3s
PBEJ  Beja               2.21  46    Pn      Pn       02 27 55.0 +2.5
PBEJ                                 Sn      Sn       02 28 19.6 +0.9
      comp=E,4.1nm,0.3s
PMST  Lisbon--Monsan     2.30  14   ePn      Pn       02 27 55.3 +1.7
PMST                                eSn      Sn       02 28 21.3 +0.6
PMST                                 A       A        02 28 24.0
      comp=E,20nm,0.4s
PMAFR Mafra              2.49  11   ePn      Pn       02 27 57.9 +1.5
PMAFR                               eSn      Sn       02 28 25.7 +0.2
PMAFR                                A       A        02 28 27.8
      comp=E,35nm,0.2s
PMAFR Mafra              2.49  11    Pn      Pn       02 27 57.9 +1.5
      comp=E,30nm,0.8s,SNR=27
PMAFR                                Sn      Sn       02 28 24.8 -0.8
      comp=E,21nm,0.2s,SNR=11
PBAR  Barrancos          2.82  53   eSn      Sn       02 28 33.6 +0.1
PBAR                                 A       A        02 28 46.2
      comp=E,22nm,0.6s
PBAR  Barrancos          2.82  53    Sn      Sn       02 28 33.6 +0.1
      comp=E,22nm,0.6s
EMIN  Mina Concepcio     2.86  63    Pn      Pn       02 28 02.8 +1.4
      comp=E,1.5nm,0.3s,SNR=8.4
EMIN                                 Sn      Sn       02 28 33.6 -1.0
      comp=E,3.4nm,0.3s,SNR=10
PMTG  Montargil          2.88  27   ePn      Pn       02 28 03.3 +1.7
PMTG                                eSn      Sn       02 28 34.1 -0.9
PMTG                                 A       A        02 28 35.2
      comp=E,8.3nm,0.2s
PMTG  Montargil          2.88  27    Pn      Pn       02 28 03.3 +1.7
PMTG                                 Sn      Sn       02 28 34.1 -0.9
      comp=E,8.3nm,0.2s
PESTR Estremoz           2.98  37   ePn      Pn       02 28 04.2 +1.1
PESTR                               eSn      Sn       02 28 36.7 -0.9
PESTR                                A       A        02 28 37.5
      comp=E,4.1nm,0.2s
EBAD  Badajoz            3.20  45    Pn      Pn       02 28 07.2 +1.1
      comp=E,4.1nm,0.9s,SNR=13
EBAD                                 Sn      Sn       02 28 41.9 -1.2
      comp=E,2.0nm,0.3s,SNR=6.1
ESPR  Espera             3.26  82    Pn      Pn       02 28 08.8 +1.9
      comp=E,3.9nm,0.4s,SNR=14
ESPR                                 Sn      Sn       02 28 43.6 -0.9
      comp=E,6.9nm,0.3s,SNR=11
PTOM  Tomar              3.32  20   ePn      Pn       02 28 09.3 +1.6
PTOM                                eSn      Sn       02 28 44.6 -1.3
PTOM                                 A       A        02 28 50.8
      comp=E,8.5nm,0.3s
PTOM  Tomar              3.32  20    Pn      Pn       02 28 09.3 +1.6
PTOM                                 Sn      Sn       02 28 44.6 -1.3
      comp=E,4.2nm,0.3s
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PMRV	Marv??o	3.52	33	ePn	Pn	02 28 12.0	+1.5
PMRV				eSn	Sn	02 28 49.6	-1.3
PMRV				A	A	02 28 51.9	
	comp=E,9.1nm,0.3s						
PMRV	Marv??o	3.52	33	Pn	Pn	02 28 12.0	+1.5
PMRV				Sn	Sn	02 28 49.6	-1.3
	comp=E,9.1nm,0.3s						
PCAS	Casmilo, Conde	3.71	17	ePn	Pn	02 28 14.8	+1.8
PCAS				eSn	Sn	02 28 55.1	-0.4
PCAS				A	A	02 28 58.4	
	comp=E,3.8nm,0.4s						
PCAS	Casmilo, Conde	3.71	17	Pn	Pn	02 28 14.8	+1.8
PCAS				Sn	Sn	02 28 55.1	-0.4
	comp=E,3.8nm,0.4s						
PCBR	Castelo Branco	3.83	29	ePn	Pn	02 28 16.5	+1.8
PCBR				eSn	Sn	02 28 57.4	-1.2
PCBR				A	A	02 28 59.6	
	comp=E,3.9nm,0.6s						
PCBR	Castelo Branco	3.83	29	Pn	Pn	02 28 16.5	+1.8
PCBR				Sn	Sn	02 28 57.4	-1.2
	comp=E,1.9nm,0.6s						
ECAB	El Cabril	3.89	65	Pn	Pn	02 28 17.4	+1.8
	comp=E,1.0nm,0.3s,SNR=29						
ECAB				Sn	Sn	02 28 58.5	-1.6
	comp=E,5.6nm,0.7s						
HORN	Hornachuelos	3.93	69	P	Pn	02 28 14.9	-1.2
EMIJ	Mijas	4.12	88	Pn	Pn	02 28 20.8	+2.1
	comp=E,0.2nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	02 29 04.3	-1.4
	comp=E,0.8nm,0.2s,SNR=7.9						
MTE	Manteigas	4.30	25⇑	ePn	Pn	02 28 22.8	+1.5
MTE				eSn	Sn	02 29 07.7	-2.5
MTE				A	A	02 29 14.9	
	comp=E,4.0nm,0.9s						
MTE	Manteigas	4.30	25	Pn	Pn	02 28 22.8	+1.5
MTE				Sn	Sn	02 29 07.7	-2.5
	comp=E,2.0nm,0.9s						
SRHM	Skhour des Reh	4.35	157	P	Pn	02 28 24.0	+2.1
SRHM				S	Sn	02 29 09.6	-1.8
PVIS	Viseu	4.48	20	ePn	Pn	02 28 25.1	+1.3
PVIS				eSn	Sn	02 29 13.5	-1.2
PVIS				A	A	02 29 16.7	
	comp=E,5.7nm,0.2s						
PVIS	Viseu	4.48	20	Pn	Pn	02 28 25.1	+1.3
PVIS				Sn	Sn	02 29 13.5	-1.2
	comp=E,2.8nm,0.2s						
EADA	Adamuz	4.54	67	Pn	Pn	02 28 26.3	+1.7
	comp=E,1.6nm,0.3s,SNR=18						
EADA				Sn	Sn	02 29 14.5	-1.7
	comp=E,7.9nm,0.9s						
EPLA	Plasencia	4.65	39	Pn	Pn	02 28 27.7	+1.7
	comp=E,0.4nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	02 29 16.8	-1.9
	comp=E,3.0nm,0.3s,SNR=15						
EGOR	Sierra Gorda,	4.67	81	Sn	Sn	02 29 19.0	-0.6
	comp=E,0.8nm,0.2s,SNR=7.9						
LCRM	LCR	4.99	123	P	Pn	02 28 28.4	-2.5
LCRM				S	Sn	02 29 18.3	-9.1
ELGU	Los Guajares,	5.04	84	Sn	Sn	02 29 29.8	+1.2
	comp=E,5.5nm,0.3s,SNR=7.9						
PVRL	Vila Real	5.05	19	ePn	Pn	02 28 33.6	+2.0
PVRL				eSn	Sn	02 29 26.7	-2.1
PVRL				A	A	02 29 29.3	
	comp=E,7.7nm,0.3s						
PVRL	Vila Real	5.05	19	Pn	Pn	02 28 33.6	+2.0
PVRL				Sn	Sn	02 29 26.7	-2.1
	comp=E,3.8nm,0.3s						
POLO	Lamas de Olo	5.13	18	ePn	Pn	02 28 34.2	+1.6
POLO				eSn	Sn	02 29 28.1	-2.5
POLO				A	A	02 29 41.6	
	comp=E,1.6nm,0.9s						
POLO	Lamas de Olo	5.13	18	Pn	Pn	02 28 34.2	+1.6
POLO				Sn	Sn	02 29 28.1	-2.5
	comp=E,1.6nm,0.9s						
MVO	Moncorvo	5.16	25	ePn	Pn	02 28 34.4	+1.3
MVO				eSn	Sn	02 29 29.3	-2.1
MVO				A	A	02 29 30.9	
	comp=E,3.9nm,0.6s						
MVO	Moncorvo	5.16	25	Pn	Pn	02 28 34.4	+1.3
	comp=E,1.9nm,0.2s,SNR=9.5						
MVO				Sn	Sn	02 29 29.3	-2.1
	comp=E,5.5nm,0.7s,SNR=6.8						
PAB	San Pablo	5.32	54	Pn	Pn	02 28 36.9	+1.6
	comp=E,0.6nm,0.1s,SNR=7.9						
PAB				Sn	Sn	02 29 32.3	-3.1
	comp=E,1.2nm,0.2s,SNR=7.9						
PCAB	Cabril	5.39	15	ePn	Pn	02 28 37.6	+1.3
PCAB	Cabril	5.39	15	Pn	Pn	02 28 37.6	+1.3
ELOB	Lobios	5.54	14	Pn	Pn	02 28 39.3	+1.0
	comp=E,1.5nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	02 29 37.0	-3.8
	comp=E,1.2nm,0.1s,SNR=7.9						
MD31	MD31	5.57	129	P	Pn	02 28 34.8	-3.9
MD31				S	Sn	02 29 30.3	-11
EQES	Quesada	5.60	75	Pn	Pn	02 28 40.2	+1.1
	comp=E,0.2nm,0.1s,SNR=7.9						
EQES				Sn	Sn	02 29 40.2	-2.0
	comp=E,0.6nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	5.64	54	Pn	Pn	02 28 41.1	+1.4
	comp=E,0.8nm,0.2s,baz=241,slow=13,SNR=30						
ESDC				Sn	Sn	02 29 41.4	-1.9
	comp=E,1.2nm,0.2s,baz=241,slow=23,SNR=30						
MDT	Midelt	5.70	129	P	Pn	02 28 37.1	-3.4
MDT				S	Sn	02 29 34.8	-10
PBRG	Braganca	5.83	24	ePn	Pn	02 28 44.0	+1.8
PBRG				eSn	Sn	02 29 45.5	-2.3
PBRG				A	A	02 29 46.8	
	comp=E,2.9nm,0.3s						
PBRG	Braganca	5.83	24	Pn	Pn	02 28 44.0	+1.8
PBRG				Sn	Sn	02 29 45.5	-2.3
	comp=E,1.4nm,0.3s						
ECAL	Calabor	5.95	23	Pn	Pn	02 28 45.5	+1.5
	comp=E,7.4nm,0.7s,SNR=7.2						
ECAL				Sn	Sn	02 29 48.4	-2.5
	comp=E,3.8nm,0.3s,SNR=5.1						
TTIG	Tnine Tigouga,	6.06	168	P	Pn	02 28 45.1	-0.4
GUD	Guadarrama	6.10	46	Pn	Pn	02 28 47.4	+1.3
	comp=E,0.0nm,0.3s,SNR=7.9						
GUD				Sn	Sn	02 29 52.4	-2.3
	comp=E,1.6nm,0.3s,SNR=8.6						
OUZM	OUZ	6.16	154	P	Pn	02 28 45.9	-0.9
OUZM				S	Sn	02 29 50.9	-5.3
EAGO	Agolada(Pontev	6.44	12	Pn	Pn	02 28 51.3	+0.7
	comp=E,0.9nm,0.1s,SNR=7.9						
EAGO				Sn	Sn	02 29 57.9	-5.0
	comp=E,0.6nm,0.1s,SNR=7.9						
ETOB	Tobarra	6.96	70	Pn	Pn	02 28 58.5	+0.7
	comp=E,0.2nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	02 30 10.7	-5.0
	comp=E,0.4nm,0.1s,SNR=7.9						

IDC 09 02:43:51.2±4.0**, 11°.29S**×**164°.92E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/35**, mbtmp3.6**/3**, Error ellipse: s-maj=202.4km s-min=33.7km az=139.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.64	250	P	P	02 50 08.2	+0.5
	0.9nm,1.0s,baz=80,slow=9.3,SNR=5.9						
ASAR	Alice Springs	31.96	243	P	P	02 50 18.6	-0.7
	0.5nm,1.1s,baz=82,slow=9.0,SNR=4.3						
ILAR	Eielson Array	84.00	19	P	P	02 56 23.2	0.0
	0.6nm,1.0s,baz=237,slow=5.5,SNR=5.8						

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*IDC **09** 02:47:27.2±0.6, 11°.33S×165°.94E, h0^{km}, mb4.6/15, mb1 4.8/17, mb1mx4.5/40, mbtmp4.7/17, ML4.9/2, MS3.9/9, Ms1 3.9/9, ms1mx3.5/34, Error ellipse: s-maj=19.3km s-min=15.9km az=115.0*

*ISCJB **09** 02:47:30.8±0.3, 11°.46S±0°.04×165°.88E±0°.06, h37^{km}, mb4.8/51, MS4.1/9, Error ellipse: s-maj=7.8km s-min=5.5km az=1.2*

*NEIC **09** 02:47:30.2±2.3, 11°.35S×165°.87E, h20^{km}±14^{km}, mb4.8/30, Error ellipse: s-maj=5.7km s-min=5.3km az=99.0*

ISC 09 02:47:32.5±0.4**, 11°.42S**±0°.05×**165°.92E**±0°.08**, h37**^{km}**, n111, σ1**^{s}**.33**/113**, mb4.8**/51**, MS3.9**/9**, 2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.20	288	ePn	Pn	02 48 58.9	-2.5
HNR	Honiara	6.20	288	Pn	Pn	02 48 59.7	-1.7
	24nm,0.3s,baz=178,slow=5.0,SNR=9.4						
HNR				LR	LR	02 51 36.4	
	comp=Z,2μm,19.9s,baz=126,slow=40						
MARNC	Mare, Loyalty	10.21	169	ePn	Pn	02 49 57.2	+0.7
DZM	Mont Dzumac	10.61	177	ePn	Pn	02 50 03.5	+1.5
	91nm,0.5s						
DZM				eSn	Sn	02 51 57.7	-1.9
	75nm,0.7s						
DZM				eLR	LR	02 52 36.3	
	comp=Z,596nm,22.6s						
DZM	Mont Dzumac	10.61	177	ePn	Pn	02 50 01.9	0.0
DZM				Sn	Sn	02 51 58.2	-1.4
DZM	Mont Dzumac	10.61	177	Pn	Pn	02 50 03.4	+1.5
	8.5nm,0.3s,baz=350,slow=12,SNR=61						
DZM				Sn	Sn	02 51 58.2	-1.4
	1.9nm,0.3s,baz=129,slow=20,SNR=6.5						
DZM				LR	LR	02 53 34.8	
	comp=Z,242nm,21.4s,baz=108,slow=34						
ONTNC	Ouen Toro	10.84	177	ePn	Pn	02 50 05.7	+0.6
PINNC	Pines Island,	11.23	173	ePn	Pn	02 50 11.6	+1.2
TARA	Tarawa	14.47	29	ePn	Pn	02 50 53.4	-1.4
MANU	Manus Island	20.62	295	eP	P	02 52 08.8	-0.1
	221nm,1.3s						
CTA	Charters Tower	20.78	243	P	Pn	02 52 11.9	-1.2
	21nm,0.9s,baz=76,slow=12,SNR=13						
CTAO	Charters Tower	20.78	243	eP	P	02 52 10.8	+0.3
COEN	Coen	22.33	261	eP	P	02 52 26.0	-1.2
	20nm,1.0s						
ARMA	Armidale	23.10	213	eP	P	02 52 34.8	-0.4
	41nm,1.4s						
URZ	Urewera	28.54	161	P	P	02 53 25.5	+0.8
	3.8nm,0.7s,baz=172,slow=15,SNR=2.5						
BKZ	Black Stump Fm	29.19	163	eP	P	02 53 32.5	+2.0
	13nm,1.0s						
STKA	Stephens Creek	30.29	224	eP	P	02 53 40.1	-0.2
	2.3nm,0.9s						
STKA	Stephens Creek	30.29	224	P	P	02 53 41.5	+1.2
	6.5nm,0.7s,baz=30,slow=11,SNR=13						
STKA				LR	LR	03 05 26.1	
	comp=Z,273nm,19.3s,baz=39,slow=36						
WRAB	Tennant Creek	31.50	250	eP	P	02 53 49.9	-1.2
	14nm,1.0s						
WB2	Warramunga Arr	31.50	250	eP	P	02 53 49.5	-1.7
WRA	Warramunga Arr	31.52	250	P	P	02 53 50.7	-0.6
	10nm,0.9s,baz=80,slow=9.3,SNR=60						
WRA				PcP	PcP	02 56 44.3	+0.6
	0.5nm,0.8s,baz=81,slow=3.0,SNR=3.4						
WRA				LR	LR	03 06 37.6	
	comp=Z,178nm,19.7s,baz=85,slow=36						
RPZ	Rata Peaks	32.48	173	eP	P	02 54 01.4	+1.9
	17nm,0.8s						
RPZ	Rata Peaks	32.48	173	P	P	02 54 00.8	+1.3
	9.1nm,0.8s,baz=305,slow=2.1,SNR=6.1						
AS01	Alice Springs	32.74	244	eP	P	02 54 00.7	-1.3
AS31	Alice Springs	32.78	244	eP	P	02 54 00.9	-1.5
	1.8nm,0.6s						
ASAR	Alice Springs	32.78	244	P	P	02 54 01.3	-1.0
	8.5nm,1.0s,baz=75,slow=9.5,SNR=45						
ASAR				PcP	PcP	02 56 47.8	+0.6
	0.7nm,0.9s,baz=60,slow=3.7,SNR=3.9						
ASAR				LR	LR	03 06 19.7	
	comp=Z,244nm,19.9s,baz=78,slow=34						
BBOO	Buckleboo	34.70	227	eP	P	02 54 18.3	-0.6
	30nm,1.1s						
FITZ	Fitzroy Crossi	39.45	255	eP	P	02 54 58.6	-0.8
	16nm,0.8s						
FITZ	Fitzroy Crossi	39.45	255	P	P	02 54 58.9	-0.5
	17nm,0.9s,baz=79,slow=7.5,SNR=27						
FITZ				LR	LR	03 10 35.6	
	comp=Z,245nm,19.4s,baz=88,slow=35						
BATI	Baumata	41.50	267	P	P	02 55 17.4	+1.0
	23nm,0.4s,baz=121,slow=1.8,SNR=3.8						
BATI				LR	LR	03 12 14.9	
	comp=Z,160nm,20.9s,baz=120,slow=36						
PPT	Papeete	43.45	103	LR	LR	03 10 44.1	
	comp=Z,135nm,20.1s,baz=203,slow=32						
PPT2	Papeete2	43.45	104	eLQ	LQ	03 06 09.7	
	2μm,41.2s						
PPT2				eLR	LR	03 07 58.0	
	comp=Z,233nm,24.2s						
MBWA	Marble Bar	45.24	252	eP	P	02 55 46.8	+0.3
NWAO	Narrogin (SRO)	49.40	236	eP	P	02 56 18.7	-0.1
NWAO	Narrogin (SRO)	49.40	236	P	P	02 56 18.8	+0.1
	23nm,1.0s,baz=330,slow=8.2,SNR=5.8						
JAGI	Jajag, Banyuwa	51.02	268	eP	P	02 56 29.9	-1.4
	37nm,0.9s						
KKM	Kota Kinabalu	52.41	287	eP	P	02 56 41.4	-0.3
	48nm,1.2s						
TAOE	Nuku Hiva Isla	53.09	93	eLR	LR	03 12 26.5	
	comp=Z,141nm,23.4s						
RKT	Rikitea	57.30	110	eLR	LR	03 14 30.2	
	comp=Z,382nm,24.5s						
SSE	Sheshan	60.23	316	eP	P	02 57 36.7	-0.5
	12nm,0.8s						
KS01	Wonju Array Si	60.31	326	eP	P	02 57 37.9	+0.4
NJ2	Nanjing	62.40	315	eP	P	02 57 52.4	+0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
USRK	Ussuriysk Ar.	63.35	333	P	P	02 57 58.1	+0.3
	comp=Z,1.4nm,0.5s,baz=45,slow=13,SNR=5.2						
CN2	Changchun	66.15	329	eP	P	02 58 16.0	-0.1
CN2				esP	pP	02 58 22.8	-3.4
IPM	Ipoh	66.45	280	eP	P	02 58 19.3	+0.6
	comp=Z,48nm,1.4s						
KULM	Kulim	67.02	281	eP	P	02 58 23.1	+0.8
	comp=Z,33nm,1.7s						
SKNT	Sakolnakorn	67.40	294	P	P	02 58 27.1	+2.5
ENH	Enshi	68.26	309	eP	P	02 58 30.1	+0.2
	comp=Z,12nm,0.9s						
GYA	Guiyang	68.77	304	P	P	02 58 33.9	+0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	Baijiatuau	68.87	321	eP	P	02 58 33.1	-0.2
	comp=Z,3.8nm,0.5s						
PBKT	Sadao Pong	69.98	292	eP	P	02 58 40.4	-0.3
	comp=Z,5.2nm,1.0s						
XAN	Xi'an	70.50	312	P	P	02 58 44.0	+0.4
XAN				pP	pP	02 58 55.2	+1.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	Xi'an	70.50	312	eP	P	02 58 44.1	+0.4
	comp=Z,8.1nm,0.8s						
KMI	Kunming	71.46	301	P	P	02 58 51.7	+1.8
KMI				pmax	pmax		
	comp=Z,17nm,1.4s						
KMI				pmax	pmax		
	comp=Z,190nm,4.6s						
KMI	Kunming	71.46	301	eP	P	02 58 52.3	+2.5
	comp=Z,38nm,1.4s						
HHC	Hu-ho-hao-te	72.22	320	eP	P	02 58 55.9	+1.9
HHC				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC				pmax	pmax		
	comp=Z,180nm,5.2s						
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,6.1s						
CM01	Chiang Mai Arr	72.39	294	eP	P	02 58 55.0	-0.3
CMAR	Chiang Mai Arr	72.42	294	P	P	02 58 56.5	+1.1
	comp=Z,3.7nm,0.6s,baz=119,slow=4.6,SNR=17						
CMMT	Chiang Mai	72.53	294	P	P	02 58 58.3	+2.2
CHTO	Chiang Mai	72.53	294	eP	P	02 58 56.4	+0.2
	comp=Z,15nm,1.3s						
CHTO	Chiang Mai	72.53	294	P	P	02 58 58.3	+2.2
	comp=Z,45nm,1.2s						
CD2	Chengdu	72.96	307	⇑P	P	02 59 00.1	+1.6
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,350nm,4.2s						
LZH	Lanzhou	75.13	312	eP	P	02 59 13.3	+2.1
LZH				pP	pP	02 59 18.9	-2.5
LZH				sP	PcP	02 59 22.3	-2.4
LZH				PP	PP	03 01 57.5	-2.4
LZH				S	S	03 08 55.4	+7.9
LZH				sS	sS	03 09 08.6	+3.7
LZH	Lanzhou	75.13	312	SS	SS	03 13 33.1	-4.4
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,260nm,4.3s						
LZH				LR	LR		
	comp=N,280nm,15.7s						
LZH				LR	LR		
	comp=E,400nm,14.1s						
LZH				LR	LR		
	comp=Z,600nm,15.9s						
GAMB	Gambell	76.91	10	eP	P	02 59 20.6	+0.2
	comp=Z,6.6nm,0.8s						
QSPA	South Pole Qui	78.59	180	eP	P	02 59 30.6	+0.4
ULN	Ulaanbaatar	78.70	324	eP	P	02 59 31.2	+0.2
	comp=Z,4.1nm,0.8s						
SONM	Songino Array	79.06	324	P	P	02 59 33.8	+0.7
	comp=Z,1.9nm,0.8s,baz=147,slow=6.2,SNR=6.0						
SONA1	Songino Array	79.07	324	eP	P	02 59 32.8	-0.3
BILL	Bilibino	79.25	0	eP	P	02 59 33.2	-0.2
	comp=Z,6.5nm,0.9s						
GTA	Gaotai	79.44	314	⇓P	P	02 59 36.5	+1.2
GTA				pP	PcP	02 59 41.7	-1.5
GTA				sP	pP	02 59 45.0	-0.5
GTA				S	S	03 09 35.0	+1.0
GTA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,78nm,6.8s						
GTA				LR	LR		
	comp=N,140nm,17.8s						
GTA				LR	LR		
	comp=E,220nm,19.0s						
GTA				LR	LR		
	comp=Z,140nm,19.7s						
SHL	Shillong	80.84	298	eP	P	02 59 42.9	-0.3
	comp=Z,22nm,1.2s						
CAST	Castle Rocks	81.25	18	eP	P	02 59 43.9	-0.4
	comp=Z,17nm,1.7s						
IM3	Indian Mountai	82.74	15	eP	P	02 59 51.4	-0.7
HDA	Harding Lake	83.54	19	eP	P	02 59 56.2	-0.1
	comp=Z,8.2nm,0.8s						
COLA	College	83.59	18	eP	P	02 59 55.7	-0.7
	comp=Z,5.1nm,0.7s						
RIDG	Independ'e Rid	83.77	20	eP	P	02 59 57.7	+0.2
	comp=Z,34nm,1.6s						
IL1	Eielson Array	83.81	18	eP	P	02 59 56.6	-1.0
ILAR	Eielson Array	83.81	18	P	P	02 59 57.3	-0.3
	comp=Z,1.3nm,0.5s,baz=242,slow=5.0,SNR=48						
ILB	Eielson Array	83.81	18	eP	P	02 59 57.0	-0.7
SCRK	Sand Creek	84.21	20	eP	P	03 00 00.3	+0.5
	comp=Z,8.0nm,1.0s						
MOD	Modoc Plateau	85.78	46	eP	P	03 00 09.3	+1.0
	comp=Z,1.7nm,0.5s						
DAWY	Dawson	85.84	21	eP	P	03 00 07.8	-0.1
	comp=Z,1.7nm,0.7s						
TIXI	Tiksi	86.49	349	eP	P	03 00 11.7	+0.9
WMQ	Urumqi	89.48	315	eP	P	03 00 27.0	+1.1
SYO	Syowa Base	91.48	197⇑	ePcP	PcP	03 00 36.4	+0.9
PV14	Lion Creek, Pa	93.17	52	eP	P	03 00 41.4	-2.0
	comp=Z,24nm,0.7s						
PV01	Paradox Valley	93.47	52	eP	P	03 00 41.6	-3.1
	comp=Z,12nm,0.8s						
MK01	Makanchi Array	93.89	317	eP	P	03 00 45.7	-0.5
MK31	Makanchi Array	93.91	317	eP	P	03 00 45.8	-0.5
MKAR	Makanchi Array	93.91	317	P	P	03 00 46.8	+0.5
	comp=Z,4.2nm,0.7s,baz=96,slow=6.2,SNR=13						
MAKZ	Makanchi	94.12	317	eP	P	03 00 47.3	0.0
	comp=Z,4.7nm,1.0s						
YKA	Yellowknife Ar	95.22	27	P	P	03 00 50.2	-1.6
	comp=Z,0.5nm,0.7s,baz=258,slow=4.8,SNR=12						
TXAR	Lajitas Array	95.86	61	LR	LR	03 36 22.3	
	comp=Z,124nm,20.7s,baz=0.0,slow=31						
ARCES	ARCESS Array B	116.73	345	PKP	PKPdf	03 06 12.4	+0.1
	comp=Z,1.2nm,0.8s,baz=81,slow=27,SNR=15						
GNI	Garni	121.02	310	ePKPdf	PKiKP	03 06 22.1	+0.3
KBZ	Khabaz	121.52	315	PKP	PKiKP	03 06 23.0	+0.7
	comp=Z,1.8nm,0.7s,baz=246,slow=9.3,SNR=6.4						
KIV	Kislovodsk	121.61	315	ePKPdf	PKiKP	03 06 22.9	+0.2
FINES	FINESS Array B	122.18	339	PKP	PKPdf	03 06 23.1	+0.1
	comp=Z,1.3nm,0.8s,baz=84,slow=5.7,SNR=3.0						
CPUP	Villa Florida	123.65	132	ePKPdf	PKPdf	03 06 26.9	-0.1
CPUP	Villa Florida	123.65	132	PKP	PKPdf	03 06 26.6	-0.3
	comp=Z,2.2nm,0.8s,baz=204,slow=8.0,SNR=5.2						
BOSA	Boshof	124.96	223	PKP	PKiKP	03 06 30.1	+0.3
	comp=Z,2.0nm,0.7s,baz=329,slow=2.9,SNR=5.5						
NB2	NORSAR Subarra	127.10	345	PKPdf	PKPdf	03 06 32.8	+0.3
	comp=Z,3.3nm,1.2s,baz=34,slow=2.1						
NOA	NORSAR Array B	127.10	345	PKP	PKPdf	03 06 32.6	+0.2
	comp=Z,0.8nm,0.7s,baz=32,slow=2.0,SNR=5.1						
BRTR	Keskin Array B	129.34	312	PKP	PKPdf	03 06 38.0	+0.4
	comp=Z,0.7nm,0.9s,baz=129,slow=3.9,SNR=3.0						
LSZ	Lusaka	130.44	239	ePKPdf	PKiKP	03 06 41.6	+0.4
CLL	Collm	134.51	336	ePKPdf	PKPdf	03 06 47.0	+0.3
KEST	Kesra	147.81	323	PKPbc	PKiKP	03 07 15.4	-0.6
	comp=Z,9.8nm,0.8s,baz=100,slow=1.1,SNR=11						
ES19	SONSECA Array	150.42	344	ePKPbc	PKPbc	03 07 20.5	0.0
TOA0	Torodi Ar. Sit	164.49	278	ePKPdf	PKPdf	03 07 33.1	-0.1
TOA0				ePKPab	PKPab	03 08 25.9	-2.2
TORD	Torodi Ar. Bea	164.49	278	PKP	PKPdf	03 07 33.5	+0.2
	comp=Z,1.7nm,0.9s,baz=341,slow=3.2,SNR=9.0						

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*ISCJB **09** 02:50:36.9±0.2, 2°.35N±0°.03×99°.10E±0°.03, h150^{km}, mb4.4/71, Error ellipse: s-maj=5.0km s-min=3.1km az=151.2*

*NEIC **09** 02:50:38.6±0.3, 2°.30N×99°.18E, h163^{km}±3^{km}, mb4.6/28, Error ellipse: s-maj=5.1km s-min=3.2km az=54.0*

*IDC **09** 02:50:38.1±0.8, 2°.28N×99°.20E, h156^{km}±6^{km}, mb4.1/35, mb1 4.2/37, mb1mx4.0/65, mbtmp4.6/37, Error ellipse: s-maj=15.9km s-min=8.2km az=48.0*

*DJA **09** 02:50:39.3±0.2, 2°N±2°×9°9E±°, h144^{km}±2^{km}, M4.5/23, mb4.8/23, mB5.2/6, MLv4.4/7, Mw(mB)4.5/6*

ISC 09 02:50:37.8±0.3**, 2°.36N**±0°.04×**99°.11E**±0°.05**, h150**^{km}**, n173, σ1**^{s}**.58**/191**, mb4.6**/79**, 5C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSI	Tuntungan	1.26	334	P	Pn	02 51 06.4	+1.5
MNSI	Mandailing Nat	1.62	163	P	Pn	02 51 10.2	+1.5
MNSI				S	Sn	02 51 34.0	+1.6
KCSI	Kotacane, Aceh	1.77	311	P	Pn	02 51 11.5	+1.3
GSI	Gunungsitoli	1.86	236	ePn	Pn	02 51 13.1	+1.8
GSI	Gunungsitoli	1.86	236	P	Pn	02 51 12.1	+0.8
GSI				S	Sn	02 51 37.2	+0.2
PBSI	Pulau Batu	2.54	199	P	Pn	02 51 20.5	+1.1
SNSI	Sinabang, Aceh	2.78	271	P	Pn	02 51 23.3	+0.9
BKNI	Bangkinang	2.79	136	ePn	Pn	02 51 23.4	+0.8
BKNI	Bangkinang	2.79	136	P	Pn	02 51 34.6	+12
IPM	Ipoh	2.84	42	ePn	Pn	02 51 24.9	+1.7
PPI	Padang Panjang	3.08	155	P	Pn	02 51 27.3	+1.1
KULM	Kulim	3.29	28	ePn	Pn	02 51 29.8	+0.9
PDSI	Padang	3.52	157	P	Pn	02 51 33.4	+1.6
LHMI	Lhok Sumawe	3.58	323	ePn	Pn	02 51 34.3	+1.8
LHMI	Lhok Sumawe	3.58	323	P	Pn	02 51 34.2	+1.7
SDSI	Sungai Dareh	4.01	145	P	Pn	02 51 41.0	+2.8
MYKOM	Kota Tinggi	4.77	97	ePn	Pn	02 51 48.1	-0.1
BSI	Banda Aceh	4.92	309	P	Pn	02 51 51.6	+1.5
KRJI	Kerinci	5.01	152	P	Pn	02 51 53.0	+1.6
SKLT	Songkhla	5.01	17	P	Pn	02 51 52.4	+1.1
	110nm,0.9s,968nm0.4nm						
TRTT	Trang	5.47	6	P	Pn	02 51 58.3	+0.8
	69nm,0.8s,831nm0.2nm						
LHSI	Lahat	7.56	144	P	Pn	02 52 26.1	+0.7
	88nm,0.9s,0.4nm						
PPBI	Pangkal Pinang	8.34	123	P	Pn	02 52 38.0	+2.3
MDSI	Maura Dua	8.48	143	P	Pn	02 52 36.5	-1.1
	29nm,0.8s,0.1nm						
PHET	Kaeng Krachan	10.50	3	P	Pn	02 53 06.9	+2.5
	15nm,0.9s,147nm						
SRDT	SRDT	11.91	0	P	P	02 53 29.5	-0.3
	37nm,1.5s						
SRAK	Srakaew	11.94	14	P	P	02 53 27.7	-2.3
	100nm,0.6s,943nm						
SBUM	Sibu	13.10	89	ePn	Pn	02 53 38.1	-0.2
UTHA	Uthaitani	13.12	1	P	P	02 53 41.0	-2.2
	18nm,1.0s,147nm						
CHAI	Chaiyaphum	13.75	12	P	P	02 53 49.8	-0.4
	8.0nm,0.9s						
UMPA	Umpang Tak	13.76	359	P	Pn	02 53 47.5	+0.7
	16nm,0.8s						
PBKT	Sadao Pong	14.24	7	ePn	P	02 53 54.3	-1.2
PBKT	Sadao Pong	14.24	7	P	P	02 53 55.1	-0.5
	48nm,0.7s,1μm						
SUKH	Sukhothai	15.04	2	P	P	02 54 06.4	+2.0
	13nm,0.8s						
SKNT	Sakolnakorn	15.29	18	P	P	02 54 07.7	+0.4
	16nm,0.9s						
UTTA	Uttaradit	15.36	5	P	P	02 54 09.1	+1.1
	11nm,0.8s,96nm						
NGJI	Ngawi	15.66	128	P	P	02 54 15.2	+3.8
	49nm,0.8s						
CM01	Chiang Mai Arr	15.96	359	ePn	P	02 54 14.7	0.0

CM31	Chiang Mai Arr	16.00	359	ePn	P	02 54 15.7	+0.5
CMAR	Chiang Mai Arr	16.00	359	P	P	02 54 16.9	+1.7
	4.6nm,0.3s,baz=191,slow=11,SNR=96						
NONG	Nongkai	16.10	14	P	P	02 54 18.5	+2.3
	0.5nm,0.7s						
MTKI	Muara Teweh, K	16.12	102	P	P	02 54 23.6	+7.1
GRJI	Gresik	16.22	125	P	P	02 54 20.9	+3.4
	150nm,0.8s,1µm						
CMMT	Chiang Mai	16.35	359	P	P	02 54 20.2	+1.2
	43nm,0.8s						
CHTO	Chiang Mai	16.35	359	eP	P	02 54 19.9	+0.8
	31nm,0.8s						
CHTO	Chiang Mai	16.35	359	P	P	02 54 20.3	+1.3
	192nm,0.9s						
KMMI	Kalianget	17.53	122	P	Pn	02 54 34.3	+1.2
	121nm,0.8s,3µm						
PALK	Pallekele	18.98	286	eP	P	02 54 48.1	+0.3
	8.0nm,0.6s						
PALK	Pallekele	18.98	286	P	Pn	02 54 50.6	+0.4
	0.5nm,0.3s,baz=116,slow=12,SNR=3.3						
SRBI	Singaraja	19.12	123	P	Pn	02 54 50.7	-1.2
	123nm,1.1s,1µm						
TTSI	Tana Toraja	21.39	104	P	P	02 55 18.6	+4.8
	19nm,1.0s						
BRDH	Bariadhala	21.46	341	P	P	02 55 14.9	+0.5
	59nm,0.4s,baz=281,slow=10,SNR=7.0						
SPSI	Sidrap Palu	21.58	107	P	P	02 55 17.9	+2.1
	10.0nm,0.9s						
PLAI	Plampang	21.67	121	P	P	02 55 16.1	-0.7
	88nm,0.7s,792nm						
BNSI	Bone	22.03	108	P	P	02 55 22.6	+2.1
	59nm,1.1s,2µm						
BKSI	Bulukumba	22.33	110	P	P	02 55 24.3	+0.8
	39nm,1.4s,445nm						
KMI	Kunming	22.90	8	P	P	02 55 31.1	+2.2
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,110nm,4.2s						
KMI				LR	LR		
	comp=N,270nm,7.7s						
KMI				LR	LR		
	comp=E,250nm,6.0s						
KMI				LR	LR		
	comp=Z,150nm,8.1s						
SHL	Shillong	24.10	344	eP	P	02 55 39.6	-0.2
	comp=Z,70nm,1.3s						
BBSI	Bau Bau	24.70	108	P	P	02 55 47.6	+2.4
	comp=Z,16nm,0.9s						
HYB	Hyderabad	25.13	308	i P	P	02 55 51.0	+1.9
RAMN	Ramite	27.23	335	eP	P	02 56 09.9	+1.7
	comp=Z,13nm,0.4s						
JIRN	Jiri	28.03	335	eP	P	02 56 16.7	+1.3
	comp=Z,22nm,0.4s						
LSA	Lhasa	28.22	345	eP	P	02 56 18.2	+1.1
	comp=Z,7.7nm,0.4s						
PKI	Pulchoki	28.29	334	eP	P	02 56 18.2	+0.6
	comp=Z,6.6nm,0.5s						
GUN	Gumba	28.38	335	eP	P	02 56 19.7	+1.2
	comp=Z,30nm,0.4s						
DMN	Daman	28.46	333	eP	P	02 56 19.9	+0.8
KKN	Kakani	28.54	334	eP	P	02 56 20.3	+0.6
	comp=Z,15nm,0.4s						
KOLN	Koldanda	29.30	331	eP	P	02 56 27.5	+1.1
	comp=Z,26nm,0.6s						
ENH	Enshi	29.45	18	eP	P	02 56 26.0	-1.5
	comp=Z,5.4nm,0.6s						
DANN	Dangsing	29.71	332	eP	P	02 56 31.0	+0.8
	comp=Z,35nm,0.4s						
PYUN	Piuthan	29.87	330	eP	P	02 56 32.5	+1.0
	comp=Z,6.4nm,0.3s						
XAN	Xi'an	32.82	15	P	P	02 56 55.8	-1.3
XAN				pP	pP	02 57 03.5	-26
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN	Xi'an	32.82	15	eP	P	02 56 55.9	-1.3
	comp=Z,9.4nm,0.9s						
FITZ	Fitzroy Crossi	33.11	129	eP	P	02 56 58.1	-1.6
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	33.11	129	P	P	02 56 57.9	-1.9
	comp=Z,13nm,0.7s,baz=315,slow=7.2,SNR=19						
LZH	Lanzhou	33.84	7	eP	P	02 57 08.8	+2.7
LZH				pP	pP	02 57 42.2	+4.0
LZH				sP	sP	02 58 00.6	+5.2
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,89nm,4.2s						
NJ2	Nanjing	34.90	30	eP	P	02 57 16.3	+1.3
GTA	Gaotai	36.88	1	⇓P	P	02 57 31.8	-0.2
GTA				pP	pP	02 58 05.8	+1.3
GTA				sP	sP	02 58 23.8	+2.2
GTA				S	S	03 03 03.8	-1.9
GTA				ScP	ScP	03 03 22.5	-1.0
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,75nm,7.1s						
NWAO	Narrogin (SRO)	39.06	155	P	P	02 57 49.8	-0.4
	comp=Z,6.8nm,0.7s,baz=207,slow=16,SNR=2.6						
NIL	Nilore	39.42	325	eP	P	02 57 53.6	+0.4
HHC	Hu-ho-hao-te	39.94	15	eP	P	02 57 59.3	+1.9
BJT	Baijiatuau	40.56	20	eP	P	02 58 02.2	-0.2
	comp=Z,6.5nm,0.6s						
WRA	Warramunga Arr	41.07	124	P	P	02 58 06.2	-0.7
	comp=Z,11nm,0.6s,baz=301,slow=9.2,SNR=103						
WRAB	Tennant Creek	41.07	124	eP	P	02 58 06.0	-1.0
	comp=Z,8.0nm,0.4s						
WB2	Warramunga Arr	41.08	124	eP	P	02 58 05.6	-1.4
	comp=Z,14nm,0.6s						
WMQ	Urumqi	42.51	348	eP	P	02 58 20.0	+1.6
WMQ				sP	sP	02 59 11.8	+3.2
WMQ				pmax	pmax		
	comp=Z,32nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,400nm,4.9s						
KBL	Kabul	42.53	322	eP	P	02 58 19.3	+0.4
	comp=Z,6.7nm,0.6s						
KSH	Kashi	42.55	333	⇓iP	P	02 58 18.5	-0.4
KSH				pP	pP	02 58 56.1	+3.8
KSH				PP	PP	03 00 03.6	+2.9
KSH				S	S	03 04 25.3	-4.9
KSH				sS	sS	03 05 43.8	+15
KSH				SS	SS	03 07 38.4	-7.7
KSH				pmax	pmax		
	comp=Z,340nm,5.1s						
KSH				LR	LR		
	comp=N,210nm,6.0s						
KSH				LR	LR		
	comp=E,170nm,4.9s						
KSH				LR	LR		
	comp=Z,300nm,6.1s						
AS31	Alice Springs	42.61	129	eP	P	02 58 18.4	-1.1
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	42.61	129	P	P	02 58 18.2	-1.2
	comp=Z,4.0nm,0.6s,baz=301,slow=7.4,SNR=27						
ASAR				ScP	ScP	03 03 43.0	-2.9
	comp=Z,0.4nm,0.8s,baz=300,slow=4.2,SNR=4.1						
AS01	Alice Springs	42.64	129	eP	P	02 58 18.2	-1.6
FORT	Forrest	42.98	142	eP	P	02 58 21.2	-1.0
	comp=Z,37nm,0.6s						
KSAR	Wonju Array Be	43.80	34	P	P	02 58 28.4	-0.3
KSRS	Korea Array	43.83	34	P	P	02 58 28.4	-0.5
	comp=Z,2.3nm,0.8s,baz=222,slow=8.8,SNR=9.4						
NRN	Naryn	44.11	335	eP	P	02 58 32.3	+0.8
	comp=Z,27nm,1.0s						
GAR	Garm	44.93	328	eP	P	02 58 38.1	+0.2
	comp=Z,23nm,0.9s						
ARSB	Arslanbob	45.37	332	eP	P	02 58 42.4	+1.1
	comp=Z,45nm,1.0s						
UCH	Uchtor	45.40	334	P	P	02 58 43.6	+1.7
	SNR=9.6						
BTK	Batken	45.45	329	eP	P	02 58 43.6	+1.7
	comp=Z,15nm,0.4s						
TKM2	Tokmak 2	45.51	336	P	P	02 58 44.0	+1.5
	SNR=5.6						
KBK	Karagaybulak	45.56	335	P	P	02 58 45.0	+2.2
	SNR=20						
AML	Almayashu	45.68	334	P	P	02 58 45.8	+1.7
	SNR=11						
SONM	Songino Array	45.74	7	P	P	02 58 44.7	+0.6
	comp=Z,9.6nm,0.6s,baz=189,slow=9.5,SNR=64						
SONM				PcP	PcP	03 00 19.6	+0.3
	comp=Z,1.5nm,0.7s,baz=186,slow=3.9,SNR=4.1						
SONM				ScP	ScP	03 03 56.5	-1.9
	comp=Z,1.6nm,1.0s,baz=197,slow=3.7,SNR=7.1						
AAK	Ala-Archa	45.74	335	P	P	02 58 45.8	+1.5
	SNR=5.9						
AAK	Ala-Archa	45.74	335	eP	P	02 58 44.9	+0.7
	comp=Z,8.8nm,0.9s						
SONA1	Songino Array	45.75	7	eP	P	02 58 44.2	0.0
ULN	Ulaanbaatar	45.85	7	eP	P	02 58 45.4	+0.4
	comp=Z,6.1nm,0.6s						
CHMS	Chumysh	45.93	335	P	P	02 58 46.8	+1.3
	SNR=8.9						
EKS2	Erkin-Say	46.07	334	P	P	02 58 48.8	+2.0
	SNR=10						
USP	Ospenovka	46.25	335	P	P	02 58 49.5	+1.4
	SNR=12						
MK01	Makanchi Array	46.59	344	eP	P	02 58 51.1	+0.4
MK31	Makanchi Array	46.62	344	eP	P	02 58 50.7	-0.2
MKAR	Makanchi Array	46.62	344	P	P	02 58 51.5	+0.6
	comp=Z,12nm,0.5s,baz=153,slow=7.9,SNR=146						
MAKZ	Makanchi	46.72	344	eP	P	02 58 51.4	-0.2
	comp=Z,12nm,0.6s						
CN2	Changchun	47.42	26	eP	P	02 58 55.8	-1.3
CN2				PP	PP	03 00 48.8	-1.0
CN2				eS	S	03 05 38.5	-1.5
CN2				eS	S	03 07 02.9	+83
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,440nm,5.0s						
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,350nm,5.0s						
KK31	Karatay Array	47.91	332	eP	P	02 59 01.2	+0.3
KKAR	Karatay Array	47.91	332	eP	P	02 59 01.2	+0.3
TLY	Talaya	49.30	4	eP	P	02 59 11.6	+0.3
	comp=Z,11nm,0.6s						
USRK	Ussuriysk Ar.	50.81	30	P	P	02 59 23.4	+0.6
	comp=Z,2.9nm,0.8s,baz=222,slow=5.7,SNR=4.6						
KURBB	Kurchatov Arra	51.15	343	P	P	02 59 26.5	+1.2
KURBB				PcP	PcP	03 00 39.2	+0.6
	comp=Z,1.0nm,0.5s,baz=149,slow=2.8,SNR=3.4						
KURK	Kurchatov	51.20	343	eP	P	02 59 25.9	+0.2
KURK				PcP	PcP	03 00 39.2	+0.4
GEYT	Alibeck	51.58	319	P	P	02 59 29.9	+1.1
	comp=Z,3.5nm,0.5s,baz=142,slow=7.5,SNR=9.3						
GYA0B	ALIBECK ARRAY	51.58	319	eP	P	02 59 28.8	0.0
STKA	Stephens Creek	52.74	134	eP	P	02 59 36.2	-1.2
	comp=Z,1.3nm,0.6s						
STKA	Stephens Creek	52.74	134	P	P	02 59 36.5	-0.9
	comp=Z,5.1nm,0.5s,baz=309,slow=7.6,SNR=20						
ZAA0	Zalesovo Array	52.75	349	eP	P	02 59 36.9	-0.1
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	52.75	349	eP	P	02 59 36.6	-0.5
ZALV				PcP	PcP	03 00 46.2	+1.6
ZALV	Zalesovo Beam	52.75	349	P	P	02 59 37.4	+0.4
	comp=Z,8.5nm,0.4s,baz=172,slow=7.0,SNR=57						
ZALV				PcP	PcP	03 00 46.2	+1.6
	comp=Z,1.9nm,0.6s,baz=183,slow=2.9,SNR=4.0						
BVAR	Borovoye Array	55.81	339	P	P	02 59 59.5	+0.2
	comp=Z,11nm,0.5s,baz=142,slow=10,SNR=17						
BRVK	Borovoye	55.88	339	eP	P	02 59 58.9	-0.7
	comp=Z,12nm,0.8s						
ABKAR	Akbulak array	57.42	331	eP	P	03 00 10.5	-0.1
AKTO	Aktyubinsk	59.14	331	P	P	03 00 22.6	0.0
	baz=119,slow=7.7						
GNI	Garni	61.81	315	eP	P	03 00 40.5	-0.6
GNI	Garni	61.81	315	P	P	03 00 42.7	+1.6
	comp=Z,4.3nm,0.8s,baz=0.0,slow=0.0						
TBLG	Delisi	62.43	317	eP	P	03 00 45.4	+0.3
	comp=Z,12nm,0.9s						
ARU	Arti	62.88	336	eP	P	03 00 47.1	-0.6
	comp=Z,6.8nm,0.9s						
KBZ	Khabaz	64.47	318	P	P	03 00 59.2	+0.9
	comp=Z,4.4nm,0.8s,baz=127,slow=6.0,SNR=14						
KIV	Kislovodsk	64.70	318	eP	P	03 01 00.1	+0.1
	comp=Z,3.4nm,0.4s						
EIL	Elat	66.47	301	P	P	03 01 12.5	+1.0
	comp=Z,2.2nm,0.7s,baz=315,slow=4.3,SNR=2.9						
MMAI	Mount Meron Ar	66.79	305	P	P	03 01 15.3	+1.7
	comp=Z,2.3nm,0.6s,baz=92,slow=10,SNR=8.0						
NRIK	Noril'sk	67.32	356	P	P	03 01 16.1	+0.1
	comp=Z,7.5nm,0.5s,baz=156,slow=5.8,SNR=12						
KIRV	Kirov	68.08	334	P	P	03 01 20.6	-0.4
	comp=Z,6.4nm,0.7s,baz=307,slow=23,SNR=5.7						
CASY	Casey	68.97	175	eP	P	03 01 25.4	-1.0
	comp=Z,19nm,1.3s						
MA2	Magadan	69.47	25	eP	P	03 01 29.3	-0.3
	comp=Z,8.6nm,0.6s						
MA2	Magadan	69.47	25	P	P	03 01 29.5	-0.1
	comp=Z,8.9nm,0.6s,baz=219,slow=6.5,SNR=8.3						
PETK	Petropavlovsk-	69.72	33	P	P	03 01 30.7	-0.6
	comp=Z,3.9nm,0.8s,baz=217,slow=3.8,SNR=2.8						
BR131	Keskin Array S	69.76	312	eP	P	03 01 31.5	-0.6
BRTR	Keskin Array B	69.76	312	P	P	03 01 31.8	-0.3
	comp=Z,2.2nm,0.6s,baz=130,slow=6.7,SNR=19						
BRTR				pP	pP	03 02 10.2	+1.5
	comp=Z,1.2nm,0.8s,baz=146,slow=7.0,SNR=3.9						
TIXI	Tiksi	71.73	10	eP	P	03 01 42.1	-0.9
TIXI	Tiksi	71.73	10	P	P	03 01 43.0	-0.1
	comp=Z,6.9nm,0.3s,baz=171,slow=2.6,SNR=20						
SEY	Seymchan	71.96	23	P	P	03 01 44.9	+0.3
	comp=Z,1.3nm,0.5s,baz=245,slow=6.6,SNR=16						
AKASG	Malin Array Be	75.52	322	P	P	03 02 04.9	-0.7
	comp=Z,0.4nm,0.4s,baz=87,slow=4.7,SNR=6.4						
KIEV	Kiev	75.53	322	eP	P	03 02 04.7	-1.0
	comp=Z,1.8nm,0.6s						
VRI	Vrincioaia	76.08	317	⇑iP	P	03 02 10.2	+1.2
MLR	Muntele Rosu	76.55	316	P	P	03 02 10.4	-1.4
	comp=Z,2.1nm,0.9s,baz=58,slow=4.7,SNR=4.0						
BURAR	Bucovina Array	77.43	318	⇑iP	P	03 02 17.9	+1.3
BUR04	Bucovina Ar. S	77.43	318	eP	P	03 02 16.6	0.0
ARR	Arges	77.44	316	⇑iP	P	03 02 16.3	-0.3
BUR08	Bucovina Ar. S	77.44	318	eP	P	03 02 17.0	+0.4
VTS	Vitosha	78.02	313	⇑iP	P	03 02 20.4	+0.4
DRGR		78.98	317	⇑iP	P	03 02 26.1	+1.0
FINES	FINESS Array B	79.86	332	P	P	03 02 29.6	+0.1
	comp=Z,2.1nm,0.4s,baz=108,slow=5.1,SNR=33						
SYO	Syowa Base	81.69	198	⇓iX	P	03 02 35.1	-3.9
URZ	Urewera	82.05	129	P	P	03 02 40.0	-1.6
	comp=Z,1.3nm,0.4s,baz=90,slow=19,SNR=2.7						
ARCES	ARCESS Array B	82.10	340	P	P	03 02 41.3	+0.2
	comp=Z,0.6nm,0.4s,baz=104,slow=5.1,SNR=14						
GERES	GERESS Array B	85.21	319	P	P	03 02 57.6	+0.1
	comp=Z,0.2nm,0.3s,baz=93,slow=5.3,SNR=4.5						
GERES				pP	pP	03 03 35.0	-0.6
	comp=Z,1.2nm,1.0s,baz=120,slow=4.8,SNR=4.1						
HFS	Hagfors	85.68	330	P	P	03 02 59.5	+0.1
	comp=Z,3.1nm,0.4s,baz=154,slow=4.0,SNR=20						
SPITS	Spitsbergen Ar	86.21	348	P	P	03 03 01.6	-0.2
	comp=Z,5.0nm,0.6s,baz=116,slow=11,SNR=16						
NB2	NORSAR Subarra	86.93	331	P	P	03 03 05.6	-0.1
	comp=Z,0.2nm,0.4s,baz=95,slow=6.2						
NOA	NORSAR Array B	86.93	331	P	P	03 03 05.1	-0.5
	comp=Z,0.7nm,0.8s,baz=95,slow=5.0,SNR=4.0						
NOA				pP	pP	03 03 45.8	+1.9
	comp=Z,0.8nm,0.8s,baz=91,slow=5.2,SNR=3.6						
DAVOX	Davos/Dischmat	87.77	317	P	P	03 03 10.2	0.0
	comp=Z,1.7nm,0.6s,baz=146,slow=15						
KEST	Kesra	88.44	306	P	P	03 03 13.5	0.0
	comp=Z,3.8nm,0.9s,baz=169,slow=10,SNR=2.1						
TXAR	Lajitas Array	141.67	33	PKP	PKPdf	03 09 48.9	-3.3
	comp=Z,0.4nm,0.8s,baz=327,slow=1.2,SNR=3.6						

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*ISCJB **09** 03:01:08.6±0.3, 11°03S±0°05×165°78E±0°05, h10^{km}, mb4.3/32, MS3.9/5, Error ellipse: s-maj=7.9km s-min=7.0km az=147.7*

*IDC **09** 03:01:08.1±0.6, 11°06S×165°90E, h0^{km}, mb4.2/17, mb1 4.3/19, mb1mx4.2/36, mbtmp4.2/19, ML4.7/2, MS3.9/6, Ms1 3.9/6, ms1mx3.5/32, Error ellipse: s-maj=18.9km s-min=16.0km az=115.0*

*NEIC **09** 03:01:11.2±7.0, 10°98S×165°84E, h18^{km}±43^{km}, mb4.5/9, Error ellipse: s-maj=12.6km s-min=10.1km az=73.0*

ISC 09 03:01:09.9±0.5**, 11°01S**±0°06×**165°86E**±0°07**, h10**^{km}**, n59, σ1**^{s}**50**/61**, mb4.2**/32**, MS3.9**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.03	285	eP	Pn	03 02 40.0	+0.7
HNR				eS	Sn	03 03 48.0	-0.4
HNR	Honiara	6.03	285	ePn	Pn	03 02 37.5	-1.8
HNR				eSn	Sn	03 03 47.6	-0.8
HNR	Honiara	6.03	285	Pn	Pn	03 02 39.2	-0.1
	27nm,0.3s,baz=183,slow=3.0,SNR=7.1						
HNR				Sn	Sn	03 03 46.1	-2.3
	baz=167,slow=19,SNR=1.9						
HNR				LR	LR	03 05 05.3	
	comp=Z,2µm,19.7s,baz=116,slow=39						
MARNC	Mare, Loyalty	10.62	169	ePn	Pn	03 03 44.9	+2.7
DZM	Mont Dzumac	11.01	177	ePn	Pn	03 03 49.2	+1.5
	38nm,0.4s						
DZM				eLR	LR	03 06 18.5	
	comp=Z,355nm,33.1s						
DZM	Mont Dzumac	11.01	177	ePn	Pn	03 03 49.9	+2.2
DZM				Sn	Sn	03 05 48.6	-2.5
DZM	Mont Dzumac	11.01	177	Pn	Pn	03 03 47.4	-0.3
	3.0nm,0.3s,baz=345,slow=14,SNR=28						
DZM				Sn	Sn	03 05 48.6	-2.5
	baz=156,slow=20,SNR=2.0						
ONTNC	Ouen Toro	11.25	177	ePn	Pn	03 03 55.4	+4.6
CTA	Charters Tower	20.91	242	P	P	03 05 53.7	+0.8
	7.8nm,0.9s,baz=75,slow=12,SNR=6.3						
CTAO	Charters Tower	20.91	242	eP	P	03 05 53.9	+1.0
	23nm,1.1s						
COEN	Coen	22.34	260	eP	P	03 06 11.3	+3.1
	16nm,1.0s						
URZ	Urewera	28.94	161	P	P	03 07 09.5	+0.1
	3.1nm,0.5s,baz=294,slow=10.0,SNR=3.4						
BKZ	Black Stump Fm	29.59	163	eP	P	03 07 16.4	+1.1
	18nm,1.1s						
WAKE	Wake Island	30.11	1	eP	P	03 07 19.4	-0.5
STKA	Stephens Creek	30.54	223	P	P	03 07 22.6	-1.1
	2.4nm,0.9s,baz=30,slow=9.7,SNR=4.8						
THZ	Tophouse	31.25	170	eP	P	03 07 31.4	+1.5
	16nm,0.9s						
WRAB	Tennant Creek	31.59	250	eP	P	03 07 32.1	-1.0
	2.2nm,0.6s						
WB2	Warramunga Arr	31.59	250	eP	P	03 07 32.5	-0.7
WRA	Warramunga Arr	31.60	250	P	P	03 07 32.0	-1.2
	2.2nm,0.7s,baz=82,slow=9.2,SNR=25						
WRA				PcP	PcP	03 10 25.8	0.0
	0.9nm,0.9s,baz=83,slow=3.7,SNR=4.5						
WRA				LR	LR	03 20 12.6	
	comp=Z,327nm,18.2s,baz=75,slow=36						
LTZ	Lake Taylor	32.14	171	eP	P	03 07 38.5	+0.8
	17nm,0.7s						
RPZ	Rata Peaks	32.89	173	eP	P	03 07 45.6	+1.4
	18nm,0.7s						
RPZ	Rata Peaks	32.89	173	P	P	03 07 44.3	0.0
	21nm,0.8s,baz=25,slow=1.3,SNR=12						
ASAR	Alice Springs	32.91	243	P	P	03 07 43.4	-1.3
	0.5nm,0.4s,baz=64,slow=10,SNR=7.6						
ASAR				PcP	PcP	03 10 28.7	-0.5
	1.1nm,0.7s,baz=70,slow=2.3,SNR=7.5						
RAR	Rarotonga	34.47	111	LR	LR	03 18 37.9	
	comp=Z,309nm,19.3s,baz=110,slow=30						
FITZ	Fitzroy Crossi	39.50	255	P	P	03 08 40.4	-0.7
	1.8nm,0.7s,baz=116,slow=7.0,SNR=5.1						
PPT	Papeete	43.59	104	LR	LR	03 25 33.5	
	comp=Z,128nm,18.4s,baz=273,slow=34						
PPT2	Papeete2	43.59	104	eLR	LR	03 21 50.4	
	comp=Z,102nm,22.2s						
MBWA	Marble Bar	45.31	251	eP	P	03 09 29.1	+0.6
MJAR	Matsushiro Arr	53.99	332	P	P	03 10 36.7	+2.4
	0.9nm,0.6s,baz=142,slow=8.1,SNR=3.1						
JNU	Nakatsue	55.12	324	LR	LR	03 29 07.0	
	comp=Z,99nm,20.5s,baz=120,slow=30						
KSRS	Korea Array	59.91	326	P	P	03 11 18.2	+1.9
	0.8nm,0.7s,baz=120,slow=7.2,SNR=4.7						
KSAR	Wonju Array Be	59.93	326	P	P	03 11 18.2	+1.8
HHC	Hu-ho-hao-te	71.88	320	eP	P	03 12 36.1	+2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.2s						
CMAR	Chiang Mai Arr	72.20	293	P	P	03 12 35.9	+0.1
	comp=Z,1.7nm,0.3s,baz=123,slow=2.5,SNR=2.6						
CMAR				LR	LR	03 43 20.6	
	comp=Z,24nm,20.9s,baz=138,slow=35						
SONM	Songino Array	78.71	324	P	P	03 13 14.4	+1.7
	comp=Z,0.4nm,0.5s,baz=104,slow=6.1,SNR=1.8						
GTA	Gaotai	79.12	314	eP	P	03 13 27.0	+12
GTA				pP	PcP	03 13 32.5	+9.0
GTA				sP	sP	03 13 35.3	+16
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HDA	Harding Lake	83.18	19	eP	P	03 13 36.0	0.0
	comp=Z,9.9nm,1.0s						
COLA	College	83.22	18	eP	P	03 13 35.3	-0.8
	comp=Z,5.6nm,0.9s						
ILAR	Eielson Array	83.45	18	P	P	03 13 36.9	-0.5
	comp=Z,1.7nm,0.6s,baz=237,slow=5.1,SNR=42						
ILB	Eielson Array	83.45	18	eP	P	03 13 36.9	-0.5
SCRK	Sand Creek	83.85	20	eP	P	03 13 39.3	-0.3
	comp=Z,7.4nm,1.2s						
DAWY	Dawson	85.48	21	eP	P	03 13 47.4	-0.4
	comp=Z,0.8nm,0.5s						
MOD	Modoc Plateau	85.54	46	eP	P	03 13 48.4	-0.3
	comp=Z,1.4nm,0.3s						
NVAR	Mina Array Bea	85.92	50	P	P	03 13 50.6	-0.1
	comp=Z,1.4nm,0.8s,baz=236,slow=6.2,SNR=5.0						
U15A	North Rim	90.00	53	eP	P	03 14 11.1	+0.7
	comp=Z,3.3nm,0.8s						
HLID	Hailey	90.17	46	eP	P	03 14 11.0	+0.1
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	93.45	47	P	P	03 14 23.2	-3.0
	comp=Z,0.2nm,0.7s,baz=234,slow=5.4,SNR=2.7						
MK01	Makanchi Array	93.56	317	eP	P	03 14 26.9	+0.6
MKAR	Makanchi Array	93.58	317	P	P	03 14 26.7	+0.3
	comp=Z,0.4nm,0.6s,baz=90,slow=8.3,SNR=3.2						
ZALV	Zalesovo Beam	93.60	324	P	P	03 14 26.5	+0.2
	comp=Z,0.4nm,0.6s,baz=123,slow=5.3,SNR=2.2						
YKA	Yellowknife Ar	94.89	27	P	P	03 14 30.0	-2.0
	comp=Z,0.3nm,0.5s,baz=258,slow=4.4,SNR=4.4						
TXAR	Lajitas Array	95.71	61	P	P	03 14 36.5	-0.2
	comp=Z,0.2nm,0.5s,baz=299,slow=3.7,SNR=2.3						
KURK	Kurchatov	96.69	320	P	P	03 14 41.7	+1.2
KURBB	Kurchatov Arra	96.73	320	P	P	03 14 41.7	+1.0
	comp=Z,0.2nm,0.4s,baz=107,slow=9.0,SNR=3.6						
ARCES	ARCESS Array B	116.33	346	PKP	PKiKP	03 19 53.0	-0.3
	comp=Z,1.3nm,0.7s,baz=63,slow=3.3,SNR=4.1						
FINES	FINESS Array B	121.78	339	PKP	PKPdf	03 20 01.9	-2.1
	comp=Z,1.2nm,0.8s,baz=268,slow=7.2,SNR=3.4						
SDV	Santo Domingo	124.38	87	PKP	PKPdf	03 20 09.3	-1.3
	comp=Z,2.1nm,0.6s,baz=14,slow=23,SNR=3.9						
ESDC	Sonseca Array	150.06	344	PKPbc	PKPbc	03 21 00.1	-1.2
	comp=Z,0.8nm,0.8s,baz=347,slow=5.4,SNR=3.1						
TORD	Torodi Ar. Bea	164.37	279	PKP	PKPdf	03 21 14.1	-0.8
	comp=Z,0.3nm,0.6s,baz=125,slow=1.8,SNR=4.4						

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*IDC **09** 03:02:13.0±1.0, 34°85N×24°02E, h0^{km}, mb3.7/9, mb1 3.7/16, mb1mx3.6/55, mbtmp3.6/16, ML3.7/6, Error ellipse: s-maj=20.8km s-min=10.1km az=161.0*

*ISCJB **09** 03:02:15.8±0.6, 35°05N±0°03×23°95E±0°02, h4^{km}±3^{km}, mb3.6/10, Error ellipse: s-maj=5.0km s-min=2.8km az=23.1*

*ATH **09** 03:02:15.8, 35°07N×23°99E, h15^{km}±1^{km}, ML3.6/12, Error ellipse: s-maj=1.4km s-min=0.8km az=224.0*

*ISK **09** 03:02:15.6, 35°10N×24°05E, h5^{km}, ML3.9/14*

*THE **09** 03:02:17.7, 35°10N×24°00E, h0^{km}±1^{km}, ML3.3/6, Error ellipse: s-maj=1.2km s-min=0.6km az=226.0*

ISC 09 03:02:16.7±0.8**, 35°08N**±0°02×**23°98E**±0°02**, h15**^{km}±5^{km}**, n150, σ2**^{s}**02**/175**, mb3.8**/10**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.26	160	PG	Pg	03 02 21.5	-0.8
GVD	Gavdhos	0.26	160	P	Pg	03 02 21.1	-1.2
GVD				S	Sg	03 02 25.4	-0.7
GVD				AML	AML	03 02 28.4	
	comp=E,87943µm,0.2s						
GVD				AML	AML	03 02 28.8	
	comp=N,91207µm,0.3s						
GVD	Gavdhos	0.26	160	P	Pg	03 02 23.2	+0.9
GVD				S	Sg	03 02 27.2	+1.1
VAM	Vamos	0.37	29	P	Pg	03 02 23.4	-0.8
VAM				S	Sb	03 02 29.6	-0.9
VAM				AML	AML	03 02 30.3	
	comp=E,82102µm,0.4s						
VAM				AML	AML	03 02 32.6	
	comp=N,56892µm,0.4s						
VAM	Vamos	0.37	29	P	Pg	03 02 23.8	-0.4
VAM				S	Sb	03 02 30.0	-0.5
IMMV	Iera Moni Meta	0.38	360	PG	Pg	03 02 23.6	-0.8
IMMV				SG	Sg	03 02 29.9	+0.4
IMMV	Iera Moni Meta	0.38	360	P	Pg	03 02 23.5	-0.8
IMMV				S	Sg	03 02 29.7	+0.1
IMMV				AML	AML	03 02 30.3	
	comp=N,78717µm,0.4s						
IMMV				AML	AML	03 02 30.9	
	comp=E,52832µm,0.4s						

IMMV	**Iera Moni Meta**	**0.38**	**360**	P	**Pg**	**03 02 23.7**	**-0.6**
IMMV				S	**Sg**	**03 02 30.0**	**+0.4**
CHAN	**Chania**	**0.44**	**7**	P	**Pg**	**03 02 25.8**	**+0.4**
CHAN				S	**Sb**	**03 02 32.3**	**-0.1**
KERA	**Keramoti**	**0.45**	**309**	P	**Pg**	**03 02 24.4**	**-1.2**
KERA				S	**Sg**	**03 02 31.6**	**-0.1**
KERA				AML	AML	03 02 32.3	
	comp=E,20011μm,0.2s						
KERA				AML	AML	03 02 32.8	
	comp=N,16964μm,0.3s						
PRNS	**Prines Rethymn**	**0.51**	**56**	P	**Pg**	**03 02 25.2**	**-1.6**
PRNS				S	**Sg**	**03 02 32.6**	**-1.0**
TMBK	**Timbaki Herakl**	**0.64**	**91**	P	**Pg**	**03 02 29.0**	**-0.3**
TMBK				S	**Sb**	**03 02 40.3**	**+2.0**
IDI	**Anoyia**	**0.77**	**74**	PG	**Pg**	**03 02 30.2**	**-1.5**
IDI				SG	**Sg**	**03 02 40.9**	**-1.0**
IDI	**Anoyia**	**0.77**	**74**	P	**Pb**	**03 02 32.9**	**+1.1**
IDI				S	**Sb**	**03 02 43.2**	**+1.1**
IDI	**Anoyia**	**0.77**	**74**	Pg	**Pg**	**03 02 29.9**	**-1.8**
	comp=N,49nm,0.3s,baz=238,slow=13,SNR=331						
IDI				Lg	Lg	03 02 42.0	
	comp=N,366nm,0.3s,baz=342,slow=19,SNR=39						
KSTL	**Kastelli Herak**	**0.92**	**76**	P	**Pn**	**03 02 38.9**	**+3.9**
KSTL				S	**Sn**	**03 02 54.7**	**+6.8**
IACM	**Heraklion**	**0.92**	**76**	P	**Pg**	**03 02 33.2**	**-1.3**
IACM	**Heraklion**	**0.92**	**76**	P	**Pg**	**03 02 34.1**	**-0.4**
ANKY	**Antikythira Is**	**0.96**	**325**	P	**Pg**	**03 02 34.6**	**-0.6**
ANKY				S	**Sg**	**03 02 47.3**	**-0.5**
ANKY				AML	AML	03 02 56.6	
	comp=E,4510μm,0.5s						
ANKY				AML	AML	03 02 56.6	
	comp=N,3302μm,0.4s						
ANKY	**Antikythira Is**	**0.96**	**325**	P	**Pg**	**03 02 35.9**	**+0.7**
ANKY				S	**Sn**	**03 02 50.6**	**+1.6**
LAST	**Lasithi**	**1.23**	**86**	P	**Pb**	**03 02 38.5**	**-1.1**
LAST				AML	AML	03 03 05.5	
	comp=N,3748μm,0.7s						
LAST				AML	AML	03 03 07.1	
	comp=E,2440μm,0.7s						
LAST	**Lasithi**	**1.23**	**86**	P	**Pb**	**03 02 38.8**	**-0.8**
LAST				S	**Sn**	**03 02 57.9**	**+2.1**
NPS	**Neapolis**	**1.35**	**82**	P	**Pn**	**03 02 41.0**	**+0.1**
NPS				AML	AML	03 03 15.0	
	comp=N,2228μm,0.4s						
NPS				AML	AML	03 03 16.1	
	comp=E,3551μm,0.7s						
NPS	**Neapolis**	**1.35**	**82**	P	**Pn**	**03 02 42.4**	**+1.5**
NPS				S	**Sg**	**03 03 01.8**	**+1.6**
KYTH	**Kithira**	**1.40**	**327**	P	**Pn**	**03 02 43.0**	**+1.3**
KYTH				AML	AML	03 03 07.7	
	comp=N,1769μm,0.6s						
KYTH				AML	AML	03 03 10.6	
	comp=E,2107μm,0.8s						
KYTH	**Kithira**	**1.40**	**327**	P	**Pn**	**03 02 43.0**	**+1.3**
KYTH				S	**Sg**	**03 03 03.2**	**+1.3**
KTHR	**Kythira**	**1.42**	**326**	P	**Pn**	**03 02 43.1**	**+1.2**
MHLO	**Agia Marina, M**	**1.64**	**12**	P	**Pn**	**03 02 46.2**	**+1.2**
MHLO				AML	AML	03 03 14.1	
	comp=E,6061μm,0.7s						
MHLO				AML	AML	03 03 19.4	
	comp=N,5879μm,0.5s						
MHLO	**Agia Marina, M**	**1.64**	**12**	P	**Pn**	**03 02 46.3**	**+1.4**
MHLO				S	**Sb**	**03 03 07.8**	**+0.8**
MHLA	**Plaka, Milos I**	**1.69**	**12**	P	**Pn**	**03 02 47.0**	**+1.3**
THR6	**Thira Island,**	**1.71**	**42**	P	**Pb**	**03 02 48.5**	**+0.7**
STIA	**Sitia Lasithi**	**1.73**	**86**	P	**Pn**	**03 02 47.4**	**+1.2**
SAP3	**Santorini-Thir**	**1.75**	**39**	P	**Pb**	**03 02 48.6**	**+0.3**
SAP3	**Santorini-Thir**	**1.75**	**39**	P	**Pb**	**03 02 48.7**	**+0.3**
SAP3				S	**Sb**	**03 03 11.0**	**+0.9**
THR3	**Thira Island,**	**1.75**	**41**	P	**Pn**	**03 02 48.1**	**+1.6**
SANT	**Santorini**	**1.76**	**43**	PN	**Pn**	**03 02 47.5**	**+0.9**
SANT	**Santorini**	**1.76**	**43**	P	**Pn**	**03 02 47.5**	**+0.9**
SAP2K	**Karterados**	**1.78**	**42**	P	**Pn**	**03 02 47.8**	**+1.0**
SAP2K	**Karterados**	**1.78**	**42**	P	**Pn**	**03 02 48.0**	**+1.1**
THT2	**Imerovigli**	**1.79**	**41**	P	**Pn**	**03 02 48.3**	**+1.3**
THR8	**Santorini-Mono**	**1.80**	**42**	P	**Pn**	**03 02 47.8**	**+0.7**
THR2	**Thira island,**	**1.80**	**41**	P	**Pb**	**03 02 49.8**	**+0.5**
ZKR	**Zakros**	**1.83**	**88**	P	**Pn**	**03 02 50.1**	**+2.5**
ZKR				AML	AML	03 03 21.3	
	comp=E,1772μm,1.0s						
ZKR				AML	AML	03 03 28.3	
	comp=N,1136μm,0.5s						
ZKR	**Zakros**	**1.83**	**88**	P	**Pb**	**03 02 50.6**	**+0.7**
ZKR				S	**Sb**	**03 03 14.4**	**+1.8**
VLI	**Veliai**	**1.84**	**333**	P	**Pn**	**03 02 49.1**	**+1.5**
VLI				AML	AML	03 03 32.7	
	comp=E,982μm,0.7s						
VLI				AML	AML	03 03 33.5	
	comp=N,999μm,0.7s						
VLI	**Veliai**	**1.84**	**333**	P	**Pn**	**03 02 49.3**	**+1.6**
ANAF	**Anafi Island**	**1.93**	**48**	P	**Pn**	**03 02 50.0**	**+1.0**
ANAF				AML	AML	03 03 19.9	
	comp=E,3328μm,0.4s						
ANAF				AML	AML	03 03 21.1	
	comp=N,3527μm,0.4s						
ANAF	**Anafi Island**	**1.93**	**48**	P	**Pn**	**03 02 50.2**	**+1.2**
ANAF				S	**Sb**	**03 03 16.2**	**+0.7**
IOSP	**Ios island**	**1.95**	**33**	P	**Pn**	**03 02 50.1**	**+0.9**
IOSP	**Ios island**	**1.95**	**33**	P	**Pn**	**03 02 50.2**	**+1.0**
IOSP				S	**Sb**	**03 03 16.5**	**+0.5**
AMGA	**Amorgos Island**	**2.33**	**41**	P	**Pn**	**03 02 56.8**	**+2.3**
AMGA	**Amorgos Island**	**2.33**	**41**	P	**Pn**	**03 02 56.1**	**+1.6**
APE	**Apeiranthos**	**2.34**	**32**	PN	**Pn**	**03 02 56.9**	**+2.2**
APE	**Apeiranthos**	**2.34**	**32**	P	**Pn**	**03 02 55.8**	**+1.2**
APE	**Apeiranthos**	**2.34**	**32**	P	**Pn**	**03 02 57.2**	**+2.5**
APE				S	**Sb**	**03 03 27.2**	**-0.2**
KRND	**KRANIDI**	**2.39**	**344**	P	**Pn**	**03 02 57.0**	**+1.7**
KRND	**KRANIDI**	**2.39**	**344**	P	**Pn**	**03 02 57.4**	**+2.1**
DID	**Didima**	**2.49**	**346**	P	**Pn**	**03 02 58.0**	**+1.3**
DID	**Didima**	**2.49**	**346**	P	**Pn**	**03 02 58.2**	**+1.5**
KARP	**Karpathos**	**2.64**	**79**	PN	**Pn**	**03 02 59.6**	**+0.9**
KARP	**Karpathos**	**2.64**	**79**	P	**Pn**	**03 03 00.8**	**+2.1**
KARP	**Karpathos**	**2.64**	**79**	P	**Pn**	**03 03 01.1**	**+2.4**
VLY	**Voula,Athens**	**2.77**	**357**	P	**Pn**	**03 03 02.2**	**+1.7**
VLY	**Voula,Athens**	**2.77**	**357**	P	**Pn**	**03 03 03.0**	**+2.6**
ATHU	**Athens Univers**	**2.88**	**357**	P	**Pn**	**03 03 04.7**	**+2.7**
PTL	**Penteli**	**2.96**	**358**	P	**Pn**	**03 03 05.7**	**+2.6**
PTL	**Penteli**	**2.96**	**358**	P	**Pn**	**03 03 05.6**	**+2.5**
LTK	**Loutraki**	**3.04**	**345**	P	**Pn**	**03 03 06.5**	**+2.2**
LTK	**Loutraki**	**3.04**	**345**	P	**Pn**	**03 03 06.5**	**+2.2**
VILL	**Villia**	**3.12**	**350**	P	**Pn**	**03 03 07.1**	**+1.7**
GUR	**Goura**	**3.14**	**336**	P	**Pn**	**03 03 08.2**	**+2.6**
VIL2	**Platees**	**3.17**	**350**	P	**Pn**	**03 03 06.7**	**+0.7**
KLV	**Kalavryta, Ach**	**3.30**	**334**	P	**Pn**	**03 03 10.2**	**+2.4**
KLV	**Kalavryta, Ach**	**3.30**	**334**	P	**Pn**	**03 03 10.6**	**+2.8**
EREA	**Eretria**	**3.33**	**359**	P	**Pn**	**03 03 09.9**	**+1.7**
BODT	**Bodrum**	**3.34**	**53**	PN	**Pn**	**03 03 10.6**	**+2.2**
DAT	**Datca**	**3.35**	**60**	PN	**Pn**	**03 03 10.3**	**+1.8**
DAT	**Datca**	**3.35**	**60**	*i* P	**Pn**	**03 03 11.6**	**+3.0**
DAT				IAML_P			
	comp=Z,126nm,0.2s						
TRAZ	**Trapeza**	**3.39**	**336**	P	**Pn**	**03 03 11.6**	**+2.5**
TRAZ	**Trapeza**	**3.39**	**336**	P	**Pn**	**03 03 12.1**	**+3.0**
DRO	**Drossia**	**3.40**	**328**	P	**Pn**	**03 03 11.1**	**+2.0**
BDRM	**Kayabasi**	**3.43**	**54**	*i* P	**Pn**	**03 03 12.1**	**+2.5**
BDRM				IAML_P			
	comp=Z,164nm,0.4s						
SMG	**Samos**	**3.49**	**40**	P	**Pn**	**03 03 11.9**	**+1.5**
DSF	**Desfina**	**3.52**	**341**	P	**Pn**	**03 03 13.1**	**+2.2**
DSF	**Desfina**	**3.52**	**341**	P	**Pn**	**03 03 13.3**	**+2.4**
LAKA	**Lakka**	**3.54**	**334**	P	**Pn**	**03 03 14.0**	**+2.9**
LAKA	**Lakka**	**3.54**	**334**	P	**Pn**	**03 03 13.6**	**+2.5**
ARG	**Arkhangelos**	**3.56**	**70**	PN	**Pn**	**03 03 14.0**	**+2.7**
ARG	**Arkhangelos**	**3.56**	**70**	P	**Pn**	**03 03 13.4**	**+2.1**
ARG	**Arkhangelos**	**3.56**	**70**	P	**Pn**	**03 03 13.8**	**+2.5**
TRIZ	**Trizonia**	**3.62**	**335**	P	**Pn**	**03 03 15.0**	**+2.9**
TRIZ	**Trizonia**	**3.62**	**335**	P	**Pn**	**03 03 14.9**	**+2.9**
KALE	**Kalithea**	**3.62**	**336**	P	**Pn**	**03 03 14.8**	**+2.7**
KALE	**Kalithea**	**3.62**	**336**	P	**Pn**	**03 03 14.9**	**+2.7**
LKR	**Lokris**	**3.65**	**348**	P	**Pn**	**03 03 13.2**	**+0.7**
ATAL	**Atalanti**	**3.68**	**348**	P	**Pn**	**03 03 15.1**	**+2.0**
ATAL	**Atalanti**	**3.68**	**348**	P	**Pn**	**03 03 15.1**	**+2.0**
CHOS	**Chios island**	**3.69**	**26**	PN	**Pn**	**03 03 15.5**	**+2.3**
CHOS	**Chios island**	**3.69**	**26**	P	**Pn**	**03 03 15.7**	**+2.5**
EFP	**Efpalio**	**3.73**	**334**	P	**Pn**	**03 03 15.4**	**+1.7**
MRSB	**Marmaris-Mugla**	**3.79**	**63**	PN	**Pn**	**03 03 16.8**	**+2.3**
ANX	**Ano Chora**	**3.87**	**335**	P	**Pn**	**03 03 17.7**	**+2.0**
ANX	**Ano Chora**	**3.87**	**335**	P	**Pn**	**03 03 18.3**	**+2.6**
URLA	**Izmir**	**3.89**	**32**	PN	**Pn**	**03 03 18.5**	**+2.6**
URLA	**Izmir**	**3.89**	**32**	*i* P	**Pn**	**03 03 19.1**	**+3.3**
URLA				IAML_P			
	comp=Z,280nm,0.5s						
PVO	**Paravola**	**4.04**	**332**	P	**Pn**	**03 03 20.6**	**+2.7**
AGG	**Agios Georgios**	**4.15**	**342**	PN	**Pn**	**03 03 22.0**	**+2.5**
AGG	**Agios Georgios**	**4.15**	**342**	P	**Pn**	**03 03 22.0**	**+2.5**
AGG	**Agios Georgios**	**4.15**	**342**	P	**Pn**	**03 03 21.9**	**+2.5**
TURN	**Turunc**	**4.15**	**63**	PN	**Pn**	**03 03 17.3**	**-2.1**
TURN	**Turunc**	**4.15**	**63**	*i* P	**Pn**	**03 03 18.8**	**-0.7**
TURN				IAML_P			
	comp=Z,609nm,0.3s						
DALY	**Dalyan (Mula)**	**4.17**	**64**	PN	**Pn**	**03 03 22.9**	**+3.3**
DALY	**Dalyan (Mula)**	**4.17**	**64**	*i* P	**Pn**	**03 03 23.5**	**+3.9**
DALY				IAML_P			
	comp=Z,1μm,0.2s						
EVR	**Evrytania**	**4.20**	**336**	P	**Pn**	**03 03 22.3**	**+2.0**
AYDB	**Zeytinkoy-Aydi**	**4.25**	**47**	PN	**Pn**	**03 03 23.9**	**+2.9**
NEO	**Neokhori**	**4.26**	**352**	P	**Pn**	**03 03 22.6**	**+1.6**
XOR	**Xorichti**	**4.32**	**352**	P	**Pn**	**03 03 22.9**	**+1.1**
FETY	**Fethiye**	**4.42**	**68**	*i* P	**Pn**	**03 03 25.7**	**+2.5**
FETY				IAML_P			
	comp=Z,2μm,0.3s						
EVGI	**Lefkada island**	**4.42**	**324**	P	**Pn**	**03 03 26.6**	**+3.4**
TAVA	**DENIZLI_Tavas**	**4.64**	**58**	*i* P	**Pn**	**03 03 30.8**	**+4.5**
TAVA				IAML_P			
	comp=Z,199nm,0.2s						
AKAS	**Kas**	**4.72**	**74**	PN	**Pn**	**03 03 29.2**	**+1.8**
AKAS	**Kas**	**4.72**	**74**	*i* P	**Pn**	**03 03 29.2**	**+1.8**
AKAS				IAML_P			
	comp=Z,2μm,0.2s						
ELL	**Elmali**	**5.09**	**69**	PN	**Pn**	**03 03 34.8**	**+2.3**
KORT	**Korkueli**	**5.50**	**68**	*i* P	**Pn**	**03 03 40.5**	**+2.3**
KORT				IAML_P			
	comp=Z,234nm,0.2s						
KHAL	**Karahalli**	**5.51**	**52**	*i* P	**Pn**	**03 03 41.7**	**+3.5**
KHAL				IAML_P			
	comp=Z,162nm,0.2s						
BRDR	**BURDUR-Merkez**	**5.55**	**60**	*i* P	**Pn**	**03 03 41.4**	**+2.6**
BRDR				IAML_P			
	comp=Z,259nm,0.2s						
NEST	**Nestorio**	**5.81**	**337**	P	**Pn**	**03 03 44.2**	**+1.9**
KZIL	**AFYON_Kizioren**	**5.88**	**56**	*i* P	**Pn**	**03 03 44.6**	**+1.3**
KZIL				IAML_P			
	comp=Z,20nm,0.1s						
KEPZ	**Antalya-Kepez**	**6.44**	**71**	*i* P	**Pn**	**03 03 53.4**	**+2.4**
KEPZ				IAML_P			
	comp=Z,274nm,0.2s						
KDHN	**Kadinhani**	**7.37**	**60**	*i* P	**Pn**	**03 04 07.5**	**+3.7**
KDHN				IAML_P			
	comp=Z,47nm,0.3s						
ERMK	**Ermenek**	**7.42**	**75**	*i* P	**Pn**	**03 04 06.8**	**+2.2**
ERMK				IAML_P			
	comp=Z,293nm,0.2s						
BRTR	**Keskin Array B**	**8.97**	**56**	Pn	**Pn**	**03 04 25.4**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=234,slow=12,SNR=3.5						
MMAI	**Mount Meron Ar**	**9.70**	**99**	Pn	Pn	03 04 32.1	-3.6
	comp=Z,1.4nm,0.3s,baz=296,slow=12,SNR=19						
MMAI				Sn	**Sn**	**03 06 19.1**	**-5.3**
	comp=Z,1.6nm,0.3s,baz=277,slow=20,SNR=5.6						
EIL	**Elat**	**10.73**	**117**	Pn	Pn	03 04 46.8	-2.9
	comp=Z,1.0nm,0.3s,baz=286,slow=2.7,SNR=13						
EIL				Sn	Sn	03 06 42.5	-7.1
	comp=Z,0.8nm,0.3s,baz=9.7,slow=5.9,SNR=4.4						
ASF	**Jabal al Asfar**	**11.15**	**101**	Pn	Pn	03 04 52.6	-3.0
	comp=Z,0.4nm,0.3s,baz=8.1,slow=7.1,SNR=4.6						
ASF				Sn	**Sn**	**03 06 55.0**	**-5.1**
	comp=Z,0.2nm,0.3s,baz=146,slow=18,SNR=2.1						
GERES	**GERESS Array B**	**15.71**	**334**	Pn	**Pn**	**03 05 59.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=155,slow=11,SNR=4.5						
KHC	**Kasperske Hory**	**16.00**	**335**	*e*P	**Pn**	**03 06 01.5**	**+0.5**
KHC				*e*pP	**pP**	**03 06 08.2**	**-0.7**
AKASG	**Malin Array Be**	**16.07**	**12**	Pn	**Pn**	**03 06 00.0**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=205,slow=9.7,SNR=2.6						
KBZ	**Khabaz**	**16.95**	**54**	Pn	**P**	**03 06 16.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=229,slow=11,SNR=3.2						
ESDC	**Sonseca Array**	**22.63**	**290**	P	**P**	**03 07 18.4**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=80,slow=10,SNR=7.8						
HFS	**Hagfors**	**25.94**	**348**	P	**P**	**03 07 49.3**	**+1.2**
	comp=Z,1.7nm,0.4s,baz=156,slow=11,SNR=15						
FINES	**FINESS Array B**	**26.41**	**2**	P	**P**	**03 07 51.6**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=169,slow=13,SNR=5.7						
NB2	**NORSAR Subarra**	**27.24**	**346**	P	**P**	**03 08 01.6**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=152,slow=11						
NOA	**NORSAR Array B**	**27.24**	**346**	P	**P**	**03 08 02.0**	**+2.1**
	comp=Z,0.6nm,0.6s,baz=152,slow=9.8,SNR=9.8						
TORD	**Torodi Ar. Bea**	**29.71**	**228**	P	**P**	**03 08 21.4**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=32,slow=8.9,SNR=4.3						
ARCES	**ARCESS Array B**	**34.52**	**1**	P	**P**	**03 09 01.4**	**-2.5**
	comp=Z,1.2nm,0.7s,baz=186,slow=9.8,SNR=8.6						
KURBB	**Kurchatov Arra**	**41.92**	**51**	P	**P**	**03 10 06.2**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=274,slow=8.6,SNR=7.6						
MKAR	**Makanchi Array**	**44.62**	**56**	P	**P**	**03 10 27.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=271,slow=7.6,SNR=14						
ZALV	**Zalesovo Beam**	**45.75**	**46**	P	**P**	**03 10 35.4**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=271,slow=9.5,SNR=2.8						
USRK	**Ussuriysk Ar.**	**77.57**	**44**	P	**P**	**03 14 09.9**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=78,slow=17,SNR=6.0						

GUC 09 03:02:26.2±0.4**, 36°.28S×72°.42W, h60**^{km}±7^{km}**, ML3.6,**
Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	**Chillan**	**0.42**	**140**	*i* P	Pn	03 02 35.4	-2.0
CCHI				*e*S	Sn	03 02 45.3	-0.2
CCHI				IAML		03 02 57.8	
	comp=E,3μm,0.4s						
AGCH	**Angol**	**1.54**	**188**	*e*P	Pn	03 02 57.3	+5.9
AGCH				*e*S	Sn	03 03 07.1	-3.4
CHPI	**Pichilemu**	**1.92**	**10**	*i* P	Pn	03 02 56.4	-0.1
LMEL	**Las Melosas**	**3.03**	**37**	*e*P	Pn	03 03 12.3	+0.4
CLCH	**Cerro Calan**	**3.27**	**29**	*i* P	Pn	03 03 14.8	-0.2
CLCH				*e*S	Sn	03 03 52.4	-0.3
CLCH				IAML		03 04 15.9	
	comp=N,233nm,0.5s						
GO06	**Curarrehue**	**3.38**	**167**	*i* P	Pn	03 03 21.6	+5.0
PEL	**Peldehue**	**3.44**	**25**	*e*P	Pn	03 03 17.1	-0.3
PEL				*e*S	Sn	03 03 58.9	+2.0
PEL				IAML		03 04 20.0	
	comp=N,114nm,0.6s						

IDC ***09*** *03:07:00.4±0.8, 11°.68S×165°.66E, h0^{km}, mb4.1/10, mb1 4.2/11, mb1mx4.0/37, mbtmp4.1/11, ML4.1/1, MS3.6/1, Ms1 3.5/1, ms1mx2.8/34, Error ellipse: s-maj=30.0km s-min=18.5km az=125.0*

ISCJB ***09*** *03:07:02.4±0.4, 11°.77S±0°.07×165°.62E±0°.08, h24^{km}, mb4.3/22, MS3.5/1, Error ellipse: s-maj=12.3km s-min=8.3km az=42.3*

NEIC ***09*** *03:07:03.8±3.0, 11°.72S×165°.66E, h23^{km}±21^{km}, mb4.6/14, Error ellipse: s-maj=8.4km s-min=7.9km az=128.0*

ISC 09 03:07:04.1±0.6**, 11°.68S**±0°.09×**165°.7E**±0°.1**, h24**^{km}**, n42,**
σ**0^{s}70**/42**, mb4.3**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.04**	**291**	*e*Pn	**Pn**	**03 08 32.4**	**+0.4**
	89nm,0.6s						
DZM	**Mont Dzumac**	**10.36**	**176**	*e*Pn	**Pn**	**03 09 31.2**	**-0.1**
DZM	**Mont Dzumac**	**10.36**	**176**	Pn	**Pn**	**03 09 32.1**	**+0.8**
	1.5nm,0.3s,baz=301,slow=23,SNR=23						
CTA	**Charters Tower**	**20.43**	**243**	P	**P**	**03 11 38.2**	**-1.6**
	7.4nm,0.9s,baz=58,slow=13,SNR=4.3						
CTAO	**Charters Tower**	**20.43**	**243**	*e*P	**P**	**03 11 39.4**	**-0.5**
STKA	**Stephens Creek**	**29.93**	**224**	*e*P	**P**	**03 13 10.2**	**-0.2**
	4.4nm,1.6s						
STKA	**Stephens Creek**	**29.93**	**224**	P	**P**	**03 13 10.2**	**-0.2**
	0.7nm,0.2s,baz=34,slow=2.6,SNR=4.2						
STKA				LR	LR	03 25 01.6	
	comp=Z,106nm,19.0s,baz=185,slow=36						
WB2	**Warramunga Arr**	**31.18**	**251**	*e*P	**P**	**03 13 20.8**	**-0.8**
WRAB	**Tennant Creek**	**31.18**	**251**	*e*P	**P**	**03 13 21.6**	**+0.1**
	1.6nm,0.5s						
WR1	**Warramunga Arr**	**31.19**	**251**	*e*P	**P**	**03 13 21.2**	**-0.5**
	12nm,1.4s						
WRA	**Warramunga Arr**	**31.19**	**251**	P	**P**	**03 13 21.2**	**-0.5**
	1.7nm,0.7s,baz=82,slow=9.0,SNR=17						
RPZ	**Rata Peaks**	**32.26**	**173**	P	**P**	**03 13 31.1**	**+0.4**
	6.2nm,0.8s,baz=24,slow=13,SNR=4.4						
AS01	**Alice Springs**	**32.39**	**244**	*e*P	**P**	**03 13 32.4**	**+0.1**
ASAR	**Alice Springs**	**32.44**	**244**	P	**P**	**03 13 32.0**	**-0.6**
	1.7nm,0.9s,baz=83,slow=9.0,SNR=11						
QSPA	**South Pole Qui**	**78.33**	**180**	*e*P	**P**	**03 19 02.6**	**+0.4**
ULN	**Ulaanbaatar**	**78.76**	**324**	*e*P	**P**	**03 19 04.7**	**-0.2**
	1.3nm,0.4s						
ANM	**Nome**	**79.13**	**12**	*e*P	**P**	**03 19 07.1**	**+0.8**
	21nm,1.9s						
SONA0	**Songino Array**	**79.13**	**324**	*e*P	**P**	**03 19 08.3**	**+1.4**
SONM	**Songino Array**	**79.13**	**324**	P	**P**	**03 19 08.3**	**+1.4**
	0.4nm,0.7s,baz=116,slow=3.4,SNR=3.5						
KLU	**Klutina**	**82.22**	**21**	*e*P	**P**	**03 19 22.3**	**-0.8**
	11nm,0.7s						
TLY	**Talaya**	**82.60**	**326**	*e*P	**P**	**03 19 25.3**	**+0.1**
	6.0nm,0.7s						
MCK	**McKinley**	**82.77**	**19**	*e*P	**P**	**03 19 26.1**	**+0.3**
	12nm,1.2s						
IM3	**Indian Mountai**	**83.06**	**16**	*e*P	**P**	**03 19 27.4**	**+0.2**
MDM	**Murphy Dome**	**83.86**	**18**	*e*P	**P**	**03 19 32.1**	**+0.7**
	4.9nm,1.0s						
HDA	**Harding Lake**	**83.87**	**19**	*e*P	**P**	**03 19 32.2**	**+0.8**
	8.8nm,0.8s						
COLA	**College**	**83.92**	**18**	*e*P	**P**	**03 19 31.6**	**0.0**
	3.4nm,0.7s						
IL1	**Eielson Array**	**84.14**	**19**	*e*P	**P**	**03 19 32.7**	**-0.1**
ILAR	**Eielson Array**	**84.14**	**19**	P	**P**	**03 19 33.0**	**+0.2**
	1.6nm,0.9s,baz=252,slow=4.7,SNR=20						
SCRK	**Sand Creek**	**84.54**	**20**	*e*P	**P**	**03 19 35.1**	**+0.1**
	9.5nm,1.1s						
CMB	**Columbia Colle**	**84.82**	**50**	*e*P	**P**	**03 19 36.7**	**-0.2**
DAWY	**Dawson**	**86.18**	**21**	*e*P	**P**	**03 19 43.8**	**+0.7**
	2.0nm,0.8s						
DAC	**Darwin (Calif)**	**86.39**	**52**	*e*P	**P**	**03 19 44.6**	**-0.4**
	0.9nm,0.5s						
NV01	**Mina Array Sit**	**86.50**	**50**	*e*P	**P**	**03 19 44.7**	**-0.7**
NVAR	**Mina Array Bea**	**86.50**	**50**	P	**P**	**03 19 44.7**	**-0.7**
	0.2nm,0.3s,baz=244,slow=4.9,SNR=3.4						
MK32	**Makanchi Array**	**93.93**	**317**	*e*P	**P**	**03 20 20.8**	**+0.9**
MKAR	**Makanchi Array**	**93.93**	**317**	P	**P**	**03 20 20.8**	**+0.9**
	0.8nm,0.8s,baz=94,slow=6.6,SNR=8.0						
YKA	**Yellowknife Ar**	**95.58**	**27**	P	**P**	**03 20 25.7**	**-1.3**
	0.3nm,0.6s,baz=260,slow=4.5,SNR=6.1						
YKB5	**Yellowknife Ar**	**95.58**	**27**	*e*P	**P**	**03 20 25.7**	**-1.3**
ARA0	**ARCESS Array S**	**116.93**	**345**	*e*PKPdf	**PKPdf**	**03 25 46.0**	**-0.3**
ARCES	**ARCESS Array B**	**116.93**	**345**	PKP	**PKPdf**	**03 25 46.0**	**-0.3**
	1.5nm,0.7s,baz=13,slow=2.0,SNR=9.9						
SDV	**Santo Domingo**	**124.61**	**87**	*e*PKPdf	**PKiKP**	**03 26 03.1**	**-0.1**
ESDC	**Sonseca Array**	**150.64**	**344**	PKPbc	**PKiKP**	**03 26 55.8**	**+0.5**
	1.5nm,0.9s,baz=356,slow=4.3,SNR=4.9						

IDC ***09*** *03:16:30.6±1.7, 12°.18N×87°.45W, h0^{km}, mb3.8/8, mb1 4.1/10, mb1mx3.8/36, mbtmp3.8/10, ML2.8/3, MS3.2/2, Ms1 3.2/2, ms1mx2.8/26, Error ellipse: s-maj=45.9km s-min=24.5km az=38.0*

UCR ***09*** *03:16:32.4±1.4, 11°.71N×87°.81W, h14^{km}±6^{km}, ML3.5, mb4.3(NEIC)*

ISCJB ***09*** *03:16:34.0±0.7, 11°.71N±0°.06×87°.78W±0°.05, h54^{km}±6^{km}, mb4.1/15, MS3.6/1, Error ellipse: s-maj=11.9km s-min=4.8km az=36.0*

NEIC ***09*** *03:16:36.6±0.8, 11°.95N×87°.62W, h52^{km}±7^{km}, mb4.3/10, Error ellipse: s-maj=13.2km s-min=6.8km az=216.0*

ISC 09 03:16:35.4±1.3**, 11°.78N**±0°.06×**87°.76W**±0°.05**, h51**^{km}±12^{km}**,**
n53, σ**1^{s}44**/59**, mb4.2**/15**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.15**	**37**	*e*P	**Pn**	**03 16 55.0**	**-0.2**
CRIN				IAML		03 17 37.9	
	comp=N,2μm,0.5s						
COPN	**Copaltepe**	**1.21**	**71**	*e*P	**Pn**	**03 16 55.2**	**-0.8**
COPN				IAML		03 17 07.8	
	comp=Z,758nm,0.8s						
CNGN	**Cerro Negro**	**1.26**	**55**	*e*P	**Pn**	**03 16 56.0**	**-0.7**
CNGN				*e*S	**Sn**	**03 17 14.5**	**+1.8**
MOMN	**Momotombo**	**1.35**	**62**	*e*P	**Pn**	**03 16 57.0**	**-0.9**
CNCH	**Conchagua**	**1.49**	**357**	*e*P	**Pn**	**03 16 59.6**	**-0.3**
MGAN	**Managua**	**1.52**	**76**	*e*P	**Pn**	**03 16 59.1**	**-1.1**
MGAN				*e*S	**Sn**	**03 17 20.6**	**+1.6**
LCND	**La Caada**	**1.53**	**355**	*e*P	**Pn**	**03 16 59.6**	**-0.7**
LCND				*e*S	**Sn**	**03 17 22.4**	**+3.4**
LCND				IAML		03 17 26.9	
	comp=Z,1μm,0.4s						
BRAN	**Las Pilas**	**1.67**	**56**	*e*S	**Sn**	**03 17 18.2**	**-4.2**
VSM	**San Miguel**	**1.72**	**343**	*e*P	**Pn**	**03 17 03.4**	**+0.3**
VSM				*e*S	**Sn**	**03 17 27.0**	**+3.0**
PACA	**Pacayal**	**1.77**	**342**	*e*P	**Pn**	**03 17 02.6**	**-1.1**
TECA	**Tecapa**	**1.85**	**337**	*e*P	**Pn**	**03 17 04.0**	**-0.9**
ESTN	**Estel**	**1.89**	**46**	*e*Pn	**Pn**	**03 17 04.7**	**-0.7**
ESTN	**Estel**	**1.89**	**46**	*e*P	**Pn**	**03 17 05.1**	**-0.2**
CAHU	**Cacacuatique**	**2.03**	**348**	*e*P	**Pn**	**03 17 07.5**	**+0.1**
MATN	**Matagalpa**	**2.13**	**57**	*e*P	Pn	03 17 03.6	-5.0
LFRS	**El Faro**	**2.23**	**325**	*e*P	**Pn**	**03 17 09.0**	**-1.0**
TGUH	**Tegucigalpa,Un**	**2.32**	**12**	*e*Pn	**Pn**	**03 17 11.4**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.32**	**12**	*e*P	**Pn**	**03 17 11.1**	**0.0**
BOQS	**Boqueron**	**2.45**	**323**	*e*S	**Sn**	**03 17 43.4**	**+1.4**
BUEV	**Buena Vista**	**2.50**	**113**	*e*P	**Pn**	**03 17 13.4**	**-0.4**
BUEV				*e*S	**Sn**	**03 17 45.2**	**+2.1**
PLVR	**Palo Verde**	**2.76**	**121**	*e*P	**Pn**	**03 17 16.6**	**-0.7**
JTS	**JuntasAbangare**	**3.13**	**118**	Pn	**Pn**	**03 17 22.1**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=0.0,slow=20,SNR=3.3						
JTS				Sn	**Sn**	**03 17 57.1**	**-1.2**
	comp=Z,6.4nm,0.3s,baz=351,slow=22,SNR=5.3						
JTS				LR	LR	03 18 43.8	
	comp=Z,178nm,21.4s,baz=3.0,slow=43						
ESPN	**Las Esperanzas**	**3.41**	**83**	*e*Pn	**Pn**	**03 17 25.2**	**-0.9**
APG	**El Apazote**	**4.15**	**321**	Pn	**Pn**	**03 17 35.2**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=1.8						
APG				Sn	**Sn**	**03 18 19.2**	**-4.6**
	comp=Z,1.3nm,0.3s,baz=132,slow=24,SNR=6.2						
CCIG	**Comitan**	**6.17**	**317**	*e*Pn	**Pn**	**03 18 04.9**	**+0.7**
CMIG	**Matias Romero**	**8.69**	**308**	Pn	**Pn**	**03 18 39.5**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=146,slow=9.2,SNR=4.0						
CMIG				Sn	**Sn**	**03 20 13.8**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=108,slow=3.2,SNR=2.3						
LNIG	**Linares**	**17.12**	**321**	*e*Pn	**P**	**03 20 33.3**	**+1.0**
	comp=Z,12nm,1.1s						
833A	**Chaparral WMA,**	**19.73**	**328**	*e*P	**P**	**03 21 01.9**	**+0.9**
	comp=Z,32nm,0.8s						
LTX	**Lajitas**	**22.91**	**322**	*e*P	**P**	**03 21 36.4**	**+1.2**
TXAR	**Lajitas Array**	**22.91**	**322**	P	**P**	**03 21 36.4**	**+1.2**
	comp=Z,4.4nm,0.8s,baz=137,slow=9.1,SNR=19						
TX31	**Lajitas Ar. Si**	**22.91**	**322**	*e*P	**P**	**03 21 36.5**	**+1.4**
MIAR	**Mount Ida**	**23.28**	**348**	*e*P	**P**	**03 21 38.2**	**-0.5**
	comp=Z,14nm,0.8s						
TKL	**Tuckaleechee C**	**24.05**	**8**	P	**P**	**03 21 44.8**	**-1.1**
	comp=Z,7.5nm,1.0s,baz=182,slow=10,SNR=3.5						
MSTX	**Muleshoe**	**26.00**	**331**	*e*P	**P**	**03 22 04.0**	**+0.3**
	comp=Z,12nm,0.9s						
AMTX	**Amarillo**	**26.25**	**333**	*e*P	**P**	**03 22 06.1**	**+0.1**
	comp=Z,3.0nm,0.3s						
WCI	**Wyandotte Cave**	**26.38**	**3**	*e*P	**P**	**03 22 06.8**	**-0.2**
	comp=Z,20nm,0.6s						
PD31	**Pinedale Array**	**36.22**	**332**	*e*P	**P**	**03 23 33.8**	**+0.1**
	comp=Z,2.6nm,1.0s						
PDAR	**Pinedale Array**	**36.22**	**332**	P	**P**	**03 23 33.8**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=122,slow=8.6,SNR=2.7						
REDW	**Red Top Meadow**	**37.28**	**332**	*e*P	**P**	**03 23 43.9**	**+1.2**
	comp=Z,25nm,1.6s						
MOOW	**Moose Ponds**	**37.53**	**332**	*e*P	**P**	**03 23 45.6**	**+0.8**
	comp=Z,3.7nm,1.1s						
NVAR	**Mina Array Bea**	**38.01**	**320**	P	**P**	**03 23 48.4**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=130,slow=9.1,SNR=2.7						
LVC	**Limon Verde**	**38.85**	**152**	*e*P	**P**	**03 23 58.1**	**+1.8**
	comp=Z,1.3nm,0.6s						
ULM	**Lac du Bonnet**	**38.94**	**352**	P	**P**	**03 23 54.1**	**-2.2**
	comp=Z,4.1nm,0.8s,baz=165,slow=9.3,SNR=9.5						
MCMT	**McKenzie Canyo**	**39.33**	**332**	*e*P	**P**	**03 24 00.3**	**+0.4**
SCHQ	**Schefferville**	**46.01**	**17**	P	**P**	**03 24 52.0**	**-1.7**
	comp=Z,4.4nm,0.9s,baz=225,slow=8.7,SNR=6.1						
BDFB	**Brasilia**	**47.85**	**124**	LR	LR	03 44 55.5	
	comp=Z,66nm,20.3s,baz=283,slow=36						
YKA	**Yellowknife Ar**	**54.18**	**345**	P	**P**	**03 25 54.6**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=136,slow=7.8,SNR=13						
YKB5	**Yellowknife Ar**	**54.18**	**345**	*e*P	**P**	**03 25 55.0**	**-0.4**
ILAR	**Eielson Array**	**66.51**	**336**	P	**P**	**03 27 21.0**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=115,slow=6.2,SNR=3.8						
WR1	**Warramunga Arr**	**138.79**	**253**	*e*PKPdf	**PKiKP**	**03 35 59.8**	**+0.8**
WRA	**Warramunga Arr**	**138.79**	**253**	PKP	**PKiKP**	**03 35 59.8**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=95,slow=2.9,SNR=2.6						
CM31	**Chiang Mai Arr**	**149.24**	**347**	*e*PKPbc	**PKPbc**	**03 36 20.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**149.24**	**347**	PKPbc	**PKPbc**	**03 36 20.0**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=348,slow=3.5,SNR=7.2						

ISCJB ***09*** *03:20:33.5±0.6, 36°.32N±0°.04×70°.77E±0°.08, h188^{km}, mb3.5/8, Error ellipse: s-maj=9.7km s-min=5.2km az=161.5*

IDC ***09*** *03:20:35.6±3.0, 36°.20N×71°.13E, h218^{km}±27^{km}, mb3.2/9, mb1 3.3/15, mb1mx3.0/50, mbtmp3.8/15, Error ellipse: s-maj=21.7km s-min=14.8km az=12.0*

*NNC **09** 03:20:42.7±1.9, 36°.77N×70°.94E, h212^{km}±25^{km}, mb2.7, mpv3.6, Error ellipse: s-maj=22.9km s-min=15.6km az=62.0*

ISC 09 03:20:34.5±0.7**, 36°.30N**±0°.07×**70°.94E**±0°.08**, h188**^{km}**, n30, σ1^{s}95**/35**, mb3.6**/8**, 5C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.22	28	⇑P	Pn	03 21 42.5	+3.7
	6.3nm,0.4s						
SFK				⇓S	Sn	03 22 30.6	+1.2
	105nm,0.6s						
MNAS	Manas	6.30	11	⇑P	Pn	03 22 08.5	+3.0
	3.9nm,0.4s						
MNAS				⇓S	Sn	03 23 15.4	-2.0
	26nm,1.0s						
KK31	Karatay Array	6.81	357	P	Pn	03 22 15.1	+3.1
	1.1nm,0.3s,baz=179,slow=13,SNR=34						
KK31				S	Sn	03 23 27.5	-1.7
	7.2nm,0.5s,baz=176,slow=15,SNR=12						
AAK	Ala-Archa	6.90	22	⇓P	Pn	03 22 16.8	+3.4
	2.4nm,0.5s						
AAK				⇑S	Sn	03 23 32.2	+0.5
	24nm,1.0s						
AAK	Ala-Archa	6.90	22	P	Pn	03 22 15.2	+1.8
	1.6nm,0.3s,baz=185,slow=5.9,SNR=7.9						
AAK				S	Sn	03 23 30.3	-1.4
	1.0nm,0.3s,baz=314,slow=21,SNR=21						
GEYT	Alibeck	10.37	283	P	Pn	03 23 01.5	+2.8
	0.2nm,0.3s,baz=99,slow=9.5,SNR=3.7						
PYUN	Piuthan	13.06	125	eP	Pn	03 23 34.9	+1.5
	8.1nm,0.3s						
DANN	Dangsing	13.42	123	eP	Pn	03 23 39.9	+2.0
	9.7nm,0.3s						
MK31	Makanchi Array	13.48	35	⇓P	Pn	03 23 39.3	+1.0
	0.7nm,0.7s						
MKAR	Makanchi Array	13.48	35	P	Pn	03 23 38.0	-0.3
	0.2nm,0.3s,baz=209,slow=8.1,SNR=16						
DMN	Daman	14.81	122	eP	Pn	03 23 56.9	+1.8
	8.9nm,0.3s						
KKN	Kakani	14.81	121	eP	Pn	03 23 56.7	+1.6
	9.4nm,0.5s						
PKIN	Phulchoki	15.03	121	eP	Pn	03 23 59.0	+1.2
	9.3nm,0.5s						
PKI	Pulchoki	15.04	121	eP	Pn	03 23 59.3	+1.3
	3.8nm,0.2s						
AB31	Akbulak array	15.24	332	⇑P	P	03 24 01.8	+1.2
	1.5nm,0.7s,baz=138,slow=11,SNR=13						
KURBB	Kurchatov Arra	15.33	19	P	Pn	03 24 00.7	-0.3
	0.0nm,0.3s,baz=206,slow=12,SNR=4.1						
JIRN	Jiri	15.53	119	eP	Pn	03 24 05.6	+1.6
	42nm,0.5s						
RAMN	Ramite	16.25	121	eP	P	03 24 13.9	+1.7
	7.4nm,0.3s						
BVAR	Borovoye Array	16.73	359	P	Pn	03 24 18.3	+0.5
	0.3nm,0.3s,baz=225,slow=38,SNR=3.8						
AKTO	Aktyubinsk	16.93	331	⇑P	Pn	03 24 21.1	+0.8
	6.1nm,0.7s						
AKTO	Aktyubinsk	16.93	331	P	Pn	03 24 21.1	+0.8
	1.4nm,0.3s,baz=154,slow=6.6,SNR=20						
ZALV	Zalesovo Beam	20.12	24	P	P	03 24 51.6	-2.1
	0.8nm,0.4s,baz=212,slow=12,SNR=5.7						
SONM	Songino Array	28.49	55	P	P	03 26 10.9	-1.2
	0.7nm,0.7s,baz=258,slow=9.7,SNR=6.3						
FINES	FINESS Array B	37.62	326	P	P	03 27 31.2	+0.4
	6.0nm,1.2s,baz=270,slow=26,SNR=3.2						
ARCES	ARCESS Array B	41.31	338	P	P	03 28 00.9	-0.3
	1.8nm,0.9s,baz=117,slow=7.4,SNR=5.6						
NOA	NORSAR Array B	44.51	323	P	P	03 28 25.3	-1.6
	0.2nm,0.6s,baz=306,slow=19,SNR=3.0						
TORD	Torodi Ar. Bea	65.67	269	P	P	03 30 57.6	-1.3
	0.3nm,0.9s,baz=331,slow=5.6,SNR=2.8						
YKA	Yellowknife Ar	81.45	3	P	P	03 32 28.2	-1.8
	0.2nm,0.5s,baz=348,slow=5.1,SNR=6.8						
WRA	Warramunga Arr	81.92	122	P	P	03 32 30.0	-3.2
	0.7nm,0.5s,baz=324,slow=4.9,SNR=31						
ASAR	Alice Springs	84.18	125	P	P	03 32 42.0	-2.8
	0.9nm,0.6s,baz=311,slow=4.9,SNR=12						

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*ISCJB **09** 03:21:18.9±1.1, 11°.0S±0°.1×166°.0E±0°.1, h10^{km}, mb3.7/4, MS3.4/3, Error ellipse: s-maj=19.8km s-min=11.9km az=31.2*

*IDC **09** 03:21:19.1±1.7, 10°.93S×165°.88E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.7/35, mbtmp3.8/6, ML3.9/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/28, Error ellipse: s-maj=51.2km s-min=28.4km az=127.0*

ISC 09 03:21:20.4±1.3**, 10°.9S**±0°.1×**166°.0E**±0°.1**, h10**^{km}**, n12, σ1^{s}27**/7**, mb3.8**/5**, MS3.4**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.14	284	Pn	Pn	03 22 54.5	+3.3
	6.6nm,0.3s,baz=153,slow=3.6,SNR=3.7						
HNR				Sn	Sn	03 24 02.4	+0.9
	15nm,0.3s,baz=129,slow=12,SNR=2.1						
HNR				LR	LR	03 25 09.9	
	comp=Z,167nm,19.6s,baz=1.5,slow=38						
DZM	Mont Dzumac	11.08	178	Pn	Pn	03 23 59.6	+0.5
	0.8nm,0.3s,baz=336,slow=9.9,SNR=13						
DZM				LR	LR	03 28 09.0	
	comp=Z,272nm,18.3s,baz=336,slow=37						
CTA	Charters Tower	21.07	242	P	P	03 26 05.7	+0.8
	2.5nm,0.6s,baz=69,slow=14,SNR=3.6						
H11S2	WAKE ISLAND Hy	29.25	1	T	T	03 57 24.2	
	baz=181,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	29.25	1	T	T	03 57 24.4	
	baz=181,slow=76,SNR=27						
H11S1	WAKE ISLAND Hy	29.27	1	T	T	03 57 25.5	
	baz=181,slow=76,SNR=22						
STKA	Stephens Creek	30.69	224	LR	LR	03 38 31.8	
	comp=Z,64nm,18.2s,baz=209,slow=34						
WRA	Warramunga Arr	31.75	250	P	P	03 27 44.3	-0.7
	1.3nm,0.9s,baz=82,slow=9.0,SNR=9.3						
WRA				LR	LR	03 40 38.6	
	comp=Z,65nm,18.1s,baz=185,slow=37						
RPZ	Rata Peaks	32.95	173	LR	LR	03 39 02.9	
	comp=Z,78nm,21.1s,baz=328,slow=32						
ASAR	Alice Springs	33.06	243	P	P	03 27 55.0	-1.5
	1.1nm,0.8s,baz=78,slow=9.3,SNR=9.5						
ILAR	Eielson Array	83.33	18	P	P	03 33 48.2	+1.0
	0.3nm,0.7s,baz=239,slow=6.0,SNR=5.0						
MKAR	Makanchi Array	93.61	317	P	P	03 34 36.0	-1.0
	0.2nm,0.7s,baz=93,slow=4.5,SNR=3.2						

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*SOME **09** 03:25:31.7, 41°.78N×72°.30E, h0^{km}*

*KRNET **09** 03:25:31.2±0.1, 41°.76N×72°.26E, h17^{km}, mb2.2*

*NNC **09** 03:25:34.3±1.1, 41°.88N×72°.26E, h0^{km}, mb2.7, mpv2.5, Error ellipse: s-maj=7.0km s-min=5.0km az=153.0*

ISC 09 03:25:31.5±1.2**, 41°.76N**±0°.04×**72°.27E**±0°.02**, h0**^{km}±12^{km}**, n19, σ0^{s}56**/37**, 23C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.23	281	⇑iP	Pg	03 25 35.6	-0.4
	baz=75						
ARK				⇑iS	Sg	03 25 39.0	-0.1
	baz=75						
ARSB	Arslanbob	0.69	129	⇑iP	Pg	03 25 44.2	-0.5
	baz=29						
ARSB				⇑iS	Sg	03 25 54.0	+0.4
	baz=29						
MNAS	Manas	0.75	13	⇓P	Pg	03 25 45.9	-0.1
	0.8nm,0.4s						
MNAS				⇑S	Sg	03 25 56.1	+0.3
	1.0nm,0.3s						
MNAS	Manas	0.75	13	P	Pg	03 25 45.9	-0.1
	1.1nm,0.1s						
MNAS				S	Sg	03 25 56.3	+0.5
	2.7nm,0.1s						
MNAS	Manas	0.75	13	⇑iP	Pg	03 25 45.9	-0.1
	baz=14						
MNAS				⇑iS	Sg	03 25 56.1	+0.3
	baz=14						
AML	Almayashu	1.13	70	⇑iP	Pg	03 25 52.7	-0.5
	baz=70						
AML				⇑iS	Sg	03 26 07.9	+0.1
	baz=70						
MRKS	Merke	1.22	35	P	Pg	03 25 54.4	-0.5
	1.7nm,0.2s						
MRKS				S	Sg	03 26 10.8	+0.1
	7.6nm,0.4s						
MRKS	Merke	1.22	35	⇓iP	Pg	03 25 54.4	-0.5
	1.7nm,0.2s						
MRKS				⇓iS	Sg	03 26 10.8	+0.1
	4.8nm,0.1s						
EKS2	Erkin-Say	1.44	51	⇑iP	Pn	03 25 57.7	-1.3
	baz=51						
EKS2				⇑iS	Sg	03 26 16.7	-1.1
	baz=51						
ARLS	Aral	1.54	85	⇑iP	Pn	03 26 00.1	-0.3
	baz=85						
ARLS				⇑iS	Sg	03 26 20.6	-0.4
	baz=85						
IUG	Iuzhnay	1.72	284	P	Pg	03 26 04.2	-0.2
	5.5nm,0.1s						
IUG				S	Sg	03 26 27.6	+0.9
	16nm,0.2s						
IUG	Iuzhnay	1.72	284	eP	Pg	03 26 04.2	-0.2
	5.5nm,0.1s						
IUG				eS	Sg	03 26 27.6	+0.9
	11nm,0.2s						
UCH	Uchtor	1.74	73	⇑iP	Pn	03 26 03.2	-0.2
	baz=74						
UCH				⇑iS	Sn	03 26 26.3	-0.2
	baz=74						
AAK	Ala-Archa	1.87	61	⇑Pn	Pg	03 26 08.0	+0.6
	2.3nm,0.8s						
AAK				⇑Sn	Sg	03 26 33.0	+1.3
	1.5nm,0.4s						
KK31	Karatay Array	1.87	317	P	Pb	03 26 06.7	0.0
	0.3nm,0.2s,baz=130,slow=16,SNR=5.3						
KK31				S	Sg	03 26 31.2	-0.5
	0.7nm,0.2s,baz=127,slow=28,SNR=10						
USP	Ospenovka	2.24	47	⇑iP	Pn	03 26 10.3	+0.4
	baz=47						
USP				⇑iS	Sn	03 26 38.2	0.0
	baz=47						
KZA	Kyzart	2.25	81	⇑iP	Pn	03 26 11.0	+0.6
	baz=81						
KZA				⇑iS	Sn	03 26 39.4	+0.4
	baz=81						
TKM2	Tokmak 2	2.73	64	⇑Pg	Pg	03 26 24.1	+0.3
	4.9nm,1.0s						
TKM2				⇑Lg	Lg	03 26 58.8	
	6.9nm,0.8s						
TKM2	Tokmak 2	2.73	64	⇓iP	Pn	03 26 17.3	+0.5
	baz=64						
TKM2				⇓iS	Sn	03 26 50.5	-0.1
	baz=64						

IDC 09 03:33:10.6±2.5**, 11°.73S**×**164°.63E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.7**/4**, ML3.9**/1**, Error ellipse: s-maj=58.9km s-min=35.6km az=92.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.43	171	Pn	Pn	03 35 41.3	-0.3
	1.0nm,0.3s,baz=206,slow=17,SNR=11						
WRA	Warramunga Arr	30.22	251	P	P	03 39 23.3	0.0
	0.8nm,0.8s,baz=80,slow=9.6,SNR=6.9						
ASAR	Alice Springs	31.51	244	P	P	03 39 34.6	0.0
	0.2nm,0.4s,baz=72,slow=8.0,SNR=5.0						
SONM	Songino Array	78.57	324	P	P	03 45 14.4	+0.1
	0.2nm,0.5s,baz=118,slow=6.0,SNR=2.5						

IDC 09 03:37:21.1±1.4**, 10°.95S**×**164°.79E, h0**^{km}**, mb3.7**/7**, mb1 3.9**/8**, mb1mx3.8**/31**, mbtmp3.7**/8**, ML3.8**/1**, Error ellipse: s-maj=44.8km s-min=23.5km az=128.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.18	172	Pn	Pn	03 40 03.2	+0.9
	0.6nm,0.3s,baz=348,slow=13,SNR=9.8						
CTA	Charters Tower	20.02	241	P	P	03 41 56.1	+0.3
	4.8nm,0.9s,baz=61,slow=13,SNR=3.5						
WRA	Warramunga Arr	30.64	249	P	P	03 43 37.2	-0.3
	0.4nm,0.5s,baz=80,slow=9.3,SNR=8.3						
ASAR	Alice Springs	32.00	243	P	P	03 43 49.1	-0.3
	1.2nm,0.8s,baz=62,slow=10,SNR=14						
SONM	Songino Array	78.03	324	P	P	03 49 22.4	+0.6
	0.2nm,0.4s,baz=125,slow=7.2,SNR=2.5						
ILAR	Eielson Array	83.72	19	P	P	03 49 52.5	+0.9
	0.5nm,0.9s,baz=232,slow=5.2,SNR=4.2						
MKAR	Makanchi Array	92.81	317	P	P	03 50 35.6	-0.1
	0.3nm,0.6s,baz=89,slow=7.3,SNR=3.9						
YKA	Yellowknife Ar	95.32	27	P	P	03 50 45.2	-1.6
	0.1nm,0.6s,baz=259,slow=8.5,SNR=3.1						

IDC 09 03:42:53.4±3.3**, 4°.70S**×**133°.34E, h0**^{km}**, mb3.4**/1**, mb1 3.6**/3**, mb1mx3.3**/36**, mbtmp3.4**/3**, ML3.2**/2**, Error ellipse: s-maj=175.9km s-min=27.9km az=77.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.18	176	Pn	Pn	03 46 28.1	-1.1
	0.1nm,0.3s,baz=354,slow=13,SNR=6.6						
WRA				Sn	Sn	03 49 17.4	-0.9
	0.0nm,0.3s,baz=356,slow=25,SNR=3.0						
ASAR	Alice Springs	18.86	178	P	Pn	03 47 16.1	+0.3
	0.1nm,0.3s,baz=2.8,slow=11,SNR=17						
MKAR	Makanchi Array	68.20	325	P	P	03 53 55.8	0.0
	0.4nm,0.8s,baz=116,slow=6.6,SNR=3.8						

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*IDC **09** 03:49:02.5±5.1, 37°.44N×72°.00E, h110^{km}±34^{km}, mb3.3/9, mb1 3.3/15, mb1mx3.2/48, mbtmp3.6/15, Error ellipse: s-maj=52.8km s-min=23.6km az=159.0*

*NNC **09** 03:49:05.2±1.5, 37°.72N×71°.62E, h131^{km}±20^{km}, mb2.9, mpv3.6, Error ellipse: s-maj=13.8km s-min=11.5km az=56.0*

*ISCJB **09** 03:49:07.0±0.8, 37°.86N±0°.06×71°.79E±0°.07, h150^{km}, mb3.4/9, Error ellipse: s-maj=8.7km s-min=6.9km az=143.6*

ISC 09 03:49:09.5±1.1**, 37°.98N**±0°.09×**71°.56E**±0°.07**, h150**^{km}**, n32, σ2^{s}11**/40**, mb3.4**/9**, 6C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.53	36	⇑P	Pn	03 49 48.2	-3.0
	13nm,0.6s						
SFK				⇑S	Sn	03 50 22.3	-1.0
	62nm,0.6s						
AML	Almayashu	4.46	21	P	Pn	03 50 14.4	-1.6
	SNR=20						
MNAS	Manas	4.56	9	⇑P	Pn	03 50 16.4	-0.7
	4.2nm,0.4s						
MNAS				⇓S	Sn	03 51 10.9	+1.0
	51nm,0.7s						
UCH	Uchtor	4.81	27	P	Pn	03 50 18.9	-1.8
	SNR=5.9						
EKS2	Erkin-Say	4.97	19	P	Pn	03 50 22.0	-0.5
	SNR=7.0						
AAK	Ala-Archa	5.16	25	P	Pn	03 50 23.6	-1.5
	SNR=6.7						
AAK	Ala-Archa	5.16	25	⇑P	Pn	03 50 23.7	-1.5
	4.5nm,0.5s						
AAK				⇓S	Sn	03 51 24.4	+0.2
	37nm,1.1s						
AAK	Ala-Archa	5.16	25	P	Pn	03 50 23.3	-1.8
	2.5nm,0.3s,baz=171,slow=4.3,SNR=26						
AAK				S	Sn	03 51 15.3	-8.9
	1.0nm,0.3s,baz=205,slow=16,SNR=4.6						
KK31	Karatay Array	5.18	351	⇓P	Pn	03 50 25.5	+0.3
	3.9nm,0.4s,baz=168,slow=11,SNR=5.3						
KK31				⇑S	Sn	03 51 26.7	+2.3
	26nm,0.6s,baz=189,slow=26,SNR=17						
CHMS	Chumysh	5.57	25	P	Pn	03 50 29.0	-1.4
	SNR=8.4						
USP	Ospenovka	5.74	22	P	Pn	03 50 31.1	-1.5
	SNR=5.4						
TKM2	Tokmak 2	5.82	31	⇓P	Pn	03 50 32.0	-1.8
	5.2nm,0.7s						
TKM2				⇑S	Sn	03 51 41.9	+2.1
	7.9nm,0.7s						
GEYT	Alibeck	10.62	274	P	Pn	03 51 41.7	+4.1
	0.6nm,0.3s,baz=99,slow=15,SNR=2.9						
GEYT				S	Sn	03 53 27.7	-7.3
	1.8nm,0.3s,baz=58,slow=11,SNR=6.6						
MK31	Makanchi Array	11.84	39	⇓P	Pn	03 51 50.9	-2.6
	1.2nm,0.9s,baz=223,slow=14,SNR=4.9						
MKAR	Makanchi Array	11.84	39	P	Pn	03 51 50.5	-3.0
	0.1nm,0.3s,baz=228,slow=16,SNR=6.4						
KURBB	Kurchatov Arra	13.58	19	P	Pn	03 52 15.5	-0.3
	0.0nm,0.3s,baz=213,slow=14,SNR=3.4						
AB31	Akbulak array	14.05	327	P	Pn	03 52 20.9	-0.8
	0.9nm,0.6s,baz=140,slow=12,SNR=15						
AB31				⇓S	Sn	03 54 56.8	-0.4
	2.1nm,0.5s,baz=147,slow=23,SNR=11						
BVA0	Borovoye Array	15.07	357	P	P	03 52 35.1	-1.1
	0.1nm,0.5s,baz=158,slow=11,SNR=5.3						
BVAR	Borovoye Array	15.07	357	P	P	03 52 35.5	-0.7
	0.1nm,0.3s,baz=148,slow=11,SNR=4.0						
BVAR				S	Sn	03 55 19.2	-2.5
	0.1nm,0.3s,baz=164,slow=22,SNR=4.1						
AKTO	Aktyubinsk	15.76	327	⇓P	Pn	03 52 42.4	-0.7
	7.2nm,0.6s						
AKTO	Aktyubinsk	15.76	327	P	P	03 52 44.3	+0.4
	0.9nm,0.3s,baz=128,slow=14,SNR=20						
AKTO				S	Sn	03 55 34.8	-3.5
	0.2nm,0.3s,baz=351,slow=21,SNR=8.4						
ZALV	Zalesovo Beam	18.39	25	P	P	03 53 11.9	-0.8
	0.2nm,0.3s,baz=209,slow=9.9,SNR=4.2						
BRTR	Keskin Array B	29.44	285	P	P	03 55 01.3	+2.2
	0.3nm,0.6s,baz=86,slow=8.7,SNR=2.8						
AKASG	Malin Array Be	32.39	307	P	P	03 55 26.5	+1.9
	0.3nm,0.4s,baz=88,slow=8.5,SNR=2.8						
FINES	FINESS Array B	36.52	325	P	P	03 56 02.1	+2.1
	0.9nm,0.4s,baz=108,slow=9.2,SNR=10						
ARCES	ARCESS Array B	39.96	337	P	P	03 56 30.9	+2.2
	0.7nm,0.6s,baz=108,slow=7.8,SNR=6.3						
NB2	NORSAR Subarra	43.48	322	P	P	03 56 59.3	+1.8
	comp=Z,0.4nm,0.5s,baz=90,slow=7.9						
NOA	NORSAR Array B	43.48	322	P	P	03 56 59.5	+2.0
	comp=Z,0.7nm,0.7s,baz=93,slow=7.6,SNR=5.1						
ESDC	Sonseca Array	57.17	297	P	P	03 58 41.8	+1.2
	comp=Z,0.2nm,0.5s,baz=65,slow=7.2,SNR=4.3						
TORD	Torodi Ar. Bea	66.20	268	P	P	03 59 40.1	-1.2
	comp=Z,0.3nm,0.6s,baz=47,slow=6.1,SNR=4.1						
INK	Inuvik	72.37	10	P	P	04 00 19.4	+0.9
	comp=Z,0.8nm,0.6s,baz=338,slow=8.3,SNR=5.8						
YKA	Yellowknife Ar	79.75	3	P	P	04 01 00.2	0.0
	comp=Z,0.4nm,0.5s,baz=351,slow=5.5,SNR=11						

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*DDA **09** 03:49:46.8, 39°.45N×26°.21E, h25^{km}±1^{km}, ML3.5*

*ATH **09** 03:49:46.9, 39°.44N×26°.24E, h28^{km}±1^{km}, ML3.1/6, Error ellipse: s-maj=2.7km s-min=1.0km az=250.0*

*ISK **09** 03:49:46.8, 39°.46N×26°.18E, h5^{km}, ML3.4/41*

*ISCJB **09** 03:49:47.2±0.4, 39°.46N±0°.01×26°.13E±0°.02, h6^{km}±3^{km}, Error ellipse: s-maj=2.6km s-min=2.0km az=157.4*

*THE **09** 03:49:48.2, 39°.46N×26°.16E, h6^{km}, ML2.6/4, Error ellipse: s-maj=1.0km s-min=0.4km az=82.0*

ISC 09 03:49:48.2±0.8**, 39°.46N**±0°.01×**26°.18E**±0°.02**, h13**^{km}±6^{km}**, n135, σ0^{s}92**/167**, 8C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.22	162	P	Pg	03 49 53.3	+0.3
PRK				S	Sg	03 49 56.9	+0.6
PRK				AML	AML	03 49 57.0	
	comp=N,30494µm,0.2s						
PRK				AML	AML	03 49 57.0	
	comp=E,38177µm,0.2s						
PRK	Paraskevi	0.22	162	P	Pg	03 49 53.4	+0.3
PRK				S	Sg	03 49 56.9	+0.6
EZN	Ezine	0.39	17	PG	Pg	03 49 55.3	-0.6
EZN	Ezine	0.39	17	P	Pg	03 49 55.6	-0.3
EZN				S	Sg	03 50 01.2	0.0
BOZC	Bozcaada	0.40	346	PG	Pg	03 49 56.0	-0.2
BOZC				SG	Sg	03 50 01.9	+0.4
BOZC	Bozcaada	0.40	346	iP	Pb	03 49 56.9	-0.2
BOZC				iS	Sb	03 50 02.4	-0.7
BOZC				IAML_P			
	comp=Z,9µm,0.2s						
BAYC	CANAKKALE_Bayr	0.40	45	iP	Pg	03 49 55.4	-0.9
BAYC				iS	Sg	03 50 00.9	-0.7
BAYC				IAML_P			
	comp=Z,34µm,0.1s						
AYVA	Ayvalik	0.42	110	iP	Pg	03 49 56.1	-0.5
AYVA				iS	Sg	03 50 01.4	-0.8
AYVA				IAML_P			
	comp=Z,15µm,0.1s						
GADA	Gvkgeada	0.76	344	PG	Pg	03 50 02.8	-0.3
GADA	Gvkgeada	0.76	344	P	Pg	03 50 02.7	-0.3
GADA				S	Sg	03 50 12.8	-0.3
FOCM	Foa	0.86	150	PG	Pg	03 50 04.6	-0.2
LIA	Limnos Island	0.89	300	P	Pb	03 50 05.2	-0.2
LIA				S	Sb	03 50 17.7	+0.5
LIA				AML	AML	03 50 25.3	
	comp=N,1033µm,0.4s						
LIA				AML	AML	03 50 25.9	
	comp=E,907µm,0.4s						
LIA	Limnos Island	0.89	300	P	Pb	03 50 05.2	-0.2
LIA				S	Sb	03 50 17.7	+0.5
KRBN	Karaburun	0.91	161	PG	Pb	03 50 04.6	-1.2
EFSA	Agios Efstrati	0.93	276	P	Pn	03 50 06.7	-0.2
GELI	Tayfur-Gelibol	0.97	13	PG	Pb	03 50 06.2	-0.6
GELI				SG	Sg	03 50 20.2	+0.7
LPK	Lapseki	1.02	26	PG	Pb	03 50 06.9	-0.8
PSRA	Psara	1.03	208	P	Pb	03 50 07.7	-0.2
CHOS	Chios island	1.07	185	PN	Pb	03 50 07.8	-0.8
CHOS	Chios island	1.07	185	P	Pb	03 50 07.5	-1.1
CHOS				AML	AML	03 50 25.1	
	comp=N,1032µm,0.3s						
CHOS				AML	AML	03 50 29.3	
	comp=E,1774µm,0.5s						
CHOS	Chios island	1.07	185	P	Pb	03 50 07.8	-0.8
CHOS				S	Sg	03 50 23.1	+0.2
SMTH	Samothraki Isl	1.13	334	P	Pb	03 50 09.0	-0.5
SMTH				AML	AML	03 50 26.5	
	comp=N,762µm,0.4s						
SMTH				AML	AML	03 50 27.6	
	comp=E,788µm,0.4s						
SMTH	Samothraki Isl	1.13	334	P	Pb	03 50 09.1	-0.5
SMTH				S	Sb	03 50 24.2	0.0
URLA	Izmir	1.14	163	PN	Pb	03 50 08.7	-1.1
URLA	Izmir	1.14	163	iP	Pb	03 50 08.8	-1.1
URLA				iS	Sg	03 50 25.1	0.0
URLA				IAML_P			
	comp=Z,7µm,0.2s						
STEP	BALIKESIR_Sava	1.19	93	iP	Pn	03 50 10.3	-0.3
STEP				iS	Sn	03 50 26.6	0.0
STEP				IAML_P			
	comp=Z,12µm,0.1s						
ERIK	Erikli-Kesan	1.24	12	PN	Pn	03 50 10.8	-0.4
ZEY	zmir	1.24	168	iP	Pn	03 50 10.7	-0.6
ZEY				IAML_P			
	comp=Z,9µm,0.3s						
BLCB	Balcova	1.26	148	PN	Pb	03 50 11.8	0.0
KRBG	Karabiga-Canak	1.27	42	PN	Pn	03 50 10.8	-0.8
ENEZ	Enez	1.28	359	PN	Pb	03 50 12.4	+0.3
GONE	Gonen-Balikesi	1.30	63	PN	Pn	03 50 11.8	-0.2
KNL	Balıkesir	1.32	51	iP	Pn	03 50 12.2	-0.1
KNL				iS	Sb	03 50 29.4	-0.1
KNL				IAML_P			
	comp=Z,4µm,0.2s						
AKHS	Akhisar	1.39	114	iP	Pn	03 50 12.7	-0.7
AKHS				iS	Sb	03 50 32.5	+0.8
AKHS				IAML_P			
	comp=Z,5µm,0.2s						
AKS	Akhisar	1.39	114	PN	Pb	03 50 13.9	-0.2
KESN	Edirne-Kesan	1.42	15	iP	Pn	03 50 14.3	+0.2
KESN				iS	Sb	03 50 33.1	+0.2
KESN				IAML_P			
	comp=Z,3µm,0.2s						
ALN	Alexandroupoli	1.44	356	PN	Pb	03 50 14.9	0.0
ALN	Alexandroupoli	1.44	356	P	Pn	03 50 13.7	-0.3
ALN				AML	AML	03 50 34.5	
	comp=E,1789µm,0.4s						
ALN				AML	AML	03 50 34.6	
	comp=N,1863µm,0.3s						
ALN	Alexandroupoli	1.44	356	P	Pn	03 50 14.2	+0.2
ALN				S	Sg	03 50 33.9	-0.8
RKY	Sarkoy-Tekirda	1.45	32	PN	Pn	03 50 14.4	+0.3
GMLD	Gumuldur	1.49	157	PN	Pb	03 50 16.2	+0.5
GOMA	Golmarmara-Man	1.54	118	PN	Pb	03 50 16.9	+0.3
EDC	Edincik	1.57	55	PN	Pb	03 50 16.6	-0.5
THAS	Thassos island	1.60	316	P	Pn	03 50 15.5	-0.7
THAS	Thassos island	1.60	316	P	Pn	03 50 15.7	-0.5
RDO	Rodhopi	1.76	344	PN	Pn	03 50 18.1	-0.2
RDO	Rodhopi	1.76	344	P	Pn	03 50 18.3	0.0
RDO	Rodhopi	1.76	344	P	Pn	03 50 18.4	+0.1
RDO				S	Sn	03 50 40.7	+0.2
DURS	Dursunbey	1.78	85	iP	Pn	03 50 18.7	0.0
DURS				iS	Sn	03 50 40.9	-0.3
DURS				IAML_P			
	comp=Z,705nm,0.1s						

AOS	Alonnisos	1.81	262	PN	Pb	03 50 20.8	-0.3
AOS	Alonnisos	1.81	262	P	Pn	03 50 18.5	-0.4
AOS	Alonnisos	1.81	262	P	Pn	03 50 18.6	-0.4
AOS				S	Sn	03 50 42.4	+0.6
SMG	Samos	1.82	163	P	Pn	03 50 17.7	-1.5
SMG				AML	AML	03 50 48.7	
	comp=N,1786μm,0.6s						
SMG				AML	AML	03 50 49.4	
	comp=E,1586μm,0.5s						
SMG	Samos	1.82	163	P	Pn	03 50 19.8	+0.6
SMG				S	Sb	03 50 43.5	-0.5
KCTX	Karacabey (Bur	1.86	64	PN	Pn	03 50 20.8	+1.1
OUR	Ouranopolis	1.91	298	PN	Pb	03 50 21.8	-1.0
OUR	Ouranopolis	1.91	298	P	Pn	03 50 20.8	+0.4
OUR	Ouranopolis	1.91	298	P	Pn	03 50 20.5	+0.2
GCAM	G?zelcaml?	1.94	154	i P	Pg	03 50 24.5	-0.9
GCAM				i S	Sb	03 50 48.5	+1.1
PAIG	Paliouri	1.99	284	P	Pn	03 50 21.8	+0.3
PAIG	Paliouri	1.99	284	P	Pn	03 50 21.4	-0.1
KAVA	Kavala	2.00	321	P	Pn	03 50 21.2	-0.4
DEMI	Demirci	2.01	101	i P	Pn	03 50 22.1	+0.3
DEMI				IAML_P			
	comp=Z,568nm,0.2s						
AYDB	Zeytinkoy-Aydi	2.02	138	PN	Pb	03 50 23.4	-1.4
EREA	Eretria	2.04	240	P	Pn	03 50 21.3	-0.9
EREA				S	Sn	03 50 48.6	+1.1
CRLT	Corlu	2.05	35	PN	Pb	03 50 24.6	-0.7
CRLT				SN	Sb	03 50 51.3	+0.7
MANT	Manisa	2.09	117	i P	Pb	03 50 25.8	-0.2
MANT				i S	Sb	03 50 52.2	+0.2
KULA	Kula-Manisa	2.15	115	PN	Pn	03 50 25.1	+1.3
KULA	Kula-Manisa	2.15	115	P	Pn	03 50 23.9	+0.1
AYDN	Tasoluk	2.23	143	i P	Pb	03 50 29.4	+1.0
MDNY	Mudanya-Bursa	2.27	65	PN	Pn	03 50 27.1	+1.8
XOR	Xorichti	2.32	269	P	Pn	03 50 25.2	-0.8
ARMT	Armutlu	2.34	61	PN	Pb	03 50 29.1	-1.1
SLVT	Silivri	2.35	41	PN	Pn	03 50 28.3	+1.8
PHSR	Pinarhisar	2.40	25	PN	Pb	03 50 29.3	-1.9
SHAP	Saphane-Kutahy	2.40	99	PN	Pb	03 50 29.7	-1.6
EDRB	Edirne	2.42	10	PN	Pn	03 50 28.9	+1.4
EDRB	Edirne	2.42	10	P	Pn	03 50 27.4	-0.1
EDRB				S	Sn	03 50 57.2	+0.2
APE	Apeiranthos	2.44	192	P	Pn	03 50 26.0	-1.7
APE	Apeiranthos	2.44	192	⇑iP	Pn	03 50 25.8	-1.9
APE	Apeiranthos	2.44	192	P	Pn	03 50 26.2	-1.5
VLY	Voula,Athens	2.46	230	P	Pn	03 50 27.6	-0.4
VLY				S	Sn	03 50 59.7	+1.8
RZN	Rozhen	2.49	334	i P	Pn	03 50 28.7	+0.1
CTKS	Kestanelik-??a	2.51	44	PN	Pn	03 50 30.1	+1.4
TVSB	Tavsanli	2.54	89	PN	Pn	03 50 29.1	-0.1
GEDZ	Gediz	2.54	98	PN	Pn	03 50 31.1	+1.9
BODT	Bodrum	2.55	159	P	Pn	03 50 28.6	-0.6
BODT				S	Sn	03 51 01.2	+1.1
ATAL	Atalanti	2.58	254	P	Pn	03 50 29.1	-0.5
CTYL	Yalikoy Yolu	2.58	38	PN	Pn	03 50 31.9	+2.3
SRS	Serrai	2.58	311	P	Pn	03 50 29.5	-0.2
SRS	Serrai	2.58	311	P	Pn	03 50 29.6	-0.1
SRS				S	Sn	03 51 01.9	+1.0
VILL	Villia	2.59	241	P	Pn	03 50 28.9	-0.9
NVR	Nevrokopi	2.59	318	P	Pn	03 50 29.6	-0.2
NVR	Nevrokopi	2.59	318	P	Pn	03 50 29.8	0.0
NVR				S	Sn	03 51 02.5	+1.3
BGKT	Bogazkoy	2.62	48	PN	Pn	03 50 32.3	+2.1
HORT	Hortiatis	2.63	297	PN	Pn	03 50 31.9	+1.6
HORT	Hortiatis	2.63	297	P	Pn	03 50 30.6	+0.3
AMGA	Amorgos Island	2.63	185	P	Pn	03 50 28.6	-1.8
AMGA	Amorgos Island	2.63	185	P	Pn	03 50 29.2	-1.1
DIM	Dimitrovgrad	2.64	349	eP	Pn	03 50 30.0	-0.4
BUY	Buyukada	2.65	57	i P	Pn	03 50 32.0	+1.4
BUY				IAML_P			
	comp=Z,181nm,0.2s						
YLV	Yalova	2.69	65	PN	Pn	03 50 33.3	+2.1
KAVV	Kandilli-Istan	2.73	53	PN	Pn	03 50 33.7	+2.1
KHAL	Karahalli	2.80	112	i P	Pn	03 50 33.9	+1.1
KHAL				IAML_P			
	comp=Z,303nm,0.3s						
KLYT	Kilyos	2.83	50	PN	Pn	03 50 35.1	+2.1
PLD	Plovdiv	2.87	337	PN	Pn	03 50 35.8	+2.1
TAVA	DENIZLI_Tavas	2.92	132	i P	Pn	03 50 35.0	+0.5
TAVA				IAML_P			
	comp=Z,111nm,0.1s						
AGG	Agios Georgios	3.02	263	P	Pn	03 50 35.6	-0.1
DID	Didima	3.02	231	P	Pn	03 50 35.2	-0.5
KNT	Kendrikon	3.03	305	P	Pn	03 50 35.9	+0.1
KNT	Kendrikon	3.03	305	P	Pn	03 50 35.8	-0.1
THL	Klokotos Trika	3.23	273	P	Pn	03 50 38.4	-0.1
THL	Klokotos Trika	3.23	273	P	Pn	03 50 38.7	+0.2
GRG	Griva	3.26	299	P	Pn	03 50 40.1	+1.1
GRG	Griva	3.26	299	P	Pn	03 50 39.7	+0.7
BORA	Eskisehir	3.32	81	i P	Pn	03 50 41.1	+1.2
BORA				IAML_P			
	comp=Z,280nm,0.1s						
KKB	Krupnik	3.37	317	eP	Pn	03 50 41.1	+0.6
VLI	Veliai	3.75	224	P	Pn	03 50 44.9	-0.7
STIP	Stip	3.77	308	i Pn	Pn	03 50 45.1	-0.9
PVL	Pavlikeni	3.81	351	eP	Pn	03 50 47.1	+0.6
VTS	Vitosha	3.86	326	⇓iP	Pn	03 50 48.3	+0.9
VTS	Vitosha	3.86	326	S	Sn	03 51 34.1	+1.4
VTS	Vitosha	3.86	326	i P	Pn	03 50 48.3	+0.9
TIRR	Tirgusor	5.27	18	⇑iP	Pn	03 51 06.6	+0.1
TIRR	Tirgusor	5.27	18	S	Sn	03 52 04.7	-2.3
ARR	Arges	6.02	350	⇓iP	Pn	03 51 17.5	+0.6
MLR	Muntele Rosu	6.03	358	⇑iP	Pn	03 51 18.7	+1.5
MDVR	Moldovita	6.27	329	⇑iP	Pn	03 51 20.4	0.0
PLOR	Plostina	6.40	3	⇑iP	Pn	03 51 22.9	+0.8
VRI	Vrincioaia	6.42	3	⇓iP	Pn	03 51 23.4	+1.0
GZR	Gura Zlata	6.44	338	⇑iP	Pn	03 51 22.4	-0.4
DOPR	Dopca	6.53	355	⇓iP	Pn	03 51 24.9	+1.0
BZS	Buzias	7.02	333	⇑iP	Pn	03 51 30.4	-0.2
BIZ	Bicaz	7.48	360	⇑iP	Pn	03 51 37.7	+0.8
BURAR	Bucovina Array	8.19	355	⇓iP	Pn	03 51 48.7	+2.0

IDC ***09*** *04:05:57.5±1.3, 11°.86S×165°.18E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/25, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=47.8km s-min=26.4km az=130.0*

ISCJB ***09*** *04:06:00.6±1.0, 12°.1S±0°.1×165°.2E±0°.2, h33^{km}, mb3.6/5, Error ellipse: s-maj=28.7km s-min=19.6km az=8.3*

ISC 09 04:06:02.5±1.0**, 12°.0S**±0°.1×**165°.3E**±0°.2**, h35^{km}, n6, σ0^{s}81**/6**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.07	174	Pn	Pn	04 08 25.1	+0.2
	0.4nm,0.3s,baz=334,slow=18,SNR=8.5						
WRA	Warramunga Arr	30.72	251	P	P	04 12 14.3	-0.2
	0.4nm,0.7s,baz=78,slow=9.2,SNR=4.3						
ASAR	Alice Springs	31.95	244	P	P	04 12 24.7	-0.6
	0.3nm,0.9s,baz=69,slow=10,SNR=2.9						
ILAR	Eielson Array	84.57	19	P	P	04 18 31.9	+0.1
	0.8nm,0.6s,baz=235,slow=6.3,SNR=15						
MKAR	Makanchi Array	93.89	317	P	P	04 19 17.5	+1.0
	0.3nm,0.6s,baz=97,slow=5.6,SNR=4.1						
YKA	Yellowknife Ar	96.04	27	P	P	04 19 25.1	-0.7
	0.3nm,0.9s,baz=260,slow=3.1,SNR=3.6						

IDC 09 04:08:10.4±3.4**, 10°.86S**×**165°.91E, h0^{km}, mb3.7**/3**, mb1 3.8**/4**, mb1mx3.6**/27**, mbtmp3.7**/4**, ML3.5**/1**, Error ellipse: s-maj=71.1km s-min=45.1km az=85.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.15	177	Pn	Pn	04 10 51.2	-0.2
	0.3nm,0.3s,baz=346,slow=15,SNR=4.0						
WRA	Warramunga Arr	31.70	250	P	P	04 14 35.9	-0.2
	0.5nm,0.6s,baz=81,slow=9.2,SNR=8.6						
ASAR	Alice Springs	33.02	243	P	P	04 14 47.9	+0.2
	0.5nm,0.5s,baz=65,slow=10,SNR=6.3						
MKAR	Makanchi Array	93.50	317	P	P	04 21 28.1	-0.1
	0.7nm,1.0s,baz=109,slow=4.9,SNR=3.4						

ISCJB ***09*** *04:08:36.5±2.2, 22°.8S±0°.9×179°.3E±0°.4, h553^{km}, mb3.9/6, Error ellipse: s-maj=119.6km s-min=19.1km az=159.6*

IDC ***09*** *04:08:40.9±6.4, 23°.17S×179°.36E, h602^{km}±75^{km}, mb3.3/6, mb1 3.7/6, mb1mx3.3/24, mbtmp4.3/6, Error ellipse: s-maj=113.3km s-min=32.3km az=161.0*

ISC 09 04:08:36.8±2.2**, 22°.9S**±0°.8×**179°.4E**±0°.3**, h553^{km}, n9, σ1^{s}37**/9**, mb3.9**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	30.96	269	P	P	04 14 11.2	+1.6
	9.7nm,0.4s,baz=93,slow=11,SNR=36						
ASAR	Alice Springs	41.70	260	P	P	04 15 37.1	-0.8
	1.7nm,0.3s,baz=98,slow=7.3,SNR=35						
WRA	Warramunga Arr	41.96	265	P	P	04 15 39.6	-0.4
	3.5nm,0.3s,baz=97,slow=8.4,SNR=163						
NVAR	Mina Array Bea	84.38	44	P	P	04 20 13.2	+1.7
	0.4nm,0.3s,baz=229,slow=8.2,SNR=2.5						
TXAR	Lajitas Array	90.33	58	P	P	04 20 39.9	+0.3
	0.6nm,0.7s,baz=212,slow=5.7,SNR=9.8						
ILAR	Eielson Array	91.15	14	P	P	04 20 41.5	-1.0
	0.3nm,0.6s,baz=232,slow=5.8,SNR=5.1						
ARCES	ARCESS Array B	130.77	348	PKP	PKiKP	04 26 44.6	-1.0
	2.2nm,1.0s,baz=72,slow=4.0,SNR=6.2						
FINES	FINESS Array B	137.30	341	PKP	PKPdf	04 26 55.6	-1.5
	3.4nm,1.1s,baz=79,slow=2.8,SNR=2.8						
BRTR	Keskin Array B	146.53	308	PKPbc	PKPbc	04 27 16.4	-0.5
	0.3nm,0.6s,baz=140,slow=4.8,SNR=2.8						

IDC 09 04:19:45.5±1.6**, 17°.13S**×**174°.39W, h0^{km}, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.7**/35**, mbtmp3.9**/4**, Error ellipse: s-maj=51.5km s-min=32.5km az=136.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	22.33	198	P	P	04 24 45.0	+0.2
	4.1nm,0.4s,baz=39,slow=9.0,SNR=12						
WRA	Warramunga Arr	48.54	258	P	P	04 28 30.4	-0.5
	0.4nm,0.5s,baz=97,slow=7.1,SNR=14						
ASAR	Alice Springs	48.69	253	P	P	04 28 32.1	+0.1
	1.7nm,0.6s,baz=90,slow=8.7,SNR=32						
PDAR	Pinedale Array	84.18	42	P	P	04 32 19.1	0.0
	0.3nm,0.6s,baz=202,slow=4.7,SNR=4.2						

IDC ***09*** *04:22:01.7±1.3, 13°.76N×92°.39W, h0^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.8/39, mbtmp3.7/9, ML3.5/3, MS3.6/3, Ms1 3.6/3, ms1mx2.9/37, Error ellipse: s-maj=32.0km s-min=20.1km az=39.0*

MEX ***09*** *04:22:03.9±0.3, 13°.84N×92°.27W, h104^{km}±8^{km}, MD4.1*

ISCJB ***09*** *04:22:06.6±0.7, 13°.87N±0°.06×92°.38W±0°.06, h46^{km}, mb4.1/15, Error ellipse: s-maj=9.2km s-min=7.9km az=142.4*

NEIC ***09*** *04:22:07.1±0.7, 13°.84N×92°.35W, h35^{km}, mb4.5/9, MD4.1(MEX), Error ellipse: s-maj=12.8km s-min=9.8km az=213.0*

ISC 09 04:22:08.2±0.9**, 13°.90N**±0°.09×**92°.41W**±0°.06**, h46^{km}, n38, σ1^{s}42**/42**, mb4.2**/15**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.02	8	i P	Pn	04 22 23.9	-2.2
THIG				i S	Sn	04 22 39.8	+0.5
THIG		1.02	8	i P	Pn	04 22 23.9	-2.2
THIG				i S	Sn	04 22 39.8	+0.5
PCIG		1.96	337	eP	Pn	04 22 36.7	-2.3
PCIG				eS	Sn	04 23 01.5	-0.9
PCIG		1.96	337	eP	Pn	04 22 36.7	-2.3
PCIG				eS	Sn	04 23 01.5	-0.9
APG	El Apazote	2.18	59	Pn	Pn	04 22 41.1	-1.2
	12nm,0.3s,baz=238,slow=7.4,SNR=226						
APG				Sn	Sn	04 23 10.0	+1.8
	17nm,0.3s,baz=264,slow=18,SNR=5.7						
CCIG	Comitan	2.39	6	ePn	Pn	04 22 45.9	+0.8
CCIG				eS	Sn	04 23 10.4	-2.8
CCIG	Comitan	2.39	6	eP	Pn	04 22 45.8	+0.8
CCIG				eS	Sn	04 23 10.4	-2.8
CMIG	Matias Romero	3.97	323	Pn	Pn	04 23 05.9	-0.7
	1.4nm,0.3s,baz=126,slow=9.5,SNR=4.7						
CMIG				Sn	Sn	04 23 54.8	+2.8
	7.4nm,0.3s,baz=142,slow=13,SNR=4.6						
TEIG	Tepich	7.43	32	ePn	Pn	04 23 54.5	+0.4
JTS	JuntasAbangare	8.13	115	Lg	Lg	04 26 05.5	
	0.3nm,0.3s,baz=195,slow=21,SNR=2.3						
LTX	Lajitas	18.57	328	eP	Pn	04 26 22.6	+0.5
TXAR	Lajitas Array	18.57	328	P	Pn	04 26 22.6	+0.5
	0.1nm,0.3s,baz=146,slow=11,SNR=11						
TX31	Lajitas Ar. Si	18.57	328	eP	Pn	04 26 22.5	+0.5
MNTX	Cornudas Mount	21.34	328	eP	P	04 26 52.2	+0.7
	1.4nm,0.6s						
MSTX	Muleshoe	22.09	337	eP	P	04 27 00.1	+0.5
	14nm,1.3s						
AMTX	Amarillo	22.51	340	eP	P	04 27 04.2	+0.1
	48nm,1.7s						
TKL	Tuckaleechee C	23.02	18	LR	LR	04 37 54.8	
	comp=Z,151nm,18.1s,baz=214,slow=41						
ANMO	Albuquerque	24.50	331	P	P	04 27 24.7	+1.3
	0.8nm,0.5s,baz=158,slow=11,SNR=4.9						
SJG	San Juan	25.58	77	LR	LR	04 38 12.3	
	comp=Z,45nm,20.1s,baz=259,slow=38						
MVCO	Mesa Verde	27.30	331	eP	P	04 27 50.6	+1.8
	6.0nm,1.0s						
PDAR	Pinedale Array	32.35	336	P	P	04 28 33.7	+0.2
	0.5nm,0.9s,baz=110,slow=6.8,SNR=3.0						
REDW	Red Top Meadow	33.37	335	eP	P	04 28 43.7	+1.3
	5.2nm,0.8s						
NV01	Mina Array Sit	33.50	322	eP	P	04 28 44.6	+1.0
NVAR	Mina Array Bea	33.50	322	P	P	04 28 45.7	+2.1
	0.7nm,0.5s,baz=124,slow=9.4,SNR=4.0						
MCMT	McKenzie Canyo	35.39	335	eP	P	04 29 00.8	+0.9
J08A	Circle Bar Ran	36.91	328	eP	P	04 29 14.2	+1.5
	19nm,1.6s						
F10A	Beach Ranch, E	38.21	332	eP	P	04 29 24.8	+1.1
	21nm,1.7s						
LPAZ	La Paz	38.41	141	eP	P	04 29 24.0	-2.2
LPAZ	La Paz	38.41	141	P	P	04 29 24.5	-1.7
	0.7nm,0.3s,baz=1.5,slow=13,SNR=4.5						
YKA	Yellowknife Ar	51.04	347	P	P	04 31 05.0	-0.4
	2.7nm,0.7s,baz=150,slow=7.5,SNR=59						
YKB5	Yellowknife Ar	51.04	347	eP	P	04 31 05.0	-0.4
INK	Inuvik	60.42	344	eP	P	04 32 12.6	0.0
	1.5nm,0.8s						
ILAR	Eielson Array	62.78	337	P	P	04 32 28.9	+0.3
	0.9nm,0.9s,baz=146,slow=4.8,SNR=12						
ILB	Eielson Array	62.78	337	eP	P	04 32 28.9	+0.3
MLY	Manley	64.37	336	eP	P	04 32 39.8	+0.6
	14nm,1.8s						
DBIC	Dimbokro	86.06	84	LR	LR	05 07 43.1	
	comp=Z,99nm,20.3s,baz=284,slow=32						
CM31	Chiang Mai Arr	145.96	340	ePKPdf	PKPab	04 41 44.8	+0.6
CMAR	Chiang Mai Arr	145.96	340	PKPbc	PKPab	04 41 44.8	+0.6
	2.0nm,0.5s,baz=338,slow=4.1,SNR=7.7						

IDC 09 04:25:05.4±1.4**, 0°.73S**×**127°.64E, h0^{km}, mb3.3**/4**, mb1 3.4**/4**, mb1mx3.3**/33**, mbtmp3.3**/4**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.9**/16**, Error ellipse: s-maj=133.9km s-min=21.8km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.19	161	P	P	04 29 41.5	-0.4
	0.4nm,0.6s,baz=341,slow=11,SNR=8.9						
ASAR	Alice Springs	23.59	166	P	P	04 30 18.6	+0.4
	0.4nm,0.8s,baz=346,slow=11,SNR=5.3						
MJAR	Matsushiro Arr	38.37	14	LR	LR	04 46 26.8	
	comp=Z,231nm,21.5s,baz=90,slow=33						
SONM	Songino Array	51.79	342	P	P	04 34 16.0	+0.8
	0.2nm,0.3s,baz=139,slow=8.3,SNR=2.5						
MKAR	Makanchi Array	61.73	326	P	P	04 35 24.9	-0.9
	0.3nm,0.3s,baz=121,slow=7.6,SNR=8.5						

SJA 09 04:28:27.5±0.7**, 32°.54S**×**68°.91W, h121^{km}**±5^{km}**, ML2.4, MW3.7, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAL	Salagasta	0.08	129	i P	Pn	04 28 45.0	+0.8
ASAL				i S	Sn	04 28 57.6	+0.8
ARCO	CERRO ARCO	0.30	184	i P	Pn	04 28 45.1	+0.3
ARCO				IAML		04 28 59.6	
	comp=Z,71nm,0.1s						
AUSP	Uspallata	0.51	308	i P	Pn	04 28 47.3	+1.3
RTLS	Leoncito	0.81	336	i P	Pn	04 28 49.0	+0.8
RTLS				IAML		04 28 49.5	
	comp=Z,90nm,0.1s						
RTLS				i S	Sn	04 29 05.1	+1.2
ROC1	El Roble	1.83	256	i P	Pn	04 28 59.8	+0.7
ROC1				i S	Sn	04 29 24.6	+1.3
ACCO	Cerro Coronel	1.95	356	i P	Pn	04 29 02.3	+1.5
ACCO				i S	Sn	04 29 28.2	+2.1

KRNET ***09*** *04:29:32.0±0.1, 41°.73N×77°.75E, h19^{km}, mb3.0*

SOME ***09*** *04:29:32.1, 41°.77N×77°.80E, h15^{km}*

NNC ***09*** *04:29:33.4±0.6, 41°.81N×77°.75E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=3.8km s-min=2.6km az=175.0*

ISC 09 04:29:31.0±1.2**, 41°.69N**±0°.04×**77°.63E**±0°.02**, h3^{km}**±10^{km}**, n70, σ0^{s}95**/116**, 41C-19D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	0.14	74	⇓iP	Pg	04 29 34.3	+0.5
	baz=89						
TARG				⇓iS	Sg	04 29 36.4	+0.7
	baz=89						
KDJ	Kajisay	0.55	323	⇑iP	Pb	04 29 43.5	+0.1
	baz=14						
KDJ				⇑iS	Sb	04 29 51.1	-0.7
	baz=14						
ULHL	Ulahol	1.17	299	P	Pn	04 29 54.6	+0.1
	SNR=89						
ULHL	Ulahol	1.17	299	⇑iP	Pn	04 29 54.6	+0.1
	baz=95						
ULHL				⇑iS	Sn	04 30 11.4	+0.3
	baz=95						
NRN	Naryn	1.25	259	⇑iP	Pn	04 29 56.8	+1.2
	baz=58						
NRN				⇑iS	Sn	04 30 15.7	+2.6
	baz=58						
TNSS	Tian-Shan	1.44	340	P	Pb	04 29 58.5	-0.1
	22nm,0.5s						
TNSS				S	Sb	04 30 17.6	+0.1
	70nm,0.2s						
TNSS	Tian-Shan	1.44	340	⇑iP	Pb	04 29 58.5	-0.1
	16nm,0.1s						
TNSS				eS	Sb	04 30 17.6	+0.1
	68nm,0.3s						
SATY	Saty	1.48	23	P	Pn	04 29 58.3	-0.3
	15nm,0.3s						
SATY				S	Sb	04 30 17.2	-1.3
	193nm,0.1s						
SATY	Saty	1.48	23	⇑iP	Pn	04 29 58.3	-0.3
	7.6nm,0.1s						
SATY				eS	Sb	04 30 17.2	-1.3
	171nm,0.2s						
BOOM	Boomskoye usch	1.49	303	⇑iP	Pg	04 30 00.1	+0.6
	baz=0.0						
BOOM				⇑iS	Sn	04 30 20.5	+1.7
	baz=0.0						
MDOK	Medeo	1.53	344	⇑P	Pb	04 29 59.9	-0.2
	30nm,0.6s						
MDOK				⇑S	Sg	04 30 20.5	+0.3
	31nm,0.5s						
MDOK	Medeo	1.53	344	Pg	Pg	04 30 00.2	-0.1
	39nm,0.4s						
MDOK				Lg	Lg	04 30 20.5	
	59nm,0.4s						
MDOK	Medeo	1.53	344	⇓iP	Pg	04 30 00.2	-0.1
	34nm,0.2s						
MDOK				eS	Sg	04 30 20.5	+0.3
	58nm,0.3s						
IZV	Izvestkoviy	1.54	331	P	Pg	04 30 00.5	0.0
	33nm,0.3s						
IZV				S	Sg	04 30 20.9	+0.5
	81nm,0.2s						
IZV	Izvestkoviy	1.54	331	eP	Pg	04 30 00.5	0.0
	33nm,0.3s						
IZV				eS	Sg	04 30 20.9	+0.5
	81nm,0.2s						
KOTS	Kotyrbulak	1.59	346	P	Pb	04 30 01.1	+0.1
	33nm,0.3s						
KOTS				S	Sg	04 30 21.9	-0.1
	92nm,0.2s						
KOTS	Kotyrbulak	1.59	346	eP	Pb	04 30 01.1	+0.1
	33nm,0.3s						
KOTS				eS	Sg	04 30 21.9	-0.1
	92nm,0.2s						
KNDC	Almaty	1.60	342	⇑Pn	Pb	04 30 01.3	+0.1
	31nm,0.4s						
KNDC				⇓Sn	Sg	04 30 23.9	+1.4
	53nm,0.3s						
AAA	Alma-Ata	1.61	341	P	Pg	04 30 02.0	+0.2
	88nm,0.1s						
AAA				S	Sg	04 30 23.1	+0.5
	120nm,0.2s						
AAA	Alma-Ata	1.61	341	eP	Pg	04 30 01.9	+0.2
	88nm,0.1s						
AAA				eS	Sg	04 30 23.1	+0.5
	120nm,0.2s						
MTBS	Maitube	1.69	329	P	Pb	04 30 03.0	+0.3
	16nm,0.2s						
MTBS				S	Sg	04 30 25.2	0.0
	72nm,0.3s						
MTBS	Maitube	1.69	329	⇑iP	Pb	04 30 03.0	+0.3
	16nm,0.2s						
MTBS				⇓iS	Sg	04 30 25.2	0.0
	72nm,0.3s						
UZB	Uzynbulak	1.78	35	P	Pn	04 30 03.4	+0.6
	4.7nm,0.3s						
UZB				S	Sn	04 30 25.9	-0.1
	24nm,0.2s						
UZB	Uzynbulak	1.78	35	eP	Pn	04 30 03.4	+0.6
	4.7nm,0.3s						
UZB				eS	Sn	04 30 25.9	-0.1
	24nm,0.2s						
KZA	Kyzart	1.82	283	P	Pg	04 30 06.6	+0.8
	SNR=7.7						
KZA	Kyzart	1.82	283	⇑iP	Pg	04 30 06.4	+0.6
	baz=81						
KZA				⇑iS	Sg	04 30 31.6	+2.2
	baz=81						
KST	Kastek	1.83	318	P	Pg	04 30 06.0	-0.1
	34nm,0.4s						
KST				S	Sg	04 30 30.7	+0.9
	69nm,0.3s						
KST	Kastek	1.83	318	⇓iP	Pg	04 30 06.0	-0.1
	34nm,0.4s						
KST				⇑iS	Sg	04 30 30.7	+0.9
	69nm,0.3s						
KURS	Kuram	1.84	12	P	Pb	04 30 04.6	-0.6
	7.5nm,0.3s						
KURS				S	Sn	04 30 27.7	+0.5
	32nm,0.3s						
KURS	Kuram	1.84	12	eP	Pb	04 30 04.6	-0.6
	7.5nm,0.3s						
KURS				eS	Sn	04 30 27.7	+0.5
	32nm,0.3s						
TKM2	Tokmak 2	1.94	310	P	Pg	04 30 08.1	-0.2
	SNR=61						
TKM2	Tokmak 2	1.94	310	⇓Pn	Pg	04 30 08.0	-0.2
	5.9nm,0.3s						
TKM2				⇑Sn	Sg	04 30 35.0	+1.5
	56nm,0.3s						
TKM2	Tokmak 2	1.94	310	⇓iP	Pg	04 30 07.7	-0.5
	baz=8.0						
TKM2				⇓iS	Sg	04 30 33.2	-0.3
	baz=8.0						
DGS	Degeres	2.07	319	Pg	Pg	04 30 10.4	-0.3
	16nm,0.2s						
DGS				Lg	Lg	04 30 37.8	
	83nm,0.4s						
DGS	Degeres	2.07	319	eP	Pg	04 30 10.3	-0.3
	16nm,0.2s						
DGS				eS	Sg	04 30 37.8	+0.3
	83nm,0.4s						
KTBS	Karatobe	2.14	341	Pg	Pb	04 30 10.7	+0.4
	5.7nm,0.2s						
KTBS				Lg	Lg	04 30 38.4	
	64nm,0.3s						
KTBS	Karatobe	2.14	341	eP	Pb	04 30 10.8	+0.4
	5.7nm,0.2s						
KTBS				eS	Sg	04 30 38.4	-1.2
	64nm,0.3s						
PDGK	Podgornoye	2.14	39	Pg	Pb	04 30 09.1	-1.2
	4.5nm,0.2s						
PDGK				Lg	Lg	04 30 35.9	
	12nm,0.3s						
PDGK	Podgornoye	2.14	39	⇑Pn	Pb	04 30 09.2	-1.2
	6.1nm,0.4s						
PDGK				⇑Sn	Sb	04 30 36.2	-1.1
	27nm,0.8s						
PDGK	Podgornoye	2.14	39	⇓iP	Pn	04 30 08.3	+0.7
	baz=38						
PDGK				⇓iS	Sn	04 30 34.6	-0.1
	baz=38						
CHKK	Chushkaly	2.21	348	Pg	Pb	04 30 12.2	+0.6

	12nm,0.3s						
CHKK				Lg	Lg	04 30 41.6	
	267nm,0.3s						
CHKK	**Chushkaly**	**2.21**	**348**	⇑*i*P	**Pb**	**04 30 12.2**	**+0.6**
	14nm,0.3s						
CHKK				*e*S	**Sg**	**04 30 40.9**	**-1.1**
	267nm,0.4s						
KBK	**Karagaybulak**	**2.21**	**297**	P	**Pg**	**04 30 13.5**	**+0.1**
	SNR=7.6						
KBK	**Karagaybulak**	**2.21**	**297**	⇓*i*P	**Pb**	**04 30 11.4**	**-0.3**
	baz=95						
KBK				⇓*i*S	**Sb**	**04 30 40.4**	**+0.8**
	baz=95						
UCH	**Uchtor**	**2.38**	**284**	P	**Pg**	**04 30 17.6**	**+0.9**
	SNR=5.7						
UCH	**Uchtor**	**2.38**	**284**	⇑*i*P	**Pb**	**04 30 14.4**	**-0.4**
	baz=83						
UCH				⇑*i*S	**Sb**	**04 30 45.1**	**+0.3**
	baz=83						
KUU	**Kurty**	**2.40**	**337**	Pg	**Pb**	**04 30 14.9**	**+0.2**
	17nm,0.5s						
KUU				Lg	Lg	04 30 45.6	
	93nm,0.4s						
KUU	**Kurty**	**2.40**	**337**	*e*P	**Pb**	**04 30 14.9**	**+0.2**
	17nm,0.5s						
KUU				*e*S	**Sb**	**04 30 45.6**	**+0.9**
	93nm,0.4s						
ARLS	**Aral**	**2.48**	**275**	⇑*i*P	**Pb**	**04 30 15.2**	**-1.0**
	baz=74						
ARLS				⇑*i*S	**Sb**	**04 30 46.8**	**-0.4**
	baz=74						
CHMS	**Chumysh**	**2.50**	**302**	P	**Sg**	**04 30 51.5**	**+0.1**
	SNR=7.0						
CHMS	**Chumysh**	**2.50**	**302**	⇑*i*P	**Pb**	**04 30 15.2**	**-1.3**
	baz=1.0						
CHMS				⇑*i*S	**Sb**	**04 30 46.8**	**-0.9**
	baz=1.0						
AAK	**Ala-Archa**	**2.52**	**293**	P	**Pg**	**04 30 19.4**	**+0.2**
	SNR=6.1						
AAK	**Ala-Archa**	**2.52**	**293**	⇓Pn	**Pb**	**04 30 17.4**	**+0.6**
	8.8nm,0.8s						
AAK				⇑Lg	Lg	04 30 53.1	
	23nm,0.7s						
AAK	**Ala-Archa**	**2.52**	**293**	⇑*i*P	**Pb**	**04 30 15.6**	**-1.2**
	baz=92						
AAK				⇑*i*S	**Sb**	**04 30 47.3**	**-0.9**
	baz=92						
ARXS	**Arharly**	**2.52**	**3**	Pg	**Pb**	**04 30 16.0**	**-0.9**
	7.2nm,0.5s						
ARXS				Lg	Lg	04 30 47.5	
	86nm,0.2s						
ARXS	**Arharly**	**2.52**	**3**	*e*P	**Pb**	**04 30 16.0**	**-0.9**
	7.2nm,0.5s						
ARXS				*e*S	**Sb**	**04 30 47.5**	**-0.9**
	86nm,0.2s						
USP	**Ospenovka**	**2.80**	**305**	P	**Sg**	**04 30 59.4**	**-1.5**
	SNR=11						
USP	**Ospenovka**	**2.80**	**305**	⇑*i*P	**Pb**	**04 30 19.4**	**-2.2**
	baz=4.0						
USP				⇑*i*S	**Sb**	**04 30 53.8**	**-2.5**
	baz=4.0						
AML	**Almayashu**	**2.97**	**280**	⇑*i*P	**Pb**	**04 30 22.6**	**-2.1**
	baz=79						
AML				⇑*i*S	**Sb**	**04 30 59.2**	**-2.4**
	baz=79						
EKS2	**Erkin-Say**	**3.02**	**290**	⇑*i*P	**Pb**	**04 30 23.0**	**-2.5**
	baz=89						
EKS2				⇑*i*S	**Sb**	**04 30 59.9**	**-2.9**
	baz=89						
DJR	**Jarkent**	**3.08**	**30**	Pg	**Pb**	**04 30 25.6**	**-0.8**
	1.0nm,0.3s						
DJR				Lg	Lg	04 31 03.9	
	4.9nm,0.4s						
DJR	**Jarkent**	**3.08**	**30**	*e*P	**Pb**	**04 30 25.6**	**-0.8**
	1.0nm,0.3s						
DJR				*e*S	**Sb**	**04 31 03.9**	**-0.4**
	4.9nm,0.4s						
MRKS	**Merke**	**3.44**	**289**	Pg	**Pg**	**04 30 36.1**	**-0.7**
	3.7nm,0.5s						
MRKS				Lg	Lg	04 31 22.1	
	12nm,0.2s						
MRKS	**Merke**	**3.44**	**289**	⇓*i*P	**Pg**	**04 30 36.1**	**-0.7**
	3.7nm,0.5s						
MRKS				⇑*i*S	**Sg**	**04 31 22.1**	**+0.7**
	12nm,0.2s						
KAPS	**Kapalarasan**	**3.81**	**19**	Pg	**Pb**	**04 30 38.4**	**-0.4**
	2.1nm,0.4s						
KAPS				Lg	Lg	04 31 26.2	
	6.4nm,0.3s						
KAPS	**Kapalarasan**	**3.81**	**19**	*e*P	**Pb**	**04 30 38.4**	**-0.4**
	2.1nm,0.4s						
KAPS				⇓*i*S	**Sb**	**04 31 26.2**	**+0.9**
	6.4nm,0.3s						
MNAS	**Manas**	**3.90**	**283**	⇑Pg	**Pg**	**04 30 44.3**	**-1.4**
	1.4nm,0.7s						
MNAS				⇓Lg	Lg	04 31 38.3	
	3.1nm,0.8s						
KK31	**Karatay Array**	**5.46**	**287**	⇓Pg	**Pg**	**04 31 14.5**	**-1.0**
	1.4nm,0.8s,baz=97,slow=15,SNR=4.7						
KK31				⇑Lg	Lg	04 32 28.4	
	0.7nm,0.4s,baz=93,slow=28,SNR=4.0						
MK31	**Makanchi Array**	**6.10**	**32**	⇑Pn	**Pn**	**04 31 03.9**	**+2.0**
	0.1nm,0.3s						
MK31				⇓Lg	Lg	04 32 38.5	
	0.7nm,0.5s						
OTUK	**Ortayu**	**7.55**	**332**	⇑Lg	Lg	04 33 32.7	
	3.6nm,0.9s						

IDC 09 04:29:59.7±1.7**, 11°.03S**×**164°.72E, h0**^{km}**, mb3.9**/4**,**
mb1 4.2/5**, mb1mx3.7**/38**, mbtmp3.9**/5**, ML3.6**/1**, MS3.6**/2**,**
Ms1 3.6/2**, ms1mx3.0**/30**, Error ellipse: s-maj=47.5km**
s-min=29.3km az=134.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.10**	**172**	Pn	Pn	04 32 39.6	-0.4
	0.4nm,0.3s,baz=284,slow=19,SNR=8.4						
WRA	**Warramunga Arr**	**30.55**	**249**	P	P	04 36 15.4	+0.2
	1.9nm,0.7s,baz=80,slow=9.1,SNR=22						
ASAR	**Alice Springs**	**31.90**	**243**	P	P	04 36 26.9	-0.2
	1.0nm,0.5s,baz=62,slow=10,SNR=25						
RAR	**Rarotonga**	**35.50**	**111**	LR	LR	04 50 20.7	
	comp=Z,23nm,19.1s,baz=228,slow=34						
FITZ	**Fitzroy Crossi**	**38.41**	**255**	P	P	04 37 23.3	0.0
	1.9nm,0.7s,baz=95,slow=7.7,SNR=6.9						
ILAR	**Eielson Array**	**83.82**	**19**	P	P	04 42 30.8	0.0
	0.4nm,1.0s,baz=214,slow=6.4,SNR=3.1						
PDAR	**Pinedale Array**	**94.28**	**47**	LR	LR	05 19 40.9	
	comp=Z,95nm,20.7s,baz=54,slow=32						

*IDC **09** 04:32:25.3±1.5, 24°.71N×125°.36E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.4/37, mbtmp3.6/4, ML1.6/1, Error ellipse: s-maj=43.1km s-min=30.0km az=63.0*

*ISCJB **09** 04:32:30.8±0.8, 24°.9N±0°.1×125°.72E±0°.08, h49^{km}±5^{km}, mb3.5/4, Error ellipse: s-maj=19.6km s-min=5.7km az=147.4*

*JMA **09** 04:32:30.8±0.2, 24°.94N×125°.69E, h47^{km}±2^{km}, M3.2*

ISC 09 04:32:30.3±1.4**, 24°.88N**±0°.10×**125°.69E**±0°.07**, h31**^{km}±10^{km}**,**
n15, σ1^s**31**/25**, mb3.4**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.29**	**245**	P	**Pn**	**04 32 39.7**	**+1.3**
JOGS				S	**Sn**	**04 32 46.1**	**+2.5**
JMJ	**Miyako jima 2**	**0.37**	**260**	P	**Pn**	**04 32 40.4**	**+0.9**
JMJ				S	**Sn**	**04 32 47.2**	**+1.5**
JIKM	**Ikemajima**	**0.41**	**276**	P	**Pn**	**04 32 40.7**	**+0.7**
JIKM				S	**Sn**	**04 32 48.1**	**+1.5**
JIRB	**Irabujima**	**0.48**	**264**	P	**Pn**	**04 32 41.3**	**+0.3**
JIRB				S	**Sn**	**04 32 48.8**	**+0.5**
JTJ	**Tarama**	**0.93**	**255**	P	**Pb**	**04 32 47.8**	**-0.1**
JTJ				S	**Sb**	**04 33 01.2**	**+1.2**
JISG	**Ishigakijimahi**	**1.29**	**257**	P	**Pb**	**04 32 53.3**	**-0.7**
JISG				*e*S	**Sb**	**04 33 10.0**	**-0.2**
JIJ	**Ishigaki jima**	**1.50**	**250**	P	**Pb**	**04 32 56.6**	**-0.9**
JIJ				*e*S	**Sb**	**04 33 16.0**	**-0.2**
JKRS	**Kuro-shima**	**1.66**	**248**	P	**Pb**	**04 32 59.2**	**-1.0**
JKRS				S	**Sb**	**04 33 20.8**	**0.0**
JKE	**Kume jima 2**	**1.75**	**34**	P	**Pb**	**04 33 01.1**	**-0.6**
JKE				*e*S	**Sb**	**04 33 22.7**	**-0.5**
IRIF	**Iriomote-Funau**	**1.87**	**253**	P	**Pn**	**04 33 01.7**	**+1.6**
JOW	**Kunigami**	**3.03**	**50**	Pn	**Pn**	**04 33 19.2**	**+3.1**
	0.1nm,0.3s,baz=142,slow=12,SNR=3.4						
JOW				Sn	**Sn**	**04 33 51.4**	**0.0**
	0.4nm,0.3s,baz=189,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**40.77**	**314**	P	**P**	**04 40 07.7**	**-0.9**
	0.2nm,0.3s,baz=102,slow=8.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**41.98**	**325**	P	**P**	**04 40 16.9**	**-1.5**
	0.5nm,0.5s,baz=125,slow=9.2,SNR=3.5						
WRA	**Warramunga Arr**	**45.34**	**169**	P	**P**	**04 40 44.3**	**-1.5**
	0.4nm,0.9s,baz=348,slow=8.2,SNR=3.0						
FINES	**FINESS Array B**	**72.90**	**330**	P	**P**	**04 43 56.3**	**+0.1**
	3.3nm,1.1s,baz=76,slow=5.9,SNR=6.1						

*NIED **09** 04:43:00, 36°.80N×141°.40E, h8^{km}, Mw4.9 Best double couple: M$_0$2.15000×10^{16} NP1:φ$_s$198.00000°, δ39.00000°, λ-91.00000°. NP2:φ$_s$19.00000°, δ51.00000°, λ-89.00000°.*

*IDC **09** 04:43:02.1±0.4, 36°.85N×141°.16E, h0^{km}, mb4.8/33, mb1 4.9/40, mb1mx4.8/50, mbtmp4.8/40, ML3.8/6, MS4.0/19, Ms1 4.1/19, ms1mx3.8/43, Error ellipse: s-maj=13.4km s-min=9.9km az=101.0*

*JMA **09** 04:43:03.1±0.1, 36°.84N×141°.36E, h33^{km}±1^{km}, M5.2*

JMA Felt IV J1.

*ISCJB **09** 04:43:05.8±0.4, 36°.88N±0°.02×141°.13E±0°.02, h31^{km}±2^{km}, mb5.0/285, MS4.5/39, Error ellipse: s-maj=3.4km s-min=2.5km az=144.5*

*GCMT **09** 04:43:06.0±0.4, 36°.87N±0°.03×141°.24E±0°.02, h13^{km}±1^{km}, MW4.8/81, Moment Tensor Solution. s35,c45; s81,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.25±.13; M$_{\theta\theta}$0.20±.09; M$_{\phi\phi}$2.05±.09; M$_{r\theta}$-0.07±.24; M$_{\theta\phi}$0.64±.06; M$_{\phi r}$-0.09±.19; Best double couple: M$_0$2.25200×10^{16} NP1:φ$_s$18.00000°, δ46.00000°, λ-89.00000°. NP2: φ$_s$196.00000°, δ44.00000°, λ-92.00000°. Principal axes: T 2.2500, Plg1.0000°, Azm107.0000°; N 0.0020, Plg1.0000°, Azm197.0000°; P -2.2530, Plg88.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **09** 04:43:06.7±0.9, 37°.05N×141°.02E, h33^{km}, mb5.2/96, MS4.3/19 Error ellipse: s-maj=6.0km s-min=3.9km az=106.1*

*NEIC **09** 04:43:08.0±0.3, 36°.88N×141°.09E, h36^{km}±3^{km}, mb5.0/187, Error ellipse: s-maj=2.8km s-min=1.9km az=146.0*

NEIC Felt [V] at Hitachi; [III] at Sendai and Utsunomiya; [II] at Tokyo. Felt in much of Chiba, Fukushima, Ibaraki, Saitama, Tochigi and Tokyo. Recorded [4 JMA] in Fukushima and Ibaraki.

ISC 09 04:43:06.2±0.5**, 36°.85N**±0°.03×**141°.24E**±0°.03**, h27**^{km}±3^{km}**,**
h27^{km}**:pP-P, n786,** σ1^s**49**/825**, mb5.1**/317**, MS4.4**/39**,**
62C-39D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.43**	**305**	⇑P	**Pb**	**04 43 13.4**	**-2.0**
ONAJ				S	**Sb**	**04 43 21.7**	**+0.1**
JFK	**Kawauchi**	**0.59**	**331**	⇑P	**Pn**	**04 43 15.5**	**-3.3**
JHO	**Hitachi**	**0.59**	**246**	⇓P	**Pn**	**04 43 16.0**	**-2.7**
JHO				S	**Sb**	**04 43 25.1**	**-0.8**
JFFD	**Fukushimafurud**	**0.59**	**294**	P	**Pn**	**04 43 15.9**	**-2.9**
JFFD				S	**Sb**	**04 43 25.2**	**-0.8**
JHYU	**Hitachinakayam**	**0.73**	**226**	P	**Pn**	**04 43 18.1**	**-2.6**
JFT	**Otama**	**0.98**	**313**	P	**Pn**	**04 43 22.6**	**-1.5**
JFT				S	**Sn**	**04 43 36.7**	**-0.4**
JMM	**Marumori**	**1.07**	**341**	⇓P	**Pn**	**04 43 23.0**	**-2.4**
JMM				*e*S	**Sn**	**04 43 37.9**	**-1.4**
JFY	**Yanaizu**	**1.34**	**295**	P	**Pn**	**04 43 28.5**	**-0.6**
JAG	**Ashikaga**	**1.50**	**254**	⇓P	**Pn**	**04 43 30.1**	**-1.1**
JKT	**Katashina**	**1.60**	**267**	⇓P	**Pn**	**04 43 32.5**	**-0.2**
I30JP	**ISUMI INFRASON**	**1.71**	**206**	Pg	**Pn**	**04 43 35.0**	**+0.8**
	baz=27,slow=13,SNR=0.4						
JNS	**Sasagawa**	**1.81**	**303**	P	**Pn**	**04 43 35.2**	**-0.3**
JHK	**Hiroka**	**1.82**	**283**	P	**Pn**	**04 43 35.9**	**+0.2**
JRY	**Ryogami san**	**2.06**	**247**	⇓P	**Pn**	**04 43 37.8**	**-1.2**
JGK	**Kuni**	**2.11**	**263**	⇓P	**Pn**	**04 43 40.1**	**+0.4**
JAW	**Awa shima**	**2.25**	**316**	⇑P	**Pn**	**04 43 42.1**	**+0.6**
MJAR	**Matsushiro Arr**	**2.45**	**264**	Pn	**Pn**	**04 43 43.3**	**-1.1**
	16nm,0.3s,baz=93,slow=14,SNR=438						
MJAR				Sn	**Sn**	**04 44 15.9**	**+2.4**
	33nm,0.3s,baz=73,slow=17,SNR=5.2						
MAJO	**Matsushiro**	**2.46**	**264**	*e*Pn	**Pn**	**04 43 45.1**	**+0.6**
MAJO	**Matsushiro**	**2.46**	**264**	*d i*P	**Pn**	**04 43 44.7**	**+0.3**
MAT	**Matsushiro**	**2.46**	**264**	P	**Pn**	**04 43 44.6**	**+0.2**
MAT				*e*S	**Sb**	**04 44 17.4**	**-2.0**
MAT	**Matsushiro**	**2.46**	**264**	P	**Pn**	**04 43 44.9**	**+0.5**
MJB9	**Matsu-Tunnel**	**2.46**	**264**	*e*Pn	**Pn**	**04 43 45.2**	**+0.7**
JJN	**Nakama**	**2.47**	**277**	P	**Pn**	**04 43 45.7**	**+1.0**
JNG	**Nsakai**	**2.56**	**261**	⇓P	**Pn**	**04 43 46.6**	**+0.6**
JSD	**Sado**	**2.65**	**297**	⇓P	**Pn**	**04 43 46.8**	**-0.2**
JNT	**Takato**	**2.69**	**250**	⇓P	**Pn**	**04 43 48.2**	**+0.5**
JIZS	**Izushimoda**	**2.87**	**223**	P	**Pn**	**04 43 49.6**	**-0.5**
SHZ3	**Shizuoka 3**	**3.04**	**235**	P	**Pn**	**04 43 52.9**	**+0.4**
JNY	**Yasuok**	**3.11**	**242**	P	**Pn**	**04 43 54.5**	**+1.0**
JGN	**Niukaw**	**3.22**	**260**	⇓P	**Pn**	**04 43 56.2**	**+1.2**
HMMJ	**Hamamatsu 2**	**3.48**	**236**	⇑P	**Pn**	**04 43 59.3**	**+0.8**
JHG	**Hegura jima**	**3.58**	**287**	⇑P	**Pn**	**04 44 00.7**	**+0.8**
JAO	**Obara**	**3.59**	**245**	P	**Pn**	**04 44 01.1**	**+1.0**
INU	**Inuyama**	**3.73**	**248**	*e*Pn	**Pn**	**04 44 02.9**	**+0.9**
JHJ2	**Mitsune**	**3.91**	**198**	*e*Pn	**Pn**	**04 44 05.6**	**+1.1**
JHJ	**Hachijo jima 2**	**3.91**	**198**	Pn	**Pn**	**04 44 03.4**	**-1.0**
	142nm,0.3s,baz=74,slow=12,SNR=6.4						
JHJ				Sn	**Sn**	**04 44 49.3**	**-0.2**
	214nm,0.3s,baz=346,slow=23,SNR=5.7						
JHJ				LR	LR	04 45 54.1	
	comp=Z,2μm,18.4s,baz=120,slow=44						
ERM	**Erimo**	**5.36**	**15**	*e*Pn	**Pn**	**04 44 23.8**	**-0.6**
ERM				*e*Sn	**Sn**	**04 45 25.3**	**+0.1**
ERM	**Erimo**	**5.36**	**15**	⇑*e*P	**Pn**	**04 44 23.0**	**-1.4**
ASAJ	**Asahikawa**	**7.33**	**8**	Pn	**Pn**	**04 44 50.3**	**-1.0**
	9.1nm,0.3s,baz=221,slow=11,SNR=22						
ASAJ				Sn	**Sn**	**04 46 12.6**	**-1.0**
	2.7nm,0.3s,baz=151,slow=19,SNR=2.4						
ASAJ				LR	LR	04 47 37.5	
	comp=Z,464nm,21.9s,baz=140,slow=38						
UWA2	**Uwa jima 2**	**7.94**	**245**	P	**Pn**	**04 45 03.4**	**+3.6**
YUK	**Yuzh-Kuril'sk**	**7.99**	**25**	*e*P	**Pn**	**04 45 01.9**	**+1.5**
YUK				*e*S	**Sn**	**04 46 24.5**	**-5.3**
YUK				pmax	pmax		
	comp=Z,205nm,0.5s						
YUK				pmax	pmax		
	comp=N,199nm,0.4s						
YUK				pmax	pmax		
	comp=E,91nm,0.4s						
SHO	**Shikotan**	**8.20**	**30**	*e*P	**Pn**	**04 45 02.5**	**-0.8**
SHO				pmax	pmax		
	comp=Z,39nm,0.3s						
SHO				pmax	pmax		
	comp=E,28nm,0.4s						
SHO				pmax	pmax		
	comp=N,28nm,0.3s						
TEY	**Ternei**	**8.89**	**338**	⇑*e*P	**Pn**	**04 45 17.4**	**+4.6**
TEY				pmax	pmax		
	comp=N,20nm,1.7s						
TEY				pmax	pmax		
	comp=Z,20nm,1.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.6s						
TEY				MLR	MLR		
	comp=N,200nm,11.0s						
TEY				MLR	MLR		
	comp=Z,250nm,10.0s						
JNU	**Nakatsue**	**9.28**	**249**	*e*Pn	**Pn**	**04 45 20.5**	**+2.3**
JNU	**Nakatsue**	**9.28**	**249**	Pn	**Pn**	**04 45 17.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=198,slow=6.4,SNR=2.7						
VLA	**Vladivostok**	**9.52**	**314**	*d i*P	**Pn**	**04 45 22.9**	**+1.6**
MSHR	**Mys Shultsa**	**9.64**	**309**	⇓*e*P	**Pn**	**04 45 21.6**	**-1.4**
KUR	**Kuril'sk**	**9.75**	**29**	P	**Pn**	**04 45 27.7**	**+3.2**
KUR				*e*S	**Sn**	**04 47 07.7**	**-5.3**
KUR				smax	smax		
	comp=E,151nm,0.6s						
KUR				smax	smax		
	comp=N,74nm,0.5s						
CBIJ	**Chichi jima**	**9.76**	**175**	Pn	**Pn**	**04 45 22.1**	**-2.7**
CBIJ				Sn	**Sn**	**04 47 07.8**	**-5.7**
JCJ	**Chichijima**	**9.76**	**175**	Pn	**Pn**	**04 45 22.1**	**-2.7**
	comp=N,37nm,0.3s,baz=322,slow=22,SNR=9.5						
JCJ				Sn	**Sn**	**04 47 07.8**	**-5.7**
	comp=N,10nm,0.3s,baz=290,slow=22,SNR=4.6						
YSS	**Yuzh-Sakhalins**	**10.15**	**6**	*e*Pn	**Pn**	**04 45 30.1**	**0.0**
YSS	**Yuzh-Sakhalins**	**10.15**	**6**	⇓*e*P	**Pn**	**04 45 30.0**	**0.0**
YSS				*e*S	**Sn**	**04 47 21.4**	**-1.6**
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				pmax	pmax		
	comp=N,40nm,0.9s						
YSS				smax	smax		
	comp=N,60nm,1.7s						
YSS				MLR	MLR		
	comp=Z,2μm,13.0s						
YSS				MLR	MLR		
	comp=N,2μm,15.0s						
USRK	**Ussuriysk Ar.**	**10.16**	**319**	Pn	**Pn**	**04 45 33.5**	**+3.3**
	comp=N,2.8nm,0.3s,baz=135,slow=13,SNR=76						
KSRS	**Korea Array**	**10.65**	**277**	Pn	**Pn**	**04 45 41.0**	**+4.2**
	comp=N,0.8nm,0.3s,baz=89,slow=14,SNR=36						
KSRS				LR	LR	04 49 13.1	
	comp=N,2μm,21.8s,baz=98,slow=35						
KS01	**Wonju Array Si**	**10.67**	**277**	*e*Pn	**Pn**	**04 45 36.2**	**-0.9**
KS15	**Wonju Array Si**	**10.68**	**277**	*e*Pn	**Pn**	**04 45 39.0**	**+1.7**
KSAR	**Wonju Array Be**	**10.68**	**277**	Pn	**Pn**	**04 45 41.0**	**+3.8**
KSAR	**Wonju Array Be**	**10.68**	**277**	P	**Pn**	**04 45 41.1**	**+3.8**
TJN	**Taejon**	**11.16**	**272**	⇑*e*P	**Pn**	**04 45 42.3**	**-1.6**
MDJ	**Mudanjiang**	**11.74**	**315**	P	Pn	04 45 56.8	+5.0
MDJ				S	Sn	04 48 20.5	+19
MDJ				pmax	pmax		
	comp=Z,100nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,900nm,6.6s						
MDJ				LR	LR		
	comp=N,1μm,10.6s						
MDJ				LR	LR		
	comp=E,2μm,11.8s						
MDJ				LR	LR		
	comp=Z,2μm,13.1s						
MDJ	**Mudanjiang**	**11.74**	**315**	*e*Pn	**Pn**	**04 45 51.7**	**-0.1**
CN2	**Changchun**	**13.89**	**305**	*e*P	**Pn**	**04 46 21.6**	**+0.5**
CN2				*e*pP	P	04 46 29.0	0.0
CN2				*e*sP		04 46 33.9	
CN2				*e*S	**Sn**	**04 48 54.6**	**+0.2**
CN2				SS	**S**	**04 49 10.7**	**-5.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2				pmax	pmax		
	comp=Z,460nm,6.0s						
CN2				LR	LR		
	comp=N,2μm,12.0s						
CN2				LR	LR		
	comp=E,2μm,12.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
TYV	**Tymovskoe**	**14.04**	**4**	*e*P	**Pn**	**04 46 22.1**	**-1.0**
TYV				pmax	pmax		
	comp=Z,12nm,0.7s						
TYV				MLR	MLR		
	comp=Z,3μm,17.0s						
KLR	**Kul'dur**	**14.17**	**334**	⇑*e*P	**Pn**	**04 46 25.2**	**+0.3**
KLR	**Kul'dur**	**14.17**	**334**	Pn	**Pn**	**04 46 25.4**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=150,slow=11,SNR=11						
KLR				LR	LR	04 51 33.0	
	comp=Z,840nm,18.8s,baz=150,slow=36						
GRNR	**Gornyy**	**14.33**	**348**	*e*P	**Pn**	**04 46 25.8**	**-1.4**
GRNR				pmax	pmax		
	comp=Z,11nm,0.8s						
SNY	**Shenyang**	**14.54**	**295**	⇑P	**Pn**	**04 46 31.1**	**+1.2**
SNY				S	Sn	04 48 58.5	-12
SNY				pmax	pmax		
	comp=Z,13nm,1.4s						
SNY				pmax	pmax		
	comp=Z,690nm,10.0s						
SNY				LR	LR		
	comp=N,2μm,12.4s						
SNY				LR	LR		
	comp=E,2μm,13.1s						
SNY				LR	LR		
	comp=Z,3μm,12.5s						
DL2	**Dalian**	**15.62**	**283**	P	**P**	**04 46 48.4**	**+0.1**
DL2				S	**Sn**	**04 49 41.6**	**+5.1**
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
DL2				pmax	pmax		
	comp=Z,690nm,6.5s						
DL2				LR	LR		
	comp=N,1μm,10.2s						
DL2				LR	LR		
	comp=E,2μm,11.5s						
DL2				LR	LR		
	comp=Z,2μm,11.6s						
NKL	**Nikolayevsk**	**16.30**	**359**	*e*P	**Pn**	**04 46 48.8**	**-4.1**
NKL				pmax	pmax		
	comp=Z,17nm,0.9s						
NJ2	**Nanjing**	**19.06**	**262**	*e*P	**P**	**04 47 24.8**	**-1.5**
NJ2				sP	**sP**	**04 47 37.5**	**+0.4**
NJ2				S	**S**	**04 51 01.0**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
NJ2				LR	LR		
	comp=N,1μm,13.0s						
NJ2				LR	LR		
	comp=E,2μm,12.5s						
NJ2				LR	LR		
	comp=Z,1μm,11.9s						
TIA	**Tai'an**	**19.38**	**275**	P	**P**	**04 47 28.5**	**-1.4**
TIA				S	**Sn**	**04 51 15.0**	**+7.3**
TIA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TIA				LR	LR		
	comp=N,330nm,13.2s						
TIA				LR	LR		
	comp=E,500nm,15.7s						
TIA				LR	LR		
	comp=Z,740nm,13.7s						
ZEA	**Zeya**	**19.48**	**334**	*e*P	**P**	**04 47 27.8**	**-3.0**
ZEA				pmax	pmax		
	comp=N,69nm,0.6s						
ZEA				pmax	pmax		
	comp=E,29nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,73nm,0.6s						
ZEA				MLR	MLR		
	comp=N,2μm,14.0s						
ZEA				MLR	MLR		
	comp=E,800nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,2μm,14.0s						
BJI	**Beijing**	**19.87**	**287**	P	**P**	**04 47 33.8**	**-1.3**
BJI				S	**S**	**04 51 12.5**	**-4.8**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BJI				LR	LR		
	comp=N,900nm,11.8s						
BJI				LR	LR		
	comp=E,1μm,10.7s						
BJI				LR	LR		
	comp=Z,200nm,19.0s						
BJT	**Baijiatuau**	**19.87**	**287**	*e*P	**P**	**04 47 33.8**	**-1.4**
	comp=Z,25nm,0.9s						
PETK	**Petropavlovsk-**	**19.91**	**30**	P	**P**	**04 47 35.6**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=223,slow=11,SNR=3.9						
PETK				LR	LR	04 54 43.7	
	comp=Z,141nm,20.9s,baz=213,slow=35						
HIA	**Hailar**	**19.93**	**315**	*e*P	**P**	**04 47 32.2**	**-3.6**
	comp=Z,22nm,1.1s						
HIA	**Hailar**	**19.93**	**315**	⇑*e*P	**P**	**04 47 33.4**	**-2.4**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PET	**Petropavlovsk**	**20.24**	**32**	*e*P	Pn	04 47 41.5	+0.4
PET				*e*S	**S**	**04 51 22.0**	**-2.7**
PET				MLR	MLR		
	comp=Z,1μm,20.0s						
NACB	**Ninganchiao**	**21.07**	**239**	*e*P	**P**	**04 47 45.7**	**-2.6**
	comp=Z,30nm,1.1s						
SSLB	**Suanglung**	**21.77**	**239**	*e*P	**P**	**04 47 51.0**	**-4.7**
	comp=Z,91nm,1.7s						
WHN	**Wuhan**	**23.20**	**262**	P	**P**	**04 48 07.4**	**-3.4**
WHN				S	**S**	**04 52 22.6**	**+1.7**
WHN				LR	LR		
	comp=N,3μm,12.9s						
WHN				LR	LR		
	comp=E,4μm,11.7s						
WHN				LR	LR		
	comp=Z,4μm,11.3s						
GUMO	**Guam**	**23.39**	**171**	*e*P	**P**	**04 48 13.9**	**+1.1**
GUMO	**Guam**	**23.39**	**171**	*e*P	**P**	**04 48 14.0**	**+1.1**
GUMO	**Guam**	**23.39**	**171**	P	**P**	**04 48 12.1**	**-0.7**
	comp=Z,63nm,0.7s,baz=358,slow=12,SNR=2.1						
HHC	**Hu-ho-hao-te**	**23.40**	**289**	*e*P	**P**	**04 48 11.8**	**-1.1**
HHC				PP	**PnPn**	**04 48 49.5**	**+10**
HHC				S	**S**	**04 52 17.9**	**-6.4**
HHC				sS	pS	04 52 32.6	-0.1

HHC				SS	Sn	04 53 01.1	+17
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
HHC				LR	LR		
	comp=N,740nm,11.4s						
HHC				LR	LR		
	comp=E,1µm,10.4s						
HHC				LR	LR		
	comp=Z,1µm,10.3s						
MA2	**Magadan**	**23.56**	**12**	*e*P	**P**	**04 48 14.0**	**-0.1**
	comp=Z,29nm,0.8s						
MA2	**Magadan**	**23.56**	**12**	⇑*e*P	**P**	**04 48 14.0**	**-0.1**
MA2				pmax	pmax		
	comp=Z,94nm,2.5s						
MA2	**Magadan**	**23.56**	**12**	P	**P**	**04 48 13.8**	**-0.3**
	comp=Z,16nm,0.6s,baz=192,slow=9.0,SNR=16						
MA2				LR	LR	04 57 21.9	
	comp=Z,230nm,19.6s,baz=176,slow=36						
YAK	**Yakutsk**	**26.21**	**348**	*e*P	**P**	**04 48 37.8**	**-0.6**
YAK				*e**PP	**sP**	**04 48 52.3**	**+2.7**
YAK				*e*S	**S**	**04 53 13.0**	**+4.4**
YAK				*e**SS	sS	04 53 31.1	+9.4
YAK				*e*SS		04 54 16.8	
YAK				pmax	pmax		
	comp=Z,313nm,0.8s						
YAK				pmax	pmax		
	comp=N,133nm,1.0s						
YAK				pmax	pmax		
	comp=E,59nm,0.9s						
YAK				smax	smax		
	comp=N,867nm,1.9s						
YAK				smax	smax		
	comp=E,133nm,2.0s						
YAK				MLR	MLR		
	comp=Z,3µm,15.0s						
YAK				MLR	MLR		
	comp=N,3µm,14.0s						
YAK				MLR	MLR		
	comp=E,2µm,15.0s						
XAN	**Xi'an**	**26.41**	**274**	P	**P**	**04 48 38.9**	**-1.6**
XAN				pP	pP	04 48 45.5	-2.9
XAN				PP	**PnPn**	**04 49 30.3**	**+10**
XAN				S	S	04 53 24.0	+12
XAN				SS	SnSn	04 54 53.8	+40
XAN				pmax	pmax		
	comp=Z,3.0nm,0.4s						
XAN				pmax	pmax		
	comp=Z,160nm,4.1s						
XAN				LR	LR		
	comp=N,690nm,13.1s						
XAN				LR	LR		
	comp=E,950nm,12.0s						
XAN				LR	LR		
	comp=Z,1µm,12.7s						
XAN	**Xi'an**	**26.41**	**274**	*e*P	**P**	**04 48 38.8**	**-1.7**
	comp=Z,8.9nm,0.6s						
XAN	**Xi'an**	**26.41**	**274**	*e*P	**P**	**04 48 38.8**	**-1.7**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SEY	**Seymchan**	**26.99**	**11**	⇑*i*P	**P**	**04 48 46.6**	**+1.2**
SEY	**Seymchan**	**26.99**	**11**	P	**P**	**04 48 46.1**	**+0.7**
	comp=Z,19nm,0.8s,baz=197,slow=6.8,SNR=31						
ENH	**Enshi**	**27.18**	**265**	*e*P	**P**	**04 48 46.1**	**-1.3**
ULN	**Ulaanbaatar**	**27.34**	**305**	*e*P	**P**	**04 48 47.3**	**-1.5**
	comp=Z,15nm,0.9s						
ULN	**Ulaanbaatar**	**27.34**	**305**	*c i*P	**P**	**04 48 47.6**	**-1.3**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ULN	**Ulaanbaatar**	**27.34**	**305**	P	**P**	**04 48 48.3**	**-0.6**
	SNR=5.7						
BOD	**Bodaibo**	**27.61**	**328**	*e*P	**P**	**04 48 50.0**	**-0.9**
BOD				pmax	pmax		
	comp=Z,38nm,0.8s						
SONA1	**Songino Array**	**27.77**	**304**	*e*P	**P**	**04 48 51.4**	**-1.3**
SONM	**Songino Array**	**27.77**	**304**	P	**P**	**04 48 51.7**	**-1.0**
	comp=Z,20nm,0.7s,baz=110,slow=8.8,SNR=100						
SONM				PcP	**PcP**	**04 52 07.3**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=110,slow=2.5,SNR=4.3						
SONM				LR	LR	04 59 54.2	
	comp=Z,292nm,18.9s,baz=118,slow=36						
H11N2	**WAKE ISLAND Hy**	**28.18**	**120**	T	T	05 18 20.2	
	baz=313,slow=75,SNR=6296						
H11N1	**WAKE ISLAND Hy**	**28.19**	**120**	T	T	05 18 20.8	
	baz=313,slow=75,SNR=7132						
H11N3	**WAKE ISLAND Hy**	**28.20**	**120**	T	T	05 18 21.2	
	baz=313,slow=75,SNR=6603						
H11S1	**WAKE ISLAND Hy**	**28.88**	**122**	T	T	05 19 47.2	
	baz=314,slow=75,SNR=3942						
H11S3	**WAKE ISLAND Hy**	**28.88**	**122**	T	T	05 19 49.1	
	baz=314,slow=75,SNR=2287						
H11S2	**WAKE ISLAND Hy**	**28.90**	**122**	T	T	05 19 45.7	
	baz=314,slow=75,SNR=1467						
LZH	**Lanzhou**	**29.96**	**280**	*e*P	**P**	**04 49 12.3**	**0.0**
LZH				pP	pP	04 49 22.3	+2.0
LZH				sP	sP	04 49 26.7	+3.1
LZH				PP	**PnPn**	**04 50 07.2**	**-1.9**
LZH				S	**S**	**04 54 07.4**	**-1.1**
LZH				sS	sS	04 54 23.1	+1.5
LZH				SS	**SnSn**	**04 55 30.4**	**-10**
LZH				pmax	pmax		
	comp=Z,31nm,1.0s						
LZH				pmax	pmax		
	comp=Z,300nm,4.3s						
LZH				LR	LR		
	comp=N,2µm,12.5s						
LZH				LR	LR		
	comp=E,1µm,15.2s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
ZAK	**Zakamensk**	**30.27**	**309**	*e*P	**P**	**04 49 13.0**	**-1.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GYA	**Guiyang**	**31.05**	**260**	⇑*i*P	**P**	**04 49 19.3**	**-2.7**
GYA				pP	pP	04 49 32.6	+2.6
GYA				PP	**PnPn**	**04 50 26.5**	**+2.9**
GYA				S	**S**	**04 54 25.3**	**-0.4**
GYA				sS	sS	04 54 40.0	+1.2
GYA				SS	**SnSn**	**04 56 09.2**	**+1.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,580nm,17.4s						
GYA				LR	LR		
	comp=E,620nm,17.1s						
GYA				LR	LR		
	comp=Z,640nm,17.6s						
CD2	**Chengdu**	**31.53**	**270**	P	**P**	**04 49 25.6**	**-0.5**
CD2				S	**S**	**04 54 31.0**	**-2.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,4.8s						
CD2				LR	LR		
	comp=N,2µm,13.4s						
CD2				LR	LR		
	comp=E,1µm,14.4s						
CD2				LR	LR		
	comp=Z,1µm,14.4s						
GTA	**Gaotai**	**32.48**	**287**	⇑P	**P**	**04 49 33.2**	**-1.3**
GTA				pP	pP	04 49 43.3	+0.8
GTA				sP	sP	04 49 47.3	+1.5
GTA				PcP	**PcP**	**04 52 22.5**	**+1.5**
GTA				S	**S**	**04 54 45.0**	**-2.8**
GTA				sS	sS	04 55 01.6	+0.6
GTA				PcS	**PcS**	**04 56 06.9**	**+0.7**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,73nm,6.8s						
GTA				LR	LR		
	comp=N,420nm,14.6s						
GTA				LR	LR		
	comp=E,450nm,12.7s						
GTA				LR	LR		
	comp=Z,720nm,12.4s						
QIZ	**Qiongzhong**	**32.73**	**246**	P	**P**	**04 49 37.2**	**+0.6**
QIZ				S	**S**	**04 54 52.0**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,34nm,2.9s						
QIZ				pmax	pmax		
	comp=Z,370nm,2.9s						
QIZ				LR	LR		
	comp=N,710nm,17.2s						
QIZ				LR	LR		
	comp=E,660nm,18.6s						
QIZ				LR	LR		
	comp=Z,480nm,11.3s						
KNGR	**Kungurtug, Tuv**	**33.94**	**308**	⇓*i*P	**P**	**04 49 46.3**	**-0.7**
BILL	**Bilibino**	**34.24**	**16**	*e*P	**P**	**04 49 46.8**	**-2.5**
	comp=Z,12nm,1.3s						
BILL	**Bilibino**	**34.24**	**16**	⇓*i*P	**P**	**04 49 47.3**	**-2.0**
BILL				*e*		04 51 05.1	
BILL				*e*S	**S**	**04 55 19.6**	**+5.5**
BILL				pmax	pmax		
	comp=Z,18nm,2.5s						
BILL				MLR	MLR		
	comp=Z,282nm,14.0s						
KMI	**Kunming**	**34.80**	**261**	P	**P**	**04 49 56.0**	**+1.2**
KMI				pP	pP	04 50 00.0	-2.9
KMI				sP	sP	04 50 07.6	+1.5
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				pmax	pmax		
	comp=Z,120nm,4.0s						
KMI				LR	LR		
	comp=N,570nm,10.9s						
KMI				LR	LR		
	comp=E,610nm,12.1s						
KMI				LR	LR		
	comp=Z,590nm,13.1s						
TIXI	**Tiksi**	**35.45**	**353**	*e*P	**P**	**04 49 59.2**	**-0.5**
	comp=Z,13nm,0.8s						
TIXI	**Tiksi**	**35.45**	**353**	*d i*P	**P**	**04 49 59.1**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,18nm,1.0s						
TIXI	**Tiksi**	**35.45**	**353**	P	**P**	**04 49 58.6**	**-1.0**
	comp=Z,5.4nm,0.5s,baz=150,slow=7.6,SNR=13						
NONG	**Nongkai**	**38.32**	**251**	P	**P**	**04 50 25.6**	**+1.0**
	comp=Z,0.6nm,0.8s						
SKNT	**Sakolnakorn**	**38.35**	**249**	P	**P**	**04 50 26.1**	**+1.2**
	comp=Z,10nm,0.9s						
DGZ	**Jazzator, Alta**	**40.38**	**306**	*c i*P	**P**	**04 50 42.2**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,66nm,0.8s						
UTTA	**Uttaradit**	**40.48**	**253**	P	**P**	**04 50 43.1**	**+0.4**
	comp=Z,2.6nm,0.6s						
CHAI	**Chaiyaphum**	**40.51**	**250**	P	**P**	**04 50 43.1**	**+0.1**
	comp=Z,11nm,1.0s						
WMQ	**Urumqi**	**40.80**	**297**	P	**P**	**04 50 46.3**	**+1.2**
WMQ				pP	pP	04 50 55.8	+2.6
WMQ				sP	sP	04 50 59.4	+2.9
WMQ				S	**S**	**04 56 54.1**	**-0.2**
WMQ				SS	**SS**	**04 59 49.5**	**-6.1**
WMQ				pmax	pmax		
	comp=Z,210nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,470nm,4.7s						
WMQ				LR	LR		
	comp=N,1µm,11.3s						
WMQ				LR	LR		
	comp=E,1µm,13.3s						
WMQ				LR	LR		
	comp=Z,630nm,22.5s						
WMQ	**Urumqi**	**40.80**	**297**	*e*P	**P**	**04 50 45.4**	**+0.3**
	comp=Z,67nm,0.7s						
WMQ	**Urumqi**	**40.80**	**297**	*e*P	**P**	**04 50 45.4**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,67nm,0.7s						
PBKT	**Sadao Pong**	**40.87**	**251**	*e*P	**P**	**04 50 45.8**	**-0.1**
	comp=Z,14nm,0.8s						
PBKT	**Sadao Pong**	**40.87**	**251**	P	**P**	**04 50 46.2**	**+0.3**
	comp=Z,21nm,0.9s						
CMMT	**Chiang Mai**	**41.11**	**256**	P	**P**	**04 50 48.4**	**+0.5**
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**41.11**	**256**	*e*P	**P**	**04 50 47.2**	**-0.6**
	comp=Z,15nm,1.3s						
CHTO	**Chiang Mai**	**41.11**	**256**	*e*P	**P**	**04 50 47.3**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,15nm,1.3s						
CHTO	**Chiang Mai**	**41.11**	**256**	P	**P**	**04 50 47.6**	**-0.3**
	SNR=5.3						
CHTO	**Chiang Mai**	**41.11**	**256**	P	**P**	**04 50 48.5**	**+0.6**
	comp=Z,36nm,0.7s						
SANI	**Sanana**	**41.22**	**204**	P	**P**	**04 50 48.9**	**+0.1**
	comp=Z,42nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.31**	**255**	P	**P**	**04 50 48.6**	**-1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR				MLR	MLR		
	comp=Z,120nm,18.3s						
CMAR	**Chiang Mai Arr**	**41.31**	**255**	P	**P**	**04 50 48.6**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=55,slow=6.3,SNR=10						
CMAR				LR	LR	05 08 22.4	
	comp=Z,120nm,18.3s,baz=42,slow=37						
CM01	**Chiang Mai Arr**	**41.32**	**255**	*e*P	**P**	**04 50 49.4**	**-0.2**
ANM	**Nome**	**41.82**	**31**	*e*P	**P**	**04 50 54.6**	**+1.4**
	comp=Z,30nm,1.4s						
ANM	**Nome**	**41.82**	**31**	*e*P	**P**	**04 50 54.6**	**+1.4**
ANM				pmax	pmax		
	comp=Z,31nm,1.4s						
ZAA0	**Zalesovo Array**	**41.93**	**313**	*e*P	**P**	**04 50 53.5**	**-0.7**
	comp=Z,46nm,0.8s						
ZALV	**Zalesovo Beam**	**41.93**	**313**	*e*P	**P**	**04 50 53.5**	**-0.7**
ZALV				PcP	**PcP**	**04 52 49.7**	**+0.4**
ZALV	**Zalesovo Beam**	**41.93**	**313**	*i* P	**P**	**04 50 54.0**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,49nm,0.7s						
ZALV	**Zalesovo Beam**	**41.93**	**313**	P	**P**	**04 50 54.1**	**-0.2**
	comp=Z,48nm,0.7s,baz=95,slow=6.6,SNR=197						
ZALV				PcP	**PcP**	**04 52 49.7**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=125,slow=1.9,SNR=3.9						
ZALV				LR	LR	05 08 31.1	
	comp=Z,199nm,19.2s,baz=74,slow=36						
NLAI	**Namlea**	**42.01**	**201**	P	P	04 51 04.6	+9.4
LSA	**Lhasa**	**42.09**	**275**	*e*P	**P**	**04 50 56.3**	**-0.1**
	comp=Z,16nm,1.1s						
LSA	**Lhasa**	**42.09**	**275**	*e*P	**P**	**04 50 56.3**	**-0.1**
LSA				pmax	pmax		
	comp=Z,16nm,1.1s						
BNDI	**Bandanaira**	**42.50**	**197**	P	**P**	**04 50 59.4**	**+0.2**
	comp=Z,162nm,0.9s,comp=Z,2µm						
UTHA	**Uthaitani**	**42.65**	**251**	P	**P**	**04 51 01.4**	**+0.9**
	comp=Z,3.7nm,0.8s,comp=Z,4µm						
UMPA	**Umpang Tak**	**42.70**	**253**	P	**P**	**04 51 02.8**	**+1.9**
	comp=Z,7.0nm,0.9s,comp=Z,1µm						
NVS	**Novosibirsk**	**42.86**	**314**	⇑*i*P	**P**	**04 51 02.2**	**+0.4**
NVS				*e*S	**S**	**04 57 29.0**	**+4.6**
NVS				pmax	pmax		
	comp=Z,46nm,1.0s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,37nm,1.1s						
NVS				smax	smax		
	comp=N,17nm,2.1s						
NVS				smax	smax		
	comp=E,28nm,2.5s						
SHL	**Shillong**	**43.26**	**269**	*e*P	**P**	**04 51 05.9**	**+0.3**
	comp=E,9.4nm,0.8s						
SHL	**Shillong**	**43.26**	**269**	*e*P	**P**	**04 51 05.9**	**+0.3**
SHL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHL	**Shillong**	**43.26**	**269**	*e*x	**P**	**04 51 05.5**	**-0.1**
NRIK	**Noril'sk**	**43.37**	**335**	P	**P**	**04 51 05.3**	**-0.3**
	comp=Z,6.8nm,0.6s,baz=107,slow=9.2,SNR=16						
NRIK				LR	LR	05 10 52.5	
	comp=Z,220nm,19.6s,baz=87,slow=38						
SBUM	**Sibu**	**43.44**	**225**	*e*P	**P**	**04 51 07.3**	**+0.4**
	comp=Z,4.4nm,0.8s						
RDOG	**Red Dog Mine**	**43.73**	**27**	*e*P	**P**	**04 51 09.8**	**+1.1**
	comp=Z,19nm,0.8s						
MK01	**Makanchi Array**	**44.09**	**302**	*e*P	**P**	**04 51 11.7**	**-0.1**
MK31	**Makanchi Array**	**44.09**	**302**	*e*P	**P**	**04 51 11.5**	**-0.4**
MK31	**Makanchi Array**	**44.09**	**302**	*e*P	**P**	**04 51 11.5**	**-0.4**
MKAR	**Makanchi Array**	**44.09**	**302**	P	**P**	**04 51 11.9**	**0.0**
	comp=Z,36nm,0.6s,baz=88,slow=9.9,SNR=457						
MKAR				LR	LR	05 09 49.6	
	comp=Z,335nm,18.6s,baz=86,slow=36						
PHET	**Kaeng Krachan**	**44.16**	**248**	P	**P**	**04 51 13.7**	**+1.0**
	comp=Z,17nm,0.7s,comp=Z,152nm						
MAKZ	**Makanchi**	**44.30**	**302**	*e*P	**P**	**04 51 13.5**	**-0.1**
	comp=Z,38nm,0.7s						
MAKZ	**Makanchi**	**44.30**	**302**	*e*P	**P**	**04 51 13.5**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,38nm,0.7s						
MTKI	**Muara Teweh, K**	**44.85**	**219**	P	**P**	**04 51 20.2**	**+2.0**
SPSI	**Sidrap Palu**	**45.28**	**211**	P	**P**	**04 51 20.5**	**-1.0**
	comp=Z,16nm,0.9s						
KSM	**Kuching**	**45.33**	**226**	*e*P	**P**	**04 51 22.9**	**+0.9**
	comp=Z,32nm,0.8s						
BNSI	**Bone**	**45.54**	**210**	P	**P**	**04 51 24.2**	**+0.6**
	comp=Z,60nm,0.9s						
SVW2	**Sparrevohn**	**45.75**	**37**	*e*P	**P**	**04 51 26.1**	**+1.3**
	comp=Z,37nm,1.4s						
KURK	**Kurchatov**	**45.93**	**308**	*e*P	**P**	**04 51 26.0**	**-0.4**
KURK	**Kurchatov**	**45.93**	**308**	*d i*P	**P**	**04 51 25.3**	**-1.1**
KURK				pmax	pmax		
	comp=Z,86nm,0.8s						
KURK	**Kurchatov**	**45.93**	**308**	P	**P**	**04 51 25.6**	**-0.8**
	SNR=26						
ODAN	**Odare**	**46.28**	**274**	*e*P	**P**	**04 51 30.0**	**+0.2**
	comp=Z,36nm,0.6s						
BKSI	**Bulukumba**	**46.37**	**210**	P	**P**	**04 51 31.6**	**+1.5**
	comp=Z,16nm,1.0s						
PDGK	**Podgornoye**	**46.73**	**298**	P	**P**	**04 51 32.0**	**-1.0**
PDGK				pmax	pmax		
	comp=Z,46nm,0.7s						
RAMN	**Ramite**	**46.88**	**274**	*e*P	**P**	**04 51 34.7**	**+0.3**
	comp=Z,129nm,0.7s						
IM3	**Indian Mountai**	**46.88**	**31**	*e*P	**P**	**04 51 34.1**	**+0.5**
JIRN	**Jiri**	**46.89**	**275**	*e*P	**P**	**04 51 35.3**	**+0.6**
	comp=Z,49nm,0.5s						
GUN	**Gumba**	**47.03**	**276**	*e*P	**P**	**04 51 36.1**	**+0.3**
	comp=Z,132nm,1.0s						
RSO	**Redoubt South**	**47.13**	**38**	*e*P	**P**	**04 51 37.1**	**+1.2**
KDAK	**Kodiak Island**	**47.33**	**42**	*i* P	**P**	**04 51 38.4**	**+1.2**
PPLA	**Purkeypile**	**47.40**	**35**	*e*P	**P**	**04 51 39.5**	**+1.6**
	comp=Z,52nm,1.6s						
CAST	**Castle Rocks**	**47.45**	**34**	*e*P	**P**	**04 51 39.5**	**+1.4**
	comp=Z,8.0nm,0.7s						
PKI	**Pulchoki**	**47.55**	**276**	*e*P	**P**	**04 51 39.7**	**-0.1**
KKN	**Kakani**	**47.56**	**276**	*e*P	**P**	**04 51 40.1**	**+0.4**
	comp=Z,59nm,0.8s						
PKIN	**Phulchoki**	**47.56**	**276**	*e*P	**P**	**04 51 39.7**	**-0.1**
	comp=Z,13nm,0.4s						
DMN	**Daman**	**47.78**	**276**	*e*P	**P**	**04 51 41.6**	**+0.1**
BPAW	**Bear Paw Mtn.**	**47.95**	**33**	*e*P	**P**	**04 51 43.4**	**+1.4**
	comp=Z,4.5nm,0.7s						
MLY	**Manley**	**48.08**	**32**	*e*P	**P**	**04 51 43.9**	**+0.9**
	comp=Z,13nm,0.7s						
SUA	**Susitna One**	**48.09**	**37**	*e*P	**P**	**04 51 44.2**	**+1.0**
	comp=Z,27nm,1.4s						
TRF	**Thorofare Moun**	**48.26**	**34**	*e*P	**P**	**04 51 45.5**	**+0.9**
	comp=Z,9.3nm,0.8s						
TARG	**Taragay, Kyrgy**	**48.35**	**296**	*e*P	**P**	**04 51 46.1**	**+0.2**
	comp=Z,28nm,0.8s						
COLD	**Coldfoot**	**48.38**	**29**	*e*P	**P**	**04 51 46.5**	**+1.2**
	comp=Z,4.7nm,0.9s						
PKDT	**Phuket**	**48.43**	**244**	P	**P**	**04 51 47.6**	**+1.3**
	comp=Z,36nm,0.9s,comp=Z,2µm						
DANN	**Dangsing**	**48.53**	**277**	*e*P	**P**	**04 51 47.9**	**+0.6**
	comp=Z,209nm,0.7s						
KULM	**Kulim**	**48.60**	**240**	*e*P	**P**	**04 51 47.4**	**-0.2**
	comp=Z,56nm,1.9s						
BWN	**Browne**	**48.62**	**33**	*e*P	**P**	**04 51 48.8**	**+1.7**
	comp=Z,59nm,1.2s						
PMR	**Palmer**	**48.85**	**37**	*e*P	**P**	**04 51 49.9**	**+1.0**
	comp=Z,36nm,1.5s						
PMR	**Palmer**	**48.85**	**37**	*e*P	**P**	**04 51 49.9**	**+1.0**
PMR				pmax	pmax		
	comp=Z,36nm,1.5s						
MCK	**McKinley**	**48.86**	**34**	*e*P	**P**	**04 51 50.2**	**+1.2**
	comp=Z,12nm,1.0s						
MCK	**McKinley**	**48.86**	**34**	*e*P	**P**	**04 51 50.2**	**+1.2**
MCK				pmax	pmax		
	comp=Z,13nm,1.0s						
RND	**Reindeer**	**48.91**	**34**	*e*P	**P**	**04 51 50.5**	**+1.1**
	comp=Z,53nm,1.5s						
RND	**Reindeer**	**48.91**	**34**	*e*P	**P**	**04 51 50.5**	**+1.1**
RND				pmax	pmax		
	comp=Z,53nm,1.5s						
KOLN	**Koldanda**	**48.91**	**277**	*e*P	**P**	**04 51 50.4**	**+0.3**
IPM	**Ipoh**	**48.93**	**239**	*e*P	**P**	**04 51 49.5**	**-0.6**
	comp=Z,21nm,0.8s						
EDFI	**Ende, Flores**	**48.93**	**206**	P	**P**	**04 51 48.0**	**-2.2**
	comp=Z,25nm,1.1s						
GHO	**Glory Hole Cre**	**48.94**	**36**	*e*P	**P**	**04 51 50.5**	**+0.7**
	comp=Z,19nm,0.8s						
SOEI	**Soe**	**49.03**	**202**	*e*P	**P**	**04 51 51.0**	**+0.1**
	comp=Z,70nm,1.0s						
SOEI	**Soe**	**49.03**	**202**	P	**P**	**04 51 50.1**	**-0.8**
	comp=Z,69nm,0.9s						
MYKOM	**Kota Tinggi**	**49.04**	**233**	*e*P	**P**	**04 51 51.2**	**+0.3**
	comp=Z,19nm,1.2s						
MDM	**Murphy Dome**	**49.14**	**32**	*e*P	**P**	**04 51 52.5**	**+1.4**
	comp=Z,22nm,0.8s						
KNK	**Knik Glacier**	**49.19**	**37**	*e*P	**P**	**04 51 52.7**	**+1.1**
	comp=Z,60nm,1.8s						
WRH	**Wood River Hil**	**49.21**	**33**	*e*P	**P**	**04 51 53.2**	**+1.5**
	comp=Z,6.9nm,0.8s						
SML	**Sawmill**	**49.22**	**36**	*e*P	**P**	**04 51 53.2**	**+1.3**
	comp=Z,17nm,0.9s						
PYUN	**Piuthan**	**49.25**	**277**	*e*P	**P**	**04 51 53.0**	**+0.3**
	comp=Z,184nm,1.0s						
TCOL	**CIGO, UAF Yank**	**49.30**	**32**	P	**P**	**04 51 54.3**	**+2.0**
	baz=272						
COLA	**College**	**49.31**	**32**	*e*P	**P**	**04 51 52.8**	**+0.5**
	comp=Z,12nm,0.8s						
COLA	**College**	**49.31**	**32**	*d i*P	**P**	**04 51 52.9**	**+0.6**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
POKR	**Poker Plat Res**	**49.48**	**32**	P	**P**	**04 51 55.4**	**+1.7**
	baz=272						
DHY	**Denali Highway**	**49.59**	**35**	*e*P	**P**	**04 51 56.0**	**+1.3**
	comp=Z,37nm,1.6s						
TKM2	**Tokmak 2**	**49.59**	**298**	P	**P**	**04 51 56.0**	**+0.9**
	SNR=14						
TKM2	**Tokmak 2**	**49.59**	**298**	*i* P	**P**	**04 51 55.6**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,26nm,0.8s						
BATI	**Baumata**	**49.64**	**203**	P	**P**	**04 51 55.9**	**+0.4**
	comp=Z,34nm,0.6s						
SCM	**Sheep Creek Mo**	**49.69**	**36**	*e*P	**P**	**04 51 56.9**	**+1.4**
	comp=Z,39nm,1.4s						
HDA	**Harding Lake**	**49.71**	**33**	*e*P	**P**	**04 51 56.3**	**+0.9**
	comp=Z,15nm,0.8s						
HDA	**Harding Lake**	**49.71**	**33**	P	**P**	**04 51 56.4**	**+0.9**
	baz=273						
IL1	**Eielson Array**	**49.72**	**32**	*e*P	**P**	**04 51 56.0**	**+0.4**
ILAR	**Eielson Array**	**49.72**	**32**	P	**P**	**04 51 55.8**	**+0.2**
	comp=Z,10nm,0.7s,baz=265,slow=5.8,SNR=127						
ILB	**Eielson Array**	**49.72**	**32**	*e*P	**P**	**04 51 56.4**	**+0.8**
NRN	**Naryn**	**49.73**	**297**	*e*P	**P**	**04 51 56.3**	**-0.1**
	comp=Z,9.4nm,0.8s						
KZA	**Kyzart**	**50.08**	**298**	P	**P**	**04 52 00.6**	**+1.5**
	SNR=6.8						
KBK	**Karagaybulak**	**50.12**	**298**	P	**P**	**04 51 59.9**	**+0.7**
	SNR=13						
USP	**Ospenovka**	**50.26**	**299**	P	**P**	**04 52 00.5**	**+0.5**
	SNR=5.3						
FRU	**Bishkek**	**50.31**	**299**	*e*P	P	04 52 10.0	+10
FYU	**Fort Yukon**	**50.34**	**30**	*e*P	**P**	**04 52 01.9**	**+1.8**
	comp=Z,89nm,1.9s						
KSH	**Kashi**	**50.35**	**294**	P	**P**	**04 52 05.3**	**+4.4**
KSH				pP	pP	04 52 09.0	-0.1
KSH				PP	**PP**	**04 54 00.8**	**+4.5**
KSH				S	**S**	**04 59 13.3**	**+1.1**
KSH				sS	sS	04 59 30.6	+4.8
KSH				ScS	**ScS**	**05 01 49.7**	**-0.5**
KSH				pmax	pmax		
	comp=Z,18nm,0.7s						
KSH				pmax	pmax		
	comp=Z,440nm,4.1s						
KSH				LR	LR		
	comp=N,390nm,7.1s						
KSH				LR	LR		
	comp=E,230nm,5.1s						
KSH				LR	LR		
	comp=Z,900nm,10.5s						
KLU	**Klutina**	**50.39**	**37**	*e*P	**P**	**04 52 02.2**	**+1.4**
	comp=Z,14nm,0.8s						
OTUK	**Ortayu**	**50.42**	**306**	P	**P**	**04 52 00.6**	**-0.5**
OTUK				pmax	pmax		
	comp=Z,25nm,0.9s						
AAK	**Ala-Archa**	**50.45**	**298**	*e*P	**P**	**04 52 01.1**	**-0.5**
	comp=Z,6.2nm,0.6s						
AAK	**Ala-Archa**	**50.45**	**298**	*i* P	**P**	**04 52 02.0**	**+0.4**
	SNR=7.1						
AAK	**Ala-Archa**	**50.45**	**298**	*de*P	**P**	**04 52 01.7**	**+0.1**
AAK				pmax	pmax		
	comp=Z,14nm,1.2s						
PLAI	**Plampang**	**50.50**	**211**	P	**P**	**04 52 01.7**	**-0.2**
	comp=Z,53nm,0.9s,comp=Z,548nm						
DIV	**Divide**	**50.50**	**37**	*e*P	**P**	**04 52 02.7**	**+1.1**
	comp=Z,73nm,1.7s						
COEN	**Coen**	**50.57**	**178**	*e*P	**P**	**04 52 03.6**	**+1.2**

	comp=Z,13nm,0.9s						
BVA0	Borovoye Array	50.59	312	i P	P	04 52 01.5	-0.8
BVA0				pmax	pmax		
	comp=Z,11nm,0.8s						
KMMI	Kalianget	50.59	216	P	P	04 52 09.9	+7.2
BRVK	Borovoye	50.65	312	eP	P	04 52 03.1	+0.4
	comp=Z,15nm,1.0s						
BRVK	Borovoye	50.65	312	d iP	P	04 52 02.3	-0.4
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	50.65	312	P	P	04 52 02.1	-0.6
	SNR=6.4						
HARP	HAARP	50.66	35	eP	P	04 52 04.3	+1.6
	comp=Z,114nm,1.8s						
RIDG	Independ’e Rid	50.68	34	eP	P	04 52 03.9	+1.0
	comp=Z,55nm,1.9s						
PPBI	Pangkal Pinang	50.70	228	P	P	04 52 04.8	+1.3
	comp=Z,11nm,0.6s,comp=Z,15µm						
SRBI	Singaraja	50.93	214	P	P	04 52 08.2	+3.0
	comp=Z,29nm,0.8s						
DOT	Dot Lake	51.03	34	eP	P	04 52 05.4	-0.1
	comp=Z,39nm,1.9s						
SCRK	Sand Creek	51.03	33	eP	P	04 52 06.8	+1.2
	comp=Z,17nm,0.9s						
AML	Almayashu	51.17	298	P	P	04 52 08.1	+0.8
	SNR=18						
PSI	Prapat	51.58	239	eP	P	04 52 10.1	-0.2
	comp=Z,16nm,0.8s						
PSI	Prapat	51.58	239	eP	P	04 52 10.1	-0.2
PSI				pmax	pmax		
	comp=Z,16nm,0.8s						
MNAS	Manas	51.90	299	i P	P	04 52 12.6	+0.1
MNAS				pmax	pmax		
	comp=Z,15nm,0.6s						
GMJI	Gumukmas	51.91	216	P	P	04 52 19.9	+7.4
ARSB	Arslanbob	51.93	297	eP	P	04 52 12.5	-0.2
	comp=Z,35nm,0.9s						
SFK	Sufi-Kurgan	51.98	296	i P	P	04 52 13.1	-0.1
SFK				pmax	pmax		
	comp=Z,17nm,0.6s						
NGJI	Ngawi	52.09	219	P	P	04 52 22.5	+8.6
EGAK	Eagle	52.17	32	eP	P	04 52 14.8	+0.9
	comp=Z,165nm,0.7s						
MNSI	Mandailing Nat	52.59	237	P	P	04 52 21.4	+3.7
DAWY	Dawson	53.03	33	eP	P	04 52 21.6	+1.2
	comp=Z,26nm,1.8s						
KK31	Karatay Array	53.09	300	eP	P	04 52 21.4	+0.3
KK31	Karatay Array	53.09	300	eP	P	04 52 21.4	+0.3
KKAR	Karatay Array	53.09	300	eP	P	04 52 20.9	-0.2
KKAR	Karatay Array	53.09	300	eP	P	04 52 20.9	-0.2
GSI	Gunungsitoli	53.59	239	P	P	04 52 25.9	+0.9
LHSI	Lahat	53.59	229	P	P	04 52 26.9	+1.9
	comp=Z,71nm,1.0s						
MDSI	Maura Dua	53.72	228	P	P	04 52 26.1	+0.1
	comp=Z,38nm,1.1s,comp=Z,1µm						
EPYK	Eagle Plains	53.75	30	eP	P	04 52 27.4	+1.7
	comp=Z,37nm,0.9s						
EPYK	Eagle Plains	53.75	30	P	P	04 52 28.0	+2.3
	baz=280						
MASI	Maura Aman, Be	53.85	231	P	P	04 52 35.9	+8.9
BTK	Batken	53.90	297	eP	P	04 52 27.5	+0.3
	comp=Z,41nm,1.6s						
BTK	Batken	53.90	297	eP	P	04 52 27.5	+0.3
BTK				pmax	pmax		
	comp=Z,41nm,1.6s						
HYT	Haines Junctio	54.53	36	eP	P	04 52 32.5	+1.0
	comp=Z,29nm,1.3s						
NIL	Nilore	54.54	288	eP	P	04 52 32.0	+0.2
NIL	Nilore	54.54	288	eP	P	04 52 32.1	+0.2
INK	Inuvik	54.61	27	eP	P	04 52 32.9	+1.1
	comp=Z,9.3nm,0.8s						
INK	Inuvik	54.61	27	P	P	04 52 32.9	+1.1
	comp=Z,5.7nm,0.6s,baz=308,slow=6.1						
GAR	Garm	54.65	295	eP	P	04 52 33.0	+0.2
	comp=Z,27nm,0.6s						
SVE	Sverdlovsk	55.19	319	c iP	P	04 52 36.6	+0.4
SVE				pmax	pmax		
	comp=Z,68nm,0.9s						
SVE				MLR	MLR		
	comp=Z,360nm,14.0s						
CHGR	Chuyangaron	55.62	295	eP	P	04 52 39.2	-0.5
ARU	Arti	56.40	319	eP	P	04 52 44.6	-0.2
ARU	Arti	56.40	319	d iP	P	04 52 44.8	-0.1
ARU				pmax	pmax		
	comp=Z,72nm,0.7s						
FITZ	Fitzroy Crossi	56.60	198	eP	P	04 52 47.2	+0.6
	comp=Z,17nm,1.1s						
FITZ	Fitzroy Crossi	56.60	198	P	P	04 52 47.1	+0.6
	comp=Z,7.1nm,0.8s,baz=37,slow=6.7,SNR=13						
CTAO	Charters Tower	56.83	174	eP	P	04 52 48.6	+0.3
CTAO	Charters Tower	56.83	174	eP	P	04 52 48.6	+0.3
WRAB	Tennant Creek	56.85	188	eP	P	04 52 48.4	0.0
WRAB	Tennant Creek	56.85	188	d iP	P	04 52 47.5	-0.9
WRAB				pmax	pmax		
	comp=Z,14nm,0.9s						
WB2	Warramunga Arr	56.86	188	eP	P	04 52 47.1	-1.3
WRA	Warramunga Arr	56.86	188	P	P	04 52 48.1	-0.4
	comp=Z,11nm,0.6s,baz=5.8,slow=7.4,SNR=211						
KBL	Kabul	57.35	291	eP	P	04 52 51.9	-0.3
	comp=Z,30nm,1.2s						
KBL	Kabul	57.35	291	eP	P	04 52 51.9	-0.3
KBL				pmax	pmax		
	comp=Z,31nm,1.2s						
AB31	Akbulak array	57.95	310	i P	P	04 52 55.3	-0.6
AB31				pmax	pmax		
	comp=Z,11nm,0.6s						
ABKAR	Akbulak array	57.95	310	eP	P	04 52 55.6	-0.3
HYB	Hyderabad	58.06	268	i P	P	04 52 57.5	+0.3
	comp=Z,45nm,1.0s						
AKTO	Aktyubinsk	58.69	312	P	P	04 53 00.1	-1.0
AKTO				pmax	pmax		
	comp=Z,14nm,1.0s						
DLBC	Dease Lake	58.85	38	eP	P	04 53 03.1	+0.9
	comp=Z,7.2nm,0.7s						
AS01	Alice Springs	60.59	188	eP	P	04 53 13.9	-0.4
AS31	Alice Springs	60.59	188	eP	P	04 53 14.7	+0.3
	comp=Z,2.9nm,0.9s						
ASAR	Alice Springs	60.59	188	P	P	04 53 14.7	+0.3
	comp=Z,7.3nm,0.7s,baz=11,slow=7.2,SNR=97						
ASAR				LR	LR	05 19 08.7	
	comp=Z,149nm,18.5s,baz=35,slow=36						
SPA0	Spitsbergen Ar	60.67	349	eP	P	04 53 15.0	+0.7
PRGR	Permogore	60.84	327	eP	P	04 53 13.8	-1.8
PRGR				pmax	pmax		
	comp=Z,34nm,1.0s						
MBWA	Marble Bar	61.17	203	eP	P	04 53 18.7	+0.4
PALK	Pallekele	62.19	258	eP	P	04 53 26.0	+0.5
PALK	Pallekele	62.19	258	i P	P	04 53 26.4	+0.9
	SNR=7.9						
PALK	Pallekele	62.19	258	i P	P	04 53 26.9	+1.4
LVZ	Lovozero	62.22	336	eP	P	04 53 23.0	-1.9
	comp=Z,31nm,1.4s						
LVZ	Lovozero	62.22	336	deP	P	04 53 23.7	-1.2
LVZ				pmax	pmax		
	comp=Z,24nm,1.4s						
APA	Apatity	62.79	336	⇓P	P	04 53 28.3	-0.4
APA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
APA				MLR	MLR		
	comp=Z,500nm,19.0s						
RES	Resolute Bay	62.81	14	eP	P	04 53 28.5	-0.2
	comp=Z,29nm,1.4s						
RES	Resolute Bay	62.81	14	eP	P	04 53 28.5	-0.2
RES				pmax	pmax		
	comp=Z,29nm,1.4s						
TMCR	Tamitsa	62.84	331	eP	P	04 53 29.0	0.0
DZM	Mont Dzumac	63.25	154	eLR	LR	05 12 30.0	
	comp=Z,179nm,23.9s						
KEV	Kevo	63.56	339	eP	P	04 53 33.7	0.0
KEV	Kevo	63.56	339	eP	P	04 53 33.7	0.0
GEYT	Alibeck	63.80	299	P	P	04 53 36.3	+0.4
	comp=Z,20nm,0.7s,baz=29,slow=3.4,SNR=39						
GEYT				LR	LR	05 23 05.4	
	comp=Z,132nm,19.2s,baz=85,slow=38						
GYA0B	ALIBECK ARRAY	63.80	299	eP	P	04 53 35.8	-0.1
KLMR	Klimovskoe	63.83	328	eP	P	04 53 32.5	-3.1
KLMR				e		04 55 52.1	
KLMR				pmax	pmax		
	comp=Z,26nm,0.9s						
KLMR	Klimovskoe	63.83	328	eP	P	04 53 32.6	-3.1
KLMR				AMP		04 53 37.7	
	comp=Z,26nm,0.9s						
KLMR				ePP	PP	04 55 52.2	-3.5
YKA	Yellowknife Ar	64.03	30	P	P	04 53 37.1	+0.2
	comp=Z,1.4nm,0.7s,baz=302,slow=6.3,SNR=29						
YKB5	Yellowknife Ar	64.03	30	eP	P	04 53 36.7	-0.3
ARCES	ARCESS Array B	64.11	339	eP	P	04 53 37.9	+0.5
ARCES	ARCESS Array B	64.11	339	P	P	04 53 37.2	-0.3
	comp=Z,5.7nm,0.5s,baz=58,slow=7.7,SNR=87						
ARE0	ARCESS Array S	64.11	339	eP	P	04 53 37.9	+0.5
TULEG	Thule	65.30	7	eP	P	04 53 45.1	+0.1
	comp=Z,9.8nm,1.0s						
TRO	Tromso	65.84	341	eP	P	04 53 48.7	+0.2
DAG	Danmarks Havn	65.94	355	i P	P	04 53 49.3	+0.1
	comp=Z,12nm,0.7s						
DAG	Danmarks Havn	65.94	355	i P	P	04 53 49.3	+0.1
DAG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XMAS	Kiritimati	66.05	106	eP	P	04 53 49.9	-0.9
	comp=Z,227nm,1.3s						
MOS	Moscow	67.31	323	eP	P	04 53 57.3	-0.9
MOS				e		04 54 24.1	
MOS				e		04 56 26.5	
MOS				pmax	pmax		
	comp=Z,58nm,1.1s						
MOS				pmax	pmax		
	comp=Z,100nm,1.3s						
MOS				MLR	MLR		
	comp=Z,500nm,21.0s						
D03D	Eldon	67.33	47	P	P	04 54 00.9	+2.4
	baz=300						
VRH	Novokhopyorsk	67.62	318	eP	P	04 53 59.1	-1.1
VRH				e*PP	pP	04 54 05.0	-3.8
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
STEI	Steigen	67.99	341	eP	P	04 54 02.3	0.0
OBN	Obninsk	68.16	323	eP	P	04 54 03.3	-0.2
OBN	Obninsk	68.16	323	d iP	P	04 54 03.4	-0.2
OBN				e		04 54 31.8	
OBN				e		04 56 29.6	
OBN				pmax	pmax		
	comp=Z,66nm,1.7s						
OBN				MLR	MLR		
	comp=Z,199nm,16.0s						
LOF	Lofoten	68.29	341	eP	P	04 54 04.0	-0.1
LPSR	Galich'ya Gora	68.35	320	eP	P	04 54 03.8	-1.0
LPSR				e*PP	pP	04 54 09.8	-3.5
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
STKA	Stephens Creek	68.38	180	P	P	04 54 05.0	-0.1
STKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
STKA	Stephens Creek	68.38	180	P	P	04 54 05.0	-0.1
	comp=Z,3.5nm,0.7s,baz=4.0,slow=4.2,SNR=8.0						
FORT	Forrest	68.40	192	eP	P	04 54 06.1	+0.9
	comp=Z,37nm,0.6s						
FIA1	FINESS Array S	68.91	332	eP	P	04 54 08.0	-0.1
	comp=Z,31nm,0.8s						
FINES	FINESS Array B	68.91	332	P	P	04 54 08.4	+0.3
	comp=Z,20nm,0.6s,baz=44,slow=9.3,SNR=102						
VSR	Storozhevoye	68.97	319	d iP	P	04 54 07.9	-0.8
VSR				pmax	pmax		
	comp=Z,28nm,0.8s						
B08A	Colville Reser	69.06	45	eP	P	04 54 10.5	+1.1
	comp=Z,31nm,1.9s						
H04A	Detroit Lake	69.33	49	eP	P	04 54 12.4	+1.3
	comp=Z,34nm,1.4s						
KONS	Konsvik	69.60	340	eP	P	04 54 13.2	+0.8
F07A	Phinny Hill Vi	70.04	47	eP	P	04 54 16.1	+0.7
	comp=Z,35nm,1.8s						
GOF	Gofitskoye	70.11	312	⇑iP	P	04 54 15.9	0.0
GOF				pmax	pmax		
	comp=Z,50nm,0.8s						
NEW	Newport	70.36	44	eP	P	04 54 19.1	+1.7
	comp=Z,20nm,1.7s						
NEW	Newport	70.36	44	eP	P	04 54 19.1	+1.7
NEW				pmax	pmax		
	comp=Z,20nm,1.7s						
VSU	Vasula	70.54	330	d iP	P	04 54 18.3	0.0
VSU				pmax	pmax		
	comp=Z,76nm,1.7s						
VSU	Vasula	70.54	330	eP	P	04 54 18.2	0.0
VSU				IAmb	IAmb	04 54 19.4	
	comp=Z,60nm,0.7s						
PINE	Pine Mountain	70.56	50	eP	P	04 54 20.3	+1.4
	comp=Z,19nm,1.0s						
NCK	Nalchik	70.61	310	⇑eP	P	04 54 18.8	-0.2
NCK				pmax	pmax		
	comp=Z,11nm,0.7s						
J05D	Fort Rock, OR	70.66	50	P	P	04 54 20.9	+1.5
	baz=303						
E09A	Wood Farm, Sta	70.74	46	eP	P	04 54 21.2	+1.5
	comp=Z,46nm,2.0s						
ZEI	Tsey	70.80	309	eP	P	04 54 18.0	-2.4
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SUMG	Summit	70.86	360	eP	P	04 54 20.9	+0.4
	comp=Z,21nm,1.1s						
SUMG	Summit	70.86	360	i P	P	04 54 21.1	+0.6
	comp=Z,35nm,0.9s						
SUMG	Summit	70.86	360	i P	P	04 54 21.1	+0.6
SUMG				pmax	pmax		
	comp=Z,35nm,0.9s						
KBZ	Khabaz	70.91	311	P	P	04 54 20.8	0.0
	comp=Z,19nm,0.9s,baz=53,slow=4.1,SNR=42						
KBZ				LR	LR	05 26 13.4	
	comp=Z,136nm,20.5s,baz=63,slow=37						
KIV	Kislovodsk	70.92	311	eP	P	04 54 21.4	+0.5
	comp=Z,46nm,0.8s						
KIV	Kislovodsk	70.92	311	⇑iP	P	04 54 22.6	+1.6
KIV	Kislovodsk	70.92	311	i P	P	04 54 21.8	+0.8
	SNR=7.2						
KIV	Kislovodsk	70.92	311	eP	P	04 54 21.1	+0.1
KIV				pmax	pmax		
	comp=Z,68nm,1.1s						
KIV	Kislovodsk	70.92	311	P	P	04 54 21.5	+0.5
	SNR=13						
KIV				P	P	04 54 21.5	+0.5
	SNR=13						
BIDO	Bidbid	71.02	285	P	P	04 54 22.4	+0.7
	SNR=5.6						
BANOM	Banah	71.13	289	i P	P	04 54 23.7	+1.2
	SNR=7.5						
SHME	Shamm	71.19	289	i P	P	04 54 23.6	+0.8
	SNR=10						
NEY	Neytrino	71.28	310	⇑eP	P	04 54 22.9	-0.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NSS	Namsos	71.40	339	eP	P	04 54 23.7	+0.3
MSFE	Esma-Masafi	71.54	288	P	P	04 54 25.7	+0.8
GNI	Garni	71.70	307	eP	P	04 54 26.4	+0.5
	comp=Z,14nm,0.8s						
GNI	Garni	71.70	307	⇑eP	P	04 54 27.1	+1.2
GNI				pmax	pmax		
	comp=Z,135nm,1.7s						
UOSS	Minazif	71.73	288	eP	P	04 54 25.9	-0.2
	comp=Z,23nm,0.9s						
UOSS	Minazif	71.73	288	i P	P	04 54 26.3	+0.3
	SNR=6.6						
UOSS	Minazif	71.73	288	P	P	04 54 25.1	-0.9
HATD	Hatta, Dubai	71.85	288	i P	P	04 54 27.6	+0.8
	SNR=8.8						
HATD	Hatta, Dubai	71.85	288	P	P	04 54 27.7	+1.0
	SNR=5.6						
ASHO	Ashiyiah	71.98	288	i P	P	04 54 28.2	+0.6
	SNR=11						
ASHO	Ashiyiah	71.98	288	P	P	04 54 27.0	-0.6
	SNR=7.0						
MOD	Modoc Plateau	71.98	51	eP	P	04 54 27.8	+0.2
	comp=Z,2.2nm,0.5s						
BMO	Blue Mountains	72.15	47	eP	P	04 54 29.8	+1.4
	comp=Z,12nm,1.4s						
BMO	Blue Mountains	72.15	47	eP	P	04 54 29.8	+1.4
BMO				pmax	pmax		
	comp=Z,12nm,1.4s						
SCO	Scoresbysund	72.28	354	⇑iP	P	04 54 30.0	+1.5
SCO	Scoresbysund	72.28	354	⇑iP	P	04 54 30.0	+1.5
J08A	Circle Bar Ran	72.30	49	eP	P	04 54 30.8	+1.4
	comp=Z,22nm,1.4s						
FAQ	Al Faqa, Dubai	72.30	288	P	P	04 54 29.7	+0.2
FAQ	Al Faqa, Dubai	72.30	288	P	P	04 54 29.6	+0.1
FAQ				P	P	04 54 29.6	+0.1
IZAR	Zarasai	72.48	327	eP	P	04 54 30.1	+0.1
IZAR				IAmb	IAmb	04 54 31.4	
	comp=Z,7.6nm,0.7s						
MHTO	MHTO	72.51	283	P	P	04 54 30.8	0.0
	SNR=10						
MHTO				P	P	04 54 30.8	0.0
	SNR=10						
IDID	Didziasalis	72.55	327	eP	P	04 54 30.4	0.0
IDID				IAmb	IAmb	04 54 32.6	
	comp=Z,10nm,0.5s						
ALNE	Al Ain	72.56	287	i P	P	04 54 31.8	+0.8
	SNR=5.2						
MICGM	Minsk	72.56	326	e	P	04 54 30.0	-0.5
MNK	Minsk	72.56	326	eP	P	04 54 30.0	-0.5
ISAL	Salakas	72.65	327	eP	P	04 54 31.0	0.0
ISAL				IAmb	IAmb	04 54 32.6	
	comp=Z,17nm,0.8s						
IIGN	Ignalina	72.75	327	eP	P	04 54 31.7	0.0
IIGN				IAmb	IAmb	04 54 33.1	
	comp=Z,13nm,0.9s						
NACGM	Naroch	72.80	327	e	P	04 54 32.0	+0.1
AJN	Ajban	72.86	288	P	P	04 54 32.6	-0.2
AJN				P	P	04 54 32.6	-0.2
TBLU	Trondheim	72.87	339	eP	P	04 54 32.1	-0.1
MSO	Missoula	72.94	44	eP	P	04 54 34.9	+1.8
	comp=Z,13nm,1.4s						
NWAO	Narrogin (SRO)	72.95	201	eP	P	04 54 33.4	+0.4
NWAO	Narrogin (SRO)	72.95	201	eP	P	04 54 33.4	+0.4
AGRB	Hanur-Agry	73.14	307	eP	P	04 54 36.4	+1.9
DQM	DQM	73.43	283	P	P	04 54 35.8	-0.4
DQM				P	P	04 54 35.8	-0.4
PAHR	Pah Rah Range	73.79	52	eP	P	04 54 39.5	+1.2
	comp=Z,14nm,1.2s						
AKDM	Akdamar-Van	73.84	306	eP	P	04 54 39.2	+0.6
MFID	Camas Ranch	73.85	48	eP	P	04 54 39.4	+0.9
	comp=Z,6.8nm,1.0s						
FFC	Flin Flon	73.93	33	eP	P	04 54 38.9	+0.3
	comp=Z,51nm,1.9s						
FFC	Flin Flon	73.93	33	i P	P	04 54 40.2	+1.6
PNTR	Pine Nut	74.00	53	eP	P	04 54 40.4	+0.8
	comp=Z,21nm,1.5s						
CUKT	Cukurca	74.04	305	P	P	04 54 40.1	+0.4
NC405	NORSAR Array S	74.08	337	eP	P	04 54 39.5	+0.1
CMB	Columbia Colle	74.09	54	eP	P	04 54 41.0	+1.1
	comp=Z,20nm,1.3s						
NC303	NORSAR Array S	74.11	337	eP	P	04 54 39.3	-0.2
DOMB	Dombas	74.16	339	eP	P	04 54 40.5	+0.6
HRY	Holter Researc	74.18	43	eP	P	04 54 41.1	+0.8
FCC	Fort Churchill	74.22	26	eP	P	04 54 40.1	-0.1
	comp=Z,33nm,1.6s						
FCC	Fort Churchill	74.22	26	eP	P	04 54 40.1	-0.1
FCC				pmax	pmax		
	comp=Z,33nm,1.6s						
NC204	NORSAR Array S	74.25	338	eP	P	04 54 40.9	+0.4
NB201	NORSAR Array S	74.27	337	eP	P	04 54 41.2	+0.7
YERR	Yerington	74.29	53	eP	P	04 54 42.6	+1.3
	comp=Z,13nm,1.2s						
NB2	NORSAR Subarra	74.30	337	P	P	04 54 40.7	0.0
	comp=Z,11nm,0.6s,baz=41,slow=5.9						
NB2	NORSAR Subarra	74.30	337	P	P	04 54 40.7	0.0
	baz=41,slow=5.9						
NOA	NORSAR Array B	74.30	337	P	P	04 54 40.8	+0.1
	comp=Z,13nm,0.7s,baz=40,slow=5.9,SNR=95						
NOA				LR	LR	05 29 39.5	
	comp=Z,152nm,21.5s,baz=40,slow=38						
AKASG	Malin Array Be	74.35	322	P	P	04 54 40.9	-0.2
	comp=Z,7.2nm,0.3s,baz=47,slow=6.0,SNR=56						
AKASG				LR	LR	05 29 22.1	
	comp=Z,175nm,18.1s,baz=5.0,slow=37						
AKBB	Malin Array Si	74.35	322	eP	P	04 54 40.9	-0.2
	comp=Z,37nm,1.3s						
KIEV	Kiev	74.36	322	eP	P	04 54 40.7	-0.5
	comp=Z,39nm,1.3s						
KIEV	Kiev	74.36	322	⇑iP	P	04 54 41.3	+0.1
KIEV	Kiev	74.36	322	i P	P	04 54 41.2	0.0
	SNR=14						
KIEV	Kiev	74.36	322	d iP	P	04 54 40.8	-0.4
KIEV				pmax	pmax		
	comp=Z,14nm,0.9s						
LRM	Limekiln Ridge	74.37	44	eP	P	04 54 43.5	+1.8
AK11	Malin Array Si	74.39	322	eP	P	04 54 40.9	-0.4
NC602	NORSAR Array S	74.43	337	eP	P	04 54 41.0	-0.4
NC602	NORSAR Array S	74.43	337	eP	P	04 54 41.6	+0.2
NBO00	NORSAR Array S	74.44	337	eP	P	04 54 42.1	+0.6
EGMT	Eagleton	74.50	41	eP	P	04 54 43.5	+1.3
	comp=Z,16nm,1.2s						
EGMT	Eagleton	74.50	41	P	P	04 54 43.9	+1.8
	baz=308						
NAO01	NORSAR Array S	74.55	337	eP	P	04 54 42.5	+0.4
DLMT	Dillon	74.57	45	eP	P	04 54 43.9	+1.2
	comp=Z,34nm,1.5s						
HLID	Hailey	74.60	47	eP	P	04 54 44.3	+1.3
	comp=Z,14nm,1.6s						
HLID	Hailey	74.60	47	P	P	04 54 45.2	+2.3
	baz=306						
AKN	Aaknes	74.64	340	eP	P	04 54 43.7	+1.1
SIRT	Sirnak	74.67	305	eP	P	04 54 42.5	-0.8
BMN	Battle Mountai	74.73	51	eP	P	04 54 45.0	+1.2
BNGB	Bingl	74.95	308	eP	P	04 54 45.5	+0.5
SUW	Suwalki	74.96	327	eP	P	04 54 44.5	-0.1
SUW	Suwalki	74.96	327	eP	P	04 54 44.8	+0.2
	comp=Z,24nm,0.8s						
SUW	Suwalki	74.96	327	eP	P	04 54 44.8	+0.2
SUW				pmax	pmax		
	comp=Z,25nm,0.8s						
BOZ	Bozeman (W)	74.97	44	eP	P	04 54 45.9	+0.9
	comp=Z,31nm,1.8s						
BOZ	Bozeman (W)	74.97	44	eP	P	04 54 45.9	+0.9
BOZ				pmax	pmax		
	comp=Z,31nm,1.8s						
BOZ	Bozeman (W)	74.97	44	P	P	04 54 46.5	+1.5
	baz=308						
KVN	Kaiserville	74.98	52	eP	P	04 54 46.5	+1.3
	comp=Z,11nm,1.1s						
KVN	Kaiserville	74.98	52	eP	P	04 54 46.5	+1.3
KVN				pmax	pmax		
	comp=Z,11nm,1.1s						
SVAN	Silvan-Diyarba	75.10	307	eP	P	04 54 46.5	+0.7
NV01	Mina Array Sit	75.21	53	eP	P	04 54 47.6	+1.0
NVAR	Mina Array Bea	75.21	53	P	P	04 54 47.8	+1.1
	comp=Z,2.2nm,0.6s,baz=294,slow=5.7,SNR=8.5						
NV11	Mina Array Sit	75.30	53	eP	P	04 54 48.3	+1.2
	comp=Z,1.6nm,1.7s						
OSL	Oslo	75.31	337	eP	P	04 54 47.8	+1.4
SIM	Simferopol'	75.36	315	ceP	P	04 54 47.5	+0.5
SIM				pmax	pmax		
	comp=Z,18nm,0.8s						
SIM				MLR	MLR		
	comp=Z,170nm,16.6s						
HYA	Hoyanger	75.69	339	eP	P	04 54 49.6	+0.9
YHB	Horse Butte	75.73	45	eP	P	04 54 50.5	+1.0
	comp=Z,12nm,1.2s						
ELK	Elko	75.77	50	eP	P	04 54 51.3	+1.4
	comp=Z,9.1nm,1.4s						
ELK	Elko	75.77	50	eP	P	04 54 51.3	+1.4
ELK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
PTK	Pertek	75.82	308	eP	P	04 54 51.9	+1.8
KONO	Kongsberg	75.89	337	eP	P	04 54 50.3	+0.5
	comp=Z,58nm,1.9s						
KONO	Kongsberg	75.89	337	eP	P	04 54 50.3	+0.5
KONO				pmax	pmax		
	comp=Z,58nm,1.9s						
KONO	Kongsberg	75.89	337	eP	P	04 54 50.4	+0.6
YMR	Madison River	75.91	44	eP	P	04 54 52.6	+2.1
	comp=Z,16nm,1.4s						
GCMT	Greycliff	75.93	43	eP	P	04 54 52.0	+1.4
MAZI	Mazidag	75.98	306	eP	P	04 54 51.7	+0.8
YFT	Old Faithful	76.11	45	eP	P	04 54 53.0	+1.3
	comp=Z,7.7nm,0.9s						
SUE	Sulen	76.18	340	eP	P	04 54 52.6	+1.3
YPP	Pitchstone Pla	76.24	45	eP	P	04 54 53.8	+1.2
	comp=Z,33nm,1.8s						
LKWY	Lake	76.29	44	eP	P	04 54 54.3	+1.6
	comp=Z,8.6nm,1.0s						
LKWY	Lake	76.29	44	eP	P	04 54 54.3	+1.6
LKWY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
H17A	Grant Village	76.30	45	eP	P	04 54 53.9	+1.1
	comp=Z,15nm,1.1s						
H17A	Grant Village	76.30	45	P	P	04 54 56.5	+3.7
	baz=308						
IMW	Indian Meadow	76.40	45	eP	P	04 54 54.5	+1.1
	comp=Z,17nm,1.4s						
FLWY	Flagg Ranch	76.42	45	eP	P	04 54 54.6	+1.2
	comp=Z,27nm,1.5s						
CWC	Cottonwood Cre	76.51	55	P	P	04 54 55.9	+1.9
	baz=306						
FXWY	Fox Creek	76.51	45	eP	P	04 54 54.9	+0.9
	comp=Z,19nm,1.6s						
RLMT	Red Lodge	76.57	43	eP	P	04 54 55.4	+1.2
	comp=Z,34nm,1.8s						
RLMT	Red Lodge	76.57	43	P	P	04 54 56.5	+2.2
	baz=309						
ODD1	Odda	76.58	338	eP	P	04 54 55.0	+1.2

MOOW	Moose Ponds	76.60	45	*e*P	P	04 54 55.5	+1.0
	comp=Z,26nm,1.9s						
HVU	Hansel Valley	76.63	48	*e*P	P	04 54 56.0	+1.4
	comp=Z,22nm,1.8s						
HVU	Hansel Valley	76.63	48	*e*P	P	04 54 56.0	+1.4
HVU				pmax	pmax		
	comp=Z,23nm,1.8s						
TPAW	Teton Pass	76.64	45	*e*P	P	04 54 54.9	+0.1
	comp=Z,21nm,1.6s						
LOHW	Long Hollow	76.77	45	*e*P	P	04 54 57.0	+1.6
	comp=Z,18nm,1.7s						
REDW	Red Top Meadow	76.78	45	*e*P	P	04 54 57.1	+1.6
	comp=Z,16nm,1.5s						
KIS	Kishinev	76.94	319	*e*P	P	04 54 54.0	-2.0
KIS				LRM	MLR	05 31 40.0	
	comp=Z,500nm,15.0s						
KIS	Kishinev	76.94	319	*e*P	P	04 54 54.0	-2.0
KIS				MLR	MLR		
	comp=Z,500nm,15.0s						
R11A	Troy Canyon, C	76.98	52	*e*P	P	04 54 58.1	+1.5
	comp=Z,26nm,1.6s						
R11A	Troy Canyon, C	76.98	52	P	P	04 54 58.8	+2.1
	baz=307						
BLS5	Blasjo	77.03	338	*e*P	P	04 54 57.4	+1.1
MPMC	Manual Prospec	77.12	55	P	P	04 54 59.1	+1.6
	baz=306						
LAO	LASA Array	77.20	41	*e*P	P	04 54 58.8	+1.2
	comp=Z,68nm,1.8s						
LAO	LASA Array	77.20	41	P	P	04 54 59.6	+2.0
	baz=311						
TPNV	Topopah Spring	77.40	53	*e*P	P	04 55 00.3	+1.3
	comp=Z,21nm,1.4s						
TPNV	Topopah Spring	77.40	53	*e*P	P	04 55 00.3	+1.3
TPNV				pmax	pmax		
	comp=Z,21nm,1.4s						
TPNV	Topopah Spring	77.40	53	P	P	04 55 00.7	+1.7
	baz=307						
LVV	L'vov	77.44	324	*e*P	P	04 54 59.6	+0.8
LVV				pmax	pmax		
	comp=Z,180nm,16.0s						
WHFO	Wadi Hawf	77.50	283	P	P	04 54 59.0	-0.7
BEL	Belsk	77.52	327	*e*P	P	04 55 00.1	+1.0
BEL	Belsk	77.52	327	*e*P	P	04 55 00.1	+1.0
BSD	Bornholm Skovb	77.54	332	*i* P	P	04 54 59.2	0.0
	comp=Z,20nm,0.8s						
BSD	Bornholm Skovb	77.54	332	*i* P	P	04 54 59.2	0.0
BSD				pmax	pmax		
	comp=Z,20nm,0.8s						
KMY	Karmoy	77.56	339	*e*P	P	04 55 00.6	+1.3
DUG	Dugway, Tooele	77.58	49	*e*P	P	04 55 01.0	+1.1
	comp=Z,29nm,1.8s						
DUG	Dugway, Tooele	77.58	49	*e*P	P	04 55 01.0	+1.1
DUG				pmax	pmax		
	comp=Z,29nm,1.8s						
DUG	Dugway, Tooele	77.58	49	P	P	04 55 01.8	+1.9
	baz=308						
SNART	Snartemo	77.68	337	*e*P	P	04 55 01.0	+1.0
TCUT	Toone Canyon	77.85	48	*e*P	P	04 55 02.5	+0.9
	comp=Z,22nm,1.3s						
BW06	Boulder Array	77.89	45	*e*P	P	04 55 02.6	+0.8
	comp=Z,3.8nm,1.0s						
BW06	Boulder Array	77.89	45	P	P	04 55 02.8	+1.1
	baz=309						
PD31	Pinedale Array	77.89	45	*e*P	P	04 55 03.1	+1.4
PDAR	Pinedale Array	77.89	45	*e*P	P	04 55 02.0	+0.3
PDAR	Pinedale Array	77.89	45	P	P	04 55 02.5	+0.8
	comp=Z,1.4nm,0.6s,baz=270,slow=2.4,SNR=14						
PSUT	Pine Spring	77.95	51	*e*P	P	04 55 03.2	+1.1
	comp=Z,15nm,1.4s						
ILGA	Ilgaz	77.99	312	*e*P	P	04 55 02.3	0.0
	comp=Z,24nm,1.0s						
BIR	Birlad	78.04	319	⇑*i*P	P	04 55 03.3	+1.1
JLU	Jordanelle	78.15	48	*e*P	P	04 55 04.5	+1.2
	comp=Z,28nm,1.8s						
NLU	North Lily Min	78.17	49	*e*P	P	04 55 04.4	+1.1
	comp=Z,26nm,1.8s						
KWP	Kalwaria Pacla	78.19	324	*e*P	P	04 55 04.0	+1.0
KWP	Kalwaria Pacla	78.19	324	*e*P	P	04 55 03.5	+0.5
	comp=Z,336nm,0.9s						
KWP	Kalwaria Pacla	78.19	324	*e*P	P	04 55 03.5	+0.5
KWP				pmax	pmax		
	comp=Z,336nm,0.9s						
BUR08	Bucovina Ar. S	78.35	322	*e*P	P	04 55 04.4	+0.3
SHPR	Sheep Range	78.36	53	*e*P	P	04 55 05.5	+1.2
	comp=Z,21nm,1.6s						
BUR04	Bucovina Ar. S	78.36	322	*e*P	P	04 55 04.1	0.0
BURAR	Bucovina Array	78.36	322	⇑*i*P	P	04 55 04.9	+0.8
BIZ	Bicaz	78.37	321	⇑*i*P	P	04 55 05.1	+1.1
MPU	Maple Canyon	78.40	49	*e*P	P	04 55 05.5	+1.0
	comp=Z,39nm,2.0s						
CFR	Carcaliu	78.49	318	⇑*i*P	P	04 55 05.1	+0.5
PETR	Petresti	78.61	319	⇓*i*P	P	04 55 06.6	+1.3
VRI	Vrincioaia	78.77	320	⇑*i*P	P	04 55 07.3	+1.0
PLOR	Plostina	78.82	320	⇑*i*P	P	04 55 07.4	+0.8
BR131	Keskin Array S	78.86	311	*e*P	P	04 55 07.5	+0.4
CCUT	Cedar City	78.86	51	*e*P	P	04 55 08.1	+0.9
	comp=Z,8.5nm,1.3s						
BRTR	Keskin Array B	78.86	311	P	P	04 55 07.3	+0.3
	comp=Z,3.4nm,0.7s,baz=84,slow=3.7,SNR=18						
BRTR				LR	LR	05 32 06.0	
	comp=Z,72nm,20.2s,baz=25,slow=37						
TLB	Topalu	78.93	318	⇑*i*P	P	04 55 07.9	+0.8
MSU	Marysvale	79.00	50	*e*P	P	04 55 09.0	+1.1
MSU	Marysvale	79.00	50	*e*P	P	04 55 09.0	+1.1
GMRC	Granite Mounta	79.08	55	P	P	04 55 10.0	+1.7
	baz=308						
OZUR		79.10	320	⇑*i*P	P	04 55 09.4	+1.3
TMUT	Trail Mountain	79.11	49	*e*P	P	04 55 09.7	+1.1
	comp=Z,16nm,1.5s						
OJC	Ojcow	79.11	326	*e*P	P	04 55 08.8	+0.8
OJC	Ojcow	79.11	326	*e*P	P	04 55 08.9	+0.8
	comp=Z,30nm,1.1s						
OJC	Ojcow	79.11	326	*e*P	P	04 55 08.8	+0.8
ARCR	ARCALIA	79.16	322	⇑*i*P	P	04 55 10.0	+1.7
LCMT	Little Creek M	79.27	52	*e*P	P	04 55 10.3	+1.0
	comp=Z,16nm,1.4s						
PGOR	Pogoanele	79.28	319	⇑*i*P	P	04 55 10.1	+1.1
ANTO	Ankara	79.28	312	*e*P	P	04 55 09.8	+0.5
	comp=Z,57nm,1.8s						
ANTO	Ankara	79.28	312	⇓*i*P	P	04 55 09.7	+0.5
ANTO	Ankara	79.28	312	*e*P	P	04 55 09.8	+0.5
ANTO				pmax	pmax		
	comp=Z,57nm,1.8s						
MTPU	Mount Pierson	79.29	50	*e*P	P	04 55 10.6	+0.9
	comp=Z,17nm,1.5s						
TRPA	Tarpa	79.32	323	⇑*i*P	P	04 55 10.0	+0.8
TRPA	Tarpa	79.32	323	⇓*e*P	P	04 55 09.0	-0.1
ICOR	Ion Corvin	79.37	318	⇑*i*P	P	04 55 10.2	+0.7
DOPR	Dopca	79.39	320	⇑*i*P	P	04 55 11.3	+1.6
MLR	Muntele Rosu	79.43	320	*e*P	P	04 55 10.7	+0.7
	comp=Z,39nm,1.8s						
MLR	Muntele Rosu	79.43	320	⇑*i*P	P	04 55 09.8	-0.2
MLR	Muntele Rosu	79.43	320	*e*P	P	04 55 10.7	+0.7
MLR				pmax	pmax		
	comp=Z,39nm,1.8s						
NIE	Niedzica	79.46	325	*e*P	P	04 55 11.0	+1.0
NIE	Niedzica	79.46	325	*e*P	P	04 55 11.0	+1.0
KNB	Kanab	79.53	52	*e*P	P	04 55 12.1	+1.3
	comp=Z,54nm,1.8s						
SRU	San Rafael Swe	79.64	49	*e*P	P	04 55 12.5	+1.2
	comp=Z,51nm,1.9s						
ULM	Lac du Bonnet	79.73	33	*e*P	P	04 55 12.0	+0.6
	comp=Z,12nm,1.1s						
ULM	Lac du Bonnet	79.73	33	*e*P	P	04 55 12.0	+0.6
ULM				pmax	pmax		
	comp=Z,12nm,1.1s						
ULM	Lac du Bonnet	79.73	33	P	P	04 55 10.9	-0.5
	comp=Z,3.0nm,0.7s,baz=316,slow=5.8,SNR=5.9						
MDND	Maddock	79.74	37	*e*P	P	04 55 12.1	+0.6
	comp=Z,18nm,0.9s						
MDND	Maddock	79.74	37	P	P	04 55 12.3	+0.8
	baz=315						
CJR	Cluj-Napoca	79.79	322	⇑*i*P	P	04 55 12.6	+0.8
VOIR		79.93	320	⇑*i*P	P	04 55 13.4	+0.7
LANS	Liptovska Anna	80.03	325	*e*P	P	04 55 14.4	+1.3
LANS	Liptovska Anna	80.03	325	*e*P	P	04 55 14.4	+1.3
W13A	Hualapai Mount	80.04	54	*e*P	P	04 55 14.8	+1.2
	comp=Z,8.5nm,1.4s						
RSSD	Black Hills	80.06	42	*e*P	P	04 55 14.4	+0.9
	comp=Z,20nm,1.5s						
RSSD	Black Hills	80.06	42	*e*P	P	04 55 14.4	+0.9
RSSD				pmax	pmax		
	comp=Z,20nm,1.5s						
OKC	Ostrava-Krasne	80.12	327	*e*P	P	04 55 14.5	+1.0
OKC	Ostrava-Krasne	80.12	327	*e*P	P	04 55 14.5	+1.0
DRGR		80.17	322	⇑*i*P	P	04 55 14.8	+0.9
KSP	Ksiaz	80.18	328	*e*P	P	04 55 14.7	+0.9
KSP	Ksiaz	80.18	328	*e*P	P	04 55 14.7	+0.9
ARR	Arges	80.19	320	⇑*i*P	P	04 55 15.8	+1.7
U15A	North Rim	80.23	52	*e*P	P	04 55 16.4	+1.6
	comp=Z,26nm,1.5s						
MORC	Moravsky Berou	80.43	327	*e*P	P	04 55 15.9	+0.7
	comp=Z,39nm,1.6s						
MORC	Moravsky Berou	80.43	327	⇑*i*P	P	04 55 16.4	+1.2
MORC	Moravsky Berou	80.43	327	*e*P	P	04 55 15.9	+0.7
MORC				pmax	pmax		
	comp=Z,39nm,1.6s						
MORC	Moravsky Berou	80.43	327	*e*P	P	04 55 16.0	+0.7
DPC	Dobruska-Polom	80.53	328	*e*P	P	04 55 17.1	+1.3
DPC				*e*PCP	PcP	04 55 22.3	-0.4
DPC	Dobruska-Polom	80.53	328	*e*P	P	04 55 17.1	+1.3
DPC				*e*		04 55 22.3	
KRLC	Kraliky	80.54	327	*e*P	P	04 55 17.0	+1.2
KRLC	Kraliky	80.54	327	*e*P	P	04 55 17.0	+1.2
UPC	Upice	80.55	328	*e*P	P	04 55 16.6	+0.8
UPC	Upice	80.55	328	*e*P	P	04 55 16.6	+0.8
PSZ	Piszkesteto	80.72	324	*e*P	P	04 55 17.1	+0.3
	comp=Z,71nm,1.8s						
PSZ	Piszkesteto	80.72	324	⇑*i*P	P	04 55 17.5	+0.6
PSZ	Piszkesteto	80.72	324	*e*P	P	04 55 17.1	+0.3
PSZ				pmax	pmax		
	comp=Z,71nm,1.8s						
PSZ	Piszkesteto	80.72	324	⇓*e*P	P	04 55 17.0	+0.1
VYHS	Vyhne	80.79	325	*e*P	P	04 55 17.1	-0.1
VYHS				pmax	pmax		
	comp=Z,17nm,1.7s						
VYHS	Vyhne	80.79	325	*e*P	P	04 55 17.1	-0.1
PV21	Cone Mtn., Par	80.92	48	*e*P	P	04 55 19.4	+1.0
	comp=Z,12nm,0.7s						
PV23	Carpenter Ridg	80.97	48	*e*P	P	04 55 19.3	+0.7
	comp=Z,54nm,1.6s						
PV10	Paradox Valley	81.00	49	*e*P	P	04 55 20.2	+1.5
	comp=Z,29nm,1.0s						
SIRR	Siria	81.06	322	⇑*i*P	P	04 55 19.5	+0.9
PV20	West Nyswonger	81.06	49	*e*P	P	04 55 20.3	+1.3
	comp=Z,18nm,0.8s						
PV19	Morning Glory	81.08	49	*e*P	P	04 55 20.2	+1.1
	comp=Z,23nm,1.2s						
PV17	East Wray Mesa	81.11	49	*e*P	P	04 55 20.7	+1.4
	comp=Z,34nm,1.1s						
PV16	Nyswonger Mesa	81.11	48	*e*P	P	04 55 20.6	+1.2
	comp=Z,70nm,1.9s						
GZR	Gura Zlata	81.12	321	⇑*i*P	P	04 55 19.7	+0.7
BRG	Berggiesshubel	81.14	329	*i* P	P	04 55 19.0	+0.1
	comp=Z,8.5nm,0.7s						
BRG				*i* PCP	PcP	04 55 24.9	-0.3
	comp=Z,8.6nm,0.8s						
	comp=N,271nm,16.4s						
	comp=E,186nm,13.8s						
	comp=Z,486nm,15.6s						
BRG	Berggiesshubel	81.14	329	*i* P	P	04 55 19.0	+0.1
BRG				*i*		04 55 24.9	
BRG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRG				MLR	MLR		
	comp=N,271nm,16.4s						
BRG				MLR	MLR		
	comp=E,186nm,13.8s						
BRG				MLR	MLR		
	comp=Z,486nm,15.6s						
PVCC	Panska Ves	81.14	329	*e*P	P	04 55 19.9	+1.0
PVCC				AMS	AMS	05 37 50.0	
	comp=Z,400nm,15.5s						
PVCC	Panska Ves	81.14	329	*e*P	P	04 55 19.9	+1.0
PVCC				MLR	MLR		
	comp=Z,400nm,15.5s						
PV11	David Mesa, Pa	81.15	48	*e*P	P	04 55 21.1	+1.6
	comp=Z,22nm,1.0s						
PV05	Paradox Valley	81.15	49	*e*P	P	04 55 21.0	+1.4
	comp=Z,18nm,0.9s						
N23A	Red Feather La	81.16	45	*e*P	P	04 55 20.8	+1.2
	comp=Z,66nm,1.8s						
N23A	Red Feather La	81.16	45	P	P	04 55 21.8	+2.2
	baz=312						
CLL	Collm	81.18	330	*e*P	P	04 55 19.4	+0.3
	comp=Z,20nm,1.0s						
CLL	Collm	81.18	330	*e*P	P	04 55 19.4	+0.3
CLL				pmax	pmax		
	comp=Z,20nm,1.0s						
PV03	Paradox Valley	81.19	49	*e*P	P	04 55 20.7	+0.9
	comp=Z,22nm,1.2s						
VRAC	Vranov	81.19	327	⇑*i*P	P	04 55 20.2	+1.0
VRAC	Vranov	81.19	327	*e*P	P	04 55 20.3	+1.0
PV13	Radium Mtn., P	81.27	49	*e*P	P	04 55 21.2	+1.0
	comp=Z,32nm,1.2s						
PV02	Paradox Valley	81.29	48	*e*P	P	04 55 21.0	+0.7
	comp=Z,16nm,1.2s						
Y14A	Wickenburg	81.33	54	*e*P	P	04 55 21.4	+1.1
	comp=Z,11nm,1.4s						
WUAZ	Wupatki	81.38	52	*e*P	P	04 55 22.0	+1.3
	comp=Z,12nm,1.1s						
PV01	Paradox Valley	81.44	48	*e*P	P	04 55 22.1	+1.0
	comp=Z,11nm,1.2s						
KRUC	Moravsky	81.47	327	*e*P	P	04 55 21.5	+0.8
SRO	Srobarova	81.53	325	*e*P	P	04 55 22.1	+1.1
SRO	Srobarova	81.53	325	*e*P	P	04 55 22.1	+1.1
BZS	Buzias	81.54	322	⇑*i*P	P	04 55 21.7	+0.6
PRU	Pruhonice	81.56	328	*e*P	P	04 55 21.9	+0.7
PRU				*e*PCP	PcP	04 55 25.9	-1.2
PRU				AMS	AMS	05 37 50.0	
	comp=Z,400nm,17.6s						
PRU	Pruhonice	81.56	328	*e*P	P	04 55 21.9	+0.7
PRU				MLR	MLR		
	comp=Z,400nm,17.6s						
MODS	Modra-Piesok	81.59	326	*e*P	P	04 55 22.2	+0.8
MODS				pmax	pmax		
	comp=Z,15nm,1.3s						
MODS	Modra-Piesok	81.59	326	*e*P	P	04 55 22.2	+0.8
TREC	Trest	81.68	328	*e*P	P	04 55 22.8	+0.9
TREC				AMS	AMS	05 35 50.0	
	comp=Z,500nm,14.9s						
TREC	Trest	81.68	328	*e*P	P	04 55 22.8	+0.9
TREC				MLR	MLR		
	comp=Z,500nm,14.9s						
SMCO	Snowmass	81.70	47	*e*P	P	04 55 23.8	+1.2
	comp=Z,4.9nm,0.9s						
KAC	Achnashellach	81.87	342	*e*P	P	04 55 23.4	+0.8
X16A	Lo Mia Camp, P	82.03	53	*e*P	P	04 55 25.6	+1.4
	comp=Z,6.6nm,1.1s						
ISCO	Idaho Springs	82.08	46	*e*P	P	04 55 25.6	+1.1
	comp=Z,5.7nm,0.6s						
ISCO	Idaho Springs	82.08	46	*e*P	P	04 55 25.6	+1.1
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MVCO	Mesa Verde	82.08	49	*e*P	P	04 55 25.2	+0.8
	comp=Z,34nm,1.7s						
MVCO	Mesa Verde	82.08	49	P	P	04 55 26.1	+1.6
	baz=311						
MDVR	Moldovita	82.08	321	⇑*i*P	P	04 55 24.6	+0.5
KPL	Plockton	82.10	343	*e*P	P	04 55 24.5	+0.7
KPL				IAmb	IAmb	04 55 26.8	
	comp=Z,52nm,1.2s						
EDU	Dundee	82.14	341	*e*P	P	04 55 25.0	+0.9
NKC	Novy Kostel	82.24	330	*e*P	P	04 55 25.4	+0.6
NKC	Novy Kostel	82.24	330	*e*P	P	04 55 25.4	+0.6
SOP	Sopron	82.42	326	⇓*e*P	P	04 55 26.0	+0.3
INVG	Invergeldie, C	82.52	341	*e*P	P	04 55 26.3	+0.3
MORH	Mrgy, Hungar	82.55	324	*e*P	P	04 55 26.2	-0.2
MORH	Mrgy, Hungar	82.55	324	*e*P	P	04 55 26.0	-0.4
CONA	Conrad Observa	82.55	326	*e*PcP	P	04 55 28.0	+1.5
	comp=Z,8.0nm,0.7s,SNR=5.8						
ESY	Stoneypath	82.59	340	*e*P	P	04 55 27.2	+0.7
KHC	Kasperske Hory	82.62	328	*e*P	P	04 55 27.4	+0.6
	comp=Z,4.9nm,0.7s						
KHC	Kasperske Hory	82.62	328	*e*P	P	04 55 27.7	+0.9
KHC				*e*PCP	PcP	04 55 31.5	-0.3
KHC				AMS	AMS	05 36 20.0	
	comp=Z,300nm,18.5s						
KHC	Kasperske Hory	82.62	328	*e*P	P	04 55 27.4	+0.6
KHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
S22A	4UR Ranch, Cre	82.73	48	*e*P	P	04 55 28.9	+0.9
	comp=Z,25nm,1.6s						
FRGS	Fruska Gora	82.75	323	⇓*i*P	P	04 55 27.9	+0.3
GEC2	GERESS Array S	82.79	328	*e*P	P	04 55 27.8	0.0
	comp=Z,22nm,1.4s						
GEC2	GERESS Array S	82.79	328	*e*P	P	04 55 27.8	0.0
GEC2				pmax	pmax		
	comp=Z,22nm,1.4s						
GERES	GERESS Array B	82.79	328	P	P	04 55 28.1	+0.3
	comp=Z,5.6nm,0.5s,baz=38,slow=6.1,SNR=62						
GERES				LR	LR	05 35 43.0	
	comp=Z,197nm,18.8s,baz=38,slow=38						
GEA0	GERESS Array S	82.80	328	*e*P	P	04 55 27.8	0.0
VTS	Vitosha	82.82	319	*e*P	P	04 55 28.1	0.0
	comp=Z,8.1nm,0.6s						
VTS	Vitosha	82.82	319	⇑*i*P	P	04 55 29.4	+1.2
VTS	Vitosha	82.82	319	*e*P	P	04 55 28.1	0.0
VTS				pmax	pmax		
	comp=Z,8.0nm,0.6s						
EAU	Auchinoon	82.88	341	*e*P	P	04 55 29.0	+1.1
GRA1	Grafenberg Arr	83.16	330	*e*P	P	04 55 29.6	+0.1
	comp=Z,21nm,0.9s						
GRF	Grafenberg Arr	83.16	330	*e*P	P	04 55 29.6	+0.1
GRF				pmax	pmax		
	comp=Z,21nm,0.9s						
GRFO	Grafenberg	83.16	330	*e*P	P	04 55 29.6	+0.1
	comp=Z,19nm,0.9s						
GRFO	Grafenberg	83.16	330	*e*P	P	04 55 29.6	+0.1
GRFO				pmax	pmax		
	comp=Z,19nm,0.9s						
PGBU	Glenifferbraes	83.18	341	*e*P	P	04 55 29.4	0.0
PGBU				IAmb	IAmb	04 55 32.6	
	comp=Z,37nm,1.1s						
ARSA	Arzberg	83.21	326	*i* P	P	04 55 30.9	+1.0
	comp=Z,6.0nm,0.8s						
EKA	Eskdalemuir Ar	83.25	340	P	P	04 55 30.0	+0.1
	comp=Z,5.1nm,0.7s,baz=35,slow=5.0,SNR=19						
ESK	Eskdalemuir	83.28	340	*e*P	P	04 55 30.6	+0.5
	comp=Z,5.3nm,0.6s						
ESK	Eskdalemuir	83.28	340	*e*P	P	04 55 30.7	+0.7
ESK				IAmb	IAmb	04 55 30.9	
	comp=Z,38nm,0.9s						
ESK	Eskdalemuir	83.28	340	*e*P	P	04 55 30.6	+0.5
ESK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MOA	Molln	83.31	327	*i* PcP	P	04 55 31.4	+1.0
	comp=Z,5.6nm,0.7s,SNR=8.1						
DIVS	Divibare	83.43	322	*e*P	P	04 55 31.5	+0.3
	comp=Z,55nm,1.7s						
DIVS	Divibare	83.43	322	*e*P	P	04 55 31.5	+0.3
TUC	Tucson	83.80	54	P	P	04 55 35.0	+1.7
	baz=310						
PERS	Pernice	83.86	326	*i* P	P	04 55 33.6	+0.3
SOKA	Soboth	83.86	326	*i* PcP	P	04 55 34.1	+0.7
	comp=Z,12nm,0.7s						
BBLS	Lazići	83.89	322	⇓*i*P	P	04 55 34.2	+0.7
HAPS	Han Pijesak,Bl	83.95	322	*e*P	P	04 55 33.6	-0.3
HPK	Haverah Park	84.04	339	*e*P	P	04 55 34.9	+1.0
HPK				IAmb	IAmb	04 55 37.8	
	comp=Z,59nm,1.3s						
GAL1	Galloway	84.08	341	*e*P	P	04 55 34.1	0.0
GAL1				IAmb	IAmb	04 55 35.7	
	comp=Z,7.2nm,0.6s						
GOLS	Golise	84.10	325	*i* P	P	04 55 34.5	0.0
ECSD	EROS Data Cent	84.14	38	*e*P	P	04 55 35.3	+0.6
	comp=Z,13nm,1.4s						
ECSD	EROS Data Cent	84.14	38	P	P	04 55 35.3	+0.6
	baz=317						
PMOR	Pomariorio Ree	84.24	113	*e*T	T	06 28 12.1	
	comp=Z,24nm,0.2s						
KBA	Koelnbreinsper	84.30	327	*i* PcP	P	04 55 36.8	+1.1
	comp=Z,9.9nm,0.9s						
CRES	Cresnjev	84.32	325	*e*P	P	04 55 34.7	-0.9
BLY	Banja Luka	84.32	324	⇑*i*P	P	04 55 35.7	+0.1
BLY	Banja Luka	84.32	324	*e*P	P	04 55 34.6	-1.0
E38A	The Farm, Brul	84.37	33	*e*P	P	04 55 36.8	+1.0
	comp=Z,57nm,1.8s						
E38A	The Farm, Brul	84.37	33	P	P	04 55 36.5	+0.7
	baz=320						
BEBN	Eben Emael	84.37	333	⇑P	P	04 55 36.1	+0.5
BEBN				⇑pP	pP	04 55 47.2	+2.9
MEM	Membach	84.41	333	⇑P	P	04 55 36.1	+0.2
MEM				⇑pP	pP	04 55 47.1	+2.5
	comp=Z,6.7nm,1.0s						
MYKA	Terra Mystica	84.52	327	*i* P	P	04 55 36.7	0.0
	comp=Z,5.9nm,0.5s						
LBWR	Ladybower, Pea	84.55	339	*e*P	P	04 55 36.4	-0.2
LBWR				IAmb	IAmb	04 55 38.1	
	comp=Z,44nm,1.0s						
PPT2	Papeete2	84.69	116	*e*LR	LR	05 21 46.4	
	comp=Z,390nm,31.0s						
PPT2	Papeete2	84.69	116	*e*T	T	06 28 45.9	
	comp=Z,3.2nm,0.3s						
PAE	Paea	84.74	116	*e*T	T	06 28 48.6	
	comp=Z,0.7nm,0.2s						
ANMO	Albuquerque	84.81	50	*e*P	P	04 55 39.7	+1.2
	comp=Z,36nm,2.0s						
ANMO	Albuquerque	84.81	50	⇑*e*P	P	04 55 40.4	+1.9
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ANMO	Albuquerque	84.81	50	P	P	04 55 40.4	+1.9
	baz=312						
TIAR	Tiarei	84.84	116	*e*T	T	06 28 56.0	
	comp=Z,3.7nm,0.3s						
CEY	Cerknica	84.85	326	*e*P	P	04 55 35.3	-3.0
WATA	Walderalm	84.86	328	*i* PcP	P	04 55 40.1	+1.6
	comp=Z,4.9nm,0.5s						
ABTA	Abfaltersbach	84.92	327	*i* P	P	04 55 38.3	-0.4
	comp=Z,6.4nm,0.8s						
E39A	Mellen	84.98	33	P	P	04 55 39.7	+0.8
	baz=321						
LIT	Litokhoron	84.99	318	*e*P	P	04 55 39.2	+0.1
	comp=Z,29nm,0.7s						
LIT	Litokhoron	84.99	318	*e*P	P	04 55 39.2	+0.1
LIT				pmax	pmax		
	comp=Z,29nm,0.7s						
CWF	Charnwood Fore	85.01	338	*e*P	P	04 55 39.1	+0.2
PDG	Podgorica	85.01	321	⇑*i*P	P	04 55 39.6	+0.5
PDG	Podgorica	85.01	321	⇓*i*P	P	04 55 39.1	0.0
BRY	Bratogost	85.03	322	*e*P	P	04 55 38.8	-0.6
MOTA	Moosalm	85.05	329	*i* PcP	P	04 55 39.9	+0.4
	comp=Z,4.8nm,0.6s						
RETA	Reutte	85.08	329	*i* PcP	P	04 55 40.3	+0.8
	comp=Z,11nm,0.6s,SNR=5.4						
SQTA	Sankt Quirin	85.11	328	*i* PcP	P	04 55 40.1	+0.5
	comp=Z,6.2nm,0.6s						
WLF	Walferdange	85.13	333	⇑P	P	04 55 38.9	-0.7
E40A	Wakefield	85.22	33	P	P	04 55 41.5	+1.4
	baz=321						
DRME	Dracevica, Mon	85.23	321	⇓*i*P	P	04 55 39.8	-0.4
DOU	Dourbes	85.34	334	⇓P	P	04 55 40.2	-0.3
HCY	Herceg Novi	85.38	321	*e*P	P	04 55 41.0	0.0
BFO	Black Forest	85.39	331	*e*P	P	04 55 41.0	0.0
BFO	Black Forest	85.39	331	*e*P	P	04 55 41.0	0.0
FOEL	Foel Wylfa	85.43	339	*e*P	P	04 55 41.8	+0.8
FOEL				IAmb	IAmb	04 55 43.2	
	comp=Z,33nm,0.9s						
FETA	Feichten	85.46	329	*i* PcP	P	04 55 42.0	+0.5
	comp=Z,6.0nm,0.7s						
SCHQ	Schefferville	85.55	16	P	P	04 55 40.8	-0.8
	comp=Z,4.3nm,0.9s,baz=282,slow=10,SNR=4.9						
E41A	Kenton	85.60	32	P	P	04 55 42.9	+0.9
	baz=322						
DAVA	Damuels	85.61	329	*i* PcP	P	04 55 42.7	+0.5
	comp=Z,18nm,0.9s,SNR=5.2						
ECH	Echery	85.94	331	*e*P	P	04 55 44.0	+0.3
	comp=Z,11nm,0.7s						
ECH	Echery	85.94	331	*e*P	P	04 55 44.0	+0.3
ECH				pmax	pmax		
	comp=Z,11nm,0.7s						
FUORN	Ofenpass-Fuorn	85.98	329	*e*P	P	04 55 44.6	+0.5
	comp=Z,17nm,0.7s						
G40A	Rib Lake	86.00	34	*e*P	P	04 55 45.4	+1.4
	comp=Z,18nm,1.1s						
G40A	Rib Lake	86.00	34	P	P	04 55 44.7	+0.7
	baz=321						
STRD	Stroud	86.11	338	*e*P	P	04 55 44.9	+0.6
STRD				IAmb	IAmb	04 55 45.8	
	comp=Z,48nm,0.8s						
MCH1	Michaelchurch	86.16	339	*e*P	P	04 55 44.8	+0.2
MCH1				IAmb	IAmb	04 55 46.0	
	comp=Z,22nm,0.7s						
MONM	Monmouth	86.24	339	*e*P	P	04 55 45.2	+0.1
MONM				IAmb	IAmb	04 55 45.9	
	comp=Z,37nm,1.0s						
TAOE	Nuku Hiva Isla	86.26	104	*e*LR	LR	05 22 34.8	
	comp=Z,292nm,33.2s						
J39A	Decorah	86.81	36	P	P	04 55 48.2	+0.1
	baz=320						
IDI	Anoyia	87.01	313	P	P	04 55 48.9	-0.3
	comp=Z,13nm,0.6s,baz=41,slow=10,SNR=11						
KSU1	Kansas State U	87.54	41	*e*P	P	04 55 52.5	+0.8
	comp=Z,55nm,1.8s						

J41A	Loganville	87.56	35	P	P	04 55 52.3	+0.7
	baz=321						
MNTX	Cornudas Mount	87.65	52	P	P	04 55 53.2	+0.9
	baz=313						
TUL1	Leonard	90.32	43	eP	P	04 56 05.6	+0.8
	comp=Z,35nm,1.7s						
TUL1	Leonard	90.32	43	P	P	04 56 05.8	+1.0
	baz=318						
TX31	Lajitas Ar. Si	90.34	52	eP	P	04 56 06.0	+0.9
TXAR	Lajitas Array	90.34	52	P	P	04 56 06.6	+1.4
	comp=Z,2.4nm,0.6s,baz=306,slow=2.9,SNR=31						
P42A	Winchester	90.35	37	P	P	04 56 05.9	+1.1
	baz=321						
U40A	Yellville	91.56	41	P	P	04 56 11.4	+0.8
	baz=320						
WHTX	Lake Whitney,	92.25	47	eP	P	04 56 14.5	+0.7
	comp=Z,14nm,0.9s						
V41A	Mountainview	92.36	41	P	P	04 56 14.9	+0.6
	baz=320						
MIAR	Mount Ida	92.55	42	P	P	04 56 16.1	+1.0
	baz=319						
KEST	Kesra	95.08	323	P	P	04 56 26.8	0.0
	comp=Z,5.6nm,1.1s,baz=32,slow=9.5,SNR=2.1						
KEST				LR	LR	05 44 20.2	
	comp=Z,111nm,18.6s,baz=308,slow=39						
ESDC	Sonseca Array	97.39	334	P	P	04 56 36.9	-0.4
	comp=Z,0.5nm,0.6s,baz=24,slow=4.6,SNR=5.9						
TORD	Torodi Ar. Bea	117.36	315	PKP	PKPdf	05 01 49.1	-0.6
	comp=Z,0.4nm,0.5s,baz=9.8,slow=1.8,SNR=7.1						
SDV	Santo Domingo	125.55	40	ePKPdf	PKiKP	05 02 05.9	-0.1
DBIC	Dimbokro	126.32	317	PKP	PKiKP	05 02 07.2	-0.2
	comp=Z,2.7nm,0.7s,baz=29,slow=3.9,SNR=8.5						
SNAA	Sanae	140.54	197	PKP	PKPpre	05 02 25.0	
VNA2	Neumayer--Watz	142.11	196	PKP	PKPpre	05 02 30.6	
VNA3	Neumayer Olymp	142.36	195	PKP	PKPpre	05 02 31.0	
VNA1	Neumayer--Stat	142.50	196	PKP	PKPpre	05 02 30.0	
LPAZ	La Paz	146.91	60	ePKPdf	PKPbc	05 02 47.6	+0.3
LPAZ	La Paz	146.91	60	PKPbc	PKPab	05 02 47.9	-0.7
	comp=Z,12nm,0.5s,baz=341,slow=3.2,SNR=52						
MNMC	Minye Minye	147.75	65	ePKPbc	PKiKP	05 02 50.3	-0.8
PB11	IPOC Station P	148.10	66	ePKPbc	PKiKP	05 02 51.2	-0.4
RCBR	Riachuelo	149.01	354	PKPbc	PKiKP	05 02 54.2	+0.6
	comp=Z,62nm,0.8s,baz=78,slow=0.0,SNR=2.9						
LVC	Limon Verde	150.37	70	ePKPbc	PKiKP	05 02 57.5	+1.0
LVC	Limon Verde	150.37	70	ePKIKP	PKiKP	05 02 57.5	+1.0
GO02	Mina Guanaco	151.25	75	ePKPbc	PKiKP	05 02 59.0	+0.8
LCO	Las Campanas	152.17	83	ePKPbc	PKiKP	05 03 00.6	+0.7
LCO	Las Campanas	152.17	83	ePKIKP	PKiKP	05 03 00.6	+0.7
GO04	Tololo Observa	152.56	85	ePKPbc	PKiKP	05 03 01.1	+0.4

JMA 09 04:44:42.1±0.1**, 36°.86N**×**141°.31E, h30**^{km}±1^{km}**, M4.0,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.47	301	P	Pb	04 44 51.8	-0.4
ONAJ				S	Sb	04 44 59.1	0.0
JFK	Kawauchi	0.61	326	P	Pb	04 44 54.0	-0.4
JFK				S	Sb	04 45 02.3	-0.6
JFFD	Fukushimafurud	0.64	291	P	Pb	04 44 54.3	-0.6
JFFD				S	Sb	04 45 02.8	-0.8
JHO	Hitachi	0.65	248	P	Pb	04 44 54.4	-0.5
JHO				S	Sb	04 45 03.1	-0.5
JHYU	Hitachinakayam	0.78	229	P	Pn	04 44 56.9	-0.1
JHYU				eS	Sb	04 45 07.2	-0.2
JFT	Otama	1.02	310	P	Pb	04 45 01.0	-0.2
JFT				eS	Sb	04 45 14.1	-0.1
JMM	Marumori	1.08	338	P	Pb	04 45 02.1	-0.2
JMM				eS	Sb	04 45 16.0	-0.1
JFY	Yanaizu	1.39	294	S	Sb	04 45 25.0	0.0
JAG	Ashikaga	1.56	254	eS	Sn	04 45 27.8	+0.9

GCMT 09 04:46:23.0±0.4**, 35°.19N**±0°.03×**34°.99W**±0°.03**, h24**^{km}±2^{km}**,**
MW4.8/66**, Moment Tensor Solution. s14,c15;**
s66,c89; Duration: 0 Moment tensor: Scale 10^{16}**Nm;**
M$_{rr}$-0.60±.18; M$_{\theta\theta}$0.86±.13; M$_{\phi\phi}$-0.26±.11; M$_{r\theta}$-0.45±.16;
M$_{\theta\phi}$1.62±.10; M$_{\phi r}$0.10±.15; **Best double couple:**
M$_0$1.79400×10^{16} **NP1:**ϕ_s97.00000°**,**δ81.00000°,
λ-19.00000°. **NP2:**ϕ_s191.00000°**,**δ71.00000°,
λ-170.00000°. **Principal axes:** T 2.0490**,** Plg7.0000°,
Azm145.0000°**;** N -0.5100, Plg69.0000°, Azm253.0000°;
P -1.5380, Plg20.0000°, Azm53.0000°**; nsta1 refers to**
body waves, cutoff=40s. nsta2 refers to surface
waves, cutoff=50s. Surface-wave location Triangular
moment-rate function Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PICO	Pico	6.21	56	eP	Pn	04 47 49.8	-3.5
PSET	Sete Cidades	7.91	68	eP	Pn	04 48 12.3	-4.2
PDA	Ponta Delgada	7.94	69	eP	Pn	04 48 12.6	-4.2
GRON	Grota Negra	8.04	69	eP	Pn	04 48 16.5	-1.8
CMLA	Cha da Macela	8.05	69	eP	Pn	04 48 14.6	-3.7
PSMA	Santa Maria	8.18	74	eP	Pn	04 48 15.7	-4.5
PSMN	Pico do Norte,	8.23	74	eP	Pn	04 48 16.1	-4.8

IDC 09 04:49:46.4±1.7**, 11°.63S**×**165°.27E, h0**^{km}**, mb3.7**/3**,**
mb1 4.0/4**, mb1mx3.6**/34**, mbtmp3.7**/4**, ML3.3**/1 **Error**
ellipse: s-maj=52.2km s-min=30.6km az=130.0, Santa
Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.45	174	Pn	Pn	04 52 18.4	+0.7
	0.2nm,0.3s,baz=12,slow=7.8,SNR=6.3						
WRA	Warramunga Arr	30.85	251	P	P	04 56 04.1	-0.5
	1.1nm,0.8s,baz=85,slow=9.8,SNR=4.8						
ASAR	Alice Springs	32.11	244	P	P	04 56 16.1	+0.3
	0.8nm,0.9s,baz=85,slow=8.5,SNR=3.5						
ILAR	Eielson Array	84.21	19	P	P	05 02 19.4	-0.1
	0.3nm,0.6s,baz=234,slow=5.1,SNR=9.4						

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*IDC **09** 04:51:40.5±1.2, 11°.63S×165°.19E, h0^{km}, mb3.9/6,*
mb1 4.2/7, mb1mx3.9/34, mbtmp3.9/7, ML3.6/1, Error
ellipse: s-maj=41.0km s-min=25.0km az=134.0
*ISCJB **09** 04:51:43.8±0.9, 11°.8S±0°.1×165°.2E±0°.2, h34^{km}, mb3.9/6,*
Error ellipse: s-maj=26.1km s-min=18.3km az=7.3
ISC 09 04:51:45.5±0.9**, 11°.7S**±0°.1×**165°.2E**±0°.2**, h34**^{km}**, n7,**
σ**0^s.13**/7**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.36	174	Pn	Pn	04 54 11.9	0.0
	0.4nm,0.3s,baz=356,slow=9.5,SNR=6.8						
WRA	Warramunga Arr	30.75	251	P	P	04 57 58.0	+0.2
	3.9nm,1.0s,baz=81,slow=9.2,SNR=11						
ASAR	Alice Springs	32.01	244	P	P	04 58 08.9	-0.1
	0.7nm,0.9s,baz=69,slow=12,SNR=4.8						
SONM	Songino Array	78.89	324	P	P	05 03 45.6	+0.1
	0.3nm,0.6s,baz=129,slow=4.6,SNR=2.1						
ILAR	Eielson Array	84.32	19	P	P	05 04 13.7	0.0
	0.8nm,0.6s,baz=237,slow=5.1,SNR=18						
NVAR	Mina Array Bea	86.87	50	P	P	05 04 27.3	+0.1
	0.7nm,0.4s,baz=246,slow=8.8,SNR=3.1						
MKAR	Makanchi Array	93.64	317	P	P	05 04 58.3	-0.2
	0.5nm,0.8s,baz=95,slow=6.1,SNR=5.0						

IDC 09 04:59:10.7±2.8**, 10°.75S**×**164°.47E, h0**^{km}**, mb3.9**/5**,**
mb1 4.1/6**, mb1mx3.8**/33**, mbtmp3.9**/6**, ML3.8**/1**, Error**
ellipse: s-maj=99.6km s-min=25.5km az=131.0, Santa
Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	19.84	240	P	Pn	05 03 44.9	0.0
	0.2nm,0.3s,baz=85,slow=13,SNR=3.2						
WRA	Warramunga Arr	30.41	249	P	P	05 05 24.8	-0.2
	1.9nm,0.6s,baz=80,slow=9.1,SNR=18						
ASAR	Alice Springs	31.81	242	P	P	05 05 36.7	-0.6
	1.3nm,0.5s,baz=62,slow=10,SNR=19						
SONM	Songino Array	77.69	324	P	P	05 11 09.2	-0.2
	0.3nm,0.5s,baz=131,slow=4.2,SNR=3.4						
ILAR	Eielson Array	83.63	19	P	P	05 11 40.8	0.0
	0.6nm,0.8s,baz=235,slow=6.3,SNR=3.7						
MKAR	Makanchi Array	92.45	317	P	P	05 12 24.2	+0.6
	0.5nm,0.8s,baz=116,slow=2.8,SNR=3.7						

IDC 09 05:01:00.6±1.2**, 10°.80S**×**164°.85E, h0**^{km}**, mb3.5**/3**,**
mb1 3.9/4**, mb1mx3.6**/32**, mbtmp3.6**/4**, ML3.0**/1**, MS3.8**/1**,**
Ms1 3.8/1**, ms1mx2.9**/25**, Error ellipse: s-maj=36.6km**
s-min=26.3km az=166.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.31	172	Pn	Pn	05 03 43.3	-0.3
	0.1nm,0.3s,baz=342,slow=20,SNR=1.6						
WRA	Warramunga Arr	30.75	249	P	P	05 07 18.3	+0.4
	0.2nm,0.5s,baz=80,slow=9.3,SNR=4.7						
ASAR	Alice Springs	32.12	242	P	P	05 07 29.5	-0.4
	0.2nm,0.5s,baz=61,slow=10,SNR=4.3						
RAR	Rarotonga	35.46	111	P	P	05 07 58.9	-0.1
	9.8nm,0.5s,baz=285,slow=16,SNR=3.2						
PPT	Papeete	44.60	104	LR	LR	05 26 32.6	
	comp=Z,108nm,18.5s,baz=355,slow=34						
ILAR	Eielson Array	83.56	19	P	P	05 13 30.3	0.0
	0.7nm,1.0s,baz=216,slow=6.5,SNR=2.6						

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*IDC **09** 05:12:20.6±1.3, 11°.49S×165°.26E, h0^{km}, mb3.7/6,*
mb1 3.9/7, mb1mx3.7/24, mbtmp3.7/7, ML3.4/1, Error
ellipse: s-maj=45.4km s-min=26.1km az=126.0
*ISCJB **09** 05:12:22.6±0.9, 11°.6S±0°.1×165°.2E±0°.2, h24^{km}, mb3.6/6,*
Error ellipse: s-maj=28.5km s-min=18.3km az=4.8
ISC 09 05:12:24.3±1.0**, 11°.5S**±0°.1×**165°.3E**±0°.2**, h24**^{km}**, n7,**
σ**1^s.18**/7**, mb3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.58	174	Pn	Pn	05 14 55.0	+0.4
	0.3nm,0.3s,baz=323,slow=20,SNR=6.3						
WRA	Warramunga Arr	30.88	250	P	P	05 18 38.8	-0.4
	1.0nm,0.9s,baz=79,slow=9.4,SNR=6.6						
ASAR	Alice Springs	32.16	244	P	P	05 18 49.7	-0.8
	0.5nm,0.8s,baz=73,slow=11,SNR=5.7						
SONM	Songino Array	78.74	324	P	P	05 24 25.8	+0.8
	0.5nm,0.8s,baz=132,slow=6.0,SNR=2.8						
ILAR	Eielson Array	84.09	19	P	P	05 24 53.6	+0.8
	0.4nm,0.5s,baz=236,slow=4.8,SNR=9.2						
MKAR	Makanchi Array	93.52	317	P	P	05 25 38.9	+0.6
	0.2nm,0.7s,baz=104,slow=4.6,SNR=3.3						
YKA	Yellowknife Ar	95.59	27	P	P	05 25 45.6	-1.7
	0.1nm,0.5s,baz=254,slow=4.3,SNR=3.0						

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*IDC **09** 05:12:45.0±1.0, 11°.04S×164°.74E, h0^{km}, mb4.1/7,*
mb1 4.3/10, mb1mx4.1/25, mbtmp4.1/10, ML4.1/3, Error
ellipse: s-maj=35.9km s-min=21.2km az=139.0
*NEIC **09** 05:12:47.2±0.5, 10°.96S×164°.65E, h10^{km}, mb4.4/8, Error*
ellipse: s-maj=12.4km s-min=8.4km az=126.0
*ISCJB **09** 05:12:48.2±0.6, 11°.05S±0°.08×164°.62E±0°.09, h29^{km},*
mb4.1/14, Error ellipse: s-maj=14.2km s-min=9.9km
az=35.4
ISC 09 05:12:49.9±0.7**, 11°.00S**±0°.10×**164°.7E**±0°.1**, h29**^{km}**, n33,**
σ**0^s.86**/29**, mb4.2**/14**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.90	288	ePn	Pn	05 14 00.1	-1.5
HNR	Honiara	4.90	288	Pn	Pn	05 14 02.0	+0.4
	15nm,0.3s,baz=118,slow=3.7,SNR=1.6						
DZM	Mont Dzumac	11.14	171	ePn	Pn	05 15 27.0	-0.4
DZM	Mont Dzumac	11.14	171	Pn	Pn	05 15 26.6	-0.8
	0.8nm,0.3s,baz=88,slow=18,SNR=1.9						
ONTNC	Ouen Toro	11.37	172	ePn	Pn	05 15 26.1	-4.4
CTA	Charters Tower	19.89	241	P	P	05 17 19.3	+0.2
	0.3nm,0.3s,baz=69,slow=12,SNR=11						
CTAO	Charters Tower	19.89	241	eP	Pn	05 17 21.4	+0.4
	13nm,0.8s						
KWAJ	Kwajalein Atol	19.89	9	eP	P	05 17 19.7	+0.6
	182nm,0.8s						
COEN	Coen	21.18	260	eP	P	05 17 31.7	-1.6
H11S2	WAKE ISLAND Hy	29.37	4	T	T	05 49 54.0	
	baz=183,slow=74						
H11S3	WAKE ISLAND Hy	29.38	4	T	T	05 49 53.9	
	baz=183						
H11S1	WAKE ISLAND Hy	29.39	4	T	T	05 49 52.1	
	baz=183,slow=74						
WB2	Warramunga Arr	30.49	249	eP	P	05 19 00.2	-0.5
	8.2nm,1.1s						
WR1	Warramunga Arr	30.50	249	eP	P	05 18 59.9	-0.9
	5.8nm,0.9s						
WR1				ePcP	PcP	05 21 58.9	-0.8
WRA	Warramunga Arr	30.50	249	P	P	05 18 59.9	-0.9
	2.0nm,0.7s,baz=78,slow=9.4,SNR=14						
WRA				PcP	PcP	05 21 58.9	-0.8
	0.4nm,0.9s,baz=69,slow=2.9,SNR=3.2						
H11N1	WAKE ISLAND Hy	30.60	4	T	T	05 51 23.0	
	baz=183						
H11N3	WAKE ISLAND Hy	30.60	4	T	T	05 51 21.5	
	baz=183						
H11N2	WAKE ISLAND Hy	30.62	4	T	T	05 51 18.2	
	baz=183						
AS01	Alice Springs	31.83	243	eP	P	05 19 12.3	-0.1
AS31	Alice Springs	31.87	243	eP	P	05 19 12.4	-0.4
	1.0nm,0.6s						
ASAR	Alice Springs	31.87	243	P	P	05 19 12.1	-0.7
	3.0nm,0.8s,baz=62,slow=10,SNR=20						
ASAR				PcP	PcP	05 22 03.1	-0.2
	0.6nm,0.8s,baz=76,slow=3.9,SNR=3.9						
BBOO	Buckleboo	34.09	226	eP	P	05 19 32.8	+0.7
	17nm,1.1s						
FITZ	Fitzroy Crossi	38.37	255	eP	P	05 20 09.4	+0.6
	3.4nm,0.9s						
FORT	Forrest	39.20	234	eP	P	05 20 17.6	+1.9
	20nm,1.0s						
SONA0	Songino Array	78.00	324	eP	P	05 24 46.6	+0.9
SONM	Songino Array	78.00	324	P	P	05 24 46.6	+0.9
	0.3nm,0.4s,baz=134,slow=4.2,SNR=4.3						
QSPA	South Pole Qui	79.00	180	eP	P	05 24 51.9	+0.9
	2.9nm,0.9s						
IM3	Indian Mountai	82.67	16	eP	P	05 25 10.4	+0.2
ILAR	Eielson Array	83.81	19	P	P	05 25 16.2	+0.1
	0.8nm,0.9s,baz=230,slow=6.4,SNR=5.1						
MK32	Makanchi Array	92.76	317	eP	P	05 25 59.9	+0.2
MKAR	Makanchi Array	92.76	317	P	P	05 25 59.9	+0.2
	0.9nm,0.7s,baz=98,slow=6.2,SNR=9.9						
PDAR	Pinedale Array	94.30	47	P	P	05 26 07.0	-0.1
	0.4nm,0.9s,baz=207,slow=1.6,SNR=2.8						
YKA	Yellowknife Ar	95.42	27	P	P	05 26 09.9	-1.4
	0.1nm,0.7s,baz=254,slow=4.5,SNR=3.0						

IDC 09 05:14:55.6±1.2**, 0°.89S**×**24°.56W, h0**^{km}**, mb3.7**/4**,**
mb1 3.9/4**, mb1mx3.6**/26**, mbtmp3.7**/4**, MS3.4**/3**, Ms1 3.3**/3**,**
ms1mx3.0/27**, Error ellipse: s-maj=45.7km**
s-min=44.9km az=174.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	12.17	125	T	T	05 30 28.9	
	baz=303,slow=74,SNR=134						
H10N2	ASCENSION HYDR	12.18	125	T	T	05 30 20.4	
	baz=303,slow=74,SNR=172						
H10N1	ASCENSION HYDR	12.19	125	T	T	05 30 20.5	
	baz=303,slow=74,SNR=188						
H10S3	ASCENSION HYDR	12.70	129	T	T	05 31 08.8	
	baz=308,slow=74,SNR=58						
H10S1	ASCENSION HYDR	12.70	129	T	T	05 31 07.5	
	baz=308,slow=74,SNR=73						
H10S2	ASCENSION HYDR	12.72	129	T	T	05 31 03.9	
	baz=308,slow=74,SNR=32						
DBIC	Dimbokro	21.05	69	LR	LR	05 26 02.8	
	comp=Z,67nm,20.7s,baz=248,slow=32						
BDFB	Brasilia	27.39	236	LR	LR	05 30 29.3	
	comp=Z,84nm,20.2s,baz=341,slow=34						
TORD	Torodi Ar. Bea	29.54	61	LR	LR	05 31 22.1	
	comp=Z,94nm,18.9s,baz=300,slow=33						
BRTR	Keskin Array B	66.64	46	P	P	05 25 49.1	+0.6
	0.4nm,0.8s,baz=230,slow=8.3,SNR=3.5						
AKASG	Malin Array Be	68.67	33	P	P	05 26 00.2	-0.6
	0.9nm,0.6s,baz=239,slow=6.9,SNR=4.5						
TXAR	Lajitas Array	80.94	300	P	P	05 27 12.6	0.0
	0.2nm,0.7s,baz=123,slow=6.6,SNR=3.5						
YKA	Yellowknife Ar	90.80	332	P	P	05 28 00.8	+0.2
	0.4nm,0.8s,baz=94,slow=4.8,SNR=7.2						
ASAR	Alice Springs	147.85	141	PKPbc	PKPbc	05 34 43.5	-0.1
	0.9nm,0.7s,baz=224,slow=2.5,SNR=9.2						
WRA	Warramunga Arr	150.74	136	PKPbc	PKPbc	05 34 50.0	-1.0
	0.4nm,0.8s,baz=238,slow=1.7,SNR=4.4						

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*SOME **09** 05:15:41.3, 42°.53N×79°.67E, h20^{km}*
*KRNET **09** 05:15:41.1±0.1, 42°.53N×79°.60E, h11^{km}, mb2.9*
*NNC **09** 05:15:41.5±1.0, 42°.58N×79°.63E, h0^{km}, mb2.9, mpv2.8,*
Error ellipse: s-maj=6.5km s-min=3.9km az=134.0
ISC 09 05:15:40.9±1.8**, 42°.54N**±0°.05×**79°.65E**±0°.05**, h2**^{km}±11^{km}**,**
n35, σ**0^s.67**/64**, 13C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.76	323	P	Pg	05 15 55.6	+0.1
	4.2nm,0.1s						
UZB				S	Sg	05 16 05.7	+0.3
	32nm,0.2s						
UZB	Uzynbulak	0.76	323	eP	Pg	05 15 55.6	+0.1
	baz=26						
UZB				eS	Sg	05 16 05.7	+0.3
	baz=26						
UZB	Uzynbulak	0.76	323	eP	Pg	05 15 55.6	+0.1
	4.2nm,0.1s						
UZB				eS	Sg	05 16 05.7	+0.3
	32nm,0.2s						
PDGK	Podgornoye	0.80	352	P	Pg	05 15 56.2	0.0
	2.1nm,0.1s						
PDGK				S	Sg	05 16 06.9	+0.3
	9.0nm,0.2s						
PDGK	Podgornoye	0.80	352	⇑P	Pg	05 15 55.8	-0.4
	0.9nm,0.2s						
PDGK				⇑S	Sg	05 16 06.5	-0.1
	5.3nm,0.3s						
PDGK	Podgornoye	0.80	352	⇓iP	Pg	05 15 56.2	0.0
	baz=54						
PDGK				⇓iS	Sg	05 16 06.9	+0.3
	baz=54						
SATY	Saty	1.05	300	P	Pg	05 16 00.8	-0.3
	4.0nm,0.1s						
SATY				S	Sg	05 16 15.0	+0.3
	27nm,0.1s						
SATY	Saty	1.05	300	eP	Pg	05 16 00.8	-0.3
	4.0nm,0.1s						
SATY				eS	Sg	05 16 14.9	+0.3
	27nm,0.1s						
KURS	Kuram	1.44	312	P	Pn	05 16 07.7	-0.4
	1.6nm,0.3s						
KURS				S	Sn	05 16 26.5	-1.1
	7.9nm,0.5s						
KURS	Kuram	1.44	312	eP	Pn	05 16 07.7	-0.4
	baz=13						
KURS				eS	Sn	05 16 26.5	-1.1
	baz=13						
KURS	Kuram	1.44	312	eP	Pn	05 16 07.7	-0.4
	1.6nm,0.3s						
KURS				eS	Sn	05 16 26.5	-1.1
	7.9nm,0.5s						
TARG	Taragay, Kyrgy	1.59	240	⇑iP	Pn	05 16 10.1	-0.4
	baz=40						
TARG				⇑iS	Sn	05 16 30.8	-1.0
	baz=40						
MNBS	Baschi	1.79	330	P	Pn	05 16 13.4	+0.5
	4.9nm,0.2s						
MNBS				S	Sb	05 16 36.4	-1.0
	23nm,0.2s						
MNBS	Baschi	1.79	330	eP	Pn	05 16 13.4	+0.5
	baz=31						
MNBS				eS	Sb	05 16 36.4	-1.0
	baz=31						
MNBS	Baschi	1.79	330	eP	Pn	05 16 13.4	+0.5
	4.9nm,0.2s						
MNBS				eS	Sb	05 16 36.4	-1.0
	23nm,0.2s						
DJR	Jarkent	1.79	3	P	Pb	05 16 14.1	-0.4
	2.4nm,0.2s						
DJR				S	Sb	05 16 37.8	+0.3
	3.3nm,0.3s						
DJR	Jarkent	1.79	3	eP	Pb	05 16 14.1	-0.4
	2.4nm,0.2s						
DJR				eS	Sb	05 16 37.8	+0.3
	3.3nm,0.3s						
KDJ	Kajisay	1.87	258	⇑iP	Pb	05 16 14.9	-1.1
	baz=58						
KDJ				⇑iS	Sb	05 16 38.8	-1.1
	baz=58						
MDOK	Medeo	2.01	289	Pg	Pb	05 16 17.6	-0.7
MDOK				Lg	Lg	05 16 43.4	
TNSS	Tian-Shan	2.05	285	Pg	Pb	05 16 18.4	-0.7
	3.2nm,0.4s						
TNSS				Lg	Lg	05 16 45.5	
	6.8nm,0.2s						
TNSS	Tian-Shan	2.05	285	eP	Pb	05 16 18.4	-0.7
	baz=85						
TNSS				eS	Sb	05 16 45.3	+0.2
	baz=85						
TNSS	Tian-Shan	2.05	285	eP	Pb	05 16 18.4	-0.7
	3.2nm,0.4s						
TNSS				eS	Sb	05 16 45.3	+0.2
	5.5nm,0.2s						
CHKK	Chushkaly	2.35	305	Pg	Pb	05 16 23.4	-0.5
	0.8nm,0.0s						
CHKK				Lg	Lg	05 16 53.5	
	13nm,0.2s						
CHKK	Chushkaly	2.35	305	eP	Pb	05 16 23.4	-0.5
	baz=6.0						
CHKK				eS	Sb	05 16 53.5	+0.2
	baz=6.0						
CHKK	Chushkaly	2.35	305	eP	Pb	05 16 23.4	-0.5
	0.8nm,0.0s						
CHKK				eS	Sb	05 16 53.5	+0.2
	13nm,0.2s						
ULHL	Ulahol	2.54	265	⇑iP	Pn	05 16 24.6	+1.3
	baz=65						
ULHL				⇑iS	Sn	05 16 56.0	+1.1
	baz=65						
BOOM	Boomskoye usch	2.74	270	⇓iP	Pn	05 16 27.5	+1.4
	baz=70						
BOOM				⇓iS	Sn	05 17 00.9	+1.1
	baz=70						
KAPS	Kapalarasan	2.75	356	Pg	Pb	05 16 30.3	-0.5
	0.5nm,0.1s						
KAPS				Lg	Lg	05 17 06.0	
	3.9nm,0.6s						
KAPS	Kapalarasan	2.75	356	eP	Pb	05 16 30.3	-0.5
	0.5nm,0.1s						
KAPS				eS	Sb	05 17 06.0	+0.9
	3.9nm,0.6s						
KUU	Kurty	2.77	300	Pg	Pb	05 16 30.7	-0.5
	1.3nm,0.3s						
KUU				Lg	Lg	05 17 06.5	
	5.7nm,0.2s						
KUU	Kurty	2.77	300	eP	Pb	05 16 30.7	-0.5
	baz=1.0						
KUU				⇑iS	Sb	05 17 06.5	+0.9
	baz=1.0						
KUU	Kurty	2.77	300	eP	Pb	05 16 30.7	-0.5
	1.3nm,0.3s						
KUU				⇑iS	Sb	05 17 06.5	+0.9
	5.7nm,0.2s						
TKM2	Tokmak 2	3.01	279	⇓Pg	Pb	05 16 35.6	+0.2
	1.7nm,0.8s						
TKM2				⇑Lg	Lg	05 17 15.5	
	2.6nm,0.6s						
TKM2	Tokmak 2	3.01	279	⇓iP	Pn	05 16 31.2	+1.4
	baz=79						
TKM2				⇓iS	Sn	05 17 06.8	+0.3
	baz=79						
MK31	Makanchi Array	4.65	23	Pn	Pn	05 16 52.7	+0.5
	baz=168,slow=14,SNR=5.9						
MK31				⇑Sn	Sn	05 17 47.0	+0.3
	0.2nm,0.5s						
MK31				⇑Lg	Lg	05 18 06.7	
	0.4nm,0.6s						

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*IDC **09** 05:22:26.7±0.8, 11°.60S×165°.22E, h0^{km}, mb4.0/12,*
mb1 4.3/13, mb1mx4.1/31, mbtmp4.0/13, ML4.0/1, Error
ellipse: s-maj=34.1km s-min=19.0km az=144.0
*NEIC **09** 05:22:28.6±0.2, 11°.59S×165°.19E, h10^{km}, mb4.4/16, Error*
ellipse: s-maj=8.5km s-min=5.7km az=122.0
*ISCJB **09** 05:22:30.7±0.3, 11°.73S±0°.06×165°.13E±0°.07, h34^{km},*
mb4.2/26, Error ellipse: s-maj=11.3km s-min=7.6km
az=33.2
ISC 09 05:22:32.1±0.5**, 11°.71S**±0°.07×**165°.2E**±0°.1**, h34**^{km}**, n48,**
σ**1^s.01**/45**, mb4.2**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.36	174	ePn	Pn	05 24 59.0	+0.6
DZM				Sn	Sn	05 26 51.0	-2.5
DZM	Mont Dzumac	10.36	174	Pn	Pn	05 24 58.6	+0.2
	1.2nm,0.3s,baz=301,slow=9.1,SNR=7.2						

DZM				Sn	Sn	05 26 51.0	-2.5
	0.2nm,0.3s,baz=175,slow=18,SNR=1.7						
PINNC	Pines Island,	11.04	169	*e*Pn	Pn	05 25 08.4	+0.7
EIDS	Eidsvold	19.07	223	*e*P	Pn	05 26 52.6	-0.1
	4.7nm,1.0s						
CTA	Charters Tower	20.05	243	P	P	05 27 02.4	-0.1
	5.0nm,1.0s,baz=60,slow=20,SNR=3.4						
BKZ	Black Stump Fm	29.11	162	*e*P	P	05 28 31.2	+1.4
	10nm,1.1s						
H11S2	WAKE ISLAND Hy	30.05	3	T	T	06 00 09.7	
	baz=184						
H11S3	WAKE ISLAND Hy	30.05	3	T	T	06 00 15.3	
	baz=184						
H11S1	WAKE ISLAND Hy	30.07	3	T	T	06 00 12.5	
	baz=184						
WB2	Warramunga Arr	30.78	251	*e*P	P	05 28 45.0	+0.3
	7.4nm,1.1s						
WRAB	Tennant Creek	30.78	251	*e*P	P	05 28 46.0	+1.3
	5.0nm,1.1s						
WR1	Warramunga Arr	30.79	251	*e*P	P	05 28 44.4	-0.4
	3.0nm,0.9s						
WRA	Warramunga Arr	30.79	251	P	P	05 28 44.4	-0.4
	2.3nm,0.8s,baz=80,slow=9.2,SNR=19						
H11N1	WAKE ISLAND Hy	31.27	3	T	T	06 01 49.2	
	baz=182						
H11N3	WAKE ISLAND Hy	31.28	3	T	T	06 01 48.7	
	baz=182						
H11N2	WAKE ISLAND Hy	31.29	3	T	T	06 01 51.4	
	baz=182						
AS01	Alice Springs	32.01	244	*e*P	P	05 28 54.8	-0.8
AS31	Alice Springs	32.05	244	*e*P	P	05 28 56.5	+0.6
	1.3nm,1.1s						
ASAR	Alice Springs	32.05	244	P	P	05 28 55.2	-0.7
	0.9nm,0.8s,baz=70,slow=9.1,SNR=8.6						
ASAR				PcP	PcP	05 31 45.1	-0.1
	0.4nm,0.9s,baz=59,slow=2.4,SNR=2.7						
MCQ	Macquarie Isla	42.97	185	*e*P	P	05 30 28.9	+1.2
	96nm,1.1s						
CMAR	Chiang Mai Arr	71.92	294	P	P	05 33 53.9	+1.4
	1.2nm,0.3s,baz=118,slow=5.2,SNR=4.4						
QSPA	South Pole Qui	78.29	180	*e*P	P	05 34 30.3	+1.7
	0.8nm,0.9s						
SONA0	Songino Array	78.91	324	*e*P	P	05 34 31.0	-1.2
SONM	Songino Array	78.91	324	P	P	05 34 31.0	-1.2
	1.0nm,1.1s,baz=132,slow=5.8,SNR=3.1						
TRF	Thorofare Moun	82.31	19	*e*P	P	05 34 51.1	+1.0
	2.8nm,1.0s						
MDM	Murphy Dome	84.02	18	*e*P	P	05 34 59.1	+0.4
	2.4nm,0.8s						
HDA	Harding Lake	84.03	19	*e*P	P	05 34 59.0	+0.2
	3.5nm,0.8s						
RIDG	Independ'e Rid	84.27	20	*e*P	P	05 34 59.5	-0.6
IL1	Eielson Array	84.30	19	*e*P	P	05 35 00.3	+0.2
ILAR	Eielson Array	84.30	19	P	P	05 34 59.9	-0.3
	1.0nm,0.5s,baz=238,slow=5.0,SNR=21						
ILB	Eielson Array	84.30	19	*e*P	P	05 35 00.3	+0.1
	1.3nm,0.7s						
SCRK	Sand Creek	84.71	20	*e*P	P	05 35 02.7	+0.3
	3.8nm,1.1s						
EGAK	Eagle	86.17	20	*e*P	P	05 35 10.2	+0.7
	4.5nm,0.8s						
DAWY	Dawson	86.36	21	*e*P	P	05 35 10.8	+0.3
	2.0nm,0.9s						
NVAR	Mina Array Bea	86.83	50	P	P	05 35 13.4	-0.2
	0.4nm,0.3s,baz=240,slow=7.2,SNR=3.0						
KVN	Kaiserville	87.17	49	*e*P	P	05 35 15.5	+0.3
	2.9nm,0.8s						
I07A	Izee	87.72	44	*e*P	P	05 35 18.1	+0.4
U15A	North Rim	90.91	53	*e*P	P	05 35 34.3	+1.3
	2.8nm,0.8s						
MK32	Makanchi Array	93.66	317	*e*P	P	05 35 44.5	-0.7
MKAR	Makanchi Array	93.66	317	P	P	05 35 44.5	-0.7
	0.4nm,0.7s,baz=79,slow=6.5,SNR=5.3						
ZALV	Zalesovo Beam	93.80	324	P	P	05 35 44.9	-0.7
	0.2nm,0.3s,baz=112,slow=6.4,SNR=2.3						
ZAA1	Zalesovo Array	93.80	324	*e*P	P	05 35 44.9	-0.7
PDAR	Pinedale Array	94.37	47	P	P	05 35 48.6	-0.2
	0.3nm,0.7s,baz=262,slow=5.4,SNR=3.0						
YKA	Yellowknife Ar	95.79	27	P	P	05 35 53.1	-1.4
	0.2nm,0.6s,baz=255,slow=4.6,SNR=5.8						
YKB5	Yellowknife Ar	95.79	27	*e*P	P	05 35 53.2	-1.3
LTX	Lajitas	96.59	62	*e*P	P	05 35 59.3	+0.3
TXAR	Lajitas Array	96.59	62	P	P	05 35 59.3	+0.3
	0.3nm,0.8s,baz=221,slow=4.8,SNR=3.0						
MVL	Millersville	119.16	51	*e*PKPdf	PKPdf	05 41 15.7	-2.1

KRNET ***09*** *05:24:40.9±0.1, 42°.57N×78°.92E, h10^{km}, mb2.6*
SOME ***09*** *05:24:42.4, 42°.63N×78°.88E, h15^{km}*
NNC ***09*** *05:24:42.1±1.1, 42°.66N×78°.91E, h2^{km}±4^{km}, mpv2.5, Error ellipse: s-maj=7.4km s-min=3.4km az=168.0*
ISC 09 05:24:40.0±1.5**, 42°.58N**±0°.05×**79°.01E**±0°.05**, h17**^{km}±9^{km}**, n17, σ0^{s}.84**/34**, 2C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.57	1	P	Pb	05 24 52.2	+0.5
	0.7nm,0.1s						
UZB				S	Sg	05 24 59.4	+0.3
	16nm,0.2s						
UZB	Uzynbulak	0.57	1	*e*P	Pb	05 24 52.2	+0.5
	baz=8.0						
UZB				*e*S	Sg	05 24 59.4	+0.3
	baz=8.0						
UZB	Uzynbulak	0.57	1	*e*P	Pb	05 24 52.2	+0.5
	0.7nm,0.1s						
UZB				*e*S	Sg	05 24 59.5	+0.3
	16nm,0.2s						
SATY	Saty	0.66	318	P	Pg	05 24 53.0	0.0
	1.6nm,0.1s						
SATY				S	Sg	05 25 00.6	-1.1
	30nm,0.2s						
SATY	Saty	0.66	318	*e*P	Pg	05 24 53.0	0.0
	1.6nm,0.1s						
SATY				*e*S	Sg	05 25 00.6	-1.1
	30nm,0.2s						
PDGK	Podgornoye	0.83	25	P	Pn	05 24 57.3	+0.2
	0.4nm,0.1s						
PDGK				S	Sb	05 25 08.1	+1.0
	4.1nm,0.3s						
TARG	Taragay, Kyrgy	1.23	227	⇓*i*P	Pn	05 25 02.9	+0.1
	baz=25						
TARG				⇓*i*S	Sb	05 25 18.1	-0.7
	baz=25						
KDJ	Kajisay	1.43	252	⇑*i*P	Pb	05 25 06.9	+0.6
	baz=51						
KDJ				⇑*i*S	Sb	05 25 24.7	+0.5
	baz=51						
MNBS	Baschi	1.57	344	P	Pn	05 25 07.9	+0.7
	2.4nm,0.1s						
MNBS				S	Sn	05 25 26.2	-1.0
	6.2nm,0.1s						
MNBS	Baschi	1.57	344	*e*P	Pn	05 25 07.9	+0.7
	baz=48						
MNBS				*e*S	Sn	05 25 26.2	-1.0
	baz=48						
MNBS	Baschi	1.57	344	*e*P	Pn	05 25 07.9	+0.7
	2.4nm,0.1s						
MNBS				*e*S	Sn	05 25 26.2	-1.0
	6.2nm,0.1s						
TNSS	Tian-Shan	1.59	288	*e*P	Pb	05 25 10.0	+0.9
	baz=88						
TNSS				*e*S	Sb	05 25 29.6	+0.6
	baz=88						
TNSS	Tian-Shan	1.59	288	*e*P	Pb	05 25 10.0	+0.9
	0.8nm,0.2s						
TNSS				*e*S	Sb	05 25 29.6	+0.6
	2.8nm,0.3s						
DJR	Jarkent	1.85	18	*e*P	Pg	05 25 15.7	+0.2
	0.5nm,0.2s						
DJR				*e*S	Sg	05 25 39.4	-0.1
	1.5nm,0.2s						
ULHL	Ulahol	2.08	262	⇓*i*P	Pb	05 25 18.1	+0.8
	baz=62						
ULHL				⇓*i*S	Sb	05 25 43.9	+1.0
	baz=62						
BOOM	Boomskoye usch	2.27	269	⇓*i*P	Pb	05 25 20.5	-0.1
	baz=69						
BOOM				⇓*i*S	Sb	05 25 49.0	+0.5
	baz=69						
KAPS	Kapalarasan	2.72	5	*e*P	Pg	05 25 30.7	-1.4
	0.3nm,0.2s						
KAPS				*e*S	Sg	05 26 05.2	-2.2
	1.3nm,0.2s						

ISCJB ***09*** *05:26:05.6±0.3, 53°.26N±0°.02×6°.54E±0°.04, h0^{km}, Error ellipse: s-maj=3.4km s-min=2.0km az=26.2*
BGS ***09*** *05:26:08.8±0.8, 53°.27N×6°.82E, h5^{km}, ML2.9*
LDG ***09*** *05:26:10.7±0.1, 53°.34N×6°.73E, h3^{km}, Md2.8/2, Ml2.7/29, Error ellipse: s-maj=2.1km s-min=1.6km az=76.0*
BGR ***09*** *05:26:10.2±0.6, 53°.38N×6°.62E, h5^{km}, ML2.9/6, Error ellipse: s-maj=8.9km s-min=4.4km az=112.0*
UPP ***09*** *05:26:12.5±2.8, 53°.54N×7°.08E, h0^{km}, ML1.9, Suspected explosion*
BNS ***09*** *05:26:12.4±1.8, 53°.19N×6°.55E, h1^{km}, ML2.4*
NAO ***09*** *05:26:14.7±8.6, 53°.82N×6°.21E, h9^{km}±45^{km}, ML2.3*
ISC 09 05:26:08.1±0.6**, 53°.29N**±0°.02×**6°.51E**±0°.03**, h0**^{km}**, n90, σ2^{s}.47**/135**, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENM4	Eenrum	0.12	351	*e*Pg	Pg	05 26 14.5	+4.1
	baz=92						
ENM4				*e*Sg	Sg	05 26 17.9	+6.0
WDB4	Woudbloem 4	0.16	121	*e*Pg	Pg	05 26 13.9	+2.9
	baz=3.9						
WDB4				*e*Sg	Sg	05 26 17.8	+4.8
SPY4	Spijk (Roodesc	0.20	53	*e*Sg	Sg	05 26 13.5	-1.2
HWF4	Haulerwijk	0.24	204	*e*Pg	Pg	05 26 18.8	+6.1
	baz=36						
ZLV4	Zuidlaardervee	0.24	144	*e*Pg	Pg	05 26 16.5	+3.7
	baz=0.6						
ZLV4				*e*Sg	Sg	05 26 23.1	+7.2
FSW4	Finsterwolde 4	0.37	101	*e*Sg	Sg	05 26 21.4	+1.4
ENV4	Elp / Enerveen	0.40	169	*e*Pg	Pb	05 26 20.6	+2.5
	baz=8.3						
WIT	Witteveen	0.48	169	*e*Pg	Pb	05 26 22.6	+3.1
HLG	Helgoland	1.21	42	*e*Pg	Pg	05 26 31.0	-0.3
HLG				*e*Sg	Sb	05 26 46.7	-1.4
IBBN	Ibbenburen	1.24	142	*e*Pg	Pb	05 26 34.3	+2.0
IBBN				*e*Sg	Sn	05 26 51.5	+1.5
WTSB	Winterswijk	1.34	172	*e*Pn	Pg	05 26 35.2	+1.5
WTSB				*e*Pg	Pn	05 26 37.1	+3.1
WTSB				*e*Sg	Sn	05 26 55.7	+3.3
WTSB	Winterswijk	1.34	172	*e*Pg	Pg	05 26 35.2	+1.5
	8.4nm,0.3s						
WTSB				*e*Sg	Sg	05 26 53.1	+2.2
RETH	Rethem/Aller,	1.81	107	*e*Pn	Pn	05 26 40.0	-0.4
BUG	Bochum--Univer	1.91	166	*e*Pn	Pn	05 26 43.7	+1.8
LAUG	Laupendahl	1.96	172	*e*Pn	Pn	05 26 42.4	-0.1
HOBG	Hohbusch	2.36	167	*e*Pn	Pn	05 26 50.3	+2.2
HOBG				*e*Sn	Sn	05 27 17.8	0.0
	48nm,0.6s						
HGN	Heimansgroeve	2.55	188	*e*Pg	Pn	05 26 52.3	+1.6
	2.2nm,0.2s						
DREG	Dreilaegerbach	2.63	184	*e*Pn	Pn	05 26 52.9	+1.0
KLL	Kalltalsperre	2.65	183	*e*Pn	Pn	05 26 53.3	+1.2
HILG	Hillesheim	3.00	178	*e*Pn	Pn	05 26 59.0	+2.1
GIVF	Givet	3.36	199	*e*Pn	Pn	05 27 02.4	+0.6
GIVF	Givet	3.36	199	*e*Pg	Pb	05 27 14.2	+5.7
GIVF				*e*Sn	Sn	05 27 42.2	-0.2
GIVF				*e*Sg	Sg	05 27 58.7	+2.7
	7.4nm,0.3s						
MUD	Monsted U'grnd	3.53	25	*i* P	Pn	05 26 56.6	-7.5
MUD				*i* S	Sn	05 27 42.6	-3.8
BAIF	Baives	3.54	205	*e*Pn	Pn	05 27 05.9	+1.7
BAIF	Baives	3.54	205	*e*Pg	Pb	05 27 17.9	+6.4
BAIF				*e*Sn	Sn	05 27 47.0	+0.3
BAIF				*e*Sg	Sg	05 28 04.8	+3.1
	3.0nm,0.3s						
LUNU	Lund	4.68	57	P	Pn	05 27 17.6	-2.2
LUNU				S	Sn	05 28 07.2	-7.6
BJUU	Bjuv	4.70	51	P	Pn	05 27 18.1	-2.0
BJUU				S	Sn	05 28 08.6	-6.7
CWF	Charnwood Fore	4.75	266	*e*P	Pn	05 27 23.6	+2.6
CWF				*e*S	Sn	05 28 16.4	-0.3
CWF				IAML		05 28 19.5	
	comp=E,3.6nm,0.3s						
CWF				IAML		05 28 21.5	
	comp=N,3.3nm,0.4s						
PAGF	Fort de Pagny	4.77	186	*e*Pn	Pn	05 27 22.7	+1.6
	baz=8.7						
PAGF	Fort de Pagny	4.77	186	*e*Pg	Pg	05 27 39.8	+0.4
	baz=6.4						
PAGF				*e*Sn	Sn	05 28 15.5	-1.5
	baz=7.5						
PAGF				*e*Sg	Sg	05 28 42.8	+1.7
	comp=N,2.6nm,0.4s,baz=7.4						
MEZF	Maizieres J'vi	4.88	191	*e*Pn	Pn	05 27 23.7	+1.0
	baz=17						
MEZF	Maizieres J'vi	4.88	191	*e*Pg	Pb	05 27 41.7	+7.3
	baz=9.3						
MEZF				*e*Sn	Sn	05 28 18.5	-1.4
MEZF				*e*Sg	Sg	05 28 46.2	+1.4
	comp=N,2.3nm,0.2s						
HPK	Haverah Park	4.89	281	*e*P	Pn	05 27 25.2	+2.4
HPK				*e*S	Sn	05 28 21.2	+1.1
HPK				IAML		05 28 23.1	
	comp=E,9.4nm,0.3s						
HPK				IAML		05 28 23.9	
	comp=N,8.4nm,0.3s						
CDF	Champ du Feu	4.91	174	*e*Pn	Pn	05 27 23.8	+0.6
CDF	Champ du Feu	4.91	174	*e*Pg	Pb	05 27 41.5	+6.6
CDF				*e*Sn	Sn	05 28 18.0	-2.6
CDF				*e*Sg	Sg	05 28 45.7	+0.1
	comp=N,1.4nm,0.3s						
LBWR	Ladybower, Pea	4.94	275	*e*P	Pn	05 27 25.7	+2.2
LBWR				*e*S	Sn	05 28 21.9	+0.6
LBWR				IAML		05 28 27.1	
	comp=E,7.4nm,0.7s						
LBWR				IAML		05 28 43.7	
	comp=N,24nm,1.1s						
ONAU	Onsala	5.14	35	P	Pn	05 27 24.2	-2.1
FABU	Falkenberg	5.15	41	P	Pn	05 27 24.1	-2.2
FABU				S	Sn	05 28 18.7	-7.7
SFTF	Sexfontaines	5.17	191	*e*Pn	Pn	05 27 28.4	+1.6
	baz=12						
SFTF	Sexfontaines	5.17	191	*e*Pg	Pg	05 27 47.4	+0.2
SFTF				*e*Sn	Sn	05 28 25.4	-1.7
	baz=10						
SFTF				*e*Sg	Sg	05 28 55.4	+1.2
	comp=N,1.3nm,0.2s,baz=11						
EDMD	Edmundbyers	5.23	291	*e*P	Pn	05 27 29.3	+1.8
EDMD				IAML		05 28 31.5	
	comp=N,8.5nm,0.5s						
EDMD				IAML		05 28 35.1	
	comp=E,7.1nm,0.4s						
BSD	Bornholm Skovb	5.26	66	*i* P	Pn	05 27 25.3	-2.6
HAU	Haudompre	5.29	181	*e*Pn	Pn	05 27 29.3	+0.9
HAU	Haudompre	5.29	181	*e*Pg	Pg	05 27 49.4	0.0
HAU				*e*Sn	Sn	05 28 27.8	-2.2
HAU				*e*Sg	Sg	05 28 58.4	+0.5
	comp=E,1.9nm,0.3s						
DEL	Delary	5.31	50	P	Pn	05 27 26.5	-2.0
HINF	Hinteralfeld	5.48	178	*e*Pn	Pn	05 27 32.2	+1.2
HINF				*e*Sg	Sg	05 29 03.7	-0.4
	comp=E,1.9nm,0.3s						
TJOU	Tjoern	5.56	29	P	Pn	05 27 30.0	-2.0
BORU	Boraas	5.62	37	P	Pn	05 27 30.9	-2.0
KESW	Keswick, Cumbr	5.83	287	*e*P	Pn	05 27 38.2	+2.5
EKA	Eskdalemuir Ar	6.02	294	Pn	Pn	05 27 39.4	+1.0
EKA				Sn	Sn	05 28 45.0	-2.9
EKA	Eskdalemuir Ar	6.02	294	Pn	Pn	05 27 39.4	+1.0
EKA				Sn	Sn	05 28 45.0	-2.9
ESK	Eskdalemuir	6.04	294	*e*P	Pn	05 27 40.0	+1.4
ESK				IAML		05 28 50.5	
	comp=N,2.3nm,0.3s						
ESK				IAML		05 28 52.1	
	comp=E,2.5nm,0.4s						
VXJU	Vaexsjoe	6.05	50	P	Pn	05 27 37.2	-1.5
VANU	Vaenersborg	6.08	29	P	Pn	05 27 37.3	-1.8
EDI	Edinburgh	6.22	299	*e*P	Pn	05 27 42.7	+1.6
LOR	Lormes	6.26	197	*e*Pn	Pn	05 27 42.7	+1.0
	baz=17						
LOR	Lormes	6.26	197	*e*Pg	Pg	05 28 08.1	+0.1
LOR				*e*Sn	Sn	05 28 51.7	-2.2
	comp=E,2.2nm,0.3s						
LDF	La Druitiere	6.30	224	*e*Pn	Pn	05 27 43.0	+0.8
LDF	La Druitiere	6.30	224	*e*Pg	Pb	05 28 08.4	+10
LDF				*e*Sn	Sn	05 28 53.4	-1.3
LDF				*e*Sg	Sg	05 29 31.9	+1.7
	comp=E,1.1nm,0.3s						
STRU	Stroemstad	6.32	22	P	Pn	05 27 40.1	-2.3
FLN	La Foliniere	6.32	227	*e*Pn	Pn	05 27 44.2	+1.7
	baz=45						
FLN				*e*Sn	Sn	05 28 53.5	-1.9
FLN				*e*Sg	Sg	05 29 32.7	+1.6
	comp=E,0.6nm,0.2s						
FKPU	Falk	6.36	37	P	Pn	05 27 40.9	-2.1
HYF	Humbligny	6.52	204	*e*Pn	Pn	05 27 46.6	+1.4
HYF				*e*Sn	Sn	05 28 56.4	-3.8
HYF				*e*Sg	Sg	05 29 38.1	+0.8
SSF	Saint Saulge	6.53	198	*e*Pn	Pn	05 27 46.6	+1.3
SSF	Saint Saulge	6.53	198	*e*Pg	Pg	05 28 12.5	-0.6
SSF				*e*Sn	Sn	05 28 58.2	-2.2
SSF				*e*Sg	Sg	05 29 37.9	+0.3
	comp=E,0.5nm,0.2s						
CABF	La Chapelle	6.69	183	*e*Pn	Pn	05 27 48.7	+1.1
CABF				*e*Sn	Sn	05 29 01.1	-3.5
	comp=E,0.4nm,0.2s						
GRR	Gorron	6.77	227	*e*Pn	Pn	05 27 50.0	+1.4
GRR				*e*Sn	Sn	05 29 03.9	-2.5
	comp=E,1.2nm,0.2s						
GAL1	Galloway	6.79	288	*e*P	Pn	05 27 50.8	+1.9
AVF	Avril sur Loir	6.81	199	*e*Pn	Pn	05 27 50.0	+0.7
AVF				*e*Sn	Sn	05 29 05.1	-2.4
	comp=E,0.4nm,0.4s						
SMF	Signal de Mont	6.87	196	*e*Pn	Pn	05 27 51.5	+1.5
SMF				*e*Sn	Sn	05 29 06.2	-2.7
	comp=E,0.7nm,0.3s						
BGF	Bois d'Agland	7.14	201	*e*Pn	Pn	05 27 54.5	+0.8
BGF				*e*Sn	Sn	05 29 13.2	-2.3
	comp=E,2.1nm,0.4s						
TCF	Toulx Ste Croi	7.54	203	*e*Pn	Pn	05 28 00.9	+1.7
TCF				*e*Sn	Sn	05 29 22.6	-2.8
	comp=E,0.3nm,0.3s						
SGMF	Saint Gilles	7.64	232	*e*Pn	Pn	05 28 02.3	+1.7
SGMF	Saint Gilles	7.64	232	*e*Pg	Pg	05 28 33.9	-0.5
SGMF				*e*Sn	Sn	05 29 26.1	-1.7
	comp=E,0.6nm,0.2s						
LPL	La Plagne	7.78	179	*e*Pn	Pn	05 28 03.0	+0.3
LPL				*e*Sn	Sn	05 29 26.5	-5.1
	comp=E,0.8nm,0.3s						
LPG	La Plagne	7.80	179	*e*Pn	Pn	05 28 04.0	+0.9
HFS	Hagfors	7.91	27	Pn	Pn	05 28 01.4	-2.9
	baz=207,slow=14						
HFS	Hagfors	7.91	27	Pn	Pn	05 28 01.4	-2.9
	baz=207,slow=14						
ROSF	Rostrenen	7.93	235	*e*Pn	Pn	05 28 05.6	+1.0
ROSF	Rostrenen	7.93	235	*e*Pg	Pg	05 28 39.3	-0.7
ROSF				*e*Sn	Sn	05 29 32.7	-2.3
ROSF				*e*Sg	Sg	05 30 23.5	+0.8
	comp=E,0.1nm,0.1s						
MFF	Saint Martin d	7.95	215	*e*Pn	Pn	05 28 06.4	+1.6
MFF				*e*Sn	Sn	05 29 32.7	-2.7
	comp=E,0.7nm,0.3s						
NRA0	NORESS Array S	7.95	18	Pn	Pn	05 28 01.4	-3.4
	baz=205,slow=14						
NRA0				Sn	Sn	05 29 26.4	-9.0
	baz=198,slow=28						
NRA0	NORESS Array S	7.95	18	Pn	Pn	05 28 01.4	-3.4
	baz=205,slow=14						
NRA0				Sn	Sn	05 29 26.4	-9.0
	baz=198,slow=28						
QUIF	Quistinic	8.17	233	*e*Pn	Pn	05 28 08.6	+0.8
QUIF				*e*Sn	Sn	05 29 38.2	-2.6
	comp=E,0.4nm,0.3s						
NB2	NORSAR Subarra	8.18	16	Pn	Pn	05 28 04.5	-3.4
	baz=196,slow=14						
NB2	NORSAR Subarra	8.18	16	Pn	Pn	05 28 04.5	-3.4
	baz=196,slow=14						
ORIF	Oris-en-Rattie	8.39	183	*e*Pn	Pn	05 28 12.1	+1.2
RJF	Les Rejaudoux	8.63	204	*e*Pn	Pn	05 28 15.1	+0.9
RJF				*e*Sn	Sn	05 29 48.8	-3.3
	comp=E,0.8nm,0.3s						
CAF	Calviac	8.86	201	*e*Pn	Pn	05 28 18.8	+1.4
CAF				*e*Sn	Sn	05 29 53.9	-4.0
	comp=E,0.4nm,0.2s						
LFF	La Frestale	9.17	207	*e*Pn	Pn	05 28 22.9	+1.4
LFF				*e*Sn	Sn	05 30 01.6	-3.8
	comp=E,0.7nm,0.2s						

ISCJB ***09*** *05:26:19.3±0.6, 11°.00S±0°.06×166°.17E±0°.06, h10^{km}, mb4.0/11, Error ellipse: s-maj=9.6km s-min=7.4km az=149.4*
NEIC ***09*** *05:26:21.3±0.5, 10°.96S×166°.19E, h10^{km}, mb4.4/7, Error ellipse: s-maj=9.3km s-min=8.2km az=102.0*
IDC ***09*** *05:26:26.7±3.9, 10°.99S×166°.10E, h54^{km}±36^{km}, mb3.5/5, mb1 3.9/7, mb1mx3.6/33, mbtmp4.0/7, ML4.2/2, Error ellipse: s-maj=28.3km s-min=22.4km az=46.0*
ISC 09 05:26:21.5±0.7**, 10°.95S**±0°.07×**166°.21E**±0°.09**, h10**^{km}**, n24, σ1^{s}.05**/20**, mb4.2**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.34	283	P	Pn	05 27 56.5	+1.4
	32nm,0.3s,baz=149,slow=4.9,SNR=6.3						
HNR				S	Sn	05 29 07.2	-0.6
	15nm,0.3s,baz=190,slow=19,SNR=1.6						
DZM	Mont Dzumac	11.06	179	*e*Pn	Pn	05 29 04.5	+4.6
DZM				S	Sn	05 31 02.8	-1.1
DZM	Mont Dzumac	11.06	179	P	Pn	05 29 02.7	+2.7
	0.3nm,0.3s,baz=348,slow=20,SNR=3.3						
DZM				S	Sn	05 31 02.8	-1.1
	baz=128,slow=20,SNR=1.7						
PINNC	Pines Island,	11.66	174	*e*Pn	Pn	05 29 07.8	-0.2
TARA	Tarawa	13.93	29	*e*Pn	Pn	05 29 39.6	+0.5
PATS	Pohnpei	19.34	336	*e*P	P	05 30 46.6	-0.6
	41nm,0.8s						
CTA	Charters Tower	21.24	242	P	P	05 31 07.2	-0.7
	1.2nm,0.4s,baz=57,slow=12,SNR=2.8						
H11S2	WAKE ISLAND Hy	29.26	1	T	T	06 02 20.8	
	baz=181,slow=76,SNR=37						
H11S3	WAKE ISLAND Hy	29.26	1	T	T	06 02 21.2	
	baz=181,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	29.27	1	T	T	06 02 22.2	
	baz=181,slow=76,SNR=26						
BKZ	Black Stump Fm	29.56	164	*e*P	P	05 32 27.2	+0.7
	6.0nm,1.0s						
H11N1	WAKE ISLAND Hy	30.48	1	T	T	06 03 52.4	
	baz=182,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	30.48	1	T	T	06 04 19.2	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.50	1	T	T	06 03 54.6	
	baz=182,slow=76,SNR=11						
BFZ	Birch Farm	30.91	165	*e*P	P	05 32 37.9	-0.6
	7.7nm,1.0s						
WB2	Warramunga Arr	31.93	250	*e*P	P	05 32 47.7	0.0
	5.5nm,1.0s						
WRAB	Tennant Creek	31.93	250	*e*P	P	05 32 47.7	+0.1
	5.4nm,1.1s						
WR1	Warramunga Arr	31.94	250	*e*P	P	05 32 46.9	-0.9
	7.4nm,1.1s						
WRA	Warramunga Arr	31.94	250	P	P	05 32 46.9	-0.9
	3.1nm,1.0s,baz=79,slow=9.1,SNR=12						
MQZ	McQueen's Vall	33.11	171	*e*P	P	05 32 58.4	+0.7
ASAR	Alice Springs	33.24	243	P	P	05 32 58.0	-1.2
	0.6nm,0.7s,baz=71,slow=10,SNR=6.4						
FITZ	Fitzroy Crossi	39.84	255	*e*P	P	05 33 54.7	-0.8
	2.4nm,0.8s						
ILAR	Eielson Array	83.28	18	P	P	05 38 48.0	-0.1
	0.3nm,0.8s,baz=230,slow=5.6,SNR=3.8						
NVAR	Mina Array Bea	85.62	50	P	P	05 38 59.9	-0.9
	0.3nm,0.3s,baz=224,slow=6.3,SNR=1.7						

IDC 09 05:30:35.0±3.1**, 11°.56S×165°.01E, h0**^{km}**, mb3.8**/5**, mb1 3.9**/5**, mb1mx3.7**/32**, mbtmp3.7**/5**, Error ellipse: s-maj=148.0km s-min=28.4km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.63	250	P	P	05 36 51.6	+0.2
	0.5nm,0.9s,baz=80,slow=9.1,SNR=5.7						
ASAR	Alice Springs	31.92	244	P	P	05 37 02.3	-0.4
	0.5nm,0.7s,baz=70,slow=9.5,SNR=5.8						
ILAR	Eielson Array	84.23	19	P	P	05 43 08.3	+0.2
	0.3nm,0.6s,baz=235,slow=5.3,SNR=9.6						
ZALV	Zalesovo Beam	93.55	324	P	P	05 43 53.1	+0.3
	0.4nm,0.4s,baz=116,slow=3.4,SNR=2.9						
YKA	Yellowknife Ar	95.76	27	P	P	05 44 02.0	-0.8
	0.2nm,0.8s,baz=269,slow=4.9,SNR=3.4						

ISCJB ***09*** *05:32:04.9±1.2, 10°.92S±0°.02×165°.93E±0°.02, h0^{km}±7^{km}, mb5.4/200, MS5.2/253, Error ellipse: s-maj=4.1km s-min=3.4km az=146.2*
BJI ***09*** *05:32:05.5, 10°.83S×166°.02E, h10^{km}, mB5.5/59, mb5.2/71, Ms5.5/69, Ms7 5.3/63*
IDC ***09*** *05:32:06.3±0.4, 10°.88S×165°.98E, h0^{km}, mb4.9/27, mb1 5.0/29, mb1mx5.0/34, mbtmp4.9/29, ML5.5/2, MS5.0/27,*

Ms1 5.0/27, ms1mx5.0/29, Error ellipse: s-maj=12.5km s-min=10.7km az=121.0

*NEIC **09** 05:32:07.9±0.1, 10°.89S×165°.97E, h9^{km}, mb5.5/126, MS5.2/208, MW5.5, Error ellipse: s-maj=3.5km s-min=2.8km az=91.0, Moment Tensor Solution. s35 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.87; $M_{\theta\theta}$2.28; $M_{\phi\phi}$-1.41; $M_{r\theta}$-0.62; $M_{\theta\phi}$-0.51; $M_{\phi r}$-0.48; Best double couple: $M_0$2.20000×10^{17} NP1:ϕ_s58.00000°,δ75.00000°, λ-149.00000°. NP2:ϕ_s319.00000°,δ60.00000°, λ-17.00000°. Principal axes: T 2.4400, Plg10.0000°, Azm186.0000°; N -0.6100, Plg56.0000°, Azm82.0000°; P -1.8300, Plg32.0000°, Azm282.0000°;*

*MOS **09** 05:32:10.2±0.8, 10°.83S×165°.80E, h33^{km}, mb5.3/58, MS5.2/21 Error ellipse: s-maj=8.6km s-min=7.0km az=115.2*

*GCMT **09** 05:32:11.9±0.1, 10°.91S±0°.01×165°.81E±0°.01, h20^{km}, MW5.6/135, Moment Tensor Solution. s113,c201; s135,c292; Duration: $1^s.6$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.77±.03; $M_{\theta\theta}$3.30±.03; $M_{\phi\phi}$-2.53±.03; $M_{r\theta}$-0.52±.07; $M_{\theta\phi}$-0.96±.03; $M_{\phi r}$-0.89±.07; Best double couple: $M_0$3.28800×10^{17} NP1:ϕ_s57.00000°,δ78.00000°, λ-160.00000°. NP2:ϕ_s322.00000°,δ70.00000°, λ-13.00000°. Principal axes: T 3.4890, Plg5.0000°, Azm188.0000°; N -0.4050, Plg67.0000°, Azm86.0000°; P -3.0880, Plg23.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 09 05:32:12.5±0.3, **10°.95S**±0°.04×**166°.03E**±0°.04, **h39**^{km}±2^{km}, **n693,** σ1^s.**73**/592, **mb5.4**/212, **MS5.2**/256, **26C-20D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.17**	**284**	*i* P	**Pn**	**05 33 41.0**	**-0.1**
HNR				*i* S	**Sn**	**05 34 54.0**	**+3.5**
HNR	**Honiara**	**6.17**	**284**	*e*Pn	**Pn**	**05 33 40.0**	**-1.2**
HNR				*e*Sn	**Sn**	**05 34 48.9**	**-1.6**
HNR	**Honiara**	**6.17**	**284**	*e*P	Pn	05 33 35.9	-5.2
HNR	**Honiara**	**6.17**	**284**	Pn	**Pn**	**05 33 39.9**	**-1.2**
	166nm,0.3s,baz=206,slow=4.3,SNR=92						
HNR				Sn	**Sn**	**05 34 49.7**	**-0.8**
	baz=24,slow=7.5,SNR=0.8						
HNR				LR	LR	05 36 16.8	
	comp=Z,34µm,18.8s,baz=163,slow=41						
MARNC	**Mare, Loyalty**	**10.64**	**170**	*e*Pn	**Pn**	**05 34 41.8**	**-0.6**
DZM	**Mont Dzumac**	**11.06**	**178**	*e*Pn	**Pn**	**05 34 48.3**	**0.0**
	306nm,0.7s						
DZM				*e*Sn	**Sn**	**05 36 52.6**	**+1.8**
	53nm,0.6s						
DZM				*e*LR	LR	05 37 32.1	
	comp=Z,28µm,24.6s						
DZM	**Mont Dzumac**	**11.06**	**178**	*e*Pn	**Pn**	**05 34 48.6**	**+0.3**
DZM				*e*Sn	**Sn**	**05 36 50.4**	**-0.4**
DZM	**Mont Dzumac**	**11.06**	**178**	Pn	**Pn**	**05 34 48.8**	**+0.5**
	20nm,0.3s,baz=350,slow=14,SNR=39						
DZM				Sn	**Sn**	**05 36 51.7**	**+0.9**
	2.8nm,0.3s,baz=312,slow=18,SNR=1.2						
ONTNC	**Ouen Toro**	**11.30**	**178**	*e*Pn	**Pn**	**05 34 51.5**	**+0.1**
PINNC	**Pines Island,**	**11.67**	**174**	*e*Pn	**Pn**	**05 34 57.2**	**+0.7**
FUNA	**Funafuti**	**13.20**	**81**	*e*Pn	**Pn**	**05 35 16.4**	**-1.1**
MSVF	**Nonsavu**	**13.45**	**121**	*e*Pn	**P**	**05 35 27.2**	**-2.4**
MSVF	**Nonsavu**	**13.45**	**121**⇓	*e*P	**Pn**	**05 35 23.0**	**+2.0**
TARA	**Tarawa**	**14.02**	**30**	*e*Pn	**Pn**	**05 35 27.9**	**-0.7**
RABL	**Rabaul**	**15.29**	**295**	*e*Pn	**Pn**	**05 35 47.9**	**+2.2**
	1µm,1.6s						
PATS	**Pohnpei**	**19.27**	**336**	P	**P**	**05 36 36.0**	**+2.0**
	baz=19,SNR=3.5						
PATS	**Pohnpei**	**19.27**	**336**	*e*P	**P**	**05 36 34.0**	**+0.1**
	236nm,0.9s						
EIDS	**Eidsvold**	**20.15**	**223**	P	**P**	**05 36 44.3**	**+0.8**
	baz=20,SNR=25						
EIDS	**Eidsvold**	**20.15**	**223**	*e*P	**P**	**05 36 44.7**	**+1.2**
	286nm,1.4s						
EIDS				LR	LR		
	comp=Z,5µm,19.0s						
MANU	**Manus Island**	**20.53**	**294**	*e*P	**P**	**05 36 48.1**	**+0.4**
MANU				LR	LR		
	comp=Z,11µm,19.0s						
CTA	**Charters Tower**	**21.09**	**242**	P	**P**	**05 36 53.8**	**+0.1**
	comp=Z,56nm,0.8s,baz=69,slow=11,SNR=37						
CTA				S	**S**	**05 40 49.0**	**+2.5**
	comp=Z,7.1nm,1.1s,baz=300,slow=19,SNR=1.7						
CTA				LR	LR	05 43 52.0	
	comp=Z,4µm,18.1s,baz=62,slow=34						
CTAO	**Charters Tower**	**21.09**	**242**	*e*P	**P**	**05 36 53.9**	**+0.2**
	comp=Z,256nm,1.3s						
CTAO				LR	LR		
	comp=Z,3µm,18.0s						
CTAO	**Charters Tower**	**21.09**	**242**	*e*P	**P**	**05 36 53.5**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,260nm,1.3s						
LHI	**Lord Howe Isla**	**21.46**	**196**	*e*P	**P**	**05 36 57.0**	**-0.5**
	comp=Z,102nm,0.8s						
LHI				LR	LR		
	comp=Z,12µm,19.0s						
MTSU	**Mount Surprise**	**22.18**	**249**	P	**P**	**05 37 05.0**	**-0.5**
	baz=22,SNR=44						
RMQ	**Roma**	**22.45**	**224**	P	**P**	**05 37 08.7**	**+0.4**
	baz=23,SNR=33						
COEN	**Coen**	**22.51**	**260**	P	**P**	**05 37 07.2**	**-1.8**
	baz=22,SNR=67						
COEN	**Coen**	**22.51**	**260**	*e*P	**P**	**05 37 07.4**	**-1.7**
	comp=Z,406nm,1.6s						
COEN				LR	LR		
	comp=Z,7µm,20.0s						
ARMA	**Armidale**	**23.54**	**213**	P	**P**	**05 37 20.3**	**+0.9**
	baz=24,SNR=14						
ARMA	**Armidale**	**23.54**	**213**	*e*P	**P**	**05 37 20.1**	**+0.6**
	comp=Z,133nm,1.1s						
ARMA				LR	LR		
	comp=Z,5µm,20.0s						
RAO	**Raoul Island**	**23.59**	**143**	LR	LR	05 44 26.9	
	comp=Z,6µm,20.8s,baz=332,slow=31						
OUZ	**Omahuta**	**25.12**	**165**	*e*P	**P**	**05 37 35.0**	**+1.3**
	comp=Z,62nm,1.0s						
OUZ				LR	LR		
	comp=Z,8µm,19.0s						
MGCD	**Mangrove Creek**	**26.05**	**209**	P	**P**	**05 37 44.2**	**+2.0**
	baz=26,SNR=4.9						
RIV	**Riverview**	**26.53**	**209**	P	**P**	**05 37 47.6**	**+1.0**
	baz=27,SNR=5.7						
GENI	**Genyem**	**26.97**	**286**	P	**P**	**05 37 48.5**	**-2.2**
QIS	**Mount Isa**	**27.12**	**246**	P	**P**	**05 37 51.6**	**-0.5**
	baz=27,SNR=20						
CMSA	**Cobar Meteorol**	**27.81**	**219**	P	**P**	**05 37 58.6**	**+0.5**
	baz=28,SNR=13						
YNG	**Young**	**28.27**	**212**	P	**P**	**05 38 03.0**	**+0.7**
	baz=28,SNR=6.1						
HIZ	**Hauiti**	**28.56**	**165**	*e*P	**P**	**05 38 04.6**	**-0.1**
	comp=Z,60nm,1.0s						
HIZ				LR	LR		
	comp=Z,10µm,18.0s						
CNB	**Canberra Magne**	**28.59**	**209**	P	**P**	**05 38 05.8**	**+0.6**
	baz=29,SNR=6.5						
MXZ	**Matakaoa Point**	**28.70**	**159**	*e*P	**P**	**05 38 07.6**	**+1.6**
	comp=Z,208nm,1.6s						
MXZ				LR	LR		
	comp=Z,11µm,20.0s						
CAN	**Canberra**	**28.78**	**210**	*e*P	**P**	**05 38 06.3**	**-0.4**
	comp=Z,20nm,1.0s						
CAN				LR	LR		
	comp=Z,3µm,22.0s						
CAN	**Canberra**	**28.78**	**210**	*e*P	**P**	**05 38 06.3**	**-0.4**
CAN				pmax	pmax		
	comp=Z,20nm,1.0s						
CAN				MLR	MLR		
	comp=Z,3µm,22.0s						
URZ	**Urewera**	**28.95**	**162**	*e*P	**P**	**05 38 07.8**	**-0.3**
	comp=Z,28nm,0.7s						
URZ	**Urewera**	**28.95**	**162**	P	**P**	**05 38 07.8**	**-0.3**
	comp=Z,13nm,0.5s,baz=44,slow=3.3,SNR=11						
URZ				LR	LR	05 47 48.6	
	comp=Z,7µm,21.2s,baz=342,slow=32						
URZ	**Urewera**	**28.95**	**162**	P	**P**	**05 38 08.0**	**-0.1**
H11S2	**WAKE ISLAND Hy**	**29.27**	**1**	T	T	06 08 31.5	
	baz=181,slow=76,SNR=465						
H11S3	**WAKE ISLAND Hy**	**29.27**	**1**	T	T	06 08 31.9	
	baz=181,slow=76,SNR=345						
MRHZ	**Matea Rd**	**29.27**	**163**	P	**P**	**05 38 12.8**	**+1.7**
H11S1	**WAKE ISLAND Hy**	**29.28**	**1**	T	T	06 08 36.1	
	baz=181,slow=76,SNR=457						
WTVZ	**West Tongariro**	**29.31**	**165**	P	**P**	**05 38 13.2**	**+1.7**
NGZ	**Ngauruhoe**	**29.37**	**165**	P	**P**	**05 38 13.4**	**+1.3**
MTHZ	**Maungataniwha**	**29.41**	**163**	P	**P**	**05 38 12.5**	**+0.2**
PKVZ	**Pokaka**	**29.41**	**165**	P	**P**	**05 38 14.7**	**+2.4**
TRVZ	**Turoa**	**29.47**	**165**	P	**P**	**05 38 14.1**	**+1.0**
SNGZ	**Shannon Statio**	**29.50**	**162**	P	**P**	**05 38 12.3**	**-0.8**
RAHZ	**Arahi**	**29.54**	**162**	P	**P**	**05 38 13.2**	**-0.3**
RIGZ	**Rimuhau**	**29.56**	**161**	P	**P**	**05 38 13.0**	**-0.6**
BKZ	**Black Stump Fm**	**29.60**	**163**	*e*P	**P**	**05 38 13.4**	**-0.6**
	comp=Z,51nm,0.5s						
BKZ				LR	LR		
	comp=Z,7µm,22.0s						
BKZ	**Black Stump Fm**	**29.60**	**163**	P	**P**	**05 38 13.6**	**-0.5**
MOVZ	**Moawhango**	**29.63**	**165**	P	**P**	**05 38 14.5**	**+0.2**
NMHZ	**Naumai**	**29.63**	**163**	P	**P**	**05 38 14.2**	**0.0**
WHHZ	**Waihua**	**29.74**	**162**	P	**P**	**05 38 15.3**	**+0.2**
BHHZ	**Black Hill Sta**	**29.79**	**164**	P	**P**	**05 38 15.3**	**-0.4**
KWHZ	**Kaweka Forest**	**29.82**	**164**	P	**P**	**05 38 15.9**	**-0.1**
ARHZ	**Aropaoanui**	**29.84**	**163**	P	**P**	**05 38 16.1**	**+0.1**
MCHZ	**McNeill Hill**	**29.92**	**163**	P	**P**	**05 38 17.0**	**+0.2**
CKHZ	**Cape Kidnapper**	**30.23**	**163**	P	**P**	**05 38 17.6**	**-1.9**
KAHZ	**Kahuranaki**	**30.30**	**163**	P	**P**	**05 38 19.8**	**-0.3**
H11N1	**WAKE ISLAND Hy**	**30.49**	**2**	T	T	06 10 02.6	
	baz=182,slow=76,SNR=332						
H11N3	**WAKE ISLAND Hy**	**30.49**	**2**	T	T	06 10 03.1	
	baz=182,slow=76,SNR=371						
H11N2	**WAKE ISLAND Hy**	**30.50**	**2**	T	T	06 10 02.9	
	baz=182,slow=76,SNR=314						
PXZ	**Pawanui**	**30.51**	**163**	P	**P**	**05 38 20.5**	**-1.5**
DVHZ	**Dannevirke**	**30.57**	**165**	P	**P**	**05 38 21.7**	**-0.8**
PRHZ	**Porangahau**	**30.67**	**164**	P	**P**	**05 38 22.7**	**-0.7**
STKA	**Stephens Creek**	**30.70**	**224**	P	**P**	**05 38 23.9**	**+0.1**
	baz=31,SNR=15						
STKA	**Stephens Creek**	**30.70**	**224**	*e*P	**P**	**05 38 24.0**	**+0.3**
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**30.70**	**224**	*e*P	**P**	**05 38 23.2**	**-0.5**
STKA				pmax	pmax		
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**30.70**	**224**	P	**P**	**05 38 23.5**	**-0.3**
	comp=Z,12nm,0.7s,baz=39,slow=9.5,SNR=19						
STKA				LR	LR	05 50 16.5	
	comp=Z,5µm,18.5s,baz=46,slow=36						
MRZ	**Mangatainoka R**	**30.77**	**166**	P	**P**	**05 38 23.0**	**-1.2**
BFZ	**Birch Farm**	**30.95**	**165**	*e*P	**P**	**05 38 24.4**	**-1.5**
	comp=Z,63nm,0.8s						
BFZ				LR	LR		
	comp=Z,10µm,20.0s						
SNZO	**South Karori**	**31.19**	**167**	*e*P	**P**	**05 38 27.2**	**-0.7**
	comp=Z,132nm,1.1s						
SNZO				LR	LR		
	comp=Z,9µm,18.0s						
THZ	**Tophouse**	**31.28**	**170**	*e*P	**P**	**05 38 29.2**	**+0.4**
	comp=Z,138nm,1.0s						
THZ				LR	LR		
	comp=Z,4µm,18.0s						
WR0	**Warramunga Arr**	**31.59**	**250**	PFAKE		05 38 40.0	+8.2
WR0				LR	LR		
	comp=Z,3µm,18.0s						
WR9	**Warramunga Arr**	**31.61**	**250**	PFAKE		05 38 40.0	+8.0
WR9				LR	LR		
	comp=Z,3µm,19.0s						
WR8	**Warramunga Arr**	**31.63**	**250**	PFAKE		05 38 40.0	+7.9
WR8				LR	LR		
	comp=Z,3µm,20.0s						
WR7	**Warramunga Arr**	**31.65**	**250**	PFAKE		05 38 40.0	+7.7
WR7				LR	LR		
	comp=Z,3µm,18.0s						
WR6	**Warramunga Arr**	**31.67**	**250**	PFAKE		05 38 40.0	+7.5
WR6				LR	LR		
	comp=Z,3µm,18.0s						
WB0	**Warramunga Arr**	**31.69**	**250**	PFAKE		05 38 40.0	+7.4
WB0				LR	LR		
	comp=Z,5µm,19.0s						
WR5	**Warramunga Arr**	**31.69**	**250**	PFAKE		05 38 40.0	+7.3
WR5				LR	LR		
	comp=Z,4µm,20.0s						
WB9	**Warramunga Arr**	**31.70**	**250**	PFAKE		05 38 40.0	+7.2
WB9				LR	LR		
	comp=Z,10µm,19.0s						
WB8	**Warramunga Arr**	**31.71**	**250**	PFAKE		05 38 40.0	+7.2
WB8				LR	LR		
	comp=Z,4µm,19.0s						
WR4	**Warramunga Arr**	**31.71**	**250**	PFAKE		05 38 40.0	+7.1
WR4				LR	LR		
	comp=Z,4µm,20.0s						
WB6	**Warramunga Arr**	**31.73**	**250**	PFAKE		05 38 40.0	+7.0
WB6				LR	LR		
	comp=Z,4µm,19.0s						
WR3	**Warramunga Arr**	**31.73**	**250**	PFAKE		05 38 40.0	+7.0
WR3				LR	LR		
	comp=Z,4µm,19.0s						
WB5	**Warramunga Arr**	**31.73**	**250**	PFAKE		05 38 40.0	+6.9
WB5				LR	LR		
	comp=Z,4µm,20.0s						
WC2	**Warramunga Arr**	**31.75**	**250**	PFAKE		05 38 40.0	+6.9
WC2				LR	LR		
	comp=Z,5µm,19.0s						
WC3	**Warramunga Arr**	**31.75**	**250**	PFAKE		05 38 40.0	+6.9
WC3				LR	LR		
	comp=Z,4µm,20.0s						
WB4	**Warramunga Arr**	**31.75**	**250**	PFAKE		05 38 40.0	+6.8
WB4				LR	LR		
	comp=Z,4µm,19.0s						
WR2	**Warramunga Arr**	**31.75**	**250**	PFAKE		05 38 40.0	+6.8
WR2				LR	LR		
	comp=Z,4µm,20.0s						
WB3	**Warramunga Arr**	**31.75**	**250**	PFAKE		05 38 40.0	+6.8
WB3				LR	LR		
	comp=Z,4µm,19.0s						
WRAB	**Tennant Creek**	**31.76**	**250**	*e*P	**P**	**05 38 32.2**	**-1.1**
	comp=Z,276nm,1.4s						
WRAB				LR	LR		
	comp=Z,5µm,19.0s						
WRAB	**Tennant Creek**	**31.76**	**250**	*d i*P	**P**	**05 38 31.7**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,220nm,1.3s						
WB2	**Warramunga Arr**	**31.76**	**250**	*e*P	**P**	**05 38 32.3**	**-1.0**
	comp=Z,319nm,1.4s						
WB2				LR	LR		
	comp=Z,5µm,19.0s						
WC1	**Warramunga Arr**	**31.77**	**250**	PFAKE		05 38 40.0	+6.6
WC1				LR	LR		
	comp=Z,4µm,19.0s						
WR1	**Warramunga Arr**	**31.77**	**250**	*e*P	**P**	**05 38 31.8**	**-1.6**
	comp=Z,388nm,1.4s						
WR1				*e*PcP	**PcP**	**05 41 24.5**	**+0.3**
WR1				*e*ScP	**ScP**	**05 45 09.0**	**+4.3**
WR1				LR	LR		
	comp=Z,5µm,19.0s						
WRA	**Warramunga Arr**	**31.77**	**250**	*i* P	**P**	**05 38 29.7**	**-3.7**
WRA				pmax	pmax		
	comp=Z,79nm,0.8s						
WRA	**Warramunga Arr**	**31.77**	**250**	P	**P**	**05 38 31.8**	**-1.6**
	comp=Z,79nm,0.8s,baz=81,slow=9.1,SNR=148						
WRA				PcP	**PcP**	**05 41 24.5**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=78,slow=3.2,SNR=2.9						
WRA				ScP	**ScP**	**05 45 09.0**	**+4.3**
	comp=Z,3.7nm,1.2s,baz=80,slow=3.4,SNR=4.2						
WRA				LR	LR	05 50 02.1	
	comp=Z,3µm,18.9s,baz=60,slow=34						
WC4	**Warramunga Arr**	**31.78**	**250**	PFAKE		05 38 40.0	+6.6
WC4				LR	LR		
	comp=Z,4µm,20.0s						
KHZ	**Kahutara**	**32.02**	**169**	*e*P	**P**	**05 38 34.2**	**-1.0**
	comp=Z,138nm,1.3s						
KHZ				LR	LR		
	comp=Z,5µm,18.0s						
LTZ	**Lake Taylor**	**32.17**	**171**	*e*P	**P**	**05 38 36.7**	**+0.1**
	comp=Z,121nm,0.8s						
LTZ				LR	LR		
	comp=Z,5µm,19.0s						
GUMO	**Guam**	**32.17**	**319**	*e*P	**P**	**05 38 36.6**	**-0.2**
	comp=Z,150nm,0.8s						
GUMO	**Guam**	**32.17**	**319**	*e*P	**P**	**05 38 36.7**	**-0.2**
GUMO				pmax	pmax		
	comp=Z,150nm,0.8s						
GUMO	**Guam**	**32.17**	**319**	P	**P**	**05 38 35.2**	**-1.7**
	comp=Z,94nm,0.7s,baz=195,slow=8.9,SNR=4.8						
GUMO				LR	LR	05 50 44.3	
	comp=Z,3µm,19.4s,baz=134,slow=35						
TOO	**Toolangi**	**32.29**	**211**	P	**P**	**05 38 38.4**	**+0.6**
	baz=32,SNR=6.5						
TOO	**Toolangi**	**32.29**	**211**	*e*P	**P**	**05 38 39.1**	**+1.3**
	comp=Z,42nm,1.1s						
TOO				LR	LR		
	comp=Z,4µm,18.0s						
TOO	**Toolangi**	**32.29**	**211**	*e*P	**P**	**05 38 37.5**	**-0.3**
TOO				pmax	pmax		
	comp=Z,42nm,1.1s						
FOZ	**Fox Glacier**	**32.62**	**175**	*e*P	**P**	**05 38 41.0**	**+0.6**
	comp=Z,126nm,1.1s						
FOZ				LR	LR		
	comp=Z,5µm,19.0s						
OXZ	**Oxford**	**32.67**	**172**	*e*P	**P**	**05 38 41.3**	**+0.4**
	comp=Z,124nm,0.8s						
KDU	**Kakadu**	**32.88**	**264**	P	**P**	**05 38 40.6**	**-2.5**
	baz=33,SNR=12						
RPZ	**Rata Peaks**	**32.93**	**173**	*e*P	**P**	**05 38 43.1**	**-0.1**
	comp=Z,133nm,0.9s						
RPZ	**Rata Peaks**	**32.93**	**173**	P	**P**	**05 38 43.1**	**-0.1**
	comp=Z,108nm,0.8s,baz=231,slow=1.2,SNR=48						
RPZ				LR	LR	05 50 42.2	
	comp=Z,5µm,20.8s,baz=345,slow=34						
CRLZ	**Canterbury Las**	**33.00**	**171**	*e*P	**P**	**05 38 43.2**	**-0.6**
	comp=Z,371nm,1.3s						
CRLZ				LR	LR		
	comp=Z,4µm,19.0s						
AS01	**Alice Springs**	**33.04**	**243**	*e*P	**P**	**05 38 42.7**	**-1.8**
AS31	**Alice Springs**	**33.08**	**243**	*e*P	**P**	**05 38 43.1**	**-1.7**
	comp=Z,16nm,1.1s						
AS31				LR	LR		
	comp=Z,100nm,18.0s						
ASAR	**Alice Springs**	**33.08**	**243**	P	**P**	**05 38 42.8**	**-2.1**
	comp=Z,34nm,0.9s,baz=66,slow=10,SNR=116						
ASAR				PcP	**PcP**	**05 41 29.2**	**+1.4**
	comp=Z,3.6nm,0.8s,baz=76,slow=3.4,SNR=4.6						
ASAR				ScP	**ScP**	**05 45 15.2**	**+6.0**
	comp=Z,1.8nm,1.0s,baz=68,slow=3.2,SNR=4.1						
ASAR				LR	LR	05 51 10.2	
	comp=Z,2µm,20.1s,baz=74,slow=35						
MQZ	**McQueen's Vall**	**33.13**	**171**	*e*P	**P**	**05 38 44.6**	**-0.4**
	comp=Z,366nm,1.5s						
MQZ				LR	LR		
	comp=Z,4µm,18.0s						
HTT	**Hallett**	**33.43**	**224**	P	**P**	**05 38 47.6**	**-0.1**
	baz=34,SNR=8.9						
LBZ	**Lake Benmore**	**33.50**	**175**	*e*P	**P**	**05 38 48.5**	**+0.3**
	comp=Z,43nm,0.8s						
LBZ				LR	LR		
	comp=Z,5µm,21.0s						
WKZ	**Wanaka**	**33.85**	**176**	*e*P	**P**	**05 38 51.4**	**+0.2**
	comp=Z,87nm,1.0s						
WKZ				LR	LR		
	comp=Z,5µm,22.0s						
SARN	**Sarigan**	**34.00**	**324**	*e*P	**P**	**05 38 51.7**	**-1.1**
	comp=Z,209nm,1.4s						
MTN	**Manton Dam**	**34.18**	**263**	PFAKE		05 39 10.0	+16
MTN				LR	LR		
	comp=Z,3µm,20.0s						
ODZ	**Otahua Downs**	**34.20**	**174**	*e*P	**P**	**05 38 54.6**	**+0.4**
	comp=Z,84nm,1.2s						
ODZ				LR	LR		
	comp=Z,4µm,18.0s						
RAR	**Rarotonga**	**34.34**	**112**	*e*P	**P**	**05 38 54.4**	**-1.3**
	comp=Z,28nm,1.1s						
RAR	**Rarotonga**	**34.34**	**112**	*e*P	**P**	**05 38 54.4**	**-1.3**
RAR				pmax	pmax		
	comp=Z,28nm,1.1s						
RAR	**Rarotonga**	**34.34**	**112**	LR	LR	05 51 08.0	
	comp=Z,2µm,18.8s,baz=274,slow=33						
MLZ	**Mavora Lakes**	**34.34**	**177**	*e*P	**P**	**05 38 56.4**	**+0.9**
	comp=Z,38nm,1.1s						
MLZ				LR	LR		
	comp=Z,6µm,19.0s						
SAUI	**Saumlaki**	**34.37**	**272**	PFAKE		05 39 10.0	+14
SAUI				LR	LR		
	comp=Z,5µm,21.0s						
DCZ	**Deep Cove**	**34.40**	**179**	*e*P	**P**	**05 38 55.8**	**-0.1**
	comp=Z,62nm,1.1s						
DCZ				LR	LR		
	comp=Z,3µm,20.0s						
WHZ	**Wether Hill Ro**	**34.86**	**178**	*e*P	**P**	**05 39 00.7**	**+0.8**
	comp=Z,62nm,1.4s						
WHZ				LR	LR		
	comp=Z,5µm,20.0s						
BBOO	**Buckleboo**	**35.09**	**227**	P	**P**	**05 39 01.3**	**-0.8**
	baz=35,SNR=12						
BBOO	**Buckleboo**	**35.09**	**227**	*e*P	**P**	**05 39 01.1**	**-1.0**
	comp=Z,40nm,0.8s						
BBOO				LR	LR		
	comp=Z,4µm,19.0s						
PYZ	**Puysegur Point**	**35.10**	**179**	PFAKE		05 39 10.0	+8.1
PYZ				LR	LR		
	comp=Z,3µm,19.0s						
TAU	**Tasmania Unive**	**35.76**	**204**	*e*P	**P**	**05 39 09.1**	**+1.4**
	comp=Z,79nm,1.3s						
TAU	**Tasmania Unive**	**35.76**	**204**	*e*P	**P**	**05 39 09.1**	**+1.4**
TAU				pmax	pmax		
	comp=Z,79nm,1.3s						
PALU	**Palau**	**36.28**	**299**	P	**P**	**05 39 12.9**	**+0.3**
	baz=36,SNR=4.6						
BNDI	**Bandanaira**	**36.33**	**277**	P	**P**	**05 39 11.4**	**-1.6**
KNRA	**Kununurra**	**36.53**	**258**	P	**P**	**05 39 14.6**	**0.0**
	baz=37,SNR=19						
WRKA	**Warakurna**	**38.37**	**243**	P	**P**	**05 39 28.5**	**-1.8**
	baz=38,SNR=27						
NLAI	**Namlea**	**39.34**	**278**	P	**P**	**05 39 37.8**	**-0.6**
	comp=Z,222nm,1.6s,comp=Z,4µm						
FITZ	**Fitzroy Crossi**	**39.67**	**255**	P	**P**	**05 39 40.0**	**-1.1**
	baz=40,SNR=65						
FITZ	**Fitzroy Crossi**	**39.67**	**255**	*e*P	**P**	**05 39 39.8**	**-1.3**
	comp=Z,83nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.67**	**255**	P	**P**	**05 39 40.0**	**-1.1**
	baz=84,slow=9.7						
FITZ				LR	LR	05 54 54.7	
	comp=Z,3µm,20.5s,baz=82,slow=34						
TNTI	**Ternate**	**40.16**	**284**	PFAKE		05 40 00.0	+15
TNTI				LR	LR		
	comp=Z,1µm,19.0s						
FORT	**Forrest**	**40.32**	**235**	P	**P**	**05 39 46.3**	**-0.1**
	baz=40,SNR=8.3						
FORT	**Forrest**	**40.32**	**235**	*e*P	**P**	**05 39 45.6**	**-0.7**
	comp=Z,89nm,1.1s						
FORT				LR	LR		
	comp=Z,3µm,21.0s						
SANI	**Sanana**	**40.70**	**280**	P	**P**	**05 39 48.4**	**-1.3**
	comp=Z,92nm,1.2s,comp=Z,2µm						
SOEI	**Soe**	**41.07**	**268**	*e*P	**P**	**05 39 52.4**	**-0.6**
	comp=Z,63nm,0.7s						
SOEI				LR	LR		
	comp=Z,3µm,18.0s						
SOEI	**Soe**	**41.07**	**268**	P	**P**	**05 39 51.6**	**-1.3**
	comp=Z,100nm,1.3s,comp=Z,2µm						
BATI	**Baumata**	**41.62**	**267**	P	**P**	**05 39 56.2**	**-1.1**
	comp=Z,64nm,1.4s,comp=Z,1µm						
MMRI	**Maumere**	**43.19**	**269**	*e*P	**P**	**05 40 07.6**	**-2.4**
	comp=Z,695nm,1.6s						
MMRI	**Maumere**	**43.19**	**269**	P	**P**	**05 40 07.0**	**-3.0**
PPT	**Papeete**	**43.45**	**104**	*e*P	**P**	**05 40 13.0**	**+0.9**
PPT	**Papeete**	**43.45**	**104**	P	**P**	**05 40 11.3**	**-0.8**
	comp=Z,50nm,1.0s,baz=252,slow=20,SNR=3.1						
PPT				LR	LR	05 56 24.1	
	comp=Z,2µm,18.1s,baz=266,slow=34						
PPT2	**Papeete2**	**43.45**	**104**	*e*S	**S**	**05 46 43.5**	**+5.2**
	comp=Z,1µm,26.2s						
PPT2				*e*LQ	LQ	05 50 37.5	
	comp=Z,5µm,27.2s						
PPT2				*e*LR	LR	05 52 28.6	
	comp=Z,4µm,23.2s,baz=278						
PPTF	**Pamatai, Papee**	**43.46**	**104**	*e*P	**P**	**05 40 13.0**	**+0.7**
	comp=Z,35nm,0.9s						
DAV	**Davao City (W)**	**44.06**	**292**	LR	LR	05 58 25.2	
	comp=Z,2µm,18.7s,baz=126,slow=36						
LUWI	**Luwuk**	**44.07**	**280**	*e*P	**P**	**05 40 16.7**	**-0.4**
	comp=Z,608nm,1.5s						
LUWI	**Luwuk**	**44.07**	**280**	P	**P**	**05 40 16.9**	**-0.2**
	comp=Z,256nm,1.5s,comp=Z,8µm						
KCP	**Kidapawan**	**44.48**	**292**⇑	*e*P	P	05 40 25.2	+4.8
BASI	**Baing, Sumba**	**44.65**	**267**	P	**P**	**05 40 21.9**	**+0.1**
	comp=Z,286nm,1.6s,comp=Z,5µm						
WSI	**Waingapu**	**44.98**	**267**	P	P	05 40 31.1	+6.7
APSI	**Ampana**	**45.19**	**280**	P	**P**	**05 40 25.4**	**-0.6**
	comp=Z,142nm,1.6s						
MBWA	**Marble Bar**	**45.49**	**251**	*e*P	**P**	**05 40 27.6**	**-0.7**
	comp=Z,152nm,1.1s						
MBWA				LR	LR		
	comp=Z,4µm,18.0s						
BKSI	**Bulukumba**	**45.75**	**273**	P	**P**	**05 40 29.0**	**-1.5**
	comp=Z,43nm,1.7s,comp=Z,936nm						
BNSI	**Bone**	**45.93**	**274**	P	**P**	**05 40 31.3**	**-0.6**
	comp=Z,315nm,1.3s,comp=Z,4µm						
SPSI	**Sidrap Palu**	**46.34**	**275**	P	**P**	**05 40 33.6**	**-1.6**
	comp=Z,54nm,1.6s,comp=Z,826nm						
TTSI	**Tana Toraja**	**46.48**	**276**	P	**P**	**05 40 36.0**	**-0.2**
	comp=Z,36nm,1.7s,comp=Z,1µm						
PCI	**Palu**	**46.95**	**279**	P	**P**	**05 40 40.9**	**+1.0**

	comp=Z,365nm,1.4s,comp=Z,6μm						
MPSI	**Mapaga**	**47.20**	**281**	P	**P**	**05 40 41.1**	**-0.8**
MEEK	**Meekatharra**	**47.23**	**244**	P	**P**	**05 40 41.7**	**-0.4**
	baz=47,SNR=26						
PLAI	**Plampang**	**47.54**	**268**	P	**P**	**05 40 43.1**	**-1.5**
	comp=Z,286nm,1.7s,comp=Z,4μm						
KKO	**Keanakako`i**	**48.62**	**52**	PFAKE		05 41 00.0	+7.1
KKO				LR	LR		
	comp=Z,2μm,19.0s						
JCUZ	**Jacuzzi**	**48.74**	**52**	PFAKE		05 41 10.0	+16
JCUZ				LR	LR		
	comp=Z,3μm,18.0s						
KLBR	**Kellerberrin**	**48.99**	**238**	P	**P**	**05 40 55.7**	**+0.2**
	baz=49,SNR=7.5						
SMKI	**Samarinda**	**49.60**	**279**	P	**P**	**05 41 02.7**	**+2.3**
	comp=Z,58nm,0.4s,comp=Z,5μm						
BLDU	**Ballidu**	**49.64**	**239**	P	**P**	**05 41 01.3**	**+0.8**
	baz=50,SNR=5.5						
NWAO	**Narrogin (SRO)**	**49.74**	**236**	P	**P**	**05 41 01.1**	**-0.2**
	baz=50,SNR=6.7						
NWAO	**Narrogin (SRO)**	**49.74**	**236**	*e*P	**P**	**05 41 01.8**	**+0.6**
	comp=Z,123nm,1.4s						
NWAO	**Narrogin (SRO)**	**49.74**	**236**	*e*P	**P**	**05 41 01.0**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,120nm,1.3s						
NWAO	**Narrogin (SRO)**	**49.74**	**236**	LR	LR	06 02 08.6	
	comp=Z,4μm,19.1s,baz=310,slow=36						
MORW	**Morawa**	**49.91**	**241**	P	**P**	**05 41 01.9**	**-0.6**
	baz=50,SNR=13						
MORW	**Morawa**	**49.91**	**241**	*e*P	**P**	**05 41 02.3**	**-0.3**
	comp=Z,50nm,0.8s						
MORW				LR	LR		
	comp=Z,4μm,18.0s						
KBKI	**Kotabaru**	**50.00**	**275**	P	**P**	**05 41 03.5**	**+0.1**
	comp=Z,20nm,1.2s,comp=Z,875nm						
SRBI	**Singaraja**	**50.15**	**269**	P	**P**	**05 41 03.5**	**-1.1**
	comp=Z,76nm,1.2s,comp=Z,2μm						
MUN	**Mundaring**	**50.36**	**237**	P	**P**	**05 41 05.8**	**-0.2**
	baz=50,SNR=6.7						
GIRL	**Giralia**	**50.70**	**250**	P	**P**	**05 41 09.0**	**+0.4**
	baz=51,SNR=3.6						
GIRL	**Giralia**	**50.70**	**250**	*e*P	**P**	**05 41 10.1**	**+1.5**
	comp=Z,861nm,1.5s						
GIRL				LR	LR		
	comp=Z,4μm,18.0s						
JAGI	**Jajag, Banyuwa**	**51.14**	**268**	*e*P	**P**	**05 41 09.9**	**-2.1**
	comp=Z,261nm,1.1s						
JAGI				LR	LR		
	comp=Z,900nm,20.0s						
JAGI	**Jajag, Banyuwa**	**51.14**	**268**	P	**P**	**05 41 10.3**	**-1.8**
	comp=Z,247nm,1.3s,comp=Z,4μm						
SDKM	**Sandakan**	**51.32**	**286**	P	**P**	**05 41 12.6**	**-0.9**
KMMI	**Kalianget**	**51.52**	**270**	P	**P**	**05 41 15.3**	**+0.4**
	comp=Z,34nm,1.0s						
GMJI	**Gumukmas**	**51.86**	**268**	P	**P**	**05 41 16.1**	**-1.3**
	comp=Z,92nm,1.1s,comp=Z,2μm						
KDM	**Kudat**	**52.08**	**288**	P	**P**	**05 41 18.7**	**-0.3**
KKM	**Kota Kinabalu**	**52.38**	**286**	*e*P	**P**	**05 41 20.4**	**-1.0**
	comp=Z,124nm,1.3s						
KKM	**Kota Kinabalu**	**52.38**	**286**	P	**P**	**05 41 20.9**	**-0.5**
JOW	**Kunigami**	**52.48**	**316**	*e*P	**P**	**05 41 22.9**	**+1.1**
	comp=Z,75nm,1.1s						
TAOE	**Nuku Hiva Isla**	**53.01**	**93**	*e*S	**S**	**05 48 55.0**	**+1.4**
	comp=Z,1μm,26.4s						
TAOE				*e*LQ	LQ	05 54 27.7	
	comp=Z,2μm,25.0s						
TAOE				*e*LR	LR	05 56 48.5	
	comp=Z,2μm,23.9s,baz=263						
INU	**Inuyama**	**53.61**	**330**	*e*P	**P**	**05 41 29.2**	**-0.7**
	comp=Z,136nm,1.6s						
NGJI	**Ngawi**	**53.93**	**269**	P	**P**	**05 41 34.3**	**+1.6**
	comp=Z,128nm,1.5s						
MJAR	**Matsushiro Arr**	**54.02**	**332**	P	**P**	**05 41 31.8**	**-1.1**
	comp=Z,38nm,1.2s,baz=166,slow=7.1,SNR=23						
MAJO	**Matsushiro**	**54.02**	**332**	*e*P	**P**	**05 41 32.2**	**-0.8**
	comp=Z,57nm,1.1s						
MAJO				LR	LR		
	comp=Z,2μm,21.0s						
MAJO	**Matsushiro**	**54.02**	**332**	⇑*i*P	**P**	**05 41 31.8**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,65nm,1.3s						
MAT	**Matsushiro**	**54.02**	**332**	P	**P**	**05 41 31.6**	**-1.3**
MAT				S	**S**	**05 49 08.4**	**+2.0**
MJB9	**Matsu-Tunnel**	**54.02**	**332**	*e*P	**P**	**05 41 32.2**	**-0.8**
	comp=Z,61nm,1.2s						
PCJI	**Pacitan**	**54.10**	**268**	P	**P**	**05 41 33.6**	**-0.3**
	comp=Z,483nm,1.3s,comp=Z,7μm						
WOJI	**Wonogiri, Jawa**	**54.39**	**268**	P	**P**	**05 41 36.7**	**+0.6**
	comp=Z,56nm,1.1s						
BTM	**Bintulu**	**54.52**	**282**	P	**P**	**05 41 36.2**	**-0.8**
UGM	**Wanagama**	**54.78**	**268**	*e*P	**P**	**05 41 37.6**	**-1.3**
	comp=Z,377nm,1.5s						
SMRI	**Semarang**	**54.98**	**269**	*e*P	**P**	**05 41 40.5**	**+0.1**
	comp=Z,179nm,1.0s						
SMRI	**Semarang**	**54.98**	**269**	P	**P**	**05 41 40.7**	**+0.3**
	comp=Z,222nm,1.0s						
SBUM	**Sibu**	**55.16**	**281**	P	**P**	**05 41 41.3**	**-0.3**
JNU	**Nakatsue**	**55.17**	**324**	*e*P	**P**	**05 41 40.8**	**-0.6**
	comp=Z,45nm,0.9s						
JNU	**Nakatsue**	**55.17**	**324**	P	**P**	**05 41 40.2**	**-1.1**
	comp=Z,18nm,0.8s,baz=69,slow=4.2,SNR=8.2						
TWG	**Pinlang**	**55.36**	**308**	PFAKE		05 41 50.0	+7.1
TWG				LR	LR		
	comp=Z,7μm,20.0s						
YULB	**Yu-li**	**55.50**	**308**	*e*P	**P**	**05 41 43.9**	**0.0**
	comp=Z,38nm,1.1s						
YULB				LR	LR		
	comp=Z,2μm,20.0s						
NACB	**Ninganchiao**	**55.70**	**309**	*e*P	**P**	**05 41 44.2**	**-1.1**
	comp=Z,66nm,1.2s						
NACB				LR	LR		
	comp=Z,2μm,21.0s						
TPUB	**Ta-pu**	**55.96**	**308**	*e*P	**P**	**05 41 45.7**	**-1.6**
	comp=Z,184nm,1.6s						
TPUB				LR	LR		
	comp=Z,2μm,20.0s						
SSLB	**Suanglung**	**55.97**	**309**	*e*P	**P**	**05 41 46.9**	**-0.4**
	comp=Z,46nm,1.3s						
SSLB				LR	LR		
	comp=Z,3μm,20.0s						
YHNB	**Yeheng**	**56.14**	**310**	*e*P	**P**	**05 41 47.5**	**-1.0**
	comp=Z,76nm,0.9s						
YHNB				LR	LR		
	comp=Z,3μm,20.0s						
TATO	**Taipei**	**56.22**	**310**	PFAKE		05 42 00.0	+11
TATO				LR	LR		
	comp=Z,3μm,20.0s						
KSM	**Kuching**	**56.76**	**279**	*e*P	**P**	**05 41 51.8**	**-1.4**
	comp=Z,88nm,1.3s						
KSM				LR	LR		
	comp=Z,400nm,20.0s						
KSM	**Kuching**	**56.76**	**279**	P	**P**	**05 41 52.4**	**-0.8**
RKT	**Rikitea**	**57.36**	**110**	*e*S	**S**	**05 49 55.6**	**+4.1**
	comp=Z,1μm,31.2s						
RKT				*e*LQ	LQ	05 56 27.3	
	comp=Z,2μm,32.0s						
RKT				*e*LR	LR	05 58 53.2	
	comp=Z,4μm,26.8s						
CISI	**Cisompet, Garu**	**57.48**	**268**	*e*P	**P**	**05 41 56.3**	**-2.0**
	comp=Z,157nm,0.9s						
CISI				LR	LR		
	comp=Z,900nm,19.0s						
CISI	**Cisompet, Garu**	**57.48**	**268**	P	**P**	**05 41 57.1**	**-1.2**
	comp=Z,167nm,1.1s,comp=Z,4μm						
TPI	**Tanjungpandan**	**58.44**	**273**	P	**P**	**05 42 05.3**	**+0.4**
	comp=Z,101nm,1.3s,comp=Z,96μm						
CBJI	**Citeko**	**58.60**	**269**	P	**P**	**05 42 07.8**	**+1.8**
DBJI	**Dramaga**	**58.68**	**269**	P	**P**	**05 42 06.4**	**-0.2**
ASAJ	**Asahikawa**	**58.80**	**340**	LR	LR	06 03 03.3	
	comp=Z,2μm,21.7s,baz=166,slow=32						
TJN	**Taejon**	**59.51**	**324**	⇓*i*P	**P**	**05 42 09.8**	**-2.1**
KSRS	**Korea Array**	**59.96**	**325**	P	**P**	**05 42 14.3**	**-0.6**
	comp=Z,5.9nm,1.1s,baz=142,slow=6.9,SNR=14						
KSRS				LR	LR	06 06 49.9	
	comp=Z,982nm,18.9s,baz=133,slow=35						
KS15	**Wonju Array Si**	**59.97**	**325**	*e*P	**P**	**05 42 14.2**	**-0.9**
KSAR	**Wonju Array Be**	**59.97**	**325**	P	**P**	**05 42 14.3**	**-0.7**
KSAR	**Wonju Array Be**	**59.97**	**325**	P	**P**	**05 42 14.3**	**-0.7**
SSE	**Sheshan**	**59.98**	**316**	P	**P**	**05 42 14.4**	**-0.8**
SSE				pmax	pmax		
	comp=Z,22nm,1.0s						
SSE				pmax	pmax		
	comp=Z,260nm,9.5s						
SSE				LR	LR		
	comp=Z,740nm,19.0s						
SSE				LR	LR		
	comp=Z,640nm,20.3s						
SSE	**Sheshan**	**59.98**	**316**	*e*P	**P**	**05 42 14.5**	**-0.8**
	comp=Z,101nm,1.0s						
SSE				LR	LR		
	comp=Z,2μm,22.0s						
KS01	**Wonju Array Si**	**59.99**	**325**	*e*P	**P**	**05 42 13.6**	**-1.6**
PPBI	**Pangkal Pinang**	**60.04**	**274**	P	**P**	**05 42 15.6**	**-0.4**
KASI	**Kota Agung**	**61.05**	**270**	P	**P**	**05 42 21.6**	**-1.3**
	comp=Z,66nm,1.5s,comp=Z,1μm						
YSS	**Yuzh-Sakhalins**	**61.29**	**342**	*e*P	**P**	**05 42 23.6**	**-0.2**
	comp=Z,52nm,0.9s						
YSS	**Yuzh-Sakhalins**	**61.29**	**342**	⇓*e*P	**P**	**05 42 23.8**	**0.0**
YSS				*e**SP	pP	05 42 30.1	-5.2
YSS				*e*		05 44 35.8	
YSS				*e*S	**S**	**05 50 40.0**	**-1.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
TEY	**Ternei**	**61.75**	**337**	⇓*e*P	P	05 42 33.2	+6.3
TEY				pmax	pmax		
	comp=Z,40nm,1.1s						
TEY				pmax	pmax		
	comp=Z,100nm,24.7s						
DSRI	**Dabo**	**61.91**	**275**	P	**P**	**05 42 28.7**	**0.0**
MSHR	**Mys Shultsa**	**62.11**	**331**	⇑*e*P	**P**	**05 42 29.3**	**-0.1**
NJ2	**Nanjing**	**62.15**	**315**	*e*P	**P**	**05 42 29.8**	**-0.1**
NJ2				sP	pP	05 42 34.5	-6.6
NJ2				S	**S**	**05 50 55.1**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s						
NJ2				LR	LR		
	comp=Z,2μm,17.4s						
NJ2				LR	LR		
	comp=Z,1μm,16.8s						
NJ2				LR	LR		
	comp=Z,2μm,21.7s						
VLA	**Vladivostok**	**62.19**	**332**	⇑*e*P	**P**	**05 42 30.2**	**+0.2**
VLA				pmax	pmax		
	comp=Z,21nm,1.1s						
MNAI	**Manna**	**62.76**	**271**	*e*P	**P**	**05 42 33.5**	**-1.0**
	comp=Z,151nm,1.1s						
QIZ	**Qiongzhong**	**62.88**	**298**	P	**P**	**05 42 34.6**	**-0.5**
QIZ				S	**S**	**05 51 06.7**	**+4.3**
QIZ				pmax	pmax		
	comp=Z,370nm,9.3s						
QIZ				LR	LR		
	comp=Z,960nm,18.6s						
QIZ				LR	LR		
	comp=Z,1μm,25.5s						
QIZ				LR	LR		
	comp=Z,2μm,20.6s						
QIZ	**Qiongzhong**	**62.88**	**298**	PFAKE		05 42 50.0	+15
QIZ				LR	LR		
	comp=Z,1μm,21.0s						
USA0B	**Ussuriysk Arra**	**62.99**	**333**	*e*P	**P**	**05 42 35.0**	**-0.3**
	comp=Z,170nm,1.5s						
USRK	**Ussuriysk Ar.**	**62.99**	**333**	P	**P**	**05 42 35.0**	**-0.3**
	comp=Z,20nm,1.1s,baz=134,slow=5.5,SNR=20						
MYKOM	**Kota Tinggi**	**63.11**	**278**	*e*P	**P**	**05 42 36.1**	**-0.6**
	comp=Z,97nm,1.3s						
MYKOM	**Kota Tinggi**	**63.11**	**278**	P	**P**	**05 42 36.8**	**+0.1**
PETK	**Petropavlovsk-**	**64.20**	**354**	P	**P**	**05 42 42.6**	**-0.6**
	comp=Z,13nm,1.2s,baz=161,slow=6.1,SNR=3.0						
PETK				LR	LR	06 06 22.6	
	comp=Z,817nm,21.2s,baz=175,slow=32						
PEA1	**Petropavlovsk-**	**64.21**	**354**	*e*P	**P**	**05 42 42.6**	**-0.6**
MDJ	**Mudanjiang**	**64.40**	**332**	P	**P**	**05 42 44.8**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,28nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,600nm,5.0s						
MDJ	**Mudanjiang**	**64.40**	**332**	*e*P	**P**	**05 42 44.3**	**-0.3**
	comp=Z,63nm,1.2s						
WHN	**Wuhan**	**64.54**	**311**	P	**P**	**05 42 44.8**	**-1.0**
WHN				S	**S**	**05 51 21.1**	**-1.5**
WHN				LR	LR		
	comp=Z,2μm,11.2s						
WHN				LR	LR		
	comp=Z,5μm,23.3s						
WHN				LR	LR		
	comp=Z,4μm,18.9s						
DL2	**Dalian**	**64.57**	**323**	P	**P**	**05 42 44.5**	**-1.3**
DL2				S	**S**	**05 51 26.2**	**+3.5**
DL2				pmax	pmax		
	comp=Z,56nm,1.0s						
DL2				pmax	pmax		
	comp=Z,560nm,4.4s						
DL2				LR	LR		
	comp=Z,1μm,17.0s						
DL2				LR	LR		
	comp=Z,1μm,18.0s						
DL2				LR	LR		
	comp=Z,1μm,20.0s						
KTGM	**Kuala Trenggan**	**64.65**	**281**	P	**P**	**05 42 47.0**	**+0.2**
TYV	**Tymovskoe**	**64.83**	**344**	*e*P	P	05 42 39.5	-7.8
TYV				pmax	pmax		
	comp=Z,1μm,5.4s						
BKNI	**Bangkinang**	**65.53**	**275**	*e*P	**P**	**05 42 52.4**	**-0.2**
	comp=Z,283nm,1.1s						
FRIM	**Kepong**	**65.60**	**279**	P	**P**	**05 42 53.2**	**+0.1**
TIA	**Tai'an**	**65.73**	**318**	P	**P**	**05 42 51.8**	**-1.7**
CN2	**Changchun**	**65.81**	**329**	*e*P	**P**	**05 42 52.2**	**-1.5**
CN2				*e*sP	pP	05 42 59.2	-5.8
CN2				*e*S	**S**	**05 51 38.0**	**+0.3**
CN2				SS	**SS**	**05 55 54.4**	**+1.2**
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CN2				pmax	pmax		
	comp=Z,250nm,4.0s						
CN2				LR	LR		
	comp=Z,1μm,17.0s						
CN2				LR	LR		
	comp=Z,1μm,17.0s						
CN2				LR	LR		
	comp=Z,1μm,18.0s						
IPM	**Ipoh**	**66.48**	**280**	*e*P	**P**	**05 42 57.6**	**-1.1**
	comp=Z,94nm,1.1s						
IPM				LR	LR		
	comp=Z,700nm,20.0s						
IPM	**Ipoh**	**66.48**	**280**	P	**P**	**05 42 58.5**	**-0.3**
CASY	**Casey**	**66.56**	**201**	*e*P	**P**	**05 42 58.7**	**+0.5**
	comp=Z,60nm,1.1s						
CASY				LR	LR		
	comp=Z,1μm,18.0s						
VNDA	**Vanda**	**66.59**	**181**	*e*P	**P**	**05 42 58.7**	**+0.5**
VNDA	**Vanda**	**66.59**	**181**	P	**P**	**05 42 58.5**	**+0.3**
	comp=Z,7.1nm,1.1s,baz=8.8,slow=8.9,SNR=3.8						
VNDA				LR	LR	06 08 56.7	
	comp=Z,2μm,19.0s,baz=11,slow=33						
GRNR	**Gornyy**	**66.65**	**340**	*e*P	**P**	**05 42 59.2**	**+0.2**
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
SBA	**Scott Base**	**66.89**	**180**	PFAKE		05 43 10.0	+10
SBA				LR	LR		
	comp=Z,2μm,19.0s						
KULM	**Kulim**	**67.04**	**281**	*e*P	**P**	**05 43 01.1**	**-1.1**
	comp=Z,99nm,1.6s						
KULM				LR	LR		
	comp=Z,600nm,20.0s						
KULM	**Kulim**	**67.04**	**281**	P	**P**	**05 43 01.9**	**-0.3**
KLR	**Kul'dur**	**67.08**	**336**	⇑*e*P	**P**	**05 43 01.8**	**0.0**
SKNT	**Sakolnakorn**	**67.31**	**294**	P	**P**	**05 43 03.8**	**-0.1**
	comp=Z,29nm,1.4s						
NKL	**Nikolayevsk**	**67.43**	**344**	*e*P	**P**	**05 43 03.6**	**-0.3**
NKL				pmax	pmax		
	comp=Z,43nm,1.3s						
ENH	**Enshi**	**68.06**	**309**	*e*P	**P**	**05 43 06.9**	**-1.5**
	comp=Z,58nm,1.1s						
ENH				LR	LR		
	comp=Z,1μm,20.0s						
SRAK	**Srakaew**	**68.12**	**290**	P	**P**	**05 43 07.4**	**-1.6**
	comp=Z,28nm,1.2s,comp=Z,443nm						
PSI	**Prapat**	**68.13**	**277**	*e*P	**P**	**05 43 07.3**	**-2.0**
	comp=Z,44nm,1.1s						
PSI	**Prapat**	**68.13**	**277**	*e*P	**P**	**05 43 07.3**	**-2.0**
PSI				pmax	pmax		
	comp=Z,44nm,1.1s						
NONG	**Nongkai**	**68.43**	**294**	P	**P**	**05 43 10.8**	**-0.1**
	comp=Z,1.1nm,1.2s						
BJT	**Baijiatuau**	**68.58**	**321**	*e*P	**P**	**05 43 10.4**	**-1.0**
	comp=Z,54nm,1.3s						
BJT				LR	LR		
	comp=Z,2μm,22.0s						
BJT	**Baijiatuau**	**68.58**	**321**	*e*P	**P**	**05 43 10.4**	**-1.0**
BJT				pmax	pmax		
	comp=Z,54nm,1.3s						
BJT				MLR	MLR		
	comp=Z,2μm,22.0s						
BJI	**Beijing**	**68.58**	**321**	P	**P**	**05 43 09.6**	**-1.8**
BJI				S	**S**	**05 52 13.3**	**+2.0**
BJI				LR	LR		
	comp=Z,960nm,21.2s						
BJI				LR	LR		
	comp=Z,680nm,28.7s						
BJI				LR	LR		
	comp=Z,1μm,30.6s						
TRTT	**Trang**	**68.59**	**283**	P	**P**	**05 43 12.3**	**+0.3**
	comp=Z,13nm,1.8s,comp=Z,1μm						
GYA	**Guiyang**	**68.60**	**304**	⇑*i*P	**P**	**05 43 11.3**	**-0.7**
GYA				PP	**PP**	**05 45 47.2**	**+3.3**
GYA				S	S	05 52 20.0	+7.8
GYA				SKS	**ScS**	**05 53 08.0**	**-1.4**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,180nm,7.4s						
GYA				LR	LR		
	comp=Z,880nm,18.4s						
GYA				LR	LR		
	comp=Z,820nm,18.1s						
GYA				LR	LR		
	comp=Z,840nm,18.6s						
CHAI	**Chaiyaphum**	**68.76**	**292**	P	**P**	**05 43 12.8**	**-0.2**
	comp=Z,6.4nm,1.0s,comp=Z,132nm						
PATY	**Pattaya**	**68.89**	**288**	P	**P**	**05 43 16.6**	**+2.8**
	comp=Z,15nm,1.2s,comp=Z,2μm						
GSI	**Gunungsitoli**	**69.12**	**276**	*e*P	**P**	**05 43 14.5**	**-0.9**
	comp=Z,83nm,1.0s						
TIY	**Taiyuan**	**69.68**	**317**	*e*P	**P**	**05 43 18.3**	**-0.1**
TIY				S	**S**	**05 52 26.2**	**+1.6**
TIY				pmax	pmax		
	comp=Z,23nm,1.0s						
TIY				LR	LR		
	comp=Z,630nm,13.7s						
TIY				LR	LR		
	comp=Z,340nm,12.2s						
TIY				LR	LR		
	comp=Z,2μm,21.8s						
PBKT	**Sadao Pong**	**69.90**	**292**	*e*P	**P**	**05 43 20.0**	**0.0**
	comp=Z,26nm,1.0s						
PBKT	**Sadao Pong**	**69.90**	**292**	P	**P**	**05 43 20.3**	**+0.3**
	comp=Z,34nm,2.0s,comp=Z,739nm						
PHET	**Kaeng Krachan**	**70.03**	**288**	P	**P**	**05 43 22.0**	**+1.1**
	comp=Z,9.1nm,1.2s						
XAN	**Xi'an**	**70.26**	**312**	P	**P**	**05 43 21.1**	**-0.9**
XAN				pP	pP	05 43 27.3	-6.2
XAN				pmax	pmax		
	comp=Z,29nm,1.3s						
XAN				pmax	pmax		
	comp=Z,400nm,5.5s						
XAN				LR	LR		
	comp=Z,1μm,19.2s						
XAN				LR	LR		
	comp=Z,2μm,20.1s						
XAN				LR	LR		
	comp=Z,2μm,19.2s						
XAN	**Xi'an**	**70.26**	**312**	*e*P	**P**	**05 43 21.2**	**-0.8**
	comp=Z,38nm,0.9s						
XAN				LR	LR		
	comp=Z,2μm,20.0s						
XAN	**Xi'an**	**70.26**	**312**	*e*P	**P**	**05 43 21.2**	**-0.8**
XAN				pmax	pmax		
	comp=Z,38nm,0.9s						
XAN				MLR	MLR		
	comp=Z,2μm,20.0s						
UTTA	**Uttaradit**	**70.65**	**293**	P	**P**	**05 43 25.1**	**+0.5**
	comp=Z,6.0nm,1.1s,comp=Z,81nm						
SRDT	**SRDT**	**70.92**	**289**	P	**P**	**05 43 26.9**	**+0.6**
	comp=Z,36nm,1.6s,comp=Z,844nm						
UTHA	**Uthaitani**	**70.98**	**291**	P	**P**	**05 43 27.2**	**+0.5**
	comp=Z,6.2nm,0.8s,comp=Z,11μm						
KMI	**Kunming**	**71.31**	**301**	P	**P**	**05 43 28.9**	**+0.1**
KMI				pP	pP	05 43 33.5	-6.8
KMI				sP	PcP	05 43 35.8	-13
KMI				S	**S**	**05 52 48.2**	**+3.9**
KMI				sS	pS	05 52 54.5	-4.1
KMI				SS	**SS**	**05 57 22.5**	**+3.1**
KMI				pmax	pmax		
	comp=Z,52nm,1.3s						
KMI				pmax	pmax		
	comp=Z,480nm,4.2s						
KMI				LR	LR		
	comp=Z,830nm,19.0s						
KMI				LR	LR		
	comp=Z,1μm,19.3s						
KMI				LR	LR		
	comp=Z,1μm,19.6s						
KMI	**Kunming**	**71.31**	**301**	*e*P	**P**	**05 43 29.0**	**+0.2**
	comp=Z,80nm,1.3s						
KMI				LR	LR		
	comp=Z,2μm,19.0s						
MA2	**Magadan**	**71.36**	**352**	⇑*i*P	**P**	**05 43 26.7**	**-1.4**
MA2				pmax	pmax		
	comp=Z,19nm,1.7s						
MA2	**Magadan**	**71.36**	**352**	P	**P**	**05 43 27.0**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=168,slow=3.0,SNR=4.0						
MA2				LR	LR	06 09 45.9	
	comp=Z,669nm,20.5s,baz=192,slow=32						
SUKH	**Sukhothai**	**71.40**	**293**	P	**P**	**05 43 30.5**	**+1.3**
	comp=Z,5.4nm,1.0s						
UMPA	**Umpang Tak**	**71.71**	**291**	P	**P**	**05 43 31.6**	**+0.5**
	comp=Z,2.4nm,0.7s,comp=Z,2μm						
HHC	**Hu-ho-hao-te**	**71.94**	**320**	*e*P	**P**	**05 43 32.2**	**+0.1**
HHC				S	**S**	**05 52 53.8**	**+3.0**
HHC				pmax	pmax		
	comp=Z,24nm,1.2s						
HHC				pmax	pmax		
	comp=Z,370nm,5.2s						
HHC				LR	LR		
	comp=Z,1μm,19.0s						
HHC				LR	LR		
	comp=Z,2μm,19.0s						
HHC				LR	LR		
	comp=Z,2μm,20.7s						
CM01	**Chiang Mai Arr**	**72.30**	**293**	*e*P	**P**	**05 43 34.3**	**-0.3**
CM31	**Chiang Mai Arr**	**72.33**	**293**	*e*P	**P**	**05 43 34.8**	**0.0**
CM31	**Chiang Mai Arr**	**72.33**	**293**	P	**P**	**05 43 34.4**	**-0.4**
	SNR=14						
CMAR	**Chiang Mai Arr**	**72.33**	**293**	P	**P**	**05 43 34.6**	**-0.2**
	comp=Z,14nm,0.9s,baz=114,slow=4.3,SNR=60						
ZEA	**Zeya**	**72.37**	**337**	*e*P	**P**	**05 43 34.0**	**-0.2**
ZEA				pmax	pmax		
	comp=N,43nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,830nm,1.4s						
HIA	**Hailar**	**72.43**	**330**	*e*P	**P**	**05 43 34.2**	**-0.6**
	comp=Z,64nm,1.5s						
HIA				LR	LR		
	comp=Z,1μm,18.0s						
HIA	**Hailar**	**72.43**	**330**	*e*P	**P**	**05 43 34.2**	**-0.6**
HIA				pmax	pmax		
	comp=Z,64nm,1.5s						
HIA				MLR	MLR		
	comp=Z,1μm,18.0s						
CMMT	**Chiang Mai**	**72.44**	**294**	P	**P**	**05 43 35.2**	**-0.2**
	comp=Z,35nm,1.6s,comp=Z,666nm						
CHTO	**Chiang Mai**	**72.44**	**294**	*e*P	**P**	**05 43 35.0**	**-0.4**
	comp=Z,51nm,1.3s						
CHTO				LR	LR		
	comp=Z,1μm,22.0s						
CHTO	**Chiang Mai**	**72.44**	**294**	*e*P	**P**	**05 43 35.0**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,51nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,1μm,22.0s						
CHTO	**Chiang Mai**	**72.44**	**294**	P	**P**	**05 43 35.0**	**-0.4**
	SNR=11						
CHTO	**Chiang Mai**	**72.44**	**294**	P	**P**	**05 43 35.2**	**-0.2**
	comp=Z,155nm,1.6s,comp=Z,3μm						
CD2	**Chengdu**	**72.77**	**307**	P	**P**	**05 43 37.0**	**-0.2**
CD2				pP	pP	05 43 40.3	-8.4
CD2				PP	**PP**	**05 46 18.9**	**-0.8**
CD2				S	**SKiKP**	**05 53 03.8**	**-4.5**
CD2				SS	**SS**	**05 57 44.8**	**+3.6**
CD2				pmax	pmax		
	comp=Z,70nm,0.7s						
CD2				pmax	pmax		
	comp=Z,560nm,5.2s						
CD2				LR	LR		
	comp=Z,2μm,18.4s						
CD2				LR	LR		
	comp=Z,2μm,16.9s						
CD2				LR	LR		
	comp=Z,2μm,22.4s						
BTO	**Baotou**	**72.81**	**319**	*e*P	**P**	**05 43 37.3**	**0.0**

SEY	Seymchan	74.42	354⇑	eP	P	05 43 45.7	-0.4
LZH	Lanzhou	74.90	312	eP	P	05 43 49.6	-0.1
LZH				pP	PcP	05 43 53.4	-10
LZH				sP	pP	05 43 56.5	-4.8
LZH				S	S	05 53 25.3	+0.7
LZH				sS	pS	05 53 33.5	-5.7
LZH				SS	SS	05 58 13.5	-0.3
LZH				pmax	pmax		
	comp=Z,81nm,1.4s						
LZH				pmax	pmax		
	comp=Z,230nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,13.6s						
LZH				LR	LR		
	comp=Z,2µm,15.0s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
KDAK	Kodiak Island	76.39	21	LR	LR	06 16 24.4	
	comp=Z,910nm,18.1s,baz=231,slow=35						
GAMB	Gambell	76.43	10	eP	P	05 43 57.0	-0.6
	comp=Z,31nm,1.0s						
GAMB				LR	LR		
	comp=Z,500nm,18.0s						
SVW2	Sparrevohn	77.94	18	eP	P	05 44 06.6	+0.4
	comp=Z,30nm,1.1s						
YAK	Yakutsk	78.09	343	eP	P	05 44 06.3	-0.6
YAK				pmax	pmax		
	comp=Z,126nm,1.1s						
YAK				pmax	pmax		
	comp=N,47nm,1.1s						
YAK				pmax	pmax		
	comp=E,47nm,1.1s						
ANM	Nome	78.34	12	eP	P	05 44 08.1	-0.2
	comp=E,25nm,1.4s						
ANM				LR	LR		
	comp=Z,1µm,20.0s						
ANM	Nome	78.34	12	eP	P	05 44 08.1	-0.2
ANM				pmax	pmax		
	comp=Z,25nm,1.4s						
ANM				MLR	MLR		
	comp=Z,1µm,20.0s						
ULN	Ulaanbaatar	78.39	324	eP	P	05 44 08.8	-0.3
	comp=Z,35nm,1.0s						
ULN	Ulaanbaatar	78.39	324	d iP	P	05 44 08.6	-0.6
ULN				pmax	pmax		
	comp=Z,37nm,1.3s						
ULN	Ulaanbaatar	78.39	324	P	P	05 44 08.9	-0.3
	SNR=16						
SONA0	Songino Array	78.76	324	eP	P	05 44 10.2	-0.9
SONM	Songino Array	78.76	324	P	P	05 44 10.2	-0.9
	comp=Z,12nm,1.1s,baz=135,slow=4.7,SNR=39						
SONM				LR	LR	06 15 40.2	
	comp=Z,874nm,21.8s,baz=108,slow=33						
SONA1	Songino Array	78.76	324	eP	P	05 44 10.4	-0.8
BILL	Bilibino	78.79	0	eP	P	05 44 10.2	-0.5
	comp=Z,67nm,1.3s						
BILL	Bilibino	78.79	0	d iP	P	05 44 10.0	-0.7
BILL				e		05 44 21.9	
BILL				e		05 47 12.5	
BILL				eS	S	05 53 57.4	-8.0
BILL				eSS	SS	05 59 18.1	+7.2
BILL				pmax	pmax		
	comp=Z,18nm,1.1s						
QSPA	South Pole Qui	79.05	180	eP	P	05 44 11.7	-0.8
	comp=Z,31nm,0.9s						
QSPA				LR	LR		
	comp=Z,2µm,19.0s						
GTA	Gaotai	79.19	314	⇓P	P	05 44 13.6	-0.2
GTA				pP	PcP	05 44 18.5	-3.5
GTA				sP	pP	05 44 20.7	-4.7
GTA				S	S	05 54 12.4	+1.3
GTA				sS	SKSac	05 54 20.0	-7.1
GTA				SKS	SKKSac	05 54 24.0	-4.5
GTA				SS	SS	05 59 20.8	+2.4
GTA				pmax	pmax		
	comp=Z,35nm,1.5s						
GTA				pmax	pmax		
	comp=Z,260nm,7.1s						
GTA				LR	LR		
	comp=Z,1µm,19.0s						
GTA				LR	LR		
	comp=Z,2µm,20.9s						
GTA				LR	LR		
	comp=Z,2µm,20.6s						
RC01	Rabbit Creek A	79.81	20	PFAKE		05 44 30.0	+14
RC01				LR	LR		
	comp=Z,1µm,19.0s						
PMR	Palmer	80.38	20	PFAKE		05 44 30.0	+11
PMR				LR	LR		
	comp=Z,1µm,20.0s						
BOD	Bodaibo	80.57	335	eP	P	05 44 18.3	-2.3
BOD				pmax	pmax		
	comp=Z,28nm,1.7s						
GHO	Glory Hole Cre	80.57	20	PFAKE		05 44 30.0	+9.3
GHO				LR	LR		
	comp=Z,1µm,20.0s						
SHL	Shillong	80.72	298	eP	P	05 44 21.1	-1.2
	comp=Z,49nm,1.1s						
SHL	Shillong	80.72	298	eP	P	05 44 21.1	-1.2
SHL				pmax	pmax		
	comp=Z,49nm,1.1s						
SHL	Shillong	80.72	298	eP	P	05 44 22.0	-0.4
CAST	Castle Rocks	80.78	18	eP	P	05 44 21.0	-0.6
	comp=Z,26nm,1.1s						
SCM	Sheep Creek Mo	81.16	20	eP	P	05 44 24.9	+1.1
	comp=Z,57nm,1.4s						
SCM	Sheep Creek Mo	81.16	20	eP	P	05 44 24.9	+1.1
SCM				pmax	pmax		
	comp=Z,57nm,1.4s						
DIV	Divide	81.22	21	eP	P	05 44 24.2	+0.1
	comp=Z,58nm,1.5s						
TRF	Thorofare Moun	81.35	18	eP	P	05 44 25.0	+0.2
	comp=Z,12nm,0.8s						
BPAW	Bear Paw Mtn.	81.61	18	eP	P	05 44 27.5	+1.5
	comp=Z,20nm,1.5s						
RND	Reindeer	81.76	19	eP	P	05 44 27.0	+0.1
	comp=Z,35nm,1.1s						
RND				LR	LR		
	comp=Z,1µm,20.0s						
RND	Reindeer	81.76	19	eP	P	05 44 27.0	+0.1
RND				pmax	pmax		
	comp=Z,35nm,1.1s						
RND				MLR	MLR		
	comp=Z,1µm,20.0s						
ZAK	Zakamensk	81.79	325	eP	P	05 44 26.2	-1.2
ZAK				pmax	pmax		
	comp=Z,16nm,1.1s						
RDOG	Red Dog Mine	81.88	11	eP	P	05 44 27.4	0.0
	comp=Z,28nm,1.0s						
RDOG				LR	LR		
	comp=Z,1µm,22.0s						
DHY	Denali Highway	82.01	20	eP	P	05 44 28.4	0.0
	comp=Z,41nm,1.6s						
DHY				LR	LR		
	comp=Z,1µm,19.0s						
BWN	Browne	82.12	18	PFAKE		05 44 40.0	+11
BWN				LR	LR		
	comp=Z,1µm,18.0s						
IRK	Irkutsk	82.13	327	eP	P	05 44 26.9	-2.2
IRK				pmax	pmax		
	comp=Z,50nm,2.5s						
IM3	Indian Mountai	82.26	15	eP	P	05 44 29.6	+0.1
HARP	HAARP	82.30	21	eP	P	05 44 29.9	+0.2
	comp=Z,29nm,0.9s						
MLY	Manley	82.37	17	eP	P	05 44 29.6	-0.5
	comp=Z,18nm,1.3s						
MLY				LR	LR		
	comp=Z,1µm,18.0s						
LSA	Lhasa	82.54	302	PFAKE		05 44 40.0	+7.7
LSA				LR	LR		
	comp=Z,800nm,19.0s						
WRH	Wood River Hil	82.76	18	eP	P	05 44 31.8	-0.2
	comp=Z,28nm,1.2s						
MDM	Murphy Dome	83.06	18	eP	P	05 44 32.5	-1.1
	comp=Z,28nm,1.1s						
HDA	Harding Lake	83.07	19	eP	P	05 44 32.7	-0.9
	comp=Z,36nm,0.8s						
HDA				LR	LR		
	comp=Z,1µm,18.0s						
HDA	Harding Lake	83.07	19	P	P	05 44 33.2	-0.4
	baz=226						
TCOL	CIGO, UAF Yank	83.11	18	P	P	05 44 33.3	-0.5
	baz=226						
COLA	College	83.11	18	eP	P	05 44 33.5	-0.3
	comp=Z,22nm,0.6s						
COLA				LR	LR		
	comp=Z,900nm,18.0s						
COLA	College	83.11	18⇑	iP	P	05 44 32.6	-1.2
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RIDG	Independ'e Rid	83.30	20	eP	P	05 44 34.4	-0.5
	comp=Z,35nm,1.1s						
ILAR	Eielson Array	83.34	18	eP	P	05 44 34.0	-1.0
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ILAR	Eielson Array	83.34	18	P	P	05 44 34.0	-1.0
	comp=Z,4.7nm,0.8s,baz=230,slow=5.2,SNR=41						
ILAR				LR	LR	06 18 40.5	
	comp=Z,447nm,18.4s,baz=232,slow=34						
ILB	Eielson Array	83.34	18	eP	P	05 44 33.6	-1.4
IL1	Eielson Array	83.34	18	eP	P	05 44 34.1	-0.9
M02C	Callahan	83.41	46	P	P	05 44 37.8	+1.8
	baz=249						
POKR	Poker Plat Res	83.41	18	P	P	05 44 36.9	+1.5
	baz=226						
YBH	Yreka Blue Hor	83.63	45	eP	P	05 44 37.4	+0.3
	comp=Z,37nm,1.4s						
YBH	Yreka Blue Hor	83.63	45	P	P	05 44 37.6	+0.4
	comp=Z,3.8nm,0.9s,baz=247,slow=7.7,SNR=3.8						
MOY	Mondy	83.66	325	eP	P	05 44 35.7	-1.4
MOY				pmax	pmax		
	comp=Z,57nm,3.0s						
SCRK	Sand Creek	83.74	20	eP	P	05 44 37.3	0.0
	comp=Z,46nm,1.3s						
ORV	Oroville	83.75	48	eP	P	05 44 37.1	-0.6
	comp=Z,11nm,1.0s						
ORV	Oroville	83.75	48	eP	P	05 44 37.1	-0.6
ORV				pmax	pmax		
	comp=Z,11nm,1.0s						
HUMO	Hull Mountain	83.77	45	eP	P	05 44 39.2	+1.4
	comp=Z,25nm,1.1s						
CMB	Columbia Colle	84.07	50	eP	P	05 44 39.4	-0.1
	comp=Z,9.3nm,0.9s						
CMB	Columbia Colle	84.07	50	eP	P	05 44 39.4	-0.1
CMB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PRP	Porcupine Dome	84.27	18	PFAKE		05 44 50.0	+10
PRP				LR	LR		
	comp=Z,1µm,21.0s						
J04D	Umpqua Nationa	84.58	44	P	P	05 44 42.6	+0.5
	baz=250						
MAW	Mawson	84.91	202	LR	LR	06 17 56.8	
	comp=Z,850nm,20.0s,baz=106,slow=32						
MDPB	Devils Postpil	84.93	50	PFAKE		05 45 00.0	+16
MDPB				LR	LR		
	comp=Z,1µm,19.0s						
WAKR	Walker	84.93	49	eP	P	05 44 44.6	+0.6
	comp=Z,54nm,1.4s						
ODAN	Odare	84.95	298	eP	P	05 44 43.7	-0.7
	comp=Z,81nm,0.9s						
OMMB	Old Mammoth Mi	84.98	50	eP	P	05 44 44.8	+0.4
	comp=Z,16nm,1.1s						
OMMB				LR	LR		
	comp=Z,1µm,19.0s						
J05D	Fort Rock, OR	85.19	44	P	P	05 44 46.6	+1.5
	baz=250						
KNGR	Kungurtug, Tuv	85.20	323⇑	iP	P	05 44 43.8	-1.1
PAHR	Pah Rah Range	85.34	48	eP	P	05 44 44.4	-1.5
	comp=Z,28nm,1.2s						
DAWY	Dawson	85.37	21	eP	P	05 44 45.8	+0.4
	comp=Z,17nm,1.1s						
RAMN	Ramite	85.66	298	eP	P	05 44 47.0	-0.9
	comp=Z,49nm,1.2s						
NVAR	Mina Array Bea	85.75	50	P	P	05 44 48.2	+0.1
	comp=Z,11nm,0.9s,baz=228,slow=7.3,SNR=5.1						
NVAR				LR	LR	06 18 10.6	
	comp=Z,488nm,18.0s,baz=274,slow=32						
NV11	Mina Array Sit	85.87	50	eP	P	05 44 47.8	-0.8
	comp=Z,5.0nm,1.6s						
GSC	Goldstone, Bar	86.00	53	PFAKE		05 45 00.0	+11
GSC				LR	LR		
	comp=Z,1µm,18.0s						
TIXI	Tiksi	86.05	349	PFAKE		05 45 00.0	+11
TIXI				LR	LR		
	comp=Z,700nm,19.0s						
TIXI	Tiksi	86.05	349⇓	iP	P	05 44 46.7	-1.8
TIXI				pmax	pmax		
	comp=Z,22nm,1.4s						
A04D	Lummi Island	86.14	39	P	P	05 44 51.1	+1.6
	baz=249						
JIRN	Jiri	86.19	299	eP	P	05 44 49.9	-0.8
	comp=Z,188nm,1.2s						
BELC	Belle Mtn. Jos	86.28	55	P	P	05 44 51.9	+1.1
	baz=254						
FURC	Furnace Creek,	86.28	52	P	P	05 44 52.0	+1.5
	baz=254						
B05A	Bryant	86.35	40	P	P	05 44 51.8	+1.3
	baz=249						
GUN	Gumba	86.51	299	eP	P	05 44 51.4	-0.9
	comp=Z,106nm,1.1s						
I07A	Izee	86.64	44	eP	P	05 44 52.5	+0.3
	comp=Z,15nm,1.0s						
GMRC	Granite Mounta	86.76	54	P	P	05 44 54.2	+1.2
	baz=254						
PALK	Pallekele	86.81	278	PFAKE		05 45 00.0	+6.4
PALK				LR	LR		
	comp=Z,400nm,18.0s						
PALK	Pallekele	86.81	278	iP	P	05 44 55.0	+1.4
PKI	Pulchoki	86.84	299	eP	P	05 44 52.6	-1.2
	comp=Z,100nm,1.2s						
PKIN	Phulchoki	86.85	299	eP	P	05 44 52.6	-1.2
	comp=Z,98nm,1.4s						
TPNV	Topopah Spring	86.89	52	eP	P	05 44 52.2	-1.5
	comp=Z,19nm,1.4s						
TPNV				LR	LR		
	comp=Z,1µm,18.0s						
TPNV	Topopah Spring	86.89	52	eP	P	05 44 52.2	-1.5
TPNV				pmax	pmax		
	comp=Z,19nm,1.4s						
TPNV				MLR	MLR		
	comp=Z,1µm,18.0s						
GLA	Glamis	86.97	56	PFAKE		05 45 10.0	+16
GLA				LR	LR		
	comp=Z,1µm,18.0s						
KKN	Kakani	87.00	299	eP	P	05 44 53.4	-1.1
	comp=Z,69nm,1.1s						
IRM	Iron Mountain	87.00	55	P	P	05 44 55.2	+1.0
	baz=255						
DMN	Daman	87.11	299	eP	P	05 44 54.0	-1.1
	comp=Z,110nm,1.1s						
BMN	Battle Mountai	87.14	48	PFAKE		05 45 10.0	+15
BMN				LR	LR		
	comp=Z,500nm,22.0s						
LDFC	Landfair	87.28	54	PFAKE		05 45 10.0	+14
LDFC				LR	LR		
	comp=Z,1µm,19.0s						
Y12C	Blythe	87.40	55	PFAKE		05 45 10.0	+14
Y12C				LR	LR		
	comp=Z,1µm,18.0s						
EPYK	Eagle Plains	87.63	20	P	P	05 44 58.0	+1.6
	baz=236						
SRIG	Santa Rosalia	87.74	62	PFAKE		05 45 10.0	+12
SRIG				LR	LR		
	comp=Z,1µm,18.0s						
R11A	Troy Canyon, C	87.78	50	PFAKE		05 45 10.0	+12
R11A				LR	LR		
	comp=Z,1µm,18.0s						
R11A	Troy Canyon, C	87.78	50	P	P	05 44 58.8	+0.8
	baz=254						
PDMCI	Parker Dam,Lak	87.84	55	P	P	05 44 59.1	+1.0
	baz=255						
W13A	Hualapai Mount	88.25	54	PFAKE		05 45 10.0	+10
W13A				LR	LR		
	comp=Z,1µm,18.0s						
DANN	Dangsing	88.44	299	eP	P	05 44 59.6	-1.9
	comp=Z,81nm,1.2s						
KOLN	Koldanda	88.44	299	eP	P	05 44 59.5	-1.9
	comp=Z,44nm,1.1s						
SLBS	Sierra La Lagu	88.95	66	PFAKE		05 45 10.0	+6.3
SLBS				LR	LR		
	comp=Z,1µm,19.0s						
PYUN	Piuthan	89.04	299	eP	P	05 45 02.1	-2.1
	comp=Z,30nm,0.8s						
WMQ	Urumqi	89.23	315	P	P	05 45 03.6	-0.9
WMQ				pP	PcP	05 45 10.7	+4.8
WMQ				PP	PP	05 48 38.1	+2.6
WMQ				SKS	SKSac	05 55 33.2	+1.5
WMQ				S	S	05 55 47.8	-3.4
WMQ				SS	SS	06 01 49.6	+3.3
WMQ				pmax	pmax		
	comp=Z,71nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,590nm,4.5s						
WMQ				LR	LR		
	comp=Z,2µm,18.1s						
WMQ				LR	LR		
	comp=Z,2µm,20.7s						
WMQ				LR	LR		
	comp=Z,2µm,21.7s						
WMQ	Urumqi	89.23	315	PFAKE		05 45 20.0	+15
WMQ				LR	LR		
	comp=Z,700nm,18.0s						
HSIG		89.24	60	PFAKE		05 45 20.0	+15
HSIG				LR	LR		
	comp=Z,1µm,22.0s						
INK	Inuvik	89.73	19	P	P	05 45 05.8	-0.4
	comp=Z,4.5nm,1.3s,baz=228,slow=1.7,SNR=3.1						
INK				LR	LR	06 19 12.7	
	comp=Z,451nm,20.9s,baz=232,slow=32						
U15A	North Rim	89.83	53	PFAKE		05 45 20.0	+12
U15A				LR	LR		
	comp=Z,800nm,20.0s						
HLID	Hailey	90.02	46	P	P	05 45 09.6	+1.2
	baz=255						
X16A	Lo Mia Camp, P	90.04	55	eP	P	05 45 10.3	+1.5
	comp=Z,11nm,0.9s						
TUC	Tucson	90.10	57	PFAKE		05 45 20.0	+11
TUC				LR	LR		
	comp=Z,1µm,18.0s						
TCRU	Three Creeks R	90.23	51	PFAKE		05 45 20.0	+10
TCRU				LR	LR		
	comp=Z,2µm,18.0s						
DUG	Dugway, Tooele	90.33	49	P	P	05 45 11.4	+1.5
	baz=256						
WUAZ	Wupatki	90.34	54	P	P	05 45 11.7	+1.6
	baz=257						
HYB	Hyderabad	90.85	287	iP	P	05 45 11.5	-1.1
DGZ	Jazzator, Alta	91.00	320	d iP	P	05 45 11.2	-1.6
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DLMT	Dillon	91.72	44	eP	P	05 45 15.2	-1.0
	comp=Z,32nm,1.3s						
SRU	San Rafael Swe	91.80	51	PFAKE		05 45 30.0	+13
SRU				LR	LR		
	comp=Z,1µm,18.0s						
LRM	Limekiln Ridge	91.93	44	eP	P	05 45 18.4	+1.1
FXWY	Fox Creek	92.42	46	eP	P	05 45 20.0	+0.3
	comp=Z,3.7nm,0.8s						
BOZ	Bozeman (W)	92.44	44	eP	P	05 45 19.8	+0.3
	comp=Z,16nm,1.2s						
BOZ	Bozeman (W)	92.44	44	eP	P	05 45 19.8	+0.3
BOZ				pmax	pmax		
	comp=Z,16nm,1.2s						
BOZ	Bozeman (W)	92.44	44	P	P	05 45 20.9	+1.3
	baz=257						
HRY	Holter Researc	92.56	43	eP	P	05 45 21.3	+1.3
PV23	Carpenter Ridg	92.82	52	PFAKE		05 45 30.0	+8.4
PV23				LR	LR		
	comp=Z,2µm,18.0s						
PV17	East Wray Mesa	92.83	52	PFAKE		05 45 30.0	+8.4
PV17				LR	LR		
	comp=Z,2µm,20.0s						
MVCO	Mesa Verde	92.97	53	PFAKE		05 45 30.0	+7.7
MVCO				LR	LR		
	comp=Z,1µm,20.0s						
PDAR	Pinedale Array	93.29	47	P	P	05 45 24.0	+0.4
	comp=Z,0.6nm,0.9s,baz=251,slow=2.8,SNR=3.9						
HPIG		93.39	63	PFAKE		05 45 40.0	+16
HPIG				LR	LR		
	comp=Z,700nm,20.0s						
MK01	Makanchi Array	93.63	317	eP	P	05 45 23.4	-1.5
MK31	Makanchi Array	93.64	317	eP	P	05 45 23.9	-1.0
MK31	Makanchi Array	93.64	317	eP	P	05 45 23.9	-1.0
MK32	Makanchi Array	93.64	317	eP	P	05 45 23.8	-1.2
MKAR	Makanchi Array	93.64	317	eP	P	05 45 23.9	-1.0
	comp=Z,88nm,0.8s						
MKAR				PKKP	PKKPbc	06 02 31.6	-0.1
MKAR	Makanchi Array	93.64	317	P	P	05 45 23.8	-1.2
	comp=Z,17nm,1.1s,baz=97,slow=6.2,SNR=52						
MKAR				PKKP	PKKPbc	06 02 31.6	-0.1
	comp=Z,0.9nm,0.7s,baz=278,slow=3.3,SNR=8.3						
ZAA0	Zalesovo Array	93.64	324	eP	P	05 45 22.8	-1.9
	comp=Z,15nm,1.1s						
ZAA0				LR	LR		
	comp=Z,800nm,21.0s						
ZALV	Zalesovo Beam	93.64	324	eP	P	05 45 22.3	-2.4
ZALV	Zalesovo Beam	93.64	324	eP	P	05 45 22.3	-2.4
ZALV	Zalesovo Beam	93.64	324	P	P	05 45 22.5	-2.2
	comp=Z,10nm,1.1s,baz=105,slow=3.5,SNR=26						
ZALV				LR	LR	06 24 21.1	
	comp=Z,672nm,22.0s,baz=78,slow=34						
ZAA1	Zalesovo Array	93.64	324	eP	P	05 45 22.5	-2.2
MAKZ	Makanchi	93.86	317	eP	P	05 45 24.2	-1.7
	comp=Z,32nm,1.1s						
MAKZ				LR	LR		
	comp=Z,600nm,18.0s						
MAKZ	Makanchi	93.86	317	eP	P	05 45 24.2	-1.7
MAKZ				pmax	pmax		
	comp=Z,32nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,600nm,18.0s						
ANMO	Albuquerque	94.17	55⇑	eP	P	05 45 27.7	-0.1
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.2s						
EGMT	Eagleton	94.22	42	eP	P	05 45 28.9	+1.2
	comp=Z,13nm,0.9s						
EGMT	Eagleton	94.22	42	P	P	05 45 28.8	+1.2
	baz=258						
MNTX	Cornudas Mount	94.48	59	P	P	05 45 30.6	+1.5
	baz=260						
NVS	Novosibirsk	94.75	325⇑	iP	P	05 45 29.2	-0.5
NVS				e		05 56 34.0	
NVS				pmax	pmax		
	comp=Z,29nm,1.9s						
NVS				pmax	pmax		
	comp=N,9.0nm,1.7s						
NVS				pmax	pmax		
	comp=E,24nm,2.0s						
YKA	Yellowknife Ar	94.77	27	P	P	05 45 28.8	-0.8
YKA						05 49 17.1	
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	Yellowknife Ar	94.77	27	P	P	05 45 28.8	-0.8
	comp=Z,0.6nm,0.6s,baz=256,slow=4.7,SNR=13						
YKA				PP	PP	05 49 17.1	-1.4
	comp=Z,0.2nm,0.5s,baz=259,slow=7.8,SNR=5.0						
YKA				PKKPbc	PKKPdf	06 02 28.2	-0.8
	comp=Z,0.1nm,0.5s,baz=86,slow=2.6,SNR=3.6						
YKB5	Yellowknife Ar	94.77	27	eP	P	05 45 28.6	-1.0
ZAIG	Zacatecas	95.44	68	PFAKE		05 45 50.0	+16
ZAIG				LR	LR		
	comp=Z,800nm,20.0s						
LTX	Lajitas	95.54	61	eP	P	05 45 34.3	+0.2
LTX	Lajitas	95.54	61	eP	P	05 45 34.3	+0.2
TXAR	Lajitas Array	95.54	61	P	P	05 45 34.3	+0.2
	comp=Z,0.3nm,0.7s,baz=286,slow=4.6,SNR=4.6						
TXAR				PP	PP	05 49 27.4	+1.8
	comp=Z,1.9nm,1.2s,baz=270,slow=5.0,SNR=3.5						
TXAR				PKKPbc	PKKPdf	06 02 26.9	+0.1
	comp=Z,0.3nm,0.8s,baz=95,slow=3.1,SNR=3.0						
TXAR				LR	LR	06 20 11.1	
	comp=Z,595nm,21.4s,baz=0.0,slow=30						
PRZ	Przheval'sk	95.56	312	PFAKE		05 45 40.0	+6.0
PRZ				LR	LR		
	comp=Z,800nm,20.0s						
TARG	Taragay, Kyrgy	95.88	311	PFAKE		05 45 50.0	+14
TARG				LR	LR		
	comp=Z,800nm,21.0s						
NRIK	Noril'sk	96.13	340	P	P	05 45 34.3	-1.5
	comp=Z,3.0nm,0.7s,baz=136,slow=4.3,SNR=5.8						
NRIK				PP	PP	05 49 30.4	+1.4
	comp=Z,1.3nm,0.3s,baz=113,slow=7.1,SNR=3.0						
KDJ	Kajisay	96.40	312	PFAKE		05 45 50.0	+12
KDJ				LR	LR		
	comp=Z,900nm,20.0s						
KURK	Kurchatov	96.75	320	PFAKE		05 45 50.0	+11
KURK				LR	LR		
	comp=Z,2µm,22.0s						
KURK	Kurchatov	96.75	320	deP	P	05 45 36.6	-2.3
KURK				pmax	pmax		
	comp=Z,13nm,1.3s						
KURK	Kurchatov	96.75	320	P	P	05 45 37.7	-1.2
KSH	Kashi	96.91	309	P	P	05 45 41.2	+1.1
KSH				pP	PcP	05 45 46.4	+6.4
KSH				PP	PP	05 49 41.5	+5.5
KSH				SKS	SKSac	05 56 16.9	+2.4
KSH				S	ScS	05 56 59.9	-0.4
KSH				SS	SS	06 03 39.5	+2.8
KSH				pmax	pmax		

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      comp=Z,270nm,5.1s
KSH                              LR        LR
      comp=Z,600nm,10.1s
KSH                              LR        LR
      comp=Z,470nm,5.7s
KSH                              LR        LR
      comp=Z,830nm,15.5s
NRN   Naryn             97.17 311  PFAKE               05 45 50.0 +8.4
NRN                              LR        LR
      comp=Z,1µm,19.0s
NIL   Nilore            98.27 303  PFAKE               05 46 00.0  +14
NIL                              LR        LR
      comp=Z,700nm,22.0s
FRU1  Bishkek           98.36 312  PFAKE               05 46 00.0  +13
FRU1                             LR        LR
      comp=Z,900nm,21.0s
AAK   Ala-Archa         98.44 312  PFAKE               05 46 00.0  +13
AAK                              LR        LR
      comp=Z,700nm,19.0s
LNIG  Linares           98.58  66  PFAKE               05 46 00.0  +12
LNIG                             LR        LR
      comp=Z,700nm,20.0s
JCT   Junction City     99.03  61  PFAKE               05 46 00.0  +10
JCT                              LR        LR
      comp=Z,1µm,19.0s
833A  Chaparral WMA,    99.10  63  PFAKE               05 46 00.0  +10
833A                             LR        LR
      comp=Z,700nm,18.0s
ARSB  Arslanbob         99.41 310  PFAKE               05 46 00.0 +8.7
ARSB                             LR        LR
      comp=Z,800nm,20.0s
LVIG  Laguna Verde     100.66  72  PFAKE               05 46 10.0  +13
LVIG                             LR        LR
      comp=Z,600nm,18.0s
BTK   Batken           100.92 309  PFAKE               05 46 10.0  +12
BTK                              LR        LR
      comp=Z,1µm,22.0s
435B  Jarrell          100.96  61  PFAKE               05 46 10.0  +12
435B                             LR        LR
      comp=Z,1µm,19.0s
WHTX  Lake Whitney,    101.20  59  PFAKE               05 46 10.0  +11
WHTX                             LR        LR
      comp=Z,1µm,18.0s
GAR   Garm             101.21 308  PFAKE               05 46 10.0  +11
GAR                              LR        LR
      comp=Z,3µm,21.0s
KBL   Kabul            101.84 303  PFAKE               05 46 10.0 +7.6
KBL                              LR        LR
      comp=Z,600nm,22.0s
BRVK  Borovoye         102.11 322  PFAKE               05 46 10.0 +7.1
BRVK                             LR        LR
      comp=Z,1µm,21.0s
BRVK  Borovoye         102.11 322⇑eP       Pdif        05 46 01.3 -1.6
BRVK                             pmax      pmax
      comp=Z,2.0nm,1.1s
MRIV  Mauritius Mete   103.17 246  PFAKE               05 46 20.0  +12
MRIV                             LR        LR
      comp=Z,300nm,19.0s
CCIG  Comitan          104.24  76  PFAKE               05 46 20.0 +6.6
CCIG                             LR        LR
      comp=Z,600nm,20.0s
ARU   Arti             108.71 326  PFAKE               05 50 50.0  +13
ARU                              LR        LR
      comp=Z,1µm,22.0s
ESTN  Estel            109.38  80  PFAKE               05 50 50.0  +10
ESTN                             LR        LR
      comp=Z,400nm,20.0s
JTS   JuntasAbangare   110.39  83  PFAKE               05 50 50.0 +8.4
JTS                              LR        LR
      comp=Z,500nm,18.0s
GYA0B ALIBECK ARRAY    110.75 306  PFAKE               05 50 50.0 +8.3
GYA0B                            LR        LR
      comp=Z,500nm,20.0s
HDC   Heredia          111.17  83  PFAKE               05 50 50.0 +6.8
HDC                              LR        LR
      comp=Z,500nm,22.0s
ESPN  Las Esperanzas   111.28  81  PFAKE               05 50 50.0 +6.8
ESPN                             LR        LR
      comp=Z,300nm,18.0s
ABPO  Ambohimpanom     112.73 244  PFAKE               05 51 00.0  +14
ABPO                             LR        LR
      comp=Z,1µm,18.0s
TRQA  Tornquist        113.75 140  PFAKE               05 51 00.0  +13
TRQA                             LR        LR
      comp=Z,700nm,18.0s
LVZ   Lovozero         114.86 342  PFAKE               05 51 00.0  +11
LVZ                              LR        LR
      comp=Z,800nm,20.0s
ALLY  Alegheny Colle   114.98  49  PFAKE               05 51 00.0  +10
ALLY                             LR        LR
      comp=Z,4µm,18.0s
OTAV  Otavalo          115.08  95  PFAKE               05 51 00.0 +8.9
OTAV                             LR        LR
      comp=Z,700nm,18.0s
APA   Apatity          115.44 342⇓iPKIKP   PKPdf       05 50 53.7 +4.1
APA                              pmax      pmax
      comp=Z,4µm,0.9s
APA                              MLR       MLR
      comp=Z,900nm,19.0s
KEV   Kevo             115.79 345  PFAKE               05 51 00.0  +10
KEV                              LR        LR
      comp=Z,800nm,21.0s
ARA0  ARCESS Array S   116.32 346 ePKPdf   PKPdf       05 50 49.9 -1.4
ARCES ARCESS Array B   116.32 346 ePKPdf   PKPdf       05 50 50.6 -0.7
ARCES ARCESS Array B   116.32 346  PKP     PKPdf       05 50 49.9 -1.4
      comp=Z,2.1nm,0.6s,baz=87,slow=1.3,SNR=20
ARE0  ARCESS Array S   116.32 346 ePKPdf   PKPdf       05 50 50.5 -0.8
O56A  Blue Knob Stat   116.36  50 ePKPdf   PKiKP       05 50 52.6 +0.3
LPAZ  La Paz           119.97 116 ePKPdf   PKPdf       05 51 00.1 -0.6
LPAZ  La Paz           119.97 116 ePKIKP   PKPdf       05 51 00.1 -0.6
LPAZ  La Paz           119.97 116  PKP     PKiKP       05 51 00.5 -0.2
      comp=Z,0.9nm,0.6s,baz=270,slow=1.0,SNR=3.5
GNI   Garni            120.81 310  PFAKE               05 51 10.0 +8.9
GNI                              LR        LR
      comp=Z,400nm,22.0s
ZEI   Tsey             120.81 313 i PKIKP  PKiKP       05 51 05.1 +4.0
ZEI                              pmax      pmax
      comp=Z,3.0nm,0.6s
OBN   Obninsk          120.87 329  PFAKE               05 51 10.0 +9.5
OBN                              LR        LR
      comp=Z,700nm,20.0s
KBZ   Khabaz           121.27 315  PKP     PKiKP       05 51 03.3 +1.6
      comp=Z,0.8nm,0.5s,baz=219,slow=6.5,SNR=2.0
KIV   Kislovodsk       121.36 315 i PKIKP  PKPdf       05 50 59.7 -2.2
KIV                              pmax      pmax
      comp=Z,6.0nm,1.0s
KIV                              MLR       MLR
      comp=Z,456nm,23.0s
FIA1  FINESS Array S   121.79 339 ePKPdf   PKPdf       05 51 01.7 -0.3
FIA0  FINESS Array S   121.79 339 ePKPdf   PKPdf       05 51 01.5 -0.5
FIA0  FINESS Array S   121.79 339 ePKIKP   PKPdf       05 51 01.5 -0.5
FINES FINESS Array B   121.79 339  PKP     PKPdf       05 51 01.5 -0.5
      comp=Z,1.8nm,0.7s,baz=45,slow=3.0,SNR=8.4
DAMY  Dhamar           123.09 280  PFAKE               05 51 20.0  +14
DAMY                             LR        LR
      comp=Z,600nm,18.0s
SIRT  Sirnak           123.13 308  PFAKE               05 51 20.0  +14
SIRT                             LR        LR
      comp=Z,500nm,18.0s
CPUP  Villa Florida    123.88 132  PKP     PKiKP       05 51 07.8 +0.4
      comp=Z,2.4nm,0.9s,baz=162,slow=0.9,SNR=7.2
SDV   Santo Domingo    124.22  87  PFAKE               05 51 20.0  +11
SDV                              LR        LR
      comp=Z,300nm,19.0s
SDDR  Presa de Saban   124.25  74  PFAKE               05 51 20.0  +12
SDDR                             LR        LR
      comp=Z,600nm,18.0s
ATD   Arta Tunnel      124.35 277  PFAKE               05 51 20.0  +11
ATD                              LR        LR
      comp=Z,900nm,19.0s
BOSA  Boshof           125.37 223  PKP     PKiKP       05 51 10.6 +0.1
      comp=Z,3.1nm,0.7s,baz=119,slow=2.9,SNR=6.0
SDD   Santo Domingo    125.55  75  PFAKE               05 51 20.0 +9.2
SDD                              LR        LR
      comp=Z,800nm,22.0s
NC303 NORSAR Array S   126.49 345 ePKPdf   PKiKP       05 51 11.9 +0.3
NB2   NORSAR Subarra   126.69 345  PKPdf   PKPdf       05 51 11.3 -0.2
      comp=Z,7.1nm,0.9s,baz=34,slow=2.0
NB2   NORSAR Subarra   126.69 345  PKPdf   PKPdf       05 51 11.3 -0.2
      baz=34,slow=2.0
NB200 NORSAR Array S   126.69 345 ePKPdf   PKPdf       05 51 10.6 -0.9
NOA   NORSAR Array B   126.69 345  PKP     PKPdf       05 51 10.6 -0.9
      comp=Z,1.0nm,0.8s,baz=32,slow=2.0,SNR=5.1
AKASG Malin Array Be   126.94 327  PKP     PKPdf       05 51 10.9 -1.3
      comp=Z,0.7nm,0.6s,baz=47,slow=1.2,SNR=6.1
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AKBB  Malin Array Si   126.94 327 ePKPdf   PKPdf       05 51 11.3 -0.9
AKBB                             LR        LR
      comp=Z,700nm,21.0s
AKBB  Malin Array Si   126.94 327 ePKIKP   PKPdf       05 51 11.3 -0.9
AKBB                             MLR       MLR
      comp=Z,700nm,21.0s
KIEV  Kiev             126.95 327  PFAKE               05 51 20.0 +7.3
KIEV                             LR        LR
      comp=Z,700nm,22.0s
KIEV  Kiev             126.95 327⇑iP       PKiKP       05 51 14.8 +2.1
KIEV  Kiev             126.95 327 ⇑PKIKP   PKiKP       05 51 14.8 +2.1
AK11  Malin Array Si   126.98 327 ePKPdf   PKPdf       05 51 11.4 -0.9
KMBO  Kilima Mbogo     127.67 260  PKP     PKPdf       05 51 13.9 -1.1
KMBO                             LR        LR
      comp=Z,700nm,19.0s
KMBO  Kilima Mbogo     127.67 260  PKP     PKPdf       05 51 13.9 -1.1
      comp=Z,0.8nm,0.4s,baz=153,slow=3.3,SNR=3.6
SUW   Suwalki          127.90 333  PFAKE               05 51 30.0  +15
SUW                              LR        LR
      comp=Z,800nm,22.0s
FURI  Furi             128.15 273  PFAKE               05 51 30.0  +13
FURI                             LR        LR
      comp=Z,500nm,19.0s
MPR   Mayaguez         128.19  75  PFAKE               05 51 30.0  +14
MPR                              LR        LR
      comp=Z,400nm,22.0s
KONO  Kongsberg        128.30 345c iPKIKP  PKiKP       05 51 18.6 +3.5
KONO                             pmax      pmax
      comp=Z,22nm,2.5s
BR101 Keskin Array S   129.10 313 ePKPdf   PKPdf       05 51 16.0 -0.9
BR101                             ePP      PP          05 53 24.1 -0.9
BRTR  Keskin Array B   129.10 313  PKP     PKPdf       05 51 16.0 -0.9
      comp=Z,1.7nm,1.1s,baz=151,slow=2.8,SNR=5.0
BRTR                             PP        PP          05 53 24.1 -0.9
      comp=Z,2.0nm,1.0s,baz=100,slow=5.5,SNR=5.2
KIS   Kishinev         129.12 323 ePKP     PKPpre      05 51 09.0
KIS                               eL       L           06 32 24.0
KIS                              LRM       MLR         06 48 50.0
      comp=Z,900nm,22.0s
KIS   Kishinev         129.12 323 ePKIKP   PKPpre      05 51 09.0
KIS                              MLR       MLR
      comp=Z,900nm,22.0s
KIS                              MLR       MLR
      comp=N,500nm,18.0s
CBYP  Canovanas        129.41  75  PFAKE               05 51 30.0  +11
CBYP                             LR        LR
      comp=Z,300nm,21.0s
MTP   Monte Pirata     129.70  76  PFAKE               05 51 30.0  +11
MTP                              LR        LR
      comp=Z,200nm,20.0s
TIRR  Tirgusor         130.63 320  PFAKE               05 51 30.0  +10
TIRR                             LR        LR
      comp=Z,800nm,22.0s
LSZ   Lusaka           130.78 239  PFAKE               05 51 30.0 +8.4
LSZ                              LR        LR
      comp=Z,900nm,20.0s
BURAR Bucovina Array   130.84 326⇑iP       PKiKP       05 51 21.4 +0.6
BURAR Bucovina Array   130.84 326 ⇑PKIKP   PKiKP       05 51 21.4 +0.6
KWP   Kalwaria Pacla   130.96 329  PFAKE               05 51 30.0 +9.2
KWP                              LR        LR
      comp=Z,8µm,18.0s
RGN   Rugen            131.44 339  PFAKE               05 51 30.0 +8.4
RGN                              LR        LR
      comp=Z,900nm,21.0s
MLR   Muntele Rosu     131.60 323⇓iP       PKiKP       05 51 29.5 +7.1
MLR   Muntele Rosu     131.60 323 ⇓PKIKP   PKiKP       05 51 29.6 +7.1
DOPR  Dopca            131.67 324⇑iP       PKiKP       05 51 27.4 +5.0
TRPA  Tarpa            131.98 328⇑iP       PKiKP       05 51 25.2 +2.3
ARR   Arges            132.44 323⇓iP       PKiKP       05 51 26.4 +2.3
SPB   Sao Paulo        132.57 137  PFAKE               05 51 40.0  +15
SPB                              LR        LR
      comp=Z,500nm,19.0s
DRGR                   132.71 326⇑iP       PKiKP       05 51 24.4 -0.2
DRGR                   132.71 326 ⇑PKIKP   PKiKP       05 51 24.4 -0.2
OKC   Ostrava-Krasne   133.03 332  AMS     AMS         06 50 30.0
      comp=Z,600nm,18.2s
MORC  Moravsky Berou   133.35 332  PFAKE               05 51 40.0  +14
MORC                             LR        LR
      comp=Z,1µm,20.0s
MORC  Moravsky Berou   133.35 332⇓iP       PKiKP       05 51 28.9 +3.2
MORC  Moravsky Berou   133.35 332 ⇓PKIKP   PKiKP       05 51 28.9 +3.2
DPC   Dobruska-Polom   133.49 334  AMS     AMS         06 49 10.0
      comp=Z,900nm,19.2s
PSZ   Piszkesteto      133.49 329  PFAKE               05 51 40.0  +14
PSZ                              LR        LR
      comp=Z,700nm,20.0s
GZR   Gura Zlata       133.50 324⇓iP       PKiKP       05 51 32.0 +5.8
GZR   Gura Zlata       133.50 324 ⇓PKIKP   PKiKP       05 51 32.0 +5.8
UPC   Upice            133.50 334 epPKP    PKiKP       05 51 31.8 +5.8
UPC                              AMS       AMS         06 49 10.0
      comp=Z,600nm,16.8s
UPC   Upice            133.50 334 ePKIKP   PKiKP       05 51 31.8 +5.8
UPC                              MLR       MLR
      comp=Z,600nm,16.8s
VYHS  Vyhne            133.63 330 ePKIKP   PKiKP       05 51 28.1 +1.8
VYHS                              e                    05 51 32.5
VYHS  Vyhne            133.63 330 ePKP     PKiKP       05 51 28.1 +1.8
VYHS                              e                    05 51 32.5
BZS   Buzias           134.03 325⇑iP       PKiKP       05 51 28.6 +1.5
BZS   Buzias           134.03 325 ⇑PKIKP   PKiKP       05 51 28.6 +1.5
BRG   Berggiesshubel   134.10 336 ePKP     PKiKP       05 51 29.7 +2.6
      comp=Z,18nm,1.6s
      comp=N,656nm,22.3s
      comp=E,414nm,20.4s
      comp=Z,784nm,25.2s
BRG   Berggiesshubel   134.10 336 ePKIKP   PKiKP       05 51 29.7 +2.6
BRG                              pmax      pmax
      comp=Z,18nm,1.6s
BRG                              MLR       MLR
      comp=N,656nm,22.3s
BRG                              MLR       MLR
      comp=E,414nm,20.4s
BRG                              MLR       MLR
      comp=Z,784nm,25.2s
MBAR  Mbarara          134.10 258  PFAKE               05 51 40.0  +12
MBAR                             LR        LR
      comp=Z,800nm,19.0s
PVCC  Panska Ves       134.10 335  AMS     AMS         06 50 30.0
      comp=Z,500nm,15.5s
CLL   Collm            134.13 337  PFAKE               05 51 40.0  +13
CLL                              LR        LR
      comp=Z,1µm,18.0s
CLL   Collm            134.13 337 ePKPdf   PKPdf       05 51 26.0 +0.2
      comp=Z,17nm,1.9s
CLL                               i                    05 51 32.4
      comp=Z,6.0nm,0.9s
CLL                               e                    05 51 38.0
CLL                               ePSKS                06 04 00.0
CLL                               ePPS     PPS         06 05 54.0
CLL                               e                    06 07 12.0
CLL                               eSS      SS          06 11 48.0 +6.1
CLL                               eSSS     SSS         06 16 48.0
CLL                              Lm        MLR         06 54 00.0
      comp=N,500nm,20.2s
CLL                              Lm        MLR         06 54 00.0
      comp=E,300nm,20.5s
CLL                              Lm        MLR         06 54 00.0
      comp=Z,900nm,19.1s
CLL   Collm            134.13 337 ePKIKP   PKPdf       05 51 26.0 +0.2
CLL                               i                    05 51 32.4
CLL                               e                    05 51 38.0
CLL                              pmax      pmax
      comp=Z,17nm,1.9s
CLL                              MLR       MLR
      comp=Z,900nm,19.1s
MODS  Modra-Piesok     134.47 331 ePKP     PKiKP       05 51 34.2 +6.2
MDVR  Moldovita        134.47 324⇑iP       PKiKP       05 51 29.6 +1.4
PRU   Pruhonice        134.52 334 epPKP    PKiKP       05 51 34.0 +6.0
PRU                              AMS       AMS         06 46 00.0
      comp=Z,900nm,27.0s
PRU   Pruhonice        134.52 334 ePKIKP   PKiKP       05 51 34.0 +6.0
PRU                              MLR       MLR
      comp=Z,900nm,27.0s
TREC  Trest            134.63 333  AMS     AMS         06 50 40.0
      comp=Z,1µm,17.8s
CONA  Conrad Observa   135.45 332 eP       PKiKP       05 51 31.8 +1.7
      comp=Z,18nm,2.1s
KHC   Kasperske Hory   135.58 334  PFAKE               05 51 40.0  +10
KHC                              LR        LR
      comp=Z,300nm,21.0s
KHC   Kasperske Hory   135.58 334 ePKPDF   PKiKP       05 51 30.5 +0.2
KHC                               epPKP    PKPdf       05 51 35.3 +6.6
KHC                              AMS       AMS         06 51 10.0
      comp=Z,800nm,20.4s
KHC   Kasperske Hory   135.58 334 ePKIKP   PKiKP       05 51 30.5 +0.2
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KHC                               e                    05 51 35.3
KHC                              MLR       MLR
      comp=Z,800nm,20.4s
GEC2  GERESS Array S   135.75 334  PFAKE               05 51 40.0 +9.3
GEC2                             LR        LR
      comp=Z,700nm,20.0s
GERES GERESS Array B   135.75 334  PKhKP   PKPpre      05 51 23.9
      comp=Z,0.2nm,0.5s,baz=48,slow=2.0,SNR=4.2
GERES                            PKP       PKPdf       05 51 29.3 +0.2
      comp=Z,0.5nm,0.6s,baz=64,slow=2.3,SNR=5.8
GRA1  Grafenberg Arr   136.11 336  PFAKE               05 51 40.0 +8.7
GRA1                             LR        LR
      comp=Z,800nm,18.0s
GRFO  Grafenberg       136.11 336  PFAKE               05 51 40.0 +8.7
GRFO                             LR        LR
      comp=Z,800nm,19.0s
MOA   Molln            136.24 333 i pPKPdf PKiKP       05 51 32.0 +0.3
      comp=Z,2.8nm,0.8s
TSUM  Tsumeb           136.81 226  PFAKE               05 51 40.0 +6.2
TSUM                             LR        LR
      comp=Z,800nm,20.0s
BLY   Banja Luka       136.99 327  PFAKE               05 51 40.0 +6.8
BLY                              LR        LR
      comp=Z,800nm,19.0s
BDFB  Brasilia         137.17 128  PFAKE               05 51 40.0 +5.5
BDFB                             LR        LR
      comp=Z,500nm,18.0s
BDFB  Brasilia         137.17 128  PKP     PKPdf       05 51 32.7  0.0
      comp=Z,2.1nm,0.8s,baz=126,slow=7.3,SNR=3.3
MEM   Membach          137.19 341 ⇓PKiKP   PKiKP       05 51 38.4 +5.0
KBA   Koelnbreinsper   137.23 332 i P      PKiKP       05 51 36.7 +2.9
      comp=Z,10nm,1.1s
TTG   Podgorica        137.31 323  PFAKE               05 51 40.0 +6.1
TTG                              LR        LR
      comp=Z,700nm,21.0s
UCC   Uccle            137.52 343  PFAKE               05 51 40.0 +6.0
UCC                              LR        LR
      comp=Z,900nm,21.0s
STU   Stuttgart        137.63 337  PFAKE               05 51 40.0 +5.6
STU                              LR        LR
      comp=Z,600nm,20.0s
ABTA  Abfaltersbach    137.86 333 eP       PKiKP       05 51 38.1 +3.0
      comp=Z,9.2nm,0.9s
WLF   Walferdange      137.96 340  PFAKE               05 51 40.0 +5.0
WLF                              LR        LR
      comp=Z,4µm,18.0s
WLF   Walferdange      137.96 340 ⇑PKiKP   PKiKP       05 51 42.2 +7.1
MOTA  Moosalm          138.01 334 i pPKiKP PKiKP       05 51 38.2 +2.7
      comp=Z,12nm,1.3s
TRI   Trieste          138.05 331  PFAKE               05 51 40.0 +4.7
TRI                              LR        LR
      comp=Z,600nm,20.0s
SQTA  Sankt Quirin     138.06 334 i pPKiKP PKiKP       05 51 37.7 +2.2
      comp=Z,12nm,1.1s
BFO   Black Forest     138.32 338  PFAKE               05 51 50.0  +14
BFO                              LR        LR
      comp=Z,600nm,19.0s
FUORN Ofenpass-Fuorn   138.94 334  PFAKE               05 51 50.0  +13
FUORN                            LR        LR
      comp=Z,800nm,20.0s
TUE   Stuetta          139.44 335  PFAKE               05 51 50.0  +12
TUE                              LR        LR
      comp=Z,1µm,19.0s
AQU   L'Aquila         140.63 327  PFAKE               05 51 50.0 +9.2
AQU                              LR        LR
      comp=Z,700nm,20.0s
TIP   Timpagrande      140.79 321  PFAKE               05 51 50.0 +8.7
TIP                              LR        LR
      comp=Z,700nm,22.0s
VLC   Villacollemand   140.80 332  PFAKE               05 51 50.0 +8.9
VLC                              LR        LR
      comp=Z,800nm,20.0s
CEL   Celeste          141.89 321  PFAKE               05 51 50.0 +6.5
CEL                              LR        LR
      comp=Z,500nm,19.0s
CLTB  Caltabellotta    143.96 322 ePKPdf   PKPdf       05 51 43.7 -0.7
KEST  Kesra            147.51 323 ePKPbc   PKPbc       05 51 52.7 -0.3
KEST  Kesra            147.51 323  PKPbc   PKPbc       05 51 52.3 -0.7
      comp=Z,40nm,0.9s,baz=306,slow=4.0,SNR=5.2
PBRG  Braganca         148.62 350 ePKPdf   PKPab       05 51 59.0 -0.2
PGAV  Gavieira, Arco   148.71 352 ePKPdf   PKPab       05 52 02.6 +3.0
POLO  Lamas de Olo     149.22 351 ePKPdf   PKiKP       05 51 58.1 -0.4
MVO   Moncorvo         149.29 350 ePKPdf   PKPdf       05 51 53.3 +0.1
PVRL  Vila Real        149.30 351 ePKPdf   PKiKP       05 51 58.6  0.0
PVIS  Viseu            149.87 351 ePKPdf   PKPdf       05 51 55.1 +1.0
ES19  SONSECA Array    150.00 344 ePKPbc   PKPbc       05 51 58.8 -0.5
ESDC  Sonseca Array    150.05 344  PKPbc   PKPbc       05 51 58.9 -0.5
      comp=Z,1.2nm,0.6s,baz=6.6,slow=2.9,SNR=9.1
ESLA  Sonseca Array    150.05 344 epPKPdf  PKPbc       05 51 57.7 -1.7
ESLA                             LR        LR
      comp=Z,700nm,20.0s
MTE   Manteigas        150.13 350 ePKPdf   PKPab       05 52 06.7 +1.3
MTE   Manteigas        150.13 350 ePKPbc   PKiKP       05 52 00.6 +0.2
PAB   San Pablo        150.27 345 ePKPbc   PKPbc       05 51 59.5 -0.4
PAB   San Pablo        150.27 345 ePKIKP   PKPbc       05 51 59.5 -0.4
PCAS  Casmilo, Conde   150.62 351 ePKPdf   PKPab       05 52 07.5 +0.1
PCBR  Castelo Branco   150.66 350 ePKPdf   PKPbc       05 51 58.5 -2.2
PTOM  Tomar            151.03 351 ePKPdf   PKPbc       05 51 59.4 -2.2
CART  Cartagena        151.03 338  PFAKE               05 52 10.0 +0.9
CART                             LR        LR
      comp=Z,600nm,22.0s
PMRV  Marv??o          151.04 349 ePKPdf   PKPbc       05 52 00.1 -1.6
PMTG  Montargil        151.54 351 ePKPdf   PKiKP       05 52 03.2 -0.1
PESTR Estremoz         151.62 349 ePKPdf   PKPab       05 52 13.5 +1.9
PBEJ  Beja             152.49 350 ePKPdf   PKiKP       05 52 06.5 +1.2
PNCL  Nicolau / Gran   152.52 351 ePKPdf   PKPdf       05 51 54.5 -3.6
RCBR  Riachuelo        152.53 126  PFAKE               05 52 10.0 +3.9
RCBR                             LR        LR
      comp=Z,700nm,18.0s
MESJ  Messejana        152.74 350 ePKPdf   PKPab       05 52 12.1 -4.1
MORF  Marmelete        153.33 351 ePKPdf   PKPab       05 52 13.9 -4.9
SFS   San Fernando     153.65 346  PFAKE               05 52 10.0 +2.3
SFS                              LR        LR
      comp=Z,500nm,22.0s
TAM   Tamanrasset      157.97 305  PFAKE               05 52 20.0  +14
TAM                              LR        LR
      comp=Z,500nm,18.0s
TOA0  Torodi Ar. Sit   164.52 280 ePKPdf   PKPdf       05 52 12.0 -1.1
TOA0                              ePKPdf   PKPdf       05 52 12.1 -1.0
TORD  Torodi Ar. Bea   164.52 280  PKP     PKPdf       05 52 12.0 -1.0
      comp=Z,4.6nm,1.2s,baz=125,slow=1.0,SNR=9.2
TORD                             PKPab     PKPab       05 53 07.4 -0.7
      comp=Z,6.4nm,1.1s,baz=117,slow=6.2,SNR=6.9
TOA1  Torodi Ar. Sit   164.52 280 ePKPdf   PKPdf       05 52 12.0 -1.0
TOA1                              ePKPab   PKPab       05 53 07.4 -0.7
KIC   Kosan Boka       169.80 244 ePKIKP   PKPdf       05 52 14.0 -3.0
      comp=Z,41nm,1.1s
LIC   Lamto            169.99 243 ePKIKP   PKPdf       05 52 14.1 -3.0
      comp=Z,51nm,1.4s
DBIC  Dimbokro         170.04 245 ePKPdf   PKPdf       05 52 17.9 +0.8
DBIC                              ePKPab   PKPab       05 53 32.4 -0.1
DBIC  Dimbokro         170.04 245  PKP     PKPdf       05 52 16.9 -0.3
      comp=Z,5.0nm,1.1s,baz=257,slow=2.7,SNR=3.2
DBIC                             PKPab     PKPab       05 53 32.0 -0.4
      comp=Z,1.7nm,0.5s,baz=134,slow=5.4,SNR=2.8
TIC   Toumodi          170.17 245 ePKIKP   PKPdf       05 52 13.8 -3.5
```

IDC 09 05:42:58.8±2.6, 11°.39S×165°.66E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/35, mbtmp3.8/5, ML4.1/1, MS4.5/1, Ms1 4.5/1, ms1mx3.6/32, Error ellipse: s-maj=57.9km s-min=33.6km az=102.0, Santa Cruz Islands

```
Code  Station Name        Δ°   AZ°   Phase ID               Time      Res
                                     Op        ISC         h  m  s    ISC
DZM   Mont Dzumac       10.64 176    Pn        Pn          05 45 32.7  0.0
      1.4nm,0.3s,baz=0.0,slow=20,SNR=1.9
CTA   Charters Tower    20.56 243    P         P           05 47 39.4 +0.1
      3.0nm,0.9s,baz=60,slow=14,SNR=2.2
RAO   Raoul Island      23.46 142    LR        LR          05 54 42.3
      comp=Z,1µm,19.4s,baz=72,slow=30
H11S2 WAKE ISLAND Hy    29.71   2    T         T           06 20 14.0
      baz=181
H11S3 WAKE ISLAND Hy    29.72   2    T         T           06 20 13.5
      baz=181
H11S1 WAKE ISLAND Hy    29.73   2    T         T           06 20 13.9
      baz=181
WRA   Warramunga Arr    31.29 250    P         P           05 49 20.9 +0.1
      1.2nm,0.8s,baz=81,slow=9.2,SNR=9.4
ASAR  Alice Springs     32.56 244    P         P           05 49 31.9 -0.2
      1.1nm,0.8s,baz=72,slow=9.7,SNR=8.8
SONM  Songino Array     78.89 324    P         P           05 55 04.3 +0.1
      0.2nm,0.7s,baz=108,slow=4.7,SNR=2.2
```

IDC ***09*** *05:43:37.8±11.0, 7°.90N×125°.52E, h0km, mb4.0/3, mb1 4.0/3, mb1mx3.5/37, mbtmp3.9/3, MS4.5/3, Ms1 4.5/3, ms1mx3.8/36, Error ellipse: s-maj=401.5km s-min=78.9km az=17.0*

ISCJB ***09*** *05:44:02.6±0.8, 9°.71N±0°.04×125°.7E±0°.2, h145km±6km, mb3.5/3, Error ellipse: s-maj=24.6km s-min=6.7km az=179.0*

MAN ***09*** *05:44:02.3, 9°.76N×125°.94E, h123km, mb4.4, ML3.2, MS3.0*

ISC 09 05:44:03.1±1.1**, 9°.72N**±0°.05×**125°.7E**±0°.2**, h140**km±8km**, n14, σ0s.95**/18**, mb3.6**/3**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.26**	**283**⇑	*e*P	**Pn**	**05 44 22.4**	**+0.1**
BUTP	**Butuan**	**0.76**	**189**	*e*P	**Pn**	**05 44 24.8**	**-0.2**
BUTP				*e*S	**Sn**	**05 44 42.6**	**+1.0**
MSLP	**Maasin**	**0.96**	**295**	*e*P	**Pn**	**05 44 26.8**	**+0.2**
MSLP				*e*S	**Sn**	**05 44 44.2**	**-0.3**
PLP	**Palo**	**1.62**	**332**⇑	*e*P	**Pn**	**05 44 33.5**	**+0.2**
PLP				*i* S	**Sn**	**05 44 56.4**	**0.0**
CGP	**Cagayan de Oro**	**1.63**	**220**⇓	*e*P	**Pn**	**05 44 33.0**	**-0.4**
CGP				*e*S	**Sn**	**05 44 54.9**	**-1.7**
BESP	**Borongan**	**1.89**	**351**	*e*P	**Pn**	**05 44 33.9**	**-2.6**
BESP				*e*S	**Sn**	**05 45 02.6**	**+0.7**
BUKP	**Musuan**	**1.95**	**200**	*e*P	**Pn**	**05 44 37.2**	**0.0**
BUKP				*e*S	**Sn**	**05 45 03.5**	**+0.2**
CNP	**Catarman**	**2.97**	**339**	*e*P	**Pn**	**05 44 49.9**	**+0.2**
CNP				*e*S	**Sn**	**05 45 26.4**	**+0.7**
WRA	**Warramunga Arr**	**30.67**	**164**	LR	LR	06 00 39.6	
	comp=Z,787nm,21.6s,baz=0.0,slow=35						
DZM	**Mont Dzumac**	**50.91**	**129**	LR	LR	06 14 32.5	
	comp=Z,333nm,18.9s,baz=11,slow=37						
MKAR	**Makanchi Array**	**52.15**	**323**	P	**P**	**05 52 59.9**	**+0.6**
	0.6nm,0.5s,baz=123,slow=7.9,SNR=9.5						
FINES	**FINESS Array B**	**86.12**	**332**	P	**P**	**05 56 27.6**	**-0.5**
	1.5nm,0.9s,baz=88,slow=6.3,SNR=4.2						
NOA	**NORSAR Array B**	**93.02**	**334**	LR	LR	06 45 42.7	
	comp=Z,367nm,20.1s,baz=30,slow=39						
YKA	**Yellowknife Ar**	**94.47**	**24**	P	**P**	**05 57 07.5**	**+0.3**
	0.1nm,0.6s,baz=302,slow=5.3,SNR=4.3						

IDC ***09*** *05:44:54.6±0.6, 11°.14S×161°.71E, h0km, mb4.4/17, mb1 4.6/20, mb1mx4.5/35, mbtmp4.4/20, ML4.1/3, MS3.7/1, Ms1 3.7/1, ms1mx3.2/34, Error ellipse: s-maj=18.9km s-min=15.0km az=122.0*

NEIC ***09*** *05:44:57.2±0.2, 11°.03S×161°.58E, h10km, mb4.9/47, Error ellipse: s-maj=5.5km s-min=4.3km az=128.0*

ISCJB ***09*** *05:44:58.3±0.2, 11°.15S±0°.04×161°.60E±0°.04, h28km, mb4.7/66, MS5.2/2, Error ellipse: s-maj=6.6km s-min=5.9km az=135.7*

ISC 09 05:45:00.0±0.4**, 11°.09S**±0°.07×**161°.61E**±0°.07**, h28**km**, n110, σ1s.17**/111**, mb4.8**/66**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.32**	**315**	Pn	**Pn**	**05 45 37.2**	**+0.8**
	74nm,0.3s,baz=128,slow=12,SNR=18						
HNR				LR	LR	05 46 03.8	
	comp=Z,1μm,18.5s,baz=324,slow=28						
HNR				Sn	**Sb**	**05 46 07.2**	**-2.3**
	151nm,0.3s,baz=200,slow=20,SNR=9.2						
DZM	**Mont Dzumac**	**11.86**	**158**	*e*Pn	**Pn**	**05 47 48.5**	**+1.0**
DZM				*e*Sn	Sn	05 49 48.1	-11
DZM	**Mont Dzumac**	**11.86**	**158**	Pn	**Pn**	**05 47 45.0**	**-2.5**
	0.6nm,0.3s,baz=324,slow=17,SNR=7.2						
DZM				Sn	Sn	05 49 48.1	-11
	0.3nm,0.3s,baz=115,slow=21,SNR=1.2						
MARNC	**Mare, Loyalty**	**12.03**	**150**	*e*Pn	**Pn**	**05 47 48.7**	**-1.0**
MSVF	**Nonsavu**	**17.23**	**114**	*e*Pn	**Pn**	**05 48 59.5**	**+0.6**
	15nm,1.0s						
CTA	**Charters Tower**	**17.28**	**237**	P	**Pn**	**05 48 59.3**	**-0.1**
	0.4nm,0.3s,baz=61,slow=15,SNR=9.1						
CTAO	**Charters Tower**	**17.28**	**237**	*e*Pn	**P**	**05 49 00.5**	**-0.2**
	26nm,1.0s						
EIDS	**Eidsvold**	**17.36**	**214**	*e*Pn	**P**	**05 49 00.7**	**-0.9**
	23nm,1.1s						
COEN	**Coen**	**18.22**	**259**	*e*P	**P**	**05 49 13.9**	**+2.7**
	29nm,1.0s						
WC3	**Warramunga Arr**	**27.66**	**248**	*e*P	**P**	**05 50 45.4**	**-0.3**
	12nm,1.1s						
WRAB	**Tennant Creek**	**27.67**	**248**	*e*P	**P**	**05 50 46.0**	**+0.1**
	16nm,1.1s						
WB2	**Warramunga Arr**	**27.67**	**248**	*e*P	**P**	**05 50 45.1**	**-0.8**
WR1	**Warramunga Arr**	**27.68**	**248**	*e*P	**P**	**05 50 45.4**	**-0.6**
	16nm,1.1s						
WR1				*e*PcP	**PcP**	**05 54 02.8**	**-0.1**
WR1				*e*ScP	**ScP**	**05 57 44.2**	**+2.4**
WRA	**Warramunga Arr**	**27.68**	**248**	P	**P**	**05 50 45.4**	**-0.6**
	10nm,1.1s,baz=78,slow=9.5,SNR=14						
WRA				PcP	**PcP**	**05 54 02.8**	**-0.1**
	1.5nm,1.0s,baz=70,slow=2.6,SNR=3.7						
WRA				ScP	**ScP**	**05 57 44.2**	**+2.4**
	0.7nm,0.8s,baz=69,slow=2.8,SNR=4.7						
STKA	**Stephens Creek**	**27.74**	**219**	*e*P	**P**	**05 50 47.3**	**+0.9**
	1.9nm,1.0s						
STKA	**Stephens Creek**	**27.74**	**219**	P	**P**	**05 50 44.8**	**-1.6**
	2.5nm,0.9s,baz=46,slow=16,SNR=2.2						
NIUE	**Niue**	**28.57**	**110**	*e*P	**P**	**05 50 54.9**	**+1.0**
	108nm,0.9s						
AS01	**Alice Springs**	**29.14**	**241**	*e*P	**P**	**05 50 57.8**	**-1.2**
ASAR	**Alice Springs**	**29.19**	**241**	P	**P**	**05 50 58.0**	**-1.3**
	2.7nm,0.8s,baz=72,slow=9.6,SNR=14						
ASAR				PcP	**PcP**	**05 54 05.1**	**-1.5**
	1.4nm,0.9s,baz=91,slow=4.6,SNR=4.4						
ASAR				ScP	**ScP**	**05 57 48.6**	**+2.1**
	2.5nm,1.0s,baz=74,slow=3.0,SNR=11						
H11S2	**WAKE ISLAND Hy**	**29.82**	**10**	T	T	06 22 06.6	
	baz=188,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.82**	**10**	T	T	06 22 06.6	
	baz=188,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.83**	**10**	T	T	06 22 06.5	
	baz=188						
H11N1	**WAKE ISLAND Hy**	**31.04**	**10**	T	T	06 23 36.9	
	baz=188						
H11N3	**WAKE ISLAND Hy**	**31.05**	**10**	T	T	06 23 32.0	
	baz=188						
H11N2	**WAKE ISLAND Hy**	**31.06**	**10**	T	T	06 23 33.6	
	baz=188						
RPZ	**Rata Peaks**	**33.52**	**168**	P	**P**	**05 51 38.2**	**+1.0**
	4.5nm,0.9s,baz=14,slow=12,SNR=2.3						
FITZ	**Fitzroy Crossi**	**35.46**	**254**	*e*P	**P**	**05 51 54.9**	**+0.6**
	5.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**35.46**	**254**	P	**P**	**05 51 53.3**	**-1.0**
	2.7nm,0.8s,baz=82,slow=9.2,SNR=5.4						
FORT	**Forrest**	**36.74**	**233**	*e*P	**P**	**05 52 05.1**	**-0.1**
	43nm,0.9s						
BATI	**Baumata**	**37.29**	**268**	P	**P**	**05 52 09.6**	**-0.5**
	14nm,0.3s,baz=117,slow=9.0,SNR=2.6						
YOJ	**Yonaguni jima**	**51.66**	**314**	*e*P	**P**	**05 54 03.1**	**-1.5**
	95nm,0.9s						
MJAR	**Matsushiro Arr**	**52.25**	**336**	P	**P**	**05 54 06.3**	**-2.6**
	1.3nm,0.6s,baz=172,slow=9.1,SNR=4.1						
MAJO	**Matsushiro**	**52.25**	**336**	*e*P	**P**	**05 54 06.3**	**-2.6**
KSRS	**Korea Array**	**57.71**	**329**	P	**P**	**05 54 47.6**	**-0.6**
	3.3nm,1.0s,baz=148,slow=7.2,SNR=9.9						
KSAR	**Wonju Array Be**	**57.72**	**328**	P	**P**	**05 54 47.6**	**-0.7**
KS01	**Wonju Array Si**	**57.74**	**329**	*e*P	**P**	**05 54 48.2**	**-0.3**
NJ2	**Nanjing**	**59.26**	**318**	*e*P	**P**	**05 55 00.5**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**61.25**	**336**	P	**P**	**05 55 12.2**	**-0.4**
	comp=Z,7.7nm,0.9s,baz=163,slow=5.4,SNR=8.7						
CN2	**Changchun**	**63.77**	**332**	*e*P	**P**	**05 55 29.4**	**0.0**
CN2				*e*sP	pwP	05 55 43.6	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2				pmax	pmax		
	comp=Z,210nm,5.0s						
PETK	**Petropavlovsk-**	**64.03**	**357**	P	**P**	**05 55 30.7**	**-0.2**
	comp=Z,4.5nm,0.9s,baz=188,slow=7.3,SNR=2.3						
PEA1	**Petropavlovsk-**	**64.03**	**357**	*e*P	**P**	**05 55 30.7**	**-0.3**
GYA	**Guiyang**	**65.12**	**306**	*e*P	**P**	**05 55 42.0**	**+3.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	**Kunming**	**67.71**	**303**	P	**P**	**05 55 56.5**	**+0.9**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,210nm,5.0s						
CMAR	**Chiang Mai Arr**	**68.43**	**295**	P	**P**	**05 56 00.4**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=109,slow=4.9,SNR=12						
CHTO	**Chiang Mai**	**68.55**	**295**	P	P	05 56 10.2	+10
HHC	**Hu-ho-hao-te**	**69.29**	**322**	*e*P	**P**	**05 56 08.1**	**+3.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,5.2s						
CD2	**Chengdu**	**69.44**	**309**	P	**P**	**05 56 09.5**	**+3.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,480nm,6.6s						
LZH	**Lanzhou**	**71.82**	**314**	*e*P	**P**	**05 56 23.5**	**+2.9**
LZH				pP	sP	05 56 30.7	+0.3
LZH				sP	pwP	05 56 35.8	+1.1
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA	**Gaotai**	**76.20**	**315**	*e*P	**P**	**05 56 46.9**	**+0.8**
GTA				pP	PcP	05 56 57.2	-0.9
GTA				sP	pwP	05 57 01.4	+1.1
GTA				S	**S**	**06 06 29.9**	**+1.1**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,150nm,8.3s						
GTA				LR	LR		
	comp=N,300nm,16.2s						
GTA				LR	LR		
	comp=E,540nm,18.1s						
GTA				LR	LR		
	comp=Z,480nm,18.7s						
SONA0	**Songino Array**	**76.34**	**325**	*e*P	**P**	**05 56 46.5**	**-0.2**
SONM	**Songino Array**	**76.34**	**325**	P	**P**	**05 56 46.5**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=135,slow=5.3,SNR=19						
SONA1	**Songino Array**	**76.35**	**325**	*e*P	**P**	**05 56 46.5**	**-0.3**
GAMB	**Gambell**	**77.38**	**12**	*e*P	**P**	**05 56 52.0**	**0.0**
	comp=Z,3.4nm,0.9s						
KDAK	**Kodiak Island**	**78.16**	**23**	*e*P	**P**	**05 56 55.5**	**-0.9**
	comp=Z,24nm,1.1s						
KDAK	**Kodiak Island**	**78.16**	**23**	P	**P**	**05 56 55.6**	**-0.8**
	comp=Z,12nm,0.9s,baz=218,slow=2.5,SNR=3.5						
QSPA	**South Pole Qui**	**78.92**	**180**	*e*P	**P**	**05 57 00.2**	**-0.6**
	comp=Z,8.7nm,1.1s						
BILL	**Bilibino**	**78.99**	**2**	*e*P	**P**	**05 57 00.8**	**-0.1**
	comp=Z,13nm,1.0s						
ANM	**Nome**	**79.45**	**14**	*e*P	**P**	**05 57 03.4**	**0.0**
	comp=Z,6.8nm,1.1s						
SVW2	**Sparrevohn**	**79.46**	**20**	*e*P	**P**	**05 57 04.2**	**+0.6**
	comp=Z,24nm,0.9s						
SUA	**Susitna One**	**81.37**	**21**	*e*P	**P**	**05 57 13.7**	**-0.3**
	comp=Z,12nm,1.0s						
PPLA	**Purkeypile**	**81.87**	**20**	*e*P	**P**	**05 57 16.9**	**+0.3**
	comp=Z,8.1nm,1.2s						
PMR	**Palmer**	**82.03**	**21**	*e*P	**P**	**05 57 17.8**	**+0.5**
	comp=Z,9.9nm,1.1s						
GHO	**Glory Hole Cre**	**82.23**	**21**	*e*P	**P**	**05 57 18.4**	**-0.1**
	comp=Z,15nm,1.2s						
CAST	**Castle Rocks**	**82.28**	**19**	*e*P	**P**	**05 57 17.9**	**-0.7**
	comp=Z,12nm,0.8s						
SML	**Sawmill**	**82.46**	**22**	*e*P	**P**	**05 57 20.3**	**+0.7**
	comp=Z,7.0nm,0.9s						
SCM	**Sheep Creek Mo**	**82.84**	**22**	*e*P	**P**	**05 57 21.8**	**+0.1**
	comp=Z,11nm,0.9s						
TRF	**Thorofare Moun**	**82.88**	**20**	*e*P	**P**	**05 57 21.7**	**-0.2**
	comp=Z,7.4nm,1.0s						
BPAW	**Bear Paw Mtn.**	**83.10**	**19**	*e*P	**P**	**05 57 22.6**	**-0.3**
	comp=Z,6.9nm,1.2s						
KLU	**Klutina**	**83.15**	**23**	*e*P	**P**	**05 57 24.3**	**+1.0**
	comp=Z,16nm,1.0s						
RND	**Reindeer**	**83.33**	**20**	*e*P	**P**	**05 57 23.7**	**-0.5**
	comp=Z,11nm,1.1s						
MCK	**McKinley**	**83.52**	**20**	*e*P	**P**	**05 57 24.7**	**-0.3**
	comp=Z,25nm,1.0s						
IM3	**Indian Mountai**	**83.59**	**17**	*e*P	**P**	**05 57 25.1**	**-0.2**
DHY	**Denali Highway**	**83.63**	**21**	*e*P	**P**	**05 57 26.3**	**+0.5**
	comp=Z,5.3nm,0.9s						
MLY	**Manley**	**83.82**	**18**	*e*P	**P**	**05 57 26.5**	**-0.1**
	comp=Z,6.8nm,0.8s						
HARP	**HAARP**	**84.00**	**22**	*e*P	**P**	**05 57 28.5**	**+1.0**
	comp=Z,25nm,1.0s						
WRH	**Wood River Hil**	**84.29**	**20**	*e*P	**P**	**05 57 28.6**	**-0.3**
	comp=Z,8.2nm,0.9s						
MDM	**Murphy Dome**	**84.56**	**19**	*e*P	**P**	**05 57 29.7**	**-0.7**
	comp=Z,8.2nm,1.0s						
HDA	**Harding Lake**	**84.63**	**20**	*e*P	**P**	**05 57 31.0**	**+0.3**
	comp=Z,13nm,0.8s						
IL1	**Eielson Array**	**84.88**	**20**	*e*P	**P**	**05 57 30.8**	**-1.1**
ILAR	**Eielson Array**	**84.88**	**20**	P	**P**	**05 57 31.0**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=250,slow=4.9,SNR=12						
ILB	**Eielson Array**	**84.88**	**20**	*e*P	**P**	**05 57 31.4**	**-0.5**
RIDG	**Independ'e Rid**	**84.93**	**21**	*e*P	**P**	**05 57 32.4**	**+0.2**
	comp=Z,10.0nm,1.0s						
DOT	**Dot Lake**	**85.15**	**21**	*e*P	**P**	**05 57 33.5**	**+0.2**
	comp=Z,10nm,1.1s						
SCRK	**Sand Creek**	**85.38**	**21**	*e*P	**P**	**05 57 34.7**	**+0.1**
	comp=Z,5.5nm,1.0s						
WMQ	**Urumqi**	**86.27**	**316**	*e*P	**P**	**05 57 41.4**	**+2.0**
WMQ				LR	LR		
	comp=N,2μm,20.9s						
WMQ				LR	LR		
	comp=E,2μm,22.1s						
WMQ				LR	LR		
	comp=Z,2μm,21.5s						
DAWY	**Dawson**	**87.09**	**22**	*e*P	**P**	**05 57 44.2**	**+1.3**
	comp=Z,6.1nm,1.0s						
WAKR	**Walker**	**88.33**	**50**	*e*P	**P**	**05 57 50.2**	**+0.5**
	comp=Z,2.6nm,1.1s						
ISA	**Isabella, Lake**	**88.33**	**53**	*e*P	**P**	**05 57 49.4**	**-0.1**
	comp=Z,4.1nm,1.0s						
NVAR	**Mina Array Bea**	**89.17**	**51**	P	**P**	**05 57 52.5**	**-1.2**
	comp=Z,2.3nm,0.8s,baz=216,slow=4.8,SNR=5.3						
EPYK	**Eagle Plains**	**89.26**	**21**	*e*P	**P**	**05 57 54.5**	**+1.3**
	comp=Z,5.8nm,0.7s						
J08A	**Circle Bar Ran**	**90.30**	**46**	*e*P	**P**	**05 57 59.6**	**+0.9**
	comp=Z,10nm,1.1s						
BMN	**Battle Mountai**	**90.48**	**49**	*e*P	**P**	**05 58 00.4**	**+0.8**
	comp=Z,6.6nm,1.1s						
MK01	**Makanchi Array**	**90.78**	**318**	*e*P	**P**	**05 57 60.0**	**-0.7**
MK31	**Makanchi Array**	**90.80**	**318**	*e*P	**P**	**05 58 00.3**	**-0.4**
MK32	**Makanchi Array**	**90.80**	**318**	*e*P	**P**	**05 58 00.2**	**-0.5**
MKAR	**Makanchi Array**	**90.80**	**318**	*e*P	**P**	**05 58 00.2**	**-0.5**
	comp=Z,5.3nm,0.8s						
MKAR	**Makanchi Array**	**90.80**	**318**	P	**P**	**05 58 00.2**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=92,slow=6.3,SNR=7.2						
SHPR	**Sheep Range**	**91.14**	**53**	*e*P	**P**	**05 58 03.8**	**+1.0**
	comp=Z,10nm,1.2s						
R11A	**Troy Canyon, C**	**91.22**	**51**	*e*P	**P**	**05 58 03.4**	**+0.2**
	comp=Z,3.3nm,1.1s						
ZALV	**Zalesovo Beam**	**91.23**	**325**	P	**P**	**05 58 01.9**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=120,slow=5.2,SNR=2.8						
ZAA1	**Zalesovo Array**	**91.24**	**325**	*e*P	**P**	**05 58 01.9**	**-0.7**
YKA	**Yellowknife Ar**	**96.88**	**28**	P	**P**	**05 58 27.2**	**-1.1**
	comp=Z,3.0nm,1.0s,baz=260,slow=4.5,SNR=22						
YKB5	**Yellowknife Ar**	**96.88**	**28**	*e*P	**P**	**05 58 27.3**	**-1.0**
ARA0	**ARCESS Array S**	**115.32**	**344**	*e*PKPdf	**PKiKP**	**06 03 36.9**	**-1.6**
ARCES	**ARCESS Array B**	**115.32**	**344**	PKP	**PKiKP**	**06 03 36.9**	**-1.6**
	comp=Z,3.1nm,1.1s,baz=106,slow=2.0,SNR=4.8						
BOSA	**Boshof**	**122.24**	**226**	PKP	**PKPdf**	**06 03 52.5**	**-0.7**
	comp=Z,2.5nm,0.9s,baz=153,slow=2.3,SNR=2.8						
ROSC	**El Rosal**	**124.33**	**92**	*e*PKPdf	**PKPdf**	**06 03 57.7**	**-0.2**
ROSC	**El Rosal**	**124.33**	**92**	PKP	**PKPdf**	**06 03 56.9**	**-1.0**
	comp=Z,2.4nm,0.5s,baz=307,slow=6.9,SNR=2.9						
AKASG	**Malin Array Be**	**124.63**	**325**	PKP	**PKPdf**	**06 03 55.8**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=43,slow=1.8,SNR=3.6						
CPUP	**Villa Florida**	**126.93**	**135**	PKP	**PKPdf**	**06 04 01.6**	**-0.5**
	comp=Z,2.8nm,1.0s,baz=225,slow=2.9,SNR=4.3						

IDC ***09*** *05:48:25.5±1.1, 11°.54S×165°.24E, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.9/37, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=45.9km s-min=23.9km az=137.0*

ISCJB ***09*** *05:48:29.0±0.8, 11°.7S±0°.1×165°.2E±0°.2, h34km, mb3.9/6, Error ellipse: s-maj=24.7km s-min=17.1km az=18.6*

ISC 09 05:48:30.6±0.9**, 11°.6S**±0°.1×**165°.3E**±0°.2**, h34**km**, n13, σ0s.51**/7**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.47**	**174**	Pn	**Pn**	**05 50 58.6**	**+0.1**
	0.4nm,0.3s,baz=351,slow=19,SNR=6.2						
H11S2	**WAKE ISLAND Hy**	**29.94**	**3**	T	T	06 25 34.9	
	baz=181						
H11S3	**WAKE ISLAND Hy**	**29.94**	**3**	T	T	06 25 34.0	
	baz=181						
H11S1	**WAKE ISLAND Hy**	**29.96**	**3**	T	T	06 25 37.9	
	baz=181						
WRA	**Warramunga Arr**	**30.84**	**251**	P	**P**	**05 54 43.6**	**-0.2**
	2.4nm,0.8s,baz=83,slow=8.9,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**31.16**	**3**	T	T	06 27 03.6	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**31.17**	**3**	T	T	06 27 01.6	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**31.18**	**3**	T	T	06 27 05.5	
	baz=182						
ASAR	**Alice Springs**	**32.11**	**244**	P	**P**	**05 54 54.8**	**-0.2**
	1.0nm,0.8s,baz=72,slow=9.1,SNR=4.6						
ILAR	**Eielson Array**	**84.19**	**19**	P	**P**	**06 00 58.7**	**+0.6**
	0.6nm,0.6s,baz=240,slow=5.1,SNR=11						
NVAR	**Mina Array Bea**	**86.75**	**50**	P	**P**	**06 01 11.7**	**-0.1**
	1.1nm,0.8s,baz=238,slow=5.1,SNR=3.6						
MKAR	**Makanchi Array**	**93.60**	**317**	P	**P**	**06 01 43.8**	**+0.4**
	0.5nm,0.9s,baz=108,slow=3.2,SNR=3.3						
YKA	**Yellowknife Ar**	**95.69**	**27**	P	**P**	**06 01 51.9**	**-0.7**
	0.1nm,0.7s,baz=256,slow=4.2,SNR=3.9						

MEX 09 05:49:09.1±0.8**, 18°.04N**×**99°.23W, h45**km±10km**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.39**	**253**	*e*P	Pn	05 49 16.8	-2.0
MEIG				*e*S	Sn	05 49 24.1	-1.5
PLIG	**Platanillo**	**0.43**	**324**	*e*P	Pn	05 49 17.4	-1.9
PLIG				*i* S	Sn	05 49 25.0	-1.6
YAIG	**Yautepec**	**0.83**	**11**	*e*P	Pn	05 49 22.6	-2.0
YAIG				*e*S	Sn	05 49 33.9	-2.0
ARIG	**Puente Sto Nin**	**1.09**	**283**	*e*P	Pn	05 49 26.5	-1.5
ARIG				*e*S	Sn	05 49 40.6	-1.3
PPM	**Popocatepetl**	**1.17**	**29**	*i* P	Pn	05 49 28.3	-1.2
PPM				*i* S	Sn	05 49 42.5	-2.1
CAIG	**El Cayaco**	**1.40**	**225**	*e*P	Pn	05 49 30.1	-2.1
CAIG				*e*S	Sn	05 49 46.9	-2.5
ZIIG	**Zihuatanejo**	**2.17**	**259**	*i* S	Sn	05 50 14.9	+6.4

IDC 09 05:52:18.6±12.0**, 5°.24S**×**101°.96W, h0**km**, mb3.6**/3**, mb1 4.0**/3**, mb1mx3.6**/27**, mbtmp3.6**/3**, Error ellipse: s-maj=450.3km s-min=191.6km az=112.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDAR	**Pinedale Array**	**48.28**	**353**	P	P	06 01 01.6	-0.2
	0.4nm,0.6s,baz=172,slow=7.0,SNR=4.0						
YKA	**Yellowknife Ar**	**68.24**	**354**	P	P	06 03 21.6	+0.8
	0.4nm,0.8s,baz=162,slow=6.4,SNR=5.8						
ILAR	**Eielson Array**	**77.28**	**342**	P	P	06 04 14.0	-0.6
	0.9nm,0.8s,baz=152,slow=5.1,SNR=7.7						

IDC 09 05:55:23.4±1.7**, 10°.17S**×**118°.46E, h0**km**, mb3.8**/3**, mb1 3.8**/7**, mb1mx3.6**/38**, mbtmp3.7**/7**, ML3.5**/4**, Error ellipse: s-maj=73.1km s-min=20.2km az=48.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.12**	**91**	Pn	Pn	05 56 41.8	+0.4
	7.5nm,0.3s,baz=266,slow=3.4,SNR=2.1						
BATI				Sn	Sn	05 57 35.6	-5.7
	9.2nm,0.3s,baz=265,slow=4.2,SNR=1.8						
FITZ	**Fitzroy Crossi**	**10.51**	**139**	Pn	Pn	05 57 56.0	+0.5
	0.5nm,0.3s,baz=315,slow=2.9,SNR=36						
FITZ				Sn	Sn	05 59 43.8	-10
	0.4nm,0.3s,baz=176,slow=23,SNR=6.2						
WRA	**Warramunga Arr**	**18.13**	**124**	P	Pn	05 59 34.9	-2.0
	0.1nm,0.3s,baz=293,slow=13,SNR=5.8						
WRA				S	Sn	06 02 44.6	-15
	0.1nm,0.3s,baz=296,slow=25,SNR=5.2						
ASAR	**Alice Springs**	**19.93**	**134**	P	Pn	05 59 58.0	-0.6
	0.1nm,0.3s,baz=309,slow=9.5,SNR=7.1						
ASAR				S	S	06 03 32.7	-10
	0.0nm,0.3s,baz=307,slow=21,SNR=3.8						
SONM	**Songino Array**	**58.74**	**351**	P	P	06 05 23.2	0.0
	0.4nm,0.4s,baz=167,slow=8.2,SNR=6.8						
MKAR	**Makanchi Array**	**65.26**	**333**	P	P	06 06 07.5	+0.5
	0.4nm,0.4s,baz=145,slow=6.4,SNR=8.7						
ZALV	**Zalesovo Beam**	**69.94**	**340**	P	P	06 06 35.4	-0.9
	0.4nm,0.3s,baz=160,slow=4.6,SNR=3.9						

IDC 09 06:00:50.7±3.4**, 10°.98S**×**117°.78E, h0**km**, mb3.4**/1**, mb1 3.5**/4**, mb1mx3.3**/41**, mbtmp3.3**/4**, ML3.0**/3**, Error ellipse: s-maj=229.7km s-min=27.5km az=48.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.39**	**134**	Pn	Pn	06 03 21.5	+0.4
	0.2nm,0.3s,baz=312,slow=15,SNR=1.9						
FITZ				Sn	Sn	06 05 13.8	-4.5
	0.1nm,0.3s,baz=92,slow=23,SNR=1.5						
WRA	**Warramunga Arr**	**18.27**	**121**	P	Pn	06 05 04.2	-1.6
	0.0nm,0.3s,baz=300,slow=12,SNR=2.2						
ASAR	**Alice Springs**	**19.88**	**131**	P	P	06 05 24.4	+0.7
	0.1nm,0.3s,baz=303,slow=10.0,SNR=11						
MKAR	**Makanchi Array**	**65.68**	**334**	P	P	06 11 36.9	0.0
	0.3nm,0.6s,baz=156,slow=7.6,SNR=3.3						

SKHL ***09*** *06:03:41.2±1.0, 44°.34N×146°.94E, h83km±6km, mb3.9/3, msh5.2/5*

JMA ***09*** *06:03:42.0±0.4, 44°.00N×146°.91E, h94km, M2.7*

ISC 09 06:03:42.7±3.7**, 44°.1N**±0°.1×**146°.9E**±0°.1**, h80**km±17km**, n12, σ0s.54**/18**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.25**	**189**	*i* P	**Pn**	**06 03 54.7**	**0.0**
SHO				AMB	AMB	06 03 55.0	
	80nm,0.4s						
SHO				*i* S	**Sn**	**06 04 04.0**	**+0.4**
SHO				A	A	06 04 05.0	
	120nm,0.2s						
SHO				A	A	06 04 05.0	
	880nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.74**	**264**	*i* P	**Pn**	**06 03 58.0**	**-0.8**
YUK				AMB	AMB	06 03 58.0	
	40nm,0.3s						
YUK				*i* S	**Sn**	**06 04 11.0**	**+0.3**
YUK				A	A	06 04 12.0	
	430nm,0.2s						
YUK				A	A	06 04 12.0	
	180nm,0.2s						
LAGR	**Lagunnoye**	**0.79**	**266**	*e*rx	rx	06 03 54.0	
LAGR				*e*S	**Sn**	**06 04 12.0**	**+0.3**
LAGR				A	A	06 04 13.0	
	920nm,0.5s						
LAGR				A	A	06 04 13.0	
	390nm,0.5s						
GRPR	**Tuman**	**0.81**	**261**	*e*P	**Pn**	**06 03 59.0**	**-0.5**
GRPR				AMB	AMB	06 03 59.0	
	30nm,0.2s						
GRPR				*e*S	**Sn**	**06 04 12.0**	**-0.1**
GRPR				A	A	06 04 12.0	
	350nm,0.3s						
GRPR				A	A	06 04 12.0	
	170nm,0.3s						
GLVR	**Golovnino**	**1.06**	**249**	*e*P	**Pn**	**06 04 02.0**	**-0.4**
GLVR				*e*S	**Sn**	**06 04 18.4**	**+1.3**
GLVR				A	A	06 04 23.0	
	310nm,0.3s						
GLVR				A	A	06 04 23.0	
	100nm,0.3s						
NEM2	**Nemuro 2**	**1.12**	**228**	P	**Pn**	**06 04 02.8**	**-0.4**
NEM2				*e*S	**Sn**	**06 04 18.2**	**-0.3**
JKHN	**Kushirohamanak**	**1.62**	**231**	*e*S	**Sn**	**06 04 30.1**	**+0.1**
JNK	**Nakash**	**1.66**	**252**	P	**Pn**	**06 04 10.1**	**+0.1**
JAK	**Akkeshi**	**1.95**	**236**	P	**Pn**	**06 04 13.4**	**-0.4**
JAK				*e*S	**Sn**	**06 04 37.3**	**-0.2**
JTKR	**Abashiri--Toko**	**2.15**	**267**	P	**Pn**	**06 04 16.3**	**-0.2**
JAR	**Ashorobuto**	**2.40**	**251**	P	**Pn**	**06 04 20.7**	**+0.7**
JMP	**Maruseppu**	**2.54**	**269**	P	**Pn**	**06 04 21.7**	**-0.2**

IDC ***09*** *06:03:46.0±1.1, 11°.05S×165°.37E, h0km, mb3.9/8, mb1 4.1/10, mb1mx3.9/39, mbtmp4.0/10, ML4.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.8/28, Error ellipse: s-maj=33.2km s-min=24.3km az=131.0*

NEIC ***09*** *06:03:47.5±0.5, 11°.07S×165°.52E, h10km, mb4.5/11, Error ellipse: s-maj=12.3km s-min=9.6km az=112.0*

*ISCJB **09** 06:03:48.5±0.5, 11°.20S±0°.07×165°.54E±0°.07, h30km, mb4.3/17, Error ellipse: s-maj=10.5km s-min=9.5km az=38.5*

ISC 09 06:03:50.3±0.7, 11°.11S±0°.10×165°.59E±0°.10, h30km, n32, σ1s.24/34, mb4.3/17, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.80	286	ePn	Pn	06 05 15.7	+1.5
HNR				eSn	Sn	06 06 21.8	+2.0
HNR	Honiara	5.80	286	Pn	Pn	06 05 11.5	-2.7
	19nm,0.3s,baz=151,slow=8.8,SNR=4.7						
HNR				Sn	Sn	06 06 21.8	+2.0
	17nm,0.3s,baz=259,slow=11,SNR=1.7						
HNR				LR	LR	06 06 50.3	
	comp=Z,144nm,21.9s,baz=262,slow=33						
DZM	Mont Dzumac	10.93	176	ePn	Pn	06 06 25.8	+1.0
DZM	Mont Dzumac	10.93	176	Pn	Pn	06 06 24.9	+0.1
	1.4nm,0.3s,baz=28,slow=9.7,SNR=18						
CTA	Charters Tower	20.63	242	P	P	06 08 25.3	-2.2
	3.5nm,0.8s,baz=65,slow=11,SNR=1.7						
LHI	Lord Howe Isla	21.19	196	eP	P	06 08 33.8	+0.4
	57nm,0.9s						
COEN	Coen	22.06	260	eP	P	06 08 43.4	+0.5
	14nm,1.1s						
H11S2	WAKE ISLAND Hy	29.43	2	T	T	06 40 31.9	
	baz=182						
H11S3	WAKE ISLAND Hy	29.44	2	T	T	06 40 40.3	
	baz=182						
H11S1	WAKE ISLAND Hy	29.45	2	T	T	06 40 41.1	
	baz=182						
WRAB	Tennant Creek	31.30	250	eP	P	06 10 07.7	-0.4
	6.7nm,1.0s						
WB2	Warramunga Arr	31.30	250	eP	P	06 10 07.9	-0.2
	7.7nm,1.0s						
WR1	Warramunga Arr	31.31	250	eP	P	06 10 06.7	-1.5
	4.6nm,0.9s						
WR1				ePcP	PcP	06 13 01.1	-1.0
WRA	Warramunga Arr	31.31	250	P	P	06 10 06.7	-1.5
	3.3nm,0.8s,baz=80,slow=9.3,SNR=22						
WRA				PcP	PcP	06 13 01.1	-1.0
	0.5nm,0.9s,baz=76,slow=2.8,SNR=4.7						
ASAR	Alice Springs	32.62	243	P	P	06 10 18.5	-1.2
	0.5nm,0.6s,baz=64,slow=9.9,SNR=6.9						
ASAR				PcP	PcP	06 13 04.7	-0.9
	0.4nm,0.7s,baz=75,slow=2.4,SNR=3.9						
MQZ	McQueen's Vall	33.05	171	eP	P	06 10 22.7	-0.4
	17nm,1.1s						
TAU	Tasmania Unive	35.45	203	eP	P	06 10 45.0	+1.1
	26nm,0.9s						
FITZ	Fitzroy Crossi	39.21	255	eP	P	06 11 16.6	+0.4
	3.6nm,0.9s						
CMAR	Chiang Mai Arr	72.00	294	P	P	06 15 11.4	-0.3
	1.0nm,0.4s,baz=125,slow=4.7,SNR=3.0						
SONA0	Songino Array	78.63	324	eP	P	06 15 48.7	-0.8
SONM	Songino Array	78.63	324	P	P	06 15 48.7	-0.8
	0.3nm,0.7s,baz=130,slow=4.3,SNR=2.4						
SUA	Susitna One	80.04	20	eP	P	06 15 58.1	+1.2
	5.0nm,1.1s						
IM3	Indian Mountai	82.53	16	eP	P	06 16 09.5	-0.3
HDA	Harding Lake	83.36	19	eP	P	06 16 14.9	+0.7
	3.9nm,1.1s						
ILAR	Eielson Array	83.62	19	P	P	06 16 15.8	+0.3
	0.7nm,0.7s,baz=239,slow=5.2,SNR=11						
ILB	Eielson Array	83.62	19	eP	P	06 16 16.2	+0.7
	2.2nm,1.1s						
MK32	Makanchi Array	93.46	317	eP	P	06 17 02.1	-1.0
MKAR	Makanchi Array	93.46	317	P	P	06 17 02.1	-1.0
	0.5nm,0.8s,baz=99,slow=4.7,SNR=2.9						
ZALV	Zalesovo Beam	93.52	324	P	P	06 17 03.1	0.0
	0.5nm,0.5s,baz=108,slow=3.2,SNR=3.4						
ZAA1	Zalesovo Array	93.52	324	eP	P	06 17 03.1	0.0
LPAZ	La Paz	120.29	116	PKP	PKiKP	06 22 42.9	+2.5
	0.6nm,0.7s,baz=229,slow=9.3,SNR=2.3						
TOA0	Torodi Ar. Sit	164.12	279	ePKPdf	PKPdf	06 23 52.2	+0.4

IDC 09 06:05:34.3±13.0, 46°.85N×151°.39E, h263km±129km, mb3.0/10, mb1 3.2/10, mb1mx3.0/41, mbtmp3.6/10, Error ellipse: s-maj=25.9km s-min=21.6km az=103.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	Zalesovo Beam	41.59	305	P	P	06 12 55.9	-0.5
	0.5nm,0.7s,baz=67,slow=8.1,SNR=2.5						
MKAR	Makanchi Array	45.84	297	P	P	06 13 30.4	+0.1
	0.2nm,0.6s,baz=74,slow=7.5,SNR=2.2						
YKA	Yellowknife Ar	51.55	36	P	P	06 14 13.0	-0.2
	0.3nm,0.8s,baz=297,slow=7.0,SNR=3.4						
ARCES	ARCESS Array B	57.36	340	P	P	06 14 55.4	+0.6
	1.8nm,0.9s,baz=46,slow=7.7,SNR=5.2						
FINES	FINESS Array B	63.44	334	P	P	06 15 35.5	-0.2
	0.7nm,0.5s,baz=46,slow=8.0,SNR=7.2						
NOA	NORSAR Array B	67.74	340	P	P	06 16 03.7	+0.4
	0.7nm,0.9s,baz=29,slow=6.1,SNR=3.2						
WRA	Warramunga Arr	68.24	197	P	P	06 16 06.8	+0.1
	0.3nm,0.8s,baz=14,slow=8.9,SNR=4.0						
KBZ	Khabaz	69.93	313	P	P	06 16 17.9	+0.9
	1.2nm,0.6s,baz=1.5,slow=2.7,SNR=4.6						
AKASG	Malin Array Be	70.80	325	P	P	06 16 21.3	-0.8
	0.5nm,0.3s,baz=40,slow=6.3,SNR=1.5						
BRTR	Keskin Array B	77.50	316	P	P	06 17 00.4	-0.6
	0.4nm,0.7s,baz=46,slow=8.3,SNR=2.4						

*ISCJB **09** 06:07:17.5±1.2, 36°.85N±0°.03×141°.36E±0°.08, h23km±6km, mb3.8/9, Error ellipse: s-maj=11.1km s-min=5.4km az=4.1*
*JMA **09** 06:07:17.6±0.1, 36°.85N×141°.34E, h31km±1km, M3.9*
JMA Felt I J1.
*IDC **09** 06:07:22.6±3.2, 36°.84N×141°.18E, h49km±28km, mb3.6/9, mb1 3.8/12, mb1mx3.5/43, mbtmp3.8/12, ML2.9/3, Error ellipse: s-maj=35.0km s-min=14.6km az=74.0*

ISC 09 06:07:17.6±1.6, 36°.89N±0°.04×141°.32E±0°.07, h11km±9km, n29, σ0s.71/34, mb3.9/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.47	297	P	Pb	06 07 27.9	0.0
ONAJ				S	Sb	06 07 35.3	+0.5
JFK	Kawauchi	0.60	323	P	Pb	06 07 29.8	-0.2
JFK				S	Sb	06 07 38.3	-0.2
JFFD	Fukushimafurud	0.64	289	P	Pg	06 07 30.2	+0.2
JFFD				S	Sg	06 07 39.0	+0.5
JHO	Hitachi	0.66	246	P	Pg	06 07 30.3	-0.1
JHO				S	Sg	06 07 39.5	+0.3
JHYU	Hitachinakayam	0.80	227	P	Pg	06 07 32.4	-0.7
JHYU				eS	Sg	06 07 42.7	-0.9
JFT	Otama	1.01	309	P	Pg	06 07 36.9	-0.1
JFT				S	Sg	06 07 50.5	+0.4
JMM	Marumori	1.06	337	P	Pb	06 07 37.0	-1.0
JMM				S	Sg	06 07 52.1	+0.2
JFY	Yanaizu	1.39	292	P	Pn	06 07 42.7	-0.2
JFY				S	Sn	06 08 01.1	-0.2
JAG	Ashikaga	1.57	253	P	Pn	06 07 43.9	-1.5
MJAR	Matsushiro Arr	2.52	263	P	Pn	06 07 58.6	+0.1
	0.9nm,0.3s,baz=94,slow=14,SNR=27						
MJAR				S	Sb	06 08 35.0	+1.0
	2.8nm,0.3s,baz=105,slow=20,SNR=3.9						
MAT	Matsushiro	2.52	263	P	Pn	06 07 58.9	+0.4
MAT				eS	Sb	06 08 34.3	+0.3
JHJ	Hachijo jima 2	3.97	199	P	Pn	06 08 19.9	+1.6
	11nm,0.3s,baz=351,slow=18,SNR=2.9						
JHJ				S	Sn	06 09 04.8	0.0
	17nm,0.3s,baz=61,slow=23,SNR=2.0						
KSRS	Korea Array	10.71	277	P	Pn	06 09 52.0	+1.2
	0.1nm,0.3s,baz=97,slow=14,SNR=3.2						
SONM	Songino Array	27.80	304	P	P	06 13 06.7	0.0
	0.9nm,0.6s,baz=106,slow=9.1,SNR=8.2						
H11N2	WAKE ISLAND Hy	28.14	120	T	T	06 42 34.0	
	baz=313,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	28.15	120	T	T	06 42 35.0	
	baz=313,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	28.16	120	T	T	06 42 36.0	
	baz=313,slow=75,SNR=35						
H11S1	WAKE ISLAND Hy	28.84	123	T	T	06 43 27.8	
	baz=315,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	28.84	123	T	T	06 43 27.4	
	baz=315,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	28.86	123	T	T	06 43 29.1	
	baz=315,slow=75,SNR=14						
ZALV	Zalesovo Beam	41.96	313	P	P	06 15 08.3	+0.1
	1.8nm,0.5s,baz=95,slow=7.4,SNR=9.6						
MKAR	Makanchi Array	44.13	302	P	P	06 15 25.9	0.0
	1.6nm,0.6s,baz=89,slow=10.0,SNR=24						
ILAR	Eielson Array	49.66	32	P	P	06 16 10.1	+1.3
	0.6nm,0.7s,baz=272,slow=7.0,SNR=4.8						
WRA	Warramunga Arr	56.91	188	P	P	06 17 01.8	-0.8
	0.6nm,0.5s,baz=6.3,slow=7.3,SNR=15						
ASAR	Alice Springs	60.63	188	P	P	06 17 28.1	-0.4
	0.6nm,0.8s,baz=16,slow=6.1,SNR=6.1						
NB2	NORSAR Subarra	74.29	337	P	P	06 18 54.4	-0.2
	comp=Z,1.6nm,0.8s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.29	337	P	P	06 18 53.4	-1.2
	comp=Z,0.5nm,0.7s,baz=39,slow=5.8,SNR=4.9						
AKASG	Malin Array Be	74.37	322	P	P	06 18 54.6	-0.5
	comp=Z,0.5nm,0.4s,baz=46,slow=6.3,SNR=5.0						
GERES	GERESS Array B	82.80	328	P	P	06 19 41.7	0.0
	comp=Z,1.1nm,0.5s,baz=41,slow=6.0,SNR=11						

*ISCJB **09** 06:07:45.5±0.8, 44°.71N±0°.05×149°.20E±0°.07, h81km±6km, mb4.0/21, Error ellipse: s-maj=9.9km s-min=5.7km az=37.4*
*SKHL **09** 06:07:45.2±0.9, 44°.77N×149°.34E, h70km±4km, mb4.7/7*
*JMA **09** 06:07:45.8±0.7, 44°.86N×149°.20E, h30km, M4.6*
*MOS **09** 06:07:45.1±1.0, 44°.81N×149°.24E, h76km, mb4.4/10, Error ellipse: s-maj=9.2km s-min=7.7km az=61.0*
*IDC **09** 06:07:47.2±2.4, 44°.81N×149°.12E, h79km±22km, mb3.6/16, mb1 3.8/23, mb1mx3.7/44, mbtmp3.9/23, Error ellipse: s-maj=18.3km s-min=13.2km az=145.0*

ISC 09 06:07:44.5±1.0, 44°.61N±0°.05×149°.38E±0°.07, h62km±8km, n105, σ1s.83/126, mb4.0/21, 2C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.24	301	eP	Pn	06 08 04.8	-1.0
KUR				AMB	AMB	06 08 05.2	
	740nm,0.3s						
KUR				AMB	AMB	06 08 05.2	
	460nm,0.3s						
KUR				AMB	AMB	06 08 05.2	
	340nm,0.3s						
KUR				iS	Sn	06 08 18.9	-2.7
KUR				A	A	06 08 22.4	
	4μm,0.6s						
KUR				A	A	06 08 22.4	
	4μm,0.6s						
KUR	Kuril'sk	1.24	301	d iPN	Pn	06 08 04.7	-1.0
KUR				iS	Sn	06 08 19.2	-2.4
KUR				pmax	pmax		
	comp=N,739nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2μm,0.5s						
KUR				pmax	pmax		
	comp=E,464nm,0.3s						
KUR				smax	smax		
	comp=N,4μm,0.5s						
KUR				smax	smax		
	comp=E,3μm,0.4s						
SHO	Shikotan	1.97	249	iP	Pn	06 08 15.9	+0.3
SHO				AMB	AMB	06 08 16.4	
	comp=E,90nm,0.4s						
SHO				iS	Sn	06 08 38.2	-1.1
SHO				A	A	06 08 39.4	
	comp=E,580nm,0.4s						
SHO				A	A	06 08 39.4	
	comp=E,610nm,0.4s						
SHO	Shikotan	1.97	249	d iPN	Pn	06 08 15.8	+0.2
SHO				iS	Sn	06 08 38.0	-1.2
SHO				pmax	pmax		
	comp=Z,88nm,0.4s						
SHO				smax	smax		
	comp=N,376nm,0.4s						
SHO				smax	smax		
	comp=E,256nm,0.4s						
YUK	Yuzh-Kuril'sk	2.59	258	iP	Pn	06 08 25.3	+1.4
YUK				AMB	AMB	06 08 27.0	
	comp=E,90nm,0.5s						
YUK				iS	Sn	06 08 55.9	+1.7
YUK				A	A	06 08 58.5	
	comp=E,550nm,0.6s						
YUK				A	A	06 08 58.5	
	comp=E,880nm,0.6s						
YUK	Yuzh-Kuril'sk	2.59	258	c iPN	Pn	06 08 26.0	+2.1
YUK				iS	Sn	06 08 55.9	+1.7
YUK				pmax	pmax		
	comp=Z,240nm,0.1s						
YUK				smax	smax		
	comp=N,548nm,0.4s						
YUK				smax	smax		
	comp=E,884nm,0.4s						
LAGR	Lagunnoye	2.63	259	eP	Pn	06 08 25.0	+0.4
LAGR				AMB	AMB	06 08 29.1	
	comp=E,250nm,0.4s						
LAGR				eS	Sn	06 08 56.0	+0.6
LAGR				A	A	06 09 01.0	
	comp=E,1μm,0.6s						
LAGR				A	A	06 09 01.0	
	comp=E,760nm,0.6s						
LAGR	Lagunnoye	2.63	259	ePN	Pn	06 08 25.6	+1.0
LAGR				eS	Sn	06 08 57.8	+2.4
LAGR				pmax	pmax		
	comp=Z,271nm,0.4s						
LAGR				smax	smax		
	comp=N,1μm,0.4s						
LAGR				smax	smax		
	comp=E,758nm,0.3s						
GRPR	Tuman	2.66	258	eP	Pn	06 08 26.0	+1.0
GRPR				eS	Sn	06 08 57.0	+1.0
GRPR				A	A	06 08 58.0	
	comp=E,770nm,0.4s						
GRPR				A	A	06 08 58.0	
	comp=E,650nm,0.4s						
GRPR	Tuman	2.66	258	ePN	Pn	06 08 26.3	+1.3
GRPR				eS	Sn	06 08 57.0	+1.0
GRPR				smax	smax		
	comp=N,774nm,0.4s						
GRPR				smax	smax		
	comp=E,650nm,0.3s						
NEM2	Nemuro 2	2.90	246	P	Pn	06 08 29.0	+0.8
NEM2				eS	Sn	06 09 00.8	-1.1
GLVR	Golovnino	2.91	254	eP	Pn	06 08 29.0	+0.7
GLVR				eS	Sn	06 09 02.0	-0.1
GLVR				A	A	06 09 06.0	
	comp=E,780nm,0.3s						
GLVR				A	A	06 09 06.0	
	comp=E,380nm,0.3s						
GLVR	Golovnino	2.91	254	ePN	Pn	06 08 29.7	+1.4
GLVR				eS	Sn	06 09 02.8	+0.7
GLVR				smax	smax		
	comp=N,779nm,0.3s						
GLVR				smax	smax		
	comp=E,377nm,0.2s						
JRA	Rausu	3.13	259	P	Pn	06 08 33.3	+2.0
JNK	Nakash	3.51	255	P	Pn	06 08 38.2	+1.7
JNK				eS	Sn	06 09 17.1	+0.3
JAK	Akkeshi	3.75	246	P	Pn	06 08 41.0	+1.1
JAK				eS	Sn	06 09 21.8	-0.9
JTKR	Abashiri--Toko	3.98	263	P	Pn	06 08 44.9	+2.0
JAR	Ashorobuto	4.25	254	P	Pn	06 08 49.2	+2.4
JAR				eS	Sn	06 09 37.0	+1.9
JMP	Maruseppu	4.36	264	P	Pn	06 08 50.7	+2.5
JOB	Onbets	4.36	249	P	Pn	06 08 50.3	+2.1
JOB				eS	Sn	06 09 37.9	+0.2
HRK	Horoka	4.65	258	eP	Pn	06 08 54.9	+2.7
JCH	Churui	4.80	248	eS	Sn	06 09 47.3	-1.2
JKK2	Kamakawa 2	4.82	264	P	Pn	06 08 57.3	+2.8
JKA	Kamikawa-asahi	4.88	267	eP	Pn	06 08 57.3	+1.9
ASAJ	Asahikawa	4.88	267	P	Pn	06 08 58.3	+2.9
ASAJ	Asahikawa	4.88	267	P	Pn	06 08 57.3	+1.9
	comp=E,6.4nm,0.3s,baz=78,slow=21,SNR=21						
ASAJ				S	Sn	06 10 05.2	+15
	comp=E,1.7nm,0.3s,baz=228,slow=7.3,SNR=1.7						
MYR	Moyori	5.00	245	eP	Pn	06 08 59.0	+2.0
MYR				eS	Sn	06 09 53.6	+0.1
YSS	Yuzh-Sakhalins	5.19	299	eP	Pn	06 09 00.5	+0.9
YSS				AMB	AMB	06 09 01.3	
	comp=E,40nm,0.4s						
YSS				eS	Sn	06 09 56.6	-1.4
YSS				A	A	06 10 00.0	
	comp=E,20nm,1.0s						
YSS	Yuzh-Sakhalins	5.19	299	⇑ ePN	Pn	06 09 00.4	+0.9
YSS				eS	Sn	06 09 59.5	+1.5
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				smax	smax		
	comp=N,20nm,1.4s						
YSS				smax	smax		
	comp=E,20nm,2.2s						
YSS				MLR	MLR		
	comp=Z,1μm,14.0s						
YSS				MLR	MLR		
	comp=N,1μm,19.0s						
JEM	Erimo	5.22	242	P	Pn	06 09 02.9	+2.9
ERM	Erimo	5.22	242	eP	Pn	06 09 02.8	+2.8
ERM	Erimo	5.22	242	iPN	Pn	06 09 02.8	+2.8
JNBK	Urakawa-nobuka	5.35	247	P	Pn	06 09 03.0	+1.2
JWK2	Keihoku	5.35	280	P	Pn	06 09 05.4	+3.6
JBT2	Biratori 2	5.40	253	P	Pn	06 09 04.6	+2.1
JNB	Noboribetsu	6.42	253	P	Pn	06 09 18.0	+1.5
JNB				eS	Sn	06 10 28.3	-0.1
JKB	Kayabe	6.67	249	P	Pn	06 09 20.9	+1.1
JKB				eS	Sn	06 10 30.8	-3.6
UGL	Uglegorsk	6.71	314	eP	Pn	06 09 20.1	-0.3
UGL				AMB	AMB	06 09 23.0	
	comp=N,60nm,0.8s						
UGL	Uglegorsk	6.71	314	ePN	Pn	06 09 14.7	-5.7
UGL				pmax	pmax		
	comp=Z,67nm,0.8s						
UGL				MLR	MLR		
	comp=Z,2μm,17.0s						
JYM2	Yakumo 2	7.02	252	P	Pn	06 09 25.9	+1.3
JANG	Nango	7.19	237	eS	Sn	06 10 41.6	-5.5
JTM	Tenmabayashi	7.21	241	eS	Sn	06 10 43.7	-4.0
JSR	Shiriuchi	7.24	248	P	Pn	06 09 28.1	+0.4
JOSM	Okushiri--Mats	7.64	254	P	Pn	06 09 34.3	+1.1
OFUJ	Ofunato	7.97	229	eS	Sn	06 11 01.2	-5.1
JRG	Rokugo	8.33	234	eS	Sn	06 11 10.9	-4.3
JIO	Ouri	8.60	227	eS	Sn	06 11 14.3	-7.4
OKH	Okha	9.89	337	eP	Pn	06 10 03.2	-0.6
PETK	Petropavlovsk-	10.11	30	P	Pn	06 10 06.6	-0.3
	comp=Z,0.5nm,0.3s,baz=214,slow=16,SNR=5.0						
NKL	Nikolayevsk	10.28	329	eP	Pn	06 10 11.8	+2.7
USRK	Ussuriysk Ar.	12.45	274	P	Pn	06 10 38.7	0.0
	comp=Z,0.3nm,0.3s,baz=92,slow=13,SNR=6.3						
KLR	Kul'dur	12.90	297	eP	Pn	06 10 45.2	+0.3
KLR	Kul'dur	12.90	297	iPN	Pn	06 10 45.2	+0.3
KLR	Kul'dur	12.90	297	P	Pn	06 10 43.9	-1.0
	comp=Z,0.1nm,0.3s,baz=127,slow=15,SNR=2.6						
MSHR	Mys Shultsa	13.36	268	iPN	Pn	06 10 52.1	+0.9
MA2	Magadan	15.01	3	iP	Pn	06 11 12.8	0.0
MA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MA2	Magadan	15.01	3	P	Pn	06 11 13.0	+0.2
	comp=Z,0.5nm,0.3s,baz=184,slow=19,SNR=2.6						
KSRS	Korea Array	17.66	254	P	P	06 11 47.6	+1.3
	comp=Z,0.3nm,0.3s,baz=57,slow=11,SNR=13						
SEY	Seymchan	18.44	4	eP	P	06 11 53.0	-1.7
SEY	Seymchan	18.44	4	iP	P	06 11 53.0	-1.7
SEY	Seymchan	18.44	4	P	P	06 11 52.9	-1.7
	comp=Z,0.2nm,0.3s,baz=162,slow=9.3,SNR=6.6						
H11N2	WAKE ISLAND Hy	28.78	144	T	T	06 44 36.2	
	baz=334,slow=76,SNR=33						
H11N1	WAKE ISLAND Hy	28.79	144	T	T	06 44 38.9	
	baz=334,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	28.79	144	T	T	06 44 38.0	
	baz=334,slow=76,SNR=30						
TIXI	Tiksi	28.87	347	iP	P	06 13 34.2	-2.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	Tiksi	28.87	347	P	P	06 13 33.0	-3.7
	comp=Z,1.3nm,0.3s,baz=134,slow=23,SNR=7.6						
SONM	Songino Array	29.63	292	P	P	06 13 42.9	-1.0
	comp=Z,0.3nm,0.7s,baz=70,slow=8.3,SNR=2.1						
H11S1	WAKE ISLAND Hy	29.79	145	T	T	06 45 54.4	
	baz=335,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.80	145	T	T	06 45 47.6	
	baz=335,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	29.81	145	T	T	06 45 50.0	
	baz=335,slow=76,SNR=16						
COLA	College	39.43	37	eP	P	06 15 08.4	+0.4
COLA	College	39.43	37	iP	P	06 15 08.4	+0.4
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	39.84	37	P	P	06 15 11.8	+0.4
	comp=Z,1.0nm,0.6s,baz=266,slow=8.0,SNR=23						
ILAR				PcP	PcP	06 17 16.0	-0.2
	comp=Z,0.5nm,0.9s,baz=289,slow=3.6,SNR=2.3						
ZALV	Zalesovo Beam	41.76	307	P	P	06 15 25.8	-1.6
	comp=Z,0.5nm,0.4s,baz=77,slow=7.7,SNR=2.3						
ZALV				PcP	PcP	06 17 23.4	+0.9
	comp=Z,0.4nm,0.4s,baz=85,slow=1.5,SNR=2.9						
INK	Inuvik	44.85	31	P	P	06 15 52.5	+0.4
	comp=Z,2.1nm,0.6s,baz=287,slow=5.9,SNR=16						
MKAR	Makanchi Array	45.60	298	P	P	06 15 57.2	-1.2
	comp=Z,0.6nm,0.7s,baz=78,slow=8.8,SNR=4.5						
MKAR				PcP	PcP	06 17 36.6	+0.9
	comp=Z,0.4nm,0.7s,baz=56,slow=4.7,SNR=2.7						
YKA	Yellowknife Ar	54.19	35	P	P	06 17 03.9	+0.7
	comp=Z,2.1nm,0.7s,baz=298,slow=6.9,SNR=32						
YKA				PcP	PcP	06 18 08.1	+1.3
	comp=Z,0.3nm,0.6s,baz=303,slow=3.6,SNR=5.1						
ARCES	ARCESS Array B	58.99	340	P	P	06 17 36.4	-0.8
	comp=Z,3.6nm,1.0s,baz=31,slow=11,SNR=3.6						
FINES	FINESS Array B	64.83	334	P	P	06 18 13.9	-2.5
	comp=Z,1.2nm,0.7s,baz=38,slow=7.2,SNR=5.1						
WRA	Warramunga Arr	65.69	196	P	P	06 18 23.7	+1.3
	comp=Z,0.4nm,0.8s,baz=13,slow=6.5,SNR=3.0						
NVAR	Mina Array Bea	65.77	59	P	P	06 18 25.4	+2.2
	comp=Z,2.1nm,0.7s,baz=287,slow=11,SNR=4.7						
PDAR	Pinedale Array	68.13	51	P	P	06 18 39.1	+1.0
	comp=Z,1.0nm,0.6s,baz=261,slow=2.0,SNR=12						
NB2	NORSAR Subarra	69.37	340	P	P	06 18 44.1	-1.2
	comp=Z,0.3nm,0.4s,baz=31,slow=6.5						
NOA	NORSAR Array B	69.37	340	P	P	06 18 44.0	-1.2
NOA	NORSAR Array B	69.37	340	P	P	06 18 44.0	-1.3
	comp=Z,0.4nm,0.6s,baz=29,slow=6.4,SNR=6.0						
ASAR	Alice Springs	69.40	195	P	P	06 18 46.9	+1.1
	comp=Z,0.2nm,0.5s,baz=16,slow=7.2,SNR=3.8						
ULM	Lac du Bonnet	69.84	38	P	P	06 18 48.9	+0.6
	comp=Z,0.9nm,0.5s,baz=321,slow=6.5,SNR=2.9						
AKASG	Malin Array Be	71.82	325	P	P	06 18 59.4	-0.9
	comp=Z,0.4nm,0.3s,baz=33,slow=6.1,SNR=5.0						
LANS	Liptovska Anna	76.88	329	eP	P	06 19 30.3	+0.5
LANS	Liptovska Anna	76.88	329	eP	P	06 19 30.2	+0.4
CLL	Collm	77.27	334	iP	P	06 19 31.4	-0.4
	comp=Z,6.0nm,0.6s						
CLL				i		06 19 36.6	
CLL				epP	pP	06 19 49.0	+0.4
CLL	Collm	77.27	334	eP	P	06 19 31.4	-0.4
CLL	Collm	77.27	334	iP	P	06 19 31.4	-0.4
CLL				e*PP	pP	06 19 49.0	+0.4
CLL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRG	Berggiesshubel	77.35	333	eP	P	06 19 31.9	-0.4
	comp=Z,1.4nm,0.4s						
BRG	Berggiesshubel	77.35	333	eP	P	06 19 31.9	-0.4
BRG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
VYHS	Vyhne	77.66	329	eP	P	06 19 34.7	+0.6
VYHS	Vyhne	77.66	329	eP	P	06 19 34.7	+0.6
KHC	Kasperske Hory	78.97	332	eP	P	06 19 41.5	+0.2
KHC	Kasperske Hory	78.97	332	eP	P	06 19 41.5	+0.2
GERES	GERESS Array B	79.17	332	eP	P	06 19 42.3	-0.2
GERES	GERESS Array B	79.17	332	eP	P	06 19 42.3	-0.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
RAO	Raoul Island	79.34	151	P	P	06 19 45.0	+1.7
	comp=Z,199nm,0.3s,baz=270,slow=24,SNR=6.5						
TXAR	Lajitas Array	80.84	58	P	P	06 19 52.9	+1.0
	comp=Z,1.5nm,0.5s,baz=296,slow=4.2,SNR=47						
LPAZ	La Paz	137.67	60	PKIKP	PKPdf	06 27 02.0	-0.6
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPAZ	La Paz	137.67	60	PKP	PKPdf	06 27 01.9	-0.6
	comp=Z,0.8nm,0.7s,baz=349,slow=5.2,SNR=3.1						

UCR 09 06:13:33.2±2.4, 8°.35N×82°.88W, h4km, MD4.4, 5C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVD	David	0.43	78	iP	Pg	06 13 41.9	+0.3
DVD				eS	Sb	06 13 49.6	-0.7
PTJ1	Puerto Jimnez	0.46	294	⇑ eP	Pg	06 13 41.0	-1.0
EDSV	San Vito	0.48	349	⇑ iP	Pg	06 13 42.5	0.0
BRU2	Volcan	0.48	23	⇑ iP	Pg	06 13 43.1	+0.6
BRU2				iS	Sb	06 13 51.9	-0.1
EDPN	Palmar Norte	0.84	317	eP	Pg	06 13 47.2	-2.0
EDBA	Buenos Aires	0.90	334	eP	Pg	06 13 49.4	-1.1
EDLM	Las Mercedes	1.16	323	eP	Pg	06 13 52.9	-2.6

EDDO	Dominical	1.33	313	*e*P	Pn	06 13 56.6	-1.9
LCR2	La Lucha 2	1.78	321	*e*P	Pn	06 14 03.0	-1.9
CVTR	Volcan Turrial	1.88	333⇑	*e*P	Pn	06 14 04.8	-1.7
HDC	Heredia	2.05	324⇑	*e*P	Pn	06 14 09.2	+0.6
HDC				*i* S	Sb	06 14 37.4	+0.4
SRA1	San Ramn	2.34	318	*e*P	Pn	06 14 12.6	0.0
AZU	Azuero	2.64	102⇓	*e*P	Pn	06 14 16.4	-0.2
AZU				*e*P	Pb	06 14 16.8	-4.3
AZU				*i* S	Sn	06 14 49.9	+0.8
FORC	Fortuna	2.75	320	*i* P	Pn	06 14 19.2	+1.1
FORC				*i* S	Sn	06 14 53.7	+1.9
ARE1	Arenal 1	2.78	319⇓	*e*P	Pn	06 14 20.0	+1.5
CEDE	Laguna Cedeo	2.79	320	*e*P	Pn	06 14 21.0	+2.3
JTS	JuntasAbangare	2.81	314	*e*P	Pn	06 14 19.5	+0.5
JTS				*i* S	Sn	06 14 53.1	-0.3
ZANG	Zanguenga, Cho	3.04	78	*e*P	Pn	06 14 19.3	-2.8
ZANG				*e*S	Sn	06 14 59.2	+0.2
BCIP	Isla Barro Col	3.12	75	*i* P	Pn	06 14 22.5	-0.7
BCIP				*i* S	Sn	06 15 02.1	+1.2
PTEN	Parque Tenorio	3.14	319	*i* P	Pn	06 14 25.9	+2.3
PLVR	Palo Verde	3.15	309	*e*P	Pn	06 14 23.6	-0.1
CUI	Cuipilapa	3.22	316	*i* P	Pn	06 14 26.3	+1.7
FRIJ	El Hiral	3.24	74	*e*P	Pn	06 14 24.4	-0.4
COLC	Colonia	3.25	315	*i* P	Pn	06 14 27.0	+1.9
MESS	Mesas	3.30	316	*e*P	Pn	06 14 27.3	+1.6
NY14	Universidad de	3.48	311	*i* P	Pn	06 14 29.5	+1.4
LAPC	Finca la Perla	3.48	314	*i* P	Pn	06 14 29.1	+0.8
GBS3	Finca Las Img	3.51	314	*i* P	Pn	06 14 29.3	+0.7
ACON	Acoyapa	4.25	328	*e*P	Pn	06 14 39.6	+0.9

ROM 09 06:17:15.6±0.1**, 42°.869N**±0°.004×**13°.055E**±0°.010**, h10^{km}, ML1.3**/4**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	Norcia	0.06	129	P	Pg	06 17 18.3	+0.4
NRCA				S	Sg	06 17 19.8	+0.3
NRCA				AML	AML		
	comp=E,772µm,0.5s						
NRCA				AML	AML		
	comp=N,804µm,0.2s						
NRCA				AML	AML		
	comp=E,792µm,0.5s						
NRCA				AML	AML		
	comp=N,718µm,0.9s						
NRCA				AML	AML		
	comp=E,772µm,0.5s						
NRCA				AML	AML		
	comp=N,805µm,0.2s						
NRCA				AML	AML		
	comp=E,792µm,0.5s						
NRCA				AML	AML		
	comp=N,718µm,0.9s						
NRCA				AML	AML		
	comp=E,772µm,0.5s						
NRCA				AML	AML		
	comp=E,792µm,0.5s						
NRCA				AML	AML		
	comp=N,805µm,0.2s						
NRCA				AML	AML		
	comp=N,718µm,0.9s						
FDMO	Fiordimonte	0.17	8	P	Pg	06 17 19.9	+0.5
FDMO				S	Sg	06 17 22.8	+0.9
FDMO				AML	AML		
	comp=E,115µm,0.2s						
FDMO				AML	AML		
	comp=N,104µm,0.8s						
FDMO				AML	AML		
	comp=E,114µm,0.2s						
FDMO				AML	AML		
	comp=N,105µm,0.8s						
FDMO				AML	AML		
	comp=E,114µm,0.2s						
FDMO				AML	AML		
	comp=N,105µm,0.8s						
CESI	CESI - Serrava	0.17	321	P	Pg	06 17 20.2	+0.7
CESI				S	Sg	06 17 23.1	+0.9
CESI				AML	AML		
	comp=E,67µm,0.5s						
CESI				AML	AML		
	comp=N,50µm,1.4s						
CESI				AML	AML		
	comp=E,67µm,0.5s						
CESI				AML	AML		
	comp=N,50µm,1.4s						
CESI				AML	AML		
	comp=N,50µm,1.4s						
CESI				AML	AML		
	comp=E,67µm,0.5s						
LNSS	Leonessa	0.27	182	P	Pg	06 17 21.6	+0.5
LNSS				S	Sb	06 17 26.0	-1.2
SMA1	SAN MARTINO	0.32	139	P	Pg	06 17 22.6	+0.6
ASSB	Assisi San Ben	0.34	301	P	Pg	06 17 22.9	+0.5
ASSB				S	Sb	06 17 28.3	-1.0
SNTG	Esanatoglia	0.40	348	AML	AML		
	comp=E,48µm,1.6s						
SNTG				AML	AML		
	comp=N,43µm,1.6s						
SNTG				AML	AML		
	comp=E,65µm,1.6s						
SNTG				AML	AML		
	comp=N,43µm,1.6s						
SNTG				AML	AML		
	comp=N,43µm,1.6s						
SNTG				AML	AML		
	comp=E,65µm,1.6s						
ATCC	AVT- Casa Cast	0.44	316	P	Pg	06 17 24.6	+0.4
ATCC				S	Sb	06 17 31.8	-0.4

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*IDC **09** 06:35:10.0±1.3, 10°.79S×165°.45E, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx3.9/29, mbtmp4.1/8, ML4.4/2, Error ellipse: s-maj=39.2km s-min=22.5km az=126.0*

*ISCJB **09** 06:35:12.8±0.6, 10°.87S±0°.07×165°.39E±0°.09, h30^{km}, mb4.2/14, Error ellipse: s-maj=12.5km s-min=10.0km az=161.5*

*NEIC **09** 06:35:12.0±0.5, 10°.80S×165°.46E, h10^{km}, mb4.2/9, Error ellipse: s-maj=11.6km s-min=9.7km az=75.0*

ISC 09 06:35:14.9±0.7**, 10°.8S**±0°.1×**165°.4E**±0°.1**, h30^{km}, n30, σ0^{s}.90**/24**, mb4.1**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.57	284	*e*Pn	Pn	06 36 38.1	+2.3
HNR	Honiara	5.57	284	Pn	Pn	06 36 34.2	-1.6
	18nm,0.3s,baz=72,slow=20,SNR=2.5						
DZM	Mont Dzumac	11.22	175	*e*Pn	Pn	06 37 53.0	-0.4
DZM	Mont Dzumac	11.22	175	Pn	Pn	06 37 52.7	-0.7
	1.9nm,0.3s,baz=341,slow=8.1,SNR=19						
ONTNC	Ouen Toro	11.45	175	*e*Pn	Pn	06 37 56.7	+0.1
CTA	Charters Tower	20.62	241	P	P	06 39 53.0	+0.9
	5.1nm,0.7s,baz=68,slow=14,SNR=3.0						
CTAO	Charters Tower	20.62	241	*e*P	Pn	06 39 54.2	-0.2
	5.4nm,0.8s						
NIUE	Niue	25.16	112	*e*P	P	06 40 38.9	+1.1
	121nm,0.9s						
H11S2	WAKE ISLAND Hy	29.16	2	T	T	07 11 55.0	
	baz=182						
H11S3	WAKE ISLAND Hy	29.17	2	T	T	07 11 50.1	
	baz=182						
H11S1	WAKE ISLAND Hy	29.18	2	T	T	07 11 57.1	
	baz=182						
BKZ	Black Stump Fm	29.89	163	*e*P	P	06 41 20.0	0.0
	7.5nm,1.1s						
H11N1	WAKE ISLAND Hy	30.39	3	T	T	07 13 23.9	
	baz=182						
H11N3	WAKE ISLAND Hy	30.39	3	T	T	07 13 26.1	
	baz=182						
H11N2	WAKE ISLAND Hy	30.40	3	T	T	07 13 27.3	
	baz=182						
WRAB	Tennant Creek	31.25	249	*e*P	P	06 41 32.4	+0.1
	2.6nm,1.1s						
WB2	Warramunga Arr	31.25	249	*e*P	P	06 41 32.1	-0.2
	2.4nm,1.0s						
WR1	Warramunga Arr	31.26	249	*e*P	P	06 41 31.7	-0.7
	1.3nm,0.8s						
WRA	Warramunga Arr	31.26	249	P	P	06 41 31.7	-0.7
	1.5nm,0.5s,baz=82,slow=9.0,SNR=26						
AS31	Alice Springs	32.61	243	*e*P	P	06 41 43.3	-0.9
	0.5nm,0.6s						
ASAR	Alice Springs	32.61	243	P	P	06 41 43.5	-0.8
	2.2nm,0.8s,baz=68,slow=9.9,SNR=25						
ASAR				PcP	PcP	06 44 30.1	-0.1
	0.4nm,0.8s,baz=72,slow=3.0,SNR=4.6						
INU	Inuyama	53.21	331	*e*P	P	06 44 30.3	-0.2
	7.3nm,1.0s						
JNU	Nakatsue	54.73	324	*e*P	P	06 44 40.7	-1.0
	8.2nm,1.1s						
PETK	Petropavlovsk-	64.03	355	*e*P	P	06 45 46.9	+1.4
PETK	Petropavlovsk-	64.03	355	P	P	06 45 45.0	-0.5
	4.7nm,0.8s,baz=176,slow=7.7,SNR=4.3						
PEA1	Petropavlovsk-	64.03	355	*e*P	P	06 45 45.0	-0.6
KULM	Kulim	66.44	281	*e*P	P	06 46 02.8	+0.7
	7.7nm,1.1s						
ILAR	Eielson Array	83.41	19	P	P	06 47 38.6	-0.4
	0.3nm,0.6s,baz=236,slow=5.2,SNR=7.7						
MK32	Makanchi Array	93.15	317	*e*P	P	06 48 26.3	0.0
MKAR	Makanchi Array	93.15	317	P	P	06 48 26.3	0.0
	0.1nm,0.5s,baz=94,slow=5.8,SNR=2.5						

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*IDC **09** 06:42:00.9±0.7, 10°.94S×165°.32E, h0^{km}, mb4.3/16, mb1 4.4/18, mb1mx4.4/30, mbtmp4.4/18, ML4.9/2, MS3.6/3, Ms1 3.6/3, ms1mx3.2/27, Error ellipse: s-maj=20.2km s-min=14.7km az=92.0*

*NEIC **09** 06:42:03.4±0.3, 10°.86S×165°.20E, h10^{km}, mb4.6/24, Error ellipse: s-maj=7.6km s-min=5.4km az=84.0*

*ISCJB **09** 06:42:04.4±0.3, 10°.95S±0°.04×165°.16E±0°.05, h30^{km}, mb4.4/42, Error ellipse: s-maj=7.8km s-min=5.5km az=165.1*

ISC 09 06:42:06.2±0.5**, 10°.91S**±0°.07×**165°.27E**±0°.07**, h30^{km}, n79, σ1^{s}.29**/76**, mb4.5**/42**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.44	285	*e*P	Pn	06 43 25.0	-0.4
HNR				*e*S	Sn	06 44 26.0	-1.0
HNR	Honiara	5.44	285	Pn	Pn	06 43 24.4	-0.9
	44nm,0.3s,baz=134,slow=1.0,SNR=7.0						
HNR				Sn	Sn	06 44 30.7	+3.7
	9.5nm,0.3s,baz=32,slow=23,SNR=1.6						
HNR				LR	LR	06 45 35.7	
	comp=Z,813nm,21.6s,baz=128,slow=39						
MARNC	Mare, Loyalty	10.84	166	*e*Pn	Pn	06 44 39.1	-0.3
DZM	Mont Dzumac	11.15	174	Pn	Pn	06 44 43.4	-0.5
	6.8nm,0.3s,baz=317,slow=19,SNR=81						
ONTNC	Ouen Toro	11.39	174	*e*Pn	Pn	06 44 47.4	+0.4
PINNC	Pines Island,	11.82	170	*e*Pn	Pn	06 44 52.6	-0.2
MANU	Manus Island	19.84	295	*e*P	P	06 46 35.3	+0.4
	94nm,0.8s						
CTA	Charters Tower	20.45	241	P	P	06 46 42.4	+0.9
	27nm,0.9s,baz=70,slow=13,SNR=16						
CTAO	Charters Tower	20.45	241	*e*P	P	06 46 42.3	+0.8
	23nm,0.8s						
COEN	Coen	21.79	260	*e*P	P	06 46 55.0	-1.0
	4.9nm,0.8s						
URZ	Urewera	29.23	161	*e*P	P	06 48 07.8	+2.4
	14nm,1.1s						
URZ	Urewera	29.23	161	P	P	06 48 04.0	-1.4
	4.2nm,0.6s,baz=342,slow=7.6,SNR=5.4						
URZ				LR	LR	06 58 45.8	
	comp=Z,209nm,20.3s,baz=349,slow=34						
H11S2	WAKE ISLAND Hy	29.25	3	T	T	07 18 33.1	
	baz=183,slow=76,SNR=42						
H11S3	WAKE ISLAND Hy	29.25	3	T	T	07 18 37.3	
	baz=183,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	29.27	3	T	T	07 18 34.4	
	baz=183,slow=76,SNR=32						
BKZ	Black Stump Fm	29.86	162	*e*P	P	06 48 12.4	+1.3
	7.1nm,0.6s						
STKA	Stephens Creek	30.22	223	*e*P	P	06 48 14.0	-0.3
	1.0nm,0.9s						
STKA	Stephens Creek	30.22	223	P	P	06 48 13.4	-0.9
	1.1nm,0.5s,baz=64,slow=18,SNR=2.3						
H11N1	WAKE ISLAND Hy	30.47	3	T	T	07 20 04.7	
	baz=182,slow=76,SNR=31						
H11N3	WAKE ISLAND Hy	30.48	3	T	T	07 20 06.1	
	baz=182,slow=76,SNR=24						
H11N2	WAKE ISLAND Hy	30.49	3	T	T	07 20 05.9	
	baz=182,slow=76,SNR=17						
WB2	Warramunga Arr	31.08	249	*e*P	P	06 48 20.7	-1.4
	2.5nm,0.6s						
WR1	Warramunga Arr	31.09	249	*e*P	P	06 48 20.9	-1.3
	2.6nm,0.7s						
WRA	Warramunga Arr	31.09	249	P	P	06 48 20.9	-1.3
	2.3nm,0.5s,baz=79,slow=9.1,SNR=42						
BFZ	Birch Farm	31.20	164	*e*P	P	06 48 23.6	+0.8
	18nm,1.1s						
THZ	Tophouse	31.45	169	*e*P	P	06 48 27.9	+2.8
	13nm,0.9s						
KHZ	Kahutara	32.21	168	*e*P	P	06 48 33.9	+2.3
	17nm,1.1s						
AS01	Alice Springs	32.39	243	*e*P	P	06 48 32.2	-1.4
AS31	Alice Springs	32.43	243	*e*P	P	06 48 32.4	-1.6
	1.3nm,0.6s						
ASAR	Alice Springs	32.44	243	P	P	06 48 32.1	-1.9
	4.0nm,0.6s,baz=65,slow=10,SNR=72						
RPZ	Rata Peaks	33.06	172	P	P	06 48 38.6	-0.6
	4.7nm,0.7s,baz=0.0,slow=4.0,SNR=2.1						
MQZ	McQueen's Vall	33.30	170	*e*P	P	06 48 42.3	+1.1
	8.6nm,0.9s						
BBOO	Buckleboo	34.58	226	*e*P	P	06 48 52.9	+0.4
	6.0nm,0.8s						
FITZ	Fitzroy Crossi	38.96	255	*e*P	P	06 49 29.9	-0.1
	8.0nm,1.1s						
FORT	Forrest	39.74	235	*e*P	P	06 49 36.9	+0.6
	18nm,0.9s						
KHLH	Kahului Airpor	49.16	50	*e*P	P	06 50 52.5	+0.8
	49nm,0.9s						
MJAR	Matsushiro Arr	53.64	333	P	P	06 51 23.9	-1.2
	2.4nm,0.7s,baz=164,slow=9.6,SNR=4.7						
MAJO	Matsushiro	53.64	333	*e*P	P	06 51 23.9	-1.2
JNU	Nakatsue	54.70	324	*e*P	P	06 51 32.9	0.0
	9.3nm,0.8s						
ASAJ	Asahikawa	58.52	341	P	P	06 51 60.0	+0.2
	10nm,0.7s,baz=170,slow=4.6,SNR=4.8						
KSRS	Korea Array	59.50	326	P	P	06 52 06.7	0.0
	1.8nm,0.7s,baz=95,slow=26,SNR=8.9						
KSRS				LR	LR	07 17 17.4	
	comp=Z,25nm,18.4s,baz=130,slow=36						
KSAR	Wonju Array Be	59.52	326	P	P	06 52 06.7	-0.1
KS01	Wonju Array Si	59.54	326	*e*P	P	06 52 06.0	-1.0
NJ2	Nanjing	61.60	316	*e*P	P	06 52 22.1	+1.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	62.62	334	P	P	06 52 28.1	+0.4
	comp=Z,2.3nm,0.7s,baz=103,slow=6.9,SNR=5.7						
PETK	Petropavlovsk-	64.09	355	*e*P	P	06 52 38.3	+1.0
PETK	Petropavlovsk-	64.09	355	P	P	06 52 37.9	+0.6
	comp=Z,15nm,1.1s,baz=170,slow=8.8,SNR=2.7						
PEA1	Petropavlovsk-	64.10	355	*e*P	P	06 52 37.9	+0.5
CN2	Changchun	65.39	329	*e*P	P	06 52 44.2	-1.8
CN2				*e*sP	pP	06 52 51.3	-3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	Baijiatuau	68.08	321	*e*P	P	06 53 04.6	+1.4
	comp=Z,3.7nm,0.5s						
XAN	Xi'an	69.69	313	P	P	06 53 13.4	0.0
XAN				pP	pP	06 53 19.8	-2.2
XAN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMI	Kunming	70.65	302	P	P	06 53 21.3	+1.6
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,250nm,5.0s						
HHC	Hu-ho-hao-te	71.43	320	*e*P	P	06 53 25.1	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,270nm,6.1s						
CMAR	Chiang Mai Arr	71.63	294	P	P	06 53 24.4	-1.1
	comp=Z,0.6nm,0.3s,baz=109,slow=6.8,SNR=2.0						
LZH	Lanzhou	74.32	312	*e*P	P	06 53 43.5	+2.2
LZH				pP	pP	06 53 48.2	-1.8
LZH				sP	sP	06 53 50.3	-2.9
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
SONA0	Songino Array	78.28	324	*e*P	P	06 54 03.1	-0.4
SONM	Songino Array	78.28	324	P	P	06 54 03.1	-0.4
	comp=Z,0.5nm,0.5s,baz=142,slow=6.1,SNR=4.7						
GTA	Gaotai	78.63	314	*e*P	P	06 54 05.2	-0.4
GTA				pP	pP	06 54 09.8	-4.5
GTA				sP	PcP	06 54 12.5	-2.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,8.4s						
GTA				LR	LR		
	comp=N,96nm,18.4s						
GTA				LR	LR		
	comp=E,590nm,17.5s						
GTA				LR	LR		
	comp=Z,180nm,17.5s						
QSPA	South Pole Qui	79.09	180	*e*P	P	06 54 08.6	+0.9
	comp=Z,4.5nm,1.0s						
CAST	Castle Rocks	80.97	18	*e*P	P	06 54 18.9	+1.3
	comp=Z,3.6nm,1.2s						
RND	Reindeer	81.96	19	*e*P	P	06 54 22.6	-0.3
IM3	Indian Mountai	82.42	16	*e*P	P	06 54 25.7	+0.5
HDA	Harding Lake	83.27	19	*e*P	P	06 54 30.9	+1.3
	comp=Z,5.9nm,1.0s						
IL1	Eielson Array	83.54	19	*e*P	P	06 54 30.9	-0.1
ILAR	Eielson Array	83.54	19	P	P	06 54 30.6	-0.4
	comp=Z,0.6nm,0.6s,baz=234,slow=4.9,SNR=11						
ILB	Eielson Array	83.54	19	*e*P	P	06 54 31.4	+0.4
	comp=Z,1.6nm,1.0s						
SCRK	Sand Creek	83.95	20	*e*P	P	06 54 33.0	-0.3
	comp=Z,3.3nm,1.1s						
WMQ	Urumqi	88.67	315	*e*P	P	06 54 58.4	+1.5
MK01	Makanchi Array	93.09	317	*e*P	P	06 55 16.8	-0.6
MK32	Makanchi Array	93.11	317	*e*P	P	06 55 16.4	-0.9
MKAR	Makanchi Array	93.11	317	P	P	06 55 16.4	-0.9
	comp=Z,1.0nm,0.6s,baz=95,slow=6.6,SNR=12						
MKAR				PKKP	PKKPdf	07 12 27.1	+0.5
	comp=Z,0.3nm,0.8s,baz=296,slow=2.5,SNR=2.9						
ZALV	Zalesovo Beam	93.17	324	P	P	06 55 14.2	-3.3
	comp=Z,0.5nm,0.6s,baz=101,slow=2.9,SNR=2.8						
ZAA1	Zalesovo Array	93.18	324	*e*P	P	06 55 14.2	-3.3
YKA	Yellowknife Ar	95.07	27	P	P	06 55 24.1	-1.8
	comp=Z,0.1nm,0.7s,baz=258,slow=4.4,SNR=3.4						
YKB5	Yellowknife Ar	95.07	27	*e*P	P	06 55 26.6	+0.6
LPAZ	La Paz	120.66	116	PKP	PKPdf	07 00 54.9	-2.1
	comp=Z,0.4nm,0.5s,baz=247,slow=13,SNR=2.2						
BOSA	Boshof	124.89	224	*e*PKPdf	PKiKP	07 01 04.7	+0.2
BOSA	Boshof	124.89	224	PKP	PKPdf	07 01 04.1	-0.2
	comp=Z,1.0nm,0.7s,baz=124,slow=3.6,SNR=2.8						
KOWA	Kowa	168.96	290	*e*PKPdf	PKPdf	07 02 09.9	-1.6

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*IDC **09** 06:44:20.4±0.5, 11°.84S×165°.17E, h0^{km}, mb4.6/19, mb1 4.7/22, mb1mx4.7/33, mbtmp4.6/22, ML4.7/3, MS3.9/7, Ms1 3.9/7, ms1mx3.5/26, Error ellipse: s-maj=17.9km s-min=14.1km az=99.0*

*ISCJB **09** 06:44:21.9±0.2, 11°.89S±0°.03×165°.04E±0°.03, h15^{km}, mb4.8/130, MS4.1/7, Error ellipse: s-maj=4.9km s-min=4.4km az=144.7*

*NEIC **09** 06:44:22.6±0.1, 11°.83S×165°.10E, h10^{km}, mb4.9/109, Error ellipse: s-maj=4.1km s-min=3.3km az=127.0*

ISC 09 06:44:24.8±2.2**, 11°.93S**±0°.06×**165°.16E**±0°.06**, h25^{km}**±15^{km}**, n204, σ1^{s}.13**/213**, mb4.9**/130**, MS4.0**/7**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.69	295	*e*P	Pn	06 45 47.0	-0.8
HNR				*e*S	Sn	06 46 53.0	+0.6
HNR	Honiara	5.69	295	*e*Pn	Pn	06 45 47.0	-0.8
HNR				*e*Sn	Sn	06 46 49.9	-2.5
HNR	Honiara	5.69	295	Pn	Pn	06 45 46.4	-1.4
	34nm,0.3s,baz=160,slow=3.8,SNR=1.8						
HNR				Sn	Sn	06 46 49.9	-2.5
	24nm,0.3s,baz=34,slow=21,SNR=1.5						
MARNC	Mare, Loyalty	9.89	164	*e*Pn	Pn	06 46 46.5	+1.1
DZM	Mont Dzumac	10.16	173	*e*Pn	Pn	06 46 49.9	+0.6
	56nm,0.3s						
DZM				*e*LR	LR	06 49 13.2	
	comp=Z,778nm,24.8s						
DZM	Mont Dzumac	10.16	173	Pn	Pn	06 46 50.4	+1.1
	13nm,0.3s,baz=299,slow=9.1,SNR=28						
DZM				Sn	Sn	06 48 38.2	-4.3
	baz=293,slow=20,SNR=1.3						
DZM				LR	LR	06 50 04.3	
	comp=Z,843nm,18.7s,baz=8.5,slow=34						
ONTNC	Ouen Toro	10.40	173	*e*Pn	Pn	06 46 53.7	+1.3
PINNC	Pines Island,	10.85	169	*e*Pn	Pn	06 47 00.2	+1.6
EIDS	Eidsvold	18.86	223	*e*P	Pn	06 48 44.9	+1.0
	34nm,1.0s						
CTA	Charters Tower	19.89	244	P	P	06 48 55.7	+1.2
	0.5nm,0.3s,baz=73,slow=12,SNR=12						
CTA				LR	LR	06 55 46.7	
	comp=Z,620nm,18.1s,baz=66,slow=34						
CTAO	Charters Tower	19.89	244	*e*P	P	06 48 55.7	+1.2
	41nm,1.0s						
COEN	Coen	21.52	262	*e*P	P	06 49 12.5	+0.3
	21nm,0.9s						
ARMA	Armidale	22.27	212	*e*P	P	06 49 21.9	+1.6
	69nm,0.9s						
OUZ	Omahuta	24.42	163	*e*P	P	06 49 45.1	+3.7
	46nm,1.2s						
MXZ	Matakaoa Point	28.12	157	*e*P	P	06 50 17.1	+2.3
	66nm,1.1s						
URZ	Urewera	28.31	160	*e*P	P	06 50 18.2	+1.7
	12nm,0.8s						
URZ				*e*PcP	PcP	06 53 27.9	-1.3
URZ	Urewera	28.31	160	P	P	06 50 17.4	+0.9
	13nm,1.0s,baz=338,slow=16,SNR=4.1						
URZ				PcP	PcP	06 53 27.9	-1.3
	6.1nm,1.0s,baz=336,slow=12,SNR=1.9						
BKZ	Black Stump Fm	28.94	162	*e*P	P	06 50 23.5	+1.3
	19nm,0.9s						
STKA	Stephens Creek	29.41	224	*e*P	P	06 50 26.4	0.0
	2.2nm,0.8s						
STKA				PcP	PcP	06 53 31.7	-0.4
STKA	Stephens Creek	29.41	224	P	P	06 50 26.1	-0.3
	9.5nm,0.8s,baz=23,slow=9.4,SNR=13						
STKA				PcP	PcP	06 53 31.7	-0.4
	2.0nm,0.7s,baz=72,slow=16,SNR=3.1						
STKA				LR	LR	07 01 41.4	
	comp=Z,476nm,18.3s,baz=31,slow=35						
H11S2	WAKE ISLAND Hy	30.26	3	T	T	07 22 25.0	
	baz=183						
BFZ	Birch Farm	30.26	163	*e*P	P	06 50 34.4	+0.6
	22nm,0.8s						
H11S3	WAKE ISLAND Hy	30.27	3	T	T	07 22 14.0	
	baz=183,slow=74						
H11S1	WAKE ISLAND Hy	30.28	3	T	T	07 22 08.5	
	baz=183,slow=74						
WRAB	Tennant Creek	30.64	251	*e*P	P	06 50 36.8	-0.6
WRAB				*e*PcP	PcP	06 53 35.8	+0.3
WB2	Warramunga Arr	30.64	251	*e*P	P	06 50 36.9	-0.5
	38nm,1.0s						
WB2				*e*PcP	PcP	06 53 35.9	+0.4
WR1	Warramunga Arr	30.65	251	*e*P	P	06 50 36.5	-1.0
	45nm,1.0s						
WR1				*e*PcP	PcP	06 53 35.4	-0.2
WRA	Warramunga Arr	30.65	251	P	P	06 50 36.5	-1.0
	23nm,1.0s,baz=80,slow=9.6,SNR=49						
WRA				PcP	PcP	06 53 35.4	-0.2
	2.9nm,0.8s,baz=77,slow=2.7,SNR=14						
WRA				LR	LR	07 01 17.9	
	comp=Z,312nm,21.0s,baz=70,slow=33						
TOO	Toolangi	31.03	211	*e*P	P	06 50 41.9	+1.3
	16nm,0.9s						
H11N1	WAKE ISLAND Hy	31.49	3	T	T	07 23 41.2	
	baz=182						
H11N3	WAKE ISLAND Hy	31.49	3	T	T	07 23 44.9	
	baz=182						
H11N2	WAKE ISLAND Hy	31.50	3	T	T	07 24 10.7	
	baz=182						
OXZ	Oxford	31.85	170	*e*P	P	06 50 48.3	+0.5
	18nm,1.0s						
AS01	Alice Springs	31.85	244	*e*P	P	06 50 47.0	-1.1
AS01				*e*PcP	PcP	06 53 38.4	-0.3
AS31	Alice Springs	31.89	244	*e*P	P	06 50 47.4	-1.1
	3.5nm,0.8s						
ASAR	Alice Springs	31.89	244	P	P	06 50 47.1	-1.3
	12nm,0.7s,baz=73,slow=9.5,SNR=41						
ASAR				PcP	PcP	06 53 38.5	-0.3
	2.1nm,0.8s,baz=69,slow=3.0,SNR=10						
ASAR				LR	LR	07 02 35.4	
	comp=Z,349nm,19.6s,baz=84,slow=34						
RPZ	Rata Peaks	32.08	172	*e*P	P	06 50 51.4	+1.6
	23nm,0.9s						
RPZ	Rata Peaks	32.08	172	P	P	06 50 50.2	+0.4
	14nm,0.8s,baz=95,slow=2.0,SNR=5.9						
BBOO	Buckleboo	33.81	227	*e*P	P	06 51 04.8	-0.3
	18nm,0.9s						
BNDI	Bandanaira	35.63	279	P	P	06 51 20.4	-0.6
FITZ	Fitzroy Crossi	38.61	256	*e*P	P	06 51 45.5	-0.7
	21nm,0.8s						
FORT	Forrest	39.07	235	*e*P	P	06 51 50.0	0.0
	52nm,0.9s						
SOEI	Soe	40.20	269	P	P	06 52 08.8	+9.1

PPT	Papeete	44.05	103	LR	LR	07 09 07.1	
	comp=Z,119nm,18.5s,baz=312,slow=34						
PPT2	Papeete2	44.05	103	eLQ	LQ	07 03 08.8	
	339nm,28.2s						
PPT2				eLR	LR	07 04 58.0	
	comp=Z,298nm,28.0s						
MBWA	Marble Bar	44.38	252	eP	P	06 52 33.7	+0.1
	23nm,1.0s						
BNSI	Bone	45.17	276	P	P	06 52 40.9	+0.9
NWAO	Narrogin (SRO)	48.50	236	eP	P	06 53 05.6	-0.3
	20nm,0.8s						
MORW	Morawa	48.70	242	eP	P	06 53 07.7	+0.2
	32nm,0.8s						
KKM	Kota Kinabalu	51.85	288	eP	P	06 53 30.9	-0.6
	26nm,1.0s						
TAOE	Nuku Hiva Isla	53.81	92	eLR	LR	07 09 29.0	
	comp=Z,139nm,23.5s						
MJAR	Matsushiro Arr	54.49	333	P	P	06 53 49.0	-1.5
	4.2nm,0.7s,baz=167,slow=7.5,SNR=7.8						
MAJO	Matsushiro	54.49	333	eP	P	06 53 49.0	-1.5
MJB9	Matsu-Tunnel	54.50	333	eP	P	06 53 49.5	-1.0
	10nm,1.0s						
JNU	Nakatsue	55.46	325	eP	P	06 53 57.1	-0.5
	7.9nm,1.0s						
NACB	Ninganchiao	55.66	310	eP	P	06 54 00.3	+1.1
	22nm,1.1s						
KSM	Kuching	56.08	280	eP	P	06 54 01.6	-0.9
	10nm,1.0s						
ASAJ	Asahikawa	59.44	341	P	P	06 54 24.2	-1.1
	21nm,0.9s,baz=202,slow=6.6,SNR=4.5						
SSE	Sheshan	60.09	317	eP	P	06 54 29.1	-1.0
	16nm,0.8s						
KSRS	Korea Array	60.28	326	P	P	06 54 30.2	-1.0
	1.9nm,1.0s,baz=141,slow=8.1,SNR=6.5						
KS15	Wonju Array Si	60.29	326	eP	P	06 54 30.5	-0.9
	8.8nm,1.1s						
KSAR	Wonju Array Be	60.29	326	P	P	06 54 30.2	-1.1
KS01	Wonju Array Si	60.31	326	eP	P	06 54 31.8	+0.2
NJ2	Nanjing	62.25	316	eP	P	06 54 43.9	-0.8
NJ2				pmax	pmax		
	comp=Z,12nm,1.2s						
USA0B	Ussuriysk Arra	63.48	334	eP	P	06 54 53.7	+1.0
	comp=Z,2.4nm,1.1s						
USRK	Ussuriysk Ar.	63.48	334	P	P	06 54 52.5	-0.2
	comp=Z,2.9nm,0.7s,baz=142,slow=9.6,SNR=6.6						
BKNI	Bangkinang	64.79	276	eP	P	06 55 02.6	+0.6
	comp=Z,52nm,0.6s						
PETK	Petropavlovsk-	65.09	355	P	P	06 55 03.6	+0.5
	comp=Z,7.4nm,0.9s,baz=145,slow=5.3,SNR=3.2						
PEA1	Petropavlovsk-	65.09	355	eP	P	06 55 03.6	+0.5
IPM	Ipoh	65.81	280	eP	P	06 55 08.7	+0.1
	comp=Z,16nm,1.1s						
CN2	Changchun	66.20	330	eP	P	06 55 07.4	-3.1
CN2				esP	pP	06 55 14.4	-2.4
MNSI	Mandailing Nat	66.31	276	P	P	06 55 11.6	-0.2
ENH	Enshi	68.01	310	eP	P	06 55 21.4	-0.9
	comp=Z,7.8nm,1.0s						
GYA	Guiyang	68.44	305	P	P	06 55 27.2	+2.0
GYA				pP	pP	06 55 30.0	-1.5
GYA				PP	PP	06 58 00.9	+4.3
GYA				S	S	07 04 27.6	+1.8
GYA				SKS	SKSac	07 05 22.8	-0.3
GYA	Guiyang	68.44	305	SS	SS	07 08 51.9	+1.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,530nm,18.4s						
GYA				LR	LR		
	comp=E,520nm,18.1s						
GYA				LR	LR		
	comp=Z,550nm,18.6s						
BJI	Beijing	68.81	322	P	P	06 55 28.0	+1.0
BJI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN	Xi'an	70.29	313	P	P	06 55 35.6	-0.8
XAN				pP	sP	06 55 44.6	-0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN	Xi'an	70.29	313	eP	P	06 55 36.0	-0.4
	comp=Z,4.4nm,0.9s						
UTHA	Uthaitani	70.54	291	P	P	06 55 40.8	+2.6
KMI	Kunming	71.09	302	P	P	06 55 43.9	+2.2
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
KMI				pmax	pmax		
	comp=Z,100nm,5.8s						
CM01	Chiang Mai Arr	71.92	294	eP	P	06 55 47.1	+0.6
CM31	Chiang Mai Arr	71.94	294	eP	P	06 55 47.1	+0.4
	comp=Z,7.6nm,0.9s						
CMAR	Chiang Mai Arr	71.94	294	P	P	06 55 46.6	-0.1
	comp=Z,0.9nm,0.5s,baz=192,slow=20,SNR=5.2						
CMAR				LR	LR	07 26 22.0	
	comp=Z,10nm,20.1s,baz=135,slow=35						
CHTO	Chiang Mai	72.06	294	eP	P	06 55 47.3	-0.1
	comp=Z,4.2nm,0.9s						
HHC	Hu-ho-hao-te	72.13	320	eP	P	06 55 49.3	+1.8
HHC				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
CD2	Chengdu	72.68	308	P	P	06 55 52.5	+1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
LZH	Lanzhou	74.92	313	eP	P	06 56 06.7	+2.6
LZH				pP	pP	06 56 11.3	+0.8
LZH				sP	sP	06 56 14.5	+1.7
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,89nm,4.1s						
GAMB	Gambell	77.53	10	eP	P	06 56 18.8	+0.8
	comp=Z,9.3nm,1.1s						
GAMB				ePcP	PcP	06 56 27.9	-0.3
QSPA	South Pole Qui	78.08	180	eP	P	06 56 21.6	+0.2
	comp=Z,26nm,1.0s						
ULN	Ulaanbaatar	78.68	324	eP	P	06 56 24.4	-0.6
	comp=Z,6.4nm,1.0s						
SONA0	Songino Array	79.04	324	eP	P	06 56 26.4	-0.5
SONM	Songino Array	79.04	324	P	P	06 56 26.4	-0.5
	comp=Z,1.1nm,0.8s,baz=143,slow=6.7,SNR=6.3						
SONA1	Songino Array	79.04	324	eP	P	06 56 26.8	-0.1
SVW2	Sparrevohn	79.12	18	eP	P	06 56 27.5	+0.5
	comp=Z,9.9nm,1.0s						
GTA	Gaotai	79.26	314	⇑P	P	06 56 28.9	+0.6
GTA				pP	pP	06 56 33.2	-1.6
GTA				sP	PcP	06 56 36.0	-0.5
GTA	Gaotai	79.26	314	S	S	07 06 29.4	+2.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,92nm,7.3s						
GTA				LR	LR		
	comp=N,170nm,20.0s						
GTA				LR	LR		
	comp=E,270nm,20.3s						
GTA				LR	LR		
	comp=Z,200nm,18.7s						
ANM	Nome	79.47	12	eP	P	06 56 29.5	+0.7
	comp=Z,3.8nm,1.1s						
BRLK	Bradley Lake	79.66	21	eP	P	06 56 31.4	+1.5
	comp=Z,17nm,0.9s						
BILL	Bilibino	79.76	0	eP	P	06 56 30.4	+0.2
	comp=Z,17nm,1.0s						
CAST	Castle Rocks	81.96	18	eP	P	06 56 41.8	-0.4
	comp=Z,10.0nm,0.9s						
KLU	Klutina	82.62	21	eP	P	06 56 45.3	-0.4
	comp=Z,16nm,1.2s						
RND	Reindeer	82.95	19	eP	P	06 56 48.8	+1.4
	comp=Z,9.3nm,1.0s						
RDOG	Red Dog Mine	83.00	12	eP	P	06 56 48.6	+1.2
	comp=Z,7.6nm,0.8s						
MCK	McKinley	83.16	19	eP	P	06 56 48.5	+0.1
	comp=Z,10nm,1.2s						
IM3	Indian Mountai	83.42	16	eP	P	06 56 50.6	+0.9
MLY	Manley	83.55	17	eP	P	06 56 50.8	+0.5
	comp=Z,3.0nm,1.0s						
WRH	Wood River Hil	83.94	19	eP	P	06 56 52.1	-0.2
	comp=Z,10nm,1.0s						
KEBM	Edson Butte	84.21	44	eP	P	06 56 54.5	+0.2
	comp=Z,55nm,1.2s						
MDM	Murphy Dome	84.24	18	eP	P	06 56 53.3	-0.6
	comp=Z,11nm,1.2s						
HDA	Harding Lake	84.26	19	eP	P	06 56 53.1	-0.9
	comp=Z,16nm,1.0s						
COLA	College	84.30	18	eP	P	06 56 53.8	-0.3
	comp=Z,10.0nm,0.7s						
RIDG	Independ'e Rid	84.49	20	eP	P	06 56 54.6	-0.7
	comp=Z,28nm,1.2s						
ILAR	Eielson Array	84.52	19	P	P	06 56 54.2	-1.1
	comp=Z,3.0nm,0.7s,baz=240,slow=5.1,SNR=25						
ILB	Eielson Array	84.52	19	eP	P	06 56 54.4	-0.9
	comp=Z,4.9nm,0.8s						
IL1	Eielson Array	84.53	19	eP	P	06 56 54.5	-0.8
DOT	Dot Lake	84.69	20	eP	P	06 56 57.5	+1.2
	comp=Z,15nm,1.0s						
PAGB	Antelope Grade	84.71	52	eP	P	06 56 57.2	+0.3
	comp=Z,6.6nm,0.9s						
SCRK	Sand Creek	84.94	20	eP	P	06 56 57.0	-0.6
	comp=Z,29nm,1.2s						
ORV	Oroville	85.03	48	eP	P	06 56 57.8	-0.6
	comp=Z,4.7nm,0.8s						
HUMO	Hull Mountain	85.05	45	eP	P	06 56 59.4	+0.9
	comp=Z,11nm,1.0s						
AFDM	Forest Hills D	85.21	49	eP	P	06 57 00.3	+0.9
	comp=Z,8.0nm,0.9s						
CMB	Columbia Colle	85.34	50	eP	P	06 57 00.7	+0.6
	comp=Z,7.0nm,0.9s						
BEKR	Beckworth	85.96	48	eP	P	06 57 04.1	+0.8
	comp=Z,5.5nm,0.8s						
MDPB	Devils Postpil	86.20	50	eP	P	06 57 05.3	+0.7
	comp=Z,7.4nm,0.8s						
WAKR	Walker	86.20	50	eP	P	06 57 04.8	+0.2
	comp=Z,11nm,1.1s						
FYU	Fort Yukon	86.25	18	eP	P	06 57 06.4	+2.6
	comp=Z,2.7nm,0.6s						
OMMB	Old Mammoth Mi	86.25	51	eP	P	06 57 04.3	-0.6
	comp=Z,5.3nm,1.0s						
PNTR	Pine Nut	86.27	49	eP	P	06 57 03.4	-1.5
	comp=Z,8.8nm,0.9s						
DAWY	Dawson	86.58	21	eP	P	06 57 05.3	-0.3
	comp=Z,2.8nm,0.8s						
PAHR	Pah Rah Range	86.62	48	eP	P	06 57 07.5	+1.0
	comp=Z,12nm,1.2s						
NV01	Mina Array Sit	87.03	50	eP	P	06 57 08.1	-0.5
NVAR	Mina Array Bea	87.03	50	P	P	06 57 08.5	-0.1
	comp=Z,4.8nm,0.9s,baz=238,slow=7.0,SNR=8.2						
PFO	Pinyon Flats O	87.05	55	eP	P	06 57 07.8	-1.0
	comp=Z,6.9nm,1.1s						
NV11	Mina Array Sit	87.14	50	eP	P	06 57 09.7	+0.7
	comp=Z,0.7nm,1.1s						
D05A	Enumclaw	87.32	41	eP	P	06 57 10.6	+1.0
	comp=Z,10nm,1.1s						
KVN	Kaiserville	87.36	49	eP	P	06 57 09.1	-1.2
	comp=Z,4.8nm,0.9s						
WVOR	Wild Horse Val	88.01	46	eP	P	06 57 13.2	0.0
	comp=Z,4.9nm,1.1s						
J08A	Circle Bar Ran	88.41	45	eP	P	06 57 15.3	+0.3
	comp=Z,5.8nm,0.8s						
G08A	Pilot Rock	88.67	43	eP	P	06 57 16.1	-0.1
	comp=Z,3.3nm,0.9s						
EPYK	Eagle Plains	88.83	20	eP	P	06 57 16.9	+0.6
	comp=Z,6.8nm,1.1s						
SHPR	Sheep Range	88.87	52	eP	P	06 57 18.0	+0.6
	comp=Z,4.0nm,1.0s						
R11A	Troy Canyon, C	89.05	51	eP	P	06 57 19.0	+0.8
	comp=Z,3.8nm,1.1s						
WMQ	Urumqi	89.31	315	eP	P	06 57 20.2	+1.0
B08A	Colville Reser	89.40	40	eP	P	06 57 19.3	-0.2
	comp=Z,1.2nm,0.6s						
W13A	Hualapai Mount	89.50	54	eP	P	06 57 20.7	+0.2
	comp=Z,6.1nm,1.1s						
BMO	Blue Mountains	89.66	44	eP	P	06 57 21.7	+0.9
	comp=Z,1.4nm,0.9s						
ELK	Elko	89.96	48	eP	P	06 57 22.9	+0.4
	comp=Z,2.8nm,1.0s						
F10A	Beach Ranch, E	90.04	43	eP	P	06 57 23.4	+0.8
	comp=Z,3.5nm,0.9s						
MFID	Camas Ranch	90.27	46	eP	P	06 57 24.7	+0.9
PSUT	Pine Spring	90.41	51	eP	P	06 57 24.5	-0.1
	comp=Z,4.9nm,0.8s						
LCMT	Little Creek M	90.49	52	eP	P	06 57 25.3	+0.3
	comp=Z,5.7nm,0.9s						
CCUT	Cedar City	90.53	52	eP	P	06 57 25.6	+0.3
	comp=Z,6.8nm,0.9s						
SZCU	Shurtz Canyon	90.76	52	eP	P	06 57 26.5	+0.3
	comp=Z,5.8nm,1.0s						
KNB	Kanab	90.82	52	eP	P	06 57 26.4	-0.1
	comp=Z,10nm,1.2s						
U15A	North Rim	91.09	53	eP	P	06 57 28.2	+0.3
	comp=Z,9.1nm,0.8s						
X16A	Lo Mia Camp, P	91.29	55	eP	P	06 57 30.8	+2.0
	comp=Z,6.3nm,0.9s						
HLID	Hailey	91.30	46	eP	P	06 57 28.1	-0.4
	comp=Z,4.2nm,0.9s						
TCRU	Three Creeks R	91.49	51	eP	P	06 57 29.5	-0.2
	comp=Z,11nm,0.4s						
MTPU	Mount Pierson	91.56	52	eP	P	06 57 30.5	+0.4
	comp=Z,7.2nm,0.9s						
WUAZ	Wupatki	91.60	54	eP	P	06 57 30.4	+0.2
	comp=Z,5.2nm,0.8s						
DUG	Dugway, Tooele	91.60	49	eP	P	06 57 31.5	+1.4
	comp=Z,2.7nm,0.9s						
BGU	Big Grassy Mou	91.62	49	eP	P	06 57 29.8	-0.3
	comp=Z,7.0nm,1.2s						
MSU	Marysvale	91.68	51	eP	P	06 57 30.7	+0.1
HVU	Hansel Valley	92.02	48	eP	P	06 57 32.3	+0.3
	comp=Z,9.7nm,1.0s						
NLU	North Lily Min	92.09	50	eP	P	06 57 32.9	+0.4
	comp=Z,5.5nm,1.0s						
SPUT	South Promonto	92.14	48	eP	P	06 57 32.6	+0.1
	comp=Z,5.6nm,1.2s						
MPU	Maple Canyon	92.44	50	eP	P	06 57 33.6	-0.4
	comp=Z,4.9nm,1.1s						
X18A	Snowflake	92.51	55	eP	P	06 57 35.8	+1.4
	comp=Z,5.2nm,1.1s						
DLMT	Dillon	93.01	44	eP	P	06 57 35.8	-0.6
	comp=Z,7.4nm,0.9s						
BOZ	Bozeman (W)	93.72	44	eP	P	06 57 39.6	-0.1
	comp=Z,0.9nm,1.0s						
MK01	Makanchi Array	93.76	317	eP	P	06 57 38.7	-1.0
MK31	Makanchi Array	93.77	317	eP	P	06 57 39.1	-0.6
	comp=Z,2.5nm,1.1s						
MK32	Makanchi Array	93.77	317	eP	P	06 57 39.1	-0.7
MKAR	Makanchi Array	93.77	317	eP	P	06 57 39.2	-0.6
	comp=Z,12nm,0.8s						
MKAR	Makanchi Array	93.77	317	P	P	06 57 39.1	-0.6
	comp=Z,1.6nm,0.7s,baz=93,slow=6.7,SNR=14						
ZAA0	Zalesovo Array	93.93	324	eP	P	06 57 40.2	0.0
	comp=Z,3.8nm,1.1s						
ZALV	Zalesovo Beam	93.93	324	eP	P	06 57 38.4	-1.8
ZALV	Zalesovo Beam	93.93	324	P	P	06 57 39.0	-1.3
	comp=Z,1.3nm,0.8s,baz=123,slow=5.5,SNR=6.2						
ZAA1	Zalesovo Array	93.93	324	eP	P	06 57 39.0	-1.3
MAKZ	Makanchi	93.98	317	eP	P	06 57 39.5	-1.2
	comp=Z,3.5nm,1.1s						
PD31	Pinedale Array	94.57	47	eP	P	06 57 43.0	-0.7
	comp=Z,1.1nm,1.0s						
PDAR	Pinedale Array	94.57	47	eP	P	06 57 43.4	-0.4
PDAR	Pinedale Array	94.57	47	P	P	06 57 42.6	-1.2
	comp=Z,0.5nm,0.7s,baz=126,slow=7.5,SNR=5.1						
YKA	Yellowknife Ar	96.01	27	P	P	06 57 47.0	-2.5
	comp=Z,1.2nm,0.9s,baz=257,slow=4.7,SNR=13						
YKB5	Yellowknife Ar	96.01	27	eP	P	06 57 49.1	-0.5
LTX	Lajitas	96.75	62	eP	P	06 57 54.4	+0.6
TXAR	Lajitas Array	96.75	62	P	P	06 57 54.4	+0.6
	comp=Z,0.4nm,0.8s,baz=219,slow=4.4,SNR=4.5						
ARA0	ARCESS Array S	117.04	345	ePKPdf	PKPdf	07 03 05.7	-1.3
ARCES	ARCESS Array B	117.04	345	PKP	PKPdf	07 03 05.7	-1.3
	comp=Z,1.4nm,0.9s,baz=286,slow=2.1,SNR=5.7						
MNMC	Minye Minye	117.84	119	ePKPdf	PKPdf	07 03 09.7	-0.7
LPAZ	La Paz	120.30	117	ePKPdf	PKPdf	07 03 14.7	-0.9
LPAZ	La Paz	120.30	117	PKP	PKPdf	07 03 15.2	-0.4
	comp=Z,1.8nm,0.8s,baz=235,slow=3.3,SNR=5.0						
BOSA	Boshof	124.09	223	ePKPdf	PKPdf	07 03 22.3	+0.3
BOSA	Boshof	124.09	223	PKP	PKPdf	07 03 21.6	-0.4
	comp=Z,1.6nm,0.7s,baz=273,slow=4.8,SNR=2.3						
SDV	Santo Domingo	125.11	87	ePKPdf	PKPdf	07 03 22.8	-1.6
SDV	Santo Domingo	125.11	87	PKP	PKPdf	07 03 22.9	-1.4
	comp=Z,2.3nm,0.8s,baz=326,slow=6.6,SNR=2.5						
AKASG	Malin Array Be	127.28	326	PKP	PKPdf	07 03 25.8	-1.3
	comp=Z,0.3nm,0.3s,baz=44,slow=2.8,SNR=3.2						
AKBB	Malin Array Si	127.28	326	ePKPdf	PKiKP	07 03 28.7	+1.0
BDFB	Brasilia	137.24	129	PKP	PKPdf	07 03 45.6	-1.5
	comp=Z,1.4nm,0.5s,baz=143,slow=4.8,SNR=3.5						
KEST	Kesra	147.75	321	ePKPbc	PKPbc	07 04 08.4	+0.4
KEST	Kesra	147.75	321	PKPbc	PKPdf	07 04 07.0	+1.8
	comp=Z,12nm,1.1s,baz=31,slow=5.9,SNR=3.5						
ESDC	Sonseca Array	150.73	343	PKPbc	PKPbc	07 04 14.6	-0.7
	comp=Z,0.7nm,0.6s,baz=15,slow=3.0,SNR=4.4						
TORD	Torodi Ar. Bea	163.81	276	PKP	PKPdf	07 04 25.6	-1.2
	comp=Z,1.1nm,1.0s,baz=140,slow=3.2,SNR=3.9						
TORD				PKPab	PKPab	07 05 18.5	-0.8
	comp=Z,1.0nm,1.0s,baz=57,slow=5.5,SNR=3.8						
TOA1	Torodi Ar. Sit	163.82	276	ePKPdf	PKPdf	07 04 25.6	-1.2
TOA1				ePKPab	PKPab	07 05 18.5	-0.8

MAN 09 06:47:50.6, 10°.34N×124°.94E, h26^{km}, mb4.0, ML2.8, MS2.4, 2C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	Maasin	0.21	201	eP	Pn	06 47 58.6	+0.5
MSLP				eS	Sb	06 48 05.5	+4.9
SCPH	Surigao	0.77	135	⇑eP	Pb	06 48 00.1	-5.4
PLP	Palo	0.83	3	⇑eP	Pb	06 48 06.1	-0.2
PLP				i S	Sn	06 48 18.6	+0.6
BESP	Borongan	1.35	21	eP	Pn	06 48 12.9	-0.9
BESP				eS	Sb	06 48 31.8	-0.3

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*IDC **09** 06:56:12.8±0.9, 10°.75S×165°.32E, h0^{km}, mb3.9/10, mb1 4.2/12, mb1mx4.0/35, mbtmp4.1/12, ML4.7/2, MS3.7/6, Ms1 3.7/6, ms1mx3.3/24, Error ellipse: s-maj=25.2km s-min=20.0km az=110.0*

*NEIC **09** 06:56:15.0±0.4, 10°.66S×165°.30E, h10^{km}, mb4.3/11, Error ellipse: s-maj=10.8km s-min=8.9km az=93.0*

*ISCJB **09** 06:56:16.3±0.4, 10°.85S±0°.05×165°.29E±0°.07, h31^{km}, mb4.1/17, MS3.7/4, Error ellipse: s-maj=10.2km s-min=6.9km az=167.5*

ISC 09 06:56:18.1±0.7, 10°.74S±0°.08×165°.34E±0°.07, h31^{km}, n44, σ1^{s}.75/41, mb4.1/17, MS3.7/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.46	283	eP	Pn	06 57 39.0	+1.6
HNR				eS	Sb	06 58 53.0	-4.9
HNR	Honiara	5.46	283	ePn	Pn	06 57 38.1	+0.7
HNR				eSn	Sn	06 58 43.6	+4.4
HNR	Honiara	5.46	283	Pn	Pn	06 57 36.8	-0.6
	50nm,0.3s,baz=163,slow=4.5,SNR=5.7						
HNR				Sn	Sn	06 58 43.6	+4.4
	7.5nm,0.3s,baz=133,slow=17,SNR=1.0						
HNR				LR	LR	06 59 46.0	
	comp=Z,832nm,19.1s,baz=112,slow=39						
DZM	Mont Dzumac	11.31	175	Pn	Pn	06 58 57.5	-0.3
	2.6nm,0.3s,baz=293,slow=18,SNR=70						
DZM				Sn	Sn	07 01 01.5	-1.8
	0.5nm,0.3s,baz=114,slow=22,SNR=1.5						
DZM				LR	LR	07 02 31.6	
	comp=Z,247nm,18.6s,baz=30,slow=34						
ONTNC	Ouen Toro	11.55	175	ePn	Pn	06 59 01.4	+0.5
PINNC	Pines Island,	11.98	171	ePn	Pn	06 59 07.8	+1.0
CTA	Charters Tower	20.59	241	P	P	07 00 54.6	-0.1
	3.7nm,0.5s,baz=69,slow=12,SNR=8.5						
CTAO	Charters Tower	20.59	241	eP	P	07 00 55.6	+0.9
	10nm,0.9s						
COEN	Coen	21.88	259	eP	P	07 01 09.5	+0.9
	3.4nm,0.8s						
H11S2	WAKE ISLAND Hy	29.08	3	T	T	07 32 47.3	
	baz=184,slow=76,SNR=131						
H11S3	WAKE ISLAND Hy	29.08	3	T	T	07 32 54.5	
	baz=184,slow=76,SNR=87						
H11S1	WAKE ISLAND Hy	29.10	3	T	T	07 32 47.4	
	baz=184,slow=76,SNR=104						
URZ	Urewera	29.36	161	eP	P	07 02 19.4	+1.1
	17nm,1.1s						
URZ	Urewera	29.36	161	P	P	07 02 17.8	-0.5
	4.5nm,0.6s,baz=324,slow=5.1,SNR=3.4						
BKZ	Black Stump Fm	30.00	162	eP	P	07 02 25.0	+0.9
	19nm,1.1s						
H11N1	WAKE ISLAND Hy	30.30	3	T	T	07 34 15.3	
	baz=182						
H11N3	WAKE ISLAND Hy	30.31	3	T	T	07 34 20.2	
	baz=182						
H11N2	WAKE ISLAND Hy	30.32	3	T	T	07 34 17.8	
	baz=182						
STKA	Stephens Creek	30.39	223	P	P	07 02 25.7	-1.8
	1.4nm,0.7s,baz=32,slow=9.5,SNR=2.3						
STKA				LR	LR	07 12 29.7	
	comp=Z,117nm,20.1s,baz=55,slow=32						
WB2	Warramunga Arr	31.20	249	eP	P	07 02 36.1	+1.3
WR1	Warramunga Arr	31.21	249	eP	P	07 02 33.5	-1.4
	6.9nm,1.1s						
WRA	Warramunga Arr	31.21	249	P	P	07 02 33.6	-1.4
	2.6nm,1.2s,baz=81,slow=8.5,SNR=6.6						
WRA				LR	LR	07 14 55.7	
	comp=Z,160nm,18.0s,baz=205,slow=36						
BFZ	Birch Farm	31.34	164	eP	P	07 02 36.3	+0.5
	16nm,1.0s						
AS01	Alice Springs	32.53	243	eP	P	07 02 45.3	-1.2
ASAR	Alice Springs	32.57	243	P	P	07 02 45.2	-1.6
	0.9nm,0.6s,baz=66,slow=10.0,SNR=20						
ASAR				LR	LR	07 14 39.6	
	comp=Z,126nm,18.5s,baz=104,slow=34						
RAR	Rarotonga	35.05	112	LR	LR	07 13 30.4	
	comp=Z,254nm,21.9s,baz=146,slow=30						
FITZ	Fitzroy Crossi	39.07	255	eP	P	07 03 42.5	-0.2
CMAR	Chiang Mai Arr	71.62	294	P	P	07 07 37.2	+0.1
	0.6nm,0.3s,baz=111,slow=4.9,SNR=3.0						
SONA0	Songino Array	78.19	324	eP	P	07 08 14.9	+0.3
SONM	Songino Array	78.19	324	P	P	07 08 14.9	+0.3
	0.7nm,1.0s,baz=133,slow=6.1,SNR=2.6						
QSPA	South Pole Qui	79.26	180	eP	P	07 08 23.8	+3.5
	1.8nm,0.9s						
SUA	Susitna One	79.78	20	eP	P	07 08 23.3	+0.2
	4.2nm,1.0s						
IL1	Eielson Array	83.36	19	eP	P	07 08 42.3	+0.5
ILAR	Eielson Array	83.36	19	P	P	07 08 42.0	+0.2
ILAR	Eielson Array	83.36	19	P	P	07 08 42.0	+0.2
	0.5nm,0.6s,baz=240,slow=4.5,SNR=12						
ILB	Eielson Array	83.36	19	eP	P	07 08 42.8	+1.0
	0.8nm,0.8s						
SCRK	Sand Creek	83.77	20	eP	P	07 08 44.9	+0.8
	1.8nm,1.0s						
HYT	Haines Junctio	84.28	24	eP	P	07 08 47.6	+0.8
	1.9nm,0.9s						
MK32	Makanchi Array	93.03	317	eP	P	07 09 27.2	-1.5
MKAR	Makanchi Array	93.03	317	P	P	07 09 27.2	-1.5
	0.2nm,0.6s,baz=103,slow=4.6,SNR=2.9						
YKA	Yellowknife Ar	94.89	27	P	P	07 09 35.5	-1.3
	0.2nm,0.6s,baz=258,slow=4.8,SNR=4.7						
YKB5	Yellowknife Ar	94.89	27	eP	P	07 09 36.0	-0.9
GRA1	Grafenberg Arr	135.64	336	ePKPdf	PKPdf	07 15 33.7	-1.8
GRFO	Grafenberg	135.64	336	ePKPdf	PKPdf	07 15 33.9	-1.6

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*IDC **09** 06:56:57.2±1.4, 13°.14N×91°.82W, h0^{km}, mb3.7/5, mb1 4.0/9, mb1mx3.8/39, mbtmp3.7/9, ML3.6/4, MS3.8/2, Ms1 3.8/2, ms1mx3.1/36, Error ellipse: s-maj=34.9km s-min=17.8km az=30.0*

*ISCJB **09** 06:57:03.9±1.0, 13°.6N±0°.1×91°.85W±0°.07, h37^{km}, mb4.1/20, MS4.3/1, Error ellipse: s-maj=18.4km s-min=8.5km az=20.3*

*NEIC **09** 06:57:05.5±1.0, 13°.59N×91°.81W, h35^{km}, mb4.2/17, MD4.2(MEX), Error ellipse: s-maj=18.6km s-min=10.1km az=200.0*

*MEX **09** 06:57:10.0±0.6, 14°.14N×92°.04W, h89^{km}±11^{km}, MD4.2*

ISC 09 06:57:03.5±0.8, 13°.43N±0°.08×92°.01W±0°.07, h37^{km}, n47, σ3^{s}.41/54, mb4.1/20, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.49	350	eP	Pn	06 57 26.1	-1.7
THIG				eS	Sn	06 57 38.3	-7.7
THIG		1.49	350	eP	Pn	06 57 26.1	-1.7
THIG				eS	Sn	06 57 38.3	-7.7
APG	El Apazote	2.16	43	Pn	Pn	06 57 37.6	+0.4
	36nm,0.3s,baz=215,slow=7.4,SNR=201						
APG				Sn	Sn	06 58 07.1	+4.2
	17nm,0.3s,baz=332,slow=20,SNR=1.9						
APG				LR	LR	06 58 34.5	
	comp=Z,547nm,18.1s,baz=222,slow=43						
PCIG		2.55	333	eP	Pn	06 57 40.9	-1.4
PCIG				eS	Sn	06 58 03.2	-8.9
PCIG		2.55	333	eP	Pn	06 57 40.9	-1.4
PCIG				eS	Sn	06 58 03.2	-8.9
CCIG	Comitan	2.84	357	ePn	Pn	06 57 48.2	+1.7
CCIG				eS	Sn	06 58 08.5	-11
CCIG	Comitan	2.84	357	eP	Pn	06 57 48.4	+1.9
CCIG				eS	Sn	06 58 08.5	-11
CMIG	Matias Romero	4.58	323	Pn	Pn	06 58 10.3	+0.1

	1.0nm,0.3s,baz=152,slow=10,SNR=14						
CMIG				Sn	Sn	06 59 10.0	+7.8
	2.0nm,0.3s,baz=128,slow=12,SNR=3.6						
TGUH	Tegucigalpa,Un	4.64	82	*e*Pn	Pn	06 58 13.0	+1.9
ESTN	Estel	5.50	93	*e*Pn	Pn	06 58 22.8	-0.2
JTS	JuntasAbangare	7.58	114	*e*Pn	Pn	06 58 46.9	-4.6
JTS				Sn	Sn	07 00 10.8	-5.3
JTS				Lg	Lg	07 00 39.1	
JTS	JuntasAbangare	7.58	114	Pn	Pn	06 58 43.7	-7.8
	0.5nm,0.3s,baz=291,slow=2.2,SNR=2.9						
JTS				Sn	Sn	07 00 10.8	-5.3
	0.1nm,0.3s,baz=14,slow=21,SNR=0.9						
JTS				Lg	Lg	07 00 39.1	
	0.0nm,0.3s,baz=312,slow=22,SNR=1.5						
TEIG	Tepich	7.64	27	*e*Pn	Pn	06 58 52.7	+0.4
LTX	Lajitas	19.17	327	*e*P	Pn	07 01 26.7	+1.5
TX31	Lajitas Ar. Si	19.17	327	*e*P	Pn	07 01 27.4	+2.3
	1.6nm,1.0s						
TXAR	Lajitas Array	19.17	327	P	Pn	07 01 26.7	+1.5
	0.1nm,0.3s,baz=143,slow=9.0,SNR=11						
MIAR	Mount Ida	21.07	356	*e*P	P	07 01 46.8	+2.3
GOGA	Godfrey	21.36	20	*e*P	P	07 01 48.1	+0.4
	8.3nm,1.1s						
SDV	Santo Domingo	21.44	100	*e*P	P	07 01 49.2	+0.3
	3.4nm,0.9s						
SDV	Santo Domingo	21.44	100	P	P	07 01 44.4	-4.5
	0.8nm,0.5s,baz=274,slow=13,SNR=2.1						
GDL2	Guadalupe Moun	21.85	331	*e*P	P	07 01 55.2	+2.1
MSTX	Muleshoe	22.67	336	*e*P	P	07 02 02.8	+0.9
	7.4nm,1.0s						
WVT	Waverly	22.91	9	*e*P	P	07 02 03.0	-1.2
AMTX	Amarillo	23.09	339	*e*P	P	07 02 06.4	+0.3
	11nm,0.8s						
CCM	Cathedral Cave	24.54	1	*e*P	P	07 02 18.2	-1.5
	4.1nm,0.8s						
ANMO	Albuquerque	25.09	331	P	P	07 02 27.1	+2.1
	0.5nm,0.4s,baz=148,slow=13,SNR=3.2						
WCI	Wyandotte Cave	25.22	11	*e*P	P	07 02 26.4	+0.6
REDW	Red Top Meadow	33.95	335	*e*P	P	07 03 45.9	+2.2
	2.9nm,1.1s						
NCB	Newcomb	34.04	23	*e*P	P	07 03 42.8	-1.3
NVAR	Mina Array Bea	34.11	322	P	P	07 03 47.6	+2.5
	0.9nm,0.5s,baz=141,slow=10,SNR=2.8						
MCMT	McKenzie Canyo	35.98	334	*e*P	P	07 04 04.0	+2.9
J08A	Circle Bar Ran	37.52	328	*e*P	P	07 04 17.4	+3.4
	3.3nm,0.8s						
EGMT	Eagleton	37.52	340	*e*P	P	07 04 15.3	+1.3
	1.4nm,0.8s						
H04A	Detroit Lake	40.38	326	*e*P	P	07 04 42.2	+4.2
	3.2nm,1.0s						
FCC	Fort Churchill	45.27	358	*e*P	P	07 05 16.4	-0.8
SCHQ	Schefferville	45.76	20	*e*P	P	07 05 19.2	-2.0
	4.4nm,0.7s						
YKA	Yellowknife Ar	51.58	347	P	P	07 06 05.9	+0.2
	1.5nm,0.6s,baz=151,slow=7.5,SNR=42						
YKA				PcP	PcP	07 07 19.5	+0.2
	0.2nm,0.7s,baz=148,slow=3.1,SNR=3.3						
YKB5	Yellowknife Ar	51.58	347	*e*P	P	07 06 06.4	+0.6
YKW3	Yellowknife Ar	51.64	347	*e*P	P	07 06 07.7	+1.4
	1.9nm,0.5s						
BDFB	Brasilia	52.22	122	LR	LR	07 29 16.7	
	comp=Z,281nm,18.3s,baz=67,slow=37						
INK	Inuvik	60.98	344	*e*P	P	07 07 14.1	+1.3
	0.4nm,0.8s						
ILAR	Eielson Array	63.36	337	P	P	07 07 30.1	+1.3
	0.5nm,0.9s,baz=102,slow=4.4,SNR=4.3						
OHAK	Old Harbor	63.39	328	*e*P	P	07 07 29.5	+0.4
	20nm,1.1s						
RND	Reindeer	63.54	335	*e*P	P	07 07 33.2	+3.1
	3.9nm,1.2s						
MLY	Manley	64.96	336	*e*P	P	07 07 41.8	+2.5
	4.4nm,1.2s						
SVW2	Sparrevohn	65.67	331	*e*P	P	07 07 46.8	+2.9
	2.6nm,1.0s						
CMAR	Chiang Mai Arr	146.53	341	PKPbc	PKPab	07 16 43.7	+0.9
	0.9nm,0.3s,baz=339,slow=4.8,SNR=4.1						

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*IDC **09** 07:16:48.6±1.0, 11°.76S×165°.29E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.8/23, mbtmp3.8/8, ML3.6/1, MS3.7/1, Ms1 3.6/1, ms1mx2.7/26, Error ellipse: s-maj=43.4km s-min=22.0km az=134.0*

*ISCJB **09** 07:16:52.0±0.8, 11°.9S±0°.1×165°.3E±0°.2, h33^{km}, mb3.7/7, MS3.6/1, Error ellipse: s-maj=24.7km s-min=16.8km az=23.0*

ISC 09 07:16:53.8±0.9**, 11°.8S**±0°.1×**165°.3E**±0°.2**, h35**^{km}**, n8, σ1^s.34**/8**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.26	174	Pn	Pn	07 19 19.0	+0.2
	0.5nm,0.3s,baz=324,slow=17,SNR=5.0						
STKA	Stephens Creek	29.61	224	P	P	07 22 57.1	+1.2
	2.1nm,0.7s,baz=353,slow=16,SNR=3.2						
STKA				LR	LR	07 34 12.5	
	comp=Z,131nm,18.0s,baz=193,slow=35						
WRA	Warramunga Arr	30.85	251	P	P	07 23 06.1	-0.9
	0.8nm,0.7s,baz=77,slow=9.1,SNR=12						
ASAR	Alice Springs	32.09	244	P	P	07 23 16.2	-1.7
	0.5nm,0.8s,baz=77,slow=9.8,SNR=5.2						
ILAR	Eielson Array	84.36	19	P	P	07 29 23.1	+1.1
	0.8nm,0.6s,baz=239,slow=5.3,SNR=18						
MKAR	Makanchi Array	93.80	317	P	P	07 30 08.2	+0.8
	0.2nm,0.7s,baz=86,slow=7.4,SNR=2.9						
YKA	Yellowknife Ar	95.83	27	P	P	07 30 16.1	-0.2
	0.2nm,0.8s,baz=258,slow=4.5,SNR=3.5						
TXAR	Lajitas Array	96.55	61	P	P	07 30 19.1	-1.4
	0.3nm,0.8s,baz=248,slow=6.7,SNR=2.9						

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*SOME **09** 07:21:41.4, 41°.60N×76°.30E, h5^{km}*

*KRNET **09** 07:21:43.4±0.1, 41°.76N×76°.26E, h15^{km}, mb2.3*

*NNC **09** 07:21:43.8±1.0, 41°.75N×76°.25E, h6^{km}±4^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=6.5km s-min=4.2km az=170.0*

ISC 09 07:21:43.7±1.1**, 41°.76N**±0°.03×**76°.25E**±0°.02**, h6**^{km}±11^{km}**, n34, σ0^s.78**/59**, 26C-10D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn	0.37	211	⇑*i*P	Pg	07 21 51.3	+0.3
	baz=13						
NRN				⇑*i*S	Sg	07 21 56.9	+0.9
	baz=13						
ULHL	Ulahol	0.49	359	⇑*i*P	Pg	07 21 53.0	-0.2
	baz=59						
ULHL				⇑*i*S	Sg	07 22 00.0	+0.4
	baz=59						
BOOM	Boomskoye usch	0.77	343	⇑*i*P	Pg	07 21 58.0	-0.5
	baz=42						
BOOM				⇑*i*S	Sg	07 22 08.8	+0.3
	baz=42						
KDJ	Kajisay	0.79	61	⇑*i*P	Pg	07 21 58.6	-0.2
	baz=62						
KDJ				⇑*i*S	Sg	07 22 09.5	+0.4
	baz=62						
KZA	Kyzart	0.81	294	⇓*i*P	Pg	07 21 58.9	-0.5
	baz=93						
KZA				⇓*i*S	Sg	07 22 10.1	+0.1
	baz=93						
TARG	Taragay, Kyrgy	1.16	91	⇑*i*P	Pg	07 22 05.0	-1.0
	baz=91						
TARG				⇑*i*S	Sg	07 22 20.9	-0.2
	baz=91						
TKM2	Tokmak 2	1.26	338	⇑P	Pg	07 22 07.3	-0.7
	0.9nm,0.4s						
TKM2				⇓S	Sg	07 22 24.3	0.0
	1.8nm,0.3s						
TKM2	Tokmak 2	1.26	338	⇑*i*P	Pg	07 22 07.2	-0.7
	baz=37						
TKM2				⇑*i*S	Sg	07 22 24.3	0.0
	baz=37						
KST	Kastek	1.30	351	P	Pn	07 22 07.6	-1.0
	1.2nm,0.3s						
KST				S	Sn	07 22 26.6	+0.2
	2.6nm,0.2s						
KST	Kastek	1.30	351	*e*P	Pn	07 22 07.6	-1.0
	1.0nm,0.2s						
KST				*e*S	Sn	07 22 26.6	+0.2
	2.3nm,0.3s						
KBK	Karagaybulak	1.32	313	⇑*i*P	Pn	07 22 08.3	-0.6
	baz=13						
KBK				⇑*i*S	Sg	07 22 26.0	-0.2
	baz=13						
ARLS	Aral	1.45	275	⇑*i*P	Pn	07 22 10.3	-0.2
	baz=75						
ARLS				⇑*i*S	Sg	07 22 30.3	+0.1
	baz=75						
MDOK	Medeo	1.53	22	Pn	Pn	07 22 10.2	-1.5
	2.7nm,0.6s						
MDOK				⇓Sn	Sg	07 22 33.4	+0.7
	4.4nm,0.6s						
DGS	Degeres	1.53	347	P	Pn	07 22 11.9	+0.3
	2.1nm,0.3s						
DGS				S	Sg	07 22 34.0	+1.2
	4.3nm,0.2s						
DGS	Degeres	1.53	347	*e*P	Pn	07 22 11.9	+0.3
	2.1nm,0.3s						
DGS				*e*S	Sg	07 22 34.0	+1.2
	4.3nm,0.2s						
AAK	Ala-Archa	1.58	305	⇑Pn	Pb	07 22 12.8	-0.6
	2.8nm,0.7s						
AAK				⇑Sn	Sg	07 22 34.2	-0.2
	2.1nm,0.5s						
AAK	Ala-Archa	1.58	305	⇑*i*P	Pb	07 22 12.7	-0.6
	baz=4.0						
AAK				⇑*i*S	Sb	07 22 33.7	+0.1
	baz=4.0						
AML	Almayashu	1.94	282	⇓*i*P	Pb	07 22 19.5	-0.3
	baz=82						
AML				⇓*i*S	Sg	07 22 45.4	-0.8
	baz=82						
KTBS	Karatobe	1.98	9	Pg	Pb	07 22 20.6	+0.4
	5.8nm,0.2s						
KTBS				Lg	Lg	07 22 48.9	
	7.8nm,0.2s						
KTBS	Karatobe	1.98	9	*e*P	Pb	07 22 20.6	+0.4
	5.8nm,0.2s						
KTBS				*e*S	Sg	07 22 48.9	+1.6
	7.8nm,0.2s						
EKS2	Erkin-Say	2.05	297	⇓*i*P	Pb	07 22 20.5	-0.9
	baz=97						
EKS2				⇓*i*S	Sb	07 22 47.5	+0.3
	baz=97						
SATY	Saty	2.06	50	Pg	Pb	07 22 21.5	-0.1
	3.4nm,0.3s						
SATY				Lg	Lg	07 22 50.2	
	19nm,0.2s						
SATY	Saty	2.06	50	⇑*i*P	Pb	07 22 21.5	-0.1
	3.4nm,0.3s						
SATY				⇓*i*S	Sg	07 22 50.2	+0.4
	19nm,0.2s						
KUU	Kurty	2.14	2	Pg	Pb	07 22 23.4	+0.6
	3.6nm,0.6s						
KUU				Lg	Lg	07 22 53.7	
	10.0nm,0.5s						
KUU	Kurty	2.14	2	*e*P	Pb	07 22 23.4	+0.6
	3.6nm,0.6s						
KUU				*e*S	Sg	07 22 53.7	+1.3
	10.0nm,0.5s						
CHKK	Chushkaly	2.17	14	Pg	Pb	07 22 23.9	+0.6
	4.1nm,0.2s						
CHKK				Lg	Lg	07 22 54.3	
	8.2nm,0.4s						
CHKK	Chushkaly	2.17	14	*e*P	Pb	07 22 23.9	+0.6
	4.1nm,0.2s						
CHKK				*e*S	Sg	07 22 54.3	+1.0
	8.2nm,0.4s						
MRKS	Merke	2.45	295	Pg	Pg	07 22 29.5	-1.2
	8.2nm,0.4s						
MRKS				Lg	Lg	07 23 04.1	
	2.8nm,0.3s						
MRKS	Merke	2.45	295	⇑*i*P	Pg	07 22 29.5	-1.2
	8.2nm,0.4s						
MRKS				*e*S	Sg	07 23 04.1	+1.6
	2.8nm,0.3s						
UZB	Uzynbulak	2.48	55	Pg	Pb	07 22 28.2	-0.5
	2.2nm,0.3s						
UZB				Lg	Lg	07 23 02.1	
	5.5nm,0.3s						
UZB	Uzynbulak	2.48	55	*e*P	Pb	07 22 28.2	-0.5
	2.2nm,0.3s						
UZB				*e*S	Sg	07 23 02.1	-1.2
	5.5nm,0.3s						
PDGK	Podgornoye	2.86	56	⇑Pn	Pn	07 22 31.1	+1.1
	1.3nm,0.7s						
PDGK				⇑Lg	Lg	07 23 15.3	
	7.8nm,0.8s						
MNAS	Manas	2.88	286	⇓Pn	Pn	07 22 32.2	+1.9
	1.7nm,0.7s						
MNAS				⇑Lg	Lg	07 23 15.4	
	1.5nm,0.5s						
MNAS	Manas	2.88	286	Pg	Pb	07 22 36.0	+0.4
	0.5nm,0.5s						
MNAS				Lg	Lg	07 23 15.3	
	0.8nm,0.4s						

IDC 09 07:26:32.4±1.7**, 10°.56S**×**164°.79E, h0**^{km}**, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.6**/24**, mbtmp3.6**/4**, ML4.2**/1**, Error ellipse: s-maj=51.4km s-min=30.6km az=128.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.56	172	Pn	Pn	07 29 18.8	-0.1
	1.4nm,0.3s,baz=311,slow=10.0,SNR=30						
WRA	Warramunga Arr	30.77	249	P	P	07 32 49.6	-0.3
	0.2nm,0.6s,baz=80,slow=9.3,SNR=4.1						
ASAR	Alice Springs	32.18	242	P	P	07 33 02.5	+0.3
	0.2nm,0.6s,baz=64,slow=10,SNR=3.9						
ILAR	Eielson Array	83.36	19	P	P	07 39 01.0	0.0
	0.4nm,0.8s,baz=230,slow=7.0,SNR=3.2						

IDC 09 07:30:26.1±1.7**, 11°.64S**×**165°.28E, h0**^{km}**, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/30**, mbtmp3.5**/4**, ML3.3**/1**, Error ellipse: s-maj=52.4km s-min=31.4km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.43	174	Pn	Pn	07 32 56.9	-0.3
	0.2nm,0.3s,baz=282,slow=19,SNR=5.8						
WRA	Warramunga Arr	30.85	251	P	P	07 36 43.4	-0.9
	0.4nm,0.8s,baz=81,slow=9.1,SNR=5.0						
ASAR	Alice Springs	32.12	244	P	P	07 36 56.2	+0.7
	0.3nm,0.8s,baz=72,slow=9.8,SNR=3.2						
ILAR	Eielson Array	84.22	19	P	P	07 42 59.2	0.0
	0.3nm,0.9s,baz=226,slow=5.2,SNR=3.5						

IDC 09 07:32:30.9±1.9**, 10°.84S**×**165°.72E, h0**^{km}**, mb4.0**/4**, mb1 4.3**/5**, mb1mx3.8**/32**, mbtmp4.1**/5**, ML3.9**/1**, Error ellipse: s-maj=51.4km s-min=30.7km az=130.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.19	177	Pn	Pn	07 35 12.2	-0.1
	0.8nm,0.3s,baz=326,slow=15,SNR=14						
CTA	Charters Tower	20.88	242	P	Pn	07 37 16.7	-0.5
	6.5nm,0.8s,baz=52,slow=17,SNR=3.2						
H11S2	WAKE ISLAND Hy	29.16	2	T	T	08 08 52.7	
	baz=181,slow=76,SNR=72						
H11S3	WAKE ISLAND Hy	29.17	2	T	T	08 08 52.7	
	baz=181,slow=76,SNR=43						
H11S1	WAKE ISLAND Hy	29.18	2	T	T	08 08 54.9	
	baz=181,slow=76,SNR=53						
H11N1	WAKE ISLAND Hy	30.39	2	T	T	08 10 23.7	
	baz=182,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	30.39	2	T	T	08 10 24.8	
	baz=182,slow=76,SNR=27						
H11N2	WAKE ISLAND Hy	30.40	2	T	T	08 10 23.1	
	baz=182,slow=76,SNR=24						
WRA	Warramunga Arr	31.53	250	P	P	07 38 55.0	-0.2
	4.5nm,0.8s,baz=81,slow=9.0,SNR=36						
ASAR	Alice Springs	32.86	243	P	P	07 39 06.0	-0.8
	2.3nm,0.7s,baz=66,slow=10,SNR=27						
ILAR	Eielson Array	83.33	19	P	P	07 44 59.5	+0.2
	0.3nm,0.8s,baz=236,slow=4.4,SNR=4.3						

IDC 09 07:33:38.4±1.7**, 10°.80S**×**165°.65E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/32**, mbtmp3.8**/5**, ML4.4**/1**, MS4.6**/1**, Ms1 4.6**/1**, ms1mx3.1**/30**, Error ellipse: s-maj=52.1km s-min=30.5km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.23	176	Pn	Pn	07 36 20.8	+0.4
	2.6nm,0.3s,baz=0.0,slow=20,SNR=9.1						
WRA	Warramunga Arr	31.48	249	P	P	07 40 02.2	0.0
	0.4nm,0.6s,baz=82,slow=9.2,SNR=2.6						
ASAR	Alice Springs	32.82	243	P	P	07 40 13.8	-0.1
	0.6nm,0.6s,baz=69,slow=9.8,SNR=2.7						
JHJ	Hachijo jima 2	50.16	332	LR	LR	08 00 56.5	
	comp=Z,611nm,20.8s,baz=90,slow=33						
ILAR	Eielson Array	83.31	19	P	P	07 46 06.8	0.0
	1.4nm,1.0s,baz=244,slow=3.7,SNR=4.5						
MKAR	Makanchi Array	93.28	317	P	P	07 46 55.0	-0.2
	0.6nm,1.1s,baz=87,slow=4.4,SNR=2.2						

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*IDC **09** 07:34:29.1±0.8, 10°.91S×165°.20E, h0^{km}, mb4.3/17, mb1 4.5/19, mb1mx4.4/33, mbtmp4.3/19, ML4.5/2, MS3.8/2, Ms1 3.8/2, ms1mx3.2/27, Error ellipse: s-maj=22.7km s-min=16.2km az=136.0*

*NEIC **09** 07:34:31.1±0.2, 10°.83S×165°.12E, h10^{km}, mb4.8/24, Error ellipse: s-maj=6.0km s-min=4.5km az=102.0*

*ISCJB **09** 07:34:32.3±0.3, 10°.91S±0°.04×165°.11E±0°.05, h31^{km}, mb4.6/45, MS4.7/2, Error ellipse: s-maj=7.1km s-min=5.6km az=0.9*

ISC 09 07:34:34.3±0.4**, 10°.84S**±0°.06×**165°.11E**±0°.06**, h31**^{km}**, n89, σ1^s.31**/87**, mb4.6**/45**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.28	285	*e*P	Pn	07 35 52.0	+0.9
HNR				*e*S	Sb	07 37 02.0	-6.8
HNR	Honiara	5.28	285	*e*Pn	Pn	07 35 52.4	+1.3
HNR				*e*Sn	Sn	07 36 54.4	+3.5
HNR	Honiara	5.28	285	Pn	Pn	07 35 51.3	+0.2
	24nm,0.3s,baz=68,slow=0.8,SNR=5.1						
HNR				Sn	Sn	07 36 54.4	+3.5
	17nm,0.3s,baz=94,slow=19,SNR=1.7						
HNR				LR	LR	07 38 09.9	
	comp=Z,777nm,18.8s,baz=124,slow=41						
MARNC	Mare, Loyalty	10.94	166	*e*Pn	Pn	07 37 08.3	-0.5
DZM	Mont Dzumac	11.24	174	*e*Pn	Pn	07 37 12.3	-0.6
	46nm,0.7s						
DZM				*e*LR	LR	07 39 45.7	
	comp=Z,681nm,25.4s						
DZM	Mont Dzumac	11.24	174	*e*Pn	Pn	07 37 12.4	-0.6
DZM	Mont Dzumac	11.24	174	Pn	Pn	07 37 11.1	-1.9
	2.2nm,0.3s,baz=312,slow=19,SNR=4.3						
DZM				LR	LR	07 41 12.6	
	comp=Z,609nm,18.7s,baz=9.5,slow=36						
ONTNC	Ouen Toro	11.47	174	*e*Pn	Pn	07 37 16.7	+0.6
PINNC	Pines Island,	11.91	170	*e*Pn	Pn	07 37 22.1	-0.1
TARA	Tarawa	14.39	33	*e*Pn	Pn	07 37 55.5	-0.6
EIDS	Eidsvold	19.63	221	*e*P	P	07 39 00.9	+0.4
	14nm,1.0s						
MANU	Manus Island	19.67	295	*e*P	P	07 39 01.7	+0.7
	169nm,1.0s						
CTA	Charters Tower	20.35	241	P	P	07 39 09.3	+0.9
	39nm,1.0s,baz=68,slow=12,SNR=20						
CTAO	Charters Tower	20.35	241	*e*P	P	07 39 08.8	+0.4
	71nm,1.0s						
COEN	Coen	21.65	260	*e*P	P	07 39 23.1	+0.7
	11nm,1.0s						
ARMA	Armidale	23.16	211	*e*P	P	07 39 38.5	+0.1
	11nm,0.9s						
H11S2	WAKE ISLAND Hy	29.19	3	T	T	08 11 06.5	
	baz=184,slow=76,SNR=8.3						
H11S3	WAKE ISLAND Hy	29.19	3	T	T	08 11 06.5	
	baz=184,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	29.21	3	T	T	08 11 07.6	
	baz=184,slow=76,SNR=8.6						
BKZ	Black Stump Fm	29.97	162	*e*P	P	07 40 41.2	+1.2
	15nm,1.2s						
STKA	Stephens Creek	30.16	223	*e*P	P	07 40 41.8	0.0
	1.0nm,0.8s						
STKA	Stephens Creek	30.16	223	P	P	07 40 41.6	-0.1
	5.1nm,0.9s,baz=24,slow=9.1,SNR=8.1						
H11N1	WAKE ISLAND Hy	30.41	3	T	T	08 12 42.7	
	baz=182,slow=76,SNR=8.5						
H11N3	WAKE ISLAND Hy	30.42	3	T	T	08 12 38.5	
	baz=182,slow=76,SNR=7.2						
H11N2	WAKE ISLAND Hy	30.43	3	T	T	08 12 39.8	
	baz=182,slow=76,SNR=6.8						
WRAB	Tennant Creek	30.96	249	*e*P	P	07 40 48.0	-0.9
	3.0nm,0.8s						
WB2	Warramunga Arr	30.96	249	*e*P	P	07 40 48.2	-0.8
	11nm,1.1s						
WR1	Warramunga Arr	30.97	249	*e*P	P	07 40 48.0	-1.1
	9.8nm,1.1s						
WRA	Warramunga Arr	30.97	249	P	P	07 40 48.0	-1.1
	4.6nm,0.8s,baz=81,slow=9.0,SNR=13						
BFZ	Birch Farm	31.30	164	*e*P	P	07 40 51.9	+0.2
	16nm,1.0s						
TOO	Toolangi	31.93	210	*e*P	P	07 40 57.0	-0.3
	9.7nm,1.1s						
AS01	Alice Springs	32.29	243	*e*P	P	07 40 59.2	-1.5
AS31	Alice Springs	32.33	243	*e*P	P	07 41 00.0	-1.0
	1.6nm,0.7s						
ASAR	Alice Springs	32.33	243	P	P	07 40 59.8	-1.2
	5.0nm,0.8s,baz=68,slow=9.6,SNR=26						
BBOO	Buckleboo	34.52	226	*e*P	P	07 41 18.6	-1.3
	16nm,1.0s						
JOHN	Johnston Islan	37.14	43	*e*P	P	07 41 41.5	-1.0
	157nm,0.8s						
FITZ	Fitzroy Crossi	38.83	255	*e*P	P	07 41 55.2	-1.6
	3.5nm,0.9s						
FORT	Forrest	39.65	234	*e*P	P	07 42 03.6	0.0
	54nm,0.9s						
PPT2	Papeete2	44.35	104	*e*LR	LR	07 55 13.0	
	comp=Z,64nm,22.0s						
MORW	Morawa	49.18	241	*e*P	P	07 43 20.2	+0.4
	14nm,1.1s						
MJAR	Matsushiro Arr	53.51	333	P	P	07 43 51.8	-0.2
	2.4nm,0.8s,baz=171,slow=8.7,SNR=6.5						
MAJO	Matsushiro	53.51	333	*e*P	P	07 43 51.8	-0.2
YOJ	Yonaguni jima	54.04	311	*e*P	P	07 43 54.5	-1.6
	105nm,0.9s						
JNU	Nakatsue	54.56	325	*e*P	P	07 44 00.4	+0.6
	15nm,0.8s						
TPUB	Ta-pu	55.19	308	*e*P	P	07 44 04.4	-0.1
	17nm,0.9s						
XMIS	Christmas Isla	58.35	264	*e*P	P	07 44 27.3	+0.2
	28nm,0.8s						
ASAJ	Asahikawa	58.40	341	P	P	07 44 27.5	+0.7
	9.4nm,0.8s,baz=193,slow=15,SNR=4.5						
KSRS	Korea Array	59.36	326	P	P	07 44 34.3	+0.6
	3.0nm,0.8s,baz=141,slow=7.1,SNR=13						
KS15	Wonju Array Si	59.38	326	*e*P	P	07 44 34.4	+0.6
KSAR	Wonju Array Be	59.38	326	P	P	07 44 34.3	+0.5
NJ2	Nanjing	61.44	316	*e*P	P	07 44 48.7	+0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
USRK	Ussuriysk Ar.	62.49	334	P	P	07 44 56.1	+1.3
	comp=Z,5.3nm,0.9s,baz=148,slow=8.8,SNR=7.6						
CN2	Changchun	65.25	329	*e*P	P	07 45 13.3	+0.3
CN2				PP	PP	07 47 39.0	+2.0
CN2				*e*S	S	07 53 52.7	-1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,160nm,5.5s						
ENH	Enshi	67.29	309	*e*P	P	07 45 26.4	0.0
	comp=Z,9.9nm,0.9s						
XAN	Xi'an	69.53	313	P	P	07 45 40.8	+0.4
XAN				pP	pP	07 45 46.3	-2.3
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN	Xi'an	69.53	313	*e*P	P	07 45 40.7	+0.3
	comp=Z,7.5nm,1.0s						
KMI	Kunming	70.49	302	P	P	07 45 48.3	+1.6
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,130nm,4.6s						
HHC	Hu-ho-hao-te	71.28	320	*e*P	P	07 45 54.9	+3.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,5.2s						
CMAR	Chiang Mai Arr	71.46	294	P	P	07 45 53.2	+0.7
	comp=Z,1.4nm,0.4s,baz=122,slow=6.3,SNR=7.2						
CD2	Chengdu	71.99	308	P	P	07 45 55.8	+0.4
CD2				pmax	pmax		
	comp=Z,30nm,1.2s						
CD2				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH	Lanzhou	74.16	312	*e*P	P	07 46 07.2	-1.1
LZH				pP	sP	07 46 20.3	+0.6
LZH				sP	PcP	07 46 27.2	+3.9
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
ULN	Ulaanbaatar	77.78	324	*e*P	P	07 46 29.6	+1.0

	comp=Z,4.6nm,0.8s						
SONA0	Songino Array	78.14	324	eP	P	07 46 31.0	+0.3
SONM	Songino Array	78.14	324	P	P	07 46 31.0	+0.3
	comp=Z,2.1nm,1.0s,baz=140,slow=5.8,SNR=8.4						
SONA1	Songino Array	78.14	324	eP	P	07 46 31.2	+0.6
GTA	Gaotai	78.47	314	eP	P	07 46 33.5	+0.8
GTA				pP	pP	07 46 38.4	-2.7
GTA				sP	PcP	07 46 40.6	-1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,180nm,6.2s						
GTA				LR	LR		
	comp=N,190nm,17.1s						
GTA				LR	LR		
	comp=E,300nm,19.4s						
GTA				LR	LR		
	comp=Z,380nm,20.3s						
QSPA	South Pole Qui	79.16	180	eP	P	07 46 36.2	+0.2
	comp=Z,9.5nm,1.1s						
IM3	Indian Mountai	82.40	16	eP	P	07 46 53.2	+0.2
IL1	Eielson Array	83.52	19	eP	P	07 46 58.7	-0.2
ILAR	Eielson Array	83.52	19	P	P	07 46 58.8	-0.1
	comp=Z,0.7nm,0.8s,baz=234,slow=5.1,SNR=6.4						
ILB	Eielson Array	83.52	19	eP	P	07 46 58.5	-0.3
NVAR	Mina Array Bea	86.37	50	P	P	07 47 13.0	-1.1
	comp=Z,0.3nm,0.2s,baz=232,slow=8.7,SNR=2.3						
WMQ	Urumqi	88.52	315	eP	P	07 47 24.7	+0.6
WMQ				LR	LR		
	comp=N,270nm,22.3s						
WMQ				LR	LR		
	comp=E,570nm,25.1s						
WMQ				LR	LR		
	comp=Z,220nm,23.7s						
MK01	Makanchi Array	92.94	317	eP	P	07 47 44.0	-0.5
MK31	Makanchi Array	92.95	317	eP	P	07 47 45.0	+0.3
MK32	Makanchi Array	92.95	317	eP	P	07 47 44.5	-0.1
MKAR	Makanchi Array	92.95	317	eP	P	07 47 45.0	+0.4
	comp=Z,8.2nm,0.8s						
MKAR	Makanchi Array	92.95	317	P	P	07 47 44.5	-0.1
	comp=Z,1.1nm,0.7s,baz=94,slow=6.5,SNR=11						
ZALV	Zalesovo Beam	93.03	324	eP	P	07 47 43.9	-0.9
ZALV	Zalesovo Beam	93.03	324	P	P	07 47 43.6	-1.2
	comp=Z,0.5nm,0.6s,baz=109,slow=8.0,SNR=5.5						
ZAA1	Zalesovo Array	93.03	324	eP	P	07 47 43.6	-1.2
PDAR	Pinedale Array	93.87	47	P	P	07 47 49.3	+0.1
	comp=Z,0.8nm,1.0s,baz=242,slow=1.9,SNR=3.6						
YKA	Yellowknife Ar	95.08	27	P	P	07 47 52.0	-1.9
	comp=Z,0.4nm,0.8s,baz=253,slow=4.6,SNR=6.5						
LTX	Lajitas	96.28	61	eP	P	07 48 01.3	+1.0
TXAR	Lajitas Array	96.28	61	P	P	07 48 01.3	+1.0
	comp=Z,0.2nm,0.6s,baz=237,slow=5.0,SNR=2.2						
TRQ	Mont Tremblant	118.62	43	ePKPdf	PKPdf	07 53 19.2	-0.3
ESDC	Sonseca Array	149.69	343	PKPbc	PKPbc	07 54 21.1	-0.3
	comp=Z,0.1nm,0.3s,baz=336,slow=2.8,SNR=3.5						
TORD	Torodi Ar. Bea	163.62	280	PKP	PKPdf	07 54 34.9	-0.3
	comp=Z,0.5nm,0.8s,baz=180,slow=1.4,SNR=2.8						
TOA1	Torodi Ar. Sit	163.62	280	ePKPdf	PKPdf	07 54 34.9	-0.3

IDC ***09*** *07:37:02.9±0.9, 11°.08S×165°.26E, h0^{km}, mb4.2/9, mb1 4.3/11, mb1mx4.0/36, mbtmp4.2/11, ML4.3/2, Error ellipse: s-maj=23.3km s-min=20.7km az=111.0*

NEIC ***09*** *07:37:05.3±0.3, 11°.07S×165°.26E, h10^{km}, mb4.4/21, Error ellipse: s-maj=8.4km s-min=6.9km az=105.0*

ISCJB ***09*** *07:37:06.7±0.4, 11°.18S±0°.05×165°.14E±0°.06, h30^{km}, mb4.3/23, Error ellipse: s-maj=8.2km s-min=7.1km az=142.5*

ISC 09 07:37:08.1±0.6**, 11°.07S**±0°.09×**165°.25E**±0°.08**, h30**^{km}**, n52, σ1ˢ.05**/50**, mb4.3**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.46	287	ePn	Pn	07 38 29.3	+1.8
HNR				eSn	Sn	07 39 28.6	-0.9
HNR	Honiara	5.46	287	Pn	Pn	07 38 26.3	-1.3
	6.9nm,0.3s,baz=195,slow=12,SNR=1.9						
HNR				Sn	Sn	07 39 28.6	-0.9
	15nm,0.3s,baz=186,slow=19,SNR=2.3						
DZM	Mont Dzumac	11.00	174	ePn	Pn	07 39 43.1	-0.6
DZM	Mont Dzumac	11.00	174	Pn	Pn	07 39 42.3	-1.4
	2.4nm,0.3s,baz=314,slow=10,SNR=14						
ONTNC	Ouen Toro	11.24	174	ePn	Pn	07 39 46.5	-0.3
PINNC	Pines Island,	11.67	170	ePn	Pn	07 39 52.6	-0.1
EIDS	Eidsvold	19.55	221	eP	P	07 41 32.0	-1.6
	5.4nm,0.8s						
CTA	Charters Tower	20.36	242	P	P	07 41 41.6	-0.8
	6.1nm,1.1s,baz=76,slow=4.2,SNR=2.8						
CTAO	Charters Tower	20.36	242	eP	Pn	07 41 43.9	-0.7
	16nm,1.1s						
COEN	Coen	21.74	260	eP	P	07 41 59.6	+2.3
	11nm,0.9s						
URZ	Urewera	29.09	161	eP	P	07 43 07.1	+1.1
	25nm,1.2s						
URZ	Urewera	29.09	161	P	P	07 43 05.2	-0.8
	6.3nm,0.7s,baz=264,slow=9.2,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.41	3	T	T	08 13 24.5	
	baz=181,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	29.41	3	T	T	08 13 25.0	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.42	3	T	T	08 13 26.2	
	baz=181,slow=76,SNR=12						
BKZ	Black Stump Fm	29.72	162	eP	P	07 43 12.8	+1.1
	14nm,1.1s						
STKA	Stephens Creek	30.09	223	eP	P	07 43 15.8	+0.7
	0.7nm,1.0s						
STKA	Stephens Creek	30.09	223	P	P	07 43 14.5	-0.6
	1.6nm,0.5s,baz=43,slow=8.4,SNR=6.0						
H11N1	WAKE ISLAND Hy	30.63	3	T	T	08 14 55.7	
	baz=182,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.63	3	T	T	08 14 56.1	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.65	3	T	T	08 14 57.1	
	baz=182,slow=76,SNR=12						
WRAB	Tennant Creek	31.00	250	eP	P	07 43 22.6	-0.7
	4.6nm,0.8s						
WB2	Warramunga Arr	31.01	250	eP	P	07 43 22.4	-0.9
	6.6nm,1.0s						
WR1	Warramunga Arr	31.02	250	eP	P	07 43 22.4	-1.0
	6.5nm,1.0s						
WR1				ePcP	PcP	07 46 18.6	-0.5
WRA	Warramunga Arr	31.02	250	P	P	07 43 22.4	-1.0
	3.4nm,1.0s,baz=80,slow=9.1,SNR=6.3						
WRA				PcP	PcP	07 46 18.6	-0.5
	0.8nm,1.0s,baz=72,slow=3.4,SNR=5.3						
BFZ	Birch Farm	31.05	164	eP	P	07 43 23.5	0.0
	13nm,0.9s						
TOO	Toolangi	31.80	211	eP	P	07 43 30.5	+0.3
	9.8nm,1.1s						
AS01	Alice Springs	32.30	243	eP	P	07 43 33.7	-1.1
AS31	Alice Springs	32.34	243	eP	P	07 43 34.2	-0.9
	1.3nm,0.6s						
ASAR	Alice Springs	32.35	243	P	P	07 43 33.9	-1.3
	3.0nm,0.6s,baz=67,slow=9.8,SNR=20						
ASAR				PcP	PcP	07 46 22.0	-0.7
	0.5nm,0.8s,baz=84,slow=2.9,SNR=3.9						
MQZ	McQueen's Vall	33.15	170	eP	P	07 43 44.9	+3.2
	12nm,1.1s						
FITZ	Fitzroy Crossi	38.90	255	eP	P	07 44 32.0	+0.6
	3.3nm,1.0s						
NWAO	Narrogin (SRO)	49.05	236	eP	P	07 45 53.5	+0.8
	15nm,1.1s						
SBUM	Sibu	54.43	281	eP	P	07 46 33.6	+0.5
	2.2nm,0.8s						
JNU	Nakatsue	54.81	325	eP	P	07 46 36.3	+0.8
	7.1nm,0.8s						
JNU	Nakatsue	54.81	325	P	P	07 46 36.0	+0.4
	4.3nm,0.8s,baz=212,slow=17,SNR=3.7						
QSPA	South Pole Qui	78.94	180	eP	P	07 49 08.9	+0.2
	2.0nm,0.9s						
IM3	Indian Mountai	82.58	16	eP	P	07 49 28.2	+0.4
HDA	Harding Lake	83.42	19	eP	P	07 49 33.8	+1.5
	3.7nm,0.9s						
IL1	Eielson Array	83.69	19	eP	P	07 49 34.5	+0.8
ILAR	Eielson Array	83.69	19	P	P	07 49 33.6	0.0
	0.5nm,0.6s,baz=233,slow=5.1,SNR=6.5						
ILB	Eielson Array	83.69	19	eP	P	07 49 34.4	+0.7
	3.6nm,1.1s						
DOT	Dot Lake	83.87	20	eP	P	07 49 34.5	-0.2
	1.4nm,0.9s						
SCRK	Sand Creek	84.10	20	eP	P	07 49 36.5	+0.5
DAWY	Dawson	85.75	21	eP	P	07 49 45.5	+1.4
MK01	Makanchi Array	93.19	317	eP	P	07 50 20.4	+0.7
MK32	Makanchi Array	93.20	317	eP	P	07 50 19.9	+0.1
MKAR	Makanchi Array	93.20	317	P	P	07 50 19.9	+0.1
	0.5nm,0.7s,baz=103,slow=5.4,SNR=3.8						
YPP	Pitchstone Pla	93.34	46	eP	P	07 50 20.4	-0.4
YKA	Yellowknife Ar	95.22	27	P	P	07 50 26.5	-2.0
	0.2nm,0.7s,baz=253,slow=5.0,SNR=3.7						
ARA0	ARCESS Array S	116.23	345	ePKPdf	PKPdf	07 55 47.5	-0.5
ARCES	ARCESS Array B	116.23	345	PKP	PKPdf	07 55 47.5	-0.5
	2.2nm,1.0s,baz=45,slow=10,SNR=3.8						

SOME ***09*** *07:39:48.2, 42°.60N×79°.67E, h20^{km}*

KRNET ***09*** *07:39:48.5±0.1, 42°.63N×79°.70E, h20^{km}, mb3.2*

NNC ***09*** *07:39:48.3±0.9, 42°.63N×79°.65E, h0^{km}, mb3.2, mpv3.1, Error ellipse: s-maj=6.2km s-min=3.5km az=129.0*

ISC 09 07:39:48.5±1.2**, 42°.60N**±0°.05×**79°.67E**±0°.04**, h10**^{km}**, n47, σ1ˢ.28**/83**, 25C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.72	319	eP	Pg	07 40 01.9	-0.6
	baz=16						
UZB				eS	Sb	07 40 12.1	-1.3
	baz=16						
UZB	Uzynbulak	0.72	319	eP	Pg	07 40 01.9	-0.6
	10nm,0.2s						
UZB				eS	Sb	07 40 12.0	-1.3
	145nm,0.3s						
PDGK	Podgornoye	0.74	350	P	Pg	07 40 01.9	-0.9
	11nm,0.1s						
PDGK				S	Sg	07 40 11.7	-0.8
	14nm,0.2s						
PDGK	Podgornoye	0.74	350	⇑P	Pg	07 40 01.9	-0.9
	9.3nm,0.4s						
PDGK				⇑S	Sb	07 40 12.3	-1.5
	9.4nm,0.2s						
PDGK	Podgornoye	0.74	350	⇑iP	Pg	07 40 01.9	-0.9
	baz=47						
PDGK				⇑iS	Sg	07 40 12.1	-0.4
	baz=47						
KTMS	Ketmen	0.98	31	eP	Pg	07 40 06.2	-1.2
	baz=29						
KTMS				eS	Sg	07 40 19.1	-1.2
	baz=29						
KTMS	Ketmen	0.98	31	eP	Pg	07 40 06.2	-1.2
	7.3nm,0.1s						
KTMS				eS	Sg	07 40 19.1	-1.2
	21nm,0.1s						
SATY	Saty	1.03	297	P	Pg	07 40 07.6	-0.8
	7.9nm,0.2s						
SATY				S	Sb	07 40 21.6	-0.7
	66nm,0.1s						
SATY	Saty	1.03	297	⇑iP	Pg	07 40 07.6	-0.8
	6.3nm,0.1s						
SATY				eS	Sb	07 40 21.6	-0.7
	67nm,0.1s						
KURS	Kuram	1.41	309	P	Pb	07 40 14.2	-0.7
	4.2nm,0.3s						
KURS				S	Sg	07 40 33.0	-0.9
	19nm,0.6s						
KURS	Kuram	1.41	309	eP	Pb	07 40 14.2	-0.7
	baz=8.0						
KURS				eS	Sg	07 40 33.0	-0.9
	baz=8.0						
KURS	Kuram	1.41	309	eP	Pb	07 40 14.2	-0.7
	4.2nm,0.3s						
KURS				eS	Sg	07 40 33.0	-0.9
	12nm,0.4s						
DJR	Jarkent	1.73	3	P	Pb	07 40 20.1	-0.4
	7.4nm,0.1s						
DJR				S	Sg	07 40 43.4	-0.9
	6.7nm,0.2s						
DJR	Jarkent	1.73	3	eP	Pb	07 40 20.1	-0.4
	7.4nm,0.1s						
DJR				eS	Sg	07 40 43.4	-0.9
	6.7nm,0.2s						
MNBS	Baschi	1.74	328	P	Pb	07 40 20.1	-0.5
	9.6nm,0.2s						
MNBS				S	Sg	07 40 43.3	-1.2
	67nm,0.2s						
MNBS	Baschi	1.74	328	eP	Pb	07 40 20.1	-0.5
	9.6nm,0.2s						
MNBS				eS	Sg	07 40 43.3	-1.2
	67nm,0.2s						
KDJ	Kajisay	1.90	257	⇑iP	Pb	07 40 23.3	-0.1
	baz=56						
KDJ				⇑iS	Sg	07 40 48.5	-1.1
	baz=56						
KOTS	Kotyrbulak	1.98	290	Pg	Pg	07 40 25.9	-0.6
	6.5nm,0.4s						
KOTS				Lg	Lg	07 40 52.8	
	44nm,0.5s						
KOTS	Kotyrbulak	1.98	290	eP	Pb	07 40 24.3	-0.4
	baz=88						
KOTS				eS	Sg	07 40 50.2	-1.9
	baz=88						
KOTS	Kotyrbulak	1.98	290	eP	Pb	07 40 24.3	-0.4
	3.6nm,0.2s						
KOTS				eS	Sg	07 40 50.2	-1.9
	44nm,0.5s						
MDOK	Medeo	2.00	287	Pg	Pb	07 40 24.7	-0.4
	4.4nm,0.2s						
MDOK				Lg	Lg	07 40 50.8	
	19nm,0.5s						
MDOK	Medeo	2.00	287	eP	Pb	07 40 24.7	-0.4
	baz=86						
MDOK				eS	Sb	07 40 50.8	+0.6
	baz=86						
MDOK	Medeo	2.00	287	eP	Pb	07 40 24.7	-0.4
	4.4nm,0.2s						
MDOK				eS	Sb	07 40 50.8	+0.6
	24nm,0.5s						
TNSS	Tian-Shan	2.05	283	Pg	Pb	07 40 25.6	-0.4
	7.5nm,0.2s						
TNSS				Lg	Lg	07 40 52.5	
	27nm,0.3s						
TNSS	Tian-Shan	2.05	283	eP	Pb	07 40 25.6	-0.4
	baz=82						
TNSS				eS	Sg	07 40 52.6	-1.8
	baz=82						
TNSS	Tian-Shan	2.05	283	eP	Pb	07 40 25.6	-0.4
	7.5nm,0.2s						
TNSS				eS	Sg	07 40 52.5	-1.8
	30nm,0.3s						
IZV	Izvestkoviy	2.29	282	Pg	Pb	07 40 29.7	-0.3
	8.5nm,0.1s						
IZV				Lg	Lg	07 40 59.7	
	43nm,0.3s						
IZV	Izvestkoviy	2.29	282	eP	Pb	07 40 29.7	-0.3
	8.5nm,0.1s						
IZV				eS	Sg	07 40 59.7	-2.3
	43nm,0.3s						
CHKK	Chushkaly	2.32	304	Pg	Pb	07 40 30.4	-0.1
	2.6nm,0.2s						
CHKK				Lg	Lg	07 41 00.4	
	36nm,0.2s						
CHKK	Chushkaly	2.32	304	eP	Pb	07 40 30.4	-0.1
	2.6nm,0.2s						
CHKK				eS	Sb	07 41 00.3	+1.1
	36nm,0.2s						
MTBS	Maitube	2.44	284	eP	Pb	07 40 32.6	+0.1
	7.8nm,0.2s						
MTBS				eS	Sg	07 41 04.3	-2.5
	31nm,0.3s						
KTBS	Karatobe	2.45	298	Pg	Pb	07 40 32.3	-0.3
	2.8nm,0.1s						
KTBS				Lg	Lg	07 41 03.9	
KTBS	Karatobe	2.45	298	eP	Pb	07 40 32.4	-0.3
	2.8nm,0.2s						
KTBS				eS	Sb	07 41 03.9	+1.0
	42nm,0.6s						
ULHL	Ulahol	2.56	263	⇑iP	Pb	07 40 32.6	-2.0
	baz=63						
ULHL				⇑iS	Sb	07 41 04.9	-1.3
	baz=63						
KAPS	Kapalarasan	2.69	355	Pg	Pb	07 40 35.6	-1.2
	2.2nm,0.3s						
KAPS				Lg	Lg	07 41 09.6	
	6.9nm,0.6s						
KAPS	Kapalarasan	2.69	355	eP	Pb	07 40 35.6	-1.2
	2.5nm,0.2s						
KAPS				eS	Sb	07 41 09.6	-0.3
	6.0nm,0.4s						
KUU	Kurty	2.75	299	Pg	Pb	07 40 37.7	-0.1
	2.0nm,0.2s						
KUU				Lg	Lg	07 41 13.4	
	13nm,0.4s						
KUU	Kurty	2.75	299	eP	Pb	07 40 37.7	-0.1
	1.0nm,0.2s						
KUU				eS	Sb	07 41 13.4	+1.8
	14nm,0.3s						
BOOM	Boomskoye usch	2.76	269	⇑iP	Pb	07 40 35.2	-2.7
	baz=68						
BOOM				⇑iS	Sb	07 41 09.7	-2.1
	baz=68						
KST	Kastek	2.76	280	Pg	Pb	07 40 37.4	-0.6
	11nm,1.1s						
KST				Lg	Lg	07 41 13.1	
	14nm,1.0s						
KST	Kastek	2.76	280	⇑iP	Pb	07 40 37.4	-0.6
	7.1nm,0.3s						
KST				⇓iS	Sb	07 41 13.1	+1.2
	14nm,0.4s						
TKM2	Tokmak 2	3.01	277	⇑Pn	Pn	07 40 37.1	+0.6
	2.2nm,0.7s						
TKM2				⇑Lg	Lg	07 41 23.8	
	6.6nm,0.5s						
TKM2	Tokmak 2	3.01	277	⇑iP	Pn	07 40 38.8	+2.3
	baz=77						
TKM2				⇑iS	Sb	07 41 15.9	-3.4
	baz=77						
KZA	Kyzart	3.31	262	⇑iP	Pn	07 40 43.4	+2.6
	baz=62						
KZA				⇑iS	Sn	07 41 23.7	+3.3
	baz=62						
AAK	Ala-Archa	3.82	272	⇑Pg	Pb	07 40 56.8	+0.8
	1.1nm,0.4s						
AAK				⇑Lg	Lg	07 41 48.4	
	5.6nm,0.7s						
MAKZ	Makanchi	4.52	21	⇑Pn	Pn	07 40 58.4	+1.5
	0.2nm,0.2s						
MAKZ				⇑Sn	Sn	07 41 52.1	+2.5
	0.3nm,0.3s						
MAKZ				⇑Lg	Lg	07 42 09.6	
	0.6nm,0.4s						
MK31	Makanchi Array	4.59	23	⇑Pn	Pn	07 40 59.2	+1.2
	0.1nm,0.2s,baz=317,slow=38,SNR=10						
MK31				⇓Sn	Sn	07 41 52.7	+1.4
	0.1nm,0.2s,baz=204,slow=25,SNR=4.2						
MK31				⇑Lg	Lg	07 42 13.3	
	1.4nm,0.6s,baz=196,slow=25,SNR=5.5						

SJA ***09*** *07:48:55.8±0.7, 27°.96S×72°.73W, h50^{km}±39^{km}, ML3.9, MW4.0*

GUC ***09*** *07:49:03.8±0.4, 27°.52S×71°.19W, h61^{km}±28^{km}, ML3.8*

ISC 09 07:48:59.0±2.7**, 27°.47S**±0°.05×**72°.1W**±0°.2**, h35**^{km}**, n10, σ2ˢ.53**/13**, 1C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	1.98	141	i P	Pn	07 49 29.8	-0.5
LCO				i S	Sn	07 49 55.6	+1.6
LCO	Las Campanas	1.98	141	eP	Pn	07 49 31.5	+1.2
LCO				i S	Sn	07 49 51.9	-2.0
LCO				IAML		07 49 56.4	
	comp=E,2μm,0.5s						
GO04	Tololo Observa	2.93	157	eP	Pn	07 49 46.7	+3.3
GO02	Mina Guanaco	3.23	45	⇑iP	Pn	07 49 47.9	+0.4
GO02				i S	Sn	07 50 21.7	-3.1
GO02				IAML		07 50 41.1	
	comp=E,348nm,0.3s						
AROD	Rodeo	3.55	140	i P	Pn	07 49 52.8	+0.9
AGUA	GUANDACOL	3.77	123	i P	Pn	07 49 58.0	+3.3
PB10	IPOC Station P	4.18	20	eP	Pn	07 50 02.3	+2.0
PB15	IPOC Station P	4.87	30	eP	Pn	07 50 12.5	+2.6
AUSP	Uspallata	5.30	154	i P	Pn	07 50 13.4	-2.5
ARCO	CERRO ARCO	6.02	154	i P	Pn	07 50 23.1	-2.6
ARCO				IAML		07 51 56.8	
	comp=Z,39nm,0.5s						

IDC 09 07:59:14.3±2.4**, 54°.23N**×**86°.00E, h0**^{km}**, mb1 2.8**/2**, mb1mx2.8**/48**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=17.8km s-min=10.6km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.75	248	i		08 04 03.1	
	baz=68,slow=349,SNR=3.2						
ZALV	Zalesovo Beam	0.75	248	Pg	Pg	07 59 27.6	-1.1
	1.1nm,0.3s,baz=65,slow=18,SNR=12						
ZALV				Lg	Lg	07 59 39.7	
	2.2nm,0.3s,baz=67,slow=29,SNR=16						
KURBB	Kurchatov Arra	5.83	235	Pn	Pn	08 00 43.3	+1.4
	0.1nm,0.3s,baz=51,slow=13,SNR=3.7						
KURBB				Lg	Lg	08 02 19.8	
	0.0nm,0.3s,baz=51,slow=32,SNR=3.4						
MKAR	Makanchi Array	7.81	199	Pn	Pn	08 01 09.9	+0.7
	0.2nm,0.3s,baz=22,slow=13,SNR=12						
MKAR				Sn	Sn	08 02 38.2	-0.2
	0.0nm,0.3s,baz=12,slow=23,SNR=2.6						
MKAR				Lg	Lg	08 03 19.9	
	0.0nm,0.3s,baz=22,slow=31,SNR=2.1						

BJI ***09*** *08:04:02.9, 11°.02S×165°.95E, h6^{km}, mB5.5/43, mb5.0/57, Ms5.4/56, Ms7 5.0/50*

IDC ***09*** *08:04:03.6±0.4, 11°.35S×165°.76E, h0^{km}, mb4.8/27, mb1 4.9/29, mb1mx4.8/41, mbtmp4.8/29, ML5.3/2, MS4.7/26, Ms1 4.7/26, ms1mx4.6/35, Error ellipse: s-maj=16.0km s-min=11.7km az=90.0*

NEIC ***09*** *08:04:05.5±0.1, 11°.24S×165°.68E, h10^{km}, mb5.4/170, Error ellipse: s-maj=3.9km s-min=3.1km az=129.0*

ISCJB ***09*** *08:04:06.2±0.1, 11°.27S±0°.02×165°.64E±0°.02, h24^{km}, mb5.2/232, MS4.9/47, Error ellipse: s-maj=3.1km s-min=2.9km az=143.0*

MOS ***09*** *08:04:07.6±1.2, 11°.21S×165°.57E, h32^{km}, mb5.3/71, MS4.7/9, Error ellipse: s-maj=7.7km s-min=7.2km az=110.1*

GCMT ***09*** *08:04:09.5±0.1, 11°.22S±0°.01×165°.47E±0°.01, h15^{km}, MW5.5/109, Moment Tensor Solution. s105,c183; s109,c183; Duration: 1ˢ.3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.77±.02; $M_{\theta\theta}$-0.22±.01; $M_{\phi\phi}$0.99±.02; $M_{r\theta}$0.79±.06; $M_{\theta\phi}$0.13±.01; $M_{\phi r}$1.48±.08; Best double couple: $M_0$1.90800×10^{17} NP1:ϕ_s206.00000°, δ77.00000°, λ-78.00000°. NP2:ϕ_s342.00000°, δ18.00000°, λ-132.00000°. Principal axes: T 1.9580, Plg31.0000°, Azm286.0000°; N -0.1000, Plg12.0000°, Azm23.0000°; P -1.8580, Plg56.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 08:04:08.1±0.2**, 11°.32S**±0°.04×**165°.64E**±0°.04**, h24**^{km}**, n691, σ1ˢ.63**/741**, mb5.3**/231**, MS4.9**/48**, 28C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.91	288	eP	Pn	08 05 35.0	+0.8
HNR				eS	Sn	08 06 37.0	-4.3
HNR	Honiara	5.91	288	ePn	Pn	08 05 34.2	-0.1
HNR				eSn	Sn	08 06 40.3	-1.0
HNR	Honiara	5.91	288	Pn	Pn	08 05 33.8	-0.4
	107nm,0.3s,baz=139,slow=8.4,SNR=16						
HNR				Sn	Sn	08 06 40.3	-1.0
	23nm,0.3s,baz=107,slow=19,SNR=2.8						
HNR				LR	LR	08 07 56.1	
	comp=Z,16μm,19.5s,baz=140,slow=39						
MARNC	Mare, Loyalty	10.36	168	ePn	Pn	08 06 35.0	-0.3
DZM	Mont Dzumac	10.72	176	ePn	Pn	08 06 39.3	-1.0
	135nm,0.5s						
DZM				eLR	LR	08 09 05.1	
	comp=Z,6μm,25.2s						
DZM	Mont Dzumac	10.72	176	ePn	Pn	08 06 40.9	+0.5
DZM				eSn	Sn	08 08 35.9	-3.8
DZM	Mont Dzumac	10.72	176	Pn	Pn	08 06 39.1	-1.2
	14nm,0.3s,baz=355,slow=12,SNR=104						
DZM				Sn	Sn	08 08 35.9	-3.8
	baz=83,slow=19,SNR=1.7						
DZM				LR	LR	08 10 38.9	
	comp=Z,6μm,18.1s,baz=7.5,slow=37						
PINNC	Pines Island,	11.36	172	ePn	Pn	08 06 50.0	+1.0
MSVF	Nonsavu	13.59	119	ePn	Pn	08 07 22.2	+2.5
MSVF	Nonsavu	13.59	119	eP	Pn	08 07 22.2	+2.5
FUNA	Funafuti	13.64	79	ePn	Pn	08 07 20.9	+0.7
TARA	Tarawa	14.53	30	ePn	Pn	08 07 34.2	+1.9
RABL	Rabaul	15.11	297	ePn	Pn	08 07 41.0	+0.8
	108nm,0.8s						
PATS	Pohnpei	19.46	338	eP	P	08 08 31.3	-1.9
	527nm,1.3s						
EIDS	Eidsvold	19.63	223	P	Pn	08 08 37.4	+0.9
	baz=20,SNR=16						

EIDS	Eidsvold	19.63	223	eP	Pn	08 08 36.6	+0.1
	49nm,0.9s						
MANU	Manus Island	20.34	296	eP	P	08 08 43.2	+0.3
	2µm,1.5s						
CTA	Charters Tower	20.58	243	P	P	08 08 45.7	+0.2
	baz=21						
CTA	Charters Tower	20.58	243	P	P	08 08 45.5	-0.1
	140nm,1.1s,baz=70,slow=13,SNR=45						
CTA				LR	LR	08 15 32.0	
	comp=Z,3µm,18.1s,baz=65,slow=33						
CTAO	Charters Tower	20.58	243	eP	P	08 08 45.2	-0.3
	299nm,1.4s						
CTAO	Charters Tower	20.58	243	eP	P	08 08 45.2	-0.3
CTAO				pmax	pmax		
	comp=Z,299nm,1.4s						
LHI	Lord Howe Isla	21.00	196	eP	P	08 08 50.8	+0.9
	comp=Z,255nm,1.3s						
MTSU	Mount Surprise	21.70	249	P	P	08 08 57.9	+0.3
	baz=22,SNR=52						
RMQ	Roma	21.93	224	P	P	08 09 01.3	+1.3
	baz=22,SNR=36						
COEN	Coen	22.08	261	P	P	08 09 01.6	-0.1
	baz=22,SNR=56						
COEN	Coen	22.08	261	eP	P	08 09 01.6	-0.1
	comp=Z,296nm,1.4s						
ARMA	Armidale	23.03	212	P	P	08 09 12.9	+1.1
	baz=23,SNR=11						
ARMA	Armidale	23.03	212	eP	P	08 09 12.1	+0.3
	comp=Z,153nm,1.3s						
RAO	Raoul Island	23.53	142	LR	LR	08 15 21.2	
	comp=Z,593nm,21.0s,baz=344,slow=29						
KNTN	Kanton	24.00	71	eP	P	08 09 22.8	+1.6
	comp=Z,198nm,1.1s						
OUZ	Omahuta	24.87	164	eP	P	08 09 29.9	+0.9
	comp=Z,112nm,1.2s						
MGCD	Mangrove Creek	25.54	209	P	P	08 09 37.3	+2.1
	baz=26,SNR=5.8						
QIS	Mount Isa	26.63	247	P	P	08 09 45.8	+0.6
	baz=27,SNR=22						
CMSA	Cobar Meteorol	27.29	219	P	P	08 09 51.3	+0.4
	baz=27,SNR=11						
YNG	Young	27.77	212	P	P	08 09 56.8	+1.6
	baz=28,SNR=6.0						
HIZ	Hauiti	28.30	165	eP	P	08 10 01.9	+2.0
	comp=Z,385nm,1.5s						
HAZ	Te Kaha	28.49	160	P	P	08 10 02.5	+0.9
MXZ	Matakaoa Point	28.50	159	eP	P	08 10 03.0	+1.4
	comp=Z,50nm,0.9s						
MXZ	Matakaoa Point	28.50	159	P	P	08 10 03.2	+1.6
RUGZ	Raukumara Rang	28.64	160	P	P	08 10 04.3	+1.2
PKGZ	Pakihiroa	28.71	159	P	P	08 10 05.2	+1.6
URZ	Urewera	28.72	161	P	P	08 10 02.7	-0.9
	comp=Z,30nm,1.1s,baz=19,slow=2.9,SNR=7.0						
URZ	Urewera	28.72	161	P	P	08 10 04.0	+0.4
MUGZ	Murupara	28.81	162	P	P	08 10 05.4	+0.9
MWZ	Matawai	28.92	160	P	P	08 10 05.5	+0.1
TWGZ	Tauwhareparae	28.93	160	P	P	08 10 07.0	+1.4
PUZ	Puketiti	28.93	159	P	P	08 10 07.3	+1.7
WTVZ	West Tongariro	29.06	164	P	P	08 10 08.9	+2.1
NGZ	Ngauruhoe	29.12	164	P	P	08 10 09.6	+2.2
MTHZ	Maungataniwha	29.18	162	P	P	08 10 08.1	+0.4
TRVZ	Turoa	29.22	164	P	P	08 10 09.7	+1.3
SNGZ	Shannon Statio	29.27	161	P	P	08 10 08.5	0.0
CNGZ	Carnagh Statio	29.29	160	P	P	08 10 09.0	+0.4
RAHZ	Arahi	29.31	162	P	P	08 10 09.4	+0.5
RIGZ	Rimuhau	29.34	160	P	P	08 10 09.8	+0.7
BKZ	Black Stump Fm	29.36	163	eP	P	08 10 09.2	-0.2
	comp=Z,241nm,1.7s						
BKZ	Black Stump Fm	29.36	163	P	P	08 10 09.2	-0.2
NMHZ	Naumai	29.39	162	P	P	08 10 10.6	+0.9
BHHZ	Black Hill Sta	29.54	164	P	P	08 10 10.6	-0.4
H11S2	WAKE ISLAND Hy	29.64	2	T	T	08 40 50.2	
	baz=178						
H11S3	WAKE ISLAND Hy	29.64	2	T	T	08 40 44.0	
	baz=178						
H11S1	WAKE ISLAND Hy	29.66	2	T	T	08 40 49.7	
	baz=178						
MCHZ	McNeill Hill	29.68	163	P	P	08 10 12.6	+0.5
STKA	Stephens Creek	30.17	224	P	P	08 10 17.6	+1.0
	baz=30,SNR=10.0						
STKA	Stephens Creek	30.17	224	eP	P	08 10 16.5	-0.1
	comp=Z,47nm,2.0s						
STKA	Stephens Creek	30.17	224	eP	P	08 10 16.5	-0.1
STKA				pmax	pmax		
	comp=Z,47nm,2.0s						
STKA	Stephens Creek	30.17	224	P	P	08 10 15.6	-1.0
	comp=Z,21nm,0.8s,baz=28,slow=10,SNR=30						
STKA				LR	LR	08 20 47.3	
	comp=Z,1µm,18.5s,baz=49,slow=33						
BFZ	Birch Farm	30.71	164	eP	P	08 10 20.2	-1.0
	comp=Z,176nm,1.2s						
H11N1	WAKE ISLAND Hy	30.86	2	T	T	08 42 11.1	
	baz=181						
H11N3	WAKE ISLAND Hy	30.87	2	T	T	08 42 16.6	
	baz=181						
H11N2	WAKE ISLAND Hy	30.88	2	T	T	08 42 17.0	
	baz=181						
SNZO	South Karori	30.92	167	eP	P	08 10 26.1	+3.1
THZ	Tophouse	30.99	169	eP	P	08 10 24.3	+0.6
	comp=Z,69nm,0.8s						
WC3	Warramunga Arr	31.27	250	eP	P	08 10 24.6	-1.9
	comp=Z,80nm,1.0s						
WRAB	Tennant Creek	31.28	250	eP	P	08 10 25.0	-1.6
	comp=Z,140nm,1.3s						
WRAB	Tennant Creek	31.28	250	ceP	P	08 10 25.2	-1.4
WRAB				pmax	pmax		
	comp=Z,130nm,1.3s						
WB2	Warramunga Arr	31.28	250	eP	P	08 10 24.8	-1.8
	comp=Z,156nm,1.3s						
WR1	Warramunga Arr	31.29	250	eP	P	08 10 24.8	-1.9
	comp=Z,127nm,1.1s						
WR1				ePcP	PcP	08 13 20.8	0.0
WR1				eScP	ScP	08 17 06.2	+3.8
WRA	Warramunga Arr	31.30	250	i P	P	08 10 24.6	-2.1
WRA				pmax	pmax		
	comp=Z,95nm,1.1s						
WRA	Warramunga Arr	31.30	250	P	P	08 10 24.8	-1.9
	comp=Z,93nm,1.1s,baz=80,slow=9.1,SNR=118						
WRA				PcP	PcP	08 13 20.8	0.0
	comp=Z,1.7nm,0.9s,baz=76,slow=2.9,SNR=3.0						
WRA				ScP	ScP	08 17 06.2	+3.7
	comp=Z,2.1nm,1.1s,baz=80,slow=3.7,SNR=4.7						
WRA				LR	LR	08 21 35.4	
	comp=Z,2µm,20.0s,baz=65,slow=34						
KHZ	Kahutara	31.74	169	eP	P	08 10 29.7	-0.5
	comp=Z,200nm,1.5s						
TOO	Toolangi	31.79	211	P	P	08 10 32.2	+1.4
	baz=32,SNR=5.7						
TOO	Toolangi	31.79	211	eP	P	08 10 31.7	+0.9
	comp=Z,31nm,0.9s						
TOO	Toolangi	31.79	211	eP	P	08 10 31.7	+0.9
TOO				pmax	pmax		
	comp=Z,31nm,0.9s						
LTZ	Lake Taylor	31.87	171	eP	P	08 10 32.1	+0.6
	comp=Z,239nm,1.6s						
GUMO	Guam	32.20	320	LR	LR	08 23 09.4	
	comp=Z,2µm,18.5s,baz=134,slow=36						
OXZ	Oxford	32.37	171	eP	P	08 10 36.1	+0.3
	comp=Z,127nm,1.2s						
KDU	Kakadu	32.46	264	P	P	08 10 36.3	-0.6
	baz=32,SNR=9.5						
AS01	Alice Springs	32.54	244	eP	P	08 10 35.6	-2.0
AS31	Alice Springs	32.58	244	eP	P	08 10 37.0	-1.0
	comp=Z,3.2nm,0.7s						
ASAR	Alice Springs	32.58	244	P	P	08 10 35.9	-2.1
	comp=Z,10.0nm,0.8s,baz=73,slow=9.3,SNR=63						
ASAR				PcP	PcP	08 13 23.7	-0.6
	comp=Z,1.6nm,0.8s,baz=79,slow=2.5,SNR=2.6						
ASAR				ScP	ScP	08 17 09.7	+2.9
	comp=Z,1.1nm,1.0s,baz=79,slow=3.2,SNR=3.4						
ASAR				LR	LR	08 22 38.4	
	comp=Z,1µm,18.4s,baz=74,slow=34						
RPZ	Rata Peaks	32.61	173	eP	P	08 10 39.6	+1.6
	comp=Z,134nm,1.4s						
RPZ	Rata Peaks	32.61	173	P	P	08 10 37.7	-0.2
	comp=Z,36nm,1.0s,baz=308,slow=5.2,SNR=10						
CRLZ	Canterbury Las	32.70	171	eP	P	08 10 39.2	+0.5
	comp=Z,496nm,1.6s						
MQZ	McQueen's Vall	32.83	171	eP	P	08 10 40.0	+0.1
	comp=Z,300nm,1.5s						
HTT	Hallett	32.91	224	P	P	08 10 40.7	0.0
	baz=33,SNR=12						
LBZ	Lake Benmore	33.18	174	eP	P	08 10 44.2	+1.3
	comp=Z,65nm,1.3s						
ARPS	Mount Arapiles	33.20	216	P	P	08 10 43.5	+0.3
	baz=33,SNR=6.1						
ODZ	Otahua Downs	33.88	174	eP	P	08 10 48.5	-0.5
	comp=Z,59nm,1.3s						
RAR	Rarotonga	34.55	111	LR	LR	08 21 48.2	
	comp=Z,2µm,21.4s,baz=249,slow=31						
BBOO	Buckleboo	34.57	227	P	P	08 10 54.9	-0.2
	baz=35,SNR=12						
BBOO	Buckleboo	34.57	227	eP	P	08 10 54.7	-0.4
	comp=Z,47nm,0.8s						
BNDI	Bandanaira	36.01	278	P	P	08 11 08.1	+0.4
	comp=Z,156nm,1.1s,comp=Z,4µm						
KNRA	Kununurra	36.09	259	P	P	08 11 08.3	-0.1
	baz=36,SNR=10.0						
WRKA	Warakurna	37.87	244	P	P	08 11 23.0	-0.6
	baz=38,SNR=10						
NLAI	Namlea	39.03	279	P	P	08 11 33.0	-0.3
	comp=Z,80nm,1.8s,comp=Z,2µm						
FITZ	Fitzroy Crossi	39.21	255	P	P	08 11 34.7	-0.1
	baz=39,SNR=19						
FITZ	Fitzroy Crossi	39.21	255	eP	P	08 11 34.7	-0.1
	comp=Z,41nm,1.0s						
FORT	Forrest	39.80	235	P	P	08 11 39.6	0.0
	baz=40						
FORT	Forrest	39.80	235	eP	P	08 11 39.9	+0.3
	comp=Z,58nm,1.1s						
SOEI	Soe	40.68	268	P	P	08 11 52.6	+5.3
BATI	Baumata	41.23	267	P	P	08 11 56.1	+4.4
MATI	Mati	43.19	293	eP	P	08 12 02.7	-4.9
PPT	Papeete	43.73	104	LR	LR	08 28 15.5	
	comp=Z,1µm,18.2s,baz=266,slow=33						
PPT2	Papeete2	43.73	104	eS	S	08 18 50.9	+10
	comp=Z,1µm,24.5s						
PPT2				eLQ	LQ	08 22 45.3	
	comp=Z,2µm,24.2s						
PPT2				eLR	LR	08 24 41.1	
	comp=Z,3µm,25.8s						
LUWI	Luwuk	43.76	280	P	P	08 12 16.1	+3.9
KCP	Kidapawan	44.27	292⇓	eP	P	08 12 16.5	+0.1
SKMP	Bagumbayan, Su	44.57	291	eP	P	08 12 17.5	-1.1
BUKP	Musuan	44.65	294	eP	P	08 12 20.0	+0.7
APSI	Ampana	44.88	280	P	P	08 12 31.5	+10
MRSI	Marisa	44.97	282	P	P	08 12 30.0	+8.1
MBWA	Marble Bar	45.01	251	eP	P	08 12 22.5	+0.4
	comp=Z,64nm,1.1s						
MBWA	Marble Bar	45.01	251	eP	P	08 12 22.6	+0.4
BKSI	Bulukumba	45.39	274	P	P	08 12 25.4	+0.2
	comp=Z,14nm,0.9s,comp=Z,589nm						
BNSI	Bone	45.58	275	P	P	08 12 25.9	-0.9
	comp=Z,60nm,1.0s,comp=Z,2µm						
MSLP	Maasin	45.80	296	eP	P	08 12 27.6	-0.9
SPSI	Sidrap Palu	46.00	275	P	P	08 12 27.4	-2.7
	comp=Z,24nm,1.4s						
PAGZ	Pagadian	46.15	293	eP	P	08 12 31.1	-0.1
OCLP	Ormoc	46.44	297	eP	P	08 12 34.0	+0.6
MEEK	Meekatharra	46.74	244	P	P	08 12 35.7	0.0
	baz=47,SNR=7.8						
IPIL	Ipil	46.87	292	eP	P	08 12 37.7	+0.9
MPSI	Mapaga	46.90	281	P	P	08 12 36.6	-0.5
	comp=Z,25nm,1.1s						
PLAI	Plampang	47.15	268	P	P	08 12 50.6	+11
GUIM	Jordan	48.02	295	eP	P	08 12 43.1	-2.7
KIP	Kipapa	48.30	48	i P	P	08 12 47.0	-0.8
KLBR	Kellerberrin	48.48	238	P	P	08 12 49.5	+0.4
	baz=48,SNR=7.5						
HMH	Humu'ula Sheep	49.09	52	eP	P	08 12 54.4	+0.1
	comp=Z,178nm,1.0s						
BLDU	Ballidu	49.13	239	P	P	08 12 54.6	+0.4
	baz=49,SNR=4.9						
POHA	Pohakuloa	49.15	51	eP	P	08 12 53.9	-0.7
	comp=Z,364nm,1.7s						
HPAH	Hawaii Prepara	49.18	51	eP	P	08 12 54.4	-0.3
	comp=Z,134nm,1.1s						
NWAO	Narrogin (SRO)	49.23	236	P	P	08 12 54.7	-0.2
	baz=49,SNR=5.7						
NWAO	Narrogin (SRO)	49.23	236	eP	P	08 12 55.2	+0.3
	comp=Z,66nm,1.1s						
NWAO	Narrogin (SRO)	49.23	236	eP	P	08 12 55.2	+0.3
NWAO				pmax	pmax		
	comp=Z,66nm,1.1s						
OTRP	Odiongan	49.29	297	eP	P	08 12 55.4	-0.1
MORW	Morawa	49.40	241	P	P	08 12 57.1	+0.8
	baz=49,SNR=10						
MORW	Morawa	49.40	241	eP	P	08 12 55.9	-0.4
	comp=Z,67nm,1.3s						
SRBI	Singaraja	49.77	269	P	P	08 13 01.5	+2.3
	comp=Z,34nm,1.3s,comp=Z,1µm						
MUN	Mundaring	49.85	238	P	P	08 12 59.6	0.0
	baz=50,SNR=10						
TSM	Tawau	49.99	285	P	P	08 13 05.8	+4.8
SJMP	San Jose	50.12	297	eP	P	08 13 04.0	+2.2
JAGI	Jajag, Banyuwa	50.75	268	eP	P	08 13 06.7	-0.1
	comp=Z,241nm,1.8s						
JAGI	Jajag, Banyuwa	50.75	268	P	P	08 13 08.1	+1.3
	comp=Z,48nm,1.0s,comp=Z,1µm						
SDKM	Sandakan	51.07	287	P	P	08 13 12.5	+3.4
BATP	Bataraza	51.61	291	eP	P	08 13 09.7	-3.5
SMPP	San Manuel, Pa	52.19	301	eP	P	08 13 16.8	-0.6
ABRA	Dolores	52.89	302	eP	P	08 13 28.4	+5.8
PWJI	Pagerwojo	53.12	268	P	P	08 13 25.1	+0.7
	comp=Z,60nm,1.7s						
TAOE	Nuku Hiva Isla	53.37	93	eS	S	08 21 03.9	+6.5
	comp=Z,761nm,25.7s						
TAOE				eLQ	LQ	08 26 49.4	
	comp=Z,1µm,23.5s						
TAOE				eLR	LR	08 28 41.8	
	comp=Z,1µm,27.9s						
NGJI	Ngawi	53.55	269	P	P	08 13 33.1	+5.6
PCJI	Pacitan	53.71	268	P	P	08 13 29.5	+0.8
	comp=Z,199nm,1.6s						
MJAR	Matsushiro Arr	54.17	333	P	P	08 13 31.1	-0.6
	comp=Z,3.1nm,0.6s,baz=175,slow=7.9,SNR=7.0						
MAJO	Matsushiro	54.17	333	eP	P	08 13 31.3	-0.4
	comp=Z,47nm,1.4s						
MAJO	Matsushiro	54.17	333	i P	P	08 13 28.1	-3.6
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAJO	Matsushiro	54.17	333	eP	P	08 13 31.3	-0.4
MAT	Matsushiro	54.17	333	P	P	08 13 30.9	-0.8
MAT				S	S	08 21 09.2	+1.8
MJB9	Matsu-Tunnel	54.17	333	eP	P	08 13 31.2	-0.5
	comp=Z,48nm,1.4s						
UGM	Wanagama	54.39	268	eP	P	08 13 33.7	0.0
	comp=Z,139nm,1.1s						
SBUM	Sibu	54.85	281	eP	P	08 13 37.3	+0.3
	comp=Z,36nm,1.5s						
SBUM	Sibu	54.85	281	P	P	08 13 39.4	+2.3
JNU	Nakatsue	55.24	324	eP	P	08 13 40.0	+0.4
	comp=Z,28nm,0.9s						
JNU	Nakatsue	55.24	324	P	P	08 13 40.1	+0.6
	comp=Z,14nm,0.8s,baz=233,slow=3.7,SNR=7.6						
NACB	Ninganchiao	55.64	310	eP	P	08 13 42.9	+0.5
	comp=Z,115nm,1.4s						
TPUB	Ta-pu	55.89	308	eP	P	08 13 44.5	+0.2
	comp=Z,62nm,1.1s						
KSM	Kuching	56.45	279	eP	P	08 13 48.6	0.0
	comp=Z,91nm,1.4s						
KSM	Kuching	56.45	279	P	P	08 13 49.7	+1.2
CISI	Cisompet, Garu	57.09	268	eP	P	08 13 53.5	+0.3
	comp=Z,72nm,1.0s						
CISI	Cisompet, Garu	57.09	268	P	P	08 13 55.7	+2.5
	comp=Z,112nm,1.4s,comp=Z,2µm						
RKT	Rikitea	57.59	110	eS	S	08 22 01.3	+7.9
	comp=Z,976nm,34.8s						
RKT				eLR	LR	08 31 04.0	
	comp=Z,2µm,27.8s						
TPI	Tanjungpandan	58.09	274	P	P	08 14 05.9	+5.8
DBJI	Dramaga	58.29	269	P	P	08 14 05.7	+4.1
ASAJ	Asahikawa	59.02	341	P	P	08 14 06.6	+0.6
	comp=Z,9.7nm,0.7s,baz=201,slow=8.0,SNR=2.5						
SSE	Sheshan	59.98	316	P	P	08 14 13.5	+0.6
SSE				S	S	08 22 21.0	-3.1
SSE				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SSE				pmax	pmax		
	comp=Z,210nm,6.5s						
SSE				LR	LR		
	comp=Z,280nm,15.4s						
SSE				LR	LR		
	comp=Z,350nm,15.7s						
KSRS	Korea Array	60.05	326	P	P	08 14 13.6	+0.4
KSRS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSRS	Korea Array	60.05	326	P	P	08 14 13.6	+0.4
	comp=Z,1.8nm,0.8s,baz=140,slow=7.1,SNR=9.7						
KSRS				LR	LR	08 38 23.0	
	comp=Z,349nm,19.3s,baz=126,slow=34						
KS15	Wonju Array Si	60.06	326	eP	P	08 14 13.5	+0.2
KSAR	Wonju Array Be	60.06	326	P	P	08 14 13.6	+0.3
KSAR	Wonju Array Be	60.06	326	P	P	08 14 13.6	+0.3
YSS	Yuzh-Sakhalins	61.52	342⇑	eP	P	08 14 22.5	-0.5
YSS				e		08 14 33.0	
YSS				eS	S	08 22 34.0	-9.1
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
YSS				MLR	MLR		
	comp=Z,1µm,18.0s						
YSS				MLR	MLR		
	comp=E,1µm,15.0s						
TEY	Ternei	61.94	337⇓	eP	P	08 14 21.8	-4.1
TEY				pmax	pmax		
	comp=Z,10.0nm,1.8s						
NJ2	Nanjing	62.14	316	eP	P	08 14 27.4	-0.2
NJ2				pP	pP	08 14 31.3	-2.2
NJ2				sP	sP	08 14 36.4	+0.6
NJ2				pmax	pmax		
	comp=Z,18nm,1.3s						
MSHR	Mys Shultsa	62.25	332	i P	P	08 14 25.9	-2.1
VLA	Vladivostok	62.34	333	i P	P	08 14 28.0	-0.6
VLA				pmax	pmax		
	comp=Z,14nm,0.9s						
QIZ	Qiongzhong	62.72	298	P	P	08 14 35.0	+3.3
QIZ				S	S	08 23 04.5	+5.1
QIZ				pmax	pmax		
	comp=Z,790nm,7.3s						
QIZ				LR	LR		
	comp=Z,510nm,14.2s						
QIZ				LR	LR		
	comp=Z,560nm,22.1s						
QIZ				LR	LR		
	comp=Z,730nm,21.1s						
MYKOM	Kota Tinggi	62.79	278	P	P	08 14 34.5	+2.2
USA0B	Ussuriysk Arra	63.15	333	eP	P	08 14 35.1	+1.1
	comp=Z,127nm,1.8s						
USRK	Ussuriysk Ar.	63.15	333	P	P	08 14 35.1	+1.1
	comp=Z,4.1nm,0.8s,baz=157,slow=6.6,SNR=10						
KGM	Kluang	63.35	278	P	P	08 14 37.9	+1.9
KTGM	Kuala Trenggan	64.35	282	P	P	08 14 43.8	+1.3
WHN	Wuhan	64.50	312	P	P	08 14 50.7	+7.5
WHN				S	S	08 23 16.8	-4.3
WHN				LR	LR		
	comp=N,2µm,14.5s						
WHN				LR	LR		
	comp=E,650nm,12.1s						
WHN				LR	LR		
	comp=Z,2µm,19.8s						
PETK	Petropavlovsk-	64.53	355	P	P	08 14 42.7	-0.3
	comp=Z,7.2nm,0.9s,baz=134,slow=11,SNR=3.7						
PETK				LR	LR	08 36 49.9	
	comp=Z,619nm,21.3s,baz=169,slow=30						
PEA1	Petropavlovsk-	64.54	355	eP	P	08 14 42.6	-0.3
MDJ	Mudanjiang	64.55	332	eP	P	08 14 45.0	+1.8
	comp=Z,22nm,0.9s						
DL2	Dalian	64.64	323	P	P	08 14 45.8	+1.9
DL2				S	S	08 23 29.4	+6.9
DL2				pmax	pmax		
	comp=Z,36nm,1.4s						
DL2				pmax	pmax		
	comp=Z,300nm,6.7s						
DL2				LR	LR		
	comp=Z,1µm,15.9s						
DL2				LR	LR		
	comp=Z,560nm,13.5s						
DL2				LR	LR		
	comp=Z,790nm,16.3s						
FRIM	Kepong	65.29	279	P	P	08 14 49.9	+1.2
TIA	Tai'an	65.75	318	P	P	08 14 50.1	-1.2
CN2	Changchun	65.92	329	eP	P	08 14 49.2	-3.0
CN2				esP	pP	08 14 55.8	-2.4
CN2				esS	S	08 23 42.1	+3.9
CN2				SS	SS	08 27 50.2	-3.6
CN2				pmax	pmax		
	comp=Z,260nm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
CN2				LR	LR		
	comp=Z,730nm,17.0s						
CN2				LR	LR		
	comp=Z,730nm,18.0s						
CASY	Casey	66.09	201	eP	P	08 14 52.9	0.0
	comp=Z,90nm,1.5s						
IPM	Ipoh	66.17	280	eP	P	08 14 53.8	-0.6
	comp=Z,209nm,1.5s						
IPM	Ipoh	66.17	280	P	P	08 14 55.4	+1.0
VNDA	Vanda	66.22	181	eP	P	08 14 54.0	+0.4
VNDA	Vanda	66.22	181	eP	P	08 14 54.0	+0.4
VNDA	Vanda	66.22	181	P	P	08 14 53.1	-0.5
	comp=Z,11nm,1.2s,baz=4.5,slow=7.2,SNR=3.5						
VNDA				LR	LR	08 39 23.1	
	comp=Z,616nm,20.2s,baz=14,slow=32						
KULM	Kulim	66.73	281	eP	P	08 14 57.5	-0.5
	comp=Z,74nm,1.3s						
KULM	Kulim	66.73	281	P	P	08 14 58.3	+0.3
GRNR	Gornyy	66.87	340	eP	P	08 15 01.8	+3.7
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
SKNT	Sakolnakorn	67.11	294	P	P	08 15 01.4	+1.1
	comp=Z,15nm,0.8s,comp=Z,1µm						
KLR	Kul'dur	67.27	337	i P	P	08 14 58.4	-2.2
KLR	Kul'dur	67.27	337	P	P	08 15 01.4	+0.7
	comp=Z,8.1nm,1.1s,baz=121,slow=6.0,SNR=12						
NKL	Nikolayevsk	67.67	344	eP	P	08 15 03.2	+0.1
NKL				pmax	pmax		
	comp=Z,43nm,1.3s						
PSI	Prapat	67.81	278	eP	P	08 15 03.6	-1.4
	comp=Z,72nm,1.2s						
PSI	Prapat	67.81	278	eP	P	08 15 03.6	-1.4
PSI				pmax	pmax		
	comp=Z,72nm,1.2s						
ENH	Enshi	67.99	309	eP	P	08 15 04.4	-1.3
	comp=Z,71nm,1.2s						
NONG	Nongkai	68.24	295	P	P	08 15 08.7	+1.3
	comp=Z,1.2nm,1.3s						
TRTT	Trang	68.31	283	P	P	08 15 11.9	+3.9
	comp=Z,16nm,2.4s						
GYA	Guiyang	68.49	304⇑	iP	P	08 15 08.8	-0.2
GYA				PP	PP	08 17 44.0	+3.5
GYA				S	S	08 24 12.8	+2.8
GYA				SKS	SKSac	08 25 06.5	-0.6
GYA				SS	SS	08 28 37.2	+2.8
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.6s						
GYA				LR	LR		
	comp=Z,580nm,18.4s						
GYA				LR	LR		
	comp=Z,560nm,18.1s						
GYA				LR	LR		
	comp=Z,610nm,18.6s						
CHAI	Chaiyaphum	68.55	292	P	P	08 15 10.4	+1.0
	comp=Z,5.2nm,0.7s						
BJT	Baijiatuau	68.62	321	eP	P	08 15 08.6	-0.8
	comp=Z,37nm,1.2s						
BJT	Baijiatuau	68.62	321	eP	P	08 15 08.6	-0.8
BJT				pmax	pmax		
	comp=Z,37nm,1.2s						
BJI	Beijing	68.63	321	P	P	08 15 08.8	-0.6
BJI				S	S	08 24 12.8	+1.9
BJI				LR	LR		
	comp=Z,780nm,16.1s						
BJI				LR	LR		
	comp=Z,610nm,18.0s						
BJI				LR	LR		
	comp=Z,570nm,27.4s						
PATY	Pattaya	68.64	289	P	P	08 15 15.5	+5.5
	comp=Z,19nm,1.4s						
GSI	Gunungsitoli	68.79	276	eP	P	08 15 10.6	-0.3
	comp=Z,155nm,1.3s						
PBKT	Sadao Pong	69.69	292	eP	P	08 15 17.3	+0.9
	comp=Z,111nm,1.7s						
PBKT	Sadao Pong	69.69	292	P	P	08 15 18.1	+1.7
	comp=Z,28nm,2.5s,comp=Z,1µm						
TIY	Taiyuan	69.69	317	eP	P	08 15 18.2	+2.0
TIY				pmax	pmax		
	comp=Z,25nm,1.0s						
TIY				LR	LR		
	comp=Z,710nm,13.4s						
TIY				LR	LR		
	comp=Z,270nm,11.5s						
TIY				LR	LR		
	comp=Z,690nm,19.5s						
PHET	Kaeng Krachan	69.79	288	P	P	08 15 22.8	+5.7
	comp=Z,9.1nm,1.4s						
XAN	Xi'an	70.23	312	P	P	08 15 19.1	-0.4

XAN				pP	sP	08 15 28.9	+1.0
XAN				S	**S**	**08 24 31.4**	**+1.3**
XAN				SS	**SS**	**08 29 06.1**	**+5.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.5s						
XAN				pmax	pmax		
	comp=Z,140nm,3.6s						
XAN				LR	LR		
	comp=Z,580nm,17.0s						
XAN				LR	LR		
	comp=Z,630nm,16.9s						
XAN				LR	LR		
	comp=Z,750nm,17.3s						
XAN	**Xi'an**	**70.23**	**312**	*e*P	**P**	**08 15 19.5**	**0.0**
	comp=Z,36nm,1.2s						
XAN	**Xi'an**	**70.23**	**312**	*e*P	**P**	**08 15 19.5**	**0.0**
XAN				pmax	pmax		
	comp=Z,36nm,1.2s						
UTTA	**Uttaradit**	**70.45**	**293**	P	**P**	**08 15 23.4**	**+2.3**
	comp=Z,6.4nm,1.2s,comp=Z,76nm						
SRDT	**SRDT**	**70.69**	**290**	P	P	08 15 27.7	+5.1
	comp=Z,28nm,1.4s,comp=Z,2µm						
UTHA	**Uthaitani**	**70.76**	**291**	P	**P**	**08 15 24.9**	**+1.9**
	comp=Z,5.2nm,0.8s						
KMI	**Kunming**	**71.18**	**302**	P	**P**	**08 15 26.6**	**+0.9**
KMI				pP	pP	08 15 29.7	-2.2
KMI				PP	**PP**	**08 18 03.6**	**-0.3**
KMI				S	**S**	**08 24 40.7**	**-1.1**
KMI				sS	pS	08 24 47.7	-1.9
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI				pmax	pmax		
	comp=Z,440nm,4.1s						
KMI				LR	LR		
	comp=Z,500nm,16.4s						
KMI				LR	LR		
	comp=Z,540nm,15.7s						
KMI				LR	LR		
	comp=Z,740nm,20.0s						
KMI	**Kunming**	**71.18**	**302**	*e*P	**P**	**08 15 26.7**	**+1.0**
	comp=Z,150nm,1.5s						
SUKH	**Sukhothai**	**71.20**	**293**	P	**P**	**08 15 27.9**	**+2.3**
	comp=Z,6.2nm,1.0s						
UMPA	**Umpang Tak**	**71.50**	**291**	P	**P**	**08 15 31.3**	**+3.8**
	comp=Z,5.8nm,1.2s,comp=Z,696nm						
MA2	**Magadan**	**71.67**	**352**	*ce*P	**P**	**08 15 24.2**	**-3.4**
MA2				pmax	pmax		
	comp=Z,15nm,2.5s						
MA2	**Magadan**	**71.67**	**352**	P	**P**	**08 15 26.4**	**-1.2**
	comp=Z,1.2nm,0.2s,baz=176,slow=12,SNR=3.4						
MA2				LR	LR	08 41 19.6	
	comp=Z,1µm,20.9s,baz=176,slow=31						
HHC	**Hu-ho-hao-te**	**71.97**	**320**	*e*P	**P**	**08 15 32.2**	**+2.2**
HHC				S	**S**	**08 24 56.1**	**+5.9**
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,310nm,5.2s						
HHC				LR	LR		
	comp=Z,1µm,17.3s						
HHC				LR	LR		
	comp=Z,740nm,14.7s						
HHC				LR	LR		
	comp=Z,1µm,15.6s						
CM01	**Chiang Mai Arr**	**72.10**	**294**	*e*P	**P**	**08 15 31.3**	**+0.2**
CM31	**Chiang Mai Arr**	**72.13**	**294**	*e*P	**P**	**08 15 30.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**72.13**	**294**	P	**P**	**08 15 31.2**	**0.0**
	comp=Z,11nm,0.7s,baz=124,slow=4.9,SNR=34						
CMAR				LR	LR	08 47 14.1	
	comp=Z,185nm,19.6s,baz=105,slow=36						
CMMT	**Chiang Mai**	**72.24**	**294**	P	**P**	**08 15 33.0**	**+1.1**
	comp=Z,35nm,1.4s,comp=Z,807nm						
CHTO	**Chiang Mai**	**72.24**	**294**	*e*P	**P**	**08 15 32.3**	**+0.3**
	comp=Z,49nm,1.2s						
CHTO	**Chiang Mai**	**72.24**	**294**	*e*P	**P**	**08 15 32.3**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,49nm,1.2s						
CHTO	**Chiang Mai**	**72.24**	**294**	P	**P**	**08 15 33.1**	**+1.1**
	comp=Z,161nm,1.3s,comp=Z,3µm						
CHTO	**Chiang Mai**	**72.24**	**294**	*e*P	**P**	**08 15 32.2**	**+0.2**
ZEA	**Zeya**	**72.56**	**337**	*e*P	**P**	**08 15 32.2**	**-0.9**
ZEA				*e*S	**SKiKP**	**08 25 02.0**	**-4.5**
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,57nm,1.2s						
ZEA				smax	smax		
	comp=N,800nm,12.0s						
HIA	**Hailar**	**72.56**	**330**	*e*P	**P**	**08 15 32.8**	**-0.4**
	comp=N,94nm,2.0s						
HIA	**Hailar**	**72.56**	**330**	*e*P	**P**	**08 15 32.8**	**-0.4**
HIA				pmax	pmax		
	comp=Z,94nm,2.0s						
CD2	**Chengdu**	**72.69**	**307**	P	**P**	**08 15 34.1**	**-0.3**
CD2				pP	pP	08 15 37.3	-3.3
CD2				PP	**PP**	**08 18 15.7**	**-0.8**
CD2				S	**S**	**08 25 00.4**	**+1.7**
CD2				SKS	**SKKSac**	**08 25 39.0**	**+0.3**
CD2				SS	**SS**	**08 29 41.1**	**+2.3**
CD2				pmax	pmax		
	comp=Z,70nm,0.8s						
CD2				pmax	pmax		
	comp=Z,630nm,5.4s						
CD2				LR	LR		
	comp=Z,1µm,15.4s						
CD2				LR	LR		
	comp=Z,870nm,13.4s						
CD2				LR	LR		
	comp=Z,650nm,15.9s						
BTO	**Baotou**	**72.83**	**319**	*e*P	**P**	**08 15 35.2**	**+0.1**
SEY	**Seymchan**	**74.73**	**354**	*ce*P	**P**	**08 15 43.9**	**-1.8**
SEY	**Seymchan**	**74.73**	**354**	P	**P**	**08 15 46.0**	**+0.4**
	comp=Z,8.5nm,1.1s,baz=155,slow=6.1,SNR=11						
SEY				PP	**PP**	**08 18 29.7**	**-3.4**
	comp=Z,1.1nm,0.6s,baz=106,slow=18,SNR=2.1						
LZH	**Lanzhou**	**74.87**	**312**	*e*P	**P**	**08 15 47.9**	**+0.6**
LZH				pP	pP	08 15 52.6	-0.8
LZH				sP	sP	08 15 55.6	-0.1
LZH				S	**S**	**08 25 26.5**	**+3.2**
LZH				sS	sS	08 25 34.6	+0.7
LZH				SS	**SS**	**08 30 08.2**	**-3.8**
LZH				pmax	pmax		
	comp=Z,43nm,1.2s						
LZH				pmax	pmax		
	comp=Z,770nm,6.0s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
LZH				LR	LR		
	comp=Z,890nm,13.8s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
GAMB	**Gambell**	**76.86**	**10**	*e*P	**P**	**08 15 57.3**	**-0.4**
	comp=Z,70nm,1.3s						
YAK	**Yakutsk**	**78.33**	**344**	*e*P	P	08 16 13.5	+7.5
YAK				pmax	pmax		
	comp=Z,95nm,1.1s						
YAK				pmax	pmax		
	comp=N,51nm,1.1s						
YAK				pmax	pmax		
	comp=E,27nm,1.1s						
SVW2	**Sparrevohn**	**78.41**	**18**	*e*P	**P**	**08 16 06.0**	**-0.5**
	comp=E,72nm,1.4s						
ULN	**Ulaanbaatar**	**78.46**	**324**	*e*P	**P**	**08 16 07.1**	**-0.3**
	comp=E,32nm,1.0s						
ULN	**Ulaanbaatar**	**78.46**	**324**	*ce*P	**P**	**08 16 05.1**	**-2.2**
ULN				pmax	pmax		
	comp=Z,24nm,1.3s						
QSPA	**South Pole Qui**	**78.69**	**180**	*e*P	**P**	**08 16 07.2**	**-1.1**
	comp=Z,36nm,1.0s						
ANM	**Nome**	**78.78**	**12**	*e*P	**P**	**08 16 08.0**	**-0.5**
	comp=Z,46nm,1.3s						
ANM	**Nome**	**78.78**	**12**	*e*P	**P**	**08 16 08.0**	**-0.5**
ANM				pmax	pmax		
	comp=Z,46nm,1.3s						
RSO	**Redoubt South**	**78.81**	**20**	*e*P	**P**	**08 16 07.1**	**-1.9**
SONA0	**Songino Array**	**78.83**	**324**	*e*P	**P**	**08 16 09.1**	**-0.2**
SONA0				*e*PKKPbc	**PKKPbc**	**08 35 02.4**	**-3.2**
SONM	**Songino Array**	**78.83**	**324**	P	**P**	**08 16 09.1**	**-0.2**
	comp=Z,8.5nm,1.0s,baz=147,slow=5.1,SNR=24						
SONM				PKKPbc	**PKKPbc**	**08 35 02.4**	**-3.2**
	comp=Z,0.5nm,0.6s,baz=260,slow=2.5,SNR=4.9						
SONM				LR	LR	08 48 09.4	
	comp=Z,297nm,20.5s,baz=129,slow=34						
SONA1	**Songino Array**	**78.83**	**324**	*e*P	**P**	**08 16 07.7**	**-1.6**
BRLK	**Bradley Lake**	**78.93**	**21**	*e*P	**P**	**08 16 08.5**	**-0.9**
	comp=Z,55nm,0.8s						
BILL	**Bilibino**	**79.15**	**0**	*e*P	**P**	**08 16 09.7**	**-0.7**
	comp=Z,64nm,1.2s						
BILL	**Bilibino**	**79.15**	**0**	⇑*i*P	**P**	**08 16 08.8**	**-1.7**
BILL				*e*		08 16 18.5	
BILL				*e*		08 19 06.4	
BILL				*e*S	**PnS**	**08 26 47.1**	**-6.3**
BILL				pmax	pmax		
	comp=Z,29nm,1.0s						
GTA	**Gaotai**	**79.17**	**314**	⇑P	**P**	**08 16 11.9**	**+0.5**
GTA				pP	pP	08 16 16.7	-0.9
GTA				sP	PcP	08 16 18.9	-0.8
GTA				S	**S**	**08 26 10.6**	**+0.6**
GTA				sS	sS	08 26 19.6	-1.1
GTA				SKS	**SKSac**	**08 26 22.3**	**-3.9**
GTA				SS	**SS**	**08 31 20.1**	**+3.2**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,360nm,7.9s						
GTA				LR	LR		
	comp=Z,570nm,19.4s						
GTA				LR	LR		
	comp=Z,610nm,19.4s						
GTA				LR	LR		
	comp=Z,680nm,19.7s						
SEW	**Seward**	**79.68**	**21**	*e*P	**P**	**08 16 13.3**	**-0.1**
	comp=Z,32nm,0.9s						
SUA	**Susitna One**	**80.22**	**20**	*e*P	**P**	**08 16 14.5**	**-2.0**
	comp=Z,75nm,1.6s						
BOD	**Bodaibo**	**80.73**	**335**	*e*P	**P**	**08 16 19.4**	**+0.2**
BOD				pmax	pmax		
	comp=Z,26nm,1.6s						
PMR	**Palmer**	**80.85**	**20**	*e*P	**P**	**08 16 18.1**	**-1.6**
	comp=Z,107nm,1.8s						
PMR	**Palmer**	**80.85**	**20**	*e*P	**P**	**08 16 18.1**	**-1.6**
PMR				pmax	pmax		
	comp=Z,107nm,1.8s						
KNK	**Knik Glacier**	**80.95**	**20**	*e*P	**P**	**08 16 19.4**	**-1.0**
	comp=Z,49nm,1.3s						
CAST	**Castle Rocks**	**81.24**	**18**	*e*P	**P**	**08 16 19.6**	**-2.3**
	comp=Z,22nm,0.7s						
SML	**Sawmill**	**81.27**	**20**	*e*P	**P**	**08 16 20.9**	**-1.1**
	comp=Z,40nm,1.1s						
SML	**Sawmill**	**81.27**	**20**	*e*P	**P**	**08 16 20.9**	**-1.1**
SML				pmax	pmax		
	comp=Z,40nm,1.1s						
SCM	**Sheep Creek Mo**	**81.63**	**21**	*e*P	**P**	**08 16 22.5**	**-1.5**
	comp=Z,37nm,0.9s						
SCM	**Sheep Creek Mo**	**81.63**	**21**	*e*P	**P**	**08 16 22.5**	**-1.5**
SCM				pmax	pmax		
	comp=Z,37nm,0.9s						
DIV	**Divide**	**81.70**	**22**	*e*P	**P**	**08 16 23.5**	**-0.9**
	comp=Z,45nm,0.9s						
HMT	**Hamilton**	**81.73**	**23**	*e*P	**P**	**08 16 25.0**	**+0.5**
	comp=Z,53nm,1.0s						
TRF	**Thorofare Moun**	**81.81**	**18**	*e*P	**P**	**08 16 23.9**	**-1.1**
	comp=Z,12nm,0.8s						
ZAK	**Zakamensk**	**81.87**	**325**	*e*P	**P**	**08 16 24.3**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,17nm,1.3s						
KLU	**Klutina**	**81.89**	**21**	*e*P	**P**	**08 16 23.9**	**-1.5**
	comp=Z,43nm,1.3s						
BPAW	**Bear Paw Mtn.**	**82.07**	**18**	*e*P	**P**	**08 16 25.2**	**-1.0**
	comp=Z,18nm,1.4s						
RND	**Reindeer**	**82.23**	**19**	*e*P	**P**	**08 16 25.7**	**-1.4**
	comp=Z,35nm,1.1s						
RND	**Reindeer**	**82.23**	**19**	*e*P	**P**	**08 16 25.7**	**-1.4**
RND				pmax	pmax		
	comp=Z,35nm,1.1s						
RDOG	**Red Dog Mine**	**82.31**	**11**	*e*P	**P**	**08 16 27.5**	**+0.1**
	comp=Z,27nm,0.8s						
LSA	**Lhasa**	**82.41**	**302**	*e*P	**P**	**08 16 30.8**	**+1.5**
	comp=Z,31nm,1.3s						
LSA	**Lhasa**	**82.41**	**302**	*e*P	**P**	**08 16 30.8**	**+1.5**
LSA				pmax	pmax		
	comp=Z,31nm,1.3s						
MCK	**McKinley**	**82.44**	**19**	*e*P	**P**	**08 16 27.5**	**-0.7**
	comp=Z,39nm,1.2s						
MCK	**McKinley**	**82.44**	**19**	*e*P	**P**	**08 16 27.5**	**-0.7**
MCK				pmax	pmax		
	comp=Z,39nm,1.2s						
DHY	**Denali Highway**	**82.48**	**20**	*e*P	**P**	**08 16 27.2**	**-1.3**
	comp=Z,15nm,1.0s						
IM3	**Indian Mountai**	**82.72**	**16**	*e*P	**P**	**08 16 27.8**	**-1.8**
MLY	**Manley**	**82.83**	**17**	*e*P	**P**	**08 16 29.4**	**-0.8**
	comp=Z,36nm,1.4s						
KMRM	**Mail Ridge**	**82.91**	**47**	*e*P	**P**	**08 16 31.3**	**0.0**
	comp=Z,26nm,0.9s						
WRH	**Wood River Hil**	**83.22**	**18**	*e*P	**P**	**08 16 30.4**	**-1.8**
	comp=Z,37nm,1.0s						
MDM	**Murphy Dome**	**83.52**	**18**	*e*P	**P**	**08 16 32.1**	**-1.7**
	comp=Z,29nm,0.9s						
HDA	**Harding Lake**	**83.53**	**19**	*e*P	**P**	**08 16 31.9**	**-1.9**
	comp=Z,81nm,0.9s						
HDA	**Harding Lake**	**83.53**	**19**	P	**P**	**08 16 31.6**	**-2.2**
	baz=227,SNR=62						
O02D	**Mt. Diablo Mer**	**83.56**	**47**	P	**P**	**08 16 33.2**	**-1.3**
	baz=249						
TCOL	**CIGO, UAF Yank**	**83.57**	**18**	P	**P**	**08 16 32.2**	**-1.8**
	baz=226,SNR=22						
COLA	**College**	**83.58**	**18**	*e*P	**P**	**08 16 32.6**	**-1.3**
	comp=Z,52nm,0.8s						
COLA	**College**	**83.58**	**18**	*e*P	**P**	**08 16 32.6**	**-1.3**
COLA				pmax	pmax		
	comp=Z,52nm,0.8s						
MOY	**Mondy**	**83.75**	**326**	*e*P	**P**	**08 16 36.4**	**+1.1**
MOY				pmax	pmax		
	comp=Z,57nm,3.9s						
RIDG	**Independ'e Rid**	**83.77**	**20**	*e*P	**P**	**08 16 34.1**	**-1.0**
	comp=Z,55nm,1.1s						
ILAR	**Eielson Array**	**83.80**	**19**	P	**P**	**08 16 32.8**	**-2.4**
	comp=Z,12nm,0.8s,baz=228,slow=5.3,SNR=77						
ILAR				LR	LR	08 50 28.3	
	comp=Z,591nm,19.3s,baz=222,slow=33						
ILB	**Eielson Array**	**83.80**	**19**	*e*P	**P**	**08 16 33.0**	**-2.2**
IL1	**Eielson Array**	**83.81**	**19**	*e*P	**P**	**08 16 32.5**	**-2.7**
J01E	**Myrtle Point**	**83.83**	**44**	P	**P**	**08 16 34.5**	**-1.2**
	baz=248						
K02D	**Willamette Mer**	**83.84**	**44**	P	**P**	**08 16 34.2**	**-1.7**
	baz=249						
WDC	**Whiskeytown Da**	**83.87**	**47**	*e*P	**P**	**08 16 35.6**	**-0.5**
	comp=Z,50nm,1.6s						
WDC	**Whiskeytown Da**	**83.87**	**47**	*e*P	**P**	**08 16 35.6**	**-0.5**
WDC				pmax	pmax		
	comp=Z,50nm,1.6s						
POKR	**Poker Plat Res**	**83.88**	**18**	P	**P**	**08 16 33.8**	**-1.7**
	baz=226						
M02C	**Callahan**	**83.94**	**46**	P	**P**	**08 16 35.2**	**-1.3**
	baz=249						
DOT	**Dot Lake**	**83.97**	**20**	*e*P	**P**	**08 16 34.4**	**-1.7**
	comp=Z,42nm,1.0s						
PKM	**Mcpherson Peak**	**84.04**	**53**	P	**P**	**08 16 37.0**	**-0.3**
	baz=252						
YBH	**Yreka Blue Hor**	**84.16**	**46**	*e*P	**P**	**08 16 36.2**	**-1.4**
	comp=Z,12nm,0.8s						
YBH	**Yreka Blue Hor**	**84.16**	**46**	*e*P	**P**	**08 16 36.2**	**-1.4**
YBH				pmax	pmax		
	comp=Z,12nm,0.8s						
SCRK	**Sand Creek**	**84.21**	**20**	*e*P	**P**	**08 16 35.5**	**-1.9**
	comp=Z,51nm,1.0s						
HUMO	**Hull Mountain**	**84.30**	**45**	*e*P	**P**	**08 16 37.6**	**-0.6**
	comp=Z,18nm,0.9s						
O03E	**Paynes Creek**	**84.30**	**47**	P	**P**	**08 16 36.8**	**-1.6**
	baz=250						
I03D	**Drain, OR**	**84.42**	**44**	P	**P**	**08 16 38.2**	**-0.5**
	baz=249						
MAW	**Mawson**	**84.43**	**202**	LR	LR	08 49 36.7	
	comp=Z,414nm,18.6s,baz=95,slow=32						
AFDM	**Forest Hills D**	**84.46**	**49**	*e*P	**P**	**08 16 37.9**	**-1.2**
	comp=Z,19nm,1.0s						
COLD	**Coldfoot**	**84.59**	**16**	*e*P	**P**	**08 16 39.4**	**+0.3**
	comp=Z,7.3nm,0.9s						
CMB	**Columbia Colle**	**84.59**	**50**	*e*P	**P**	**08 16 38.3**	**-1.5**
	comp=Z,14nm,0.9s						
CMB	**Columbia Colle**	**84.59**	**50**	*e*P	**P**	**08 16 38.3**	**-1.5**
CMB				pmax	pmax		
	comp=Z,14nm,0.9s						
L04D	**Klamath Falls**	**84.61**	**45**	P	**P**	**08 16 38.7**	**-1.3**
	baz=250						
TAPN	**Taplejung**	**84.65**	**299**	*e*P	**P**	**08 16 40.3**	**-0.4**
	comp=Z,88nm,1.3s						
HYT	**Haines Junctio**	**84.68**	**24**	*e*P	**P**	**08 16 38.7**	**-1.2**
	comp=Z,15nm,0.9s						
COR	**Corvallis**	**84.77**	**43**	*e*P	**P**	**08 16 41.5**	**+1.0**
	comp=Z,138nm,1.8s						
COR	**Corvallis**	**84.77**	**43**	*e*P	**P**	**08 16 41.5**	**+1.0**
COR				pmax	pmax		
	comp=Z,139nm,1.8s						
M04C	**Macdoel**	**84.78**	**46**	P	**P**	**08 16 39.1**	**-1.7**
	baz=250						
ODAN	**Odare**	**84.79**	**299**	*e*P	**P**	**08 16 41.5**	**+0.2**
	comp=Z,112nm,1.0s						
I04A	**Tendick Farm,**	**85.09**	**44**	P	**P**	**08 16 40.9**	**-1.3**
	baz=249						
J04D	**Umpqua Nationa**	**85.10**	**44**	P	**P**	**08 16 41.0**	**-1.4**
	baz=250						
H04D	**Lebanon**	**85.13**	**43**	P	**P**	**08 16 40.8**	**-1.5**
	baz=249						
KNGR	**Kungurtug, Tuv**	**85.27**	**324**	*i* P	**P**	**08 16 41.3**	**-1.7**
ISA	**Isabella, Lake**	**85.32**	**52**	*e*P	**P**	**08 16 42.8**	**-0.8**
	comp=Z,11nm,1.0s						
ISA	**Isabella, Lake**	**85.32**	**52**	*e*P	**P**	**08 16 42.8**	**-0.8**
ISA				pmax	pmax		
	comp=Z,11nm,1.0s						
ISA	**Isabella, Lake**	**85.32**	**52**	P	**P**	**08 16 41.7**	**-1.9**
	baz=253						
MDPB	**Devils Postpil**	**85.45**	**50**	*e*P	**P**	**08 16 43.7**	**-0.7**
	comp=Z,22nm,1.0s						
WAKR	**Walker**	**85.45**	**49**	*e*P	**P**	**08 16 43.1**	**-1.3**
	comp=Z,18nm,1.1s						
EDW2	**Edwards Air Fo**	**85.47**	**53**	P	**P**	**08 16 43.6**	**-0.7**
	baz=253,SNR=8.4						
RAMN	**Ramite**	**85.50**	**298**	*e*P	**P**	**08 16 45.7**	**+0.8**
OMMB	**Old Mammoth Mi**	**85.50**	**50**	*e*P	**P**	**08 16 43.9**	**-0.9**
	comp=Z,10nm,1.1s						
PNTR	**Pine Nut**	**85.52**	**49**	*e*P	**P**	**08 16 43.6**	**-1.1**
	comp=Z,20nm,1.1s						
BFSC	**Mount Baldy Ra**	**85.54**	**54**	P	**P**	**08 16 43.3**	**-1.5**
	baz=253						
VCNR	**Virginia City**	**85.54**	**49**	*e*P	**P**	**08 16 44.2**	**-0.6**
	comp=Z,12nm,1.1s						
H04A	**Detroit Lake**	**85.55**	**43**	*e*P	**P**	**08 16 43.5**	**-1.0**
	comp=Z,15nm,1.1s						
MLAC	**Mammoth, Mammo**	**85.64**	**50**	P	**P**	**08 16 44.8**	**-0.5**
	baz=252						
WHY	**Whitehorse**	**85.67**	**25**	*e*P	**P**	**08 16 43.6**	**-1.1**
	comp=Z,6.9nm,1.1s						
EGAK	**Eagle**	**85.67**	**20**	*e*P	**P**	**08 16 42.9**	**-1.7**
	comp=Z,64nm,1.0s						
J05D	**Fort Rock, OR**	**85.72**	**44**	P	**P**	**08 16 44.8**	**-0.7**
	baz=250						
MURC	**Murrieta**	**85.73**	**55**	P	**P**	**08 16 44.9**	**-0.7**
	baz=254						
YERR	**Yerington**	**85.75**	**49**	*e*P	**P**	**08 16 46.3**	**+0.5**
	comp=Z,33nm,1.7s						
DAWY	**Dawson**	**85.85**	**21**	*e*P	**P**	**08 16 45.1**	**-0.4**
	comp=Z,12nm,0.8s						
CWC	**Cottonwood Cre**	**85.86**	**52**	P	**P**	**08 16 45.4**	**-0.9**
	baz=253						
PAHR	**Pah Rah Range**	**85.87**	**48**	*e*P	**P**	**08 16 45.8**	**-0.5**
	comp=Z,15nm,1.2s						
LRMC	**Laurel Mtn Rad**	**85.88**	**53**	P	**P**	**08 16 46.0**	**-0.5**
	baz=253						
E04D	**Cinebar**	**85.97**	**41**	P	**P**	**08 16 46.0**	**-0.4**
	baz=249						
D03D	**Eldon**	**85.99**	**40**	P	**P**	**08 16 45.9**	**-0.6**
	baz=249						
I05D	**Terrebonne, OR**	**86.00**	**43**	P	**P**	**08 16 46.3**	**-0.5**
	baz=250						
JIRN	**Jiri**	**86.03**	**299**	*e*P	**P**	**08 16 47.4**	**-0.3**
	comp=Z,286nm,1.5s						
PINE	**Pine Mountain**	**86.09**	**44**	*e*P	**P**	**08 16 46.7**	**-0.7**
	comp=Z,24nm,1.0s						
PGC	**Sidney**	**86.17**	**39**	*e*P	**P**	**08 16 46.7**	**-0.6**
	comp=Z,16nm,0.9s						
MPMC	**Manual Prospec**	**86.20**	**52**	P	**P**	**08 16 47.1**	**-1.0**
	baz=253						
NV01	**Mina Array Sit**	**86.28**	**50**	*e*P	**P**	**08 16 47.1**	**-1.3**
NVAR	**Mina Array Bea**	**86.28**	**50**	P	**P**	**08 16 46.7**	**-1.8**
	comp=Z,9.4nm,0.9s,baz=233,slow=8.1,SNR=15						
NVAR				LR	LR	08 50 22.0	
	comp=Z,536nm,18.6s,baz=270,slow=32						
G05D	**Wamic, OR**	**86.33**	**43**	P	**P**	**08 16 47.6**	**-0.7**
	baz=250						
TIXI	**Tiksi**	**86.34**	**349**	*ce*P	**P**	**08 16 44.8**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,11nm,1.3s						
TIXI	**Tiksi**	**86.34**	**349**	P	**P**	**08 16 47.7**	**0.0**
	comp=Z,4.6nm,0.9s,baz=120,slow=5.0,SNR=7.6						
TIXI				LR	LR	08 52 11.3	
	comp=Z,351nm,19.6s,baz=144,slow=33						
GUN	**Gumba**	**86.36**	**299**	*e*P	**P**	**08 16 48.4**	**-0.9**
NV11	**Mina Array Sit**	**86.39**	**50**	*e*P	**P**	**08 16 48.5**	**-0.5**
	comp=Z,1.2nm,1.0s						
PALK	**Pallekele**	**86.49**	**278**	*e*P	**P**	**08 16 47.6**	**-2.2**
	comp=Z,27nm,1.1s						
PALK	**Pallekele**	**86.49**	**278**	*e*P	**P**	**08 16 47.6**	**-2.2**
PALK				pmax	pmax		
	comp=Z,27nm,1.1s						
D05A	**Enumclaw**	**86.56**	**41**	*e*P	**P**	**08 16 47.3**	**-2.0**
	comp=Z,38nm,1.1s						
GRAC	**Grapevine Rang**	**86.57**	**51**	P	**P**	**08 16 48.9**	**-0.8**
	baz=253						
KVN	**Kaiserville**	**86.61**	**49**	*e*P	**P**	**08 16 48.5**	**-1.6**
	comp=Z,14nm,1.0s						
KVN	**Kaiserville**	**86.61**	**49**	*e*P	**P**	**08 16 48.5**	**-1.6**
KVN				pmax	pmax		
	comp=Z,14nm,1.0s						
SWSC	**Sam W. Stewart**	**86.67**	**56**	P	**P**	**08 16 49.4**	**-0.8**
	baz=254						
PKIN	**Phulchoki**	**86.69**	**299**	*e*P	**P**	**08 16 49.9**	**-0.9**
	comp=Z,149nm,1.5s						
DLBC	**Dease Lake**	**86.70**	**28**	*e*P	**P**	**08 16 49.6**	**-0.3**
	comp=Z,16nm,1.3s						
HEC	**Hector,Ludlow**	**86.76**	**54**	P	**P**	**08 16 49.9**	**-0.8**
	baz=254						
BELC	**Belle Mtn. Jos**	**86.80**	**55**	P	**P**	**08 16 51.4**	**+0.4**
	baz=254,SNR=5.7						
FURC	**Furnace Creek,**	**86.80**	**52**	P	**P**	**08 16 49.9**	**-0.8**
	baz=254,SNR=7.3						
KKN	**Kakani**	**86.85**	**299**	*e*P	**P**	**08 16 51.0**	**-0.5**
	comp=Z,135nm,1.4s						
B05A	**Bryant**	**86.87**	**40**	P	**P**	**08 16 50.1**	**-0.7**
	baz=249						
DMN	**Daman**	**86.95**	**299**	*e*P	**P**	**08 16 51.4**	**-0.7**
	comp=Z,210nm,1.3s						
SHOC	**Shoshone, Teco**	**87.10**	**53**	P	**P**	**08 16 51.5**	**-0.8**
	baz=254						
BC3	**Big Chuckawall**	**87.14**	**55**	P	**P**	**08 16 51.7**	**-1.0**
	baz=254						
I07A	**Izee**	**87.16**	**44**	*e*P	**P**	**08 16 51.3**	**-1.3**
	comp=Z,17nm,1.1s						
TUQ	**Turquoise Moun**	**87.25**	**53**	P	**P**	**08 16 52.2**	**-1.0**
	baz=254						
WVOR	**Wild Horse Val**	**87.25**	**46**	*e*P	**P**	**08 16 52.5**	**-0.5**
	comp=Z,24nm,1.4s						
WVOR	**Wild Horse Val**	**87.25**	**46**	*e*P	**P**	**08 16 52.5**	**-0.5**
WVOR				pmax	pmax		
	comp=Z,24nm,1.4s						
GMRC	**Granite Mounta**	**87.28**	**54**	P	**P**	**08 16 52.0**	**-1.3**
	baz=254						
TPNV	**Topopah Spring**	**87.41**	**52**	P	**P**	**08 16 52.8**	**-1.2**
	baz=254						
GLA	**Glamis**	**87.49**	**56**	P	**P**	**08 16 53.1**	**-1.2**
	baz=255						
IRM	**Iron Mountain**	**87.52**	**55**	P	**P**	**08 16 53.8**	**-0.6**
	baz=255,SNR=8.6						
J08A	**Circle Bar Ran**	**87.65**	**45**	*e*P	**P**	**08 16 53.6**	**-1.3**
	comp=Z,12nm,0.9s						
LLLB	**Lillooet**	**87.83**	**37**	*e*P	**P**	**08 16 55.5**	**0.0**
	comp=Z,15nm,1.3s						
HAWA	**Hanford**	**87.88**	**42**	*e*P	**P**	**08 16 54.8**	**-1.0**
	comp=Z,40nm,1.8s						
G08A	**Pilot Rock**	**87.91**	**43**	*e*P	**P**	**08 16 55.2**	**-0.9**
	comp=Z,12nm,1.0s						
Y12C	**Blythe**	**87.92**	**55**	P	**P**	**08 16 55.8**	**-0.4**
	baz=255						
EPYK	**Eagle Plains**	**88.10**	**20**	*e*P	**P**	**08 16 55.6**	**-0.8**
	comp=Z,34nm,1.2s						
EPYK	**Eagle Plains**	**88.10**	**20**	P	**P**	**08 16 55.9**	**-0.6**
	baz=236,SNR=11						
NEE2	**Needles Airpor**	**88.10**	**54**	P	**P**	**08 16 56.4**	**-0.7**
	baz=255						
DANN	**Dangsing**	**88.28**	**299**	*e*P	**P**	**08 16 56.9**	**-1.6**
	comp=Z,65nm,1.1s						
KOLN	**Koldanda**	**88.28**	**299**	*e*P	**P**	**08 16 57.8**	**-0.6**
	comp=Z,64nm,1.2s						
R11A	**Troy Canyon, C**	**88.30**	**50**	*e*P	**P**	**08 16 57.5**	**-0.7**
	comp=Z,11nm,1.2s						
R11A	**Troy Canyon, C**	**88.30**	**50**	P	**P**	**08 16 57.4**	**-0.7**
	baz=254,SNR=8.9						
PDMCI	**Parker Dam,Lak**	**88.36**	**55**	P	**P**	**08 16 57.7**	**-0.6**
	baz=255						
D08A	**Wollman Farm,**	**88.49**	**41**	*e*P	**P**	**08 16 58.2**	**-0.4**
	comp=Z,12nm,1.1s						

B08A	Colville Reser	88.64	40	*e*P	P	08 16 59.1	-0.2
	comp=Z,23nm,1.8s						
W13A	Hualapai Mount	88.77	54	*e*P	P	08 16 59.6	-0.9
	comp=Z,34nm,1.7s						
214A	Organ Pipe Nat	88.86	57	P	P	08 16 59.9	-0.9
	baz=256						
PYUN	Piuthan	88.89	299	*e*P	P	08 16 59.7	-1.5
	comp=Z,62nm,1.1s						
BMO	Blue Mountains	88.90	44	*e*P	P	08 16 59.7	-1.1
	comp=Z,31nm,1.9s						
BMO	Blue Mountains	88.90	44	*e*P	P	08 16 59.7	-1.1
BMO				pmax	pmax		
	comp=Z,31nm,1.9s						
ELK	Elko	89.20	48	*e*P	P	08 17 01.5	-1.0
	comp=Z,8.2nm,1.2s						
ELK	Elko	89.20	48	*e*P	P	08 17 01.5	-1.0
ELK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
WMQ	Urumqi	89.22	315	*e*P	P	08 17 03.1	+0.8
WMQ				pP	pP	08 17 06.7	-1.8
WMQ				sP	sP	08 17 11.3	+0.6
WMQ				PP	PP	08 20 37.6	+4.6
WMQ				SKS	SKSac	08 27 31.3	+0.4
WMQ				S	S	08 27 50.6	+0.3
WMQ				SS	SS	08 33 47.8	+2.8
WMQ				pmax	pmax		
	comp=Z,60nm,1.5s						
WMQ				LR	LR		
	comp=Z,1µm,13.5s						
WMQ				LR	LR		
	comp=Z,910nm,16.9s						
WMQ				LR	LR		
	comp=Z,470nm,19.5s						
WMQ	Urumqi	89.22	315	*e*P	P	08 17 03.0	+0.8
	comp=Z,49nm,1.4s						
WMQ	Urumqi	89.22	315	*e*P	P	08 17 03.0	+0.8
WMQ				pmax	pmax		
	comp=Z,49nm,1.4s						
F10A	Beach Ranch, E	89.28	43	*e*P	P	08 17 01.1	-1.4
	comp=Z,55nm,1.9s						
PSUT	Pine Spring	89.66	51	*e*P	P	08 17 03.8	-0.9
	comp=Z,18nm,1.2s						
LCMT	Little Creek M	89.75	52	*e*P	P	08 17 03.9	-1.1
	comp=Z,12nm,1.0s						
CCUT	Cedar City	89.79	52	*e*P	P	08 17 04.9	-0.4
	comp=Z,21nm,1.2s						
SZCU	Shurtz Canyon	90.01	52	*e*P	P	08 17 06.1	-0.2
	comp=Z,16nm,1.1s						
NEW	Newport	90.02	41	*e*P	P	08 17 05.3	-0.6
	comp=Z,2.9nm,0.9s						
NEW	Newport	90.02	41	P	P	08 17 05.2	-0.6
	baz=253						
KNB	Kanab	90.08	52	*e*P	P	08 17 05.2	-1.4
	comp=Z,48nm,1.6s						
KNB	Kanab	90.08	52	*e*P	P	08 17 05.2	-1.4
KNB				pmax	pmax		
	comp=Z,48nm,1.6s						
INK	Inuvik	90.19	19	*e*P	P	08 17 05.5	-0.5
	comp=Z,17nm,1.6s						
INK	Inuvik	90.19	19	P	P	08 17 04.8	-1.3
	comp=Z,4.0nm,1.1s,baz=184,slow=5.4,SNR=6.1						
U15A	North Rim	90.35	53	*e*P	P	08 17 07.0	-1.0
	comp=Z,20nm,0.9s						
HLID	Hailey	90.54	46	*e*P	P	08 17 07.6	-1.0
	comp=Z,9.9nm,0.9s						
HLID	Hailey	90.54	46	P	P	08 17 07.6	-1.0
	baz=255,SNR=14						
X16A	Lo Mia Camp, P	90.56	55	*e*P	P	08 17 08.5	-0.4
	comp=Z,9.3nm,0.9s						
PKCU	Pink Cliffs	90.58	52	*e*P	P	08 17 09.6	+0.5
	comp=Z,45nm,1.3s						
HYB	Hyderabad	90.60	288	*i* P	P	08 17 11.0	+1.8
TUC	Tucson	90.62	57	P	P	08 17 08.7	-0.4
	baz=257						
TCRU	Three Creeks R	90.75	51	*e*P	P	08 17 09.9	+0.1
	comp=Z,20nm,0.9s						
MTPU	Mount Pierson	90.81	51	*e*P	P	08 17 09.9	-0.3
	comp=Z,12nm,0.9s						
DUG	Dugway, Tooele	90.85	49	*e*P	P	08 17 09.2	-0.9
	comp=Z,8.0nm,0.9s						
DUG	Dugway, Tooele	90.85	49	*e*P	P	08 17 09.2	-0.9
DUG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DUG	Dugway, Tooele	90.85	49	P	P	08 17 08.9	-1.2
	baz=256,SNR=9.7						
WUAZ	Wupatki	90.86	54	*e*P	P	08 17 10.2	-0.1
	comp=Z,11nm,0.9s						
WUAZ	Wupatki	90.86	54	P	P	08 17 09.6	-0.7
	baz=257						
BGU	Big Grassy Mou	90.87	49	*e*P	P	08 17 09.3	-0.9
	comp=Z,11nm,0.9s						
MSU	Marysvale	90.93	51	*e*P	P	08 17 09.9	-0.7
MSU	Marysvale	90.93	51	*e*P	P	08 17 09.9	-0.7
DGZ	Jazzator, Alta	91.04	321	*i* P	P	08 17 08.9	-1.8
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HVU	Hansel Valley	91.27	48	*e*P	P	08 17 11.3	-0.7
	comp=Z,24nm,1.0s						
HVU	Hansel Valley	91.27	48	*e*P	P	08 17 11.3	-0.7
HVU				pmax	pmax		
	comp=Z,24nm,1.0s						
NLU	North Lily Min	91.35	50	*e*P	P	08 17 11.6	-0.9
	comp=Z,14nm,0.9s						
SPUT	South Promonto	91.39	48	*e*P	P	08 17 11.9	-0.6
	comp=Z,9.5nm,0.9s						
SYO	Syowa Base	91.49	197	⇑*i*pP	P	08 17 15.0	+2.7
MSO	Missoula	91.70	43	P	P	08 17 13.1	-0.7
	baz=255						
MCMT	McKenzie Canyo	91.95	45	*e*P	P	08 17 14.7	-0.5
JLU	Jordanelle	91.96	49	*e*P	P	08 17 14.4	-0.9
	comp=Z,11nm,1.0s						
W18A	Petrified Fore	92.08	55	*e*P	P	08 17 15.1	-0.8
	comp=Z,12nm,0.9s						
DLMT	Dillon	92.25	44	*e*P	P	08 17 15.3	-1.1
	comp=Z,21nm,1.1s						
LRM	Limekiln Ridge	92.46	44	*e*P	P	08 17 16.0	-1.5
P18A	Preston Nutter	92.65	50	*e*P	P	08 17 17.9	-0.8
	comp=Z,269nm,2.0s						
FXWY	Fox Creek	92.95	46	*e*P	P	08 17 18.9	-0.9
	comp=Z,7.7nm,1.0s						
BOZ	Bozeman (W)	92.96	44	*e*P	P	08 17 19.3	-0.4
	comp=Z,39nm,1.8s						
BOZ	Bozeman (W)	92.96	44	*e*P	P	08 17 19.3	-0.4
BOZ				pmax	pmax		
	comp=Z,39nm,1.8s						
BOZ	Bozeman (W)	92.96	44	P	P	08 17 19.4	-0.4
	baz=257,SNR=7.8						
TPAW	Teton Pass	92.97	46	*e*P	P	08 17 19.1	-0.8
	comp=Z,5.8nm,0.9s						
YHB	Horse Butte	93.08	45	*e*P	P	08 17 18.9	-1.5
	comp=Z,6.0nm,0.9s						
HRY	Holter Researc	93.08	43	*e*P	P	08 17 18.8	-1.4
121A	Cookes Peak, D	93.14	58	P	P	08 17 19.9	-1.0
	baz=259						
H17A	Grant Village	93.43	46	P	P	08 17 22.3	+0.3
	baz=258,SNR=6.9						
MVCO	Mesa Verde	93.49	53	P	P	08 17 21.8	-0.7
	baz=258						
MK01	Makanchi Array	93.64	317	*e*P	P	08 17 21.3	-1.4
MK31	Makanchi Array	93.65	317	*e*P	P	08 17 21.5	-1.2
MK31	Makanchi Array	93.65	317	*e*P	P	08 17 21.5	-1.2
MK32	Makanchi Array	93.65	317	*e*P	P	08 17 21.3	-1.4
MK32				*e*PP	PP	08 21 04.2	-3.8
MK32				*e*PKKPdf	PKKPdf	08 34 25.1	-3.4
MKAR	Makanchi Array	93.65	317	*e*P	P	08 17 21.6	-1.1
	comp=Z,164nm,1.2s						
MKAR				PP	PP	08 21 04.2	-3.8
MKAR				PKKPbc	PKKPdf	08 34 25.1	-3.4
MKAR	Makanchi Array	93.65	317	*i* P	P	08 17 21.0	-1.7
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR	Makanchi Array	93.65	317	P	P	08 17 21.3	-1.4
	comp=Z,7.6nm,0.8s,baz=96,slow=4.8,SNR=39						
MKAR				PP	PP	08 21 04.2	-3.8
	comp=Z,0.8nm,1.0s,baz=108,slow=12,SNR=2.5						
MKAR				PKKPbc	PKKPdf	08 34 25.1	-3.4
	comp=Z,4.0nm,0.7s,baz=325,slow=1.9,SNR=38						
MKAR				LR	LR	08 58 28.4	
	comp=Z,249nm,22.0s,baz=89,slow=35						
ZAA0	Zalesovo Array	93.72	324	*e*P	P	08 17 22.1	-0.7
	comp=Z,28nm,1.2s						
ZALV	Zalesovo Beam	93.72	324	*e*P	P	08 17 22.1	-0.6
ZALV				PKKPbc	PKKPdf	08 34 26.7	-1.9
ZALV	Zalesovo Beam	93.72	324	P	P	08 17 21.7	-1.1
	comp=Z,5.1nm,0.8s,baz=108,slow=4.8,SNR=17						
ZALV				PKKPbc	PKKPdf	08 34 26.7	-1.9
	comp=Z,0.7nm,0.6s,baz=339,slow=3.7,SNR=4.1						
ZALV				LR	LR	09 00 28.4	
	comp=Z,122nm,18.1s,baz=70,slow=36						
ZAA1	Zalesovo Array	93.72	324	*e*P	P	08 17 21.7	-1.1
ZAA1				*e*PKKPdf	PKKPdf	08 34 26.7	-1.9
BW06	Boulder Array	93.81	47	*e*P	P	08 17 23.5	-0.3
	comp=Z,7.4nm,1.3s						
BW06	Boulder Array	93.81	47	P	P	08 17 23.1	-0.7
	baz=258						
PD31	Pinedale Array	93.81	47	*e*P	P	08 17 22.2	-1.6
PDAR	Pinedale Array	93.81	47	P	P	08 17 22.6	-1.2
	comp=Z,3.4nm,0.9s,baz=253,slow=2.3,SNR=21						
PDAR				PKKPbc	PKKPbc	08 34 42.5	+13
	comp=Z,0.4nm,0.7s,baz=86,slow=6.1,SNR=4.2						
PDAR				LR	LR	08 54 17.1	
	comp=Z,228nm,18.5s,baz=274,slow=32						
MAKZ	Makanchi	93.86	317	*e*P	P	08 17 22.1	-1.6
	comp=Z,64nm,1.4s						
MAKZ	Makanchi	93.86	317	*e*P	P	08 17 22.1	-1.6
MAKZ				pmax	pmax		
	comp=Z,64nm,1.4s						
O20A	White River Ci	94.26	50	P	P	08 17 25.3	-0.6
	baz=259						
ANMO	Albuquerque	94.69	55	*i* P	P	08 17 26.6	-1.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
EGMT	Eagleton	94.74	42	*e*P	P	08 17 26.1	-1.7
	comp=Z,15nm,0.9s						
EGMT	Eagleton	94.74	42	P	P	08 17 27.9	+0.1
	baz=258,SNR=7.7						
NVS	Novosibirsk	94.83	325	⇑*i*P	P	08 17 29.0	+1.2
NVS				*i*		08 21 18.8	
NVS				*e*		08 28 05.0	
NVS				pmax	pmax		
	comp=N,10.0nm,1.5s						
NVS				pmax	pmax		
	comp=Z,26nm,1.5s						
NVS				pmax	pmax		
	comp=E,22nm,1.7s						
NVS				pmax	pmax		
	comp=Z,28nm,2.2s						
NVS				pmax	pmax		
	comp=N,11nm,1.9s						
NVS				pmax	pmax		
	comp=E,23nm,2.3s						
S22A	4UR Ranch, Cre	94.90	53	*e*P	P	08 17 29.1	+0.1
	comp=E,4.2nm,0.9s						
S22A	4UR Ranch, Cre	94.90	53	P	P	08 17 28.2	-0.8
	baz=260						
MNTX	Cornudas Mount	94.99	59	P	P	08 17 28.9	-0.3
	baz=260						
YKA	Yellowknife Ar	95.26	27	P	P	08 17 26.0	-3.6
	comp=E,2.4nm,0.8s,baz=255,slow=4.6,SNR=38						
YKA				PP	PP	08 21 24.0	+4.0
	comp=E,0.6nm,1.1s,baz=253,slow=7.5,SNR=3.6						
YKA				PKiKP	PKiKP	08 22 08.8	-1.6
	comp=E,0.4nm,0.8s,baz=242,slow=1.5,SNR=4.5						
YKA				PKKPab	PKKPdf	08 34 41.7	+16
	comp=E,0.2nm,0.9s,baz=73,slow=2.4,SNR=4.0						
YKA				LR	LR	09 00 13.5	
	comp=E,64nm,18.1s,baz=249,slow=35						
YKB5	Yellowknife Ar	95.26	27	*e*P	P	08 17 26.1	-3.6
LTX	Lajitas	96.05	61	*e*P	P	08 17 32.4	-1.8
LTX				*e*PP	PP	08 21 26.5	-0.7
LTX	Lajitas	96.05	61	*e*P	P	08 17 32.4	-1.8
LTX				*e*		08 21 26.5	
TXAR	Lajitas Array	96.05	61	P	P	08 17 32.4	-1.8
	comp=E,1.0nm,0.9s,baz=239,slow=3.4,SNR=9.8						
TXAR				PP	PP	08 21 26.5	-0.7
	comp=E,0.5nm,1.0s,baz=277,slow=9.9,SNR=3.5						
TXAR				LR	LR	08 56 53.6	
	comp=E,610nm,18.1s,baz=0.0,slow=33						
NRIK	Noril'sk	96.34	340	P	P	08 17 34.0	-0.5
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NRIK				MLR	MLR		
	comp=Z,446nm,18.2s						
NRIK	Noril'sk	96.34	340	P	P	08 17 34.0	-0.5
	comp=Z,1.1nm,0.4s,baz=120,slow=5.5,SNR=3.2						
NRIK				LR	LR	09 02 58.2	
	comp=Z,446nm,18.2s,baz=93,slow=37						
KURK	Kurchatov	96.79	320	*e*P	P	08 17 35.6	-1.3
KURK				PKKPbc	PKKPbc	08 34 17.4	-3.7
KURK	Kurchatov	96.79	320	*i* P	P	08 17 35.0	-1.9
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURBB	Kurchatov Arra	96.83	320	P	P	08 17 35.6	-1.4
	comp=Z,0.4nm,0.5s,baz=86,slow=4.0,SNR=5.7						
KURBB				PKKPbc	PKKPbc	08 34 17.4	-3.6
	comp=Z,1.2nm,0.9s,baz=278,slow=2.9,SNR=7.5						
KSH	Kashi	96.85	309	P	P	08 17 39.9	+2.3
KSH				PP	PP	08 21 39.2	+6.1
KSH				SKS	SKSac	08 28 17.5	+4.0
KSH				S	ScS	08 28 59.1	+0.1
KSH				SS	SS	08 35 38.6	+3.9
KSH				LR	LR		
	comp=Z,360nm,8.1s						
KSH				LR	LR		
	comp=Z,320nm,5.5s						
KSH				LR	LR		
	comp=Z,750nm,7.7s						
CRZF	Crozet Islands	97.63	220	*e*P	Pdif	08 17 41.2	+0.3
	comp=Z,98nm,1.2s						
DGMT	Dagmar	98.48	42	P	P	08 17 43.9	-0.7
	baz=263						
BVAR	Borovoye Array	102.10	322	P	Pdif	08 17 59.9	-0.7
	comp=Z,0.9nm,0.7s,baz=62,slow=3.5,SNR=5.9						
ARCES	ARCESS Array B	116.57	345	*e*PKPdf	PKPdf	08 22 49.1	-0.6
ARCES	ARCESS Array B	116.57	345	PKP	PKPdf	08 22 47.4	-2.3
	comp=Z,2.0nm,0.7s,baz=90,slow=1.5,SNR=10						
SSPA	Standing Stone	117.34	50	*e*PKPdf	PKPdf	08 22 51.7	-0.3
PB11	IPOC Station P	117.41	119	*e*PKPdf	PKPdf	08 22 52.5	-0.5
MNMC	Minye Minye	117.72	119	*e*PKPdf	PKiKP	08 22 53.6	-0.1
VRH	Novokhopyorsk	119.73	323	*e*PKIKP	PKPdf	08 22 54.4	-1.8
VRH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LPAZ	La Paz	120.15	116	*e*PKPdf	PKPdf	08 22 57.6	-1.2
LPAZ	La Paz	120.15	116	PKP	PKPdf	08 22 57.2	-1.6
	comp=Z,3.8nm,0.7s,baz=233,slow=2.2,SNR=16						
LPAZ	La Paz	120.15	116	*e*P	PKiKP	08 22 60.0	+1.1
SCHQ	Schefferville	120.31	32	*e*PKPdf	PKPdf	08 22 56.0	-1.2
SCHQ	Schefferville	120.31	32	PKP	PKPdf	08 22 55.8	-1.5
	comp=Z,2.8nm,0.8s,baz=38,slow=15,SNR=3.7						
GNI	Garni	120.75	310	*i* PKIKP	PKPdf	08 22 58.0	-0.8
LPSR	Galich'ya Gora	120.81	325	*e*PKIKP	PKPdf	08 22 56.6	-1.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN	Obninsk	120.98	329	⇑*i*PKIKP	PKPdf	08 22 58.0	-0.5
OBN				*e*		08 24 24.2	
OBN				*e*PPP	PPP	08 26 57.9	
OBN				*e*		08 30 00.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,233nm,17.0s						
VSR	Storozhevoye	121.22	324	*i* PKIKP	PKPdf	08 22 58.0	-1.1
KIV	Kislovodsk	121.35	315	*i* PKIKP	PKPdf	08 22 59.3	-0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FIA1	FINESS Array S	121.99	338	*e*PKPdf	PKPdf	08 22 59.8	-0.4
FIA0	FINESS Array S	121.99	338	*e*PKPdf	PKPdf	08 22 58.8	-1.4
FIA0	FINESS Array S	121.99	338	*e*PKIKP	PKPdf	08 22 58.8	-1.4
FINES	FINESS Array B	121.99	338	PKP	PKPdf	08 22 58.8	-1.4
	comp=Z,3.6nm,0.9s,baz=84,slow=5.9,SNR=9.1						
PLTB	Pedras Altas	123.01	140	*e*P	PKiKP	08 23 05.2	+1.8
CPUP	Villa Florida	123.92	133	*e*PKPdf	PKPdf	08 23 03.7	-1.4
CPUP	Villa Florida	123.92	133	PKP	PKPdf	08 23 03.4	-1.7
	comp=Z,9.0nm,0.8s,baz=258,slow=1.7,SNR=22						
CPUP	Villa Florida	123.92	133	*e*P	PKiKP	08 23 06.4	+1.1
CPSB	Cacapava Do Su	124.02	139	*e*P	PKiKP	08 23 07.3	+1.8
SDV	Santo Domingo	124.61	87	*e*PKPdf	PKPdf	08 23 05.3	-1.6
SDV	Santo Domingo	124.61	87	*e*P	PKiKP	08 23 07.5	+0.3
BOSA	Boshof	124.85	223	PKP	PKPdf	08 23 06.4	-0.6
	comp=Z,3.9nm,0.7s,baz=142,slow=1.3,SNR=9.0						
CNLB	Canela	126.41	140	*e*P	PKiKP	08 23 10.4	+0.1
NB2	NORSAR Subarra	126.94	345	PKPdf	PKPdf	08 23 08.7	-1.1
	comp=Z,5.2nm,1.1s,baz=31,slow=1.9						
NB200	NORSAR Array S	126.94	345	*e*PKPdf	PKPdf	08 23 07.9	-1.9
NOA	NORSAR Array B	126.94	345	PKP	PKPdf	08 23 07.9	-1.9
	comp=Z,2.0nm,0.8s,baz=34,slow=2.0,SNR=11						
ITAB	Concordia	126.98	137	*e*P	PKiKP	08 23 14.2	+2.8
AKASG	Malin Array Be	127.04	327	PKP	PKPdf	08 23 08.8	-1.4
	comp=Z,2.3nm,0.7s,baz=61,slow=2.1,SNR=15						
AKBB	Malin Array Si	127.04	327	*e*PKPdf	PKiKP	08 23 10.8	+0.1
AKBB	Malin Array Si	127.04	327	*e*PKIKP	PKiKP	08 23 10.8	+0.1
KIEV	Kiev	127.05	327	*e*PKPdf	PKiKP	08 23 11.0	+0.2
KIEV	Kiev	127.05	327	⇑*i*P	PKPdf	08 23 09.0	-1.2
KIEV	Kiev	127.05	327	⇑PKIKP	PKPdf	08 23 09.0	-1.2
AK11	Malin Array Si	127.08	327	*e*PKPdf	PKPdf	08 23 09.5	-0.8
KMBO	Kilima Mbogo	127.24	260	PKP	PKiKP	08 23 12.5	-0.1
	comp=Z,0.4nm,0.3s,baz=53,slow=2.0,SNR=3.6						
TER01	Tubaro-SC	128.04	140	*e*P	PKiKP	08 23 14.8	+1.3
AQDB	Aquidauana	128.50	128	*e*P	PKiKP	08 23 16.0	+1.4
ASF	Jabal al Asfar	128.60	302	PKP	PKiKP	08 23 16.2	+1.6
	comp=Z,2.8nm,0.9s,baz=95,slow=6.9						
BR101	Keskin Array S	129.07	312	*e*PKPdf	PKiKP	08 23 14.9	-0.4
BR101				*e*PP	PP	08 25 30.0	+7.5
BR101				*e*		08 26 37.0	
BRTR	Keskin Array B	129.07	312	PKP	PKiKP	08 23 14.9	-0.4
	comp=Z,2.6nm,1.0s,baz=130,slow=1.9,SNR=8.9						
BRTR				PP	PP	08 25 30.0	+7.5
	comp=Z,0.6nm,0.8s,baz=46,slow=5.9,SNR=4.3						
BRTR				SKPbc	SKPbc	08 26 37.0	+2.4
	comp=Z,2.5nm,1.1s,baz=24,slow=1.5,SNR=5.6						
TRCB	Terra Rica	129.45	132	*e*P	PKiKP	08 23 17.3	+0.8
SJG	San Juan	129.58	76	*e*PKPdf	PKPdf	08 23 15.7	-0.3
SJG	San Juan	129.58	76	*e*PKIKP	PKPdf	08 23 15.7	-0.3
ANTO	Ankara	129.63	313	*e*P	PKiKP	08 23 16.3	-0.1
MMAI	Mount Meron Ar	129.65	304	PKP	PKPdf	08 23 15.7	-0.2
	comp=Z,2.9nm,0.8s,baz=62,slow=16,SNR=3.5						
MMAI				SKPbc	SKPbc	08 26 39.6	+3.0
	comp=Z,4.7nm,1.0s,baz=65,slow=12,SNR=6.5						
HUMP	Col San Antoni	129.87	76	*e*PKPdf	PKPdf	08 23 15.6	-1.0
LSZ	Lusaka	130.26	239	*e*P	PKiKP	08 23 19.9	+1.5
LSZ	Lusaka	130.26	239	*e*PKIKP	PKiKP	08 23 19.9	+1.5
EIL	Elat	130.74	299	PKP	PKiKP	08 23 19.2	+0.4
	comp=Z,4.0nm,0.8s,baz=0.0,slow=1.0,SNR=3.0						
EIL				SKPbc	SKPab	08 26 43.9	+3.3
	comp=Z,2.2nm,0.4s,baz=317,slow=2.9,SNR=8.1						
BIZ	Bicaz	130.80	324	⇑*i*P	PKiKP	08 23 19.7	+1.3
BUR08	Bucovina Ar. S	130.92	325	*e*PKPdf	PKiKP	08 23 20.3	+1.5
BURAR	Bucovina Array	130.93	325	⇑*i*P	PKiKP	08 23 19.9	+1.1
BURAR	Bucovina Array	130.93	325	⇑PKIKP	PKiKP	08 23 19.9	+1.1
BUR04	Bucovina Ar. S	130.93	325	*e*PKPdf	PKiKP	08 23 20.1	+1.3
SALV	Santo Antonio	130.96	123	*e*P	PKiKP	08 23 20.4	+0.7
FRTB	Fartura	131.28	135	*e*P	PKiKP	08 23 21.8	+1.6
MLR	Muntele Rosu	131.66	322	⇓*i*P	PKiKP	08 23 21.6	+1.2
MLR	Muntele Rosu	131.66	322	⇓PKIKP	PKiKP	08 23 21.6	+1.2
MLR	Muntele Rosu	131.66	322	PKP	PKiKP	08 23 20.6	+0.2
	comp=Z,0.9nm,0.3s,baz=149,slow=6.1,SNR=4.6						
MLR				SKPbc	SKPab	08 26 47.0	+2.8
	comp=Z,2.6nm,1.0s,baz=31,slow=4.1,SNR=4.0						
C2SB	Chapadao do Su	131.69	128	*e*P	PKiKP	08 23 21.2	+0.2
UZH	Uzhgorod	131.91	328	*e*PKIKP	PKiKP	08 23 20.6	0.0
ARR	Arges	132.51	323	⇑*i*P	PKiKP	08 23 22.7	+0.7
DRGR		132.80	326	⇓*i*P	PKiKP	08 23 22.0	-0.6
DRGR		132.80	326	⇓PKIKP	PKiKP	08 23 22.0	-0.6
LANS	Liptovska Anna	133.01	330	*e*PKIKP	PKiKP	08 23 23.0	+0.1
LANS	Liptovska Anna	133.01	330	*e*PKP	PKiKP	08 23 23.0	+0.1
ITRB	Iturama	133.02	131	*e*P	PKiKP	08 23 24.9	+1.2
PTGA	Pitinga	133.12	102	*e*PKPdf	PKPdf	08 23 22.1	-0.9
PTGA	Pitinga	133.12	102	*e*P	PKiKP	08 23 23.9	-0.3
RCLB	Rio Claro- Sao	133.29	136	*e*P	PKiKP	08 23 25.6	+1.3
BB19B	Bebedouro	133.49	134	*e*P	PKiKP	08 23 25.3	+0.6
MORC	Moravsky Berou	133.50	332	*e*PKPdf	PKPdf	08 23 22.9	+0.3
MORC	Moravsky Berou	133.50	332	⇑*i*P	PKiKP	08 23 24.1	+0.2
MORC	Moravsky Berou	133.50	332	⇑PKIKP	PKiKP	08 23 24.1	+0.2
GZR	Gura Zlata	133.58	324	⇑*i*P	PKPdf	08 23 22.9	0.0
GZR	Gura Zlata	133.58	324	⇑PKIKP	PKPdf	08 23 22.9	0.0
DPC	Dobruska-Polom	133.64	333	AMS	AMS	09 24 20.0	
	comp=Z,500nm,18.6s						
UPC	Upice	133.66	333	AMS	AMS	09 21 50.0	
	comp=Z,500nm,18.3s						
SIRR	Siria	133.69	326	⇑*i*P	PKiKP	08 23 24.3	0.0
VYHS	Vyhne	133.76	330	*e*PKIKP	PKPdf	08 23 23.3	+0.2
VYHS				*e*		08 25 51.8	
VYHS	Vyhne	133.76	330	*e*PKP	PKPdf	08 23 23.3	+0.2
VYHS				*e*PP	PP	08 25 51.8	-0.1
BZS	Buzias	134.11	325	⇑*i*P	PKPdf	08 23 24.1	+0.3
BZS	Buzias	134.11	325	⇑PKIKP	PKPdf	08 23 24.1	+0.3
PVCC	Panska Ves	134.27	334	AMS	AMS	09 27 10.0	
	comp=Z,600nm,18.6s						
BRG	Berggiesshubel	134.27	335	*e*PKP	PKiKP	08 23 25.7	+0.4
	comp=Z,25nm,1.9s						
BRG	Berggiesshubel	134.27	335	*e*PKIKP	PKiKP	08 23 25.7	+0.4
BRG				pmax	pmax		
	comp=Z,25nm,1.9s						
CLL	Collm	134.31	336	*e*PKPdf	PKPdf	08 23 24.0	0.0
	comp=Z,5.0nm,1.0s						
CLL				*e*		08 23 34.0	
CLL				*e*PP	PP	08 25 54.0	-1.2
CLL				*i* SKPdf	SKPab	08 26 56.0	+0.8
	comp=Z,32nm,2.0s						
CLL				*i* pSKPdf		08 27 02.7	
	comp=Z,34nm,1.7s						
CLL				*e*PPS	PPS	08 37 48.0	
CLL				*e*SS	SS	08 43 42.0	-1.2
CLL				*e*		08 45 47.0	
CLL				*e*SSS	SSS	08 48 36.0	
CLL				Lm	MLR	09 23 00.0	
	comp=N,400nm,18.4s						
CLL				Lm	MLR	09 23 00.0	
	comp=E,200nm,20.2s						
CLL				Lm	MLR	09 23 00.0	
	comp=Z,400nm,19.9s						
CLL	Collm	134.31	336	*e*PKIKP	PKPdf	08 23 24.0	0.0
CLL				*e*		08 23 34.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL				pmax	pmax		
	comp=Z,32nm,2.0s						
CLL				MLR	MLR		
	comp=Z,400nm,19.9s						
MDVR	Moldovita	134.55	324	⇑*i*P	PKPdf	08 23 24.8	+0.1
MODS	Modra-Piesok	134.60	331	*e*PKIKP	PKiKP	08 23 25.4	-0.7
MODS	Modra-Piesok	134.60	331	*e*PKP	PKiKP	08 23 25.4	-0.7
PRU	Pruhonice	134.69	334	AMS	AMS	09 27 40.0	
	comp=Z,700nm,19.8s						
TREC	Trest	134.78	333	AMS	AMS	09 22 40.0	
	comp=Z,500nm,18.4s						
VTS	Vitosha	134.85	321	⇑*i*P	PKPdf	08 23 25.7	+0.2
VTS	Vitosha	134.85	321	⇑PKIKP	PKPdf	08 23 25.7	+0.2
ESAR	Angra dos Reis	134.91	139	*e*P	PKiKP	08 23 28.2	+0.8
EKA	Eskdalemuir Ar	135.22	351	PKIKP	PKPdf	08 23 24.2	-1.4
EKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
EKA				pmax	pmax		
	comp=N,11nm,1.2s						
EKA	Eskdalemuir Ar	135.22	351	PKP	PKPdf	08 23 24.2	-1.4
	comp=N,2.2nm,0.9s,baz=14,slow=3.2,SNR=3.5						
EKA				SKPbc	SKPab	08 26 58.3	-0.7
	comp=N,10nm,1.2s,baz=25,slow=4.1,SNR=7.4						
CONA	Conrad Observa	135.59	331	*e*pPKPdf	PKiKP	08 23 28.5	+0.2
	comp=N,4.5nm,0.9s						
IPMB	Ipameri, GO	135.67	131	*e*P	PKPdf	08 23 28.1	+0.5
KHC	Kasperske Hory	135.74	334	*e*PKPDF	PKiKP	08 23 29.2	+0.8
KHC				*e*x	x	08 23 37.4	
KHC				AMS	AMS	09 32 10.0	
	comp=N,600nm,18.5s						
KHC	Kasperske Hory	135.74	334	*e*PKIKP	PKiKP	08 23 29.2	+0.8
KHC				*e*		08 23 37.4	
KHC				MLR	MLR		
	comp=Z,600nm,18.5s						
GERES	GERESS Array B	135.90	333	PKP	PKPdf	08 23 25.8	-1.4
	comp=Z,2.8nm,0.8s,baz=80,slow=1.5,SNR=16						
GERES				SKPbc	SKPbc	08 26 59.3	+1.8
	comp=Z,0.6nm,0.8s,baz=355,slow=4.4,SNR=3.4						
VAS01	Vassouras-RJ	136.09	140	*e*P	PKiKP	08 23 30.0	+0.1
PMNB	Patos De Minas	136.62	133	*e*P	PKiKP	08 23 31.6	+0.5
SOKA	Soboth	136.87	330	*e*PKiKP	PKPdf	08 23 29.4	+0.4
	comp=Z,14nm,1.3s						
BDFB	Brasilia	137.25	128	PKP	PKPdf	08 23 28.3	-2.4
	comp=Z,9.7nm,0.8s,baz=127,slow=2.5,SNR=14						
BDFB				SKPbc	SKiKP	08 27 05.4	-2.0
	comp=Z,5.4nm,0.9s,baz=256,slow=17,SNR=4.1						
KBA	Koelnbreinsper	137.38	332	*e*PKiKP	PKiKP	08 23 30.9	-1.2
	comp=Z,13nm,1.4s						
MEM	Membach	137.41	341	⇓PKiKP	PKiKP	08 23 31.0	-0.7
CAM01	Campos-RJ	137.54	141	*e*P	PKiKP	08 23 33.4	+0.6
WATA	Walderalm	137.98	334	*e*pPKPdf	PKiKP	08 23 32.8	-0.4
	comp=Z,2.1nm,0.5s						
ABTA	Abfaltersbach	138.01	332	*i* PKiKP	PKiKP	08 23 32.0	-1.2
	comp=Z,11nm,1.3s						
MOTA	Moosalm	138.18	334	*i* PKiKP	PKPdf	08 23 31.5	0.0
	comp=Z,9.2nm,1.1s						
SQTA	Sankt Quirin	138.23	334	*i* PKiKP	PKPdf	08 23 31.4	-0.2
	comp=Z,10nm,1.0s						
BFO	Black Forest	138.51	337	*i* PKIKP	PKiKP	08 23 33.3	-0.8
FETA	Feichten	138.59	334	*e*pPKPdf	PKiKP	08 23 34.0	-0.4
	comp=Z,8.8nm,1.1s						

DAVA	Damuels	138.74	335	*e*pPKPdf	PKiKP	08 23 34.4	-0.4
	comp=Z,8.1nm,0.9s						
DAVOX	Davos/Dischmat	139.14	334	PKhKP	PKPpre	08 23 26.7	
	comp=Z,3.1nm,0.9s,baz=23,slow=6.3,SNR=4.8						
DAVOX				SKPbc	SKiKP	08 27 11.7	+1.3
	comp=Z,2.6nm,0.8s,baz=48,slow=15,SNR=2.9						
MCI6	Montes Claros	139.58	133	*e*P	PKiKP	08 23 38.5	+1.2
SJMB	Sao Joao De Ma	140.12	138	*e*P	PKiKP	08 23 37.6	-0.6
BSFB	Barra de Sao F	140.25	139	*e*P	PKiKP	08 23 37.0	-1.4
KEST	Kesra	147.57	322	*e*PKPbc	PKPbc	08 23 50.9	-0.1
KEST	Kesra	147.57	322	PKPbc	PKPdf	08 23 48.9	+0.5
	comp=Z,21nm,0.9s,baz=79,slow=5.2,SNR=9.0						
PBRG	Braganca	148.91	349	*e*PKPdf	PKPbc	08 23 54.2	-0.1
PGAV	Gavieira, Arco	149.01	351	*e*PKPdf	PKPdf	08 23 51.9	+1.3
SET	Setif	149.46	327	P	PKiKP	08 23 58.0	+1.0
POLO	Lamas de Olo	149.51	350	*e*PKPdf	PKPbc	08 23 55.9	0.0
MVO	Moncorvo	149.58	349	*e*PKPdf	PKPbc	08 23 55.1	-0.9
PVRL	Vila Real	149.59	350	*e*PKPdf	PKiKP	08 23 56.7	-0.4
PVIS	Viseu	150.17	350	*e*PKPdf	PKiKP	08 23 58.1	-0.2
ES19	SONSECA Array	150.25	344	*e*PKPdf	PKPdf	08 23 52.9	+0.3
ESDC	Sonseca Array	150.29	344	PKP	PKPdf	08 23 53.1	+0.4
	comp=Z,0.3nm,0.4s,baz=52,slow=7.0,SNR=3.9						
ESDC				PKPbc	PKPbc	08 23 57.1	-0.7
	comp=Z,6.8nm,0.9s,baz=2.3,slow=2.1,SNR=18						
ESLA	Sonseca Array	150.29	344	*e*PKPbc	PKPbc	08 23 57.2	-0.5
MTE	Manteigas	150.42	349	*e*PKPdf	PKPbc	08 23 57.6	-0.5
MTE	Manteigas	150.42	349	*e*PKPbc	PKPbc	08 23 57.1	-1.0
PAB	San Pablo	150.52	344	*e*PKPbc	PKiKP	08 23 59.0	-0.1
PAB	San Pablo	150.52	344	*e*PKIKP	PKiKP	08 23 59.0	-0.1
NBLI	Livramento-PB	150.85	129	*e*P	PKPdf	08 23 56.6	+2.3
PCBR	Castelo Branco	150.95	349	*e*PKPdf	PKPdf	08 23 55.3	+1.8
PTOM	Tomar	151.33	350	*e*PKPdf	PKPbc	08 23 59.9	-0.2
PMRV	Marv??o	151.33	349	*e*PKPdf	PKPbc	08 23 59.5	-0.7
PMTG	Montargil	151.83	350	*e*PKPdf	PKPdf	08 23 55.6	+0.7
PESTR	Estremoz	151.91	349	*e*PKPdf	PKPbc	08 24 00.7	-0.8
RCBR	Riachuelo	152.62	127	*e*PKPbc	PKPbc	08 24 02.8	-1.1
RCBR	Riachuelo	152.62	127	*e*PKIKP	PKPbc	08 24 02.8	-1.1
PNCL	Nicolau / Gran	152.82	350	*e*PKPdf	PKPbc	08 24 00.5	-3.0
MESJ	Messejana	153.03	349	*e*PKPdf	PKPdf	08 23 57.3	+0.6
PFVI	Vila Bisbo	153.82	350	*e*PKPdf	PKPdf	08 23 57.6	-0.3
RTC	Rabat Centre	156.42	344	*e*PKPab	PKPab	08 24 29.5	-0.3
TOA0	Torodi Ar. Sit	164.21	278	*e*PKPdf	PKPdf	08 24 10.8	+0.2
TORD	Torodi Ar. Bea	164.21	278	PKP	PKPdf	08 24 09.4	-1.2
	comp=Z,2.6nm,0.8s,baz=353,slow=4.4,SNR=13						
TORD				PKPab	PKPab	08 25 04.7	+0.2
	comp=Z,2.4nm,1.1s,baz=123,slow=5.3,SNR=2.5						
TORD				PP	PP	08 28 54.4	+3.7
	comp=Z,4.0nm,1.3s,baz=128,slow=9.6,SNR=4.3						
TOA1	Torodi Ar. Sit	164.21	278	*e*PKPdf	PKPdf	08 24 09.4	-1.2
TOA1				*e*PKPab	PKPab	08 25 04.7	+0.2
TOA1				*e*PP	PP	08 28 54.4	+3.6
KIC	Kosan Boka	169.30	243	*e*P	PKPdf	08 24 15.8	+1.2
	comp=Z,88nm,1.4s						
LIC	Lamto	169.48	242	*e*P	PKPdf	08 24 15.1	+0.4
	comp=Z,83nm,1.6s						
DBIC	Dimbokro	169.54	245	*e*PKPdf	PKPdf	08 24 14.6	-0.1
DBIC	Dimbokro	169.54	245	PKP	PKPdf	08 24 14.0	-0.7
	comp=Z,5.7nm,0.9s,baz=172,slow=2.7,SNR=4.6						
DBIC	Dimbokro	169.54	245	*e*P	PKPdf	08 24 17.9	+3.2
TIC	Toumodi	169.67	244	*e*P	PKPdf	08 24 13.7	-1.1

IDC 09 08:11:11.3±2.6**,10°.70S×165°.08E,h0^{km},mb3.8**/4**, mb1 4.0**/5**,mb1mx3.7**/35**,mbtmp3.9**/5**,ML3.4**/1**,Error ellipse: s-maj=58.6km s-min=33.6km az=101.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.39	174	Pn	Pn	08 13 55.0	-0.4
	0.3nm,0.3s,baz=15,slow=12,SNR=5.2						
CTA	Charters Tower	20.40	241	P	Pn	08 15 51.0	-1.0
	3.7nm,0.8s,baz=62,slow=14,SNR=3.4						
WRA	Warramunga Arr	31.00	249	P	P	08 17 30.2	-0.5
	1.1nm,0.7s,baz=80,slow=9.3,SNR=8.3						
ASAR	Alice Springs	32.37	242	P	P	08 17 42.8	-0.1
	0.7nm,0.5s,baz=63,slow=10,SNR=7.6						
SONM	Songino Array	78.00	324	P	P	08 23 11.9	+0.2
	0.5nm,0.8s,baz=107,slow=5.0,SNR=2.5						

IDC 09 08:12:03.7±1.7**,10°.80S×165°.95E,h0^{km},mb3.5**/3**, mb1 3.9**/4**,mb1mx3.5**/32**,mbtmp3.7**/4**,ML3.7**/1**,Error ellipse: s-maj=55.0km s-min=30.6km az=127.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.22	178	Pn	Pn	08 14 45.2	-0.4
	0.5nm,0.3s,baz=324,slow=17,SNR=2.9						
WRA	Warramunga Arr	31.75	250	P	P	08 18 30.1	+0.3
	1.2nm,0.8s,baz=81,slow=9.2,SNR=5.7						
ASAR	Alice Springs	33.08	243	P	P	08 18 41.3	-0.2
	0.3nm,0.7s,baz=62,slow=9.9,SNR=2.8						
ILAR	Eielson Array	83.21	18	P	P	08 24 31.6	0.0
	0.3nm,0.8s,baz=236,slow=4.5,SNR=3.3						

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*IDC **09** 08:14:06.1±1.4, 10°.81S×164°.60E, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.8/27, mbtmp3.8/7, ML4.5/2, Error ellipse: s-maj=38.0km s-min=27.6km az=121.0*

*ISCJB **09** 08:14:08.7±1.0, 11°.0S±0°.1×164°.6E±0°.2, h29^{km}, mb3.5/5, Error ellipse: s-maj=23.0km s-min=16.2km az=152.2*

ISC 09 08:14:10.4±1.2**,10°.9S**±0°.1×**164°.6E**±0°.2**,h29^{km},n13, σ0^{s}56**/7**,mb3.6**/5**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.78	287	Pn	Pn	08 15 20.2	-0.3
	20nm,0.3s,baz=180,slow=2.0,SNR=3.1						
DZM	Mont Dzumac	11.27	171	Pn	Pn	08 16 49.7	0.0
	2.9nm,0.3s,baz=301,slow=9.6,SNR=46						
H11S2	WAKE ISLAND Hy	29.27	4	T	T	08 50 21.0	
	baz=184,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	29.27	4	T	T	08 50 21.3	
	baz=184,slow=76,SNR=28						
H11S1	WAKE ISLAND Hy	29.28	4	T	T	08 50 22.5	
	baz=184,slow=76,SNR=38						
WRA	Warramunga Arr	30.46	249	P	P	08 20 21.2	+0.3
	0.3nm,0.6s,baz=77,slow=8.8,SNR=5.5						
H11N1	WAKE ISLAND Hy	30.49	4	T	T	08 51 55.3	
	baz=184,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	30.50	4	T	T	08 51 51.6	
	baz=184,slow=76,SNR=15						
H11N2	WAKE ISLAND Hy	30.51	4	T	T	08 51 52.6	
	baz=184,slow=76,SNR=18						
ASAR	Alice Springs	31.84	242	P	P	08 20 32.9	-0.2
	0.2nm,0.5s,baz=65,slow=9.7,SNR=3.8						
SONM	Songino Array	77.86	324	P	P	08 26 06.3	+0.8
	0.7nm,1.0s,baz=134,slow=6.2,SNR=3.1						
ILAR	Eielson Array	83.73	19	P	P	08 26 35.8	-0.6
	0.6nm,0.9s,baz=231,slow=5.7,SNR=4.2						
MKAR	Makanchi Array	92.62	317	P	P	08 27 19.6	+0.1
	0.5nm,0.9s,baz=95,slow=5.2,SNR=3.1						

IDC 09 08:14:32.6±3.2**,53°.50N×87°.32E,h0^{km},mb1 2.7**/2**, mb1mx2.6**/55**,mbtmp2.7**/2**,ML2.3**/2**,Error ellipse: s-maj=30.7km s-min=16.8km az=63.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.55	288	*i*		08 23 54.5	
	baz=104,slow=357,SNR=1.9						
ZALV	Zalesovo Beam	1.55	288	Pg	Pn	08 15 01.2	-0.3
	0.6nm,0.3s,baz=109,slow=14,SNR=9.6						
ZALV				Lg	Lg	08 15 21.9	
	0.4nm,0.3s,baz=108,slow=28,SNR=5.4						
KURBB	Kurchatov Arra	6.14	246	Pn	Pn	08 16 04.7	+0.2
	0.0nm,0.3s,baz=65,slow=16,SNR=3.1						
MKAR	Makanchi Array	7.45	208	Pn	Pn	08 16 24.0	+1.4
	0.1nm,0.3s,baz=22,slow=9.8,SNR=3.7						

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*AZER **09** 08:25:02.5±10.0, 38°.80N×42°.29E, h5^{km}, ml3.2/6, Error ellipse: s-maj=105.5km s-min=80.6km az=175.0*

*NSSP **09** 08:25:08.3, 38°.73N×43°.10E, h8^{km}, Ms3.2*

*ISK **09** 08:25:08.1, 38°.73N×43°.07E, h5^{km}, ML3.6/6*

*ISCJB **09** 08:25:09.7±0.5, 38°.73N±0°.02×43°.08E±0°.02, h1^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=3.0km az=154.4*

*DDA **09** 08:25:09.2, 38°.74N×43°.11E, h17^{km}±1^{km}, ML3.4*

ISC 09 08:25:09.4±1.1**,38°.74N**±0°.02×**43°.08E**±0°.02**,h11^{km}**±10^{km}**, n41,σ1^{s}49**/59**,8C-6D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.28	122	PG	Pb	08 25 16.0	-0.6
VANB				SG	Sb	08 25 21.9	+0.5
ADCV	BITLIS_Adilcev	0.29	283	*i* P	Pb	08 25 17.0	+0.2
ADCV				*i* S	Sb	08 25 21.1	-0.6
TVAN	Van	0.33	130	*i* P	Pb	08 25 16.0	-1.5
TVAN				*i* S	Sb	08 25 22.2	-0.7
TVAN				IAML_P			
	comp=Z,21μm,0.1s						
AKDM	Akdamar-Van	0.42	191	PG	Pg	08 25 16.8	-1.0
VMUR	Van-Muradiye	0.45	57	*i* P	Pb	08 25 19.2	-0.4
VMUR				*i* S	Sb	08 25 26.5	0.0
TUTA	Tutak	0.69	342	*i* P	Pb	08 25 23.7	0.0
CLDR	Caldiran	0.76	58	PG	Pb	08 25 23.8	-1.1
CLDR	Caldiran	0.76	58	*i* P	Pb	08 25 24.4	-0.5
CLDR				*i* S	Sb	08 25 35.4	0.0
CLDR				IAML_P			
	comp=Z,12μm,0.2s						
AGRB	Hanur-Agry	0.83	355	PG	Pb	08 25 25.4	-0.7
GURO	Guroymak-BITLI	0.84	257	PG	Pg	08 25 25.1	-0.7
GURO				SG	Sb	08 25 37.1	-0.5
DYDN	Diyadin	0.93	30	*i* P	Pn	08 25 27.5	-1.2
DYDN				IAML_P			
	comp=Z,2μm,0.2s						
BASK	Baskale_VAN	1.00	133	*i* P	Pb	08 25 28.1	-0.8
BASK				*i* S	Sn	08 25 42.6	-1.2
SRTM	Siirt_Merkez	1.18	231	*i* P	Pn	08 25 32.4	+0.4
SRTM				*i* S	Sn	08 25 49.5	+1.4
SRTM				IAML_P			
	comp=Z,5μm,0.3s						
EATA	Eleskirt	1.21	338	*i* P	Pn	08 25 32.3	-0.4
EATA				*i* S	Sn	08 25 51.8	+2.6
EATA				IAML_P			
	comp=Z,12μm,0.4s						
SIRT	Sirnak	1.34	202	PN	Pg	08 25 34.9	-0.3
SIRT				SN	Sn	08 25 53.9	+1.9
SIRN	Sırnak	1.35	203	*i* P	Pg	08 25 36.3	+0.9
SIRN				IAML_P			
	comp=Z,4μm,0.3s						
IGDI	IGDIR	1.36	34	*i* P	Pg	08 25 35.0	-0.6
YOVA	Hakkari_Yksek	1.50	140	*i* P	Pg	08 25 36.8	-1.3
TASB	TASBURUN-IGDIR	1.53	35	PN	Pg	08 25 38.2	-0.6
KOPR	Koprukoy-ERZUR	1.57	323	PN	Pg	08 25 38.3	-1.3
HOMI	Horasan	1.59	325	*i* P	Pg	08 25 39.4	-0.5
HOMI				IAML_P			
	comp=Z,1μm,0.2s						
SVAN	Silvan-Diyarba	1.59	249	PN	Pg	08 25 39.3	-0.7
SVAN				SN	Sg	08 26 00.3	-0.4
SVAN	Silvan-Diyarba	1.59	249	*i* P	Pg	08 25 39.5	-0.5
SVAN				IAML_P			
	comp=Z,3μm,0.4s						
BTMN	Batman	1.66	240	*i* P	Pg	08 25 41.1	-0.2
BTMN				IAML_P			
	comp=Z,4μm,0.4s						
HYR	Heyderabad	1.68	54	⇓P	Pg	08 25 40.5	-1.3
HYR				⇓S	Sg	08 26 07.3	+3.7
DIGO	Kars	1.69	8	*i* P	Pg	08 25 41.1	-0.7
DIGO				IAML_P			
	comp=Z,6μm,0.3s						
ECAT	Cat-ERZURUM	1.85	298	*i* P	Pg	08 25 43.9	-1.1
BNGB	Bingl	1.89	278	PN	Pb	08 25 43.1	-1.0
GNI	Garni	1.90	42	PN	Pb	08 25 43.6	-0.7
GNI	Garni	1.90	42	⇑*i*P	Pb	08 25 43.6	-0.7
GNI				⇑*i*S	Sg	08 26 09.4	-1.3
NAX	Nakhchivan	1.93	76	⇓P	Pb	08 25 44.1	-0.6
NAX				⇑S	Sg	08 26 15.5	+4.0
EAK	Akyaka	1.98	12	*i* P	Pg	08 25 48.5	+1.0
EAK				IAML_P			
	comp=Z,7μm,0.4s						
SBZ	Shahbuz	2.03	70	⇑P	Pb	08 25 44.9	-1.6
SBZ				⇑S	Sg	08 26 16.9	+2.2
HANI	Diyarbakir_Han	2.13	262	*i* P	Pb	08 25 47.9	-0.2
HANI				IAML_P			
	comp=Z,856nm,0.3s						
ORD	Ordubad	2.28	84	⇓P	Pb	08 25 48.6	-2.1
ORD				⇑S	Sg	08 26 26.9	+4.2
MARD	Mardin	2.31	233	*i* P	Pn	08 25 48.4	+0.8
MARD				IAML_P			
	comp=Z,1μm,0.3s						
MAZI	Mazidag	2.44	239	PN	Pb	08 25 50.8	-2.7
BGD	Bogdanovka	2.55	9	P	Pg	08 25 57.7	-0.7
GDB	GEDABAY	2.85	45	⇓P	Pn	08 25 55.7	+0.6
GDB				⇓S	Sb	08 26 36.4	+0.9
TRLG	Trialeti	2.90	15	P	Pg	08 26 02.7	-2.4
QZX	Qazax, Azerbai	2.91	37	⇑P	Pn	08 25 54.5	-1.2
QZX				⇑S	Sb	08 26 33.9	-3.0

IDC 09 08:27:55.4±4.1**,11°.55S×165°.03E,h0^{km},mb3.6**/4**, mb1 3.8**/4**,mb1mx3.5**/36**,mbtmp3.5**/4**,Error ellipse: s-maj=178.0km s-min=31.6km az=137.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.65	250	P	P	08 34 12.1	+0.2
	0.7nm,0.8s,baz=82,slow=9.3,SNR=5.2						
ASAR	Alice Springs	31.94	244	P	P	08 34 23.1	-0.1
	0.6nm,0.8s,baz=77,slow=9.6,SNR=6.6						
ILAR	Eielson Array	84.22	19	P	P	08 40 28.7	+0.3
	0.3nm,0.8s,baz=226,slow=7.4,SNR=3.7						
MKAR	Makanchi Array	93.41	317	P	P	08 41 12.2	-0.6
	0.1nm,0.5s,baz=100,slow=6.3,SNR=2.7						

IDC 09 08:28:19.5±27.0**,16°.35S×173°.68W,h0^{km},mb4.2**/4**, mb1 4.4**/4**,mb1mx3.8**/36**,mbtmp4.2**/4**,Error ellipse: s-maj=544.7km s-min=153.0km az=86.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.33	241	P	P	08 36 23.9	+0.3
	1.2nm,0.4s,baz=89,slow=8.9,SNR=6.4						
WRA	Warramunga Arr	49.37	258	P	P	08 37 10.3	-0.9
	1.0nm,0.5s,baz=95,slow=6.9,SNR=26						
ASAR	Alice Springs	49.56	253	P	P	08 37 12.6	-0.2
	6.2nm,0.4s,baz=89,slow=8.1,SNR=131						
FITZ	Fitzroy Crossi	57.75	259	P	P	08 38 13.3	+0.5
	1.8nm,0.9s,baz=80,slow=5.2,SNR=4.0						

HLW 09 08:30:55.7,20°.77N×29°.51E,h10^{km}±12^{km}**,Md3.6,Ml3.7, Sudan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKFR	Khafra	2.46	42	P	Pn	08 31 33.7	-2.3
	baz=42						
HMSM	Jabal Masmas	3.05	46	P	Pn	08 31 41.5	-2.5
	baz=46						
HMSM				AMP		08 32 00.0	
	baz=46						
ASHG	Umm Shaghir	3.19	38	P	Pn	08 31 43.5	-2.4
	baz=38						
MABD	Mabed	3.42	50	P	Pn	08 31 46.8	-2.3
	baz=49						
MABD				S	Sn	08 32 24.0	-5.6
	baz=49						

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*IDC **09** 08:31:14.9±0.9, 10°.68S×166°.18E, h0^{km}, mb4.0/9, mb1 4.3/11, mb1mx4.0/41, mbtmp4.2/11, ML4.9/2, Error ellipse: s-maj=26.5km s-min=21.0km az=135.0*

*ISCJB **09** 08:31:15.3±0.5, 10°.75S±0°.06×166°.11E±0°.07, h10^{km}, mb4.2/22, Error ellipse: s-maj=11.2km s-min=8.2km az=147.5*

*NEIC **09** 08:31:16.6±0.4, 10°.63S×166°.16E, h10^{km}, mb4.4/16, Error ellipse: s-maj=9.2km s-min=7.8km az=62.0*

ISC 09 08:31:16.4±0.7**,10°.63S**±0°.10×**166°.3E**±0°.1**,h10^{km},n43, σ1^{s}16**/40**,mb4.3**/22**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.33	280	*e*P	Pn	08 32 51.0	+1.2
HNR	Honiara	6.33	280	*e*Pn	Pn	08 32 51.2	+1.4
HNR	Honiara	6.33	280	Pn	Pn	08 32 50.1	+0.3
	48nm,0.3s,baz=157,slow=4.5,SNR=10.0						
MARNC	Mare, Loyalty	10.92	171	*e*Pn	Pn	08 33 53.2	+0.3
DZM	Mont Dzumac	11.38	179	Pn	Pn	08 33 58.7	-0.5
	3.7nm,0.3s,baz=344,slow=9.9,SNR=26						
DZM				Sn	Sn	08 35 57.6	-8.9
	0.1nm,0.3s,baz=72,slow=20,SNR=2.4						
ONTNC	Ouen Toro	11.61	179	*e*Pn	Pn	08 34 02.6	+0.2
PINNC	Pines Island,	11.97	175	*e*Pn	Pn	08 34 08.2	+1.0
CTA	Charters Tower	21.44	242	P	P	08 36 04.2	-0.8
	3.8nm,0.6s,baz=69,slow=11,SNR=7.0						
CTAO	Charters Tower	21.44	242	*e*P	P	08 36 04.8	-0.2
	12nm,1.1s						
COEN	Coen	22.79	259	*e*P	P	08 36 18.7	-0.8
	3.9nm,0.8s						
H11S2	WAKE ISLAND Hy	28.94	1	T	T	09 07 40.0	
	baz=181,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	28.94	1	T	T	09 07 40.4	
	baz=181,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	28.96	1	T	T	09 07 41.4	
	baz=181,slow=76,SNR=13						
URZ	Urewera	29.18	162	*e*P	P	08 37 19.3	+1.3
	6.7nm,1.1s						
URZ	Urewera	29.18	162	P	P	08 37 18.2	+0.1
	1.9nm,0.4s,baz=293,slow=16,SNR=2.6						
BKZ	Black Stump Fm	29.85	164	*e*P	P	08 37 24.7	+0.7
	4.7nm,0.6s						
H11N1	WAKE ISLAND Hy	30.16	1	T	T	09 09 11.5	
	baz=182,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.16	1	T	T	09 09 11.9	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.18	1	T	T	09 09 12.8	
	baz=182,slow=76,SNR=15						
STKA	Stephens Creek	31.09	223	*e*P	P	08 37 34.7	-0.3
	0.7nm,1.0s						
STKA	Stephens Creek	31.09	223	P	P	08 37 34.2	-0.7
	0.7nm,0.5s,baz=38,slow=6.9,SNR=4.3						
BFZ	Birch Farm	31.21	165	*e*P	P	08 37 35.9	-0.1
	32nm,1.2s						
THZ	Tophouse	31.56	170	*e*P	P	08 37 41.1	+2.1
	6.6nm,0.8s						
WRAB	Tennant Creek	32.09	249	*e*P	P	08 37 42.7	-1.2
	5.3nm,0.7s						
WB2	Warramunga Arr	32.09	249	*e*P	P	08 37 43.1	-0.9
	5.4nm,0.8s						
WR1	Warramunga Arr	32.10	249	*e*P	P	08 37 43.0	-1.1
	6.6nm,0.8s						
WR1				*e*PcP	PcP	08 40 34.7	+1.2
WRA	Warramunga Arr	32.10	249	P	P	08 37 43.0	-1.1
	6.0nm,0.8s,baz=80,slow=9.1,SNR=36						
WRA				PcP	PcP	08 40 34.7	+1.1
	0.3nm,0.8s,baz=78,slow=3.0,SNR=3.2						
KHZ	Kahutara	32.30	170	*e*P	P	08 37 45.7	+0.3
	4.7nm,0.9s						
LTZ	Lake Taylor	32.46	172	*e*P	P	08 37 48.6	+1.6
	9.9nm,0.9s						
AS01	Alice Springs	33.38	243	*e*P	P	08 37 53.9	-1.4
AS31	Alice Springs	33.42	243	*e*P	P	08 37 53.7	-2.0
	0.5nm,0.8s						
ASAR	Alice Springs	33.43	243	P	P	08 37 53.8	-1.9
	1.1nm,0.7s,baz=64,slow=10,SNR=8.6						
ASAR				PcP	PcP	08 40 36.8	-0.4
	0.7nm,1.1s,baz=104,slow=2.4,SNR=2.9						
MTN	Manton Dam	34.44	263	*e*P	P	08 38 04.0	-0.6
	4.9nm,1.0s						
FITZ	Fitzroy Crossi	39.97	255	*e*P	P	08 38 50.2	-1.3
	5.1nm,0.9s						
FITZ	Fitzroy Crossi	39.97	255	P	P	08 38 50.3	-1.2
	3.7nm,0.6s,baz=93,slow=5.7,SNR=14						
MLOA	Mauna Loa Obse	48.09	52	*e*P	P	08 39 55.6	-1.5
	55nm,1.1s						
BPAW	Bear Paw Mtn.	81.24	18	*e*P	P	08 43 33.2	+0.8
	2.7nm,0.8s						
IM3	Indian Mountai	81.89	15	*e*P	P	08 43 37.7	+2.0
ILAR	Eielson Array	82.96	18	P	P	08 43 42.4	+1.1
	0.4nm,0.6s,baz=246,slow=5.2,SNR=8.3						
MK32	Makanchi Array	93.56	317	*e*P	P	08 44 33.9	+1.1
MKAR	Makanchi Array	93.56	317	P	P	08 44 33.9	+1.1
	0.4nm,0.7s,baz=84,slow=7.0,SNR=4.9						
YKA	Yellowknife Ar	94.38	27	P	P	08 44 34.6	-1.5
	0.2nm,0.8s,baz=247,slow=4.7,SNR=3.8						
WNC	Wilmington	116.97	57	*e*PKPdf	PKPdf	08 50 01.6	-0.4

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*KRAR **09** 08:37:37.2±0.1, 53°.54N×87°.59E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 09 08:37:39.8±2.8**,53°.36N×87°.30E,h0^{km},mb1 2.7**/2**, mb1mx2.6**/54**,mbtmp2.7**/2**,ML2.4**/2**,Error ellipse: s-maj=24.8km s-min=13.3km az=72.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.59	293	*i*		08 47 00.5	
	baz=109,slow=357,SNR=0.8						
ZALV	Zalesovo Beam	1.59	293	Pg	Pn	08 38 07.8	-1.3
	0.5nm,0.3s,baz=111,slow=13,SNR=6.9						
ZALV				Lg	Lg	08 38 30.2	
	0.6nm,0.3s,baz=109,slow=28,SNR=5.9						
KURBB	Kurchatov Arra	6.07	247	Pn	Pn	08 39 11.8	+1.1
	0.1nm,0.3s,baz=60,slow=15,SNR=3.6						
KURBB				Lg	Lg	08 40 52.1	
	0.0nm,0.3s,baz=63,slow=27,SNR=3.1						
MKAR	Makanchi Array	7.32	208	Pn	Pn	08 39 29.4	+1.5
	0.1nm,0.3s,baz=30,slow=14,SNR=7.2						
MKAR				Sn	Sn	08 40 50.9	-0.8
	0.0nm,0.3s,baz=147,slow=36,SNR=2.4						
MKAR				Lg	Lg	08 41 29.5	
	0.0nm,0.3s,baz=25,slow=31,SNR=3.6						

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*IDC **09** 08:39:59.2±0.5, 10°.93S×116°.44E, h0^{km}, mb4.5/20, mb1 4.7/22, mb1mx4.6/34, mbtmp4.6/22, ML5.0/2, MS4.0/7, Ms1 4.0/7, ms1mx3.6/36, Error ellipse: s-maj=20.9km s-min=11.7km az=54.0*

*ISCJB **09** 08:40:02.1±0.2, 11°.18S±0°.03×116°.34E±0°.02, h33^{km}, mb4.8/78, MS3.4/1, Error ellipse: s-maj=4.9km s-min=2.6km az=34.5*

*DJA **09** 08:40:02.7±0.2, 11°S±2°×11°6E±°, h10^{km}, M5.1/32, mb5.2/32, mB5.5/16, MLv5.3/10, Mw(mB)5.0/16*

*NEIC **09** 08:40:03.1±1.0, 11°.11S×116°.34E, h25^{km}±6^{km}, mb4.8/53, Error ellipse: s-maj=5.8km s-min=3.1km az=46.0*

NEIC Felt on Nusa Penida.

ISC 09 08:40:04.1±0.3**,11°.15S**±0°.05×**116°.40E**±0°.05**,h35^{km},n300, σ1^{s}54**/295**,mb4.8**/78**,1C,South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.68	31	P	Pn	08 40 45.7	+0.9
DNP	Denpasar	2.72	334	P	Pn	08 40 46.3	+1.0
SRBI	Singaraja	3.26	339	P	Pn	08 40 54.9	+2.1
JAGI	Jajag, Banyuwa	3.46	320	*e*Pn	Pn	08 40 55.6	+0.1
JAGI				*e*Sn	Sn	08 41 34.4	-1.0
JAGI	Jajag, Banyuwa	3.46	320	P	Pn	08 40 56.2	+0.7
GMJI	Gumukmas	4.08	314	P	Pn	08 41 04.6	+0.6
KMMI	Kalianget	4.73	329	P	Pn	08 41 15.2	+2.3
PWJI	Pagerwojo	5.49	304	P	Pn	08 41 23.0	-0.4
	377nm,0.7s,13μm5.7nm						
GRJI	Gresik	5.72	317	P	Pn	08 41 27.3	+0.8
	193nm,0.8s,3μm1.3nm						
EDFI	Ende, Flores	5.74	66	P	Pn	08 41 28.8	+1.9
	61nm,0.5s,1.0nm						
PCJI	Pacitan	5.92	299	P	Pn	08 41 29.8	+0.4
	372nm,0.5s,8μm4.0nm						
NGJI	Ngawi	6.15	307	P	Pn	08 41 33.6	+1.1
MMRI	Maumere	6.27	67	*e*Pn	Pn	08 41 36.0	+1.8
MMRI				*e*Sn	Sn	08 42 44.1	-0.7
MMRI	Maumere	6.27	67	P	Pn	08 41 36.8	+2.6
WOJI	Wonogiri, Jawa	6.32	301	P	Pn	08 41 35.9	+1.0
UGM	Wanagama	6.62	299	*e*Pn	Pn	08 41 38.6	-0.5
UGM				*e*Sn	Sn	08 42 49.9	-3.5
UGM	Wanagama	6.62	299	P	Pn	08 41 39.6	+0.5
BKSI	Bulukumba	6.87	33	P	Pn	08 41 44.5	+2.2
	90nm,0.7s,1μm0.4nm						
SMRI	Semarang	7.15	304	*e*Pn	Pn	08 41 46.9	+0.5
SMRI				*e*Sn	Sn	08 43 06.2	-0.2
BATI	Baumata	7.20	83	P	Pn	08 41 49.0	+2.0
BATI	Baumata	7.20	83	Pn	Pn	08 41 47.0	0.0
	37nm,0.3s,baz=266,slow=1.9,SNR=12						
BATI				Sn	Sn	08 43 03.8	-3.9
	120nm,0.3s,baz=2.1,slow=21,SNR=16						
BNSI	Bone	7.65	29	P	Pn	08 41 55.8	+2.7
KBKI	Kotabaru	7.80	358	P	Pn	08 41 57.6	+2.4
SOEI	Soe	7.87	81	*e*Pn	Pn	08 41 57.5	+1.3
SOEI				*e*Sn	Sn	08 43 22.2	-1.9
SOEI	Soe	7.87	81	P	Pn	08 41 58.3	+2.1
	183nm,0.7s,2μm						
SPSI	Sidrap Palu	7.88	25	P	Pn	08 41 59.3	+3.0
	28nm,0.7s,704nm						

KPJI	Karang Pucung	8.29	297	P	Pn	08 42 02.8	+1.0
	221nm,0.5s,3µm						
CMJI	Cimerak	8.52	292	P	Pn	08 42 04.3	-0.8
TTSI	Tana Toraja	8.74	23	P	Pn	08 42 10.7	+2.7
CISI	Cisompet, Garu	9.19	292	ePn	Pn	08 42 13.8	-0.4
CISI	Cisompet, Garu	9.19	292	P	Pn	08 42 13.9	-0.4
	344nm,0.7s,6µm						
JCJI	Jatiwangi	9.27	299	P	Pn	08 42 14.3	-1.0
MTKI	Muara Teweh, K	10.25	352	P	Pn	08 42 32.9	+4.1
	319nm,0.5s,9µm						
MBWA	Marble Bar	10.45	163	ePn	Pn	08 42 27.8	-3.7
DBJI	Dramaga	10.57	295	P	Pn	08 42 35.2	+2.0
	83nm,0.6s						
XMIS	Christmas Isla	10.58	273	ePn	Pn	08 42 31.4	-1.9
XMIS				eSn	Sn	08 44 16.0	-15
FITZ	Fitzroy Crossi	11.30	129	ePn	Pn	08 42 40.5	-2.6
FITZ				eSn	Sn	08 44 36.8	-11
FITZ	Fitzroy Crossi	11.30	129	Pn	Pn	08 42 39.8	-3.4
	12nm,0.3s,baz=318,slow=11,SNR=131						
FITZ				Sn	Sn	08 44 36.8	-11
	24nm,0.3s,baz=229,slow=9.6,SNR=9.1						
FITZ				LR	LR	08 46 56.5	
	comp=Z,542nm,20.2s,baz=3.5,slow=37						
GIRL	Giralia	11.62	190	ePn	Pn	08 42 45.1	-2.3
GIRL				eSn	Sn	08 44 46.2	-10
MPSI	Mapaga	11.93	17	P	Pn	08 42 56.8	+5.0
KASI	Kota Agung	13.03	294	P	Pn	08 43 08.9	+2.1
	126nm,0.6s						
PPBI	Pangkal Pinang	13.54	311	P	Pn	08 43 14.0	+0.2
	42nm,1.1s,11µm						
LWLI	Liwa	13.65	296	P	P	08 43 20.7	-3.0
MDSI	Maura Dua	13.79	298	P	Pn	08 43 16.1	-1.1
	30nm,0.8s						
KSM	Kuching	13.93	334	ePn	Pn	08 43 19.3	+0.3
SBUM	Sibu	14.13	343	ePn	Pn	08 43 24.4	+2.5
MTN	Manton Dam	14.52	98	ePn	Pn	08 43 26.0	-1.1
LHSI	Lahat	14.68	299	P	P	08 43 36.3	+1.2
BNDI	Bandanaira	14.91	65	P	P	08 43 49.7	+12
MNAI	Manna	14.92	296	ePn	Pn	08 43 30.2	-2.4
MASI	Maura Aman, Be	16.13	299	P	Pn	08 43 47.4	-1.0
	447nm,0.7s						
KKM	Kota Kinabalu	17.08	359	eP	P	08 44 01.7	-0.1
	24nm,0.8s						
KRJI	Kerinci	17.34	300	P	Pn	08 44 01.5	-2.1
	484nm,0.7s						
MORW	Morawa	17.83	181	ePn	Pn	08 44 07.3	-2.2
	19nm,0.8s						
MYKOM	Kota Tinggi	17.91	315	ePn	P	08 44 11.6	+0.6
	20nm,0.7s						
SDSI	Sungai Dareh	18.00	303	P	P	08 44 13.9	+2.0
	56nm,1.3s,3µm						
PDSI	Padang	18.81	302	P	P	08 44 20.8	-0.1
	92nm,0.6s						
BKNI	Bangkinang	19.05	306	P	Pn	08 44 27.0	+2.5
	134nm,0.8s						
WR1	Warramunga Arr	19.36	119	eP	P	08 44 27.6	+0.7
	30nm,0.8s						
WR1				eS	S	08 47 49.2	-15
WRA	Warramunga Arr	19.36	119	P	P	08 44 27.6	+0.7
	3.9nm,0.3s,baz=293,slow=12,SNR=351						
WRA				S	S	08 47 49.2	-15
	3.2nm,0.3s,baz=291,slow=21,SNR=9.1						
WRA				LR	LR	08 52 04.3	
	comp=Z,433nm,18.4s,baz=295,slow=37						
WRAB	Tennant Creek	19.36	119	eP	P	08 44 27.6	+0.7
	33nm,0.6s						
WB2	Warramunga Arr	19.37	119	eP	P	08 44 27.6	+0.7
	23nm,0.8s						
WC3	Warramunga Arr	19.39	119	eP	P	08 44 27.7	+0.5
	26nm,0.6s						
DAV	Davao City (W)	20.28	27	LR	LR	08 51 57.7	
	comp=Z,166nm,21.1s,baz=196,slow=36						
MNSI	Mandailing Nat	20.50	304	P	Pn	08 44 41.7	+0.1
	20nm,0.7s						
AS31	Alice Springs	20.80	129	eP	P	08 44 43.9	+1.3
	15nm,0.6s						
ASAR	Alice Springs	20.80	129	P	P	08 44 43.6	+1.1
	19nm,0.6s,baz=301,slow=10.0,SNR=225						
ASAR				S	S	08 48 24.9	-8.1
	26nm,0.8s,baz=307,slow=23,SNR=13						
AS01	Alice Springs	20.84	129	eP	P	08 44 43.5	+0.6
NWAO	Narrogin (SRO)	21.69	178	eP	P	08 44 55.0	+3.1
	30nm,0.6s						
NWAO	Narrogin (SRO)	21.69	178	P	P	08 44 55.1	+3.2
	22nm,0.5s,baz=51,slow=8.0,SNR=16						
NWAO				S	S	08 48 38.5	-12
	42nm,0.5s,baz=126,slow=12,SNR=8.1						
IPM	Ipoh	21.80	315	eP	P	08 44 53.5	+0.2
	36nm,0.6s						
PSI	Prapat	22.23	308	eP	P	08 44 55.8	-2.2
	38nm,1.0s						
PSI	Prapat	22.23	308	P	P	08 44 56.1	-2.0
	14nm,0.5s,baz=180,slow=7.8,SNR=8.1						
FORT	Forrest	22.33	153	eP	P	08 45 00.2	+1.3
	65nm,0.8s						
KULM	Kulim	22.64	315	eP	P	08 45 01.1	-1.1
	18nm,0.6s						
TSI	Tuntungan	22.95	308	P	P	08 45 10.7	+5.2
KCSI	Kotacane, Aceh	23.58	307	P	P	08 45 11.2	-0.6
	67nm,0.9s,625nm						
TRTT	Trang	25.14	318	P	P	08 45 26.5	+0.4
	40nm,1.1s,742nm						
PKDT	Phuket	26.09	316	P	P	08 45 38.9	+4.1
	26nm,0.8s,778nm						
COEN	Coen	26.28	99	eP	P	08 45 37.0	+0.5
	11nm,0.8s						
BSI	Banda Aceh	26.73	307	P	P	08 45 45.8	+5.2
BBOO	Buckleboo	28.13	143	eP	P	08 45 53.6	+0.7
	21nm,0.9s						
PATY	Pattaya	28.45	327	P	P	08 45 58.2	+2.3
	16nm,0.5s						
CTA	Charters Tower	30.05	111	P	P	08 46 11.6	+1.4
	7.5nm,0.6s,baz=285,slow=11,SNR=10						
CTAO	Charters Tower	30.05	111	eP	P	08 46 11.8	+1.6
	9.9nm,0.8s						
SKNT	Sakolnakorn	30.52	336	P	P	08 46 14.8	+0.6
	9.7nm,1.0s						
SRDT	SRDT	30.58	326	P	P	08 46 17.1	+2.3
	26nm,0.7s						
STKA	Stephens Creek	31.08	135	eP	P	08 46 20.1	+0.9
	1.8nm,0.8s						
STKA	Stephens Creek	31.08	135	P	P	08 46 20.3	+1.2
	6.1nm,0.7s,baz=314,slow=9.4,SNR=21						
STKA				LR	LR	08 59 11.8	
	comp=Z,251nm,20.5s,baz=313,slow=37						
PBKT	Sadao Pong	31.49	331	eP	P	08 46 23.1	+0.4
	19nm,0.9s						
PBKT	Sadao Pong	31.49	331	P	P	08 46 23.3	+0.6
	30nm,1.0s						
UMPA	Umpang Tak	32.25	327	P	P	08 46 29.6	+0.1
	12nm,0.6s,389nm						
UTTA	Uttaradit	32.70	331	P	P	08 46 34.4	+1.0
	22nm,0.8s,183nm						
CM01	Chiang Mai Arr	34.05	329	eP	P	08 46 45.5	+0.2
CMAR	Chiang Mai Arr	34.09	329	P	P	08 46 46.1	+0.6
	7.1nm,0.5s,baz=156,slow=7.0,SNR=38						
CM31	Chiang Mai Arr	34.09	329	eP	P	08 46 46.6	+1.0
CMMT	Chiang Mai	34.39	330	P	P	08 46 49.3	+1.2
	12nm,0.7s						
CHTO	Chiang Mai	34.39	330	eP	P	08 46 48.5	+0.3
	8.3nm,0.7s						
CHTO	Chiang Mai	34.39	330	P	P	08 46 49.4	+1.2
EIDS	Eidsvold	35.72	118	eP	P	08 47 01.6	+2.0
	6.6nm,1.0s						
TOO	Toolangi	37.06	140	eP	P	08 47 13.5	+2.6
	12nm,0.8s						
ARMA	Armidale	37.89	126	eP	P	08 47 21.0	+2.9
	7.3nm,0.6s						
KMI	Kunming	38.43	340	P	P	08 47 25.0	+2.2
KMI				pP	sP	08 47 34.5	-1.3
KMI				sP	pwP	08 47 37.7	+1.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,190nm,4.2s						
KMI				LR	LR		
	comp=N,400nm,13.1s						
KMI				LR	LR		
	comp=E,360nm,13.9s						
KMI				LR	LR		
	comp=Z,240nm,15.4s						
GYA	Guiyang	38.56	346	P	P	08 47 23.5	-0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ENH	Enshi	41.72	351	eP	P	08 47 48.5	-1.2
	comp=Z,12nm,0.9s						
NJ2	Nanjing	43.02	3	eP	P	08 47 59.7	-0.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2	Chengdu	43.55	344	⇑P	P	08 48 04.0	-0.6
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
SHL	Shillong	43.61	327	eP	P	08 48 05.7	+0.2
	comp=Z,27nm,0.6s						
SHL	Shillong	43.61	327	ex	P	08 48 06.0	+0.6
XAN	Xi'an	45.50	351	eP	P	08 48 18.9	-1.2
	comp=Z,5.9nm,1.0s						
HYB	Hyderabad	46.94	307	i P	P	08 48 31.5	-0.3
ODAN	Odare	47.13	324	eP	P	08 48 33.4	0.0
	comp=Z,13nm,0.3s						
TAPN	Taplejung	47.32	324	eP	P	08 48 34.8	-0.1
LSA	Lhasa	47.34	330	eP	P	08 48 35.7	+0.4
	comp=Z,6.6nm,0.7s						
RAMN	Ramite	47.66	323	eP	P	08 48 37.6	+0.1
	comp=Z,22nm,0.6s						
JIRN	Jiri	48.43	323	eP	P	08 48 43.3	-0.3
	comp=Z,53nm,0.3s						
LZH	Lanzhou	48.45	346	eP	P	08 48 43.9	+0.5
LZH				pP	pP	08 48 53.7	+1.3
LZH				sP	pwP	08 48 57.1	-1.5
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				LR	LR		
	comp=N,520nm,11.4s						
LZH				LR	LR		
	comp=E,790nm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,13.5s						
GUN	Gumba	48.80	323	eP	P	08 48 46.1	-0.3
	comp=Z,72nm,0.7s						
PKI	Pulchoki	48.82	323	eP	P	08 48 45.9	-0.7
PKIN	Phulchoki	48.84	323	eP	P	08 48 45.8	-0.8
	comp=Z,15nm,0.5s						
DZM	Mont Dzumac	48.98	110	LR	LR	09 10 48.3	
	comp=Z,148nm,18.0s,baz=235,slow=38						
DMN	Daman	49.03	322	eP	P	08 48 47.6	-0.5
	comp=Z,32nm,0.6s						
KKN	Kakani	49.06	323	eP	P	08 48 47.7	-0.6
KS15	Wonju Array Si	49.52	12	eP	P	08 48 49.9	-1.5
KSAR	Wonju Array Be	49.52	12	P	P	08 48 50.4	-1.0
KSRS	Korea Array	49.54	12	P	P	08 48 50.4	-1.1
	comp=Z,3.8nm,1.1s,baz=188,slow=7.7,SNR=6.8						
KS01	Wonju Array Si	49.56	12	eP	P	08 48 50.8	-0.8
KOLN	Koldanda	50.06	321	eP	P	08 48 55.4	-0.5
DANN	Dangsing	50.38	322	eP	P	08 48 57.9	-0.5
	comp=Z,90nm,0.6s						
PYUN	Piuthan	50.67	321	eP	P	08 49 00.0	-0.5
	comp=Z,52nm,0.7s						
BJT	Baijiatuau	50.91	360	eP	P	08 49 00.5	-1.3
	comp=Z,8.4nm,0.9s						
BJI	Beijing	50.93	360	P	P	08 49 00.3	-1.6
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MJAR	Matsushiro Arr	51.70	22	P	P	08 49 05.1	-2.7
	comp=Z,0.6nm,0.5s,baz=200,slow=9.0,SNR=4.4						
MAJO	Matsushiro	51.70	22	eP	P	08 49 05.1	-2.7
HHC	Hu-ho-hao-te	51.93	355	eP	P	08 49 13.0	+3.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,620nm,6.1s						
GTA	Gaotai	52.62	344	eP	P	08 49 14.7	0.0
GTA				pP	pP	08 49 25.1	+1.3
GTA				sP	pwP	08 49 28.8	-1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,150nm,6.5s						
GTA				LR	LR		
	comp=N,190nm,17.5s						
GTA				LR	LR		
	comp=E,340nm,19.4s						
GTA				LR	LR		
	comp=Z,270nm,18.7s						
CASY	Casey	55.20	183	eP	P	08 49 33.7	+0.6
	comp=Z,13nm,0.9s						
MLZ	Mavora Lakes	55.61	138	eP	P	08 49 38.1	+1.6
	comp=Z,14nm,0.9s						
WHZ	Wether Hill Ro	55.69	139	eP	P	08 49 38.6	+1.6
	comp=Z,16nm,1.2s						
WKZ	Wanaka	56.02	137	eP	P	08 49 41.5	+2.1
	comp=Z,46nm,1.1s						
LBZ	Lake Benmore	56.66	136	eP	P	08 49 44.7	+0.7
	comp=Z,18nm,1.0s						
USA0B	Ussuriysk Arra	56.88	13	eP	P	08 49 43.9	-1.5
	comp=Z,5.2nm,0.7s						
USRK	Ussuriysk Ar.	56.88	13	P	P	08 49 44.0	-1.3
	comp=Z,4.8nm,0.7s,baz=187,slow=6.4,SNR=13						
RPZ	Rata Peaks	57.05	135	eP	P	08 49 48.1	+1.4
	comp=Z,31nm,0.9s						
RPZ	Rata Peaks	57.05	135	LR	LR	09 15 24.6	
	comp=Z,263nm,18.1s,baz=293,slow=37						
OXZ	Oxford	57.62	134	eP	P	08 49 51.3	+0.5
	comp=Z,22nm,0.7s						
THZ	Tophouse	57.82	133	eP	P	08 49 53.9	+1.7
	comp=Z,12nm,0.9s						
CRLZ	Canterbury Las	58.10	135	eP	P	08 49 55.0	+0.9
	comp=Z,18nm,0.8s						
MQZ	McQueen's Vall	58.16	135	eP	P	08 49 56.0	+1.5
	comp=Z,8.6nm,0.8s						
ULN	Ulaanbaatar	59.34	353	eP	P	08 50 01.5	-1.2
	comp=Z,4.7nm,0.6s						
SONA0	Songino Array	59.39	352	eP	P	08 50 02.0	-1.0
SONM	Songino Array	59.39	352	P	P	08 50 02.0	-1.0
	comp=Z,7.0nm,0.8s,baz=170,slow=8.9,SNR=32						
SONA1	Songino Array	59.40	352	eP	P	08 50 01.9	-1.3
BKZ	Black Stump Fm	59.92	129	eP	P	08 50 08.0	+1.0
	comp=Z,12nm,0.9s						
URZ	Urewera	60.24	128	P	P	08 50 09.5	+0.5
	comp=Z,5.5nm,0.9s,baz=203,slow=7.7,SNR=2.8						
URZ				LR	LR	09 15 48.9	
	comp=Z,152nm,20.1s,baz=288,slow=36						
WMQ	Urumqi	60.63	336	eP	P	08 50 12.2	+0.7
WMQ				pP	pP	08 50 22.4	+1.6
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				LR	LR		
	comp=N,310nm,16.9s						
WMQ				LR	LR		
	comp=E,300nm,17.7s						
WMQ				LR	LR		
	comp=Z,260nm,16.7s						
KSH	Kashi	62.86	326	P	P	08 50 26.4	-0.4
KSH				pP	sP	08 50 39.9	+0.3
KSH				PP	PP	08 52 52.1	+6.6
KSH				S	S	08 58 48.4	-5.7
KSH				sS	sS	08 59 08.7	-1.4
KSH	Kashi	62.86	326	SS	SS	09 03 06.8	+6.8
KSH				pmax	pmax		
	comp=Z,53nm,0.6s						
KSH				pmax	pmax		
	comp=Z,570nm,5.5s						
KSH				LR	LR		
	comp=N,170nm,6.0s						
KSH				LR	LR		
	comp=E,230nm,5.6s						
KSH				LR	LR		
	comp=Z,510nm,6.8s						
TARG	Taragay, Kyrgy	63.47	329	eP	P	08 50 32.5	+1.5
	comp=Z,6.6nm,0.6s						
KBL	Kabul	63.87	317	eP	P	08 50 33.8	+0.1
	comp=Z,12nm,0.6s						
KDJ	Kajisay	64.08	328	eP	P	08 50 36.5	+1.6
	comp=Z,6.4nm,0.6s						
NRN	Naryn	64.19	327	eP	P	08 50 35.5	-0.3
	comp=Z,3.7nm,0.7s						
KZA	Kyzart	65.05	327	P	P	08 50 42.3	+0.9
	SNR=8.1						
MK01	Makanchi Array	65.22	335	eP	P	08 50 41.5	-0.5
MK31	Makanchi Array	65.25	335	eP	P	08 50 41.7	-0.5
MK32	Makanchi Array	65.25	335	eP	P	08 50 42.1	-0.1
MKAR	Makanchi Array	65.25	335	eP	P	08 50 41.7	-0.4
	comp=Z,65nm,0.6s						
MKAR				eS	S	08 59 25.6	+2.3
MKAR	Makanchi Array	65.25	335	P	P	08 50 42.1	-0.1
	comp=Z,9.3nm,0.5s,baz=148,slow=7.4,SNR=156						
MAKZ	Makanchi	65.39	335	eP	P	08 50 42.4	-0.7
	comp=Z,3.9nm,0.7s						
KBK	Karagaybulak	65.61	328	P	P	08 50 45.6	+0.8
	SNR=8.3						
ARSB	Arslanbob	65.76	325	eP	P	08 50 43.8	-2.0
	comp=Z,17nm,0.7s						
GAR	Garm	65.79	322	eP	P	08 50 42.8	-3.2
	comp=Z,21nm,0.6s						
AAK	Ala-Archa	65.84	327	P	P	08 50 47.1	+0.8
	SNR=5.8						
AAK	Ala-Archa	65.84	327	eP	P	08 50 47.0	+0.8
	comp=Z,7.6nm,0.8s						
AML	Almayashu	65.92	326	P	P	08 50 47.6	+0.6
	SNR=7.8						
EKS2	Erkin-Say	66.24	327	P	P	08 50 49.7	+0.9
	SNR=5.8						
KURBB	Kurchatov Arra	69.80	335	P	P	08 51 10.5	-0.3
	comp=Z,11nm,0.6s,baz=148,slow=5.9,SNR=122						
KURK	Kurchatov	69.83	335	eP	P	08 51 10.7	-0.3
	comp=Z,15nm,0.7s						
ZAA0	Zalesovo Array	70.17	341	eP	P	08 51 11.8	-1.2
	comp=Z,7.4nm,0.7s						
ZALV	Zalesovo Beam	70.17	341	eP	P	08 51 11.6	-1.4
ZALV	Zalesovo Beam	70.17	341	P	P	08 51 11.8	-1.2
	comp=Z,9.0nm,0.6s,baz=144,slow=4.6,SNR=41						
ZAA1	Zalesovo Array	70.17	341	eP	P	08 51 11.8	-1.2
PETK	Petropavlovsk-	73.07	25	P	P	08 51 29.7	-0.8
	comp=Z,3.9nm,0.9s,baz=223,slow=5.0,SNR=2.9						
PEA1	Petropavlovsk-	73.08	25	eP	P	08 51 29.7	-0.8
GEYT	Alibeck	73.12	315	P	P	08 51 31.2	0.0
	comp=Z,2.2nm,0.7s,baz=178,slow=4.5,SNR=3.8						
ABKAR	Akbulak array	77.87	326	eP	P	08 51 58.3	+0.2
QSPA	South Pole Qui	78.86	180	eP	P	08 52 04.2	+0.7
	comp=Z,12nm,1.1s						
TIXI	Tiksi	83.03	4	eP	P	08 52 25.1	-0.3
	comp=Z,3.7nm,0.9s						
TIXI	Tiksi	83.03	4	P	P	08 52 22.9	-2.4
	comp=Z,2.3nm,0.6s,baz=217,slow=2.2,SNR=8.2						
BOSA	Boshof	85.73	242	P	P	08 52 41.0	+0.7
	comp=Z,0.7nm,0.5s,baz=110,slow=4.2,SNR=4.8						
KBZ	Khabaz	86.00	316	P	P	08 52 41.8	+0.8
	comp=Z,1.6nm,0.9s,baz=175,slow=4.3,SNR=3.3						
SNAA	Sanae	88.25	196	eP	P	08 52 52.9	+1.4
	comp=Z,8.8nm,0.7s						
PPT	Papeete	90.47	108	eP	P	08 53 03.1	+0.2
BR101	Keskin Array S	91.54	310	eP	P	08 53 07.2	-0.4
BRTR	Keskin Array B	91.54	310	P	P	08 53 07.2	-0.4
	comp=Z,0.8nm,0.8s,baz=118,slow=7.9,SNR=3.6						
KIS	Kishinev	96.41	317	eP	P	08 53 26.0	-3.6
KIS	Kishinev	96.41	317	ePP	PP	08 57 40.0	+16
KIS				eS	S	09 04 38.0	-9.4
KIS	Kishinev	96.41	317	ePS	PS	09 06 22.0	+10
KIS				LRM	MLR	09 33 36.0	
	comp=Z,500nm,17.0s						
CLL	Collm	106.99	320	ePP	PP	08 58 42.0	-1.3
TOA0	Torodi Ar. Sit	116.29	279	ePKPdf	PKiKP	08 58 45.0	+0.1
TORD	Torodi Ar. Bea	116.29	279	PKP	PKPdf	08 58 44.1	-0.8
	comp=Z,0.5nm,0.6s,baz=92,slow=1.4,SNR=5.4						
TOA1	Torodi Ar. Sit	116.29	279	ePKPdf	PKPdf	08 58 44.1	-0.8
YKW3	Yellowknife Ar	117.15	24	ePKPdf	PKiKP	08 58 45.6	+0.4
YKA	Yellowknife Ar	117.19	24	PKP	PKPdf	08 58 45.2	0.0
	comp=Z,1.1nm,0.4s,baz=308,slow=2.0,SNR=34						
YKB5	Yellowknife Ar	117.19	24	ePKPdf	PKPdf	08 58 45.0	-0.2
LTY	Liberty	120.27	41	ePKPdf	PKiKP	08 58 52.1	+0.2
B08A	Colville Reser	120.78	40	ePKPdf	PKiKP	08 58 53.1	+0.4
MOD	Modoc Plateau	122.01	47	ePKPdf	PKiKP	08 58 58.0	+2.5
F10A	Beach Ranch, E	122.93	42	ePKPdf	PKiKP	08 58 58.6	+1.5
BMO	Blue Mountains	123.25	43	ePKPdf	PKiKP	08 58 58.2	+0.4
RYN	Ryan	124.14	51	ePKPdf	PKiKP	08 59 01.1	+1.2
NV01	Mina Array Sit	124.36	51	ePKPdf	PKiKP	08 59 00.8	+0.4
NVAR	Mina Array Bea	124.36	51	PKP	PKiKP	08 59 01.4	+1.0
	comp=Z,0.4nm,0.3s,baz=257,slow=3.6,SNR=3.5						
MSO	Missoula	124.73	40	ePKPdf	PKiKP	08 59 00.8	0.0
HLID	Hailey	125.64	44	ePKPdf	PKiKP	08 59 04.0	+1.3
ELK	Elko	125.99	47	ePKPdf	PKiKP	08 59 04.9	+1.3
LRM	Limekiln Ridge	126.08	41	ePKPdf	PKPdf	08 59 03.1	-0.1
FFC	Flin Flon	127.07	27	ePKPdf	PKiKP	08 59 06.2	+1.2
FCC	Fort Churchill	127.21	19	ePKPdf	PKiKP	08 59 05.2	+0.2
HVU	Hansel Valley	127.40	45	ePKPdf	PKiKP	08 59 07.5	+1.2
REDW	Red Top Meadow	128.12	43	ePKPdf	PKiKP	08 59 08.9	+1.2
SNOW	Snow King Moun	128.14	43	ePKPdf	PKiKP	08 59 09.3	+1.5
PD31	Pinedale Array	129.23	43	ePKPdf	PKiKP	08 59 10.1	+0.2
PDAR	Pinedale Array	129.23	43	ePKPdf	PKiKP	08 59 09.8	-0.1
PDAR	Pinedale Array	129.23	43	PKP	PKiKP	08 59 10.2	+0.2
	comp=Z,0.2nm,0.4s,baz=98,slow=0.5,SNR=5.8						
O20A	White River Ci	131.20	46	ePKPdf	PKiKP	08 59 15.2	+1.2
PV01	Paradox Valley	131.74	48	ePKPdf	PKiKP	08 59 16.5	+1.4
RSSD	Black Hills	132.17	39	ePKPdf	PKiKP	08 59 16.3	+0.5
ULM	Lac du Bonnet	132.84	28	PKP	PKiKP	08 59 16.3	-0.4
	comp=Z,1.4nm,0.8s,baz=330,slow=3.7,SNR=3.5						
D41A	Chassel	138.46	26	ePKPdf	PKiKP	08 59 28.5	+0.3
TXAR	Lajitas Array	138.54	58	PKhKP	PKPpre	08 59 17.2	
	comp=Z,0.2nm,0.5s,baz=211,slow=4.2,SNR=4.2						
G42A	Mountain	139.93	27	ePKPdf	PKiKP	08 59 31.6	+0.3
CPUP	Villa Florida	142.25	189	PKhKP	PKPpre	08 59 28.6	
	comp=Z,1.3nm,0.8s,baz=170,slow=4.2,SNR=4.6						
GO02	Mina Guanaco	143.44	171	ePKPdf	PKPdf	08 59 36.5	+0.3
FVM	French Village	144.07	37	ePKPdf	PKPbc	08 59 34.5	0.0
MIAR	Mount Ida	144.11	45	ePKPdf	PKPbc	08 59 35.5	+0.7
T42A	Van Buren	144.28	39	ePKPdf	PKPbc	08 59 35.4	+0.2
W41B	Gary Mavity, V	144.66	43	ePKPdf	PKPbc	08 59 36.6	+0.2
NATX	Nacogdoches	144.76	50	ePKPdf	PKPdf	08 59 38.4	+0.6
PBMO	Poplar Bluff	144.85	39	ePKPdf	PKPbc	08 59 37.1	+0.2
MOQ	Mont Orford	145.16	11	ePKPbc	PKPdf	08 59 38.7	+0.4
N49A	Columbus Grove	145.24	28	ePKPbc	PKPdf	08 59 38.5	+0.1
LONY	Lake Ozonia	145.34	14	ePKPbc	PKPab	08 59 38.5	+0.1
Z41A	Richland Creek	145.35	46	ePKPbc	PKPab	08 59 40.1	+1.3
FRNY	Flat Rock	145.35	13	ePKPbc	PKPab	08 59 38.5	0.0
BLO	Bloomington	145.44	32	ePKPbc	PKPab	08 59 39.2	+0.2
O49A	Covington	145.75	29	ePKPdf	PKPdf	08 59 39.6	+0.3
GBN	Guysborough	145.81	357	ePKPdf	PKPab	08 59 40.9	+0.8
NCB	Newcomb	146.03	14	ePKPdf	PKPab	08 59 41.4	+0.3
LVC	Limon Verde	146.05	171	ePKPdf	PKPab	08 59 43.2	+1.1
MMNY	Mt. Morris Dam	146.16	19	ePKPdf	PKPbc	08 59 41.2	+0.3
WCI	Wyandotte Cave	146.25	33	ePKPdf	PKPbc	08 59 41.5	+0.2
ACSO	Alum Creek Sta	146.34	27	ePKPdf	PKPbc	08 59 41.9	+0.4
HAL	Halifax	146.63	360	ePKPbc	PKPab	08 59 43.3	0.0
M54A	Oil Creek Stat	146.63	22	ePKPdf	PKPbc	08 59 42.7	+0.3
WVT	Waverly	146.86	37	ePKPbc	PKPbc	08 59 43.4	+0.2
P51A	Williamsport	146.91	28	ePKPdf	PKPbc	08 59 42.9	-0.3
OXF	Oxford	146.92	41	ePKPdf	PKPbc	08 59 43.8	+0.4
O52A	Adamsville	146.94	26	ePKPbc	PKPbc	08 59 43.6	+0.3
N54A	Moraine State	146.98	23	ePKPbc	PKPbc	08 59 43.9	+0.5
Q51A	Peebles	147.14	29	ePKPbc	PKPbc	08 59 43.9	0.0
BINY	Binghamton	147.23	17	ePKPbc	PKPbc	08 59 44.9	+0.9
PLAL	Pickwick Lake	147.47	39	ePKPbc	PKPbc	08 59 44.6	-0.3
T49A	Edmonton	147.48	34	ePKPbc	PKPbc	08 59 45.1	+0.2
P53A	Whipple	147.65	26	ePKPbc	PKPbc	08 59 45.7	+0.4
V48A	Smith Brothers	147.72	37	ePKPbc	PKPbc	08 59 45.4	-0.2
KSPA	Keystone Colle	147.88	17	ePKPbc	PKPbc	08 59 46.5	+0.7
SSPA	Standing Stone	148.04	21	ePKPbc	PKPbc	08 59 46.6	+0.3
S51A	Beattyville	148.10	31	ePKPbc	PKPbc	08 59 46.7	+0.2
X48A	Hartselle	148.46	39	ePKPbc	PKPbc	08 59 47.3	-0.3
N59A	State Game Lan	148.47	18	ePKPbc	PKPbc	08 59 48.1	+0.7
PB11	IPOC Station P	148.71	169	ePKPbc	PKiKP	08 59 49.9	-0.4
PAGS	Pennsylvania G	148.80	20	ePKPbc	PKPbc	08 59 48.6	+0.4
W50A	Signal Mountai	148.98	36	ePKPbc	PKPbc	08 59 49.2	+0.3
MVL	Millersville	149.12	19	ePKPbc	PKiKP	08 59 49.9	-0.5
BDFB	Brasilia	149.23	210	PKPbc	PKiKP	08 59 51.1	-0.3
	comp=Z,2.7nm,0.4s,baz=66,slow=3.5,SNR=5.6						
Y49A	Blount Mountai	149.24	39	ePKPbc	PKPbc	08 59 49.5	-0.1
MNMC	Minye Minye	149.34	169	ePKPdf	PKPbc	08 59 49.9	-0.7
MNMC				ePKPbc	PKiKP	08 59 52.0	+0.3
LRAL	Lakeview Retre	149.41	41	ePKPbc	PKPbc	08 59 50.3	+0.3
V52A	Sevierville	149.47	33	ePKPbc	PKiKP	08 59 50.8	-0.4
TKL	Tuckaleechee C	149.51	34	ePKPbc	PKPbc	08 59 50.8	+0.6
X51A	Calhoun	149.69	36	ePKPbc	PKPbc	08 59 51.1	+0.5
W52A	Murphy	149.84	35	ePKPbc	PKiKP	08 59 51.8	-0.3
Z50A	Ashland	149.95	39	ePKPbc	PKPbc	08 59 51.6	+0.2
BLA	Blacksburg	149.96	27	ePKPbc	PKPbc	08 59 51.4	+0.1
V53A	Saluda	150.01	32	ePKPbc	PKiKP	08 59 52.2	-0.2
R58B	Mineral	150.39	23	ePKPbc	PKiKP	08 59 52.9	-0.1
250A	Grady	150.56	42	ePKPbc	PKiKP	08 59 53.4	-0.2
Y52A	Lilburn	150.65	36	ePKPbc	PKiKP	08 59 54.0	+0.3
152A	Waverly Hall	151.09	39	ePKPbc	PKiKP	08 59 54.7	+0.1
KMSC	Kings Mountain	151.18	31	ePKPbc	PKiKP	08 59 54.6	-0.2
GOGA	Godfrey	151.32	36	ePKPbc	PKiKP	08 59 55.4	+0.4
352A	Blakely	151.75	41	ePKPbc	PKiKP	08 59 56.2	+0.2
451A	Vernon	151.76	43	ePKPbc	PKiKP	08 59 56.5	+0.5
253A	Americus	151.87	39	ePKPbc	PKiKP	08 59 57.0	+0.7
LPAZ	La Paz	152.37	171	ePKPbc	PKiKP	08 59 59.4	+0.9
LPAZ	La Paz	152.37	171	PKPbc	PKiKP	08 59 59.0	+0.5
	comp=Z,3.4nm,0.8s,baz=141,slow=3.9,SNR=12						
453A	Whigham	152.55	41	ePKPbc	PKiKP	08 59 58.5	+0.8
TIGA	Tifton	152.63	39	ePKPbc	PKiKP	08 59 58.4	+0.6
255A	Hazlehurst	152.97	37	ePKPbc	PKiKP	08 59 59.3	+0.8

IDC 09 08:41:13.8±3.4, 54°.16N×87°.34E, h0^{km}, mb1 2.6/2, mb1mx2.6/44, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=29.2km s-min=18.1km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.50	263	i		08 49 28.7	
	baz=84,slow=355,SNR=6.8						
ZALV	Zalesovo Beam	1.50	263	Pg	Pn	08 41 41.2	-0.8
	1.0nm,0.3s,baz=80,slow=16,SNR=13						
ZALV				Lg	Lg	08 42 02.0	
	0.6nm,0.3s,baz=80,slow=28,SNR=7.6						
KURBB	Kurchatov Arra	6.45	240	Pn	Pn	08 42 49.2	-0.7
	0.0nm,0.3s,baz=57,slow=15,SNR=2.8						
MKAR	Makanchi Array	8.04	206	Pn	Pn	08 43 13.8	+1.9
	0.1nm,0.3s,baz=26,slow=14,SNR=2.9						
MKAR				Lg	Lg	08 45 30.9	
	0.0nm,0.3s,baz=36,slow=26,SNR=2.5						

MEX 09 08:43:31.7±0.6, 13°.91N×92°.19W, h96^{km}±64^{km}, MD3.9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.99	356	i P	Pn	08 43 50.8	-0.9
PCIG		2.04	331	eP	Pn	08 44 04.2	-0.4
PCIG				eS	Sn	08 44 27.7	-2.0
CCIG	Comitan	2.35	1	eP	Pn	08 44 13.4	+4.5
CCIG				eS	Sn	08 44 46.0	+8.5

*SOME **09** 08:59:58.9, 43°.75N×77°.98E, h15^{km}*
*NNC **09** 08:59:59.0±1.4, 43°.74N×78°.01E, h0^{km}, mpv1.8, Error ellipse: s-maj=11.5km s-min=5.8km az=122.0*
ISC 09 08:59:56.3±4.4, 43°.76N±0°.05×77°.8E±0°.2, h10^{km}, n6, σ0^{s}.70/12, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	Kuram	0.40	133	P	Pg	09 00 05.1	+0.8
	2.4nm,0.3s						
KURS				S	Sg	09 00 09.6	0.0
	3.8nm,0.3s						
KURS	Kuram	0.40	133	eP	Pg	09 00 05.1	+0.8
	2.4nm,0.3s						
KURS				eS	Sg	09 00 09.6	0.0
	3.8nm,0.3s						
MNBS	Baschi	0.56	55	P	Pg	09 00 07.7	+0.4
	0.6nm,0.2s						
MNBS				S	Sg	09 00 14.0	-0.6
	2.5nm,0.2s						
MNBS	Baschi	0.56	55	eP	Pg	09 00 07.7	+0.4
	0.6nm,0.1s						
MNBS				eS	Sg	09 00 14.0	-0.6
	3.0nm,0.1s						
SATY	Saty	0.84	146	P	Pg	09 00 12.7	+0.1
	3.2nm,0.5s						
SATY				S	Sg	09 00 22.7	-1.0
	6.9nm,0.2s						
SATY	Saty	0.84	146	eP	Pg	09 00 12.8	+0.1
	2.1nm,0.1s						
SATY				eS	Sg	09 00 22.7	-1.0
	6.3nm,0.2s						

*ISCJB **09** 09:01:35.1±0.9, 11°.8S±0°.1×165°.1E±0°.2, h10^{km}, mb3.8/6, Error ellipse: s-maj=23.1km s-min=16.5km az=18.3*
*IDC **09** 09:01:35.4±1.4, 11°.70S×165°.05E, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.8/33, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=48.8km s-min=24.7km az=132.0*
ISC 09 09:01:36.8±1.0, 11°.7S±0°.1×165°.0E±0°.2, h10^{km}, n14, σ0^{s}.87/8, mb3.8/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.36	173	Pn	Pn	09 04 05.6	0.0
	0.5nm,0.3s,baz=330,slow=20,SNR=3.3						
CTA	Charters Tower	19.87	243	P	Pn	09 06 10.2	+0.3
	0.1nm,0.3s,baz=57,slow=17,SNR=3.6						
H11S2	WAKE ISLAND Hy	30.09	3	T	T	09 38 57.4	
	baz=183,slow=76,SNR=2.8						
H11S3	WAKE ISLAND Hy	30.09	3	T	T	09 38 53.5	
	baz=183,slow=76,SNR=3.9						
H11S1	WAKE ISLAND Hy	30.10	3	T	T	09 38 57.3	
	baz=183,slow=76,SNR=2.6						
WRA	Warramunga Arr	30.60	251	P	P	09 07 51.9	+0.6
	0.8nm,0.8s,baz=80,slow=9.2,SNR=8.6						
H11N1	WAKE ISLAND Hy	31.31	3	T	T	09 40 28.1	
	baz=182						
H11N3	WAKE ISLAND Hy	31.32	3	T	T	09 40 28.1	
	baz=182						
H11N2	WAKE ISLAND Hy	31.33	3	T	T	09 40 28.1	
	baz=182						
ASAR	Alice Springs	31.87	244	P	P	09 08 01.6	-0.8
	0.4nm,0.7s,baz=70,slow=9.0,SNR=3.6						
ILAR	Eielson Array	84.39	19	P	P	09 14 09.8	+0.9
	1.0nm,0.8s,baz=238,slow=6.3,SNR=8.6						
MKAR	Makanchi Array	93.56	317	P	P	09 14 53.4	+0.3
	0.2nm,0.6s,baz=103,slow=6.2,SNR=3.2						
ZALV	Zalesovo Beam	93.71	324	P	P	09 14 52.3	-1.3
	0.2nm,0.3s,baz=90,slow=1.4,SNR=1.9						
YKA	Yellowknife Ar	95.91	27	P	P	09 15 03.1	-0.3
	0.4nm,0.8s,baz=258,slow=5.4,SNR=6.3						

*ISCJB **09** 09:04:46.7±0.5, 11°.34S±0°.06×165°.71E±0°.07, h10^{km}, mb4.3/20, Error ellipse: s-maj=10.5km s-min=7.3km az=143.6*
*IDC **09** 09:04:46.6±1.0, 11°.30S×165°.79E, h0^{km}, mb4.2/11, mb1 4.4/12, mb1mx4.1/34, mbtmp4.2/12, ML4.6/1, Error ellipse: s-maj=29.5km s-min=20.6km az=135.0*
*NEIC **09** 09:04:48.2±0.4, 11°.26S×165°.80E, h10^{km}, mb4.4/10, Error ellipse: s-maj=9.3km s-min=7.0km az=69.0*
ISC 09 09:04:48.3±0.7, 11°.24S±0°.10×165°.77E±0°.10, h10^{km}, n43, σ1^{s}.05/41, mb4.4/20, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.00	287	Pn	Pn	09 06 17.9	+0.7
	16nm,0.3s,baz=116,slow=11,SNR=3.8						
HNR				Sn	Sn	09 07 23.9	-2.2
	9.8nm,0.3s,baz=166,slow=19,SNR=2.1						
MARNC	Mare, Loyalty	10.41	168	ePn	Pn	09 07 16.0	-1.8
DZM	Mont Dzumac	10.79	177	ePn	Pn	09 07 24.2	+1.1
ONTNC	Ouen Toro	11.02	177	ePn	Pn	09 07 27.8	+1.6
MANU	Manus Island	20.42	295	eP	Pn	09 09 27.3	-0.6
	41nm,0.9s						
CTA	Charters Tower	20.73	243	P	P	09 09 30.2	+1.0
	7.6nm,0.8s,baz=61,slow=12,SNR=8.0						
CTAO	Charters Tower	20.73	243	eP	P	09 09 30.3	+1.0
	18nm,1.0s						
COEN	Coen	22.21	261	eP	P	09 09 46.0	+0.8
	7.8nm,0.9s						
ARMA	Armidale	23.16	212	eP	P	09 09 56.1	+0.8
	23nm,1.5s						
URZ	Urewera	28.76	161	P	P	09 10 45.3	-0.8
	2.2nm,0.4s,baz=328,slow=9.5,SNR=3.5						
BKZ	Black Stump Fm	29.40	163	eP	P	09 10 53.1	+1.1
	8.0nm,1.0s						
H11S2	WAKE ISLAND Hy	29.56	2	T	T	09 43 43.7	
	baz=181,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.56	2	T	T	09 43 43.7	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.57	2	T	T	09 43 40.2	
	baz=181,slow=76,SNR=9.9						
STKA	Stephens Creek	30.32	224	eP	P	09 11 01.1	+1.0
	0.8nm,0.7s						
STKA	Stephens Creek	30.32	224	P	P	09 11 00.3	+0.2
	3.6nm,0.8s,baz=37,slow=9.5,SNR=13						
BFZ	Birch Farm	30.75	164	eP	P	09 11 03.8	-0.1
	38nm,1.6s						
H11N1	WAKE ISLAND Hy	30.78	2	T	T	09 45 10.3	
	baz=182,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	30.78	2	T	T	09 45 13.9	
	baz=182,slow=76,SNR=19						
H11N2	WAKE ISLAND Hy	30.80	2	T	T	09 45 10.3	
	baz=182,slow=76,SNR=17						
SNZO	South Karori	30.97	167	eP	P	09 11 03.6	-2.1
	52nm,1.1s						
THZ	Tophouse	31.04	170	eP	P	09 11 05.5	-0.9
	11nm,1.1s						
WRAB	Tennant Creek	31.42	250	eP	P	09 11 09.2	-0.9
	4.7nm,0.7s						
WB2	Warramunga Arr	31.43	250	eP	P	09 11 09.5	-0.5
WR1	Warramunga Arr	31.44	250	eP	P	09 11 09.3	-0.8
WR1				ePcP	PcP	09 14 04.5	+0.8
WRA	Warramunga Arr	31.44	250	P	P	09 11 09.3	-0.9
	6.0nm,0.7s,baz=83,slow=9.0,SNR=66						
WRA				PcP	PcP	09 14 04.5	+0.8
	0.4nm,1.0s,baz=65,slow=3.0,SNR=3.3						
TOO	Toolangi	31.92	211	eP	P	09 11 12.6	-1.6
	18nm,1.3s						
AS31	Alice Springs	32.72	244	eP	P	09 11 19.9	-1.5
	0.6nm,0.8s						
AS31				ePcP	PcP	09 14 07.9	+0.8
ASAR	Alice Springs	32.72	244	P	P	09 11 20.1	-1.4
	1.6nm,0.8s,baz=75,slow=9.5,SNR=18						
ASAR				PcP	PcP	09 14 07.9	+0.8
	0.4nm,0.8s,baz=82,slow=3.7,SNR=2.7						
FITZ	Fitzroy Crossi	39.35	255	P	P	09 12 17.4	-0.9
	2.8nm,0.7s						
CM31	Chiang Mai Arr	72.21	294	eP	P	09 16 15.0	+0.9
CMAR	Chiang Mai Arr	72.21	294	P	P	09 16 15.0	+0.9
	0.7nm,0.3s,baz=125,slow=4.6,SNR=4.5						
HDA	Harding Lake	83.42	19	eP	P	09 17 16.4	+0.8
	3.7nm,0.8s						
ILAR	Eielson Array	83.69	18	P	P	09 17 17.2	+0.2
	0.9nm,0.6s,baz=229,slow=5.5,SNR=15						
ILB	Eielson Array	83.69	18	eP	P	09 17 17.0	0.0
MK31	Makanchi Array	93.68	317	eP	P	09 18 05.4	+0.1
MK32	Makanchi Array	93.68	317	eP	P	09 18 05.9	+0.6
MKAR	Makanchi Array	93.68	317	eP	P	09 18 05.1	-0.2
	5.5nm,0.6s						
MKAR	Makanchi Array	93.68	317	P	P	09 18 05.9	+0.6
	0.7nm,0.6s,baz=96,slow=6.2,SNR=9.5						
ZALV	Zalesovo Beam	93.73	324	P	P	09 18 04.9	-0.4
	0.4nm,0.5s,baz=83,slow=6.2,SNR=2.8						
ZAA1	Zalesovo Array	93.73	324	eP	P	09 18 04.9	-0.4
YKA	Yellowknife Ar	95.14	27	P	P	09 18 10.4	-1.1
	0.1nm,0.5s,baz=262,slow=4.7,SNR=4.0						
YKB5	Yellowknife Ar	95.14	27	eP	P	09 18 11.3	-0.3

IDC 09 09:09:57.2±1.3, 12°.04S×165°.59E, h0^{km}, mb3.7/4, mb1 4.1/5, mb1mx3.7/33, mbtmp3.8/5, ML3.2/1, Error ellipse: s-maj=51.1km s-min=26.4km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.01	175	Pn	Pn	09 12 22.3	-0.2
	0.2nm,0.3s,baz=330,slow=17,SNR=2.6						
WRA	Warramunga Arr	31.01	251	P	P	09 16 16.7	-0.1
	0.4nm,0.8s,baz=80,slow=9.3,SNR=4.9						
ASAR	Alice Springs	32.22	245	P	P	09 16 27.5	0.0
	0.4nm,0.6s,baz=73,slow=9.4,SNR=5.1						
ILAR	Eielson Array	84.50	19	P	P	09 22 32.3	+0.6
	1.5nm,1.3s,baz=229,slow=5.5,SNR=2.7						
NVAR	Mina Array Bea	86.78	50	P	P	09 22 43.4	-0.6
	0.4nm,0.3s,baz=248,slow=4.8,SNR=2.4						

*IDC **09** 09:12:08.9±1.2, 10°.96S×165°.56E, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx3.8/39, mbtmp3.9/7, ML3.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/24, Error ellipse: s-maj=43.0km s-min=25.7km az=135.0*
*ISCJB **09** 09:12:11.5±0.9, 11°.2S±0°.1×165°.5E±0°.2, h30^{km}, mb3.9/6, Error ellipse: s-maj=24.8km s-min=18.1km az=8.6*
ISC 09 09:12:13.4±0.9, 11°.1S±0°.1×165°.6E±0°.2, h30^{km}, n11, σ1^{s}.42/8, mb3.9/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.77	286	LR	LR	09 16 03.0	
	comp=Z,390nm,19.0s,baz=70,slow=41						
DZM	Mont Dzumac	10.99	176	Pn	Pn	09 14 48.6	-0.2
	0.8nm,0.3s,baz=331,slow=10,SNR=13						
H11N1	WAKE ISLAND Hy	30.60	2	T	T	09 50 20.7	
	baz=192						
H11N3	WAKE ISLAND Hy	30.60	2	T	T	09 50 26.5	
	baz=192						
H11N2	WAKE ISLAND Hy	30.62	2	T	T	09 50 25.0	
	baz=192						
WRA	Warramunga Arr	31.33	250	P	P	09 18 31.4	-0.1
	2.7nm,0.8s,baz=81,slow=9.2,SNR=24						
WRA				PcP	PcP	09 21 27.3	+2.1
	0.5nm,1.1s,baz=62,slow=2.6,SNR=3.0						
ASAR	Alice Springs	32.64	243	P	P	09 18 41.9	-1.1
	0.5nm,0.6s,baz=66,slow=10,SNR=8.0						
CMAR	Chiang Mai Arr	71.96	294	P	P	09 23 35.8	+1.1
	0.9nm,0.3s,baz=120,slow=3.2,SNR=4.1						
ILAR	Eielson Array	83.57	19	P	P	09 24 37.1	-1.3
	0.6nm,1.1s,baz=218,slow=5.6,SNR=2.7						
NVAR	Mina Array Bea	86.15	50	P	P	09 24 53.0	+0.8
	0.4nm,0.3s,baz=243,slow=7.0,SNR=1.9						
MKAR	Makanchi Array	93.41	317	P	P	09 25 25.0	-1.0
	0.2nm,0.6s,baz=90,slow=2.9,SNR=3.1						

*IDC **09** 09:19:28.0±1.0, 11°.77S×165°.00E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.8/40, mbtmp3.9/8, ML3.6/1, Error ellipse: s-maj=34.3km s-min=25.4km az=121.0*
*ISCJB **09** 09:19:31.3±0.9, 11°.9S±0°.1×165°.0E±0°.2, h33^{km}, mb3.8/7, Error ellipse: s-maj=25.2km s-min=17.6km az=178.4*
ISC 09 09:19:33.2±0.9, 11°.8S±0°.1×165°.0E±0°.2, h35^{km}, n8, σ0^{s}.65/10, mb3.8/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.26	173	Pn	Pn	09 21 57.8	-0.3
	0.4nm,0.3s,baz=310,slow=16,SNR=4.5						
WRA	Warramunga Arr	30.55	251	P	P	09 25 43.4	-0.3
	1.1nm,0.6s,baz=80,slow=8.9,SNR=14						
WRA				PcP	PcP	09 28 42.9	+0.7
	0.4nm,1.0s,baz=64,slow=1.9,SNR=3.8						
ASAR	Alice Springs	31.81	244	P	P	09 25 54.2	-0.6
	0.8nm,0.7s,baz=68,slow=10.0,SNR=10						
ASAR				PcP	PcP	09 28 45.6	+0.1
	0.5nm,0.8s,baz=104,slow=3.6,SNR=4.1						
CMAR	Chiang Mai Arr	71.79	294	P	P	09 30 53.1	+0.4
	0.6nm,0.3s,baz=102,slow=4.2,SNR=4.1						
QSPA	South Pole Qui	78.17	180	P	P	09 31 29.7	+0.9
	1.0nm,0.7s,baz=55,slow=8.2,SNR=6.0						
ILAR	Eielson Array	84.49	19	P	P	09 32 02.3	+0.3
	0.4nm,0.5s,baz=231,slow=5.4,SNR=10						
MKAR	Makanchi Array	93.62	317	P	P	09 32 46.0	0.0
	0.3nm,0.6s,baz=88,slow=6.4,SNR=3.7						
YKA	Yellowknife Ar	96.00	27	P	P	09 32 55.5	-0.9
	0.2nm,0.7s,baz=254,slow=4.8,SNR=5.1						

*ISK **09** 09:23:53.6, 38°.29N×38°.10E, h15^{km}, ML1.7/5, Suspected Mining explosion.*
*ISCJB **09** 09:23:54.1±0.5, 38°.29N±0°.04×38°.11E±0°.04, h0^{km}, Error ellipse: s-maj=5.7km s-min=4.0km az=174.3*
*DDA **09** 09:23:54.0, 38°.38N×38°.05E, h10^{km}±1^{km}, ML2.5*
ISC 09 09:23:53.7±0.9, 38°.25N±0°.04×38°.14E±0°.04, h0^{km}, n11, σ0^{s}.67/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	Akcadag	0.18	284	i P	Pg	09 23 57.5	+0.4
AKCD				i S	Sg	09 24 00.8	+1.5
DARE	Darende-Malaty	0.60	302	PG	Pg	09 24 04.9	-0.4
DARE				SG	Sg	09 24 13.6	+0.4
ELZG	Elazig	0.71	70	i P	Pb	09 24 08.7	-0.4
ELZG				i S	Sb	09 24 19.4	0.0
ELZG				IAML_P			
	comp=Z,586nm,0.2s						
ELBS	KAHRAMANMARAS	0.80	275	i P	Pg	09 24 08.0	-1.0
ELBS				i S	Sg	09 24 19.3	0.0
ELBS				IAML_P			
	comp=Z,226nm,0.2s						
URFA	Urfa	0.97	146	PG	Pb	09 24 13.8	+0.2
GZT	Gaziantep	1.01	207	i P	Pn	09 24 15.7	+0.5
GZT				i S	Sn	09 24 30.3	+0.1
KEMA	Kemaliye	1.05	15	i P	Pb	09 24 14.3	-0.5
PTK	Pertek	1.17	57	PN	Pg	09 24 16.1	-0.1
CUKAN	kangal_SIVAS	1.18	334	i P	Pb	09 24 16.8	-0.4
KMRS	Kahramanmaras	1.23	233	PN	Pg	09 24 16.9	-0.5
GAZ	Gaziantep	1.31	215	PN	Pg	09 24 17.7	-1.1

*NNC **09** 09:24:36.5±3.9, 54°.13N×86°.49E, h1^{km}±25^{km}, mb3.3, mpv3.2, Error ellipse: s-maj=46.3km s-min=19.0km az=176.0, Suspected Mining explosion.*
IDC 09 09:24:38.8±2.1, 54°.06N×86°.33E, h0^{km}, mb1 3.3/3, mb1mx3.1/39, mbtmp3.3/3, ML3.1/3, 6C-2D, Error ellipse: s-maj=17.7km s-min=11.5km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.90	263	i		09 30 25.0	
	baz=85,slow=351,SNR=5.2						
ZAA0	Zalesovo Array	0.90	263	⇑P	Pg	09 24 54.8	-1.1
	1.9nm,0.3s						
ZAA0				⇑S	Sb	09 25 09.8	+0.1
	14nm,1.1s						
ZALV	Zalesovo Beam	0.90	263	Pg	Pg	09 24 54.7	-1.3
	2.3nm,0.3s,baz=81,slow=18,SNR=30						
ZALV				Lg	Lg	09 25 09.1	
	3.8nm,0.3s,baz=79,slow=24,SNR=23						
KURBB	Kurchatov Arra	5.89	237	⇑Pn	Pn	09 26 08.4	+1.2
	3.5nm,0.5s						
KURBB				⇓Sn	Sn	09 27 15.6	+0.3
	4.0nm,1.0s						
KURBB				⇑Lg	Lg	09 27 48.4	
	7.9nm,0.8s						
KURBB	Kurchatov Arra	5.89	237	Pn	Pn	09 26 07.2	0.0
	0.4nm,0.3s,baz=54,slow=13,SNR=30						
KURBB				Sn	Sn	09 27 13.1	-2.2
	baz=51,slow=25,SNR=2.2						
KURBB				Lg	Lg	09 27 47.5	
	0.1nm,0.3s,baz=51,slow=32,SNR=3.9						
MK31	Makanchi Array	7.72	201	⇓Pn	Pn	09 26 33.1	+0.8
	0.9nm,0.3s,baz=28,slow=14,SNR=32						
MK31				⇑Sn	Sn	09 28 01.1	+0.6
	0.3nm,0.5s,baz=21,slow=25,SNR=6.6						
MK31				⇑Lg	Lg	09 28 44.3	
	2.1nm,0.9s						
MKAR	Makanchi Array	7.72	201	Pn	Pn	09 26 33.5	+1.2
	0.6nm,0.3s,baz=25,slow=13,SNR=31						
MKAR				Sn	Sn	09 28 01.3	+0.9
	0.2nm,0.3s,baz=24,slow=27,SNR=6.9						
MKAR				Lg	Lg	09 28 44.6	
	0.1nm,0.3s,baz=24,slow=29,SNR=5.4						
BVAR	Borovoye Array	9.55	270	Pn	Pn	09 26 57.4	0.0
	0.1nm,0.3s,baz=84,slow=13,SNR=3.7						

IDC 09 09:35:46.6±1.7, 11°.01S×165°.52E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.5/30, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=53.6km s-min=30.7km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.03	176	Pn	Pn	09 38 26.0	+0.1
	0.2nm,0.3s,baz=0.0,slow=20,SNR=2.2						
WRA	Warramunga Arr	31.29	250	P	P	09 42 09.0	+0.3
	0.2nm,0.5s,baz=82,slow=8.9,SNR=4.1						
ASAR	Alice Springs	32.61	243	P	P	09 42 19.9	-0.4
	0.4nm,0.6s,baz=61,slow=10,SNR=7.2						
ILAR	Eielson Array	83.55	19	P	P	09 48 16.2	0.0
	0.3nm,0.9s,baz=233,slow=6.7,SNR=3.1						

*IDC **09** 09:40:12.7±1.3, 10°.90S×165°.10E, h0^{km}, mb3.9/9, mb1 4.1/11, mb1mx3.9/32, mbtmp4.0/11, ML4.3/2, Error ellipse: s-maj=31.9km s-min=21.9km az=121.0*
*NEIC **09** 09:40:13.5±0.6, 11°.12S×165°.13E, h10^{km}, mb4.3/5, Error ellipse: s-maj=13.0km s-min=9.3km az=108.0*
*ISCJB **09** 09:40:14.9±0.7, 11°.20S±0°.09×165°.11E±0°.09, h31^{km}, mb3.9/12, Error ellipse: s-maj=12.9km s-min=12.1km az=151.9*
ISC 09 09:40:16.6±0.9, 11°.1S±0°.1×165°.2E±0°.1, h31^{km}, n33, σ1^{s}.66/29, mb3.9/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.42	287	eP	Pn	09 41 35.0	-0.4
HNR				eS	Sn	09 42 42.0	+5.1
HNR	Honiara	5.42	287	ePn	Pn	09 41 33.8	-1.7
HNR				eSn	Sn	09 42 37.4	+0.5
HNR	Honiara	5.42	287	Pn	Pn	09 41 34.1	-1.4
	33nm,0.3s,baz=149,slow=6.4,SNR=8.4						
HNR				Sn	Sn	09 42 37.4	+0.5
	8.0nm,0.3s,baz=171,slow=19,SNR=3.4						
DZM	Mont Dzumac	10.99	174	ePn	Pn	09 42 52.0	+0.1
DZM				eSn	Sn	09 45 05.0	+11
DZM	Mont Dzumac	10.99	174	Pn	Pn	09 42 55.6	+3.7
	0.6nm,0.3s,baz=302,slow=16,SNR=10						
DZM				Sn	Sn	09 45 05.0	+11
	0.2nm,0.3s,baz=158,slow=18,SNR=2.4						
CTA	Charters Tower	20.31	242	P	Pn	09 44 51.4	-1.0
	9.3nm,0.9s,baz=72,slow=13,SNR=12						
CTAO	Charters Tower	20.31	242	eP	P	09 44 48.9	-1.3
	12nm,0.8s						
COEN	Coen	21.69	260	eP	P	09 45 05.0	-0.2
	6.2nm,1.2s						
ARMA	Armidale	23.00	211	eP	P	09 45 15.5	-3.6
	68nm,1.9s						
H11S2	WAKE ISLAND Hy	29.43	3	T	T	10 16 51.8	
	baz=184,slow=76,SNR=75						
H11S3	WAKE ISLAND Hy	29.43	3	T	T	10 16 46.2	
	baz=184,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	29.44	3	T	T	10 16 49.3	
	baz=184,slow=76,SNR=24						
STKA	Stephens Creek	30.05	223	eP	P	09 46 22.1	-0.9
	7.3nm,1.9s						
STKA	Stephens Creek	30.05	223	P	P	09 46 24.6	+1.5
	1.5nm,0.9s,baz=67,slow=18,SNR=2.6						
H11N1	WAKE ISLAND Hy	30.65	3	T	T	10 18 26.0	
	baz=182,slow=76,SNR=48						
H11N3	WAKE ISLAND Hy	30.66	3	T	T	10 18 19.7	
	baz=182,slow=76,SNR=26						
H11N2	WAKE ISLAND Hy	30.67	3	T	T	10 18 20.6	
	baz=182,slow=76,SNR=20						
WRAB	Tennant Creek	30.95	250	eP	P	09 46 29.9	-1.3
	13nm,1.6s						
WB2	Warramunga Arr	30.95	250	eP	P	09 46 29.8	-1.5
WR1	Warramunga Arr	30.97	250	eP	P	09 46 30.6	-0.7
WRA	Warramunga Arr	30.97	250	P	P	09 46 30.7	-0.7
	0.4nm,0.5s,baz=74,slow=8.7,SNR=17						
AS31	Alice Springs	32.29	243	eP	P	09 46 42.7	-0.3
	1.2nm,1.2s						
ASAR	Alice Springs	32.30	243	P	P	09 46 42.7	-0.3
	0.9nm,0.6s,baz=68,slow=9.7,SNR=19						
CM31	Chiang Mai Arr	71.64	294	eP	P	09 51 36.6	+0.8
CMAR	Chiang Mai Arr	71.64	294	P	P	09 51 36.6	+0.8
	0.5nm,0.3s,baz=98,slow=3.7,SNR=3.1						
SONA0	Songino Array	78.38	324	eP	P	09 52 13.6	-0.7
SONM	Songino Array	78.38	324	P	P	09 52 13.6	-0.7
	0.7nm,0.9s,baz=145,slow=5.3,SNR=3.8						
ILAR	Eielson Array	83.72	19	P	P	09 52 42.7	+0.5
	0.5nm,0.8s,baz=236,slow=4.9,SNR=3.9						
ILB	Eielson Array	83.72	19	eP	P	09 52 42.7	+0.5
MK32	Makanchi Array	93.19	317	eP	P	09 53 27.6	-0.4
MKAR	Makanchi Array	93.19	317	P	P	09 53 27.6	-0.4
	0.1nm,0.3s,baz=87,slow=5.9,SNR=3.4						
ZALV	Zalesovo Beam	93.28	324	P	P	09 53 28.2	0.0
	0.6nm,0.6s,baz=129,slow=3.9,SNR=2.8						
ZAA1	Zalesovo Array	93.28	324	eP	P	09 53 28.2	0.0

IDC 09 09:46:47.7±1.7, 11°.21S×164°.52E, h0^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.6/28, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=39.6km s-min=33.0km az=118.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.83	291	Pn	Pn	09 48 00.6	-1.2
	1.5nm,0.3s,baz=162,slow=9.6,SNR=2.7						
HNR				Sn	Sb	09 49 05.8	-6.3
	17nm,0.3s,baz=6.8,slow=17,SNR=3.5						
DZM	Mont Dzumac	10.96	171	Pn	Pn	09 49 24.6	-1.3
	0.4nm,0.3s,baz=342,slow=20,SNR=7.7						
WRA	Warramunga Arr	30.30	250	P	P	09 53 01.9	+0.8
	0.4nm,0.6s,baz=81,slow=9.2,SNR=4.7						
ASAR	Alice Springs	31.64	243	P	P	09 53 12.8	-0.1
	0.3nm,0.6s,baz=59,slow=10,SNR=4.8						
ILAR	Eielson Array	84.06	19	P	P	09 59 20.3	+0.4
	0.6nm,1.1s,baz=218,slow=6.5,SNR=3.5						
MKAR	Makanchi Array	92.82	317	P	P	10 00 01.8	-0.6
	0.3nm,0.7s,baz=114,slow=3.6,SNR=3.4						

*KRNET **09** 09:50:22.7±0.1, 42°.58N×75°.27E, h14^{km}, mb2.8*
*NNC **09** 09:50:22.9±0.2, 42°.61N×75°.26E, h0^{km}±1^{km}, mb3.0, mpv3.0, Error ellipse: s-maj=3.3km s-min=0.7km az=158.0*

*KNET **09** 09:50:22.3±0.3, 42.°59N×75.°25E, h20^{km}±4^{km}, ml1.8, Error ellipse: s-maj=3.0km s-min=2.0km az=59.0*

*SOME **09** 09:50:23.1, 42.°57N×75.°27E, h15^{km}*

ISC 09 09:50:22.9±0.8**, 42.°59N**±0.°02×**75.°27E**±0.°01**, h16**^{km}±6^{km}**, n71, σ0.^{s}58**/131**, 49C-16D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	**Karagaybulak** 118nm,0.1s,SNR=172	**0.25**	**286**	P	**Pg**	**09 50 28.4**	**-0.1**
KBK	233nm,0.2s			⇑S	**Sg**	**09 50 32.5**	**+0.2**
KBK	**Karagaybulak** baz=88	**0.25**	**286**	⇓*i*P	**Pg**	**09 50 28.2**	**-0.3**
KBK	baz=88			⇓*i*S	**Sg**	**09 50 32.1**	**-0.2**
TKM2	**Tokmak 2** 26nm,0.1s,SNR=269	**0.41**	**36**	P	**Pg**	**09 50 31.0**	**-0.3**
TKM2	**Tokmak 2** 6.5nm,0.2s	**0.41**	**36**	⇑P	**Pg**	**09 50 31.0**	**-0.3**
TKM2	39nm,0.3s			⇑S	**Sg**	**09 50 36.5**	**-0.6**
TKM2	**Tokmak 2** baz=35	**0.41**	**36**	*i* P	**Pg**	**09 50 30.9**	**-0.3**
TKM2	baz=35			*i* S	**Sg**	**09 50 36.4**	**-0.6**
BOOM	**Boomskoye usch** baz=0.0	**0.50**	**101**	⇑*i*P	**Pg**	**09 50 32.7**	**-0.3**
BOOM	baz=0.0			⇑*i*S	**Sg**	**09 50 39.2**	**-0.6**
KZA	**Kyzart** 60nm,0.1s,SNR=150	**0.51**	**182**	P	**Pg**	**09 50 33.0**	**-0.1**
KZA	18nm,0.2s			⇓S	**Sg**	**09 50 40.1**	**+0.1**
KZA	**Kyzart** baz=82	**0.51**	**182**	⇑*i*P	**Pg**	**09 50 32.9**	**-0.3**
KZA	baz=82			⇑*i*S	**Sg**	**09 50 39.8**	**-0.3**
CHMS	**Chumysh** 3.2nm,0.1s,SNR=16	**0.56**	**317**	⇑P	**Pg**	**09 50 33.7**	**-0.3**
CHMS	68nm,0.1s			⇑S	**Sg**	**09 50 41.4**	**-0.1**
CHMS	**Chumysh** baz=18	**0.56**	**317**	⇑*i*P	**Pg**	**09 50 33.6**	**-0.4**
CHMS	baz=18			⇑*i*S	**Sg**	**09 50 41.2**	**-0.3**
AAK	**Ala-Archa** 27nm,0.1s,SNR=15	**0.57**	**275**	⇑P	**Pg**	**09 50 34.0**	**-0.3**
AAK	55nm,0.2s			⇑S	**Sg**	**09 50 41.9**	**-0.1**
AAK	**Ala-Archa** 7.5nm,0.2s	**0.57**	**275**	⇑P	**Pg**	**09 50 33.9**	**-0.3**
AAK	33nm,0.3s			⇓S	**Sg**	**09 50 41.8**	**-0.1**
AAK	**Ala-Archa** baz=76	**0.57**	**275**	⇑*i*P	**Pg**	**09 50 33.9**	**-0.3**
AAK	baz=76			⇑*i*S	**Sg**	**09 50 41.8**	**-0.2**
UCH	**Uchtor** 2.6nm,0.2s,SNR=14	**0.67**	**238**	P	**Pg**	**09 50 35.6**	**-0.5**
UCH	**Uchtor** baz=38	**0.67**	**238**	⇑*i*P	**Pg**	**09 50 35.5**	**-0.6**
UCH	baz=38			⇑*i*S	**Sg**	**09 50 44.4**	**-0.6**
KST	**Kastek** 8.0nm,0.1s	**0.68**	**48**	P	**Pg**	**09 50 35.9**	**-0.4**
KST	37nm,0.4s			S	**Sg**	**09 50 45.2**	**-0.2**
KST	**Kastek** baz=48	**0.68**	**48**	⇓*e*P	**Pg**	**09 50 35.9**	**-0.4**
KST	baz=48			⇓*i*S	**Sg**	**09 50 45.2**	**-0.2**
KST	**Kastek** 6.0nm,0.1s	**0.68**	**48**	⇓*e*P	**Pg**	**09 50 35.9**	**-0.4**
KST	30nm,0.2s			⇓*i*S	**Sg**	**09 50 45.2**	**-0.2**
DGS	**Degeres** 10nm,0.1s	**0.75**	**29**	P	**Pg**	**09 50 37.3**	**-0.2**
DGS	14nm,0.1s			S	**Sg**	**09 50 47.4**	**-0.1**
DGS	**Degeres** baz=29	**0.75**	**29**	⇑*e*P	**Pg**	**09 50 37.3**	**-0.2**
DGS	baz=29			⇑*e*S	**Sg**	**09 50 47.4**	**-0.1**
DGS	**Degeres** 10nm,0.1s	**0.75**	**29**	⇑*e*P	**Pg**	**09 50 37.3**	**-0.2**
DGS	14nm,0.1s			*e*S	**Sg**	**09 50 47.4**	**-0.1**
ULHL	**Ulahol** 8.0nm,0.1s,SNR=38	**0.80**	**115**	P	**Pg**	**09 50 37.7**	**-0.7**
ULHL	**Ulahol** baz=15	**0.80**	**115**	⇑*i*P	**Pg**	**09 50 37.6**	**-0.8**
ULHL	baz=15			⇑*i*S	**Sg**	**09 50 48.1**	**-0.9**
USP	**Ospenovka** 4.2nm,0.1s,SNR=12	**0.88**	**320**	⇑P	**Pb**	**09 50 39.5**	**-0.4**
USP	14nm,0.1s			⇑S	**Sb**	**09 50 51.4**	**-0.1**
USP	**Ospenovka** baz=21	**0.88**	**320**	⇑*i*P	**Pb**	**09 50 39.3**	**-0.5**
USP	baz=21			⇑*i*S	**Sb**	**09 50 51.3**	**-0.1**
SGDS	**Sogindy** 6.1nm,0.1s	**0.98**	**332**	P	**Pb**	**09 50 41.5**	**-0.1**
SGDS	14nm,0.1s			S	**Sb**	**09 50 54.5**	**+0.2**
MTBS	**Maitube** 3.2nm,0.1s	**1.01**	**57**	P	**Pb**	**09 50 42.2**	**+0.2**
MTBS	57nm,0.1s			S	**Sg**	**09 50 55.6**	**-0.1**
MTBS	**Maitube** baz=57	**1.01**	**57**	*e*P	**Pb**	**09 50 42.2**	**+0.2**
MTBS	baz=57			*e*S	**Sg**	**09 50 55.6**	**-0.1**
MTBS	**Maitube** 3.2nm,0.1s	**1.01**	**57**	*e*P	**Pb**	**09 50 42.2**	**+0.2**
MTBS	57nm,0.1s			*e*S	**Sg**	**09 50 55.6**	**-0.1**
ARLS	**Aral** baz=25	**1.01**	**224**	⇑*i*P	**Pb**	**09 50 41.8**	**-0.3**
ARLS	baz=25			⇑*i*S	**Sb**	**09 50 54.9**	**-0.3**
IZV	**Izvestkoviy** 6.0nm,0.1s	**1.08**	**65**	P	**Pb**	**09 50 43.4**	**0.0**
IZV	25nm,0.1s			S	**Sb**	**09 50 57.9**	**+0.5**
IZV	**Izvestkoviy** baz=65	**1.08**	**65**	*e*P	**Pb**	**09 50 43.4**	**0.0**
IZV	baz=65			*e*S	**Sb**	**09 50 57.9**	**+0.5**
IZV	**Izvestkoviy** 6.0nm,0.1s	**1.08**	**65**	*e*P	**Pb**	**09 50 43.4**	**0.0**
IZV	25nm,0.1s			*e*S	**Sb**	**09 50 57.9**	**+0.5**
EKS2	**Erkin-Say** baz=75	**1.10**	**274**	⇑*i*P	**Pn**	**09 50 43.9**	**+0.1**
EKS2	baz=75			⇑*i*S	**Sn**	**09 50 59.0**	**+0.2**
AML	**Almayashu** 2.5nm,0.1s,SNR=10	**1.25**	**249**	⇑P	**Pb**	**09 50 46.4**	**+0.1**
AML	**Almayashu** baz=50	**1.25**	**249**	⇑*i*P	**Pn**	**09 50 46.3**	**+0.2**
AML	baz=50			⇑*i*S	**Sn**	**09 51 03.0**	**+0.2**
NRN	**Naryn** baz=56	**1.27**	**155**	⇑*i*P	**Pb**	**09 50 46.7**	**0.0**
NRN	baz=56			⇑*i*S	**Sn**	**09 51 03.5**	**+0.3**
TNSS	**Tian-Shan** 2.1nm,0.3s	**1.31**	**69**	P	**Pb**	**09 50 47.4**	**0.0**
TNSS	11nm,0.2s			S	**Sg**	**09 51 05.2**	**-0.2**
TNSS	**Tian-Shan** baz=69	**1.31**	**69**	⇑*i*P	**Pb**	**09 50 47.4**	**0.0**
TNSS	baz=69			⇑*e*S	**Sn**	**09 51 05.0**	**+0.7**
TNSS	**Tian-Shan** 1.8nm,0.2s	**1.31**	**69**	⇑*i*P	**Pb**	**09 50 47.4**	**0.0**
TNSS	9.8nm,0.2s			*e*S	**Sn**	**09 51 05.0**	**+0.7**
MDOK	**Medeo** 5.2nm,0.8s	**1.43**	**66**	P	**Pb**	**09 50 49.3**	**+0.1**
MDOK	2.6nm,0.3s			S	**Sg**	**09 51 08.6**	**-0.4**
MDOK	**Medeo** 2.7nm,0.1s	**1.43**	**66**	Pg	**Pb**	**09 50 49.7**	**+0.5**
MDOK	8.7nm,0.2s			Lg	Lg	09 51 08.9	
MDOK	**Medeo** baz=65	**1.43**	**66**	*e*P	**Pb**	**09 50 49.7**	**+0.5**
MDOK	baz=65			*e*S	**Sg**	**09 51 08.9**	**-0.1**
MDOK	**Medeo** 2.7nm,0.1s	**1.43**	**66**	*e*P	**Pb**	**09 50 49.7**	**+0.5**
MDOK	8.7nm,0.2s			*e*S	**Sg**	**09 51 08.9**	**-0.1**
KDJ	**Kajisay** baz=7.0	**1.49**	**107**	⇑*i*P	**Pb**	**09 50 50.5**	**+0.3**
KDJ	baz=7.0			⇑*i*S	**Sg**	**09 51 10.4**	**-0.5**
KOTS	**Kotyrbulak** 2.2nm,0.2s	**1.50**	**64**	P	**Pg**	**09 50 51.2**	**-0.5**
KOTS	17nm,0.3s			S	**Sg**	**09 51 11.2**	**0.0**
KOTS	**Kotyrbulak** baz=64	**1.50**	**64**	*e*P	**Pg**	**09 50 51.2**	**-0.5**
KOTS	baz=64			*e*S	**Sg**	**09 51 11.3**	**0.0**
KOTS	**Kotyrbulak** 2.2nm,0.2s	**1.50**	**64**	*e*P	**Pg**	**09 50 51.2**	**-0.5**
KOTS	17nm,0.3s			*e*S	**Sg**	**09 51 11.2**	**0.0**
MRKS	**Merke** 9.9nm,0.3s	**1.52**	**277**	P	**Pb**	**09 50 50.9**	**+0.2**
MRKS	24nm,0.2s			S	**Sg**	**09 51 11.4**	**-0.4**
MRKS	**Merke** baz=77	**1.52**	**277**	⇑*i*P	**Pb**	**09 50 50.9**	**+0.2**
MRKS	baz=77			⇑*e*S	**Sb**	**09 51 10.7**	**+1.0**
MRKS	**Merke** 8.7nm,0.2s	**1.52**	**277**	⇑*i*P	**Pb**	**09 50 50.9**	**+0.2**
MRKS	14nm,0.2s			*e*S	**Sb**	**09 51 10.7**	**+1.0**
KUU	**Kurty** 9.3nm,0.1s	**1.52**	**31**	P	**Pb**	**09 50 51.0**	**+0.3**
KUU	13nm,0.2s			S	**Sg**	**09 51 11.0**	**-0.9**
KUU	**Kurty** baz=30	**1.52**	**31**	⇓*i*P	**Pb**	**09 50 51.0**	**+0.3**
KUU	baz=30			⇓*i*S	**Sg**	**09 51 11.0**	**-0.9**
KUU	**Kurty** 9.3nm,0.1s	**1.52**	**31**	⇓*i*P	**Pb**	**09 50 51.0**	**+0.3**
KUU	13nm,0.2s			⇓*i*S	**Sg**	**09 51 11.0**	**-0.9**
KTBS	**Karatobe** 2.5nm,0.2s	**1.53**	**42**	P	**Pb**	**09 50 51.1**	**+0.3**
KTBS	16nm,0.3s			S	**Sg**	**09 51 11.2**	**-0.9**
KTBS	**Karatobe** baz=37	**1.53**	**42**	*e*P	**Pb**	**09 50 51.1**	**+0.3**
KTBS	baz=37			*e*S	**Sg**	**09 51 11.2**	**-0.9**
KTBS	**Karatobe** 2.5nm,0.2s	**1.53**	**42**	*e*P	**Pb**	**09 50 51.1**	**+0.3**
KTBS	16nm,0.3s			*e*S	**Sg**	**09 51 11.2**	**-0.9**
CHKK	**Chushkaly** 1.7nm,0.1s	**1.78**	**44**	P	**Pb**	**09 50 55.7**	**+0.6**
CHKK	48nm,0.2s			S	**Sg**	**09 51 19.2**	**-1.0**
CHKK	**Chushkaly** baz=44	**1.78**	**44**	*e*P	**Pb**	**09 50 55.7**	**+0.6**
CHKK	baz=44			*e*S	**Sg**	**09 51 19.2**	**-1.0**
CHKK	**Chushkaly** 1.7nm,0.1s	**1.78**	**44**	*e*P	**Pb**	**09 50 55.7**	**+0.6**
CHKK	48nm,0.2s			*e*S	**Sg**	**09 51 19.2**	**-1.0**
MNAS	**Manas** 1.8nm,0.8s	**2.05**	**268**	⇑Pg	**Pb**	**09 51 00.3**	**+0.6**
MNAS	2.2nm,0.4s			⇓Lg	Lg	09 51 28.1	
MNAS	**Manas** baz=68	**2.05**	**268**	⇑*i*P	**Pb**	**09 51 00.0**	**+0.3**
MNAS	baz=68			⇑*i*S	**Sb**	**09 51 26.5**	**+1.5**
TARG	**Taragay, Kyrgy** baz=14	**2.07**	**114**	⇓*i*P	**Pb**	**09 51 00.0**	**-0.3**
TARG	baz=14			⇓*i*S	**Sb**	**09 51 26.7**	**+0.8**
KURS	**Kuram** 2.1nm,0.4s	**2.31**	**66**	Pg	**Pg**	**09 51 05.9**	**-1.2**
KURS	5.9nm,0.3s			Lg	Lg	09 51 36.5	
KURS	**Kuram** baz=66	**2.31**	**66**	*e*P	**Pg**	**09 51 05.9**	**-1.2**
KURS	baz=66			*e*S	**Sg**	**09 51 36.5**	**-0.6**
KURS	**Kuram** 2.5nm,0.5s	**2.31**	**66**	*e*P	**Pg**	**09 51 05.9**	**-1.2**
KURS	6.7nm,0.3s			*e*S	**Sg**	**09 51 36.5**	**-0.6**
SATY	**Saty** 7.9nm,0.2s	**2.35**	**77**	Pg	**Pg**	**09 51 06.7**	**-1.3**
SATY	24nm,0.2s			Lg	Lg	09 51 38.4	
SATY	**Saty** 7.9nm,0.2s	**2.35**	**77**	*e*P	**Pg**	**09 51 06.7**	**-1.3**
SATY	24nm,0.2s			*e*S	**Sg**	**09 51 38.4**	**-0.1**
PDGK	**Podgornoye** 1.8nm,0.8s	**3.19**	**75**	⇑Pg	**Pb**	**09 51 20.4**	**+1.3**
PDGK	4.0nm,0.7s			⇓Lg	Lg	09 52 02.8	
KK31	**Karatay Array** 0.3nm,0.3s,baz=100,slow=15,SNR=14	**3.54**	**280**	Pg	**Pg**	**09 51 28.5**	**-2.1**
KK31	0.3nm,0.2s,baz=95,slow=30,SNR=7.8			⇑Lg	Lg	09 52 14.8	
KAPS	**Kapalarasan** 0.8nm,0.3s	**4.00**	**46**	Pg	**Pb**	**09 51 34.1**	**+1.2**
KAPS	2.8nm,0.4s			Lg	Lg	09 52 25.3	

IDC 09 09:52:00.8±3.1**, 10.°78S**×**165.°94E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/29**, mbtmp3.8**/5**, ML3.9**/1**, Error ellipse: s-maj=70.3km s-min=38.5km az=87.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 3.7nm,0.3s,baz=186,slow=19,SNR=1.7	**6.05**	**282**	Pn	Pn	09 53 34.1	+2.5
DZM	**Mont Dzumac** 0.9nm,0.3s,baz=337,slow=18,SNR=9.3	**11.24**	**178**	Pn	Pn	09 54 42.7	-0.2
WRA	**Warramunga Arr** 1.4nm,0.9s,baz=82,slow=9.2,SNR=11	**31.75**	**250**	P	P	09 58 27.6	+0.6
ASAR	**Alice Springs** 0.2nm,0.8s,baz=66,slow=9.7,SNR=3.9	**33.08**	**243**	P	P	09 58 38.4	-0.3
CMAR	**Chiang Mai Arr** 1.0nm,0.4s,baz=108,slow=5.8,SNR=5.7	**72.19**	**293**	P	P	10 03 27.2	-0.9
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=108,slow=4.7,SNR=2.2	**93.46**	**317**	P	P	10 05 19.4	+1.0

IDC 09 09:55:50.3±1.5**, 10.°11S**×**165.°52E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.6**/29**, mbtmp3.6**/5**, ML4.1**/1**, Error ellipse: s-maj=47.7km s-min=31.3km az=134.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 1.1nm,0.3s,baz=324,slow=19,SNR=11	**11.93**	**176**	Pn	Pn	09 58 41.9	+0.1
H11S2	**WAKE ISLAND Hy** baz=184,slow=76,SNR=6.1	**28.44**	**2**	T	T	10 32 39.5	
H11S3	**WAKE ISLAND Hy** baz=184,slow=76,SNR=5.9	**28.45**	**2**	T	T	10 32 42.0	
H11S1	**WAKE ISLAND Hy** baz=184,slow=76,SNR=6.8	**28.46**	**2**	T	T	10 32 42.0	
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=80,slow=9.0,SNR=4.2	**31.61**	**248**	P	P	10 02 15.1	-0.1
ASAR	**Alice Springs** 0.2nm,0.5s,baz=64,slow=10,SNR=7.8	**33.03**	**242**	P	P	10 02 27.6	0.0
MKAR	**Makanchi Array** 0.2nm,0.8s,baz=106,slow=3.1,SNR=2.5	**92.69**	**317**	P	P	10 09 04.4	0.0
PDAR	**Pinedale Array** 0.4nm,0.9s,baz=233,slow=4.4,SNR=2.7	**93.08**	**47**	P	P	10 09 06.4	-0.1

IDC 09 10:02:25.9±2.0**, 11.°71S**×**164.°79E, h0**^{km}**, mb3.3**/3**, mb1 3.7**/4**, mb1mx3.5**/23**, mbtmp3.5**/4**, ML3.4**/1**, Error ellipse: s-maj=50.8km s-min=40.0km az=130.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 0.3nm,0.3s,baz=313,slow=18,SNR=11	**10.42**	**171**	Pn	Pn	10 04 56.4	-0.4
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=81,slow=9.1,SNR=3.4	**30.38**	**251**	P	P	10 08 39.9	0.0
ASAR	**Alice Springs** 0.3nm,0.8s,baz=67,slow=9.4,SNR=3.0	**31.66**	**244**	P	P	10 08 51.3	+0.1
YKA	**Yellowknife Ar** 0.1nm,0.6s,baz=262,slow=5.6,SNR=2.8	**95.99**	**27**	P	P	10 15 54.6	-0.1

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*IDC **09** 10:16:39.5±1.2, 11.°73S×165.°11E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.8/32, mbtmp3.8/9, ML3.8/2, MS2.9/1, Ms1 2.9/1, ms1mx2.7/38, Error ellipse: s-maj=31.4km s-min=25.0km az=139.0*

*ISCJB **09** 10:16:42.7±0.8, 11.°9S±0.°1×165.°1E±0.°1, h33^{km}, mb3.7/7, Error ellipse: s-maj=18.1km s-min=10.9km az=37.9*

ISC 09 10:16:44.6±0.9**, 11.°8S**±0.°1×**165.°1E**±0.°1**, h35**^{km}**, n15, σ1.^{s}27**/10**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 4.3nm,0.3s,baz=142,slow=17,SNR=1.5	**5.61**	**294**	Pn	**Pn**	**10 18 03.5**	**-2.1**
HNR	4.2nm,0.3s,baz=160,slow=15,SNR=2.3			Sn	**Sn**	**10 19 11.0**	**+2.1**
HNR	comp=Z,125nm,20.9s,baz=82,slow=39			LR	LR	10 20 18.5	
DZM	**Mont Dzumac** 0.4nm,0.3s,baz=289,slow=21,SNR=7.1	**10.28**	**173**	Pn	**Pn**	**10 19 10.0**	**+0.2**
H11S2	**WAKE ISLAND Hy** baz=181,slow=76,SNR=5.6	**30.15**	**3**	T	T	10 55 39.4	
H11S3	**WAKE ISLAND Hy** baz=181,slow=76,SNR=5.1	**30.15**	**3**	T	T	10 55 39.3	
H11S1	**WAKE ISLAND Hy** baz=181,slow=76,SNR=8.0	**30.17**	**3**	T	T	10 55 40.4	
WRA	**Warramunga Arr** 1.1nm,0.8s,baz=78,slow=9.7,SNR=14	**30.66**	**251**	P	**P**	**10 22 56.9**	**+0.8**
H11N1	**WAKE ISLAND Hy** baz=182	**31.37**	**3**	T	T	10 57 15.7	
H11N3	**WAKE ISLAND Hy** baz=182	**31.38**	**3**	T	T	10 57 13.7	
H11N2	**WAKE ISLAND Hy** baz=182	**31.39**	**3**	T	T	10 57 25.9	
ASAR	**Alice Springs** 0.9nm,0.8s,baz=72,slow=9.6,SNR=14	**31.91**	**244**	P	**P**	**10 23 06.3**	**-0.8**
CMAR	**Chiang Mai Arr** 0.5nm,0.3s,baz=114,slow=6.0,SNR=3.3	**71.86**	**294**	P	**P**	**10 28 05.0**	**+0.4**
SONM	**Songino Array** 0.5nm,0.8s,baz=132,slow=4.1,SNR=1.9	**78.92**	**324**	P	**P**	**10 28 43.9**	**-0.8**
ILAR	**Eielson Array** 0.4nm,0.6s,baz=237,slow=5.7,SNR=9.3	**84.43**	**19**	P	**P**	**10 29 13.6**	**+0.4**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=97,slow=7.8,SNR=3.2	**93.66**	**317**	P	**P**	**10 29 58.1**	**+0.5**
YKA	**Yellowknife Ar** 0.2nm,0.7s,baz=257,slow=8.3,SNR=3.6	**95.93**	**27**	P	**P**	**10 30 07.6**	**+0.2**

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*ISCJB **09** 10:17:38.1±0.8, 55.°2N±0.°2×35.°2W±0.°1, h10^{km}, mb3.7/12, MS3.1/2, Error ellipse: s-maj=25.7km s-min=10.6km az=1.2*

*IDC **09** 10:17:38.6±0.9, 55.°14N×35.°21W, h0^{km}, mb3.7/12, mb1 3.9/14, mb1mx3.7/43, mbtmp3.7/14, ML3.2/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/45, Error ellipse: s-maj=30.0km s-min=14.9km az=2.0*

ISC 09 10:17:39.9±0.9**, 55.°1N**±0.°2×**35.°23W**±0.°09**, h10**^{km}**, n17, σ0.^{s}99**/15**, mb3.7**/12**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville** 0.1nm,0.3s,baz=93,slow=4.8,SNR=3.6	**18.06**	**282**	P	**P**	**10 21 51.2**	**0.0**
EKA	**Eskdalemuir Ar** baz=280,slow=9.8,SNR=3.3	**18.20**	**76**	P	**Pn**	**10 21 51.8**	**-0.6**
NOA	**NORSAR Array B** comp=Z,16nm,18.5s,baz=320,slow=33	**24.80**	**57**	LR	LR	10 31 20.6	
RES	**Resolute Bay** comp=Z,142nm,21.5s,baz=44,slow=32	**29.96**	**333**	LR	LR	10 33 25.9	
ARCES	**ARCESS Array B** 3.2nm,0.9s,baz=304,slow=15,SNR=2.9	**30.10**	**38**	P	**P**	**10 23 47.6**	**-1.4**
FINES	**FINESS Array B** 2.9nm,1.1s,baz=327,slow=10,SNR=2.7	**31.73**	**53**	P	**P**	**10 24 03.1**	**-0.4**
AKASG	**Malin Array Be** 0.5nm,0.5s,baz=308,slow=8.0,SNR=3.2	**37.87**	**69**	P	**P**	**10 24 56.8**	**+0.2**
YKA	**Yellowknife Ar** 0.5nm,0.7s,baz=59,slow=9.1,SNR=9.6	**39.26**	**314**	P	**P**	**10 25 08.2**	**+0.1**
BRTR	**Keskin Array B** 1.1nm,0.7s,baz=306,slow=6.9,SNR=6.6	**47.09**	**79**	P	**P**	**10 26 12.6**	**+0.7**
ILAR	**Eielson Array** 0.6nm,0.8s,baz=34,slow=6.8,SNR=6.6	**49.54**	**328**	P	**P**	**10 26 30.7**	**+0.4**
TORD	**Torodi Ar. Bea** 0.3nm,0.7s,baz=329,slow=5.4,SNR=2.5	**50.79**	**131**	P	**P**	**10 26 39.9**	**-0.4**
TXAR	**Lajitas Array** 0.8nm,1.2s,baz=93,slow=8.1,SNR=3.0	**54.32**	**271**	P	**P**	**10 27 05.5**	**-1.0**
NVAR	**Mina Array Bea** 0.3nm,0.3s,baz=13,slow=5.8,SNR=2.4	**55.87**	**290**	P	**P**	**10 27 18.5**	**+0.8**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=350,slow=15,SNR=2.8	**60.63**	**36**	P	**P**	**10 27 51.7**	**+1.3**
GEYT	**Alibeck** 1.2nm,0.4s,baz=284,slow=8.6,SNR=2.3	**61.66**	**64**	P	**P**	**10 27 59.2**	**+1.4**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=320,slow=6.4,SNR=2.6	**65.63**	**42**	P	**P**	**10 28 22.5**	**-1.3**
ASAR	**Alice Springs** 0.3nm,0.5s,baz=354,slow=2.4,SNR=5.8	**147.54**	**19**	PKPbc	**PKPab**	**10 37 25.1**	**-1.1**

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*ISCJB **09** 10:21:44.8±1.0, 11.°0S±0.°1×165.°88E±0.°10, h10^{km}, mb3.6/5, MS4.2/2, Error ellipse: s-maj=19.0km s-min=11.6km az=31.5*

*IDC **09** 10:21:45.0±1.6, 10.°93S×165.°89E, h0^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.7/33, mbtmp3.8/8, ML3.9/2, MS4.2/2, Ms1 4.3/2, ms1mx3.5/28, Error ellipse: s-maj=34.9km s-min=28.5km az=131.0*

ISC 09 10:21:46.5±1.2**, 10.°9S**±0.°1×**165.°9E**±0.°1**, h10**^{km}**, n15, σ0.^{s}89**/9**, mb3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 5.4nm,0.3s,baz=117,slow=2.3,SNR=1.6	**6.08**	**284**	Pn	**Pn**	**10 23 15.8**	**-0.6**
HNR	3.1nm,0.3s,baz=159,slow=13,SNR=1.6			Sn	**Sn**	**10 24 27.0**	**+0.9**
DZM	**Mont Dzumac** 0.5nm,0.3s,baz=120,slow=21,SNR=20	**11.09**	**178**	Pn	**Pn**	**10 24 25.8**	**+0.5**
CTA	**Charters Tower** 1.8nm,0.7s,baz=57,slow=17,SNR=2.5	**21.02**	**242**	P	**P**	**10 26 30.4**	**-0.1**
H11S2	**WAKE ISLAND Hy** baz=182,slow=74	**29.24**	**2**	T	T	10 58 12.2	
H11S3	**WAKE ISLAND Hy** baz=182	**29.25**	**1**	T	T	10 58 12.4	
H11S1	**WAKE ISLAND Hy** baz=182,slow=74	**29.26**	**1**	T	T	10 58 13.1	
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=4.1	**30.46**	**2**	T	T	10 59 44.2	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=4.1	**30.47**	**2**	T	T	10 59 45.3	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=4.6	**30.48**	**2**	T	T	10 59 44.5	
WRA	**Warramunga Arr** 1.8nm,0.6s,baz=81,slow=9.2,SNR=22	**31.70**	**250**	P	**P**	**10 28 09.9**	**-0.7**
ASAR	**Alice Springs** 0.7nm,0.8s,baz=64,slow=11,SNR=10	**33.01**	**243**	P	**P**	**10 28 21.1**	**-1.0**
RAR	**Rarotonga** comp=Z,272nm,19.6s,baz=246,slow=31	**34.43**	**112**	LR	LR	10 39 20.8	
CMAR	**Chiang Mai Arr** 0.4nm,0.5s,baz=101,slow=4.7,SNR=3.2	**72.23**	**293**	P	**P**	**10 33 13.7**	**+1.3**
ILAR	**Eielson Array** 0.2nm,0.7s,baz=233,slow=5.1,SNR=3.4	**83.34**	**18**	P	**P**	**10 34 13.4**	**0.0**
ILAR	comp=Z,169nm,19.1s,baz=218,slow=34			LR	LR	11 08 39.1	
MKAR	**Makanchi Array** 0.2nm,0.8s,baz=90,slow=7.2,SNR=3.1	**93.56**	**317**	P	**P**	**10 35 02.4**	**-0.5**

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*IDC **09** 10:23:49.4±0.5, 11.°97S×165.°93E, h0^{km}, mb4.8/19, mb1 4.9/21, mb1mx4.8/31, mbtmp4.8/21, ML4.9/2, MS4.6/16, Ms1 4.7/16, ms1mx4.3/32, Error ellipse: s-maj=18.9km s-min=13.7km az=95.0*

*ISCJB **09** 10:23:51.6±0.2, 11.°90S±0.°03×165.°79E±0.°04, h20^{km}, mb5.0/115, MS4.8/29, Error ellipse: s-maj=5.7km s-min=4.2km az=170.9*

NEIC ***09*** *10:23:51.7±0.2, 11°.88S×165°.66E, h10km, mb5.1/59, Error ellipse: s-maj=4.9km s-min=3.7km az=80.0*

MOS ***09*** *10:23:53.8±1.0, 11°.85S×165°.64E, h33km, mb5.1/45, MS4.9/6, Error ellipse: s-maj=10.8km s-min=7.9km az=133.0*

GCMT ***09*** *10:23:54.7±0.1, 12°.00S±0°.01×165°.81E±0°.01, h12km, MW5.3/107, Moment Tensor Solution. s87,c131; s107,c188; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.59±.01; $M_{\theta\theta}$-0.02±.01; $M_{\phi\phi}$-0.56±.01; $M_{r\theta}$0.47±.04; $M_{\theta\phi}$0.15±.01; $M_{\phi r}$-0.62±.04; Best double couple: $M_0$0.97900×10^{17} NP1:ϕ_s148.00000°,δ72.00000°,λ79.00000°. NP2:ϕ_s1.00000°,δ21.00000°,λ121.00000°. Principal axes: T 1.0020, Plg61.0000°, Azm41.0000°; N -0.0460, Plg11.0000°, Azm152.0000°; P -0.9560, Plg26.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 10:23:52.6±1.0**, 11°.97S**±0°.05×**165°.75E**±0°.05**, h13km**±5km**, n298,** σ1^s**88**/313**, mb5.1**/115**, MS4.9**/30**, 7C-4D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.23	293	eP	Pn	10 25 26.0	+1.7
HNR				eS	Sn	10 26 41.0	+5.6
HNR	Honiara	6.23	293	ePn	Pn	10 25 22.3	-1.9
HNR				eSn	Sn	10 26 35.1	-0.2
HNR	Honiara	6.23	293	eP	Pn	10 25 22.3	-1.9
HNR				e		10 26 35.1	
HNR	Honiara	6.23	293	Pn	Pn	10 25 25.3	+1.1
	68nm,0.3s,baz=186,slow=0.2,SNR=23						
HNR				Sn	Sn	10 26 38.3	+2.9
	16nm,0.3s,baz=58,slow=23,SNR=8.0						
MARNC	Mare, Loyalty	9.71	167	ePn	Pn	10 26 12.2	+0.2
DZM	Mont Dzumac	10.07	176	ePn	Pn	10 26 16.3	-0.8
	39nm,0.5s						
DZM				eLQ	LQ	10 28 08.5	
	4μm,28.4s						
DZM				eLR	LR	10 28 34.0	
	comp=Z,4μm,23.6s						
DZM	Mont Dzumac	10.07	176	ePn	Pn	10 26 18.7	+1.7
DZM				Sn	Sn	10 28 06.5	-3.5
DZM	Mont Dzumac	10.07	176	Pn	Pn	10 26 16.6	-0.5
	4.8nm,0.3s,baz=334,slow=16,SNR=20						
DZM				Sn	Sn	10 28 06.5	-3.5
	0.9nm,0.3s,baz=300,slow=20,SNR=2.5						
DZM				LR	LR	10 28 55.2	
	comp=Z,575nm,21.9s,baz=10,slow=30						
ONTNC	Ouen Toro	10.31	176	ePn	Pn	10 26 21.6	+1.3
MSVF	Nonsavu	13.20	117	ePn	Pn	10 27 01.9	+2.0
MSVF	Nonsavu	13.20	117	eP	Pn	10 27 02.0	+2.0
TARA	Tarawa	15.03	29	ePn	Pn	10 27 25.7	+0.9
	179nm,0.8s						
EIDS	Eidsvold	19.23	224	P	Pn	10 28 20.0	+2.5
	baz=19,SNR=13						
EIDS	Eidsvold	19.23	224	eP	P	10 28 15.4	-1.1
	64nm,1.0s						
CTA	Charters Tower	20.39	244	P	Pn	10 28 30.9	-0.5
	32nm,0.8s,baz=66,slow=13,SNR=28						
CTA				LR	LR	10 36 15.0	
	comp=Z,3μm,18.4s,baz=75,slow=36						
CTAO	Charters Tower	20.39	244	eP	P	10 28 28.2	-1.0
	40nm,0.8s						
CTAO	Charters Tower	20.39	244	eP	P	10 28 28.3	-1.0
CTAO				pmax	pmax		
	comp=Z,40nm,0.8s						
MANU	Manus Island	20.71	297	eP	P	10 28 31.2	-1.7
	comp=Z,204nm,1.4s						
RMQ	Roma	21.55	225	P	P	10 28 44.3	+2.5
	baz=22,SNR=38						
MTSU	Mount Surprise	21.57	251	P	P	10 28 40.9	-1.2
	baz=22,SNR=15						
COEN	Coen	22.08	262	P	P	10 28 43.7	-3.9
	baz=22,SNR=24						
COEN	Coen	22.08	262	eP	P	10 28 47.0	-0.6
	comp=Z,45nm,0.9s						
ARMA	Armidale	22.55	213	P	P	10 28 49.1	-3.4
	baz=23,SNR=53						
ARMA	Armidale	22.55	213	eP	P	10 28 52.8	+0.3
	comp=Z,148nm,0.9s						
KNTN	Kanton	24.12	70	eP	P	10 29 09.2	+0.8
	comp=Z,236nm,1.5s						
OUZ	Omahuta	24.22	164	eP	P	10 29 10.0	+0.9
	comp=Z,34nm,1.0s						
MGCD	Mangrove Creek	25.04	210	P	P	10 29 18.0	+1.5
	baz=25,SNR=6.1						
QIS	Mount Isa	26.48	248	P	P	10 29 31.8	+2.0
	baz=27,SNR=5.7						
CMSA	Cobar Meteorol	26.86	220	P	P	10 29 35.9	+2.8
	baz=27,SNR=36						
YNG	Young	27.28	213	P	P	10 29 41.0	+4.2
	baz=28,SNR=5.6						
CAN	Canberra	27.77	210	P	P	10 29 44.6	+3.3
	baz=28						
URZ	Urewera	28.08	161	eP	P	10 29 44.6	+0.7
	comp=Z,22nm,1.0s						
URZ	Urewera	28.08	161	P	P	10 29 41.0	-2.9
	comp=Z,8.3nm,0.9s,baz=333,slow=2.3,SNR=2.8						
BKZ	Black Stump Fm	28.72	162	eP	P	10 29 53.6	+4.0
	comp=Z,34nm,1.4s						
STKA	Stephens Creek	29.78	224	P	P	10 29 59.4	+0.3
	baz=30,SNR=10						
STKA	Stephens Creek	29.78	224	eP	P	10 29 58.6	-0.5
	comp=Z,4.7nm,0.8s						
STKA	Stephens Creek	29.78	224	P	P	10 29 59.0	-0.1
	comp=Z,18nm,0.8s,baz=34,slow=9.8,SNR=31						
STKA				LR	LR	10 41 54.3	
	comp=Z,3μm,18.2s,baz=57,slow=36						
BFZ	Birch Farm	30.06	164	eP	P	10 30 03.1	+1.6
	comp=Z,38nm,1.3s						
SNZO	South Karori	30.27	167	eP	P	10 30 02.7	-0.6
	comp=Z,36nm,1.0s						
THZ	Tophouse	30.34	169	eP	P	10 30 05.2	+1.2
	comp=Z,37nm,0.9s						
KHZ	Kahutara	31.09	169	eP	P	10 30 11.2	+0.8
	comp=Z,30nm,1.2s						
WRAB	Tennant Creek	31.17	251	eP	P	10 30 10.1	-1.5
	comp=Z,49nm,1.5s						
WRAB	Tennant Creek	31.17	251	d iP	P	10 30 13.1	+1.6
WRAB				pmax	pmax		
	comp=Z,22nm,1.0s						
WB2	Warramunga Arr	31.17	251	eP	P	10 30 10.3	-1.2
WB2				ePcP	PcP	10 33 07.9	+1.3
WRA	Warramunga Arr	31.18	251	P	P	10 30 10.8	-0.9
	comp=Z,25nm,1.2s,baz=80,slow=9.3,SNR=37						
WRA				PcP	PcP	10 33 07.3	+0.7
	comp=Z,5.5nm,1.0s,baz=76,slow=2.4,SNR=6.6						
WRA				PKiKP	PKiKP	10 40 34.4	-2.4
	comp=Z,0.9nm,1.1s,baz=355,slow=0.6,SNR=6.4						
WRA				LR	LR	10 42 38.7	
	comp=Z,1μm,18.6s,baz=75,slow=36						
LTZ	Lake Taylor	31.22	171	eP	P	10 30 11.2	-0.6
	comp=Z,15nm,0.8s						
FOZ	Fox Glacier	31.65	174	eP	P	10 30 14.9	-0.5
	comp=Z,64nm,0.9s						
RPZ	Rata Peaks	31.96	173	eP	P	10 30 18.3	0.0
	comp=Z,65nm,0.9s						
RPZ	Rata Peaks	31.96	173	P	P	10 30 17.7	-0.5
	comp=Z,51nm,0.8s,baz=333,slow=0.6,SNR=23						
MQZ	McQueen's Vall	32.19	171	eP	P	10 30 21.8	+1.7
	comp=Z,22nm,0.8s						
AS01	Alice Springs	32.35	245	eP	P	10 30 20.0	-2.0
AS01				ePcP	PcP	10 33 10.3	+0.6
AS31	Alice Springs	32.39	245	eP	P	10 30 21.0	-1.3
	comp=Z,5.8nm,0.8s						
ASAR	Alice Springs	32.39	245	P	P	10 30 20.8	-1.5
	comp=Z,21nm,0.8s,baz=74,slow=9.5,SNR=49						
ASAR				PcP	PcP	10 33 11.1	+1.1
	comp=Z,4.7nm,1.0s,baz=70,slow=4.6,SNR=7.8						
ASAR				PKiKP	PKiKP	10 40 35.0	-2.6
	comp=Z,0.6nm,1.1s,baz=72,slow=1.2,SNR=4.6						
ASAR				LR	LR	10 43 22.6	
	comp=Z,2μm,18.9s,baz=77,slow=36						
KDU	Kakadu	32.50	265	P	P	10 30 22.7	-0.6
	baz=33,SNR=5.2						
HTT	Hallett	32.52	225	P	P	10 30 23.4	+0.1
	baz=33,SNR=14						
LBZ	Lake Benmore	32.53	174	eP	P	10 30 24.6	+1.4
	comp=Z,34nm,1.1s						
ODZ	Otahua Downs	33.23	174	eP	P	10 30 29.3	0.0
	comp=Z,34nm,1.2s						
MLZ	Mavora Lakes	33.35	177	eP	P	10 30 32.0	+1.6
	comp=Z,122nm,1.7s						
DCZ	Deep Cove	33.41	178	eP	P	10 30 30.3	-0.5
	comp=Z,56nm,1.2s						
BBOO	Buckleboo	34.21	228	P	P	10 30 40.3	+2.2
	baz=34,SNR=9.1						
BBOO	Buckleboo	34.21	228	eP	P	10 30 38.6	+0.5
	comp=Z,30nm,1.0s						
KNRA	Kununurra	36.07	260	P	P	10 30 54.6	+0.4
	baz=36,SNR=11						
BNDI	Bandanaira	36.20	279	P	P	10 30 58.4	+3.0
	comp=Z,94nm,1.0s,comp=Z,2μm						
WRKA	Warakurna	37.68	244	P	P	10 31 07.1	-0.9
	baz=38,SNR=13						
FITZ	Fitzroy Crossi	39.15	256	P	P	10 31 21.9	+1.6
	baz=39,SNR=10						
FITZ	Fitzroy Crossi	39.15	256	eP	P	10 31 19.8	-0.5
	comp=Z,25nm,1.1s						
NLAI	Namlea	39.23	280	P	P	10 31 26.8	+5.8
	comp=Z,26nm,1.0s						
FORT	Forrest	39.52	236	P	P	10 31 25.3	+2.0
	baz=40,SNR=11						
FORT	Forrest	39.52	236	eP	P	10 31 23.6	+0.4
	comp=Z,74nm,0.9s						
SANI	Sanana	40.61	281	P	P	10 31 37.5	+5.0
	comp=Z,31nm,1.3s,comp=Z,841nm						
SOEI	Soe	40.77	269	P	P	10 31 39.4	+5.4
	comp=Z,31nm,1.0s						
BATI	Baumata	41.31	268	P	P	10 31 42.3	+4.0
	comp=Z,33nm,0.9s						
MMRI	Maumere	42.90	270	eP	P	10 31 50.3	-1.0
	comp=Z,60nm,1.0s						
MMRI	Maumere	42.90	270	P	P	10 31 54.2	+2.9
	comp=Z,45nm,0.9s						
PPT	Papeete	43.48	103	LR	LR	10 47 52.4	
	comp=Z,1μm,18.0s,baz=270,slow=33						
PPT2	Papeete2	43.48	103	eS	S	10 38 28.7	+3.9
	comp=Z,533nm,25.8s						
PPT2				eLQ	LQ	10 42 15.2	
	comp=Z,2μm,26.2s						
PPT2				eLR	LR	10 44 08.8	
	comp=Z,2μm,27.2s,baz=276						
LUWI	Luwuk	43.98	281	eP	P	10 31 59.4	-0.6
	comp=Z,90nm,1.0s						
LUWI	Luwuk	43.98	281	P	P	10 32 03.8	+3.8
	comp=Z,98nm,1.1s,comp=Z,2μm						
MBWA	Marble Bar	44.91	252	eP	P	10 32 07.5	+0.2
	comp=Z,35nm,0.9s						
BKSI	Bulukumba	45.54	274	P	P	10 32 15.2	+2.8
	comp=Z,8.3nm,1.0s						
BNSI	Bone	45.74	276	P	P	10 32 16.6	+2.6
	comp=Z,71nm,1.1s,comp=Z,883nm						
SPSI	Sidrap Palu	46.16	276	P	P	10 32 19.5	+2.1
	comp=Z,16nm,1.0s						
TTSI	Tana Toraja	46.32	277	P	P	10 32 24.1	+5.5
	comp=Z,26nm,0.9s						
MEEK	Meekatharra	46.55	245	P	P	10 32 22.6	+2.3
	baz=47,SNR=10.0						
KLBR	Kellerberrin	48.22	238	P	P	10 32 35.1	+1.9
	baz=48,SNR=5.2						
BLDU	Ballidu	48.89	240	P	P	10 32 40.6	+2.2
	baz=49						
NWAO	Narrogin (SRO)	48.95	237	P	P	10 32 40.7	+1.9
	baz=49,SNR=6.9						
NWAO	Narrogin (SRO)	48.95	237	eP	P	10 32 38.7	-0.1
	comp=Z,40nm,1.0s						
NWAO	Narrogin (SRO)	48.95	237	eP	P	10 32 38.7	-0.1
NWAO				pmax	pmax		
	comp=Z,40nm,1.0s						
MORW	Morawa	49.19	242	P	P	10 32 42.7	+1.9
	baz=49,SNR=7.8						
MORW	Morawa	49.19	242	eP	P	10 32 40.2	-0.5
	comp=Z,26nm,0.8s						
RKGY	Rocky Gully	49.57	235	P	P	10 32 46.3	+2.7
	baz=50						
MUN	Mundaring	49.59	238	P	P	10 32 45.2	+1.4
	baz=50,SNR=8.1						
KKM	Kota Kinabalu	52.40	287	eP	P	10 33 07.8	+2.6
	comp=Z,48nm,1.0s						
TAOE	Nuku Hiva Isla	53.24	92	eS	S	10 40 45.0	+2.2
	comp=Z,440nm,26.6s						
TAOE				eLQ	LQ	10 46 24.2	
	comp=Z,333nm,24.6s						
TAOE				eLR	LR	10 48 23.6	
	comp=Z,1μm,27.3s,baz=265						
PCJI	Pacitan	53.79	269	P	P	10 33 18.9	+3.5
MJAR	Matsushiro Arr	54.78	333	P	P	10 33 20.4	-1.7
	comp=Z,15nm,1.1s,baz=168,slow=8.1,SNR=14						
MJAR				PcP	PcP	10 34 23.9	-0.7
	comp=Z,2.8nm,0.9s,baz=166,slow=3.3,SNR=3.5						
MAJO	Matsushiro	54.78	333	eP	P	10 33 20.1	-2.1
	comp=Z,16nm,0.9s						
MAJO	Matsushiro	54.78	333	⇓eP	P	10 33 20.4	-1.8
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAT	Matsushiro	54.78	333	P	P	10 33 20.2	-2.0
MAT				eS	S	10 41 03.6	+0.8
MJB9	Matsu-Tunnel	54.79	333	eP	P	10 33 20.4	-1.8
	comp=Z,16nm,0.9s						
SBUM	Sibu	55.08	282	eP	P	10 33 27.8	+3.1
	comp=Z,15nm,1.3s						
JNU	Nakatsue	55.82	325	eP	P	10 33 29.3	-0.5
	comp=Z,23nm,0.9s						
JNU	Nakatsue	55.82	325	LR	LR	10 55 23.1	
	comp=Z,255nm,19.3s,baz=126,slow=34						
KSM	Kuching	56.65	280	eP	P	10 33 34.9	-1.2
	comp=Z,19nm,1.0s						
RKT	Rikitea	57.27	110	eS	S	10 41 39.2	+2.8
	comp=Z,389nm,34.8s						
RKT				eLQ	LQ	10 48 03.7	
	comp=Z,530nm,30.0s						
RKT				eLR	LR	10 50 25.9	
	comp=Z,1μm,27.0s						
ASAJ	Asahikawa	59.66	341	P	P	10 33 56.3	-0.2
ASAJ				pmax	pmax		
	comp=Z,21nm,1.0s						
ASAJ	Asahikawa	59.66	341	P	P	10 33 56.3	-0.2
	comp=Z,10nm,0.8s,baz=85,slow=15,SNR=7.2						
SSE	Sheshan	60.51	316	P	P	10 34 04.0	+1.4
SSE				S	S	10 42 24.5	+6.4
SSE				pmax	pmax		
	comp=Z,14nm,1.0s						
SSE				pmax	pmax		
	comp=Z,260nm,4.9s						
SSE				LR	LR		
	comp=N,230nm,11.1s						
SSE				LR	LR		
	comp=E,250nm,13.3s						
SSE	Sheshan	60.51	316	eP	P	10 34 02.2	-0.4
	comp=E,58nm,1.0s						
KSRS	Korea Array	60.63	326	P	P	10 34 02.8	-0.5
	comp=E,5.6nm,0.9s,baz=138,slow=6.9,SNR=14						
KSRS				PcP	PcP	10 34 48.5	+1.0
	comp=E,6.2nm,1.0s,baz=143,slow=4.5,SNR=6.4						
KSRS				LR	LR	11 01 15.1	
	comp=E,136nm,18.1s,baz=128,slow=37						
KSAR	Wonju Array Be	60.65	326	P	P	10 34 02.8	-0.6
KSAR				PcP	PcP	10 34 48.5	+0.9
KSAR	Wonju Array Be	60.65	326	P	P	10 34 02.8	-0.6
KSAR						10 34 48.5	
KS01	Wonju Array Si	60.66	326	eP	P	10 34 03.4	-0.2
YSS	Yuzh-Sakhalins	62.16	342	⇑eP	P	10 34 12.6	-0.8
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
NJ2	Nanjing	62.67	316	eP	P	10 34 17.0	-0.2
NJ2				pmax	pmax		
	comp=Z,29nm,1.0s						
QIZ	Qiongzhong	63.11	299	P	P	10 34 19.6	-0.8
QIZ				S	S	10 42 50.1	-1.4
QIZ				pmax	pmax		
	comp=Z,330nm,4.0s						
QIZ				LR	LR		
	comp=E,450nm,11.6s						
QIZ				LR	LR		
	comp=Z,390nm,15.7s						
USA0B	Ussuriysk Arra	63.77	334	eP	P	10 34 24.2	+0.1
	comp=Z,44nm,1.3s						
USRK	Ussuriysk Ar.	63.77	334	P	P	10 34 23.8	-0.4
	comp=Z,28nm,1.1s,baz=128,slow=7.1,SNR=19						
WHN	Wuhan	65.00	312	⇑P	P	10 34 33.8	+1.2
WHN				S	S	10 43 11.3	-3.2
WHN				LR	LR		
	comp=N,1μm,11.6s						
WHN				LR	LR		
	comp=E,710nm,6.2s						
WHN				LR	LR		
	comp=Z,2μm,20.1s						
MDJ	Mudanjiang	65.16	332	eP	P	10 34 32.9	-0.4
	comp=Z,34nm,1.3s						
PETK	Petropavlovsk-	65.18	355	P	P	10 34 32.6	-0.7
	comp=Z,9.0nm,1.0s,baz=152,slow=13,SNR=3.9						
PETK				LR	LR	10 59 19.2	
	comp=Z,349nm,18.8s,baz=159,slow=33						
DL2	Dalian	65.21	323	P	P	10 34 36.1	+2.4
DL2				S	S	10 43 23.2	+6.5
DL2				pmax	pmax		
	comp=Z,44nm,1.2s						
DL2				pmax	pmax		
	comp=Z,110nm,4.3s						
DL2				LR	LR		
	comp=N,610nm,14.0s						
DL2				LR	LR		
	comp=E,480nm,13.0s						
DL2				LR	LR		
	comp=Z,530nm,18.6s						
BKNI	Bangkinang	65.36	276	eP	P	10 34 34.3	-1.0
	comp=Z,151nm,1.0s						
VNDA	Vanda	65.58	181	LR	LR	11 00 37.4	
	comp=Z,412nm,18.7s,baz=16,slow=34						
IPM	Ipoh	66.38	280	eP	P	10 34 40.8	-1.0
	comp=Z,76nm,1.1s						
CN2	Changchun	66.53	329	eP	P	10 34 41.3	-0.8
CN2				PP	PP	10 37 09.9	+1.0
CN2				eS	S	10 43 30.6	-2.1
CN2	Changchun	66.53	329	SS	SS	10 47 49.4	-0.8
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				pmax	pmax		
	comp=Z,180nm,3.5s						
CN2				LR	LR		
	comp=N,450nm,15.0s						
CN2				LR	LR		
	comp=E,490nm,15.0s						
CN2				LR	LR		
	comp=Z,450nm,17.0s						
KULM	Kulim	66.95	281	eP	P	10 34 44.8	-0.7
	comp=Z,32nm,1.2s						
SKNT	Sakolnakorn	67.46	294	P	P	10 34 51.7	+3.1
	comp=Z,13nm,1.0s						
GRNR	Gornyy	67.50	340	eP	P	10 34 48.7	+0.5
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
KLR	Kul'dur	67.90	337	d iP	P	10 34 51.2	+0.5
NKL	Nikolayevsk	68.32	344	eP	P	10 34 52.7	-0.5
NKL				pmax	pmax		
	comp=Z,34nm,1.0s						
ENH	Enshi	68.47	309	eP	P	10 34 53.4	-1.4
	comp=Z,37nm,1.0s						
TRTT	Trang	68.56	283	P	P	10 34 59.0	+3.4
	comp=Z,6.8nm,1.1s						
NONG	Nongkai	68.60	295	P	P	10 34 58.6	+2.9
	comp=Z,0.4nm,1.0s						
CHAI	Chaiyaphum	68.89	292	P	P	10 35 00.7	+3.1
	comp=Z,3.7nm,0.9s,comp=Z,233nm						
GYA	Guiyang	68.93	304	⇑iP	P	10 34 57.8	-0.1
GYA				PP	PP	10 37 33.0	+2.7
GYA				S	S	10 44 02.8	+0.3
GYA				SKS	SKiKP	10 44 54.2	+4.5
GYA	Guiyang	68.93	304	SS	SS	10 48 29.6	+1.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,550nm,18.4s						
GYA				LR	LR		
	comp=E,560nm,18.1s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
GSI	Gunungsitoli	68.95	276	eP	P	10 34 57.0	-1.1
	comp=Z,68nm,1.0s						
BJT	Baijiatuau	69.19	321	eP	P	10 34 58.0	-1.0
	comp=Z,27nm,1.2s						
BJT	Baijiatuau	69.19	321	eP	P	10 34 58.0	-1.0
BJT				pmax	pmax		
	comp=Z,27nm,1.2s						
BJI	Beijing	69.19	321	P	P	10 35 00.6	+1.6
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PBKT	Sadao Pong	70.03	293	P	P	10 35 07.9	+3.3
	comp=Z,15nm,1.1s						
TIY	Taiyuan	70.23	317	eP	P	10 35 08.4	+2.8
TIY				S	S	10 44 21.1	+3.8
TIY				pmax	pmax		
	comp=Z,23nm,1.0s						
TIY				LR	LR		
	comp=Z,450nm,12.8s						
XAN	Xi'an	70.74	313	P	P	10 35 09.0	+0.3
XAN				pP	pwP	10 35 16.0	-4.8
XAN				PP	PP	10 37 54.7	+9.0
XAN				S	S	10 44 26.6	+3.4
XAN				sS	SKiKP	10 44 55.4	+3.4
XAN	Xi'an	70.74	313	SS	SS	10 49 01.2	+5.4
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,150nm,4.0s						
XAN				LR	LR		
	comp=N,130nm,6.4s						
XAN				LR	LR		
	comp=E,390nm,19.2s						
XAN				LR	LR		
	comp=Z,540nm,18.2s						
XAN	Xi'an	70.74	313	eP	P	10 35 07.3	-1.4
	comp=Z,18nm,1.0s						
XAN	Xi'an	70.74	313	eP	P	10 35 07.3	-1.4
XAN				pmax	pmax		
	comp=Z,18nm,1.0s						
UTTA	Uttaradit	70.80	294	P	P	10 35 12.9	+3.6
	comp=Z,2.5nm,1.0s						
UTHA	Uthaitani	71.08	291	P	P	10 35 13.7	+2.6
	comp=Z,35nm,0.4s,comp=Z,12μm						
KMI	Kunming	71.60	302	P	P	10 35 15.3	+0.9
KMI				pP	pwP	10 35 22.6	-3.9
KMI				pmax	pmax		
	comp=Z,20nm,1.1s						
KMI				pmax	pmax		
	comp=Z,240nm,4.6s						
KMI				LR	LR		
	comp=N,310nm,14.9s						
KMI				LR	LR		
	comp=E,310nm,14.6s						
KMI				LR	LR		
	comp=Z,380nm,15.9s						
KMI	Kunming	71.60	302	eP	P	10 35 12.9	-1.5
	comp=Z,24nm,1.1s						
KMI	Kunming	71.60	302	eP	P	10 35 12.9	-1.5
KMI				pmax	pmax		
	comp=Z,24nm,1.1s						
CM01	Chiang Mai Arr	72.45	294	eP	P	10 35 17.3	-2.0
CM31	Chiang Mai Arr	72.48	294	eP	P	10 35 18.3	-1.1
CMAR	Chiang Mai Arr	72.48	294	P	P	10 35 20.1	+0.6
	comp=Z,9.0nm,0.9s,baz=117,slow=4.2,SNR=33						
HHC	Hu-ho-hao-te	72.53	320	eP	P	10 35 20.1	+0.6
HHC				S	SKiKP	10 44 50.5	-4.0
HHC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,230nm,4.3s						
HHC				LR	LR		
	comp=N,700nm,15.6s						
HHC				LR	LR		
	comp=E,490nm,14.7s						
HHC				LR	LR		
	comp=Z,1μm,15.6s						
CMMT	Chiang Mai	72.59	294	P	P	10 35 22.8	+2.6
	comp=Z,7.9nm,1.2s						
CHTO	Chiang Mai	72.60	294	eP	P	10 35 18.4	-1.8
	comp=Z,8.9nm,0.9s						
CHTO	Chiang Mai	72.60	294	eP	P	10 35 18.4	-1.8
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	Chiang Mai	72.60	294	P	P	10 35 22.9	+2.7
	comp=Z,51nm,1.1s						
CD2	Chengdu	73.16	308	P	P	10 35 22.9	-0.4
HIA	Hailar	73.17	331	eP	P	10 35 22.7	-0.2
	comp=Z,38nm,1.2s						
HIA	Hailar	73.17	331	eP	P	10 35 22.7	-0.2
HIA				pmax	pmax		
	comp=Z,38nm,1.2s						
ZEA	Zeya	73.19	337	eP	P	10 35 22.6	-0.3
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
LZH	Lanzhou	75.37	312	eP	P	10 35 39.8	+3.5
LZH				pP	pwP	10 35 44.8	-3.6
LZH				sP	PcP	10 35 48.0	-1.5
LZH				PP	PP	10 38 39.6	+14

LZH				S	S	10 45 17.1	+1.0
LZH				sS	sS	10 45 26.8	+7.7
LZH	Lanzhou	75.37	312	SS	SS	10 50 10.9	+4.1
LZH				pmax	pmax		
	comp=Z,31nm,1.0s						
LZH				pmax	pmax		
	comp=Z,200nm,4.3s						
LZH				LR	LR		
	comp=N,630nm,15.2s						
LZH				LR	LR		
	comp=E,820nm,11.9s						
LZH				LR	LR		
	comp=Z,1μm,15.7s						
SEY	Seymchan	75.38	354	ceP	P	10 35 33.6	-1.9
QSPA	South Pole Qui	78.04	180	eP	P	10 35 50.0	-0.9
	comp=Z,44nm,1.1s						
YAK	Yakutsk	78.97	344	eP	P	10 35 55.7	0.0
YAK				pmax	pmax		
	comp=Z,132nm,0.9s						
YAK				pmax	pmax		
	comp=E,19nm,0.9s						
YAK				pmax	pmax		
	comp=N,36nm,0.9s						
ULN	Ulaanbaatar	79.04	324	eP	P	10 35 56.3	-0.3
	comp=N,22nm,1.0s						
ULN	Ulaanbaatar	79.04	324	ceP	P	10 35 57.6	+1.0
ULN				pmax	pmax		
	comp=Z,32nm,2.5s						
SONM	Songino Array	79.40	324	P	P	10 35 58.6	0.0
	comp=Z,3.5nm,0.8s,baz=131,slow=5.3,SNR=14						
SONA1	Songino Array	79.41	324	eP	P	10 35 58.1	-0.4
GTA	Gaotai	79.69	314	⇑P	P	10 36 01.0	+0.7
GTA				pP	PcP	10 36 05.9	-2.2
GTA				sP	pwP	10 36 08.2	-4.2
GTA				S	S	10 46 01.6	-1.2
GTA	Gaotai	79.69	314	sS	sS	10 46 09.2	+3.5
GTA	Gaotai	79.69	314	SKS	SKSac	10 46 12.5	-4.7
GTA	Gaotai	79.69	314	SS	SS	10 51 12.8	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,120nm,8.3s						
GTA				LR	LR		
	comp=N,370nm,19.4s						
GTA				LR	LR		
	comp=E,400nm,19.4s						
GTA				LR	LR		
	comp=Z,480nm,19.4s						
BILL	Bilibino	79.79	0	eP	P	10 35 59.0	-1.1
	comp=Z,7.7nm,1.0s						
BILL	Bilibino	79.79	0	⇓eP	P	10 35 58.1	-2.0
BILL				e		10 36 06.1	
BILL				e		10 39 01.1	
BILL				eS	S	10 45 58.4	-4.0
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOD	Bodaibo	81.36	335	eP	P	10 36 07.7	-1.0
BOD				pmax	pmax		
	comp=Z,17nm,1.8s						
CAST	Castle Rocks	81.82	18	eP	P	10 36 10.5	-0.5
	comp=Z,6.5nm,0.9s						
CAST				ePcP	PcP	10 36 16.9	+0.2
ZAK	Zakamensk	82.45	325	eP	P	10 36 13.9	-0.8
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
LSA	Lhasa	82.84	302	eP	P	10 36 16.2	-1.5
	comp=Z,7.0nm,1.1s						
LSA	Lhasa	82.84	302	eP	P	10 36 16.2	-1.5
LSA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RDOG	Red Dog Mine	82.92	11	eP	P	10 36 13.4	-3.3
	comp=Z,6.6nm,0.6s						
HDA	Harding Lake	84.11	19	eP	P	10 36 21.7	-1.2
	comp=Z,7.1nm,0.8s						
COLA	College	84.16	18	i P	P	10 36 20.7	-2.3
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MOY	Mondy	84.33	326	eP	P	10 36 24.2	-0.2
MOY				pmax	pmax		
	comp=Z,26nm,2.5s						
IL1	Eielson Array	84.38	18	eP	P	10 36 27.4	+3.2
ILAR	Eielson Array	84.38	18	P	P	10 36 22.2	-2.0
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR				MLR	MLR		
	comp=Z,270nm,18.1s						
ILAR	Eielson Array	84.38	18	P	P	10 36 22.2	-2.0
	comp=Z,0.8nm,0.6s,baz=208,slow=6.0,SNR=8.9						
ILAR				LR	LR	11 17 13.8	
	comp=Z,270nm,18.1s,baz=217,slow=38						
ILB	Eielson Array	84.38	18	eP	P	10 36 23.3	-0.9
SCRK	Sand Creek	84.78	20	eP	P	10 36 25.4	-1.1
	comp=Z,6.0nm,0.9s						
KNGR	Kungurtug, Tuv	85.84	324	i P	P	10 36 29.9	-2.1
NVAR	Mina Array Bea	86.61	50	P	P	10 36 34.3	-2.0
	comp=Z,0.9nm,0.6s,baz=261,slow=5.9,SNR=2.6						
NVAR				LR	LR	11 12 00.6	
	comp=Z,1μm,18.3s,baz=272,slow=33						
TIXI	Tiksi	86.99	349	eP	P	10 36 36.1	-0.9
	comp=Z,21nm,1.4s						
TIXI	Tiksi	86.99	349	ceP	P	10 36 35.1	-1.9
TIXI				pmax	pmax		
	comp=Z,11nm,1.7s						
WMQ	Urumqi	89.74	315	eP	P	10 36 51.2	+0.4
WMQ				sP	pwP	10 36 59.5	-3.4
WMQ				PP	PP	10 40 25.3	+2.1
WMQ	Urumqi	89.74	315	SKS	SKSac	10 47 19.6	-1.7
WMQ	Urumqi	89.74	315	S	S	10 47 39.1	-3.4
WMQ	Urumqi	89.74	315	SS	SS	10 53 39.6	-0.1
WMQ				pmax	pmax		
	comp=Z,23nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,350nm,6.3s						
WMQ				LR	LR		
	comp=N,870nm,19.3s						
WMQ				LR	LR		
	comp=E,690nm,23.9s						
WMQ				LR	LR		
	comp=Z,450nm,19.9s						
WMQ	Urumqi	89.74	315	eP	P	10 36 50.7	-0.1
	comp=Z,8.4nm,0.8s						
WMQ	Urumqi	89.74	315	eP	P	10 36 50.7	-0.1
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
INK	Inuvik	90.77	19	LR	LR	11 13 03.0	
	comp=Z,364nm,19.3s,baz=127,slow=33						
HYB	Hyderabad	90.89	288	i P	P	10 36 57.0	+0.3
BGU	Big Grassy Mou	91.22	49	eP	P	10 37 03.5	+5.6
	comp=Z,1.5nm,0.7s						
DGZ	Jazzator, Alta	91.60	320	i P	P	10 36 59.7	+0.2
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HVU	Hansel Valley	91.62	48	eP	P	10 37 04.0	+4.2
	comp=Z,3.4nm,0.9s						
HVU	Hansel Valley	91.62	48	eP	P	10 37 04.0	+4.2
HVU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK01	Makanchi Array	94.18	317	eP	P	10 37 10.5	-0.7
MK31	Makanchi Array	94.19	317	eP	P	10 37 10.6	-0.8
MKAR	Makanchi Array	94.19	317	eP	P	10 37 10.6	-0.8
	comp=Z,68nm,0.8s						
MKAR	Makanchi Array	94.19	317	P	P	10 37 10.3	-1.0
	comp=Z,9.1nm,0.9s,baz=92,slow=5.5,SNR=34						
ZAA0	Zalesovo Array	94.30	324	eP	P	10 37 10.3	-1.2
	comp=Z,16nm,1.1s						
ZALV	Zalesovo Beam	94.30	324	eP	P	10 37 09.8	-1.8
ZALV	Zalesovo Beam	94.30	324	eP	P	10 37 09.8	-1.8
ZALV	Zalesovo Beam	94.30	324	P	P	10 37 10.9	-0.7
	comp=Z,11nm,1.0s,baz=117,slow=2.9,SNR=30						
ZALV				LR	LR	11 18 17.8	
	comp=Z,141nm,21.3s,baz=70,slow=35						
MAKZ	Makanchi	94.40	317	eP	P	10 37 12.0	-0.3
	comp=Z,12nm,0.9s						
MAKZ	Makanchi	94.40	317	eP	P	10 37 12.0	-0.3
MAKZ				pmax	pmax		
	comp=Z,12nm,0.9s						
NVS	Novosibirsk	95.41	325	eP	P	10 37 15.8	-0.8
NVS				pmax	pmax		
	comp=Z,13nm,1.5s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.6s						
YKA	Yellowknife Ar	95.79	27	P	P	10 37 15.8	-2.4
	comp=E,0.4nm,0.7s,baz=258,slow=4.6,SNR=5.9						
YKB5	Yellowknife Ar	95.79	27	eP	P	10 37 20.4	+2.3
TXAR	Lajitas Array	96.27	61	P	P	10 37 23.9	+2.6
	comp=E,0.2nm,0.9s,baz=216,slow=5.6,SNR=2.4						
TXAR				LR	LR	11 16 39.2	
	comp=E,468nm,18.3s,baz=0.0,slow=33						
NRIK	Noril'sk	96.98	340	P	P	10 37 22.6	-0.8
	comp=E,3.2nm,0.5s,baz=121,slow=5.7,SNR=6.6						
NRIK				LR	LR	11 24 10.1	
	comp=E,313nm,18.1s,baz=82,slow=37						
KSH	Kashi	97.33	309	P	Pdif	10 37 27.1	+1.1
KSH				pP	pwP	10 37 32.9	-5.2
KSH				pmax	pmax		
	comp=Z,340nm,5.3s						
PRGR	Permogore	114.55	333	i PKIKP	PKiKP	10 42 29.2	-2.9
PRGR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARCES	ARCESS Array B	117.22	345	PKP	PKPdf	10 42 35.1	-2.0
	comp=Z,3.3nm,0.7s,baz=82,slow=1.7,SNR=16						
ZEI	Tsey	121.30	313	ePKIKP	PKPdf	10 42 44.1	-1.9
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FIA1	FINESS Array S	122.62	338	ePKPdf	PKPdf	10 42 46.8	-0.8
FINES	FINESS Array B	122.62	338	PKP	PKPdf	10 42 46.1	-1.6
	comp=Z,4.1nm,0.9s,baz=33,slow=3.3,SNR=11						
BOSA	Boshof	124.45	223	PKP	PKPdf	10 42 51.6	-0.7
	comp=Z,3.3nm,1.0s,baz=112,slow=5.4,SNR=3.5						
NB2	NORSAR Subarra	127.58	345	PKPdf	PKPdf	10 42 55.9	-1.3
	comp=Z,2.6nm,0.9s,baz=36,slow=2.1						
NOA	NORSAR Array B	127.58	345	PKP	PKPdf	10 42 55.5	-1.7
	comp=Z,3.0nm,1.1s,baz=35,slow=2.1,SNR=7.3						
AKASG	Malin Array Be	127.63	326	PKP	PKPdf	10 42 55.5	-2.0
	comp=Z,2.0nm,0.7s,baz=60,slow=2.5,SNR=12						
AKBB	Malin Array Si	127.63	326	ePKPdf	PKPdf	10 42 57.2	-0.4
KIEV	Kiev	127.64	326	ePKPdf	PKPdf	10 42 57.2	-0.4
KIEV	Kiev	127.64	326	ePKIKP	PKPdf	10 42 57.2	-0.4
BR131	Keskin Array S	129.58	312	ePKPdf	PKPdf	10 43 00.8	-1.0
BRTR	Keskin Array B	129.58	312	PKP	PKPdf	10 43 01.1	-0.7
	comp=Z,2.9nm,1.0s,baz=101,slow=1.5,SNR=10						
LSZ	Lusaka	130.01	238	ePKPdf	PKPdf	10 43 01.8	-1.5
LSZ	Lusaka	130.01	238	ePKIKP	PKPdf	10 43 01.8	-1.5
BUR04	Bucovina Ar. S	131.51	325	ePKPdf	PKPdf	10 43 05.1	-0.1
MORC	Moravsky Berou	134.11	332	ePKPdf	PKPdf	10 43 09.2	-0.8
MORC	Moravsky Berou	134.11	332	ePKIKP	PKPdf	10 43 09.2	-0.8
VYHS	Vyhne	134.36	329	ePKIKP	PKPdf	10 43 10.6	+0.1
VYHS	Vyhne	134.36	329	ePKP	PKPdf	10 43 10.5	+0.1
BRG	Berggiesshubel	134.89	335	ePKP	PKPdf	10 43 10.8	-0.5
	comp=Z,8.4nm,1.4s						
	comp=N,394nm,16.7s						
	comp=E,266nm,18.1s						
	comp=Z,339nm,16.2s						
BRG	Berggiesshubel	134.89	335	ePKIKP	PKPdf	10 43 10.8	-0.5
BRG				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BRG				MLR	MLR		
	comp=N,394nm,16.7s						
BRG				MLR	MLR		
	comp=E,266nm,18.1s						
BRG				MLR	MLR		
	comp=Z,339nm,16.2s						
CLL	Collm	134.94	336	ePKPdf	PKPdf	10 43 09.8	-1.6
CLL	Collm	134.94	336	ePKPdf	PKPdf	10 43 09.0	-2.4
CLL				ePKiKP	pPKPdf	10 43 12.0	-1.3
	comp=Z,6.0nm,1.2s						
CLL				e		10 43 18.0	
CLL				eSS	SS	11 03 42.0	+4.1
CLL				Lm	MLR	11 48 00.0	
	comp=N,200nm,19.1s						
CLL				Lm	MLR	11 48 00.0	
	comp=E,200nm,20.4s						
CLL				Lm	MLR	11 48 00.0	
	comp=Z,400nm,18.1s						
CLL	Collm	134.94	336	ePKIKP	PKPdf	10 43 09.0	-2.4
CLL				MLR	MLR		
	comp=Z,400nm,18.1s						
MODS	Modra-Piesok	135.21	330	ePKIKP	PKPdf	10 43 11.8	-0.2
MODS	Modra-Piesok	135.21	330	ePKP	PKPdf	10 43 11.8	-0.2
CONA	Conrad Observa	136.20	331	ePKiKP	PKPdf	10 43 14.8	+0.8
	comp=Z,12nm,1.5s						
KHC	Kasperske Hory	136.36	334	ePKPdf	PKPdf	10 43 13.9	-0.3
KHC	Kasperske Hory	136.36	334	ePKPDF	PKPdf	10 43 12.0	-2.2
KHC	Kasperske Hory	136.36	334	ePKIKP	PKPdf	10 43 12.0	-2.2
DIVS	Divibare	136.52	324	ePKPdf	PKPdf	10 43 14.3	-0.4
GEC2	GERESS Array S	136.52	333	ePKPdf	PKiKP	10 43 15.6	-0.7
GEC2	GERESS Array S	136.52	333	ePKIKP	PKiKP	10 43 15.6	-0.7
GERES	GERESS Array B	136.52	333	PKhKP	PKPpre	10 43 02.8	
	comp=Z,0.7nm,0.7s,baz=67,slow=3.5,SNR=5.5						
GERES				PKP	PKPdf	10 43 14.1	-0.5
	comp=Z,2.0nm,0.9s,baz=75,slow=1.5,SNR=10						
GEA0	GERESS Array S	136.53	333	ePKPdf	PKPdf	10 43 13.7	-0.9
KBA	Koelnbreinsper	137.99	332	eP	PKiKP	10 43 20.5	+1.1
	comp=Z,4.9nm,0.8s						
ABTA	Abfaltersbach	138.62	332	epPKPdf	PKiKP	10 43 20.4	-0.2
	comp=Z,6.7nm,1.1s						
MOTA	Moosalm	138.80	334	ePKPdf	PKPdf	10 43 16.3	-2.6
	comp=Z,6.0nm,1.0s						
SQTA	Sankt Quirin	138.85	334	ePKiKP	PKPdf	10 43 18.8	-0.1
	comp=Z,5.2nm,0.8s						
FETA	Feichten	139.21	334	ePKiKP	PKPdf	10 43 20.7	+1.0
	comp=Z,10nm,1.0s						
TIP	Timpagrande	141.40	320	ePKPdf	PKPdf	10 43 24.5	+0.8
BNI	Bardonecchia	142.48	335	ePKPdf	PKPdf	10 43 22.4	-3.2
BNI	Bardonecchia	142.48	335	ePKIKP	PKPdf	10 43 22.4	-3.2
SSB	Saint Sauveur	143.12	338	ePKPdf	PKPbc	10 43 23.6	+0.2
SSB	Saint Sauveur	143.12	338	ePKIKP	PKPbc	10 43 23.7	+0.3
KEST	Kesra	148.14	322	ePKPbc	PKPdf	10 43 37.0	+1.4
KEST	Kesra	148.14	322	PKPbc	PKPbc	10 43 38.6	-0.1
	comp=Z,25nm,0.9s,baz=70,slow=2.6,SNR=10						
CMAH	Djebel Manchou	148.64	325	P	PKPdf	10 43 36.8	+0.5
ABSA	Djebel Ababsia	148.86	325	P	PKPdf	10 43 37.2	+0.5
DFRA	Djebel Bou Aff	149.54	327	P	PKPbc	10 43 42.4	+0.1
PGAV	Gavieira, Arco	149.66	351	ePKPdf	PKPbc	10 43 41.0	-1.4
POLO	Lamas de Olo	150.16	350	ePKPdf	PKPbc	10 43 43.1	-0.6
ES19	SONSECA Array	150.89	343	ePKPbc	PKPbc	10 43 45.1	-0.3
ESDC	Sonseca Array	150.94	344	PKPbc	PKPbc	10 43 44.3	-1.2
	comp=Z,7.0nm,1.1s,baz=19,slow=2.3,SNR=15						
ESDC				PKPab	PKPab	10 43 52.9	+0.1
	comp=Z,5.3nm,0.9s,baz=19,slow=3.3,SNR=8.7						
MTE	Manteigas	151.07	349	ePKPdf	PKPbc	10 43 44.1	-1.7
PAB	San Pablo	151.16	344	ePKPbc	PKPbc	10 43 46.1	+0.1
PAB	San Pablo	151.16	344	ePKIKP	PKPbc	10 43 46.2	+0.1
PCBR	Castelo Branco	151.60	349	ePKPdf	PKPbc	10 43 46.9	0.0
PMRV	Marv??o	151.98	349	ePKPdf	PKPbc	10 43 45.9	-2.0
PESTR	Estremoz	152.56	349	ePKPdf	PKPbc	10 43 46.6	-2.6
PTEO	Sao Teotonio	154.05	350	ePKPdf	PKPdf	10 43 46.9	+2.5
TOA0	Torodi Ar. Sit	164.38	276	ePKPdf	PKPdf	10 43 55.3	-1.7
TOA0				ePKPdf	PKPdf	10 43 56.0	-1.0
TORD	Torodi Ar. Bea	164.38	276	PKP	PKPdf	10 43 55.1	-1.9
	comp=Z,5.1nm,1.1s,baz=59,slow=0.5,SNR=18						
TORD				PKPab	PKPab	10 44 51.1	-0.4
	comp=Z,2.6nm,0.9s,baz=75,slow=3.3,SNR=2.3						
KIC	Kosan Boka	169.08	240	ePKP2	PKPab	10 45 03.8	-8.3
	comp=Z,67nm,1.5s						
LIC	Lamto	169.25	239	ePKP2	PKPab	10 45 05.0	-7.9
	comp=Z,28nm,1.0s						
DBIC	Dimbokro	169.34	241	ePKPdf	PKPdf	10 43 59.4	-1.4
DBIC				ePKPab	PKPab	10 45 10.9	-2.3
DBIC	Dimbokro	169.34	241	ePKIKP	PKPdf	10 43 59.4	-1.4
DBIC				e		10 45 10.9	
DBIC	Dimbokro	169.34	241	PKP	PKPdf	10 43 59.8	-1.0
	comp=Z,8.6nm,1.1s,baz=89,slow=3.4,SNR=4.9						
DBIC				PKPab	PKPab	10 45 12.1	-1.2
	comp=Z,4.6nm,0.8s,baz=109,slow=6.9,SNR=4.7						
TIC	Toumodi	169.47	241	ePKP2	PKPab	10 45 04.1	-10

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*ISK **09** 10:33:16.9, 37°.08N×38°.85E, h5^{km}, ML1.8/5, Suspected Mining explosion.*

*ISCJB **09** 10:33:17.7±0.7, 37°.05N±0°.05×38°.83E±0°.06, h0^{km}, Error ellipse: s-maj=8.3km s-min=5.0km az=139.1*

*DDA **09** 10:33:17.8, 37°.04N×38°.80E, h7^{km}±1^{km}, ML2.5*

ISC 09 10:33:17.7±1.1**, 37°.04N**±0°.06×**38°.82E**±0°.05**, h0^{km}, n8, σ0^{s}73**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANL	SANLIURFA_Merk	0.18	45	i P	Pg	10 33 22.5	+1.2
SURC	SANLIURFA_SURC	0.23	227	i P	Pg	10 33 21.8	-0.4
SURC				i S	Sg	10 33 26.5	+1.3
SURC				IAML_P			
	comp=Z,2μm,0.2s						
URFA	Urfa	0.40	360	PG	Pg	10 33 24.9	-0.5
GZT	Gaziantep	1.05	288	i P	Pb	10 33 38.6	-0.4
GZT				IAML_P			
	comp=Z,350nm,0.2s						
GAZ	Gaziantep	1.30	276	PN	Pn	10 33 43.4	+0.2
MAZI	Mazidag	1.36	72	PN	Pg	10 33 42.9	-0.9
MAZI				SN	Sn	10 34 02.8	-0.1
DARE	Darende-Malaty	1.86	326	PN	Pn	10 33 50.9	-0.1
DARE				SN	Sn	10 34 15.3	+0.1
PTK	Pertek	1.90	13	PN	Pn	10 33 51.2	-0.4
PTK				SN	Sn	10 34 16.8	+0.4

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*ISCJB **09** 10:37:05.1±0.6, 44°.42N±0°.02×15°.36E±0°.03, h16^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=2.7km az=33.1*

*SAR **09** 10:37:05.6±0.5, 44°.45N×15°.43E, h4^{km}±2^{km}, ML2.8/1*

*PRU **09** 10:37:05.1±0.0, 44°.42N×15°.52E, h8^{km}*

*BEO **09** 10:37:05.8±1.5, 44°.93N×15°.40E, h29^{km}±1^{km}, ML2.8/4*

*LDG **09** 10:37:10.7±0.1, 44°.74N×15°.21E, h10^{km}, Ml2.7/8, Error ellipse: s-maj=2.8km s-min=2.1km az=176.0*

ISC 09 10:37:04.9±1.0**, 44°.47N**±0°.03×**15°.34E**±0°.03**, h15^{km}**±7^{km}**, n54, σ1^{s}91**/92**, 1C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UDBI	Udbina	0.31	79	i Pg	Pg	10 37 10.4	-0.9
UDBI				Sg	Sg	10 37 15.1	-0.7
NVLJ	Novalja	0.35	286	ePg	Pg	10 37 11.8	-0.3
NVLJ				Sg	Sg	10 37 18.2	+1.3
BOJS	Bojanci	1.04	356	⇑iPg	Pn	10 37 25.2	+0.3
BOJS				i Sg	Sn	10 37 40.2	+1.0
	comp=Z,38nm,0.2s						
GBRS	Gornja Briga	1.13	341	i Pg	Pn	10 37 26.8	+0.6
	comp=Z,29nm,0.1s						
OZLJ	Ozalj	1.15	4	ePn	Pg	10 37 26.8	-0.3
BLY	Banja Luka	1.34	77	ePg	Pn	10 37 29.0	-0.1
BLY				eSg	Sb	10 37 46.5	-0.3
BLY	Banja Luka	1.34	77	⇓iPg	Pn	10 37 28.6	-0.5
BLY				eSg	Sb	10 37 46.5	-0.3
CRES	Cresnjev	1.36	3	i Pg	Pb	10 37 30.4	+0.3
CRES				eSg	Sg	10 37 50.0	+1.2
CRES	Cresnjev	1.36	3	⇓iPg	Pb	10 37 30.3	+0.3
CRES				eSg	Sg	10 37 49.2	+0.5
VISS	Visnje	1.38	345	i Pn	Pg	10 37 31.5	0.0
VISS				i		10 37 31.7	
CEY	Cerknica	1.43	333	⇓iPg	Pb	10 37 31.7	+0.5
CEY				eSg	Sg	10 37 53.0	+2.1
LJU	Ljubljana	1.68	340	⇓iPn	Pb	10 37 35.6	+0.2
LJU				eSn	Sg	10 37 58.4	-0.5
VOJS	Vojsko	1.87	327	i Pn	Pn	10 37 38.1	+1.7
CADS	Cadrg	2.09	328	i Pn	Pn	10 37 41.4	+1.9
CADS				i Pg	Pg	10 37 44.2	-0.8
SOKA	Soboth	2.22	354	ePn	Pn	10 37 42.9	+1.7
	comp=Z,2.7nm,0.3s						
SOKA				Sg	Sb	10 38 11.8	-0.2
	comp=Z,3.9nm,0.3s						
BEHE	Becsehely	2.24	26	ePn	Pn	10 37 42.8	+1.4
BEHE				eSn	Sb	10 38 11.3	-1.3
STON	Ston	2.34	132	i Pn	Pn	10 37 42.7	0.0
STON				Sn	Sn	10 38 11.3	0.0
MYKA	Terra Mystica	2.47	332	ePn	Pb	10 37 48.5	-0.5
	comp=Z,3.5nm,0.2s						
MYKA				eSg	Sg	10 38 24.2	0.0
	comp=Z,15nm,0.3s						
HAPS	Han Pijesak,Bl	2.62	97	ePn	Pn	10 37 46.7	-0.1
HAPS	Han Pijesak,Bl	2.62	97	ePn	Pn	10 37 47.8	+1.1
HAPS				eSn	Sn	10 38 19.2	+0.9
ARSA	Arzberg	2.78	3	ePn	Pn	10 37 50.2	+1.2
	comp=Z,1.7nm,0.3s						
BRY	Bratogost	2.80	123	ePn	Pn	10 37 50.9	+1.7
BRY				eSn	Sn	10 38 23.8	+1.0
TREB	Trebinje	2.80	128	ePn	Pb	10 37 53.1	-1.5
TREB				eSn	Sb	10 38 27.8	-0.9
TREB	Trebinje	2.80	128	ePn	Pn	10 37 50.8	+1.7
TREB				eSn	Sn	10 38 24.2	+1.6
MORH	Mrgy, Hungar	2.91	52	eSn	Sn	10 38 26.9	+1.6
KBA	Koelnbreinsper	2.96	333	ePg	Pg	10 38 00.7	-0.9
	comp=Z,1.2nm,0.1s						
KBA				eSg	Sg	10 38 41.5	+1.6
	comp=Z,6.8nm,0.3s						
BBLS	Lazići	2.98	100	ePn	Pn	10 37 52.5	+0.8
BBLS	Lazići	2.98	100	ePn	Pn	10 37 52.3	+0.6
BBLS				eSn	Sn	10 38 28.5	+1.2
ABTA	Abfaltersbach	3.02	320	Pg	Pg	10 38 03.1	+0.3
	comp=Z,1.4nm,0.2s						
ABTA				Sg	Sg	10 38 42.8	+0.9
	comp=Z,54nm,0.8s						
HCY	Herceg Novi	3.06	130	ePn	Pn	10 37 54.1	+1.4
HCY				eSn	Sn	10 38 30.3	+1.3
DIVS	Divibare	3.36	95	ePn	Pn	10 37 57.0	+0.1
DIVS	Divibare	3.36	95	ePn	Pn	10 37 57.8	+0.9
DIVS				eSn	Sn	10 38 36.7	+0.2
MOA	Molln	3.46	348	i Pn	Pn	10 37 60.0	+1.7
	comp=Z,1.3nm,0.2s						
MOA				i Sn	Sn	10 38 41.8	+2.8
	comp=Z,3.2nm,0.2s						
CONA	Conrad Observa	3.48	6	i Pn	Pn	10 38 00.0	+1.5
	comp=Z,3.0nm,0.3s						
CONA				eSn	Sn	10 38 40.3	+0.9
	comp=Z,3.4nm,0.4s						
SJES	Sjenica	3.56	108	ePn	Pn	10 38 00.8	+1.1
IVAS	Ivanjica	3.58	103	ePn	Pn	10 38 00.2	+0.3
DRME	Dracevica, Mon	3.61	128	ePn	Pn	10 38 01.0	+0.7
DRME				eSn	Sn	10 38 43.2	+0.5
WATA	Walderalm	3.89	319	i Pn	Pn	10 38 06.4	+2.1
	comp=Z,1.1nm,0.2s						
GRUS	Gruza	3.91	97	ePn	Pn	10 38 05.2	+0.8
SQTA	Sankt Quirin	3.99	315	ePn	Pn	10 38 09.5	+3.9
	comp=Z,0.9nm,0.2s						
SQTA				eSg	Sg	10 39 13.2	+0.3
	comp=Z,5.7nm,0.3s						
FETA	Feichten	4.12	310	i Pn	Pn	10 38 10.0	+2.6
	comp=Z,0.3nm,0.3s						
FETA				eSn	Sn	10 38 57.7	+2.4
	comp=Z,2.0nm,0.4s						
RETA	Reutte	4.39	315	i Sn	Sn	10 39 05.5	+3.5
	comp=Z,1.0nm,0.2s						
VYHS	Vyhne	4.69	30	ePN	Pn	10 38 15.3	+0.2
VYHS				eSN	Sn	10 39 07.7	-1.6
VYHS				eLG	Lg	10 39 08.5	
KHC	Kasperske Hory	4.82	346	ePN	Pn	10 38 17.9	+1.0
KHC				ex	x	10 38 35.0	
KHC				eSN	Sn	10 39 13.4	+1.0
KHC				ex	x	10 39 33.5	
SBF	Sospel	5.72	267	ePn	Pn	10 38 32.3	+3.0
SBF				eSn	Sn	10 39 33.7	-1.0
	comp=Z,1.3nm,0.2s						
MBDF	Montbardon	6.13	275	ePn	Pn	10 38 38.0	+3.0
MBDF				eSn	Sn	10 39 43.0	-1.8
	comp=Z,0.4nm,0.2s						
FRF	La Foret Royal	6.34	265	ePn	Pn	10 38 40.6	+2.9
LMR	La Mourre	6.48	263	ePn	Pn	10 38 42.9	+3.2
ORIF	Oris-en-Rattie	6.76	277	ePn	Pn	10 38 45.8	+2.2
ORIF				eSn	Sn	10 39 57.9	-2.5
	comp=Z,0.4nm,0.2s						
HINF	Hinteralfeld	6.78	303	ePn	Pn	10 38 44.3	+0.5
HINF				eSn	Sn	10 39 56.2	-4.6
	comp=Z,0.8nm,0.2s						
CABF	La Chapelle	6.84	291	ePn	Pn	10 38 45.7	+1.0
CABF				eSn	Sn	10 39 58.2	-4.2
	comp=Z,0.4nm,0.2s						
HAU	Haudompre	7.17	303	ePn	Pn	10 38 50.3	+1.2
HAU				eSg	Sg	10 40 46.9	-7.9
	comp=Z,1.7nm,0.3s						
VIVF	Saint-Julien-l	7.62	277	ePn	Pn	10 38 57.9	+2.6
VIVF				eSn	Sn	10 40 17.8	-3.6
	comp=Z,0.4nm,0.2s						
SFTF	Sexfontaines	8.05	301	ePn	Pn	10 39 01.7	+0.5
SFTF				eSn	Sn	10 40 26.7	-5.2
	comp=Z,2.1nm,0.3s						

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*NEIC **09** 10:47:03.0±0.3, 10°.47S×166°.12E, h10^{km}, mb4.3/8, Error ellipse: s-maj=8.0km s-min=6.4km az=85.0*

*ISCJB **09** 10:47:04.5±0.5, 10°.57S±0°.06×166°.18E±0°.06, h35^{km}, mb4.5/21, MS3.8/4, Error ellipse: s-maj=9.1km s-min=6.8km az=42.3*

*IDC **09** 10:47:08.4±3.4, 10°.67S×166°.05E, h48^{km}±30^{km}, mb4.0/10, mb1 4.2/12, mb1mx3.8/48, mbtmp4.3/12, ML4.8/2, MS3.8/5, Ms1 3.8/5, ms1mx3.4/26, Error ellipse: s-maj=24.1km s-min=23.1km az=142.0*

ISC 09 10:47:06.6±0.7**, 10°.57S**±0°.10×**166°.22E**±0°.08**, h35^{km}, n56, σ1^{s}15**/50**, mb4.5**/21**, MS3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.28	280	eP	Pn	10 48 38.0	+1.2

HNR				eS	Sn	10 49 50.0	+2.5
HNR	Honiara	6.28	280	ePn	Pn	10 48 34.9	-2.0
HNR				eSn	Sn	10 49 47.9	+0.5
HNR	Honiara	6.28	280	P	Pn	10 48 37.3	+0.5
	23nm,0.3s,baz=149,slow=6.0,SNR=9.5						
HNR				S	Sn	10 49 47.9	+0.5
	7.7nm,0.3s,baz=72,slow=20,SNR=1.5						
HNR				LR	LR	10 50 56.1	
	comp=Z,1μm,20.5s,baz=113,slow=37						
MARNC	Mare, Loyalty	10.99	171	ePn	Pn	10 49 43.7	+2.3
DZM	Mont Dzumac	11.44	179	ePn	Pn	10 49 48.3	+0.6
	44nm,0.5s						
DZM				eLR	LR	10 52 23.0	
	comp=Z,702nm,25.6s						
DZM	Mont Dzumac	11.44	179	ePn	Pn	10 49 48.7	+1.0
DZM	Mont Dzumac	11.44	179	P	Pn	10 49 47.2	-0.5
	5.2nm,0.3s,baz=299,slow=20,SNR=53						
ONTNC	Ouen Toro	11.68	179	ePn	Pn	10 49 52.5	+1.7
PINNC	Pines Island,	12.04	175	ePn	Pn	10 49 58.6	+2.9
TARA	Tarawa	13.59	30	ePn	Pn	10 50 15.6	-1.4
EIDS	Eidsvold	20.57	222	eP	Pn	10 51 43.6	-1.2
	13nm,1.0s						
CTA	Charters Tower	21.44	241	P	P	10 51 51.2	-0.7
	8.2nm,0.7s,baz=70,slow=12,SNR=16						
CTAO	Charters Tower	21.44	241	eP	P	10 51 51.5	-0.5
	10nm,0.7s						
RAO	Raoul Island	23.78	144	P	P	10 52 13.4	-2.7
	310nm,0.4s,baz=253,slow=19,SNR=4.8						
H11S2	WAKE ISLAND Hy	28.88	1	T	T	11 23 28.6	
	baz=182						
H11S3	WAKE ISLAND Hy	28.88	1	T	T	11 23 29.0	
	baz=182						
H11S1	WAKE ISLAND Hy	28.89	1	T	T	11 23 30.0	
	baz=182						
BKZ	Black Stump Fm	29.92	164	eP	P	10 53 11.1	-0.2
	12nm,0.4s						
H11N1	WAKE ISLAND Hy	30.09	1	T	T	11 25 00.3	
	baz=184						
H11N3	WAKE ISLAND Hy	30.10	1	T	T	11 25 00.7	
	baz=184						
H11N2	WAKE ISLAND Hy	30.11	1	T	T	11 25 01.6	
	baz=184						
STKA	Stephens Creek	31.11	223	eP	P	10 53 22.2	+0.4
	1.6nm,1.4s						
STKA	Stephens Creek	31.11	223	P	P	10 53 21.3	-0.6
	1.1nm,0.6s,baz=43,slow=4.4,SNR=3.3						
BFZ	Birch Farm	31.28	165	eP	P	10 53 22.1	-1.1
	77nm,1.7s						
THZ	Tophouse	31.63	170	eP	P	10 53 26.4	0.0
	9.7nm,0.9s						
GUMO	Guam	32.01	318	LR	LR	11 05 30.3	
	comp=Z,113nm,21.2s,baz=133,slow=34						
WRAB	Tennant Creek	32.08	249	eP	P	10 53 29.9	-0.6
	4.9nm,0.8s						
WB2	Warramunga Arr	32.08	249	eP	P	10 53 29.7	-0.8
WR1	Warramunga Arr	32.09	249	eP	P	10 53 29.8	-0.9
WR1				ePcP	PcP	10 56 19.9	+0.2
WRA	Warramunga Arr	32.09	249	P	P	10 53 29.8	-0.9
	3.6nm,0.6s,baz=82,slow=9.1,SNR=48						
WRA				PcP	PcP	10 56 19.9	+0.2
	0.8nm,0.7s,baz=80,slow=4.7,SNR=3.0						
KHZ	Kahutara	32.37	170	eP	P	10 53 33.0	+0.3
	22nm,1.2s						
TOO	Toolangi	32.72	211	eP	P	10 53 36.8	+0.8
	9.9nm,1.1s						
FOZ	Fox Glacier	32.99	175	eP	P	10 53 38.5	+0.3
	23nm,1.1s						
RPZ	Rata Peaks	33.29	174	eP	P	10 53 40.9	0.0
RPZ	Rata Peaks	33.29	174	P	P	10 53 40.7	-0.1
	11nm,0.6s,baz=328,slow=1.5,SNR=12						
AS01	Alice Springs	33.39	243	eP	P	10 53 40.4	-1.6
AS31	Alice Springs	33.43	243	eP	P	10 53 41.1	-1.2
	1.2nm,0.7s						
AS31				ePcP	PcP	10 56 22.4	-1.0
ASAR	Alice Springs	33.43	243	P	P	10 53 40.3	-2.0
	3.9nm,0.7s,baz=72,slow=9.6,SNR=45						
ASAR				PcP	PcP	10 56 22.4	-1.0
	1.0nm,0.7s,baz=81,slow=2.3,SNR=5.4						
MQZ	McQueen's Vall	33.49	172	eP	P	10 53 42.5	0.0
	21nm,1.1s						
LBZ	Lake Benmore	33.87	175	eP	P	10 53 45.9	0.0
	35nm,1.5s						
FITZ	Fitzroy Crossi	39.96	254	eP	P	10 54 37.2	-0.8
	5.2nm,0.8s						
FITZ	Fitzroy Crossi	39.96	254	P	P	10 54 36.1	-1.9
	3.6nm,0.6s,baz=102,slow=6.7,SNR=8.5						
PPT	Papeete	43.36	104	LR	LR	11 10 58.0	
	comp=Z,106nm,19.7s,baz=288,slow=33						
PPT2	Papeete2	43.36	104	eLQ	LQ	11 05 55.3	
	609nm,27.8s						
PPT2				eLR	LR	11 07 46.3	
	comp=Z,170nm,23.0s						
MJAR	Matsushiro Arr	53.77	332	LR	LR	11 16 40.5	
	comp=Z,46nm,21.9s,baz=0.0,slow=33						
CM31	Chiang Mai Arr	72.35	293	eP	P	10 58 29.3	-0.2
CMAR	Chiang Mai Arr	72.35	293	P	P	10 58 28.7	-0.8
	0.6nm,0.3s,baz=122,slow=4.4,SNR=4.7						
ILAR	Eielson Array	82.91	18	P	P	10 59 28.3	+0.8
	0.9nm,0.8s,baz=242,slow=5.5,SNR=9.8						
ILB	Eielson Array	82.91	18	eP	P	10 59 28.2	+0.8
NV01	Mina Array Sit	85.36	50	eP	P	10 59 40.4	-0.4
NVAR	Mina Array Bea	85.36	50	P	P	10 59 41.9	+1.2
	0.3nm,0.3s,baz=193,slow=6.1,SNR=3.7						
INK	Inuvik	89.30	19	LR	LR	11 33 49.8	
	comp=Z,130nm,20.0s,baz=236,slow=31						
MK32	Makanchi Array	93.50	317	eP	P	11 00 18.7	-0.1
MKAR	Makanchi Array	93.50	317	P	P	11 00 18.7	-0.1
	0.3nm,0.7s,baz=80,slow=8.1,SNR=2.4						
AKASG	Malin Array Be	126.72	327	PKP	PKPdf	11 06 07.2	+0.8
	0.1nm,0.3s,baz=132,slow=16,SNR=4.9						
AKBB	Malin Array Si	126.72	327	ePKPdf	PKPdf	11 06 07.2	+0.8

IDC 09 10:48:22.1±0.8,10.°70S×165.°98E,h0^{km},mb4.1/12, mb1 4.3/14,mb1mx4.1/43,mbtmp4.2/14,ML4.4/2,MS3.8/6, Ms1 3.9/6,ms1mx3.5/26,Error ellipse: s-maj=30.6km s-min=16.8km az=144.0

GCMT 09 10:48:24.6±0.4,10.°67S±0.°02×166.°02E±0.°02,h24^{km}±2^{km}, MW4.9/68,Moment Tensor Solution. s18,c24; s68,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.83±.18; $M_{\theta\theta}$-0.13±.13; $M_{\phi\phi}$0.96±.15; $M_{r\theta}$0.29±.18; $M_{\theta\phi}$-2.38±.11; $M_{\phi r}$-0.14±.18; Best double couple: $M_0$2.46100×10^{16} NP1:ϕ_s277.00000°,δ88.00000°,λ-172.00000°. NP2: ϕ_s186.00000°,δ82.00000°,λ-2.00000°. Principal axes: T 2.8820, Plg4.0000°, Azm51.0000°; N -0.8410, Plg82.0000°, Azm288.0000°; P -2.0400, Plg7.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 09 10:48:29.6±0.3,11.°05S×165.°30E,h10^{km},mb4.6/9 Error ellipse: s-maj=10.5km s-min=6.3km az=159.0

ISCJB 09 10:48:30.6±0.4,11.°19S±0.°06×165.°30E±0.°06,h30^{km}, mb4.4/21,MS3.8/5,Error ellipse: s-maj=8.4km s-min=7.4km az=140.8

ISC 09 10:48:31.4±0.6,11.°02S±0.°08×165.°23E±0.°06,h30^{km},n49, σ2.^{s}03/43,mb4.6/21,MS4.0/5,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.43	286	ePn	Pn	10 49 51.3	+1.0
HNR				eSn	Sb	10 51 06.7	-3.7
HNR	Honiara	5.43	286	Pn	Pn	10 49 52.4	+2.0
	14nm,0.3s,baz=98,slow=15,SNR=2.9						
HNR				Sn	Sb	10 51 06.6	-3.7
	baz=90,slow=12,SNR=1.7						
DZM	Mont Dzumac	11.05	174	Pn	Pn	10 51 06.8	-0.8
	2.1nm,0.3s,baz=0.0,slow=14,SNR=3.4						
DZM				Sn	Sn	10 53 09.6	-0.7
	0.4nm,0.3s,baz=0.0,slow=20,SNR=2.3						
DZM				LR	LR	10 54 41.1	
	comp=Z,514nm,19.1s,baz=4.0,slow=34						
FUNA	Funafuti	13.99	81	ePn	Pn	10 51 47.0	-0.7
MSVF	Nonsavu	14.10	120	ePn	Pn	10 51 48.0	-1.2
EIDS	Eidsvold	19.58	221	eP	P	10 52 57.4	+0.3
	41nm,1.0s						
CTA	Charters Tower	20.36	241	P	Pn	10 53 08.8	+0.8
	18nm,1.1s,baz=84,slow=15,SNR=2.7						
CTAO	Charters Tower	20.36	241	eP	P	10 53 07.0	+1.3
	29nm,1.1s						
URZ	Urewera	29.14	161	LR	LR	11 03 48.0	
	comp=Z,316nm,18.8s,baz=352,slow=32						
H11S2	WAKE ISLAND Hy	29.36	3	T	T	11 24 43.6	
	baz=181,slow=76,SNR=993						
H11S3	WAKE ISLAND Hy	29.36	3	T	T	11 24 43.9	
	baz=181,slow=76,SNR=686						
H11S1	WAKE ISLAND Hy	29.37	3	T	T	11 24 44.5	
	baz=181,slow=76,SNR=18						
STKA	Stephens Creek	30.11	223	eP	P	10 54 39.2	+0.6
	0.9nm,0.9s						
STKA	Stephens Creek	30.11	223	P	P	10 54 39.1	+0.6
	2.7nm,0.9s,baz=69,slow=17,SNR=2.8						
H11N1	WAKE ISLAND Hy	30.58	3	T	T	11 26 14.9	
	baz=182						
H11N3	WAKE ISLAND Hy	30.59	3	T	T	11 26 14.7	
	baz=182						
H11N2	WAKE ISLAND Hy	30.60	3	T	T	11 26 15.7	
	baz=182						
WB2	Warramunga Arr	31.01	250	eP	P	10 54 48.5	+2.0
	15nm,0.9s						
WR1	Warramunga Arr	31.02	250	eP	P	10 54 49.1	+2.4
WR1				ePcP	PcP	10 57 39.5	-2.8
WRA	Warramunga Arr	31.02	250	P	P	10 54 49.1	+2.4
	12nm,0.9s,baz=79,slow=9.2,SNR=19						
WRA				PcP	PcP	10 57 39.5	-2.8
	0.5nm,0.9s,baz=81,slow=3.4,SNR=3.5						
WRA				LR	LR	11 06 19.2	
	comp=Z,353nm,20.2s,baz=90,slow=34						
AS01	Alice Springs	32.31	243	eP	P	10 54 59.5	+1.4
AS31	Alice Springs	32.35	243	eP	P	10 54 59.9	+1.4
	2.5nm,0.9s						
AS31				ePcP	PcP	10 57 44.0	-1.9
ASAR	Alice Springs	32.35	243	P	P	10 55 00.3	+1.9
	8.1nm,0.9s,baz=73,slow=9.4,SNR=19						
ASAR				PcP	PcP	10 57 44.1	-1.9
	0.9nm,0.9s,baz=60,slow=3.7,SNR=3.1						
FITZ	Fitzroy Crossi	38.90	255	eP	P	10 55 56.3	+1.7
	10nm,0.9s						
FITZ	Fitzroy Crossi	38.90	255	P	P	10 55 57.1	+2.5
	9.8nm,0.9s,baz=98,slow=7.6,SNR=7.6						
JCJ	Chichijima	43.99	330	LR	LR	11 11 39.3	
	comp=Z,82nm,21.0s,baz=128,slow=32						
CM01	Chiang Mai Arr	71.61	294	eP	P	10 59 50.9	+0.4
CM31	Chiang Mai Arr	71.64	294	eP	P	10 59 51.0	+0.3
CMAR	Chiang Mai Arr	71.64	294	P	P	10 59 51.0	+0.3
	0.6nm,0.4s,baz=103,slow=5.1,SNR=4.0						
CMAR				LR	LR	11 31 05.3	
	comp=Z,20nm,19.8s,baz=120,slow=36						
HDA	Harding Lake	83.38	19	eP	P	11 00 56.8	+1.5
	18nm,1.4s						
ILAR	Eielson Array	83.65	19	P	P	11 00 48.9	-7.8
	0.8nm,0.9s,baz=213,slow=7.6,SNR=3.1						
ILB	Eielson Array	83.65	19	eP	P	11 00 58.9	+2.2
NV01	Mina Array Sit	86.39	50	eP	P	11 01 11.9	+0.5
NVAR	Mina Array Bea	86.39	50	P	P	11 01 02.8	-8.6
	0.3nm,0.4s,baz=219,slow=8.0,SNR=2.9						
LCMT	Little Creek M	89.89	52	eP	P	11 01 30.8	+2.8
	16nm,1.6s						
U15A	North Rim	90.49	53	eP	P	11 01 34.0	+2.9
	9.7nm,1.2s						
MTPU	Mount Pierson	90.94	52	eP	P	11 01 30.1	-3.1
	9.3nm,1.3s						
BGU	Big Grassy Mou	90.98	49	eP	P	11 01 35.6	+2.6
BGU				ePcP	pP	11 01 38.8	-3.0
HVU	Hansel Valley	91.36	48	eP	P	11 01 35.0	+0.3
	8.4nm,1.2s						
MPU	Maple Canyon	91.81	50	eP	P	11 01 37.1	+0.2
	4.4nm,1.2s						
CTU	Camp Tracy	91.87	49	eP	P	11 01 37.4	+0.2
	3.8nm,1.0s						
DLMT	Dillon	92.32	44	eP	P	11 01 39.9	+0.8
BOZ	Bozeman (W)	93.03	44	eP	P	11 01 43.5	+1.1
	0.9nm,1.2s						
MK01	Makanchi Array	93.14	317	eP	P	11 01 43.9	+1.2
MKAR	Makanchi Array	93.15	317	P	P	11 01 39.4	-3.4
	0.6nm,0.9s,baz=109,slow=5.6,SNR=3.7						
ZALV	Zalesovo Beam	93.24	324	P	P	11 01 38.0	-4.9
	0.2nm,0.3s,baz=134,slow=6.2,SNR=2.7						
PDAR	Pinedale Array	93.91	47	P	P	11 01 39.3	-7.3
	0.6nm,1.1s,baz=227,slow=6.0,SNR=2.3						
PDAR				LR	LR	11 34 35.2	
	comp=Z,76nm,21.2s,baz=302,slow=30						
LENM	Lemitar	94.29	56	eP	P	11 01 51.2	+2.7
YKA	Yellowknife Ar	95.18	27	P	P	11 01 45.0	-6.6
	0.1nm,0.6s,baz=243,slow=5.5,SNR=3.0						

ISCJB 09 10:49:16.6±1.1,12.°7N±0.°1×93.°2E±0.°2,h58^{km},mb3.7/7, Error ellipse: s-maj=24.6km s-min=17.2km az=143.7

IDC 09 10:49:22.9±6.5,12.°90N×93.°34E,h96^{km}±57^{km},mb3.5/7, mb1 3.5/8,mb1mx3.2/56,mbtmp3.7/8,Error ellipse: s-maj=51.3km s-min=19.0km az=52.0

ISC 09 10:49:18.4±1.4,12.°7N±0.°2×93.°2E±0.°2,h58^{km},n8,σ1.^{s}13/8, mb3.7/7,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	7.96	44	P	Pn	10 51 12.6	+1.1
	baz=237,slow=15,SNR=4.0						
MKAR	Makanchi Array	35.16	347	P	P	10 56 07.2	+0.6
	0.5nm,0.8s,baz=155,slow=8.4,SNR=4.5						
KSRS	Korea Array	39.60	45	P	P	10 56 42.6	-1.6
	0.7nm,0.7s,baz=237,slow=8.9,SNR=3.6						
KURBB	Kurchatov Arra	39.62	345	P	P	10 56 43.5	-0.7
	0.9nm,0.2s,baz=164,slow=7.8,SNR=3.9						
GEYT	Alibeck	40.02	315	P	P	10 56 48.5	+0.6
	1.3nm,0.3s,baz=141,slow=9.3,SNR=2.0						
ZALV	Zalesovo Beam	41.64	353	P	P	10 56 59.8	-1.0
	0.4nm,0.4s,baz=157,slow=7.8,SNR=2.8						
WRA	Warramunga Arr	51.93	128	P	P	10 58 22.2	+0.4
	0.6nm,0.6s,baz=305,slow=8.3,SNR=5.9						
ASAR	Alice Springs	53.82	132	P	P	10 58 35.8	+0.1
	0.5nm,0.6s,baz=307,slow=6.5,SNR=4.4						

ISCJB 09 10:58:44.0±0.5,40.°94N±0.°03×29.°72E±0.°04,h12^{km},Error ellipse: s-maj=5.2km s-min=3.7km az=38.1

ISK 09 10:58:43.8,40.°93N×29.°72E,h10^{km},ML2.1/13

DDA 09 10:58:46.1,40.°91N×29.°98E,h7^{km}±1^{km},ML2.6

ISC 09 10:58:43.6±0.9,40.°96N±0.°04×29.°75E±0.°03,h12^{km},n17, σ0.^{s}67/21,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SILT	Sile	0.21	338	PG	Pb	10 58 48.9	-0.6
SILT				SG	Sg	10 58 52.8	+1.4
KAND	Kocaeli-Kandir	0.36	67	i P	Pb	10 58 51.7	-0.3
KAND				IAML_P			
	comp=Z,1μm,0.1s						
YLV	Yalova	0.48	216	PG	Pg	10 58 53.1	0.0
YLV				SG	Sg	10 59 00.2	+0.7
SAUV	Serdivan-Sakar	0.49	116	PG	Pb	10 58 54.1	-0.1
KAVV	Kandilli-Istan	0.53	282	PG	Pg	10 58 54.2	+0.2
KAVV				SG	Sg	10 59 01.9	+0.8
KLYT	Kilyos	0.61	299	PG	Pb	10 58 55.9	-0.3
KLYT				SG	Sb	10 59 05.0	+0.2
GEYV	SAKARYA_Geyve	0.63	138	i P	Pn	10 58 56.8	-1.6
GEYV				IAML_P			
	comp=Z,1μm,0.2s						
CAVI	Cavuskoy	0.76	174	PG	Pb	10 58 58.2	-0.5
BGKT	Bogazkoy	0.77	287	PG	Pg	10 58 58.4	-0.1
ARMT	Armutlu	0.78	240	PG	Pg	10 58 58.3	-0.4
GULT	Gulveren	0.78	132	PG	Pb	10 58 59.1	-0.1
SAHE	Sakarya_HENDEK	0.84	97	i P	Pn	10 59 00.9	-0.4
MDNY	Mudanya-Bursa	0.88	229	PG	Pb	10 59 00.7	-0.1
CTKS	Kestanelik-??a	0.98	287	PG	Pn	10 59 02.9	-0.3
BORA	Eskisehir	1.20	153	PN	Pg	10 59 06.8	+0.1
BORA	Eskisehir	1.20	153	i P	Pg	10 59 07.8	+1.1
BORA				IAML_P			
	comp=Z,2μm,0.1s						
TVSB	Tavsanli	1.52	188	PN	Pn	10 59 10.8	+0.1

IDC 09 10:59:40.0±1.3,11.°56S×164.°70E,h0^{km},mb3.6/5, mb1 3.9/6,mb1mx3.7/36,mbtmp3.7/6,ML3.8/1,Error ellipse: s-maj=47.4km s-min=26.6km az=130.0

ISCJB 09 10:59:43.2±1.0,11.°7S±0.°1×164.°7E±0.°2,h33^{km},mb3.5/5, Error ellipse: s-maj=28.1km s-min=19.8km az=6.6

ISC 09 10:59:45.2±1.0,11.°6S±0.°1×164.°7E±0.°2,h35^{km},n6, σ1.^{s}30/6,mb3.5/5,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.52	171	Pn	Pn	11 02 13.9	+0.3
	0.7nm,0.3s,baz=300,slow=20,SNR=3.2						
WRA	Warramunga Arr	30.36	250	P	P	11 05 53.1	-0.9
	0.4nm,1.0s,baz=80,slow=8.9,SNR=2.9						
ASAR	Alice Springs	31.65	244	P	P	11 06 05.0	-0.4
	0.8nm,1.0s,baz=69,slow=9.8,SNR=3.6						
ILAR	Eielson Array	84.38	19	P	P	11 12 13.5	0.0
	0.5nm,0.5s,baz=241,slow=4.7,SNR=9.8						
MKAR	Makanchi Array	93.27	317	P	P	11 12 58.0	+1.7
	0.1nm,0.6s,baz=104,slow=5.5,SNR=2.6						
YKA	Yellowknife Ar	95.94	27	P	P	11 13 07.0	-1.1
	0.1nm,0.3s,baz=264,slow=5.4,SNR=4.2						

IDC 09 11:01:44.5±3.9,10.°15S×166.°26E,h0^{km},mb3.6/4, mb1 3.8/4,mb1mx3.5/36,mbtmp3.6/4,Error ellipse: s-maj=169.7km s-min=31.6km az=136.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	32.27	249	P	P	11 08 13.7	-1.5
	0.9nm,0.9s,baz=79,slow=9.0,SNR=6.0						
ASAR	Alice Springs	33.65	242	P	P	11 08 28.4	+1.2
	0.5nm,1.0s,baz=68,slow=10,SNR=4.2						
ILAR	Eielson Array	82.51	18	P	P	11 14 08.4	-0.3
	0.4nm,0.8s,baz=231,slow=5.7,SNR=3.7						
MKAR	Makanchi Array	93.22	317	P	P	11 15 01.9	+0.9
	0.3nm,0.6s,baz=92,slow=5.9,SNR=4.1						

ISCJB 09 11:14:30.8±0.5,34.°86N±0.°08×136.°09E±0.°10,h350^{km}, mb2.6/3,Error ellipse: s-maj=11.7km s-min=10.2km az=142.7

IDC 09 11:14:31.4±1.0,34.°80N×136.°14E,h347^{km}±18^{km},mb2.7/3, mb1 2.8/8,mb1mx2.6/56,mbtmp3.5/8,Error ellipse: s-maj=33.2km s-min=18.0km az=58.0

JMA 09 11:14:32.1±0.1,34.°95N×136.°07E,h344^{km}±1^{km},M2.9

ISC 09 11:14:31.3±0.9,34.°91N±0.°10×136.°11E±0.°09,h350^{km},n18, σ0.^{s}84/21,mb2.5/3,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWT	Wachi	0.69	303	P	Pn	11 15 16.1	+0.2
JWT				eS	S	11 15 50.4	-1.4
JIE	Ise	0.71	136	P	Pn	11 15 16.5	+0.4
JWY	Kouya	0.81	212	P	Pn	11 15 16.9	+0.3
JYTA	Yamagatataniai	0.86	37	P	Pn	11 15 17.0	+0.6
TK02	Tokai 2	1.67	125	P	Pn	11 15 21.2	+1.0
JYN	Shimob	2.08	73	P	Pn	11 15 23.6	+0.4
MAT	Matsushiro	2.36	46	P	Pn	11 15 25.2	0.0
MAT				eS	S	11 16 06.6	-2.0
MAT	Matsushiro	2.36	46	P	Pn	11 15 25.5	+0.3
MJAR	Matsushiro Arr	2.37	46	P	Pn	11 15 25.6	+0.3
	0.3nm,0.3s,baz=216,slow=7.4,SNR=31						
MJAR				S	S	11 16 09.8	+1.1
	baz=241,slow=26,SNR=3.5						
JOD2	Odawara 2	2.47	81	P	Pn	11 15 26.5	+0.4
JRY	Ryogami san	2.54	63	P	Pn	11 15 27.3	+0.6
KSRS	Korea Array	7.09	293	P	Pn	11 16 15.7	+1.1
	0.1nm,0.3s,baz=106,slow=12,SNR=5.1						
USRK	Ussuriysk Ar.	9.81	342	P	P	11 16 48.0	-0.5
	0.4nm,0.3s,baz=156,slow=11,SNR=6.9						
ASAJ	Asahikawa	10.47	27	P	Pn	11 16 55.1	+0.5
	0.7nm,0.3s,baz=237,slow=7.4,SNR=7.8						
KLR	Kul'dur	14.67	349	P	Pn	11 17 44.2	+0.1
	0.2nm,0.3s,baz=209,slow=7.3,SNR=5.5						
MKAR	Makanchi Array	41.64	303	P	P	11 21 47.2	+0.8
	0.1nm,0.4s,baz=95,slow=8.4,SNR=4.2						
WRA	Warramunga Arr	54.57	182	P	P	11 23 23.8	-0.8
	0.5nm,0.4s,baz=359,slow=7.8,SNR=12						
ASAR	Alice Springs	58.29	182	P	P	11 23 50.4	-0.1
	0.1nm,0.5s,baz=13,slow=8.8,SNR=3.1						

MEX 09 11:15:24.0±0.7,16.°47N×98.°36W,h3^{km}±10^{km},MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.24	110	i P	Pg	11 15 28.1	-0.5
PNIG				i S	Sg	11 15 32.4	+0.7
VHO	Vista Hermosa	1.67	69	eP	Pn	11 15 51.3	-3.0
VHO				eS	Sn	11 16 11.7	-4.7
CAIG	El Cayaco	1.92	288	eP	Pn	11 15 55.1	-2.5
CAIG				eS	Sn	11 16 17.1	-5.0
PLIG	Platanillo	2.20	330	eP	Pn	11 15 57.6	-3.9
PLIG				eS	Sn	11 16 25.4	-3.9

ISCJB 09 11:15:56.9±1.4,10.°9S±0.°1×165.°8E±0.°1,h10^{km},mb4.2/11, Error ellipse: s-maj=26.0km s-min=8.1km az=38.9

IDC 09 11:15:57.1±2.8,10.°84S×165.°80E,h0^{km},mb4.0/4, mb1 4.2/6,mb1mx3.8/43,mbtmp4.2/6,ML4.3/2,Error ellipse: s-maj=48.8km s-min=35.3km az=55.0

NEIC 09 11:15:58.5±1.2,10.°77S×165.°76E,h10^{km},mb4.2/8,Error ellipse: s-maj=22.6km s-min=8.5km az=44.0

ISC 09 11:15:58.6±1.7,10.°8S±0.°2×165.°8E±0.°1,h10^{km},n25, σ1.^{s}09/20,mb4.1/11,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.96	283	ePn	Pn	11 17 27.6	+0.6
HNR				eSn	Sn	11 18 36.0	+0.7
HNR	Honiara	5.96	283	Pn	Pn	11 17 28.1	+1.2
	20nm,0.3s,baz=138,slow=4.4,SNR=6.8						
HNR				Sn	Sn	11 18 36.0	+0.7
	6.1nm,0.3s,baz=250,slow=22,SNR=1.6						
MARNC	Mare, Loyalty	10.83	169	ePn	Pn	11 18 34.6	+0.8
DZM	Mont Dzumac	11.23	177	Pn	Pn	11 18 40.2	+0.9
	1.0nm,0.3s,baz=308,slow=13,SNR=16						
ONTNC	Ouen Toro	11.46	177	ePn	Pn	11 18 43.5	+1.0
CTA	Charters Tower	21.00	242	P	Pn	11 20 43.1	-1.9
	4.5nm,0.8s,baz=64,slow=12,SNR=6.3						
CTAO	Charters Tower	21.00	242	eP	P	11 20 42.5	+0.1
	17nm,1.4s						
COEN	Coen	22.36	260	eP	P	11 20 55.5	-1.6
	8.7nm,1.1s						
ARMA	Armidale	23.58	212	eP	P	11 21 09.1	-0.6
	12nm,1.3s						
H11S2	WAKE ISLAND Hy	29.11	2	T	T	11 52 27.4	
	baz=181,slow=76,SNR=6.4						
H11S3	WAKE ISLAND Hy	29.11	2	T	T	11 52 29.8	
	baz=181,slow=76,SNR=3.8						
H11S1	WAKE ISLAND Hy	29.13	2	T	T	11 52 29.9	
	baz=181,slow=76,SNR=3.7						
BKZ	Black Stump Fm	29.81	163	eP	P	11 22 06.5	+0.6
	15nm,1.4s						
H11N1	WAKE ISLAND Hy	30.33	2	T	T	11 54 00.8	
	baz=185,slow=74,SNR=3.2						
H11N3	WAKE ISLAND Hy	30.34	2	T	T	11 53 59.4	
	baz=328,slow=74,SNR=3.0						
H11N2	WAKE ISLAND Hy	30.35	2	T	T	11 54 00.7	
BFZ	Birch Farm	31.16	165	eP	P	11 22 17.2	-0.5
	26nm,1.1s						
WRAB	Tennant Creek	31.64	250	eP	P	11 22 21.2	-1.0
	2.3nm,0.9s						
WB2	Warramunga Arr	31.64	249	eP	P	11 22 20.6	-1.7
	1.9nm,0.8s						
WR1	Warramunga Arr	31.66	249	eP	P	11 22 21.3	-1.1
WRA	Warramunga Arr	31.66	249	P	P	11 22 21.3	-1.1
	1.7nm,0.7s,baz=82,slow=9.1,SNR=24						
AS31	Alice Springs	32.99	243	eP	P	11 22 32.4	-1.7
	0.8nm,0.4s						
ASAR	Alice Springs	32.99	243	P	P	11 22 32.8	-1.3
	2.0nm,0.5s,baz=66,slow=10,SNR=40						
FITZ	Fitzroy Crossi	39.53	255	eP	P	11 23 29.3	-0.8
	14nm,1.3s						
MKAR	Makanchi Array	93.40	317	P	P	11 29 14.5	+0.2
	0.5nm,0.9s,baz=95,slow=6.1,SNR=3.9						

ISCJB 09 11:24:18.3±0.7,10.°94S±0.°07×165.°82E±0.°07,h10^{km}, mb4.2/12,MS4.3/2,Error ellipse: s-maj=12.3km s-min=6.7km az=138.4

IDC 09 11:24:18.3±1.0,10.°86S×165.°86E,h0^{km},mb3.9/7, mb1 4.2/9,mb1mx3.8/50,mbtmp4.0/9,ML4.4/2,MS4.3/2, Ms1 4.3/2,ms1mx3.2/29,Error ellipse: s-maj=24.6km s-min=21.5km az=137.0

NEIC 09 11:24:19.7±0.6,10.°82S×165.°87E,h10^{km},mb4.2/7,Error ellipse: s-maj=11.4km s-min=7.6km az=49.0

ISC 09 11:24:20.0±0.9,10.°86S±0.°08×165.°9E±0.°1,h10^{km},n30, σ0.^{s}85/26,mb4.1/13,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.03	283	Pn	Pn	11 25 49.8	+0.6
	28nm,0.3s,baz=175,slow=3.4,SNR=8.4						
HNR				Sn	Sn	11 26 58.6	+0.3
	3.5nm,0.3s,baz=210,slow=23,SNR=2.3						

MARNC	Mare, Loyalty	10.76	169	ePn	Pn	11 26 55.7	+1.5
DZM	Mont Dzumac	11.16	177	ePn	Pn	11 27 00.3	+0.5
DZM				eSn	Sn	11 29 04.4	-0.4
DZM	Mont Dzumac	11.16	177	Pn	Pn	11 27 00.1	+0.3
	1.0nm,0.3s,baz=319,slow=11,SNR=18						
DZM				Sn	Sn	11 29 04.6	-0.2
	0.3nm,0.3s,baz=108,slow=20,SNR=2.9						
ONTNC	Ouen Toro	11.40	177	ePn	Pn	11 27 04.0	+1.0
PINNC	Pines Island,	11.78	173	ePn	Pn	11 27 09.4	+1.2
EIDS	Eidsvold	20.13	222	eP	P	11 28 54.8	+0.5
	8.9nm,1.2s						
CTA	Charters Tower	21.02	242	P	P	11 29 04.3	+0.3
	3.2nm,0.8s,baz=73,slow=16,SNR=3.7						
CTAO	Charters Tower	21.02	242	eP	P	11 29 04.0	0.0
	8.8nm,1.1s						
RAO	Raoul Island	23.74	143	LR	LR	11 36 40.9	
	comp=Z,2µm,21.9s,baz=181,slow=31						
H11S2	WAKE ISLAND Hy	29.17	2	T	T	12 00 43.8	
	baz=181,slow=76,SNR=7.1						
H11S3	WAKE ISLAND Hy	29.18	2	T	T	12 00 44.1	
	baz=181,slow=76,SNR=6.0						
H11S1	WAKE ISLAND Hy	29.19	2	T	T	12 00 46.6	
	baz=181,slow=76,SNR=6.9						
BKZ	Black Stump Fm	29.73	163	eP	P	11 30 25.6	-0.9
	15nm,1.3s						
H11N1	WAKE ISLAND Hy	30.39	2	T	T	12 02 16.0	
	baz=182,slow=76,SNR=5.3						
H11N3	WAKE ISLAND Hy	30.40	2	T	T	12 02 13.0	
	baz=182,slow=76,SNR=6.6						
H11N2	WAKE ISLAND Hy	30.41	2	T	T	12 02 18.3	
	baz=182,slow=76,SNR=5.1						
BFZ	Birch Farm	31.08	165	eP	P	11 30 37.1	-1.3
	37nm,1.3s						
THZ	Tophouse	31.39	170	eP	P	11 30 40.9	-0.3
	36nm,1.4s						
WRAB	Tennant Creek	31.67	250	eP	P	11 30 43.0	-0.8
	3.2nm,1.0s						
WB2	Warramunga Arr	31.67	250	eP	P	11 30 42.3	-1.6
	4.6nm,1.0s						
WR1	Warramunga Arr	31.68	250	eP	P	11 30 43.2	-0.8
WRA	Warramunga Arr	31.68	250	P	P	11 30 43.2	-0.8
	1.9nm,0.9s,baz=82,slow=9.0,SNR=14						
AS31	Alice Springs	33.01	243	eP	P	11 30 54.6	-1.0
	0.7nm,1.0s						
ASAR	Alice Springs	33.01	243	P	P	11 30 54.2	-1.3
	1.3nm,0.8s,baz=66,slow=10.0,SNR=16						
RPZ	Rata Peaks	33.04	173	eP	P	11 30 55.5	0.0
	14nm,1.0s						
RPZ	Rata Peaks	33.04	173	P	P	11 30 55.9	+0.3
	6.6nm,0.9s,baz=278,slow=5.1,SNR=5.7						
ILAR	Eielson Array	83.29	18	P	P	11 36 47.0	+0.5
	0.5nm,0.7s,baz=239,slow=5.3,SNR=5.1						
NVAR	Mina Array Bea	85.79	50	P	P	11 36 59.9	-0.2
	0.7nm,0.5s,baz=212,slow=5.0,SNR=3.4						
NVAR				LR	LR	12 09 31.5	
	comp=Z,81nm,18.3s,baz=265,slow=32						
MKAR	Makanchi Array	93.49	317	P	P	11 37 36.0	-0.1
	0.3nm,0.8s,baz=117,slow=4.6,SNR=3.5						

IDC 09 11:27:39.7±1.7**, 10°.75S×165°.76E, h0km, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/49**, mbtmp3.8**/4**, ML3.6**/1**, Error ellipse: s-maj=55.5km s-min=30.6km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.27	177	Pn	Pn	11 30 22.5	+0.2
	0.5nm,0.3s,baz=210,slow=14,SNR=5.2						
WRA	Warramunga Arr	31.60	249	P	P	11 34 04.7	+0.1
	1.0nm,0.8s,baz=80,slow=9.0,SNR=7.2						
ASAR	Alice Springs	32.94	243	P	P	11 34 16.1	-0.2
	1.0nm,0.8s,baz=72,slow=9.7,SNR=8.1						
ILAR	Eielson Array	83.23	19	P	P	11 40 07.7	0.0
	0.4nm,1.0s,baz=227,slow=6.1,SNR=2.9						

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*ISCJB **09** 11:30:17.0±0.3, 10°.94S±0°.04×165°.84E±0°.05, h10km, mb4.6/43, MS3.8/10, Error ellipse: s-maj=7.2km s-min=4.9km az=151.3*

*IDC **09** 11:30:17.2±0.8, 10°.86S×165°.92E, h0km, mb4.4/17, mb1 4.5/19, mb1mx4.3/44, mbtmp4.4/19, ML4.6/2, MS3.9/12, Ms1 3.9/12, ms1mx3.6/31, Error ellipse: s-maj=22.2km s-min=15.5km az=111.0*

*NEIC **09** 11:30:18.7±0.2, 10°.88S×165°.86E, h10km, mb4.8/31, Error ellipse: s-maj=4.5km s-min=3.1km az=73.0*

ISC 09 11:30:18.8±0.5**, 10°.95S**±0°.07×**165°.87E**±0°.07**, h10km, n95, σ1ˢ.06**/86**, mb4.7**/43**, MS4.0**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.02	284	eP	Pn	11 31 50.0	+2.0
HNR				eS	Sn	11 32 55.0	-2.0
HNR	Honiara	6.02	284	ePn	Pn	11 31 48.3	+0.3
HNR				eSn	Sn	11 32 58.1	+1.1
HNR	Honiara	6.02	284	Pn	Pn	11 31 50.0	+2.0
	36nm,0.3s,baz=158,slow=2.6,SNR=20						
HNR				Sn	Sn	11 32 58.1	+1.1
	baz=308,slow=23,SNR=1.5						
HNR				LR	LR	11 34 17.8	
	comp=Z,2µm,18.7s,baz=147,slow=40						
MARNC	Mare, Loyalty	10.67	169	ePn	Pn	11 32 52.7	+0.9
DZM	Mont Dzumac	11.07	177	ePn	Pn	11 32 58.8	+1.4
	31nm,0.5s						
DZM				eSn	Sn	11 34 56.0	-5.3
	21nm,0.7s						
DZM				eLR	LR	11 35 37.8	
	comp=Z,608nm,23.9s						
DZM	Mont Dzumac	11.07	177	ePn	Pn	11 32 59.2	+1.8
DZM	Mont Dzumac	11.07	177	Pn	Pn	11 32 59.8	+2.4
	2.0nm,0.3s,baz=12,slow=6.3,SNR=14						
DZM				LR	LR	11 37 14.2	
	comp=Z,681nm,18.2s,baz=20,slow=37						
ONTNC	Ouen Toro	11.30	177	ePn	Pn	11 33 02.3	+1.8
PINNC	Pines Island,	11.69	173	ePn	Pn	11 33 07.3	+1.5
MSVF	Nonsavu	13.59	121	ePn	Pn	11 33 33.8	+2.0
EIDS	Eidsvold	20.04	222	eP	P	11 34 52.5	+0.3
	11nm,1.1s						
MANU	Manus Island	20.39	294	eP	P	11 34 56.3	+0.3
	74nm,1.1s						
CTA	Charters Tower	20.95	242	P	Pn	11 35 04.4	-0.2
	9.5nm,1.0s,baz=74,slow=9.6,SNR=12						
CTAO	Charters Tower	20.95	242	eP	P	11 35 02.8	+0.7
	18nm,1.0s						
COEN	Coen	22.36	260	eP	P	11 35 17.2	0.0
	12nm,1.1s						
ARMA	Armidale	23.46	212	eP	P	11 35 29.9	+1.2
	26nm,1.3s						
OUZ	Omahuta	25.16	165	eP	P	11 35 45.0	+0.8
	25nm,1.5s						
MXZ	Matakaoa Point	28.76	159	eP	P	11 36 17.0	+0.3
	60nm,1.3s						
URZ	Urewera	29.00	162	eP	P	11 36 19.1	+0.3
	19nm,1.2s						
URZ	Urewera	29.00	162	LR	LR	11 45 47.7	
	comp=Z,334nm,18.4s,baz=345,slow=32						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	12 06 40.0	
	baz=181,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.27	2	T	T	12 06 40.3	
	baz=181,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	12 06 41.4	
	baz=181,slow=76,SNR=41						
BKZ	Black Stump Fm	29.65	163	eP	P	11 36 24.6	0.0
	9.4nm,0.5s						
H11N1	WAKE ISLAND Hy	30.49	2	T	T	12 08 14.0	
	baz=182,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	12 08 14.4	
	baz=182,slow=76,SNR=21						
H11N2	WAKE ISLAND Hy	30.51	2	T	T	12 08 14.1	
	baz=182,slow=76,SNR=22						
STKA	Stephens Creek	30.59	223	eP	P	11 36 33.7	+0.7
	1.4nm,1.1s						
STKA	Stephens Creek	30.59	223	P	P	11 36 34.9	+1.9
	2.8nm,0.7s,baz=40,slow=9.3,SNR=6.3						
STKA				LR	LR	11 48 26.7	
	comp=Z,289nm,18.1s,baz=31,slow=36						
BFZ	Birch Farm	31.00	165	eP	P	11 36 35.3	-1.2
	34nm,1.3s						
THZ	Tophouse	31.31	170	eP	P	11 36 39.5	+0.3
	24nm,1.1s						
WRAB	Tennant Creek	31.61	250	eP	P	11 36 42.1	-0.1
	14nm,0.8s						
WB2	Warramunga Arr	31.61	250	eP	P	11 36 42.2	0.0
WR1	Warramunga Arr	31.63	250	eP	P	11 36 42.2	-0.1
WRA	Warramunga Arr	31.63	250	P	P	11 36 42.2	-0.1
	11nm,0.7s,baz=81,slow=9.2,SNR=101						
WRA				LR	LR	11 49 45.8	
	comp=Z,324nm,18.9s,baz=60,slow=37						
KHZ	Kahutara	32.05	169	eP	P	11 36 45.9	+0.2
	17nm,0.9s						
LTZ	Lake Taylor	32.20	171	eP	P	11 36 47.3	+0.2
	16nm,0.9s						
TOO	Toolangi	32.21	211	eP	P	11 36 46.9	-0.4
	9.0nm,1.1s						
OXZ	Oxford	32.70	172	eP	P	11 36 51.8	+0.4
	41nm,1.4s						
AS01	Alice Springs	32.90	243	eP	P	11 36 53.2	-0.2
AS31	Alice Springs	32.94	243	eP	P	11 36 53.5	-0.4
	1.4nm,0.6s						
ASAR	Alice Springs	32.94	243	P	P	11 36 53.8	-0.1
	3.9nm,0.6s,baz=64,slow=10,SNR=47						
ASAR				LR	LR	11 50 17.5	
	comp=Z,269nm,18.9s,baz=80,slow=36						
RPZ	Rata Peaks	32.95	173	P	P	11 36 53.8	+0.2
	19nm,0.7s,baz=298,slow=2.6,SNR=8.7						
MQZ	McQueen’s Vall	33.16	171	eP	P	11 36 55.9	+0.5
	22nm,1.1s						
LBZ	Lake Benmore	33.52	174	eP	P	11 36 58.6	0.0
	14nm,1.0s						
MTN	Manton Dam	34.02	263	eP	P	11 37 03.1	-0.2
	9.2nm,1.1s						
ODZ	Otahua Downs	34.22	174	eP	P	11 37 05.6	+1.0
	14nm,1.2s						
RAR	Rarotonga	34.48	112	LR	LR	11 48 07.1	
	comp=Z,131nm,20.4s,baz=304,slow=31						
BBOO	Buckleboo	34.98	227	eP	P	11 37 11.8	+0.4
	9.3nm,0.8s						
FITZ	Fitzroy Crossi	39.52	255	P	P	11 37 50.8	+0.7
	12nm,0.6s,baz=90,slow=7.0						
BATI	Baumata	41.47	267	LR	LR	11 56 37.1	
	comp=Z,187nm,18.7s,baz=124,slow=38						
MMRI	Maumere	43.03	269	eP	P	11 38 19.1	0.0
	41nm,1.2s						
PPT	Papeete	43.60	104	LR	LR	11 55 41.0	
	comp=Z,136nm,18.1s,baz=263,slow=35						
PPT2	Papeete2	43.60	104	eLQ	LQ	11 48 48.5	
	255nm,28.2s						
PPT2				eLR	LR	11 50 54.3	
	comp=Z,224nm,23.8s,baz=280						
MBWA	Marble Bar	45.34	251	eP	P	11 38 37.3	-0.2
	14nm,1.1s						
MORW	Morawa	49.77	241	eP	P	11 39 12.1	+0.2
	11nm,1.2s						
MJAR	Matsushiro Arr	53.94	332	P	P	11 39 42.0	-0.8
	3.1nm,0.9s,baz=174,slow=9.3,SNR=7.2						
MJAR				LR	LR	12 02 39.4	
	comp=Z,32nm,18.9s,baz=150,slow=36						
MAJO	Matsushiro	53.95	332	eP	P	11 39 42.0	-0.9
JNU	Nakatsue	55.08	324	eP	P	11 39 50.8	-0.3
	46nm,1.4s						
JNU	Nakatsue	55.08	324	P	P	11 39 50.8	-0.3
	4.8nm,0.6s,baz=105,slow=3.4,SNR=8.1						
KSRS	Korea Array	59.87	326	P	P	11 40 24.9	+0.1
	1.3nm,0.8s,baz=141,slow=6.9,SNR=7.0						
KSAR	Wonju Array Be	59.88	326	P	P	11 40 24.9	0.0
USRK	Ussuriysk Ar.	62.92	333	P	P	11 40 45.7	+0.4
	3.0nm,0.7s,baz=137,slow=7.6,SNR=7.3						
KLR	Kul'dur	67.02	336	P	P	11 41 11.8	-0.1
	1.5nm,0.7s,baz=144,slow=7.2,SNR=5.5						
XAN	Xi'an	70.15	312	eP	P	11 41 31.4	-0.4
	5.2nm,0.6s						
CM01	Chiang Mai Arr	72.16	293	eP	P	11 41 44.2	-0.1
CM31	Chiang Mai Arr	72.18	293	eP	P	11 41 43.9	-0.6
CMAR	Chiang Mai Arr	72.18	293	P	P	11 41 44.2	-0.3
	3.3nm,0.8s,baz=124,slow=4.7,SNR=6.1						
CMAR				LR	LR	12 16 03.4	
	comp=Z,30nm,18.1s,baz=260,slow=38						
CHTO	Chiang Mai	72.30	294	eP	P	11 41 44.8	-0.3
	3.9nm,0.9s						
ULN	Ulaanbaatar	78.30	324	eP	P	11 42 18.8	-0.5
	4.1nm,0.8s						
SONA0	Songino Array	78.66	324	eP	P	11 42 21.4	+0.1
SONM	Songino Array	78.66	324	P	P	11 42 21.4	+0.1
	0.8nm,0.5s,baz=134,slow=6.4,SNR=5.3						
SONA1	Songino Array	78.66	324	eP	P	11 42 20.5	-0.7
IM3	Indian Mountai	82.30	16	eP	P	11 42 40.4	+0.2
HDA	Harding Lake	83.12	19	eP	P	11 42 44.9	+0.4
	8.0nm,0.8s						
IL1	Eielson Array	83.39	18	eP	P	11 42 45.1	-0.8
ILAR	Eielson Array	83.39	18	P	P	11 42 45.7	-0.2
	1.9nm,0.6s,baz=234,slow=5.0,SNR=25						
ILB	Eielson Array	83.39	18	eP	P	11 42 45.9	0.0
SCRK	Sand Creek	83.79	20	eP	P	11 42 48.4	+0.3
	5.8nm,1.2s						
MK01	Makanchi Array	93.52	317	eP	P	11 43 34.1	-0.9
MK31	Makanchi Array	93.54	317	eP	P	11 43 34.3	-0.7
MK32	Makanchi Array	93.54	317	eP	P	11 43 34.4	-0.7
MKAR	Makanchi Array	93.54	317	eP	P	11 43 34.4	-0.7
	18nm,1.0s						
MKAR	Makanchi Array	93.54	317	P	P	11 43 34.4	-0.7
	2.2nm,0.8s,baz=98,slow=6.1,SNR=22						
ZALV	Zalesovo Beam	93.55	324	P	P	11 43 33.7	-1.2
	0.4nm,0.5s,baz=76,slow=6.3,SNR=4.4						
ZAA1	Zalesovo Array	93.55	324	eP	P	11 43 33.7	-1.2
YKA	Yellowknife Ar	94.84	27	P	P	11 43 41.6	+1.0
	0.3nm,0.6s,baz=259,slow=4.7,SNR=10.0						
YKB5	Yellowknife Ar	94.84	27	eP	P	11 43 40.9	+0.3
NRIK	Noril'sk	96.08	340	LR	LR	12 24 45.6	
	comp=Z,45nm,21.0s,baz=44,slow=34						
ARA0	ARCESS Array S	116.28	346	ePKPdf	PKiKP	11 49 00.7	-1.3
ARCES	ARCESS Array B	116.28	346	PKP	PKiKP	11 49 00.7	-1.3
	5.1nm,1.1s,baz=48,slow=2.0,SNR=6.4						
FIA0	FINESS Array S	121.73	339	ePKPdf	PKPdf	11 49 12.0	-0.7
FINES	FINESS Array B	121.73	339	PKP	PKPdf	11 49 12.0	-0.7
FINES	FINESS Array B	121.73	339	PKP	PKPdf	11 49 12.0	-0.7
	0.4nm,0.5s,baz=90,slow=0.4,SNR=4.4						
ESDC	Sonseca Array	150.00	344	PKPbc	PKPbc	11 50 09.2	-0.9
	0.5nm,0.5s,baz=21,slow=3.0,SNR=4.6						

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*NIED **09** 11:32:00, 24°.90N×123°.30E, h95km, Mw3.9 Best double couple: M0 8.80000×10^14 NP1:φs319.00000°, δ57.00000°, λ144.00000°. NP2:φs71.00000°, δ60.00000°, λ39.00000°.*

*ISCJB **09** 11:32:29.9±0.4, 24°.84N±0°.08×123°.31E±0°.05, h122km±4km, mb3.8/10, Error ellipse: s-maj=13.1km s-min=6.5km az=164.6*

*IDC **09** 11:32:29.9±2.9, 24°.93N×123°.37E, h112km±27km, mb3.5/9, mb1 3.5/10, mb1mx3.3/50, mbtmp3.8/10, Error ellipse: s-maj=19.9km s-min=14.9km az=71.0*

*JMA **09** 11:32:32.0±0.1, 24°.86N×123°.35E, h105km±2km, M4.0*

ISC 09 11:32:30.8±0.7**, 24°.87N**±0°.09×**123°.32E**±0°.05**, h118**km±7km**, n26, σ1ˢ.07**/41**, mb3.6**/10**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.49	215	P	Pn	11 32 48.5	+0.1
YOJ				S	Sn	11 33 00.9	-0.8
JYNG	Yonagunijimaku	0.53	219	P	Pn	11 32 48.8	+0.1
JYNG				S	Sn	11 33 01.6	-0.5
IRIF	Iriomote-Funau	0.65	144	P	Pn	11 32 49.3	-0.2
IRIF				S	Sn	11 33 02.3	-1.3
JKRS	Kuro-shima	0.89	135	P	Pn	11 32 51.8	+0.2
JKRS				S	Sn	11 33 06.7	-0.5
JIJ	Ishigaki jima	0.90	123	P	Pn	11 32 51.6	-0.1
JIJ				S	Sn	11 33 05.9	-1.6
HATJ	Hateruma jima	0.92	151	P	Pn	11 32 51.9	0.0
HATJ				S	Sn	11 33 07.7	0.0
JISG	Ishigakijimahi	0.95	107	P	Pn	11 32 52.2	+0.1
JISG				S	Sn	11 33 07.5	-0.6
JTJ	Tarama	1.28	100	P	Pn	11 32 56.1	+0.6
JTJ				S	Sn	11 33 14.2	-0.1
JIRB	Irabujima	1.69	91	P	Pn	11 33 00.8	+0.5
JIRB				S	Sn	11 33 22.5	-0.2
JIKM	Ikemajima	1.75	88	P	Pn	11 33 01.9	+0.8
JIKM				S	Sn	11 33 24.4	+0.2
JMJ	Miyako jima 2	1.80	91	P	Pn	11 33 02.5	+0.9
JMJ				S	Sn	11 33 25.1	0.0
JOGS	Gusukube	1.90	93	P	Pn	11 33 04.0	+1.1
JOGS				S	Sn	11 33 28.1	+0.7
JOW	Kunigami	4.88	65	P	Pn	11 33 41.2	-0.9
	1.7nm,0.3s,baz=115,slow=15,SNR=47						
JOW				S	Sn	11 34 34.8	-2.7
	2.7nm,0.3s,baz=93,slow=18,SNR=8.7						
KSRS	Korea Array	13.15	16	P	Pn	11 35 35.0	+2.1
	0.1nm,0.3s,baz=202,slow=10,SNR=8.0						
CMMT	Chiang Mai	23.39	260	P	P	11 37 31.7	+2.4
CHTO	Chiang Mai	23.39	260	P	P	11 37 32.4	+3.1
	17nm,0.8s						
CMAR	Chiang Mai Arr	23.51	259	P	P	11 37 30.4	0.0
	1.3nm,0.5s,baz=58,slow=7.8,SNR=10						
ASAJ	Asahikawa	24.82	35	P	P	11 37 40.8	-1.1
	12nm,1.1s,baz=198,slow=9.6,SNR=9.8						
MKAR	Makanchi Array	39.22	315	P	P	11 39 47.4	-0.2
	1.4nm,0.5s,baz=99,slow=9.9,SNR=16						
ZALV	Zalesovo Beam	40.75	326	P	P	11 39 59.2	-0.9
	1.1nm,0.5s,baz=118,slow=9.7,SNR=5.4						
WRA	Warramunga Arr	45.81	165	P	P	11 40 40.2	-0.9
	0.7nm,0.5s,baz=347,slow=8.6,SNR=10						
WRA				PcP	PcP	11 42 16.0	-0.6
	0.3nm,0.5s,baz=350,slow=3.9,SNR=4.6						
ASAR	Alice Springs	49.33	167	P	P	11 41 08.7	+0.5
	0.6nm,0.8s,baz=351,slow=6.8,SNR=12						
ASAR				PcP	PcP	11 42 29.1	-0.1
	0.3nm,0.5s,baz=340,slow=3.3,SNR=4.0						
FINES	FINESS Array B	71.84	330	P	P	11 43 39.7	-0.8
	0.8nm,0.8s,baz=67,slow=4.2,SNR=5.5						
NB2	NORSAR Subarra	78.52	333	P	P	11 44 18.4	-0.5
	comp=Z,0.1nm,0.3s,baz=54,slow=6.2						
NOA	NORSAR Array B	78.52	333	P	P	11 44 18.0	-0.9
	comp=Z,0.2nm,0.4s,baz=54,slow=6.0,SNR=3.4						
YKA	Yellowknife Ar	81.58	23	P	P	11 44 35.2	0.0
	comp=Z,0.4nm,0.8s,baz=307,slow=5.1,SNR=7.5						

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*IDC **09** 11:32:33.9±0.9, 11°.88S×165°.31E, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.2/36, mbtmp4.1/13, ML4.0/1, Error ellipse: s-maj=34.0km s-min=18.3km az=140.0*

*NEIC **09** 11:32:35.5±0.2, 11°.85S×165°.28E, h10km, mb4.7/16, Error ellipse: s-maj=5.5km s-min=4.4km az=146.0*

*ISCJB **09** 11:32:37.4±0.3, 11°.97S±0°.06×165°.21E±0°.05, h33km, mb4.4/26, Error ellipse: s-maj=8.0km s-min=6.8km az=3.5*

ISC 09 11:32:39.1±0.5**, 11°.91S**±0°.08×**165°.26E**±0°.07**, h35km, n42, σ0ˢ.55**/43**, mb4.4**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.78	295	ePn	Pn	11 34 01.7	-0.7
HNR				eSn	Sn	11 35 07.8	+0.4
DZM	Mont Dzumac	10.17	174	ePn	Pn	11 35 02.2	-0.5
DZM	Mont Dzumac	10.17	174	Pn	Pn	11 35 01.9	-0.9
	1.2nm,0.3s,baz=117,slow=23,SNR=8.3						
ONTNC	Ouen Toro	10.40	174	ePn	Pn	11 35 06.2	+0.4
MSVF	Nonsavu	13.65	117	ePn	Pn	11 35 50.2	-0.1
CTA	Charters Tower	19.98	244	P	Pn	11 37 10.2	-0.4
	9.5nm,0.8s,baz=58,slow=13,SNR=6.4						
CTAO	Charters Tower	19.98	244	eP	Pn	11 37 09.7	-1.0
	17nm,1.0s						
COEN	Coen	21.62	262	eP	P	11 37 26.8	+0.3
	9.3nm,1.0s						
ARMA	Armidale	22.34	212	eP	P	11 37 34.9	+0.8
	29nm,1.0s						
BKZ	Black Stump Fm	28.92	162	eP	P	11 38 35.6	+0.6
	4.9nm,1.0s						
STKA	Stephens Creek	29.49	224	P	P	11 38 40.9	+0.8
	1.5nm,0.3s,baz=17,slow=8.4,SNR=4.2						
WB2	Warramunga Arr	30.74	251	eP	P	11 38 51.5	+0.2
	11nm,1.0s						
WRAB	Tennant Creek	30.74	251	eP	P	11 38 51.1	-0.2
	9.4nm,1.0s						
WR1	Warramunga Arr	30.75	251	eP	P	11 38 50.7	-0.7
WRA	Warramunga Arr	30.75	251	P	P	11 38 50.7	-0.7
	6.4nm,0.9s,baz=78,slow=9.8,SNR=14						
AS01	Alice Springs	31.95	244	eP	P	11 39 01.5	-0.4
ASAR	Alice Springs	31.99	244	P	P	11 39 01.4	-0.9
	4.1nm,0.8s,baz=76,slow=9.2,SNR=12						
MORW	Morawa	48.80	242	eP	P	11 41 20.9	-0.2
	14nm,0.9s						
CM01	Chiang Mai Arr	72.00	294	eP	P	11 43 59.8	0.0
CMAR	Chiang Mai Arr	72.03	294	P	P	11 44 01.3	+1.3
	1.0nm,0.8s,baz=120,slow=4.7,SNR=6.5						
QSPA	South Pole Qui	78.10	180	eP	P	11 44 34.6	+0.2
	9.5nm,1.2s						
SONA0	Songino Array	79.08	324	eP	P	11 44 40.6	+0.6
SONM	Songino Array	79.08	324	P	P	11 44 40.6	+0.6
	0.3nm,0.4s,baz=107,slow=5.0,SNR=3.0						
IM3	Indian Mountai	83.38	16	eP	P	11 45 02.5	+0.2
HDA	Harding Lake	84.21	19	eP	P	11 45 06.9	+0.3
	6.1nm,0.9s						
IL1	Eielson Array	84.48	19	eP	P	11 45 07.9	0.0
ILAR	Eielson Array	84.48	19	P	P	11 45 07.9	0.0
	1.1nm,0.7s,baz=237,slow=5.4,SNR=7.4						
DOT	Dot Lake	84.65	20	eP	P	11 45 09.3	+0.4
	13nm,1.1s						
SCRK	Sand Creek	84.89	20	eP	P	11 45 10.2	0.0
	22nm,1.3s						
AFDM	Forest Hills D	85.12	49	eP	P	11 45 11.8	0.0
	8.4nm,1.1s						
NV01	Mina Array Sit	86.94	50	eP	P	11 45 20.6	-0.4
NVAR	Mina Array Bea	86.94	50	P	P	11 45 21.4	+0.4
	2.3nm,0.8s,baz=231,slow=6.7,SNR=6.1						
LCMT	Little Creek M	90.40	52	eP	P	11 45 37.5	+0.1
	5.1nm,1.0s						
CCUT	Cedar City	90.45	52	eP	P	11 45 37.8	+0.1
	3.6nm,1.1s						
U15A	North Rim	91.00	53	eP	P	11 45 39.8	-0.6
	4.7nm,0.9s						
MPU	Maple Canyon	92.36	50	eP	P	11 45 46.5	0.0
	0.2nm,0.5s						
MK32	Makanchi Array	93.83	317	eP	P	11 45 53.1	+0.2
MKAR	Makanchi Array	93.83	317	P	P	11 45 53.1	+0.2
	0.8nm,0.9s,baz=92,slow=10,SNR=3.6						
PDAR	Pinedale Array	94.48	47	P	P	11 45 56.8	+0.6
	0.3nm,0.7s,baz=251,slow=9.0,SNR=3.7						
YKA	Yellowknife Ar	95.95	27	P	P	11 46 00.8	-1.3
	0.3nm,0.6s,baz=258,slow=4.7,SNR=6.2						
TXAR	Lajitas Array	96.66	62	P	P	11 46 06.3	+0.1
	0.1nm,0.8s,baz=238,slow=4.3,SNR=4.2						
LTX	Lajitas	96.66	62	eP	P	11 46 06.3	+0.1

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*ISCJB **09** 11:36:44.1±0.4, 11°.67S±0°.05×166°.36E±0°.06, h10km, mb4.3/19, Error ellipse: s-maj=8.3km s-min=7.3km az=170.6*

*NEIC **09** 11:36:45.8±0.4, 11°.56S×166°.40E, h10km, mb4.4/12, Error ellipse: s-maj=10.5km s-min=8.1km az=126.0*

*IDC **09** 11:36:52.0±3.5, 11°.64S×166°.33E, h57km±30km, mb3.9/10, mb1 4.2/12, mb1mx3.9/35, mbtmp4.2/12, ML4.4/2, Error ellipse: s-maj=23.2km s-min=21.0km az=148.0*

ISC 09 11:36:45.7±0.6**, 11°.60S**±0°.07×**166°.48E**±0°.08**, h10km, n38, σ1ˢ.33**/41**, mb4.3**/19**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.77	288	ePn	Pn	11 38 27.6	+2.3
HNR				eSn	Sn	11 39 43.5	+1.0
HNR	Honiara	6.77	288	P	Pn	11 38 28.6	+3.4
	16nm,0.3s,baz=169,slow=1.9,SNR=12						
HNR				S	Sn	11 39 40.8	-1.7
	6.7nm,0.3s,baz=58,slow=22,SNR=3.2						
DZM	Mont Dzumac	10.41	180	ePn	Pn	11 39 17.2	+1.9
DZM				eSn	Sn	11 41 10.8	-1.4
DZM	Mont Dzumac	10.41	180	P	Pn	11 39 17.6	+2.3
	1.4nm,0.3s,baz=212,slow=7.7,SNR=8.7						
ONTNC	Ouen Toro	10.65	180	ePn	Pn	11 39 20.4	+2.0
EIDS	Eidsvold	19.99	225	eP	Pn	11 41 20.2	0.0
	8.6nm,1.0s						
CTA	Charters Tower	21.19	244	P	P	11 41 32.5	+0.9
	4.6nm,0.6s,baz=79,slow=12,SNR=8.2						
CTAO	Charters Tower	21.19	244	eP	P	11 41 31.8	+0.2
	20nm,1.4s						
COEN	Coen	22.84	262	eP	P	11 41 49.0	-0.4
	11nm,0.9s						
ARMA	Armidale	23.25	214	eP	P	11 41 53.5	0.0
	17nm,0.8s						
BKZ	Black Stump Fm	28.86	164	eP	P	11 42 44.2	-0.4
	18nm,1.4s						
BFZ	Birch Farm	30.22	165	eP	P	11 42 56.7	+0.1
	26nm,1.3s						
STKA	Stephens Creek	30.54	225	eP	P	11 42 59.3	-0.2
	1.7nm,1.4s						
STKA	Stephens Creek	30.54	225	P	P	11 42 59.6	+0.1
	5.3nm,0.7s,baz=49,slow=8.9,SNR=11						
WB2	Warramunga Arr	31.96	251	eP	P	11 43 10.0	-2.2
WR1	Warramunga Arr	31.97	251	eP	P	11 43 10.8	-1.5
WRA	Warramunga Arr	31.97	251	P	P	11 43 10.8	-1.5
	3.1nm,0.6s,baz=84,slow=9.3,SNR=41						
AS01	Alice Springs	33.15	244	eP	P	11 43 21.2	-1.4
AS31	Alice Springs	33.19	244	eP	P	11 43 21.0	-2.0
	1.3nm,0.6s						
ASAR	Alice Springs	33.19	244	P	P	11 43 21.2	-1.8
	3.3nm,0.6s,baz=68,slow=9.7,SNR=66						
FITZ	Fitzroy Crossi	39.93	256	eP	P	11 44 19.6	-0.9
	6.5nm,0.8s						
MBWA	Marble Bar	45.70	252	eP	P	11 45 06.1	-1.2
	12nm,0.9s						

CM01	**Chiang Mai Arr**	72.96	293	eP	P	11 48 15.3	-0.7
CM31	**Chiang Mai Arr**	72.99	293	eP	P	11 48 15.6	-0.6
CMAR	**Chiang Mai Arr**	72.99	293	P	P	11 48 16.3	+0.1
	1.9nm,0.8s,baz=126,slow=5.0,SNR=12						
IM3	**Indian Mountai**	82.77	15	eP	P	11 49 10.6	+1.0
MDM	**Murphy Dome**	83.54	18	eP	P	11 49 13.9	+0.3
	2.2nm,1.1s						
HDA	**Harding Lake**	83.54	19	eP	P	11 49 14.1	+0.5
	4.9nm,0.7s						
IL1	**Eielson Array**	83.81	18	eP	P	11 49 15.8	+0.8
ILAR	**Eielson Array**	83.81	18	P	P	11 49 15.7	+0.6
	0.9nm,0.5s,baz=238,slow=5.1,SNR=24						
ILB	**Eielson Array**	83.81	18	eP	P	11 49 15.6	+0.6
NVAR	**Mina Array Bea**	85.83	50	P	P	11 49 25.9	-0.2
	0.6nm,0.7s,baz=250,slow=7.6,SNR=2.8						
NV01	**Mina Array Sit**	85.83	50	eP	P	11 49 26.1	0.0
MK32	**Makanchi Array**	94.41	317	eP	P	11 50 04.7	-1.4
MKAR	**Makanchi Array**	94.41	317	P	P	11 50 04.7	-1.4
	1.1nm,0.8s,baz=89,slow=6.4,SNR=8.0						
YKA	**Yellowknife Ar**	95.14	27	P	P	11 50 07.9	-1.0
	0.2nm,0.7s,baz=250,slow=4.9,SNR=3.8						
TXAR	**Lajitas Array**	95.47	61	P	P	11 50 12.2	+0.8
	0.2nm,0.7s,baz=228,slow=3.5,SNR=2.6						
ARCES	**ARCESS Array B**	117.05	346	PKP	PKiKP	11 55 30.5	+0.1
	2.0nm,0.8s,baz=27,slow=3.0,SNR=6.3						

JMA 09 11:52:49.1±0.1**,38°.39N**×**142°.11E,h33**^{km}±1^{km}**,M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	0.51	261	P	Pb	11 52 59.5	-0.4
JIKH				S	Sb	11 53 06.5	-0.8
JIO	**Ouri**	0.60	276	P	Pn	11 53 01.1	-0.2
JIO				S	Sb	11 53 09.2	-0.5
JKMT	**Kesennumamotoy**	0.65	310	P	Pn	11 53 02.0	0.0
JKMT				S	Sb	11 53 10.9	-0.1
OFUJ	**Ofunato**	0.77	334	P	Pn	11 53 03.5	-0.2
OFUJ				S	Sn	11 53 13.6	-0.5
JMK	**Ichinoseki**	0.90	309	P	Pn	11 53 05.5	+0.2
JMK				S	Sn	11 53 17.1	0.0
JOU	**Okura**	1.14	269	P	Pn	11 53 09.4	+0.7
JOU				S	Sn	11 53 23.7	+0.5
JMM	**Marumori**	1.16	244	P	Pn	11 53 08.8	-0.2
JMM				eS	Sn	11 53 22.9	-0.9
JOM	**Ohasama**	1.25	330	P	Pn	11 53 11.2	+0.9
JOM				S	Sn	11 53 26.9	+0.8

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*ISCJB **09** 12:17:35.6±0.4, 42°.09N±0°.05×140°.63E±0°.06, h135^{km}±3^{km}, mb3.6/10, Error ellipse: s-maj=8.3km s-min=6.5km az=142.1*

*IDC **09** 12:17:36.5±1.4, 42°.14N×140°.68E, h126^{km}±11^{km}, mb3.4/10, mb1 3.5/13, mb1mx3.3/44, mbtmp3.7/13, MS2.6/1, Ms1 2.6/1, ms1mx2.1/27, Error ellipse: s-maj=20.5km s-min=12.8km az=132.0*

*JMA **09** 12:17:37.1±0.1, 42°.09N×140°.67E, h127^{km}±1^{km}, M3.1*

ISC 09 12:17:36.5±0.7**,42°.06N**±0°.05×**140°.65E**±0°.05**,h131**^{km}±6^{km}**, n31,**σ**0^s.92**/38**,mb3.6**/10**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYM2	**Yakumo 2**	0.21	286	P	Pn	12 17 54.7	+0.2
JYM2				eS	Sn	12 18 08.0	-0.1
JKB	**Kayabe**	0.34	121	P	Pn	12 17 55.0	+0.2
JNB	**Noboribetsu**	0.50	35	P	Pn	12 17 55.5	-0.1
JNB				eS	Sn	12 18 09.5	-0.7
JSR	**Shiriuchi**	0.56	198	P	Pn	12 17 56.4	+0.4
JSR				eS	Sn	12 18 10.7	0.0
JHST	**Hiyamasetana**	0.68	303	P	Pn	12 17 56.9	+0.1
JHST				eS	Sn	12 18 11.9	-0.2
JSH	**Shimam**	0.73	323	P	Pn	12 17 57.6	+0.4
JOT	**Ohata**	0.74	156	P	Pn	12 17 57.6	+0.3
JOSM	**Okushiri--Mats**	0.87	272	P	Pn	12 17 58.5	+0.2
JOSM				eS	Sn	12 18 14.5	-0.3
JIAM	**Iburiatsuma**	1.10	59	eS	Sn	12 18 19.2	+0.6
JSK	**Shakotan**	1.30	354	P	Pn	12 18 03.0	+0.6
JSK				eS	Sn	12 18 22.5	+0.3
JTM	**Tenmabayashi**	1.31	166	P	Pn	12 18 03.3	+0.7
JISS	**Ishikarishitsu**	1.34	25	P	Pn	12 18 03.8	+0.9
JNBK	**Urakawa-nobuka**	1.58	81	P	Pn	12 18 05.6	+0.1
JANG	**Nango**	1.81	158	P	Pn	12 18 07.9	-0.3
JFR	**Furan**	1.81	52	P	Pn	12 18 09.1	+0.9
JHR	**Hokuryu**	1.86	25	P	Pn	12 18 09.9	+1.1
JCH	**Churui**	2.09	74	P	Pn	12 18 11.8	+0.3
JCH				eS	Sn	12 18 38.2	-0.2
ASAJ	**Asahikawa**	2.50	34	P	Pn	12 18 17.4	+0.7
	6.9nm,0.3s,baz=228,slow=12,SNR=98						
ASAJ				S	Sn	12 18 45.2	-2.5
	1.9nm,0.3s,baz=261,slow=4.6,SNR=5.3						
MJAR	**Matsushiro Arr**	5.82	200	P	Pn	12 19 02.8	+2.1
	0.1nm,0.3s,baz=25,slow=11,SNR=11						
USRK	**Ussuriysk Ar.**	6.69	292	P	Pn	12 19 13.6	+1.5
	0.3nm,0.3s,baz=117,slow=13,SNR=11						
KLR	**Kul'dur**	9.49	322	LR	LR	12 23 51.9	
	comp=Z,39nm,20.9s,baz=360,slow=40						
SEY	**Seymchan**	22.02	14	P	P	12 22 17.8	-2.3
	0.6nm,0.4s,baz=205,slow=14,SNR=6.9						
ZALV	**Zalesovo Beam**	38.23	308	P	P	12 24 43.2	-0.1
	1.1nm,0.3s,baz=89,slow=7.3,SNR=12						
MKAR	**Makanchi Array**	41.12	297	P	P	12 25 07.5	+0.1
	0.7nm,0.5s,baz=83,slow=11,SNR=9.9						
ILAR	**Eielson Array**	45.64	35	P	P	12 25 43.6	+0.3
	0.4nm,0.9s,baz=293,slow=7.3,SNR=5.1						
INK	**Inuvik**	50.23	29	P	P	12 26 19.5	+0.9
	1.7nm,0.3s,baz=294,slow=7.5,SNR=29						
ARCES	**ARCESS Array B**	59.10	338	P	P	12 27 23.3	+0.8
	1.4nm,0.8s,baz=56,slow=8.0,SNR=3.3						
YKA	**Yellowknife Ar**	59.80	31	P	P	12 27 28.4	+1.1
	0.2nm,0.6s,baz=308,slow=6.2,SNR=5.6						
WRA	**Warramunga Arr**	61.96	187	P	P	12 27 42.1	-0.3
	0.2nm,0.4s,baz=2.7,slow=7.1,SNR=4.9						
FINES	**FINESS Array B**	64.12	331	P	P	12 27 55.9	-0.3
	0.9nm,0.5s,baz=44,slow=5.8,SNR=15						
NOA	**NORSAR Array B**	69.34	336	P	P	12 28 28.2	-1.2
	0.8nm,0.8s,baz=39,slow=6.3,SNR=3.9						

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*KRNET **09** 12:19:17.1±0.1, 39°.61N×73°.99E, mb3.2*

*NNC **09** 12:19:17.4±0.5, 39°.73N×74°.08E, h1^{km}±2^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=3.9km s-min=2.2km az=176.0*

ISC 09 12:19:18.9±1.9**,39°.71N**±0°.08×**74°.00E**±0°.04**,h8**^{km}±11^{km}**, n40,**σ**1^s.45**/57**,29C-11D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	0.48	308	⇑P	Pg	12 19 27.8	-0.5
	24nm,0.2s						
SFK				⇓S	Sg	12 19 35.6	+0.8
	101nm,0.3s						
SFK	**Sufi-Kurgan**	0.48	308	⇑iP	Pg	12 19 27.8	-0.5
	baz=17						
SFK				⇑iS	Sg	12 19 35.4	+0.7
	baz=17						
ARSB	**Arslanbob**	1.79	335	⇓iP	Pb	12 19 51.7	-0.2
	baz=36						
ARSB				⇓iS	Sg	12 20 17.2	+0.9
	baz=36						
ARLS	**Aral**	2.16	6	⇑iP	Pb	12 19 57.1	-1.2
	baz=6.0						
ARLS				⇑iS	Sb	12 20 25.8	+0.5
	baz=6.0						
NRN	**Naryn**	2.30	41	⇑iP	Pn	12 19 58.0	+0.7
	baz=39						
NRN				⇑iS	Sb	12 20 28.7	-0.7
	baz=39						
AML	**Almayashu**	2.43	355	P	Pb	12 20 03.5	+0.5
	SNR=7.2						
AML	**Almayashu**	2.43	355	⇑iP	Pb	12 20 01.2	-1.8
	baz=55						
AML				⇑iS	Sb	12 20 33.1	-0.1
	baz=55						
BTK	**Batken**	2.47	279	⇑iP	Pn	12 20 00.4	+0.9
	baz=81						
BTK				⇑iS	Sb	12 20 31.7	-2.4
	baz=81						
UCH	**Uchtor**	2.54	9	P	Pb	12 20 04.9	-0.1
	SNR=52						
UCH	**Uchtor**	2.54	9	⇓iP	Pb	12 20 02.5	-2.5
	baz=8.0						
UCH				⇓iS	Sb	12 20 36.1	-0.5
	baz=8.0						
KZA	**Kyzart**	2.55	21	P	Pb	12 20 04.0	-1.1
	SNR=18						
KZA	**Kyzart**	2.55	21	⇑iP	Pn	12 20 02.4	+1.6
	baz=21						
KZA				⇑iS	Sb	12 20 35.8	-0.9
	baz=21						
ARK	**Arkit**	2.59	324	⇑iP	Pn	12 20 02.3	+1.1
	baz=25						
ARK				⇑iS	Sb	12 20 35.7	-2.0
	baz=25						
AAK	**Ala-Archa**	2.95	7	P	Pb	12 20 11.3	-0.4
	SNR=16						
AAK	**Ala-Archa**	2.95	7	⇓Pg	Pb	12 20 10.9	-0.8
	9.0nm,0.5s						
AAK				⇓Lg	Lg	12 20 50.4	
	30nm,0.7s						
AAK	**Ala-Archa**	2.95	7	⇑iP	Pn	12 20 08.2	+2.1
	baz=7.0						
AAK				⇑iS	Sb	12 20 45.4	-2.5
	baz=7.0						
EKS2	**Erkin-Say**	2.95	357	P	Pb	12 20 11.2	-0.6
	SNR=7.5						
EKS2	**Erkin-Say**	2.95	357	⇑iP	Pn	12 20 08.4	+2.3
	baz=57						
EKS2				⇑iS	Sb	12 20 45.8	-2.2
	baz=57						
MNAS	**Manas**	2.99	338	⇓Pn	Pn	12 20 07.3	+0.6
	2.3nm,0.5s						
MNAS				⇑Lg	Lg	12 20 53.3	
	59nm,0.6s						
MNAS	**Manas**	2.99	338	Pg	Pb	12 20 12.9	+0.5
	2.0nm,0.3s						
MNAS				Lg	Lg	12 20 53.4	
	26nm,0.5s						
MNAS	**Manas**	2.99	338	⇑eP	Pn	12 20 08.6	+1.9
	baz=39						
MNAS				⇑iS	Sb	12 20 46.4	-2.8
	baz=39						
KBK	**Karagaybulak**	3.03	13	P	Pb	12 20 13.0	-0.1
	SNR=15						
KBK	**Karagaybulak**	3.03	13	⇓iP	Pn	12 20 09.3	+2.1
	baz=13						
KBK				⇓iS	Sb	12 20 47.3	-3.0
	baz=13						
ULHL	**Ulahol**	3.05	33	P	Pb	12 20 11.2	-2.3
	SNR=7.9						
ULHL	**Ulahol**	3.05	33	⇑iP	Pn	12 20 09.4	+1.9
	baz=32						
ULHL				⇑iS	Sb	12 20 47.6	-3.3
	baz=32						
MRKS	**Merke**	3.08	349	Pg	Pb	12 20 12.4	-1.6
	7.0nm,0.2s						
MRKS				Lg	Lg	12 20 52.6	
	18nm,0.5s						
TKM2	**Tokmak 2**	3.42	20	⇑Pg	Pb	12 20 19.3	-0.6
	2.8nm,0.3s						
TKM2				⇑Lg	Lg	12 21 05.4	
	14nm,0.6s						
KST	**Kastek**	3.64	23	Pg	Pb	12 20 23.0	-0.5
	7.7nm,0.6s						
KST				Lg	Lg	12 21 10.8	
	16nm,0.5s						
SGDS	**Sogindy**	3.77	7	Pg	Pb	12 20 26.3	+0.7
	7.3nm,0.2s						
SGDS				Lg	Lg	12 21 16.4	
	18nm,0.7s						
DGS	**Degeres**	3.77	20	Pg	Pb	12 20 26.0	+0.3
	12nm,0.4s						
DGS				Lg	Lg	12 21 16.1	
	16nm,0.7s						
IZV	**Izvestkoviy**	3.86	30	Pg	Pb	12 20 28.3	+1.0
	12nm,0.6s						
IZV				Lg	Lg	12 21 19.9	
	16nm,0.5s						
MTBS	**Maitube**	3.87	27	Pg	Pb	12 20 28.4	+0.9
	7.3nm,0.3s						
MTBS				Lg	Lg	12 21 20.2	
	14nm,0.5s						
TNSS	**Tian-Shan**	4.00	33	Pg	Pb	12 20 30.2	+0.5
	11nm,0.4s						
TNSS				Lg	Lg	12 21 23.8	
	12nm,0.8s						
MDOK	**Medeo**	4.14	33	Pg	Pb	12 20 31.7	-0.4
	15nm,1.0s						
MDOK				⇓Lg	Lg	12 21 28.7	
	14nm,0.8s						
KOTS	**Kotyrbulak**	4.22	33	Pg	Pb	12 20 33.7	+0.2
	8.8nm,0.6s						
KOTS				Lg	Lg	12 21 29.3	
	14nm,0.6s						
KK31	**Karatay Array**	4.28	323	Pn	Pn	12 20 24.8	+0.4
	0.5nm,0.5s,baz=133,slow=12,SNR=13						
KK31				⇑Pg	Pb	12 20 36.1	+1.7
	0.7nm,0.3s,baz=142,slow=17,SNR=4.6						
KK31				⇑Sn	Sn	12 21 15.8	+1.3
	1.0nm,0.3s,baz=119,slow=30,SNR=3.9						
KK31				⇑Lg	Lg	12 21 35.6	
	4.3nm,0.5s,baz=154,slow=29,SNR=6.4						
KTBS	**Karatobe**	4.47	26	Pg	Pb	12 20 38.6	+1.0
	4.1nm,0.4s						
KTBS				Lg	Lg	12 21 37.7	
	12nm,0.4s						
KUU	**Kurty**	4.53	22	Pg	Pb	12 20 38.5	0.0
	3.6nm,0.4s						
KUU				Lg	Lg	12 21 38.3	
	18nm,0.4s						
CHKK	**Chushkaly**	4.70	27	Pg	Pb	12 20 42.6	+1.0
	4.2nm,0.4s						
CHKK				Lg	Lg	12 21 44.4	
	10nm,0.3s						
AB31	**Akbulak array**	13.82	318	P	Pn	12 22 34.5	-0.4
	1.4nm,0.8s,baz=132,slow=11,SNR=7.0						

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*IDC **09** 12:20:09.1±1.6, 0°.18S×123°.95E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.4/40, mbtmp3.5/3, Error ellipse: s-maj=238.7km s-min=25.1km az=63.0*

*ISCJB **09** 12:20:18.6±0.7, 0°.28S±0°.08×124°.21E±0°.05, h88^{km}, mb3.4/3, Error ellipse: s-maj=11.7km s-min=7.0km az=15.3*

*DJA **09** 12:20:20.8±2.8, 0°S±3°×12°4E±°, h34^{km}±35^{km}, M4.2/12, mb4.6/5, mB4.7/3, MLv4.1/12, Mw(mB)4.0/3*

ISC 09 12:20:19.7±1.1**,0°.28S**±0°.09×**124°.22E**±0°.06**,h88**^{km}**,n14,** σ**0^s.77**/16**,mb3.3**/3**,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	1.64	242	P	Pn	12 20 46.3	-0.8
MRSI	**Marisa**	2.40	288	P	Pn	12 20 57.5	+0.3
MRSI				S	Sn	12 21 25.1	-0.9
SANI	**Sanana**	2.49	135	P	Pn	12 20 57.6	-0.8
APSI	**Ampana**	2.65	256	P	Pn	12 21 00.9	+0.4
TNTI	**Ternate**	3.31	72	P	Pn	12 21 10.3	+0.8
KDI	**Kendari**	3.99	204	P	Pn	12 21 18.3	-0.3
NLAI	**Namlea**	4.11	136	P	Pn	12 21 20.1	-0.2
TTSI	**Tana Toraja**	5.19	238	P	Pn	12 21 34.5	-0.4
	61nm,0.6s,1μm						
SPSI	**Sidrap Palu**	5.76	231	P	Pn	12 21 43.4	+0.6
	50nm,0.5s,1μm						
BNSI	**Bone**	5.80	225	P	Pn	12 21 43.5	+0.2
	47nm,0.7s						
BKSI	**Bulukumba**	6.47	219	P	Pn	12 21 52.6	+0.2
	10nm,0.6s,366nm						
WRA	**Warramunga Arr**	21.91	154	P	P	12 25 06.6	+0.6
	0.5nm,0.5s,baz=336,slow=9.6,SNR=7.4						
ASAR	**Alice Springs**	25.07	159	P	P	12 25 37.4	+1.1
	0.7nm,0.6s,baz=343,slow=14,SNR=12						
ASAR				PcP	PcP	12 29 09.8	+1.0
	0.3nm,0.5s,baz=342,slow=1.7,SNR=6.3						
MKAR	**Makanchi Array**	59.50	328	P	P	12 30 12.7	-1.1
	0.4nm,0.5s,baz=133,slow=8.2,SNR=6.5						

IDC 09 12:20:38.4±1.7**,11°.15S**×**165°.90E,h0**^{km}**,mb3.5**/3**, mb1 3.9**/4**,mb1mx3.5**/34**,mbtmp3.7**/4**,ML3.9**/1**,Error ellipse: s-maj=54.3km s-min=30.8km az=128.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	10.88	177	Pn	Pn	12 23 16.2	+0.6
	0.9nm,0.3s,baz=317,slow=23,SNR=9.6						
WRA	**Warramunga Arr**	31.59	250	P	P	12 27 03.6	+0.5
	0.4nm,0.6s,baz=82,slow=8.9,SNR=4.3						
ASAR	**Alice Springs**	32.88	243	P	P	12 27 13.7	-0.8
	0.5nm,0.8s,baz=76,slow=10,SNR=5.6						
ILAR	**Eielson Array**	83.56	18	P	P	12 33 08.0	0.0
	0.6nm,1.0s,baz=224,slow=7.6,SNR=4.1						

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*IDC **09** 12:28:56.0±0.5, 10°.99S×165°.77E, h0^{km}, mb4.6/20, mb1 4.7/22, mb1mx4.6/34, mbtmp4.6/22, ML5.1/2, MS4.4/23, Ms1 4.4/23, ms1mx4.3/31, Error ellipse: s-maj=17.1km s-min=13.4km az=100.0*

*NEIC **09** 12:28:57.2±0.1, 11°.05S×165°.73E, h10^{km}, mb5.0/68, Error ellipse: s-maj=3.1km s-min=2.3km az=85.0*

*ISCJB **09** 12:28:58.6±0.2, 11°.10S±0°.03×165°.71E±0°.03, h30^{km}, mb4.9/94, MS4.5/28, Error ellipse: s-maj=5.1km s-min=3.5km az=155.8*

*MOS **09** 12:28:59.5±0.9, 11°.01S×165°.61E, h33^{km}, mb5.1/30, MS4.5/5, Error ellipse: s-maj=10.5km s-min=9.8km az=40.9*

*GCMT **09** 12:29:02.2±0.4, 11°.15S±0°.03×165°.56E±0°.03, h31^{km}±2^{km}, MW4.9/56, Moment Tensor Solution. s22,c28; s56,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.49±.22; $M_{\theta\theta}$-0.54±.13; $M_{\phi\phi}$2.02±.14; $M_{r\theta}$0.20±.17; $M_{\theta\phi}$-1.37±.10; $M_{\phi r}$-2.42±.23; Best double couple: $M_0$3.24500×10^{16} NP1:ϕ_s356.00000°,δ72.00000°,λ-70.00000°. NP2: ϕ_s126.00000°,δ27.00000°,λ-137.00000°. Principal axes: T 3.6660, Plg25.0000°, Azm71.0000°; N -0.8480, Plg19.0000°, Azm170.0000°; P -2.8240, Plg58.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 12:29:00.6±0.3**,11°.09S**±0°.05×**165°.73E**±0°.05**,h30**^{km}**,n250,** σ**1^s.37**/262**,mb5.0**/94**,MS4.5**/30**,10C-3D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.92	286	eP	Pn	12 30 28.0	+1.6
HNR				eS	Sn	12 31 33.0	-0.3
HNR	**Honiara**	5.92	286	ePn	Pn	12 30 25.4	-0.9
HNR				eSn	Sn	12 31 34.0	+0.7
HNR	**Honiara**	5.92	286	eP	Pn	12 30 25.5	-0.9
HNR				e		12 31 34.1	
HNR	**Honiara**	5.92	286	Pn	Pn	12 30 27.3	+0.9
	86nm,0.3s,baz=185,slow=3.5,SNR=43						
HNR				Sn	Sn	12 31 33.2	-0.1
	baz=120,slow=20,SNR=2.4						
HNR				LR	LR	12 32 52.1	
	comp=Z,8μm,20.7s,baz=132,slow=40						
MARNC	**Mare, Loyalty**	10.56	168	ePn	Pn	12 31 29.1	-0.9
DZM	**Mont Dzumac**	10.94	177	ePn	Pn	12 31 36.4	+1.1
	73nm,0.5s						
DZM				eLR	LR	12 34 09.0	
	comp=Z,3μm,23.5s						
DZM	**Mont Dzumac**	10.94	177	ePn	Pn	12 31 34.6	-0.7
DZM				eSn	Sn	12 33 36.6	-0.1
DZM	**Mont Dzumac**	10.94	177	Pn	Pn	12 31 37.0	+1.7
	6.3nm,0.3s,baz=339,slow=16,SNR=40						
DZM				Sn	Sn	12 33 33.4	-3.4
	baz=206,slow=19,SNR=1.7						
DZM				LR	LR	12 35 54.3	
	comp=Z,2μm,18.0s,baz=27,slow=38						
ONTNC	**Ouen Toro**	11.17	177	ePn	Pn	12 31 37.5	-0.9
PINNC	**Pines Island,**	11.57	172	ePn	Pn	12 31 43.2	-0.7
MSVF	**Nonsavu**	13.63	120	ePn	Pn	12 32 11.8	-0.4
MSVF	**Nonsavu**	13.63	120	i P	Pn	12 32 09.5	-2.7
TARA	**Tarawa**	14.29	30	ePn	Pn	12 32 19.6	-1.5
EIDS	**Eidsvold**	19.85	222	eP	P	12 33 29.2	-0.1
	43nm,1.1s						
MANU	**Manus Island**	20.32	295	eP	P	12 33 34.5	-0.1
	330nm,1.3s						
CTA	**Charters Tower**	20.76	242	P	Pn	12 33 40.8	-1.0
	26nm,1.1s,baz=68,slow=12,SNR=12						
CTA				LR	LR	12 41 11.6	
	comp=Z,3μm,18.1s,baz=54,slow=35						
CTAO	**Charters Tower**	20.76	242	eP	P	12 33 39.0	-0.3
	67nm,1.3s						
CTAO	**Charters Tower**	20.76	242	eP	P	12 33 39.0	-0.3
CTAO				pmax	pmax		
	comp=Z,67nm,1.3s						
COEN	**Coen**	22.20	260	eP	P	12 33 54.4	-0.4
	comp=Z,71nm,1.1s						
ARMA	**Armidale**	23.27	212	eP	P	12 34 05.4	-0.5
	comp=Z,43nm,1.3s						
OUZ	**Omahuta**	25.06	165	eP	P	12 34 23.0	+0.6
	comp=Z,37nm,1.3s						
HAZ	**Te Kaha**	28.67	160	P	P	12 34 55.5	+0.6
MXZ	**Matakaoa Point**	28.68	159	eP	P	12 34 54.9	0.0
	comp=Z,46nm,1.2s						
MXZ	**Matakaoa Point**	28.68	159	P	P	12 34 57.1	+2.2
URZ	**Urewera**	28.91	161	eP	P	12 34 56.7	-0.3
	comp=Z,17nm,0.9s						
URZ	**Urewera**	28.91	161	P	P	12 34 58.0	+1.0
	comp=Z,5.0nm,0.5s,baz=266,slow=3.6,SNR=11						
URZ				LR	LR	12 44 30.8	
	comp=Z,681nm,21.1s,baz=333,slow=32						
URZ	**Urewera**	28.91	161	P	P	12 34 57.6	+0.6
MUGZ	**Murupara**	29.00	162	P	P	12 34 59.1	+1.3
MWZ	**Matawai**	29.11	161	P	P	12 34 59.6	+0.8
PUZ	**Puketiti**	29.12	159	P	P	12 34 58.8	0.0
COVZ	**Chateau Observ**	29.32	164	P	P	12 35 04.0	+3.2
TRVZ	**Turoa**	29.42	164	P	P	12 35 03.7	+1.9
SNGZ	**Shannon Statio**	29.46	161	P	P	12 35 02.5	+0.6
RAHZ	**Arahi**	29.50	162	P	P	12 35 03.5	+1.2
RIGZ	**Rimuhau**	29.52	161	P	P	12 35 02.9	+0.4
BKZ	**Black Stump Fm**	29.56	163	eP	P	12 35 02.4	-0.4
	comp=Z,16nm,0.7s						
BKZ	**Black Stump Fm**	29.56	163	P	P	12 35 03.0	+0.2
WHHZ	**Waihua**	29.70	162	P	P	12 35 05.6	+1.6
BHHZ	**Black Hill Sta**	29.74	164	P	P	12 35 05.7	+1.2
KWHZ	**Kaweka Forest**	29.78	163	P	P	12 35 04.9	+0.1
MCHZ	**McNeill Hill**	29.87	163	P	P	12 35 07.8	+2.3
KAHZ	**Kahuranaki**	30.25	163	P	P	12 35 09.4	+0.5
STKA	**Stephens Creek**	30.40	223	eP	P	12 35 09.9	-0.4
	comp=Z,4.6nm,1.3s						
STKA	**Stephens Creek**	30.40	223	P	P	12 35 10.6	+0.3
	comp=Z,9.9nm,0.9s,baz=18,slow=8.4,SNR=12						
STKA				LR	LR	12 46 59.6	
	comp=Z,2μm,18.9s,baz=35,slow=36						
PXZ	**Pawanui**	30.46	163	P	P	12 35 10.3	-0.4
DVHZ	**Dannevirke**	30.52	164	P	P	12 35 11.8	+0.5
BFZ	**Birch Farm**	30.90	164	eP	P	12 35 13.8	-0.9
	comp=Z,43nm,1.1s						
THZ	**Tophouse**	31.19	170	eP	P	12 35 17.6	+0.4
	comp=Z,30nm,0.9s						
WRAB	**Tennant Creek**	31.44	250	eP	P	12 35 18.4	-1.3
	comp=Z,28nm,0.9s						
WRAB	**Tennant Creek**	31.44	250	ceP	P	12 35 19.4	-0.3
WRAB				pmax	pmax		
	comp=Z,69nm,1.7s						
WB2	**Warramunga Arr**	31.44	250	eP	P	12 35 18.9	-0.8
WR1	**Warramunga Arr**	31.45	250	eP	P	12 35 19.0	-0.8
WR1				ePcP	PcP	12 38 13.2	+0.4
WRA	**Warramunga Arr**	31.45	250	i P	P	12 35 17.2	-2.6
WRA				pmax	pmax		
	comp=Z,24nm,0.9s						
WRA	**Warramunga Arr**	31.45	250	P	P	12 35 19.0	-0.8
	comp=Z,24nm,0.9s,baz=82,slow=9.1,SNR=110						
WRA				PcP	PcP	12 38 13.2	+0.4
	comp=Z,4.1nm,0.8s,baz=77,slow=3.4,SNR=13						
WRA				ScP	ScP	12 41 59.2	+5.2
	comp=Z,1.0nm,1.1s,baz=90,slow=5.6,SNR=3.9						
WRA				LR	LR	12 48 07.2	
	comp=Z,2μm,18.2s,baz=85,slow=36						
KHZ	**Kahutara**	31.94	169	eP	P	12 35 23.8	+0.1
	comp=Z,27nm,1.1s						
TOO	**Toolangi**	32.02	211	eP	P	12 35 24.1	-0.5
	comp=Z,23nm,1.4s						
TOO	**Toolangi**	32.02	211	eP	P	12 35 24.1	-0.5
TOO				pmax	pmax		
	comp=Z,23nm,1.4s						
LTZ	**Lake Taylor**	32.08	171	eP	P	12 35 25.0	0.0
	comp=Z,36nm,0.7s						
GUMO	**Guam**	32.09	319	LR	LR	12 49 06.0	
	comp=Z,309nm,18.1s,baz=140,slow=38						
OXZ	**Oxford**	32.58	171	eP	P	12 35 28.9	-0.4
	comp=Z,39nm,1.0s						
AS01	**Alice Springs**	32.71	243	eP	P	12 35 30.3	-0.5
AS31	**Alice Springs**	32.76	243	eP	P	12 35 30.1	-1.1
	comp=Z,1.9nm,0.8s						
ASAR	**Alice Springs**	32.76	243	P	P	12 35 30.2	-1.0
	comp=Z,3.4nm,0.7s,baz=65,slow=10,SNR=56						
ASAR				PcP	PcP	12 38 16.6	+0.3
	comp=Z,5.0nm,0.8s,baz=76,slow=2.8,SNR=16						
ASAR				ScP	ScP	12 42 02.6	+4.2
	comp=Z,1.2nm,1.0s,baz=73,slow=3.1,SNR=3.9						

ASAR				LR	LR	12 48 09.8	
	comp=Z,1µm,18.1s,baz=76,slow=35						
RPZ	Rata Peaks	32.83	173	*e*P	P	12 35 32.0	+0.4
	comp=Z,40nm,1.1s						
RPZ	Rata Peaks	32.83	173	P	P	12 35 32.4	+0.9
	comp=Z,21nm,0.9s,baz=343,slow=3.3,SNR=15						
CRLZ	Canterbury Las	32.91	171	*e*P	P	12 35 32.4	+0.2
	comp=Z,116nm,1.4s						
MQZ	McQueen's Vall	33.04	171	*e*P	P	12 35 33.2	-0.2
	comp=Z,44nm,0.8s						
LBZ	Lake Benmore	33.40	174	*e*P	P	12 35 36.3	-0.1
	comp=Z,21nm,1.1s						
MTN	Manton Dam	33.87	263	*e*P	P	12 35 39.9	-1.1
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	34.78	227	*e*P	P	12 35 48.1	-0.6
	comp=Z,54nm,1.4s						
BNDI	Bandanaira	36.06	278	P	P	12 35 58.6	-1.3
FITZ	Fitzroy Crossi	39.35	255	*e*P	P	12 36 26.8	-0.8
	comp=Z,14nm,0.8s						
FITZ	Fitzroy Crossi	39.35	255	P	P	12 36 27.9	+0.3
	comp=Z,11nm,0.7s,baz=90,slow=5.3,SNR=32						
SANI	Sanana	40.44	280	P	P	12 36 35.9	-0.9
MMRI	Maumere	42.89	269	*e*P	P	12 36 56.1	-0.8
	comp=Z,35nm,1.0s						
PPT	Papeete	43.70	104	LR	LR	12 51 56.1	
	comp=Z,645nm,18.4s,baz=262,slow=32						
PPT2	Papeete2	43.70	104	*e*S	S	12 43 39.5	+7.5
	comp=Z,160nm,26.0s						
PPT2				*e*LR	LR	12 49 19.0	
	comp=Z,994nm,21.8s,baz=277						
LUWI	Luwuk	43.80	280	*e*P	P	12 37 03.5	-0.7
	comp=Z,51nm,0.6s						
MBWA	Marble Bar	45.17	251	*e*P	P	12 37 14.7	-0.3
	comp=Z,29nm,1.0s						
BNSI	Bone	45.65	275	P	P	12 37 19.8	+0.8
SPSI	Sidrap Palu	46.06	275	P	P	12 37 23.1	+0.9
PCI	Palu	46.68	279	P	P	12 37 27.0	-0.1
MORW	Morawa	49.59	241	*e*P	P	12 37 49.0	-0.4
	comp=Z,21nm,1.1s						
KKM	Kota Kinabalu	52.13	287	P	P	12 38 09.7	+0.9
PWJI	Pagerwojo	53.21	268	P	P	12 38 17.5	+0.8
	comp=Z,32nm,0.9s						
TAOE	Nuku Hiva Isla	53.29	93	*e*S	S	12 45 54.7	+7.1
	comp=Z,138nm,27.2s						
TAOE				*e*LR	LR	12 53 40.7	
	comp=Z,547nm,23.5s						
PCJI	Pacitan	53.80	268	P	P	12 38 21.8	+0.8
	comp=Z,143nm,1.1s						
MJAR	Matsushiro Arr	54.01	333	P	P	12 38 21.1	-1.1
	comp=Z,4.7nm,0.8s,baz=170,slow=8.7,SNR=16						
MAJO	Matsushiro	54.01	333	*e*P	P	12 38 21.1	-1.0
	comp=Z,13nm,1.0s						
MAJO	Matsushiro	54.01	333	*e*P	P	12 38 21.1	-1.0
MAJO				pmax	pmax		
	comp=Z,13nm,1.0s						
MAT	Matsushiro	54.01	333	P	P	12 38 20.8	-1.3
BTM	Bintulu	54.27	282	P	P	12 38 25.4	+0.9
SBUM	Sibu	54.89	281	*e*P	P	12 38 28.1	-0.9
	comp=Z,12nm,1.4s						
SBUM	Sibu	54.89	281	P	P	12 38 30.5	+1.5
JNU	Nakatsue	55.11	324	*e*P	P	12 38 29.4	-0.9
	comp=Z,20nm,1.0s						
JNU	Nakatsue	55.11	324	P	P	12 38 28.6	-1.7
	comp=Z,11nm,0.8s,baz=122,slow=4.6,SNR=7.8						
KPJI	Karang Pucung	56.12	269	P	P	12 38 39.1	+1.2
KSM	Kuching	56.49	279	P	P	12 38 41.1	+0.5
CISI	Cisompet, Garu	57.19	268	*e*P	P	12 38 45.0	-0.5
	comp=Z,144nm,1.5s						
RKT	Rikitea	57.59	110	*e*LR	LR	12 55 45.5	
	comp=Z,2µm,25.2s						
ASAJ	Asahikawa	58.83	341	P	P	12 38 57.0	+0.6
ASAJ				pmax	pmax		
	comp=Z,17nm,0.9s						
ASAJ	Asahikawa	58.83	341	P	P	12 38 57.0	+0.6
	comp=Z,17nm,0.9s,baz=218,slow=15,SNR=8.5						
KSRS	Korea Array	59.91	326	P	P	12 39 03.9	0.0
	comp=Z,1.6nm,0.7s,baz=145,slow=8.7,SNR=6.0						
KSRS				LR	LR	13 04 23.3	
	comp=Z,146nm,18.2s,baz=145,slow=36						
YSS	Yuzh-Sakhalins	61.33	342	⇓*e*P	P	12 39 10.9	-2.5
NJ2	Nanjing	62.04	315	⇑P	P	12 39 19.0	+0.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.9s						
QIZ	Qiongzhong	62.69	298	P	P	12 39 20.7	-2.4
QIZ				S	S	12 47 53.0	+2.9
QIZ				pmax	pmax		
	comp=Z,420nm,2.7s						
QIZ				LR	LR		
	comp=E,530nm,16.2s						
QIZ				LR	LR		
	comp=Z,530nm,25.5s						
MYKOM	Kota Tinggi	62.84	278	*e*P	P	12 39 23.6	-0.6
	comp=Z,33nm,1.1s						
MYKOM	Kota Tinggi	62.84	278	P	P	12 39 25.3	+1.1
USA0B	Ussuriysk Arra	62.98	333	*e*P	P	12 39 24.3	-0.2
	comp=Z,9.5nm,1.0s						
USRK	Ussuriysk Ar.	62.98	333	P	P	12 39 25.2	+0.7
	comp=Z,6.0nm,0.8s,baz=134,slow=7.4,SNR=13						
USRK				LR	LR	13 04 58.3	
	comp=Z,111nm,19.9s,baz=141,slow=34						
KGM	Kluang	63.41	278	P	P	12 39 29.7	+1.7
PETK	Petropavlovsk-	64.31	355	LR	LR	13 03 22.8	
	comp=Z,208nm,19.6s,baz=162,slow=32						
MDJ	Mudanjiang	64.38	332	*e*P	P	12 39 33.5	-0.3
	comp=Z,11nm,1.0s						
KTGM	Kuala Trenggan	64.39	281	P	P	12 39 36.3	+1.8
WHN	Wuhan	64.41	312	P	P	12 39 33.6	-0.7
FRIM	Kepong	65.34	279	P	P	12 39 41.3	+0.6
CN2	Changchun	65.77	329	*e*P	P	12 39 42.0	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,170nm,3.5s						
IPM	Ipoh	66.21	280	*e*P	P	12 39 45.4	-1.0
	comp=Z,69nm,1.2s						
IPM	Ipoh	66.21	280	P	P	12 39 47.4	+1.0
CASY	Casey	66.33	201	*e*P	P	12 39 46.7	+0.6
	comp=Z,16nm,1.0s						
VNDA	Vanda	66.45	181	LR	LR	13 05 56.3	
	comp=Z,251nm,18.7s,baz=335,slow=33						
KULM	Kulim	66.77	281	P	P	12 39 50.2	+0.3
NKL	Nikolayevsk	67.48	344	*e*P	P	12 39 53.0	-0.5
NKL				pmax	pmax		
	comp=Z,21nm,1.0s						
PSI	Prapat	67.86	278	*e*P	P	12 39 56.0	-1.0
	comp=Z,35nm,1.1s						
PSI	Prapat	67.86	278	*e*P	P	12 39 56.0	-1.0
PSI				pmax	pmax		
	comp=Z,35nm,1.1s						
ENH	Enshi	67.92	309	*e*P	P	12 39 56.1	-0.8
	comp=Z,31nm,1.4s						
GYA	Guiyang	68.43	304	⇑*i*P	P	12 40 01.0	+0.7
GYA				PP	PP	12 42 35.5	+3.8
GYA				S	S	12 49 02.0	+1.6
GYA				SKS	SKSac	12 49 56.3	-1.3
GYA	Guiyang	68.43	304	SS	SS	12 53 28.9	+4.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,550nm,18.4s						
GYA				LR	LR		
	comp=E,560nm,18.1s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
BJT	Baijiatuau	68.50	321	*e*P	P	12 40 00.0	-0.2
	comp=Z,9.1nm,1.1s						
BJT	Baijiatuau	68.50	321	*e*P	P	12 40 00.0	-0.2
BJT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GSI	Gunungsitoli	68.85	276	*e*P	P	12 40 02.6	-0.4
	comp=Z,64nm,0.8s						
PBKT	Sadao Pong	69.68	292	P	P	12 40 09.4	+1.4
	comp=Z,17nm,1.4s						
XAN	Xi'an	70.14	312	P	P	12 40 10.6	0.0
XAN				pP	pP	12 40 17.1	-2.1
XAN				PP	PP	12 42 56.5	+10
XAN				S	SKiKP	12 49 52.4	-2.2
XAN	Xi'an	70.14	312	SS	SS	12 54 34.5	+44
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				LR	LR		
	comp=N,140nm,5.0s						
XAN				LR	LR		
	comp=E,300nm,15.9s						
XAN				LR	LR		
	comp=Z,340nm,18.2s						
XAN	Xi'an	70.14	312	*e*P	P	12 40 10.3	-0.3
	comp=Z,17nm,1.4s						
XAN	Xi'an	70.14	312	*e*P	P	12 40 10.3	-0.3
XAN				pmax	pmax		
	comp=Z,17nm,1.4s						
KMI	Kunming	71.13	301	P	P	12 40 18.6	+1.5
KMI				pmax	pmax		
	comp=Z,13nm,1.4s						
KMI				pmax	pmax		
	comp=Z,130nm,4.2s						
KMI				LR	LR		
	comp=N,220nm,8.3s						
KMI				LR	LR		
	comp=E,190nm,13.3s						
KMI				LR	LR		
	comp=Z,300nm,15.6s						
HHC	Hu-ho-hao-te	71.86	320	*e*P	P	12 40 22.2	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,6.9s						
CM01	Chiang Mai Arr	72.09	294	*e*P	P	12 40 22.8	+0.1
CM31	Chiang Mai Arr	72.12	294	*e*P	P	12 40 23.1	+0.3
CMAR	Chiang Mai Arr	72.12	294	*ce*P	P	12 40 24.2	+1.4
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMAR	Chiang Mai Arr	72.12	294	P	P	12 40 23.9	+1.0
	comp=Z,7.0nm,0.9s,baz=115,slow=4.5,SNR=42						
CMAR				LR	LR	13 11 14.6	
	comp=Z,57nm,20.5s,baz=94,slow=35						
CHTO	Chiang Mai	72.23	294	*e*P	P	12 40 23.4	-0.1
	comp=Z,22nm,1.4s						
CHTO	Chiang Mai	72.23	294	*e*P	P	12 40 23.4	-0.1
CHTO				pmax	pmax		
	comp=Z,22nm,1.4s						
CHTO	Chiang Mai	72.23	294	P	P	12 40 24.5	+1.0
	comp=Z,54nm,1.3s						
ZEA	Zeya	72.38	337	*e*P	P	12 40 24.0	+0.4
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
CD2	Chengdu	72.62	307	*e*P	P	12 40 27.2	+1.5
SEY	Seymchan	74.52	354	*ce*P	P	12 40 35.1	-0.9
LZH	Lanzhou	74.78	312	*e*P	P	12 40 39.8	+1.4
LZH				pP	pP	12 40 45.5	-1.5
LZH				sP	sP	12 40 48.8	-1.4
LZH				PP	PP	12 43 27.2	+1.2
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
LZH				LR	LR		
	comp=N,370nm,11.3s						
LZH				LR	LR		
	comp=E,400nm,13.4s						
LZH				LR	LR		
	comp=Z,410nm,14.6s						
GAMB	Gambell	76.62	10	*e*P	P	12 40 47.4	-0.6
	comp=Z,17nm,0.8s						
ULN	Ulaanbaatar	78.33	324	*e*P	P	12 40 57.5	-0.8
	comp=Z,6.4nm,0.9s						
ULN	Ulaanbaatar	78.33	324	*ce*P	P	12 40 57.9	-0.3
ULN				pmax	pmax		
	comp=Z,19nm,2.5s						
ANM	Nome	78.54	12	*e*P	P	12 40 58.6	-0.1
	comp=Z,9.8nm,1.4s						
ANM	Nome	78.54	12	*e*P	P	12 40 58.7	-0.1
ANM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SONA0	Songino Array	78.69	324	*e*P	P	12 41 00.7	+0.5
SONM	Songino Array	78.69	324	P	P	12 41 00.7	+0.5
	comp=Z,2.0nm,0.9s,baz=141,slow=5.9,SNR=10						
SONA1	Songino Array	78.70	324	*e*P	P	12 40 59.3	-0.9
QSPA	South Pole Qui	78.91	180	*e*P	P	12 41 00.5	-0.6
	comp=Z,14nm,1.2s						
BILL	Bilibino	78.93	0	*e*P	P	12 41 00.5	-0.4
	comp=Z,19nm,0.9s						
BILL	Bilibino	78.93	0	⇑*e*P	P	12 40 59.8	-1.0
BILL				*e*		12 41 10.0	
BILL				*e*		12 43 57.3	
BILL				*e*S	PnS	12 51 38.4	-4.0
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
BILL				MLR	MLR		
	comp=Z,133nm,20.0s						
GTA	Gaotai	79.08	314	⇓P	P	12 41 03.1	+0.6
GTA				pP	PcP	12 41 07.4	-3.5
GTA				sP	pP	12 41 10.1	-1.1
GTA				S	S	12 51 03.9	+3.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,110nm,8.1s						
GTA				LR	LR		
	comp=N,230nm,19.4s						
GTA				LR	LR		
	comp=E,270nm,20.3s						
GTA				LR	LR		
	comp=Z,290nm,20.6s						
SHL	Shillong	80.53	298	*e*P	P	12 41 10.1	-0.6
	comp=Z,17nm,1.1s						
SHL	Shillong	80.53	298	*e*P	P	12 41 10.1	-0.6
SHL				pmax	pmax		
	comp=Z,17nm,1.1s						
CAST	Castle Rocks	81.00	18	*e*P	P	12 41 12.2	0.0
	comp=Z,7.9nm,0.8s						
ZAK	Zakamensk	81.73	325	*e*P	P	12 41 11.7	-4.8
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
RND	Reindeer	81.99	19	*e*P	P	12 41 17.1	-0.4
	comp=Z,18nm,1.2s						
RND	Reindeer	81.99	19	*e*P	P	12 41 17.1	-0.4
RND				pmax	pmax		
	comp=Z,18nm,1.2s						
RDOG	Red Dog Mine	82.07	11	*e*P	P	12 41 17.1	-0.6
	comp=Z,13nm,0.8s						
TLY	Talaya	82.15	326	*e*P	P	12 41 17.6	-0.9
	comp=Z,5.7nm,1.0s						
TLY	Talaya	82.15	326	*ce*P	P	12 41 18.9	+0.4
MCK	McKinley	82.19	19	*e*P	P	12 41 17.7	-0.8
	comp=Z,20nm,1.2s						
MCK	McKinley	82.19	19	*e*P	P	12 41 17.7	-0.8
MCK				pmax	pmax		
	comp=Z,20nm,1.2s						
IM3	Indian Mountai	82.47	16	*e*P	P	12 41 19.4	-0.5
WRH	Wood River Hil	82.98	18	*e*P	P	12 41 21.7	-0.8
	comp=Z,8.2nm,0.8s						
MDM	Murphy Dome	83.28	18	*e*P	P	12 41 23.1	-1.0
	comp=Z,9.9nm,0.8s						
HDA	Harding Lake	83.29	19	*e*P	P	12 41 23.8	-0.4
	comp=Z,23nm,0.8s						
COLA	College	83.34	18	*e*P	P	12 41 23.7	-0.6
	comp=Z,20nm,0.8s						
COLA	College	83.34	18	⇑*i*P	P	12 41 23.3	-1.0
COLA				pmax	pmax		
	comp=Z,17nm,0.8s						
IL1	Eielson Array	83.56	19	*e*P	P	12 41 24.6	-0.9
ILAR	Eielson Array	83.56	19	P	P	12 41 24.4	-1.1
	comp=Z,5.0nm,0.7s,baz=232,slow=5.3,SNR=90						
ILAR				LR	LR	13 11 40.1	
	comp=Z,178nm,20.6s,baz=254,slow=31						
ILB	Eielson Array	83.56	19	*e*P	P	12 41 24.8	-0.8
SCRK	Sand Creek	83.97	20	*e*P	P	12 41 27.0	-0.7
	comp=Z,30nm,1.3s						
COLD	Coldfoot	84.35	16	*e*P	P	12 41 29.7	+0.2
	comp=Z,3.7nm,1.1s						
MAW	Mawson	84.67	202	LR	LR	13 12 28.7	
	comp=Z,176nm,18.7s,baz=114,slow=31						
ODAN	Odare	84.76	299	*e*P	P	12 41 33.1	+0.3
RAMN	Ramite	85.47	298	*e*P	P	12 41 36.3	0.0
DAWY	Dawson	85.61	21	*e*P	P	12 41 35.8	-0.1
	comp=Z,6.3nm,1.0s						
JIRN	Jiri	86.00	299	*e*P	P	12 41 38.2	-0.9
	comp=Z,39nm,1.0s						
NV01	Mina Array Sit	86.07	50	*e*P	P	12 41 38.5	-0.5
NVAR	Mina Array Bea	86.07	50	P	P	12 41 38.8	-0.2
	comp=Z,1.4nm,0.8s,baz=230,slow=7.6,SNR=5.3						
NVAR				LR	LR	13 13 06.8	
	comp=Z,650nm,19.9s,baz=276,slow=31						
TIXI	Tiksi	86.13	349	*i* P	P	12 41 36.2	-2.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GUN	Gumba	86.33	299	*e*P	P	12 41 40.9	+0.2
	comp=Z,22nm,0.9s						
PALK	Pallekele	86.54	278	*i* P	P	12 41 44.2	+2.5
PKI	Pulchoki	86.65	299	*e*P	P	12 41 42.0	-0.3
	comp=Z,23nm,1.0s						
PKIN	Phulchoki	86.66	299	*e*P	P	12 41 42.0	-0.3
	comp=Z,7.5nm,0.7s						
DMN	Daman	86.92	299	*e*P	P	12 41 43.6	+0.1
	comp=Z,42nm,1.1s						
MDRS	Chennai	88.14	284	*e*x	P	12 41 52.8	+3.5
MDRS				*e*x	x	12 53 08.8	
MDRS				*e*x	x	13 03 36.8	
MDRS				*e*x	x	13 09 16.8	
MDRS				*e*x	x	13 19 04.8	
DANN	Dangsing	88.25	299	*e*P	P	12 41 49.0	-0.9
	comp=Z,22nm,0.9s						
KOLN	Koldanda	88.25	299	*e*P	P	12 41 49.0	-0.8
	comp=Z,8.4nm,0.7s						
PYUN	Piuthan	88.85	299	*e*P	P	12 41 51.7	-1.0
	comp=Z,17nm,0.9s						
WMQ	Urumqi	89.12	315	P	P	12 41 53.4	0.0
WMQ				pP	PcP	12 41 58.3	+3.5
WMQ	Urumqi	89.12	315	S	S	12 52 43.2	+2.8
WMQ				pmax	pmax		
	comp=Z,21nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,570nm,6.1s						
WMQ				LR	LR		
	comp=N,180nm,19.5s						
WMQ				LR	LR		
	comp=E,240nm,24.7s						
WMQ				LR	LR		
	comp=Z,300nm,22.3s						
WMQ	Urumqi	89.12	315	*e*P	P	12 41 53.1	-0.3
	comp=Z,13nm,1.3s						
WMQ	Urumqi	89.12	315	*e*P	P	12 41 53.1	-0.3
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
PSUT	Pine Spring	89.45	51	*e*P	P	12 41 54.9	-0.4
	comp=Z,3.3nm,1.0s						
U15A	North Rim	90.15	53	*e*P	P	12 41 58.2	-0.4
	comp=Z,4.7nm,0.8s						
DGZ	Jazzator, Alta	90.92	321	*i* P	P	12 42 00.8	-1.0
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SYO	Syowa Base	91.73	197	⇓*e*PP	PP	12 45 42.0	-1.4
MK01	Makanchi Array	93.53	317	*e*P	P	12 42 13.3	-0.4
MK31	Makanchi Array	93.55	317	*e*P	P	12 42 13.1	-0.7
MK32	Makanchi Array	93.55	317	*e*P	P	12 42 13.8	-0.1
MKAR	Makanchi Array	93.55	317	*e*P	P	12 42 13.1	-0.7
	comp=Z,28nm,0.9s						
MKAR	Makanchi Array	93.55	317	P	P	12 42 13.8	0.0
	comp=Z,4.8nm,0.8s,baz=101,slow=6.3,SNR=46						
MKAR				PKKP	PKKPdf	12 59 18.6	-1.6
	comp=Z,0.8nm,0.7s,baz=291,slow=3.0,SNR=12						
MKAR				LR	LR	13 27 13.6	
	comp=Z,45nm,18.2s,baz=92,slow=37						
ZAA0	Zalesovo Array	93.58	324	*e*P	P	12 42 12.4	-1.3
	comp=Z,3.9nm,0.9s						
ZALV	Zalesovo Beam	93.58	324	*e*P	P	12 42 12.4	-1.4
ZALV	Zalesovo Beam	93.58	324	P	P	12 42 12.5	-1.3
	comp=Z,2.4nm,0.9s,baz=104,slow=4.7,SNR=12						
ZALV				LR	LR	13 23 28.1	
	comp=Z,87nm,20.4s,baz=70,slow=35						
ZAA1	Zalesovo Array	93.59	324	*e*P	P	12 42 12.5	-1.3
PDAR	Pinedale Array	93.60	47	P	P	12 42 14.2	-0.2
	comp=Z,0.9nm,1.0s,baz=41,slow=2.9,SNR=3.4						
PDAR				LR	LR	13 17 35.7	
	comp=Z,120nm,19.0s,baz=285,slow=31						
MAKZ	Makanchi	93.76	317	*e*P	P	12 42 13.7	-1.1
	comp=Z,9.3nm,1.1s						
MAKZ	Makanchi	93.76	317	*e*P	P	12 42 13.7	-1.1
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NVS	Novosibirsk	94.69	325	*e*P	P	12 42 16.9	-1.9
YKA	Yellowknife Ar	95.02	27	P	P	12 42 17.9	-2.3
	comp=Z,0.4nm,0.6s,baz=256,slow=4.7,SNR=11						
YKA				LR	LR	13 18 57.9	
	comp=Z,32nm,19.1s,baz=238,slow=32						
YKB5	Yellowknife Ar	95.02	27	*e*P	P	12 42 18.5	-1.7
TXAR	Lajitas Array	95.87	61	LR	LR	13 17 58.7	
	comp=Z,515nm,20.4s,baz=0.0,slow=31						
NRIK	Noril'sk	96.16	340	LR	LR	13 22 42.2	
	comp=Z,114nm,21.9s,baz=65,slow=34						
KSH	Kashi	96.77	309	P	P	12 42 29.3	+0.4
KSH				pmax	pmax		
	comp=Z,190nm,6.0s						
ARA0	ARCESS Array S	116.38	345	*e*PKPdf	PKPdf	12 47 39.9	-0.9
ARCES	ARCESS Array B	116.38	345	PKP	PKPdf	12 47 39.9	-0.9
	comp=Z,3.1nm,0.8s,baz=57,slow=1.9,SNR=8.0						
OBN	Obninsk	120.84	329	*c i*PKIKP	PKPdf	12 47 48.1	-1.6
OBN				*e*		12 49 22.3	
OBN				*e*SS	SS	13 05 59.7	+13
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FIA0	FINESS Array S	121.81	339	*e*PKPdf	PKPdf	12 47 50.7	-0.8
FIA0	FINESS Array S	121.81	339	*e*PKIKP	PKPdf	12 47 50.7	-0.8
FINES	FINESS Array B	121.81	339	PKP	PKPdf	12 47 50.7	-0.8
	comp=Z,1.8nm,0.9s,baz=325,slow=3.0,SNR=4.0						
BOSA	Boshof	125.07	223	PKP	PKiKP	12 47 59.7	+0.4
	comp=Z,3.6nm,0.8s,baz=58,slow=2.1,SNR=5.2						
NB2	NORSAR Subarra	126.74	345	PKPdf	PKPdf	12 47 59.6	-1.4
	comp=Z,0.2nm,0.7s,baz=31,slow=1.9						
NB200	NORSAR Array S	126.74	345	*e*PKPdf	PKPdf	12 48 00.3	-0.7
NOA	NORSAR Array B	126.74	345	PKP	PKPdf	12 48 00.3	-0.7
	comp=Z,0.7nm,0.8s,baz=35,slow=2.0,SNR=3.9						
HFS	Hagfors	126.83	343	PKP	PKiKP	12 48 02.3	+0.7
	comp=Z,1.6nm,0.8s,baz=329,slow=1.7,SNR=2.6						
AKASG	Malin Array Be	126.89	327	PKP	PKPdf	12 48 01.2	-0.3
	comp=Z,0.3nm,0.4s,baz=68,slow=2.4,SNR=4.5						
VYHS	Vyhne	133.60	330	*e*PKIKP	PKPdf	12 48 14.4	0.0
VYHS	Vyhne	133.60	330	*e*PKP	PKPdf	12 48 14.4	0.0
CLL	Collm	134.14	336	*e*PKPdf	PKPdf	12 48 14.0	-1.3
CLL				Lm	MLR	13 55 00.0	
	comp=Z,100nm,19.1s						
CLL	Collm	134.14	336	*e*PKIKP	PKPdf	12 48 14.0	-1.3
GERES	GERESS Array B	135.74	334	PKP	PKPdf	12 48 17.3	-1.2
	comp=Z,0.6nm,0.7s,baz=347,slow=5.5,SNR=4.9						
KEST	Kesra	147.44	323	*e*PKPbc	PKPbc	12 48 42.6	+0.3
KEST	Kesra	147.44	323	PKPbc	PKPbc	12 48 42.7	+0.5
	comp=Z,9.3nm,0.9s,baz=359,slow=11,SNR=4.9						
ES19	SONSECA Array	150.06	344	*e*PKPbc	PKPbc	12 48 48.4	-0.4
ES19				*e*PKPab	PKPab	12 48 55.2	+0.6
ESDC	Sonseca Array	150.10	344	PKPbc	PKPbc	12 48 48.9	-0.1
	comp=Z,1.7nm,0.8s,baz=15,slow=2.5,SNR=7.0						
ESDC				PKPab	PKPab	12 48 55.4	+0.7
	comp=Z,3.3nm,0.9s,baz=21,slow=3.5,SNR=10						
TOA0	Torodi Ar. Sit	164.25	279	*e*PKPdf	PKPdf	12 49 01.5	-0.7
TOA0				*e*PKPab	PKPab	12 49 55.9	-0.5
TORD	Torodi Ar. Bea	164.25	279	PKP	PKPdf	12 49 02.0	-0.3
	comp=Z,0.7nm,0.7s,baz=332,slow=4.1,SNR=5.4						
TORD				PKPab	PKPab	12 49 55.4	-0.9
	comp=Z,2.9nm,1.0s,baz=18,slow=2.8,SNR=7.5						
TOA1	Torodi Ar. Sit	164.26	279	*e*PKPdf	PKPdf	12 49 02.0	-0.3
TOA1				*e*PKPab	PKPab	12 49 55.4	-0.9

IDC 09 12:36:04.9±1.7, 10°.99S×164°.59E, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.6/24, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=50.8km s-min=31.3km az=128.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.16	171	Pn	Pn	12 38 45.5	-0.4
	0.3nm,0.3s,baz=321,slow=18,SNR=5.0						
WRA	Warramunga Arr	30.44	249	P	P	12 42 19.1	-0.3
	0.8nm,0.8s,baz=79,slow=9.1,SNR=4.7						
ASAR	Alice Springs	31.81	243	P	P	12 42 31.9	+0.4
	0.7nm,0.8s,baz=69,slow=9.3,SNR=4.8						
ILAR	Eielson Array	83.83	19	P	P	12 48 36.0	+0.1
	0.4nm,0.7s,baz=240,slow=5.3,SNR=4.2						

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*SKO **09** 12:36:56.9, 41°.57N×19°.47E, h42km*
*IDC **09** 12:36:56.4±2.5, 41°.25N×19°.39E, h0km, mb3.6/3, mb1 3.7/6, mb1mx3.3/38, mbtmp3.6/6, ML3.4/3, Error ellipse: s-maj=30.6km s-min=15.7km az=21.0*
*SAR **09** 12:37:00.1±0.7, 41°.31N×19°.69E, h10km±2km, ML3.4/1*
*TIR **09** 12:37:00.8, 41°.47N×19°.64E, h12km, Md3.5/6*
*BEO **09** 12:37:01.5±0.5, 41°.40N×19°.65E, h12km±2km, ML3.1/13*
*ISCJB **09** 12:37:01.6±0.4, 41°.43N±0°.01×19°.59E±0°.02, h18km±3km, mb3.6/2, Error ellipse: s-maj=2.8km s-min=1.7km az=146.6*
*THE **09** 12:37:01.2, 41°.49N×19°.61E, h9km, ML2.7/7, Error ellipse: s-maj=1.3km s-min=0.6km az=318.0*

*PDG **09** 12:37:01.0±0.3, 41°.40N×19°.69E, h20^{km}, MD3.4/4, ML3.4/10, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

ISC 09 12:37:01.4±0.8**, 41°.41N**±0°.02×**19°.63E**±0°.02**, h17**^{km}±5^{km}**, n144,** σ**1^s.50**/221**, 27C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.18	109	*e*Pg	Pg	12 37 05.5	-0.4
TIR				*e*Sg	Sg	12 37 09.5	+0.4
TIR	Tirane	0.18	109	⇓*i*P	Pg	12 37 05.6	-0.4
TIR				S	Sg	12 37 09.4	+0.4
TIR	Tirane	0.18	109	P	Pg	12 37 05.7	-0.3
TIR				S	Sg	12 37 09.6	+0.4
TIR	Tirane	0.18	109	*i* PG	Pg	12 37 05.5	-0.4
TIR				*i* SG	Sg	12 37 09.4	+0.4
ULC	Ulcinj	0.63	333	⇑*i*Pg	Pg	12 37 13.7	-0.1
ULC				*i* Sg	Sn	12 37 24.4	-0.8
PHP	Peshkopia	0.67	65	P	Pg	12 37 13.1	-1.4
PHP				S	Sg	12 37 23.5	+0.1
PHP	Peshkopia	0.67	65	*i* PG	Pg	12 37 12.9	-1.6
PHP				*i* SG	Sg	12 37 23.5	+0.1
DRME	Dracevica, Mon	0.85	337	⇓*i*Pg	Pb	12 37 17.6	-0.1
DRME				*i* Sg	Sn	12 37 31.4	+0.8
DRME	Dracevica, Mon	0.85	337	*e*Pg	Pb	12 37 17.3	-0.4
DRME				*e*Sg	Sn	12 37 30.6	0.0
OHR	Ohrid	0.93	108	*i* Pg	Pb	12 37 17.8	-1.2
OHR				*i* Sg	Sg	12 37 32.1	+0.5
VLO	Vlora	0.94	186	P	Pn	12 37 21.1	+1.3
VLO	Vlora	0.94	186	*i* PG	Pn	12 37 21.1	+1.3
VLO				*i* SG	Sn	12 37 37.2	+4.3
BCI	Bajram Curri	1.01	19	*i* PG	Pb	12 37 20.1	-0.4
BCI				*i* SG	Sn	12 37 35.6	+0.8
BUM	Brajici-Budva	1.05	329	⇑*i*Pg	Pb	12 37 21.5	+0.4
BUM				*i* Sg	Sn	12 37 37.9	+2.2
PDG	Podgorica	1.06	345	*e*Pg	Pn	12 37 21.7	+0.2
PDG				*e*Sg	Sn	12 37 36.5	+0.7
PDG	Podgorica	1.06	345	⇑*i*P	Pn	12 37 21.6	+0.1
PDG				S	Sn	12 37 37.4	+1.6
PDG	Podgorica	1.06	345	*e*Pg	Pb	12 37 20.9	-0.4
PDG				*e*Sg	Sn	12 37 36.7	+0.9
TTG	Podgorica	1.06	345	⇑*i*Pg	Pb	12 37 21.2	-0.1
TTG				*i* Sg	Sn	12 37 38.4	+2.6
TPE	Tepelena	1.15	165	P	Pb	12 37 23.3	+0.6
TPE				S	Sg	12 37 40.8	+2.3
TPE	Tepelena	1.15	165	*i* PN	Pg	12 37 23.6	0.0
TPE				*i* SN	Sb	12 37 30.3	-7.0
PVY	Plav	1.21	11	⇓*i*Pg	Pn	12 37 23.6	-0.1
PVY				*i* Sg	Sg	12 37 42.0	+1.4
KRUS	Krusevo	1.22	91	*i* Pg	Pn	12 37 22.0	-1.7
KRUS				*i* Sg	Sn	12 37 40.1	+0.2
BIA	Bitola	1.33	106	*i* Pg	Pn	12 37 24.7	-0.6
BIA				*i* Sg	Sg	12 37 44.7	+0.2
HCY	Herceg Novi	1.34	321	⇑*i*Pg	Pn	12 37 25.9	+0.6
HCY				*i* Sg	Sg	12 37 45.6	+0.8
HCY	Herceg Novi	1.34	321	⇑*i*Pg	Pn	12 37 26.0	+0.6
HCY				*e*Sg	Sg	12 37 45.8	+1.0
KOME	Kolasin	1.45	357	⇓*i*Pg	Pb	12 37 27.6	-0.3
KOME				*i* Sg	Sg	12 37 47.3	-0.8
NKME	Niksic	1.45	340	⇓*i*Pg	Pb	12 37 28.1	+0.1
NKME				*i* Sg	Sg	12 37 48.1	-0.1
NEST	Nestorio	1.46	132	P	Pb	12 37 29.1	+0.9
NEST				S	Sg	12 37 49.3	+0.7
IVA	Berane	1.48	7	⇓*i*Pg	Pn	12 37 27.8	+0.5
IVA				*i* Sg	Sg	12 37 48.5	-0.6
NKY	Niksic	1.48	342	⇓*i*Pg	Pb	12 37 28.5	-0.1
NKY				*i* Sg	Sg	12 37 49.1	-0.2
SRN	Sarande	1.55	169	P	Pn	12 37 29.0	+0.8
SRN				S	Sg	12 37 50.8	-0.6
SRN	Sarande	1.55	169	*i* PN	Pb	12 37 30.3	+0.7
SRN				*i* SN	Sg	12 37 52.2	+0.8
TREB	Trebinje	1.62	324	*e*Pg	Pn	12 37 29.9	+0.7
TREB				*e*Sg	Sg	12 37 53.4	-0.2
TREB	Trebinje	1.62	324	⇑*i*Pn	Pn	12 37 29.7	+0.5
TREB				*e*Sn	Sb	12 37 51.7	+0.7
PENT	Pentalofos	1.67	136	P	Pb	12 37 31.9	+0.3
PENT				S	Sg	12 37 55.4	+0.4
KEK	Kerkira	1.70	176	P	Pn	12 37 30.7	+0.5
KEK				S	Sg	12 37 55.5	-0.5
BRY	Bratogost	1.70	332	⇑*i*Pn	Pb	12 37 31.6	-0.7
BRY				*i* Sn	Sb	12 37 54.6	+1.2
BRY	Bratogost	1.70	332	⇑*i*Pn	Pn	12 37 31.3	+0.9
BRY				*e*Sn	Sb	12 37 53.9	+0.5
CGL1	Ceglie Messapi	1.80	246	*e*Pn	Pn	12 37 31.4	-0.2
FASA	Fasano	1.82	252	*e*Pn	Pn	12 37 31.9	0.0
SJES	Sjenica	1.87	8	*e*Pg	Pb	12 37 35.3	+0.1
SJES				*e*Sg	Sg	12 38 00.7	-0.9
PLE	Pljevlja	1.93	355	⇑*i*Pn	Pb	12 37 35.8	-0.4
PLE				*i* Sn	Sb	12 37 59.9	-0.1
STIP	Stip	1.94	81	*i* Pn	Pb	12 37 36.0	-0.2
STIP				*i* Sn	Sg	12 38 04.0	+0.2
IGT	Igoumenitsa	1.95	164	P	Pn	12 37 35.0	+1.3
KPRO	Kipourio	1.96	137	P	Pn	12 37 35.5	+1.6
KZN	Kozani	1.96	123	P	Pn	12 37 34.8	+0.9
KZN				S	Sb	12 38 00.5	-0.3
JAN	Janina	1.98	152	P	Pb	12 37 36.0	-1.0
TAR1	Taranto	1.98	244	*e*Pn	Pb	12 37 38.1	+1.1
MASS	Massafra	2.04	248	*e*Pn	Pb	12 37 37.5	-0.4
STON	Ston	2.05	316	*e*Pn	Pn	12 37 35.7	+0.6
STON				Sn	Sn	12 38 01.5	+1.3
BAI	Bari	2.10	263	*e*Pn	Pn	12 37 35.8	+0.1
BAI				Sn	Sn	12 38 00.1	-1.3
SELS	Selova	2.12	31	*e*Pn	Pn	12 37 37.1	+1.0
GRG	Griva	2.14	101	P	Pn	12 37 37.2	+0.9
GRG				S	Sn	12 38 04.2	+1.7
BARS	Barje	2.15	48	*e*Pn	Pn	12 37 37.2	+0.7
BARS	Barje	2.15	48	*e*Pn	Pg	12 37 51.5	+8.9
BARS				*e*Sg	Sg	12 38 09.5	-1.0
BARS	Barje	2.15	48	*i* Pn	Pn	12 37 36.8	+0.3
IVAS	Ivanjica	2.20	10	*e*Pn	Pn	12 37 38.0	+0.8
VAY	Valandovo	2.21	91	*i* Pn	Pn	12 37 38.0	+0.7
VAY				*i* Sn	Sn	12 38 05.4	+1.1
SG1	Sgolgore (BA)	2.30	257	*e*Pn	Pn	12 37 39.1	+0.5
SG1				Sn	Sn	12 38 06.1	-0.4
MATE	Matera	2.34	252	⇓*i*P	Pn	12 37 39.8	+0.8
MATE	Matera	2.34	252	S	Sb	12 38 10.6	-1.1
BBLS	Lazići	2.46	356	*e*Pn	Pn	12 37 42.4	+1.6
BBLS				*e*Sg	Sg	12 38 19.9	-0.7
BBLS	Lazići	2.46	356	⇑*i*Pn	Pn	12 37 42.0	+1.2
BBLS				*e*Sn	Sn	12 38 13.1	+2.5
KNT	Kendrikon	2.47	95	P	Pn	12 37 41.6	+0.7
KNT				S	Sn	12 38 12.6	+1.9
LIT	Litokhoron	2.53	120	P	Pn	12 37 43.1	+1.4
THL	Klokotos Trika	2.59	135	P	Pn	12 37 43.4	+1.0
THL				S	Sb	12 38 17.0	-1.8
GRUS	Gruza	2.60	17	*e*Pn	Pn	12 37 43.7	+1.0
BOVS	Bovan	2.70	34	*e*Pn	Pn	12 37 44.9	+0.9
DIVS	Divibare	2.70	6	*e*Pn	Pn	12 37 45.2	+1.1
DIVS	Divibare	2.70	6	*i* Pn	Pn	12 37 45.4	+1.2
DIVS	Divibare	2.70	6	⇑*i*Pn	Pn	12 37 44.5	+0.4
DIVS				*e*Sn	Sn	12 38 18.9	+2.4
HAPS	Han Pijesak,Bl	2.72	350	*e*Pn	Pn	12 37 45.1	+0.6
HAPS	Han Pijesak,Bl	2.72	350	*e*Pn	Pn	12 37 45.1	+0.6
HAPS				*e*Sn	Sn	12 38 19.8	+2.7
LKD2	Lefkada island	2.73	163	P	Pn	12 37 45.1	+0.6
HORT	Hortiatis	2.75	106	P	Pn	12 37 45.2	+0.5
TRUS	Trudelj	2.87	11	*e*Pn	Pn	12 37 47.1	+0.7
EVGI	Lefkada island	2.89	164	P	Pn	12 37 47.3	+0.6
EVGI				S	Sn	12 38 24.2	+3.2
ZAPS	Zavoj	2.90	49	*e*Pn	Pn	12 37 48.2	+1.4
VTS	Vitosha	2.94	65	⇑*i*P	Pn	12 37 48.7	+1.2
VTS	Vitosha	2.94	65	S	Sn	12 38 23.9	+1.3
VTS	Vitosha	2.94	65	P	Pn	12 37 48.3	+0.8
VTS				S	Sn	12 38 23.4	+0.8
EVR	Evrytania	3.00	145	P	Pn	12 37 50.5	+2.3
EVR				S	Sn	12 38 26.8	+3.1
SRS	Serrai	3.00	94	P	Pn	12 37 48.8	+0.7
PLG	Polygyros	3.07	108	P	Pn	12 37 49.9	+0.8
ZAGS	Zajecar	3.08	38	*e*Pn	Pn	12 37 50.4	+1.2
SVIS	Svilajnac	3.08	22	*e*Pn	Pn	12 37 50.9	+1.6
TIP	Timpagrande	3.13	226	P	Pn	12 37 50.3	+0.3
TEKS	Tekeris	3.14	359	*e*Pn	Pn	12 37 50.7	+0.6
TEKS				*e*Sn	Sn	12 38 29.2	+2.0
PVO	Paravola	3.14	152	P	Pn	12 37 51.8	+1.7
AGG	Agios Georgios	3.15	138	P	Pn	12 37 51.7	+1.4
AGG				S	Sn	12 38 31.7	+4.2
NVR	Nevrokopi	3.18	90	P	Pn	12 37 52.2	+1.5
ANX	Ano Chora	3.31	147	P	Pn	12 37 54.5	+1.9
ANX				S	Sn	12 38 35.4	+3.8
KUBS	Kucevo	3.36	26	*e*Pn	Pn	12 37 53.4	+0.3
XOR	Xorichti	3.40	126	P	Pn	12 37 55.3	+1.7
XOR				S	Sn	12 38 36.4	+2.8
PAIG	Paliouri	3.42	114	P	Pn	12 37 54.6	+0.8
PAIG				S	Sn	12 38 37.4	+3.5
EFP	Efpalio	3.45	149	P	Pn	12 37 56.5	+2.2
OUR	Ouranopolis	3.47	107	P	Pn	12 37 55.2	+0.7
LAKA	Lakka	3.64	150	P	Pn	12 37 58.0	+1.0
MDVR	Moldovita	3.70	24	⇑*i*P	Pn	12 37 58.8	+1.0
KAVA	Kavala	3.71	95	P	Pn	12 37 58.9	+1.1
DSF	Desfina	3.73	142	P	Pn	12 38 00.3	+2.1
FRGS	Fruska Gora	3.75	2	*e*Pn	Pn	12 37 58.6	+0.1
FRGS	Fruska Gora	3.75	2	*e*Pn	Pn	12 37 59.1	+0.6
FRGS				*e*Sn	Sn	12 38 43.3	+1.0
BLY	Banja Luka	3.79	333	⇑*i*Pn	Pn	12 37 59.8	+0.8
BLY				*e*Sn	Sn	12 38 44.5	+1.3
DRO	Drossia	3.81	154	P	Pn	12 38 01.2	+2.0
DRO				S	Sn	12 38 47.3	+3.7
THAS	Thassos island	3.93	100	P	Pn	12 38 00.7	-0.2
HERR	Herculane	4.03	29	⇑*i*P	Pn	12 38 03.2	+1.0
GUR	Goura	4.05	148	P	Pn	12 38 03.7	+1.1
UDBI	Udbina	4.22	319	*e*Pn	Pn	12 38 06.6	+1.7
BZS	Buzias	4.45	18	*e*Pn	Pn	12 38 08.4	+0.4
BZS	Buzias	4.45	18	⇑*i*P	Pn	12 38 08.7	+0.7
GZR	Gura Zlata	4.60	29	⇑*i*P	Pn	12 38 11.6	+1.5
NVLJ	Novalja	4.71	314	*e*Pn	Pn	12 38 12.0	+0.5
NVLJ				Sn	Sn	12 39 04.6	-1.1
AQU	L'Aquila	4.75	284	*e*Sn	Sn	12 39 06.5	-0.4
DID	Didima	4.79	143	P	Pn	12 38 14.6	+1.8
DID				S	Sn	12 39 12.6	+4.7
MORH	Mrgy, Hungar	4.86	352	*e*Pn	Pn	12 38 14.1	+0.4
MORH				*e*Sn	Sn	12 39 10.4	+0.9
MORH	Mrgy, Hungar	4.86	352	⇑*e*Pn	Pn	12 38 14.0	+0.4
MORH				Sn	Sn	12 39 12.0	+2.5
SIRR	Siria	5.08	16	⇑*i*P	Pn	12 38 17.6	+0.9
BOJS	Bojanci	5.19	324	*i* Pn	Pn	12 38 18.8	+0.6
CRES	Cresnjev	5.36	327	*e*Pn	Pn	12 38 20.6	+0.1
CRES				*e*Sn	Sn	12 39 21.6	-0.2
ARR	Arges	5.38	41	⇑*i*P	Pn	12 38 22.8	+1.9
VOIR		5.64	43	⇑*i*P	Pn	12 38 25.5	+1.1
CEY	Cerknica	5.75	321	*e*Pn	Pn	12 38 26.5	+0.6
CEY				*e*Sn	Sn	12 39 31.3	-0.2
DRGR		5.82	21	⇑*i*P	Pn	12 38 28.7	+1.7
MLR	Muntele Rosu	6.14	46	⇑*i*P	Pn	12 38 33.9	+2.5
MLR	Muntele Rosu	6.14	46	Pn	Pn	12 38 33.9	+2.5
	1.0nm,0.3s,baz=156,slow=12,SNR=19						
MLR				Sn	Sn	12 39 46.7	+5.3
	0.3nm,0.3s,baz=197,slow=21,SNR=2.6						
DOPR	Dopca	6.18	41	⇑*i*P	Pn	12 38 33.0	+1.2
SOKA	Soboth	6.22	329	*i* Pn	Pn	12 38 33.1	+0.6
	0.4nm,0.2s						
SOKA				*i* Sn	Sn	12 39 44.0	+0.7
	0.5nm,0.2s						
PLOR	Plostina	6.76	47	⇓*i*P	Pn	12 38 42.3	+2.5
VRI	Vrincioaia	6.81	47	⇓*i*P	Pn	12 38 42.3	+1.8
TRPA	Tarpa	7.03	16	⇑*i*P	Pn	12 38 44.9	+1.4
VYHS	Vyhne	7.11	356	*e*PN	Pn	12 38 50.3	+5.7
VYHS				*e*SN	Sn	12 40 09.9	+5.0
CFR	Carcaliu	7.26	56	⇓*i*P	Pn	12 38 47.5	+0.9
BURAR	Bucovina Array	7.38	31	⇑*i*P	Pn	12 38 49.8	+1.5
ABTA	Abfaltersbach	7.40	319	*i* Pn	Pn	12 38 48.2	-0.5
	0.5nm,0.1s						
ABTA				*i* Sn	Sn	12 40 11.5	-0.7
	1.8nm,0.2s						
MOA	Molln	7.49	331	*i* Pn	Pn	12 38 51.6	+1.8
	0.5nm,0.2s						
MOA				Sn	Sn	12 40 15.1	+0.8
	0.5nm,0.2s						
WATA	Walderalm	8.27	318	*i* Pn	Pn	12 39 02.6	+2.0
	1.8nm,0.2s						
WATA				*i* Sn	Sn	12 40 34.0	+0.4
	0.9nm,0.2s						
SQTA	Sankt Quirin	8.38	317	*i* Pn	Pn	12 39 02.8	+0.8
	1.3nm,0.2s						
SQTA				*e*Sn	Sn	12 40 33.3	-3.1
	2.5nm,0.3s						
MOTA	Moosalm	8.51	317	*i* Pn	Pn	12 39 04.9	+1.0
	1.8nm,0.4s						
MOTA				*e*Sn	Sn	12 40 37.9	-1.8
	2.0nm,0.4s						
GERES	GERESS Array B	8.54	333	Pn	Pn	12 39 04.7	+0.4
	0.2nm,0.3s,baz=153,slow=15,SNR=4.3						
GERES				Sn	Sn	12 40 37.9	-2.3
	0.1nm,0.3s,baz=134,slow=9.5,SNR=2.9						
HFS	Hagfors	19.11	351	P	P	12 41 23.0	-0.1
	0.1nm,0.3s,baz=156,slow=14,SNR=5.4						
FINES	FINESS Array B	20.44	9	P	P	12 41 36.0	-1.7
	0.7nm,0.3s,baz=188,slow=9.3,SNR=8.2						
ZALV	Zalesovo Beam	44.10	50	P	P	12 45 07.4	-1.0
	0.5nm,0.3s,baz=280,slow=8.9,SNR=4.3						
MKAR	Makanchi Array	44.26	61	P	P	12 45 08.7	-1.2
	0.9nm,0.7s,baz=281,slow=6.5,SNR=6.9						

IDC 09 12:47:28.5±2.0**, 11°.05S**×**164°.93E, h0**^{km}**, mb3.7**/3**, mb1 4.1**/4**, mb1mx3.6**/32**, mbtmp3.8**/4**, ML3.4**/1**, Error ellipse: s-maj=53.5km s-min=35.1km az=129.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.16	288	Pn	Pb	12 48 53.9	-5.7
	3.1nm,0.3s,baz=62,slow=1.9,SNR=4.3						
DZM	Mont Dzumac	11.06	173	Pn	Pn	12 50 08.3	+0.1
	0.3nm,0.3s,baz=308,slow=18,SNR=2.7						
WRA	Warramunga Arr	30.73	250	P	P	12 53 45.6	0.0
	0.9nm,0.7s,baz=81,slow=8.7,SNR=8.3						
ASAR	Alice Springs	32.08	243	P	P	12 53 57.4	-0.1
	0.7nm,0.7s,baz=65,slow=10,SNR=10						
ILAR	Eielson Array	83.77	19	P	P	12 59 59.2	0.0
	0.7nm,1.1s,baz=219,slow=6.9,SNR=2.7						

IDC 09 12:48:13.6±1.7**, 11°.06S**×**165°.65E, h0**^{km}**, mb3.6**/3**, mb1 4.0**/5**, mb1mx3.6**/33**, mbtmp3.9**/5**, ML3.9**/2**, Error ellipse: s-maj=41.8km s-min=30.7km az=132.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.84	286	Pn	Pn	12 49 43.3	+1.7
	5.9nm,0.3s,baz=34,slow=8.4,SNR=2.4						
DZM	Mont Dzumac	10.98	176	Pn	Pn	12 50 53.1	+1.0
	0.5nm,0.3s,baz=322,slow=15,SNR=9.3						
WRA	Warramunga Arr	31.39	250	P	P	12 54 36.4	-0.2
	1.1nm,0.6s,baz=81,slow=8.9,SNR=7.5						
ASAR	Alice Springs	32.71	243	P	P	12 54 47.4	-0.7
	0.2nm,0.5s,baz=64,slow=10,SNR=6.0						
ILAR	Eielson Array	83.55	19	P	P	13 00 43.2	0.0
	0.3nm,0.7s,baz=233,slow=6.9,SNR=3.2						

MEX 09 12:52:13.5±0.4**, 13°.99N**×**92°.57W, h5**^{km}**, MD3.8, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.82	340	*e*P	Pn	12 52 42.6	-2.9
PCIG				*e*S	Sn	12 53 03.9	-5.0

IDC 09 13:01:24.4±1.7**, 10°.79S**×**166°.00E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.6**/28**, mbtmp3.7**/5**, ML3.8**/1**, Error ellipse: s-maj=52.8km s-min=30.5km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.23	178	Pn	Pn	13 04 06.7	+0.3
	0.6nm,0.3s,baz=196,slow=20,SNR=5.2						
WRA	Warramunga Arr	31.80	250	P	P	13 07 51.1	+0.1
	1.2nm,0.7s,baz=81,slow=9.2,SNR=12						
ASAR	Alice Springs	33.13	243	P	P	13 08 02.3	-0.3
	0.4nm,0.7s,baz=65,slow=10,SNR=4.6						
ILAR	Eielson Array	83.19	18	P	P	13 13 52.1	0.0
	0.5nm,1.0s,baz=212,slow=6.4,SNR=4.6						
MKAR	Makanchi Array	93.50	317	P	P	13 14 42.2	-0.1
	0.2nm,0.7s,baz=93,slow=6.4,SNR=2.9						

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*IDC **09** 13:02:07.3±1.9, 19°.33S×176°.48W, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx3.9/25, mbtmp4.2/6, ML5.4/2, Error ellipse: s-maj=42.1km s-min=30.7km az=108.0*

ISC 09 13:02:12.7±1.6**, 19°.2S**±0°.1×**176°.4W**±0°.2**, h35**^{km}**, n18,** σ**2^s.35**/17**, mb4.0**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	10.06	187	Pn	Pn	13 04 30.5	-4.1
	132nm,0.3s,baz=24,slow=19,SNR=4.4						
GRZ	Great Barrier	18.39	201	P	Pn	13 06 33.6	+8.9
MXZ	Matakaoa Point	18.82	193	P	Pn	13 06 31.5	+1.5
MXZ				S	Sn	13 09 42.3	-17
WMGZ	Waiomatatini S	19.05	193	P	Pn	13 06 34.3	+1.5
WMGZ				S	Sn	13 09 47.5	-18
HAZ	Te Kaha	19.13	194	P	Pn	13 06 34.7	+1.0
HAZ				S	Sn	13 09 47.8	-19
PKGZ	Pakihiroa	19.19	193	P	Pn	13 06 35.3	+0.8
ETAZ	East Tamaki Re	19.20	201	P	Pn	13 06 40.1	+5.5
MKAZ	Moumakai	19.26	201	P	Pn	13 06 39.3	+4.0
PUZ	Puketiti	19.32	193	P	Pn	13 06 36.7	+0.6
PUZ				S	Sn	13 09 49.8	-22
RUGZ	Raukumara Rang	19.35	194	P	Pn	13 06 37.0	+0.4
RUGZ				S	S	13 09 51.2	-21
TWGZ	Tauwhareparae	19.48	193	P	Pn	13 06 39.1	+1.1
TWGZ				S	S	13 09 54.4	-21
URZ	Urewera	19.77	195	P	P	13 06 39.1	-0.5
	2.9nm,0.3s,baz=255,slow=3.5,SNR=25						
URZ				S	S	13 10 00.3	-20
	0.5nm,0.3s,baz=165,slow=20,SNR=5.8						
URZ	Urewera	19.77	195	P	P	13 06 39.8	+0.2
URZ				S	S	13 10 00.4	-20
CTA	Charters Tower	35.09	262	P	P	13 09 03.6	+0.8
	3.0nm,0.4s,baz=87,slow=9.5,SNR=11						
STKA	Stephens Creek	39.66	243	P	P	13 09 40.6	-0.8
	1.3nm,0.5s,baz=94,slow=11,SNR=5.5						
WRA	Warramunga Arr	46.24	261	P	P	13 10 33.3	-1.6
	0.4nm,0.3s,baz=96,slow=7.4,SNR=24						
ASAR	Alice Springs	46.25	255	P	P	13 10 33.5	-1.4
	2.9nm,0.6s,baz=96,slow=8.5,SNR=47						
ILAR	Eielson Array	86.77	12	P	P	13 14 53.5	+0.7
	0.5nm,0.8s,baz=220,slow=5.1,SNR=5.0						

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*ISCJB **09** 13:09:53.9±0.9, 11°.3S±0°.1×166°.3E±0°.2, h10^{km}, mb3.9/7, Error ellipse: s-maj=23.3km s-min=16.4km az=17.1*

*IDC **09** 13:09:53.8±1.3, 11°.20S×166°.29E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.9/30, mbtmp3.9/8, ML3.6/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/38, Error ellipse: s-maj=46.6km s-min=22.7km az=130.0*

ISC 09 13:09:55.5±1.0**, 11°.2S**±0°.1×**166°.3E**±0°.2**, h10**^{km}**, n11,** σ**0^s.92**/9**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.46	285	*e*P	Pn	13 11 36.0	+5.2
HNR	Honiara	6.46	285	LR	LR	13 14 13.8	
	comp=Z,211nm,18.9s,baz=192,slow=40						
DZM	Mont Dzumac	10.84	179	Pn	Pn	13 12 31.1	+0.3
	0.4nm,0.3s,baz=14,slow=17,SNR=3.4						
DZM				LR	LR	13 15 38.5	
	comp=Z,54nm,22.0s,baz=336,slow=32						
CTA	Charters Tower	21.20	243	P	P	13 14 42.3	+0.8
	5.7nm,0.8s,baz=51,slow=9.5,SNR=4.0						
WRA	Warramunga Arr	31.93	250	P	P	13 16 21.3	-0.4
	1.1nm,0.8s,baz=79,slow=9.4,SNR=6.0						
ASAR	Alice Springs	33.20	244	P	P	13 16 31.9	-1.0
	1.2nm,0.8s,baz=74,slow=9.8,SNR=11						
SONM	Songino Array	79.08	324	P	P	13 22 01.1	+0.8
	0.2nm,0.4s,baz=166,slow=4.9,SNR=3.0						
ILAR	Eielson Array	83.47	18	P	P	13 22 22.9	-0.1
	0.7nm,0.7s,baz=232,slow=6.4,SNR=13						
MKAR	Makanchi Array	93.97	317	P	P	13 23 13.8	0.0
	0.7nm,0.5s,baz=86,slow=7.1,SNR=8.5						
YKA	Yellowknife Ar	94.85	27	P	P	13 23 17.7	+0.3
	0.2nm,0.6s,baz=255,slow=4.5,SNR=6.5						
ARCES	ARCESS Array B	116.59	346	PKP	PKiKP	13 28 37.8	-1.6
	2.1nm,0.9s,baz=85,slow=1.3,SNR=5.6						

IDC 09 13:11:29.0±3.7**, 39°.88S**×**45°.41E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/28**, mbtmp3.6**/4**, Error ellipse: s-maj=316.7km s-min=25.0km az=33.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATP	Matopo	24.21	318	P	P	13 16 46.6	-0.9
	1.2nm,0.5s,baz=149,slow=7.0,SNR=4.2						
H01W2	Cape Leeuwin H	53.61	108	T	T	14 18 13.7	
	baz=244,slow=75,SNR=15						
H01W3	Cape Leeuwin H	53.62	108	T	T	14 18 14.3	
	baz=244,slow=75,SNR=25						
H01W1	Cape Leeuwin H	53.63	108	T	T	14 18 15.0	
	baz=244,slow=75,SNR=17						
TORD	Torodi Ar. Bea	66.58	313	P	P	13 22 21.8	+0.6
	0.9nm,1.2s,baz=140,slow=7.6,SNR=2.3						
ASAR	Alice Springs	74.13	108	P	P	13 23 06.6	-0.9
	0.5nm,0.7s,baz=231,slow=4.8,SNR=7.8						
WRA	Warramunga Arr	76.70	105	P	P	13 23 23.3	+1.0
	0.4nm,0.7s,baz=226,slow=4.7,SNR=6.6						

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*TIR **09** 13:13:48.9, 40°.45N×21°.01E, h5^{km}, Md3.0/7*

*SKO **09** 13:13:50.8, 40°.44N×20°.77E, h9^{km}*

*THE **09** 13:13:51.8, 40°.52N×20°.83E, h0^{km}±1^{km}, ML2.6/7, Error ellipse: s-maj=1.4km s-min=0.6km az=286.0*

*ATH **09** 13:13:51.9, 40°.43N×20°.87E, h12^{km}±3^{km}, ML2.8/5, Error ellipse: s-maj=4.2km s-min=1.7km az=133.0*

*BEO **09** 13:13:52.1±0.8, 40°.45N×20°.86E, h9^{km}±8^{km}, ML2.8/5*

ISC 09 13:13:51.6±1.0**, 40°.46N**±0°.02×**20°.84E**±0°.02**, h6**^{km}±8^{km}**, n86,** σ**1^s.08**/121**, 6C-6D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.17	107	P	Pg	13 13 55.1	0.0
NEST				S	Sg	13 13 58.8	+1.4
NEST				AML	AML	13 14 01.7	
	comp=N,9754µm,0.3s						
NEST				AML	AML	13 14 01.8	
	comp=E,7415µm,0.3s						
NEST	Nestorio	0.17	107	P	Pg	13 13 55.3	+0.2
NEST				S	Sg	13 13 58.6	+1.2
PENT	Pentalofos	0.35	139	P	Pg	13 13 58.1	-0.4
PENT				S	Sg	13 14 03.2	0.0
PENT				AML	AML	13 14 05.1	
	comp=N,5149µm,0.2s						
PENT				AML	AML	13 14 06.9	
	comp=E,3917µm,0.3s						
PENT	Pentalofos	0.35	139	P	Pg	13 13 59.1	+0.6
PENT				S	Sb	13 14 05.0	-1.3
OHR	Ohrid	0.65	358	⇑*i*Pg	Pg	13 14 03.1	-1.0
OHR				*i* Sg	Sg	13 14 12.7	+0.2
KPRO	Kipourio	0.65	141	P	Pg	13 14 03.3	-0.8
KPRO				S	Sg	13 14 12.2	-0.3
KPRO				AML	AML	13 14 16.8	
	comp=E,1976µm,0.5s						
KPRO				AML	AML	13 14 17.5	
	comp=N,2032µm,0.3s						
KPRO	Kipourio	0.65	141	P	Pg	13 14 04.3	+0.2
KPRO				S	Sb	13 14 15.3	+0.5
TPE	Tepelena	0.65	255	*i* PG	Pg	13 14 03.3	-0.9
TPE				*i* SG	Sb	13 14 16.0	+1.2
BIA	Bitola	0.67	34	⇑*i*Pg	Pg	13 14 03.6	-0.9
BIA				*i* Sg	Sb	13 14 14.5	-0.9
KZN	Kozani	0.73	102	P	Pg	13 14 05.2	-0.5
KZN				S	Sb	13 14 15.8	-1.3
KZN				AML	AML	13 14 19.2	
	comp=N,2081µm,0.1s						
KZN				AML	AML	13 14 19.5	
	comp=E,3423µm,0.1s						
KZN	Kozani	0.73	102	P	Pg	13 14 05.4	-0.3
KZN				S	Sn	13 14 18.4	-1.8
JAN	Janina	0.81	179	P	Pg	13 14 07.0	-0.1
JAN	Janina	0.81	179	P	Pb	13 14 07.8	-0.3
JAN				S	Sn	13 14 20.8	-1.1
SRN	Sarande	0.86	228	P	Pg	13 14 08.5	+0.3
SRN				S	Sn	13 14 22.3	-1.0
SRN	Sarande	0.86	228	*i* PG	Pg	13 14 07.1	-1.1
SRN				*i* SG	Sb	13 14 21.6	+0.7
KRUS	Krusevo	0.96	19	⇑*i*Pg	Pg	13 14 08.4	-1.6
KRUS				*i* Sg	Sg	13 14 22.3	-0.2
IGT	Igoumenitsa	1.01	203	*e*Pg	Pg	13 14 10.5	-0.4
IGT				*e*Sg	Sg	13 14 23.9	-0.1
IGT	Igoumenitsa	1.01	203	P	Pg	13 14 10.2	-0.7
IGT	Igoumenitsa	1.01	203	P	Pb	13 14 11.6	+0.1
IGT	Igoumenitsa	1.01	203	*i* PN	Pg	13 14 10.6	-0.4
IGT				*i* SN	Sn	13 14 26.7	-0.2
VLO	Vlora	1.02	271	*i* PN	Pb	13 14 12.0	+0.3

VLO				*i* SN	Sn	13 14 28.9	+1.7
KEK	Kerkira	1.09	227	P	Pn	13 14 13.3	-0.2
TIR	Tirane	1.15	321	*e*Pg	Pb	13 14 12.6	-1.3
TIR				*e*Sg	Sg	13 14 29.7	+1.1
TIR	Tirane	1.15	321	⇓*i*P	Pb	13 14 10.8	-3.1
TIR	Tirane	1.15	321	*i* PN	Pn	13 14 14.6	+0.3
TIR				*i* SN	Sn	13 14 33.3	+2.9
PHP	Peshkopia	1.26	346	P	Pn	13 14 13.9	-1.9
PHP				S	Sb	13 14 32.5	+0.2
PHP	Peshkopia	1.26	346	*i* PN	Pn	13 14 13.8	-2.0
PHP				*i* SN	Sg	13 14 32.7	+0.7
THL	Klokotos Trika	1.27	134	P	Pn	13 14 14.7	-1.3
THL	Klokotos Trika	1.27	134	P	Pg	13 14 16.9	+0.8
THL				S	Sn	13 14 36.5	+3.1
GRG	Griva	1.29	67	P	Pn	13 14 14.8	-1.5
GRG				S	Sn	13 14 35.0	+1.1
LIT	Litokhoron	1.32	105	P	Pg	13 14 16.9	0.0
LIT				S	Sb	13 14 32.9	-1.1
LIT				AML	AML	13 14 40.1	
	comp=E,590µm,0.3s						
LIT				AML	AML	13 14 43.6	
	comp=N,603µm,0.6s						
LIT	Litokhoron	1.32	105	P	Pg	13 14 16.9	0.0
LIT				S	Sn	13 14 36.7	+2.2
VAY	Valandovo	1.57	56	⇑*i*Pg	Pn	13 14 19.9	-0.2
VAY				*i* Sg	Sg	13 14 42.3	+0.3
STIP	Stip	1.60	39	*e*Pn	Pg	13 14 22.3	+0.1
STIP				*e*Sn	Sg	13 14 45.9	+2.9
LKD2	Lefkada island	1.68	185	P	Pg	13 14 23.6	-0.2
LKD2	Lefkada island	1.68	185	P	Pg	13 14 23.6	-0.2
LKD2				S	Sg	13 14 45.1	-0.4
KNT	Kendrikon	1.71	65	P	Pn	13 14 21.6	-0.5
KNT				S	Sg	13 14 45.8	-0.9
EVR	Evrytania	1.72	154	P	Pb	13 14 23.6	-0.1
EVR				S	Sg	13 14 47.1	+0.3
HORT	Hortiatis	1.73	85	P	Pn	13 14 22.3	-0.1
HORT				S	Sb	13 14 45.9	-0.1
AGG	Agios Georgios	1.84	141	P	Pn	13 14 23.9	0.0
EVGI	Lefkada island	1.84	184	P	Pb	13 14 25.6	-0.2
PVO	Paravola	1.92	164	P	Pb	13 14 25.6	-1.5
FYTO	Fytoko, Volos	1.93	122	P	Pn	13 14 25.6	+0.6
SOH	Sokhos	1.95	79	P	Pn	13 14 25.1	-0.3
BCI	Bajram Curri	1.99	343	*i* PN	Pb	13 14 28.8	+0.5
PLG	Polygyros	2.00	92	P	Pn	13 14 26.3	+0.3
PLG				S	Sb	13 14 53.0	-0.5
ANX	Ano Chora	2.05	155	P	Pb	13 14 28.2	-1.1
ANX				S	Sg	13 14 56.1	-1.3
XOR	Xorichti	2.12	120	P	Pn	13 14 28.2	+0.6
XOR				S	Sb	13 14 56.9	-0.1
DRME	Dracevica, Mon	2.12	325	*e*Pn	Pn	13 14 28.3	+0.6
SRS	Serrai	2.19	72	*e*Pn	Pn	13 14 28.5	-0.2
EFP	Efpalio	2.20	157	P	Pn	13 14 29.7	+1.0
SERG	Sergoula	2.25	155	P	Pn	13 14 30.1	+0.6
VLS	Valsamata	2.29	185	P	Pn	13 14 30.4	+0.4
PDG	Podgorica	2.30	329	*e*Pn	Pn	13 14 30.4	+0.4
PDG	Podgorica	2.30	329	⇓*i*P	Pn	13 14 29.2	-0.8
PDG	Podgorica	2.30	329	*e*Pn	Pn	13 14 30.0	0.0
TRIZ	Trizonia	2.30	155	P	Pb	13 14 31.7	-1.9
LAKA	Lakka	2.39	158	P	Pn	13 14 32.6	+1.2
SKIA	Skiathos	2.41	122	P	Pn	13 14 31.6	0.0
OUR	Ouranopolis	2.41	92	P	Pn	13 14 31.1	-0.5
DSF	Desfina	2.43	147	P	Pn	13 14 32.6	+0.6
DSF				S	Sb	13 15 05.6	-0.5
DRO	Drossia	2.60	165	P	Pn	13 14 34.7	+0.5
KLV	Kalavryta, Ach	2.62	157	P	Pb	13 14 36.5	-2.6
HCY	Herceg Novi	2.65	319	*e*Pn	Pn	13 14 33.4	-1.5
SELS	Selova	2.76	4	*e*Pn	Pn	13 14 36.3	-0.2
VTS	Vitosha	2.77	39	⇓*i*P	Pg	13 14 45.2	+0.4
GUR	Goura	2.78	155	P	Pn	13 14 37.9	+1.1
SJES	Sjenica	2.87	347	*e*Pn	Pn	13 14 38.6	+0.5
TREB	Trebinje	2.92	321	*e*Pn	Pn	13 14 38.0	-0.7
TREB	Trebinje	2.92	321	*e*Pn	Pn	13 14 37.6	-1.1
BRY	Bratogost	2.98	326	*e*Pn	Pn	13 14 39.4	-0.2
IVAS	Ivanjica	3.15	351	*e*Pn	Pn	13 14 43.0	+1.1
MATE	Matera	3.15	275	⇓*i*P	Pb	13 14 48.1	+0.1
BOVS	Bovan	3.23	11	*e*Pn	Pn	13 14 42.5	-0.5
DID	Didima	3.50	147	P	Pn	13 14 48.3	+1.7
BBLS	Lazići	3.56	343	*e*Pn	Pn	13 14 48.3	+0.8
BBLS	Lazići	3.56	343	*e*Pn	Pn	13 14 48.3	+0.8
DIVS	Divibare	3.69	351	*e*Pn	Pn	13 14 50.0	+0.8
DIVS	Divibare	3.69	351	*e*Pn	Pn	13 14 50.1	+0.8
DIVS	Divibare	3.69	351	*e*Pn	Pn	13 14 49.6	+0.3
HAPS	Han Pijesak,Bl	3.88	340	*e*Pn	Pn	13 14 51.1	-0.9
MDVR	Moldovita	4.36	8	⇓*i*P	Pn	13 15 00.3	+1.8
GZR	Gura Zlata	5.13	15	⇑*i*P	Pn	13 15 11.8	+2.7
BZS	Buzias	5.18	6	⇓*i*P	Pn	13 15 10.3	+0.6
ARR	Arges	5.64	28	⇑*i*P	Pn	13 15 21.0	+4.9
NVLJ	Novalja	6.02	315	*e*Pn	Pn	13 15 20.1	-1.1

SOME ***09*** *13:20:35.5, 42°.00N×75°.78E, h15^{km}*
KRNET ***09*** *13:20:35.6±0.1, 42°.01N×75°.75E, h13^{km}, mb3.5*
KNET ***09*** *13:20:35.9±0.5, 42°.06N×75°.73E, h3^{km}±9^{km}, ml2.5, Error ellipse: s-maj=3.8km s-min=2.0km az=172.0*
NNC ***09*** *13:20:36.5±0.4, 42°.07N×75°.73E, h0^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=2.6km s-min=1.6km az=167.0*
ISC 09 13:20:35.9±1.1**, 42°.03N**±0°.02×**75°.76E**±0°.01**, h3**^{km}±10^{km}**,**
n91, σ0^{s}82/162**, 50C-54D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	Kyzart	0.38	277	P	Pg	13 20 43.7	+0.3
	142nm,0.2s,SNR=86						
KZA				⇑S	Sg	13 20 49.4	+1.0
	3µm,0.3s						
KZA	Kyzart	0.38	277	⇓*i*P	Pg	13 20 43.5	+0.2
	baz=80						
KZA				⇓*i*S	Sg	13 20 49.1	+0.7
	baz=80						
ULHL	Ulahol	0.42	59	P	Pg	13 20 44.1	0.0
	41nm,0.1s,SNR=189						
ULHL				⇑S	Sg	13 20 49.8	+0.3
	250nm,0.1s						
ULHL	Ulahol	0.42	59	⇑*i*P	Pg	13 20 44.0	0.0
	baz=57						
ULHL				⇑*i*S	Sg	13 20 49.5	0.0
	baz=57						
BOOM	Boomskoye usch	0.48	17	⇑*i*P	Pg	13 20 45.3	+0.2
	baz=16						
BOOM				⇑*i*S	Sg	13 20 52.3	+1.0
	baz=16						
NRN	Naryn	0.63	163	⇑*i*P	Pg	13 20 47.3	-0.6
	baz=64						
NRN				⇑*i*S	Sg	13 20 55.6	-0.5
	baz=64						
KBK	Karagaybulak	0.86	316	⇓P	Pg	13 20 52.8	+0.3
	56nm,0.2s,SNR=350						
KBK				⇓S	Sb	13 21 04.6	-1.1
	238nm,0.2s						
KBK	Karagaybulak	0.86	316	⇓*i*P	Pg	13 20 52.3	-0.2
	baz=17						
KBK				⇓*i*S	Sg	13 21 04.3	+0.6
	baz=17						
TKM2	Tokmak 2	0.89	352	P	Pg	13 20 53.2	+0.1
	89nm,0.3s,SNR=252						
TKM2				⇑S	Sb	13 21 05.6	-1.0
	193nm,0.2s						
TKM2	Tokmak 2	0.89	352	⇓P	Pg	13 20 53.1	+0.1
	17nm,0.2s						
TKM2				⇓S	Sb	13 21 05.4	-1.2
	87nm,0.3s						
TKM2	Tokmak 2	0.89	352	⇑*i*P	Pg	13 20 52.7	-0.4
	baz=53						
TKM2				⇑*i*S	Sb	13 21 05.4	-1.2
	baz=53						
UCH	Uchtor	0.94	282	⇓P	Pg	13 20 53.7	-0.4
	9.1nm,0.1s,SNR=13						
UCH				⇓S	Sg	13 21 06.9	+0.6
	43nm,0.1s						
UCH	Uchtor	0.94	282	⇓*i*P	Pg	13 20 53.4	-0.6
	baz=84						
UCH				⇓*i*S	Sg	13 21 06.5	+0.2
	baz=84						
KST	Kastek	1.02	9	P	Pg	13 20 55.5	0.0
	90nm,0.1s						
KST				S	Sb	13 21 09.9	-0.2
	200nm,0.3s						
KST	Kastek	1.02	9	⇓*e*P	Pg	13 20 55.5	0.0
	baz=9.0						
KST				⇓*i*S	Sb	13 21 10.0	-0.2
	baz=9.0						
KST	Kastek	1.02	9	⇓*e*P	Pg	13 20 55.5	0.0
	90nm,0.1s						
KST				⇓*i*S	Sb	13 21 09.9	-0.2
	200nm,0.3s						
KDJ	Kajisay	1.06	84	⇓*i*P	Pg	13 20 56.1	-0.2
	baz=83						
KDJ				⇓*i*S	Sg	13 21 10.3	+0.2
	baz=83						
ARLS	Aral	1.08	261	⇑*i*P	Pg	13 20 56.0	-0.7
	baz=63						
ARLS				⇑*i*S	Sg	13 21 10.5	-0.2
	baz=63						
AAK	Ala-Archa	1.11	303	⇓P	Pg	13 20 56.9	-0.3
	50nm,0.2s,SNR=31						
AAK				⇓S	Sg	13 21 11.9	+0.2
	73nm,0.2s						
AAK	Ala-Archa	1.11	303	⇓P	Pg	13 20 56.8	-0.5
	14nm,0.3s						
AAK				⇑S	Sg	13 21 11.7	0.0
	36nm,0.4s						
AAK	Ala-Archa	1.11	303	⇓*i*P	Pg	13 20 56.7	-0.6
	baz=4.0						
AAK				⇓*i*S	Sg	13 21 11.7	0.0
	baz=4.0						
FRU1	Bishkek	1.14	313	⇑*i*P	Pg	13 20 57.0	-0.8
	baz=14						
FRU1				⇑*i*S	Sg	13 21 12.7	+0.2
	baz=14						
IZV	Izvestkoviy	1.19	32	P	Pg	13 20 58.4	-0.2
	32nm,0.2s						
IZV				S	Sb	13 21 14.9	0.0
	97nm,0.4s						
IZV	Izvestkoviy	1.19	32	⇓*e*P	Pg	13 20 58.4	-0.2
	baz=32						
IZV				⇓*e*S	Sb	13 21 14.9	0.0
	baz=32						
IZV	Izvestkoviy	1.19	32	⇓*e*P	Pg	13 20 58.4	-0.2
	32nm,0.2s						
IZV				*e*S	Sb	13 21 14.9	0.0
	97nm,0.4s						
DGS	Degeres	1.21	1	P	Pg	13 20 58.8	-0.3
	25nm,0.1s						
DGS				S	Sb	13 21 15.5	-0.1
	78nm,0.1s						
DGS	Degeres	1.21	1	⇑*e*P	Pg	13 20 58.8	-0.3
	baz=1.0						
DGS				⇑*e*S	Sb	13 21 15.5	-0.1
	baz=1.0						
DGS	Degeres	1.21	1	⇑*e*P	Pg	13 20 58.8	-0.3
	25nm,0.1s						
DGS				*e*S	Sb	13 21 15.5	-0.1
	78nm,0.1s						
CHMS	Chumysh	1.22	323	⇓P	Pg	13 20 58.9	-0.4
	19nm,0.1s,SNR=24						
CHMS				⇑S	Sb	13 21 15.4	-0.4
CHMS	Chumysh	1.22	323	⇑*i*P	Pg	13 20 58.7	-0.6
	baz=23						
CHMS				⇑*i*S	Sg	13 21 15.0	0.0
	baz=23						
TNSS	Tian-Shan	1.33	41	P	Pn	13 21 01.0	-0.8
	38nm,0.3s						
TNSS				S	Sn	13 21 19.3	-1.0
	56nm,0.5s						
TNSS	Tian-Shan	1.33	41	⇓*e*P	Pn	13 21 01.0	-0.8
	baz=40						
TNSS				⇑*i*S	Sn	13 21 19.3	-1.0
	baz=40						
TNSS	Tian-Shan	1.33	41	⇓*e*P	Pn	13 21 01.0	-0.8
	41nm,0.2s						
TNSS				⇑*i*S	Sn	13 21 19.3	-1.0
	45nm,0.2s						
AAA	Alma-Ata	1.45	36	P	Pg	13 21 03.7	-0.1
	68nm,0.1s						
AAA				S	Sg	13 21 23.7	+1.2
	169nm,0.2s						
AAA	Alma-Ata	1.45	36	*e*P	Pg	13 21 03.7	-0.1
	baz=35						
AAA				*e*S	Sg	13 21 23.8	+1.2
	baz=35						
AAA	Alma-Ata	1.45	36	*e*P	Pg	13 21 03.7	-0.1
	68nm,0.1s						
AAA				*e*S	Sg	13 21 23.7	+1.2
	169nm,0.2s						
MDOK	Medeo	1.48	40	⇓P	Pn	13 21 03.1	-0.4
	8.2nm,0.6s						
MDOK				⇑S	Sg	13 21 23.3	-0.1
	26nm,0.5s						
MDOK	Medeo	1.48	40	Pg	Pn	13 21 03.4	-0.1
	11nm,0.1s						
MDOK				Lg	Lg	13 21 23.4	
	46nm,0.3s						
MDOK	Medeo	1.48	40	⇑*e*P	Pn	13 21 03.4	-0.1
	baz=39						
MDOK				⇑*e*S	Sg	13 21 23.4	0.0
	baz=39						
MDOK	Medeo	1.48	40	⇑*e*P	Pn	13 21 03.4	-0.1
	9.9nm,0.3s						
MDOK				*e*S	Sg	13 21 23.4	0.0
	46nm,0.3s						
KNDC	Almaty	1.48	37	⇑P	Pb	13 21 03.9	-0.2
	20nm,0.2s						
KNDC				⇓S	Sg	13 21 24.2	+0.7
	73nm,0.3s						
AML	Almayashu	1.54	274	⇓P	Pb	13 21 04.6	-0.7
	20nm,0.1s,SNR=65						
AML	Almayashu	1.54	274	⇓*i*P	Pn	13 21 04.3	-0.3
	baz=75						
AML				⇓*i*S	Sb	13 21 24.9	-0.4
	baz=75						
USP	Ospenovka	1.54	323	⇓P	Pb	13 21 04.7	-0.5
	37nm,0.1s,SNR=45						
USP	Ospenovka	1.54	323	⇓*i*P	Pn	13 21 04.1	-0.2
	baz=24						
USP				⇓*i*S	Sg	13 21 25.3	-0.2
	baz=24						
KOTS	Kotyrbulak	1.56	39	P	Pb	13 21 05.2	-0.4
	24nm,0.3s						
KOTS				S	Sg	13 21 26.4	+0.3
	90nm,0.4s						
KOTS	Kotyrbulak	1.56	39	*e*P	Pb	13 21 05.2	-0.4
	baz=39						
KOTS				*e*S	Sg	13 21 26.4	+0.3
	baz=39						
KOTS	Kotyrbulak	1.56	39	*e*P	Pb	13 21 05.2	-0.4
	24nm,0.3s						
KOTS				*e*S	Sg	13 21 26.4	+0.3
	90nm,0.4s						
EKS2	Erkin-Say	1.60	294	⇑P	Pb	13 21 06.0	-0.1
	25nm,0.3s,SNR=81						
EKS2	Erkin-Say	1.60	294	⇓*i*P	Pn	13 21 05.2	0.0
	baz=95						
EKS2				⇓*i*S	Sg	13 21 27.0	-0.2
	baz=95						
KTBS	Karatobe	1.81	22	P	Pb	13 21 09.5	-0.2
	31nm,0.2s						
KTBS				S	Sg	13 21 34.0	-0.1
	122nm,0.3s						
KTBS	Karatobe	1.81	22	*e*P	Pb	13 21 09.5	-0.2
	baz=17						
KTBS				*e*S	Sg	13 21 34.0	-0.1
	baz=17						
KTBS	Karatobe	1.81	22	*e*P	Pb	13 21 09.5	-0.2
	31nm,0.2s						
KTBS				*e*S	Sg	13 21 34.0	-0.1
	122nm,0.3s						
KUU	Kurty	1.91	13	P	Pb	13 21 11.2	-0.1
	40nm,0.2s						
KUU				S	Sg	13 21 36.8	-0.4
	90nm,0.4s						
KUU	Kurty	1.91	13	⇓*e*P	Pb	13 21 11.2	-0.1
	baz=13						
KUU				⇓*e*S	Sg	13 21 36.8	-0.4
	baz=13						
KUU	Kurty	1.91	13	⇓*e*P	Pb	13 21 11.2	-0.1
	40nm,0.2s						
KUU				*e*S	Sg	13 21 36.8	-0.4
	90nm,0.4s						
MRKS	Merke	2.00	292	Pg	Pb	13 21 12.9	-0.1
	72nm,0.3s						
MRKS				Lg	Lg	13 21 40.1	
	54nm,0.3s						
MRKS	Merke	2.00	292	⇑*i*P	Pb	13 21 12.9	-0.1
	baz=92						
MRKS				⇓*i*S	Sg	13 21 40.1	-0.2
	baz=92						
MRKS	Merke	2.00	292	⇑*i*P	Pb	13 21 12.9	-0.1
	72nm,0.3s						
MRKS				⇓*i*S	Sg	13 21 40.1	-0.2
	54nm,0.3s						
CHKK	Chushkaly	2.03	26	Pg	Pb	13 21 13.4	-0.1
	46nm,0.3s						
CHKK				Lg	Lg	13 21 40.9	
	168nm,0.2s						
CHKK	Chushkaly	2.03	26	⇓*e*P	Pb	13 21 13.4	-0.1
	baz=26						
CHKK				⇓*e*S	Sg	13 21 40.9	-0.2
	baz=26						
CHKK	Chushkaly	2.03	26	⇓*e*P	Pb	13 21 13.4	-0.1
	46nm,0.4s						
CHKK				*e*S	Sg	13 21 41.0	-0.2
	167nm,0.3s						
SATY	Saty	2.21	61	Pg	Pb	13 21 16.0	-0.6
	16nm,0.4s						
SATY				Lg	Lg	13 21 45.6	
	69nm,0.2s						
SATY	Saty	2.21	61	⇑*i*P	Pb	13 21 16.0	-0.6
	16nm,0.4s						
SATY				⇑*i*S	Sg	13 21 45.6	-1.3
	69nm,0.2s						
KURS	Kuram	2.30	50	Pg	Pb	13 21 18.1	+0.1
	10nm,0.5s						
KURS				Lg	Lg	13 21 48.8	
	42nm,0.6s						
KURS	Kuram	2.30	50	*e*P	Pb	13 21 18.1	+0.1
	baz=50						
KURS				*e*S	Sg	13 21 48.8	-0.9
	baz=50						
KURS	Kuram	2.30	50	*e*P	Pb	13 21 18.1	+0.1
	10nm,0.5s						
KURS				*e*S	Sg	13 21 48.8	-0.9
	42nm,0.7s						
MNAS	Manas	2.46	282	⇑Pn	Pb	13 21 19.6	-1.2
	5.6nm,0.5s						
MNAS				⇓Lg	Lg	13 21 53.4	
	7.4nm,0.4s						
MNAS	Manas	2.46	282	⇑Pn	Pb	13 21 19.6	-1.2
	5.6nm,0.5s						
MNAS				⇓Sn	Sg	13 21 53.4	-1.4
	7.4nm,0.4s						
MNAS	Manas	2.46	282	⇑*i*P	Pn	13 21 17.3	+0.3
	baz=82						
MNAS				⇑*i*S	Sb	13 21 49.0	-2.5
	baz=82						
SFK	Sufi-Kurgan	2.64	221	⇓Pn	Pn	13 21 21.4	+1.8
	2.2nm,0.3s						
SFK				Lg	Lg	13 22 02.1	
SFK	Sufi-Kurgan	2.64	221	Pg	Pb	13 21 24.5	+0.5
	2.1nm,0.2s						
SFK				Lg	Lg	13 21 59.9	
	9.8nm,0.7s						
SFK	Sufi-Kurgan	2.64	221	⇓Pn	Pn	13 21 21.4	+1.8
	2.2nm,0.3s						
SFK				Lg	Lg	13 22 02.1	
SFK	Sufi-Kurgan	2.64	221	⇑*i*P	Pn	13 21 20.6	+1.0
	baz=21						
SFK				⇑*i*S	Sn	13 21 53.3	+1.0
	baz=21						
ARXS	Arharly	2.65	34	Pg	Pb	13 21 24.3	+0.2
	20nm,0.6s						
ARXS				Lg	Lg	13 21 59.4	
	72nm,0.3s						
ARXS	Arharly	2.65	34	*e*P	Pb	13 21 24.3	+0.2
	20nm,0.6s						
ARXS				*e*S	Sg	13 21 59.4	-1.7
	72nm,0.3s						
UZB	Uzynbulak	2.66	64	*e*P	Pb	13 21 22.9	-1.3
	baz=64						
UZB				*e*S	Sb	13 21 56.8	-0.4
	baz=64						
UZB	Uzynbulak	2.66	64	*e*P	Pb	13 21 22.9	-1.3
	5.8nm,0.3s						
UZB				*e*S	Sb	13 21 56.8	-0.4
	20nm,0.5s						
ARK	Arkit	2.84	267	⇑*i*P	Pn	13 21 23.2	+0.9
	baz=67						
ARK				⇑*i*S	Sn	13 21 58.0	+1.0
	baz=67						
PDGK	Podgornoye	3.04	64	⇓Pn	Pb	13 21 28.0	-2.8
	2.6nm,0.4s						
PDGK				⇓Lg	Lg	13 22 11.8	
	11nm,0.6s						
PDGK	Podgornoye	3.04	64	⇑*i*P	Pn	13 21 26.1	+1.1
	baz=63						
PDGK				⇑*i*S	Sn	13 22 03.6	+1.6
	baz=63						
TDK	Taldyqorghan	3.54	32	Pg	Pb	13 21 39.2	+0.1
	33nm,0.3s						
TDK				Lg	Lg	13 22 25.1	
	41nm,0.5s						
TDK	Taldyqorghan	3.54	32	*e*P	Pb	13 21 39.2	+0.1
	33nm,0.3s						
TDK				*e*S	Sb	13 22 25.1	+2.6
	41nm,0.5s						
KTMS	Ketmen	3.67	66	Pg	Pb	13 21 42.9	+1.5
	1.8nm,0.1s						
KTMS				Lg	Lg	13 22 31.6	
	15nm,0.2s						
KTMS	Ketmen	3.67	66	*e*P	Pb	13 21 42.9	+1.5
	baz=65						
KTMS				*e*S	Sg	13 22 31.6	-2.1
	baz=65						
KTMS	Ketmen	3.67	66	*e*P	Pb	13 21 42.9	+1.5
	1.8nm,0.1s						
KTMS				*e*S	Sg	13 22 31.6	-2.1
	15nm,0.2s						
KK31	Karatay Array	4.02	287	⇑Pg	Pb	13 21 48.3	+0.9
	1.6nm,0.5s,baz=103,slow=13,SNR=7.6						
KK31				⇑Lg	Lg	13 22 42.7	
	3.2nm,0.5s,baz=106,slow=24,SNR=6.3						
KK31	Karatay Array	4.02	287	⇑Pg	Pb	13 21 48.3	+0.9
	1.6nm,0.5s,baz=103,slow=13,SNR=7.6						
KK31				⇑Lg	Lg	13 22 42.7	
	3.2nm,0.5s,baz=106,slow=24,SNR=6.3						
KAPS	Kapalarasan	4.17	38	Pg	Pb	13 21 50.3	+0.4
	4.3nm,0.4s						
KAPS				Lg	Lg	13 22 44.2	
	13nm,0.5s						
KAPS	Kapalarasan	4.17	38	*e*P	Pb	13 21 50.3	+0.4
	4.3nm,0.4s						
KAPS				⇓*i*S	Sb	13 22 44.2	+3.5
	13nm,0.5s						
MK31	Makanchi Array	6.67	42	⇑Pn	Pn	13 22 15.2	+0.4
	0.3nm,0.3s,baz=223,slow=15,SNR=22						
MK31				⇑Lg	Lg	13 24 09.1	
	0.7nm,0.6s,baz=104,slow=7.0,SNR=3.5						

ISCJB ***09*** *13:27:37.7±1.5, 11°.98N±0°.06×87°.79W±0°.04, h27^{km}±11^{km}, mb3.3/3, Error ellipse: s-maj=11.0km s-min=5.3km az=21.5*
UCR ***09*** *13:27:39.1±1.1, 12°.07N×87°.76W, h27^{km}±5^{km}, ML3.4*
IDC ***09*** *13:27:45.6±4.4, 11°.87N×88°.03W, h95^{km}±20^{km}, mb3.0/3, mb1 3.3/5, mb1mx3.1/42, mbtmp3.3/5, Error ellipse: s-maj=137.2km s-min=9.6km az=40.0*
ISC 09 13:27:37.5±2.3**, 12°.09N**±0°.06×**87°.74W**±0°.04**, h11**^{km}±15^{km}**,**
n22, σ1^{s}14/33**, mb3.3**/3**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.91	48	*e*P	Pn	13 27 56.4	+0.1
CRIN				*e*S	Sn	13 28 09.4	-0.1
CRIN				IAML		13 28 21.8	
	comp=E,2µm,0.4s						
CNGN	Cerro Negro	1.10	68	*e*P	Pb	13 27 58.8	+0.3
COPN	Copaltepe	1.13	85	*e*P	Pb	13 27 58.7	-0.4
CNCH	Conchagua	1.18	356	*e*P	Pb	13 28 00.0	0.0
CNCH				*e*S	Sn	13 28 16.6	+0.4
MOMN	Momotombo	1.22	75	*e*P	Pn	13 27 60.0	-0.6
LCND	La Caada	1.22	353	*e*P	Pb	13 28 00.8	+0.2
LCND				*e*S	Sg	13 28 17.5	+0.7
LCND				IAML		13 28 20.3	
	comp=Z,2µm,0.3s						
VSM	San Miguel	1.43	339	*e*P	Pn	13 28 03.9	+0.3
LCY	Lacayo	1.43	338	*e*P	Pn	13 28 03.8	+0.3
MGAN	Managua	1.46	88	*e*S	Sn	13 28 23.5	+0.5
MGAN				IAML		13 28 24.4	
	comp=N,88nm,0.5s						
PACA	Pacayal	1.48	338	*e*P	Pn	13 28 04.3	0.0
PACA				*e*S	Sn	13 28 23.1	-0.6
TECA	Tecapa	1.58	332	*e*P	Pn	13 28 05.5	-0.2
ESTN	Estel	1.67	53	*e*P	Pn	13 28 07.0	+0.1
ESTN				*e*S	Sb	13 28 29.7	+0.1
CAHU	Cacacuatique	1.73	345	*e*P	Pn	13 28 08.3	+0.5
CAHU				*e*S	Sb	13 28 30.8	-0.5
MATN	Matagalpa	1.96	65	*e*P	Pn	13 28 10.6	-0.2
MATN				*e*S	Sn	13 28 35.9	+0.4

LFRS	**El Faro**	**1.99**	**320**	*e*P	**Pn**	**13 28 11.6**	**+0.3**
LFRS				*e*S	**Sn**	**13 28 35.5**	**-0.9**
VICT	**Victoria**	**2.05**	**335**	*e*P	**Pn**	**13 28 12.9**	**+0.8**
VICT				*e*S	**Sn**	**13 28 38.8**	**+1.0**
BOQS	**Boqueron**	**2.22**	**318**	*e*S	**Sn**	**13 28 42.8**	**+0.8**
JTS	**JuntasAbangare**	**3.27**	**123**	P	**Pb**	**13 28 35.4**	**-0.2**
	comp=N,5.6nm,0.3s,baz=354,slow=9.3,SNR=8.3						
JTS				S	**Sb**	**13 29 17.0**	**+1.5**
	comp=N,2.5nm,0.3s,baz=349,slow=19,SNR=3.1						
APG	**El Apazote**	**3.92**	**318**	P	**Pb**	**13 28 45.0**	**-1.9**
	comp=N,0.2nm,0.3s,baz=91,slow=16,SNR=2.3						
APG				S	**Sn**	**13 29 29.0**	**+4.8**
	comp=N,0.5nm,0.3s,baz=80,slow=18,SNR=2.3						
TXAR	**Lajitas Array**	**22.67**	**322**	P	**P**	**13 32 39.3**	**+0.1**
	comp=N,1.6nm,0.8s,baz=137,slow=10,SNR=13						
PDAR	**Pinedale Array**	**35.95**	**332**	P	**P**	**13 34 38.7**	**+0.2**
	comp=N,0.2nm,0.5s,baz=130,slow=8.4,SNR=3.4						
YKA	**Yellowknife Ar**	**53.88**	**345**	P	**P**	**13 36 58.9**	**-1.7**
	comp=N,0.2nm,0.6s,baz=146,slow=6.5,SNR=3.8						

IDC 09 13:29:25.6±3.9**, 10°.42S×165°.45E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/46**, mbtmp3.5**/3**, Error ellipse: s-maj=202.5km s-min=31.2km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.43**	**249**	P	P	13 35 48.1	-0.8
	0.5nm,0.9s,baz=81,slow=8.8,SNR=4.5						
ASAR	**Alice Springs**	**32.81**	**242**	P	P	13 36 01.9	+0.7
	0.5nm,0.5s,baz=63,slow=10,SNR=11						
ILAR	**Eielson Array**	**83.02**	**19**	P	P	13 41 52.5	0.0
	0.2nm,0.5s,baz=230,slow=5.6,SNR=3.4						

IDC 09 13:33:21.7±2.3**, 3°.95N×127°.85E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/54**, mbtmp3.5**/3**, Error ellipse: s-maj=171.4km s-min=26.2km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.59**	**165**	P	P	13 38 42.2	-1.5
	1.6nm,0.8s,baz=345,slow=10,SNR=13						
ASAR	**Alice Springs**	**28.08**	**168**	P	P	13 39 17.1	+1.8
	0.2nm,0.4s,baz=347,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**58.01**	**325**	P	P	13 43 16.4	-0.1
	0.2nm,0.4s,baz=115,slow=8.0,SNR=6.8						

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*JMA **09** 13:37:50.8±0.2, 43°.63N×147°.25E, h35^{km}, M3.7*
*MOS **09** 13:37:50.4±1.2, 43°.93N×147°.23E, h61^{km}, mb4.2/3, Error ellipse: s-maj=15.4km s-min=11.9km az=141.3*
*SKHL **09** 13:37:51.2±0.8, 43°.75N×147°.30E, h46^{km}±3^{km}, mb4.2/6*
*IDC **09** 13:37:56.3±5.0, 44°.39N×147°.00E, h70^{km}±27^{km}, mb3.2/7, mb1 3.4/9, mb1mx3.1/62, mbtmp3.5/9, Error ellipse: s-maj=121.4km s-min=21.6km az=162.0*
ISC 09 13:37:48.0±0.9**, 43°.75N**±0°.07×**147°.37E**±0°.06**, h20**^{km}±5^{km}**, n47, σ1**^{s}**58**/59**, mb3.5**/7**, 2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.40**	**287**	*i* P	**Pn**	**13 38 00.0**	**+1.4**
SHO				AMB	AMB	13 38 00.9	
	50nm,0.2s						
SHO				AMB	AMB	13 38 00.9	
	60nm,0.2s						
SHO				AMB	AMB	13 38 00.9	
	80nm,0.2s						
SHO				*e*S	**Sn**	**13 38 06.0**	**+0.3**
SHO				A	A	13 38 08.4	
	1μm,0.2s						
SHO				A	A	13 38 08.4	
	1μm,0.2s						
SHO	**Shikotan**	**0.40**	**287**	*d i*PN	**Pn**	**13 38 00.1**	**+1.4**
SHO				*e*S	**Sn**	**13 38 06.9**	**+1.2**
SHO				pmax	pmax		
	comp=Z,315nm,0.1s						
SHO				pmax	pmax		
	comp=N,46nm,0.2s						
SHO				pmax	pmax		
	comp=E,55nm,0.1s						
SHO				smax	smax		
	comp=N,4μm,0.2s						
SHO				smax	smax		
	comp=E,3μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.12**	**285**	*i* P	**Pb**	**13 38 09.0**	**+0.3**
YUK				AMB	AMB	13 38 09.0	
	comp=E,70nm,0.3s						
YUK				AMB	AMB	13 38 09.0	
	comp=E,110nm,0.3s						
YUK				AMB	AMB	13 38 09.0	
	comp=E,90nm,0.3s						
YUK				*e*S	**Sn**	**13 38 23.0**	**-0.4**
YUK				A	A	13 38 26.0	
	comp=E,1μm,0.3s						
YUK				A	A	13 38 26.0	
	comp=E,390nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.12**	**285**	*d i*PN	**Pn**	**13 38 09.4**	**+0.8**
GRPR	**Tuman**	**1.18**	**282**	*e*P	**Pb**	**13 38 10.3**	**+0.7**
GRPR				AMB	AMB	13 38 11.0	
	comp=E,20nm,0.2s						
GRPR				AMB	AMB	13 38 11.0	
	comp=E,80nm,0.2s						
GRPR				AMB	AMB	13 38 11.0	
	comp=E,30nm,0.2s						
GRPR				*e*S	**Sb**	**13 38 24.0**	**-0.4**
GRPR				A	A	13 38 25.0	
	comp=E,520nm,0.2s						
GRPR				A	A	13 38 25.0	
	comp=E,90nm,0.2s						
GRPR	**Tuman**	**1.18**	**282**	*e*PN	**Pn**	**13 38 09.8**	**+0.5**
GRPR				*e*S	**Sn**	**13 38 24.6**	**-0.1**
GRPR				pmax	pmax		
	comp=Z,209nm,0.2s						
GRPR				pmax	pmax		
	comp=N,176nm,0.1s						
GRPR				pmax	pmax		
	comp=E,76nm,0.1s						
GRPR				smax	smax		
	comp=N,522nm,0.2s						
GRPR				smax	smax		
	comp=E,930nm,0.2s						
LAGR	**Lagunnoye**	**1.18**	**285**	*e*P	**Pn**	**13 38 10.0**	**+0.7**
LAGR				AMB	AMB	13 38 11.0	
	comp=E,70nm,0.2s						
LAGR				AMB	AMB	13 38 11.0	
	comp=E,90nm,0.2s						
LAGR				AMB	AMB	13 38 11.0	
	comp=E,50nm,0.2s						
LAGR				*e*S	**Sb**	**13 38 24.0**	**-0.5**
LAGR				A	A	13 38 26.0	
	comp=E,100nm,0.2s						
LAGR				A	A	13 38 26.0	
	comp=E,550nm,0.2s						
LAGR	**Lagunnoye**	**1.18**	**285**	*e*PN	**Pb**	**13 38 10.3**	**+0.6**
LAGR				*e*S	**Sn**	**13 38 24.7**	**-0.1**
LAGR				pmax	pmax		
	comp=N,68nm,0.1s						
LAGR				pmax	pmax		
	comp=E,88nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,347nm,0.1s						
LAGR				smax	smax		
	comp=N,995nm,0.2s						
LAGR				smax	smax		
	comp=E,536nm,0.2s						
NEM2	**Nemuro 2**	**1.24**	**252**	P	**Pn**	**13 38 10.7**	**+0.5**
NEM2				*e*S	**Sb**	**13 38 24.9**	**-1.4**
GLVR	**Golovnino**	**1.34**	**270**	*e*P	**Pn**	**13 38 12.0**	**+0.5**
GLVR				AMB	AMB	13 38 13.0	
	comp=E,50nm,0.2s						
GLVR				*i* S	**Sn**	**13 38 28.6**	**-0.1**
GLVR				A	A	13 38 30.0	
	comp=E,210nm,0.2s						
GLVR				A	A	13 38 30.0	
	comp=E,290nm,0.2s						
GLVR	**Golovnino**	**1.34**	**270**	*e*PN	**Pn**	**13 38 12.7**	**+1.2**
GLVR				*i* S	**Sn**	**13 38 29.0**	**+0.3**
GLVR				pmax	pmax		
	comp=N,55nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,532nm,0.1s						
GLVR				smax	smax		
	comp=N,2μm,0.2s						
GLVR				smax	smax		
	comp=E,1μm,0.2s						
KUR	**Kuril'sk**	**1.52**	**13**	*i* P	**Pb**	**13 38 15.6**	**0.0**
KUR				AMB	AMB	13 38 16.0	
	comp=E,7.0nm,0.3s						
KUR				AMB	AMB	13 38 16.0	
	comp=E,80nm,0.3s						
KUR				*e*S	**Sb**	**13 38 33.7**	**-0.7**
KUR				A	A	13 38 35.4	
	comp=E,350nm,0.4s						
KUR				A	A	13 38 35.4	
	comp=E,500nm,0.4s						
KUR	**Kuril'sk**	**1.52**	**13**	*i* PN	**Pb**	**13 38 15.5**	**0.0**
JRA	**Rausu**	**1.63**	**277**	P	**Pn**	**13 38 17.1**	**+1.5**
JRA				*e*S	**Sn**	**13 38 36.3**	**+0.3**
JKHN	**Kushirohamanak**	**1.74**	**248**	P	**Pn**	**13 38 18.1**	**+1.1**
JNK	**Nakash**	**1.93**	**266**	P	**Pn**	**13 38 20.6**	**+1.0**
JNK				*e*S	**Sn**	**13 38 42.5**	**-0.7**
JAK	**Akkeshi**	**2.09**	**250**	P	**Pn**	**13 38 22.6**	**+0.8**
JAK				*e*S	**Sn**	**13 38 46.3**	**-0.9**
JTKR	**Abashiri--Toko**	**2.51**	**276**	P	**Pn**	**13 38 29.8**	**+2.2**
JAR	**Ashorobuto**	**2.65**	**261**	P	**Pn**	**13 38 31.5**	**+1.9**
JAR				*e*S	**Sn**	**13 39 02.3**	**+1.1**
JOB	**Onbets**	**2.71**	**253**	P	**Pn**	**13 38 31.9**	**+1.5**
JOB				*e*S	**Sn**	**13 39 02.1**	**-0.5**
JMP	**Maruseppu**	**2.91**	**276**	P	**Pn**	**13 38 35.5**	**+2.4**
HRK	**Horoka**	**3.09**	**266**	*e*P	**Pn**	**13 38 38.5**	**+2.8**
JCH	**Churui**	**3.14**	**250**	P	**Pn**	**13 38 37.4**	**+1.1**
JCH				*e*S	**Sn**	**13 39 11.7**	**-1.5**
JKA	**Kamikawa-asahi**	**3.46**	**278**	*e*P	**Pn**	**13 38 43.7**	**+3.0**
ASAJ	**Asahikawa**	**3.46**	**278**	P	**Pn**	**13 38 43.7**	**+3.0**
	comp=E,1.8nm,0.3s,baz=137,slow=9.5,SNR=10						
ASAJ				S	**Sb**	**13 39 28.9**	**-1.3**
	comp=E,1.6nm,0.3s,baz=250,slow=31,SNR=6.0						
JFR	**Furan**	**3.52**	**262**	P	**Pn**	**13 38 44.4**	**+2.8**
ERM	**Erimo**	**3.55**	**242**	*e*P	**Pn**	**13 38 45.7**	**+3.8**
ERM	**Erimo**	**3.55**	**242**	*i* PN	**Pn**	**13 38 45.7**	**+3.8**
JNBK	**Urakawa-nobuka**	**3.69**	**248**	P	**Pn**	**13 38 44.9**	**+1.1**
PETK	**Petropavlovsk-**	**11.60**	**33**	P	**Pn**	**13 40 33.6**	**+1.3**
	comp=E,0.3nm,0.3s,baz=171,slow=12,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**29.00**	**139**	T	T	14 14 35.9	
	baz=330,slow=75,SNR=35						
H11N1	**WAKE ISLAND Hy**	**29.01**	**140**	T	T	14 14 36.8	
	baz=330,slow=75,SNR=33						
H11N3	**WAKE ISLAND Hy**	**29.02**	**139**	T	T	14 14 37.3	
	baz=330,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	**29.97**	**141**	T	T	14 15 42.5	
	baz=331,slow=76,SNR=68						
H11S3	**WAKE ISLAND Hy**	**29.98**	**141**	T	T	14 15 41.6	
	baz=331,slow=76,SNR=48						
H11S2	**WAKE ISLAND Hy**	**29.99**	**141**	T	T	14 15 43.6	
	baz=331,slow=76,SNR=26						
ILAR	**Eielson Array**	**41.39**	**36**	*e*P	**P**	**13 45 34.5**	**+2.1**
ILAR	**Eielson Array**	**41.39**	**36**	P	**P**	**13 45 32.2**	**-0.2**
	comp=E,0.4nm,0.8s,baz=281,slow=9.2,SNR=4.6						
MKAR	**Makanchi Array**	**44.72**	**298**	P	**P**	**13 45 58.2**	**-1.4**
	comp=E,0.1nm,0.6s,baz=81,slow=11,SNR=3.6						
INK	**Inuvik**	**46.32**	**30**	P	**P**	**13 46 11.4**	**-0.5**
	comp=E,0.4nm,0.4s,baz=284,slow=9.0,SNR=5.6						
YKA	**Yellowknife Ar**	**55.71**	**34**	*e*P	**P**	**13 47 24.9**	**+2.3**
YKA	**Yellowknife Ar**	**55.71**	**34**	P	**P**	**13 47 22.0**	**-0.6**
YKA	**Yellowknife Ar**	**55.71**	**34**	P	**P**	**13 47 22.0**	**-0.6**
	comp=E,0.2nm,0.7s,baz=299,slow=7.2,SNR=3.9						
FINES	**FINESS Array B**	**64.94**	**333**	P	**P**	**13 48 23.3**	**-2.4**
	comp=E,0.8nm,0.6s,baz=30,slow=8.8,SNR=5.3						
NB2	**NORSAR Subarra**	**69.66**	**339**	P	**P**	**13 48 53.8**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**69.66**	**339**	P	**P**	**13 48 53.6**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=32,slow=6.6,SNR=5.7						
HFS	**Hagfors**	**69.75**	**337**	P	**P**	**13 48 54.1**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=28,slow=6.7,SNR=8.5						

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*SJA **09** 13:40:58.2±0.3, 34°.31S×73°.18W, h92^{km}±610^{km}, ML3.5, MW3.3*
*GUC **09** 13:41:06.9±0.6, 34°.20S×72°.17W, h48^{km}±6^{km}, ML3.3*
ISC 09 13:41:01.6±2.8**, 34°.00S**±0°.07×**72°.4W**±0°.2**, h8**^{km}±14^{km}**, n11, σ0**^{s}**70**/18**, 3C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	**Pichilemu**	**0.49**	**143**	⇑*e*P	**Pn**	**13 41 15.1**	**+0.1**
CHPI				*e*S	**Sb**	**13 41 20.8**	**+0.8**
ROCH	**El Roble**	**1.52**	**48**	⇑*e*P	**Pg**	**13 41 31.1**	**+0.2**
ROCH				*e*S	**Sb**	**13 41 50.5**	**+0.7**
ROCH				IAML		13 41 57.5	
	comp=N,739nm,0.7s						
CLCH	**Cerro Calan**	**1.64**	**69**	⇑*e*P	**Pb**	**13 41 32.4**	**+0.3**
CLCH				*e*S	**Sn**	**13 41 52.3**	**+0.2**
CLCH				IAML		13 41 57.4	
	comp=E,461nm,0.5s						
PEL	**Peldehue**	**1.64**	**59**	*e*P	**Pg**	**13 41 33.1**	**0.0**
PEL				*e*S	**Sb**	**13 41 53.7**	**+0.7**
PEL				IAML		13 42 00.0	
	comp=N,522nm,0.2s						
LMEL	**Las Melosas**	**1.80**	**86**	*e*P	**Pb**	**13 41 34.4**	**-0.6**
LMEL				*e*S	**Sn**	**13 41 54.8**	**-1.5**
LMEL				IAML		13 42 00.1	
	comp=N,858nm,0.3s						
FCH	**Farellones**	**1.85**	**70**	*e*P	**Pb**	**13 41 35.9**	**-0.1**
FCH				*e*S	**Sn**	**13 41 58.2**	**+0.5**
FCH				IAML		13 42 03.8	
	comp=E,373nm,0.5s						
AUSP	**Uspallata**	**3.06**	**56**	*i* P	**Pb**	**13 41 56.7**	**+0.2**
AUSP				*i* S	**Sg**	**13 42 40.0**	**-0.1**
AAGR	**Agrelo**	**3.09**	**74**	*i* P	**Pb**	**13 41 56.7**	**-0.3**
ARCO	**CERRO ARCO**	**3.09**	**69**	*i* P	**Pb**	**13 41 56.7**	**-0.3**
ARCO				IAML		13 42 43.5	
	comp=Z,54nm,0.6s						
ASAL	**Salagasta**	**3.27**	**66**	*i* P	**Pb**	**13 41 59.1**	**-0.9**
ASAL				IAML		13 42 50.6	
	comp=Z,35nm,0.9s						
RTLS	**Leoncito**	**3.39**	**51**	*i* P	**Pb**	**13 42 01.0**	**-1.1**
RTLS				IAML		13 42 50.8	
	comp=Z,56nm,0.8s						

MEX 09 13:42:12.7±0.7**, 16°.28N×97°.99W, h5**^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**312**	*e*P	Pg	13 42 15.5	-0.6
PNIG				*i* S	Sg	13 42 18.5	+0.1
CAIG	**El Cayaco**	**2.31**	**290**	*e*P	Pn	13 42 46.3	-5.1
CAIG				*e*S	Sn	13 43 21.4	+1.2
PLIG	**Platanillo**	**2.55**	**326**	*i* P	Pn	13 42 50.4	-4.4
PLIG				*e*S	Sn	13 43 27.5	+1.2

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*IDC **09** 13:43:32.0±1.6, 10°.91S×165°.25E, h0^{km}, mb3.7/5, mb1 4.0/7, mb1mx3.7/41, mbtmp3.9/7, ML4.1/2, MS2.6/1, Ms1 2.6/1, ms1mx2.4/39, Error ellipse: s-maj=34.8km s-min=28.2km az=139.0*
*ISCJB **09** 13:43:34.8±1.1, 11°.0S±0°.1×165°.3E±0°.1, h31^{km}, mb3.7/4, Error ellipse: s-maj=20.3km s-min=11.7km az=33.4*
ISC 09 13:43:36.7±1.3**, 10°.9S**±0°.1×**165°.3E**±0°.1**, h31**^{km}**, n10, σ1**^{s}**58**/8**, mb3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.48**	**285**	Pn	**Pn**	**13 44 55.6**	**-0.7**
	9.6nm,0.3s,baz=165,slow=2.3,SNR=7.6						
HNR				Sn	**Sn**	**13 46 00.5**	**+2.1**
	3.8nm,0.3s,baz=150,slow=20,SNR=2.1						
HNR				LR	LR	13 46 17.2	
	comp=Z,67nm,20.3s,baz=122,slow=30						
DZM	**Mont Dzumac**	**11.14**	**175**	Pn	**Pn**	**13 46 15.0**	**+1.0**
	1.0nm,0.3s,baz=349,slow=18,SNR=6.8						
CTA	**Charters Tower**	**20.48**	**241**	P	**P**	**13 48 12.6**	**+0.4**
	5.9nm,0.8s,baz=71,slow=9.7,SNR=5.9						
H11S2	**WAKE ISLAND Hy**	**29.25**	**3**	T	T	14 20 11.0	
	baz=184,slow=76,SNR=8.0						
H11S3	**WAKE ISLAND Hy**	**29.26**	**3**	T	T	14 20 10.8	
	baz=184,slow=76,SNR=9.4						
H11S1	**WAKE ISLAND Hy**	**29.27**	**3**	T	T	14 20 12.4	
	baz=184,slow=76,SNR=9.1						
WRA	**Warramunga Arr**	**31.13**	**249**	P	**P**	**13 49 50.8**	**-2.0**
	0.7nm,0.8s,baz=82,slow=8.9,SNR=4.9						
ASAR	**Alice Springs**	**32.47**	**243**	P	**P**	**13 50 03.1**	**-1.5**
	0.9nm,0.5s,baz=66,slow=10,SNR=32						
ILAR	**Eielson Array**	**83.53**	**19**	P	**P**	**13 56 01.7**	**+0.5**
	0.4nm,0.9s,baz=232,slow=5.3,SNR=4.6						
MKAR	**Makanchi Array**	**93.14**	**317**	P	**P**	**13 56 47.9**	**+0.1**
	0.2nm,0.6s,baz=98,slow=5.1,SNR=3.5						

IDC 09 13:46:22.7±3.7**, 40°.30N×14°.55E, h350**^{km}±34^{km}**, mb3.1**/3**, mb1 2.8**/9**, mb1mx2.6**/70**, mbtmp3.6**/9**, Error ellipse: s-maj=50.8km s-min=17.9km az=36.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**9.84**	**54**	P	P	13 48 39.9	-0.4
	baz=122,slow=19						
AKASG	**Malin Array Be**	**14.60**	**40**	P	P	13 49 30.8	-1.9
	1.0nm,0.3s,baz=226,slow=8.9,SNR=2.3						
BRTR	**Keskin Array B**	**14.64**	**86**	P	P	13 49 33.2	-0.3
	0.1nm,0.3s,baz=277,slow=9.4,SNR=5.7						
MMAI	**Mount Meron Ar**	**18.22**	**107**	P	P	13 50 11.4	-0.6
	0.3nm,0.3s,baz=287,slow=15,SNR=2.3						
EKA	**Eskdalemuir Ar**	**19.09**	**328**	P	P	13 50 21.1	+0.3
	baz=118,slow=5.2,SNR=5.1						
HFS	**Hagfors**	**19.87**	**359**	P	P	13 50 28.6	-0.4
	0.1nm,0.3s,baz=182,slow=11,SNR=5.1						
FINES	**FINESS Array B**	**22.32**	**15**	P	P	13 50 50.7	-0.7
	1.3nm,0.6s,baz=191,slow=10,SNR=7.2						
ZALV	**Zalesovo Beam**	**47.76**	**49**	P	P	13 54 25.5	+0.1
	0.6nm,0.3s,baz=283,slow=6.5,SNR=3.3						
MKAR	**Makanchi Array**	**48.15**	**59**	P	P	13 54 28.9	+0.3
	0.5nm,0.4s,baz=285,slow=6.7,SNR=15						

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*IDC **09** 13:55:49.7±1.0, 62°.38N×73°.35W, h0^{km}, mb3.2/1, mb1 3.6/5, mb1mx3.3/59, mbtmp3.4/5, ML2.6/4, Error ellipse: s-maj=13.6km s-min=10.2km az=126.0*
*OTT **09** 13:55:51.7±0.1, 62°.41N×73°.29W, h18^{km}, MN3.7/11, 74km northeast from Purtuniq, Qc*
ISC 09 13:55:47.0±0.7**, 62°.43N**±0°.05×**73°.26W**±0°.05**, h10**^{km}**, n25, σ2**^{s}**84**/35**, Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNGQ	**Kangiqsujuaq**	**1.05**	**144**	PG	**Pn**	**13 56 09.7**	**+1.9**
KNGQ				SG	**Sn**	**13 56 24.1**	**+1.6**
KNGQ				Trac		13 56 29.0	
	comp=Z,790nm,0.1s						
FRB	**Frobisher Bay**	**2.51**	**56**	PN	**Pb**	**13 56 32.5**	**+0.3**
FRB				SN	**Sb**	**13 57 01.1**	**-2.1**
FRB				Trac		13 57 08.7	
	comp=Z,115nm,0.1s						
FRB				LG	Lg	13 57 08.8	
FRB	**Frobisher Bay**	**2.51**	**56**	Pn	**Pb**	**13 56 32.5**	**+0.3**
	8.1nm,0.3s,baz=237,slow=15,SNR=59						
FRB				Sn	**Sb**	**13 57 02.8**	**-0.4**
	26nm,0.3s,baz=330,slow=20,SNR=19						
KAJQ	**Kangiqsualujju**	**5.21**	**133**	PN	**Pn**	**13 57 06.8**	**+1.9**
KAJQ				SN	**Sn**	**13 58 04.6**	**-0.3**
KAJQ				LG	Lg	13 58 30.0	
KAJQ				Trac		13 58 30.0	
	comp=Z,16nm,0.1s						
ILON	**Igloolik, Nuna**	**7.79**	**337**	PN	**Pn**	**13 57 41.9**	**+1.7**
ILON				SN	**Sn**	**13 59 05.8**	**-2.6**
ILON				LG	Lg	13 59 53.8	
ILON				Trac		13 59 56.2	
	comp=Z,62nm,0.3s						
CLRN	**Clyde River**	**8.29**	**11**	PN	**Pn**	**13 57 49.9**	**+2.8**
CLRN				SN	**Sn**	**13 59 17.4**	**-3.1**
CLRN				LG	Lg	14 00 08.2	
CLRN				Trac		14 00 08.5	
	comp=Z,35nm,0.3s						
SCHQ	**Schefferville**	**8.32**	**153**	PN	**Pn**	**13 57 49.1**	**+1.5**
SCHQ				SN	**Sn**	**13 59 17.1**	**-4.4**
SCHQ				Trac		14 00 08.7	
	comp=Z,188nm,1.1s						
SCHQ				LG	Lg	14 00 10.0	
SCHQ	**Schefferville**	**8.32**	**153**	Pn	**Pn**	**13 57 49.1**	**+1.5**
	0.8nm,0.3s,baz=346,slow=11,SNR=17						
SCHQ				Sn	**Sn**	**13 59 17.6**	**-4.0**
	4.8nm,0.3s,baz=206,slow=18,SNR=10.0						
SCHQ				Lg	Lg	14 00 05.4	
	7.6nm,0.3s,baz=246,slow=18,SNR=13						
NANL	**Nain**	**8.33**	**130**	PN	**Pn**	**13 57 49.5**	**+1.8**
NANL				SN	**Sn**	**13 59 18.0**	**-3.7**
NANL				Trac		14 00 17.7	
	comp=Z,1.0nm,0.0s						
WEMQ	**Wemindji, Queb**	**9.73**	**197**	PN	**Pn**	**13 58 08.5**	**+1.6**
WEMQ				SN	**Sn**	**13 59 51.4**	**-4.8**
WEMQ				LG	Lg	14 00 54.5	
WEMQ				Trac		14 00 57.2	
	comp=Z,260nm,1.5s						
MKVL	**Makkovik**	**10.35**	**129**	PN	**Pn**	**13 58 17.0**	**+1.7**
MKVL				SN	**Sn**	**14 00 05.8**	**-5.4**
MKVL				Trac		14 01 17.8	
	comp=Z,2.3nm,0.1s						
MKVL				LG	Lg	14 01 21.2	
FCC	**Fort Churchill**	**10.86**	**260**	PN	**Pn**	**13 58 23.8**	**+1.5**
FCC				SN	Sn	14 00 17.1	-6.6
FCC				LG	Lg	14 01 32.0	
FCC				Trac		14 01 44.5	
	comp=Z,274nm,2.0s						
VIMO	**Victor Mine**	**11.14**	**215**	PN	**Pn**	**13 58 28.7**	**+2.5**
VIMO				Trac		14 01 33.0	
	comp=Z,2μm,4.3s						
MNQ	**Manicouagan**	**12.18**	**166**	PN	**Pn**	**13 58 41.4**	**+1.0**
MNQ				SN	**Sn**	**14 00 49.2**	**-6.9**
MNQ				Trac		14 02 02.8	
	comp=Z,0.9nm,0.0s						
CHGQ	**Chibougamau**	**12.57**	**183**	PN	**Pn**	**13 58 47.7**	**+2.0**
CHGQ				SN	Sn	14 00 56.0	-10
CHGQ				LG	Lg	14 02 28.0	
CHGQ				Trac		14 02 31.3	
	comp=Z,679nm,2.3s						
SMQ	**Clarke City**	**12.76**	**161**	PN	**Pn**	**13 58 48.9**	**+0.6**
SMQ				SN	Sn	14 01 01.6	-8.7
SMQ				Trac		14 02 36.0	
	comp=Z,14nm,0.5s						
MATQ	**Matagami**	**12.93**	**193**	PN	**Pn**	**13 58 50.6**	**-0.1**
MATQ				SN	Sn	14 01 06.0	-8.6
MATQ				LG	Lg	14 02 31.8	
MATQ				Trac		14 02 44.6	
	comp=Z,192nm,1.5s						
ICQ	**Pointe Anglais**	**13.36**	**163**	PN	**Pn**	**13 58 57.0**	**+0.5**
ICQ				SN	Sn	14 01 16.8	-8.1
ICQ				Trac		14 02 49.2	
	comp=Z,3μm,4.7s						
ICQ				LG	Lg	14 02 51.9	
NATG	**Natashquan Que**	**13.46**	**150**	PN	Pn	13 58 54.0	-3.8
NATG				SN	Sn	14 01 18.6	-8.6
NATG				Trac		14 02 44.0	
	comp=Z,2μm,4.8s						
CNQ	**Baie Comeau**	**13.47**	**165**	PN	**Pn**	**13 59 00.1**	**+2.1**
CNQ				SN	Sn	14 01 18.8	-8.9
CNQ				Trac		14 02 46.8	
	comp=Z,4.6nm,0.3s						
RES	**Resolute Bay**	**14.47**	**337**	Pn	**Pn**	**13 59 10.9**	**-0.6**
	0.3nm,0.3s,baz=128,slow=8.3,SNR=6.1						
RES				Sn	Sn	14 01 43.2	-8.5
	0.2nm,0.3s,baz=164,slow=15,SNR=4.7						
RES				Lg	Lg	14 03 15.9	
	0.9nm,0.3s,baz=51,slow=18,SNR=7.1						
ULM	**Lac du Bonnet**	**17.37**	**236**	Pn	**Pn**	**13 59 46.5**	**-2.8**
	0.1nm,0.3s,baz=25,slow=13,SNR=2.1						
ULM				Sn	Sn	14 02 50.1	-12
	0.2nm,0.3s,baz=122,slow=19,SNR=2.4						
ULM				Lg	Lg	14 04 45.2	
	0.3nm,0.3s,baz=300,slow=22,SNR=4.4						
SADO	**Sadowa**	**18.02**	**194**	Lg	Lg	14 05 04.6	
	0.5nm,0.3s,baz=132,slow=18,SNR=3.6						
YKA	**Yellowknife Ar**	**18.89**	**289**	Pn	**P**	**14 00 04.7**	**-2.5**
	0.0nm,0.3s,baz=75,slow=12,SNR=4.7						
TXAR	**Lajitas Array**	**38.58**	**225**	P	**P**	**14 03 14.4**	**+4.5**
	0.1nm,0.5s,baz=31,slow=5.4,SNR=3.9						

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*KRSC **09** 13:57:47.2±0.4, 55°.70N×161°.44E, h92^{km}±7^{km}, ML5.0, FELT [II-III] at GMS Kronoki.*
*ISCJB **09** 13:57:48.4±0.2, 55°.73N±0°.02×161°.35E±0°.05, h96^{km}±1^{km}, mb4.3/66, Error ellipse: s-maj=4.8km s-min=2.5km az=24.5*
*MOS **09** 13:57:48.1±0.9, 55°.74N×161°.32E, h93^{km}, mb4.5/29, Error ellipse: s-maj=8.0km s-min=3.7km az=78.7*
MOS Felt (II-III) at Kronoki.
*IDC **09** 13:57:50.7±1.4, 55°.65N×161°.24E, h101^{km}±12^{km}, mb3.9/31, mb1 4.1/36, mb1mx4.0/61, mbtmp4.2/36, MS2.9/4, Ms1 2.9/4, ms1mx2.8/58, Error ellipse: s-maj=11.9km s-min=8.7km az=142.0*
*NEIC **09** 13:57:50.7±0.5, 55°.67N×161°.24E, h102^{km}±5^{km}, mb4.6/22,*

Error ellipse: s-maj=5.1km s-min=3.8km az=145.0

ISC 09 13:57:49.0±0.6,**55°.69N**±0°.03×**161°.41E**±0°.03,**h87**^{km}±4^{km}, **n238**,σ**1**^{s}**.55**/307,**mb4.5**/71,**7C-2D**,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.47	314	*i* P	Pn	13 58 03.2	-0.1
ZLN	Zelenaya	0.47	314	PN	Pn	13 58 03.2	-0.1
BZGR	Bezymyannyi-Gr	0.47	302	*i* P	Pn	13 58 03.0	-0.3
BZGR	Bezymyannyi-Gr	0.47	302	PN	Pn	13 58 03.0	-0.3
LGNR	Loginova	0.56	314	*e*P	Pn	13 58 04.3	0.0
LGNR	Loginova	0.56	314	PN	Pn	13 58 04.3	0.0
CIRR	Tsirk	0.56	319	*i* P	Pn	13 58 04.0	-0.1
CIRR	Tsirk	0.56	319	PN	Pn	13 58 04.0	-0.1
BZMR	Bezymyannaya	0.57	296	*e*P	Pn	13 58 03.7	-0.5
BZWR	Bezymyannyi-We	0.58	298	*i* P	Pn	13 58 04.0	-0.3
BZWR	Bezymyannyi-We	0.58	298	PN	Pn	13 58 04.0	-0.3
KIRR	Kirishev	0.66	294	*e*P	Pn	13 58 04.9	-0.1
KIRR	Kirishev	0.66	294	PN	Pn	13 58 04.9	-0.1
KMNR	Kamenistaya	0.67	276	*e*P	Pn	13 58 04.9	-0.1
KMNR	Kamenistaya	0.67	276	PN	Pn	13 58 04.9	-0.1
KRSR	Krestovskiy	0.71	318	*e*P	Pn	13 58 05.0	-0.4
KRSR	Krestovskiy	0.71	318	PN	Pn	13 58 05.0	-0.4
KPT	Kopyto	0.72	293	*e*P	Pn	13 58 05.0	-0.5
KPT				*e*S	Sn	13 58 18.6	+0.7
KPT	Kopyto	0.72	293	PN	Pn	13 58 05.0	-0.5
KPT				S	Sn	13 58 18.6	+0.7
KLY	Klyuchi	0.76	326	*i* P	Pn	13 58 04.8	-0.9
KLY				*e*S	Sn	13 58 16.8	-1.4
KLY	Klyuchi	0.76	326	PN	Pn	13 58 04.8	-0.9
KLY				S	Sn	13 58 16.8	-1.4
TUMD	Tumrok D	0.76	230	*e*P	Pn	13 58 04.9	-0.9
TUMD				*e*S	Sn	13 58 18.2	-0.1
TUMR	Tumrok	0.83	241	*i* P	Pn	13 58 06.5	-0.2
TUMR	Tumrok	0.83	241	PN	Pn	13 58 04.9	-1.8
TUMR				S	Sn	13 58 18.2	-1.6
KZV	Kizimen	0.86	228	*e*P	Pn	13 58 06.3	-0.8
KZV				*e*S	Sn	13 58 20.4	-0.1
KZV	Kizimen	0.86	228	PN	Pn	13 58 06.3	-0.8
KZV				S	Sn	13 58 20.4	-0.1
BDR	Baidarnaya	0.89	353	*i* P	Pn	13 58 07.4	+0.1
BDR	Baidarnaya	0.89	353	PN	Pn	13 58 07.4	+0.1
SMKR	Semkarok	0.89	2	*e*P	Pn	13 58 07.3	0.0
SMKR	Semkarok	0.89	2	PN	Pn	13 58 07.3	0.0
KBG	Krutoberegovo	0.92	52	*e*P	Pn	13 58 07.2	-0.3
KBG				*e*S	Sn	13 58 21.7	+0.3
KBG	Krutoberegovo	0.92	52	PN	Pn	13 58 07.2	-0.3
KBG				S	Sn	13 58 21.7	+0.3
KOZ	Kozyrevsk	0.94	294	*e*P	Pn	13 58 07.9	+0.1
KOZ				*e*S	Sn	13 58 22.9	+1.1
KOZ	Kozyrevsk	0.94	294	PN	Pn	13 58 07.9	+0.1
KOZ				S	Sn	13 58 22.9	+1.1
KBTR	Krutoberegovo	0.95	56	*e*P	Pn	13 58 07.2	-0.6
KBTR	Krutoberegovo	0.95	56	PN	Pn	13 58 07.2	-0.6
SRKR	Sorokina	0.97	352	*e*P	Pn	13 58 08.3	+0.1
SRKR	Sorokina	0.97	352	PN	Pn	13 58 08.3	+0.1
SRDR	Sredinnyy	1.14	304	*e*P	Pn	13 58 10.0	-0.2
SRDR				*e*S	Sn	13 58 26.7	+0.7
SRDR	Sredinnyy	1.14	304	PN	Pn	13 58 10.0	-0.2
SRDR				S	Sn	13 58 26.7	+0.7
ESO	Esso	1.55	280	*e*P	Pn	13 58 15.0	-0.2
ESO				*e*S	Sn	13 58 35.2	+0.2
ESO	Esso	1.55	280	PN	Pn	13 58 15.0	-0.2
ESO				S	Sn	13 58 35.2	+0.2
KII	Karymskiy	2.01	215	*e*P	Pn	13 58 21.6	+0.3
KII				*e*S	Sn	13 58 47.9	+2.1
KII	Karymskiy	2.01	215	PN	Pn	13 58 21.6	+0.3
KII				S	Sn	13 58 47.9	+2.1
SPN	Mys Shipunski	2.72	198	*e*P	Pn	13 58 29.9	-0.8
SPN				*e*S	Sn	13 59 02.8	+0.1
SPN	Mys Shipunski	2.72	198	PN	Pn	13 58 29.9	-0.8
SPN				S	Sn	13 59 02.8	+0.1
NLC	Nalytchevo	2.80	206	*e*P	Pn	13 58 32.1	+0.4
NLC				*e*S	Sn	13 59 05.2	+0.7
NLC	Nalytchevo	2.80	206	PN	Pn	13 58 32.1	+0.4
NLC				S	Sn	13 59 05.2	+0.7
SDLR	Sedlovina	2.83	212	*e*P	Pn	13 58 32.9	+0.6
SDLR	Sedlovina	2.83	212	PN	Pn	13 58 32.9	+0.6
GNL	Ganaly	2.84	227	*e*P	Pn	13 58 32.7	+0.4
GNL	Ganaly	2.84	227	PN	Pn	13 58 32.7	+0.4
KRX	Arik	2.84	216	*e*P	Pn	13 58 33.8	+1.4
KRX				*e*S	Sn	13 59 08.2	+2.5
KRX	Arik	2.84	216	PN	Pn	13 58 33.8	+1.4
KRX				S	Sn	13 59 08.2	+2.5
SMAR	Somma	2.87	213	*e*P	Pn	13 58 33.6	+0.7
SMAR	Somma	2.87	213	PN	Pn	13 58 33.6	+0.7
AVH	Avacha	2.89	214	*i* P	Pn	13 58 34.7	+1.7
AVH				*e*S	Sn	13 59 09.6	+2.8
AVH	Avacha	2.89	214	PN	Pn	13 58 34.7	+1.7
AVH				S	Sn	13 59 09.6	+2.8
KOK	Koryaka	2.90	215	*e*P	Pn	13 58 35.0	+1.9
KOK	Koryaka	2.90	215	PN	Pn	13 58 35.0	+1.9
UGLR	Uglovaya	2.91	212	*e*P	Pn	13 58 34.5	+1.2
UGLR				*e*S	Sn	13 59 08.9	+1.5
UGLR	Uglovaya	2.91	212	PN	Pn	13 58 34.5	+1.2
UGLR				S	Sn	13 59 08.9	+1.5
DALK	Dalny	3.09	211	*e*P	Pn	13 58 36.2	+0.7
DALK				*e*S	Sn	13 59 13.5	+2.1
DALK	Dalny	3.09	211	PN	Pn	13 58 36.2	+0.7
DALK				S	Sn	13 59 13.5	+2.1
PET	Petropavlovsk	3.12	212	*e*Pn	Pn	13 58 36.9	+0.9
PET	Petropavlovsk	3.12	212	*i* P	Pn	13 58 37.3	+1.3
PET	Petropavlovsk	3.12	212	*e*PN	Pn	13 58 37.8	+1.8
PET				*e*S	Sn	13 59 15.1	+2.8
PET				pmax	pmax		
	comp=Z,1μm,0.8s						
PET				smax	smax		
	comp=N,1μm,0.6s						
PET				smax	smax		
	comp=E,1μm,0.5s						
PEA0B	Petropavlovsk-	3.38	221	*e*Pn	Pn	13 58 39.9	+0.4
PETK	Petropavlovsk-	3.38	221	*e*Pn	Pn	13 58 40.2	+0.7
PETK				S	Sn	13 59 23.3	+4.7
PETK	Petropavlovsk-	3.38	221	*e*PN	Pn	13 58 40.2	+0.7
PETK	Petropavlovsk-	3.38	221	P	Pn	13 58 39.7	+0.2
	comp=E,32nm,0.3s,baz=62,slow=15,SNR=240						
PETK				S	Sn	13 59 23.3	+4.7
	comp=E,19nm,0.3s,baz=78,slow=18,SNR=5.4						
PETK				LR	LR	13 59 37.8	
	comp=E,154nm,20.2s,baz=53,slow=33						
KRMR	Karymshinskiy	3.45	215	*e*P	Pn	13 58 42.1	+1.6
KRMR				*e*S	Sn	13 59 23.2	+2.9
KRMR	Karymshinskiy	3.45	215	PN	Pn	13 58 42.1	+1.6
KRMR				S	Sn	13 59 23.2	+2.9
PALN	Palana	3.50	348	*e*P	Pn	13 58 40.8	-0.2
PALN	Palana	3.50	348	PN	Pn	13 58 40.8	-0.2
OSSR	Ossora	3.68	13	*e*P	Pn	13 58 43.7	+0.2
OSSR	Ossora	3.68	13	PN	Pn	13 58 43.7	+0.2
RUS	Russkaya	3.68	209	*e*P	Pn	13 58 44.0	+0.4
RUS				*e*S	Sn	13 59 27.0	+1.1
RUS	Russkaya	3.68	209	PN	Pn	13 58 44.0	+0.4
RUS				S	Sn	13 59 27.0	+1.1
GRL	Gorelyy	3.71	213	*e*P	Pn	13 58 45.5	+1.4
GRL	Gorelyy	3.71	213	PN	Pn	13 58 45.5	+1.4
APC	Apacha	3.73	224	*i* P	Pn	13 58 45.5	+1.3
APC				*e*S	Sn	13 59 29.1	+2.2
APC	Apacha	3.73	224	PN	Pn	13 58 45.5	+1.3
APC				S	Sn	13 59 29.1	+2.2
MTVR	Mutnovka	3.73	212	*e*P	Pn	13 58 45.2	+0.7
MTVR				*e*S	Sn	13 59 28.0	+0.6
MTVR	Mutnovka	3.73	212	PN	Pn	13 58 45.2	+0.7
MTVR				S	Sn	13 59 28.0	+0.6
KDTR	Khodutka, Kamc	4.36	208	*e*P	Pn	13 58 53.3	+0.4
KDTR				*e*S	Sn	13 59 44.0	+1.6
KDTR	Khodutka, Kamc	4.36	208	PN	Pn	13 58 53.3	+0.4
KDTR				S	Sn	13 59 44.0	+1.6
PAU	Pauzhetka	5.04	215	*e*P	Pn	13 59 03.2	+1.1
PAU	Pauzhetka	5.04	215	PN	Pn	13 59 03.2	+1.1
TILK	Tilichiki	5.39	26	*e*P	Pn	13 59 07.7	+1.0
TILK				*e*S	Sn	14 00 06.9	-0.4
TILK	Tilichiki	5.39	26	PN	Pn	13 59 07.7	+1.0
TILK				S	Sn	14 00 06.9	-0.4
SKR	Severo-Kuril's	5.94	215	*e*P	Pn	13 59 14.3	0.0
SKR				*e*S	Sn	14 00 22.4	+1.5
SKR	Severo-Kuril's	5.94	215	*e*PN	Pn	13 59 14.8	+0.5
SKR				*e*S	Sn	14 00 28.3	+7.4
SKR				pmax	pmax		
	comp=Z,153nm,0.6s						
SKR				smax	smax		
	comp=E,287nm,1.0s						
SKR				smax	smax		
	comp=N,331nm,0.8s						
MA2	Magadan	6.91	309	*ce*PN	Pn	13 59 28.2	+0.7
MA2				pmax	pmax		
	comp=Z,12nm,0.6s						
MA2	Magadan	6.91	309	P	Pn	13 59 28.8	+1.3
	comp=Z,2.1nm,0.3s,baz=106,slow=14,SNR=26						
MA2				S	Sn	14 00 48.8	+4.3
	baz=152,slow=17,SNR=2.0						
KMSK	Kamenskaya	7.23	18	*e*P	Pn	13 59 33.8	+2.0
KMSK	Kamenskaya	7.23	18	PN	Pn	13 59 33.8	+2.0
SEY	Seymchan	8.60	331	P	Pn	13 59 52.5	+2.1
	comp=Z,0.3nm,0.3s,baz=87,slow=21,SNR=5.2						
TYV	Tymovskoe	12.21	254	*e*PN	Pn	14 00 41.5	+2.0
TYV				pmax	pmax		
	comp=Z,20nm,1.6s						
NKL	Nikolayevsk	12.33	267	*e*PN	Pn	14 00 43.5	+2.4
NKL				pmax	pmax		
	comp=Z,21nm,0.9s						
BILL	Bilibino	12.60	8	*e*Pn	Pn	14 00 45.7	+1.1
BILL	Bilibino	12.60	8	⇓*e*PN	Pn	14 00 45.9	+1.3
BILL				*e*S	Sn	14 03 05.4	+2.6
BILL				pmax	pmax		
	comp=Z,15nm,1.7s						
YSS	Yuzh-Sakhalins	14.54	241	*e*P	Pn	14 01 11.6	+1.4
YSS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SHO	Shikotan	15.08	224	P	Pn	14 01 11.7	-5.5
SHO				S	Sn	14 03 56.8	-6.4
SHO				pmax	pmax		
	comp=Z,23nm,0.6s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.7s						
SHO				pmax	pmax		
	comp=N,10.0nm,0.5s						
GRNR	Gornyy	15.71	262	*e*P	P	14 01 27.2	-0.2
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
ASAJ	Asahikawa	16.70	234	P	P	14 01 38.5	+0.2
	comp=Z,3.8nm,0.3s,baz=67,slow=11,SNR=44						
ASAJ				S	Sn	14 04 44.5	+2.2
	comp=Z,0.2nm,0.3s,baz=77,slow=18,SNR=2.5						
YAK	Yakutsk	17.46	304	*e*P	Pn	14 01 47.2	+0.7
YAK				pmax	pmax		
	comp=Z,161nm,0.7s						
YAK				pmax	pmax		
	comp=N,13nm,0.6s						
YAK				pmax	pmax		
	comp=E,90nm,1.0s						
ERM	Erimo	18.13	229	*i* P	P	14 01 53.7	-0.3
KLR	Kul'dur	19.09	263	P	P	14 02 05.1	+0.5
	comp=E,0.8nm,0.3s,baz=59,slow=9.7,SNR=25						
KLR				S	Sn	14 05 38.1	-1.7
	comp=E,0.0nm,0.3s,baz=90,slow=19,SNR=3.0						
KLR				LR	LR	14 10 26.5	
	comp=E,40nm,18.0s,baz=58,slow=40						
ZEA	Zeya	19.71	279	*e*P	P	14 02 10.2	-1.1
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
TIXI	Tiksi	21.09	332	*e*P	P	14 02 27.5	+1.6
	comp=Z,18nm,0.6s						
TIXI				S	S	14 06 19.0	+3.5
TIXI	Tiksi	21.09	332	*ce*P	P	14 02 26.4	+0.5
TIXI				pmax	pmax		
	comp=Z,25nm,1.0s						
TIXI	Tiksi	21.09	332	P	P	14 02 27.3	+1.4
	comp=Z,17nm,0.6s,baz=118,slow=8.2,SNR=36						
TIXI				S	S	14 06 19.0	+3.5
	comp=Z,0.3nm,0.3s,baz=263,slow=8.1,SNR=3.8						
USRK	Ussuriysk Ar.	21.97	251	P	P	14 02 34.8	-0.7
	comp=Z,1.3nm,0.5s,baz=46,slow=13,SNR=7.1						
IM3	Indian Mountai	23.60	46	*e*P	P	14 02 52.0	+0.3
CAST	Castle Rocks	24.29	52	*e*P	P	14 02 59.2	+1.3
	comp=Z,12nm,1.3s						
MJA0	Matsu Arr-Jizo	24.79	229	*e*P	P	14 03 02.5	-0.1
MJA0				pmax	pmax		
	comp=Z,12nm,0.7s						
MJB9	Matsu-Tunnel	24.80	229	*e*P	P	14 03 01.8	-0.9
	comp=Z,22nm,0.8s						
MAJO	Matsushiro	24.80	229	*e*P	P	14 03 01.7	-1.1
	comp=Z,22nm,0.8s						
MAJO	Matsushiro	24.80	229	*i* P	P	14 03 01.8	-0.9
MAJO				pmax	pmax		
	comp=Z,24nm,0.8s						
MAT	Matsushiro	24.80	229	P	P	14 03 02.0	-0.7
MAT				*e*S	S	14 07 18.0	-0.9
MJAR	Matsushiro Arr	24.80	229	P	P	14 03 02.2	-0.5
	comp=Z,12nm,0.7s,baz=21,slow=6.7,SNR=37						
BOD	Bodaibo	25.66	295	*e*P	P	14 03 08.9	-1.4
BOD				pmax	pmax		
	comp=Z,21nm,1.1s						
HIA	Hailar	25.86	273	*e*P	P	14 03 10.6	-1.7
	comp=Z,18nm,0.9s						
HIA	Hailar	25.86	273	*e*P	P	14 03 10.6	-1.7
HIA				pmax	pmax		
	comp=Z,18nm,0.9s						
COLA	College	26.06	49	*i* P	P	14 03 14.5	+0.7
COLA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ILAR	Eielson Array	26.48	49	P	P	14 03 17.5	-0.1
	comp=Z,0.9nm,0.5s,baz=264,slow=8.7,SNR=19						
ILAR				ScP	ScP	14 10 09.2	-2.7
	comp=Z,0.4nm,0.5s,baz=287,slow=3.2,SNR=5.0						
ILB	Eielson Array	26.48	49	*e*P	P	14 03 16.9	-0.8
KSRS	Korea Array	28.96	245	P	P	14 03 38.6	-1.3
	comp=Z,1.3nm,0.7s,baz=32,slow=9.9,SNR=6.1						
KSRS				PcP	PcP	14 06 46.5	0.0
	comp=Z,1.2nm,0.7s,baz=20,slow=3.6,SNR=4.6						
KSRS				LR	LR	14 16 06.2	
	comp=Z,14nm,19.5s,baz=115,slow=38						
KSAR	Wonju Array Be	28.99	245	P	P	14 03 38.6	-1.6
KSAR				PcP	PcP	14 06 46.5	-0.1
KSAR	Wonju Array Be	28.99	245	P	P	14 03 38.7	-1.6
KSAR						14 06 46.6	
INK	Inuvik	31.36	40	P	P	14 04 01.9	+1.0
	comp=Z,1.7nm,0.5s,baz=285,slow=10,SNR=9.5						
TLY	Talaya	33.59	288	*i* P	P	14 04 20.4	-0.1
ULN	Ulaanbaatar	33.74	280	*e*P	P	14 04 21.1	-0.9
	comp=Z,15nm,1.7s						
ULN	Ulaanbaatar	33.74	280	*ce*P	P	14 04 19.8	-2.3
ULN				pmax	pmax		
	comp=Z,12nm,2.3s						
SONA1	Songino Array	34.11	280	*e*P	P	14 04 25.1	-0.2
SONM	Songino Array	34.12	280	*e*P	P	14 04 25.1	-0.3
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	Songino Array	34.12	280	P	P	14 04 24.9	-0.5
	comp=Z,1.8nm,0.5s,baz=64,slow=8.0,SNR=18						
SONM				PcP	PcP	14 07 00.4	-0.2
	comp=Z,1.3nm,0.6s,baz=84,slow=1.8,SNR=7.4						
SONM				ScP	ScP	14 10 36.2	-1.2
	comp=Z,2.0nm,0.8s,baz=75,slow=1.8,SNR=7.9						
SONM				LR	LR	14 17 57.5	
	comp=Z,48nm,19.4s,baz=116,slow=36						
ZAK	Zakamensk	34.45	286	*e*P	P	14 04 27.1	-1.0
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MOY	Mondy	35.02	289	*e*P	P	14 04 33.7	+0.7
HHC	Hu-ho-hao-te	35.51	267	*e*P	P	14 04 37.5	+0.2
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,62nm,6.1s						
NJ2	Nanjing	37.86	249	*e*P	P	14 04 54.7	-2.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YKA	Yellowknife Ar	40.75	45	P	P	14 05 21.2	+0.4
	comp=Z,2.8nm,0.9s,baz=298,slow=8.3,SNR=9.6						
YKA				ScP	ScP	14 11 00.1	-1.7
	comp=Z,0.6nm,0.7s,baz=299,slow=3.8,SNR=5.8						
ZALV	Zalesovo Beam	42.06	301	*e*P	P	14 05 31.2	-0.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	42.06	301	P	P	14 05 30.9	-0.8
	comp=Z,1.3nm,0.7s,baz=34,slow=8.4,SNR=6.2						
ZALV				PP	PP	14 07 16.8	+6.4
	comp=Z,3.8nm,1.1s,baz=61,slow=12,SNR=8.9						
ZALV				ScP	ScP	14 11 04.5	-2.7
	comp=Z,0.9nm,0.7s,baz=33,slow=3.5,SNR=4.9						
NVS	Novosibirsk	42.31	303	*i* P	P	14 05 34.0	+0.3
NVS				pmax	pmax		
	comp=N,7.0nm,1.6s						
NVS				pmax	pmax		
	comp=Z,22nm,1.6s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.4s						
GTA	Gaotai	43.12	275	*e*P	P	14 05 39.5	-1.2
GTA				pP	pP	14 06 01.0	-0.5
GTA				sP	sP	14 06 12.8	+1.3
GTA				PcP	PP	14 07 23.4	+1.2
GTA				ScP	ScP	14 11 14.7	+2.8
GTA				S	S	14 11 57.0	-3.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,97nm,7.5s						
GTA				LR	LR		
	comp=N,120nm,18.4s						
GTA				LR	LR		
	comp=E,190nm,19.7s						
GTA				LR	LR		
	comp=Z,97nm,19.0s						
DGZ	Jazzator, Alta	43.25	294	*i* P	P	14 05 41.1	-0.5
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SPA0	Spitsbergen Ar	44.70	350	*e*P	P	14 05 53.3	+0.7
SPITS	Spitsbergen Ar	44.70	350	P	P	14 05 53.0	+0.3
SPITS				pmax	pmax		
	comp=Z,15nm,0.6s						
SPITS	Spitsbergen Ar	44.70	350	P	P	14 05 53.0	+0.3
	comp=Z,14nm,0.6s,baz=63,slow=7.6,SNR=45						
WMQ	Urumqi	46.87	288	P	P	14 06 11.1	+0.9
WMQ				pP	pP	14 06 33.5	+2.0
WMQ				pmax	pmax		
	comp=Z,76nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.5s						
WMQ				LR	LR		
	comp=N,150nm,21.5s						
WMQ				LR	LR		
	comp=E,160nm,19.9s						
WMQ				LR	LR		
	comp=Z,150nm,21.9s						
CD2	Chengdu	47.02	263	*e*P	P	14 06 11.4	-0.1
KURK	Kurchatov	47.04	300	*e*P	P	14 06 08.4	-3.0
	comp=Z,17nm,0.8s						
KURK	Kurchatov	47.04	300	*ce*P	P	14 06 10.1	-1.3
KURK				pmax	pmax		
	comp=Z,22nm,0.9s						
MK31	Makanchi Array	47.75	294	*e*P	P	14 06 16.0	-1.0
MK31	Makanchi Array	47.75	294	*e*P	P	14 06 16.0	-1.0
MKAR	Makanchi Array	47.75	294	*e*P	P	14 06 16.0	-1.0
	comp=Z,34nm,0.8s						
MKAR	Makanchi Array	47.75	294	*i* P	P	14 06 26.1	+9.1
MKAR	Makanchi Array	47.75	294	P	P	14 06 15.8	-1.2
	comp=Z,2.7nm,0.5s,baz=58,slow=6.5,SNR=44						
MK01	Makanchi Array	47.76	294	*e*P	P	14 06 15.9	-1.2
MAKZ	Makanchi	47.91	294	*e*P	P	14 06 16.6	-1.6
	comp=Z,9.5nm,1.1s						
MAKZ	Makanchi	47.91	294	*e*P	P	14 06 16.6	-1.6
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRVK	Borovoye	49.42	307	*e*P	P	14 06 28.9	-0.8
	comp=Z,7.3nm,0.8s						
BRVK	Borovoye	49.42	307	*i* P	P	14 06 28.4	-1.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BMO	Blue Mountains	50.18	66	*e*P	P	14 06 36.6	+1.0
	comp=Z,9.8nm,1.8s						
BMO	Blue Mountains	50.18	66	*e*P	P	14 06 36.6	+1.0
BMO				pmax	pmax		
	comp=Z,10.0nm,1.8s						
ARCES	ARCESS Array B	51.06	342	*e*P	P	14 06 43.2	+1.5
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	51.06	342	P	P	14 06 43.0	+1.3
	comp=Z,0.6nm,0.4s,baz=26,slow=9.4,SNR=14						
ARU	Arti	52.02	317	*e*P	P	14 06 47.8	-1.3
	comp=Z,11nm,1.1s						
ARU	Arti	52.02	317*c*	*i*P	P	14 06 47.0	-2.1
ARU				*PP	pP	14 07 10.6	+0.1
ARU						14 08 44.5	
ARU				S	S	14 14 02.9	-2.7
ARU				SS	SS	14 17 39.0	-3.9
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI	Kunming	52.05	259	P	P	14 06 50.1	+0.1
KMI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,140nm,4.8s						
RLMT	Red Lodge	54.07	61	*e*P	P	14 07 05.6	+1.0
	comp=Z,4.3nm,0.8s						
NV01	Mina Array Sit	54.18	73	*e*P	P	14 07 06.1	+0.6
NVAR	Mina Array Bea	54.18	73	P	P	14 07 07.0	+1.5
	comp=Z,5.6nm,1.1s,baz=300,slow=7.7,SNR=10						
USP	Ospenovka	54.18	296	P	P	14 07 06.2	+1.0
	SNR=6.6						
FXWY	Fox Creek	54.25	63	*e*P	P	14 07 06.5	+0.6
	comp=Z,6.0nm,1.2s						
KBK	Karagaybulak	54.39	295	P	P	14 07 07.8	+0.9
	SNR=7.2						
AAK	Ala-Archa	54.64	295	P	P	14 07 09.8	+1.1
	SNR=7.7						
AAK	Ala-Archa	54.64	295	*e*P	P	14 07 08.4	-0.2
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	54.64	295	*ce*P	P	14 07 07.6	-1.1
AAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
EKS2	Erkin-Say	54.99	296	P	P	14 07 12.4	+1.3
	SNR=6.4						
KLMR	Klimovskoe	55.09	330	*e*P	P	14 07 09.3	-2.1
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KLMR	Klimovskoe	55.09	330	*e*P	P	14 07 09.3	-2.1
KLMR				AMP		14 07 12.6	
	comp=Z,9.0nm,1.4s						
AML	Almayashu	55.41	295	P	P	14 07 15.7	+1.2
	SNR=6.7						
BW06	Boulder Array	55.62	63	*e*P	P	14 07 16.8	+0.9
	comp=Z,2.3nm,0.8s						
PD31	Pinedale Array	55.62	63	*e*P	P	14 07 17.0	+1.2
PDAR	Pinedale Array	55.62	63	*e*P	P	14 07 16.6	+0.8
PDAR	Pinedale Array	55.62	63	P	P	14 07 16.9	+1.2
	comp=Z,2.5nm,1.0s,baz=308,slow=2.8,SNR=12						
KSH	Kashi	56.14	292	P	P	14 07 23.9	+4.5
KSH				pP	sP	14 07 48.3	-2.8
KSH				S	S	14 15 03.2	+1.4
KSH				sS	sS	14 15 46.9	+8.4
KSH	Kashi	56.14	292	SS	SS	14 18 53.8	+5.1
KSH				pmax	pmax		
	comp=Z,12nm,0.6s						
KSH				pmax	pmax		
	comp=Z,340nm,5.6s						
KSH				LR	LR		
	comp=N,140nm,4.3s						
KSH				LR	LR		
	comp=E,140nm,4.7s						
KSH				LR	LR		
	comp=Z,190nm,5.7s						
KK31	Karatay Array	56.31	298	*e*P	P	14 07 20.2	-0.3
KK31	Karatay Array	56.31	298	*e*P	P	14 07 20.2	-0.3
KKAR	Karatay Array	56.31	298	*e*P	P	14 07 20.2	-0.3
KKAR	Karatay Array	56.31	298	*e*P	P	14 07 20.2	-0.3
ARSB	Arslanbob	56.37	295	*e*P	P	14 07 19.9	-1.1
	comp=Z,20nm,1.4s						
ULM	Lac du Bonnet	56.50	49	*e*P	P	14 07 21.2	-0.5
ULM				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ULM	Lac du Bonnet	56.50	49	P	P	14 07 22.6	+0.9
	comp=Z,2.2nm,0.4s,baz=323,slow=5.6,SNR=5.1						
ABKAR	Akbulak array	56.71	310	*e*P	P	14 07 22.7	-0.4
SRU	San Rafael Swe	57.81	67	*e*P	P	14 07 32.6	+1.3
	comp=Z,4.1nm,1.0s						
FINES	FINESS Array B	58.04	337	P	P	14 07 32.1	-0.2
	comp=Z,2.1nm,0.4s,baz=36,slow=8.3,SNR=38						
BTK	Batken	58.41	296	*e*P	P	14 07 36.8	+1.4
	comp=Z,14nm,0.6s						
BTK	Batken	58.41	296	*e*P	P	14 07 36.8	+1.4
BTK				pmax	pmax		
	comp=Z,14nm,0.6s						
GUN	Gumba	59.40	275	*e*P	P	14 07 40.7	-2.0
	comp=Z,25nm,0.4s						
GAR	Garm	59.46	295	*e*P	P	14 07 42.3	-0.4
	comp=Z,18nm,0.8s						
GAR	Garm	59.46	295	*e*P	P	14 07 42.3	-0.4
GAR				pmax	pmax		
	comp=Z,18nm,0.8s						
CMAR	Chiang Mai Arr	59.48	258	P	P	14 07 42.7	-0.2
	comp=Z,0.7nm,0.7s,baz=21,slow=7.3,SNR=4.9						
RAMN	Ramite	59.73	274	*e*P	P	14 07 43.4	-1.5
	comp=Z,45nm,0.7s						

PKI	Pulchoki	59.93	276	eP	P	14 07 45.5	-0.8
PKIN	Phulchoki	59.93	276	eP	P	14 07 44.1	-2.1
DANN	Dangsing	60.26	277	eP	P	14 07 47.3	-1.2
	comp=Z,29nm,0.8s						
KOLN	Koldanda	60.79	277	eP	P	14 07 50.7	-1.3
	comp=Z,21nm,0.9s						
PYUN	Piuthan	60.88	278	eP	P	14 07 51.3	-1.3
	comp=Z,38nm,0.8s						
NC204	NORSAR Array S	61.10	344	eP	P	14 07 53.0	-0.5
NB2	NORSAR Subarra	61.26	344	P	P	14 07 53.7	-0.8
	comp=Z,5.0nm,1.0s,baz=20,slow=6.9						
NOA	NORSAR Array B	61.26	344	P	P	14 07 54.0	-0.5
	comp=Z,2.4nm,0.7s,baz=19,slow=6.8,SNR=14						
SCHQ	Schefferville	62.99	29	P	P	14 08 06.9	+0.8
	comp=Z,1.6nm,0.6s,baz=297,slow=9.0,SNR=3.6						
ANMO	Albuquerque	63.08	67	P	P	14 08 08.1	+0.8
	comp=Z,1.2nm,0.7s,baz=310,slow=5.9,SNR=5.1						
SBUM	Sibu	66.13	236	eP	P	14 08 27.8	+0.8
	comp=Z,14nm,0.9s						
GEYT	Alibeck	66.32	303	P	P	14 08 26.4	-1.7
	comp=Z,2.6nm,0.9s,baz=345,slow=5.2,SNR=5.5						
AKASG	Malin Array Be	66.78	329	P	P	14 08 30.9	+0.3
	comp=Z,1.4nm,0.3s,baz=27,slow=7.0,SNR=7.5						
KIEV	Kiev	66.79	329	i P	P	14 08 29.3	-1.4
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	Khabaz	68.17	317	P	P	14 08 40.3	+0.7
	comp=Z,2.4nm,0.6s,baz=124,slow=2.8,SNR=6.3						
EKA	Eskdalemuir Ar	68.62	351	P	P	14 08 42.4	+0.2
	comp=Z,0.8nm,0.4s,baz=15,slow=5.7,SNR=10.0						
TX31	Lajitas Ar. Si	68.94	69	eP	P	14 08 44.5	-0.2
TXAR	Lajitas Array	68.94	69	P	P	14 08 45.7	+0.9
	comp=Z,1.1nm,0.5s,baz=294,slow=4.8,SNR=19						
BUR08	Bucovina Ar. S	70.68	330	eP	P	14 08 55.1	-0.1
MEM	Membach	72.11	344	⇓P	P	14 09 03.8	+0.3
	comp=Z,7.8nm,1.1s						
GERES	GERESS Array B	72.39	338	P	P	14 09 05.0	-0.4
	comp=Z,0.4nm,0.5s,baz=46,slow=3.9,SNR=4.7						
BRTR	Keskin Array B	75.10	321	P	P	14 09 20.5	-0.9
	comp=Z,0.4nm,0.3s,baz=30,slow=2.7,SNR=4.5						
CTA	Charters Tower	76.57	195	P	P	14 09 29.6	0.0
	comp=Z,12nm,0.8s,baz=10.0,slow=6.4,SNR=11						
WRAB	Tennant Creek	78.75	206	ceP	P	14 09 42.4	+0.6
WRAB				pmax	pmax		
	comp=Z,13nm,1.7s						
WB2	Warramunga Arr	78.76	206	eP	P	14 09 40.8	-1.0
WRA	Warramunga Arr	78.76	206	P	P	14 09 40.8	-1.1
	comp=Z,4.0nm,0.9s,baz=18,slow=6.0,SNR=16						
AS01	Alice Springs	82.43	205	eP	P	14 10 01.0	-0.4
AS31	Alice Springs	82.44	205	eP	P	14 10 01.6	+0.1
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	82.44	205	P	P	14 10 01.5	0.0
	comp=Z,4.8nm,0.8s,baz=13,slow=5.0,SNR=43						
ESDC	Sonseca Array	84.19	349	P	P	14 10 11.6	+1.1
	comp=Z,1.0nm,0.6s,baz=16,slow=4.8,SNR=8.6						

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*ISCJB **09** 13:59:24.0±1.0, 11°.0S±0°.1×166°.00E±0°.10, h10^{km}, mb3.9/8, MS4.4/1, Error ellipse: s-maj=18.5km s-min=11.7km az=33.4*

*IDC **09** 13:59:24.1±1.5, 10°.93S×166°.02E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.9/38, mbtmp4.0/10, ML4.1/2, MS3.9/2, Ms1 3.9/2, ms1mx3.2/36, Error ellipse: s-maj=33.5km s-min=24.8km az=128.0*

ISC 09 13:59:25.6±1.2**, 10°.9S**±0°.1×**166°.1E**±0°.1**, h10**^{km}**, n11, σ0^s.70**/11**, mb4.0**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.19	283	Pn	Pn	14 00 57.3	+0.2
	5.2nm,0.3s,baz=141,slow=6.5,SNR=4.5						
HNR				Sn	Sn	14 02 08.8	+0.8
	3.4nm,0.3s,baz=210,slow=20,SNR=3.4						
HNR				LR	LR	14 03 29.5	
	comp=Z,231nm,19.5s,baz=120,slow=40						
DZM	Mont Dzumac	11.09	178	Pn	Pn	14 02 05.4	+0.9
	1.2nm,0.3s,baz=330,slow=15,SNR=13						
CTA	Charters Tower	21.12	242	P	P	14 04 10.9	+0.1
	5.1nm,0.9s,baz=80,slow=18,SNR=3.8						
RAO	Raoul Island	23.59	143	LR	LR	14 12 16.8	
	comp=Z,2μm,22.0s,baz=172,slow=33						
STKA	Stephens Creek	30.73	224	P	P	14 05 40.6	-0.5
	1.3nm,0.6s,baz=6.8,slow=14,SNR=4.0						
WRA	Warramunga Arr	31.81	250	P	P	14 05 50.2	-0.5
	3.2nm,0.8s,baz=82,slow=9.1,SNR=16						
ASAR	Alice Springs	33.12	243	P	P	14 06 01.1	-1.2
	0.6nm,0.6s,baz=66,slow=10,SNR=12						
FITZ	Fitzroy Crossi	39.70	255	P	P	14 06 58.1	-0.3
	2.9nm,0.8s,baz=102,slow=7.2,SNR=7.1						
CMAR	Chiang Mai Arr	72.34	293	P	P	14 10 52.8	+0.5
	0.4nm,0.3s,baz=120,slow=5.3,SNR=5.2						
ILAR	Eielson Array	83.30	18	P	P	14 11 52.5	+0.2
	0.3nm,0.5s,baz=236,slow=4.5,SNR=6.2						
MKAR	Makanchi Array	93.64	317	P	P	14 12 42.0	-0.4
	0.5nm,0.8s,baz=99,slow=6.8,SNR=4.6						

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*GUC **09** 14:10:27.3±0.5, 32°.33S×71°.36W, h35^{km}±6^{km}, ML3.2*

*SJA **09** 14:10:29.6±0.6, 32°.46S×71°.31W, h8^{km}±7^{km}, ML3.1, MW3.7*

ISC 09 14:10:22.4±2.7**, 32°.45S**±0°.06×**71°.9W**±0°.1**, h15**^{km}±12^{km}**, n13, σ1^s.26**/20**, 5C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	El Roble	0.92	125	⇑eP	Pn	14 10 41.2	+0.1
ROCH				eS	Sg	14 10 52.5	0.0
ROCH				IAML		14 10 55.7	
	comp=N,1μm,0.4s						
PEL	Peldehue	1.25	124	i P	Pg	14 10 46.4	-0.1
PEL	Peldehue	1.25	124	⇑eP	Pb	14 10 46.1	+0.4
PEL				eS	Sb	14 10 59.8	-1.8
PEL				IAML		14 11 03.9	
	comp=N,2μm,0.3s						
CMCH	Combarbala	1.49	32	⇑eP	Pn	14 10 49.2	+0.4
CMCH				eS	Sn	14 11 06.2	-1.8
CLCH	Cerro Calan	1.49	130	⇑eP	Pb	14 10 50.3	+0.3
CLCH				eS	Sb	14 11 08.1	-0.8
CLCH				IAML		14 11 17.9	
	comp=N,1μm,0.4s						
FCH	Farellones	1.62	123	eP	Pb	14 10 52.0	-0.3
FCH				eS	Sn	14 11 11.0	-0.7
FCH				IAML		14 11 16.3	
	comp=E,545nm,0.2s						
LMEL	Las Melosas	2.00	135	⇑eP	Pb	14 10 58.4	-0.3
LMEL				eS	Sb	14 11 24.0	+0.5
LMEL				IAML		14 11 28.6	
	comp=N,495nm,0.3s						
AUSP	Uspallata	2.15	85	i P	Pb	14 11 01.1	-0.2
RTLS	Leoncito	2.31	74	i P	Pb	14 11 04.0	-0.1
RTLS				i S	Sn	14 11 29.7	+1.0
RTLS				IAML		14 11 36.8	
	comp=Z,169nm,0.4s						
RTLS				IAML		14 11 36.9	
	comp=Z,257nm,1.1s						
ARCO	CERRO ARCO	2.54	100	i P	Pb	14 11 06.9	-1.0
ARCO				IAML		14 11 11.9	
	comp=Z,129nm,0.4s						
ARCO				IAML		14 11 48.4	
	comp=Z,152nm,1.1s						
ASAL	Salagasta	2.60	94	i P	Pb	14 11 07.7	-1.3
ASAL				IAML		14 11 53.4	
	comp=Z,82nm,0.4s						
AAGR	Agrelo	2.67	105	i P	Pb	14 11 08.8	-1.4
AAGR				IAML		14 11 55.0	
	comp=Z,76nm,1.2s						
RTCV	Cerro Valdivia	2.92	79	i P	Pn	14 11 11.8	+3.4
RTCV				IAML		14 11 52.9	
	comp=Z,78nm,0.3s						

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*MOS **09** 14:16:01.6±1.0, 1°.20N×77°.44W, h98^{km}, mb6.5/27, MS6.3/20, Error ellipse: s-maj=6.1km s-min=4.0km az=95.6*

*RSNC **09** 14:16:05.7±1.9, 1°.11N×77°.56W, h163^{km}±8^{km}, ML6.4, Mw7.0*

*NEIC **09** 14:16:06.0±0.0, 1°.14N×77°.36W, h150^{km}, Moment Tensor Solution. s27 Moment tensor: Scale 10^{19}Nm; M$_{rr}$0.14; M$_{\theta\theta}$-0.53; M$_{\phi\phi}$0.39; M$_{r\theta}$-0.88; M$_{\theta\phi}$2.84; M$_{\phi r}$-1.19; Best double couple: M$_0$3.20000×10^{19} NP1:φ$_s$173.00000°, δ75.00000°, λ161.00000°. NP2:φ$_s$268.00000°, δ72.00000°, λ16.00000°. Principal axes: T 3.4600, Plg23.0000°, Azm129.0000°; N -0.5100, Plg65.0000°, Azm315.0000°; P -2.9500, Plg2.0000°, Azm220.0000°;*

*IDC **09** 14:16:07.4±0.6, 1°.12N×77°.36W, h143^{km}±4^{km}, mb5.9/46, mb1 6.0/53, mb1mx6.0/54, mbtmp6.3/53, MS6.2/15, Ms1 6.2/15, ms1mx5.9/35 Error ellipse: s-maj=8.6km s-min=7.0km az=49.0*

*ISCJB **09** 14:16:07.3±0.2, 1°.20N±0°.01×77°.41W±0°.01, h152^{km}±1^{km}, mb6.4/158, Error ellipse: s-maj=2.3km s-min=1.6km az=44.2*

*VAO **09** 14:16:07.2±0.5, 1°.12N×77°.22W, h135^{km}±4^{km}, mb6.9*

*NEIC **09** 14:16:07.9±0.1, 1°.14N×77°.39W, h145^{km}, mb6.7/17, ME6.3, MW6.9, MW6.9, MW6.9, Error ellipse: s-maj=3.0km s-min=2.2km az=54.0, Moment Tensor Solution. s76 Moment tensor: Scale 10^{19}Nm; M$_{rr}$0.46; M$_{\theta\theta}$-1.01; M$_{\phi\phi}$0.55; M$_{r\theta}$-1.07; M$_{\theta\phi}$2.11; M$_{\phi r}$-0.87; Best double couple: M$_0$2.70000×10^{19} NP1:φ$_s$166.00000°, δ63.00000°, λ164.00000°. NP2:φ$_s$263.00000°, δ75.00000°, λ28.00000°. Principal axes: T 2.7900, Plg30.0000°, Azm127.0000°; N -0.2500, Plg59.0000°, Azm289.0000°; P -2.5300, Plg8.0000°, Azm32.0000°; Broadband fault plane solution: P waves. NP1:φ$_s$230.00000°, δ10.00000°, λ-90.00000°. NP2:φ$_s$50.00000°, δ80.00000°, λ-90.00000°. Principal axes: T Plg35.0000°, Azm140.0000°; N Plg0.0000°, Azm0.0000°; P Plg55.0000°, Azm320.0000°; Apparent Stress 0.13 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Fifteen people injured, 100 houses destroyed and 1,900 damaged in Cauca and Narino. Felt [V] at Pasto; [IV] at Cali, Jamundi, Manizales, Palmira, Pasca, Pereira and Popayan; [III] at Bogota and Medellin. Felt [V] at Bahia de Caraquez and Portoviejo; [IV] at Guayaquil, Manta, Quito and Tumbaco; [III] at Ibarra and Sangolqui, Ecuador. Felt [III] at Rio Hato, Panama. Felt in much of Colombia, Ecuador and Panama. Also felt in the Caracas-Valencia area, Venezuela.

*BJI **09** 14:16:08.2, 1°.15N×77°.40W, h155^{km}, mB6.6/34*

*UCR **09** 14:16:09.0±1.9, 1°.26N×77°.41W, h131^{km}±11^{km}, mb6.7(NEIC)*

*GCMT **09** 14:16:13.9±0.1, 1°.16N×77°.40W, h152^{km}, MW7.0/147, Moment Tensor Solution. s147,c398; s141,c695; Duration: 7^s.5 Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.12±.01; M$_{\theta\theta}$-0.73±.01; M$_{\phi\phi}$0.85±.01; M$_{r\theta}$-0.97±.01; M$_{\theta\phi}$3.30±.01; M$_{\phi r}$-1.07±.01; Best double couple: M$_0$3.64900×10^{19} NP1:φ$_s$265.00000°, δ78.00000°, λ15.00000°. NP2:φ$_s$171.00000°, δ75.00000°, λ167.00000°. Principal axes: T 3.9630, Plg19.0000°, Azm129.0000°; N -0.6270, Plg71.0000°, Azm302.0000°; P -3.3350, Plg2.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **09** 14:16:30.3±0.0, 1°.51N×76°.49W, h119^{km}, Moment Tensor Solution. s136 Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.09; M$_{\theta\theta}$-0.47; M$_{\phi\phi}$0.56; M$_{r\theta}$-0.96; M$_{\theta\phi}$3.01; M$_{\phi r}$-1.03; Best double couple: M$_0$3.30000×10^{19} NP1:φ$_s$173.00000°, δ74.00000°, λ166.00000°. NP2:φ$_s$267.00000°, δ77.00000°, λ16.00000°. Principal axes: T 3.6300, Plg21.0000°, Azm130.0000°; N -0.6100, Plg69.0000°, Azm306.0000°; P -3.0100, Plg1.0000°, Azm40.0000°;*

ISC 09 14:16:07.0±0.2**, 1°.03N**±0°.02×**77°.46W**±0°.03**, h144**^{km}±1^{km}**, h144**^{km}**:pP-P, n2348, σ1^s.83**/2835**, mb6.4**/190**, 131C-203D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCUF	Volcan Galeras	0.22	32	⇓iP	Pn	14 16 27.7	+0.5
GCUF				eS	Sn	14 16 45.4	+2.8
CPAS2	Pasto	0.28	49	eP	Pn	14 16 29.0	+1.8
CPAS2				eS	Sn	14 16 45.9	+3.4
CMBC	Cumbal	0.38	256	⇑iP	Pn	14 16 28.3	+0.6
CRUC	La Cruz	0.74	44	⇑iP	Pn	14 16 29.9	+0.4
OTAV	Otavalo	1.27	231	ePn	Pn	14 16 35.2	+1.0
OTAV	Otavalo	1.27	231	eP	Pn	14 16 35.2	+1.0
OTAV	Otavalo	1.27	231	⇓iP	Pn	14 16 35.0	+0.8
OTAV				eS	Sn	14 16 55.5	+0.6
OTAV	Otavalo	1.27	231	eP	Pn	14 16 35.9	+1.7
SOTA	Rioblanco	1.39	38	⇓iP	Pn	14 16 35.6	+0.2
SOTA				eS	Sn	14 16 58.4	+1.3
TUMC	Tumaco	1.49	302	⇑iP	Pn	14 16 34.9	-1.0
TUMC				i P	Pn	14 16 34.9	-1.0
TUMC				eS	Sn	14 16 55.0	-3.2
PCON	Cinco Dias	1.67	40	⇓iP	Pn	14 16 38.7	+0.2
MARP	Paez Belalcaza	2.34	40	⇓iP	Pn	14 16 46.4	+0.2
MARP				eS	Sn	14 17 17.0	+0.7
PTLC	Puerto Leguiza	2.80	108	⇑iP	Pn	14 16 54.0	+2.4
PTLC				⇑iP	Pn	14 16 54.0	+2.4
PTLC				eS	Sn	14 17 27.6	+1.6
MALC	Bahia Malaga	2.96	2	⇑iP	Pn	14 16 52.0	-1.6
MALC				eS	Sn	14 17 28.8	-1.0
MALC				i		14 17 40.7	
	comp=Z,185μm,0.5s						
YOTC	Yotoco, Valle	3.13	21	⇓iP	Pn	14 16 53.8	-2.2
YOTC				eS	Sn	14 17 31.1	-2.8
YOTC				i		14 17 41.5	
	comp=N,157μm,0.4s						
ANIL	Santa Ana	4.00	31	⇓iP	Pn	14 17 05.3	-2.1
ANIL				eS	Sn	14 17 51.3	-3.0
PLMC	San Jos del P	4.02	17	eP	Pn	14 17 04.0	-3.5
PLMC				eS	Sn	14 17 50.3	-4.1
VILC	Villavicencio,	4.85	51	⇑iP	Pn	14 17 19.7	+1.3
ROSC	El Rosal	4.91	40	ePn	Pn	14 17 20.0	+0.5
ROSC				S	Sn	14 18 22.1	+6.2
ROSC				e		14 55 19.2	
ROSC	El Rosal	4.91	40	⇓iP	Pn	14 17 19.6	+0.1
ROSC				eS	Sn	14 18 20.1	+4.2
ROSC				i		14 18 48.6	
	comp=Z,13μm,0.7s						
ROSC	El Rosal	4.91	40	P	Pn	14 17 19.6	+0.1
	comp=Z,4μm,0.3s,baz=216,slow=6.2,SNR=5524						
ROSC				S	Sn	14 18 22.1	+6.2
	comp=Z,333nm,0.3s,baz=198,slow=19,SNR=2.6						
ROSC				P3KPbc		14 55 19.2	
	comp=Z,1.4nm,0.3s,baz=311,slow=20,SNR=2.8						
GUVC	San Jose del G	5.06	73	⇓iP	Pn	14 17 22.0	+0.9
CTAB	Cerro Tablazo,	5.12	39	⇓iP	Pn	14 17 22.5	+0.2
CHIC	Chingaza	5.16	46	⇓iP	Pn	14 17 22.8	-0.1
CHIC				eS	Sn	14 18 24.4	+2.5
CHIC				i		14 19 02.6	
	comp=Z,6μm,0.5s						
NORC	Norcasia	5.19	30	⇓iP	Pn	14 17 20.3	-2.6
NORC				eS	Sn	14 18 22.0	-0.1
NORC				i		14 18 28.7	
	comp=Z,17μm,0.6s						
HELC	Santa Helena	5.47	21	⇓iP	Pn	14 17 23.5	-3.5
HELC				eS	Sn	14 18 27.7	-1.7
HELC				i		14 18 34.0	
	comp=Z,22μm,0.5s						
DBBC	Dabeiba	6.07	12	eP	Pn	14 17 31.7	-3.0
PTBC	PUERTO BERRIO,	6.24	29	⇓iP	Pn	14 17 33.4	-3.4
PTBC				eS	Sn	14 18 43.8	-3.4
RUSC	La Rusia	6.51	42	⇓iP	Pn	14 17 39.6	-1.3
RUSC				eS	Sn	14 18 54.3	-0.1
ZARC	Zaragoza, Cauc	6.92	22	⇓iP	Pn	14 17 42.2	-3.8
ZARC				eS	Sn	14 19 00.1	-3.5
ZARC				i		14 19 06.0	
	comp=Z,18μm,0.5s						
UREC	San Jos de Ur	6.94	16	⇓iP	Pn	14 17 42.4	-3.9
UREC				eS	Sn	14 18 60.0	-4.2
BARC	Barichara	6.98	38	i P	Pn	14 17 45.2	-1.8
BARC				i		14 19 26.7	
	comp=Z,19μm,0.7s						
BRRC	Barranca, Sant	7.10	32	⇓iP	Pn	14 17 44.7	-3.7
BRRC				eS	Sn	14 19 03.2	-4.6
BRRC				i		14 19 15.4	
	comp=Z,5μm,0.4s						
AZU	Azuero	7.27	337	⇑iP	Pn	14 17 50.5	-0.2
AZU				eS	Sn	14 19 07.0	-5.1
AZU	Azuero	7.27	337	eP	Pn	14 17 49.1	-1.6
AZU				eS	Sn	14 19 08.0	-4.0
UPD2	Meteti	7.48	356	⇓iP	Pn	14 17 53.7	+0.2
UPD2				eS	Sn	14 19 13.1	-4.0
UPD2	Meteti	7.48	356	eP	Pn	14 17 51.5	-2.1
UPD2				eS	Sn	14 19 14.5	-2.6
PAMC	Pamplona, Colo	7.86	37	⇑eP	Pn	14 17 56.2	-2.8
PAMC				eS	Sn	14 19 25.9	-1.0
PNME	Penonome	7.93	339	eP	Pn	14 17 57.7	-1.9
PNME				eS	Sn	14 19 25.3	-2.7
FLAM	Flamenco Islan	8.10	345	i P	Pn	14 18 02.9	+1.2
FLAM				eS	Sn	14 19 29.3	-2.6
UPA	Univ. de Panam	8.16	345	eP	Pn	14 18 02.0	-0.5
UPA				eS	Sn	14 19 29.3	-4.1
ATAH	Atahualpa	8.17	187	P	Pn	14 18 02.9	-0.2
	comp=Z,125nm,0.3s,baz=2.3,slow=11,SNR=348						
ATAH				S	Sn	14 19 33.0	-1.2
	comp=Z,103nm,0.3s,baz=72,slow=16,SNR=2.1						
ATAH				LR	LR	14 21 18.8	
	comp=Z,227μm,21.9s,baz=12,slow=38						
ZANG	Zanguenga, Cho	8.23	343	eP	Pn	14 18 03.5	0.0
ZANG				eS	Sn	14 19 33.1	-1.9
OCAC	Ocana	8.26	30	⇓eP	Pn	14 17 59.7	-4.4
OCAC				eS	Sn	14 19 34.4	-1.7
OCAC				i		14 19 42.8	
	comp=Z,13μm,0.5s						
BCIP	Isla Barro Col	8.42	344	ePn	Pn	14 18 06.2	+0.2
BCIP	Isla Barro Col	8.42	344	⇑iP	Pn	14 18 05.8	-0.2
BCIP				eS	Sn	14 19 35.8	-3.9
BCIP	Isla Barro Col	8.42	344	⇑eP	Pn	14 18 05.9	-0.2
BCIP				eS	Sn	14 19 37.0	-2.7
SMLC	San Martn de	8.42	24	⇓iP	Pn	14 18 01.2	-4.9
SMLC				eS	Sn	14 19 32.9	-6.9
FRIJ	El Hiral	8.44	345	eP	Pn	14 18 06.7	+0.4
PINA	Piqa, Costa Ab	8.57	342	eP	Pn	14 18 08.1	+0.1
DVD	David	8.87	326	eP	Pn	14 18 12.1	0.0
DVD				eS	Sn	14 19 47.9	-2.8
BRU2	Volcan	9.30	326	⇑iP	Pn	14 18 18.1	+0.1
BRU2				eS	Sn	14 20 01.8	+0.6
PTJ1	Puerto Jimnez	9.45	322	eP	Pn	14 18 19.4	-0.4
PTJ1				eS	Sn	14 20 03.5	-1.1
EDSV	San Vito	9.48	325	⇑eP	Pn	14 18 21.2	+0.8
CODC	Agustn Codazz	9.70	24	⇓iP	Pn	14 18 18.5	-4.7
CODC				eS	Sn	14 20 03.2	-7.5
CODC				i		14 20 17.7	
	comp=Z,2μm,0.7s						
EDPN	Palmar Norte	9.88	323	⇑eP	Pn	14 18 26.5	+1.0
EDBA	Buenos Aires	9.93	325	⇑eP	Pn	14 18 27.2	+0.9
DRK0	Durika	10.00	325	⇑eP	Pn	14 18 27.0	-0.3
DRK0				eS	Sn	14 20 16.3	-1.7
EDLM	Las Mercedes	10.21	324	⇑eP	Pn	14 18 30.5	+0.5
SDV	Santo Domingo	10.35	41	⇓iP	Pn	14 18 28.6	-3.4
SDV				i		14 20 32.1	
	comp=Z,2μm,0.5s						
SDV	Santo Domingo	10.35	41	P	Pn	14 18 29.2	-2.7
	comp=Z,558nm,0.3s,baz=222,slow=12,SNR=991						
SDV				S	Sn	14 20 23.0	-3.5
	comp=Z,386nm,0.3s,baz=41,slow=19,SNR=3.8						
SDV				P3KPbc		14 55 02.5	
	comp=Z,0.5nm,0.3s,baz=253,slow=20,SNR=2.8						
SDV	Santo Domingo	10.35	41	eP	Pn	14 18 29.1	-2.9
SDV				eS	Sn	14 20 21.8	-4.8
EDDO	Dominical	10.36	322	⇑eP	Pn	14 18 31.2	-0.7
SMRC	Santa Marta, M	10.56	18	⇓eP	Pn	14 18 30.8	-3.8
SMRC				eS	Sn	14 20 23.5	-8.0
LCR2	La Lucha 2	10.82	323	⇑iP	Pn	14 18 38.1	-0.2
CVTR	Volcan Turrial	10.90	325	⇑iP	Pn	14 18 39.9	+0.4
SJS	Escuela Geolog	11.01	324	⇑eP	Pn	14 18 40.1	-0.6
HDC	Heredia	11.10	324	ePn	Pn	14 18 42.4	+0.6
HDC	Heredia	11.10	324	⇑iP	Pn	14 18 42.0	+0.2
HDC				eS	Sn	14 20 43.4	-1.1
SRA1	San Ramn	11.38	322	⇑eP	Pn	14 18 44.8	-0.8
ARE1	Arenal 1	11.82	323	⇑iP	Pn	14 18 52.3	+1.1
CEDE	Laguna Cedeo	11.83	323	⇑iP	Pn	14 18 52.1	+0.7
JTS	JuntasAbangare	11.83	321	ePn	Pn	14 18 51.9	+0.6
JTS				S	Sn	14 21 01.8	-0.3
JTS	JuntasAbangare	11.83	321	c iP	Pn	14 18 50.6	-0.8
JTS				pmax	pmax		
	comp=Z,3μm,0.9s						
JTS	JuntasAbangare	11.83	321	P	Pn	14 18 51.0	-0.3
	comp=Z,13nm,0.3s,baz=207,slow=10,SNR=142						
JTS				S	Sn	14 21 01.8	-0.3
	comp=Z,101nm,0.3s,baz=5.7,slow=20,SNR=7.8						
JTS	JuntasAbangare	11.83	321	⇑iP	Pn	14 18 51.2	-0.2
JTS				eP	Pn	14 18 51.5	+0.1
CUI	Cuipilapa	12.25	322	⇑iP	Pn	14 18 57.6	+0.9
MESS	Mesas	12.33	322	⇑iP	Pn	14 18 58.3	+0.4
GPS2	Hotel Rincn d	12.44	321	⇑eP	Pn	14 18 60.0	+0.7
BUEV	Buena Vista	12.51	321	⇑iP	Pn	14 19 00.5	+0.3
GB1A	Borinquen Arri	12.52	321	⇑iP	Pn	14 19 01.0	+0.7
PRVC	Isla de Provid	12.86	343	⇑iP	Pn	14 19 02.3	-2.3
PRVC				eS	Sn	14 21 21.2	-5.5
PRVC				i		14 21 36.1	
	comp=Z,1μm,0.5s						
PAYG	Puerto Ayora	12.94	263	ePn	Pn	14 19 06.0	+0.3
NNA	Nana	12.95	177	i P	Pn	14 19 05.3	-0.6
NNA	Nana	12.95	177	P	Pn	14 19 06.2	+0.3
	comp=Z,14nm,0.3s,baz=346,slow=11,SNR=87						
NNA				S	Sn	14 21 21.3	-7.9
	comp=Z,24nm,0.3s,baz=319,slow=19,SNR=2.0						
ESPN	Las Esperanzas	13.00	329	ePn	Pn	14 19 06.5	+0.1
ESPN	Las Esperanzas	13.00	329	⇑iP	Pn	14 19 06.5	+0.1
ACON	Acoyapa	13.29	325	⇑iP	Pn	14 19 10.5	+0.4
MASN	Masaya	13.88	322	⇑iP	Pn	14 19 18.1	+0.3
BOAB	BOACO BROADBAN	13.96	325	ePn	Pn	14 19 19.5	+0.8
MATN	Matagalpa	14.49	325	⇑iP	Pn	14 19 26.1	+0.6
CNGN	Cerro Negro	14.62	322	i P	Pn	14 19 27.7	+0.7
ESTN	Estel	14.89	324	ePn	P	14 19 31.8	-0.7
ESTN	Estel	14.89	324	⇑iP	P	14 19 32.1	-0.4
CRIN	San Cristobal	14.99	321	⇑iP	Pn	14 19 32.3	+0.6
CNCH	Conchagua	15.92	320	eP	P	14 19 44.0	0.0
LCND	La Caada	15.98	320	eP	Pn	14 19 43.8	-0.1
TGUH	Tegucigalpa,Un	16.17	324	ePn	P	14 19 48.2	+1.5
VSM	San Miguel	16.32	319	eP	P	14 19 48.6	0.0
LCY	Lacayo	16.33	319	eP	P	14 19 49.2	+0.7
PACA	Pacayal	16.38	319	eP	P	14 19 49.6	+0.6
TECA	Tecapa	16.52	319	eP	P	14 19 51.8	+1.1
CAHU	Cacacuatique	16.53	320	eP	P	14 19 51.4	+0.6
PCJ	Portland Cotta	16.61	1	⇓iP	Pn	14 19 51.8	+0.3
MCJ	Malvern	16.79	359	i P	Pn	14 19 54.2	+0.5
HOJ	Hope	16.88	2	⇑iP	Pn	14 19 55.7	+0.9
VICT	Victoria	16.95	320	eP	Pn	14 19 55.7	0.0
STH	Stony Hill	16.95	2	⇓iP	Pn	14 19 55.9	+0.2
GWJ	Greenwich	16.95	2	i P	Pn	14 19 58.4	+2.6
PAVA	Las Pavas	16.96	318	eP	Pn	14 19 56.9	+1.0
LFRS	El Faro	16.98	318	eP	Pn	14 19 57.1	+0.9
LBRS	Las Brisas	17.05	318	eP	Pn	14 19 58.1	+1.1
CVJ	Coleyville	17.09	360	⇓iP	Pn	14 19 58.1	+0.8
MTDJ	Mount Denham	17.09	360	eP	Pn	14 19 58.4	+1.1
LFU	La Fuente	17.10	318	eP	Pn	14 19 58.4	+0.8
SNET	Serv Nac Est T	17.14	318	eP	Pn	14 19 58.8	+0.8
OPAM	San Salvador	17.14	318	eP	Pn	14 19 59.2	+1.2
CUSC	San Salvador	17.14	318	eP	Pn	14 19 59.2	+1.2
UEES	San Salvador	17.18	318	eP	Pn	14 19 59.4	+0.9
BOQS	Boqueron	17.21	318	eP	Pn	14 19 59.9	+0.9
CEDA	San Andres	17.33	318	eP	Pn	14 20 00.8	+0.5
CEVE	Cerro Verde	17.50	317	eP	Pn	14 20 03.2	+0.6
SBLS	San Blas	17.51	317	eP	Pn	14 20 03.6	+1.0
SNJE	San Jose	17.52	317	eP	Pn	14 20 03.5	+0.7
RTR	El Retiro	17.57	317	eP	Pn	14 20 04.0	+0.7
PTGA	Pitinga	17.58	96	P	Pn	14 20 04.0	+0.7
	comp=Z,212nm,0.3s,baz=276,slow=12,SNR=222						
PTGA				S	S	14 23 16.0	-1.9
	baz=285,slow=20,SNR=1.8						
PTGA				LR	LR	14 28 04.0	
	comp=Z,135μm,19.6s,baz=277,slow=41						
PTGA				P3KPbc		14 54 54.6	
	baz=82,slow=7.1,SNR=7.4						
IXG	Ixpaco	18.31	316	eP	Pn	14 20 11.7	-0.4
MRL	Marmol	18.45	320	⇓eP	Pn	14 20 13.5	-0.3
FSCY	Frank Sound, G	18.53	349	eP	Pn	14 20 13.9	-0.5
NBG	Las Nubes	18.53	317	eP	Pn	14 20 15.5	+0.7
PCG	Pacaya	18.58	316	eP	Pn	14 20 16.3	+1.0
TRN	Trinidad (W)	18.60	59	eP	Pn	14 20 17.5	+2.3
WBCY	West Bay, Gran	18.63	348	eP	Pn	14 20 15.6	0.0
FUG	Fuego 3	18.78	316	eP	Pn	14 20 17.6	0.0
TBH	Brigand Hill	18.80	59	eP	Pn	14 20 19.8	+2.1
SDD	Santo Domingo	18.83	23	eP	P	14 20 16.8	+1.0
SDDR	Presa de Saban	18.84	18	eP	Pn	14 20 17.7	-0.4
APG	El Apazote	18.91	318	P	Pn	14 20 18.3	-0.9
	comp=Z,124nm,0.3s,baz=143,slow=9.5,SNR=811						
APG				S	S	14 23 47.2	+2.7
	baz=353,slow=17,SNR=1.4						
APG				P3KPbc		14 54 52.0	
	comp=Z,0.0nm,0.3s,baz=319,slow=11,SNR=3.8						
GTBY	Guantanamo Bay	18.92	7	eP	Pn	14 20 18.8	-0.2
GRGR	Grenville	19.17	54	eP	P	14 20 17.8	-1.7
GRGR	Grenville	19.17	54	eP	Pn	14 20 21.8	-0.2
GRHS	Sauteurs	19.23	54	eP	Pn	14 20 23.8	+1.2
GRSS	Sisters	19.29	54	eP	P	14 20 21.7	+0.9
I08BO	LAS PENAS INFR	19.31	153	P	Pn	14 20 26.7	+2.6

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      baz=347,slow=12,SNR=0.5
TPR   Prospect          19.40  58  eP     Pn    14 20 23.5 -1.2
BOT   Bacolet           19.44  58  eP     P     14 20 22.8 +0.3
LPAZ  La Paz            19.52 152  eP     P     14 20 25.0 +1.0
LPAZ                                S     S     14 23 55.9 -1.4
LPAZ                               e            14 54 45.0
LPAZ  La Paz            19.52 152  eP     P     14 20 25.0 +1.0
LPAZ                                S     S     14 23 55.9 -1.4
LPAZ  La Paz            19.52 152⇑iP     P     14 20 24.5 +0.5
LPAZ  La Paz            19.52 152   P     P     14 20 24.3 +0.3
      comp=Z,36nm,0.3s,baz=332,slow=12,SNR=900
LPAZ                                S     S     14 23 55.9 -1.4
      baz=243,slow=17,SNR=1.6
LPAZ                                LR    LR    14 29 38.6
      comp=Z,101µm,20.6s,baz=321,slow=42
LPAZ                                P3KPbc      14 54 45.0
      comp=Z,0.1nm,0.3s,baz=95,slow=2.3,SNR=5.4
LPAZ  La Paz            19.52 152  eP     P     14 20 25.0 +1.0
TOSP  Speyside          19.66  58  eP     P     14 20 24.9 +0.1
ICMP  Isla Caja de M    19.90  32  eP     P     14 20 27.9 +0.6
OBIP  Obispado Ponce    19.99  32  eP     P     14 20 28.8 +0.5
AGP   Aguadilla         20.02  30  eP     Pn    14 20 30.3 -1.6
FCV   Fort Charlotte    20.08  52  eP     P     14 20 30.9 +1.6
SVB   Belmont           20.14  52  eP     P     14 20 28.5 -1.5
SVB   Belmont           20.14  52  eP     P     14 20 29.8 -0.2
SVV   Soufriere Volc    20.19  52  eP     Pn    14 20 33.8 -0.2
SSV   Crater Summit     20.22  52  eP     P     14 20 29.2 -1.7
SVCV  St. Vincent, C    20.22  52  eP     Pn    14 20 33.6 -0.8
SFAN  Fancy Village     20.27  52  eP     P     14 20 32.9 +1.6
SJG   San Juan          20.29  33⇓iP     P     14 20 31.6 +0.2
SJG                                eS     S     14 24 10.6 -0.7
SJG   San Juan          20.29  33   P     P     14 20 31.7 +0.2
      comp=Z,9µm,0.8s,baz=209,slow=9.6,SNR=574
SJG                                 S     S     14 24 07.8 -3.5
      comp=Z,227nm,0.7s,baz=233,slow=20,SNR=1.9
EMPR  Esperanza - Ma    20.39  31  eP     P     14 20 33.5 +0.9
HUMP  Col San Antoni    20.47  33  eP     P     14 20 34.1 +0.6
CBYP  Canovanas         20.57  33  eP     P     14 20 35.5 +0.8
CBYP                               ePcP   PcP   14 24 34.4 -5.5
MTP   Monte Pirata      20.60  34  eP     P     14 20 35.4 +0.5
MTP                                ePcP   PcP   14 24 37.4 -2.5
SLDE  Delcer            20.60  51  eP     P     14 20 34.5 -0.5
SLB   Belfond           20.63  51  eP     P     14 20 32.6 -2.7
MCLT  Moule a Chique    20.64  52  eP     P     14 20 31.9 -3.4
SLPA  Patience          20.74  51  eP     P     14 20 35.7 -0.8
PB12  IPOC Station P    20.75 161⇑iP     P     14 20 37.3 +0.8
PB12                               eS     S     14 24 21.9 +1.4
CDVI  St. Croix         20.78  36  eP     P     14 20 37.3 +0.5
SLW   Petit Monier      20.82  51  eP     P     14 20 37.2 -0.2
CUPR  Culebra, Puert    20.92  34  eP     P     14 20 39.0 +0.7
CCIG  Comitan           20.95 317  eP     P     14 20 39.2 +0.4
TRMF  Trois Ilets       21.05  50  eP     P     14 20 38.0 -1.7
ZAM   Aeronautique      21.09  50  eP     P     14 20 38.3 -1.8
FDF   Fort de France    21.10  49  eP     P     14 20 39.0 -1.3
FDF   Fort de France    21.10  49  eP     P     14 20 38.8 -1.5
FDF   Fort de France    21.10  49  eP     P     14 20 39.3 -1.0
FDF   Fort de France    21.10  49  eP     P     14 20 39.0 -1.3
PML   Morne Lenard      21.10  49  eP     P     14 20 38.7 -1.6
PCM   Pelee Case Pet    21.10  49  eP     P     14 20 38.5 -1.9
PCM   Pelee Case Pet    21.10  49  eP     P     14 20 39.0 -1.3
GBMF  Grand Be          21.12  49  eP     P     14 20 38.8 -1.8
CXM   Morne La Croix    21.13  49  eP     P     14 20 39.1 -1.7
LPMF  Morne Lapointe    21.14  50  eP     P     14 20 41.4 +0.7
STVI  Saint Thomas      21.14  35  eP     P     14 20 40.4 -0.3
H05S1 Guadeloupe/Mar    21.15  50   P     P     14 20 38.6 -2.2
BAMF  Morne Balai       21.15  49  eP     P     14 20 39.3 -1.6
GRTK  Grand Turk        21.27  16  eP     P     14 20 41.4 -0.6
ILAM  Ilet Lapin Mar    21.33  49  eP     P     14 20 41.1 -1.7
BBL   Barber's Block    21.36  47  eP     P     14 20 42.0 -1.2
DLPL  La Plaine         21.40  48  eP     P     14 20 42.9 -0.6
MDPO  Dominica; Chan    21.41  47  eP     P     14 20 45.6 +2.0
BBGH  Gun Hill          21.43  55  eP     P     14 20 42.2 -1.6
      comp=Z,23µm,0.9s
BBGH  Gun Hill          21.43  55  eP     P     14 20 41.6 -2.3
BBGH  Gun Hill          21.43  55  eP     P     14 20 45.5 +1.7
TBG   Guadaloupe-3      21.45  46  eP     P     14 20 49.9 +5.8
TDBA  Terre de Bas,     21.46  46  eP     P     14 20 42.2 -1.9
MDPV  Dominica, Penn    21.46  47  eP     P     14 20 46.2 +2.0
MNMC  Minye Minye       21.48 159  eP     P     14 20 46.6 +2.0
MNMC  Minye Minye       21.48 159⇑iP     P     14 20 45.9 +1.3
MNMC                               eS     S     14 24 36.3 +2.0
BBSP  Saint Philip      21.49  55  eP     P     14 20 46.9 +2.4
DWS   Wesley            21.51  47  eP     P     14 20 43.1 -1.5
MLYT  Lee's Yard        21.66  43  eP     P     14 20 44.5 -1.7
SEUS  St. Eustatius     21.69  40  eP     P     14 20 44.1 -2.4
SEUS  St. Eustatius     21.69  40  eP     P     14 20 45.3 -1.2
NEV   Hard Times        21.70  42  eP     P     14 20 47.9 +1.2
MGG   Marie-Galante     21.73  46  eP     P     14 20 45.4 -1.7
PSGC  Pisagua           21.73 161⇑iP     P     14 20 47.5 +0.4
PSGC                               eS     S     14 24 40.2 +1.9
MAGL  Barre de l’ile    21.78  46  eP     P     14 20 45.7 -1.8
ABVI  Anegada Island    21.80  35  eP     P     14 20 46.1 -1.6
TEIG  Tepich            21.81 332  eP     P     14 20 47.6 -0.2
ABD   La Joyeuse, An    21.98  45  eP     P     14 20 47.8 -1.8
SMRT  St. Maarten       22.04  39  eP     P     14 20 47.2 -3.0
SMRT  St. Maarten       22.04  39  eP     P     14 20 49.5 -0.7
PB11  IPOC Station P    22.04 160  eP     P     14 20 52.9 +2.5
PB11  IPOC Station P    22.04 160⇑iP     P     14 20 51.0 +0.6
BPA   Boggy Peak        22.11  43  eP     P     14 20 48.7 -2.3
H05N1 Guadeloupe/Mar    22.18  46   P     P     14 20 49.6 -2.0
PB08  IPOC Station P    22.57 159⇑iP     P     14 20 57.8 +2.0
ANWB  Willy Bob         22.60  42  eP     P     14 20 51.8 -3.8
ANWB  Willy Bob         22.60  42  eP     P     14 20 54.4 -1.2
MYIG  Mrida             23.15 330  eP     P     14 21 00.9 +0.2
PB01  IPOC Station P    23.29 161  eP     P     14 21 05.9 +3.8
PB01  IPOC Station P    23.29 161⇑iP     P     14 21 03.9 +1.8
PB02  IPOC Station P    23.42 162⇑iP     P     14 21 05.2 +1.9
CMIG  Matias Romero     23.42 314   P     P     14 21 03.4 +0.1
      comp=Z,377nm,1.0s,baz=104,slow=7.0,SNR=84
CMIG                                S     S     14 25 03.5 -2.3
      comp=Z,44nm,1.1s,baz=229,slow=20,SNR=1.6
CMIG                                P3KPbc      14 54 30.5
      comp=Z,5.6nm,0.9s,baz=294,slow=4.7,SNR=4.9
062Z  Marathon          23.81 352   P     P     14 21 08.2 +1.5
      baz=171,SNR=5.9
062Z                                S     S     14 25 15.3 +3.5
      baz=171
PB09  IPOC Station P    24.07 161⇑iP     P     14 21 11.4 +2.1
PB04  IPOC Station P    24.30 163  eP     P     14 21 13.9 +2.5
061Z  Ochoppi           24.91 353  eP     P     14 21 18.3 +1.6
061Z  Ochoppi           24.91 353   P     P     14 21 17.9 +1.2
      baz=172,SNR=93
LVC   Limon Verde       24.94 161  eP     P     14 21 20.7 +3.3
LVC                                 S     S     14 25 33.2 +2.6
LVC   Limon Verde       24.94 161  eP     P     14 21 20.7 +3.3
LVC                                 S     S     14 25 33.3 +2.6
LVC   Limon Verde       24.94 161   P     P     14 21 19.8 +2.5
      comp=Z,1µm,0.9s,baz=337,slow=7.6,SNR=285
LVC                                 S     S     14 25 33.2 +2.6
      comp=Z,64nm,0.9s,baz=84,slow=19,SNR=2.1
MDP   Montagnes des     25.11  80   P     P     14 21 19.4 +0.7
      comp=Z,4µm,0.9s,baz=255,slow=8.3,SNR=275
MDP                                 S     S     14 25 31.7 -1.2
      comp=Z,272nm,0.8s,baz=162,slow=20,SNR=1.9
MDP                                 LR    LR    14 32 03.0
      comp=Z,190µm,19.6s,baz=258,slow=38
PB10  IPOC Station P    25.31 165  eP     P     14 21 23.0 +2.7
060Z  West Palm Beac    25.40 354   P     P     14 21 22.6 +1.4
      baz=173,SNR=79
059Z  Ave Maria         25.45 352   P     P     14 21 22.8 +1.2
      baz=171,SNR=26
YJA   Yavi              25.85 154  eP     P     14 21 27.4 +1.7
060A  Indiantown        26.00 354   P     P     14 21 27.7 +1.1
      baz=173,SNR=22
059A  Moore Haven       26.03 352   P     P     14 21 27.8 +1.0
      baz=171,SNR=44
058A  Arcadia           26.21 351   P     P     14 21 29.4 +1.1
      baz=170,SNR=65
LVIG  Laguna Verde      26.25 316  eP     P     14 21 29.9 +1.0
959A  Okeechobee        26.54 353   P     P     14 21 32.4 +1.0
      baz=172,SNR=30
958A  Wauchula          26.72 352   P     P     14 21 33.9 +1.0
      baz=170,SNR=21
957A  Wimauma           26.88 351   P     P     14 21 35.5 +1.1
      baz=169,SNR=12
859A  Kempfer Cattle    27.07 353   P     P     14 21 37.1 +1.0
      baz=172,SNR=66
GO02  Mina Guanaco      27.14 164  eP     P     14 21 39.9 +2.8
DWPF  Disney Wildern    27.19 352  eP     P     14 21 38.3 +1.1
      comp=Z,5µm,1.0s
DWPF  Disney Wildern    27.19 352   P     P     14 21 37.9 +0.7
      baz=171
DWPF  Disney Wildern    27.19 352  eP     P     14 21 38.3 +1.1
858A  St. Cloud         27.28 352   P     P     14 21 38.6 +0.6
      baz=171,SNR=5.5
857A  Zephyrhills       27.46 351   P     P     14 21 40.5 +0.9
      baz=170,SNR=64
758A  Lake Helen        28.00 353   P     P     14 21 45.5 +1.1
      baz=172,SNR=43
757A  Oxford            28.10 351   P     P     14 21 46.1 +0.9
      baz=170,SNR=103
658A  Bunnell           28.46 353   P     P     14 21 49.4 +0.9
      baz=172,SNR=37
656A  Willston          28.59 351   P     P     14 21 50.6 +1.0
      baz=169,SNR=118
657A  Interlachen       28.70 352   P     P     14 21 51.4 +0.8
      baz=171,SNR=114
655A  Horseshoe Beac    28.85 349   P     P     14 21 52.9 +0.9
      baz=168,SNR=67
557A  Orange Park       29.11 352   P     P     14 21 55.1 +0.9
      baz=171,SNR=80
556A  Lake Butler       29.19 351   P     P     14 21 55.7 +0.8
      baz=170,SNR=151
555A  McAlpin           29.40 350   P     P     14 21 57.3 +0.6
      baz=169,SNR=86
554A  Perry             29.49 349   P     P     14 21 58.5 +1.0
      baz=167,SNR=45
457A  Yulee             29.68 353   P     P     14 22 00.2 +0.9
      baz=172,SNR=50
553A  Crawfordville     29.74 348   P     P     14 22 00.8 +1.0
      baz=166,SNR=110
456A  Hilliard          29.84 352   P     P     14 22 01.9 +1.2
      baz=171,SNR=16
552A  Lynn Haven        29.88 346   P     P     14 22 01.9 +0.9
      baz=164,SNR=16
455A  Stateville        30.01 350   P     P     14 22 02.8 +0.6
      baz=169,SNR=218
AHML  Horco Molle       30.03 158  eP     P     14 22 03.6 +1.1
AHML                               eP     P     14 22 04.3 +1.9
454A  Quitman           30.09 349   P     P     14 22 03.7 +0.9
      baz=168,SNR=113
AQDB  Aquidauana        30.19 136  eP     P     14 22 05.2 +1.4
453A  Whigham           30.36 348   P     P     14 22 06.2 +1.0
      baz=166,SNR=143
356A  Blackshear        30.45 352   P     P     14 22 06.7 +0.7
      baz=171,SNR=121
451A  Vernon            30.45 346   P     P     14 22 06.8 +0.8
      baz=163,SNR=42
357A  Townsend          30.46 353   P     P     14 22 06.9 +0.7
      baz=172,SNR=39
452A  Marianna          30.54 347   P     P     14 22 07.4 +0.6
      baz=165,SNR=125
LCO   Las Campanas      30.57 168  eP     P     14 22 09.9 +2.5
LCO   Las Campanas      30.57 168  eP     P     14 22 09.9 +2.5
LCO   Las Campanas      30.57 168  eP     P     14 22 09.8 +2.4
355A  Pearson           30.57 351   P     P     14 22 08.0 +0.9
      baz=169,SNR=82
TIGA  Tifton            30.79 350   P     P     14 22 09.6 +0.5
      baz=168,SNR=75
353A  Camilla           30.82 349   P     P     14 22 09.7 +0.4
      baz=167,SNR=179
450A  Crestview         30.85 345   P     P     14 22 10.3 +0.8
      baz=162,SNR=38
257A  Skidaway Islan    30.96 354   P     P     14 22 11.2 +0.7
      baz=173,SNR=30
449A  Pace              30.98 344   P     P     14 22 11.1 +0.5
      baz=161,SNR=42
351A  Pinckard          31.05 346   P     P     14 22 11.7 +0.4
      baz=164,SNR=174
256A  Glennville        31.06 353   P     P     14 22 12.3 +0.9
      baz=171,SNR=158
255A  Hazlehurst        31.09 352  eP     P     14 22 12.4 +0.8
255A  Hazlehurst        31.09 352   P     P     14 22 12.4 +0.8
      baz=170,SNR=118
352A  Blakely           31.09 348   P     P     14 22 12.2 +0.5
      baz=165,SNR=49
C2SB  Chapadao do Su    31.19 130  eP     P     14 22 14.4 +1.6
254A  Abbeville         31.23 350   P     P     14 22 13.5 +0.5
      baz=169,SNR=230
BRAL  Brewton           31.32 344  eP     P     14 22 14.4 +0.7
      comp=Z,2µm,1.1s
BRAL  Brewton           31.32 344   P     P     14 22 14.1 +0.5
      baz=161,SNR=62
448A  Bay Minette       31.33 343   P     P     14 22 14.1 +0.4
      baz=160,SNR=31
350A  Dozier            31.37 345   P     P     14 22 14.4 +0.3
      baz=163,SNR=40
CYA   Choya             31.37 160  eP     P     14 22 16.2 +1.9
253A  Americus          31.50 349  eP     P     14 22 15.4 +0.1
253A  Americus          31.50 349   P     P     14 22 15.3 +0.1
      baz=167,SNR=230
349A  Repton            31.53 344   P     P     14 22 16.0 +0.5
      baz=161,SNR=218
AGUA  GUANDACOL         31.54 165  eP     P     14 22 18.7 +2.9
252A  Lumpkin           31.55 348   P     P     14 22 15.9 +0.2
      baz=166,SNR=333
GO04  Tololo Observa    31.68 169  eP     P     14 22 19.8 +2.7
156A  Sylvania          31.68 354   P     P     14 22 17.9 +1.1
      baz=172,SNR=362
155A  Kite              31.77 352   P     P     14 22 18.4 +0.8
      baz=170,SNR=525
251A  Midway            31.79 347   P     P     14 22 17.9 +0.1
      baz=165,SNR=664
154A  Montrose          31.86 351  eP     P     14 22 19.2 +0.8
154A  Montrose          31.86 351   P     P     14 22 19.1 +0.8
      baz=169,SNR=343
LNIG  Linares           31.86 320  eP     P     14 22 19.1 +0.6
LNIG                               ePcP   PcP   14 25 06.3 +0.3
250A  Grady             31.88 346  eP     P     14 22 18.7 +0.1
250A  Grady             31.88 346   P     P     14 22 18.8 +0.2
      baz=163,SNR=194
ACLC  CERRO LA CRUZ     31.91 162  eP     P     14 22 22.0 +2.8
AROD  Rodeo             31.95 167  eP     P     14 22 23.1 +3.5
NHSC  New Hope          32.01 356  eP     P     14 22 20.7 +1.1
NHSC                               ePcP   PcP   14 25 07.0 +0.8
NHSC  New Hope          32.01 356   P     P     14 22 20.8 +1.2
      baz=175,SNR=158
153A  Fort Valley       32.02 350   P     P     14 22 20.2 +0.4
      baz=168,SNR=81
ACDV  Cuesta del Vie    32.03 166  eP     P     14 22 23.4 +3.3
249A  Camden            32.10 344   P     P     14 22 20.7 +0.2
      baz=162,SNR=288
151A  Opelika           32.19 347   P     P     14 22 21.2 -0.1
      baz=165,SNR=267
152A  Waverly Hall      32.20 348   P     P     14 22 21.5 +0.1
      baz=166,SNR=464
Z55A  Blythe            32.32 353   P     P     14 22 23.1 +0.8
      baz=171,SNR=157
150A  Eclectic          32.42 346   P     P     14 22 23.3  0.0
      baz=164,SNR=340
Z54A  Sparta            32.43 352   P     P     14 22 23.8 +0.4
      baz=170,SNR=379
ACCO  Cerro Coronel     32.45 166  eP     P     14 22 26.0 +2.0
Z53A  Monticello        32.59 350   P     P     14 22 24.9 +0.2
      baz=168,SNR=293
ZAIG  Zacatecas         32.59 313  eP     P     14 22 26.9 +1.6
149A  Jones             32.60 345   P     P     14 22 24.8 -0.1
      baz=162,SNR=294
Z52A  Williamson        32.65 349   P     P     14 22 25.4 +0.1
      baz=167,SNR=369
GOGA  Godfrey           32.70 351  eP     P     14 22 25.7  0.0
      comp=Z,169nm,1.1s
GOGA  Godfrey           32.70 351  eP     P     14 22 25.7  0.0
GOGA                                pmax  pmax
      comp=Z,169nm,1.1s
GOGA  Godfrey           32.70 351   P     P     14 22 26.0 +0.3
      baz=169,SNR=280
KVTX  Kingsville        32.84 325  eP     P     14 22 28.4 +1.4
      comp=Z,957nm,1.0s
Z51A  Franklin          32.92 348   P     P     14 22 27.9 +0.2
      baz=166,SNR=144
AMOG  MOGNA             32.92 166  eP     P     14 22 30.1 +2.3
APLL  PUNTA DE LOS L    32.95 162  eP     P     14 22 29.9 +1.9
Y54A  Tignall           33.02 352   P     P     14 22 29.1 +0.5
      baz=170,SNR=388
Z50A  Ashland           33.02 347  eP     P     14 22 28.6  0.0
Z50A  Ashland           33.02 347   P     P     14 22 28.6  0.0
      baz=164,SNR=683
LRAL  Lakeview Retre    33.07 345  eP     P     14 22 28.9 -0.1
LRAL  Lakeview Retre    33.07 345   P     P     14 22 28.9 -0.1
      baz=162,SNR=375
147A  Livingston        33.08 343  eP     P     14 22 28.5 -0.5
147A  Livingston        33.08 343   P     P     14 22 28.8 -0.2
      baz=160,SNR=208
Z49A  Columbiana        33.11 346   P     P     14 22 29.2 -0.1
      baz=163,SNR=522
Y53A  Monroe            33.15 351   P     P     14 22 29.7 +0.1
      baz=169,SNR=425
Y52A  Lilburn           33.24 350  eP     P     14 22 30.6 +0.1
Y52A  Lilburn           33.24 350   P     P     14 22 30.5 +0.1
      baz=168,SNR=179
RTLL  Cerro Villicun    33.30 166  eP     P     14 22 33.4 +2.4
VBMS  Vicksburg         33.37 340  eP     P     14 22 31.6  0.0
VBMS  Vicksburg         33.37 340   P     P     14 22 31.8 +0.3
      baz=156,SNR=43
CPUP  Villa Florida     33.43 146  eP     P     14 22 32.0 -0.2
CPUP                                S     S     14 27 35.1 -7.9
CPUP                               e            14 53 41.6
CPUP  Villa Florida     33.43 146  eP     P     14 22 32.0 -0.2
CPUP  Villa Florida     33.43 146   P     P     14 22 31.3 -0.9
      comp=Z,295nm,0.7s,baz=330,slow=8.2,SNR=102
CPUP                                S     S     14 27 35.1 -7.9
      comp=Z,49nm,0.8s,baz=340,slow=13,SNR=2.2
CPUP                                P3KPbc      14 53 41.6
      comp=Z,4.2nm,1.0s,baz=139,slow=11,SNR=3.8
CPUP  Villa Florida     33.43 146  eP     P     14 22 31.1 -1.1
ZON   Zonda             33.46 166  eP     P     14 22 34.8 +2.3
Y51A  Rockmart          33.46 348   P     P     14 22 32.2 -0.2
      baz=166,SNR=356
BDFB  Brasilia          33.49 121  eP     P     14 22 32.9 -0.1
BDFB                                S     S     14 27 39.6 -4.8
BDFB  Brasilia          33.49 121  eP     P     14 22 32.9 -0.1
BDFB                                S     S     14 27 39.6 -4.8
BDFB  Brasilia          33.49 121   P     P     14 22 32.5 -0.4
      comp=Z,791nm,1.0s,baz=290,slow=11,SNR=120
BDFB                                S     S     14 27 39.6 -4.8
      comp=Z,258nm,0.9s,baz=342,slow=20,SNR=2.1
BDFB                                LR    LR    14 37 01.7
      comp=Z,64µm,19.9s,baz=299,slow=38
145A  Houston Renfro    33.53 341   P     P     14 22 32.9  0.0
      baz=157,SNR=74
RTLS  Leoncito          33.56 167  eP     P     14 22 36.3 +2.8
Y50A  Piedmont          33.59 348   P     P     14 22 33.4 -0.1
      baz=165,SNR=430
CFA   Coronel Fontan    33.62 166  eP     P     14 22 36.1 +2.3
ITRB  Iturama           33.64 129  eP     P     14 22 34.1  0.0
Y49A  Blount Mountai    33.71 347  eP     P     14 22 34.1 -0.5
Y49A  Blount Mountai    33.71 347   P     P     14 22 34.1 -0.5
      baz=164,SNR=214
X53A  Estanollee        33.74 351   P     P     14 22 35.1 +0.3
      baz=169,SNR=151
RTCV  Cerro Valdivia    33.79 166  eP     P     14 22 37.4 +2.1
TRCB  Terra Rica        33.85 136  eP     P     14 22 35.9 -0.1
X52A  Dahlonega         33.93 350   P     P     14 22 36.3 -0.2
      baz=168,SNR=314
Y48A  Jasper            33.95 345   P     P     14 22 35.8 -0.8
      baz=162,SNR=391
AUSP  Uspallata         33.95 168  eP     P     14 22 40.1 +3.2
CNNC  Cliffs of the     34.03 359  eP     P     14 22 37.7 +0.5
      comp=Z,1µm,0.8s
CNNC  Cliffs of the     34.03 359   P     P     14 22 37.6 +0.4
      baz=179,SNR=72
X51A  Calhoun           34.07 349  eP     P     14 22 37.8 +0.2
X51A  Calhoun           34.07 349   P     P     14 22 37.2 -0.4
      baz=167,SNR=183
X50B  Fort Payne        34.12 348   P     P     14 22 37.7 -0.4
      baz=165,SNR=410
KMSC  Kings Mountain    34.12 354   P     P     14 22 38.4 +0.3
      baz=173,SNR=16
833A  Chaparral WMA,    34.30 324  eP     P     14 22 40.4 +0.7
833A  Chaparral WMA,    34.30 324   P     P     14 22 40.1 +0.5
      baz=138,SNR=49
X49A  Woodville         34.32 347   P     P     14 22 39.4 -0.3
      baz=164,SNR=175
ROC1  El Roble          34.37 170  eP     P     14 22 42.7 +2.2
ROC1  El Roble          34.37 170  eP     P     14 22 42.8 +2.2
W53A  Cullowhee         34.37 352   P     P     14 22 40.9 +0.5
      baz=170,SNR=568
W52A  Murphy            34.42 351  eP     P     14 22 40.8 +0.1
W52A  Murphy            34.42 351   P     P     14 22 40.9 +0.3
      baz=168,SNR=216
ASAL  Salagasta         34.42 167  eP     P     14 22 43.8 +3.0
X48A  Hartselle         34.43 346  eP     P     14 22 40.1 -0.6
X48A  Hartselle         34.43 346   P     P     14 22 40.3 -0.4
      baz=163,SNR=333
TCA   Tanti             34.44 160  eP     P     14 22 41.9 +0.9
IPMB  Ipameri, GO       34.44 125  eP     P     14 22 40.2 -0.9
ACAN  Cantantal         34.53 165  eP     P     14 22 43.3 +1.7
Z43A  Armstrong Fami    34.53 339   P     P     14 22 41.0 -0.5
      baz=155,SNR=69
PEL   Peldehue          34.59 170  eP     P     14 22 45.2 +3.0
PEL   Peldehue          34.59 170  eP     P     14 22 44.3 +2.1
NATX  Nacogdoches       34.61 334  eP     P     14 22 42.5 +0.2
NATX                               ePcP   PcP   14 25 15.2 +1.6
NATX  Nacogdoches       34.61 334   P     P     14 22 42.6 +0.2
      baz=149,SNR=220
W51A  Cleveland         34.63 349   P     P     14 22 42.6 +0.2
      baz=167,SNR=564
ARCO  CERRO ARCO        34.64 167  eP     P     14 22 45.7 +3.0
X47A  Russelville       34.70 345   P     P     14 22 42.2 -0.8
      baz=161,SNR=495
W50A  Signal Mountai    34.77 349  eP     P     14 22 43.5 -0.1
W50A  Signal Mountai    34.77 349   P     P     14 22 43.6 -0.1
      baz=166,SNR=534
V53A  Saluda            34.82 352   P     P     14 22 44.6 +0.5
      baz=170,SNR=266
W49A  Belvidere         34.89 347   P     P     14 22 44.2 -0.5
      baz=164,SNR=266
AAGR  Agrelo            34.90 167  eP     P     14 22 47.4 +2.4
X46A  Booneville        34.93 344   P     P     14 22 44.1 -0.9
      baz=160,SNR=246
TKL   Tuckaleechee C    34.95 351   P     P     14 22 45.0 -0.1
      comp=Z,387nm,0.9s,baz=165,slow=9.2,SNR=77
TKL                                 S     S     14 28 04.8 -1.3
      comp=Z,47nm,1.0s,baz=45,slow=18,SNR=2.3
Y43A  Makayla and Ka    35.06 340   P     P     14 22 45.6 -0.5
      baz=156,SNR=102
W48A  Pulaski           35.06 346   P     P     14 22 45.8 -0.3
      baz=163,SNR=719
V52A  Sevierville       35.10 351  eP     P     14 22 46.9 +0.4
V52A  Sevierville       35.10 351   P     P     14 22 46.4  0.0
      baz=169,SNR=257
OXF   Oxford            35.13 343  eP     P     14 22 45.9 -0.8
OXF   Oxford            35.13 343  eP     P     14 22 45.9 -0.8
OXF   Oxford            35.13 343   P     P     14 22 45.4 -1.3
      baz=159,SNR=171
Z41A  Richland Creek    35.15 337   P     P     14 22 46.5 -0.3
      baz=153,SNR=147
V51A  Loudon            35.18 350  eP     P     14 22 47.2  0.0
V51A  Loudon            35.18 350   P     P     14 22 47.1  0.0
      baz=168,SNR=328
V50A  Pikevile          35.19 349   P     P     14 22 47.3 +0.1
      baz=167,SNR=409
PLAL  Pickwick Lake     35.20 345  eP     P     14 22 46.4 -0.9
PLAL                               ePcP   PcP   14 25 15.6 +0.4
435B  Jarrell           35.21 329  eP     P     14 22 47.6 +0.2
435B                               ePcP   PcP   14 25 16.7 +1.3
435B  Jarrell           35.21 329   P     P     14 22 47.7 +0.3
      baz=143,SNR=101
Y42A  Garnett, Star     35.28 339   P     P     14 22 47.5 -0.5
      baz=155,SNR=135
W47A  Westpoint         35.33 346   P     P     14 22 47.9 -0.6
      baz=162,SNR=604
AVIZ  Vizcacheras       35.34 167  eP     P     14 22 51.7 +3.0
W46A  Michie            35.42 344   P     P     14 22 47.8 -1.3
      baz=161,SNR=99
V49A  McMinnville       35.44 348   P     P     14 22 48.8 -0.6
      baz=165,SNR=381
U53A  Fall Branch       35.47 353   P     P     14 22 50.1 +0.4
      baz=171,SNR=402
PTGB  Pitanga           35.51 138  eP     P     14 22 50.2 -0.1
X43A  Marvell           35.59 341   P     P     14 22 50.5 -0.2
      baz=156,SNR=34
U52A  Thorn Hill        35.60 352   P     P     14 22 50.8 -0.1
      baz=170,SNR=310
V48A  Smith Brothers    35.61 347  eP     P     14 22 50.5 -0.3
V48A  Smith Brothers    35.61 347   P     P     14 22 50.5 -0.3
      baz=164,SNR=1000
Y41A  Eaglette Beard    35.63 338   P     P     14 22 50.7 -0.3
      baz=153,SNR=86
W45A  Hickory Valley    35.66 343   P     P     14 22 50.1 -1.2
      baz=160,SNR=222
U51A  La Follette       35.69 351   P     P     14 22 51.6 +0.1
      baz=169,SNR=256
TZTN  Tazewell          35.78 352  eP     P     14 22 52.1 -0.2
TZTN  Tazewell          35.78 352   P     P     14 22 52.2  0.0
      baz=170,SNR=212
BB19B Bebedouro         35.82 129  eP     P     14 22 52.8 -0.1
W44A  Shelby Farms P    35.83 343   P     P     14 22 51.6 -1.1
      baz=158,SNR=24
V47A  Nunnelly          35.86 346   P     P     14 22 51.7 -1.2
      baz=163,SNR=290
U50A  Jamestown         35.86 350   P     P     14 22 52.7 -0.3
      baz=167,SNR=354
X42A  Stuttgart         35.88 340   P     P     14 22 52.6 -0.5
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	baz=155,SNR=108						
V46A	Holladay	35.98	345	P	P	14 22 52.3	-1.7
	baz=162,SNR=183						
T54A	Tazewell	36.05	354	P	P	14 22 54.9	+0.2
	baz=173,SNR=349						
W43A	Forest City	36.06	341	P	P	14 22 53.8	-0.9
	baz=157,SNR=20						
T53A	Wise	36.08	353	P	P	14 22 55.1	+0.2
	baz=171,SNR=235						
BLA	Blacksburg	36.10	356	*e*P	P	14 22 56.0	+0.9
BLA	Blacksburg	36.10	356	*e*P	P	14 22 56.0	+0.9
BLA	Blacksburg	36.10	356	P	P	14 22 55.9	+0.8
	baz=175,SNR=297						
WHTX	Lake Whitney,	36.12	330	*e*P	P	14 22 55.2	+0.1
WHTX	Lake Whitney,	36.12	330	P	P	14 22 55.3	+0.1
	baz=144,SNR=138						
U49A	Red Boiling Sp	36.13	349	P	P	14 22 54.7	-0.5
	baz=166,SNR=194						
X41A	Kaden, Bauxite	36.14	339	P	P	14 22 54.5	-0.9
	baz=154,SNR=104						
V45A	Humboldt	36.15	344	P	P	14 22 54.1	-1.3
	baz=160,SNR=74						
JCT	Junction City	36.16	326	*e*P	P	14 22 55.8	+0.2
JCT	Junction City	36.16	326	*e*P	P	14 22 55.8	+0.2
JCT	Junction City	36.16	326	P	P	14 22 55.7	+0.2
	baz=140,SNR=134						
PMNB	Patos De Minas	36.17	124	*e*P	P	14 22 55.6	-0.3
SUCO	SUCO	36.19	162	*e*P	P	14 22 57.7	+1.8
WVT	Waverly	36.22	346	*e*P	P	14 22 54.5	-1.5
WVT	Waverly	36.22	346	*e*P	P	14 22 54.5	-1.5
WVT	Waverly	36.22	346	P	P	14 22 54.6	-1.5
	baz=162						
X40A	Basin Creek Fa	36.25	338	P	P	14 22 55.5	-0.8
	baz=153,SNR=145						
T51A	Gray	36.25	351	P	P	14 22 56.3	0.0
	baz=169,SNR=325						
T52A	Hallie	36.26	353	P	P	14 22 56.6	+0.3
	baz=170,SNR=451						
U48A	Cassie Pea, Po	36.29	348	P	P	14 22 55.9	-0.7
	baz=164,SNR=479						
UALR	University of	36.33	339	*e*P	P	14 22 55.9	-1.1
FRTB	Fartura	36.38	134	*e*P	P	14 22 58.5	+0.9
U47A	Clarksville	36.39	347	P	P	14 22 56.2	-1.2
	baz=163,SNR=319						
T50A	Nancy	36.45	350	P	P	14 22 57.4	-0.6
	baz=167,SNR=179						
JANB	Januaria	36.48	117	*e*P	P	14 22 57.8	-0.7
V44A	Blytheville	36.50	343	P	P	14 22 57.1	-1.2
	baz=159,SNR=22						
W42A	Bald Knob	36.50	340	P	P	14 22 57.4	-1.0
	baz=156,SNR=19						
U46A	Springville	36.52	345	P	P	14 22 57.2	-1.4
	baz=162,SNR=184						
MIAR	Mount Ida	36.58	337	*e*P	P	14 22 58.2	-0.9
	comp=Z,2µm,1.1s						
MIAR	Mount Ida	36.58	337	*e*P	P	14 22 58.2	-0.9
MIAR				pmax	pmax		
	comp=Z,2µm,1.1s						
MIAR	Mount Ida	36.58	337	P	P	14 22 57.9	-1.2
	baz=152,SNR=210						
RFA	San Rafael	36.60	168	*e*P	P	14 23 01.8	+2.4
V43A	Jonesboro	36.65	342	P	P	14 22 58.9	-0.7
	baz=158,SNR=61						
W41B	Gary Mavity, V	36.65	339	*e*P	P	14 22 58.5	-1.1
W41B				*e*PcP	PcP	14 25 18.4	-1.2
W41B	Gary Mavity, V	36.65	339	P	P	14 22 58.7	-1.0
	baz=155,SNR=307						
T49A	Edmonton	36.66	349	*e*P	P	14 22 59.0	-0.7
T49A	Edmonton	36.66	349	P	P	14 22 59.1	-0.7
	baz=166,SNR=268						
S55A	Lewisburg	36.67	356	P	P	14 23 00.8	+0.9
	baz=175,SNR=444						
U45A	Rockin P Farm,	36.67	345	P	P	14 22 58.5	-1.3
	baz=161,SNR=101						
S53A	Williamson	36.72	354	P	P	14 23 00.3	+0.1
	baz=172,SNR=316						
R58B	Mineral	36.75	359	*e*P	P	14 23 01.2	+0.7
R58B	Mineral	36.75	359	P	P	14 23 01.0	+0.5
	baz=179,SNR=130						
U44B	Burton Farm, H	36.82	344	P	P	14 22 60.0	-1.1
	baz=160,SNR=87						
S52A	Salyersville	36.83	353	P	P	14 23 00.9	-0.2
	baz=170,SNR=84						
T48A	Bowling Green	36.83	348	P	P	14 23 00.5	-0.6
	baz=165,SNR=392						
S51A	Beattyville	36.86	352	*e*P	P	14 23 01.2	-0.2
S51A				*e*PcP	PcP	14 25 21.2	+1.0
S51A	Beattyville	36.86	352	P	P	14 23 01.4	0.0
	baz=170,SNR=365						
T47A	Sharon Grove	36.87	347	P	P	14 23 00.5	-1.0
	baz=164,SNR=128						
V42A	Cord	36.94	341	P	P	14 23 00.7	-1.4
	baz=156,SNR=332						
CBN	Corbin Frederi	36.99	0	*e*P	P	14 23 03.5	+1.0
	comp=Z,2µm,1.2s						
CBN	Corbin Frederi	36.99	0	P	P	14 23 03.4	+1.0
	baz=180,SNR=26						
S50A	Richmond	37.02	351	P	P	14 23 02.5	-0.3
	baz=168,SNR=441						
U44A	Portageville	37.07	344	P	P	14 23 02.2	-1.0
	baz=159,SNR=74						
T46A	Princeton	37.10	346	P	P	14 23 02.2	-1.3
	baz=162,SNR=621						
R54A	Victor	37.11	355	P	P	14 23 04.1	+0.5
	baz=174,SNR=309						
R55A	Marlinton	37.15	357	P	P	14 23 04.9	+1.0
	baz=176,SNR=396						
U43A	Rector	37.15	343	P	P	14 23 02.7	-1.2
	baz=158,SNR=328						
V41A	Mountainview	37.17	340	P	P	14 23 02.8	-1.3
	baz=155,SNR=342						
ITAB	Concordia	37.20	141	*e*P	P	14 23 04.2	-0.2
W39A	Magazine	37.23	338	*e*P	P	14 23 04.7	+0.1
W39A	Magazine	37.23	338	P	P	14 23 04.3	-0.3
	baz=152,SNR=380						
H06E1	SOCORRO T-PHAS	37.25	300	P	P	14 23 06.5	+1.5
H06S1	SOCORRO T	37.26	300	P	P	14 23 06.4	+1.3
T45A	Paducah	37.27	345	P	P	14 23 03.6	-1.3
	baz=161,SNR=60						
S49A	Springfield	37.27	350	P	P	14 23 04.0	-0.9
	baz=167,SNR=351						
S48A	Wiedeman Farm,	37.30	349	P	P	14 23 03.9	-1.2
	baz=166,SNR=241						
H06N1	SOCORRO T-PHAS	37.34	300	P	P	14 23 07.7	+2.0
R53A	Hurricane	37.34	354	P	P	14 23 05.6	+0.1
	baz=172,SNR=173						
RCLB	Rio Claro- Sao	37.35	130	*e*P	P	14 23 05.8	-0.1
HPIG		37.37	316	*e*P	P	14 23 07.5	+1.3
U42A	Revenden	37.39	342	P	P	14 23 04.5	-1.4
	baz=157,SNR=306						
S47A	Hartford	37.40	348	P	P	14 23 05.0	-1.0
	baz=164,SNR=377						
R52A	Catlettsburg	37.43	353	P	P	14 23 06.0	-0.2
	baz=171,SNR=129						
MCI8	Montes Claros	37.47	119	*e*P	P	14 23 06.6	-0.3
MCI9	Montes Claros	37.51	120	*e*P	P	14 23 06.6	-0.6
R51A	Hillsboro	37.51	352	P	P	14 23 07.0	+0.1
	baz=170,SNR=408						
MCI6	Montes Claros	37.55	120	*e*P	P	14 23 06.9	-0.8
R50A	Paris	37.60	351	P	P	14 23 07.4	-0.2
	baz=169,SNR=362						
MCI7	Montes Claros	37.60	120	*e*P	P	14 23 07.5	-0.6
U41A	Viola	37.60	341	P	P	14 23 05.9	-1.8
	baz=156,SNR=299						
TX31	Lajitas Ar. Si	37.62	321	*e*P	P	14 23 08.9	+0.8
TX31				*e*PcP	PcP	14 25 24.3	+1.5
TXAR	Lajitas Array	37.62	321	P	P	14 23 09.1	+1.0
	comp=Z,59nm,0.6s,baz=141,slow=8.1,SNR=431						
TXAR				PcP	PcP	14 25 24.1	+1.3
	comp=Z,185nm,1.0s,baz=146,slow=4.3,SNR=6.9						
TXAR				S	S	14 28 55.1	+7.8
	comp=Z,14nm,0.9s,baz=116,slow=6.2,SNR=2.6						
TXAR				LR	LR	14 38 44.7	
	comp=Z,9µm,18.0s,baz=0.0,slow=36						
TXAR				P3KPbc		14 53 28.2	
	comp=Z,2.6nm,1.0s,baz=298,slow=2.2,SNR=9.9						
TXAR				P3KP		14 54 30.4	
	comp=Z,1.9nm,1.0s,baz=45,slow=2.9,SNR=5.3						
TXAR				PKPPKP	P'P'df	14 55 27.2	-26
	comp=Z,2.4nm,1.1s,baz=328,slow=4.7,SNR=4.0						
TXAR				PKP2ab		14 57 26.3	
	comp=Z,3.2nm,1.0s,baz=264,slow=3.6,SNR=4.5						
S46A	Don Dixon Farm	37.67	347	P	P	14 23 06.7	-1.5
	baz=163,SNR=197						
ABTX	Abilene, Hawle	37.73	329	*e*P	P	14 23 09.0	+0.1
ABTX				*e*PcP	PcP	14 25 24.2	+1.2
ABTX	Abilene, Hawle	37.73	329	P	P	14 23 09.0	+0.1
	baz=142,SNR=198						
R49A	Shelbyville	37.75	350	P	P	14 23 08.1	-0.8
	baz=167,SNR=231						
T43A	Greenville	37.78	343	P	P	14 23 07.6	-1.5
	baz=159,SNR=697						
Q55A	Buckhannon	37.86	357	P	P	14 23 11.1	+1.3
	baz=176,SNR=558						
S45A	Carrier Mills	37.88	346	P	P	14 23 08.6	-1.4
	baz=162,SNR=135						
Q54A	Coxs Mills	37.89	356	P	P	14 23 10.3	+0.2
	baz=174,SNR=222						
WCI	Wyandotte Cave	37.89	349	*e*P	P	14 23 08.8	-1.3
WCI	Wyandotte Cave	37.89	349	*e*P	P	14 23 08.8	-1.3
WCI	Wyandotte Cave	37.89	349	P	P	14 23 08.9	-1.3
	baz=165						
U40A	Yellville	37.93	340	P	P	14 23 09.5	-1.0
	baz=154,SNR=557						
T42A	Van Buren	37.97	342	*e*P	P	14 23 09.1	-1.6
T42A	Van Buren	37.97	342	P	P	14 23 09.2	-1.5
	baz=157,SNR=697						
R48A	Northridge Ran	37.98	349	P	P	14 23 10.2	-0.6
	baz=166,SNR=111						
Q52A	Bidwell	38.00	354	P	P	14 23 11.0	0.0
	baz=172,SNR=422						
R47A	Wooly Knot Far	38.01	348	P	P	14 23 09.6	-1.4
	baz=165,SNR=134						
S44A	Carbondale	38.06	345	P	P	14 23 10.1	-1.4
	baz=161,SNR=429						
SIUC	Southern Illin	38.07	345	*e*P	P	14 23 10.2	-1.4
Q50A	Georgetown	38.10	352	P	P	14 23 11.2	-0.6
	baz=169,SNR=242						
R46A	Gibon Southern	38.13	347	P	P	14 23 10.7	-1.4
	baz=164,SNR=170						
S43A	Fulton Ridge,	38.17	344	P	P	14 23 10.9	-1.5
	baz=159,SNR=294						
T41A	Mountain View	38.19	341	P	P	14 23 11.1	-1.5
	baz=156,SNR=655						
Q51A	Peebles	38.19	353	*e*P	P	14 23 12.9	+0.3
Q51A	Peebles	38.19	353	P	P	14 23 12.4	-0.2
	baz=170,SNR=174						
SDMD	Soldier's Deli	38.20	1	*e*P	P	14 23 13.4	+0.7
P55A	Reedsville	38.35	357	P	P	14 23 15.1	+1.1
	baz=176,SNR=166						
R45A	Skylar, Fairfi	38.39	346	P	P	14 23 12.9	-1.3
	baz=162,SNR=462						
Q49A	Aurora	38.40	351	P	P	14 23 13.5	-0.9
	baz=168,SNR=212						
P53A	Whipple	38.44	355	*e*P	P	14 23 14.8	+0.2
P53A	Whipple	38.44	355	P	P	14 23 15.2	+0.6
	baz=174,SNR=363						
Q48A	North Vernon	38.47	350	P	P	14 23 13.8	-1.1
	baz=167,SNR=159						
P54A	Burton	38.48	356	P	P	14 23 15.8	+0.7
	baz=175,SNR=333						
MCWV	Mont Chateau	38.50	357	P	P	14 23 15.9	+0.7
	baz=176,SNR=200						
R44A	Waltonville	38.54	345	P	P	14 23 14.1	-1.4
	baz=161,SNR=439						
S42A	Caledonia	38.56	343	P	P	14 23 13.8	-2.0
	baz=158,SNR=334						
Q47A	Bedord North L	38.60	349	P	P	14 23 14.9	-1.2
	baz=166,SNR=575						
P51A	Williamsport	38.61	353	*e*P	P	14 23 15.3	-0.7
P51A	Williamsport	38.61	353	P	P	14 23 15.6	-0.4
	baz=171,SNR=133						
TUL1	Leonard	38.65	336	*e*P	P	14 23 15.6	-0.9
TUL1	Leonard	38.65	336	P	P	14 23 15.5	-0.9
	baz=150,SNR=309						
P52A	Corning	38.65	354	P	P	14 23 16.1	-0.3
	baz=172,SNR=459						
FVM	French Village	38.66	344	*e*P	P	14 23 15.0	-1.5
FVM	French Village	38.66	344	*e*P	P	14 23 15.0	-1.5
S41A	Jillco Farms,	38.68	342	P	P	14 23 15.0	-1.8
	baz=157,SNR=358						
SLBS	Sierra La Lagu	38.71	308	*e*P	P	14 23 19.1	+1.8
CPSB	Cacapava Do Su	38.74	146	*e*P	P	14 23 16.5	-0.9
BSCB	Bom Sucesso	38.75	126	*e*P	P	14 23 16.9	-0.7
R43A	Red Bud	38.79	344	P	P	14 23 16.3	-1.3
	baz=160,SNR=431						
P50A	Jamestown	38.83	352	P	P	14 23 17.0	-0.9
	baz=170,SNR=302						
BLO	Bloomington	38.85	349	*e*P	P	14 23 16.8	-1.3
BLO	Bloomington	38.85	349	*e*P	P	14 23 16.8	-1.3
Q46A	CEJHS Indians,	38.88	348	P	P	14 23 17.1	-1.2
	baz=164,SNR=9.4						
P49A	Miami Univ. Ec	38.89	351	P	P	14 23 17.1	-1.3
	baz=168,SNR=235						
P48A	Milroy	38.93	350	P	P	14 23 17.1	-1.7
	baz=167,SNR=212						
Q45A	Warren Harvey,	38.93	347	P	P	14 23 17.4	-1.4
	baz=163,SNR=263						
CCM	Cathedral Cave	38.96	343	*e*P	P	14 23 17.2	-1.8
CCM	Cathedral Cave	38.96	343	*e*P	P	14 23 17.2	-1.8
CCM	Cathedral Cave	38.96	343	P	P	14 23 17.4	-1.6
	baz=158						
WMOK	Wichita Mounta	38.99	332	*e*P	P	14 23 18.8	-0.6
WMOK	Wichita Mounta	38.99	332	*e*P	P	14 23 18.8	-0.6
WMOK	Wichita Mounta	38.99	332	P	P	14 23 18.6	-0.8
	baz=145,SNR=283						
PAGS	Pennsylvania G	39.02	1	*e*P	P	14 23 20.3	+0.9
O55A	Ligonier	39.03	358	P	P	14 23 20.7	+1.1
	baz=177,SNR=301						
R42A	Luebbering	39.04	343	P	P	14 23 18.2	-1.5
	baz=158,SNR=532						
O56A	Blue Knob Stat	39.06	359	*e*P	P	14 23 20.9	+1.0
O56A	Blue Knob Stat	39.06	359	P	P	14 23 21.1	+1.2
	baz=178,SNR=318						
O52A	Adamsville	39.10	355	*e*P	P	14 23 19.9	-0.2
O52A	Adamsville	39.10	355	P	P	14 23 20.2	0.0
	baz=173,SNR=325						
P47A	Martinsville	39.11	349	P	P	14 23 19.2	-1.1
	baz=166,SNR=249						
Q44A	Meyer Farm, Va	39.15	346	*e*P	P	14 23 18.9	-1.7
Q44A	Meyer Farm, Va	39.15	346	P	P	14 23 18.7	-1.8
	baz=161,SNR=374						
O53A	New Philadelph	39.18	355	P	P	14 23 21.0	+0.1
	baz=174,SNR=372						
LPIG	La Paz	39.20	308	P	P	14 23 22.6	+1.4
	comp=Z,902nm,1.0s,baz=178,slow=1.0,SNR=32						
O51A	Pataskala	39.21	354	P	P	14 23 20.9	-0.2
	baz=172,SNR=262						
R41A	Rosebud	39.23	343	P	P	14 23 19.5	-1.7
	baz=158,SNR=452						
O50A	Cable	39.33	353	P	P	14 23 21.3	-0.8
	baz=170,SNR=376						
ACSO	Alum Creek Sta	39.34	353	*e*P	P	14 23 21.5	-0.6
ACSO	Alum Creek Sta	39.34	353	P	P	14 23 21.6	-0.6
	baz=171,SNR=223						
Q43A	New Douglas	39.35	345	P	P	14 23 20.8	-1.5
	baz=160,SNR=299						
P46A	Rosedale	39.42	348	P	P	14 23 21.2	-1.6
	baz=164,SNR=95						
SSPA	Standing Stone	39.42	359	*e*P	P	14 23 23.5	+0.7
SSPA	Standing Stone	39.42	359	P	P	14 23 23.5	+0.7
	baz=179						
P45A	Graceland, Par	39.45	347	P	P	14 23 20.9	-2.1
	baz=164,SNR=79						
CNLB	Canela	39.47	142	*e*P	P	14 23 22.1	-1.3
O49A	Covington	39.47	352	P	P	14 23 22.3	-1.0
	baz=169,SNR=234						
Q42A	Golden Eagle	39.55	344	P	P	14 23 22.4	-1.5
	baz=159,SNR=258						
P44A	Sand Creek, Wi	39.59	346	P	P	14 23 22.6	-1.6
	baz=162,SNR=321						
N55A	Marion Center	39.59	358	P	P	14 23 25.0	+0.7
	baz=178,SNR=601						
O48A	Farmland	39.66	351	P	P	14 23 23.5	-1.3
	baz=168,SNR=309						
PLTB	Pedras Altas	39.69	147	*e*P	P	14 23 24.8	-0.5
N53A	Lisbon	39.71	356	P	P	14 23 25.1	-0.1
	baz=175,SNR=316						
N59A	State Game Lan	39.73	2	*e*P	P	14 23 26.5	+1.1
N59A	State Game Lan	39.73	2	P	P	14 23 26.6	+1.1
	baz=182,SNR=152						
N52A	McGinn's Farm,	39.78	355	P	P	14 23 25.2	-0.5
	baz=173,SNR=179						
Q41A	Truxton	39.79	343	P	P	14 23 24.4	-1.5
	baz=158,SNR=536						
N54A	Moraine State	39.81	357	*e*P	P	14 23 26.6	+0.6
N54A	Moraine State	39.81	357	P	P	14 23 26.6	+0.6
	baz=176,SNR=567						
O47A	Sheridan	39.82	350	P	P	14 23 24.5	-1.6
	baz=166,SNR=292						
N50A	Nevada	39.89	353	P	P	14 23 26.1	-0.6
	baz=171,SNR=238						
PAL	Palisades	39.92	4	*e*P	P	14 23 27.3	+0.4
PAL	Palisades	39.92	4	*e*P	P	14 23 27.3	+0.4
PAL	Palisades	39.92	4	P	P	14 23 27.3	+0.4
	baz=185,SNR=102						
P43A	Skaggs, Pawnee	39.97	345	P	P	14 23 25.6	-1.7
	baz=161,SNR=370						
GDL2	Guadalupe Moun	40.05	323	*e*P	P	14 23 30.0	+1.6
ESAR	Angra dos Reis	40.06	129	*e*P	P	14 23 28.7	+0.3
SFIN	Lafayette	40.13	349	P	P	14 23 26.6	-2.1
	baz=165,SNR=52						
P42A	Winchester	40.13	344	*e*P	P	14 23 26.9	-1.8
P42A	Winchester	40.13	344	P	P	14 23 26.7	-1.9
	baz=160,SNR=440						
O45A	Potomac	40.13	348	P	P	14 23 26.4	-2.3
	baz=164,SNR=34						
N49A	Columbus Grove	40.17	352	P	P	14 23 28.0	-1.0
	baz=170,SNR=240						
O44A	Mansfield	40.20	347	P	P	14 23 27.2	-2.1
	baz=163,SNR=87						
N48A	Decatur	40.23	351	P	P	14 23 28.0	-1.5
	baz=168,SNR=115						
M55A	Ridgway	40.27	358	P	P	14 23 30.4	+0.5
	baz=178,SNR=180						
MNTX	Cornudas Mount	40.32	322	*e*P	P	14 23 30.8	+0.4
MNTX	Cornudas Mount	40.32	322	P	P	14 23 31.5	+1.0
	baz=134,SNR=559						
M53A	WI Miller and	40.33	356	P	P	14 23 30.4	+0.1
	baz=175,SNR=229						
M54A	Oil Creek Stat	40.34	357	*e*P	P	14 23 30.9	+0.5
M54A	Oil Creek Stat	40.34	357	P	P	14 23 30.7	+0.3
	baz=176,SNR=474						
M51A	Elyria	40.34	355	P	P	14 23 30.0	-0.4
	baz=173,SNR=87						
N47A	Urbana	40.36	350	P	P	14 23 28.9	-1.6
	baz=167,SNR=212						
P41A	Barry, Barry	40.41	344	P	P	14 23 29.2	-1.8
	baz=159,SNR=360						
MSTX	Muleshoe	40.44	327	*e*P	P	14 23 31.6	+0.1
MSTX	Muleshoe	40.44	327	P	P	14 23 32.0	+0.5
	baz=139,SNR=944						
U32A	Winter Ranch,	40.44	333	*e*P	P	14 23 31.3	0.0
VAS01	Vassouras-RJ	40.46	127	*e*P	P	14 23 31.5	-0.3
M52A	Chesterland	40.48	355	P	P	14 23 31.1	-0.4
	baz=174,SNR=148						
M50A	Fremont	40.50	354	P	P	14 23 31.1	-0.6
	baz=171,SNR=261						
O43A	Sugar Creek Fa	40.53	346	P	P	14 23 29.9	-2.1
	baz=162,SNR=96						
AMTX	Amarillo	40.55	329	*e*P	P	14 23 32.5	+0.1
AMTX	Amarillo	40.55	329	P	P	14 23 32.9	+0.6
	baz=141						
N46A	Monticello	40.56	349	P	P	14 23 30.2	-1.9
	baz=166,SNR=45						
O42A	Bath	40.63	345	P	P	14 23 30.9	-1.9
	baz=160,SNR=73						
N45A	Kentland	40.66	348	P	P	14 23 30.8	-2.3
	baz=164,SNR=56						
M49A	Liberty Center	40.68	352	P	P	14 23 32.3	-0.9
	baz=170,SNR=281						
SJMB	Sao Joao De Ma	40.69	121	*e*P	P	14 23 33.0	-0.6
N44A	Piper City	40.74	348	P	P	14 23 31.5	-2.2
	baz=163,SNR=266						
O41A	Passleys Farm,	40.77	344	P	P	14 23 31.8	-2.2
	baz=159,SNR=142						
HDIL	Hopedale	40.78	346	*e*P	P	14 23 31.9	-2.1
	comp=Z,1µm,0.6s						
HDIL	Hopedale	40.78	346	P	P	14 23 31.8	-2.1
	baz=162						
GO06	Curarrehue	40.79	173	*e*P	P	14 23 35.9	+1.6
M48A	Edgerton	40.80	352	P	P	14 23 33.1	-1.1
	baz=169,SNR=118						
M65A	Busby, Falmout	40.81	8	P	P	14 23 32.5	-1.7
	baz=190						
L53A	Girard	40.81	357	P	P	14 23 34.5	+0.2
	baz=176,SNR=352						
M47A	Cromwell	40.81	351	P	P	14 23 33.0	-1.3
	baz=167,SNR=80						
ERPA	Erie	40.96	357	*e*P	P	14 23 35.6	+0.1
ERPA	Erie	40.96	357	P	P	14 23 35.7	+0.3
	baz=176,SNR=228						
L55A	Hinsdale	40.97	359	P	P	14 23 36.3	+0.6
	baz=178,SNR=362						
M46A	Old House Fiel	40.98	350	P	P	14 23 34.1	-1.6
	baz=166,SNR=30						
BINY	Binghamton	41.00	2	*e*P	P	14 23 36.9	+1.0
BINY	Binghamton	41.00	2	P	P	14 23 36.9	+1.0
	baz=182,SNR=160						
BSFB	Barra de Sao F	41.03	121	*e*P	P	14 23 35.8	-0.6
L50A	Kingsville	41.11	354	P	P	14 23 35.7	-0.9
	baz=172,SNR=198						
N43A	Stutzman Famil	41.12	346	P	P	14 23 34.6	-2.2
	baz=162,SNR=356						
M45A	Boilermakers S	41.13	349	P	P	14 23 34.8	-2.1
	baz=165,SNR=8.9						
L48A	N Adams	41.21	352	P	P	14 23 36.2	-1.3
	baz=169,SNR=104						
N42A	Yates City	41.22	345	P	P	14 23 35.7	-1.9
	baz=161,SNR=493						
DUB01	Friburgo-RJ	41.22	126	*e*P	P	14 23 37.6	-0.4
NBLI	Livramento-PB	41.26	102	*e*P	P	14 23 38.9	+0.4
L49A	Milan	41.28	353	P	P	14 23 37.5	-0.6
	baz=170,SNR=202						
M44A	Midewin, Midew	41.29	348	P	P	14 23 35.8	-2.4
	baz=164,SNR=38						
N41A	Harden Midland	41.32	345	*e*P	P	14 23 36.3	-2.1
N41A	Harden Midland	41.32	345	P	P	14 23 36.2	-2.1
	baz=159,SNR=95						
L47A	Sherwood	41.35	351	P	P	14 23 37.2	-1.5
	baz=168,SNR=382						
TRQA	Tornquist	41.44	161	*e*P	P	14 23 41.5	+2.0
TRQA	Tornquist	41.44	161	*e*P	P	14 23 41.5	+2.0
AAM	Ann Arbor	41.46	353	*e*P	P	14 23 38.3	-1.2
	comp=Z,853nm,1.0s						
AAM	Ann Arbor	41.46	353	*e*P	P	14 23 38.3	-1.2
AAM				pmax	pmax		
	comp=Z,853nm,1.0s						
AAM	Ann Arbor	41.46	353	P	P	14 23 38.8	-0.7
	baz=170,SNR=38						
K55A	Perry	41.51	359	P	P	14 23 40.3	+0.3
	baz=179,SNR=168						
MMNY	Mt. Morris Dam	41.51	360	*e*P	P	14 23 40.4	+0.4
MMNY				*e*PcP	PcP	14 25 33.1	-1.7
RPN	Rapa Nui	41.53	225	*e*P	P	14 23 42.7	+2.4
RPN	Rapa Nui	41.53	225	*e*P	P	14 23 42.7	+2.4
RPN	Rapa Nui	41.53	225	P	P	14 23 42.5	+2.2
	comp=Z,353nm,0.9s,baz=347,slow=2.2,SNR=9.1						
M43A	Waltham Townsh	41.54	347	P	P	14 23 37.7	-2.5
	baz=162,SNR=129						
L46A	Eue Claire	41.56	350	P	P	14 23 38.3	-2.1
	baz=166,SNR=45						
RIB01	Linhares ES	41.62	121	*e*P	P	14 23 40.6	-0.6
HRV	Adam Dziewonsk	41.63	7	P	P	14 23 41.8	+0.9
	baz=189						
TRY	Troy	41.65	4	*e*P	P	14 23 42.3	+1.3
K51A	Iona Station	41.66	356	P	P	14 23 40.6	-0.6
	baz=174,SNR=47						
K52A	Tillsonburg	41.66	356	P	P	14 23 40.9	-0.3
	baz=175,SNR=30						
N40A	Mertquake, Sal	41.68	344	P	P	14 23 39.2	-2.2
	baz=158,SNR=160						
CAM01	Campos-RJ	41.68	125	*e*P	P	14 23 41.3	-0.4
KSU1	Kansas State U	41.74	337	*e*P	P	14 23 41.2	-0.6
KSU1	Kansas State U	41.74	337	P	P	14 23 40.4	-1.5
	baz=150,SNR=160						
M42A	Sheffield	41.74	346	P	P	14 23 39.6	-2.3
	baz=161,SNR=45						
M41A	Milan	41.86	345	P	P	14 23 40.3	-2.5
	baz=160,SNR=221						
K49A	Clarkson	41.91	353	P	P	14 23 42.3	-0.9
	baz=171,SNR=48						
TYNO	Tyneside	41.93	357	P	P	14 23 43.2	-0.2
	baz=176,SNR=176						
MEDO	Medina	41.95	359	P	P	14 23 43.9	+0.4
	baz=178,SNR=138						
K47A	Vermontville	42.00	352	P	P	14 23 42.4	-1.5
	baz=169,SNR=241						
K48A	Perry	42.01	353	P	P	14 23 43.0	-1.0
	baz=170,SNR=251						
STCO	Saint Catharin	42.02	358	P	P	14 23 44.2	+0.2
	baz=177,SNR=232						
L44A	Lake County Fo	42.02	348	P	P	14 23 41.6	-2.5
	baz=164,SNR=30						
PLCA	Paso Flores	42.05	172	*e*P	P	14 23 46.2	+1.8
PLCA	Paso Flores	42.05	172	*e*P	P	14 23 46.2	+1.8
PLCA	Paso Flores	42.05	172	*e*P	P	14 23 46.5	+2.0
J55A	Hilton	42.05	360	P	P	14 23 44.4	+0.2
	baz=179,SNR=122						
RCBR	Riachuelo	42.05	100	P	P	14 23 44.7	-0.2

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     comp=Z,1µm,1.1s,baz=266,slow=9.4,SNR=50
RCBR Riachuelo        42.05 100 eP    P      14 23 45.0 +0.1
J52A Paris            42.11 357  P    P      14 23 44.2 -0.6
     baz=175,SNR=215
K46A Dorr             42.13 351  P    P      14 23 43.1 -1.9
     baz=168,SNR=142
M40A Post Highland    42.15 344  P    P      14 23 42.9 -2.3
     baz=159,SNR=216
L43A Garden Prairie   42.20 348  P    P      14 23 43.3 -2.3
     baz=163,SNR=112
L42A Oliver, Polo     42.24 346  P    P      14 23 43.6 -2.3
     baz=162,SNR=139
HSIG                  42.35 314 eP    P      14 23 48.0 +1.0
SRIG Santa Rosalia    42.37 311 eP    P      14 23 49.0 +1.8
121A Cookes Peak, D   42.38 321  P    P      14 23 49.7 +2.2
     baz=132,SNR=493
M39A Webster          42.40 344  P    P      14 23 44.9 -2.3
     baz=158,SNR=278
TORO Toronto--Lesli   42.43 358  P    P      14 23 47.4 +0.1
     baz=177,SNR=24
J49A Marlette         42.45 354  P    P      14 23 46.0 -1.5
     baz=172,SNR=186
ACTO Acton            42.45 357  P    P      14 23 47.3 -0.3
     baz=176,SNR=201
J48A Bridge Port      42.46 353  P    P      14 23 46.5 -1.1
     baz=170,SNR=250
L41A Preston          42.51 346  P    P      14 23 45.7 -2.4
     baz=160,SNR=397
J47A Sunmer           42.53 352  P    P      14 23 47.0 -1.3
     baz=169,SNR=203
319A Douglas          42.61 318 eP    P      14 23 51.0 +1.7
K43A Burlington       42.62 348  P    P      14 23 46.7 -2.3
     baz=164,SNR=76
DRWO Darlington Wes   42.67 359  P    P      14 23 49.0 -0.3
     baz=178,SNR=154
DRCO St. Marys Ceme   42.67 359  P    P      14 23 49.2 -0.2
     baz=178,SNR=143
L40A Anamosa          42.68 345 eP    P      14 23 47.4 -2.1
L40A Anamosa          42.68 345  P    P      14 23 47.4 -2.1
     baz=159,SNR=270
I51A Listowel         42.70 356  P    P      14 23 48.9 -0.7
     baz=175,SNR=296
WLVO Wesleyville      42.71 359  P    P      14 23 49.6  0.0
     baz=178,SNR=266
J46A Howard City      42.76 351  P    P      14 23 48.5 -1.6
     baz=168,SNR=130
PKRO Pickering        42.77 358  P    P      14 23 49.8 -0.3
     baz=178,SNR=247
BNM  Barren Site      42.77 323 eP    P      14 23 51.9 +1.3
CBKS Cedar Bluff      42.78 334 eP    P      14 23 50.2 -0.2
CBKS Cedar Bluff      42.78 334 eP    P      14 23 50.2 -0.2
CBKS Cedar Bluff      42.78 334  P    P      14 23 50.0 -0.3
     baz=146,SNR=228
NCB  Newcomb          42.85   3 eP    P      14 23 51.5 +0.7
LPM  Los Pinos Moun   42.89 324 eP    P      14 23 52.9 +1.4
K42A Prairie Point,   42.91 347  P    P      14 23 49.3 -1.9
     baz=162,SNR=133
I52A Shelburne        42.92 357  P    P      14 23 50.7 -0.7
     baz=176,SNR=32
L39A Vinton           42.95 344  P    P      14 23 49.2 -2.4
     baz=158,SNR=98
BASO Ashfield         42.96 356  P    P      14 23 50.8 -0.8
     baz=174,SNR=98
J45A Montague         42.96 350  P    P      14 23 49.8 -1.9
     baz=167,SNR=55
K41A Shullsburg       42.96 346  P    P      14 23 49.5 -2.3
     baz=161,SNR=242
I49A Point Hope       42.99 354  P    P      14 23 50.6 -1.3
     baz=172,SNR=91
I55A Frankford        43.00 360  P    P      14 23 52.1 +0.2
     baz=180,SNR=83
BWLO Walkerton        43.02 356  P    P      14 23 51.6 -0.6
     baz=174,SNR=225
SCIA State Center     43.09 343 eP    P      14 23 51.0 -1.8
     comp=Z,2µm,1.1s
SCIA State Center     43.09 343  P    P      14 23 50.9 -1.9
     baz=156,SNR=145
BRCO Bruce Peninsul   43.17 356  P    P      14 23 52.7 -0.6
     baz=174,SNR=107
ANMO Albuquerque      43.23 324 eP    P      14 23 55.8 +1.6
ANMO Albuquerque      43.23 324ceP    P      14 23 55.3 +1.1
ANMO                           pmax   pmax
     comp=Z,824nm,1.0s
ANMO Albuquerque      43.23 324  P    P      14 23 55.3 +1.1
     baz=135
ANMO Albuquerque      43.23 324  P    P      14 23 55.4 +1.2
     comp=Z,531nm,0.8s,baz=130,slow=8.4,SNR=613
JFWS Jewell Farm      43.24 346 eP    P      14 23 52.1 -1.8
JFWS Jewell Farm      43.24 346 eP    P      14 23 52.1 -1.8
JFWS Jewell Farm      43.24 346  P    P      14 23 51.9 -2.0
     baz=161,SNR=410
LAZ  Ladron           43.25 323 eP    P      14 23 55.9 +1.5
I47A Gladwin          43.26 353  P    P      14 23 52.7 -1.4
     baz=170,SNR=264
K40A Colesburg        43.26 345  P    P      14 23 51.8 -2.3
     baz=160,SNR=435
J43A Natural Harves   43.28 348  P    P      14 23 52.4 -1.9
     baz=164,SNR=81
DELO Deloro Mine      43.30 360  P    P      14 23 54.2 -0.2
     baz=180
LBNH Lisbon           43.30   6  P    P      14 23 55.0 +0.6
     baz=188,SNR=108
I46A Reed City        43.31 352  P    P      14 23 52.5 -1.9
     baz=168,SNR=153
I48A Sherman Twp      43.32 353  P    P      14 23 53.7 -0.9
     baz=171,SNR=203
H55A Tweed            43.33   0  P    P      14 23 54.8 +0.2
     baz=180,SNR=300
J42A Columbus         43.37 348  P    P      14 23 53.0 -2.0
     baz=163,SNR=98
H56A Elgin            43.39   1  P    P      14 23 55.6 +0.5
     baz=182,SNR=357
K39A Oelwein          43.46 345  P    P      14 23 53.4 -2.3
     baz=159,SNR=259
LONY Lake Ozonia      43.48   3 eP    P      14 23 56.4 +0.5
LONY Lake Ozonia      43.48   3  P    P      14 23 56.4 +0.5
     baz=184,SNR=130
BMRO Meriville Lake   43.50 356  P    P      14 23 55.1 -0.9
     baz=174,SNR=114
I45A Fountain         43.52 351  P    P      14 23 54.5 -1.7
     baz=167,SNR=64
SADO Sadowa           43.58 358  P    P      14 23 56.0 -0.6
     comp=Z,2µm,1.1s,baz=198,slow=7.4,SNR=146
J41A Loganville       43.61 347  P    P      14 23 54.9 -2.0
     baz=162,SNR=280
T25A Trinidad         43.70 328 eP    P      14 23 59.3 +1.3
T25A Trinidad         43.70 328  P    P      14 23 59.8 +1.8
     baz=139,SNR=239
I43A Langenfeld Bro   43.71 349  P    P      14 23 56.0 -1.7
     baz=164,SNR=133
FRNY Flat Rock        43.75   4 eP    P      14 23 58.9 +0.9
H47A Mio              43.79 353  P    P      14 23 57.1 -1.3
     baz=170,SNR=278
H48A Harrisville      43.79 354  P    P      14 23 57.2 -1.1
     baz=171,SNR=52
BANO Bancroft         43.80 360  P    P      14 23 58.0 -0.4
     baz=179,SNR=99
J40A Soldiers Grove   43.81 346  P    P      14 23 56.6 -1.9
     baz=161,SNR=418
PLVO Plevna           43.82   0 eP    P      14 23 58.8 +0.3
PLVO Plevna           43.82   0  P    P      14 23 58.5 -0.1
     baz=180,SNR=436
H46A Fife Lake        43.86 352  P    P      14 23 57.1 -1.8
     baz=169,SNR=84
I42A Draeger Farm,    43.87 348  P    P      14 23 57.4 -1.6
     baz=163,SNR=259
G53A Haliburton       43.91 359  P    P      14 23 58.9 -0.4
     baz=178,SNR=336
J39A Decorah          44.00 345  P    P      14 23 57.6 -2.4
     baz=159,SNR=445
G55A Calabogie        44.04   1  P    P      14 24 00.3  0.0
     baz=181,SNR=278
GLMI Grayling         44.06 353 eP    P      14 23 59.3 -1.2
     comp=Z,2µm,1.3s
GLMI Grayling         44.06 353  P    P      14 23 59.1 -1.4
     baz=170,SNR=74
H45A Beulah           44.07 351  P    P      14 23 58.9 -1.6
     baz=168,SNR=65
TOBO Tobermory, Bru   44.15 356  P    P      14 23 59.8 -1.4
     baz=174,SNR=132
TUC  Tucson           44.19 318 eP    P      14 24 03.1 +1.2
TUC  Tucson           44.19 318 eP    P      14 24 03.1 +1.2
TUC  Tucson           44.19 318  P    P      14 24 03.2 +1.4
     baz=128
H43A Windswept, Lux   44.21 349 eP    P      14 24 00.1 -1.6
H43A Windswept, Lux   44.21 349  P    P      14 23 59.9 -1.8
     baz=165,SNR=142
I41A Arkdale          44.24 347  P    P      14 24 00.3 -1.6
     baz=162,SNR=146
I40A Norwalk          44.25 346  P    P      14 23 59.9 -2.2
     baz=161,SNR=211
KSCO Kaye Shedlock'   44.25 332 eP    P      14 24 02.9 +0.6
KSCO Kaye Shedlock'   44.25 332  P    P      14 24 02.9 +0.6
     baz=142,SNR=119
BUKO Buck Lake        44.26 358  P    P      14 24 01.5 -0.5
     baz=177,SNR=7.9
ORHO Orleans, Herit   44.27   2  P    P      14 24 02.0 -0.1
     baz=183
G47A Hillman          44.31 354  P    P      14 24 01.5 -1.0
     baz=171,SNR=139
BGNE Belgrade         44.32 338  P    P      14 24 01.5 -1.2
     baz=150,SNR=72
MOQ  Mont Orford      44.33   5 eP    P      14 24 03.4 +0.7
EMMW East Machias     44.38  10 eP    P      14 24 03.7 +0.7
H42A Shiocton         44.39 349  P    P      14 24 01.5 -1.6
     baz=164,SNR=215
G45A Suttons Bay      44.42 352  P    P      14 24 01.8 -1.5
     baz=168,SNR=383
I39A Houston          44.44 345 eP    P      14 24 01.4 -2.1
I39A Houston          44.44 345  P    P      14 24 01.4 -2.1
     baz=160,SNR=275
PEMO Pembroke         44.46   0  P    P      14 24 03.7 +0.1
     baz=180
ALFO Alfred           44.47   3  P    P      14 24 03.9 +0.3
     baz=184,SNR=201
G46A Petoskey         44.58 353  P    P      14 24 03.2 -1.3
     baz=169,SNR=40
F52A Sundridge        44.60 358  P    P      14 24 03.7 -1.1
     baz=177,SNR=203
F55A Otter Lake       44.62   1  P    P      14 24 05.0  0.0
     baz=182,SNR=238
PKME Peaks-Kenny Pk   44.63   8 eP    P      14 24 05.7 +0.8
     comp=Z,835nm,0.8s
PKME Peaks-Kenny Pk   44.63   8  P    P      14 24 05.6 +0.6
     baz=192,SNR=62
H41A Junction City    44.72 348 eP    P      14 24 03.9 -1.9
H41A Junction City    44.72 348  P    P      14 24 04.1 -1.7
     baz=162,SNR=192
F49A Sandfield        44.73 355  P    P      14 24 03.6 -2.2
     baz=173,SNR=100
SDCO Great Sand Dun   44.73 328 eP    P      14 24 07.7 +1.4
SDCO Great Sand Dun   44.73 328  P    P      14 24 07.5 +1.3
     baz=138,SNR=997
ALGO Algonquin Park   44.74 359  P    P      14 24 05.3 -0.5
     baz=179,SNR=446
F51A Arnstein         44.76 358  P    P      14 24 05.2 -0.8
     baz=176,SNR=178
F48A Evansville       44.84 355  P    P      14 24 05.0 -1.6
     baz=173,SNR=130
GGN  Saint George     44.89  11 eP    P      14 24 07.8 +0.7
H40A Chili            44.89 347  P    P      14 24 05.3 -1.8
     baz=161,SNR=237
G43A Wallace          44.95 350 eP    P      14 24 06.0 -1.5
G43A Wallace          44.95 350  P    P      14 24 06.2 -1.3
     baz=165,SNR=220
F46A Macinaw City C   45.02 353  P    P      14 24 06.8 -1.2
     baz=170,SNR=349
F45A CMU Biological   45.03 352  P    P      14 24 06.9 -1.2
     baz=168,SNR=276
X18A Snowflake        45.06 321 eP    P      14 24 10.2 +1.4
G42A Mountain         45.08 349 eP    P      14 24 07.2 -1.3
G42A Mountain         45.08 349  P    P      14 24 07.2 -1.3
     baz=164,SNR=574
TRQ  Mont Tremblant   45.08   3 eP    P      14 24 08.6  0.0
E52A Mattawa          45.08 359  P    P      14 24 07.8 -0.7
     baz=178,SNR=152
H39A Augusta          45.15 346  P    P      14 24 07.4 -1.8
     baz=160,SNR=153
E53A Dumoine, Ponti   45.16 360  P    P      14 24 08.8 -0.4
     baz=180,SNR=214
G41A Antigo           45.19 348  P    P      14 24 07.9 -1.6
     baz=163,SNR=140
E54A Lac Daplat, Po   45.22   0  P    P      14 24 09.4 -0.2
     baz=180,SNR=283
E50A Wahnapitae       45.30 357  P    P      14 24 09.0 -1.3
     baz=175,SNR=231
W18A Petrified Fore   45.31 322 eP    P      14 24 12.4 +1.6
W18A Petrified Fore   45.31 322  P    P      14 24 12.5 +1.8
     baz=131,SNR=757
E51A G1948 Merrick    45.35 358  P    P      14 24 10.3 -0.4
     baz=177,SNR=511
214A Organ Pipe Nat   45.36 316  P    P      14 24 12.6 +1.5
     baz=126,SNR=192
H38A Maiden Rock      45.40 345  P    P      14 24 09.0 -2.1
     baz=159,SNR=60
F43A Flat Rock, Esc   45.42 350  P    P      14 24 09.5 -1.8
     baz=166,SNR=331
S22A 4UR Ranch, Cre   45.44 327  P    P      14 24 13.5 +1.6
     baz=136,SNR=362
F44A Big Bay de Noc   45.44 351  P    P      14 24 09.9 -1.4
     baz=167,SNR=345
E48A Lockeyer         45.45 355  P    P      14 24 10.3 -1.1
     baz=173,SNR=327
Q24A Divide           45.46 329 eP    P      14 24 12.6 +0.6
Q24A Divide           45.46 329  P    P      14 24 12.6 +0.6
     baz=139,SNR=186
G40A Rib Lake         45.46 347  P    P      14 24 09.9 -1.7
     baz=162,SNR=199
F42A Maple Grove Fa   45.52 350  P    P      14 24 10.6 -1.4
     baz=165,SNR=234
E47A Iron Bridge      45.52 354  P    P      14 24 10.8 -1.2
     baz=172,SNR=177
OGNE Ogallala         45.53 334 eP    P      14 24 12.7 +0.3
OGNE Ogallala         45.53 334  P    P      14 24 12.4 +0.1
     baz=144,SNR=104
E46A Sault Ste Mari   45.54 353  P    P      14 24 10.7 -1.5
     baz=170,SNR=147
E45A Wooded Hills,    45.64 353  P    P      14 24 11.6 -1.3
     baz=169,SNR=86
F41A Three Lakes      45.68 349 eP    P      14 24 11.8 -1.6
F41A Three Lakes      45.68 349  P    P      14 24 12.0 -1.4
     baz=164,SNR=232
G39A Holcombe         45.70 346  P    P      14 24 11.8 -1.7
     baz=161,SNR=360
G38A Ridgeland        45.75 346  P    P      14 24 11.9 -2.0
     baz=160,SNR=252
D52A ZEK Kipawa Sen   45.76 359  P    P      14 24 13.8 -0.2
     baz=179,SNR=229
ECSD EROS Data Cent   45.81 341 eP    P      14 24 12.0 -2.4
     comp=Z,16µm,0.6s
ECSD EROS Data Cent   45.81 341  P    P      14 24 12.2 -2.2
     baz=153,SNR=229
D53A Lac Vacive, Po   45.86 360  P    P      14 24 14.5 -0.2
     baz=180,SNR=351
D51A Lot 18 Range I   45.90 358  P    P      14 24 14.0 -0.9
     baz=177,SNR=49
E43A Lone Tree Farm   45.92 351 eP    P      14 24 13.6 -1.5
E43A Lone Tree Farm   45.92 351  P    P      14 24 13.5 -1.7
     baz=167,SNR=299
X16A Lo Mia Camp, P   45.93 320 eP    P      14 24 17.2 +1.5
D54A Lac Fusel, La    45.94   1  P    P      14 24 14.9 -0.4
     baz=181,SNR=277
MVCO Mesa Verde       45.99 325 eP    P      14 24 16.5 +0.3
     comp=Z,471nm,0.9s
MVCO Mesa Verde       45.99 325  P    P      14 24 16.7 +0.5
     baz=134,SNR=126
D46A Sault St. Mari   46.03 354  P    P      14 24 14.2 -1.8
     baz=171,SNR=126
COWI Conover          46.04 349 eP    P      14 24 15.1 -1.0
SPMN Marine on St.    46.04 345  P    P      14 24 13.8 -2.3
     baz=158,SNR=164
F40A Park Falls       46.06 348  P    P      14 24 14.6 -1.7
     baz=162,SNR=199
D47A Chapleau         46.10 355  P    P      14 24 14.7 -1.8
     baz=172
D48A Paudash Townsh   46.11 356  P    P      14 24 15.1 -1.5
     baz=174,SNR=235
E42A Champion         46.13 350  P    P      14 24 15.3 -1.5
     baz=165,SNR=187
D49A Beulah Townshi   46.18 356  P    P      14 24 15.1 -2.1
     baz=174
PQI  Presque Isle     46.20   9 eP    P      14 24 18.4 +1.1
F39A Loretta          46.24 347  P    P      14 24 16.0 -1.7
     baz=161,SNR=84
ISCO Idaho Springs    46.32 330 eP    P      14 24 19.9 +1.1
ISCO Idaho Springs    46.32 330 eP    P      14 24 19.9 +1.1
ISCO Idaho Springs    46.32 330  P    P      14 24 20.2 +1.4
     baz=139,SNR=327
LATQ La Tuque         46.34   4  P    P      14 24 18.9 +0.5
     baz=186,SNR=390
E41A Kenton           46.35 349  P    P      14 24 17.0 -1.6
     baz=164,SNR=195
F37A Hinrichs Farm,   46.46 345  P    P      14 24 17.4 -2.0
     baz=159,SNR=75
113A Mohawk Valley,   46.49 317 eP    P      14 24 20.9 +1.1
F38A Pierce - Schro   46.50 346  P    P      14 24 17.8 -1.9
     baz=160,SNR=154
E40A Wakefield        46.52 348  P    P      14 24 18.5 -1.3
     baz=163,SNR=276
SMCO Snowmass         46.56 328 eP    P      14 24 21.6 +0.8
WUAZ Wupatki          46.59 321 eP    P      14 24 22.1 +1.4
WUAZ Wupatki          46.59 321  P    P      14 24 22.0 +1.2
     baz=130,SNR=432
E39A Mellen           46.59 348  P    P      14 24 19.1 -1.3
     baz=162,SNR=365
Y14A Wickenburg       46.66 318 eP    P      14 24 22.5 +1.3
PV01 Paradox Valley   46.68 326 eP    P      14 24 22.5 +1.0
PV15 Paradox Valley   46.77 326 eP    P      14 24 23.5 +1.2
PV02 Paradox Valley   46.82 326 eP    P      14 24 23.5 +0.9
PV13 Radium Mtn., P   46.84 326 eP    P      14 24 23.5 +0.7
D41A Chassel          46.85 350 eP    P      14 24 21.2 -1.2
D41A Chassel          46.85 350  P    P      14 24 20.7 -1.8
     baz=165,SNR=138
VLDQ Val d'Or         46.89   0 eP    P      14 24 22.5 -0.2
PV03 Paradox Valley   46.92 326 eP    P      14 24 23.8 +0.5
PV07 Paradox Valley   46.94 326 eP    P      14 24 24.4 +0.9
PV12 Saucer Basin,    46.94 326 eP    P      14 24 24.3 +0.8
PV11 David Mesa, Pa   46.96 326 eP    P      14 24 24.4 +0.7
PV16 Nyswonger Mesa   47.00 326 eP    P      14 24 24.6 +0.6
PV17 East Wray Mesa   47.00 326 eP    P      14 24 24.5 +0.5
E38A The Farm, Brul   47.03 347 eP    P      14 24 22.1 -1.8
E38A The Farm, Brul   47.03 347  P    P      14 24 22.1 -1.8
     baz=160,SNR=185
PV19 Morning Glory    47.03 326 eP    P      14 24 25.1 +0.9
PV20 West Nyswonger   47.05 326 eP    P      14 24 25.1 +0.8
PV04 Paradox Valley   47.05 326 eP    P      14 24 25.0 +0.6
PV14 Lion Creek, Pa   47.10 326 eP    P      14 24 25.2 +0.4
PV10 Paradox Valley   47.11 326 eP    P      14 24 25.3 +0.4
BATG Bathurst New B   47.12  11 eP    P      14 24 25.0 +0.6
PV23 Carpenter Ridg   47.15 326 eP    P      14 24 26.0 +0.8
PV21 Cone Mtn., Par   47.20 326 eP    P      14 24 26.4 +0.8
SUSD Miller           47.24 339  P    P      14 24 23.5 -2.0
     baz=150,SNR=91
PV09 Paradox Valley   47.25 326 eP    P      14 24 26.9 +0.8
N23A Red Feather La   47.32 331  P    P      14 24 27.4 +0.9
     baz=140,SNR=220
GLA  Glamis           47.38 316 eP    P      14 24 27.9 +1.1
GLA  Glamis           47.38 316 eP    P      14 24 27.9 +1.1
GLA  Glamis           47.38 316  P    P      14 24 28.3 +1.5
     baz=124,SNR=74
Y12C Blythe           47.57 317 eP    P      14 24 29.7 +1.6
Y12C Blythe           47.57 317  P    P      14 24 29.8 +1.6
     baz=125,SNR=145
PDMCI Parker Dam,Lak  47.63 318  P    P      14 24 30.3 +1.6
     baz=126,SNR=110
U15A North Rim        47.74 322 eP    P      14 24 31.4 +1.6
C40A Isle Royale Na   47.78 349 eP    P      14 24 29.2 -0.4
C40A Isle Royale Na   47.78 349  P    P      14 24 28.3 -1.3
     baz=164,SNR=96
LSQQ Lebel-sur-Quev   47.84   0  P    P      14 24 29.2 -0.8
     baz=181
O20A White River Ci   47.93 328 eP    P      14 24 32.0 +0.9
O20A White River Ci   47.93 328  P    P      14 24 32.2 +1.0
     baz=136,SNR=112
W13A Hualapai Mount   47.94 319 eP    P      14 24 32.9 +1.6
SWSC Sam W. Stewart   48.00 315  P    P      14 24 33.2 +1.7
     baz=123,SNR=41
IKP  In-Ko-Pah, Jac   48.06 315  P    P      14 24 34.0 +1.9
     baz=123,SNR=44
BC3  Big Chuckawall   48.15 316  P    P      14 24 34.5 +1.7
     baz=124,SNR=119
NEE2 Needles Airpor   48.23 318  P    P      14 24 35.1 +1.8
     baz=126,SNR=99
IRM  Iron Mountain    48.23 317  P    P      14 24 35.0 +1.7
     baz=125,SNR=336
EYMN Ely              48.29 347 eP    P      14 24 31.6 -1.9
EYMN Ely              48.29 347  P    P      14 24 31.7 -1.8
     baz=161,SNR=131
PKCU Pink Cliffs      48.40 323 eP    P      14 24 36.3 +1.3
MONP2 Monument Peak   48.41 315  P    P      14 24 36.5 +1.5
     baz=123,SNR=41
KNB  Kanab            48.44 322 eP    P      14 24 36.4 +1.3
KNB  Kanab            48.44 322 eP    P      14 24 36.4 +1.3
SRU  San Rafael Swe   48.46 325 eP    P      14 24 35.7 +0.5
SRU  San Rafael Swe   48.46 325 eP    P      14 24 35.7 +0.5
BAR  Barrett          48.47 315 eP    P      14 24 36.6 +1.4
MATQ Matagami         48.54 360  P    P      14 24 34.5 -0.9
     baz=180,SNR=264
RWWY Rawlins          48.54 330 eP    P      14 24 35.4 -0.4
LCMT Little Creek M   48.70 321 eP    P      14 24 38.2 +1.2
MTPU Mount Pierson    48.71 323 eP    P      14 24 38.2 +0.9
BELC Belle Mtn. Jos   48.72 316  P    P      14 24 39.1 +1.9
     baz=124,SNR=221
LDFC Landfair         48.73 318 eP    P      14 24 39.2 +2.0
CHGQ Chibougamau      48.77   3  P    P      14 24 37.0 -0.1
     baz=184,SNR=381
XPFO Pion Flat        48.82 316 eP    P      14 24 39.2 +1.2
PFO  Pinyon Flats O   48.83 316 eP    P      14 24 39.2 +1.2
PFO  Pinyon Flats O   48.83 316 eP    P      14 24 39.2 +1.2
PFO  Pinyon Flats O   48.83 316  P    P      14 24 39.8 +1.8
     baz=123,SNR=33
109C Camp Elliot, M   48.89 315  P    P      14 24 40.0 +1.7
     baz=122,SNR=33
CPE  Camp Elliot      48.89 315 eP    P      14 24 39.8 +1.4
GMRC Granite Mounta   48.93 318  P    P      14 24 40.5 +1.7
     baz=125,SNR=271
K22A Casper           48.94 332 eP    P      14 24 39.1 +0.3
K22A Casper           48.94 332  P    P      14 24 39.3 +0.6
     baz=140,SNR=210
RSSD Black Hills      48.97 335 eP    P      14 24 39.4 +0.4
RSSD Black Hills      48.97 335 eP    P      14 24 39.4 +0.4
RSSD Black Hills      48.97 335  P    P      14 24 39.3 +0.4
     baz=144
SZCU Shurtz Canyon    48.97 322 eP    P      14 24 40.1 +1.0
TMUT Trail Mountain   48.97 325 eP    P      14 24 39.8 +0.6
MSU  Marysvale        49.01 324 eP    P      14 24 40.4 +0.9
MSU  Marysvale        49.01 324 eP    P      14 24 40.4 +0.9
CCUT Cedar City       49.11 322 eP    P      14 24 41.6 +1.3
MURC Murrieta         49.34 315  P    P      14 24 43.6 +1.9
     baz=122,SNR=72
HEC  Hector,Ludlow    49.42 317  P    P      14 24 44.4 +1.9
     baz=124,SNR=208
TUQ  Turquoise Moun   49.48 318  P    P      14 24 44.4 +1.4
     baz=125,SNR=154
BBRC Big Bear Solar   49.50 316  P    P      14 24 45.4 +2.1
     baz=123,SNR=23
SHPR Sheep Range      49.61 320 eP    P      14 24 45.1 +1.1
MPU  Maple Canyon     49.70 326 eP    P      14 24 45.1 +0.5
RRX  Edison Barstow   49.89 317  P    P      14 24 48.0 +2.0
     baz=124,SNR=37
NLU  North Lily Min   49.91 325 eP    P      14 24 46.8 +0.6
SCI2 San Clemente I   49.97 314  P    P      14 24 48.1 +1.6
     baz=121,SNR=13
SHOC Shoshone, Teco   49.98 318  P    P      14 24 48.3 +1.7
     baz=125,SNR=192
JLU  Jordanelle       50.00 326 eP    P      14 24 47.3 +0.4
GSC  Goldstone, Bar   50.00 317 eP    P      14 24 48.4 +1.5
GSC  Goldstone, Bar   50.00 317 eP    P      14 24 48.4 +1.5
GSC  Goldstone, Bar   50.00 317  P    P      14 24 48.7 +1.8
     baz=124,SNR=261
BFSC Mount Baldy Ra   50.00 316  P    P      14 24 48.4 +1.4
     baz=123,SNR=58
PSUT Pine Spring      50.03 323 eP    P      14 24 48.3 +1.1
CIS  Catalina Islan   50.10 314  P    P      14 24 49.2 +1.6
     baz=121,SNR=18
FMP  Fort Macarthur   50.17 315  P    P      14 24 49.8 +1.8
     baz=122,SNR=11
CTU  Camp Tracy       50.22 326 eP    P      14 24 49.4 +0.8
MWC  Mount Wilson     50.27 315 eP    P      14 24 50.6 +1.5
MWC  Mount Wilson     50.27 315 eP    P      14 24 50.6 +1.5
TCUT Toone Canyon     50.33 327 eP    P      14 24 49.9 +0.5
PASC Pasadena Art C   50.34 315 eP    P      14 24 50.6 +1.3
MDND Maddock          50.43 341 eP    P      14 24 49.3 -0.4
MDND Maddock          50.43 341  P    P      14 24 48.6 -1.1
     baz=151,SNR=33
DECC Green Verdugo    50.48 315  P    P      14 24 52.3 +1.9
     baz=122,SNR=78
DUG  Dugway, Tooele   50.49 325 eP    P      14 24 51.6 +1.1
DUG  Dugway, Tooele   50.49 325 eP    P      14 24 51.6 +1.1
DUG  Dugway, Tooele   50.49 325  P    P      14 24 51.8 +1.3
     baz=131,SNR=387
BW06 Boulder Array    50.52 330 eP    P      14 24 51.0 +0.2
BW06 Boulder Array    50.52 330  P    P      14 24 50.9 +0.1
     baz=136,SNR=146
PD31 Pinedale Array   50.52 330 eP    P      14 24 51.2 +0.4
PDAR Pinedale Array   50.52 330 eP    P      14 24 51.2 +0.4
PDAR                            PcP   PcP    14 26 08.1 +1.3
PDAR                            PP    PP     14 26 49.0 +1.0
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PDAR				P'P'		14 55 38.1	
PDAR	**Pinedale Array**	**50.52**	**330**	P	**P**	**14 24 50.8**	**0.0**
	comp=Z,48nm,0.8s,baz=131,slow=8.1,SNR=176						
PDAR				PcP	**PcP**	**14 26 08.1**	**+1.3**
	comp=Z,167nm,1.0s,baz=142,slow=4.6,SNR=4.7						
PDAR				PP	**PP**	**14 26 49.0**	**+1.0**
	comp=Z,81nm,1.0s,baz=139,slow=7.2,SNR=2.1						
PDAR				LR	LR	14 50 41.3	
	comp=Z,13µm,18.6s,baz=146,slow=41						
PDAR				PKPPKP	**P'P'df**	**14 55 38.1**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=108,slow=1.4,SNR=4.8						
PDAR				PKP2bc		14 55 51.9	
	comp=Z,1.5nm,0.8s,baz=107,slow=0.9,SNR=3.9						
PDAR				P4KPbc		15 02 19.9	
	comp=Z,4.5nm,1.1s,baz=128,slow=5.8,SNR=10						
TPNV	**Topopah Spring**	**50.57**	**319**	*e*P	**P**	**14 24 52.9**	**+1.7**
TPNV	**Topopah Spring**	**50.57**	**319**	*e*P	**P**	**14 24 52.9**	**+1.7**
TPNV	**Topopah Spring**	**50.57**	**319**	P	**P**	**14 24 53.2**	**+2.0**
	baz=126,SNR=91						
EDW2	**Edwards Air Fo**	**50.58**	**316**	P	**P**	**14 24 52.6**	**+1.4**
	baz=123,SNR=162						
LRMC	**Laurel Mtn Rad**	**50.69**	**317**	P	**P**	**14 24 54.0**	**+1.9**
	baz=123,SNR=242						
FURC	**Furnace Creek,**	**50.70**	**319**	P	**P**	**14 24 54.0**	**+2.1**
	baz=125,SNR=259						
SNCC	**San Nicolas Is**	**50.81**	**314**	*e*P	**P**	**14 24 55.2**	**+2.3**
SNCC	**San Nicolas Is**	**50.81**	**314**	P	**P**	**14 24 54.7**	**+1.8**
	baz=120,SNR=7.7						
MPMC	**Manual Prospec**	**50.88**	**318**	P	**P**	**14 24 55.1**	**+1.5**
	baz=124,SNR=219						
BLG	**Laguna Peak, P**	**50.92**	**315**	P	**P**	**14 24 55.6**	**+1.9**
	baz=121,SNR=30						
OSI	**Osito Audit: C**	**50.95**	**316**	*e*P	**P**	**14 24 55.4**	**+1.4**
OSI	**Osito Audit: C**	**50.95**	**316**	P	**P**	**14 24 55.6**	**+1.6**
	baz=122,SNR=11						
R11A	**Troy Canyon, C**	**50.98**	**321**	*e*P	**P**	**14 24 55.4**	**+1.0**
R11A	**Troy Canyon, C**	**50.98**	**321**	P	**P**	**14 24 55.7**	**+1.4**
	baz=127,SNR=487						
DRLN	**Deer Lake**	**51.00**	**17**	*e*P	**P**	**14 24 53.9**	**-0.1**
DAC	**Darwin (Calif)**	**51.08**	**318**	*e*P	**P**	**14 24 56.7**	**+1.7**
DAC	**Darwin (Calif)**	**51.08**	**318**	*e*P	**P**	**14 24 56.7**	**+1.7**
BGU	**Big Grassy Mou**	**51.10**	**326**	*e*P	**P**	**14 24 55.3**	**+0.2**
SCZ2	**Santa Cruz Isl**	**51.27**	**314**	P	**P**	**14 24 58.1**	**+1.8**
	baz=121,SNR=24						
ARVC	**Arvin**	**51.29**	**316**	P	**P**	**14 24 58.0**	**+1.6**
	baz=122,SNR=99						
AHID	**Auburn Hatcher**	**51.31**	**328**	*e*P	**P**	**14 24 56.6**	**0.0**
GRAC	**Grapevine Rang**	**51.33**	**319**	P	**P**	**14 24 58.2**	**+1.4**
	baz=125,SNR=230						
ISA	**Isabella, Lake**	**51.34**	**317**	*e*P	**P**	**14 24 58.2**	**+1.3**
ISA	**Isabella, Lake**	**51.34**	**317**	*e*P	**P**	**14 24 58.2**	**+1.3**
ISA	**Isabella, Lake**	**51.34**	**317**	P	**P**	**14 24 58.1**	**+1.3**
	baz=123,SNR=190						
ULM	**Lac du Bonnet**	**51.48**	**345**	P	**P**	**14 24 55.5**	**-2.1**
	comp=Z,520nm,1.0s,baz=155,slow=8.0,SNR=178						
ULM				LR	LR	14 46 57.2	
	comp=Z,30µm,21.7s,baz=154,slow=36						
ULM				P4KPbc		15 02 24.2	
	comp=Z,7.1nm,1.0s,baz=194,slow=4.4,SNR=6.5						
CWC	**Cottonwood Cre**	**51.49**	**318**	P	**P**	**14 24 59.7**	**+1.6**
	baz=124						
HVU	**Hansel Valley**	**51.53**	**326**	*e*P	**P**	**14 24 58.6**	**+0.3**
HVU	**Hansel Valley**	**51.53**	**326**	*e*P	**P**	**14 24 58.6**	**+0.3**
SBC	**Santa Barbara**	**51.56**	**315**	P	**P**	**14 24 59.9**	**+1.5**
	baz=121,SNR=11						
REDW	**Red Top Meadow**	**51.60**	**329**	*e*P	**P**	**14 24 58.7**	**-0.2**
SNOW	**Snow King Moun**	**51.62**	**329**	*e*P	**P**	**14 24 59.2**	**+0.2**
LOHW	**Long Hollow**	**51.66**	**330**	*e*P	**P**	**14 24 59.2**	**-0.1**
TPAW	**Teton Pass**	**51.74**	**329**	*e*P	**P**	**14 24 59.0**	**-1.0**
MOOW	**Moose Ponds**	**51.82**	**330**	*e*P	**P**	**14 25 00.3**	**-0.2**
VES	**Vestal, Richgr**	**51.85**	**317**	P	**P**	**14 25 02.4**	**+1.8**
	baz=122,SNR=211						
PKM	**Mcpherson Peak**	**51.86**	**315**	P	**P**	**14 25 02.2**	**+1.3**
	baz=121,SNR=60						
FXWY	**Fox Creek**	**51.89**	**329**	*e*P	**P**	**14 25 00.9**	**-0.1**
TIN	**Tinemaha, Big**	**51.94**	**318**	P	**P**	**14 25 03.1**	**+1.8**
	baz=124,SNR=42						
LAO	**LASA Array**	**51.95**	**335**	*e*P	**P**	**14 25 00.8**	**-0.4**
LAO	**LASA Array**	**51.95**	**335**	P	**P**	**14 25 00.9**	**-0.3**
	baz=142,SNR=209						
IMW	**Indian Meadow**	**52.03**	**330**	*e*P	**P**	**14 25 02.1**	**0.0**
FLWY	**Flagg Ranch**	**52.04**	**330**	*e*P	**P**	**14 25 02.3**	**+0.2**
RLMT	**Red Lodge**	**52.10**	**332**	*e*P	**P**	**14 25 02.2**	**-0.3**
RLMT	**Red Lodge**	**52.10**	**332**	P	**P**	**14 25 02.5**	**-0.1**
	baz=138,SNR=208						
H17A	**Grant Village**	**52.20**	**330**	P	**P**	**14 25 04.8**	**+1.5**
	baz=136,SNR=71						
SMMC	**Simmler**	**52.20**	**316**	P	**P**	**14 25 04.7**	**+1.4**
	baz=121,SNR=68						
YPP	**Pitchstone Pla**	**52.23**	**330**	*e*P	**P**	**14 25 04.1**	**+0.6**
LKWY	**Lake**	**52.24**	**331**	*e*P	**P**	**14 25 04.4**	**+0.8**
	comp=Z,1µm,0.8s						
ELK	**Elko**	**52.26**	**324**	*e*P	**P**	**14 25 04.1**	**+0.3**
ELK	**Elko**	**52.26**	**324**	*e*P	**P**	**14 25 04.1**	**+0.3**
VOG	**Valley Oaks Go**	**52.31**	**317**	P	**P**	**14 25 04.4**	**+0.5**
	baz=122,SNR=6.6						
YFT	**Old Faithful**	**52.37**	**330**	*e*P	**P**	**14 25 06.2**	**+1.6**
YNR	**Norris Junctio**	**52.49**	**331**	*e*P	**P**	**14 25 06.4**	**+1.0**
DGMT	**Dagmar**	**52.58**	**338**	*e*P	**P**	**14 25 05.6**	**-0.2**
	comp=Z,962nm,1.1s						
DGMT	**Dagmar**	**52.58**	**338**	P	**P**	**14 25 05.9**	**+0.1**
	baz=146,SNR=90						
YMR	**Madison River**	**52.59**	**330**	*e*P	**P**	**14 25 07.2**	**+1.0**
PAGB	**Antelope Grade**	**52.60**	**316**	*e*P	**P**	**14 25 07.5**	**+1.4**
MLAC	**Mammoth, Mammo**	**52.66**	**319**	P	**P**	**14 25 08.0**	**+1.2**
	baz=124						
NV11	**Mina Array Sit**	**52.66**	**320**	*e*P	**P**	**14 25 07.9**	**+1.2**
NV01	**Mina Array Sit**	**52.76**	**320**	*e*P	**P**	**14 25 08.3**	**+0.8**
NVAR	**Mina Array Bea**	**52.76**	**320**	P	**P**	**14 25 08.7**	**+1.1**
	comp=Z,744nm,1.0s,baz=130,slow=6.2,SNR=506						
NVAR				PKKP	**PKKPdf**	**14 47 10.1**	**-3.6**
	comp=Z,0.8nm,0.7s,baz=219,slow=4.2,SNR=3.7						
NVAR				LR	LR	14 49 08.8	
	comp=Z,21µm,20.4s,baz=116,slow=38						
NVAR				PKPPKP	**P'P'df**	**14 55 30.3**	**-3.8**
	comp=Z,4.2nm,1.1s,baz=314,slow=2.7,SNR=4.9						
NVAR				PKP2ab		14 56 15.5	
	comp=Z,7.1nm,1.0s,baz=266,slow=3.6,SNR=5.7						
NVAR				P4KPbc		15 02 30.6	
	comp=Z,0.6nm,0.6s,baz=109,slow=4.9,SNR=3.9						
YHB	**Horse Butte**	**52.77**	**330**	*e*P	**P**	**14 25 08.4**	**+0.9**
GCMT	**Greycliff**	**52.79**	**332**	*e*P	**P**	**14 25 07.5**	**0.0**
MDPB	**Devils Postpil**	**52.82**	**319**	*e*P	**P**	**14 25 09.2**	**+1.2**
QLMT	**Earthquake Lak**	**52.94**	**330**	*e*P	**P**	**14 25 09.9**	**+1.2**
KVN	**Kaiserville**	**52.98**	**321**	*e*P	**P**	**14 25 09.9**	**+0.8**
KVN	**Kaiserville**	**52.98**	**321**	*e*P	**P**	**14 25 09.9**	**+0.8**
RYN	**Ryan**	**53.01**	**320**	*e*P	**P**	**14 25 10.4**	**+1.1**
WAKR	**Walker**	**53.54**	**319**	*e*P	**P**	**14 25 14.6**	**+1.4**
BOZ	**Bozeman (W)**	**53.59**	**331**	*e*P	**P**	**14 25 13.6**	**+0.2**
BOZ	**Bozeman (W)**	**53.59**	**331**	*e*P	**P**	**14 25 13.6**	**+0.2**
BOZ	**Bozeman (W)**	**53.59**	**331**	P	**P**	**14 25 13.9**	**+0.5**
	baz=136,SNR=1000						
HLID	**Hailey**	**53.62**	**327**	*e*P	**P**	**14 25 13.9**	**+0.2**
HLID	**Hailey**	**53.62**	**327**	P	**P**	**14 25 14.2**	**+0.5**
	baz=132,SNR=512						
MCMT	**McKenzie Canyo**	**53.66**	**329**	*e*P	**P**	**14 25 14.7**	**+0.8**
YERR	**Yerington**	**53.68**	**320**	*e*P	**P**	**14 25 15.3**	**+1.1**
DLMT	**Dillon**	**53.90**	**330**	*e*P	**P**	**14 25 16.0**	**+0.4**
CMB	**Columbia Colle**	**53.91**	**318**	*e*P	**P**	**14 25 16.2**	**+0.5**
CMB	**Columbia Colle**	**53.91**	**318**	*e*P	**P**	**14 25 16.2**	**+0.5**
SAO	**San Andreas Ge**	**53.96**	**316**	*e*P	**P**	**14 25 17.1**	**+1.2**
SAO	**San Andreas Ge**	**53.96**	**316**	*e*P	**P**	**14 25 17.2**	**+1.2**
PNTR	**Pine Nut**	**53.97**	**320**	*e*P	**P**	**14 25 17.6**	**+1.3**
VCNR	**Virginia City**	**54.12**	**320**	*e*P	**P**	**14 25 18.5**	**+1.2**
PAHR	**Pah Rah Range**	**54.18**	**321**	*e*P	**P**	**14 25 18.7**	**+0.9**
GO10	**Punta Arenas**	**54.26**	**175**	*e*P	**P**	**14 25 21.3**	**+3.3**
RUBR	**Rubicon Trail**	**54.31**	**319**	*e*P	**P**	**14 25 21.0**	**+2.2**
SCHQ	**Schefferville**	**54.33**	**8**	P	**P**	**14 25 18.1**	**-0.3**
	comp=Z,1µm,1.0s,baz=203,slow=5.4,SNR=150						
SCHQ				P4KPbc		15 02 37.0	
	comp=Z,9.7nm,0.8s,baz=124,slow=3.1,SNR=7.8						
EGMT	**Eagleton**	**54.50**	**334**	*e*P	**P**	**14 25 19.8**	**0.0**
EGMT	**Eagleton**	**54.50**	**334**	P	**P**	**14 25 19.9**	**0.0**
	baz=139,SNR=367						
AFDM	**Forest Hills D**	**54.78**	**319**	*e*P	**P**	**14 25 22.6**	**+0.7**
BEKR	**Beckworth**	**54.89**	**320**	*e*P	**P**	**14 25 24.2**	**+1.3**
SACV	**Santiago Islan**	**54.93**	**72**	*e*P	**P**	**14 25 24.0**	**+0.6**
EFI	**East Falkland**	**55.03**	**165**	*e*P	**P**	**14 25 25.1**	**+1.8**
EFI	**East Falkland**	**55.03**	**165**	*c i*P	**P**	**14 25 24.7**	**+1.3**
EFI				pmax	pmax		
	comp=Z,612nm,1.0s						
WVOR	**Wild Horse Val**	**55.31**	**324**	*e*P	**P**	**14 25 26.4**	**+0.6**
WVOR	**Wild Horse Val**	**55.31**	**324**	*e*P	**P**	**14 25 26.4**	**+0.6**
ORV	**Oroville**	**55.45**	**319**	*e*P	**P**	**14 25 28.6**	**+1.9**
ORV	**Oroville**	**55.45**	**319**	*e*P	**P**	**14 25 28.7**	**+1.9**
MSO	**Missoula**	**55.59**	**330**	*e*P	**P**	**14 25 27.7**	**0.0**
MSO	**Missoula**	**55.59**	**330**	P	**P**	**14 25 28.0**	**+0.3**
	baz=134,SNR=351						
MCCM	**Marconi Confer**	**55.64**	**317**	*e*P	**P**	**14 25 29.6**	**+1.6**
J08A	**Circle Bar Ran**	**55.77**	**325**	*e*P	**P**	**14 25 29.5**	**+0.5**
GDXM	**Geysers**	**55.92**	**318**	*e*P	**P**	**14 25 32.2**	**+2.0**
MOD	**Modoc Plateau**	**56.00**	**322**	*e*P	**P**	**14 25 30.9**	**+0.1**
BMO	**Blue Mountains**	**56.04**	**327**	*e*P	**P**	**14 25 30.9**	**-0.1**
BMO	**Blue Mountains**	**56.04**	**327**	*e*P	**P**	**14 25 30.9**	**-0.1**
O03E	**Paynes Creek**	**56.05**	**320**	P	**P**	**14 25 30.9**	**-0.2**
	baz=123,SNR=217						
USHA	**Ushuaia**	**56.17**	**174**	PKP2bc	**P'P'bc**	**14 55 42.8**	**+2.6**
	comp=Z,14nm,1.0s,baz=351,slow=16,SNR=3.5						
HOPS	**Hopland Field**	**56.20**	**318**	*e*P	**P**	**14 25 33.8**	**+1.7**
O02D	**Mt. Diablo Mer**	**56.62**	**319**	P	**P**	**14 25 34.8**	**-0.4**
	baz=122,SNR=107						
WDC	**Whiskeytown Da**	**56.68**	**320**	*e*P	**P**	**14 25 34.6**	**-0.8**
WDC	**Whiskeytown Da**	**56.68**	**320**	*e*P	**P**	**14 25 34.6**	**-0.8**
F10A	**Beach Ranch, E**	**56.71**	**328**	*e*P	**P**	**14 25 35.8**	**+0.1**
I07A	**Izee**	**56.80**	**325**	*e*P	**P**	**14 25 36.9**	**+0.6**
H07S1	**FLORES T-PHASE**	**56.83**	**42**	*e*P	**P**	**14 25 40.3**	**+3.8**
H07S1				*e*S	**S**	**14 33 23.5**	**+4.7**
H07S1				*e*LQ	LQ	14 41 15.3	
H07S1				*e*LR	LR	14 44 40.7	
H07S1	**FLORES T-PHASE**	**56.83**	**42**	P	**P**	**14 25 37.4**	**+0.8**
M04C	**Macdoel**	**56.88**	**321**	P	**P**	**14 25 37.5**	**+0.5**
	baz=123,SNR=284						
KCPM	**Cahto Peak**	**56.89**	**318**	*e*P	**P**	**14 25 39.3**	**+2.2**
N02D	**Trinity Center**	**56.99**	**320**	P	**P**	**14 25 36.9**	**-0.8**
	baz=122,SNR=131						
H07N1	**FLORES T-PHASE**	**57.04**	**42**	*e*P	**P**	**14 25 40.1**	**+2.0**
H07N1	**FLORES T-PHASE**	**57.04**	**42**	P	**P**	**14 25 38.5**	**+0.4**
FFC	**Flin Flon**	**57.16**	**343**	*e*P	**P**	**14 25 37.6**	**-0.9**
FFC	**Flin Flon**	**57.16**	**343**	*e*P	**P**	**14 25 37.6**	**-0.9**
G08A	**Pilot Rock**	**57.23**	**326**	*e*P	**P**	**14 25 40.0**	**+0.7**
KMRM	**Mail Ridge**	**57.25**	**319**	*e*P	**P**	**14 25 41.0**	**+1.4**
K04D	**Chiloquin, OR**	**57.29**	**322**	P	**P**	**14 25 40.4**	**+0.5**
	baz=124,SNR=103						
M02C	**Callahan**	**57.31**	**320**	P	**P**	**14 25 39.7**	**-0.3**
	baz=122,SNR=131						
J05D	**Fort Rock, OR**	**57.35**	**323**	P	**P**	**14 25 41.3**	**+0.9**
	baz=125,SNR=535						
YBH	**Yreka Blue Hor**	**57.40**	**321**	*e*P	**P**	**14 25 39.9**	**-0.7**
YBH	**Yreka Blue Hor**	**57.40**	**321**	*e*P	**P**	**14 25 39.9**	**-0.7**
L04D	**Klamath Falls**	**57.41**	**322**	P	**P**	**14 25 40.9**	**+0.1**
	baz=123,SNR=274						
PINE	**Pine Mountain**	**57.47**	**324**	*e*P	**P**	**14 25 42.2**	**+1.0**
E09A	**Wood Farm, Sta**	**57.55**	**328**	*e*P	**P**	**14 25 41.5**	**+0.1**
KHMM	**Horse Mountain**	**57.60**	**320**	*e*P	**P**	**14 25 42.8**	**+0.7**
JCC	**Jacoby Creek,**	**57.77**	**319**	*e*P	**P**	**14 25 44.8**	**+1.8**
J04D	**Umpqua Nationa**	**57.85**	**323**	P	**P**	**14 25 44.5**	**+0.6**
	baz=124,SNR=340						
I05D	**Terrebonne, OR**	**58.02**	**324**	P	**P**	**14 25 45.8**	**+1.0**
	baz=125,SNR=372						
E08A	**Dider Farm, El**	**58.02**	**327**	*e*P	**P**	**14 25 44.5**	**-0.2**
HUMO	**Hull Mountain**	**58.03**	**322**	*e*P	**P**	**14 25 44.3**	**-0.6**
F07A	**Phinny Hill Vi**	**58.13**	**326**	*e*P	**P**	**14 25 46.3**	**+0.8**
CALA	**Caldeira**	**58.15**	**44**	*e*P	P	14 25 51.4	+5.5
NEW	**Newport**	**58.15**	**330**	*e*P	**P**	**14 25 46.0**	**+0.3**
NEW	**Newport**	**58.15**	**330**	*e*P	**P**	**14 25 46.0**	**+0.3**
NEW	**Newport**	**58.15**	**330**	P	**P**	**14 25 45.6**	**-0.1**
	baz=131,SNR=237						
NEW	**Newport**	**58.15**	**330**	P	**P**	**14 25 45.5**	**-0.2**
	comp=Z,356nm,1.1s,baz=133,slow=6.8,SNR=132						
PCED	**Cedros**	**58.17**	**44**	*e*P	**P**	**14 25 45.9**	**0.0**
	comp=Z,5µm,1.5s						
HOR	**Horta**	**58.17**	**44**	*e*P	**P**	**14 25 48.9**	**+3.0**
	comp=Z,2µm,1.0s						
L02E	**Cave Junction**	**58.19**	**321**	P	**P**	**14 25 46.3**	**+0.3**
	baz=122,SNR=92						
HAWA	**Hanford**	**58.22**	**327**	*e*P	**P**	**14 25 46.0**	**-0.1**
PCAN	**Candelaria**	**58.24**	**44**	*e*P	**P**	**14 25 47.5**	**+1.0**
	comp=Z,4µm,1.1s						
PICO	**Pico**	**58.30**	**44**	*e*P	**P**	**14 25 47.6**	**+0.7**
	comp=Z,6µm,0.9s						
D08A	**Wollman Farm,**	**58.30**	**328**	*e*P	**P**	**14 25 47.0**	**+0.3**
I04A	**Tendick Farm,**	**58.35**	**323**	P	**P**	**14 25 47.0**	**-0.1**
	baz=124,SNR=150						
C09A	**Chrisman Ranch**	**58.44**	**329**	*e*P	**P**	**14 25 47.9**	**+0.3**
K02D	**Willamette Mer**	**58.52**	**321**	P	**P**	**14 25 48.9**	**+0.5**
	baz=122,SNR=167						
G05D	**Wamic, OR**	**58.53**	**325**	P	**P**	**14 25 49.9**	**+1.6**
	baz=126,SNR=161						
ROSA	**Rosais**	**58.53**	**44**	*e*P	**P**	**14 25 49.3**	**+0.9**
	comp=Z,7µm,1.2s						
ROSA				*e*S	**S**	**14 33 43.3**	**+2.3**
ROSA				*e*LQ	LQ	14 41 16.1	
ROSA				*e*LR	LR	14 44 37.2	
	comp=Z,3µm,22.4s						
ROSA	**Rosais**	**58.53**	**44**	*e*P	**P**	**14 25 49.6**	**+1.1**
PMAN	**Manadas**	**58.60**	**44**	*e*P	**P**	**14 25 50.3**	**+1.4**
	comp=Z,5µm,1.3s						
H04A	**Detroit Lake**	**58.71**	**324**	*e*P	**P**	**14 25 50.1**	**+0.5**
SRBC	**Serra Branca**	**58.82**	**44**	*e*P	**P**	**14 25 51.7**	**+1.3**
	comp=Z,9µm,1.5s						
PGRA	**Graciosa**	**58.85**	**44**	*e*P	**P**	**14 25 52.0**	**+1.4**
	comp=Z,5µm,1.7s						
PGRA				*e*S	**S**	**14 33 49.2**	**+4.1**
PGRA				*e*LQ	LQ	14 41 25.0	
PGRA				*e*LR	LR	14 44 35.1	
	comp=Z,6µm,18.5s						
I03D	**Drain, OR**	**58.86**	**323**	P	**P**	**14 25 51.0**	**+0.5**
	baz=123,SNR=68						
J01E	**Myrtle Point**	**58.93**	**322**	P	**P**	**14 25 52.3**	**+1.3**
	baz=122,SNR=116						
H04D	**Lebanon**	**58.95**	**324**	P	**P**	**14 25 51.1**	**-0.1**
	baz=124,SNR=59						
F05D	**White Salmon**	**58.99**	**326**	P	**P**	**14 25 52.4**	**+0.9**
	baz=126,SNR=113						
KEBM	**Edson Butte**	**59.03**	**321**	*e*P	**P**	**14 25 53.7**	**+1.8**
FCC	**Fort Churchill**	**59.03**	**350**	*e*P	**P**	**14 25 49.9**	**-1.5**
FCC	**Fort Churchill**	**59.03**	**350**	*e*P	**P**	**14 25 49.9**	**-1.5**
ADH	**Angra Heroismo**	**59.20**	**44**	*e*P	**P**	**14 25 54.0**	**+1.0**
	comp=Z,5µm,1.3s						
PSCM	**Serra do Cume**	**59.31**	**44**	*e*P	**P**	**14 25 54.2**	**+0.4**
	comp=Z,4µm,1.5s						
COR	**Corvallis**	**59.32**	**323**	*e*P	**P**	**14 25 54.7**	**+1.0**
COR	**Corvallis**	**59.32**	**323**	*e*P	**P**	**14 25 54.7**	**+1.0**
B08A	**Colville Reser**	**59.34**	**329**	*e*P	**P**	**14 25 54.5**	**+0.7**
LTY	**Liberty**	**59.37**	**327**	*e*P	**P**	**14 25 54.9**	**+0.8**
I02D	**Swisshome**	**59.38**	**323**	P	**P**	**14 25 55.2**	**+1.1**
	baz=123,SNR=89						
G03D	**McMinnville, O**	**59.64**	**324**	P	**P**	**14 25 56.8**	**+0.8**
	baz=124,SNR=42						
LON	**Longmire**	**59.69**	**326**	*e*P	**P**	**14 25 57.0**	**+0.6**
LON	**Longmire**	**59.69**	**326**	*e*P	**P**	**14 25 57.0**	**+0.6**
C06D	**Leavenworth**	**59.89**	**328**	P	**P**	**14 25 57.9**	**+0.3**
	baz=127,SNR=82						
PSET	**Sete Cidades**	**59.92**	**46**	*e*P	**P**	**14 25 58.8**	**+0.8**
	comp=Z,5µm,1.5s						
PSET				*e*S	**S**	**14 34 00.1**	**+1.2**
PSET				*e*LQ	LQ	14 41 16.9	
PSET				*e*LR	LR	14 44 33.6	
	comp=Z,5µm,17.6s						
PDA	**Ponta Delgada**	**59.93**	**46**	*e*P	**P**	**14 25 58.3**	**+0.3**
	comp=Z,6µm,1.4s						
F04D	**Rainier, OR**	**59.98**	**325**	P	**P**	**14 25 59.1**	**+0.8**
	baz=124,SNR=20						
E04D	**Cinebar**	**60.00**	**326**	P	**P**	**14 25 58.4**	**+0.1**
	baz=125,SNR=71						
PSMA	**Santa Maria**	**60.01**	**47**	*e*P	**P**	**14 25 58.2**	**-0.4**
	comp=Z,2µm,1.0s						
GRON	**Grota Negra**	**60.03**	**46**	*e*P	**P**	**14 26 00.0**	**+1.2**
	comp=Z,5µm,1.9s						
CMLA	**Cha da Macela**	**60.03**	**46**	*e*P	**P**	**14 25 58.5**	**-0.3**
	comp=Z,5µm,1.6s						
CMLA	**Cha da Macela**	**60.03**	**46**	*e*LQ	LQ	14 41 34.8	
CMLA				*e*LR	LR	14 45 04.2	
	comp=Z,4µm,22.2s						
CMLA	**Cha da Macela**	**60.03**	**46**	*e*P	**P**	**14 25 59.7**	**+0.9**
CMLA	**Cha da Macela**	**60.03**	**46**	*i* P	**P**	**14 26 00.1**	**+1.3**
D05A	**Enumclaw**	**60.05**	**326**	*e*P	**P**	**14 25 59.7**	**+1.1**
PSMN	**Pico do Norte,**	**60.06**	**47**	*e*P	**P**	**14 25 58.4**	**-0.5**
	comp=Z,2µm,1.7s						
PSMN				*e*S	**S**	**14 34 00.1**	**-0.6**
PSMN				*e*LQ	LQ	14 41 28.3	
PSMN				*e*LR	LR	14 44 42.2	
	comp=Z,8µm,20.1s						
PCALD	**Caldeiras da R**	**60.08**	**46**	*e*P	**P**	**14 26 00.0**	**+0.9**
	comp=Z,7µm,1.6s						
BART	**Pico Bartolome**	**60.30**	**46**	*e*P	**P**	**14 26 00.7**	**0.0**
	comp=Z,6µm,1.1s						
D04E	**Lakebay**	**60.48**	**326**	P	**P**	**14 26 02.1**	**+0.6**
	baz=125,SNR=129						
B05A	**Bryant**	**60.74**	**327**	P	**P**	**14 26 03.0**	**-0.4**
	baz=126						
RKT	**Rikitea**	**60.83**	**243**	*e*P	**P**	**14 26 05.8**	**+1.4**
	comp=Z,1µm,1.1s						
RKT				*e*pP	**pP**	**14 26 40.8**	**+1.6**
	comp=Z,822nm,1.2s						
RKT				*e*S	**S**	**14 34 06.5**	**-4.4**
	comp=Z,45µm,29.5s						
RKT				*e*LQ	LQ	14 41 38.9	
	comp=Z,121µm,34.8s						
D03D	**Eldon**	**60.86**	**326**	P	**P**	**14 26 04.8**	**+0.6**
	baz=125,SNR=153						
NLWA	**Neilton Lookou**	**61.21**	**326**	*e*P	**P**	**14 26 07.7**	**+1.1**
A04D	**Lummi Island**	**61.34**	**328**	P	**P**	**14 26 07.8**	**+0.5**
	baz=126,SNR=182						
PGC	**Sidney**	**61.70**	**327**	*e*P	**P**	**14 26 10.9**	**+1.2**
LLLB	**Lillooet**	**62.04**	**330**	*e*P	**P**	**14 26 13.1**	**+1.0**
FRB	**Frobisher Bay**	**62.91**	**4**	P	**P**	**14 26 16.1**	**-1.4**
	comp=Z,521nm,0.9s,baz=199,slow=6.9,SNR=116						
TAOE	**Nuku Hiva Isla**	**63.22**	**260**	*e*P	**P**	**14 26 21.4**	**+0.8**
	comp=Z,2µm,1.0s						
TAOE				*e*pP	**PcP**	**14 26 56.7**	**-0.1**
	comp=Z,1µm,1.5s						
TAOE				*e*S	**S**	**14 34 37.4**	**-4.0**
	comp=Z,21µm,27.1s						
TAOE				*e*LQ	LQ	14 42 42.6	
	comp=Z,170µm,37.6s						
TAOE				*e*LR	LR	14 45 23.0	
	comp=Z,19µm,24.1s						
H10S3	**ASCENSION HYDR**	**63.34**	**100**	P	**P**	**14 26 20.7**	**-0.3**
H10S1	**ASCENSION HYDR**	**63.35**	**100**	P	**P**	**14 26 20.8**	**-0.3**
H10S2	**ASCENSION HYDR**	**63.35**	**100**	P	**P**	**14 26 20.8**	**-0.3**
H10N3	**ASCENSION HYDR**	**63.39**	**99**	P	**P**	**14 26 22.4**	**+1.1**
	baz=267,slow=6.6,SNR=17						
H10N2	**ASCENSION HYDR**	**63.40**	**99**	P	**P**	**14 26 22.7**	**+1.2**
	baz=267,slow=6.6,SNR=17						
H10N1	**ASCENSION HYDR**	**63.41**	**99**	P	**P**	**14 26 22.1**	**+0.7**
	baz=267,slow=6.6,SNR=23						
ASCN	**Ascension**	**63.54**	**99**	*e*P	**P**	**14 26 22.9**	**+0.3**
IVI	**Ivigtut**	**64.03**	**15**	*e*P	**P**	**14 26 24.8**	**-0.1**
MACI	**Morro de la Ar**	**64.11**	**59**	*e*P	**P**	**14 26 27.8**	**+1.4**
HOPE	**Hope Point**	**64.65**	**155**	*e*P	**P**	**14 26 31.3**	**+2.2**
PMOZ	**Porto Moniz, M**	**64.71**	**54**	*e*P	**P**	**14 26 29.3**	**-0.8**
	comp=Z,3µm,1.4s						
PMOZ				*e*S	**S**	**14 35 00.2**	**+0.9**
PMOZ				A	A	14 50 47.5	
	comp=Z,10µm,20.0s						
PMOZ	**Porto Moniz, M**	**64.71**	**54**	P	**P**	**14 26 31.8**	**+1.7**
NRS	**Narsarsuaq**	**64.75**	**17**	*i* P	**P**	**14 26 29.3**	**-0.3**
	comp=Z,762nm,0.8s						
NRS	**Narsarsuaq**	**64.75**	**17**	*i* P	**P**	**14 26 29.3**	**-0.3**
NRS				pmax	pmax		
	comp=Z,760nm,0.8s						
FUL	**Funchal**	**64.91**	**54**	*e*P	**P**	**14 26 33.7**	**+2.5**
	comp=Z,755nm,1.9s						
PMAR	**Madeira**	**64.91**	**54**	*e*P	**P**	**14 26 33.5**	**+2.0**
	comp=Z,1µm,1.8s						
PMPS	**Porto Santo**	**65.47**	**54**	*e*P	**P**	**14 26 36.3**	**+1.4**
	comp=Z,3µm,1.9s						
BBB	**Bella Bella**	**66.14**	**329**	*e*P	**P**	**14 26 40.2**	**+1.4**
PMSA	**Palmer Station**	**66.39**	**174**	*e*P	**P**	**14 26 42.0**	**+2.0**
	comp=Z,886nm,0.8s						
YKA	**Yellowknife Ar**	**67.30**	**342**	P	**P**	**14 26 44.7**	**-1.2**
	comp=Z,173nm,0.8s,baz=136,slow=5.8,SNR=759						
YKA				pP	**pP**	**14 27 19.8**	**-1.7**
	comp=Z,83nm,0.7s,baz=134,slow=6.2,SNR=2.4						
YKA				PKKP	**PKKPdf**	**14 46 55.2**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=13,slow=2.3,SNR=4.3						
YKA				PKP2ab		14 55 15.3	
	comp=Z,1.7nm,0.9s,baz=319,slow=2.3,SNR=5.7						
YKA				P4KPbc		15 03 33.0	
	comp=Z,2.0nm,1.0s,baz=134,slow=4.4,SNR=14						
YKB5	**Yellowknife Ar**	**67.30**	**342**	*e*P	**P**	**14 26 45.0**	**-0.9**
YKW3	**Yellowknife Ar**	**67.35**	**342**	*e*P	**P**	**14 26 45.6**	**-0.6**
SFJD	**Kangerlussuaq**	**68.46**	**11**	⇓*i*P	**P**	**14 26 52.1**	**-1.0**
	comp=Z,629nm,0.9s						
	comp=Z,18µm,18.0s						
SFJD	**Kangerlussuaq**	**68.46**	**11**	⇓*i*P	**P**	**14 26 52.1**	**-1.0**
SFJD				pmax	pmax		
	comp=Z,630nm,0.9s						
SFJD				MLR	MLR		
	comp=Z,18µm,18.0s						
SFJD	**Kangerlussuaq**	**68.46**	**11**	P	**P**	**14 26 52.0**	**-1.1**
	comp=Z,612nm,0.8s,baz=204,slow=3.5,SNR=71						
DIB	**Dawson Inlet,**	**68.95**	**328**	*e*P	**P**	**14 26 57.8**	**+1.5**
H02S1	**DAWSON INLET T**	**68.95**	**328**	P	**P**	**14 26 56.9**	**+0.5**
ILULI	**Ilulissat**	**70.33**	**10**	⇓*i*P	**P**	**14 27 03.8**	**-0.7**
	comp=Z,1µm,0.9s						
	comp=Z,26µm,22.0s						
ILULI	**Ilulissat**	**70.33**	**10**	⇓*i*P	**P**	**14 27 03.8**	**-0.7**
ILULI				pmax	pmax		
	comp=Z,1µm,0.9s						
ILULI				MLR	MLR		
	comp=Z,26µm,22.0s						
DLBC	**Dease Lake**	**70.43**	**334**	*e*P	**P**	**14 27 06.0**	**+0.5**
WRAK	**Wrangell Islan**	**70.46**	**331**	*e*P	**P**	**14 27 06.0**	**+0.4**
EAH	**EAH**	**70.70**	**57**	P	**P**	**14 27 10.0**	**+2.4**
H09W1	**TRISTAN DA CUN**	**71.01**	**130**	P	**P**	**14 27 09.5**	**+0.3**
H09N1	**TRISTAN DA CUN**	**71.01**	**130**	P	**P**	**14 27 08.8**	**-0.5**
VAH	**Vaihoa**	**71.17**	**254**	*e*P	**P**	**14 27 12.2**	**+1.6**
	comp=Z,1µm,1.0s						
PMOR	**Pomariorio Ree**	**71.40**	**254**	*e*P	**P**	**14 27 13.6**	**+1.6**
	comp=Z,1µm,1.1s						
TTIG	**Tnine Tigouga,**	**71.47**	**58**	P	**P**	**14 27 14.0**	**+1.6**
OUK	**Oukaimeden**	**72.07**	**58**	P	**P**	**14 27 18.0**	**+1.8**
SIT	**Sitka**	**72.20**	**331**	*e*P	**P**	**14 27 18.3**	**+2.3**
SRHM	**Skhour des Reh**	**72.26**	**56**	P	**P**	**14 27 18.1**	**+1.1**
JIS	**Juneau Island**	**72.33**	**332**	*e*P	**P**	**14 27 17.8**	**+1.1**
LIC	**Lamto**	**72.43**	**84**	*e*P	**P**	**14 27 18.1**	**-0.1**
	comp=Z,8µm,1.9s						
PFVI	**Vila Bisbo**	**72.43**	**51**	*e*P	**P**	**14 27 18.6**	**+0.8**
	comp=Z,2µm,1.8s						
PFVI				*e*pP	**pP**	**14 27 55.5**	**+1.3**
PFVI				*i* LQ	LQ	14 29 29.2	
PFVI	**Vila Bisbo**	**72.43**	**51**	*e*P	**P**	**14 27 18.6**	**+0.8**
PFVI	**Vila Bisbo**	**72.43**	**51**	P	**P**	**14 27 19.0**	**+1.1**
TIC	**Toumodi**	**72.44**	**83**	*e*P	**P**	**14 27 18.1**	**-0.2**
PMAFR	**Mafra**	**72.48**	**49**	*e*P	**P**	**14 27 17.6**	**-0.5**
	comp=Z,1µm,1.8s						
PMAFR				*i* pP	**pP**	**14 27 56.0**	**+1.9**
PMAFR				*i* LQ	LQ	14 29 28.4	
PMST	**Lisbon--Monsan**	**72.51**	**50**	*e*P	**P**	**14 27 17.4**	**-0.8**
	comp=Z,2µm,1.6s						
PMST				*e*pP	**pP**	**14 27 55.7**	**+1.5**
LIS	**Lisbon**	**72.53**	**50**	*e*P	**P**	**14 27 18.3**	**0.0**
LIS				AMb	AMB	14 27 24.4	
	comp=Z,2µm,2.9s						
LIS				*e*pP	**pP**	**14 27 55.7**	**+1.3**
LIS				*e*S	**S**	**14 36 29.9**	**-1.4**
LIS	**Lisbon**	**72.53**	**50**	*e*P	**P**	**14 27 18.3**	**0.0**
LIS				*e**PP	**pP**	**14 27 55.6**	**+1.3**
LIS				*e*S	**S**	**14 36 29.8**	**-1.4**
LIS				pmax	pmax		
	comp=Z,2µm,2.9s						
PTEO	**Sao Teotonio**	**72.60**	**51**	*e*P	**P**	**14 27 19.4**	**+0.6**
	comp=Z,1µm,1.5s						
DBIC	**Dimbokro**	**72.60**	**83**	*e*P	**P**	**14 27 19.1**	**-0.2**
DBIC	**Dimbokro**	**72.60**	**83**	P	**P**	**14 27 19.0**	**-0.3**
	comp=Z,730nm,0.9s,baz=257,slow=4.6,SNR=322						
DBIC				PP	**PP**	**14 29 56.9**	**-6.0**
	comp=Z,130nm,0.9s,baz=241,slow=6.0,SNR=3.0						
DBIC				PKPPKP	**P'P'df**	**14 54 58.9**	**-5.0**
	comp=Z,3.8nm,0.8s,baz=82,slow=4.8,SNR=5.6						
DBIC				LR	LR	14 55 49.7	
	comp=Z,20µm,21.7s,baz=248,slow=33						
DBIC	**Dimbokro**	**72.60**	**83**	*e*P	**P**	**14 27 18.8**	**-0.5**
MORF	**Marmelete**	**72.60**	**51**	*e*P	**P**	**14 27 19.0**	**+0.1**
MORF				AMb	AMB	14 27 26.4	
	comp=Z,2µm,2.0s						
MORF				*e*pP	**pP**	**14 27 56.2**	**+0.9**
MORF				*e*S	**S**	**14 36 31.0**	**-1.3**
MORF	**Marmelete**	**72.60**	**51**	*e*P	**P**	**14 27 19.1**	**+0.1**
	comp=Z,2µm,1.7s						
MORF				*i* pP	**pP**	**14 27 57.2**	**+1.9**
MORF				*i* LQ	LQ	14 29 31.0	
MORF				*e*S	**S**	**14 36 30.9**	**-1.4**
MORF	**Marmelete**	**72.60**	**51**	*e*P	**P**	**14 27 19.0**	**+0.1**
MORF				*e**PP	**pP**	**14 27 56.2**	**+0.9**
MORF				*e*S	**S**	**14 36 31.0**	**-1.3**
MORF				pmax	pmax		
	comp=Z,2µm,2.0s						
BESE	**Bessie Mountai**	**72.69**	**332**	*e*P	**P**	**14 27 20.1**	**+1.1**
KIC	**Kosan Boka**	**72.71**	**84**	*e*P	**P**	**14 27 20.1**	**+0.2**
	comp=Z,1µm,1.0s						
SHEL	**Horse Pasture**	**72.73**	**107**	*e*P	**P**	**14 27 21.3**	**+1.3**
SHEL	**Horse Pasture**	**72.73**	**107**	*e*P	**P**	**14 27 21.3**	**+1.3**

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AVE   Averroes          72.81  55⇓iP      P        14 27 20.8 +0.7
AVE                              i S      S        14 36 35.5 +0.9
AVE   Averroes          72.81  55  P      P        14 27 21.6 +1.5
PNCL  Nicolau / Gran    72.87  50 eP      P        14 27 20.6 +0.2
      comp=Z,1µm,1.5s
PNCL                              epP     pP       14 27 57.1 +0.7
PNCL                              i LQ    LQ       14 29 31.5
PNCL                              eS      S        14 36 32.3 -2.8
OUZM  OUZ               72.95  58  P      P        14 27 23.0 +1.8
TVO   Taravao           73.01 251 eP      P        14 27 23.2 +1.6
      comp=Z,119nm,0.9s
MESJ  Messejana         73.05  51 eP      P        14 27 21.3 -0.1
MESJ                               AMb    AMB      14 27 27.9
      comp=Z,593nm,1.4s
MESJ                              epP     pP       14 27 58.7 +0.9
MESJ                              eS      S        14 36 35.8 -1.5
MESJ  Messejana         73.05  51 eP      P        14 27 21.6 +0.1
      comp=Z,593nm,1.3s
MESJ                              i pP    pP       14 27 59.2 +1.5
MESJ                              i LQ    LQ       14 29 33.5
MESJ  Messejana         73.05  51 eP      P        14 27 21.3 -0.1
MESJ                              e*PP    pP       14 27 58.6 +0.9
MESJ                              eS      S        14 36 35.7 -1.5
MESJ                               pmax   pmax
      comp=Z,593nm,1.4s
TIAR  Tiarei            73.07 251 eP      P        14 27 23.4 +1.4
      comp=Z,196nm,0.9s
TIAR                              epP     pP       14 27 59.4 +1.3
      comp=Z,151nm,1.1s
PBDV  Barranco-do-Ve    73.15  51 eP      P        14 27 23.2 +1.1
      comp=Z,861nm,1.9s
PBDV                              i pP    pP       14 28 00.5 +1.9
PBDV                              i LQ    LQ       14 29 34.5
PBDV                              eS      S        14 36 37.5 -0.9
PPTF  Pamatai, Papee    73.28 251 eP      P        14 27 24.1 +0.8
PPT   Papeete           73.29 251  P      P        14 27 24.8 +1.6
      comp=Z,391nm,0.9s,baz=65,slow=1.5,SNR=30
PPT                                LR     LR       14 51 50.4
      comp=Z,11µm,22.0s,baz=80,slow=29
PPT2  Papeete2          73.29 251 eP      P        14 27 24.9 +1.6
      comp=Z,621nm,1.1s
PPT2                              epP     pP       14 28 00.7 +1.3
      comp=Z,487nm,1.3s
PPT2                              eS      SKiKP    14 36 36.0 -4.6
      comp=Z,17µm,25.8s
PPT2  Papeete2          73.29 251 eLR     LR       14 49 59.0
      comp=Z,25µm,25.2s
PTOM  Tomar             73.29  49 eP      P        14 27 23.2 +0.4
      comp=Z,1µm,1.6s
PTOM                              epP     pP       14 27 59.5 +0.6
PTOM                              i LQ    LQ       14 29 32.7
PAE   Paea              73.30 251 eP      P        14 27 25.0 +1.7
      comp=Z,367nm,1.0s
PAE                               epP     pP       14 28 00.7 +1.3
      comp=Z,135nm,1.2s
PMTG  Montargil         73.31  49 eP      P        14 27 21.8 -1.2
      comp=Z,915nm,1.5s
PMTG                              i pP    pP       14 28 02.8 +3.7
PMTG                              i LQ    LQ       14 29 34.5
SKAG  Skagway           73.32 333 eP      P        14 27 23.0 +0.5
PCAS  Casmilo, Conde    73.32  48 eP      P        14 27 23.3 +0.3
      comp=Z,2µm,1.3s
PCAS                              i pP    pP       14 28 01.0 +1.9
PCAS                              eS      S        14 36 40.3 +0.1
PVAQ  Vaqueiros         73.35  51 eP      P        14 27 23.3 +0.1
      comp=Z,481nm,1.9s
PVAQ                              eS      S        14 36 41.1 +0.5
PVAQ                               A      A        14 57 08.4
      comp=Z,11µm,20.0s
PVAQ  Vaqueiros         73.35  51  P      P        14 27 24.2 +1.0
PBEJ  Beja              73.36  51 eP      P        14 27 24.5 +1.2
      comp=Z,714nm,1.9s
PBEJ                              i pP    pP       14 28 02.0 +2.4
PBEJ                              i LQ    LQ       14 29 36.1
RTC   Rabat Centre      73.39  55  P      P        14 27 25.4 +1.9
ZHG   ZHG               73.47  55  P      P        14 27 25.0 +0.8
WHY   Whitehorse        73.69 334 eP      P        14 27 24.8 -0.1
PESTR Estremoz          73.75  50 eP      P        14 27 25.6  0.0
      comp=Z,2µm,1.4s
PESTR                             i pP    pP       14 28 02.7 +1.0
PESTR                             i LQ    LQ       14 29 37.5
PESTR                             eS      S        14 36 46.6 +1.5
PESTR Estremoz          73.75  50 eP      P        14 27 25.5  0.0
PESTR Estremoz          73.75  50  P      P        14 27 26.3 +0.8
PVIS  Viseu             73.92  48 eP      P        14 27 27.0 +0.4
      comp=Z,1µm,1.4s
PVIS                              i pP    pP       14 28 03.5 +0.8
PGAV  Gavieira, Arco    73.93  47⇓iP      P        14 27 26.6 -0.1
      comp=Z,1µm,1.6s
PGAV                              epP     pP       14 28 04.6 +1.8
PGAV                              i LQ    LQ       14 30 04.2
PGAV                              eS      S        14 36 48.1 +0.9
PGAV                               A      A        14 38 14.0
      comp=Z,9µm,18.0s
PMRV  Marv??o           74.02  49 eP      P        14 27 26.7 -0.4
      comp=Z,938nm,1.6s
PMRV                              i pP    pP       14 28 03.8 +0.5
PMRV                              i LQ    LQ       14 30 12.1
PMRV                              eS      S        14 36 49.8 +1.7
PMRV                               A      A        14 56 19.8
      comp=Z,11µm,18.0s
PCBR  Castelo Branco    74.04  49 eP      P        14 27 26.8 -0.4
      comp=Z,1µm,1.8s
PCBR                              i pP    pP       14 28 04.9 +1.5
MTE   Manteigas         74.11  48⇓iP      P        14 27 27.5 -0.2
      comp=Z,932nm,1.2s
MTE                               epP     pP       14 28 04.8 +0.9
MTE                               i LQ    LQ       14 30 02.3
MTE                               eS      S        14 36 49.8 +0.6
MTE                                A      A        14 54 45.6
      comp=Z,14µm,22.0s
MTE   Manteigas         74.11  48 eP      P        14 27 27.2 -0.5
POLO  Lamas de Olo      74.14  47 eP      P        14 27 27.3 -0.6
      comp=Z,693nm,1.4s
POLO                              i pP    pP       14 28 05.1 +1.0
POLO                              i LQ    LQ       14 30 13.8
POLO                              eS      S        14 36 47.9 -1.6
PVRL  Vila Real         74.18  47 eP      P        14 27 26.8 -1.2
      comp=Z,1µm,1.4s
RES   Resolute Bay      74.29 355  P      P        14 27 26.8 -1.1
      comp=Z,333nm,1.0s,baz=181,slow=8.4,SNR=107
SFS   San Fernando      74.36  52 eP      P        14 27 32.6 +3.5
SFS   San Fernando      74.36  52 i P     P        14 27 28.6 -0.5
SFS                               i S     S        14 36 54.7 +2.8
RSA   Sarsar            74.39  54  P      P        14 27 31.0 +1.6
KULLO Kullorsuaq        74.44   6⇓iP      P        14 27 28.3 -0.5
      comp=Z,625nm,1.0s
      comp=Z,18µm,18.0s
KULLO Kullorsuaq        74.44   6⇓iP      P        14 27 28.3 -0.5
KULLO                              pmax   pmax
      comp=Z,620nm,1.0s
KULLO                              MLR    MLR
      comp=Z,18µm,18.0s
CNIL  Conil             74.46  53 eP      P        14 27 29.4 -0.3
GIBL  Gibalbin          74.61  52 eP      P        14 27 30.6  0.0
MVO   Moncorvo          74.66  48⇓iP      P        14 27 30.6 -0.3
      comp=Z,1µm,1.3s
MVO                               epP     pP       14 28 07.4 +0.3
MVO                               i LQ    LQ       14 30 13.2
MVO                               eS      S        14 36 55.3  0.0
MVO                                A      A        14 52 32.7
      comp=Z,10µm,20.0s
CZD   Col de Zad        74.73  56  P      P        14 27 34.0 +2.3
IFR   Ifrane            74.73  56⇓iP      P        14 27 32.0 +0.4
IFR                               i S     S        14 36 58.5 +1.9
CHEFC Chefchaouen       74.82  54  P      P        14 27 34.1 +2.2
HYT   Haines Junctio    74.91 334 eP      P        14 27 32.9 +0.9
CEU   Ceuta             74.92  53⇓iP      P        14 27 32.0 -0.4
CEU                               i S     S        14 36 58.9 +0.7
CEUT  Ceuta             74.96  53  P      P        14 27 34.4 +1.8
LCRM  LCR               74.98  55  P      P        14 27 35.0 +2.0
PBRG  Braganca          75.01  47 eP      P        14 27 32.7 -0.1
      comp=Z,779nm,1.7s
PBRG                              i pP    pP       14 28 08.8 -0.3
PBRG                              i LQ    LQ       14 30 13.8
PBRG                              eS      S        14 36 57.9 -1.1
MDT   Midelt            75.06  56  P      P        14 27 34.1 +0.8
      comp=Z,361nm,1.1s,baz=280,slow=5.3,SNR=62
MDT   Midelt            75.06  56  P      P        14 27 34.4 +1.0
LIJA  Lijar             75.07  52 eP      P        14 27 33.2 -0.2
REAL  Reales            75.15  53 eP      P        14 27 34.6 +0.7
ARF   Arif              75.18  58  P      P        14 27 36.0 +1.9
BORG  Borgarnes         75.22  22 i P     P        14 27 35.8 +2.4
BORG  Borgarnes         75.22  22  P      P        14 27 34.9 +1.5
      comp=Z,226nm,0.9s,baz=316,slow=2.3,SNR=22
VAL   Valentia          75.30  36 eP      P        14 27 33.5 -0.7
VAL                               eS      S        14 37 01.4 -0.3
SUMG  Summit            75.45  11 eP      P        14 27 35.0 -0.1
SUMG  Summit            75.45  11⇓iP      P        14 27 35.3 +0.1
      comp=Z,8µm,1.0s
      comp=Z,44µm,20.0s
SUMG  Summit            75.45  11⇓iP      P        14 27 35.3 +0.1
SUMG                               pmax   pmax
      comp=Z,8µm,1.0s
SUMG                               MLR    MLR
      comp=Z,44µm,20.0s
TULEG Thule             75.58   2 eP      P        14 27 34.7 -0.6
EMAL  Malaga-Limoner    75.82  52 i P     P        14 27 36.8 -0.6
EMAL                              i S     S        14 37 04.6 -3.5
AKLM  AKL               75.92  55  P      P        14 27 39.1 +0.9
PALE  Palemas           75.97  54  P      P        14 27 40.0 +1.6
IGLA  Glengowla, Co     76.25  35 i P     P        14 27 38.8 -0.7
IGLA                              eS      S        14 37 12.2 +0.1
PAB   San Pablo         76.35  50 eP      P        14 27 40.7 +0.1
PAB   San Pablo         76.35  50 eP      P        14 27 40.7 +0.1
ESDC  Sonseca Array     76.67  50  P      P        14 27 42.6 +0.3
      comp=Z,162nm,0.8s,baz=264,slow=5.6,SNR=274
ESDC                               PKKPbc PKKPbc   14 46 53.2 -0.2
      comp=Z,0.2nm,0.4s,baz=79,slow=3.2,SNR=4.3
ESDC                               PKPPKP P'P'df   14 54 48.2 -7.1
      comp=Z,1.6nm,0.8s,baz=18,slow=4.1,SNR=6.4
ESLA  Sonseca Array     76.67  50 eP      P        14 27 42.4 +0.1
ES19  SONSECA Array     76.72  49 eP      P        14 27 42.4 -0.2
GOG   Mont Gurugu       76.73  54  P      P        14 27 44.0 +1.2
MELI  Melilla           76.79  54⇓iP      P        14 27 42.2 -0.8
MELI                              i S     S        14 37 19.0 +0.3
INK   Inuvik            77.04 342  P      P        14 27 43.6 -0.1
      comp=Z,259nm,0.8s,baz=104,slow=5.5,SNR=273
INK                                PKKPbc PKKPbc   14 46 52.0 -1.9
      comp=Z,3.2nm,1.0s,baz=302,slow=2.8,SNR=4.6
DAWY  Dawson            77.11 337 eP      P        14 27 43.9 -0.4
TAF   Taforalt          77.15  55  P      P        14 27 47.0 +1.9
EPYK  Eagle Plains      77.15 339 eP      P        14 27 44.4  0.0
EPYK  Eagle Plains      77.15 339  P      P        14 27 44.3 -0.1
      baz=118,SNR=156
UCM   Universidad Co    77.32  49 i P     P        14 27 46.1 +0.2
UCM                               i S     S        14 37 25.1 +0.7
SESP  Santiago Espad    77.51  51  P      P        14 27 47.8 +0.6
FIGM  Figuig            77.77  57  P      P        14 27 50.0 +1.3
IDGL  Inch Island, C    77.77  34 i P     P        14 27 47.4 -0.6
IDGL                              eS      S        14 37 28.4 -0.1
CCA1  Carnmenellis      77.89  39⇓eP      P        14 27 48.8  0.0
CCA1                               IAmb   IAmb     14 27 54.1
      comp=Z,713nm,1.0s
CCA1                              e                14 37 22.8
DSB   Dublin            77.93  36 eP      P        14 27 47.6 -1.3
DSB                               eS      S        14 37 29.6 -0.7
DSB   Dublin            77.93  36 eP      P        14 27 48.6 -0.4
SCO   Scoresbysund      78.04  16 eP      P        14 27 49.3 +0.1
SCO   Scoresbysund      78.04  16⇓iP      P        14 27 49.5 +0.3
      comp=Z,316nm,1.0s
SCO   Scoresbysund      78.04  16⇓iP      P        14 27 49.5 +0.3
SCO                                pmax   pmax
      comp=Z,320nm,1.0s
PUH   Pauahi            78.11 289 eP      P        14 27 52.1 +1.3
MLH   Mauna Loa         78.27 290 eP      P        14 27 54.0 +2.2
HMH   Humu‘ula Sheep    78.37 290 eP      P        14 27 53.2 +0.7
POHA  Pohakuloa         78.42 290 eP      P        14 27 53.6 +1.0
MLOA  Mauna Loa Obse    78.45 290 eP      P        14 27 54.2 +1.2
KHU   Kahuku            78.47 289 eP      P        14 27 56.1 +3.2
HTL   Hartland          78.53  38⇓eP      P        14 27 50.6 -1.7
HTL                                IAmb   IAmb     14 27 57.6
      comp=Z,1µm,1.4s
HTL                                IAMs_20 IAMs_20 14 53 48.5
      comp=Z,13µm,24.7s
CLGH  Cloghs, Cushen    78.55  34⇓eP      P        14 27 52.1 -0.2
CLGH                              e                14 37 33.3
CLGH                               IAMs_20 IAMs_20 14 56 25.4
      comp=Z,13µm,18.5s
EYAK  Cordova Ski Ar    78.56 332 eP      P        14 27 53.0 +0.8
RSBS  Rosebush, Pemb    78.58  37⇓eP      P        14 27 52.2 -0.4
RSBS                               IAmb   IAmb     14 27 57.5
      comp=Z,234nm,1.0s
RSBS                               IAMs_20 IAMs_20 14 58 47.2
      comp=Z,8µm,20.7s
HPAH  Hawaii Prepara    78.59 290 eP      P        14 27 54.4 +1.0
CART  Cartagena         78.65  52 i P     P        14 27 50.7 -2.5
CART                              i S     S        14 37 36.4 -2.2
DIV   Divide            78.75 333 eP      P        14 27 53.3 -0.1
KHLU  Kahalu`u          78.75 290 eP      P        14 27 55.2 +0.9
KKH   Kailua Kona       78.88 290 eP      P        14 27 56.3 +1.5
HARP  HAARP             78.90 334 eP      P        14 27 54.5 +0.4
KLU   Klutina           78.94 333 eP      P        14 27 54.4  0.0
SCRK  Sand Creek        78.94 336 eP      P        14 27 54.6 +0.2
YRC   Rhoscolyn         78.98  36⇓eP      P        14 27 53.9 -0.7
LPW   Lampeter          79.03  37⇓eP      P        14 27 54.9  0.0
LPW                                IAMs_20 IAMs_20 14 56 01.9
      comp=Z,17µm,26.8s
WPS   Cemaes, Angles    79.06  36⇓eP      P        14 27 54.5 -0.6
WPS                               e                14 37 39.5
WPS                                IAMs_20 IAMs_20 14 56 44.5
      comp=Z,25µm,19.4s
WLF1  Llynfaes          79.09  36 eP      P        14 27 54.7 -0.6
WLF1                              e                14 37 41.7
WLF1                               IAMs_20 IAMs_20 14 56 44.4
      comp=Z,46µm,20.8s
WIM   Isle of Man       79.13  35⇓eP      P        14 27 55.2 -0.3
WME   Myndd Eilian      79.17  36 eP      P        14 27 54.9 -0.9
YLL   Llanberis         79.19  36⇓eP      P        14 27 55.5 -0.3
TOA0  Torodi Ar. Sit    79.21  77 eP      P        14 27 56.0 -0.7
TORD  Torodi Ar. Bea    79.21  77  P      P        14 27 54.9 -1.9
      comp=Z,69nm,0.6s,baz=277,slow=5.1,SNR=153
TORD                               S      S        14 37 44.1 -1.2
      comp=Z,37nm,1.3s,baz=263,slow=6.7,SNR=9.6
TORD                               PKKPbc PKKPbc   14 46 47.1 +0.4
      comp=Z,4.1nm,0.6s,baz=27,slow=2.7,SNR=17
TORD                               PKPPKP          14 54 48.2
      comp=Z,3.2nm,0.9s,baz=45,slow=2.3,SNR=6.6
RIDG  Independ'e Rid    79.22 335 eP      P        14 27 56.0 +0.1
GAL1  Galloway          79.28  34⇓eP      P        14 27 53.9 -2.3
GAL1                               IAMs_20 IAMs_20 14 58 07.1
      comp=Z,5µm,18.6s
KPL   Plockton          79.38  32⇓eP      P        14 27 55.9 -0.8
KPL                                IAmb   IAmb     14 28 01.2
      comp=Z,705nm,0.9s
KPL                                IAMs_20 IAMs_20 14 58 54.9
      comp=Z,14µm,18.5s
LLW   Llanuwychllyn     79.43  36 eP      P        14 27 56.3 -0.9
KAC   Achnashellach     79.61  32⇓eP      P        14 27 57.7 -0.3
JSA   Saint Aubin       79.62  40⇓eP      P        14 27 58.1 -0.2
JSA                                IAmb   IAmb     14 28 03.4
      comp=Z,835nm,1.3s
JSA                               e                14 37 44.6
JSA                                IAMs_20 IAMs_20 14 55 05.5
      comp=Z,14µm,23.1s
PGBU  Glenifferbraes    79.63  33⇓eP      P        14 27 56.5 -1.7
PGBU                               IAmb   IAmb     14 28 02.8
      comp=Z,5µm,2.2s
PGBU                               IAMs_20 IAMs_20 14 56 25.5
      comp=Z,10µm,20.7s
MCH1  Michaelchurch     79.65  37⇓eP      P        14 27 57.9 -0.4
MCH1                               IAmb   IAmb     14 28 03.2
      comp=Z,679nm,1.0s
MCH1                              e                14 37 45.4
MCH1                               IAMs_20 IAMs_20 14 59 18.7
      comp=Z,15µm,19.3s
SCM   Sheep Creek Mo    79.68 333 eP      P        14 27 58.5  0.0
SCM   Sheep Creek Mo    79.68 333 eP      P        14 27 58.5  0.0
FOEL  Foel Wylfa        79.71  36⇓eP      P        14 27 57.5 -1.2
FOEL                              e                14 37 45.2
FOEL                               IAMs_20 IAMs_20 14 58 48.0
      comp=Z,18µm,20.4s
MONM  Monmouth          79.73  37⇓eP      P        14 27 58.6 -0.2
MONM                               IAmb   IAmb     14 28 03.8
      comp=Z,1µm,1.3s
MONM                               IAMs_20 IAMs_20 15 00 33.5
      comp=Z,11µm,18.7s
EAB   Aberfoyle         79.80  33⇓eP      P        14 27 58.5 -0.6
HLM1  Long Mynd         79.83  37⇓eP      P        14 27 57.8 -1.6
HLM1                               IAmb   IAmb     14 28 04.2
      comp=Z,908nm,1.2s
HLM1                               IAMs_20 IAMs_20 14 58 51.5
      comp=Z,19µm,20.7s
OLDB  Oldbury-Upon-S    79.85  38⇓eP      P        14 27 59.1 -0.3
XMAS  Kiritimati        79.95 272 eP      P        14 28 02.1 +1.3
INVG  Invergeldie, C    80.01  33⇓eP      P        14 27 59.7 -0.5
INVG                               IAmb   IAmb     14 28 05.0
      comp=Z,1µm,1.7s
INVG                              e                14 37 39.6
INVG                               IAMs_20 IAMs_20 14 56 36.9
      comp=Z,14µm,20.2s
BBO1  Bothel            80.08  35⇓eP      P        14 28 00.4 -0.2
DHY   Denali Highway    80.08 334 eP      P        14 28 01.2 +0.5
KNK   Knik Glacier      80.08 333 eP      P        14 28 00.6  0.0
MDO   Dochfour          80.08  32⇓eP      P        14 28 00.1 -0.5
PRP   Porcupine Dome    80.10 337 eP      P        14 28 00.9 +0.2
STRD  Stroud            80.11  38⇓eP      P        14 28 00.6 -0.2
STRD                               IAmb   IAmb     14 28 05.8
      comp=Z,832nm,0.8s
STRD                               IAMs_20 IAMs_20 15 00 43.8
      comp=Z,13µm,19.0s
KESW  Keswick, Cumbr    80.12  35⇓eP      P        14 28 00.6 -0.3
KESW                               IAMs_20 IAMs_20 14 45 16.6
      comp=Z,10µm,22.1s
SML   Sawmill           80.13 333 eP      P        14 28 01.0 +0.2
SML   Sawmill           80.13 333 eP      P        14 28 01.0 +0.2
EANR  'Ain N'Sour       80.13  54  P      P        14 28 02.0 +0.6
BHH   Howats Hill       80.17  34⇓eP      P        14 28 00.5 -0.6
SEW   Seward            80.19 331 eP      P        14 28 01.1  0.0
EAU   Auchinoon         80.21  33⇓eP      P        14 28 00.8 -0.5
ESK   Eskdalemuir       80.22  34 eP      P        14 28 01.3  0.0
ESK   Eskdalemuir       80.22  34⇓eP      P        14 28 01.0 -0.4
ESK                                IAmb   IAmb     14 28 06.2
      comp=Z,832nm,1.2s
ESK                               e                14 37 50.5
ESK                                IAMs_20 IAMs_20 14 58 44.8
      comp=Z,67µm,19.9s
ESK   Eskdalemuir       80.22  34 i P     P        14 28 01.4  0.0
ETRT  Tiaret            80.24  54  P      P        14 28 04.8 +2.7
EKA   Eskdalemuir Ar    80.25  34  P      P        14 28 01.5 -0.1
      comp=Z,77nm,0.6s,baz=260,slow=3.2,SNR=234
SWN1  Swindon           80.29  38⇓eP      P        14 28 01.6 -0.2
SWN1                               IAmb   IAmb     14 28 06.8
      comp=Z,1µm,1.1s
HDA   Harding Lake      80.31 336 eP      P        14 28 01.6 -0.1
HDA   Harding Lake      80.31 336  P      P        14 28 00.9 -0.7
      baz=108,SNR=174
SSW   Stow on the Wo    80.34  37 eP      P        14 28 02.2 +0.1
STNC  Stoke             80.34  36⇓eP      P        14 28 02.2 +0.2
STNC                               IAmb   IAmb     14 28 07.4
      comp=Z,3µm,1.5s
STNC                              e                14 37 51.3
STNC                               IAMs_20 IAMs_20 14 59 17.8
      comp=Z,18µm,18.0s
FYU   Fort Yukon        80.34 338 eP      P        14 28 01.9 +0.2
EDI   Edinburgh         80.37  33⇓eP      P        14 28 01.3 -0.8
EDI                                IAmb   IAmb     14 28 06.8
      comp=Z,1µm,1.6s
EDI                                IAMs_20 IAMs_20 14 56 01.1
      comp=Z,12µm,19.0s
ECHA  Ech Chlef         80.37  54  P      P        14 28 03.4 +0.8
IL1   Eielson Array     80.40 336 eP      P        14 28 01.9 -0.2
ILAR  Eielson Array     80.40 336  P      P        14 28 01.9 -0.2
      comp=Z,58nm,0.9s,baz=96,slow=4.7,SNR=203
ILAR                               PP     PP       14 31 07.2 +0.2
      comp=Z,72nm,1.0s,baz=108,slow=8.3,SNR=4.0
ILAR                               PKKPbc PKKPbc   14 46 45.3 -1.0
      comp=Z,1.6nm,0.8s,baz=294,slow=3.2,SNR=6.2
ILAR                               PKPPKP P'P'df   14 54 42.2 -4.7
      comp=Z,1.2nm,1.0s,baz=313,slow=2.9,SNR=4.5
ILAR                               LR     LR       15 06 36.7
      comp=Z,8µm,20.9s,baz=104,slow=38
ILB   Eielson Array     80.40 336 eP      P        14 28 02.0 -0.2
PMR   Palmer            80.44 333 eP      P        14 28 02.4  0.0
PMR   Palmer            80.44 333 eP      P        14 28 02.4  0.0
EBNR  Beni Rached       80.51  54  P      P        14 28 04.0 +0.6
BIGH  Upper Bighouse    80.56  31⇓eP      P        14 28 02.9 -0.3
BIGH                              e                14 37 54.2
BIGH                               IAMs_20 IAMs_20 14 58 18.4
      comp=Z,19µm,19.0s
RC01  Rabbit Creek A    80.58 332 eP      P        14 28 03.1 -0.1
EDU   Dundee            80.60  33⇓eP      P        14 28 03.4  0.0
WOL   Wolverton         80.61  38⇓eP      P        14 28 02.9 -0.6
WOL                                IAmb   IAmb     14 28 08.3
      comp=Z,2µm,1.4s
ESY   Stoneypath        80.68  33⇓eP      P        14 28 03.6 -0.2
LBWR  Ladybower, Pea    80.69  36⇓eP      P        14 28 04.1 +0.2
LBWR                              e                14 37 52.7
LBWR                               IAMs_20 IAMs_20 14 58 56.6
      comp=Z,16µm,18.1s
MCD   Coleburn Disti    80.70  32⇓eP      P        14 28 03.6 -0.3
POKR  Poker Plat Res    80.73 336  P      P        14 28 03.6 -0.3
      baz=108
MME1  Meikle Cairn      80.79  32⇓eP      P        14 28 03.2 -1.1
WRH   Wood River Hil    80.80 336 eP      P        14 28 03.8 -0.4
MLA1  Latheron          80.80  31⇓eP      P        14 28 04.0 -0.4
BRLK  Bradley Lake      80.80 331 eP      P        14 28 03.7 -0.8
CWF   Charnwood Fore    80.81  37⇓eP      P        14 28 04.1 -0.4
CWF                                IAmb   IAmb     14 28 09.6
      comp=Z,914nm,1.4s
CWF                                IAMs_20 IAMs_20 14 59 31.7
      comp=Z,16µm,18.7s
HON   Honolulu          80.81 291 eP      P        14 28 06.5 +1.3
HON   Honolulu          80.81 291 eP      P        14 28 06.9 +1.7
RND   Reindeer          80.82 334 eP      P        14 28 04.8 +0.3
RND   Reindeer          80.82 334 eP      P        14 28 04.8 +0.3
COLA  College           80.82 336d iP     P        14 28 03.3 -1.0
COLA                               pmax   pmax
      comp=Z,96nm,1.2s
COLA  College           80.82 336 eP      P        14 28 03.8 -0.5
EDMD  Edmundbyers       80.82  35⇓eP      P        14 28 04.3 -0.3
EDMD                               IAMs_20 IAMs_20 14 53 58.2
      comp=Z,10µm,22.6s
KIP   Kipapa            80.83 291ceP      P        14 28 05.9 +0.6
KIP                                pmax   pmax
      comp=Z,1µm,2.5s
TCOL  CIGO, UAF Yank    80.83 336  P      P        14 28 03.9 -0.5
      baz=107,SNR=24
OPA   Opana             80.83 292 eP      P        14 28 07.2 +1.8
HPK   Haverah Park      80.85  35⇓eP      P        14 28 04.5 -0.3
HPK                                IAmb   IAmb     14 28 10.0
      comp=Z,720nm,1.1s
HPK                                IAMs_20 IAMs_20 14 57 47.2
      comp=Z,21µm,20.9s
MCK   McKinley          80.94 335 eP      P        14 28 04.9 -0.2
MCK   McKinley          80.94 335 eP      P        14 28 04.9 -0.2
DRUM  Mains of Drumt    80.96  32⇓eP      P        14 28 04.8 -0.5
DRUM                              e                14 37 57.4
DRUM                               IAMs_20 IAMs_20 14 57 05.8
      comp=Z,13µm,23.7s
MDM   Murphy Dome       81.00 336 eP      P        14 28 05.0 -0.4
SUA   Susitna One       81.15 332 eP      P        14 28 06.4 +0.1
GDLE  Glaisdale, N Y    81.40  35⇓eP      P        14 28 07.6  0.0
GDLE                               IAmb   IAmb     14 28 12.0
      comp=Z,988nm,1.0s
GDLE                               IAMs_20 IAMs_20 14 58 16.3
      comp=Z,18µm,19.3s
TRF   Thorofare Moun    81.45 334 eP      P        14 28 07.5 -0.5
OHAK  Old Harbor        81.48 328 eP      P        14 28 07.6 -0.3
HMNX  Herstmonceux      81.50  39⇓eP      P        14 28 08.3 +0.1
HMNX                               IAmb   IAmb     14 28 13.6
      comp=Z,1µm,1.2s
HMNX                              e                14 38 00.2
HMNX                               IAMs_20 IAMs_20 14 56 59.2
      comp=Z,18µm,21.1s
LMK   Market Rasen      81.52  36⇓eP      P        14 28 08.0 -0.2
LMK                                IAmb   IAmb     14 28 13.6
      comp=Z,936nm,1.0s
LMK                                IAMs_20 IAMs_20 14 59 52.4
      comp=Z,18µm,20.6s
RSO   Redoubt South     81.87 331 eP      P        14 28 10.0 -0.3
BPAW  Bear Paw Mtn.     81.92 335 eP      P        14 28 09.7 -0.5
WACR  West Acre         81.97  37⇓eP      P        14 28 10.2 -0.4
WACR                               IAmb   IAmb     14 28 14.6
      comp=Z,1µm,0.9s
ELSH  Elham, Standar    82.04  39⇓eP      P        14 28 11.1  0.0
ELSH                               IAmb   IAmb     14 28 16.8
      comp=Z,1µm,1.1s
ELSH                               IAMs_20 IAMs_20 14 57 17.8
      comp=Z,15µm,18.5s
MLY   Manley            82.05 336 eP      P        14 28 10.3 -0.7
DAG   Danmarks Havn     82.14  11⇓iP      P        14 28 10.8 -0.3
DAG                               i                14 29 04.2
DAG   Danmarks Havn     82.14  11⇓iP      P        14 28 10.8 -0.3
PPLA  Purkeypile        82.15 334 eP      P        14 28 11.3 -0.3
CAST  Castle Rocks      82.22 334 eP      P        14 28 11.3 -0.5
JMIC  Jan Mayen         82.26  18  P      P        14 28 13.4 +1.5
      comp=Z,186nm,0.8s,baz=180,slow=1.7,SNR=8.4
JMIC  Jan Mayen         82.26  18 eP      P        14 28 10.0 -1.8
JMIC                               IVmB_BB         14 28 18.7
      comp=Z,11µm,2.5s
JMIC                              eS      S        14 38 16.3 +1.3
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LRW	**Lerwick**	**82.29**	**29**	⇓*e*P	**P**	**14 28 11.9**	**-0.3**
LRW				IAmb	IAmb	14 28 17.2	
	comp=Z,357nm,0.8s						
CLF	**Chambon-Foret**	**82.35**	**42**	*e*P	**P**	**14 28 13.3**	**+0.5**
COLD	**Coldfoot**	**82.41**	**338**	*e*P	**P**	**14 28 13.2**	**+0.5**
MAHO	**Mahon**	**82.99**	**50**	*i* P	**P**	**14 28 14.5**	**-1.7**
MAHO				*i* S	**S**	**14 38 22.2**	**-1.3**
TAM	**Tamanrasset**	**83.13**	**67**	*e*P	**P**	**14 28 18.5**	**+1.0**
TAM	**Tamanrasset**	**83.13**	**67**	*e*P	**P**	**14 28 18.5**	**+1.0**
RAR	**Rarotonga**	**83.20**	**249**	*e*P	**P**	**14 28 22.2**	**+4.5**
RAR	**Rarotonga**	**83.20**	**249**	P	**P**	**14 28 17.6**	**-0.1**
	baz=173,slow=8.1						
RAR				LR	LR	14 58 06.9	
	comp=Z,5µm,18.7s,baz=76,slow=30						
SVW2	**Sparrevohn**	**83.36**	**331**	*e*P	**P**	**14 28 16.6**	**-1.2**
IM3	**Indian Mountai**	**83.49**	**336**	*e*P	**P**	**14 28 16.0**	**-2.3**
SET	**Setif**	**83.62**	**54**	P	**P**	**14 28 21.0**	**+1.3**
SSB	**Saint Sauveur**	**83.63**	**45**	*e*P	**P**	**14 28 19.9**	**+0.4**
SSB	**Saint Sauveur**	**83.63**	**45**	*e*P	**P**	**14 28 19.9**	**+0.4**
VNA3	**Neumayer Olymp**	**83.96**	**162**	P	**P**	**14 28 21.9**	**+1.3**
UCC	**Uccle**	**84.02**	**39**	*e*P	**P**	**14 28 21.6**	**+0.3**
UCC	**Uccle**	**84.02**	**39**	⇓P	**P**	**14 28 20.8**	**-0.5**
UCC				⇑PcP	**PcP**	**14 28 24.5**	**-0.4**
	comp=Z,354nm,2.3s						
UCC				⇓pP	**pP**	**14 29 00.3**	**+2.1**
UCC				⇓sP	**sP**	**14 29 11.7**	**-2.0**
UCC				⇓PP	**PP**	**14 31 38.8**	**+1.7**
DOU	**Dourbes**	**84.11**	**40**	⇓P	**P**	**14 28 21.6**	**-0.1**
DOU				pP	**pP**	**14 28 57.3**	**-1.4**
DOU				⇑PKiKP	**PKiKP**	**14 33 31.2**	**-4.6**
CHGN	**Chignik**	**84.11**	**326**	*e*P	**P**	**14 28 21.0**	**-0.6**
VNA1	**Neumayer--Stat**	**84.18**	**162**	P	**P**	**14 28 23.6**	**+2.0**
VNA2	**Neumayer--Watz**	**84.54**	**162**	P	**P**	**14 28 24.9**	**+1.4**
	baz=305,slow=5.2						
BEBN	**Eben Emael**	**84.86**	**39**	⇓P	**P**	**14 28 25.4**	**0.0**
BEBN				⇓PcP	**PcP**	**14 28 28.8**	**+0.3**
BEBN				⇓pP	**pP**	**14 29 02.5**	**+0.1**
BEBN				⇓PP	**PP**	**14 31 46.0**	**+2.1**
HGN	**Heimansgroeve**	**85.02**	**39**	*e*P	**P**	**14 28 26.5**	**+0.2**
	comp=Z,5µm,2.1s						
HGN	**Heimansgroeve**	**85.02**	**39**	*e*S	**S**	**14 38 46.2**	**+2.9**
MEM	**Membach**	**85.05**	**39**	⇓P	**P**	**14 28 26.6**	**+0.1**
	comp=Z,538nm,1.9s						
WLF	**Walferdange**	**85.07**	**40**	*e*P	**P**	**14 28 27.0**	**+0.4**
WLF	**Walferdange**	**85.07**	**40**	*e*P	**P**	**14 28 27.0**	**+0.4**
WLF	**Walferdange**	**85.07**	**40**	⇑P	**P**	**14 28 27.1**	**+0.4**
	comp=Z,868nm,1.8s						
BNI	**Bardonecchia**	**85.12**	**45**	*e*P	**P**	**14 28 27.8**	**+0.7**
BNI	**Bardonecchia**	**85.12**	**45**	*e*P	**P**	**14 28 27.8**	**+0.7**
SUE	**Sulen**	**85.33**	**29**	*e*P	**P**	**14 28 26.7**	**-0.9**
SUE				IVmB_BB		14 28 33.8	
	comp=Z,13µm,4.0s						
SUE				*e*PP	**PP**	**14 31 44.7**	**-2.7**
SUE				IVMsBB		14 56 33.0	
	comp=Z,4µm,19.8s						
SUE				IVMs_BB	IVMs_BB	15 02 43.4	
	comp=Z,4µm,23.0s						
KMY	**Karmoy**	**85.37**	**31**	*e*P	**P**	**14 28 27.9**	**+0.1**
KMY				IVmB_BB		14 28 33.4	
	comp=Z,12µm,2.7s						
KMY				*e*		14 38 45.5	
KMY				IVMsBB		14 59 58.4	
	comp=Z,5µm,16.0s						
FOO	**Floro**	**85.52**	**28**	*e*P	**P**	**14 28 27.6**	**-0.9**
FOO				IAmb	IAmb	14 28 34.2	
	comp=Z,438nm,1.2s						
FOO				*e*		14 38 46.0	
FOO				IVMsBB		14 57 22.9	
	comp=Z,4µm,19.7s						
BER	**Bergen**	**85.53**	**30**	*e*P	**P**	**14 28 30.1**	**+1.5**
BER				IVmB_BB		14 28 34.5	
	comp=Z,12µm,2.2s						
BER				*e*S	**SKSac**	**14 38 39.4**	**-0.8**
BER				*e*ScS	**ScS**	**14 38 55.4**	**-1.8**
SENIN	**Lac Senin/Sane**	**85.63**	**44**	*e*P	**P**	**14 28 30.2**	**+0.4**
ECH	**Echery**	**85.64**	**42**	*e*P	**P**	**14 28 29.3**	**-0.2**
ECH	**Echery**	**85.64**	**42**	*e*P	**P**	**14 28 29.3**	**-0.2**
WTSB	**Winterswijk**	**85.64**	**38**	*e*P	**P**	**14 28 29.7**	**+0.4**
	comp=Z,5µm,1.6s						
BLS5	**Blasjo**	**86.01**	**31**	*e*P	**P**	**14 28 32.2**	**+1.2**
BLS5				IVmB_BB		14 28 37.3	
	comp=Z,16µm,2.3s						
BLS5				*e*		14 38 48.6	
BLS5				IVMsBB		15 00 26.1	
	comp=Z,4µm,18.1s						
HYA	**Hoyanger**	**86.03**	**29**	*e*P	**P**	**14 28 30.9**	**-0.1**
HYA				IVmB_BB		14 28 36.8	
	comp=Z,10µm,2.2s						
HYA				*e*PP	**PP**	**14 31 50.3**	**-2.7**
HYA				*e*SKSac	**SKSac**	**14 38 41.6**	**-1.6**
HYA				IVMs_BB	IVMs_BB	15 03 10.4	
	comp=Z,4µm,19.8s						
ODD1	**Odda**	**86.14**	**30**	*e*P	**P**	**14 28 32.6**	**+1.0**
ODD1				IVmB_BB		14 28 38.1	
	comp=Z,14µm,2.5s						
ODD1				*e*PP	**PP**	**14 31 52.9**	**-1.2**
ODD1				*e*SKSac	**SKSac**	**14 38 46.4**	**+2.2**
ODD1				*e*ScS	**ScS**	**14 38 58.5**	**-3.8**
SNAA	**Sanae**	**86.17**	**162**	P	**P**	**14 28 32.9**	**+1.3**
SNAA	**Sanae**	**86.17**	**162**	*e*P	**P**	**14 28 32.6**	**+0.9**
SNAA				PP	**PP**	**14 31 55.8**	**+1.8**
SNAA				S	**SKSac**	**14 38 42.1**	**-1.8**
SNAA	**Sanae**	**86.17**	**162**	*c* *i*P	**P**	**14 28 32.9**	**+1.3**
SNAA	**Sanae**	**86.17**	**162**	PP	PP	14 31 55.8	+1.8
	baz=305,slow=6.0						
SNAA				S	**SKSac**	**14 38 42.1**	**-1.8**
	comp=Z,4.2nm,0.9s,baz=180,slow=20,SNR=4.1						
SNART	**Snartemo**	**86.32**	**32**	*e*P	**P**	**14 28 31.2**	**-1.3**
SNART				IVmB_BB		14 28 38.7	
	comp=Z,6µm,3.0s						
SNART				*e*PP	**PP**	**14 31 54.6**	**-0.9**
SNART				*e*SKSac	**SKSac**	**14 38 41.0**	**-4.2**
SNART				IVMs_BB	IVMs_BB	15 06 07.4	
	comp=Z,2µm,22.2s						
BFO	**Black Forest**	**86.43**	**42**	*e*P	**P**	**14 28 32.5**	**-0.8**
BFO	**Black Forest**	**86.43**	**42**	*i* P	**P**	**14 28 32.9**	**-0.5**
AKN	**Aaknes**	**86.50**	**28**	*e*P	**P**	**14 28 34.3**	**+0.9**
AKN				IVmB_BB		14 28 39.4	
	comp=Z,14µm,1.8s						
AKN				*e*PP	**PP**	**14 31 56.1**	**-0.7**
AKN				*e*		14 38 59.6	
AKN				*e*SS	SS	14 44 40.1	-0.8
MOL	**Molde**	**86.78**	**28**	*e*P	**P**	**14 28 35.5**	**+0.8**
MOL				IVmB_BB		14 28 40.9	
	comp=Z,8µm,3.0s						
MOL				*e*		14 38 51.4	
KEST	**Kesra**	**86.81**	**54**	P	**P**	**14 28 36.0**	**+0.5**
	comp=Z,106nm,1.1s,baz=220,slow=3.9,SNR=14						
KEST				PP	**PP**	**14 32 00.5**	**+0.3**
	comp=Z,230nm,1.0s,baz=184,slow=7.8,SNR=5.8						
KEST				S	**SKSac**	**14 38 54.0**	**+4.5**
	comp=Z,12nm,1.1s,baz=102,slow=23,SNR=8.7						
KEST				LR	LR	15 06 05.2	
	comp=Z,12µm,20.3s,baz=217,slow=35						
HOMB	**Homborsund**	**87.00**	**32**	*e*P	**P**	**14 28 35.7**	**-0.1**
HOMB				IVmB_BB		14 28 42.2	
	comp=Z,10µm,4.1s						
HOMB				*e*		14 31 55.1	
HOMB				*e*SKSac	**SKSac**	**14 38 46.5**	**-2.8**
STU	**Stuttgart**	**87.02**	**41**	*e*P	**P**	**14 28 35.7**	**-0.5**
TUE	**Stuetta**	**87.05**	**44**	*e*P	**P**	**14 28 37.2**	**+0.5**
MUD	**Monsted U'grnd**	**87.28**	**34**	⇓*i*P	**P**	**14 28 38.2**	**+1.0**
MUD	**Monsted U'grnd**	**87.28**	**34**	⇓*i*P	**P**	**14 28 38.2**	**+1.0**
RDOG	**Red Dog Mine**	**87.34**	**338**	*e*P	**P**	**14 28 37.7**	**+0.3**
DAVOX	**Davos/Dischmat**	**87.43**	**43**	P	**P**	**14 28 39.0**	**+0.6**
	comp=Z,138nm,0.6s,baz=254,slow=5.9,SNR=144						
DAVOX				S	**SKSac**	**14 38 57.1**	**+4.1**
	comp=Z,6.0nm,1.0s,baz=58,slow=20,SNR=7.9						
DAVA	**Damuels**	**87.44**	**43**	*i* P	**P**	**14 28 39.0**	**+0.6**
	comp=Z,4µm,2.1s,SNR=228						
DAVA				*i* PKKPbc	**PKKPbc**	**14 46 28.3**	**-0.9**
	comp=Z,9.6nm,0.8s						
DOMB	**Dombas**	**87.46**	**28**	*e*P	**P**	**14 28 39.1**	**+1.1**
DOMB				IVmB_BB		14 28 44.6	
	comp=Z,7µm,3.8s						
DOMB				*i*		14 31 31.6	
DOMB				*e*ScS	**S**	**14 39 11.8**	**+5.1**
DOMB				*e*SS	**SS**	**14 44 54.3**	**-0.6**
KONO	**Kongsberg**	**87.62**	**31**	*e*P	**P**	**14 28 39.0**	**+0.2**
KONO	**Kongsberg**	**87.62**	**31**	*e*P	**P**	**14 28 39.0**	**+0.2**
KONO	**Kongsberg**	**87.62**	**31**	*e*P	**P**	**14 28 39.2**	**+0.4**
KONO				IVmB_BB		14 28 44.9	
	comp=Z,6µm,2.8s						
KONO				*e*		14 32 05.7	
KONO				*e*SKSac	**SKSac**	**14 38 53.8**	**+0.7**
KONO				IVMs_BB	IVMs_BB	15 01 14.0	
	comp=Z,5µm,21.3s						
FUORN	**Ofenpass-Fuorn**	**87.69**	**44**	*e*P	**P**	**14 28 40.2**	**+0.4**
FETA	**Feichten**	**88.01**	**43**	*i* P	**P**	**14 28 41.7**	**+0.5**
	comp=Z,2µm,1.9s,SNR=163						
FETA				*e*PKKPbc	**PKKPbc**	**14 46 26.9**	**-0.9**
	comp=Z,12nm,1.0s						
RETA	**Reutte**	**88.04**	**43**	*i* P	**P**	**14 28 41.4**	**+0.2**
	comp=Z,4µm,3.4s,SNR=115						
RETA				*i* PKKPbc	**PKKPbc**	**14 46 25.5**	**-2.1**
	comp=Z,10nm,1.4s						
TBLU	**Trondheim**	**88.05**	**27**	*e*P	**P**	**14 28 43.2**	**+2.4**
TBLU				IAmb	IAmb	14 28 46.5	
	comp=Z,2µm,1.9s						
ANM	**Nome**	**88.17**	**334**	*e*P	**P**	**14 28 41.9**	**+0.6**
ANM	**Nome**	**88.17**	**334**	*e*P	**P**	**14 28 41.9**	**+0.6**
OSL	**Oslo**	**88.20**	**30**	*e*P	**P**	**14 28 42.5**	**+1.0**
OSL				IVmB_BB		14 28 47.2	
	comp=Z,9µm,1.9s						
OSL				*e*SKSac	**SKSac**	**14 38 54.9**	**-1.6**
OSL				*e*ScS	**S**	**14 39 16.2**	**+2.6**
NC204	**NORSAR Array S**	**88.24**	**29**	*e*P	**P**	**14 28 42.2**	**+0.4**
NBO00	**NORSAR Array S**	**88.25**	**29**	*e*P	**P**	**14 28 42.3**	**+0.5**
MOTA	**Moosalm**	**88.27**	**43**	*i* P	**P**	**14 28 42.4**	**0.0**
	comp=Z,169nm,0.8s,SNR=110						
MOTA				*i* PKKPbc	**PKKPbc**	**14 46 25.8**	**-1.3**
	comp=Z,9.5nm,0.8s						
NAO01	**NORSAR Array S**	**88.30**	**29**	*e*P	**P**	**14 28 42.6**	**+0.6**
SQTA	**Sankt Quirin**	**88.34**	**43**	*i* P	**P**	**14 28 43.1**	**+0.4**
	comp=Z,2µm,2.2s,SNR=146						
SQTA				*e*PKKPbc	**PKKPbc**	**14 46 26.0**	**-1.0**
	comp=Z,7.5nm,0.7s						
GRFO	**Grafenberg**	**88.36**	**41**	*e*P	**P**	**14 28 43.2**	**+0.6**
GRFO	**Grafenberg**	**88.36**	**41**	*e*P	**P**	**14 28 43.2**	**+0.6**
GRA1	**Grafenberg Arr**	**88.36**	**41**	*e*P	**P**	**14 28 43.1**	**+0.5**
GRF	**Grafenberg Arr**	**88.36**	**41**	*e*P	**P**	**14 28 43.1**	**+0.5**
NB2	**NORSAR Subarra**	**88.46**	**29**	P	**P**	**14 28 43.1**	**+0.3**
	comp=Z,389nm,1.1s,baz=268,slow=4.6						
NB2	**NORSAR Subarra**	**88.46**	**29**	P	**P**	**14 28 43.1**	**+0.3**
	baz=268,slow=4.6						
NOA	**NORSAR Array B**	**88.46**	**29**	P	**P**	**14 28 43.1**	**+0.3**
	comp=Z,116nm,0.8s,baz=268,slow=4.7,SNR=109						
NOA				pP	**pP**	**14 29 18.9**	**-1.2**
	comp=Z,70nm,1.0s,baz=269,slow=4.8,SNR=2.3						
NOA				S	**SKSac**	**14 38 56.8**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=270,slow=8.8,SNR=2.1						
NOA				PKKPbc	**PKKPbc**	**14 46 24.6**	**-2.5**
	comp=Z,4.9nm,1.1s,baz=61,slow=1.1,SNR=5.1						
NOA				PKPPKP		14 54 29.1	
	comp=Z,3.5nm,1.0s,baz=260,slow=3.2,SNR=6.3						
NB201	**NORSAR Array S**	**88.50**	**29**	*e*P	**P**	**14 28 43.9**	**+1.0**
NC303	**NORSAR Array S**	**88.53**	**29**	*e*P	**P**	**14 28 43.7**	**+0.6**
WATA	**Walderalm**	**88.59**	**43**	*i* P	**P**	**14 28 43.8**	**-0.1**
	comp=Z,738nm,1.4s,SNR=82						
WATA				*e*PKKPbc	**PKKPbc**	**14 46 24.8**	**-1.5**
	comp=Z,5.8nm,0.5s						
UNV	**Unalaska Valle**	**88.60**	**324**	*e*P	**P**	**14 28 44.2**	**+0.7**
NC602	**NORSAR Array S**	**88.61**	**29**	*e*P	**P**	**14 28 44.6**	**+1.1**
NC602	**NORSAR Array S**	**88.61**	**29**	*e*P	**P**	**14 28 43.9**	**+0.4**
NC602				IVmB_BB		14 28 50.0	
	comp=Z,9µm,3.6s						
WTTA	**Wattenberg**	**88.63**	**43**	*i* P	**P**	**14 28 44.4**	**+0.3**
	comp=Z,2µm,2.5s,SNR=61						
WTTA				*i* PKKPbc	**PKKPbc**	**14 46 25.3**	**-1.0**
	comp=Z,12nm,0.8s						
NC405	**NORSAR Array S**	**88.70**	**29**	*e*P	**P**	**14 28 44.4**	**+0.4**
NSS	**Namsos**	**88.83**	**26**	*e*P	**P**	**14 28 42.0**	**-2.4**
NSS				IVmB_BB		14 28 50.4	
	comp=Z,7µm,3.0s						
NSS				*e*		14 39 21.1	
NSS				IVMsBB		15 04 14.1	
	comp=Z,3µm,17.8s						
KBS	**Kingsbay**	**88.88**	**11**	*e*P	**P**	**14 28 46.1**	**+1.7**
KBS	**Kingsbay**	**88.88**	**11**	*ce*P	**P**	**14 28 45.7**	**+1.3**
KBS				pmax	pmax		
	comp=Z,2µm,1.7s						
KBS	**Kingsbay**	**88.88**	**11**	*e*P	**P**	**14 28 44.3**	**-0.1**
KBS				IVmB_BB		14 28 51.6	
	comp=Z,6µm,3.2s						
KBS				*e*PP	**PP**	**14 32 17.0**	**+1.5**
KBS				*e*SKSac	**SKSac**	**14 39 03.0**	**+3.0**
KBS				IVMs_BB	IVMs_BB	15 08 01.3	
	comp=Z,5µm,17.6s						
COP	**Copenhagen**	**89.09**	**34**	⇓*i*P	**P**	**14 28 46.7**	**+0.9**
	comp=Z,323nm,1.1s						
	comp=Z,9µm,21.0s						
COP	**Copenhagen**	**89.09**	**34**	⇓*i*P	**P**	**14 28 46.7**	**+0.9**
COP				pmax	pmax		
	comp=Z,320nm,1.1s						
COP				MLR	MLR		
	comp=Z,9µm,21.0s						
NKC	**Novy Kostel**	**89.15**	**40**	*e*P	**P**	**14 28 47.5**	**+1.2**
NKC				*e*pP	**pP**	**14 29 24.9**	**+1.3**
NKC				*e*PP	**PP**	**14 32 19.4**	**+0.9**
NKC				*e*SKS	**SKSac**	**14 39 07.4**	**+4.6**
NKC				*e*S	**ScS**	**14 39 27.2**	**-0.5**
NKC				*e*XS	**sS**	**14 40 24.1**	**-4.2**
NKC				AMS	AMS	15 00 00.0	
	comp=Z,20µm,22.8s						
NKC	**Novy Kostel**	**89.15**	**40**	*e*P	**P**	**14 28 47.5**	**+1.2**
NKC				*e*		14 29 24.9	
NKC				*e*		14 32 19.4	
NKC				*e*		14 39 07.4	
NKC				*e*S	**ScS**	**14 39 27.2**	**-0.5**
NKC				MLR	MLR		
	comp=Z,20µm,22.8s						
ABTA	**Abfaltersbach**	**89.24**	**43**	*i* P	**P**	**14 28 47.2**	**+0.3**
	comp=Z,3µm,2.5s,SNR=124						
KONS	**Konsvik**	**89.29**	**24**	*e*P	**P**	**14 28 47.0**	**+0.5**
KONS				*e*		14 38 46.0	
LOF	**Lofoten**	**89.42**	**22**	*e*P	**P**	**14 28 47.7**	**+0.6**
LOF				IVmB_BB		14 28 53.1	
	comp=Z,7µm,3.9s						
LOF				*e*PP	**PP**	**14 32 18.5**	**-1.5**
LOF				*e*SKSac	**SKSac**	**14 39 04.0**	**+0.5**
LOF				*e*SP	SP	14 40 30.1	0.0
LOF				IVMsBB		14 59 26.2	
	comp=Z,4µm,26.1s						
CLL	**Collm**	**89.49**	**39**	*e*P	**P**	**14 28 48.4**	**+0.6**
CLL	**Collm**	**89.49**	**39**	⇓*i*P	**P**	**14 28 48.3**	**+0.6**
	comp=Z,303nm,1.5s						
CLL				⇑*i*Pmax		14 28 52.7	
	comp=Z,778nm,1.6s						
CLL				*e*Pmax		14 28 52.0	
CLL				*e*pP	**pP**	**14 29 25.0**	**-0.2**
CLL				*e*sP	**sP**	**14 29 36.0**	**-4.6**
CLL				*e*		14 31 13.0	
CLL				*i*		14 31 46.3	
CLL				*e*PP	**PP**	**14 32 18.0**	**-3.0**
CLL				*e*sPP		14 33 06.0	
CLL				*e*		14 38 21.0	
CLL				*e*SKSac	**SKSac**	**14 39 06.0**	**+1.4**
CLL				*e*S	**S**	**14 39 28.0**	**+1.8**
	comp=N,18µm,29.8s						
CLL				*e*S	**S**	**14 39 28.0**	**+1.8**
	comp=E,14µm,24.2s						
CLL				*i* pS	**pS**	**14 40 16.6**	**+2.6**
CLL				*e*SP	SP	14 40 34.0	+2.4
CLL				*e*PS	**PS**	**14 40 49.0**	**-1.3**
CLL				*e*PPS	PPS	14 41 17.0	
CLL				*e*SS	SS	14 45 12.0	-13
CLL				*e*sSS		14 46 06.0	
CLL				*e*SSS	SSS	14 48 48.0	
CLL				*e*		14 49 07.0	
CLL				*e*SKKPbc	**SKKPbc**	**14 49 45.0**	**-4.3**
CLL				*e*PKPPKPdf		14 54 32.0	
CLL				*e*		14 54 59.0	
CLL				Lm	MLR	15 06 00.0	
	comp=Z,13µm,21.0s						
CLL				*e*3PKPbc		15 15 26.0	
CLL				*e*		15 16 03.0	
CLL	**Collm**	**89.49**	**39**	*e*P	**P**	**14 28 48.4**	**+0.6**
RGN	**Rugen**	**89.62**	**36**	*e*P	**P**	**14 28 49.3**	**+1.1**
RGN	**Rugen**	**89.62**	**36**	*e*P	**P**	**14 28 48.9**	**+0.6**
RGN				IAmb	IAmb	14 28 55.1	
	comp=Z,326nm,0.9s						
HSPB	**Hornsund (broa**	**89.68**	**13**	*e*P	**P**	**14 28 49.7**	**+1.6**
HSPB				*e*		14 32 25.6	
HSPB				*e*		14 39 04.9	
HSPB				*e*S	**S**	**14 39 32.7**	**+5.8**
HSPB				*e**SS	**sS**	**14 40 33.6**	**+2.2**
HSPB	**Hornsund (broa**	**89.68**	**13**	*e*P	**P**	**14 28 48.2**	**+0.1**
HSPB				IVmB_BB		14 28 55.3	
	comp=Z,7µm,4.5s						
HSPB				*e*SKSac	**SKSac**	**14 39 06.4**	**+1.7**
HSPB				IVMsBB		15 01 13.6	
	comp=Z,4µm,23.6s						
HFS	**Hagfors**	**89.69**	**30**	P	**P**	**14 28 48.2**	**-0.3**
	comp=Z,150nm,0.8s,baz=197,slow=1.5,SNR=81						
HFS				S	**SKSac**	**14 39 02.7**	**-2.7**
	comp=Z,3.0nm,0.9s,baz=226,slow=5.8,SNR=2.1						
SPA0	**Spitsbergen Ar**	**89.78**	**12**	*e*P	**P**	**14 28 49.4**	**+0.8**
SPA0	**Spitsbergen Ar**	**89.78**	**12**	*e*P	**P**	**14 28 49.0**	**+0.3**
SPA0				IAmb	IAmb	14 28 54.0	
	comp=Z,338nm,1.0s						
SPA0				*e*SKSac	**SKSac**	**14 39 01.3**	**-4.1**
SPA0				IAMs_20	IAMs_20	14 40 33.0	
	comp=Z,10µm,14.9s						
SPA0				*e*SP	**SP**	**14 40 35.6**	**+1.8**
SPA0				IVMs_BB	IVMs_BB	15 09 23.3	
	comp=Z,4µm,18.0s						
SPITS	**Spitsbergen Ar**	**89.78**	**12**	P	**P**	**14 28 49.0**	**+0.3**
SPITS	**Spitsbergen Ar**	**89.78**	**12**	P	**P**	**14 28 49.0**	**+0.3**
	comp=Z,342nm,1.0s,baz=181,slow=3.3,SNR=123						
KBA	**Koelnbreinsper**	**89.80**	**43**	*i* P	**P**	**14 28 49.7**	**+0.1**
	comp=Z,3µm,3.4s,SNR=36						
KBA				*e*PKKPdf	**PKKPdf**	**14 46 17.9**	**-0.8**
	comp=Z,5.5nm,0.9s						
MOR8	**Moi Rana**	**89.83**	**24**	*e*P	**P**	**14 28 50.7**	**+1.6**
MOR8				IVmB_BB		14 28 55.8	
	comp=Z,5µm,3.7s						
MOR8				*e*PP	**PP**	**14 32 22.5**	**-0.9**
MOR8				*e*SKSac	**SKSac**	**14 39 06.8**	**+0.7**
MOR8				IVMsBB		15 02 02.5	
	comp=Z,4µm,23.7s						
KHC	**Kasperske Hory**	**89.91**	**41**	*e*P	**P**	**14 28 50.0**	**+0.1**
KHC	**Kasperske Hory**	**89.91**	**41**	*e*P	**P**	**14 28 50.1**	**+0.2**
KHC				*e*x	x	14 28 55.8	
KHC				*e*pP	**pP**	**14 29 29.3**	**+2.0**
KHC				*e*PP	**PP**	**14 32 27.0**	**+2.5**
KHC				*e*SKS	**SKSac**	**14 39 10.5**	**+3.2**
KHC				*e*S	**ScS**	**14 39 33.4**	**-0.6**
KHC				*e*XS	**sS**	**14 40 32.6**	**-2.8**
KHC				AMS	AMS	15 03 10.0	
	comp=Z,9µm,20.0s						
KHC	**Kasperske Hory**	**89.91**	**41**	*e*P	**P**	**14 28 50.1**	**+0.2**
KHC				*e*		14 29 29.3	
KHC				*e*		14 32 27.0	
KHC				*e*		14 39 10.5	
KHC				*e*S	**ScS**	**14 39 33.4**	**-0.6**
KHC				MLR	MLR		
	comp=Z,9µm,20.0s						
ROBS	**Robic**	**89.93**	**44**	*e*P	**P**	**14 28 50.0**	**+0.1**
RUE	**Ruedersdorf**	**89.95**	**38**	*e*P	**P**	**14 28 50.2**	**+0.4**
RUE				IAmb	IAmb	14 28 55.8	
	comp=Z,445nm,1.4s						
AQU	**L'Aquila**	**89.95**	**48**	*e*P	**P**	**14 28 50.2**	**0.0**
AQU	**L'Aquila**	**89.95**	**48**	*e*P	**P**	**14 28 50.2**	**0.0**
AQU	**L'Aquila**	**89.95**	**48**	*e*P	**P**	**14 28 49.9**	**-0.3**
GEC2	**GERESS Array S**	**90.00**	**41**	*e*P	**P**	**14 28 50.5**	**+0.1**
GEC2	**GERESS Array S**	**90.00**	**41**	*e*P	**P**	**14 28 50.5**	**+0.1**
GERES	**GERESS Array B**	**90.00**	**41**	P	**P**	**14 28 50.5**	**+0.1**
	comp=Z,38nm,0.7s,baz=271,slow=2.9,SNR=128						
GERES				S	**SKSac**	**14 39 08.6**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=255,slow=6.0,SNR=1.9						
GERES				PKKPbc	**PKKPbc**	**14 46 22.1**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=45,slow=1.5,SNR=4.6						
GERES				PKPPKP		14 54 27.4	
	comp=Z,1.3nm,1.0s,baz=222,slow=1.6,SNR=5.4						
GEA0	**GERESS Array S**	**90.00**	**41**	*e*P	**P**	**14 28 50.8**	**+0.5**
MYKA	**Terra Mystica**	**90.02**	**44**	*i* P	**P**	**14 28 50.7**	**+0.3**
	comp=Z,3µm,3.2s,SNR=58						
NIKH	**Nikolski High**	**90.02**	**323**	*e*P	**P**	**14 28 51.5**	**+1.2**
STEI	**Steigen**	**90.07**	**22**	*e*P	**P**	**14 28 49.5**	**-0.6**
STEI				IAmb	IAmb	14 28 55.7	
	comp=Z,138nm,0.7s						
STEI				*e*		14 32 20.1	
STEI				*e*SKSac	**SKSac**	**14 39 04.2**	**-3.0**
STEI				*e*SP	**SPn**	**14 40 36.0**	**-1.4**
STEI				IVMsBB		14 59 44.9	
	comp=Z,4µm,29.0s						
CADS	**Cadrg**	**90.09**	**44**	⇓*i*P	**P**	**14 28 51.0**	**+0.2**
CADS				*e*pP	**pP**	**14 29 29.3**	**+1.1**
CADS				*e*SKSac	**SKSac**	**14 39 10.4**	**+2.0**
CADS				*e*S	**S**	**14 39 33.5**	**+1.4**
CADS				*e*		14 53 25.2	
BRG	**Berggiesshubel**	**90.09**	**39**	⇓*i*P	**P**	**14 28 51.3**	**+0.7**
	comp=Z,283nm,1.6s						
BRG				*i*		14 28 55.8	
	comp=Z,826nm,1.6s						
BRG				*i* sP	**sP**	**14 29 38.4**	**-5.0**
	comp=Z,338nm,1.4s						
BRG				S	**S**	**14 39 27.0**	**-4.8**
BRG				SS	SS	14 45 17.0	-17
BRG				*e*PKPPKP		14 54 30.3	
	comp=Z,18nm,1.5s						
BRG	**Berggiesshubel**	**90.09**	**39**	⇓*i*P	**P**	**14 28 51.3**	**+0.7**
BRG				S	**S**	**14 39 27.0**	**-4.8**
BRG				pmax	pmax		
	comp=Z,283nm,1.6s						
BRG				pmax	pmax		
	comp=N,338nm,1.5s						
TRI	**Trieste**	**90.13**	**44**	*e*P	**P**	**14 28 51.5**	**+0.6**
TRI	**Trieste**	**90.13**	**44**	*e*P	**P**	**14 28 51.5**	**+0.6**
MOA	**Molln**	**90.40**	**42**	*i* P	**P**	**14 28 52.4**	**+0.2**
	comp=N,2µm,2.5s,SNR=93						
PRA	**Prague**	**90.44**	**40**	*e*P	**P**	**14 28 53.2**	**+1.0**
PRA				*e*PP	**PP**	**14 32 30.3**	**+1.7**
PRA				*e*SKS	**SKSac**	**14 39 14.9**	**+4.8**
PRA				*e*S	**ScS**	**14 39 37.5**	**-0.7**
PRA				AMS	AMS	15 00 40.0	
	comp=N,18µm,23.2s						
PRA	**Prague**	**90.44**	**40**	*e*P	**P**	**14 28 53.2**	**+1.0**
PRA				*e*		14 32 30.3	
PRA				*e*		14 39 14.9	
PRA				*e*S	**ScS**	**14 39 37.5**	**-0.7**
PRA				MLR	MLR		
	comp=Z,18µm,23.2s						
CRNS	**Crni Vrh**	**90.46**	**44**	⇓*i*P	**P**	**14 28 52.8**	**+0.3**
CRNS				*e*pP	**pP**	**14 29 31.2**	**+1.3**
PVCC	**Panska Ves**	**90.50**	**40**	*e*P	**P**	**14 28 53.7**	**+1.2**
PVCC				*e*x	x	14 28 57.1	
PVCC				*e*PP	**PP**	**14 32 30.6**	**+1.5**
PVCC				*e*SKS	**SKSac**	**14 39 14.0**	**+3.5**
PVCC				*e*XS	**sS**	**14 40 36.0**	**-4.3**
PVCC				AMS	AMS	15 02 10.0	
	comp=Z,12µm,22.1s						
PVCC	**Panska Ves**	**90.50**	**40**	*e*P	**P**	**14 28 53.7**	**+1.2**
PVCC				*e*		14 32 30.6	
PVCC				*e*		14 39 14.0	
PVCC				MLR	MLR		
	comp=Z,12µm,22.1s						
PRU	**Pruhonice**	**90.51**	**40**	*e*P	**P**	**14 28 53.7**	**+1.1**
PRU				*e*x	x	14 28 57.0	
PRU				*e*pP	**pP**	**14 29 31.0**	**+1.1**
PRU				*e*PP	**PP**	**14 32 31.1**	**+1.9**
PRU				*e*SKS	**SKSac**	**14 39 15.3**	**+4.7**
PRU				*e*S	**ScS**	**14 39 38.3**	**-0.6**
PRU				*e*XS	**sS**	**14 40 39.4**	**-1.5**
PRU				AMS	AMS	15 05 20.0	
	comp=Z,15µm,20.2s						
PRU	**Pruhonice**	**90.51**	**40**	*e*P	**P**	**14 28 53.7**	**+1.1**
PRU				*e*		14 29 31.0	
PRU				*e*		14 32 31.1	
PRU				*e*		14 39 15.3	
PRU				*e*S	**ScS**	**14 39 38.3**	**-0.6**
PRU				MLR	MLR		
	comp=Z,15µm,20.2s						
BSD	**Bornholm Skovb**	**90.52**	**35**	⇓*i*P	**P**	**14 28 53.1**	**+0.6**
	comp=Z,183nm,1.0s						
	comp=Z,10µm,20.0s						
BSD	**Bornholm Skovb**	**90.52**	**35**	⇓*i*P	**P**	**14 28 53.1**	**+0.6**
BSD				pmax	pmax		
	comp=Z,180nm,1.0s						
BSD				MLR	MLR		
	comp=Z,10µm,20.0s						
CEY	**Cerknica**	**90.59**	**44**	⇓*i*P	**P**	**14 28 53.3**	**+0.2**
LJU	**Ljubljana**	**90.65**	**44**	⇓*i*P	**P**	**14 28 53.8**	**+0.4**
LJU				*e*pP	**pP**	**14 29 32.2**	**+1.5**
LJU				*e*PP	**PP**	**14 32 32.2**	**+1.8**
LJU				*e*SKSac	**SKSac**	**14 39 11.6**	**0.0**
LJU				*e*S	**ScS**	**14 39 39.0**	**-1.2**
LJU				*e*		14 40 27.5	
LJU				*e*SS	**SS**	**14 45 49.1**	**+7.1**
LJU				*e*		14 52 16.3	

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LJU   Ljubljana         90.65  44⇓iP       P       14 28 53.6 +0.3
SPIA  Saint Paul Isl    90.66 327 eP       P       14 28 54.6 +1.6
GOPC  GO Pecny, Ondr    90.67  40 eP       P       14 28 55.1 +1.7
GOPC                              ex       x       14 28 58.0
GOPC                              epP      pP      14 29 31.9 +1.2
GOPC                              eSKS     SKSac   14 39 15.7 +4.1
GOPC                              eS       ScS     14 39 40.2 -0.1
GOPC                               AMS     AMS     15 00 40.0
      comp=Z,18µm,24.8s
GOPC  GO Pecny, Ondr    90.67  40 eP       P       14 28 55.1 +1.7
GOPC                              e                14 29 31.9
GOPC                              e                14 39 15.7
GOPC                              eS       ScS     14 39 40.2 -0.1
GOPC                               MLR     MLR
      comp=Z,18µm,24.8s
NVL   N'lazarevskaya    90.74 161 eP       P       14 28 52.7 -0.4
NVL                               eS       SKSac   14 39 11.1 +0.1
NVL                                pmax    pmax
      comp=Z,371nm,1.0s
BJO   Bjornoya          90.79  15 eP       P       14 28 53.9 +0.5
BJO                               eSKSac   SKSac   14 39 11.4 +0.1
VAE   Valguarnera       90.87  53  P       P       14 28 55.8 +1.2
      comp=Z,93nm,1.1s,baz=41,slow=4.7,SNR=7.6
VAE                                S       SKSac   14 39 21.2 +7.9
      comp=Z,9.9nm,0.3s,baz=205,slow=19,SNR=2.5
NVLJ  Novalja           90.95  46  P       P       14 28 56.0 +1.3
GAMB  Gambell           90.96 334 eP       P       14 28 55.0 +0.7
SOKA  Soboth            90.97  43 i P      P       14 28 54.9  0.0
      comp=Z,2µm,3.6s,SNR=23
SOKA                              ePKKPbc  PKKPbc  14 46 18.5 -1.8
      comp=Z,9.8nm,1.0s
PERS  Pernice           91.03  44⇓iP       P       14 28 54.8 -0.4
PERS                              epP      pP      14 29 33.1 +0.5
PERS                              ePP      PP      14 32 33.9 +0.4
PERS                              eS       S       14 39 39.5 -1.2
PERS                              eSS      SS      14 45 52.6 +5.1
QSPA  South Pole Qui    91.08 180 eP       P       14 28 56.7 +1.7
QSPA                               S       SKSac   14 39 14.7 +1.3
QSPA                               PKKPbc  PKKPdf  14 46 19.2 +1.9
QSPA  South Pole Qui    91.08 180  S       SKSac   14 39 14.7 +1.3
      comp=Z,8.2nm,1.0s,baz=20,slow=22,SNR=6.2
QSPA                               PKKPbc  PKKPbc  14 46 19.2 -2.4
      comp=Z,16nm,1.0s,baz=271,slow=2.2,SNR=8.5
TREC  Trest             91.15  41 eP       P       14 28 56.7 +1.1
TREC                              ex       x       14 29 56.4
TREC                              ePP      PP      14 32 36.0 +1.7
TREC                              eSKS     SKSac   14 39 17.6 +3.2
TREC                              eS       ScS     14 39 43.2 -1.1
TREC                              eXS      sS      14 40 47.7 +0.8
TREC                               AMS     AMS     15 05 20.0
      comp=Z,11µm,22.3s
TREC  Trest             91.15  41 eP       P       14 28 56.7 +1.1
TREC                              e                14 32 36.0
TREC                              e                14 39 17.6
TREC                              eS       ScS     14 39 43.2 -1.1
TREC                               MLR     MLR
      comp=Z,11µm,22.3s
BOJS  Bojanci           91.18  45⇓iP       P       14 28 56.0 +0.2
BOJS                              epP      pP      14 29 34.8 +1.6
TRO   Tromso            91.27  20 eP       P       14 28 53.9 -1.7
TRO                                IVmB_BB         14 29 01.8
      comp=Z,5µm,4.5s
TRO                               ePP      PP      14 32 36.5 +2.0
TRO                               e                14 39 05.4
TRO                               eSP      SP      14 40 48.2 -2.3
TRO                                IVMsBB          15 00 41.5
      comp=Z,3µm,31.7s
ARSA  Arzberg           91.28  43 i P      P       14 28 56.3 +0.1
      comp=Z,2µm,2.5s,SNR=71
CRES  Cresnjev          91.31  44⇓iP       P       14 28 56.6 +0.2
OZLJ  Ozalj             91.32  45  P       P       14 28 56.0 -0.4
UPC   Upice             91.43  40 eP       P       14 28 58.1 +1.3
UPC                               ex       x       14 29 01.4
UPC                               ePP      PP      14 32 37.4 +1.0
UPC                               eSKS     SKSac   14 39 21.2 +5.4
UPC                               eS       ScS     14 39 46.9 +0.4
UPC                               eXS      sS      14 40 48.1 -0.8
UPC                                AMS     AMS     15 07 30.0
      comp=Z,13µm,20.2s
UPC   Upice             91.43  40 eP       P       14 28 58.1 +1.3
UPC                               e                14 32 37.4
UPC                               e                14 39 21.2
UPC                               eS       ScS     14 39 46.9 +0.4
UPC                                MLR     MLR
      comp=Z,13µm,20.2s
CONA  Conrad Observa    91.47  42 i PcP    P       14 28 57.7 +0.5
      comp=Z,3µm,3.0s,SNR=122
KSP   Ksiaz             91.58  39 eP       P       14 28 58.7 +1.1
KSP                               epP      pP      14 29 36.2 +1.2
KSP                               eSKSac   SKSac   14 39 21.4 +4.7
KSP                               eS       ScS     14 39 47.4 -0.4
KSP                               eSS      SS      14 46 05.7  +11
KSP                               eSSS     SSS     14 49 52.7
KSP   Ksiaz             91.58  39 eP       P       14 28 58.7 +1.1
KSP                               e*PP     pP      14 29 36.2 +1.2
KSP                               e                14 39 21.4
KSP                               eS       ScS     14 39 47.4 -0.4
KSP                               eSS      SS      14 46 05.7  +11
UDBI  Udbina            91.59  46  P       P       14 28 57.6 -0.2
DPC   Dobruska-Polom    91.63  40 eP       P       14 28 58.7 +0.8
DPC                               ex       x       14 29 02.5
DPC                               ex       x       14 29 53.8
DPC                               ePP      PP      14 32 39.6 +1.5
DPC                               eSKS     SKSac   14 39 19.4 +2.3
DPC                                AMS     AMS     15 01 10.0
      comp=Z,14µm,21.9s
DPC   Dobruska-Polom    91.63  40 eP       P       14 28 58.7 +0.8
DPC                               e                14 32 39.6
DPC                               e                14 39 19.4
DPC                                MLR     MLR
      comp=Z,14µm,21.9s
KRUC  Moravsky          91.76  41⇓iP       P       14 28 59.0 +0.6
KRUC                              epP      pP      14 29 37.2 +1.4
KRUC                              e                14 32 00.7
KRUC                              ePP      PP      14 32 40.5 +1.4
KRUC                              eSKS     SKSac   14 39 19.8 +2.0
KRUC                              eS       S       14 39 47.4 +0.4
KRUC                              esS      sS      14 40 51.5 -0.5
KOGS  Kog               91.82  44⇓iP       P       14 28 59.2 +0.5
KOGS                              epP      pP      14 29 37.4 +1.3
VRAC  Vranov            91.88  41⇑iP       P       14 29 00.3 +1.4
VRAC  Vranov            91.88  41 ⇑P       P       14 29 00.3 +1.4
VRAC  Vranov            91.88  41⇓iP       P       14 28 59.8 +0.8
VRAC                              epP      pP      14 29 37.7 +1.4
VRAC                              e                14 32 01.5
VRAC                              ePP      PP      14 32 42.1 +2.1
VRAC                              eSKS     SKSac   14 39 20.7 +2.3
VRAC                              eS       ScS     14 39 49.5 -0.8
VRAC                              esS      sS      14 40 52.7 -0.4
VRAC  Vranov            91.88  41  P       P       14 28 59.8 +0.8
      comp=Z,98nm,1.1s,baz=272,slow=5.8,SNR=79
KRLC  Kraliky           91.95  40 eP       P       14 29 00.6 +1.3
KRLC                              ex       x       14 29 04.0
KRLC  Kraliky           91.95  40 eP       P       14 29 00.6 +1.3
SOP   Sopron            91.96  42⇓eP       P       14 28 59.1 -0.2
SOP                               ePP      PP      14 32 47.0 +6.4
SOP                               i S      S       14 39 39.0  -10
SOP                               eSS      SS      14 46 12.0  +11
GKP   Gorka Klasztor    92.00  37 eP       P       14 29 00.8 +1.4
GKP                               epP      pP      14 29 37.7 +0.9
GKP                               eSKSac   SKSac   14 39 22.8 +4.0
GKP                               eS       ScS     14 39 50.8 -0.2
GKP                               eSS      SS      14 45 57.3 -3.5
GKP   Gorka Klasztor    92.00  37 eP       P       14 29 00.8 +1.4
GKP                               e*PP     pP      14 29 37.7 +0.9
GKP                               e                14 39 22.8
GKP                               eS       ScS     14 39 50.8 -0.2
GKP                               eSS      SS      14 45 57.3 -3.5
BEHE  Becsehely         92.18  44 eP       P       14 29 01.1 +0.6
BEHE                              ePP      PP      14 32 46.1 +3.6
BEHE                              i S      S       14 39 51.1 +0.2
BEHE                              eSS      SS      14 46 12.0 +8.1
BEHE  Becsehely         92.18  44⇓iP       P       14 29 01.2 +0.8
ZST   Bratislava        92.29  42 eP       P       14 29 00.5 -0.3
ZST                               e                14 29 39.5
ZST                               e                14 32 42.7
ZST   Bratislava        92.29  42 eP       P       14 29 00.5 -0.3
ZST                               epP      pP      14 29 39.5 +1.2
ZST                               e                14 31 25.6
ZST                               ePP      PP      14 32 42.7 -0.5
MODS  Modra-Piesok      92.39  42 eP       P       14 29 02.2 +0.8
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MODS                              e                14 29 39.5
MODS                              e                14 32 43.5
MODS                              eS       SKSac   14 39 23.3 +1.9
MODS                              eSS      SS      14 46 13.7 +6.9
MODS                               pmax    pmax
      comp=Z,613nm,1.6s
MODS  Modra-Piesok      92.39  42 eP       P       14 29 02.2 +0.8
MODS                              epP      pP      14 29 39.5 +0.8
MODS                              e                14 31 26.0
MODS                              e                14 31 57.2
MODS                              ePP      PP      14 32 43.5 -0.6
MODS                              eS       SKSac   14 39 23.3 +1.9
MODS                              eSS      SS      14 46 13.7 +6.9
MORC  Moravsky Berou    92.46  40 eP       P       14 29 02.7 +1.0
MORC  Moravsky Berou    92.46  40⇑iP       P       14 29 03.2 +1.5
MORC  Moravsky Berou    92.46  40 ⇑P       P       14 29 03.2 +1.5
MORC  Moravsky Berou    92.46  40⇓iP       P       14 29 02.8 +1.1
MORC                              epP      pP      14 29 41.0 +1.9
MORC                              e                14 32 04.8
MORC                              ePP      PP      14 32 46.3 +1.7
MORC                              eSKS     SKSac   14 39 21.9 +0.2
MORC                              eS       ScS     14 39 55.5 +0.3
MORC                              esS      sS      14 40 56.8 -1.7
SG1   Sgolgore (BA)     92.47  49 eP       P       14 29 01.0 -0.9
MATE  Matera            92.50  49⇓iP       P       14 29 01.1 -0.9
BLY   Banja Luka        92.59  45 eP       P       14 29 03.0 +0.8
BLY   Banja Luka        92.59  45⇑iP       P       14 29 03.1 +0.8
BLY   Banja Luka        92.59  45⇓iP       P       14 29 02.2 -0.1
BAI   Bari              92.61  49 eP       P       14 29 03.0 +0.6
TIP   Timpagrande       92.63  51 eP       P       14 29 01.6 -1.2
TIP   Timpagrande       92.63  51⇑iP       P       14 29 01.5 -1.2
TIP   Timpagrande       92.63  51  P       P       14 29 02.5 -0.2
HAMF  Hammerfest        92.72  19 eP       P       14 29 01.9 -0.5
HAMF                               IVmB_BB         14 29 08.0
      comp=Z,4µm,3.1s
HAMF                              eSKSac   SKSac   14 39 22.9 +0.7
HAMF                               IVMsBB          15 01 38.4
      comp=Z,3µm,35.3s
MASS  Massafra          92.84  49 eP       P       14 29 03.5 -0.1
OKC   Ostrava-Krasne    92.84  40 eP       P       14 29 04.5 +1.1
OKC                               ex       x       14 29 08.2
OKC                               epP      pP      14 29 42.4 +1.6
OKC                               ex       x       14 30 04.3
OKC                               eSKS     SKSac   14 39 27.2 +3.5
OKC                               eS       ScS     14 39 59.0 +0.7
OKC                                AMS     AMS     15 06 00.0
      comp=Z,10µm,19.4s
OKC   Ostrava-Krasne    92.84  40 eP       P       14 29 04.5 +1.1
OKC                               e                14 29 42.4
OKC                               e                14 39 27.2
OKC                               eS       ScS     14 39 59.0 +0.7
OKC                                MLR     MLR
      comp=Z,10µm,19.4s
RAC   Raciborz          92.85  40 eP       P       14 29 03.3 -0.1
RAC                               e*PP     pP      14 29 42.2 +1.4
RAC                               eS       S       14 39 59.8 +3.2
KTK1  Kautokeino        92.87  21 eP       P       14 29 03.0 -0.1
KTK1                              ePP      PP      14 32 51.3 +4.1
KTK1                              e                14 39 19.7
KTK1                              e                14 41 01.9
KTK1                               IVMsBB          15 01 27.0
      comp=Z,3µm,19.5s
TIH   Tihany            92.92  43⇓eP       P       14 29 04.1 +0.3
TIH                               i S      S       14 39 53.0 -4.3
TIH                              ⇑eSS      SS      14 46 23.0 +8.6
TAR1  Taranto           92.95  50 eP       P       14 29 03.3 -0.8
FASA  Fasano            92.98  49 eP       P       14 29 04.9 +0.7
CGL1  Ceglie Messapi    93.09  49 eP       P       14 29 04.1 -0.6
STON  Ston              93.09  47  P       P       14 29 03.7 -1.0
KOLL  Kolacno           93.12  41 eP       P       14 29 05.4 +0.7
KOLL                              e                14 29 42.4
KOLL  Kolacno           93.12  41 eP       P       14 29 05.4 +0.7
KOLL                              epP      pP      14 29 42.4 +0.3
KOLL                              e                14 32 02.6
SRO   Srobarova         93.13  42 eP       P       14 29 05.1 +0.4
SRO                               e                14 29 42.4
SRO                               e                14 32 48.0
SRO   Srobarova         93.13  42 eP       P       14 29 05.1 +0.4
SRO                               epP      pP      14 29 42.4 +0.2
SRO                               ePP      PP      14 32 48.0 -1.8
VYHS  Vyhne             93.42  41 eP       P       14 29 06.8 +0.7
VYHS                              e                14 29 45.4
VYHS                              e                14 32 47.6
VYHS                              eS       SKSac   14 39 26.1 -0.9
VYHS                              eSS      SS      14 46 31.2  +10
VYHS                               pmax    pmax
      comp=Z,299nm,1.7s
VYHS  Vyhne             93.42  41 eP       P       14 29 06.8 +0.7
VYHS                              epP      pP      14 29 45.4 +1.9
VYHS                              e                14 31 29.2
VYHS                              e                14 32 08.5
VYHS                              ePP      PP      14 32 47.6 -4.5
VYHS                              eS       SKSac   14 39 26.1 -0.9
VYHS                              eSS      SS      14 46 31.2  +10
MORH  Mrgy, Hungar      93.49  44⇓iP       P       14 29 06.8 +0.4
MORH  Mrgy, Hungar      93.49  44⇓eP       P       14 29 07.0 +0.6
MORH                              ePP      PP      14 32 54.0 +1.4
MORH                              i S      S       14 39 58.1 -4.3
MORH                              eSS      SS      14 46 23.0 +0.4
ARCES ARCESS Array B    93.56  20 eP       P       14 29 05.0 -1.3
ARCES                              S       SKSac   14 39 30.5 +3.6
ARCES                              PKKPbc  PKKPdf  14 46 11.3 -0.9
ARCES ARCESS Array B    93.56  20 eP       P       14 29 05.0 -1.3
ARCES                              S       SKSac   14 39 30.5 +3.6
ARCES ARCESS Array B    93.56  20  P       P       14 29 05.9 -0.4
      comp=Z,92nm,0.7s,baz=276,slow=3.7,SNR=180
ARCES                              S       SKSac   14 39 30.5 +3.6
      comp=Z,4.2nm,0.9s,baz=272,slow=9.6,SNR=2.9
ARCES                              PKKPbc  PKKPdf  14 46 11.3 -0.9
      comp=Z,2.6nm,0.5s,baz=120,slow=2.7,SNR=12
ARE0  ARCESS Array S    93.56  20 eP       P       14 29 05.7 -0.6
ARE0  ARCESS Array S    93.56  20 eP       P       14 29 05.6 -0.6
ARE0                               IVmB_BB         14 29 11.0
      comp=Z,2µm,1.3s
ARE0                              ePP      PP      14 32 52.7 +0.1
ARE0                              eSKSac   SKSac   14 39 25.2 -1.7
ARE0                               IVMsBB          15 01 35.9
      comp=Z,3µm,54.2s
TREB  Trebinje          93.58  47 eP       P       14 29 06.6 -0.4
KLNR  Kaliningrad       93.62  35 i P      P       14 29 07.7 +0.9
KLNR                               pmax    pmax
      comp=Z,129nm,1.3s
BRY   Bratogost         93.71  47⇑iP       P       14 29 08.7 +1.0
BRY   Bratogost         93.71  47 eP       P       14 29 07.4 -0.3
HCY   Herceg Novi       93.71  48⇓iP       P       14 29 08.7 +1.1
HCY   Herceg Novi       93.71  48 eP       P       14 29 05.7 -1.9
LANS  Liptovska Anna    93.77  41 eP       P       14 29 09.9 +2.2
LANS                              e                14 29 46.9
LANS                              e                14 32 56.2
LANS  Liptovska Anna    93.77  41 eP       P       14 29 09.9 +2.2
LANS                              epP      pP      14 29 46.9 +1.8
LANS                              ePP      PP      14 32 56.2 +1.4
OJC   Ojcow             93.87  40 eP       P       14 29 09.3 +1.2
OJC                               epP      pP      14 29 46.6 +1.1
OJC                               eSKSac   SKSac   14 39 32.9 +3.6
OJC                               eS       ScS     14 40 08.2 +1.5
OJC                               eSS      SS      14 46 35.5 +7.8
OJC   Ojcow             93.87  40 eP       P       14 29 09.2 +1.1
OJC   Ojcow             93.87  40 eP       P       14 29 09.3 +1.2
OJC                               e*PP     pP      14 29 46.6 +1.1
OJC                               e                14 39 32.9
OJC                               eS       ScS     14 40 08.3 +1.5
OJC                               eSS      SS      14 46 35.5 +7.8
HAPS  Han Pijesak,Bl    93.90  46 eP       P       14 29 06.6 -1.9
BUM   Brajici-Budva     94.02  48⇓iP       P       14 29 09.4 +0.3
NKME  Niksic            94.02  47⇑iP       P       14 29 09.4 +0.4
KEV   Kevo              94.02  20 eP       P       14 29 07.9 -0.4
KEV   Kevo              94.02  20 eP       P       14 29 07.9 -0.4
KEV   Kevo              94.02  20 eP       P       14 29 08.5 +0.2
NKY   Niksic            94.05  47⇓iP       P       14 29 09.8 +0.6
PSZ   Piszkesteto       94.18  42⇓iP       P       14 29 11.7 +2.0
PSZ   Piszkesteto       94.18  42 ⇓P       P       14 29 11.7 +2.0
PSZ   Piszkesteto       94.18  42⇓eP       P       14 29 10.0 +0.4
PSZ                               i S      SKSac   14 39 33.1 +1.8
PSZ                               eSS      SS      14 46 34.0 +1.6
DRME  Dracevica, Mon    94.24  48⇓iP       P       14 29 10.9 +0.9
DRME  Dracevica, Mon    94.24  48⇓iP       P       14 29 10.6 +0.6
BBLS  Lazi&#263;i       94.25  46⇓iP       P       14 29 10.5 +0.4
TEKS  Tekeris           94.27  45 eP       P       14 29 10.1  0.0
PDG   Podgorica         94.27  48⇑iP       P       14 29 10.6 +0.5
PDG   Podgorica         94.27  48⇓iP       P       14 29 10.4 +0.3
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TTG   Podgorica         94.27  48⇓iP       P       14 29 10.8 +0.7
TTG   Podgorica         94.27  48 eP       P       14 29 10.3 +0.2
NIE   Niedzica          94.28  40 eP       P       14 29 11.9 +1.9
NIE                               epP      pP      14 29 49.0 +1.6
NIE                               eSKSac   SKSac   14 39 36.0 +4.3
NIE                               eS       ScS     14 40 13.3 +2.9
NIE                               eSS      SS      14 46 36.2 +2.5
NIE   Niedzica          94.28  40 eP       P       14 29 11.9 +1.9
NIE                               e*PP     pP      14 29 49.0 +1.6
NIE                               e                14 39 36.0
NIE                               eS       ScS     14 40 13.3 +2.9
NIE                               eSS      SS      14 46 36.2 +2.5
BEL   Belsk             94.30  38 eP       P       14 29 11.5 +1.5
BEL                               epP      pP      14 29 48.5 +1.0
BEL                               eSKSac   SKSac   14 39 32.1 +0.6
BEL                               eS       ScS     14 40 12.5 +2.2
BEL                               esS      sS      14 41 09.1 -5.0
BEL                               eSS      SS      14 46 34.6 +0.9
BEL   Belsk             94.30  38 eP       P       14 29 11.5 +1.5
BEL                               e*PP     pP      14 29 48.5 +1.0
BEL                               e                14 39 32.1
BEL                               eS       ScS     14 40 12.5 +2.2
BEL                               eSS      SS      14 46 34.6 +0.9
SLIT  Slitere, Latvi    94.36  32 eP       P       14 29 08.8 -1.3
SLIT                               IAmb    IAmb    14 29 16.3
      comp=Z,764nm,1.1s
PBUR  Paburg            94.40  34 eP       P       14 29 10.4 +0.1
PBUR                               IAmb    IAmb    14 29 16.0
      comp=Z,714nm,1.4s
FRGS  Fruska Gora       94.41  45⇓iP       P       14 29 11.0 +0.3
KOME  Kolasin           94.43  47⇑iP       P       14 29 11.6 +0.7
VLO   Vlora             94.64  49  P       P       14 29 13.9 +2.1
DIVS  Divibare          94.65  46 eP       P       14 29 12.4 +0.5
DIVS  Divibare          94.65  46⇓iP       P       14 29 12.4 +0.5
IVA   Berane            94.70  47⇑iP       P       14 29 12.6 +0.4
TIR   Tirane            94.83  49  P       P       14 29 15.2 +2.5
TIR   Tirane            94.83  49 eP       P       14 29 14.5 +1.8
KEK   Kerkira           94.94  50  P       P       14 29 14.1 +0.9
SRN   Sarande           95.08  50  P       P       14 29 15.2 +1.4
TSUM  Tsumeb            95.10 109 eP       P       14 29 14.7 +0.1
TSUM  Tsumeb            95.10 109  P       P       14 29 15.1 +0.5
      comp=Z,98nm,1.1s,baz=278,slow=5.3,SNR=53
PHP   Peshkopia         95.23  48  P       P       14 29 16.3 +1.7
IGT   Igoumenitsa       95.36  50  P       P       14 29 16.6 +1.4
SUW   Suwalki           95.42  36 eP       P       14 29 15.4 +0.3
SUW                               epP      pP      14 29 53.2 +0.6
SUW                               eSKSac   SKSac   14 39 36.6 -0.8
SUW                               eS       ScS     14 40 19.3 -0.2
SUW                               eSS      SS      14 46 55.4 +5.9
SUW   Suwalki           95.42  36 eP       P       14 29 15.4 +0.3
SUW                               e*PP     pP      14 29 53.2 +0.6
SUW                               e                14 39 36.6
SUW                               eS       ScS     14 40 19.3 -0.2
SUW                               eSS      SS      14 46 55.4 +5.9
FINES FINESS Array B    95.55  28  P       P       14 29 15.0 -0.5
      comp=Z,115nm,0.8s,baz=273,slow=3.1,SNR=86
FINES                              S       SKSac   14 39 37.4 -0.4
      comp=Z,13nm,1.3s,baz=1.3,slow=6.3,SNR=1.9
FINES                              PKKPbc  PKKPdf  14 46 06.4 -2.0
      comp=Z,7.3nm,0.7s,baz=93,slow=3.9,SNR=8.8
FINES                              PKPPKP          14 54 15.6
      comp=Z,3.0nm,0.9s,baz=48,slow=2.8,SNR=5.6
FIA1  FINESS Array S    95.55  28 eP       P       14 29 15.2 -0.3
OHR   Ohrid             95.56  49 i P      P       14 29 16.7 +0.6
SIRR  Siria             95.57  43⇑iP       P       14 29 16.9 +0.9
LTVH  Ltavrtes, Hu      95.59  42⇓eP       P       14 29 17.0 +1.0
LTVH                              ePP      PP      14 33 17.1 +8.2
LTVH                             ⇓iS       S       14 40 19.1 -1.5
BZS   Buzias            95.62  44⇓iP       P       14 29 17.0 +0.8
BZS   Buzias            95.62  44 ⇓P       P       14 29 17.0 +0.8
UZH   Uzhgorod          95.68  41 eP       P       14 29 16.1 -0.3
UZH                               e                14 29 53.3
UZH                               e                14 39 40.4
UZH                               eS       S       14 40 16.6 -4.7
JAN   Janina            95.75  50  P       P       14 29 18.2 +1.2
MDVR  Moldovita         95.79  45⇑iP       P       14 29 17.7 +0.6
KWP   Kalwaria Pacla    95.81  40 eP       P       14 29 18.5 +1.5
KWP                               epP      pP      14 29 56.6 +2.2
KWP                               eSKSac   SKSac   14 39 42.6 +2.8
KWP                               eS       SKSac   14 39 42.8 +3.0
KWP                               eS       ScS     14 40 24.9 +1.9
KWP                               esS      sS      14 41 28.8 +0.7
KWP                               eSS      SS      14 46 54.9 -0.4
KWP   Kalwaria Pacla    95.81  40 eP       P       14 29 18.5 +1.5
KWP                               e*PP     pP      14 29 56.6 +2.2
KWP                               eS       SKSac   14 39 42.8 +3.0
KWP                               eS       ScS     14 40 24.9 +1.9
KWP                               eSS      SS      14 46 54.9 -0.4
NEST  Nestorio          95.82  49  P       P       14 29 19.1 +1.7
KRUS  Krusevo           95.86  48 i P      P       14 29 17.1 -0.4
PENT  Pentalofos        95.91  50  P       P       14 29 19.4 +1.6
TRPA  Tarpa             95.91  42⇑iP       P       14 29 17.8 +0.4
TRPA  Tarpa             95.91  42⇓eP       P       14 29 17.1 -0.4
TRPA                              ePP      PP      14 33 14.0 +2.6
TRPA                              i S      SKSac   14 39 37.1 -3.2
TRPA                             ⇓eSS      SS      14 47 18.1  +21
BIA   Bitola            95.96  49 i P      P       14 29 18.8 +0.9
KPRO  Kipourio          96.11  50  P       P       14 29 20.4 +1.7
DRGR                    96.22  43⇓iP       P       14 29 19.5 +0.6
DRGR                    96.22  43 ⇓P       P       14 29 19.6 +0.6
HERR  Herculane         96.28  45⇑iP       P       14 29 19.9 +0.7
KZN   Kozani            96.38  49  P       P       14 29 20.9 +1.0
GZR   Gura Zlata        96.46  44⇑iP       P       14 29 21.0 +0.9
GZR   Gura Zlata        96.46  44 ⇑P       P       14 29 21.0 +0.9
DEV   Deva              96.48  44⇑iP       P       14 29 22.1 +2.0
DEV   Deva              96.48  44 ⇑P       P       14 29 22.1 +2.0
STIP  Stip              96.52  48 i P      P       14 29 21.1 +0.7
VSU   Vasula            96.53  31ceP       P       14 29 19.3 -0.7
VSU                                pmax    pmax
      comp=Z,258nm,0.9s
VSU   Vasula            96.53  31 eP       P       14 29 19.1 -0.8
VSU                                IAmb    IAmb    14 29 24.1
      comp=Z,313nm,0.9s
EVR   Evrytania         96.57  51  P       P       14 29 22.8 +2.0
DRO   Drossia           96.60  52  P       P       14 29 22.7 +1.8
BMR   Baia Mare         96.62  42⇑iP       P       14 29 22.7 +2.0
BMR   Baia Mare         96.62  42 ⇑P       P       14 29 22.7 +2.0
LVV   L'vov             96.62  40⇑iP       P       14 29 21.1 +0.4
LVV                               e                14 33 16.1
LVV                               e                14 39 44.3
LVV                               i S      S       14 40 26.9 -2.6
LVV                               eSS      SS      14 47 11.4 +4.6
THL   Klokotos Trika    96.65  50  P       P       14 29 21.9 +0.9
EFP   Efpalio           96.70  51  P       P       14 29 22.9 +1.6
PUNG  Punghina          96.72  45⇓iP       P       14 29 23.4 +2.2
GRG   Griva             96.78  49  P       P       14 29 23.0 +1.4
LAKA  Lakka             96.78  51  P       P       14 29 23.4 +1.7
ISAL  Salakas           96.81  34 eP       P       14 29 21.2 -0.2
ISAL                               IAmb    IAmb    14 29 28.2
      comp=Z,40nm,1.1s
CJR   Cluj-Napoca       96.83  43⇓iP       P       14 29 23.3 +1.5
CJR   Cluj-Napoca       96.83  43 ⇓P       P       14 29 23.3 +1.5
TRIZ  Trizonia          96.84  51  P       P       14 29 23.0 +1.1
IZAR  Zarasai           96.84  34 eP       P       14 29 21.4 -0.1
IZAR                               IAmb    IAmb    14 29 27.3
      comp=Z,29nm,0.9s
VAY   Valandovo         96.86  48 i P      P       14 29 21.8 -0.1
SRE   Strehaia          96.86  45⇑iP       P       14 29 23.2 +1.3
SRE   Strehaia          96.86  45 ⇑P       P       14 29 23.2 +1.3
APA   Apatity           96.90  21⇑iP       P       14 29 21.3 -0.2
APA                               i                14 33 20.9
APA                               i PPP    PPP     14 35 31.0
APA                               i                14 39 45.0
APA                               i S      S       14 40 29.0 -2.0
APA                               i PS     PS      14 42 01.0  -10
APA                               i SS     SS      14 47 10.0 +0.4
APA                                pmax    pmax
      comp=Z,55nm,0.9s
IIGN  Ignalina          96.91  34 eP       P       14 29 21.7 -0.1
IIGN                               IAmb    IAmb    14 29 28.8
      comp=Z,86nm,1.1s
LIT   Litokhoron        96.95  50  P       P       14 29 22.9 +0.5
AGG   Agios Georgios    96.96  51  P       P       14 29 23.8 +1.3
KNT   Kendrikon         97.12  48  P       Pdif    14 29 24.8 +1.6
LOT   Lotru             97.14  44⇓iP       Pdif    14 29 24.7 +1.4
KKB   Krupnik           97.17  48 eP       Pdif    14 29 27.0 +3.6
VTS   Vitosha           97.17  47 eP       P       14 29 22.4 -1.1
VTS   Vitosha           97.17  47⇓iP       Pdif    14 29 25.1 +1.5
VTS   Vitosha           97.17  47  P       Pdif    14 29 24.6 +1.0
VTS   Vitosha           97.17  47 ⇓P       Pdif    14 29 25.1 +1.5
VTS   Vitosha           97.17  47 eP       Pdif    14 29 24.0 +0.4
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DSF	Desfina	97.19	51	P	Pdif	14 29 24.2	+0.6
IDID	Didziasalis	97.21	34	eP	P	14 29 23.0	-0.2
IDID				IAmb	IAmb	14 29 28.9	
	comp=Z,36nm,0.9s						
LVZ	Lovozero	97.23	21	eP	Pdif	14 29 23.1	0.0
LVZ	Lovozero	97.23	21	ceP	P	14 29 22.6	-0.4
LVZ				pmax	pmax		
	comp=Z,72nm,0.8s						
THE	Thessaloniki	97.24	49	P	Pdif	14 29 25.0	+1.3
ARCR	ARCALIA	97.28	42	⇓iP	Pdif	14 29 25.2	+1.4
NACGM	Naroch	97.32	34	eP	P	14 29 22.0	-1.7
NACGM				eP	Pdif	14 29 24.0	+0.3
NACGM				esP	pP	14 30 02.0	+0.8
NACGM				ePP	PP	14 33 20.0	-2.0
NACGM				ePPP	PPP	14 35 20.0	
NACGM				eSKS	SKSac	14 39 44.0	-3.3
NACGM				eS	S	14 40 34.0	-1.1
NACGM				eSP	SP	14 41 42.0	-16
NACGM				ePS	PS	14 42 02.0	-14
NACGM				eSS	SS	14 47 00.0	-16
NACGM				eSSS	SSS	14 50 28.0	
NACGM				eLQ	LQ	14 58 43.0	
NACGM				eLR	LR	15 01 41.0	
NACGM				LRM	MLR	15 07 22.0	
	comp=Z,28nm,23.0s						
HORT	Hortiatis	97.35	49	P	Pdif	14 29 24.9	+0.6
VNDA	Vanda	97.38	191	P	Pdif	14 29 25.2	+1.7
	comp=Z,7.2nm,0.9s,baz=124,slow=5.0,SNR=6.2						
VNDA				S	SKSac	14 39 55.7	+8.9
	comp=Z,5.0nm,1.1s,baz=115,slow=11,SNR=2.4						
VNDA				PKKPbc	PKKPbc	14 46 00.1	-4.3
	comp=Z,5.5nm,1.1s,baz=306,slow=3.7,SNR=5.5						
MPEP	Malo Peshtene	97.44	46	eP	Pdif	14 29 25.0	+0.5
SOH	Sokhos	97.51	49	P	Pdif	14 29 26.5	+1.5
LKR	Lokris	97.53	51	P	P	14 29 23.7	-1.3
ATAL	Atalanti	97.54	51	P	Pdif	14 29 25.6	+0.5
SUR	Sutherland	97.55	122	P	Pdif	14 29 26.8	+1.3
	comp=Z,90nm,0.9s,baz=264,slow=4.5,SNR=22						
SUR				S	SKSac	14 39 52.1	+2.2
	comp=Z,5.7nm,1.0s,baz=282,slow=9.3,SNR=1.8						
XOR	Xorichti	97.58	50	P	Pdif	14 29 25.8	+0.5
PLG	Polygyros	97.64	49	P	Pdif	14 29 26.7	+1.1
SRS	Serrai	97.65	48	P	Pdif	14 29 26.6	+1.0
MMB	Musomiste	97.68	48	eP	Pdif	14 29 30.0	+4.3
ARR	Arges	97.76	44	⇑iP	Pdif	14 29 26.8	+0.8
BUR08	Bucovina Ar. S	97.76	42	eP	Pdif	14 29 27.0	+1.0
BUR04	Bucovina Ar. S	97.77	42	eP	Pdif	14 29 27.4	+1.4
BURAR	Bucovina Array	97.77	42	⇑iP	Pdif	14 29 27.9	+1.8
BURAR	Bucovina Array	97.77	42	⇑P	Pdif	14 29 27.9	+1.8
VLAD	Vladila	97.81	45	⇑iP	Pdif	14 29 28.1	+1.9
NVR	Nevrokopi	97.82	48	P	Pdif	14 29 27.3	+1.0
VILL	Villia	97.83	51	P	P	14 29 26.4	-0.1
PAIG	Paliouri	97.88	50	P	Pdif	14 29 27.6	+1.0
PUL	Pulkovo	97.99	29	ceP	Pdif	14 29 27.9	+1.3
PUL				pmax	pmax		
	comp=Z,153nm,1.0s						
PUL	Pulkovo	97.99	29	eP	P	14 29 26.0	-0.5
MICGM	Minsk	98.03	35	⇑eP	Pdif	14 29 27.0	+0.1
MICGM				PM		14 29 29.0	
	comp=Z,0.4nm,1.1s						
MICGM				epP	pP	14 30 05.0	+0.6
MICGM				ePP	PP	14 33 24.0	-3.4
MICGM				PPM		14 33 25.0	
	comp=Z,4.4nm,4.0s						
MICGM				ePPP	PPP	14 35 36.0	
MICGM				eSKS	SKSac	14 39 52.0	+1.0
MICGM				eS	S	14 40 40.0	-1.2
MICGM				SM		14 40 48.0	
	comp=N,16nm,10.0s						
MICGM				esS	ScS	14 41 05.0	+24
MICGM				eSP	SP	14 41 46.0	-19
MICGM				ePS	PS	14 42 04.0	-20
MICGM				eSS	SS	14 47 20.0	-6.2
MICGM				eSSS	SSS	14 50 46.0	
MICGM				eLR	LR	15 06 40.0	
MICGM				LRM	MLR	15 13 20.0	
	comp=E,8.3nm,19.0s						
MICGM				LRM	MLR	15 13 27.0	
	comp=Z,15nm,20.0s						
MNK	Minsk	98.03	35	eP	Pdif	14 29 27.0	+0.1
MNK				e		14 33 24.0	
MNK				e		14 39 52.0	
MNK				eS	S	14 40 40.0	-1.2
MNK				pmax	pmax		
	comp=Z,410nm,1.1s						
VOIR		98.03	44	⇓iP	Pdif	14 29 28.3	+1.0
VOIR		98.03	44	⇓P	Pdif	14 29 28.3	+1.0
OUR	Ouranopolis	98.05	49	P	Pdif	14 29 28.2	+0.9
MTUR	Matau	98.08	44	⇑iP	Pdif	14 29 27.8	+0.3
MTUR	Matau	98.08	44	⇑P	Pdif	14 29 27.8	+0.3
HUMR	Humele	98.14	45	⇑iP	Pdif	14 29 28.8	+1.2
DOPR	Dopca	98.18	43	⇑iP	Pdif	14 29 28.4	+0.6
PLD	Plovdiv	98.33	47	eP	Pdif	14 29 32.0	+3.5
BIZ	Bicaz	98.49	42	⇑iP	Pdif	14 29 31.1	+1.9
PRAR	RASCA	98.49	42	⇓iP	Pdif	14 29 31.8	+2.6
THAS	Thassos island	98.57	49	P	Pdif	14 29 30.3	+0.7
PVL	Pavlikeni	98.61	46	eP	Pdif	14 29 33.0	+3.3
BILL	Bilibino	98.62	340	deP	P	14 29 29.0	-0.2
BILL				e*PP	pP	14 30 03.2	-3.5
BILL				e		14 33 27.9	
BILL				eS	SKSac	14 39 55.7	+2.3
BILL				eSS	SS	14 47 37.3	+3.6
BILL				pmax	pmax		
	comp=Z,29nm,0.8s						
MLR	Muntele Rosu	98.65	44	⇓iP	Pdif	14 29 31.6	+1.6
MLR	Muntele Rosu	98.65	44	⇓P	Pdif	14 29 31.6	+1.6
MLR	Muntele Rosu	98.65	44	P	Pdif	14 29 30.6	+0.6
	comp=Z,32nm,0.9s,baz=177,slow=2.8,SNR=24						
MLR				S	SKSac	14 39 56.5	+1.7
	comp=Z,1.4nm,0.4s,baz=52,slow=20,SNR=3.4						
DIM	Dimitrovgrad	98.94	47	eP	Pdif	14 29 35.0	+3.7
SZH	Strazhica	99.03	46	eP	Pdif	14 29 36.0	+4.4
PLOR	Plostina	99.06	43	⇑iP	Pdif	14 29 34.3	+2.5
PLOR	Plostina	99.06	43	⇑P	Pdif	14 29 34.3	+2.5
VRI	Vrincioaia	99.12	43	⇑iP	Pdif	14 29 33.5	+1.5
VRI	Vrincioaia	99.12	43	⇑P	Pdif	14 29 33.5	+1.5
ISR	Istrita	99.13	44	⇓iP	Pdif	14 29 34.0	+1.9
ISR	Istrita	99.13	44	⇓P	Pdif	14 29 34.0	+1.9
IDI	Anoyia	99.48	54	ePdif	Pdif	14 29 34.2	+0.3
IDI	Anoyia	99.48	54	⇑iP	Pdif	14 29 33.6	-0.3
ALN	Alexandroupoli	99.52	48	eP	PP	14 33 39.5	+0.3
GADA	Gvkgeada	99.52	49	eP	PP	14 33 39.5	+0.2
ENEZ	Enez	99.62	49	eP	PP	14 33 40.2	+0.2
SIGR	SIGRI	99.65	50	eP	PP	14 33 41.2	+0.9
BOZC	Bozcaada	99.70	49	eP	PP	14 33 40.9	+0.3
KIEV	Kiev	99.70	38	⇓iP	Pdif	14 29 37.8	+3.4
KIEV	Kiev	99.70	38	d iP	Pdif	14 29 33.8	-0.6
KIEV				pmax	pmax		
	comp=Z,26nm,1.0s						
AKASG	Malin Array Be	99.71	38	P	Pdif	14 29 34.5	0.0
	comp=Z,21nm,0.9s,baz=273,slow=3.9,SNR=29						
AKASG				PP	PP	14 33 39.1	-1.3
	comp=Z,77nm,1.2s,baz=282,slow=7.2,SNR=10						
AKASG				PKKPbc	PKKPbc	14 45 55.1	-1.9
	comp=Z,3.7nm,0.7s,baz=82,slow=3.0,SNR=8.3						
AKASG				PKPPKP		14 54 08.9	
	comp=Z,0.3nm,0.4s,baz=73,slow=2.1,SNR=5.0						
AKASG				LR	LR	15 14 45.8	
	comp=Z,10µm,19.6s,baz=285,slow=35						
APE	Apeiranthos	99.73	52	eP	PP	14 33 38.9	-2.1
SANT	Santorini	99.78	53	eP	PP	14 33 36.3	-5.1
EDRB	Edirne	99.87	47	eP	PP	14 33 40.7	-1.1
ERIK	Erikli-Kesan	99.91	49	eP	PP	14 33 40.9	-1.2
EZN	Ezine	99.91	49	eP	PP	14 33 42.8	+0.6
GELI	Tayfur-Gelibol	99.92	49	eP	PP	14 33 41.6	-0.7
TMCR	Tamitsa	99.93	24	eP	Pdif	14 29 33.5	-1.6
TMCR				pmax	pmax		
	comp=Z,35nm,1.5s						
CHOS	Chios island	99.94	51	eP	PP	14 33 45.1	+2.5
PRD	Provadia	100.10	46	eP	Pdif	14 29 41.0	+4.7
LPK	Lapseki	100.14	49	eP	PP	14 33 44.3	+0.3
HARR	Harsova	100.18	44	⇓iP	Pdif	14 29 39.2	+2.5
HARR	Harsova	100.18	44	⇓P	Pdif	14 29 39.2	+2.5
CFR	Carcaliu	100.22	44	⇑iP	Pdif	14 29 37.7	+0.9
CFR	Carcaliu	100.22	44	⇑P	Pdif	14 29 37.7	+0.9
TLB	Topalu	100.28	44	⇑iP	Pdif	14 29 38.1	+1.0
TLB	Topalu	100.28	44	⇓iP	PKKPbc	14 45 53.2	-1.9
TLB	Topalu	100.28	44	⇑P	Pdif	14 29 38.1	+1.0
KIS	Kishinev	100.30	42	eP	Pdif	14 29 36.0	-1.2
	comp=Z,910nm,2.8s						
KIS				epP	pPdif	14 30 14.0	-0.6
KIS	Kishinev	100.30	42	ePP	PP	14 33 45.0	+0.1
KIS	Kishinev	100.30	42	ePS	SP	14 42 32.0	+2.0
KIS				eSS	SS	14 48 00.0	+1.7
KIS				LQM		15 10 25.0	
	comp=Z,4µm,20.0s						
KIS				LRM	MLR	15 14 23.0	
	comp=Z,7µm,22.0s						
KIS	Kishinev	100.30	42	eP	Pdif	14 29 36.0	-1.2
KIS				e		14 33 45.0	
KIS				ePPP	PPP	14 36 02.0	
KIS				i		14 39 59.0	
KIS				i S	Sdif	14 40 59.0	-1.6
KIS				ePS	SP	14 42 32.0	+2.0
KIS				e		14 43 16.0	
KIS				eSS	SS	14 48 00.0	+1.7
KIS				pmax	pmax		
	comp=Z,910nm,2.8s						
KIS				pmax	pmax		
	comp=Z,2µm,17.0s						
KIS				MLR	MLR		
	comp=Z,7µm,22.0s						
URLA	Izmir	100.36	51	eP	PP	14 33 46.9	+1.2
RKY	Sarkoy-Tekirda	100.40	48	eP	PP	14 33 47.2	+1.2
SYO	Syowa Base	100.40	161	⇓iP	Pdif	14 29 39.6	+2.5
SYO	Syowa Base	100.40	161	⇑iP	Pdif	14 29 42.0	+4.9
PHSR	Pinarhisar	100.48	47	eP	PP	14 33 45.0	-1.5
KRBG	Karabiga-Canak	100.54	49	eP	PP	14 33 48.4	+1.4
PSN	Preselentsi	100.56	45	eP	PP	14 33 46.2	-0.8
PSN	Preselentsi	100.56	45	eP	Pdif	14 29 43.0	+4.6
TIRR	Tirgusor	100.56	44	⇑iP	Pdif	14 29 39.5	+1.1
TIRR	Tirgusor	100.56	44	⇑P	Pdif	14 29 39.5	+1.1
TLCR		100.69	44	⇑iP	Pdif	14 29 41.6	+2.7
TLCR		100.69	44	⇑P	Pdif	14 29 41.6	+2.7
BLCB	Balcova	100.70	51	eP	PP	14 33 50.5	+2.3
MRMT	Marmara Adasi	100.73	48	eP	PP	14 33 47.2	-1.3
CRLT	Corlu	100.73	48	eP	PP	14 33 49.3	+0.9
GCAM	G?zelcaml?	100.97	51	eP	PP	14 33 50.8	+0.5
EDC	Edincik	100.98	49	eP	PP	14 33 50.1	-0.2
SLVT	Silivri	101.07	48	eP	PP	14 33 50.8	-0.1
CTYL	Yalikoy Yolu	101.08	47	eP	PP	14 33 50.1	-0.8
BODT	Bodrum	101.14	52	eP	PP	14 33 50.3	-1.3
CTKS	Kestanelik-??a	101.28	48	eP	PP	14 33 51.3	-1.2
KCTX	Karacabey (Bur	101.36	49	eP	PP	14 33 53.2	0.0
DAT	Datca	101.41	52	eP	PP	14 33 51.3	-2.4
AYDB	Zeytinkoy-Aydi	101.44	51	eP	PP	14 33 53.7	-0.3
MLSB	Milas	101.46	52	eP	PP	14 33 53.2	-0.9
BGKT	Bogazkoy	101.49	48	eP	PP	14 33 56.1	+2.0
BOSA	Boshof	101.66	119	P	Pdif	14 29 44.1	+0.3
	comp=Z,12nm,0.8s,baz=241,slow=2.3,SNR=13						
BOSA				S	SKSac	14 40 11.1	+1.0
	comp=Z,1.8nm,0.8s,baz=204,slow=20,SNR=2.1						
BOSA				PKKPbc	PKKPbc	14 45 50.3	-0.5
	comp=Z,4.9nm,0.8s,baz=97,slow=3.0,SNR=8.7						
KLYT	Kilyos	101.68	48	eP	PP	14 33 57.5	+2.1
ARMT	Armutlu	101.68	48	eP	PP	14 33 54.9	-0.7
SBT5	Esenkoy-Cinarc	101.68	48	eP	PP	14 33 54.2	-1.2
KAVV	Kandilli-Istan	101.73	48	eP	PP	14 33 52.9	-3.0
MDNY	Mudanya-Bursa	101.74	48	eP	PP	14 33 55.6	-0.3
KLMR	Klimovskoe	101.91	26	eP	Pdif	14 29 43.4	-0.6
KLMR				e		14 33 56.9	
KLMR				pmax	pmax		
	comp=Z,64nm,1.3s						
KLMR	Klimovskoe	101.91	26	ePdif	Pdif	14 29 43.5	-0.6
KLMR				AMP		14 29 50.6	
	comp=Z,64nm,1.3s						
KLMR				ePP	PP	14 33 57.0	+0.5
KLMR				ePKKPbc	PKKPbc	14 45 48.2	-2.9
KULA	Kula-Manisa	101.93	50	eP	PP	14 33 57.8	+0.2
ARG	Arkhangelos	101.93	53	eP	PP	14 33 53.7	-3.9
GEMT	Gemlik	101.95	48	eP	PP	14 33 55.4	-2.2
YLV	Yalova	102.06	48	eP	PP	14 33 57.3	-1.2
SILT	Sile	102.14	48	eP	PP	14 33 55.6	-3.3
TURN	Turunc	102.19	52	eP	PP	14 33 56.8	-2.7
DALY	Dalyan (Mula)	102.24	52	eP	PP	14 33 58.0	-1.8
LBTB	Lobatse	102.27	115	P	Pdif	14 29 47.0	+0.5
	comp=Z,20nm,1.1s,baz=261,slow=6.9,SNR=13						
LBTB				S	SKSac	14 40 14.7	+1.6
	comp=Z,4.9nm,1.0s,baz=315,slow=10.0,SNR=1.9						
LBTB				PKKPbc	PKKPbc	14 45 48.8	-0.1
	comp=Z,6.0nm,0.7s,baz=116,slow=2.7,SNR=6.0						
TVSB	Tavsanli	102.36	49	eP	PP	14 33 58.3	-2.5
GEDZ	Gediz	102.40	50	eP	PP	14 34 00.7	-0.4
CAVI	Cavuskoy	102.49	48	eP	PP	14 34 00.4	-1.2
FETY	Fethiye	102.61	52	eP	PP	14 33 59.9	-2.8
OBN	Obninsk	102.67	33	d iP	Pdif	14 29 47.4	-0.1
OBN				e		14 34 03.4	
OBN				eS	SKSac	14 40 09.7	-3.7
OBN				pmax	pmax		
	comp=Z,27nm,1.1s						
OBN	Obninsk	102.67	33	P	Pdif	14 29 46.2	-1.2
	comp=Z,2.8nm,0.3s,baz=297,slow=5.5,SNR=9.1						
SPNC	Sapanca-Adapaz	102.73	48	eP	PP	14 34 03.3	-0.1
SAUV	Serdivan-Sakar	102.73	48	eP	PP	14 34 00.4	-3.0
URZ	Urewera	102.73	231	P	Pdif	14 29 50.1	+2.0
	comp=Z,5.5nm,0.7s,baz=251,slow=2.9,SNR=11						
URZ				PKKPbc	PKKPbc	14 45 45.3	-2.5
	comp=Z,8.6nm,0.8s,baz=246,slow=6.6,SNR=5.7						
GULT	Gulveren	102.94	48	eP	PP	14 34 03.1	-2.0
MOS	Moscow	103.00	32	i P	Pdif	14 29 48.2	-0.8
MOS				e		14 34 02.8	
MOS				i		14 40 14.4	
MOS				i PS	PS	14 43 14.4	-2.0
MOS				pmax	pmax		
	comp=Z,109nm,1.4s						
MOS				pmax	pmax		
	comp=Z,600nm,2.9s						
BORA	Eskisehir	103.02	49	eP	PP	14 34 07.4	+1.8
AKAS	Kas	103.10	53	eP	PP	14 34 06.5	0.0
ELL	Elmali	103.24	52	eP	PP	14 34 06.9	-0.6
SHUT	Suhut-Afyon	103.37	50	eP	PP	14 34 10.0	+1.6
MDUB	Mudurnu	103.44	48	eP	PP	14 34 07.4	-1.4
ISP	Isparta	103.50	51	eP	PP	14 34 04.0	-5.4
KORT	Korkueli	103.54	52	eP	PP	14 34 06.9	-2.8
BCK	Bucak	103.63	51	eP	PP	14 34 07.2	-3.1
AUMIH	MIHALICIK	103.79	49	eP	PP	14 34 10.5	-1.0
ANTB	Antalya	103.80	52	eP	PP	14 34 09.3	-2.1
AUSIV	SIVRIHISAR	103.93	49	eP	PP	14 34 08.6	-3.9
SUTC	Sutluce-Ispart	103.95	51	eP	PP	14 34 11.9	-0.8
PRGR	Permogore	104.18	24	⇓iP	Pdif	14 29 54.7	+0.7
PRGR				pmax	pmax		
	comp=Z,44nm,1.5s						
SIM	Simferopol'	104.39	43	ceP	Pdif	14 30 00.2	+4.8
SIM				e		14 34 17.0	
SIM				e		14 40 24.0	
SIM				eS	Sdif	14 41 39.0	+4.2
SIM				ePS	SP	14 43 14.0	+0.7
SIM				eSS	SS	14 48 58.0	+3.3
SIM				pmax	pmax		
	comp=Z,230nm,4.8s						
SIM				pmax	pmax		
	comp=Z,1µm,5.2s						
LPSR	Galich'ya Gora	104.88	34	eP	Pdif	14 29 57.0	-0.4
LPSR				e		14 34 14.7	
LPSR				e		14 40 21.5	
LPSR				eSP	SP	14 43 15.6	-2.3
LPSR				eSS	SKKPbc	14 49 11.6	+0.9
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
MATP	Matopo	105.31	111	Pdiff	Pdif	14 30 01.8	+1.6
	comp=Z,6.2nm,0.7s,baz=281,slow=4.2,SNR=12						
MATP				PKKPbc	PKKPbc	14 45 39.2	-0.5
	comp=Z,3.1nm,1.0s,baz=105,slow=8.1,SNR=2.7						
MATP				PKKP	PKKPab	14 45 57.5	0.0
	comp=Z,8.3nm,0.9s,baz=93,slow=3.2,SNR=6.4						
LSZ	Lusaka	105.37	105	Pdiff	Pdif	14 30 02.1	+1.6
	comp=Z,4.1nm,0.7s,baz=150,slow=2.9,SNR=7.6						
LSZ				PP	PP	14 34 22.8	-1.1
	comp=Z,85nm,1.2s,baz=259,slow=8.3,SNR=5.8						
LSZ				PKKPbc	PKKPbc	14 45 37.1	-2.3
	comp=Z,8.2nm,0.9s,baz=105,slow=2.9,SNR=4.5						
LSZ				PKKP	PKKPab	14 45 57.6	+0.4
	comp=Z,7.9nm,0.7s,baz=100,slow=3.5,SNR=5.5						
BRTR	Keskin Array B	105.44	48	Pdiff	Pdif	14 30 01.5	+1.1
	comp=Z,2.6nm,0.8s,baz=261,slow=2.9,SNR=7.9						
BRTR				PP	PP	14 34 23.2	-0.4
	comp=Z,27nm,0.9s,baz=255,slow=4.8,SNR=4.1						
BRTR				PKKPbc	PKKPbc	14 45 39.5	-0.5
	comp=Z,3.0nm,0.7s,baz=131,slow=5.2,SNR=7.1						
BRTR				PKKP	PKKPab	14 45 56.5	-0.5
	comp=Z,8.2nm,0.8s,baz=138,slow=5.8,SNR=11						
BRTR				PKPPKP		14 54 00.3	
	comp=Z,0.8nm,0.8s,baz=108,slow=4.7,SNR=3.4						
TIXI	Tiksi	105.48	352	PKKPbc	PKKPbc	14 45 37.0	-3.7
	comp=Z,4.0nm,0.3s,baz=353,slow=1.8,SNR=12						
TIXI				PKKP	PKKPab	14 45 55.8	-0.8
	comp=Z,3.7nm,0.7s,baz=285,slow=2.3,SNR=3.8						
VSR	Storozhevoye	105.54	36	eP	Pdif	14 30 00.8	+0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RPZ	Rata Peaks	106.13	225	PKKPbc	PKKPbc	14 45 37.9	+0.1
	comp=Z,11nm,0.8s,baz=310,slow=4.7,SNR=5.2						
RPZ				PKKP	PKKPab	14 45 55.9	+2.4
	comp=Z,13nm,0.8s,baz=14,slow=13,SNR=4.0						
SEY	Seymchan	106.20	339	PKKPbc	PKKPbc	14 45 36.6	-1.7
	comp=Z,5.2nm,0.6s,baz=189,slow=3.7,SNR=13						
SEY				PKKP	PKKPab	14 45 55.1	+1.7
	comp=Z,24nm,1.0s,baz=236,slow=4.7,SNR=9.1						
ANN	Anapa	106.68	42	i P	Pdif	14 30 06.7	+1.1
ANN				pmax	pmax		
	comp=Z,141nm,2.0s						
VRH	Novokhopyorsk	107.02	35	eP	Pdif	14 30 09.3	+2.3
VRH				e		14 34 31.4	
VRH				e		14 40 33.6	
VRH				eSS	SS	14 49 36.3	+6.3
VRH				pmax	pmax		
	comp=Z,50nm,1.7s						
KIRV	Kirov	107.40	26	Pdiff	Pdif	14 30 12.3	+3.9
	comp=Z,6.0nm,0.5s,baz=334,slow=5.0,SNR=4.3						
KIRV				PP	PP	14 34 39.0	+2.0
	comp=Z,52nm,1.1s,baz=297,slow=4.9,SNR=4.5						
MBAR	Mbarara	108.21	90	Pdiff	Pdif	14 30 17.4	+4.2
	comp=Z,2.4nm,0.2s,baz=348,slow=3.6,SNR=4.0						
MBAR				PP	PP	14 34 47.5	+2.6
	comp=Z,31nm,1.0s,baz=284,slow=7.8,SNR=6.0						
MBAR				PKKPbc	PKKPbc	14 45 30.1	-0.5
	comp=Z,3.9nm,0.2s,baz=137,slow=6.5,SNR=5.9						
MBAR				PKKP	PKKPab	14 45 46.0	+1.3
	comp=Z,2.0nm,0.2s,baz=108,slow=9.6,SNR=5.0						
SOC	Sochi	108.64	43	i P	Pdif	14 30 17.7	+3.4
SOC				e		14 34 47.5	
SOC				e		14 40 39.3	
SOC				eSS	SS	14 49 49.5	-2.8
SOC				pmax	pmax		
	comp=Z,12nm,0.7s						
PET	Petropavlovsk	108.81	328	eP	Pdif	14 30 24.7	+10
PET				e		14 34 51.4	
PET				ePPS	PPS	14 45 15.3	
PET				eSS	SS	14 50 02.8	+8.9
PET				eSSS	SSS	14 54 06.4	
PET				pmax	pmax		
	comp=Z,2µm,16.5s						
EIL	Elat	108.84	58	PP	PP	14 34 49.5	+0.8
	comp=Z,34nm,1.1s,baz=332,slow=3.3,SNR=4.2						
MA2	Magadan	108.88	336	PKKPbc	PKKPbc	14 45 28.5	-1.4
	comp=Z,17nm,1.0s,baz=165,slow=2.6,SNR=7.9						
MA2				PKKP	PKKPab	14 45 41.9	+0.4
	comp=Z,32nm,1.0s,baz=195,slow=5.1,SNR=11						
NRIK	Noril'sk	109.03	6	Pdiff	Pdif	14 30 16.1	+0.6
	comp=Z,13nm,1.0s,baz=335,slow=4.6,SNR=8.3						
NRIK				PP	PP	14 34 51.1	+2.6
	comp=Z,102nm,1.0s,baz=330,slow=5.0,SNR=14						
NRIK				PKKPbc	PKKPbc	14 45 29.8	+0.1
	comp=Z,2.7nm,0.3s,baz=201,slow=3.6,SNR=4.7						
NRIK				PKKP	PKKPab	14 45 39.8	-1.0
	comp=Z,20nm,0.8s,baz=114,slow=5.9,SNR=10						
PETK	Petropavlovsk-	109.27	328	Pdiff	Pdif	14 30 18.0	+1.0
	comp=Z,12nm,1.1s,baz=78,slow=13,SNR=2.8						
PETK				PP	PP	14 34 51.9	+1.0
	comp=Z,15nm,0.9s,baz=70,slow=9.6,SNR=5.1						
PETK				PKKPbc	PKKPbc	14 45 27.8	-0.6
	comp=Z,6.0nm,1.0s,baz=271,slow=6.6,SNR=2.7						
PETK				PKKP	PKKPdf	14 45 41.7	-1.4
	comp=Z,15nm,0.9s,baz=204,slow=6.3,SNR=5.7						
ASF	Jabal al Asfar	109.89	55	PKKP	PKKPab	14 45 38.8	+1.6
	baz=152,slow=1.5						
GOF	Gofitskoye	110.31	41	eP	Pdif	14 30 20.9	-0.8
GOF				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV	Kislovodsk	110.50	42	i P	Pdif	14 30 22.0	-0.8
KIV				i		14 34 21.9	
KIV				e		14 34 59.9	
KIV				ePPP	PPP	14 37 20.6	
KIV				ePS	PS	14 44 32.0	-0.6
KIV				eSS	SS	14 50 22.9	+5.4
KIV				pmax	pmax		
	comp=Z,41nm,1.1s						
KIV				MLR	MLR		
	comp=Z,5µm,21.0s						
KBZ	Khabaz	110.73	42	Pdiff	Pdif	14 30 24.0	+0.4
	comp=Z,2.0nm,1.0s,baz=292,slow=11,SNR=1.9						
KBZ				PP	PP	14 35 01.8	+0.1
	comp=Z,47nm,1.0s,baz=295,slow=12,SNR=7.5						
KBZ				PKKPbc	PKKPbc	14 45 22.8	-0.5
	comp=Z,11nm,0.9s,baz=104,slow=4.6,SNR=9.7						
KBZ				PKKP	PKKPab	14 45 34.1	+0.8
	comp=Z,15nm,1.0s,baz=147,slow=5.4,SNR=5.0						
SKR	Severo-Kuril's	111.33	327	i PKIKP	PKiKP	14 34 28.8	+4.9
SKR				e		14 34 59.8	
SKR				MLR	MLR		
	comp=Z,8µm,19.0s						
ARU	Arti	112.63	25	P	Pdif	14 30 35.5	+3.7
ARU				PS	SP	14 44 31.9	-1.7
GROC	Groznyy	112.88	42	i PKIKP	PKiKP	14 34 31.8	+4.7
GROC				e		14 35 09.5	
GROC				e		14 35 16.7	
GROC				pmax	pmax		
	comp=Z,16nm,0.4s						
YAK	Yakutsk	113.81	346	eP	Pdif	14 30 39.4	+2.5
YAK				pmax	pmax		
	comp=Z,29nm,1.1s						
YAK				pmax	pmax		
	comp=N,16nm,1.0s						
YAK				pmax	pmax		
	comp=Z,852nm,3.2s						
YAK				pmax	pmax		
	comp=N,692nm,3.7s						
MAK	Makhachkala	114.11	41	eP	Pdif	14 30 39.0	+0.3
MAK				i		14 34 31.3	
MAK				e		14 35 26.5	
MAK				ePPP	PPP	14 37 51.3	
MAK				e		14 41 03.2	
MAK				ePS	PKKPbc	14 45 04.9	-7.2
MAK				eSS	SS	14 51 09.9	+5.0
MAK				eSSS	SSS	14 55 25.8	
MAK				pmax	pmax		
	comp=Z,322nm,1.2s						
DZM	Mont Dzumac	114.50	246	ePdif	Pdif	14 30 42.8	+1.8
	comp=Z,1µm,27.8s						
DZM	Mont Dzumac	114.50	246	ePP	PP	14 35 26.6	-3.0
	comp=Z,5µm,26.8s						
DZM	Mont Dzumac	114.50	246	ePS	PS	14 45 09.4	-0.8
	comp=Z,23µm,29.6s						
KMBO	Kilima Mbogo	114.73	91	PKP	PKiKP	14 34 32.2	+0.5
	comp=Z,4.7nm,0.8s,baz=262,slow=1.9,SNR=5.3						
KMBO				PP	PP	14 35 30.6	-1.1
	comp=Z,50nm,1.2s,baz=245,slow=6.1,SNR=9.2						
KMBO				PKKPbc	PKKPbc	14 45 10.3	+1.0
	comp=Z,4.9nm,0.9s,baz=39,slow=6.3,SNR=5.7						
AKTO	Aktyubinsk	116.24	30	Pdiff	Pdif	14 30 49.5	+1.5
	comp=Z,0.3nm,0.5s,baz=307,slow=5.1,SNR=2.3						
AKTO				PKP	PKiKP	14 34 34.1	+0.7
	comp=Z,16nm,0.8s,baz=165,slow=1.2,SNR=12						
AKTO				PKKPbc	PKKPbc	14 45 03.6	-1.4
	comp=Z,14nm,0.9s,baz=109,slow=7.1,SNR=11						
AB31	Akbulak array	117.95	30	i PKIKP	PKPdf	14 34 35.9	-0.8
AB31				pmax	pmax		
	comp=Z,37nm,0.8s						
ABKAR	Akbulak array	117.95	30	ePKPdf	PKiKP	14 34 36.9	+0.2
ATD	Arta Tunnel	119.40	76	PKP	PKiKP	14 34 40.7	+0.1
	comp=Z,29nm,0.7s,baz=262,slow=11,SNR=10						
BRVK	Borovoye	119.74	22	ePKPdf	PKiKP	14 34 40.4	+0.4
BRVK	Borovoye	119.74	22	i PKIKP	PKiKP	14 34 40.5	+0.4
BVAR	Borovoye Array	119.81	22	PKKPbc	PKKPbc	14 44 50.5	-1.9
	comp=Z,4.2nm,0.8s,baz=154,slow=4.6,SNR=8.6						
BVAR				PKKP	PKKPdf	14 45 25.2	+2.0
	comp=Z,2.2nm,0.8s,baz=132,slow=2.1,SNR=3.0						
BVAR				SKKPbc	SKKPbc	14 48 29.1	+2.4
	comp=Z,7.5nm,0.9s,baz=143,slow=10,SNR=3.7						
BOD	Bodaibo	120.61	353	eP	Pdif	14 31 12.5	+5.2
BOD				pmax	pmax		
	comp=Z,5.0nm,1.6s						
YSS	Yuzh-Sakhalins	120.66	329	i PKIKP	PKPdf	14 34 41.7	-0.2
YSS				e		14 35 22.1	
YSS				e		14 36 10.0	
YSS				e		14 41 37.0	
YSS				eSS	SS	14 52 27.0	-2.2
YSS				pmax	pmax		
	comp=N,2µm,15.6s						
YSS				pmax	pmax		
	comp=E,2µm,13.3s						

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YUK   Yuzh-Kuril'sk    120.81 325 ePKIKP  PKPdf   14 34 38.4 -3.9
YUK                               eSS     SS      14 52 27.8 -3.6
GRNR  Gornyy           120.88 336 ePKIKP  PKPdf   14 34 41.1 -1.2
GRNR                               pmax   pmax
      comp=Z,21nm,1.0s
ZEA   Zeya             121.68 343 ePKIKP  PKPdf   14 34 42.8 -0.9
ZEA                               e               14 36 18.0
ZEA                                pmax   pmax
      comp=Z,55nm,1.4s
ZEA                                pmax   pmax
      comp=N,1µm,11.0s
ZEA                                pmax   pmax
      comp=Z,3µm,11.0s
NVS   Novosibirsk      122.09  13⇓iPKIKP  PKiKP   14 34 44.6  0.0
NVS                               i               14 41 31.3
NVS                                pmax   pmax
      comp=Z,68nm,1.0s
NVS                                pmax   pmax
      comp=N,9.0nm,1.1s
NVS                                pmax   pmax
      comp=E,15nm,1.1s
JMP   Maruseppu        122.25 326  P      PKPdf   14 34 44.7 -0.4
ASAJ  Asahikawa        122.60 327  PKKPbc PKKPbc  14 44 40.7 -0.9
      comp=E,9.6nm,0.9s,baz=237,slow=7.4,SNR=3.3
ABPO  Ambohimpanom     122.97 112 ePKPdf  PKiKP   14 34 48.8 +1.2
OPO   Ambohidratompo   123.02 111  PKKPbc PKKPbc  14 44 39.9 +0.5
      comp=E,2.9nm,0.8s,baz=310,slow=9.6,SNR=3.5
ZAA0  Zalesovo Array   123.26  12 ePKPdf  PKPdf   14 34 46.6 -0.1
ZALV  Zalesovo Beam    123.26  12  Pdiff  Pdif    14 31 29.2 +10
      comp=E,0.9nm,0.7s,baz=338,slow=1.6,SNR=4.5
ZALV                               PKP    PKPdf   14 34 46.7  0.0
      comp=E,157nm,0.8s,baz=272,slow=2.4,SNR=131
ZALV                               PKKPab PKKPab  14 44 35.8 -2.3
      comp=E,3.6nm,0.5s,baz=172,slow=3.3,SNR=8.8
ZALV                               SKKPbc SKKPbc  14 48 13.0 -2.5
      comp=E,2.5nm,0.7s,baz=164,slow=3.8,SNR=2.3
GEYT  Alibeck          123.62  42  PKP    PKiKP   14 34 48.2  0.0
      comp=E,79nm,0.8s,baz=275,slow=3.2,SNR=46
GEYT                               PKKPbc PKKPbc  14 44 37.2 -0.2
      comp=E,14nm,1.0s,baz=132,slow=2.2,SNR=5.7
GEYT                               SKKPbc SKKPbc  14 48 18.8 +5.0
      comp=E,3.4nm,0.7s,baz=49,slow=4.5,SNR=5.0
GYA0B ALIBECK ARRAY    123.62  42 ePKPdf  PKiKP   14 34 48.3  0.0
KLR   Kul'dur          123.95 337 i PKIKP PKPdf   14 34 47.1 -1.1
KLR   Kul'dur          123.95 337  PKKPbc PKKPbc  14 44 35.4 -1.1
      comp=E,12nm,1.0s,baz=253,slow=3.5,SNR=7.4
KLR                                PKKP   PKKPdf  14 45 15.9 +0.7
      comp=E,8.4nm,1.0s,baz=229,slow=1.2,SNR=2.8
KLR                                SKKPbc SKKPbc  14 48 13.5 +0.5
      comp=E,5.2nm,1.0s,baz=279,slow=7.6,SNR=2.4
OTUK  Ortayu           124.35  24  PKIKP  PKPdf   14 34 47.3 -1.8
OTUK                               pmax   pmax
      comp=Z,42nm,0.8s
KURK  Kurchatov        124.56  18 ePKPdf  PKiKP   14 34 49.6  0.0
KURK                               PKKPbc PKKPab  14 44 32.1 -0.5
KURK                               PKKP   PKKPdf  14 45 14.2 +0.2
KURK                               SKKPbc SKKPbc  14 48 09.1 -2.0
KURK  Kurchatov        124.56  18 i PKIKP PKiKP   14 34 49.8 +0.2
KURBB Kurchatov Arra   124.61  18  PKKPbc PKKPbc  14 44 32.1 -1.8
      comp=Z,8.6nm,1.0s,baz=153,slow=3.5,SNR=10
KURBB                              PKKP   PKKPdf  14 45 14.2 +0.3
      comp=Z,3.9nm,0.9s,baz=160,slow=2.7,SNR=3.2
KURBB                              SKKPbc SKKPbc  14 48 09.1 -1.8
      comp=Z,5.9nm,0.8s,baz=130,slow=4.0,SNR=5.1
CAN   Canberra         125.00 226 ePKPdf  PKiKP   14 34 51.5 +0.4
ARMA  Armidale         125.07 233 ePKPdf  PKiKP   14 34 52.3 +0.9
SEM   Semipalatinsk    125.32  17 i PKIKP PKPdf   14 34 50.4 -0.7
SEM                               e               14 36 39.0
SEM                                pmax   pmax
      comp=Z,238nm,0.9s
SEM   Semipalatinsk    125.32  17 ePKiKP  PKPdf   14 34 50.5 -0.7
      comp=Z,238nm,0.9s
SEM                               ePP     PP      14 36 39.0 -3.0
JOM   Ohasama          126.31 323  P      PKPdf   14 34 52.6 -0.4
TOO   Toolangi         126.32 222 ePKPdf  PKiKP   14 34 53.5 -0.1
IRK   Irkutsk          126.90 359 ePKIKP  PKPdf   14 34 53.9 +0.1
IRK                                pmax   pmax
      comp=Z,184nm,2.0s
TLY   Talaya           127.47 359 ePKPdf  PKPdf   14 34 55.1 +0.2
TLY   Talaya           127.47 359 i PKIKP PKPdf   14 34 54.8 -0.1
MOY   Mondy            127.48   1 ePKIKP  PKPdf   14 34 55.2 +0.2
MOY                               e               14 36 55.2
MOY                                pmax   pmax
      comp=Z,203nm,2.8s
KK31  Karatay Array    127.49  29 i PKIKP PKPdf   14 34 54.8 -0.4
KK31                               pmax   pmax
      comp=Z,22nm,0.9s
JMM   Marumori         127.62 322  P      PKPdf   14 34 55.1 -0.4
DGZ   Jazzator, Alta   127.82  12 i PKIKP PKiKP   14 34 56.5 +0.1
USRK  Ussuriysk Ar.    127.86 333  PKP    PKPdf   14 34 55.8 -0.1
      comp=Z,49nm,0.9s,baz=2.1,slow=1.7,SNR=22
USRK                               PP     PP      14 37 00.6 +1.8
      comp=Z,24nm,0.9s,baz=34,slow=5.4,SNR=2.5
USRK                               SKKPbc SKKPbc  14 47 59.0 -0.6
      comp=Z,2.7nm,0.8s,baz=235,slow=5.1,SNR=2.8
IUG   Iuzhnay          127.96  30d iPKIKP PKPdf   14 34 56.0 -0.2
IUG                               e               14 36 59.9
IUG                                pmax   pmax
      comp=Z,575nm,1.4s
IUG   Iuzhnay          127.96  30⇓iPKiKP  PKPdf   14 34 56.1 -0.2
      comp=Z,575nm,1.4s
IUG                               ePP     PP      14 36 59.9 +0.2
JBG   Jabagly          128.01  30c iPKIKP PKPdf   14 34 56.6 +0.2
JBG                                pmax   pmax
      comp=Z,531nm,0.4s
DZA   Taraz            128.05  29c iPKIKP PKiKP   14 34 57.8 +0.9
DZA                               i               14 37 00.3
DZA                                pmax   pmax
      comp=Z,986nm,0.9s
DZA   Taraz            128.05  29⇑iPKiKP  PKiKP   14 34 57.8 +0.9
      comp=Z,986nm,0.9s
DZA                              ⇓iPP     PP      14 37 00.3 +0.1
UOSS  Minazif          128.25  57 ePKPdf  PKPdf   14 34 56.7 -0.4
KNGR  Kungurtug, Tuv   128.38   4 i PKIKP PKPdf   14 34 57.1 +0.3
ZAK   Zakamensk        128.78 359 ePKIKP  PKPdf   14 34 56.8 -0.7
ZAK                                pmax   pmax
      comp=Z,45nm,1.4s
MNAS  Manas            128.92  28  PKIKP  PKPdf   14 34 58.4 +0.3
MNAS                               pmax   pmax
      comp=Z,113nm,0.9s
JYT   Yasato           129.01 321  P      PKPdf   14 34 58.1 -0.1
MAKZ  Makanchi         129.05  18  PKIKP  PKPdf   14 34 57.2 -0.9
MAKZ                               pmax   pmax
      comp=Z,166nm,1.0s
MK31  Makanchi Array   129.16  18 ePKPdf  PKPdf   14 34 58.6 +0.3
MK31  Makanchi Array   129.16  18 i PKIKP PKPdf   14 34 56.8 -1.5
MK31                               pmax   pmax
      comp=Z,129nm,0.9s
MKAR  Makanchi Array   129.16  18  Pdiff  Pdif    14 32 05.7 +20
      comp=Z,0.4nm,0.8s,baz=354,slow=1.4,SNR=3.1
MKAR                               PKP    PKPdf   14 34 57.9 -0.4
      comp=Z,130nm,0.9s,baz=310,slow=2.0,SNR=47
MKAR                               SKKPbc SKKPbc  14 47 48.9 -6.3
      comp=Z,8.3nm,0.9s,baz=111,slow=6.6,SNR=4.1
MK01  Makanchi Array   129.18  18 ePKPdf  PKPdf   14 34 58.4 +0.1
USP   Ospenovka        129.23  26  P      PKiKP   14 34 59.4 +0.1
      SNR=44
ZSN   Zaisan           129.30  15d iPKIKP PKiKP   14 34 59.0 -0.2
ZSN                                pmax   pmax
      comp=Z,129nm,0.9s
ZSN   Zaisan           129.30  15⇓ePKiKP  PKiKP   14 34 59.1 -0.2
      comp=Z,129nm,0.9s
EKS2  Erkin-Say        129.38  27  P      PKiKP   14 35 00.2 +0.5
      SNR=49
TDK   Taldyqorghan     129.40  22d iPKIKP PKPdf   14 34 58.8  0.0
TDK                                pmax   pmax
      comp=Z,983nm,1.3s
TDK   Taldyqorghan     129.40  22⇓ePKiKP  PKPdf   14 34 58.8  0.0
      comp=Z,983nm,1.3s
TDK                              ⇓ePKS            14 38 34.3
MSHR  Mys Shultsa      129.51 333 i PKIKP PKPdf   14 34 57.8 -1.2
KUU   Kurty            129.51  24c iPKIKP PKPdf   14 34 58.8 -0.2
KUU                               e               14 37 07.9
KUU                                pmax   pmax
      comp=Z,580nm,0.6s
KUU   Kurty            129.51  24⇑iPKiKP  PKPdf   14 34 58.8 -0.2
      comp=Z,580nm,0.6s
KUU                               ePP     PP      14 37 08.0 -1.6
CHMS  Chumysh          129.55  26  P      PKiKP   14 35 01.7 +1.8
      SNR=34
FRU   Bishkek          129.62  27 i PKIKP PKPdf   14 34 58.0 -1.3
FRU                               e               14 37 12.0
FRU                               e               14 41 56.0
FRU                                pmax   pmax
      comp=Z,400nm,2.0s
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FRU1  Bishkek          129.65  27 ePKPdf  PKiKP   14 35 01.1 +0.9
AAK   Ala-Archa        129.72  27  P      PKiKP   14 35 00.8 +0.4
      SNR=61
AAK   Ala-Archa        129.72  27 ePKPdf  PKiKP   14 35 01.3 +0.8
AAK                                SKKPbc SKKPbc  14 47 55.5 +2.3
AAK   Ala-Archa        129.72  27  PKIKP  PKiKP   14 35 00.5 +0.1
AAK                                pmax   pmax
      comp=Z,155nm,1.0s
AAK   Ala-Archa        129.72  27  SKKPbc SKKPbc  14 47 55.5 +2.3
      comp=Z,14nm,1.0s,baz=199,slow=1.3,SNR=4.2
AML   Almayashu        129.75  28  P      PKiKP   14 35 01.7 +0.9
      SNR=36
CHKK  Chushkaly        129.81  24⇓iPKIKP  PKPdf   14 34 59.3 -0.3
CHKK                              e               14 37 15.5
CHKK                               pmax   pmax
      comp=Z,581nm,1.5s
CHKK  Chushkaly        129.81  24⇓iPKiKP  PKPdf   14 34 59.3 -0.3
      comp=Z,581nm,1.5s
CHKK                              ePP     PP      14 37 15.6 +4.1
CHKK                             ⇑iSKP            14 38 07.8
CHKK                             ⇓iPKS    PKSdf   14 38 23.0  -13
KBK   Karagaybulak     129.91  26  P      PKiKP   14 35 02.9 +2.0
      SNR=37
TKM2  Tokmak 2         129.98  26  P      PKiKP   14 35 02.7 +1.7
      SNR=28
TKM2  Tokmak 2         129.98  26  PKIKP  PKPdf   14 34 59.1 -1.1
TKM2                               pmax   pmax
      comp=Z,119nm,1.2s
MJAR  Matsushiro Arr   130.05 322  PKP    PKPdf   14 35 00.3 +0.1
      comp=Z,32nm,0.8s,baz=264,slow=0.4,SNR=24
MJAR                               pPKP   pPKPdf  14 35 39.2 -0.1
      comp=Z,15nm,0.8s,baz=96,slow=2.5,SNR=2.6
MAJO  Matsushiro       130.05 322 ePKPdf  PKiKP   14 35 00.8 -0.3
MAJO  Matsushiro       130.05 322 i PKIKP PKPdf   14 35 00.0 -0.3
MAJO  Matsushiro       130.05 322 eP      PKiKP   14 35 01.2 +0.1
MAT   Matsushiro       130.05 322  PKP    PKPdf   14 34 59.1 -1.2
MAT   Matsushiro       130.05 322  P      PKPdf   14 34 59.9 -0.4
MJB9  Matsu-Tunnel     130.05 322 ePKPdf  PKiKP   14 35 00.9 -0.2
UCH   Uchtor           130.06  27  P      PKiKP   14 35 02.3 +0.8
      SNR=49
MTBS  Maitube          130.17  25⇑iPKIKP  PKiKP   14 35 02.3 +1.1
MTBS                               pmax   pmax
      comp=Z,964nm,1.0s
MTBS  Maitube          130.17  25⇑ePKiKP  PKiKP   14 35 02.4 +1.1
      comp=Z,964nm,1.0s
AAA   Alma-Ata         130.31  24c iPKIKP PKiKP   14 35 01.2 -0.3
AAA                                pmax   pmax
      comp=Z,810nm,0.8s
AAA   Alma-Ata         130.31  24⇑ePKiKP  PKiKP   14 35 01.2 -0.3
      comp=Z,810nm,0.8s
AAA                              ⇓iSKP            14 38 16.0
AAA                              ⇓iPKS            14 38 28.3
MDOK  Medeo            130.40  24c iPKIKP PKPdf   14 35 00.8 -0.1
MDOK                               pmax   pmax
      comp=Z,1µm,1.3s
MDOK  Medeo            130.40  24⇑ePKiKP  PKPdf   14 35 00.8 -0.1
      comp=Z,1µm,1.3s
TNSS  Tian-Shan        130.46  25 i PKIKP PKiKP   14 35 02.1 -0.1
TNSS  Tian-Shan        130.46  25 ePKiKP  PKiKP   14 35 02.2 -0.1
TNSS                             ⇓iPKS    PKSdf   14 38 29.2 -9.0
KZA   Kyzart           130.51  27  P      PKiKP   14 35 03.4 +1.0
      SNR=22
KPKS  Kokpek           130.81  23d iPKIKP PKiKP   14 35 03.0 +0.5
KPKS                               pmax   pmax
      comp=Z,3µm,1.0s
KPKS  Kokpek           130.81  23⇓ePKiKP  PKiKP   14 35 03.0 +0.5
      comp=Z,3µm,1.0s
JGN   Niukaw           130.81 322  P      PKPdf   14 35 01.1 -0.7
ULHL  Ulahol           130.81  26  P      PKiKP   14 35 04.8 +2.1
      SNR=11
CN2   Changchun        130.88 338 ePKP    PKPdf   14 34 58.9 -2.7
CN2                                PP     PP      14 37 19.6 +1.3
CN2                                SKS    SKSdf   14 41 57.3 -2.5
CN2                                SKKS   SKKSac  14 43 58.4 -3.3
CN2                                SS     SS      14 54 36.2 -0.2
CN2                                AMB    AMB
      comp=Z,3µm,6.6s
CN2                                LR     LR
      comp=Z,8µm,22.0s
CN2                                LR     LR
      comp=Z,7µm,22.0s
CN2                                LR     LR
      comp=Z,12µm,23.0s
WSAR  Wadi Sarin       130.96  58  SKPbc  SKPbc   14 38 13.1 -0.5
      comp=Z,128nm,1.1s,baz=284,slow=4.5,SNR=10
WSAR                               SKKPbc SKKPbc  14 47 50.1 +2.2
      comp=Z,11nm,1.0s,baz=113,slow=9.1,SNR=2.7
SATY  Saty             131.04  23 i PKIKP PKiKP   14 35 03.2 +0.2
SATY                               pmax   pmax
      comp=Z,1µm,1.0s
SATY  Saty             131.04  23 ePKiKP  PKiKP   14 35 03.2 +0.2
      comp=Z,1µm,1.0s
SATY                              eSKP            14 38 17.4
SATY                             ⇓iPKS    PKSdf   14 38 32.1 -6.5
ULN   Ulaanbaatar      131.14 356 ePKPdf  PKiKP   14 35 02.9 -0.2
ULN   Ulaanbaatar      131.14 356 i PKIKP PKPdf   14 35 02.2  0.0
SONA1 Songino Array    131.20 357 ePKPdf  PKiKP   14 35 02.9 -0.3
UZB   Uzynbulak        131.21  23c iPKIKP PKPdf   14 35 02.6 +0.2
UZB                                pmax   pmax
      comp=Z,703nm,1.0s
UZB   Uzynbulak        131.21  23⇑ePKiKP  PKPdf   14 35 02.6 +0.2
      comp=Z,703nm,1.0s
UZB                              ⇑iPKS    SKPbc   14 38 15.4 +1.3
SONM  Songino Array    131.21 357  Pdiff  Pdif    14 32 06.0 +11
      comp=Z,0.5nm,1.0s,baz=4.0,slow=6.2,SNR=2.9
SONM                               PKhKP  PKPpre  14 34 49.0
      comp=Z,2.8nm,0.9s,baz=329,slow=2.0,SNR=7.9
SONM                               PKP    PKPdf   14 35 01.2 -1.1
      comp=Z,82nm,1.1s,baz=314,slow=1.1,SNR=34
SONM                               pPKP   pPKPdf  14 35 40.5 -1.0
      comp=Z,29nm,0.9s,baz=7.9,slow=1.0,SNR=3.0
SONM                               PP     PP      14 37 18.2 -2.1
      comp=Z,47nm,1.2s,baz=350,slow=4.4,SNR=3.2
SONM                               SKKPbc SKKPbc  14 47 51.8 +3.7
      comp=Z,8.1nm,1.0s,baz=204,slow=3.6,SNR=5.2
PDGK  Podgornoye       131.23  22  PKIKP  PKPdf   14 35 01.8 -0.7
PDGK                               pmax   pmax
      comp=Z,128nm,1.3s
SFK   Sufi-Kurgan      131.29  30  PKIKP  PKPdf   14 35 03.1 +0.3
SFK                                pmax   pmax
      comp=Z,136nm,0.7s
KDJ   Kajisay          131.31  25 ePKPdf  PKiKP   14 35 05.5 +1.8
NRN   Naryn            131.36  27 ePKPpre PKPpre  14 34 55.0
PRZ   Przheval'sk      131.52  24 ePKPdf  PKiKP   14 35 05.2 +1.1
STKA  Stephens Creek   132.06 226  PKhKP  PKPpre  14 34 51.2
      comp=Z,4.6nm,0.7s,baz=64,slow=2.3,SNR=7.8
STKA                               PKP    PKiKP   14 35 05.0 -0.3
      comp=Z,54nm,0.9s,baz=50,slow=1.6,SNR=27
STKA                               pPKP   pPKPdf  14 35 43.7 +0.2
      comp=Z,30nm,0.8s,baz=84,slow=1.3,SNR=3.0
KSH   Kashi            132.87  28  PKP    PKPdf   14 35 02.9 -2.8
KSH                                sPKP           14 36 04.9
KSH                                SKS    SKSdf   14 42 01.3 -2.6
KSH                                SKKS   SKKSac  14 44 07.4 -7.0
KSH                                SS     SS      14 55 03.1 +1.8
KSH                                AMB    AMB
      comp=Z,2µm,4.4s
KSH                                LR     LR
      comp=Z,13µm,17.8s
KSH                                LR     LR
      comp=Z,3µm,13.6s
KSH                                LR     LR
      comp=Z,2µm,12.8s
CTAO  Charters Tower   133.26 243 ePKPdf  PKPdf   14 35 04.7 -2.1
SNY   Shenyang         133.28 338 ⇑PKP    PKPdf   14 34 49.1  -17
SNY                                sPKP           14 35 54.0
SNY                                PP     PP      14 37 33.8 +0.1
SNY   Shenyang         133.28 338  SS     SS      14 55 00.8 -4.7
SNY                                pmax   pmax
      comp=Z,4µm,14.9s
SNY                                LR     LR
      comp=N,12µm,21.0s
SNY                                LR     LR
      comp=E,6µm,19.6s
SNY                                LR     LR
      comp=Z,22µm,20.6s
WMQ   Urumqi           133.41  15  PKP    PKPdf   14 35 06.8 +0.3
WMQ                                PP     PP      14 37 39.7 +5.2
WMQ                                SKS    SKSdf   14 42 00.7 -3.8
WMQ                                SKKS   SKKSac  14 44 13.9 -3.4
WMQ                                SS     SS      14 55 08.4 +1.5
WMQ                                LR     LR
      comp=Z,17µm,22.1s
WMQ                                LR     LR
      comp=Z,20µm,20.3s
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WMQ                                LR     LR
      comp=Z,22µm,21.3s
JMN   Monobe           134.57 323  P      PKiKP   14 35 09.6 -0.7
KSRS  Korea Array      135.07 331  PKhKP  PKPpre  14 34 57.9
      comp=Z,6.8nm,0.7s,baz=52,slow=3.0,SNR=20
KSRS                               PKP    PKPdf   14 35 10.1 +0.5
      comp=Z,59nm,0.8s,baz=36,slow=1.7,SNR=25
KSRS                               pPKP   pPKPdf  14 35 49.5 +0.7
      comp=Z,38nm,0.7s,baz=354,slow=1.2,SNR=2.3
KSRS                               PP     PP      14 37 48.7 +3.4
      comp=Z,20nm,1.1s,baz=35,slow=5.7,SNR=3.5
KS15  Wonju Array Si   135.10 331 ePKPpre PKPpre  14 34 59.8
KSAR  Wonju Array Be   135.10 331  PKPpre PKPpre  14 34 57.9
KSAR                               PKP    PKPdf   14 35 10.1 +0.4
KSAR                               pPKP   pPKPdf  14 35 49.5 +0.7
KSAR                               PP     PP      14 37 48.7 +3.2
KSAR  Wonju Array Be   135.10 331  PKHKP  PKPpre  14 34 57.9
KSAR                                              14 35 10.1
KSAR                                              14 35 49.5
KSAR                                              14 37 48.7
DL2   Dalian           136.55 338  Pdif   Pdif    14 32 07.1  -11
DL2                                sP     sPdif   14 33 08.1 -3.3
DL2                                PKP    PKPdf   14 35 00.8  -12
DL2                                sPKP           14 36 03.0
DL2                                PP     PP      14 37 40.9  -13
DL2                                PKS            14 38 43.6
DL2   Dalian           136.55 338  SS     SS      14 55 20.8  -24
DL2                                AMB    AMB
      comp=Z,2µm,10.4s
DL2                                LR     LR
      comp=N,4µm,27.5s
DL2                                LR     LR
      comp=E,10µm,22.0s
DL2                                LR     LR
      comp=Z,10µm,27.5s
JNU   Nakatsue         136.78 324  P      PKPpre  14 35 03.9
BJI   Beijing          137.26 345  PKP    PKPdf   14 35 00.1  -14
BJI                                sPKP           14 35 52.0
BJI                                PP     PP      14 37 48.3  -10
BJI   Beijing          137.26 345  SS     SS      14 55 42.9  -10
BJI                                LR     LR
      comp=N,4µm,30.6s
BJI                                LR     LR
      comp=E,410nm,27.9s
BJI                                LR     LR
      comp=Z,4µm,28.5s
HHC   Hu-ho-hao-te     137.51 350 ePKP    PKPdf   14 35 08.4 -5.9
HHC                                SS     SS      14 55 53.2 -2.7
HHC                                LR     LR
      comp=Z,8µm,20.7s
HHC                                LR     LR
      comp=Z,5µm,19.0s
HHC                                LR     LR
      comp=Z,8µm,18.1s
BTO   Baotou           138.00 351 eP      PKPdf   14 35 06.8 -8.4
BTO   Baotou           138.00 351 ePKP    PKPdf   14 35 10.3 -4.9
DHRM  DHARAMSHALA      138.62  35 eP      PKPdf   14 35 15.4 -1.3
GTA   Gaotai           139.67   3 ⇑PKP    PKPdf   14 35 08.6  -10
GTA                                sPKP           14 35 57.8
GTA                                PP     PP      14 38 12.3 -1.2
GTA                                SKS    SKSdf   14 42 01.9  -14
GTA                                SKKS   SKKSac  14 44 44.3  -11
BHJ   Bhuj             139.92  51 eP      PKPdf   14 35 18.2 -0.8
SMLA  Simla            139.95  35 eP      PKPdf   14 35 18.0 -0.8
TIY   Taiyuan          140.37 348 ePKP    PKPdf   14 35 14.5 -5.0
TIY                                SKKS           14 44 59.7
TIY                                LR     LR
      comp=Z,11µm,23.1s
TIY                                LR     LR
      comp=Z,11µm,23.2s
TIY                                LR     LR
      comp=Z,14µm,24.7s
DDI   Dehra Dun        141.06  35 eP      PKPdf   14 35 19.7 -1.2
DDI                                IAMs_20 IAMs_20 15 34 05.1
      comp=Z,12µm,12.9s
NDI   New Delhi        141.77  37 eP      PKPdf   14 35 22.0 -0.2
FORT  Forrest          141.78 217 ePKPpre PKPpre  14 35 18.4
AS01  Alice Springs    142.14 231 ePKPpre PKPpre  14 35 18.6
AS31  Alice Springs    142.18 231 ePKPpre PKPpre  14 35 19.1
ASAR  Alice Springs    142.18 231  PKhKP  PKPpre  14 35 17.6
      comp=Z,84nm,0.9s,baz=119,slow=3.8,SNR=369
JOW   Kunigami         142.82 320  PKhKP  PKPpre  14 35 21.0
      comp=Z,5.4nm,0.6s,baz=140,slow=12,SNR=9.7
LZH   Lanzhou          143.05 358 ⇓PKP    PKPab   14 35 20.7 +0.7
LZH                                pPKP   pPKPdf  14 36 03.5 -0.2
LZH                                PP     PP      14 38 34.0 -0.1
LZH                                AMB    AMB
      comp=Z,10µm,10.8s
LZH                                LR     LR
      comp=Z,13µm,19.5s
LZH                                LR     LR
      comp=Z,9µm,19.0s
LZH                                LR     LR
      comp=Z,14µm,19.7s
SSE   Sheshan          143.46 333  PKP    PKPab   14 35 21.2 -0.4
SSE                                PP     PP      14 38 37.9 +1.1
SSE                                SS     SS      14 57 00.9 -5.0
SSE                                AMB    AMB
      comp=Z,3µm,9.7s
SSE                                LR     LR
      comp=Z,4µm,21.7s
SSE                                LR     LR
      comp=Z,6µm,22.2s
SSE   Sheshan          143.46 333 ePKPpre PKPab   14 35 21.3 -0.3
NJ2   Nanjing          143.65 336 ⇓PKP    PKPab   14 35 20.7 -1.6
NJ2                                pPKP   pPKPdf  14 36 00.4 -4.2
NJ2                                sPKP           14 36 20.3
NJ2                                SS     SS      14 57 08.1 +0.4
NJ2                                AMB    AMB
      comp=Z,6µm,8.7s
NJ2                                LR     LR
      comp=Z,7µm,21.7s
NJ2                                LR     LR
      comp=Z,7µm,22.2s
NJ2                                LR     LR
      comp=Z,8µm,23.3s
WB2   Warramunga Arr   143.65 237 ePKPpre PKPbc   14 35 22.2 -1.4
WRAB  Tennant Creek    143.65 237 ePKPdf  PKPbc   14 35 23.1 -0.5
WRAB  Tennant Creek    143.65 237 ePKHKP  PKPbc   14 35 23.2 -0.4
WRA   Warramunga Arr   143.66 237  PKP    PKPbc   14 35 23.6 -0.1
      comp=Z,592nm,1.1s,baz=120,slow=3.0,SNR=861
XAN   Xi'an            144.60 351  PKP    PKPab   14 35 25.6 -0.3
XAN                                PKPab  PKPdf   14 35 28.1 +1.0
XAN                                PP     PP      14 38 43.6 +0.3
XAN                                SKKS           14 45 22.9
XAN                                AMB    AMB
      comp=Z,5µm,14.2s
XAN                                LR     LR
      comp=Z,5µm,27.7s
XAN                                LR     LR
      comp=Z,11µm,25.9s
XAN                                LR     LR
      comp=Z,8µm,24.0s
XAN   Xi'an            144.60 351 ePKPdf  PKPab   14 35 25.4 -0.5
XAN   Xi'an            144.60 351 ePKIKP  PKPab   14 35 25.4 -0.5
H01W1 Cape Leeuwin H   144.61 197  PKP    PKPdf   14 35 26.8 +0.1
      baz=162,slow=4.7,SNR=12
H01W2 Cape Leeuwin H   144.61 197  PKP    PKPdf   14 35 26.6 -0.1
      baz=162,slow=4.7,SNR=18
H01W3 Cape Leeuwin H   144.63 197  PKP    PKPdf   14 35 26.8 +0.1
      baz=162,slow=4.7,SNR=12
BOM   Bombay           144.71  54 eP      PKPab   14 35 26.4 -0.3
NWAO  Narrogin (SRO)   145.39 202  PKPbc  PKPab   14 35 28.8 -0.1
      comp=Z,669nm,1.2s,baz=7.9,slow=3.6,SNR=52
PYUN  Piuthan          145.49  31 eP      PKPbc   14 35 29.3  0.0
BHPL  Bhopal           145.66  44 eP      PKPdf   14 35 27.3 -1.9
DANN  Dangsing         145.68  30 eP      PKPbc   14 35 30.1 +0.1
POO   Poona            145.74  54 eP      PKPdf   14 35 29.2 -0.2
KOLN  Koldanda         146.07  31 eP      PKPdf   14 35 30.2 +0.2
WHN   Wuhan            146.64 341 ⇓PKPbc  PKPbc   14 35 31.8 -0.6
WHN                                SKKS           14 45 36.0
WHN                                LR     LR
      comp=Z,13µm,22.0s
WHN                                LR     LR
      comp=Z,11µm,19.2s
WHN                                LR     LR
      comp=Z,22µm,22.8s
KKN   Kakani           146.89  29 eP      PKPdf   14 35 31.8 +0.4
DMN   Daman            146.96  29 eP      PKPdf   14 35 31.8 +0.2
GUN   Gumba            147.07  28 eP      PKPdf   14 35 32.2 +0.3
PKIN  Phulchoki        147.12  29 eP      PKPdf   14 35 31.6 -0.3
PKI   Pulchoki         147.13  29 eP      PKPdf   14 35 31.8 -0.2
GOA   Goa              147.21  59 eP      PKPdf   14 35 31.0 -0.9
JIRN  Jiri             147.43  28 eP      PKPdf   14 35 32.4 -0.1
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JBP	Jabalpur	147.43	41	*e*P	PKPdf	14 35 31.1	-1.0
JBP				AMB	AMB	14 35 41.2	
	comp=Z,776nm,2.5s						
JBP				*e*x	x	14 38 58.6	
LSA	Lhasa	147.56	19	PKPbc	PKPdf	14 35 33.6	+0.8
LSA				LR	LR		
	comp=Z,4µm,39.9s						
LSA				LR	LR		
	comp=Z,4µm,32.3s						
LSA				LR	LR		
	comp=Z,12µm,49.4s						
LSA	Lhasa	147.56	19	*e*PKPdf	PKPbc	14 35 34.5	-1.1
LSA	Lhasa	147.56	19	*e*PKIKP	PKPbc	14 35 34.5	-1.1
YOJ	Yonaguni jima	147.80	323	*e*PKPbc	PKPbc	14 35 35.1	-0.6
YOJ	Yonaguni jima	147.80	323	*e*PKIKP	PKPbc	14 35 35.1	-0.6
YOJ	Yonaguni jima	147.80	323	P	PKPbc	14 35 35.0	-0.7
H08N3	Diego Garcia H	148.09	100	PKPbc	PKPbc	14 35 36.4	0.0
H08N2	Diego Garcia H	148.10	100	PKPbc	PKPbc	14 35 36.4	0.0
H08N1	Diego Carcia H	148.12	100	PKPbc	PKPbc	14 35 36.5	0.0
NGP	Nagpur	148.16	45	⇓*e*P	PKPdf	14 35 32.9	-0.5
NGP				*e*x	x	14 46 56.8	
ENH	Enshi	148.17	349	*e*PKPdf	PKPdf	14 35 33.7	+0.5
CD2	Chengdu	148.21	358	PKPbc	PKPdf	14 35 33.7	+0.4
CD2				pPKP	pPKPbc	14 36 15.0	-0.5
CD2				sPKP		14 36 28.7	
CD2				PP	PP	14 39 09.5	+5.0
CD2				SKS	SKSdf	14 42 24.9	-3.8
CD2				SKKS	SKKSac	14 45 44.3	+0.6
CD2				AMB	AMB		
	comp=Z,14µm,10.0s						
CD2				LR	LR		
	comp=Z,15µm,23.7s						
CD2				LR	LR		
	comp=Z,32µm,25.7s						
CD2				LR	LR		
	comp=Z,22µm,24.9s						
RAMN	Ramite	148.22	28	*e*P	PKPdf	14 35 33.9	+0.2
TATO	Taipei	148.29	326	*e*PKPbc	PKPbc	14 35 36.4	-0.6
YHNB	Yeheng	148.59	326	*e*PKPdf	PKPbc	14 35 36.7	-1.2
ODAN	Odare	148.66	27	*e*P	PKPdf	14 35 34.5	+0.1
NACB	Ninganchiao	148.85	325	*e*PKPbc	PKPbc	14 35 38.6	+0.1
MNCY	Minicoy	149.17	72	*e*P	PKPdf	14 35 33.7	-1.5
MNCY				IAMs_20	IAMs_20	15 35 24.9	
	comp=Z,6µm,12.9s						
MORW	Morawa	149.29	204	*e*PKPdf	PKPdf	14 35 35.3	+0.3
H08S1	Diego Carcia H	149.33	103	PKPbc	PKPbc	14 35 39.0	-0.6
H08S3	Diego Garcia H	149.34	103	PKPbc	PKPbc	14 35 39.0	-0.6
H08S2	Diego Garcia H	149.35	103	PKPbc	PKPbc	14 35 39.0	-0.6
DGAR	Diego Garcia	149.35	103	*e*PKPdf	PKPbc	14 35 38.1	-1.9
SSLB	Suanglung	149.52	325	*e*PKPbc	PKPbc	14 35 40.2	0.0
YULB	Yu-li	149.63	324	*e*PKPdf	PKPbc	14 35 38.4	-2.1
TPUB	Ta-pu	150.08	325	*e*PKPbc	PKPbc	14 35 41.5	-0.1
HYB	Hyderabad	150.09	51	*i* PKP	PKPdf	14 35 37.0	+0.4
HYB				*e*PP	PP	14 39 20.0	+3.1
HYB	Hyderabad	150.09	51	*e*P	PKPdf	14 35 35.9	-0.7
BOK	Bokaro	150.49	32	*e*P	PKPdf	14 35 35.6	-1.4
BOK				IAMs_20	IAMs_20	15 33 23.8	
	comp=Z,8µm,20.6s						
SHL	Shillong	151.62	21	*i* P	PKPdf	14 35 38.0	-1.0
SHL				*e*x	x	14 45 02.0	
SHL				IAMs_20	IAMs_20	15 35 06.9	
	comp=Z,11µm,28.3s						
FITZ	Fitzroy Crossi	151.67	232	*e*PKPdf	PKPdf	14 35 39.7	+0.7
GYA	Guiyang	152.38	352	*i* PKPbc	PKPdf	14 35 39.9	-0.1
GYA				PKPab	PKPab	14 35 58.0	+0.7
GYA				pPKP	pPKPdf	14 36 20.8	+1.5
GYA				sPKP		14 36 36.0	
GYA				PKS	PKSdf	14 39 12.4	-2.4
GYA				PP	PP	14 39 31.2	+2.6
GYA				SKKS		14 46 03.0	
GYA				SS	SS	14 58 44.4	-1.0
GYA				AMB	AMB		
	comp=Z,3µm,13.4s						
GYA				LR	LR		
	comp=Z,23µm,20.0s						
GYA				LR	LR		
	comp=Z,21µm,19.8s						
GYA				LR	LR		
	comp=Z,20µm,20.6s						
TRD	Trivandrum	152.80	69	*e*P	PKPdf	14 35 39.5	-1.3
TRD				IAMs_20	IAMs_20	15 35 03.0	
SGCP	Mt. Cagua	152.88	316	*e*P	PKPbc	14 35 47.6	-0.4
BWNR	Bhubaneshwar	153.20	37	*e*x	PKPpre	14 35 30.2	
BWNR				IAMs_20	IAMs_20	15 34 25.7	
	comp=Z,6µm,12.9s						
APYP	Conner	153.70	316	*e*P	PKPdf	14 35 43.2	+1.3
GZH	Guangzhou	153.82	337	PKPbc	PKPdf	14 35 39.3	-2.7
GZH				PKS	PKSdf	14 39 13.0	-3.4
GZH				SKKS		14 46 09.5	
GZH				SS	SS	14 58 56.9	-4.5
GZH				LR	LR		
	comp=Z,7µm,24.5s						
GZH				LR	LR		
	comp=Z,10µm,22.0s						
MDRS	Chennai	153.82	57	*e*P	PKPdf	14 35 41.6	-0.6
MBWA	Marble Bar	153.89	219	*e*PKPdf	PKPdf	14 35 42.6	+0.5
MBWA	Marble Bar	153.89	219	*e*P	PKPdf	14 35 43.5	+1.4
KMI	Kunming	154.00	360	PKPbc	PKPdf	14 35 41.2	-1.3
BESP	Borongan	154.01	300	*e*P	PKPbc	14 35 49.3	-1.3
PVCP	Virac	154.11	305	*e*P	PKPdf	14 35 45.7	+3.1
BRDH	Bariadhala	154.15	24	PKP	PKPdf	14 35 44.4	+1.9
	comp=Z,128nm,0.4s,baz=64,slow=6.1,SNR=12						
ABRA	Dolores	154.21	317	*e*P	PKPdf	14 35 44.3	+1.7
MCO	Taipa Grande	154.60	336	P	PKPbc	14 35 50.0	-1.7
BUTP	Butuan	154.95	294	*e*P	PKiKP	14 35 53.7	+1.1
OCLP	Ormoc	154.99	299	*e*P	PKPdf	14 35 44.7	+0.9
MSLP	Maasin	155.17	297	*e*P	PKPdf	14 35 44.1	0.0
AUQP	San Andres	155.46	306	*e*P	PKPab	14 36 09.1	-1.5
DAV	Davao City (W)	155.64	290	P	PKPdf	14 35 41.8	-3.0
DAV	Davao City (W)	155.64	290	*e*P	PKPdf	14 35 47.5	+2.8
DDMP	Don Marcelino,	155.80	287	*e*P	PKPdf	14 35 51.0	+6.0
BUKP	Musuan	155.86	292	*e*P	PKPdf	14 35 45.2	+0.1
LLP	Lapu-Lapu	155.88	298	*e*P	PKPdf	14 35 44.0	-1.0
BOAC	Boac	156.05	308	*e*P	PKPdf	14 35 48.5	+3.3
SCZP	Santa Cruz	156.05	315	*e*P	PKPab	14 36 12.3	-0.8
KCP	Kidapawan	156.12	290	⇓*i*P	PKPdf	14 35 45.4	-0.1
RCP	Roxas	156.34	302	⇑*e*P	PKPdf	14 35 44.4	-1.2
TGY	Tagaytay City	156.37	310	PKPab	PKPab	14 36 16.5	+1.9
	comp=Z,614nm,0.9s,baz=245,slow=3.0,SNR=11						
OTRP	Odiongan	156.52	305	*e*P	PKPdf	14 35 46.3	+0.5
PALK	Pallekele	156.71	69	PKP	PKPdf	14 35 45.7	-0.5
	comp=Z,27nm,1.0s,baz=300,slow=3.2,SNR=7.5						
PALK				PKPab	PKPab	14 36 14.5	-1.7
	comp=Z,53nm,0.6s,baz=296,slow=4.2,SNR=20						
SKMP	Bagumbayan, Su	156.79	289	*e*P	PKPdf	14 35 44.9	-1.3
CTBH	Cotabato--PC H	156.84	291	⇑*e*P	PKPdf	14 35 46.3	0.0
GUIM	Jordan	156.93	301	*e*P	PKPpre	14 35 35.7	
SJMP	San Jose	157.20	307	*e*P	PKPdf	14 35 49.6	+2.9
PAGZ	Pagadian	157.42	293	*e*P	PKPdf	14 35 46.0	-1.1
CUYO	Cuyo Island	158.16	303	*e*P	PKPab	14 36 22.6	+0.2
IPIL	Ipil	158.18	294	*e*P	PKPab	14 36 22.2	-0.3
BUSP	Coron	158.19	307	*e*P	PKPdf	14 35 50.5	+2.6
QIZ	Qiongzhong	158.81	341	PKP	PKPdf	14 35 47.8	-0.8
QIZ				PKPab	PKPab	14 36 23.9	-0.9
QIZ				PP	PP	14 40 03.7	-0.7
QIZ				SS	SS	14 59 55.9	+1.0
QIZ				AMB	AMB		
	comp=Z,3µm,13.2s						
QIZ				LR	LR		
	comp=Z,6µm,29.4s						
QIZ				LR	LR		
	comp=Z,6µm,23.5s						
QIZ				LR	LR		
	comp=Z,8µm,43.6s						
MMRI	Maumere	158.98	248	PKP	PKPdf	14 35 52.7	+3.8
MMRI				PKP	PKPdf	14 35 54.1	+5.2
MMRI				PKP	PKPdf	14 35 58.6	+10
ENPP	El Nido	159.27	306	*e*P	PKPdf	14 35 48.8	-0.5
CHTO	Chiang Mai	159.96	10	*e*PKPdf	PKPdf	14 35 51.3	+1.3
CHTO	Chiang Mai	159.96	10	PKP	PKPdf	14 35 50.2	+0.3
CHTO	Chiang Mai	159.96	10	*e*P	PKPdf	14 35 52.3	+2.3
CMMT	Chiang Mai	159.96	10	PKP	PKPdf	14 35 50.1	+0.1
CMAR	Chiang Mai Arr	160.31	10	PKP	PKPdf	14 35 50.5	+0.1
	comp=Z,28nm,0.8s,baz=303,slow=2.1,SNR=57						
CMAR				PKPab	pPKPdf	14 36 30.1	+0.3
	comp=Z,275nm,0.8s,baz=330,slow=5.4,SNR=25						
CMAR				SKP		14 39 07.8	
	comp=Z,37nm,0.8s,baz=324,slow=4.1,SNR=4.4						
NONG	Nongkai	161.01	358	PKP	PKPdf	14 35 53.1	+2.0
NONG	Nongkai	161.01	358	P	PKPab	14 36 34.1	-0.3
	comp=Z,8.7nm,0.9s,comp=Z,144nm						
UTTA	Uttaradit	161.24	6	PKP	PKPdf	14 35 51.9	+0.6
SUKH	Sukhothai	161.38	9	PKP	PKPdf	14 35 52.3	+0.8
SUKH	Sukhothai	161.38	9	P	PKPab	14 36 35.6	-0.4
BATP	Bataraza	161.93	303	*e*P	PKPdf	14 35 52.0	-0.1
BKSI	Bulukumba	161.94	256	PKP	PKPdf	14 35 51.7	-0.5
BKSI				PKP	PKPdf	14 35 53.8	+1.6
SKNT	Sakolnakorn	162.05	356	PKP	PKPdf	14 35 54.3	+2.1
BNSI	Bone	162.14	259	PKP	PKPdf	14 35 52.0	-0.4
BNSI				PKP	PKPdf	14 35 53.7	+1.3
UMPA	Umpang Tak	162.49	12	PKP	PKPdf	14 35 53.7	+1.0
SPSI	Sidrap Palu	162.54	260	PKP	PKPdf	14 35 53.3	+0.5
SPSI				PKP	PKPdf	14 35 56.2	+3.4
CHAI	Chaiyaphum	163.16	2	PKP	PKPdf	14 35 53.8	+0.5
CHAI	Chaiyaphum	163.16	2	P	PKPab	14 36 38.7	-5.1
	comp=Z,91nm,0.9s,comp=Z,553nm						
UTHA	Uthaitani	163.23	10	PKP	PKPdf	14 35 53.7	+0.3
UTHA	Uthaitani	163.23	10	P	PKPab	14 36 38.4	-5.7
	comp=Z,118nm,0.9s,comp=Z,799nm						
PBA	Port Blair	164.07	37	*e*P	PKPdf	14 35 52.2	-1.9
SRAK	Srakaew	165.04	2	PKP	PKPdf	14 35 56.8	+1.8
SRAK	Srakaew	165.04	2	P	PKPab	14 36 53.3	+1.2
	comp=Z,688nm,0.9s,comp=Z,5µm						
SMKI	Samarinda	165.32	272	PKP	PKPdf	14 36 00.5	+5.2
SMKI				PKP	PKPdf	14 36 00.9	+5.6
SMKI				PKP	PKPdf	14 36 03.4	+8.1
SRBI	Singaraja	165.56	241	PKP	PKPdf	14 35 55.3	-0.2
PHET	Kaeng Krachan	165.85	12	PKP	PKPdf	14 35 57.3	+1.6
PHET	Kaeng Krachan	165.85	12	P	PKPab	14 36 55.8	+0.1
PATY	Pattaya	166.03	7	P	PKPab	14 36 59.6	+3.1
	comp=Z,33nm,0.8s						
KBKI	Kotabaru	166.20	260	PKP	PKPdf	14 35 56.1	+0.1
JAGI	Jajag, Banyuwa	166.28	237	PKP	PKPdf	14 35 54.8	-1.3
JAGI				PKP	PKPdf	14 35 58.9	+2.8
KMMI	Kalianget	167.13	242	PKP	PKPdf	14 35 56.7	0.0
KMMI				PKP	PKPdf	14 35 59.3	+2.6
CMBY	CAMPBELL BAY	168.26	47	*e*P	PKPdf	14 35 55.9	-1.6
PWJI	Pagerwojo	168.45	233	PKP	PKPdf	14 35 56.6	-1.0
PWJI				PKP	PKPdf	14 35 58.4	+0.8
GRJI	Gresik	168.49	239	PKP	PKPdf	14 36 00.7	+3.0
PCJI	Pacitan	168.84	230	PKP	PKPdf	14 35 57.0	-0.9
PCJI				PKP	PKPdf	14 35 59.6	+1.7
PKDT	Phuket	170.19	25	PKP	PKPdf	14 36 01.4	+2.7
PKDT	Phuket	170.19	25	P	PKPab	14 37 16.7	+1.7
	comp=Z,81nm,1.0s,comp=Z,4µm						
TRTT	Trang	170.74	18	PKP	PKPdf	14 36 00.6	+1.6
TRTT	Trang	170.74	18	P	PKPab	14 37 18.6	+1.2
KPJI	Karang Pucung	171.07	225	PKP	PKPdf	14 35 59.2	0.0
CMJI	Cimerak	171.08	221	PKP	PKPdf	14 36 00.4	+1.2
CMJI				PKP	PKPdf	14 36 04.4	+5.2
SKLT	Songkhla	171.63	13	PKP	PKPdf	14 36 02.6	+3.1
CISI	Cisompet, Garu	171.66	219	*e*PKPdf	PKPdf	14 35 58.1	-1.5
KSM	Kuching	171.84	288	*e*PKPdf	PKPdf	14 35 59.3	-0.3
JCJI	Jatiwangi	172.12	226	PKP	PKPdf	14 36 02.1	+2.4
JCJI				PKP	PKPdf	14 36 05.3	+5.6
DBJI	Dramaga	173.09	217	PKP	PKPdf	14 35 59.4	-0.7
DBJI				PKP	PKPdf	14 36 00.3	+0.2
KCSI	Kotacane, Aceh	173.43	46	PKP	PKPdf	14 35 58.4	-1.9
KCSI				PKP	PKPdf	14 36 00.3	0.0
KULM	Kulim	173.44	17	*e*PKPdf	PKPdf	14 35 59.8	-0.4
IPM	Ipoh	174.32	15	*e*PKPab	PKPab	14 37 33.3	+0.1
GSI	Gunungsitoli	174.52	65	PKP	PKPdf	14 36 06.2	+5.5
PSI	Prapat	174.75	43	PKP	PKPdf	14 35 59.4	-1.4
	comp=Z,56nm,0.9s,baz=179,slow=4.9,SNR=20						
PSI				pPKP	pPKPdf	14 36 38.9	-1.5
	comp=Z,32nm,1.0s,baz=180,slow=2.8,SNR=2.6						
PSI				PKPab	PKPab	14 37 35.7	+0.1
	comp=Z,85nm,0.9s,baz=360,slow=6.2,SNR=12						
KASI	Kota Agung	175.13	204	PKP	PKPdf	14 35 58.1	-2.7
KASI				PKP	PKPdf	14 36 03.9	+3.1
KLI	Kotabumi	175.55	211	PKP	PKPdf	14 35 59.4	-1.5
KLI				PKP	PKPdf	14 36 04.2	+3.3
LWLI	Liwa	175.76	201	PKP	PKPdf	14 36 03.0	+1.9
MDSI	Maura Dua	176.20	206	PKP	PKPdf	14 35 58.9	-2.2
MNSI	Mandailing Nat	176.53	58	PKP	PKPdf	14 35 58.9	-2.2
MNSI				PKP	PKPdf	14 35 59.8	-1.4
MYKOM	Kota Tinggi	176.90	335	*e*PKPdf	PKPdf	14 36 01.1	-0.1
LHSI	Lahat	177.06	200	PKP	PKPdf	14 35 59.8	-1.4
LHSI				PKP	PKPdf	14 36 00.5	-0.7
TPRI	Tanjung Pinang	177.22	314	PKP	PKPdf	14 36 03.4	+2.1
MASI	Maura Aman, Be	177.89	172	PKP	PKPdf	14 36 02.7	+1.3
PDSI	Padang	177.92	87	PKP	PKPdf	14 36 02.1	+0.7
KRJI	Kerinci	178.50	134	PKP	PKPdf	14 36 02.2	+0.6

IDC 09 14:49:31.4±6.1**,10°.69S**×**167°.32E,h0**^{km}**,mb3.6**/3**,**
mb1 3.9/3**,mb1mx3.5**/28**,mbtmp3.6**/3**,Error ellipse:**
s-maj=321.6km s-min=31.9km az=139.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.05	250	P	P	14 56 09.2	+0.2
	0.5nm,0.8s,baz=81,slow=9.2,SNR=3.6						
ASAR	Alice Springs	34.33	244	P	P	14 56 19.8	-0.4
	0.6nm,0.8s,baz=66,slow=7.3,SNR=5.4						
ILAR	Eielson Array	82.70	18	P	P	15 01 56.7	0.0
	1.1nm,1.1s,baz=210,slow=7.0,SNR=3.4						

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*IDC **09** 14:55:18.9±1.4, 11°.60S×165°.82E, h0^{km}, mb3.6/5,*
mb1 3.9/7, mb1mx3.7/32, mbtmp3.8/7, ML4.4/2, Error
ellipse: s-maj=34.0km s-min=28.6km az=131.0
*ISCJB **09** 14:55:22.5±1.0, 11°.8S±0°.1×165°.7E±0°.1, h37^{km}, mb3.6/5,*
Error ellipse: s-maj=21.0km s-min=11.9km az=38.5
ISC 09 14:55:24.1±1.1**,11°.7S**±0°.1×**165°.8E**±0°.1**,h37**^{km}**,n7,**
σ0^{s}82/8**,mb3.5**/5**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.18	291	Pn	Pn	14 56 51.6	-1.3
	25nm,0.3s,baz=148,slow=5.4,SNR=14						
HNR				Sn	Sn	14 58 03.2	+0.9
	3.1nm,0.3s,baz=198,slow=20,SNR=1.2						
DZM	Mont Dzumac	10.34	177	Pn	Pn	14 57 49.7	-0.2
	1.0nm,0.3s,baz=324,slow=22,SNR=6.8						
WRA	Warramunga Arr	31.32	251	P	P	15 01 41.7	+0.6
	0.5nm,0.6s,baz=81,slow=8.7,SNR=5.1						
ASAR	Alice Springs	32.56	244	P	P	15 01 52.6	+0.6
	0.4nm,0.7s,baz=72,slow=9.3,SNR=5.7						
SONM	Songino Array	79.22	324	P	P	15 07 25.3	-0.2
	0.3nm,0.5s,baz=103,slow=6.4,SNR=2.1						
ILAR	Eielson Array	84.11	18	P	P	15 07 51.1	+0.3
	0.3nm,0.8s,baz=218,slow=5.6,SNR=3.7						
MKAR	Makanchi Array	94.03	317	P	P	15 08 38.6	+0.2
	0.4nm,0.7s,baz=113,slow=5.4,SNR=5.3						

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*SOME **09** 14:57:55.5, 42°.60N×79°.68E, h20^{km}, MS3.4*
*KRNET **09** 14:57:55.1±0.1, 42°.60N×79°.68E, h14^{km}, mb3.2*
*NNC **09** 14:57:55.3±0.9, 42°.62N×79°.67E, h0^{km}, mb3.7, mpv3.5,*
Error ellipse: s-maj=5.9km s-min=3.4km az=137.0
ISC 09 14:57:54.2±1.5**,42°.57N**±0°.04×**79°.59E**±0°.04**,h14**^{km}±10^{km}**,**
n62,σ1^{s}20/104**,22C-19D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.71	324	P	Pn	14 58 09.1	-1.0
	12nm,0.1s						
UZB				S	Sb	14 58 18.9	+0.6
	223nm,0.2s						
UZB	Uzynbulak	0.71	324	*e*P	Pn	14 58 09.1	-1.0
	baz=19						
UZB				*e*S	Sb	14 58 18.9	+0.6
	baz=19						
UZB	Uzynbulak	0.71	324	*e*P	Pn	14 58 09.1	-1.0
	12nm,0.1s						
UZB				*e*S	Sb	14 58 18.9	+0.6
	223nm,0.2s						
PDGK	Podgornoye	0.76	355	P	Pb	14 58 09.4	0.0
	32nm,0.2s						
PDGK				S	Sb	14 58 19.4	-0.3
	34nm,0.2s						
PDGK	Podgornoye	0.76	355	⇑P	Pb	14 58 09.4	0.0
	15nm,0.3s						
PDGK				⇓S	Sb	14 58 19.7	-0.1
	74nm,0.5s						
PDGK	Podgornoye	0.76	355	⇓*i*P	Pb	14 58 09.4	0.0
	baz=49						
PDGK				⇓*i*S	Sb	14 58 19.9	+0.2
	baz=49						
PRZ	Przheval'sk	0.88	265	⇓*i*P	Pn	14 58 13.2	+0.7
	baz=63						
PRZ				⇓*i*S	Sn	14 58 25.5	+0.3
	baz=63						
SATY	Saty	1.00	300	P	Pn	14 58 14.7	+0.7
	14nm,0.2s						
SATY				S	Sn	14 58 28.5	+0.5
	136nm,0.2s						
SATY	Saty	1.00	300	⇓*i*P	Pn	14 58 14.7	+0.7
	4.3nm,0.1s						
SATY				⇓*i*S	Sn	14 58 28.5	+0.5
	140nm,0.1s						
KTMS	Ketmen	1.04	32	P	Pn	14 58 13.8	-0.8
	46nm,0.1s						
KTMS				S	Sb	14 58 27.1	-0.6
	170nm,0.1s						
KTMS	Ketmen	1.04	32	*e*P	Pn	14 58 13.8	-0.8
	baz=29						
KTMS				*e*S	Sb	14 58 27.1	-0.6
	baz=29						
KTMS	Ketmen	1.04	32	*e*P	Pn	14 58 13.8	-0.8
	46nm,0.1s						
KTMS				*e*S	Sb	14 58 27.1	-0.6
	170nm,0.1s						
KURS	Kuram	1.39	312	P	Pg	14 58 21.6	+0.7
	5.4nm,0.4s						
KURS				S	Sg	14 58 40.6	+1.7
	18nm,0.5s						
KURS	Kuram	1.39	312	⇑*i*P	Pg	14 58 21.6	+0.7
	baz=9.0						
KURS				⇓*i*S	Sg	14 58 40.7	+1.7
	baz=9.0						
KURS	Kuram	1.39	312	⇑*i*P	Pg	14 58 21.6	+0.7
	5.4nm,0.4s						
KURS				⇓*i*S	Sg	14 58 40.6	+1.7
	18nm,0.5s						
MNBS	Baschi	1.74	331	P	Pg	14 58 27.3	-0.3
	16nm,0.2s						
MNBS				S	Sg	14 58 50.6	+0.3
	86nm,0.2s						
MNBS	Baschi	1.74	331	*e*P	Pg	14 58 27.3	-0.3
	16nm,0.2s						
MNBS				*e*S	Sg	14 58 50.6	+0.3
	86nm,0.2s						
KDJ	Kajisay	1.84	257	⇑*i*P	Pg	14 58 30.7	+1.2
	baz=56						
KDJ				⇑*i*S	Sg	14 58 55.3	+1.9
	baz=56						
KOTS	Kotyrbulak	1.94	291	Pg	Pg	14 58 32.1	+0.7
	8.9nm,0.2s						
KOTS				Lg	Lg	14 58 58.5	
	51nm,0.5s						
KOTS	Kotyrbulak	1.94	291	*e*P	Pg	14 58 32.1	+0.7
	baz=89						
KOTS				*e*S	Sg	14 58 58.5	+2.0
	baz=89						
KOTS	Kotyrbulak	1.94	291	*e*P	Pg	14 58 32.1	+0.7
	8.9nm,0.2s						
KOTS				*e*S	Sg	14 58 58.5	+2.0
	51nm,0.5s						
MDOK	Medeo	1.96	288	P	Pg	14 58 32.0	+0.2
	10.0nm,0.5s						
MDOK				⇑S	Sg	14 58 57.4	+0.1
	30nm,0.8s						
MDOK	Medeo	1.96	288	Pg	Pg	14 58 31.8	0.0
	9.8nm,0.2s						
MDOK				Lg	Lg	14 58 57.7	
	25nm,0.6s						
MDOK	Medeo	1.96	288	⇑*i*P	Pg	14 58 31.8	0.0
	baz=87						
MDOK				⇓*i*S	Sg	14 58 57.8	+0.5
	baz=87						
MDOK	Medeo	1.96	288	⇑*i*P	Pg	14 58 31.8	0.0
	2.0nm,0.2s						
MDOK				⇓*i*S	Sg	14 58 57.7	+0.5
	16nm,0.6s						
TNSS	Tian-Shan	2.00	284	Pg	Pg	14 58 32.2	-0.4
	18nm,0.5s						
TNSS				Lg	Lg	14 58 58.9	
	27nm,0.3s						
TNSS	Tian-Shan	2.00	284	*e*P	Pg	14 58 32.2	-0.4
	baz=83						
TNSS				*e*S	Sg	14 58 58.9	+0.3
	baz=83						
TNSS	Tian-Shan	2.00	284	*e*P	Pg	14 58 32.2	-0.4
	6.9nm,0.4s						
TNSS				*e*S	Sg	14 58 58.9	+0.3
	25nm,0.4s						
ARXS	Arharly	2.09	323	Pg	Pg	14 58 33.8	-0.4
	12nm,0.4s						
ARXS				Lg	Lg	14 59 01.3	
	76nm,0.3s						
ARXS	Arharly	2.09	323	*e*P	Pg	14 58 33.8	-0.4
	5.9nm,0.3s						
ARXS				*e*S	Sg	14 59 01.3	0.0
	76nm,0.3s						
IZV	Izvestkoviy	2.24	283	Pg	Pg	14 58 36.9	-0.2
	21nm,0.4s						
IZV				Lg	Lg	14 59 06.6	
	84nm,0.4s						
IZV	Izvestkoviy	2.24	283	*e*P	Pg	14 58 36.9	-0.2
	21nm,0.4s						
IZV				*e*S	Sg	14 59 06.6	+0.4
	84nm,0.4s						
CHKK	Chushkaly	2.29	305	Pg	Pg	14 58 37.6	-0.6
	6.6nm,0.3s						
CHKK				Lg	Lg	14 59 08.0	
	71nm,0.2s						
CHKK	Chushkaly	2.29	305	*e*P	Pg	14 58 37.6	-0.6
	6.6nm,0.3s						
CHKK				*e*S	Sg	14 59 08.0	0.0
	71nm,0.2s						
MTBS	Maitube	2.39	285	Pg	Pg	14 58 39.3	-0.8
	15nm,0.4s						
MTBS				Lg	Lg	14 59 10.6	
	34nm,0.4s						
MTBS	Maitube	2.39	285	⇓*i*P	Pg	14 58 39.3	-0.8
	5.7nm,0.3s						
MTBS				⇑*i*S	Sg	14 59 10.6	-0.4
	34nm,0.4s						
KTBS	Karatobe	2.42	299	Pg	Pg	14 58 39.8	-0.7
	5.6nm,0.1s						
KTBS				Lg	Lg	14 59 11.4	
	32nm,0.2s						
KTBS	Karatobe	2.42	299	*e*P	Pg	14 58 39.8	-0.7
	baz=97						
KTBS				*e*S	Sg	14 59 11.5	-0.3
	baz=97						
KTBS	Karatobe	2.42	299	*e*P	Pg	14 58 39.8	-0.7
	5.6nm,0.1s						
KTBS				*e*S	Sg	14 59 11.4	-0.3
	32nm,0.2s						
ULHL	Ulahol	2.50	264	⇓*i*P	Pb	14 58 40.1	+1.1
	baz=63						
ULHL				⇓*i*S	Sb	14 59 12.1	+2.3
	baz=63						
TDK	Taldyqorghan	2.58	341	Pg	Pg	14 58 42.1	-1.5
	39nm,0.3s						
TDK				Lg	Lg	14 59 15.5	
	71nm,0.3s						
TDK	Taldyqorghan	2.58	341	*e*P	Pg	14 58 42.1	-1.5
	39nm,0.3s						
TDK				*e*S	Sg	14 59 15.6	-1.5
	71nm,0.3s						
BOOM	Boomskoye usch	2.70	270	⇑*i*P	Pb	14 58 42.0	-0.4
	baz=69						
BOOM				⇑*i*S	Sb	14 59 16.5	+1.0
	baz=69						
KST	Kastek	2.71	281	Pg	Pg	14 58 45.0	-1.2
	22nm,0.6s						
KST				Lg	Lg	14 59 20.5	
	24nm,0.7s						
KST	Kastek	2.71	281	⇓*i*P	Pg	14 58 45.0	-1.2
	6.6nm,0.3s						
KST				*e*S	Sg	14 59 20.5	-0.8
	24nm,0.7s						
KUU	Kurty	2.72	300	Pg	Pg	14 58 44.5	-1.8
	3.4nm,0.3s						
KUU				Lg	Lg	14 59 20.3	
KUU	Kurty	2.72	300	*e*P	Pg	14 58 44.5	-1.8
	3.4nm,0.3s						
KUU				*e*S	Sg	14 59 20.2	-1.3
KAPS	Kapalarasan	2.72	357	Pg	Pb	14 58 42.7	0.0
	5.2nm,0.2s						
KAPS				Lg	Lg	14 59 16.7	
	26nm,0.7s						
KAPS	Kapalarasan	2.72	357	*e*P	Pb	14 58 42.7	0.0
	5.2nm,0.2s						
KAPS				*e*S	Sb	14 59 16.7	+0.7
	28nm,0.5s						
DGS	Degeres	2.88	285	Pg	Pg	14 58 48.0	-1.4
	16nm,0.4s						

DGS				Lg	Lg	14 59 25.8	
	51nm,0.4s						
DGS	Degeres	2.88	285	eP	Pg	14 58 48.0	-1.4
	16nm,0.4s						
DGS				eS	Sg	14 59 25.8	-1.1
	51nm,0.4s						
NRN	Naryn	2.91	248	⇑iP	Pb	14 58 45.9	-0.1
	baz=48						
NRN				⇑iS	Sb	14 59 22.4	+0.8
	baz=48						
TKM2	Tokmak 2	2.96	278	⇓Pn	Pb	14 58 45.7	-1.3
	9.0nm,0.8s						
TKM2				⇓Lg	Lg	14 59 28.2	
	10nm,0.3s						
TKM2	Tokmak 2	2.96	278	⇑iP	Pb	14 58 46.0	-0.9
	baz=77						
TKM2				⇑iS	Sb	14 59 22.6	-0.5
	baz=77						
KZA	Kyzart	3.25	263	⇑iP	Pb	14 58 50.7	-1.3
	baz=62						
KZA				⇑iS	Sb	14 59 30.4	-1.3
	baz=62						
AAK	Ala-Archa	3.76	273	⇓Lg	Lg	14 59 55.0	
	12nm,0.8s						
MAKZ	Makanchi	4.57	21	⇓Pn	Pn	14 59 06.4	+3.5
	0.6nm,0.2s						
MAKZ				⇑Sn	Sn	14 59 57.7	+1.9
	1.1nm,0.3s						
MK31	Makanchi Array	4.64	24	Pn	Pn	14 59 07.1	+3.1
	0.2nm,0.2s,baz=211,slow=16,SNR=24						
MK31				⇑Sn	Sn	14 59 56.7	-1.0
	0.3nm,0.2s,baz=204,slow=26,SNR=8.5						
MRKS	Merke	4.70	274	Pg	Pg	14 59 20.6	-3.5
	3.1nm,0.4s						
MRKS				Lg	Lg	15 00 21.8	
	6.7nm,0.3s						
MRKS	Merke	4.70	274	eP	Pg	14 59 20.6	-3.5
	3.1nm,0.4s						
MRKS				eS	Sg	15 00 21.8	-3.2
	6.7nm,0.3s						
MNAS	Manas	5.24	271	⇑Pg	Pg	14 59 32.3	-2.2
	1.4nm,0.6s						
MNAS				⇑Lg	Lg	15 00 40.9	
	2.9nm,0.7s						
KK31	Karatay Array	6.70	278	⇑Lg	Lg	15 01 31.0	
	0.8nm,0.4s,baz=97,slow=27						

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*ISCJB **09** 15:06:59.1±0.8, 11.°04S±0.°07×166.°24E±0.°09, h35^{km}, mb3.8/7, Error ellipse: s-maj=13.2km s-min=9.8km az=149.9*

*IDC **09** 15:07:06.5±3.5, 10.°91S×166.°06E, h81^{km}±31^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.6/28, mbtmp3.9/9, Error ellipse: s-maj=26.1km s-min=25.5km az=18.0*

ISC 09 15:07:01.6±0.9**, 10.°84S**±0.°09×**166.°3E**±0.°1**, h35^{km}, n16, σ2.^{s}38**/11**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.40	282	eP	Pn	15 08 25.0	-8.4
HNR	Honiara	6.40	282	P	Pn	15 08 35.1	+1.6
	19nm,0.3s,baz=144,slow=2.6,SNR=19						
HNR				S	Sn	15 09 45.4	0.0
	5.9nm,0.3s,baz=202,slow=19,SNR=2.9						
DZM	Mont Dzumac	11.17	179	P	Pn	15 09 43.2	+4.2
	0.5nm,0.3s,baz=307,slow=22,SNR=8.7						
DZM				S	Sn	15 11 39.2	-3.5
	0.2nm,0.3s,baz=112,slow=23,SNR=2.6						
CTA	Charters Tower	21.37	242	P	P	15 11 45.9	-0.3
	4.9nm,0.9s,baz=58,slow=13,SNR=3.2						
H11S2	WAKE ISLAND Hy	29.14	1	T	T	15 43 35.8	
	baz=185,slow=74						
H11S3	WAKE ISLAND Hy	29.15	1	T	T	15 43 34.7	
	baz=185						
H11S1	WAKE ISLAND Hy	29.16	1	T	T	15 43 31.1	
	baz=185,slow=74						
H11N1	WAKE ISLAND Hy	30.36	1	T	T	15 45 06.5	
	baz=180						
H11N3	WAKE ISLAND Hy	30.37	1	T	T	15 45 06.2	
	baz=180						
H11N2	WAKE ISLAND Hy	30.38	1	T	T	15 45 06.6	
	baz=180						
WRA	Warramunga Arr	32.06	250	P	P	15 13 23.2	-2.2
	0.9nm,0.4s,baz=83,slow=9.2,SNR=22						
ASAR	Alice Springs	33.37	243	P	P	15 13 35.0	-1.8
	0.8nm,0.8s,baz=67,slow=10,SNR=7.6						
SONM	Songino Array	78.82	324	P	P	15 19 01.9	+0.9
	0.6nm,1.1s,baz=132,slow=2.1,SNR=3.4						
ILAR	Eielson Array	83.14	18	P	P	15 19 24.1	+0.5
	0.6nm,0.6s,baz=235,slow=5.3,SNR=14						
MKAR	Makanchi Array	93.74	317	P	P	15 20 13.9	-1.0
	0.5nm,0.7s,baz=93,slow=6.2,SNR=6.3						
YKA	Yellowknife Ar	94.54	27	P	P	15 20 16.7	-1.4
	0.2nm,0.6s,baz=257,slow=4.8,SNR=4.1						

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*DDA **09** 15:13:07.7, 39.°46N×26.°22E, h7^{km}±3^{km}, ML2.5*

*ATH **09** 15:13:07.6, 39.°42N×26.°14E, h28^{km}±1^{km}, ML2.2/3, Error ellipse: s-maj=2.9km s-min=1.1km az=249.0*

*ISK **09** 15:13:07.3, 39.°43N×26.°25E, h8^{km}, ML2.3/16*

*ISCJB **09** 15:13:08.1±0.4, 39.°45N±0.°02×26.°18E±0.°03, h8^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=2.8km az=169.2*

*THE **09** 15:13:08.7, 39.°47N×26.°16E, h1^{km}±1^{km}, ML1.9/5, Error ellipse: s-maj=1.8km s-min=0.4km az=90.0*

ISC 09 15:13:08.3±0.8**, 39.°46N**±0.°02×**26.°21E**±0.°02**, h15^{km}**±6^{km}**, n42, σ0.^{s}79**/63**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.21	167	P	Pg	15 13 13.6	+0.3
PRK				S	Sg	15 13 16.6	+0.1
PRK				AML	AML	15 13 17.1	
	comp=N,3531µm,0.2s						
PRK				AML	AML	15 13 17.1	
	comp=E,3750µm,0.2s						
PRK	Paraskevi	0.21	167	P	Pg	15 13 13.6	+0.3
PRK				S	Sg	15 13 17.1	+0.6
SIGR	SIGRI	0.37	228	PG	Pg	15 13 15.1	-0.8
SIGR	SIGRI	0.37	228	P	Pg	15 13 15.1	-0.8
SIGR				S	Sg	15 13 19.8	-1.1
SIGR				AML	AML	15 13 21.3	
	comp=E,341µm,0.4s						
SIGR				AML	AML	15 13 24.0	
	comp=N,350µm,0.3s						
SIGR	SIGRI	0.37	228	P	Pg	15 13 15.2	-0.6
SIGR				S	Sg	15 13 20.7	-0.2
EZN	Ezine	0.38	14	PG	Pg	15 13 15.8	-0.3
EZN	Ezine	0.38	14	P	Pb	15 13 15.9	-0.9
EZN				S	Sb	15 13 21.7	-0.8
BAYC	CANAKKALE_Bayr	0.39	42	i P	Pg	15 13 15.9	-0.3
BAYC				i S	Sb	15 13 21.7	-1.0
BAYC				IAML_P			
	comp=Z,3µm,0.1s						
AYVA	Ayvalik	0.40	111	i P	Pb	15 13 16.6	-0.5
AYVA				i S	Sb	15 13 22.3	-0.8
BOZC	Bozcaada	0.40	343	PG	Pg	15 13 16.1	-0.4
BOZC	Bozcaada	0.40	343	i P	Pg	15 13 16.3	-0.3
BOZC				i S	Sg	15 13 22.1	0.0
BOZC				IAML_P			
	comp=Z,983nm,0.2s						
GADA	Gvkgeada	0.77	342	PG	Pb	15 13 23.9	+0.4
GADA	Gvkgeada	0.77	342	P	Pb	15 13 23.3	-0.2
GADA				S	Sb	15 13 33.8	+0.1
LIA	Limnos Island	0.91	300	P	Pg	15 13 25.3	-0.6
LIA				S	Sb	15 13 37.8	+0.2
LIA	Limnos Island	0.91	300	P	Pg	15 13 25.5	-0.4
LIA				S	Sb	15 13 37.9	+0.3
GELI	Tayfur-Gelibol	0.96	12	PG	Pb	15 13 26.4	-0.3
LPK	Lapseki	1.01	25	PG	Pg	15 13 27.0	-0.9
CHOS	Chios island	1.07	186	PG	Pg	15 13 27.8	-1.3
CHOS	Chios island	1.07	186	P	Pg	15 13 27.7	-1.4
CHOS				S	Sb	15 13 42.6	+0.1
CHOS	Chios island	1.07	186	P	Pg	15 13 28.3	-0.8
CHOS				S	Sn	15 13 44.8	+1.3
BALY	Balya	1.13	75	i P	Pn	15 13 30.9	+1.3
BALY				i S	Sn	15 13 45.2	+0.4
BALY				IAML_P			
	comp=Z,381nm,0.3s						
URLA	Izmir	1.14	164	PN	Pg	15 13 28.6	-1.7
URLA	Izmir	1.14	164	i P	Pg	15 13 29.5	-0.8
URLA				IAML_P			
	comp=Z,439nm,0.2s						
SMTH	Samothraki Isl	1.14	333	P	Pg	15 13 29.3	-1.1
SMTH				S	Sb	15 13 45.1	+0.7
SMTH	Samothraki Isl	1.14	333	P	Pg	15 13 29.4	-1.0
SMTH				S	Sb	15 13 45.2	+0.8
STEP	BALIKESIR_Sava	1.17	93	i P	Pn	15 13 31.4	+1.2
STEP				i S	Sn	15 13 47.9	+2.0
STEP				IAML_P			
	comp=Z,662nm,0.1s						
ERIK	Erikli-Kesan	1.24	11	PN	Pb	15 13 31.0	-0.4
ZEY	zmir	1.24	169	i P	Pn	15 13 31.1	+0.1
ZEY				IAML_P			
	comp=Z,882nm,0.2s						
BLCB	Balcova	1.25	148	PN	Pg	15 13 31.6	-0.9
BLCB				SN	Sn	15 13 48.3	+0.5
KRBG	Karabiga-Canak	1.26	41	PN	Pn	15 13 31.1	-0.2
ENEZ	Enez	1.28	358	PN	Pg	15 13 32.5	-0.5
ENEZ				SN	Sn	15 13 50.1	+1.6
AKHS	Akhisar	1.38	114	i P	Pg	15 13 34.7	-0.1
AKHS				IAML_P			
	comp=Z,272nm,0.1s						
RKY	Sarkoy-Tekirda	1.44	31	PN	Pn	15 13 34.3	+0.4
RKY				SN	Sg	15 13 53.8	-1.0
ALN	Alexandroupoli	1.45	355	PN	Pb	15 13 34.9	0.0
ALN	Alexandroupoli	1.45	355	P	Pb	15 13 34.7	-0.2
ALN				S	Sg	15 13 54.1	-0.9
ALN				AML	AML	15 13 54.8	
	comp=E,112µm,0.3s						
ALN				AML	AML	15 13 54.9	
	comp=N,119µm,0.3s						
ALN	Alexandroupoli	1.45	355	P	Pb	15 13 35.1	+0.2
EDC	Edincik	1.55	55	PN	Pn	15 13 35.6	+0.2
MRMT	Marmara Adasi	1.56	42	PN	Pn	15 13 36.1	+0.5
THAS	Thassos island	1.62	316	P	Pn	15 13 35.7	-0.7
THAS	Thassos island	1.62	316	P	Pn	15 13 37.0	+0.7
KCTX	Karacabey (Bur	1.84	63	PN	Pn	15 13 39.4	0.0
PAIG	Paliouri	2.01	284	P	Pn	15 13 42.6	+1.0

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*IDC **09** 15:18:40.1±1.8, 8.°49S×124.°03E, h0^{km}, mb3.5/1, mb1 3.9/4, mb1mx3.5/42, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=53.7km s-min=21.2km az=82.0*

*ISCJB **09** 15:18:47.5±0.9, 9.°1S±0.°1×123.°32E±0.°09, h86^{km}, mb3.3/1, Error ellipse: s-maj=18.4km s-min=7.4km az=36.8*

*DJA **09** 15:18:52.0±0.7, 9°S±4°×12°3E±°, h37^{km}±11^{km}, M3.7/9, MLv3.7/9*

ISC 09 15:18:49.3±1.1**, 9.°13S**±0.°09×**123.°21E**±0.°09**, h86^{km}, n12, σ2.^{s}00**/14**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.08	297	P	Pn	15 19 09.8	+0.2
MMRI				S	Sn	15 19 23.7	-1.3
BATI	Baumata	1.16	158	P	Pn	15 19 12.6	+2.0
BATI	Baumata	1.16	158	Pg	Pn	15 19 12.8	+2.1
	52nm,0.3s,baz=302,slow=9.5,SNR=61						
BATI				Lg	Lg	15 19 30.3	
	89nm,0.3s,baz=319,slow=20,SNR=22						
SOEI	Soe	1.21	121	P	Pn	15 19 14.0	+2.6
EDFI	Ende, Flores	1.55	284	P	Pn	15 19 15.9	+0.3
EDFI				S	Sn	15 19 34.4	-1.1
BASI	Baing, Sumba	2.82	247	P	Pn	15 19 33.8	+1.6
WSI	Waingapu	2.93	259	P	Pn	15 19 35.9	+2.2
BKSI	Bulukumba	4.87	321	P	Pn	15 20 02.0	+1.9
FITZ	Fitzroy Crossi	9.22	165	Pn	Pn	15 20 58.7	-0.8
	1.4nm,0.3s,baz=358,slow=10,SNR=73						
FITZ				Sn	Sn	15 22 33.3	-8.3
	6.4nm,0.3s,baz=138,slow=9.3,SNR=24						
WRA	Warramunga Arr	15.21	136	Pn	Pn	15 22 15.7	-3.7
	0.3nm,0.3s,baz=301,slow=13,SNR=27						
WRA				Sn	Sn	15 24 52.5	-15
	0.3nm,0.3s,baz=292,slow=24,SNR=4.8						
ASAR	Alice Springs	17.71	146	P	P	15 22 49.7	-0.4
	0.4nm,0.3s,baz=316,slow=12,SNR=30						
ASAR				S	Sn	15 25 53.2	-14
	0.1nm,0.3s,baz=320,slow=24,SNR=3.8						
MKAR	Makanchi Array	66.54	331	P	P	15 29 31.0	+1.0
	0.3nm,0.6s,baz=134,slow=7.2,SNR=4.4						

IDC 09 15:26:18.0±2.0**, 3.°28N**×**92.°85E, h0^{km}, mb3.2**/2**, mb1 3.6**/5**, mb1mx3.3**/47**, mbtmp3.4**/5**, ML3.4**/3**, Error ellipse: s-maj=53.5km s-min=27.5km az=37.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.08	94	Pn	Pn	15 27 50.1	+0.7
	1.1nm,0.3s,baz=180,slow=6.0,SNR=4.5						
PSI				Sn	Sn	15 28 53.4	-6.3
	1.2nm,0.3s,baz=360,slow=19,SNR=5.2						
PALK	Pallekele	12.73	289	Pn	Pn	15 29 19.9	-0.6
	0.1nm,0.3s,baz=296,slow=14,SNR=1.8						
PALK				Sn	Sn	15 31 30.2	-13
	0.3nm,0.3s,baz=115,slow=14,SNR=2.6						
CMAR	Chiang Mai Arr	16.22	21	Pn	Pn	15 30 06.2	-1.3
	0.1nm,0.3s,baz=215,slow=12,SNR=2.8						
H08S2	Diego Garcia H	23.03	242	T	T	15 56 45.1	
	baz=68						
H08S3	Diego Garcia H	23.03	242	T	T	15 56 45.1	
	baz=68						
H08S1	Diego Carcia H	23.05	242	T	T	15 56 45.1	
	baz=68						
MKAR	Makanchi Array	44.31	350	P	P	15 34 30.1	+0.4
	0.3nm,0.8s,baz=177,slow=8.5,SNR=4.4						
WRA	Warramunga Arr	46.81	121	P	P	15 34 49.5	-0.4
	0.2nm,0.5s,baz=299,slow=8.7,SNR=4.8						

GUC 09 15:27:52.0±0.6**, 23.°99S**×**67.°55W, h249^{km}**±7^{km}**, ML3.7, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.86	317	eP	Pn	15 28 35.5	+1.9
LVC				eS	S	15 29 07.7	+1.3
PB15	IPOC Station P	1.93	293	⇑iP	Pn	15 28 35.8	+1.7
PB15				eS	S	15 29 09.2	+2.0
PB15				IAML		15 29 12.8	
	comp=E,327nm,0.1s						
GO02	Mina Guanaco	2.20	238	⇑eP	Pn	15 28 38.3	+1.7
GO02				eS	S	15 29 14.0	+2.3
GO02				IAML		15 29 14.7	
	comp=N,206nm,0.3s						
PB09	IPOC Station P	2.69	324	⇓eP	Pn	15 28 43.2	+1.9
PB09				eS	S	15 29 22.9	+2.6
PB05	IPOC Station P	2.69	294	eP	Pn	15 28 43.5	+2.1
PB05				eS	S	15 29 22.4	+2.1
PB04	IPOC Station P	2.91	304	eP	Pn	15 28 46.1	+2.4
PB04				eS	S	15 29 26.9	+2.4
PB04				IAML		15 29 31.2	
	comp=N,46nm,0.1s						
PB07	IPOC Station P	3.12	316	eP	Pn	15 28 48.0	+2.0
PB07				eS	S	15 29 31.1	+2.3
PB07				IAML		15 29 32.4	
	comp=E,50nm,0.7s						
PB02	IPOC Station P	3.43	320	eP	Pn	15 28 51.5	+2.1
PB02				eS	S	15 29 35.7	+0.8
PB02				IAML		15 29 42.1	
	comp=E,44nm,0.2s						

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*IDC **09** 15:28:24.7±2.1, 32.°88N×130.°93E, h0^{km}, mb3.2/1, mb1 3.2/3, mb1mx3.0/62, mbtmp3.1/3, ML2.6/2, Error ellipse: s-maj=39.1km s-min=11.8km az=80.0*

*ISCJB **09** 15:28:25.3±1.0, 33.°10N±0.°09×131.°10E±0.°06, h12^{km}, mb3.1/1, Error ellipse: s-maj=13.0km s-min=7.3km az=0.3*

*JMA **09** 15:28:25.0, 33.°07N×131.°12E, h11^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s60.00000°, δ71.00000°, λ-159.00000°. NP2: ϕ_s323.00000°, δ70.00000°, λ-20.00000°. Principal axes: T Plg1.0000°, Azm191.0000°; N Plg62.0000°, Azm99.0000°; P Plg28.0000°, Azm282.0000°;*

JMA Felt II J1.

ISC 09 15:28:26.7±1.2**, 33.°16N**±0.°08×**131.°09E**±0.°04**, h12^{km}, n7, σ2.^{s}16**/10**, 3D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	0.18	259	⇓P	Pg	15 28 29.6	-1.2
JNU				S	Sg	15 28 32.7	-0.9
JNU	Nakatsue	0.18	259	Pg	Pg	15 28 29.6	-1.2
	723nm,0.3s,baz=88,slow=8.4						
JNU				Lg	Lg	15 28 32.8	
	2µm,0.3s,baz=300,slow=16,SNR=91						
JTA	Tamana	0.50	248	⇓P	Pg	15 28 34.9	-1.7
JUS	Usuki	0.56	99	⇓P	Pg	15 28 35.1	-2.6
KSRS	Korea Array	5.01	330	Pn	Pn	15 29 42.2	+0.6
	0.3nm,0.3s,baz=149,slow=14,SNR=6.0						
KSRS				Pg	Pg	15 29 59.8	-2.8
	0.7nm,0.3s,baz=153,slow=16,SNR=10.0						
KSRS				Sn	Sn	15 30 41.0	+1.6
	0.7nm,0.3s,baz=149,slow=24,SNR=5.5						
KSRS				Lg	Lg	15 31 03.3	
	1.2nm,0.3s,baz=151,slow=30,SNR=8.7						
MJAR	Matsushiro Arr	6.76	58	Pn	Pn	15 30 08.5	+2.8
	0.1nm,0.3s,baz=244,slow=15,SNR=8.2						
SONM	Songino Array	23.69	316	P	P	15 33 39.2	+0.9
	0.5nm,0.7s,baz=128,slow=9.3,SNR=3.4						

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*IDC **09** 15:29:05.8±0.7, 20.°43S×176.°22W, h0^{km}, mb4.0/11, mb1 4.2/12, mb1mx4.0/36, mbtmp4.0/12, ML4.1/1, Error ellipse: s-maj=34.0km s-min=16.8km az=141.0*

*ISCJB **09** 15:29:29.1±0.7, 20.°8S±0.°2×176.°4W±0.°2, h211^{km}, mb3.6/11, Error ellipse: s-maj=31.1km s-min=14.3km az=143.7*

ISC 09 15:29:30.0±0.7**, 20.°9S**±0.°2×**176.°3W**±0.°2**, h211^{km}, n20, σ0.^{s}80**/20**, mb3.5**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	18.19	197	P	P	15 33 25.1	-2.0
	0.6nm,0.3s,baz=354,slow=9.2,SNR=8.1						
RPZ	Rata Peaks	25.06	202	P	P	15 34 36.0	+1.0
	4.4nm,0.6s,baz=72,slow=6.0,SNR=5.0						
CTA	Charters Tower	35.07	265	P	P	15 36 03.2	0.0
	2.8nm,0.6s,baz=88,slow=14,SNR=4.1						
STKA	Stephens Creek	39.07	245	P	P	15 36 37.6	+0.9
	3.1nm,1.1s,baz=67,slow=7.7,SNR=3.1						
ASAR	Alice Springs	46.00	257	P	P	15 37 33.0	+0.3
	1.6nm,0.8s,baz=90,slow=8.6,SNR=16						
ASAR				PcP	PcP	15 39 06.7	+1.0
	0.4nm,0.7s,baz=109,slow=3.8,SNR=6.5						
WRA	Warramunga Arr	46.15	262	P	P	15 37 33.4	-0.4
	1.4nm,0.9s,baz=95,slow=8.0,SNR=20						
NVAR	Mina Array Bea	80.23	42	P	P	15 41 17.7	+0.3
	0.4nm,0.5s,baz=211,slow=6.0,SNR=2.3						
TXAR	Lajitas Array	85.93	57	P	P	15 41 47.6	+1.0
	0.4nm,0.9s,baz=249,slow=6.7,SNR=3.4						
ANMO	Albuquerque	86.41	51	P	P	15 41 49.4	+0.4
	1.1nm,0.6s,baz=80,slow=6.1,SNR=3.7						
ILAR	Eielson Array	88.38	12	P	P	15 41 56.7	-0.7
	0.5nm,0.9s,baz=224,slow=5.9,SNR=4.9						
YKA	Yellowknife Ar	96.23	24	P	P	15 42 33.4	-0.2
	0.3nm,0.8s,baz=234,slow=4.2,SNR=4.4						
SONM	Songino Array	97.15	319	P	P	15 42 37.4	-1.0
	0.1nm,0.5s,baz=95,slow=6.4,SNR=2.4						
AKASG	Malin Array Be	144.16	332	PKhKP	PKPpre	15 48 38.3	
	2.8nm,0.6s,baz=43,slow=4.4,SNR=28						
EKA	Eskdalemuir Ar	145.26	7	PKP	PKPab	15 48 42.2	-0.4
	0.2nm,0.4s,baz=308,slow=2.5,SNR=3.5						
MBAR	Mbarara	146.01	234	PKPbc	PKiKP	15 48 49.0	-0.2
	5.5nm,0.3s,baz=353,slow=4.5,SNR=6.1						
BRTR	Keskin Array B	148.33	313	PKPbc	PKiKP	15 48 52.3	-0.8
	1.2nm,0.5s,baz=142,slow=5.3,SNR=9.4						
ASF	Jabal al Asfar	148.42	298	PKPbc	PKiKP	15 48 53.3	-0.1
	1.8nm,0.6s,baz=36,slow=2.5,SNR=4.2						
MMAI	Mount Meron Ar	149.44	300	PKPbc	PKiKP	15 48 56.1	+0.6
	2.8nm,0.5s,baz=72,slow=5.4,SNR=11						
MLR	Muntele Rosu	149.45	328	PKPbc	PKiKP	15 48 55.5	+0.3
	1.0nm,0.7s,baz=261,slow=13,SNR=3.1						
GERES	GERESS Array B	151.03	346	PKPbc	PKiKP	15 48 58.4	0.0
	0.5nm,0.7s,baz=48,slow=1.5,SNR=3.2						

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*ISCJB **09** 15:32:45.9±0.3, 56.°17N±0.°02×135.°51W±0.°06, h14^{km}, mb2.6/1, Error ellipse: s-maj=5.3km s-min=2.2km az=152.5*

*IDC **09** 15:32:46.9±1.3, 56.°18N×135.°47W, h0^{km}, mb2.9/1, mb1 3.5/6, mb1mx3.2/64, mbtmp3.3/6, ML3.1/4, Error ellipse: s-maj=17.2km s-min=10.8km az=49.0*

*PGC **09** 15:32:46.9±0.0, 56.°12N×135.°64W, h1^{km}, ML3.5/11, 105km Ssw of Sitka, Ak Southeastern Alaska*

*NEIC **09** 15:32:48.6±0.0, 56.°21N×135.°43W, h24^{km}, ML3.2(AEIC), ML3.5(OTT), After AEIC.*

ISC 09 15:32:48.5±0.8**, 56.°17N**±0.°03×**135.°52W**±0.°05**, h14^{km}, n68, σ1.^{s}60**/90**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIT	Sitka	0.89	7	ePg	Pg	15 33 04.2	-1.5
SIT				eSg	Sg	15 33 15.1	-2.4
CRAG	Craig	1.53	116	ePn	Pn	15 33 14.1	-1.1
WRAK	Wrangell Islan	1.79	81	ePn	Pn	15 33 17.1	-1.8
JIS	Juneau Island	2.20	16	ePn	Pn	15 33 23.7	-0.8
BESE	Bessie Mountai	2.44	8	ePn	Pn	15 33 27.6	-0.4
BESE				eSn	Sn	15 33 56.8	-0.9
BESE	Bessie Mountai	2.44	8	Pn	Pn	15 33 27.5	-0.4
BESE				Sn	Sn	15 33 56.8	-0.9
BESE				Sg	Sb	15 34 04.8	+2.7
NDB	Naden	2.67	145	Sg	Sb	15 34 12.1	+3.4
DHAK	Deception Hill	3.27	335	ePn	Pn	15 33 39.5	+0.2
DHAK				eSn	Sn	15 34 15.6	-2.2
SKAG	Skagway	3.30	2	ePn	Pn	15 33 39.4	-0.2
PLBC	Pleasant Camp	3.33	353	ePn	Pn	15 33 39.6	-0.4
PLBC				eSn	Sn	15 34 19.9	+0.6
PLBC	Pleasant Camp	3.33	353	Pn	Pn	15 33 39.6	-0.4
PLBC				Sn	Sn	15 34 19.9	+0.6
DIB	Dawson Inlet,	3.46	148	ePn	Pn	15 33 40.9	-1.0
DIB				eSn	Sn	15 34 20.7	-1.9
DIB	Dawson Inlet,	3.46	148	Pn	Pn	15 33 40.9	-1.0
DIB				Sn	Sn	15 34 20.7	-1.9
H02S1	DAWSON INLET T	3.46	148	Pn	Pn	15 33 41.5	-0.4
H02S1				Sn	Sn	15 34 20.3	-2.3
H02S1				Lg	Lg	15 34 35.3	
MOBC	Moresby Island	3.67	144	Pn	Pn	15 33 43.8	-1.0
MOBC				Sn	Sn	15 34 26.7	-1.1
DLBC	Dease Lake	3.75	50	ePn	Pn	15 33 45.9	0.0
DLBC				eSn	Sn	15 34 30.0	+0.2
DLBC	Dease Lake	3.75	50	Pn	Pn	15 33 46.1	+0.2
DLBC				Sn	Sn	15 34 30.0	+0.2
DLBC	Dease Lake	3.75	50	Pn	Pn	15 33 45.5	-0.4
	0.2nm,0.3s,baz=219,slow=7.4,SNR=24						
DLBC				Pg	Pb	15 33 56.8	+2.4
	1.4nm,0.3s,baz=210,slow=19,SNR=21						
DLBC				Lg	Lg	15 34 44.5	
	6.7nm,0.3s,baz=139,slow=26,SNR=7.1						
HG1B	Mitchell Dam	3.80	147	Pn	Pn	15 33 45.7	-0.8
BNAB	Bonilla	3.90	132	ePn	Pn	15 33 47.2	-0.7
BNAB				eSn	Sn	15 34 31.8	-1.5
BNAB	Bonilla	3.90	132	Pn	Pn	15 33 47.2	-0.7
BNAB				Sn	Sn	15 34 31.8	-1.5
PNL	Peninsula	4.07	331	ePn	Pn	15 33 49.1	-1.1
PNL	Peninsula	4.07	331	Pn	Pn	15 33 49.1	-1.1
BNB	Barry Inlet	4.22	147	ePn	Pn	15 33 52.1	-0.3
BNB	Barry Inlet	4.22	147	Pn	Pn	15 33 52.1	-0.3
BNB				Sn	Sn	15 34 40.1	-1.4
WHY	Whitehorse	4.51	4	ePn	Pn	15 33 56.6	+0.1
WHY				eSn	Sn	15 34 46.6	-2.1
WHY	Whitehorse	4.51	4	Pn	Pn	15 33 56.3	-0.1
WHY				Sn	Sn	15 34 46.6	-2.1
WHY				Sg	Sb	15 35 07.0	+5.3
YUK7	Dusty Glacier	4.58	344	ePn	Pn	15 33 57.7	+0.2
YUK7				eSn	Sn	15 34 48.6	-2.0
YUK7	Dusty Glacier	4.58	344	Pn	Pn	15 33 57.7	+0.2
YUK7				Sn	Sn	15 34 48.6	-2.0
HYT	Haines Junctio	4.78	348	ePn	Pn	15 33 59.2	-1.0
HYT				eSn	Sn	15 34 53.4	-1.9
HYT	Haines Junctio	4.78	348	Pn	Pn	15 33 59.2	-1.0
HYT				Sn	Sn	15 34 53.4	-1.9
YUK6	Outpost Mounta	5.01	344	Pn	Pn	15 34 03.0	-0.4
YUK6				Sn	Sn	15 35 00.3	-0.8
YUK5	Granite Creek	5.12	347	Pn	Pn	15 34 05.5	+0.7
YUK5				Sn	Sn	15 35 02.6	-1.2
YUK4	Talbot Arm	5.44	344	Pn	Pn	15 34 10.5	+1.3
BBB	Bella Bella	5.90	129	Pn	Pn	15 34 15.2	-0.2
BBB				Sn	Sn	15 35 21.6	-1.2
BBB	Bella Bella	5.90	129	Pn	Pn	15 34 15.1	-0.3
	0.9nm,0.3s,baz=309,slow=6.2,SNR=12						
BBB				Sn	Sn	15 35 21.8	-1.0
	2.3nm,0.3s,baz=117,slow=20,SNR=11						
BBB				Lg	Lg	15 35 54.4	
	0.6nm,0.3s,baz=339,slow=4.7,SNR=2.1						
YUK3	Moose Creek	6.17	338	Pn	Pn	15 34 19.4	+0.1
YUK2	White River	6.27	336	Pn	Pn	15 34 20.8	+0.3
FNBB	Fort Nelson	7.26	63	Sg	Sg	15 36 34.7	-6.6

KLU	Klutina	7.58	319	*e*Pn	Pn	15 34 39.3	+0.8
HARP	HAARP	7.96	326	Pn	Pn	15 34 45.0	+1.4
DAWY	Dawson	8.15	348	*e*Pn	Pn	15 34 47.8	+1.5
DAWY	Dawson	8.15	348	Pn	Pn	15 34 46.4	+0.1
DAWY				Sn	Sn	15 36 15.6	-2.5
SCM	Sheep Creek Mo	8.32	318	*e*Pn	Pn	15 34 49.1	+0.5
KNK	Knik Glacier	8.52	313	*e*Pn	Pn	15 34 50.5	-0.7
PMR	Palmer	8.89	313	*e*Pn	Pn	15 34 55.6	-0.7
RC01	Rabbit Creek A	8.89	309	*e*Pn	Pn	15 34 55.6	-0.8
GHO	Glory Hole Cre	8.90	315	*e*Pn	Pn	15 34 57.9	+1.4
HOM	Homer	9.26	299	*e*Pn	Pn	15 34 59.3	-2.1
KDAK	Kodiak Island	9.46	287	*e*Pn	Pn	15 35 02.9	-1.2
KDAK	Kodiak Island	9.46	287	Pn	Pn	15 35 02.1	-2.0
	1.3nm,0.3s,baz=84,slow=10,SNR=18						
KDAK				Pg		15 35 37.1	
	0.1nm,0.3s,baz=289,slow=14,SNR=1.6						
SUA	Susitna One	9.50	310	*e*Pn	Pn	15 35 04.5	-0.3
RND	Reindeer	9.87	323	*e*Pn	Pn	15 35 11.1	+1.3
ILAR	Eielson Array	10.27	332	Pn	Pn	15 35 15.2	0.0
	0.1nm,0.3s,baz=154,slow=12,SNR=16						
ILAR				Lg	Lg	15 38 10.9	
	0.0nm,0.3s,baz=119,slow=28,SNR=2.6						
TRF	Thorofare Moun	10.39	321	*e*Pn	Pn	15 35 19.8	+2.7
PPLA	Purkeypile	10.79	315	*e*Pn	Pn	15 35 23.0	+0.5
CAST	Castle Rocks	11.03	318	*e*Pn	Pn	15 35 26.5	+0.9
BPAW	Bear Paw Mtn.	11.04	322	*e*Pn	Pn	15 35 26.9	+1.1
INK	Inuvik	12.22	4	Lg	Lg	15 39 13.1	
	0.0nm,0.3s,baz=199,slow=16,SNR=2.9						
YKA	Yellowknife Ar	12.37	51	Pn	Pn	15 35 42.6	-1.4
	baz=246,slow=12,SNR=3.4						
YKA				Lg	Lg	15 39 16.7	
	0.0nm,0.3s,baz=247,slow=30,SNR=4.1						
IM3	Indian Mountai	13.15	326	*e*Pn	Pn	15 35 55.8	+1.3
NVAR	Mina Array Bea	21.14	140	P	P	15 37 35.2	+2.2
	0.1nm,0.3s,baz=320,slow=9.5,SNR=1.9						
H11N2	WAKE ISLAND Hy	55.90	254	T	T	16 43 06.9	
	baz=33						
H11N3	WAKE ISLAND Hy	55.90	254	T	T	16 43 07.2	
	baz=33						
H11N1	WAKE ISLAND Hy	55.92	254	T	T	16 43 08.4	
	baz=33						
H11S1	WAKE ISLAND Hy	57.01	253	T	T	16 44 34.3	
	baz=36						
H11S2	WAKE ISLAND Hy	57.02	253	T	T	16 44 28.1	
	baz=36						
H11S3	WAKE ISLAND Hy	57.02	253	T	T	16 44 35.4	
	baz=36						

*IDC **09** 15:38:32.2±1.5, 10°.91S×165°.12E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.5/40, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=34.6km s-min=29.1km az=141.0*
*ISCJB **09** 15:38:35.1±1.1, 11°.1S±0°.1×165°.1E±0°.1, h31^{km}, mb3.6/4, Error ellipse: s-maj=21.4km s-min=11.4km az=33.5*
ISC 09 15:38:36.8±1.3**, 11°.0S**±0°.1×**165°.2E**±0°.1**, h31**^{km}**, n12, σ0^{s}.91**/7**, mb3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.37	286	Pn	Pn	15 39 54.6	-0.2
	5.0nm,0.3s,baz=286,slow=16,SNR=5.1						
HNR				Sn	Sn	15 40 56.7	+1.1
	3.0nm,0.3s,baz=37,slow=20,SNR=2.3						
DZM	Mont Dzumac	11.12	174	Pn	Pn	15 41 14.5	+0.6
	0.4nm,0.3s,baz=308,slow=12,SNR=12						
H11S2	WAKE ISLAND Hy	29.30	3	T	T	16 15 10.3	
	baz=184,slow=76,SNR=5.4						
H11S3	WAKE ISLAND Hy	29.30	3	T	T	16 15 12.2	
	baz=184,slow=76,SNR=5.8						
H11S1	WAKE ISLAND Hy	29.32	3	T	T	16 15 11.8	
	baz=184,slow=76,SNR=3.3						
H11N1	WAKE ISLAND Hy	30.52	3	T	T	16 16 44.9	
	baz=174						
H11N3	WAKE ISLAND Hy	30.53	3	T	T	16 16 40.7	
	baz=174						
H11N2	WAKE ISLAND Hy	30.54	3	T	T	16 16 46.0	
	baz=174						
WRA	Warramunga Arr	30.99	249	P	P	15 44 50.7	-1.0
	0.5nm,0.8s,baz=79,slow=9.1,SNR=3.4						
ASAR	Alice Springs	32.33	243	P	P	15 45 02.8	-0.8
	0.6nm,0.7s,baz=68,slow=10.0,SNR=8.2						
ILAR	Eielson Array	83.61	19	P	P	15 51 02.1	+0.3
	0.5nm,0.8s,baz=214,slow=6.2,SNR=4.3						
MKAR	Makanchi Array	93.07	317	P	P	15 51 47.5	-0.2
	0.2nm,0.7s,baz=97,slow=6.1,SNR=2.3						

*IDC **09** 15:45:08.4±0.8, 34°.77N×140°.83E, h0^{km}, mb3.8/15, mb1 3.9/18, mb1mx3.8/51, mbtmp3.8/18, ML3.9/3, Error ellipse: s-maj=20.2km s-min=16.3km az=82.0*
*ISCJB **09** 15:45:15.3±0.5, 34°.85N±0°.04×140°.69E±0°.06, h65^{km}±3^{km}, mb3.7/17, Error ellipse: s-maj=7.7km s-min=6.1km az=176.8*
*JMA **09** 15:45:15.1±0.1, 34°.89N×140°.72E, h68^{km}±2^{km}, M4.1*
JMA Felt I J1.
ISC 09 15:45:15.6±0.8**, 34°.86N**±0°.04×**140°.81E**±0°.06**, h57**^{km}±7^{km}**, n44, σ1^{s}.97**/49**, mb3.9**/17**, 1C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.25	146	⇑P	Pn	15 45 26.1	+1.8
BSO3	Boso 3	0.26	257	⇓P	Pn	15 45 25.3	+0.6
BSO4	Boso 4	0.41	289	⇓P	Pn	15 45 26.5	+0.3
BSO4				X		15 45 35.5	
KTR	Katsuura	0.50	305	⇓P	Pn	15 45 27.1	-0.1
KTR				S	Sn	15 45 36.1	+0.4
JKUC	kamogawauchiur	0.58	301	P	Pn	15 45 28.0	-0.2
JKUC				S	Sn	15 45 37.2	-0.2
TATJ	Tateyama 2	0.78	283	⇓P	Pn	15 45 30.7	+0.1
JSMT	Sammumatsuo	0.84	339	P	Pn	15 45 31.3	0.0
JIM2	Oshima 3	1.15	263	P	Pn	15 45 34.4	-1.0
JIM2				*e*S	Sn	15 45 48.4	-1.8
JTHY	Toshimahigashi	1.30	255	P	Pn	15 45 36.8	-0.7
JTHY				S	Sn	15 45 52.8	-1.0
JMKN	Mikurajimanish	1.40	227	P	Pn	15 45 38.3	-0.5
JMKN				S	Sn	15 45 55.6	-0.6
JOD2	Odawara 2	1.47	286	⇓P	Pn	15 45 38.5	-1.3
JOD2				S	Sn	15 45 55.7	-2.3
JIZS	Izushimoda	1.60	265	⇓P	Pn	15 45 40.5	-1.0
JIZS				S	Sn	15 45 59.1	-2.0
JHJ	Hachijo jima 2	1.94	206	Pn	Pn	15 45 46.5	+0.4
	516nm,0.3s,baz=335,slow=18,SNR=290						
JHJ				Sn	Sn	15 46 08.4	-0.9
	375nm,0.3s,baz=60,slow=21,SNR=7.3						
MJAR	Matsushiro Arr	2.70	309	Pn	Pn	15 45 55.5	-1.1
	4.0nm,0.3s,baz=25,slow=18,SNR=229						
MJAR				Sn	Sn	15 46 29.3	+1.2
	3.4nm,0.3s,baz=111,slow=16,SNR=7.0						
MAT	Matsushiro	2.70	309	P	Pn	15 45 56.3	-0.3
MAT				*e*S	Sn	15 46 25.6	-2.6
JCJ	Chichijima	7.83	171	Pn	Pn	15 47 05.4	-1.4
	103nm,0.3s,baz=51,slow=12,SNR=29						
JCJ				Sn	Sn	15 48 26.8	-7.3
	16nm,0.3s,baz=270,slow=19,SNR=3.1						
JNU	Nakatsue	8.43	261	Pn	Pn	15 47 15.4	+0.3
	0.4nm,0.3s,baz=131,slow=11,SNR=4.2						
ASAJ	Asahikawa	9.35	8	Pn	Pn	15 47 23.9	-3.6
	4.3nm,0.3s,baz=215,slow=12,SNR=46						
ASAJ				Sn	Sn	15 49 04.1	-7.0
	0.5nm,0.3s,baz=162,slow=20,SNR=2.5						
KSRS	Korea Array	10.74	288	Pn	Pn	15 47 47.6	+1.0
	0.1nm,0.3s,baz=85,slow=14,SNR=3.2						
USRK	Ussuriysk Ar.	11.54	327	Pn	Pn	15 47 58.6	+1.1
	0.2nm,0.3s,baz=138,slow=13,SNR=5.3						
KLR	Kul'dur	15.84	338	Pn	Pn	15 48 54.1	-0.7
	0.2nm,0.3s,baz=148,slow=10,SNR=5.3						
H11N2	WAKE ISLAND Hy	27.54	116	T	T	16 20 09.5	
	baz=309,slow=75,SNR=7.9						
H11N1	WAKE ISLAND Hy	27.55	116	T	T	16 20 13.1	
	baz=309,slow=75,SNR=57						
H11N3	WAKE ISLAND Hy	27.56	116	T	T	16 20 14.0	
	baz=309,slow=75,SNR=7.1						
H11S3	WAKE ISLAND Hy	28.17	119	T	T	16 20 59.9	
	baz=312,slow=76,SNR=56						
H11S1	WAKE ISLAND Hy	28.17	119	T	T	16 20 56.0	
	baz=312,slow=76,SNR=52						
H11S2	WAKE ISLAND Hy	28.18	119	T	T	16 20 57.3	
	baz=312,slow=76,SNR=60						
SONM	Songino Array	28.66	307	P	P	15 51 05.7	-1.3
	0.7nm,0.6s,baz=114,slow=9.1,SNR=6.5						
CMAR	Chiang Mai Arr	40.51	257	P	P	15 52 48.7	-0.5
	0.2nm,0.6s,baz=55,slow=7.8,SNR=3.0						
ZALV	Zalesovo Beam	43.05	314	P	P	15 53 10.0	+0.5
	0.8nm,0.3s,baz=110,slow=7.3,SNR=5.1						
MKAR	Makanchi Array	44.89	304	P	P	15 53 24.4	0.0
	0.7nm,0.5s,baz=91,slow=9.6,SNR=12						
KURBB	Kurchatov Arra	46.98	310	P	P	15 53 40.5	-0.3
	2.1nm,0.4s,baz=82,slow=7.5,SNR=27						
AAK	Ala-Archa	51.12	300	P	P	15 54 13.4	+0.7
	0.7nm,0.4s,baz=140,slow=7.9,SNR=2.8						
ILAR	Eielson Array	51.59	31	P	P	15 54 17.1	+1.3
	1.0nm,0.7s,baz=262,slow=6.1,SNR=11						
BVAR	Borovoye Array	51.69	314	P	P	15 54 17.1	+0.4
	0.7nm,0.4s,baz=106,slow=12,SNR=9.8						
WRA	Warramunga Arr	54.85	187	P	P	15 54 39.7	-0.4
	3.7nm,0.3s,baz=4.2,slow=7.8,SNR=117						
ASAR	Alice Springs	58.57	187	P	P	15 55 06.5	0.0
	0.7nm,0.4s,baz=18,slow=12,SNR=16						
ARCES	ARCESS Array B	65.86	340	P	P	15 55 56.8	+2.0
	1.0nm,0.7s,baz=68,slow=7.9,SNR=3.0						
YKA	Yellowknife Ar	65.93	29	P	P	15 55 55.3	0.0
	0.1nm,0.5s,baz=306,slow=6.5,SNR=3.6						
FINES	FINESS Array B	70.51	332	P	P	15 56 26.9	+3.0
	0.6nm,0.6s,baz=64,slow=6.3,SNR=4.1						
AKASG	Malin Array Be	75.72	322	P	P	15 56 56.5	+1.7
	0.3nm,0.3s,baz=52,slow=6.2,SNR=1.9						
NB2	NORSAR Subarra	76.00	337	P	P	15 57 03.3	+6.9
	comp=Z,5.0nm,1.2s,baz=39,slow=6.2						
PDAR	Pinedale Array	79.54	45	P	P	15 57 17.2	+0.5
	comp=Z,0.3nm,0.7s,baz=46,slow=4.3,SNR=4.0						
BRTR	Keskin Array B	79.92	312	P	P	15 57 20.2	+1.5
	comp=Z,0.2nm,0.5s,baz=92,slow=8.7,SNR=2.6						

*SOME **09** 15:56:39.6, 47°.85N×81°.07E, h0^{km}*
*NNC **09** 15:56:40.9±0.6, 47°.78N×81°.30E, h10^{km}±6^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=4.5km s-min=2.7km az=51.0*
ISC 09 15:56:40.7±0.8**, 47°.80N**±0°.03×**81°.34E**±0°.03**, h10**^{km}**, n39, σ2^{s}.45**/55**, 12C-11D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	1.09	156	⇓P	Pg	15 57 01.4	-0.2
	8.8nm,0.4s						
MAKZ				⇓S	Sb	15 57 16.1	+0.2
	38nm,0.3s						
MK31	Makanchi Array	1.20	147	⇓P	Pb	15 57 03.5	-0.1
	1.8nm,0.1s,baz=69,slow=31,SNR=788						
MK31				⇓S	Sb	15 57 19.3	+0.1
	44nm,0.3s,baz=331,slow=28,SNR=54						
ZSN	Zaisan	2.41	97	Pg	Pb	15 57 24.9	+0.7
	9.5nm,0.4s						
ZSN				Lg	Lg	15 57 57.8	
	79nm,0.3s						
ZSN	Zaisan	2.41	97	*e*P	Pb	15 57 24.1	-0.1
	9.2nm,0.2s						
ZSN				*e*S	Sb	15 57 56.3	+2.3
	79nm,0.3s						
SEM	Semipalatinsk	2.70	345	Pg	Pb	15 57 28.6	-0.7
	18nm,0.1s						
SEM				Lg	Lg	15 58 04.3	
	176nm,0.3s						
SEM	Semipalatinsk	2.70	345	*e*P	Pb	15 57 28.6	-0.7
	18nm,0.1s						
SEM				*e*S	Sb	15 58 04.3	+1.7
	176nm,0.3s						
KAPS	Kapalarasan	2.87	209	Pg	Pb	15 57 32.3	+0.3
	5.6nm,0.1s						
KAPS				Lg	Lg	15 58 10.6	
	72nm,0.5s						
KAPS	Kapalarasan	2.87	209	*e*P	Pb	15 57 32.3	+0.3
	5.6nm,0.1s						
KAPS				*e*S	Sg	15 58 10.6	-2.2
	72nm,0.5s						
KURBB	Kurchatov Arra	3.37	328	⇓Pn	Pn	15 57 33.8	+0.4
	0.9nm,0.3s						
KURBB				⇑Pg	Pb	15 57 40.9	+0.4
	4.1nm,0.3s						
KURBB				⇑Lg	Lg	15 58 26.5	
	198nm,0.8s						
TDK	Taldyqorghan	3.46	217	Pg	Pg	15 57 44.4	-2.6
	23nm,0.2s						
TDK				Lg	Lg	15 58 31.3	
	93nm,0.6s						
TDK	Taldyqorghan	3.46	217	*e*P	Pg	15 57 44.4	-2.6
	23nm,0.2s						
TDK				*e*S	Sg	15 58 31.3	-0.5
	93nm,0.6s						
DJR	Jarkent	3.64	198	Pg	Pb	15 57 47.4	+2.2
	1.6nm,0.4s						
DJR				Lg	Lg	15 58 36.3	
	12nm,0.2s						
DJR	Jarkent	3.64	198	*e*P	Pb	15 57 47.4	+2.2
	1.6nm,0.4s						
DJR				*e*S	Sg	15 58 36.3	-1.2
	12nm,0.2s						
MNBS	Baschi	4.25	210	Pg	Pg	15 57 58.7	-3.4
	2.8nm,0.2s						
MNBS				Lg	Lg	15 58 56.2	
	37nm,0.6s						
MNBS	Baschi	4.25	210	*e*P	Pg	15 57 58.7	-3.4
	2.8nm,0.2s						
MNBS				*e*S	Sg	15 58 56.2	-1.0
	37nm,0.6s						
ARXS	Arharly	4.34	216	Pg	Pb	15 57 59.9	+2.7
	3.8nm,0.2s						
ARXS				Lg	Lg	15 58 58.4	
	39nm,0.3s						
ARXS	Arharly	4.34	216	*e*P	Pb	15 57 59.9	+2.7
	3.8nm,0.2s						
ARXS				*e*S	Sg	15 58 58.4	-1.8
	39nm,0.3s						
PDGK	Podgornoye	4.66	197	Pg	Pb	15 58 04.9	+2.3
	2.3nm,0.5s						
PDGK				Lg	Lg	15 59 06.8	
	10.0nm,0.5s						
PDGK	Podgornoye	4.66	197	⇓Pg	Pg	15 58 07.2	-2.7
	3.6nm,0.7s						
PDGK				⇑Lg	Lg	15 59 10.6	
	17nm,0.6s						
KURS	Kuram	4.85	208	Pg	Pg	15 58 10.3	-3.3
	3.0nm,0.3s						
KURS				Lg	Lg	15 59 15.8	
	8.9nm,0.8s						
KURS	Kuram	4.85	208	*e*P	Pg	15 58 10.3	-3.3
	3.3nm,0.5s						
KURS				*e*S	Sg	15 59 15.8	-0.7
	8.9nm,0.8s						
UZB	Uzynbulak	4.93	200	Pg	Pb	15 58 09.7	+2.4
	1.3nm,0.1s						
UZB				Lg	Lg	15 59 14.9	
	6.4nm,0.4s						
UZB	Uzynbulak	4.93	200	*e*P	Pb	15 58 09.7	+2.4
	1.3nm,0.1s						
UZB				*e*S	Sg	15 59 14.9	-4.2
	6.4nm,0.4s						
CHKK	Chushkaly	4.98	219	Pg	Pb	15 58 10.8	+2.8
	1.6nm,0.2s						
CHKK				Lg	Lg	15 59 16.9	
	31nm,0.4s						
CHKK	Chushkaly	4.98	219	*e*P	Pb	15 58 10.8	+2.8
	1.6nm,0.2s						
CHKK				*e*S	Sg	15 59 16.9	-3.7
	31nm,0.4s						
SATY	Saty	5.17	205	Pg	Pg	15 58 15.2	-4.5
	7.5nm,0.7s						
SATY				Lg	Lg	15 59 24.8	
	15nm,0.6s						
SATY	Saty	5.17	205	*e*P	Pg	15 58 15.2	-4.5
	7.5nm,0.7s						
SATY				*e*S	Sg	15 59 24.8	-2.0
	15nm,0.6s						
KTBS	Karatobe	5.23	220	Pg	Pb	15 58 15.7	+3.5
	2.0nm,0.4s						
KTBS				Lg	Lg	15 59 24.9	
	32nm,0.5s						
KTBS	Karatobe	5.23	220	*e*P	Pb	15 58 15.7	+3.5
	2.0nm,0.4s						
KTBS				*e*S	Sg	15 59 24.9	-3.6
	32nm,0.5s						
KUU	Kurty	5.24	224	Pg	Pb	15 58 15.4	+2.9
	1.3nm,0.1s						
KUU				Lg	Lg	15 59 24.7	
	35nm,0.5s						
KUU	Kurty	5.24	224	*e*P	Pb	15 58 15.4	+2.9
	1.3nm,0.1s						
KUU				*e*S	Sg	15 59 24.7	-4.3
	35nm,0.5s						
MDOK	Medeo	5.53	215	⇓Lg	Lg	15 59 36.6	
	17nm,0.7s						
OTUK	Ortayu	6.05	278	⇑Pn	Pn	15 58 11.5	+1.2
	0.7nm,0.3s						
OTUK				⇑Sn	Sn	15 59 20.1	+0.5
	1.5nm,0.3s						
OTUK				⇓Lg	Lg	15 59 53.8	
	9.3nm,0.6s						
TKM2	Tokmak 2	6.34	222	⇑Pn	Pn	15 58 16.0	+1.6
	1.5nm,0.5s						
TKM2				⇓Sn	Sn	15 59 28.2	+1.3
	3.2nm,0.8s						
TKM2				Lg	Lg	16 00 02.6	
ZAA0	Zalesovo Array	6.53	18	⇑Pn	Pn	15 58 16.4	-0.4
	2.0nm,0.8s						
ZAA0				⇓Sn	Sn	15 59 32.7	+1.4
	1.3nm,0.2s						
ZAA0				Lg	Lg	16 00 09.0	
	12nm,0.8s						
AAK	Ala-Archa	7.07	226	⇑Lg	Lg	16 00 26.5	
	13nm,0.8s						
MNAS	Manas	8.20	233	⇑Lg	Lg	16 01 00.0	
	4.4nm,0.6s						
BVA0	Borovoye Array	8.73	311	⇑Pn	Pn	15 58 47.3	+0.4
	1.7nm,0.8s,baz=120,slow=16,SNR=4.5						
BVA0				⇑Sn	Sn	16 00 28.4	+3.1
	2.1nm,0.8s,baz=0.0,slow=0.1,SNR=3.8						
BVA0				⇓Lg	Lg	16 01 18.8	
	3.5nm,0.7s,baz=120,slow=16,SNR=4.5						
KK31	Karatay Array	8.94	242	⇑Lg	Lg	16 01 22.2	
	3.7nm,0.7s,baz=53,slow=27,SNR=4.5						

IDC 09 16:08:56.3±1.7**, 10°.89S**×**165°.45E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.5**/32**, mbtmp3.6**/4**, ML3.4**/1**, Error ellipse: s-maj=53.4km s-min=31.6km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.16	175	Pn	Pn	16 11 37.0	-0.4
	0.3nm,0.3s,baz=308,slow=19,SNR=3.9						
WRA	Warramunga Arr	31.26	249	P	P	16 15 18.3	+0.1
	0.3nm,0.5s,baz=81,slow=9.0,SNR=5.0						
ASAR	Alice Springs	32.60	243	P	P	16 15 29.9	-0.1
	0.6nm,0.9s,baz=64,slow=9.8,SNR=6.1						
ILAR	Eielson Array	83.46	19	P	P	16 21 25.5	0.0
	0.5nm,0.9s,baz=242,slow=5.7,SNR=6.6						

IDC 09 16:12:29.9±1.4**, 11°.08S**×**166°.81E, h0**^{km}**, mb3.8**/5**, mb1 3.9**/7**, mb1mx3.7**/35**, mbtmp3.8**/7**, ML3.5**/2**, Error ellipse: s-maj=42.6km s-min=25.5km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.95	283	Pn	Pn	16 14 12.8	-0.2
	1.6nm,0.3s,baz=338,slow=15,SNR=2.5						
HNR				Sn	Sn	16 15 41.2	+8.2
	1.4nm,0.3s,baz=248,slow=19,SNR=1.8						
DZM	Mont Dzumac	10.93	182	Pn	Pn	16 15 07.9	+0.1
	0.2nm,0.3s,baz=300,slow=20,SNR=2.4						
WRA	Warramunga Arr	32.45	250	P	P	16 19 02.4	+0.2
	0.4nm,0.6s,baz=84,slow=8.8,SNR=7.5						
ASAR	Alice Springs	33.71	244	P	P	16 19 12.9	-0.3
	0.6nm,0.7s,baz=66,slow=10.0,SNR=9.7						
ILAR	Eielson Array	83.22	18	P	P	16 24 58.0	+0.1
	0.8nm,0.8s,baz=237,slow=5.2,SNR=7.9						
MKAR	Makanchi Array	94.26	317	P	P	16 25 51.8	+0.5
	0.4nm,0.8s,baz=101,slow=6.3,SNR=5.0						
YKA	Yellowknife Ar	94.53	27	P	P	16 25 51.3	-0.7
	0.3nm,0.8s,baz=265,slow=4.5,SNR=5.4						

*IDC **09** 16:15:35.4±1.4, 2°.75S×140°.76E, h0^{km}, mb3.8/7, mb1 4.2/9, mb1mx3.9/35, mbtmp4.0/9, ML4.2/2, Error ellipse: s-maj=43.0km s-min=20.1km az=102.0*
*DJA **09** 16:15:35.9±0.6, 2°S±4°×14°1E±°, h10^{km}, M4.8/7, mb4.8/7, MLv4.8/7*
*ISCJB **09** 16:15:37.1±0.5, 2°.79S±0°.04×140°.64E±0°.06, h24^{km}, mb3.9/9, Error ellipse: s-maj=8.8km s-min=5.7km az=9.7*
*NEIC **09** 16:15:40.6±0.5, 2°.83S×140°.62E, h35^{km}, mb4.0/5, ML4.1(DJA), Error ellipse: s-maj=15.2km s-min=5.9km az=95.0*
NEIC Felt [II] at Sentani.
ISC 09 16:15:38.9±0.8**, 2°.74S**±0°.08×**140°.68E**±0°.10**, h24**^{km}**, n40, σ0^{s}.92**/35**, mb4.1**/13**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	0.23	6	P	Pb	16 15 43.3	-1.6
JAY				S	Sb	16 15 48.2	-0.7
GENI	Genyem	0.54	286	P	Pb	16 15 45.8	-3.9
GENI				S	Sb	16 15 55.3	-1.7
SRPI	Serui, Papua	4.52	281	P	Pn	16 16 41.6	-4.3
BAKI	Biak	4.83	289	P	Pn	16 16 45.0	-5.1
MMPI	Merauke	5.70	183	P	Pn	16 17 08.6	+6.5
RKPI	Ransiki, Papua	6.62	281	P	Pn	16 17 10.9	-3.8
FAKI	Fak Fak	8.43	269	*e*Pn	Pn	16 17 40.2	+0.6
SWI	Sorong	9.60	281	P	Pn	16 17 50.6	-5.1
SAUI	Saumlaki	10.69	240	*e*Pn	Pn	16 18 05.0	-5.7
SAUI	Saumlaki	10.69	240	P	Pn	16 18 11.7	+1.0
MTN	Manton Dam	13.79	223	*e*Pn	Pn	16 18 50.8	-2.2
WRAB	Tennant Creek	18.17	199	*e*Pn	Pn	16 19 48.0	-1.8
	8.7nm,0.8s						
WB2	Warramunga Arr	18.18	199	*e*Pn	Pn	16 19 49.6	-0.3
WR1	Warramunga Arr	18.18	199	*e*Pn	Pn	16 19 49.1	-0.8
	8.7nm,0.9s						
WRA	Warramunga Arr	18.18	199	P	Pn	16 19 49.1	-0.9
	0.6nm,0.3s,baz=17,slow=12,SNR=26						
WRA				S	Sn	16 22 58.7	-14
	0.1nm,0.3s,baz=21,slow=23,SNR=3.4						
BATI	Baumata	18.45	246	P	Pn	16 19 55.2	+2.0
	1.9nm,0.3s,baz=73,slow=20,SNR=4.2						
FITZ	Fitzroy Crossi	21.22	223	P	P	16 20 22.5	-0.7
	4.5nm,0.9s,baz=48,slow=9.6,SNR=6.3						
FITZ				S	S	16 24 07.7	-10
	1.4nm,0.8s,baz=191,slow=5.2,SNR=3.8						
AS01	Alice Springs	21.80	197	*e*P	P	16 20 29.4	+0.1
AS31	Alice Springs	21.81	197	*e*P	P	16 20 29.3	-0.2
	2.3nm,0.9s						
ASAR	Alice Springs	21.81	197	P	P	16 20 30.1	+0.6
	4.0nm,0.7s,baz=34,slow=9.9,SNR=63						
ASAR				S	S	16 24 19.0	-11
	0.4nm,1.0s,baz=14,slow=27,SNR=3.3						
CMAR	Chiang Mai Arr	46.17	299	P	P	16 24 02.2	+0.1
	2.1nm,0.8s,baz=117,slow=6.3,SNR=18						
SONA0	Songino Array	58.61	334	*e*P	P	16 25 35.0	+1.0
SONM	Songino Array	58.61	334	P	P	16 25 35.0	+1.0
	0.3nm,0.6s,baz=157,slow=8.9,SNR=3.3						
JIRN	Jiri	60.48	304	*e*P	P	16 25 47.9	+0.2
GUN	Gumba	60.83	304	*e*P	P	16 25 50.5	+0.4
	5.5nm,0.6s						
PKI	Pulchoki	61.10	304	*e*P	P	16 25 51.9	0.0
PKIN	Phulchoki	61.12	304	*e*P	P	16 25 51.9	0.0
DMN	Daman	61.37	303	*e*P	P	16 25 54.1	+0.5
KOLN	Koldanda	62.68	303	*e*P	P	16 26 02.7	+0.4
	6.4nm,0.8s						
DANN	Dangsing	62.74	304	*e*P	P	16 26 03.1	+0.3
	8.2nm,0.7s						
PYUN	Piuthan	63.30	303	*e*P	P	16 26 06.8	+0.3
	17nm,0.8s						
MK01	Makanchi Array	71.01	322	*e*P	P	16 26 55.6	+0.7
MK31	Makanchi Array	71.02	322	*e*P	P	16 26 54.6	-0.3
	4.0nm,1.6s						
MK32	Makanchi Array	71.02	322	*e*P	P	16 26 55.9	+1.0
MKAR	Makanchi Array	71.02	322	*e*P	P	16 26 54.6	-0.3
	10nm,1.1s						
MKAR	Makanchi Array	71.02	322	P	P	16 26 55.9	+1.0
	1.0nm,0.6s,baz=108,slow=7.3,SNR=9.6						
ZALV	Zalesovo Beam	72.96	329	P	P	16 27 06.2	-0.1
	0.3nm,0.3s,baz=103,slow=7.0,SNR=3.8						
ZAA1	Zalesovo Array	72.96	329	*e*P	P	16 27 06.2	-0.1
ILAR	Eielson Array	85.05	24	P	P	16 28 12.7	+0.4
	0.9nm,1.0s,baz=263,slow=4.6,SNR=6.5						
DBIC	Dimbokro	145.44	278	PKPbc	PKPdf	16 35 15.6	-0.5
	3.2nm,0.8s,baz=117,slow=4.5,SNR=3.7						

MAN 09 16:17:25.2, 6°.66N×126°.67E, h41^{km}, mb4.5, ML3.4, MS3.2, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.50	305	*e*P	Pn	16 17 37.7	+1.8
MATI				*e*S	Sn	16 17 46.3	+2.7
DDMP	Don Marcelino,	1.09	240	*e*P	Pn	16 17 42.9	-1.2

DDMP				eS	Sn	16 17 54.5	-3.6
DMPH	Davao City--Mi	1.23	290	⇑eP	Pn	16 17 47.0	+1.2
DMPH				eS	Sn	16 17 58.1	-3.2
GSPH	General Santos	1.80	252	⇑eP	Pn	16 17 50.5	-3.3
BUKP	Musuan	2.00	307	eP	Pn	16 17 56.7	+0.1
BUKP				eS	Sn	16 18 21.6	+1.1

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*IDC **09** 16:19:00.9±1.5, 11°.13S×164°.98E, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.9/40, mbtmp4.0/9, ML4.1/2, Error ellipse: s-maj=38.4km s-min=24.0km az=122.0*

*ISCJB **09** 16:19:03.9±1.0, 11°.2S±0°.1×164°.9E±0°.1, h31^{km}, mb3.9/6, Error ellipse: s-maj=20.6km s-min=15.7km az=167.0*

ISC 09 16:19:06.3±1.0, **11°.2S**±0°.1×**164°.8E**±0°.1, **h31^{km}, n9, σ1^{s}.45**/10, **mb3.9**/6, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.02	289	Pn	Pn	16 20 20.4	+0.8
	17nm,0.3s,baz=144,slow=4.8,SNR=9.5						
HNR				Sn	Sn	16 21 14.4	-2.2
	baz=127,slow=20,SNR=2.3						
DZM	Mont Dzumac	10.98	172	Pn	Pn	16 21 40.8	-0.6
	0.6nm,0.3s,baz=55,slow=8.3,SNR=6.3						
CTA	Charters Tower	19.89	241	P	Pn	16 23 37.7	+0.6
	3.6nm,0.8s,baz=85,slow=12,SNR=2.6						
WRA	Warramunga Arr	30.53	250	P	P	16 25 16.9	-0.2
	2.3nm,0.7s,baz=80,slow=9.6,SNR=6.6						
ASAR	Alice Springs	31.87	243	P	P	16 25 29.2	+0.2
	1.2nm,0.6s,baz=64,slow=10.0,SNR=11						
USRK	Ussuriysk Ar.	62.61	334	P	P	16 29 27.8	+0.2
	1.6nm,0.8s,baz=117,slow=8.4,SNR=4.1						
SONM	Songino Array	78.17	324	P	P	16 31 03.8	+0.9
	0.7nm,1.0s,baz=135,slow=3.3,SNR=3.6						
ILAR	Eielson Array	83.93	19	P	P	16 31 30.8	-2.1
	0.9nm,1.0s,baz=217,slow=5.7,SNR=3.4						
MKAR	Makanchi Array	92.93	317	P	P	16 32 18.2	+1.6
	0.3nm,0.8s,baz=93,slow=5.2,SNR=3.6						

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*ISCJB **09** 16:25:33.1±0.3, 1°.78S±0°.03×78°.05W±0°.05, h170^{km}±2^{km}, Error ellipse: s-maj=8.7km s-min=5.0km az=15.4*

*IGQ **09** 16:25:34.5±0.6, 2°S±5°×7°8W±°, h52^{km}, MLv3.8*

*IDC **09** 16:25:35.4±2.3, 1°.71S×77°.84W, h170^{km}±24^{km}, mb3.5/12, mb1 3.7/17, mb1mx3.6/34, mbtmp4.0/17, Error ellipse: s-maj=22.8km s-min=14.5km az=35.0*

ISC 09 16:25:34.1±0.6, **1°.71S**±0°.04×**78°.04W**±0°.05, **h165^{km}**±5^{km}, **n99, σ1^{s}.45**/113, **Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUYO	Puyo, Santa Ro	0.22	5	P	Pn	16 25 56.0	-0.5
PUYO				S	Sn	16 26 12.9	-0.8
BPAT	Tungurahua Vol	0.44	298	P	Pn	16 25 57.3	-0.3
BPAT				S	Sn	16 26 15.0	-0.5
PAT1	Patacocha	0.45	297	P	Pn	16 25 57.5	-0.2
BULB	Ulba Tungurahu	0.46	307	P	Pn	16 25 57.2	-0.4
BULB				S	Sn	16 26 14.2	-1.2
ARRY	Arrayan	0.46	297	P	Pn	16 25 57.0	-0.6
BRUN	Tungurahua Vol	0.47	308	P	Pn	16 25 56.9	-0.7
BRUN				S	Sn	16 26 15.0	-0.4
RETU	Refugio	0.48	303	P	Pn	16 25 57.7	-0.2
RUN5	Runtun	0.48	308	P	Pn	16 25 56.8	-0.8
BMAS	Trigal station	0.48	296	P	Pn	16 25 56.9	-0.8
BMAS				S	Sn	16 26 14.8	-0.8
POND	Pondoa	0.50	305	P	Pn	16 25 57.5	-0.2
JUI6	Juive	0.51	304	P	Pn	16 25 57.3	-0.4
BBIL	Ulba Tungurahu	0.52	301	P	Pn	16 25 57.6	-0.1
BIL2	Estacion Bilba	0.53	299	P	Pn	16 25 57.0	-0.7
IGUA	Igualata	0.64	290	P	Pn	16 25 57.8	-0.8
PIS1	Pisayambo	0.74	332	P	Pn	16 25 59.3	+0.1
PIS1				S	Sn	16 26 18.5	+0.1
PISA	Pisayambo	0.74	332	P	Pn	16 25 59.3	+0.1
ARDO	Archidona, Ten	0.75	19	P	Pn	16 25 58.1	-0.7
ARDO				S	Sn	16 26 16.4	-1.3
SAGO	Sagoatoa	0.83	312	P	Pn	16 25 59.9	+0.1
BMOR	Cotopaxi Volca	1.06	337	P	Pn	16 26 02.0	+0.4
BTAM	Cotopaxi Volca	1.09	341	P	Pn	16 26 02.1	+0.3
BREF	Cotopaxi Volca	1.11	339	P	Pn	16 26 03.5	+1.4
BVC2	Cotopaxi Volca	1.11	341	P	Pn	16 26 02.5	+0.5
BNAS	Cotopaxi Volca	1.12	337	P	Pn	16 26 02.8	+0.7
NAS2	Nasa	1.14	338	P	Pn	16 26 03.2	+1.0
PAST	Pastocalle	1.18	329	P	Pn	16 26 02.9	+0.5
ANTM	Antisana-La Mi	1.18	351	P	Pn	16 26 02.7	+0.1
PITA	Cotopaxi Volc	1.21	341	P	Pn	16 26 03.0	+0.3
ANTS	Antisana-Sarah	1.22	354	P	Pn	16 26 03.2	+0.3
ANTG	Antisana-Guama	1.22	350	P	Pn	16 26 03.1	+0.2
ANTI	Antisana	1.26	355	P	Pn	16 26 03.4	+0.1
COHC	Cochancay	1.42	238	P	Pn	16 26 03.5	-0.7
NINA	Atacazo Ninahu	1.44	336	P	Pn	16 26 04.9	+0.1
AMIL	Milagro (Trans	1.61	255	P	Pn	16 26 04.2	-1.8
MILO	Milagro-Astudi	1.61	250	P	Pn	16 26 04.2	-1.9
GGPC	Guagua Pichinc	1.62	340	P	Pn	16 26 06.9	+0.1
YANA	Yana	1.67	342	P	Pn	16 26 07.0	-0.2
CONE	Cono NE Rev Vo	1.68	14	P	Pn	16 26 07.1	0.0
CAYA	Cayambe	1.77	2	P	Pn	16 26 09.3	+0.9
OTAV	Otavalo	1.98	348	eP	Pn	16 26 10.4	-0.1
OTAV	Otavalo	1.98	348	eP	Pn	16 26 10.4	-0.1
CUIC	Cuicocha-Domo	2.03	351	P	Pn	16 26 11.4	+0.4
YAHU	Yahuarcocha	2.07	359	P	Pn	16 26 12.2	+0.7
URCU	Urcuqui	2.15	354	P	Pn	16 26 13.0	+0.6
MAG1	Magdalena	2.38	313	P	Pn	16 26 14.2	-0.4
TULM	Tulcn-Chalpat	2.43	6	P	Pn	16 26 16.3	+0.6
MORR	Playas El Morr	2.47	248	P	Pn	16 26 14.3	-1.4
JAMA	Jama	2.60	304	P	Pn	16 26 16.2	-1.1
CMBC	Cumbal	2.65	5	eP	Pn	16 26 19.8	+1.6
CMBC	Cumbal	2.65	5	eP	Pn	16 26 19.8	+1.6
CHIS	Cerro-Chispas-	2.76	284	P	Pn	16 26 17.1	-2.2
GONZ	Gonzanam	2.85	208	P	Pn	16 26 19.6	-1.1
SALI	Salinas	2.98	261	P	Pn	16 26 20.1	-1.9
GCUF	Volcan Galeras	3.00	13	eP	Pn	16 26 23.5	+0.8
GCUF	Volcan Galeras	3.00	13	eP	Pn	16 26 23.5	+0.8
MCRA	Macar, Loja	3.26	216	P	Pn	16 26 22.4	-3.0
CRUC	La Cruz	3.44	19	eP	Pn	16 26 27.7	-0.3
CRUC	La Cruz	3.44	19	eP	Pn	16 26 27.7	-0.3
TUMC	Tumaco	3.58	349	eP	Pn	16 26 26.6	-2.9
TUMC				eS	Sn	16 27 11.1	-1.5
TUMC	Tumaco	3.58	349	eP	Pn	16 26 26.6	-2.9
TUMC				eS	Sn	16 27 11.1	-1.5
PTLC	Puerto Leguiza	3.75	60	eP	Pn	16 26 28.9	-2.7
PTLC	Puerto Leguiza	3.75	60	eP	Pn	16 26 28.9	-2.7
SOTA	Rioblanco	4.08	21	eP	Pn	16 26 37.4	+1.0
SOTA	Rioblanco	4.08	21	eP	Pn	16 26 37.4	+1.0
PCON	Cinco Dias	4.34	22	eP	Pn	16 26 40.9	+1.2
PCON	Cinco Dias	4.34	22	eP	Pn	16 26 40.9	+1.2
POPC	Popayan, Colom	4.44	18	eP	Pn	16 26 40.4	-0.4
POPC	Popayan, Colom	4.44	18	eP	Pn	16 26 40.4	-0.4
GRGC	Isla de Gorgon	4.69	358	eP	Pn	16 26 44.2	+0.4
GRGC	Isla de Gorgon	4.69	358	eP	Pn	16 26 44.2	+0.4
MARP	Paez Belalcaza	4.98	25	eP	Pn	16 26 48.6	+0.7
MARP	Paez Belalcaza	4.98	25	eP	Pn	16 26 48.6	+0.7
BETC	Betania	5.08	31	eP	Pn	16 26 50.4	+1.4
BETC	Betania	5.08	31	eP	Pn	16 26 50.4	+1.4
ATAH	Atahualpa	5.40	184	P	Pn	16 26 53.8	+0.3
	4.8nm,0.3s,baz=46,slow=7.0,SNR=22						
ATAH				S	Sn	16 27 54.5	-1.1
	18nm,0.3s,baz=8.0,slow=7.5,SNR=12						
MALC	Bahia Malaga	5.73	7	eP	Pn	16 26 57.0	-0.5
MALC				eS	Sn	16 27 57.6	-5.3
MALC				i		16 28 10.2	
	comp=Z,22nm,0.6s						
MALC	Bahia Malaga	5.73	7	eP	Pn	16 26 57.0	-0.5
MALC				eS	Sn	16 27 57.6	-5.3
MALC				i		16 28 10.2	
	comp=Z,22nm,0.6s						
YOTC	Yotoco, Valle	5.91	17	eP	Pn	16 26 57.4	-2.5
YOTC				eS	Sn	16 28 02.7	-4.6
YOTC				i		16 28 10.2	
	comp=Z,6.2nm,0.7s						
YOTC	Yotoco, Valle	5.91	17	eP	Pn	16 26 57.4	-2.5
YOTC				eS	Sn	16 28 02.7	-4.6
YOTC				i		16 28 10.2	
	comp=Z,6.2nm,0.7s						
NNA	Nana	10.28	173	P	Pn	16 27 59.1	+1.5
	comp=Z,4.0nm,0.3s,baz=5.6,slow=5.0,SNR=7.6						
NNA				S	Sn	16 29 41.3	-11
	comp=Z,2.7nm,0.3s,baz=270,slow=20,SNR=3.5						
SDV	Santo Domingo	12.86	35	P	Pn	16 28 30.6	-0.7
	comp=Z,0.9nm,0.3s,baz=225,slow=8.6,SNR=4.1						
LPAZ	La Paz	17.47	147	P	Pn	16 29 28.2	-0.3
	comp=Z,0.1nm,0.3s,baz=315,slow=5.7,SNR=2.6						
PTGA	Pitinga	18.10	87	P	P	16 29 34.0	+0.4
	comp=Z,0.8nm,0.3s,baz=299,slow=12,SNR=6.3						
MDP	Montagnes des	26.26	75	P	P	16 30 53.8	-0.5
	comp=Z,10.0nm,0.8s,baz=254,slow=8.7,SNR=6.6						
BDFB	Brasilia	32.68	117	P	P	16 31 50.8	-0.4
	comp=Z,2.1nm,0.4s,baz=310,slow=7.9,SNR=4.3						
TXAR	Lajitas Array	39.42	324	P	P	16 32 50.2	+2.0
	comp=Z,0.2nm,0.7s,baz=139,slow=5.9,SNR=3.8						
NVAR	Mina Array Bea	54.50	321	P	P	16 34 47.9	+2.7
	comp=Z,0.5nm,0.6s,baz=130,slow=6.4,SNR=3.5						
SCHQ	Schefferville	57.11	8	P	P	16 35 02.8	-0.3
	comp=Z,1.3nm,0.5s,baz=209,slow=13,SNR=3.3						
YKA	Yellowknife Ar	69.73	343	P	P	16 36 26.7	+0.9
	comp=Z,0.1nm,0.4s,baz=141,slow=5.9,SNR=3.6						
LIC	Lamto	73.32	83	eP	P	16 36 47.7	-0.6
	comp=Z,5.5nm,0.2s						
TIC	Toumodi	73.35	83	eP	P	16 36 48.0	-0.5
DBIC	Dimbokro	73.51	83	P	P	16 36 49.0	-0.5
	comp=Z,3.2nm,0.5s,baz=269,slow=7.3,SNR=14						
KIC	Kosan Boka	73.61	83	eP	P	16 36 49.3	-0.7
	comp=Z,17nm,0.7s						
ESDC	Sonseca Array	78.89	49	P	P	16 37 19.6	+0.1
	comp=Z,0.2nm,0.5s,baz=259,slow=4.4,SNR=2.9						
TORD	Torodi Ar. Bea	80.40	76	P	P	16 37 26.4	-1.5
	comp=Z,1.1nm,0.6s,baz=292,slow=6.4,SNR=16						
ILAR	Eielson Array	82.66	336	P	P	16 37 39.1	+0.3
	comp=Z,0.2nm,0.6s,baz=140,slow=4.2,SNR=4.6						
KEST	Kesra	88.87	54	P	P	16 38 10.8	+0.7
	comp=Z,3.4nm,0.8s,baz=304,slow=3.6,SNR=3.4						
GERES	GERESS Array B	92.43	41	P	P	16 38 27.1	+0.8
	comp=Z,0.4nm,0.6s,baz=265,slow=9.2,SNR=3.8						
ASAR	Alice Springs	139.98	229	PKhKP	PKPpre	16 44 35.7	
	comp=Z,0.5nm,1.0s,baz=194,slow=27,SNR=5.1						
ASAR				PKP	PKPdf	16 44 44.5	+0.7
	comp=Z,0.5nm,0.7s,baz=114,slow=2.2,SNR=7.9						
WRA	Warramunga Arr	141.63	234	PKhKP	PKPpre	16 44 42.1	
	comp=Z,0.5nm,0.7s,baz=122,slow=2.7,SNR=10						
WRA				PKP	PKPdf	16 44 46.9	+0.1
	comp=Z,0.5nm,0.7s,baz=110,slow=2.3,SNR=7.5						

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*IDC **09** 16:27:21.7±1.2, 26°.51S×68°.84W, h0^{km}, mb3.9/1, mb1 4.0/2, mb1mx3.6/29, mbtmp4.0/2, ML3.9/1, Error ellipse: s-maj=70.3km s-min=32.5km az=95.0*

*GUC **09** 16:27:21.8±0.4, 26°.18S×69°.08W, h2^{km}±4^{km}, ML4.1*

*ISCJB **09** 16:27:25.8±0.5, 26°.15S±0°.03×69°.29W±0°.05, h10^{km}, mb3.8/1, Error ellipse: s-maj=7.0km s-min=4.1km az=160.2*

*SJA **09** 16:27:26.2±0.4, 26°.49S×69°.45W, h248^{km}±20^{km}, ML2.7, MW3.3*

ISC 09 16:27:22.2±0.7, **26°.17S**±0°.03×**69°.20W**±0°.06, **h10^{km}, n18, σ1^{s}.98**/27, **4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	1.07	341	⇓iP	Pg	16 27 42.0	-0.7
GO02				eS	Sg	16 27 56.8	+0.2
CRCH	Chaqaral	1.29	262	eS	Sn	16 28 04.2	+0.7
PB14	IPOC Station P	1.89	324	⇓eP	Pn	16 27 56.0	+1.2
PB14				eS	Sb	16 28 21.9	+1.2
PB14				IAML		16 28 25.3	
	comp=E,1μm,0.3s						
PB10	IPOC Station P	2.92	335	eP	Pn	16 28 11.5	+2.8
PB10				eS	Sb	16 28 49.5	-0.7
PB10				IAML		16 28 57.0	
	comp=E,243nm,0.5s						
PB15	IPOC Station P	2.96	355	eP	Pb	16 28 13.1	-2.1
PB15				eS	Sg	16 28 55.2	-2.2
PB15				IAML		16 28 59.9	
	comp=N,3μm,0.7s						
LCO	Las Campanas	3.12	205	eP	Pn	16 28 14.6	+2.8
LCO				eS	Sb	16 28 54.9	-1.4
LCO				IAML		16 29 03.2	
	comp=E,488nm,0.8s						
AGUA	GUANDACOL	3.36	169	i P	Pb	16 28 20.3	-1.7
PB05	IPOC Station P	3.43	344	eP	Pn	16 28 18.7	+2.8
PB05				eS	Sb	16 29 04.2	-0.8
PB05				IAML		16 29 11.2	
	comp=E,196nm,0.8s						
PB06	IPOC Station P	3.47	354	eP	Pn	16 28 20.0	+3.6
PB06				eS	Sb	16 29 05.8	-0.3
LVC	Limon Verde	3.56	4	Pn	Pb	16 28 22.8	-2.7
	comp=E,8.8nm,0.3s,baz=182,slow=11,SNR=28						
LVC				Sn	Sb	16 29 11.2	+2.3
	comp=E,17nm,0.3s,baz=57,slow=16,SNR=8.5						
CYA	Choya	3.77	128	⇓iP	Pb	16 28 27.9	-1.1
CYA				⇓iS	Sb	16 29 13.4	-1.3
CYA				IAML		16 29 23.3	
	comp=Z,9.3nm,0.6s						
ACLC	CERRO LA CRUZ	3.80	149	i P	Pb	16 28 26.5	-3.0
APLL	PUNTA DE LOS L	4.82	151	i P	Pn	16 28 38.5	+3.6
APLL				IAML		16 28 40.4	
	comp=Z,4.0nm,0.5s						
TORD	Torodi Ar. Bea	79.20	70	P	P	16 39 28.1	+0.2
	comp=Z,1.2nm,1.1s,baz=253,slow=5.3,SNR=3.2						
ASAR	Alice Springs	125.64	206	PKP	PKiKP	16 46 25.0	-0.1
	comp=Z,0.4nm,0.9s,baz=140,slow=1.8,SNR=3.7						
WRA	Warramunga Arr	128.78	209	PKP	PKiKP	16 46 31.7	+0.4
	comp=Z,0.4nm,1.0s,baz=157,slow=1.9,SNR=4.8						
ZALV	Zalesovo Beam	146.24	28	PKPbc	PKPab	16 47 02.8	-0.5
	comp=Z,1.2nm,0.4s,baz=309,slow=1.8,SNR=8.0						
MKAR	Makanchi Array	149.46	40	PKPbc	PKiKP	16 47 12.8	+0.2
	comp=Z,0.7nm,0.7s,baz=299,slow=2.7,SNR=7.3						

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*NEIC **09** 16:29:01.6±0.0, 14°.72N×93°.30W, h6^{km}, MD4.1(MEX), After MEX.*

MEX 09 16:29:01.6±0.9, **14°.72N**×**93°.30W, h6^{km}**±24^{km}, **MD4.1, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.98	5	i P	Pg	16 29 18.2	-2.3
PCIG				eS	Sg	16 29 30.4	-2.9
PCIG		0.98	5	i P	Pg	16 29 18.2	-2.3
PCIG				eS	Sg	16 29 30.4	-2.9
THIG		1.02	79	eP	Pg	16 29 18.8	-2.5
THIG				i S	Sg	16 29 32.5	-2.0
THIG		1.02	79	eP	Pg	16 29 18.8	-2.5
THIG				i S	Sg	16 29 32.5	-2.0
CCIG	Comitan	1.92	36	eP	Pn	16 29 32.9	-2.1
CCIG	Comitan	1.92	36	eP	Pn	16 29 32.9	-2.1
CMIG	Matias Romero	2.81	327	eP	Pn	16 29 44.0	-3.0
CMIG	Matias Romero	2.81	327	eP	Pn	16 29 44.0	-3.0
HUIG	Huatulco	2.90	291	eP	Pn	16 29 44.8	-3.5
HUIG				i S	Sn	16 30 15.2	-8.4
HUIG	Huatulco	2.90	291	eP	Pn	16 29 44.8	-3.5
HUIG				i S	Sn	16 30 15.2	-8.4

IDC 09 16:42:21.1±1.8, **11°.42S**×**164°.99E, h0^{km}, mb3.6**/3, **mb1 3.9**/5, **mb1mx3.5**/40, **mbtmp3.8**/5, **ML3.3**/2, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx3.1**/26, **Error ellipse: s-maj=34.1km s-min=32.5km az=172.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.34	291	Pn	Pn	16 43 40.7	-1.4
	3.0nm,0.3s,baz=126,slow=19,SNR=2.3						
HNR				Sn	Sn	16 44 46.0	+1.7
	3.3nm,0.3s,baz=173,slow=17,SNR=2.4						
DZM	Mont Dzumac	10.68	173	Pn	Pn	16 44 55.1	-0.5
	0.1nm,0.3s,baz=347,slow=19,SNR=2.1						
WRA	Warramunga Arr	30.66	250	P	P	16 48 38.3	+0.6
	0.9nm,0.9s,baz=82,slow=9.0,SNR=5.6						
ASAR	Alice Springs	31.96	243	P	P	16 48 49.0	-0.2
	0.6nm,0.9s,baz=68,slow=10,SNR=4.2						
JCJ	Chichijima	44.22	330	LR	LR	17 08 58.6	
	comp=Z,34nm,19.2s,baz=344,slow=36						
ILAR	Eielson Array	84.10	19	P	P	16 54 53.6	0.0
	0.4nm,0.7s,baz=239,slow=5.6,SNR=5.0						

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*IDC **09** 16:46:44.8±2.0, 9°.38S×112°.98E, h0^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.6/36, mbtmp3.6/8, ML3.5/2, MS3.6/1, Ms1 3.6/1, ms1mx3.2/28, Error ellipse: s-maj=89.0km s-min=17.5km az=46.0*

ISC 09 16:46:49.8±1.5, **9°.5S**±0°.3×**113°.0E**±0°.2, **h36^{km}, n9, σ1^{s}.06**/8, **mb3.4**/6, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	10.53	95	Pn	Pn	16 49 18.2	-0.1
	0.8nm,0.3s,baz=288,slow=19,SNR=1.7						
FITZ	Fitzroy Crossi	14.96	126	Pn	Pn	16 50 17.8	-1.0
	0.1nm,0.3s,baz=293,slow=11,SNR=3.6						
FITZ				Sn	Sn	16 52 53.1	-10
	0.0nm,0.3s,baz=15,slow=16,SNR=1.8						
WRA	Warramunga Arr	23.08	119	P	P	16 51 53.0	+0.5
	0.2nm,0.5s,baz=290,slow=10,SNR=4.1						
ASAR	Alice Springs	24.45	128	P	P	16 52 06.8	+1.2
	0.5nm,0.7s,baz=301,slow=9.0,SNR=13						
CMAR	Chiang Mai Arr	31.03	333	P	P	16 53 05.4	+1.0
	0.2nm,0.4s,baz=164,slow=7.5,SNR=3.7						
PALK	Pallekele	36.23	296	LR	LR	17 06 53.4	
	comp=Z,84nm,19.6s,baz=306,slow=33						
SONM	Songino Array	57.35	355	P	P	16 56 33.8	-0.7
	0.4nm,0.7s,baz=164,slow=7.7,SNR=3.7						
MKAR	Makanchi Array	62.35	337	P	P	16 57 07.6	-1.2
	0.6nm,0.5s,baz=148,slow=5.8,SNR=19						
ZALV	Zalesovo Beam	67.53	342	P	P	16 57 42.4	+0.2
	0.4nm,0.5s,baz=168,slow=6.0,SNR=2.8						

IDC 09 16:48:26.1±2.6, **10°.72S**×**113°.03E, h0^{km}, mb3.2**/3, **mb1 3.5**/4, **mb1mx3.3**/35, **mbtmp3.3**/4, **ML2.9**/1, **Error ellipse: s-maj=126.8km s-min=24.2km az=45.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.24	122	Pn	Pn	16 51 48.5	-0.8
	0.0nm,0.3s,baz=300,slow=8.1,SNR=1.6						
FITZ				Sn	Sn	16 54 13.7	-14
	0.1nm,0.3s,baz=300,slow=18,SNR=2.6						
WRA	Warramunga Arr	22.48	117	P	P	16 53 27.9	+0.5
	0.5nm,0.7s,baz=290,slow=11,SNR=7.0						
ASAR	Alice Springs	23.70	126	P	P	16 53 39.6	-0.3
	0.6nm,0.8s,baz=300,slow=9.6,SNR=5.7						
MKAR	Makanchi Array	63.50	337	P	P	16 58 58.2	0.0
	0.3nm,0.9s,baz=156,slow=7.6,SNR=3.0						

IDC 09 16:57:19.9±4.7, **10°.84S**×**164°.62E, h56^{km}**±35^{km}, **mb3.3**/3, **mb1 3.7**/5, **mb1mx3.4**/29, **mbtmp3.9**/5, **ML4.6**/2, **Error ellipse: s-maj=56.6km s-min=34.8km az=59.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.81	286	eP	Pn	16 58 36.0	+6.3
HNR				eS	Sn	16 59 27.0	+2.9
HNR	Honiara	4.81	286	P	Pn	16 58 29.9	+0.2
	22nm,0.3s,baz=144,slow=3.5,SNR=15						
HNR				S	Sn	16 59 19.7	-4.4
	6.5nm,0.3s,baz=167,slow=18,SNR=1.5						
DZM	Mont Dzumac	11.30	171	P	Pn	16 59 58.6	-0.2
	3.8nm,0.3s,baz=331,slow=19,SNR=77						
DZM				S	Sn	17 02 02.7	-1.0
	0.1nm,0.3s,baz=184,slow=19,SNR=2.8						
WRA	Warramunga Arr	30.52	249	P	P	17 03 28.5	+0.4
	0.2nm,0.4s,baz=78,slow=9.2,SNR=5.1						
ASAR	Alice Springs	31.90	242	P	P	17 03 39.7	-0.6
	0.3nm,0.8s,baz=62,slow=10.0,SNR=3.4						
MKAR	Makanchi Array	92.61	317	P	P	17 10 25.5	0.0
	0.6nm,0.8s,baz=99,slow=6.3,SNR=5.5						

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*ISCJB **09** 16:57:57.2±0.7, 11°.7S±0°.1×165°.04E±0°.10, h33^{km}, mb3.9/9, Error ellipse: s-maj=16.2km s-min=11.5km az=38.5*

*IDC **09** 16:58:02.5±3.4, 11°.86S×165°.25E, h70^{km}±29^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.8/30, mbtmp4.0/12, Error ellipse: s-maj=30.0km s-min=24.0km az=115.0*

ISC 09 16:57:59.1±0.8, **11°.7S**±0°.1×**165°.1E**±0°.1, **h35^{km}, n12, σ0^{s}.92**/14, **mb4.0**/9, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.55	293	P	Pn	16 59 26.3	+7.1
	47nm,0.3s,baz=152,slow=9.3,SNR=8.2						
HNR				S	Sn	17 00 21.1	-0.8
	12nm,0.3s,baz=180,slow=20,SNR=2.1						
DZM	Mont Dzumac	10.41	173	P	Pn	17 00 25.8	-0.2
	1.0nm,0.3s,baz=325,slow=16,SNR=2.5						
CTA	Charters Tower	19.96	243	P	Pn	17 02 31.4	+1.2
	0.5nm,0.3s,baz=78,slow=11,SNR=3.8						
WRA	Warramunga Arr	30.69	251	P	P	17 04 10.5	-0.3
	2.1nm,0.8s,baz=81,slow=9.4,SNR=12						
WRA				PcP	PcP	17 07 07.5	-0.9
	1.1nm,1.2s,baz=93,slow=2.5,SNR=5.1						
ASAR	Alice Springs	31.96	244	P	P	17 04 20.8	-1.3
	0.7nm,0.8s,baz=64,slow=9.7,SNR=4.6						
ASAR				PcP	PcP	17 07 12.2	+0.4
	0.7nm,0.9s,baz=102,slow=3.6,SNR=5.6						
MJAR	Matsushiro Arr	54.25	333	P	P	17 07 21.3	-0.3
	0.9nm,0.8s,baz=182,slow=7.7,SNR=4.6						
CMAR	Chiang Mai Arr	71.80	294	P	P	17 09 20.0	+1.3
	0.8nm,0.9s,baz=115,slow=4.8,SNR=5.8						
SONM	Songino Array	78.81	324	P	P	17 09 58.9	+0.4
	0.7nm,0.8s,baz=145,slow=8.0,SNR=5.6						
ILAR	Eielson Array	84.31	19	P	P	17 10 27.8	+0.7
	0.9nm,0.7s,baz=234,slow=5.6,SNR=7.3						
MKAR	Makanchi Array	93.56	317	P	P	17 11 12.1	+0.5
	0.8nm,0.8s,baz=99,slow=6.5,SNR=4.8						
ZALV	Zalesovo Beam	93.71	324	P	P	17 11 11.9	-0.1
	0.6nm,0.7s,baz=111,slow=7.9,SNR=3.2						
YKA	Yellowknife Ar	95.82	27	P	P	17 11 20.1	-1.3
	0.4nm,0.8s,baz=256,slow=4.5,SNR=6.9						

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*ISCJB **09** 17:07:29.7±0.9, 10°.74S±0°.10×166°.08E±0°.08, h10^{km}, mb4.3/11, Error ellipse: s-maj=15.6km s-min=9.3km az=30.2*

*NEIC **09** 17:07:31.3±0.9, 10°.64S×166°.08E, h10^{km}, mb4.7/8, Error ellipse: s-maj=17.7km s-min=13.7km az=223.0*

*IDC **09** 17:07:38.0±4.0, 10°.84S×166°.01E, h60^{km}±32^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.5/36, mbtmp4.1/6, ML3.9/2, Error ellipse: s-maj=31.7km s-min=26.3km az=37.0*

ISC 09 17:07:31.3±1.0, **10°.7S**±0°.1×**166°.17E**±0°.09, **h10^{km}, n19, σ1^{s}.51**/23, **mb4.5**/11, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.25	281	ePn	Pn	17 09 04.7	+1.0
HNR				eSn	Sn	17 10 14.9	-0.2
HNR	Honiara	6.25	281	P	Pn	17 09 06.0	+2.4
	7.3nm,0.3s,baz=45,slow=1.4,SNR=9.1						
HNR				S	Sn	17 10 15.6	+0.5
	4.6nm,0.3s,baz=162,slow=16,SNR=2.1						
DZM	Mont Dzumac	11.36	179	ePn	Pn	17 10 14.6	+0.7
DZM	Mont Dzumac	11.36	179	P	Pn	17 10 14.9	+1.1
	0.4nm,0.3s,baz=359,slow=18,SNR=6.0						
PINNC	Pines Island,	11.96	174	ePn	Pn	17 10 22.6	+0.6
EIDS	Eidsvold	20.46	222	eP	Pn	17 12 10.1	-1.3
	26nm,1.6s						
CTA	Charters Tower	21.35	242	P	P	17 12 18.0	-0.9
	2.4nm,0.6s,baz=75,slow=16,SNR=3.6						
COEN	Coen	22.70	259	eP	P	17 12 33.6	+0.1
	30nm,1.6s						
BKZ	Black Stump Fm	29.85	164	eP	P	17 13 39.9	+1.0
	24nm,1.4s						
WRAB	Tennant Creek	32.00	249	eP	P	17 13 57.2	-0.9
	25nm,2.0s						
WB2	Warramunga Arr	32.00	249	eP	P	17 13 57.0	-1.1
WR1	Warramunga Arr	32.01	249	eP	P	17 13 56.9	-1.3
	23nm,1.9s						
WR1				ePcP	PcP	17 16 46.5	-1.7
WRA	Warramunga Arr	32.01	249	P	P	17 13 56.9	-1.3
	1.9nm,0.8s,baz=81,slow=9.2,SNR=18						
WRA				PcP	PcP	17 16 46.5	-1.7
	0.5nm,0.9s,baz=72,slow=2.6,SNR=4.6						
AS01	Alice Springs	33.30	243	eP	P	17 14 06.2	-3.3
AS31	Alice Springs	33.34	243	eP	P	17 14 07.0	-2.9
	0.8nm,0.8s						
ASAR	Alice Springs	33.34	243	P	P	17 14 08.6	-1.3
	2.1nm,0.9s,baz=62,slow=10,SNR=15						
ASAR				PcP	PcP	17 16 51.2	-0.7
	0.5nm,0.8s,baz=68,slow=2.4,SNR=5.6						
FITZ	Fitzroy Crossi	39.88	255	eP	P	17 15 04.9	-0.8
	25nm,1.7s						
ILAR	Eielson Array	83.01	18	P	P	17 19 57.5	+1.0
	0.5nm,0.9s,baz=234,slow=5.3,SNR=5.1						
PHWY	Pilot Hill	95.72	49	eP	P	17 20 57.5	-0.7
	5.7nm,0.7s						

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*ISCJB **09** 17:09:26.9±0.2, 51°.59N±0°.01×16°.10E±0°.02, h0^{km}, mb3.5/5, Error ellipse: s-maj=2.1km s-min=1.7km az=28.0*

*LDG **09** 17:09:28.8±0.2, 51°.58N×16°.20E, $h1^{km}$, Md4.0/2, Ml4.0/14, Error ellipse: s-maj=4.2km s-min=2.2km az=10.0, Suspected Mining induced.*

*IDC **09** 17:09:29.9±0.6, 51°.48N×16°.05E, $h0^{km}$, mb3.5/5, mb1 3.6/12, mb1mx3.4/49, mbtmp3.5/12, ML2.9/7, Error ellipse: s-maj=9.6km s-min=5.9km az=108.0*

*BGR **09** 17:09:30.9±0.4, 51°.54N×16°.13E, $h1^{km}$, ML3.8/16, Error ellipse: s-maj=4.4km s-min=2.2km az=17.0*

*PRU **09** 17:09:30.5±0.0, 51°.56N×16°.12E, $h0^{km}$*

*UPP **09** 17:09:31.6±3.0, 51°.63N×15°.55E, $h0^{km}$, ML2.5, Suspected explosion*

*BNS **09** 17:09:32.9±1.0, 51°.93N×15°.81E, $h5^{km}$, ML3.6*

*VIE **09** 17:09:34.0±0.7, 51°.24N×16°.16E, $h0^{km}$, mb3.2/13, ml3.4/12, ms3.7/2, Error ellipse: s-maj=7.2km s-min=4.3km az=31.0, Suspected Mining induced.*

ISC 09 17:09:28.3±0.5, **51°.61N**±0°.03×**16°.09E**±0°.02, **$h0^{km}$, n124, σ2ˢ.04**/206, **mb3.4**/5, **2C-18D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.78	170	iPg	Pg	17 09 44.4	+1.1
KSP				eSg	Sg	17 09 53.9	+0.5
KSP	Ksiaz	0.78	170	ePg	Pg	17 09 44.4	+1.1
KSP				eSg	Sg	17 09 54.1	+0.8
UPC	Upice	1.11	182	⇓iPG	Pg	17 09 50.5	+1.0
UPC				eSG	Sg	17 10 04.4	+0.6
	comp=Z,637nm,0.3s						
DPC	Dobruska-Polom	1.27	173	⇓iPG	Pg	17 09 53.2	+0.5
DPC				eSG	Sg	17 10 08.9	-0.2
	comp=Z,306nm,0.7s						
DPC	Dobruska-Polom	1.27	173	ePg	Pg	17 09 53.2	+0.5
DPC				eSg	Sg	17 10 09.2	+0.1
PVCC	Panska Ves	1.45	222	⇓iPG	Pn	17 09 56.7	+1.0
PVCC				eSG	Sn	17 10 16.7	+1.3
	comp=Z,896nm,0.3s						
BRG	Berggiesshubel	1.54	242	PN	Pn	17 09 57.8	+0.8
BRG				PG	Pg	17 09 59.7	+1.9
BRG				SG	Sg	17 10 19.6	+2.0
	579nm,0.5s						
BRG	Berggiesshubel	1.54	242	ePn	Pn	17 09 57.6	+0.6
BRG				ePg	Pg	17 09 59.2	+1.4
BRG				eSg	Sg	17 10 19.8	+2.2
KRLC	Kraliky	1.60	164	⇓iPG	Pn	17 09 58.4	+0.5
KRLC				eSG	Sn	17 10 19.0	-0.3
	comp=Z,59nm,0.3s						
FBE	Freiberg	1.85	249	ePn	Pn	17 10 02.3	+1.0
FBE				ePg	Pg	17 10 04.7	+0.9
FBE				eSg	Sg	17 10 29.4	+1.7
PRA	Prague	1.86	215	⇓ePN	Pn	17 10 02.6	+1.1
PRA				eSG	Sg	17 10 29.0	+0.8
	comp=Z,319nm,0.6s						
GOPC	GO Pecny, Ondr	1.89	206	⇓ePN	Pn	17 10 02.6	+0.8
GOPC				iPG	Pb	17 10 04.8	+1.1
PRU	Pruhonice	1.90	212	⇓ePN	Pn	17 10 02.7	+0.8
PRU				iPG	Pb	17 10 04.9	+1.1
PRU				eSG	Sb	17 10 28.6	+0.6
	comp=Z,186nm,0.4s						
CLL	Collm	1.95	262	ePn	Pn	17 10 04.0	+1.3
CLL				iPg	Pg	17 10 06.9	+1.2
CLL				i		17 10 10.0	
CLL				iSg	Sg	17 10 32.7	+1.7
	comp=Z,253nm,0.4s						
CLL	Collm	1.95	262	ePn	Pn	17 10 03.6	+0.9
CLL				eSg	Sg	17 10 32.9	+1.9
MORC	Moravsky Berou	2.06	153	⇓iP	Pn	17 10 04.6	+0.3
MORC	Moravsky Berou	2.06	153	S	Sn	17 10 29.4	-1.2
MORC	Moravsky Berou	2.06	153	ePN	Pn	17 10 04.5	+0.3
MORC				eSG	Sb	17 10 32.6	-0.1
MORC	Moravsky Berou	2.06	153	ePn	Pn	17 10 04.5	+0.3
MORC				eSg	Sb	17 10 33.7	+1.0
OKC	Ostrava-Krasne	2.21	143	⇓ePN	Pn	17 10 05.2	-1.0
OKC				iPG	Pg	17 10 10.7	+0.1
OKC				eSG	Sb	17 10 37.7	+0.8
	comp=Z,139nm,0.6s						
OKC	Ostrava-Krasne	2.21	143	ePn	Pn	17 10 06.0	-0.2
OKC				eSg	Sb	17 10 37.8	+0.8
CHZP	Chorzow	2.26	125	ePg	Pg	17 10 13.3	+1.6
CHZP				eSg	Sg	17 10 41.5	+0.5
VRAC	Vranov	2.33	172	⇑iP	Pn	17 10 08.9	+1.0
VRAC	Vranov	2.33	172	ePN	Pn	17 10 08.5	+0.6
VRAC				eSG	Sb	17 10 41.9	+1.4
VRAC	Vranov	2.33	172	Pn	Pn	17 10 07.1	-0.7
	comp=Z,4.7nm,0.3s,baz=345,slow=15,SNR=53						
VRAC				Pg	Pb	17 10 09.5	-1.6
	comp=Z,5.6nm,0.3s,baz=350,slow=17,SNR=54						
VRAC				Lg	Lg	17 10 40.0	
	comp=Z,28nm,0.3s,baz=53,slow=20,SNR=13						
TREC	Trest	2.35	190	⇓ePN	Pn	17 10 09.5	+1.3
TREC				eSG	Sb	17 10 43.2	+2.1
	comp=Z,153nm,0.5s						
KRUC	Moravsky	2.56	175	ePN	Pn	17 10 12.2	+1.1
KRUC				eSG	Sb	17 10 48.9	+1.8
TANN	Tannenbergstha	2.58	244	ePn	Pn	17 10 12.8	+1.4
TANN				eSg	Sg	17 10 52.8	+1.5
NKC	Novy Kostel	2.68	240	⇓ePN	Pn	17 10 14.4	+1.6
NKC				iPG	Pg	17 10 20.8	+1.1
NKC				eSG	Sg	17 10 56.3	+1.8
	comp=Z,449nm,0.5s						
OJC	Ojcow	2.73	119	ePn	Pn	17 10 12.6	-0.8
OJC				ePg	Pg	17 10 21.0	+0.4
OJC				eSn	Sn	17 10 44.8	-2.3
OJC				eSg	Sg	17 10 56.5	+0.5
OJC	Ojcow	2.73	119	ePn	Pn	17 10 13.7	+0.3
OJC				eSg	Sg	17 10 56.5	+0.5
KHC	Kasperske Hory	2.96	214	⇓ePN	Pn	17 10 17.4	+0.9
KHC				iPG	Pb	17 10 24.2	+2.3
KHC				eSN	Sn	17 10 52.9	+0.2
KHC				eSG	Sg	17 11 03.0	-0.3
	comp=Z,74nm,0.3s						
MOX	Moxa	2.98	253	ePn	Pn	17 10 18.1	+1.3
MOX				eSg	Sg	17 11 06.9	+2.9
MANZ	Manzenberg	3.00	239	ePn	Pn	17 10 19.2	+2.0
MANZ				eSg	Sg	17 11 05.5	+0.8
ROTZ	Rotzenmuhle	3.08	235	ePn	Pn	17 10 19.5	+1.3
ROTZ				eSg	Sg	17 11 07.5	+0.2
GEC2	GERESS Array S	3.16	210	ePn	Pn	17 10 20.5	+1.0
GERES	GERESS Array B	3.16	210	Pn	Pn	17 10 20.0	+0.5
	comp=Z,5.7nm,0.3s,baz=31,slow=13,SNR=154						
GERES				Pg	Pb	17 10 26.9	+1.5
	comp=Z,9.8nm,0.3s,baz=27,slow=16,SNR=49						
GERES				Sn	Sn	17 10 56.0	-2.0
	comp=Z,9.2nm,0.3s,baz=28,slow=26,SNR=7.7						
GERES				Lg	Lg	17 11 06.9	
	comp=Z,18nm,0.3s,baz=20,slow=26,SNR=5.8						
WET	Wettzell	3.21	221	ePn	Pn	17 10 21.3	+1.3
SMOL	Smolenice	3.22	164	ePG	Pg	17 10 30.3	+0.3
SMOL				eSG	Sg	17 11 12.1	+0.4
LANS	Liptovska Anna	3.28	137	e	Pn	17 10 21.8	+0.8
LANS	Liptovska Anna	3.28	137	ePG	Pg	17 10 30.6	-0.5
LANS				eSG	Sg	17 11 12.4	-1.2
MODS	Modra-Piesok	3.33	166	ePG	Pg	17 10 32.0	-0.1
MODS				eSG	Sg	17 11 14.9	-0.4
MODS				eLG	Lg	17 11 25.8	
KOLL	Kolacno	3.38	153	ePG	Pg	17 10 33.9	+0.8
KOLL				eSG	Sg	17 11 15.6	-1.3
NIE	Niedzica	3.47	128	eP	Pg	17 10 35.0	+0.2
NIE				eS	Sg	17 11 20.6	+0.8
CLZ	Clausthal	3.56	276	ePn	Pn	17 10 27.2	+2.4
CLZ				eSg	Sg	17 11 26.0	+3.3
BSD	Bornholm Skovb	3.58	349	iP	Pn	17 10 26.1	+1.1
BSD				eS	Sn	17 11 05.8	-2.1
VYHS	Vyhne	3.59	149	e	Pn	17 10 25.5	+0.3
VYHS	Vyhne	3.59	149	ePG	Pg	17 10 38.2	+1.1
VYHS				eSG	Sb	17 11 20.0	+3.3
VYHS				eLG	Lg	17 11 37.8	
GRF	Grafenberg Arr	3.64	240	ePn	Pn	17 10 27.8	+1.8
GRF				eSg	Sg	17 11 26.6	+1.3
CONA	Conrad Observa	3.69	182	iPn	Pn	17 10 27.9	+1.2
	comp=Z,20nm,0.5s,SNR=9.2						
CONA				eSg	Sb	17 11 23.0	+3.3
	comp=Z,60nm,0.5s						
SOP	Sopron	3.94	175	ePn	Pn	17 10 30.1	0.0
SOP				Sn	Sn	17 11 18.0	+1.0
SOP				eSg	Sg	17 11 34.1	-0.9
MOA	Molln	3.95	198	iPn	Pn	17 10 31.5	+1.4
	comp=Z,39nm,0.5s,SNR=22						
MOA				eSg	Sg	17 11 32.3	-2.7
	comp=Z,124nm,0.7s						
LUNU	Lund	4.32	340	P	Pn	17 10 36.2	+1.0
LUNU				S	Sn	17 11 25.5	-0.8
ARSA	Arzberg	4.38	185	iPn	Pn	17 10 37.8	+1.7
	comp=Z,6.4nm,0.3s,SNR=6.1						
ARSA				eSg	Sg	17 11 46.1	-2.9
	comp=Z,142nm,0.9s						
PSZ	Piszkesteto	4.45	145	⇓iP	Pn	17 10 38.7	+1.7
PSZ	Piszkesteto	4.45	145	ePn	Pn	17 10 35.1	-1.9
PSZ				Sn	Sn	17 11 29.1	-0.4
PSZ				eSg	Sg	17 11 54.1	+3.0
BJUU	Bjuv	4.83	339	P	Pn	17 10 42.8	+0.7
KBA	Koelnbreinsper	4.88	203	iPn	Pn	17 10 44.7	+1.6
	comp=Z,22nm,0.5s,SNR=14						
KBA				eSg	Sg	17 12 02.0	-3.0
	comp=Z,23nm,0.4s						
SOKA	Soboth	4.99	188	iPn	Pn	17 10 46.0	+1.5
	comp=Z,3.0nm,0.4s						
SOKA				Sg	Sg	17 12 05.2	-3.2
	comp=Z,17nm,0.6s						
DEL	Delary	5.04	346	P	Pn	17 10 45.9	+0.8
DEL				S	Sn	17 11 43.1	-0.9
BEHE	Becsehely	5.17	175	ePn	Pn	17 10 49.1	+2.2
BEHE				Sn	Sn	17 11 43.1	-4.0
BEHE				eSg	Sg	17 12 23.1	+8.9
GROS	Grobnik	5.17	184	iPn	Pn	17 10 48.5	+1.5
WATA	Walderalm	5.19	216	iPn	Pn	17 10 49.4	+2.0
	comp=Z,13nm,0.5s,SNR=13						
WATA				eSg	Sg	17 12 14.3	-0.7
	comp=Z,30nm,0.6s						
WTTA	Wattenberg	5.23	215	iPn	Pn	17 10 50.2	+2.2
	comp=Z,6.0nm,0.6s						
WTTA				Sg	Sg	17 12 18.1	+1.9
	comp=Z,28nm,0.6s						
MOTA	Moosalm	5.36	219	iPn	Pn	17 10 50.5	+0.7
	comp=Z,3.8nm,0.4s,SNR=10						
MOTA				eSg	Sg	17 12 19.2	-1.3
	comp=Z,51nm,0.8s						
ABTA	Abfaltersbach	5.40	207	iPn	Pn	17 10 52.0	+1.8
	comp=Z,3.6nm,0.4s						
ABTA				Sg	Sg	17 12 20.2	-1.5
	comp=Z,77nm,1.1s						
TRPA	Tarpa	5.43	127	⇓iP	Pn	17 10 51.8	+1.3
TRPA	Tarpa	5.43	127	ePn	Pn	17 10 49.0	-1.5
TRPA				Sn	Sn	17 11 55.0	+1.3
TRPA				eSg	Sg	17 12 26.1	+3.2
MORH	Mrgy, Hungar	5.66	162	ePn	Pn	17 10 52.0	-1.6
MORH				Sn	Sn	17 12 01.0	+1.8
BGG	Burgeitz	5.71	259	ePn	Pn	17 10 55.4	+1.1
LAUG	Laupendahl	5.72	271	ePn	Pn	17 10 54.4	0.0
FABU	Falkenberg	5.75	341	P	Pn	17 10 55.6	+0.8
ASPU	Aespoe	5.83	3	P	Pn	17 10 57.8	+1.9
GNOU	Gnosjoe	5.85	347	P	Pn	17 10 57.5	+1.3
STB	Steinbach	5.91	264	ePn	Pn	17 10 59.1	+2.0
DAVA	Damuels	5.92	225	ePn	Pn	17 10 59.1	+1.7
	comp=Z,3.5nm,0.3s						
HILG	Hillesheim	6.09	261	ePn	Pn	17 11 00.6	+1.0
HILG				eSn	Sn	17 12 07.8	-2.1
DAVOX	Davos/Dischmat	6.32	222	Pn	Pn	17 11 01.3	-1.5
	comp=Z,0.2nm,0.3s,baz=356,slow=19,SNR=2.1						
DAVOX				Lg	Lg	17 12 47.7	
	comp=Z,1.1nm,0.3s,baz=15,slow=13,SNR=5.5						
DRGR		6.49	135	⇓iP	Pn	17 11 06.9	+1.8
CDF	Champ du Feu	6.52	244	ePn	Pn	17 11 04.2	-1.3
CDF	Champ du Feu	6.52	244	ePg	Pg	17 11 36.7	+3.6
CDF				eSg	Sg	17 12 54.7	-2.8
	comp=Z,98nm,1.0s						
HINF	Hinteralfeld	7.09	241	eP	Pn	17 11 12.0	-1.3
HINF	Hinteralfeld	7.09	241	ePg	Pg	17 11 40.6	-3.4
HINF				eSg	Sg	17 13 12.5	-3.3
	comp=Z,43nm,0.8s						
BURAR	Bucovina Array	7.15	120	⇓iP	Pn	17 11 15.9	+1.7
HAU	Haudompre	7.26	244	ePn	Pn	17 11 14.7	-0.9
HAU	Haudompre	7.26	244	ePg	Pg	17 11 43.4	-3.9
HAU				eSg	Sg	17 13 18.7	-2.6
	comp=Z,41nm,0.7s						
GIVF	Givet	7.29	262	eP	Pn	17 11 15.1	-0.9
GIVF	Givet	7.29	262	ePg	Pg	17 11 45.7	-2.2
GIVF				eSg	Sg	17 13 18.7	-3.5
	comp=Z,27nm,0.7s						
PAGF	Fort de Pagny	7.33	249	ePn	Pn	17 11 15.6	-1.0
	baz=69						
PAGF	Fort de Pagny	7.33	249	ePg	Pg	17 11 45.2	-3.5
	baz=69						
PAGF				eSg	Sg	17 13 19.3	-4.4
	comp=Z,296nm,1.1s						
GZR	Gura Zlata	7.64	142	⇓iP	Pn	17 11 22.0	+1.1
BAIF	Baives	7.68	263	ePn	Pn	17 11 21.0	-0.3
BAIF	Baives	7.68	263	ePg	Pg	17 11 51.9	-3.5
BAIF				eSg	Sg	17 13 31.7	-3.1
	comp=Z,63nm,1.2s						
MEZF	Maizieres J'vi	7.75	251	eSn	Sn	17 12 45.1	-5.7
	baz=72						
MEZF				eSg	Sg	17 13 33.3	-3.8
	comp=Z,19nm,0.8s						
SFTF	Sexfontaines	7.90	249	ePn	Pn	17 11 23.3	-1.1
SFTF				eSn	Sn	17 12 48.6	-5.9
SFTF				eSg	Sg	17 13 38.5	-3.5
	comp=Z,39nm,0.9s						
BIZ	Bicaz	8.05	122	⇓iP	Pn	17 11 27.8	+1.4
CABF	La Chapelle	8.25	237	ePn	Pn	17 11 27.2	-2.0
CABF	La Chapelle	8.25	237	ePg	Pg	17 12 02.5	-3.7
CABF				eSg	Sg	17 13 50.0	-3.0
	comp=Z,29nm,0.7s						
KIEV	Kiev	8.30	91	⇑iP	Pn	17 11 31.3	+1.4
AKASG	Malin Array Be	8.31	91	Pn	Pn	17 11 29.4	-0.6
	comp=Z,1.3nm,0.3s,baz=280,slow=12,SNR=14						
AKASG				Sn	Sn	17 12 59.1	-5.4
	comp=Z,0.8nm,0.3s,baz=268,slow=24,SNR=4.3						
AKASG				Lg	Lg	17 13 56.0	
	comp=Z,0.4nm,0.3s,baz=264,slow=25,SNR=2.9						
HFS	Hagfors	8.65	352	Pn	Pn	17 11 35.6	+1.0
	comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=5.5						
HFS				Sn	Sn	17 13 06.9	-5.8
	comp=Z,0.0nm,0.3s,baz=176,slow=25,SNR=2.0						
HFS				Lg	Lg	17 14 08.0	
	comp=Z,0.1nm,0.3s,baz=152,slow=22,SNR=2.1						
LPG	La Plagne	8.70	229	eSg	Sg	17 14 02.0	-5.5
	comp=Z,1.0nm,0.3s						
LOR	Lormes	9.07	246	ePn	Pn	17 11 39.9	-0.6
	baz=65						
LOR	Lormes	9.07	246	ePg	Pn	17 12 17.5	+37
	baz=67						
LOR				eSn	Sn	17 13 16.7	-6.5
LOR				eSg		17 14 14.9	
	comp=Z,12nm,0.7s,baz=64						
SSF	Saint Saulge	9.39	246	ePn	Pn	17 11 45.3	+0.5
SSF	Saint Saulge	9.39	246	ePg	Pn	17 12 23.7	+39
SSF				eSn	Sn	17 13 23.3	-7.7
SSF				eSg		17 14 24.0	
	comp=Z,54nm,1.5s						
SMF	Signal de Mont	9.44	243	ePn	Pn	17 11 43.8	-1.7
SMF				eSg	Sn	17 14 27.1	+55
	comp=Z,7.3nm,0.5s						
AVF	Avril sur Loir	9.63	245	ePn	Pn	17 11 46.6	-1.4
SBF	Sospel	9.69	220	eP	Pn	17 11 51.3	+2.3
HYF	Humbligny	9.78	249	ePn	Pn	17 11 48.2	-1.9
HYF				eSg	Sn	17 14 36.6	+56
NOA	NORSAR Array B	9.83	346	Pn	Pn	17 11 50.0	-0.8
	comp=Z,0.0nm,0.3s,baz=164,slow=12,SNR=2.9						
BGF	Bois d'Agland	10.04	245	ePn	Pn	17 11 52.3	-1.5
BGF	Bois d'Agland	10.04	245	ePg	Pn	17 12 35.6	+42
BGF				eSn	Sn	17 13 39.4	-7.7
BGF				eSg		17 14 44.7	
	comp=Z,62nm,1.2s						
FRF	La Foret Royal	10.26	222	eP	Pn	17 11 59.7	+2.9
SMRF	Simiane la Rot	10.40	227	ePn	Pn	17 11 56.1	-2.6
FINES	FINESS Array B	11.28	25	Pn	Pn	17 12 10.2	-0.3
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=9.1						
MFF	Saint Martin d	11.75	251	ePn	Pn	17 12 17.0	-0.1
EKA	Eskdalemuir Ar	12.05	296	Pn	Pn	17 12 19.0	-2.1
	baz=100,slow=14,SNR=6.6						
ARCES	ARCESS Array B	18.53	10	P	P	17 13 43.5	-2.5
	comp=Z,0.2nm,0.3s,baz=202,slow=9.2,SNR=7.3						
AKTO	Aktyubinsk	26.14	76	P	P	17 15 04.3	+0.4
	comp=Z,1.2nm,0.7s,baz=281,slow=7.6,SNR=5.9						
MKAR	Makanchi Array	42.19	69	P	P	17 17 24.5	+1.9
	comp=Z,0.3nm,0.7s,baz=298,slow=5.1,SNR=4.4						
SONM	Songino Array	54.87	55	P	P	17 19 02.7	+2.4
	comp=Z,0.3nm,0.7s,baz=268,slow=5.3,SNR=3.8						
YKA	Yellowknife Ar	59.76	336	P	P	17 19 36.4	+2.0
	comp=Z,0.7nm,0.7s,baz=28,slow=6.7,SNR=12						
CMAR	Chiang Mai Arr	71.36	84	P	P	17 20 52.1	+2.1
	comp=Z,0.2nm,0.7s,baz=312,slow=6.8,SNR=3.9						

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*ISCJB **09** 17:10:13.7±0.7, 23°.38S±0°.04×69°.29W±0°.06, $h105^{km}$±6^{km}, mb3.4/3, Error ellipse: s-maj=10.3km s-min=6.6km az=22.9*

*SJA **09** 17:10:13.2±0.6, 23°.40S×69°.27W, $h96^{km}$±3^{km}, ML3.6, MW4.0*

*GUC **09** 17:10:14.2±0.5, 23°.33S×69°.30W, $h100^{km}$±2^{km}, ML3.8*

*IDC **09** 17:10:18.3±1.9, 23°.13S×68°.55W, $h82^{km}$±8^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.3/21, mbtmp3.6/4, Error ellipse: s-maj=55.2km s-min=35.4km az=26.0*

ISC 09 17:10:14.4±0.9, **23°.38S**±0°.05×**69°.28W**±0°.06, **$h96^{km}$**±6^{km}, **n24, σ0ˢ.78**/37, **mb3.6**/3, **2C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.25	314	iP	Pn	17 10 28.3	-0.3
PB15				iS	Sn	17 10 39.1	0.0
PB15	IPOC Station P	0.25	314	⇓iP	Pn	17 10 28.8	+0.2
PB15				eS	Sn	17 10 40.0	+0.9
PB06	IPOC Station P	0.73	338	iP	Pn	17 10 32.0	+0.1
PB06	IPOC Station P	0.73	338	⇓iP	Pn	17 10 32.0	+0.1
PB06				eS	Sn	17 10 45.4	+0.5
PB06				IAML		17 10 46.2	
	comp=E,4µm,0.4s						
LVC	Limon Verde	0.84	24	iP	Pn	17 10 32.9	-0.3
LVC				iS	Sn	17 10 47.8	+0.5
PB05	IPOC Station P	1.00	302	iP	Pn	17 10 34.8	+0.2
PB05				iS	Sn	17 10 50.3	+0.4
PB10	IPOC Station P	1.18	263	iP	Pn	17 10 36.8	+0.2
PB10	IPOC Station P	1.18	263	⇑iP	Pn	17 10 36.9	+0.3
PB10				eS	Sn	17 10 53.8	+0.5
PB04	IPOC Station P	1.32	322	iP	Pn	17 10 38.3	-0.1
PB04	IPOC Station P	1.32	322	⇓iP	Pn	17 10 38.3	-0.1
PB04				eS	Sn	17 10 56.7	+0.2
PB04				IAML		17 10 57.8	
	comp=N,3µm,0.2s						
PB03	IPOC Station P	1.40	342	iP	Pn	17 10 39.3	-0.1
PB03	IPOC Station P	1.40	342	⇓iP	Pn	17 10 39.2	-0.2
PB03				eS	Sn	17 10 58.3	+0.1
PB03				IAML		17 10 59.6	
	comp=N,2µm,0.3s						
PB09	IPOC Station P	1.58	1	iP	Pn	17 10 42.0	+0.3
PB09	IPOC Station P	1.58	1	⇓iP	Pn	17 10 41.9	+0.3
PB09				eS	Sn	17 11 03.4	+1.2
PB09				IAML		17 11 05.0	
	comp=N,2µm,0.5s						
PB14	IPOC Station P	1.61	220	iP	Pn	17 10 41.8	-0.3
PB14	IPOC Station P	1.61	220	⇑eP	Pn	17 10 41.9	-0.3
PB14				eS	Sn	17 11 03.2	0.0
PB07	IPOC Station P	1.74	341	⇓iP	Pn	17 10 43.3	-0.3
PB07				eS	Sn	17 11 05.9	0.0
PB07				IAML		17 11 08.9	
	comp=N,954nm,0.6s						
PB02	IPOC Station P	2.13	344	⇓iP	Pn	17 10 48.1	-0.5
PB02				eS	Sn	17 11 14.9	+0.2
PB02				IAML		17 11 18.4	
	comp=N,1µm,0.3s						
HJA	Humahuaca	3.56	88	iP	Pn	17 11 08.7	+0.8
HJA				IAML		17 11 09.7	
	comp=Z,101nm,0.5s						
LPAZ	La Paz	7.14	9	P	Pn	17 11 56.6	-0.2
	comp=Z,0.8nm,0.3s,baz=182,slow=5.8,SNR=12						
BDFB	Brasilia	21.45	73	P	P	17 14 52.2	-3.0
	comp=Z,2.3nm,0.6s,baz=240,slow=8.1,SNR=4.6						
TORD	Torodi Ar. Bea	78.31	70	P	P	17 22 05.5	+1.0
	comp=Z,0.4nm,0.6s,baz=240,slow=5.4,SNR=3.1						
TORD				pP	pP	17 22 28.9	-1.4
	comp=Z,0.3nm,0.5s,baz=250,slow=4.8,SNR=1.9						
YKA	Yellowknife Ar	92.84	341	P	P	17 23 21.7	+5.9
	comp=Z,0.1nm,0.7s,baz=133,slow=4.5,SNR=3.0						
YKA				pP	pP	17 23 41.5	-0.2
	comp=Z,0.2nm,0.7s,baz=138,slow=4.6,SNR=2.8						
MKAR	Makanchi Array	147.34	37	PKPbc	PKiKP	17 29 50.6	+1.5
	comp=Z,0.1nm,0.4s,baz=332,slow=5.7,SNR=3.7						
MKAR				pPKPbc	pPKPdf	17 30 12.8	+1.1
	comp=Z,0.3nm,0.7s,baz=321,slow=3.2,SNR=2.1						

MAN 09 17:10:52.2, 10°.10N×126°.08E, $h33^{km}$, mb3.8, ML2.6, MS2.1, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.67	242	⇓eP	Pb	17 11 06.3	+0.8
SCPH				eS	Sb	17 11 14.1	-0.4
MSLP	Maasin	1.21	272	eP	Pn	17 11 13.6	+0.8
MSLP				eS	Sn	17 11 28.6	+0.6
BESP	Borongan	1.62	337	eP	Pn	17 11 18.9	+0.3
BESP				eS	Sn	17 11 38.4	+0.1

IDC 09 17:26:22.1±1.6, **11°.94S×165°.19E, $h0^{km}$, mb3.6**/3, **mb1 3.9**/4, **mb1mx3.6**/33, **mbtmp3.6**/4, **ML3.7**/1, **Error ellipse: s-maj=50.8km s-min=33.8km az=116.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.14	173	Pn	Pn	17 28 49.0	-0.1
	0.6nm,0.3s,baz=304,slow=23,SNR=11						
WRA	Warramunga Arr	30.67	251	P	P	17 32 38.6	-0.1
	0.2nm,0.8s,baz=81,slow=8.4,SNR=3.1						
ILAR	Eielson Array	84.53	19	P	P	17 38 56.6	-0.1
	0.6nm,0.6s,baz=238,slow=5.7,SNR=9.4						
MKAR	Makanchi Array	93.80	317	P	P	17 39 41.4	+0.1
	0.1nm,0.3s,baz=119,slow=5.3,SNR=2.9						

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*IDC **09** 17:26:60.0±0.6, 11°.67S×165°.58E, $h0^{km}$, mb4.5/17, mb1 4.6/19, mb1mx4.5/36, mbtmp4.5/19, ML4.8/2, MS3.9/4, Ms1 3.9/4, ms1mx3.5/26, Error ellipse: s-maj=19.7km s-min=14.6km az=97.0*

*ISCJB **09** 17:27:02.1±0.2, 11°.67S±0°.03×165°.47E±0°.04, $h24^{km}$, mb4.9/87, Error ellipse: s-maj=6.1km s-min=4.1km az=164.2*

*NEIC **09** 17:27:04.5±1.5, 11°.64S×165°.50E, $h28^{km}$±10^{km}, mb5.0/68, Error ellipse: s-maj=4.8km s-min=3.4km az=62.0*

ISC 09 17:27:03.9±0.4, **11°.70S**±0°.05×**165°.50E**±0°.06, **$h24^{km}$, n158, σ1ˢ.16**/172, **mb4.9**/87, **2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.90	292	eP	Pn	17 28 30.0	+0.1
HNR				eS	Sn	17 29 36.0	-0.9
HNR	Honiara	5.90	292	ePn	Pn	17 28 30.1	+0.1
HNR				eSn	Sn	17 29 34.4	-2.6
HNR	Honiara	5.90	292	Pn	Pn	17 28 30.6	+0.6
	33nm,0.3s,baz=144,slow=3.5,SNR=28						
HNR				Sn	Sn	17 29 34.3	-2.6
	22nm,0.3s,baz=198,slow=20,SNR=14						
HNR				LR	LR	17 31 08.2	
	comp=Z,767nm,18.9s,baz=120,slow=42						
MARNC	Mare, Loyalty	10.03	166	ePn	Pn	17 29 27.1	+0.6
DZM	Mont Dzumac	10.36	175	ePn	Pn	17 29 31.4	+0.2
DZM				eSn	Sn	17 31 22.9	-3.7
DZM	Mont Dzumac	10.36	175	Pn	Pn	17 29 31.6	+0.4
	6.4nm,0.3s,baz=8.4,slow=11,SNR=39						
DZM				Sn	Sn	17 31 23.1	-3.4
	0.1nm,0.3s,baz=288,slow=20,SNR=2.1						
ONTNC	Ouen Toro	10.59	175	ePn	Pn	17 29 34.2	-0.1
PINNC	Pines Island,	11.01	171	ePn	Pn	17 29 40.8	+0.7
RABL	Rabaul	15.16	298	ePn	Pn	17 30 36.0	-0.7
	18nm,0.6s						
EIDS	Eidsvold	19.25	223	eP	Pn	17 31 28.5	+0.6
	41nm,1.5s						
CTA	Charters Tower	20.29	243	P	P	17 31 38.0	-0.1
	7.7nm,0.8s,baz=51,slow=16,SNR=5.6						
CTAO	Charters Tower	20.29	243	eP	P	17 31 39.0	+0.9
	19nm,1.1s						
MANU	Manus Island	20.38	297	eP	P	17 31 39.5	+0.3
	87nm,1.1s						
KWAJ	Kwajalein Atol	20.47	6	eP	P	17 31 40.8	+0.7
	433nm,1.1s						
COEN	Coen	21.88	262	eP	P	17 31 55.9	+0.6
	11nm,1.0s						
ARMA	Armidale	22.64	213	eP	P	17 32 04.1	+0.6
	27nm,1.0s						
OUZ	Omahuta	24.55	164	eP	P	17 32 24.5	+2.7
	28nm,1.1s						
NIUE	Niue	24.78	110	eP	P	17 32 25.3	+1.1
	754nm,1.9s						
CAN	Canberra	27.88	210	eP	P	17 32 54.0	+2.0
	82nm,1.7s						
MXZ	Matakaoa Point	28.20	158	eP	P	17 32 56.3	+1.5
	149nm,1.6s						
URZ	Urewera	28.41	161	P	P	17 32 57.5	+0.8
	3.4nm,0.4s,baz=286,slow=1.4,SNR=6.3						

BKZ	Black Stump Fm	29.05	162	eP	P	17 33 03.0	+0.7
	15nm,0.5s						
STKA	Stephens Creek	29.80	224	eP	P	17 33 10.2	+1.1
	3.4nm,1.4s						
STKA	Stephens Creek	29.80	224	P	P	17 33 09.2	+0.1
	5.9nm,0.9s,baz=17,slow=11,SNR=5.9						
BFZ	Birch Farm	30.39	164	eP	P	17 33 14.0	-0.1
	55nm,1.4s						
SNZO	South Karori	30.59	166	eP	P	17 33 17.3	+1.4
	85nm,1.4s						
THZ	Tophouse	30.65	169	eP	P	17 33 18.6	+2.2
	90nm,1.8s						
WB2	Warramunga Arr	31.02	251	eP	P	17 33 19.4	-0.7
WRAB	Tennant Creek	31.02	251	eP	P	17 33 19.6	-0.5
	22nm,1.3s						
WR1	Warramunga Arr	31.04	251	eP	P	17 33 19.5	-0.7
	24nm,1.3s						
WR1				ePcP	PcP	17 36 16.2	+0.4
WRA	Warramunga Arr	31.04	251	P	P	17 33 19.5	-0.7
	4.6nm,0.5s,baz=80,slow=8.7,SNR=77						
WRA				PcP	PcP	17 36 16.2	+0.4
	1.2nm,0.9s,baz=82,slow=3.1,SNR=5.6						
WRA				LR	LR	17 45 27.0	
	comp=Z,167nm,18.2s,baz=75,slow=36						
TOO	Toolangi	31.39	211	eP	P	17 33 23.1	-0.1
	28nm,1.4s						
KHZ	Kahutara	31.40	169	eP	P	17 33 23.6	+0.6
	26nm,1.3s						
LTZ	Lake Taylor	31.52	170	eP	P	17 33 25.4	+1.2
	24nm,1.2s						
FOZ	Fox Glacier	31.94	174	eP	P	17 33 28.9	+1.2
	97nm,1.7s						
AS01	Alice Springs	32.24	244	eP	P	17 33 30.6	-0.2
AS01				ePcP	PcP	17 36 19.0	-0.1
RPZ	Rata Peaks	32.26	172	P	P	17 33 29.9	-0.7
	8.7nm,0.5s,baz=332,slow=2.9,SNR=7.9						
AS31	Alice Springs	32.28	244	eP	P	17 33 30.1	-1.0
	2.3nm,1.2s						
ASAR	Alice Springs	32.29	244	P	P	17 33 30.2	-0.9
	4.1nm,1.0s,baz=64,slow=10,SNR=27						
ASAR				PcP	PcP	17 36 18.9	-0.3
	1.4nm,0.9s,baz=110,slow=2.7,SNR=6.8						
ASAR				LR	LR	17 46 27.3	
	comp=Z,276nm,18.4s,baz=109,slow=36						
CRLZ	Canterbury Las	32.36	170	eP	P	17 33 32.3	+0.9
	127nm,1.8s						
MQZ	McQueen's Vall	32.49	170	eP	P	17 33 32.8	+0.2
	60nm,1.5s						
LBZ	Lake Benmore	32.82	174	eP	P	17 33 35.6	0.0
	98nm,1.9s						
WKZ	Wanaka	33.15	175	eP	P	17 33 39.4	+1.0
	172nm,1.8s						
BBOO	Buckleboo	34.21	227	eP	P	17 33 48.9	+1.1
	64nm,1.5s						
FITZ	Fitzroy Crossi	38.98	256	eP	P	17 34 28.5	-0.1
	10nm,0.8s						
MBWA	Marble Bar	44.76	252	eP	P	17 35 16.0	+0.1
	36nm,1.3s						
MORW	Morawa	49.10	242	eP	P	17 35 49.8	0.0
	55nm,1.6s						
KKM	Kota Kinabalu	52.09	287	eP	P	17 36 13.1	+0.5
	20nm,1.2s						
INU	Inuyama	54.00	331	eP	P	17 36 25.7	-0.5
	33nm,1.6s						
UGM	Wanagama	54.24	269	eP	P	17 36 29.1	+0.7
	202nm,1.6s						
MJAR	Matsushiro Arr	54.44	333	P	P	17 36 28.6	-0.8
	3.8nm,0.6s,baz=171,slow=8.7,SNR=21						
MAJO	Matsushiro	54.44	333	eP	P	17 36 28.5	-0.8
	15nm,1.2s						
MAT	Matsushiro	54.44	333	P	P	17 36 28.4	-1.0
MJB9	Matsu-Tunnel	54.44	333	eP	P	17 36 28.7	-0.7
	15nm,1.2s						
TWG	Pinlang	55.41	308	eP	P	17 36 36.9	+0.3
	498nm,2.0s						
JNU	Nakatsue	55.47	325	eP	P	17 36 37.1	+0.2
	44nm,1.3s						
TPUB	Ta-pu	56.01	309	eP	P	17 36 41.1	+0.2
	165nm,1.7s						
SSLB	Suanglung	56.03	309	eP	P	17 36 41.3	+0.2
	137nm,2.0s						
YHNB	Yeheng	56.21	310	eP	P	17 36 42.9	+0.4
	142nm,1.6s						
KSM	Kuching	56.37	280	eP	P	17 36 42.2	-1.5
	13nm,1.1s						
CISI	Cisompet, Garu	56.94	269	eP	P	17 36 47.7	-0.1
	22nm,0.7s						
ERM	Erimo	57.26	340	eP	P	17 36 49.4	-0.1
	64nm,1.3s						
SSE	Sheshan	60.15	316	eP	P	17 37 09.5	-0.3
	12nm,0.6s						
KSRS	Korea Array	60.28	326	P	P	17 37 10.8	+0.2
	2.3nm,0.9s,baz=144,slow=7.1,SNR=5.5						
KSAR	Wonju Array Be	60.29	326	P	P	17 37 10.8	+0.1
KS01	Wonju Array Si	60.31	326	eP	P	17 37 09.9	-0.9
NJ2	Nanjing	62.31	316	eP	P	17 37 24.3	-0.1
NJ2				pmax	pmax		
	comp=Z,13nm,1.2s						
USA0B	Ussuriysk Arra	63.42	334	eP	P	17 37 32.7	+1.2
	comp=Z,30nm,1.7s						
USRK	Ussuriysk Ar.	63.42	334	P	P	17 37 32.5	+1.0
	comp=Z,3.2nm,0.7s,baz=122,slow=6.7,SNR=7.2						
WHN	Wuhan	64.64	312	P	P	17 37 39.2	-0.7
PETK	Petropavlovsk-	64.89	355	P	P	17 37 40.8	-0.2
	comp=Z,14nm,1.2s,baz=180,slow=7.0,SNR=3.3						
PEA1	Petropavlovsk-	64.89	355	eP	P	17 37 40.8	-0.3
KIWB	Kanaga Island	65.05	12	eP	P	17 37 42.0	0.0
IPM	Ipoh	66.09	280	eP	P	17 37 50.2	+0.5
	comp=Z,22nm,1.1s						
CN2	Changchun	66.17	329	eP	P	17 37 48.0	-1.5
CN2				esP	pwP	17 38 02.2	-1.0
CN2				eS	S	17 46 33.0	-3.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,110nm,4.0s						
KULM	Kulim	66.66	281	eP	P	17 37 54.0	+0.7
	comp=Z,13nm,1.2s						
PSI	Prapat	67.72	278	eP	P	17 37 59.6	-0.6
	comp=Z,9.8nm,1.1s						
NIKH	Nikolski High	68.06	16	eP	P	17 38 01.8	+0.5
	comp=Z,296nm,0.7s						
ENH	Enshi	68.12	309	eP	P	17 38 01.8	-0.4
	comp=Z,18nm,1.3s						
GYA	Guiyang	68.58	305	⇑iP	P	17 38 06.2	+0.9
GYA				pP	pwP	17 38 17.4	-1.7
GYA				PP	PP	17 40 40.0	+2.9
GYA				S	S	17 47 06.2	-0.7
GYA				SKS	SKiKP	17 47 59.8	+2.3
GYA	Guiyang	68.58	305	SS	SS	17 51 32.0	+0.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,550nm,18.4s						
GYA				LR	LR		
	comp=E,560nm,18.1s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
BJT	Baijiatuau	68.83	321	eP	P	17 38 06.8	+0.4
	comp=Z,23nm,1.6s						
XAN	Xi'an	70.38	313	P	P	17 38 16.7	+0.5
XAN				pP	pwP	17 38 28.9	-1.1
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN	Xi'an	70.38	313	eP	P	17 38 15.4	-0.8
	comp=Z,13nm,1.5s						
KMI	Kunming	71.25	302	P	P	17 38 22.8	+0.9
KMI				pP	pwP	17 38 33.3	-2.4
KMI				sP	sP	17 38 35.1	+5.3
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				pmax	pmax		
	comp=Z,280nm,4.6s						
KMI	Kunming	71.25	302	eP	P	17 38 22.7	+0.7
	comp=Z,13nm,1.1s						
CM01	Chiang Mai Arr	72.12	294	eP	P	17 38 27.4	+0.4
CM31	Chiang Mai Arr	72.15	294	eP	P	17 38 27.3	+0.1
CMAR	Chiang Mai Arr	72.15	294	P	P	17 38 28.4	+1.3
	comp=Z,2.7nm,0.8s,baz=122,slow=4.3,SNR=26						
HHC	Hu-ho-hao-te	72.17	320	eP	P	17 38 29.0	+2.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.9s						
CHTO	Chiang Mai	72.27	294	eP	P	17 38 28.1	+0.2
	comp=Z,15nm,1.7s						
CHTO	Chiang Mai	72.27	294	P	P	17 38 30.6	+2.7
	comp=Z,15nm,0.9s						
CD2	Chengdu	72.80	308	⇑P	P	17 38 31.9	+1.0
CD2				pmax	pmax		
	comp=Z,20nm,1.2s						
CD2				pmax	pmax		
	comp=Z,180nm,3.1s						
HIA	Hailar	72.81	331	eP	P	17 38 30.8	+0.3
	comp=Z,15nm,1.3s						
LZH	Lanzhou	75.01	312	eP	P	17 38 45.7	+1.8
LZH				pP	PcP	17 38 55.7	-1.8
LZH				sP	pwP	17 39 01.5	+3.9
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
GAMB	Gambell	77.25	10	eP	P	17 38 55.0	-0.6
	comp=Z,7.1nm,0.9s						
QSPA	South Pole Qui	78.31	180	eP	P	17 39 02.2	+0.3
	comp=Z,9.8nm,0.9s						
ULN	Ulaanbaatar	78.68	324	eP	P	17 39 04.5	+0.2
	comp=Z,5.2nm,0.7s						
SVW2	Sparrevohn	78.80	18	eP	P	17 39 04.6	+0.2
	comp=Z,92nm,2.0s						
SONA0	Songino Array	79.05	324	eP	P	17 39 06.8	+0.6
SONM	Songino Array	79.05	324	P	P	17 39 06.8	+0.6
	comp=Z,1.9nm,0.8s,baz=150,slow=6.4,SNR=16						
SONA1	Songino Array	79.05	324	eP	P	17 39 06.4	+0.1
ANM	Nome	79.17	12	eP	P	17 39 06.2	-0.1
	comp=Z,18nm,1.9s						
RSO	Redoubt South	79.21	20	eP	P	17 39 05.9	-1.0
GTA	Gaotai	79.33	314	eP	P	17 39 08.6	+0.6
GTA				pP	pwP	17 39 20.3	-1.5
GTA				sP	PcP	17 39 24.2	+8.1
GTA				S	S	17 49 08.8	+1.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,97nm,7.1s						
GTA				LR	LR		
	comp=N,130nm,21.6s						
GTA				LR	LR		
	comp=E,220nm,21.9s						
GTA				LR	LR		
	comp=Z,160nm,20.3s						
BILL	Bilibino	79.53	0	eP	P	17 39 07.5	-0.8
	comp=Z,11nm,1.2s						
IM3	Indian Mountai	83.11	16	eP	P	17 39 27.0	-0.3
WRH	Wood River Hil	83.62	18	eP	P	17 39 29.1	-0.9
	comp=Z,8.9nm,0.9s						
MDM	Murphy Dome	83.92	18	eP	P	17 39 31.3	-0.2
	comp=Z,8.3nm,0.9s						
HDA	Harding Lake	83.94	19	eP	P	17 39 31.1	-0.5
	comp=Z,18nm,0.8s						
COLA	College	83.98	18	eP	P	17 39 31.0	-0.7
	comp=Z,17nm,0.7s						
IL1	Eielson Array	84.20	19	eP	P	17 39 32.8	-0.2
ILAR	Eielson Array	84.20	19	P	P	17 39 31.9	-1.1
	comp=Z,2.8nm,0.7s,baz=242,slow=5.2,SNR=38						
ILB	Eielson Array	84.20	19	eP	P	17 39 30.6	-2.4
	comp=Z,4.6nm,0.8s						
JIRN	Jiri	86.09	299	eP	P	17 39 44.0	+0.3
	comp=Z,13nm,0.9s						
PALK	Pallekele	86.40	278	LR	LR	18 23 30.5	
	comp=Z,84nm,18.2s,baz=254,slow=39						
GUN	Gumba	86.42	299	eP	P	17 39 45.5	+0.2
NVAR	Mina Array Bea	86.63	50	P	P	17 39 45.2	-0.7
	comp=Z,0.2nm,0.3s,baz=234,slow=7.7,SNR=2.4						
TIXI	Tiksi	86.68	349	eP	P	17 39 44.6	-0.6
	comp=Z,5.0nm,1.1s						
PKI	Pulchoki	86.74	299	eP	P	17 39 46.9	0.0
	comp=Z,3.8nm,0.7s						
PKIN	Phulchoki	86.75	299	eP	P	17 39 46.8	0.0
DMN	Daman	87.01	299	eP	P	17 39 48.3	+0.2
	comp=Z,13nm,0.8s						
KOLN	Koldanda	88.34	299	eP	P	17 39 54.0	-0.4
	comp=Z,7.0nm,0.8s						
DANN	Dangsing	88.34	299	eP	P	17 39 53.9	-0.6
	comp=Z,8.8nm,0.7s						
PYUN	Piuthan	88.94	299	eP	P	17 39 56.7	-0.6
	comp=Z,11nm,0.9s						
MK01	Makanchi Array	93.82	317	eP	P	17 40 18.9	-0.3
MK31	Makanchi Array	93.83	317	eP	P	17 40 19.1	-0.2
	comp=Z,3.9nm,0.9s						
MK32	Makanchi Array	93.83	317	eP	P	17 40 19.4	+0.1
MKAR	Makanchi Array	93.83	317	eP	P	17 40 19.1	-0.2
	comp=Z,24nm,0.6s						
MKAR	Makanchi Array	93.83	317	P	P	17 40 19.4	+0.1
	comp=Z,4.1nm,0.7s,baz=95,slow=6.3,SNR=36						
ZAA0	Zalesovo Array	93.94	324	eP	P	17 40 18.4	-1.1
	comp=Z,4.4nm,0.9s						
ZALV	Zalesovo Beam	93.94	324	eP	P	17 40 18.5	-1.0
ZALV	Zalesovo Beam	93.94	324	P	P	17 40 18.8	-0.7
	comp=Z,3.6nm,0.9s,baz=114,slow=4.0,SNR=16						
ZAA1	Zalesovo Array	93.94	324	eP	P	17 40 18.8	-0.7
MAKZ	Makanchi	94.04	317	eP	P	17 40 19.8	-0.4
	comp=Z,6.5nm,1.0s						
YKA	Yellowknife Ar	95.66	27	P	P	17 40 25.3	-1.9
	comp=Z,0.4nm,0.6s,baz=260,slow=4.7,SNR=6.4						
YKB5	Yellowknife Ar	95.66	27	eP	P	17 40 24.9	-2.3
KSH	Kashi	96.97	309	P	P	17 40 37.6	+3.7
KSH				pP	pwP	17 40 45.8	-1.9
KSH				PP	PP	17 44 35.1	+5.3
KSH	Kashi	96.97	309	S	S	17 51 52.3	-3.1
KSH	Kashi	96.97	309	sS	sS	17 52 11.0	+5.9
KSH	Kashi	96.97	309	SS	SS	17 58 33.6	+1.4
KSH				pmax	pmax		
	comp=Z,360nm,5.7s						
KSH				LR	LR		
	comp=N,170nm,4.7s						
KSH				LR	LR		
	comp=E,110nm,4.0s						
KSH				LR	LR		
	comp=Z,340nm,4.9s						
ARA0	ARCESS Array S	116.90	345	ePKPdf	PKPdf	17 45 45.7	-0.4
ARCES	ARCESS Array B	116.90	345	PKP	PKPdf	17 45 45.7	-0.4
	comp=Z,1.5nm,0.5s,baz=45,slow=0.7,SNR=14						
FIA0	FINESS Array S	122.28	338	ePKPdf	PKPdf	17 45 56.1	-0.5
FINES	FINESS Array B	122.28	338	PKP	PKPdf	17 45 56.1	-0.5
	comp=Z,1.1nm,0.8s,baz=78,slow=2.7,SNR=7.7						
BOSA	Boshof	124.48	223	PKP	PKiKP	17 46 02.3	-0.1
	comp=Z,1.6nm,0.8s,baz=111,slow=3.2,SNR=3.6						
NB200	NORSAR Array S	127.26	345	ePKPdf	PKPdf	17 46 05.9	-0.3
NOA	NORSAR Array B	127.26	345	PKP	PKPdf	17 46 05.9	-0.3
	comp=Z,0.7nm,0.9s,baz=36,slow=2.4,SNR=2.5						
AKASG	Malin Array Be	127.27	326	PKP	PKPdf	17 46 06.1	-0.3
	comp=Z,0.2nm,0.4s,baz=85,slow=1.0,SNR=3.8						
ASF	Jabal al Asfar	128.68	302	PKP	PKiKP	17 46 11.1	+0.6
	comp=Z,0.9nm,0.4s,baz=90,slow=4.0,SNR=3.2						
GEC2	GERESS Array S	136.18	333	ePKPdf	PKiKP	17 46 24.5	-0.6
GERES	GERESS Array B	136.18	333	PKP	PKiKP	17 46 24.5	-0.6
	comp=Z,0.3nm,0.6s,baz=327,slow=2.2,SNR=4.2						
KEST	Kesra	147.78	322	ePKPbc	PKPbc	17 46 47.7	+0.3
KEST	Kesra	147.78	322	PKPbc	PKPbc	17 46 47.9	+0.5
	comp=Z,4.0nm,0.8s,baz=325,slow=3.4,SNR=4.1						
ES19	SONSECA Array	150.57	343	ePKPbc	PKPbc	17 46 54.5	+0.3
ES19				ePKPab	sPKPbc	17 47 01.8	-0.6
ESDC	Sonseca Array	150.61	343	PKPbc	PKPbc	17 46 53.9	-0.4
	comp=Z,0.5nm,0.5s,baz=26,slow=3.5,SNR=6.9						
TORD	Torodi Ar. Bea	164.11	277	PKP	PKPdf	17 47 05.7	-0.7
	comp=Z,0.2nm,0.4s,baz=215,slow=1.8,SNR=4.1						
TORD				PKPab	PKPab	17 48 00.1	+0.2
	comp=Z,0.2nm,0.5s,baz=119,slow=8.5,SNR=3.9						
TOA1	Torodi Ar. Sit	164.12	277	ePKPdf	PKPdf	17 47 05.7	-0.7
TOA1				ePKPab	PKPab	17 48 00.1	+0.2

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*TEH **09** 17:27:14.7, 35°.10N×56°.97E, h7^{km}, ML3.6*
*ISCJB **09** 17:27:16.6±0.3, 35°.10N±0°.03×56°.94E±0°.04, h10^{km}, Error ellipse: s-maj=4.7km s-min=3.7km az=174.2*
*THR **09** 17:27:17.1, 35°.17N×56°.94E, h16^{km}, ML3.5*
ISC 09 17:27:15.8±0.9, **35°.11N**±0°.03×**56°.92E**±0°.03, **h10^{km}, n43,**
σ**2^s.16**/41, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHRO	Shahrood	1.15	320	ePg	Pg	17 27 38.2	+0.3
SHRO	Shahrood	1.15	320	eAML	AML	17 27 55.5	
	comp=N,757nm,0.2s						
SHRO	Shahrood	1.15	320	ePg	Pg	17 27 38.2	+0.3
SHRO				eSg	Sn	17 27 53.8	-0.2
TNSJ	Nastanj	1.17	193	ePg	Pn	17 27 37.6	-0.7
TNSJ				IAMB	IAmb	17 27 57.9	
	comp=Z,0.0nm,0.4s						
SBZV	Sabzevar	1.40	24	ePg	Pb	17 27 41.1	-1.0
SBZV				IAMB	IAmb	17 27 43.4	
	comp=Z,0.0nm,0.2s						
TABS	Tabas	1.47	173	ePg	Pg	17 27 44.8	+0.9
TABS	Tabas	1.47	173	eAML	AML	17 28 08.8	
	comp=N,1μm,0.4s						
TABS				eAML	AML	17 28 08.9	
	comp=E,808nm,0.4s						
TABS	Tabas	1.47	173	ePg	Pg	17 27 44.8	+0.9
TABS				eSg	Sg	17 28 05.8	+2.8
TKDS	Koohdasht(Taba	1.50	174	ePn	Pg	17 27 43.9	-0.7
TKDS				IAMB	IAmb	17 28 09.6	
	comp=Z,0.0nm,0.3s						
TPRV	Parvadeh(Tabas	2.08	185	ePn	Pb	17 27 51.8	-1.9
TPRV				IAMB	IAmb	17 28 25.2	
	comp=Z,0.0nm,0.2s						
IKRD	Kardeh	2.11	37	ePn	Pg	17 28 00.8	+4.6
IKRD				IAMB	IAmb	17 28 46.1	
	comp=Z,824nm,0.6s						
IAKL	Akhelmad	2.11	45	ePn	Pb	17 27 52.9	-1.4
IAKL				IAMB	IAmb	17 28 01.7	
	comp=Z,2μm,0.4s						
ISFR	Sfrayin	2.13	24	ePn	Pb	17 27 53.3	-1.3
ISFR				IAMB	IAmb	17 28 03.0	
	comp=Z,4μm,0.5s						
IPAY	Payeh	2.15	51	ePn	Pb	17 27 53.7	-1.3
IPAY				IAMB	IAmb	17 28 28.0	
	comp=Z,2μm,0.6s						
IMOG	Moghan	2.21	62	ePn	Pb	17 27 53.2	-2.8
IMOG				IAMB	IAmb	17 28 28.7	
	comp=Z,900nm,0.6s						
IMND	Minoodasht	2.47	331	ePn	Pb	17 27 57.6	-2.6
IMND				IAMB	IAmb	17 28 48.9	
	comp=Z,882nm,0.8s						
IANJ	Anjilo	2.48	279	ePn	Pb	17 27 58.9	-1.8
IANJ				IAMB	IAmb	17 28 02.6	
	comp=Z,2μm,0.2s						
BJRD	Bojnurd	2.62	9	ePn	Pb	17 28 00.1	-2.7
BJRD	Bojnurd	2.62	9	ePn	Pb	17 28 00.1	-2.7
MRVT	Maraveh tapeh	2.63	345	ePn	Pb	17 28 00.4	-2.7
MRVT	Maraveh tapeh	2.63	345	ePn	Pb	17 28 00.4	-2.7
ITEG	Tejag	2.68	145	ePn	Pb	17 28 00.5	-3.4
ITEG				IAMB	IAmb	17 28 43.2	
	comp=Z,3μm,0.4s						
IEMG	Emamgholi	2.69	31	ePn	Pb	17 28 01.7	-2.6
IEMG				IAMB	IAmb	17 28 46.5	
	comp=Z,520nm,0.4s						
IMYA	Miami	2.87	64	ePn	Pn	17 28 02.8	+1.1
IMYA				IAMB	IAmb	17 28 49.1	
	comp=Z,2μm,1.4s						
JRKH	Jarkhoshk	2.91	73	IAMB	IAmb	17 28 16.5	
	comp=Z,0.0nm,0.3s						
JRKH				ePn	Pn	17 28 03.1	+0.8
IMON	Monand	2.97	129	IAMB	IAmb	17 28 13.7	
	comp=Z,2μm,0.2s						
IMON				ePn	Pn	17 28 03.7	+0.4
ISHM	Shahmirzad	3.04	284	ePn	Pb	17 28 07.6	-2.6
ISHM				IAMB	IAmb	17 29 05.8	
	comp=Z,2μm,0.4s						
IKOO	Kooshah	3.19	146	ePn	Pn	17 28 07.1	+0.8
IKOO				IAMB	IAmb	17 29 08.9	
	comp=Z,2μm,0.6s						
ILAS	Lasjerd	3.25	276	ePn	Pb	17 28 10.9	-2.9
ILAS				IAMB	IAmb	17 29 01.9	
	comp=Z,2μm,0.4s						
ANAR	Anarak	3.27	235	ePn	Pn	17 28 07.7	+0.5
YZKH	Yazd	3.33	216	ePn	Pb	17 28 11.6	-3.4
YZKH	Yazd	3.33	216	eAML	AML	17 29 15.7	
	comp=N,83nm,0.8s						
YZKH	Yazd	3.33	216	ePn	Pb	17 28 11.6	-3.4
IFIR	Firoozkooh	3.44	280	ePn	Pn	17 28 11.7	+1.9
IFIR				IAMB	IAmb	17 29 07.0	
	comp=Z,1μm,0.3s						
IALA	Alasht	3.49	287	ePn	Pb	17 28 15.2	-2.6
IALA				IAMB	IAmb	17 29 17.3	
	comp=Z,839nm,0.4s						
ICHK	Chekchek	3.54	217	ePn	Pn	17 28 13.3	+2.2
ICHK				IAMB	IAmb	17 29 20.9	
	comp=Z,2μm,0.3s						
IDMV	Damavand	4.02	278	ePn	Pn	17 28 19.7	+2.0
IDMV				IAMB	IAmb	17 29 32.0	
	comp=Z,506nm,0.4s						
ISAD	Sadrabad	4.18	221	ePn	Pn	17 28 21.4	+1.6
ISAD				IAMB	IAmb	17 28 34.5	
	comp=Z,1μm,0.3s						
IMEH	Mehriz	4.18	208	ePn	Pn	17 28 22.1	+2.2
IMEH				IAMB	IAmb	17 29 37.5	
	comp=Z,509nm,0.2s						
IZEF	Zefreh	4.41	241	ePn	Pn	17 28 25.0	+2.0
IZEF				IAMB	IAmb	17 29 37.1	
	comp=Z,481nm,0.4s						
KHGB	Koh Gabri	4.74	185	ePn	Pn	17 28 30.2	+2.7
KHGB				IAMB	IAmb	17 28 45.7	
	comp=Z,0.0nm,0.3s						
IKLH	Kolahrood	4.77	250	ePn	Pn	17 28 29.8	+1.8
IKLH				IAMB	IAmb	17 30 00.6	
	comp=Z,624nm,0.6s						
TVBK	TV Kerman	5.11	182	ePn	Pn	17 28 35.4	+2.7
TVBK				IAMB	IAmb	17 28 57.9	
	comp=Z,0.0nm,0.2s						

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*MEX **09** 17:29:09.7±0.4, 14°.38N×93°.75W, h130^{km}±31^{km}, MD4.3*
*IDC **09** 17:29:10.3±2.4, 14°.55N×93°.64W, h0^{km}, mb3.7/4, mb1 3.9/7, mb1mx3.6/46, mbtmp3.5/7, ML3.2/3, Error ellipse: s-maj=59.3km s-min=26.1km az=30.0*
ISC 09 17:29:14.1±1.3, **14°.3N**±0°.1×**93°.78W**±0°.07, **h36^{km}, n11,**
σ**1^s.64**/15, **mb3.8**/4, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.46	22	eP	Pn	17 29 35.5	-2.3
PCIG				i S	Sn	17 29 55.5	-0.2
THIG		1.57	69	i P	Pn	17 29 36.7	-2.7
THIG				i S	Sn	17 29 58.0	-0.5
CCIG	Comitan	2.49	39	eP	Pn	17 29 52.5	+0.2
CCIG				eS	Sn	17 30 23.8	+2.2
CMIG	Matias Romero	2.93	339	Pn	Pn	17 29 56.5	-1.7
	3.7nm,0.3s,baz=154,slow=10,SNR=21						
CMIG				Sn	Sn	17 30 30.2	-1.9
	3.4nm,0.3s,baz=152,slow=12,SNR=5.9						
APG	El Apazote	3.27	78	Pn	Pn	17 30 01.2	-1.9
	1.4nm,0.3s,baz=256,slow=8.3,SNR=9.0						
TXAR	Lajitas Array	17.50	330	P	Pn	17 33 15.7	+0.2
	0.0nm,0.3s,baz=152,slow=14,SNR=5.8						
NVAR	Mina Array Bea	32.34	322	P	P	17 35 41.8	+1.5
	0.9nm,0.8s,baz=128,slow=7.3,SNR=3.1						
YKA	Yellowknife Ar	50.31	348	P	P	17 38 06.8	-0.1
	0.8nm,0.8s,baz=154,slow=7.3,SNR=15						
INK	Inuvik	59.63	344	P	P	17 39 14.1	-0.1
	0.5nm,0.5s,baz=142,slow=5.1,SNR=5.6						
NOA	NORSAR Array B	84.66	28	P	P	17 41 45.4	+1.4
	0.6nm,0.8s,baz=292,slow=4.9,SNR=3.2						
CMAR	Chiang Mai Arr	145.08	339	PKP	PKPab	17 48 48.2	+0.1
	0.4nm,0.4s,baz=337,slow=3.0,SNR=5.2						

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*ISCJB **09** 17:33:57.4±1.1, 11°.8S±0°.1×166°.6E±0°.2, h200^{km}, mb3.6/9, Error ellipse: s-maj=25.6km s-min=17.4km az=8.4*
*IDC **09** 17:33:57.2±5.2, 11°.79S×166°.66E, h187^{km}±49^{km}, mb3.4/9, mb1 3.6/10, mb1mx3.4/37, mbtmp3.9/10, Error ellipse: s-maj=38.8km s-min=23.9km az=162.0*
ISC 09 17:33:58.5±1.1, **11°.8S**±0°.1×**166°.6E**±0°.2, **h200^{km}, n11,**
σ**0^s.74**/13, **mb3.7**/9, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.20	181	P	Pn	17 36 20.9	+0.4
	0.1nm,0.3s,baz=18,slow=20,SNR=3.8						
CTA	Charters Tower	21.24	245	P	P	17 38 28.7	-0.5
	1.5nm,0.6s,baz=88,slow=12,SNR=3.6						
WRA	Warramunga Arr	32.05	251	P	P	17 40 05.8	-1.0
	0.6nm,0.5s,baz=85,slow=9.3,SNR=20						
WRA				PcP	PcP	17 42 51.9	+0.3
	0.5nm,1.0s,baz=80,slow=5.0,SNR=3.2						
ASAR	Alice Springs	33.24	245	P	P	17 40 16.0	-1.1
	1.1nm,0.7s,baz=82,slow=9.1,SNR=5.1						
ASAR				PcP	PcP	17 42 54.8	-0.1
	0.5nm,0.8s,baz=73,slow=2.9,SNR=3.5						
FITZ	Fitzroy Crossi	40.03	256	P	P	17 41 14.6	+0.1
	1.4nm,0.5s,baz=60,slow=9.0,SNR=10						
BATI	Baumata	42.18	268	P	P	17 41 33.2	+1.1
	5.6nm,0.5s,baz=127,slow=5.1,SNR=2.8						
CMAR	Chiang Mai Arr	73.22	293	P	P	17 45 08.9	+0.7
	1.1nm,0.7s,baz=124,slow=4.9,SNR=11						
SONM	Songino Array	79.80	324	P	P	17 45 44.7	0.0
	0.2nm,0.3s,baz=139,slow=5.9,SNR=5.3						
ILAR	Eielson Array	83.96	18	P	P	17 46 05.1	-0.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.4nm,1.1s,baz=237,slow=5.6,SNR=3.0						
MKAR	Makanchi Array	94.67	317	P	P	17 46 57.4	+0.4
	0.7nm,0.5s,baz=89,slow=6.7,SNR=9.6						
ARCES	ARCESS Array B	117.29	346	PKP	PKiKP	17 52 19.5	-0.1
	1.1nm,0.9s,baz=72,slow=2.9,SNR=4.6						

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*IDC **09** 17:36:00.2±1.6, 10.°90S×164.°47E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.6/36, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=33.8km s-min=30.8km az=146.0*

*ISCJB **09** 17:36:03.1±1.2, 11.°0S±0.°1×164.°4E±0.°1, h29^{km}, mb3.5/4, Error ellipse: s-maj=23.7km s-min=11.7km az=35.4*

ISC 09 17:36:04.8±1.3**, 10.°9S**±0.°2×**164.°5E**±0.°1**, h29^{km}, n6, σ1^{s}16**/7**, mb3.4**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.70	288	Pn	Pn	17 37 13.9	+0.2
	6.4nm,0.3s,baz=178,slow=5.6,SNR=4.6						
HNR				Sn	Sn	17 38 07.6	+0.3
	1.4nm,0.3s,baz=3.8,slow=17,SNR=2.3						
DZM	Mont Dzumac	11.24	171	Pn	Pn	17 38 44.2	+0.4
	0.6nm,0.3s,baz=302,slow=11,SNR=11						
WRA	Warramunga Arr	30.35	249	P	P	17 42 13.0	-1.5
	0.3nm,0.8s,baz=81,slow=8.6,SNR=2.9						
ASAR	Alice Springs	31.73	242	P	P	17 42 26.1	-0.4
	0.4nm,0.9s,baz=63,slow=10.0,SNR=3.4						
ILAR	Eielson Array	83.80	19	P	P	17 48 30.2	-0.9
	0.2nm,0.5s,baz=242,slow=3.5,SNR=4.3						
MKAR	Makanchi Array	92.58	317	P	P	17 49 15.1	+1.4
	0.5nm,0.8s,baz=91,slow=6.3,SNR=3.9						

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*SOME **09** 17:38:33.5, 43.°30N×79.°93E, h15^{km}*

*KRNET **09** 17:38:33.0±0.1, 43.°19N×79.°97E, h10^{km}, mb3.1*

*NNC **09** 17:38:33.0±0.6, 43.°31N×79.°93E, h8^{km}±2^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=6.3km s-min=2.7km az=162.0*

ISC 09 17:38:33.6±1.1**, 43.°35N**±0.°04×**79.°88E**±0.°03**, h5^{km}**±10^{km}**, n46, σ0^{s}83**/76**, 10C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	0.28	265	P	Pb	17 38 40.8	-0.6
	11nm,0.0s						
PDGK				S	Sb	17 38 45.8	-0.7
	64nm,0.2s						
PDGK	Podgornoye	0.28	265	⇑P	Pb	17 38 40.7	-0.6
	1.4nm,0.1s						
PDGK				⇑S	Sb	17 38 45.6	-0.9
	75nm,0.4s						
PDGK	Podgornoye	0.28	265	*i* P	Pb	17 38 40.7	-0.6
	baz=92						
PDGK				*i* S	Sb	17 38 45.8	-0.7
	baz=92						
KTMS	Ketmen	0.36	75	P	Pg	17 38 40.6	0.0
	111nm,0.1s						
KTMS				S	Sg	17 38 45.5	+0.2
	647nm,0.1s						
KTMS	Ketmen	0.36	75	*e*P	Pg	17 38 40.6	0.0
	baz=45						
KTMS				*e*S	Sg	17 38 45.6	+0.2
	baz=45						
KTMS	Ketmen	0.36	75	*e*P	Pg	17 38 40.6	0.0
	111nm,0.1s						
KTMS				*e*S	Sg	17 38 45.5	+0.2
	647nm,0.1s						
UZB	Uzynbulak	0.66	252	P	Pg	17 38 46.4	+0.1
	10nm,0.1s						
UZB				S	Sg	17 38 55.7	+0.7
	44nm,0.1s						
UZB	Uzynbulak	0.66	252	*e*P	Pg	17 38 46.4	+0.1
	baz=67						
UZB				*e*S	Sg	17 38 55.6	+0.7
	baz=67						
UZB	Uzynbulak	0.66	252	*e*P	Pg	17 38 46.4	+0.1
	10nm,0.1s						
UZB				*e*S	Sg	17 38 55.7	+0.7
	44nm,0.1s						
DJR	Jarkent	0.98	356	P	Pg	17 38 52.3	-0.2
	2.1nm,0.1s						
DJR				S	Sb	17 39 06.1	-0.3
	14nm,0.3s						
DJR	Jarkent	0.98	356	*e*P	Pg	17 38 52.3	-0.2
	2.1nm,0.1s						
DJR				*e*S	Sb	17 39 06.1	-0.3
	14nm,0.3s						
SATY	Saty	1.12	255	P	Pb	17 38 54.5	-1.1
	35nm,0.1s						
SATY				S	Sg	17 39 09.7	+0.1
	88nm,0.1s						
SATY	Saty	1.12	255	*e*P	Pb	17 38 54.5	-1.1
	35nm,0.1s						
SATY				*e*S	Sg	17 39 09.7	+0.1
	88nm,0.1s						
KURS	Kuram	1.25	277	P	Pn	17 38 57.2	-0.7
	6.1nm,0.3s						
KURS				S	Sb	17 39 14.2	-0.1
	10nm,0.3s						
KURS	Kuram	1.25	277	*e*P	Pn	17 38 57.2	-0.7
	6.1nm,0.3s						
KURS				*e*S	Sb	17 39 14.2	-0.1
	10nm,0.3s						
MNBS	Baschi	1.29	305	P	Pb	17 38 58.2	-0.3
	13nm,0.2s						
MNBS				S	Sn	17 39 15.8	-0.5
	53nm,0.2s						
MNBS	Baschi	1.29	305	*e*P	Pb	17 38 58.2	-0.3
	baz=7.0						
MNBS				*e*S	Sn	17 39 15.8	-0.5
	baz=7.0						
MNBS	Baschi	1.29	305	*e*P	Pb	17 38 58.2	-0.3
	13nm,0.2s						
MNBS				*e*S	Sn	17 39 15.8	-0.5
	53nm,0.2s						
ARXS	Arharly	1.72	301	P	Pb	17 39 05.2	-0.6
	2.2nm,0.1s						
ARXS				S	Sb	17 39 28.1	+0.4
	44nm,0.3s						
ARXS	Arharly	1.72	301	*e*P	Pb	17 39 05.2	-0.6
	2.2nm,0.1s						
ARXS				*e*S	Sb	17 39 28.1	+0.4
	44nm,0.3s						
KAPS	Kapalarasan	1.97	349	Pg	Pb	17 39 09.5	-0.4
	1.2nm,0.1s						
KAPS				Lg	Lg	17 39 35.5	
	17nm,0.2s						
KAPS	Kapalarasan	1.97	349	*e*P	Pb	17 39 09.6	-0.4
	1.2nm,0.1s						
KAPS				*e*S	Sb	17 39 35.5	+0.7
	17nm,0.2s						
KOTS	Kotyrbulak	2.02	268	Pg	Pb	17 39 10.3	-0.7
	3.3nm,0.1s						
KOTS				Lg	Lg	17 39 36.8	
	22nm,0.4s						
KOTS	Kotyrbulak	2.02	268	*e*P	Pb	17 39 10.3	-0.7
	3.3nm,0.1s						
KOTS				*e*S	Sb	17 39 36.8	+0.2
	22nm,0.4s						
MDOK	Medeo	2.08	266	Pg	Pb	17 39 10.8	-1.1
	3.4nm,0.6s						
MDOK				Lg	Lg	17 39 40.1	
	5.5nm,0.5s						
MDOK	Medeo	2.08	266	Pg	Pb	17 39 11.6	-0.3
	2.8nm,0.2s						
MDOK				Lg	Lg	17 39 39.4	
	7.1nm,0.3s						
MDOK	Medeo	2.08	266	*e*P	Pb	17 39 11.6	-0.3
	baz=70						
MDOK				*e*S	Sg	17 39 39.4	-0.9
	baz=70						
MDOK	Medeo	2.08	266	*e*P	Pb	17 39 11.6	-0.3
	2.8nm,0.2s						
MDOK				*e*S	Sg	17 39 39.4	-0.9
	7.1nm,0.3s						
CHKK	Chushkaly	2.16	284	Pg	Pb	17 39 12.9	-0.3
	1.8nm,0.1s						
CHKK				Lg	Lg	17 39 41.2	
	19nm,0.2s						
CHKK	Chushkaly	2.16	284	*e*P	Pb	17 39 12.9	-0.3
	1.8nm,0.1s						
CHKK				*e*S	Sb	17 39 41.2	+0.8
	19nm,0.2s						
TNSS	Tian-Shan	2.17	263	Pg	Pb	17 39 13.3	-0.3
	4.4nm,0.2s						
TNSS				Lg	Lg	17 39 41.8	
	9.6nm,0.2s						
TNSS	Tian-Shan	2.17	263	*e*P	Pb	17 39 13.3	-0.3
	baz=67						
TNSS				*e*S	Sb	17 39 41.8	+0.9
	baz=67						
TNSS	Tian-Shan	2.17	263	*e*P	Pb	17 39 13.3	-0.3
	4.4nm,0.2s						
TNSS				*e*S	Sb	17 39 41.8	+0.9
	9.6nm,0.2s						
KDJ	Kajisay	2.33	239	⇑*i*P	Pn	17 39 13.7	+0.8
	baz=44						
KDJ				⇑*i*S	Sb	17 39 43.6	-1.9
	baz=44						
KTBS	Karatobe	2.35	280	Pg	Pb	17 39 16.0	-0.5
	1.2nm,0.2s						
KTBS				Lg	Lg	17 39 46.6	
	8.9nm,0.2s						
KTBS	Karatobe	2.35	280	*e*P	Pb	17 39 16.0	-0.5
	1.2nm,0.2s						
KTBS				*e*S	Sb	17 39 46.5	+0.6
	8.9nm,0.2s						
IZV	Izvestkoviy	2.41	264	Pg	Pb	17 39 17.0	-0.5
	3.3nm,0.2s						
IZV				Lg	Lg	17 39 48.5	
	10nm,0.2s						
IZV	Izvestkoviy	2.41	264	*e*P	Pb	17 39 17.1	-0.5
	3.3nm,0.2s						
IZV				*e*S	Sb	17 39 48.5	+0.8
	10nm,0.2s						
KUU	Kurty	2.63	283	Pg	Pb	17 39 21.0	-0.2
	0.6nm,0.1s						
KUU				Lg	Lg	17 39 54.8	
	6.9nm,0.2s						
KUU	Kurty	2.63	283	*e*P	Pb	17 39 21.0	-0.2
	0.6nm,0.1s						
KUU				*e*S	Sb	17 39 54.8	+1.0
	6.9nm,0.2s						
ULHL	Ulahol	2.90	249	⇑*i*P	Pn	17 39 22.2	+1.6
	baz=52						
ULHL				⇑*i*S	Sn	17 39 57.6	+1.6
	baz=52						
TKM2	Tokmak 2	3.16	264	⇑Lg	Lg	17 40 13.2	
	3.0nm,0.4s						
TKM2	Tokmak 2	3.16	264	⇑*e*P	Pn	17 39 26.4	+2.1
	baz=67						
TKM2				⇑*i*S	Sb	17 40 05.6	-3.8
	baz=67						
MAKZ	Makanchi	3.76	23	⇑Lg	Lg	17 40 33.8	
	1.2nm,0.8s						
MK31	Makanchi Array	3.84	26	⇓Lg	Lg	17 40 36.7	
	1.2nm,0.5s,baz=195,slow=32,SNR=4.5						
WMQ	Urumqi	5.70	83	*e*P	Pn	17 39 59.1	+0.1
WMQ				pP	Pb	17 40 09.8	-3.7
WMQ				pmax	pmax		
	comp=Z,13nm,1.5s						

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*IDC **09** 17:47:10.1±1.5, 11.°70S×165.°34E, h0^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.7/25, mbtmp3.9/6, ML4.1/2, Error ellipse: s-maj=32.8km s-min=29.5km az=134.0*

*ISCJB **09** 17:47:11.6±0.7, 11.°79S±0.°08×165.°35E±0.°08, h24^{km}, mb4.5/11, Error ellipse: s-maj=14.3km s-min=8.0km az=41.1*

*NEIC **09** 17:47:11.6±0.4, 11.°71S×165.°35E, h10^{km}, mb4.7/5, Error ellipse: s-maj=9.5km s-min=8.0km az=46.0*

ISC 09 17:47:13.4±0.8**, 11.°7S**±0.°1×**165.°4E**±0.°1**, h24^{km}, n17, σ0^{s}54**/18**, mb4.7**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.84	292	Pn	Pn	17 48 38.6	+0.1
	7.3nm,0.3s,baz=229,slow=11,SNR=3.9						
HNR				Sn	Sn	17 49 44.9	+0.2
	1.4nm,0.3s,baz=319,slow=20,SNR=3.4						
DZM	Mont Dzumac	10.35	175	*e*Pn	Pn	17 49 41.1	+0.6
DZM	Mont Dzumac	10.35	175	Pn	Pn	17 49 40.6	+0.1
	1.3nm,0.3s,baz=108,slow=22,SNR=15						
ONTNC	Ouen Toro	10.58	175	*e*Pn	Pn	17 49 43.8	+0.1
MXZ	Matakaoa Point	28.22	158	*e*P	P	17 53 04.6	+0.1
	59nm,1.2s						
BKZ	Black Stump Fm	29.06	162	*e*P	P	17 53 11.4	-0.6
	25nm,1.6s						
WRAB	Tennant Creek	30.95	251	*e*P	P	17 53 28.9	0.0
	22nm,1.8s						
WB2	Warramunga Arr	30.95	251	*e*P	P	17 53 28.8	-0.1
WR1	Warramunga Arr	30.96	251	*e*P	P	17 53 28.7	-0.3
	10nm,1.6s						
WRA	Warramunga Arr	30.96	251	P	P	17 53 28.7	-0.3
	1.1nm,0.8s,baz=80,slow=8.7,SNR=10						
ASAR	Alice Springs	32.21	244	P	P	17 53 39.0	-1.0
	0.6nm,0.8s,baz=70,slow=9.5,SNR=6.5						
CRLZ	Canterbury Las	32.35	170	*e*P	P	17 53 41.3	+0.4
	123nm,1.8s						
FITZ	Fitzroy Crossi	38.90	256	*e*P	P	17 54 36.3	-1.2
	31nm,1.8s						
HUH	Hualalai	49.29	51	*e*P	P	17 56 00.5	-0.6
	174nm,1.9s						
ILAR	Eielson Array	84.24	19	P	P	17 59 43.5	+0.8
	0.6nm,1.0s,baz=224,slow=4.9,SNR=3.4						
MK32	Makanchi Array	93.78	317	*e*P	P	18 00 28.5	-0.1
MKAR	Makanchi Array	93.78	317	P	P	18 00 28.5	-0.1
	0.4nm,0.7s,baz=93,slow=6.3,SNR=4.8						

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*ISCJB **09** 17:48:38.4±1.4, 22.°6N±0.°1×12.°3W±0.°2, h10^{km}, mb3.6/5, Error ellipse: s-maj=27.9km s-min=10.5km az=154.1*

*IDC **09** 17:48:40.7±2.2, 22.°70N×11.°99W, h0^{km}, mb3.7/5, mb1 3.7/8, mb1mx3.5/35, mbtmp3.6/8, ML3.2/3, Error ellipse: s-maj=65.9km s-min=26.8km az=80.0*

ISC 09 17:48:40.2±1.5**, 22.°6N**±0.°1×**12.°3W**±0.°2**, h10^{km}, n11, σ0^{s}90**/11**, mb3.7**/5**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDT	Midelt	12.23	32	Pn	Pn	17 51 34.2	-0.5
	0.1nm,0.3s,baz=249,slow=8.6,SNR=2.1						
MDT				Lg	Lg	17 54 56.4	
	0.2nm,0.3s,baz=40,slow=18,SNR=2.6						
TORD	Torodi Ar. Bea	16.28	123	Pn	Pn	17 52 27.6	-1.6
	0.1nm,0.3s,baz=310,slow=10,SNR=4.0						
TORD				Sn	Sn	17 55 31.4	+1.5
	0.1nm,0.3s,baz=302,slow=30,SNR=2.9						
TORD				Lg	Lg	17 57 16.4	
	baz=298,slow=6.2,SNR=2.5						
DBIC	Dimbokro	17.38	155	P	Pn	17 52 42.6	-0.4
	0.1nm,0.3s,baz=346,slow=13,SNR=2.7						
DBIC				Lg	Lg	17 57 48.6	
	0.1nm,0.3s,baz=327,slow=7.3,SNR=1.9						
I17CI	DIMBOKRO INFRA	17.38	155	*i*		19 39 40.0	
	baz=340,slow=314,SNR=1.1						
GERES	GERESS Array B	33.32	32	P	P	17 55 17.8	-0.4
	0.3nm,0.5s,baz=212,slow=9.1,SNR=4.1						
FINES	FINESS Array B	46.90	24	P	P	17 57 10.8	+0.2
	0.7nm,0.7s,baz=235,slow=6.7,SNR=7.5						
ARCES	ARCESS Array B	52.08	16	P	P	17 57 50.0	0.0
	1.6nm,0.9s,baz=217,slow=7.4,SNR=2.5						
MKAR	Makanchi Array	76.88	45	P	P	18 00 33.7	+1.0
	0.3nm,0.5s,baz=291,slow=5.2,SNR=9.9						
SONM	Songino Array	90.94	36	P	P	18 01 44.9	+0.2
	0.2nm,0.7s,baz=312,slow=5.2,SNR=2.5						
WRA	Warramunga Arr	148.82	91	PKPbc	PKiKP	18 08 30.3	0.0
	0.3nm,0.5s,baz=295,slow=2.7,SNR=5.0						
ASAR	Alice Springs	148.93	99	PKPbc	PKiKP	18 08 30.8	+0.4
	0.5nm,0.7s,baz=269,slow=1.6,SNR=5.9						

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*NEIC **09** 17:51:32.9±0.0, 18.°30N×68.°83W, h108^{km}, MD3.0(RSPR), After RSPR.*

RSPR 09 17:51:32.9, 18.°30N×68.°83W, h108^{km}±4^{km}**, MD3.0**/4**, 3C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.72	313	⇑*e*P	Pn	17 51 50.5	-0.8
DR12				*e*S	Sn	17 52 05.0	-0.1
DR12	Loma Pena Alta	0.72	313	*e*Pn	Pn	17 51 50.5	-0.8
DR12				*e*Sn	Sn	17 52 05.0	-0.1
IDE	Isla Desecheo	1.29	86	⇓*e*P	Pn	17 51 55.4	-1.7
IDE	Isla Desecheo	1.29	86	*e*S	Sn	17 52 15.0	-0.5
BANI	BANI	1.46	274	*e*Pn	Pn	17 51 59.8	+0.6
AGP	Aguadilla	1.61	86	*e*Pn	Pn	17 51 58.4	-2.4
AGP				*e*Sn	Sn	17 52 22.7	+0.5
MPR	Mayaguez	1.61	93	*e*Pn	Pn	17 51 58.0	-2.8
AGPR	Aguadilla, PR	1.64	84	⇑*e*P	Pn	17 52 01.3	0.0
AGPR	Aguadilla, PR	1.64	84	⇑*e*P	Pn	17 52 01.3	0.0
AGPR				*e*S	Sn	17 52 22.7	-0.2
OBIP	Obispado Ponce	2.13	96	*e*Pn	Pn	17 52 04.8	-2.6
CELP	Cerrillos	2.15	95	⇓*e*P	Pn	17 52 07.3	-0.4
CELP				*e*S	Sn	17 52 34.6	+0.2
CELP	Cerrillos	2.15	95	*e*Pn	Pn	17 52 07.3	-0.4
CELP				*e*Sn	Sn	17 52 34.6	+0.2
EMPR	Esperanza - Ma	2.19	85	*e*Pn	Pn	17 52 07.3	-0.9
SDDR	Presa de Saban	2.43	287	*e*Pn	Pn	17 52 11.9	+0.5
MTP	Monte Pirata	3.12	93	*e*Pn	Pn	17 52 19.9	-0.5
STVI	Saint Thomas	3.68	89	*e*Pn	Pn	17 52 28.2	+0.3

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*MOS **09** 17:54:03.2±1.0, 10.°80S×165.°87E, h0^{km}, mb5.2/31, MS4.6/5, Error ellipse: s-maj=9.5km s-min=7.7km az=106.6*

*ISCJB **09** 17:54:04.6±0.2, 10.°87S±0.°02×165.°85E±0.°03, h10^{km}, mb5.0/125, MS4.6/34, Error ellipse: s-maj=4.9km s-min=3.4km az=167.2*

*NEIC **09** 17:54:06.1±0.2, 10.°83S×165.°87E, h10^{km}, mb5.2/92, Error ellipse: s-maj=5.3km s-min=3.7km az=88.0*

*IDC **09** 17:54:08.2±3.0, 11.°00S×165.°96E, h26^{km}±19^{km}, mb4.3/18, mb1 4.6/20, mb1mx4.5/28, mbtmp4.6/20, ML5.2/2, MS4.4/24, Ms1 4.4/24, ms1mx4.3/33, Error ellipse: s-maj=17.5km s-min=13.3km az=97.0*

ISC 09 17:54:06.0±0.3**, 10.°92S**±0.°04×**165.°92E**±0.°05**, h10^{km}, n316, σ1^{s}41**/318**, mb5.2**/133**, MS4.6**/36**, 8C-4D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.07	284	*e*P	Pn	17 55 38.0	+2.2
HNR				*e*S	Sn	17 56 49.0	+3.7
HNR	Honiara	6.07	284	*e*Pn	Pn	17 55 36.5	+0.7
HNR				*e*Sn	Sn	17 56 45.1	-0.2
HNR	Honiara	6.07	284	*e*P	Pn	17 55 36.5	+0.7
HNR				*e*		17 56 45.1	
HNR	Honiara	6.07	284	Pn	Pn	17 55 37.3	+1.5
	167nm,0.3s,baz=139,slow=2.9,SNR=89						
HNR				Sn	Sn	17 56 45.1	-0.2
	baz=236,slow=18,SNR=0.9						
HNR				LR	LR	17 58 13.3	
	comp=Z,8µm,19.0s,baz=130,slow=40						
MARNC	Mare, Loyalty	10.70	169	*e*Pn	Pn	17 56 39.7	+0.3
DZM	Mont Dzumac	11.10	177	*e*Pn	Pn	17 56 44.4	-0.6
	145nm,0.6s						
DZM				*e*LR	LR	17 59 20.7	
	comp=Z,4µm,26.6s						
DZM	Mont Dzumac	11.10	177	*e*Pn	Pn	17 56 45.3	+0.3
DZM				Sn	Sn	17 58 45.6	-3.7
DZM	Mont Dzumac	11.10	177	Pn	Pn	17 56 45.8	+0.8
	5.9nm,0.3s,baz=354,slow=14,SNR=29						
DZM				Sn	Sn	17 58 45.6	-3.7
	baz=114,slow=19,SNR=1.6						
DZM				LR	LR	17 59 40.6	
	comp=Z,817nm,21.1s,baz=18,slow=30						
ONTNC	Ouen Toro	11.34	177	*e*Pn	Pn	17 56 48.8	+0.6
PINNC	Pines Island,	11.72	173	*e*Pn	Pn	17 56 55.0	+1.6
MSVF	Nonsavu	13.56	121	*e*Pn	P	17 57 27.4	-0.4
MSVF	Nonsavu	13.56	121	*e*P	P	17 57 27.4	-0.4
TARA	Tarawa	14.04	30	*e*Pn	Pn	17 57 25.7	+0.6
RABL	Rabaul	15.18	295	*e*Pn	Pn	17 57 40.8	+0.1
	162nm,1.3s						
KWAJ	Kwajalein Atol	19.66	5	*e*P	P	17 58 33.5	-1.8
	616nm,1.4s						
KWAJ	Kwajalein Atol	19.66	5	*e*P	P	17 58 33.5	-1.8
KWAJ				pmax	pmax		
	comp=Z,616nm,1.4s						
EIDS	Eidsvold	20.11	222	P	Pn	17 58 42.8	+0.9
	baz=20,SNR=3.9						
EIDS	Eidsvold	20.11	222	*e*P	Pn	17 58 42.2	+0.3
	comp=Z,25nm,0.9s						
MANU	Manus Island	20.42	294	*e*P	Pn	17 58 44.3	-1.4
	comp=Z,162nm,0.9s						
CTA	Charters Tower	21.01	242	P	P	17 58 51.4	+1.4
	comp=Z,16nm,0.9s,baz=71,slow=12,SNR=17						
CTA				LR	LR	18 06 13.2	
	comp=Z,927nm,18.2s,baz=61,slow=34						
CTAO	Charters Tower	21.01	242	*e*P	P	17 58 51.0	+1.1
	comp=Z,67nm,1.3s						
CTAO	Charters Tower	21.01	242	*e*P	P	17 58 51.1	+1.1
CTAO				pmax	pmax		
	comp=Z,67nm,1.3s						
MTSU	Mount Surprise	22.10	249	P	P	17 59 02.8	+1.2
	baz=22,SNR=20						
RMQ	Roma	22.41	224	P	P	17 59 06.2	+1.3
	baz=22,SNR=13						
COEN	Coen	22.41	260	P	P	17 59 05.4	+0.3
	baz=22,SNR=6.5						
COEN	Coen	22.41	260	*e*P	P	17 59 04.7	-0.4
	comp=Z,70nm,1.4s						
ARMA	Armidale	23.52	212	P	P	17 59 17.9	+1.4
	baz=24,SNR=5.5						
ARMA	Armidale	23.52	212	*e*P	P	17 59 18.4	+1.9
	comp=Z,43nm,1.1s						
KNTN	Kanton	23.61	72	*e*P	P	17 59 19.9	+2.5
	comp=Z,84nm,0.9s						
OUZ	Omahuta	25.18	165	*e*P	P	17 59 33.8	+2.1
	comp=Z,23nm,1.0s						
QIS	Mount Isa	27.05	246	P	P	17 59 49.1	+0.3
	baz=27,SNR=8.5						
CAN	Canberra	28.76	210	*e*P	P	18 00 07.8	+3.8
	comp=Z,181nm,2.0s						
CAN	Canberra	28.76	210	*e*P	P	18 00 07.8	+3.8
CAN				pmax	pmax		
	comp=Z,181nm,2.0s						
HAZ	Te Kaha	28.77	160	P	P	18 00 07.2	+3.3
MXZ	Matakaoa Point	28.77	159	*e*P	P	18 00 05.7	+1.7
	comp=Z,298nm,2.0s						
URZ	Urewera	29.01	162	P	P	18 00 04.5	-1.6
	comp=Z,6.1nm,1.0s,baz=16,slow=10,SNR=2.7						
URZ				LR	LR	18 09 46.0	
	comp=Z,2µm,21.1s,baz=344,slow=32						
URZ	Urewera	29.01	162	P	P	18 00 08.2	+2.1
TWGZ	Tauwhareparae	29.22	160	P	P	18 00 10.7	+2.7
H11S2	WAKE ISLAND Hy	29.23	2	T	T	18 30 30.8	
	baz=185						
H11S3	WAKE ISLAND Hy	29.24	1	T	T	18 30 29.3	
	baz=185						
H11S1	WAKE ISLAND Hy	29.25	2	T	T	18 30 29.8	
	baz=185						
TWVZ	Taurewa	29.29	165	P	P	18 00 10.6	+1.8
RTZ	Ruatahuna	29.30	162	P	P	18 00 10.4	+1.7
NGZ	Ngauruhoe	29.43	165	P	P	18 00 12.9	+2.9
MTHZ	Maungataniwha	29.48	163	P	P	18 00 11.6	+1.3
RIGZ	Rimuhau	29.63	161	P	P	18 00 11.8	+0.1
BKZ	Black Stump Fm	29.67	163	*e*P	P	18 00 12.5	+0.5
	comp=Z,25nm,0.5s						
BKZ	Black Stump Fm	29.67	163	P	P	18 00 12.3	+0.3
NMHZ	Naumai	29.69	163	P	P	18 00 13.3	+1.0
BHHZ	Black Hill Sta	29.85	164	P	P	18 00 15.3	+1.6
KWHZ	Kaweka Forest	29.89	164	P	P	18 00 14.9	+0.9
H11N1	WAKE ISLAND Hy	30.45	2	T	T	18 32 03.8	
	baz=181						
H11N3	WAKE ISLAND Hy	30.46	2	T	T	18 32 00.4	
	baz=181						
H11N2	WAKE ISLAND Hy	30.47	2	T	T	18 32 01.9	
	baz=181						
STKA	Stephens Creek	30.65	223	P	P	18 00 21.8	+1.0
	baz=31,SNR=5.6						
STKA	Stephens Creek	30.65	223	*e*P	P	18 00 19.6	-1.2
	comp=Z,4.4nm,1.4s						
STKA	Stephens Creek	30.65	223	P	P	18 00 19.0	-1.8
STKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
STKA				MLR	MLR		
	comp=Z,1µm,18.1s						
STKA	Stephens Creek	30.65	223	P	P	18 00 19.0	-1.8
	comp=Z,5.3nm,0.8s,baz=44,slow=7.9,SNR=9.6						
STKA				LR	LR	18 11 55.7	
	comp=Z,1µm,18.1s,baz=45,slow=35						
BFZ	Birch Farm	31.02	165	*e*P	P	18 00 23.4	-0.4
	comp=Z,22nm,0.5s						
SNZO	South Karori	31.25	167	*e*P	P	18 00 28.3	+2.5
	comp=Z,50nm,1.0s						
THZ	Tophouse	31.33	170	*e*P	P	18 00 27.3	+0.6
	comp=Z,160nm,1.7s						
WB2	Warramunga Arr	31.68	250	*e*P	P	18 00 28.8	-1.2
WRAB	Tennant Creek	31.68	250	*e*P	P	18 00 29.1	-0.8
	comp=Z,30nm,0.9s						
WRAB	Tennant Creek	31.68	250	*ce*P	P	18 00 29.7	-0.3
WRAB				pmax	pmax		
	comp=Z,45nm,1.3s						
WR1	Warramunga Arr	31.69	250	*e*P	P	18 00 29.2	-0.8
	comp=Z,40nm,0.9s						
WR1				*e*PcP	PcP	18 03 22.5	+0.5
WR1				*e*ScP	ScP	18 07 03.1	-2.5

WRA	Warramunga Arr	31.69	250	iP	P	18 00 29.6	-0.5
WRA				pmax	pmax		
	comp=Z,24nm,0.9s						
WRA	Warramunga Arr	31.69	250	P	P	18 00 29.2	-0.8
	comp=Z,24nm,0.9s,baz=82,slow=9.1,SNR=91						
WRA				PcP	PcP	18 03 22.5	+0.5
	comp=Z,0.9nm,0.7s,baz=90,slow=2.9,SNR=5.1						
WRA				ScP	ScP	18 07 03.1	-2.5
	comp=Z,2.0nm,1.3s,baz=74,slow=3.6,SNR=2.4						
WRA				LR	LR	18 11 40.6	
	comp=Z,546nm,18.9s,baz=65,slow=33						
KHZ	Kahutara	32.08	169	eP	P	18 00 34.1	+1.0
	comp=Z,18nm,0.7s						
LTZ	Lake Taylor	32.22	171	eP	P	18 00 35.5	+1.0
	comp=Z,39nm,0.8s						
TOO	Toolangi	32.27	211	P	P	18 00 36.7	+1.7
	baz=32,SNR=4.6						
TOO	Toolangi	32.27	211	eP	P	18 00 36.5	+1.5
	comp=Z,34nm,1.2s						
TOO	Toolangi	32.27	211	eP	P	18 00 36.5	+1.5
TOO				pmax	pmax		
	comp=Z,34nm,1.2s						
FOZ	Fox Glacier	32.67	175	eP	P	18 00 39.7	+1.4
	comp=Z,53nm,1.1s						
OXZ	Oxford	32.72	172	eP	P	18 00 40.7	+1.9
	comp=Z,51nm,1.1s						
KDU	Kakadu	32.78	264	P	P	18 00 38.4	-1.2
	baz=33,SNR=4.9						
AS01	Alice Springs	32.96	243	eP	P	18 00 40.6	-0.7
RPZ	Rata Peaks	32.98	173	eP	P	18 00 41.0	0.0
	comp=Z,35nm,0.8s						
RPZ	Rata Peaks	32.98	173	P	P	18 00 41.6	+0.6
	comp=Z,22nm,0.8s,baz=173,slow=3.0,SNR=11						
AS31	Alice Springs	33.00	243	eP	P	18 00 40.5	-1.1
	comp=Z,3.9nm,1.0s						
AS31				ePcP	PcP	18 03 25.2	-0.4
AS31				eScP	ScP	18 07 08.0	-2.1
ASAR	Alice Springs	33.00	243	P	P	18 00 40.5	-1.1
	comp=Z,9.6nm,0.9s,baz=73,slow=9.4,SNR=61						
ASAR				PcP	PcP	18 03 25.2	-0.4
	comp=Z,1.6nm,0.8s,baz=70,slow=3.2,SNR=5.7						
ASAR				ScP	ScP	18 07 08.0	-2.1
	comp=Z,0.9nm,1.2s,baz=101,slow=3.9,SNR=2.9						
ASAR				LR	LR	18 14 03.8	
	comp=Z,697nm,18.2s,baz=72,slow=36						
CRLZ	Canterbury Las	33.05	171	eP	P	18 00 42.0	+0.3
	comp=Z,207nm,1.7s						
MQZ	McQueen's Vall	33.19	171	eP	P	18 00 43.3	+0.4
	comp=Z,102nm,1.4s						
HTT	Hallett	33.39	224	P	P	18 00 45.5	+0.7
	baz=34,SNR=3.2						
LBZ	Lake Benmore	33.55	174	eP	P	18 00 46.7	+0.6
	comp=Z,79nm,1.6s						
WKZ	Wanaka	33.89	176	eP	P	18 00 50.1	+1.0
	comp=Z,96nm,1.3s						
SARN	Sarigan	33.91	324	eP	P	18 00 46.5	-3.0
	comp=Z,77nm,1.2s						
ODZ	Otahua Downs	34.25	174	eP	P	18 00 55.1	+3.0
	comp=Z,103nm,1.9s						
MLZ	Mavora Lakes	34.38	177	eP	P	18 00 56.0	+2.8
	comp=Z,46nm,1.3s						
DCZ	Deep Cove	34.44	178	eP	P	18 00 57.3	+3.5
	comp=Z,187nm,2.0s						
WHZ	Wether Hill Ro	34.90	178	eP	P	18 01 01.2	+3.5
	comp=Z,184nm,2.0s						
BBOO	Buckleboo	35.04	227	eP	P	18 00 58.8	-0.4
	comp=Z,31nm,1.2s						
TAU	Tasmania Unive	35.75	204	eP	P	18 01 05.1	0.0
	comp=Z,202nm,1.7s						
TAU	Tasmania Unive	35.75	204	eP	P	18 01 05.1	0.0
TAU				pmax	pmax		
	comp=Z,202nm,1.7s						
PALU	Palau	36.18	299	P	P	18 01 10.0	+0.9
	baz=36,SNR=3.9						
KNRA	Kununurra	36.44	258	P	P	18 01 11.6	+0.3
	baz=36,SNR=8.4						
WRKA	Warakurna	38.30	243	P	P	18 01 27.2	+0.1
	baz=38,SNR=8.4						
FITZ	Fitzroy Crossi	39.58	255	P	P	18 01 37.5	-0.3
	baz=40,SNR=19						
FITZ	Fitzroy Crossi	39.58	255	eP	P	18 01 36.5	-1.3
	comp=Z,23nm,0.9s						
FITZ	Fitzroy Crossi	39.58	255	LR	LR	18 17 23.6	
	comp=Z,612nm,19.6s,baz=82,slow=35						
TNTI	Ternate	40.05	284	eP	P	18 01 40.0	-1.9
	comp=Z,16nm,1.1s						
FORT	Forrest	40.26	235	eP	P	18 01 42.3	-1.0
	comp=Z,45nm,1.1s						
SOEI	Soe	40.97	268	eP	P	18 01 50.3	+0.7
	comp=Z,27nm,1.0s						
BATI	Baumata	41.52	267	LR	LR	18 18 42.3	
	comp=Z,860nm,21.4s,baz=114,slow=36						
MMRI	Maumere	43.08	269	eP	P	18 02 05.3	-1.4
	comp=Z,60nm,1.2s						
PPT	Papeete	43.56	104	LR	LR	18 15 58.2	
	comp=Z,672nm,20.3s,baz=274,slow=30						
PPT2	Papeete2	43.56	104	eLQ	LQ	18 12 33.9	
	comp=Z,2µm,28.0s						
PPT2				eLR	LR	18 14 21.6	
	comp=Z,1µm,22.5s,baz=273						
DAV	Davao City (W)	43.95	292	LR	LR	18 20 22.1	
	comp=Z,371nm,19.1s,baz=90,slow=36						
MBWA	Marble Bar	45.40	251	eP	P	18 02 25.1	-0.1
	comp=Z,29nm,1.0s						
MEEK	Meekatharra	47.16	244	P	P	18 02 39.4	+0.4
	baz=47,SNR=14						
KLBR	Kellerberrin	48.92	238	P	P	18 02 52.7	+0.1
	baz=49,SNR=6.2						
NWAO	Narrogin (SRO)	49.68	236	eP	P	18 03 00.7	+2.4
	comp=Z,77nm,1.5s						
NWAO	Narrogin (SRO)	49.68	236	eP	P	18 03 00.7	+2.4
NWAO				pmax	pmax		
	comp=Z,77nm,1.5s						
MORW	Morawa	49.84	241	P	P	18 03 00.5	+0.9
	baz=50,SNR=4.0						
MORW	Morawa	49.84	241	eP	P	18 03 00.4	+0.8
	comp=Z,27nm,1.0s						
TGY	Tagaytay City	51.07	298	LR	LR	18 22 07.0	
	comp=Z,434nm,20.5s,baz=124,slow=33						
KKM	Kota Kinabalu	52.27	286	eP	P	18 03 18.2	0.0
	comp=Z,77nm,1.5s						
TAOE	Nuku Hiva Isla	53.11	93	eLR	LR	18 18 43.8	
	comp=Z,481nm,24.0s						
INU	Inuyama	53.53	331	eP	P	18 03 27.6	+0.7
	comp=Z,17nm,0.9s						
MJAR	Matsushiro Arr	53.94	332	P	P	18 03 29.2	-0.8
	comp=Z,12nm,1.1s,baz=167,slow=7.4,SNR=13						
MAJO	Matsushiro	53.94	332	eP	P	18 03 29.6	-0.4
	comp=Z,20nm,0.8s						
MAJO	Matsushiro	53.94	332c	iP	P	18 03 29.4	-0.6
MAJO				pmax	pmax		
	comp=Z,20nm,1.2s						
MAT	Matsushiro	53.94	332	P	P	18 03 29.0	-1.0
MJB9	Matsu-Tunnel	53.94	332	eP	P	18 03 29.8	-0.2
	comp=Z,20nm,0.8s						
JNU	Nakatsue	55.08	324	eP	P	18 03 38.6	+0.2
	comp=Z,32nm,0.9s						
TPUB	Ta-pu	55.86	308	eP	P	18 03 44.4	+0.3
	comp=Z,59nm,1.2s						
SSLB	Suanglung	55.87	309	eP	P	18 03 43.3	-1.0
	comp=Z,123nm,2.0s						
YHNB	Yeheng	56.03	310	eP	P	18 03 45.3	-0.2
	comp=Z,138nm,1.6s						
ERM	Erimo	56.67	340	iP	P	18 03 49.3	-0.3
ERM				pmax	pmax		
	comp=Z,30nm,1.0s						
CISI	Cisompet, Garu	57.38	268	eP	P	18 03 54.3	-0.9
	comp=Z,40nm,1.0s						
RKT	Rikitea	57.47	110	eLR	LR	18 20 51.2	
	comp=Z,2µm,26.5s						
KSRS	Korea Array	59.87	325	P	P	18 04 12.5	+0.5
	comp=Z,2.7nm,0.8s,baz=140,slow=7.5,SNR=5.9						
SSE	Sheshan	59.88	316	eP	P	18 04 11.9	-0.3
	comp=Z,32nm,0.9s						
KSAR	Wonju Array Be	59.88	325	P	P	18 04 12.5	+0.4
KSAR	Wonju Array Be	59.88	325	P	P	18 04 12.5	+0.4
KS01	Wonju Array Si	59.90	325	eP	P	18 04 10.3	-2.0
YSS	Yuzh-Sakhalins	61.22	342	eP	P	18 04 19.3	-1.8
	comp=Z,31nm,1.1s						
YSS	Yuzh-Sakhalins	61.22	342	eP	P	18 04 23.7	+2.7
YSS				e		18 04 27.5	
YSS				MLR	MLR		
	comp=Z,300nm,19.0s						
MSHR	Mys Shultsa	62.03	332	iP	P	18 04 26.8	+0.2
NJ2	Nanjing	62.05	315	eP	P	18 04 27.2	+0.2
NJ2				sP	sP	18 04 32.4	+1.1
NJ2				pmax	pmax		
	comp=Z,14nm,1.1s						
QIZ	Qiongzhong	62.77	298	P	P	18 04 33.0	+0.9
QIZ				S	S	18 13 01.8	+0.3
QIZ				pmax	pmax		
	comp=Z,26nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,210nm,2.5s						
QIZ				LR	LR		
	comp=N,300nm,14.7s						
QIZ				LR	LR		
	comp=E,440nm,22.6s						
QIZ				LR	LR		
	comp=Z,490nm,22.1s						
USA0B	Ussuriysk Arra	62.91	333	eP	P	18 04 32.4	-0.1
	comp=Z,39nm,1.5s						
USRK	Ussuriysk Ar.	62.91	333	P	P	18 04 33.6	+1.1
	comp=Z,5.7nm,0.8s,baz=141,slow=7.1,SNR=14						
PETK	Petropavlovsk-	64.16	355	eP	P	18 04 40.4	-0.2
PETK	Petropavlovsk-	64.16	355	eP	P	18 04 40.4	-0.2
PETK	Petropavlovsk-	64.16	355	P	P	18 04 41.8	+1.2
	comp=Z,4.5nm,0.9s,baz=200,slow=9.7,SNR=3.5						
PETK				LR	LR	18 29 04.5	
	comp=Z,171nm,19.3s,baz=152,slow=33						
PEA1	Petropavlovsk-	64.16	355	eP	P	18 04 41.8	+1.2
MDJ	Mudanjiang	64.32	332	P	P	18 04 42.7	+0.9
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,240nm,9.4s						
MDJ	Mudanjiang	64.32	332	eP	P	18 04 42.2	+0.4
ADK	Adak	64.33	12	eP	P	18 04 41.2	-0.5
	comp=Z,112nm,1.4s						
ADK	Adak	64.33	12	eP	P	18 04 41.2	-0.5
ADK				pmax	pmax		
	comp=Z,112nm,1.4s						
WHN	Wuhan	64.44	311	P	P	18 04 46.8	+3.9
WHN				S	S	18 13 32.7	+11
WHN				LR	LR		
	comp=Z,1µm,20.0s						
BKNI	Bangkinang	65.43	275	eP	P	18 04 49.5	-0.1
	comp=Z,119nm,1.2s						
CN2	Changchun	65.72	329	eP	P	18 04 50.6	-0.3
CN2				esP	sP	18 04 57.6	+2.3
CN2				PP	PP	18 07 19.5	+3.7
CN2				eS	S	18 13 40.9	+3.7
CN2	Changchun	65.72	329	SS	SS	18 18 00.6	+8.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,110nm,5.0s						
CN2				LR	LR		
	comp=N,520nm,17.0s						
CN2				LR	LR		
	comp=E,360nm,17.0s						
CN2				LR	LR		
	comp=Z,410nm,18.0s						
IPM	Ipoh	66.37	280	eP	P	18 04 55.5	-0.3
	comp=Z,26nm,1.1s						
CASY	Casey	66.56	201	eP	P	18 04 57.2	+1.2
	comp=Z,49nm,1.4s						
GRNR	Gornyy	66.58	340	eP	P	18 04 56.4	+0.1
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
VNDA	Vanda	66.62	181	eP	P	18 04 57.0	+0.7
VNDA	Vanda	66.62	181	eP	P	18 04 57.0	+0.7
VNDA	Vanda	66.62	181	LR	LR	18 30 53.2	
	comp=Z,499nm,19.1s,baz=14,slow=33						
KULM	Kulim	66.93	281	eP	P	18 04 59.3	0.0
	comp=Z,16nm,1.1s						
KLR	Kul'dur	67.01	336	iP	P	18 04 59.5	+0.4
NKL	Nikolayevsk	67.37	344	eP	P	18 05 01.8	+0.6
NKL				pmax	pmax		
	comp=Z,16nm,0.9s						
ENH	Enshi	67.95	309	eP	P	18 05 04.8	-0.7
	comp=Z,15nm,0.9s						
PSI	Prapat	68.03	278	eP	P	18 05 04.2	-2.2
	comp=Z,10nm,1.0s						
PSI	Prapat	68.03	278	eP	P	18 05 04.2	-2.2
PSI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	Baijiatuau	68.48	321	eP	P	18 05 08.6	0.0
	comp=Z,9.7nm,0.8s						
BJT	Baijiatuau	68.48	321	eP	P	18 05 08.6	0.0
BJT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	Guiyang	68.49	304⇑	iP	P	18 05 10.2	+1.1
GYA				PP	PP	18 07 43.6	+3.2
GYA				S	S	18 14 10.8	-0.7
GYA				SKS	SKiKP	18 15 04.0	+0.6
GYA	Guiyang	68.49	304	SS	SS	18 18 36.5	+0.8
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.6s						
GYA				LR	LR		
	comp=N,630nm,18.4s						
GYA				LR	LR		
	comp=E,650nm,18.1s						
GYA				LR	LR		
	comp=Z,590nm,18.6s						
GSI	Gunungsitoli	69.02	276	eP	P	18 05 10.6	-1.9
	comp=Z,63nm,1.2s						
PBKT	Sadao Pong	69.79	292	eP	P	18 05 17.0	-0.2
PBKT	Sadao Pong	69.79	292	P	P	18 05 18.8	+1.7
	comp=Z,9.7nm,1.1s,comp=Z,783nm						
XAN	Xi'an	70.16	312	P	P	18 05 19.2	0.0
XAN				pP	sP	18 05 24.5	+0.9
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				LR	LR		
	comp=N,400nm,18.2s						
XAN				LR	LR		
	comp=E,130nm,6.3s						
XAN	Xi'an	70.16	312	eP	P	18 05 19.2	0.0
	comp=E,15nm,0.8s						
XAN	Xi'an	70.16	312	eP	P	18 05 19.3	0.0
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
SPIA	Saint Paul Isl	70.64	13	eP	P	18 05 23.1	+1.6
	comp=Z,748nm,1.6s						
KMI	Kunming	71.20	301	P	P	18 05 27.2	+1.3
KMI				pP	sP	18 05 32.1	+1.8
KMI				sP	pP	18 05 34.0	+4.8
KMI				LR	LR		
	comp=N,210nm,14.2s						
KMI				LR	LR		
	comp=E,270nm,14.2s						
KMI				LR	LR		
	comp=Z,380nm,17.7s						
KMI	Kunming	71.20	301	eP	P	18 05 26.9	+0.9
	comp=Z,12nm,0.9s						
KMI	Kunming	71.20	301	eP	P	18 05 26.9	+0.9
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
MA2	Magadan	71.31	352	iP	P	18 05 27.0	+1.5
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC	Hu-ho-hao-te	71.85	320	eP	P	18 05 31.5	+2.1
HHC				S	S	18 14 50.9	+0.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,6.0s						
HHC				LR	LR		
	comp=N,520nm,19.9s						
HHC				LR	LR		
	comp=E,360nm,21.6s						
HHC				LR	LR		
	comp=Z,790nm,17.3s						
CM01	Chiang Mai Arr	72.19	293	eP	P	18 05 32.0	+0.2
CM31	Chiang Mai Arr	72.22	293	eP	P	18 05 32.8	+0.9
	comp=Z,9.8nm,0.8s						
CMAR	Chiang Mai Arr	72.22	293	P	P	18 05 32.5	+0.6
	comp=Z,3.6nm,1.0s,baz=112,slow=4.5,SNR=22						
ZEA	Zeya	72.29	337	eP	P	18 05 32.0	+0.4
ZEA				pmax	pmax		
	comp=N,23nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
CHTO	Chiang Mai	72.33	294	eP	P	18 05 32.8	+0.2
	comp=Z,19nm,1.4s						
CHTO	Chiang Mai	72.33	294	eP	P	18 05 32.8	+0.2
CHTO				pmax	pmax		
	comp=Z,19nm,1.4s						
CHTO	Chiang Mai	72.33	294	P	P	18 05 33.8	+1.2
	comp=Z,39nm,1.3s						
CD2	Chengdu	72.66	307⇑	iP	P	18 05 34.9	+0.5
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				pmax	pmax		
	comp=Z,300nm,8.0s						
SEY	Seymchan	74.37	354	iP	P	18 05 44.2	+0.6
LZH	Lanzhou	74.80	312	eP	P	18 05 48.3	+1.3
LZH				pP	sP	18 05 52.2	+0.8
LZH				sP	pP	18 05 54.8	+4.6
LZH				ePP	PP	18 08 27.2	-7.3
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.8s						
LZH				LR	LR		
	comp=N,590nm,13.0s						
LZH				LR	LR		
	comp=E,910nm,11.4s						
LZH				LR	LR		
	comp=Z,950nm,13.8s						
GAMB	Gambell	76.41	10	eP	P	18 05 55.9	+0.6
	comp=Z,20nm,1.3s						
YAK	Yakutsk	78.02	343	eP	P	18 06 04.3	-0.1
YAK				pmax	pmax		
	comp=Z,54nm,0.8s						
YAK				pmax	pmax		
	comp=N,16nm,0.9s						
ULN	Ulaanbaatar	78.30	324	eP	P	18 06 06.6	+0.1
	comp=N,13nm,0.7s						
ULN	Ulaanbaatar	78.30	324c	eP	P	18 06 05.7	-0.8
ULN				pmax	pmax		
	comp=Z,13nm,1.3s						
ANM	Nome	78.33	12	eP	P	18 06 06.7	+0.6
	comp=Z,12nm,1.4s						
ANM	Nome	78.33	12	eP	P	18 06 06.7	+0.6
ANM				pmax	pmax		
	comp=Z,12nm,1.4s						
SONA0	Songino Array	78.67	324	eP	P	18 06 08.9	+0.4
SONM	Songino Array	78.67	324	P	P	18 06 08.9	+0.4
	comp=Z,3.1nm,0.9s,baz=145,slow=7.2,SNR=25						
SONM				LR	LR	18 39 57.2	
	comp=Z,158nm,18.7s,baz=48,slow=35						
SONA1	Songino Array	78.67	324	eP	P	18 06 07.7	-0.8
BILL	Bilibino	78.75	0	eP	P	18 06 08.3	0.0
	comp=Z,12nm,0.9s						
BILL	Bilibino	78.75	0⇓	iP	P	18 06 08.5	+0.1
BILL				e		18 06 19.9	
BILL				e		18 09 02.9	
BILL				pmax	pmax		
	comp=Z,13nm,0.8s						
QSPA	South Pole Qui	79.09	180	eP	P	18 06 10.0	-0.5
	comp=Z,69nm,1.9s						
GTA	Gaotai	79.09	314	⇓P	P	18 06 11.7	+0.6
GTA				pP	sP	18 06 16.3	+0.8
GTA				sP	PcP	18 06 18.8	-0.7
GTA				S	S	18 16 09.6	-1.2
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,7.6s						
GTA				LR	LR		
	comp=N,370nm,20.3s						
GTA				LR	LR		
	comp=E,470nm,21.3s						
GTA				LR	LR		
	comp=Z,480nm,20.3s						
PPLA	Purkeypile	80.35	18	eP	P	18 06 15.5	-1.9
	comp=Z,97nm,2.0s						
BOD	Bodaibo	80.49	335	eP	P	18 06 12.8	-5.2
BOD				pmax	pmax		
	comp=Z,9.0nm,1.9s						
ZAK	Zakamensk	81.70	325	eP	P	18 06 23.6	-1.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TLY	Talaya	82.11	326	eP	P	18 06 26.2	-0.7
	comp=Z,12nm,1.0s						
TLY	Talaya	82.11	326	iP	P	18 06 26.5	-0.3
IM3	Indian Mountai	82.26	16	eP	P	18 06 27.1	-0.2
LSA	Lhasa	82.43	302	eP	P	18 06 29.7	+0.1
	comp=Z,6.3nm,1.0s						
LSA	Lhasa	82.43	302	eP	P	18 06 29.7	+0.1
LSA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WRH	Wood River Hil	82.75	18	eP	P	18 06 30.5	+0.7
	comp=Z,17nm,1.2s						
MDM	Murphy Dome	83.06	18	eP	P	18 06 30.7	-0.7
	comp=Z,9.7nm,1.0s						
HDA	Harding Lake	83.07	19	eP	P	18 06 31.1	-0.4
	comp=Z,15nm,0.8s						
COLA	College	83.11	18	eP	P	18 06 30.7	-0.9
	comp=Z,14nm,0.9s						
COLA	College	83.11	18	iP	P	18 06 31.5	-0.2
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IL1	Eielson Array	83.34	18	eP	P	18 06 32.2	-0.7
ILAR	Eielson Array	83.34	18	P	P	18 06 32.6	-0.2
	comp=Z,2.2nm,0.8s,baz=233,slow=5.6,SNR=18						
ILAR				LR	LR	18 41 36.3	
	comp=Z,135nm,20.1s,baz=226,slow=34						
ILB	Eielson Array	83.34	18	eP	P	18 06 32.1	-0.8
	comp=Z,6.1nm,0.8s						
SCRK	Sand Creek	83.74	20	eP	P	18 06 34.5	-0.6
	comp=Z,16nm,1.2s						
AFDM	Forest Hills D	83.99	49	eP	P	18 06 36.8	-0.1
	comp=Z,8.1nm,1.2s						
MAW	Mawson	84.90	202	LR	LR	18 40 05.0	
	comp=Z,231nm,18.2s,baz=164,slow=32						
DAWY	Dawson	85.38	21	eP	P	18 06 43.9	+0.6
	comp=Z,27nm,2.0s						
RAMN	Ramite	85.55	298	eP	P	18 06 44.9	-0.4
NV01	Mina Array Sit	85.81	50	eP	P	18 06 45.7	-0.6
NVAR	Mina Array Bea	85.81	50	P	P	18 06 45.9	-0.4
	comp=Z,1.7nm,0.9s,baz=228,slow=6.2,SNR=5.9						
NVAR				LR	LR	18 35 29.0	
	comp=Z,168nm,21.6s,baz=284,slow=29						
TIXI	Tiksi	86.00	349	eP	P	18 06 45.3	-0.8
	comp=Z,12nm,0.4s						
TIXI	Tiksi	86.00	349c	eP	P	18 06 45.6	-0.5
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.7s						
TIXI	Tiksi	86.00	349	LR	LR	18 46 01.0	
	comp=Z,111nm,18.0s,baz=134,slow=36						
JIRN	Jiri	86.08	299	eP	P	18 06 48.1	+0.1
	comp=Z,41nm,1.0s						
GUN	Gumba	86.41	299	eP	P	18 06 49.3	-0.3
	comp=Z,29nm,1.0s						
PKI	Pulchoki	86.73	299	eP	P	18 06 50.6	-0.6
	comp=Z,30nm,1.0s						
PKIN	Phulchoki	86.74	299	eP	P	18 06 50.4	-0.8
	comp=Z,11nm,0.8s						
DMN	Daman	87.00	299	eP	P	18 06 52.1	-0.3
	comp=Z,50nm,1.1s						
G08A	Pilot Rock	87.44	43	eP	P	18 06 53.9	0.0
	comp=Z,11nm,1.6s						
DANN	Dangsing	88.33	299	eP	P	18 06 57.8	-1.0
	comp=Z,22nm,0.7s						
KOLN	Koldanda	88.33	299	eP	P	18 06 57.5	-1.3
PYUN	Piuthan	88.94	299	eP	P	18 07 00.2	-1.4
	comp=Z,20nm,0.9s						
WMQ	Urumqi	89.13	315	eP	P	18 07 01.8	-0.2
WMQ				pP	sP	18 07 08.3	+1.9
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,350nm,4.5s						
WMQ				LR	LR		
	comp=N,690nm,26.3s						
WMQ				LR	LR		
	comp=E,600nm,23.7s						
WMQ				LR	LR		
	comp=Z,540nm,24.3s						
PSUT	Pine Spring	89.19	51	eP	P	18 07 02.8	+0.2
	comp=Z,3.3nm,0.7s						
U15A	North Rim	89.89	53	eP	P	18 07 08.1	+2.1
	comp=Z,14nm,1.3s						
DGZ	Jazzator, Alta	90.91	320d	iP	P	18 07 09.3	-1.0
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DGAR	Diego Garcia	92.00	262	iP	P	18 07 15.4	-0.5
DGAR				pmax	pmax		
	comp=Z,106nm,1.1s						
PDAR	Pinedale Array	93.34	47	P	P	18 07 21.1	-0.7
	comp=Z,0.6nm,1.0s,baz=258,slow=4.2,SNR=2.7						
MK01	Makanchi Array	93.54	317	eP	P	18 07 21.4	-0.9
MK31	Makanchi Array	93.55	317	eP	P	18 07 21.6	-0.8
	comp=Z,8.8nm,1.0s						

MK31	Makanchi Array	93.55	317	eP	P	18 07 21.6	-0.8
MK31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MK32	Makanchi Array	93.55	317	eP	P	18 07 22.2	-0.1
MK32				ePKKPdf	PKKPdf	18 24 28.4	-0.5
MKAR	Makanchi Array	93.55	317	eP	P	18 07 22.1	-0.3
	comp=Z,49nm,0.8s						
MKAR				PKKP	PKKPdf	18 24 28.4	-0.5
MKAR	Makanchi Array	93.55	317	P	P	18 07 22.2	-0.1
	comp=Z,4.8nm,0.8s,baz=101,slow=6.3,SNR=53						
MKAR				PKKP	PKKPdf	18 24 28.4	-0.5
	comp=Z,0.8nm,1.0s,baz=285,slow=2.4,SNR=4.5						
MKAR				LR	LR	18 50 20.7	
	comp=Z,87nm,19.6s,baz=88,slow=36						
ZAA0	Zalesovo Array	93.56	324	eP	P	18 07 20.8	-1.4
	comp=Z,19nm,1.5s						
ZALV	Zalesovo Beam	93.56	324	eP	P	18 07 20.1	-2.1
ZALV	Zalesovo Beam	93.56	324	i P	P	18 07 21.0	-1.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZALV	Zalesovo Beam	93.56	324	P	P	18 07 20.3	-1.8
	comp=Z,2.3nm,0.9s,baz=104,slow=4.7,SNR=11						
ZALV				LR	LR	18 48 58.2	
	comp=Z,71nm,20.7s,baz=68,slow=35						
ZAA1	Zalesovo Array	93.56	324	eP	P	18 07 20.3	-1.8
MAKZ	Makanchi	93.76	317	eP	P	18 07 22.3	-1.1
	comp=Z,10nm,0.9s						
MAKZ	Makanchi	93.76	317	eP	P	18 07 22.3	-1.1
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ANMO	Albuquerque	94.23	55	i P	P	18 07 28.9	+2.9
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NVS	Novosibirsk	94.66	325	eP	P	18 07 26.9	-0.3
NVS				pmax	pmax		
	comp=Z,9.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.3s						
YKA	Yellowknife Ar	94.78	27	P	P	18 07 26.1	-1.5
	comp=E,0.3nm,0.7s,baz=256,slow=4.7,SNR=6.6						
YKA				LR	LR	18 45 00.6	
	comp=E,23nm,18.6s,baz=233,slow=32						
YKB5	Yellowknife Ar	94.78	27	eP	P	18 07 26.8	-0.8
TXAR	Lajitas Array	95.62	61	LR	LR	18 42 11.3	
	comp=E,116nm,21.6s,baz=0.0,slow=30						
NRIK	Noril'sk	96.06	340	LR	LR	18 49 36.2	
	comp=E,169nm,20.6s,baz=90,slow=35						
KURK	Kurchatov	96.65	320	c eP	P	18 07 36.4	0.0
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KSH	Kashi	96.81	309	P	P	18 07 39.4	+1.8
KSH				sP	sP	18 07 46.7	+4.6
KSH				pmax	pmax		
	comp=Z,130nm,4.3s						
ARA0	ARCESS Array S	116.25	346	ePKPdf	PKiKP	18 12 47.4	-1.8
ARCES	ARCESS Array B	116.25	346	PKP	PKiKP	18 12 47.4	-1.8
	comp=Z,1.8nm,0.6s,baz=83,slow=2.1,SNR=12						
OBN	Obninsk	120.79	329	⇓ePKIKP	PKiKP	18 13 04.0	+5.6
OBN				e		18 14 22.9	
OBN				pmax	pmax		
	comp=Z,11nm,1.5s						
KIV	Kislovodsk	121.26	315	i PKIKP	PKiKP	18 13 01.9	+2.1
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,154nm,23.0s						
FIA0	FINESS Array S	121.72	339	ePKPdf	PKPdf	18 12 58.6	-1.3
FIA0	FINESS Array S	121.72	339	ePKIKP	PKPdf	18 12 58.6	-1.3
FINES	FINESS Array B	121.72	339	PKP	PKPdf	18 12 58.6	-1.3
	comp=Z,0.6nm,0.5s,baz=29,slow=4.4,SNR=4.8						
BANI	BANI	125.22	75	ePKPpre	PKPpre	18 12 59.9	
BOSA	Boshof	125.33	223	PKP	PKPdf	18 13 06.6	-1.5
	comp=Z,1.9nm,0.8s,baz=333,slow=2.3,SNR=2.8						
NB2	NORSAR Subarra	126.62	345	PKPdf	PKPdf	18 13 08.5	-0.9
	comp=Z,1.5nm,0.8s,baz=30,slow=1.8						
NB200	NORSAR Array S	126.62	345	ePKPdf	PKPdf	18 13 08.3	-1.1
NOA	NORSAR Array B	126.62	345	PKP	PKPdf	18 13 08.3	-1.1
	comp=Z,0.7nm,0.7s,baz=34,slow=2.0,SNR=7.0						
AKASG	Malin Array Be	126.85	327	PKIKP	PKPdf	18 13 09.0	-1.1
AKASG	Malin Array Be	126.85	327	PKP	PKPdf	18 13 08.9	-1.1
	comp=Z,0.4nm,0.4s,baz=58,slow=2.8,SNR=5.1						
AKBB	Malin Array Si	126.85	327	ePKPdf	PKPdf	18 13 09.4	-0.7
AKBB	Malin Array Si	126.85	327	ePKIKP	PKPdf	18 13 09.4	-0.7
KIEV	Kiev	126.86	327	i PKIKP	PKiKP	18 13 11.7	+1.1
AK11	Malin Array Si	126.89	327	ePKPdf	PKPdf	18 13 08.6	-1.6
BR101	Keskin Array S	129.00	313	ePKPdf	PKPdf	18 13 14.2	-0.5
BRTR	Keskin Array B	129.00	313	c iPKIKP	PKiKP	18 13 15.3	-0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	129.00	313	PKP	PKPdf	18 13 14.2	-0.5
	comp=Z,0.8nm,0.9s,baz=19,slow=4.2,SNR=4.7						
VYHS	Vyhne	133.55	330	ePKIKP	PKPdf	18 13 23.2	+0.3
VYHS	Vyhne	133.55	330	ePKP	PKPdf	18 13 23.2	+0.3
TREC	Trest	134.55	333	AMS	AMS	19 12 30.0	
	comp=Z,300nm,20.3s						
KHC	Kasperske Hory	135.50	334	ePKPDF	PKiKP	18 13 28.6	+0.5
KHC				AMS	AMS	19 17 00.0	
	comp=Z,300nm,21.7s						
KHC	Kasperske Hory	135.50	334	ePKIKP	PKiKP	18 13 28.6	+0.5
KHC				MLR	MLR		
	comp=Z,300nm,21.7s						
GEC2	GERESS Array S	135.67	334	ePKPdf	PKiKP	18 13 27.7	-0.9
GEC2	GERESS Array S	135.67	334	ePKIKP	PKiKP	18 13 27.7	-0.9
GERES	GERESS Array B	135.67	334	PKP	PKiKP	18 13 27.7	-0.9
	comp=Z,0.7nm,0.7s,baz=90,slow=1.3,SNR=6.9						
KEST	Kesra	147.42	323	ePKPdf	PKPdf	18 13 49.4	+1.0
KEST	Kesra	147.42	323	PKPbc	PKPbc	18 13 50.4	-0.4
	comp=Z,6.3nm,0.8s,baz=310,slow=3.7,SNR=4.3						
PBRG	Braganca	148.57	349	ePKPdf	PKPdf	18 13 51.6	+1.6
POLO	Lamas de Olo	149.16	351	ePKPdf	PKPbc	18 13 55.4	+0.2
MVO	Moncorvo	149.24	350	ePKPdf	PKPbc	18 13 55.1	-0.3
PVRL	Vila Real	149.25	351	ePKPdf	PKPbc	18 13 55.3	0.0
PVIS	Viseu	149.82	351	ePKPdf	PKPbc	18 13 56.7	-0.1
ES19	SONSECA Array	149.94	344	ePKPbc	PKPbc	18 13 56.2	-0.9
ESDC	Sonseca Array	149.98	344	PKPbc	PKPbc	18 13 56.8	-0.5
	comp=Z,1.7nm,0.7s,baz=14,slow=2.8,SNR=19						
MTE	Manteigas	150.07	350	ePKPdf	PKPbc	18 13 56.7	-0.7
MTE	Manteigas	150.07	350	ePKPbc	PKPbc	18 13 56.6	-0.9
PCAS	Casmilo, Conde	150.56	351	ePKPdf	PKPdf	18 13 55.4	+2.2
PCBR	Castelo Branco	150.60	350	ePKPdf	PKPbc	18 13 55.9	-2.7
PTOM	Tomar	150.98	351	ePKPdf	PKPbc	18 13 58.9	-0.6
PMRV	Marv??o	150.99	349	ePKPdf	PKPbc	18 13 59.2	-0.4
PMTG	Montargil	151.48	350	ePKPdf	PKPbc	18 14 00.3	-0.4
PNCL	Nicolau / Gran	152.47	351	ePKPdf	PKPbc	18 14 01.9	-1.1
TOA0	Torodi Ar. Sit	164.41	280	ePKPdf	PKPdf	18 14 10.1	-0.9
TOA0				ePKPab	PKPab	18 15 04.3	-1.3
TORD	Torodi Ar. Bea	164.41	280	PKP	PKPdf	18 14 09.4	-1.6
	comp=Z,0.7nm,0.9s,baz=28,slow=3.5,SNR=3.7						
TORD				PKPab	PKPab	18 15 04.2	-1.3
	comp=Z,2.1nm,1.1s,baz=36,slow=3.7,SNR=4.9						
TOA1	Torodi Ar. Sit	164.42	280	ePKPdf	PKPdf	18 14 09.4	-1.6
TOA1				ePKPab	PKPab	18 15 04.2	-1.3

MAN 09 17:57:17.7, 7°.70N×125°.01E, h35^{km}, mb3.6, ML2.3, MS1.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.19	17	eP	Pn	17 57 25.9	+1.3
BUKP				eS	Sn	17 57 31.0	+1.8
CTBH	Cotabato--PC H	0.89	238	⇑iP	Pn	17 57 34.8	+1.0
CTBH				i S	Sn	17 57 46.3	+0.8

IDC 09 18:10:49.3±3.9, 2°.52S×101°.85E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.3/40, mbtmp3.4/5, Error ellipse: s-maj=168.8km s-min=22.5km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.14	121	P	P	18 17 53.8	+0.2
	0.1nm,0.3s,baz=307,slow=8.9,SNR=6.3						
ASAR	Alice Springs	37.45	127	P	P	18 18 04.2	-0.6
	0.3nm,0.6s,baz=305,slow=7.8,SNR=8.2						
SONM	Songino Array	50.31	4	P	P	18 19 49.0	+1.2
	0.5nm,0.5s,baz=184,slow=9.1,SNR=5.9						
MKAR	Makanchi Array	52.05	343	P	P	18 19 59.9	-0.9
	0.2nm,0.6s,baz=146,slow=6.9,SNR=2.7						
ZALV	Zalesovo Beam	58.04	348	P	P	18 20 43.3	-0.6
	0.5nm,0.3s,baz=166,slow=8.7,SNR=3.6						

NNC 09 18:13:33.4±3.8, 38°.66N×71°.54E, h0^{km}, mb3.6, mpv3.1, 6C-2D, Error ellipse: s-maj=31.5km s-min=19.3km az=31.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.04	48	⇓P	Pn	18 14 08.0	-1.2
	11nm,0.4s						
SFK				⇑S	Sb	18 14 37.4	0.0
	18nm,0.4s						
MNAS	Manas	3.89	11	⇑P	Pn	18 14 35.8	+1.2
	3.9nm,0.9s						
MNAS				⇑S	Sn	18 15 22.6	+1.5
	2.8nm,0.5s						
KK31	Karatay Array	4.51	350	⇑Pn	Pn	18 14 44.2	+1.2
	0.9nm,0.4s,baz=167,slow=12,SNR=20						
KK31				⇑Sn	Sn	18 15 36.4	+0.3
	4.9nm,0.8s						
KK31				⇑Lg	Lg	18 15 54.1	
	1.6nm,0.4s						
TKM2	Tokmak 2	5.25	35	⇓Pn	Pn	18 14 54.7	+1.3
	2.9nm,0.8s						

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*IDC **09** 18:13:35.9±1.3, 11°.69S×165°.57E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.9/37, mbtmp3.9/10, ML4.1/2, Error ellipse: s-maj=36.8km s-min=24.5km az=133.0*

*ISCJB **09** 18:13:38.6±0.5, 11°.73S±0°.07×165°.35E±0°.07, h24^{km}, mb4.1/15, Error ellipse: s-maj=11.5km s-min=8.4km az=139.4*

*NEIC **09** 18:13:38.3±0.6, 11°.66S×165°.36E, h10^{km}, mb4.6/8, Error ellipse: s-maj=13.1km s-min=8.7km az=68.0*

ISC 09 18:13:40.2±0.7, 11°.67S±0°.10×165°.4E±0°.1, h24^{km}, n26, σ0^{s}92/28, mb4.1/15, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.81	292	ePn	Pn	18 15 03.4	-1.6
HNR				eSn	Sn	18 16 10.6	-0.4
HNR	Honiara	5.81	292	Pn	Pn	18 15 05.6	+0.6
	5.4nm,0.3s,baz=52,slow=5.5,SNR=4.4						
HNR				Sn	Sn	18 16 10.5	-0.4
	1.4nm,0.3s,baz=45,slow=20,SNR=3.8						
DZM	Mont Dzumac	10.39	175	ePn	Pn	18 16 08.2	+0.3
DZM	Mont Dzumac	10.39	175	Pn	Pn	18 16 08.1	+0.2
	1.2nm,0.3s,baz=178,slow=16,SNR=11						
ONTNC	Ouen Toro	10.62	175	ePn	Pn	18 16 11.4	+0.4
ARMA	Armidale	22.61	212	eP	P	18 18 38.8	-0.7
	24nm,1.4s						
BKZ	Black Stump Fm	29.10	162	eP	P	18 19 39.3	+0.1
	18nm,1.3s						
WRAB	Tennant Creek	30.95	251	eP	P	18 19 56.0	+0.3
	11nm,1.4s						
WB2	Warramunga Arr	30.95	251	eP	P	18 19 55.4	-0.3
WR1	Warramunga Arr	30.96	251	eP	P	18 19 56.0	+0.1
	15nm,1.4s						
WRA	Warramunga Arr	30.96	251	P	P	18 19 56.0	+0.1
	2.4nm,0.9s,baz=79,slow=9.4,SNR=14						
AS31	Alice Springs	32.22	244	eP	P	18 20 05.8	-1.1
	1.0nm,1.2s						
ASAR	Alice Springs	32.22	244	P	P	18 20 06.3	-0.6
	1.2nm,0.9s,baz=74,slow=9.5,SNR=9.8						
FITZ	Fitzroy Crossi	38.90	256	eP	P	18 21 04.3	0.0
	15nm,1.4s						
FITZ	Fitzroy Crossi	38.90	256	P	P	18 21 04.3	0.0
	2.9nm,0.8s,baz=75,slow=8.4,SNR=6.0						
CM01	Chiang Mai Arr	72.03	294	eP	P	18 25 04.4	+1.6
CMAR	Chiang Mai Arr	72.06	294	P	P	18 25 04.7	+1.8
	0.3nm,0.6s,baz=126,slow=4.8,SNR=7.0						
QSPA	South Pole Qui	78.34	180	eP	P	18 25 37.9	-0.6
	27nm,1.8s						
SVW2	Sparrevohn	78.81	18	eP	P	18 25 41.4	+0.6
	98nm,2.0s						
SONA0	Songino Array	78.97	324	eP	P	18 25 43.5	+1.3
SONM	Songino Array	78.97	324	P	P	18 25 43.5	+1.3
	0.2nm,0.7s,baz=131,slow=6.4,SNR=2.3						
IM3	Indian Mountai	83.11	16	eP	P	18 26 02.8	-0.9
ILAR	Eielson Array	84.21	19	P	P	18 26 07.4	-1.9
	0.5nm,0.7s,baz=225,slow=5.3,SNR=5.3						
MK32	Makanchi Array	93.75	317	eP	P	18 26 55.3	+0.1
MKAR	Makanchi Array	93.75	317	P	P	18 26 55.3	+0.1
	0.6nm,0.7s,baz=98,slow=5.2,SNR=7.7						
YKA	Yellowknife Ar	95.68	27	P	P	18 27 02.6	-1.0
	0.2nm,0.8s,baz=268,slow=3.8,SNR=3.7						

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*ISCJB **09** 18:16:32.9±0.6, 18°.42N±0°.06×64°.14W±0°.03, h99^{km}±5^{km}, Error ellipse: s-maj=10.8km s-min=3.2km az=13.7*

*TRN **09** 18:16:33.6, 18°.37N×64°.12W, h81^{km}, MD3.4*

*NEIC **09** 18:16:35.2±0.0, 18°.43N×64°.14W, h87^{km}, MD3.0(RSPR), After RSPR.*

*RSPR **09** 18:16:35.2, 18°.43N×64°.14W, h87^{km}±1^{km}, MD3.0/12*

ISC 09 18:16:33.0±1.5, 18°.46N±0°.07×64°.13W±0°.03, h99^{km}±8^{km}, n59, σ1^{s}33/92, 15C-11D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.33	324	⇑eP	Pn	18 16 48.5	+0.9
ABV	Anegada	0.33	324	eS	Sn	18 16 58.7	+0.1
ABV	Anegada	0.33	324	⇑eP	Pn	18 16 48.5	+0.9
ABV				eS	Sn	18 16 58.7	+0.1
ABVI	Anegada Island	0.33	324	eSdif	Sn	18 16 58.7	+0.1
ABVI	Anegada Island	0.33	324	⇑eP	Pn	18 16 48.5	+0.9
ABVI				eS	Sn	18 16 58.7	+0.1
TBVI	Tortola	0.46	264	⇓eP	Pn	18 16 48.6	+0.2
TBVI				eS	Sn	18 16 59.1	-0.9
TBVI	Tortola	0.46	264	ePn	Pn	18 16 48.6	+0.2
TBVI				eSn	Sn	18 16 59.1	-0.9
TBVI	Tortola	0.46	264	⇓eP	Pn	18 16 48.6	+0.2
TBVI				eS	Sn	18 16 59.1	-0.9
STVI	Saint Thomas	0.79	262	⇓eP	Pn	18 16 51.6	+0.4
STVI				eS	Sn	18 17 04.2	-0.6
STVI	Saint Thomas	0.79	262	⇑eP	Pn	18 16 51.6	+0.4
STVI	Saint Thomas	0.79	262	ePn	Pn	18 16 51.5	+0.4
STVI				eSn	Sn	18 17 04.2	-0.6
STVI	Saint Thomas	0.79	262	⇓eP	Pn	18 16 51.6	+0.4
STVI				eS	Sn	18 17 04.2	-0.6
CDVI	St. Croix	0.93	221	⇓eP	Pn	18 16 53.2	+0.6
CDVI				eS	Sn	18 17 07.3	-0.1
CDVI	St. Croix	0.93	221	⇓eP	Pn	18 16 53.2	+0.6
CDVI	St. Croix	0.93	221	ePn	Pn	18 16 53.2	+0.6
CDVI				eSn	Sn	18 17 06.8	-0.6
CDVI	St. Croix	0.93	221	⇓eP	Pn	18 16 53.2	+0.6
CDVI				eS	Sn	18 17 07.2	-0.2
SMRT	St. Maarten	1.08	112	⇓eP	Pn	18 16 54.7	+0.4
SMRT	St. Maarten	1.08	112	eS	Sn	18 17 09.6	-0.8
SMRT	St. Maarten	1.08	112	ePn	Pn	18 16 54.7	+0.4
SMRT				eSn	Sn	18 17 09.6	-0.8
SMRT	St. Maarten	1.08	112	eP	Pn	18 16 54.7	+0.4
SMRT				eS	Sn	18 17 09.7	-0.8
CUPR	Culebra, Puert	1.10	262	⇓eP	Pn	18 16 55.2	+0.7
CUPR	Culebra, Puert	1.10	262	eS	Sn	18 17 10.6	-0.2
CUPR	Culebra, Puert	1.10	262	ePn	Pn	18 16 55.1	+0.5
CUPR				eSn	Sn	18 17 09.6	-1.2
MTP	Monte Pirata	1.40	255	⇑eP	Pn	18 16 59.1	+1.1
MTP	Monte Pirata	1.40	255	eS	Sn	18 17 17.1	+0.2
MTP	Monte Pirata	1.40	255	ePn	Pn	18 16 59.0	+1.1
MTP				eSn	Sn	18 17 14.6	-2.4
MTP				eSn	Sn	18 17 17.1	+0.2
MTP	Monte Pirata	1.40	255	⇑eP	Pn	18 16 59.1	+1.1
MTP				eS	Sn	18 17 17.1	+0.2
SEUS	St. Eustatius	1.46	131	ePn	Pn	18 16 59.5	+0.8
SEUS				eSn	Sn	18 17 18.0	-0.2
SEUS	St. Eustatius	1.46	131	eP	Pn	18 17 00.1	+1.4
SEUS				eS	Sn	18 17 18.1	-0.1
CBYP	Canovanas	1.65	264	⇓eP	Pn	18 17 02.1	+0.9
CBYP	Canovanas	1.65	264	⇑eP	Pn	18 17 02.1	+0.9
CBYP				eS	Sn	18 17 23.2	+0.6
CBYP	Canovanas	1.65	264	ePn	Pn	18 17 01.8	+0.6
CBYP				eSn	Sn	18 17 23.2	+0.6
CBYP	Canovanas	1.65	264	⇓eP	Pn	18 17 02.1	+0.9
CBYP				eS	Sn	18 17 23.1	+0.6
HUMP	Col San Antoni	1.66	259	⇑eP	Pn	18 17 03.0	+1.7
HUMP				eS	Sn	18 17 23.4	+0.7
HUMP	Col San Antoni	1.66	259	⇑eP	Pn	18 17 02.8	+1.5
HUMP	Col San Antoni	1.66	259	ePn	Pn	18 17 02.9	+1.7
HUMP				eSn	Sn	18 17 20.4	-2.4
HUMP	Col San Antoni	1.66	259	⇑eP	Pn	18 17 02.8	+1.5
HUMP				eS	Sn	18 17 23.2	+0.5
SJG	San Juan	1.95	260	ePn	Pn	18 17 04.4	-0.5
SJG				eSn	Sn	18 17 27.7	-1.6
NEV	Hard Times	1.99	131	eP	Pn	18 17 06.4	+1.0
NEV				eS	Sn	18 17 29.8	-0.3
EMPR	Esperanza - Ma	2.28	271	⇑eP	Pn	18 17 10.6	+1.5
EMPR	Esperanza - Ma	2.28	271	ePn	Pn	18 17 05.7	-3.4
EMPR				eSn	Sn	18 17 29.3	-7.5
EMPR				eS		18 17 37.7	
ICMP	Isla Caja de M	2.35	256	ePn	Pn	18 17 11.2	+1.1
CELP	Cerrillos	2.36	261	⇑eP	Pn	18 17 12.1	+1.9
CELP				eS	Sn	18 17 40.2	+1.4
CELP	Cerrillos	2.36	261	ePn	Pn	18 17 12.1	+1.9
CELP	Cerrillos	2.36	261	⇑eP	Pn	18 17 12.1	+1.9
ANWB	Willy Bob	2.37	109	ePn	Pn	18 17 10.6	+0.2
ANWB	Willy Bob	2.37	109	eP	Pn	18 17 11.2	+0.9
ANWB				eS	Sn	18 17 39.0	0.0
OBIP	Obispado Ponce	2.39	260	ePn	Pn	18 17 10.5	-0.1
MLYT	Lee's Yard	2.54	133	eP	Pn	18 17 13.3	+0.7
MLYT				eS	Sn	18 17 41.3	-1.6
BPA	Boggy Peak	2.58	123	eP	Pn	18 17 14.1	+0.8
BPA				eS	Sn	18 17 44.2	0.0
LSP	Las Mesas	2.82	265	⇑eP	Pn	18 17 18.8	+2.4
LSP	Las Mesas	2.82	265	ePn	Pn	18 17 18.8	+2.4
LSP	Las Mesas	2.82	265	⇑eP	Pn	18 17 18.8	+2.4
AGP	Aguadilla	2.86	269	ePn	Pn	18 17 17.0	+0.1
AGP				eSn	Sn	18 17 49.2	-1.4
MPR	Mayaguez	2.87	265	ePn	Pn	18 17 17.9	+0.9
MPR				eSn	Sn	18 17 50.5	-0.4
FDF	Fort de France	4.68	142	ePn	Pn	18 17 42.2	+0.8
SDDR	Presa de Saban	6.80	275	ePn	Pn	18 18 08.2	-2.1
SDDR				eSn	Sn	18 19 26.6	+0.3
BBGH	Gun Hill	6.88	140	ePn	Pn	18 18 10.0	-1.3
GRTK	Grand Turk	7.25	296	ePn	Pn	18 18 14.8	-1.4

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*ISCJB **09** 18:22:48.5±1.0, 11°.13S±0°.09×165°.80E±0°.10, h10^{km}, mb4.4/10, MS4.0/1, Error ellipse: s-maj=18.1km s-min=6.9km az=137.6*

*NEIC **09** 18:22:49.2±1.1, 10°.90S×165°.92E, h10^{km}, mb4.8/7, Error ellipse: s-maj=24.6km s-min=9.5km az=50.0*

*IDC **09** 18:22:54.9±4.5, 11°.09S×165°.82E, h48^{km}±30^{km}, mb3.4/4, mb1 3.8/6, mb1mx3.4/41, mbtmp3.9/6, ML4.5/2, MS4.1/1, Ms1 4.0/1, ms1mx3.0/17, Error ellipse: s-maj=49.8km s-min=20.7km az=51.0*

ISC 09 18:22:50.0±1.5, 11°.0S±0°.1×165°.9E±0°.1, h10^{km}, n21, σ1^{s}45/23, mb4.5/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.08	285	eP	Pn	18 24 21.0	+1.0
HNR	Honiara	6.08	285	P	Pn	18 24 21.1	+1.1
	30nm,0.3s,baz=137,slow=6.6,SNR=21						
HNR				S	Sn	18 25 29.5	-0.2
	2.5nm,0.3s,baz=37,slow=20,SNR=2.1						
MARNC	Mare, Loyalty	10.58	169	ePn	Pn	18 25 24.1	+2.3
DZM	Mont Dzumac	10.98	177	ePn	Pn	18 25 29.4	+2.0
DZM				eSn	Sn	18 27 28.8	-1.6
DZM	Mont Dzumac	10.98	177	P	Pn	18 25 29.8	+2.4
	1.6nm,0.3s,baz=333,slow=12,SNR=22						
DZM				S	Sn	18 27 28.8	-1.6
	baz=11,slow=4.8,SNR=3.1						
ONTNC	Ouen Toro	11.22	177	ePn	Pn	18 25 33.1	+2.6
PINNC	Pines Island,	11.60	173	ePn	Pn	18 25 35.6	-0.2
BKZ	Black Stump Fm	29.56	163	eP	P	18 28 55.1	0.0
	20nm,1.3s						
STKA	Stephens Creek	30.55	224	LR	LR	18 40 22.8	
	comp=Z,317nm,18.7s,baz=206,slow=34						
BFZ	Birch Farm	30.91	165	eP	P	18 29 06.0	-0.9
	25nm,1.3s						
THZ	Tophouse	31.21	170	eP	P	18 29 09.2	-0.5
	50nm,1.6s						
WRAB	Tennant Creek	31.62	250	eP	P	18 29 12.6	-0.9
	6.9nm,1.4s						
WB2	Warramunga Arr	31.62	250	eP	P	18 29 11.8	-1.7
WR1	Warramunga Arr	31.63	250	eP	P	18 29 12.4	-1.2
	10nm,1.4s						
WRA	Warramunga Arr	31.63	250	P	P	18 29 12.4	-1.2
	0.7nm,0.6s,baz=81,slow=9.1,SNR=9.6						
KHZ	Kahutara	31.96	169	eP	P	18 29 17.5	+1.4
	63nm,1.9s						
ASAR	Alice Springs	32.94	243	P	P	18 29 24.1	-1.0
	0.3nm,0.6s,baz=64,slow=10,SNR=8.8						
FITZ	Fitzroy Crossi	39.53	255	eP	P	18 30 22.1	+0.6
	30nm,1.8s						
FITZ	Fitzroy Crossi	39.53	255	P	P	18 30 21.6	+0.1
	1.3nm,0.8s,baz=74,slow=7.4,SNR=3.0						
MK32	Makanchi Array	93.62	317	eP	P	18 36 05.8	-1.0
MKAR	Makanchi Array	93.62	317	P	P	18 36 05.8	-1.0
	0.2nm,0.6s,baz=91,slow=4.9,SNR=2.4						

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*UCR **09** 18:25:00.3±1.5, 11°.62N×87°.87W, h3^{km}±20^{km}, ML3.5, mb4.5(NEIC)*

*IDC **09** 18:25:01.4±1.7, 12°.18N×87°.43W, h0^{km}, mb3.8/5, mb1 3.9/8, mb1mx3.7/41, mbtmp3.7/8, ML3.0/3, MS3.8/1, Ms1 3.7/1, ms1mx2.8/40, Error ellipse: s-maj=52.2km s-min=23.2km az=39.0*

*ISCJB **09** 18:25:02.3±0.7, 11°.54N±0°.06×87°.85W±0°.04, h48^{km}, mb4.1/10, MS3.8/1, Error ellipse: s-maj=8.6km s-min=4.8km az=23.6*

*NEIC **09** 18:25:05.1±0.8, 11°.85N×87°.66W, h35^{km}, mb4.5/7, Error ellipse: s-maj=17.2km s-min=9.3km az=205.0*

ISC 09 18:25:03.9±0.8, 11°.57N±0°.08×87°.80W±0°.06, h48^{km}, n37, σ1^{s}52/43, mb4.3/10, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	1.33	63	eP	Pn	18 25 25.7	-0.3
CRIN	San Cristobal	1.34	33	eP	Pn	18 25 25.5	-0.8
CRIN				eS	Sn	18 25 43.1	0.0
CNGN	Cerro Negro	1.42	49	eP	Pn	18 25 26.6	-0.8
CNGN				eS	Sn	18 25 47.6	+2.7
MOMN	Momotombo	1.49	56	eP	Pn	18 25 27.4	-0.9
CNCH	Conchagua	1.70	359	eP	Pn	18 25 30.6	-0.7
LCND	La Caada	1.73	357	eP	Pn	18 25 30.1	-1.6
LCND				IAML		18 25 41.1	
	comp=Z,563nm,0.4s						
LCND				eS	Sn	18 25 53.9	+1.3
PACA	Pacayal	1.96	345	eP	Pn	18 25 33.2	-1.6
TECA	Tecapa	2.04	340	eP	Pn	18 25 34.3	-1.6
TECA				eS	Sn	18 26 00.2	0.0
ESTN	Estel	2.07	42	ePn	Pn	18 25 35.6	-0.6
BOAB	BOACO BROADBAN	2.26	67	ePn	Pn	18 25 38.2	-0.6
MATN	Matagalpa	2.28	53	eP	Pn	18 25 38.5	-0.7
LFRS	El Faro	2.39	329	eP	Pn	18 25 39.5	-1.2
TGUH	Tegucigalpa,Un	2.53	12	ePn	Pn	18 25 41.2	-1.2
TGUH	Tegucigalpa,Un	2.53	12	eP	Pn	18 25 41.5	-1.0
JTS	JuntasAbangare	3.07	114	Pn	Pn	18 25 51.4	+1.5
	comp=Z,0.9nm,0.3s,baz=317,slow=19,SNR=2.5						
JTS				Sn	Sn	18 26 26.4	+1.0
	comp=Z,5.2nm,0.3s,baz=3.6,slow=16,SNR=4.3						
ESPN	Las Esperanzas	3.48	79	ePn	Pn	18 25 50.9	-4.7
APG	El Apazote	4.29	323	Pn	Pn	18 26 05.1	-1.8
	comp=Z,0.7nm,0.3s,baz=90,slow=13,SNR=3.9						
CCIG	Comitan	6.30	319	ePn	Pn	18 26 32.1	-2.3
CMIG	Matias Romero	8.79	309	Pn	Pn	18 27 08.7	+0.3
	comp=Z,0.6nm,0.3s,baz=98,slow=7.5,SNR=3.6						
CMIG				Sn	Sn	18 28 47.8	+1.6
	comp=Z,0.2nm,0.3s,baz=49,slow=20,SNR=2.9						
833A	Chaparral WMA,	19.89	329	eP	Pn	18 29 32.6	-0.7
	comp=Z,27nm,0.8s						
LTX	Lajitas	23.05	322	eP	P	18 30 06.9	+1.6
TXAR	Lajitas Array	23.05	322	P	P	18 30 06.9	+1.6
	comp=Z,1.2nm,0.4s,baz=135,slow=9.9,SNR=19						
TX31	Lajitas Ar. Si	23.05	322	eP	P	18 30 06.8	+1.4
MIAR	Mount Ida	23.47	348	eP	P	18 30 09.2	0.0
	comp=Z,8.2nm,0.8s						
ABTX	Abilene, Hawle	23.62	334	eP	P	18 30 10.9	+0.2
	comp=Z,12nm,1.2s						
TKL	Tuckaleechee C	24.26	8	eP	P	18 30 16.6	0.0
	comp=Z,20nm,1.3s						
CCM	Cathedral Cave	26.56	354	eP	P	18 30 36.9	-0.5
	comp=Z,25nm,1.8s						
PDAR	Pinedale Array	36.39	333	P	P	18 32 05.2	+1.3
	comp=Z,0.5nm,0.8s,baz=122,slow=9.7,SNR=4.4						
REDW	Red Top Meadow	37.45	332	eP	P	18 32 14.5	+1.6
	comp=Z,7.1nm,1.1s						
ULM	Lac du Bonnet	39.14	352	P	P	18 32 25.4	-1.3
	comp=Z,2.7nm,0.6s,baz=168,slow=8.9,SNR=6.5						
ULM				LR	LR	18 50 19.3	
	comp=Z,124nm,18.5s,baz=255,slow=39						
SCHQ	Schefferville	46.22	17	eP	P	18 33 22.1	-2.0
	comp=Z,80nm,1.9s						
SCHQ	Schefferville	46.22	17	P	P	18 33 22.9	-1.2
	comp=Z,0.9nm,0.4s,baz=220,slow=13,SNR=5.3						
YKA	Yellowknife Ar	54.37	345	P	P	18 34 25.2	-0.3

	comp=Z,0.3nm,0.7s,baz=140,slow=7.6,SNR=7.2						
ASAR	**Alice Springs**	138.62	247	PKP	PKiKP	18 44 28.4	+0.9
	comp=Z,0.3nm,0.8s,baz=132,slow=1.4,SNR=3.0						
WR1	**Warramunga Arr**	138.69	253	ePKPdf	PKiKP	18 44 30.0	+2.2
WRA	**Warramunga Arr**	138.69	253	PKP	PKiKP	18 44 30.0	+2.2
	comp=Z,0.1nm,0.5s,baz=92,slow=2.6,SNR=4.7						
CMAR	**Chiang Mai Arr**	149.43	347	PKPbc	PKPab	18 44 52.3	-1.1
	comp=Z,1.6nm,0.8s,baz=351,slow=4.0,SNR=16						

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*ISCJB **09** 18:28:02.0±0.6, 24°.02S±0°.04×66°.6W±0°.1, h195^{km}, mb3.2/2, Error ellipse: s-maj=13.6km s-min=5.5km az=166.1*

*IDC **09** 18:28:03.3±3.1, 23°.89S×66°.52W, h192^{km}±30^{km}, mb3.2/2, mb1 3.3/4, mb1mx3.1/29, mbtmp3.5/4, Error ellipse: s-maj=44.7km s-min=29.9km az=116.0*

*SJA **09** 18:28:03.7±0.8, 24°.33S×66°.02W, h275^{km}±17^{km}, ML2.8, MW3.1*

ISC 09 18:28:02.3±0.8**, 24°.08S**±0°.06×**66°.6W**±0°.1**, h195**^{km}**, n11, σ1**^{s}**94**/16**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	2.55	304	P	Pn	18 28 48.7	+1.8
	19nm,0.3s,baz=124,slow=8.9,SNR=293						
LVC				S	Sn	18 29 22.0	+0.5
	15nm,0.3s,baz=75,slow=20,SNR=20						
AHML	**Horco Molle**	2.94	157	iP	Pn	18 28 53.4	+2.4
AHML				IAML		18 28 53.9	
	comp=Z,6.1nm,0.4s						
AHML				eS	Sn	18 29 29.8	+0.6
CYA	**Choya**	4.41	170	iP	Pn	18 29 10.7	+1.6
CYA				IAML		18 29 12.2	
	comp=Z,4.4nm,0.5s						
ACLC	**CERRO LA CRUZ**	5.34	183	iP	Pn	18 29 21.9	+0.9
AGUA	**GUANDACOL**	5.64	197	iP	Pn	18 29 25.7	+0.8
AGUA				iS	Sn	18 30 30.7	+0.5
APLL	**PUNTA DE LOS L**	6.29	179	iP	Pn	18 29 33.9	+0.5
APLL				IAML		18 29 35.0	
	comp=Z,7.9nm,0.2s						
APLL				iS	Sn	18 30 40.3	-5.1
LPAZ	**La Paz**	7.88	349	P	Pn	18 29 53.9	-0.7
	comp=Z,0.3nm,0.3s,baz=178,slow=11,SNR=5.6						
LPAZ				S	Sn	18 31 20.9	-2.8
	comp=Z,0.1nm,0.3s,baz=120,slow=20,SNR=2.0						
TORD	**Torodi Ar. Bea**	76.28	69	P	P	18 39 29.8	-0.2
	comp=Z,0.3nm,0.6s,baz=257,slow=5.8,SNR=2.6						
YKA	**Yellowknife Ar**	94.31	340	P	P	18 40 59.5	+0.5
	comp=Z,0.2nm,0.6s,baz=134,slow=4.4,SNR=4.7						
WRA	**Warramunga Arr**	131.71	207	PKP	PKPdf	18 46 53.0	+0.2
	comp=Z,0.1nm,0.5s,baz=158,slow=1.9,SNR=4.9						
MKAR	**Makanchi Array**	146.37	40	PKPbc	PKPab	18 47 21.6	+0.2
	comp=Z,0.4nm,0.6s,baz=296,slow=2.4,SNR=5.8						

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*SOME **09** 18:32:30.9, 43°.18N×77°.92E, h15^{km}*

*KRNET **09** 18:32:30.8±0.1, 43°.22N×77°.94E, h20^{km}, mb2.6*

*NNC **09** 18:32:30.3±0.2, 43°.20N×77°.93E, h3^{km}±2^{km}, mb2.4, mpv2.6, Error ellipse: s-maj=3.3km s-min=1.3km az=176.0*

ISC 09 18:32:30.3±1.0**, 43°.21N**±0°.02×**77°.93E**±0°.01**, h13**^{km}±9^{km}**, n40, σ0**^{s}**47**/78**, 18C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	**Kuram**	0.33	31	P	Pb	18 32 38.0	-0.2
	2.3nm,0.3s						
KURS				S	Sb	18 32 43.1	-0.4
	16nm,0.4s						
KURS	**Kuram**	0.33	31	⇑eP	Pb	18 32 38.0	-0.2
	baz=32						
KURS				⇑eS	Sb	18 32 43.0	-0.4
	baz=32						
KURS	**Kuram**	0.33	31	⇑eP	Pb	18 32 38.0	-0.2
	3.1nm,0.1s						
KURS				eS	Sb	18 32 43.0	-0.4
	17nm,0.2s						
SATY	**Saty**	0.38	113	P	Pb	18 32 38.8	-0.2
	10nm,0.1s						
SATY				S	Sb	18 32 44.4	-0.3
	62nm,0.2s						
SATY	**Saty**	0.38	113	⇑eP	Pb	18 32 38.7	-0.3
	10nm,0.1s						
SATY				eS	Sb	18 32 44.4	-0.3
	62nm,0.2s						
KOTS	**Kotyrbulak**	0.60	273	P	Pb	18 32 42.6	-0.2
	2.2nm,0.1s						
KOTS				S	Sb	18 32 51.0	-0.2
	12nm,0.1s						
KOTS	**Kotyrbulak**	0.60	273	eP	Pb	18 32 42.6	-0.2
	baz=71						
KOTS				eS	Sb	18 32 51.1	-0.2
	baz=71						
KOTS	**Kotyrbulak**	0.60	273	eP	Pb	18 32 42.6	-0.2
	2.2nm,0.1s						
KOTS				eS	Sb	18 32 51.0	-0.2
	12nm,0.1s						
MDOK	**Medeo**	0.65	267	⇑P	Pg	18 32 43.1	+0.2
MDOK				S	Sg	18 32 52.0	+0.4
	1.3nm,0.2s						
MDOK	**Medeo**	0.65	267	Pg	Pg	18 32 43.2	+0.2
	2.2nm,0.2s						
MDOK				Lg	Lg	18 32 52.0	
	5.8nm,0.1s						
MDOK	**Medeo**	0.65	267	eP	Pg	18 32 43.2	+0.2
	baz=65						
MDOK				⇓iS	Sg	18 32 52.0	+0.4
	baz=65						
MDOK	**Medeo**	0.65	267	eP	Pg	18 32 43.1	+0.2
	2.2nm,0.2s						
MDOK				⇓iS	Sg	18 32 52.0	+0.4
	5.8nm,0.1s						
TNSS	**Tian-Shan**	0.74	257	P	Pg	18 32 45.0	+0.2
	2.5nm,0.1s						
TNSS				S	Sb	18 32 55.2	-0.4
	3.3nm,0.1s						
TNSS	**Tian-Shan**	0.74	257	eP	Pg	18 32 45.0	+0.2
	baz=56						
TNSS				eS	Sb	18 32 55.2	-0.4
	baz=56						
TNSS	**Tian-Shan**	0.74	257	eP	Pg	18 32 45.0	+0.2
	2.5nm,0.1s						
TNSS				eS	Sb	18 32 55.2	-0.4
	3.3nm,0.1s						
UZB	**Uzynbulak**	0.80	94	P	Pg	18 32 45.8	+0.1
	1.3nm,0.1s						
UZB				S	Sg	18 32 56.5	+0.2
	6.9nm,0.1s						
UZB	**Uzynbulak**	0.80	94	eP	Pg	18 32 45.9	+0.1
	baz=95						
UZB				eS	Sg	18 32 56.6	+0.2
	baz=95						
UZB	**Uzynbulak**	0.80	94	eP	Pg	18 32 45.9	+0.1
	1.3nm,0.1s						
UZB				eS	Sg	18 32 56.5	+0.2
	6.9nm,0.1s						
CHKK	**Chushkaly**	0.94	314	P	Pg	18 32 48.4	-0.2
	3.9nm,0.1s						
CHKK				S	Sg	18 33 01.0	+0.1
	18nm,0.3s						
CHKK	**Chushkaly**	0.94	314	eP	Pg	18 32 48.4	-0.2
	baz=13						
CHKK				eS	Sg	18 33 01.0	+0.1
	baz=13						
CHKK	**Chushkaly**	0.94	314	eP	Pg	18 32 48.4	-0.2
	3.9nm,0.1s						
CHKK				eS	Sg	18 33 01.0	+0.1
	18nm,0.3s						
ARXS	**Arharly**	1.01	356	P	Pg	18 32 49.6	-0.2
	3.7nm,0.1s						
ARXS				S	Sg	18 33 03.1	+0.1
	12nm,0.2s						
ARXS	**Arharly**	1.01	356	eP	Pg	18 32 49.6	-0.2
	3.7nm,0.1s						
ARXS				eS	Sg	18 33 03.1	+0.1
	12nm,0.2s						
KTBS	**Karatobe**	1.04	299	P	Pg	18 32 50.0	-0.4
	1.4nm,0.1s						
KTBS				S	Sg	18 33 03.7	-0.3
	9.4nm,0.3s						
KTBS	**Karatobe**	1.04	299	eP	Pg	18 32 50.0	-0.4
	1.4nm,0.1s						
KTBS				eS	Sg	18 33 03.7	-0.3
	9.4nm,0.3s						
PDGK	**Podgornoye**	1.14	83	P	Pb	18 32 52.0	-0.1
	0.4nm,0.1s						
PDGK				S	Sg	18 33 07.1	-0.1
	1.3nm,0.1s						
PDGK	**Podgornoye**	1.14	83	⇓P	Pb	18 32 51.6	-0.4
	1.7nm,0.8s						
PDGK				⇑S	Sb	18 33 07.7	+0.8
	3.1nm,0.9s						
PDGK	**Podgornoye**	1.14	83	⇑iP	Pb	18 32 51.4	-0.7
	baz=84						
PDGK				⇑iS	Sg	18 33 06.3	-1.0
	baz=84						
KDJ	**Kajisay**	1.21	208	⇑iP	Pg	18 32 54.1	+0.5
	baz=7.0						
KDJ				⇑iS	Sn	18 33 10.1	+0.6
	baz=7.0						
KUU	**Kurty**	1.35	301	P	Pb	18 32 55.5	+0.1
	1.0nm,0.1s						
KUU				S	Sn	18 33 13.2	+0.5
	15nm,0.3s						
KUU	**Kurty**	1.35	301	eP	Pb	18 32 55.5	+0.1
	baz=1.0						
KUU				eS	Sn	18 33 13.2	+0.5
	baz=1.0						
KUU	**Kurty**	1.35	301	eP	Pb	18 32 55.5	+0.1
	1.0nm,0.1s						
KUU				eS	Sn	18 33 13.2	+0.5
	15nm,0.3s						
BOOM	**Boomskoye usch**	1.63	245	⇑iP	Pg	18 33 01.2	-0.4
	baz=44						
BOOM				⇑iS	Sg	18 33 22.5	-0.3
	baz=44						
TKM2	**Tokmak 2**	1.74	261	⇑Pn	Pb	18 33 02.8	+0.6
TKM2				⇑Sn	Sg	18 33 25.7	-0.5
	2.0nm,0.7s						
TKM2	**Tokmak 2**	1.74	261	⇑iP	Pb	18 33 02.8	+0.6
	baz=61						
TKM2				⇑iS	Sg	18 33 25.6	-0.6
	baz=61						
DJR	**Jarkent**	1.75	49	P	Pb	18 33 03.1	+0.6
	0.5nm,0.1s						
DJR				S	Sg	18 33 26.2	-0.6
	1.9nm,0.1s						
DJR	**Jarkent**	1.75	49	eP	Pb	18 33 03.1	+0.6
	0.5nm,0.1s						
DJR				eS	Sg	18 33 26.2	-0.6
	1.9nm,0.1s						
KBK	**Karagaybulak**	2.26	257	⇑iP	Pb	18 33 10.1	-1.0
	baz=57						
KBK				⇑iS	Sb	18 33 38.2	-0.9
	baz=57						
KAPS	**Kapalarasan**	2.32	26	Pg	Pb	18 33 13.2	+1.2
	0.4nm,0.2s						
KAPS				Lg	Lg	18 33 43.5	
	2.7nm,0.2s						
KAPS	**Kapalarasan**	2.32	26	eP	Pb	18 33 13.2	+1.2
	0.4nm,0.2s						
KAPS				eS	Sg	18 33 43.5	-1.3
	2.7nm,0.2s						

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*SOF **09** 18:40:37.2, 39°.22N×25°.64E, h2^{km}, MD2.8*

*DDA **09** 18:40:41.9, 39°.63N×25°.48E, h21^{km}±1^{km}, ML3.3*

*ISK **09** 18:40:43.8, 39°.70N×25°.63E, h10^{km}, ML3.1/29*

*THE **09** 18:40:44.7, 39°.71N×25°.67E, h2^{km}±1^{km}, ML2.7/10, Error ellipse: s-maj=1.5km s-min=0.5km az=69.0*

*ATH **09** 18:40:44.1, 39°.70N×25°.61E, h30^{km}±1^{km}, ML2.8/10, Error ellipse: s-maj=1.6km s-min=1.0km az=74.0*

*ISCJB **09** 18:40:44.3±0.4, 39°.70N±0°.01×25°.67E±0°.02, h8^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=2.2km az=29.0*

*BEO **09** 18:40:48.6±1.2, 39°.63N×24°.97E, h10^{km}, ML2.5/3*

ISC 09 18:40:44.4±1.0**, 39°.70N**±0°.01×**25°.62E**±0°.01**, h13**^{km}±8^{km}**, n126, σ1**^{s}**04**/166**, 7C-5D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	0.36	67	PG	Pg	18 40 51.7	-0.1
BOZC	**Bozcaada**	0.36	67	iP	Pb	18 40 52.4	-0.4
BOZC				IAML_P			
	comp=Z,26µm,0.2s						
LIA	**Limnos Island**	0.39	301	P	Pb	18 40 52.8	-0.4
LIA				S	Sb	18 40 58.6	-0.6
LIA				AML	AML	18 40 58.9	
	comp=E,2246µm,0.2s						
LIA				AML	AML	18 40 59.3	
	comp=N,1838µm,0.1s						
LIA	**Limnos Island**	0.39	301	P	Pb	18 40 52.9	-0.4
LIA				S	Sb	18 40 58.8	-0.3
EFSA	**Agios Efstrati**	0.51	252	P	Pb	18 40 55.7	+0.4
EFSA				S	Sb	18 41 02.8	+0.2
EFSA				AML	AML	18 41 04.6	
	comp=E,5498µm,0.2s						
EFSA				AML	AML	18 41 04.6	
	comp=N,4244µm,0.2s						
SIGR	**SIGRI**	0.52	159	PG	Pg	18 40 54.4	-0.2
SIGR				SG	Sb	18 41 02.0	-0.8
SIGR	**SIGRI**	0.52	159	P	Pg	18 40 54.4	-0.2
SIGR				S	Sb	18 41 02.2	-0.6
SIGR				AML	AML	18 41 02.8	
	comp=E,5560µm,0.4s						
SIGR				AML	AML	18 41 02.8	
	comp=N,7878µm,0.6s						
SIGR	**SIGRI**	0.52	159	P	Pg	18 40 54.5	-0.2
SIGR				S	Sg	18 41 01.6	+0.1
GADA	**Gvkgeada**	0.54	24	PG	Pg	18 40 55.1	+0.1
EZN	**Ezine**	0.56	77	PG	Pg	18 40 55.3	-0.1
EZN				SG	Sg	18 41 02.9	+0.1
PRK	**Paraskevi**	0.68	131	P	Pb	18 40 58.6	+0.5
PRK				S	Sb	18 41 07.9	+0.5
PRK				AML	AML	18 41 08.7	
	comp=N,1869µm,0.3s						
PRK				AML	AML	18 41 08.9	
	comp=E,2498µm,0.4s						
PRK	**Paraskevi**	0.68	131	P	Pg	18 40 57.3	-0.3
PRK				S	Sb	18 41 07.0	-0.4
BAYC	**CANAKKALE_Bayr**	0.72	86	iP	Pb	18 40 58.4	-0.4
SMTH	**Samothraki Isl**	0.78	355	P	Pb	18 40 59.7	-0.1
SMTH				S	Sb	18 41 09.9	-0.3
SMTH				AML	AML	18 41 12.3	
	comp=N,1561µm,0.4s						
SMTH				AML	AML	18 41 12.6	
	comp=E,952µm,0.2s						
SMTH	**Samothraki Isl**	0.78	355	P	Pb	18 40 59.8	0.0
SMTH				S	Sb	18 41 10.7	+0.4
AYVA	**Ayvalik**	0.92	115	iP	Pn	18 41 02.5	-0.5
AYVA				iS	Sn	18 41 15.9	-0.2
GELI	**Tayfur-Gelibol**	0.96	43	PG	Pg	18 41 02.3	-0.6
LPK	**Lapseki**	1.11	52	PN	Pb	18 41 05.2	-0.2
ENEZ	**Enez**	1.11	21	PN	Pb	18 41 05.5	-0.1
THAS	**Thassos island**	1.14	323	P	Pb	18 41 05.7	-0.2
THAS				S	Sg	18 41 21.1	-0.1
THAS				AML	AML	18 41 23.6	
	comp=N,970µm,0.3s						
THAS				AML	AML	18 41 24.4	
	comp=E,889µm,0.4s						
THAS	**Thassos island**	1.14	323	P	Pb	18 41 05.6	-0.4
THAS				S	Sn	18 41 22.7	+1.1
PSRA	**Psara**	1.16	182	P	Pb	18 41 05.9	-0.3
PSRA				S	Sn	18 41 22.5	+0.6
SKY	**Skiros Island**	1.17	226	P	Pg	18 41 06.6	-0.2
ERIK	**Erikli-Kesan**	1.19	35	PN	Pb	18 41 06.7	-0.1
ALN	**Alexandroupoli**	1.24	15	PN	Pn	18 41 07.6	+0.1
ALN	**Alexandroupoli**	1.24	15	P	Pn	18 41 07.5	0.0
ALN				S	Sb	18 41 23.6	-0.1
ALN				AML	AML	18 41 25.3	
	comp=N,297µm,0.4s						
ALN				AML	AML	18 41 25.6	
	comp=E,295µm,0.5s						
ALN	**Alexandroupoli**	1.24	15	P	Pb	18 41 07.7	0.0
ALN				S	Sg	18 41 24.2	-0.3
FOCM	**Foa**	1.31	138	PN	Pn	18 41 08.4	0.0
KRBN	**Karaburun**	1.32	146	PN	Pn	18 41 08.4	-0.2
CHOS	**Chios island**	1.35	165	PN	Pn	18 41 08.9	-0.2
CHOS	**Chios island**	1.35	165	P	Pn	18 41 09.0	-0.2
CHOS				S	Sb	18 41 26.1	-0.8
CHOS				AML	AML	18 41 29.4	
	comp=N,868µm,0.5s						
CHOS				AML	AML	18 41 31.2	
	comp=E,1473µm,0.5s						
CHOS	**Chios island**	1.35	165	P	Pn	18 41 09.0	-0.2
CHOS				S	Sg	18 41 28.9	+0.9
KESN	**Edirne-Kesan**	1.39	35	iP	Pg	18 41 10.7	-0.5
KESN				IAML_P			
	comp=Z,1µm,0.2s						
OUR	**Ouranopolis**	1.41	297	P	Pn	18 41 09.6	-0.2
OUR	**Ouranopolis**	1.41	297	P	Pg	18 41 11.1	-0.4
OUR				S	Sg	18 41 30.7	+0.9
AOS	**Alonnisos**	1.45	249	PN	Pn	18 41 09.9	-0.4
AOS	**Alonnisos**	1.45	249	P	Pn	18 41 09.8	-0.5
AOS				S	Sn	18 41 28.6	-0.5
AOS				AML	AML	18 41 33.8	
	comp=N,592µm,0.3s						
AOS				AML	AML	18 41 34.0	
	comp=E,555µm,0.4s						
AOS	**Alonnisos**	1.45	249	P	Pg	18 41 12.0	-0.2
AOS				S	Sg	18 41 33.0	+2.1
RDO	**Rodhopi**	1.45	358	PN	Pn	18 41 10.2	-0.2
RDO	**Rodhopi**	1.45	358	P	Pn	18 41 10.3	0.0
RDO	**Rodhopi**	1.45	358	P	Pn	18 41 10.4	0.0
KRBG	**Karabiga-Canak**	1.47	61	PN	Pn	18 41 10.8	+0.2
PAIG	**Paliouri**	1.51	279	P	Pn	18 41 10.6	-0.6
PAIG				S	Sn	18 41 29.7	-1.1
PAIG				AML	AML	18 41 36.2	
	comp=N,288µm,0.5s						
PAIG				AML	AML	18 41 36.5	
	comp=E,162µm,0.3s						
PAIG	**Paliouri**	1.51	279	P	Pb	18 41 12.2	-0.1
PAIG				S	Sg	18 41 34.7	+1.7
URLA	**Izmir**	1.54	150	PN	Pn	18 41 11.4	-0.2
URLA	**Izmir**	1.54	150	iP	Pn	18 41 11.6	0.0
URLA				IAML_P			
	comp=Z,614nm,0.2s						
KAVA	**Kavala**	1.55	327	P	Pn	18 41 11.9	+0.2
KAVA	**Kavala**	1.55	327	P	Pn	18 41 11.9	+0.2
KAVA				S	Sg	18 41 34.0	-0.2
RKY	**Sarkoy-Tekirda**	1.55	50	PN	Pn	18 41 12.3	+0.5
ZEY	**zmir**	1.61	154	iP	Pn	18 41 11.4	-1.2
ZEY				IAML_P			
	comp=Z,320nm,0.1s						
GONE	**Gonen-Balikesi**	1.63	77	PN	Pn	18 41 13.4	+0.6
STEP	**BALIKESIR_Sava**	1.66	100	iP	Pb	18 41 14.9	+0.1
STEP				IAML_P			
	comp=Z,2µm,0.1s						
BLCB	**Balcova**	1.72	139	PN	Pn	18 41 14.5	+0.5
SKIA	**Skiathos**	1.75	253	P	Pn	18 41 15.0	+0.5
SKIA	**Skiathos**	1.75	253	P	Pb	18 41 16.0	-0.4
SKIA				S	Sg	18 41 39.8	-0.9
PLG	**Polygyros**	1.80	293	P	Pn	18 41 15.5	+0.3
PLG	**Polygyros**	1.80	293	P	Pb	18 41 17.3	0.0
PLG				S	Sb	18 41 40.2	+0.4
EREA	**Eretria**	1.83	226	P	Pn	18 41 14.9	-0.7
EREA	**Eretria**	1.83	226	P	Pn	18 41 14.9	-0.7
EDC	**Edincik**	1.84	69	PN	Pn	18 41 16.0	+0.2
MRKA	**Markates**	1.86	239	P	Pg	18 41 19.9	-0.2
MRKA				S	Sb	18 41 41.5	-0.1
AKHS	**Akhisar**	1.89	115	iP	Pn	18 41 17.1	+0.6
AKHS				IAML_P			
	comp=Z,2µm,0.1s						
NEO	**Neokhori**	1.89	259	P	Pb	18 41 18.1	-0.8
NEO				S	Sg	18 41 44.7	-0.6
XOR	**Xorichti**	1.91	261	P	Pn	18 41 17.4	+0.7
XOR				S	Sg	18 41 44.4	-1.3
SMIA	**Simia**	2.04	247	P	Pn	18 41 19.5	+1.0
SMIA				S	Sb	18 41 46.9	+0.2
SOH	**Sokhos**	2.06	304	P	Pn	18 41 19.2	+0.3
SOH				S	Sb	18 41 47.0	-0.4
FYTO	**Fytoko, Volos**	2.09	263	P	Pb	18 41 21.5	-0.7
FYTO				S	Sb	18 41 49.4	+1.3
SRS	**Serrai**	2.10	313	ePn	Pn	18 41 19.3	0.0
SRS				eSn	Sn	18 41 42.5	-2.8
SRS	**Serrai**	2.10	313	P	Pn	18 41 20.9	+1.6
SRS				S	Sb	18 41 47.5	-0.9
RZN	**Rozhen**	2.10	341	P	Pn	18 41 20.1	+0.6
NVR	**Nevrokopi**	2.12	322	P	Pn	18 41 19.5	-0.2
NVR	**Nevrokopi**	2.12	322	P	Pn	18 41 20.4	+0.7
NVR				S	Sb	18 41 48.2	-0.9
HORT	**Hortiatis**	2.13	296	P	Pn	18 41 20.2	+0.4
CRLT	**Corlu**	2.16	48	PN	Pn	18 41 20.6	+0.5
KCTX	**Karacabey (Bur**	2.18	74	PN	Pn	18 41 20.6	+0.2
SMG	**Samos**	2.20	154	P	Pb	18 41 22.4	-1.7
DURS	**Dursunbey**	2.21	92	iP	Pn	18 41 21.3	+0.4
DURS				iS	Sn	18 41 48.0	-0.2
DURS				IAML_P			
	comp=Z,633nm,0.1s						
ATHU	**Athens Univers**	2.25	220	P	Pn	18 41 22.8	+1.5
ATAL	**Atalanti**	2.25	244	P	Pn	18 41 22.7	+1.3
EDRB	**Edirne**	2.31	21	PN	Pn	18 41 22.9	+0.7
DIM	**Dimitrovgrad**	2.35	358	eP	Pb	18 41 25.1	-1.6
GCAM	**G?zelcaml?**	2.36	147	PN	Pn	18 41 23.6	+0.7
MMB	**Musomiste**	2.37	323	P	Pn	18 41 23.3	+0.2
AYDB	**Zeytinkoy-Aydi**	2.49	134	PN	Pn	18 41 25.4	+0.6
SLVT	**Silivri**	2.50	51	PN	Pn	18 41 25.6	+0.8
PLD	**Plovdiv**	2.50	344	ePn	Pb	18 41 28.4	-0.8
PLD				eSn	Sb	18 41 59.8	-0.2
KNT	**Kendrikon**	2.54	306	P	Pn	18 41 26.2	+0.8
KNT	**Kendrikon**	2.54	306	P	Pn	18 41 26.4	+1.0
KNT				S	Sb	18 42 00.1	-0.9
MDNY	**Mudanya-Bursa**	2.60	74	PN	Pn	18 41 27.0	+0.9
APE	**Apeiranthos**	2.63	182	⇑iP	Pn	18 41 27.9	+1.3
APE	**Apeiranthos**	2.63	182	S	Sn	18 41 58.6	+0.2
ARMT	**Armutlu**	2.63	70	PN	Pn	18 41 27.0	+0.3
AGG	**Agios Georgios**	2.64	256	P	Pn	18 41 27.7	+1.0
KULA	**Kula-Manisa**	2.65	116	PN	Pn	18 41 27.7	+0.8
LTK	**Loutraki**	2.66	232	P	Pn	18 41 28.6	+1.6
SBT5	**Esenkoy-Cinarc**	2.67	69	PN	Pn	18 41 27.7	+0.6
CTKS	**Kestanelik-??a**	2.69	54	PN	Pn	18 41 27.9	+0.5
CTYL	**Yalikoy Yolu**	2.70	48	PN	Pn	18 41 27.8	+0.2
DSF	**Desfina**	2.73	243	P	Pn	18 41 29.0	+1.0
GRG	**Griva**	2.76	298	P	Pn	18 41 29.8	+1.3
BGKT	**Bogazkoy**	2.83	57	PN	Pn	18 41 29.9	+0.6
VAY	**Valandovo**	2.83	306	ePn	Pg	18 41 38.5	-0.2
AMGA	**Amorgos Island**	2.87	176	P	Pn	18 41 31.6	+1.7
DID	**Didima**	2.88	221	P	Pn	18 41 31.0	+1.0
BUY	**Buyukada**	2.92	66	iP	Pn	18 41 31.1	+0.6
BUY				IAML_P			
	comp=Z,377nm,0.1s						
PGB	**Panagyurishte**	3.05	339	P	Pn	18 41 33.0	+0.5
ANX	**Ano Chora**	3.08	250	P	Pn	18 41 33.6	+0.7
STIP	**Stip**	3.28	308	ePn	Pn	18 41 35.5	-0.1
VTS	**Vitosha**	3.42	329	ePn	Pn	18 41 40.5	+2.9
VTS				eSn	Sn	18 42 18.4	+0.4
VTS	**Vitosha**	3.42	329	⇓iP	Pb	18 41 41.7	-3.2
VTS	**Vitosha**	3.42	329	S	Sb	18 42 25.4	-1.0
VTS	**Vitosha**	3.42	329	P	Pn	18 41 40.8	+3.2
MPEP	**Malo Peshtene**	3.92	340	P	Pn	18 41 45.8	+1.5
ZAPS	**Zavoj**	4.22	329	ePn	Pn	18 41 50.5	+2.0
BARS	**Barje**	4.23	319	ePn	Pn	18 41 49.7	+1.0
BOVS	**Bovan**	4.91	325	ePn	Pn	18 41 59.4	+1.5
TIRR	**Tirgusor**	5.19	23	⇑iP	Pn	18 42 02.4	+0.6
TLB	**Topalu**	5.21	19	⇑iP	Pn	18 42 02.6	+0.6
VOIR		5.75	356	⇓iP	Pn	18 42 13.0	+3.4
CFR	**Carcaliu**	5.79	18	⇑iP	Pn	18 42 10.9	+1.0
MLR	**Muntele Rosu**	5.79	2	⇓iP	Pn	18 42 13.6	+3.4
GZR	**Gura Zlata**	6.07	341	⇑iP	Pn	18 42 14.5	+0.6
PLOR	**Plostina**	6.20	7	⇓iP	Pn	18 42 18.2	+2.6
VRI	**Vrincioaia**	6.22	7	⇑iP	Pn	18 42 18.5	+2.6
OZUR		6.40	1	⇓iP	Pn	18 42 21.3	+2.9
BZS	**Buzias**	6.61	335	⇑iP	Pn	18 42 25.0	+3.7

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*ISCJB **09** 18:56:09.0±0.4, 12°.57N±0°.04×88°.06W±0°.02, h71^{km}±2^{km}, mb4.5/72, Error ellipse: s-maj=7.4km s-min=2.9km az=24.2*

*UCR **09** 18:56:09.7±1.5, 12°.57N×88°.10W, h44^{km}±35^{km}, MD4.0, ML4.3, mb4.5(NEIC)*

*IDC **09** 18:56:10.8±2.2, 12°.74N×87°.88W, h75^{km}±19^{km}, mb3.8/9, mb1 4.1/12, mb1mx3.7/40, mbtmp4.1/12, Error ellipse: s-maj=32.0km s-min=20.5km az=38.0*

*NEIC **09** 18:56:10.1±0.6, 12°.49N×87°.99W, h76^{km}±5^{km}, mb4.5/69, MD4.4(SNET), Error ellipse: s-maj=8.5km s-min=5.3km az=208.0*

NEIC Felt [I] at San Miguel, El Salvador.

ISC 09 18:56:09.4±1.0**, 12°.57N**±0°.06×**88°.08W**±0°.04**, h67**^{km}±8^{km}**, n146, σ1**^{s}**15**/171**, mb4.5**/72**, 4D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	0.75	19	eP	Pn	18 56 25.1	+0.3
CNCH				eS	Sn	18 56 35.6	-0.6
LCND	**La Caada**	0.76	14	eP	Pn	18 56 24.3	-0.6
LCND				eS	Sn	18 56 35.4	-0.9
LCND				IAML		18 56 38.7	
	comp=Z,17µm,0.3s						
LCY	**Lacayo**	0.88	346	eP	Pn	18 56 26.0	-0.5
VSM	**San Miguel**	0.88	347	eP	Pn	18 56 26.2	-0.4

BLLM	**Bellamira**	**0.89**	**350**	*e*P	**Pn**	**18 56 26.1**	**-0.4**
PACA	**Pacayal**	**0.93**	**345**	*e*P	**Pn**	**18 56 26.6**	**-0.4**
PACA				*e*S	**Sn**	**18 56 39.6**	**-0.6**
TECA	**Tecapa**	**1.01**	**336**	*i* P	**Pn**	**18 56 27.7**	**-0.5**
CRIN	**San Cristobal**	**1.01**	**82**	⇓*e*P	**Pn**	**18 56 28.3**	**+0.3**
CRIN				*e*S	**Sn**	**18 56 42.5**	**+0.7**
UESV	**Ojushtada**	**1.07**	**320**	*e*P	**Pn**	**18 56 31.3**	**+2.6**
UESV				*e*S	**Sn**	**18 56 47.3**	**+4.3**
CAHU	**Cacacuatique**	**1.21**	**354**	*e*P	**Pn**	**18 56 30.9**	**+0.2**
CAHU				*e*S	**Sn**	**18 56 47.5**	**+1.0**
SNVI	**San Vicente**	**1.28**	**325**	*e*P	**Pn**	**18 56 31.3**	**-0.3**
CNGN	**Cerro Negro**	**1.35**	**93**	⇓*e*P	**Pn**	**18 56 32.2**	**-0.1**
PAVA	**Las Pavas**	**1.42**	**324**	*e*P	**Pn**	**18 56 33.4**	**+0.1**
PAVA				*e*S	**Sn**	**18 56 51.3**	**0.0**
LFRS	**El Faro**	**1.42**	**318**	*e*P	**Pn**	**18 56 33.1**	**-0.3**
VICT	**Victoria**	**1.49**	**339**	*e*P	**Pn**	**18 56 34.3**	**0.0**
VICT				*e*S	**Sn**	**18 56 53.3**	**+0.3**
VICT				IAML		18 56 58.3	
	comp=Z,1µm,0.3s						
LBRS	**Las Brisas**	**1.50**	**321**	*e*P	**Pn**	**18 56 34.6**	**+0.2**
COPN	**Copaltepe**	**1.50**	**105**	*e*P	**Pn**	**18 56 34.0**	**-0.3**
MOMN	**Momotombo**	**1.51**	**96**	*e*P	**Pn**	**18 56 34.3**	**-0.2**
LFU	**La Fuente**	**1.55**	**320**	*e*P	**Pn**	**18 56 35.2**	**+0.2**
LFU				*e*S	**Sn**	**18 56 53.5**	**-0.9**
UDBS	**Soyapango**	**1.56**	**318**	*e*P	**Pn**	**18 56 35.5**	**+0.3**
UDBS				*e*S	**Sn**	**18 56 53.9**	**-0.7**
OPAM	**San Salvador**	**1.58**	**316**	*e*P	**Pn**	**18 56 35.6**	**+0.1**
OPAM				*e*S	**Sn**	**18 56 54.7**	**-0.5**
SNET	**Serv Nac Est T**	**1.58**	**315**	*e*P	**Pn**	**18 56 35.5**	**-0.1**
SNET				*e*S	**Sn**	**18 56 54.3**	**-0.9**
BOQS	**Boqueron**	**1.65**	**315**	*e*P	**Pn**	**18 56 36.5**	**0.0**
BOQS				*e*S	**Sn**	**18 56 56.7**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.68**	**28**	*e*Pn	**Pn**	**18 56 37.5**	**+0.8**
TGUH				*e*Sn	**Sn**	**18 56 56.2**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.68**	**28**	*e*P	**Pn**	**18 56 37.5**	**+0.8**
BRAN	**Las Pilas**	**1.69**	**85**	*e*P	**Pn**	**18 56 37.9**	**+1.0**
BRAN				*e*S	**Sn**	**18 56 59.3**	**+1.6**
ESTN	**Estel**	**1.75**	**72**	*e*Pn	**Pn**	**18 56 38.1**	**+0.3**
ESTN				*e*Sn	**Sn**	**18 56 56.7**	**-2.5**
ESTN	**Estel**	**1.75**	**72**	⇓*e*P	**Pn**	**18 56 38.2**	**+0.5**
ESTN				*e*S	**Sn**	**18 57 00.2**	**+1.0**
CEDA	**San Andres**	**1.78**	**314**	*e*P	**Pn**	**18 56 38.4**	**+0.3**
CEDA				*e*S	**Sn**	**18 56 59.4**	**-0.4**
MGAN	**Managua**	**1.84**	**103**	*e*P	**Pn**	**18 56 38.6**	**-0.2**
CEVE	**Cerro Verde**	**1.96**	**310**	*e*P	**Pn**	**18 56 41.1**	**+0.4**
CEVE				*e*S	**Sn**	**18 57 04.9**	**+0.4**
SBLS	**San Blas**	**1.97**	**310**	*e*P	**Pn**	**18 56 41.2**	**+0.4**
RTR	**El Retiro**	**2.02**	**311**	*e*P	**Pn**	**18 56 42.2**	**+0.7**
MATN	**Matagalpa**	**2.13**	**80**	⇓*i*P	**Pn**	**18 56 43.0**	**+0.1**
MATN				*e*S	**Sn**	**18 57 08.4**	**-0.1**
MTO3	**Montecristo**	**2.21**	**326**	*e*P	**Pn**	**18 56 44.3**	**+0.2**
BOAB	**BOACO BROADBAN**	**2.36**	**93**	*e*Pn	**Pn**	**18 56 45.7**	**-0.2**
BOAB	**BOACO BROADBAN**	**2.36**	**93**	*e*P	**Pn**	**18 56 45.7**	**-0.2**
IXG	**Ixpaco**	**2.81**	**305**	*e*P	**Pn**	**18 56 53.5**	**+1.3**
IXG				*e*S	**Sn**	**18 57 24.9**	**-0.2**
ACON	**Acoyapa**	**2.90**	**101**	*e*P	**Pn**	**18 56 52.9**	**-0.4**
NBG	**Las Nubes**	**2.98**	**313**	*e*P	**Pn**	**18 56 56.0**	**+1.3**
APG	**El Apazote**	**3.35**	**317**	P	**Pn**	**18 57 00.8**	**+1.1**
	comp=Z,2.4nm,0.3s,baz=82,slow=14,SNR=12						
ESPN	**Las Esperanzas**	**3.71**	**95**	*e*Pn	**Pn**	**18 57 04.1**	**-0.2**
ESPN	**Las Esperanzas**	**3.71**	**95**	*e*P	**Pn**	**18 57 05.0**	**+0.7**
JTS	**JuntasAbangare**	**3.81**	**126**	*e*Pn	**Pn**	**18 57 06.0**	**+0.3**
JTS				S	**Sn**	**18 57 49.5**	**+0.2**
JTS	**JuntasAbangare**	**3.81**	**126**	P	**Pn**	**18 57 06.9**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=45,slow=2.5,SNR=9.1						
JTS				S	**Sn**	**18 57 49.5**	**+0.2**
	comp=Z,2.1nm,0.3s,baz=338,slow=19,SNR=4.6						
HDC	**Heredia**	**4.65**	**123**	*e*Pn	**Pn**	**18 57 14.8**	**-2.5**
CCIG	**Comitan**	**5.39**	**314**	*e*Pn	**Pn**	**18 57 28.4**	**+0.9**
TEIG	**Tepich**	**7.62**	**359**	*e*Pn	**Pn**	**18 58 00.6**	**+2.8**
CMIG	**Matias Romero**	**7.97**	**305**	P	**Pn**	**18 58 04.0**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=159,slow=8.6,SNR=14						
CMIG				S	**Sn**	**18 59 28.7**	**-2.6**
	comp=Z,0.6nm,0.3s,baz=246,slow=20,SNR=2.6						
LNIG	**Linares**	**16.32**	**320**	*e*P	**P**	**18 59 57.8**	**+1.5**
	comp=Z,11nm,1.2s						
152A	**Waverly Hall**	**20.25**	**8**	*e*P	Pn	19 00 41.1	-0.6
	comp=Z,12nm,0.7s						
LRAL	**Lakeview Retre**	**20.40**	**3**	*e*P	Pn	19 00 43.0	-0.6
	comp=Z,17nm,1.2s						
Z50A	**Ashland**	**20.69**	**5**	*e*P	**P**	**19 00 44.7**	**+0.6**
	comp=Z,12nm,1.0s						
Z41A	**Richland Creek**	**21.05**	**349**	*e*P	**P**	**19 00 48.6**	**+0.8**
	comp=Z,15nm,0.6s						
GOGA	**Godfrey**	**21.17**	**11**	*e*P	**P**	**19 00 51.1**	**+1.8**
	comp=Z,53nm,1.8s						
Y49A	**Blount Mountai**	**21.25**	**4**	*e*P	**P**	**19 00 49.8**	**-0.2**
	comp=Z,5.8nm,0.8s						
Y52A	**Lilburn**	**21.52**	**9**	*e*P	**P**	**19 00 54.4**	**+1.5**
	comp=Z,15nm,1.1s						
TXAR	**Lajitas Array**	**22.10**	**321**	P	**P**	**19 01 00.7**	**+1.4**
	comp=Z,7.0nm,0.8s,baz=139,slow=10,SNR=50						
LTX	**Lajitas**	**22.10**	**321**	*e*P	**P**	**19 01 00.7**	**+1.4**
TX31	**Lajitas Ar. Si**	**22.10**	**321**	*e*P	**P**	**19 01 00.9**	**+1.6**
HODGE	**Hodges**	**22.21**	**13**	*e*P	**P**	**19 01 02.6**	**+2.2**
X40A	**Basin Creek Fa**	**22.25**	**350**	*e*P	**P**	**19 01 01.7**	**+0.9**
	comp=Z,19nm,1.8s						
MTP	**Monte Pirata**	**22.40**	**73**	*e*P	**P**	**19 01 02.9**	**+0.4**
	comp=Z,43nm,1.5s						
MIAR	**Mount Ida**	**22.45**	**348**	*e*P	**P**	**19 01 03.9**	**+1.0**
	comp=Z,13nm,0.8s						
ABTX	**Abilene, Hawle**	**22.61**	**334**	*e*P	**P**	**19 01 04.5**	**-0.2**
	comp=Z,8.5nm,1.0s						
W50A	**Signal Mountai**	**22.68**	**6**	*e*P	**P**	**19 01 06.3**	**+0.9**
	comp=Z,55nm,1.8s						
BG3	**Lake Jocassee**	**22.81**	**11**	*e*P	**P**	**19 01 07.8**	**+1.0**
	comp=Z,9.9nm,0.7s						
W41B	**Gary Mavity, V**	**22.82**	**351**	*e*P	**P**	**19 01 07.7**	**+0.9**
	comp=Z,11nm,1.2s						
PAULI	**Pauline**	**22.88**	**13**	*e*P	**P**	**19 01 08.6**	**+1.2**
WHAR	**Wooly Hollow**	**22.94**	**351**	*e*P	**P**	**19 01 08.6**	**+0.5**
	comp=Z,56nm,1.9s						
STVI	**Saint Thomas**	**23.01**	**73**	*e*P	**P**	**19 01 08.4**	**-0.4**
	comp=Z,24nm,1.0s						
CPCT	**Cooper Cave**	**23.01**	**7**	*e*P	**P**	**19 01 09.5**	**+0.8**
	comp=Z,20nm,1.6s						
W39A	**Magazine**	**23.12**	**348**	*e*P	**P**	**19 01 11.4**	**+1.6**
	comp=Z,14nm,1.3s						
KMSC	**Kings Mountain**	**23.29**	**14**	*e*P	**P**	**19 01 12.1**	**+0.6**
	comp=Z,9.4nm,0.6s						
TKL	**Tuckaleechee C**	**23.32**	**9**	*e*P	**P**	**19 01 12.6**	**+0.9**
	comp=Z,69nm,1.8s						
TKL	**Tuckaleechee C**	**23.32**	**9**	P	**P**	**19 01 11.6**	**-0.2**
	comp=Z,8.8nm,0.8s,baz=187,slow=8.1,SNR=7.7						
V53A	**Saluda**	**23.49**	**11**	*e*P	**P**	**19 01 14.6**	**+1.2**
	comp=Z,14nm,1.0s						
WMOK	**Wichita Mounta**	**24.12**	**338**	*e*P	**P**	**19 01 20.3**	**+1.3**
	comp=Z,8.0nm,1.5s						
HHAR	**Hobbs**	**24.20**	**348**	*e*P	**P**	**19 01 21.3**	**+1.6**
PBMO	**Poplar Bluff**	**24.20**	**355**	*e*P	**P**	**19 01 19.6**	**-0.1**
	comp=Z,6.5nm,0.6s						
TZTN	**Tazewell**	**24.22**	**9**	*e*P	**P**	**19 01 20.1**	**+0.2**
	comp=Z,16nm,1.2s						
TUL1	**Leonard**	**24.26**	**345**	*e*P	**P**	**19 01 22.1**	**+1.9**
	comp=Z,10nm,0.8s						
T42A	**Van Buren**	**24.51**	**354**	*e*P	**P**	**19 01 22.0**	**-0.5**
	comp=Z,5.0nm,1.0s						
T49A	**Edmonton**	**24.54**	**5**	*e*P	**P**	**19 01 22.3**	**-0.5**
	comp=Z,36nm,1.9s						
MSTX	**Muleshoe**	**25.16**	**330**	*e*P	**P**	**19 01 29.2**	**+0.5**
	comp=Z,13nm,0.8s						
CCM	**Cathedral Cave**	**25.54**	**354**	*e*P	**P**	**19 01 31.6**	**-0.2**
	comp=Z,65nm,2.0s						
WCI	**Wyandotte Cave**	**25.61**	**3**	*e*P	**P**	**19 01 32.0**	**-0.4**
	comp=Z,9.5nm,0.8s						
Q51A	**Peebles**	**26.69**	**8**	*e*P	**P**	**19 01 42.1**	**-0.1**
	comp=Z,19nm,0.6s						
P53A	**Whipple**	**27.46**	**11**	*e*P	**P**	**19 01 48.9**	**-0.3**
	comp=Z,72nm,1.7s						
LENM	**Lemitar**	**27.53**	**324**	*e*P	**P**	**19 01 50.0**	**-0.1**
N54A	**Moraine State**	**29.16**	**13**	*e*P	**P**	**19 02 02.5**	**-1.8**
	comp=Z,46nm,1.6s						
SSPA	**Standing Stone**	**29.36**	**16**	*e*P	**P**	**19 02 05.2**	**-0.8**
	comp=Z,64nm,1.8s						
M54A	**Oil Creek Stat**	**29.76**	**13**	*e*P	**P**	**19 02 09.7**	**+0.1**
	comp=Z,61nm,1.5s						
N59A	**State Game Lan**	**30.24**	**19**	*e*P	**P**	**19 02 14.9**	**+1.1**
	comp=Z,67nm,1.7s						
ERPA	**Erie**	**30.27**	**12**	*e*P	**P**	**19 02 15.7**	**+1.6**
	comp=Z,30nm,1.4s						
ODNJ	**Ogdensburg**	**30.77**	**20**	*e*P	**P**	**19 02 18.9**	**+0.4**
	comp=Z,111nm,2.0s						
I42A	**Draeger Farm,**	**31.22**	**359**	*e*P	**P**	**19 02 21.5**	**-1.0**
	comp=Z,59nm,1.8s						
I39A	**Houston**	**31.32**	**355**	*e*P	**P**	**19 02 22.1**	**-1.2**
	comp=Z,49nm,1.8s						
PV03	**Paradox Valley**	**31.57**	**328**	*e*P	**P**	**19 02 27.0**	**+1.2**
	comp=Z,3.9nm,0.8s						
PV12	**Saucer Basin,**	**31.59**	**328**	*e*P	**P**	**19 02 26.5**	**+0.5**
	comp=Z,6.9nm,0.6s						
PV11	**David Mesa, Pa**	**31.62**	**328**	*e*P	**P**	**19 02 27.4**	**+1.2**
	comp=Z,34nm,1.7s						
PV17	**East Wray Mesa**	**31.65**	**328**	*e*P	**P**	**19 02 27.2**	**+0.7**
	comp=Z,8.0nm,0.9s						
PV16	**Nyswonger Mesa**	**31.65**	**328**	*e*P	**P**	**19 02 27.2**	**+0.6**
	comp=Z,18nm,2.0s						
PV20	**West Nyswonger**	**31.70**	**328**	*e*P	**P**	**19 02 28.8**	**+1.9**
	comp=Z,4.7nm,0.8s						
PV04	**Paradox Valley**	**31.70**	**328**	*e*P	**P**	**19 02 28.6**	**+1.6**
	comp=Z,24nm,1.7s						
PV10	**Paradox Valley**	**31.76**	**328**	*e*P	**P**	**19 02 28.5**	**+1.0**
	comp=Z,42nm,1.7s						
G43A	**Wallace**	**32.58**	**1**	*e*P	**P**	**19 02 33.0**	**-1.4**
	comp=Z,18nm,1.1s						
SADO	**Sadowa**	**32.99**	**12**	*e*P	**P**	**19 02 37.1**	**-0.8**
	comp=Z,99nm,1.9s						
SADO	**Sadowa**	**32.99**	**12**	P	**P**	**19 02 36.8**	**-1.2**
	comp=Z,3.0nm,0.4s,baz=219,slow=10,SNR=11						
TCRU	**Three Creeks R**	**33.79**	**324**	*e*P	**P**	**19 02 42.8**	**-2.4**
	comp=Z,8.8nm,0.4s						
TCUT	**Toone Canyon**	**35.02**	**329**	*e*P	**P**	**19 02 58.1**	**+2.2**
	comp=Z,7.1nm,0.6s						
PD31	**Pinedale Array**	**35.38**	**332**	*e*P	**P**	**19 02 59.2**	**+0.2**
PDAR	**Pinedale Array**	**35.38**	**332**	*e*P	**P**	**19 02 58.9**	**-0.1**
PDAR				PcP	**PcP**	**19 05 27.7**	**-0.1**
PDAR	**Pinedale Array**	**35.38**	**332**	P	**P**	**19 02 59.7**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=114,slow=9.0,SNR=10						
PDAR				PcP	**PcP**	**19 05 27.7**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=139,slow=3.3,SNR=2.1						
HWUT	**Hardware Ranch**	**35.46**	**329**	*e*P	**P**	**19 02 58.8**	**-0.8**
	comp=Z,4.1nm,0.7s						
REDW	**Red Top Meadow**	**36.44**	**332**	*e*P	**P**	**19 03 08.8**	**+0.8**
	comp=Z,35nm,1.4s						
SNOW	**Snow King Moun**	**36.48**	**332**	*e*P	**P**	**19 03 08.9**	**+0.6**
	comp=Z,12nm,0.7s						
LOHW	**Long Hollow**	**36.52**	**332**	*e*P	**P**	**19 03 09.9**	**+1.2**
	comp=Z,2.9nm,0.8s						
TPAW	**Teton Pass**	**36.59**	**332**	*e*P	**P**	**19 03 09.8**	**+0.5**
	comp=Z,43nm,1.8s						
MOOW	**Moose Ponds**	**36.69**	**332**	*e*P	**P**	**19 03 11.3**	**+1.2**
	comp=Z,4.4nm,0.9s						
FXWY	**Fox Creek**	**36.74**	**332**	*e*P	**P**	**19 03 11.2**	**+0.6**
	comp=Z,11nm,1.8s						
IMW	**Indian Meadow**	**36.90**	**332**	*e*P	**P**	**19 03 13.3**	**+1.4**
	comp=Z,9.0nm,1.5s						
RLMT	**Red Lodge**	**37.14**	**335**	*e*P	**P**	**19 03 14.6**	**+0.6**
	comp=Z,17nm,1.8s						
NV01	**Mina Array Sit**	**37.21**	**319**	*e*P	**P**	**19 03 16.5**	**+1.9**
NVAR	**Mina Array Bea**	**37.21**	**319**	P	**P**	**19 03 16.6**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=130,slow=8.4,SNR=4.7						
NVAR				PcP	**PcP**	**19 05 34.3**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=156,slow=4.6,SNR=3.6						
YHB	**Horse Butte**	**37.67**	**333**	*e*P	**P**	**19 03 20.1**	**+1.6**
	comp=Z,22nm,1.6s						
ULM	**Lac du Bonnet**	**38.12**	**352**	P	**P**	**19 03 20.4**	**-1.4**
	comp=Z,3.2nm,0.6s,baz=157,slow=10,SNR=11						
DGMT	**Dagmar**	**38.23**	**343**	*e*P	**P**	**19 03 22.7**	**-0.1**
	comp=Z,12nm,0.6s						
MCMT	**McKenzie Canyo**	**38.49**	**331**	*e*P	**P**	**19 03 27.4**	**+2.1**
BOZ	**Bozeman (W)**	**38.53**	**333**	*e*P	**P**	**19 03 26.7**	**+1.2**
	comp=Z,2.2nm,0.6s						
DLMT	**Dillon**	**38.78**	**332**	*e*P	**P**	**19 03 27.8**	**+0.2**
	comp=Z,3.7nm,0.9s						
F10A	**Beach Ranch, E**	**41.45**	**329**	*e*P	**P**	**19 03 49.8**	**+0.1**
	comp=Z,25nm,2.0s						
D08A	**Wollman Farm,**	**43.04**	**329**	*e*P	**P**	**19 04 03.0**	**+0.5**
	comp=Z,6.2nm,1.0s						
SCHQ	**Schefferville**	**45.35**	**17**	*e*P	**P**	**19 04 19.7**	**-1.1**
	comp=Z,63nm,1.8s						
SCHQ	**Schefferville**	**45.35**	**17**	P	**P**	**19 04 19.6**	**-1.1**
	comp=Z,3.6nm,0.5s,baz=218,slow=7.1,SNR=19						
YKA	**Yellowknife Ar**	**53.34**	**345**	P	**P**	**19 05 20.7**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=144,slow=6.8,SNR=18						
YKB5	**Yellowknife Ar**	**53.34**	**345**	*e*P	**P**	**19 05 20.9**	**-0.7**
LPH	**Laupahoehoe**	**64.69**	**286**	*e*P	**P**	**19 06 36.7**	**-4.2**
ILAR	**Eielson Array**	**65.67**	**336**	P	**P**	**19 06 45.4**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=152,slow=5.2,SNR=11						
ILB	**Eielson Array**	**65.67**	**336**	*e*P	**P**	**19 06 45.7**	**-0.7**
KWP	**Kalwaria Pacla**	**93.50**	**38**	*e*P	**P**	**19 09 21.2**	**+3.3**
	comp=Z,75nm,0.5s						
WMQ	**Urumqi**	**123.75**	**4**	*e*P	**PKPdf**	**19 14 59.2**	**-0.8**
WMQ				LR	LR		
	comp=N,350nm,27.5s						
WMQ				LR	LR		
	comp=E,260nm,24.3s						
WMQ				LR	LR		
	comp=Z,210nm,18.9s						
NJ2	**Nanjing**	**128.68**	**330**	*e*P	**PKPdf**	**19 15 08.6**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WR1	**Warramunga Arr**	**138.71**	**254**	*e*PKPdf	**PKPdf**	**19 15 29.7**	**+1.0**
WRA	**Warramunga Arr**	**138.71**	**254**	PKP	**PKPdf**	**19 15 29.7**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=93,slow=2.3,SNR=7.8						
CMAR	**Chiang Mai Arr**	**148.41**	**347**	PKPbc	**PKPbc**	**19 15 48.1**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=350,slow=3.8,SNR=7.2						

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*NNC **09** 19:05:03.7±0.4, 44°.86N×80°.98E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=5.0km s-min=2.3km az=128.0*
*SOME **09** 19:05:04.0, 44°.85N×81°.03E, h15^{km}*
ISC 09 19:05:01.4±1.0**, 44°.83N**±0°.05×**81°.16E**±0°.05**, h10^{km}, n41, σ1^{s}90**/56**, 7C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.10**	**244**	P	**Pn**	**19 05 23.6**	**+0.7**
	3.8nm,0.1s						
DJR				S	**Sb**	**19 05 37.6**	**+0.7**
	29nm,0.2s						
DJR	**Jarkent**	**1.10**	**244**	*e*P	**Pn**	**19 05 23.6**	**+0.7**
	3.8nm,0.1s						
DJR				*e*S	**Sb**	**19 05 37.6**	**+0.7**
	29nm,0.2s						
KAPS	**Kapalarasan**	**1.36**	**290**	P	**Pg**	**19 05 27.0**	**-0.4**
	11nm,0.2s						
KAPS				S	**Sn**	**19 05 43.6**	**-0.9**
	82nm,0.4s						
KAPS	**Kapalarasan**	**1.36**	**290**	*e*P	**Pg**	**19 05 27.0**	**-0.4**
	11nm,0.2s						
KAPS				*e*S	**Sn**	**19 05 43.6**	**-0.9**
	82nm,0.4s						
PDGK	**Podgornoye**	**1.92**	**219**	P	**Pb**	**19 05 37.9**	**+1.3**
	7.8nm,0.2s						
PDGK				S	**Sb**	**19 06 02.2**	**+1.5**
	109nm,0.4s						
PDGK	**Podgornoye**	**1.92**	**219**	⇑Pn	**Pb**	**19 05 37.2**	**+0.6**
PDGK				⇓Sn	**Sb**	**19 06 02.7**	**+2.1**
	111nm,0.4s						
TDK	**Taldyqorghan**	**1.96**	**276**	P	**Pg**	**19 05 38.3**	**-0.7**
	79nm,0.3s						
TDK				S	**Sg**	**19 06 02.8**	**-1.6**
	374nm,0.3s						
TDK	**Taldyqorghan**	**1.96**	**276**	*e*P	**Pg**	**19 05 38.3**	**-0.7**
	79nm,0.3s						
TDK				*e*S	**Sg**	**19 06 02.9**	**-1.6**
	374nm,0.3s						
MAKZ	**Makanchi**	**2.06**	**16**	⇑Pn	**Pg**	**19 05 40.2**	**-0.7**
	2.0nm,0.1s						
MAKZ				⇑Lg	Lg	19 06 07.4	
	23nm,0.5s						
MK31	**Makanchi Array**	**2.12**	**22**	⇑Pn	**Pg**	**19 05 40.9**	**-1.0**
	1.6nm,0.1s,baz=208,slow=14,SNR=199						
MK31				⇑Sn	**Sg**	**19 06 08.8**	**-0.6**
	40nm,0.5s,baz=203,slow=17,SNR=27						
UZB	**Uzynbulak**	**2.28**	**223**	Pg	**Pb**	**19 05 44.1**	**+1.4**
	4.3nm,0.2s						
UZB				Lg	Lg	19 06 13.0	
	102nm,0.7s						
UZB	**Uzynbulak**	**2.28**	**223**	*e*P	**Pb**	**19 05 44.1**	**+1.4**
	4.3nm,0.2s						
UZB				*e*S	**Sb**	**19 06 13.0**	**+1.9**
	102nm,0.7s						
ARXS	**Arharly**	**2.46**	**257**	Pg	**Pg**	**19 05 47.2**	**-1.3**
	10nm,0.3s						
ARXS				Lg	Lg	19 06 18.1	
	72nm,0.5s						
ARXS	**Arharly**	**2.46**	**257**	*e*P	**Pg**	**19 05 47.2**	**-1.3**
	10nm,0.3s						
ARXS				*e*S	**Sg**	**19 06 18.1**	**-2.3**
	72nm,0.5s						
KURS	**Kuram**	**2.53**	**239**	Pg	**Pb**	**19 05 48.3**	**+1.4**
	2.9nm,0.3s						
KURS				Lg	Lg	19 06 20.2	
	14nm,0.4s						
KURS	**Kuram**	**2.53**	**239**	*e*P	**Pb**	**19 05 48.3**	**+1.4**
	2.9nm,0.3s						
KURS				*e*S	**Sb**	**19 06 20.2**	**+2.0**
	14nm,0.4s						
SATY	**Saty**	**2.66**	**229**	Pg	**Pb**	**19 05 51.1**	**+1.9**
	9.7nm,0.2s						
SATY				Lg	Lg	19 06 24.8	
	72nm,0.3s						
SATY	**Saty**	**2.66**	**229**	*e*P	**Pb**	**19 05 51.0**	**+1.9**
	9.7nm,0.2s						
SATY				*e*S	**Sb**	**19 06 24.8**	**+2.9**
	72nm,0.3s						
CHKK	**Chushkaly**	**3.15**	**253**	Pg	**Pb**	**19 05 58.6**	**+1.2**
	2.1nm,0.1s						
CHKK				Lg	Lg	19 06 38.0	
	32nm,0.3s						
CHKK	**Chushkaly**	**3.15**	**253**	*e*P	**Pb**	**19 05 58.6**	**+1.2**
	2.1nm,0.1s						
CHKK				*e*S	**Sb**	**19 06 38.0**	**+2.2**
	32nm,0.3s						
KOTS	**Kotyrbulak**	**3.33**	**243**	Pg	**Pb**	**19 06 02.1**	**+1.6**
	7.0nm,0.3s						
KOTS				Lg	Lg	19 06 43.9	
	1.5nm,0.4s						
KOTS	**Kotyrbulak**	**3.33**	**243**	*e*P	**Pb**	**19 06 02.1**	**+1.6**
	7.0nm,0.3s						
KOTS				*e*S	**Sb**	**19 06 43.9**	**+2.8**
	1.5nm,0.4s						
MDOK	**Medeo**	**3.40**	**242**	⇑Lg	Lg	19 06 45.0	
	17nm,0.6s						
MDOK	**Medeo**	**3.40**	**242**	Pg	**Pb**	**19 06 02.9**	**+1.1**
	3.0nm,0.4s						
MDOK				Lg	Lg	19 06 45.1	
	16nm,0.5s						
MDOK	**Medeo**	**3.40**	**242**	*e*P	**Pb**	**19 06 02.9**	**+1.1**
	3.0nm,0.4s						
MDOK				*e*S	**Sb**	**19 06 45.1**	**+1.8**
	16nm,0.5s						
KTBS	**Karatobe**	**3.40**	**252**	Pg	**Pb**	**19 06 03.8**	**+2.0**
	3.4nm,0.3s						
KTBS				Lg	Lg	19 06 46.9	
	27nm,0.4s						
KTBS	**Karatobe**	**3.40**	**252**	*e*P	**Pb**	**19 06 03.8**	**+2.0**
	3.4nm,0.3s						
KTBS				*e*S	**Sg**	**19 06 46.9**	**-3.8**
	27nm,0.4s						
TNSS	**Tian-Shan**	**3.53**	**241**	*e*P	**Pb**	**19 06 06.2**	**+2.1**
	1.1nm,0.2s						
TNSS				*e*S	**Sb**	**19 06 50.7**	**+3.5**
	22nm,0.5s						
KUU	**Kurty**	**3.58**	**257**	Pg	**Pb**	**19 06 06.7**	**+2.0**
	5.4nm,0.4s						
KUU				Lg	Lg	19 06 51.9	
	24nm,0.3s						
KUU	**Kurty**	**3.58**	**257**	*e*P	**Pb**	**19 06 06.7**	**+2.0**
	5.4nm,0.4s						
KUU				*e*S	**Sg**	**19 06 51.9**	**-4.4**
	24nm,0.3s						
ZSN	**Zaisan**	**3.68**	**43**	Pg	**Pb**	**19 06 06.8**	**+0.4**
	1.0nm,0.6s						
ZSN				Lg	Lg	19 06 52.1	
	15nm,0.5s						
ZSN	**Zaisan**	**3.68**	**43**	*e*P	**Pb**	**19 06 06.5**	**+0.2**
	1.0nm,0.6s						
ZSN				*e*S	**Sb**	**19 06 52.1**	**+1.1**
	15nm,0.5s						
MTBS	**Maitube**	**3.81**	**245**	*e*P	**Pb**	**19 06 10.6**	**+1.9**
	2.4nm,0.1s						
MTBS				*e*S	**Sb**	**19 06 58.2**	**+3.2**
	33nm,0.3s						
KST	**Kastek**	**4.16**	**246**	Pg	**Pg**	**19 06 18.2**	**-2.7**
	3.0nm,0.3s						
KST				Lg	Lg	19 07 11.8	
	16nm,0.5s						
KST	**Kastek**	**4.16**	**246**	*e*P	**Pg**	**19 06 18.2**	**-2.7**
	3.0nm,0.3s						
KST				*e*S	**Sg**	**19 07 11.8**	**-3.0**
	16nm,0.5s						
TKM2	**Tokmak 2**	**4.45**	**247**	⇓Lg	Lg	19 07 22.7	
	8.1nm,0.6s						
AAK	**Ala-Archa**	**5.30**	**248**	⇓Lg	Lg	19 07 47.0	
	6.7nm,0.8s						
KURBB	**Kurchatov Arra**	**6.06**	**344**	⇑Lg	Lg	19 08 13.7	
	13nm,0.6s						
MNAS	**Manas**	**6.70**	**253**	⇓Lg	Lg	19 08 33.9	
	2.8nm,0.7s						
OTUK	**Ortayu**	**6.98**	**302**	⇓Lg	Lg	19 08 38.8	
	7.5nm,0.9s						
KK31	**Karatay Array**	**7.87**	**261**	⇓Lg	Lg	19 09 07.5	
	1.2nm,0.5s,baz=71,slow=28,SNR=4.0						

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*ISK **09** 19:06:13.0, 34°.20N×26°.58E, h15^{km}, ML3.6/26*
*ISCJB **09** 19:06:15.8±0.3, 34°.26N±0°.03×26°.56E±0°.03, h55^{km}±7^{km}, mb3.6/6, MS3.9/1, Error ellipse: s-maj=4.3km s-min=4.0km az=32.3*
*HLW **09** 19:06:17.5, 34°.30N×26°.67E, h11^{km}±16^{km}, Ml3.6*
*THE **09** 19:06:18.5, 34°.43N×26°.55E, h12^{km}±1^{km}, ML2.6/6, Error ellipse: s-maj=1.6km s-min=1.1km az=156.0*
*ATH **09** 19:06:21.6, 34°.78N×26°.35E, h68^{km}±3^{km}, ML2.7/4, Error ellipse: s-maj=4.5km s-min=2.4km az=168.0*
*IDC **09** 19:06:29.4±13.0, 35°.01N×26°.38E, h130^{km}±87^{km}, mb3.3/6, mb1 3.3/8, mb1mx3.1/50, mbtmp3.6/8, MS4.0/1, Ms1 3.9/1, ms1mx2.9/18, Error ellipse: s-maj=143.2km s-min=30.5km az=32.0*
*DDA **09** 19:06:39.0, 35°.86N×28°.00E, h8^{km}±3^{km}, ML2.3*
ISC 09 19:06:17.6±1.0**, 34°.34N**±0°.04×**26°.49E**±0°.04**, h49^{km}**±12^{km}**, n89, σ1^{s}67**/109**, mb3.5**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.81**	**344**	PG	**Pn**	**19 06 32.4**	**-0.4**
ZKR				SG	**Sn**	**19 06 45.4**	**+1.6**
ZKR	**Zakros**	**0.81**	**344**	P	**Pn**	**19 06 32.7**	**-0.1**
ZKR				S	**Sn**	**19 06 42.2**	**-1.7**
ZKR				AML	AML	19 06 46.2	
	comp=N,746µm,0.5s						
ZKR				AML	AML	19 06 47.4	
	comp=E,1414µm,0.5s						
ZKR	**Zakros**	**0.81**	**344**	P	**Pn**	**19 06 32.7**	**-0.1**
ZKR				S	**Sn**	**19 06 43.8**	**0.0**
STIA	**Sitia Lasithi**	**0.92**	**339**	P	**Pn**	**19 06 35.0**	**+0.7**
STIA				S	**Sn**	**19 06 46.6**	**+0.1**
LAST	**Lasithi**	**1.17**	**315**	P	**Pn**	**19 06 38.4**	**+0.7**
LAST				S	**Sn**	**19 06 50.4**	**-2.3**
LAST				AML	AML	19 07 03.9	
	comp=N,799µm,0.6s						
LAST				AML	AML	19 07 06.2	
	comp=E,618µm,0.6s						
LAST	**Lasithi**	**1.17**	**315**	P	**Pn**	**19 06 38.3**	**+0.6**
LAST				S	**Sn**	**19 06 54.6**	**+1.9**
NPS	**Neapolis**	**1.17**	**322**	P	**Pn**	**19 06 38.5**	**+0.8**
NPS				S	**Sn**	**19 06 50.1**	**-2.5**
NPS				AML	AML	19 07 02.8	
	comp=E,611µm,0.4s						
NPS				AML	AML	19 07 04.3	
	comp=N,572µm,0.5s						
NPS	**Neapolis**	**1.17**	**322**	P	**Pn**	**19 06 38.8**	**+1.1**
NPS				S	**Sn**	**19 06 54.6**	**+2.0**
KARP	**Karpathos**	**1.32**	**24**	PN	**Pn**	**19 06 39.4**	**-0.3**
KARP				SN	**Sn**	**19 06 58.3**	**+2.0**
KARP	**Karpathos**	**1.32**	**24**	P	**Pn**	**19 06 41.1**	**+1.3**
KARP				S	**Sn**	**19 06 54.9**	**-1.4**
KARP	**Karpathos**	**1.32**	**24**	P	**Pn**	**19 06 39.5**	**-0.3**
KARP				S	**Sn**	**19 06 56.6**	**+0.3**
KSTL	**Kastelli Herak**	**1.52**	**310**	P	**Pn**	**19 06 40.5**	**-1.8**
IDI	**Anoyia**	**1.62**	**306**	PN	**Pn**	**19 06 44.9**	**+1.0**
IDI				SN	**Sn**	**19 07 06.0**	**+2.3**
PRNS	**Prines Rethymn**	**1.93**	**303**	P	**Pn**	**19 06 50.4**	**+2.4**
GVD	**Gavdhos**	**2.05**	**285**	PN	**Pn**	**19 06 49.6**	**0.0**
ANAF	**Anafi Island**	**2.10**	**344**	P	**Pn**	**19 06 50.1**	**-0.2**
ANAF				S	**Sn**	**19 07 10.5**	**-4.7**
ANAF				AML	AML	19 07 19.9	
	comp=E,988µm,0.3s						
ANAF				AML	AML	19 07 20.9	
	comp=N,1501µm,0.3s						
ANAF	**Anafi Island**	**2.10**	**344**	P	**Pn**	**19 06 50.5**	**+0.2**
ANAF				S	**Sn**	**19 07 16.2**	**+1.0**
SANT	**Santorini**	**2.20**	**338**	PN	**Pn**	**19 06 50.9**	**-0.8**
SANT	**Santorini**	**2.20**	**338**	P	**Pn**	**19 06 50.7**	**-1.0**
SANT				S	**Sn**	**19 07 12.2**	**-5.5**

THR6	Thira Island,	2.20	336	P	Pn	19 06 51.6	-0.2
THR3	Thira Island,	2.25	337	P	Pn	19 06 51.9	-0.5
THR2	Thira island,	2.27	338	P	Pn	19 06 52.2	-0.6
ARG	Arkhangelos	2.30	35	PN	Pn	19 06 52.7	-0.4
ARG	Arkhangelos	2.30	35	P	Pn	19 06 54.0	+0.9
IMMV	Iera Moni Meta	2.35	299	PN	Pn	19 06 54.2	+0.5
IMMV	Iera Moni Meta	2.35	299	P	Pn	19 06 54.9	+1.2
IMMV	Iera Moni Meta	2.35	299	P	Pn	19 06 55.3	+1.6
IMMV				S	Sn	19 07 24.0	+2.6
AMGA	Amorgos Island	2.54	349	P	Pn	19 06 55.2	-1.1
AMGA				S	Sn	19 07 19.7	-6.2
DAT	Datca	2.54	20	PN	Pn	19 06 56.6	+0.1
DAT	Datca	2.54	20	*i* P	Pn	19 06 56.6	+0.1
DAT				*i* S	Sn	19 07 24.9	-1.4
DAT				IAML_P			
	comp=Z,300nm,0.1s						
IOSP	Ios island	2.58	338	P	Pn	19 06 55.6	-1.3
IOSP				S	Sn	19 07 20.6	-6.3
BODT	Bodrum	2.80	13	PN	Pn	19 07 00.0	+0.1
BDRM	Kayabasi	2.83	16	*i* P	Pn	19 07 00.6	+0.3
BDRM				IAML_P			
	comp=Z,140nm,0.2s						
APE	Apeiranthos	2.84	344	PN	Pn	19 06 59.8	-0.7
APE	Apeiranthos	2.84	344	P	Pn	19 06 59.7	-0.8
DALY	Dalyan (Mula)	3.04	35	PN	Pn	19 07 03.6	+0.5
DALY	Dalyan (Mula)	3.04	35	*i* P	Pn	19 07 04.2	+1.0
DALY				IAML_P			
	comp=Z,214nm,0.3s						
SLUM	Salum	3.04	201	P	Pn	19 07 03.5	+0.4
	baz=205						
SLUM				AMP		19 07 00.0	
	baz=205						
SLUM				S	Sn	19 07 36.1	-2.2
	baz=205						
MATC	Matruh	3.05	168	P	Pn	19 07 03.3	0.0
	baz=170						
TURN	Turunc	3.06	34	PN	Pn	19 07 00.3	-3.1
TURN	Turunc	3.06	34	*i* P	Pn	19 06 58.0	-5.5
KSL	Kastellorizon	3.11	54	P	Pn	19 07 04.8	+0.7
FETY	Fethiye	3.12	42	PN	Pn	19 07 04.2	-0.1
MLSB	Milas	3.13	19	PN	Pn	19 07 04.8	+0.3
AKAS	Kas	3.17	53	PN	Pn	19 07 03.9	-1.2
AKAS	Kas	3.17	53	*i* P	Pn	19 07 05.3	+0.2
AKAS				IAML_P			
	comp=Z,789nm,0.1s						
AYDN	Tasoluk	3.50	18	*i* P	Pn	19 07 10.9	+1.3
AYDN				IAML_P			
	comp=Z,240nm,0.1s						
ELL	Elmali	3.68	48	PN	Pn	19 07 12.2	+0.1
AYDB	Zeytinkoy-Aydi	3.77	17	PN	Pn	19 07 13.7	+0.3
KORT	Korkueli	4.11	49	PN	Pn	19 07 17.9	-0.1
KORT	Korkueli	4.11	49	*i* P	Pn	19 07 16.5	-1.6
KORT				*i* S	Sn	19 08 06.8	+1.9
KORT				IAML_P			
	comp=Z,36nm,0.2s						
KORT	Korkueli	4.11	49	*i* P	Pn	19 07 16.3	-1.7
KORT				IAML_P			
	comp=Z,36nm,0.2s						
KULA	Kula-Manisa	4.52	22	PN	Pn	19 07 24.5	+0.9
BCK	Bucak	4.56	46	PN	Pn	19 07 24.6	+0.5
ITM	Ithomi	4.67	309	PN	Pn	19 07 27.1	+1.5
SUTC	Sutluce-Ispart	4.81	48	PN	Pn	19 07 27.7	0.0
KEPZ	Antalya-Kepez	4.88	57	*i* P	Pn	19 07 29.4	+0.8
KEPZ				IAML_P			
	comp=Z,264nm,0.2s						
SWA2		5.16	190	P	Pn	19 07 32.3	+0.1
	baz=192						
SWA2				S	Sn	19 08 27.4	-3.1
	baz=192						
LEF	Lefka	5.32	80	PN	Pn	19 07 33.3	-1.2
LEF	Lefka	5.32	80	*i* P	Pn	19 07 33.8	-0.8
LEF				IAML_P			
	comp=Z,455nm,0.1s						
CSS	Mathiatis	5.67	82	PN	Pn	19 07 38.2	-1.1
TEKE	Tekeli-Mersin	5.71	70	PN	Pn	19 07 39.5	-0.3
ERMK	Ermenek	5.72	64	*i* P	Pn	19 07 42.4	+2.3
ERMK				IAML_P			
	comp=Z,562nm,0.3s						
BERE	Bereket-Mersin	5.85	68	PN	Pn	19 07 41.6	-0.3
KONT	Konya--Tatoy	5.96	51	PN	Pn	19 07 44.4	+1.2
AKKU	Akkuyu-Mersin	6.05	71	PN	Pn	19 07 44.3	-0.2
GULN	MERSIN_Gulnar	6.05	70	*i* P	Pn	19 07 45.4	+0.8
GULN				IAML_P			
	comp=Z,175nm,0.1s						
KDHN	Kadinhani	6.16	46	*i* P	Pn	19 07 47.8	+1.7
KDHN				IAML_P			
	comp=Z,51nm,0.1s						
IKL	Isikli	6.18	70	PN	Pn	19 07 45.9	-0.3
KEBE	Keben-Mersin	6.26	68	PN	Pn	19 07 47.8	+0.4
EREN	Erenkoy	6.42	77	PN	Pn	19 07 49.4	-0.1
GLL	Jalalah	6.49	136	P	Pn	19 07 49.2	-1.4
	baz=136						
KIZK	Mersin	6.60	69	PN	Pn	19 07 52.3	+0.3
KERG	Konya-Eregli	6.91	61	*i* P	Pn	19 07 57.8	+1.3
KERG				IAML_P			
	comp=Z,72nm,0.2s						
KZIT	Kziot	7.49	115	PN	Pn	19 08 02.9	-1.4
KARA	Karaisali	7.54	65	PN	Pn	19 08 05.1	+0.1
MMLI	Mount Malkishu	7.70	102	PN	Pn	19 08 06.5	-0.7
HNKL	Nakhl	7.72	123	P	Pn	19 08 06.2	-1.2
	baz=123						
HRFI	Mount Harif	8.41	118	PN	Pn	19 08 14.9	-2.0
HKAT	Jabal Katrina	8.64	130	P	Pn	19 08 18.7	-1.5
	baz=130						
AKASG	Malin Array Be	16.48	6	P	Pn	19 10 05.2	0.0
	comp=Z,0.8nm,0.3s,baz=192,slow=9.9,SNR=5.5						
GERES	GERESS Array B	17.33	331	P	Pn	19 10 15.8	-0.2
	comp=Z,0.1nm,0.3s,baz=146,slow=11,SNR=7.4						
GEYT	Alibeck	25.73	73	P	P	19 11 46.6	+3.3
	comp=Z,0.6nm,0.5s,baz=242,slow=37,SNR=3.1						
FINES	FINESS Array B	27.12	360	P	P	19 11 53.5	-2.2
	comp=Z,0.7nm,0.5s,baz=150,slow=11,SNR=6.4						
ARCES	ARCESS Array B	35.25	359	P	P	19 13 05.3	-1.7
	comp=Z,4.7nm,1.1s,baz=183,slow=9.9,SNR=5.5						
DBIC	Dimbokro	39.94	234	LR	LR	19 34 20.4	
	comp=Z,175nm,18.7s,baz=308,slow=42						
MKAR	Makanchi Array	43.32	56	P	P	19 14 15.6	+1.0
	comp=Z,0.3nm,0.6s,baz=270,slow=8.6,SNR=4.2						
ZALV	Zalesovo Beam	44.79	46	P	P	19 14 26.7	+0.5
	comp=Z,0.4nm,0.3s,baz=270,slow=8.6,SNR=2.6						
SONM	Songino Array	59.16	51	P	P	19 16 14.3	+1.0
	comp=Z,0.2nm,0.5s,baz=280,slow=6.8,SNR=2.9						

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*IDC **09** 19:08:55.9±1.2, 7°.48N×124°.61E, h0^{km}, mb3.4/5, mb1 3.7/6, mb1mx3.5/48, mbtmp3.6/6, ML4.1/1, Error ellipse: s-maj=28.8km s-min=11.4km az=25.0*

*MAN **09** 19:08:56.8, 7°.67N×124°.83E, h2^{km}, mb5.0, ML3.9, MS4.0*

MAN INTENSITY II - MARAMAG BUKIDNON; INTENSITY I - CAGAYAN DE ORO CITY.

*ISCJB **09** 19:08:57.8±0.6, 7°.68N±0°.02×124°.89E±0°.03, h15^{km}±5^{km}, mb3.6/10, Error ellipse: s-maj=5.0km s-min=3.6km az=167.5*

*NEIC **09** 19:09:00.6±1.6, 7°.71N×125°.02E, h39^{km}±14^{km}, mb3.9/6, Error ellipse: s-maj=22.8km s-min=9.6km az=61.0*

NEIC Felt [II PIVS] at Maramag and [I PIVS] at Cagayan de Oro.

ISC 09 19:08:57.3±1.0, **7°.68N**±0°.02×**124°.81E**±0°.02, **h11**^{km}±8^{km}, **n40,** σ**1^{s}.33**/58, **mb3.7**/10, **7C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.32	52	*e*P	Pg	19 09 03.1	-0.6
BUKP				*e*S	Sg	19 09 08.5	+0.5
CTBH	Cotabato--PC H	0.72	231	⇑*i*P	Pb	19 09 12.2	+0.2
CTBH				*i* S	Sn	19 09 23.6	-1.1
KCP	Kidapawan	0.72	157	⇑*i*P	Pg	19 09 11.0	-0.3
KCP				*i* S	Sb	19 09 21.6	-0.4
CGP	Cagayan de Oro	0.78	351	⇑*i*P	Pg	19 09 11.4	-0.9
CGP				*i* S	Sg	19 09 21.7	-0.8
DMPH	Davao City--Mi	0.91	131	⇑*e*P	Pn	19 09 16.9	+0.8
DMPH				*i* S	Sn	19 09 30.3	+1.0
DAV	Davao City (W)	0.97	129	*e*Pg	Pg	19 09 15.7	-0.4
DAV				*e*Sg	Sb	19 09 28.8	-0.4
DAV	Davao City (W)	0.97	129	Pg	Pb	19 09 16.1	-0.2
	389nm,0.3s,baz=277,slow=5.8,SNR=28						
DAV				LR	LR	19 09 23.2	
	comp=Z,72nm,19.3s,baz=253,slow=26						
DAV				Lg	Lg	19 09 30.3	
	648nm,0.3s,baz=343,slow=19,SNR=50						
SKMP	Bagumbayan, Su	1.18	193	*e*P	Pb	19 09 18.3	-1.5
SKMP				*e*S	Sn	19 09 35.6	-0.5
PAGZ	Pagadian	1.43	277	*e*P	Pb	19 09 23.8	-0.2
PAGZ				*e*S	Sg	19 09 44.6	+1.4
BUTP	Butuan	1.51	32	*e*P	Pb	19 09 25.1	-0.3
BUTP				*e*S	Sg	19 09 50.1	+4.2
GSPH	General Santos	1.59	175	*e*P	Pg	19 09 27.7	-0.2
MATI	Mati	1.61	117	*e*P	Pn	19 09 25.3	-0.5
MATI				*e*S	Sg	19 09 51.6	+2.5
BIPH	Bislig	1.61	72	⇓*e*P	Pn	19 09 25.3	-0.5
BIPH				*e*S	Sn	19 09 46.7	0.0
DCPH	Dipolog City	1.70	302	⇑*e*P	Pg	19 09 29.9	-0.1
DCPH				*e*S	Sg	19 09 54.0	+2.0
DDMP	Don Marcelino,	1.80	150	*e*P	Pb	19 09 29.9	-0.5
DDMP				*e*S	Sg	19 09 54.6	-0.7
SCPH	Surigao	2.19	18	⇑*e*P	Pn	19 09 33.1	-0.6
TBP	Tagbilaran	2.21	335	*e*P	Pn	19 09 33.9	0.0
IPIL	Ipil	2.22	273	*e*P	Pb	19 09 36.5	-1.0
IPIL				*e*S	Sb	19 10 05.3	+0.2
SNPH	Sibulan	2.27	317	⇓*i*P	Pb	19 09 38.7	+0.3
SNPH				*i* S	Sg	19 10 08.8	-1.6
MSLP	Maasin	2.44	1	*e*P	Pn	19 09 37.4	+0.2
MSLP				*e*S	Sg	19 10 14.0	-1.8
LLP	Lapu-Lapu	2.75	342	⇑*e*P	Pn	19 09 42.2	+0.8
LLP				*e*S	Sn	19 10 16.7	+2.0
OCLP	Ormoc	3.35	357	*e*P	Pn	19 09 51.2	+1.4
OCLP				*e*S	Sn	19 10 03.7	-26
GUIM	Jordan	3.66	323	*e*P	Pn	19 09 56.2	+2.3
GUIM				*e*S	Sb	19 10 43.0	-3.5
RCP	Roxas	4.36	332	⇓*e*P	Pn	19 10 05.6	+2.0
LUWI	Luwuk	8.90	193	*e*Pn	Pn	19 11 08.6	+2.6
LUWI				*e*Sn	Sn	19 12 55.7	+9.3
BATI	Baumata	17.81	184	P	Pn	19 13 04.8	-0.6
	0.6nm,0.3s,baz=3.6,slow=18,SNR=4.7						
MTN	Manton Dam	21.34	163	*e*P	P	19 13 44.5	-0.1
	9.3nm,1.4s						
FITZ	Fitzroy Crossi	25.63	178	*e*P	P	19 14 27.5	+0.4
	6.6nm,1.1s						
FITZ	Fitzroy Crossi	25.63	178	P	P	19 14 26.5	-0.6
	1.6nm,1.0s,baz=17,slow=19,SNR=3.5						
CMAR	Chiang Mai Arr	27.34	296	P	P	19 14 42.9	+0.2
	0.1nm,0.3s,baz=120,slow=8.4,SNR=2.8						
WRAB	Tennant Creek	29.00	161	*e*P	P	19 14 57.8	+0.4
	1.9nm,0.9s						
WR1	Warramunga Arr	29.01	161	*e*P	P	19 14 55.5	-2.0
	3.2nm,1.2s						
WRA	Warramunga Arr	29.01	161	P	P	19 14 55.5	-2.0
	0.2nm,0.5s,baz=329,slow=11,SNR=3.9						
WB2	Warramunga Arr	29.01	161	*e*P	P	19 14 57.8	+0.2
	12nm,1.4s						
AS31	Alice Springs	32.40	164	*e*P	P	19 15 26.1	-1.3
	0.8nm,1.0s						
ASAR	Alice Springs	32.40	164	P	P	19 15 26.1	-1.4
	0.3nm,0.5s,baz=342,slow=6.7,SNR=13						
AS01	Alice Springs	32.41	164	*e*P	P	19 15 26.9	-0.7
MK01	Makanchi Array	53.23	325	*e*P	P	19 18 16.8	+0.9
MK32	Makanchi Array	53.25	325	*e*P	P	19 18 16.0	-0.1
MKAR	Makanchi Array	53.25	325	P	P	19 18 16.0	0.0
	0.4nm,0.7s,baz=122,slow=7.0,SNR=5.7						

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*ISCJB **09** 19:10:13.3±0.4, 43°.78N±0°.03×105°.33W±0°.05, h0^{km}, mb3.9/3, Error ellipse: s-maj=5.1km s-min=4.3km az=6.6*

*IDC **09** 19:10:13.6±0.9, 43°.77N×105°.66W, h0^{km}, mb3.8/3, mb1 3.6/9, mb1mx3.4/48, mbtmp3.4/9, ML3.2/6, Error ellipse: s-maj=24.1km s-min=8.9km az=147.0*

*NEIC **09** 19:10:15.0±0.2, 43°.77N×105°.35W, h0^{km}, ML3.3, Error ellipse: s-maj=3.0km s-min=2.6km az=89.0, Suspected Mining explosion.*

NEIC 57 km [36 miles] SSE of Gillette.

ISC 09 19:10:14.5±0.8, **43°.79N**±0°.05×**105°.39W**±0°.05, **h0**^{km}**, n57,** σ**0^{s}.93**/56, **mb4.0**/3, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	71	*e*Pg	Pg	19 10 33.8	-0.5
K22A	Casper	1.41	216	*e*Pn	Pg	19 10 40.4	-1.1
PHWY	Pilot Hill	2.49	181	*e*Pn	Pn	19 10 56.7	+0.3
RWWY	Rawlins	2.49	213	*e*Pn	Pn	19 10 57.0	+0.4
N23A	Red Feather La	2.92	188	*e*Pn	Pn	19 11 04.0	+1.6
LAO	LASA Array	2.96	349	*e*Pn	Pn	19 11 03.4	+0.6
RLMT	Red Lodge	3.08	297	*e*Pn	Pn	19 11 05.0	+0.4
PD31	Pinedale Array	3.21	253	*e*Pn	Pn	19 11 07.4	+1.0
PDAR	Pinedale Array	3.21	253	*e*Pn	Pn	19 11 07.2	+0.8
PDAR	Pinedale Array	3.21	253	Pn	Pn	19 11 04.2	-2.1
	1.2nm,0.3s,baz=105,slow=23,SNR=11						
PDAR				Lg	Lg	19 11 48.9	
	4.8nm,0.3s,baz=81,slow=29,SNR=2.7						
BW06	Boulder Array	3.21	253	*e*Pn	Pn	19 11 06.8	+0.4
GCMT	Greycliff	3.64	305	*e*Pn	Pn	19 11 13.3	+1.0
LKWY	Lake	3.69	284	*e*Pn	Pn	19 11 14.3	+1.3
OGNE	Ogallala	3.78	138	*e*Pn	Pn	19 11 14.4	+0.4
H17A	Grant Village	3.78	281	*e*Pn	Pn	19 11 16.3	+2.0
LOHW	Long Hollow	3.78	269	*e*Pn	Pn	19 11 15.9	+1.6
FLWY	Flagg Ranch	3.84	276	*e*Pn	Pn	19 11 15.6	+0.5
MOOW	Moose Ponds	3.88	271	*e*Pn	Pn	19 11 16.9	+1.3
YPP	Pitchstone Pla	3.93	279	*e*Pn	Pn	19 11 17.2	+0.9
ISCO	Idaho Springs	3.99	182	*e*Pn	Pn	19 11 17.5	+0.4
REDW	Red Top Meadow	3.99	266	*e*Pn	Pn	19 11 18.4	+1.3
TPAW	Teton Pass	4.05	268	*e*Pn	Pn	19 11 18.5	+0.5
FXWY	Fox Creek	4.09	270	*e*Pn	Pn	19 11 20.1	+1.6
O20A	White River Ci	4.22	211	*e*Pn	Pn	19 11 20.9	+0.6
YHB	Horse Butte	4.28	285	*e*Pn	Pn	19 11 22.2	+1.1
DGMT	Dagmar	4.76	10	*e*Pn	Pn	19 11 28.9	+1.5
BOZ	Bozeman (W)	4.80	294	*e*Pn	Pn	19 11 29.3	+1.1
HWUT	Hardware Ranch	5.04	247	*e*Pn	Pn	19 11 32.0	+0.4
TCUT	Toone Canyon	5.19	241	*e*Pn	Pn	19 11 34.2	+0.6
EGMT	Eagleton	5.22	326	*e*Pn	Pn	19 11 34.1	+0.3
HRY	Holter Researc	5.41	305	*e*Pn	Pn	19 11 36.7	+0.3
JLU	Jordanelle	5.51	237	*e*Pn	Pn	19 11 38.0	-0.1
MDND	Maddock	5.73	43	*e*Pn	Pn	19 11 40.4	-0.4
PV21	Cone Mtn., Par	5.88	209	*e*Pn	Pn	19 11 43.6	+0.6
PV07	Paradox Valley	5.88	206	*e*Pn	Pn	19 11 44.1	+1.0
PV15	Paradox Valley	5.92	204	*e*Pn	Pn	19 11 43.7	0.0
PV09	Paradox Valley	5.99	209	*e*Pn	Pn	19 11 45.2	+0.5
PV04	Paradox Valley	6.01	207	*e*Pn	Pn	19 11 45.3	+0.5
PV12	Saucer Basin,	6.04	206	*e*Pn	Pn	19 11 45.9	+0.6
SRU	San Rafael Swe	6.06	221	*e*Pn	Pn	19 11 45.8	+0.3
PV14	Lion Creek, Pa	6.07	208	*e*Pn	Pn	19 11 45.6	0.0
PV11	David Mesa, Pa	6.08	207	*e*Pn	Pn	19 11 46.2	+0.3
PV16	Nyswonger Mesa	6.08	207	*e*Pn	Pn	19 11 46.3	+0.5
PV19	Morning Glory	6.11	208	*e*Pn	Pn	19 11 46.5	+0.3
PV03	Paradox Valley	6.12	206	*e*Pn	Pn	19 11 47.2	+0.9
PV02	Paradox Valley	6.12	206	*e*Pn	Pn	19 11 47.3	+0.9
PV01	Paradox Valley	6.14	204	*e*Pn	Pn	19 11 47.1	+0.4
ECSD	EROS Data Cent	6.36	87	*e*Pn	Pn	19 11 49.6	+0.2
ELK	Elko	7.91	251	Pn	Pn	19 12 10.5	-0.5
	0.1nm,0.3s,baz=62,slow=15,SNR=3.2						
I10CA	LAC DU BONNET	9.06	42	*i*		20 04 20.0	
	baz=220,slow=318,SNR=1.8						
ULM	Lac du Bonnet	9.16	42	Pn	Pn	19 12 26.1	-1.8
	1.1nm,0.3s,baz=227,slow=11,SNR=14						
ULM				Lg	Lg	19 14 58.0	
	0.3nm,0.3s,baz=143,slow=20,SNR=2.6						
NVAR	Mina Array Bea	11.11	246	Pn	Pn	19 12 54.0	-0.8
	0.1nm,0.3s,baz=52,slow=12,SNR=2.5						
TXAR	Lajitas Array	14.49	174	Pn	Pn	19 13 42.5	+1.5
	0.0nm,0.3s,baz=353,slow=14,SNR=2.7						
YKA	Yellowknife Ar	19.50	347	P	P	19 14 42.6	-0.3
	0.1nm,0.3s,baz=158,slow=12,SNR=8.1						
ZALV	Zalesovo Beam	82.25	354	P	P	19 22 36.4	-0.9
	0.8nm,0.6s,baz=28,slow=5.1,SNR=4.2						
SONM	Songino Array	84.56	339	P	P	19 22 50.1	+0.6
	0.2nm,0.5s,baz=56,slow=3.6,SNR=3.3						
MKAR	Makanchi Array	89.55	355	P	P	19 23 13.2	-0.4
	0.6nm,0.7s,baz=6.0,slow=4.1,SNR=8.3						

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*ISCJB **09** 19:12:28.2±0.3, 10°.95S±0°.05×165°.91E±0°.05, h10^{km}, mb4.4/29, Error ellipse: s-maj=8.4km s-min=5.6km az=145.7*

*IDC **09** 19:12:28.1±0.7, 10°.88S×165°.93E, h0^{km}, mb4.1/15, mb1 4.3/17, mb1mx4.0/50, mbtmp4.1/17, ML4.6/2, Error ellipse: s-maj=20.0km s-min=16.1km az=118.0*

*NEIC **09** 19:12:29.9±0.2, 10°.88S×165°.93E, h10^{km}, mb4.8/20, Error ellipse: s-maj=5.2km s-min=3.5km az=71.0*

ISC 09 19:12:29.6±0.5, **10°.88S**±0°.08×**166°.00E**±0°.08, **h10**^{km}**, n61,** σ**0^{s}.72**/63, **mb4.5**/30, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.12	283	*e*P	Pn	19 13 59.0	-1.2
HNR	Honiara	6.12	283	*e*Pn	Pn	19 14 00.8	+0.5
HNR				*e*Sn	Sn	19 15 11.0	+0.6
HNR	Honiara	6.12	283	Pn	Pn	19 14 01.1	+0.8
	48nm,0.3s,baz=169,slow=2.2,SNR=32						
HNR				Sn	Sn	19 15 11.4	+1.0
	baz=24,slow=10.0,SNR=1.5						
MARNC	Mare, Loyalty	10.72	170	*e*Pn	Pn	19 15 03.7	+0.4
DZM	Mont Dzumac	11.14	178	Pn	Pn	19 15 09.9	+0.7
	1.2nm,0.3s,baz=334,slow=14,SNR=20						
ONTNC	Ouen Toro	11.38	178	*e*Pn	Pn	19 15 12.9	+0.7
PINNC	Pines Island,	11.76	173	*e*Pn	Pn	19 15 17.7	+0.2
MANU	Manus Island	20.47	294	*e*P	P	19 17 08.1	+0.4
	30nm,0.8s						
CTA	Charters Tower	21.09	242	P	P	19 17 15.0	+0.5
	5.0nm,0.8s,baz=59,slow=11,SNR=6.5						
CTAO	Charters Tower	21.09	242	*e*P	P	19 17 14.2	-0.3
	11nm,0.8s						
COEN	Coen	22.49	260	*e*P	P	19 17 29.2	-0.3
	11nm,1.0s						
OUZ	Omahuta	25.20	165	*e*P	P	19 17 56.2	+0.8
	24nm,1.5s						
URZ	Urewera	29.03	162	*e*P	P	19 18 30.4	+0.5
	14nm,1.2s						
URZ	Urewera	29.03	162	P	P	19 18 30.5	+0.7
	3.1nm,0.6s,baz=336,slow=12,SNR=3.0						
BKZ	Black Stump Fm	29.69	163	*e*P	P	19 18 36.0	+0.2
	10nm,0.6s						
STKA	Stephens Creek	30.73	223	*e*P	P	19 18 44.8	-0.3
	3.3nm,1.5s						
STKA	Stephens Creek	30.73	223	P	P	19 18 45.0	-0.1
	1.4nm,0.7s,baz=14,slow=12,SNR=2.6						
BFZ	Birch Farm	31.04	165	*e*P	P	19 18 47.0	-0.6
	16nm,0.7s						
THZ	Tophouse	31.36	170	*e*P	P	19 18 50.9	+0.4
	14nm,0.6s						
WRAB	Tennant Creek	31.76	250	*e*P	P	19 18 53.5	-0.8
	7.7nm,0.9s						
WB2	Warramunga Arr	31.76	250	*e*P	P	19 18 53.7	-0.6
WR1	Warramunga Arr	31.77	250	*e*P	P	19 18 53.5	-0.9
WRA	Warramunga Arr	31.77	250	P	P	19 18 53.5	-0.9
	6.6nm,0.9s,baz=81,slow=9.2,SNR=35						
KHZ	Kahutara	32.11	169	*e*P	P	19 18 56.7	-0.3
	12nm,0.9s						
LTZ	Lake Taylor	32.25	171	*e*P	P	19 18 58.8	+0.4
	18nm,0.8s						
FOZ	Fox Glacier	32.70	175	*e*P	P	19 19 03.0	+0.7
	77nm,1.4s						
OXZ	Oxford	32.75	172	*e*P	P	19 19 03.3	+0.6
	17nm,0.8s						
RPZ	Rata Peaks	33.01	173	P	P	19 19 05.1	+0.2
	17nm,0.9s,baz=331,slow=1.6,SNR=9.4						
AS01	Alice Springs	33.05	243	*e*P	P	19 19 05.2	-0.4
AS31	Alice Springs	33.09	243	*e*P	P	19 19 05.7	-0.3
	0.9nm,0.8s						
ASAR	Alice Springs	33.09	243	P	P	19 19 04.4	-1.5
	2.0nm,0.8s,baz=65,slow=10,SNR=20						
MQZ	McQueen's Vall	33.22	171	*e*P	P	19 19 07.2	+0.5
	24nm,0.9s						
LBZ	Lake Benmore	33.59	175	*e*P	P	19 19 10.2	+0.3
	19nm,1.0s						
WKZ	Wanaka	33.93	176	*e*P	P	19 19 13.8	+0.9
	36nm,1.4s						
FITZ	Fitzroy Crossi	39.66	255	*e*P	P	19 20 02.1	-0.1
	5.2nm,0.8s						
FITZ	Fitzroy Crossi	39.66	255	P	P	19 20 01.1	-1.0
	5.1nm,0.8s,baz=102,slow=7.9,SNR=10						
MJAR	Matsushiro Arr	53.93	332	P	P	19 21 52.6	-0.9
	0.7nm,0.7s,baz=134,slow=47,SNR=3.0						
MAJO	Matsushiro	53.94	332	*e*P	P	19 21 52.6	-0.9
CM01	Chiang Mai Arr	72.24	293	*e*P	P	19 23 55.8	+0.1
CMAR	Chiang Mai Arr	72.27	293	P	P	19 23 55.2	-0.6
	0.5nm,0.9s,baz=108,slow=4.8,SNR=4.2						
SEY	Seymchan	74.33	354	P	P	19 24 08.4	+1.4
	0.6nm,0.6s,baz=217,slow=20						
SONA0	Songino Array	78.67	324	*e*P	P	19 24 32.8	+0.6
SONM	Songino Array	78.67	324	P	P	19 24 32.8	+0.6
	0.3nm,0.8s,baz=133,slow=5.2,SNR=2.6						
QSPA	South Pole Qui	79.13	180	*e*P	P	19 24 34.3	-0.1
	5.4nm,1.0s						
IM3	Indian Mountai	82.20	15	*e*P	P	19 24 51.3	+0.8
IL1	Eielson Array	83.28	18	*e*P	P	19 24 57.1	+0.9
ILAR	Eielson Array	83.28	18	P	P	19 24 56.5	+0.4
	1.1nm,0.6s,baz=237,slow=5.1,SNR=22						
ILB	Eielson Array	83.28	18	*e*P	P	19 24 56.9	+0.8
NV01	Mina Array Sit	85.73	50	*e*P	P	19 25 10.0	+0.5
NVAR	Mina Array Bea	85.73	50	P	P	19 25 10.1	+0.6
	0.4nm,0.6s,baz=218,slow=6.4,SNR=3.3						
MK01	Makanchi Array	93.55	317	*e*P	P	19 25 46.1	+0.1
MK31	Makanchi Array	93.57	317	*e*P	P	19 25 46.5	+0.5
MK32	Makanchi Array	93.57	317	*e*P	P	19 25 45.8	-0.3
MKAR	Makanchi Array	93.57	317	*e*P	P	19 25 46.5	+0.5
	5.4nm,0.8s						
MKAR	Makanchi Array	93.57	317	P	P	19 25 45.8	-0.3
	0.7nm,0.8s,baz=99,slow=5.9,SNR=8.7						
YKA	Yellowknife Ar	94.71	27	P	P	19 25 49.6	-1.2
	0.2nm,0.5s,baz=260,slow=4.9,SNR=4.0						
ARA0	ARCESS Array S	116.23	346	*e*PKPdf	PKiKP	19 31 12.5	-0.3
ARCES	ARCESS Array B	116.23	346	PKP	PKiKP	19 31 12.5	-0.3
	2.7nm,0.9s,baz=147,slow=2.2,SNR=4.7						
NOA	NORSAR Array B	126.60	345	PKP	PKPdf	19 31 32.6	-0.4
	0.3nm,0.6s,baz=32,slow=2.0,SNR=2.8						
ESDC	Sonseca Array	149.96	344	PKPbc	PKPbc	19 32 20.8	0.0
	0.7nm,0.7s,baz=7.7,slow=3.2,SNR=4.7						
TORD	Torodi Ar. Bea	164.48	280	PKP	PKPdf	19 32 32.4	-2.3
	0.3nm,0.7s,baz=61,slow=4.9,SNR=2.4						

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*ISCJB **09** 19:13:56.6±0.3, 11°.05S±0°.04×165°.80E±0°.04, h10^{km}, mb4.4/42, MS4.2/6, Error ellipse: s-maj=6.5km s-min=4.8km az=153.7*

*IDC **09** 19:13:56.4±0.6, 11°.03S×165°.92E, h0^{km}, mb4.1/21, mb1 4.3/23, mb1mx4.1/51, mbtmp4.1/23, ML4.8/2, MS4.3/7, Ms1 4.3/7, ms1mx3.9/22, Error ellipse: s-maj=18.3km s-min=14.5km az=111.0*

*NEIC **09** 19:13:58.2±0.2, 10°.99S×165°.82E, h10^{km}, mb4.8/29, Error ellipse: s-maj=5.1km s-min=3.8km az=77.0*

ISC 09 19:13:58.5±0.4, **11°.03S**±0°.06×**165°.80E**±0°.06, **h10**^{km}**, n87,** σ**1^{s}.20**/89, **mb4.4**/42, **MS4.1**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.97	285	*e*Pn	Pn	19 15 28.3	+1.3
HNR				*e*Sn	Sn	19 16 37.6	+2.1
HNR	Honiara	5.97	285	Pn	Pn	19 15 28.6	+1.6
	28nm,0.3s,baz=256,slow=14,SNR=4.6						
HNR				Sn	Sn	19 16 35.4	0.0
	baz=180,slow=20,SNR=1.6						
HNR				LR	LR	19 17 44.0	
	comp=Z,7µm,20.1s,baz=71,slow=37						
HNR	Honiara	5.97	285	*e*S	Pn	19 15 28.0	+1.0
MARNC	Mare, Loyalty	10.62	169	*e*Pn	Pn	19 16 30.9	+0.2
DZM	Mont Dzumac	11.00	177	*e*Pn	Pn	19 16 37.8	+1.7
	51nm,0.5s						
DZM				*e*LR	LR	19 19 11.0	
	comp=Z,2µm,31.8s						
DZM	Mont Dzumac	11.00	177	*e*Pn	Pn	19 16 37.5	+1.4
DZM				*e*Sn	Sn	19 18 37.0	-2.3
DZM	Mont Dzumac	11.00	177	Pn	Pn	19 16 36.8	+0.8
	4.9nm,0.3s,baz=33,slow=4.7,SNR=13						
DZM				Sn	Sn	19 18 37.6	-1.7
	0.4nm,0.3s,baz=127,slow=20,SNR=2.4						
ONTNC	Ouen Toro	11.24	177	*e*Pn	Pn	19 16 39.7	+0.5
PINNC	Pines Island,	11.63	172	*e*Pn	Pn	19 16 46.1	+1.6
MSVF	Nonsavu	13.61	121	*e*Pn	Pn	19 17 13.0	+1.2
TARA	Tarawa	14.20	30	*e*Pn	Pn	19 17 19.4	-0.3
RABL	Rabaul	15.12	296	*e*Pn	Pn	19 17 33.4	+1.1
	28nm,0.4s						
EIDS	Eidsvold	19.94	222	*e*P	P	19 18 31.6	+0.8
	43nm,1.4s						
MANU	Manus Island	20.35	295	*e*P	P	19 18 35.2	-0.1
	87nm,1.0s						
CTA	Charters Tower	20.85	242	P	P	19 18 41.2	+0.5
	5.1nm,0.7s,baz=70,slow=11,SNR=5.9						
CTAO	Charters Tower	20.85	242	*e*P	P	19 18 40.7	0.0
	58nm,1.4s						
COEN	Coen	22.27	260	*e*P	P	19 18 56.6	+0.5
	12nm,1.0s						
ARMA	Armidale	23.36	212	*e*P	P	19 19 06.5	-0.8
	14nm,1.1s						
OUZ	Omahuta	25.11	165	*e*P	P	19 19 23.2	-0.3
	18nm,1.3s						
URZ	Urewera	28.95	161	*e*P	P	19 19 58.4	+0.4
	23nm,1.4s						
URZ	Urewera	28.95	161	P	P	19 19 58.4	+0.4
	1.3nm,0.4s,baz=333,slow=11,SNR=3.0						
BKZ	Black Stump Fm	29.60	163	*e*P	P	19 20 04.0	+0.1
	13nm,0.6s						

STKA	Stephens Creek	30.49	223	*e*P	P	19 20 11.5	-0.3
	1.4nm,0.9s						
STKA	Stephens Creek	30.49	223	P	P	19 20 11.3	-0.5
	1.8nm,0.6s,baz=48,slow=11,SNR=4.7						
BFZ	Birch Farm	30.95	164	*e*P	P	19 20 15.2	-0.5
	37nm,1.4s						
THZ	Tophouse	31.25	170	*e*P	P	19 20 19.1	+0.7
	12nm,0.7s						
WB2	Warramunga Arr	31.52	250	*e*P	P	19 20 20.8	-0.3
	6.8nm,0.9s						
WRAB	Tennant Creek	31.52	250	*e*P	P	19 20 20.8	-0.3
	5.8nm,0.9s						
WR1	Warramunga Arr	31.54	250	*e*P	P	19 20 20.5	-0.7
WRA	Warramunga Arr	31.54	250	P	P	19 20 20.5	-0.7
	2.6nm,0.6s,baz=82,slow=9.0,SNR=9.5						
WRA				PcP	PcP	19 23 14.3	+0.2
	0.2nm,0.9s,baz=87,slow=3.0,SNR=5.6						
WRA				LR	LR	19 33 01.0	
	comp=Z,1µm,18.1s,baz=60,slow=36						
KHZ	Kahutara	32.00	169	*e*P	P	19 20 24.7	-0.1
	30nm,1.3s						
GUMO	Guam	32.08	319	LR	LR	19 32 50.2	
	comp=Z,421nm,18.8s,baz=146,slow=35						
TOO	Toolangi	32.11	211	*e*P	P	19 20 25.9	-0.2
	32nm,1.3s						
LTZ	Lake Taylor	32.14	171	*e*P	P	19 20 26.1	-0.1
	15nm,0.8s						
FOZ	Fox Glacier	32.57	175	*e*P	P	19 20 29.7	-0.2
	23nm,1.0s						
OXZ	Oxford	32.63	172	*e*P	P	19 20 30.2	-0.2
	11nm,0.6s						
AS01	Alice Springs	32.80	243	*e*P	P	19 20 31.8	-0.5
AS31	Alice Springs	32.84	243	*e*P	P	19 20 31.7	-0.9
	2.9nm,1.5s						
ASAR	Alice Springs	32.84	243	P	P	19 20 31.6	-1.0
	1.0nm,0.4s,baz=66,slow=10,SNR=13						
ASAR				PcP	PcP	19 23 16.5	-1.1
	0.5nm,0.6s,baz=88,slow=2.2,SNR=4.9						
RPZ	Rata Peaks	32.89	173	*e*P	P	19 20 33.0	+0.3
	21nm,1.1s						
RPZ	Rata Peaks	32.89	173	P	P	19 20 33.0	+0.3
	6.1nm,0.5s,baz=280,slow=2.8,SNR=6.7						
RPZ				LR	LR	19 32 49.5	
	comp=Z,356nm,19.0s,baz=342,slow=34						
MQZ	McQueen's Vall	33.10	171	*e*P	P	19 20 34.7	+0.2
	49nm,1.4s						
LBZ	Lake Benmore	33.45	174	*e*P	P	19 20 38.5	+0.9
	27nm,1.3s						
WKZ	Wanaka	33.80	176	*e*P	P	19 20 41.2	+0.6
	23nm,0.9s						
MTN	Manton Dam	33.95	263	*e*P	P	19 20 42.5	+0.2
	10nm,1.4s						
RAR	Rarotonga	34.52	111	LR	LR	19 32 11.4	
	comp=Z,205nm,18.0s,baz=325,slow=32						
BBOO	Buckleboo	34.88	227	*e*P	P	19 20 49.8	-0.4
	42nm,1.5s						
FITZ	Fitzroy Crossi	39.43	255	*e*P	P	19 21 28.6	-0.5
	5.8nm,1.2s						
FITZ	Fitzroy Crossi	39.43	255	P	P	19 21 29.3	+0.2
	2.7nm,0.9s,baz=70,slow=9.6,SNR=4.4						
BATI	Baumata	41.40	267	P	P	19 21 46.4	+1.0
	6.1nm,0.8s,baz=236,slow=3.6,SNR=1.9						
PPT2	Papeete2	43.65	104	*e*S	S	19 28 41.0	+7.1
	213nm,27.0s						
PPT2				*e*LQ	LQ	19 32 33.6	
	951nm,26.5s						
PPT2				*e*LR	LR	19 34 32.6	
	comp=Z,174nm,21.5s						
MJAR	Matsushiro Arr	53.98	333	P	P	19 23 22.3	-0.4
	1.7nm,0.8s,baz=174,slow=8.0,SNR=5.8						
MAJO	Matsushiro	53.98	333	*e*P	P	19 23 22.3	-0.4
RKT	Rikitea	57.55	110	*e*LR	LR	19 40 51.4	
	comp=Z,683nm,25.0s						
KSRS	Korea Array	59.89	326	P	P	19 24 04.7	+0.1
	0.6nm,0.9s,baz=166,slow=24,SNR=3.2						
KSAR	Wonju Array Be	59.90	326	P	P	19 24 04.7	0.0
USRK	Ussuriysk Ar.	62.95	333	P	P	19 24 26.9	+1.7
	0.8nm,0.6s,baz=126,slow=2.5,SNR=2.6						
KLR	Kul'dur	67.06	337	P	P	19 24 52.4	+0.5
	1.7nm,0.7s,baz=145,slow=3.9,SNR=3.6						
CM31	Chiang Mai Arr	72.15	294	*e*P	P	19 25 23.1	-0.8
CMAR	Chiang Mai Arr	72.15	294	P	P	19 25 25.3	+1.4
	0.7nm,0.6s,baz=107,slow=4.2,SNR=5.7						
SONA0	Songino Array	78.68	324	*e*P	P	19 26 01.5	+0.5
SONM	Songino Array	78.68	324	P	P	19 26 01.5	+0.5
	0.8nm,1.0s,baz=142,slow=6.0,SNR=4.5						
SONM				LR	LR	19 58 18.4	
	comp=Z,92nm,20.8s,baz=145,slow=34						
SONA1	Songino Array	78.68	324	*e*P	P	19 26 01.0	-0.1
BILL	Bilibino	78.86	0	*e*P	P	19 26 01.2	-0.2
	5.7nm,1.0s						
QSPA	South Pole Qui	78.98	180	*e*P	P	19 26 01.7	-0.7
	7.4nm,1.1s						
IM3	Indian Mountai	82.39	16	*e*P	P	19 26 19.8	-0.5
WRH	Wood River Hil	82.90	18	*e*P	P	19 26 23.0	0.0
	10nm,1.4s						
ILAR	Eielson Array	83.48	18	P	P	19 26 25.1	-0.9
	1.4nm,0.6s,baz=236,slow=5.0,SNR=12						
ILB	Eielson Array	83.48	18	*e*P	P	19 26 25.6	-0.5
NV01	Mina Array Sit	85.97	50	*e*P	P	19 26 38.9	-0.6
NVAR	Mina Array Bea	85.97	50	P	P	19 26 38.2	-1.3
	1.0nm,0.9s,baz=218,slow=5.7,SNR=3.2						
TIXI	Tiksi	86.08	349	P	P	19 26 39.4	+0.4
	0.9nm,0.3s,baz=135,slow=4.3,SNR=3.8						
PDAR	Pinedale Array	93.50	47	P	P	19 27 12.9	-2.1
	0.1nm,0.6s,baz=207,slow=9.1,SNR=2.6						
MK01	Makanchi Array	93.53	317	*e*P	P	19 27 14.5	-0.2
MK32	Makanchi Array	93.54	317	*e*P	P	19 27 14.3	-0.4
MKAR	Makanchi Array	93.54	317	P	P	19 27 14.3	-0.4
	0.6nm,0.8s,baz=86,slow=5.7,SNR=2.8						
ZALV	Zalesovo Beam	93.57	324	P	P	19 27 14.4	-0.2
	0.2nm,0.3s,baz=132,slow=4.1,SNR=2.3						
ZAA1	Zalesovo Array	93.57	324	*e*P	P	19 27 14.4	-0.2
YKA	Yellowknife Ar	94.93	27	P	P	19 27 19.3	-1.4
	0.2nm,0.6s,baz=254,slow=5.0,SNR=3.6						
AAK	Ala-Archa	98.32	312	LR	LR	20 09 45.9	
	comp=Z,80nm,21.8s,baz=70,slow=34						
ARA0	ARCESS Array S	116.33	345	*e*PKPdf	PKiKP	19 32 41.5	-0.3
ARCES	ARCESS Array B	116.33	345	PKP	PKiKP	19 32 41.5	-0.3
	2.6nm,0.9s,baz=126,slow=1.2,SNR=3.6						
FIA0	FINESS Array S	121.77	339	*e*PKPdf	PKPdf	19 32 50.3	-2.2
FINES	FINESS Array B	121.77	339	PKP	PKPdf	19 32 50.3	-2.2
	2.5nm,1.1s,baz=331,slow=5.4,SNR=3.3						
ESDC	Sonseca Array	150.05	344	PKPbc	PKPbc	19 33 49.8	0.0
	0.1nm,0.4s,baz=230,slow=20,SNR=2.4						
TORD	Torodi Ar. Bea	164.31	279	PKP	PKPdf	19 34 01.5	-1.9
	0.4nm,0.8s,baz=358,slow=1.5,SNR=2.9						
TOA1	Torodi Ar. Sit	164.31	279	*e*PKPdf	PKPdf	19 34 01.5	-1.9

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*IDC **09** 19:22:28.3±1.1, 11°.58S×165°.27E, h0^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.9/37, mbtmp3.9/11, ML3.8/2, Error ellipse: s-maj=35.3km s-min=21.3km az=142.0*

*ISCJB **09** 19:22:30.8±0.8, 11°.6S±0°.1×165°.15E±0°.08, h24^{km}, mb3.8/8, Error ellipse: s-maj=20.9km s-min=11.8km az=7.2*

ISC 09 19:22:31.7±0.8**, 11°.7S**±0°.1×**165°.2E**±0°.1**, h24^{km}, n11, σ1ˢ.12**/12**, mb3.9**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.64	293	Pn	Pn	19 23 52.6	-1.5
	7.9nm,0.3s,baz=191,slow=18,SNR=4.1						
HNR				Sn	Sn	19 24 58.2	0.0
	3.0nm,0.3s,baz=209,slow=19,SNR=2.4						
DZM	Mont Dzumac	10.38	174	Pn	Pn	19 24 58.2	-1.0
	0.2nm,0.3s,baz=16,slow=20,SNR=2.0						
CTA	Charters Tower	20.03	243	P	Pn	19 27 04.9	0.0
	1.5nm,0.6s,baz=61,slow=18,SNR=2.5						
WRA	Warramunga Arr	30.77	251	P	P	19 28 47.5	+2.0
	3.6nm,0.8s,baz=82,slow=9.0,SNR=27						
ASAR	Alice Springs	32.03	244	P	P	19 28 58.0	+1.4
	1.5nm,0.8s,baz=76,slow=9.4,SNR=15						
CMAR	Chiang Mai Arr	71.89	294	P	P	19 33 52.9	-0.5
	0.4nm,0.8s,baz=111,slow=4.9,SNR=3.1						
SONM	Songino Array	78.88	324	P	P	19 34 33.1	0.0
	0.2nm,0.6s,baz=143,slow=5.0,SNR=2.6						
ILAR	Eielson Array	84.30	19	P	P	19 35 01.8	+0.6
	0.8nm,0.6s,baz=240,slow=5.0,SNR=13						
NVAR	Mina Array Bea	86.84	50	P	P	19 35 15.2	+0.4
	1.4nm,0.8s,baz=205,slow=4.0,SNR=4.4						
MKAR	Makanchi Array	93.64	317	P	P	19 35 47.0	+0.8
	0.4nm,0.8s,baz=89,slow=5.9,SNR=2.9						
YKA	Yellowknife Ar	95.79	27	P	P	19 35 54.5	-1.0
	0.1nm,0.4s,baz=261,slow=4.9,SNR=4.1						

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*ISCJB **09** 19:28:01.7±0.6, 40°.89N±0°.03×142°.07E±0°.07, h64^{km}±4^{km}, mb3.5/10, Error ellipse: s-maj=9.0km s-min=5.0km az=12.1*

*JMA **09** 19:28:02.3±0.1, 40°.91N×142°.12E, h50^{km}±2^{km}, M3.5*

JMA Felt I J1.

*IDC **09** 19:28:03.5±2.0, 40°.91N×142°.17E, h74^{km}±17^{km}, mb3.3/10, mb1 3.4/14, mb1mx3.3/34, mbtmp3.5/14, Error ellipse: s-maj=25.7km s-min=12.8km az=102.0*

ISC 09 19:28:02.5±1.0**, 40°.89N**±0°.04×**142°.07E**±0°.06**, h57^{km}**±8^{km}**, n40, σ1ˢ.08**/44**, mb3.7**/14**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JARK	Aomorirokkasho	0.54	282	P	Pn	19 28 14.6	-0.1
JARK				S	Sn	19 28 23.3	-0.3
JAHD	Aomorihigashid	0.66	304	⇓P	Pn	19 28 15.9	-0.3
JAHD				S	Sn	19 28 25.8	-0.3
JANG	Nango	0.67	219	⇓P	Pn	19 28 16.1	-0.1
JANG				S	Sn	19 28 25.7	-0.5
JKEN	Kujiedanarisaw	0.74	202	P	Pn	19 28 16.8	-0.3
JKEN				S	Sn	19 28 27.2	-0.5
JTM	Tenmabayashi	0.76	262	⇓P	Pn	19 28 17.4	0.0
JTM				S	Sn	19 28 28.3	0.0
JOT	Ohata	0.91	303	⇓P	Pn	19 28 19.0	-0.3
JOT				*e*S	Sn	19 28 31.3	-0.3
JKB	Kayabe	1.26	322	⇓P	Pn	19 28 23.7	-0.2
JKB				*e*S	Sn	19 28 39.5	-0.4
JAH	Hinai	1.30	238	⇓P	Pn	19 28 25.0	+0.6
JAH				S	Sn	19 28 41.8	+1.0
JEM	Erimo	1.39	36	P	Pn	19 28 26.0	+0.4
JSR	Shiriuchi	1.40	298	P	Pn	19 28 26.1	+0.4
JNBK	Urakawa-nobuka	1.48	20	P	Pn	19 28 28.0	+1.2
JIW	Iwasaki	1.59	260	P	Pn	19 28 28.9	+0.5
JIAM	Iburiatsuma	1.73	356	P	Pn	19 28 31.1	+0.9
JNB	Noboribetsu	1.75	334	P	Pn	19 28 29.9	-0.6
JNB				*e*S	Sn	19 28 51.6	-0.1
JYM2	Yakumo 2	1.77	314	P	Pn	19 28 31.1	+0.4
ASAJ	Asahikawa	3.24	7	P	Pn	19 28 51.7	+0.8
	3.1nm,0.3s,baz=222,slow=9.1,SNR=4.3						
ASAJ				S	Sn	19 29 29.9	+1.7
	2.4nm,0.3s,baz=318,slow=25,SNR=3.7						
MJAR	Matsushiro Arr	5.29	216	P	Pn	19 29 20.4	+1.4
	0.1nm,0.3s,baz=45,slow=15,SNR=9.1						
USRK	Ussuriysk Ar.	8.14	297	P	Pn	19 29 58.9	+1.0
	0.2nm,0.3s,baz=92,slow=16,SNR=4.6						
KSRS	Korea Array	11.50	257	P	Pn	19 30 48.1	+4.2
	0.1nm,0.3s,baz=65,slow=14,SNR=3.4						
SEY	Seymchan	22.91	12	P	P	19 32 59.0	-2.2
	0.4nm,0.4s,baz=14,slow=22,SNR=5.2						
SONM	Songino Array	26.25	297	P	P	19 33 30.6	-1.7
	0.2nm,0.6s,baz=94,slow=9.7,SNR=2.6						
H11N2	WAKE ISLAND Hy	29.89	127	T	T	20 05 40.7	
	baz=320,slow=75						
H11N1	WAKE ISLAND Hy	29.90	127	T	T	20 05 42.1	
	baz=320,slow=75						
H11N3	WAKE ISLAND Hy	29.91	127	T	T	20 05 43.8	
	baz=320,slow=75						
H11S1	WAKE ISLAND Hy	30.72	129	T	T	20 06 44.8	
	baz=322,slow=76						
H11S3	WAKE ISLAND Hy	30.72	129	T	T	20 06 45.4	
	baz=322,slow=76						
H11S2	WAKE ISLAND Hy	30.74	129	T	T	20 06 47.9	
	baz=322,slow=76						
ZALV	Zalesovo Beam	39.78	309	P	P	19 35 29.5	-0.1
	0.5nm,0.4s,baz=99,slow=10,SNR=3.6						
MKAR	Makanchi Array	42.60	299	P	P	19 35 52.8	-0.1
	0.5nm,0.4s,baz=84,slow=11,SNR=17						
CMAR	Chiang Mai Arr	43.08	252	P	P	19 35 56.4	-0.6
	0.3nm,0.3s,baz=42,slow=6.1,SNR=3.0						
JIRN	Jiri	47.28	272	*e*P	P	19 36 31.7	+1.0
RAMN	Ramite	47.34	271	*e*P	P	19 36 32.0	+1.0
	2.8nm,0.4s						
GUN	Gumba	47.39	272	*e*P	P	19 36 32.3	+0.8
	8.0nm,0.5s						
DANN	Dangsing	48.77	274	*e*P	P	19 36 43.1	+1.1
	12nm,0.6s						
PYUN	Piuthan	49.48	274	*e*P	P	19 36 49.3	+1.9
	4.0nm,0.5s						
WRA	Warramunga Arr	60.95	188	P	P	19 38 08.8	-0.8
	0.2nm,0.4s,baz=5.2,slow=6.8,SNR=14						
ASAR	Alice Springs	64.68	188	P	P	19 38 34.0	-0.3
	0.2nm,0.5s,baz=6.6,slow=6.9,SNR=4.4						
FINES	FINESS Array B	65.65	332	P	P	19 38 40.2	0.0
	2.3nm,0.7s,baz=47,slow=8.8,SNR=18						
NOA	NORSAR Array B	70.83	337	P	P	19 39 12.3	-0.5
	0.8nm,1.1s,baz=45,slow=5.7,SNR=2.6						
AKASG	Malin Array Be	71.57	322	P	P	19 39 16.3	-1.0
	0.5nm,0.3s,baz=47,slow=7.1,SNR=2.3						

MAN 09 19:31:08.1, 7°.06N×125°.99E, h45^{km}, mb3.8, ML2.6, MS2.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.28	112	*e*P	Pn	19 31 17.9	+1.2
MATI				*e*S	Sn	19 31 26.3	+3.6
DMPH	Davao City--Mi	0.48	273	⇓*e*P	Pn	19 31 20.3	+1.5
DMPH				*i* S	Sn	19 31 29.5	+3.0
BUKP	Musuan	1.23	312	*e*P	Pn	19 31 29.2	+0.2
BUKP				*e*S	Sn	19 31 46.0	+1.5
SKMP	Bagumbayan, Su	1.53	250	*e*P	Pn	19 31 34.2	+1.2

MEX 09 19:32:33.2±0.4**, 15°.99N×98°.08W, h2^{km}, MD3.9, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.40	354	*i* P	Pg	19 32 40.4	-0.6
PNIG				*i* S	Sg	19 32 46.5	+0.3

MAN 09 19:33:06.9, 7°.69N×125°.05E, h33^{km}, mb3.9, ML2.7, MS2.2, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.19	3	*e*P	Pb	19 33 14.9	+1.4
BUKP				*e*S	Sb	19 33 20.1	+2.1
CGP	Cagayan de Oro	0.84	335	⇑*e*P	Pb	19 33 23.1	-0.1
CTBH	Cotabato--PC H	0.92	240	⇓*i*P	Pn	19 33 24.0	+0.4
CTBH				*i* S	Sn	19 33 35.0	-0.7
SKMP	Bagumbayan, Su	1.27	204	*e*P	Pb	19 33 37.1	+6.8
PAGZ	Pagadian	1.66	276	*e*P	Pb	19 33 35.4	-1.6
PAGZ				*e*S	Sb	19 33 56.2	-1.3

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*IDC **09** 19:41:13.8±1.9, 37°.07N×143°.54E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.4/33, mbtmp3.5/7, ML3.0/2, Error ellipse: s-maj=46.2km s-min=24.6km az=56.0*

*ISCJB **09** 19:41:16.2±0.9, 37°.36N±0°.04×143°.45E±0°.06, h33^{km}, mb3.5/5, Error ellipse: s-maj=7.2km s-min=5.4km az=0.1*

*JMA **09** 19:41:16.4±0.2, 37°.38N×143°.44E, h46^{km}, M3.4*

ISC 09 19:41:18.3±1.3**, 37°.39N**±0°.05×**143°.47E**±0°.10**, h35^{km}, n23, σ1ˢ.32**/35**, mb3.5**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.83	301	P	Pn	19 41 46.0	-1.2
JIKH				S	Sn	19 42 07.8	-1.4
JIO	Ouri	1.99	303	P	Pn	19 41 48.3	-1.0
JIO				S	Sn	19 42 12.0	-1.0
JFK	Kawauchi	2.07	270	P	Pn	19 41 49.1	-1.4
JFK				S	Sn	19 42 13.2	-1.8
JKMT	Kesennumamotoy	2.12	313	P	Pn	19 41 50.1	-1.1
JKMT				S	Sn	19 42 15.1	-1.2
ONAJ	Iwakimizuishiy	2.15	263	P	Pn	19 41 50.6	-1.1
ONAJ				S	Sn	19 42 14.9	-2.2
JMM	Marumori	2.18	284	P	Pn	19 41 50.6	-1.4
JMM				*e*S	Sn	19 42 16.2	-1.5
JMK	Ichinoseki	2.36	312	P	Pn	19 41 53.6	-0.9
JMK				S	Sn	19 42 21.9	-0.4
JOU	Okura	2.42	295	P	Pn	19 41 54.8	-0.6
JOU				S	Sn	19 42 23.4	-0.5
JFT	Otama	2.50	274	P	Pn	19 41 56.3	-0.1
JFT				S	Sn	19 42 25.0	-0.6
JOM	Ohasama	2.69	321	P	Pn	19 41 58.0	-1.1
JOM				S	Sn	19 42 29.4	-1.1
JYK	Kaneyama	2.89	303	P	Pn	19 42 01.4	-0.4
JRG	Rokugo	3.00	313	P	Pn	19 42 03.5	+0.2
JANG	Nango	3.35	334	*e*S	Sn	19 42 44.4	-2.2
JAG	Ashikaga	3.36	255	P	Pn	19 42 07.2	-1.0
JAG				S	Sn	19 42 44.7	-2.2
BSO1	Boso 1	3.39	217	*e*S	Sn	19 42 45.9	-1.1
MJAR	Matsushiro Arr	4.29	260	Pn	Pn	19 42 21.4	+0.3
	0.9nm,0.3s,baz=90,slow=14,SNR=101						
MJAR				Sn	Sn	19 43 10.6	+0.5
	0.2nm,0.3s,baz=352,slow=3.1,SNR=6.2						
MAT	Matsushiro	4.30	260	P	Pn	19 42 22.2	+1.1
MAT				S	Sn	19 43 11.2	+1.2
KSRS	Korea Array	12.36	275	Pn	Pn	19 44 13.3	+1.6
	0.1nm,0.3s,baz=93,slow=15,SNR=3.5						
SONM	Songino Array	28.96	303	P	P	19 47 17.0	+2.6
	0.7nm,0.6s,baz=103,slow=8.0,SNR=7.4						
ZALV	Zalesovo Beam	42.89	312	P	P	19 49 17.6	+4.5
	0.6nm,0.6s,baz=94,slow=10,SNR=3.3						
MKAR	Makanchi Array	45.32	302	P	P	19 49 33.2	+0.5
	0.5nm,0.9s,baz=85,slow=8.2,SNR=2.9						
WRA	Warramunga Arr	57.67	190	P	P	19 51 03.6	-1.6
	0.3nm,0.5s,baz=7.8,slow=7.4,SNR=5.1						
ASAR	Alice Springs	61.39	190	P	P	19 51 30.1	-0.8
	0.2nm,0.7s,baz=21,slow=5.0,SNR=2.6						

MAN 09 19:46:06.6, 7°.86N×125°.03E, h31^{km}, mb3.8, ML2.5, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.04	59	*e*P	Pb	19 46 11.7	-0.2
BUKP				*e*S	Sb	19 46 16.9	+1.5
CGP	Cagayan de Oro	0.68	330	⇑*i*P	Pn	19 46 20.8	+0.7
CGP				*i* S	Sn	19 46 30.3	+0.7
PAGZ	Pagadian	1.64	270	*e*P	Pn	19 46 33.5	+0.2
PAGZ				*e*S	Sn	19 46 53.5	+0.2

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*IDC **09** 19:54:38.2±0.8, 10°.90S×164°.71E, h0^{km}, mb4.2/17, mb1 4.4/20, mb1mx4.2/49, mbtmp4.2/20, ML4.3/3, MS3.6/3, Ms1 3.6/3, ms1mx3.1/37, Error ellipse: s-maj=23.7km s-min=16.2km az=126.0*

*NEIC **09** 19:54:39.9±0.2, 10°.87S×164°.68E, h10^{km}, mb4.6/16, Error ellipse: s-maj=6.0km s-min=4.7km az=97.0*

*ISCJB **09** 19:54:41.0±0.3, 10°.98S±0°.05×164°.64E±0°.06, h29^{km}, mb4.3/30, MS3.7/1, Error ellipse: s-maj=8.2km s-min=6.9km az=168.4*

ISC 09 19:54:42.6±0.5**, 10°.90S**±0°.07×**164°.68E**±0°.07**, h29^{km}, n72, σ0ˢ.82**/71**, mb4.2**/33**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.88	287	*e*P	Pn	19 55 56.0	+1.9
HNR				*e*S	Sb	19 57 04.0	-1.8
HNR	Honiara	4.88	287	Pn	Pn	19 55 54.7	+0.5
	23nm,0.3s,baz=154,slow=2.3,SNR=14						
HNR				Sn	Sn	19 56 50.8	+1.0
	8.2nm,0.3s,baz=130,slow=18,SNR=3.6						
HNR				LR	LR	19 57 47.1	
	comp=Z,632nm,21.1s,baz=142,slow=38						
MARNC	Mare, Loyalty	11.00	163	*e*Pn	Pn	19 57 17.5	-0.6
DZM	Mont Dzumac	11.23	172	*e*Pn	Pn	19 57 21.8	+0.4
DZM	Mont Dzumac	11.23	172	Pn	Pn	19 57 21.4	0.0
	3.5nm,0.3s,baz=305,slow=12,SNR=25						
DZM				LR	LR	20 01 14.8	
	comp=Z,277nm,18.3s,baz=204,slow=35						
PINNC	Pines Island,	11.94	168	*e*Pn	Pn	19 57 31.5	+0.5
MANU	Manus Island	19.31	296	*e*P	P	19 59 05.3	-0.3
	29nm,1.0s						
CTA	Charters Tower	19.95	241	P	Pn	19 59 13.8	-0.6
	0.2nm,0.3s,baz=68,slow=11,SNR=5.9						
CTAO	Charters Tower	19.95	241	*e*P	P	19 59 12.9	+0.3
	13nm,0.8s						
COEN	Coen	21.22	260	*e*P	P	19 59 26.7	+0.4
	7.2nm,0.8s						
H11S2	WAKE ISLAND Hy	29.27	4	T	T	20 31 19.4	
	baz=184,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.28	4	T	T	20 31 21.0	
	baz=184,slow=76,SNR=9.2						
H11S1	WAKE ISLAND Hy	29.29	4	T	T	20 31 18.4	
	baz=184,slow=76,SNR=11						
STKA	Stephens Creek	29.84	222	*e*P	P	20 00 47.9	+0.4
	1.6nm,0.9s						
STKA	Stephens Creek	29.84	222	P	P	20 00 48.5	+1.0
	5.7nm,0.8s,baz=31,slow=9.1,SNR=12						
BKZ	Black Stump Fm	30.05	161	*e*P	P	20 00 49.6	+0.3
	14nm,1.3s						
H11N1	WAKE ISLAND Hy	30.50	4	T	T	20 32 50.9	
	baz=184,slow=76,SNR=6.9						
H11N3	WAKE ISLAND Hy	30.51	4	T	T	20 32 50.2	
	baz=184,slow=76,SNR=8.0						
H11N2	WAKE ISLAND Hy	30.52	4	T	T	20 32 51.5	
	baz=184,slow=76,SNR=9.9						
WRAB	Tennant Creek	30.54	249	*e*P	P	20 00 53.5	-0.4
	11nm,1.4s						
WB2	Warramunga Arr	30.54	249	*e*P	P	20 00 53.5	-0.4
	5.5nm,1.3s						
WR1	Warramunga Arr	30.55	249	*e*P	P	20 00 53.0	-0.9
WR1				*e*PcP	PcP	20 03 50.7	-1.8
WRA	Warramunga Arr	30.55	249	P	P	20 00 53.1	-0.9
	3.0nm,0.9s,baz=80,slow=9.5,SNR=24						
WRA				PcP	PcP	20 03 50.7	-1.8
	0.5nm,0.9s,baz=91,slow=6.3,SNR=4.2						
TOO	Toolangi	31.66	210	*e*P	P	20 01 04.4	+0.8
	28nm,1.4s						
AS31	Alice Springs	31.92	243	*e*P	P	20 01 05.6	-0.4
	0.7nm,0.8s						
ASAR	Alice Springs	31.93	243	P	P	20 01 05.2	-0.9
	3.6nm,1.1s,baz=65,slow=10,SNR=26						
ASAR				PcP	PcP	20 03 56.0	-0.2
	0.5nm,0.9s,baz=56,slow=3.5,SNR=4.1						
ASAR				LR	LR	20 12 29.9	
	comp=Z,144nm,19.0s,baz=133,slow=34						
FITZ	Fitzroy Crossi	38.41	255	*e*P	P	20 02 00.8	-1.1
	18nm,1.4s						
FORT	Forrest	39.27	234	*e*P	P	20 02 08.9	-0.1
	30nm,0.8s						
MJAR	Matsushiro Arr	53.37	333	P	P	20 03 58.9	-0.7
	2.2nm,0.9s,baz=174,slow=9.3,SNR=7.0						
MAJO	Matsushiro	53.37	333	*e*P	P	20 03 58.9	-0.7
KSRS	Korea Array	59.17	326	P	P	20 04 42.3	+1.3
	1.0nm,0.8s,baz=155,slow=8.4,SNR=3.5						
KSAR	Wonju Array Be	59.19	326	P	P	20 04 42.3	+1.2
USRK	Ussuriysk Ar.	62.35	334	P	P	20 05 03.4	+0.9
	1.6nm,0.7s,baz=124,slow=3.5,SNR=4.3						
KLR	Kul'dur	66.51	337	P	P	20 05 30.1	+0.5
	1.8nm,0.9s,baz=210,slow=5.9,SNR=6.0						
XAN	Xi'an	69.25	313	*e*P	P	20 05 47.0	-0.2
	6.5nm,1.4s						
CM01	Chiang Mai Arr	71.07	294	*e*P	P	20 05 59.2	+0.6
CM31	Chiang Mai Arr	71.10	294	*e*P	P	20 05 59.1	+0.3
CMAR	Chiang Mai Arr	71.10	294	P	P	20 05 59.9	+1.1
	1.4nm,0.8s,baz=120,slow=4.3,SNR=14						
SEY	Seymchan	74.22	354	P	P	20 06 16.3	-0.1
	2.0nm,0.9s,baz=165,slow=3.7,SNR=6.4						
ULN	Ulaanbaatar	77.57	324	*e*P	P	20 06 36.0	-0.2
	4.8nm,1.0s						
SONA0	Songino Array	77.94	324	*e*P	P	20 06 38.0	-0.1
SONM	Songino Array	77.94	324	P	P	20 06 38.0	-0.1
	2.1nm,0.9s,baz=145,slow=6.6,SNR=15						
SONA1	Songino Array	77.94	324	*e*P	P	20 06 38.7	+0.5
BILL	Bilibino	78.74	1	*e*P	P	20 06 42.3	+0.4
	9.4nm,1.1s						
QSPA	South Pole Qui	79.10	180	*e*P	P	20 06 44.5	+0.2
	14nm,1.2s						
IM3	Indian Mountai	82.57	16	*e*P	P	20 07 03.1	+0.6
ILAR	Eielson Array	83.71	19	P	P	20 07 08.7	+0.2
	0.8nm,0.7s,baz=235,slow=5.9,SNR=5.8						
ILB	Eielson Array	83.71	19	*e*P	P	20 07 08.8	+0.4
JIRN	Jiri	85.00	299	*e*P	P	20 07 17.3	+1.0
	10nm,0.9s						
GUN	Gumba	85.33	299	*e*P	P	20 07 18.6	+0.7
PKIN	Phulchoki	85.66	299	*e*P	P	20 07 19.9	+0.4
	13nm,1.2s						
TIXI	Tiksi	85.75	349	P	P	20 07 18.7	+0.1
	1.1nm,0.3s,baz=130,slow=2.8,SNR=4.9						
DMN	Daman	85.92	299	*e*P	P	20 07 21.6	+0.9
	31nm,1.5s						
NV01	Mina Array Sit	86.73	50	*e*P	P	20 07 24.0	-0.5
NVAR	Mina Array Bea	86.73	50	P	P	20 07 25.5	+1.0
	0.4nm,0.5s,baz=239,slow=7.0,SNR=3.8						
DANN	Dangsing	87.26	299	*e*P	P	20 07 24.9	-2.4
I07A	Izee	87.53	44	*e*P	P	20 07 28.6	+0.5
PYUN	Piuthan	87.86	299	*e*P	P	20 07 29.2	-0.9
MK01	Makanchi Array	92.69	317	*e*P	P	20 07 52.0	0.0
MK31	Makanchi Array	92.70	317	*e*P	P	20 07 52.3	+0.2

MK32	Makanchi Array	92.70	317	*e*P	P	20 07 52.9	+0.8
MKAR	Makanchi Array	92.70	317	*e*P	P	20 07 52.2	+0.1
	19nm,0.8s						
MKAR	Makanchi Array	92.70	317	P	P	20 07 52.9	+0.8
	3.5nm,0.8s,baz=100,slow=6.0,SNR=38						
ZALV	Zalesovo Beam	92.83	324	P	P	20 07 51.5	-0.9
	1.9nm,0.8s,baz=108,slow=4.7,SNR=9.2						
ZAA1	Zalesovo Array	92.83	324	*e*P	P	20 07 51.5	-0.9
MAKZ	Makanchi	92.92	317	*e*P	P	20 07 53.1	+0.1
	3.7nm,0.9s						
PDAR	Pinedale Array	94.23	47	P	P	20 07 59.6	+0.1
	0.8nm,0.9s,baz=305,slow=1.9,SNR=4.3						
YKA	Yellowknife Ar	95.33	27	P	P	20 08 02.8	-0.9
	0.4nm,0.8s,baz=250,slow=4.4,SNR=5.4						
GERES	GERESS Array B	135.11	333	PKP	PKiKP	20 14 01.0	0.0
	0.4nm,0.7s,baz=72,slow=3.5,SNR=3.6						
ESDC	Sonseca Array	149.62	343	PKPbc	PKiKP	20 14 30.7	-0.2
	1.3nm,0.8s,baz=6.1,slow=2.7,SNR=4.8						
TORD	Torodi Ar. Bea	163.21	279	PKP	PKPdf	20 14 42.5	-0.9
	1.1nm,1.1s,baz=200,slow=1.4,SNR=3.5						
TOA1	Torodi Ar. Sit	163.21	279	*e*PKPdf	PKPdf	20 14 42.5	-0.9

ISCJB ***09*** *19:55:59.7±0.5, 26°.65N±0°.07×125°.00E±0°.06, h225^{km}±6^{km}, mb2.9/4, Error ellipse: s-maj=13.7km s-min=4.0km az=144.0*

IDC ***09*** *19:56:00.3±3.3, 26°.69N×124°.89E, h224^{km}±40^{km}, mb2.7/4, mb1 2.8/7, mb1mx2.6/58, mbtmp3.2/7, Error ellipse: s-maj=52.9km s-min=16.0km az=66.0*

JMA ***09*** *19:56:02.1±0.4, 26°.73N×124°.87E, h202^{km}, M3.5*

ISC 09 19:56:00.0±0.8**, 26°.71N**±0°.08×**124°.95E**±0°.06**, h222**^{km}±10^{km}**, n30, σ1^{s}.90**/51**, mb2.9**/4**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	1.69	103	P	Pn	19 56 39.2	+1.8
JKE				S	S	19 57 07.1	+0.7
JIKM	Ikemajima	1.80	171	P	Pn	19 56 40.1	+1.7
JIKM				S	S	19 57 07.0	-1.3
JIRB	Irabujima	1.89	174	P	Pn	19 56 40.7	+1.5
JIRB				S	S	19 57 08.1	-1.6
JOGS	Gusukube	1.99	168	P	Pn	19 56 42.0	+1.8
JOGS				S	S	19 57 10.9	-0.5
JAGN	Aguni-jima	2.06	93	P	Pn	19 56 42.4	+1.6
JAGN				S	S	19 57 12.1	-0.3
JTJ	Tarama	2.08	186	P	Pn	19 56 42.2	+1.2
JTJ				S	S	19 57 11.2	-1.7
JISG	Ishigakijimahi	2.19	195	P	Pn	19 56 42.9	+0.7
JISG				S	S	19 57 13.1	-1.9
JIJ	Ishigaki jima	2.45	197	P	Pn	19 56 44.9	0.0
JIJ				S	S	19 57 16.6	-3.2
JJT3	Tamagusuku3	2.61	102	P	Pn	19 56 48.7	+2.2
JJT3				S	S	19 57 22.3	-0.4
JKRS	Kuro-shima	2.61	199	P	Pn	19 56 46.8	+0.3
JKRS				S	S	19 57 20.1	-2.7
IRIF	Iriomote-Funau	2.61	205	P	Pn	19 56 46.7	+0.1
IRIF				*e*S	S	19 57 21.0	-1.9
JIH	Iheya	2.72	83	P	Pn	19 56 49.4	+1.7
JIH				S	S	19 57 23.8	-1.0
JNTH	Nagotoyohara	2.76	93	P	Pn	19 56 49.8	+1.7
JNTH				S	S	19 57 24.0	-1.7
HATJ	Hateruma jima	2.84	202	P	Pn	19 56 49.2	+0.1
HATJ				S	S	19 57 24.9	-2.5
YOJ	Yonaguni jima	2.84	218	P	Pn	19 56 49.9	+0.8
YOJ				S	S	19 57 27.6	+0.2
JYNG	Yonagunijimaku	2.89	219	P	Pn	19 56 50.7	+1.1
JYNG				*e*S	S	19 57 28.9	+0.6
JOW	Kunigami	2.98	87	P	Pn	19 56 52.1	+1.5
JOW				S	S	19 57 28.2	-1.9
JOW	Kunigami	2.98	87	P	Pn	19 56 51.6	+1.0
	1.0nm,0.3s,baz=140,slow=13,SNR=24						
JOW				S	S	19 57 23.2	-6.9
	2.4nm,0.3s,baz=123,slow=14,SNR=5.5						
JYRO	Yoronjima	3.15	84	P	Pn	19 56 53.8	+1.3
JYRO				S	S	19 57 31.1	-2.4
JOKE	Okinoerabujima	3.30	78	P	Pn	19 56 55.4	+1.1
JOKE				S	S	19 57 34.2	-2.5
JTK	Tokunoshima	3.72	72	P	Pn	19 57 00.1	+0.8
JTK				S	S	19 57 42.2	-3.5
JAMN	Amaminishikomi	4.05	67	S	S	19 57 51.1	-1.8
JAM	Amami Oshima	4.47	67	*e*S	S	19 57 59.4	-2.7
JMZ	Minamidaito 2	5.70	98	P	Pn	19 57 25.5	+1.7
KSRS	Korea Array	11.00	13	P	Pn	19 58 31.6	+0.1
	0.1nm,0.3s,baz=190,slow=12,SNR=3.0						
MJAR	Matsushiro Arr	14.94	46	P	Pn	19 59 21.6	+1.1
	0.0nm,0.3s,baz=217,slow=8.8,SNR=2.7						
SONM	Songino Array	25.61	330	P	P	20 01 09.3	+0.2
	0.1nm,0.5s,baz=123,slow=7.1,SNR=2.5						
MKAR	Makanchi Array	39.03	312	P	P	20 03 05.1	0.0
	0.2nm,0.5s,baz=98,slow=9.0,SNR=4.9						
WRA	Warramunga Arr	47.27	168	P	P	20 04 10.8	-0.4
	0.5nm,0.6s,baz=349,slow=8.6,SNR=8.3						
ASAR	Alice Springs	50.83	169	P	P	20 04 38.4	+0.2
	0.2nm,0.5s,baz=356,slow=15,SNR=8.2						

IDC 09 20:04:14.2±1.7**, 11°.63S**×**164°.64E, h0**^{km}**, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/40**, mbtmp3.6**/4**, ML4.3**/1**, Error ellipse: s-maj=49.5km s-min=31.9km az=127.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.53	171	Pn	Pn	20 06 46.7	+0.1
	2.3nm,0.3s,baz=319,slow=20,SNR=30						
WRA	Warramunga Arr	30.26	250	P	P	20 10 27.3	0.0
	0.2nm,0.4s,baz=82,slow=9.0,SNR=4.9						
ASAR	Alice Springs	31.56	244	P	P	20 10 38.6	-0.1
	0.2nm,0.6s,baz=66,slow=10.0,SNR=4.4						
ILAR	Eielson Array	84.41	19	P	P	20 16 48.2	0.0
	0.4nm,0.9s,baz=228,slow=4.3,SNR=2.8						

IDC 09 20:04:47.0±1.6**, 11°.43S**×**165°.13E, h0**^{km}**, mb3.6**/5**, mb1 3.9**/6**, mb1mx3.6**/42**, mbtmp3.7**/6**, ML4.2**/1**, Error ellipse: s-maj=48.2km s-min=28.5km az=116.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.65	173	Pn	Pn	20 07 21.5	+0.4
	1.7nm,0.3s,baz=46,slow=9.8,SNR=12						
WRA	Warramunga Arr	30.79	250	P	P	20 11 04.7	0.0
	0.6nm,0.6s,baz=83,slow=8.7,SNR=5.9						
ASAR	Alice Springs	32.08	244	P	P	20 11 15.9	-0.2
	0.6nm,0.8s,baz=74,slow=10,SNR=4.2						
SONM	Songino Array	78.62	324	P	P	20 16 50.8	-0.1
	0.5nm,1.0s,baz=116,slow=3.4,SNR=3.3						
ILAR	Eielson Array	84.07	19	P	P	20 17 19.2	-0.1
	0.4nm,0.7s,baz=236,slow=4.5,SNR=5.0						
MKAR	Makanchi Array	93.39	317	P	P	20 18 04.7	+0.3
	0.2nm,0.5s,baz=91,slow=6.2,SNR=3.2						

MAN 09 20:12:49.4, 7°.81N×124°.67E, h40^{km}, mb3.8, ML2.5, MS2.0, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.39	80	*e*P	Pn	20 12 54.9	-3.9
BUKP				*e*S	Sn	20 13 00.1	-5.3
CGP	Cagayan de Oro	0.64	2	⇑*e*P	Pn	20 13 03.2	+1.2
CGP				*e*S	Sn	20 13 13.4	+2.3
CTBH	Cotabato--PC H	0.72	216	⇓*i*P	Pn	20 13 04.0	+0.9
CTBH				*i* S	Sn	20 13 15.1	+2.1
DMPH	Davao City--Mi	1.10	131	⇑*e*P	Pn	20 13 08.8	+0.5
DMPH				*i* S	Sn	20 13 22.1	-0.3

IDC 09 20:17:11.8±2.2**, 5°.66S**×**103°.68E, h0**^{km}**, mb3.5**/7**, mb1 3.6**/7**, mb1mx3.5**/36**, mbtmp3.6**/7**, Error ellipse: s-maj=89.6km s-min=18.2km az=52.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	20.30	104	P	P	20 21 49.5	-0.1
	6.8nm,0.6s,baz=280,slow=12,SNR=3.7						
CMAR	Chiang Mai Arr	24.41	349	P	P	20 22 31.9	-0.4
	0.3nm,0.8s,baz=182,slow=9.0,SNR=3.7						
WRA	Warramunga Arr	33.01	118	P	P	20 23 48.9	-0.1
	0.4nm,1.0s,baz=302,slow=9.0,SNR=3.0						
WRA				PcP	PcP	20 26 32.8	-0.4
	0.2nm,0.9s,baz=292,slow=2.2,SNR=3.1						
ASAR	Alice Springs	34.16	125	P	P	20 23 59.0	0.0
	0.2nm,0.8s,baz=297,slow=7.7,SNR=4.0						
SONM	Songino Array	53.32	2	P	P	20 26 32.9	+0.1
	0.2nm,0.6s,baz=185,slow=8.9,SNR=3.4						
MKAR	Makanchi Array	55.56	342	P	P	20 26 49.0	-0.1
	0.7nm,0.5s,baz=148,slow=9.1,SNR=19						
ZALV	Zalesovo Beam	61.47	347	P	P	20 27 30.1	0.0
	1.0nm,0.4s,baz=169,slow=5.2,SNR=6.9						

MAN 09 20:17:57.8, 8°.61N×122°.76E, h31^{km}, mb4.0, ML2.8, MS2.8, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	Dipolog City	0.59	93	⇑*e*P	Pn	20 18 10.1	+0.1
DCPH				*e*S	Sn	20 18 19.5	+0.9
IPIL	Ipil	0.84	193	*e*P	Pn	20 18 13.5	0.0
IPIL				*e*S	Sb	20 18 25.0	+0.1
SNPH	Sibulan	0.87	33	⇓*i*P	Pn	20 18 11.7	-2.2
SNPH				*i* S	Sb	20 18 26.8	+1.0
PAGZ	Pagadian	0.98	141	*e*P	Pn	20 18 15.7	+0.3
PAGZ				*e*S	Sb	20 18 28.6	-0.3
CTBH	Cotabato--PC H	2.02	133	⇑*i*P	Pn	20 18 31.6	+1.9

ISCJB ***09*** *20:31:34.5±0.8, 67°.58N±0°.03×33°.9E±0°.1, h0^{km}, Error ellipse: s-maj=7.3km s-min=4.9km az=170.8*

HEL ***09*** *20:31:37.8±0.4, 67°.85N×33°.82E, h0^{km}, ML2.3, Explosion*

KOLA ***09*** *20:31:38.7, 67°.67N×33°.78E, M1.8, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NAO ***09*** *20:31:39.3±1.0, 67°.67N×33°.67E, ML3.0*

IDC ***09*** *20:31:40.0±1.7, 67°.73N×33°.66E, h0^{km}, mb1 3.4/5, mb1mx3.0/56, mbtmp3.4/5, ML2.7/4, Error ellipse: s-maj=18.2km s-min=8.8km az=82.0*

ISC 09 20:31:36.4±1.1**, 67°.50N**±0°.04×**33°.87E**±0°.06**, h0**^{km}**, n46, σ2^{s}.16**/85**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.19	291	P	Pg	20 31 41.8	+1.7
APA				S	Sg	20 31 44.1	+1.5
APZ9	Apatity	0.19	291	Pg	Pg	20 31 41.8	+1.7
APZ9				Lg	Lg	20 31 44.2	
APZ9	Apatity	0.19	291	Pg	Pg	20 31 41.8	+1.7
APZ9				Sg	Sg	20 31 44.2	+1.7
APA0	Apatity Array	0.35	288	Pg	Pg	20 31 44.2	+1.0
	baz=72,slow=16						
APA0				Lg	Lg	20 31 48.3	
	baz=77,slow=56						
APA0				Rg	Rg	20 31 50.0	
	baz=72,slow=37						
APA0	Apatity Array	0.35	288	P	Pg	20 31 44.2	+1.0
APA0				S	Sg	20 31 48.2	+0.4
APA0	Apatity Array	0.35	288	Pg	Pg	20 31 44.2	+1.0
	baz=72,slow=16						
APA0				Sg	Sg	20 31 48.3	+0.6
	baz=77,slow=56						
APA0				Rg	Rg	20 31 50.0	
	baz=72,slow=37						
VRF	Varrio	1.65	281	PG	Pn	20 32 06.8	+0.2
VRF				MSG		20 32 25.8	
	comp=Z,31nm,0.2s						
VRF				SN	Sn	20 32 27.4	-1.1
KU6	Riekki	2.17	229	PN	Pb	20 32 17.5	+1.0
	baz=37						
KU6				SN	Sg	20 32 47.7	+1.8
KU6				MSG		20 32 48.8	
	comp=Z,11nm,0.2s						
MSF	Maaselka	2.50	232	PN	Pb	20 32 22.5	+0.3
MSF				SB	Sg	20 32 58.1	+1.5
SGF	Sodankyl	2.83	272	PN	Pn	20 32 23.9	+1.1
SGF				SG	Sb	20 33 02.8	-0.1
RNF	Rovaniemi	3.21	257	PN	Pn	20 32 30.1	+2.1
RNF				SN	Sn	20 33 08.8	+2.0
KEV	Kevo	3.38	315	Pn	Pn	20 32 31.1	+0.7
KEV				Sn	Sn	20 33 09.8	-1.3
KEV	Kevo	3.38	315	*e*P	Pn	20 32 31.1	+0.7
KEV				*e*S	Sn	20 33 10.5	-0.6
KEV	Kevo	3.38	315	PB	Pn	20 32 30.9	+0.5
	baz=124						
KEV				MSG		20 33 09.8	
	comp=Z,11nm,0.2s						
KEV				SB	Sn	20 33 10.6	-0.6
ARA0	ARCESS Array S	3.69	307	Pn	Pn	20 32 34.9	+0.2
	baz=122,slow=16						
ARA0				Pg	Pb	20 32 44.1	+1.6
	baz=114,slow=16						
ARA0				Sn	Sn	20 33 16.1	-2.7
	baz=121,slow=28						
ARA0				Lg	Lg	20 33 27.9	
	baz=113,slow=37						
ARA0	ARCESS Array S	3.69	307	Pn	Pn	20 32 34.9	+0.2
	baz=122,slow=16						
ARA0				Pg	Pb	20 32 44.1	+1.6
	baz=114,slow=16						
ARA0				Sn	Sn	20 33 16.1	-2.7
	baz=121,slow=28						
ARA0				Sg	Sb	20 33 27.9	+0.2
	baz=113,slow=37						
ARCES	ARCESS Array B	3.69	307	Pn	Pn	20 32 34.8	+0.1
	comp=Z,5.2nm,0.3s,baz=118,slow=15,SNR=283						
ARCES				Pg	Pb	20 32 43.2	+0.8
	comp=Z,4.5nm,0.3s,baz=114,slow=16,SNR=22						
ARCES				Sn	Sn	20 33 16.0	-2.8
	comp=Z,4.9nm,0.3s,baz=118,slow=25,SNR=17						
ARCES				Lg	Lg	20 33 28.0	
	comp=Z,12nm,0.3s,baz=115,slow=30,SNR=16						
ARE0	ARCESS Array S	3.69	307	*e*P	Pn	20 32 35.1	+0.4
ARE0				*e*S	Sn	20 33 15.9	-2.9
HEF	Hetta	3.96	288	Pn	Pn	20 32 38.8	+0.5
HEF				Pg	Pb	20 32 47.4	+0.4
HEF				Sn	Sn	20 33 22.6	-2.7
HEF				Lg	Lg	20 33 36.0	
HEF	Hetta	3.96	288	*e*P	Pn	20 32 39.4	+1.1
HEF				*e*S	Sn	20 33 23.6	-1.7
HEF	Hetta	3.96	288	PN	Pn	20 32 38.6	+0.3
HEF				SN	Sn	20 33 23.4	-1.9
OUL	Oulu	4.03	237	PN	Pn	20 32 43.5	+4.2
OUL				SG	Sg	20 33 48.6	+2.9
TOF	Tornio	4.04	254	PN	Pn	20 32 40.8	+1.4
KTK1	Kautokeino	4.24	296	*e*P	Pn	20 32 43.1	+1.0
KTK1				IAML		20 33 53.0	
	comp=Z,33nm,0.6s						
KALU	Kalix	4.49	253	PN	Pn	20 32 48.5	+2.9
LANU	Lannavaara	4.55	282	PN	Pn	20 32 46.1	-0.3
LANU				SG	Sb	20 33 55.7	+3.4
ERTU	Ertsjaerv	4.68	264	PN	Pn	20 32 49.1	+0.9
ERTU				SN	Sn	20 33 42.3	-0.7
HAMF	Hammerfest	4.82	315	*e*P	Pn	20 32 50.0	-0.1
HAMF				*e*S	Sn	20 33 43.4	-3.2
KIF	Kilpisjarvi	5.09	293	Pn	Pn	20 32 54.0	+0.2
KIF				Sn	Sn	20 33 48.8	-4.3
KIF	Kilpisjarvi	5.09	293	*e*P	Pn	20 32 54.1	+0.3
FIA0	FINESS Array S	6.95	213	Pn	Pn	20 33 22.4	+3.0
	baz=18,slow=16						
FIA0				Sn	Sn	20 34 40.8	+1.9
	baz=38,slow=28						
FIA0				Lg	Lg	20 35 11.6	
	baz=27,slow=28						
FIA0	FINESS Array S	6.95	213	Pn	Pn	20 33 22.4	+3.0
	baz=18,slow=16						
FIA0				Sn	Sn	20 34 40.8	+1.9
	baz=38,slow=28						
FIA0				Sg	Sg	20 35 11.6	-7.7
	baz=27,slow=28						
FINES	FINESS Array B	6.95	213	Pn	Pn	20 33 22.3	+3.0
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=9.0						
FINES				Sn	Sn	20 34 41.1	+2.2
	comp=Z,0.4nm,0.3s,baz=17,slow=25,SNR=4.7						
FINES				Lg	Lg	20 35 13.2	
	comp=Z,1.0nm,0.3s,baz=37,slow=28,SNR=11						
STEI	Steigen	7.09	282	*e*P	Pn	20 33 20.0	-1.2
KLMR	Klimovskoe	7.11	157	*i* P	Pn	20 33 21.2	-0.4
KLMR				*i* S	Sn	20 34 42.2	-0.8
KLMR				*i* S	Sn	20 34 42.2	-0.8
KLMR				*i* S	Sn	20 34 42.2	-0.8
HFS	Hagfors	11.52	240	Pn	Pn	20 34 21.6	-0.3
	baz=26,slow=12						
HFS	Hagfors	11.52	240	Pn	Pn	20 34 22.3	+0.3
	comp=Z,0.2nm,0.3s,baz=37,slow=14,SNR=6.1						
HFS				Lg	Lg	20 37 35.6	
	comp=Z,0.2nm,0.3s,baz=62,slow=31,SNR=2.8						
HFS	Hagfors	11.52	240	Pn	Pn	20 34 21.6	-0.3
	baz=26,slow=12						
NB2	NORSAR Subarra	11.72	247	Pn	Pn	20 34 25.1	+0.3
	baz=47,slow=12						
NB2	NORSAR Subarra	11.72	247	Pn	Pn	20 34 25.1	+0.3
	baz=47,slow=12						
NOA	NORSAR Array B	11.72	247	Pn	Pn	20 34 24.6	-0.2
	comp=Z,0.0nm,0.3s,baz=48,slow=11,SNR=8.1						
NOA				Sn	Sn	20 36 30.3	-5.9
	comp=Z,0.0nm,0.3s,baz=44,slow=24,SNR=3.0						
NOA				Lg	Lg	20 37 41.5	
	comp=Z,0.0nm,0.3s,baz=45,slow=25,SNR=4.5						
SPA0	Spitsbergen Ar	11.81	342	Pn	Pn	20 34 23.0	-2.9
	baz=143,slow=14						
SPA0	Spitsbergen Ar	11.81	342	Pn	Pn	20 34 23.0	-2.9
	baz=143,slow=14						
SPITS	Spitsbergen Ar	11.81	342	Pn	Pn	20 34 22.4	-3.4
	baz=140,slow=16,SNR=11						
NRA0	NORESS Array S	11.82	246	Pn	Pn	20 34 26.3	+0.3
	baz=54,slow=12						
NRA0				Sn	Sn	20 36 33.7	-4.8
	baz=53,slow=28						
NRA0	NORESS Array S	11.82	246	Pn	Pn	20 34 26.3	+0.3
	baz=54,slow=12						
NRA0				Sn	Sn	20 36 33.7	-4.8
	baz=53,slow=28						

IDC 09 20:32:12.1±6.4**, 50°.08N**×**113°.94W, h0**^{km}**, mb1 3.6**/1**, mb1mx3.0**/53**, mbtmp3.3**/1**, ML2.9**/1**, Error ellipse: s-maj=97.7km s-min=48.7km az=66.0, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	Newport	2.77	230	Lg	Lg	20 33 29.8	
	baz=108,slow=19						
I56US	NEWPORT INFRAS	2.77	230	*i*		20 51 48.5	
	baz=45,slow=326,SNR=0.5						
I10CA	LAC DU BONNET	11.50	83	*i*		21 46 50.0	
	baz=274,slow=308,SNR=2.3						
YKA	Yellowknife Ar	12.45	359	Pn	Pn	20 35 06.1	-4.2
	0.1nm,0.3s,baz=180,slow=13,SNR=6.6						
YKA				Sn	Sn	20 37 16.2	-13
	0.0nm,0.3s,baz=175,slow=22,SNR=3.4						
YKA				Lg	Lg	20 38 39.0	
	baz=173,slow=27,SNR=3.5						

IDC ***09*** *20:34:36.5±0.5, 11°.08S×164°.82E, h0^{km}, mb4.5/18, mb1 4.7/21, mb1mx4.5/36, mbtmp4.5/21, ML4.6/3, MS3.7/4, Ms1 3.7/4, ms1mx3.5/28, Error ellipse: s-maj=18.1km s-min=14.1km az=94.0*

NEIC ***09*** *20:34:37.8±0.1, 11°.09S×164°.75E, h10^{km}, mb5.0/56, Error ellipse: s-maj=3.5km s-min=3.0km az=104.0*

ISCJB ***09*** *20:34:39.3±0.2, 11°.18S±0°.04×164°.69E±0°.04, h31^{km}, mb4.7/77, MS4.1/3, Error ellipse: s-maj=5.6km s-min=5.3km az=6.8*

ISC 09 20:34:41.1±0.3**, 11°.17S**±0°.05×**164°.76E**±0°.06**, h31**^{km}**, n163, σ1^{s}.05**/173**, mb4.9**/77**, MS3.8**/3**, 2C-1D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.04	290	*e*P	Pn	20 35 55.0	+0.3
HNR				*e*S	Sn	20 36 50.0	-1.9
HNR	Honiara	5.04	290	*e*Pn	Pn	20 35 54.1	-0.6
HNR				*e*Sn	Sn	20 36 51.8	-0.1
HNR	Honiara	5.04	290	Pn	Pn	20 35 54.7	0.0
	59nm,0.3s,baz=162,slow=2.8,SNR=24						
HNR				Sn	Sn	20 36 51.2	-0.7
	65nm,0.3s,baz=162,slow=20,SNR=5.8						
HNR				LR	LR	20 37 16.1	
	comp=Z,439nm,21.2s,baz=106,slow=32						
MARNC	Mare, Loyalty	10.72	163	*e*Pn	Pn	20 37 12.3	-0.4
DZM	Mont Dzumac	10.96	172	*e*Pn	Pn	20 37 16.4	+0.4
	58nm,0.6s						
DZM				*e*LR	LR	20 39 47.0	
	comp=Z,1μm,26.1s						
DZM	Mont Dzumac	10.96	172	*e*Pn	Pn	20 37 15.9	0.0
DZM				*e*Sn	Sn	20 39 15.6	-2.0
DZM	Mont Dzumac	10.96	172	Pn	Pn	20 37 16.5	+0.4
	7.5nm,0.3s,baz=10,slow=10,SNR=63						
DZM				Sn	Sn	20 39 15.3	-2.3
	0.4nm,0.3s,baz=180,slow=20,SNR=2.3						
DZM				LR	LR	20 40 43.9	
	comp=Z,788nm,21.3s,baz=74,slow=33						
PINNC	Pines Island,	11.67	168	*e*Pn	Pn	20 37 26.1	+0.5
RABL	Rabaul	14.27	298	*e*Pn	Pn	20 38 00.7	-0.6
EIDS	Eidsvold	19.16	221	*e*P	P	20 39 02.1	-0.1
	14nm,0.9s						
MANU	Manus Island	19.50	296	*e*P	P	20 39 04.8	-1.1
	170nm,1.4s						
CTA	Charters Tower	19.89	241	P	Pn	20 39 12.1	+0.1
	0.4nm,0.3s,baz=73,slow=11,SNR=14						
CTAO	Charters Tower	19.89	241	*e*P	P	20 39 10.7	+0.5
	45nm,1.0s						
COEN	Coen	21.25	260	*e*P	P	20 39 24.9	0.0
	30nm,1.2s						
ARMA	Armidale	22.71	211	*e*P	P	20 39 41.0	+0.5
	22nm,1.1s						
URZ	Urewera	29.15	160	P	P	20 40 40.6	+1.1
	2.7nm,0.7s,baz=321,slow=6.5,SNR=2.1						
URZ				LR	LR	20 51 13.4	
	comp=Z,191nm,18.2s,baz=350,slow=34						
H11S2	WAKE ISLAND Hy	29.53	4	T	T	21 11 44.3	
	baz=184,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.54	4	T	T	21 11 43.5	
	baz=184,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	29.55	4	T	T	21 11 41.2	
	baz=184,slow=76,SNR=22						
STKA	Stephens Creek	29.69	223	*e*P	P	20 40 45.1	+0.7
	1.2nm,1.0s						
STKA	Stephens Creek	29.69	223	P	P	20 40 45.6	+1.2
	2.4nm,0.7s,baz=47,slow=9.5,SNR=6.3						
STKA				PcP	PcP	20 43 49.1	+0.8
	3.9nm,0.7s,baz=91,slow=2.6,SNR=6.8						
BKZ	Black Stump Fm	29.77	161	*e*P	P	20 40 46.0	+0.9
	9.5nm,1.1s						
WRAB	Tennant Creek	30.52	250	*e*P	P	20 40 51.3	-0.7
	20nm,0.9s						
WB2	Warramunga Arr	30.52	250	*e*P	P	20 40 50.8	-1.1
WR1	Warramunga Arr	30.53	250	*e*P	P	20 40 51.8	-0.3
	44nm,1.1s						
WRA	Warramunga Arr	30.53	250	P	P	20 40 51.8	-0.3
	14nm,0.8s,baz=82,slow=8.7,SNR=64						
WRA				PcP	PcP	20 43 51.3	+0.6
	3.4nm,1.0s,baz=76,slow=2.4,SNR=10						
H11N1	WAKE ISLAND Hy	30.76	4	T	T	21 13 12.7	
	baz=184,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.77	4	T	T	21 13 16.4	
	baz=184,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.78	4	T	T	21 13 16.5	
	baz=184,slow=76,SNR=21						
BFZ	Birch Farm	31.09	163	*e*P	P	20 40 57.3	+0.6
	47nm,1.5s						
TOO	Toolangi	31.47	210	*e*P	P	20 41 00.1	0.0
	26nm,1.3s						
AS01	Alice Springs	31.83	243	*e*P	P	20 41 02.0	-1.4
AS31	Alice Springs	31.87	243	*e*P	P	20 41 02.8	-1.0
	2.7nm,0.9s						
ASAR	Alice Springs	31.88	243	P	P	20 41 03.6	-0.3
	7.3nm,0.6s,baz=63,slow=10.0,SNR=88						
ASAR				PcP	PcP	20 43 54.5	+0.3
	2.7nm,0.7s,baz=70,slow=2.2,SNR=14						
ASAR				LR	LR	20 52 20.0	
	comp=Z,123nm,21.6s,baz=114,slow=33						
RPZ	Rata Peaks	32.88	172	*e*P	P	20 41 12.4	+0.1
	11nm,1.0s						
RPZ	Rata Peaks	32.88	172	P	P	20 41 12.5	+0.1
	6.5nm,0.8s,baz=348,slow=7.2,SNR=3.9						
MTN	Manton Dam	32.92	264	*e*P	P	20 41 12.3	-0.7
	16nm,1.2s						
BBOO	Buckleboo	34.04	226	*e*P	P	20 41 22.1	-0.5
	27nm,1.1s						
FITZ	Fitzroy Crossi	38.41	255	*e*P	P	20 41 59.5	-0.6
	23nm,0.8s						
FORT	Forrest	39.18	235	*e*P	P	20 42 06.6	+0.1
	28nm,0.9s						
MBWA	Marble Bar	44.24	251	*e*P	P	20 42 47.6	-0.4
	25nm,1.1s						
PPT2	Papeete2	44.60	104	*e*LR	LR	20 55 22.9	
	comp=Z,97nm,22.2s						
MORW	Morawa	48.72	241	*e*P	P	20 43 23.2	+0.1
	38nm,1.4s						
MJAR	Matsushiro Arr	53.64	333	P	P	20 43 59.0	-0.8

	6.5nm,0.9s,baz=169,slow=8.4,SNR=14						
MAJO	Matsushiro	53.64	333	*e*P	P	20 43 59.3	-0.5
	15nm,1.1s						
MAT	Matsushiro	53.64	333	P	P	20 43 58.4	-1.4
JNU	Nakatsue	54.62	325	*e*P	P	20 44 06.3	-0.8
	12nm,1.0s						
YULB	Yu-li	54.66	309	*e*P	P	20 44 06.3	-1.2
	19nm,1.1s						
TPUB	Ta-pu	55.12	309	*e*P	P	20 44 09.8	-1.1
	56nm,1.4s						
SSE	Sheshan	59.27	317	*e*P	P	20 44 39.0	-1.0
	17nm,0.8s						
KSRS	Korea Array	59.44	326	P	P	20 44 41.1	+0.1
	3.7nm,0.8s,baz=137,slow=7.7,SNR=13						
KS01	Wonju Array Si	59.47	326	*e*P	P	20 44 40.8	-0.5
USA0B	Ussuriysk Arra	62.63	334	*e*P	P	20 45 02.0	-0.6
	38nm,1.4s						
USRK	Ussuriysk Ar.	62.63	334	P	P	20 45 03.0	+0.5
	9.1nm,0.8s,baz=128,slow=5.9,SNR=18						
MDJ	Mudanjiang	64.01	333	*e*P	P	20 45 11.3	-0.4
	12nm,0.9s						
PETK	Petropavlovsk-	64.31	355	*e*P	P	20 45 13.1	-0.4
PETK	Petropavlovsk-	64.31	355	P	P	20 45 13.9	+0.5
	11nm,0.8s,baz=152,slow=8.1,SNR=7.2						
PEA1	Petropavlovsk-	64.31	355	*e*P	P	20 45 13.9	+0.4
CN2	Changchun	65.36	330	*e*P	P	20 45 19.8	-0.7
CN2				PP	PP	20 47 45.1	+0.4
CN2				*e*S	S	20 53 56.9	-5.6
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,160nm,5.0s						
ENH	Enshi	67.23	310	*e*P	P	20 45 31.9	-0.9
	comp=Z,12nm,0.9s						
GYA	Guiyang	67.69	305	⇑*i*P	P	20 45 37.3	+1.3
GYA				PP	PP	20 48 09.5	+3.9
GYA				S	S	20 54 34.3	+2.5
GYA				SKS	SKiKP	20 55 31.0	-0.6
GYA	Guiyang	67.69	305	SS	SS	20 58 56.7	+3.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,550nm,18.4s						
GYA				LR	LR		
	comp=E,560nm,18.1s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
XAN	Xi'an	69.49	313	P	P	20 45 47.1	+0.1
XAN				pP	pP	20 45 52.1	-3.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN	Xi'an	69.49	313	*e*P	P	20 45 46.5	-0.5
	comp=Z,7.0nm,0.8s						
KMI	Kunming	70.36	302	P	P	20 45 54.3	+1.6
KMI				pP	pP	20 46 00.1	-1.0
KMI				sP	sP	20 46 02.7	-1.5
KMI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,190nm,4.5s						
KMI	Kunming	70.36	302	*e*P	P	20 45 52.4	-0.4
	comp=Z,26nm,1.6s						
CM01	Chiang Mai Arr	71.25	294	*e*P	P	20 45 57.4	-0.6
CM31	Chiang Mai Arr	71.28	294	*e*P	P	20 45 58.0	-0.1
CMAR	Chiang Mai Arr	71.28	294	P	P	20 45 58.7	+0.5
	comp=Z,1.4nm,0.9s,baz=112,slow=4.5,SNR=11						
HHC	Hu-ho-hao-te	71.30	320	*e*P	P	20 45 59.3	+1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,6.3s						
CHTO	Chiang Mai	71.39	294	P	P	20 46 01.0	+2.2
	comp=Z,16nm,1.6s						
CD2	Chengdu	71.91	308	⇑P	P	20 46 02.5	+0.7
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,130nm,4.7s						
HIA	Hailar	72.00	331	*e*P	P	20 46 01.5	-0.4
	comp=Z,13nm,0.9s						
LZH	Lanzhou	74.13	313	*e*P	P	20 46 16.4	+1.5
LZH				pP	pP	20 46 21.1	-2.3
LZH				sP	sP	20 46 23.9	-2.6
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,84nm,4.9s						
GAMB	Gambell	76.86	10	*e*P	P	20 46 29.4	-0.3
	comp=Z,8.0nm,0.8s						
ULN	Ulaanbaatar	77.84	324	*e*P	P	20 46 36.1	+0.3
	comp=Z,15nm,1.2s						
SONA0	Songino Array	78.20	324	*e*P	P	20 46 38.2	+0.4
SONM	Songino Array	78.20	324	P	P	20 46 38.2	+0.4
	comp=Z,4.1nm,1.0s,baz=149,slow=6.2,SNR=29						
SONA1	Songino Array	78.20	324	*e*P	P	20 46 37.7	-0.1
GTA	Gaotai	78.45	314	⇓P	P	20 46 40.5	+1.1
GTA				pP	pP	20 46 44.8	-3.1
GTA				sP	PcP	20 46 47.8	-0.7
GTA				S	S	20 56 38.4	+4.8
GTA	Gaotai	78.45	314	SKS	SKSac	20 56 51.1	-1.2
GTA	Gaotai	78.45	314	SS	SS	21 01 47.4	+10
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,110nm,6.7s						
ANM	Nome	78.82	13	*e*P	P	20 46 40.9	+0.2
	comp=Z,3.4nm,0.9s						
QSPA	South Pole Qui	78.84	180	*e*P	P	20 46 42.1	+1.1
	comp=Z,12nm,0.9s						
BILL	Bilibino	79.01	1	*e*P	P	20 46 41.1	-0.5
	comp=Z,13nm,1.2s						
LSA	Lhasa	81.60	302	*e*P	P	20 46 56.2	-0.8
	comp=Z,3.6nm,1.1s						
TLY	Talaya	81.69	327	*e*P	P	20 46 55.9	-0.5
	comp=Z,4.9nm,0.8s						
RDOG	Red Dog Mine	82.34	12	*e*P	P	20 47 00.2	+0.7
	comp=Z,12nm,0.7s						
IM3	Indian Mountai	82.80	16	*e*P	P	20 47 01.9	0.0
WRH	Wood River Hil	83.35	19	*e*P	P	20 47 04.9	+0.1
	comp=Z,29nm,1.6s						
MDM	Murphy Dome	83.65	18	*e*P	P	20 47 06.1	-0.3
	comp=Z,9.7nm,1.2s						
HDA	Harding Lake	83.67	19	*e*P	P	20 47 05.8	-0.7
	comp=Z,12nm,0.8s						
IL1	Eielson Array	83.94	19	*e*P	P	20 47 07.2	-0.6
ILAR	Eielson Array	83.94	19	P	P	20 47 07.2	-0.7
	comp=Z,3.0nm,0.7s,baz=235,slow=4.8,SNR=28						
ILB	Eielson Array	83.94	19	*e*P	P	20 47 08.0	+0.2
HYT	Haines Junctio	84.90	25	*e*P	P	20 47 12.8	-0.1
	comp=Z,19nm,1.5s						
TIXI	Tiksi	86.03	349	*e*P	P	20 47 17.3	-0.9
	comp=Z,5.5nm,1.1s						
NV01	Mina Array Sit	86.84	50	*e*P	P	20 47 23.2	0.0
NVAR	Mina Array Bea	86.84	50	P	P	20 47 23.1	-0.1
	comp=Z,2.9nm,1.0s,baz=230,slow=7.2,SNR=9.3						
NV11	Mina Array Sit	86.95	50	*e*P	P	20 47 22.9	-0.7
	comp=Z,0.5nm,1.1s						
I07A	Izee	87.66	44	*e*P	P	20 47 26.7	-0.2
	comp=Z,13nm,1.6s						
J08A	Circle Bar Ran	88.15	45	*e*P	P	20 47 29.1	-0.2
	comp=Z,13nm,1.4s						
G08A	Pilot Rock	88.40	43	*e*P	P	20 47 29.8	-0.6
	comp=Z,5.5nm,1.4s						
CCUT	Cedar City	90.38	52	*e*P	P	20 47 40.1	+0.2
	comp=Z,2.9nm,1.0s						
KNB	Kanab	90.67	53	*e*P	P	20 47 41.5	+0.2
	comp=Z,18nm,1.6s						
U15A	North Rim	90.95	53	*e*P	P	20 47 42.5	-0.2
	comp=Z,5.2nm,1.0s						
HLID	Hailey	91.06	46	*e*P	P	20 47 42.2	-0.7
	comp=Z,1.0nm,1.2s						
MTPU	Mount Pierson	91.40	52	*e*P	P	20 47 44.0	-0.9
	comp=Z,6.4nm,1.1s						
HVU	Hansel Valley	91.80	48	*e*P	P	20 47 46.4	0.0
	comp=Z,12nm,1.1s						
DLMT	Dillon	92.75	44	*e*P	P	20 47 50.0	-0.6
	comp=Z,7.7nm,1.1s						
MK01	Makanchi Array	92.94	317	*e*P	P	20 47 50.4	-1.0
MK31	Makanchi Array	92.95	317	*e*P	P	20 47 50.6	-0.8
MK32	Makanchi Array	92.95	317	*e*P	P	20 47 51.6	+0.2
MKAR	Makanchi Array	92.95	317	*e*P	P	20 47 50.6	-0.8
	comp=Z,20nm,1.0s						
MKAR	Makanchi Array	92.95	317	P	P	20 47 51.6	+0.2
	comp=Z,2.2nm,0.8s,baz=104,slow=5.9,SNR=21						
MKAR				PKKPbc	PKKPdf	21 05 01.8	+0.2
	comp=Z,0.6nm,0.7s,baz=281,slow=3.1,SNR=7.9						
ZAA0	Zalesovo Array	93.09	324	*e*P	P	20 47 50.7	-1.1
	comp=Z,13nm,1.5s						
ZALV	Zalesovo Beam	93.09	324	*e*P	P	20 47 50.8	-1.1
ZALV	Zalesovo Beam	93.09	324	P	P	20 47 51.3	-0.5
	comp=Z,2.1nm,0.9s,baz=116,slow=3.4,SNR=8.9						
ZAA1	Zalesovo Array	93.09	324	*e*P	P	20 47 51.3	-0.5
MAKZ	Makanchi	93.17	317	*e*P	P	20 47 51.6	-0.8
	comp=Z,9.4nm,1.3s						
BOZ	Bozeman (W)	93.46	44	*e*P	P	20 47 53.4	-0.5
	comp=Z,4.3nm,1.0s						
PDAR	Pinedale Array	94.35	47	P	P	20 47 58.1	-0.1
	comp=Z,0.7nm,0.9s,baz=237,slow=4.4,SNR=5.3						
PDAR				PKKPbc	PKKPdf	21 04 58.4	-0.9
	comp=Z,0.3nm,0.6s,baz=87,slow=4.9,SNR=4.1						
YKA	Yellowknife Ar	95.53	27	P	P	20 48 01.5	-1.3
	comp=Z,0.7nm,0.8s,baz=255,slow=4.5,SNR=8.8						
YKB5	Yellowknife Ar	95.53	27	*e*P	P	20 48 01.3	-1.5
KSH	Kashi	96.08	309	P	P	20 48 08.4	+2.3
KSH				sP	pP	20 48 15.5	+0.8
KSH				PP	PP	20 52 01.7	+2.5
KSH	Kashi	96.08	309	sS	sS	20 59 32.2	-5.7
KSH				pmax	pmax		
	comp=Z,290nm,5.7s						
KURK	Kurchatov	96.12	320	*e*P	P	20 48 05.9	+0.1
KURBB	Kurchatov Arra	96.16	320	P	P	20 48 05.9	-0.1
	comp=Z,0.6nm,0.8s,baz=99,slow=3.7,SNR=3.2						
BVAR	Borovoye Array	101.45	322	P	Pdif	20 48 28.9	-0.7
	comp=Z,0.6nm,0.8s,baz=79,slow=7.5,SNR=3.5						
ARA0	ARCESS Array S	116.21	345	*e*PKPdf	PKiKP	20 53 20.1	-0.7
ARCES	ARCESS Array B	116.21	345	PKP	PKiKP	20 53 20.1	-0.7
	comp=Z,2.9nm,0.8s,baz=70,slow=1.4,SNR=14						
LPAZ	La Paz	120.99	117	*e*PKPdf	PKiKP	20 53 32.5	0.0
LPAZ	La Paz	120.99	117	PKP	PKiKP	20 53 33.1	+0.7
	comp=Z,2.4nm,0.7s,baz=271,slow=2.4,SNR=9.4						
FIA0	FINESS Array S	121.53	338	*e*PKPdf	PKPdf	20 53 31.2	0.0
FINES	FINESS Array B	121.53	338	PKP	PKPdf	20 53 31.2	0.0
	comp=Z,1.5nm,0.8s,baz=335,slow=3.2,SNR=7.1						
BOSA	Boshof	124.36	224	PKP	PKiKP	20 53 38.8	+0.5
	comp=Z,3.8nm,0.6s,baz=97,slow=2.4,SNR=10						
CPUP	Villa Florida	124.65	133	*e*PKPdf	PKPdf	20 53 38.3	-0.1
CPUP	Villa Florida	124.65	133	PKP	PKPdf	20 53 38.5	+0.2
	comp=Z,3.6nm,0.8s,baz=282,slow=5.2,SNR=4.2						
SDV	Santo Domingo	125.47	87	*e*PKPdf	PKPdf	20 53 40.3	-0.1
AKASG	Malin Array Be	126.43	326	PKP	PKPdf	20 53 40.9	-0.1
	comp=Z,0.3nm,0.3s,baz=55,slow=1.2,SNR=4.7						
NB2	NORSAR Subarra	126.56	344	PKPdf	PKPdf	20 53 40.9	-0.1
	comp=Z,1.3nm,0.8s,baz=34,slow=2.0						
NB200	NORSAR Array S	126.56	344	*e*PKPdf	PKPdf	20 53 41.0	0.0
NOA	NORSAR Array B	126.56	344	PKP	PKPdf	20 53 41.0	0.0
	comp=Z,0.6nm,0.7s,baz=35,slow=2.0,SNR=4.5						
BR101	Keskin Array S	128.33	312	*e*PKPdf	PKPdf	20 53 45.3	+0.1
BRTR	Keskin Array B	128.33	312	PKP	PKPdf	20 53 45.3	+0.1
	comp=Z,0.6nm,0.6s,baz=149,slow=2.7,SNR=4.5						
HUMP	Col San Antoni	130.67	76	*e*PKPdf	PKPdf	20 53 50.0	0.0
BRG	Berggiesshubel	133.77	335	*e*PKP	PKiKP	20 53 56.5	+0.2
	comp=Z,3.2nm,1.0s						
CLL	Collm	133.82	336	*e*PKPdf	PKiKP	20 53 56.0	-0.3
	comp=Z,3.0nm,0.7s						
CLL				*e*pPKPdf	PKPdf	20 53 59.0	+4.0
GERES	GERESS Array B	135.38	333	PKP	PKPdf	20 53 58.5	+0.4
	comp=Z,0.7nm,0.6s,baz=52,slow=2.2,SNR=8.5						
BDFB	Brasilia	138.02	129	PKP	PKPdf	20 54 04.2	+0.2
	comp=Z,1.2nm,0.4s,baz=165,slow=4.4,SNR=5.3						
KEST	Kesra	146.92	322	*e*PKPdf	PKPdf	20 54 19.7	+0.5
KEST	Kesra	146.92	322	PKPbc	PKPbc	20 54 21.1	0.0
	comp=Z,11nm,0.9s,baz=315,slow=2.8,SNR=5.9						
PBRG	Braganca	148.59	348	*e*PKPab	PKPab	20 54 29.7	+0.9
POLO	Lamas de Olo	149.21	349	*e*PKPdf	PKPbc	20 54 27.5	+0.4
PVRL	Vila Real	149.29	349	*e*PKPdf	PKiKP	20 54 28.0	-0.4
ES19	SONSECA Array	149.85	342	*e*PKPdf	PKPdf	20 54 24.6	+0.7
ES19				*e*PKPbc	PKiKP	20 54 29.6	0.0
ES19				*e*PKPab	sPKPdf	20 54 35.8	+0.2
ESDC	Sonseca Array	149.90	342	PKPbc	PKPbc	20 54 28.8	0.0
	comp=Z,2.0nm,0.8s,baz=9.8,slow=2.6,SNR=14						
MTE	Manteigas	150.10	348	*e*PKPab	PKPab	20 54 36.3	+1.2
PMRV	Marv??o	151.00	347	*e*PKPdf	PKiKP	20 54 31.7	-0.2
PTOM	Tomar	151.03	349	*e*PKPdf	PKiKP	20 54 32.3	+0.4
TOA0	Torodi Ar. Sit	163.33	279	*e*PKPdf	PKPdf	20 54 41.7	0.0
TORD	Torodi Ar. Bea	163.33	279	PKP	PKPdf	20 54 41.3	-0.5
	comp=Z,2.4nm,1.0s,baz=24,slow=1.5,SNR=8.2						
TOA1	Torodi Ar. Sit	163.33	279	*e*PKPdf	PKPdf	20 54 41.3	-0.5

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*ISCJB **09** 20:59:34.1±0.9, 10°.9S±0°.1×164°.32E±0°.10, h29^{km}, mb3.6/7, Error ellipse: s-maj=18.3km s-min=11.3km az=34.5*

*IDC **09** 20:59:39.8±3.5, 11°.01S×164°.18E, h64^{km}±28^{km}, mb3.4/7, mb1 3.7/9, mb1mx3.5/39, mbtmp3.8/9, ML4.2/2, Error ellipse: s-maj=30.3km s-min=22.3km az=50.0*

ISC 09 20:59:35.9±1.1, **10°.9S**±0°.1×**164°.3E**±0°.1, **h29**^{km}**, n10, σ1s.34**/11, **mb3.6**/7, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.55	288	P	Pn	21 00 44.4	+1.5
	22nm,0.3s,baz=261,slow=13,SNR=5.7						
HNR				S	Sn	21 01 36.3	+1.3
	21nm,0.3s,baz=223,slow=18,SNR=2.8						
DZM	Mont Dzumac	11.32	170	P	Pn	21 02 17.5	+1.5
	0.8nm,0.3s,baz=312,slow=22,SNR=14						
CTA	Charters Tower	19.68	240	P	Pn	21 04 04.5	+0.1
	0.4nm,0.3s,baz=61,slow=12,SNR=4.6						
WRA	Warramunga Arr	30.25	249	P	P	21 05 43.5	-1.1
	0.8nm,0.9s,baz=78,slow=8.8,SNR=8.1						
ASAR	Alice Springs	31.65	242	P	P	21 05 55.3	-1.6
	0.2nm,0.4s,baz=63,slow=10.0,SNR=6.9						
FITZ	Fitzroy Crossi	38.09	255	P	P	21 06 51.2	-1.4
	2.3nm,0.7s,baz=96,slow=9.7,SNR=9.1						
CMAR	Chiang Mai Arr	70.78	294	P	P	21 10 48.8	-1.3
	0.3nm,0.4s,baz=129,slow=7.1,SNR=3.6						
SONM	Songino Array	77.71	324	P	P	21 11 30.3	+0.2
	0.3nm,0.8s,baz=131,slow=4.4,SNR=2.6						
ILAR	Eielson Array	83.79	19	P	P	21 12 02.9	+0.7
	0.3nm,0.7s,baz=236,slow=6.4,SNR=3.1						
MKAR	Makanchi Array	92.45	317	P	P	21 12 43.9	-0.3
	0.3nm,0.7s,baz=92,slow=4.8,SNR=3.5						

WEL 09 21:01:29.7±0.3, **44°S**±2°×**17°2E**±°, **h5**^{km}**, ML4.1**/6, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLZ	Canterbury Las	0.18	78	P	Pg	21 01 34.1	+0.7
CRLZ				S	Sg	21 01 36.9	+1.1
EYCZ	Eyrewell	0.19	356	P	Pg	21 01 34.2	+0.7
RACZ	Rakaia	0.20	237	P	Pg	21 01 34.4	+0.6
MQZ	McQueen’s Vall	0.22	114	P	Pg	21 01 34.5	+0.4
MQZ				S	Sg	21 01 37.9	+0.9
OXZ	Oxford	0.38	320	P	Pg	21 01 37.2	+0.2
OXZ				S	Sg	21 01 42.1	+0.1
AKCZ	Akaroa Harbour	0.47	124	P	Pg	21 01 39.2	+0.5
AKCZ				S	Sg	21 01 45.7	+0.9
AMCZ	Amberley	0.48	25	P	Pb	21 01 40.1	-0.6
OKCZ	Okains Bay	0.51	103	P	Pg	21 01 40.2	+0.7
OKCZ				S	Sb	21 01 47.5	-1.3
LTZ	Lake Taylor	0.84	355	P	Pg	21 01 46.1	+0.3
RPZ	Rata Peaks	0.96	264	P	Pg	21 01 48.1	-0.1
INZ	Inchbonnie	1.12	322	P	Pg	21 01 50.3	-0.9
WVZ	Waitaha Valley	1.31	294	P	Pn	21 01 53.9	-0.7
KHZ	Kahutara	1.47	36	P	Pn	21 01 54.9	-2.0
LBZ	Lake Benmore	1.76	243	P	Pn	21 01 59.6	-1.2
FOZ	Fox Glacier	1.86	272	P	Pn	21 02 02.4	+0.1
THZ	Tophouse	1.89	12	P	Pn	21 02 00.9	-1.9
ODZ	Otahua Downs	1.89	220	P	Pn	21 02 00.8	-1.9
DSZ	Denniston Nort	1.92	347	P	Pn	21 02 01.5	-1.6
BSWZ	Blackbirch Sta	2.20	31	P	Pn	21 02 05.3	-1.6
TUWZ	Tuamarina	2.47	28	P	Pn	21 02 08.9	-1.7
NNZ	Nelson	2.51	18	P	Pn	21 02 09.9	-1.3
HHSZ	Highcliff Hill	2.60	209	P	Pn	21 02 10.5	-1.9
JCZ	Jackson Bay	2.64	259	P	Pn	21 02 11.9	-1.1
WKZ	Wanaka	2.70	242	P	Pn	21 02 12.7	-1.2
EAZ	Earnscleugh	2.73	233	P	Pn	21 02 12.4	-1.8
TCW	Tory Channel	2.79	31	P	Pn	21 02 13.1	-1.8
QRZ	Quartz Range	2.79	2	P	Pn	21 02 13.2	-1.8
BHW	Baring Head	2.88	41	P	Pn	21 02 13.4	-2.8
PLWZ	Palliser	2.95	47	P	Pn	21 02 14.4	-2.9
DUWZ	D’Urville Isla	3.04	23	P	Pn	21 02 17.8	-0.6
TUZ	Tuapeka	3.05	219	P	Pn	21 02 16.8	-1.8
MSWZ	Moikau Station	3.06	45	P	Pn	21 02 15.7	-3.0
PAWZ	Paruwai Farm	3.17	46	P	Pn	21 02 17.1	-3.2
CAW	Cannon Point	3.20	39	P	Pn	21 02 18.0	-2.7
TRWZ	Traveller	3.30	49	P	Pn	21 02 19.2	-2.9
KIW	Kapiti Island	3.33	35	P	Pn	21 02 20.5	-2.0
MSZ	Milford Sound	3.37	250	P	Pn	21 02 22.1	-0.9
MTW	Mount Morrison	3.38	44	P	Pn	21 02 20.0	-3.0
OGWZ	Otaki Gorge	3.48	38	P	Pn	21 02 21.8	-2.7
MLZ	Mavora Lakes	3.51	239	P	Pn	21 02 22.9	-2.1
HOWZ	Holdsworth Sta	3.58	42	P	Pn	21 02 23.9	-2.0
TMWZ	Te Maipa	3.62	47	P	Pn	21 02 23.8	-2.6
SYZ	Scrubby Hill	3.71	217	P	Pn	21 02 26.4	-1.2
MRZ	Mangatainoka R	3.79	40	P	Pn	21 02 26.4	-2.4
TIWZ	Tintock	3.85	44	P	Pn	21 02 29.1	-0.5
WHZ	Wether Hill Ro	3.89	233	P	Pn	21 02 27.3	-2.9
PRWZ	Pori Road	4.06	42	P	Pn	21 02 30.3	-2.2
BFZ	Birch Farm	4.11	46	P	Pn	21 02 29.5	-3.6
DCZ	Deep Cove	4.17	242	P	Pn	21 02 32.4	-1.5
NMEZ	Namu Road	4.35	16	P	Pn	21 02 37.4	+1.0
APZ	The Paps	4.47	222	P	Pn	21 02 38.4	+0.4
NBEZ	Newall Road No	4.49	15	P	Pn	21 02 38.8	+0.5
KHEZ	Kahui Hut	4.49	16	P	Pn	21 02 38.3	-0.2
PKE	Pukeiti	4.58	16	P	Pn	21 02 39.6	-0.1
TRVZ	Turoa	4.93	30	P	Pn	21 02 43.8	-0.8

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*IDC **09** 21:02:19.9±0.3, 10°.93S×165°.88E, h0^{km}, mb5.6/32, mb1 5.6/34, mb1mx5.6/37, mbtmp5.6/34, ML5.8/2, MS6.3/31, Ms1 6.3/31, ms1mx6.2/43, Error ellipse: s-maj=10.7km s-min=9.1km az=76.0*

*BJI **09** 21:02:20.0, 10°.90S×165°.85E, h15^{km}, mB6.1/68, mb5.5/75, Ms6.8/96, Ms7 6.6/88*

*ISCJB **09** 21:02:21.2±0.1, 11°.00S±0°.02×165°.75E±0°.02, h17^{km}, mb5.8/384, MS6.5/743, Error ellipse: s-maj=2.6km s-min=2.2km az=166.6*

*NEIC **09** 21:02:22.8±0.1, 10°.99S×165°.74E, h18^{km}, mb6.0/277, ME6.7, MS6.5/300, MW6.5, MW6.6, Error ellipse: s-maj=3.1km s-min=2.6km az=133.0, Moment Tensor Solution. s89 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.75; $M_{\theta\theta}$3.23; $M_{\phi\phi}$-2.48; $M_{r\theta}$0.57; $M_{\theta\phi}$-6.81; $M_{\phi r}$0.96; Best double couple: $M_0$7.50000×10^{18} NP1:ϕ_s259.00000°, δ83.00000°, λ-173.00000°. NP2:ϕ_s168.00000°, δ83.00000°, λ-7.00000°. Principal axes: T 7.7600, Plg0.0000°, Azm214.0000°; N -0.5600, Plg80.0000°, Azm306.0000°; P -7.2000, Plg10.0000°, Azm124.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s169.00000°, δ85.00000°, λ-10.00000°. NP2: ϕ_s260.00000°, δ80.00000°, λ-175.00000°. Principal axes: T Plg4.0000°, Azm215.0000°; N Plg0.0000°, Azm0.0000°; P Plg11.0000°, Azm124.0000°; Apparent Stress 0.72 MPa Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*NEIC **09** 21:02:22.0±0.0, 10°.67S×165°.55E, h19^{km} Best double couple: NP1:ϕ_s165.00000°, δ85.00000°, λ-25.00000°. NP2:ϕ_s257.00000°, δ65.00000°, λ-174.00000°. Principal axes: T 1.1800, Plg14.0000°, Azm213.0000°; N -0.2600, Plg64.0000°, Azm335.0000°; P -0.9200, Plg20.0000°, Azm118.0000°;*

*MOS **09** 21:02:24.2±1.2, 10°.87S×165°.70E, h33^{km}, mb6.0/88, MS6.5/86 Error ellipse: s-maj=6.2km s-min=5.3km az=105.9*

*GCMT **09** 21:02:31.8±0.0, 10°.93S×165°.64E, h19^{km}, MW6.6/148, Moment Tensor Solution. s148,c379; s148,c635; Duration: 4s.8 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.23±.00; $M_{\theta\theta}$0.50±.00; $M_{\phi\phi}$-0.27±.00; $M_{r\theta}$-0.16±.01; $M_{\theta\phi}$-0.81±.00; $M_{\phi r}$0.32±.01; Best double couple: $M_0$0.96500×10^{19} NP1:ϕ_s166.00000°, δ87.00000°, λ-23.00000°. NP2:ϕ_s257.00000°, δ67.00000°, λ-176.00000°. Principal axes: T 1.0840, Plg13.0000°, Azm214.0000°; N -0.2380, Plg67.0000°, Azm338.0000°; P -0.8460, Plg18.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 09 21:02:22.7±0.4, **10°.96S**±0°.03×**165°.89E**±0°.03, **h18**^{km}±2^{km}, **h18**^{km}**:pP-P, n1650, σ1s.61**/1369, **mb5.9**/386, **MS6.5**/753, **71C-46D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.04	284	*i* P	Pn	21 03 53.0	+1.8
HNR				*i* S	Sn	21 05 06.0	+6.0
HNR	Honiara	6.04	284	*e*Pn	Pn	21 03 51.9	+0.7
HNR				*e*Sn	Sn	21 05 01.0	+1.1
HNR				*e*Sn	Sn	21 05 01.9	+2.0
HNR	Honiara	6.04	284	Pn	Pn	21 03 51.9	+0.7
	656nm,0.3s,baz=157,slow=3.4,SNR=174						
HNR				Sn	Sn	21 05 01.0	+1.1
	baz=174,slow=19,SNR=2.7						
HNR				LR	LR	21 06 20.6	
	comp=Z,729µm,18.0s,baz=359,slow=40						
MARNC	Mare, Loyalty	10.66	169	*e*Pn	Pn	21 04 54.5	-0.1
DZM	Mont Dzumac	11.06	177	*e*Pn	Pn	21 05 00.9	+0.6
	1µm,0.5s						
DZM				*e*LR	LR	21 07 33.6	
	comp=Z,603µm,29.1s						
DZM	Mont Dzumac	11.06	177	*e*Pn	Pn	21 05 00.8	+0.6
DZM				*e*Sn	Sn	21 07 01.3	-2.3
DZM	Mont Dzumac	11.06	177	Pn	Pn	21 05 01.5	+1.2
	20nm,0.3s,baz=13,slow=12,SNR=91						
DZM				Sn	Sn	21 07 01.3	-2.3
	baz=341,slow=18,SNR=2.6						
ONTNC	Ouen Toro	11.30	177	*e*Pn	Pn	21 05 03.9	+0.5
PINNC	Pines Island,	11.69	173	*e*Pn	Pn	21 05 09.7	+1.1
FUNA	Funafuti	13.34	81	*e*Pn	Pn	21 05 32.8	+1.5
MSVF	Nonsavu	13.57	121	*e*Pn	Pn	21 05 38.4	+3.9
MSVF	Nonsavu	13.57	121	*e*P	Pn	21 05 38.4	+3.9
TARA	Tarawa	14.09	30	*e*Pn	Pn	21 05 43.0	+1.4
RABL	Rabaul	15.17	295	*e*Pn	Pn	21 05 54.2	-2.0
	889nm,0.7s						
NFK	Norfolk Island	18.10	174	P	P	21 06 34.7	+1.1
	baz=18,SNR=6.1						
PATS	Pohnpei	19.22	337	P	Pn	21 06 49.0	+2.0
	baz=19,SNR=6.7						
PATS	Pohnpei	19.22	337	*e*P	Pn	21 06 47.8	+0.9
	2µm,1.3s						
KWAJ	Kwajalein Atol	19.70	5	*e*P	Pn	21 06 52.1	-0.7
	1µm,0.9s						
KWAJ	Kwajalein Atol	19.70	5	*e*P	Pn	21 06 52.1	-0.7
KWAJ				pmax	pmax		
	comp=Z,1µm,0.9s						
EIDS	Eidsvold	20.05	222	P	Pn	21 06 56.2	-0.7
	baz=20,SNR=214						
EIDS	Eidsvold	20.05	222	*e*P	P	21 06 55.8	+0.7
	comp=Z,3µm,1.4s						
MANU	Manus Island	20.41	294	*e*P	P	21 06 59.5	+0.5
	comp=Z,3µm,1.1s						
MANU				LR	LR		
	comp=Z,251µm,18.0s						
CTA	Charters Tower	20.96	242	P	P	21 07 05.9	+0.9
	comp=Z,506nm,0.8s,baz=69,slow=12,SNR=127						
CTA				S	Sn	21 11 01.8	-2.4
	comp=Z,14nm,0.9s,baz=254,slow=20,SNR=1.9						
CTA				LR	LR	21 14 47.1	
	comp=Z,137µm,18.1s,baz=62,slow=36						
CTAO	Charters Tower	20.96	242	*e*P	P	21 07 05.0	0.0
	comp=Z,1µm,1.0s						
CTAO				LR	LR		
	comp=Z,166µm,22.0s						
CTAO	Charters Tower	20.96	242	*e*P	P	21 07 05.0	0.0
CTAO				pmax	pmax		
	comp=Z,1µm,1.0s						
CTAO				MLR	MLR		
	comp=Z,166µm,22.0s						
LHI	Lord Howe Isla	21.41	196	P	P	21 07 11.0	+1.3
	baz=22,SNR=7.7						
LHI	Lord Howe Isla	21.41	196	*e*P	P	21 07 09.1	-0.6
	comp=Z,1µm,1.4s						
LHI				LR	LR		
	comp=Z,200µm,18.0s						
MTSU	Mount Surprise	22.05	249	P	P	21 07 17.1	+0.4
	baz=22,SNR=165						
RMQ	Roma	22.36	224	P	P	21 07 20.5	+0.6
	baz=22,SNR=288						
COEN	Coen	22.37	260	P	P	21 07 19.6	-0.6
	baz=22,SNR=121						
COEN	Coen	22.37	260	*e*P	P	21 07 19.1	-1.1
	comp=Z,883nm,1.4s						
COEN				LR	LR		
	comp=Z,256µm,22.0s						
ARMA	Armidale	23.46	212	P	P	21 07 32.0	+0.5

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      baz=24,SNR=94
ARMA  Armidale           23.46 212 eP      P        21 07 31.6 +0.1
      comp=Z,728nm,1.0s
ARMA                               LR      LR
      comp=Z,79µm,20.0s
KNTN  Kanton             23.66  72 eP      P        21 07 34.2 +0.8
      comp=Z,2µm,1.5s
RAO   Raoul Island       23.66 143 P       P        21 07 35.1 +1.8
      comp=Z,216nm,0.3s,baz=270,slow=20,SNR=2.6
RAO                                S       S        21 11 52.1 +4.7
      comp=Z,417nm,0.3s,baz=50,slow=21,SNR=5.0
RAO                                LR      LR       21 15 38.5
      comp=Z,50µm,19.2s,baz=310,slow=34
NIUE  Niue               24.69 112 P       P        21 07 43.7 +0.7
      baz=25,SNR=4.2
NIUE  Niue               24.69 112 eP      P        21 07 42.5 -0.4
      comp=Z,416nm,1.0s
NIUE                               LR      LR
      comp=Z,79µm,20.0s
OUZ   Omahuta            25.15 165 eP      P        21 07 45.8 -1.1
      comp=Z,478nm,1.2s
OUZ                                LR      LR
      comp=Z,127µm,18.0s
MGCD  Mangrove Creek     25.98 209 P       P        21 07 55.6 +1.2
      baz=26,SNR=22
JAY   Jayapura           26.36 287 P       P        21 07 58.3 +0.2
      comp=Z,2µm,1.4s,comp=Z,48µm
RIV   Riverview          26.46 208 P       P        21 07 59.9 +1.1
      baz=26,SNR=10.0
GENI  Genyem             26.84 286 P       P        21 08 02.7 +0.3
      comp=Z,417nm,0.9s,comp=Z,14µmcomp=Z,69µm
QIS   Mount Isa          27.00 246 P       P        21 08 03.3 -0.5
      baz=27,SNR=122
CMSA  Cobar Meteorol     27.72 219 P       P        21 08 10.0 -0.2
      baz=28,SNR=302
YNG   Young              28.20 212 P       P        21 08 15.1 +0.7
      baz=28,SNR=40
OPRZ  Ohinepanea         28.43 162 P       P        21 08 20.3 +3.9
CNB   Canberra Magne     28.52 209 P       P        21 08 18.1 +0.7
      baz=29,SNR=37
HIZ   Hauiti             28.59 165 eP      P        21 08 16.8 -1.1
      comp=Z,314nm,1.0s
HIZ                                LR      LR
      comp=Z,136µm,18.0s
OMRZ  Omania             28.62 163 P       P        21 08 20.7 +2.5
CAN   Canberra           28.70 210 eP      P        21 08 18.1 -0.9
      comp=Z,239nm,1.1s
CAN                                LR      LR
      comp=Z,56µm,19.0s
CAN   Canberra           28.70 210 eP      P        21 08 18.1 -0.9
CAN                                pmax    pmax
      comp=Z,239nm,1.1s
CAN                                MLR     MLR
      comp=Z,56µm,19.0s
HAZ   Te Kaha            28.74 160 P       P        21 08 20.8 +1.6
MXZ   Matakaoa Point     28.75 159 eP      P        21 08 19.1 -0.1
      comp=Z,133nm,0.6s
MXZ                                LR      LR
      comp=Z,113µm,22.0s
MXZ   Matakaoa Point     28.75 159 P       P        21 08 20.4 +1.1
PKGZ  Pakihiroa          28.96 160 P       P        21 08 21.4 +0.1
URZ   Urewera            28.99 162 eP      P        21 08 22.1 +0.8
      comp=Z,200nm,0.9s
URZ                                LR      LR
      comp=Z,126µm,18.0s
URZ   Urewera            28.99 162 P       P        21 08 22.1 +0.8
      comp=Z,137nm,1.0s,baz=338,slow=4.3,SNR=37
URZ                                S       S        21 13 10.0 -1.6
      comp=Z,12nm,0.9s,baz=3.1,slow=18,SNR=2.9
URZ   Urewera            28.99 162 P       P        21 08 22.2 +0.8
MUGZ  Murupara           29.08 162 P       P        21 08 23.2 +1.0
RATZ  Rangitukua         29.16 164 P       P        21 08 25.1 +2.1
MWZ   Matawai            29.18 161 P       P        21 08 23.8 +0.6
PUZ   Puketiti           29.19 160 P       P        21 08 20.7 -2.5
TWGZ  Tauwhareparae      29.19 160 P       P        21 08 23.6 +0.3
RTZ   Ruatahuna          29.27 162 P       P        21 08 24.2 +0.1
MRHZ  Matea Rd           29.31 163 P       P        21 08 26.3 +2.0
MTHZ  Maungataniwha      29.45 162 P       P        21 08 26.1 +0.6
CNGZ  Carnagh Statio     29.54 160 P       P        21 08 27.2 +0.9
BKZ   Black Stump Fm     29.64 163 eP      P        21 08 26.4 -0.8
      comp=Z,229nm,0.6s
BKZ                                LR      LR
      comp=Z,109µm,18.0s
MILA  Mila               30.04 207 P       P        21 08 31.9 +1.0
      baz=30,SNR=4.1
WAKE  Wake Island        30.06   1 eP      P        21 08 30.8 -0.2
      comp=Z,2µm,1.8s
WAKE                               LR      LR
      comp=Z,56µm,18.0s
STKA  Stephens Creek     30.60 223 P       P        21 08 35.8 +0.1
      baz=31,SNR=109
STKA  Stephens Creek     30.60 223 eP      P        21 08 35.4 -0.4
      comp=Z,97nm,1.3s
STKA                               eScP    ScP      21 15 18.0 +1.9
STKA  Stephens Creek     30.60 223 eP      P        21 08 35.4 -0.4
STKA                               e                21 15 18.0
STKA                               pmax    pmax
      comp=Z,97nm,1.3s
STKA  Stephens Creek     30.60 223 P       P        21 08 35.9 +0.1
      comp=Z,161nm,1.0s,baz=36,slow=8.0,SNR=146
STKA                               ScP     ScP      21 15 18.0 +1.9
      comp=Z,16nm,0.9s,baz=225,slow=1.4,SNR=2.8
STKA                               LR      LR       21 19 49.8
      comp=Z,110µm,20.5s,baz=45,slow=34
SRPI  Serui, Papua       30.78 285 P       P        21 08 38.0 +0.4
      comp=Z,116nm,1.0s,comp=Z,4µmcomp=Z,35µm
BFZ   Birch Farm         30.99 165 eP      P        21 08 37.8 -1.3
      comp=Z,345nm,0.9s
BFZ                                eS      S        21 13 43.9 +0.9
BFZ                                LR      LR
      comp=Z,150µm,19.0s
SNZO  South Karori       31.21 167 eP      P        21 08 39.3 -1.7
      comp=Z,476nm,1.1s
SNZO                               LR      LR
      comp=Z,119µm,18.0s
THZ   Tophouse           31.30 170 eP      P        21 08 41.1 -0.7
      comp=Z,390nm,0.8s
THZ                                eS      S        21 13 51.7 +3.7
THZ                                LR      LR
      comp=Z,60µm,21.0s
WR0   Warramunga Arr     31.46 250 PFAKE            21 08 50.0 +6.5
WR0                                LR      LR
      comp=Z,188µm,18.0s
WR9   Warramunga Arr     31.48 250 PFAKE            21 08 50.0 +6.3
WR9                                LR      LR
      comp=Z,155µm,18.0s
WR8   Warramunga Arr     31.50 250 PFAKE            21 08 50.0 +6.1
WR8                                LR      LR
      comp=Z,191µm,18.0s
WR7   Warramunga Arr     31.52 250 PFAKE            21 08 50.0 +5.9
WR7                                LR      LR
      comp=Z,162µm,18.0s
WR6   Warramunga Arr     31.54 250 PFAKE            21 09 00.0  +16
WR6                                LR      LR
      comp=Z,160µm,18.0s
WB0   Warramunga Arr     31.56 250 PFAKE            21 09 00.0  +16
WB0                                LR      LR
      comp=Z,150µm,18.0s
WR5   Warramunga Arr     31.56 250 PFAKE            21 09 00.0  +16
WR5                                LR      LR
      comp=Z,190µm,18.0s
WB9   Warramunga Arr     31.57 250 PFAKE            21 09 00.0  +15
WB9                                LR      LR
      comp=Z,340µm,18.0s
WB8   Warramunga Arr     31.58 250 PFAKE            21 09 00.0  +15
WB8                                LR      LR
      comp=Z,174µm,18.0s
WR4   Warramunga Arr     31.58 250 PFAKE            21 09 00.0  +15
WR4                                LR      LR
      comp=Z,163µm,18.0s
WB6   Warramunga Arr     31.60 250 PFAKE            21 09 00.0  +15
WB6                                LR      LR
      comp=Z,181µm,18.0s
WR3   Warramunga Arr     31.60 250 PFAKE            21 09 00.0  +15
WR3                                LR      LR
      comp=Z,192µm,18.0s
WB5   Warramunga Arr     31.61 250 PFAKE            21 09 00.0  +15
WB5                                LR      LR
      comp=Z,182µm,18.0s
WC2   Warramunga Arr     31.62 250 PFAKE            21 09 00.0  +15
WC2                                LR      LR
      comp=Z,184µm,18.0s
WC3   Warramunga Arr     31.62 250 PFAKE            21 09 00.0  +15
WC3                                LR      LR
      comp=Z,175µm,18.0s
WB4   Warramunga Arr     31.62 250 PFAKE            21 09 00.0  +15
WB4                                LR      LR
      comp=Z,160µm,18.0s
WR2   Warramunga Arr     31.62 250 PFAKE            21 09 00.0  +15
WR2                                LR      LR
      comp=Z,175µm,18.0s
WB3   Warramunga Arr     31.62 250 PFAKE            21 09 00.0  +15
WB3                                LR      LR
      comp=Z,181µm,18.0s
WRAB  Tennant Creek      31.63 250 eP      P        21 08 43.9 -1.1
      comp=Z,756nm,1.1s
WRAB                               LR      LR
      comp=Z,169µm,19.0s
WRAB  Tennant Creek      31.63 250 i P     P        21 08 43.7 -1.3
WRAB                               pmax    pmax
      comp=Z,815nm,1.1s
WB2   Warramunga Arr     31.63 250 eP      P        21 08 43.4 -1.6
WB2                                LR      LR
      comp=Z,210µm,18.0s
WC1   Warramunga Arr     31.64 250 PFAKE            21 09 00.0  +15
WC1                                LR      LR
      comp=Z,147µm,18.0s
WR1   Warramunga Arr     31.64 250 eP      P        21 08 44.5 -0.6
      comp=Z,879nm,1.0s
WR1                                ePcP    PcP      21 11 37.6 +0.4
WR1                                eScP    ScP      21 15 21.4 +1.6
WR1                                e                21 19 05.5
WRA   Warramunga Arr     31.64 250 P       P        21 08 44.5 -0.6
      comp=Z,447nm,1.0s,baz=80,slow=9.1,SNR=362
WRA                                PcP     PcP      21 11 37.6 +0.4
      comp=Z,22nm,1.0s,baz=68,slow=3.6,SNR=4.8
WRA                                ScP     ScP      21 15 21.4 +1.6
      comp=Z,19nm,1.3s,baz=83,slow=2.9,SNR=5.4
WRA                                PKiKP   PKiKP    21 19 05.5 -1.0
      comp=Z,2.0nm,1.0s,baz=4.5,slow=0.6,SNR=4.2
WRA                                LR      LR       21 21 39.0
      comp=Z,174µm,18.1s,baz=80,slow=37
WC4   Warramunga Arr     31.65 250 PFAKE            21 09 00.0  +15
WC4                                LR      LR
      comp=Z,174µm,18.0s
KHZ   Kahutara           32.05 169 eP      P        21 08 47.4 -0.9
      comp=Z,343nm,0.8s
KHZ                                LR      LR
      comp=Z,124µm,18.0s
GUMO  Guam               32.09 319 eP      P        21 08 48.8 -0.2
      comp=Z,198nm,1.0s
GUMO  Guam               32.09 319 eP      P        21 08 48.8 -0.2
GUMO                               pmax    pmax
      comp=Z,198nm,1.0s
GUMO  Guam               32.09 319 P       P        21 08 48.8 -0.2
      comp=Z,112nm,0.9s,baz=345,slow=4.6,SNR=4.2
GUMO                               LR      LR       21 21 18.0
      comp=Z,70µm,18.8s,baz=140,slow=36
LTZ   Lake Taylor        32.19 171 eP      P        21 08 48.8 -0.8
      comp=Z,371nm,0.7s
LTZ                                LR      LR
      comp=Z,70µm,20.0s
TOO   Toolangi           32.22 211 P       P        21 08 50.5 +0.5
      baz=32,SNR=57
TOO   Toolangi           32.22 211 eP      P        21 08 50.0 +0.1
      comp=Z,294nm,1.0s
TOO                                LR      LR
      comp=Z,90µm,22.0s
TOO   Toolangi           32.22 211 eP      P        21 08 50.1 +0.1
TOO                                pmax    pmax
      comp=Z,294nm,1.0s
TOO                                MLR     MLR
      comp=Z,90µm,22.0s
FOZ   Fox Glacier        32.63 175 eP      P        21 08 53.3 -0.2
      comp=Z,346nm,0.8s
FOZ                                LR      LR
      comp=Z,69µm,18.0s
OXZ   Oxford             32.69 172 eP      P        21 08 53.2 -0.8
      comp=Z,835nm,1.2s
OXZ                                LR      LR
      comp=Z,68µm,21.0s
KDU   Kakadu             32.74 264 P       P        21 08 53.1 -1.7
      baz=33,SNR=34
RKPI  Ransiki, Papua     32.85 284 P       P        21 08 55.3 -0.5
      comp=Z,115nm,1.2s,comp=Z,5µm
AS01  Alice Springs      32.91 243 eP      P        21 08 53.3 -3.0
RPZ   Rata Peaks         32.94 173 eP      P        21 08 56.0 -0.2
      comp=Z,717nm,0.9s
RPZ                                LR      LR
      comp=Z,95µm,20.0s
RPZ   Rata Peaks         32.94 173 P       P        21 08 56.0 -0.2
      comp=Z,307nm,0.7s,baz=357,slow=0.8,SNR=83
AS31  Alice Springs      32.95 243 eP      P        21 08 54.4 -2.3
      comp=Z,86nm,1.2s
AS31                               ePcP    PcP      21 11 40.8  0.0
AS31                               eScP    ScP      21 15 26.1 +1.7
ASAR  Alice Springs      32.95 243 P       P        21 08 55.2 -1.5
      comp=Z,120nm,1.1s,baz=71,slow=8.6,SNR=277
ASAR                               PcP     PcP      21 11 40.8  0.0
      comp=Z,36nm,1.0s,baz=69,slow=2.6,SNR=4.9
ASAR                               ScP     ScP      21 15 26.1 +1.7
      comp=Z,11nm,1.1s,baz=94,slow=3.2,SNR=5.1
ASAR                               LR      LR       21 21 13.2
      comp=Z,116µm,20.7s,baz=73,slow=34
CRLZ  Canterbury Las     33.02 171 eP      P        21 08 56.5 -0.4
      comp=Z,2µm,1.4s
CRLZ                               LR      LR
      comp=Z,80µm,18.0s
MQZ   McQueen's Vall     33.15 171 eP      P        21 08 57.8 -0.2
      comp=Z,590nm,0.8s
MQZ                                eS      S        21 14 21.6 +5.0
MQZ                                LR      LR
      comp=Z,74µm,18.0s
HTT   Hallett            33.33 224 P       P        21 08 59.7 -0.2
      baz=33,SNR=101
LBZ   Lake Benmore       33.51 174 eP      P        21 09 00.9 -0.3
      comp=Z,284nm,1.3s
LBZ                                LR      LR
      comp=Z,60µm,19.0s
ARPS  Mount Arapiles     33.63 216 P       P        21 09 03.0 +0.7
      baz=34,SNR=10
ANA2  Anatahan           33.68 323 PFAKE            21 09 10.0 +7.1
ANA2                               LR      LR
      comp=Z,68µm,20.0s
WKZ   Wanaka             33.86 176 eP      P        21 09 03.9 -0.3
      comp=Z,2µm,1.8s
WKZ                                LR      LR
      comp=Z,44µm,20.0s
SARN  Sarigan            33.92 324 eP      P        21 09 03.2 -1.9
      comp=Z,720nm,1.9s
SARN                               LR      LR
      comp=Z,56µm,18.0s
MTN   Manton Dam         34.04 263 PFAKE            21 09 20.0  +14
MTN                                LR      LR
      comp=Z,111µm,22.0s
ODZ   Otahua Downs       34.21 174 eP      P        21 09 05.9 -1.3
      comp=Z,202nm,1.1s
ODZ                                LR      LR
      comp=Z,54µm,20.0s
SAUI  Saumlaki           34.23 272 eP      P        21 09 06.5 -1.3
      comp=Z,315nm,1.3s
SAUI                               LR      LR
      comp=Z,99µm,20.0s
SAUI  Saumlaki           34.23 272 P       P        21 09 07.8  0.0
      comp=Z,143nm,1.1s,comp=Z,7µm
MLZ   Mavora Lakes       34.34 177 eP      P        21 09 08.1 -0.3
      comp=Z,123nm,0.9s
MLZ                                LR      LR
      comp=Z,94µm,19.0s
DCZ   Deep Cove          34.40 178 eP      P        21 09 08.2 -0.6
      comp=Z,275nm,1.1s
DCZ                                LR      LR
      comp=Z,52µm,21.0s
RAR   Rarotonga          34.46 112 PFAKE            21 09 20.0  +10
RAR                                LR      LR
      comp=Z,33µm,20.0s
WHZ   Wether Hill Ro     34.86 177 eP      P        21 09 11.5 -1.3
      comp=Z,152nm,1.0s
WHZ                                LR      LR
      comp=Z,64µm,19.0s
BBOO  Buckleboo          34.99 227 P       P        21 09 13.8 -0.4
      baz=35,SNR=44
BBOO  Buckleboo          34.99 227 eP      P        21 09 13.1 -1.1
      comp=Z,547nm,1.0s
BBOO                               LR      LR
      comp=Z,76µm,19.0s
PYZ   Puysegur Point     35.09 179 PFAKE            21 09 30.0  +15
PYZ                                LR      LR
      comp=Z,55µm,22.0s
MOO   Moorlands          35.36 204 P       P        21 09 18.0 +0.8
      baz=35,SNR=14
TAU   Tasmania Unive     35.70 204 eP      P        21 09 19.9 -0.2
      comp=Z,580nm,1.6s
TAU                                LR      LR
      comp=Z,40µm,18.0s
TAU   Tasmania Unive     35.70 204 eP      P        21 09 19.9 -0.2
TAU                                pmax    pmax
      comp=Z,580nm,1.6s
TAU                                MLR     MLR
      comp=Z,40µm,18.0s
SWI   Sorong             35.83 284 P       P        21 09 23.0 +1.4
      comp=Z,108nm,1.0s,comp=Z,2µm
PALU  Palau              36.17 299 P       P        21 09 25.1 +0.6
      baz=36,SNR=10
BNDI  Bandanaira         36.20 277 P       P        21 09 23.4 -1.4
      comp=Z,2µm,1.5s,comp=Z,23µm
KNRA  Kununurra          36.40 258 P       P        21 09 25.3 -1.1
      baz=36,SNR=71
JOHN  Johnston Islan     36.72  42 PFAKE            21 09 40.0  +11
JOHN                               LR      LR
      comp=Z,47µm,22.0s
WRKA  Warakurna          38.25 243 P       P        21 09 41.1 -1.0
      baz=38,SNR=131
XMAS  Kiritimati         38.70  73 PFAKE            21 10 00.0  +14
XMAS                               LR      LR
      comp=Z,36µm,18.0s
NLAI  Namlea             39.21 278 P       P        21 09 50.7 +0.4
      comp=Z,321nm,1.1s,comp=Z,6µmcomp=Z,26µm
FITZ  Fitzroy Crossi     39.54 255 P       P        21 09 51.6 -1.3
      baz=40,SNR=111
FITZ  Fitzroy Crossi     39.54 255 eP      P        21 09 51.4 -1.5
      comp=Z,331nm,1.0s
FITZ  Fitzroy Crossi     39.54 255 P       P        21 09 52.6 -0.3
      comp=Z,238nm,0.9s,baz=88,slow=8.0,SNR=223
FITZ                               LR      LR       21 24 55.1
      comp=Z,105µm,21.4s,baz=81,slow=34
TNTI  Ternate            40.03 284 eP      P        21 09 55.2 -1.9
      comp=Z,280nm,1.4s
TNTI                               LR      LR
      comp=Z,36µm,18.0s
TNTI  Ternate            40.03 284 P       P        21 09 57.3 +0.2
      comp=Z,137nm,1.4s,comp=Z,4µm
FORT  Forrest            40.21 235 P       P        21 09 58.0 -0.3
      baz=40,SNR=32
FORT  Forrest            40.21 235 eP      P        21 09 57.5 -0.9
      comp=Z,662nm,1.0s
FORT                               LR      LR
      comp=Z,74µm,19.0s
SANI  Sanana             40.57 280 P       P        21 10 00.7 -0.9
      comp=Z,175nm,1.0s,comp=Z,8µm
SOEI  Soe                40.94 268 eP      P        21 10 03.6 -1.2
      comp=Z,240nm,1.1s
SOEI                               LR      LR
      comp=Z,95µm,21.0s
SOEI  Soe                40.94 268 P       P        21 10 04.7 -0.1
      comp=Z,192nm,1.0s,comp=Z,5µm
BATI  Baumata            41.49 267 P       P        21 10 09.5 +0.3
      comp=Z,147nm,0.9s,comp=Z,3µm
BATI  Baumata            41.49 267 P       P        21 10 09.4 +0.3
      comp=Z,282nm,0.9s,baz=164,slow=1.3,SNR=64
BATI                               LR      LR       21 30 06.3
      comp=Z,62µm,18.6s,baz=119,slow=40
MIDW  Midway             42.18  22 PFAKE            21 10 30.0  +16
MIDW                               LR      LR
      comp=Z,42µm,20.0s
MMRI  Maumere            43.05 269 eP      P        21 10 20.4 -1.5
      comp=Z,462nm,1.0s
MMRI                               LR      LR
      comp=Z,34µm,18.0s
MMRI  Maumere            43.05 269 P       P        21 10 20.8 -1.1
      comp=Z,442nm,1.0s,comp=Z,7µm
BBSI  Bau Bau            43.18 274 P       P        21 10 24.2 +1.2
      comp=Z,49nm,1.0s,comp=Z,15µm
KMSI  Cibinong           43.20 283 P       P        21 10 23.2 +0.1
      comp=Z,1µm,1.1s,comp=Z,13µmcomp=Z,31µm
MATI  Mati               43.27 293 eP      P        21 10 21.6 -2.0
KDI   Kendari            43.42 276 P       P        21 10 25.3 +0.4
      comp=Z,76nm,1.4s,comp=Z,4µm
DDMP  Don Marcelino,     43.43 291 eP      P        21 10 36.3  +11
EDFI  Ende, Flores       43.57 269 P       P        21 10 25.5 -0.7
      comp=Z,178nm,1.5s,comp=Z,6µm
PPT   Papeete            43.58 104 P       P        21 10 26.4 +0.2
      comp=Z,35nm,0.9s,baz=327,slow=10,SNR=2.9
PPT                                LR      LR       21 26 41.4
      comp=Z,23µm,18.1s,baz=276,slow=34
PAE   Paea               43.58 104 eP      P        21 10 27.0 +0.9
      comp=Z,22nm,1.3s
PPT2  Papeete2           43.58 104 eP      P        21 10 27.3 +1.1
      comp=Z,138nm,1.3s
PPT2                               eS      S        21 16 54.8 -0.3
      comp=Z,31µm,26.0s
PPT2                               eLQ     LQ       21 20 49.8
      comp=Z,352µm,27.8s
PPT2                               eLR     LR       21 22 41.0
      comp=Z,61µm,24.5s
PPTF  Pamatai, Papee     43.59 104 PFAKE            21 10 40.0  +14
PPTF                               LR      LR
      comp=Z,28µm,19.0s
MCQ   Macquarie Isla     43.78 186 PFAKE            21 10 40.0  +13
MCQ                                LR      LR
      comp=Z,64µm,18.0s
TIAR  Tiarei             43.80 104 eP      P        21 10 29.2 +1.3
      comp=Z,46nm,1.3s
TVO   Taravao            43.90 104 eP      P        21 10 29.9 +1.1
      comp=Z,82nm,1.4s
DAV   Davao City (W)     43.93 292 PFAKE            21 10 40.0  +11
DAV                                LR      LR
      comp=Z,30µm,18.0s
DAV   Davao City (W)     43.93 292⇑eP      P        21 10 27.0 -2.0
LUWI  Luwuk              43.93 280 eP      P        21 10 27.6 -1.4
      comp=Z,580nm,1.1s
LUWI                               LR      LR
      comp=Z,32µm,20.0s
LUWI  Luwuk              43.93 280 P       P        21 10 28.9 -0.1
      comp=Z,492nm,1.1s,comp=Z,8µm
CBIJ  Chichi jima        44.27 329 eP      P        21 10 31.0 -0.5
JCJ   Chichijima         44.27 329 P       P        21 10 31.0 -0.5
      comp=Z,132nm,0.9s,baz=167,slow=7.1,SNR=2.7
JCJ                                LR      LR       21 27 39.4
      comp=Z,44µm,19.6s,baz=150,slow=34
KCP   Kidapawan          44.35 292⇓eP      P        21 10 32.5  0.0
BASI  Baing, Sumba       44.51 267 P       P        21 10 35.5 +1.8
      comp=Z,345nm,1.1s,comp=Z,6µm
SKMP  Bagumbayan, Su     44.66 291 eP      P        21 10 33.8 -1.1
BUTP  Butuan             44.68 295 eP      P        21 10 34.5 -0.4
BUKP  Musuan             44.73 293 eP      P        21 10 35.3 -0.2
WSI   Waingapu           44.84 267 P       P        21 10 37.9 +1.6
      comp=Z,388nm,1.1s,comp=Z,11µm
APSI  Ampana             45.05 280 P       P        21 10 38.0  0.0
      comp=Z,284nm,1.0s,comp=Z,4µm
MRSI  Marisa             45.13 282 P       P        21 10 37.3 -1.3
      comp=Z,77nm,1.2s,comp=Z,2µm
PMOR  Pomariorio Ree     45.16 100 eP      P        21 10 39.8 +1.1
      comp=Z,395nm,1.4s
CTBH  Cotabato--PC H     45.21 292⇓eP      P        21 10 33.9 -5.3
CGP   Cagayan de Oro     45.30 294 eP      P        21 10 47.0 +7.1
MBWA  Marble Bar         45.36 251 eP      P        21 10 39.5 -0.8
      comp=Z,547nm,1.0s
MBWA                               LR      LR
      comp=Z,70µm,20.0s
MBWA  Marble Bar         45.36 251 P       P        21 10 40.2 -0.1
      SNR=13
MBWA                               P       P        21 10 40.2 -0.1
      SNR=13
VAH   Vaihoa             45.41 101 eP      P        21 10 41.6 +0.8
      comp=Z,221nm,1.2s
BKSI  Bulukumba          45.61 273 P       P        21 10 41.6 -0.8
      comp=Z,72nm,1.1s,comp=Z,2µm
BNSI  Bone               45.79 275 P       P        21 10 43.8  0.0
      comp=Z,407nm,1.1s,comp=Z,5µm
MSLP  Maasin             45.86 296 eP      P        21 10 44.0 -0.3
KAPI  Kappang            46.03 274 PFAKE            21 11 00.0  +14
KAPI                               LR      LR
      comp=Z,26µm,19.0s
SPSI  Sidrap Palu        46.21 275 P       P        21 10 46.0 -1.1
      comp=Z,104nm,1.4s,comp=Z,2µm
PAGZ  Pagadian           46.24 292 eP      P        21 10 48.0 +0.7
TTSI  Tana Toraja        46.34 276 P       P        21 10 49.1 +0.9
      comp=Z,142nm,1.3s,comp=Z,4µm
DCPH  Dipolog City       46.56 293 eP      P        21 10 47.5 -2.3
LLP   Lapu-Lapu          46.73 295 eP      P        21 10 51.1 -0.1
PCI   Palu               46.81 279 P       P        21 10 52.9 +1.0
      comp=Z,849nm,1.1s,comp=Z,10µm
IPIL  Ipil               46.96 292 eP      P        21 10 52.7 -0.3
KEKH  Kekaha             47.02  46 PFAKE            21 11 10.0  +17
KEKH                               LR      LR
      comp=Z,46µm,22.0s
MPSI  Mapaga             47.06 281 P       P        21 10 52.9 -0.9
      comp=Z,103nm,0.9s,comp=Z,3µm
MEEK  Meekatharra        47.11 244 P       P        21 10 54.2 +0.1
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	baz=47,SNR=174						
PLAI	**Plampang**	**47.41**	**268**	P	**P**	**21 10 55.4**	**-1.1**
	comp=Z,420nm,1.2s,comp=Z,6µm						
KIP	**Kipapa**	**47.88**	**48**	*e*P	P	21 11 05.2	+5.2
	comp=Z,332nm,1.4s						
KIP	**Kipapa**	**47.88**	**48**	*i* P	**P**	**21 10 59.7**	**-0.3**
KIP				pmax	pmax		
	comp=Z,93nm,0.9s						
OPA	**Opana**	**48.05**	**47**	*e*P	**P**	**21 11 01.9**	**+0.6**
	comp=Z,1µm,1.5s						
OPA				LR	LR		
	comp=Z,32µm,21.0s						
OPA	**Opana**	**48.05**	**47**	*e*P	**P**	**21 11 01.9**	**+0.6**
OPA				pmax	pmax		
	comp=Z,1µm,1.5s						
OPA				MLR	MLR		
	comp=Z,32µm,21.0s						
PVCP	**Virac**	**48.05**	**300**	*e*P	P	21 11 11.6	+10
PVCP	**Virac**	**48.05**	**300**	*e*P	P	21 11 12.0	+11
GUIM	**Jordan**	**48.09**	**295**	*e*P	**P**	**21 11 01.6**	**-0.1**
KHLU	**Kahalu`u**	**48.36**	**51**	*e*P	**P**	**21 11 04.2**	**+0.3**
	comp=Z,698nm,1.5s						
KHLU				LR	LR		
	comp=Z,32µm,21.0s						
KHU	**Kahuku**	**48.38**	**52**	*e*P	**P**	**21 11 02.0**	**-2.2**
	comp=Z,561nm,1.1s						
KHU				LR	LR		
	comp=Z,28µm,21.0s						
KHU	**Kahuku**	**48.38**	**52**	*e*P	**P**	**21 11 02.0**	**-2.2**
KHU				pmax	pmax		
	comp=Z,561nm,1.1s						
KHU				MLR	MLR		
	comp=Z,28µm,21.0s						
HUH	**Hualalai**	**48.46**	**51**	*e*P	**P**	**21 11 03.0**	**-1.8**
	comp=Z,334nm,1.1s						
HUH				LR	LR		
	comp=Z,30µm,21.0s						
MWH	**Moku‘aweowe**	**48.53**	**52**	*e*P	**P**	**21 11 03.8**	**-1.8**
	comp=Z,236nm,1.1s						
MWH				LR	LR		
	comp=Z,31µm,22.0s						
AIN	**Ainahou**	**48.57**	**52**	PFAKE		21 11 20.0	+14
AIN				LR	LR		
	comp=Z,30µm,21.0s						
MLOA	**Mauna Loa Obse**	**48.57**	**52**	PFAKE		21 11 20.0	+14
MLOA				LR	LR		
	comp=Z,31µm,22.0s						
HLP	**Hilina Pali**	**48.64**	**52**	PFAKE		21 11 20.0	+14
HLP				LR	LR		
	comp=Z,34µm,21.0s						
HMH	**Humu‘ula Sheep**	**48.68**	**52**	*e*P	**P**	**21 11 07.6**	**+1.0**
	comp=Z,618nm,1.0s						
HMH				LR	LR		
	comp=Z,33µm,21.0s						
MLH	**Mauna Loa**	**48.70**	**52**	*e*P	**P**	**21 11 07.0**	**+0.4**
	comp=Z,407nm,1.2s						
MLH				LR	LR		
	comp=Z,29µm,20.0s						
MLH	**Mauna Loa**	**48.70**	**52**	*e*P	**P**	**21 11 07.0**	**+0.4**
MLH				pmax	pmax		
	comp=Z,407nm,1.2s						
MLH				MLR	MLR		
	comp=Z,29µm,20.0s						
MHA	**Mahukona**	**48.70**	**51**	*e*P	**P**	**21 11 06.1**	**-0.2**
MHA	**Mahukona**	**48.70**	**51**	*e*P	**P**	**21 11 06.1**	**-0.2**
SDHHI	**Sand Hill**	**48.71**	**52**	PFAKE		21 11 20.0	+13
SDHHI				LR	LR		
	comp=Z,35µm,21.0s						
WRMHI	**West Rim**	**48.71**	**52**	PFAKE		21 11 20.0	+13
WRMHI				LR	LR		
	comp=Z,35µm,22.0s						
RIM	**Rim**	**48.73**	**52**	PFAKE		21 11 20.0	+13
RIM				LR	LR		
	comp=Z,34µm,22.0s						
UWE	**Uwekahuna**	**48.73**	**52**	PFAKE		21 11 20.0	+13
UWE				LR	LR		
	comp=Z,34µm,22.0s						
KHLH	**Kahului Airpor**	**48.73**	**50**	*e*P	**P**	**21 11 04.4**	**-2.1**
	comp=Z,343nm,1.1s						
KHLH				LR	LR		
	comp=Z,28µm,18.0s						
NPH	**North Pit**	**48.73**	**52**	PFAKE		21 11 20.0	+13
NPH				LR	LR		
	comp=Z,34µm,22.0s						
OBL	**Observatory Le**	**48.73**	**52**	PFAKE		21 11 20.0	+13
OBL				LR	LR		
	comp=Z,36µm,22.0s						
KKO	**Keanakako`i**	**48.73**	**52**	PFAKE		21 11 20.0	+13
KKO				LR	LR		
	comp=Z,33µm,21.0s						
POHA	**Pohakuloa**	**48.73**	**51**	*e*P	**P**	**21 11 05.6**	**-1.3**
	comp=Z,458nm,1.1s						
POHA				LR	LR		
	comp=Z,33µm,22.0s						
UWB	**Uwekahuna B**	**48.74**	**52**	PFAKE		21 11 20.0	+13
UWB				LR	LR		
	comp=Z,41µm,22.0s						
BYL	**Byron's Ledge**	**48.74**	**52**	PFAKE		21 11 20.0	+13
BYL				LR	LR		
	comp=Z,38µm,20.0s						
SBLHI	**Steaming Bluff**	**48.75**	**52**	PFAKE		21 11 20.0	+13
SBLHI				LR	LR		
	comp=Z,33µm,21.0s						
HATHI	**Halema‘uma‘u T**	**48.75**	**52**	PFAKE		21 11 20.0	+13
HATHI				LR	LR		
	comp=Z,36µm,22.0s						
PUH	**Pauahi**	**48.76**	**52**	PFAKE		21 11 20.0	+13
PUH				LR	LR		
	comp=Z,33µm,21.0s						
HPAH	**Hawaii Prepara**	**48.77**	**51**	*e*P	**P**	**21 11 06.7**	**-0.3**
	comp=Z,208nm,0.9s						
HPAH				LR	LR		
	comp=Z,29µm,20.0s						
HLK	**Haleakala**	**48.78**	**50**	*e*P	**P**	**21 11 06.4**	**-0.9**
	comp=Z,641nm,1.4s						
HLK				LR	LR		
	comp=Z,21µm,19.0s						
STCH	**Steam Cracks**	**48.84**	**52**	PFAKE		21 11 20.0	+12
STCH				LR	LR		
	comp=Z,30µm,21.0s						
NPOC	**North of Pu‘u**	**48.85**	**52**	PFAKE		21 11 20.0	+12
NPOC				LR	LR		
	comp=Z,31µm,21.0s						
JCUZ	**Jacuzzi**	**48.85**	**52**	PFAKE		21 11 20.0	+12
JCUZ				LR	LR		
	comp=Z,34µm,22.0s						
KLBR	**Kellerberrin**	**48.87**	**238**	P	**P**	**21 11 06.8**	**-0.8**
	baz=49,SNR=107						
SGKI	**Sangatta, Kali**	**49.07**	**279**	P	**P**	**21 11 13.6**	**+4.2**
AUQP	**San Andres**	**49.20**	**298**	*e*P	P	21 11 03.2	-7.0
OTRP	**Odiongan**	**49.34**	**297**	*e*P	**P**	**21 11 11.0**	**-0.3**
SMKI	**Samarinda**	**49.47**	**279**	P	**P**	**21 11 13.0**	**+0.6**
BLDU	**Ballidu**	**49.52**	**239**	P	**P**	**21 11 12.2**	**-0.5**
	baz=50,SNR=30						
CUYO	**Cuyo Island**	**49.58**	**294**	*e*P	**P**	**21 11 14.3**	**+1.0**
BKB	**Balikpapan**	**49.58**	**278**	P	**P**	**21 11 14.0**	**+0.7**
NWAO	**Narrogin (SRO)**	**49.63**	**236**	P	**P**	**21 11 13.0**	**-0.3**
	baz=50,SNR=58						
NWAO	**Narrogin (SRO)**	**49.63**	**236**	*e*P	**P**	**21 11 12.4**	**-1.0**
	comp=Z,720nm,1.1s						
NWAO				LR	LR		
	comp=Z,133µm,21.0s						
NWAO	**Narrogin (SRO)**	**49.63**	**236**	*e*P	**P**	**21 11 12.4**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,721nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,133µm,21.0s						
NWAO	**Narrogin (SRO)**	**49.63**	**236**	P	**P**	**21 11 13.1**	**-0.2**
	SNR=18						
NWAO	**Narrogin (SRO)**	**49.63**	**236**	P	**P**	**21 11 13.1**	**-0.3**
	comp=Z,425nm,1.0s,baz=303,slow=8.4,SNR=72						
NWAO				PP	**PP**	**21 13 07.9**	**0.0**
	comp=Z,86nm,1.2s,baz=309,slow=7.0,SNR=3.1						
GQP	**Guinayangan**	**49.66**	**299**⇑	*e*P	**P**	**21 11 15.2**	**+1.4**
MORW	**Morawa**	**49.79**	**241**	P	**P**	**21 11 14.6**	**-0.1**
	baz=50,SNR=97						
MORW	**Morawa**	**49.79**	**241**	*e*P	**P**	**21 11 13.4**	**-1.2**
	comp=Z,539nm,1.0s						
MORW				LR	LR		
	comp=Z,114µm,18.0s						
KBKI	**Kotabaru**	**49.86**	**275**	P	**P**	**21 11 10.8**	**-4.6**
DNP	**Denpasar**	**49.94**	**268**	P	**P**	**21 11 15.4**	**-0.6**
	comp=Z,567nm,1.0s,comp=Z,11µm						
BOAC	**Boac**	**49.98**	**298**	*e*P	**P**	**21 11 14.2**	**-2.1**
SRBI	**Singaraja**	**50.01**	**269**	P	**P**	**21 11 16.6**	**0.0**
TSM	**Tawau**	**50.13**	**285**	P	**P**	**21 11 18.2**	**+0.8**
SJMP	**San Jose**	**50.17**	**296**	*e*P	**P**	**21 11 17.7**	**0.0**
MUN	**Mundaring**	**50.24**	**237**	P	**P**	**21 11 17.9**	**-0.2**
	baz=50,SNR=28						
RKGY	**Rocky Gully**	**50.27**	**234**	P	**P**	**21 11 18.8**	**+0.6**
	baz=50,SNR=17						
JHJ2	**Mitsune**	**50.38**	**331**	PFAKE		21 11 30.0	+11
JHJ2				LR	LR		
	comp=Z,28µm,18.0s						
JHJ	**Hachijo jima 2**	**50.41**	**331**	P	**P**	**21 11 18.8**	**-0.4**
	comp=Z,283nm,0.9s,baz=117,slow=6.8,SNR=2.0						
POLP	**Polilio Island**	**50.48**	**299**	*e*P	**P**	**21 11 17.2**	**-2.8**
GIRL	**Giralia**	**50.57**	**250**	P	**P**	**21 11 22.3**	**+1.6**
	baz=50,SNR=8.2						
GIRL	**Giralia**	**50.57**	**250**	*e*P	**P**	**21 11 19.8**	**-0.8**
	comp=Z,4µm,1.7s						
GIRL				LR	LR		
	comp=Z,89µm,18.0s						
BUSP	**Coron**	**50.79**	**295**	*e*P	**P**	**21 11 19.2**	**-3.2**
JAGI	**Jajag, Banyuwa**	**51.01**	**268**	*e*P	**P**	**21 11 21.5**	**-2.6**
	comp=Z,484nm,1.0s						
JAGI				LR	LR		
	comp=Z,24µm,22.0s						
JAGI	**Jajag, Banyuwa**	**51.01**	**268**	P	**P**	**21 11 24.4**	**+0.3**
TGY	**Tagaytay City**	**51.05**	**298**	LR	LR	21 32 34.3	
	comp=Z,21µm,19.9s,baz=116,slow=36						
ENPP	**El Nido**	**51.15**	**294**	*e*P	**P**	**21 11 24.6**	**-0.5**
PALP	**Palanan**	**51.19**	**302**	*e*P	**P**	**21 11 26.1**	**+0.8**
KMMI	**Kalianget**	**51.38**	**270**	P	**P**	**21 11 27.5**	**+0.6**
	comp=Z,95nm,1.2s,comp=Z,936nm						
MTKI	**Muara Teweh, K**	**51.60**	**278**	P	**P**	**21 11 28.8**	**+0.2**
	comp=Z,76nm,1.0s,comp=Z,4µm						
GMJI	**Gumukmas**	**51.73**	**268**	P	**P**	**21 11 28.4**	**-1.1**
	comp=Z,204nm,1.1s,comp=Z,4µm						
SGCP	**Mt. Cagua**	**52.09**	**303**	*e*P	**P**	**21 11 36.1**	**+4.1**
KKM	**Kota Kinabalu**	**52.25**	**286**	*e*P	**P**	**21 11 33.5**	**0.0**
	comp=Z,578nm,1.5s						
KKM				LR	LR		
	comp=Z,21µm,21.0s						
KKM	**Kota Kinabalu**	**52.25**	**286**	P	**P**	**21 11 34.0**	**+0.5**
JOW	**Kunigami**	**52.39**	**316**	*e*P	**P**	**21 11 32.8**	**-1.4**
	comp=Z,176nm,1.2s						
APYP	**Conner**	**52.57**	**303**	*e*P	P	21 11 46.8	+11
SCZP	**Santa Cruz**	**52.70**	**300**	*e*P	**P**	**21 11 40.6**	**+4.1**
GRJI	**Gresik**	**52.86**	**270**	P	**P**	**21 11 38.4**	**+0.5**
ABRA	**Dolores**	**52.90**	**302**	*e*P	P	21 11 45.6	+7.5
TAOE	**Nuku Hiva Isla**	**53.15**	**93**	*e*P	**P**	**21 11 41.4**	**+1.3**
	comp=Z,244nm,1.3s						
TAOE				*e*S	**S**	**21 19 08.2**	**-2.2**
	comp=Z,12µm,26.6s						
TAOE				*e*LQ	LQ	21 24 49.3	
	comp=Z,93µm,24.7s						
TAOE				*e*LR	LR	21 27 06.6	
	comp=Z,18µm,24.7s						
PWJI	**Pagerwojo**	**53.37**	**268**	P	**P**	**21 11 41.9**	**+0.3**
TBJI	**Tambak Boyo**	**53.49**	**270**	P	**P**	**21 11 42.9**	**+0.3**
	comp=Z,115nm,1.0s,comp=Z,3µm						
INU	**Inuyama**	**53.54**	**331**	*e*P	**P**	**21 11 41.7**	**-0.8**
	comp=Z,311nm,1.3s						
INU				LR	LR		
	comp=Z,37µm,19.0s						
NGJI	**Ngawi**	**53.79**	**269**	P	**P**	**21 11 45.2**	**+0.4**
MJAR	**Matsushiro Arr**	**53.96**	**332**	P	**P**	**21 11 45.3**	**-0.3**
	comp=Z,63nm,1.0s,baz=169,slow=7.4,SNR=43						
MAJO	**Matsushiro**	**53.96**	**332**	*e*P	**P**	**21 11 44.9**	**-0.6**
	comp=Z,206nm,0.9s						
MAJO				LR	LR		
	comp=Z,39µm,21.0s						
MAJO	**Matsushiro**	**53.96**	**332** *d*	*i*P	**P**	**21 11 44.4**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,70nm,0.8s						
MAT	**Matsushiro**	**53.96**	**332**	P	**P**	**21 11 44.6**	**-1.0**
MAT				S	**S**	**21 19 21.8**	**+1.3**
PCJI	**Pacitan**	**53.96**	**268**	P	**P**	**21 11 45.9**	**-0.1**
	comp=Z,1µm,1.1s,comp=Z,12µm						
MJB9	**Matsu-Tunnel**	**53.96**	**332**	*e*P	**P**	**21 11 45.5**	**-0.1**
	comp=Z,219nm,1.0s						
MJB9				LR	LR		
	comp=Z,43µm,21.0s						
WOJI	**Wonogiri, Jawa**	**54.26**	**268**	P	**P**	**21 11 48.4**	**+0.2**
	comp=Z,310nm,1.1s,comp=Z,5µm						
PBKI	**Pangkalan Bun**	**54.38**	**275**	P	**P**	**21 11 49.5**	**+0.4**
BTM	**Bintulu**	**54.39**	**282**	P	**P**	**21 11 50.2**	**+1.1**
UGM	**Wanagama**	**54.64**	**268**	*e*P	**P**	**21 11 49.0**	**-2.0**
	comp=Z,684nm,1.1s						
UGM				LR	LR		
	comp=Z,24µm,22.0s						
UGM	**Wanagama**	**54.64**	**268**	P	**P**	**21 11 51.0**	**0.0**
	comp=Z,670nm,1.2s,comp=Z,8µm						
YOJ	**Yonaguni jima**	**54.69**	**311**	*e*P	**P**	**21 11 50.3**	**-0.8**
	comp=Z,576nm,1.4s						
YOJ				LR	LR		
	comp=Z,45µm,20.0s						
YOJ	**Yonaguni jima**	**54.69**	**311**	*e*P	**P**	**21 11 50.3**	**-0.8**
YOJ				pmax	pmax		
	comp=Z,576nm,1.4s						
YOJ				MLR	MLR		
	comp=Z,45µm,20.0s						
SMRI	**Semarang**	**54.84**	**269**	*e*P	**P**	**21 11 50.9**	**-1.5**
	comp=Z,825nm,1.2s						
SMRI				LR	LR		
	comp=Z,18µm,22.0s						
SMRI	**Semarang**	**54.84**	**269**	P	**P**	**21 11 52.7**	**+0.3**
	comp=Z,666nm,1.2s,comp=Z,14µm						
SBUM	**Sibu**	**55.02**	**281**	*e*P	**P**	**21 11 53.8**	**+0.1**
	comp=Z,129nm,1.9s						
SBUM	**Sibu**	**55.02**	**281**	P	**P**	**21 11 54.5**	**+0.7**
JNU	**Nakatsue**	**55.09**	**324**	*e*P	**P**	**21 11 52.9**	**-1.0**
	comp=Z,313nm,1.2s						
JNU				LR	LR		
	comp=Z,32µm,18.0s						
JNU	**Nakatsue**	**55.09**	**324**	P	**P**	**21 11 54.2**	**+0.4**
	comp=Z,66nm,0.8s,baz=99,slow=2.2,SNR=26						
TWG	**Pinlang**	**55.26**	**308**	*e*P	**P**	**21 11 54.8**	**-0.4**
	comp=Z,416nm,1.2s						
TWG				LR	LR		
	comp=Z,130µm,19.0s						
YULB	**Yu-li**	**55.39**	**308**	*e*P	**P**	**21 11 54.9**	**-1.3**
	comp=Z,129nm,1.1s						
YULB				LR	LR		
	comp=Z,32µm,20.0s						
NACB	**Ninganchiao**	**55.59**	**309**	*e*P	**P**	**21 11 56.5**	**-1.1**
	comp=Z,707nm,1.8s						
NACB				LR	LR		
	comp=Z,37µm,22.0s						
TPUB	**Ta-pu**	**55.86**	**308**	*e*P	**P**	**21 11 57.8**	**-1.7**
	comp=Z,210nm,1.1s						
TPUB				LR	LR		
	comp=Z,37µm,21.0s						
SSLB	**Suanglung**	**55.87**	**309**	PFAKE		21 12 10.0	+10
SSLB				LR	LR		
	comp=Z,29µm,20.0s						
YHNB	**Yeheng**	**56.03**	**310**	*e*P	**P**	**21 11 58.1**	**-2.7**
	comp=Z,249nm,1.1s						
YHNB				LR	LR		
	comp=Z,52µm,22.0s						
TATO	**Taipei**	**56.12**	**310**	PFAKE		21 12 10.0	+8.6
TATO				LR	LR		
	comp=Z,49µm,19.0s						
KPJI	**Karang Pucung**	**56.28**	**268**	P	**P**	**21 12 03.3**	**+0.5**
KSM	**Kuching**	**56.63**	**279**	*e*P	**P**	**21 12 04.9**	**-0.4**
	comp=Z,161nm,1.2s						
KSM				LR	LR		
	comp=Z,14µm,20.0s						
KSM	**Kuching**	**56.63**	**279**	P	**P**	**21 12 05.4**	**+0.1**
CMJI	**Cimerak**	**56.69**	**268**	P	**P**	**21 12 06.2**	**+0.5**
ERM	**Erimo**	**56.70**	**340**	*e*P	**P**	**21 12 03.5**	**-1.7**
	comp=Z,80nm,0.7s						
ERM				LR	LR		
	comp=Z,58µm,18.0s						
ERM	**Erimo**	**56.70**	**340**	*e*P	**P**	**21 12 03.5**	**-1.7**
ERM				pmax	pmax		
	comp=Z,80nm,0.7s						
ERM				MLR	MLR		
	comp=Z,58µm,18.0s						
JCJI	**Jatiwangi**	**57.06**	**269**	P	**P**	**21 12 08.1**	**-0.2**
	comp=Z,1µm,1.2s,comp=Z,14µm						
CISI	**Cisompet, Garu**	**57.35**	**268**	*e*P	**P**	**21 12 08.1**	**-2.3**
	comp=Z,483nm,1.1s						
CISI				LR	LR		
	comp=Z,18µm,20.0s						
CISI	**Cisompet, Garu**	**57.35**	**268**	P	**P**	**21 12 09.2**	**-1.2**
	comp=Z,454nm,1.2s,comp=Z,7µm						
RKT	**Rikitea**	**57.49**	**110**	*e*S	**S**	**21 20 06.7**	**-1.4**
	comp=Z,32µm,32.5s						
RKT				*e*LQ	LQ	21 26 40.8	
	comp=Z,52µm,29.8s						
RKT				*e*LR	LR	21 29 06.7	
	comp=Z,71µm,28.0s						
YUK	**Yuzh-Kuril'sk**	**57.68**	**343**	*e*P	P	21 12 01.2	-11
YUK				*e*S	**S**	**21 20 05.1**	**-4.7**
YUK				*e*SS	**SS**	**21 23 59.1**	**-1.5**
YUK				pmax	pmax		
	comp=Z,296nm,1.2s						
YUK				pmax	pmax		
	comp=N,121nm,0.9s						
YUK				pmax	pmax		
	comp=E,402nm,1.2s						
TPI	**Tanjungpandan**	**58.30**	**274**	P	**P**	**21 12 17.4**	**+0.3**
	comp=E,232nm,1.3s,comp=E,4µm						
CBJI	**Citeko**	**58.46**	**269**	P	**P**	**21 12 17.8**	**-0.4**
DBJI	**Dramaga**	**58.54**	**269**	P	**P**	**21 12 19.3**	**+0.6**
SKJI	**Sukabumi**	**58.66**	**268**	P	**P**	**21 12 20.1**	**+0.5**
ASAJ	**Asahikawa**	**58.76**	**341**	P	**P**	**21 12 20.2**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,130nm,1.1s						
ASAJ				MLR	MLR		
	comp=Z,27µm,21.4s						
ASAJ	**Asahikawa**	**58.76**	**341**	P	**P**	**21 12 20.2**	**+0.6**
	comp=Z,108nm,1.0s,baz=222,slow=9.4,SNR=26						
ASAJ				LR	LR	21 33 47.1	
	comp=Z,27µm,21.4s,baz=167,slow=32						
XMIS	**Christmas Isla**	**59.09**	**264**	*e*P	**P**	**21 12 19.5**	**-3.1**
	comp=Z,129nm,1.0s						
XMIS				LR	LR		
	comp=Z,18µm,21.0s						
TJN	**Taejon**	**59.44**	**324***c*	*e*P	**P**	**21 12 24.3**	**-0.2**
KSRS	**Korea Array**	**59.88**	**326**	P	**P**	**21 12 28.1**	**+0.6**
	comp=Z,9.7nm,0.7s,baz=139,slow=7.2,SNR=30						
SSE	**Sheshan**	**59.89**	**316**	P	**P**	**21 12 27.2**	**-0.5**
SSE				S	**S**	**21 20 40.1**	**+1.2**
SSE				pmax	pmax		
	comp=Z,25nm,0.9s						
SSE				pmax	pmax		
	comp=Z,2µm,11.7s						
SSE	**Sheshan**	**59.89**	**316**	*e*P	**P**	**21 12 27.2**	**-0.5**
	comp=Z,318nm,1.0s						
SSE				LR	LR		
	comp=Z,39µm,21.0s						
KS15	**Wonju Array Si**	**59.90**	**325**	*e*P	**P**	**21 12 28.6**	**+1.0**
KSAR	**Wonju Array Be**	**59.90**	**325**	P	**P**	**21 12 28.1**	**+0.5**
KSAR	**Wonju Array Be**	**59.90**	**325**	P	**P**	**21 12 28.1**	**+0.5**
PPBI	**Pangkal Pinang**	**59.91**	**274**	P	**P**	**21 12 28.4**	**+0.2**
	comp=Z,153nm,1.5s,comp=Z,2µm						
KS01	**Wonju Array Si**	**59.92**	**326**	*e*P	**P**	**21 12 26.9**	**-0.9**
KASI	**Kota Agung**	**60.91**	**270**	P	**P**	**21 12 33.7**	**-1.4**
	comp=Z,154nm,1.2s,comp=Z,3µm						
MCO	**Taipa Grande**	**60.94**	**303**	P	P	21 12 41.0	+5.9
PMBI	**Palembang**	**61.10**	**273**	P	**P**	**21 12 37.8**	**+1.5**
	comp=Z,491nm,1.1s,comp=Z,6µm						
YSS	**Yuzh-Sakhalins**	**61.25**	**342**	*e*P	**P**	**21 12 35.9**	**-0.8**
	comp=Z,322nm,1.1s						
YSS				LR	LR		
	comp=Z,30µm,22.0s						
YSS	**Yuzh-Sakhalins**	**61.25**	**342**⇑	*e*P	**P**	**21 12 37.6**	**+1.0**
YSS				*e**SP	**sP**	**21 12 45.0**	**+1.0**
YSS				*e*S	**S**	**21 20 54.8**	**-1.0**
YSS				*e*		21 22 19.3	
YSS				*e*SS	**SS**	**21 24 59.3**	**+2.8**
YSS				pmax	pmax		
	comp=Z,180nm,1.2s						
YSS				pmax	pmax		
	comp=N,80nm,1.1s						
YSS				pmax	pmax		
	comp=E,80nm,1.0s						
MDSI	**Maura Dua**	**61.40**	**271**	P	**P**	**21 12 36.7**	**-1.7**
	comp=E,128nm,1.3s,comp=E,2µm						
LWLI	**Liwa**	**61.43**	**270**	P	**P**	**21 12 37.5**	**-1.2**
	comp=E,95nm,0.9s						
GZH	**Guangzhou**	**61.55**	**304**	P	**P**	**21 12 38.6**	**-0.6**
GZH				S	**S**	**21 21 01.0**	**+0.5**
GZH				SS	**SS**	**21 25 05.4**	**+3.3**
GZH				LR	LR		
	comp=E,17µm,16.7s						
GZH				LR	LR		
	comp=E,22µm,16.9s						
TEY	**Ternei**	**61.70**	**337**⇓	*e*P	**P**	**21 12 40.3**	**+0.6**
TEY				*e*		21 21 14.8	
TEY				pmax	pmax		
	comp=E,50nm,1.1s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
SKR	**Severo-Kuril’s**	**61.97**	**353**	*e*P	P	21 12 47.5	+6.1
SKR				*e*S	S	21 21 33.8	+29
SKR				MLR	MLR		
	comp=Z,25µm,18.0s						
PTCN	**Pitcairn Islan**	**61.98**	**113**	PFAKE		21 13 00.0	+18
PTCN				LR	LR		
	comp=Z,19µm,20.0s						
MSHR	**Mys Shultsa**	**62.05**	**332***c*	*i*P	**P**	**21 12 42.8**	**+0.7**
NJ2	**Nanjing**	**62.05**	**315**⇓	*i*P	**P**	**21 12 42.6**	**+0.2**
NJ2				sP	**sP**	**21 12 49.6**	**-0.2**
NJ2				S	**S**	**21 21 08.5**	**+1.9**
NJ2				sS	**pS**	**21 21 14.0**	**+0.5**
NJ2				SS	**SS**	**21 25 08.6**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,65nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,2µm,6.5s						
NJ2				LR	LR		
	comp=Z,31µm,21.1s						
NJ2				LR	LR		
	comp=Z,28µm,17.4s						
NJ2				LR	LR		
	comp=Z,50µm,19.5s						
TPRI	**Tanjung Pinang**	**62.12**	**277**	P	**P**	**21 12 43.9**	**+0.6**
VLA	**Vladivostok**	**62.13**	**332***c*	*i*P	**P**	**21 12 43.4**	**+0.7**
VLA				pmax	pmax		
	comp=Z,191nm,1.4s						
LHSI	**Lahat**	**62.16**	**271**	P	**P**	**21 12 42.7**	**-0.8**
	comp=Z,196nm,1.1s,comp=Z,3µm						
JMBI	**JAMBI**	**62.45**	**274**	P	**P**	**21 12 46.1**	**+0.6**
MNAI	**Manna**	**62.62**	**271**	*e*P	**P**	**21 12 44.5**	**-2.1**
	comp=Z,384nm,1.3s						
MNAI				LR	LR		
	comp=Z,19µm,20.0s						
MNAI	**Manna**	**62.62**	**271**	P	**P**	**21 12 47.2**	**+0.6**
QIZ	**Qiongzhong**	**62.76**	**298**	P	**P**	**21 12 48.1**	**+0.7**
QIZ				sP	**pP**	**21 12 53.7**	**+1.1**
QIZ				S	**S**	**21 21 15.2**	**-0.8**
QIZ				sS	**pS**	**21 21 23.0**	**0.0**
QIZ				pmax	pmax		
	comp=Z,1µm,9.8s						
QIZ				LR	LR		
	comp=Z,16µm,16.7s						
QIZ				LR	LR		
	comp=Z,16µm,22.6s						
QIZ				LR	LR		
	comp=Z,27µm,21.6s						
QIZ	**Qiongzhong**	**62.76**	**298**	PFAKE		21 13 00.0	+13
QIZ				LR	LR		
	comp=Z,28µm,22.0s						
USA0B	**Ussuriysk Arra**	**62.93**	**333**	*e*P	**P**	**21 12 47.8**	**-0.3**
	comp=Z,424nm,1.4s						
USRK	**Ussuriysk Ar.**	**62.93**	**333**	P	**P**	**21 12 49.0**	**+0.9**
	comp=Z,29nm,0.8s,baz=138,slow=6.6,SNR=54						
USRK				PKP2bc		21 41 55.4	
	comp=Z,1.4nm,0.8s,baz=270,slow=4.3,SNR=3.1						
MYKOM	**Kota Tinggi**	**62.98**	**278**	*e*P	**P**	**21 12 48.9**	**0.0**
	comp=Z,196nm,1.2s						
MYKOM	**Kota Tinggi**	**62.98**	**278**	P	**P**	**21 12 49.7**	**+0.8**
MASI	**Maura Aman, Be**	**63.54**	**272**	P	**P**	**21 12 53.4**	**+0.6**
KGM	**Kluang**	**63.54**	**278**	P	**P**	**21 12 54.0**	**+1.2**
SMY	**Shemya**	**63.82**	**6**	PFAKE		21 13 10.0	+16
SMY				LR	LR		
	comp=Z,20µm,18.0s						
RGRI	**Rengat**	**63.99**	**275**	P	**P**	**21 12 56.4**	**+0.7**
PET	**Petropavlovsk**	**64.03**	**355**	*e*P	**P**	**21 12 58.5**	**+3.4**
	comp=Z,169nm,1.3s						
PET	**Petropavlovsk**	**64.03**	**355**	*e*P	P	21 13 00.4	+5.4
PET				*e*SS	SS	21 25 41.4	+1.7
PET				pmax	pmax		
	comp=Z,48nm,0.9s						
PEA0B	**Petropavlovsk-**	**64.19**	**355**	*e*P	**P**	**21 12 55.9**	**-0.3**
	comp=Z,221nm,1.3s						
PEA0B				LR	LR		
	comp=Z,34µm,20.0s						
PETK	**Petropavlovsk-**	**64.19**	**355**	*e*P	**P**	**21 12 56.3**	**+0.1**
PETK				⇑*e*		21 41 51.2	
PETK	**Petropavlovsk-**	**64.19**	**355**	*e*P	**P**	**21 12 56.3**	**+0.1**
PETK	**Petropavlovsk-**	**64.19**	**355**	P	**P**	**21 12 57.1**	**+0.9**

	comp=Z,21nm,0.9s,baz=159,slow=9.3,SNR=13						
PETK				LR	LR	21 38 20.7	
	comp=Z,15µm,19.6s,baz=170,slow=34						
PETK				PKP2bc		21 41 51.2	
	comp=Z,3.3nm,0.8s,baz=7.6,slow=4.5,SNR=3.6						
PEA1	**Petropavlovsk-**	**64.20**	**355**	*e*P	**P**	**21 12 57.1**	**+0.9**
PEA1				⇑*e*		21 41 51.2	
KIWB	**Kanaga Island**	**64.25**	**12**	*e*P	**P**	**21 12 57.2**	**+0.6**
MDJ	**Mudanjiang**	**64.34**	**332**	P	**P**	**21 12 57.9**	**+0.6**
MDJ				pP	pP	21 13 01.9	-1.1
MDJ				sP	sP	21 13 05.0	+0.3
MDJ				ScP		21 17 27.2	
MDJ				PcS		21 17 34.3	
MDJ				pmax	pmax		
	comp=Z,51nm,1.3s						
MDJ				LR	LR		
	comp=Z,13µm,19.8s						
MDJ				LR	LR		
	comp=Z,34µm,16.7s						
MDJ				LR	LR		
	comp=Z,25µm,20.1s						
MDJ	**Mudanjiang**	**64.34**	**332**	*e*P	**P**	**21 12 58.1**	**+0.8**
	comp=Z,169nm,1.1s						
ADK	**Adak**	**64.37**	**12**	*e*P	**P**	**21 12 57.8**	**+0.5**
	comp=Z,194nm,1.2s						
ADK				LR	LR		
	comp=Z,36µm,21.0s						
ADK	**Adak**	**64.37**	**12**	*e*P	**P**	**21 12 57.8**	**+0.5**
ADK				pmax	pmax		
	comp=Z,194nm,1.2s						
ADK				MLR	MLR		
	comp=Z,36µm,21.0s						
WHN	**Wuhan**	**64.44**	**312**	⇑P	**P**	**21 12 57.5**	**-0.8**
WHN				PP	**PP**	**21 15 15.4**	**-4.9**
WHN				S	**S**	**21 21 37.9**	**+1.5**
WHN				LR	LR		
	comp=Z,60µm,16.0s						
WHN				LR	LR		
	comp=Z,48µm,21.8s						
WHN				LR	LR		
	comp=Z,91µm,20.1s						
DL2	**Dalian**	**64.49**	**323**	⇑*i*P	**P**	**21 12 58.6**	**+0.2**
DL2				S	**S**	**21 21 36.8**	**0.0**
DL2				SS	**SS**	**21 25 49.5**	**+1.9**
DL2				pmax	pmax		
	comp=Z,210nm,0.9s						
DL2				pmax	pmax		
	comp=Z,2µm,7.0s						
DL2				LR	LR		
	comp=Z,25µm,15.3s						
DL2				LR	LR		
	comp=Z,22µm,16.1s						
DL2				LR	LR		
	comp=Z,36µm,18.7s						
KRJI	**Kerinci**	**64.50**	**273**	P	**P**	**21 12 59.7**	**+0.5**
KTGM	**Kuala Trenggan**	**64.52**	**281**	P	**P**	**21 13 00.5**	**+1.3**
SDSI	**Sungai Dareh**	**64.76**	**274**	P	**P**	**21 13 01.6**	**+0.9**
	comp=Z,112nm,1.0s,comp=Z,5µm						
TYV	**Tymovskoe**	**64.80**	**344**	*e*P	P	21 13 05.0	+4.8
TYV				*e*S	pP	21 13 10.4	+4.5
TYV				pmax	pmax		
	comp=Z,82nm,1.4s						
SNY	**Shenyang**	**65.34**	**326**	⇓P	**P**	**21 13 02.4**	**-1.5**
SNY				S	**S**	**21 21 47.7**	**+0.6**
SNY				pmax	pmax		
	comp=Z,41nm,1.4s						
SNY				pmax	pmax		
	comp=Z,1µm,7.5s						
SNY				LR	LR		
	comp=Z,43µm,21.0s						
SNY				LR	LR		
	comp=Z,36µm,19.6s						
SNY				LR	LR		
	comp=Z,41µm,25.0s						
BKNI	**Bangkinang**	**65.40**	**275**	*e*P	**P**	**21 13 04.4**	**-0.5**
	comp=Z,1µm,1.1s						
BKNI				LR	LR		
	comp=Z,18µm,20.0s						
BKNI	**Bangkinang**	**65.40**	**275**	P	**P**	**21 13 05.6**	**+0.7**
TIA	**Tai'an**	**65.64**	**318**	P	**P**	**21 13 04.8**	**-1.2**
TIA				pmax	pmax		
	comp=Z,1µm,12.8s						
TIA				LR	LR		
	comp=Z,18µm,16.7s						
TIA				LR	LR		
	comp=Z,18µm,18.6s						
TIA				LR	LR		
	comp=Z,21µm,18.1s						
PDSI	**Padang**	**65.71**	**274**	P	**P**	**21 13 06.7**	**-0.2**
CN2	**Changchun**	**65.74**	**329**	*e*P	**P**	**21 13 05.3**	**-1.1**
CN2				*e*pP	pP	21 13 09.9	-2.3
CN2				*e*sP	sP	21 13 12.2	-1.6
CN2				PP	**PP**	**21 15 34.0**	**+2.6**
CN2				*e*S	**S**	**21 21 55.5**	**+3.6**
CN2				pmax	pmax		
	comp=Z,60nm,1.1s						
CN2				pmax	pmax		
	comp=Z,550nm,5.0s						
CN2				LR	LR		
	comp=Z,22µm,16.0s						
CN2				LR	LR		
	comp=Z,27µm,16.0s						
CN2				LR	LR		
	comp=Z,26µm,18.0s						
PPSI	**Pulau Pagai**	**65.80**	**272**	P	**P**	**21 13 08.2**	**+0.7**
IPM	**Ipoh**	**66.34**	**280**	*e*P	**P**	**21 13 10.8**	**-0.2**
	comp=Z,281nm,1.2s						
IPM				LR	LR		
	comp=Z,14µm,20.0s						
CASY	**Casey**	**66.51**	**201**	*e*P	**P**	**21 13 10.5**	**-0.6**
	comp=Z,447nm,1.3s						
CASY				LR	LR		
	comp=Z,22µm,18.0s						
VNDA	**Vanda**	**66.58**	**181**	*e*P	**P**	**21 13 11.0**	**-0.4**
	comp=Z,255nm,1.3s						
VNDA	**Vanda**	**66.58**	**181**	*e*P	**P**	**21 13 11.0**	**-0.4**
VNDA				pmax	pmax		
	comp=Z,255nm,1.3s						
VNDA	**Vanda**	**66.58**	**181**	P	**P**	**21 13 11.7**	**+0.3**
	comp=Z,59nm,1.2s,baz=348,slow=7.2,SNR=8.3						
VNDA				LR	LR	21 39 05.3	
	comp=Z,34µm,19.4s,baz=6.0,slow=33						
GRNR	**Gornyy**	**66.61**	**340**	*e*P	**P**	**21 13 12.8**	**+0.9**
GRNR				*e*		21 15 44.1	
GRNR				pmax	pmax		
	comp=N,40nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.0s						
SBA	**Scott Base**	**66.89**	**180**	*e*P	**P**	**21 13 13.5**	**+0.2**
	comp=Z,168nm,0.9s						
SBA				LR	LR		
	comp=Z,24µm,18.0s						
SBA	**Scott Base**	**66.89**	**180**	*e*P	**P**	**21 13 13.5**	**+0.2**
SBA				pmax	pmax		
	comp=Z,168nm,0.9s						
SBA				MLR	MLR		
	comp=Z,24µm,18.0s						
KULM	**Kulim**	**66.90**	**281**	*e*P	**P**	**21 13 13.8**	**-0.8**
	comp=Z,224nm,1.6s						
KULM				LR	LR		
	comp=Z,22µm,21.0s						
MNSI	**Mandailing Nat**	**66.92**	**276**	P	**P**	**21 13 15.4**	**+0.7**
KLR	**Kul'dur**	**67.03**	**336**	P	**P**	**21 13 15.1**	**+0.5**
	comp=Z,32nm,0.9s,baz=130,slow=4.7,SNR=78						
KLR				LR	LR	21 37 05.9	
	comp=Z,7µm,21.0s,baz=144,slow=31						
NIKH	**Nikolski High**	**67.25**	**16**	PFAKE		21 13 30.0	+14
NIKH				LR	LR		
	comp=Z,17µm,20.0s						
NKL	**Nikolayevsk**	**67.39**	**344**	*i* P	**P**	**21 13 17.0**	**+0.2**
NKL				*e*		21 13 23.5	
NKL				*e*		21 22 29.0	
NKL				pmax	pmax		
	comp=N,15nm,1.0s						
NKL				pmax	pmax		
	comp=Z,66nm,1.0s						
COCO	**West Island**	**67.49**	**261**	*e*P	**P**	**21 13 16.4**	**-1.8**
	comp=Z,943nm,1.5s						
COCO				LR	LR		
	comp=Z,28µm,22.0s						
COCO	**West Island**	**67.49**	**261**	*i* P	**P**	**21 13 20.6**	**+2.4**
ENH	**Enshi**	**67.95**	**309**	*e*P	**P**	**21 13 19.8**	**-1.1**
	comp=Z,216nm,1.1s						
ENH				LR	LR		
	comp=Z,16µm,20.0s						
SRAK	**Srakaew**	**67.99**	**290**	P	**P**	**21 13 19.9**	**-1.5**
	comp=Z,81nm,1.3s,comp=Z,1µm						
PSI	**Prapat**	**68.00**	**278**	*e*P	**P**	**21 13 20.1**	**-1.5**
	comp=Z,130nm,1.1s						
PSI	**Prapat**	**68.00**	**278**	*e*P	**P**	**21 13 20.1**	**-1.5**
PSI				pmax	pmax		
	comp=Z,130nm,1.1s						
PBSI	**Pulau Batu**	**68.02**	**274**	P	**P**	**21 13 22.4**	**+0.8**
NONG	**Nongkai**	**68.31**	**294**	P	**P**	**21 13 23.6**	**+0.3**
	comp=Z,2.9nm,1.0s,comp=Z,112nm						
GYA	**Guiyang**	**68.48**	**304**	⇑*i*P	**P**	**21 13 24.2**	**-0.2**
GYA				PP	**PP**	**21 16 00.2**	**+4.4**
GYA				S	**S**	**21 22 27.8**	**+1.8**
GYA				SKS	**SKSac**	**21 23 21.6**	**-1.6**
GYA				SS	**SS**	**21 26 52.0**	**+1.7**
GYA				pmax	pmax		
	comp=Z,100nm,1.0s						
GYA				LR	LR		
	comp=Z,32µm,18.6s						
GYA				LR	LR		
	comp=Z,22µm,20.5s						
GYA				LR	LR		
	comp=Z,28µm,22.0s						
BJT	**Baijiatuau**	**68.49**	**321**	*e*P	**P**	**21 13 23.7**	**-0.3**
	comp=Z,159nm,1.1s						
BJT				LR	LR		
	comp=Z,48µm,20.0s						
BJT	**Baijiatuau**	**68.49**	**321**	*e*P	**P**	**21 13 23.7**	**-0.3**
BJT				pmax	pmax		
	comp=Z,159nm,1.1s						
BJT				MLR	MLR		
	comp=Z,48µm,20.0s						
BJI	**Beijing**	**68.50**	**321**	P	**P**	**21 13 23.7**	**-0.4**
BJI				LR	LR		
	comp=Z,8µm,24.2s						
TSI	**Tuntungan**	**68.50**	**278**	P	**P**	**21 13 25.5**	**+0.9**
CHAI	**Chaiyaphum**	**68.64**	**292**	P	**P**	**21 13 25.8**	**+0.4**
	comp=Z,17nm,1.1s,comp=Z,157nm						
UNV	**Unalaska Valle**	**68.69**	**17**	PFAKE		21 13 40.0	+15
UNV				LR	LR		
	comp=Z,24µm,22.0s						
PATY	**Pattaya**	**68.76**	**289**	P	**P**	**21 13 27.8**	**+1.6**
	comp=Z,30nm,1.0s						
GSI	**Gunungsitoli**	**68.99**	**276**	*e*P	**P**	**21 13 27.1**	**-0.6**
	comp=Z,252nm,1.0s						
GSI				LR	LR		
	comp=Z,28µm,21.0s						
GSI	**Gunungsitoli**	**68.99**	**276**	P	**P**	**21 13 28.1**	**+0.4**
	comp=Z,277nm,1.2s,comp=Z,5µm						
AKUT	**Akutan**	**69.15**	**17**	PFAKE		21 13 40.0	+12
AKUT				LR	LR		
	comp=Z,22µm,21.0s						
KCSI	**Kotacane, Aceh**	**69.28**	**278**	P	**P**	**21 13 28.3**	**-1.2**
	comp=Z,84nm,1.2s,comp=Z,2µmcomp=Z,16µm						
TIY	**Taiyuan**	**69.59**	**317**	*e*P	**P**	**21 13 31.6**	**+0.6**
TIY				S	**S**	**21 22 37.7**	**-0.9**
TIY				SS	**SS**	**21 27 04.6**	**-2.3**
TIY				pmax	pmax		
	comp=Z,48nm,1.1s						
TIY				pmax	pmax		
	comp=Z,1µm,4.4s						
TIY				LR	LR		
	comp=Z,11µm,15.3s						
TIY				LR	LR		
	comp=Z,25µm,17.6s						
TIY				LR	LR		
	comp=Z,33µm,18.7s						
PBKT	**Sadao Pong**	**69.78**	**292**	*e*P	**P**	**21 13 31.9**	**-0.5**
	comp=Z,76nm,1.2s						
PHET	**Kaeng Krachan**	**69.90**	**288**	P	**P**	**21 13 35.0**	**+1.7**
	comp=Z,19nm,1.1s,comp=Z,225nm						
XAN	**Xi'an**	**70.17**	**312**	P	**P**	**21 13 34.2**	**-0.4**
XAN				pP	pP	21 13 40.3	+0.5
XAN				pmax	pmax		
	comp=Z,38nm,1.4s						
XAN				pmax	pmax		
	comp=Z,620nm,6.1s						
XAN				LR	LR		
	comp=Z,27µm,20.1s						
XAN				LR	LR		
	comp=Z,21µm,22.1s						
XAN				LR	LR		
	comp=Z,33µm,18.2s						
XAN	**Xi'an**	**70.17**	**312**	*e*P	**P**	**21 13 34.1**	**-0.4**
	comp=Z,197nm,1.3s						
XAN				LR	LR		
	comp=Z,34µm,19.0s						
XAN	**Xi'an**	**70.17**	**312**	*e*P	**P**	**21 13 34.1**	**-0.5**
XAN				pmax	pmax		
	comp=Z,197nm,1.3s						
XAN				MLR	MLR		
	comp=Z,34µm,19.0s						
SNSI	**Sinabang, Aceh**	**70.44**	**277**	P	**P**	**21 13 37.5**	**+0.9**
LHMI	**Lhok Sumawe**	**70.47**	**280**	PFAKE		21 13 50.0	+13
LHMI				LR	LR		
	comp=Z,15µm,20.0s						
FALS	**False Pass**	**70.48**	**18**	PFAKE		21 13 50.0	+14
FALS				LR	LR		
	comp=Z,30µm,21.0s						
UTTA	**Uttaradit**	**70.53**	**293**	P	**P**	**21 13 37.8**	**+0.8**
	comp=Z,20nm,1.0s,comp=Z,162nm						
SPIA	**Saint Paul Isl**	**70.69**	**14**	PFAKE		21 13 50.0	+13
SPIA				LR	LR		
	comp=Z,38µm,22.0s						
UTHA	**Uthaitani**	**70.86**	**291**	P	**P**	**21 13 39.9**	**+0.8**
	comp=Z,15nm,1.1s,comp=Z,207nm						
KMI	**Kunming**	**71.19**	**301**	P	**P**	**21 13 42.0**	**+0.8**
KMI				pP	sP	21 13 48.4	-0.3
KMI				sP	pwP	21 13 52.9	+3.9
KMI				PP	**PP**	**21 16 21.7**	**+2.3**
KMI				S	**S**	**21 23 00.0**	**+1.9**
KMI				pmax	pmax		
	comp=Z,66nm,1.4s						
KMI				pmax	pmax		
	comp=Z,2µm,5.1s						
KMI				LR	LR		
	comp=Z,19µm,18.3s						
KMI				LR	LR		
	comp=Z,22µm,20.9s						
KMI				LR	LR		
	comp=Z,32µm,21.8s						
KMI	**Kunming**	**71.19**	**301**	*e*P	**P**	**21 13 42.1**	**+0.8**
	comp=Z,166nm,1.3s						
KMI				LR	LR		
	comp=Z,35µm,22.0s						
KMI	**Kunming**	**71.19**	**301**	*e*P	**P**	**21 13 42.1**	**+0.8**
SUKH	**Sukhothai**	**71.28**	**293**	P	**P**	**21 13 42.9**	**+1.3**
	comp=Z,15nm,0.9s						
MA2	**Magadan**	**71.34**	**352**	*e*P	**P**	**21 13 40.1**	**-1.0**
	comp=Z,66nm,1.1s						
MA2	**Magadan**	**71.34**	**352**	*e*P	**P**	**21 13 40.1**	**-1.0**
MA2				pmax	pmax		
	comp=Z,66nm,1.1s						
UMPA	**Umpang Tak**	**71.59**	**291**	P	**P**	**21 13 44.3**	**+0.8**
	comp=Z,18nm,1.2s,comp=Z,182nm						
SDPT	**Sand Point**	**71.82**	**19**	PFAKE		21 14 00.0	+16
SDPT				LR	LR		
	comp=Z,19µm,22.0s						
HHC	**Hu-ho-hao-te**	**71.86**	**320**	*e*P	**P**	**21 13 45.1**	**+0.3**
HHC				sP	pwP	21 13 53.5	+0.9
HHC				pmax	pmax		
	comp=Z,34nm,1.2s						
HHC				pmax	pmax		
	comp=Z,2µm,6.9s						
HHC				LR	LR		
	comp=Z,24µm,19.0s						
HHC				LR	LR		
	comp=Z,24µm,17.7s						
HHC				LR	LR		
	comp=Z,36µm,18.8s						
BSI	**Banda Aceh**	**72.13**	**279**	P	**P**	**21 13 47.7**	**+0.8**
CM01	**Chiang Mai Arr**	**72.18**	**293**	*e*P	**P**	**21 13 46.5**	**-0.6**
CM31	**Chiang Mai Arr**	**72.20**	**293**	*e*P	**P**	**21 13 45.8**	**-1.4**
CM31				*e*P'P'df	**P'P'df**	**21 41 33.5**	**-1.2**
CM31	**Chiang Mai Arr**	**72.20**	**293**	P	**P**	**21 13 47.6**	**+0.4**
	SNR=37						
CMAR	**Chiang Mai Arr**	**72.20**	**293**	*ce*P	**P**	**21 13 47.5**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,37nm,1.1s						
CMAR	**Chiang Mai Arr**	**72.20**	**293**	P	**P**	**21 13 47.5**	**+0.3**
	comp=Z,34nm,1.1s,baz=114,slow=4.2,SNR=123						
CMAR				PKPPKP		21 41 33.5	
	comp=Z,0.3nm,0.6s,baz=253,slow=3.3,SNR=3.2						
CMAR				LR	LR	21 45 34.8	
	comp=Z,6µm,19.8s,baz=122,slow=36						
CHTO	**Chiang Mai**	**72.32**	**294**	*e*P	**P**	**21 13 47.6**	**-0.3**
	comp=Z,171nm,1.5s						
CHTO				LR	LR		
	comp=Z,13µm,22.0s						
CHTO	**Chiang Mai**	**72.32**	**294**	*e*P	**P**	**21 13 47.6**	**-0.3**
CHTO	**Chiang Mai**	**72.32**	**294**	P	**P**	**21 13 47.9**	**+0.1**
	SNR=24						
CHTO				P	**P**	**21 13 47.9**	**+0.1**
	SNR=24						
CHTO	**Chiang Mai**	**72.32**	**294**	P	**P**	**21 13 48.1**	**+0.2**
	comp=Z,253nm,1.4s,comp=Z,10µm						
ZEA	**Zeya**	**72.32**	**337**	*e*P	**P**	**21 13 47.4**	**+0.3**
ZEA				*e*SS	SS	21 27 49.0	+1.0
ZEA				pmax	pmax		
	comp=E,110nm,1.4s						
ZEA				pmax	pmax		
	comp=N,120nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,260nm,1.2s						
ZEA				pmax	pmax		
	comp=N,1µm,8.0s						
ZEA				pmax	pmax		
	comp=Z,3µm,8.0s						
HIA	**Hailar**	**72.36**	**330**	*e*P	**P**	**21 13 46.6**	**-0.9**
	comp=Z,166nm,1.2s						
HIA				LR	LR		
	comp=Z,25µm,20.0s						
HIA	**Hailar**	**72.36**	**330**	*c i*P	**P**	**21 13 47.7**	**+0.2**
HIA				pmax	pmax		
	comp=Z,167nm,1.2s						
CD2	**Chengdu**	**72.66**	**307**	⇑P	**P**	**21 13 49.5**	**-0.2**
CD2				pP	pP	21 13 54.8	-0.2
CD2				PP	**PP**	**21 16 31.0**	**-0.7**
CD2				S	**S**	**21 23 14.9**	**+0.5**
CD2				sS	SKiKP	21 23 23.8	+0.1
CD2				SS	**SS**	**21 27 55.4**	**+1.1**
CD2				pmax	pmax		
	comp=Z,90nm,1.0s						
CD2				pmax	pmax		
	comp=Z,2µm,6.4s						
CD2				LR	LR		
	comp=Z,50µm,19.4s						
CD2				LR	LR		
	comp=Z,44µm,19.4s						
CD2				LR	LR		
	comp=Z,39µm,17.4s						
BTO	**Baotou**	**72.72**	**319**	*e*P	**P**	**21 13 49.9**	**0.0**
CHGN	**Chignik**	**73.28**	**20**	PFAKE		21 14 10.0	+17
CHGN				LR	LR		
	comp=Z,16µm,18.0s						
CMBY	**CAMPBELL BAY**	**73.80**	**281**	*e*P	**P**	**21 13 56.5**	**-0.3**
CMBY				IAMs_20	IAMs_20	21 45 41.8	
	comp=Z,18µm,33.1s						
SEY	**Seymchan**	**74.40**	**354**	*ce*P	**P**	**21 13 58.4**	**-0.8**
LZH	**Lanzhou**	**74.80**	**312**	⇑P	**P**	**21 14 03.2**	**+0.8**
LZH				pP	sP	21 14 08.8	-1.0
LZH				sP	pwP	21 14 12.6	+2.4
LZH				PP	**PP**	**21 16 52.1**	**+2.1**
LZH				S	**S**	**21 23 43.0**	**+4.4**
LZH				sS	sS	21 23 50.1	+2.2
LZH				SS	**SS**	**21 28 22.0**	**-5.0**
LZH				pmax	pmax		
	comp=Z,300nm,1.2s						
LZH				pmax	pmax		
	comp=Z,3µm,6.0s						
LZH				LR	LR		
	comp=Z,40µm,16.1s						
LZH				LR	LR		
	comp=Z,35µm,16.4s						
LZH				LR	LR		
	comp=Z,43µm,17.3s						
SII	**Sitkinak Islan**	**74.95**	**22**	PFAKE		21 14 10.0	+7.4
SII				LR	LR		
	comp=Z,19µm,18.0s						
OHAK	**Old Harbor**	**75.78**	**22**	PFAKE		21 14 20.0	+13
OHAK				LR	LR		
	comp=Z,20µm,20.0s						
PBA	**Port Blair**	**76.05**	**285**	PFAKE		21 14 20.0	+10
PBA				LR	LR		
	comp=Z,13µm,22.0s						
PBA	**Port Blair**	**76.05**	**285**	*e*P	P	21 14 07.2	-2.5
KDAK	**Kodiak Island**	**76.45**	**21**	LR	LR	21 44 09.9	
	comp=Z,16µm,18.7s,baz=230,slow=33						
GAMB	**Gambell**	**76.46**	**10**	*e*P	**P**	**21 14 11.9**	**+1.0**
	comp=Z,161nm,1.2s						
GAMB				LR	LR		
	comp=Z,27µm,21.0s						
CIT	**Chita**	**77.16**	**330**	*e*P	**P**	**21 14 15.2**	**-0.1**
CIT				pmax	pmax		
	comp=Z,407nm,1.4s						
SVW2	**Sparrevohn**	**77.99**	**18**	*e*P	**P**	**21 14 20.6**	**+0.9**
	comp=Z,159nm,1.1s						
SVW2				LR	LR		
	comp=Z,17µm,20.0s						
YAK	**Yakutsk**	**78.05**	**343**	*e*P	**P**	**21 14 20.2**	**+0.3**
YAK				*e*S	**S**	**21 24 06.0**	**-6.8**
YAK				*e*SS	**SS**	**21 29 15.6**	**+0.9**
YAK				pmax	pmax		
	comp=Z,460nm,0.9s						
YAK				pmax	pmax		
	comp=N,186nm,1.0s						
YAK				pmax	pmax		
	comp=E,141nm,1.1s						
YAK				pmax	pmax		
	comp=Z,3µm,4.3s						
YAK				pmax	pmax		
	comp=E,2µm,4.3s						
YAK				pmax	pmax		
	comp=N,2µm,4.6s						
YAK				smax	smax		
	comp=E,10µm,11.3s						
YAK				smax	smax		
	comp=N,9µm,10.8s						
HOM	**Homer**	**78.17**	**21**	PFAKE		21 14 30.0	+9.3
HOM				LR	LR		
	comp=Z,17µm,20.0s						
ULN	**Ulaanbaatar**	**78.31**	**324**	*e*P	**P**	**21 14 21.9**	**-0.1**
	comp=Z,108nm,1.1s						
ULN				LR	LR		
	comp=Z,20µm,19.0s						
ULN	**Ulaanbaatar**	**78.31**	**324**	*c i*P	**P**	**21 14 22.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,124nm,1.1s						
ULN	**Ulaanbaatar**	**78.31**	**324**	P	**P**	**21 14 22.4**	**+0.5**
	SNR=57						
ULN				P	**P**	**21 14 22.4**	**+0.5**
	SNR=57						
ANM	**Nome**	**78.38**	**12**	*e*P	**P**	**21 14 22.9**	**+1.2**
	comp=Z,109nm,1.2s						
ANM				LR	LR		
	comp=Z,22µm,22.0s						
ANM	**Nome**	**78.38**	**12**	*e*P	**P**	**21 14 22.9**	**+1.2**
ANM				pmax	pmax		
	comp=Z,109nm,1.2s						
ANM				MLR	MLR		
	comp=Z,22µm,22.0s						
RSO	**Redoubt South**	**78.39**	**20**	*e*P	**P**	**21 14 22.4**	**+0.3**
BRLK	**Bradley Lake**	**78.51**	**21**	*e*P	**P**	**21 14 23.6**	**+1.0**
	comp=Z,318nm,1.6s						
BRLK				LR	LR		
	comp=Z,29µm,20.0s						
SONA0	**Songino Array**	**78.68**	**324**	*e*P	**P**	**21 14 24.0**	**+0.1**
SONA0				*e*PKKPbc	**PKKPbc**	**21 33 22.2**	**+0.8**
SONA0				*e*P'P'df	P'P'df	21 41 22.4	+1.7
SONM	**Songino Array**	**78.68**	**324**	P	**P**	**21 14 24.0**	**+0.1**
	comp=Z,15nm,0.9s,baz=139,slow=4.7,SNR=82						
SONM				PKKPbc	**PKKPbc**	**21 33 22.2**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=318,slow=1.9,SNR=6.7						
SONM				PKPPKP		21 41 22.4	
	comp=Z,0.8nm,0.8s,baz=288,slow=1.9,SNR=4.8						
SONM				LR	LR	21 45 27.9	
	comp=Z,18µm,21.8s,baz=111,slow=33						
SONA1	**Songino Array**	**78.68**	**324**	*e*P	**P**	**21 14 22.0**	**-1.9**
BILL	**Bilibino**	**78.79**	**0**	*e*P	**P**	**21 14 23.3**	**-0.7**
	comp=Z,174nm,1.1s						
BILL				LR	LR		
	comp=Z,19µm,18.0s						
BILL	**Bilibino**	**78.79**	**0**	*c i*P	**P**	**21 14 24.1**	**+0.1**
BILL				*e*		21 14 33.4	
BILL				*e*		21 17 25.1	
BILL				*i* S	**S**	**21 24 16.5**	**-4.1**
BILL				pmax	pmax		
	comp=Z,185nm,1.1s						
BILL				MLR	MLR		
	comp=Z,17µm,18.0s						
QSPA	**South Pole Qui**	**79.05**	**180**	*e*P	**P**	**21 14 25.5**	**-0.2**
	comp=Z,93nm,0.9s						
QSPA				LR	LR		

	comp=Z,32µm,18.0s						
QSPA	South Pole Qui	79.05	180	P	P	21 14 25.5	-0.2
	comp=Z,74nm,1.1s,baz=12,slow=1.5,SNR=64						
GTA	Gaotai	79.10	314	⇑P	P	21 14 26.9	+0.4
GTA				pP	pP	21 14 31.4	-0.4
GTA				sP	sP	21 14 34.0	+0.1
GTA				S	S	21 24 24.3	-1.0
GTA				sS	pS	21 24 32.6	0.0
GTA				SKS	SKSac	21 24 36.4	-5.4
GTA				SS	SS	21 29 31.6	-0.1
GTA				pmax	pmax		
	comp=Z,41nm,1.5s						
GTA				pmax	pmax		
	comp=Z,1µm,10.2s						
GTA				LR	LR		
	comp=Z,32µm,18.4s						
GTA				LR	LR		
	comp=Z,21µm,18.4s						
GTA				LR	LR		
	comp=Z,27µm,19.0s						
SEW	Seward	79.25	21	*e*P	P	21 14 27.5	+0.8
	comp=Z,366nm,1.8s						
SEW				LR	LR		
	comp=Z,17µm,20.0s						
SUA	Susitna One	79.80	20	*e*P	P	21 14 29.7	-0.1
	comp=Z,217nm,1.4s						
SUA				LR	LR		
	comp=Z,17µm,22.0s						
RC01	Rabbit Creek A	79.86	20	*e*P	P	21 14 30.9	+0.9
	comp=Z,140nm,1.2s						
RC01				LR	LR		
	comp=Z,29µm,20.0s						
MID	Middleton Isla	79.92	23	PFAKE		21 14 40.0	+10
MID				LR	LR		
	comp=Z,18µm,19.0s						
PPLA	Purkeypile	80.40	18	PFAKE		21 14 50.0	+17
PPLA				LR	LR		
	comp=Z,23µm,19.0s						
PMR	Palmer	80.43	20	*e*P	P	21 14 33.4	+0.4
	comp=Z,221nm,1.6s						
PMR				LR	LR		
	comp=Z,29µm,20.0s						
PMR	Palmer	80.43	20	*e*P	P	21 14 33.4	+0.4
PMR				pmax	pmax		
	comp=Z,221nm,1.6s						
PMR				MLR	MLR		
	comp=Z,29µm,20.0s						
RPN	Rapa Nui	80.49	116	LR	LR	21 43 03.3	
	comp=Z,13µm,20.9s,baz=270,slow=30						
BOD	Bodaibo	80.51	335	*e*P	P	21 14 32.3	-1.2
BOD				pmax	pmax		
	comp=Z,72nm,1.7s						
KNK	Knik Glacier	80.53	20	*e*P	P	21 14 34.6	+1.1
	comp=Z,125nm,1.3s						
KNK				LR	LR		
	comp=Z,22µm,19.0s						
SHL	Shillong	80.60	298	*e*P	P	21 14 35.2	+0.3
	comp=Z,136nm,1.3s						
SHL				LR	LR		
	comp=Z,17µm,22.0s						
SHL	Shillong	80.60	298	*e*P	P	21 14 35.2	+0.3
SHL	Shillong	80.60	298	⇑*i*P	P	21 14 34.5	-0.4
SHL				*e*x	x	21 24 48.0	
GHO	Glory Hole Cre	80.62	20	PFAKE		21 14 50.0	+16
GHO				LR	LR		
	comp=Z,29µm,20.0s						
GLI	Glacier Island	80.63	21	PFAKE		21 14 50.0	+16
GLI				LR	LR		
	comp=Z,21µm,20.0s						
CAST	Castle Rocks	80.82	18	*e*P	P	21 14 34.7	-0.4
	comp=Z,260nm,1.8s						
CAST				LR	LR		
	comp=Z,18µm,20.0s						
SML	Sawmill	80.85	20	*e*P	P	21 14 36.0	+0.7
	comp=Z,146nm,1.2s						
SML				LR	LR		
	comp=Z,26µm,20.0s						
SML	Sawmill	80.85	20	*e*P	P	21 14 36.0	+0.7
SML				pmax	pmax		
	comp=Z,146nm,1.2s						
SML				MLR	MLR		
	comp=Z,26µm,20.0s						
EYAK	Cordova Ski Ar	80.89	22	PFAKE		21 14 50.0	+15
EYAK				LR	LR		
	comp=Z,50µm,21.0s						
SCM	Sheep Creek Mo	81.21	20	*e*P	P	21 14 38.5	+1.2
	comp=Z,131nm,1.1s						
SCM				LR	LR		
	comp=Z,14µm,21.0s						
SCM	Sheep Creek Mo	81.21	20	*e*P	P	21 14 38.5	+1.2
SCM				pmax	pmax		
	comp=Z,131nm,1.1s						
SCM				MLR	MLR		
	comp=Z,14µm,21.0s						
DIV	Divide	81.28	22	*e*P	P	21 14 38.4	+0.8
	comp=Z,96nm,1.1s						
DIV				LR	LR		
	comp=Z,28µm,20.0s						
HMT	Hamilton	81.31	23	PFAKE		21 14 50.0	+12
HMT				LR	LR		
	comp=Z,38µm,19.0s						
TRF	Thorofare Moun	81.39	18	*e*P	P	21 14 39.6	+1.3
	comp=Z,54nm,0.9s						
TRF				LR	LR		
	comp=Z,28µm,22.0s						
KLU	Klutina	81.47	21	*e*P	P	21 14 39.9	+1.2
	comp=Z,111nm,1.2s						
KLU				LR	LR		
	comp=Z,26µm,18.0s						
BPAW	Bear Paw Mtn.	81.66	18	PFAKE		21 14 50.0	+10
BPAW				LR	LR		
	comp=Z,18µm,19.0s						
ZAK	Zakamensk	81.71	325	*e*P	P	21 14 39.6	-0.6
ZAK				pmax	pmax		
	comp=Z,53nm,1.1s						
RND	Reindeer	81.81	19	*e*P	P	21 14 40.6	+0.2
	comp=Z,120nm,1.1s						
RND				LR	LR		
	comp=Z,16µm,20.0s						
RND	Reindeer	81.81	19	*e*P	P	21 14 40.6	+0.2
RND				pmax	pmax		
	comp=Z,120nm,1.1s						
RND				MLR	MLR		
	comp=Z,16µm,20.0s						
RDOG	Red Dog Mine	81.91	11	*e*P	P	21 14 41.5	+0.7
	comp=Z,136nm,1.1s						
RDOG				LR	LR		
	comp=Z,23µm,22.0s						
MCK	McKinley	82.02	19	*e*P	P	21 14 41.4	-0.1
	comp=Z,197nm,1.2s						
MCK				LR	LR		
	comp=Z,27µm,19.0s						
MCK	McKinley	82.02	19	*e*P	P	21 14 41.4	-0.1
MCK				pmax	pmax		
	comp=Z,197nm,1.2s						
MCK				MLR	MLR		
	comp=Z,27µm,19.0s						
DHY	Denali Highway	82.06	20	*e*P	P	21 14 42.7	+0.9
	comp=Z,98nm,1.3s						
DHY				LR	LR		
	comp=Z,25µm,19.0s						
IRK	Irkutsk	82.06	327	*e*P	P	21 14 40.3	-1.6
IRK				pmax	pmax		
	comp=Z,124nm,3.4s						
TLY	Talaya	82.13	326	*e*P	P	21 14 42.1	-0.2
	comp=Z,105nm,0.9s						
TLY				LR	LR		
	comp=Z,50µm,18.0s						
TLY	Talaya	82.13	326	*c i*P	P	21 14 41.8	-0.5
TLY	Talaya	82.13	326	P	P	21 14 41.7	-0.5
	SNR=33						
TLY				P	P	21 14 41.7	-0.5
	SNR=33						
BWN	Browne	82.17	18	PFAKE		21 14 50.0	+7.8
BWN				LR	LR		
	comp=Z,18µm,20.0s						
IM3	Indian Mountai	82.30	16	*e*P	P	21 14 42.5	-0.4
HARP	HAARP	82.35	21	*e*P	P	21 14 44.6	+1.4
	comp=Z,170nm,1.0s						
HARP				LR	LR		
	comp=Z,15µm,20.0s						
MCCM	Marconi Confer	82.36	49	PFAKE		21 15 00.0	+16
MCCM				LR	LR		
	comp=Z,19µm,22.0s						
KCPM	Cahto Peak	82.39	47	*e*P	P	21 14 46.3	+2.3
	comp=Z,211nm,1.5s						
KCPM				LR	LR		
	comp=Z,14µm,20.0s						
MLY	Manley	82.42	17	*e*P	P	21 14 43.5	0.0
	comp=Z,86nm,1.3s						
MLY				LR	LR		
	comp=Z,17µm,20.0s						
LSA	Lhasa	82.42	302	P	P	21 14 44.6	-0.3
LSA				S	S	21 25 04.3	+3.1
LSA				pmax	pmax		
	comp=Z,970nm,11.0s						
LSA				LR	LR		
	comp=Z,6µm,32.3s						
LSA				LR	LR		
	comp=Z,3µm,32.3s						
LSA				LR	LR		
	comp=Z,12µm,48.4s						
LSA	Lhasa	82.42	302	*e*P	P	21 14 45.2	+0.3
	comp=Z,26nm,0.9s						
LSA	Lhasa	82.42	302	*e*P	P	21 14 45.2	+0.3
LSA				pmax	pmax		
	comp=Z,27nm,0.9s						
JCC	Jacoby Creek,	82.48	46	PFAKE		21 15 00.0	+16
JCC				LR	LR		
	comp=Z,14µm,20.0s						
KMRM	Mail Ridge	82.49	47	*e*P	P	21 14 46.1	+1.6
	comp=Z,85nm,0.9s						
KMRM				LR	LR		
	comp=Z,18µm,19.0s						
HOPS	Hopland Field	82.52	48	PFAKE		21 15 00.0	+15
HOPS				LR	LR		
	comp=Z,18µm,19.0s						
DIB	Dawson Inlet,	82.54	32	PFAKE		21 15 00.0	+16
DIB				LR	LR		
	comp=Z,22µm,22.0s						
YKU2	Yakutat	82.61	25	PFAKE		21 15 00.0	+16
YKU2				LR	LR		
	comp=Z,38µm,20.0s						
PAX	Paxson	82.62	20	PFAKE		21 15 00.0	+15
PAX				LR	LR		
	comp=Z,10µm,20.0s						
GDXM	Geysers	82.65	48	*e*P	P	21 14 47.8	+2.4
	comp=Z,92nm,1.4s						
GDXM				LR	LR		
	comp=Z,23µm,18.0s						
KHMM	Horse Mountain	82.71	46	*e*P	P	21 14 50.7	+5.0
KHMM				LR	LR		
	comp=Z,16µm,19.0s						
WRH	Wood River Hil	82.80	18	*e*P	P	21 14 45.2	-0.2
	comp=Z,129nm,1.3s						
WRH				LR	LR		
	comp=Z,26µm,22.0s						
DHAK	Deception Hill	82.97	26	PFAKE		21 15 00.0	+14
DHAK				LR	LR		
	comp=Z,34µm,20.0s						
SAO	San Andreas Ge	82.97	51	*e*P	P	21 14 49.5	+2.5
	comp=Z,146nm,1.5s						
SAO				LR	LR		
	comp=Z,36µm,22.0s						
SAO	San Andreas Ge	82.97	51	*e*P	P	21 14 49.5	+2.5
KEBM	Edson Butte	83.02	44	PFAKE		21 15 00.0	+13
KEBM				LR	LR		
	comp=Z,12µm,20.0s						
MDM	Murphy Dome	83.11	18	*e*P	P	21 14 46.7	-0.4
	comp=Z,72nm,1.0s						
MDM				LR	LR		
	comp=Z,16µm,19.0s						
SIT	Sitka	83.12	28	PFAKE		21 15 00.0	+13
SIT				LR	LR		
	comp=Z,19µm,22.0s						
HDA	Harding Lake	83.12	19	*e*P	P	21 14 47.2	+0.1
	comp=Z,171nm,1.0s						
HDA				LR	LR		
	comp=Z,14µm,20.0s						
HDA	Harding Lake	83.12	19	P	P	21 14 47.0	-0.1
	baz=227						
O02D	Mt. Diablo Mer	83.13	47	P	P	21 14 48.2	+0.4
	baz=250,SNR=14						
TCOL	CIGO, UAF Yank	83.16	18	P	P	21 14 46.5	-0.8
	baz=226						
COLA	College	83.16	18	*e*P	P	21 14 47.1	-0.2
	comp=Z,89nm,0.9s						
COLA				LR	LR		
	comp=Z,20µm,19.0s						
COLA	College	83.16	18	*i* P	P	21 14 46.0	-1.3
COLA				pmax	pmax		
	comp=Z,102nm,1.0s						
L02E	Cave Junction	83.26	45	P	P	21 14 47.9	-0.5
	baz=249						
CRAG	Craig	83.34	30	PFAKE		21 15 00.0	+12
CRAG				LR	LR		
	comp=Z,24µm,20.0s						
RIDG	Independ'e Rid	83.35	20	*e*P	P	21 14 49.1	+0.7
	comp=Z,146nm,1.0s						
RIDG				LR	LR		
	comp=Z,24µm,19.0s						
SNCC	San Nicolas Is	83.36	54	PFAKE		21 15 00.0	+11
SNCC				LR	LR		
	comp=Z,14µm,20.0s						
ILAR	Eielson Array	83.39	18	P	P	21 14 48.5	-0.1
	comp=Z,18nm,0.7s,baz=232,slow=5.4,SNR=106						
ILAR				PKPPKP		21 41 10.7	
	comp=Z,1.0nm,1.1s,baz=35,slow=3.3,SNR=4.7						
ILAR				LR	LR	21 49 30.5	
	comp=Z,14µm,18.4s,baz=236,slow=34						
ILB	Eielson Array	83.39	18	*e*P	P	21 14 48.2	-0.3
ILB				*e*P'P'df	P'P'df	21 41 10.7	-0.1
IL1	Eielson Array	83.39	18	*e*P	P	21 14 47.0	-1.5
J01E	Myrtle Point	83.40	44	P	P	21 14 49.8	+0.7
	baz=248						
K02D	Willamette Mer	83.41	44	P	P	21 14 49.9	+0.7
	baz=249,SNR=12						
WDC	Whiskeytown Da	83.45	47	*e*P	P	21 14 50.5	+1.1
	comp=Z,147nm,1.5s						
WDC				LR	LR		
	comp=Z,17µm,20.0s						
WDC	Whiskeytown Da	83.45	47	*e*P	P	21 14 50.5	+1.1
WDC				pmax	pmax		
	comp=Z,147nm,1.5s						
WDC				MLR	MLR		
	comp=Z,17µm,20.0s						
POKR	Poker Plat Res	83.46	18	P	P	21 14 49.2	+0.3
	baz=226						
N02D	Trinity Center	83.47	46	P	P	21 14 50.5	+1.0
	baz=250						
M02C	Callahan	83.51	46	P	P	21 14 51.0	+1.2
	baz=249,SNR=7.5						
DOT	Dot Lake	83.55	20	PFAKE		21 15 00.0	+11
DOT				LR	LR		
	comp=Z,18µm,22.0s						
PAGB	Antelope Grade	83.55	52	*e*P	P	21 14 53.2	+3.1
	comp=Z,85nm,1.3s						
PAGB				LR	LR		
	comp=Z,37µm,22.0s						
SBC	Santa Barbara	83.57	53	P	P	21 14 50.8	+0.6
	baz=252						
MOY	Mondy	83.58	325	*e*P	P	21 14 49.4	-0.6
MOY				pmax	pmax		
	comp=Z,171nm,2.6s						
SMMC	Simmler	83.62	52	P	P	21 14 51.3	+0.8
	baz=252						
PKM	Mcpherson Peak	83.63	53	P	P	21 14 51.3	+0.6
	baz=252						
YBH	Yreka Blue Hor	83.73	46	*e*P	P	21 14 52.2	+1.3
	comp=Z,73nm,1.2s						
YBH	Yreka Blue Hor	83.73	46	*e*P	P	21 14 52.2	+1.3
YBH	Yreka Blue Hor	83.73	46	LR	LR	21 46 27.8	
	comp=Z,11µm,19.6s,baz=262,slow=32						
SCRK	Sand Creek	83.79	20	*e*P	P	21 14 51.5	+0.8
	comp=Z,397nm,1.6s						
SCRK				LR	LR		
	comp=Z,20µm,19.0s						
ORV	Oroville	83.85	48	*e*P	P	21 14 52.0	+0.5
	comp=Z,145nm,1.7s						
ORV				LR	LR		
	comp=Z,12µm,19.0s						
ORV	Oroville	83.85	48	*e*P	P	21 14 52.0	+0.5
ORV				pmax	pmax		
	comp=Z,145nm,1.7s						
ORV				MLR	MLR		
	comp=Z,12µm,19.0s						
HUMO	Hull Mountain	83.87	45	*e*P	P	21 14 52.9	+1.3
	comp=Z,51nm,0.9s						
HUMO				LR	LR		
	comp=Z,17µm,20.0s						
O03E	Paynes Creek	83.88	47	P	P	21 14 51.7	0.0
	baz=250,SNR=12						
BLG	Laguna Peak, P	83.98	54	P	P	21 14 53.0	+0.7
	baz=252						
I03D	Drain, OR	83.99	44	P	P	21 14 52.5	+0.5
	baz=249						
AFDM	Forest Hills D	84.04	49	*e*P	P	21 14 53.2	+0.7
	comp=Z,60nm,1.0s						
AFDM				LR	LR		
	comp=Z,13µm,22.0s						
BESE	Bessie Mountai	84.14	27	PFAKE		21 15 00.0	+7.4
BESE				LR	LR		
	comp=Z,27µm,18.0s						
COLD	Coldfoot	84.18	16	*e*P	P	21 14 53.9	+1.4
	comp=Z,27nm,1.0s						
COLD				LR	LR		
	comp=Z,19µm,20.0s						
CMB	Columbia Colle	84.18	50	*e*P	P	21 14 53.9	+0.6
	comp=Z,55nm,1.1s						
CMB				LR	LR		
	comp=Z,30µm,22.0s						
CMB	Columbia Colle	84.18	50	*e*P	P	21 14 53.9	+0.6
CMB				pmax	pmax		
	comp=Z,55nm,1.1s						
CMB				MLR	MLR		
	comp=Z,30µm,22.0s						
L04D	Klamath Falls	84.19	45	P	P	21 14 53.9	+0.7
	baz=250						
JIS	Juneau Island	84.19	27	PFAKE		21 15 00.0	+7.3
JIS				LR	LR		
	comp=Z,23µm,18.0s						
WRAK	Wrangell Islan	84.19	29	*e*P	P	21 14 57.6	+4.8
WRAK				LR	LR		
	comp=Z,24µm,20.0s						
HYT	Haines Junctio	84.25	24	PFAKE		21 15 00.0	+6.8
HYT				LR	LR		
	comp=Z,34µm,20.0s						
CIS	Catalina Islan	84.29	55	P	P	21 14 54.2	+0.3
	baz=253						
PRP	Porcupine Dome	84.32	18	*e*P	P	21 14 54.4	+0.9
	comp=Z,32nm,1.0s						
PRP				LR	LR		
	comp=Z,18µm,20.0s						
COR	Corvallis	84.35	43	PFAKE		21 15 10.0	+16
COR				LR	LR		
	comp=Z,19µm,21.0s						
M04C	Macdoel	84.36	46	P	P	21 14 54.7	+0.5
	baz=250,SNR=9.4						
SKAG	Skagway	84.40	26	PFAKE		21 15 10.0	+16
SKAG				LR	LR		
	comp=Z,34µm,20.0s						
OSI	Osito Audit: C	84.40	53	PFAKE		21 15 10.0	+16
OSI				LR	LR		
	comp=Z,22µm,21.0s						
OSI	Osito Audit: C	84.40	53	P	P	21 14 55.0	+0.5
	baz=253						
VOG	Valley Oaks Go	84.41	52	P	P	21 14 55.5	+1.1
	baz=252						
BBB	Bella Bella	84.43	34	PFAKE		21 15 10.0	+16
BBB				LR	LR		
	comp=Z,24µm,21.0s						
ARVC	Arvin	84.47	53	P	P	21 14 55.4	+0.7
	baz=253						
VES	Vestal, Richgr	84.49	52	P	P	21 14 54.9	+0.1
	baz=252						
G03D	McMinnville, O	84.60	42	P	P	21 14 55.8	+0.7
	baz=249						
DECC	Green Verdugo	84.61	54	P	P	21 14 57.1	+1.7
	baz=253						
I04A	Tendick Farm,	84.66	44	P	P	21 14 55.7	+0.1
	baz=250,SNR=12						
F03A	Seaside	84.67	41	PFAKE		21 15 10.0	+15
F03A				LR	LR		
	comp=Z,20µm,21.0s						
J04D	Umpqua Nationa	84.68	44	P	P	21 14 56.3	+0.5
	baz=250,SNR=17						
RUBR	Rubicon Trail	84.68	49	*e*P	P	21 14 58.0	+2.0
	comp=Z,161nm,1.2s						
RUBR				LR	LR		
	comp=Z,14µm,21.0s						
PASC	Pasadena Art C	84.70	54	PFAKE		21 15 10.0	+14
PASC				LR	LR		
	comp=Z,16µm,21.0s						
H04D	Lebanon	84.70	43	P	P	21 14 56.4	+0.8
	baz=249						
K04D	Chiloquin, OR	84.71	45	P	P	21 14 56.7	+0.8
	baz=250						
BEKR	Beckworth	84.79	48	PFAKE		21 15 10.0	+14
BEKR				LR	LR		
	comp=Z,10µm,18.0s						
MWC	Mount Wilson	84.82	54	*e*P	P	21 14 57.3	+0.6
	comp=Z,208nm,1.5s						
MWC				LR	LR		
	comp=Z,19µm,22.0s						
MWC	Mount Wilson	84.82	54	*e*P	P	21 14 57.3	+0.6
MWC				pmax	pmax		
	comp=Z,208nm,1.5s						
MWC				MLR	MLR		
	comp=Z,19µm,22.0s						
MAW	Mawson	84.85	202	P	P	21 14 55.8	-0.3
	baz=85,SNR=6.6						
MAW	Mawson	84.85	202	*e*P	P	21 14 56.9	+0.9
	comp=Z,70nm,1.3s						
MAW	Mawson	84.85	202	P	P	21 14 56.5	+0.5
MAW				pmax	pmax		
	comp=Z,155nm,1.1s						
MAW				MLR	MLR		
	comp=Z,12µm,21.3s						
MAW	Mawson	84.85	202	P	P	21 14 56.5	+0.5
	comp=Z,155nm,1.1s,baz=101,slow=7.9,SNR=9.6						
MAW				LR	LR	21 48 16.8	
	comp=Z,12µm,21.3s,baz=108,slow=32						
ISA	Isabella, Lake	84.91	52	*e*P	P	21 14 57.9	+0.9
	comp=Z,85nm,1.3s						
ISA				LR	LR		
	comp=Z,31µm,22.0s						
ISA	Isabella, Lake	84.91	52	*e*P	P	21 14 57.9	+0.9
ISA				pmax	pmax		
	comp=Z,85nm,1.3s						
ISA				MLR	MLR		
	comp=Z,31µm,22.0s						
ISA	Isabella, Lake	84.91	52	P	P	21 14 57.6	+0.6
	baz=253						
NLWA	Neilton Lookou	85.01	40	*e*P	P	21 14 58.4	+1.2
	comp=Z,56nm,1.1s						
NLWA				LR	LR		
	comp=Z,15µm,19.0s						
WAKR	Walker	85.04	49	PFAKE		21 15 10.0	+12
WAKR				LR	LR		
	comp=Z,28µm,22.0s						
MDPB	Devils Postpil	85.04	50	*e*P	P	21 14 58.9	+1.0
	comp=Z,82nm,1.1s						
MDPB				LR	LR		
	comp=Z,32µm,21.0s						
EDW2	Edwards Air Fo	85.06	53	P	P	21 14 58.1	+0.4
	baz=253,SNR=18						
F04D	Rainier, OR	85.08	41	P	P	21 14 58.3	+0.8
	baz=249						
OMMB	Old Mammoth Mi	85.09	50	*e*P	P	21 14 59.3	+1.1
	comp=Z,98nm,1.3s						
OMMB				LR	LR		
	comp=Z,37µm,22.0s						
PNTR	Pine Nut	85.10	49	*e*P	P	21 14 59.1	+1.1
	comp=Z,180nm,1.5s						
PNTR				LR	LR		
	comp=Z,14µm,20.0s						
FYU	Fort Yukon	85.11	18	*e*P	P	21 14 59.0	+1.8
	comp=Z,102nm,1.4s						
FYU				LR	LR		
	comp=Z,18µm,20.0s						
VCNR	Virginia City	85.12	49	*e*P	P	21 14 59.4	+1.2
	comp=Z,40nm,1.1s						
VCNR				LR	LR		
	comp=Z,13µm,21.0s						
H04A	Detroit Lake	85.13	43	*e*P	P	21 14 58.4	+0.6
	comp=Z,72nm,1.3s						
H04A				LR	LR		
	comp=Z,16µm,21.0s						
BFSC	Mount Baldy Ra	85.14	54	P	P	21 14 58.5	+0.3
	baz=253						
109C	Camp Elliot, M	85.20	55	P	P	21 14 58.8	+0.4
	baz=254						
CPE	Camp Elliot	85.20	55	PFAKE		21 15 10.0	+12
CPE				LR	LR		
	comp=Z,26µm,21.0s						
MLAC	Mammoth, Mammo	85.22	50	P	P	21 14 58.9	+0.1
	baz=252						
WHY	Whitehorse	85.24	25	*e*P	P	21 14 57.9	-0.2
	comp=Z,69nm,1.6s						
WHY				LR	LR		
	comp=Z,37µm,20.0s						

EGAK	Eagle	85.25	20	*e*P	P	21 14 59.0	+1.1
	comp=Z,119nm,0.8s						
EGAK				LR	LR		
	comp=Z,17µm,19.0s						
J05D	Fort Rock, OR	85.29	44	P	P	21 14 59.6	+0.7
	baz=250,SNR=21						
MURC	Murrieta	85.33	55	P	P	21 14 59.1	0.0
	baz=254						
YERR	Yerington	85.33	49	*e*P	P	21 15 00.1	+0.8
	comp=Z,112nm,1.5s						
YERR				LR	LR		
	comp=Z,14µm,20.0s						
TOLK	Toolik Lake Re	85.37	15	*e*P	P	21 14 56.9	-1.7
TOLK				LR	LR		
	comp=Z,25µm,21.0s						
TOLK	Toolik Lake Re	85.37	15	P	P	21 14 57.0	-1.6
	baz=224						
BOK	Bokaro	85.39	295	*e*P	P	21 14 57.2	-2.4
BOK				IAmb	IAmb	21 14 58.8	
	comp=Z,687nm,3.3s						
DAWY	Dawson	85.42	21	*e*P	P	21 14 59.7	+0.8
	comp=Z,80nm,1.1s						
DAWY				LR	LR		
	comp=Z,30µm,22.0s						
CWC	Cottonwood Cre	85.44	52	P	P	21 15 00.1	+0.3
	baz=253						
PAF	Port-aux-Franc	85.45	221	PFAKE		21 15 10.0	+11
PAF				LR	LR		
	comp=Z,15µm,20.0s						
PAHR	Pah Rah Range	85.45	48	*e*P	P	21 15 00.7	+0.9
	comp=Z,214nm,1.7s						
LRMC	Laurel Mtn Rad	85.47	53	P	P	21 15 00.4	+0.5
	baz=253						
MOD	Modoc Plateau	85.48	46	*e*P	P	21 15 00.6	+0.8
	comp=Z,197nm,2.0s						
BAR	Barrett	85.49	56	PFAKE		21 15 10.0	+10
BAR				LR	LR		
	comp=Z,24µm,20.0s						
E04D	Cinebar	85.54	41	P	P	21 15 00.6	+0.8
	baz=249						
RAMN	Ramite	85.54	298	*e*P	P	21 15 00.1	-0.5
	comp=Z,192nm,1.5s						
D03D	Eldon	85.56	40	P	P	21 15 00.7	+0.8
	baz=249						
I05D	Terrebonne, OR	85.58	43	P	P	21 15 00.6	+0.4
	baz=250,SNR=14						
PINE	Pine Mountain	85.66	44	*e*P	P	21 15 02.2	+1.4
	comp=Z,62nm,1.0s						
PINE				LR	LR		
	comp=Z,20µm,20.0s						
PGC	Sidney	85.74	39	*e*P	P	21 15 00.7	0.0
	comp=Z,67nm,1.0s						
MONP2	Monument Peak	85.75	56	P	P	21 15 02.0	+0.6
	baz=254						
RYN	Ryan	85.76	50	*e*P	P	21 15 02.0	+0.7
	comp=Z,133nm,1.5s						
RYN				LR	LR		
	comp=Z,24µm,22.0s						
DAC	Darwin (Calif)	85.77	52	*e*P	P	21 15 02.2	+0.7
	comp=Z,110nm,1.5s						
DAC				LR	LR		
	comp=Z,33µm,22.0s						
DAC	Darwin (Calif)	85.77	52	*e*P	P	21 15 02.2	+0.7
MPMC	Manual Prospec	85.79	52	P	P	21 15 01.9	+0.3
	baz=253,SNR=20						
RRX	Edison Barstow	85.84	53	P	P	21 15 02.0	+0.4
	baz=254						
NV01	Mina Array Sit	85.86	50	*e*P	P	21 15 02.0	+0.1
NV01				*e*P'P'df	P'P'df	21 41 09.6	+0.6
NVAR	Mina Array Bea	85.86	50	P	P	21 15 02.7	+0.8
	comp=Z,17nm,0.9s,baz=233,slow=8.3,SNR=42						
NVAR				PKPPKP	P'P'df	21 41 09.6	+0.6
	comp=Z,1.4nm,0.9s,baz=92,slow=2.2,SNR=3.1						
NVAR				LR	LR	21 44 49.2	
	comp=Z,23µm,21.9s,baz=260,slow=30						
G05D	Wamic, OR	85.90	43	P	P	21 15 02.1	+0.5
	baz=250						
PFO	Pinyon Flats O	85.92	55	*e*P	P	21 15 03.0	+0.8
	comp=Z,53nm,1.3s						
PFO	Pinyon Flats O	85.92	55	*e*P	P	21 15 03.0	+0.8
PFO	Pinyon Flats O	85.92	55	P	P	21 15 02.5	+0.3
	baz=254						
PFO	Pinyon Flats O	85.92	55	LR	LR	21 45 20.6	
	comp=Z,22µm,21.6s,baz=260,slow=30						
XPFO	Pion Flat	85.92	55	*e*P	P	21 15 03.0	+0.8
	comp=Z,52nm,1.2s						
XPFO				LR	LR		
	comp=Z,26µm,21.0s						
IKP	In-Ko-Pah, Jac	85.94	56	P	P	21 15 02.8	+0.6
	baz=254						
NV11	Mina Array Sit	85.97	50	*e*P	P	21 15 03.0	+0.7
	comp=Z,13nm,1.5s						
NV11				LR	LR		
	comp=Z,2µm,22.0s						
F05D	White Salmon	86.02	42	P	P	21 15 02.8	+0.5
	baz=250						
TIXI	Tiksi	86.03	349	*e*P	P	21 15 01.1	-0.6
TIXI	Tiksi	86.03	349*c*	*i*P	P	21 15 01.0	-0.6
TIXI				pmax	pmax		
	comp=Z,122nm,1.4s						
JIRN	Jiri	86.07	299	*e*P	P	21 15 03.1	-0.2
	comp=Z,489nm,1.6s						
LON	Longmire	86.09	41	*e*P	P	21 15 02.8	+0.2
	comp=Z,33nm,1.2s						
LON				LR	LR		
	comp=Z,16µm,20.0s						
LON	Longmire	86.09	41	*e*P	P	21 15 02.8	+0.2
LON				pmax	pmax		
	comp=Z,33nm,1.2s						
LON				MLR	MLR		
	comp=Z,16µm,20.0s						
GSC	Goldstone, Bar	86.11	53	*e*P	P	21 15 03.9	+0.9
	comp=Z,48nm,1.2s						
GSC				LR	LR		
	comp=Z,22µm,22.0s						
GSC	Goldstone, Bar	86.11	53	*e*P	P	21 15 03.9	+0.9
GSC				pmax	pmax		
	comp=Z,48nm,1.2s						
GSC				MLR	MLR		
	comp=Z,22µm,22.0s						
GSC	Goldstone, Bar	86.11	53	P	P	21 15 03.4	+0.3
	baz=254						
D05A	Enumclaw	86.13	41	*e*P	P	21 15 03.9	+1.2
	comp=Z,154nm,1.2s						
D05A				LR	LR		
	comp=Z,12µm,19.0s						
GRAC	Grapevine Rang	86.15	51	P	P	21 15 03.8	+0.6
	baz=253,SNR=22						
KVN	Kaiserville	86.20	49	*e*P	P	21 15 04.0	+0.6
	comp=Z,55nm,1.2s						
KVN				LR	LR		
	comp=Z,20µm,22.0s						
KVN	Kaiserville	86.20	49	*e*P	P	21 15 04.1	+0.6
KVN				pmax	pmax		
	comp=Z,55nm,1.2s						
KVN				MLR	MLR		
	comp=Z,20µm,22.0s						
A04D	Lummi Island	86.22	39	P	P	21 15 03.9	+0.8
	baz=249						
DLBC	Dease Lake	86.27	28	*e*P	P	21 15 04.6	+1.3
	comp=Z,45nm,1.3s						
DLBC				LR	LR		
	comp=Z,20µm,20.0s						
SWSC	Sam W. Stewart	86.27	56	P	P	21 15 04.3	+0.6
	baz=254						
HEC	Hector,Ludlow	86.35	54	P	P	21 15 04.2	0.0
	baz=254,SNR=15						
FURC	Furnace Creek,	86.39	52	P	P	21 15 05.0	+0.7
	baz=254,SNR=9.9						
BELC	Belle Mtn. Jos	86.39	55	P	P	21 15 04.8	+0.3
	baz=254,SNR=17						
GUN	Gumba	86.40	299	*e*P	P	21 15 04.5	-0.4
	comp=Z,190nm,1.0s						
B05A	Bryant	86.44	40	P	P	21 15 04.9	+0.7
	baz=249						
PALK	Pallekele	86.67	278	*e*P	P	21 15 07.2	+1.0
	comp=Z,104nm,1.3s						
PALK				LR	LR		
	comp=Z,11µm,20.0s						
PALK	Pallekele	86.67	278	*e*P	P	21 15 07.2	+1.0
PALK	Pallekele	86.67	278	P	P	21 15 06.7	+0.5
	SNR=7.1						
PALK				P	P	21 15 06.7	+0.5
	SNR=7.1						
SHOC	Shoshone, Teco	86.69	53	P	P	21 15 06.1	+0.3
	baz=254						
PKI	Pulchoki	86.72	299	*e*P	P	21 15 05.6	-0.9
PKIN	Phulchoki	86.73	299	*e*P	P	21 15 05.7	-0.8
	comp=Z,139nm,1.2s						
I07A	Izee	86.74	44	*e*P	P	21 15 06.5	+0.6
	comp=Z,158nm,1.8s						
I07A				LR	LR		
	comp=Z,19µm,20.0s						
BC3	Big Chuckawall	86.74	55	P	P	21 15 06.6	+0.4
	baz=255,SNR=8.9						
WVOR	Wild Horse Val	86.83	46	*e*P	P	21 15 07.2	+0.8
	comp=Z,83nm,1.1s						
WVOR				LR	LR		
	comp=Z,13µm,19.0s						
WVOR	Wild Horse Val	86.83	46	*e*P	P	21 15 07.2	+0.8
WVOR				pmax	pmax		
	comp=Z,83nm,1.1s						
WVOR				MLR	MLR		
	comp=Z,13µm,19.0s						
TUQ	Turquoise Moun	86.84	53	P	P	21 15 06.9	+0.2
	baz=254,SNR=7.2						
GMRC	Granite Mounta	86.87	54	P	P	21 15 07.0	+0.1
	baz=254,SNR=13						
DMN	Daman	86.99	299	*e*P	P	21 15 07.2	-0.5
	comp=Z,470nm,1.2s						
LTY	Liberty	87.00	41	*e*P	P	21 15 07.5	+0.4
	comp=Z,33nm,1.0s						
LTY				LR	LR		
	comp=Z,14µm,20.0s						
TPNV	Topopah Spring	87.00	52	*e*P	P	21 15 10.0	+2.5
	comp=Z,150nm,1.6s						
TPNV				LR	LR		
	comp=Z,33µm,22.0s						
TPNV	Topopah Spring	87.00	52	*e*P	P	21 15 10.0	+2.5
TPNV	Topopah Spring	87.00	52	P	P	21 15 07.8	+0.3
	baz=254						
F07A	Phinny Hill Vi	87.03	42	*e*P	P	21 15 08.6	+1.4
	comp=Z,45nm,1.1s						
F07A				LR	LR		
	comp=Z,15µm,20.0s						
C06D	Leavenworth	87.08	40	P	P	21 15 08.6	+1.2
	baz=250						
GLA	Glamis	87.09	56	*e*P	P	21 15 09.4	+1.6
	comp=Z,64nm,1.0s						
GLA				LR	LR		
	comp=Z,24µm,20.0s						
GLA	Glamis	87.09	56	*e*P	P	21 15 09.4	+1.6
GLA	Glamis	87.09	56	P	P	21 15 08.4	+0.6
	baz=255,SNR=5.9						
IRM	Iron Mountain	87.12	55	P	P	21 15 08.2	+0.3
	baz=255,SNR=18						
J08A	Circle Bar Ran	87.22	45	*e*P	P	21 15 08.8	+0.5
	comp=Z,59nm,1.1s						
J08A				LR	LR		
	comp=Z,14µm,22.0s						
BMN	Battle Mountai	87.25	48	*e*P	P	21 15 09.3	+0.7
BMN				LR	LR		
	comp=Z,9µm,18.0s						
BMN	Battle Mountai	87.25	48	*e*P	P	21 15 09.3	+0.7
BMN				MLR	MLR		
	comp=Z,9µm,18.0s						
LDFC	Landfair	87.39	54	PFAKE		21 15 20.0	+11
LDFC				LR	LR		
	comp=Z,16µm,19.0s						
LLLB	Lillooet	87.40	37	*e*P	P	21 15 09.4	+0.5
	comp=Z,26nm,0.9s						
LLLB				LR	LR		
	comp=Z,32µm,21.0s						
HAWA	Hanford	87.45	42	*e*P	P	21 15 09.6	+0.4
	comp=Z,47nm,1.1s						
HAWA				LR	LR		
	comp=Z,16µm,22.0s						
G08A	Pilot Rock	87.49	43	*e*P	P	21 15 10.1	+0.5
	comp=Z,67nm,1.1s						
G08A				LR	LR		
	comp=Z,14µm,20.0s						
Y12C	Blythe	87.51	55	*e*P	P	21 15 11.0	+1.2
	comp=Z,83nm,1.3s						
Y12C				LR	LR		
	comp=Z,23µm,21.0s						
Y12C	Blythe	87.51	55	P	P	21 15 10.2	+0.4
	baz=255,SNR=5.7						
EPYK	Eagle Plains	87.68	20	*e*P	P	21 15 10.5	+0.6
	comp=Z,136nm,1.3s						
EPYK				LR	LR		
	comp=Z,19µm,20.0s						
EPYK	Eagle Plains	87.68	20	P	P	21 15 10.6	+0.6
	baz=236						
NEE2	Needles Airpor	87.70	54	P	P	21 15 11.0	+0.3
	baz=255						
SHPR	Sheep Range	87.72	52	*e*P	P	21 15 12.1	+1.2
	comp=Z,122nm,1.6s						
SHPR				LR	LR		
	comp=Z,28µm,22.0s						
E08A	Dider Farm, El	87.80	42	*e*P	P	21 15 12.4	+1.6
	comp=Z,84nm,1.1s						
E08A				LR	LR		
	comp=Z,16µm,22.0s						
SRIG	Santa Rosalia	87.86	62	PFAKE		21 15 20.0	+8.4
SRIG				LR	LR		
	comp=Z,20µm,21.0s						
113A	Mohawk Valley,	87.88	56	*e*P	P	21 15 12.7	+1.1
	comp=Z,134nm,1.6s						
R11A	Troy Canyon, C	87.89	50	*e*P	P	21 15 12.2	+0.5
	comp=Z,48nm,1.4s						
R11A				LR	LR		
	comp=Z,38µm,22.0s						
R11A	Troy Canyon, C	87.89	50	P	P	21 15 11.8	+0.1
	baz=254,SNR=9.7						
PDMCI	Parker Dam,Lak	87.96	55	P	P	21 15 12.5	+0.6
	baz=255,SNR=16						
D08A	Wollman Farm,	88.06	41	*e*P	P	21 15 12.8	+0.7
	comp=Z,64nm,1.4s						
D08A				LR	LR		
	comp=Z,18µm,20.0s						
B08A	Colville Reser	88.21	40	*e*P	P	21 15 13.0	+0.2
	comp=Z,66nm,1.4s						
B08A				LR	LR		
	comp=Z,9µm,18.0s						
MDRS	Chennai	88.26	284	*e*P	P	21 15 12.1	-1.6
MDRS				IAmb	IAmb	21 15 17.2	
	comp=Z,433nm,2.9s						
DANN	Dangsing	88.32	299	*e*P	P	21 15 12.8	-1.3
	comp=Z,99nm,0.9s						
KOLN	Koldanda	88.32	299	*e*P	P	21 15 12.8	-1.3
	comp=Z,77nm,1.0s						
W13A	Hualapai Mount	88.36	54	*e*P	P	21 15 15.2	+1.1
	comp=Z,128nm,1.7s						
W13A				LR	LR		
	comp=Z,14µm,19.0s						
E09A	Wood Farm, Sta	88.40	42	*e*P	P	21 15 14.2	+0.5
	comp=Z,46nm,1.1s						
E09A				LR	LR		
	comp=Z,14µm,20.0s						
214A	Organ Pipe Nat	88.47	57	P	P	21 15 15.3	+0.9
	baz=256,SNR=8.4						
BMO	Blue Mountains	88.47	44	*e*P	P	21 15 14.5	+0.3
	comp=Z,50nm,1.3s						
BMO	Blue Mountains	88.47	44	*e*P	P	21 15 14.5	+0.3
BMO				pmax	pmax		
	comp=Z,50nm,1.3s						
C09A	Chrisman Ranch	88.71	41	*e*P	P	21 15 15.6	+0.4
	comp=Z,17nm,0.8s						
C09A				LR	LR		
	comp=Z,15µm,22.0s						
Y14A	Wickenburg	88.78	55	*e*P	P	21 15 16.8	+0.8
	comp=Z,26nm,0.9s						
Y14A				LR	LR		
	comp=Z,22µm,20.0s						
ELK	Elko	88.79	48	*e*P	P	21 15 16.8	+0.8
	comp=Z,59nm,1.4s						
ELK				LR	LR		
	comp=Z,13µm,19.0s						
ELK	Elko	88.79	48	*e*P	P	21 15 16.8	+0.8
ELK				pmax	pmax		
	comp=Z,59nm,1.4s						
ELK				MLR	MLR		
	comp=Z,13µm,19.0s						
F10A	Beach Ranch, E	88.85	43	*e*P	P	21 15 16.3	+0.3
	comp=Z,211nm,1.8s						
F10A				LR	LR		
	comp=Z,13µm,20.0s						
PYUN	Piuthan	88.92	299	*e*P	P	21 15 15.5	-1.4
	comp=Z,151nm,1.1s						
SLBS	Sierra La Lagu	89.08	66	*e*P	P	21 15 20.0	+2.4
SLBS				LR	LR		
	comp=Z,18µm,19.0s						
WMQ	Urumqi	89.13	315	P	P	21 15 17.3	0.0
WMQ				pP	pP	21 15 23.0	+0.3
WMQ				sP	pwP	21 15 29.2	+4.1
WMQ				PP	PP	21 18 48.8	+1.0
WMQ				SKS	SKSac	21 25 46.0	-0.6
WMQ				S	S	21 26 05.0	-0.6
WMQ				SS	SS	21 32 01.7	+2.0
WMQ				pmax	pmax		
	comp=Z,240nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,2µm,6.3s						
WMQ				LR	LR		
	comp=Z,44µm,20.1s						
WMQ				LR	LR		
	comp=Z,31µm,21.3s						
WMQ				LR	LR		
	comp=Z,52µm,26.5s						
WMQ	Urumqi	89.13	315	*e*P	P	21 15 17.6	+0.2
	comp=Z,126nm,1.1s						
WMQ				LR	LR		
	comp=Z,18µm,22.0s						
WMQ	Urumqi	89.13	315	*e*P	P	21 15 17.6	+0.2
WMQ				pmax	pmax		
	comp=Z,126nm,1.1s						
WMQ				MLR	MLR		
	comp=Z,18µm,22.0s						
PSUT	Pine Spring	89.25	51	*e*P	P	21 15 18.9	+0.7
	comp=Z,70nm,1.2s						
PSUT				LR	LR		
	comp=Z,31µm,22.0s						
LCMT	Little Creek M	89.34	52	*e*P	P	21 15 19.6	+1.1
	comp=Z,88nm,1.3s						
LCMT				LR	LR		
	comp=Z,18µm,22.0s						
HSIG		89.36	60	PFAKE		21 15 30.0	+11
HSIG				LR	LR		
	comp=Z,18µm,19.0s						
CCUT	Cedar City	89.38	52	*e*P	P	21 15 20.1	+1.2
	comp=Z,150nm,1.6s						
CCUT				LR	LR		
	comp=Z,31µm,22.0s						
NEW	Newport	89.59	41	*e*P	P	21 15 19.6	+0.3
	comp=Z,112nm,1.9s						
NEW				PKKPbc	PKKPbc	21 32 55.0	-0.4
NEW				LR	LR		
	comp=Z,11µm,18.0s						
NEW	Newport	89.59	41	*e*P	P	21 15 19.6	+0.3
NEW				pmax	pmax		
	comp=Z,112nm,1.9s						
NEW				MLR	MLR		
	comp=Z,11µm,18.0s						
NEW	Newport	89.59	41	P	P	21 15 19.7	+0.3
	baz=253						
NEW	Newport	89.59	41	PKKPbc	PKKPbc	21 32 55.0	-0.4
	comp=Z,1.0nm,0.5s,baz=0.0,slow=4.0,SNR=2.4						
SZCU	Shurtz Canyon	89.60	52	PFAKE		21 15 30.0	+10
SZCU				LR	LR		
	comp=Z,36µm,22.0s						
KNB	Kanab	89.67	52	*e*P	P	21 15 21.6	+1.4
	comp=Z,208nm,1.4s						
KNB				LR	LR		
	comp=Z,15µm,22.0s						
KNB	Kanab	89.67	52	*e*P	P	21 15 21.6	+1.4
INK	Inuvik	89.77	19	*e*P	P	21 15 19.7	0.0
	comp=Z,76nm,1.6s						
INK				*e*PKKPdf	PKKPdf	21 32 52.5	+1.0
INK	Inuvik	89.77	19	*e*P	P	21 15 19.7	0.0
INK				pmax	pmax		
	comp=Z,76nm,1.6s						
INK	Inuvik	89.77	19	PKKPbc	PKKPbc	21 32 55.3	-0.4
	comp=Z,2.3nm,1.0s,baz=114,slow=3.7,SNR=4.4						
INK				LR	LR	21 49 11.6	
	comp=Z,10µm,21.8s,baz=228,slow=31						
U15A	North Rim	89.94	53	*e*P	P	21 15 22.8	+1.2
	comp=Z,387nm,2.0s						
U15A				LR	LR		
	comp=Z,15µm,18.0s						
HLID	Hailey	90.12	46	*e*P	P	21 15 22.6	+0.5
	comp=Z,56nm,1.3s						
HLID				LR	LR		
	comp=Z,13µm,18.0s						
HLID	Hailey	90.12	46	P	P	21 15 22.4	+0.3
	baz=255						
X16A	Lo Mia Camp, P	90.16	55	*e*P	P	21 15 23.5	+1.0
	comp=Z,27nm,0.8s						
X16A				LR	LR		
	comp=Z,25µm,21.0s						
PKCU	Pink Cliffs	90.17	52	*e*P	P	21 15 24.8	+2.1
	comp=Z,530nm,1.9s						
PKCU				LR	LR		
	comp=Z,22µm,22.0s						
TUC	Tucson	90.22	57	*e*P	P	21 15 24.1	+1.4
	comp=Z,55nm,1.3s						
TUC				LR	LR		
	comp=Z,24µm,20.0s						
TUC	Tucson	90.22	57	*e*P	P	21 15 24.1	+1.4
TUC				pmax	pmax		
	comp=Z,55nm,1.3s						
TUC				MLR	MLR		
	comp=Z,24µm,20.0s						
TUC	Tucson	90.22	57	P	P	21 15 23.1	+0.4
	baz=257						
TCRU	Three Creeks R	90.33	51	PFAKE		21 15 40.0	+17
TCRU				LR	LR		
	comp=Z,40µm,22.0s						
MTPU	Mount Pierson	90.40	51	*e*P	P	21 15 25.7	+1.9
	comp=Z,54nm,1.0s						
MTPU				LR	LR		
	comp=Z,41µm,22.0s						
DUG	Dugway, Tooele	90.44	49	*e*P	P	21 15 24.6	+1.0
	comp=Z,46nm,1.1s						
DUG				LR	LR		
	comp=Z,13µm,19.0s						
DUG	Dugway, Tooele	90.44	49	*e*P	P	21 15 24.6	+1.0
DUG				pmax	pmax		
	comp=Z,47nm,1.1s						
DUG				MLR	MLR		
	comp=Z,13µm,19.0s						
DUG	Dugway, Tooele	90.44	49	P	P	21 15 24.0	+0.3
	baz=256						
BGU	Big Grassy Mou	90.45	48	*e*P	P	21 15 25.1	+1.3
	comp=Z,52nm,1.2s						
BGU				LR	LR		
	comp=Z,11µm,20.0s						
WUAZ	Wupatki	90.46	54	*e*P	P	21 15 24.9	+1.0
	comp=Z,76nm,1.3s						
WUAZ				LR	LR		
	comp=Z,15µm,21.0s						
WUAZ	Wupatki	90.46	54	P	P	21 15 23.6	-0.3
	baz=257						
MSU	Marysvale	90.52	51	*e*P	P	21 15 25.7	+1.6
MSU	Marysvale	90.52	51	*e*P	P	21 15 25.7	+1.6
TRD	Trivandrum	90.55	279	*e*P	P	21 15 22.9	-1.6
HYB	Hyderabad	90.72	287	*i* P	P	21 15 24.5	-0.8
HYB				*e*SKS	SKSac	21 26 00.0	+3.2
HYB	Hyderabad	90.72	287	*e*P	P	21 15 23.8	-1.4
HYB				IAmb	IAmb	21 15 25.7	
	comp=Z,105nm,0.2s						
HVU	Hansel Valley	90.84	48	*e*P	P	21 15 27.1	+1.6
	comp=Z,161nm,1.4s						
HVU				LR	LR		
	comp=Z,12µm,18.0s						
HVU	Hansel Valley	90.84	48	*e*P	P	21 15 27.1	+1.6
HVU				pmax	pmax		
	comp=Z,161nm,1.4s						
HVU				MLR	MLR		
	comp=Z,12µm,18.0s						
DGZ	Jazzator, Alta	90.92	320*c*	*i*P	P	21 15 24.7	-0.9
DGZ				pmax	pmax		
	comp=Z,51nm,1.3s						
NLU	North Lily Min	90.93	50	*e*P	P	21 15 27.6	+1.5
	comp=Z,42nm,1.0s						
NLU				LR	LR		
	comp=Z,25µm,22.0s						
SPUT	South Promonto	90.97	48	PFAKE		21 15 40.0	+14
SPUT				LR	LR		
	comp=Z,11µm,19.0s						
NGP	Nagpur	90.98	291	*e*P	P	21 15 25.1	-1.3
NGP				*e*x	x	21 26 35.5	
NGP				*e*x	x	21 55 11.9	
	comp=Z,11µm,20.6s						
319A	Douglas	91.27	58	*e*P	P	21 15 28.9	+1.2
	comp=Z,58nm,1.1s						
319A				LR	LR		
	comp=Z,23µm,21.0s						
MSO	Missoula	91.27	43	PFAKE		21 15 40.0	+13
MSO				LR	LR		
	comp=Z,13µm,20.0s						
MSO	Missoula	91.27	43	P	P	21 15 28.0	+0.6
	baz=256						
MPU	Maple Canyon	91.28	50	*e*P	P	21 15 29.3	+1.7

	comp=Z,119nm,1.5s						
MPU				LR	LR		
	comp=Z,24µm,22.0s						
CTU	**Camp Tracy**	**91.34**	**49**	*e*P	**P**	**21 15 29.2**	**+1.3**
	comp=Z,40nm,1.0s						
CTU				LR	LR		
	comp=Z,11µm,22.0s						
X18A	**Snowflake**	**91.38**	**55**	*e*P	**P**	**21 15 29.4**	**+1.2**
	comp=Z,41nm,1.1s						
X18A				LR	LR		
	comp=Z,20µm,22.0s						
TMUT	**Trail Mountain**	**91.43**	**50**	*e*P	**P**	**21 15 30.2**	**+1.7**
	comp=Z,34nm,1.0s						
TMUT				LR	LR		
	comp=Z,20µm,21.0s						
MCMT	**McKenzie Canyo**	**91.52**	**45**	*e*P	**P**	**21 15 29.6**	**+0.9**
JLU	**Jordanelle**	**91.54**	**49**	*e*P	**P**	**21 15 30.3**	**+1.4**
	comp=Z,140nm,1.6s						
JLU				LR	LR		
	comp=Z,16µm,22.0s						
W18A	**Petrified Fore**	**91.68**	**55**	PFAKE		21 15 40.0	+10
W18A				LR	LR		
	comp=Z,20µm,21.0s						
W18A	**Petrified Fore**	**91.68**	**55**	P	**P**	**21 15 30.4**	**+0.8**
	baz=258						
HWUT	**Hardware Ranch**	**91.69**	**48**	*e*P	**P**	**21 15 30.6**	**+1.1**
	comp=Z,27nm,1.1s						
TCUT	**Toone Canyon**	**91.69**	**49**	*e*P	**P**	**21 15 31.5**	**+1.9**
	comp=Z,107nm,1.1s						
TCUT				LR	LR		
	comp=Z,17µm,19.0s						
DLMT	**Dillon**	**91.82**	**44**	*e*P	**P**	**21 15 31.0**	**+1.1**
	comp=Z,108nm,1.3s						
DLMT				LR	LR		
	comp=Z,15µm,20.0s						
SYO	**Syowa Base**	**91.91**	**197**	⇓*e*P	P	21 15 23.5	-6.2
SYO	**Syowa Base**	**91.91**	**197**	⇓*i*P	**P**	**21 15 27.6**	**-2.1**
SYO	**Syowa Base**	**91.91**	**197**	⇓*i*P	**P**	**21 15 30.0**	**+0.3**
SRU	**San Rafael Swe**	**91.91**	**51**	PFAKE		21 15 40.0	+9.4
SRU				LR	LR		
	comp=Z,29µm,22.0s						
DGAR	**Diego Garcia**	**91.96**	**262**	PFAKE		21 15 40.0	+8.9
DGAR				LR	LR		
	comp=Z,26µm,19.0s						
ZSN	**Zaisan**	**91.99**	**318**	*e*P	**P**	**21 15 27.7**	**-2.8**
ZSN				pmax	pmax		
	comp=Z,52nm,1.8s						
ZSN				MLR	MLR		
	comp=Z,2µm,17.0s						
ZSN	**Zaisan**	**91.99**	**318**	*e*P	**P**	**21 15 27.8**	**-2.8**
	comp=Z,52nm,1.8s						
ZSN				*e*LR	LR	21 58 43.7	
	comp=Z,2µm,16.9s						
LRM	**Limekiln Ridge**	**92.03**	**44**	*e*P	**P**	**21 15 31.6**	**+0.5**
AHID	**Auburn Hatcher**	**92.28**	**47**	PFAKE		21 15 40.0	+7.8
AHID				LR	LR		
	comp=Z,12µm,19.0s						
QLMT	**Earthquake Lak**	**92.50**	**45**	*e*P	P	21 15 38.1	+4.9
FXWY	**Fox Creek**	**92.53**	**46**	*e*P	**P**	**21 15 33.9**	**+0.5**
	comp=Z,28nm,1.0s						
BOZ	**Bozeman (W)**	**92.54**	**44**	*e*P	**P**	**21 15 34.0**	**+0.7**
	comp=Z,64nm,1.1s						
BOZ				LR	LR		
	comp=Z,18µm,22.0s						
BOZ	**Bozeman (W)**	**92.54**	**44**	*e*P	**P**	**21 15 34.0**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,64nm,1.1s						
BOZ				MLR	MLR		
	comp=Z,18µm,22.0s						
BOZ	**Bozeman (W)**	**92.54**	**44**	P	**P**	**21 15 33.7**	**+0.5**
	baz=257						
TPAW	**Teton Pass**	**92.55**	**46**	*e*P	**P**	**21 15 34.9**	**+1.4**
	comp=Z,16nm,0.9s						
TPAW				LR	LR		
	comp=Z,12µm,20.0s						
REDW	**Red Top Meadow**	**92.59**	**46**	*e*P	**P**	**21 15 37.7**	**+4.1**
	comp=Z,99nm,1.5s						
REDW				LR	LR		
	comp=Z,12µm,20.0s						
IMW	**Indian Meadow**	**92.64**	**46**	*e*P	**P**	**21 15 35.4**	**+1.4**
	comp=Z,26nm,1.0s						
IMW				LR	LR		
	comp=Z,9µm,19.0s						
YHB	**Horse Butte**	**92.65**	**45**	*e*P	**P**	**21 15 35.8**	**+1.9**
	comp=Z,39nm,1.1s						
YHB				LR	LR		
	comp=Z,19µm,20.0s						
HRY	**Holter Researc**	**92.65**	**43**	*e*P	**P**	**21 15 34.6**	**+0.9**
SNOW	**Snow King Moun**	**92.68**	**46**	*e*P	**P**	**21 15 38.4**	**+4.3**
	comp=Z,34nm,1.0s						
SNOW				LR	LR		
	comp=Z,13µm,20.0s						
MOOW	**Moose Ponds**	**92.75**	**46**	*e*P	**P**	**21 15 34.9**	**+0.6**
	comp=Z,25nm,1.2s						
MOOW				LR	LR		
	comp=Z,10µm,20.0s						
121A	**Cookes Peak, D**	**92.75**	**58**	P	**P**	**21 15 34.8**	**+0.2**
	baz=259						
PV05	**Paradox Valley**	**92.79**	**52**	PFAKE		21 15 50.0	+15
PV05				LR	LR		
	comp=Z,14µm,20.0s						
YMR	**Madison River**	**92.79**	**45**	*e*P	**P**	**21 15 36.6**	**+2.0**
	comp=Z,34nm,1.0s						
YMR				LR	LR		
	comp=Z,17µm,21.0s						
LOHW	**Long Hollow**	**92.82**	**46**	*e*P	**P**	**21 15 35.8**	**+1.1**
	comp=Z,71nm,1.8s						
LOHW				LR	LR		
	comp=Z,10µm,20.0s						
YPP	**Pitchstone Pla**	**92.82**	**46**	PFAKE		21 15 50.0	+15
YPP				LR	LR		
	comp=Z,16µm,20.0s						
YFT	**Old Faithful**	**92.84**	**45**	*e*P	**P**	**21 15 37.2**	**+2.4**
	comp=Z,28nm,1.0s						
YFT				LR	LR		
	comp=Z,26µm,18.0s						
FLWY	**Flagg Ranch**	**92.85**	**46**	*e*P	**P**	**21 15 39.3**	**+4.5**
	comp=Z,80nm,1.6s						
FLWY				LR	LR		
	comp=Z,11µm,19.0s						
BHPL	**Bhopal**	**92.86**	**293**	*e*P	**P**	**21 15 33.5**	**-1.6**
BHPL				IAmb	IAmb	21 15 34.4	
PV10	**Paradox Valley**	**92.89**	**52**	PFAKE		21 15 50.0	+15
PV10				LR	LR		
	comp=Z,19µm,22.0s						
PV14	**Lion Creek, Pa**	**92.91**	**52**	*e*P	**P**	**21 15 37.2**	**+1.9**
	comp=Z,154nm,2.0s						
PV14				LR	LR		
	comp=Z,23µm,22.0s						
PV19	**Morning Glory**	**92.92**	**52**	*e*P	**P**	**21 15 37.9**	**+2.6**
	comp=Z,23nm,1.0s						
PV19				LR	LR		
	comp=Z,18µm,22.0s						
PV23	**Carpenter Ridg**	**92.93**	**52**	*e*P	**P**	**21 15 37.5**	**+2.1**
	comp=Z,29nm,0.8s						
PV23				LR	LR		
	comp=Z,24µm,21.0s						
PV17	**East Wray Mesa**	**92.94**	**52**	*e*P	**P**	**21 15 37.9**	**+2.5**
	comp=Z,110nm,1.8s						
PV17				LR	LR		
	comp=Z,20µm,21.0s						
PV20	**West Nyswonger**	**92.94**	**52**	*e*P	**P**	**21 15 38.0**	**+2.7**
	comp=Z,21nm,0.9s						
PV20				LR	LR		
	comp=Z,17µm,22.0s						
PV16	**Nyswonger Mesa**	**92.98**	**52**	PFAKE		21 15 50.0	+14
PV16				LR	LR		
	comp=Z,15µm,20.0s						
PV21	**Cone Mtn., Par**	**92.98**	**51**	*e*P	**P**	**21 15 38.4**	**+2.8**
	comp=Z,163nm,1.9s						
PV21				LR	LR		
	comp=Z,28µm,22.0s						
PV04	**Paradox Valley**	**93.00**	**52**	*e*P	**P**	**21 15 38.5**	**+2.9**
	comp=Z,100nm,1.7s						
PV04				LR	LR		
	comp=Z,22µm,22.0s						
YNR	**Norris Junctio**	**93.00**	**45**	PFAKE		21 15 50.0	+14
YNR				LR	LR		
	comp=Z,19µm,21.0s						
H17A	**Grant Village**	**93.00**	**46**	*e*P	**P**	**21 15 38.1**	**+2.5**
	comp=Z,30nm,0.9s						
H17A				LR	LR		
	comp=Z,19µm,20.0s						
H17A	**Grant Village**	**93.00**	**46**	P	**P**	**21 15 36.9**	**+1.4**
	baz=258						
PV11	**David Mesa, Pa**	**93.01**	**52**	PFAKE		21 15 50.0	+14
PV11				LR	LR		
	comp=Z,18µm,20.0s						
PV03	**Paradox Valley**	**93.02**	**52**	PFAKE		21 15 50.0	+14
PV03				LR	LR		
	comp=Z,15µm,20.0s						
PV13	**Radium Mtn., P**	**93.02**	**52**	PFAKE		21 15 50.0	+14
PV13				LR	LR		
	comp=Z,14µm,21.0s						
PV12	**Saucer Basin,**	**93.06**	**52**	*e*P	**P**	**21 15 38.7**	**+2.7**
	comp=Z,26nm,0.9s						
PV12				LR	LR		
	comp=Z,21µm,22.0s						
MVCO	**Mesa Verde**	**93.08**	**53**	*e*P	**P**	**21 15 37.1**	**+1.0**
	comp=Z,74nm,1.8s						
MVCO				LR	LR		
	comp=Z,10µm,20.0s						
MVCO	**Mesa Verde**	**93.08**	**53**	P	**P**	**21 15 35.8**	**-0.3**
	baz=259						
PV02	**Paradox Valley**	**93.09**	**52**	PFAKE		21 15 50.0	+14
PV02				LR	LR		
	comp=Z,14µm,20.0s						
PV01	**Paradox Valley**	**93.21**	**52**	PFAKE		21 15 50.0	+13
PV01				LR	LR		
	comp=Z,13µm,21.0s						
PV07	**Paradox Valley**	**93.21**	**52**	*e*P	**P**	**21 15 39.1**	**+2.5**
	comp=Z,20nm,1.0s						
PV07				LR	LR		
	comp=Z,23µm,22.0s						
PV15	**Paradox Valley**	**93.32**	**52**	PFAKE		21 15 50.0	+13
PV15				LR	LR		
	comp=Z,20µm,22.0s						
BW06	**Boulder Array**	**93.39**	**47**	*e*P	**P**	**21 15 37.9**	**+0.6**
	comp=Z,33nm,1.2s						
BW06				LR	LR		
	comp=Z,12µm,22.0s						
BW06	**Boulder Array**	**93.39**	**47**	P	**P**	**21 15 37.7**	**+0.3**
	baz=258						
PD31	**Pinedale Array**	**93.39**	**47**	*e*P	**P**	**21 15 38.4**	**+1.0**
PD31				*e*PKKPdf	**PKKPbc**	**21 32 45.3**	**-0.4**
PDAR	**Pinedale Array**	**93.39**	**47**	*e*P	**P**	**21 15 36.7**	**-0.7**
PDAR				PKKPbc	**PKKPbc**	**21 32 45.3**	**-0.4**
PDAR	**Pinedale Array**	**93.39**	**47**	P	**P**	**21 15 37.6**	**+0.2**
	comp=Z,3.8nm,0.9s,baz=261,slow=2.8,SNR=8.0						
PDAR				PKKPbc	**PKKPbc**	**21 32 45.3**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=94,slow=4.6,SNR=3.6						
PDAR				LR	LR	21 55 57.5	
	comp=Z,5µm,18.0s,baz=264,slow=34						
HPIG		**93.52**	**63**	PFAKE		21 15 50.0	+12
HPIG				LR	LR		
	comp=Z,16µm,18.0s						
MK01	**Makanchi Array**	**93.54**	**317**	*e*P	**P**	**21 15 36.1**	**-1.6**
MK31	**Makanchi Array**	**93.55**	**317**	*e*P	**P**	**21 15 37.0**	**-0.7**
MK31	**Makanchi Array**	**93.55**	**317**	*e*P	**P**	**21 15 37.0**	**-0.7**
MK32	**Makanchi Array**	**93.55**	**317**	*e*P	**P**	**21 15 37.5**	**-0.3**
MK32				*e*PP	**PP**	**21 19 21.5**	**-1.1**
MK32				*e*PKKPdf	**PKKPdf**	**21 32 42.8**	**-1.4**
MKAR	**Makanchi Array**	**93.55**	**317**	*e*P	**P**	**21 15 37.0**	**-0.7**
	comp=Z,326nm,1.1s						
MKAR				PP	**PP**	**21 19 21.5**	**-1.1**
MKAR				PKKPbc	**PKKPdf**	**21 32 42.8**	**-1.4**
MKAR	**Makanchi Array**	**93.55**	**317**	*ce*P	**P**	**21 15 37.2**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,22nm,0.9s						
MKAR	**Makanchi Array**	**93.55**	**317**	P	**P**	**21 15 37.5**	**-0.3**
	comp=Z,22nm,0.9s,baz=100,slow=6.3,SNR=152						
MKAR				PP	**PP**	**21 19 21.5**	**-1.1**
	comp=Z,3.1nm,1.0s,baz=99,slow=7.8,SNR=2.7						
MKAR				PKKPbc	**PKKPdf**	**21 32 42.8**	**-1.4**
	comp=Z,5.5nm,0.8s,baz=278,slow=3.0,SNR=31						
MKAR				LR	LR	21 56 55.5	
	comp=Z,8µm,21.3s,baz=91,slow=35						
ZAA0	**Zalesovo Array**	**93.57**	**324**	*e*P	**P**	**21 15 36.0**	**-1.6**
	comp=Z,64nm,1.1s						
ZAA0				LR	LR		
	comp=Z,16µm,19.0s						
ZAA1	**Zalesovo Array**	**93.57**	**324**	*e*P	**P**	**21 15 36.7**	**-0.9**
ZAA1				*e*PP	**PP**	**21 19 22.1**	**-0.3**
ZAA1				*e*PKKPdf	**PKKPdf**	**21 32 43.1**	**-1.2**
ZALV	**Zalesovo Beam**	**93.57**	**324**	*e*P	**P**	**21 15 35.3**	**-2.3**
ZALV				PP	**PP**	**21 19 22.1**	**-0.3**
ZALV				PKKPbc	**PKKPdf**	**21 32 43.1**	**-1.2**
ZALV	**Zalesovo Beam**	**93.57**	**324**	*e*P	**P**	**21 15 35.3**	**-2.3**
ZALV						21 19 22.1	
ZALV	**Zalesovo Beam**	**93.57**	**324**	P	**P**	**21 15 36.7**	**-0.9**
	comp=Z,16nm,1.0s,baz=108,slow=4.8,SNR=63						
ZALV				PP	**PP**	**21 19 22.1**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=117,slow=6.6,SNR=2.9						
ZALV				PKKPbc	**PKKPdf**	**21 32 43.1**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=299,slow=3.0,SNR=5.5						
DDI	**Dehra Dun**	**93.60**	**300**	*e*P	**P**	**21 15 36.7**	**-1.7**
MAKZ	**Makanchi**	**93.77**	**317**	*e*P	**P**	**21 15 37.8**	**-0.9**
	comp=Z,137nm,1.3s						
MAKZ				LR	LR		
	comp=Z,15µm,18.0s						
MAKZ	**Makanchi**	**93.77**	**317**	*e*P	**P**	**21 15 37.8**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,137nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,15µm,18.0s						
O20A	**White River Ci**	**93.84**	**50**	PFAKE		21 15 50.0	+11
O20A				LR	LR		
	comp=Z,25µm,21.0s						
O20A	**White River Ci**	**93.84**	**50**	P	**P**	**21 15 39.7**	**+0.3**
	baz=259						
NDI	**New Delhi**	**94.02**	**298**	*e*P	**P**	**21 15 39.0**	**-1.3**
RLMT	**Red Lodge**	**94.07**	**45**	PFAKE		21 15 50.0	+10
RLMT				LR	LR		
	comp=Z,18µm,21.0s						
RLMT	**Red Lodge**	**94.07**	**45**	P	**P**	**21 15 40.8**	**+0.4**
	baz=259						
ANMO	**Albuquerque**	**94.28**	**55**	*e*P	**P**	**21 15 42.4**	**+0.8**
	comp=Z,11nm,0.9s						
ANMO				LR	LR		
	comp=Z,19µm,21.0s						
ANMO	**Albuquerque**	**94.28**	**55**	*e*P	**P**	**21 15 42.4**	**+0.8**
ANMO	**Albuquerque**	**94.28**	**55**	P	**P**	**21 15 42.0**	**+0.3**
	baz=260						
MNCI	**Minicoy**	**94.30**	**278**	PFAKE		21 15 50.0	+8.2
MNCI				LR	LR		
	comp=Z,14µm,20.0s						
EGMT	**Eagleton**	**94.31**	**42**	*e*P	**P**	**21 15 42.0**	**+0.6**
	comp=Z,261nm,1.9s						
EGMT				LR	LR		
	comp=Z,12µm,21.0s						
EGMT	**Eagleton**	**94.31**	**42**	P	**P**	**21 15 41.9**	**+0.6**
	baz=259						
MNCY	**Minicoy**	**94.32**	**278**	*e*P	**P**	**21 15 40.3**	**-1.6**
S22A	**4UR Ranch, Cre**	**94.49**	**53**	*e*P	**P**	**21 15 43.6**	**+1.0**
	comp=Z,15nm,1.0s						
S22A				LR	LR		
	comp=Z,14µm,20.0s						
S22A	**4UR Ranch, Cre**	**94.49**	**53**	P	**P**	**21 15 43.0**	**+0.4**
	baz=260						
SMLA	**Simla**	**94.49**	**301**	*e*P	**P**	**21 15 41.2**	**-1.2**
SMLA				IAmb	IAmb	21 15 50.0	
	comp=Z,13µm,8.0s						
SMLA				IAMs_20	IAMs_20	21 57 54.3	
	comp=Z,15µm,9.7s						
MNTX	**Cornudas Mount**	**94.60**	**59**	*e*P	**P**	**21 15 45.1**	**+2.2**
	comp=Z,23nm,1.4s						
MNTX				LR	LR		
	comp=Z,20µm,21.0s						
MNTX	**Cornudas Mount**	**94.60**	**59**	P	**P**	**21 15 42.8**	**-0.1**
	baz=260						
SMCO	**Snowmass**	**94.63**	**51**	PFAKE		21 16 00.0	+17
SMCO				LR	LR		
	comp=Z,29µm,22.0s						
NVS	**Novosibirsk**	**94.67**	**325**	⇑*i*P	**P**	**21 15 42.0**	**-0.6**
NVS				*i*		21 19 37.3	
NVS				*i*		21 26 19.5	
NVS				pmax	pmax		
	comp=N,18nm,1.4s						
NVS				pmax	pmax		
	comp=E,26nm,1.4s						
NVS				pmax	pmax		
	comp=Z,57nm,1.4s						
NVS				pmax	pmax		
	comp=Z,60nm,2.1s						
NVS				pmax	pmax		
	comp=N,24nm,2.5s						
NVS				pmax	pmax		
	comp=E,48nm,1.9s						
GOA	**Goa**	**94.83**	**285**	*e*P	**P**	**21 15 41.5**	**-2.7**
GOA				IAMs_20	IAMs_20	22 10 32.7	
	comp=Z,12µm,14.1s						
YKA	**Yellowknife Ar**	**94.83**	**27**	P	**P**	**21 15 42.0**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=255,slow=4.6,SNR=34						
YKA				PP	**PP**	**21 19 32.0**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=268,slow=6.6,SNR=2.9						
YKA				PKiKP	**PKiKP**	**21 20 26.2**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=249,slow=1.1,SNR=3.7						
YKA				PKKPbc	**PKKPdf**	**21 32 41.4**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=72,slow=2.6,SNR=4.3						
YKA				PKPPKP		21 40 52.5	
	comp=Z,0.5nm,1.0s,baz=53,slow=2.3,SNR=3.6						
YKA				LR	LR	21 53 42.8	
	comp=Z,1µm,19.9s,baz=268,slow=32						
YKB5	**Yellowknife Ar**	**94.83**	**27**	*e*P	**P**	**21 15 41.7**	**-1.4**
YKB5				*e*PP	**PP**	**21 19 32.0**	**-0.1**
YKB5				*e*PKiKP	**PKiKP**	**21 20 26.2**	**+1.0**
YKB5				*e*PKKPdf	**PKKPdf**	**21 32 41.4**	**-0.8**
YKB5				*e*P'P'df	**P'P'df**	**21 40 52.5**	**+2.4**
YKW3	**Yellowknife Ar**	**94.84**	**27**	*e*P	**P**	**21 15 42.1**	**-1.1**
	comp=Z,20nm,1.3s						
YKW3				LR	LR		
	comp=Z,13µm,18.0s						
RWWY	**Rawlins**	**94.90**	**49**	PFAKE		21 16 00.0	+16
RWWY				LR	LR		
	comp=Z,11µm,19.0s						
UZB	**Uzynbulak**	**95.13**	**313**	*c i*P	**P**	**21 15 43.1**	**-2.1**
UZB				*e*		21 19 34.0	
UZB				pmax	pmax		
	comp=Z,105nm,1.7s						
UZB				MLR	MLR		
	comp=Z,4µm,19.0s						
UZB	**Uzynbulak**	**95.13**	**313**	⇑*i*P	**P**	**21 15 43.1**	**-2.1**
	comp=Z,105nm,1.7s						
UZB				*e*PP	**PP**	**21 19 34.0**	**-1.1**
UZB				*e*LQ	LQ	21 51 38.3	
UZB				*e*LR	LR	21 59 36.3	
	comp=Z,4µm,19.2s						
POO	**Poona**	**95.32**	**288**	*e*P	**P**	**21 15 44.7**	**-1.8**
POO				IAmb	IAmb	21 15 45.8	
	comp=Z,242nm,2.8s						
POO				IAMs_20	IAMs_20	21 51 24.8	
	comp=Z,17µm,34.8s						
DHRM	**DHARAMSHALA**	**95.41**	**302**	*e*P	**P**	**21 15 43.6**	**-3.3**
DHRM				IAmb	IAmb	21 15 51.7	
	comp=Z,6µm,6.1s						
PRZ	**Przheval'sk**	**95.47**	**312**	PFAKE		21 16 00.0	+13
PRZ				LR	LR		
	comp=Z,17µm,19.0s						
SDCO	**Great Sand Dun**	**95.52**	**53**	PFAKE		21 16 00.0	+13
SDCO				LR	LR		
	comp=Z,17µm,20.0s						
SDCO	**Great Sand Dun**	**95.52**	**53**	P	**P**	**21 15 47.2**	**-0.1**
	baz=260						
K22A	**Casper**	**95.57**	**48**	PFAKE		21 16 00.0	+13
K22A				LR	LR		
	comp=Z,11µm,19.0s						
ZAIG	**Zacatecas**	**95.57**	**68**	PFAKE		21 16 00.0	+12
ZAIG				LR	LR		
	comp=Z,13µm,18.0s						
SEM	**Semipalatinsk**	**95.59**	**320**	*c i*P	**P**	**21 15 43.7**	**-3.5**
SEM				*i*		21 19 33.3	
SEM				pmax	pmax		
	comp=Z,151nm,1.5s						
SEM				MLR	MLR		
	comp=Z,8µm,21.0s						
SEM	**Semipalatinsk**	**95.59**	**320**	⇑*i*P	**P**	**21 15 43.8**	**-3.5**
	comp=Z,151nm,1.5s						
SEM				⇑*i*PP	**PP**	**21 19 33.4**	**-5.2**
SEM				*e*LR	LR	21 56 42.4	
	comp=Z,8µm,21.1s						
TX31	**Lajitas Ar. Si**	**95.67**	**61**	*e*P	**P**	**21 15 48.3**	**+0.4**
LTX	**Lajitas**	**95.67**	**61**	*e*P	**P**	**21 15 48.1**	**+0.1**
LTX				*e*PP	**PP**	**21 19 39.6**	**0.0**
LTX				*e*PKKPbc	**PKKPbc**	**21 32 38.6**	**-0.4**
LTX				*e*P'P'df	P'P'df	21 40 50.6	-1.0
LTX	**Lajitas**	**95.67**	**61**	*e*P	**P**	**21 15 48.1**	**+0.1**
LTX				*e*		21 19 39.6	
TXAR	**Lajitas Array**	**95.67**	**61**	P	**P**	**21 15 48.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=191,slow=1.4,SNR=3.2						
TXAR				PP	**PP**	**21 19 39.6**	**0.0**
	comp=Z,1.3nm,1.0s,baz=250,slow=7.5,SNR=2.9						
TXAR				PKKPbc	**PKKPbc**	**21 32 38.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=90,slow=1.8,SNR=2.5						
TXAR				PKPPKP		21 40 50.6	
	comp=Z,2.8nm,1.1s,baz=132,slow=5.2,SNR=3.4						
TXAR				LR	LR	21 51 10.1	
	comp=Z,16µm,21.1s,baz=0.0,slow=31						
N23A	**Red Feather La**	**95.70**	**50**	PFAKE		21 16 00.0	+12
N23A				LR	LR		
	comp=Z,13µm,22.0s						
N23A	**Red Feather La**	**95.70**	**50**	P	**P**	**21 15 48.2**	**+0.1**
	baz=261						
PMSA	**Palmer Station**	**95.75**	**161**	PFAKE		21 16 00.0	+13
PMSA				LR	LR		
	comp=Z,13µm,18.0s						
ISCO	**Idaho Springs**	**95.77**	**51**	PFAKE		21 16 00.0	+12
ISCO				LR	LR		
	comp=Z,37µm,22.0s						
TARG	**Taragay, Kyrgy**	**95.78**	**311**	PFAKE		21 16 00.0	+11
TARG				LR	LR		
	comp=Z,20µm,22.0s						
TDK	**Taldyqorghan**	**95.88**	**315**	*de*P	**P**	**21 15 46.6**	**-1.8**
TDK				*i*		21 19 43.2	
TDK				pmax	pmax		
	comp=Z,259nm,1.1s						
TDK				MLR	MLR		
	comp=Z,17µm,19.0s						
TDK	**Taldyqorghan**	**95.88**	**315**	⇓*e*P	**P**	**21 15 46.6**	**-1.8**
	comp=Z,259nm,1.1s						
TDK				⇓*i*PP	**PP**	**21 19 43.2**	**+2.4**
TDK				*e*LQ	LQ	21 50 51.2	
TDK				*e*LR	LR	21 57 59.8	
	comp=Z,17µm,19.2s						
Q24A	**Divide**	**96.00**	**52**	PFAKE		21 16 00.0	+11
Q24A				LR	LR		
	comp=Z,22µm,22.0s						
NRIK	**Noril'sk**	**96.09**	**340**	P	**P**	**21 15 47.9**	**-0.9**
	comp=Z,8.6nm,0.9s,baz=111,slow=5.2,SNR=14						
NRIK				PP	**PP**	**21 19 39.2**	**-2.4**
	comp=Z,3.8nm,0.6s,baz=117,slow=9.0,SNR=3.5						
NRIK				LR	LR	21 56 06.1	
	comp=Z,17µm,21.9s,baz=104,slow=34						
PHWY	**Pilot Hill**	**96.13**	**49**	PFAKE		21 16 00.0	+10
PHWY				LR	LR		
	comp=Z,7µm,19.0s						
T25A	**Trinidad**	**96.28**	**54**	PFAKE		21 16 00.0	+9.3
T25A				LR	LR		
	comp=Z,18µm,18.0s						
KDJ	**Kajisay**	**96.30**	**312**	PFAKE		21 16 00.0	+9.4
KDJ				LR	LR		
	comp=Z,17µm,22.0s						
LAO	**LASA Array**	**96.44**	**44**	PFAKE		21 16 00.0	+9.0
LAO				LR	LR		
	comp=Z,12µm,20.0s						
LAO	**LASA Array**	**96.44**	**44**	P	**P**	**21 15 51.5**	**+0.5**
	baz=261						
MDOK	**Medeo**	**96.56**	**313**	*e*P	**P**	**21 15 50.5**	**-1.2**
MDOK				pmax	pmax		
	comp=Z,95nm,1.7s						
MDOK				MLR	MLR		
	comp=Z,5µm,19.0s						
MDOK	**Medeo**	**96.56**	**313**	*e*P	**P**	**21 15 50.6**	**-1.2**
	comp=Z,95nm,1.7s						
MDOK				*e*LQ	LQ	21 52 31.8	
MDOK				*e*LR	LR	21 59 50.5	
	comp=Z,5µm,19.4s						
NVL	**N'lazarevskaya**	**96.57**	**188**	*e*P	P	21 15 57.8	+6.7
NVL				*e*		21 19 43.7	
NVL				pmax	pmax		
	comp=Z,14nm,0.9s						
KURK	**Kurchatov**	**96.66**	**320**	*e*P	**P**	**21 15 50.8**	**-1.0**
	comp=Z,72nm,1.4s						
KURK				*e*PKKPbc	**PKKPbc**	**21 32 35.4**	**-1.5**
KURK				LR	LR		
	comp=Z,29µm,21.0s						
KURK	**Kurchatov**	**96.66**	**320**	*ce*P	**P**	**21 15 49.4**	**-2.4**
KURK				pmax	pmax		
	comp=Z,24nm,1.7s						
CHKK	**Chushkaly**	**96.70**	**313**	⇓*e*P	**P**	**21 15 50.0**	**-2.2**
CHKK				*e*		21 19 43.5	
CHKK				pmax	pmax		
	comp=Z,54nm,1.2s						
CHKK	**Chushkaly**	**96.70**	**313**	⇓*e*P	**P**	**21 15 50.0**	**-2.2**
	comp=Z,54nm,1.2s						
CHKK				*e*PP	**PP**	**21 19 43.6**	**-3.6**
KURBB	**Kurchatov Arra**	**96.70**	**320**	PKKPbc	PKKPbc	21 32 35.4	-1.4
	comp=Z,3.7nm,0.9s,baz=273,slow=3.2,SNR=16						
KSH	**Kashi**	**96.81**	**309**	P	**P**	**21 15 54.7**	**+1.8**
KSH				sP	pwP	21 16 02.7	+2.0

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KSH                             PP       PP       21 19 55.2 +7.0
KSH                             SKS      SKSac    21 26 32.7 +3.3
KSH                             S        S        21 27 12.0 -2.4
KSH                             SS       SS       21 33 52.3 +2.2
KSH                             pmax     pmax
       comp=Z,7.0nm,0.7s
KSH                             pmax     pmax
       comp=Z,620nm,6.9s
KSH                             LR       LR
       comp=Z,11µm,17.9s
KSH                             LR       LR
       comp=Z,10µm,18.4s
KSH                             LR       LR
       comp=Z,10µm,14.9s
NRN    Naryn           97.07 311  PFAKE             21 16 10.0  +16
NRN                             LR       LR
       comp=Z,12µm,22.0s
MSTX   Muleshoe        97.13  57  PFAKE             21 16 10.0  +15
MSTX                            LR       LR
       comp=Z,21µm,19.0s
KUU    Kurty           97.17 313c iP     P          21 15 51.6  -2.7
KUU                              e                  21 19 49.3
KUU                             pmax     pmax
       comp=Z,89nm,1.0s
KUU    Kurty           97.17 313⇑ iP     P          21 15 51.7  -2.6
       comp=Z,89nm,1.0s
KUU                              ePP     PP         21 19 49.3  -1.5
KUU                              eLR     LR         22 01 14.0
       comp=Z,2µm,15.9s
SNAA   Sanae           97.21 184  P      P          21 15 51.1  -3.0
SNAA   Sanae           97.21 184 eP      P          21 15 52.9  -1.2
       comp=Z,33nm,1.1s
SNAA   Sanae           97.21 184 eP      P          21 15 52.9  -1.2
SNAA                            pmax     pmax
       comp=Z,33nm,1.1s
SNAA   Sanae           97.21 184  LR     LR         21 59 02.4
       comp=Z,29µm,18.9s,baz=174,slow=35
RSSD   Black Hills     97.58  47  PFAKE             21 16 10.0  +13
RSSD                            LR       LR
       comp=Z,11µm,18.0s
VNA3   Neumayer Olymp  97.93 181  P      Pdif       21 15 57.6 +0.3
KSCO   Kaye Shedlock'  97.95  52  PFAKE             21 16 10.0  +12
KSCO                            LR       LR
       comp=Z,25µm,21.0s
DGMT   Dagmar          98.05  42 eP      Pdif       21 16 02.3 +4.1
       comp=Z,28nm,1.0s
DGMT                            LR       LR
       comp=Z,13µm,21.0s
DGMT   Dagmar          98.05  42  P      Pdif       21 15 58.5 +0.3
       baz=263
CRZF   Crozet Islands  98.06 220  PFAKE             21 16 10.0  +12
CRZF                            LR       LR
       comp=Z,11µm,18.0s
AMTX   Amarillo        98.15  56  PFAKE             21 16 10.0  +11
AMTX                            LR       LR
       comp=Z,18µm,20.0s
AMTX   Amarillo        98.15  56  P      Pdif       21 15 59.1   0.0
       baz=262
NIL    Nilore          98.15 303 eP      P          21 15 58.4  -0.6
       comp=Z,14nm,1.0s
NIL                             LR       LR
       comp=Z,12µm,22.0s
NIL    Nilore          98.15 303 eP      P          21 15 58.4  -0.6
NIL                             pmax     pmax
       comp=Z,13nm,1.0s
NIL                             MLR      MLR
       comp=Z,12µm,22.0s
VNA2   Neumayer--Watz  98.18 182  P      Pdif       21 16 04.0 +5.7
       baz=182,slow=4.1
FRU1   Bishkek         98.26 312  PFAKE             21 16 10.0  +11
FRU1                            LR       LR
       comp=Z,20µm,20.0s
FRU    Bishkek         98.28 312 eP      P          21 15 58.0  -1.4
FRU                             pmax     pmax
       comp=Z,85nm,2.3s
AAK    Ala-Archa       98.34 312 eP      P          21 15 59.7  -0.1
       comp=Z,14nm,1.2s
AAK                              ePKKPbc PKKPbc     21 32 31.1  -1.1
AAK                             LR       LR
       comp=Z,22µm,21.0s
AAK    Ala-Archa       98.34 312ceP      P          21 15 56.8  -3.0
AAK                             pmax     pmax
       comp=Z,18nm,1.7s
AAK    Ala-Archa       98.34 312  PKKPbc PKKPbc     21 32 31.1  -1.1
       comp=Z,1.3nm,0.6s,baz=233,slow=5.1,SNR=4.8
VNA1   Neumayer--Stat  98.48 182  P      P          21 15 56.9  -2.8
OGNE   Ogallala        98.64  50  PFAKE             21 16 10.0 +8.9
OGNE                            LR       LR
       comp=Z,34µm,22.0s
JCT    Junction City   99.15  61  PFAKE             21 16 20.0  +16
JCT                             LR       LR
       comp=Z,23µm,20.0s
JCT    Junction City   99.15  61  Pdiff  Pdif       21 16 03.2  -0.4
       baz=263
833A   Chaparral WMA,  99.23  63  PFAKE             21 16 20.0  +16
833A                            LR       LR
       comp=Z,14µm,20.0s
ARSB   Arslanbob       99.31 310  PFAKE             21 16 20.0  +16
ARSB                            LR       LR
       comp=Z,16µm,22.0s
ABTX   Abilene, Hawle  99.55  59  PFAKE             21 16 20.0  +15
ABTX                            LR       LR
       comp=Z,22µm,20.0s
GO10   Punta Arenas    99.90 149  PFAKE             21 16 20.0  +14
GO10                            LR       LR
       comp=Z,14µm,18.0s
FFC    Flin Flon      100.08  36  PFAKE             21 16 20.0  +13
FFC                             LR       LR
       comp=Z,20µm,20.0s
FFC    Flin Flon      100.08  36 i P     Pdif       21 16 07.7 +0.6
CBKS   Cedar Bluff    100.16  52  PFAKE             21 16 20.0  +12
CBKS                            LR       LR
       comp=Z,16µm,18.0s
GO09   Cerro Castillo 100.25 147  PFAKE             21 16 20.0  +12
GO09                            LR       LR
       comp=Z,9µm,18.0s
KVTX   Kingsville     100.45  64  PFAKE             21 16 20.0  +11
KVTX                            LR       LR
       comp=Z,9µm,18.0s
U32A   Winter Ranch,  100.49  55  PFAKE             21 16 20.0  +11
U32A                            LR       LR
       comp=Z,21µm,20.0s
WMOK   Wichita Mounta 100.50  57  PFAKE             21 16 20.0  +11
WMOK                            LR       LR
       comp=Z,23µm,21.0s
BTK    Batken         100.82 309  PFAKE             21 16 20.0 +9.2
BTK                             LR       LR
       comp=Z,22µm,21.0s
MDND   Maddock        101.05  43  PFAKE             21 16 20.0 +8.4
MDND                            LR       LR
       comp=Z,16µm,20.0s
435B   Jarrell        101.08  61  PFAKE             21 16 20.0 +7.9
435B                            LR       LR
       comp=Z,20µm,20.0s
GAR    Garm           101.11 308  PFAKE             21 16 20.0 +7.8
GAR                             LR       LR
       comp=Z,33µm,20.0s
KK31   Karatay Array  101.30 312 ePdif   Pdif       21 16 12.5  -0.3
KK31   Karatay Array  101.30 312 eP      Pdif       21 16 12.5  -0.3
KKAR   Karatay Array  101.30 312 ePdif   Pdif       21 16 12.5  -0.3
KKAR   Karatay Array  101.30 312 eP      Pdif       21 16 12.5  -0.3
WHTX   Lake Whitney,  101.32  59  PFAKE             21 16 30.0  +17
WHTX                            LR       LR
       comp=Z,18µm,21.0s
IUG    Iuzhnay        101.58 311 eP      Pdif       21 16 12.9  -1.3
IUG                             pmax     pmax
       comp=Z,46nm,1.3s
IUG    Iuzhnay        101.58 311 eP      Pdif       21 16 13.0  -1.3
       comp=Z,46nm,1.3s
IUG                              eLR     LR         22 04 21.4
       comp=Z,3µm,17.9s
BGNE   Belgrade       101.61  50  PFAKE             21 16 30.0  +16
BGNE                            LR       LR
       comp=Z,20µm,22.0s
KBL    Kabul          101.72 303  PFAKE             21 16 30.0  +15
KBL                             LR       LR
       comp=Z,15µm,20.0s
BRVK   Borovoye       102.03 322 ePdif   Pdif       21 16 14.9  -0.9
BRVK                            LR       LR
       comp=Z,15µm,19.0s
BRVK   Borovoye       102.03 322 eP      Pdif       21 16 14.9  -0.9
BRVK                            MLR      MLR
       comp=Z,15µm,19.0s
KSU1   Kansas State U 102.62  52  PFAKE             21 16 30.0  +11
KSU1                            LR       LR
       comp=Z,17µm,19.0s
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ECSD   EROS Data Cent 102.89  47  PFAKE             21 16 30.0  +10
ECSD                            LR       LR
       comp=Z,15µm,22.0s
RES    Resolute Bay   102.94  16 ePKKPbc PKKPbc     21 32 17.8  -1.9
RES                             LR       LR
       comp=Z,16µm,22.0s
RES    Resolute Bay   102.94  16  PKKPbc PKKPbc     21 32 16.3  -3.4
       comp=Z,3.6nm,1.1s,baz=71,slow=2.6,SNR=5.9
TUL1   Leonard        103.04  56  PFAKE             21 16 30.0 +9.3
TUL1                            LR       LR
       comp=Z,24µm,19.0s
MRIV   Mauritius Mete 103.04 246  PFAKE             21 16 30.0 +8.9
MRIV                            LR       LR
       comp=Z,6µm,19.0s
X37A   Clayton        103.29  57  PFAKE             21 16 30.0 +8.2
X37A                            LR       LR
       comp=Z,25µm,22.0s
PAYG   Puerto Ayora   103.44  93  PFAKE             21 16 40.0  +17
PAYG                            LR       LR
       comp=Z,8µm,18.0s
ULM    Lac du Bonnet  103.60  41  PKiKP  PKiKP      21 20 41.7 +0.5
ULM                             LR       LR
       comp=Z,11µm,18.0s
ULM    Lac du Bonnet  103.60  41  PKiKP  PKiKP      21 20 41.7 +0.5
       comp=Z,2.3nm,0.8s,baz=252,slow=3.2,SNR=3.6
NATX   Nacogdoches    103.67  60  PFAKE             21 16 40.0  +16
NATX                            LR       LR
       comp=Z,18µm,20.0s
RER    Riviere de l'E 104.35 245  PFAKE             21 16 40.0  +13
RER                             LR       LR
       comp=Z,12µm,18.0s
CCIG   Comitan        104.38  76  PFAKE             21 16 40.0  +13
CCIG                            LR       LR
       comp=Z,8µm,21.0s
FCC    Fort Churchill 104.49  32  PFAKE             21 16 40.0  +13
FCC                             LR       LR
       comp=Z,20µm,21.0s
W39A   Magazine       104.63  56  PFAKE             21 16 40.0  +12
W39A                            LR       LR
       comp=Z,19µm,20.0s
MIAR   Mount Ida      104.76  57  PFAKE             21 16 40.0  +12
MIAR                            LR       LR
       comp=Z,26µm,22.0s
SCIA   State Center   105.32  49  PFAKE             21 21 00.0  +15
SCIA                            LR       LR
       comp=Z,14µm,20.0s
Z41A   Richland Creek 105.33  58  PFAKE             21 21 00.0  +15
Z41A                            LR       LR
       comp=Z,20µm,19.0s
X40A   Basin Creek Fa 105.37  57  PFAKE             21 21 00.0  +15
X40A                            LR       LR
       comp=Z,17µm,20.0s
SPMN   Marine on St.  105.65  46  PFAKE             21 21 00.0  +15
SPMN                            LR       LR
       comp=Z,18µm,22.0s
W41B   Gary Mavity, V 105.89  56  PFAKE             21 21 00.0  +14
W41B                            LR       LR
       comp=Z,37µm,22.0s
E38A   The Farm, Brul 106.50  45  PFAKE             21 21 00.0  +13
E38A                            LR       LR
       comp=Z,12µm,20.0s
EYMN   Ely            106.50  43  PFAKE             21 21 00.0  +13
EYMN                            LR       LR
       comp=Z,18µm,21.0s
I39A   Houston        106.57  47  PFAKE             21 21 00.0  +13
I39A                            LR       LR
       comp=Z,10µm,18.0s
CCM    Cathedral Cave 106.77  53  PFAKE             21 21 00.0  +13
CCM                             LR       LR
       comp=Z,21µm,20.0s
L40A   Anamosa        106.81  49  PFAKE             21 21 00.0  +13
L40A                            LR       LR
       comp=Z,20µm,22.0s
GO06   Curarrehue     106.83 137  PFAKE             21 21 00.0  +12
GO06                            LR       LR
       comp=Z,14µm,19.0s
T42A   Van Buren      106.88  55  PFAKE             21 21 00.0  +12
T42A                            LR       LR
       comp=Z,24µm,19.0s
X43A   Marvell        106.99  57  PFAKE             21 21 00.0  +12
X43A                            LR       LR
       comp=Z,11µm,21.0s
EFI    East Falkland  107.00 153  PFAKE             21 21 00.0  +12
EFI                             LR       LR
       comp=Z,10µm,22.0s
N41A   Harden Midland 107.09  51  PFAKE             21 21 00.0  +12
N41A                            LR       LR
       comp=Z,28µm,22.0s
VBMS   Vicksburg      107.21  60  PFAKE             21 21 00.0  +12
VBMS                            LR       LR
       comp=Z,12µm,20.0s
PBMO   Poplar Bluff   107.40  55  PFAKE             21 21 00.0  +11
PBMO                            LR       LR
       comp=Z,23µm,20.0s
FVM    French Village 107.42  54  PFAKE             21 21 00.0  +11
FVM                             LR       LR
       comp=Z,22µm,21.0s
G40A   Rib Lake       107.48  46  PFAKE             21 21 00.0  +11
G40A                            LR       LR
       comp=Z,16µm,20.0s
P42A   Winchester     107.49  52  PFAKE             21 21 00.0  +11
P42A                            LR       LR
       comp=Z,16µm,20.0s
JFWS   Jewell Farm    107.52  48  PFAKE             21 21 00.0  +11
JFWS                            LR       LR
       comp=Z,11µm,19.0s
SLM    Saint Louis    107.57  53  PFAKE             21 21 00.0  +11
SLM                             LR       LR
       comp=Z,21µm,22.0s
I41A   Arkdale        107.76  47  PFAKE             21 21 00.0  +11
I41A                            LR       LR
       comp=Z,19µm,22.0s
MET    Memphis--Engin 107.78  57  PFAKE             21 21 00.0  +11
MET                             LR       LR
       comp=Z,24µm,22.0s
H41A   Junction City  107.90  47  PFAKE             21 21 00.0  +11
H41A                            LR       LR
       comp=Z,21µm,22.0s
L42A   Oliver, Polo   107.97  49  PFAKE             21 21 00.0  +10
L42A                            LR       LR
       comp=Z,25µm,22.0s
PVMO   Portageville   107.99  55  PFAKE             21 21 00.0  +10
PVMO                            LR       LR
       comp=Z,14µm,22.0s
C40A   Isle Royale Na 108.08  43  PFAKE             21 21 00.0  +10
C40A                            LR       LR
       comp=Z,15µm,20.0s
COWI   Conover        108.19  45  PFAKE             21 21 00.0  +10
COWI                            LR       LR
       comp=Z,23µm,21.0s
OXF    Oxford         108.20  57  PFAKE             21 21 00.0  +10
OXF                             LR       LR
       comp=Z,15µm,21.0s
F41A   Three Lakes    108.23  45  PFAKE             21 21 00.0  +10
F41A                            LR       LR
       comp=Z,20µm,22.0s
HDIL   Hopedale       108.28  51  PFAKE             21 21 00.0  +10
HDIL                            LR       LR
       comp=Z,32µm,22.0s
SIUC   Southern Illin 108.38  54  PFAKE             21 21 00.0  +10
SIUC                            LR       LR
       comp=Z,28µm,21.0s
TULEG  Thule          108.45  12  PFAKE             21 21 00.0  +10
TULEG                           LR       LR
       comp=Z,9µm,18.0s
I42A   Draeger Farm,  108.46  47  PFAKE             21 21 00.0  +10
I42A                            LR       LR
       comp=Z,10µm,20.0s
Q44A   Meyer Farm, Va 108.52  53  PFAKE             21 21 00.0 +9.3
Q44A                            LR       LR
       comp=Z,24µm,20.0s
D41A   Chassel        108.53  44  PFAKE             21 21 00.0  +10
D41A                            LR       LR
       comp=Z,18µm,21.0s
ARU    Arti           108.63 326  PFAKE             21 21 00.0  +10
ARU                             LR       LR
       comp=Z,20µm,19.0s
ARU    Arti           108.63 326  P      Pdif       21 16 49.9 +4.9
ARU                             SS       SS         21 36 37.0 +5.0
H42A   Shiocton       108.70  47  PFAKE             21 21 00.0 +9.1
H42A                            LR       LR
       comp=Z,19µm,20.0s
G42A   Mountain       108.74  46  PFAKE             21 21 00.0 +9.1
G42A                            LR       LR
       comp=Z,14µm,20.0s
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T45A   Paducah        108.83  55  PFAKE             21 21 00.0 +8.7
T45A                            LR       LR
       comp=Z,18µm,19.0s
K43A   Burlington     108.93  49  PFAKE             21 21 00.0 +8.6
K43A                            LR       LR
       comp=Z,21µm,22.0s
147A   Livingston     109.12  59  PFAKE             21 21 00.0 +8.0
147A                            LR       LR
       comp=Z,15µm,20.0s
M44A   Midewin, Midew 109.20  50  PFAKE             21 21 00.0 +8.1
M44A                            LR       LR
       comp=Z,20µm,22.0s
OLIL   Olney          109.24  53  PFAKE             21 21 00.0 +7.9
OLIL                            LR       LR
       comp=Z,19µm,20.0s
H43A   Windswept, Lux 109.25  47  PFAKE             21 21 00.0 +8.1
H43A                            LR       LR
       comp=Z,16µm,21.0s
G43A   Wallace        109.26  46  PFAKE             21 21 00.0 +8.1
G43A                            LR       LR
       comp=Z,12µm,20.0s
PLAL   Pickwick Lake  109.30  57  PFAKE             21 21 00.0 +7.7
PLAL                            LR       LR
       comp=Z,19µm,21.0s
P45A   Graceland, Par 109.50  52  PFAKE             21 21 00.0 +7.5
P45A                            LR       LR
       comp=Z,20µm,18.0s
WVT    Waverly        109.50  56  PFAKE             21 21 00.0 +7.4
WVT                             LR       LR
       comp=Z,19µm,20.0s
USIN   University of  109.60  54  PFAKE             21 21 00.0 +7.2
USIN                            LR       LR
       comp=Z,35µm,22.0s
E43A   Lone Tree Farm 109.66  45  PFAKE             21 21 00.0 +7.4
E43A                            LR       LR
       comp=Z,12µm,22.0s
SFIN   Lafayette      109.96  51  PFAKE             21 21 10.0  +17
SFIN                            LR       LR
       comp=Z,22µm,22.0s
WSAR   Wadi Sarin     110.00 291  PKKPbc PKKPbc     21 31 55.4  -0.9
       comp=Z,1.5nm,0.8s,baz=270,slow=8.1,SNR=2.2
BRAL   Brewton        110.14  61  PFAKE             21 21 10.0  +16
BRAL                            LR       LR
       comp=Z,9µm,21.0s
X48A   Hartselle      110.15  57  PFAKE             21 21 10.0  +16
X48A                            LR       LR
       comp=Z,14µm,21.0s
LRAL   Lakeview Retre 110.20  59  PFAKE             21 21 10.0  +16
LRAL                            LR       LR
       comp=Z,21µm,19.0s
V48A   Smith Brothers 110.32  56  PFAKE             21 21 10.0  +16
V48A                            LR       LR
       comp=Z,19µm,21.0s
E44A   Grand Marais A 110.37  44  PFAKE             21 21 10.0  +16
E44A                            LR       LR
       comp=Z,10µm,19.0s
BLO    Bloomington    110.46  52  PFAKE             21 21 10.0  +16
BLO                             LR       LR
       comp=Z,19µm,19.0s
M46A   Old House Fiel 110.47  50  PFAKE             21 21 10.0  +16
M46A                            LR       LR
       comp=Z,19µm,21.0s
JTS    JuntasAbangare 110.53  83  PFAKE             21 21 10.0  +15
JTS                             LR       LR
       comp=Z,11µm,18.0s
PEL    Peldehue       110.55 132  PFAKE             21 21 10.0  +15
PEL                             LR       LR
       comp=Z,13µm,22.0s
GEYT   Alibeck        110.65 306  PKiKP  PKiKP      21 20 55.0 +0.2
       comp=Z,1.7nm,0.9s,baz=255,slow=4.3,SNR=3.2
GEYT                            PKKPbc   PKKPbc     21 31 53.4  -1.3
       comp=Z,0.6nm,0.5s,baz=276,slow=5.7,SNR=2.3
GYA0B  ALIBECK ARRAY  110.65 306  PFAKE             21 21 10.0  +15
GYA0B                           LR       LR
       comp=Z,19µm,21.0s
WCI    Wyandotte Cave 110.67  53  PFAKE             21 21 10.0  +15
WCI                             LR       LR
       comp=Z,36µm,22.0s
Y49A   Blount Mountai 110.68  58  PFAKE             21 21 10.0  +15
Y49A                            LR       LR
       comp=Z,14µm,20.0s
250A   Grady          110.81  60  PFAKE             21 21 10.0  +15
250A                            LR       LR
       comp=Z,10µm,19.0s
Z50A   Ashland        111.10  59  PFAKE             21 21 10.0  +14
Z50A                            LR       LR
       comp=Z,18µm,20.0s
451A   Vernon         111.25  61  PFAKE             21 21 10.0  +14
451A                            LR       LR
       comp=Z,12µm,20.0s
T49A   Edmonton       111.32  54  PFAKE             21 21 10.0  +14
T49A                            LR       LR
       comp=Z,22µm,22.0s
GLMI   Grayling       111.46  46  PFAKE             21 21 10.0  +14
GLMI                            LR       LR
       comp=Z,20µm,21.0s
W50A   Signal Mountai 111.57  56  PFAKE             21 21 10.0  +13
W50A                            LR       LR
       comp=Z,17µm,21.0s
M48A   Edgerton       111.69  50  PFAKE             21 21 10.0  +13
M48A                            LR       LR
       comp=Z,23µm,22.0s
GO04   Tololo Observa 111.88 129  PFAKE             21 21 10.0  +12
GO04                            LR       LR
       comp=Z,11µm,18.0s
352A   Blakely        111.95  60  PFAKE             21 21 10.0  +13
352A                            LR       LR
       comp=Z,7µm,20.0s
X51A   Calhoun        111.96  57  PFAKE             21 21 10.0  +13
X51A                            LR       LR
       comp=Z,20µm,22.0s
O49A   Covington      112.08  51  PFAKE             21 21 10.0  +13
O49A                            LR       LR
       comp=Z,18µm,20.0s
152A   Waverly Hall   112.12  59  PFAKE             21 21 10.0  +12
152A                            LR       LR
       comp=Z,18µm,20.0s
N49A   Columbus Grove 112.14  50  PFAKE             21 21 10.0  +13
N49A                            LR       LR
       comp=Z,28µm,21.0s
UOSS   Minazif        112.30 293  PFAKE             21 21 10.0  +12
UOSS                            LR       LR
       comp=Z,6µm,22.0s
HOPE   Hope Point     112.30 166  PFAKE             21 21 10.0  +13
HOPE                            LR       LR
       comp=Z,14µm,20.0s
V51A   Loudon         112.33  56  PFAKE             21 21 10.0  +12
V51A                            LR       LR
       comp=Z,24µm,22.0s
AAM    Ann Arbor      112.41  49  PFAKE             21 21 10.0  +12
AAM                             LR       LR
       comp=Z,18µm,22.0s
453A   Whigham        112.48  61  PFAKE             21 21 10.0  +12
453A                            LR       LR
       comp=Z,9µm,21.0s
LCO    Las Campanas   112.49 128  PFAKE             21 21 10.0  +11
LCO                             LR       LR
       comp=Z,12µm,22.0s
ABPO   Ambohimpanom   112.61 244  PFAKE             21 21 10.0  +11
ABPO                            LR       LR
       comp=Z,16µm,18.0s
253A   Americus       112.63  60  PFAKE             21 21 10.0  +11
253A                            LR       LR
       comp=Z,10µm,20.0s
Y52A   Lilburn        112.64  58  PFAKE             21 21 10.0  +11
Y52A                            LR       LR
       comp=Z,15µm,22.0s
W52A   Murphy         112.70  57  PFAKE             21 21 10.0  +11
W52A                            LR       LR
       comp=Z,15µm,20.0s
OPO    Ambohidratompo112.80 244  PKiKP  PKiKP      21 21 00.2 +0.6
       comp=Z,3.1nm,0.6s,baz=199,slow=2.2,SNR=2.6
TKL    Tuckaleechee C 112.80  56  PFAKE             21 21 10.0  +11
TKL                             LR       LR
       comp=Z,21µm,22.0s
S51A   Beattyville    112.84  54  PFAKE             21 21 10.0  +11
S51A                            LR       LR
       comp=Z,21µm,22.0s
Q51A   Peebles        112.93  52  PFAKE             21 21 10.0  +11
Q51A                            LR       LR
       comp=Z,28µm,20.0s
V52A   Sevierville    112.94  56  PFAKE             21 21 10.0  +11
V52A                            LR       LR
       comp=Z,21µm,22.0s
M50A   Fremont        112.95  50  PFAKE             21 21 10.0  +11
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M50A				LR	LR		
	comp=Z,28µm,22.0s						
TIGA	**Tifton**	**113.10**	**60**	PFAKE		21 21 10.0	+10
TIGA				LR	LR		
	comp=Z,6µm,19.0s						
ACSO	**Alum Creek Sta**	**113.11**	**51**	PFAKE		21 21 10.0	+11
ACSO				LR	LR		
	comp=Z,21µm,21.0s						
P51A	**Williamsport**	**113.12**	**52**	PFAKE		21 21 10.0	+11
P51A				LR	LR		
	comp=Z,16µm,20.0s						
GOGA	**Godfrey**	**113.15**	**58**	PFAKE		21 21 10.0	+10
GOGA				LR	LR		
	comp=Z,14µm,20.0s						
154A	**Montrose**	**113.48**	**59**	PFAKE		21 21 10.0	+10
154A				LR	LR		
	comp=Z,19µm,21.0s						
V53A	**Saluda**	**113.58**	**56**	PFAKE		21 21 10.0	+10
V53A				LR	LR		
	comp=Z,20µm,22.0s						
555A	**McAlpin**	**113.66**	**62**	PFAKE		21 21 10.0	+9.3
555A				LR	LR		
	comp=Z,9µm,21.0s						
NNA	**Nana**	**113.66**	**108**	PFAKE		21 21 10.0	+8.8
NNA				LR	LR		
	comp=Z,7µm,21.0s						
PRGR	**Permogore**	**113.72**	**333**	*i* PKIKP	**PKiKP**	**21 20 58.1**	**-1.7**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TRQA	**Tornquist**	**113.84**	**140**	PFAKE		21 21 10.0	+9.1
TRQA				LR	LR		
	comp=Z,8µm,18.0s						
O52A	**Adamsville**	**114.00**	**51**	PFAKE		21 21 10.0	+8.9
O52A				LR	LR		
	comp=Z,20µm,22.0s						
255A	**Hazlehurst**	**114.03**	**60**	PFAKE		21 21 10.0	+8.7
255A				LR	LR		
	comp=Z,10µm,19.0s						
656A	**Willston**	**114.04**	**63**	PFAKE		21 21 10.0	+8.6
656A				LR	LR		
	comp=Z,14µm,20.0s						
P53A	**Whipple**	**114.40**	**52**	PFAKE		21 21 10.0	+8.1
P53A				LR	LR		
	comp=Z,28µm,20.0s						
456A	**Hilliard**	**114.46**	**61**	PFAKE		21 21 10.0	+7.8
456A				LR	LR		
	comp=Z,9µm,20.0s						
LVZ	**Lovozero**	**114.82**	**342**	PFAKE		21 21 10.0	+8.1
LVZ				LR	LR		
	comp=Z,21µm,21.0s						
KMSC	**Kings Mountain**	**114.82**	**56**	PFAKE		21 21 10.0	+7.2
KMSC				LR	LR		
	comp=Z,19µm,21.0s						
DWPF	**Disney Wildern**	**115.02**	**64**	PFAKE		21 21 20.0	+17
DWPF				LR	LR		
	comp=Z,6µm,20.0s						
FRB	**Frobisher Bay**	**115.03**	**24**	PKKPbc	PKKPbc	21 31 39.8	-0.8
	comp=Z,1.2nm,0.8s,baz=150,slow=8.1,SNR=2.0						
PB10	**IPOC Station P**	**115.05**	**122**	PFAKE		21 21 20.0	+16
PB10				LR	LR		
	comp=Z,8µm,19.0s						
ALLY	**Alegheny Colle**	**115.09**	**49**	PFAKE		21 21 20.0	+17
ALLY				LR	LR		
	comp=Z,33µm,22.0s						
GO02	**Mina Guanaco**	**115.12**	**124**	PFAKE		21 21 20.0	+16
GO02				LR	LR		
	comp=Z,10µm,20.0s						
ERPA	**Erie**	**115.14**	**49**	PFAKE		21 21 20.0	+17
ERPA				LR	LR		
	comp=Z,15µm,22.0s						
658A	**Bunnell**	**115.16**	**63**	PFAKE		21 21 20.0	+16
658A				LR	LR		
	comp=Z,6µm,20.0s						
OTAV	**Otavalo**	**115.22**	**95**	PFAKE		21 21 20.0	+15
OTAV				LR	LR		
	comp=Z,11µm,20.0s						
257A	**Skidaway Islan**	**115.26**	**60**	PFAKE		21 21 20.0	+16
257A				LR	LR		
	comp=Z,14µm,20.0s						
059A	**Moore Haven**	**115.29**	**65**	PFAKE		21 21 20.0	+16
059A				LR	LR		
	comp=Z,6µm,20.0s						
N54A	**Moraine State**	**115.30**	**50**	PFAKE		21 21 20.0	+16
N54A				LR	LR		
	comp=Z,23µm,21.0s						
SADO	**Sadowa**	**115.33**	**46**	PFAKE		21 21 20.0	+17
SADO				LR	LR		
	comp=Z,23µm,22.0s						
BLA	**Blacksburg**	**115.39**	**54**	PFAKE		21 21 20.0	+16
BLA				LR	LR		
	comp=Z,19µm,21.0s						
APA	**Apatity**	**115.40**	**342**	⇑*i*PKIKP	PKPdf	21 21 16.0	+13
APA				*i*		21 22 08.0	
APA				*i* SS	SS	21 38 05.0	+4.0
M54A	**Oil Creek Stat**	**115.46**	**49**	PFAKE		21 21 20.0	+16
M54A				LR	LR		
	comp=Z,26µm,22.0s						
MCWV	**Mont Chateau**	**115.57**	**51**	PFAKE		21 21 20.0	+16
MCWV				LR	LR		
	comp=Z,9µm,19.0s						
KEV	**Kevo**	**115.76**	**345**	PFAKE		21 21 20.0	+16
KEV				LR	LR		
	comp=Z,15µm,20.0s						
VLDQ	**Val d'Or**	**115.81**	**42**	PFAKE		21 21 20.0	+16
VLDQ				LR	LR		
	comp=Z,14µm,19.0s						
PB04	**IPOC Station P**	**115.89**	**121**	PFAKE		21 21 20.0	+15
PB04				LR	LR		
	comp=Z,10µm,18.0s						
NHSC	**New Hope**	**115.92**	**59**	PFAKE		21 21 20.0	+15
NHSC				LR	LR		
	comp=Z,17µm,22.0s						
ARA0	**ARCESS Array S**	**116.28**	**346**	*e*PKPdf	**PKiKP**	**21 21 04.2**	**-0.5**
ARA0				*e*PKKPbc	**PKKPbc**	**21 31 33.6**	**-2.8**
ARCES	**ARCESS Array B**	**116.28**	**346**	PKP	**PKiKP**	**21 21 04.2**	**-0.5**
	comp=Z,5.3nm,0.6s,baz=81,slow=2.0,SNR=26						
ARCES				PKKPbc	**PKKPbc**	**21 31 33.6**	**-2.8**
	comp=Z,2.0nm,0.8s,baz=268,slow=3.2,SNR=7.3						
ARE0	**ARCESS Array S**	**116.28**	**346**	PFAKE		21 21 20.0	+15
ARE0				LR	LR		
	comp=Z,700nm,20.0s						
O56A	**Blue Knob Stat**	**116.46**	**50**	PFAKE		21 21 20.0	+14
O56A				LR	LR		
	comp=Z,25µm,22.0s						
SUMG	**Summit**	**116.72**	**8**	PFAKE		21 21 20.0	+14
SUMG				LR	LR		
	comp=Z,9µm,20.0s						
PLVO	**Plevna**	**116.72**	**45**	PFAKE		21 21 20.0	+14
PLVO				LR	LR		
	comp=Z,14µm,20.0s						
KLMR	**Klimovskoe**	**116.73**	**334**	*e*PKIKP	**PKPdf**	**21 21 03.4**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s						
KLMR	**Klimovskoe**	**116.73**	**334**	*e*PKPdf	**PKPdf**	**21 21 03.5**	**-2.2**
KLMR				AMP		21 21 20.5	
	comp=Z,20nm,1.4s						
KLMR				*e*PP	PP	21 22 05.0	-8.5
KLMR				*e*PKKPbc	**PKKPbc**	**21 31 31.2**	**-3.4**
LVC	**Limon Verde**	**116.80**	**122**	PFAKE		21 21 20.0	+13
LVC				LR	LR		
	comp=Z,8µm,20.0s						
SSPA	**Standing Stone**	**116.92**	**50**	PFAKE		21 21 20.0	+13
SSPA				LR	LR		
	comp=Z,28µm,22.0s						
PB01	**IPOC Station P**	**116.99**	**120**	PFAKE		21 21 20.0	+12
PB01				LR	LR		
	comp=Z,9µm,20.0s						
ILULI	**Ilulissat**	**117.16**	**14**	PFAKE		21 21 20.0	+14
ILULI				LR	LR		
	comp=Z,13µm,20.0s						
R58B	**Mineral**	**117.31**	**53**	PFAKE		21 21 20.0	+13
R58B				LR	LR		
	comp=Z,36µm,22.0s						
PB11	**IPOC Station P**	**117.38**	**119**	PFAKE		21 21 20.0	+12
PB11				LR	LR		
	comp=Z,7µm,20.0s						
CNNC	**Cliffs of the**	**117.62**	**56**	PFAKE		21 21 20.0	+12
CNNC				LR	LR		
	comp=Z,18µm,21.0s						
CBN	**Corbin Frederi**	**117.67**	**53**	PFAKE		21 21 20.0	+12
CBN				LR	LR		
	comp=Z,28µm,21.0s						
MNMC	**Minye Minye**	**117.68**	**118**	*e*PKPdf	**PKPdf**	**21 21 08.5**	**-0.6**
MNMC				LR	LR		
	comp=Z,7µm,20.0s						
PAGS	**Pennsylvania G**	**117.86**	**50**	PFAKE		21 21 20.0	+12
PAGS				LR	LR		
	comp=Z,26µm,22.0s						
SDMD	**Soldier's Deli**	**117.91**	**51**	PFAKE		21 21 20.0	+11
SDMD				LR	LR		
	comp=Z,12µm,18.0s						
YOTC	**Yotoco, Valle**	**118.00**	**91**	*e*P	**PP**	**21 22 16.9**	**-7.3**
YOTC	**Yotoco, Valle**	**118.00**	**91**	*e*P	**PP**	**21 22 16.9**	**-7.3**
BINY	**Binghamton**	**118.06**	**48**	PFAKE		21 21 20.0	+11
BINY				LR	LR		
	comp=Z,20µm,21.0s						
MAK	**Makhachkala**	**118.09**	**313**	*e*P	**Pdif**	**21 17 23.0**	**-4.4**
MAK				*e*		21 22 20.8	
MAK				*e*PPP	PPP	21 24 49.5	
MAK				*e*		21 27 54.5	
MAK				*e*PS	**PKKPdf**	**21 32 04.7**	**+6.4**
MAK				*e*SS	SS	21 38 32.8	-5.0
MAK				*e*SSS	SSS	21 42 56.8	
MAK				pmax	pmax		
	comp=Z,208nm,0.8s						
MVL	**Millersville**	**118.18**	**50**	PFAKE		21 21 20.0	+11
MVL				LR	LR		
	comp=Z,20µm,21.0s						
KSPA	**Keystone Colle**	**118.34**	**49**	PFAKE		21 21 20.0	+11
KSPA				LR	LR		
	comp=Z,20µm,20.0s						
N59A	**State Game Lan**	**118.46**	**49**	PFAKE		21 21 20.0	+10
N59A				LR	LR		
	comp=Z,24µm,22.0s						
SFJD	**Kangerlussuaq**	**118.94**	**15**	PFAKE		21 21 20.0	+10
SFJD				LR	LR		
	comp=Z,17µm,20.0s						
SFJD	**Kangerlussuaq**	**118.94**	**15**	*i* P	**PKiKP**	**21 21 16.1**	**+6.3**
SFJD	**Kangerlussuaq**	**118.94**	**15**	*e*PKIKP	**PKiKP**	**21 21 16.1**	**+6.3**
NCB	**Newcomb**	**118.95**	**46**	PFAKE		21 21 20.0	+9.5
NCB				LR	LR		
	comp=Z,10µm,19.0s						
GROC	**Groznyy**	**119.27**	**314**	*i* PKIKP	**PKPdf**	**21 21 09.8**	**-1.3**
GROC				*e*		21 22 28.9	
GROC				*e*		21 28 24.0	
GROC				pmax	pmax		
	comp=Z,19nm,0.8s						
ODNJ	**Ogdensburg**	**119.29**	**49**	PFAKE		21 21 20.0	+8.7
ODNJ				LR	LR		
	comp=Z,25µm,22.0s						
BRNJ	**Basking Ridge**	**119.40**	**49**	PFAKE		21 21 20.0	+8.5
BRNJ				LR	LR		
	comp=Z,31µm,22.0s						
ACCN	**Adirondack Com**	**119.47**	**46**	PFAKE		21 21 20.0	+8.4
ACCN				LR	LR		
	comp=Z,22µm,20.0s						
VRH	**Novokhopyorsk**	**119.59**	**323**	*e*PKIKP	**PKPdf**	**21 21 09.6**	**-1.8**
VRH				*e*		21 22 36.3	
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRH				MLR	MLR		
	comp=Z,14µm,18.0s						
PAL	**Palisades**	**119.83**	**49**	PFAKE		21 21 20.0	+7.7
PAL				LR	LR		
	comp=Z,24µm,22.0s						
CPNY	**Central Park**	**119.83**	**49**	PFAKE		21 21 20.0	+7.7
CPNY				LR	LR		
	comp=Z,34µm,22.0s						
SCHQ	**Schefferville**	**119.88**	**32**	*e*PKPdf	**PKPdf**	**21 21 11.3**	**-0.7**
SCHQ				*e*PKKPbc	**PKKPab**	**21 31 22.2**	**-0.4**
SCHQ				LR	LR		
	comp=Z,22µm,22.0s						
SCHQ	**Schefferville**	**119.88**	**32**	PKP	**PKPdf**	**21 21 11.3**	**-0.7**
	comp=Z,3.2nm,0.8s,baz=265,slow=3.9,SNR=4.0						
SCHQ				PKKPbc	**PKKPab**	**21 31 22.2**	**-0.4**
	comp=Z,4.5nm,0.9s,baz=122,slow=5.9,SNR=3.1						
MOS	**Moscow**	**119.98**	**329**	*i* PKIKP	**PKPdf**	**21 21 10.5**	**-1.5**
MOS				*e*		21 22 41.8	
MOS				*e*PPP	PPP	21 25 08.1	
MOS				*e*SS	SS	21 38 56.9	-4.2
MOS				pmax	pmax		
	comp=Z,22nm,1.0s						
MOS				MLR	MLR		
	comp=Z,15µm,20.0s						
MOS				MLR	MLR		
	comp=N,8µm,17.0s						
MOS				MLR	MLR		
	comp=E,9µm,20.0s						
LPAZ	**La Paz**	**120.10**	**116**	*e*PKPdf	**PKPdf**	**21 21 14.0**	**-0.2**
LPAZ	**La Paz**	**120.10**	**116**	*e*PKIKP	**PKPdf**	**21 21 14.0**	**-0.2**
LPAZ	**La Paz**	**120.10**	**116**	PKP	**PKPdf**	**21 21 13.9**	**-0.4**
	comp=E,2.0nm,0.4s,baz=358,slow=2.5,SNR=10						
ROSC	**El Rosal**	**120.14**	**91**	PKP	**PKPdf**	**21 21 13.8**	**-0.3**
	comp=E,4.5nm,0.4s,baz=290,slow=15,SNR=2.7						
SCO	**Scoresbysund**	**120.32**	**3**	PFAKE		21 21 20.0	+7.6
SCO				LR	LR		
	comp=Z,10µm,19.0s						
SCO	**Scoresbysund**	**120.32**	**3**	*i* P	**PKiKP**	**21 21 12.7**	**+0.3**
SCO	**Scoresbysund**	**120.32**	**3**	*e*PKIKP	**PKiKP**	**21 21 12.7**	**+0.3**
TBLG	**Delisi**	**120.36**	**312**	*e*PKPdf	**PKiKP**	**21 21 14.3**	**+0.9**
TBLG	**Delisi**	**120.36**	**312**	*e*PKIKP	**PKiKP**	**21 21 14.3**	**+0.9**
LPSR	**Galich'ya Gora**	**120.65**	**325**	*e*PKIKP	**PKPdf**	**21 21 12.9**	**-0.5**
LPSR				*e*		21 22 44.0	
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
LPSR				MLR	MLR		
	comp=Z,18µm,16.0s						
GNI	**Garni**	**120.70**	**310**	*e*PKPdf	**PKiKP**	**21 21 14.5**	**+0.2**
GNI				LR	LR		
	comp=Z,9µm,22.0s						
GNI	**Garni**	**120.70**	**310**	*e*PKIKP	**PKiKP**	**21 21 14.5**	**+0.2**
ZEI	**Tsey**	**120.71**	**313**	*i* PKIKP	**PKPdf**	**21 21 13.3**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,45nm,2.4s						
OBN	**Obninsk**	**120.80**	**329**	*e*PKPdf	**PKiKP**	**21 21 13.8**	**0.0**
OBN				LR	LR		
	comp=Z,17µm,21.0s						
OBN	**Obninsk**	**120.80**	**329**	⇓*i*P	**PKiKP**	**21 21 15.4**	**+1.7**
OBN	**Obninsk**	**120.80**	**329**	*d* *i*PKIKP	**PKPdf**	**21 21 13.1**	**-0.5**
OBN				*e*		21 22 39.4	
OBN				*e*PPP	PPP	21 25 13.8	
OBN				*i*		21 28 16.7	
OBN				*i* SS	SS	21 39 28.8	+17
OBN				pmax	pmax		
	comp=Z,22nm,1.3s						
VORR	**Voronezh**	**120.87**	**324**	PKIKP	**PKPdf**	**21 21 12.0**	**-1.9**
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
VSR	**Storozhevoye**	**121.07**	**324**	*e*PKIKP	**PKPdf**	**21 21 13.1**	**-1.2**
VSR				*e*		21 22 44.9	
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR				MLR	MLR		
	comp=Z,15µm,21.0s						
KBZ	**Khabaz**	**121.18**	**315**	PKP	**PKiKP**	**21 21 15.4**	**+0.5**
	comp=Z,4.2nm,1.0s,baz=214,slow=4.1,SNR=3.5						
HRV	**Adam Dziewonsk**	**121.19**	**47**	PFAKE		21 21 30.0	+15
HRV				LR	LR		
	comp=Z,20µm,20.0s						
IGDI	**IGDIR**	**121.26**	**310**	*i* P	**PKiKP**	**21 21 15.8**	**+0.6**
IGDI				IAML_P			
	comp=Z,101nm,0.6s						
KIV	**Kislovodsk**	**121.26**	**315**	PFAKE		21 21 30.0	+15
KIV				LR	LR		
	comp=Z,16µm,20.0s						
KIV	**Kislovodsk**	**121.26**	**315**	⇓*i*P	PKiKP	21 21 23.5	+8.3
KIV	**Kislovodsk**	**121.26**	**315**	*e*P	**Pdif**	**21 17 41.7**	**0.0**
KIV				*i*		21 21 16.0	
KIV				*e*		21 22 45.1	
KIV				*e*		21 28 13.7	
KIV				*e*PS	**PS**	**21 32 37.0**	**-1.6**
KIV				*e*SS	SS	21 39 18.9	+0.1
KIV				*e*SSS	SSS	21 43 47.4	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WES	**Weston**	**121.39**	**47**	PFAKE		21 21 30.0	+15
WES				LR	LR		
	comp=Z,22µm,20.0s						
EAK	**Akyaka**	**121.43**	**311**	*i* P	**PKiKP**	**21 21 16.2**	**+0.5**
EAK				IAML_P			
	comp=Z,70nm,0.2s						
CLDR	**Caldiran**	**121.54**	**309**	*i* P	**PKiKP**	**21 21 17.2**	**+1.1**
CLDR				IAML_P			
	comp=Z,44nm,0.1s						
FIA1	**FINESS Array S**	**121.74**	**339**	*e*PKPdf	**PKPdf**	**21 21 14.6**	**-0.6**
FIA1				*e*PKPdf	**PKiKP**	**21 21 15.2**	**-0.2**
FIA0	**FINESS Array S**	**121.74**	**339**	*e*PKPdf	**PKPdf**	**21 21 14.9**	**-0.4**
FIA0				*e*PKKPbc	**PKKPab**	**21 31 13.8**	**-0.5**
FIA0	**FINESS Array S**	**121.74**	**339**	*e*PKIKP	**PKPdf**	**21 21 14.9**	**-0.4**
FINES	**FINESS Array B**	**121.74**	**339**	*c* *i*PKIKP	**PKPdf**	**21 21 15.0**	**-0.3**
FINES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FINES	**FINESS Array B**	**121.74**	**339**	PKP	**PKPdf**	**21 21 14.9**	**-0.4**
	comp=Z,9.6nm,0.8s,baz=72,slow=6.2,SNR=17						
FINES				PKKPbc	**PKKPab**	**21 31 13.8**	**-0.5**
	comp=Z,2.4nm,0.9s,baz=258,slow=11,SNR=4.6						
PKME	**Peaks-Kenny Pk**	**121.99**	**43**	PFAKE		21 21 30.0	+14
PKME				LR	LR		
	comp=Z,16µm,18.0s						
TUTA	**Tutak**	**122.32**	**310**	*i* P	**PKiKP**	**21 21 17.5**	**-0.1**
TUTA				IAML_P			
	comp=Z,9.4nm,0.4s						
GEVA	**Gevas**	**122.37**	**308**	*i* P	**PKiKP**	**21 21 18.8**	**+1.2**
GEVA				IAML_P			
	comp=Z,183nm,0.9s						
EATA	**Eleskirt**	**122.45**	**310**	*i* P	**PKiKP**	**21 21 19.2**	**+1.3**
EATA				IAML_P			
	comp=Z,22nm,0.1s						
ARTV	**Artvin**	**122.54**	**312**	*i* P	**PKiKP**	**21 21 18.3**	**+0.3**
ARTV				IAML_P			
	comp=Z,18nm,0.1s						
DAGI	**Agillar**	**122.58**	**312**	*i* P	**PKiKP**	**21 21 18.6**	**+0.7**
DAGI				IAML_P			
	comp=Z,92nm,0.4s						
DBOC	**Borcka**	**122.69**	**312**	*i* P	**PKiKP**	**21 21 18.0**	**0.0**
DBOC				IAML_P			
	comp=Z,21nm,0.1s						
DBAD	**Bademkaya**	**122.75**	**312**	*i* P	**PKiKP**	**21 21 19.1**	**+0.8**
DBAD				IAML_P			
	comp=Z,318nm,0.8s						
HOMI	**Horasan**	**122.84**	**311**	*i* P	**PKiKP**	**21 21 19.6**	**+0.9**
HOMI				IAML_P			
	comp=Z,20nm,0.3s						
DAMY	**Dhamar**	**122.95**	**280**	*e*PKPdf	**PKiKP**	**21 21 21.5**	**+1.9**
DAMY				LR	LR		
	comp=Z,9µm,22.0s						
SIRT	**Sirnak**	**123.02**	**308**	*e*PKPdf	**PKiKP**	**21 21 19.2**	**+0.4**
SIRT				LR	LR		
	comp=Z,21µm,21.0s						
ANGG	**Ammassalik, Gr**	**123.07**	**11**	PFAKE		21 21 30.0	+12
ANGG				LR	LR		
	comp=Z,13µm,19.0s						
SRTM	**Siirt_Merkez**	**123.31**	**308**	*i* P	**PKiKP**	**21 21 20.4**	**+0.9**
SRTM				IAML_P			
	comp=Z,20nm,0.1s						
BATG	**Bathurst New B**	**123.40**	**40**	PFAKE		21 21 30.0	+11
BATG				LR	LR		
	comp=Z,15µm,20.0s						
SOC	**Sochi**	**123.43**	**315**	*i* PKIKP	**PKPdf**	**21 21 14.4**	**-4.7**
SOC				*e*		21 28 20.5	
VSU	**Vasula**	**123.44**	**336**	*c* *i*PKIKP	**PKPdf**	**21 21 18.7**	**+0.1**
VSU				pmax	pmax		
	comp=Z,63nm,1.3s						
VSU	**Vasula**	**123.44**	**336**	*e*P	**PKPdf**	**21 21 17.0**	**-1.6**
VSU				IAmb	IAmb	21 21 27.5	
	comp=Z,161nm,1.5s						
BTMN	**Batman**	**123.84**	**308**	*i* P	**PKiKP**	**21 21 26.4**	**+5.9**
BTMN				IAML_P			
	comp=Z,190nm,0.7s						
CPUP	**Villa Florida**	**123.98**	**132**	PKP	**PKPdf**	**21 21 20.4**	**-0.3**
	comp=Z,9.8nm,0.8s,baz=267,slow=2.1,SNR=17						
IVI	**Ivigtut**	**124.00**	**19**	PFAKE		21 21 30.0	+10
IVI				LR	LR		
	comp=Z,22µm,20.0s						
BAYB	**BAYBURT**	**124.01**	**311**	*i* P	**PKiKP**	**21 21 21.1**	**+0.2**
BAYB				IAML_P			
	comp=Z,350nm,0.7s						
ATD	**Arta Tunnel**	**124.21**	**277**	PKP	**PKPdf**	**21 21 21.4**	**-0.1**
ATD				LR	LR		
	comp=Z,11µm,20.0s						
ATD	**Arta Tunnel**	**124.21**	**277**	PKP	**PKPdf**	**21 21 21.4**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=253,slow=19,SNR=3.0						
SDV	**Santo Domingo**	**124.35**	**87**	*e*PKPdf	**PKPdf**	**21 21 20.9**	**-1.1**
SDV				LR	LR		
	comp=Z,6µm,21.0s						
HANI	**Diyarbakir_Han**	**124.38**	**309**	*i* P	**PKiKP**	**21 21 22.1**	**+0.6**
HANI				IAML_P			
	comp=Z,155nm,0.3s						
SDDR	**Presa de Saban**	**124.39**	**74**	*e*PKPdf	**PKPdf**	**21 21 20.6**	**-1.1**
ANN	**Anapa**	**124.57**	**317**	*i* PKIKP	**PKPdf**	**21 21 19.2**	**-2.0**
ANN				*e*		21 23 08.9	
ANN				*e*SS	SS	21 40 11.7	+11
ANN				pmax	pmax		
	comp=Z,27nm,0.9s						
ANN				MLR	MLR		
	comp=E,2µm,23.0s						
ANN				MLR	MLR		
	comp=Z,14µm,23.0s						
LMN	**Caledonia Moun**	**124.74**	**41**	PFAKE		21 21 30.0	+8.1
LMN				LR	LR		
	comp=Z,17µm,20.0s						
KELT	**Kelkit**	**124.78**	**312**	*i* P	**PKPdf**	**21 21 22.1**	**+0.1**
KELT				IAML_P			
	comp=Z,152nm,0.4s						
NRS	**Narsarsuaq**	**124.89**	**18**	PFAKE		21 21 30.0	+8.4
NRS				LR	LR		
	comp=Z,31µm,21.0s						
BOSA	**Boshof**	**125.27**	**223**	*i* P	**PKiKP**	**21 21 24.4**	**+0.7**
BOSA	**Boshof**	**125.27**	**223**	*i* P	**PKPdf**	**21 21 22.2**	**-1.1**
BOSA	**Boshof**	**125.27**	**223**	PKP	**PKPdf**	**21 21 23.3**	**0.0**
	comp=Z,6.7nm,0.8s,baz=170,slow=2.2,SNR=9.9						
REFA	**Refahiye_ERZN**	**125.35**	**311**	*i* P	**PKiKP**	**21 21 24.4**	**+0.8**
REFA				IAML_P			
	comp=Z,1.0nm,0.3s						
IZAR	**Zarasai**	**125.37**	**333**	*e*P	**PKPdf**	**21 21 17.7**	**-4.7**
IZAR				IAmb	IAmb	21 21 32.7	
	comp=Z,13nm,1.0s						
MICGM	**Minsk**	**125.39**	**331**	*e*PKP	**PKPdf**	**21 21 22.0**	**-0.5**
MICGM				*e*PP	PP	21 23 28.0	+15
MICGM				*e*PPP	PPP	21 26 01.0	
MICGM				*e*SKS	SKSdf	21 28 46.0	+13
MICGM				*e*SKKS	SKKSac	21 29 50.0	-20
MICGM				*e*SS	**SS**	**21 40 10.0**	**+0.3**
MICGM				*e*SSS	SSS	21 44 01.0	
MICGM				*e*LR	LR	22 06 20.0	
MICGM				LRM	MLR	22 19 07.0	
	comp=Z,22nm,19.0s						
MICGM				LRM	MLR	22 19 18.0	
	comp=E,8.3nm,18.0s						
MNK	**Minsk**	**125.39**	**331**	*e*PKIKP	**PKPdf**	**21 21 22.0**	**-0.5**
MNK				*e*SS	SS	21 40 10.0	+0.3
IDID	**Didziasalis**	**125.42**	**333**	*e*P	**PKPdf**	**21 21 21.9**	**-0.6**
IDID				IAmb	IAmb	21 21 29.2	
	comp=Z,12nm,1.0s						
SUR	**Sutherland**	**125.49**	**217**	*e*PKPdf	**PKiKP**	**21 21 24.6**	**+0.5**
SUR				LR	LR		
	comp=Z,15µm,18.0s						
ISAL	**Salakas**	**125.53**	**333**	*e*P	**PKPdf**	**21 21 20.8**	**-1.9**
ISAL				IAmb	IAmb	21 21 33.0	
	comp=Z,12nm,0.9s						
KEMA	**Kemaliye**	**125.59**	**311**	*i* P	**PKiKP**	**21 21 24.5**	**+0.6**
KEMA				IAML_P			
	comp=Z,6.1nm,0.1s						
NACGM	**Naroch**	**125.65**	**332**	*e*PKP	**PKPdf**	**21 21 22.0**	**-1.0**
NACGM				*e*PP	**PP**	**21 23 20.0**	**+5.6**
NACGM				*e*SKS	**SKSdf**	**21 28 30.0**	**-3.9**
NACGM				*e*SKKS	**SKKSac**	**21 30 04.0**	**-8.1**
NACGM				*e*SKKKS		21 30 48.0	
NACGM				*e*PS	**PS**	**21 33 12.0**	**-4.6**
NACGM				*e*SS	**SS**	**21 40 20.0**	**+7.0**
NACGM				*e*SSS	SSS	21 44 43.0	
NACGM				*e*LQ	LQ	22 00 38.0	
NACGM				*e*LR	LR	22 08 02.0	
NACGM				LRM	MLR	22 17 48.0	
	comp=Z,31nm,18.0s						
SDD	**Santo Domingo**	**125.69**	**75**	PFAKE		21 21 40.0	+16
SDD				LR	LR		
	comp=Z,9µm,20.0s						
CUZAR	**Zara_SIVAS**	**125.94**	**312**	*i* P	**PKiKP**	**21 21 25.2**	**+0.5**
NC303	**NORSAR Array S**	**126.46**	**345**	*e*PKPdf	**PKiKP**	**21 21 24.8**	**0.0**
NB2	**NORSAR Subarra**	**126.65**	**345**	PKPdf	**PKPdf**	**21 21 23.6**	**-1.2**
	comp=Z,3.0nm,0.7s,baz=31,slow=1.9						
NB200	**NORSAR Array S**	**126.65**	**345**	*e*PKPdf	**PKPdf**	**21 21 24.0**	**-0.8**
NOA	**NORSAR Array B**	**126.65**	**345**	PKP	**PKPdf**	**21 21 24.0**	**-0.8**
	comp=Z,4.6nm,0.9s,baz=32,slow=2.0,SNR=20						
SIM	**Simferopol'**	**126.69**	**319**	*i* PKIKP	**PKPdf**	**21 21 25.2**	**-0.1**
SIM				*e*		21 23 25.7	
SIM				pmax	pmax		
	comp=Z,60nm,9.0s						
SIM				pmax	pmax		
	comp=Z,400nm,6.1s						
SIM				MLR	MLR		
	comp=Z,8µm,14.9s						
NBO00	**NORSAR Array S**	**126.77**	**345**	*e*PKPdf	**PKPdf**	**21 21 25.2**	**+0.2**

NC602	NORSAR Array S	126.83	345	*e*PKPdf	PKPdf	21 21 25.3	+0.2
AKASG	Malin Array Be	126.87	327*c*	*i*PKIKP	PKPdf	21 21 24.8	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	Malin Array Be	126.87	327	PKP	PKPdf	21 21 24.9	-0.5
	comp=Z,4.1nm,0.8s,baz=63,slow=2.3,SNR=26						
AKBB	Malin Array Si	126.87	327	*e*PKPdf	PKPdf	21 21 24.9	-0.4
AKBB				LR	LR		
	comp=Z,19µm,20.0s						
AKBB	Malin Array Si	126.87	327	*e*PKIKP	PKPdf	21 21 25.0	-0.4
KIEV	Kiev	126.88	327	*e*PKPdf	PKPdf	21 21 24.7	-0.7
KIEV				LR	LR		
	comp=Z,18µm,21.0s						
KIEV	Kiev	126.88	327	⇑*i*P	PKPdf	21 21 25.3	-0.1
KIEV	Kiev	126.88	327	⇑PKIKP	PKPdf	21 21 25.3	-0.1
NAO01	NORSAR Array S	126.91	345	*e*PKPdf	PKPdf	21 21 25.4	+0.2
AK11	Malin Array Si	126.91	327	*e*PKPdf	PKPdf	21 21 24.9	-0.7
PBUR	Paburg	127.02	336	*e*P	PKPdf	21 21 25.4	-0.1
PBUR				IAmb	IAmb	21 21 32.0	
	comp=Z,120nm,1.3s						
ANKE	Ethiopia-Afar	127.06	274	*e*P	PKiKP	21 21 35.5	+7.6
ANKE				*i* S	SS	21 40 19.7	-15
ANKE	Ethiopia-Afar	127.06	274	*e*P	PKiKP	21 21 35.5	+7.6
LBTB	Lobatse	127.30	227	*e*PKPdf	PKPdf	21 21 27.4	+0.2
LBTB	Lobatse	127.30	227	*e*PKIKP	PKPdf	21 21 27.5	+0.2
LBTB	Lobatse	127.30	227	PKP	PKPdf	21 21 27.3	0.0
	comp=Z,10nm,1.1s,baz=134,slow=2.9						
KMBO	Kilima Mbogo	127.54	260	*e*PKPdf	PKPdf	21 21 28.2	+0.1
KMBO				LR	LR		
	comp=Z,9µm,19.0s						
KMBO	Kilima Mbogo	127.54	260*c*	*i*PKIKP	PKiKP	21 21 29.2	+0.5
KMBO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMBO	Kilima Mbogo	127.54	260	PKP	PKPdf	21 21 28.2	+0.1
	comp=Z,4.2nm,1.0s,baz=84,slow=1.8,SNR=12						
DRLN	Deer Lake	127.61	35	PFAKE		21 21 40.0	+13
DRLN				LR	LR		
	comp=Z,32µm,22.0s						
MATP	Matopo	127.75	233	*i* P	PKPdf	21 21 26.8	-1.4
MATP	Matopo	127.75	233	*i* P	PKPdf	21 21 23.4	-4.8
MATP	Matopo	127.75	233	PKP	PKPdf	21 21 28.2	0.0
	comp=Z,12nm,1.1s,baz=114,slow=1.6,SNR=6.6						
BLWY	Bulawayo	127.82	234	*i* P	PKPdf	21 21 24.7	-3.7
SUW	Suwalki	127.84	333	*e*PKP	PKPdf	21 21 26.4	-0.8
SUW				LMZ	LR	22 15 36.9	
	comp=Z,29µm,22.7s						
SUW	Suwalki	127.84	333	*e*PKPdf	PKPdf	21 21 27.0	-0.2
SUW				LR	LR		
	comp=Z,30µm,21.0s						
SUW	Suwalki	127.84	333	*e*PKIKP	PKPdf	21 21 26.4	-0.8
SUW				MLR	MLR		
	comp=Z,29µm,22.7s						
AAE	Adis Abeba	127.94	273	*e*P	PKiKP	21 21 31.7	+2.2
FURI	Furi	128.01	273	PFAKE		21 21 40.0	+10
FURI				LR	LR		
	comp=Z,14µm,21.0s						
KONO	Kongsberg	128.26	345	PFAKE		21 21 40.0	+12
KONO				LR	LR		
	comp=Z,10µm,19.0s						
OBIP	Obispado Ponce	128.83	76	*e*PKPdf	PKPdf	21 21 28.9	-1.2
ICMP	Isla Caja de M	128.91	76	PFAKE		21 21 40.0	+9.1
ICMP				LR	LR		
	comp=Z,4µm,19.0s						
BR101	Keskin Array S	129.01	313	*e*PKPdf	PKPdf	21 21 29.6	-0.5
BR101				*e*PP	PP	21 23 37.1	-0.4
BR131	Keskin Array S	129.01	313	*e*PKPdf	PKPdf	21 21 29.5	-0.5
BR131	Keskin Array S	129.01	313	P	PKPdf	21 21 28.9	-1.2
	SNR=9.2						
BRTR	Keskin Array B	129.01	313	PKhKP	PKPpre	21 21 21.3	
	comp=Z,0.2nm,0.6s,baz=148,slow=4.1,SNR=3.2						
BRTR				PKP	PKPdf	21 21 29.6	-0.6
	comp=Z,6.0nm,1.2s,baz=132,slow=1.8,SNR=17						
BRTR				PP	PP	21 23 37.1	-0.4
	comp=Z,3.8nm,1.1s,baz=132,slow=3.7,SNR=3.8						
KIS	Kishinev	129.04	323	*e*PKP	PKPdf	21 21 28.0	-1.7
KIS	Kishinev	129.04	323	*e*PP	PP	21 23 38.0	+0.9
KIS	Kishinev	129.04	323	*e*PS	PS	21 33 55.0	+8.5
KIS	Kishinev	129.04	323	*e*PKIKP	PKPdf	21 21 28.0	-1.7
KIS				*e*		21 23 38.0	
KIS				*e*		21 26 25.0	
KIS				*e*PPS	PPS	21 35 12.0	
SJG	San Juan	129.26	76	*e*PKPdf	PKPdf	21 21 30.6	-0.3
SJG	San Juan	129.26	76	*e*PKIKP	PKPdf	21 21 30.6	-0.3
HUMP	Col San Antoni	129.55	76	*e*PKPdf	PKPdf	21 21 31.1	-0.3
ANTO	Ankara	129.56	313	*e*PKPdf	PKiKP	21 21 31.8	0.0
ANTO				LR	LR		
	comp=Z,8µm,20.0s						
ANTO	Ankara	129.56	313	⇓*i*P	PKiKP	21 21 34.4	+2.6
ANTO	Ankara	129.56	313	⇓PKIKP	PKiKP	21 21 34.4	+2.6
ANTO	Ankara	129.56	313	P	PKPdf	21 21 31.0	0.0
	SNR=10						
LEOM	Leova	129.64	323	⇑*i*P	PKiKP	21 21 32.4	+0.8
LEOM	Leova	129.64	323	⇑PKIKP	PKiKP	21 21 32.4	+0.8
GHAJ	Ghor Haditha	129.91	302	PKP	PKPdf	21 21 31.9	+0.1
LVV	L'vov	130.10	328	*i* PKIKP	PKPdf	21 21 31.0	-0.6
LVV				*e*		21 23 50.0	
LVV				*e*		21 28 31.0	
PRAR	RASCA	130.34	325	⇓*i*P	PKiKP	21 21 33.4	+0.4
CFR	Carcaliu	130.36	321	⇑*i*P	PKPdf	21 21 32.5	+0.2
CFR	Carcaliu	130.36	321	⇑PKIKP	PKPdf	21 21 32.5	+0.2
BEL	Belsk	130.38	332	*e*PKP	PKiKP	21 21 32.9	0.0
BEL				LMZ	LR	22 13 23.6	
	comp=Z,20µm,24.8s						
BEL	Belsk	130.38	332	*e*PKIKP	PKiKP	21 21 32.9	0.0
BEL				MLR	MLR		
	comp=Z,20µm,24.8s						
BSD	Bornholm Skovb	130.38	339	*i* P	PKiKP	21 21 32.6	-0.2
	comp=Z,16µm,22.0s						
BSD	Bornholm Skovb	130.38	339	*e*PKIKP	PKiKP	21 21 32.6	-0.2
BSD				MLR	MLR		
	comp=Z,16µm,22.0s						
TIRR	Tirgusor	130.55	320	PFAKE		21 21 40.0	+6.5
TIRR				LR	LR		
	comp=Z,14µm,20.0s						
TIRR	Tirgusor	130.55	320	⇑*i*P	PKiKP	21 21 38.5	+5.0
TIRR	Tirgusor	130.55	320	⇑PKIKP	PKiKP	21 21 38.5	+5.0
CDVI	St. Croix	130.58	76	*e*PKPdf	PKPdf	21 21 33.8	+0.3
BIZ	Bicaz	130.65	324	⇑*i*P	PKiKP	21 21 34.0	+0.3
LSZ	Lusaka	130.66	239	*e*PKPdf	PKiKP	21 21 34.5	-0.2
LSZ				*e*SKPbc	SKPab	21 24 58.2	+1.2
LSZ				LR	LR		
	comp=Z,19µm,21.0s						
LSZ	Lusaka	130.66	239	*e*PKIKP	PKiKP	21 21 34.5	-0.2
LSZ	Lusaka	130.66	239	PKhKP	PKPpre	21 21 22.7	
	comp=Z,0.9nm,0.5s,baz=117,slow=2.3,SNR=3.0						
LSZ				PKP	PKPdf	21 21 33.8	0.0
	comp=Z,13nm,1.1s,baz=43,slow=1.4,SNR=12						
LSZ				SKPbc	SKPab	21 24 58.2	+1.2
	comp=Z,25nm,1.3s,baz=138,slow=2.2,SNR=4.6						
TLB	Topalu	130.72	321	⇑*i*P	PKiKP	21 21 34.9	+1.1
TLB	Topalu	130.72	321	⇑PKIKP	PKiKP	21 21 34.9	+1.1
HARR	Harsova	130.73	321	⇑*i*P	PKiKP	21 21 38.4	+4.5
HARR	Harsova	130.73	321	⇑PKIKP	PKiKP	21 21 38.4	+4.5
BUR08	Bucovina Ar. S	130.76	326	*e*PKPdf	PKiKP	21 21 35.1	+1.1
BURAR	Bucovina Array	130.77	326	⇓*i*P	PKiKP	21 21 34.8	+0.8
BURAR	Bucovina Array	130.77	326	⇓PKIKP	PKiKP	21 21 34.9	+0.9
EIL	Elat	130.77	300	PKP	PKPdf	21 21 33.5	0.0
BUR04	Bucovina Ar. S	130.77	326	*e*PKPdf	PKPdf	21 21 33.1	-0.1
CSS	Mathiatis	130.78	307	PFAKE		21 21 40.0	+5.7
CSS				LR	LR		
	comp=Z,10µm,19.0s						
VRI	Vrincioaia	130.86	323	⇓*i*P	PKPdf	21 21 33.4	+0.2
VRI	Vrincioaia	130.86	323	⇓PKIKP	PKPdf	21 21 33.4	+0.2
KWP	Kalwaria Pacla	130.89	329	*e*PKP	PKiKP	21 21 33.8	-0.3
KWP				LMZ	LR	22 11 14.5	
	comp=Z,14µm,25.5s						
KWP	Kalwaria Pacla	130.89	329	PFAKE		21 21 40.0	+5.9
KWP				LR	LR		
	comp=Z,156µm,19.0s						
KWP	Kalwaria Pacla	130.89	329	*e*PKIKP	PKiKP	21 21 33.8	-0.3
KWP				MLR	MLR		
	comp=Z,14µm,25.5s						
GKP	Gorka Klasztor	130.90	336	*e*PKP	PKiKP	21 21 34.0	+0.1
GKP				LMZ	LR	22 11 46.6	
	comp=Z,19µm,27.4s						
GKP	Gorka Klasztor	130.90	336	*e*PKIKP	PKiKP	21 21 34.0	+0.1
PLOR	Plostina	130.91	323	⇑*i*P	PKiKP	21 21 38.7	+4.4
PLOR	Plostina	130.91	323	⇑PKIKP	PKiKP	21 21 38.7	+4.4
PSN	Preselentsi	131.07	320	P	PKPdf	21 21 31.3	-2.4
RGN	Rugen	131.40	339	PFAKE		21 21 50.0	+15
RGN				LR	LR		
	comp=Z,16µm,21.0s						
MLR	Muntele Rosu	131.52	323	*e*PKPdf	PKPdf	21 21 33.5	-1.2
MLR				LR	LR		
	comp=Z,17µm,22.0s						
MLR	Muntele Rosu	131.52	323	⇓*i*P	PKPdf	21 21 34.4	-0.3
MLR	Muntele Rosu	131.52	323	⇓PKIKP	PKPdf	21 21 34.4	-0.3
DOPR	Dopca	131.59	324	⇑*i*P	PKiKP	21 21 36.0	+0.4
SECR		131.69	322	⇓*i*P	PKiKP	21 21 37.0	+1.2
UZH	Uzhgorod	131.73	328	*e*PKIKP	PKPdf	21 21 34.4	-0.3
PRD	Provadia	131.80	319	P	PKiKP	21 21 36.1	+0.1
TRPA	Tarpa	131.91	327	⇑*i*P	PKPdf	21 21 35.5	+0.4
OJC	Ojcow	131.93	331	*e*PKP	PKPdf	21 21 35.1	0.0
OJC				LMZ	LR	22 14 06.8	
	comp=Z,16µm,24.3s						
OJC	Ojcow	131.93	331	*e*PKPdf	PKiKP	21 21 35.7	-0.5
OJC	Ojcow	131.93	331	*e*PKIKP	PKPdf	21 21 35.1	0.0
OJC				MLR	MLR		
	comp=Z,16µm,24.3s						
VOIR		132.08	323	⇓*i*P	PKiKP	21 21 37.4	+0.7
VOIR		132.08	323	⇓PKIKP	PKiKP	21 21 37.4	+0.7
CJR	Cluj-Napoca	132.19	325	⇑*i*P	PKiKP	21 21 37.2	+0.4
CJR	Cluj-Napoca	132.19	325	⇑PKIKP	PKiKP	21 21 37.2	+0.4
TRIS	Tristan da Cun	132.20	182	PFAKE		21 21 50.0	+13
TRIS				LR	LR		
	comp=Z,15µm,22.0s						
NIE	Niedzica	132.23	330	*e*PKP	PKiKP	21 21 37.1	+0.3
NIE				LMZ	LR	22 19 16.5	
	comp=Z,16µm,22.4s						
NIE	Niedzica	132.23	330	*e*PKIKP	PKiKP	21 21 37.1	+0.3
NIE				MLR	MLR		
	comp=Z,16µm,22.4s						
SEUS	St. Eustatius	132.29	76	PFAKE		21 21 50.0	+12
SEUS				LR	LR		
	comp=Z,5µm,20.0s						
ARR	Arges	132.37	323	⇓*i*P	PKPdf	21 21 35.6	-0.6
HUMR	Humele	132.62	322	⇓*i*P	PKPdf	21 21 37.0	+0.4
DRGR		132.63	326	⇑*i*P	PKPdf	21 21 36.0	-0.6
DRGR		132.63	326	⇑PKIKP	PKPdf	21 21 36.0	-0.6
SPB	Sao Paulo	132.66	137	PFAKE		21 21 50.0	+12
SPB				LR	LR		
	comp=Z,11µm,18.0s						
SZH	Strazhica	132.70	320	P	PKiKP	21 21 43.1	+5.2
LTVH	Ltavrtes, Hu	132.71	327	*e*PKiKP	PKiKP	21 21 38.0	+0.3
LTVH				*e*PP	PP	21 23 56.0	-4.7
LTVH				*e*SS	SS	21 41 50.0	+10
LANS	Liptovska Anna	132.81	330	*e*PKIKP	PKPdf	21 21 37.4	+0.5
LANS				*e*		21 24 05.8	
LANS	Liptovska Anna	132.81	330	*e*PKP	PKPdf	21 21 37.4	+0.5
LANS				*e*PP	PP	21 24 05.8	+4.5
PTGA	Pitinga	132.96	101	*e*PKPdf	PKPdf	21 21 37.6	-0.5
PTGA				LR	LR		
	comp=Z,6µm,20.0s						
OKC	Ostrava-Krasne	132.97	332	*e*PP	PP	21 24 07.6	+5.4
OKC				*e*x	x	21 36 41.8	
OKC				AMS	AMS	22 22 10.0	
	comp=Z,12µm,17.9s						
DEV	Deva	133.07	325	⇓*i*P	PKiKP	21 21 38.1	-0.5
DEV	Deva	133.07	325	⇓PKIKP	PKiKP	21 21 38.1	-0.5
KSP	Ksiaz	133.08	334	*e*PKP	PKiKP	21 21 37.9	-0.5
KSP				LMZ	LR	22 12 34.5	
	comp=Z,12µm,28.3s						
KSP	Ksiaz	133.08	334	*e*PKIKP	PKiKP	21 21 37.9	-0.5
PVL	Pavlikeni	133.10	320	P	PKiKP	21 21 43.6	+4.9
VLAD	Vladila	133.25	322	⇓*i*P	PKPdf	21 21 37.7	-0.1
MORC	Moravsky Berou	133.29	332	*e*PKPdf	PKPdf	21 21 37.1	-0.7
MORC				LR	LR		
	comp=Z,16µm,20.0s						
MORC	Moravsky Berou	133.29	332	⇑*i*P	PKPdf	21 21 35.7	-2.1
MORC	Moravsky Berou	133.29	332	⇑PKIKP	PKPdf	21 21 35.7	-2.1
MORC	Moravsky Berou	133.29	332	*e*PKP	PKPdf	21 21 37.8	0.0
MORC				*e*PP	PP	21 24 14.9	+11
MORC				*e*		21 24 34.0	
MORC				*e*SS	SS	21 42 04.7	+17
MORC				*e*		21 56 40.2	
PSZ	Piszkesteto	133.42	329	*e*PKPdf	PKiKP	21 21 40.0	+0.7
PSZ				LR	LR		
	comp=Z,26µm,22.0s						
PSZ	Piszkesteto	133.42	329	⇓*i*P	PKPdf	21 21 37.1	-1.0
PSZ	Piszkesteto	133.42	329	⇓PKIKP	PKPdf	21 21 37.1	-1.0
PSZ	Piszkesteto	133.42	329	*e*PKiKP	PKPdf	21 21 38.1	0.0
PSZ				*e*PP	PP	21 24 07.0	+1.7
PSZ				*e*SS	SS	21 41 54.1	+5.0
GZR	Gura Zlata	133.43	324	⇓*i*P	PKPdf	21 21 38.1	-0.1
GZR	Gura Zlata	133.43	324	⇓PKIKP	PKPdf	21 21 38.1	-0.1
DPC	Dobruska-Polom	133.43	333	*e*PKPDF	PKiKP	21 21 41.2	+2.0
DPC				*e*pPKP	sPKPdf	21 21 44.9	-0.7
DPC				*e*PS	PS	21 34 23.7	-0.6
DPC				*e*x	x	21 36 35.9	
DPC				*e*x	x	21 42 06.7	
DPC				AMS	AMS	22 23 40.0	
	comp=Z,16µm,19.2s						
DPC	Dobruska-Polom	133.43	333	*e*PKIKP	PKiKP	21 21 41.2	+2.0
DPC				*e*		21 34 23.7	
DPC				*e*S	SS	21 42 06.7	+18
DPC				MLR	MLR		
	comp=Z,16µm,19.2s						
UPC	Upice	133.45	334	*e*PKPDF	PKiKP	21 21 42.9	+3.7
UPC				*e*x	x	21 42 01.6	
UPC				AMS	AMS	22 19 40.0	
	comp=Z,14µm,19.7s						
UPC	Upice	133.45	334	*e*PKIKP	PKiKP	21 21 42.9	+3.7
UPC				MLR	MLR		
	comp=Z,14µm,19.7s						
SIRR	Siria	133.53	326	⇓*i*P	PKiKP	21 21 39.8	+0.3
VYHS	Vyhne	133.56	330	*e*PKIKP	PKPdf	21 21 38.3	0.0
VYHS				*e*		21 24 11.4	
VYHS				MLR	MLR		
	comp=Z,8µm,23.7s						
VYHS	Vyhne	133.56	330	*e*PKP	PKPdf	21 21 38.3	0.0
VYHS				*e*PP	PP	21 24 11.4	+5.3
VYHS				*e*SS	SS	21 41 40.2	-10
VYHS				*e*L	L	22 19 42.9	
HERR	Herculane	133.93	324	⇓*i*P	PKPdf	21 21 38.9	-0.1
BZS	Buzias	133.95	325	⇑*i*P	PKPdf	21 21 39.4	+0.4
BZS	Buzias	133.95	325	⇑PKIKP	PKPdf	21 21 39.4	+0.4
MBAR	Mbarara	133.96	258	*e*PKPdf	PKiKP	21 21 43.0	+1.5
MBAR				*e*SKPbc	SKPab	21 25 11.4	0.0
MBAR				LR	LR		
	comp=Z,22µm,22.0s						
MBAR	Mbarara	133.96	258	PKP	PKiKP	21 21 41.9	+0.4
	comp=Z,3.6nm,0.2s,baz=90,slow=8.1,SNR=8.0						
MBAR				SKPbc	SKPab	21 25 10.3	-1.1
	comp=Z,6.1nm,0.8s,baz=108,slow=5.4,SNR=4.9						
MPEP	Malo Peshtene	134.01	322	P	PKiKP	21 21 40.2	-0.4
BRG	Berggiesshubel	134.04	336	*e*PKP	PKPdf	21 21 37.1	-1.9
	comp=Z,9.5nm,1.1s						
BRG				*e*		21 21 44.6	
	comp=Z,32nm,1.3s						
BRG				*e*PP	PP	21 23 12.5	-56
	comp=Z,37nm,1.6s						
BRG				PKS		21 25 17.0	
BRG				SS	SS	21 42 10.0	+14
	comp=N,13µm,18.0s						
	comp=E,5µm,16.5s						
	comp=Z,18µm,19.5s						
BRG	Berggiesshubel	134.04	336	*e*PKIKP	PKPdf	21 21 37.1	-1.9
BRG				*e*		21 21 44.6	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,13µm,18.0s						
BRG				MLR	MLR		
	comp=E,5µm,16.5s						
BRG				MLR	MLR		
	comp=Z,18µm,19.5s						
PVCC	Panska Ves	134.05	335	*e*PKPDF	PKiKP	21 21 40.2	-0.2
PVCC				*e*pPKP	pPKPdf	21 21 44.6	-0.1
PVCC				AMS	AMS	22 24 00.0	
	comp=Z,18µm,18.5s						
PVCC	Panska Ves	134.05	335	*e*PKIKP	PKiKP	21 21 40.2	-0.2
PVCC				*e*		21 21 44.6	
PVCC				MLR	MLR		
	comp=Z,18µm,18.5s						
VRAC	Vranov	134.06	332	⇓*i*P	PKPpre	21 21 32.5	
VRAC	Vranov	134.06	332	⇓PKIKP	PKPpre	21 21 32.5	
VRAC	Vranov	134.06	332	*e*PKP	PKiKP	21 21 41.9	+1.4
VRAC				*e*PP	PP	21 24 19.8	+11
VRAC				*e*		21 24 39.2	
VRAC				*e*		21 25 22.5	
VRAC				*e*SS	SS	21 42 10.6	+14
VRAC				*e*		21 56 58.5	
CLL	Collm	134.08	337	*e*PKPdf	PKPdf	21 21 36.8	-2.3
CLL				LR	LR		
	comp=Z,18µm,21.0s						
CLL	Collm	134.08	337	*e*PKPdf	PKPpre	21 21 34.0	
CLL				*e*PKPdfmax		21 21 39.0	
	comp=Z,20nm,1.4s						
CLL				*i* pPKPdf	pPKPdf	21 21 44.4	-0.3
	comp=Z,34nm,1.4s						
CLL				*i* sPKiKP	sPKPdf	21 21 48.7	+2.0
CLL				*i*		21 21 54.7	
CLL				*e*PP	PP	21 24 07.0	-2.1
CLL				*e*pPP		21 24 14.0	
CLL				*e*PPlp		21 24 31.0	
CLL				*e*SKPdf	SKPab	21 25 12.0	+1.6
CLL				*e*SKPdfmax		21 25 23.0	
CLL				*e*(SKKSac)		21 31 14.0	
CLL				*e*Sdif	Sdif	21 32 36.0	+11
CLL				*e*PSKS		21 34 14.0	
CLL				*e*PPS	PPS	21 36 18.0	
CLL				*e*		21 37 42.0	
CLL				*e*SS	SS	21 42 05.0	+8.6
CLL				*e*		21 43 30.0	
CLL				*e*		21 44 15.0	
CLL				*e*		21 46 00.0	
CLL				*e*SSS	SSS	21 46 54.0	
CLL				*e*SSSS		21 50 18.0	
CLL				Lmax		22 24 00.0	
CLL				LmV		22 24 00.0	
	comp=Z,17µm,20.5s						
CLL	Collm	134.08	337	*e*PKIKP	PKPdf	21 21 39.0	-0.1
CLL				*i*		21 21 44.4	
CLL				pmax	pmax		
	comp=Z,20nm,1.4s						
CLL				MLR	MLR		
	comp=Z,17µm,20.5s						
KRUC	Moravsky	134.33	332	*e*PKP	PKPdf	21 21 39.4	-0.3
KRUC				*e*PP	PP	21 24 21.4	+11
KRUC				*e*		21 24 41.5	
KRUC				*e*		21 25 25.2	
KRUC				*e*SS	SS	21 42 10.6	+11
KRUC				*e*		21 57 09.8	
MDVR	Moldovita	134.40	324	⇑*i*P	PKPdf	21 21 40.2	+0.2
MODS	Modra-Piesok	134.40	331	*e*PKIKP	PKPdf	21 21 40.1	+0.3
MODS				*e*		21 24 11.7	
MODS	Modra-Piesok	134.40	331	*e*PKP	PKPdf	21 21 40.1	+0.3
MODS				*e*PP	PP	21 24 11.7	+0.3
MODS				*e*SS	SS	21 42 16.3	+16
MODS				*e*L	L	22 15 43.8	
GOPC	GO Pecny, Ondr	134.42	334	AMS	AMS	22 19 30.0	
	comp=Z,16µm,20.4s						
PRU	Pruhonice	134.47	334	*e*PKPDF	PKiKP	21 21 40.8	-0.5
PRU				*e*pPKP	pPKPdf	21 21 45.5	0.0
PRU				*e*SS	SS	21 42 06.0	+4.8
PRU				AMS	AMS	22 24 20.0	
	comp=Z,18µm,18.3s						
PRU	Pruhonice	134.47	334	*e*PKIKP	PKiKP	21 21 40.8	-0.5
PRU				*e*		21 21 45.5	
PRU				*e*S	SS	21 42 06.0	+4.8
PRU				MLR	MLR		
	comp=Z,18µm,18.3s						
TREC	Trest	134.57	333	*e*PKPDF	PKiKP	21 21 42.1	+0.6
TREC				*e*PP	PP	21 24 14.2	+1.8
TREC				*e*SS	SS	21 42 13.6	+11
TREC				AMS	AMS	22 25 40.0	
	comp=Z,11µm,19.2s						
TREC	Trest	134.57	333	*e*PKIKP	PKiKP	21 21 42.1	+0.6
TREC				*e*		21 24 14.2	
TREC				MLR	MLR		
	comp=Z,11µm,19.2s						
ZST	Bratislava	134.61	331	*e*PKIKP	PKPdf	21 21 40.0	-0.2
ZST				*e*		21 24 13.1	
ZST	Bratislava	134.61	331	*e*PKP	PKPdf	21 21 40.0	-0.2
ZST				*e*PP	PP	21 24 13.1	+0.4
VTS	Vitosha	134.72	321	*e*PKPdf	PKPdf	21 21 41.3	+0.5
VTS				LR	LR		
	comp=Z,12µm,20.0s						
VTS	Vitosha	134.72	321	⇑*i*P	PKPdf	21 21 41.5	+0.7
VTS	Vitosha	134.72	321	⇑PKIKP	PKPdf	21 21 41.5	+0.7
VTS	Vitosha	134.72	321	P	PKiKP	21 21 44.7	+2.5
ESK	Eskdalemuir	134.92	351	PFAKE		21 21 50.0	+8.0
ESK				LR	LR		
	comp=Z,14µm,22.0s						
MMB	Musomiste	134.96	319	P	PKiKP	21 21 46.9	+4.3
NKC	Novy Kostel	135.14	336	*e*PKPDF	PKiKP	21 21 44.2	+1.5
NKC				AMS	AMS	22 23 50.0	
	comp=Z,14µm,19.9s						
NKC	Novy Kostel	135.14	336	*e*PKIKP	PKiKP	21 21 44.2	+1.5
NKC				MLR	MLR		
	comp=Z,14µm,19.9s						
MORH	Mrgy, Hungar	135.18	328	*e*PKiKP	PKiKP	21 21 43.0	+0.2
MORH				*e*PP	PP	21 24 23.0	+6.6
MORH				*e*SS	SS	21 41 57.0	-13
KKB	Krupnik	135.22	320	P	PKiKP	21 21 49.0	+5.9
CONA	Conrad Observa	135.39	331	PKPdf	PKPpre	21 21 37.5	
	comp=Z,29nm,1.7s						
KHC	Kasperske Hory	135.52	334	*e*PKPdf	PKPdf	21 21 40.2	-1.7
KHC				LR	LR		
	comp=Z,8µm,20.0s						
KHC	Kasperske Hory	135.52	334	*e*PKPDF	PKPdf	21 21 41.3	-0.7
KHC				*e*pPKP	pPKPdf	21 21 48.1	+0.5
KHC				*e*PP	PP	21 24 19.7	+1.3
KHC				*e*SS	SS	21 42 07.6	-6.4
KHC				AMS	AMS	22 25 00.0	
	comp=Z,19µm,17.9s						
KHC	Kasperske Hory	135.52	334	*e*PKIKP	PKPdf	21 21 41.3	-0.7
KHC				*e*		21 21 48.1	
KHC				*e*		21 24 19.7	
KHC				*e*S	SS	21 42 07.6	-6.4
KHC				MLR	MLR		
	comp=Z,19µm,17.9s						
IDGL	Inch Island, C	135.69	355	*e*SS	SS	21 42 26.5	+11
GEC2	GERESS Array S	135.69	334	PFAKE		21 21 50.0	+6.1
GEC2				LR	LR		
	comp=Z,16µm,20.0s						
GERES	GERESS Array B	135.69	334	PKP	PKPdf	21 21 41.7	-0.6
	comp=Z,4.9nm,1.0s,baz=48,slow=2.0,SNR=14						
DIVS	Divibare	135.79	325	*e*PKPdf	PKPdf	21 21 42.4	-0.2
DIVS				LR	LR		
	comp=Z,12µm,19.0s						
BEHE	Becsehely	135.97	329	*e*PKiKP	PKPpre	21 21 28.1	
BEHE				*e*PP	PP	21 24 11.1	-10
BEHE				*e*SS	SS	21 42 33.0	+13
GRA1	Grafenberg Arr	136.06	336	PFAKE		21 21 50.0	+5.5
GRA1				LR	LR		
	comp=Z,14µm,20.0s						
GRFO	Grafenberg	136.06	336	*e*PKPdf	PKiKP	21 21 44.8	+0.3
GRFO				LR	LR		
	comp=Z,13µm,20.0s						
MOA	Molln	136.18	332	PKPdf	PKPdf	21 21 40.4	-2.8
	comp=Z,18nm,1.6s						
LIT	Litokhoron	136.54	318	*e*PKPdf	PKPdf	21 21 40.7	-3.4
LIT				LR	LR		
	comp=Z,10µm,21.0s						
LIT	Litokhoron	136.54	318	*e*PKIKP	PKPdf	21 21 40.7	-3.4
LIT				MLR	MLR		
	comp=Z,10µm,21.0s						
SOKA	Soboth	136.68	331	PKPdf	PKPpre	21 21 38.6	
	comp=Z,15nm,1.4s						
TSUM	Tsumeb	136.71	226	*e*PKPdf	PKPdf	21 21 45.9	+0.7
TSUM				LR	LR		
	comp=Z,27µm,22.0s						
TSUM	Tsumeb	136.71	226	PKP	PKPdf	21 21 45.8	+0.7
	baz=55,slow=1.1						
BLY	Banja Luka	136.92	327	PFAKE		21 22 00.0	+14
BLY				LR	LR		
	comp=Z,15µm,22.0s						
BLY	Banja Luka	136.92	327	⇑*i*P	PKiKP	21 21 46.3	-0.1
CRES	Cresnjev	137.07	330	*e*PKPdf	PKPdf	21 21 45.0	+0.1
BEBN	Eben Emael	137.08	342	⇓PP	PP	21 24 25.4	-2.5
IDI	Anoyia	137.13	311	PFAKE		21 22 00.0	+13
IDI				LR	LR		
	comp=Z,6µm,21.0s						
IDI	Anoyia	137.13	311	⇑*i*P	PKiKP	21 21 54.5	+7.3
MEM	Membach	137.14	341	⇓PKiKP	PKPdf	21 21 45.0	+0.2
KBA	Koelnbreinsper	137.17	332	PKPdf	PKPdf	21 21 42.7	-2.5
	comp=Z,22nm,1.1s						
AGG	Agios Georgios	137.20	317	*e*PKPdf	PKiKP	21 21 46.9	-0.4
AGG				LR	LR		
	comp=Z,10µm,20.0s						
AGG	Agios Georgios	137.20	317	*e*PKIKP	PKiKP	21 21 46.9	-0.4
AGG				MLR	MLR		
	comp=Z,10µm,20.0s						
TTG	Podgorica	137.23	323	PFAKE		21 22 00.0	+13
TTG				LR	LR		
	comp=Z,18µm,22.0s						
BDFB	Brasilia	137.28	128	*e*PKIKP	PKPdf	21 21 43.2	-3.1
BDFB	Brasilia	137.28	128	PKhKP	PKPpre	21 21 38.9	

	comp=Z,10nm,0.9s,baz=226,slow=4.6,SNR=5.5						
BDFB				PKP	**PKPdf**	**21 21 46.2**	**-0.1**
	comp=Z,17nm,0.9s,baz=203,slow=1.7,SNR=17						
BDFB				SKPbc	**SKPbc**	**21 25 20.9**	**+2.0**
	comp=Z,9.9nm,1.1s,baz=208,slow=6.3,SNR=3.6						
DSB	**Dublin**	**137.37**	**353**	*e*SS	SS	21 42 46.6	+11
LJU	**Ljubljana**	**137.38**	**330**	*e*PKPdf	**PKPdf**	**21 21 45.0**	**-0.4**
UCC	**Uccle**	**137.48**	**343**	PFAKE		21 22 00.0	+13
UCC				LR	LR		
	comp=Z,12µm,19.0s						
UCC	**Uccle**	**137.48**	**343**	⇓PP	PP	21 24 29.2	-1.1
IGLA	**Glengowla, Co**	**137.48**	**356**	*e*SS	SS	21 42 51.6	+15
TIR	**Tirane**	**137.51**	**321**	PFAKE		21 22 00.0	+12
TIR				LR	LR		
	comp=Z,17µm,22.0s						
STU	**Stuttgart**	**137.58**	**337**	*e*PKPdf	**PKiKP**	**21 21 48.0**	**+0.3**
STU				LR	LR		
	comp=Z,11µm,21.0s						
STU	**Stuttgart**	**137.58**	**337**	*e*PKIKP	**PKiKP**	**21 21 48.0**	**+0.3**
WATA	**Walderalm**	**137.76**	**334**	*e*PKPdf	**PKPdf**	**21 21 45.2**	**-1.1**
	comp=Z,6.7nm,0.6s						
WTTA	**Wattenberg**	**137.79**	**334**	*e*PKPdf	**PKPdf**	**21 21 44.5**	**-1.9**
	comp=Z,18nm,1.5s						
ABTA	**Abfaltersbach**	**137.80**	**333**	*e*PKPdf	**PKPdf**	**21 21 45.0**	**-1.3**
	comp=Z,18nm,1.0s						
WLF	**Walferdange**	**137.91**	**340**	*e*PKPdf	**PKiKP**	**21 21 47.3**	**-1.0**
WLF				LR	LR		
	comp=Z,89µm,19.0s						
WLF	**Walferdange**	**137.91**	**340**	*e*PKIKP	**PKiKP**	**21 21 47.3**	**-1.0**
WLF				MLR	MLR		
	comp=Z,89µm,19.0s						
WLF	**Walferdange**	**137.91**	**340**	⇑PKiKP	**PKPdf**	**21 21 46.7**	**+0.4**
MOTA	**Moosalm**	**137.96**	**334**	*e*PKPdf	**PKPdf**	**21 21 43.2**	**-3.5**
	comp=Z,37nm,1.4s						
TRI	**Trieste**	**137.99**	**331**	PFAKE		21 22 00.0	+11
TRI				LR	LR		
	comp=Z,13µm,20.0s						
RETA	**Reutte**	**137.99**	**335**	PKPdf	**PKPdf**	**21 21 45.2**	**-1.4**
	comp=Z,8.1nm,1.0s						
SQTA	**Sankt Quirin**	**138.01**	**334**	PKPdf	**PKPdf**	**21 21 45.1**	**-1.6**
	comp=Z,22nm,0.9s						
DOU	**Dourbes**	**138.03**	**342**	⇑PKiKP	**PKPdf**	**21 21 46.0**	**-0.5**
BFO	**Black Forest**	**138.27**	**337**	*e*PKPdf	**PKPdf**	**21 21 48.0**	**+1.0**
BFO				LR	LR		
	comp=Z,11µm,20.0s						
BFO	**Black Forest**	**138.27**	**337**	*e*PKIKP	**PKPdf**	**21 21 48.1**	**+1.0**
BFO				MLR	MLR		
	comp=Z,11µm,20.0s						
FETA	**Feichten**	**138.37**	**334**	*e*PKPdf	**PKPdf**	**21 21 46.1**	**-1.3**
	comp=Z,24nm,0.9s						
ITM	**Ithomi**	**138.40**	**315**	PFAKE		21 22 00.0	+10
ITM				LR	LR		
	comp=Z,12µm,22.0s						
DAVA	**Damuels**	**138.51**	**335**	*e*PKPdf	**PKPdf**	**21 21 46.6**	**-1.1**
	comp=Z,16nm,1.1s						
ECH	**Echery**	**138.80**	**338**	*e*PKPdf	**PKiKP**	**21 21 50.0**	**-0.2**
ECH				LR	LR		
	comp=Z,11µm,22.0s						
ECH	**Echery**	**138.80**	**338**	*e*PKIKP	**PKiKP**	**21 21 50.0**	**-0.2**
ECH				MLR	MLR		
	comp=Z,11µm,22.0s						
VAL	**Valentia**	**139.01**	**356**	*e*SS	SS	21 43 09.1	+15
TUE	**Stuetta**	**139.38**	**335**	PFAKE		21 22 00.0	+8.3
TUE				LR	LR		
	comp=Z,20µm,19.0s						
SENIN	**Lac Senin/Sane**	**140.30**	**337**	*e*PKPdf	**PKPdf**	**21 21 51.6**	**+0.5**
SENIN				LR	LR		
	comp=Z,10µm,21.0s						
AQU	**L'Aquila**	**140.56**	**327**	PFAKE		21 22 00.0	+6.0
AQU				LR	LR		
	comp=Z,20µm,22.0s						
CLF	**Chambon-Foret**	**140.57**	**343**	PFAKE		21 22 00.0	+6.2
CLF				LR	LR		
	comp=Z,17µm,20.0s						
TIP	**Timpagrande**	**140.71**	**321**	*e*PKPdf	**PKiKP**	**21 21 55.2**	**+0.8**
TIP				LR	LR		
	comp=Z,9µm,21.0s						
TIP	**Timpagrande**	**140.71**	**321**	⇓*i*P	**PKiKP**	**21 21 55.3**	**+0.9**
VLC	**Villacollemand**	**140.74**	**332**	PFAKE		21 22 00.0	+5.7
VLC				LR	LR		
	comp=Z,21µm,21.0s						
CUC	**Castrocucco**	**140.78**	**323**	PFAKE		21 22 00.0	+5.5
CUC				LR	LR		
	comp=Z,20µm,22.0s						
BNI	**Bardonecchia**	**141.62**	**336**	*e*PKHKP	PKPpre	21 21 47.2	
CEL	**Celeste**	**141.81**	**320**	PFAKE		21 22 10.0	+13
CEL				LR	LR		
	comp=Z,9µm,22.0s						
SSB	**Saint Sauveur**	**142.25**	**338**	*e*PKPpre	PKPpre	21 21 50.4	
SSB				LR	LR		
	comp=Z,10µm,18.0s						
MAHO	**Mahon**	**146.89**	**334**	PKP	**PKiKP**	**21 22 07.3**	**+0.3**
MAHO				SS	SS	21 44 35.8	+10
KEST	**Kesra**	**147.43**	**323**	*e*PKPdf	**PKPbc**	**21 22 05.9**	**-0.2**
KEST	**Kesra**	**147.43**	**323**	PKPbc	**PKPbc**	**21 22 06.2**	**+0.1**
	comp=Z,56nm,1.1s,baz=274,slow=2.4,SNR=18						
PBRG	**Braganca**	**148.60**	**349**	*e*PKPdf	**PKPbc**	**21 22 08.4**	**-0.6**
PGAV	**Gavieira, Arco**	**148.69**	**352**	*e*PKPdf	**PKPbc**	**21 22 09.8**	**+0.5**
PGAV	**Gavieira, Arco**	**148.69**	**352**	*e*SS	SS	21 45 02.3	+16
PGAV	**Gavieira, Arco**	**148.69**	**352**	*e*LQ	LQ	22 03 55.4	
PGAV	**Gavieira, Arco**	**148.69**	**352**	*e*LR	LR	22 15 12.2	
	comp=Z,15µm,20.0s						
PCAB	**Cabril**	**148.90**	**351**	*e*PKPdf	**PKPdf**	**21 22 07.3**	**+1.5**
POLO	**Lamas de Olo**	**149.20**	**351**	*e*PKPdf	**PKPbc**	**21 22 10.2**	**-0.4**
UCM	**Universidad Co**	**149.22**	**344**	PKP	**PKPbc**	**21 22 11.0**	**+0.3**
UCM				SS	SS	21 45 06.4	+14
MVO	**Moncorvo**	**149.27**	**350**	*e*PKPdf	**PKPdf**	**21 22 05.7**	**-0.8**
MVO	**Moncorvo**	**149.27**	**350**	*e*SS	SS	21 45 07.1	+14
MVO	**Moncorvo**	**149.27**	**350**	*e*LQ	LQ	22 04 04.4	
MVO				*e*LR	LR	22 12 55.7	
	comp=Z,11µm,20.0s						
PVRL	**Vila Real**	**149.28**	**351**	*e*PKPdf	**PKPbc**	**21 22 11.3**	**+0.5**
SET	**Setif**	**149.28**	**328**	P	**PKPab**	**21 22 14.0**	**-1.5**
SRBC	**Serra Branca**	**149.40**	**22**	*e*PKP	**PKPab**	**21 22 14.7**	**-1.0**
PGRA	**Graciosa**	**149.43**	**22**	*e*PKP	**PKPbc**	**21 22 10.0**	**-1.1**
PTO	**Porto**	**149.55**	**352**	*e*PKPdf	**PKPbc**	**21 22 11.6**	**+0.3**
ROSA	**Rosais**	**149.61**	**22**	*e*PKP	**PKPbc**	**21 22 09.6**	**-2.0**
ROSA	**Rosais**	**149.61**	**22**	PFAKE		21 22 20.0	+3.4
ROSA				LR	LR		
	comp=Z,11µm,22.0s						
PICO	**Pico**	**149.73**	**23**	*e*PKP	**PKPbc**	**21 22 12.3**	**+0.3**
PICO	**Pico**	**149.73**	**23**	*e*PKP	**PKiKP**	**21 22 13.1**	**+0.1**
PCAN	**Candelaria**	**149.74**	**23**	*e*PKP	**PKPbc**	**21 22 09.9**	**-2.1**
PMAN	**Manadas**	**149.74**	**22**	*e*PKP	**PKPbc**	**21 22 12.4**	**+0.5**
PVIS	**Viseu**	**149.86**	**351**	*e*PKPdf	**PKPbc**	**21 22 12.6**	**+0.4**
ES19	**SONSECA Array**	**149.97**	**344**	*e*PKPdf	**PKPdf**	**21 22 08.2**	**+0.5**
ESDC	**Sonseca Array**	**150.01**	**344**	PKPbc	**PKPbc**	**21 22 12.1**	**-0.5**
	comp=Z,7.2nm,0.8s,baz=14,slow=3.5,SNR=38						
ESLA	**Sonseca Array**	**150.01**	**344**	*e*PKPbc	**PKPbc**	**21 22 12.7**	**0.0**
ESLA				LR	LR		
	comp=Z,18µm,22.0s						
ADH	**Angra Heroismo**	**150.03**	**21**	*e*PKP	**PKiKP**	**21 22 14.3**	**+0.8**
PSCM	**Serra do Cume**	**150.03**	**21**	*e*PKP	**PKiKP**	**21 22 13.4**	**-0.1**
MTE	**Manteigas**	**150.10**	**350**	*e*PKPdf	**PKPbc**	**21 22 11.8**	**-1.0**
MTE	**Manteigas**	**150.10**	**350**	*e*SS	SS	21 45 20.9	+19
MTE	**Manteigas**	**150.10**	**350**	*e*LQ	LQ	22 04 26.1	
MTE				*e*LR	LR	22 12 48.1	
	comp=Z,13µm,20.0s						
MTE	**Manteigas**	**150.10**	**350**	*e*PKPbc	**PKPbc**	**21 22 13.0**	**+0.1**
MTE				LR	LR		
	comp=Z,15µm,21.0s						
PAB	**San Pablo**	**150.23**	**345**	*e*PKPdf	**PKPdf**	**21 22 09.0**	**+0.9**
PAB				LR	LR		
	comp=Z,10µm,20.0s						
PAB	**San Pablo**	**150.23**	**345**	*e*PKIKP	**PKPdf**	**21 22 09.0**	**+0.9**
PAB				MLR	MLR		
	comp=Z,10µm,20.0s						
PCAS	**Casmilo, Conde**	**150.60**	**351**	*e*PKPdf	**PKPbc**	**21 22 12.8**	**-1.2**
PCAS	**Casmilo, Conde**	**150.60**	**351**	*i* SS	SS	21 45 19.4	+12
PCBR	**Castelo Branco**	**150.64**	**350**	*e*PKPdf	**PKPdf**	**21 22 09.0**	**+0.4**
CART	**Cartagena**	**150.98**	**338**	PFAKE		21 22 20.0	-2.2
CART				LR	LR		
	comp=Z,9µm,19.0s						
CART	**Cartagena**	**150.98**	**338**	PKP	**PKiKP**	**21 22 17.1**	**+1.6**
CART				SS	SS	21 45 23.6	+12
PTOM	**Tomar**	**151.01**	**351**	*e*PKPdf	**PKiKP**	**21 22 15.4**	**-0.1**
PMRV	**Marv??o**	**151.02**	**349**	*e*PKPdf	**PKPbc**	**21 22 14.6**	**-0.4**
PMRV	**Marv??o**	**151.02**	**349**	*e*SS	SS	21 45 13.8	+1.8
PMRV	**Marv??o**	**151.02**	**349**	*e*LQ	LQ	22 03 38.7	
PMRV	**Marv??o**	**151.02**	**349**	*e*LR	LR	22 15 54.0	
	comp=Z,13µm,20.0s						
ECHA	**Ech Chlef**	**151.27**	**333**	P	**PKiKP**	**21 22 16.0**	**-0.1**
PSET	**Sete Cidades**	**151.29**	**19**	*e*PKP	**PKPbc**	**21 22 14.2**	**-1.5**
PDA	**Ponta Delgada**	**151.38**	**19**	*e*PKP	**PKPbc**	**21 22 13.4**	**-2.4**
PCALD	**Caldeiras da R**	**151.39**	**19**	*e*PKP	**PKiKP**	**21 22 17.0**	**+0.6**
GRON	**Grota Negra**	**151.40**	**19**	*e*PKP	**PKiKP**	**21 22 17.7**	**+1.3**
CMLA	**Cha da Macela**	**151.41**	**19**	*e*PKP	**PKiKP**	**21 22 16.6**	**+0.2**
CMLA	**Cha da Macela**	**151.41**	**19**	*e*PKPab	**PKPab**	**21 22 24.2**	**+0.2**
CMLA				LR	LR		
	comp=Z,12µm,20.0s						
BART	**Pico Bartolome**	**151.51**	**19**	*e*PKP	**PKiKP**	**21 22 16.7**	**0.0**
PMTG	**Montargil**	**151.52**	**350**	*e*PKPdf	**PKPbc**	**21 22 15.8**	**-0.3**
EANR	**'Ain N'Sour**	**151.55**	**333**	P	**PKiKP**	**21 22 17.0**	**+0.2**
PESTR	**Estremoz**	**151.60**	**349**	*e*PKPdf	**PKPbc**	**21 22 15.6**	**-0.8**
PESTR	**Estremoz**	**151.60**	**349**	*i* SS	SS	21 45 35.8	+17
PESTR	**Estremoz**	**151.60**	**349**	*e*pPKPdf	**pPKPdf**	**21 22 14.7**	**-1.0**
PESTR				LR	LR		
	comp=Z,8µm,21.0s						
PMAFR	**Mafra**	**151.79**	**352**	*e*PKPdf	**PKiKP**	**21 22 17.9**	**+0.7**
ETRT	**Tiaret**	**151.93**	**333**	P	**PKiKP**	**21 22 20.5**	**+2.8**
SHEL	**Horse Pasture**	**152.00**	**197**	*e*PKPbc	**PKiKP**	**21 22 19.1**	**+0.8**
SHEL				LR	LR		
	comp=Z,12µm,19.0s						
SHEL	**Horse Pasture**	**152.00**	**197**	*e*PKIKP	**PKiKP**	**21 22 19.1**	**+0.8**
SHEL				MLR	MLR		
	comp=Z,12µm,19.0s						
LIS	**Lisbon**	**152.00**	**352**	*e*PKPdf	**PKPdf**	**21 22 10.3**	**-0.5**
LIS				*e*PP	**PP**	**21 25 58.5**	**+1.7**
LIS				AMS	AMS	22 19 49.8	
	comp=E,15µm,29.9s						
LIS	**Lisbon**	**152.00**	**352**	*e*PKIKP	**PKPdf**	**21 22 10.2**	**-0.5**
LIS				*e*		21 25 58.5	
PSMA	**Santa Maria**	**152.24**	**19**	*e*PKP	**PKiKP**	**21 22 18.4**	**+0.3**
PSMN	**Pico do Norte,**	**152.25**	**19**	*e*PKP	**PKPdf**	**21 22 13.8**	**+2.7**
PBEJ	**Beja**	**152.47**	**349**	*e*PKPdf	**PKiKP**	**21 22 19.3**	**+0.7**
PNCL	**Nicolau / Gran**	**152.50**	**350**	*e*PKPdf	**PKiKP**	**21 22 18.8**	**+0.2**
PNCL	**Nicolau / Gran**	**152.50**	**350**	*i* SS	SS	21 45 42.4	+14
RCBR	**Riachuelo**	**152.64**	**127**	*e*PKPbc	**PKPbc**	**21 22 19.5**	**0.0**
RCBR				LR	LR		
	comp=Z,13µm,20.0s						
RCBR	**Riachuelo**	**152.64**	**127**	*e*PKIKP	**PKPbc**	**21 22 19.5**	**0.0**
RCBR				MLR	MLR		
	comp=Z,13µm,20.0s						
MESJ	**Messejana**	**152.71**	**350**	*e*PKPdf	**PKPdf**	**21 22 11.3**	**-0.5**
MESJ				*e*PP	**PP**	**21 26 02.6**	**+1.7**
MESJ				*e*SS	SS	21 45 34.4	+3.8
MESJ				AMS	AMS	22 40 11.4	
	comp=Z,9µm,15.5s						
MESJ	**Messejana**	**152.71**	**350**	*e*PKPdf	**PKPdf**	**21 22 11.5**	**-0.3**
MESJ	**Messejana**	**152.71**	**350**	*e*PKIKP	**PKPdf**	**21 22 11.3**	**-0.5**
MESJ				*e*		21 26 02.6	
MESJ				*e*SS	SS	21 45 34.3	+3.7
EMAL	**Malaga-Limoner**	**152.86**	**343**	PKP	**PKPdf**	**21 22 15.0**	**+3.0**
EMAL				SS	SS	21 45 36.1	+3.7
LIJA	**Lijar**	**153.00**	**344**	*e*PKP	**PKPdf**	**21 22 15.0**	**+2.6**
PVAQ	**Vaqueiros**	**153.05**	**349**	*e*LQ	LQ	21 22 26.1	
PVAQ	**Vaqueiros**	**153.05**	**349**	*e*SS	SS	21 45 45.3	+11
PVAQ	**Vaqueiros**	**153.05**	**349**	*e*LQ	LQ	22 04 58.3	
PVAQ	**Vaqueiros**	**153.05**	**349**	*e*LR	LR	22 17 55.9	
	comp=Z,8µm,20.0s						
PTEO	**Sao Teotonio**	**153.09**	**351**	*e*PKPdf	**PKiKP**	**21 22 20.3**	**+0.5**
PBDV	**Barranco-do-Ve**	**153.24**	**349**	*e*PKPdf	**PKPdf**	**21 22 15.3**	**+2.7**
PBDV	**Barranco-do-Ve**	**153.24**	**349**	*i* SS	SS	21 45 50.3	+14
MORF	**Marmelete**	**153.31**	**350**	*e*PKPdf	**PKPdf**	**21 22 12.3**	**-0.5**
MORF				*e*PP	**PP**	**21 26 05.9**	**+1.6**
MORF				AMS	AMS	22 23 17.4	
	comp=E,10µm,20.4s						
MORF	**Marmelete**	**153.31**	**350**	*e*PKPdf	**PKPdf**	**21 22 14.1**	**+1.4**
MORF	**Marmelete**	**153.31**	**350**	*e*PKIKP	**PKPdf**	**21 22 12.2**	**-0.5**
MORF				*e*		21 26 05.9	
PFVI	**Vila Bisbo**	**153.51**	**350**	*e*PKPdf	**PKPbc**	**21 22 17.8**	**-2.8**
PFVI	**Vila Bisbo**	**153.51**	**350**	PFAKE		21 22 20.0	-0.6
PFVI				LR	LR		
	comp=Z,11µm,20.0s						
SFS	**San Fernando**	**153.62**	**346**	PFAKE		21 22 20.0	-0.9
SFS				LR	LR		
	comp=Z,10µm,22.0s						
SFS	**San Fernando**	**153.62**	**346**	PKP	**PKPdf**	**21 22 11.6**	**-1.5**
SFS				SS	SS	21 45 40.3	-0.2
MELI	**Melilla**	**153.73**	**339**	PKP	**PKPdf**	**21 22 16.1**	**+2.8**
CEU	**Ceuta**	**153.94**	**344**	PKP	**PKPdf**	**21 22 11.2**	**-2.4**
CEU				SS	SS	21 45 53.4	+9.3
IFR	**Ifrane**	**156.08**	**341**	PKP	**PKPdf**	**21 22 13.7**	**-3.2**
IFR				SS	SS	21 46 02.5	-5.5
RTC	**Rabat Centre**	**156.13**	**345**	PFAKE		21 22 30.0	+13
RTC				LR	LR		
	comp=Z,32µm,20.0s						
AVE	**Averroes**	**156.93**	**346**	PKP	**PKPdf**	**21 22 25.3**	**+7.6**
AVE				SS	SS	21 46 20.4	+3.9
TAM	**Tamanrasset**	**157.86**	**305**	*e*PKPdf	**PKPdf**	**21 22 20.1**	**+0.7**
TAM				LR	LR		
	comp=Z,13µm,19.0s						
TAM	**Tamanrasset**	**157.86**	**305**	*e*PKIKP	**PKPdf**	**21 22 20.1**	**+0.7**
TAM				MLR	MLR		
	comp=Z,13µm,19.0s						
PMOZ	**Porto Moniz, M**	**158.05**	**7**	*e*SS	SS	21 46 44.3	+16
PMOZ	**Porto Moniz, M**	**158.05**	**7**	*e*LQ	LQ	22 07 51.6	
PMOZ				*e*LR	LR	22 16 50.5	
	comp=Z,10µm,20.0s						
TOA0	**Torodi Ar. Sit**	**164.39**	**280**	*e*PKPdf	**PKPdf**	**21 22 24.8**	**-1.5**
TOA0				*e*PKPdf	**PKPdf**	**21 22 26.1**	**-0.3**
TOA0	**Torodi Ar. Sit**	**164.39**	**280**	P	**PKPdf**	**21 22 25.6**	**-0.7**
	SNR=24						
TORD	**Torodi Ar. Bea**	**164.39**	**280**	PKP	**PKPdf**	**21 22 25.7**	**-0.6**
	comp=Z,8.7nm,1.1s,baz=124,slow=1.7,SNR=27						
TORD				PKPab	**PKPab**	**21 23 20.3**	**-0.5**
	comp=Z,23nm,1.1s,baz=87,slow=2.4,SNR=7.8						
TORD				PP	**PP**	**21 27 07.3**	**+0.2**
	comp=Z,4.4nm,1.0s,baz=116,slow=3.4,SNR=2.9						
TOA1	**Torodi Ar. Sit**	**164.39**	**280**	*e*PKPdf	**PKPdf**	**21 22 25.7**	**-0.6**
TOA1				*e*PKPab	**PKPab**	**21 23 20.3**	**-0.5**
TOA1				*e*PP	**PP**	**21 27 07.3**	**+0.2**
KIC	**Kosan Boka**	**169.67**	**245**	*e*PKIKP	**PKPdf**	**21 22 29.2**	**-1.1**
	comp=Z,49nm,0.7s						
KIC	**Kosan Boka**	**169.67**	**245**	*e*PKP1	**PKPab**	**21 23 43.3**	**-0.8**
	comp=Z,162nm,1.1s						
LIC	**Lamto**	**169.86**	**243**	*e*PKIKP	**PKPdf**	**21 22 29.2**	**-1.2**
	comp=Z,151nm,1.5s						
LIC	**Lamto**	**169.86**	**243**	*e*PKP1	**PKPab**	**21 23 44.1**	**-0.8**
	comp=Z,264nm,1.5s						
DBIC	**Dimbokro**	**169.91**	**246**	PKP	**PKPdf**	**21 22 29.6**	**-0.8**
	comp=Z,17nm,1.1s,baz=142,slow=2.6,SNR=7.8						
DBIC				PKPab	**PKPab**	**21 23 44.9**	**-0.2**
	comp=Z,23nm,1.1s,baz=119,slow=5.9,SNR=5.1						
TIC	**Toumodi**	**170.04**	**245**	*e*PKIKP	**PKPdf**	**21 22 29.4**	**-1.2**
TIC	**Toumodi**	**170.04**	**245**	*e*PKP1	**PKPab**	**21 23 43.6**	**-2.2**

MAN 09 21:09:52.0, 13°.60N×122°.57E, h1^{km}, mb3.6, ML2.3, MS1.8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUQP	**San Andres**	**0.30**	**159**	*e*P	Pg	21 09 57.4	-0.3
AUQP				*e*S	Sg	21 10 02.6	+1.0
GQP	**Guinayangan**	**0.32**	**339**	⇑*e*P	Pg	21 09 56.6	-1.5
GQP				*e*S	Sg	21 10 02.3	0.0
BOAC	**Boac**	**0.72**	**259**	*e*P	Pg	21 10 05.6	-0.1
BOAC				*e*S	Sn	21 10 19.9	-1.0
POLP	**Polilio Island**	**1.27**	**332**	*e*P	Pb	21 10 16.6	-0.1
POLP				*e*S	Sg	21 10 31.4	-1.5
OTRP	**Odiongan**	**1.34**	**203**	*e*P	Sg	21 10 32.3	-2.8
SJMP	**San Jose**	**1.81**	**231**	*e*P	Pn	21 10 24.6	+0.3
OCLP	**Ormoc**	**3.23**	**142**	*e*P	Pb	21 10 48.8	-1.3
BATP	**Bataraza**	**6.68**	**225**	*e*P	Pn	21 11 29.8	-1.5

IDC 09 21:18:32.6±1.8, 11°.59S×165°.06E, h0^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.5/49, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=52.6km s-min=33.5km az=121.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.50**	**173**	Pn	Pn	21 21 04.7	+0.1
	0.4nm,0.3s,baz=319,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**30.67**	**250**	P	P	21 24 49.0	-0.2
	0.3nm,0.7s,baz=81,slow=8.9,SNR=3.0						
ASAR	**Alice Springs**	**31.95**	**244**	P	P	21 25 00.4	-0.1
	0.3nm,0.8s,baz=66,slow=10,SNR=2.6						
ILAR	**Eielson Array**	**84.24**	**19**	P	P	21 31 05.6	-0.1
	0.5nm,0.8s,baz=223,slow=5.8,SNR=4.2						
MKAR	**Makanchi Array**	**93.46**	**317**	P	P	21 31 50.5	+0.3
	0.2nm,0.7s,baz=87,slow=6.2,SNR=2.3						

ISCJB ***09*** *21:19:56.7±0.7, 10°.99S±0°.06×165°.9E±0°.1, h10^{km}, mb4.0/11, Error ellipse: s-maj=15.8km s-min=8.9km az=169.6*

IDC ***09*** *21:19:57.0±0.8, 10°.87S×165°.88E, h0^{km}, mb4.0/12, mb1 4.2/14, mb1mx4.0/51, mbtmp4.1/14, ML4.3/2, Error ellipse: s-maj=25.3km s-min=18.2km az=117.0*

ISC 09 21:19:58.5±0.7, 10°.91S±0°.08×165°.9E±0°.1, h10^{km}, n22, σ0^{s}.81/18, mb4.0/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.01**	**284**	Pn	**Pn**	**21 21 26.3**	**-1.3**
	10.0nm,0.3s,baz=135,slow=17,SNR=2.6						
DZM	**Mont Dzumac**	**11.11**	**177**	Pn	**Pn**	**21 22 37.9**	**+0.2**
	1.4nm,0.3s,baz=356,slow=18,SNR=3.7						
DZM				Sn	**Sn**	**21 24 40.6**	**-1.6**
	baz=272,slow=15,SNR=1.5						
CTA	**Charters Tower**	**20.97**	**242**	P	**P**	**21 24 43.5**	**+1.5**
	3.9nm,0.8s,baz=73,slow=16,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**29.22**	**2**	T	T	21 57 10.9	
	baz=181,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.23**	**2**	T	T	21 57 11.1	
	baz=181,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.24**	**2**	T	T	21 57 12.1	
	baz=181						
H11N1	**WAKE ISLAND Hy**	**30.45**	**2**	T	T	21 58 41.8	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**30.45**	**2**	T	T	21 58 41.9	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	21 58 41.6	
	baz=182						
STKA	**Stephens Creek**	**30.63**	**223**	P	**P**	**21 26 14.1**	**+1.0**
	1.1nm,0.6s,baz=10,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**31.65**	**250**	P	**P**	**21 26 22.0**	**-0.2**
	2.7nm,0.9s,baz=80,slow=9.0,SNR=7.5						
ASAR	**Alice Springs**	**32.97**	**243**	P	**P**	**21 26 33.3**	**-0.4**
	0.9nm,0.8s,baz=64,slow=10.0,SNR=5.3						
ASAR				PcP	**PcP**	**21 29 18.2**	**+0.3**
	1.0nm,0.7s,baz=69,slow=2.7,SNR=7.6						
RPZ	**Rata Peaks**	**32.99**	**173**	P	**P**	**21 26 33.9**	**+0.2**
	9.0nm,0.7s,baz=23,slow=7.7,SNR=5.4						
FITZ	**Fitzroy Crossi**	**39.53**	**255**	P	**P**	**21 27 30.4**	**+0.4**
	3.5nm,0.9s,baz=73,slow=6.3,SNR=3.1						
MJAR	**Matsushiro Arr**	**53.91**	**332**	P	**P**	**21 29 22.2**	**-0.1**
	1.1nm,0.8s,baz=163,slow=8.9,SNR=3.2						
USRK	**Ussuriysk Ar.**	**62.88**	**333**	P	**P**	**21 30 24.6**	**-0.2**
	1.4nm,0.7s,baz=148,slow=11,SNR=6.0						
CMAR	**Chiang Mai Arr**	**72.17**	**293**	P	**P**	**21 31 24.4**	**+0.3**
	0.7nm,0.9s,baz=120,slow=5.3,SNR=4.4						
SONM	**Songino Array**	**78.63**	**324**	P	**P**	**21 32 01.2**	**+0.4**
	0.6nm,0.8s,baz=149,slow=6.0,SNR=3.5						
ILAR	**Eielson Array**	**83.34**	**18**	P	**P**	**21 32 25.5**	**+0.1**
	1.4nm,0.6s,baz=232,slow=5.1,SNR=9.6						
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**21 32 39.0**	**0.0**
	0.9nm,0.7s,baz=237,slow=5.3,SNR=4.0						
ARCES	**ARCESS Array B**	**116.23**	**346**	PKP	**PKPdf**	**21 38 41.1**	**-0.5**
	4.5nm,1.0s,baz=24,slow=3.3,SNR=6.2						
ESDC	**Sonseca Array**	**149.96**	**344**	PKPbc	**PKiKP**	**21 39 49.4**	**-1.2**
	0.3nm,0.4s,baz=346,slow=3.5,SNR=4.6						

ISCJB ***09*** *21:27:03.8±0.5, 10°.91S±0°.07×166°.01E±0°.07, h10^{km}, mb4.3/21, Error ellipse: s-maj=10.5km s-min=8.9km az=41.9*

IDC ***09*** *21:27:03.9±0.6, 10°.88S×166°.02E, h0^{km}, mb4.3/19, mb1 4.4/21, mb1mx4.3/47, mbtmp4.3/21, ML4.7/2, Error ellipse: s-maj=18.1km s-min=14.5km az=110.0*

NEIC ***09*** *21:27:05.5±0.3, 10°.87S×166°.01E, h10^{km}, mb4.8/2, Error ellipse: s-maj=9.4km s-min=7.4km az=95.0*

ISC 09 21:27:05.4±0.6, 10°.87S±0°.09×166°.07E±0°.08, h10^{km}, n39, σ0^{s}.86/35, mb4.3/21, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.19**	**283**	*e*P	**Pn**	**21 28 38.0**	**+1.0**
HNR	**Honiara**	**6.19**	**283**	*e*Pn	**Pn**	**21 28 37.2**	**+0.2**
	116nm,0.7s						
HNR				Sn	**Sn**	**21 29 49.0**	**+1.1**
HNR	**Honiara**	**6.19**	**283**	Pn	**Pn**	**21 28 37.4**	**+0.5**
	25nm,0.3s,baz=186,slow=1.7,SNR=12						
HNR				Sn	**Sn**	**21 29 49.0**	**+1.1**
	baz=141,slow=15,SNR=1.6						
DZM	**Mont Dzumac**	**11.14**	**178**	Pn	**Pn**	**21 29 45.1**	**+0.1**
	4.6nm,0.3s,baz=9.8,slow=16,SNR=16						
CTA	**Charters Tower**	**21.16**	**242**	P	**P**	**21 31 51.2**	**+0.3**
	4.7nm,0.8s,baz=75,slow=14,SNR=5.1						
CTAO	**Charters Tower**	**21.16**	**242**	P	**P**	**21 31 50.2**	**-0.7**
URZ	**Urewera**	**29.01**	**162**	P	**P**	**21 33 05.9**	**+0.3**
	2.4nm,0.4s,baz=321,slow=13,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**29.18**	**1**	T	T	22 03 26.7	
	baz=181,slow=76,SNR=9.8						
H11S3	**WAKE ISLAND Hy**	**29.18**	**1**	T	T	22 03 26.9	
	baz=181,slow=76,SNR=8.0						
H11S1	**WAKE ISLAND Hy**	**29.20**	**1**	T	T	22 03 28.2	
	baz=181,slow=76,SNR=8.1						
H11N1	**WAKE ISLAND Hy**	**30.40**	**2**	T	T	22 04 58.3	
	baz=182,slow=76,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**30.41**	**2**	T	T	22 04 58.8	
	baz=182,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	**30.42**	**2**	T	T	22 04 59.8	
	baz=182,slow=76,SNR=9.1						
STKA	**Stephens Creek**	**30.79**	**224**	P	**P**	**21 33 21.4**	**+0.1**
	0.6nm,0.3s,baz=40,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	**31.84**	**250**	P	**P**	**21 33 29.9**	**-0.9**
	6.9nm,0.7s,baz=81,slow=9.2,SNR=42						
RPZ	**Rata Peaks**	**33.01**	**173**	P	**P**	**21 33 41.3**	**+0.5**
	19nm,0.7s,baz=58,slow=15,SNR=12						
ASAR	**Alice Springs**	**33.15**	**243**	P	**P**	**21 33 41.1**	**-1.2**
	3.1nm,0.8s,baz=66,slow=10,SNR=26						
FITZ	**Fitzroy Crossi**	**39.73**	**255**	P	**P**	**21 34 38.2**	**-0.3**
	8.3nm,0.7s,baz=93,slow=6.1,SNR=23						
BATI	**Baumata**	**41.67**	**267**	P	**P**	**21 34 54.4**	**-0.2**
	7.7nm,0.5s,baz=153,slow=4.5,SNR=3.4						
MJAR	**Matsushiro Arr**	**53.96**	**332**	P	**P**	**21 36 29.1**	**-0.5**
	3.1nm,0.9s,baz=170,slow=8.7,SNR=8.1						
KSRS	**Korea Array**	**59.91**	**325**	P	**P**	**21 37 11.9**	**+0.2**
	0.7nm,0.6s,baz=140,slow=7.1,SNR=5.1						
KSAR	**Wonju Array Be**	**59.92**	**325**	P	**P**	**21 37 11.9**	**+0.1**
USRK	**Ussuriysk Ar.**	**62.93**	**333**	P	**P**	**21 37 33.0**	**+1.0**
	2.7nm,0.8s,baz=110,slow=4.9,SNR=7.0						
KLR	**Kul'dur**	**67.02**	**336**	P	**P**	**21 37 59.0**	**+0.4**
	0.9nm,0.7s,baz=149,slow=6.8,SNR=4.9						
ENH	**Enshi**	**68.03**	**309**	*e*P	**P**	**21 38 03.8**	**-1.6**
	9.5nm,1.3s						
CMAR	**Chiang Mai Arr**	**72.33**	**293**	P	**P**	**21 38 32.4**	**+0.4**
	1.7nm,0.8s,baz=122,slow=4.1,SNR=14						
KDAK	**Kodiak Island**	**76.30**	**21**	P	**P**	**21 38 55.2**	**+1.0**
	21nm,1.1s,baz=270,slow=9.1,SNR=3.1						
ULN	**Ulaanbaatar**	**78.35**	**324**	*e*P	**P**	**21 39 06.4**	**+0.2**
	10nm,1.4s						
SONM	**Songino Array**	**78.71**	**324**	P	**P**	**21 39 08.2**	**+0.1**
	0.7nm,0.5s,baz=147,slow=6.0,SNR=9.9						
QSPA	**South Pole Qui**	**79.13**	**180**	*e*P	**P**	**21 39 11.3**	**+1.1**
	2µm,4.5s						
ILAR	**Eielson Array**	**83.25**	**18**	P	**P**	**21 39 31.9**	**+0.1**
	0.5nm,0.5s,baz=230,slow=5.4,SNR=9.4						
NVAR	**Mina Array Bea**	**85.67**	**50**	P	**P**	**21 39 46.6**	**+1.7**
	1.2nm,1.0s,baz=305,slow=5.2,SNR=3.6						
ZALV	**Zalesovo Beam**	**93.60**	**324**	P	**P**	**21 40 20.8**	**-1.0**
	0.4nm,0.5s,baz=64,slow=3.4,SNR=3.7						
MKAR	**Makanchi Array**	**93.61**	**317**	P	**P**	**21 40 21.8**	**-0.3**
	1.8nm,0.7s,baz=92,slow=6.0,SNR=14						
ARCES	**ARCESS Array B**	**116.24**	**346**	PKP	**PKiKP**	**21 45 47.9**	**-0.7**
	1.6nm,0.8s,baz=61,slow=2.0,SNR=7.4						
FINES	**FINESS Array B**	**121.72**	**339**	PKP	**PKPdf**	**21 45 58.6**	**-0.7**
	1.3nm,1.0s,baz=48,slow=6.2,SNR=3.8						
BRTR	**Keskin Array B**	**129.08**	**313**	PKP	**PKPdf**	**21 46 12.3**	**-2.0**
	0.3nm,0.8s,baz=48,slow=4.7,SNR=3.0						
KEST	**Kesra**	**147.47**	**323**	PKPbc	**PKPbc**	**21 46 50.5**	**+0.2**
	3.3nm,0.7s,baz=45,slow=4.3,SNR=3.0						
ESDC	**Sonseca Array**	**149.97**	**345**	PKPbc	**PKPbc**	**21 46 55.5**	**-1.1**
	0.3nm,0.5s,baz=14,slow=3.4,SNR=4.0						

IDC 09 21:29:15.1±3.9, 11°.06S×166°.03E, h0^{km}, mb4.1/4, mb1 4.3/5, mb1mx3.8/46, mbtmp4.2/5, ML4.5/1, Error ellipse: s-maj=80.0km s-min=55.9km az=119.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.20**	**285**	Pn	Pn	21 30 48.1	0.0
	12nm,0.3s,baz=158,slow=5.4,SNR=2.2						
WRA	**Warramunga Arr**	**31.74**	**250**	P	P	21 35 41.1	-0.1
	1.8nm,0.6s,baz=82,slow=9.2,SNR=7.1						
ASAR	**Alice Springs**	**33.04**	**243**	P	P	21 35 53.0	+0.5
	2.2nm,0.8s,baz=64,slow=10,SNR=8.7						

FITZ	Fitzroy Crossi	39.65	255	P	P	21 36 48.5	-0.5
	2.1nm,0.7s,baz=68,slow=5.4,SNR=4.4						
MKAR	Makanchi Array	93.72	317	P	P	21 42 33.8	-0.1
	0.4nm,0.8s,baz=84,slow=5.2,SNR=3.3						

IDC 09 21:29:39.0±3.0, 10°.75S×165°.68E, h0km, mb4.1/7, mb1 4.3/7, mb1mx3.9/44, mbtmp4.1/7, Error ellipse: s-maj=132.5km s-min=24.9km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.88	241	P	Pn	21 34 24.6	-0.9
	3.5nm,0.7s,baz=54,slow=14,SNR=2.8						
WRA	Warramunga Arr	31.53	249	P	P	21 36 03.3	0.0
	2.7nm,0.8s,baz=82,slow=8.9,SNR=7.7						
ASAR	Alice Springs	32.87	243	P	P	21 36 14.7	-0.4
	3.7nm,0.6s,baz=65,slow=10,SNR=17						
FITZ	Fitzroy Crossi	39.40	255	P	P	21 37 10.4	-0.5
	2.6nm,0.8s,baz=84,slow=9.2,SNR=4.2						
ILAR	Eielson Array	83.26	19	P	P	21 42 07.7	+0.6
	1.2nm,0.7s,baz=235,slow=5.5,SNR=6.9						
MKAR	Makanchi Array	93.27	317	P	P	21 42 55.4	-0.3
	0.6nm,0.7s,baz=94,slow=5.8,SNR=3.9						
ZALV	Zalesovo Beam	93.28	324	P	P	21 42 55.7	+0.1
	0.4nm,0.4s,baz=98,slow=4.4,SNR=3.5						
ARCES	ARCESS Array B	116.04	345	PKP	PKiKP	21 48 22.8	-0.8
	2.6nm,0.9s,baz=72,slow=1.3,SNR=11						

IDC 09 21:30:23.8±6.5, 10°.86S×165°.95E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/43, mbtmp3.9/4, Error ellipse: s-maj=185.2km s-min=50.4km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.73	250	P	P	21 36 49.8	0.0
	2.1nm,0.7s,baz=81,slow=9.1,SNR=6.1						
ASAR	Alice Springs	33.05	243	P	P	21 37 00.7	-0.7
	0.4nm,0.5s,baz=62,slow=10,SNR=2.3						
FITZ	Fitzroy Crossi	39.62	255	P	P	21 37 58.0	+0.5
	1.9nm,0.7s,baz=60,slow=8.1,SNR=3.9						
MKAR	Makanchi Array	93.52	317	P	P	21 43 41.5	-0.1
	0.4nm,0.8s,baz=110,slow=6.4,SNR=2.5						

*IDC **09** 21:30:23.7±1.0, 20°.14S×173°.13W, h0km, mb4.4/16, mb1 4.7/18, mb1mx4.4/42, mbtmp4.5/18, ML3.7/2, Error ellipse: s-maj=42.1km s-min=15.4km az=154.0*
*ISCJB **09** 21:30:26.1±0.6, 20°.5S±0°.2×173°.02W±0°.08, h33km, mb4.4/17, Error ellipse: s-maj=23.6km s-min=10.0km az=169.1*
*NEIC **09** 21:30:28.5±1.2, 20°.43S×173°.01W, h38km±12km, mb4.1/1, Error ellipse: s-maj=21.2km s-min=8.5km az=169.0*
ISC 09 21:30:28.0±0.6, 20°.5S±0°.2×172°.93W±0°.07, h35km, n27, σ1s.11/29, mb4.3/17, 1C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.97	286	Pn	Pn	21 32 35.6	+0.5
	5.0nm,0.7s						
RAR	Rarotonga	12.32	96	Pn	Pn	21 33 22.1	+1.1
	4.4nm,0.3s,baz=248,slow=7.8,SNR=8.3						
RAR				Sn	Sn	21 35 34.3	-2.7
	2.3nm,0.3s,baz=315,slow=16,SNR=2.8						
DZM	Mont Dzumac	19.29	262	P	P	21 34 47.8	-2.2
	0.3nm,0.3s,baz=70,slow=9.8,SNR=2.1						
CTA	Charters Tower	38.22	263	P	P	21 37 44.1	-0.7
	15nm,0.7s,baz=93,slow=11,SNR=13						
STKA	Stephens Creek	42.08	245	P	P	21 38 17.4	+0.7
	3.0nm,0.7s,baz=91,slow=8.5,SNR=7.0						
ASAR	Alice Springs	49.14	256	P	P	21 39 13.0	+0.3
ASAR	Alice Springs	49.14	256	P	P	21 39 13.0	+0.3
	19nm,0.9s,baz=86,slow=8.5,SNR=56						
WRAB	Tennant Creek	49.29	261	P	P	21 39 12.9	-1.0
	1.2nm,0.6s						
WRA	Warramunga Arr	49.30	261	P	P	21 39 13.0	-0.9
	5.8nm,0.9s,baz=97,slow=9.0,SNR=41						
FITZ	Fitzroy Crossi	57.73	261	P	P	21 40 15.9	+0.1
	6.6nm,0.6s,baz=110,slow=4.7,SNR=25						
BATI	Baumata	61.68	269	P	P	21 40 42.9	-0.2
	8.2nm,0.5s,baz=158,slow=5.4,SNR=5.0						
MJAR	Matsushiro Arr	73.14	321	P	P	21 41 52.9	-2.2
	2.2nm,0.7s,baz=142,slow=6.3,SNR=5.6						
PETK	Petropavlovsk-	77.61	342	P	P	21 42 19.2	-1.2
	4.6nm,0.9s,baz=119,slow=11,SNR=5.2						
NVAR	Mina Array Bea	77.84	41	P	P	21 42 22.5	+0.2
	1.1nm,0.8s,baz=222,slow=8.7,SNR=3.8						
KSRS	Korea Array	80.12	316	P	P	21 42 34.1	-0.4
	2.0nm,0.9s,baz=131,slow=5.0,SNR=4.9						
KSAR	Wonju Array Be	80.14	316	P	P	21 42 34.1	-0.5
TXAR	Lajitas Array	83.10	55	P	P	21 42 51.5	+0.9
	1.8nm,0.9s,baz=224,slow=7.6,SNR=2.3						
PDAR	Pinedale Array	85.77	41	P	P	21 43 05.0	+1.1
	0.6nm,0.8s,baz=216,slow=4.6,SNR=4.4						
ILAR	Eielson Array	87.35	11	P	P	21 43 09.8	-1.1
	1.6nm,0.8s,baz=210,slow=6.6,SNR=7.7						
INK	Inuvik	93.10	14	P	P	21 43 37.2	-0.4
	2.3nm,0.9s,baz=206,slow=5.5,SNR=5.8						
YKA	Yellowknife Ar	94.59	23	P	P	21 43 44.7	+0.1
	0.7nm,0.8s,baz=241,slow=4.3,SNR=10						
CMAR	Chiang Mai Arr	94.62	288	P	P	21 43 47.2	+1.3
	1.4nm,0.9s,baz=109,slow=2.8,SNR=6.3						
AKASG	Malin Array Be	145.18	335	PKP	PKPdf	21 50 01.6	-0.1
	0.6nm,0.5s,baz=34,slow=4.3,SNR=7.9						
CLL	Collm	148.91	353	*e*PKPbc	PKPbc	21 50 13.0	+1.1
	comp=Z,10.0nm,1.3s						
CLL				*i* PKPab	PKPab	21 50 17.1	+1.2
	comp=Z,8.0nm,1.0s						
CLL				*e*		21 50 33.0	
BRTR	Keskin Array B	150.27	316	PKPbc	PKPbc	21 50 16.1	+0.3
	comp=Z,1.7nm,0.9s,baz=157,slow=4.0,SNR=11						
KHC	Kasperske Hory	150.97	351⇑	*e*PKP	PKiKP	21 50 18.5	+0.8
GERES	GERESS Array B	151.24	351	PKPbc	PKiKP	21 50 18.7	+0.4
	comp=Z,1.1nm,0.9s,baz=15,slow=1.5,SNR=6.6						

*ISCJB **09** 21:33:32.8±0.6, 11°.03S±0°.08×165°.8E±0°.1, h10km, mb4.0/12, Error ellipse: s-maj=14.7km s-min=11.9km az=171.9*
*IDC **09** 21:33:32.8±0.8, 10°.94S×165°.83E, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.1/42, mbtmp4.2/15, ML4.7/2, Error ellipse: s-maj=23.5km s-min=18.2km az=103.0*
*NEIC **09** 21:33:34.3±0.4, 10°.96S×165°.84E, h10km, mb4.1/1, Error ellipse: s-maj=10.6km s-min=8.9km az=98.0*
ISC 09 21:33:34.4±0.7, 10°.96S±0°.10×165°.8E±0°.1, h10km, n24, σ0s.78/18, mb4.1/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.00	284	Pn	Pn	21 35 04.5	+1.2
	28nm,0.3s,baz=158,slow=12,SNR=12						
DZM	Mont Dzumac	11.07	177	Pn	Pn	21 36 13.3	+0.4
	3.8nm,0.3s,baz=357,slow=18,SNR=11						
CTA	Charters Tower	20.93	242	P	P	21 38 17.9	+0.5
	21nm,1.1s,baz=65,slow=10,SNR=5.3						
CTAO	Charters Tower	20.93	242	*e*P	P	21 38 16.7	-0.7
	3.3nm,0.4s						
URZ	Urewera	29.00	162	P	P	21 39 35.2	+0.8
	2.9nm,0.5s,baz=22,slow=5.4,SNR=4.4						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	22 10 57.9	
	baz=181,slow=76,SNR=5.9						
H11S3	WAKE ISLAND Hy	29.28	2	T	T	22 10 56.2	
	baz=181,slow=76,SNR=8.1						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	22 10 53.0	
	baz=181,slow=76,SNR=8.1						
H11N1	WAKE ISLAND Hy	30.50	2	T	T	22 12 15.2	
	baz=182,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	22 12 13.1	
	baz=182,slow=76,SNR=5.5						
H11N2	WAKE ISLAND Hy	30.51	2	T	T	22 12 14.0	
	baz=182,slow=76,SNR=5.2						
STKA	Stephens Creek	30.57	223	P	P	21 39 48.0	-0.4
	2.0nm,0.5s,baz=51,slow=10,SNR=4.1						
WRA	Warramunga Arr	31.60	250	P	P	21 39 57.2	-0.5
	2.9nm,0.7s,baz=81,slow=9.0,SNR=7.3						
ASAR	Alice Springs	32.92	243	P	P	21 40 08.1	-1.2
	1.7nm,0.7s,baz=67,slow=9.9,SNR=2.8						
RPZ	Rata Peaks	32.95	173	P	P	21 40 09.2	+0.1
	9.8nm,0.7s,baz=342,slow=3.2,SNR=5.7						
USRK	Ussuriysk Ar.	62.91	333	P	P	21 44 01.3	+0.4
	1.1nm,0.7s,baz=126,slow=7.4,SNR=2.5						
SONM	Songino Array	78.65	324	P	P	21 45 36.7	-0.1
	0.6nm,0.7s,baz=140,slow=4.6,SNR=4.1						
ILAR	Eielson Array	83.40	18	P	P	21 46 01.4	-0.1
	0.8nm,0.8s,baz=235,slow=5.6,SNR=5.7						
NVAR	Mina Array Bea	85.89	50	P	P	21 46 16.2	+1.1
	0.2nm,0.3s,baz=225,slow=7.4,SNR=2.2						
MKAR	Makanchi Array	93.52	317	P	P	21 46 50.3	-0.4
	0.6nm,0.7s,baz=93,slow=6.0,SNR=6.9						
ZALV	Zalesovo Beam	93.54	324	P	P	21 46 51.0	+0.6
	0.2nm,0.4s,baz=107,slow=5.0,SNR=2.4						
YKA	Yellowknife Ar	94.85	27	P	P	21 46 55.1	-1.1
	0.2nm,0.7s,baz=257,slow=4.9,SNR=3.3						
ARCES	ARCESS Array B	116.27	346	PKP	PKiKP	21 52 16.6	-1.0
	1.8nm,0.8s,baz=132,slow=1.3,SNR=3.2						
ESDC	Sonseca Array	150.00	344	PKPbc	PKPbc	21 53 25.2	-0.5
	0.3nm,0.6s,baz=9.9,slow=4.3,SNR=3.7						

*ISCJB **09** 21:34:27.8±0.5, 10°.88S±0°.06×165°.78E±0°.07, h10km, mb4.4/18, Error ellipse: s-maj=10.1km s-min=7.9km az=152.1*
*IDC **09** 21:34:28.2±0.6, 10°.81S×165°.81E, h0km, mb4.4/17, mb1 4.6/19, mb1mx4.4/40, mbtmp4.5/19, ML4.9/2, Error ellipse: s-maj=20.0km s-min=15.5km az=107.0*
*NEIC **09** 21:34:31.5±2.8, 10°.81S×165°.77E, h21km±19km, mb4.4/2, Error ellipse: s-maj=9.7km s-min=6.9km az=63.0*
ISC 09 21:34:29.6±0.5, 10°.83S±0°.07×165°.83E±0°.08, h10km, n33, σ0s.63/39, mb4.5/18, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.96	283	*e*Pn	Pn	21 35 56.9	-1.0
HNR				Sn	Sn	21 37 06.7	+0.4
HNR	Honiara	5.96	283	Pn	Pn	21 35 58.4	+0.4
	40nm,0.3s,baz=157,slow=7.7,SNR=4.3						
HNR				Sn	Sn	21 37 06.7	+0.4
	baz=287,slow=20,SNR=1.4						
DZM	Mont Dzumac	11.19	177	Pn	Pn	21 37 10.9	+1.0
	7.0nm,0.3s,baz=319,slow=19,SNR=13						
DZM				Sn	Sn	21 39 13.6	-1.6
	0.8nm,0.3s,baz=79,slow=16,SNR=2.1						
CTA	Charters Tower	20.97	242	P	P	21 39 14.1	+0.9
	13nm,0.7s,baz=68,slow=14,SNR=3.0						
CTAO	Charters Tower	20.97	242	*e*P	P	21 39 12.8	-0.4
URZ	Urewera	29.12	162	P	P	21 40 30.9	+0.1
	2.0nm,0.5s,baz=37,slow=5.1,SNR=2.3						
STKA	Stephens Creek	30.65	223	P	P	21 40 44.9	+0.5
	3.2nm,0.5s,baz=38,slow=8.6,SNR=4.9						
WRA	Warramunga Arr	31.63	250	P	P	21 40 52.7	-0.6
	5.0nm,0.7s,baz=82,slow=8.9,SNR=8.7						
WRA				PcP	PcP	21 43 45.7	+0.2
	1.1nm,0.8s,baz=77,slow=3.0,SNR=4.5						
ASAR	Alice Springs	32.96	243	P	P	21 41 04.3	-0.6
	9.0nm,0.8s,baz=64,slow=10,SNR=12						
ASAR				PcP	PcP	21 43 49.0	-0.1
	1.4nm,0.9s,baz=72,slow=2.4,SNR=4.7						
RPZ	Rata Peaks	33.07	173	P	P	21 41 06.3	+0.8
	10nm,0.8s,baz=331,slow=5.6,SNR=3.8						
FITZ	Fitzroy Crossi	39.51	255	P	P	21 42 00.9	0.0
	7.2nm,0.7s,baz=124,slow=7.0,SNR=6.0						
FITZ				PcP	PcP	21 44 09.2	+0.5
	2.2nm,0.8s,baz=180,slow=3.0,SNR=2.6						
MBWA	Marble Bar	45.34	251	*e*P	P	21 42 48.3	-0.1
	3.2nm,0.4s						
MJAR	Matsushiro Arr	53.82	332	P	P	21 43 53.0	+0.2
	2.5nm,0.7s,baz=170,slow=8.8,SNR=6.7						
ASAJ	Asahikawa	58.62	341	P	P	21 44 27.3	+0.4
	10.0nm,0.8s,baz=238,slow=5.3,SNR=4.9						
KSRS	Korea Array	59.75	326	P	P	21 44 34.8	0.0
	0.7nm,0.6s,baz=150,slow=6.8,SNR=3.5						
KSAR	Wonju Array Be	59.76	325	P	P	21 44 34.8	-0.1
USRK	Ussuriysk Ar.	62.79	333	P	P	21 44 55.8	+0.5
	2.9nm,0.8s,baz=142,slow=7.6,SNR=4.5						
MDJ	Mudanjiang	64.20	332	*e*P	P	21 45 04.5	-0.1
	1.3nm,0.6s						
SONM	Songino Array	78.54	324	P	P	21 46 31.8	+0.4
	1.5nm,0.7s,baz=136,slow=5.5,SNR=8.0						
ILAR	Eielson Array	83.28	18	P	P	21 46 56.6	+0.3
	3.3nm,0.8s,baz=229,slow=6.3,SNR=9.7						
NVAR	Mina Array Bea	85.82	50	P	P	21 47 10.9	+0.9
	0.2nm,0.3s,baz=251,slow=4.5,SNR=3.6						
MKAR	Makanchi Array	93.42	317	P	P	21 47 45.3	-0.1
	2.3nm,0.7s,baz=94,slow=6.2,SNR=12						
ZALV	Zalesovo Beam	93.43	324	P	P	21 47 44.3	-1.0
	1.1nm,0.5s,baz=107,slow=4.2,SNR=5.8						
YKA	Yellowknife Ar	94.75	27	P	P	21 47 50.1	-1.0
	0.3nm,0.6s,baz=262,slow=4.7,SNR=4.9						
ARCES	ARCESS Array B	116.15	346	PKP	PKiKP	21 53 12.0	-0.6
	2.4nm,0.8s,baz=47,slow=2.2,SNR=15						
FINES	FINESS Array B	121.60	339	PKP	PKPdf	21 53 22.7	-0.6
	1.5nm,0.9s,baz=118,slow=5.5,SNR=4.0						
NB2	NORSAR Subarra	126.52	345	PKPdf	PKPdf	21 53 31.8	-1.1
	comp=Z,0.2nm,0.6s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.52	345	PKP	PKPdf	21 53 32.2	-0.7
	comp=Z,0.5nm,0.7s,baz=344,slow=1.8,SNR=3.8						
AKASG	Malin Array Be	126.73	327	PKP	PKPdf	21 53 33.3	-0.1
	comp=Z,0.5nm,0.4s,baz=45,slow=1.6,SNR=2.3						
BRTR	Keskin Array B	128.88	313	PKP	PKPdf	21 53 37.8	-0.3
	comp=Z,0.5nm,0.8s,baz=230,slow=3.6,SNR=3.7						
GERES	GERESS Array B	135.55	334	PKP	PKPdf	21 53 51.1	+0.7
	comp=Z,0.4nm,0.7s,baz=124,slow=1.4,SNR=3.2						
ESDC	Sonseca Array	149.88	344	PKPbc	PKPbc	21 54 20.6	0.0
	comp=Z,0.9nm,0.7s,baz=33,slow=2.9,SNR=6.3						
TORD	Torodi Ar. Bea	164.31	280	PKP	PKPdf	21 54 34.5	-0.1
	comp=Z,0.4nm,0.9s,baz=98,slow=2.0,SNR=2.8						

*IDC **09** 21:40:02.0±1.1, 11°.15S×165°.64E, h0km, mb4.1/7, mb1 4.3/9, mb1mx4.0/31, mbtmp4.1/9, ML4.2/2, Error ellipse: s-maj=35.6km s-min=21.4km az=149.0*
*NEIC **09** 21:40:03.5±0.7, 11°.16S×165°.68E, h10km, mb4.4/1, Error ellipse: s-maj=14.6km s-min=12.3km az=137.0*
*ISCJB **09** 21:40:04.7±0.8, 11°.3S±0°.1×165°.63E±0°.08, h30km, mb4.0/6, Error ellipse: s-maj=16.2km s-min=10.9km az=21.0*
ISC 09 21:40:06.4±0.9, 11°.2S±0°.1×165°.7E±0°.1, h30km, n10, σ0s.85/11, mb4.0/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.92	287	Pn	Pn	21 41 31.7	-0.4
	13nm,0.3s,baz=176,slow=7.1,SNR=3.9						
HNR				Sn	Sn	21 42 40.0	+1.1
	baz=110,slow=15,SNR=2.1						
DZM	Mont Dzumac	10.82	176	Pn	Pn	21 42 39.5	+0.1
	0.8nm,0.3s,baz=336,slow=19,SNR=4.0						
CTA	Charters Tower	20.67	242	P	P	21 44 44.1	+0.1
	2.1nm,0.3s,baz=71,slow=14,SNR=2.4						
CTAO	Charters Tower	20.67	242	P	P	21 44 44.6	+0.6
	7.3nm,0.3s						
WRA	Warramunga Arr	31.37	250	P	P	21 46 24.4	-0.4
	2.8nm,1.0s,baz=82,slow=9.0,SNR=8.2						
ASAR	Alice Springs	32.66	243	P	P	21 46 35.6	-0.6
	4.3nm,1.1s,baz=75,slow=8.9,SNR=16						
ILAR	Eielson Array	83.69	19	P	P	21 52 31.3	-0.7
	0.3nm,0.5s,baz=236,slow=5.2,SNR=2.7						
NVAR	Mina Array Bea	86.18	50	P	P	21 52 47.0	+1.6
	1.6nm,0.9s,baz=236,slow=7.3,SNR=6.3						
MKAR	Makanchi Array	93.61	317	P	P	21 53 19.1	-0.7
	0.6nm,1.0s,baz=92,slow=4.3,SNR=3.2						
YKA	Yellowknife Ar	95.15	27	P	P	21 53 26.4	-0.2
	0.1nm,0.4s,baz=263,slow=3.9,SNR=4.4						

MEX 09 21:41:29.2±0.6, 14°.86N×94°.41W, h20km±821km, MD4.2, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.42	54	*e*P	Pn	21 41 51.1	-2.8
PCIG				*e*S	Sn	21 42 08.0	-4.0
HUIG	Huatulco	1.87	299	*e*P	Pn	21 41 57.6	-2.5
HUIG				*i* S	Sn	21 42 18.5	-4.6
CCIG	Comitan	2.61	57	*e*P	Pn	21 42 10.9	+0.5
CCIG				*e*S	Sn	21 42 43.6	+2.0

IDC 09 21:43:26.7±3.0, 7°.71N×126°.70E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/35, mbtmp3.2/3, Error ellipse: s-maj=240.6km s-min=27.7km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.49	165	P	P	21 49 24.3	+0.4
	0.1nm,0.3s,baz=345,slow=9.0,SNR=4.8						
ASAR	Alice Springs	31.97	167	P	P	21 49 54.1	-0.6
	0.2nm,0.7s,baz=351,slow=7.3,SNR=4.2						
MKAR	Makanchi Array	54.32	324	P	P	21 52 55.0	0.0
	0.2nm,0.4s,baz=123,slow=8.8,SNR=5.8						

*IDC **09** 21:48:32.8±0.6, 11°.04S×165°.52E, h0km, mb4.2/13, mb1 4.4/15, mb1mx4.3/32, mbtmp4.3/15, ML4.7/2, Error ellipse: s-maj=20.6km s-min=17.2km az=122.0*
*NEIC **09** 21:48:34.5±0.3, 11°.01S×165°.41E, h10km, mb4.5/2, Error ellipse: s-maj=9.8km s-min=8.4km az=219.0*
*ISCJB **09** 21:48:35.8±0.5, 11°.15S±0°.08×165°.42E±0°.07, h30km, mb4.2/18, Error ellipse: s-maj=11.8km s-min=9.0km az=29.3*
ISC 09 21:48:37.7±0.5, 11°.07S±0°.09×165°.46E±0°.08, h30km, n33, σ1s.37/32, mb4.1/18, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.66	286	*e*P	Pn	21 50 06.0	+6.2
HNR				*e*S	Sb	21 51 13.0	-10
HNR	Honiara	5.66	286	Pn	Pn	21 49 58.2	-1.6
	24nm,0.3s,baz=195,slow=4.7,SNR=5.4						
HNR				Sn	Sn	21 51 06.5	+2.6
	baz=187,slow=17,SNR=1.3						
DZM	Mont Dzumac	10.98	175	Pn	Pn	21 51 12.6	-0.4
	4.9nm,0.3s,baz=328,slow=8.9,SNR=39						
MSVF	Nonsavu	13.88	120	Pn	Pn	21 51 55.0	+2.4
	84nm,1.0s						
CTA	Charters Tower	20.54	242	P	P	21 53 13.4	-0.6
	3.0nm,0.3s,baz=75,slow=15,SNR=3.1						
URZ	Urewera	29.02	161	P	P	21 54 34.0	-1.1
	5.9nm,0.7s,baz=355,slow=12,SNR=4.3						
STKA	Stephens Creek	30.23	223	P	P	21 54 46.0	0.0
	2.9nm,0.8s,baz=34,slow=12,SNR=5.7						
WRA	Warramunga Arr	31.21	250	P	P	21 54 54.7	-0.1
	1.4nm,0.6s,baz=81,slow=9.0,SNR=15						
ASAR	Alice Springs	32.53	243	P	P	21 55 06.0	-0.3
	4.5nm,0.8s,baz=64,slow=10.0,SNR=24						
ASAR				PcP	PcP	21 57 54.9	+2.1
	1.4nm,0.8s,baz=64,slow=2.8,SNR=6.7						
RPZ	Rata Peaks	32.89	173	P	P	21 55 08.2	-0.9
	39nm,0.7s,baz=355,slow=11,SNR=5.1						
RAR	Rarotonga	34.82	111	*e*P	P	21 55 26.2	+0.1
CASY	Casey	66.26	201	*e*P	P	21 59 21.6	-1.1
	4.2nm,1.0s						
XAN	Xi'an	69.93	312	P	P	21 59 59.3	+13
XAN				pP	PcP	22 00 05.4	-3.2
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HHC	Hu-ho-hao-te	71.66	320	*e*P	P	22 00 02.4	+5.5
HHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	71.86	294	P	P	21 59 58.3	-0.1
	comp=Z,0.3nm,0.3s,baz=112,slow=4.2,SNR=2.5						
SONM	Songino Array	78.52	324	P	P	22 00 35.1	-1.2
	comp=Z,0.9nm,1.0s,baz=128,slow=5.2,SNR=3.7						
GTA	Gaotai	78.87	314	*e*P	P	22 00 42.3	+3.9
GTA				pP	pwP	22 00 49.8	-1.9
GTA				sP	sP	22 00 52.7	+2.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
QSPA	South Pole Qui	78.94	180	*e*P	P	22 00 39.5	+1.2
	comp=Z,3.5nm,0.8s						
LSA	Lhasa	82.12	302	*e*P	P	22 00 56.0	-0.6
ILAR	Eielson Array	83.62	19	P	P	22 01 03.0	0.0
	comp=Z,2.3nm,0.7s,baz=236,slow=5.2,SNR=18						
NVAR	Mina Array Bea	86.25	50	P	P	22 01 16.4	-0.6
	comp=Z,0.3nm,0.6s,baz=79,slow=7.7,SNR=3.7						
MKAR	Makanchi Array	93.34	317	P	P	22 01 51.6	+1.7
	comp=Z,1.0nm,0.8s,baz=91,slow=6.1,SNR=8.8						
ZALV	Zalesovo Beam	93.41	324	P	P	22 01 49.3	-0.8
	comp=Z,0.3nm,0.4s,baz=132,slow=4.1,SNR=3.6						
PDAR	Pinedale Array	93.78	47	P	P	22 01 51.5	-0.8
	comp=Z,0.4nm,0.8s,baz=242,slow=1.9,SNR=2.3						
YKA	Yellowknife Ar	95.12	27	P	P	22 01 56.0	-1.7
YKA	Yellowknife Ar	95.12	27	P	P	22 01 56.0	-1.7
	comp=Z,0.3nm,0.5s,baz=255,slow=4.6,SNR=6.4						
ARCES	ARCESS Array B	116.28	345	PKP	PKPdf	22 07 17.7	-0.1
	comp=Z,2.5nm,0.8s,baz=89,slow=1.3,SNR=10						
FINES	FINESS Array B	121.69	338	PKP	PKPdf	22 07 27.7	-0.6
	comp=Z,1.5nm,1.0s,baz=5.0,slow=3.2,SNR=3.0						
NB2	NORSAR Subarra	126.65	345	PKPdf	PKiKP	22 07 37.7	-0.6
	comp=Z,0.2nm,0.6s,baz=24,slow=1.9						
NOA	NORSAR Array B	126.65	345	PKP	PKiKP	22 07 37.8	-0.6
	comp=Z,0.5nm,0.8s,baz=82,slow=0.4,SNR=3.2						
KEST	Kesra	147.26	322	PKPbc	PKPbc	22 08 18.9	+0.1
	comp=Z,4.5nm,0.9s,baz=225,slow=2.9,SNR=3.0						
ESDC	Sonseca Array	150.00	344	PKPbc	PKiKP	22 08 25.8	-0.8
	comp=Z,0.9nm,0.8s,baz=17,slow=2.7,SNR=5.6						
TORD	Torodi Ar. Bea	163.99	279	PKP	PKPdf	22 08 39.8	+0.7
	comp=Z,0.5nm,0.9s,baz=11,slow=2.9,SNR=2.7						

*ISCJB **09** 21:51:27.4±1.2, 11°.1S±0°.1×165°.7E±0°.1, h10km, mb3.9/4, Error ellipse: s-maj=20.9km s-min=12.2km az=32.3*
*IDC **09** 21:51:27.6±1.6, 10°.98S×165°.72E, h0km, mb3.9/5, mb1 4.2/7, mb1mx3.8/36, mbtmp4.1/7, ML4.4/2, Error ellipse: s-maj=36.0km s-min=28.1km az=140.0*
ISC 09 21:51:29.1±1.3, 11°.0S±0°.1×165°.8E±0°.1, h10km, n7, σ1s.30/7, mb4.0/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.95	284	Pn	Pn	21 52 57.3	+0.1
	14nm,0.3s,baz=203,slow=7.7,SNR=2.4						
HNR				Sn	Sn	21 54 06.9	+1.3
	4.8nm,0.3s,baz=32,slow=19,SNR=2.4						
DZM	Mont Dzumac	11.07	177	Pn	Pn	21 54 08.5	+0.9
	1.9nm,0.3s,baz=349,slow=16,SNR=6.9						
CTA	Charters Tower	20.88	242	P	Pn	21 56 12.0	-2.1
	2.5nm,0.7s,baz=68,slow=5.4,SNR=2.7						
WRA	Warramunga Arr	31.55	250	P	P	21 57 50.6	-1.4
	1.3nm,0.8s,baz=83,slow=9.2,SNR=6.1						
ASAR	Alice Springs	32.87	243	P	P	21 58 02.3	-1.2
	1.9nm,0.7s,baz=63,slow=10,SNR=3.6						
ILAR	Eielson Array	83.42	18	P	P	22 03 57.0	+0.7
	0.7nm,0.7s,baz=232,slow=5.0,SNR=5.9						
MKAR	Makanchi Array	93.49	317	P	P	22 04 44.6	-0.5
	0.4nm,0.9s,baz=92,slow=5.3,SNR=2.3						

IDC 09 21:58:00.7±1.7, 10°.74S×165°.79E, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.8/41, mbtmp4.0/7, ML4.7/2, Error ellipse: s-maj=41.2km s-min=27.9km az=130.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.90	282	Pn	Pn	21 59 31.4	+2.0
	24nm,0.3s,baz=296,slow=0.9,SNR=8.2						
DZM	Mont Dzumac	11.28	177	Pn	Pn	22 00 44.4	+1.0
	3.4nm,0.3s,baz=334,slow=7.8,SNR=27						
CTA	Charters Tower	20.98	241	P	P	22 02 46.2	+0.5
	3.3nm,1.0s,baz=73,slow=14,SNR=2.2						
H11S2	WAKE ISLAND Hy	29.06	2	T	T	22 34 25.3	
	baz=181,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	29.07	2	T	T	22 34 25.5	
	baz=181,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.08	2	T	T	22 34 26.5	
	baz=181,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	30.28	2	T	T	22 35 55.6	
	baz=182,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.29	2	T	T	22 35 55.9	
	baz=182,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.30	2	T	T	22 35 57.8	
	baz=182,slow=76,SNR=14						
WRA	Warramunga Arr	31.63	249	P	P	22 04 25.2	-0.6
	0.6nm,0.6s,baz=81,slow=9.0,SNR=11						
ASAR	Alice Springs	32.97	243	P	P	22 04 36.9	-0.6
	1.3nm,0.7s,baz=65,slow=9.9,SNR=15						
ILAR	Eielson Array	83.22	19	P	P	22 10 28.6	0.0
	0.6nm,0.8s,baz=241,slow=5.1,SNR=4.7						
MKAR	Makanchi Array	93.33	317	P	P	22 11 17.8	+0.1
	0.3nm,0.7s,baz=87,slow=3.2,SNR=4.0						

IDC 09 22:03:33.0±8.3, 6°.60S×155°.97E, h230km±113km, mb2.9/3, mb1 3.2/4, mb1mx2.8/36, mbtmp3.6/4, Error ellipse: s-maj=107.3km s-min=37.2km az=132.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.84	126	P	Pn	22 04 48.0	+1.8
	27nm,0.3s,baz=5.8,slow=0.7,SNR=5.5						
HNR				S	S	22 05 43.5	-0.7
	23nm,0.3s,baz=239,slow=18,SNR=3.3						

WRA	Warramunga Arr	24.84	236	P	P	22 08 34.7	+0.1
	0.7nm,0.5s,baz=59,slow=9.2,SNR=28						
ASAR	Alice Springs	27.16	229	P	P	22 08 55.2	-0.3
	0.2nm,0.4s,baz=56,slow=9.3,SNR=3.5						
MKAR	Makanchi Array	83.75	318	P	P	22 15 36.3	-0.1
	0.1nm,0.4s,baz=94,slow=6.4,SNR=2.5						

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*IDC **09** 22:04:00.7±0.5, 37°.05N×142°.23E, h0^{km}, mb4.2/20, mb1 4.3/27, mb1mx4.2/51, mbtmp4.2/27, ML4.0/5, Error ellipse: s-maj=15.7km s-min=11.4km az=107.0*

*NEIC **09** 22:04:02.4±2.4, 37°.04N×142°.30E, h12^{km}±15^{km}, mb4.7/6, Error ellipse: s-maj=7.9km s-min=5.2km az=114.0*

NEIC Recorded [1 JMA] in Fukushima, Miyagi and Tochigi.

*JMA **09** 22:04:03.5±0.2, 37°.08N×142°.17E, h41^{km}±5^{km}, M4.5*

JMA Felt I J1.

ISC 09 22:04:00.7±1.9**, 37°.03N**±0°.04×**142°.24E**±0°.05**, h3**^{km}±11^{km}**, n71,** σ**2^{s}02**/81**, mb4.5**/34**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.14	288	P	Pg	22 04 22.3	-0.3
JFK				eS	Sg	22 04 35.8	-1.6
ONAJ	Iwakimizuishiy	1.16	274	P	Pg	22 04 22.5	-0.4
ONAJ				eS	Sg	22 04 36.4	-1.5
JFFD	Fukushimafurud	1.35	273	P	Pn	22 04 25.2	-1.2
JIKH	Ishinomakikobu	1.42	335	P	Pn	22 04 26.3	-1.1
JIKH				eS	Sb	22 04 43.5	-2.8
JMM	Marumori	1.43	306	P	Pn	22 04 26.5	-0.9
JMM				eS	Sb	22 04 43.2	-3.2
JIO	Ouri	1.59	334	P	Pn	22 04 28.9	-0.8
JIO				S	Sn	22 04 46.6	-4.2
JFT	Otama	1.60	288	P	Pn	22 04 29.9	+0.1
JFT				eS	Sn	22 04 49.1	-1.8
JOU	Okura	1.83	317	P	Pn	22 04 32.9	-0.1
JOU				S	Sn	22 04 54.4	-2.3
JFY	Yanaizu	2.06	281	P	Pn	22 04 37.1	+0.9
JFY				eS	Sn	22 05 00.9	-1.5
JMK	Ichinoseki	2.08	338	P	Pn	22 04 36.3	-0.2
JMK				eS	Sn	22 05 00.3	-2.6
JYS	Shirataka	2.10	305	P	Pn	22 04 37.1	+0.4
JYS				eS	Sn	22 05 01.6	-1.7
JAG	Ashikaga	2.32	256	P	Pn	22 04 39.6	-0.1
JAG				eS	Sn	22 05 05.9	-2.9
JYK	Kaneyama	2.40	322	P	Pn	22 04 41.1	+0.2
JYK				eS	Sn	22 05 08.6	-2.2
JNS	Sasagawa	2.46	290	P	Pn	22 04 43.5	+1.9
MJAR	Matsushiro Arr	3.27	263	Pn	Pn	22 04 54.5	+1.6
	4.1nm,0.3s,baz=90,slow=15,SNR=224						
MJAR				Sn	Sn	22 05 33.8	+1.5
	3.9nm,0.3s,baz=112,slow=19,SNR=7.8						
MAJO	Matsushiro	3.27	263	ePn	Pn	22 04 55.5	+2.6
MAT	Matsushiro	3.27	263	P	Pn	22 04 55.4	+2.5
MAT				S	Sn	22 05 31.6	-0.8
JHJ	Hachijo jima 2	4.39	208	Pn	Pn	22 05 08.8	+0.6
	119nm,0.3s,baz=88,slow=22,SNR=16						
JHJ				Sn	Sn	22 05 57.3	-2.5
	190nm,0.3s,baz=115,slow=23,SNR=6.9						
ERM	Erimo	5.03	8	ePn	Pn	22 05 17.2	+0.3
	123nm,0.9s						
ASAJ	Asahikawa	7.09	2	Pn	Pn	22 05 45.5	+0.2
	6.1nm,0.3s,baz=206,slow=9.1,SNR=22						
ASAJ				Sn	Sn	22 07 03.7	-2.5
	1.5nm,0.3s,baz=252,slow=20,SNR=1.9						
CBIJ	Chichi jima	9.90	180	Pn	Pn	22 06 23.6	-0.2
CBIJ				Sn	Sn	22 08 07.5	-8.1
JCJ	Chichijima	9.90	180	Pn	Pn	22 06 23.6	-0.3
	14nm,0.3s,baz=94,slow=23,SNR=6.4						
JCJ				Sn	Sn	22 08 07.5	-8.1
	11nm,0.3s,baz=253,slow=19,SNR=2.6						
YSS	Yuzh-Sakhalins	9.93	2	ePn	Pn	22 06 24.8	+0.6
	36nm,0.8s						
JNU	Nakatsue	10.09	251	Pn	Pn	22 06 27.6	+1.0
	0.7nm,0.3s,baz=68,slow=7.8,SNR=12						
USRK	Ussuriysk Ar.	10.58	316	Pn	Pn	22 06 33.7	+0.6
	0.2nm,0.3s,baz=123,slow=14,SNR=5.0						
KSRS	Korea Array	11.42	276	Pn	Pn	22 06 48.6	+3.9
	0.1nm,0.3s,baz=92,slow=15,SNR=2.9						
KSAR	Wonju Array Be	11.46	276	Pn	Pn	22 06 48.6	+3.5
KLR	Kul'dur	14.38	331	Pn	Pn	22 07 24.6	-0.5
	0.1nm,0.3s,baz=153,slow=15,SNR=5.3						
MA2	Magadan	23.23	11	P	P	22 09 08.9	+0.2
	9.8nm,0.8s,baz=197,slow=9.6,SNR=10.0						
SEY	Seymchan	26.67	10	P	P	22 09 40.9	+0.3
	6.7nm,0.7s,baz=190,slow=6.6,SNR=16						
XAN	Xi'an	27.20	274	eP	P	22 09 46.3	+0.7
	22nm,0.6s						
H11N2	WAKE ISLAND Hy	27.58	122	T	T	22 39 30.0	
	baz=314,slow=75,SNR=60						
H11N1	WAKE ISLAND Hy	27.59	122	T	T	22 39 18.1	
	baz=314,slow=75,SNR=48						
H11N3	WAKE ISLAND Hy	27.60	122	T	T	22 39 12.4	
	baz=314,slow=75,SNR=52						
ULN	Ulaanbaatar	27.91	304	eP	P	22 09 52.3	+0.3
	2.4nm,0.7s						
ENH	Enshi	27.99	266	eP	P	22 09 52.5	-0.3
	11nm,0.9s						
H11S1	WAKE ISLAND Hy	28.30	124	T	T	22 40 14.3	
	baz=316,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	28.30	124	T	T	22 40 11.9	
	baz=316,slow=76,SNR=8.8						
H11S2	WAKE ISLAND Hy	28.32	124	T	T	22 40 13.6	
	baz=316,slow=76,SNR=12						
SONM	Songino Array	28.34	304	P	P	22 09 56.1	+0.3
	2.8nm,0.7s,baz=103,slow=9.1,SNR=29						
CMAR	Chiang Mai Arr	42.14	256	P	P	22 11 55.4	+1.0
	2.2nm,0.3s,baz=46,slow=7.2,SNR=4.9						
ZALV	Zalesovo Beam	42.41	312	P	P	22 11 56.7	+0.5
	4.0nm,0.8s,baz=90,slow=6.4,SNR=13						
MKAR	Makanchi Array	44.68	302	P	P	22 12 15.1	+0.3
	2.3nm,0.6s,baz=87,slow=9.8,SNR=28						
KURK	Kurchatov	46.46	308	eP	P	22 12 28.0	-0.6
	56nm,0.8s						
RAMN	Ramite	47.66	275	eP	P	22 12 41.6	+2.9
	15nm,0.7s						
JIRN	Jiri	47.68	276	eP	P	22 12 41.1	+2.1
	111nm,1.4s						
GUN	Gumba	47.81	276	eP	P	22 12 41.4	+1.4
	13nm,0.7s						
PKI	Pulchoki	48.34	276	eP	P	22 12 46.3	+2.3
	21nm,1.3s						
ILAR	Eielson Array	49.15	32	P	P	22 12 50.6	+1.3
	1.9nm,0.8s,baz=261,slow=5.8,SNR=14						
DANN	Dangsing	49.31	278	eP	P	22 12 52.2	+0.8
	50nm,0.8s						
KOLN	Koldanda	49.69	277	eP	P	22 12 56.2	+2.0
	14nm,0.9s						
PYUN	Piuthan	50.03	278	eP	P	22 12 58.0	+1.2
	28nm,1.0s						
INK	Inuvik	54.09	27	P	P	22 13 27.6	+1.4
	1.8nm,0.6s,baz=276,slow=7.0,SNR=12						
FITZ	Fitzroy Crossi	57.02	199	P	P	22 13 48.8	+0.9
	3.7nm,1.1s,baz=16,slow=10,SNR=2.1						
WRAB	Tennant Creek	57.14	189	eP	P	22 13 49.0	+0.4
	6.5nm,0.8s						
WRA	Warramunga Arr	57.15	189	P	P	22 13 49.2	+0.5
	6.5nm,0.7s,baz=7.4,slow=7.2,SNR=65						
ASAR	Alice Springs	60.88	189	P	P	22 14 15.2	+0.6
	3.2nm,0.6s,baz=16,slow=6.6,SNR=38						
YKA	Yellowknife Ar	63.48	30	P	P	22 14 32.9	+1.3
	0.6nm,0.7s,baz=302,slow=6.6,SNR=9.4						
STKA	Stephens Creek	68.55	181	P	P	22 15 04.5	+0.1
	1.7nm,0.6s,baz=352,slow=23,SNR=3.4						
FINES	FINESS Array B	69.13	333	P	P	22 15 07.5	-0.3
	3.2nm,0.7s,baz=45,slow=5.7,SNR=10						
KBZ	Khabaz	71.41	311	P	P	22 15 22.1	0.0
	2.1nm,0.9s,baz=241,slow=2.4,SNR=3.7						
KIV	Kislovodsk	71.41	311	eP	P	22 15 24.2	+1.9
	4.3nm,0.8s						
NB2	NORSAR Subarra	74.45	338	P	P	22 15 40.2	+0.3
	comp=Z,0.4nm,0.6s,baz=40,slow=5.9						
NOA	NORSAR Array B	74.45	338	P	P	22 15 40.0	+0.1
	comp=Z,1.4nm,0.9s,baz=39,slow=5.6,SNR=4.9						
NVAR	Mina Array Bea	74.46	54	P	P	22 15 40.7	+0.1
	comp=Z,0.7nm,0.7s,baz=275,slow=6.1,SNR=4.5						
AKASG	Malin Array Be	74.71	323	P	P	22 15 41.5	0.0
	comp=Z,1.1nm,0.5s,baz=46,slow=6.1,SNR=11						
PDAR	Pinedale Array	77.20	46	P	P	22 15 55.2	-1.0
	comp=Z,0.3nm,0.5s,baz=269,slow=7.4,SNR=3.4						
CLL	Collm	81.43	331	i (PKPbc)	P	22 16 28.1	+9.3
	comp=Z,13nm,1.5s						
CLL				i		22 16 32.3	
KHC	Kasperske Hory	82.89	329	eP	P	22 16 36.0	+9.4
GERES	GERESS Array B	83.06	329	P	P	22 16 27.8	+0.3
	comp=Z,0.1nm,0.3s,baz=29,slow=4.5,SNR=2.6						
LPAZ	La Paz	146.12	61	PKPbc	PKPbc	22 23 44.0	+0.6
	comp=Z,2.8nm,1.2s,baz=45,slow=2.9,SNR=5.7						

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*IDC **09** 22:12:41.9±1.6, 10°.93S×165°.84E, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/36, mbtmp4.0/8, ML4.2/2, Error ellipse: s-maj=41.3km s-min=26.5km az=133.0*

*ISCJB **09** 22:12:42.2±1.2, 11°.0S±0°.1×165°.8E±0°.2, h10^{km}, mb3.8/5, Error ellipse: s-maj=22.8km s-min=18.1km az=154.0*

ISC 09 22:12:43.8±1.3**, 10°.9S**±0°.1×**165°.8E**±0°.2**, h10**^{km}**, n8,** σ**0^{s}72**/7**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.94	284	Pn	Pn	22 14 12.4	+0.5
	19nm,0.3s,baz=252,slow=0.9,SNR=4.8						
DZM	Mont Dzumac	11.13	177	Pn	Pn	22 15 23.7	+0.4
	0.6nm,0.3s,baz=312,slow=23,SNR=8.9						
CTA	Charters Tower	20.92	242	P	Pn	22 17 26.8	-2.5
	3.1nm,0.8s,baz=75,slow=12,SNR=2.1						
WRA	Warramunga Arr	31.59	250	P	P	22 19 06.7	-0.3
	0.8nm,0.9s,baz=82,slow=8.8,SNR=3.5						
ASAR	Alice Springs	32.91	243	P	P	22 19 17.8	-0.8
	1.4nm,0.8s,baz=75,slow=9.3,SNR=9.6						
FITZ	Fitzroy Crossi	39.47	255	P	P	22 20 14.3	-0.4
	1.7nm,0.8s,baz=86,slow=6.6,SNR=2.1						
ILAR	Eielson Array	83.35	18	P	P	22 25 10.3	-0.4
	0.8nm,0.8s,baz=237,slow=5.0,SNR=8.7						
MKAR	Makanchi Array	93.45	317	P	P	22 26 00.4	+0.7
	0.3nm,0.6s,baz=88,slow=6.0,SNR=4.6						

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*IDC **09** 22:14:28.0±0.5, 10°.88S×165°.97E, h0^{km}, mb4.8/22, mb1 5.0/24, mb1mx4.9/34, mbtmp4.9/24, ML5.9/2, Error ellipse: s-maj=16.5km s-min=12.5km az=104.0*

*ISCJB **09** 22:14:32.3±0.1, 10°.97S±0°.02×165°.87E±0°.02, h35^{km}, mb5.2/164, Error ellipse: s-maj=3.6km s-min=3.1km az=153.2*

*MOS **09** 22:14:32.7±0.9, 10°.81S×165°.72E, h33^{km}, mb5.3/25, Error ellipse: s-maj=9.6km s-min=8.5km az=113.9*

*BJI **09** 22:14:33.2, 10°.68S×165°.80E, h40^{km}, mB5.6/19, mb5.0/59, Ms5.6/27, Ms7 5.4/26*

*NEIC **09** 22:14:33.1±1.7, 10°.93S×165°.90E, h29^{km}±11^{km}, mb5.3/101, Error ellipse: s-maj=4.5km s-min=4.3km az=159.0*

ISC 09 22:14:33.8±0.3**, 10°.92S**±0°.05×**165°.96E**±0°.05**, h35**^{km}**, n444,** σ**1^{s}19**/446**, mb5.2**/165**, 19C-9D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	283	i P	Pn	22 16 03.0	+1.5
HNR	Honiara	6.10	283	ePn	Pn	22 16 02.6	+1.0
HNR	Honiara	6.10	283	Pn	Pn	22 16 01.3	-0.3
	615nm,0.3s,baz=168,slow=4.9,SNR=91						
MARNC	Mare, Loyalty	10.69	170	ePn	Pn	22 17 02.6	-2.0
DZM	Mont Dzumac	11.10	178	ePn	Pn	22 17 09.0	-1.3
	276nm,0.5s						
DZM				eLR	LR	22 19 43.0	
	comp=Z,19µm,22.4s						
DZM	Mont Dzumac	11.10	178	ePn	Pn	22 17 09.3	-1.0
DZM	Mont Dzumac	11.10	178	Pn	Pn	22 17 09.6	-0.6
	36nm,0.3s,baz=50,slow=14,SNR=74						
ONTNC	Ouen Toro	11.34	178	ePn	Pn	22 17 12.4	-1.0
PINNC	Pines Island,	11.72	173	ePn	Pn	22 17 18.0	-0.6
FUNA	Funafuti	13.26	81	ePn	Pn	22 17 38.9	-0.8
MSVF	Nonsavu	13.53	121	ePn	Pn	22 17 43.8	+0.3
MSVF	Nonsavu	13.53	121	eP	Pn	22 17 43.8	+0.3
TARA	Tarawa	14.02	30	ePn	Pn	22 17 49.2	-0.9
RABL	Rabaul	15.21	295	ePn	P	22 18 10.2	-0.6
	590nm,1.4s						
EIDS	Eidsvold	20.13	222	P	Pn	22 19 06.2	-0.8
	baz=20,SNR=11						
EIDS	Eidsvold	20.13	222	eP	Pn	22 19 06.5	-0.5
	91nm,1.1s						
MANU	Manus Island	20.45	294	eP	P	22 19 09.2	+0.7
	1µm,1.4s						
CTA	Charters Tower	21.05	242	P	P	22 19 14.8	-0.1
	47nm,0.8s,baz=65,slow=12,SNR=27						
CTAO	Charters Tower	21.05	242	eP	P	22 19 16.0	+1.1
	70nm,0.8s						
CTAO	Charters Tower	21.05	242	eP	P	22 19 16.0	+1.1
CTAO				pmax	pmax		
	comp=Z,70nm,0.8s						
LHI	Lord Howe Isla	21.48	196	eP	P	22 19 20.4	+1.0
	comp=Z,167nm,0.9s						
MTSU	Mount Surprise	22.13	249	P	P	22 19 26.9	+0.3
	baz=22,SNR=43						
RMQ	Roma	22.44	224	P	P	22 19 30.4	+0.6
	baz=23,SNR=65						
COEN	Coen	22.45	260	P	P	22 19 29.5	-0.6
	baz=22,SNR=51						
COEN	Coen	22.45	260	eP	P	22 19 29.9	-0.2
	comp=Z,311nm,1.4s						
ARMA	Armidale	23.54	212	P	P	22 19 41.7	+0.5
	baz=24,SNR=20						
ARMA	Armidale	23.54	212	eP	P	22 19 41.8	+0.6
	comp=Z,170nm,1.3s						
OUZ	Omahuta	25.17	165	eP	P	22 19 57.1	+1.1
	comp=Z,121nm,1.3s						
OUZ	Omahuta	25.17	165	P	P	22 19 56.4	+0.5
MGCD	Mangrove Creek	26.05	209	P	P	22 20 04.9	+0.9
	baz=26,SNR=6.8						
JAY	Jayapura	26.41	287	P	P	22 20 07.9	+0.4
	comp=Z,857nm,1.1s						
GENI	Genyem	26.89	286	P	P	22 20 12.1	+0.3
QIS	Mount Isa	27.08	246	P	P	22 20 13.2	-0.2
	baz=27,SNR=29						
CMSA	Cobar Meteorol	27.80	219	P	P	22 20 19.3	-0.5
	baz=28,SNR=23						
YNG	Young	28.27	212	P	P	22 20 24.7	+0.8
	baz=28,SNR=5.4						
CNB	Canberra Magne	28.60	209	P	P	22 20 27.4	+0.5
	baz=29,SNR=12						
OMRZ	Omania	28.64	163	P	P	22 20 31.5	+4.3
HAZ	Te Kaha	28.76	160	P	P	22 20 28.9	+0.7
RUGZ	Raukumara Rang	28.91	161	P	P	22 20 29.4	-0.3
PKGZ	Pakihiroa	28.98	160	P	P	22 20 29.9	-0.3
URZ	Urewera	29.00	162	eP	P	22 20 30.9	+0.5
	comp=Z,20nm,0.7s						
URZ	Urewera	29.00	162	P	P	22 20 30.4	0.0
	comp=Z,20nm,0.8s,baz=349,slow=6.9,SNR=14						
URZ	Urewera	29.00	162	P	P	22 20 30.6	+0.3
MUGZ	Murupara	29.10	162	P	P	22 20 30.6	-0.7
PUZ	Puketiti	29.20	160	P	P	22 20 31.4	-0.8
TWGZ	Tauwhareparae	29.21	160	P	P	22 20 32.3	+0.1
H11S2	WAKE ISLAND Hy	29.23	1	T	T	22 50 51.2	
	baz=181,slow=76						
H11S3	WAKE ISLAND Hy	29.23	1	T	T	22 50 51.6	
	baz=181,slow=76						
H11S1	WAKE ISLAND Hy	29.25	1	T	T	22 50 52.7	
	baz=181,slow=76						
RTZ	Ruatahuna	29.29	162	P	P	22 20 31.7	-1.4
WTVZ	West Tongariro	29.37	165	P	P	22 20 35.2	+1.4
NGZ	Ngauruhoe	29.43	165	P	P	22 20 36.1	+1.8
COVZ	Chateau Observ	29.43	165	P	P	22 20 36.8	+2.5
FWVZ	Far West T-bar	29.49	165	P	P	22 20 36.4	+1.5
TUVZ	Tukino	29.53	165	P	P	22 20 37.3	+2.1
TRVZ	Turoa	29.53	165	P	P	22 20 37.5	+2.2
CNGZ	Carnagh Statio	29.56	160	P	P	22 20 35.3	0.0
RIGZ	Rimuhau	29.62	161	P	P	22 20 34.4	-1.5
BKZ	Black Stump Fm	29.66	163	eP	P	22 20 35.0	-1.3
	comp=Z,34nm,0.5s						
BKZ				eS	S	22 25 31.9	+2.3
BKZ	Black Stump Fm	29.66	163	P	P	22 20 34.8	-1.5
MOVZ	Moawhango	29.68	165	P	P	22 20 36.8	+0.3
WAZ	Wanganui	29.82	166	P	P	22 20 39.8	+2.2
BHHZ	Black Hill Sta	29.84	164	P	P	22 20 36.9	-1.0
KWHZ	Kaweka Forest	29.88	164	P	P	22 20 37.8	-0.4
ARHZ	Aropaoanui	29.89	163	P	P	22 20 37.7	-0.6
MCHZ	McNeill Hill	29.98	163	P	P	22 20 38.2	-0.8
KAHZ	Kahuranaki	30.35	163	P	P	22 20 40.8	-1.6
H11N1	WAKE ISLAND Hy	30.45	2	T	T	22 52 23.5	
	baz=182						
H11N3	WAKE ISLAND Hy	30.45	2	T	T	22 52 23.6	
	baz=182						
H11N2	WAKE ISLAND Hy	30.47	2	T	T	22 52 24.5	
	baz=182						
PXZ	Pawanui	30.57	163	P	P	22 20 43.0	-1.1
STKA	Stephens Creek	30.68	223	P	P	22 20 45.5	+0.1
	baz=31,SNR=26						
STKA	Stephens Creek	30.68	223	eP	P	22 20 45.4	+0.1
	comp=Z,7.5nm,0.9s						
STKA	Stephens Creek	30.68	223	eP	P	22 20 45.4	+0.1
STKA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STKA	Stephens Creek	30.68	223	P	P	22 20 44.9	-0.4
	comp=Z,23nm,0.9s,baz=46,slow=9.1,SNR=32						
BFZ	Birch Farm	31.01	165	eP	P	22 20 46.5	-1.6
	comp=Z,52nm,0.9s						
BFZ	Birch Farm	31.01	165	P	P	22 20 45.5	-2.6
SNZO	South Karori	31.24	167	eP	P	22 20 49.4	-0.7
	comp=Z,82nm,1.0s						
THZ	Tophouse	31.33	170	eP	P	22 20 51.3	+0.3
	comp=Z,59nm,0.8s						
WRAB	Tennant Creek	31.71	250	eP	P	22 20 53.4	-1.2
	comp=Z,212nm,1.0s						
WRAB	Tennant Creek	31.71	250	eP	P	22 20 53.4	-1.2
WRAB				pmax	pmax		
	comp=Z,212nm,1.0s						
WB2	Warramunga Arr	31.71	250	eP	P	22 20 53.5	-1.1
WRA	Warramunga Arr	31.73	250	P	P	22 20 53.5	-1.2
	comp=Z,162nm,0.9s,baz=80,slow=9.2,SNR=313						
WRA				PcP	PcP	22 23 45.8	-0.2
	comp=Z,2.5nm,1.0s,baz=83,slow=3.7,SNR=2.1						
WRA				ScP	ScP	22 27 29.5	+2.7
	comp=Z,3.0nm,1.1s,baz=79,slow=4.3,SNR=2.6						
KHZ	Kahutara	32.07	169	eP	P	22 20 57.0	-0.4
	comp=Z,38nm,1.0s						
LTZ	Lake Taylor	32.22	171	eP	P	22 20 58.3	-0.4
	comp=Z,74nm,1.0s						
TOO	Toolangi	32.29	211	P	P	22 21 00.0	+0.5
	baz=32,SNR=13						
TOO	Toolangi	32.29	211	eP	P	22 20 60.0	+0.5
	comp=Z,33nm,0.8s						
TOO	Toolangi	32.29	211	eP	P	22 21 00.0	+0.5
TOO				pmax	pmax		
	comp=Z,33nm,0.8s						
FOZ	Fox Glacier	32.67	175	eP	P	22 21 03.5	+0.9
	comp=Z,100nm,0.9s						
OXZ	Oxford	32.72	172	eP	P	22 21 02.2	-0.9
	comp=Z,105nm,1.1s						
KDU	Kakadu	32.81	264	P	P	22 21 02.5	-1.7
	baz=33,SNR=32						
RPZ	Rata Peaks	32.98	173	eP	P	22 21 05.1	-0.3
	comp=Z,79nm,0.8s						
RPZ	Rata Peaks	32.98	173	P	P	22 21 05.1	-0.3
	comp=Z,70nm,0.8s,baz=40,slow=1.5,SNR=21						
AS01	Alice Springs	33.00	243	eP	P	22 21 03.9	-1.9
AS31	Alice Springs	33.04	243	eP	P	22 21 04.8	-1.5
	comp=Z,7.2nm,0.8s						
ASAR	Alice Springs	33.04	243	P	P	22 21 05.1	-1.1
ASAR				PcP	PcP	22 23 49.3	-0.2
ASAR				ScP	ScP	22 27 35.5	+4.3
ASAR	Alice Springs	33.04	243	P	P	22 21 05.1	-1.1
	comp=Z,19nm,0.7s,baz=72,slow=9.3,SNR=119						
ASAR				PcP	PcP	22 23 49.3	-0.2
	comp=Z,3.7nm,0.9s,baz=69,slow=2.4,SNR=2.9						
ASAR				ScP	ScP	22 27 35.5	+4.3
	comp=Z,3.3nm,0.9s,baz=82,slow=3.3,SNR=4.8						
CRLZ	Canterbury Las	33.05	171	eP	P	22 21 06.0	+0.1
	comp=Z,148nm,1.4s						
MQZ	McQueen's Vall	33.18	171	eP	P	22 21 06.9	-0.2
	comp=Z,76nm,1.0s						
HTT	Hallett	33.41	224	P	P	22 21 09.5	+0.2
	baz=34,SNR=14						
LBZ	Lake Benmore	33.55	175	eP	P	22 21 10.9	+0.6
	comp=Z,34nm,1.0s						
ARPS	Mount Arapiles	33.71	216	P	P	22 21 12.3	+0.5
	baz=34,SNR=5.5						
ODZ	Otahua Downs	34.25	174	eP	P	22 21 16.8	+0.4
	comp=Z,38nm,1.1s						
SAUI	Saumlaki	34.30	272	P	P	22 21 17.6	+0.4
MLZ	Mavora Lakes	34.38	177	eP	P	22 21 18.7	+1.1
	comp=Z,52nm,1.2s						
DCZ	Deep Cove	34.44	179	eP	P	22 21 20.5	+2.4
	comp=Z,66nm,1.1s						
BBOO	Buckleboo	35.07	227	P	P	22 21 23.5	-0.2
	baz=35,SNR=14						
BBOO	Buckleboo	35.07	227	eP	P	22 21 23.5	-0.2
	comp=Z,58nm,0.8s						
MOO	Moorlands	35.43	204	P	P	22 21 27.8	+1.1
	baz=36,SNR=4.0						
PALU	Palau	36.21	299	P	P	22 21 33.9	+0.2
	baz=36,SNR=6.7						
BNDI	Bandanaira	36.26	277	P	P	22 21 34.3	+0.2
KNRA	Kununurra	36.47	258	P	P	22 21 35.2	-0.7
	baz=37,SNR=12						
WRKA	Warakurna	38.33	243	P	P	22 21 50.8	-0.8
	baz=38,SNR=17						
NLAI	Namlea	39.27	278	P	P	22 21 59.7	+0.1
FITZ	Fitzroy Crossi	39.62	255	P	P	22 22 01.6	-0.9
	baz=40,SNR=103						
FITZ	Fitzroy Crossi	39.62	255	eP	P	22 22 01.5	-0.9
	comp=Z,126nm,0.8s						
FITZ	Fitzroy Crossi	39.62	255	P	P	22 22 01.5	-0.9
	comp=Z,99nm,0.7s,baz=90,slow=6.4,SNR=215						
TNTI	Ternate	40.09	284	eP	P	22 22 05.6	-0.8
	comp=Z,65nm,1.3s						
TNTI	Ternate	40.09	284	P	P	22 22 06.3	-0.1
FORT	Forrest	40.29	235	P	P	22 22 07.9	+0.1
	baz=40,SNR=7.5						
FORT	Forrest	40.29	235	eP	P	22 22 07.7	-0.1
	comp=Z,85nm,1.0s						
SANI	Sanana	40.63	280	P	P	22 22 10.9	0.0
SOEI	Soe	41.01	268	eP	P	22 22 14.2	0.0
	comp=Z,159nm,1.3s						
SOEI	Soe	41.01	268	P	P	22 22 14.2	0.0
BATI	Baumata	41.56	267	P	P	22 22 18.7	+0.1
BATI	Baumata	41.56	267	P	P	22 22 18.1	-0.5
	comp=Z,212nm,1.0s,baz=162,slow=1.9,SNR=44						
MMRI	Maumere	43.12	269	eP	P	22 22 30.3	-1.0
	comp=Z,383nm,1.1s						
MMRI	Maumere	43.12	269	P	P	22 22 31.3	+0.1
BBSI	Bau Bau	43.25	274	P	P	22 22 32.3	0.0
KMSI	Cibinong	43.26	283	P	P	22 22 32.3	-0.1
MATI	Mati	43.32	292	eP	P	22 22 32.4	-0.4
KDI	Kendari	43.49	276	P	P	22 22 34.2	0.0
PPT2	Papeete2	43.52	104	eLQ	LQ	22 32 59.8	
	comp=Z,10µm,28.0s						
PPT2				eLR	LR	22 34 50.2	
	comp=Z,5µm,22.0s,baz=277						
EDFI	Ende, Flores	43.65	269	P	P	22 22 35.6	0.0
LUWI	Luwuk	44.00	280	eP	P	22 22 37.9	-0.4
	comp=Z,280nm,1.1s						
LUWI	Luwuk	44.00	280	P	P	22 22 38.2	-0.1
KCP	Kidapawan	44.40	292⇑	eP	P	22 22 40.3	-1.3
BASI	Baing, Sumba	44.59	266	P	P	22 22 43.1	+0.1
BUKP	Musuan	44.78	293	eP	P	22 22 43.0	-1.6
WSI	Waingapu	44.91	267	P	P	22 22 45.7	+0.1
APSI	Ampana	45.12	280	P	P	22 22 47.1	-0.1
MRSI	Marisa	45.20	282	P	P	22 22 47.7	-0.2
MBWA	Marble Bar	45.44	251	eP	P	22 22 50.2	+0.5
	comp=Z,160nm,0.9s						
BKSI	Bulukumba	45.68	273	P	P	22 22 51.7	0.0
BNSI	Bone	45.86	274	P	P	22 22 53.1	0.0
MSLP	Maasin	45.91	296	eP	P	22 22 51.2	-2.3
SPSI	Sidrap Palu	46.27	275	P	P	22 22 56.3	-0.1
PAGZ	Pagadian	46.29	292	eP	P	22 22 54.4	-2.1
TTSI	Tana Toraja	46.41	276	P	P	22 22 57.4	-0.1
PCI	Palu	46.87	279	P	P	22 23 01.0	-0.1
MPSI	Mapaga	47.13	281	P	P	22 23 02.9	-0.2
MEEK	Meekatharra	47.19	244	P	P	22 23 03.4	-0.1
	baz=47,SNR=79						
PLAI	Plampang	47.48	268	P	P	22 23 05.8	0.0
HMH	Humu'ula Sheep	48.60	52	eP	P	22 23 21.0	+6.3
	comp=Z,130nm,1.1s						
KLBR	Kellerberrin	48.95	238	P	P	22 23 16.4	-0.6
	baz=49,SNR=9.5						
OTRP	Odiongan	49.38	297	eP	P	22 23 20.4	-0.1
SMKI	Samarinda	49.53	279	P	P	22 23 21.5	-0.2
BLDU	Ballidu	49.61	239	P	P	22 23 21.7	-0.3
	baz=50,SNR=6.3						
BKB	Balikpapan	49.65	278	P	P	22 23 26.1	+3.6
NWAO	Narrogin (SRO)	49.71	236	P	P	22 23 22.6	-0.2
	baz=50,SNR=5.5						
NWAO	Narrogin (SRO)	49.71	236	eP	P	22 23 22.6	-0.2
	comp=Z,52nm,1.1s						
NWAO	Narrogin (SRO)	49.71	236	P	P	22 23 22.0	-0.7
	comp=Z,30nm,1.0s,baz=302,slow=6.5,SNR=7.0						
MORW	Morawa	49.87	241	P	P	22 23 24.1	+0.1
	baz=50,SNR=18						
MORW	Morawa	49.87	241	eP	P	22 23 24.1	+0.1
	comp=Z,82nm,1.0s						
KBKI	Kotabaru	49.93	275	P	P	22 23 24.9	+0.2
	comp=Z,23nm,1.1s,comp=Z,3µm						
DNP	Denpasar	50.01	268	P	P	22 23 25.3	0.0
	comp=Z,225nm,0.5s						
SRBI	Singaraja	50.09	269	P	P	22 23 25.4	-0.4
	comp=Z,103nm,0.9s,comp=Z,2µm						

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SJMP  San Jose          50.22 296  eP      P        22 23 29.7 +3.0
MUN   Mundaring         50.33 237   P      P        22 23 27.4  0.0
      baz=50,SNR=8.8
GIRL  Giralia           50.65 250   P      P        22 23 31.6 +1.6
      baz=51,SNR=4.8
GIRL  Giralia           50.65 250  eP      P        22 23 31.6 +1.6
      comp=Z,612nm,1.5s
JAGI  Jajag, Banyuwa    51.08 268  eP      P        22 23 32.1 -1.3
      comp=Z,290nm,1.1s
JAGI  Jajag, Banyuwa    51.08 268   P      P        22 23 32.1 -1.3
PALP  Palanan           51.23 302  eP      P        22 23 34.5 +0.2
KMMI  Kalianget         51.45 270   P      P        22 23 37.0 +0.9
      comp=Z,58nm,1.1s,comp=Z,594nm
CAUP  Cauayan           51.67 302  eP      P        22 23 37.9 +0.2
GMJI  Gumukmas          51.80 268   P      P        22 23 37.7 -1.0
KKM   Kota Kinabalu     52.30 286  eP      P        22 23 42.2 -0.4
      comp=Z,119nm,1.3s
TAOE  Nuku Hiva Isla    53.08  93  eLR     LR       22 39 09.0
      comp=Z,2µm,22.6s,baz=269
PWJI  Pagerwojo         53.44 268   P      P        22 23 50.4 -0.5
      comp=Z,111nm,0.9s,comp=Z,3µm
NGJI  Ngawi             53.87 269   P      P        22 23 55.6 +1.6
MJAR  Matsushiro Arr    53.95 332   P      P        22 23 52.9 -1.4
      comp=Z,7.0nm,0.8s,baz=172,slow=9.0,SNR=18
MAJO  Matsushiro        53.95 332  eP      P        22 23 54.3  0.0
      comp=Z,18nm,0.9s
MAJO  Matsushiro        53.95 332  eP      P        22 23 54.3  0.0
MAJO                                pmax   pmax
      comp=Z,18nm,0.9s
MAT   Matsushiro        53.95 332   P      P        22 23 53.4 -0.8
MJB9  Matsu-Tunnel      53.96 332  eP      P        22 23 54.3  0.0
      comp=Z,18nm,0.9s
PCJI  Pacitan           54.03 268   P      P        22 23 55.3 +0.1
      comp=Z,397nm,1.6s,comp=Z,6µm
WOJI  Wonogiri, Jawa    54.33 268   P      P        22 23 59.2 +1.8
UGM   Wanagama          54.71 268  eP      P        22 24 00.1 -0.1
      comp=Z,151nm,1.0s
UGM   Wanagama          54.71 268   P      P        22 24 00.8 +0.6
      comp=Z,170nm,1.1s
SMRI  Semarang          54.91 269  eP      P        22 24 02.3 +0.6
      comp=Z,158nm,0.9s
SMRI  Semarang          54.91 269   P      P        22 24 02.2 +0.5
      comp=Z,186nm,1.1s
JNU   Nakatsue          55.10 324  eP      P        22 24 02.7  0.0
      comp=Z,21nm,0.9s
JNU   Nakatsue          55.10 324   P      P        22 24 02.1 -0.6
      comp=Z,14nm,0.8s,baz=57,slow=3.2,SNR=11
KPJI  Karang Pucung     56.35 268   P      P        22 24 12.1 +0.1
      comp=Z,116nm,0.8s
KSM   Kuching           56.69 279  eP      P        22 24 14.2 -0.2
      comp=Z,81nm,1.3s
CMJI  Cimerak           56.77 268   P      P        22 24 15.2 +0.3
      comp=Z,114nm,1.1s
JCJI  Jatiwangi         57.13 269   P      P        22 24 17.5  0.0
      comp=Z,591nm,1.1s,comp=Z,7µm
CISI  Cisompet, Garu    57.42 268  eP      P        22 24 18.1 -1.5
      comp=Z,156nm,0.8s
CISI  Cisompet, Garu    57.42 268   P      P        22 24 18.7 -0.9
      comp=Z,222nm,1.1s,comp=Z,3µm
RKT   Rikitea           57.44 110  eLR     LR       22 41 11.4
      comp=Z,4µm,23.2s
TPI   Tanjungpandan     58.37 273   P      P        22 24 26.7 +0.5
      comp=Z,106nm,1.2s,comp=Z,5µm
CBJI  Citeko            58.53 269   P      P        22 24 26.3 -1.1
      comp=Z,133nm,1.5s
DBJI  Dramaga           58.61 269   P      P        22 24 27.7 -0.2
      comp=Z,71nm,1.3s,comp=Z,8µm
SKJI  Sukabumi          58.73 268   P      P        22 24 28.3 -0.5
      comp=Z,230nm,1.3s,comp=Z,3µm
KSRS  Korea Array       59.89 325   P      P        22 24 36.3 +0.1
      comp=Z,3.1nm,0.9s,baz=141,slow=7.7,SNR=8.5
KSAR  Wonju Array Be    59.90 325   P      P        22 24 36.3  0.0
KSAR  Wonju Array Be    59.90 325   P      P        22 24 36.3  0.0
KS01  Wonju Array Si    59.92 325  eP      P        22 24 35.9 -0.6
PPBI  Pangkal Pinang    59.97 274   P      P        22 24 37.8 +0.4
      comp=Z,54nm,1.2s,comp=Z,3µm
KASI  Kota Agung        60.98 270   P      P        22 24 43.0 -1.2
YSS   Yuzh-Sakhalins    61.23 342⇑eP      P        22 24 49.0 +3.8
YSS                                e                22 25 01.3
YSS                                e                22 25 23.7
YSS                                 pmax   pmax
      comp=Z,20nm,1.0s
MDSI  Maura Dua         61.47 271   P      P        22 24 45.9 -1.6
LWLI  Liwa              61.50 270   P      P        22 24 47.7 -0.2
      comp=Z,40nm,1.1s,comp=Z,15µm
NJ2   Nanjing           62.08 315  eP      P        22 24 51.2  0.0
NJ2                                 PcP    PcP      22 25 28.3 -3.1
NJ2                                 pmax   pmax
      comp=Z,24nm,0.8s
LHSI  Lahat             62.23 271   P      P        22 24 52.4 -0.2
      comp=Z,66nm,1.2s
JMBI  JAMBI             62.52 274   P      P        22 24 57.1 +2.5
QIZ   Qiongzhong        62.80 298   P      P        22 24 57.2 +0.8
QIZ                                 S      S        22 33 24.0 +0.4
QIZ                                 LR     LR
      comp=Z,1µm,19.6s
QIZ                                 LR     LR
      comp=Z,1µm,17.2s
QIZ                                 LR     LR
      comp=Z,2µm,19.6s
USA0B Ussuriysk Arra    62.93 333  eP      P        22 24 58.0 +1.3
      comp=Z,24nm,1.2s
USRK  Ussuriysk Ar.     62.93 333   P      P        22 24 57.3 +0.7
      comp=Z,7.5nm,0.8s,baz=134,slow=6.3,SNR=14
MASI  Maura Aman, Be    63.61 272   P      P        22 25 02.5 +0.6
RGRI  Rengat            64.06 275   P      P        22 25 06.1 +1.3
PETK  Petropavlovsk-    64.16 354   P      P        22 25 05.0 +0.4
PETK  Petropavlovsk-    64.16 354   P      P        22 25 05.0 +0.4
PETK  Petropavlovsk-    64.16 354   P      P        22 25 05.0 +0.4
      comp=Z,3.3nm,0.8s,baz=158,slow=4.3,SNR=4.4
MDJ   Mudanjiang        64.33 332   P      P        22 25 06.6 +0.7
MDJ                                 pmax   pmax
      comp=Z,15nm,1.1s
WHN   Wuhan             64.46 311 ⇓P      P        22 25 05.7 -1.4
KRJI  Kerinci           64.57 273   P      P        22 25 08.8 +0.5
BKNI  Bangkinang        65.47 275  eP      P        22 25 14.7 +0.7
      comp=Z,226nm,1.0s
BKNI  Bangkinang        65.47 275   P      P        22 25 14.6 +0.7
      comp=Z,249nm,1.1s
CN2   Changchun         65.74 329  eP      P        22 25 14.7 -0.4
CN2                                epP     pP       22 25 25.1 -0.8
CN2                                esP     sP       22 25 28.9 -1.1
CN2                                 PP     PP       22 27 42.3 +2.1
CN2                                eS      S        22 33 58.5 -0.5
CN2                                 pmax   pmax
      comp=Z,20nm,1.1s
CN2                                 LR     LR
      comp=Z,2µm,16.0s
CN2                                 LR     LR
      comp=Z,1µm,16.0s
CN2                                 LR     LR
      comp=Z,2µm,16.0s
PDSI  Padang            65.78 274   P      P        22 25 15.6 -0.4
      comp=Z,19nm,1.0s
IPM   Ipoh              66.41 280  eP      P        22 25 20.2 +0.1
      comp=Z,71nm,0.9s
CASY  Casey             66.58 201  eP      P        22 25 20.0 -0.2
      comp=Z,1.3nm,0.3s
GRNR  Gornyy            66.59 340  eP      P        22 25 21.7 +1.3
GRNR                                pmax   pmax
      comp=Z,21nm,1.0s
VNDA  Vanda             66.63 181   P      P        22 25 21.1 +0.8
      comp=Z,9.4nm,0.9s,baz=15,slow=8.6,SNR=3.4
MNSI  Mandailing Nat    66.99 276   P      P        22 25 22.9 -0.9
      comp=Z,76nm,1.2s
KLR   Kul'dur           67.02 336  i P     P        22 25 22.0 -1.2
SKNT  Sakolnakorn       67.23 294   P      P        22 25 25.6 +0.4
      comp=Z,27nm,2.2s
NKL   Nikolayevsk       67.37 344  eP      P        22 25 25.6 +0.3
ENH   Enshi             67.98 309  eP      P        22 25 28.8 -0.9
      comp=Z,14nm,1.2s
PSI   Prapat            68.06 277  eP      P        22 25 29.7 -1.0
      comp=Z,31nm,0.9s
PSI   Prapat            68.06 277  eP      P        22 25 29.7 -1.0
PSI                                 pmax   pmax
      comp=Z,31nm,0.9s
NONG  Nongkai           68.35 294   P      P        22 25 32.5 +0.3
      comp=Z,1.0nm,1.1s,comp=Z,113nm
BJI   Beijing           68.51 321   P      P        22 25 31.3 -1.5
GYA   Guiyang           68.52 304⇑iP      P        22 25 35.4 +2.1
GYA                                 pP     sP       22 25 47.3 -0.5
GYA                                 PP     PP       22 28 09.4 +4.4
GYA                                 S      S        22 34 33.0 -0.4
GYA                                 SKS    SKiKP    22 35 27.2 +2.7
GYA                                 pmax   pmax
      comp=Z,30nm,1.0s
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GYA                                 pmax   pmax
      comp=Z,140nm,7.6s
GYA                                 LR     LR
      comp=Z,630nm,18.4s
GYA                                 LR     LR
      comp=Z,650nm,18.1s
GYA                                 LR     LR
      comp=Z,590nm,18.6s
TSI   Tuntungan         68.57 278   P      P        22 25 33.4 -0.3
      comp=Z,99nm,0.8s
CHAI  Chaiyaphum        68.69 292   P      P        22 25 34.5 +0.1
      comp=Z,6.3nm,0.9s
PATY  Pattaya           68.81 288   P      P        22 25 36.9 +1.8
      comp=Z,12nm,0.9s
GSI   Gunungsitoli      69.06 276  eP      P        22 25 36.9 +0.1
      comp=Z,70nm,0.8s
GSI   Gunungsitoli      69.06 276   P      P        22 25 38.3 +1.5
KCSI  Kotacane, Aceh    69.34 278   P      P        22 25 37.5 -1.0
      comp=Z,30nm,0.7s
TIY   Taiyuan           69.61 317  eP      P        22 25 40.2 +0.4
TIY                                 pmax   pmax
      comp=Z,12nm,0.7s
PBKT  Sadao Pong        69.83 292  eP      P        22 25 42.1 +0.7
PBKT  Sadao Pong        69.83 292   P      P        22 25 42.1 +0.7
      comp=Z,24nm,1.4s
XAN   Xi'an             70.19 312   P      P        22 25 43.0 -0.4
XAN                                 pP     sP       22 25 56.5 -1.4
XAN                                 pmax   pmax
      comp=Z,17nm,1.1s
XAN                                 pmax   pmax
      comp=Z,2µm,12.0s
SRDT  SRDT              70.85 289   P      P        22 25 48.8 +1.1
      comp=Z,23nm,1.5s,comp=Z,1µm
UTHA  Uthaitani         70.91 291   P      P        22 25 48.9 +0.9
      comp=Z,7.1nm,1.0s,comp=Z,66nm
KMI   Kunming           71.23 301   P      P        22 25 51.2 +1.1
KMI                                 pP     sP       22 26 03.1 -1.6
KMI                                 sP     PcP      22 26 08.0 -2.0
KMI                                 pmax   pmax
      comp=Z,28nm,1.3s
KMI                                 LR     LR
      comp=Z,1µm,18.1s
KMI                                 LR     LR
      comp=Z,2µm,19.3s
KMI                                 LR     LR
      comp=Z,2µm,19.3s
MA2   Magadan           71.31 352  i P     P        22 25 49.9 +0.3
MA2                                 pmax   pmax
      comp=Z,30nm,2.1s
HHC   Hu-ho-hao-te      71.87 320  eP      P        22 25 54.2 +0.7
HHC                                 pmax   pmax
      comp=Z,16nm,1.3s
HHC                                 pmax   pmax
      comp=Z,560nm,6.1s
CM01  Chiang Mai Arr    72.23 293  eP      P        22 25 55.6 -0.4
CMAR  Chiang Mai Arr    72.25 293   P      P        22 25 55.6 -0.5
      comp=Z,13nm,0.9s,baz=114,slow=4.3,SNR=69
ZEA   Zeya              72.31 337  eP      P        22 25 56.2 +0.5
ZEA                                 pmax   pmax
      comp=N,29nm,1.2s
ZEA                                 pmax   pmax
      comp=Z,61nm,1.6s
CMMT  Chiang Mai        72.36 294   P      P        22 25 56.9 +0.1
      comp=Z,23nm,1.3s
HIA   Hailar            72.36 330  i P     P        22 25 56.1 -0.1
HIA                                 pmax   pmax
      comp=Z,21nm,1.5s
CHTO  Chiang Mai        72.36 294  eP      P        22 25 57.1 +0.3
      comp=Z,26nm,1.1s
CHTO  Chiang Mai        72.36 294  eP      P        22 25 57.1 +0.3
CHTO                                pmax   pmax
      comp=Z,26nm,1.1s
CHTO  Chiang Mai        72.36 294   P      P        22 25 56.9 +0.1
      comp=Z,102nm,1.3s
CD2   Chengdu           72.69 307   P      P        22 25 58.6  0.0
CD2                                 pmax   pmax
      comp=Z,70nm,1.0s
BTO   Baotou            72.73 319  eP      P        22 25 59.5 +0.8
SEY   Seymchan          74.37 354  i P     P        22 26 07.3 -0.3
LZH   Lanzhou           74.83 312  eP      P        22 26 11.3 +0.2
LZH                                 pP     pP       22 26 20.5 -1.3
LZH                                 sP     sP       22 26 26.1 +0.4
LZH                                 pmax   pmax
      comp=Z,31nm,1.3s
LZH                                 pmax   pmax
      comp=Z,140nm,4.8s
LZH                                 LR     LR
      comp=Z,890nm,13.9s
LZH                                 LR     LR
      comp=Z,2µm,13.9s
LZH                                 LR     LR
      comp=Z,1µm,14.8s
GAMB  Gambell           76.40  10  eP      P        22 26 20.8 +1.6
      comp=Z,22nm,1.0s
CIT   Chita             77.15 330  eP      P        22 26 24.0 +0.1
CIT                                e                22 26 33.6
YAK   Yakutsk           78.03 343  eP      P        22 26 28.4  0.0
YAK                                 pmax   pmax
      comp=Z,64nm,0.8s
YAK                                 pmax   pmax
      comp=N,16nm,0.8s
YAK                                 pmax   pmax
      comp=E,16nm,0.8s
ANM   Nome              78.32  12  eP      P        22 26 31.8 +1.8
      comp=E,18nm,1.2s
ANM   Nome              78.32  12  eP      P        22 26 31.8 +1.8
ANM                                 pmax   pmax
      comp=Z,18nm,1.2s
ULN   Ulaanbaatar       78.32 324  eP      P        22 26 30.9 +0.3
      comp=Z,13nm,1.0s
ULN   Ulaanbaatar       78.32 324  i P     P        22 26 30.3 -0.3
ULN                                 pmax   pmax
      comp=Z,15nm,1.0s
SONM  Songino Array     78.69 324   P      P        22 26 32.0 -0.6
      comp=Z,4.3nm,1.0s,baz=134,slow=4.9,SNR=23
SONA1 Songino Array     78.69 324  eP      P        22 26 32.2 -0.4
BILL  Bilibino          78.75   0  eP      P        22 26 31.9 -0.4
      comp=Z,35nm,1.2s
BILL  Bilibino          78.75   0  eP      P        22 26 31.9 -0.4
BILL                                pmax   pmax
      comp=Z,35nm,1.2s
QSPA  South Pole Qui    79.09 180  eP      P        22 26 33.7 -0.9
      comp=Z,32nm,1.1s
GTA   Gaotai            79.12 314 ⇓P      P        22 26 35.3 +0.1
GTA                                 pP     pP       22 26 46.6 +0.7
GTA                                 sP     sP       22 26 51.4 +1.6
GTA                                 pmax   pmax
      comp=Z,19nm,1.4s
BOD   Bodaibo           80.50 335  eP      P        22 26 41.2 -0.8
BOD                                 pmax   pmax
      comp=Z,4.0nm,1.5s
SHL   Shillong          80.64 298  eP      P        22 26 43.8  0.0
      comp=Z,55nm,1.5s
SHL   Shillong          80.64 298  eP      P        22 26 43.8  0.0
SHL                                 pmax   pmax
      comp=Z,55nm,1.5s
CAST  Castle Rocks      80.76  18  eP      P        22 26 44.8 +1.4
      comp=Z,19nm,1.2s
ZAK   Zakamensk         81.72 325  eP      P        22 26 46.3 -2.5
ZAK                                 pmax   pmax
      comp=Z,11nm,1.1s
RDOG  Red Dog Mine      81.86  11  eP      P        22 26 54.4 +5.4
      comp=Z,43nm,1.4s
TLY   Talaya            82.13 326  i P     P        22 26 49.9 -1.0
IM3   Indian Mountai    82.24  15  eP      P        22 26 50.7 -0.4
WRH   Wood River Hil    82.74  18  eP      P        22 26 54.3 +0.6
      comp=Z,18nm,1.1s
MDM   Murphy Dome       83.04  18  eP      P        22 26 58.7 +3.4
      comp=Z,10nm,0.8s
HDA   Harding Lake      83.05  19  eP      P        22 26 55.6 +0.2
      comp=Z,29nm,0.8s
HDA   Harding Lake      83.05  19   P      P        22 26 55.5 +0.2
      baz=226
COLA  College           83.10  18  eP      P        22 26 60.0 +4.5
      comp=Z,17nm,0.8s
COLA  College           83.10  18  i P     P        22 26 56.0 +0.5
COLA                                pmax   pmax
      comp=Z,14nm,0.8s
RIDG  Independ'e Rid    83.28  20  eP      P        22 27 00.2 +3.6
      comp=Z,32nm,1.2s
IL1   Eielson Array     83.32  18  eP      P        22 26 55.8 -1.0
ILAR  Eielson Array     83.32  18   P      P        22 26 56.5 -0.2
      comp=Z,7.8nm,0.8s,baz=230,slow=5.3,SNR=49
ILB   Eielson Array     83.32  18  eP      P        22 26 56.5 -0.2
K02D  Willamette Mer    83.33  44   P      P        22 27 01.0 +3.5
      baz=249
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POKR  Poker Plat Res    83.39  18   P      P        22 26 56.4 -0.8
      baz=226
MOY   Mondy             83.59 325  eP      P        22 26 57.6 -1.0
MOY                                 pmax   pmax
      comp=Z,2.0nm,1.5s
YBH   Yreka Blue Hor    83.65  46  eP      P        22 27 01.8 +2.7
      comp=Z,14nm,1.2s
SCRK  Sand Creek        83.72  20  eP      P        22 27 03.9 +4.9
      comp=Z,46nm,1.4s
HUMO  Hull Mountain     83.79  45  eP      P        22 27 00.8 +1.1
      comp=Z,12nm,1.1s
AFDM  Forest Hills D    83.96  49  eP      P        22 27 01.1 +0.5
      comp=Z,20nm,1.0s
CMB   Columbia Colle    84.10  50  eP      P        22 27 01.7 +0.3
      comp=Z,13nm,1.1s
CMB   Columbia Colle    84.10  50  eP      P        22 27 01.7 +0.3
CMB                                 pmax   pmax
      comp=Z,13nm,1.1s
M04C  Macdoel           84.28  46   P      P        22 27 04.2 +1.9
      baz=250
J04D  Umpqua Nationa    84.59  44   P      P        22 27 04.7 +0.7
      baz=250
WAKR  Walker            84.95  49  eP      P        22 27 07.3 +1.3
      comp=Z,27nm,1.3s
MDPB  Devils Postpil    84.95  50  eP      P        22 27 07.0 +0.9
      comp=Z,15nm,1.0s
EDW2  Edwards Air Fo    84.97  53   P      P        22 27 06.4 +0.5
      baz=253
PNTR  Pine Nut          85.02  49  eP      P        22 27 11.1 +4.8
      comp=Z,16nm,1.0s
J05D  Fort Rock, OR     85.21  44   P      P        22 27 07.8 +0.7
      baz=250
TOLK  Toolik Lake Re    85.31  15  eP      P        22 27 10.7 +3.8
      comp=Z,15nm,1.5s
TOLK  Toolik Lake Re    85.31  15   P      P        22 27 08.1 +1.3
      baz=224
DAWY  Dawson            85.36  21  eP      P        22 27 07.8 +0.7
      comp=Z,8.0nm,0.9s
CWC   Cottonwood Cre    85.36  52   P      P        22 27 08.4 +0.4
      baz=253
PAHR  Pah Rah Range     85.37  48  eP      P        22 27 08.5 +0.6
      comp=Z,12nm,1.0s
RAMN  Ramite            85.58 298  eP      P        22 27 08.8 -0.6
PINE  Pine Mountain     85.58  44  eP      P        22 27 13.8 +4.9
      comp=Z,17nm,1.3s
RYN   Ryan              85.67  50  eP      P        22 27 11.3 +1.9
      comp=Z,12nm,1.0s
MPMC  Manual Prospec    85.71  52   P      P        22 27 10.2 +0.5
      baz=253
NVAR  Mina Array Bea    85.78  50   P      P        22 27 10.1  0.0
      comp=Z,2.4nm,0.7s,baz=235,slow=7.2,SNR=10
TIXI  Tiksi             86.00 349  i P     P        22 27 09.2 -0.9
TIXI                                pmax   pmax
      comp=Z,6.0nm,1.3s
GRAC  Grapevine Rang    86.07  51   P      P        22 27 12.1 +0.8
      baz=253
JIRN  Jiri              86.11 299  eP      P        22 27 11.6 -0.5
      comp=Z,84nm,1.3s
BELC  Belle Mtn. Jos    86.31  55   P      P        22 27 12.1 -0.6
      baz=254
GUN   Gumba             86.44 299  eP      P        22 27 13.2 -0.5
WVOR  Wild Horse Val    86.75  46  eP      P        22 27 16.5 +1.9
      comp=Z,22nm,1.4s
WVOR  Wild Horse Val    86.75  46  eP      P        22 27 16.5 +1.9
WVOR                                pmax   pmax
      comp=Z,22nm,1.4s
PKI   Pulchoki          86.76 299  eP      P        22 27 14.0 -1.3
      comp=Z,77nm,1.5s
PKIN  Phulchoki         86.77 299  eP      P        22 27 14.2 -1.1
      comp=Z,66nm,1.5s
DMN   Daman             87.03 299  eP      P        22 27 15.9 -0.6
      comp=Z,93nm,1.3s
IRM   Iron Mountain     87.03  55   P      P        22 27 16.9 +0.7
      baz=255
R11A  Troy Canyon, C    87.80  50   P      P        22 27 19.7 -0.2
      baz=254
PDMCI Parker Dam,Lak    87.88  55   P      P        22 27 21.0 +0.9
      baz=255
W13A  Hualapai Mount    88.28  54  eP      P        22 27 24.4 +2.1
      comp=Z,11nm,1.1s
DANN  Dangsing          88.36 299  eP      P        22 27 21.4 -1.5
      comp=Z,20nm,1.0s
KOLN  Koldanda          88.37 299  eP      P        22 27 21.4 -1.4
F10A  Beach Ranch, E    88.77  43  eP      P        22 27 25.7 +1.5
      comp=Z,19nm,1.4s
PYUN  Piuthan           88.97 299  eP      P        22 27 23.9 -1.8
      comp=Z,24nm,1.1s
WMQ   Urumqi            89.15 315   P      P        22 27 25.7 -0.3
WMQ                                 pP     pP       22 27 35.4 -1.5
WMQ                                 sP     sP       22 27 42.5 +1.6
WMQ                                 pmax   pmax
      comp=Z,52nm,1.3s
WMQ                                 LR     LR
      comp=Z,4µm,17.1s
WMQ                                 LR     LR
      comp=Z,2µm,18.1s
WMQ                                 LR     LR
      comp=Z,2µm,22.3s
PSUT  Pine Spring       89.16  51  eP      P        22 27 29.1 +2.8
      comp=Z,14nm,1.3s
LCMT  Little Creek M    89.26  52  eP      P        22 27 27.6 +0.9
      comp=Z,29nm,1.4s
CCUT  Cedar City        89.30  52  eP      P        22 27 28.1 +1.1
      comp=Z,17nm,1.4s
SZCU  Shurtz Canyon     89.52  52  eP      P        22 27 29.1 +1.1
      comp=Z,40nm,1.5s
KNB   Kanab             89.58  52  eP      P        22 27 29.4 +1.1
      comp=Z,52nm,1.4s
KNB   Kanab             89.58  52  eP      P        22 27 29.4 +1.1
KNB                                 pmax   pmax
      comp=Z,52nm,1.4s
U15A  North Rim         89.86  53  eP      P        22 27 30.6 +0.8
      comp=Z,17nm,1.0s
HLID  Hailey            90.04  46  eP      P        22 27 30.9 +0.6
      comp=Z,8.8nm,1.1s
HLID  Hailey            90.04  46   P      P        22 27 31.0 +0.7
      baz=255
MTPU  Mount Pierson     90.32  51  eP      P        22 27 33.5 +1.5
      comp=Z,20nm,1.2s
DUG   Dugway, Tooele    90.36  49  eP      P        22 27 33.8 +2.0
      comp=Z,7.7nm,1.3s
DUG   Dugway, Tooele    90.36  49   P      P        22 27 32.1 +0.2
      baz=256
MSU   Marysvale         90.44  51  eP      P        22 27 33.7 +1.4
MSU   Marysvale         90.44  51  eP      P        22 27 33.7 +1.4
HYB   Hyderabad         90.78 287  i P     P        22 27 33.5 -0.6
NLU   North Lily Min    90.85  50  eP      P        22 27 35.5 +1.3
      comp=Z,9.1nm,1.0s
DGZ   Jazzator, Alta    90.93 320  i P     P        22 27 33.4 -0.9
DGZ                                 pmax   pmax
      comp=Z,4.0nm,0.7s
DLMT  Dillon            91.74  44  eP      P        22 27 38.8 +0.7
      comp=Z,13nm,1.0s
SYO   Syowa Base        91.97 197⇓eP      P        22 27 37.6 -0.9
PDAR  Pinedale Array    93.31  47  eP      P        22 27 47.0 +1.4
PDAR  Pinedale Array    93.31  47   P      P        22 27 45.2 -0.4
      comp=Z,0.6nm,0.8s,baz=256,slow=6.0,SNR=5.0
MK01  Makanchi Array    93.56 317  eP      P        22 27 45.3 -1.0
MK31  Makanchi Array    93.57 317  eP      P        22 27 45.3 -1.1
MKAR  Makanchi Array    93.57 317  eP      P        22 27 45.3 -1.1
      comp=Z,36nm,0.9s
MKAR                                PKKPbc PKKPdf   22 44 50.4 -2.2
MKAR  Makanchi Array    93.57 317   P      P        22 27 45.1 -1.3
      comp=Z,6.4nm,1.0s,baz=98,slow=6.2,SNR=26
MKAR                                PKKPbc PKKPdf   22 44 50.4 -2.2
      comp=Z,0.8nm,0.9s,baz=267,slow=1.4,SNR=6.5
ZAA0  Zalesovo Array    93.57 324  eP      P        22 27 44.7 -1.4
      comp=Z,11nm,1.3s
ZALV  Zalesovo Beam     93.57 324   P      P        22 27 44.6 -1.5
      comp=Z,8.2nm,1.1s,baz=108,slow=4.8,SNR=16
MAKZ  Makanchi          93.78 317  eP      P        22 27 46.8 -0.6
      comp=Z,18nm,1.3s
MAKZ  Makanchi          93.78 317  eP      P        22 27 46.8 -0.6
MAKZ                                pmax   pmax
      comp=Z,18nm,1.3s
EGMT  Eagleton          94.23  42   P      P        22 27 49.5  0.0
      baz=258
NVS   Novosibirsk       94.68 325  eP      P        22 27 50.9 -0.3
YKA   Yellowknife Ar    94.76  27   P      P        22 27 49.6 -1.8
      comp=Z,0.8nm,0.6s,baz=257,slow=4.6,SNR=11
NRIK  Noril'sk          96.07 340   P      P        22 27 56.2 -1.1
      comp=Z,0.9nm,0.3s,baz=133,slow=3.3,SNR=4.3
KURK  Kurchatov         96.67 320  eP      P        22 27 59.5 -0.9
      comp=Z,8.3nm,1.4s
KURK  Kurchatov         96.67 320  eP      P        22 27 59.5 -0.9
KURK                                pmax   pmax
      comp=Z,8.0nm,1.4s
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ARCES	ARCESS Array B	116.26	346	PKP	PKiKP	22 33 12.0	-1.0
	comp=Z,2.0nm,0.6s,baz=72,slow=1.9,SNR=15						
FINES	FINESS Array B	121.73	339	PKP	PKPdf	22 33 22.8	-1.0
	comp=Z,0.7nm,0.7s,baz=259,slow=1.9,SNR=4.7						
BOSA	Boshof	125.35	223	PKP	PKPdf	22 33 31.3	-0.7
	comp=Z,2.8nm,0.7s,baz=108,slow=3.6,SNR=6.3						
NB2	NORSAR Subarra	126.63	345	PKPdf	PKPdf	22 33 32.4	-0.8
	comp=Z,3.6nm,1.2s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.63	345	PKP	PKPdf	22 33 32.0	-1.2
	comp=Z,0.7nm,0.7s,baz=36,slow=2.0,SNR=5.5						
AKASG	Malin Array Be	126.87	327	PKP	PKPdf	22 33 32.9	-1.0
	comp=Z,0.4nm,0.5s,baz=62,slow=1.8,SNR=5.6						
BRTR	Keskin Array B	129.03	313	PKP	PKPdf	22 33 36.9	-1.7
	comp=Z,1.9nm,1.2s,baz=57,slow=4.6,SNR=5.8						
CFR	Carcaliu	130.38	321	⇓*i*P	PKPdf	22 33 40.8	+0.1
CFR	Carcaliu	130.38	321	⇓PKIKP	PKPdf	22 33 40.8	+0.1
BIZ	Bicaz	130.65	324	⇑*i*P	PKPdf	22 33 41.3	0.0
TLB	Topalu	130.73	321	⇑*i*P	PKiKP	22 33 44.6	+2.3
TLB	Topalu	130.73	321	⇑PKIKP	PKiKP	22 33 44.6	+2.3
BURAR	Bucovina Array	130.77	326	⇑*i*P	PKiKP	22 33 42.7	+0.2
BURAR	Bucovina Array	130.77	326	⇑PKIKP	PKiKP	22 33 42.7	+0.2
MLR	Muntele Rosu	131.53	323	⇑*i*P	PKiKP	22 33 45.1	+1.0
MLR	Muntele Rosu	131.53	323	⇑PKIKP	PKiKP	22 33 45.1	+1.0
TRPA	Tarpa	131.91	328	⇑*i*P	PKiKP	22 33 46.5	+1.9
VOIR		132.09	323	⇓*i*P	PKiKP	22 33 46.9	+1.7
VOIR		132.09	323	⇓PKIKP	PKiKP	22 33 46.9	+1.7
ARR	Arges	132.37	323	⇑*i*P	PKiKP	22 33 46.3	+0.5
DRGR		132.64	326	⇓*i*P	PKPdf	22 33 45.2	+0.1
DRGR		132.64	326	⇓PKIKP	PKPdf	22 33 45.2	+0.1
GZR	Gura Zlata	133.43	324	⇑*i*P	PKiKP	22 33 49.7	+1.8
GZR	Gura Zlata	133.43	324	⇑PKIKP	PKiKP	22 33 49.7	+1.8
SIRR	Siria	133.53	326	⇑*i*P	PKPdf	22 33 46.1	-0.7
BZS	Buzias	133.96	325	⇑*i*P	PKPdf	22 33 46.4	-1.1
BZS	Buzias	133.96	325	⇑PKIKP	PKPdf	22 33 46.4	-1.1
CLL	Collm	134.07	337	*e*PKPdf	PKPdf	22 33 48.0	+0.4
CLL				*e*		22 34 14.0	
CLL				*i*		22 34 26.0	
CLL				*e*PKSdf	PKSdf	22 37 28.0	+4.3
CLL	Collm	134.07	337	*e*PKIKP	PKPdf	22 33 48.0	+0.4
VTS	Vitosha	134.73	321	⇑*i*P	PKiKP	22 33 50.4	-0.3
VTS	Vitosha	134.73	321	⇑PKIKP	PKiKP	22 33 50.4	-0.3
KHC	Kasperske Hory	135.52	334	*e*PKPDF	PKPdf	22 33 51.2	+0.8
KHC				*e*pPKP	pPKPdf	22 34 03.0	+1.4
KHC				*e*x	x	22 34 28.0	
KHC				*e*x	x	22 37 06.5	
KHC	Kasperske Hory	135.52	334	*e*PKIKP	PKPdf	22 33 51.2	+0.8
KHC				*e*		22 34 03.0	
GERES	GERESS Array B	135.68	334	PKP	PKPdf	22 33 49.8	-1.0
	comp=Z,0.8nm,0.7s,baz=64,slow=3.1,SNR=5.7						
MOA	Molln	136.18	333	PKPdf	PKPdf	22 33 50.6	-1.1
	comp=Z,7.4nm,1.7s						
ABTA	Abfaltersbach	137.79	333	PKPdf	PKPdf	22 33 52.9	-1.9
	comp=Z,11nm,2.0s						
MOTA	Moosalm	137.95	334	PKiKP	PKPdf	22 33 55.5	+0.4
	comp=Z,2.4nm,0.8s						
SQTA	Sankt Quirin	138.00	334	PKiKP	PKiKP	22 33 56.9	-0.3
	comp=Z,8.3nm,1.8s						
FETA	Feichten	138.36	334	PKiKP	PKiKP	22 33 59.0	+1.0
	comp=Z,4.4nm,1.3s						
KEST	Kesra	147.44	323	PKPbc	PKPbc	22 34 14.8	+0.2
	comp=Z,5.9nm,0.7s,baz=262,slow=3.3,SNR=9.7						
PBRG	Braganca	148.57	350	*e*PKPdf	PKPbc	22 34 17.3	-0.1
PGAV	Gavieira, Arco	148.66	352	*e*PKPdf	PKPbc	22 34 17.8	+0.1
POLO	Lamas de Olo	149.17	351	*e*PKPdf	PKPbc	22 34 18.7	-0.3
MVO	Moncorvo	149.24	350	*e*PKPdf	PKPbc	22 34 18.9	-0.3
PVRL	Vila Real	149.25	351	*e*PKPdf	PKPbc	22 34 18.2	-1.0
PVIS	Viseu	149.82	351	*e*PKPdf	PKPbc	22 34 20.5	-0.1
ESDC	Sonseca Array	149.99	344	PKPbc	PKPbc	22 34 20.7	-0.4
	comp=Z,2.1nm,0.8s,baz=10,slow=2.3,SNR=13						
MTE	Manteigas	150.08	350	*e*PKPdf	PKPbc	22 34 20.7	-0.6
PCAS	Casmilo, Conde	150.57	351	*e*PKPdf	PKPbc	22 34 21.6	-0.8
PCBR	Castelo Branco	150.61	350	*e*PKPdf	PKPbc	22 34 22.0	-0.4
PTOM	Tomar	150.98	351	*e*PKPdf	PKPbc	22 34 23.6	+0.3
PMRV	Marv??o	150.99	349	*e*PKPdf	PKPbc	22 34 23.2	-0.2
PMTG	Montargil	151.49	350	*e*PKPdf	PKPdf	22 34 20.5	+2.1
PESTR	Estremoz	151.57	349	*e*PKPab	PKPab	22 34 34.2	+1.0
PNCL	Nicolau / Gran	152.47	351	*e*PKPdf	PKPdf	22 34 18.1	-1.8
PVAQ	Vaqueiros	153.02	349	*e*PKPdf	PKPdf	22 34 20.4	-0.3
TORD	Torodi Ar. Bea	164.45	280	PKP	PKPdf	22 34 33.3	-1.6
	comp=Z,2.7nm,1.1s,baz=151,slow=3.4,SNR=7.8						
KIC	Kosan Boka	169.75	245	*e*P	PKPab	22 35 52.4	-0.6
	comp=Z,13nm,0.2s						
LIC	Lamto	169.94	243	*e*P	PKPab	22 35 53.6	-0.3
	comp=Z,83nm,1.6s						
TIC	Toumodi	170.13	245	*e*P	PKPab	22 35 54.8	+0.1

*ISCJB **09** 22:15:04.4±0.4, 10.°93S±0.°05×166.°00E±0.°06, h10^{km}, mb5.0/23, MS5.2/1, Error ellipse: s-maj=10.1km s-min=6.5km az=144.1*

*IDC **09** 22:15:04.0±0.5, 10.°93S×166.°09E, h0^{km}, mb5.1/23, mb1 5.2/25, mb1mx5.1/35, mbtmp5.1/25, ML5.6/2, MS5.4/3, Ms1 5.4/3, ms1mx4.7/28, Error ellipse: s-maj=16.4km s-min=13.2km az=106.0*

ISC 09 22:15:05.4±0.4**, 10.°92S**±0.°06×**166.°04E**±0.°07**, h10^{km}, n70, σ1^{s}.70**/73**, mb5.1**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.18	283	Pn	Pn	22 16 39.1	+2.3
	399nm,0.3s,baz=144,slow=7.8,SNR=3.6						
HNR				Sn	Sn	22 17 48.7	+1.1
	baz=165,slow=20,SNR=1.7						
HNR				LR	LR	22 18 43.1	
	comp=Z,26μm,19.0s,baz=134,slow=35						
HNR	Honiara	6.18	283	*i* S	Sn	22 17 39.0	-8.6
HNR	Honiara	6.18	283	Sn	Sn	22 17 48.7	+1.1
DZM	Mont Dzumac	11.10	178	Pn	Pn	22 17 45.7	+1.4
	14nm,0.3s,baz=58,slow=19,SNR=2.3						
DZM				Sn	Sn	22 19 46.9	-1.8
	3.0nm,0.3s,baz=308,slow=20,SNR=3.0						
DZM				LR	LR	22 21 41.3	
	comp=Z,24μm,19.6s,baz=26,slow=36						
DZM	Mont Dzumac	11.10	178	Sn	Sn	22 19 46.9	-1.8
CTA	Charters Tower	21.11	242	P	P	22 19 51.0	+0.6
	45nm,0.8s,baz=77,slow=14,SNR=5.9						
URZ	Urewera	28.97	162	P	P	22 21 05.9	+0.7
	16nm,0.5s,baz=79,slow=1.4,SNR=6.2						
URZ				LR	LR	22 30 34.9	
	comp=Z,7μm,19.9s,baz=346,slow=32						
H11S2	WAKE ISLAND Hy	29.23	1	T	T	22 51 29.3	
	baz=187						
H11S3	WAKE ISLAND Hy	29.23	1	T	T	22 51 31.0	
	baz=187						
KATZ	Kakaramea	29.24	164	P	P	22 21 10.1	+2.4
H11S1	WAKE ISLAND Hy	29.25	1	T	T	22 51 33.7	
	baz=187						
MTHZ	Maungataniwha	29.44	163	P	P	22 21 11.4	+2.0
FWVZ	Far West T-bar	29.46	165	P	P	22 21 12.3	+2.5
TUVZ	Tukino	29.50	165	P	P	22 21 13.7	+3.6
BKZ	Black Stump Fm	29.63	163	P	P	22 21 12.2	+1.1
MOVZ	Moawhango	29.66	165	P	P	22 21 12.9	+1.5
BHHZ	Black Hill Sta	29.82	164	P	P	22 21 13.9	+1.2
ARHZ	Aropaoanui	29.87	163	P	P	22 21 14.0	+0.9
KAHZ	Kahuranaki	30.32	163	P	P	22 21 18.1	+0.9
H11N1	WAKE ISLAND Hy	30.45	2	T	T	22 53 00.6	
	baz=180						
H11N3	WAKE ISLAND Hy	30.46	2	T	T	22 53 03.4	
	baz=180,slow=74						
H11N2	WAKE ISLAND Hy	30.47	2	T	T	22 53 04.6	
	baz=180,slow=74						
DVHZ	Dannevirke	30.60	165	P	P	22 21 20.0	+0.4
STKA	Stephens Creek	30.73	224	P	P	22 21 22.8	+1.9
	28nm,0.9s,baz=30,slow=6.5,SNR=7.0						
BFZ	Birch Farm	30.98	165	P	P	22 21 23.1	+0.1
WRA	Warramunga Arr	31.80	250	P	P	22 21 30.5	+0.1
	69nm,1.0s,baz=78,slow=8.8,SNR=12						
WRA				PcP	PcP	22 24 21.4	-0.3
	3.3nm,1.0s,baz=71,slow=2.3,SNR=3.2						
WRA				ScP	ScP	22 28 05.0	-0.4
	3.8nm,1.1s,baz=79,slow=3.7,SNR=3.5						
RPZ	Rata Peaks	32.96	173	P	P	22 21 41.0	+0.6
	70nm,0.7s,baz=28,slow=0.7,SNR=7.0						
ASAR	Alice Springs	33.11	243	P	P	22 21 42.4	+0.5
	24nm,0.9s,baz=71,slow=8.9,SNR=5.4						
ASAR				PcP	PcP	22 24 24.9	-0.4
	1.8nm,0.6s,baz=81,slow=2.1,SNR=2.4						
ASAR				ScP	ScP	22 28 08.8	-1.0
	2.7nm,0.9s,baz=72,slow=3.0,SNR=3.4						
ASAR	Alice Springs	33.11	243	PcP	PcP	22 24 24.9	-0.4
ASAR				ScP	ScP	22 28 08.8	-1.0
FITZ	Fitzroy Crossi	39.69	255	P	P	22 22 38.5	+0.3
	42nm,0.8s,baz=69,slow=8.4,SNR=12						
BATI	Baumata	41.64	267	P	P	22 22 55.4	+1.0
	62nm,0.6s,baz=121,slow=22,SNR=7.5						
NWAO	Narrogin (SRO)	49.77	236	P	P	22 23 58.0	-0.4
	61nm,1.1s,baz=296,slow=7.2,SNR=6.4						
MJAR	Matsushiro Arr	53.99	332	P	P	22 24 29.7	-0.1
	13nm,1.0s,baz=167,slow=8.4,SNR=6.5						
JNU	Nakatsue	55.15	324	P	P	22 24 38.9	+0.6
	13nm,0.7s,baz=217,slow=4.8,SNR=4.8						
KSRS	Korea Array	59.94	325	P	P	22 25 12.2	+0.3
	4.1nm,0.8s,baz=138,slow=8.1,SNR=4.0						
USRK	Ussuriysk Ar.	62.97	333	P	P	22 25 33.8	+1.5
	22nm,1.1s,baz=126,slow=4.9,SNR=7.4						
PETK	Petropavlovsk-	64.17	354	P	P	22 25 42.2	+2.2
	13nm,1.0s,baz=201,slow=7.1,SNR=5.6						
PETK	Petropavlovsk-	64.17	354	*e*	P	22 25 41.9	+1.8
PETK	Petropavlovsk-	64.17	354	*e*PcP	P	22 25 41.9	+1.8
VNDA	Vanda	66.62	181	P	P	22 25 55.0	-0.7
	32nm,1.1s,baz=326,slow=8.3,SNR=4.8						
CMAR	Chiang Mai Arr	72.33	293	P	P	22 26 33.1	+1.2
	16nm,0.9s,baz=115,slow=4.4,SNR=11						
SONM	Songino Array	78.74	324	P	P	22 27 09.3	+1.0
	4.9nm,0.7s,baz=145,slow=5.3,SNR=7.2						
ILAR	Eielson Array	83.30	18	P	P	22 27 32.2	+0.2
	8.7nm,0.8s,baz=239,slow=5.1,SNR=9.1						
NVAR	Mina Array Bea	85.72	50	P	P	22 27 46.1	+0.9
	8.9nm,1.1s,baz=235,slow=6.2,SNR=5.1						
PDAR	Pinedale Array	93.25	47	P	P	22 28 22.4	+1.6
	1.4nm,0.9s,baz=245,slow=6.4,SNR=4.7						
ZALV	Zalesovo Beam	93.62	324	P	P	22 28 21.4	-0.5
	10nm,1.1s,baz=108,slow=4.8,SNR=7.0						
MKAR	Makanchi Array	93.63	317	P	P	22 28 22.2	0.0
	8.5nm,0.9s,baz=97,slow=5.9,SNR=7.4						
MKAR				PKKPbc	PKKPbc	22 45 27.5	-1.6
	0.8nm,0.7s,baz=276,slow=2.1,SNR=3.8						
YKA	Yellowknife Ar	94.73	27	P	P	22 28 26.0	-0.7
	1.6nm,0.6s,baz=257,slow=4.6,SNR=11						
ARCES	ARCESS Array B	116.29	346	PKP	PKPdf	22 33 47.4	-1.3
	2.5nm,0.7s,baz=70,slow=1.9,SNR=7.9						
KLMR	Klimovskoe	116.76	334	*e*PKPdf	PKPdf	22 33 44.2	-5.6
KLMR				AMP		22 33 45.8	
	comp=Z,8.0nm,1.6s						
LPAZ	La Paz	119.98	116	PKP	PKiKP	22 33 58.0	-0.2
	comp=Z,1.5nm,0.9s,baz=217,slow=2.9,SNR=3.0						
FINES	FINESS Array B	121.76	339	PKP	PKiKP	22 33 58.9	-0.7
	comp=Z,2.4nm,0.8s,baz=101,slow=3.9,SNR=4.8						
IZAR	Zarasai	125.40	333	*e*P	PKiKP	22 34 06.0	-0.9
BOSA	Boshof	125.41	223	PKP	PKiKP	22 34 07.6	-0.4
	comp=Z,8.6nm,1.1s,baz=161,slow=2.6,SNR=7.4						
IDID	Didziasalis	125.46	333	*e*P	PKiKP	22 34 06.4	-0.6
IIGN	Ignalina	125.67	333	*e*P	PKiKP	22 34 08.3	+0.8
NB2	NORSAR Subarra	126.66	345	PKPdf	PKiKP	22 34 08.0	-1.3
	comp=Z,5.6nm,1.0s,baz=32,slow=1.9						
NB2	NORSAR Subarra	126.66	345	PKPdf	PKiKP	22 34 08.0	-1.3
	baz=32,slow=1.9						
NOA	NORSAR Array B	126.66	345	PKP	PKiKP	22 34 08.9	-0.5
	comp=Z,1.7nm,0.8s,baz=32,slow=2.0,SNR=6.2						
AKASG	Malin Array Be	126.92	327	PKP	PKiKP	22 34 09.0	-1.0
	comp=Z,0.2nm,0.3s,baz=50,slow=2.0,SNR=6.7						
KMBO	Kilima Mbogo	127.70	260	PKP	PKiKP	22 34 11.9	-1.2
	comp=Z,2.3nm,1.0s,baz=357,slow=2.3,SNR=5.7						
BRTR	Keskin Array B	129.09	313	PKP	PKiKP	22 34 14.4	-0.6
	comp=Z,1.4nm,0.9s,baz=153,slow=4.1,SNR=4.6						
GERES	GERESS Array B	135.72	334	PKP	PKiKP	22 34 28.1	+0.1
	comp=Z,1.7nm,0.9s,baz=96,slow=2.7,SNR=6.0						
KEST	Kesra	147.49	323	PKPbc	PKPbc	22 34 48.1	-2.2
	comp=Z,8.6nm,0.6s,baz=320,slow=6.7,SNR=3.8						
ESDC	Sonseca Array	150.02	344	PKPbc	PKiKP	22 34 56.5	-1.1
	comp=Z,2.8nm,0.9s,baz=1.4,slow=2.3,SNR=5.0						
ESDC				PKPab	PKPab	22 35 01.4	-0.9
	comp=Z,7.1nm,0.8s,baz=11,slow=3.9,SNR=7.5						
TORD	Torodi Ar. Bea	164.53	280	PKP	PKPdf	22 35 11.5	+1.0
	comp=Z,3.0nm,0.9s,baz=112,slow=2.1,SNR=7.6						
TORD				PKPab	pPKPab	22 36 06.3	-2.3
	comp=Z,2.8nm,1.0s,baz=73,slow=4.7,SNR=2.9						
KIC	Kosan Boka	169.82	244	*e*PKP2	PKPab	22 36 29.5	+0.7
	comp=Z,86nm,1.1s						
LIC	Lamto	170.01	243	*e*PKP2	PKPab	22 36 30.2	+0.6
	comp=Z,83nm,1.6s						
DBIC	Dimbokro	170.06	246	PKP	PKPdf	22 35 15.4	+0.8
	comp=Z,7.2nm,0.9s,baz=100,slow=1.0,SNR=3.4						
TIC	Toumodi	170.20	245	*e*PKP2	PKPab	22 36 31.1	+0.6

*IDC **09** 22:26:23.0±1.0, 10.°95S×165.°75E, h0^{km}, mb4.1/9, mb1 4.3/11, mb1mx4.1/34, mbtmp4.2/11, ML4.6/2, MS4.9/1, Ms1 4.9/1, ms1mx3.9/36, Error ellipse: s-maj=25.4km s-min=20.7km az=104.0*

*ISCJB **09** 22:26:26.0±0.9, 11.°1S±0.°1×165.°69E±0.°09, h30^{km}, mb4.0/8, MS4.8/1, Error ellipse: s-maj=16.8km s-min=10.3km az=37.4*

ISC 09 22:26:28.2±0.9**, 11.°0S**±0.°1×**165.°7E**±0.°1**, h30^{km}, n19, σ1^{s}.22**/14**, mb4.0**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.89	285	Pn	Pn	22 27 53.0	-0.5
	30nm,0.3s,baz=160,slow=8.1,SNR=5.3						
HNR				Sn	Sn	22 29 01.5	+1.4
	3.0nm,0.3s,baz=192,slow=20,SNR=2.1						
DZM	Mont Dzumac	10.99	176	Pn	Pn	22 29 03.9	+0.4
	2.2nm,0.3s,baz=351,slow=19,SNR=2.4						
CTA	Charters Tower	20.77	242	P	P	22 31 07.6	+0.6
	5.7nm,0.8s,baz=113,slow=12,SNR=6.6						
RAO	Raoul Island	23.70	142	LR	LR	22 39 06.0	
	comp=Z,3μm,18.2s,baz=45,slow=32						
H11S2	WAKE ISLAND Hy	29.36	2	T	T	23 02 48.0	
	baz=182,slow=74						
H11S3	WAKE ISLAND Hy	29.36	2	T	T	23 02 49.4	
	baz=182						
H11S1	WAKE ISLAND Hy	29.38	2	T	T	23 02 49.5	
	baz=182,slow=74						
STKA	Stephens Creek	30.42	223	P	P	22 32 36.5	-1.6
	1.3nm,0.6s,baz=25,slow=11,SNR=3.5						
H11N1	WAKE ISLAND Hy	30.58	2	T	T	23 04 20.6	
	baz=181						
H11N3	WAKE ISLAND Hy	30.59	2	T	T	23 04 20.8	
	baz=181						
H11N2	WAKE ISLAND Hy	30.60	2	T	T	23 04 19.9	
	baz=181						
WRA	Warramunga Arr	31.45	250	P	P	22 32 46.7	-0.6
	2.9nm,0.7s,baz=82,slow=8.9,SNR=15						
ASAR	Alice Springs	32.77	243	P	P	22 32 58.1	-0.8
	1.3nm,0.7s,baz=65,slow=10,SNR=13						
ASAR				PcP	PcP	22 35 45.1	+1.3
	0.9nm,1.0s,baz=69,slow=3.1,SNR=3.2						
RPZ	Rata Peaks	32.88	173	P	P	22 32 59.9	+0.4
	10nm,0.7s,baz=277,slow=2.6,SNR=7.2						
CMAR	Chiang Mai Arr	72.08	294	P	P	22 37 50.6	+0.4
	0.4nm,0.3s,baz=100,slow=4.7,SNR=2.8						
SONM	Songino Array	78.64	324	P	P	22 38 26.0	-1.4
	0.1nm,0.3s,baz=138,slow=6.7,SNR=2.9						
ILAR	Eielson Array	83.52	19	P	P	22 38 52.2	-0.6
	1.0nm,0.6s,baz=242,slow=5.6,SNR=6.9						
MKAR	Makanchi Array	93.50	317	P	P	22 39 41.5	+0.4
	0.7nm,0.8s,baz=97,slow=4.9,SNR=5.0						
ESDC	Sonseca Array	150.04	344	PKPbc	PKPdf	22 46 13.7	+2.3
	0.1nm,0.5s,baz=12,slow=3.4,SNR=3.3						

IDC 09 22:39:47.8±1.7**, 10.°87S×165.°75E, h0^{km}, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/36**, mbtmp3.8**/4**, ML3.9**/1**, Error ellipse: s-maj=55.0km s-min=31.0km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.16	177	Pn	Pn	22 42 29.1	+0.3
	0.8nm,0.3s,baz=319,slow=20,SNR=7.8						
WRA	Warramunga Arr	31.54	250	P	P	22 46 12.3	+0.3
	0.6nm,0.7s,baz=81,slow=8.9,SNR=5.8						
ASAR	Alice Springs	32.87	243	P	P	22 46 23.3	-0.4
	0.6nm,0.7s,baz=67,slow=10,SNR=5.6						
ILAR	Eielson Array	83.34	19	P	P	22 52 16.4	0.0
	0.8nm,1.0s,baz=226,slow=7.2,SNR=3.3						

IDC 09 22:43:38.7±2.0**, 10.°97S×165.°78E, h0^{km}, mb3.3**/3**, mb1 3.8**/4**, mb1mx3.5**/37**, mbtmp3.6**/4**, ML3.8**/1**, Error ellipse: s-maj=55.6km s-min=35.7km az=123.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.06	177	Pn	Pn	22 46 18.9	+0.5
	0.8nm,0.3s,baz=71,slow=16,SNR=9.4						
WRA	Warramunga Arr	31.55	250	P	P	22 50 03.3	+0.2
	0.5nm,0.9s,baz=80,slow=9.0,SNR=3.9						
ASAR	Alice Springs	32.86	243	P	P	22 50 14.1	-0.6
	0.3nm,0.9s,baz=74,slow=9.2,SNR=3.4						
ILAR	Eielson Array	83.43	18	P	P	22 56 07.8	0.0
	0.3nm,0.8s,baz=220,slow=4.4,SNR=3.0						

*IDC **09** 22:48:59.1±0.4, 10.°89S×165.°93E, h0^{km}, mb4.7/25, mb1 4.9/27, mb1mx4.8/41, mbtmp4.7/27, ML5.4/2, MS4.8/7, Ms1 4.7/7, ms1mx4.3/31, Error ellipse: s-maj=15.9km s-min=12.9km az=131.0*

*ISCJB **09** 22:49:00.1±0.1, 10.°95S±0.°02×165.°78E±0.°03, h10^{km}, mb5.0/146, MS4.9/11, Error ellipse: s-maj=3.9km s-min=3.1km az=26.1*

*MOS **09** 22:49:00.6±0.9, 10.°83S×165.°69E, h15^{km}, mb5.2/35, Error ellipse: s-maj=10.1km s-min=7.9km az=58.8*

*NEIC **09** 22:49:01.4±0.1, 10.°90S×165.°81E, h10^{km}, mb5.1/109, Error ellipse: s-maj=4.8km s-min=3.4km az=118.0*

ISC 09 22:49:01.2±0.3**, 10.°95S**±0.°05×**165.°88E**±0.°05**, h10^{km}, n390, σ1^{s}.12**/392**, mb5.0**/146**, MS4.7**/11**, 23C-10D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.03	284	*e*P	Pn	22 50 31.0	+0.4
HNR				*e*S	Sn	22 51 42.0	+2.3
HNR	Honiara	6.03	284	Pn	Pn	22 50 31.9	+1.3
HNR				*e*Sn	Sn	22 51 35.0	-4.7
HNR				Sn	Sn	22 51 40.1	+0.4
HNR	Honiara	6.03	284	P	Pn	22 50 31.9	+1.3
HNR				*e*		22 51 35.0	
HNR	Honiara	6.03	284	Pn	Pn	22 50 31.9	+1.3
	391nm,0.3s,baz=166,slow=3.1,SNR=132						
HNR				Sn	Sn	22 51 40.1	+0.4
	baz=180,slow=20,SNR=2.9						
HNR				LR	LR	22 52 58.1	
	comp=Z,10μm,19.3s,baz=111,slow=39						
MARNC	Mare, Loyalty	10.68	169	*e*Pn	Pn	22 51 34.5	+0.2
DZM	Mont Dzumac	11.08	177	*e*Pn	Pn	22 51 42.1	+2.2
	77nm,0.5s						
DZM				*e*LR	LR	22 54 19.9	
	comp=Z,4μm,26.2s						
DZM	Mont Dzumac	11.08	177	Pn	Pn	22 51 41.5	+1.6
	6.7nm,0.3s,baz=314,slow=6.5,SNR=66						
DZM				Sn	Sn	22 53 41.8	-2.1
	1.0nm,0.3s,baz=72,slow=20,SNR=2.1						
ONTNC	Ouen Toro	11.31	177	*e*Pn	Pn	22 51 45.8	+2.8
PINNC	Pines Island,	11.70	173	*e*Pn	Pn	22 51 51.1	+2.8
FUNA	Funafuti	13.34	81	*e*Pn	P	22 52 18.5	-2.0
MSVF	Nonsavu	13.58	121	*e*Pn	Pn	22 52 19.9	+5.8
MSVF	Nonsavu	13.58	121	*e*P	Pn	22 52 19.9	+5.8
TARA	Tarawa	14.09	30	*e*Pn	Pn	22 52 23.9	+3.0
RABL	Rabaul	15.16	295	*e*Pn	Pn	22 52 35.5	-0.1
	82nm,0.6s						
EIDS	Eidsvold	20.06	222	P	Pn	22 53 35.8	-0.7
	baz=20,SNR=9.4						
EIDS	Eidsvold	20.06	222	*e*P	Pn	22 53 36.6	+0.1
	201nm,1.3s						
MANU	Manus Island	20.39	294	*e*P	Pn	22 53 40.0	-0.6
	242nm,1.1s						
CTA	Charters Tower	20.96	242	P	Pn	22 53 45.9	-1.3
	71nm,0.9s,baz=68,slow=12,SNR=51						
CTA				LR	LR	23 01 04.1	
	comp=Z,3μm,18.9s,baz=80,slow=34						
CTAO	Charters Tower	20.96	242	*e*P	Pn	22 53 45.9	-1.3
	116nm,1.0s						
CTAO	Charters Tower	20.96	242	*e*P	Pn	22 53 45.9	-1.3
CTAO				pmax	pmax		
	comp=Z,117nm,1.0s						
MTSU	Mount Surprise	22.05	249	P	P	22 53 57.2	+0.8
	baz=22,SNR=43						
RMQ	Roma	22.36	224	P	P	22 54 01.0	+1.4
	baz=22,SNR=21						
COEN	Coen	22.37	260	P	P	22 53 59.7	-0.1
	baz=22,SNR=18						
COEN	Coen	22.37	260	*e*P	P	22 53 59.7	-0.1
	comp=Z,110nm,1.4s						
ARMA	Armidale	23.47	212	P	P	22 54 12.0	+0.8
	baz=24,SNR=25						
ARMA	Armidale	23.47	212	*e*P	P	22 54 12.2	+0.9
	comp=Z,48nm,0.8s						
OUZ	Omahuta	25.16	165	*e*P	P	22 54 29.3	+2.6
	comp=Z,27nm,1.0s						
RIV	Riverview	26.47	208	P	P	22 54 40.0	+1.4
	baz=27,SNR=5.2						
QIS	Mount Isa	27.00	246	P	P	22 54 43.7	+0.1
	baz=27,SNR=17						
CMSA	Cobar Meteorol	27.72	219	P	P	22 54 50.4	+0.4
	baz=28,SNR=30						
CNB	Canberra Magne	28.53	209	P	P	22 54 58.4	+1.2
	baz=29,SNR=5.4						
HIZ	Hauiti	28.60	165	*e*P	P	22 54 57.7	0.0
	comp=Z,63nm,1.3s						
CAN	Canberra	28.71	210	*e*P	P	22 54 57.5	-1.3
	comp=Z,37nm,1.2s						
CAN	Canberra	28.71	210	*e*P	P	22 54 57.5	-1.3
CAN				pmax	pmax		
	comp=Z,37nm,1.2s						
KATZ	Kakaramea	29.25	164	P	P	22 55 05.4	+1.8
TWVZ	Taurewa	29.28	165	P	P	22 55 05.0	+1.2
MRHZ	Matea Rd	29.32	163	P	P	22 55 05.4	+1.3
WTVZ	West Tongariro	29.36	164	P	P	22 55 06.6	+2.0
NGZ	Ngauruhoe	29.42	165	P	P	22 55 07.1	+2.0
PKVZ	Pokaka	29.46	165	P	P	22 55 07.9	+2.5
MTHZ	Maungataniwha	29.46	162	P	P	22 55 06.2	+0.8
FWVZ	Far West T-bar	29.48	165	P	P	22 55 08.1	+2.4
TRVZ	Turoa	29.52	165	P	P	22 55 07.6	+1.4
RAHZ	Arahi	29.60	162	P	P	22 55 07.1	+0.5
BKZ	Black Stump Fm	29.65	163	*e*P	P	22 55 07.1	0.0
	comp=Z,28nm,0.5s						
BKZ	Black Stump Fm	29.65	163	P	P	22 55 07.6	+0.5
MOVZ	Moawhango	29.68	164	P	P	22 55 08.1	+0.8
NMHZ	Naumai	29.68	163	P	P	22 55 08.3	+0.9
WHHZ	Waihua	29.79	162	P	P	22 55 08.8	+0.6
BHHZ	Black Hill Sta	29.84	164	P	P	22 55 09.7	+1.0
KWHZ	Kaweka Forest	29.87	163	P	P	22 55 10.0	+0.9
ARHZ	Aropaoanui	29.89	163	P	P	22 55 09.4	+0.3
MCHZ	McNeill Hill	29.97	163	P	P	22 55 09.9	+0.1
CKHZ	Cape Kidnapper	30.28	163	P	P	22 55 11.8	-0.8
KAHZ	Kahuranaki	30.35	163	P	P	22 55 13.4	+0.2
PXZ	Pawanui	30.56	163	P	P	22 55 15.0	0.0
STKA	Stephens Creek	30.61	223	P	P	22 55 16.2	+0.6
	baz=31,SNR=16						
STKA	Stephens Creek	30.61	223	P	P	22 55 15.8	+0.3
	comp=Z,16nm,0.8s,baz=45,slow=9.0,SNR=24						
STKA				ScP	ScP	23 01 58.0	+1.0
	comp=Z,1.8nm,0.6s,baz=48,slow=2.9,SNR=2.9						
STKA				LR	LR	23 06 50.3	
	comp=Z,2μm,21.6s,baz=360,slow=35						
BFZ	Birch Farm	31.00	165	*e*P	P	22 55 18.4	-0.6
	comp=Z,40nm,0.7s						
BFZ	Birch Farm	31.00	165	P	P	22 55 18.5	-0.4
THZ	Tophouse	31.31	170	*e*P	P	22 55 22.5	+0.8
	comp=Z,60nm,1.0s						
WRAB	Tennant Creek	31.63	250	*e*P	P	22 55 24.0	-0.8
	comp=Z,53nm,0.9s						
WRAB	Tennant Creek	31.63	250	*ce*P	P	22 55 24.3	-0.5
WRAB				pmax	pmax		
	comp=Z,86nm,1.3s						
WB2	Warramunga Arr	31.63	250	*e*P	P	22 55 24.1	-0.7
WRA	Warramunga Arr	31.64	250	*ce*P	P	22 55 20.8	-4.1
WRA				pmax	pmax		
	comp=Z,60nm,1.0s						
WRA	Warramunga Arr	31.64	250	P	P	22 55 24.4	-0.4
	comp=Z,60nm,1.0s,baz=81,slow=9.1,SNR=175						
WRA				PcP	PcP	22 58 16.8	-0.3
	comp=Z,3.6nm,0.9s,baz=82,slow=2.9,SNR=5.2						
WRA				ScP	ScP	23 02 00.8	+0.2
	comp=Z,2.9nm,1.1s,baz=81,slow=3.8,SNR=7.1						
WRA				LR	LR	23 08 06.3	
	comp=Z,2μm,18.7s,baz=55,slow=36						
KHZ	Kahutara	32.06	169	*e*P	P	22 55 28.8	+0.6
	comp=Z,41nm,0.9s						
LTZ	Lake Taylor	32.20	171	*e*P	P	22 55 30.2	+0.7
	comp=Z,40nm,0.7s						
TOO	Toolangi	32.23	211	P	P	22 55 31.2	+1.4
	baz=32,SNR=6.0						
TOO	Toolangi	32.23	211	*e*P	P	22 55 29.9	+0.1
	comp=Z,20nm,0.9s						
TOO	Toolangi	32.23	211	*e*P	P	22 55 29.9	+0.1
TOO				pmax	pmax		
	comp=Z,20nm,0.9s						
FOZ	Fox Glacier	32.65	175	*e*P	P	22 55 35.2	+1.9
	comp=Z,52nm,1.0s						
OXZ	Oxford	32.70	172	*e*P	P	22 55 34.3	+0.5
	comp=Z,36nm,0.8s						

AS01	Alice Springs	32.91	243	eP	P	22 55 34.5	-1.5
AS01				ePcP	PcP	22 58 20.0	-0.5
AS31	Alice Springs	32.95	243	eP	P	22 55 35.6	-0.8
	comp=Z,7.0nm,0.8s						
ASAR	Alice Springs	32.95	243	P	P	22 55 35.2	-1.1
	comp=Z,15nm,0.7s,baz=65,slow=10,SNR=113						
ASAR				PcP	PcP	22 58 20.6	-0.1
	comp=Z,4.6nm,0.8s,baz=77,slow=2.8,SNR=8.5						
ASAR				ScP	ScP	23 02 04.6	-0.5
	comp=Z,4.1nm,1.2s,baz=54,slow=4.0,SNR=8.8						
ASAR				LR	LR	23 08 19.3	
	comp=Z,2µm,18.5s,baz=54,slow=35						
RPZ	Rata Peaks	32.95	173	P	P	22 55 36.3	+0.2
	comp=Z,57nm,0.7s,baz=337,slow=1.3,SNR=46						
CRLZ	Canterbury Las	33.03	171	eP	P	22 55 37.3	+0.6
	comp=Z,116nm,1.3s						
MQZ	McQueen’s Vall	33.16	171	eP	P	22 55 38.4	+0.5
	comp=Z,59nm,0.8s						
HTT	Hallett	33.34	224	P	P	22 55 40.3	+0.7
	baz=34,SNR=11						
LBZ	Lake Benmore	33.53	174	eP	P	22 55 42.5	+1.4
	comp=Z,24nm,0.9s						
WKZ	Wanaka	33.87	176	eP	P	22 55 44.7	+0.6
	comp=Z,104nm,1.4s						
RAR	Rarotonga	34.47	112	LR	LR	23 07 54.8	
	comp=Z,641nm,18.1s,baz=226,slow=33						
BBOO	Buckleboo	34.99	227	P	P	22 55 54.1	+0.1
	baz=35,SNR=12						
BBOO	Buckleboo	34.99	227	eP	P	22 55 53.4	-0.5
	comp=Z,45nm,0.9s						
KNRA	Kununurra	36.39	258	P	P	22 56 05.5	-0.7
	baz=36,SNR=8.4						
WRKA	Warakurna	38.25	243	P	P	22 56 21.0	-0.9
	baz=38,SNR=16						
FITZ	Fitzroy Crossi	39.53	255	P	P	22 56 32.0	-0.6
	baz=40,SNR=27						
FITZ	Fitzroy Crossi	39.53	255	eP	P	22 56 32.1	-0.6
	comp=Z,35nm,0.8s						
FITZ	Fitzroy Crossi	39.53	255	LR	LR	23 11 42.0	
	comp=Z,1µm,19.3s,baz=98,slow=34						
FORT	Forrest	40.21	235	eP	P	22 56 38.3	+0.1
	comp=Z,61nm,0.8s						
SANI	Sanana	40.56	280	P	P	22 56 40.9	-0.4
	comp=Z,24nm,1.2s						
BATI	Baumata	41.48	267	P	P	22 56 49.5	+0.6
PPT2	Papeete2	43.59	104	eLR	LR	23 09 26.5	
	comp=Z,2µm,26.5s						
BNSI	Bone	45.78	275	P	P	22 57 23.9	+0.4
	comp=Z,74nm,1.0s						
PCI	Palu	46.80	279	P	P	22 57 32.1	+0.5
MPSI	Mapaga	47.06	281	P	P	22 57 34.1	+0.6
MEEK	Meekatharra	47.11	244	P	P	22 57 34.6	+0.7
	baz=47,SNR=23						
HMH	Humu‘ula Sheep	48.68	52	eP	P	22 57 48.9	+2.6
	comp=Z,186nm,1.1s						
KLBR	Kellerberrin	48.87	238	P	P	22 57 47.3	-0.1
	baz=49,SNR=16						
BLDU	Ballidu	49.52	239	P	P	22 57 52.5	+0.1
	baz=50,SNR=6.4						
NWAO	Narrogin (SRO)	49.63	236	P	P	22 57 53.5	+0.3
	baz=50,SNR=8.9						
NWAO	Narrogin (SRO)	49.63	236	eP	P	22 57 53.5	+0.3
	comp=Z,53nm,0.9s						
NWAO	Narrogin (SRO)	49.63	236	eP	P	22 57 53.5	+0.3
NWAO				pmax	pmax		
	comp=Z,53nm,0.9s						
MORW	Morawa	49.79	241	P	P	22 57 55.0	+0.6
	baz=50,SNR=10						
MORW	Morawa	49.79	241	eP	P	22 57 55.1	+0.6
	comp=Z,35nm,0.8s						
MUN	Mundaring	50.24	237	P	P	22 57 58.4	+0.5
	baz=50,SNR=6.8						
PWJI	Pagerwojo	53.36	268	P	P	22 58 21.4	0.0
	comp=Z,34nm,1.0s						
NGJI	Ngawi	53.79	269	P	P	22 58 25.2	+0.7
MJAR	Matsushiro Arr	53.94	332	P	P	22 58 24.0	-1.2
	comp=Z,3.0nm,0.6s,baz=176,slow=8.1,SNR=13						
MAT	Matsushiro	53.95	332	P	P	22 58 24.6	-0.6
PCJI	Pacitan	53.95	268	P	P	22 58 26.4	+0.7
KPJI	Karang Pucung	56.28	268	P	P	22 58 43.2	+0.7
RKT	Rikitea	57.50	110	eLR	LR	23 16 03.9	
	comp=Z,2µm,26.0s						
TPI	Tanjungpandan	58.30	274	P	P	22 58 57.5	+0.7
KSRS	Korea Array	59.87	326	P	P	22 59 06.2	-1.0
	comp=Z,1.7nm,0.6s,baz=140,slow=6.7,SNR=7.7						
KSAR	Wonju Array Be	59.88	325	P	P	22 59 06.2	-1.1
KSAR	Wonju Array Be	59.88	325	P	P	22 59 06.2	-1.1
YSS	Yuzh-Sakhalins	61.23	342	⇑eP	P	22 59 17.5	+1.2
YSS				e		22 59 25.1	
MDSI	Maura Dua	61.39	271	P	P	22 59 17.8	-0.3
	comp=Z,13nm,1.9s						
USA0B	Ussuriysk Arra	62.92	333	eP	P	22 59 28.6	+0.8
	comp=Z,27nm,1.4s						
USRK	Ussuriysk Ar.	62.92	333	P	P	22 59 28.5	+0.7
	comp=Z,3.8nm,0.6s,baz=120,slow=7.6,SNR=12						
PETK	Petropavlovsk-	64.18	355	P	P	22 59 35.9	0.0
	comp=Z,7.3nm,1.1s,baz=166,slow=4.5,SNR=4.4						
BKNI	Bangkinang	65.39	275	P	P	22 59 45.3	+0.7
CN2	Changchun	65.72	329	eP	P	22 59 45.0	-1.2
CN2				epP	PP	23 01 25.6	-45
CN2				eS	S	23 07 58.6	-34
CN2	Changchun	65.72	329	SS	SS	23 12 28.6	-19
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2				pmax	pmax		
	comp=Z,230nm,5.0s						
CN2				LR	LR		
	comp=N,730nm,17.0s						
CN2				LR	LR		
	comp=E,960nm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
VNDA	Vanda	66.59	181	P	P	22 59 52.5	+1.2
	comp=Z,8.9nm,1.1s,baz=1.0,slow=6.1,SNR=2.6						
MNSI	Mandailing Nat	66.92	276	P	P	22 59 54.3	-0.1
KLR	Kul'dur	67.02	336	c iP	P	22 59 54.2	-0.1
ENH	Enshi	67.94	309	eP	P	22 59 60.0	-0.6
	comp=Z,17nm,1.0s						
GYA	Guiyang	68.47	304	⇑iP	P	23 00 05.8	+1.6
GYA				pP	sP	23 00 18.3	+10
GYA				PP	PP	23 02 39.5	+4.0
GYA				S	S	23 09 03.8	-2.7
GYA				SKS	SKiKP	23 09 57.0	-1.6
GYA	Guiyang	68.47	304	SS	SS	23 13 29.1	-1.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,550nm,18.4s						
GYA				LR	LR		
	comp=E,560nm,18.1s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
XAN	Xi'an	70.15	312	P	P	23 00 14.3	0.0
XAN				pP	sP	23 00 22.2	+4.2
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
XAN	Xi'an	70.15	312	eP	P	23 00 13.9	-0.4
	comp=Z,32nm,0.8s						
XAN	Xi'an	70.15	312	eP	P	23 00 13.9	-0.4
XAN				pmax	pmax		
	comp=Z,32nm,0.8s						
KMI	Kunming	71.18	301	P	P	23 00 23.8	+2.8
KMI				pP	PcP	23 00 34.9	-6.2
KMI				sP	sP	23 00 40.5	+16
KMI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMI				LR	LR		
	comp=N,640nm,17.4s						
KMI				LR	LR		
	comp=E,710nm,19.0s						
KMI				LR	LR		
	comp=Z,820nm,19.0s						
MA2	Magadan	71.33	352	ceP	P	23 00 20.9	0.0
MA2				pmax	pmax		
	comp=Z,12nm,1.7s						
HHC	Hu-ho-hao-te	71.84	320	eP	P	23 00 25.3	+0.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,930nm,6.1s						
CM01	Chiang Mai Arr	72.17	293	eP	P	23 00 27.2	+0.4
CMAR	Chiang Mai Arr	72.19	293	P	P	23 00 27.0	0.0
	comp=Z,1.8nm,0.9s,baz=119,slow=4.3,SNR=10						
ZEA	Zeya	72.30	337	eP	P	23 00 27.4	+0.6
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
CD2	Chengdu	72.65	307	eP	P	23 00 31.4	+1.9
SEY	Seymchan	74.39	354	i P	P	23 00 38.5	-0.4
LZH	Lanzhou	74.79	312	eP	P	23 00 50.5	+8.4
LZH				pP	PcP	23 00 59.6	+3.4
LZH				sP	sP	23 01 04.1	+18
LZH				PP	PP	23 03 44.6	+15
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				LR	LR		
	comp=N,1µm,11.9s						
LZH				LR	LR		
	comp=E,1µm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,14.2s						
GAMB	Gambell	76.45	10	eP	P	23 00 51.2	+0.5
	comp=Z,25nm,0.9s						
ULN	Ulaanbaatar	78.30	324	eP	P	23 01 01.8	+0.1
	comp=Z,4.9nm,0.6s						
ULN	Ulaanbaatar	78.30	324	ceP	P	23 01 01.4	-0.3
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ANM	Nome	78.36	12	eP	P	23 01 02.6	+1.1
	comp=Z,8.6nm,1.0s						
ANM	Nome	78.36	12	eP	P	23 01 02.6	+1.1
ANM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SONM	Songino Array	78.66	324	P	P	23 01 03.6	-0.1
	comp=Z,1.5nm,0.5s,baz=147,slow=5.6,SNR=24						
SONA1	Songino Array	78.67	324	eP	P	23 01 03.6	-0.1
BILL	Bilibino	78.78	0	eP	P	23 01 03.8	+0.1
	comp=Z,28nm,1.0s						
BILL	Bilibino	78.78	0	d iP	P	23 01 03.3	-0.4
BILL				e		23 01 09.8	
BILL				e		23 04 06.0	
BILL				eS	S	23 10 57.9	-3.2
BILL				pmax	pmax		
	comp=Z,31nm,1.0s						
BILL				MLR	MLR		
	comp=Z,2µm,21.0s						
QSPA	South Pole Qui	79.06	180	eP	P	23 01 05.2	-0.4
	comp=Z,19nm,0.9s						
GTA	Gaotai	79.08	314	⇓P	P	23 01 06.6	+0.4
GTA				pP	PcP	23 01 17.4	+2.7
GTA				sP	sP	23 01 21.0	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CAST	Castle Rocks	80.81	18	eP	P	23 01 14.3	-0.6
	comp=Z,14nm,0.8s						
ZAK	Zakamensk	81.70	325	eP	P	23 01 17.1	-2.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
RND	Reindeer	81.80	19	eP	P	23 01 20.3	+0.1
	comp=Z,14nm,1.0s						
RND	Reindeer	81.80	19	eP	P	23 01 20.3	+0.1
RND				pmax	pmax		
	comp=Z,14nm,1.0s						
RDOG	Red Dog Mine	81.90	11	eP	P	23 01 21.6	+1.0
	comp=Z,18nm,0.8s						
MCK	McKinley	82.01	19	eP	P	23 01 21.2	0.0
	comp=Z,33nm,1.4s						
MCK	McKinley	82.01	19	eP	P	23 01 21.2	0.0
MCK				pmax	pmax		
	comp=Z,33nm,1.4s						
IM3	Indian Mountai	82.29	16	eP	P	23 01 21.1	-1.5
MLY	Manley	82.41	17	eP	P	23 01 23.6	+0.3
	comp=Z,18nm,1.4s						
WRH	Wood River Hil	82.79	18	eP	P	23 01 25.2	-0.1
	comp=Z,18nm,0.9s						
MDM	Murphy Dome	83.09	18	eP	P	23 01 26.2	-0.6
	comp=Z,16nm,0.9s						
HDA	Harding Lake	83.11	19	P	P	23 01 27.0	+0.1
	baz=227						
O02D	Mt. Diablo Mer	83.13	47	P	P	23 01 29.1	+1.4
	baz=250						
TCOL	CIGO, UAF Yank	83.15	18	P	P	23 01 26.5	-0.5
	baz=226						
COLA	College	83.15	18	eP	P	23 01 26.7	-0.4
	comp=Z,23nm,0.8s						
COLA	College	83.15	18	i P	P	23 01 26.2	-0.9
COLA				pmax	pmax		
	comp=Z,22nm,0.9s						
RIDG	Independ’e Rid	83.34	20	eP	P	23 01 28.5	+0.4
	comp=Z,30nm,1.0s						
ILAR	Eielson Array	83.38	18	P	P	23 01 27.6	-0.7
	comp=Z,8.3nm,0.7s,baz=238,slow=5.2,SNR=114						
ILB	Eielson Array	83.38	18	eP	P	23 01 27.6	-0.7
IL1	Eielson Array	83.38	18	eP	P	23 01 27.1	-1.1
J01E	Myrtle Point	83.40	44	P	P	23 01 29.9	+1.0
	baz=248						
K02D	Willamette Mer	83.41	44	P	P	23 01 29.2	+0.2
	baz=249						
WDC	Whiskeytown Da	83.45	47	eP	P	23 01 30.4	+1.2
	comp=Z,16nm,1.3s						
WDC	Whiskeytown Da	83.45	47	eP	P	23 01 30.4	+1.2
WDC				pmax	pmax		
	comp=Z,16nm,1.3s						
N02D	Trinity Center	83.47	46	P	P	23 01 30.5	+1.1
	baz=250						
M02C	Callahan	83.51	46	P	P	23 01 30.8	+1.2
	baz=249						
YBH	Yreka Blue Hor	83.73	46	P	P	23 01 31.2	+0.5
	comp=Z,9.5nm,0.9s,baz=347,slow=2.7,SNR=13						
ORV	Oroville	83.85	48	eP	P	23 01 31.7	+0.4
	comp=Z,8.3nm,0.9s						
ORV	Oroville	83.85	48	eP	P	23 01 31.7	+0.4
ORV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HUMO	Hull Mountain	83.87	45	eP	P	23 01 32.4	+1.0
	comp=Z,11nm,0.9s						
O03E	Paynes Creek	83.88	47	P	P	23 01 31.7	+0.1
	baz=250						
I03D	Drain, OR	83.99	44	P	P	23 01 32.4	+0.5
	baz=249						
AFDM	Forest Hills D	84.04	49	eP	P	23 01 32.8	+0.5
	comp=Z,18nm,1.1s						
CMB	Columbia Colle	84.18	50	eP	P	23 01 33.3	+0.3
	comp=Z,10.0nm,1.0s						
CMB	Columbia Colle	84.18	50	eP	P	23 01 33.3	+0.3
CMB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
L04D	Klamath Falls	84.18	45	P	P	23 01 33.7	+0.6
	baz=250						
M04C	Macdoel	84.36	46	P	P	23 01 34.8	+0.8
	baz=250						
I04A	Tendick Farm,	84.66	44	P	P	23 01 35.8	+0.4
	baz=250						
J04D	Umpqua Nationa	84.67	44	P	P	23 01 36.4	+0.7
	baz=250						
ISA	Isabella, Lake	84.91	52	eP	P	23 01 37.5	+0.7
	comp=Z,5.5nm,0.6s						
ISA	Isabella, Lake	84.91	52	eP	P	23 01 37.5	+0.7
ISA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WAKR	Walker	85.03	49	eP	P	23 01 38.5	+0.9
	comp=Z,28nm,1.4s						
MDPB	Devils Postpil	85.03	50	eP	P	23 01 38.3	+0.6
	comp=Z,12nm,0.9s						
EDW2	Edwards Air Fo	85.05	53	P	P	23 01 38.0	+0.4
	baz=253						
OMMB	Old Mammoth Mi	85.09	50	eP	P	23 01 39.0	+1.0
	comp=Z,14nm,1.3s						
PNTR	Pine Nut	85.09	49	eP	P	23 01 38.7	+0.8
	comp=Z,18nm,1.3s						
H04A	Detroit Lake	85.12	43	eP	P	23 01 38.3	+0.6
	comp=Z,20nm,1.3s						
VCNR	Virginia City	85.12	49	eP	P	23 01 39.2	+1.2
	comp=Z,6.3nm,0.9s						
J05D	Fort Rock, OR	85.29	44	P	P	23 01 39.2	+0.5
	baz=250						
YERR	Yerington	85.33	49	eP	P	23 01 39.6	+0.5
	comp=Z,12nm,1.3s						
TOLK	Toolik Lake Re	85.36	15	eP	P	23 01 39.2	+0.9
	comp=Z,12nm,1.4s						
TOLK	Toolik Lake Re	85.36	15	P	P	23 01 39.5	+1.1
	baz=224						
DAWY	Dawson	85.42	21	eP	P	23 01 39.0	+0.2
	comp=Z,10nm,0.8s						
CWC	Cottonwood Cre	85.44	52	P	P	23 01 39.9	+0.3
	baz=253						
PAHR	Pah Rah Range	85.44	48	eP	P	23 01 40.5	+1.0
	comp=Z,10nm,0.9s						
LRMC	Laurel Mtn Rad	85.47	53	P	P	23 01 40.4	+0.6
	baz=253						
MOD	Modoc Plateau	85.48	46	eP	P	23 01 40.1	+0.4
	comp=Z,6.9nm,0.8s						
E04D	Cinebar	85.53	41	P	P	23 01 40.8	+1.2
	baz=249						
D03D	Eldon	85.55	40	P	P	23 01 40.5	+0.8
	baz=249						
I05D	Terrebonne, OR	85.57	43	P	P	23 01 40.7	+0.8
	baz=250						
PINE	Pine Mountain	85.66	44	eP	P	23 01 41.4	+0.8
	comp=Z,11nm,0.9s						
PGC	Sidney	85.73	39	eP	P	23 01 41.0	+0.5
	comp=Z,10nm,0.8s						
RYN	Ryan	85.75	50	eP	P	23 01 41.6	+0.5
	comp=Z,7.7nm,1.0s						
DAC	Darwin (Calif)	85.77	52	eP	P	23 01 41.9	+0.6
	comp=Z,5.9nm,0.9s						
MPMC	Manual Prospec	85.79	52	P	P	23 01 41.9	+0.5
	baz=253						
NV01	Mina Array Sit	85.86	50	eP	P	23 01 41.7	0.0
NVAR	Mina Array Bea	85.86	50	P	P	23 01 41.6	-0.1
	comp=Z,7.7nm,1.0s,baz=235,slow=8.7,SNR=20						
G05D	Wamic, OR	85.89	43	P	P	23 01 42.1	+0.6
	baz=250						
PFO	Pinyon Flats O	85.92	55	P	P	23 01 41.0	-1.0
PFO	Pinyon Flats O	85.92	55	P	P	23 01 41.0	-1.0
	comp=Z,4.8nm,0.8s,baz=330,slow=4.5,SNR=3.3						
NV11	Mina Array Sit	85.97	50	eP	P	23 01 42.3	+0.1
	comp=Z,1.3nm,1.2s						
TIXI	Tiksi	86.02	349	ceP	P	23 01 40.9	-0.5
TIXI				pmax	pmax		
	comp=Z,15nm,1.7s						
LON	Longmire	86.09	41	eP	P	23 01 45.5	+3.1
	comp=Z,6.0nm,1.1s						
GSC	Goldstone, Bar	86.11	53	eP	P	23 01 43.3	+0.5
	comp=Z,16nm,1.5s						
GSC	Goldstone, Bar	86.11	53	eP	P	23 01 43.3	+0.5
GSC				pmax	pmax		
	comp=Z,16nm,1.5s						
GSC	Goldstone, Bar	86.11	53	P	P	23 01 43.2	+0.4
	baz=254						
D05A	Enumclaw	86.13	41	eP	P	23 01 44.9	+2.4
	comp=Z,36nm,1.3s						
KVN	Kaiserville	86.19	49	eP	P	23 01 43.7	+0.4
	comp=Z,8.3nm,0.9s						
KVN	Kaiserville	86.19	49	eP	P	23 01 43.7	+0.4
KVN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
A04D	Lummi Island	86.22	39	P	P	23 01 43.9	+1.0
	baz=249						
HEC	Hector,Ludlow	86.35	54	P	P	23 01 43.8	-0.3
	baz=254						
BELC	Belle Mtn. Jos	86.39	55	P	P	23 01 44.9	+0.5
	baz=254						
B05A	Bryant	86.44	40	P	P	23 01 44.3	+0.3
	baz=249						
I07A	Izee	86.73	44	eP	P	23 01 46.4	+0.6
	comp=Z,11nm,0.8s						
BC3	Big Chuckawall	86.74	55	P	P	23 01 46.1	0.0
	baz=255						
WVOR	Wild Horse Val	86.82	46	eP	P	23 01 46.8	+0.5
	comp=Z,11nm,1.1s						
WVOR	Wild Horse Val	86.82	46	eP	P	23 01 46.8	+0.5
WVOR				pmax	pmax		
	comp=Z,11nm,1.1s						
TUQ	Turquoise Moun	86.84	53	P	P	23 01 46.6	+0.1
	baz=254						
GMRC	Granite Mounta	86.87	54	P	P	23 01 47.0	+0.3
	baz=254						
LTY	Liberty	86.99	41	eP	P	23 01 45.8	-1.1
	comp=Z,6.9nm,0.9s						
TPNV	Topopah Spring	87.00	52	eP	P	23 01 47.6	+0.3
	comp=Z,6.0nm,1.1s						
TPNV	Topopah Spring	87.00	52	eP	P	23 01 47.6	+0.3
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TPNV	Topopah Spring	87.00	52	P	P	23 01 46.9	-0.3
	baz=254						
GLA	Glamis	87.09	56	eP	P	23 01 48.9	+1.3
	comp=Z,15nm,0.8s						
GLA	Glamis	87.09	56	eP	P	23 01 48.9	+1.3
GLA				pmax	pmax		
	comp=Z,15nm,0.8s						
GLA	Glamis	87.09	56	P	P	23 01 48.4	+0.7
	baz=255						
IRM	Iron Mountain	87.12	55	P	P	23 01 48.3	+0.5
	baz=255						
J08A	Circle Bar Ran	87.22	45	eP	P	23 01 48.6	+0.5
	comp=Z,9.7nm,0.9s						
HAWA	Hanford	87.45	42	eP	P	23 01 49.5	+0.5
G08A	Pilot Rock	87.48	43	eP	P	23 01 49.7	+0.3
	comp=Z,9.4nm,1.0s						
Y12C	Blythe	87.51	55	eP	P	23 01 50.5	+0.9
	comp=Z,10nm,0.8s						
Y12C	Blythe	87.51	55	P	P	23 01 50.2	+0.6
	baz=255						
EPYK	Eagle Plains	87.67	20	eP	P	23 01 49.4	-0.3
	comp=Z,30nm,1.3s						
EPYK	Eagle Plains	87.67	20	P	P	23 01 49.4	-0.3
	baz=236						
SHPR	Sheep Range	87.72	52	eP	P	23 01 51.6	+0.8
	comp=Z,7.5nm,1.2s						
E08A	Dider Farm, El	87.79	42	eP	P	23 01 51.3	+0.7
	comp=Z,12nm,1.1s						
R11A	Troy Canyon, C	87.88	50	P	P	23 01 51.5	-0.1
	baz=254						
PDMCI	Parker Dam,Lak	87.96	55	P	P	23 01 52.6	+0.9
	baz=255						
D08A	Wollman Farm,	88.06	41	eP	P	23 01 52.4	+0.5
	comp=Z,9.8nm,1.3s						
B08A	Colville Reser	88.20	40	eP	P	23 01 52.6	-0.1
	comp=Z,11nm,1.5s						
214A	Organ Pipe Nat	88.47	57	P	P	23 01 55.0	+0.7
	baz=256						
BMO	Blue Mountains	88.47	44	eP	P	23 01 54.2	+0.1
	comp=Z,5.5nm,1.0s						
BMO	Blue Mountains	88.47	44	eP	P	23 01 54.2	+0.1
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ELK	Elko	88.78	48	P	P	23 01 54.3	-1.6
	comp=Z,1.5nm,0.9s,baz=270,slow=4.0,SNR=5.6						
F10A	Beach Ranch, E	88.85	43	eP	P	23 01 55.9	+0.1
	comp=Z,9.4nm,1.2s						
WMQ	Urumqi	89.12	315	eP	P	23 01 57.8	+0.7
WMQ				pP	sP	23 02 03.9	+3.1
WMQ				sP	pP	23 02 15.0	+15
WMQ				pmax	pmax		
	comp=Z,19nm,1.5s						
PSUT	Pine Spring	89.24	51	eP	P	23 01 58.7	+0.6
	comp=Z,10nm,1.2s						
LCMT	Little Creek M	89.34	52	eP	P	23 01 59.4	+1.0
	comp=Z,9.9nm,1.0s						
CCUT	Cedar City	89.38	52	eP	P	23 01 59.8	+1.1
	comp=Z,8.0nm,0.9s						
NEW	Newport	89.58	41	P	P	23 01 58.7	-0.4
	baz=253						
NEW	Newport	89.58	41	P	P	23 01 58.3	-0.9
	comp=Z,2.4nm,0.7s,baz=197,slow=4.0,SNR=6.3						
SZCU	Shurtz Canyon	89.60	52	eP	P	23 02 00.8	+1.1
	comp=Z,9.5nm,1.0s						
KNB	Kanab	89.67	52	eP	P	23 02 01.0	+1.0
	comp=Z,15nm,1.2s						
INK	Inuvik	89.76	19	P	P	23 01 58.3	-1.1
	comp=Z,3.7nm,1.1s,baz=267,slow=6.3,SNR=4.7						
HLID	Hailey	90.11	46	eP	P	23 02 02.8	+0.8
	comp=Z,5.2nm,0.9s						
HLID	Hailey	90.11	46	P	P	23 02 02.6	+0.7
	baz=255						
PKCU	Pink Cliffs	90.16	52	eP	P	23 02 04.2	+1.7
	comp=Z,14nm,1.0s						
TUC	Tucson	90.22	57	eP	P	23 02 03.6	+1.0
	comp=Z,4.3nm,0.8s						
TUC	Tucson	90.22	57	eP	P	23 02 03.6	+1.0
TUC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TUC	Tucson	90.22	57	P	P	23 02 03.6	+1.0
	baz=257						
MTPU	Mount Pierson	90.40	51	eP	P	23 02 05.1	+1.5
	comp=Z,10.0nm,0.9s						
DUG	Dugway, Tooele	90.43	49	eP	P	23 02 03.9	+0.5
	comp=Z,4.9nm,0.8s						
DUG	Dugway, Tooele	90.43	49	eP	P	23 02 03.9	+0.5
DUG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DUG	Dugway, Tooele	90.43	49	P	P	23 02 03.5	0.0
	baz=256						
WUAZ	Wupatki	90.45	54	eP	P	23 02 04.8	+1.1
	comp=Z,7.7nm,0.8s						
WUAZ	Wupatki	90.45	54	P	P	23 02 03.3	-0.4
	baz=257						
MSU	Marysvale	90.52	51	eP	P	23 02 04.3	+0.3

MSU	Marysvale	90.52	51	eP	P	23 02 04.3	+0.3
HVU	Hansel Valley	90.84	48	eP	P	23 02 06.1	+0.8
	comp=Z,12nm,1.0s						
HVU	Hansel Valley	90.84	48	eP	P	23 02 06.1	+0.8
HVU				pmax	pmax		
	comp=Z,12nm,1.0s						
DGZ	Jazzator, Alta	90.91	320	iP	P	23 02 04.7	-0.7
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NLU	North Lily Min	90.93	50	eP	P	23 02 06.5	+0.7
	comp=Z,7.6nm,0.9s						
MSO	Missoula	91.27	43	P	P	23 02 06.2	-0.9
	baz=256						
MPU	Maple Canyon	91.27	50	eP	P	23 02 08.8	+1.3
	comp=Z,14nm,1.5s						
TMUT	Trail Mountain	91.43	50	eP	P	23 02 09.3	+0.9
	comp=Z,5.7nm,0.9s						
MCMT	McKenzie Canyo	91.52	45	eP	P	23 02 10.3	+1.8
JLU	Jordanelle	91.54	49	eP	P	23 02 09.9	+1.1
	comp=Z,5.8nm,1.1s						
TCUT	Toone Canyon	91.69	49	eP	P	23 02 10.5	+1.1
	comp=Z,9.2nm,0.8s						
DLMT	Dillon	91.82	44	eP	P	23 02 10.2	+0.4
	comp=Z,11nm,0.9s						
SYO	Syowa Base	91.92	197	⇓epP	pP	23 02 23.2	+11
LRM	Limekiln Ridge	92.03	44	eP	P	23 02 11.1	+0.3
BOZ	Bozeman (W)	92.53	44	eP	P	23 02 13.7	+0.6
	comp=Z,7.7nm,0.9s						
BOZ	Bozeman (W)	92.53	44	eP	P	23 02 13.7	+0.6
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BOZ	Bozeman (W)	92.53	44	P	P	23 02 13.8	+0.7
	baz=257						
IMW	Indian Meadow	92.64	46	eP	P	23 02 14.4	+0.6
	comp=Z,0.7nm,0.6s						
YHB	Horse Butte	92.65	45	eP	P	23 02 15.2	+1.5
	comp=Z,5.4nm,0.9s						
121A	Cookes Peak, D	92.75	58	P	P	23 02 14.0	-0.4
	baz=259						
PV04	Paradox Valley	93.00	52	eP	P	23 02 17.1	+1.6
	comp=Z,7.1nm,1.1s						
H17A	Grant Village	93.00	46	P	P	23 02 16.8	+1.4
	baz=258						
BW06	Boulder Array	93.39	47	P	P	23 02 17.0	-0.2
	baz=258						
PD31	Pinedale Array	93.39	47	eP	P	23 02 17.4	+0.1
PDAR	Pinedale Array	93.39	47	P	P	23 02 16.5	-0.7
	comp=Z,2.1nm,0.9s,baz=252,slow=3.0,SNR=11						
MK31	Makanchi Array	93.54	317	eP	P	23 02 17.1	-0.4
MKAR	Makanchi Array	93.54	317	ceP	P	23 02 16.7	-0.8
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	93.54	317	P	P	23 02 16.1	-1.4
	comp=Z,3.7nm,0.8s,baz=93,slow=6.2,SNR=41						
MKAR				PKKPbc	PKKPdf	23 19 21.7	-2.4
	comp=Z,2.6nm,0.8s,baz=277,slow=3.0,SNR=23						
ZALV	Zalesovo Beam	93.55	324	P	P	23 02 15.2	-2.1
	comp=Z,1.7nm,0.6s,baz=106,slow=4.0,SNR=9.4						
MAKZ	Makanchi	93.75	317	eP	P	23 02 18.1	-0.4
	comp=Z,7.7nm,1.1s						
MAKZ	Makanchi	93.75	317	eP	P	23 02 18.1	-0.4
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANMO	Albuquerque	94.28	55	P	P	23 02 20.6	-0.8
	comp=Z,1.4nm,0.8s,baz=220,slow=5.9,SNR=4.8						
YKA	Yellowknife Ar	94.82	27	P	P	23 02 21.3	-1.6
	comp=Z,1.5nm,0.7s,baz=255,slow=4.6,SNR=26						
YKA				PP	PP	23 06 13.4	+1.6
	comp=Z,0.1nm,0.3s,baz=258,slow=7.6,SNR=3.9						
YKA				PKKP	PKKPdf	23 19 19.4	-2.7
	comp=Z,0.2nm,0.7s,baz=72,slow=2.0,SNR=4.1						
TXAR	Lajitas Array	95.67	61	P	P	23 02 26.7	-1.1
	comp=Z,0.7nm,0.6s,baz=241,slow=3.7,SNR=3.2						
TXAR				PP	PP	23 06 19.7	+0.3
	comp=Z,4.1nm,1.2s,baz=268,slow=9.8,SNR=4.5						
FFC	Flin Flon	100.08	36	iP	Pdif	23 02 47.1	+0.2
ARCES	ARCESS Array B	116.27	346	PKP	PKiKP	23 07 43.1	-1.3
	comp=Z,2.0nm,0.6s,baz=90,slow=2.4,SNR=6.2						
LPAZ	La Paz	120.11	116	PKP	PKPdf	23 07 53.0	-1.1
	comp=Z,1.6nm,0.6s,baz=308,slow=2.3,SNR=4.1						
FINES	FINESS Array B	121.73	339	PKP	PKPdf	23 07 54.2	-0.9
	comp=Z,2.2nm,0.8s,baz=38,slow=3.4,SNR=5.0						
CPUP	Villa Florida	124.00	132	PKP	PKPdf	23 07 59.7	-0.9
	comp=Z,6.2nm,0.9s,baz=220,slow=0.8,SNR=8.5						
SDV	Santo Domingo	124.36	87	PKP	PKPdf	23 08 00.2	-1.6
	comp=Z,11nm,0.8s,baz=259,slow=3.5,SNR=15						
BOSA	Boshof	125.28	223	PKP	PKPdf	23 08 02.1	-1.0
	comp=Z,3.0nm,0.8s,baz=130,slow=2.2,SNR=6.4						
NB2	NORSAR Subarra	126.64	345	PKPdf	PKPdf	23 08 03.6	-1.1
	comp=Z,6.4nm,1.4s,baz=33,slow=2.0						
NOA	NORSAR Array B	126.64	345	PKP	PKPdf	23 08 03.8	-0.9
	comp=Z,1.4nm,0.7s,baz=32,slow=2.0,SNR=6.6						
AKASG	Malin Array Be	126.85	327	PKP	PKPdf	23 08 04.4	-0.9
	comp=Z,0.2nm,0.3s,baz=54,slow=2.2,SNR=5.9						
BRTR	Keskin Array B	128.99	313	PKP	PKPdf	23 08 09.2	-0.7
	comp=Z,1.5nm,1.1s,baz=97,slow=3.0,SNR=5.6						
PRAR	RASCA	130.33	325	⇑iP	PKiKP	23 08 22.7	+10
TIRR	Tirgusor	130.53	320	⇑iP	PKiKP	23 08 14.2	+0.9
TIRR	Tirgusor	130.53	320	⇑PKIKP	PKiKP	23 08 14.2	+0.9
BIZ	Bicaz	130.63	324	⇓iP	PKPdf	23 08 12.1	-0.5
TLB	Topalu	130.70	321	⇑iP	PKiKP	23 08 23.1	+9.4
BURAR	Bucovina Array	130.75	326	⇑iP	PKPdf	23 08 12.6	-0.4
BURAR	Bucovina Array	130.75	326	⇑PKIKP	PKPdf	23 08 12.6	-0.4
VRI	Vrincioaia	130.85	323	⇑iP	PKiKP	23 08 17.5	+3.5
VRI	Vrincioaia	130.85	323	⇑PKIKP	PKiKP	23 08 17.5	+3.5
MLR	Muntele Rosu	131.51	323	⇓iP	PKiKP	23 08 18.5	+3.0
MLR	Muntele Rosu	131.51	323	⇓PKIKP	PKiKP	23 08 18.5	+3.0
VOIR		132.07	323	⇓iP	PKiKP	23 08 20.0	+3.5
VOIR		132.07	323	⇓PKIKP	PKiKP	23 08 20.0	+3.5
ARR	Arges	132.35	323	⇑iP	PKPdf	23 08 15.8	-0.2
DRGR		132.62	326	⇑iP	PKPdf	23 08 15.6	-0.9
DRGR		132.62	326	⇑PKIKP	PKPdf	23 08 15.6	-0.9
SIRR	Siria	133.52	326	⇑iP	PKPdf	23 08 18.4	+0.3
BZS	Buzias	133.94	325	⇓iP	PKPdf	23 08 18.9	0.0
BZS	Buzias	133.94	325	⇓PKIKP	PKPdf	23 08 18.9	0.0
BRG	Berggiesshubel	134.03	336	ePKP	PKiKP	23 08 20.0	-0.2
	comp=Z,9.4nm,1.3s						
BRG	Berggiesshubel	134.03	336	ePKIKP	PKiKP	23 08 20.0	-0.2
BRG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CLL	Collm	134.07	337	ePKPdf	PKPdf	23 08 19.0	0.0
CLL	Collm	134.07	337	ePKIKP	PKPdf	23 08 19.0	0.0
VTS	Vitosha	134.71	321	⇑iP	PKPdf	23 08 20.2	-0.5
VTS	Vitosha	134.71	321	⇑PKIKP	PKPdf	23 08 20.2	-0.5
GERES	GERESS Array B	135.67	334	PKP	PKPdf	23 08 21.6	-0.6
	comp=Z,1.5nm,0.9s,baz=78,slow=1.9,SNR=9.6						
BDFB	Brasilia	137.29	128	PKP	PKPdf	23 08 23.7	-2.4
	comp=Z,6.5nm,0.8s,baz=135,slow=1.4,SNR=7.2						
KEST	Kesra	147.42	323	PKPbc	PKPbc	23 08 45.3	-0.7
	comp=Z,12nm,1.0s,baz=324,slow=2.4,SNR=6.9						
PBRG	Braganca	148.59	349	ePKPdf	PKPbc	23 08 47.8	-1.1
PGAV	Gavieira, Arco	148.68	352	ePKPdf	PKPbc	23 08 48.7	-0.5
POLO	Lamas de Olo	149.18	351	ePKPdf	PKPbc	23 08 50.4	-0.1
POLO	Lamas de Olo	149.18	351	ePKPdf	PKPbc	23 08 50.4	-0.1
MVO	Moncorvo	149.26	349	ePKPdf	PKPbc	23 08 50.4	-0.2
MVO	Moncorvo	149.26	349	ePKPdf	PKPbc	23 08 50.4	-0.2
PVRL	Vila Real	149.27	351	ePKPdf	PKPbc	23 08 50.5	-0.1
PTO	Porto	149.53	352	ePKPdf	PKPbc	23 08 51.1	-0.1
PVIS	Viseu	149.84	351	ePKPdf	PKPbc	23 08 51.7	-0.4
ESDC	Sonseca Array	150.00	344	PKPbc	PKPbc	23 08 52.0	-0.5
	comp=Z,4.0nm,0.9s,baz=17,slow=2.3,SNR=22						
MTE	Manteigas	150.09	350	ePKPdf	PKPbc	23 08 52.8	+0.1
MTE	Manteigas	150.09	350	ePKPdf	PKPbc	23 08 53.0	+0.3
PCAS	Casmilo, Conde	150.59	351	ePKPdf	PKPbc	23 08 53.2	-0.6
PCBR	Castelo Branco	150.62	350	ePKPdf	PKPbc	23 08 53.5	-0.4
PCBR	Castelo Branco	150.62	350	ePKPdf	PKPbc	23 08 53.5	-0.4
PTOM	Tomar	151.00	351	ePKPdf	PKPbc	23 08 54.6	-0.2
PMRV	Marv??o	151.01	349	ePKPdf	PKPbc	23 08 54.6	-0.2
PMRV	Marv??o	151.01	349	ePKPdf	PKPbc	23 08 54.7	-0.1
PMTG	Montargil	151.50	350	ePKPdf	PKPbc	23 08 55.3	-0.7
PMTG	Montargil	151.50	350	ePKPdf	PKPbc	23 08 55.5	-0.5
PBEJ	Beja	152.46	349	ePKPdf	PKiKP	23 08 59.0	+0.6
MESJ	Messejana	152.70	350	ePKPdf	PKPdf	23 08 50.9	-0.8
MESJ	Messejana	152.70	350	ePKPdf	PKiKP	23 08 59.0	+0.1
PVAQ	Vaqueiros	153.03	349	ePKPdf	PKiKP	23 08 59.8	+0.2
TORD	Torodi Ar. Bea	164.38	280	PKP	PKPdf	23 09 04.5	-1.7
	comp=Z,1.1nm,0.8s,baz=70,slow=0.7,SNR=7.2						
TORD				PKPab	PKPab	23 09 59.7	-0.9
	comp=Z,2.0nm,1.0s,baz=99,slow=2.7,SNR=4.2						

IDC 09 22:58:40.4±3.4**, 10°.41S**×**165°.30E, h0^{km}, mb3.8**/6**,**
mb1 4.0/6**, mb1mx3.7**/39**, mbtmp3.8**/6**, Error ellipse:**
s-maj=134.2km s-min=28.0km az=135.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.72	240	P	P	23 03 23.1	+0.5
	2.6nm,0.7s,baz=68,slow=12,SNR=3.2						
H11S2	WAKE ISLAND Hy	28.75	3	T	T	23 34 52.5	
	baz=181						
H11S3	WAKE ISLAND Hy	28.76	3	T	T	23 34 52.5	
	baz=181						
H11S1	WAKE ISLAND Hy	28.77	3	T	T	23 34 59.9	
	baz=181						
H11N1	WAKE ISLAND Hy	29.98	3	T	T	23 36 23.8	
	baz=180						
H11N3	WAKE ISLAND Hy	29.98	3	T	T	23 36 24.9	
	baz=180						
H11N2	WAKE ISLAND Hy	30.00	3	T	T	23 36 25.7	
	baz=180						
WRA	Warramunga Arr	31.30	249	P	P	23 05 03.1	+0.6
	1.0nm,0.6s,baz=81,slow=9.1,SNR=11						
ASAR	Alice Springs	32.69	242	P	P	23 05 14.5	-0.3
	1.9nm,0.8s,baz=67,slow=10,SNR=13						
FITZ	Fitzroy Crossi	39.13	254	P	P	23 06 09.8	-0.1
	1.6nm,0.7s,baz=74,slow=7.4,SNR=3.9						
ILAR	Eielson Array	83.06	19	P	P	23 11 08.5	+1.0
	0.3nm,0.6s,baz=239,slow=5.1,SNR=4.1						
MKAR	Makanchi Array	92.77	317	P	P	23 11 53.1	-1.7
	0.1nm,0.4s,baz=84,slow=4.5,SNR=3.4						

IDC ***09*** *22:59:15.1±1.9, 70°.05N×24°.28E, h0^{km}, mb1 3.1/2, mb1mx2.9/49, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=13.7km s-min=8.1km az=1.0*
NAO ***09*** *22:59:17.9±1.4, 69°.93N×24°.41E, h14^{km}±8^{km}, ML3.2*
UPP ***09*** *22:59:18.9±1.9, 69°.79N×24°.44E, h0^{km}, ML2.4, Suspected explosion*
BER ***09*** *22:59:19.2±3.1, 69°.91N×24°.51E, h5^{km}, ML2.6, ML2.7(HEL), Confirmed Earthquake*
HEL ***09*** *22:59:19.9±0.1, 69°.89N×24°.62E, h26^{km}, ML2.7, ML2.4(UPP), Confirmed Earthquake*
KOLA ***09*** *22:59:21.3, 70°.11N×26°.01E, h0^{km}*
IEPN ***09*** *22:59:37.0, 70°.10N×25°.62E, h10^{km}, station ZFI2 has station magnitude of 2.91*
ISC 09 22:59:18.4±1.4**, 69°.88N**±0°.03×**24°.58E**±0°.02**, h15^{km}**±10^{km}**,**
n81, σ1°.47/132**, 1C-1D, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARA0	ARCESS Array S	0.48	137	Pg	Pb	22 59 29.3	+0.8
	baz=313,slow=16						
ARA0				Lg	Lg	22 59 36.3	
	baz=324,slow=37						
ARA0	ARCESS Array S	0.48	137	Pg	Pb	22 59 29.3	+0.8
	baz=313,slow=16						
ARA0				Sg	Sb	22 59 36.3	+1.0
	baz=324,slow=37						
ARCES	ARCESS Array B	0.48	137	Pg	Pb	22 59 28.9	+0.5
	16nm,0.3s,baz=321,slow=15,SNR=745						
ARCES				Lg	Lg	22 59 36.0	
	191nm,0.3s,baz=323,slow=27,SNR=329						
ARE0	ARCESS Array S	0.48	137	eP	Pb	22 59 29.5	+1.0
ARE0				eS	Sb	22 59 36.3	+1.0
ARE0	ARCESS Array S	0.48	137	eP	Pb	22 59 29.4	+1.0
ARE0				eS	Sb	22 59 35.7	+0.4
HAMF	Hammerfest	0.82	339	⇑iP	Pb	22 59 33.5	-0.8
HAMF				eS	Sg	22 59 43.6	-1.4
HAMF				IAML		22 59 45.0	
	comp=Z,249nm,0.1s						
KEV	Kevo	0.85	98	Pg	Pb	22 59 35.0	+0.3
KEV				Lg	Lg	22 59 45.9	
KEV	Kevo	0.85	98	⇓iP	Pb	22 59 35.1	+0.3
KEV				eS	Sg	22 59 45.7	-0.3
KEV	Kevo	0.85	98	eP	Pb	22 59 35.1	+0.3
KEV				eS	Sg	22 59 45.5	-0.5
KTK1	Kautokeino	1.00	209	eP	Pb	22 59 37.5	+0.2
KTK1				eS	Sg	22 59 50.7	0.0
KTK1				IAML		22 59 52.7	
	comp=Z,259nm,0.3s						
KTK1	Kautokeino	1.00	209	eP	Pb	22 59 37.5	+0.2
KTK1				eS	Sg	22 59 49.9	-0.8
HEF	Hetta	1.52	193	Pn	Pn	22 59 45.8	+0.7
HEF				Pg	Pb	22 59 46.3	+0.1
HEF				Lg	Lg	23 00 05.6	
HEF	Hetta	1.52	193	Pn	Pn	22 59 45.8	+0.7
HEF				Pg	Pb	22 59 46.3	+0.1
HEF				Sg	Sn	23 00 05.6	+1.1
HEF	Hetta	1.52	193	eP	Pn	22 59 45.7	+0.7
HEF				eS	Sn	23 00 05.4	+0.9
HEF				MSG		23 00 06.5	
	comp=Z,124nm,0.1s						
KIF	Kilpisjarvi	1.60	238	Pg	Pn	22 59 47.1	+1.0
KIF				Lg	Lg	23 00 07.2	
KIF	Kilpisjarvi	1.60	238	eP	Pn	22 59 47.0	+1.0
KIF				eS	Sn	23 00 06.6	+0.2
KIF	Kilpisjarvi	1.60	238	eP	Pn	22 59 47.0	+1.0
KIF				eS	Sn	23 00 06.6	+0.2
KIF				MSG		23 00 08.9	
	comp=Z,211nm,0.1s						
TRO	Tromso	1.98	265	Pn	Pn	22 59 52.5	+1.2
TRO				Pg	Pb	22 59 54.0	-0.1
TRO				Lg	Lg	23 00 18.8	
TRO	Tromso	1.98	265	eP	Pn	22 59 52.5	+1.2
TRO				eS	Sn	23 00 17.8	+1.9
TRO				IAML		23 00 19.9	
	comp=Z,80nm,0.3s						
TRO	Tromso	1.98	265	eP	Pn	22 59 52.3	+1.0
TRO				eS	Sn	23 00 16.7	+0.9
LANU	Lannavaara	2.07	208	eP	Pn	22 59 53.5	+1.0
LANU				eS	Sn	23 00 18.1	+0.1
LANU	Lannavaara	2.07	208	P	Pn	22 59 53.5	+1.0
LANU				S	Sn	23 00 20.8	+2.8
LANU	Lannavaara	2.07	208	eP	Pn	22 59 53.5	+1.0
LANU				eS	Sn	23 00 18.1	+0.1
KUA	Kurravaara	2.47	220	P	Pn	22 59 59.2	+1.1
KUA	Kurravaara	2.47	220	eP	Pn	22 59 59.2	+1.1
SGF	Sodankyl	2.56	163	eP	Pn	23 00 00.2	+1.0
SGF				eS	Sn	23 00 29.5	-0.5
SGF	Sodankyl	2.56	163	eP	Pn	23 00 00.2	+1.0
SGF				eS	Sn	23 00 29.5	-0.5
SGF				MSG		23 00 42.7	
	comp=Z,24nm,0.1s						
MASU	Masugnsbyn	2.62	202	P	Pn	23 00 00.9	+0.9
MASU	Masugnsbyn	2.62	202	eP	Pn	23 00 00.9	+0.9
RATU	Laukkuluspa	2.75	224	P	Pn	23 00 02.9	+1.0
RATU				S	Sn	23 00 35.8	+1.0
RATU	Laukkuluspa	2.75	224	eP	Pn	23 00 02.9	+1.0
RATU				eS	Sn	23 00 35.8	+1.0
VRF	Varrio	2.82	137	eP	Pn	23 00 03.6	+0.8
VRF				eS	Sn	23 00 35.9	-0.5
VRF	Varrio	2.82	137	eP	Pn	23 00 03.6	+0.8
VRF				eS	Sn	23 00 35.9	-0.5
VRF				MSG		23 00 46.6	
	comp=Z,21nm,0.1s						
NIKU	Nikkaluokta	2.85	227	P	Pn	23 00 03.9	+0.6
NIKU				S	Sn	23 00 37.0	-0.4
NIKU	Nikkaluokta	2.85	227	eP	Pn	23 00 03.9	+0.6
NIKU				eS	Sn	23 00 37.0	-0.4
PAJU	Pajala	2.92	191	P	Pn	23 00 05.1	+0.8
PAJU				S	Sn	23 00 39.0	-0.1
PAJU	Pajala	2.92	191	eP	Pn	23 00 05.1	+0.8
PAJU				eS	Sn	23 00 39.0	-0.1
DUNU	Dundret	3.14	210	P	Pn	23 00 08.8	+1.4
DUNU	Dundret	3.14	210	eP	Pn	23 00 08.8	+1.4
RNF	Rovaniemi	3.33	170	eP	Pn	23 00 10.7	+0.8
RNF				eS	Sn	23 00 48.7	-0.4
RNF	Rovaniemi	3.33	170	eP	Pn	23 00 10.7	+0.8
RNF				eS	Sn	23 00 48.7	-0.4
SALU	Saltoluokta	3.36	224	P	Pn	23 00 11.7	+1.5
SALU	Saltoluokta	3.36	224	eP	Pn	23 00 11.7	+1.5
ERTU	Ertsjaerv	3.46	196	eP	Pn	23 00 12.6	+0.9
ERTU				eS	Sn	23 00 51.5	-0.9
ERTU	Ertsjaerv	3.46	196	P	Pn	23 00 12.5	+0.9
ERTU	Ertsjaerv	3.46	196	eP	Pn	23 00 12.6	+0.9
ERTU				eS	Sn	23 00 51.5	-0.9
APA0	Apatity Array	3.82	123	Pn	Pn	23 00 16.8	+0.2
	baz=318,slow=12						
APA0				Sn	Sn	23 00 58.6	-2.6
	baz=320,slow=37						
APA0				Lg	Lg	23 01 14.1	
	baz=324,slow=37						
APA0	Apatity Array	3.82	123	P	Pn	23 00 17.0	+0.4
APA0				S	Sn	23 00 58.9	-2.3
APA0	Apatity Array	3.82	123	Pn	Pn	23 00 16.8	+0.2
	baz=318,slow=12						
APA0				Sn	Sn	23 00 58.6	-2.6
	baz=320,slow=37						
APA0				Sg	Sb	23 01 14.1	+2.7
	baz=324,slow=37						
TOF	Tornio	3.82	182	eP	Pn	23 00 17.5	+0.9
TOF				eS	Sn	23 01 00.2	-1.0
TOF	Tornio	3.82	182	eP	Pn	23 00 17.5	+0.9
TOF				eS	Sn	23 01 00.2	-1.0
STEI	Steigen	3.90	244	eP	Pn	23 00 18.8	+1.1
STEI				eSg	Sg	23 01 19.3	-4.3
HARU	Harads	3.98	202	P	Pn	23 00 19.1	+0.5
HARU	Harads	3.98	202	eP	Pn	23 00 19.1	+0.5
KALU	Kalix	4.07	187	eP	Pn	23 00 20.9	+0.9
KALU				eS	Sn	23 01 06.4	-0.9
KALU	Kalix	4.07	187	P	Pn	23 00 21.1	+1.1
KALU	Kalix	4.07	187	eP	Pn	23 00 20.9	+0.9
KALU				eS	Sn	23 01 06.4	-0.9
MSF	Maaselka	4.33	155	eP	Pn	23 00 24.7	+1.1
MSF				eS	Sn	23 01 12.3	-1.4
MSF	Maaselka	4.33	155	eP	Pn	23 00 24.7	+1.1
MSF				eS	Sn	23 01 12.3	-1.4
LOF	Lofoten	4.34	251	eP	Pn	23 00 23.3	-0.4
KU6	Riekki	4.36	150	eP	Pn	23 00 24.9	+0.9
KU6				eS	Sn	23 01 12.7	-1.8
KU6	Riekki	4.36	150	eP	Pn	23 00 24.9	+0.9
KU6				eS	Sn	23 01 12.7	-1.8
OUL	Oulu	4.85	173	eP	Pn	23 00 31.0	+0.3
OUL				eS	Sn	23 01 23.7	-2.7
OUL	Oulu	4.85	173	eP	Pn	23 00 31.0	+0.3
OUL				eS	Sn	23 01 23.7	-2.7
MOR8	Moi Rana	5.33	230	eP	Pn	23 00 36.6	-0.6
KONS	Konsvik	5.46	237	eP	Pn	23 00 40.5	+1.5
SLVR	Solovky	6.48	133	iP	Pb	23 01 08.4	-2.1
SLVR				iS	Sn	23 02 17.2	+11
FIA0	FINESS Array S	8.50	175	Pn	Pn	23 01 20.8	+0.1
	baz=350,slow=16						
FIA0				Sn	Sn	23 02 52.6	-3.7
	baz=353,slow=28						
FIA0				Lg	Lg	23 03 40.5	
	slow=28						
FIA0	FINESS Array S	8.50	175	Pn	Pn	23 01 20.8	+0.1
	baz=350,slow=16						
FIA0				Sn	Sn	23 02 52.6	-3.7
	baz=353,slow=28						
FIA0				Sg	Sg	23 03 40.5	-10
	slow=28						
FINES	FINESS Array B	8.50	175	Pn	Pn	23 01 20.5	-0.2
	comp=Z,0.2nm,0.3s,baz=356,slow=13,SNR=21						
FINES				Sn	Sn	23 02 55.6	-0.6
	comp=Z,0.4nm,0.3s,baz=357,slow=21,SNR=4.3						
FINES				Lg	Lg	23 03 40.2	
	comp=Z,1.0nm,0.3s,baz=6.5,slow=28,SNR=5.6						
SPA0	Spitsbergen Ar	8.62	349	iP	Pn	23 01 25.7	+3.2
SPA0				eS	Sn	23 02 55.8	-3.5
KBS	Kingsbay	9.66	345	iP	Pn	23 01 30.8	-5.8
KBS				iS	Sn	23 03 01.1	-24
NB2	NORSAR Subarra	10.44	218	Pn	Pn	23 01 45.8	-1.6
	baz=22,slow=14						
NB2	NORSAR Subarra	10.44	218	Pn	Pn	23 01 45.8	-1.6
	baz=22,slow=14						
NOA	NORSAR Array B	10.44	218	Pn	Pn	23 01 45.3	-2.0
	comp=Z,0.0nm,0.3s,baz=22,slow=12,SNR=6.7						
NOA				Sn	Sn	23 03 37.2	-6.7
	comp=Z,0.0nm,0.3s,baz=30,slow=18,SNR=3.1						
NOA				Lg	Lg	23 04 44.0	
	comp=Z,0.1nm,0.3s,baz=128,slow=20,SNR=5.6						
NRA0	NORESS Array S	10.65	217	Pn	Pn	23 01 48.4	-1.8
	baz=57,slow=16						
NRA0	NORESS Array S	10.65	217	Pn	Pn	23 01 48.4	-1.8
	baz=57,slow=16						
HFS	Hagfors	10.79	210	Pn	Pn	23 01 48.3	-3.8
	baz=22,slow=14						
HFS	Hagfors	10.79	210	Pn	Pn	23 01 48.3	-3.8
	baz=22,slow=14						
ZFI2	Zemlya Franca-	12.25	17	eP	Pn	23 02 15.1	+3.1
	comp=Z,570nm,1.0s						
ZFI2				iS	Sn	23 04 19.6	-8.5
AMDE	Amderma	12.67	73	iP	Pn	23 02 17.0	-0.8
AMDE				iS	Sn	23 04 25.4	-13

ISCJB ***09*** *22:59:56.3±0.9, 35°.76S±0°.05×73°.6W±0°.1, h10^{km}, mb4.6/8, Error ellipse: s-maj=17.7km s-min=6.5km az=12.1*
IDC ***09*** *22:59:57.5±1.2, 35°.90S×73°.05W, h0^{km}, mb4.4/7, mb1 4.4/7, mb1mx4.1/34, mbtmp4.4/7, Error ellipse: s-maj=48.2km s-min=21.9km az=99.0*
NEIC ***09*** *22:59:59.9±3.6, 35°.75S×73°.48W, h20^{km}±23^{km}, mb4.7/5, Error ellipse: s-maj=28.1km s-min=9.6km az=90.0*
ISC 09 22:59:58.2±0.7**, 35°.83S**±0°.05×**73°.40W**±0°.10**, h10^{km}, n49,**
σ1°.81/56**, mb4.6**/8**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	3.46	35	ePn	Pn	23 00 51.8	-0.6
ROC1				eSn	Sn	23 01 28.7	-5.0
PEL	Peldehue	3.49	41	ePn	Pn	23 00 52.3	-0.3
PEL				eSn	Sn	23 01 30.1	-4.0
GO06	Curarrehue	4.05	158	ePn	Pn	23 01 01.7	+1.4
AAGR	Agrelo	4.67	55	iP	Pn	23 01 11.2	+2.4
ARCO	CERRO ARCO	4.75	52	iP	Pn	23 01 12.4	+2.4
AUSP	Uspallata	4.90	44	iP	Pn	23 01 13.6	+1.4
ASAL	Salagasta	4.97	51	iP	Pn	23 01 15.3	+2.2
ASAL				eS	Sg	23 02 37.1	-0.8
RTLS	Leoncito	5.28	42	iP	Pn	23 01 18.5	+1.1
RTLS				IAML		23 01 20.4	
	comp=Z,86nm,0.5s						
RTLS				iS	Sg	23 02 52.8	+5.1
PLCA	Paso Flores	5.38	156	ePn	Pn	23 01 20.7	+2.0
PLCA				eSn	Sn	23 02 18.0	-2.7
RTCV	Cerro Valdivia	5.66	47	iP	Pn	23 01 23.1	+0.7
GO04	Tololo Observa	6.05	22	ePn	Pn	23 01 25.8	-2.2
GO04				eSn	Sn	23 02 34.3	-3.1
RTLL	Cerro Villicun	6.09	44	iP	Pn	23 01 28.4	+0.1
ACAN	Cantantal	6.26	57	iP	Pn	23 01 31.2	+0.6
ACCO	Cerro Coronel	6.37	36	iP	Pn	23 01 32.5	+0.1
AMOG	MOGNA	6.37	41	iP	Pn	23 01 32.4	+0.1
ACDV	Cuesta del Vie	6.69	34	iP	Pn	23 01 38.0	+1.3
LCO	Las Campanas	7.17	19	ePn	Pn	23 01 40.8	-2.6
LCO				eSn	Sn	23 03 01.4	-3.7
TRQA	Tornquist	9.41	107	ePn	Pn	23 02 16.3	+2.5
TRQA				eSn	Sn	23 03 50.4	-9.4
GO02	Mina Guanaco	11.13	18	ePn	Pn	23 02 40.3	+2.6
CPUP	Villa Florida	16.69	60	Pn	Pn	23 03 44.8	-7.5
	comp=Z,0.1nm,0.3s,baz=167,slow=19,SNR=2.0						
EFI	East Falkland	19.26	150	eP	P	23 04 20.2	-2.6
	comp=Z,85nm,1.4s						
LPAZ	La Paz	20.02	15	eP	P	23 04 33.5	+1.5
	comp=Z,9.3nm,1.0s						
LPAZ	La Paz	20.02	15	P	P	23 04 34.1	+2.2
	comp=Z,5.7nm,0.9s,baz=156,slow=6.2,SNR=16						
SPB	Sao Paulo	25.56	69	eP	P	23 05 29.5	+2.2
BDFB	Brasilia	30.29	55	eP	P	23 06 10.0	+0.1
BDFB	Brasilia	30.29	55	P	P	23 06 08.8	-1.1
	comp=Z,7.4nm,1.1s,baz=195,slow=7.6,SNR=6.5						
SNAA	Sanae	50.33	157	eP	P	23 08 55.9	+1.1
	comp=Z,20nm,1.1s						
SNAA	Sanae	50.33	157	P	P	23 08 54.6	-0.2
	comp=Z,10nm,0.9s,baz=307,slow=6.1,SNR=7.9						
QSPA	South Pole Qui	54.41	180	eP	P	23 09 26.8	+1.5
	comp=Z,6.0nm,1.2s						
QSPA	South Pole Qui	54.41	180	P	P	23 09 26.0	+0.8
	comp=Z,4.8nm,0.8s,baz=154,slow=4.8,SNR=9.2						
LIC	Lamto	76.41	72	ePKP1	P	23 11 49.1	+0.9
	comp=Z,67nm,1.7s						
TIC	Toumodi	76.68	72	ePKP1	P	23 11 50.0	+0.2
KIC	Kosan Boka	76.72	72	ePKP1	P	23 11 50.3	+0.3
	comp=Z,18nm,0.8s						
DBIC	Dimbokro	76.82	72	P	P	23 11 50.6	0.0
	comp=Z,7.2nm,0.9s,baz=200,slow=8.7,SNR=5.9						
BOSA	Boshof	80.20	118	P	P	23 12 08.2	-1.1
	comp=Z,2.6nm,0.9s,baz=269,slow=5.9,SNR=3.3						
TOA0	Torodi Ar. Sit	85.88	71	eP	P	23 12 38.8	+0.2
TORD	Torodi Ar. Bea	85.88	71	P	P	23 12 37.9	-0.7
	comp=Z,1.9nm,1.0s,baz=228,slow=2.8,SNR=5.8						
TOA1	Torodi Ar. Sit	85.88	71	eP	P	23 12 37.9	-0.7
ABKAR	Akbulak array	143.68	54	ePKPpre	PKPpre	23 19 30.4	
NRIK	Noril'sk	144.83	12	PKP	PKPab	23 19 33.4	0.0
	comp=Z,2.2nm,0.6s,baz=50,slow=3.5,SNR=7.9						
GAR	Garm	151.13	73	ePKPbc	PKPbc	23 19 52.7	+1.0
ZAA1	Zalesovo Array	156.36	33	ePKPdf	PKPdf	23 19 51.8	-0.8
ZAA1				ePKPab	PKPab	23 20 21.2	+0.3

ZALV	Zalesovo Beam	156.37	33	*e*PKPab	PKPab	23 20 21.0	+0.1
ZALV	Zalesovo Beam	156.37	33	PKP	PKPdf	23 19 51.8	-0.8
	comp=Z,0.4nm,0.4s,baz=207,slow=1.7,SNR=4.5						
ZALV				PKPab	PKPab	23 20 21.2	+0.3
	comp=Z,2.5nm,0.7s,baz=288,slow=4.7,SNR=8.9						
MK32	Makanchi Array	158.79	51	*e*PKPdf	PKPdf	23 19 55.7	-0.2
MK32				*e*PKPab	PKPab	23 20 30.8	-1.0
MKAR	Makanchi Array	158.79	51	PKP	PKPdf	23 19 55.7	-0.2
	comp=Z,0.6nm,0.9s,baz=270,slow=1.4,SNR=2.3						
MKAR				PKPab	PKPab	23 20 30.8	-1.0
	comp=Z,0.7nm,0.8s,baz=291,slow=3.6,SNR=3.7						
SONA0	Songino Array	168.00	1	*e*PKPab	PKPab	23 21 12.9	+0.8
SONM	Songino Array	168.00	1	PKPab	PKPab	23 21 12.9	+0.8
	comp=Z,0.7nm,1.0s,baz=114,slow=1.7,SNR=4.2						
HHC	Hu-ho-hao-te	173.65	324	*e*P	PKPdf	23 20 06.8	-1.1
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						

DDA 09 23:05:59.2, 39°.37N×27°.89E, h7km±1km, ML1.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.13	273	*i* P	Pg	23 06 02.3	+0.3
STEP				*i* S	Sg	23 06 05.5	+1.6
STEP				IAML_P			
	comp=Z,1μm,0.1s						
AKHS	Akhisar	0.49	187	*i* P	Pg	23 06 03.9	-4.9
DURS	Dursunbey	0.51	63	*i* P	Pb	23 06 10.0	-0.5
DURS				*i* S	Sb	23 06 17.4	-0.8
DEMI	Demirci	0.72	117	*i* P	Pb	23 06 14.5	+0.4
DEMI				IAML_P			
	comp=Z,109nm,0.1s						
MANT	Manisa	1.02	149	*i* P	Pb	23 06 19.3	-0.1
MANT				IAML_P			
	comp=Z,63nm,0.1s						
BAYC	CANAKKALE_Bayr	1.10	290	*i* P	Pn	23 06 21.4	+0.4
BAYC				*i* S	Sn	23 06 36.2	-0.4

*ISCJB **09** 23:06:28.6±0.5, 3°.41N±0°.06×124°.32E±0°.09, h400km, mb3.4/7, Error ellipse: s-maj=13.0km s-min=7.3km az=163.0*

*IDC **09** 23:06:31.9±6.3, 3°.32N×124°.19E, h419km±84km, mb3.0/7, mb1 3.3/8, mb1mx3.0/43, mbtmp4.0/8, Error ellipse: s-maj=43.6km s-min=18.0km az=79.0*

*DJA **09** 23:06:40.6±0.9, 2°N±6°×12°4E±°, h359km±9km, M3.9/10, mB4.4/1, mb4.0/5, MLv3.9/10, Mw(mB)3.6/1*

ISC 09 23:06:30.0±0.7**, 3°.27N**±0°.08×**124°.3E**±0°.1**, h400km, n23, σ1ˢ87**/25**, mb3.6**/10**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	2.69	186	P	Pn	23 07 32.5	+1.6
MRSI	Marisa	3.62	220	P	Pn	23 07 40.2	+1.6
TNTI	Ternate	3.98	129	S	S	23 08 36.7	-3.5
LUWI	Luwuk	4.54	199	P	Pn	23 07 48.0	+0.6
APSI	Ampana	4.91	212	P	Pn	23 07 51.4	+0.3
SANI	Sanana	5.56	162	P	Pn	23 07 59.2	+1.2
SANI				S	S	23 09 04.2	-5.4
SPSI	Sidrap Palu	8.47	212	P	P	23 08 31.2	+0.5
	0.1nm27nm,0.9s						
SPSI				S	P	23 08 31.0	+0.3
	0.1nm27nm,0.9s						
BNSI	Bone	8.68	209	P	P	23 08 33.9	+0.9
BKSI	Bulukumba	9.48	206	P	Pn	23 08 43.3	+1.2
BNDI	Bandanaira	9.58	144	S	Pn	23 08 47.5	+4.2
BATI	Baumata	13.40	183	P	Pn	23 09 27.8	+0.2
	7.1nm,0.3s,baz=2.4,slow=7.9,SNR=8.4						
FITZ	Fitzroy Crossi	21.28	176	P	P	23 10 47.2	+1.0
	1.3nm,0.4s,baz=11,slow=7.5,SNR=8.4						
WRA	Warramunga Arr	25.11	157	P	P	23 11 21.6	+0.8
	1.0nm,0.5s,baz=337,slow=10.0,SNR=28						
ASAR	Alice Springs	28.38	161	P	P	23 11 51.0	+1.2
	0.5nm,0.5s,baz=341,slow=7.5,SNR=14						
MJAR	Matsushiro Arr	35.52	20	P	P	23 12 51.3	+0.2
	1.8nm,0.9s,baz=188,slow=10,SNR=4.2						
JIRN	Jiri	43.67	308	*e*P	P	23 13 56.4	-1.5
GUN	Gumba	44.02	308	*e*P	P	23 14 00.2	-0.5
	6.2nm,0.6s						
KOLN	Koldanda	45.78	306	*e*P	P	23 14 13.3	-0.9
DANN	Dangsing	45.90	307	*e*P	P	23 14 14.3	-0.9
	7.1nm,0.6s						
PYUN	Piuthan	46.41	306	*e*P	P	23 14 18.5	-0.5
	10nm,0.7s						
SONM	Songino Array	46.99	344	P	P	23 14 22.3	-0.7
	0.6nm,0.8s,baz=160,slow=9.6,SNR=3.8						
MKAR	Makanchi Array	56.55	327	P	P	23 15 32.1	-0.5
	0.9nm,0.6s,baz=121,slow=8.6,SNR=13						
NRIK	Noril'sk	70.30	347	P	P	23 17 01.5	+0.4
	0.5nm,0.3s,baz=116,slow=5.1,SNR=3.7						

*IDC **09** 23:09:39.6±0.5, 10°.99S×166°.01E, h0km, mb4.7/21, mb1 4.8/23, mb1mx4.7/34, mbtmp4.7/23, ML5.3/2, MS4.7/15, Ms1 4.8/15, ms1mx4.5/39, Error ellipse: s-maj=18.2km s-min=13.2km az=101.0*

*ISCJB **09** 23:09:40.5±0.2, 11°.02S±0°.03×165°.89E±0°.03, h10km, mb5.0/68, MS5.2/115, Error ellipse: s-maj=4.7km s-min=4.0km az=177.0*

*NEIC **09** 23:09:41.6±0.3, 10°.92S×165°.91E, h10km, mb5.5/29, MS5.2/95, Error ellipse: s-maj=7.4km s-min=5.3km az=76.0*

*BJI **09** 23:09:42.0, 11°.14S×165°.95E, h23km, mB5.4/33, mb4.9/43, Ms5.4/35, Ms7 5.1/34*

*MOS **09** 23:09:44.3±1.3, 10°.87S×165°.75E, h33km, mb5.2/20, MS5.0/7, Error ellipse: s-maj=11.1km s-min=9.2km az=134.8*

*GCMT **09** 23:09:45.7±0.2, 10°.97S±0°.01×165°.69E±0°.01, h12km, MW5.5/94, Moment Tensor Solution. s36,c40; s94,c138; Duration: 1ˢ4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.30±.07; $M_{\theta\theta}$0.77±.07; $M_{\phi\phi}$-0.47±.07; $M_{r\theta}$-0.19±.19; $M_{\theta\phi}$-2.11±.05; $M_{\phi r}$0.87±.19; Best double couple: $M_0$2.37500×10^{17} NP1:ϕ_s171.00000°, δ87.00000°, λ-23.00000°. NP2:ϕ_s262.00000°, δ67.00000°, λ-177.00000°. Principal axes: T 2.5170, Plg14.0000°, Azm219.0000°; N -0.2820, Plg67.0000°, Azm345.0000°; P -2.2340, Plg18.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 23:09:41.9±0.3**, 10°.99S**±0°.05×**165°.97E**±0°.05**, h10km, n351, σ1ˢ99**/251**, mb5.2**/74**, MS5.2**/116**, 19C-15D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.13	284	*e*P	Pn	23 11 12.0	-0.6
HNR				*e*S	Sn	23 12 22.0	-0.8
HNR	Honiara	6.13	284	*e*Pn	Pn	23 11 11.8	-0.7
HNR				*e*Sn	Sn	23 12 20.8	-2.0
HNR	Honiara	6.13	284	Pn	Pn	23 11 11.7	-0.8
	171nm,0.3s,baz=173,slow=3.0,SNR=32						
HNR				Sn	Sn	23 12 21.6	-1.2
	90nm,0.3s,baz=49,slow=19,SNR=3.2						
MARNC	Mare, Loyalty	10.62	170	*e*Pn	Pn	23 12 16.0	+1.9
DZM	Mont Dzumac	11.03	178	*e*Pn	Pn	23 12 21.4	+1.5
	165nm,0.6s						
DZM				*e*LR	LR	23 14 58.7	
	comp=Z,7μm,27.4s						
DZM	Mont Dzumac	11.03	178	*e*Pn	Pn	23 12 21.2	+1.3
DZM				Sn	Sn	23 14 22.8	-0.7
DZM	Mont Dzumac	11.03	178	Pn	Pn	23 12 19.8	-0.1
	8.0nm,0.3s,baz=21,slow=14,SNR=31						
DZM				Sn	Sn	23 14 22.8	-0.7
	1.1nm,0.3s,baz=127,slow=20,SNR=3.3						
DZM				LR	LR	23 16 05.3	
	comp=Z,2μm,19.9s,baz=26,slow=35						
ONTNC	Ouen Toro	11.27	178	*e*Pn	Pn	23 12 24.7	+1.7
PINNC	Pines Island,	11.65	173	*e*Pn	Pn	23 12 30.0	+1.8
FUNA	Funafuti	13.26	81	*e*Pn	Pn	23 12 52.1	+1.7
MSVF	Nonsavu	13.48	121	*e*Pn	P	23 13 00.8	-2.0
MSVF	Nonsavu	13.48	121	*i* P	P	23 12 59.0	-3.8
TARA	Tarawa	14.07	30	*e*Pn	Pn	23 13 02.3	+0.8
RABL	Rabaul	15.26	295	*e*Pn	Pn	23 13 18.5	+1.0
	105nm,0.6s						
EIDS	Eidsvold	20.09	223	P	Pn	23 14 16.7	-0.8
	baz=20,SNR=5.7						
EIDS	Eidsvold	20.09	223	*e*P	Pn	23 14 16.8	-0.7
	167nm,1.3s						
MANU	Manus Island	20.49	294	*e*P	P	23 14 19.7	-0.6
	378nm,1.0s						
CTA	Charters Tower	21.02	242	P	P	23 14 25.9	-0.1
	159nm,1.1s,baz=71,slow=12,SNR=17						
CTAO	Charters Tower	21.02	242	*e*P	P	23 14 26.2	+0.3
	224nm,1.1s						
CTAO				LR	LR		
	comp=Z,4μm,20.0s						
CTAO	Charters Tower	21.02	242	*e*P	P	23 14 26.2	+0.3
CTAO				pmax	pmax		
	comp=Z,224nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,4μm,20.0s						
MTSU	Mount Surprise	22.12	249	P	P	23 14 38.9	+1.2
	baz=22,SNR=27						
RMQ	Roma	22.39	224	P	P	23 14 41.0	+0.3
	baz=22,SNR=58						
COEN	Coen	22.45	260	P	P	23 14 39.9	-1.4
	baz=22,SNR=8.2						
COEN	Coen	22.45	260	*e*P	P	23 14 39.9	-1.4
	comp=Z,104nm,1.1s						
ARMA	Armidale	23.49	212	P	P	23 14 52.3	+0.3
	baz=24,SNR=7.8						
ARMA	Armidale	23.49	212	*e*P	P	23 14 52.3	+0.3
	comp=Z,170nm,1.3s						
RAO	Raoul Island	23.59	143	PFAKE		23 15 00.0	+7.1
RAO				LR	LR		
	comp=Z,4μm,19.0s						
RAO	Raoul Island	23.59	143	LR	LR	23 22 15.0	
	comp=Z,2μm,19.2s,baz=324,slow=32						
OUZ	Omahuta	25.10	165	*e*P	P	23 15 09.2	+2.4
	comp=Z,38nm,0.9s						
MGCD	Mangrove Creek	25.99	209	P	P	23 15 16.5	+1.5
	baz=26,SNR=4.7						
QIS	Mount Isa	27.06	246	P	P	23 15 24.5	-0.3
	baz=27,SNR=7.0						
CMSA	Cobar Meteorol	27.75	219	P	P	23 15 30.8	0.0
	baz=28,SNR=16						
YNG	Young	28.22	212	P	P	23 15 37.2	+2.2
	baz=28,SNR=5.6						
HIZ	Hauiti	28.54	165	*e*P	P	23 15 37.6	-0.2
	comp=Z,69nm,1.2s						
URZ	Urewera	28.93	162	*e*P	P	23 15 40.1	-1.2
URZ				*e*pP	P	23 15 40.7	-0.6
URZ	Urewera	28.93	162	P	P	23 15 40.7	-0.6
	comp=Z,4.5nm,0.3s,baz=56,slow=1.2,SNR=13						
URZ				LR	LR	23 26 01.4	
	comp=Z,2μm,18.8s,baz=349,slow=34						
BKZ	Black Stump Fm	29.59	163	*e*P	P	23 15 47.3	+0.2
	comp=Z,32nm,0.5s						
H11N1	WAKE ISLAND Hy	30.52	2	T	T	23 47 35.8	
	baz=182,slow=76,SNR=111						
H11N3	WAKE ISLAND Hy	30.52	2	T	T	23 47 35.5	
	baz=182,slow=76,SNR=61						
H11N2	WAKE ISLAND Hy	30.54	2	T	T	23 47 37.2	
	baz=182,slow=76,SNR=74						
STKA	Stephens Creek	30.64	224	P	P	23 15 57.4	+0.8
	baz=31,SNR=11						
STKA	Stephens Creek	30.64	224	*e*P	P	23 15 57.0	+0.5
	comp=Z,6.9nm,1.0s						
STKA	Stephens Creek	30.64	224	P	P	23 15 55.4	-1.1
STKA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STKA				MLR	MLR		
	comp=Z,5μm,18.8s						
STKA	Stephens Creek	30.64	224	P	P	23 15 55.4	-1.1
	comp=Z,17nm,0.8s,baz=31,slow=8.1,SNR=14						
STKA				LR	LR	23 27 20.6	
	comp=Z,5μm,18.8s,baz=63,slow=35						
BFZ	Birch Farm	30.94	165	*e*P	P	23 15 58.2	-0.8
	comp=Z,40nm,0.6s						
SNZO	South Karori	31.17	167	*e*P	P	23 16 00.6	-0.4
	comp=Z,54nm,1.0s						
THZ	Tophouse	31.25	170	*e*P	P	23 16 02.4	+0.5
	comp=Z,111nm,1.2s						
WRAB	Tennant Creek	31.70	250	*e*P	P	23 16 03.4	-2.6
	comp=Z,129nm,1.4s						
WRAB				LR	LR		
	comp=Z,3μm,19.0s						
WRAB	Tennant Creek	31.70	250	*i* P	P	23 16 07.6	+1.6
WRAB				pmax	pmax		
	comp=Z,41nm,1.1s						
WB2	Warramunga Arr	31.70	250	*e*P	P	23 16 04.6	-1.5
	comp=Z,117nm,1.3s						
WRA	Warramunga Arr	31.71	250	P	P	23 16 04.2	-1.9
	comp=Z,26nm,0.8s,baz=82,slow=9.0,SNR=31						
WRA				PcP	PcP	23 18 57.6	-0.3
	comp=Z,2.7nm,1.0s,baz=75,slow=2.7,SNR=2.9						
WRA				LR	LR	23 27 17.6	
	comp=Z,2μm,21.6s,baz=70,slow=33						
KHZ	Kahutara	32.00	169	*e*P	P	23 16 08.3	0.0
	comp=Z,63nm,0.9s						
LTZ	Lake Taylor	32.15	171	*e*P	P	23 16 10.2	+0.5
	comp=Z,50nm,0.8s						
GUMO	Guam	32.16	319	PFAKE		23 16 20.0	+10
GUMO				LR	LR		
	comp=Z,2μm,19.0s						
GUMO	Guam	32.16	319	LR	LR	23 26 56.3	
	comp=Z,1μm,21.0s,baz=142,slow=32						
TOO	Toolangi	32.24	211	P	P	23 16 15.6	+5.0
	baz=32,SNR=3.7						
TOO	Toolangi	32.24	211	*e*P	P	23 16 15.6	+5.0
	comp=Z,41nm,1.3s						
TOO	Toolangi	32.24	211	*e*P	P	23 16 15.6	+5.0
TOO				pmax	pmax		
	comp=Z,41nm,1.3s						
FOZ	Fox Glacier	32.60	175	*e*P	P	23 16 15.0	+1.5
	comp=Z,69nm,1.1s						
OXZ	Oxford	32.65	172	*e*P	P	23 16 14.3	+0.2
	comp=Z,116nm,1.2s						
KDU	Kakadu	32.82	264	P	P	23 16 12.9	-2.9
	baz=33,SNR=8.1						
RPZ	Rata Peaks	32.90	173	*e*P	P	23 16 16.7	+0.4
	comp=Z,88nm,1.0s						
RPZ	Rata Peaks	32.90	173	P	P	23 16 16.1	-0.2
	comp=Z,56nm,0.8s,baz=59,slow=0.1,SNR=22						
CRLZ	Canterbury Las	32.98	171	*e*P	P	23 16 17.1	+0.2
	comp=Z,303nm,1.4s						
ASAR	Alice Springs	33.02	243	P	P	23 16 15.7	-1.9
	comp=Z,12nm,1.0s,baz=71,slow=9.7,SNR=32						
ASAR				PcP	PcP	23 19 00.9	-0.5
	comp=Z,2.6nm,0.7s,baz=68,slow=2.9,SNR=4.8						
ASAR				LR	LR	23 28 46.0	
	comp=Z,2μm,20.2s,baz=74,slow=35						
MQZ	McQueen's Vall	33.11	171	*e*P	P	23 16 18.1	+0.1
	comp=Z,99nm,1.0s						
HTT	Hallett	33.37	224	P	P	23 16 21.4	+0.8
	baz=34,SNR=6.2						
LBZ	Lake Benmore	33.48	175	*e*P	P	23 16 22.2	+0.9
	comp=Z,75nm,1.2s						
ODZ	Otahua Downs	34.17	174	*e*P	P	23 16 29.4	+2.1
	comp=Z,63nm,1.3s						
RAR	Rarotonga	34.37	112	LR	LR	23 27 32.2	
	comp=Z,904nm,19.6s,baz=274,slow=31						
BBOO	Buckleboo	35.03	227	*e*P	P	23 16 38.5	+3.5
	comp=Z,54nm,1.1s						
BNDI	Bandanaira	36.28	277	P	P	23 16 46.2	+0.3
KNRA	Kununurra	36.47	259	P	P	23 16 47.0	-0.5
	baz=36,SNR=5.4						
WRKA	Warakurna	38.31	243	P	P	23 17 01.7	-1.3
	baz=38,SNR=25						
FITZ	Fitzroy Crossi	39.61	255	P	P	23 17 12.8	-1.1
	baz=40,SNR=16						
FITZ	Fitzroy Crossi	39.61	255	*e*P	P	23 17 12.8	-1.1
	comp=Z,20nm,0.8s						
SANI	Sanana	40.66	280	P	P	23 17 24.1	+1.4
BATI	Baumata	41.57	267	P	P	23 17 32.0	+1.7
MIDW	Midway	42.17	22	PFAKE		23 17 50.0	+15
MIDW				LR	LR		
	comp=Z,2μm,19.0s						
PPT	Papeete	43.49	104	LR	LR	23 31 54.6	
	comp=Z,2μm,20.8s,baz=285,slow=31						
PPT2	Papeete2	43.49	104	*e*LQ	LQ	23 28 13.9	
	comp=Z,7μm,27.8s						
PPT2				*e*LR	LR	23 30 17.7	
	comp=Z,3μm,23.5s,baz=272						
DAV	Davao City (W)	44.02	292	PFAKE		23 18 00.0	+10
DAV				LR	LR		
	comp=Z,706nm,19.0s						
DAV	Davao City (W)	44.02	292	LR	LR	23 34 44.2	
	comp=Z,748nm,21.0s,baz=103,slow=34						
BNSI	Bone	45.88	275	P	P	23 18 03.2	-1.7
KAPI	Kappang	46.11	274	PFAKE		23 18 20.0	+13
KAPI				LR	LR		
	comp=Z,770nm,21.0s						
MEEK	Meekatharra	47.17	244	P	P	23 18 15.1	+0.1
	baz=47,SNR=24						
POHA	Pohakuloa	48.69	51	PFAKE		23 18 40.0	+13
POHA				LR	LR		
	comp=Z,2μm,19.0s						
NWAO	Narrogin (SRO)	49.68	236	P	P	23 18 34.3	0.0
	baz=50,SNR=3.8						
NWAO	Narrogin (SRO)	49.68	236	PFAKE		23 18 50.0	+16
NWAO				LR	LR		
	comp=Z,3μm,21.0s						
MORW	Morawa	49.85	241	P	P	23 18 35.4	-0.1
	baz=50,SNR=7.0						
MJAR	Matsushiro Arr	54.02	332	P	P	23 19 04.8	-1.6
	comp=Z,6.8nm,1.0s,baz=172,slow=9.4,SNR=5.6						
MAJO	Matsushiro	54.02	332	PFAKE		23 19 20.0	+14
MAJO				LR	LR		
	comp=Z,1μm,20.0s						
MAT	Matsushiro	54.02	332	P	P	23 19 07.7	+1.2
ERM	Erimo	56.76	340	PFAKE		23 19 40.0	+14
ERM				LR	LR		
	comp=Z,1μm,19.0s						
RKT	Rikitea	57.40	110	*e*LQ	LQ	23 34 11.1	
	comp=Z,1μm,29.5s						
RKT				*e*LR	LR	23 36 42.2	
	comp=Z,2μm,27.2s						
ASAJ	Asahikawa	58.81	340	P	P	23 19 42.1	+1.7
	comp=Z,15nm,0.8s,baz=198,slow=7.1,SNR=8.5						
KSRS	Korea Array	59.95	325	P	P	23 19 49.6	+1.2
	comp=Z,4.0nm,0.7s,baz=136,slow=7.0,SNR=14						
KSRS				LR	LR	23 44 27.5	
	comp=Z,632nm,18.7s,baz=95,slow=35						
KSAR	Wonju Array Be	59.97	325	P	P	23 19 49.6	+1.0
KSAR	Wonju Array Be	59.97	325	P	P	23 19 49.6	+1.0
YSS	Yuzh-Sakhalins	61.30	342	*e*P	P	23 20 03.2	+5.8
YSS				*e*		23 20 09.8	
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
NJ2	Nanjing	62.13	315	*e*P	P	23 20 03.4	0.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.8s						
QIZ	Qiongzhong	62.85	298	P	P	23 20 09.7	+1.3
QIZ				S	S	23 28 38.7	+0.4
QIZ				pmax	pmax		
	comp=Z,270nm,7.5s						
QIZ				LR	LR		
	comp=Z,650nm,12.7s						
QIZ				LR	LR		
	comp=Z,670nm,14.7s						
QIZ				LR	LR		
	comp=Z,930nm,21.6s						
QIZ	Qiongzhong	62.85	298	PFAKE		23 20 20.0	+12
QIZ				LR	LR		
	comp=Z,135nm,21.0s						
USRK	Ussuriysk Ar.	63.00	333	P	P	23 20 08.8	-0.1
	comp=Z,9.9nm,1.0s,baz=119,slow=9.9,SNR=4.7						
PETK	Petropavlovsk-	64.23	354	P	P	23 20 16.3	-0.6
	comp=Z,2.5nm,0.8s,baz=174,slow=7.5,SNR=2.2						
ADK	Adak	64.38	12	PFAKE		23 20 30.0	+12
ADK				LR	LR		
	comp=Z,2μm,19.0s						
MDJ	Mudanjiang	64.40	332	P	P	23 20 22.9	+4.7
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ	Mudanjiang	64.40	332	PFAKE		23 20 30.0	+12
MDJ				LR	LR		
	comp=Z,1μm,19.0s						
WHN	Wuhan	64.52	311	P	P	23 20 23.0	+3.8
CN2	Changchun	65.81	329	*e*P	P	23 20 30.2	+2.9
CN2				*e*sP	sP	23 20 37.4	+6.3
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,160nm,5.0s						
CN2				LR	LR		
	comp=Z,1μm,18.0s						
CN2				LR	LR		
	comp=Z,1μm,18.0s						
CN2				LR	LR		
	comp=Z,1μm,18.0s						
CASY	Casey	66.52	201	PFAKE		23 20 40.0	+8.4
CASY				LR	LR		
	comp=Z,463nm,19.0s						
GRNR	Gornyy	66.66	340	*e*P	P	23 20 23.2	-10
SBA	Scott Base	66.86	180	PFAKE		23 20 50.0	+16
SBA				LR	LR		
	comp=Z,2μm,21.0s						
KLR	Kul'dur	67.09	336	*i* P	P	23 20 34.6	-0.9
SKNT	Sakolnakorn	67.27	294	P	P	23 20 41.3	+4.0
	comp=Z,12nm,1.1s						
NKL	Nikolayevsk	67.44	344	*e*P	P	23 20 37.0	-0.6
NKL				pmax	pmax		
	comp=Z,23nm,1.0s						
ENH	Enshi	68.03	309	*e*P	P	23 20 41.7	-0.2
	comp=Z,21nm,1.1s						
ENH				LR	LR		
	comp=Z,1μm,19.0s						
NONG	Nongkai	68.39	294	P	P	23 20 48.8	+4.5
	comp=Z,0.3nm,0.9s						
BJT	Baijiatuau	68.57	321	PFAKE		23 21 00.0	+15
BJT				LR	LR		
	comp=Z,2μm,22.0s						
GYA	Guiyang	68.57	304	⇑*i*P	P	23 20 47.4	+2.0
GYA				pP	sP	23 20 56.0	+6.7
GYA				PP	PP	23 23 20.2	+3.2
GYA				S	S	23 29 46.8	-1.5
GYA				SKS	SKiKP	23 30 39.1	-0.3
GYA				SS	SS	23 34 13.0	+0.2
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,7.6s						
GYA				LR	LR		
	comp=Z,630nm,18.4s						
GYA				LR	LR		
	comp=Z,650nm,18.1s						
GYA				LR	LR		
	comp=Z,590nm,18.6s						
BJI	Beijing	68.58	321	P	P	23 20 47.0	+2.0
PBKT	Sadao Pong	69.86	292	P	P	23 21 00.7	+7.3
XAN	Xi'an	70.25	312	P	P	23 20 56.1	+0.5
XAN				pP	sP	23 21 03.1	+3.7
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN	Xi'an	70.25	312	*e*P	P	23 20 54.1	-1.4
	comp=Z,79nm,1.1s						
XAN	Xi'an	70.25	312	*e*P	P	23 20 54.1	-1.4
XAN				pmax	pmax		
	comp=Z,79nm,1.1s						
SRDT	SRDT	70.88	289	P	P	23 21 07.3	+7.6
UTHA	Uthaitani	70.94	291	P	P	23 21 08.0	+7.9
KMI	Kunming	71.28	301	P	P	23 21 04.2	+1.9
KMI				pP	sP	23 21 11.4	+5.3
KMI				sP	PcP	23 21 15.7	-6.4
KMI				pmax	pmax		
	comp=Z,15nm,1.3s						
KMI				LR	LR		
	comp=Z,580nm,20.7s						
KMI				LR	LR		
	comp=Z,560nm,19.2s						
KMI				LR	LR		
	comp=Z,740nm,20.9s						
MA2	Magadan	71.38	352	PFAKE		23 21 10.0	+8.2
MA2				LR	LR		
	comp=Z,2μm,20.0s						
MA2	Magadan	71.38	352	*i* P	P	23 21 02.1	+0.3
MA2				pmax	pmax		
	comp=Z,23nm,1.9s						
HHC	Hu-ho-hao-te	71.93	320	*e*P	P	23 21 06.2	+0.5
HHC				S	S	23 30 25.1	-2.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,5.2s						
HHC				LR	LR		
	comp=Z,1μm,17.3s						
HHC				LR	LR		
	comp=Z,1μm,18.1s						
HHC				LR	LR		
	comp=Z,940nm,16.4s						
CMAR	Chiang Mai Arr	72.29	293	P	P	23 21 09.3	+1.1
	comp=Z,2.9nm,0.8s,baz=113,slow=4.4,SNR=13						
CMAR				LR	LR	23 52 14.1	
	comp=Z,161nm,20.5s,baz=155,slow=35						
ZEA	Zeya	72.38	337	*e*P	P	23 21 08.0	+0.1
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,61nm,1.6s						
CMMT	Chiang Mai	72.40	294	P	P	23 21 11.1	+2.2
CHTO	Chiang Mai	72.41	294	PFAKE		23 21 20.0	+11
CHTO				LR	LR		

	comp=Z,593nm,20.0s						
CHTO	**Chiang Mai**	**72.41**	**294**	P	**P**	**23 21 11.1**	**+2.2**
	comp=Z,47nm,1.3s						
HIA	**Hailar**	**72.43**	**330**	PFAKE		23 21 20.0	+12
HIA				LR	LR		
	comp=Z,2µm,19.0s						
HIA	**Hailar**	**72.43**	**330**	*i* P	**P**	**23 21 11.3**	**+2.9**
HIA				pmax	pmax		
	comp=Z,14nm,1.3s						
CD2	**Chengdu**	**72.75**	**307**	⇑P	**P**	**23 21 10.5**	**-0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
SEY	**Seymchan**	**74.44**	**354**	*i* P	**P**	**23 21 19.1**	**-0.8**
SEY	**Seymchan**	**74.44**	**354**	P	**P**	**23 21 19.4**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=170,slow=7.5,SNR=4.6						
LZH	**Lanzhou**	**74.88**	**312**	*e*P	**P**	**23 21 25.0**	**+1.7**
LZH				pP	sP	23 21 29.0	+1.8
LZH				sP	PcP	23 21 32.4	-4.8
LZH				PP	**PP**	**23 24 14.9**	**+3.9**
LZH				pmax	pmax		
	comp=Z,30nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,4.2s						
LZH				LR	LR		
	comp=Z,1µm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,16.0s						
ULN	**Ulaanbaatar**	**78.39**	**324**	*i* P	**P**	**23 21 42.0**	**-0.8**
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**78.75**	**324**	P	**P**	**23 21 43.6**	**-1.2**
	comp=Z,4.1nm,0.9s,baz=145,slow=5.9,SNR=17						
BILL	**Bilibino**	**78.82**	**0**	PFAKE		23 22 00.0	+15
BILL				LR	LR		
	comp=Z,1µm,19.0s						
BILL	**Bilibino**	**78.82**	**0**	⇑*e*P	**P**	**23 21 43.6**	**-1.0**
BILL				*e*		23 21 53.6	
BILL				*e*		23 24 45.2	
BILL				pmax	pmax		
	comp=Z,29nm,1.0s						
BILL				MLR	MLR		
	comp=Z,923nm,18.0s						
QSPA	**South Pole Qui**	**79.02**	**180**	*e*P	**P**	**23 21 45.8**	**-0.2**
	comp=Z,134nm,1.2s						
QSPA				LR	LR		
	comp=Z,1µm,19.0s						
GTA	**Gaotai**	**79.18**	**314**	*e*P	**P**	**23 21 45.0**	**-2.4**
GTA				pP	sP	23 21 51.9	+0.7
GTA				sP	PcP	23 21 54.9	-0.8
GTA				pmax	pmax		
	comp=Z,340nm,7.0s						
GTA				LR	LR		
	comp=Z,1µm,17.8s						
GTA				LR	LR		
	comp=Z,590nm,20.3s						
GTA				LR	LR		
	comp=Z,1µm,19.7s						
BOD	**Bodaibo**	**80.57**	**335**	*e*P	**P**	**23 21 54.0**	**-0.3**
BOD				pmax	pmax		
	comp=Z,12nm,1.9s						
SHL	**Shillong**	**80.69**	**298**	*e*P	P	23 22 02.0	+6.1
ZAK	**Zakamensk**	**81.78**	**325**	*e*P	**P**	**23 22 01.5**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TLY	**Talaya**	**82.20**	**326**	PFAKE		23 22 10.0	+6.9
TLY				LR	LR		
	comp=Z,491nm,20.0s						
TLY	**Talaya**	**82.20**	**326**	*i* P	**P**	**23 22 02.0**	**-1.1**
LSA	**Lhasa**	**82.51**	**302**	PFAKE		23 22 20.0	+14
LSA				LR	LR		
	comp=Z,656nm,19.0s						
O02D	**Mt. Diablo Mer**	**83.09**	**47**	P	**P**	**23 22 09.7**	**+1.6**
	baz=250						
HDA	**Harding Lake**	**83.12**	**19**	P	**P**	**23 22 07.5**	**-0.1**
	baz=226						
TCOL	**CIGO, UAF Yank**	**83.16**	**18**	P	**P**	**23 22 07.6**	**-0.2**
	baz=226						
COLA	**College**	**83.16**	**18**	PFAKE		23 22 20.0	+12
COLA				LR	LR		
	comp=Z,1µm,19.0s						
COLA	**College**	**83.16**	**18**	*i* P	**P**	**23 22 06.8**	**-1.0**
COLA				pmax	pmax		
	comp=Z,19nm,0.9s						
K02D	**Willamette Mer**	**83.38**	**44**	P	**P**	**23 22 10.6**	**+1.1**
	baz=249						
ILAR	**Eielson Array**	**83.39**	**18**	P	**P**	**23 22 07.9**	**-1.1**
	comp=Z,5.7nm,0.8s,baz=227,slow=5.9,SNR=36						
O03E	**Paynes Creek**	**83.84**	**47**	P	**P**	**23 22 13.5**	**+1.5**
	baz=250						
M04C	**Macdoel**	**84.32**	**46**	P	**P**	**23 22 14.8**	**+0.3**
	baz=250						
I04A	**Tendick Farm,**	**84.62**	**44**	P	**P**	**23 22 16.5**	**+0.7**
	baz=249						
NLWA	**Neilton Lookou**	**84.98**	**40**	PFAKE		23 22 30.0	+12
NLWA				LR	LR		
	comp=Z,2µm,20.0s						
J05D	**Fort Rock, OR**	**85.25**	**44**	P	**P**	**23 22 19.7**	**+0.5**
	baz=250						
CWC	**Cottonwood Cre**	**85.39**	**52**	P	**P**	**23 22 20.7**	**+0.6**
	baz=253						
E04D	**Cinebar**	**85.50**	**41**	P	**P**	**23 22 21.3**	**+1.2**
	baz=249						
D03D	**Eldon**	**85.52**	**40**	P	**P**	**23 22 21.1**	**+0.9**
	baz=249						
I05D	**Terrebonne, OR**	**85.54**	**43**	P	**P**	**23 22 21.4**	**+1.0**
	baz=250						
RAMN	**Ramite**	**85.62**	**298**	*e*P	**P**	**23 22 21.7**	**+0.2**
NVAR	**Mina Array Bea**	**85.81**	**50**	P	**P**	**23 22 21.8**	**-0.4**
	comp=Z,6.7nm,1.0s,baz=235,slow=7.3,SNR=16						
NVAR				LR	LR	23 55 43.1	
	comp=Z,628nm,18.9s,baz=208,slow=32						
PFO	**Pinyon Flats O**	**85.87**	**55**	PFAKE		23 22 30.0	+7.6
PFO				LR	LR		
	comp=Z,2µm,20.0s						
TIXI	**Tiksi**	**86.08**	**349**	*i* P	**P**	**23 22 20.0**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,16nm,1.1s						
GRAC	**Grapevine Rang**	**86.11**	**51**	P	**P**	**23 22 24.5**	**+1.1**
	baz=253						
JIRN	**Jiri**	**86.16**	**299**	*e*P	**P**	**23 22 24.3**	**0.0**
	comp=Z,48nm,1.2s						
A04D	**Lummi Island**	**86.19**	**39**	P	**P**	**23 22 24.4**	**+1.0**
	baz=249						
BELC	**Belle Mtn. Jos**	**86.34**	**55**	P	**P**	**23 22 25.7**	**+0.9**
	baz=254						
B05A	**Bryant**	**86.41**	**40**	P	**P**	**23 22 25.2**	**+0.7**
	baz=249						
GUN	**Gumba**	**86.48**	**299**	*e*P	**P**	**23 22 25.9**	**0.0**
	comp=Z,28nm,1.2s						
PKI	**Pulchoki**	**86.81**	**299**	*e*P	**P**	**23 22 26.4**	**-1.0**
	comp=Z,39nm,1.3s						
PKIN	**Phulchoki**	**86.82**	**299**	*e*P	**P**	**23 22 27.4**	**0.0**
GLA	**Glamis**	**87.03**	**56**	P	**P**	**23 22 29.2**	**+1.1**
	baz=255						
IRM	**Iron Mountain**	**87.07**	**55**	P	**P**	**23 22 28.6**	**+0.4**
	baz=255						
DMN	**Daman**	**87.08**	**299**	*e*P	**P**	**23 22 28.7**	**+0.1**
HAWA	**Hanford**	**87.42**	**42**	PFAKE		23 22 40.0	+10
HAWA				LR	LR		
	comp=Z,1µm,19.0s						
R11A	**Troy Canyon, C**	**87.84**	**50**	P	**P**	**23 22 32.9**	**+0.9**
	baz=254						
PDMCI	**Parker Dam,Lak**	**87.91**	**55**	P	**P**	**23 22 33.3**	**+1.1**
	baz=255						
DANN	**Dangsing**	**88.41**	**299**	*e*P	**P**	**23 22 32.7**	**-2.4**
	comp=Z,29nm,1.2s						
PYUN	**Piuthan**	**89.01**	**299**	*e*P	**P**	**23 22 36.5**	**-1.3**
	comp=Z,17nm,0.9s						
WMQ	**Urumqi**	**89.21**	**315**	*e*P	**P**	**23 22 37.8**	**-0.4**
WMQ				pP	sP	23 22 46.9	+4.8
WMQ				sP	pP	23 22 50.7	+10
WMQ				pmax	pmax		
	comp=Z,22nm,1.5s						
NEW	**Newport**	**89.55**	**41**	PFAKE		23 22 50.0	+10
NEW				LR	LR		
	comp=Z,2µm,19.0s						
NEW	**Newport**	**89.55**	**41**	P	**P**	**23 22 40.0**	**+0.4**
	baz=253						
INK	**Inuvik**	**89.77**	**19**	P	**P**	**23 22 39.5**	**-0.6**
	comp=Z,2.9nm,1.2s,baz=189,slow=1.9,SNR=3.2						
HLID	**Hailey**	**90.08**	**46**	PFAKE		23 22 50.0	+7.6
HLID				LR	LR		
	comp=Z,1µm,19.0s						
HLID	**Hailey**	**90.08**	**46**	P	**P**	**23 22 43.4**	**+1.0**
	baz=255						
DUG	**Dugway, Tooele**	**90.39**	**49**	PFAKE		23 22 50.0	+6.1
DUG				LR	LR		
	comp=Z,995nm,19.0s						
DUG	**Dugway, Tooele**	**90.39**	**49**	P	**P**	**23 22 44.2**	**+0.3**
	baz=256						
DGZ	**Jazzator, Alta**	**90.99**	**320**	*i* P	**P**	**23 22 44.8**	**-1.7**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MSO	**Missoula**	**91.24**	**43**	P	**P**	**23 22 48.7**	**+1.0**
	baz=255						
HWUT	**Hardware Ranch**	**91.64**	**48**	PFAKE		23 23 00.0	+10
HWUT				LR	LR		
	comp=Z,836nm,20.0s						
DGAR	**Diego Garcia**	**92.04**	**262**	PFAKE		23 23 00.0	+8.1
DGAR				LR	LR		
	comp=Z,544nm,19.0s						
AHID	**Auburn Hatcher**	**92.24**	**47**	PFAKE		23 23 00.0	+7.5
AHID				LR	LR		
	comp=Z,1µm,19.0s						
BOZ	**Bozeman (W)**	**92.50**	**44**	PFAKE		23 23 00.0	+6.4
BOZ				LR	LR		
	comp=Z,1µm,20.0s						
BOZ	**Bozeman (W)**	**92.50**	**44**	P	**P**	**23 22 54.4**	**+0.9**
	baz=257						
MVCO	**Mesa Verde**	**93.03**	**53**	PFAKE		23 23 10.0	+14
MVCO				LR	LR		
	comp=Z,1µm,19.0s						
LKWY	**Lake**	**93.12**	**45**	PFAKE		23 23 10.0	+13
LKWY				LR	LR		
	comp=Z,2µm,19.0s						
BW06	**Boulder Array**	**93.35**	**47**	PFAKE		23 23 10.0	+12
BW06				LR	LR		
	comp=Z,843nm,19.0s						
BW06	**Boulder Array**	**93.35**	**47**	P	**P**	**23 22 58.0**	**+0.3**
	baz=258						
PDAR	**Pinedale Array**	**93.35**	**47**	P	**P**	**23 22 57.5**	**-0.2**
	comp=Z,2.1nm,1.0s,baz=228,slow=1.8,SNR=10						
MKAR	**Makanchi Array**	**93.63**	**317**	P	**P**	**23 22 57.4**	**-1.2**
	comp=Z,4.6nm,0.9s,baz=99,slow=6.0,SNR=17						
ZALV	**Zalesovo Beam**	**93.64**	**324**	P	**P**	**23 22 57.4**	**-1.0**
	comp=Z,4.0nm,0.9s,baz=108,slow=4.8,SNR=11						
RLMT	**Red Lodge**	**94.03**	**45**	PFAKE		23 23 10.0	+9.3
RLMT				LR	LR		
	comp=Z,782nm,20.0s						
ANMO	**Albuquerque**	**94.23**	**55**	PFAKE		23 23 10.0	+8.1
ANMO				LR	LR		
	comp=Z,1µm,19.0s						
EGMT	**Eagleton**	**94.28**	**42**	PFAKE		23 23 10.0	+8.4
EGMT				LR	LR		
	comp=Z,1µm,19.0s						
EGMT	**Eagleton**	**94.28**	**42**	P	**P**	**23 23 02.4**	**+0.8**
	baz=258						
MNTX	**Cornudas Mount**	**94.54**	**59**	PFAKE		23 23 10.0	+6.9
MNTX				LR	LR		
	comp=Z,1µm,19.0s						
YKA	**Yellowknife Ar**	**94.82**	**27**	P	**P**	**23 23 01.3**	**-2.3**
	comp=Z,1.1nm,0.9s,baz=257,slow=4.8,SNR=11						
SDCO	**Great Sand Dun**	**95.47**	**53**	PFAKE		23 23 20.0	+12
SDCO				LR	LR		
	comp=Z,1µm,21.0s						
PMSA	**Palmer Station**	**95.70**	**161**	PFAKE		23 23 20.0	+12
PMSA				LR	LR		
	comp=Z,765nm,20.0s						
ISCO	**Idaho Springs**	**95.73**	**51**	PFAKE		23 23 20.0	+11
ISCO				LR	LR		
	comp=Z,2µm,19.0s						
NRIK	**Noril'sk**	**96.14**	**340**	P	**P**	**23 23 09.5**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=91,slow=8.1,SNR=3.3						
NRIK				LR	LR	00 06 26.8	
	comp=Z,316nm,20.1s,baz=64,slow=35						
LAO	**LASA Array**	**96.40**	**44**	PFAKE		23 23 20.0	+8.7
LAO				LR	LR		
	comp=Z,918nm,19.0s						
KURK	**Kurchatov**	**96.74**	**320**	PFAKE		23 23 20.0	+7.4
KURK				LR	LR		
	comp=Z,1µm,22.0s						
KSH	**Kashi**	**96.89**	**309**	P	**P**	**23 23 17.2**	**+3.4**
KSH				sP	sP	23 23 27.7	+10
KSH				PP	PP	23 27 16.6	+7.3
KSH				SKS	**SKSac**	**23 33 52.7**	**+1.4**
KSH				S	**ScS**	**23 34 36.3**	**-0.6**
KSH				sS	sS	23 34 48.8	+7.5
KSH				SS	**SS**	**23 41 16.8**	**+4.3**
KSH				LR	LR		
	comp=Z,430nm,10.1s						
KSH				LR	LR		
	comp=Z,860nm,16.6s						
KSH				LR	LR		
	comp=Z,920nm,17.7s						
DGMT	**Dagmar**	**98.01**	**42**	PFAKE		23 23 30.0	+11
DGMT				LR	LR		
	comp=Z,1µm,19.0s						
NIL	**Nilore**	**98.24**	**303**	PFAKE		23 23 30.0	+10
NIL				LR	LR		
	comp=Z,316nm,21.0s						
AAK	**Ala-Archa**	**98.42**	**312**	PFAKE		23 23 30.0	+9.3
AAK				LR	LR		
	comp=Z,645nm,19.0s						
AAK	**Ala-Archa**	**98.42**	**312**	LR	LR	00 05 31.2	
	comp=Z,352nm,21.6s,baz=76,slow=34						
OGNE	**Ogallala**	**98.60**	**50**	PFAKE		23 23 30.0	+8.6
OGNE				LR	LR		
	comp=Z,2µm,21.0s						
JCT	**Junction City**	**99.09**	**61**	PFAKE		23 23 30.0	+6.2
JCT				LR	LR		
	comp=Z,1µm,19.0s						
FFC	**Flin Flon**	**100.06**	**36**	PFAKE		23 23 40.0	+13
FFC				LR	LR		
	comp=Z,1µm,19.0s						
CBKS	**Cedar Bluff**	**100.11**	**52**	PFAKE		23 23 40.0	+12
CBKS				LR	LR		
	comp=Z,1µm,22.0s						
KVTX	**Kingsville**	**100.39**	**64**	PFAKE		23 23 40.0	+10
KVTX				LR	LR		
	comp=Z,774nm,20.0s						
BRVK	**Borovoye**	**102.11**	**322**	PFAKE		23 23 50.0	+13
BRVK				LR	LR		
	comp=Z,429nm,21.0s						
KSU1	**Kansas State U**	**102.57**	**52**	PFAKE		23 23 50.0	+11
KSU1				LR	LR		
	comp=Z,1µm,19.0s						
PAYG	**Puerto Ayora**	**103.36**	**93**	PFAKE		23 23 50.0	+6.9
PAYG				LR	LR		
	comp=Z,558nm,20.0s						
NATX	**Nacogdoches**	**103.61**	**60**	PFAKE		23 24 00.0	+16
NATX				LR	LR		
	comp=Z,945nm,19.0s						
MIAR	**Mount Ida**	**104.71**	**57**	PFAKE		23 24 00.0	+11
MIAR				LR	LR		
	comp=Z,1µm,19.0s						
HDIL	**Hopedale**	**108.23**	**51**	PFAKE		23 28 20.0	+9.3
HDIL				LR	LR		
	comp=Z,1µm,19.0s						
ARU	**Arti**	**108.70**	**326**	PFAKE		23 28 20.0	+9.0
ARU				LR	LR		
	comp=Z,523nm,20.0s						
BRAL	**Brewton**	**110.08**	**61**	PFAKE		23 28 30.0	+16
BRAL				LR	LR		
	comp=Z,793nm,19.0s						
JTS	**JuntasAbangare**	**110.45**	**83**	PFAKE		23 28 30.0	+14
JTS				LR	LR		
	comp=Z,480nm,20.0s						
KBS	**Kingsbay**	**110.88**	**355**	PFAKE		23 28 30.0	+15
KBS				LR	LR		
	comp=Z,465nm,20.0s						
AAM	**Ann Arbor**	**112.37**	**49**	PFAKE		23 28 30.0	+12
AAM				LR	LR		
	comp=Z,1µm,22.0s						
LCO	**Las Campanas**	**112.41**	**128**	PFAKE		23 28 30.0	+11
LCO				LR	LR		
	comp=Z,329nm,19.0s						
ABPO	**Ambohimpanom**	**112.67**	**244**	PFAKE		23 28 30.0	+10
ABPO				LR	LR		
	comp=Z,372nm,19.0s						
ACSO	**Alum Creek Sta**	**113.06**	**51**	PFAKE		23 28 30.0	+10
ACSO				LR	LR		
	comp=Z,490nm,19.0s						
GOGA	**Godfrey**	**113.09**	**58**	PFAKE		23 28 30.0	+10
GOGA				LR	LR		
	comp=Z,1µm,21.0s						
NNA	**Nana**	**113.57**	**108**	PFAKE		23 28 30.0	+8.4
NNA				LR	LR		
	comp=Z,328nm,20.0s						
LVZ	**Lovozero**	**114.87**	**342**	PFAKE		23 28 30.0	+7.5
LVZ				LR	LR		
	comp=Z,335nm,19.0s						
OTAV	**Otavalo**	**115.13**	**95**	PFAKE		23 28 40.0	+15
OTAV				LR	LR		
	comp=Z,621nm,20.0s						
BCIP	**Isla Barro Col**	**115.29**	**85**	PFAKE		23 28 40.0	+15
BCIP				LR	LR		
	comp=Z,375nm,19.0s						
BLA	**Blacksburg**	**115.34**	**54**	PFAKE		23 28 40.0	+16
BLA				LR	LR		
	comp=Z,1µm,20.0s						
KEV	**Kevo**	**115.81**	**345**	PFAKE		23 28 40.0	+16
KEV				LR	LR		
	comp=Z,962nm,20.0s						
NHSC	**New Hope**	**115.86**	**59**	PFAKE		23 28 40.0	+15
NHSC				LR	LR		
	comp=Z,971nm,20.0s						
ARCES	**ARCESS Array B**	**116.33**	**346**	PKIKP	**PKiKP**	**23 28 23.0**	**-2.3**
ARCES	**ARCESS Array B**	**116.33**	**346**	PKP	**PKiKP**	**23 28 22.9**	**-2.3**
	comp=Z,4.0nm,1.1s,baz=84,slow=1.4,SNR=12						
LVC	**Limon Verde**	**116.72**	**122**	PFAKE		23 28 40.0	+12
LVC				LR	LR		
	comp=Z,623nm,20.0s						
CNNC	**Cliffs of the**	**117.57**	**56**	PFAKE		23 28 40.0	+11
CNNC				LR	LR		
	comp=Z,793nm,19.0s						
CBN	**Corbin Frederi**	**117.62**	**53**	PFAKE		23 28 40.0	+11
CBN				LR	LR		
	comp=Z,1µm,19.0s						
MAK	**Makhachkala**	**118.17**	**313**	*i* PKIKP	**PKPdf**	**23 28 24.5**	**-5.0**
MAK				*e*		23 29 41.3	
MAK				pmax	pmax		
	comp=Z,126nm,0.8s						
MTDJ	**Mount Denham**	**118.37**	**75**	PFAKE		23 28 40.0	+9.2
MTDJ				LR	LR		
	comp=Z,554nm,19.0s						
VRH	**Novokhopyorsk**	**119.66**	**323**	*e*PKIKP	**PKiKP**	**23 28 32.8**	**+0.6**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LPSR	**Galich'ya Gora**	**120.72**	**326**	*e*PKIKP	**PKiKP**	**23 28 33.8**	**-0.4**
LPSR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTBY	**Guantanamo Bay**	**120.72**	**73**	PFAKE		23 28 50.0	+15
GTBY				LR	LR		
	comp=Z,240nm,21.0s						
GNI	**Garni**	**120.79**	**310**	PFAKE		23 28 50.0	+15
GNI				LR	LR		
	comp=Z,648nm,22.0s						
OBN	**Obninsk**	**120.87**	**329**	PFAKE		23 28 50.0	+16
OBN				LR	LR		
	comp=Z,296nm,21.0s						
KIV	**Kislovodsk**	**121.34**	**315**	PFAKE		23 28 50.0	+14
KIV				LR	LR		
	comp=Z,488nm,20.0s						
FINES	**FINESS Array B**	**121.80**	**339**	PKP	**PKPdf**	**23 28 33.5**	**-2.4**
	comp=Z,2.3nm,1.0s,baz=122,slow=2.5,SNR=3.5						
GRTK	**Grand Turk**	**124.44**	**71**	PFAKE		23 28 50.0	+7.5
GRTK				LR	LR		
	comp=Z,594nm,20.0s						
BOSA	**Boshof**	**125.31**	**223**	PKP	**PKPdf**	**23 28 42.9**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=80,slow=6.1,SNR=3.2						
SUR	**Sutherland**	**125.52**	**216**	PFAKE		23 29 00.0	+15
SUR				LR	LR		
	comp=Z,1µm,19.0s						
NB2	**NORSAR Subarra**	**126.70**	**345**	PKPdf	**PKPdf**	**23 28 43.7**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=35,slow=2.1						
NOA	**NORSAR Array B**	**126.70**	**345**	PKP	**PKPdf**	**23 28 43.5**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=334,slow=2.0,SNR=4.0						
AKASG	**Malin Array Be**	**126.94**	**327**	PKP	**PKPdf**	**23 28 44.4**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=60,slow=2.4,SNR=2.6						
KIEV	**Kiev**	**126.95**	**327**	PFAKE		23 29 00.0	+13
KIEV				LR	LR		
	comp=Z,662nm,19.0s						
KIEV	**Kiev**	**126.95**	**327**	⇓*i*P	**PKiKP**	**23 28 49.2**	**+2.6**
KIEV	**Kiev**	**126.95**	**327**	⇓PKIKP	**PKiKP**	**23 28 49.2**	**+2.6**
KMBO	**Kilima Mbogo**	**127.62**	**260**	PFAKE		23 29 00.0	+11
KMBO				LR	LR		
	comp=Z,596nm,19.0s						
BRTR	**Keskin Array B**	**129.09**	**313**	PKIKP	**PKiKP**	**23 28 52.0**	**+0.5**
BRTR	**Keskin Array B**	**129.09**	**313**	PKP	**PKiKP**	**23 28 52.0**	**+0.5**
	comp=Z,1.8nm,1.0s,baz=96,slow=1.2,SNR=8.6						
ANTO	**Ankara**	**129.64**	**313**	PFAKE		23 29 00.0	+7.5
ANTO				LR	LR		
	comp=Z,372nm,20.0s						
CFR	**Carcaliu**	**130.44**	**321**	⇓*i*P	**PKiKP**	**23 28 59.8**	**+6.0**
CFR	**Carcaliu**	**130.44**	**321**	⇓PKIKP	**PKiKP**	**23 28 59.8**	**+6.0**
LSZ	**Lusaka**	**130.71**	**239**	PFAKE		23 29 10.0	+15
LSZ				LR	LR		
	comp=Z,643nm,19.0s						
BIZ	**Bicaz**	**130.72**	**324**	⇓*i*P	**PKiKP**	**23 28 58.1**	**+3.8**
TLB	**Topalu**	**130.79**	**321**	⇑*i*P	**PKiKP**	**23 28 57.8**	**+3.3**
TLB	**Topalu**	**130.79**	**321**	⇑PKIKP	**PKiKP**	**23 28 57.8**	**+3.3**
HARR	**Harsova**	**130.81**	**321**	⇓*i*P	**PKiKP**	**23 28 57.8**	**+3.3**
HARR	**Harsova**	**130.81**	**321**	⇓PKIKP	**PKiKP**	**23 28 57.8**	**+3.3**
BURAR	**Bucovina Array**	**130.84**	**326**	⇑*i*P	**PKiKP**	**23 28 58.3**	**+3.6**
BURAR	**Bucovina Array**	**130.84**	**326**	⇑PKIKP	**PKiKP**	**23 28 58.3**	**+3.6**
VRI	**Vrincioaia**	**130.93**	**323**	⇑*i*P	**PKiKP**	**23 29 00.8**	**+6.0**
VRI	**Vrincioaia**	**130.93**	**323**	⇑PKIKP	**PKiKP**	**23 29 00.8**	**+6.0**
MLR	**Muntele Rosu**	**131.60**	**323**	⇑*i*P	**PKiKP**	**23 29 02.1**	**+5.8**
MLR	**Muntele Rosu**	**131.60**	**323**	⇑PKIKP	**PKiKP**	**23 29 02.1**	**+5.8**
TRPA	**Tarpa**	**131.98**	**328**	⇑*i*P	**PKiKP**	**23 28 59.0**	**+2.2**
VOIR		**132.16**	**323**	⇑*i*P	**PKPdf**	**23 28 56.1**	**-0.2**
VOIR		**132.16**	**323**	⇑PKIKP	**PKPdf**	**23 28 56.1**	**-0.2**
ARR	**Arges**	**132.44**	**323**	⇑*i*P	**PKiKP**	**23 28 59.9**	**+2.0**
DRGR		**132.71**	**326**	⇓*i*P	**PKiKP**	**23 28 58.7**	**+0.3**
DRGR		**132.71**	**326**	⇓PKIKP	**PKiKP**	**23 28 58.7**	**+0.3**
PTGA	**Pitinga**	**132.87**	**101**	PFAKE		23 29 10.0	+10
PTGA				LR	LR		
	comp=Z,12µm,21.0s						
ANWB	**Willy Bob**	**133.35**	**76**	PFAKE		23 29 10.0	+10
ANWB				LR	LR		
	comp=Z,424nm,20.0s						
MORC	**Moravsky Berou**	**133.35**	**332**	⇓*i*P	**PKiKP**	**23 29 03.5**	**+3.9**
MORC	**Moravsky Berou**	**133.35**	**332**	⇓PKIKP	**PKiKP**	**23 29 03.6**	**+3.9**
BZS	**Buzias**	**134.02**	**325**	⇓*i*P	**PKiKP**	**23 29 02.3**	**+1.3**
BZS	**Buzias**	**134.02**	**325**	⇓PKIKP	**PKiKP**	**23 29 02.3**	**+1.3**
MBAR	**Mbarara**	**134.04**	**258**	PFAKE		23 29 10.0	+7.8
MBAR				LR	LR		
	comp=Z,690nm,19.0s						
VRAC	**Vranov**	**134.12**	**332**	⇓*i*P	**PKPdf**	**23 28 58.3**	**-1.5**
VRAC	**Vranov**	**134.12**	**332**	⇓PKIKP	**PKPdf**	**23 28 58.3**	**-1.5**
CLL	**Collm**	**134.14**	**337**	*e*PKPdf	**PKiKP**	**23 29 04.0**	**+2.9**
CLL				LmV		00 31 00.0	
	comp=Z,500nm,19.4s						
CLL	**Collm**	**134.14**	**337**	*e*PKIKP	**PKiKP**	**23 29 04.0**	**+2.9**
CLL				MLR	MLR		
	comp=Z,500nm,19.4s						
VTS	**Vitosha**	**134.80**	**321**	⇑*i*P	**PKiKP**	**23 29 08.8**	**+5.9**
VTS	**Vitosha**	**134.80**	**321**	⇑PKIKP	**PKiKP**	**23 29 08.8**	**+5.9**
ESK	**Eskdalemuir**	**134.96**	**351**	PFAKE		23 29 10.0	+7.4
ESK				LR	LR		
	comp=Z,554nm,19.0s						
CONA	**Conrad Observa**	**135.45**	**331**	*e*PKiKP	**PKiKP**	**23 29 03.3**	**-0.7**
	comp=Z,6.1nm,1.2s						
KHC	**Kasperske Hory**	**135.59**	**334**	*e*PKPDF	**PKPdf**	**23 29 02.8**	**+0.2**
KHC	**Kasperske Hory**	**135.59**	**334**	*e*PKIKP	**PKPdf**	**23 29 02.8**	**+0.2**
GERES	**GERESS Array B**	**135.75**	**334**	PKP	**PKiKP**	**23 29 04.4**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=27,slow=3.3,SNR=7.6						
APE	**Apeiranthos**	**135.99**	**313**	⇑*i*P	**PKiKP**	**23 29 08.4**	**+3.0**
APE	**Apeiranthos**	**135.99**	**313**	⇑PKIKP	**PKiKP**	**23 29 08.4**	**+3.0**
KBA	**Koelnbreinsper**	**137.24**	**332**	*e*pPKiKP	**PKiKP**	**23 29 11.0**	**+3.3**
	comp=Z,12nm,1.5s						
ABTA	**Abfaltersbach**	**137.86**	**333**	*i* pPKiKP	**PKiKP**	**23 29 12.6**	**+3.7**
	comp=Z,11nm,1.8s						
MOTA	**Moosalm**	**138.02**	**334**	*e*pPKiKP	**PKiKP**	**23 29 11.8**	**+2.5**
	comp=Z,8.5nm,1.1s						
BFO	**Black Forest**	**138.33**	**338**	PFAKE		23 29 20.0	+10
BFO				LR	LR		
	comp=Z,19nm,20.0s						
KEST	**Kesra**	**147.50**	**323**	PKPbc	**PKPbc**	**23 29 25.9**	**-0.9**
	comp=Z,8.4nm,1.0s,baz=247,slow=7.7,SNR=3.6						
POLO	**Lamas de Olo**	**149.24**	**351**	*e*PKPdf	**PKPbc**	**23 29 30.9**	**-0.3**
MVO	**Moncorvo**	**149.31**	**350**	*e*PKPdf	**PKPab**	**23 29 36.1**	**+0.2**
PVRL	**Vila Real**	**149.32**	**351**	*e*PKPdf	**PKiKP**	**23 29 32.6**	**0.0**
PVIS	**Viseu**	**149.90**	**351**	*e*PKPdf	**PKPbc**	**23 29 32.3**	**-0.5**
ESDC	**Sonseca Array**	**150.06**	**344**	PKPbc	**PKPbc**	**23 29 31.6**	**-1.7**
	comp=Z,2.0nm,0.7s,baz=22,slow=3.6,SNR=7.9						
MTE	**Manteigas**	**150.15**	**350**	*e*PKPdf	**PKPab**	**23 29 37.4**	**-1.9**
PAB	**San Pablo**	**150.28**	**345**	PFAKE		23 29 40.0	+0.1
PAB				LR	LR		
	comp=Z,414nm,19.0s						
PCAS	**Casmilo, Conde**	**150.64**	**351**	*e*PKPdf	**PKiKP**	**23 29 37.1**	**+1.8**
PCBR	**Castelo Branco**	**150.68**	**350**	*e*PKPdf	**PKPab**	**23 29 38.6**	**-2.8**

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PTOM  Tomar            151.05 351  ePKPdf   PKPbc    23 29 35.0 -0.5
PMRV  Marv??o          151.07 349  ePKPdf   PKPbc    23 29 34.5 -1.1
PMTG  Montargil        151.56 350  ePKPdf   PKPbc    23 29 36.0 -0.7
PESTR Estremoz         151.65 349  ePKPdf   PKPab    23 29 41.8 -3.7
PMAFR Mafra            151.83 352  ePKPdf   PKiKP    23 29 38.8 +1.0
PNCL  Nicolau / Gran   152.54 351  ePKPdf   PKPbc    23 29 35.9 -3.1
PVAQ  Vaqueiros        153.09 349  ePKPdf   PKPbc    23 29 39.0 -1.2
MORF  Marmelete        153.35 350  ePKPdf   PKPbc    23 29 39.8 -1.1
PFVI  Vila Bisbo       153.55 351  ePKPdf   PKPbc    23 29 38.8 -2.4
TORD  Torodi Ar. Bea   164.47 280   PKP     PKPdf    23 29 47.1 +0.1
      comp=Z,2.2nm,0.9s,baz=207,slow=0.3,SNR=10.0
TORD                                PKPab   pPKPab   23 30 43.3 -1.3
      comp=Z,4.5nm,1.1s,baz=122,slow=8.8,SNR=6.1
KIC   Kosan Boka       169.74 244  ePKP1    PKPdf    23 29 54.3 +3.4
      comp=Z,55nm,1.3s
SACV  Santiago Islan   169.86  66   PFAKE            23 30 00.0 +9.1
SACV                                LR      LR
      comp=Z,451nm,19.0s
LIC   Lamto            169.92 243  ePKP1    PKPdf    23 29 53.6 +2.6
      comp=Z,58nm,1.5s
TIC   Toumodi          170.11 245  ePKP1    PKPdf    23 29 54.5 +3.4
```

IDC 09 23:11:25.1±39.0**, 53°.11N×173°.88W, h333^{km}**±233^{km}**,**
mb2.8/3**, mb1 3.1**/5**, mb1mx2.7**/46**, mbtmp3.7**/5**, Error**
ellipse: s-maj=379.4km s-min=46.9km az=63.0,
Andreanof Islands

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s    ISC
KDAK  Kodiak Island     12.94  60    P       Pn       23 14 19.0 +1.1
      0.3nm,0.3s,baz=236,slow=3.6,SNR=5.4
ILAR  Eielson Array     17.99  39    P       P        23 15 11.5 -1.0
      0.1nm,0.3s,baz=260,slow=12,SNR=9.6
INK   Inuvik            24.29  36    P       P        23 16 13.7 +1.0
      0.5nm,0.4s,baz=244,slow=9.6,SNR=6.8
YKA   Yellowknife Ar    31.82  49    P       P        23 17 18.4 -0.8
      0.3nm,0.5s,baz=281,slow=7.8,SNR=7.2
NVAR  Mina Array Bea    40.40  88    P       P        23 18 31.7 -0.2
      0.5nm,0.7s,baz=304,slow=6.4,SNR=2.7
```

IDC ***09*** *23:13:36.4±0.5, 10°.82S×165°.85E, h0^{km}, mb4.7/23,*
mb1 4.9/25, mb1mx4.8/35, mbtmp4.8/25, ML5.4/2, MS5.0/1,
Ms1 5.0/1, ms1mx3.9/39, Error ellipse: s-maj=17.4km
s-min=13.1km az=99.0

ISCJB ***09*** *23:13:37.3±0.2, 10°.82S±0°.03×165°.69E±0°.04, h10^{km},*
mb5.0/70, Error ellipse: s-maj=5.8km s-min=3.9km
az=165.3

NEIC ***09*** *23:13:38.6±0.2, 10°.75S×165°.79E, h10^{km}, mb5.2/31, Error*
ellipse: s-maj=7.5km s-min=4.9km az=83.0

MOS ***09*** *23:13:40.5±0.7, 10°.70S×165°.68E, h33^{km}, mb5.2/17, Error*
ellipse: s-maj=33.2km s-min=16.5km az=92.2

ISC 09 23:13:38.5±0.3**, 10°.81S**±0°.05×**165°.80E**±0°.05**, h10^{km}, n192,**
σ**1^{s}.58**/205**, mb5.0**/70**, 7C-6D, Santa Cruz Islands**

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Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s    ISC
HNR   Honiara            5.93 283   eP       Pn       23 15 08.0 +1.6
HNR                                 eS       Sn       23 16 20.0 +5.6
HNR   Honiara            5.93 283   ePn      Pn       23 15 07.4 +1.0
HNR                                  Sn      Sn       23 16 19.1 +4.7
HNR                                 eSn      Sb       23 16 25.4 -7.7
HNR   Honiara            5.93 283    Pn      Pn       23 15 07.0 +0.6
      113nm,0.3s,baz=139,slow=6.8,SNR=9.6
HNR                                  Sn      Sn       23 16 19.1 +4.7
      21nm,0.3s,baz=151,slow=19,SNR=1.8
HNR                                  LR      LR       23 17 30.1
      comp=Z,11µm,18.7s,baz=110,slow=39
MARNC Mare, Loyalty     10.82 169   ePn      Pn       23 16 14.7 +1.1
DZM   Mont Dzumac       11.21 177   ePn      Pn       23 16 20.6 +1.6
DZM                                  Sn      Sn       23 18 23.2 -1.4
DZM   Mont Dzumac       11.21 177    Pn      Pn       23 16 19.9 +0.8
      21nm,0.3s,baz=2.0,slow=19,SNR=29
DZM                                  Sn      Sn       23 18 23.2 -1.4
      4.3nm,0.3s,baz=113,slow=22,SNR=4.0
ONTNC Ouen Toro         11.45 177   ePn      Pn       23 16 24.1 +2.0
ONTNC                               eSn      Sn       23 18 28.7 -1.5
PINNC Pines Island,     11.84 173   ePn      Pn       23 16 29.7 +2.2
MSVF  Nonsavu           13.72 121   i P      Pn       23 16 55.2 +1.9
TARA  Tarawa            14.01  31   ePn      Pn       23 16 59.3 +2.1
RABL  Rabaul            15.03 295   ePn      P        23 17 18.1 +1.5
      97nm,1.0s
EIDS  Eidsvold          20.11 222   eP       Pn       23 18 14.8 +0.4
      96nm,1.3s
MANU  Manus Island      20.27 294   eP       Pn       23 18 16.2 -0.2
      140nm,0.8s
CTA   Charters Tower    20.96 242    P       P        23 18 22.1 +0.2
      78nm,1.0s,baz=72,slow=12,SNR=18
CTAO  Charters Tower    20.96 242   eP       P        23 18 23.1 +1.2
      81nm,0.9s
CTAO  Charters Tower    20.96 242   eP       P        23 18 23.1 +1.2
CTAO                                 pmax    pmax
      comp=Z,81nm,0.9s
COEN  Coen              22.32 260   eP       P        23 18 36.7 +0.2
      comp=Z,49nm,1.2s
ARMA  Armidale          23.55 212   eP       P        23 18 49.5 +0.2
      comp=Z,61nm,1.3s
OMRZ  Omania            28.79 163    P       P        23 19 40.3 +3.6
HAZ   Te Kaha           28.91 160    P       P        23 19 38.9 +1.2
MXZ   Matakaoa Point    28.91 159   eP       P        23 19 39.8 +2.1
      comp=Z,41nm,0.9s
MXZ   Matakaoa Point    28.91 159    P       P        23 19 38.7 +0.9
PKGZ  Pakihiroa         29.13 160    P       P        23 19 39.6 -0.1
URZ   Urewera           29.15 162   eP       P        23 19 41.0 +1.2
      comp=Z,13nm,0.8s
URZ   Urewera           29.15 162    P       P        23 19 40.9 +1.1
      comp=Z,6.6nm,0.5s,baz=269,slow=3.6,SNR=9.7
URZ   Urewera           29.15 162    P       P        23 19 40.3 +0.4
PRRZ  Plateau Road      29.16 163    P       P        23 19 43.2 +3.3
WMGZ  Waiomatatini S    29.18 159    P       P        23 19 41.7 +1.5
MUGZ  Murupara          29.25 162    P       P        23 19 42.3 +1.5
MWZ   Matawai           29.35 161    P       P        23 19 41.5 -0.2
TWGZ  Tauwhareparae     29.36 160    P       P        23 19 43.4 +1.7
RTZ   Ruatahuna         29.44 162    P       P        23 19 43.2 +0.7
MTHZ  Maungataniwha     29.61 162    P       P        23 19 44.7 +0.7
RAHZ  Arahi             29.75 162    P       P        23 19 45.3 +0.1
BKZ   Black Stump Fm    29.80 163   eP       P        23 19 46.6 +0.9
      comp=Z,39nm,0.5s
STKA  Stephens Creek    30.65 223    P       P        23 19 53.8 +0.5
      comp=Z,6.1nm,0.6s,baz=47,slow=7.4,SNR=5.9
BFZ   Birch Farm        31.15 165   eP       P        23 19 57.0 -0.6
      comp=Z,31nm,1.0s
SNZO  South Karori      31.38 167   eP       P        23 19 59.5 +0.1
      comp=Z,39nm,1.0s
THZ   Tophouse          31.46 170   eP       P        23 20 01.5 +1.2
      comp=Z,49nm,1.0s
WRAB  Tennant Creek     31.60 250   eP       P        23 20 01.0 -0.8
      comp=Z,26nm,1.1s
WRAB  Tennant Creek     31.60 250ceP         P        23 20 00.6 -1.2
WRAB                                 pmax    pmax
      comp=Z,15nm,1.0s
WB2   Warramunga Arr    31.61 249   eP       P        23 20 01.2 -0.7
      comp=Z,43nm,1.3s
WB2                                 ePcP     PcP      23 22 54.6 +0.3
WRA   Warramunga Arr    31.62 250    P       P        23 20 00.7 -1.3
      comp=Z,13nm,0.8s,baz=82,slow=8.9,SNR=24
WRA                                  PcP     PcP      23 22 54.6 +0.3
      comp=Z,3.0nm,0.8s,baz=80,slow=3.3,SNR=6.5
KHZ   Kahutara          32.20 169   eP       P        23 20 07.6 +0.9
      comp=Z,30nm,1.0s
TOO   Toolangi          32.30 211   eP       P        23 20 08.8 +1.0
      comp=Z,12nm,0.7s
TOO   Toolangi          32.30 211   eP       P        23 20 08.8 +1.0
TOO                                  pmax    pmax
      comp=Z,12nm,0.7s
LTZ   Lake Taylor       32.35 171   eP       P        23 20 09.1 +1.0
      comp=Z,65nm,1.0s
FOZ   Fox Glacier       32.79 175   eP       P        23 20 17.8 +5.9
      comp=Z,65nm,0.9s
OXZ   Oxford            32.84 172   eP       P        23 20 14.3 +1.9
      comp=Z,94nm,1.2s
AS01  Alice Springs     32.91 243   eP       P        23 20 11.9 -1.4
AS31  Alice Springs     32.95 243   eP       P        23 20 12.4 -1.2
      comp=Z,7.8nm,0.8s
ASAR  Alice Springs     32.95 243    P       P        23 20 12.4 -1.2
      comp=Z,25nm,0.8s,baz=67,slow=10,SNR=54
ASAR                                 PcP     PcP      23 22 57.9 -0.1
      comp=Z,2.3nm,0.7s,baz=68,slow=2.1,SNR=6.3
ASAR                                 ScP     ScP      23 26 40.9 -1.5
      comp=Z,0.5nm,0.7s,baz=75,slow=3.9,SNR=3.7
RPZ   Rata Peaks        33.10 173   eP       P        23 20 16.0 +1.3
      comp=Z,46nm,0.9s
RPZ   Rata Peaks        33.10 173    P       P        23 20 14.1 -0.5
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      comp=Z,17nm,0.6s,baz=269,slow=3.7,SNR=13
MQZ   McQueen's Vall    33.31 171   eP       P        23 20 17.1 +0.7
      comp=Z,147nm,1.3s
FITZ  Fitzroy Crossi    39.49 255   eP       P        23 21 09.8 +0.1
      comp=Z,24nm,0.8s
MORW  Morawa            49.78 241   eP       P        23 22 32.4 +0.7
      comp=Z,94nm,1.2s
MJAR  Matsushiro Arr    53.79 332    P       P        23 23 01.1 -0.3
      comp=Z,16nm,1.0s,baz=169,slow=8.0,SNR=20
MAJO  Matsushiro        53.79 332   eP       P        23 23 01.7 +0.3
      comp=Z,28nm,1.0s
MAJO  Matsushiro        53.79 332   eP       P        23 23 01.7 +0.3
MAJO                                 pmax    pmax
      comp=Z,28nm,1.0s
MAT   Matsushiro        53.79 332    P       P        23 23 01.0 -0.4
MJB9  Matsu-Tunnel      53.80 332   eP       P        23 23 01.7 +0.3
      comp=Z,31nm,1.0s
JNU   Nakatsue          54.92 324   eP       P        23 23 10.0 +0.3
      comp=Z,83nm,1.4s
ASAJ  Asahikawa         58.59 341    P       P        23 23 36.5 +0.9
      comp=Z,34nm,0.8s,baz=213,slow=9.4,SNR=16
KSRS  Korea Array       59.72 326    P       P        23 23 43.9 +0.4
      comp=Z,1.7nm,0.7s,baz=153,slow=7.0,SNR=6.2
KSAR  Wonju Array Be    59.73 326    P       P        23 23 43.9 +0.3
KSAR  Wonju Array Be    59.73 326    P       P        23 23 43.9 +0.3
YSS   Yuzh-Sakhalins    61.08 342   eP       P        23 23 54.3 +1.7
      comp=Z,63nm,1.2s
YSS   Yuzh-Sakhalins    61.08 342⇓eP         P        23 23 54.0 +1.4
YSS                                 e                 23 24 00.9
YSS                                  pmax    pmax
      comp=Z,40nm,1.3s
NJ2   Nanjing           61.89 315   eP       P        23 23 58.3 -0.1
NJ2                                  pP      sP       23 24 09.1 +6.2
NJ2                                  sP      pP       23 24 15.4  +14
NJ2                                  pmax    pmax
      comp=Z,11nm,0.8s
QIZ   Qiongzhong        62.62 298    P       P        23 24 04.0 +0.4
QIZ                                  S       S        23 32 30.0 -2.1
QIZ                                  pmax    pmax
      comp=Z,660nm,12.3s
QIZ                                  LR      LR
      comp=N,800nm,13.2s
QIZ                                  LR      LR
      comp=E,670nm,16.2s
QIZ                                  LR      LR
      comp=Z,930nm,17.6s
USRK  Ussuriysk Ar.     62.76 333    P       P        23 24 04.5 +0.5
      comp=Z,18nm,1.1s,baz=144,slow=6.8,SNR=13
PETK  Petropavlovsk-    64.04 355    P       P        23 24 11.9 -0.4
      comp=Z,3.1nm,0.8s,baz=160,slow=6.9,SNR=4.3
MDJ   Mudanjiang        64.17 332   eP       P        23 24 14.2 +0.8
      comp=Z,17nm,1.0s
WHN   Wuhan             64.28 312    P       P        23 24 21.0 +6.7
TYV   Tymovskoe         64.64 344   eP       P        23 24 15.0 -1.2
TYV                                  pmax    pmax
      comp=Z,18nm,1.6s
CN2   Changchun         65.57 329   eP       P        23 24 22.3 -0.2
CN2                                  pmax    pmax
      comp=Z,10.0nm,1.3s
GRNR  Gornyy            66.44 340   eP       P        23 24 29.1 +1.2
GRNR                                 pmax    pmax
      comp=Z,21nm,1.0s
KLR   Kul'dur           66.87 336⇓iP         P        23 24 30.7  0.0
NKL   Nikolayevsk       67.23 344   eP       P        23 24 34.0 +1.2
NKL                                  pmax    pmax
      comp=Z,21nm,1.0s
ENH   Enshi             67.79 309   eP       P        23 24 36.1 -0.9
      comp=Z,15nm,0.9s
GYA   Guiyang           68.33 304⇑iP         P        23 24 42.0 +1.4
GYA                                  pP      sP       23 24 55.5  +10
GYA                                  PP      PP       23 27 16.6 +5.0
GYA                                  S       S        23 33 40.0 -2.1
GYA                                  SKS     SKiKP    23 34 33.2 -2.5
GYA   Guiyang           68.33 304    SS      SS       23 38 05.9 +0.1
GYA                                  pmax    pmax
      comp=Z,20nm,1.0s
GYA                                  pmax    pmax
      comp=Z,120nm,7.6s
GYA                                  LR      LR
      comp=N,550nm,18.4s
GYA                                  LR      LR
      comp=E,560nm,18.1s
GYA                                  LR      LR
      comp=Z,520nm,18.6s
XAN   Xi'an             70.01 312    P       P        23 24 50.8 +0.1
XAN                                  pP      sP       23 24 59.6 +4.4
XAN                                  pmax    pmax
      comp=Z,10.0nm,0.9s
XAN   Xi'an             70.01 312   eP       P        23 24 50.3 -0.4
XAN   Xi'an             70.01 312   eP       P        23 24 50.3 -0.4
KMI   Kunming           71.05 301    P       P        23 24 58.0 +0.5
KMI                                  pP      PcP      23 25 10.5 -7.3
KMI                                  sP      sP       23 25 16.0  +14
KMI                                  pmax    pmax
      comp=Z,12nm,1.2s
KMI                                  LR      LR
      comp=N,490nm,16.8s
KMI                                  LR      LR
      comp=E,390nm,14.4s
KMI                                  LR      LR
      comp=Z,810nm,20.0s
MA2   Magadan           71.19 352    P       P        23 24 56.8 -0.4
      comp=Z,2.8nm,0.3s,baz=163,slow=19,SNR=2.5
HHC   Hu-ho-hao-te      71.69 320   eP       P        23 25 01.7 +0.8
HHC                                  pmax    pmax
      comp=Z,11nm,0.9s
HHC                                  pmax    pmax
      comp=Z,390nm,5.2s
CMAR  Chiang Mai Arr    72.07 293    P       P        23 25 04.4 +0.9
      comp=Z,3.1nm,0.7s,baz=115,slow=4.5,SNR=11
CMAR                                 PKKP    PKKPdf   23 44 33.4 -2.8
      comp=Z,0.4nm,0.3s,baz=165,slow=2.8,SNR=4.1
ZEA   Zeya              72.15 337   eP       P        23 25 04.0 +0.8
ZEA                                  pmax    pmax
      comp=N,29nm,1.2s
ZEA                                  pmax    pmax
      comp=Z,43nm,1.2s
CMMT  Chiang Mai        72.18 294    P       P        23 25 08.0 +3.8
      comp=Z,6.1nm,1.2s
CHTO  Chiang Mai        72.18 294   eP       P        23 25 04.7 +0.5
      comp=Z,6.6nm,1.3s
CHTO  Chiang Mai        72.18 294   eP       P        23 25 04.7 +0.5
CHTO                                 pmax    pmax
      comp=Z,7.0nm,1.3s
CHTO  Chiang Mai        72.18 294    P       P        23 25 08.0 +3.8
      comp=Z,28nm,1.3s
HIA   Hailar            72.19 330   i P      P        23 25 03.7 +0.1
HIA                                  pmax    pmax
      comp=Z,22nm,1.8s
CD2   Chengdu           72.51 307⇑iP         P        23 25 06.4 +0.5
CD2                                  pmax    pmax
      comp=Z,40nm,0.9s
CD2                                  pmax    pmax
      comp=Z,130nm,4.7s
SEY   Seymchan          74.25 354ceP         P        23 25 15.5 +0.1
SEY   Seymchan          74.25 354    P       P        23 25 14.4 -1.0
      comp=Z,3.2nm,0.9s,baz=134,slow=6.8,SNR=5.0
LZH   Lanzhou           74.64 312   eP       P        23 25 19.6 +1.0
LZH                                  pP      PcP      23 25 31.9 -0.9
LZH                                  sP      sP       23 25 39.2  +16
LZH                                  PP      PP       23 28 03.8 -1.8
LZH                                  pmax    pmax
      comp=Z,29nm,1.0s
LZH                                  pmax    pmax
      comp=Z,91nm,4.9s
LZH                                  LR      LR
      comp=N,1µm,13.8s
LZH                                  LR      LR
      comp=E,1µm,12.9s
LZH                                  LR      LR
      comp=Z,2µm,14.6s
ULN   Ulaanbaatar       78.14 324   eP       P        23 25 38.5 +0.3
ULN   Ulaanbaatar       78.14 324ceP         P        23 25 37.6 -0.6
ULN                                  pmax    pmax
      comp=Z,22nm,1.3s
SONM  Songino Array     78.51 324    P       P        23 25 40.4 +0.2
      comp=Z,4.9nm,0.8s,baz=142,slow=6.6,SNR=16
BILL  Bilibino          78.65   0   eP       P        23 25 40.6 +0.3
      comp=Z,23nm,1.0s
BILL  Bilibino          78.65   0d iP        P        23 25 40.3  0.0
BILL                                 pmax    pmax
      comp=Z,27nm,1.1s
GTA   Gaotai            78.94 314  ⇓P        P        23 25 43.4 +0.7
GTA                                  pP      PcP      23 25 55.2 +3.9
GTA                                  sP      sP       23 25 59.6  +12
GTA                                  pmax    pmax
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      comp=Z,15nm,1.2s
QSPA  South Pole Qui    79.19 180   eP       P        23 25 43.5 -0.2
BOD   Bodaibo           80.34 335   eP       P        23 25 48.5 -1.2
BOD                                  pmax    pmax
      comp=Z,9.0nm,1.6s
ZAK   Zakamensk         81.54 325   eP       P        23 25 54.6 -1.9
ZAK                                  pmax    pmax
      comp=Z,8.0nm,1.1s
TLY   Talaya            81.96 326⇓eP         P        23 25 58.2 -0.3
HDA   Harding Lake      83.00  19    P       P        23 26 04.6 +0.9
      baz=227
TCOL  CIGO, UAF Yank    83.04  18    P       P        23 26 04.2 +0.4
      baz=226
COLA  College           83.05  18   i P      P        23 26 02.6 -1.2
COLA                                 pmax    pmax
      comp=Z,19nm,0.9s
ILAR  Eielson Array     83.27  18    P       P        23 26 04.8 -0.3
      comp=Z,7.7nm,0.8s,baz=232,slow=5.3,SNR=34
K02D  Willamette Mer    83.37  44    P       P        23 26 07.5 +1.4
      baz=249
SCZ2  Santa Cruz Isl    83.48  54    P       P        23 26 06.3 -0.5
      baz=252
KNGR  Kungurtug, Tuv    84.95 324   i P      P        23 26 14.0 -0.1
J05D  Fort Rock, OR     85.25  44    P       P        23 26 16.9 +1.1
      baz=250
RAMN  Ramite            85.39 298   eP       P        23 26 16.7 -0.3
CWC   Cottonwood Cre    85.42  52    P       P        23 26 17.6 +0.8
      baz=253
E04D  Cinebar           85.48  41    P       P        23 26 18.5 +1.9
      baz=249
D03D  Eldon             85.50  40    P       P        23 26 17.8 +1.1
      baz=249
NVAR  Mina Array Bea    85.83  50    P       P        23 26 19.8 +0.9
      comp=Z,3.8nm,0.9s,baz=230,slow=7.9,SNR=7.1
TIXI  Tiksi             85.87 349ceP         P        23 26 16.7 -1.3
TIXI                                 pmax    pmax
      comp=Z,3.0nm,0.8s
JIRN  Jiri              85.92 299   eP       P        23 26 19.6 -0.2
GRAC  Grapevine Rang    86.13  51    P       P        23 26 21.6 +1.4
      baz=254
A04D  Lummi Island      86.16  39    P       P        23 26 21.1 +1.1
      baz=249
GUN   Gumba             86.25 299   eP       P        23 26 21.0 -0.4
      comp=Z,25nm,1.0s
FURC  Furnace Creek,    86.37  52    P       P        23 26 22.9 +1.6
      baz=254
BELC  Belle Mtn. Jos    86.38  55    P       P        23 26 22.7 +1.1
      baz=254
B05A  Bryant            86.38  40    P       P        23 26 22.1 +1.1
      baz=250
PKI   Pulchoki          86.58 299   eP       P        23 26 22.1 -0.8
      comp=Z,31nm,1.3s
PKIN  Phulchoki         86.59 299   eP       P        23 26 22.2 -0.7
      comp=Z,18nm,1.1s
DMN   Daman             86.84 299   eP       P        23 26 23.7 -0.5
      comp=Z,47nm,1.1s
GMRC  Granite Mounta    86.85  54    P       P        23 26 24.6 +0.7
      baz=255
IRM   Iron Mountain     87.10  55    P       P        23 26 26.1 +1.1
      baz=255
R11A  Troy Canyon, C    87.86  50    P       P        23 26 29.6 +0.9
      baz=254
PDMCI Parker Dam,Lak    87.94  55    P       P        23 26 30.3 +1.3
      baz=256
KOLN  Koldanda          88.18 299   eP       P        23 26 29.3 -1.2
214A  Organ Pipe Nat    88.46  57    P       P        23 26 32.5 +1.0
      baz=256
PYUN  Piuthan           88.78 299   eP       P        23 26 31.6 -1.8
      comp=Z,30nm,1.2s
WMQ   Urumqi            88.97 315   eP       P        23 26 34.4 +0.7
WMQ                                  pmax    pmax
      comp=Z,23nm,1.5s
INK   Inuvik            89.66  19    P       P        23 26 35.8 -0.5
      comp=Z,1.8nm,0.9s,baz=204,slow=10.0,SNR=3.1
HLID  Hailey            90.07  46    P       P        23 26 40.1 +1.1
      baz=255
DUG   Dugway, Tooele    90.40  49    P       P        23 26 41.8 +1.2
      baz=256
WUAZ  Wupatki           90.44  54    P       P        23 26 41.8 +0.9
      baz=257
DGZ   Jazzator, Alta    90.75 321d iP        P        23 26 41.4 -0.6
DGZ                                  pmax    pmax
      comp=Z,5.0nm,0.8s
PDAR  Pinedale Array    93.35  47    P       P        23 26 54.1 -0.3
      comp=Z,2.6nm,1.0s,baz=238,slow=2.8,SNR=4.3
MKAR  Makanchi Array    93.39 317    P       P        23 26 53.9 -0.3
      comp=Z,6.1nm,0.8s,baz=97,slow=6.3,SNR=24
ZALV  Zalesovo Beam     93.40 324    P       P        23 26 52.8 -1.2
      comp=Z,4.6nm,0.8s,baz=110,slow=4.1,SNR=16
YKA   Yellowknife Ar    94.74  27    P       P        23 26 58.0 -1.9
      comp=Z,0.9nm,0.8s,baz=258,slow=4.6,SNR=9.8
NRIK  Noril'sk          95.92 340    P       P        23 27 03.3 -1.9
      comp=Z,1.1nm,0.3s,baz=127,slow=5.0,SNR=4.6
KURK  Kurchatov         96.50 320ceP         P        23 27 08.4 +0.2
KURK                                 pmax    pmax
      comp=Z,6.0nm,1.3s
KSH   Kashi             96.65 309    P       P        23 27 11.1 +1.7
KSH                                  pmax    pmax
      comp=Z,490nm,8.9s
ARCES ARCESS Array B   116.12 346    PKP     PKiKP    23 32 20.3 -1.1
      comp=Z,1.4nm,0.5s,baz=87,slow=2.2,SNR=33
FINES FINESS Array B   121.58 339    PKIKP   PKPdf    23 32 30.0 -2.1
FINES FINESS Array B   121.58 339    PKP     PKPdf    23 32 29.9 -2.1
      comp=Z,1.3nm,0.7s,baz=62,slow=1.4,SNR=10
CPUP  Villa Florida    124.14 132    PKIKP   PKPdf    23 32 36.0 -2.2
CPUP  Villa Florida    124.14 132    PKP     PKPdf    23 32 36.0 -2.2
      comp=Z,1.3nm,0.7s,baz=277,slow=2.3,SNR=4.2
BOSA  Boshof           125.32 223    PKP     PKPdf    23 32 39.8 -0.8
      comp=Z,2.7nm,0.7s,baz=122,slow=3.3,SNR=8.7
NB2   NORSAR Subarra126.49 345       PKPdf   PKPdf    23 32 40.4 -1.3
      comp=Z,4.0nm,0.9s,baz=37,slow=2.1
NB2   NORSAR Subarra126.49 345       PKPdf   PKPdf    23 32 40.4 -1.3
      baz=37,slow=2.1
NOA   NORSAR Array B126.49 345       PKIKP   PKPdf    23 32 41.0 -0.7
NOA   NORSAR Array B126.49 345       PKP     PKPdf    23 32 41.0 -0.7
      comp=Z,1.1nm,0.7s,baz=33,slow=2.0,SNR=7.6
AKASG Malin Array Be   126.70 327    PKP     PKPdf    23 32 41.2 -1.1
      comp=Z,0.4nm,0.4s,baz=59,slow=2.5,SNR=5.8
BRTR  Keskin Array B   128.85 313    PKP     PKPdf    23 32 44.4 -2.6
      comp=Z,0.5nm,0.7s,baz=139,slow=4.6,SNR=6.0
BRG   Berggiesshubel   133.88 336   ePKP     PKiKP    23 33 06.4 +9.2
      comp=Z,5.3nm,1.2s
CLL   Collm            133.91 337   ePKPdf   PKPdf    23 32 55.0 -1.0
CLL                                 e                 23 33 05.0
CLL   Collm            133.91 337   ePKIKP   PKPdf    23 32 54.0 -2.0
CLL                                 e                 23 33 05.0
GERES GERESS Array B   135.52 334    PKP     PKPdf    23 32 58.9 -0.3
      comp=Z,1.6nm,0.8s,baz=41,slow=1.6,SNR=8.6
BDFB  Brasilia         137.43 128    PKP     PKPdf    23 33 02.9 -0.8
      comp=Z,3.8nm,0.9s,baz=114,slow=2.2,SNR=4.5
KEST  Kesra            147.26 323    PKPbc   PKPbc    23 33 22.6 -0.2
      comp=Z,13nm,1.0s,baz=119,slow=4.3,SNR=5.2
PBRG  Braganca         148.44 349   ePKPdf   PKPdf    23 33 19.2 -3.1
PGAV  Gavieira, Arco   148.53 352   ePKPdf   PKPbc    23 33 26.0 -0.1
POLO  Lamas de Olo     149.04 351   ePKPdf   PKPbc    23 33 27.5 +0.1
MVO   Moncorvo         149.11 349   ePKPdf   PKPbc    23 33 27.8 +0.3
PVRL  Vila Real        149.12 350   ePKPdf   PKPbc    23 33 27.8 +0.3
PTO   Porto            149.39 352   ePKPdf   PKPbc    23 33 28.3 +0.2
PVIS  Viseu            149.70 350   ePKPdf   PKPbc    23 33 29.0  0.0
ESDC  Sonseca Array    149.85 344    PKPbc   PKPbc    23 33 29.2 -0.2
      comp=Z,3.3nm,0.8s,baz=13,slow=2.5,SNR=14
MTE   Manteigas        149.95 350   ePKPdf   PKPbc    23 33 29.6  0.0
PCAS  Casmilo, Conde   150.44 351   ePKPdf   PKPbc    23 33 30.6 -0.2
PCBR  Castelo Branco   150.48 349   ePKPdf   PKPbc    23 33 30.7 -0.1
PTOM  Tomar            150.85 351   ePKPdf   PKPbc    23 33 31.4 -0.3
PMRV  Marv??o          150.86 349   ePKPdf   PKPbc    23 33 31.9 +0.1
PMTG  Montargil        151.36 350   ePKPdf   PKPbc    23 33 32.7 -0.2
PESTR Estremoz         151.44 349   ePKPdf   PKPbc    23 33 32.9 -0.3
PMST  Lisbon--Monsan   151.83 352   ePKPdf   PKPdf    23 33 23.9 -3.7
PBEJ  Beja             152.31 349   ePKPdf   PKiKP    23 33 36.4 +1.0
MESJ  Messejana        152.56 350   ePKPdf   PKPdf    23 33 29.6 +0.9
PVAQ  Vaqueiros        152.89 349   ePKPdf   PKiKP    23 33 38.9 +2.3
TORD  Torodi Ar. Bea   164.28 280    PKP     PKPdf    23 33 41.7 -1.7
      comp=Z,2.3nm,1.0s,baz=38,slow=1.8,SNR=6.5
TORD                                 PKPab   PKPab    23 34 36.0 -1.4
      comp=Z,2.9nm,1.1s,baz=96,slow=4.5,SNR=5.3
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SOME ***09*** *23:16:33.3, 40°.87N×71°.25E, h0^{km}*

KRNET ***09*** *23:16:34.7±0.1, 41°.02N×71°.15E, h25^{km}, mb2.3*

NNC ***09*** *23:16:36.0±1.2, 40°.96N×71°.29E, h1^{km}±9^{km}, mb3.3,*
mpv2.9, Error ellipse: s-maj=8.7km s-min=4.3km az=48.0

ISC 09 23:16:34.5±1.3**, 40°.92N**±0°.03×**71°.26E**±0°.03**, h8^{km}**±11^{km}**,**
n24, σ**1^{s}.54**/38**, 15C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.93	201	⇓iP	Pn	23 16 53.7	-0.2
	baz=95						
BTK				⇓iS	Sn	23 17 07.1	-0.4
	baz=95						
ARK	Arkit	1.02	31	⇑iP	Pg	23 16 53.6	-0.5
	baz=39						
ARK				⇑iS	Sg	23 17 06.7	-0.7
	baz=39						
ARSB	Arslanbob	1.36	72	⇑iP	Pg	23 17 00.9	+0.3
	baz=77						
ARSB				⇑iS	Sg	23 17 20.1	+1.8
	baz=77						
IUG	Iuzhnay	1.53	323	P	Pb	23 17 02.8	-0.4
	26nm,0.3s						
IUG				S	Sg	23 17 24.7	+1.0
	58nm,0.3s						
IUG	Iuzhnay	1.53	323	eP	Pb	23 17 02.8	-0.4
	26nm,0.3s						
IUG				eS	Sg	23 17 24.7	+1.0
	58nm,0.3s						
MNAS	Manas	1.82	30	⇓Pn	Pb	23 17 07.6	-0.6
	1.8nm,0.4s						
MNAS				⇑Lg	Lg	23 17 32.8	
	6.2nm,0.5s						
MNAS	Manas	1.82	30	Pg	Pb	23 17 07.8	-0.4
	1.4nm,0.2s						
MNAS				Lg	Lg	23 17 33.3	
	5.2nm,0.3s						
MNAS	Manas	1.82	30	⇓iP	Pn	23 17 06.8	+0.5
	baz=34						
MNAS				⇓iS	Sn	23 17 30.0	+0.3
	baz=34						
SFK	Sufi-Kurgan	1.94	117	⇓Pn	Pg	23 17 11.5	-0.2
	2.5nm,0.7s						
SFK				⇑Lg	Lg	23 17 36.5	
	10nm,0.4s						
SFK	Sufi-Kurgan	1.94	117	Pg	Pb	23 17 10.4	+0.2
	0.9nm,0.1s						
SFK				Lg	Lg	23 17 37.7	
	12nm,0.3s						
SFK	Sufi-Kurgan	1.94	117	⇓iP	Pb	23 17 10.8	+0.6
	baz=18						
SFK				⇓iS	Sg	23 17 37.0	+0.2
	baz=18						
AML	Almayashu	2.19	56	⇑iP	Pb	23 17 13.3	-1.3
	baz=59						
AML				⇑iS	Sb	23 17 42.6	+0.5
	baz=59						
KK31	Karatay Array	2.25	346	⇑Pn	Pb	23 17 13.8	-1.5
	0.5nm,0.3s,baz=334,slow=40,SNR=76						
KK31				⇑Pg	Pg	23 17 18.6	+1.1
	2.2nm,0.4s,baz=163,slow=14,SNR=14						
KK31				⇓Lg	Lg	23 17 45.8	
	2.9nm,0.3s,baz=166,slow=27,SNR=13						
MRKS	Merke	2.34	38	Pg	Pb	23 17 17.3	+0.3
	3.9nm,0.3s						
MRKS				Lg	Lg	23 17 49.2	
	12nm,0.4s						
MRKS	Merke	2.34	38	eP	Pb	23 17 17.3	+0.3
	3.9nm,0.3s						
MRKS				eS	Sg	23 17 49.2	-0.5
	12nm,0.4s						
ARLS	Aral	2.49	67	⇑iP	Pb	23 17 17.7	-1.9
	baz=69						
ARLS				⇑iS	Sb	23 17 48.7	-1.8
	baz=69						
UCH	Uchtor	2.77	61	⇑iP	Pn	23 17 21.4	+1.8
	baz=63						
UCH				⇑iS	Sb	23 17 56.7	-2.1
	baz=63						
AAK	Ala-Archa	2.97	54	⇑Lg	Lg	23 18 09.9	
	8.0nm,0.9s						
DGS	Degeres	4.08	54	Pg	Pg	23 17 50.4	-2.2
	2.5nm,0.7s						
DGS				Lg	Lg	23 18 46.7	
	6.4nm,0.8s						
DGS	Degeres	4.08	54	eP	Pg	23 17 50.4	-2.2
	2.5nm,0.7s						
DGS				eS	Sg	23 18 46.7	+1.1
	6.4nm,0.8s						
KST	Kastek	4.10	57	Pg	Pb	23 17 49.2	+2.2
	3.7nm,0.3s						
KST				Lg	Lg	23 18 44.2	
	4.6nm,0.6s						
KST	Kastek	4.10	57	eP	Pb	23 17 49.2	+2.2
	3.7nm,0.3s						
KST				eS	Sg	23 18 44.2	-1.9
	4.6nm,0.6s						
KUU	Kurty	4.79	50	Pg	Pb	23 18 02.4	+3.6
	2.9nm,1.1s						
KUU				Lg	Lg	23 19 06.9	
	3.9nm,0.8s						
KUU	Kurty	4.79	50	eP	Pb	23 18 02.4	+3.6
	2.9nm,1.1s						
KUU				eS	Sg	23 19 06.9	-1.4
	3.9nm,0.8s						

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*ISCJB **09** 23:22:44.2±0.5, 10°.91S±0°.07×165°.68E±0°.07, h10km, mb4.1/11, Error ellipse: s-maj=12.4km s-min=7.4km az=40.7*

*IDC **09** 23:22:44.0±0.8, 10°.82S×165°.71E, h0km, mb4.2/11, mb1 4.4/13, mb1mx4.2/32, mbtmp4.3/13, ML4.9/2, Error ellipse: s-maj=20.9km s-min=18.8km az=126.0*

*NEIC **09** 23:22:45.6±0.5, 10°.83S×165°.77E, h10km, mb4.3/1, Error ellipse: s-maj=12.2km s-min=11.3km az=103.0*

ISC 09 23:22:45.7±0.7**, 10°.91S**±0°.08×**165°.70E**±0°.08**, h10km, n32, σ1s.67**/35**, mb4.3**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.85	284	eP	Pn	23 24 14.0	+1.5
HNR				eS	Sn	23 25 14.0	-5.7
HNR	Honiara	5.85	284	ePn	Pn	23 24 14.5	+2.0
HNR				Sn	Sn	23 25 19.8	+0.1
HNR	Honiara	5.85	284	Pn	Pn	23 24 14.1	+1.6
	37nm,0.3s,baz=60,slow=3.3,SNR=8.1						
HNR				Sn	Sn	23 25 19.8	+0.1
	baz=180,slow=19,SNR=1.8						
DZM	Mont Dzumac	11.12	176	Pn	Pn	23 25 27.0	+2.0
	6.7nm,0.3s,baz=305,slow=16,SNR=45						
DZM				Sn	Sn	23 27 25.1	-4.5
	0.5nm,0.3s,baz=297,slow=18,SNR=1.8						
CTA	Charters Tower	20.82	242	P	P	23 27 29.4	+1.8
	7.6nm,0.8s,baz=64,slow=9.7,SNR=8.4						
HAZ	Te Kaha	28.85	160	P	P	23 28 46.3	+1.9
PKGZ	Pakihiroa	29.07	160	P	P	23 28 46.6	+0.1
URZ	Urewera	29.09	161	P	P	23 28 46.4	-0.1
	4.8nm,0.6s,baz=274,slow=3.6,SNR=5.7						
MWZ	Matawai	29.29	161	P	P	23 28 48.4	0.0
RTZ	Ruatahuna	29.38	162	P	P	23 28 49.4	+0.2
NGZ	Ngauruhoe	29.50	164	P	P	23 28 52.7	+2.3
PKVZ	Pokaka	29.54	165	P	P	23 28 57.2	+6.5
MTHZ	Maungataniwha	29.55	162	P	P	23 28 52.0	+1.3
RAHZ	Arahi	29.68	162	P	P	23 28 52.8	+1.0
RIGZ	Rimuhau	29.71	161	P	P	23 28 52.3	+0.2
BKZ	Black Stump Fm	29.74	163	P	P	23 28 53.0	+0.7
NMHZ	Naumai	29.77	162	P	P	23 28 52.9	+0.2
WHHZ	Waihua	29.88	162	P	P	23 28 54.2	+0.7
BHHZ	Black Hill Sta	29.92	164	P	P	23 28 55.1	+1.1
KAHZ	Kahuranaki	30.43	163	P	P	23 28 58.6	+0.1
STKA	Stephens Creek	30.50	223	P	P	23 28 59.8	+0.6
	1.3nm,0.3s,baz=4.3,slow=9.7,SNR=3.7						
PXZ	Pawanui	30.65	163	P	P	23 29 00.3	-0.1
WRA	Warramunga Arr	31.48	250	P	P	23 29 07.3	-0.7
	3.8nm,0.7s,baz=82,slow=9.1,SNR=28						
ASAR	Alice Springs	32.81	243	P	P	23 29 19.6	0.0
	3.1nm,0.6s,baz=66,slow=10,SNR=33						
RPZ	Rata Peaks	33.01	173	P	P	23 29 22.1	+1.0
	15nm,0.6s,baz=301,slow=3.0,SNR=14						
CMAR	Chiang Mai Arr	72.01	294	P	P	23 34 10.2	-0.2
	0.3nm,0.4s,baz=120,slow=5.3,SNR=3.6						
ILAR	Eielson Array	83.40	19	P	P	23 35 13.1	+0.1
	0.9nm,0.6s,baz=240,slow=4.9,SNR=18						
NVAR	Mina Array Bea	85.97	50	P	P	23 35 27.3	+0.5
	0.2nm,0.3s,baz=234,slow=9.4,SNR=3.8						
WVOR	Wild Horse Val	86.93	46	eP	P	23 35 31.0	-0.3
	0.6nm,0.3s						
MKAR	Makanchi Array	93.39	317	P	P	23 36 01.2	-0.2
	0.2nm,0.7s,baz=105,slow=1.6,SNR=2.6						
YKA	Yellowknife Ar	94.88	27	P	P	23 36 06.2	-1.5
	0.2nm,0.6s,baz=253,slow=4.8,SNR=3.3						
ARCES	ARCESS Array B	116.19	345	PKP	PKiKP	23 41 27.4	-1.5
	2.8nm,0.9s,baz=46,slow=1.9,SNR=9.2						

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*ISCJB **09** 23:25:18.6±1.2, 10°.9S±0°.1×165°.8E±0°.1, h10km, mb3.7/4, Error ellipse: s-maj=21.9km s-min=12.6km az=28.9*

*IDC **09** 23:25:18.7±1.5, 10°.79S×165°.80E, h0km, mb3.8/4, mb1 4.1/6, mb1mx3.8/36, mbtmp4.0/6, ML4.6/2, Error ellipse: s-maj=36.1km s-min=28.5km az=142.0*

ISC 09 23:25:20.2±1.3**, 10°.8S**±0°.1×**165°.9E**±0°.1**, h10km, n6, σ1s.21**/7**, mb3.8**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.98	282	Pn	Pn	23 26 49.1	+0.2
	34nm,0.3s,baz=135,slow=4.3,SNR=4.0						
HNR				Sn	Sn	23 27 58.7	+1.1
	baz=255,slow=12,SNR=1.4						
DZM	Mont Dzumac	11.27	177	Pn	Pn	23 28 02.4	+0.8
	2.2nm,0.3s,baz=28,slow=12,SNR=6.6						
WRA	Warramunga Arr	31.71	249	P	P	23 31 43.0	-1.4
	0.5nm,0.5s,baz=82,slow=9.3,SNR=4.4						
ASAR	Alice Springs	33.04	243	P	P	23 31 55.0	-1.2
	1.1nm,0.6s,baz=68,slow=9.9,SNR=5.6						
ILAR	Eielson Array	83.19	18	P	P	23 37 46.8	+0.5
	0.6nm,0.8s,baz=232,slow=5.1,SNR=4.6						
MKAR	Makanchi Array	93.39	317	P	P	23 38 35.6	-0.2
	0.2nm,0.6s,baz=97,slow=6.2,SNR=4.1						

IDC 09 23:27:24.1±1.7**, 10°.70S**×**166°.12E, h0km, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/36**, mbtmp3.9**/4**, ML4.3**/1**, Error ellipse: s-maj=55.4km s-min=30.4km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.31	178	Pn	Pn	23 30 06.9	-0.3
	2.1nm,0.3s,baz=162,slow=20,SNR=6.9						
WRA	Warramunga Arr	31.95	249	P	P	23 33 52.1	0.0
	0.4nm,0.7s,baz=80,slow=9.1,SNR=4.0						
ASAR	Alice Springs	33.28	243	P	P	23 34 03.6	-0.1
	0.6nm,0.6s,baz=64,slow=10,SNR=6.5						
ILAR	Eielson Array	83.07	18	P	P	23 39 51.3	0.0
	0.7nm,0.9s,baz=224,slow=5.0,SNR=2.9						

DDA 09 23:27:25.4, 39°.15N×30°.13E, h7km±1km, ML2.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUKIR	Kırka- Seyitga	0.34	67	i P	Pg	23 27 32.8	+0.7
GDZ	Gediz	0.51	264	i P	Pg	23 27 35.8	+0.6
GDZ				i S	Sb	23 27 43.9	-0.5
GDZ				IAML_P			
	comp=Z,327nm,0.1s						
BORA	Eskisehir	0.78	19	i P	Pb	23 27 41.1	-0.2
BORA				i S	Sb	23 27 52.4	+0.3
BORA				IAML_P			
	comp=Z,736nm,0.1s						
DEMI	Demirci	1.10	265	i P	Pn	23 27 47.8	+0.4

IDC 09 23:35:17.9±16.0**, 6°.52N**×**124°.81E, h523km**±246km**, mb3.0**/5**, mb1 3.2**/5**, mb1mx2.7**/42**, mbtmp4.0**/5**, Error ellipse: s-maj=131.2km s-min=30.0km az=71.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.91	161	P	P	23 40 25.4	-0.5
	2.3nm,0.3s,baz=342,slow=9.1,SNR=67						
ASAR	Alice Springs	31.29	164	P	P	23 40 55.2	+0.1
	1.1nm,0.3s,baz=337,slow=7.7,SNR=47						
STKA	Stephens Creek	41.40	158	P	P	23 42 18.7	+0.2
	0.9nm,0.4s,baz=333,slow=9.5,SNR=3.0						
SONM	Songino Array	44.07	342	P	P	23 42 39.6	+0.3
	0.3nm,0.6s,baz=152,slow=6.1,SNR=3.3						
MKAR	Makanchi Array	54.19	325	P	P	23 43 53.8	-0.3
	0.7nm,0.4s,baz=119,slow=7.9,SNR=36						

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*IDC **09** 23:39:50.6±0.6, 11°.84S×165°.37E, h0km, mb4.4/18, mb1 4.5/20, mb1mx4.3/41, mbtmp4.4/20, ML4.4/2, Error ellipse: s-maj=18.2km s-min=15.1km az=112.0*

*NEIC **09** 23:39:52.1±0.3, 11°.86S×165°.36E, h10km, mb4.8/6, Error ellipse: s-maj=9.6km s-min=7.8km az=97.0*

*ISCJB **09** 23:39:53.9±0.5, 11°.92S±0°.07×165°.26E±0°.07, h33km, mb4.4/23, Error ellipse: s-maj=10.5km s-min=8.9km az=32.9*

ISC 09 23:39:55.9±0.6**, 11°.90S**±0°.09×**165°.33E**±0°.09**, h35km, n28, σ0s.88**/32**, mb4.3**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.83	294	Pn	Pn	23 41 18.3	-1.6
	15nm,0.3s,baz=272,slow=4.2,SNR=4.8						
HNR				Sn	Sn	23 42 25.4	-0.2
	14nm,0.3s,baz=204,slow=20,SNR=2.8						
DZM	Mont Dzumac	10.17	174	Pn	Pn	23 42 17.9	-1.7
	2.5nm,0.3s,baz=134,slow=24,SNR=15						
CTA	Charters Tower	20.05	244	P	P	23 44 26.6	+0.4
	7.6nm,0.7s,baz=81,slow=12,SNR=10.0						
URZ	Urewera	28.28	160	P	P	23 45 47.1	+1.1
	3.1nm,0.6s,baz=16,slow=3.4,SNR=5.5						
STKA	Stephens Creek	29.55	224	P	P	23 45 58.3	+1.0
	2.9nm,0.7s,baz=23,slow=6.7,SNR=6.3						
WRAB	Tennant Creek	30.80	251	eP	P	23 46 08.3	-0.3
	4.8nm,0.7s						
WRA	Warramunga Arr	30.82	251	P	P	23 46 08.7	0.0
	3.8nm,0.7s,baz=81,slow=9.3,SNR=45						
WRA				PcP	PcP	23 49 06.0	+0.5
	1.1nm,0.8s,baz=79,slow=3.1,SNR=7.2						
ASAR	Alice Springs	32.05	244	P	P	23 46 18.4	-1.2
	4.9nm,0.7s,baz=74,slow=9.5,SNR=48						
ASAR				PcP	PcP	23 49 09.2	+0.4
	0.9nm,0.8s,baz=78,slow=3.4,SNR=5.7						
RPZ	Rata Peaks	32.09	172	P	P	23 46 20.3	+0.7
	14nm,0.8s,baz=326,slow=1.6,SNR=7.8						
FITZ	Fitzroy Crossi	38.77	256	P	P	23 47 16.9	-0.4
	10nm,0.7s,baz=103,slow=6.0,SNR=19						
MJAR	Matsushiro Arr	54.54	333	P	P	23 49 19.8	-0.8
	2.0nm,0.8s,baz=167,slow=9.1,SNR=5.4						
PETK	Petropavlovsk-	65.07	355	P	P	23 50 32.9	+0.3
	4.6nm,0.8s,baz=174,slow=5.8,SNR=2.9						
KLR	Kul'dur	67.67	337	P	P	23 50 51.0	+1.6
	0.6nm,0.7s,baz=66,slow=2.7,SNR=3.6						
ENH	Enshi	68.12	310	eP	P	23 50 52.4	-0.2
	7.3nm,0.8s						
ENH				e		23 51 01.8	
XAN	Xi'an	70.39	313	eP	P	23 51 06.8	+0.2
	28nm,0.9s						
CMAR	Chiang Mai Arr	72.08	294	P	P	23 51 18.7	+1.6
	2.4nm,0.7s,baz=124,slow=4.5,SNR=15						
ULN	Ulaanbaatar	78.75	324	eP	P	23 51 55.9	+0.8
	2.0nm,0.8s						
ULN				e		23 52 04.9	
SONM	Songino Array	79.11	324	P	P	23 51 57.8	+0.8
	1.4nm,0.8s,baz=137,slow=6.7,SNR=7.7						
BILL	Bilibino	79.73	0	eP	P	23 51 60.0	+0.3
	6.7nm,0.9s						
COLA	College	84.22	18	eP	P	23 52 22.9	-0.4
	8.2nm,0.7s						
ILAR	Eielson Array	84.44	19	P	P	23 52 24.0	-0.5
	3.2nm,0.6s,baz=246,slow=5.2,SNR=55						
NVAR	Mina Array Bea	86.88	50	P	P	23 52 37.0	-0.5
	1.1nm,0.8s,baz=235,slow=8.4,SNR=6.9						
MKAR	Makanchi Array	93.86	317	P	P	23 53 09.4	-0.3
	2.3nm,0.8s,baz=102,slow=5.4,SNR=26						
ZALV	Zalesovo Beam	94.00	324	P	P	23 53 09.4	-0.8
	1.0nm,0.7s,baz=105,slow=4.8,SNR=6.5						
PDAR	Pinedale Array	94.42	47	P	P	23 53 12.3	-0.4
	0.5nm,0.7s,baz=224,slow=4.1,SNR=4.7						
YKA	Yellowknife Ar	95.91	27	P	P	23 53 17.2	-1.4
	0.6nm,0.6s,baz=259,slow=4.6,SNR=14						
ESDC	Sonseca Array	150.75	343	PKPbc	PKPbc	23 59 44.4	-0.5
	1.0nm,0.8s,baz=16,slow=2.5,SNR=6.3						
TORD	Torodi Ar. Bea	163.97	276	PKP	PKPdf	23 59 57.2	+0.7
	0.6nm,0.9s,baz=11,slow=2.9,SNR=3.5						
TORD				PKPab	PKPab	00 00 50.0	+0.5
	0.3nm,0.7s,baz=48,slow=6.0,SNR=3.5						

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*ISCJB **09** 23:44:13.5±0.4, 10°.97S±0°.05×165°.77E±0°.06, h10km, mb4.4/23, MS4.2/3, Error ellipse: s-maj=9.0km s-min=7.0km az=157.2*

*IDC **09** 23:44:13.4±0.5, 10°.87S×165°.82E, h0km, mb4.4/18, mb1 4.6/20, mb1mx4.4/45, mbtmp4.4/20, ML4.8/2, MS4.2/4, Ms1 4.2/4, ms1mx3.8/34, Error ellipse: s-maj=17.6km s-min=14.8km az=113.0*

*NEIC **09** 23:44:15.0±0.3, 10°.87S×165°.85E, h10km, mb4.9/5, Error ellipse: s-maj=9.0km s-min=7.4km az=113.0*

ISC 09 23:44:15.0±0.5**, 10°.89S**±0°.07×**165°.86E**±0°.08**, h10km, n39, σ0s.95**/42**, mb4.5**/23**, MS4.3**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.00	283	eP	Pn	23 45 44.0	+0.1
HNR				eS	Sn	23 46 52.0	-0.7
HNR	Honiara	6.00	283	Pn	Pn	23 45 45.1	+1.2
	54nm,0.3s,baz=154,slow=5.2,SNR=17						
HNR				Sn	Sn	23 46 52.4	-0.3
	baz=219,slow=6.5,SNR=1.5						
HNR				LR	LR	23 48 13.2	
	comp=Z,3μm,18.5s,baz=130,slow=40						
DZM	Mont Dzumac	11.14	177	Pn	Pn	23 46 56.0	+1.4
	2.9nm,0.3s,baz=359,slow=15,SNR=16						
DZM				Sn	Sn	23 48 58.6	-0.7
	0.8nm,0.3s,baz=162,slow=20,SNR=3.0						
CTA	Charters Tower	20.97	242	P	P	23 48 59.4	+0.9
	25nm,1.1s,baz=63,slow=14,SNR=7.3						
CTAO	Charters Tower	20.97	242	eP	P	23 48 59.7	+1.1
	372nm,1.3s						
URZ	Urewera	29.06	162	P	P	23 50 15.2	-0.4
	6.7nm,0.8s,baz=116,slow=3.3,SNR=5.6						
STKA	Stephens Creek	30.63	223	P	P	23 50 29.5	-0.1
	3.9nm,0.9s,baz=63,slow=8.5,SNR=5.2						
WRAB	Tennant Creek	31.63	250	eP	P	23 50 37.8	-0.8
	32nm,1.6s						
WRA	Warramunga Arr	31.64	250	P	P	23 50 38.0	-0.7
	3.7nm,0.6s,baz=82,slow=8.7,SNR=31						
WRA				PcP	PcP	23 53 31.1	+0.2
	0.3nm,0.9s,baz=75,slow=3.3,SNR=2.7						
ASAR	Alice Springs	32.96	243	P	P	23 50 49.4	-0.9
	5.3nm,0.8s,baz=64,slow=10,SNR=33						
ASAR				PcP	PcP	23 53 34.6	0.0
	0.6nm,0.6s,baz=76,slow=2.6,SNR=5.5						
RPZ	Rata Peaks	33.02	173	P	P	23 50 50.0	-0.5
	14nm,0.7s,baz=269,slow=1.3,SNR=9.5						
FITZ	Fitzroy Crossi	39.53	255	P	P	23 51 45.9	-0.6
	6.4nm,0.8s,baz=98,slow=6.2,SNR=10						
MJAR	Matsushiro Arr	53.88	332	P	P	23 53 38.5	-0.1
	5.2nm,1.0s,baz=160,slow=7.8,SNR=5.6						
USRK	Ussuriysk Ar.	62.85	333	P	P	23 54 40.5	-0.7
	2.1nm,0.7s,baz=116,slow=8.7,SNR=5.2						
KLR	Kul'dur	66.95	336	P	P	23 55 08.7	+0.9
	2.7nm,1.0s,baz=108,slow=5.4,SNR=4.3						
XAN	Xi'an	70.10	312	P	P	23 55 31.3	+3.5
XAN				pP	PcP	23 55 41.1	-8.8
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC	Hu-ho-hao-te	71.78	320	eP	P	23 55 37.9	-0.1
HHC	Hu-ho-hao-te	71.78	320	pP	pP	23 55 47.6	+6.6
CMAR	Chiang Mai Arr	72.15	293	P	P	23 55 40.1	-0.4
	comp=Z,0.4nm,0.3s,baz=187,slow=27,SNR=5.6						
CMAR				LR	LR	00 28 21.4	
	comp=Z,147nm,18.8s,baz=90,slow=37						
ULN	Ulaanbaatar	78.24	324	eP	P	23 56 15.2	0.0
	comp=Z,4.3nm,0.9s						
SONM	Songino Array	78.60	324	P	P	23 56 16.5	-0.7
	comp=Z,0.9nm,0.7s,baz=147,slow=5.9,SNR=6.0						
GTA	Gaotai	79.03	314	eP	P	23 56 20.5	+0.8
GTA				pP	sP	23 56 24.9	+1.1
GTA				sP	PcP	23 56 27.4	-0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
QSPA	South Pole Qui	79.12	180	eP	P	23 56 19.5	-0.2
	comp=Z,31nm,1.1s						
COLA	College	83.10	18	eP	P	23 56 41.0	+0.3
	comp=Z,2.1nm,0.7s						
ILAR	Eielson Array	83.33	18	P	P	23 56 42.1	+0.2
	comp=Z,4.0nm,0.9s,baz=236,slow=3.9,SNR=15						
NVAR	Mina Array Bea	85.84	50	P	P	23 56 56.8	+1.4
	comp=Z,4.4nm,0.9s,baz=231,slow=7.3,SNR=14						
BOZ	Bozeman (W)	92.51	44	eP	P	23 57 28.4	+1.6
PDAR	Pinedale Array	93.36	47	P	P	23 57 30.9	0.0
	comp=Z,1.2nm,0.9s,baz=255,slow=3.5,SNR=2.9						
MKAR	Makanchi Array	93.48	317	P	P	23 57 30.4	-0.7
	comp=Z,1.3nm,0.7s,baz=94,slow=6.1,SNR=9.4						
ZALV	Zalesovo Beam	93.49	324	P	P	23 57 30.8	-0.1
	comp=Z,0.7nm,0.7s,baz=132,slow=2.1,SNR=3.5						
YKA	Yellowknife Ar	94.78	27	P	P	23 57 35.6	-1.0
	comp=Z,0.6nm,0.8s,baz=254,slow=4.8,SNR=4.2						
YKA				LR	LR	00 38 09.8	
	comp=Z,38nm,18.0s,baz=228,slow=34						
NRIK	Noril'sk	96.01	340	LR	LR	00 39 10.0	
	comp=Z,172nm,20.4s,baz=70,slow=34						
ARCES	ARCESS Array B	116.21	346	PKP	PKiKP	00 02 57.0	-1.2
	comp=Z,1.4nm,0.7s,baz=47,slow=1.3,SNR=6.3						
CPUP	Villa Florida	124.05	132	PKP	PKiKP	00 03 15.4	+0.6
	comp=Z,0.8nm,0.4s,baz=250,slow=4.0,SNR=3.5						
BOSA	Boshof	125.31	223	PKP	PKiKP	00 03 17.4	0.0
	comp=Z,2.5nm,0.8s,baz=276,slow=17,SNR=1.9						
AKASG	Malin Array Be	126.79	327	PKP	PKPdf	00 03 18.1	-0.9
	comp=Z,0.3nm,0.4s,baz=61,slow=2.6,SNR=2.8						
GERES	GERESS Array B	135.61	334	PKP	PKPdf	00 03 34.9	-1.0
	comp=Z,0.1nm,0.3s,baz=350,slow=5.0,SNR=2.3						
ESDC	Sonseca Array	149.94	344	PKPbc	PKPbc	00 04 05.4	-0.8
	comp=Z,0.4nm,0.6s,baz=13,slow=6.1,SNR=4.5						
TORD	Torodi Ar. Bea	164.35	280	PKP	PKPdf	00 04 19.2	-0.8
	comp=Z,0.8nm,1.0s,baz=146,slow=0.5,SNR=3.3						

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*ISCJB **09** 23:47:30.6±0.7, 10°.92S±0°.06×165°.79E±0°.08, h10km, mb4.2/12, Error ellipse: s-maj=12.0km s-min=7.7km az=146.4*

*IDC **09** 23:47:30.6±0.7, 10°.81S×165°.82E, h0km, mb4.3/13, mb1 4.5/15, mb1mx4.2/45, mbtmp4.4/15, ML5.0/2, Error ellipse: s-maj=19.8km s-min=17.0km az=99.0*

*NEIC **09** 23:47:32.0±0.5, 10°.78S×165°.86E, h10km, mb4.8/1, Error ellipse: s-maj=11.1km s-min=9.4km az=88.0*

ISC 09 23:47:32.1±0.7**, 10°.82S**±0°.08×**165°.86E**±0°.10**, h10km, n26, σ0s.86**/24**, mb4.3**/13**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.98	283	Pn	Pn	23 49 01.3	+0.5
	52nm,0.3s,baz=168,slow=5.1,SNR=7.1						
HNR				Sn	Sn	23 50 09.4	0.0
	baz=210,slow=20,SNR=1.4						
DZM	Mont Dzumac	11.20	177	Pn	Pn	23 50 13.9	+1.5
	6.8nm,0.3s,baz=327,slow=7.8,SNR=30						
DZM				Sn	Sn	23 52 16.5	-1.3
	0.7nm,0.3s,baz=139,slow=20,SNR=3.0						
CTA	Charters Tower	21.01	242	P	P	23 52 17.1	+1.1
	13nm,0.8s,baz=72,slow=12,SNR=10						
CTAO	Charters Tower	21.01	242	eP	P	23 52 16.8	+0.9
	39nm,0.9s						
URZ	Urewera	29.12	162	P	P	23 53 33.4	+0.2
	2.2nm,0.4s,baz=113,slow=7.7,SNR=4.6						
H11S2	WAKE ISLAND Hy	29.14	2	T	T	00 23 57.6	
	baz=181,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.14	2	T	T	00 23 57.9	
	baz=181,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	29.15	2	T	T	00 23 58.8	
	baz=181,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	30.36	2	T	T	00 25 29.3	
	baz=182,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	30.36	2	T	T	00 25 25.3	
	baz=182,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	30.38	2	T	T	00 25 30.2	
	baz=182,slow=76,SNR=17						
STKA	Stephens Creek	30.68	223	P	P	23 53 46.5	-0.6
	1.1nm,0.4s,baz=53,slow=13,SNR=4.2						
WRA	Warramunga Arr	31.67	250	P	P	23 53 54.8	-1.2
	4.4nm,0.6s,baz=82,slow=9.1,SNR=28						
WRA				PcP	PcP	23 56 47.7	-0.3
	0.3nm,0.8s,baz=110,slow=4.2,SNR=3.1						
ASAR	Alice Springs	32.99	243	P	P	23 54 06.8	-0.8
	7.6nm,0.8s,baz=65,slow=10,SNR=42						
ASAR				PcP	PcP	23 56 51.3	-0.3
	0.4nm,0.7s,baz=94,slow=2.8,SNR=3.1						
RPZ	Rata Peaks	33.08	173	P	P	23 54 08.7	+0.6
	15nm,0.8s,baz=114,slow=7.8,SNR=7.7						
BATI	Baumata	41.47	267	P	P	23 55 19.9	+0.2
	6.3nm,0.4s,baz=94,slow=8.8						
MJAR	Matsushiro Arr	53.82	332	P	P	23 56 55.1	-0.1
	1.8nm,0.8s,baz=173,slow=8.8,SNR=4.8						
CMAR	Chiang Mai Arr	72.13	293	P	P	23 58 56.9	-0.5
	0.3nm,0.3s,baz=111,slow=4.9,SNR=3.7						
SONM	Songino Array	78.55	324	P	P	23 59 34.8	+0.8
	0.5nm,0.4s,baz=153,slow=4.5,SNR=3.3						
ILAR	Eielson Array	83.26	18	P	P	23 59 59.6	+1.1
	0.8nm,0.6s,baz=235,slow=5.2,SNR=11						

MKAR	Makanchi Array	93.44	317	P	P	00 00 48.0	+0.1
	0.9nm,0.7s,baz=98,slow=5.3,SNR=5.9						
YKA	Yellowknife Ar	94.72	27	P	P	00 00 53.0	-0.3
	0.1nm,0.6s,baz=255,slow=3.9,SNR=3.5						
ARCES	ARCESS Array B	116.14	346	PKP	PKiKP	00 06 13.8	-1.2
	3.7nm,1.0s,baz=72,slow=1.8,SNR=5.3						
FINES	FINESS Array B	121.60	339	PKP	PKPdf	00 06 24.2	-1.5
	0.7nm,0.8s,baz=24,slow=4.1,SNR=2.3						
ESDC	Sonseca Array	149.87	344	PKPbc	PKPbc	00 07 23.0	0.0
	0.2nm,0.7s,baz=8.0,slow=3.3,SNR=3.3						
TORD	Torodi Ar. Bea	164.34	280	PKP	PKPdf	00 07 37.0	0.0
	1.1nm,1.1s,baz=306,slow=3.5,SNR=3.7						

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*IDC **09** 23:53:13.3±0.6, 11°.01S×165°.61E, h0^{km}, mb4.3/13, mb1 4.5/15, mb1mx4.2/42, mbtmp4.3/15, ML4.6/2, MS4.8/1, Ms1 4.8/1, ms1mx3.7/31, Error ellipse: s-maj=22.7km s-min=16.9km az=129.0*

*NEIC **09** 23:53:15.3±0.2, 11°.00S×165°.58E, h10^{km}, mb4.8/18, Error ellipse: s-maj=7.2km s-min=5.9km az=100.0*

*ISCJB **09** 23:53:16.7±0.3, 11°.14S±0°.05×165°.52E±0°.05, h30^{km}, mb4.5/30, MS4.7/1, Error ellipse: s-maj=7.4km s-min=6.5km az=145.7*

ISC 09 23:53:18.4±0.5, **11°.06S**±0°.08×**165°.59E**±0°.08, **h30**^{km}, **n59**, σ**0^{s}.98**/62, **mb4.6**/30, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.78	286	eP	Pn	23 54 40.0	-2.2
HNR				eS	Sn	23 55 50.0	+2.5
HNR	Honiara	5.78	286	Pn	Pn	23 54 41.7	-0.4
	29nm,0.3s,baz=252,slow=9.3,SNR=11						
HNR				Sn	Sn	23 55 47.6	+0.1
	12nm,0.3s,baz=270,slow=20,SNR=1.7						
MARNC	Mare, Loyalty	10.62	168	ePn	Pn	23 55 51.0	+2.4
DZM	Mont Dzumac	10.98	176	ePn	Pn	23 55 53.2	-0.4
DZM	Mont Dzumac	10.98	176	Pn	Pn	23 55 53.3	-0.3
	2.4nm,0.3s,baz=327,slow=8.9,SNR=23						
ONTNC	Ouen Toro	11.22	176	ePn	Pn	23 55 55.5	-1.3
PINNC	Pines Island,	11.63	171	ePn	Pn	23 56 03.7	+1.4
MANU	Manus Island	20.18	295	eP	P	23 57 51.5	+0.8
	145nm,1.3s						
CTA	Charters Tower	20.66	242	P	P	23 57 56.9	+1.0
	14nm,1.0s,baz=65,slow=14,SNR=4.8						
CTAO	Charters Tower	20.66	242	eP	Pn	23 57 57.2	-1.1
	25nm,1.0s						
COEN	Coen	22.07	260	eP	P	23 58 11.1	+0.1
	29nm,1.1s						
URZ	Urewera	28.98	161	eP	P	23 59 15.3	-0.1
	16nm,1.1s						
URZ	Urewera	28.98	161	P	P	23 59 15.3	-0.1
	8.9nm,0.8s,baz=337,slow=4.1,SNR=6.0						
URZ				LR	LR	00 08 45.6	
	comp=Z,2µm,21.5s,baz=118,slow=32						
BKZ	Black Stump Fm	29.63	163	eP	P	23 59 21.6	+0.5
	18nm,0.5s						
STKA	Stephens Creek	30.33	223	P	P	23 59 27.5	+0.1
	3.7nm,0.9s,baz=9.3,slow=10,SNR=4.3						
BFZ	Birch Farm	30.97	164	eP	P	23 59 32.3	-0.7
	22nm,0.8s						
THZ	Tophouse	31.25	169	eP	P	23 59 35.8	+0.3
	16nm,1.0s						
WB2	Warramunga Arr	31.32	250	eP	P	23 59 36.0	-0.3
WRAB	Tennant Creek	31.32	250	eP	P	23 59 35.4	-0.9
	14nm,1.1s						
WRA	Warramunga Arr	31.33	250	P	P	23 59 35.5	-0.9
	9.9nm,1.1s,baz=80,slow=8.8,SNR=24						
AS01	Alice Springs	32.61	243	eP	P	23 59 44.5	-3.1
ASAR	Alice Springs	32.65	243	P	P	23 59 46.6	-1.4
	1.1nm,0.6s,baz=63,slow=9.9,SNR=21						
ASAR				PcP	PcP	00 02 34.0	+0.3
	1.0nm,0.8s,baz=97,slow=1.2,SNR=8.2						
KLR	Kul'dur	67.01	337	P	P	00 04 08.2	-0.1
	2.8nm,1.2s,baz=208,slow=3.1,SNR=5.0						
KMI	Kunming	71.00	301	P	P	00 04 34.3	+0.3
KMI				pP	pwP	00 04 49.6	+3.4
KMI				sP	PcP	00 04 53.4	-0.8
KMI				pmax	pmax		
	comp=Z,4.0nm,1.5s						
HHC	Hu-ho-hao-te	71.74	320	eP	P	00 04 39.7	+1.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,940nm,6.9s						
GAMB	Gambell	76.61	10	eP	P	00 05 06.5	+0.8
	comp=Z,7.7nm,1.0s						
SONM	Songino Array	78.58	324	P	P	00 05 17.6	+0.3
	comp=Z,0.8nm,0.9s,baz=131,slow=4.5,SNR=4.9						
QSPA	South Pole Qui	78.95	180	eP	P	00 05 19.8	+0.8
	comp=Z,13nm,1.3s						
GTA	Gaotai	78.96	314	eP	P	00 05 21.3	+1.8
GTA				pP	pwP	00 05 34.3	+3.6
GTA				sP	sP	00 05 39.7	+7.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
IM3	Indian Mountai	82.48	16	eP	P	00 05 38.1	+0.5
HDA	Harding Lake	83.31	19	eP	P	00 05 42.2	+0.3
	comp=Z,17nm,1.0s						
IL1	Eielson Array	83.57	19	eP	P	00 05 42.7	-0.6
ILAR	Eielson Array	83.57	19	P	P	00 05 43.4	+0.1
	comp=Z,2.7nm,0.8s,baz=236,slow=5.1,SNR=39						
ILB	Eielson Array	83.57	19	eP	P	00 05 43.0	-0.3
AFDM	Forest Hills D	84.33	49	eP	P	00 05 48.4	+0.6
	comp=Z,8.4nm,1.2s						
MDPB	Devils Postpil	85.33	50	eP	P	00 05 53.0	-0.2
	comp=Z,12nm,1.5s						
NV01	Mina Array Sit	86.15	50	eP	P	00 05 57.4	+0.2
NVAR	Mina Array Bea	86.15	50	P	P	00 05 56.8	-0.4
	comp=Z,2.9nm,1.0s,baz=234,slow=8.4,SNR=9.6						
NV11	Mina Array Sit	86.26	50	eP	P	00 05 57.9	+0.2
	comp=Z,0.4nm,1.1s						
KVN	Kaiserville	86.48	49	eP	P	00 05 59.4	+0.6
	comp=Z,3.5nm,1.1s						
G08A	Pilot Rock	87.76	43	eP	P	00 06 05.3	+0.6
	comp=Z,5.4nm,1.1s						
WMQ	Urumqi	89.00	315	eP	P	00 06 10.4	-0.1
LCMT	Little Creek M	89.63	52	eP	P	00 06 13.4	-0.4
	comp=Z,5.5nm,1.1s						
U15A	North Rim	90.24	53	eP	P	00 06 17.7	+0.9
	comp=Z,5.4nm,1.0s						
MK01	Makanchi Array	93.41	317	eP	P	00 06 30.4	-0.6
MK31	Makanchi Array	93.42	317	eP	P	00 06 30.6	-0.3
MKAR	Makanchi Array	93.42	317	eP	P	00 06 30.6	-0.3
	comp=Z,17nm,1.3s						
MKAR	Makanchi Array	93.42	317	P	P	00 06 30.3	-0.7
	comp=Z,2.0nm,1.1s,baz=104,slow=5.1,SNR=8.8						
ZALV	Zalesovo Beam	93.48	324	eP	P	00 06 30.0	-1.0
ZALV	Zalesovo Beam	93.48	324	P	P	00 06 29.8	-1.2
	comp=Z,0.3nm,0.3s,baz=119,slow=5.2,SNR=5.1						
PDAR	Pinedale Array	93.67	47	P	P	00 06 32.5	0.0
	comp=Z,0.7nm,0.9s,baz=232,slow=7.4,SNR=3.6						
YKA	Yellowknife Ar	95.06	27	P	P	00 06 36.2	-1.8
	comp=Z,0.9nm,0.7s,baz=256,slow=4.6,SNR=13						
ARCES	ARCESS Array B	116.31	345	PKP	PKPdf	00 11 57.6	-0.9
	comp=Z,4.7nm,1.0s,baz=350,slow=1.5,SNR=4.6						
LPAZ	La Paz	120.32	116	PKP	PKPdf	00 12 07.4	-1.0
	comp=Z,0.9nm,0.7s,baz=282,slow=3.3,SNR=3.8						
FINES	FINESS Array B	121.73	338	PKP	PKPdf	00 12 08.4	-0.6
	comp=Z,1.0nm,0.9s,baz=268,slow=15,SNR=3.3						
BOSA	Boshof	125.00	223	PKP	PKPdf	00 12 16.7	+0.1
	comp=Z,2.5nm,0.8s,baz=92,slow=3.0,SNR=4.0						
ESDC	Sonseca Array	150.03	344	PKPbc	PKPbc	00 13 05.8	-0.6
	comp=Z,1.5nm,1.1s,baz=331,slow=1.6,SNR=3.8						
TOA0	Torodi Ar. Sit	164.11	279	ePKPdf	PKPdf	00 13 20.2	+0.3
TORD	Torodi Ar. Bea	164.11	279	PKP	PKPdf	00 13 19.8	-0.1
	comp=Z,1.1nm,1.0s,baz=110,slow=1.7,SNR=4.4						
TORD				PKPab	PKPab	00 14 13.0	-0.4
	comp=Z,1.1nm,1.0s,baz=12,slow=4.2,SNR=4.5						

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*ISCJB **09** 23:54:44.6±0.3, 36°.94N±0°.03×71°.52E±0°.05, h106^{km}, mb3.5/12, Error ellipse: s-maj=6.3km s-min=3.8km az=156.0*

*IDC **09** 23:54:49.5±3.3, 37°.26N×71°.45E, h111^{km}±31^{km}, mb3.2/11, mb1 3.5/18, mb1mx3.3/48, mbtmp3.7/18, Error ellipse: s-maj=22.4km s-min=15.8km az=18.0*

*NNC **09** 23:54:49.7±3.1, 37°.45N×71°.01E, h24^{km}±32^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=29.2km s-min=11.8km az=164.0*

ISC 09 23:54:46.7±0.5, **37°.07N**±0°.05×**71°.56E**±0°.05, **h106**^{km}, **n59**, σ**2^{s}.80**/70, **mb3.4**/12, **8C-6D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.25	175	P	Pn	23 55 40.2	+4.2
CEP				S	Sn	23 56 19.0	+4.9
SFK	Sufi-Kurgan	3.31	27	⇓P	Pn	23 55 39.2	+2.3
	8.1nm,0.2s						
SFK				⇓S	Sn	23 56 17.9	+2.3
	54nm,0.3s						
CHCP	Chirah Chowk	3.67	157	P	Pn	23 55 46.2	+4.6
THW	Thamme Wali	4.26	178	P	Pn	23 55 53.1	+3.5
AML	Almayashu	5.32	17	P	Pn	23 56 05.2	+1.1
	SNR=109						
MNAS	Manas	5.46	7	⇑P	Pn	23 56 06.5	+0.8
	11nm,0.4s						
MNAS				⇑S	Sn	23 57 04.2	-3.2
	65nm,0.6s						
UCH	Uchtor	5.63	23	P	Pn	23 56 09.7	+1.3
	SNR=28						
KZA	Kyzart	5.76	28	P	Pn	23 56 10.9	+0.9
	SNR=5.9						
EKS2	Erkin-Say	5.84	16	P	Pn	23 56 12.2	+1.3
	SNR=41						
AAK	Ala-Archa	6.00	21	P	Pn	23 56 14.6	+1.5
	SNR=14						
AAK	Ala-Archa	6.00	21	⇑P	Pn	23 56 14.6	+1.5
	5.1nm,0.3s						
AAK				⇓S	Sn	23 57 20.4	-0.1
	28nm,0.6s						
AAK	Ala-Archa	6.00	21	P	Pn	23 56 14.6	+1.5
	4.7nm,0.3s,baz=178,slow=5.2,SNR=89						
AAK				S	Sn	23 57 18.7	-1.8
	3.5nm,0.3s,baz=274,slow=3.7,SNR=12						
KK31	Karatay Array	6.08	353	⇑P	Pn	23 56 14.6	+0.6
	22nm,0.3s,baz=178,slow=13,SNR=1240						
KK31				⇓S	Sn	23 57 18.4	-3.9
	14nm,0.3s,baz=173,slow=22,SNR=10						
DHRM	DHARAMSHALA	6.19	140	eP	Pn	23 56 17.3	+1.6
DHRM				eS	Sn	23 57 22.5	-2.8
DHRM				IAML		23 57 29.4	
	comp=E,565nm,0.7s						
DHRM				IAML		23 57 29.5	
	comp=N,472nm,0.9s						
ULHL	Ulahol	6.31	33	P	Pn	23 56 19.2	+1.9
	SNR=10						
CHMS	Chumysh	6.41	21	P	Pn	23 56 19.8	+1.3
	SNR=17						
USP	Ospenovka	6.59	19	P	Pn	23 56 21.5	+0.6
	SNR=21						
TKM2	Tokmak 2	6.62	27	⇑P	Pn	23 56 22.7	+1.2
	comp=N,4.7nm,0.5s						
SMLA	Simla	7.53	140	eP	Pn	23 56 35.1	+1.4
SMLA				eS	Sn	23 57 53.0	-4.4
SMLA				IAML		23 57 58.1	
	comp=N,151nm,0.0s						
SMLA				IAML		23 57 58.2	
	comp=E,179nm,0.2s						
KKR	Kurukshetra	8.33	147	eP	Pn	23 56 42.9	-1.8
DDI	Dehra Dun	8.63	139	eS	Sn	23 58 17.4	-7.0
JOSI	Joshimath	9.29	132	eP	Pn	23 56 59.1	+1.2
JOSI				eS	Sn	23 58 34.6	-6.1
JOSI				IAML		23 58 43.1	
	comp=E,96nm,0.6s						
JOSI				IAML		23 58 47.2	
	comp=N,89nm,0.1s						
KALG	Kalgarh	9.64	139	eP	Pn	23 57 02.4	-0.1
KALG				eS	Sn	23 58 41.6	-7.3
GEYT	Alibeck	10.72	279	P	Pn	23 57 14.9	-2.2
	comp=N,1.2nm,0.3s,baz=110,slow=13,SNR=12						
GEYT				S	Sn	23 59 08.4	-6.6
	comp=N,4.1nm,0.3s,baz=106,slow=19,SNR=13						
GYA0B	ALIBECK ARRAY	10.72	279	⇓P	Pn	23 57 15.0	-2.1
	comp=N,5.7nm,0.7s						
GYA0B				⇑S	Sn	23 59 10.0	-5.1
	comp=N,16nm,0.7s						
OTUK	Ortayu	11.19	3	⇓P	Pn	23 57 21.3	-2.0
	comp=N,1.9nm,0.5s						
MKAR	Makanchi Array	12.57	36	P	Pn	23 57 43.1	+1.5
	comp=N,0.1nm,0.3s,baz=231,slow=17,SNR=6.6						
PYUN	Piuthan	13.13	130	eP	Pn	23 57 46.8	-2.5
	comp=N,68nm,0.3s						
DANN	Dangsing	13.44	127	eP	Pn	23 57 51.3	-2.1
	comp=N,30nm,0.3s						
KOLN	Koldanda	13.75	129	eP	Pn	23 57 55.0	-2.3
	comp=N,33nm,0.3s						
BHJ	Bhuj	13.87	187	eP	Pn	23 57 48.5	-10
KURBB	Kurchatov Arra	14.44	18	P	Pn	23 58 07.7	+1.9
	comp=N,0.1nm,0.3s,baz=207,slow=10,SNR=6.2						
BHPL	Bhopal	14.68	158	eP	Pn	23 58 05.8	-3.3
BHPL				IAmb	IAmb	23 58 15.8	
DMN	Daman	14.82	126	eP	Pn	23 58 08.9	-2.1
	comp=N,11nm,0.3s						
AB31	Akbulak array	14.82	329	P	Pn	23 58 08.7	-2.0
	comp=N,1.5nm,0.3s,baz=135,slow=15,SNR=127						
PKIN	Phulchoki	15.03	125	eP	Pn	23 58 11.0	-2.7
	comp=N,23nm,0.4s						
GUN	Gumba	15.13	123	eP	Pn	23 58 12.5	-2.5
	comp=N,84nm,0.8s						
JIRN	Jiri	15.50	123	eP	Pn	23 58 17.5	-2.2
	comp=N,78nm,0.4s						
BVA0	Borovoye Array	15.98	357	⇑P	Pn	23 58 23.8	-1.3
	comp=N,0.8nm,0.5s,baz=167,slow=12,SNR=12						
BVAR	Borovoye Array	15.98	357	P	Pn	23 58 24.5	-0.7
	comp=N,0.3nm,0.3s,baz=162,slow=14,SNR=8.1						
RAMN	Ramite	16.24	124	eP	Pn	23 58 26.3	-2.5
	comp=N,26nm,0.4s						
AKTO	Aktyubinsk	16.53	328	⇑P	Pn	23 58 32.9	+1.0
	comp=N,4.6nm,0.7s						
AKTO	Aktyubinsk	16.53	328	P	Pn	23 58 33.4	+1.5
	comp=N,0.6nm,0.3s,baz=138,slow=15,SNR=14						
AKTO				S	Sn	00 01 25.4	-10
	comp=N,0.3nm,0.3s,baz=252,slow=20,SNR=4.1						
WSAR	Wadi Sarin	17.72	223	P	Pn	23 58 49.2	+2.5
	comp=N,0.4nm,0.3s,baz=42,slow=5.0,SNR=7.6						
BOK	Bokaro	18.07	133	ex	P	23 58 50.4	+0.5
ZALV	Zalesovo Beam	19.21	24	P	P	23 59 02.1	+0.1
	comp=N,0.5nm,0.3s,baz=215,slow=10,SNR=8.6						
GNI	Garni	21.16	287	P	P	23 59 26.7	+3.3
	comp=N,4.2nm,0.6s,baz=91,slow=0.3,SNR=10						
KVAR	Kislovodsk Arr	22.93	296	P	P	23 59 44.2	+2.5
	comp=N,1.1nm,0.9s,baz=88,slow=10,SNR=2.4						
BRTR	Keskin Array B	29.70	287	P	P	00 00 44.4	+1.7
	comp=N,0.5nm,0.7s,baz=94,slow=6.7,SNR=4.2						
AKASG	Malin Array Be	32.95	308	P	P	00 01 11.7	+0.8
	comp=N,0.1nm,0.2s,baz=101,slow=9.4,SNR=3.6						
FINES	FINESS Array B	37.27	326	P	P	00 01 48.9	+1.0
	comp=N,0.9nm,0.5s,baz=120,slow=8.6,SNR=9.2						
ARCES	ARCESS Array B	40.80	337	P	P	00 02 18.0	+0.9
	comp=N,1.4nm,0.6s,baz=115,slow=9.2,SNR=13						
GERES	GERESS Array B	42.97	305	P	P	00 02 36.6	+1.4
	comp=N,0.1nm,0.3s,baz=74,slow=7.2,SNR=3.2						
NB2	NORSAR Subarra	44.20	323	P	P	00 02 45.0	+0.2
	comp=Z,0.5nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.20	323	P	P	00 02 45.1	+0.2
	comp=Z,0.3nm,0.5s,baz=107,slow=7.2,SNR=7.9						
ESDC	Sonseca Array	57.59	298	P	P	00 04 25.4	-0.1
	comp=Z,0.9nm,0.5s,baz=54,slow=7.6,SNR=12						
TORD	Torodi Ar. Bea	66.18	269	P	P	00 05 23.0	-0.3
	comp=Z,0.5nm,0.5s,baz=48,slow=6.0,SNR=8.4						
WRA	Warramunga Arr	81.91	122	P	P	00 06 57.9	+3.3
	comp=Z,0.3nm,0.7s,baz=327,slow=5.0,SNR=3.5						
ASAR	Alice Springs	84.21	125	P	P	00 07 10.6	+4.2
	comp=Z,0.2nm,0.6s,baz=297,slow=4.1,SNR=2.6						

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*SAR **09** 23:56:55.9±1.0, 40°.94N×20°.18E, h4^{km}±4^{km}, ML2.6/5*

*SKO **09** 23:56:57.1, 41°.21N×20°.01E, h0^{km}*

*ATH **09** 23:56:57.7, 41°.12N×20°.14E, h17^{km}±2^{km}, ML2.2/4, Error ellipse: s-maj=2.7km s-min=1.1km az=294.0*

*BEO **09** 23:56:57.7±0.7, 40°.98N×19°.96E, h5^{km}, ML2.3/6*

*PDG **09** 23:56:58.6±0.1, 41°.20N×20°.16E, h6^{km}, ML2.6/8, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*

*TIR **09** 23:56:58.7, 41°.15N×20°.16E, h10^{km}, Md2.8/6*

ISC 09 23:56:57.8±1.2, **41°.10N**±0°.02×**20°.09E**±0°.02, **h0**^{km}±10^{km}, **n74**, σ**1^{s}.02**/109, **15C-5D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.30	326	ePg	Pg	23 57 03.7	0.0
TIR				eSg	Sb	23 57 09.9	-1.8
TIR	Tirane	0.30	326	P	Pg	23 57 03.7	0.0
TIR				S	Sg	23 57 09.7	+2.2
TIR	Tirane	0.30	326	⇑iP	Pg	23 57 03.6	0.0
TIR				S	Sg	23 57 09.3	+1.8
TIR	Tirane	0.30	326	i PG	Pg	23 57 03.7	0.0
TIR				i SG	Sb	23 57 10.4	-1.2
OHR	Ohrid	0.54	88	i Pg	Pg	23 57 07.6	-0.5
OHR				i Sg	Sg	23 57 16.2	+1.1
PHP	Peshkopia	0.64	24	i PG	Pg	23 57 09.5	-0.7
PHP				i SG	Sg	23 57 19.8	+1.3
TPE	Tepelena	0.80	184	i PG	Pn	23 57 15.5	-0.9
TPE				i SG	Sn	23 57 29.9	+0.8
KRUS	Krusevo	0.92	72	i Pg	Pg	23 57 13.9	-1.4
KRUS				i Sg	Sg	23 57 27.1	-0.1
BIA	Bitola	0.94	94	i Pg	Pg	23 57 15.3	-0.5
BIA				i Sg	Sb	23 57 29.4	-0.5
PUK	Puka	0.95	351	i PG	Pg	23 57 15.8	-0.3
PUK				i SG	Sb	23 57 31.7	+1.1
NEST	Nestorio	1.00	133	P	Pg	23 57 16.7	-0.3
NEST				AML	AML	23 57 38.9	
	comp=E,140µm,0.5s						
NEST				AML	AML	23 57 40.2	
	comp=N,132µm,0.7s						
ULC	Ulcinj	1.07	324	⇑iPg	Pg	23 57 17.4	-1.0
ULC				i Sg	Sb	23 57 33.8	-0.1
SRN	Sarande	1.22	183	i PN	Pn	23 57 23.4	+1.3
BCI	Bajram Curri	1.27	359	i PN	Pg	23 57 21.1	-1.0
BCI				i SN	Sn	23 57 41.0	+0.5
DRME	Dracevica, Mon	1.28	328	⇓iPg	Pg	23 57 21.1	-1.3
DRME				i Sg	Sb	23 57 40.2	+0.3
DRME	Dracevica, Mon	1.28	328	ePg	Pg	23 57 21.4	-1.0
DRME				eSg	Sn	23 57 42.4	+1.5
KEK	Kerkira	1.40	189	P	Pb	23 57 25.2	+0.4
KEK				S	Sn	23 57 43.9	+0.1
PDG	Podgorica	1.47	335	ePg	Pn	23 57 24.7	-0.8
PDG				eSg	Sn	23 57 47.1	+1.6
PDG	Podgorica	1.47	335	⇑iP	Pn	23 57 24.9	-0.7
PDG	Podgorica	1.47	335	S	Sn	23 57 47.1	+1.6
PDG	Podgorica	1.47	335	ePn	Pn	23 57 24.8	-0.8
PDG				eSg	Sn	23 57 47.6	+2.1
TTG	Podgorica	1.47	335	⇑iPg	Pn	23 57 24.4	-1.2
TTG				i Sg	Sn	23 57 46.0	+0.5
PVY	Plav	1.50	356	⇑iPg	Pn	23 57 24.8	-1.3
PVY				i Sg	Sg	23 57 46.4	+0.4
BUM	Brajici-Budva	1.50	324	⇓iPg	Pn	23 57 25.2	-0.8
BUM				i Sg	Sn	23 57 48.3	+2.0
KPRO	Kipourio	1.50	139	P	Pn	23 57 25.2	-0.9
KZN	Kozani	1.50	121	P	Pn	23 57 25.1	-1.0
KZN				AML	AML	23 57 52.8	
	comp=E,123µm,0.4s						
KZN				AML	AML	23 57 59.5	
	comp=N,102µm,0.5s						
JAN	Janina	1.55	158	P	Pb	23 57 27.1	-0.3
JAN				AML	AML	23 58 00.1	
	comp=N,197µm,0.5s						
JAN				AML	AML	23 58 01.9	
	comp=E,181µm,0.4s						
IGT	Igoumenitsa	1.57	173	P	Pg	23 57 28.0	0.0
IGT				S	Sg	23 57 48.6	+0.1
IGT				AML	AML	23 57 59.2	
	comp=N,258µm,0.7s						
IGT				AML	AML	23 58 00.7	
	comp=E,128µm,0.6s						
SCTE	Santa Cesarea	1.60	231	P	Pn	23 57 27.1	-0.3
STIP	Stip	1.69	69	ePn	Pg	23 57 30.9	+0.7
GRG	Griva	1.75	94	P	Pn	23 57 28.8	-0.8
IVA	Berane	1.78	355	⇓iPn	Pn	23 57 29.7	-0.2
IVA				i Sn	Sn	23 57 54.0	+0.7
HCY	Herceg Novi	1.80	319	⇑iPn	Pn	23 57 30.4	+0.3
HCY				i Sn	Sg	23 57 55.9	+0.2
HCY	Herceg Novi	1.80	319	ePn	Pn	23 57 29.6	-0.5
HCY				eSn	Sb	23 57 54.5	-0.3
KOME	Kolasin	1.80	346	⇑iPn	Pn	23 57 30.3	0.0
KOME				i Sn	Sb	23 57 54.9	-0.1
NKME	Niksic	1.87	333	⇑iPn	Pn	23 57 31.4	+0.3
NKME				i Sn	Sb	23 57 57.1	+0.2
TREB	Trebinje	2.07	322	ePn	Pn	23 57 33.6	-0.3
TREB	Trebinje	2.07	322	ePn	Pn	23 57 33.7	-0.2
TREB				eSn	Sn	23 58 01.3	+0.9
LIT	Litokhoron	2.08	118	P	Pn	23 57 33.7	-0.3
KNT	Kendrikon	2.12	87	P	Pn	23 57 33.5	-1.1
THL	Klokotos Trika	2.12	136	P	Pn	23 57 35.3	+0.8
BRY	Bratogost	2.14	328	⇓iPn	Pn	23 57 35.3	+0.3
BRY				i Sn	Sb	23 58 04.3	-0.4
BRY	Bratogost	2.14	328	ePn	Pn	23 57 35.2	+0.3
BRY				eSn	Sn	23 58 03.5	+1.2
BARS	Barje	2.15	36	ePn	Pb	23 57 36.5	-1.1
SJES	Sjenica	2.16	358	ePn	Pn	23 57 36.3	+1.1
SJES				eSg	Sg	23 58 10.1	+2.8
SELS	Selova	2.25	20	ePn	Pb	23 57 38.1	-1.3
PLE	Pljevlja	2.29	347	⇑iPn	Pn	23 57 37.2	+0.2
PLE				i Sn	Sn	23 58 06.7	+0.8
LKD2	Lefkada island	2.35	169	P	Pn	23 57 37.4	-0.2
IVAS	Ivanjica	2.48	1	ePn	Pn	23 57 40.3	+0.8
STON	Ston	2.51	316	ePn	Pn	23 57 39.4	-0.5
STON				Sn	Sn	23 58 09.2	-2.0
MATE	Matera	2.61	261	⇑iP	Pn	23 57 39.3	-1.9
MATE	Matera	2.61	261	S	Sn	23 58 13.0	-0.5
VTS	Vitosha	2.77	56	ePn	Pn	23 57 43.9	+0.3
VTS	Vitosha	2.77	56	⇑iP	Pn	23 57 41.8	-1.8
VTS	Vitosha	2.77	56	S	Sn	23 58 17.9	+0.2
BBLS	Lazići	2.81	350	ePn	Pn	23 57 45.3	+1.2
BBLS	Lazići	2.81	350	ePn	Pn	23 57 44.1	0.0
BBLS				eSn	Sn	23 58 19.5	+0.8
GRUS	Gruza	2.83	9	ePn	Pn	23 57 45.7	+1.5
NVR	Nevrokopi	2.86	84	P	Pn	23 57 45.2	+0.5
ANX	Ano Chora	2.87	150	P	Pn	23 57 46.1	+1.2
ZAPS	Zavoj	2.88	40	ePn	Pn	23 57 46.1	+1.1
DIVS	Divibare	3.00	359	ePn	Pn	23 57 48.0	+1.3
DIVS	Divibare	3.00	359	ePn	Pn	23 57 46.5	-0.2
DIVS				eSn	Sn	23 58 24.1	+0.7
HAPS	Han Pijesak,Bl	3.10	345	ePn	Pn	23 57 48.1	0.0
HAPS	Han Pijesak,Bl	3.10	345	ePn	Pn	23 57 47.8	-0.3
TRUS	Trudelj	3.13	4	ePn	Pn	23 57 50.0	+1.6
LAKA	Lakka	3.21	152	P	Pn	23 57 50.8	+1.3
MDVR	Moldovita	3.87	17	⇑iP	Pn	23 57 58.5	-0.1
HERR	Herculane	4.15	24	⇑iP	Pn	23 58 01.5	-0.9
BLY	Banja Luka	4.23	331	⇑iP	Pn	23 58 03.4	-0.1
BLY	Banja Luka	4.23	331	S	Sn	23 58 55.7	+2.2
BZS	Buzias	4.65	13	⇓iP	Pn	23 58 08.1	-1.2
GZR	Gura Zlata	4.72	24	⇑iP	Pn	23 58 08.8	-1.5
NVLJ	Novalja	5.17	314	i Pn	Pn	23 58 15.8	-0.5
NVLJ				Sn	Sn	23 59 14.8	-1.9

IDC 10 00:03:58.1±3.3, **10°.53S**×**165°.01E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.5**/25, **mbtmp3.6**/4, **MS4.3**/2, **Ms1 4.3**/2, **ms1mx3.7**/29, **Error ellipse: s-maj=140.9km s-min=30.4km az=136.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	30.99	249	P	P	00 10 18.8	+1.2
	1.5nm,0.9s,baz=81,slow=9.0,SNR=8.2						
ASAR	Alice Springs	32.39	242	P	P	00 10 29.0	-0.9
	0.2nm,0.5s,baz=66,slow=10.0,SNR=3.5						
DAV	Davao City (W)	42.98	292	LR	LR	00 27 35.9	
	comp=Z,483nm,21.8s,baz=136,slow=33						
ASAJ	Asahikawa	58.07	341	LR	LR	00 35 19.6	
	comp=Z,195nm,20.8s,baz=202,slow=32						
ILAR	Eielson Array	83.26	19	P	P	00 16 26.7	+0.4
	0.2nm,0.7s,baz=227,slow=4.8,SNR=3.5						
MKAR	Makanchi Array	92.66	317	P	P	00 17 11.0	-1.0
	0.2nm,0.7s,baz=114,slow=6.0,SNR=2.2						

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*ISCJB **10** 00:18:45.3±0.8, 10°.91S±0°.08×166°.07E±0°.09, h35^{km}, mb3.7/8, Error ellipse: s-maj=13.2km s-min=9.6km az=146.1*

*IDC **10** 00:18:51.9±3.3, 10°.90S×165°.92E, h77^{km}±28^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.6/36, mbtmp4.0/10, Error ellipse: s-maj=24.9km s-min=20.1km az=47.0*

ISC 10 00:18:47.5±1.1, **10°.7S**±0°.1×**166°.1E**±0°.1, **h35**^{km}, **n14**, σ**1^{s}.98**/11, **mb3.8**/8, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.20	282	P	Pn	00 20 18.3	+1.7
	27nm,0.3s,baz=134,slow=3.0,SNR=12						
HNR				S	Sn	00 21 27.5	+1.3
	8.5nm,0.3s,baz=253,slow=14,SNR=2.0						
DZM	Mont Dzumac	11.27	178	P	Pn	00 21 29.6	+3.4
	1.8nm,0.3s,baz=316,slow=8.9,SNR=16						
DZM				S	Sn	00 23 29.2	-1.9
	0.3nm,0.3s,baz=274,slow=19,SNR=3.2						
H11S2	WAKE ISLAND Hy	29.05	1	T	T	00 55 17.3	
	baz=181,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	29.06	1	T	T	00 55 12.0	
	baz=181,slow=76,SNR=23						

H11S1	WAKE ISLAND Hy	29.07	1	T	T	00 55 13.0	
	baz=181,slow=76,SNR=22						
WRA	Warramunga Arr	31.91	250	P	P	00 25 08.8	-1.2
	1.4nm,0.8s,baz=82,slow=8.7,SNR=12						
ASAR	Alice Springs	33.24	243	P	P	00 25 19.6	-2.1
	0.9nm,1.0s,baz=71,slow=7.8,SNR=4.4						
FITZ	Fitzroy Crossi	39.79	255	P	P	00 26 16.2	-1.3
	2.8nm,0.7s,baz=81,slow=9.7,SNR=6.6						
CMAR	Chiang Mai Arr	72.31	293	P	P	00 30 09.3	-0.9
	0.2nm,0.3s,baz=125,slow=4.6,SNR=4.3						
SONM	Songino Array	78.63	324	P	P	00 30 45.6	-0.4
	0.2nm,0.5s,baz=134,slow=6.2,SNR=3.0						
ILAR	Eielson Array	83.12	18	P	P	00 31 10.6	+1.1
	0.6nm,0.6s,baz=237,slow=5.1,SNR=16						
MKAR	Makanchi Array	93.54	317	P	P	00 31 59.6	-0.3
	0.6nm,0.7s,baz=93,slow=6.4,SNR=7.3						
YKA	Yellowknife Ar	94.55	27	P	P	00 32 03.6	-0.6
	0.1nm,0.6s,baz=252,slow=3.9,SNR=2.9						
ARCES	ARCESS Array B	116.13	346	PKP	PKiKP	00 37 25.2	-1.3
	2.1nm,0.8s,baz=70,slow=1.4,SNR=6.4						

MEX 10 00:31:56.1±0.7, 16°.88N×95°.27W, h107^{km}±13^{km}, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.42	61	*e*P	Pn	00 32 10.6	-1.5
CMIG				*i* S	Sn	00 32 22.4	-1.8
HUIG	Huatulco	1.37	216	*e*P	Pn	00 32 19.3	-1.9
HUIG				*i* S	Sn	00 32 38.9	-1.4
VHO	Vista Hermosa	1.41	278	*i* P	Pn	00 32 21.3	-0.6
VHO				*e*S	Sn	00 32 39.6	-1.8

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*ISCJB **10** 00:38:40.1±0.2, 4°.41S±0°.02×131°.20E±0°.03, h33^{km}, mb4.6/38, MS4.4/3, Error ellipse: s-maj=4.3km s-min=3.3km az=149.7*

*IDC **10** 00:38:42.9±3.3, 4°.32S×131°.26E, h44^{km}±32^{km}, mb4.1/16, mb1 4.2/16, mb1mx4.1/32, mbtmp4.3/16, ML5.5/2, MS3.5/1, Ms1 3.5/1, ms1mx3.1/29, Error ellipse: s-maj=23.7km s-min=12.3km az=72.0*

*NEIC **10** 00:38:42.1±1.1, 4°.41S×131°.11E, h38^{km}±10^{km}, mb4.9/14, Error ellipse: s-maj=11.0km s-min=6.0km az=67.0*

*DJA **10** 00:38:44.8±0.2, 4°S±2°×13°1E±°, h57^{km}±4^{km}, M5.0/36, mB5.4/18, mb5.1/36, MLv5.6/12, Mw(mB)4.8/18*

ISC 10 00:38:42.3±0.4, 4°.41S±0°.04×131°.25E±0°.06, h35^{km}, n149, σ2^{s}.07/149, mb4.8/45, MS4.3/4, 2C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.34	265	P	Pn	00 39 05.4	+0.9
FAKI	Fak Fak	1.79	34	P	Pn	00 39 11.9	+1.2
SWI	Sorong	3.53	0	P	Pn	00 39 34.9	+0.3
SAUI	Saumlaki	3.54	179	*e*Pn	Pn	00 39 37.6	+2.8
SAUI				*e*Sn	Sn	00 40 16.6	+1.0
SAUI	Saumlaki	3.54	179	P	Pn	00 39 38.1	+3.2
RKPI	Ransiki, Papua	4.11	45	P	Pn	00 39 44.0	+1.4
NLAI	Namlea	4.30	286	P	Pn	00 39 46.6	+1.4
SRPI	Serui, Papua	5.59	63	P	Pn	00 40 05.1	+2.1
SANI	Sanana	5.75	294	P	Pn	00 40 03.1	-2.1
	156nm,1.1s,2μm1.3nm						
TNTI	Ternate	6.45	323	*e*Pn	Pn	00 40 14.4	-0.4
TNTI	Ternate	6.45	323	P	Pn	00 40 15.2	+0.4
KDU	Kakadu	8.31	172	P	Pn	00 40 40.8	+0.5
	baz=8.3,SNR=971						
KDI	Kendari	8.62	273	P	Pn	00 40 46.4	+1.8
BBSI	Bau Bau	8.71	263	P	Pn	00 40 49.2	+3.3
SOEI	Soe	8.72	232	*e*Pn	Pn	00 40 49.5	+3.4
SOEI	Soe	8.72	232	P	Pn	00 40 49.5	+3.4
KMSI	Cibinong	8.79	304	P	Pn	00 40 46.2	-0.7
	342nm,0.7s,4μm3.6nm						
GENI	Genyem	9.09	79	P	Pn	00 40 53.7	+2.7
LUWI	Luwuk	9.10	291	*e*Pn	Pn	00 40 50.9	-0.4
LUWI	Luwuk	9.10	291	P	Pn	00 40 52.4	+1.2
BATI	Baumata	9.47	232	P	Pn	00 40 59.4	+3.1
	134nm,0.8s,1μm						
BATI	Baumata	9.47	232	P	Pn	00 40 58.7	+2.4
	39nm,0.3s,baz=119,slow=1.8,SNR=66						
BATI				S	Sn	00 42 23.6	-18
	69nm,0.3s,baz=28,slow=1.3,SNR=26						
JAY	Jayapura	9.63	79	P	Pn	00 40 58.8	+0.4
MMRI	Maumere	9.88	244	*e*Pn	Pn	00 41 06.5	+4.5
MMRI	Maumere	9.88	244	P	Pn	00 41 04.9	+2.9
MMPI	Merauke	9.93	114	P	Pn	00 41 07.3	+4.8
APSI	Ampana	10.20	290	P	Pn	00 41 07.5	+1.2
MRSI	Marisa	10.49	297	P	Pn	00 41 10.0	-0.3
	50nm,1.0s						
BNSI	Bone	11.11	270	P	Pn	00 41 20.8	+2.1
BKSI	Bulukumba	11.12	265	P	Pn	00 41 21.1	+2.2
KNRA	Kununurra	11.46	192	P	Pn	00 41 21.8	-1.6
	baz=12,SNR=82						
SPSI	Sidrap Palu	11.46	272	P	Pn	00 41 25.4	+1.9
PCI	Palu	11.92	287	P	Pn	00 41 35.0	+5.2
BASI	Baing, Sumba	12.05	241	P	Pn	00 41 34.7	+3.1
PALU	Palau	12.12	15	P	Pn	00 41 33.9	+1.4
	baz=12						
MPSI	Mapaga	12.28	292	P	Pn	00 41 36.0	+1.2
DAV	Davao City (W)	12.73	334	LR	LR	00 47 12.5	
	comp=Z,216nm,21.9s,baz=152,slow=40						
KCP	Kidapawan	12.90	332	⇓*e*P	Pn	00 41 44.7	+1.4
PLAI	Plampang	14.08	251	P	Pn	00 41 59.7	+0.3
	128nm,1.1s,1μm						
FITZ	Fitzroy Crossi	14.66	202	P	Pn	00 42 02.7	-4.6
	baz=15,SNR=34						
FITZ	Fitzroy Crossi	14.66	202	*e*Pn	Pn	00 42 03.1	-4.2
FITZ				S	Sn	00 44 37.2	-11
FITZ	Fitzroy Crossi	14.66	202	P	Pn	00 42 02.6	-4.6
	6.8nm,0.3s,baz=11,slow=8.1,SNR=74						
FITZ				S	Sn	00 44 37.2	-11
	4.6nm,0.3s,baz=84,slow=17,SNR=6.4						
COEN	Coen	15.11	130	P	Pn	00 42 12.1	-1.1
	baz=15,SNR=84						
COEN	Coen	15.11	130	*e*Pn	Pn	00 42 12.1	-1.1
	144nm,1.0s						
WRAB	Tennant Creek	15.72	169	*e*Pn	Pn	00 42 16.7	-4.5
	79nm,0.6s						
WRA	Warramunga Arr	15.73	169	P	Pn	00 42 16.3	-5.0
	5.4nm,0.3s,baz=96,slow=8.6,SNR=96						
WRA				S	Sn	00 45 01.8	-13
	12nm,0.3s,baz=350,slow=22,SNR=9.6						
WB2	Warramunga Arr	15.73	169	*e*Pn	Pn	00 42 16.9	-4.4
TSM	Tawau	15.92	303	P	Pn	00 42 23.5	-0.2
SRBI	Singaraja	16.35	256	P	P	00 42 37.9	+6.1
SDKM	Sandakan	17.23	305	P	Pn	00 42 40.9	+0.6
KMMI	Kalianget	17.39	261	P	Pn	00 42 42.7	+0.3
JAGI	Jajag, Banyuwa	17.46	256	*e*Pn	Pn	00 42 39.8	-3.4
	25nm,0.7s						
QIS	Mount Isa	17.99	154	P	Pn	00 42 49.3	-0.4
	baz=18,SNR=98						
KKM	Kota Kinabalu	18.26	305	P	Pn	00 42 54.5	+1.4
MTSU	Mount Surprise	18.69	138	P	Pn	00 43 00.3	+2.0
	baz=19,SNR=92						
AS06	Alice Springs	19.30	172	P	Pn	00 43 05.0	-0.7
	baz=19						
AS31	Alice Springs	19.31	173	*e*P	P	00 43 04.2	-0.3
	37nm,0.6s						
ASAR	Alice Springs	19.31	173	P	P	00 43 04.2	-0.2
	18nm,0.3s,baz=350,slow=9.3,SNR=444						
ASAR				S	S	00 46 29.4	-12
	3.6nm,0.3s,baz=358,slow=27,SNR=12						
AS01	Alice Springs	19.32	172	*e*P	P	00 43 04.3	-0.2
PWJI	Pagerwojo	19.66	259	P	P	00 43 08.0	-0.3
MBWA	Marble Bar	20.06	213	*e*P	P	00 43 10.4	-2.2
	29nm,0.8s						
SBUM	Sibu	20.20	289	P	P	00 43 14.8	+0.5
WRKA	Warakurna	20.70	188	P	P	00 43 20.1	+0.5
	baz=21,SNR=168						
RABL	Rabaul	20.86	90	*e*P	Pn	00 43 25.0	+1.0
	41nm,0.6s						
CTA	Charters Tower	21.36	138	P	P	00 43 28.4	+1.6
	11nm,0.5s,baz=323,slow=12,SNR=15						
CTAO	Charters Tower	21.36	138	*e*P	P	00 43 29.2	+2.5
KSM	Kuching	21.73	285	P	P	00 43 29.8	-0.9
KPJI	Karang Pucung	22.39	262	P	P	00 43 35.3	-2.5
	34nm,0.6s						
CISI	Cisompet, Garu	23.51	261	*e*P	P	00 43 44.4	-5.0
	49nm,0.8s						
GIRL	Giralia	24.48	221	P	P	00 43 57.5	-0.7
	baz=24,SNR=11						
GIRL	Giralia	24.48	221	*e*P	P	00 43 57.6	-0.7
	173nm,0.8s						
ANA2	Anatahan	25.10	34	*e*P	P	00 44 04.2	+0.3
	60nm,0.7s						
MEEK	Meekatharra	25.19	207	P	P	00 44 03.0	-1.7
	baz=25,SNR=14						
FORT	Forrest	26.40	186	P	P	00 44 17.2	+1.7
	baz=26,SNR=15						
FORT	Forrest	26.40	186	*e*P	P	00 44 14.7	-0.9
	41nm,0.7s						
MYKOM	Kota Tinggi	28.06	282	P	P	00 44 30.0	-0.7
EIDS	Eidsvold	28.23	140	*e*P	P	00 44 33.2	+1.2
	27nm,1.4s						
MORW	Morawa	28.45	209	P	P	00 44 32.5	-1.4
	baz=28,SNR=8.4						
MORW	Morawa	28.45	209	*e*P	P	00 44 32.6	-1.4
	33nm,1.4s						
BBOO	Buckleboo	28.61	172	P	P	00 44 35.4	0.0
	baz=29,SNR=7.6						
BBOO	Buckleboo	28.61	172	*e*P	P	00 44 35.3	0.0
	37nm,1.5s						
STKA	Stephens Creek	29.00	162	P	P	00 44 39.6	+0.7
	baz=29,SNR=8.1						
STKA	Stephens Creek	29.00	162	*e*P	P	00 44 38.9	+0.1
STKA				*e*pP	P	00 44 39.7	+0.9
STKA	Stephens Creek	29.00	162	P	P	00 44 38.9	+0.1
	3.6nm,0.4s,baz=346,slow=6.8,SNR=13						
BLDU	Ballidu	29.45	206	P	P	00 44 41.8	-1.0
	baz=30,SNR=13						
KLBR	Kellerberrin	29.86	204	P	P	00 44 45.9	-0.6
	baz=30,SNR=18						
CMSA	Cobar Meteorol	30.20	155	P	P	00 44 50.7	+1.2
	baz=30,SNR=18						
MUN	Mundaring	30.84	205	P	P	00 44 54.1	-1.0
	baz=31,SNR=3.9						
NWAO	Narrogin (SRO)	31.24	203	P	P	00 44 58.4	-0.3
	baz=31,SNR=4.6						
NWAO	Narrogin (SRO)	31.24	203	*e*P	P	00 44 57.2	-1.5
	39nm,1.2s						
NWAO	Narrogin (SRO)	31.24	203	P	P	00 44 58.2	-0.5
	14nm,0.8s,baz=277,slow=6.7,SNR=6.3						
ARMA	Armidale	32.23	146	P	P	00 45 08.2	+0.7
	baz=32,SNR=6.7						
ARMA	Armidale	32.23	146	*e*P	P	00 45 08.8	+1.3
ARMA				*e*pP	P	00 45 10.0	+2.5
ARPS	Mount Arapiles	33.64	165	P	P	00 45 21.1	+1.5
	baz=34,SNR=14						
YNG	Young	33.73	154	P	P	00 45 22.2	+1.7
	baz=34,SNR=6.2						
CAN	Canberra	34.86	154	*e*P	P	00 45 32.1	+1.8
	33nm,1.4s						
CNB	Canberra Magne	35.02	154	P	P	00 45 33.8	+2.1
	baz=35,SNR=5.1						
TOO	Toolangi	35.48	160	P	P	00 45 37.5	+1.9
	baz=36,SNR=9.6						
TOO	Toolangi	35.48	160	*e*P	P	00 45 37.1	+1.5
	31nm,1.4s						
UTHA	Uthaitani	37.22	303	P	P	00 45 55.4	+4.8
	3.6nm,0.7s,86nm						
UTTA	Uttaradit	37.44	307	P	P	00 46 00.7	+8.2
NJ2	Nanjing	38.13	343	*e*P	P	00 45 58.4	+0.3
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WHN	Wuhan	38.34	336	P	P	00 46 03.1	+3.2
CM01	Chiang Mai Arr	39.08	306	*e*P	P	00 46 05.6	-0.7
CMAR	Chiang Mai Arr	39.12	306	P	P	00 46 05.7	-1.0
	comp=Z,1.5nm,0.6s,baz=138,slow=7.6,SNR=12						
CMMT	Chiang Mai	39.30	307	P	P	00 46 10.8	+2.6
	comp=Z,10.0nm,0.9s						
CHTO	Chiang Mai	39.31	307	*e*P	P	00 46 11.0	+2.7
	comp=Z,19nm,1.4s						
CHTO	Chiang Mai	39.31	307	P	P	00 46 10.9	+2.7
	comp=Z,45nm,0.9s						
KMI	Kunming	40.36	318	P	P	00 46 17.3	+0.1
KMI				pP	pwP	00 46 29.1	-1.8
KMI				sP	sP	00 46 34.7	+4.5
KMI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,83nm,4.4s						
MJAR	Matsushiro Arr	41.26	9	P	P	00 46 21.5	-2.7
	comp=Z,1.1nm,0.7s,baz=205,slow=9.5,SNR=3.5						
KSAR	Wonju Array Be	41.76	356	P	P	00 46 27.2	-0.9
KSRS	Korea Array	41.77	356	P	P	00 46 27.2	-1.0
	comp=Z,1.9nm,0.7s,baz=174,slow=9.2,SNR=12						
XAN	Xi'an	43.67	333	P	P	00 46 41.7	-2.2
XAN				pP	pP	00 46 52.4	-0.9
XAN				sP	pwP	00 46 57.4	+0.3
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				LR	LR		
	comp=N,160nm,13.0s						
XAN				LR	LR		
	comp=Z,260nm,23.9s						
LZH	Lanzhou	47.77	330	*e*P	P	00 47 19.9	+3.6
LZH				pP	pwP	00 47 31.2	+1.7
LZH				sP	sP	00 47 35.8	+6.1
LZH				S	S	00 54 16.1	+5.4
LZH				sS	sS	00 54 42.8	+17
LZH	Lanzhou	47.77	330	SS	SS	00 57 36.4	-3.2
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,5.0s						
LZH				LR	LR		
	comp=N,330nm,11.9s						
LZH				LR	LR		
	comp=E,360nm,14.1s						
LZH				LR	LR		
	comp=Z,540nm,15.9s						
USRK	Ussuriysk Ar.	48.40	1	P	P	00 47 20.3	-0.5
	comp=Z,4.3nm,0.5s,baz=181,slow=7.7,SNR=18						
HHC	Hu-ho-hao-te	48.52	340	*e*P	P	00 47 24.7	+2.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
GTA	Gaotai	52.36	329	⇑P	P	00 47 50.8	-0.3
GTA				pP	pP	00 48 01.0	+0.3
GTA				sP	pwP	00 48 05.4	+1.1
GTA				S	S	00 55 16.0	+1.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,93nm,7.5s						
GTA				LR	LR		
	comp=N,150nm,17.5s						
GTA				LR	LR		
	comp=E,230nm,17.5s						
GTA				LR	LR		
	comp=Z,170nm,19.7s						
RAMN	Ramite	53.22	308	*e*P	P	00 47 56.9	-0.9
	comp=Z,14nm,0.5s						
URZ	Urewera	53.58	135	P	P	00 47 59.5	-0.5
	comp=Z,3.2nm,0.6s,baz=183,slow=10.0,SNR=3.3						
JIRN	Jiri	53.88	309	*e*P	P	00 48 00.7	-2.1
	comp=Z,6.7nm,0.4s						
GUN	Gumba	54.25	309	*e*P	P	00 48 03.2	-2.2
	comp=Z,11nm,0.4s						
PKI	Pulchoki	54.45	308	*e*P	P	00 48 05.7	-1.2
	comp=Z,6.3nm,0.5s						
DMN	Daman	54.70	308	*e*P	P	00 48 07.4	-1.3
	comp=Z,16nm,0.9s						
KOLN	Koldanda	55.96	308	*e*P	P	00 48 16.5	-1.2
	comp=Z,17nm,0.7s						
DANN	Dangsing	56.10	308	*e*P	P	00 48 17.4	-1.4
	comp=Z,13nm,0.6s						
HYB	Hyderabad	56.35	294	*i* P	P	00 48 19.0	-1.4
SONM	Songino Array	56.42	340	P	P	00 48 19.7	-0.8
	comp=Z,0.8nm,0.6s,baz=158,slow=7.1,SNR=9.0						
SONA1	Songino Array	56.43	340	*e*P	P	00 48 19.8	-0.8
PYUN	Piuthan	56.59	308	*e*P	P	00 48 21.1	-1.1
	comp=Z,46nm,0.9s						
PETK	Petropavlovsk-	61.50	18	P	P	00 48 55.2	-0.2
	comp=Z,5.2nm,0.8s,baz=165,slow=9.0,SNR=6.0						
WMQ	Urumqi	61.95	326	P	P	00 48 58.6	-0.1
WMQ				pP	pP	00 49 07.3	-1.3
WMQ				sP	sP	00 49 16.2	+3.8
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.9s						
WMQ				LR	LR		
	comp=N,180nm,20.1s						
WMQ				LR	LR		
	comp=E,200nm,25.1s						
WMQ				LR	LR		
	comp=Z,190nm,18.3s						
MK01	Makanchi Array	66.76	326	*e*P	P	00 49 29.2	-1.0
MK31	Makanchi Array	66.78	326	*e*P	P	00 49 29.5	-0.7
MKAR	Makanchi Array	66.78	326	P	P	00 49 29.5	-0.8
	comp=Z,2.0nm,0.5s,baz=113,slow=7.4,SNR=71						
MAKZ	Makanchi	66.96	326	*e*P	P	00 49 30.6	-0.8
	comp=Z,11nm,1.1s						
KSH	Kashi	66.99	316	P	P	00 49 32.1	+0.2
KSH				sP	pwP	00 49 53.0	+7.0
KSH				PP	PP	00 52 04.6	+4.7
KSH				S	S	00 58 20.4	-2.8
KSH				sS	sS	00 58 44.9	+5.6
KSH	Kashi	66.99	316	SS	SS	01 02 43.2	+0.7
KSH				pmax	pmax		
	comp=Z,13nm,1.1s						
KSH				pmax	pmax		
	comp=Z,220nm,5.8s						
KSH				LR	LR		
	comp=N,200nm,5.6s						
KSH				LR	LR		
	comp=E,170nm,5.3s						
KSH				LR	LR		
	comp=Z,250nm,7.5s						
ZALV	Zalesovo Beam	69.84	333	P	P	00 49 47.5	-1.7
	comp=Z,1.7nm,0.6s,baz=121,slow=5.8,SNR=9.7						
KURK	Kurchatov	70.99	328	*e*P	P	00 49 55.5	-0.8
NRIK	Noril'sk	79.38	346	P	P	00 50 42.9	-1.3
	comp=Z,2.6nm,0.9s,baz=133,slow=7.1,SNR=4.0						
SYO	Syowa Base	86.51	201	⇑*e*P	P	00 51 19.8	-1.4
SYO	Syowa Base	86.51	201	⇓*e*PcP	P	00 51 21.5	+0.3
ILAR	Eielson Array	90.49	25	P	P	00 51 38.0	-2.2
	comp=Z,0.3nm,0.6s,baz=274,slow=4.3,SNR=5.8						
KMBO	Kilima Mbogo	93.90	269	P	P	00 51 58.0	+0.7
	comp=Z,0.6nm,0.6s,baz=57,slow=9.5,SNR=4.2						
ARCES	ARCESS Array B	99.60	340	P	Pdif	00 52 21.5	-0.1
	comp=Z,3.2nm,0.9s,baz=87,slow=6.4,SNR=3.6						
TORD	Torodi Ar. Bea	129.48	283	PKP	PKPdf	00 57 47.1	-1.3
	comp=Z,0.2nm,0.4s,baz=125,slow=3.0,SNR=5.4						
CPUP	Villa Florida	148.33	165	PKPbc	PKPbc	00 58 24.6	-1.1
	comp=Z,2.4nm,0.5s,baz=180,slow=1.3,SNR=7.8						
LPAZ	La Paz	151.88	137	PKPbc	PKiKP	00 58 36.0	+0.3
	comp=Z,3.4nm,0.4s,baz=2.8,slow=3.2,SNR=26						

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*ISCJB **10** 00:58:58.1±0.5, 10°.84S±0°.08×165°.76E±0°.07, h10^{km}, mb4.3/16, Error ellipse: s-maj=11.2km s-min=9.8km az=12.7*

*NEIC **10** 00:58:59.5±0.4, 10°.80S×165°.84E, h10^{km}, mb4.7/3, Error ellipse: s-maj=12.9km s-min=10.1km az=105.0*

*IDC **10** 00:59:05.0±3.0, 10°.87S×165°.72E, h49^{km}±26^{km}, mb4.0/14, mb1 4.2/16, mb1mx4.1/29, mbtmp4.3/16, ML4.8/2, MS3.5/1, Ms1 3.5/1, ms1mx2.9/27, Error ellipse: s-maj=21.4km s-min=16.3km az=73.0*

ISC 10 00:58:59.6±0.6, 10°.79S±0°.09×165°.84E±0°.08, h10^{km}, n26, σ0^{s}.96/30, mb4.3/17, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.96	283	*e*P	Pn	01 00 29.6	+1.6
HNR				S	Sn	01 01 36.1	-0.3
HNR	Honiara	5.96	283	P	Pn	01 00 29.3	+1.3
	39nm,0.3s,baz=183,slow=3.6,SNR=7.8						
HNR				S	Sn	01 01 36.1	-0.3
	15nm,0.3s,baz=173,slow=19,SNR=1.8						
DZM	Mont Dzumac	11.23	177	P	Pn	01 01 41.8	+1.4
	3.6nm,0.3s,baz=324,slow=9.0,SNR=27						
DZM				LR	LR	01 05 15.0	
	comp=Z,268nm,21.8s,baz=161,slow=33						
CTA	Charters Tower	21.00	242	P	P	01 03 43.8	+0.3
	14nm,0.9s,baz=97,slow=16,SNR=2.8						
STKA	Stephens Creek	30.69	223	P	P	01 05 13.9	-0.8
	1.3nm,0.4s,baz=27,slow=12,SNR=3.6						
WRA	Warramunga Arr	31.66	249	P	P	01 05 22.0	-1.5
	2.6nm,0.8s,baz=80,slow=9.1,SNR=18						
WRA				PcP	PcP	01 08 15.5	-0.1
	0.6nm,0.9s,baz=88,slow=2.9,SNR=5.0						
ASAR	Alice Springs	32.99	243	P	P	01 05 33.7	-1.4
	4.3nm,0.8s,baz=67,slow=10,SNR=33						
ASAR				PcP	PcP	01 08 18.6	-0.6
	1.5nm,0.9s,baz=67,slow=2.9,SNR=7.6						
RPZ	Rata Peaks	33.12	173	P	P	01 05 36.6	+0.7
	8.4nm,0.7s,baz=225,slow=5.7,SNR=3.7						
MJAR	Matsushiro Arr	53.79	332	P	P	01 08 22.3	-0.1
	2.6nm,0.8s,baz=168,slow=7.6,SNR=6.2						
USRK	Ussuriysk Ar.	62.76	333	P	P	01 09 26.6	+1.6
	2.5nm,0.8s,baz=130,slow=7.7,SNR=6.2						
CMAR	Chiang Mai Arr	72.10	293	P	P	01 10 24.8	+0.1
	0.8nm,0.3s,baz=129,slow=4.5,SNR=6.0						
ULN	Ulaanbaatar	78.15	324	*e*P	P	01 11 00.1	+0.8
	3.4nm,0.9s						
SONM	Songino Array	78.52	324	P	P	01 11 01.2	0.0
	1.4nm,0.8s,baz=145,slow=6.7,SNR=10						
BILL	Bilibino	78.62	0	*e*P	P	01 11 02.1	+0.9
	7.5nm,1.1s						
COLA	College	83.01	18	*e*P	P	01 11 25.3	+0.5
	7.8nm,0.9s						
ILAR	Eielson Array	83.24	18	P	P	01 11 26.6	+0.6
	3.5nm,0.9s,baz=231,slow=5.3,SNR=28						
NVAR	Mina Array Bea	85.78	50	P	P	01 11 40.4	+0.7
	0.4nm,0.5s,baz=232,slow=8.2,SNR=5.6						
MKAR	Makanchi Array	93.40	317	P	P	01 12 14.9	-0.4
	2.1nm,0.9s,baz=100,slow=5.6,SNR=15						
ZALV	Zalesovo Beam	93.40	324	P	P	01 12 13.7	-1.3
	0.7nm,0.6s,baz=122,slow=5.3,SNR=5.5						
YKA	Yellowknife Ar	94.70	27	P	P	01 12 19.4	-1.4
	0.3nm,0.6s,baz=256,slow=4.6,SNR=6.0						
ARCES	ARCESS Array B	116.11	346	PKP	PKiKP	01 17 41.7	-0.8
	2.0nm,0.7s,baz=66,slow=1.9,SNR=15						
CPUP	Villa Florida	124.13	132	PKP	PKPdf	01 17 58.4	-0.9
	0.8nm,0.6s,baz=272,slow=4.3,SNR=3.1						
BOSA	Boshof	125.37	223	PKP	PKPdf	01 18 00.5	-1.3
	7.8nm,1.2s,baz=173,slow=6.3,SNR=3.7						
NB2	NORSAR Subarra	126.48	345	PKPdf	PKPdf	01 18 02.2	-0.5
	comp=Z,1.3nm,0.8s,baz=29,slow=1.9						
NOA	NORSAR Array B	126.48	345	PKP	PKPdf	01 18 02.2	-0.5
	comp=Z,0.8nm,0.8s,baz=31,slow=2.0,SNR=3.8						
ESDC	Sonseca Array	149.84	344	PKPbc	PKPbc	01 18 50.1	-0.3
	comp=Z,1.3nm,0.8s,baz=20,slow=2.4,SNR=7.2						

MEX 10 01:01:47.5±0.8, 19°.37N×103°.78W, h39^{km}±11^{km}, MD3.8, Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZ5V		0.20	58	*e*P	Pn	01 01 53.6	-2.6
EZ5V				*e*S	Sn	01 01 58.8	-4.6
EZ5V				*e*S		01 01 58.9	
R15V		0.28	223	*e*P	Pn	01 01 54.0	-1.8
CJM	Chamela	1.20	276	*e*P	Pn	01 02 06.7	-1.1
CJM				*e*S	Sn	01 02 20.0	-2.8

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*ISCJB **10** 01:09:38.1±0.9, 10°.8S±0°.1×165°.88E±0°.09, h10^{km}, mb4.0/7, Error ellipse: s-maj=16.7km s-min=12.1km az=27.2*

*IDC **10** 01:09:46.5±3.8, 10°.93S×165°.75E, h62^{km}±32^{km}, mb3.8/7, mb1 4.2/9, mb1mx3.8/33, mbtmp4.3/9, ML4.9/2, Error ellipse: s-maj=26.9km s-min=23.1km az=68.0*

ISC 10 01:09:39.9±1.0, 10°.8S±0°.1×165°.9E±0°.1, h10^{km}, n10, σ1^{s}.36/11, mb4.2/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.02	282	P	Pn	01 11 10.1	+1.0
	68nm,0.3s,baz=0.2,slow=1.9,SNR=6.0						
HNR				S	Sn	01 12 19.4	+1.3
	12nm,0.3s,baz=206,slow=15,SNR=1.4						
DZM	Mont Dzumac	11.27	177	P	Pn	01 12 22.5	+1.2
	4.8nm,0.3s,baz=357,slow=18,SNR=22						
CTA	Charters Tower	21.09	242	P	P	01 14 24.4	-0.3
	9.7nm,0.8s,baz=63,slow=18,SNR=2.9						
WRA	Warramunga Arr	31.74	249	P	P	01 16 02.5	-2.0
	2.2nm,0.8s,baz=82,slow=8.9,SNR=17						
ASAR	Alice Springs	33.07	243	P	P	01 16 14.3	-1.8
	3.5nm,0.8s,baz=65,slow=10,SNR=46						
MJAR	Matsushiro Arr	53.79	332	P	P	01 19 02.2	-0.6
	2.0nm,0.8s,baz=175,slow=8.4,SNR=5.8						
SONM	Songino Array	78.53	324	P	P	01 21 41.6	0.0
	0.3nm,0.5s,baz=141,slow=6.1,SNR=4.8						
ILAR	Eielson Array	83.18	18	P	P	01 22 07.5	+1.5
	1.3nm,0.8s,baz=239,slow=5.0,SNR=10						
MKAR	Makanchi Array	93.42	317	P	P	01 22 55.2	-0.5
	0.7nm,0.7s,baz=93,slow=6.3,SNR=8.8						
ARCES	ARCESS Array B	116.09	346	PKP	PKPdf	01 28 22.1	-0.7
	3.3nm,0.9s,baz=17,slow=5.1,SNR=5.9						

IDC 10 01:12:20.6±1.8, 10°.92S×165°.38E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.6/30, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=52.8km s-min=32.4km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.14	175	Pn	Pn	01 15 01.7	+0.3
	0.7nm,0.3s,baz=329,slow=11,SNR=8.3						
WRA	Warramunga Arr	31.20	250	P	P	01 18 41.9	+0.1
	0.4nm,0.6s,baz=82,slow=9.1,SNR=6.0						
ASAR	Alice Springs	32.53	243	P	P	01 18 53.5	-0.2
	1.4nm,0.6s,baz=66,slow=10,SNR=14						
ILAR	Eielson Array	83.50	19	P	P	01 24 50.0	0.0
	0.3nm,0.7s,baz=231,slow=4.6,SNR=4.9						

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*IDC **10** 01:16:39.8±1.7, 10°.89S×165°.53E, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.8/27, mbtmp3.9/6, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.8/31, Error ellipse: s-maj=49.4km s-min=27.8km az=117.0*

*ISCJB **10** 01:16:42.4±1.2, 11°.1S±0°.1×165°.6E±0°.2, h30^{km}, mb3.8/5, Error ellipse: s-maj=32.5km s-min=19.1km az=179.1*

ISC 10 01:16:44.2±1.2, 11°.0S±0°.1×165°.5E±0°.3, h30^{km}, n7, σ1ṣ17/6, mb3.8/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.71	285	LR	LR	01 20 34.5	
	comp=Z,269nm,18.3s,baz=16,slow=41						
DZM	Mont Dzumac	11.07	176	Pn	Pn	01 19 20.3	-0.3
	0.6nm,0.3s,baz=38,slow=18,SNR=8.3						
WRA	Warramunga Arr	31.31	250	P	P	01 23 02.6	+0.5
	1.8nm,0.8s,baz=82,slow=9.2,SNR=13						
ASAR	Alice Springs	32.64	243	P	P	01 23 14.5	+0.7
	2.1nm,0.9s,baz=72,slow=9.6,SNR=10						
SONM	Songino Array	78.49	324	P	P	01 28 42.4	-0.3
	0.1nm,0.3s,baz=128,slow=6.6,SNR=2.5						
ILAR	Eielson Array	83.51	19	P	P	01 29 09.9	+1.1
	0.5nm,0.6s,baz=234,slow=5.3,SNR=4.2						
MKAR	Makanchi Array	93.33	317	P	P	01 29 55.0	-1.4
	0.3nm,0.8s,baz=91,slow=7.1,SNR=2.2						

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*ISCJB **10** 01:22:50.9±1.0, 10°.9S±0°.1×165°.74E±0°.10, h10^{km}, mb3.8/5, Error ellipse: s-maj=19.5km s-min=12.1km az=27.9*

*IDC **10** 01:22:50.8±1.3, 10°.76S×165°.76E, h0^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.8/35, mbtmp4.0/7, ML4.6/2, Error ellipse: s-maj=34.9km s-min=26.3km az=137.0*

ISC 10 01:22:52.4±1.0, 10°.7S±0°.1×165°.8E±0°.1, h10^{km}, n8, σ0ṣ78/9, mb3.9/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.91	282	Pn	Pn	01 24 19.8	-0.2
	26nm,0.3s,baz=287,slow=11,SNR=4.2						
HNR				Sn	Sn	01 25 28.7	+0.9
	7.8nm,0.3s,baz=251,slow=18,SNR=2.1						
DZM	Mont Dzumac	11.28	177	Pn	Pn	01 25 34.5	+0.6
	3.1nm,0.3s,baz=347,slow=14,SNR=20						
WRA	Warramunga Arr	31.64	249	P	P	01 29 15.2	-0.8
	0.5nm,0.6s,baz=82,slow=8.7,SNR=6.3						
ASAR	Alice Springs	32.97	243	P	P	01 29 26.9	-0.9
	1.0nm,0.7s,baz=66,slow=10,SNR=12						
SONM	Songino Array	78.46	324	P	P	01 34 54.2	+0.5
	0.3nm,0.5s,baz=150,slow=6.5,SNR=4.6						
ILAR	Eielson Array	83.21	18	P	P	01 35 18.9	+0.2
	0.9nm,0.8s,baz=232,slow=4.9,SNR=7.3						
MKAR	Makanchi Array	93.34	317	P	P	01 36 07.9	+0.1
	0.5nm,0.7s,baz=97,slow=6.8,SNR=7.6						
ARCES	ARCESS Array B	116.06	346	PKP	PKPdf	01 41 34.4	-0.9
	4.0nm,1.1s,baz=64,slow=2.8,SNR=5.0						

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*ISCJB **10** 01:24:58.6±0.3, 10°.99S±0°.05×165°.83E±0°.05, h10^{km}, mb4.2/20, Error ellipse: s-maj=7.9km s-min=7.0km az=34.3*

*NEIC **10** 01:25:00.2±0.3, 10°.95S×165°.82E, h10^{km}, mb4.5/10, Error ellipse: s-maj=8.7km s-min=5.5km az=137.0*

*IDC **10** 01:25:06.8±3.2, 10°.99S×165°.78E, h58^{km}±27^{km}, mb3.9/13, mb1 4.1/15, mb1mx4.0/35, mbtmp4.3/15, ML4.6/2, Error ellipse: s-maj=20.5km s-min=18.3km az=65.0*

ISC 10 01:25:00.5±0.5, 10°.92S±0°.07×165°.87E±0°.08, h10^{km}, n45, σ1ṣ00/50, mb4.3/20, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.02	284	*e*Pn	Pn	01 26 29.4	-0.2
HNR				*e*Sn	Sn	01 27 40.2	+1.5
HNR	Honiara	6.02	284	P	Pn	01 26 31.4	+1.8
	12nm,0.3s,baz=177,slow=6.2,SNR=3.2						
HNR				S	Sn	01 27 40.2	+1.5
	11nm,0.3s,baz=75,slow=20,SNR=2.6						
DZM	Mont Dzumac	11.11	177	*e*Pn	Pn	01 27 39.9	+0.4
DZM				*e*Sn	Sn	01 29 43.9	0.0
DZM	Mont Dzumac	11.11	177	P	Pn	01 27 42.7	+3.2
	4.9nm,0.3s,baz=296,slow=15,SNR=25						
DZM				S	Sn	01 29 43.9	0.0
	0.3nm,0.3s,baz=114,slow=20,SNR=2.5						
TARA	Tarawa	14.06	30	*e*Pn	Pn	01 28 22.2	+2.2
CTA	Charters Tower	20.97	242	P	Pn	01 29 46.0	-0.6
	10nm,1.0s,baz=39,slow=14,SNR=2.9						
CTAO	Charters Tower	20.97	242	*e*P	P	01 29 42.8	-1.2
	42nm,0.8s						
WRAB	Tennant Creek	31.63	250	*e*P	P	01 31 22.8	-1.3
	1.7nm,0.5s						
WR1	Warramunga Arr	31.64	250	*e*P	P	01 31 23.7	-0.4
	5.8nm,0.8s						
WRA	Warramunga Arr	31.64	250	P	P	01 31 23.7	-0.4
	1.9nm,0.9s,baz=81,slow=9.2,SNR=18						
AS01	Alice Springs	32.92	243	*e*P	P	01 31 34.0	-1.3
AS31	Alice Springs	32.96	243	*e*P	P	01 31 35.4	-0.3
	1.4nm,0.7s						
AS31				*e*PcP	PcP	01 34 19.6	-0.4
ASAR	Alice Springs	32.96	243	P	P	01 31 35.0	-0.6
	2.0nm,0.8s,baz=71,slow=9.6,SNR=16						
ASAR				PcP	PcP	01 34 19.6	-0.4
	1.2nm,0.9s,baz=64,slow=2.0,SNR=6.9						
FITZ	Fitzroy Crossi	39.53	255	*e*P	P	01 32 31.1	-0.8
	22nm,1.5s						
FITZ	Fitzroy Crossi	39.53	255	P	P	01 32 30.4	-1.5
	2.7nm,0.8s,baz=68,slow=8.7,SNR=3.5						
MJAR	Matsushiro Arr	53.92	332	P	P	01 34 24.5	+0.2
	2.8nm,0.9s,baz=127,slow=2.3,SNR=4.8						
MAJO	Matsushiro	53.92	332	*e*P	P	01 34 24.5	+0.2
ASAJ	Asahikawa	58.72	341	P	P	01 34 59.2	+0.9
	2.2nm,0.6s,baz=189,slow=4.4,SNR=4.5						
XAN	Xi'an	70.13	312	*e*P	P	01 36 13.1	-0.4
CM31	Chiang Mai Arr	72.18	293	*e*P	P	01 36 25.4	-0.7
CMAR	Chiang Mai Arr	72.18	293	P	P	01 36 25.4	-0.7
	1.3nm,0.3s,baz=99,slow=5.6,SNR=6.8						
ULN	Ulaanbaatar	78.27	324	*e*P	P	01 37 00.8	0.0
	1.7nm,0.6s						
SONA0	Songino Array	78.64	324	*e*P	P	01 37 03.2	+0.4
SONM	Songino Array	78.64	324	P	P	01 37 03.2	+0.4
	0.5nm,0.8s,baz=137,slow=6.4,SNR=8.4						
BILL	Bilibino	78.75	0	*e*P	P	01 37 02.9	+0.1
	2.2nm,0.5s						
QSPA	South Pole Qui	79.09	180	*e*P	P	01 37 05.4	+0.4
COLA	College	83.13	18	*e*P	P	01 37 26.0	-0.1
	4.2nm,0.8s						
ILAR	Eielson Array	83.35	18	P	P	01 37 27.9	+0.5
	2.7nm,0.8s,baz=233,slow=5.4,SNR=23						
IL1	Eielson Array	83.35	18	*e*P	P	01 37 26.5	-0.9
HUMO	Hull Mountain	83.85	45	*e*P	P	01 37 29.8	-0.7
MDPB	Devils Postpil	85.02	50	*e*P	P	01 37 36.5	-0.4
	4.7nm,1.0s						
NV01	Mina Array Sit	85.84	50	*e*P	P	01 37 40.9	0.0
NVAR	Mina Array Bea	85.84	50	P	P	01 37 41.7	+0.8
	1.7nm,0.9s,baz=239,slow=8.1,SNR=6.5						
WVOR	Wild Horse Val	86.81	46	*e*P	P	01 37 45.2	-0.3
	1.3nm,0.3s						
PV05	Paradox Valley	92.77	52	*e*P	P	01 38 14.4	+0.7
MK31	Makanchi Array	93.52	317	*e*P	P	01 38 16.0	-0.7
MK32	Makanchi Array	93.52	317	*e*P	P	01 38 16.6	0.0
MKAR	Makanchi Array	93.52	317	P	P	01 38 16.6	0.0
	0.9nm,0.7s,baz=90,slow=6.3,SNR=12						
ZAA1	Zalesovo Array	93.53	324	*e*P	P	01 38 15.2	-1.3
ZALV	Zalesovo Beam	93.53	324	P	P	01 38 15.2	-1.3
	0.4nm,0.5s,baz=59,slow=0.8,SNR=3.4						
YKA	Yellowknife Ar	94.80	27	P	P	01 38 20.7	-1.4
	0.3nm,0.7s,baz=252,slow=5.0,SNR=4.8						
YKB5	Yellowknife Ar	94.80	27	*e*P	P	01 38 20.7	-1.4
ARA0	ARCESS Array S	116.24	346	*e*PKPdf	PKiKP	01 43 42.8	-0.9
ARCES	ARCESS Array B	116.24	346	PKP	PKiKP	01 43 42.8	-0.9
	2.2nm,0.8s,baz=34,slow=4.8,SNR=3.5						
ESDC	Sonseca Array	149.97	344	PKPbc	PKPbc	01 44 51.2	-0.4
	0.6nm,0.8s,baz=50,slow=3.4,SNR=4.8						

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*IDC **10** 01:29:41.8±1.7, 3°.72S×142°.37E, h0^{km}, mb4.0/4, mb1 4.4/6, mb1mx3.9/31, mbtmp4.3/6, ML4.7/2, Error ellipse: s-maj=54.4km s-min=23.2km az=112.0*

*ISCJB **10** 01:29:45.3±1.2, 3°.63S±0°.09×142°.1E±0°.1, h33^{km}, mb3.9/5, Error ellipse: s-maj=19.5km s-min=13.1km az=174.5*

*DJA **10** 01:29:45.2±3.0, 3°S±9°×14°2E±1°1, h12^{km}±23^{km}, M4.7/10, mb4.5/10, mB5.6/3, MLv4.7/2, Mw(mB)5.1/3*

ISC 10 01:29:47.2±1.4, 3°.6S±0°.1×142°.1E±0°.2, h35^{km}, n15, σ1ṣ78/15, mb4.0/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.74	308	P	Pn	01 30 13.5	-1.6
GENI	Genyem	2.15	298	P	Pn	01 30 18.5	-2.2
SANI	Sanana	16.14	275	P	P	01 33 37.5	+3.0
	9.8nm,1.2s						
WRA	Warramunga Arr	17.91	204	P	Pn	01 33 51.4	-2.3
	1.5nm,0.3s,baz=28,slow=12,SNR=59						
SOEI	Soe	18.70	250	P	Pn	01 34 03.3	-0.3
BATI	Baumata	19.41	249	P	Pn	01 34 13.3	+1.3
BATI	Baumata	19.41	249	P	Pn	01 34 12.8	+0.8
	7.4nm,0.3s,baz=254,slow=3.6,SNR=6.5						
APSI	Ampana	20.58	277	P	P	01 34 23.4	0.0
ASAR	Alice Springs	21.45	201	P	P	01 34 31.5	-1.2
	5.2nm,0.5s,baz=31,slow=11,SNR=37						
FITZ	Fitzroy Crossi	21.60	227	P	P	01 34 36.1	+1.8
	2.8nm,0.5s,baz=49,slow=13,SNR=9.2						
BNSI	Bone	21.93	267	P	P	01 34 40.4	+2.5
BKSI	Bulukumba	21.95	265	P	P	01 34 38.9	+0.8
GTA	Gaotai	57.81	322	*e*P	P	01 39 34.4	-1.1
GTA				pP	pP	01 39 39.1	-7.2
GTA				sP	sP	01 39 41.4	-9.0
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
MKAR	Makanchi Array	72.56	322	P	P	01 41 12.0	+1.1
	comp=Z,1.6nm,0.8s,baz=111,slow=6.6,SNR=16						
ILAR	Eielson Array	85.26	24	P	P	01 42 20.8	+0.6
	comp=Z,0.4nm,0.6s,baz=263,slow=4.1,SNR=5.3						

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*NEIC **10** 01:30:46.6±0.1, 11°.01S×166°.79E, h10^{km}, mb5.4/199, MS5.4/112, MW5.6, Error ellipse: s-maj=2.7km s-min=2.1km az=147.0, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.82; $M_{\theta\theta}$0.13; $M_{\phi\phi}$1.69; $M_{r\theta}$0.37; $M_{\theta\phi}$-0.22; $M_{\phi r}$2.36; Best double couple: $M_0$3.00000×10^{17} NP1:ϕ_s342.00000°, δ19.00000°, λ-112.00000°. NP2:ϕ_s185.00000°, δ72.00000°, λ-83.00000°. Principal axes: T 2.8700, Plg27.0000°, Azm269.0000°; N 0.1900, Plg7.0000°, Azm3.0000°; P -3.0700, Plg62.0000°, Azm107.0000°;*

*GCMT **10** 01:30:48.6±0.1, 11°.07S±0°.01×167°.01E±0°.01, h12^{km}, MW5.6/130, Moment Tensor Solution. s102,c150; s130,c295; Duration: 1ṣ5 Moment tensor: Scale 10^{17} Nm; M_{rr}-3.00±.03; $M_{\theta\theta}$0.59±.03; $M_{\phi\phi}$2.41±.03; $M_{r\theta}$-0.53±.12; $M_{\theta\phi}$-1.00±.03; $M_{\phi r}$-0.80±.10; Best double couple: $M_0$3.06900×10^{17} NP1:ϕ_s350.00000°, δ52.00000°, λ-73.00000°. NP2:ϕ_s143.00000°, δ41.00000°, λ-110.00000°. Principal axes: T 2.8990, Plg5.0000°, Azm68.0000°; N 0.3390, Plg13.0000°, Azm159.0000°; P -3.2380, Plg76.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **10** 01:30:48.5±0.1, 11°.05S±0°.03×166°.79E±0°.02, h33^{km}, mb5.3/252, MS5.3/165 Error ellipse: s-maj=4.2km s-min=3.0km az=161.6*

*BJI **10** 01:30:48.6, 10°.84S×166°.91E, h36^{km}, mB5.7/62, mb5.2/66, Ms5.4/65, Ms7 5.1/59*

*MOS **10** 01:30:49.1±1.0, 10°.91S×166°.65E, h33^{km}, mb5.5/56, MS5.2/22, Error ellipse: s-maj=8.0km s-min=7.2km az=101.1*

*IDC **10** 01:30:51.6±2.9, 11°.07S×166°.79E, h47^{km}±26^{km}, mb4.7/24, mb1 4.8/26, mb1mx4.7/35, mbtmp4.9/26, ML4.5/2, MS5.2/26, Ms1 5.2/26, ms1mx5.1/32, Error ellipse: s-maj=17.7km s-min=12.8km az=79.0*

ISC 10 01:30:49.2±0.5, 11°.04S±0°.05×166°.87E±0°.04, h28^{km}±3^{km}, h28^{km}:pP-P, n688, σ1ṣ28/649, mb5.4/252, MS5.3/167, 15C-12D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	7.00	283	*e*P	Pn	01 32 32.0	+2.1
HNR				*e*S	Sn	01 33 52.0	+3.4
HNR	Honiara	7.00	283	*e*Pn	Pn	01 32 28.4	-1.5
HNR	Honiara	7.00	283	*e*P	Pn	01 32 28.4	-1.5
HNR	Honiara	7.00	283	P	Pn	01 32 31.5	+1.6
	22nm,0.3s,baz=220,slow=4.0,SNR=48						
HNR				LR	LR	01 35 20.6	
	comp=Z,70µm,19.3s,baz=114,slow=39						
DZM	Mont Dzumac	10.97	182	*e*Pn	Pn	01 33 25.6	+1.1
	28nm,0.6s						
DZM				*e*LR	LR	01 36 05.4	
	comp=Z,24µm,26.0s						
DZM	Mont Dzumac	10.97	182	*e*Pn	Pn	01 33 24.9	+0.4
DZM	Mont Dzumac	10.97	182	P	Pn	01 33 25.8	+1.2
	1.5nm,0.3s,baz=22,slow=19,SNR=15						
DZM				LR	LR	01 37 11.8	
	comp=Z,13µm,20.7s,baz=14,slow=35						
PINNC	Pines Island,	11.52	177	*e*Pn	Pn	01 33 32.5	+0.6
FUNA	Funafuti	12.40	79	*e*Pn	Pn	01 33 43.2	-0.8
MSVF	Nonsavu	12.71	123	*i* P	Pn	01 33 43.6	-4.6
RABL	Rabaul	16.08	294	*e*Pn	Pn	01 34 32.5	-1.0
	63nm,0.8s						
EIDS	Eidsvold	20.65	224	P	Pn	01 35 29.1	-0.2
	baz=21,SNR=5.7						
EIDS	Eidsvold	20.65	224	*e*P	P	01 35 27.1	+0.2
	107nm,1.3s						
MANU	Manus Island	21.32	293	*e*P	P	01 35 33.2	-0.9
	325nm,1.4s						
CTA	Charters Tower	21.78	243	P	P	01 35 40.0	+1.0
	15nm,0.8s,baz=80,slow=12,SNR=7.2						
CTA				LR	LR	01 43 12.6	
	comp=Z,14µm,18.9s,baz=62,slow=34						
CTAO	Charters Tower	21.78	243	*e*P	P	01 35 37.3	-1.7
CTAO				LR	LR		
	comp=Z,20µm,20.0s						
CTAO	Charters Tower	21.78	243	*e*P	P	01 35 37.3	-1.7
CTAO				MLR	MLR		
	comp=Z,20µm,20.0s						
MTSU	Mount Surprise	22.92	249	P	P	01 35 52.8	+1.6
	baz=23,SNR=23						
RMQ	Roma	22.98	226	P	P	01 35 52.9	+1.2
	baz=23,SNR=4.9						
RAO	Raoul Island	23.02	144	LR	LR	01 42 48.7	
	comp=Z,4µm,21.5s,baz=328,slow=31						
COEN	Coen	23.31	260	P	P	01 35 56.3	+1.1
	baz=24,SNR=4.1						
COEN	Coen	23.31	260	*e*P	P	01 35 54.5	-0.7
	comp=Z,55nm,0.8s						
ARMA	Armidale	23.92	214	P	P	01 36 01.3	+0.2
	baz=24,SNR=6.8						
ARMA	Armidale	23.92	214	*e*P	P	01 36 01.1	+0.1
	comp=Z,130nm,1.5s						
OUZ	Omahuta	24.84	167	*e*P	P	01 36 10.4	+1.2
	comp=Z,69nm,1.4s						
CMSA	Cobar Meteorol	28.27	221	P	P	01 36 40.4	+0.2
	baz=28,SNR=6.6						
URZ	Urewera	28.61	163	P	P	01 36 43.8	+0.6
	comp=Z,2.6nm,0.6s,baz=169,slow=5.2,SNR=3.0						
URZ				LR	LR	01 45 55.6	
	comp=Z,2µm,19.8s,baz=334,slow=32						
BKZ	Black Stump Fm	29.29	165	*e*P	P	01 36 49.7	+0.4
	comp=Z,24nm,1.3s						
BFZ	Birch Farm	30.66	166	*e*P	P	01 37 01.4	+0.1
	comp=Z,14nm,0.8s						
SNZO	South Karori	30.93	168	PFAKE		01 37 20.0	+16
SNZO				LR	LR		
	comp=Z,3µm,20.0s						
THZ	Tophouse	31.06	171	*e*P	P	01 37 05.6	+0.8
	comp=Z,21nm,0.9s						
STKA	Stephens Creek	31.21	225	P	P	01 37 07.0	+0.7
	baz=31,SNR=5.3						
STKA	Stephens Creek	31.21	225	*e*P	P	01 37 06.5	+0.2
	comp=Z,4.9nm,1.3s						
STKA	Stephens Creek	31.21	225	*e*P	P	01 37 06.5	+0.2
STKA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
STKA	Stephens Creek	31.21	225	P	P	01 37 05.4	-0.9
	comp=Z,4.4nm,0.6s,baz=51,slow=7.9,SNR=6.0						
STKA				LR	LR	01 48 53.1	
	comp=Z,10µm,20.6s,baz=50,slow=35						
KHZ	Kahutara	31.79	171	*e*P	P	01 37 11.9	+0.7
	comp=Z,29nm,1.2s						
LTZ	Lake Taylor	31.97	172	*e*P	P	01 37 13.2	+0.4
	comp=Z,16nm,0.7s						
FOZ	Fox Glacier	32.47	176	*e*P	P	01 37 17.8	+0.6
	comp=Z,30nm,0.9s						
OXZ	Oxford	32.48	173	*e*P	P	01 37 17.7	+0.5
	comp=Z,21nm,1.0s						
WB3	Warramunga Arr	32.50	250	P	P	01 37 18.5	+0.6
	baz=33						
WRAB	Tennant Creek	32.51	250	*e*P	P	01 37 16.4	-1.5
	comp=Z,7.6nm,0.5s						
WRAB				LR	LR		
	comp=Z,9µm,19.0s						
WRAB	Tennant Creek	32.51	250	*ce*P	P	01 37 16.9	-1.0
WRAB				pmax	pmax		
	comp=Z,71nm,2.5s						
WB2	Warramunga Arr	32.51	250	*e*P	P	01 37 16.3	-1.6
	comp=Z,30nm,1.1s						
WRA	Warramunga Arr	32.52	250	*i* P	P	01 37 17.2	-0.8
WRA				pmax	pmax		
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	32.52	250	P	P	01 37 17.3	-0.8
	comp=Z,17nm,0.7s,baz=81,slow=8.9,SNR=24						
WRA				LR	LR	01 50 28.8	
	comp=Z,9µm,19.0s,baz=75,slow=36						
TOO	Toolangi	32.66	212	P	P	01 37 19.6	+0.6
	baz=33,SNR=5.6						
TOO	Toolangi	32.66	212	*e*P	P	01 37 19.2	+0.2
	comp=Z,10nm,1.0s						
TOO	Toolangi	32.66	212	*e*P	P	01 37 19.2	+0.2
TOO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RPZ	Rata Peaks	32.75	174	*e*P	P	01 37 20.7	+0.9
	comp=Z,30nm,1.1s						
RPZ	Rata Peaks	32.75	174	P	P	01 37 20.1	+0.4
	comp=Z,9.7nm,0.3s,baz=155,slow=2.7,SNR=6.0						
RPZ				LR	LR	01 49 49.3	
	comp=Z,3µm,19.4s,baz=346,slow=35						
GUMO	Guam	32.79	318	LR	LR	01 51 17.5	
	comp=Z,2µm,18.2s,baz=116,slow=37						
MQZ	McQueen’s Vall	32.93	172	*e*P	P	01 37 21.7	+0.5
	comp=Z,55nm,1.3s						
RAR	Rarotonga	33.53	112	LR	LR	01 48 51.3	
	comp=Z,2µm,19.3s,baz=282,slow=32						
WKZ	Wanaka	33.72	177	*e*P	P	01 37 28.8	+0.7
	comp=Z,47nm,1.3s						
AS01	Alice Springs	33.74	244	*e*P	P	01 37 27.9	-0.7
AS31	Alice Springs	33.78	244	*e*P	P	01 37 28.1	-0.9
	comp=Z,3.3nm,0.9s						
ASAR	Alice Springs	33.78	244	P	P	01 37 27.8	-1.3
	comp=Z,7.4nm,0.8s,baz=75,slow=9.5,SNR=17						
ASAR				LR	LR	01 50 29.2	
	comp=Z,10µm,19.2s,baz=78,slow=35						
HTT	Hallett	33.95	225	P	P	01 37 30.9	+0.6
	baz=34,SNR=3.2						
SARN	Sarigan	34.57	323	*e*P	P	01 37 35.5	-0.3
	comp=Z,54nm,1.1s						
BBOO	Buckleboo	35.64	228	*e*P	P	01 37 45.0	+0.1
	comp=Z,25nm,1.1s						
TAU	Tasmania Unive	36.02	205	PFAKE		01 38 00.0	+12
TAU				LR	LR		
	comp=Z,3µm,19.0s						
BNDI	Bandanaira	37.16	277	P	P	01 37 58.6	+0.5
WRKA	Warakurna	39.07	244	P	P	01 38 14.7	+0.5
	baz=39,SNR=4.4						
NLAI	Namlea	40.17	278	P	P	01 38 24.7	+1.3
FITZ	Fitzroy Crossi	40.45	255	P	P	01 38 25.1	-0.5
	baz=41,SNR=19						
FITZ	Fitzroy Crossi	40.45	255	*e*P	P	01 38 24.7	-0.9
	comp=Z,47nm,1.0s						
FITZ	Fitzroy Crossi	40.45	255	P	P	01 38 24.8	-0.9
	comp=Z,34nm,0.7s,baz=83,slow=7.2,SNR=18						
FORT	Forrest	40.95	235	*e*P	P	01 38 28.9	-0.8
	comp=Z,56nm,1.1s						
SANI	Sanana	41.53	279	P	P	01 38 34.3	-0.3
SOEI	Soe	41.90	268	*e*P	P	01 38 37.9	+0.1
	comp=Z,52nm,1.2s						
MIDW	Midway	41.90	21	PFAKE		01 38 50.0	+13
MIDW				LR	LR		
	comp=Z,4µm,22.0s						
BATI	Baumata	42.45	267	P	P	01 38 43.9	+1.8
BATI	Baumata	42.45	267	P	P	01 38 40.6	-1.6
	comp=Z,19nm,0.5s,baz=204,slow=3.4,SNR=6.9						
PPT	Papeete	42.63	104	LR	LR	01 53 07.0	
	comp=Z,3µm,18.7s,baz=262,slow=31						
PPT2	Papeete2	42.63	104	*e*S	S	01 45 09.4	+4.2
	comp=Z,2µm,24.8s						
PPT2				*e*LQ	LQ	01 48 48.1	
	comp=Z,5µm,28.0s						
PPT2				*e*LR	LR	01 50 40.0	
	comp=Z,10µm,26.5s,baz=276						
MMRI	Maumere	44.01	269	*e*P	P	01 38 54.5	-0.2
	comp=Z,162nm,1.5s						
MMRI	Maumere	44.01	269	P	P	01 38 54.9	+0.2
PMOR	Pomariorio Ree	44.19	100	*e*P	P	01 38 56.0	-0.1
	comp=Z,102nm,1.1s						
VAH	Vaihoa	44.45	101	*e*P	P	01 38 57.7	-0.5
	comp=Z,104nm,1.2s						
EDFI	Ende, Flores	44.53	269	P	P	01 38 59.0	-0.1
DAV	Davao City (W)	44.86	292	PFAKE		01 39 10.0	+8.5
DAV				LR	LR		
	comp=Z,2µm,22.0s						
LUWI	Luwuk	44.90	280	P	P	01 39 04.6	+2.8
	comp=Z,91nm,0.5s,comp=Z,12µm						
KCP	Kidapawan	45.28	291	⇓*e*P	P	01 39 07.1	+2.2
APSI	Ampana	46.02	279	P	P	01 39 12.5	+1.8
	comp=Z,60nm,1.2s,comp=Z,1µm						
MBWA	Marble Bar	46.24	251	*e*P	P	01 39 11.0	-1.4
MBWA				LR	LR		
	comp=Z,6µm,19.0s						
BNSI	Bone	46.76	274	P	P	01 39 17.6	+1.1
KAPI	Kappang	46.99	273	PFAKE		01 39 30.0	+12
KAPI				LR	LR		
	comp=Z,1µm,21.0s						
PCI	Palu	47.78	279	P	P	01 39 26.3	+1.8
	comp=Z,197nm,1.2s,comp=Z,3µm						
MEEK	Meekatharra	47.94	244	P	P	01 39 25.9	+0.2
	baz=48,SNR=9.3						
MPSI	Mapaga	48.03	281	P	P	01 39 26.0	-0.4
POHA	Pohakuloa	48.04	51	PFAKE		01 39 40.0	+13
POHA				LR	LR		
	comp=Z,5µm,20.0s						
NWAO	Narrogin (SRO)	50.38	236	*e*P	P	01 39 44.2	0.0
NWAO				LR	LR		
	comp=Z,13µm,20.0s						
NWAO	Narrogin (SRO)	50.38	236	*e*P	P	01 39 44.2	0.0
NWAO				MLR	MLR		
	comp=Z,13µm,20.0s						
TSM	Tawau	51.08	285	P	P	01 39 52.0	+2.2
JAGI	Jajag, Banyuwa	51.97	268	*e*P	P	01 39 56.0	-0.3
	comp=Z,72nm,1.3s						
TAOE	Nuku Hiva Isla	52.18	93	*e*S	S	01 47 22.0	+0.7
	comp=Z,2µm,25.1s						
TAOE				*e*LR	LR	01 54 55.9	
	comp=Z,4µm,26.2s,baz=269						
KKM	Kota Kinabalu	53.20	286	*e*P	P	01 40 05.0	-0.6
	comp=Z,84nm,1.1s						
KKM	Kota Kinabalu	53.20	286	P	P	01 40 07.2	+1.7
INU	Inuyama	54.09	330	*e*P	P	01 40 11.8	+0.2
	comp=Z,101nm,1.5s						
MJAR	Matsushiro Arr	54.48	332	P	P	01 40 13.5	-0.9
	comp=Z,14nm,0.9s,baz=168,slow=8.5,SNR=35						
MAJO	Matsushiro	54.48	332	*e*P	P	01 40 13.2	-1.3
	comp=Z,23nm,0.8s						
MAJO				LR	LR		
	comp=Z,1µm,21.0s						
MAJO	Matsushiro	54.48	332	*e*P	P	01 40 13.2	-1.3
MAJO				pmax	pmax		
	comp=Z,23nm,0.8s						
MAJO				MLR	MLR		
	comp=Z,1µm,21.0s						
MAT	Matsushiro	54.48	332	P	P	01 40 13.2	-1.3
MAT				S	S	01 47 51.4	-0.4
MJB9	Matsu-Tunnel	54.49	332	*e*P	P	01 40 14.2	-0.3
	comp=Z,23nm,0.8s						
BTM	Bintulu	55.35	282	P	P	01 40 22.0	+0.8
JNU	Nakatsue	55.73	323	*e*P	P	01 40 23.6	0.0
	comp=Z,58nm,0.9s						
JNU	Nakatsue	55.73	323	P	P	01 40 23.8	+0.2

Code	Station	Dist	Azi	Phase	ISC Phase	Time	Res
	comp=Z,67nm,1.0s,baz=106,slow=5.6,SNR=19						
SBUM	**Sibu**	**55.98**	**281**	*e*P	**P**	**01 40 25.9**	**+0.2**
	comp=Z,11nm,1.1s						
SBUM	**Sibu**	**55.98**	**281**	P	**P**	**01 40 27.2**	**+1.5**
NACB	**Ninganchiao**	**56.39**	**309**	*e*P	**P**	**01 40 28.2**	**-0.3**
	comp=Z,66nm,1.4s						
RKT	**Rikitea**	**56.55**	**110**	*e*S	**S**	**01 48 21.7**	**+1.8**
	comp=Z,1µm,30.8s						
RKT				*e*LQ	LQ	01 54 44.2	
	comp=Z,1µm,31.0s						
RKT				*e*LR	LR	01 57 07.5	
	comp=Z,8µm,27.0s						
YHNB	**Yeheng**	**56.83**	**309**	*e*P	**P**	**01 40 31.6**	**0.0**
	comp=Z,94nm,1.3s						
TATO	**Taipei**	**56.91**	**310**	PFAKE		01 40 40.0	+7.9
TATO				LR	LR		
	comp=Z,2µm,22.0s						
KSM	**Kuching**	**57.59**	**279**	*e*P	**P**	**01 40 36.7**	**-0.5**
	comp=Z,39nm,1.3s						
YUK	**Yuzh-Kuril'sk**	**58.05**	**342**	*e*P	**P**	**01 40 35.8**	**-3.9**
YUK						01 42 49.1	
YUK				*e*S	**S**	**01 48 35.3**	**-3.4**
YUK				MLR	MLR		
	comp=Z,891nm,18.0s						
ASAJ	**Asahikawa**	**59.16**	**340**	P	**P**	**01 40 48.1**	**+0.6**
	comp=Z,18nm,0.8s,baz=214,slow=12,SNR=11						
ASAJ				LR	LR	02 01 14.2	
	comp=Z,1µm,22.0s,baz=185,slow=31						
KSRS	**Korea Array**	**60.50**	**325**	P	**P**	**01 40 57.0**	**+0.2**
	comp=Z,8.4nm,1.0s,baz=149,slow=6.7,SNR=22						
KSAR	**Wonju Array Be**	**60.52**	**325**	P	**P**	**01 40 57.0**	**+0.1**
KSAR	**Wonju Array Be**	**60.52**	**325**	P	**P**	**01 40 57.0**	**+0.1**
KS01	**Wonju Array Si**	**60.53**	**325**	*e*P	**P**	**01 40 56.4**	**-0.6**
SSE	**Sheshan**	**60.62**	**315**	*e*P	**P**	**01 40 57.5**	**-0.2**
	comp=Z,54nm,1.0s						
SSE				LR	LR		
	comp=Z,877nm,22.0s						
YSS	**Yuzh-Sakhalins**	**61.63**	**341**	*e*P	**P**	**01 41 05.4**	**+1.1**
	comp=Z,143nm,1.4s						
YSS				LR	LR		
	comp=Z,825nm,20.0s						
YSS	**Yuzh-Sakhalins**	**61.63**	**341**	⇑*e*P	**P**	**01 41 05.8**	**+1.6**
YSS				*e*		01 49 25.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.4s						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s						
TEY	**Ternei**	**62.16**	**336**	⇑*e*P	P	01 41 02.6	-5.3
TEY				pmax	pmax		
	comp=Z,10.0nm,1.7s						
TEY				pmax	pmax		
	comp=N,20nm,1.8s						
MSHR	**Mys Shultsa**	**62.58**	**331**	*i* P	**P**	**01 41 10.6**	**-0.2**
VLA	**Vladivostok**	**62.66**	**332**	*d i*P	**P**	**01 41 10.8**	**-0.4**
VLA				pmax	pmax		
	comp=Z,98nm,1.5s						
NJ2	**Nanjing**	**62.80**	**315**	*e*P	**P**	**01 41 13.5**	**+1.1**
NJ2				pP	**pP**	**01 41 20.1**	**-0.4**
NJ2				S	S	01 49 27.2	-13
NJ2				pmax	pmax		
	comp=Z,53nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,710nm,4.3s						
NJ2				LR	LR		
	comp=Z,1µm,17.9s						
NJ2				LR	LR		
	comp=Z,810nm,16.8s						
NJ2				LR	LR		
	comp=Z,1µm,21.7s						
USA0B	**Ussuriysk Arra**	**63.45**	**333**	*e*P	**P**	**01 41 16.6**	**+0.1**
	comp=Z,197nm,1.5s						
USRK	**Ussuriysk Ar.**	**63.45**	**333**	P	**P**	**01 41 17.3**	**+0.9**
	comp=Z,59nm,1.2s,baz=131,slow=5.8,SNR=36						
QIZ	**Qiongzhong**	**63.65**	**298**	P	**P**	**01 41 19.0**	**+0.6**
QIZ				S	**S**	**01 49 53.9**	**+2.7**
QIZ				pmax	pmax		
	comp=Z,450nm,8.8s						
QIZ				LR	LR		
	comp=Z,840nm,23.5s						
QIZ				LR	LR		
	comp=Z,1µm,21.6s						
QIZ				LR	LR		
	comp=Z,2µm,23.5s						
MYKOM	**Kota Tinggi**	**63.94**	**277**	P	**P**	**01 41 22.2**	**+1.8**
PET	**Petropavlovsk**	**64.20**	**354**	*e*P	**P**	**01 41 22.3**	**+1.1**
PET				*e*S	**S**	**01 49 54.8**	**-1.8**
ADK	**Adak**	**64.26**	**11**	PFAKE		01 41 30.0	+8.3
ADK				LR	LR		
	comp=Z,3µm,21.0s						
PETK	**Petropavlovsk-**	**64.37**	**354**	*e*P	**P**	**01 41 23.4**	**+1.0**
PETK	**Petropavlovsk-**	**64.37**	**354**	*e*P	**P**	**01 41 23.4**	**+1.0**
PETK	**Petropavlovsk-**	**64.37**	**354**	P	**P**	**01 41 22.8**	**+0.4**
	comp=Z,13nm,1.0s,baz=187,slow=11,SNR=5.0						
PETK				LR	LR	02 03 55.5	
	comp=Z,983nm,19.8s,baz=161,slow=31						
KGM	**Kluang**	**64.51**	**278**	P	**P**	**01 41 25.9**	**+1.7**
MDJ	**Mudanjiang**	**64.87**	**331**	P	**P**	**01 41 26.1**	**+0.2**
MDJ				pP	sP	01 41 37.0	0.0
MDJ				sP	pwP	01 41 41.4	+4.8
MDJ				PcP	**PcP**	**01 41 58.5**	**-0.4**
MDJ				PP	**PP**	**01 43 51.1**	**+2.2**
MDJ				S	**S**	**01 50 09.4**	**+4.1**
MDJ				pmax	pmax		
	comp=Z,71nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,2µm,4.8s						
MDJ				LR	LR		
	comp=Z,620nm,12.7s						
MDJ				LR	LR		
	comp=Z,700nm,15.9s						
MDJ				LR	LR		
	comp=Z,1µm,22.3s						
MDJ	**Mudanjiang**	**64.87**	**331**	*e*P	**P**	**01 41 26.0**	**+0.2**
	comp=Z,132nm,1.4s						
MDJ				LR	LR		
	comp=Z,937nm,21.0s						
DL2	**Dalian**	**65.14**	**322**	⇓*i*P	**P**	**01 41 28.0**	**+0.3**
DL2				S	**S**	**01 50 06.3**	**-2.6**
DL2				pmax	pmax		
	comp=Z,42nm,1.3s						
DL2				pmax	pmax		
	comp=Z,340nm,3.9s						
DL2				LR	LR		
	comp=Z,550nm,13.7s						
DL2				LR	LR		
	comp=Z,460nm,11.8s						
DL2				LR	LR		
	comp=Z,790nm,14.5s						
WHN	**Wuhan**	**65.22**	**311**	P	**P**	**01 41 28.4**	**0.0**
WHN				LR	LR		
	comp=Z,2µm,20.1s						
WHN				LR	LR		
	comp=Z,1µm,12.8s						
WHN				LR	LR		
	comp=Z,2µm,16.6s						
SNY	**Shenyang**	**65.94**	**326**	⇓P	**P**	**01 41 32.6**	**-0.2**
SNY				pmax	pmax		
	comp=Z,39nm,2.5s						
SNY				pmax	pmax		
	comp=Z,900nm,7.5s						
SNY				LR	LR		
	comp=Z,850nm,14.7s						
SNY				LR	LR		
	comp=Z,980nm,19.1s						
SNY				LR	LR		
	comp=Z,1µm,19.2s						
CN2	**Changchun**	**66.31**	**328**	*e*P	**P**	**01 41 34.7**	**-0.5**
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,840nm,4.0s						
CN2				LR	LR		
	comp=Z,740nm,19.0s						
CN2				LR	LR		
	comp=Z,620nm,19.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
TIA	**Tai'an**	**66.35**	**318**	P	**P**	**01 41 35.6**	**0.0**
TIA				pmax	pmax		
	comp=Z,11nm,1.2s						
TIA				pmax	pmax		
	comp=Z,170nm,4.9s						
TIA				LR	LR		
	comp=Z,310nm,20.6s						
TIA				LR	LR		
	comp=Z,330nm,19.1s						
TIA				LR	LR		
	comp=Z,580nm,18.8s						
FRIM	**Kepong**	**66.44**	**278**	P	**P**	**01 41 37.6**	**+1.0**
VNDA	**Vanda**	**66.52**	**181**	P	**P**	**01 41 35.8**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=11,slow=5.6,SNR=6.3						
VNDA				LR	LR	02 06 44.8	
	comp=Z,616nm,20.1s,baz=14,slow=32						
CASY	**Casey**	**66.78**	**201**	PFAKE		01 41 50.0	+12
CASY				LR	LR		
	comp=Z,404nm,21.0s						
IPM	**Ipoh**	**67.31**	**280**	*e*P	**P**	**01 41 41.7**	**-0.5**
	comp=Z,39nm,1.1s						
IPM	**Ipoh**	**67.31**	**280**	P	**P**	**01 41 43.1**	**+1.0**
KLR	**Kul'dur**	**67.50**	**336**	⇑*i*P	**P**	**01 41 43.2**	**+0.6**
NKL	**Nikolayevsk**	**67.75**	**343**	*e*P	**P**	**01 41 42.2**	**-1.8**
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
SKNT	**Sakolnakorn**	**68.10**	**293**	P	**P**	**01 41 48.8**	**+1.7**
	comp=Z,22nm,1.8s						
CHBT	**CHBT**	**68.28**	**289**	P	**P**	**01 41 52.2**	**+4.0**
	comp=Z,18nm,1.1s						
COCO	**West Island**	**68.43**	**261**	PFAKE		01 42 00.0	+11
COCO				LR	LR		
	comp=Z,3µm,20.0s						
ENH	**Enshi**	**68.75**	**309**	*e*P	**P**	**01 41 50.1**	**-0.8**
ENH				LR	LR		
	comp=Z,909nm,21.0s						
PSI	**Prapat**	**68.96**	**277**	*e*P	**P**	**01 41 51.5**	**-1.2**
	comp=Z,38nm,1.3s						
PSI	**Prapat**	**68.96**	**277**	*e*P	**P**	**01 41 51.5**	**-1.2**
PSI				pmax	pmax		
	comp=Z,38nm,1.3s						
BJT	**Baijiatuau**	**69.17**	**321**	*e*P	**P**	**01 41 53.6**	**+0.4**
	comp=Z,29nm,1.2s						
BJT				LR	LR		
	comp=Z,2µm,20.0s						
BJT	**Baijiatuau**	**69.17**	**321**	*e*P	**P**	**01 41 53.6**	**+0.4**
BJT				pmax	pmax		
	comp=Z,29nm,1.2s						
BJT				MLR	MLR		
	comp=Z,2µm,20.0s						
BJI	**Beijing**	**69.18**	**321**	P	**P**	**01 41 52.9**	**-0.4**
BJI				S	**S**	**01 51 00.4**	**+3.0**
BJI				pmax	pmax		
	comp=Z,17nm,1.8s						
BJI				LR	LR		
	comp=Z,840nm,20.2s						
BJI				LR	LR		
	comp=Z,740nm,20.7s						
BJI				LR	LR		
	comp=Z,840nm,20.0s						
NONG	**Nongkai**	**69.22**	**294**	P	**P**	**01 41 55.7**	**+1.7**
GYA	**Guiyang**	**69.33**	**304**	⇑*i*P	**P**	**01 41 56.9**	**+2.2**
GYA				pP	sP	01 42 08.6	+2.3
GYA				PP	**PP**	**01 44 32.8**	**+4.5**
GYA				S	**S**	**01 51 00.9**	**+0.8**
GYA				SKS	**SKSac**	**01 51 51.2**	**-2.3**
GYA				SS	**SS**	**01 55 29.4**	**+1.8**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,7.4s						
GYA				LR	LR		
	comp=Z,590nm,18.6s						
GYA				LR	LR		
	comp=Z,640nm,18.3s						
GYA				LR	LR		
	comp=Z,620nm,18.0s						
GSI	**Gunungsitoli**	**69.96**	**275**	*e*P	**P**	**01 41 58.7**	**0.0**
	comp=Z,44nm,0.9s						
TIY	**Taiyuan**	**70.31**	**317**	*e*P	**P**	**01 42 01.2**	**+0.7**
TIY				pmax	pmax		
	comp=Z,53nm,1.5s						
PBKT	**Sadao Pong**	**70.70**	**292**	P	**P**	**01 42 04.6**	**+1.5**
XAN	**Xi'an**	**70.94**	**312**	P	**P**	**01 42 03.8**	**-0.5**
XAN				pP	sP	01 42 16.4	+0.4
XAN				sP	PcP	01 42 24.2	-0.5
XAN				S	**S**	**01 51 23.6**	**+5.1**
XAN				SKS	**SKSac**	**01 52 00.8**	**-4.4**
XAN				SS	**SS**	**01 55 51.7**	**-0.3**
XAN				pmax	pmax		
	comp=Z,34nm,1.2s						
XAN				pmax	pmax		
	comp=Z,610nm,4.1s						
XAN				LR	LR		
	comp=Z,510nm,20.6s						
XAN				LR	LR		
	comp=Z,730nm,21.7s						
XAN				LR	LR		
	comp=Z,1µm,21.7s						
XAN	**Xi'an**	**70.94**	**312**	*e*P	**P**	**01 42 04.1**	**-0.2**
	comp=Z,60nm,1.3s						
XAN	**Xi'an**	**70.94**	**312**	*e*P	**P**	**01 42 04.1**	**-0.2**
XAN				pmax	pmax		
	comp=Z,60nm,1.3s						
MA2	**Magadan**	**71.56**	**351**	*e*P	**P**	**01 42 06.7**	**-0.7**
	comp=Z,44nm,1.5s						
MA2				LR	LR		
	comp=Z,1µm,21.0s						
MA2	**Magadan**	**71.56**	**351**	*ce*P	**P**	**01 42 06.0**	**-1.5**
MA2				pmax	pmax		
	comp=Z,30nm,1.7s						
UTHA	**Uthaitani**	**71.79**	**290**	P	**P**	**01 42 11.5**	**+1.8**
	comp=Z,2.6nm,1.0s						
KMI	**Kunming**	**72.06**	**301**	P	**P**	**01 42 12.0**	**+0.5**
KMI				pP	pP	01 42 20.5	+0.8
KMI				sP	sP	01 42 26.3	+3.2
KMI				PP	**PP**	**01 44 48.4**	**-3.6**
KMI				S	**S**	**01 51 32.9**	**+0.7**
KMI				sS	SKiKP	01 51 51.4	+4.4
KMI				SKS	**SKSac**	**01 52 07.3**	**-7.2**
KMI				pmax	pmax		
	comp=Z,28nm,1.6s						
KMI				pmax	pmax		
	comp=Z,460nm,3.9s						
KMI				LR	LR		
	comp=Z,380nm,23.8s						
KMI				LR	LR		
	comp=Z,1µm,20.7s						
KMI				LR	LR		
	comp=Z,2µm,20.7s						
KMI	**Kunming**	**72.06**	**301**	*e*P	**P**	**01 42 11.8**	**+0.3**
	comp=Z,66nm,1.5s						
KMI	**Kunming**	**72.06**	**301**	*e*P	**P**	**01 42 11.8**	**+0.3**
KMI				pmax	pmax		
	comp=Z,66nm,1.5s						
SUKH	**Sukhothai**	**72.20**	**292**	P	**P**	**01 42 14.6**	**+2.4**
	comp=Z,2.7nm,1.1s						
HHC	**Hu-ho-hao-te**	**72.55**	**319**	*e*P	**P**	**01 42 15.4**	**+1.5**
HHC				sP	sP	01 42 25.4	+0.3
HHC				S	**S**	**01 51 38.0**	**+1.1**
HHC				ScS	**SKKSac**	**01 52 17.7**	**+0.4**
HHC				pmax	pmax		
	comp=Z,40nm,1.0s						
HHC				pmax	pmax		
	comp=Z,700nm,7.2s						
HHC				LR	LR		
	comp=Z,710nm,17.3s						
HHC				LR	LR		
	comp=Z,630nm,17.3s						
HHC				LR	LR		
	comp=Z,880nm,19.0s						
ZEA	**Zeya**	**72.77**	**337**	*e*P	**P**	**01 42 15.0**	**+0.2**
ZEA				*e*		01 42 38.0	
ZEA				pmax	pmax		
	comp=E,56nm,1.4s						
ZEA				pmax	pmax		
	comp=N,86nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,140nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,1µm,5.0s						
ZEA				MLR	MLR		
	comp=N,600nm,20.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,20.0s						
HIA	**Hailar**	**72.92**	**330**	*e*P	**P**	**01 42 16.3**	**+0.4**
	comp=Z,76nm,1.2s						
HIA				LR	LR		
	comp=Z,1µm,20.0s						
HIA	**Hailar**	**72.92**	**330**	*d i*P	**P**	**01 42 16.0**	**+0.1**
HIA				pmax	pmax		
	comp=Z,54nm,1.2s						
CM01	**Chiang Mai Arr**	**73.10**	**293**	*e*P	**P**	**01 42 17.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**73.12**	**293**	P	**P**	**01 42 17.4**	**-0.3**
	comp=Z,5.6nm,0.8s,baz=115,slow=4.2,SNR=33						
CMAR				LR	LR	02 13 53.8	
	comp=Z,479nm,19.4s,baz=119,slow=35						
CMMT	**Chiang Mai**	**73.23**	**294**	P	**P**	**01 42 19.6**	**+1.3**
	comp=Z,12nm,1.6s,comp=Z,697nm						
CHTO	**Chiang Mai**	**73.23**	**294**	*e*P	**P**	**01 42 17.5**	**-0.8**
	comp=Z,29nm,1.4s						
CHTO				LR	LR		
	comp=Z,886nm,21.0s						
CHTO	**Chiang Mai**	**73.23**	**294**	*e*P	**P**	**01 42 17.5**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,29nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,886nm,21.0s						
CHTO	**Chiang Mai**	**73.23**	**294**	P	**P**	**01 42 19.7**	**+1.4**
	comp=Z,63nm,1.6s,comp=Z,3µm						
BTO	**Baotou**	**73.42**	**318**	*e*P	**P**	**01 42 19.5**	**+0.4**
CD2	**Chengdu**	**73.48**	**307**	P	**P**	**01 42 20.0**	**+0.4**
CD2				pP	pP	01 42 26.3	-1.5
CD2				PP	**PP**	**01 45 03.7**	**-0.1**
CD2				S	**SKiKP**	**01 51 49.4**	**+0.6**
CD2				sS	sS	01 52 00.1	-1.3
CD2				SS	**SS**	**01 56 33.1**	**+2.1**
CD2				pmax	pmax		
	comp=Z,70nm,0.9s						
CD2				pmax	pmax		
	comp=Z,720nm,7.9s						
CD2				LR	LR		
	comp=Z,2µm,21.9s						
CD2				LR	LR		
	comp=Z,1µm,25.8s						
CD2				LR	LR		
	comp=Z,2µm,28.8s						
SEY	**Seymchan**	**74.60**	**353**	*ce*P	**P**	**01 42 25.0**	**-0.3**
LZH	**Lanzhou**	**75.58**	**312**	*e*P	**P**	**01 42 32.3**	**+0.5**
LZH				pP	pwP	01 42 42.6	-0.3
LZH				sP	PcP	01 42 48.9	+4.2
LZH				PP	**PP**	**01 45 23.0**	**+1.4**
LZH				S	**SKiKP**	**01 51 58.7**	**+6.7**
LZH				pmax	pmax		
	comp=Z,63nm,1.4s						
LZH				pmax	pmax		
	comp=Z,910nm,4.8s						
LZH				LR	LR		
	comp=Z,1µm,19.5s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,19.5s						
KDAK	**Kodiak Island**	**76.18**	**21**	LR	LR	02 09 41.0	
	comp=Z,3µm,21.0s,baz=222,slow=31						
GAMB	**Gambell**	**76.38**	**10**	*e*P	**P**	**01 42 35.9**	**+0.4**
	comp=Z,51nm,1.4s						
CIT	**Chita**	**77.71**	**330**	*e*P	**P**	**01 42 44.0**	**+0.6**
CIT				*e*		01 42 51.7	
CIT				*e*		01 42 58.4	
CIT				pmax	pmax		
	comp=Z,268nm,1.6s						
SVW2	**Sparrevohn**	**77.77**	**18**	*e*P	**P**	**01 42 44.3**	**+0.9**
	comp=Z,75nm,1.4s						
ANM	**Nome**	**78.26**	**12**	*e*P	**P**	**01 42 47.1**	**+1.1**
	comp=Z,63nm,1.5s						
ANM	**Nome**	**78.26**	**12**	*e*P	**P**	**01 42 47.1**	**+1.1**
ANM				pmax	pmax		
	comp=Z,63nm,1.5s						
YAK	**Yakutsk**	**78.41**	**343**	*e*P	**P**	**01 42 46.9**	**0.0**
YAK				pmax	pmax		
	comp=Z,312nm,1.0s						
YAK				pmax	pmax		
	comp=N,151nm,1.3s						
YAK				pmax	pmax		
	comp=E,101nm,1.1s						
YAK				MLR	MLR		
	comp=Z,5µm,19.0s						
YAK				MLR	MLR		
	comp=N,3µm,20.0s						
YAK				MLR	MLR		
	comp=E,3µm,18.0s						
BILL	**Bilibino**	**78.88**	**360**	*e*P	**P**	**01 42 49.4**	**0.0**
	comp=E,109nm,1.5s						
BILL				LR	LR		
	comp=Z,634nm,20.0s						
BILL	**Bilibino**	**78.88**	**360**	⇓*i*P	**P**	**01 42 48.7**	**-0.7**
BILL				*e*		01 45 47.1	
BILL				*e*S	S	01 52 56.2	+11
BILL				*e*SS	**SS**	**01 57 58.2**	**+7.1**
BILL				pmax	pmax		
	comp=Z,75nm,1.4s						
BILL				MLR	MLR		
	comp=Z,459nm,18.0s						
ULN	**Ulaanbaatar**	**78.95**	**324**	*e*P	**P**	**01 42 50.6**	**+0.2**
	comp=Z,67nm,1.2s						
ULN				LR	LR		
	comp=Z,924nm,20.0s						
ULN	**Ulaanbaatar**	**78.95**	**324**	*d i*P	**P**	**01 42 50.4**	**-0.1**
ULN				pmax	pmax		
	comp=Z,64nm,1.3s						
SONM	**Songino Array**	**79.32**	**323**	P	**P**	**01 42 53.0**	**+0.5**
SONM	**Songino Array**	**79.32**	**323**	P	**P**	**01 42 53.0**	**+0.5**
	comp=Z,22nm,1.1s,baz=136,slow=4.6,SNR=60						
SONA1	**Songino Array**	**79.32**	**323**	*e*P	**P**	**01 42 52.4**	**-0.1**
GTA	**Gaotai**	**79.85**	**314**	⇓P	**P**	**01 42 55.5**	**-0.1**
GTA				pP	pwP	01 43 05.7	-1.0
GTA				sP	sP	01 43 10.2	+2.9
GTA				S	**S**	**01 52 54.4**	**-2.9**
GTA				SKS	**SKSac**	**01 53 05.8**	**-5.2**
GTA				sS	SKKSac	01 53 12.0	-0.8
GTA				SS	**SS**	**01 58 06.4**	**-0.9**
GTA				pmax	pmax		
	comp=Z,18nm,2.2s						
GTA				pmax	pmax		
	comp=Z,410nm,8.4s						
GTA				LR	LR		
	comp=Z,440nm,20.6s						
GTA				LR	LR		
	comp=Z,400nm,20.9s						
GTA				LR	LR		
	comp=Z,850nm,19.0s						
PMR	**Palmer**	**80.18**	**20**	*e*P	**P**	**01 42 57.2**	**+0.6**
	comp=Z,66nm,1.4s						
PMR	**Palmer**	**80.18**	**20**	*e*P	**P**	**01 42 57.2**	**+0.6**
PMR				pmax	pmax		
	comp=Z,67nm,1.4s						
SML	**Sawmill**	**80.60**	**20**	*e*P	**P**	**01 42 60.0**	**+1.0**
	comp=Z,76nm,1.5s						
SML	**Sawmill**	**80.60**	**20**	*e*P	**P**	**01 43 00.0**	**+1.0**
SML				pmax	pmax		
	comp=Z,76nm,1.5s						
CAST	**Castle Rocks**	**80.61**	**17**	*e*P	**P**	**01 42 59.5**	**+0.5**
	comp=Z,59nm,1.4s						
BOD	**Bodaibo**	**81.00**	**334**	*e*P	**P**	**01 42 59.5**	**-1.6**
BOD				pmax	pmax		
	comp=Z,39nm,1.8s						
SHL	**Shillong**	**81.49**	**298**	*e*P	**P**	**01 43 04.5**	**-0.2**
	comp=Z,9.6nm,0.9s						
SHL	**Shillong**	**81.49**	**298**	*e*P	**P**	**01 43 04.5**	**-0.2**
SHL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SHL	**Shillong**	**81.49**	**298**	*e*P	**P**	**01 43 07.5**	**+2.8**
RND	**Reindeer**	**81.58**	**19**	*e*P	**P**	**01 43 05.0**	**+0.8**
	comp=Z,21nm,1.2s						
RND	**Reindeer**	**81.58**	**19**	*e*P	**P**	**01 43 05.0**	**+0.8**
RND				pmax	pmax		
	comp=Z,21nm,1.2s						
MCK	**McKinley**	**81.79**	**18**	*e*P	**P**	**01 43 05.8**	**+0.6**
	comp=Z,36nm,1.3s						
MCK	**McKinley**	**81.79**	**18**	*e*P	**P**	**01 43 05.8**	**+0.6**
MCK				pmax	pmax		
	comp=Z,36nm,1.3s						
RDOG	**Red Dog Mine**	**81.81**	**11**	*e*P	**P**	**01 43 06.1**	**+0.9**
	comp=Z,52nm,1.3s						
DHY	**Denali Highway**	**81.81**	**19**	*e*P	**P**	**01 43 06.6**	**+1.1**
	comp=Z,37nm,1.5s						
KMRM	**Mail Ridge**	**81.85**	**46**	*e*P	**P**	**01 43 07.4**	**+1.3**
	comp=Z,88nm,1.2s						
GDXM	**Geysers**	**81.99**	**48**	*e*P	**P**	**01 43 08.1**	**+1.1**
	comp=Z,40nm,1.2s						
KHMM	**Horse Mountain**	**82.08**	**46**	*e*P	**P**	**01 43 08.5**	**+1.1**
	comp=Z,143nm,1.4s						
IM3	**Indian Mountai**	**82.13**	**15**	*e*P	**P**	**01 43 06.9**	**0.0**
MLY	**Manley**	**82.21**	**17**	*e*P	**P**	**01 43 08.3**	**+0.8**
	comp=Z,23nm,1.4s						
ZAK	**Zakamensk**	**82.33**	**325**	*e*P	**P**	**01 43 06.5**	**-2.0**
ZAK				pmax	pmax		
	comp=Z,22nm,1.1s						
O02D	**Mt. Diablo Mer**	**82.49**	**47**	P	**P**	**01 43 09.5**	**0.0**
	baz=249,SNR=6.2						

WRH	**Wood River Hil** comp=Z,40nm,1.2s	82.58	18	*e*P	P	01 43 09.8	+0.5
L02E	**Cave Junction** baz=248	82.64	45	P	P	01 43 10.5	+0.3
IRK	**Irkutsk**	82.66	327	*e*P	P	01 43 09.7	-0.3
IRK	comp=Z,136nm,3.4s			pmax	pmax		
TLY	**Talaya** comp=Z,54nm,1.1s	82.74	326	*e*P	P	01 43 10.1	-0.3
TLY	comp=Z,404nm,21.0s			LR	LR		
TLY	**Talaya**	82.74	326	*d* *i*P	P	01 43 09.9	-0.5
J01E	**Myrtle Point** baz=248	82.80	44	P	P	01 43 11.0	+0.1
K02D	**Willamette Mer** baz=248,SNR=5.1	82.80	44	P	P	01 43 10.9	-0.2
WDC	**Whiskeytown Da** comp=Z,30nm,1.3s	82.81	46	*e*P	P	01 43 11.8	+0.8
N02D	**Trinity Center** baz=249,SNR=8.1	82.83	46	P	P	01 43 11.0	-0.2
M02C	**Callahan** baz=249,SNR=9.3	82.88	46	P	P	01 43 10.5	-1.0
HDA	**Harding Lake** comp=Z,138nm,1.4s	82.89	18	*e*P	P	01 43 11.6	+0.6
HDA	**Harding Lake** baz=226	82.89	18	P	P	01 43 10.7	-0.2
MDM	**Murphy Dome** comp=Z,78nm,1.4s	82.89	18	*e*P	P	01 43 11.2	+0.2
SMMC	**Simmler** baz=251	82.91	52	P	P	01 43 10.9	-0.8
PKM	**Mcpherson Peak** baz=251	82.92	53	P	P	01 43 11.3	-0.7
TCOL	**CIGO, UAF Yank** baz=225	82.94	18	P	P	01 43 11.3	+0.2
COLA	**College** comp=Z,13nm,0.6s	82.94	18	*e*P	P	01 43 10.2	-0.9
COLA	comp=Z,1µm,20.0s			LR	LR		
COLA	**College**	82.94	18	*e*P	P	01 43 10.2	-0.9
COLA	comp=Z,13nm,0.6s			pmax	pmax		
COLA	comp=Z,1µm,20.0s			MLR	MLR		
RIDG	**Independ'e Rid** comp=Z,46nm,1.1s	83.10	20	*e*P	P	01 43 13.5	+1.3
YBH	**Yreka Blue Hor** comp=Z,50nm,1.3s	83.11	45	*e*P	P	01 43 13.5	+0.9
YBH	**Yreka Blue Hor** comp=Z,967nm,20.0s,baz=260,slow=30	83.11	45	LR	LR	02 13 01.1	
ILAR	**Eielson Array** comp=Z,13nm,0.8s,baz=219,slow=5.5,SNR=29	83.16	18	P	P	01 43 11.2	-1.1
ORV	**Oroville** comp=Z,48nm,1.3s	83.19	48	*e*P	P	01 43 14.2	+1.1
ORV	**Oroville**	83.19	48	*e*P	P	01 43 14.2	+1.1
ORV	comp=Z,48nm,1.3s			pmax	pmax		
I02D	**Swisshome** baz=248	83.21	43	P	P	01 43 13.7	+0.7
O03E	**Paynes Creek** baz=250,SNR=21	83.23	47	P	P	01 43 12.9	-0.5
POKR	**Poker Plat Res** baz=225	83.24	18	P	P	01 43 12.5	-0.2
HUMO	**Hull Mountain** comp=Z,46nm,1.3s	83.25	44	*e*P	P	01 43 14.6	+1.2
LSA	**Lhasa** comp=Z,13nm,1.4s	83.29	302	*e*P	P	01 43 14.0	-0.3
LSA	comp=Z,1µm,22.0s			LR	LR		
LSA	**Lhasa**	83.29	302	*e*P	P	01 43 14.0	-0.3
LSA	comp=Z,13nm,1.4s			pmax	pmax		
LSA	comp=Z,1µm,22.0s			MLR	MLR		
AFDM	**Forest Hills D** comp=Z,62nm,1.3s	83.37	48	*e*P	P	01 43 14.5	+0.4
I03D	**Drain, OR** baz=248	83.39	43	P	P	01 43 14.3	+0.3
CMB	**Columbia Colle** comp=Z,36nm,1.3s	83.50	49	*e*P	P	01 43 14.4	-0.4
CMB	**Columbia Colle**	83.50	49	*e*P	P	01 43 14.4	-0.4
CMB	comp=Z,36nm,1.3s			pmax	pmax		
SCRK	**Sand Creek** comp=Z,31nm,1.1s	83.54	20	*e*P	P	01 43 15.0	+0.5
L04D	**Klamath Falls** baz=249,SNR=7.2	83.56	45	P	P	01 43 15.0	-0.1
VOG	**Valley Oaks Go** baz=252	83.70	51	P	P	01 43 14.7	-1.1
M04C	**Macdoel** baz=249,SNR=13	83.73	45	P	P	01 43 15.8	-0.2
ARVC	**Arvin** baz=252	83.76	53	P	P	01 43 15.7	-0.3
VES	**Vestal, Richgr** baz=252	83.78	52	P	P	01 43 14.6	-1.6
WRAK	**Wrangell Islan**	83.80	29	PFAKE		01 43 30.0	+14
WRAK	comp=Z,2µm,19.0s			LR	LR		
JIS	**Juneau Island** comp=Z,50nm,1.4s	83.83	27	*e*P	P	01 43 17.1	+1.3
DECC	**Green Verdugo** baz=252	83.88	54	P	P	01 43 15.8	-1.0
COLD	**Coldfoot** comp=Z,22nm,1.2s	84.00	15	*e*P	P	01 43 18.0	+1.5
RUBR	**Rubicon Trail** comp=Z,72nm,1.3s	84.01	48	*e*P	P	01 43 17.9	+0.3
G03D	**McMinnville, O** baz=248	84.02	42	P	P	01 43 17.1	0.0
I04A	**Tendick Farm,** baz=249	84.06	43	P	P	01 43 17.1	-0.4
J04D	**Umpqua Nationa** baz=249,SNR=9.3	84.06	44	P	P	01 43 17.0	-0.7
MWC	**Mount Wilson** comp=Z,52nm,1.4s	84.09	54	*e*P	P	01 43 18.8	+0.8
MWC	**Mount Wilson**	84.09	54	*e*P	P	01 43 18.8	+0.8
MWC	comp=Z,52nm,1.4s			pmax	pmax		
K04D	**Chiloquin, OR** baz=249	84.09	45	P	P	01 43 17.1	-0.6
H04D	**Lebanon** baz=248	84.11	43	P	P	01 43 16.9	-0.8
BEKR	**Beckworth** comp=Z,78nm,1.4s	84.13	48	*e*P	P	01 43 18.4	+0.3
ISA	**Isabella, Lake** comp=Z,16nm,1.4s	84.20	52	*e*P	P	01 43 19.4	+1.0
ISA	**Isabella, Lake**	84.20	52	*e*P	P	01 43 19.4	+1.0
ISA	comp=Z,16nm,1.4s			pmax	pmax		
ISA	**Isabella, Lake** baz=252,SNR=6.0	84.20	52	P	P	01 43 17.1	-1.4
MOY	**Mondy**	84.20	325	*e*P	P	01 43 17.5	-0.6
MOY	comp=Z,154nm,3.4s			pmax	pmax		
EDW2	**Edwards Air Fo** baz=252,SNR=8.7	84.34	53	P	P	01 43 17.6	-1.5
MDPB	**Devils Postpil** comp=Z,53nm,1.3s	84.35	50	*e*P	P	01 43 20.3	+0.9
WAKR	**Walker** comp=Z,102nm,1.4s	84.36	49	*e*P	P	01 43 19.8	+0.5
OMMB	**Old Mammoth Mi** comp=Z,42nm,1.5s	84.40	50	*e*P	P	01 43 20.1	+0.3
BFSC	**Mount Baldy Ra** baz=253,SNR=5.4	84.41	54	P	P	01 43 18.7	-0.9
PNTR	**Pine Nut** comp=Z,78nm,1.3s	84.43	49	*e*P	P	01 43 19.9	+0.2
109C	**Camp Elliot, M** baz=253	84.45	55	P	P	01 43 18.4	-1.2
NLWA	**Neilton Lookou**	84.46	40	PFAKE		01 43 30.0	+11
NLWA	comp=Z,2µm,21.0s			LR	LR		
VCNR	**Virginia City** comp=Z,21nm,1.3s	84.46	48	*e*P	P	01 43 20.6	+0.8
F04D	**Rainier, OR** baz=248	84.51	41	P	P	01 43 19.1	-0.5
H04A	**Detroit Lake** comp=Z,60nm,1.5s	84.53	43	*e*P	P	01 43 20.7	+0.8
H04A				*e*pP	sP	01 43 31.6	+0.2
MLAC	**Mammoth, Mammo** baz=252	84.53	50	P	P	01 43 19.4	-0.8
MURC	**Murrieta** baz=253	84.59	54	P	P	01 43 19.8	-0.6
YERR	**Yerington** comp=Z,66nm,1.5s	84.66	49	*e*P	P	01 43 21.5	+0.7
J05D	**Fort Rock, OR** baz=250,SNR=16	84.68	44	P	P	01 43 19.6	-1.1
CWC	**Cottonwood Cre** baz=252	84.74	51	P	P	01 43 20.4	-0.9
LRMC	**Laurel Mtn Rad** baz=253,SNR=5.6	84.76	52	P	P	01 43 20.4	-0.9
PAHR	**Pah Rah Range** comp=Z,73nm,1.3s	84.79	48	*e*P	P	01 43 21.2	-0.1
MOD	**Modoc Plateau** comp=Z,51nm,1.3s	84.85	46	*e*P	P	01 43 22.0	+0.3
E04D	**Cinebar** baz=248	84.97	41	P	P	01 43 21.8	-0.1
I05D	**Terrebonne, OR** baz=249	84.97	43	P	P	01 43 21.3	-0.8
EGAK	**Eagle** comp=Z,240nm,1.9s	85.00	20	*e*P	P	01 43 21.1	-0.6
D03D	**Eldon** baz=248	85.00	40	P	P	01 43 22.1	0.0
MONP2	**Monument Peak** baz=254,SNR=5.6	85.01	55	P	P	01 43 22.1	-0.6
PINE	**Pine Mountain** comp=Z,82nm,1.4s	85.05	44	*e*P	P	01 43 22.8	+0.1
DAC	**Darwin (Calif)** comp=Z,64nm,0.4s	85.06	52	*e*P	P	01 43 23.6	+0.6
RYN	**Ryan** comp=Z,54nm,1.4s	85.08	49	*e*P	P	01 43 23.6	+0.7
MPMC	**Manual Prospec** baz=253,SNR=8.5	85.08	52	P	P	01 43 22.4	-0.6
MAW	**Mawson** comp=Z,1µm,21.6s,baz=93,slow=32	85.14	202	LR	LR	02 15 41.3	
DAWY	**Dawson** comp=Z,17nm,1.2s	85.16	21	*e*P	P	01 43 23.8	+1.2
NVAR	**Mina Array Bea** comp=Z,11nm,0.9s,baz=231,slow=5.7,SNR=48	85.18	50	P	P	01 43 23.5	0.0
NVAR	comp=Z,4µm,21.2s,baz=273,slow=30			LR	LR	02 13 14.8	
PFO	**Pinyon Flats O** comp=Z,17nm,1.4s	85.18	55	*e*P	P	01 43 23.0	-0.5
PFO	**Pinyon Flats O**	85.18	55	*e*P	P	01 43 23.0	-0.5
PFO	comp=Z,17nm,1.4s			pmax	pmax		
PFO	**Pinyon Flats O** baz=254	85.18	55	P	P	01 43 22.6	-0.8
PFO	**Pinyon Flats O** comp=Z,2µm,21.3s,baz=287,slow=30	85.18	55	LR	LR	02 12 49.4	
XPFO	**Pion Flat** comp=Z,23nm,1.3s	85.18	55	*e*P	P	01 43 24.3	+0.8
IKP	**In-Ko-Pah, Jac** baz=254,SNR=5.1	85.19	56	P	P	01 43 22.8	-0.7
NV11	**Mina Array Sit** comp=Z,4.7nm,1.4s	85.29	50	*e*P	P	01 43 23.5	-0.5
G05D	**Wamic, OR** baz=249	85.31	42	P	P	01 43 23.5	-0.3
GSC	**Goldstone, Bar** comp=Z,3.7nm,1.1s	85.39	53	*e*P	P	01 43 25.2	+0.8
GSC	**Goldstone, Bar** baz=253	85.39	53	P	P	01 43 23.7	-0.7
F05D	**White Salmon** baz=249	85.44	42	P	P	01 43 23.7	-0.7
GRAC	**Grapevine Rang** baz=253,SNR=6.2	85.45	51	P	P	01 43 24.1	-0.5
KVN	**Kaiserville** comp=Z,54nm,1.4s	85.52	49	*e*P	P	01 43 24.7	-0.4
KVN	**Kaiserville**	85.52	49	*e*P	P	01 43 24.7	-0.4
KVN	comp=Z,54nm,1.4s			pmax	pmax		
LON	**Longmire** comp=Z,14nm,1.2s	85.52	41	*e*P	P	01 43 25.5	+0.7
SWSC	**Sam W. Stewart** baz=254	85.52	55	P	P	01 43 24.2	-0.8
D05A	**Enumclaw** comp=Z,109nm,1.4s	85.57	40	*e*P	P	01 43 25.7	+0.8
HEC	**Hector,Ludlow** baz=253	85.62	53	P	P	01 43 24.6	-1.0
BELC	**Belle Mtn. Jos** baz=254,SNR=13	85.66	54	P	P	01 43 24.9	-1.0
FURC	**Furnace Creek,** baz=253,SNR=7.6	85.68	52	P	P	01 43 25.3	-0.4
A04D	**Lummi Island** baz=248	85.69	39	P	P	01 43 25.2	-0.2
KNGR	**Kungurtug, Tuv**	85.76	323	⇓*i*P	P	01 43 26.0	0.0
DLBC	**Dease Lake** comp=Z,42nm,1.4s	85.89	28	*e*P	P	01 43 26.7	+0.3
B05A	**Bryant** baz=249	85.89	39	P	P	01 43 26.4	-0.1
SHOC	**Shoshone, Teco** baz=253,SNR=6.8	85.98	52	P	P	01 43 26.7	-0.5
BC3	**Big Chuckawall** baz=254,SNR=6.3	86.00	55	P	P	01 43 27.5	0.0
TUQ	**Turquoise Moun** baz=254,SNR=8.5	86.12	53	P	P	01 43 27.3	-0.9
I07A	**Izee** comp=Z,60nm,1.4s	86.13	44	*e*P	P	01 43 27.8	-0.2
GMRC	**Granite Mounta** baz=254,SNR=8.0	86.14	54	P	P	01 43 27.3	-1.0
WVOR	**Wild Horse Val** comp=Z,73nm,1.4s	86.19	46	*e*P	P	01 43 28.5	+0.2
WVOR	comp=Z,2µm,20.0s			LR	LR		
WVOR	**Wild Horse Val**	86.19	46	*e*P	P	01 43 28.5	+0.2
WVOR	comp=Z,73nm,1.4s			pmax	pmax		
WVOR	comp=Z,2µm,20.0s			MLR	MLR		
TPNV	**Topopah Spring** comp=Z,9.6nm,1.1s	86.30	51	*e*P	P	01 43 30.2	+1.2
TPNV	**Topopah Spring** baz=253,SNR=8.5	86.30	51	P	P	01 43 28.6	-0.4
TIXI	**Tiksi**	86.30	349	*d* *i*P	P	01 43 26.9	-1.1
TIXI	comp=Z,53nm,1.3s			pmax	pmax		
GLA	**Glamis** comp=Z,37nm,1.4s	86.34	55	*e*P	P	01 43 30.1	+0.9
GLA	**Glamis**	86.34	55	*e*P	P	01 43 30.1	+0.9
GLA	comp=Z,37nm,1.4s			pmax	pmax		
GLA	**Glamis** baz=254,SNR=7.4	86.34	55	P	P	01 43 29.5	+0.4
IRM	**Iron Mountain** baz=254,SNR=13	86.38	54	P	P	01 43 28.8	-0.5
LTY	**Liberty** comp=Z,21nm,1.3s	86.43	41	*e*P	P	01 43 29.1	-0.2
F07A	**Phinny Hill Vi** comp=Z,56nm,1.5s	86.45	42	*e*P	P	01 43 30.7	+1.4
J08A	**Circle Bar Ran** comp=Z,41nm,1.2s	86.60	45	*e*P	P	01 43 30.8	+0.5
LDFC	**Landfair** comp=Z,88nm,1.3s	86.66	53	*e*P	P	01 43 30.9	+0.2
Y12C	**Blythe** comp=Z,19nm,1.3s	86.77	55	*e*P	P	01 43 32.2	+1.0
Y12C	**Blythe** baz=255,SNR=9.1	86.77	55	P	P	01 43 30.9	-0.3
HAWA	**Hanford** comp=Z,57nm,1.5s	86.87	42	*e*P	P	01 43 31.8	+0.4
HAWA	comp=Z,1µm,20.0s			LR	LR		
LLLB	**Lillooet** comp=Z,24nm,1.4s	86.88	37	*e*P	P	01 43 32.3	+0.9
G08A	**Pilot Rock** comp=Z,47nm,1.3s	86.89	43	*e*P	P	01 43 32.2	+0.5
SHPR	**Sheep Range** comp=Z,51nm,1.5s	87.01	52	*e*P	P	01 43 32.8	+0.3
R11A	**Troy Canyon, C** comp=Z,21nm,1.5s	87.20	50	*e*P	P	01 43 32.8	-0.6
R11A	**Troy Canyon, C** baz=254,SNR=11	87.20	50	P	P	01 43 33.0	-0.4
E08A	**Dider Farm, El** comp=Z,61nm,1.2s	87.22	42	*e*P	P	01 43 33.0	0.0
PDMCI	**Parker Dam,Lak** baz=255,SNR=7.5	87.22	54	P	P	01 43 33.9	+0.6
D08A	**Wollman Farm,** comp=Z,24nm,1.2s	87.49	41	*e*P	P	01 43 35.3	+0.9
W13A	**Hualapai Mount** comp=Z,38nm,1.4s	87.63	54	*e*P	P	01 43 36.5	+0.9
B08A	**Colville Reser** comp=Z,21nm,1.3s	87.66	40	*e*P	P	01 43 35.7	+0.5
214A	**Organ Pipe Nat** baz=256,SNR=11	87.70	57	P	P	01 43 36.3	+0.5
E09A	**Wood Farm, Sta** comp=Z,50nm,1.4s	87.82	42	*e*P	P	01 43 35.6	-0.3
BMO	**Blue Mountains** comp=Z,3.8nm,1.0s	87.86	44	*e*P	P	01 43 35.8	-0.6
BMO	**Blue Mountains**	87.86	44	*e*P	P	01 43 35.8	-0.6
BMO	comp=Z,4.0nm,1.0s			pmax	pmax		
Y14A	**Wickenburg** comp=Z,13nm,1.4s	88.04	55	*e*P	P	01 43 37.5	+0.1
ELK	**Elko** comp=Z,23nm,1.5s	88.12	48	*e*P	P	01 43 38.2	+0.3
ELK	**Elko**	88.12	48	*e*P	P	01 43 38.2	+0.3
ELK	comp=Z,23nm,1.5s			pmax	pmax		
C09A	**Chrisman Ranch** comp=Z,4.5nm,0.8s	88.15	41	*e*P	P	01 43 38.7	+1.2
F10A	**Beach Ranch, E** comp=Z,44nm,1.5s	88.26	43	*e*P	P	01 43 37.6	-0.5
PSUT	**Pine Spring** comp=Z,21nm,1.4s	88.56	50	*e*P	P	01 43 40.2	+0.3
LCMT	**Little Creek M** comp=Z,25nm,1.4s	88.63	52	*e*P	P	01 43 40.9	+0.7
CCUT	**Cedar City** comp=Z,22nm,1.3s	88.67	51	*e*P	P	01 43 41.6	+1.1
SZCU	**Shurtz Canyon** comp=Z,38nm,1.5s	88.90	51	*e*P	P	01 43 41.9	+0.4
KNB	**Kanab** comp=Z,34nm,1.4s	88.96	52	*e*P	P	01 43 42.4	+0.5
NEW	**Newport** comp=Z,11nm,1.3s	89.02	40	*e*P	P	01 43 42.1	+0.4
NEW	comp=Z,2µm,20.0s			LR	LR		
NEW	**Newport**	89.02	40	*e*P	P	01 43 42.1	+0.4
NEW	comp=Z,11nm,1.3s			pmax	pmax		
NEW	comp=Z,2µm,20.0s			MLR	MLR		
NEW	**Newport** baz=252	89.02	40	P	P	01 43 41.2	-0.5
U15A	**North Rim** comp=Z,71nm,1.4s	89.22	53	*e*P	P	01 43 43.5	+0.4
X16A	**Lo Mia Camp, P** comp=Z,32nm,1.4s	89.41	55	*e*P	P	01 43 44.5	+0.4
TUC	**Tucson** comp=Z,24nm,1.5s	89.46	57	*e*P	P	01 43 45.3	+1.2
TUC	comp=Z,4µm,20.0s			LR	LR		
TUC	**Tucson** baz=257	89.46	57	P	P	01 43 44.5	+0.4
PKCU	**Pink Cliffs** comp=Z,73nm,1.4s	89.46	52	*e*P	P	01 43 44.6	+0.3
HLID	**Hailey** comp=Z,55nm,1.5s	89.49	45	*e*P	P	01 43 44.5	+0.4
HLID	comp=Z,1µm,22.0s			LR	LR		
HLID	**Hailey** baz=254	89.49	45	P	P	01 43 44.7	+0.6
INK	**Inuvik** comp=Z,14nm,1.4s	89.54	19	*e*P	P	01 43 42.6	-0.9
INK	**Inuvik**	89.54	19	*e*P	P	01 43 42.6	-0.9
INK	comp=Z,14nm,1.4s			pmax	pmax		
MTPU	**Mount Pierson** comp=Z,68nm,1.4s	89.70	51	*e*P	P	01 43 46.4	+0.9
WUAZ	**Wupatki** comp=Z,54nm,1.4s	89.73	54	*e*P	P	01 43 45.2	-0.2
WUAZ	comp=Z,2µm,19.0s			LR	LR		
WUAZ	**Wupatki** baz=256	89.73	54	P	P	01 43 45.6	+0.1
DUG	**Dugway, Tooele** comp=Z,12nm,1.1s	89.76	49	*e*P	P	01 43 46.0	+0.6
DUG	comp=Z,2µm,21.0s			LR	LR		
DUG	**Dugway, Tooele**	89.76	49	*e*P	P	01 43 46.0	+0.6
DUG	comp=Z,12nm,1.1s			pmax	pmax		
DUG	comp=Z,2µm,21.0s			MLR	MLR		
DUG	**Dugway, Tooele** baz=255	89.76	49	P	P	01 43 45.5	+0.1
MSU	**Marysvale**	89.82	51	*e*P	P	01 43 46.5	+0.6
MSU	**Marysvale**	89.82	51	*e*P	P	01 43 46.5	+0.6
WMQ	**Urumqi**	89.88	315	P	P	01 43 45.3	-0.5
WMQ				pP	sP	01 43 57.3	+0.1
WMQ				PP	PP	01 47 14.4	-4.4
WMQ				S	S	01 54 29.9	-6.6
WMQ				SS	SS	02 00 35.6	+0.9
WMQ	comp=Z,56nm,1.3s			pmax	pmax		
WMQ	comp=Z,170nm,3.6s			pmax	pmax		
WMQ	comp=Z,830nm,21.7s			LR	LR		
WMQ	comp=Z,760nm,21.7s			LR	LR		
WMQ	comp=Z,960nm,28.1s			LR	LR		
WMQ	**Urumqi** comp=Z,35nm,1.3s	89.88	315	*e*P	P	01 43 45.7	-0.1
WMQ	**Urumqi**	89.88	315	*e*P	P	01 43 45.7	-0.1
WMQ	comp=Z,35nm,1.3s			pmax	pmax		
HVU	**Hansel Valley** comp=Z,87nm,1.3s	90.19	48	*e*P	P	01 43 47.5	+0.1
HVU	**Hansel Valley**	90.19	48	*e*P	P	01 43 47.6	+0.1
HVU	comp=Z,87nm,1.3s			pmax	pmax		
NLU	**North Lily Min** comp=Z,45nm,1.3s	90.25	49	*e*P	P	01 43 48.1	+0.3
319A	**Douglas** comp=Z,53nm,1.4s	90.50	58	*e*P	P	01 43 48.8	-0.2
MPU	**Maple Canyon** comp=Z,52nm,1.5s	90.60	49	*e*P	P	01 43 50.5	+1.1
X18A	**Snowflake** comp=Z,44nm,1.5s	90.64	55	*e*P	P	01 43 50.1	+0.4
CTU	**Camp Tracy** comp=Z,38nm,1.2s	90.67	49	*e*P	P	01 43 50.6	+0.9
MSO	**Missoula** comp=Z,22nm,1.4s	90.68	42	*e*P	P	01 43 50.3	+0.7
MSO	**Missoula** baz=255	90.68	42	P	P	01 43 50.2	+0.6
TMUT	**Trail Mountain** comp=Z,15nm,1.0s	90.75	50	*e*P	P	01 43 51.4	+1.2
JLU	**Jordanelle** comp=Z,63nm,1.4s	90.87	49	*e*P	P	01 43 51.3	+0.5
MCMT	**McKenzie Canyo**	90.90	45	*e*P	P	01 43 51.3	+0.5
W18A	**Petrified Fore** comp=Z,27nm,1.3s	90.94	55	*e*P	P	01 43 51.9	+0.7
W18A	**Petrified Fore** baz=257	90.94	55	P	P	01 43 51.3	+0.2
TCUT	**Toone Canyon** comp=Z,75nm,1.3s	91.02	48	*e*P	P	01 43 51.5	+0.1
DLMT	**Dillon** comp=Z,53nm,1.3s	91.21	44	*e*P	P	01 43 52.4	+0.3
SRU	**San Rafael Swe** comp=Z,6.9nm,1.3s	91.22	51	*e*P	P	01 43 53.1	+0.8
SRU	**San Rafael Swe**	91.22	51	*e*P	P	01 43 53.2	+0.8
SRU	comp=Z,7.0nm,1.3s			pmax	pmax		
LRM	**Limekiln Ridge**	91.42	44	*e*P	P	01 43 55.0	+1.8
DGZ	**Jazzator, Alta**	91.60	320	*c* *i*P	P	01 43 53.8	0.0
DGZ	comp=Z,11nm,1.0s			pmax	pmax		
AHID	**Auburn Hatcher**	91.63	47	PFAKE		01 44 10.0	+16
AHID	comp=Z,2µm,19.0s			LR	LR		
HYB	**Hyderabad**	91.67	287	*i* P	P	01 43 54.5	-0.1
QLMT	**Earthquake Lak**	91.88	45	*e*P	P	01 43 55.7	+0.4
FXWY	**Fox Creek** comp=Z,30nm,1.5s	91.89	46	*e*P	P	01 43 54.4	-0.9
TPAW	**Teton Pass** comp=Z,14nm,1.3s	91.91	46	*e*P	P	01 43 55.7	+0.1
BOZ	**Bozeman (W)** comp=Z,67nm,1.6s	91.93	44	*e*P	P	01 43 54.8	-0.6
BOZ	comp=Z,2µm,21.0s			LR	LR		
BOZ	**Bozeman (W)**	91.93	44	*e*P	P	01 43 54.8	-0.6
BOZ	comp=Z,67nm,1.6s			pmax	pmax		
BOZ	comp=Z,2µm,21.0s			MLR	MLR		
BOZ	**Bozeman (W)** baz=256	91.93	44	P	P	01 43 55.7	+0.3
REDW	**Red Top Meadow** comp=Z,61nm,1.5s	91.95	46	*e*P	P	01 43 56.3	+0.7
121A	**Cookes Peak, D** baz=258	91.98	57	P	P	01 43 56.9	+0.9
IMW	**Indian Meadow** comp=Z,31nm,1.4s	92.01	46	*e*P	P	01 43 56.8	+0.8
YHB	**Horse Butte** comp=Z,35nm,1.4s	92.03	45	*e*P	P	01 43 57.0	+1.0
HRY	**Holter Researc**	92.06	43	*e*P	P	01 43 56.7	+0.7
MOOW	**Moose Ponds** comp=Z,9.9nm,1.3s	92.11	46	*e*P	P	01 43 56.8	+0.4
PV09	**Paradox Valley**	92.14	51	*e*P	P	01 43 57.8	+1.0
YMR	**Madison River** comp=Z,21nm,1.4s	92.17	45	*e*P	P	01 43 57.5	+0.9
LOHW	**Long Hollow** comp=Z,12nm,1.3s	92.18	46	*e*P	P	01 43 57.7	+1.0
YPP	**Pitchstone Pla** comp=Z,5.2nm,1.2s	92.19	45	*e*P	P	01 43 57.8	+0.9
PV14	**Lion Creek, Pa**	92.20	51	*e*P	P	01 43 57.4	+0.4

	comp=Z,12nm,1.2s						
YFT	**Old Faithful**	**92.21**	**45**	*e*P	**P**	**01 43 57.7**	**+0.8**
	comp=Z,24nm,1.4s						
PV19	**Morning Glory**	**92.22**	**52**	*e*P	**P**	**01 43 58.1**	**+1.1**
	comp=Z,24nm,1.5s						
FLWY	**Flagg Ranch**	**92.22**	**46**	*e*P	**P**	**01 43 58.2**	**+1.4**
	comp=Z,25nm,1.4s						
PV23	**Carpenter Ridg**	**92.23**	**51**	*e*P	**P**	**01 43 58.3**	**+1.2**
	comp=Z,24nm,1.4s						
PV17	**East Wray Mesa**	**92.23**	**52**	*e*P	**P**	**01 43 58.0**	**+0.9**
PV20	**West Nyswonger**	**92.24**	**52**	*e*P	**P**	**01 44 00.8**	**+3.7**
	comp=Z,20nm,1.3s						
PV16	**Nyswonger Mesa**	**92.27**	**52**	*e*P	**P**	**01 43 57.2**	**0.0**
	comp=Z,10nm,1.5s						
PV21	**Cone Mtn., Par**	**92.28**	**51**	*e*P	**P**	**01 43 57.9**	**+0.6**
	comp=Z,17nm,1.3s						
PV04	**Paradox Valley**	**92.30**	**51**	*e*P	**P**	**01 43 57.7**	**+0.4**
	comp=Z,18nm,1.5s						
PV03	**Paradox Valley**	**92.31**	**52**	*e*P	**P**	**01 43 57.9**	**+0.5**
	comp=Z,10.0nm,1.3s						
PV12	**Saucer Basin,**	**92.36**	**52**	*e*P	**P**	**01 43 58.1**	**+0.4**
	comp=Z,12nm,1.2s						
MVCO	**Mesa Verde**	**92.36**	**53**	*e*P	**P**	**01 43 57.8**	**+0.1**
	comp=Z,9.2nm,1.4s						
MVCO				LR	LR		
	comp=Z,2µm,19.0s						
MVCO	**Mesa Verde**	**92.36**	**53**	P	**P**	**01 43 58.2**	**+0.5**
	baz=258						
H17A	**Grant Village**	**92.38**	**45**	*e*P	**P**	**01 43 59.1**	**+1.5**
	comp=Z,16nm,1.3s						
H17A	**Grant Village**	**92.38**	**45**	P	**P**	**01 43 59.1**	**+1.5**
	baz=257						
YNR	**Norris Junctio**	**92.38**	**45**	*e*P	**P**	**01 43 59.0**	**+1.3**
	comp=Z,16nm,1.5s						
PV01	**Paradox Valley**	**92.50**	**52**	*e*P	**P**	**01 43 58.9**	**+0.6**
	comp=Z,4.9nm,1.2s						
LKWY	**Lake**	**92.54**	**45**	PFAKE		01 44 10.0	+12
LKWY				LR	LR		
	comp=Z,2µm,19.0s						
BW06	**Boulder Array**	**92.74**	**47**	*e*P	**P**	**01 43 58.9**	**-0.4**
	comp=Z,44nm,1.8s						
BW06				LR	LR		
	comp=Z,2µm,22.0s						
BW06	**Boulder Array**	**92.74**	**47**	P	**P**	**01 43 59.0**	**-0.3**
	baz=258						
PD31	**Pinedale Array**	**92.74**	**47**	*e*P	**P**	**01 43 59.0**	**-0.3**
PDAR	**Pinedale Array**	**92.74**	**47**	*e*P	**P**	**01 43 57.9**	**-1.4**
PDAR	**Pinedale Array**	**92.74**	**47**	P	**P**	**01 44 00.0**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=259,slow=3.0,SNR=17						
PDAR				LR	LR	02 20 14.1	
	comp=Z,843nm,19.2s,baz=264,slow=32						
DGAR	**Diego Garcia**	**92.90**	**262**	PFAKE		01 44 10.0	+10
DGAR				LR	LR		
	comp=Z,807nm,20.0s						
O20A	**White River Ci**	**93.16**	**50**	*e*P	**P**	**01 44 01.3**	**0.0**
	comp=Z,25nm,1.5s						
O20A	**White River Ci**	**93.16**	**50**	P	**P**	**01 44 01.9**	**+0.6**
	baz=258						
GCMT	**Greycliff**	**93.31**	**44**	*e*P	**P**	**01 44 02.1**	**+0.4**
RLMT	**Red Lodge**	**93.44**	**45**	*e*P	**P**	**01 44 02.9**	**+0.4**
	comp=Z,20nm,1.5s						
RLMT				LR	LR		
	comp=Z,2µm,19.0s						
RLMT	**Red Lodge**	**93.44**	**45**	P	**P**	**01 44 02.8**	**+0.4**
	baz=258						
ANMO	**Albuquerque**	**93.54**	**55**	*e*P	**P**	**01 44 03.9**	**+0.7**
ANMO				LR	LR		
	comp=Z,2µm,20.0s						
ANMO	**Albuquerque**	**93.54**	**55**	P	**P**	**01 44 03.8**	**+0.7**
	baz=259						
EGMT	**Eagleton**	**93.73**	**42**	*e*P	**P**	**01 44 04.1**	**+0.6**
	comp=Z,79nm,1.9s						
EGMT				LR	LR		
	comp=Z,1µm,19.0s						
EGMT	**Eagleton**	**93.73**	**42**	P	**P**	**01 44 04.1**	**+0.6**
	baz=258						
S22A	**4UR Ranch, Cre**	**93.77**	**52**	*e*P	**P**	**01 44 05.1**	**+0.8**
	comp=Z,5.4nm,1.1s						
S22A	**4UR Ranch, Cre**	**93.77**	**52**	P	**P**	**01 44 04.4**	**+0.1**
	baz=259						
MNTX	**Cornudas Mount**	**93.82**	**59**	PFAKE		01 44 20.0	+16
MNTX				LR	LR		
	comp=Z,3µm,20.0s						
MNTX	**Cornudas Mount**	**93.82**	**59**	P	**P**	**01 44 04.4**	**+0.1**
	baz=260						
SMCO	**Snowmass**	**93.93**	**51**	*e*P	**P**	**01 44 05.4**	**+0.2**
ZAA0	**Zalesovo Array**	**94.20**	**324**	*e*P	**P**	**01 44 05.2**	**-0.2**
	comp=Z,23nm,1.2s						
ZALV	**Zalesovo Beam**	**94.20**	**324**	*e*P	**P**	**01 44 03.6**	**-1.8**
ZALV	**Zalesovo Beam**	**94.20**	**324**	*i* P	**P**	**01 44 05.0**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,11nm,1.0s						
ZALV	**Zalesovo Beam**	**94.20**	**324**	P	**P**	**01 44 04.8**	**-0.7**
	comp=Z,11nm,1.0s,baz=108,slow=4.8,SNR=29						
ZALV				LR	LR	02 24 36.2	
	comp=Z,478nm,21.2s,baz=72,slow=34						
RWWY	**Rawlins**	**94.23**	**49**	*e*P	**P**	**01 44 06.6**	**+0.3**
	comp=Z,4.1nm,1.3s						
MK01	**Makanchi Array**	**94.26**	**317**	*e*P	**P**	**01 44 04.5**	**-1.4**
MK31	**Makanchi Array**	**94.27**	**317**	*e*P	**P**	**01 44 05.6**	**-0.5**
MKAR	**Makanchi Array**	**94.27**	**317**	*e*P	**P**	**01 44 05.6**	**-0.5**
	comp=Z,106nm,1.0s						
MKAR				PKKPbc	**PKKPdf**	**02 01 05.6**	**-2.2**
MKAR	**Makanchi Array**	**94.27**	**317**	*ce*P	**P**	**01 44 05.1**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,16nm,1.0s						
MKAR	**Makanchi Array**	**94.27**	**317**	P	**P**	**01 44 05.2**	**-0.8**
	comp=Z,16nm,1.0s,baz=102,slow=4.2,SNR=52						
MKAR				PKKPbc	**PKKPdf**	**02 01 05.6**	**-2.2**
	comp=Z,0.8nm,0.7s,baz=278,slow=2.6,SNR=8.2						
MKAR				LR	LR	02 26 06.0	
	comp=Z,326nm,21.5s,baz=104,slow=35						
YKA	**Yellowknife Ar**	**94.47**	**27**	P	**P**	**01 44 04.8**	**-1.7**
	comp=Z,0.9nm,0.6s,baz=256,slow=4.6,SNR=15						
YKB5	**Yellowknife Ar**	**94.47**	**27**	*e*P	**P**	**01 44 05.4**	**-1.1**
YKW3	**Yellowknife Ar**	**94.48**	**27**	*e*P	**P**	**01 44 07.1**	**+0.6**
	comp=Z,1.2nm,0.8s						
MAKZ	**Makanchi**	**94.49**	**317**	*e*P	**P**	**01 44 06.5**	**-0.5**
	comp=Z,39nm,1.2s						
SDCO	**Great Sand Dun**	**94.81**	**53**	PFAKE		01 44 20.0	+11
SDCO				LR	LR		
	comp=Z,2µm,20.0s						
TXAR	**Lajitas Array**	**94.86**	**61**	LR	LR	02 18 42.6	
	comp=Z,2µm,20.8s,baz=0.0,slow=30						
ISCO	**Idaho Springs**	**95.08**	**51**	PFAKE		01 44 20.0	+10
ISCO				LR	LR		
	comp=Z,4µm,22.0s						
NVS	**Novosibirsk**	**95.29**	**325**	*e*P	**P**	**01 44 09.9**	**-0.5**
NVS				*e*		01 47 59.6	
NVS				pmax	pmax		
	comp=N,10.0nm,2.3s						
NVS				pmax	pmax		
	comp=E,27nm,2.3s						
NVS				pmax	pmax		
	comp=Z,38nm,2.3s						
LAO	**LASA Array**	**95.83**	**44**	*e*P	**P**	**01 44 13.7**	**+0.5**
	comp=Z,26nm,1.4s						
LAO				LR	LR		
	comp=Z,2µm,21.0s						
LAO	**LASA Array**	**95.83**	**44**	P	**P**	**01 44 15.4**	**+2.2**
	baz=260						
NRIK	**Noril'sk**	**96.50**	**339**	P	**P**	**01 44 14.9**	**-0.8**
	comp=Z,2.2nm,0.4s,baz=97,slow=4.2,SNR=8.9						
NRIK				LR	LR	02 27 09.9	
	comp=Z,316nm,19.3s,baz=98,slow=35						
RSSD	**Black Hills**	**96.94**	**47**	*e*P	**P**	**01 44 19.2**	**+0.7**
	comp=Z,8.8nm,1.5s						
RSSD	**Black Hills**	**96.94**	**47**	P	**P**	**01 44 19.0**	**+0.5**
	baz=262						
KURK	**Kurchatov**	**97.34**	**320**	*e*P	**P**	**01 44 18.6**	**-1.2**
	comp=Z,11nm,1.3s						
KURK				LR	LR		
	comp=Z,2µm,19.0s						
KURK	**Kurchatov**	**97.34**	**320**	*ce*P	**P**	**01 44 18.0**	**-1.9**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
AMTX	**Amarillo**	**97.40**	**56**	*e*P	**P**	**01 44 20.7**	**0.0**
	comp=Z,26nm,0.9s						
DGMT	**Dagmar**	**97.46**	**42**	PFAKE		01 44 30.0	+9.4
DGMT				LR	LR		
	comp=Z,930nm,22.0s						
KSH	**Kashi**	**97.61**	**309**	P	Pdif	01 44 24.2	+2.6
KSH				pP	sP	01 44 35.6	+2.6
KSH				PP	**PP**	**01 48 26.6**	**+7.1**
KSH				SKS	**SKSac**	**01 54 58.9**	**+1.5**
KSH				S	**S**	**01 55 44.1**	**-1.1**
KSH				sS	sS	01 56 03.6	+4.4
KSH				SS	**SS**	**02 02 28.5**	**+2.9**
KSH				pmax	pmax		
	comp=Z,380nm,5.0s						
KSH				LR	LR		
	comp=Z,250nm,4.9s						
KSH				LR	LR		
	comp=Z,140nm,4.5s						
KSH				LR	LR		
	comp=Z,940nm,8.8s						
OGNE	**Ogallala**	**97.96**	**50**	PFAKE		01 44 30.0	+6.9
OGNE				LR	LR		
	comp=Z,3µm,21.0s						
JCT	**Junction City**	**98.35**	**61**	PFAKE		01 44 40.0	+15
JCT				LR	LR		
	comp=Z,3µm,20.0s						
NIL	**Nilore**	**99.01**	**303**	PFAKE		01 44 40.0	+12
NIL				LR	LR		
	comp=Z,434nm,21.0s						
AAK	**Ala-Archa**	**99.12**	**312**	*e*P	**Pdif**	**01 44 28.5**	**+0.2**
	comp=Z,2.2nm,0.8s						
AAK				LR	LR		
	comp=Z,601nm,22.0s						
AAK	**Ala-Archa**	**99.12**	**312**	*e*P	**Pdif**	**01 44 28.5**	**+0.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK				MLR	MLR		
	comp=Z,601nm,22.0s						
CBKS	**Cedar Bluff**	**99.45**	**52**	PFAKE		01 44 40.0	+10
CBKS				LR	LR		
	comp=Z,2µm,19.0s						
FFC	**Flin Flon**	**99.58**	**36**	PFAKE		01 44 40.0	+10
FFC				LR	LR		
	comp=Z,3µm,20.0s						
FFC	**Flin Flon**	**99.58**	**36**	*i* P	**Pdif**	**01 44 32.2**	**+2.4**
KVTX	**Kingsville**	**99.62**	**64**	PFAKE		01 44 40.0	+9.4
KVTX				LR	LR		
	comp=Z,982nm,20.0s						
WMOK	**Wichita Mounta**	**99.75**	**56**	PFAKE		01 44 40.0	+8.9
WMOK				LR	LR		
	comp=Z,3µm,19.0s						
WMOK	**Wichita Mounta**	**99.75**	**56**	Pdiff	**Pdif**	**01 44 31.2**	**+0.1**
	baz=263						
KSU1	**Kansas State U**	**101.91**	**52**	PFAKE		01 44 50.0	+9.5
KSU1				LR	LR		
	comp=Z,2µm,20.0s						
KK31	**Karatay Array**	**102.07**	**312**	*e*Pdif	**Pdif**	**01 44 40.7**	**-0.5**
KK31	**Karatay Array**	**102.07**	**312**	*e*P	**Pdif**	**01 44 40.7**	**-0.5**
KKAR	**Karatay Array**	**102.07**	**312**	*e*Pdif	**Pdif**	**01 44 41.9**	**+0.7**
KKAR	**Karatay Array**	**102.07**	**312**	*e*P	**Pdif**	**01 44 41.9**	**+0.7**
ECSD	**EROS Data Cent**	**102.23**	**47**	PFAKE		01 44 50.0	+8.1
ECSD				LR	LR		
	comp=Z,2µm,22.0s						
PAYG	**Puerto Ayora**	**102.47**	**93**	PFAKE		01 45 00.0	+16
PAYG				LR	LR		
	comp=Z,1µm,20.0s						
BRVK	**Borovoye**	**102.69**	**322**	PFAKE		01 45 00.0	+16
BRVK				LR	LR		
	comp=Z,354nm,19.0s						
NATX	**Nacogdoches**	**102.88**	**60**	PFAKE		01 45 00.0	+15
NATX				LR	LR		
	comp=Z,3µm,22.0s						
MIAR	**Mount Ida**	**104.00**	**57**	PFAKE		01 45 00.0	+10
MIAR				LR	LR		
	comp=Z,3µm,20.0s						
SCIA	**State Center**	**104.64**	**49**	PFAKE		01 45 00.0	+7.3
SCIA				LR	LR		
	comp=Z,3µm,19.0s						
EYMN	**Ely**	**105.90**	**43**	PFAKE		01 49 20.0	+9.5
EYMN				LR	LR		
	comp=Z,2µm,21.0s						
COWI	**Conover**	**107.57**	**45**	PFAKE		01 49 30.0	+16
COWI				LR	LR		
	comp=Z,2µm,19.0s						
HDIL	**Hopedale**	**107.59**	**51**	PFAKE		01 49 30.0	+16
HDIL				LR	LR		
	comp=Z,2µm,21.0s						
ARU	**Arti**	**109.24**	**326**	PFAKE		01 49 30.0	+14
ARU				LR	LR		
	comp=Z,359nm,19.0s						
BRAL	**Brewton**	**109.33**	**61**	PFAKE		01 49 30.0	+13
BRAL				LR	LR		
	comp=Z,1µm,20.0s						
JTS	**JuntasAbangare**	**109.58**	**83**	PFAKE		01 49 30.0	+12
JTS				LR	LR		
	comp=Z,739nm,20.0s						
GLMI	**Grayling**	**110.83**	**46**	PFAKE		01 49 30.0	+10
GLMI				LR	LR		
	comp=Z,1µm,20.0s						
KBS	**Kingsbay**	**111.02**	**355**	PFAKE		01 49 30.0	+11
KBS				LR	LR		
	comp=Z,471nm,20.0s						
LCO	**Las Campanas**	**111.67**	**127**	PFAKE		01 49 30.0	+7.7
LCO				LR	LR		
	comp=Z,1µm,20.0s						
AAM	**Ann Arbor**	**111.74**	**49**	PFAKE		01 49 30.0	+8.4
AAM				LR	LR		
	comp=Z,3µm,19.0s						
GOGA	**Godfrey**	**112.37**	**58**	PFAKE		01 49 40.0	+17
GOGA				LR	LR		
	comp=Z,2µm,21.0s						
ACSO	**Alum Creek Sta**	**112.42**	**51**	PFAKE		01 49 40.0	+17
ACSO				LR	LR		
	comp=Z,3µm,22.0s						
NNA	**Nana**	**112.72**	**108**	PFAKE		01 49 40.0	+16
NNA				LR	LR		
	comp=Z,508nm,20.0s						
TRQA	**Tornquist**	**113.15**	**140**	PFAKE		01 49 40.0	+15
TRQA				LR	LR		
	comp=Z,3.0nm,20.0s						
ABPO	**Ambohimpanom**	**113.44**	**244**	PFAKE		01 49 40.0	+14
ABPO				LR	LR		
	comp=Z,525nm,20.0s						
OTAV	**Otavalo**	**114.25**	**95**	PFAKE		01 49 40.0	+12
OTAV				LR	LR		
	comp=Z,763nm,19.0s						
BCIP	**Isla Barro Col**	**114.42**	**85**	PFAKE		01 49 40.0	+12
BCIP				LR	LR		
	comp=Z,707nm,22.0s						
BLA	**Blacksburg**	**114.66**	**54**	PFAKE		01 49 40.0	+13
BLA				LR	LR		
	comp=Z,2µm,20.0s						
NHSC	**New Hope**	**115.14**	**59**	PFAKE		01 49 40.0	+12
NHSC				LR	LR		
	comp=Z,2µm,22.0s						
LVZ	**Lovozero**	**115.20**	**342**	PFAKE		01 49 40.0	+12
LVZ				LR	LR		
	comp=Z,323nm,21.0s						
LVC	**Limon Verde**	**115.94**	**122**	PFAKE		01 49 40.0	+9.3
LVC				LR	LR		
	comp=Z,954nm,19.0s						
KEV	**Kevo**	**116.08**	**346**	PFAKE		01 49 40.0	+11
KEV				LR	LR		
	comp=Z,1µm,22.0s						
ARCES	**ARCESS Array B**	**116.61**	**346**	PKP	**PKPdf**	**01 49 29.4**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=64,slow=2.8,SNR=5.7						
CNNC	**Cliffs of the**	**116.87**	**56**	PFAKE		01 49 40.0	+8.4
CNNC				LR	LR		
	comp=Z,2µm,20.0s						
CBN	**Corbin Frederi**	**116.96**	**53**	PFAKE		01 49 40.0	+8.3
CBN				LR	LR		
	comp=Z,3µm,20.0s						
KLMR	**Klimovskoe**	**117.23**	**334**	*e*PKIKP	**PKPdf**	**01 49 30.2**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,11nm,1.4s						
KLMR	**Klimovskoe**	**117.23**	**334**	*e*PKPdf	**PKPdf**	**01 49 30.2**	**-1.3**
KLMR				AMP		01 49 33.8	
	comp=Z,11nm,1.4s						
BINY	**Binghamton**	**117.40**	**48**	PFAKE		01 49 40.0	+7.5
BINY				LR	LR		
	comp=Z,3µm,19.0s						
MTDJ	**Mount Denham**	**117.53**	**75**	PFAKE		01 49 50.0	+16
MTDJ				LR	LR		
	comp=Z,711nm,20.0s						
SFJD	**Kangerlussuaq**	**118.76**	**16**	PFAKE		01 49 50.0	+16
SFJD				LR	LR		
	comp=Z,1µm,19.0s						
MAK	**Makhachkala**	**118.86**	**313**	*i* PKIKP	**PKPdf**	**01 49 29.0**	**-6.2**
MAK				*e*		01 50 49.7	
MAK				pmax	pmax		
	comp=Z,235nm,1.1s						
GTBY	**Guantanamo Bay**	**119.89**	**73**	PFAKE		01 49 50.0	+12
GTBY				LR	LR		
	comp=Z,568nm,19.0s						
VRH	**Novokhopyorsk**	**120.23**	**323**	*e*PKIKP	**PKPdf**	**01 49 36.8**	**-0.8**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	**Galich'ya Gora**	**121.26**	**326**	*e*PKIKP	**PKPdf**	**01 49 38.1**	**-1.4**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.9s						
OBN	**Obninsk**	**121.37**	**329**	PFAKE		01 49 50.0	+10
OBN				LR	LR		
	comp=Z,424nm,22.0s						
OBN	**Obninsk**	**121.37**	**329**	⇑*e*PKIKP	**PKPdf**	**01 49 39.3**	**-0.3**
OBN				*e*		01 51 12.0	
OBN				*e*SS	SS	02 08 00.2	+17
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,639nm,21.0s						
GNI	**Garni**	**121.49**	**310**	*e*PKPdf	**PKiKP**	**01 49 40.9**	**+0.1**
GNI				LR	LR		
	comp=Z,548nm,20.0s						
VSR	**Storozhevoye**	**121.70**	**324**	*e*PKIKP	**PKPdf**	**01 49 37.7**	**-2.7**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KIV	**Kislovodsk**	**122.00**	**315**	PFAKE		01 49 50.0	+8.4
KIV				LR	LR		
	comp=Z,427nm,20.0s						
KIV	**Kislovodsk**	**122.00**	**315**	*i* PKIKP	**PKPdf**	**01 49 38.1**	**-3.3**
KIV				*e*		01 51 13.1	
KIV				*e*PS	PKKPdf	02 01 07.3	+51
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FIA1	**FINESS Array S**	**122.17**	**339**	*e*PKPdf	**PKPdf**	**01 49 41.0**	**0.0**
FINES	**FINESS Array B**	**122.17**	**339**	*c i*PKIKP	**PKPdf**	**01 49 40.9**	**-0.1**
FINES				pmax	pmax		
	comp=Z,10.0nm,1.2s						
FINES	**FINESS Array B**	**122.17**	**339**	PKP	**PKPdf**	**01 49 39.9**	**-1.2**
	comp=Z,9.9nm,1.2s,baz=29,slow=4.4,SNR=7.3						
CPUP	**Villa Florida**	**123.21**	**132**	PKP	**PKPdf**	**01 49 44.2**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=108,slow=2.1,SNR=3.8						
SDV	**Santo Domingo**	**123.39**	**87**	*e*PKPdf	**PKiKP**	**01 49 45.2**	**-0.1**
SDV				LR	LR		
	comp=Z,439nm,19.0s						
SDDR	**Presa de Saban**	**123.48**	**75**	PFAKE		01 50 00.0	+15
SDDR				LR	LR		
	comp=Z,1µm,20.0s						
GRTK	**Grand Turk**	**123.63**	**72**	PFAKE		01 50 00.0	+15
GRTK				LR	LR		
	comp=Z,931nm,22.0s						
SOC	**Sochi**	**124.17**	**316**	*i* PKIKP	**PKPdf**	**01 49 43.0**	**-2.4**
SOC				*e*		01 51 26.8	
SOC				*e*PS	PS	02 01 18.5	-11
ANN	**Anapa**	**125.28**	**318**	*i* PKHKP	PKPpre	01 49 35.4	
ANN				pmax	pmax		
	comp=Z,39nm,1.2s						
BOSA	**Boshof**	**125.87**	**222**	PKP	**PKiKP**	**01 49 49.7**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=40,slow=4.9,SNR=5.7						
SUR	**Sutherland**	**126.00**	**216**	PFAKE		01 50 00.0	+10
SUR				LR	LR		
	comp=Z,2µm,20.0s						
NACGM	**Naroch**	**126.17**	**333**	*e*	**PKPdf**	**01 49 48.0**	**-0.9**
NACGM				*e*LQ	LQ	02 42 16.0	
NACGM				*e*LR	LR	02 46 24.0	
NOA	**NORSAR Array B**	**126.98**	**345**	PKP	**PKPdf**	**01 49 50.3**	**-0.1**
	comp=Z,2.6nm,1.1s,baz=32,slow=2.5,SNR=3.5						
AKASG	**Malin Array Be**	**127.46**	**327**	*c i*PKIKP	**PKPdf**	**01 49 50.4**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**127.46**	**327**	PKP	**PKPdf**	**01 49 50.9**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=44,slow=2.3,SNR=8.0						
AKASG				PP	**PP**	**01 51 51.3**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=44,slow=6.9,SNR=5.8						
KIEV	**Kiev**	**127.47**	**327**	*e*PKPdf	**PKPdf**	**01 49 51.6**	**+0.1**
KIEV				LR	LR		
	comp=Z,548nm,19.0s						
KIEV	**Kiev**	**127.47**	**327**	*e*PKIKP	**PKPdf**	**01 49 51.6**	**+0.1**
KIEV				MLR	MLR		
	comp=Z,548nm,19.0s						
AK11	**Malin Array Si**	**127.50**	**327**	*e*PKPdf	**PKPdf**	**01 49 51.5**	**0.0**
SJG	**San Juan**	**128.35**	**76**	*e*PKPdf	**PKiKP**	**01 49 54.7**	**0.0**
SJG				LR	LR		
	comp=Z,625nm,21.0s						
SJG	**San Juan**	**128.35**	**76**	*e*PKIKP	**PKiKP**	**01 49 54.7**	**0.0**
SJG				MLR	MLR		
	comp=Z,625nm,21.0s						
KMBO	**Kilima Mbogo**	**128.47**	**260**	PFAKE		01 50 10.0	+14
KMBO				LR	LR		
	comp=Z,658nm,22.0s						
HUMP	**Col San Antoni**	**128.63**	**76**	*e*PKPdf	**PKPdf**	**01 49 54.1**	**-0.5**
KIS	**Kishinev**	**129.68**	**324**	*e*PKP	PKiKP	01 50 08.0	+11
KIS	**Kishinev**	**129.68**	**324**	*e*PP	PP	01 52 16.0	+10
KIS				*e*L	L	02 37 30.0	
KIS				LRM	MLR	02 53 23.0	
	comp=Z,500nm,20.0s						
KIS	**Kishinev**	**129.68**	**324**	*e*PKIKP	PKiKP	01 50 08.0	+11
KIS				*e*		01 52 05.0	
BRTR	**Keskin Array B**	**129.77**	**313**	*c i*PKIKP	**PKPdf**	**01 49 56.2**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BRTR	**Keskin Array B**	**129.77**	**313**	PKP	**PKiKP**	**01 49 56.9**	**-0.3**
	comp=Z,1.4nm,1.1s,baz=196,slow=0.9,SNR=6.1						
BRTR				PP	**PP**	**01 52 08.2**	**+0.6**
	comp=Z,1.0nm,1.0s,baz=67,slow=4.2,SNR=4.0						
ANTO	**Ankara**	**130.32**	**314**	PFAKE		01 50 10.0	+12
ANTO				LR	LR		
	comp=Z,331nm,21.0s						
BUR08	**Bucovina Ar. S**	**131.37**	**326**	*e*PKPdf	**PKiKP**	**01 50 00.2**	**0.0**
BUR04	**Bucovina Ar. S**	**131.38**	**326**	*e*PKPdf	**PKiKP**	**01 50 00.4**	**+0.2**
LSZ	**Lusaka**	**131.44**	**238**	*e*PKPdf	**PKPdf**	**01 50 00.6**	**+0.4**
LSZ				LR	LR		
	comp=Z,2µm,19.0s						
LSZ	**Lusaka**	**131.44**	**238**	*e*PKIKP	**PKPdf**	**01 50 00.6**	**+0.4**
LSZ				MLR	MLR		
	comp=Z,2µm,19.0s						
MLR	**Muntele Rosu**	**132.17**	**323**	*e*PKPdf	**PKiKP**	**01 50 01.6**	**-0.3**
MLR	**Muntele Rosu**	**132.17**	**323**	*e*PKIKP	**PKiKP**	**01 50 01.6**	**-0.3**
UZH	**Uzhgorod**	**132.31**	**329**	*e*PKHKP	PKPpre	01 49 49.4	
UZH				*e*		01 49 59.8	
UZH				*i*		01 50 12.8	
UZH				*e*		01 52 22.0	
GRGR	**Grenville**	**132.50**	**84**	PFAKE		01 50 10.0	+6.8
GRGR				LR	LR		
	comp=Z,522nm,20.0s						
ANWB	**Willy Bob**	**132.51**	**76**	PFAKE		01 50 10.0	+6.9
ANWB				LR	LR		
	comp=Z,882nm,20.0s						
OKC	**Ostrava-Krasne**	**133.49**	**332**	*e*PP	PP	01 52 38.1	+7.5
OKC				AMS	AMS	02 55 10.0	
	comp=Z,600nm,18.1s						
MORC	**Moravsky Berou**	**133.81**	**333**	*e*PKP	**PKiKP**	**01 50 04.8**	**-0.1**
DPC	**Dobruska-Polom**	**133.93**	**334**	AMS	AMS	02 54 10.0	
	comp=Z,600nm,20.1s						
UPC	**Upice**	**133.94**	**334**	*e*PP	PP	01 52 41.7	+8.3
UPC				AMS	AMS	02 54 00.0	
	comp=Z,800nm,17.9s						
VYHS	**Vyhne**	**134.11**	**331**	*e*PKIKP	**PKPdf**	**01 50 04.8**	**+0.6**
VYHS				*e*		01 52 33.2	
VYHS	**Vyhne**	**134.11**	**331**	*e*PKP	**PKPdf**	**01 50 04.8**	**+0.6**
VYHS				*e*PP	**PP**	**01 52 33.2**	**-1.4**
BRG	**Berggiesshubel**	**134.51**	**336**	*e*PKP	**PKiKP**	**01 50 06.0**	**-0.3**
	comp=Z,19nm,1.7s						
	comp=N,397nm,17.9s						
	comp=E,390nm,23.9s						
	comp=Z,670nm,18.0s						
BRG	**Berggiesshubel**	**134.51**	**336**	*e*PKIKP	**PKiKP**	**01 50 06.0**	**-0.3**
BRG				pmax	pmax		
	comp=Z,19nm,1.7s						
BRG				MLR	MLR		
	comp=N,397nm,17.9s						
BRG				MLR	MLR		
	comp=E,390nm,23.9s						
BRG				MLR	MLR		
	comp=Z,670nm,18.0s						
CLL	**Collm**	**134.54**	**337**	*e*PKPdf	**PKPdf**	**01 50 05.4**	**+0.5**
CLL	**Collm**	**134.54**	**337**	*e*PKPdf	**PKPdf**	**01 50 05.0**	**+0.1**
CLL				*e*		01 50 19.0	
CLL				*e*		01 50 23.0	
CLL				*e*PP	**PP**	**01 52 33.0**	**-4.0**
CLL				*e*		01 52 48.0	
CLL				*e*PKSdf	**PKSdf**	**01 53 42.0**	**+1.0**
CLL				*e*PSKS		02 03 00.0	
CLL				*e*PPS	PPS	02 04 30.0	
CLL				*e*SSS	SSS	02 15 30.0	
CLL				Lm	MLR	02 56 00.0	
	comp=N,600nm,19.8s						
CLL				Lm	MLR	02 56 00.0	
	comp=E,400nm,19.3s						
CLL				Lm	MLR	02 56 00.0	
	comp=Z,700nm,19.5s						

CLL	Collm	134.54	337	ePKIKP	PKPdf	01 50 05.4	+0.5
MBAR	Mbarara	134.89	258	PFAKE		01 50 20.0	+12
MBAR				LR	LR		
	comp=Z,566nm,22.0s						
GOPC	GO Pecny, Ondr	134.91	335	ePP	PP	01 52 48.5	+9.0
GOPC				AMS	AMS	02 53 00.0	
	comp=Z,700nm,23.1s						
MODS	Modra-Piesok	134.94	332	ePKIKP	PKiKP	01 50 07.1	-0.1
MODS	Modra-Piesok	134.94	332	ePKP	PKiKP	01 50 07.1	-0.1
PRU	Pruhonice	134.95	335	ePKPDF	PKiKP	01 50 07.6	+0.4
PRU				ePP	PP	01 52 46.1	+6.3
PRU				AMS	AMS	02 46 30.0	
	comp=Z,600nm,21.8s						
PRU	Pruhonice	134.95	335	ePKIKP	PKiKP	01 50 07.6	+0.4
PRU				e		01 52 46.1	
PRU				MLR	MLR		
	comp=Z,600nm,21.8s						
TREC	Trest	135.08	334	AMS	AMS	02 53 00.0	
	comp=Z,600nm,19.2s						
CONA	Conrad Observa	135.92	332	epPKPdf	PKiKP	01 50 10.0	+0.6
	comp=Z,11nm,1.6s						
KHC	Kasperske Hory	136.01	335	ePKPdf	PKPdf	01 50 08.1	+0.3
KHC	Kasperske Hory	136.01	335	ePKPDF	PKPdf	01 50 08.3	+0.5
KHC				ePP	PP	01 52 54.6	+8.1
KHC				AMS	AMS	02 47 40.0	
	comp=Z,700nm,22.5s						
KHC	Kasperske Hory	136.01	335	ePKIKP	PKPdf	01 50 08.3	+0.5
KHC				e		01 52 54.6	
KHC				MLR	MLR		
	comp=Z,700nm,22.5s						
GEC2	GERESS Array S	136.18	334	ePKPdf	PKPdf	01 50 08.1	-0.1
GEC2	GERESS Array S	136.18	334	ePKIKP	PKPdf	01 50 08.1	-0.1
GERES	GERESS Array B	136.18	334	PKP	PKPdf	01 50 08.2	-0.1
	comp=Z,2.9nm,1.0s,baz=52,slow=2.2,SNR=14						
GERES				PP	PP	01 52 47.1	-0.6
	comp=Z,0.7nm,0.9s,baz=21,slow=8.6,SNR=5.6						
GEA0	GERESS Array S	136.19	334	ePKPdf	PKPdf	01 50 07.5	-0.7
BDFB	Brasilia	136.46	127	PKP	PKiKP	01 50 11.1	-0.3
	comp=Z,3.9nm,0.8s,baz=74,slow=11,SNR=5.1						
MOA	Molln	136.70	333	ePKiKP	PKiKP	01 50 11.0	+0.1
	comp=Z,1.6nm,0.8s						
TSUM	Tsumeb	137.34	225	PFAKE		01 50 20.0	+6.9
TSUM				LR	LR		
	comp=Z,2µm,19.0s						
MEM	Membach	137.53	342	⇓PKiKP	PKiKP	01 50 12.1	-0.3
WATA	Walderalm	138.25	335	PKPdf	PKPdf	01 50 11.7	-0.4
	comp=Z,5.4nm,1.0s						
ABTA	Abfaltersbach	138.31	333	ePKiKP	PKiKP	01 50 14.3	0.0
	comp=Z,13nm,1.3s						
DOU	Dourbes	138.40	343	⇑PKiKP	PKiKP	01 50 13.3	-0.9
MOTA	Moosalm	138.44	335	ePKPdf	PKPdf	01 50 12.1	-0.4
	comp=Z,5.6nm,1.0s						
SQTA	Sankt Quirin	138.50	335	eP	PKiKP	01 50 16.0	+1.3
	comp=Z,8.6nm,1.3s						
BNI	Bardonecchia	142.09	337	ePKPdf	PKPdf	01 50 19.1	-0.1
BNI	Bardonecchia	142.09	337	ePKIKP	PKPdf	01 50 19.1	-0.1
KEST	Kesra	148.07	324	PKPbc	PKPbc	01 50 33.7	+0.9
	comp=Z,24nm,1.0s,baz=63,slow=1.7,SNR=12						
PBRG	Braganca	148.85	351	ePKPdf	PKPbc	01 50 35.1	+0.5
PCAB	Cabril	149.12	353	ePKPdf	PKPbc	01 50 35.4	+0.1
POLO	Lamas de Olo	149.42	352	ePKPdf	PKiKP	01 50 36.8	-0.5
PVRL	Vila Real	149.51	352	ePKPdf	PKPbc	01 50 36.2	-0.1
MVO	Moncorvo	149.52	351	ePKPdf	PKiKP	01 50 37.0	-0.4
PTO	Porto	149.76	353	ePKPdf	PKiKP	01 50 37.8	0.0
PVIS	Viseu	150.08	352	ePKPdf	PKiKP	01 50 39.9	+1.3
ES19	SONSECA Array	150.30	346	ePKPbc	PKPbc	01 50 38.5	+0.3
ES19				ePKPab	pPKPbc	01 50 47.4	+0.4
ESDC	Sonseca Array	150.34	346	PKP	PKPdf	01 50 32.8	-0.4
	comp=Z,0.5nm,0.7s,baz=351,slow=2.3,SNR=3.9						
ESDC				PKPbc	PKPbc	01 50 38.1	-0.2
	comp=Z,7.6nm,1.1s,baz=2.9,slow=2.5,SNR=17						
ESDC				PKPab	sPKPdf	01 50 45.5	+0.6
	comp=Z,2.9nm,0.8s,baz=8.7,slow=4.0,SNR=10						
ESDC				PP	PP	01 54 14.0	+1.4
	comp=Z,1.6nm,0.9s,baz=22,slow=4.5,SNR=4.7						
ESLA	Sonseca Array	150.34	346	ePKPdf	PKPdf	01 50 33.1	-0.1
MTE	Manteigas	150.34	351	ePKPdf	PKiKP	01 50 39.6	+0.5
MTE	Manteigas	150.34	351	ePKPbc	PKPbc	01 50 38.1	-0.2
MTE				epPKPab	sPKPbc	01 50 48.6	-1.5
PAB	San Pablo	150.56	346	ePKPbc	PKiKP	01 50 39.4	-0.2
PAB				ePKPab	PKPab	01 50 46.2	+0.7
PAB				LR	LR		
	comp=Z,613nm,21.0s						
PAB	San Pablo	150.56	346	ePKIKP	PKiKP	01 50 39.4	-0.2
PAB				e		01 50 46.2	
PAB				MLR	MLR		
	comp=Z,613nm,21.0s						
PCAS	Casmilo, Conde	150.82	353	ePKPdf	PKiKP	01 50 40.3	+0.3
PCBR	Castelo Branco	150.88	351	ePKPdf	PKiKP	01 50 41.7	+1.5
PTOM	Tomar	151.23	352	ePKPdf	PKiKP	01 50 41.1	+0.2
PMRV	Marv??o	151.27	351	ePKPdf	PKiKP	01 50 41.2	+0.2
PMTG	Montargil	151.75	352	ePKPdf	PKiKP	01 50 42.3	+0.3
RCBR	Riachuelo	151.81	125	ePKPbc	PKiKP	01 50 43.0	+0.1
RCBR	Riachuelo	151.81	125	ePKIKP	PKiKP	01 50 43.0	+0.1
PESTR	Estremoz	151.85	351	ePKPdf	PKPab	01 50 51.3	+0.5
PESTR	Estremoz	151.85	351	ePKPab	PKPab	01 50 51.5	+0.7
SHEL	Horse Pasture	152.19	195	PFAKE		01 50 50.0	-2.8
SHEL				LR	LR		
	comp=Z,622nm,20.0s						
LIS	Lisbon	152.21	353	ePKPdf	PKPdf	01 50 35.7	-0.3
LIS				AMS	AMS	03 04 57.2	
	comp=Z,687nm,10.7s						
LIS	Lisbon	152.21	353	ePKIKP	PKPdf	01 50 35.6	-0.3
PBEJ	Beja	152.72	351	ePKPdf	PKPab	01 50 56.1	+1.7
PNCL	Nicolau / Gran	152.73	352	ePKPdf	PKiKP	01 50 45.6	+1.6
MESJ	Messejana	152.95	351	ePKPdf	PKPdf	01 50 36.7	-0.3
MESJ				AMS	AMS	03 00 23.4	
	comp=Z,1µm,21.3s						
MESJ	Messejana	152.95	351	ePKIKP	PKPdf	01 50 36.7	-0.3
PTEO	Sao Teotonio	153.31	352	ePKPdf	PKPdf	01 50 38.1	+0.5
PBDV	Barranco-do-Ve	153.50	351	ePKPdf	PKPab	01 50 59.0	+1.2
MORF	Marmelete	153.54	352	ePKPdf	PKPdf	01 50 37.7	-0.4
MORF				AMS	AMS	03 01 48.7	
	comp=E,560nm,26.1s						
MORF	Marmelete	153.54	352	ePKIKP	PKPdf	01 50 37.6	-0.4
PFVI	Vila Bisbo	153.73	352	ePKPdf	PKiKP	01 50 47.4	+1.3
TAM	Tamanrasset	158.70	306	ePKPdf	PKPdf	01 50 45.4	+0.1
TAM	Tamanrasset	158.70	306	ePKIKP	PKPdf	01 50 45.4	+0.1
TOA0	Torodi Ar. Sit	165.35	280	ePKPdf	PKPdf	01 50 52.0	-0.1
TOA0				ePKPab	PKPab	01 51 50.2	+0.2
TORD	Torodi Ar. Bea	165.35	280	PKP	PKPdf	01 50 51.2	-0.9
	comp=E,3.2nm,1.1s,baz=148,slow=3.6,SNR=11						
TORD				PKPab	PKPab	01 51 49.4	-0.6
	comp=E,3.7nm,1.0s,baz=1.6,slow=1.6,SNR=7.6						
TORD				PP	PP	01 55 36.5	-0.6
	comp=E,2.0nm,1.2s,baz=49,slow=6.7,SNR=4.4						
SACV	Santiago Islan	169.07	68	PFAKE		01 51 10.0	+15
SACV				LR	LR		
	comp=Z,583nm,20.0s						

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*ISCJB **10** 01:38:19.7±0.2, 10°.90S±0°.04×165°.76E±0°.06, h10^{km}, mb4.6/41, Error ellipse: s-maj=8.7km s-min=6.1km az=11.0*

*NEIC **10** 01:38:23.8±2.5, 10°.85S×165°.79E, h28^{km}±17^{km}, mb4.8/30, Error ellipse: s-maj=5.6km s-min=5.0km az=77.0*

*IDC **10** 01:38:28.0±3.1, 10°.93S×165°.84E, h61^{km}±26^{km}, mb4.0/14, mb1 4.2/16, mb1mx4.1/32, mbtmp4.3/16, ML4.7/2, Error ellipse: s-maj=19.7km s-min=15.3km az=69.0*

ISC 10 01:38:21.2±0.5, **10°.82S**±0°.07×**165°.98E**±0°.08, **h10^{km}, n78, σ1^{s}.19**/84, **mb4.5**/42, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.10	283	ePn	Pn	01 39 48.6	-2.8
HNR	Honiara	6.10	283	P	Pn	01 39 54.4	+2.9
	23nm,0.3s,baz=357,slow=7.2,SNR=5.3						
HNR				S	Sn	01 41 03.7	+2.3
	15nm,0.3s,baz=170,slow=18,SNR=2.8						
DZM	Mont Dzumac	11.20	178	ePn	Pn	01 41 01.8	+0.3
DZM	Mont Dzumac	11.20	178	P	Pn	01 41 03.1	+1.6
	4.9nm,0.3s,baz=315,slow=11,SNR=25						
DZM				S	Sn	01 43 07.0	+0.1
	0.3nm,0.3s,baz=135,slow=20,SNR=2.6						
CTA	Charters Tower	21.11	242	P	P	01 43 09.6	+3.4
	14nm,0.8s,baz=72,slow=13,SNR=10						
CTAO	Charters Tower	21.11	242	eP	P	01 43 05.5	-0.7
BKZ	Black Stump Fm	29.74	163	eP	P	01 44 28.4	+0.5
	7.7nm,0.8s						
STKA	Stephens Creek	30.76	223	P	P	01 44 37.0	0.0
	3.8nm,0.8s,baz=50,slow=11,SNR=4.9						
WRAB	Tennant Creek	31.77	250	eP	P	01 44 44.2	-1.7
	1.7nm,0.6s						
WB2	Warramunga Arr	31.77	250	eP	P	01 44 44.7	-1.2
WR1	Warramunga Arr	31.78	250	eP	P	01 44 43.9	-2.1
	40nm,2.0s						
WR1				ePcP	PcP	01 47 37.4	0.0
WRA	Warramunga Arr	31.78	250	P	P	01 44 43.9	-2.1
	3.5nm,0.8s,baz=82,slow=8.9,SNR=15						
WRA				PcP	PcP	01 47 37.4	-0.1
	1.2nm,1.1s,baz=76,slow=3.4,SNR=5.1						
LTZ	Lake Taylor	32.31	171	eP	P	01 44 50.5	0.0
	14nm,0.9s						
RPZ	Rata Peaks	33.07	173	P	P	01 44 57.6	+0.5
	9.4nm,0.8s,baz=137,slow=10,SNR=5.2						
ASAR	Alice Springs	33.10	243	P	P	01 44 56.0	-1.7
	2.7nm,0.6s,baz=65,slow=9.8,SNR=20						
ASAR				PcP	PcP	01 47 40.7	-0.3
	1.3nm,0.9s,baz=87,slow=2.3,SNR=7.8						
CRLZ	Canterbury Las	33.14	171	eP	P	01 44 57.7	+0.1
	64nm,1.3s						
MQZ	McQueen’s Vall	33.27	171	eP	P	01 44 58.9	+0.1
	22nm,0.9s						
FITZ	Fitzroy Crossi	39.66	255	eP	P	01 45 52.6	-1.1
	47nm,1.9s						
FITZ	Fitzroy Crossi	39.66	255	P	P	01 45 52.6	-1.1
	3.2nm,0.8s,baz=127,slow=5.2,SNR=5.8						
NWAO	Narrogin (SRO)	49.78	236	eP	P	01 47 12.9	-1.4
MJAR	Matsushiro Arr	53.88	332	P	P	01 47 44.4	-0.4
	5.4nm,1.1s,baz=164,slow=7.9,SNR=6.6						
MAJO	Matsushiro	53.88	332	eP	P	01 47 44.4	-0.4
USRK	Ussuriysk Ar.	62.85	333	P	P	01 48 47.7	+0.4
	2.0nm,0.8s,baz=160,slow=6.1,SNR=4.7						
ULN	Ulaanbaatar	78.26	324	eP	P	01 50 21.5	+0.1
	4.1nm,1.1s						
SONA0	Songino Array	78.62	324	eP	P	01 50 23.6	+0.1
SONM	Songino Array	78.62	324	P	P	01 50 23.6	+0.1
	1.6nm,0.9s,baz=134,slow=7.0,SNR=8.4						
SONA1	Songino Array	78.62	324	eP	P	01 50 23.2	-0.3
BILL	Bilibino	78.66	0	eP	P	01 50 23.4	+0.4
	7.9nm,1.0s						
QSPA	South Pole Qui	79.18	180	eP	P	01 50 25.9	-0.4
MDM	Murphy Dome	82.95	18	eP	P	01 50 46.0	-0.1
	10nm,1.1s						
COLA	College	83.00	18	eP	P	01 50 47.2	+0.9
	8.6nm,0.9s						
ILAR	Eielson Array	83.23	18	P	P	01 50 47.9	+0.4
	3.5nm,0.9s,baz=234,slow=5.3,SNR=30						
ILB	Eielson Array	83.23	18	eP	P	01 50 47.5	0.0
	23nm,1.8s						
IL1	Eielson Array	83.23	18	eP	P	01 50 47.4	-0.1
SCRK	Sand Creek	83.63	20	eP	P	01 50 50.5	+0.7
	26nm,1.7s						
HUMO	Hull Mountain	83.71	45	eP	P	01 50 52.1	+1.5
	7.1nm,0.7s						
AFDM	Forest Hills D	83.88	49	eP	P	01 50 52.3	+0.8
	9.7nm,1.3s						
CMB	Columbia Colle	84.02	50	eP	P	01 50 52.6	+0.3
EGAK	Eagle	85.09	20	eP	P	01 50 57.8	+0.8
	7.4nm,0.9s						
MOD	Modoc Plateau	85.32	46	eP	P	01 50 59.8	+0.9
	1.4nm,0.6s						
DAC	Darwin (Calif)	85.62	52	eP	P	01 51 01.0	+0.4
	1.0nm,0.5s						
NV01	Mina Array Sit	85.70	50	eP	P	01 51 01.3	+0.4
NVAR	Mina Array Bea	85.70	50	P	P	01 51 02.2	+1.3
	1.6nm,0.8s,baz=226,slow=8.3,SNR=6.8						
WVOR	Wild Horse Val	86.67	46	eP	P	01 51 05.6	+0.1
	4.2nm,1.2s						
CCUT	Cedar City	89.22	52	eP	P	01 51 18.7	+0.7
	2.6nm,1.0s						
U15A	North Rim	89.79	53	eP	P	01 51 21.6	+0.9
	4.1nm,0.9s						
HLID	Hailey	89.96	46	eP	P	01 51 22.3	+1.1
	1.0nm,0.7s						
X16A	Lo Mia Camp, P	90.00	55	eP	P	01 51 22.1	+0.5
	3.8nm,1.0s						
MTPU	Mount Pierson	90.25	51	eP	P	01 51 23.9	+1.0
	16nm,2.0s						
NLU	North Lily Min	90.77	50	eP	P	01 51 26.0	+0.9
	16nm,2.0s						
BOZ	Bozeman (W)	92.38	44	eP	P	01 51 32.1	-0.2
	1.3nm,0.6s						
LKWY	Lake	93.00	45	eP	P	01 51 35.9	+0.5
	25nm,1.5s						
PD31	Pinedale Array	93.23	47	eP	P	01 51 36.3	-0.2
	5.0nm,1.5s						
PDAR	Pinedale Array	93.23	47	P	P	01 51 37.2	+0.7
	0.6nm,0.8s,baz=240,slow=2.9,SNR=5.4						
MK01	Makanchi Array	93.51	317	eP	P	01 51 36.8	-0.6
ZALV	Zalesovo Beam	93.51	324	P	P	01 51 36.1	-1.1
	0.2nm,0.3s,baz=116,slow=3.4,SNR=5.4						
ZAA1	Zalesovo Array	93.51	324	eP	P	01 51 36.0	-1.1
MK31	Makanchi Array	93.52	317	eP	P	01 51 37.1	-0.3
	2.2nm,1.0s						
MK32	Makanchi Array	93.52	317	eP	P	01 51 37.2	-0.3
MKAR	Makanchi Array	93.52	317	P	P	01 51 37.2	-0.2
	1.6nm,0.8s,baz=93,slow=6.4,SNR=13						
MAKZ	Makanchi	93.73	317	eP	P	01 51 38.1	-0.3
	6.1nm,1.4s						
YKA	Yellowknife Ar	94.67	27	P	P	01 51 41.6	-0.7
	0.4nm,0.6s,baz=258,slow=4.8,SNR=7.8						
YKB5	Yellowknife Ar	94.67	27	eP	P	01 51 41.6	-0.7
ARA0	ARCESS Array S	116.18	346	ePKPdf	PKiKP	01 57 04.0	-0.3
ARCES	ARCESS Array B	116.18	346	PKP	PKiKP	01 57 04.0	-0.3
	2.2nm,0.8s,baz=18,slow=0.4,SNR=4.4						
CPUP	Villa Florida	124.00	132	PKP	PKPdf	01 57 20.3	-0.3
	1.0nm,0.6s,baz=201,slow=3.3,SNR=4.0						
NB2	NORSAR Subarra	126.55	345	PKPdf	PKPdf	01 57 23.7	-0.8
	comp=Z,0.8nm,0.7s,baz=28,slow=1.9						
NB200	NORSAR Array S	126.55	345	ePKPdf	PKPdf	01 57 23.2	-1.3
NOA	NORSAR Array B	126.55	345	PKP	PKPdf	01 57 23.2	-1.3
	comp=Z,0.7nm,0.7s,baz=30,slow=2.0,SNR=4.2						
AKASG	Malin Array Be	126.80	327	PKP	PKPdf	01 57 24.5	-0.7
	comp=Z,0.1nm,0.3s,baz=11,slow=0.5,SNR=6.5						
BR101	Keskin Array S	128.98	313	ePKPdf	PKPdf	01 57 29.9	-0.1
BRTR	Keskin Array B	128.98	313	PKP	PKPdf	01 57 29.9	-0.1
	comp=Z,0.6nm,0.9s,baz=318,slow=1.9,SNR=3.3						
CLL	Collm	133.99	337	ePKPdf	PKPdf	01 57 39.0	+0.2
GEC2	GERESS Array S	135.61	334	ePKPdf	PKPdf	01 57 41.2	-0.8
GERES	GERESS Array B	135.61	334	PKP	PKPdf	01 57 41.2	-0.8
	comp=Z,0.8nm,0.9s,baz=70,slow=1.6,SNR=4.5						
ESDC	Sonseca Array	149.91	344	PKPbc	PKPdf	01 58 12.0	+4.6
	comp=Z,1.5nm,0.8s,baz=15,slow=2.5,SNR=10						
ESDC				PKPab	pPKPbc	01 58 17.9	+2.3
	comp=Z,2.2nm,0.9s,baz=26,slow=3.2,SNR=7.1						
TORD	Torodi Ar. Bea	164.46	280	PKP	PKPdf	01 58 24.7	-1.5
	comp=Z,1.6nm,1.1s,baz=327,slow=6.9,SNR=4.1						
TOA1	Torodi Ar. Sit	164.46	280	ePKPdf	PKPdf	01 58 24.8	-1.5

IDC 10 01:49:02.7±1.6, **10°.66S**×**165°.91E, h0^{km}, mb4.1**/5, **mb1 4.3**/6, **mb1mx3.9**/31, **mbtmp4.1**/6, **ML3.9**/1, **Error ellipse: s-maj=49.7km s-min=26.4km az=121.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.36	177	Pn	Pn	01 51 46.1	-0.4
	0.9nm,0.3s,baz=331,slow=23,SNR=6.7						
WRA	Warramunga Arr	31.77	249	P	P	01 55 29.4	+0.4
	5.5nm,0.9s,baz=80,slow=9.1,SNR=24						
ASAR	Alice Springs	33.11	243	P	P	01 55 40.5	-0.4
	1.1nm,0.5s,baz=64,slow=10,SNR=15						
SONM	Songino Array	78.45	324	P	P	02 01 06.0	+0.4
	0.4nm,0.5s,baz=130,slow=6.0,SNR=5.9						
ILAR	Eielson Array	83.09	18	P	P	02 01 30.1	+0.1
	0.6nm,0.5s,baz=235,slow=5.0,SNR=10						
MKAR	Makanchi Array	93.35	317	P	P	02 02 19.2	-0.6
	1.0nm,0.7s,baz=85,slow=6.2,SNR=10						

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*SOME **10** 02:12:58.6, 41°.37N×71°.65E, h10^{km}*

*KRNET **10** 02:12:58.8±0.1, 41°.42N×71°.81E, h15^{km}, mb2.2*

*NNC **10** 02:12:58.5±1.1, 41°.44N×71°.73E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=9.0km s-min=7.6km az=26.0*

ISC 10 02:12:58.6±1.2, **41°.42N**±0°.02×**71°.74E**±0°.03, **h8^{km}**±13^{km}, **n23, σ0^{s}.99**/40, **24C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	Arkit	0.41	23	⇑iP	Pg	02 13 06.4	-0.4
	baz=20						
ARK				⇑iS	Sg	02 13 11.7	-0.6
	baz=20						
ARSB	Arslanbob	0.94	95	⇑iP	Pg	02 13 15.9	-0.7
	baz=96						
ARSB				⇑iS	Sg	02 13 28.2	-0.6
	baz=96						
MNAS	Manas	1.21	28	⇑Pn	Pb	02 13 21.4	-0.6
	0.5nm,0.2s						
MNAS				⇓Sn	Sb	02 13 37.7	-0.2
	2.6nm,0.3s						
MNAS	Manas	1.21	28	P	Pb	02 13 21.5	-0.5
	0.6nm,0.1s						
MNAS				S	Sb	02 13 37.6	-0.2
	7.1nm,0.3s						
MNAS	Manas	1.21	28	⇑iP	Pb	02 13 21.2	-0.7
	baz=26						
MNAS				⇑iS	Sb	02 13 37.6	-0.2
	baz=26						
IUG	Iuzhnay	1.48	300	P	Pb	02 13 25.7	-0.7
	24nm,0.2s						
IUG				S	Sb	02 13 45.2	-0.1
	195nm,0.2s						
IUG	Iuzhnay	1.48	300	eP	Pb	02 13 25.7	-0.7
	24nm,0.2s						
IUG				eS	Sb	02 13 45.2	-0.1
	195nm,0.2s						
BTK	Batken	1.53	208	⇑iP	Pg	02 13 28.1	+0.1
	baz=9.0						
BTK				⇑iS	Sg	02 13 48.7	+0.9
	baz=9.0						
AML	Almayashu	1.62	63	⇑iP	Pn	02 13 28.3	+0.3
	baz=63						
AML				⇑iS	Sb	02 13 49.9	0.0
	baz=63						
MRKS	Merke	1.73	39	P	Pg	02 13 31.4	-0.3
	3.8nm,0.2s						
MRKS				S	Sg	02 13 55.0	+0.9
	25nm,0.4s						
MRKS	Merke	1.73	39	eP	Pg	02 13 32.5	+0.7
	1.9nm,0.2s						
MRKS				eS	Sg	02 13 56.8	+2.7
	26nm,0.5s						
KK31	Karatay Array	1.92	332	Pg	Pb	02 13 33.8	-0.2
	4.1nm,0.6s,baz=132,slow=14,SNR=83						
KK31				⇓Lg	Lg	02 14 00.3	
	4.8nm,0.3s,baz=153,slow=30,SNR=16						
DRK	Karamyk	1.94	179	⇑iP	Pb	02 13 34.3	-0.1
	baz=80						
DRK				⇑iS	Sg	02 14 00.5	-0.3
	baz=80						
SFK	Sufi-Kurgan	1.94	136	⇑Pn	Pb	02 13 33.9	-0.5
	0.2nm,0.2s						
SFK				⇑Lg	Lg	02 13 59.7	
	8.4nm,0.3s						
SFK	Sufi-Kurgan	1.94	136	Pg	Pb	02 13 33.7	-0.7
	1.0nm,0.1s						
SFK				Lg	Lg	02 13 59.5	
	16nm,0.2s						
SFK	Sufi-Kurgan	1.94	136	⇑iP	Pb	02 13 33.7	-0.7
	baz=37						
SFK				⇑iS	Sb	02 13 59.0	+0.2
	baz=37						
EKS2	Erkin-Say	1.96	50	⇑iP	Pb	02 13 34.2	-0.5
	baz=49						
EKS2				⇑iS	Sb	02 14 00.2	+0.9
	baz=49						
ARLS	Aral	1.98	76	⇑iP	Pb	02 13 34.6	-0.5
	baz=76						
ARLS				⇑iS	Sb	02 14 00.9	+0.9
	baz=76						
UCH	Uchtor	2.22	68	⇑iP	Pb	02 13 38.3	-1.1
	baz=67						
UCH				⇑iS	Sb	02 14 06.6	-0.6
	baz=67						
AAK	Ala-Archa	2.38	58	⇓Pg	Pb	02 13 42.8	+0.9
	0.9nm,0.5s						
AAK				⇓Lg	Lg	02 14 15.7	
	4.9nm,0.6s						
USP	Ospenovka	2.75	47	⇓iP	Pb	02 13 45.6	-2.6
	baz=46						
USP				⇓iS	Sb	02 14 19.4	-2.7
	baz=46						
TKM2	Tokmak 2	3.23	61	⇑Pg	Pg	02 14 01.5	+0.9
	0.3nm,0.3s						
TKM2				⇓Lg	Lg	02 14 38.9	
	0.8nm,0.5s						
DGS	Degeres	3.50	57	Pg	Pb	02 14 02.2	+1.3
	1.1nm,0.4s						
DGS				Lg	Lg	02 14 47.7	
	4.3nm,0.6s						

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*IDC **10** 02:16:44.5±1.7, 37°.04N×142°.38E, h0^{km}, mb3.2/3, mb1 3.4/5, mb1mx3.2/41, mbtmp3.2/5, ML3.0/2, Error ellipse: s-maj=37.0km s-min=26.7km az=67.0*

*ISCJB **10** 02:16:45.9±1.3, 37°.13N±0°.05×142°.25E±0°.07, h18^{km}±9^{km}, mb3.2/3, Error ellipse: s-maj=9.1km s-min=8.4km az=41.7*

*JMA **10** 02:16:47.2±0.2, 37°.10N×142°.16E, h31^{km}±4^{km}, M3.3*

ISC 10 02:16:46.4±2.1, **37°.14N**±0°.07×**142°.12E**±0°.07, **h11^{km}**±11^{km}, **n19, σ1^{s}.36**/28, **mb3.1**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	1.02	283	P	Pg	02 17 06.2	+0.2
JFK				eS	Sb	02 17 20.0	+0.5
ONAJ	Iwakimizuishiy	1.06	268	P	Pg	02 17 06.8	+0.1
ONAJ				eS	Sg	02 17 20.7	+0.2
JFFD	Fukushimafurud	1.25	268	P	Pn	02 17 09.2	-0.6
JIKH	Ishinomakikobu	1.28	336	P	Pn	02 17 09.9	-0.3
JMM	Marumori	1.28	305	P	Pn	02 17 10.1	-0.1
JIO	Ouri	1.45	335	P	Pn	02 17 12.4	-0.1
JIO				eS	Sn	02 17 30.4	-1.2
JFT	Otama	1.47	286	P	Pn	02 17 13.5	+0.6
JFT				eS	Sn	02 17 31.9	-0.2
JOU	Okura	1.68	317	P	Pn	02 17 16.8	+1.0
JOU				eS	Sn	02 17 37.7	+0.3
JFY	Yanaizu	1.95	279	P	Pb	02 17 21.0	-0.9
JFY				eS	Sn	02 17 44.5	+0.7
JMK	Ichinoseki	1.95	339	P	Pn	02 17 20.1	+0.7
JYS	Shirataka	1.96	304	P	Pn	02 17 20.9	+1.4
JYS				eS	Sn	02 17 45.6	+1.5
JAG	Ashikaga	2.26	252	P	Pn	02 17 23.9	+0.3
JYK	Kaneyama	2.26	322	P	Pn	02 17 25.0	+1.3
MJAR	Matsushiro Arr	3.19	260	Pn	Pn	02 17 39.5	+2.9
	0.2nm,0.3s,baz=88,slow=15,SNR=14						
MJAR				Sn	Sb	02 18 19.0	-3.1
	0.3nm,0.3s,baz=249,slow=24,SNR=6.6						
MAT	Matsushiro	3.19	260	P	Pn	02 17 39.6	+3.0
MAT				eS	Sb	02 18 20.5	-1.6
ASAJ	Asahikawa	6.98	3	Pn	Pn	02 18 29.9	+1.3
	0.7nm,0.3s,baz=150,slow=2.7,SNR=4.5						
MKAR	Makanchi Array	44.54	302	P	P	02 24 58.9	+0.8
	0.1nm,0.4s,baz=85,slow=9.3,SNR=3.4						
WRA	Warramunga Arr	57.24	189	P	P	02 26 33.0	-0.9
	0.3nm,0.5s,baz=6.5,slow=7.2,SNR=9.7						
ASAR	Alice Springs	60.97	189	P	P	02 26 59.2	-0.4
	0.1nm,0.7s,baz=9.7,slow=6.6,SNR=3.5						

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*IDC **10** 02:21:19.1±1.8, 10°.74S×165°.68E, h0^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.8/33, mbtmp4.0/7, ML4.6/2, Error ellipse: s-maj=41.9km s-min=29.5km az=128.0*

*ISCJB **10** 02:21:21.9±1.2, 10°.98S±0°.09×165°.7E±0°.2, h30^{km}, mb3.8/4, Error ellipse: s-maj=23.0km s-min=11.5km az=160.8*

ISC 10 02:21:23.7±1.3, **10°.9S**±0°.1×**165°.6E**±0°.2, **h30^{km}, n7, σ1^{s}.32**/7, **mb3.8**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.79	284	Pn	Pn	02 22 47.7	+0.1
	51nm,0.3s,baz=150,slow=10,SNR=4.4						
DZM	Mont Dzumac	11.15	176	Pn	Pn	02 24 03.0	+1.7
	1.4nm,0.3s,baz=297,slow=18,SNR=10						
DZM				Sn	Sn	02 26 03.1	-1.9
	0.2nm,0.3s,baz=288,slow=20,SNR=1.8						
CTA	Charters Tower	20.78	242	P	Pn	02 26 04.8	-0.3
	4.1nm,0.7s,baz=67,slow=9.5,SNR=4.2						
WRA	Warramunga Arr	31.44	250	P	P	02 27 42.6	-0.1
	1.5nm,0.9s,baz=82,slow=9.1,SNR=9.8						
ASAR	Alice Springs	32.77	243	P	P	02 27 54.3	-0.1
	2.0nm,0.8s,baz=66,slow=10,SNR=24						
ILAR	Eielson Array	83.39	19	P	P	02 33 47.4	-0.3
	0.2nm,0.6s,baz=239,slow=5.1,SNR=3.2						
MKAR	Makanchi Array	93.33	317	P	P	02 34 35.5	-0.4
	0.2nm,0.6s,baz=85,slow=7.7,SNR=3.5						

IDC 10 02:24:42.5±1.7, **10°.07S**×**165°.83E, h0^{km}, mb3.4**/3, **mb1 3.8**/4, **mb1mx3.5**/27, **mbtmp3.6**/4, **ML3.9**/1, **Error ellipse: s-maj=56.4km s-min=30.3km az=128.0, Santa**

Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.95**	**177**	Pn	Pn	02 27 35.4	+1.1
	0.7nm,0.3s,baz=264,slow=4.5,SNR=6.8						
WRA	**Warramunga Arr**	**31.91**	**248**	P	P	02 31 10.7	+0.7
	0.2nm,0.8s,baz=82,slow=9.0,SNR=3.2						
ASAR	**Alice Springs**	**33.31**	**242**	P	P	02 31 21.3	-1.0
	0.2nm,0.7s,baz=74,slow=9.8,SNR=2.9						
ILAR	**Eielson Array**	**82.57**	**19**	P	P	02 37 07.0	0.0
	1.0nm,0.9s,baz=227,slow=5.7,SNR=7.4						

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*MOS **10** 02:37:45.2±1.8, 40°.86N×47°.72E, $h14^{km}$, mb3.7/1, Error ellipse: s-maj=18.6km s-min=5.9km az=105.1*
*NORS **10** 02:37:54.2±0.0, 41°.50N×47°.60E, $h10^{km}$, MPVA3.8*
*MOS **10** 02:37:54.4±0.0, 41°.50N×47°.57E, $h5^{km}$, MPVA3.7*
*DRS **10** 02:37:55.2±0.0, 41°.79N×47°.66E, $h8^{km}$*
ISC 10 02:37:52.6±1.2**, 41°.42N**±0°.06×**47°.55E**±0°.04**, h14**^{km}±7^{km}**, n33,** σ**0ˢ.98**/47**, 4C-5D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKT	**Akhty**	**0.15**	**66**	⇑*i*PG	**Pg**	**02 37 57.0**	**+0.4**
AKT	**Akhty**	**0.15**	**66**	*i* Pg	**Pg**	**02 37 57.0**	**+0.4**
AKT				*e*Sg	**Sg**	**02 37 58.7**	**-0.5**
URKR	**Urkarakh**	**0.75**	**5**	⇓*i*PG	**Pg**	**02 38 06.9**	**-0.3**
URKR	**Urkarakh**	**0.75**	**5**	*e*Pg	**Pg**	**02 38 06.9**	**-0.3**
URKR				*e*Sg	**Sg**	**02 38 15.2**	**-2.0**
KMKR	**Kumukh**	**0.79**	**335**	*e*PG	**Pg**	**02 38 08.0**	**0.0**
KMKR				pmax	pmax		
	comp=Z,59nm,0.2s						
KMKR	**Kumukh**	**0.79**	**335**	*e*Pg	**Pg**	**02 38 08.0**	**0.0**
KMKR				*e*Sg	**Sb**	**02 38 18.5**	**-0.3**
DRN	**Derbent**	**0.85**	**44**	*e*PG	**Pb**	**02 38 09.6**	**+0.5**
DRN	**Derbent**	**0.85**	**44**	*e*Pg	**Pb**	**02 38 09.6**	**+0.5**
DRN				*e*Sg	**Sb**	**02 38 20.1**	**-0.2**
LGD	**Lagodekhi**	**1.06**	**294**	P	**Pn**	**02 38 14.4**	**+1.3**
LGD	**Lagodekhi**	**1.06**	**294**	*e*PG	**Pn**	**02 38 14.4**	**+1.3**
LGD	**Lagodekhi**	**1.06**	**294**	*e*Pg	**Pn**	**02 38 14.4**	**+1.3**
GNBR	**Gunib**	**1.06**	**336**	⇓*i*PN	**Pn**	**02 38 13.4**	**+0.2**
GNBR				pmax	pmax		
	comp=Z,24nm,0.1s						
GNBR	**Gunib**	**1.06**	**336**	*i* Pg	**Pn**	**02 38 13.4**	**+0.2**
GNBR				*i* Sg	**Sn**	**02 38 27.9**	**+0.1**
ARKR	**Arakani**	**1.25**	**341**	PN	**Pg**	**02 38 17.5**	**+0.7**
ARKR	**Arakani**	**1.25**	**341**	*e*Pg	**Pg**	**02 38 17.5**	**+0.7**
ARKR				*e*Sg	**Sn**	**02 38 33.5**	**+1.0**
XNZR	**Khunzakh**	**1.29**	**331**	⇑*e*PN	**Pg**	**02 38 17.5**	**+0.1**
XNZR	**Khunzakh**	**1.29**	**331**	*e*Pg	**Pg**	**02 38 17.6**	**+0.1**
XNZR				*e*Sg	**Sn**	**02 38 34.9**	**+1.4**
KRNR	**Karanay**	**1.49**	**342**	PN	**Pg**	**02 38 21.0**	**-0.2**
KRNR	**Karanay**	**1.49**	**342**	*e*Pg	**Pg**	**02 38 21.0**	**-0.2**
KRNR				*e*Sg	**Sg**	**02 38 39.5**	**-1.0**
MAK	**Makhachkala**	**1.54**	**359**	*e*PN	**Pb**	**02 38 21.2**	**+0.3**
MAK				pmax	pmax		
	comp=Z,55nm,0.2s						
MAK	**Makhachkala**	**1.54**	**359**	*e*Pg	**Pb**	**02 38 21.3**	**+0.3**
MAK				*e*Sg	**Sg**	**02 38 43.8**	**+1.5**
BTLR	**Botlikh**	**1.59**	**322**	*e*PN	**Pg**	**02 38 23.6**	**+0.5**
BTLR	**Botlikh**	**1.59**	**322**	*e*Pg	**Pg**	**02 38 23.6**	**+0.5**
BTLR				*e*Sg	**Sg**	**02 38 44.5**	**+0.7**
DBC	**Dubki**	**1.69**	**342**	⇑*e*PN	**Pg**	**02 38 26.2**	**+1.2**
DBC				*e*		02 38 48.6	
DBC	**Dubki**	**1.69**	**342**	*e*Pg	**Pg**	**02 38 24.4**	**-0.6**
DBC				*e*Sg	**Sg**	**02 38 45.7**	**-1.2**
DVE	**Vedeno**	**1.86**	**326**	*e*PN	**Pb**	**02 38 27.4**	**+0.9**
DVE	**Vedeno**	**1.86**	**326**	*e*Pg	**Pb**	**02 38 27.4**	**+0.9**
DVE				*e*Sg	**Sg**	**02 38 51.5**	**-1.2**
GROC	**Groznyy**	**2.21**	**325**	*e*Pg	**Pg**	**02 38 35.8**	**+0.8**
GROC				*e*Sg	**Sg**	**02 39 04.5**	**+1.0**
LACR	**Lac**	**2.80**	**301**	*e*Pn	**Pg**	**02 38 44.9**	**-1.3**
LACR				*e*Sn	**Sg**	**02 39 20.8**	**-1.7**
NEY	**Neytrino**	**4.02**	**299**	⇑*e*PN	**Pn**	**02 38 51.6**	**-2.3**
PYA1	**Pyatigorsk**	**4.21**	**310**	⇓*e*PN	**Pn**	**02 38 58.0**	**+1.6**
OBN	**Obninsk**	**15.50**	**336**	⇓*e*P	**Pn**	**02 41 29.5**	**-1.1**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRVK	**Borovoye**	**19.24**	**45**	⇓*e*P	**P**	**02 42 15.3**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,2.2s						

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*ISCJB **10** 02:38:33.4±0.2, 10°.88S±0°.04×165°.74E±0°.04, $h10^{km}$, mb4.8/103, MS4.1/12, Error ellipse: s-maj=5.8km s-min=4.8km az=143.0*
*IDC **10** 02:38:33.0±0.5, 10°.84S×165°.81E, $h0^{km}$, mb4.5/19, mb1 4.6/21, mb1mx4.6/34, mbtmp4.5/21, ML5.3/2, MS4.1/12, Ms1 4.0/12, ms1mx3.8/36, Error ellipse: s-maj=18.9km s-min=14.5km az=120.0*
*NEIC **10** 02:38:36.8±1.4, 10°.84S×165°.77E, $h23^{km}$±9^{km}, mb4.9/80, Error ellipse: s-maj=4.2km s-min=3.7km az=152.0*
ISC 10 02:38:34.6±0.4**, 10°.88S**±0°.06×**165°.84E**±0°.06**, h10**^{km}**, n165,** σ**1ˢ.03**/161**, mb4.8**/103**, MS4.2**/12**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.98**	**283**	*e*P	**Pn**	**02 40 03.0**	**-0.3**
HNR				*e*S	**Sn**	**02 41 13.0**	**+1.1**
HNR	**Honiara**	**5.98**	**283**	*e*Pn	**Pn**	**02 40 02.8**	**-0.5**
HNR				*e*Sn	**Sn**	**02 41 09.9**	**-2.0**
HNR	**Honiara**	**5.98**	**283**	Pn	**Pn**	**02 40 04.2**	**+0.9**
	53nm,0.3s,baz=222,slow=4.8,SNR=12						
HNR				Sn	**Sn**	**02 41 10.8**	**-1.1**
	baz=233,slow=20,SNR=4.7						
HNR				LR	LR	02 42 29.3	
	comp=Z,2µm,21.0s,baz=126,slow=40						
MARNC	**Mare, Loyalty**	**10.75**	**169**	*e*Pn	**Pn**	**02 41 09.3**	**+0.6**
DZM	**Mont Dzumac**	**11.14**	**177**	*e*Pn	**Pn**	**02 41 14.7**	**+0.5**
	190nm,0.5s						
DZM				*e*LR	LR	02 43 48.8	
	comp=Z,1µm,25.8s						
DZM	**Mont Dzumac**	**11.14**	**177**	Pn	**Pn**	**02 41 15.2**	**+1.0**
	28nm,0.3s,baz=349,slow=9.8,SNR=165						
DZM				Sn	**Sn**	**02 43 15.8**	**-3.2**
	0.8nm,0.3s,baz=299,slow=19,SNR=3.7						
DZM				LR	LR	02 45 29.3	
	comp=Z,476nm,18.6s,baz=330,slow=37						
ONTNC	**Ouen Toro**	**11.38**	**177**	*e*Pn	**Pn**	**02 41 18.5**	**+1.1**
PINNC	**Pines Island,**	**11.77**	**173**	*e*Pn	**Pn**	**02 41 23.9**	**+1.2**
TARA	**Tarawa**	**14.05**	**31**	*e*Pn	**Pn**	**02 41 53.4**	**-0.5**
EIDS	**Eidsvold**	**20.08**	**222**	*e*P	**P**	**02 43 08.6**	**+0.1**
	60nm,1.4s						
MANU	**Manus Island**	**20.34**	**294**	*e*P	**P**	**02 43 11.2**	**-0.1**
	180nm,1.1s						
CTA	**Charters Tower**	**20.96**	**242**	P	**P**	**02 43 18.1**	**+0.1**
	17nm,0.8s,baz=71,slow=12,SNR=14						
CTA				LR	LR	02 50 42.7	
	comp=Z,842nm,18.1s,baz=48,slow=35						
CTAO	**Charters Tower**	**20.96**	**242**	*e*P	**P**	**02 43 18.5**	**+0.4**
	43nm,0.9s						
COEN	**Coen**	**22.35**	**260**	*e*P	**P**	**02 43 34.2**	**+1.2**
	48nm,1.4s						
ARMA	**Armidale**	**23.51**	**212**	*e*P	**P**	**02 43 45.1**	**+0.1**
	23nm,0.8s						
URZ	**Urewera**	**29.07**	**162**	LR	LR	02 54 18.9	
	comp=Z,330nm,18.6s,baz=350,slow=32						
H11S2	**WAKE ISLAND Hy**	**29.20**	**2**	T	T	03 15 03.9	
	baz=181,slow=76,SNR=84						
H11S3	**WAKE ISLAND Hy**	**29.20**	**2**	T	T	03 15 04.2	
	baz=181,slow=76,SNR=76						
H11S1	**WAKE ISLAND Hy**	**29.21**	**2**	T	T	03 15 01.0	
	baz=181,slow=76,SNR=81						
H11N1	**WAKE ISLAND Hy**	**30.42**	**2**	T	T	03 16 35.5	
	baz=182,slow=76,SNR=108						
H11N3	**WAKE ISLAND Hy**	**30.42**	**2**	T	T	03 16 35.9	
	baz=182,slow=76,SNR=75						
H11N2	**WAKE ISLAND Hy**	**30.43**	**2**	T	T	03 16 36.9	
	baz=182,slow=76,SNR=62						
STKA	**Stephens Creek**	**30.63**	**223**	P	**P**	**02 44 49.5**	**+0.3**
	3.2nm,0.5s,baz=47,slow=9.9,SNR=11						
STKA				LR	LR	02 56 30.6	
	comp=Z,449nm,18.0s,baz=35,slow=35						
SNZO	**South Karori**	**31.30**	**167**	*e*P	**P**	**02 44 55.5**	**+0.6**
WRAB	**Tennant Creek**	**31.62**	**250**	*e*P	**P**	**02 44 56.7**	**-1.4**
	8.8nm,0.8s						
WB2	**Warramunga Arr**	**31.62**	**250**	*e*P	**P**	**02 44 58.2**	**+0.1**
	22nm,1.0s						
WRA	**Warramunga Arr**	**31.63**	**250**	P	**P**	**02 44 57.0**	**-1.2**
	3.6nm,0.8s,baz=82,slow=8.7,SNR=29						
WRA				PcP	**PcP**	**02 47 50.3**	**-0.2**
	1.5nm,0.8s,baz=90,slow=3.4,SNR=5.4						
WRA				LR	LR	02 57 46.3	
	comp=Z,554nm,18.1s,baz=70,slow=36						
TOO	**Toolangi**	**32.26**	**211**	*e*P	**P**	**02 45 03.7**	**+0.1**
	12nm,0.8s						
LTZ	**Lake Taylor**	**32.27**	**171**	*e*P	**P**	**02 45 05.8**	**+2.3**
	29nm,0.7s						
AS01	**Alice Springs**	**32.91**	**243**	*e*P	**P**	**02 45 10.5**	**+1.1**
AS01				*e*PcP	**PcP**	**02 47 53.6**	**-0.3**
AS31	**Alice Springs**	**32.95**	**243**	*e*P	**P**	**02 45 10.7**	**+0.9**
	6.5nm,0.8s						
ASAR	**Alice Springs**	**32.95**	**243**	P	**P**	**02 45 08.4**	**-1.4**
	5.8nm,1.0s,baz=66,slow=10,SNR=29						
ASAR				PcP	**PcP**	**02 47 53.7**	**-0.4**
	2.1nm,0.8s,baz=66,slow=2.7,SNR=7.4						
ASAR				LR	LR	02 57 39.9	
	comp=Z,422nm,18.5s,baz=70,slow=35						
RPZ	**Rata Peaks**	**33.02**	**173**	P	**P**	**02 45 12.3**	**+2.2**
	21nm,0.7s,baz=101,slow=2.9,SNR=6.3						
RAR	**Rarotonga**	**34.53**	**112**	LR	LR	02 56 25.5	
	comp=Z,204nm,21.2s,baz=273,slow=31						
FITZ	**Fitzroy Crossi**	**39.52**	**255**	*e*P	**P**	**02 46 06.9**	**+1.0**
	17nm,1.0s						
FITZ	**Fitzroy Crossi**	**39.52**	**255**	LR	LR	03 00 29.6	
	comp=Z,206nm,21.9s,baz=82,slow=33						
BATI	**Baumata**	**41.45**	**267**	LR	LR	03 06 45.9	
	comp=Z,146nm,19.0s,baz=95,slow=41						
PPT2	**Papeete2**	**43.64**	**104**	*e*LR	LR	02 58 57.2	
	comp=Z,298nm,22.2s						
MORW	**Morawa**	**49.79**	**241**	*e*P	**P**	**02 47 28.0**	**+0.1**
	30nm,1.0s						
TAOE	**Nuku Hiva Isla**	**53.19**	**93**	*e*LR	LR	03 03 15.5	
	comp=Z,123nm,25.8s						
MJAR	**Matsushiro Arr**	**53.87**	**332**	P	**P**	**02 47 57.1**	**-1.0**
	3.3nm,1.0s,baz=177,slow=8.7,SNR=6.7						
MAJO	**Matsushiro**	**53.87**	**332**	*e*P	**P**	**02 47 57.6**	**-0.5**
	3.4nm,0.5s						
RKT	**Rikitea**	**57.55**	**110**	*e*LR	LR	03 05 15.4	
	comp=Z,334nm,25.8s						
ASAJ	**Asahikawa**	**58.67**	**341**	P	**P**	**02 48 32.7**	**+0.4**
	8.4nm,0.9s,baz=209,slow=12,SNR=4.8						
KSRS	**Korea Array**	**59.80**	**326**	P	**P**	**02 48 40.6**	**+0.5**
	0.8nm,0.7s,baz=141,slow=6.9,SNR=4.1						
KSRS				LR	LR	03 13 10.3	
	comp=Z,45nm,18.8s,baz=265,slow=35						
SSE	**Sheshan**	**59.80**	**316**	*e*P	**P**	**02 48 39.9**	**-0.4**
	3.2nm,0.5s						
KSAR	**Wonju Array Be**	**59.81**	**326**	P	**P**	**02 48 40.6**	**+0.4**
NJ2	**Nanjing**	**61.97**	**315**	*e*P	**P**	**02 48 56.8**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USRK	**Ussuriysk Ar.**	**62.84**	**333**	P	**P**	**02 49 01.2**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=160,slow=6.1,SNR=4.2						
PETK	**Petropavlovsk-**	**64.11**	**355**	P	**P**	**02 49 09.6**	**+0.7**
	comp=Z,8.1nm,1.0s,baz=187,slow=10.0,SNR=2.9						
MDJ	**Mudanjiang**	**64.25**	**332**	*e*P	**P**	**02 49 10.2**	**+0.3**
	comp=Z,3.5nm,0.6s						
GYA	**Guiyang**	**68.41**	**304**	*e*P	**P**	**02 49 39.5**	**+2.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**70.08**	**312**	P	**P**	**02 49 49.8**	**+2.5**
XAN				pP	sP	02 49 59.7	+8.1
XAN				sP	PcP	02 50 04.4	-5.0
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
XAN	**Xi'an**	**70.08**	**312**	*e*P	**P**	**02 49 46.9**	**-0.5**
KMI	**Kunming**	**71.12**	**301**	P	**P**	**02 49 57.1**	**+3.0**
KMI				pP	sP	02 50 04.0	+5.7
KMI				sP	PcP	02 50 08.5	-5.7
KMI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**71.77**	**320**	*e*P	**P**	**02 49 55.8**	**-1.7**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
CMAR	**Chiang Mai Arr**	**72.14**	**293**	P	**P**	**02 49 59.9**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=122,slow=4.4,SNR=3.6						
CD2	**Chengdu**	**72.58**	**307**	*e*P	**P**	**02 50 05.0**	**+2.5**
LZH	**Lanzhou**	**74.72**	**312**	*e*P	**P**	**02 50 18.5**	**+3.4**
LZH				pP	sP	02 50 22.2	+2.8
LZH				sP	pP	02 50 25.2	+7.0
LZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GAMB	**Gambell**	**76.39**	**10**	*e*P	**P**	**02 50 24.4**	**+0.6**
	comp=Z,11nm,0.9s						
SVW2	**Sparrevohn**	**77.93**	**18**	*e*P	**P**	**02 50 32.9**	**+0.3**
	comp=Z,46nm,1.5s						
ULN	**Ulaanbaatar**	**78.22**	**324**	*e*P	**P**	**02 50 34.5**	**-0.3**
	comp=Z,4.1nm,0.8s						
ANM	**Nome**	**78.31**	**12**	*e*P	**P**	**02 50 35.0**	**+0.4**
	comp=Z,28nm,1.6s						
SONM	**Songino Array**	**78.59**	**324**	P	**P**	**02 50 36.6**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=125,slow=5.5,SNR=11						
SONA1	**Songino Array**	**78.59**	**324**	*e*P	**P**	**02 50 36.5**	**-0.3**
BILL	**Bilibino**	**78.71**	**0**	*e*P	**P**	**02 50 36.3**	**-0.5**
	comp=Z,12nm,1.0s						
GTA	**Gaotai**	**79.01**	**314**	⇑P	**P**	**02 50 39.9**	**+0.6**
GTA				pP	pP	02 50 44.5	+2.1
GTA				sP	sP	02 50 47.0	+3.5
GTA				S	**S**	**03 00 39.8**	**+1.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,83nm,7.5s						
GTA				LR	LR		
	comp=N,180nm,21.3s						
GTA				LR	LR		
	comp=E,200nm,20.6s						
GTA				LR	LR		
	comp=Z,160nm,19.0s						
CAST	**Castle Rocks**	**80.76**	**18**	*e*P	**P**	**02 50 47.9**	**-0.1**
	comp=Z,9.0nm,0.9s						
RND	**Reindeer**	**81.75**	**19**	*e*P	**P**	**02 50 54.6**	**+1.3**
	comp=Z,36nm,1.5s						
RDOG	**Red Dog Mine**	**81.84**	**11**	*e*P	**P**	**02 50 54.2**	**+0.6**
	comp=Z,15nm,1.1s						
MCK	**McKinley**	**81.96**	**19**	*e*P	**P**	**02 50 54.9**	**+0.5**
	comp=Z,40nm,1.6s						
IM3	**Indian Mountai**	**82.24**	**16**	*e*P	**P**	**02 50 56.0**	**+0.3**
MLY	**Manley**	**82.35**	**17**	*e*P	**P**	**02 50 57.0**	**+0.5**
	comp=Z,34nm,2.0s						
WRH	**Wood River Hil**	**82.74**	**18**	*e*P	**P**	**02 50 58.4**	**-0.1**
	comp=Z,18nm,1.1s						
MDM	**Murphy Dome**	**83.05**	**18**	*e*P	**P**	**02 50 59.4**	**-0.6**
	comp=Z,11nm,0.9s						
COLA	**College**	**83.10**	**18**	*e*P	**P**	**02 50 59.7**	**-0.6**
IL1	**Eielson Array**	**83.33**	**18**	*e*P	**P**	**02 51 00.7**	**-0.8**
ILAR	**Eielson Array**	**83.33**	**18**	P	**P**	**02 51 01.4**	**0.0**
	comp=Z,5.4nm,0.8s,baz=233,slow=5.0,SNR=47						
ILB	**Eielson Array**	**83.33**	**18**	*e*P	**P**	**02 51 01.5**	**0.0**
YBH	**Yreka Blue Hor**	**83.71**	**46**	*e*P	**P**	**02 51 04.8**	**+0.7**
	comp=Z,8.3nm,1.0s						
ORV	**Oroville**	**83.83**	**48**	*e*P	**P**	**02 51 05.5**	**+0.8**
	comp=Z,7.2nm,1.0s						
HUMO	**Hull Mountain**	**83.84**	**45**	*e*P	**P**	**02 51 05.4**	**+0.7**
AFDM	**Forest Hills D**	**84.02**	**49**	*e*P	**P**	**02 51 06.0**	**+0.4**
	comp=Z,11nm,1.0s						
CMB	**Columbia Colle**	**84.16**	**50**	*e*P	**P**	**02 51 05.8**	**-0.6**
	comp=Z,6.3nm,1.0s						
WAKR	**Walker**	**85.02**	**49**	*e*P	**P**	**02 51 11.4**	**+0.5**
	comp=Z,11nm,1.1s						
MDPB	**Devils Postpil**	**85.02**	**50**	*e*P	**P**	**02 51 11.8**	**+0.7**
	comp=Z,6.0nm,0.9s						
OMMB	**Old Mammoth Mi**	**85.07**	**50**	*e*P	**P**	**02 51 12.0**	**+0.6**
	comp=Z,6.4nm,1.1s						
PNTR	**Pine Nut**	**85.08**	**49**	*e*P	**P**	**02 51 12.1**	**+0.8**
	comp=Z,8.1nm,0.9s						
VCNR	**Virginia City**	**85.11**	**49**	*e*P	**P**	**02 51 12.2**	**+0.8**
	comp=Z,4.4nm,1.0s						
EGAK	**Eagle**	**85.19**	**20**	*e*P	**P**	**02 51 11.6**	**+0.7**
	comp=Z,22nm,1.0s						
DAWY	**Dawson**	**85.37**	**21**	*e*P	**P**	**02 51 11.2**	**-0.7**
	comp=Z,5.4nm,1.0s						
PAHR	**Pah Rah Range**	**85.43**	**48**	*e*P	**P**	**02 51 14.0**	**+1.1**
	comp=Z,11nm,1.1s						
MOD	**Modoc Plateau**	**85.46**	**46**	*e*P	**P**	**02 51 12.9**	**-0.1**
	comp=Z,3.1nm,0.7s						
PINE	**Pine Mountain**	**85.64**	**44**	*e*P	**P**	**02 51 14.8**	**+0.9**
	comp=Z,17nm,1.4s						
PGC	**Sidney**	**85.71**	**39**	*e*P	**P**	**02 51 14.6**	**+0.8**
	comp=Z,48nm,1.8s						
RYN	**Ryan**	**85.74**	**50**	*e*P	**P**	**02 51 15.2**	**+0.7**
	comp=Z,4.2nm,0.9s						
DAC	**Darwin (Calif)**	**85.76**	**52**	*e*P	**P**	**02 51 15.1**	**+0.4**
	comp=Z,5.4nm,0.9s						
NV01	**Mina Array Sit**	**85.84**	**50**	*e*P	**P**	**02 51 15.2**	**+0.1**
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**02 51 15.5**	**+0.4**
	comp=Z,8.6nm,1.0s,baz=233,slow=7.0,SNR=21						
TIXI	**Tiksi**	**85.95**	**349**	*e*P	**P**	**02 51 13.2**	**-1.4**
	comp=Z,2.0nm,0.5s						
NV11	**Mina Array Sit**	**85.96**	**50**	*e*P	**P**	**02 51 15.8**	**+0.2**
	comp=Z,0.9nm,1.1s						
KVN	**Kaiserville**	**86.18**	**49**	*e*P	**P**	**02 51 17.1**	**+0.4**
	comp=Z,7.0nm,1.0s						
I07A	**Izee**	**86.71**	**44**	*e*P	**P**	**02 51 19.8**	**+0.7**
	comp=Z,6.1nm,0.9s						
J08A	**Circle Bar Ran**	**87.20**	**45**	*e*P	**P**	**02 51 22.0**	**+0.5**
	comp=Z,7.8nm,1.0s						
LDFC	**Landfair**	**87.38**	**54**	*e*P	**P**	**02 51 22.8**	**+0.3**
	comp=Z,14nm,1.1s						
HAWA	**Hanford**	**87.43**	**42**	*e*P	**P**	**02 51 22.9**	**+0.5**
	comp=Z,6.3nm,1.1s						
G08A	**Pilot Rock**	**87.46**	**43**	*e*P	**P**	**02 51 23.1**	**+0.4**
	comp=Z,8.1nm,1.0s						
Y12C	**Blythe**	**87.50**	**55**	*e*P	**P**	**02 51 24.2**	**+1.2**
	comp=Z,5.5nm,0.9s						
EPYK	**Eagle Plains**	**87.62**	**20**	*e*P	**P**	**02 51 23.2**	**+0.3**
	comp=Z,13nm,1.1s						
SHPR	**Sheep Range**	**87.71**	**52**	*e*P	**P**	**02 51 24.9**	**+0.7**
	comp=Z,4.9nm,1.1s						
E08A	**Dider Farm, El**	**87.77**	**42**	*e*P	**P**	**02 51 24.8**	**+0.8**
	comp=Z,17nm,1.3s						
R11A	**Troy Canyon, C**	**87.87**	**50**	*e*P	**P**	**02 51 25.3**	**+0.4**
	comp=Z,5.6nm,1.4s						
W13A	**Hualapai Mount**	**88.35**	**54**	*e*P	**P**	**02 51 27.7**	**+0.4**
	comp=Z,13nm,1.5s						
BMO	**Blue Mountains**	**88.44**	**44**	*e*P	**P**	**02 51 27.4**	**0.0**
	comp=Z,1.3nm,0.6s						
WMQ	**Urumqi**	**89.05**	**315**	P	**P**	**02 51 30.9**	**+0.7**
WMQ				pP	PcP	02 51 34.3	+2.6
WMQ				PP	**PP**	**02 54 56.0**	**-4.3**
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.7s						
WMQ				LR	LR		
	comp=N,130nm,19.9s						
WMQ				LR	LR		
	comp=E,150nm,23.5s						
WMQ				LR	LR		
	comp=Z,130nm,21.7s						
PSUT	**Pine Spring**	**89.23**	**51**	*e*P	**P**	**02 51 31.5**	**+0.1**
	comp=Z,4.8nm,1.0s						
LCMT	**Little Creek M**	**89.33**	**52**	*e*P	**P**	**02 51 32.7**	**+0.9**
	comp=Z,8.3nm,1.1s						
CCUT	**Cedar City**	**89.36**	**52**	*e*P	**P**	**02 51 32.3**	**+0.2**
	comp=Z,5.4nm,1.0s						
NEW	**Newport**	**89.56**	**41**	*e*P	**P**	**02 51 32.2**	**-0.3**
	comp=Z,2.0nm,0.9s						
SZCU	**Shurtz Canyon**	**89.59**	**52**	*e*P	**P**	**02 51 33.1**	**+0.1**
	comp=Z,6.8nm,1.0s						
KNB	**Kanab**	**89.65**	**52**	*e*P	**P**	**02 51 34.9**	**+1.6**
	comp=Z,13nm,1.3s						
INK	**Inuvik**	**89.72**	**19**	P	**P**	**02 51 32.1**	**-0.6**
	comp=Z,2.0nm,1.1s,baz=149,slow=5.9,SNR=3.5						
U15A	**North Rim**	**89.93**	**53**	*e*P	**P**	**02 51 34.6**	**-0.2**
	comp=Z,6.9nm,0.8s						
HLID	**Hailey**	**90.09**	**46**	*e*P	**P**	**02 51 35.8**	**+0.5**
	comp=Z,3.8nm,1.0s						
X16A	**Lo Mia Camp, P**	**90.15**	**55**	*e*P	**P**	**02 51 36.2**	**+0.5**
	comp=Z,4.2nm,0.9s						
TUC	**Tucson**	**90.22**	**57**	*e*P	**P**	**02 51 36.4**	**+0.4**
	comp=Z,3.2nm,0.8s						
MTPU	**Mount Pierson**	**90.39**	**51**	*e*P	**P**	**02 51 37.3**	**+0.3**
	comp=Z,6.5nm,1.0s						
DUG	**Dugway, Tooele**	**90.42**	**49**	*e*P	**P**	**02 51 36.6**	**-0.2**
	comp=Z,2.0nm,0.8s						
MSU	**Marysvale**	**90.50**	**51**	*e*P	**P**	**02 51 37.7**	**+0.3**
HVU	**Hansel Valley**	**90.82**	**48**	*e*P	**P**	**02 51 38.6**	**-0.1**
	comp=Z,6.3nm,0.9s						
NLU	**North Lily Min**	**90.91**	**50**	*e*P	**P**	**02 51 39.6**	**+0.3**
	comp=Z,4.8nm,0.9s						
CTU	**Camp Tracy**	**91.32**	**49**	*e*P	**P**	**02 51 41.7**	**+0.6**
	comp=Z,19nm,1.6s						
DLMT	**Dillon**	**91.80**	**44**	*e*P	**P**	**02 51 43.4**	**+0.2**
	comp=Z,10nm,1.0s						
AHID	**Auburn Hatcher**	**92.26**	**47**	*e*P	**P**	**02 51 46.8**	**+1.5**
	comp=Z,11nm,0.6s						
FXWY	**Fox Creek**	**92.50**	**46**	*e*P	**P**	**02 51 47.1**	**+0.6**
	comp=Z,3.7nm,1.1s						
BOZ	**Bozeman (W)**	**92.51**	**44**	*e*P	**P**	**02 51 46.7**	**+0.3**
	comp=Z,5.3nm,0.9s						
HRY	**Holter Researc**	**92.62**	**43**	*e*P	**P**	**02 51 47.3**	**+0.5**
BW06	**Boulder Array**	**93.37**	**47**	*e*P	**P**	**02 51 50.6**	**+0.1**
	comp=Z,2.6nm,0.9s						
PD31	**Pinedale Array**	**93.37**	**47**	*e*P	**P**	**02 51 50.3**	**-0.3**
PDAR	**Pinedale Array**	**93.37**	**47**	*e*P	**P**	**02 51 50.3**	**-0.3**
PDAR	**Pinedale Array**	**93.37**	**47**	P	**P**	**02 51 50.8**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=242,slow=3.2,SNR=13						
MK01	**Makanchi Array**	**93.46**	**317**	*e*P	**P**	**02 51 49.7**	**-0.9**
MK31	**Makanchi Array**	**93.47**	**317**	*e*P	**P**	**02 51 50.0**	**-0.7**
MKAR	**Makanchi Array**	**93.47**	**317**	P	**P**	**02 51 50.1**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=97,slow=5.8,SNR=25						
MKAR				PKKPbc	**PKKPdf**	**03 08 56.2**	**-1.4**
	comp=Z,1.2nm,0.9s,baz=277,slow=4.2,SNR=9.2						
ZALV	**Zalesovo Beam**	**93.48**	**324**	*e*P	**P**	**02 51 48.8**	**-1.6**
ZALV	**Zalesovo Beam**	**93.48**	**324**	P	**P**	**02 51 49.3**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=98,slow=3.1,SNR=7.0						
MAKZ	**Makanchi**	**93.68**	**317**	*e*P	**P**	**02 51 50.6**	**-1.0**
	comp=Z,4.7nm,1.3s						
YKA	**Yellowknife Ar**	**94.78**	**27**	P	**P**	**02 51 54.5**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=258,slow=4.7,SNR=14						
YKB5	**Yellowknife Ar**	**94.78**	**27**	*e*P	**P**	**02 51 56.0**	**-0.2**
NRIK	**Noril'sk**	**96.00**	**340**	LR	LR	03 36 26.5	
	comp=Z,71nm,18.6s,baz=346,slow=36						
ARCES	**ARCESS Array B**	**116.20**	**346**	PKP	**PKiKP**	**02 57 16.5**	**-1.3**
	comp=Z,3.8nm,1.0s,baz=69,slow=2.1,SNR=22						
FINES	**FINESS Array B**	**121.65**	**339**	PKP	**PKPdf**	**02 57 28.3**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=134,slow=4.0,SNR=3.5						
CPUP	**Villa Florida**	**124.07**	**132**	PKP	**PKPdf**	**02 57 33.5**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=332,slow=1.3,SNR=6.0						
SDV	**Santo Domingo**	**124.39**	**87**	*e*PKPdf	**PKPdf**	**02 57 34.2**	**-1.1**
BOSA	**Boshof**	**125.30**	**223**	PKP	**PKPdf**	**02 57 36.5**	**-0.2**
	comp=Z,2.9nm,1.0s,baz=140,slow=4.1,SNR=3.8						
NB2	**NORSAR Subarra**	**126.57**	**345**	PKPdf	**PKPdf**	**02 57 36.5**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=36,slow=1.8						
NOA	**NORSAR Array B**	**126.57**	**345**	PKP	**PKPdf**	**02 57 35.9**	**-2.0**
	comp=Z,0.6nm,0.9s,baz=325,slow=3.1,SNR=3.4						
BRTR	**Keskin Array B**	**128.92**	**313**	PKP	**PKPdf**	**02 57 42.8**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=30,slow=7.9,SNR=3.7						
CLL	**Collm**	**133.99**	**337**	*e*PKPdf	**PKPdf**	**02 57 52.0**	**-0.2**
GERES	**GERESS Array B**	**135.60**	**334**	PKP	**PKPdf**	**02 57 55.1**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=119,slow=1.2,SNR=4.4						
BDFB	**Brasilia**	**137.36**	**128**	PKP	**PKPdf**	**02 57 59.1**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=81,slow=6.4,SNR=4.7						
KEST	**Kesra**	**147.34**	**323**	PKPbc	**PKPdf**	**02 58 19.1**	**+2.3**
	comp=Z,5.5nm,0.8s,baz=24,slow=13,SNR=3.1						
ES19	**SONSECA Array**	**149.88**	**344**	*e*PKPbc	**PKPbc**	**02 58 25.4**	**-0.2**
ESDC	**Sonseca Array**	**149.93**	**344**	PKPbc	**PKPbc**	**02 58 25.5**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=10,slow=2.2,SNR=10.0						
TORD	**Torodi Ar. Bea**	**164.33**	**280**	PKP	**PKPdf**	**02 58 38.7**	**-0.9**
	comp=Z,0.9nm,1.0s,baz=204,slow=28,SNR=4.4						

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*ISCJB **10** 02:41:02.3±0.8, 31°.32S±0°.03×68°.98W±0°.05, $h116^{km}$±6^{km}, Error ellipse: s-maj=6.4km s-min=4.3km az=4.3*
*GUC **10** 02:41:02.1±0.6, 31°.30S×69°.41W, $h162^{km}$±26^{km}, ML3.7*
*SJA **10** 02:41:02.2±0.7, 31°.31S×68°.98W, $h108^{km}$±3^{km}, ML3.5, MW3.7*
ISC 10 02:41:03.1±1.5**, 31°.31S**±0°.03×**68°.99W**±0°.05**, h110**^{km}±10^{km}**, n23,** σ**0ˢ.59**/38**, 2C-4D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.44**	**92**	*i* P	**Pn**	**02 41 19.1**	**-0.5**
RTLL				*i* S	**Sn**	**02 41 31.3**	**-0.8**
RTLL				IAML		02 41 32.4	
	comp=Z,728nm,0.4s						
RTLS	**Leoncito**	**0.55**	**208**	*i* P	**Pn**	**02 41 20.5**	**-0.1**
RTLS				*i* S	**Sn**	**02 41 34.3**	**+0.4**
RTLS				IAML		02 41 34.9	
	comp=Z,2µm,0.9s						
AMOG	**MOGNA**	**0.57**	**49**	*i* P	**Pn**	**02 41 20.6**	**+0.1**
RTCV	**Cerro Valdivia**	**0.67**	**145**	*i* P	**Pn**	**02 41 20.7**	**-0.5**
RTCV				*i* S	**Sn**	**02 41 35.2**	**+0.2**
CFA	**Coronel Fontan**	**0.71**	**115**	*i* P	**Pn**	**02 41 21.2**	**-0.3**
CFA				*i* S	**Sn**	**02 41 35.1**	**-0.4**
ACCO	**Cerro Coronel**	**0.72**	**355**	*i* P	**Pn**	**02 41 22.2**	**+0.1**
ACCO				*i* S	**Sn**	**02 41 36.8**	**+0.5**
AUSP	**Uspallata**	**0.97**	**200**	*i* P	**Pn**	**02 41 24.2**	**-0.1**
ACDV	**Cuesta del Vie**	**1.14**	**354**	*i* P	**Pn**	**02 41 26.2**	**+0.2**
ACDV				*i* S	**Sn**	**02 41 43.6**	**+0.3**
AROD	**Rodeo**	**1.22**	**340**	*i* P	**Pn**	**02 41 27.4**	**+0.5**
AROD				*i* S	**Sn**	**02 41 46.1**	**+1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAL	Salagasta	1.28	174	iP	Pn	02 41 27.4	-0.1
ARCO	CERRO ARCO	1.52	178	iP	Pn	02 41 30.5	+0.1
ARCO				iS	Sn	02 41 51.5	+0.4
CMCH	Combarbala	1.73	274	iP	Pn	02 41 32.6	-0.1
CMCH				iS	Sn	02 41 55.6	+0.3
ACAN	Cantantal	1.81	122	iP	Pn	02 41 33.9	+0.2
AGUA	GUANDACOL	1.87	13	iP	Pn	02 41 34.1	-0.4
AGUA				iS	Sn	02 41 58.6	+0.1
GO04	Tololo Observa	1.93	306	⇑iP	Pn	02 41 35.1	-0.3
GO04				iS	Sn	02 41 59.9	-0.2
FCH	Farellones	2.29	208	⇓iP	Pn	02 41 40.4	+0.3
FCH				iS	Sn	02 42 10.3	+1.9
FCH				IAML		02 42 11.5	
	comp=E,319nm,0.3s						
APLL	PUNTA DE LOS L	2.31	67	iP	Pn	02 41 40.0	-0.1
APLL				IAML		02 42 10.1	
	comp=Z,141nm,0.2s						
PEL	Peldehue	2.32	218	⇓iP	Pn	02 41 39.6	-0.7
PEL				iS	Sn	02 42 08.3	-0.4
PEL				IAML		02 42 12.8	
	comp=E,219nm,0.3s						
ROCH	El Roble	2.38	225	⇓iP	Pn	02 41 40.2	-1.0
ROCH				eS	Sn	02 42 09.2	-1.1
ROCH				IAML		02 42 13.0	
	comp=N,494nm,0.4s						
CLCH	Cerro Calan	2.46	212	⇓iP	Pn	02 41 42.0	0.0
CLCH				iS	Sn	02 42 12.2	+0.4
CLCH				IAML		02 42 14.9	
	comp=E,401nm,0.4s						
LMEL	Las Melosas	2.73	202	eP	Pn	02 41 46.1	+0.4
LMEL				IAML		02 42 31.2	
	comp=N,193nm,0.2s						
LCO	Las Campanas	2.73	327	⇑iP	Pn	02 41 45.3	-0.5
LCO				iS	Sn	02 42 18.3	-0.3
LCO				IAML		02 42 19.1	
	comp=E,181nm,0.2s						
MRA	San Martin	3.00	112	IAML		02 42 24.4	
	comp=Z,126nm,0.5s						

WEL 10 02:43:18.9±0.8, 37°S±8°×17°7E±°, h274^{km}±8^{km}, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUZ	Kuaotunu	1.06	268	P	Pn	02 43 57.1	+0.2
TGRZ	Tauranga	1.18	211	P	Pn	02 43 58.3	+0.9
OPRZ	Ohinepanea	1.18	199	P	Pn	02 43 56.6	-0.9
HAZ	Te Kaha	1.19	150	P	Pn	02 43 57.2	-0.3
HAZ				S	S	02 44 28.3	+0.2
MXZ	Matakaoa Point	1.31	130	P	Pn	02 43 58.2	-0.1
MXZ				S	S	02 44 29.9	+0.4
RUGZ	Raukumara Rang	1.34	158	P	Pn	02 43 57.9	-0.7
RUGZ				S	S	02 44 29.4	-0.7
RUGZ	Raukumara Rang	1.34	158	P	S	02 44 23.0	-7.1
GRZ	Great Barrier	1.36	290	P	Pn	02 43 58.5	-0.2
PKGZ	Pakihiroa	1.43	145	P	Pn	02 43 59.4	+0.3
PKGZ				S	S	02 44 31.4	+0.4
OMRZ	Omania	1.48	201	P	Pn	02 44 00.0	+0.6
WIAZ	Waiheke Island	1.53	267	P	Pn	02 44 00.2	+0.4
URZ	Urewera	1.53	178	P	Pn	02 43 59.3	-0.4
URZ				S	S	02 44 31.8	-0.4
WMGZ	Waiomatatini S	1.55	135	P	Pn	02 44 00.2	+0.3
WMGZ				S	S	02 44 33.5	+1.2
WMGZ	Waiomatatini S	1.55	135	P	S	02 44 27.9	-4.5
MKAZ	Moumakai	1.55	255	P	Pn	02 44 00.4	+0.5
TARZ	Mount Tarawera	1.57	196	P	Pn	02 44 00.8	+0.7
TOZ	Tahuroa Road	1.58	230	P	Pn	02 43 59.8	-0.3
HLRZ	Highlands Stat	1.62	199	P	Pn	02 44 01.4	+0.9
TWGZ	Tauwhareparae	1.63	153	P	Pn	02 44 01.1	+0.5
TWGZ				S	S	02 44 35.0	+1.4
TWGZ	Tauwhareparae	1.63	153	P	S	02 44 28.8	-4.8
MWZ	Matawai	1.65	167	P	Pn	02 44 00.6	-0.1
MWZ				S	S	02 44 34.5	+0.6
PUZ	Puketiti	1.66	145	P	Pn	02 44 00.7	0.0
PUZ				S	S	02 44 33.8	-0.1
PUZ	Puketiti	1.66	145	P	S	02 44 29.4	-4.4
RRRZ	Republican Roa	1.67	194	P	Pn	02 44 01.1	+0.4
ETAZ	East Tamaki Re	1.71	262	P	Pn	02 44 01.6	+0.5
MBAZ	Motutapu North	1.72	268	P	Pn	02 44 01.6	+0.5
MUGZ	Murupara	1.76	187	P	Pn	02 44 01.1	-0.4
MUGZ				S	S	02 44 35.9	+0.6
ABAZ	Army Bay	1.78	273	P	Pn	02 44 02.1	+0.5
RAGZ	Rawiri	1.79	170	P	Pn	02 44 01.8	0.0
RAGZ				S	S	02 44 36.6	+0.7
RAGZ	Rawiri	1.79	170	P	S	02 44 32.6	-3.2
TKGZ	Te Karaka	1.83	160	P	Pn	02 44 02.0	+0.1
TKGZ				S	S	02 44 36.6	+0.4
TKGZ	Te Karaka	1.83	160	P	S	02 44 33.8	-2.4
RTZ	Ruatahuna	1.89	181	P	Pn	02 44 01.9	-0.6
RTZ				S	S	02 44 37.0	-0.2
ALRZ	Allen Road	1.92	197	P	Pn	02 44 01.7	-1.0
WPRZ	Whakapapatarin	1.92	201	P	Pn	02 44 03.0	+0.3
AWAZ	Awhitu Peninsu	1.95	259	P	Pn	02 44 03.2	+0.2
CNGZ	Carnagh Statio	1.99	152	P	Pn	02 44 03.8	+0.5
TLZ	Tolley Road	2.00	216	P	Pn	02 44 04.6	+1.2
RIGZ	Rimuhau	2.06	164	P	Pn	02 44 04.2	+0.3
RIGZ				S	S	02 44 41.4	+1.7
RIGZ	Rimuhau	2.06	164	P	S	02 44 37.1	-2.6
SNGZ	Shannon Statio	2.07	173	P	Pn	02 44 03.9	-0.1
SNGZ				S	S	02 44 39.4	-0.4
SNGZ	Shannon Statio	2.07	173	P	S	02 44 36.8	-3.1
MTHZ	Maungataniwha	2.13	184	P	Pn	02 44 04.0	-0.5
MTHZ				S	S	02 44 41.1	+0.2
MRHZ	Matea Rd	2.16	193	P	Pn	02 44 04.2	-0.6
RAHZ	Arahi	2.19	179	P	Pn	02 44 04.9	-0.1
PRGZ	Paritu Road	2.29	163	P	Pn	02 44 06.3	+0.3
PRGZ	Paritu Road	2.29	163	P	S	02 44 41.4	-2.1
WCZ	Waipu Caves	2.31	289	P	Pn	02 44 05.2	-1.0
KNZ	Kokohu	2.35	168	P	Pn	02 44 05.9	-0.6
KNZ	Kokohu	2.35	168	P	S	02 44 40.6	-3.7
WHHZ	Waihua	2.35	176	P	Pn	02 44 06.2	-0.3
RATZ	Rangitukua	2.36	205	P	Pn	02 44 06.3	-0.3
NMHZ	Naumai	2.38	184	P	Pn	02 44 06.7	-0.1
RITZ	Rihia Road	2.44	202	P	Pn	02 44 07.0	-0.3
BKZ	Black Stump Fm	2.48	190	P	Pn	02 44 06.5	-1.2
KATZ	Kakaramea	2.49	205	P	Pn	02 44 08.4	+0.5
HIZ	Hauiti	2.49	223	P	Pn	02 44 08.5	+0.7
MHGZ	Mahia Peninsul	2.52	164	P	Pn	02 44 07.9	-0.2
ARHZ	Aropaoanui	2.54	181	P	Pn	02 44 07.8	-0.4
KRVZ	Karewarewa	2.61	205	P	Pn	02 44 08.3	-0.8
WTVZ	West Tongariro	2.65	205	P	Pn	02 44 08.8	-0.7
TWVZ	Taurewa	2.66	208	P	Pn	02 44 08.9	-0.7
NGZ	Ngauruhoe	2.70	204	P	Pn	02 44 09.5	-0.5
MCHZ	McNeill Hill	2.73	186	P	Pn	02 44 09.5	-0.7
COVZ	Chateau Observ	2.74	205	P	Pn	02 44 09.5	-0.9
KWHZ	Kaweka Forest	2.74	190	P	Pn	02 44 09.2	-1.1
TUVZ	Tukino	2.76	203	P	Pn	02 44 09.6	-1.0
FWVZ	Far West T-bar	2.79	204	P	Pn	02 44 10.1	-0.9
WHVZ	Whangaehu Hut	2.80	204	P	Pn	02 44 10.0	-1.1
TRVZ	Turoa	2.83	204	P	Pn	02 44 10.3	-1.0
MOVZ	Moawhango	2.86	200	P	Pn	02 44 10.0	-1.6
BHHZ	Black Hill Sta	2.87	195	P	Pn	02 44 10.0	-1.6
PKVZ	Pokaka	2.89	207	P	Pn	02 44 10.7	-1.1
CKHZ	Cape Kidnapper	2.93	179	P	Pn	02 44 11.2	-1.0
MTVZ	Mangateitei	2.93	204	P	Pn	02 44 11.1	-1.1
VRZ	Vera Road	3.00	216	P	Pn	02 44 10.7	-2.1
KAHZ	Kahuranaki	3.07	182	P	Pn	02 44 12.5	-1.1
PXZ	Pawanui	3.30	182	P	Pn	02 44 14.5	-1.5
WAZ	Wanganui	3.43	207	P	Pn	02 44 16.0	-1.5
PKE	Pukeiti	3.45	223	P	Pn	02 44 17.9	+0.2
PRHZ	Porangahau	3.55	185	P	Pn	02 44 17.1	-1.6
DVHZ	Dannevirke	3.63	191	P	Pn	02 44 17.5	-2.1
POWZ	Post Office Ro	3.79	195	P	Pn	02 44 19.5	-1.9
PRWZ	Pori Road	3.92	192	P	Pn	02 44 21.0	-1.8
BFZ	Birch Farm	4.00	189	P	Pn	02 44 21.1	-2.6
MRZ	Mangatainoka R	4.09	196	P	Pn	02 44 21.6	-3.2
TIWZ	Tintock	4.14	192	P	Pn	02 44 22.7	-2.8
CPWZ	Castlepoint	4.23	189	P	Pn	02 44 24.3	-2.1
HOWZ	Holdsworth Sta	4.33	195	P	Pn	02 44 24.2	-3.4
OGWZ	Otaki Gorge	4.34	199	P	Pn	02 44 24.4	-3.2
KIW	Kapiti Island	4.45	201	P	Pn	02 44 25.4	-3.6
TMWZ	Te Maipa	4.47	191	P	Pn	02 44 26.1	-3.0
MTW	Mount Morrison	4.59	195	P	Pn	02 44 26.7	-3.8
CAW	Cannon Point	4.64	199	P	Pn	02 44 27.4	-3.8
DUWZ	D'Urville Isla	4.74	210	P	Pn	02 44 28.7	-3.7
TRWZ	Traveller	4.78	192	P	Pn	02 44 29.7	-3.1
PAWZ	Paruwai Farm	4.82	195	P	Pn	02 44 29.9	-3.4
MSWZ	Moikau Station	4.89	196	P	Pn	02 44 30.0	-4.1
TCW	Tory Channel	4.97	205	P	Pn	02 44 31.3	-3.7
BHW	Baring Head	4.97	199	P	Pn	02 44 31.1	-3.9
PLWZ	Palliser	5.03	195	P	Pn	02 44 31.7	-4.1
TUWZ	Tuamarina	5.28	206	P	Pn	02 44 34.9	-3.8
NNZ	Nelson	5.32	211	P	Pn	02 44 34.6	-4.5
QRZ	Quartz Range	5.40	219	P	Pn	02 44 35.4	-4.8
BSWZ	Blackbirch Sta	5.55	205	P	Pn	02 44 38.3	-3.7
THZ	Tophouse	5.97	211	P	Pn	02 44 42.6	-4.5
KHZ	Kahutara	6.29	204	P	Pn	02 44 47.2	-3.8
DSZ	Denniston Nort	6.45	217	P	Pn	02 44 47.8	-5.3
LTZ	Lake Taylor	7.08	210	P	Pn	02 44 55.8	-5.0
AMCZ	Amberley	7.27	206	P	Pn	02 44 55.0	-8.1
INZ	Inchbonnie	7.38	214	P	Pn	02 44 59.0	-5.5
OKCZ	Okains Bay	7.62	202	P	Pn	02 45 03.0	-4.5
OXZ	Oxford	7.63	209	P	Pn	02 45 01.9	-5.7
MQZ	McQueen's Vall	7.74	204	P	Pn	02 45 03.3	-5.6
AKCZ	Akaroa Harbour	7.80	203	P	Pn	02 45 04.8	-5.0
WVZ	Waitaha Valley	7.98	215	P	Pn	02 45 06.6	-5.3
FOZ	Fox Glacier	8.76	217	P	Pn	02 45 15.6	-6.1
ODZ	Otahua Downs	9.61	208	P	Pn	02 45 27.7	-4.6
WKZ	Wanaka	10.12	214	P	Pn	02 45 32.3	-6.3

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*IDC **10** 02:45:38.5±1.7, 11°.04S×166°.97E, h0^{km}, mb4.1/10, mb1 4.2/10, mb1mx4.0/36, mbtmp4.0/10, MS4.0/1, Ms1 4.0/1, ms1mx3.1/31, Error ellipse: s-maj=72.2km s-min=19.5km az=143.0*

*ISCJB **10** 02:45:41.4±1.4, 11°.1S±0°.3×166°.9E±0°.3, h28^{km}, mb4.0/10, MS3.9/1, Error ellipse: s-maj=61.7km s-min=16.7km az=142.0*

ISC 10 02:45:42.9±1.6**, 11°.1S**±0°.4×**167°.0E**±0°.3**, h28^{km}, n11, σ0^{s}.95**/10**, mb4.0**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.86	243	P	P	02 50 35.1	+1.6
	4.5nm,0.9s,baz=75,slow=15,SNR=3.4						
WRA	Warramunga Arr	32.60	250	P	P	02 52 11.9	-0.5
	2.3nm,0.7s,baz=82,slow=9.2,SNR=22						
RPZ	Rata Peaks	32.72	175	LR	LR	03 03 28.6	
	comp=Z,218nm,18.4s,baz=16,slow=33						
ASAR	Alice Springs	33.86	244	P	P	02 52 22.7	-0.6
	1.7nm,0.8s,baz=73,slow=9.5,SNR=14						
FITZ	Fitzroy Crossi	40.53	255	P	P	02 53 19.3	-0.7
	6.4nm,1.1s,baz=104,slow=6.6,SNR=3.7						
SONM	Songino Array	79.39	323	P	P	02 57 47.1	+0.6
	0.8nm,0.8s,baz=156,slow=4.9,SNR=4.7						
ILAR	Eielson Array	83.15	18	P	P	02 58 06.1	+0.1
	1.0nm,0.8s,baz=234,slow=6.0,SNR=9.3						
NVAR	Mina Array Bea	85.12	50	P	P	02 58 17.7	+0.8
	0.8nm,0.7s,baz=229,slow=7.4,SNR=6.1						
ZALV	Zalesovo Beam	94.28	324	P	P	02 58 59.2	-0.2
	0.5nm,0.6s,baz=104,slow=5.2,SNR=3.2						
MKAR	Makanchi Array	94.36	317	P	P	02 59 00.4	+0.3
	1.5nm,0.8s,baz=112,slow=5.5,SNR=15						
YKA	Yellowknife Ar	94.44	27	P	P	02 58 58.9	-1.2
	0.1nm,0.5s,baz=250,slow=3.9,SNR=3.3						

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*IDC **10** 02:49:12.7±0.6, 11°.79S×165°.30E, h0^{km}, mb4.3/16, mb1 4.5/18, mb1mx4.4/38, mbtmp4.3/18, ML4.4/2, MS3.5/3, Ms1 3.5/3, ms1mx3.1/35, Error ellipse: s-maj=20.4km s-min=15.9km az=129.0*

*ISCJB **10** 02:49:16.5±0.3, 11°.84S±0°.06×165°.20E±0°.05, h33^{km}, mb4.5/51, MS3.7/1, Error ellipse: s-maj=9.0km s-min=6.1km az=163.6*

*NEIC **10** 02:49:16.1±2.1, 11°.81S×165°.31E, h21^{km}±14^{km}, mb4.7/38, Error ellipse: s-maj=5.5km s-min=4.7km az=174.0*

ISC 10 02:49:18.0±0.5**, 11°.85S**±0°.08×**165°.25E**±0°.08**, h35^{km}, n88, σ0^{s}.69**/94**, mb4.6**/51**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.74	294	ePn	Pn	02 50 41.2	+0.5
HNR				eSn	Sn	02 51 45.5	0.0
HNR	Honiara	5.74	294	Pn	Pn	02 50 37.7	-3.1
	13nm,0.3s,baz=178,slow=9.1,SNR=3.2						
HNR				Sn	Sn	02 51 45.5	0.0
	13nm,0.3s,baz=16,slow=20,SNR=3.8						
HNR				LR	LR	02 52 43.2	
	comp=Z,368nm,21.2s,baz=112,slow=36						
DZM	Mont Dzumac	10.23	174	Pn	Pn	02 51 41.3	-1.2
	2.0nm,0.3s,baz=285,slow=17,SNR=9.7						
DZM				LR	LR	02 55 03.5	
	comp=Z,225nm,18.6s,baz=172,slow=34						
CTA	Charters Tower	20.00	243	P	Pn	02 53 48.9	-0.8
	7.9nm,0.9s,baz=75,slow=12,SNR=6.4						
CTAO	Charters Tower	20.00	243	eP	Pn	02 53 49.1	-0.6
ARMA	Armidale	22.39	212	eP	P	02 54 14.6	+1.1
	21nm,1.0s						
STKA	Stephens Creek	29.53	224	eP	P	02 55 20.6	+1.2
	10.0nm,1.9s						
STKA	Stephens Creek	29.53	224	P	P	02 55 18.6	-0.8
	2.5nm,0.8s,baz=38,slow=11,SNR=4.8						
STKA				LR	LR	03 06 38.7	
	comp=Z,173nm,19.7s,baz=36,slow=35						
WRAB	Tennant Creek	30.75	251	eP	P	02 55 30.6	+0.4
	17nm,1.6s						
WB2	Warramunga Arr	30.75	251	eP	P	02 55 30.7	+0.5
WR1	Warramunga Arr	30.76	251	eP	P	02 55 30.2	-0.1
	41nm,1.8s						
WR1				ePcP	PcP	02 58 28.6	+1.1
WRA	Warramunga Arr	30.76	251	P	P	02 55 30.3	-0.1
	3.3nm,0.8s,baz=82,slow=9.3,SNR=19						
WRA				PcP	PcP	02 58 28.6	+1.1
	0.6nm,0.7s,baz=75,slow=3.0,SNR=6.9						
AS01	Alice Springs	31.96	244	eP	P	02 55 42.3	+1.3
AS31	Alice Springs	32.00	244	eP	P	02 55 41.7	+0.4
	1.0nm,0.9s						
AS31				ePcP	PcP	02 58 30.3	-0.5
ASAR	Alice Springs	32.01	244	P	P	02 55 41.4	+0.1
	2.8nm,0.9s,baz=74,slow=9.3,SNR=19						
ASAR				PcP	PcP	02 58 30.3	-0.5
	0.7nm,0.8s,baz=87,slow=2.8,SNR=5.5						
RPZ	Rata Peaks	32.15	172	P	P	02 55 42.7	+0.4
	11nm,0.8s,baz=285,slow=3.6,SNR=5.6						
FITZ	Fitzroy Crossi	38.71	256	eP	P	02 56 39.5	+0.5
	8.3nm,0.9s						
FITZ	Fitzroy Crossi	38.71	256	P	P	02 56 39.5	+0.5
	6.6nm,0.8s,baz=127,slow=8.3,SNR=10						
MJAR	Matsushiro Arr	54.46	333	P	P	02 58 39.8	-2.2
	3.2nm,1.1s,baz=173,slow=8.8,SNR=5.9						
MAJO	Matsushiro	54.46	333	eP	P	02 58 41.4	-0.6
	4.7nm,0.7s						
SSE	Sheshan	60.09	317	eP	P	02 59 22.3	+0.3
	5.8nm,0.5s						
USRK	Ussuriysk Ar.	63.44	334	P	P	02 59 45.1	+0.9
	0.9nm,0.6s,baz=79,slow=5.9,SNR=4.3						
ENH	Enshi	68.03	310	eP	P	03 00 13.9	-0.3
XAN	Xi'an	70.30	313	eP	P	03 00 28.6	+0.4
CMAR	Chiang Mai Arr	71.99	294	P	P	03 00 40.5	+1.8
	1.5nm,0.6s,baz=128,slow=4.6,SNR=6.7						
QSPA	South Pole Qui	78.16	180	eP	P	03 01 13.9	+0.3
ULN	Ulaanbaatar	78.66	324	eP	P	03 01 16.8	+0.1
	2.0nm,0.9s						
SONA0	Songino Array	79.02	324	eP	P	03 01 19.7	+1.1
SONM	Songino Array	79.02	324	P	P	03 01 19.7	+1.1
	0.9nm,0.8s,baz=128,slow=6.1,SNR=7.4						
SONA1	Songino Array	79.02	324	eP	P	03 01 19.0	+0.4
BILL	Bilibino	79.68	0	eP	P	03 01 22.2	+0.6
	11nm,1.0s						
TLY	Talaya	82.52	326	eP	P	03 01 37.0	-0.1
	4.3nm,0.4s						
IM3	Indian Mountai	83.32	16	eP	P	03 01 41.1	+0.2
WRH	Wood River Hil	83.84	18	eP	P	03 01 43.5	-0.1
	5.8nm,0.8s						
MDM	Murphy Dome	84.14	18	eP	P	03 01 45.4	+0.3
	6.1nm,0.7s						
COLA	College	84.19	18	eP	P	03 01 45.5	+0.2
ILAR	Eielson Array	84.42	19	P	P	03 01 45.8	-0.7
	3.2nm,0.6s,baz=242,slow=5.2,SNR=71						
ILB	Eielson Array	84.42	19	eP	P	03 01 46.7	+0.2
IL1	Eielson Array	84.42	19	eP	P	03 01 45.9	-0.6
HUMO	Hull Mountain	84.94	45	eP	P	03 01 49.5	-0.2
AFDM	Forest Hills D	85.09	49	eP	P	03 01 50.2	-0.3
	3.7nm,0.8s						
CMB	Columbia Colle	85.22	50	eP	P	03 01 51.0	-0.3
DAWY	Dawson	86.47	21	eP	P	03 01 57.2	+0.4
	2.1nm,0.6s						
PAHR	Pah Rah Range	86.50	48	eP	P	03 01 58.1	+0.4
	4.9nm,1.1s						
MOD	Modoc Plateau	86.55	46	eP	P	03 01 57.4	-0.4
	5.2nm,0.7s						
NV01	Mina Array Sit	86.91	50	eP	P	03 01 59.6	-0.2
NVAR	Mina Array Bea	86.91	50	P	P	03 01 59.5	-0.2
	2.0nm,0.7s,baz=232,slow=8.2,SNR=15						
KVN	Kaiserville	87.25	49	eP	P	03 02 01.2	-0.2
	3.3nm,0.9s						
HAWA	Hanford	88.53	42	eP	P	03 02 07.1	+0.1
	3.0nm,0.9s						
R11A	Troy Canyon, C	88.93	51	eP	P	03 02 09.7	+0.3
	3.5nm,1.1s						
W13A	Hualapai Mount	89.39	54	eP	P	03 02 12.3	+0.7
	2.8nm,1.0s						
ELK	Elko	89.84	48	eP	P	03 02 14.2	+0.5
	6.6nm,1.4s						
PSUT	Pine Spring	90.29	51	eP	P	03 02 16.3	+0.6
	3.3nm,0.8s						
LCMT	Little Creek M	90.37	52	eP	P	03 02 16.4	+0.3
	5.4nm,0.9s						
CCUT	Cedar City	90.41	52	eP	P	03 02 16.5	+0.1
	6.0nm,1.0s						
SZCU	Shurtz Canyon	90.64	52	eP	P	03 02 18.1	+0.6
	5.1nm,1.1s						
NEW	Newport	90.66	41	eP	P	03 02 16.5	-0.6
	1.1nm,0.6s						
KNB	Kanab	90.70	52	eP	P	03 02 18.0	+0.3
	21nm,1.7s						
U15A	North Rim	90.97	53	eP	P	03 02 19.1	0.0
	6.1nm,0.8s						
X16A	Lo Mia Camp, P	91.17	55	eP	P	03 02 20.1	+0.2
	3.3nm,0.9s						
HLID	Hailey	91.18	46	eP	P	03 02 19.8	0.0
	4.6nm,1.0s						
TUC	Tucson	91.22	57	eP	P	03 02 19.8	-0.3
	2.1nm,0.7s						
MTPU	Mount Pierson	91.44	52	eP	P	03 02 21.4	+0.1
	4.1nm,1.0s						
DUG	Dugway, Tooele	91.48	49	eP	P	03 02 20.8	-0.4
	1.5nm,0.7s						
HVU	Hansel Valley	91.90	48	eP	P	03 02 23.1	0.0
	7.2nm,1.0s						
NLU	North Lily Min	91.98	50	eP	P	03 02 23.2	-0.4
	3.9nm,1.0s						
BOZ	Bozeman (W)	93.61	44	eP	P	03 02 31.1	+0.2
	2.0nm,1.1s						
MK01	Makanchi Array	93.76	317	eP	P	03 02 31.9	+0.5
MK31	Makanchi Array	93.77	317	eP	P	03 02 31.7	+0.2
MK32	Makanchi Array	93.77	317	eP	P	03 02 31.9	+0.5
MKAR	Makanchi Array	93.77	317	P	P	03 02 31.9	+0.5
	1.9nm,0.8s,baz=99,slow=5.8,SNR=17						
ZALV	Zalesovo Beam	93.92	324	eP	P	03 02 31.8	-0.1
ZALV	Zalesovo Beam	93.92	324	P	P	03 02 31.7	-0.2
	1.0nm,0.8s,baz=134,slow=4.3,SNR=5.3						
ZAA1	Zalesovo Array	93.92	324	eP	P	03 02 31.7	-0.2
MAKZ	Makanchi	93.98	317	eP	P	03 02 32.6	+0.1
	2.2nm,0.9s						
PD31	Pinedale Array	94.45	47	eP	P	03 02 35.5	+0.5
PDAR	Pinedale Array	94.45	47	P	P	03 02 35.4	+0.5
	0.7nm,0.8s,baz=247,slow=3.4,SNR=6.9						
YKA	Yellowknife Ar	95.90	27	P	P	03 02 39.6	-1.2
	0.5nm,0.6s,baz=257,slow=4.7,SNR=15						
YKB5	Yellowknife Ar	95.90	27	eP	P	03 02 39.6	-1.2
LVC	Limon Verde	116.85	123	ePKPdf	PKiKP	03 08 00.5	+0.3
ARA0	ARCESS Array S	116.98	345	ePKPdf	PKPdf	03 07 58.5	0.0
ARCES	ARCESS Array B	116.98	345	PKP	PKPdf	03 07 58.5	-0.1
	2.2nm,0.9s,baz=90,slow=3.6,SNR=4.4						
BOSA	Boshof	124.20	223	PKP	PKPdf	03 08 13.5	-0.4
	3.8nm,1.0s,baz=134,slow=0.8,SNR=4.2						
SDV	Santo Domingo	125.02	87	ePKPdf	PKPdf	03 08 15.6	-0.3
ES19	SONSECA Array	150.64	343	ePKPbc	PKiKP	03 09 07.8	+0.3
ESDC	Sonseca Array	150.68	343	PKPbc	PKiKP	03 09 07.7	+0.2
	1.3nm,0.8s,baz=22,slow=1.6,SNR=8.4						
TORD	Torodi Ar. Bea	163.89	276	PKPab	PKPab	03 10 11.4	+0.1
	1.1nm,1.1s,baz=48,slow=2.1,SNR=3.8						
TOA1	Torodi Ar. Sit	163.90	276	ePKPab	PKPab	03 10 11.4	0.0

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*IDC **10** 02:54:34.4±1.1, 11°.85S×165°.36E, h0^{km}, mb3.8/7, mb1 4.1/8, mb1mx3.8/30, mbtmp3.8/8, ML3.8/1, Error ellipse: s-maj=45.5km s-min=22.2km az=141.0*

*ISCJB **10** 02:54:37.8±0.8, 12°.0S±0°.1×165°.3E±0°.2, h33^{km}, mb3.7/7, Error ellipse: s-maj=23.6km s-min=17.5km az=25.4*

ISC 10 02:54:39.6±0.9**, 11°.9S**±0°.1×**165°.4E**±0°.2**, h35^{km}, n8, σ0^{s}.94**/8**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.16	174	Pn	Pn	02 57 03.4	+0.2
	0.8nm,0.3s,baz=127,slow=8.5,SNR=6.5						
WRA	Warramunga Arr	30.87	251	P	P	03 00 51.7	-1.3
	0.5nm,0.7s,baz=82,slow=9.0,SNR=5.5						
ASAR	Alice Springs	32.10	244	P	P	03 01 03.0	-0.9
	0.9nm,0.9s,baz=68,slow=9.6,SNR=6.9						
FITZ	Fitzroy Crossi	38.82	256	P	P	03 02 02.3	+0.8
	2.9nm,1.0s,baz=73,slow=11,SNR=2.9						
ILAR	Eielson Array	84.43	19	P	P	03 07 09.0	+0.8
	0.8nm,0.7s,baz=245,slow=5.0,SNR=14						
NVAR	Mina Array Bea	86.84	50	P	P	03 07 20.8	-0.3
	0.2nm,0.4s,baz=235,slow=5.2,SNR=3.7						
MKAR	Makanchi Array	93.90	317	P	P	03 07 54.0	+0.3
	0.2nm,0.8s,baz=99,slow=5.4,SNR=4.0						
YKA	Yellowknife Ar	95.89	27	P	P	03 08 01.6	-0.8
	0.1nm,0.5s,baz=259,slow=4.4,SNR=3.3						

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*ISCJB **10** 03:01:26.8±0.5, 10°.95S±0°.06×165°.96E±0°.06, h10^{km}, mb4.2/16, MS3.8/2, Error ellipse: s-maj=9.7km s-min=8.5km az=138.0*

*IDC **10** 03:01:26.8±0.9, 10°.88S×165°.98E, h0^{km}, mb4.3/9, mb1 4.4/11, mb1mx4.2/31, mbtmp4.4/11, ML4.5/2, MS3.8/4, Ms1 3.8/4, ms1mx3.2/41, Error ellipse: s-maj=22.4km s-min=20.6km az=93.0*

*NEIC **10** 03:01:30.4±1.8, 10°.90S×165°.95E, h22^{km}±13^{km}, mb4.4/6, Error ellipse: s-maj=7.3km s-min=5.8km az=114.0*

ISC 10 03:01:28.3±0.7**, 10°.98S**±0°.07×**166°.00E**±0°.08**, h10^{km}, n40, σ1^{s}.28**/36**, mb4.2**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.15	284	ePn	Pn	03 02 58.2	-1.2
HNR				eSn	Sn	03 04 10.9	+1.0
HNR	Honiara	6.15	284	Pn	Pn	03 02 56.7	-2.7
	16nm,0.3s,baz=308,slow=19,SNR=3.4						
HNR				Sn	Sn	03 04 10.9	+1.0
	3.2nm,0.3s,baz=202,slow=19,SNR=4.3						
HNR				LR	LR	03 05 17.7	
	comp=Z,847nm,19.7s,baz=24,slow=38						
DZM	Mont Dzumac	11.04	178	Pn	Pn	03 04 08.6	+2.1
	2.0nm,0.3s,baz=7.1,slow=5.6,SNR=20						
DZM				Sn	Sn	03 06 05.3	-4.8
	0.3nm,0.3s,baz=94,slow=18,SNR=1.9						
DZM				LR	LR	03 07 15.5	
	comp=Z,221nm,20.1s,baz=8.0,slow=31						
ONTNC	Ouen Toro	11.27	178	ePn	Pn	03 04 11.4	+1.8
TARA	Tarawa	14.06	30	ePn	Pn	03 04 47.6	-0.1
EIDS	Eidsvold	20.11	223	eP	P	03 06 03.5	+1.1
	45nm,1.4s						
CTA	Charters Tower	21.05	242	P	P	03 06 13.8	+1.1
	8.8nm,1.1s,baz=69,slow=12,SNR=4.2						
CTA				LR	LR	03 13 52.4	
	comp=Z,326nm,19.4s,baz=302,slow=35						
CTAO	Charters Tower	21.05	242	eP	P	03 06 13.1	+0.3
ARMA	Armidale	23.51	213	eP	P	03 06 39.9	+1.1
	25nm,0.9s						
URZ	Urewera	28.93	162	P	P	03 07 28.1	+0.4
	4.9nm,0.8s,baz=164,slow=4.3,SNR=3.9						
H11S2	WAKE ISLAND Hy	29.29	1	T	T	03 37 56.6	
	baz=181,slow=76,SNR=127						
H11S3	WAKE ISLAND Hy	29.30	1	T	T	03 37 56.8	
	baz=181,slow=76,SNR=85						
H11S1	WAKE ISLAND Hy	29.31	1	T	T	03 37 56.7	
	baz=181,slow=76,SNR=79						
H11N1	WAKE ISLAND Hy	30.51	2	T	T	03 39 27.0	
	baz=182,slow=76,SNR=58						
H11N3	WAKE ISLAND Hy	30.52	2	T	T	03 39 27.4	
	baz=182,slow=76,SNR=31						
H11N2	WAKE ISLAND Hy	30.53	2	T	T	03 39 28.5	
	baz=182,slow=76,SNR=33						
STKA	Stephens Creek	30.66	224	eP	P	03 07 44.3	+1.1
	4.9nm,1.7s						
STKA	Stephens Creek	30.66	224	P	P	03 07 44.3	+1.1
	3.3nm,0.6s,baz=43,slow=8.1,SNR=9.6						
WRAB	Tennant Creek	31.73	250	eP	P	03 07 53.0	+0.2
	2.1nm,0.6s						
WB2	Warramunga Arr	31.73	250	eP	P	03 07 52.4	-0.4
WR1	Warramunga Arr	31.74	250	eP	P	03 07 53.0	+0.2
	7.6nm,0.9s						
WRA	Warramunga Arr	31.74	250	P	P	03 07 53.0	+0.2
	4.8nm,0.8s,baz=81,slow=9.2,SNR=34						
WRA				LR	LR	03 20 36.0	

	comp=Z,224nm,18.1s,baz=60,slow=36						
RPZ	Rata Peaks	32.91	173	P	P	03 08 03.4	+0.7
	5.7nm,0.6s,baz=272,slow=5.1,SNR=5.9						
AS01	Alice Springs	33.00	243	eP	P	03 08 03.7	-0.3
AS31	Alice Springs	33.04	243	eP	P	03 08 03.8	-0.5
	2.7nm,1.5s						
ASAR	Alice Springs	33.04	243	P	P	03 08 03.8	-0.5
	1.7nm,0.7s,baz=72,slow=9.5,SNR=22						
FITZ	Fitzroy Crossi	39.64	255	eP	P	03 09 00.8	+0.1
	24nm,1.6s						
FITZ	Fitzroy Crossi	39.64	255	P	P	03 09 00.8	+0.1
	4.1nm,0.6s,baz=81,slow=6.3,SNR=15						
FORT	Forrest	40.28	235	eP	P	03 09 05.0	-0.9
	33nm,1.1s						
SONA0	Songino Array	78.76	324	eP	P	03 13 31.1	-0.3
SONM	Songino Array	78.76	324	P	P	03 13 31.1	-0.3
	0.2nm,0.7s,baz=112,slow=6.4,SNR=2.6						
QSPA	South Pole Qui	79.02	180	eP	P	03 13 33.1	+0.5
ILAR	Eielson Array	83.37	18	P	P	03 13 55.4	-0.1
	0.5nm,0.7s,baz=236,slow=7.2,SNR=3.8						
ILB	Eielson Array	83.37	18	eP	P	03 13 55.4	-0.1
MK32	Makanchi Array	93.64	317	eP	P	03 14 45.6	+0.5
MKAR	Makanchi Array	93.64	317	P	P	03 14 45.6	+0.5
	0.5nm,0.8s,baz=99,slow=7.5,SNR=6.6						
YKA	Yellowknife Ar	94.80	27	P	P	03 14 45.7	-4.4
	0.2nm,0.7s,baz=251,slow=5.8,SNR=3.8						
ARA0	ARCESS Array S	116.33	346	ePKPdf	PKiKP	03 20 10.5	-1.2
ARCES	ARCESS Array B	116.33	346	PKP	PKiKP	03 20 10.5	-1.2
	4.1nm,1.0s,baz=90,slow=1.8,SNR=5.1						
ESDC	Sonseca Array	150.06	344	PKPbc	PKPbc	03 21 19.6	-0.2
	0.2nm,0.5s,baz=4.2,slow=4.0,SNR=2.6						

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*IDC **10** 03:16:05.8±0.8, 29°.12N×142°.58E, h0^{km}, mb3.6/12, mb1 3.8/14, mb1mx3.8/38, mbtmp3.7/14, ML3.3/3, Error ellipse: s-maj=26.1km s-min=14.8km az=86.0*

*ISCJB **10** 03:16:08.3±0.6, 29°.20N±0°.05×142°.4E±0°.1, h27^{km}, mb3.6/12, Error ellipse: s-maj=17.8km s-min=6.2km az=169.6*

ISC 10 03:16:10.0±0.7**, 29°.18N**±0°.06×**142°.4E**±0°.1**, h27^{km}, n17, σ1^{s}22**/20**, mb3.6**/12**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.09	185	Pn	Pn	03 16 42.4	-0.9
	5.8nm,0.3s,baz=284,slow=19,SNR=5.8						
JCJ				Sn	Sn	03 17 08.0	-0.4
	21nm,0.3s,baz=252,slow=23,SNR=8.5						
JHJ	Hachijo jima 2	4.51	331	Pn	Pn	03 17 16.5	-0.1
	8.2nm,0.3s,baz=255,slow=20,SNR=2.5						
JHJ				Sn	Sn	03 18 06.0	-2.2
	7.2nm,0.3s,baz=72,slow=20,SNR=2.1						
MJAR	Matsushiro Arr	8.13	336	Pn	Pn	03 18 06.5	+0.1
	0.3nm,0.3s,baz=158,slow=10,SNR=25						
MJAR				Sn	Sn	03 19 34.1	-3.3
	0.1nm,0.3s,baz=260,slow=31,SNR=2.8						
MAT	Matsushiro	8.13	335	P	Pn	03 18 07.0	+0.6
MAT				eS	Sn	03 19 29.0	-8.5
KSRS	Korea Array	14.62	308	Pn	P	03 19 41.1	-0.1
	0.2nm,0.3s,baz=113,slow=12,SNR=4.4						
KLR	Kul'dur	21.61	341	P	P	03 20 58.5	+0.7
	1.7nm,0.9s,baz=158,slow=7.6,SNR=5.3						
SONM	Songino Array	33.37	314	P	P	03 22 47.5	+1.4
	1.1nm,0.8s,baz=112,slow=7.6,SNR=9.5						
ZALV	Zalesovo Beam	48.05	318	P	P	03 24 47.9	+1.0
	0.7nm,0.4s,baz=97,slow=7.1,SNR=5.2						
MKAR	Makanchi Array	49.31	308	P	P	03 24 57.8	+1.1
	0.5nm,0.4s,baz=85,slow=9.5,SNR=13						
WRA	Warramunga Arr	49.45	190	P	P	03 24 57.1	-0.9
	0.5nm,0.4s,baz=9.7,slow=8.2,SNR=10						
ASAR	Alice Springs	53.18	190	P	P	03 25 25.1	-0.7
	0.2nm,0.4s,baz=15,slow=8.2,SNR=4.8						
ILAR	Eielson Array	55.80	29	P	P	03 25 44.6	+0.1
	0.4nm,0.7s,baz=264,slow=7.2,SNR=3.6						
YKA	Yellowknife Ar	70.23	29	P	P	03 27 20.1	-0.2
	0.2nm,0.6s,baz=296,slow=6.4,SNR=4.8						
FINES	FINESS Array B	76.16	334	P	P	03 27 55.7	+0.3
	1.8nm,1.0s,baz=81,slow=4.4,SNR=2.7						
NVAR	Mina Array Bea	79.09	52	P	P	03 28 12.7	+0.2
	0.3nm,0.6s,baz=294,slow=6.5,SNR=2.9						
PDAR	Pinedale Array	82.61	45	P	P	03 28 30.2	-1.1
	0.2nm,0.6s,baz=271,slow=6.0,SNR=2.5						
BRTR	Keskin Array B	84.72	313	P	P	03 28 43.0	+1.0
	0.3nm,0.8s,baz=149,slow=4.1,SNR=2.9						

IDC 10 03:22:23.2±1.8**, 10°.89S**×**165°.71E, h0^{km}, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.6**/39**, mbtmp3.7**/5**, ML3.0**/1**, Error ellipse: s-maj=52.6km s-min=31.6km az=120.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.14	176	Pn	Pn	03 25 05.5	+1.5
	0.1nm,0.3s,baz=294,slow=20,SNR=1.9						
WRA	Warramunga Arr	31.50	250	P	P	03 28 47.0	-0.2
	1.2nm,0.9s,baz=82,slow=8.7,SNR=6.7						
ASAR	Alice Springs	32.83	243	P	P	03 28 58.2	-0.7
	0.7nm,1.0s,baz=76,slow=9.6,SNR=4.3						
ILAR	Eielson Array	83.38	19	P	P	03 34 51.3	-0.7
	0.7nm,0.9s,baz=215,slow=6.3,SNR=3.8						
MKAR	Makanchi Array	93.38	317	P	P	03 35 41.4	+0.9
	0.2nm,0.6s,baz=97,slow=7.4,SNR=3.1						

IDC 10 03:24:24.0±1.6**, 11°.08S**×**165°.56E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/40**, mbtmp3.7**/5**, ML3.7**/1**, Error ellipse: s-maj=51.3km s-min=29.2km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.97	176	Pn	Pn	03 27 02.4	0.0
	0.6nm,0.3s,baz=66,slow=19,SNR=8.3						
WRA	Warramunga Arr	31.30	250	P	P	03 30 45.9	-0.3
	0.5nm,0.8s,baz=79,slow=9.3,SNR=4.2						
ASAR	Alice Springs	32.62	243	P	P	03 30 57.7	-0.1
	0.5nm,0.6s,baz=68,slow=9.8,SNR=9.8						
ILAR	Eielson Array	83.60	19	P	P	03 36 53.5	-0.3
	0.4nm,0.8s,baz=231,slow=5.7,SNR=3.9						
MKAR	Makanchi Array	93.42	317	P	P	03 37 42.1	+0.6
	0.4nm,0.9s,baz=90,slow=5.8,SNR=3.0						

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*ISCJB **10** 03:42:09.8±0.4, 5°.15S±0°.06×150°.74E±0°.09, h200^{km}, mb4.0/21, Error ellipse: s-maj=12.5km s-min=7.4km az=20.3*

*NEIC **10** 03:42:12.7±0.7, 5°.17S×150°.80E, h218^{km}±7^{km}, mb4.1/8, Error ellipse: s-maj=11.2km s-min=6.3km az=110.0*

*IDC **10** 03:42:15.7±1.7, 5°.24S×150°.70E, h245^{km}±16^{km}, mb3.8/15, mb1 3.9/16, mb1mx3.6/45, mbtmp4.3/16, Error ellipse: s-maj=14.3km s-min=9.1km az=109.0*

ISC 10 03:42:11.1±0.5**, 5°.18S**±0°.08×**150°.7E**±0°.1**, h200^{km}, n38, σ1^{s}74**/42**, mb4.2**/21**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.75	56	ePn	Pn	03 42 48.6	+1.4
COEN	Coen	11.46	220	ePn	Pn	03 44 52.7	+3.5
CTA	Charters Tower	15.44	196	P	Pn	03 45 41.2	+2.4
	0.7nm,0.3s,baz=22,slow=13,SNR=20						
CTAO	Charters Tower	15.44	196	ePn	Pn	03 45 41.0	+2.2
	22nm,0.8s						
EIDS	Eidsvold	20.08	179	eP	P	03 46 29.4	+0.1
	76nm,1.6s						
WRAB	Tennant Creek	21.65	226	eP	P	03 46 45.7	-0.3
	9.9nm,0.6s						
WB2	Warramunga Arr	21.66	226	eP	P	03 46 45.3	-0.8
WRA	Warramunga Arr	21.66	226	P	P	03 46 46.4	+0.2
	5.6nm,0.5s,baz=52,slow=9.6,SNR=72						
WRA				S	S	03 50 28.5	-4.0
	1.4nm,0.9s,baz=45,slow=19,SNR=4.1						
WRA				ScP	ScP	03 53 53.6	-4.2
	0.5nm,0.6s,baz=41,slow=2.8,SNR=4.9						
SARN	Sarigan	22.28	347	eP	P	03 46 53.7	+1.5
	50nm,1.1s						
DZM	Mont Dzumac	22.66	139	eP	P	03 46 55.6	-0.1
	57nm,1.3s						
DZM	Mont Dzumac	22.66	139	P	P	03 46 56.1	+0.4
	11nm,0.5s,baz=248,slow=9.3,SNR=27						
AS01	Alice Springs	24.47	220	eP	P	03 47 11.7	-0.3
AS31	Alice Springs	24.50	220	eP	P	03 47 12.3	0.0
	1.8nm,0.6s						
ASAR	Alice Springs	24.50	220	P	P	03 47 12.8	+0.5
	5.4nm,0.7s,baz=52,slow=8.8,SNR=62						
ASAR				S	S	03 51 14.7	-3.3
	0.7nm,0.8s,baz=32,slow=16,SNR=4.0						
ASAR				ScP	ScP	03 54 00.8	-4.5
	1.3nm,0.8s,baz=46,slow=4.0,SNR=7.2						
FITZ	Fitzroy Crossi	27.66	240	P	P	03 47 41.4	+0.8
	2.0nm,0.4s,baz=53,slow=3.6,SNR=5.8						
STKA	Stephens Creek	27.90	197	eP	P	03 47 42.1	-0.5
	2.2nm,0.9s						
STKA	Stephens Creek	27.90	197	P	P	03 47 42.9	+0.3
	5.3nm,0.6s,baz=0.7,slow=10,SNR=16						
URZ	Urewera	40.74	148	P	P	03 49 32.9	+0.4
	5.6nm,0.5s,baz=291,slow=3.9,SNR=7.5						
RPZ	Rata Peaks	42.36	158	P	P	03 49 45.5	-0.2
	4.9nm,0.5s,baz=243,slow=6.8,SNR=2.5						
PETK	Petropavlovsk-	58.37	5	P	P	03 51 45.5	+0.1
	2.7nm,0.5s,baz=159,slow=7.3,SNR=12						
SONM	Songino Array	65.56	329	P	P	03 52 34.7	+1.2
	1.3nm,0.5s,baz=148,slow=5.4,SNR=13						
SONA1	Songino Array	65.56	329	eP	P	03 52 34.5	+1.0
MKAR	Makanchi Array	79.26	319	P	P	03 53 54.2	-0.1
	0.5nm,0.7s,baz=106,slow=4.0,SNR=6.1						
ZALV	Zalesovo Beam	80.33	327	P	P	03 53 58.8	-1.0
	0.9nm,0.6s,baz=119,slow=5.5,SNR=5.4						
KURK	Kurchatov	82.80	322	eP	P	03 54 12.4	-0.5
KURBB	Kurchatov Arra	82.83	322	P	P	03 54 12.6	-0.3
	0.5nm,0.7s,baz=119,slow=4.3,SNR=5.5						
COLA	College	82.98	22	eP	P	03 54 11.6	-1.9
	2.3nm,0.6s						
ILAR	Eielson Array	83.30	22	P	P	03 54 13.4	-1.7
	2.4nm,0.8s,baz=248,slow=5.3,SNR=31						
AAK	Ala-Archa	83.43	314	eP	P	03 54 16.8	+0.3
	0.6nm,0.4s						
INK	Inuvik	89.55	21	eP	P	03 54 44.5	-0.9
	0.7nm,0.5s						
NVAR	Mina Array Bea	93.95	52	P	P	03 55 06.6	-0.2
	1.3nm,0.7s,baz=254,slow=6.0,SNR=8.1						
YKA	Yellowknife Ar	96.73	28	P	P	03 55 17.8	-0.7
	0.5nm,0.6s,baz=272,slow=4.6,SNR=12						
PDAR	Pinedale Array	100.64	48	P	Pdif	03 55 36.0	-0.8
PDAR	Pinedale Array	100.64	48	P	Pdif	03 55 36.0	-0.8
	0.3nm,0.7s,baz=208,slow=3.7,SNR=2.8						
ARCES	ARCESS Array B	106.62	343	PKiKP	PKiKP	04 00 11.1	-0.8
	3.6nm,1.1s,baz=90,slow=2.7,SNR=5.1						
GERES	GERESS Array B	123.28	327	PKP	PKPdf	04 00 43.9	-0.5
	0.6nm,0.6s,baz=75,slow=1.5,SNR=6.2						
TORD	Torodi Ar. Bea	148.44	287	PKPbc	PKPdf	04 01 34.5	+3.2
	2.3nm,0.8s,baz=68,slow=3.3,SNR=14						
BDFB	Brasilia	152.21	138	PKPbc	PKPbc	04 01 43.8	-0.5
	2.8nm,0.6s,baz=201,slow=2.1,SNR=6.3						

IDC 10 03:45:04.6±1.6**, 9°.74S**×**125°.21E, h0^{km}, mb3.7**/1**, mb1 3.8**/4**, mb1mx3.4**/48**, mbtmp3.6**/4**, ML3.6**/2**, Error ellipse: s-maj=26.7km s-min=16.7km az=164.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	1.59	253	Pg	Pn	03 45 33.1	-0.9
	26nm,0.3s,baz=135,slow=3.9,SNR=15						
BATI				Lg	Lg	03 45 55.1	
	25nm,0.3s,baz=4.1,slow=23,SNR=9.3						
FITZ	Fitzroy Crossi	8.32	177	Pn	Pn	03 47 06.7	+0.1
	0.5nm,0.3s,baz=353,slow=12,SNR=28						
FITZ				Sn	Sn	03 48 32.8	-8.6
	1.2nm,0.3s,baz=117,slow=4.0,SNR=5.2						
FITZ				Lg	Lg	03 49 26.2	
	0.4nm,0.3s,baz=252,slow=20,SNR=2.8						
WRA	Warramunga Arr	13.44	140	Pn	Pn	03 48 16.4	-0.3
	0.4nm,0.3s,baz=317,slow=12,SNR=3.8						
WRA				Sn	Sn	03 50 38.8	-8.2
	0.6nm,0.3s,baz=318,slow=25,SNR=7.2						
ASAR	Alice Springs	16.15	150	Pn	Pn	03 48 53.5	+0.3
	baz=319,slow=11,SNR=2.7						
ASAR				Sn	Sn	03 51 42.0	-11
	0.2nm,0.3s,baz=323,slow=25,SNR=4.4						
MKAR	Makanchi Array	68.04	330	P	P	03 56 06.0	+0.1
	0.5nm,0.5s,baz=134,slow=6.9,SNR=12						

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*IDC **10** 03:46:44.3±1.4, 11°.46S×165°.05E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.7/51, mbtmp3.9/7, ML3.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/31, Error ellipse: s-maj=45.3km s-min=26.4km az=126.0*

*ISCJB **10** 03:46:47.7±0.9, 11°.6S±0°.1×165°.0E±0°.2, h34^{km}, mb3.8/6, Error ellipse: s-maj=27.5km s-min=18.0km az=4.8*

ISC 10 03:46:49.4±1.0**, 11°.5S**±0°.1×**165°.1E**±0°.2**, h34^{km}, n8, σ1^{s}00**/7**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.42	292	LR	LR	03 50 18.3	
	comp=Z,198nm,20.2s,baz=108,slow=40						
DZM	Mont Dzumac	10.62	173	Pn	Pn	03 49 19.6	+0.4
	0.8nm,0.3s,baz=322,slow=14,SNR=6.5						
WRA	Warramunga Arr	30.70	250	P	P	03 53 00.4	-0.9
	1.3nm,0.9s,baz=82,slow=9.0,SNR=3.8						
ASAR	Alice Springs	31.99	244	P	P	03 53 12.3	-0.5
	1.2nm,0.8s,baz=69,slow=10,SNR=5.1						
SONM	Songino Array	78.61	324	P	P	03 58 49.0	+1.1
	0.3nm,0.7s,baz=139,slow=7.5,SNR=3.2						
ILAR	Eielson Array	84.14	19	P	P	03 59 16.4	-0.3
	0.7nm,0.7s,baz=232,slow=5.6,SNR=9.4						
MKAR	Makanchi Array	93.37	317	P	P	04 00 01.9	+0.7
	0.8nm,0.8s,baz=94,slow=6.2,SNR=7.9						
YKA	Yellowknife Ar	95.67	27	P	P	04 00 10.3	-1.0
	0.1nm,0.5s,baz=256,slow=4.6,SNR=4.0						

SJA 10 03:51:11.8±0.3**, 31°.39S**×**65°.16W, h11^{km}**±1^{km}**, ML2.7, MW3.5, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRA	San Martin	1.13	205	i P	Pb	03 51 33.4	0.0
MRA				i S	Sn	03 51 49.3	+0.1
MRA				IAML		03 51 52.2	
	comp=Z,231nm,0.5s						
APLL	PUNTA DE LOS L	1.54	310	i P	Pb	03 51 40.7	+0.3
APLL				IAML		03 52 02.0	
	comp=Z,76nm,0.3s						
APLL				i S	Sg	03 52 02.1	+0.8
ACAN	Cantantal	1.94	242	i P	Pb	03 51 47.0	-0.2
ACAN				i S	Sb	03 52 12.7	+1.4
ACLC	CERRO LA CRUZ	2.50	321	i P	Pb	03 51 55.0	-1.8

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*MDD **10** 04:00:16.1±0.6, 43°.03N×0°.19W, h0^{km}, mbLg0.6/1, Error ellipse: s-maj=8.6km s-min=3.2km az=1.0, PRXIMO*

LDG 10 04:00:15.7±0.0**, 43°.03N**×**0°.20W, h2^{km}, Md1.5**/3**, Error ellipse: s-maj=2.7km s-min=0.7km az=175.0, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETSF	Etsaut	0.30	244	ePg	Pg	04 00 21.6	+0.2
ETSF				eSg	Sg	04 00 25.4	+0.1
	4.9nm,0.2s						
ETSF	Etsaut	0.30	244	Pg	Pg	04 00 21.6	+0.2
ETSF				Lg	Lg	04 00 25.4	
	2.5nm,0.2s						
EPF	Esparros	0.39	90	ePg	Pg	04 00 23.3	0.0
EPF				eSg	Sg	04 00 28.4	0.0
	1.7nm,0.2s						
EPF	Esparros	0.39	90	Pg	Pg	04 00 23.3	0.0
EPF				Lg	Lg	04 00 28.4	
	0.9nm,0.2s						
SJPF	Ste Jean	0.76	277	ePg	Pg	04 00 30.0	-0.2
SJPF				eSg	Sg	04 00 39.7	-0.3
	0.4nm,0.2s						
SJPF	Ste Jean	0.76	277	Pg	Pg	04 00 30.0	-0.2
SJPF				Lg	Lg	04 00 39.7	
	0.2nm,0.2s						

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*MDD **10** 04:00:43.7±0.2, 43°.07N×0°.19W, h3^{km}±2^{km}, mbLg2.8/18, Error ellipse: s-maj=2.5km s-min=1.7km az=0.0, PRXIMO*

*MRB **10** 04:00:43.4±0.5, 43°.07N×0°.20W, h5^{km}±5^{km}, ML2.5/11, Error ellipse: s-maj=2.1km s-min=1.3km az=186.0*

*INMG **10** 04:00:43.8±1.3, 43°.09N×0°.19W, h5^{km}±3^{km}, ML2.4, Error ellipse: s-maj=3.8km s-min=1.9km az=26.0*

*LDG **10** 04:00:43.1±0.1, 43°.04N×0°.21W, h2^{km}, Md2.9/3, Ml3.1/34, Error ellipse: s-maj=1.0km s-min=0.9km az=54.0*

STR 10 04:00:43.9±0.2**, 43°N**±3°×°±°**, h5^{km}, M2.6**/7**, MLv2.6**/7**, MLv2.6**/5**, 1C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYLO	Lourdes	0.16	51	Pg	Pg	04 00 46.2	-0.9
PYLO	Lourdes	0.16	51	P	Pg	04 00 45.8	-1.3
PYLO				S	Sg	04 00 48.0	-1.3
	923nm,0.2s						
VIEF	Viey	0.21	123	Pg	Pg	04 00 47.9	-0.2
VIEF				Sg	Sg	04 00 50.5	-0.4
LABF	Labassere	0.22	77	Pg	Pg	04 00 47.3	-0.9
LABF				Sg	Sg	04 00 49.5	-1.6
ETSF	Etsaut	0.27	249	ePg	Pg	04 00 49.3	0.0
	SNR=1.0						
ETSF				eSg	Sg	04 00 52.7	-0.2
	784nm,0.2s						
ETSF	Etsaut	0.27	249	Pg	Pg	04 00 49.3	0.0
ETSF				Lg	Lg	04 00 52.7	
	392nm,0.2s						
ETSF	Etsaut	0.27	249	Pg	Pg	04 00 49.3	0.0
ATE	Arette	0.37	284	Lg	Lg	04 00 28.6	
	SNR=7.9						
ATE	Arette	0.37	284	⇑Pg	Pg	04 00 50.3	-0.7
	8.5nm,0.1s,SNR=18						
ATE				Lg	Lg	04 00 55.8	
	385nm,0.1s,SNR=7.9						
ATE	Arette	0.37	284	Pg	Pb	04 00 50.5	-2.5
ATE				Pg	Pg	04 00 50.3	-0.8
ATE				Sg	Sg	04 00 55.9	0.0
ATE				Sg	Sb	04 00 56.0	-3.0
ATE	Arette	0.37	284	P	Pg	04 00 50.4	-0.7
ATE				S	Sg	04 00 56.0	+0.1
	341nm,0.2s						
EPF	Esparros	0.41	85	ePg	Pg	04 00 50.9	-0.9
	SNR=1.0						
EPF				eSg	Sg	04 00 56.3	-0.9
	371nm,0.2s,SNR=1.0						
EPF	Esparros	0.41	85	Pg	Pg	04 00 50.9	-0.9
EPF				Lg	Lg	04 00 56.3	
	186nm,0.2s						
EPF	Esparros	0.41	85	Pg	Pg	04 00 50.9	-0.9
EPF				Sg	Sg	04 00 56.3	-0.9
ECHI	Chisagues Biel	0.45	138	Lg	Lg	04 00 31.2	
	SNR=7.9						
ECHI	Chisagues Biel	0.45	138	Pg	Pg	04 00 52.4	-0.2
	16nm,0.1s,SNR=7.9						
ECHI				Lg	Lg	04 00 58.6	
	271nm,0.1s,SNR=7.9						
ECHI	Chisagues Biel	0.45	138	Pg	Pg	04 00 52.5	-0.1
ECHI				Sg	Sg	04 00 58.6	+0.1
ECHI	Chisagues Biel	0.45	138	P	Pg	04 00 52.5	-0.2
ECHI				S	Sg	04 00 59.1	+0.6
FMON	Montouss	0.47	82	P	Pg	04 00 51.9	-1.1
FMON				S	Sg	04 00 58.6	-0.5
	122nm,0.3s						
URDF	Urds	0.52	328	Pg	Pg	04 00 53.8	-0.1
URDF				Sg	Sb	04 01 02.1	-1.3
MELF	Melles	0.73	100	Pg	Pg	04 00 56.6	-1.3
MELF				Sg	Sg	04 01 06.5	-0.8
SJPF	Ste Jean	0.75	279	ePg	Pg	04 00 57.3	-1.0
	SNR=1.0						
SJPF				eSg	Sg	04 01 06.8	-1.3
	60nm,0.2s						
SJPF	Ste Jean	0.75	279	Pg	Pg	04 00 57.3	-1.0
SJPF				Lg	Lg	04 01 06.8	
	30nm,0.2s						
SJPF	Ste Jean	0.75	279	Pg	Pg	04 00 57.3	-1.0
OSSF	Osses	0.81	289	Pg	Pg	04 00 58.0	-1.5
OSSF				Sg	Sg	04 01 10.7	+0.7
EORO	Oroz-Betelu	0.81	263	Pg	Pg	04 00 59.3	-0.2
	0.6nm,0.3s,SNR=7.9						
EORO				Lg	Lg	04 01 11.1	
	200nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	0.81	263	Pg	Pg	04 00 59.4	-0.2
CARA	Val d'Aran	0.81	111	P	Pg	04 00 58.8	-0.8
CARA				S	Sg	04 01 10.8	+0.7
	121nm,0.3s						
TERF	Tercis-les-Bai	0.94	316	Pg	Pg	04 01 01.5	-0.5
TERF				Sg	Sb	04 01 15.3	-0.3
MLS	Moulis	0.96	92	Pg	Pg	04 01 01.7	-0.7
MLS				Sg	Sg	04 01 15.1	+0.2
MLS	Moulis	0.96	92	P	Pg	04 01 00.8	-1.6
MLS				S	Sg	04 01 14.4	-0.5
	37nm,0.3s						
EALK	Alkurruntz	0.97	284	Pg	Pg	04 01 01.4	-1.2
	3.6nm,0.1s,SNR=30						
EALK				Lg	Lg	04 01 14.7	
	47nm,0.2s,SNR=18						
EALK	Alkurruntz	0.97	284	Pg	Pg	04 01 01.3	-1.3
EALK				Sg	Sg	04 01 15.3	+0.1
EALK	Alkurruntz	0.97	284	Pg	Pg	04 01 01.4	-1.2
EALK				Lg	Lg	04 01 14.7	
CTRE	Tremp	0.99	132	Pg	Pg	04 01 02.4	-0.6
CTRE				Lg	Lg	04 01 17.1	
	98nm,0.3s						
CTRE	Tremp	0.99	132	P	Pg	04 01 02.5	-0.5
CTRE				S	Sb	04 01 17.1	0.0
	98nm,0.3s						
EARA	Aranguren	1.03	258	Pg	Pg	04 01 03.8	+0.2
	0.9nm,0.1s,SNR=16						
EARA				Lg	Lg	04 01 17.9	
	51nm,0.2s						
EARA	Aranguren	1.03	258	Pg	Pg	04 01 03.7	0.0
CEST	Esterri de Car	1.15	110	Pg	Pg	04 01 04.6	-1.5
CEST				Lg	Lg	04 01 21.4	
	64nm,0.2s						
CEST	Esterri de Car	1.15	110	P	Pg	04 01 04.7	-1.4
CEST				S	Sb	04 01 21.4	-0.3
	64nm,0.2s						
CSOR	Sort	1.17	122	Pg	Pg	04 01 05.8	-0.7
	3.0nm,0.1s,SNR=47						
CSOR				Lg	Lg	04 01 22.3	
	46nm,0.2s,SNR=11						
CSOR	Sort	1.17	122	P	Pg	04 01 05.7	-0.8
CSOR				S	Sb	04 01 22.4	+0.1
	84nm,0.3s						
ESAC	San Caprasio	1.29	188	Pg	Pb	04 01 09.2	+0.5
	153nm,0.3s,SNR=82						
ESAC				Lg	Lg	04 01 27.3	
	165nm,0.1s						
CAVN	Les Avellanes	1.32	147	Pn	Pn	04 01 08.6	-0.5
CAVN				Sn	Sn	04 01 27.4	+0.2
	100nm,0.2s						
CAVN	Les Avellanes	1.32	147	P	Pn	04 01 08.7	-0.5
CAVN				S	Sn	04 01 27.5	+0.3
	200nm,0.2s						
CORG	Organya	1.37	124	Pn	Pn	04 01 08.9	-0.8
CORG				Sn	Sn	04 01 28.2	-0.1
	0.2nm,0.2s						
CORG	Organya	1.37	124	P	Pn	04 01 09.0	-0.8
CORG				S	Sn	04 01 28.2	0.0
CLLI	Llivia	1.69	107	Pg	Pb	04 01 15.0	-0.7
	0.6nm,0.2s,SNR=45						
CLLI				Lg	Lg	04 01 37.8	
	14nm,0.1s,SNR=16						
CLLI	Llivia	1.69	107	P	Pn	04 01 13.5	-0.8
CLLI				S	Sn	04 01 36.8	+0.3
	45nm,0.3s						
FNEB	Nbias	1.71	92	Pn	Pn	04 01 13.8	-0.6
FNEB				Sn	Sn	04 01 36.2	-0.4
	50nm,0.2s						
FNEB	Nbias	1.71	92	Pg	Pb	04 01 15.3	-0.5
FNEB				Sg	Sg	04 01 38.5	-0.3
FNEB	Nbias	1.71	92	P	Pn	04 01 13.9	-0.5
FNEB				S	Sn	04 01 36.2	-0.4
	50nm,0.2s						
MONQ	Montcuq	1.71	36	Pg	Pn	04 01 14.9	+0.6
CARF	Carcanieres	1.73	99	Pg	Pn	04 01 14.6	-0.2
CARF				Sg	Sb	04 01 38.4	+0.1
VALF	Valcebollere	1.75	109	Pg	Pb	04 01 16.2	-0.5
VALF				Sg	Sg	04 01 40.6	+0.4
MTLF	Montolieu	1.81	78	eP	Pn	04 01 15.1	-0.7
	SNR=1.0						
MTLF	Montolieu	1.81	78	ePg	Pb	04 01 17.2	-0.4
MTLF				eSg	Sn	04 01 39.8	+0.6
	26nm,0.2s,SNR=1.0						
MTLF	Montolieu	1.81	78	Pg	Pb	04 01 17.2	-0.4
MTLF				Lg	Lg	04 01 39.8	
	13nm,0.2s						
MTLF	Montolieu	1.81	78	Pg	Pb	04 01 17.3	-0.3
MTLF				Sg	Sb	04 01 40.3	-0.3
EPOB	Poblet	1.91	149	Pn	Pn	04 01 16.8	-0.3
	0.1nm,0.1s,SNR=7.9						
EPOB				Pg	Pb	04 01 19.3	+0.1
	4.2nm,0.1s,SNR=49						
EPOB				Sn	Sn	04 01 40.6	-1.0
	5.8nm,0.1s,SNR=7.9						

EPOB				Lg	Lg	04 01 44.3	
	18nm,0.1s,SNR=5.0						
LFF	**La Frestale**	**2.06**	**19**	*e*Pn	Pn	04 01 16.4	-2.8
	SNR=1.0						
LFF	**La Frestale**	**2.06**	**19**	*e*Pg	Pb	04 01 20.8	-1.0
LFF				*e*Sn	Sn	04 01 41.0	-4.2
	SNR=1.0						
LFF				*e*Sg	Sb	04 01 46.8	-0.9
	103nm,0.2s,SNR=1.0						
LFF	**La Frestale**	**2.06**	**19**	Pn	Pn	04 01 16.4	-2.8
LFF				Pg	Pb	04 01 20.8	-1.0
LFF				Sn	Sn	04 01 41.0	-4.2
LFF				Lg	Lg	04 01 46.8	
	52nm,0.2s						
ERTA	**Horta de San J**	**2.08**	**168**	Pg	Pb	04 01 22.6	+0.4
	5.3nm,0.2s,SNR=30						
ERTA				Lg	Lg	04 01 50.4	
	33nm,0.2s,SNR=12						
EBR	**Ebro Roquetas**	**2.24**	**166**	Pg	Pb	04 01 25.1	+0.2
	73nm,0.1s,SNR=7.9						
EBR				Lg	Lg	04 01 55.8	
	196nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**2.32**	**121**	Pn	Pn	04 01 23.8	+0.9
	2.6nm,0.1s,SNR=7.9						
CFON				Pg	Pb	04 01 27.3	+1.0
	13nm,0.2s,SNR=7.9						
CFON				Lg	Lg	04 01 56.9	
	104nm,0.2s,SNR=7.4						
SJAF	**Saint Jean de**	**2.34**	**102**	Pg	Pb	04 01 24.9	-1.7
	1.2nm,0.2s,SNR=7.9						
SJAF				Lg	Lg	04 01 57.8	
	6.4nm,0.2s,SNR=7.9						
SJAF	**Saint Jean de**	**2.34**	**102**	Pn	Pn	04 01 23.4	+0.4
SJAF				Sg	Sb	04 01 56.2	+0.5
EJON	**La Jonquera**	**2.35**	**102**	Pg	Pb	04 01 27.8	+1.0
	4.2nm,0.2s,SNR=16						
EJON				Lg	Lg	04 01 58.9	
	16nm,0.2s,SNR=5.0						
ELAN	**Lanestosa**	**2.37**	**277**	Pg	Pg	04 01 28.4	-1.0
	1.5nm,0.2s,SNR=7.9						
ELAN				Lg	Lg	04 01 56.5	
	11nm,0.3s,SNR=7.9						
CAF	**Calviac**	**2.53**	**40**	*e*Pn	Pn	04 01 22.9	-2.9
	SNR=1.0						
CAF	**Calviac**	**2.53**	**40**	*e*Pg	Pb	04 01 30.0	+0.1
CAF				*e*Sn	Sn	04 01 51.8	-5.2
	SNR=1.0						
CAF				*e*Sg	Sb	04 02 01.7	+0.3
	28nm,0.2s,SNR=1.0						
CAF	**Calviac**	**2.53**	**40**	Pn	Pn	04 01 22.9	-2.9
CAF				Pg	Pb	04 01 30.0	+0.1
CAF				Sn	Sn	04 01 51.8	-5.2
CAF				Lg	Lg	04 02 01.7	
	14nm,0.2s						
ETOR	**Torete**	**2.58**	**213**	Pn	Pn	04 01 26.9	+0.5
	2.3nm,0.1s,SNR=27						
ETOR				Pg	Pb	04 01 32.0	+1.3
	7.6nm,0.3s,SNR=7.9						
ETOR				Sn	Sn	04 01 56.7	-1.4
	6.3nm,0.2s,SNR=7.9						
RJF	**Les Rejaudoux**	**2.62**	**28**	*e*Pn	Pn	04 01 24.5	-2.4
	SNR=1.0						
RJF	**Les Rejaudoux**	**2.62**	**28**	*e*Pg	Pb	04 01 31.0	-0.4
RJF				*e*Sn	Sn	04 01 53.6	-5.5
	SNR=1.0						
RJF				*e*Sg	Sb	04 02 04.1	+0.2
	42nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.62**	**28**	Pn	Pn	04 01 24.5	-2.4
RJF				Pg	Pb	04 01 31.0	-0.4
RJF				Sn	Sn	04 01 53.6	-5.5
RJF				Lg	Lg	04 02 04.1	
	21nm,0.2s						
EMOS	**Mosqueruela**	**2.64**	**184**	Pn	Pn	04 01 27.8	+0.5
	0.8nm,0.1s,SNR=7.9						
EMOS				Pg	Pb	04 01 33.0	+1.2
	2.1nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	04 02 10.2	
	9.4nm,0.3s,SNR=7.0						
LASF	**Ste Croix**	**3.15**	**69**	*e*Pn	Pn	04 01 32.1	-2.1
	SNR=1.0						
LASF	**Ste Croix**	**3.15**	**69**	*e*Pg	Pb	04 01 40.8	+0.4
LASF				*e*Sg	Sb	04 02 21.4	+2.3
	11nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**3.15**	**69**	Pn	Pn	04 01 32.1	-2.1
LASF				Pg	Pb	04 01 40.8	+0.4
LASF				Lg	Lg	04 02 21.4	
	5.6nm,0.2s						
ECHE	**Chera**	**3.45**	**190**	Pn	Pn	04 01 38.5	+0.1
	0.4nm,0.2s,SNR=7.9						
ECHE				Lg	Lg	04 02 32.0	
	14nm,0.6s,SNR=7.9						
MFF	**Saint Martin d**	**3.60**	**1**	*e*Pn	Pn	04 01 37.5	-2.9
	SNR=1.0						
MFF	**Saint Martin d**	**3.60**	**1**	*e*Pg	Pb	04 01 49.2	+1.1
MFF				*e*Sn	Sn	04 02 17.6	-5.7
MFF				*e*Sg	Sb	04 02 34.8	+2.7
	20nm,0.3s,SNR=1.0						
MFF	**Saint Martin d**	**3.60**	**1**	Pn	Pn	04 01 37.5	-2.9
MFF				Pg	Pb	04 01 49.2	+1.1
MFF				Sn	Sn	04 02 17.6	-5.7
MFF				Lg	Lg	04 02 34.8	
	10nm,0.3s						
EARI	**Arriondas**	**3.67**	**276**	Pn	Pn	04 01 40.9	-0.5
	2.0nm,0.4s,SNR=7.9						
EARI				Sn	Sn	04 02 23.3	-1.7
	0.6nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**3.77**	**233**	Pn	Pn	04 01 43.0	+0.2
	0.1nm,0.2s,SNR=7.9						
GUD				Sn	Sn	04 02 25.7	-1.9
	0.1nm,0.3s,SNR=5.8						
GUD				Lg	Lg	04 02 41.9	
	2.3nm,0.3s,SNR=7.9						
VIVF	**Saint-Julien-l**	**3.99**	**61**	*e*Pn	Pn	04 01 43.4	-2.4
VIVF				*e*Sn	Sn	04 02 26.2	-6.7
VIVF				*e*Sg	Sb	04 02 46.1	+2.8
VIVF	**Saint-Julien-l**	**3.99**	**61**	Pn	Pn	04 01 43.4	-2.4
VIVF				Sn	Sn	04 02 26.2	-6.7
VIVF				Lg	Lg	04 02 46.1	
EIBI	**Ibiza**	**4.14**	**163**	Sn	Sn	04 02 33.3	-3.2
	0.3nm,0.1s,SNR=7.9						
BGF	**Bois d'Agland**	**4.17**	**30**	*e*Pn	Pn	04 01 45.5	-2.8
	SNR=1.0						
BGF	**Bois d'Agland**	**4.17**	**30**	*e*Pg	Pb	04 01 59.7	+1.9
BGF				*e*Sg	Sb	04 02 52.2	+3.7
	77nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**4.17**	**30**	Pn	Pn	04 01 45.5	-2.8
BGF				Pg	Pb	04 01 59.7	+1.9
BGF				Lg	Lg	04 02 52.2	
	38nm,0.4s						
EBEN2	**Beniarda presa**	**4.32**	**180**	Pn	Pn	04 01 51.6	+1.3
	2.4nm,0.2s,SNR=7.9						
SMRF	**Simiane la Rot**	**4.33**	**75**	*e*Pn	Pn	04 01 48.1	-2.3
SMRF				*e*Sg	Sb	04 02 57.7	+4.8
	1.8nm,0.2s						
SMRF	**Simiane la Rot**	**4.33**	**75**	Pn	Pn	04 01 48.1	-2.3
SMRF				Lg	Lg	04 02 57.7	
	1.8nm,0.2s						
ESDC	**Sonseca Array**	**4.36**	**222**	Pn	Pn	04 01 50.2	-0.7
	1.5nm,0.2s,baz=41,slow=14,SNR=15						
ESDC				Sn	Sn	04 02 39.2	-2.9
	0.6nm,0.3s,baz=40,slow=24,SNR=15						
ETOB	**Tobarra**	**4.47**	**194**	Pn	Pn	04 01 52.6	+0.3
	0.1nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	04 02 40.8	-3.9
	0.3nm,0.1s,SNR=7.9						
AVF	**Avril sur Loir**	**4.56**	**33**	*e*Pn	Pn	04 01 49.0	-4.6
	SNR=1.0						
AVF	**Avril sur Loir**	**4.56**	**33**	*e*Pg	Pb	04 02 06.0	+1.6
AVF				*e*Sg	Sb	04 03 03.8	+4.2
	12nm,0.4s,SNR=1.0						
AVF	**Avril sur Loir**	**4.56**	**33**	Pn	Pn	04 01 49.0	-4.6
AVF				Pg	Pb	04 02 06.0	+1.6
AVF				Lg	Lg	04 03 03.8	
	6.2nm,0.4s						
PAB	**San Pablo**	**4.65**	**223**	Pn	Pn	04 01 55.0	+0.1
	0.7nm,0.1s,SNR=7.9						
PAB				Sn	Sn	04 02 45.2	-4.1
	0.9nm,0.2s,SNR=7.9						
PAB				Lg	Lg	04 03 10.5	
	1.9nm,0.3s,SNR=7.9						
SMF	**Signal de Mont**	**4.65**	**37**	*e*Pn	Pn	04 01 52.2	-2.6
	SNR=1.0						
SMF	**Signal de Mont**	**4.65**	**37**	*e*Pg	Pb	04 02 08.4	+2.4
SMF				*e*Sg	Sb	04 03 05.9	+3.7
	4.7nm,0.2s						
SMF	**Signal de Mont**	**4.65**	**37**	Pn	Pn	04 01 52.2	-2.6
SMF				Pg	Pb	04 02 08.4	+2.4
SMF				Lg	Lg	04 03 05.9	
	2.3nm,0.2s						
HYF	**Humbligny**	**4.72**	**24**	*e*Pn	Pn	04 01 53.2	-2.6
HYF	**Humbligny**	**4.72**	**24**	*e*Pg	Pb	04 02 09.8	+2.6
HYF				*e*Sg	Sg	04 03 10.0	-5.6
HYF	**Humbligny**	**4.72**	**24**	Pn	Pn	04 01 53.2	-2.6
HYF				Pg	Pb	04 02 09.8	+2.6
HYF				Lg	Lg	04 03 10.0	
ORIF	**Oris-en-Rattie**	**4.80**	**64**	*e*Pn	Pn	04 01 53.6	-3.4
ORIF				*e*Sg	Sg	04 03 12.7	-5.4
	0.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.80**	**64**	Pn	Pn	04 01 53.6	-3.4
ORIF				Lg	Lg	04 03 12.7	
	0.4nm,0.3s						
SSF	**Saint Saulge**	**4.84**	**32**	*e*Pn	Pn	04 01 54.8	-2.7
	22nm,0.5s,SNR=1.0						
SSF	**Saint Saulge**	**4.84**	**32**	*e*Pg	Pb	04 02 12.4	+3.2
SSF				*e*Sg	Sb	04 03 13.4	+5.6
	11nm,0.3s						
SSF	**Saint Saulge**	**4.84**	**32**	Pn	Pn	04 01 54.8	-2.7
	11nm,0.5s						
SSF				Pg	Pb	04 02 12.4	+3.2
SSF				Lg	Lg	04 03 13.4	
	5.7nm,0.3s						
LMR	**La Mourre**	**4.93**	**84**	*e*Pn	Pn	04 01 56.5	-2.1
LMR	**La Mourre**	**4.93**	**84**	*e*Pg	Pb	04 02 13.2	+2.5
LMR				*e*Sn	Sn	04 02 48.5	-7.5
LMR				*e*Sg	Sg	04 03 16.6	-5.6
	0.6nm,0.2s						
LMR	**La Mourre**	**4.93**	**84**	Pn	Pn	04 01 56.5	-2.1
LMR				Pg	Pb	04 02 13.2	+2.5
LMR				Sn	Sn	04 02 48.5	-7.5
LMR				Lg	Lg	04 03 16.6	
	0.3nm,0.2s						
ECAL	**Calabor**	**4.94**	**260**	Pn	Pn	04 01 58.7	-0.2
	0.2nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	04 02 53.2	-3.2
	0.8nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	04 03 18.8	
	4.0nm,0.2s,SNR=4.0						
PBRG	**Braganca**	**4.98**	**258**	*e*Pn	Pn	04 01 59.9	+0.5
PBRG				*e*Sn	Sn	04 02 55.3	-2.0
PBRG				A	A	04 03 31.9	
	2.4nm,0.5s						
PBRG	**Braganca**	**4.98**	**258**	Pn	Pn	04 01 59.9	+0.5
PBRG				Sn	Sn	04 02 55.3	-2.0
	1.2nm,0.5s						
FRF	**La Foret Royal**	**5.04**	**81**	*e*Pn	Pn	04 01 57.3	-2.9
FRF	**La Foret Royal**	**5.04**	**81**	*e*Pg	Pb	04 02 15.9	+3.3
FRF				*e*Sg	Sg	04 03 19.7	-6.1
	0.9nm,0.3s						
FRF	**La Foret Royal**	**5.04**	**81**	Pn	Pn	04 01 57.3	-2.9
FRF				Pg	Pb	04 02 15.9	+3.3
FRF				Lg	Lg	04 03 19.7	
	0.4nm,0.3s						
EPON	**Pontenova**	**5.08**	**276**	Pn	Pn	04 01 59.6	-1.2
	1.5nm,0.3s,SNR=4.0						
EPON				Sn	Sn	04 02 56.7	-3.2
	1.5nm,0.3s,SNR=6.1						
LOR	**Lormes**	**5.15**	**33**	*e*Pn	Pn	04 01 58.5	-3.2
	baz=209,SNR=1.0						
LOR	**Lormes**	**5.15**	**33**	*e*Pg	Pb	04 02 18.0	+3.5
LOR				*e*Sg	Sb	04 03 22.5	+5.9
	5.9nm,0.3s						
LOR	**Lormes**	**5.15**	**33**	Pn	Pn	04 01 58.5	-3.2
LOR				Pg	Pb	04 02 18.0	+3.5
LOR				Lg	Lg	04 03 22.5	
	3.0nm,0.3s						
EMUR	**La Murta**	**5.21**	**189**	Pn	Pn	04 02 02.8	+0.2
	0.1nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	**5.29**	**238**	Pn	Pn	04 02 03.8	+0.1
	0.1nm,0.2s,SNR=7.9						
EPLA				Sn	Sn	04 03 00.9	-4.0
	0.2nm,0.2s,SNR=7.9						
QUIF	**Quistinic**	**5.34**	**338**	*e*Pn	Pn	04 02 01.6	-2.6
	SNR=1.0						
QUIF	**Quistinic**	**5.34**	**338**	*e*Pg	Pb	04 02 21.3	+3.6
QUIF				*e*Sn	Sn	04 02 59.0	-7.0
QUIF				*e*Sg	Sg	04 03 29.2	-6.1
	3.5nm,0.3s						
QUIF	**Quistinic**	**5.34**	**338**	Pn	Pn	04 02 01.6	-2.6
QUIF				Pg	Pb	04 02 21.3	+3.6
QUIF				Sn	Sn	04 02 59.0	-7.0
QUIF				Lg	Lg	04 03 29.2	
	1.8nm,0.3s						
MVO	**Moncorvo**	**5.39**	**252**	*e*Pn	Pn	04 02 05.1	0.0
MVO				*e*Sn	Sn	04 03 04.9	-2.6
MVO				A	A	04 03 51.0	
	5.4nm,0.6s						
MVO	**Moncorvo**	**5.39**	**252**	Pn	Pn	04 02 05.0	-0.1
	1.1nm,0.2s,SNR=7.9						
MVO				Sn	Sn	04 03 04.0	-3.6
	2.5nm,0.2s,SNR=7.9						
GRR	**Gorron**	**5.41**	**355**	*e*Pn	Pn	04 02 02.2	-3.0
	SNR=1.0						
GRR	**Gorron**	**5.41**	**355**	*e*Pg	Pb	04 02 22.7	+3.8
GRR				*e*Sn	Sn	04 03 00.2	-7.6
	3.3nm,0.2s,SNR=1.0						
GRR				*e*Sg	Sb	04 03 30.6	+6.6
	3.8nm,0.2s						
GRR	**Gorron**	**5.41**	**355**	Pn	Pn	04 02 02.2	-3.0
GRR				Pg	Pb	04 02 22.7	+3.8
GRR				Sn	Sn	04 03 00.2	-7.6
	1.7nm,0.2s						
GRR				Lg	Lg	04 03 30.6	
	1.9nm,0.2s						
SGMF	**Saint Gilles**	**5.51**	**343**	*e*Pn	Pn	04 02 04.1	-2.5
	SNR=1.0						
SGMF	**Saint Gilles**	**5.51**	**343**	*e*Pg	Pb	04 02 24.8	+4.3
SGMF				*e*Sn	Sn	04 03 02.6	-7.6
SGMF				*e*Sg	Sg	04 03 34.3	-6.4
	2.7nm,0.2s						
SGMF	**Saint Gilles**	**5.51**	**343**	Pn	Pn	04 02 04.1	-2.5
SGMF				Pg	Pb	04 02 24.8	+4.3
SGMF				Sn	Sn	04 03 02.6	-7.6
SGMF				Lg	Lg	04 03 34.3	
	1.4nm,0.2s						
LDF	**La Druitiere**	**5.60**	**1**	*e*Pn	Pn	04 02 04.6	-3.2
	SNR=1.0						
LDF	**La Druitiere**	**5.60**	**1**	*e*Pg	Pb	04 02 26.0	+3.9
LDF				*e*Sn	Sn	04 03 04.7	-7.7
	SNR=1.0						
LDF				*e*Sg	Sg	04 03 36.9	-6.7
	12nm,0.4s,SNR=1.0						
EQES	**Quesada**	**5.63**	**204**	Pn	Pn	04 02 08.7	+0.3
	0.1nm,0.2s,SNR=7.9						
EQES				Sn	Sn	04 03 10.3	-3.2
	0.1nm,0.2s,SNR=7.9						
EQES				Lg	Lg	04 03 43.1	
	3.3nm,0.4s,SNR=7.9						
ROSF	**Rostrenen**	**5.75**	**339**	*e*Pn	Pn	04 02 06.6	-3.3
	SNR=1.0						
ROSF	**Rostrenen**	**5.75**	**339**	*e*Pg	Pg	04 02 29.6	-4.5
ROSF				*e*Sn	Sn	04 03 10.1	-6.2
ROSF				*e*Sg	Sg	04 03 42.6	-6.0
	8.8nm,0.6s						
ROSF	**Rostrenen**	**5.75**	**339**	Pn	Pn	04 02 06.6	-3.3
ROSF				Pg	Pg	04 02 29.6	-4.5
ROSF				Sn	Sn	04 03 10.1	-6.2
ROSF				Lg	Lg	04 03 42.6	
	4.4nm,0.6s						
CABF	**La Chapelle**	**5.76**	**49**	*e*Pn	Pn	04 02 06.8	-3.3
CABF	**La Chapelle**	**5.76**	**49**	*e*Pg	Pb	04 02 29.4	+4.5
CABF				*e*Sn	Sn	04 03 08.8	-7.8
CABF				*e*Sg	Sg	04 03 42.2	-6.5
	6.1nm,0.5s						
CABF	**La Chapelle**	**5.76**	**49**	Pn	Pn	04 02 06.8	-3.3
CABF				Pg	Pb	04 02 29.4	+4.5
CABF				Sn	Sn	04 03 08.8	-7.8
CABF				Lg	Lg	04 03 42.2	
	3.1nm,0.5s						
FLN	**La Foliniere**	**5.77**	**358**	*e*Pn	Pn	04 02 07.0	-3.1
	baz=176						
FLN				*e*Sn	Sn	04 03 08.9	-7.8
FLN				*e*Sg	Sg	04 03 42.5	-6.6
	2.5nm,0.2s						
FLN	**La Foliniere**	**5.77**	**358**	Pn	Pn	04 02 07.0	-3.1
FLN				Sn	Sn	04 03 08.9	-7.8
FLN				Lg	Lg	04 03 42.5	
	1.2nm,0.2s						
EADA	**Adamuz**	**5.86**	**216**	Pn	Pn	04 02 11.7	+0.3
	0.0nm,0.1s,SNR=7.9						
EADA				Sn	Sn	04 03 15.2	-3.8
	0.1nm,0.1s,SNR=7.9						
POLO	**Lamas de Olo**	**5.86**	**256**	*e*Sn	Sn	04 03 16.5	-2.6
POLO	**Lamas de Olo**	**5.86**	**256**	Sn	Sn	04 03 16.5	-2.6
ELOB	**Lobios**	**5.92**	**262**	Sn	Sn	04 03 16.3	-4.1
	0.2nm,0.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.04**	**263**	*e*Sn	Sn	04 03 23.2	-0.5
PGAV	**Gavieira, Arco**	**6.04**	**263**	Sn	Sn	04 03 23.2	-0.5
MTE	**Manteigas**	**6.07**	**247**	*e*Sn	Sn	04 03 21.1	-3.1
MTE	**Manteigas**	**6.07**	**247**	Sn	Sn	04 03 21.1	-3.1
ECAB	**El Cabril**	**6.32**	**221**	Pn	Pn	04 02 18.0	+0.2
	0.1nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	04 03 24.6	-5.6
	0.4nm,0.2s,SNR=7.9						
SFTF	**Sexfontaines**	**6.38**	**33**	*e*Pn	Pn	04 02 15.1	-3.4
	baz=215						
SFTF	**Sexfontaines**	**6.38**	**33**	*e*Pg	Pb	04 02 40.7	+5.3
SFTF				*e*Sg	Sg	04 04 01.3	-7.3
	3.6nm,0.3s						
SFTF	**Sexfontaines**	**6.38**	**33**	Pn	Pn	04 02 15.1	-3.4
SFTF				Pg	Pb	04 02 40.7	+5.3
SFTF				Lg	Lg	04 04 01.3	
	3.6nm,0.3s						
PMRV	**Marv??o**	**6.48**	**239**	*e*Pn	Pn	04 02 19.4	-0.6
PMRV				*e*Sn	Sn	04 03 31.0	-3.3
PMRV				A	A	04 04 16.7	
	2.1nm,0.6s						
PMRV	**Marv??o**	**6.48**	**239**	Pn	Pn	04 02 19.4	-0.6
PMRV				Sn	Sn	04 03 31.0	-3.3
	2.1nm,0.6s						
EGOR	**Sierra Gorda,**	**6.60**	**208**	Pn	Pn	04 02 22.0	+0.3
	0.6nm,0.3s,SNR=7.9						
EGOR				Sn	Sn	04 03 33.4	-3.9
	0.9nm,0.3s,SNR=7.9						
MEZF	**Maizieres J’vi**	**6.62**	**32**	*e*Pn	Pn	04 02 18.9	-3.0
	baz=210						
MEZF				*e*Sg	Sg	04 04 09.3	-7.1
	3.4nm,0.3s						
MEZF	**Maizieres J’vi**	**6.62**	**32**	Pn	Pn	04 02 18.9	-3.0
MEZF				Lg	Lg	04 04 09.3	
	3.4nm,0.3s						
PAGF	**Fort de Pagny**	**6.94**	**35**	*e*Pn	Pn	04 02 23.6	-2.6
	baz=216						
PAGF				*e*Sn	Sn	04 03 36.1	-9.3
PAGF				*e*Sg	Sg	04 04 18.1	-8.4
	5.1nm,0.5s						
PESTR	**Estremoz**	**6.94**	**236**	*e*Pn	Pn	04 02 25.5	-0.8
PESTR				*e*Sn	Sn	04 03 41.8	-3.9
PESTR				A	A	04 03 54.8	
	1.5nm,0.6s						

IDC ***10*** *04:06:14.4±1.2, 10°.81S×165°.54E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.8/45, mbtmp4.0/9, ML4.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/25, Error ellipse: s-maj=41.7km s-min=21.0km az=126.0*

ISCJB ***10*** *04:06:17.1±1.1, 11°.0S±0°.1×165°.6E±0°.2, h30^{km}, mb3.9/7, Error ellipse: s-maj=24.8km s-min=16.6km az=8.3*

ISC 10 04:06:18.8±1.1**, 10°.9S**±0°.1×**165°.6E**±0°.2**, h30^{km}, n17, σ0^{s}.66**/12**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.75**	**284**	LR	LR	04 10 06.0	
	comp=Z,239nm,19.9s,baz=116,slow=41						
DZM	**Mont Dzumac**	**11.12**	**176**	Pn	**Pn**	**04 08 55.6**	**-0.3**
	1.6nm,0.3s,baz=308,slow=8.4,SNR=20						
CTA	**Charters Tower**	**20.73**	**242**	P	**P**	**04 10 57.6**	**+0.5**
	3.0nm,0.7s,baz=60,slow=8.1,SNR=3.6						
H11S2	**WAKE ISLAND Hy**	**29.24**	**2**	T	T	04 42 50.7	
	baz=181,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	**29.25**	**2**	T	T	04 42 48.5	
	baz=181,slow=76,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**29.26**	**2**	T	T	04 42 50.7	
	baz=181,slow=76,SNR=4.6						
STKA	**Stephens Creek**	**30.43**	**223**	P	**P**	**04 12 29.4**	**+0.5**
	1.0nm,0.4s,baz=6.0,slow=8.7,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	04 44 20.7	
	baz=186,slow=74						
H11N3	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	04 44 21.2	
	baz=186,slow=74						
H11N2	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	04 44 22.0	
	baz=186						
WRA	**Warramunga Arr**	**31.39**	**250**	P	**P**	**04 12 37.5**	**+0.1**
	2.5nm,0.6s,baz=82,slow=9.1,SNR=28						
WRA				PcP	**PcP**	**04 15 31.1**	**+0.3**
	0.5nm,0.8s,baz=82,slow=5.2,SNR=5.8						
ASAR	**Alice Springs**	**32.72**	**243**	P	**P**	**04 12 48.6**	**-0.5**
	0.6nm,0.4s,baz=63,slow=10,SNR=20						
ASAR				PcP	**PcP**	**04 15 35.0**	**+0.7**
	0.6nm,0.7s,baz=73,slow=2.3,SNR=7.1						
FITZ	**Fitzroy Crossi**	**39.27**	**255**	P	**P**	**04 13 44.9**	**-0.3**
	2.2nm,0.7s,baz=108,slow=7.3,SNR=5.6						
SONM	**Songino Array**	**78.48**	**324**	P	**P**	**04 18 16.1**	**-1.1**
	0.1nm,0.3s,baz=107,slow=4.8,SNR=1.8						
ILAR	**Eielson Array**	**83.44**	**19**	P	**P**	**04 18 43.8**	**+0.7**
	1.2nm,0.5s,baz=237,slow=5.1,SNR=40						
MKAR	**Makanchi Array**	**93.33**	**317**	P	**P**	**04 19 31.5**	**+0.5**
	0.3nm,0.9s,baz=88,slow=5.0,SNR=2.9						
ARCES	**ARCESS Array B**	**116.17**	**345**	PKP	**PKiKP**	**04 24 57.9**	**-0.8**
	2.7nm,0.9s,baz=29,slow=2.1,SNR=3.5						

IDC 10 04:09:43.5±1.6**, 11°.16S**×**165°.17E, h0^{km}, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.6**/40**, mbtmp3.8**/5**, ML3.3**/1**, Error ellipse: s-maj=50.2km s-min=29.3km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.92**	**174**	Pn	Pn	04 12 21.0	-0.2
	0.2nm,0.3s,baz=316,slow=22,SNR=7.5						
WRA	**Warramunga Arr**	**30.91**	**250**	P	P	04 16 02.4	+0.1
	1.3nm,0.8s,baz=79,slow=9.3,SNR=9.0						
ASAR	**Alice Springs**	**32.23**	**243**	P	P	04 16 13.5	-0.4
	1.1nm,1.0s,baz=64,slow=11,SNR=9.0						
ILAR	**Eielson Array**	**83.80**	**19**	P	P	04 22 14.2	-0.3
	0.6nm,1.0s,baz=227,slow=6.1,SNR=4.0						
MKAR	**Makanchi Array**	**93.22**	**317**	P	P	04 23 00.6	+0.6
	0.3nm,1.0s,baz=104,slow=6.1,SNR=3.5						

IDC 10 04:12:54.0±1.8**, 11°.78S**×**165°.29E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/37**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=54.9km s-min=33.3km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.29**	**174**	Pn	Pn	04 15 23.1	+0.1
	0.3nm,0.3s,baz=320,slow=17,SNR=3.0						
WRA	**Warramunga Arr**	**30.81**	**251**	P	P	04 19 12.0	+0.1
	0.5nm,0.9s,baz=82,slow=9.4,SNR=3.5						
ASAR	**Alice Springs**	**32.07**	**244**	P	P	04 19 22.7	-0.2
	0.5nm,0.7s,baz=75,slow=8.8,SNR=5.5						
ILAR	**Eielson Array**	**84.35**	**19**	P	P	04 25 27.6	0.0
	0.4nm,0.7s,baz=235,slow=5.5,SNR=5.6						

IDC ***10*** *04:15:40.9±1.5, 10°.72S×165°.71E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.7/30, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=52.1km s-min=27.4km az=129.0*

ISCJB ***10*** *04:15:43.5±0.9, 10°.9S±0°.1×165°.7E±0°.2, h31^{km}, mb3.6/5, Error ellipse: s-maj=28.3km s-min=18.0km az=11.3*

ISC 10 04:15:45.3±1.1**, 10°.8S**±0°.1×**165°.7E**±0°.2**, h31^{km}, n12, σ1^{s}.15**/6**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.26**	**177**	Pn	**Pn**	**04 18 24.1**	**-0.1**
	0.3nm,0.3s,baz=0.0,slow=20,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**29.09**	**2**	T	T	04 52 03.6	
	baz=181,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.10**	**2**	T	T	04 52 03.9	
	baz=181,slow=76,SNR=8.8						
H11S1	**WAKE ISLAND Hy**	**29.11**	**2**	T	T	04 52 03.8	
	baz=181,slow=76,SNR=8.5						
H11N1	**WAKE ISLAND Hy**	**30.32**	**2**	T	T	04 53 35.2	
	baz=182,slow=76,SNR=8.8						
H11N3	**WAKE ISLAND Hy**	**30.32**	**2**	T	T	04 53 35.5	
	baz=182,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**30.33**	**2**	T	T	04 53 36.0	
	baz=182,slow=76,SNR=10						
WRA	**Warramunga Arr**	**31.56**	**249**	P	**P**	**04 22 05.6**	**+0.4**
	0.6nm,0.7s,baz=82,slow=9.1,SNR=9.3						
ASAR	**Alice Springs**	**32.90**	**243**	P	**P**	**04 22 17.2**	**+0.3**
	0.6nm,0.7s,baz=67,slow=9.7,SNR=6.0						
ILAR	**Eielson Array**	**83.26**	**19**	P	**P**	**04 28 09.9**	**+1.5**

	0.6nm,0.9s,baz=232,slow=5.0,SNR=5.3						
MKAR	Makanchi Array	93.31	317	P	P	04 28 56.3	-0.9
	0.2nm,0.7s,baz=116,slow=3.4,SNR=2.1						
YKA	Yellowknife Ar	94.74	27	P	P	04 29 02.5	-0.9
	0.1nm,0.7s,baz=238,slow=3.5,SNR=3.4						

IDC 10 04:17:54.0±1.7, 10°.66S×165°.83E, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.5/29, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=55.0km s-min=30.6km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.36	177	Pn	Pn	04 20 37.5	-0.3
	0.8nm,0.3s,baz=307,slow=22,SNR=13						
H11S2	WAKE ISLAND Hy	28.98	2	T	T	04 54 20.3	
	baz=181,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	28.98	2	T	T	04 54 21.9	
	baz=181,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.00	2	T	T	04 54 22.4	
	baz=181,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	30.20	2	T	T	04 55 52.3	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	30.21	2	T	T	04 55 52.8	
	baz=182,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	30.22	2	T	T	04 55 54.0	
	baz=182,slow=76,SNR=10						
WRA	Warramunga Arr	31.70	249	P	P	04 24 20.1	+0.3
	0.9nm,0.8s,baz=80,slow=9.2,SNR=6.3						
ASAR	Alice Springs	33.04	243	P	P	04 24 31.2	-0.3
	0.6nm,0.8s,baz=63,slow=10,SNR=7.6						
ILAR	Eielson Array	83.12	18	P	P	04 30 21.5	0.0
	0.3nm,0.8s,baz=219,slow=7.0,SNR=3.0						

IDC 10 04:19:14.3±1.7, 10°.94S×165°.22E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/27, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=49.4km s-min=28.3km az=126.0

ISCJB 10 04:19:17.3±1.2, 11°.1S±0°.1×165°.2E±0°.2, h31^{km}, mb3.6/4, Error ellipse: s-maj=26.3km s-min=19.7km az=2.4

ISC 10 04:19:19.1±1.3, 11°.0S±0°.2×165°.2E±0°.2, h31^{km}, n12, σ1^{s}36/6, mb3.7/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.10	174	Pn	Pn	04 21 56.2	+0.3
	0.3nm,0.3s,baz=331,slow=19,SNR=2.4						
CTA	Charters Tower	20.37	241	P	P	04 23 53.8	+0.4
	3.2nm,0.9s,baz=79,slow=18,SNR=2.8						
H11S2	WAKE ISLAND Hy	29.31	3	T	T	04 55 51.7	
	baz=181						
H11S3	WAKE ISLAND Hy	29.31	3	T	T	04 55 48.9	
	baz=181						
H11S1	WAKE ISLAND Hy	29.33	3	T	T	04 55 51.7	
	baz=181						
H11N1	WAKE ISLAND Hy	30.53	3	T	T	04 57 26.4	
	baz=180						
H11N3	WAKE ISLAND Hy	30.54	3	T	T	04 57 26.2	
	baz=180						
H11N2	WAKE ISLAND Hy	30.55	3	T	T	04 57 27.0	
	baz=180						
WRA	Warramunga Arr	31.01	250	P	P	04 25 34.1	-0.1
	0.4nm,0.6s,baz=81,slow=8.9,SNR=4.2						
ASAR	Alice Springs	32.36	243	P	P	04 25 44.5	-1.6
	0.6nm,0.6s,baz=70,slow=8.6,SNR=7.7						
ILAR	Eielson Array	83.61	19	P	P	04 31 43.2	-0.9
	0.4nm,0.7s,baz=237,slow=4.4,SNR=4.5						
MKAR	Makanchi Array	93.11	317	P	P	04 32 31.5	+1.4
	0.2nm,0.6s,baz=101,slow=4.6,SNR=2.8						

IDC 10 04:21:40.1±1.0, 23°.35N×65°.03E, h0^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.5/49, mbtmp3.7/10, ML3.4/1, Error ellipse: s-maj=28.2km s-min=24.1km az=175.0

ISCJB 10 04:21:42.8±0.8, 23°.4N±0°.2×64°.9E±0°.1, h33^{km}, mb3.6/8, Error ellipse: s-maj=22.6km s-min=12.6km az=166.2

ISC 10 04:21:45.2±1.0, 23°.4N±0°.2×64°.85E±0°.09, h35^{km}, n14, σ1^{s}44/13, mb3.7/8, Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	5.72	270	Pn	Pn	04 23 07.8	+0.2
	1.0nm,0.3s,baz=120,slow=8.3,SNR=16						
WSAR				Sn	Sn	04 24 09.6	-2.4
	baz=58,slow=7.1,SNR=1.9						
AAK	Ala-Archa	20.79	20	P	P	04 26 22.8	-0.6
	0.6nm,0.5s,baz=212,slow=16,SNR=2.3						
MKAR	Makanchi Array	27.23	27	P	P	04 27 26.1	+0.2
	0.6nm,0.7s,baz=201,slow=7.7,SNR=4.1						
H08N2	Diego Garcia H	30.15	168	T	T	04 59 13.9	
	baz=349,slow=75,SNR=14						
H08N3	Diego Garcia H	30.17	168	T	T	04 59 14.2	
	baz=349,slow=75,SNR=16						
H08N1	Diego Carcia H	30.17	168	T	T	04 59 11.3	
	baz=349,slow=75,SNR=14						
SONM	Songino Array	40.97	43	P	P	04 29 22.6	-2.1
	0.4nm,0.7s,baz=238,slow=8.3,SNR=3.6						
SONM				PcP	PcP	04 31 26.1	+1.7
	0.1nm,0.3s,baz=251,slow=4.4,SNR=2.3						
ARCES	ARCESS Array B	51.71	343	P	P	04 30 49.5	+1.0
	3.2nm,1.0s,baz=126,slow=9.3,SNR=3.3						
KSRS	Korea Array	55.23	60	P	P	04 31 13.6	-1.2
	0.8nm,0.6s,baz=294,slow=3.9,SNR=2.9						
TORD	Torodi Ar. Bea	60.43	272	P	P	04 31 52.6	+0.9
	1.4nm,1.2s,baz=58,slow=6.4,SNR=2.7						
WRA	Warramunga Arr	80.28	117	P	P	04 33 52.2	-0.6
	0.7nm,0.8s,baz=309,slow=4.6,SNR=7.3						
ASAR	Alice Springs	81.75	120	P	P	04 34 00.5	-0.2
	0.7nm,0.8s,baz=310,slow=6.2,SNR=7.3						
YKA	Yellowknife Ar	94.40	360	P	P	04 35 02.8	+1.7
	0.1nm,0.5s,baz=358,slow=4.1,SNR=2.5						
NVAR	Mina Array Bea	118.42	3	PKP	PKiKP	04 40 30.4	+0.7
	0.2nm,0.6s,baz=291,slow=2.8,SNR=2.6						

IDC 10 04:23:22.3±12.0, 11°.33S×165°.57E, h0^{km}, mb3.7/3, mb1 3.8/3, mb1mx3.5/27, mbtmp3.7/3, Error ellipse: s-maj=358.7km s-min=53.3km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.23	250	P	P	04 29 43.8	0.0
	0.6nm,0.8s,baz=81,slow=9.2,SNR=4.8						
SONM	Songino Array	78.79	324	P	P	04 35 27.4	+0.2
	0.4nm,0.8s,baz=134,slow=4.2,SNR=3.8						
MKAR	Makanchi Array	93.61	317	P	P	04 36 40.4	-0.3
	0.3nm,0.5s,baz=118,slow=5.7,SNR=7.7						

IDC 10 04:28:22.4±1.1, 11°.38S×165°.05E, h0^{km}, mb3.9/8, mb1 4.2/9, mb1mx3.9/28, mbtmp3.9/9, ML3.6/1, Error ellipse: s-maj=37.4km s-min=23.7km az=135.0

ISCJB 10 04:28:25.7±0.7, 11°.6S±0°.1×165°.0E±0°.2, h34^{km}, mb3.9/8, Error ellipse: s-maj=22.4km s-min=16.4km az=10.7

ISC 10 04:28:27.4±0.8, 11°.5S±0°.1×165°.1E±0°.2, h34^{km}, n15, σ0^{s}76/10, mb3.8/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.62	173	Pn	Pn	04 30 57.3	-0.1
	0.5nm,0.3s,baz=299,slow=22,SNR=9.1						
H11S2	WAKE ISLAND Hy	29.81	3	T	T	05 05 41.6	
	baz=185,slow=74,SNR=3.8						
H11S3	WAKE ISLAND Hy	29.82	3	T	T	05 05 41.2	
	baz=185						
H11S1	WAKE ISLAND Hy	29.83	3	T	T	05 05 41.6	
	baz=185,slow=74,SNR=2.8						
WRA	Warramunga Arr	30.72	250	P	P	04 34 38.9	-0.6
	1.9nm,1.0s,baz=82,slow=9.2,SNR=8.6						
H11N1	WAKE ISLAND Hy	31.04	3	T	T	05 07 11.4	
	baz=180						
H11N3	WAKE ISLAND Hy	31.04	3	T	T	05 07 12.5	
	baz=180						
H11N2	WAKE ISLAND Hy	31.05	3	T	T	05 07 12.7	
	baz=180						
ASAR	Alice Springs	32.02	244	P	P	04 34 50.9	-0.1
	2.0nm,1.0s,baz=71,slow=9.0,SNR=10						
ASAR				PcP	PcP	04 37 41.5	+1.1
	0.6nm,1.0s,baz=64,slow=2.2,SNR=4.2						
CMAR	Chiang Mai Arr	71.68	294	P	P	04 39 46.8	+0.3
	0.7nm,0.4s,baz=116,slow=4.1,SNR=3.5						
SONM	Songino Array	78.62	324	P	P	04 40 25.4	-0.6
	0.6nm,0.9s,baz=130,slow=4.5,SNR=3.8						
ILAR	Eielson Array	84.12	19	P	P	04 40 54.8	+0.2
	0.6nm,0.7s,baz=239,slow=4.9,SNR=7.2						
NVAR	Mina Array Bea	86.80	50	P	P	04 41 09.3	+0.4
	0.5nm,0.7s,baz=216,slow=4.5,SNR=3.6						
MKAR	Makanchi Array	93.38	317	P	P	04 41 39.9	+0.6
	0.9nm,0.8s,baz=102,slow=5.6,SNR=8.9						
YKA	Yellowknife Ar	95.65	27	P	P	04 41 48.1	-1.1
	0.2nm,0.7s,baz=253,slow=5.2,SNR=4.0						

ISCJB 10 04:35:53.6±0.4, 10°.97S±0°.06×165°.76E±0°.06, h10^{km}, mb4.3/17, MS3.7/7, Error ellipse: s-maj=9.0km s-min=8.6km az=44.5

IDC 10 04:35:53.2±0.8, 10°.91S×165°.89E, h0^{km}, mb4.2/12, mb1 4.4/14, mb1mx4.2/33, mbtmp4.3/14, ML4.8/2, MS3.7/9, Ms1 3.7/9, ms1mx3.4/32, Error ellipse: s-maj=26.5km s-min=17.5km az=111.0

NEIC 10 04:35:55.3±0.4, 10°.90S×165°.80E, h10^{km}, mb4.4/5, Error ellipse: s-maj=10.8km s-min=8.0km az=112.0

ISC 10 04:35:55.2±0.6, 10°.98S±0°.07×165°.84E±0°.09, h10^{km}, n45, σ1^{s}33/38, mb4.3/17, MS3.7/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.00	284	eP	Pn	04 37 25.0	+0.9
HNR	Honiara	6.00	284	Pn	Pn	04 37 25.2	+1.1
	46nm,0.3s,baz=158,slow=3.0,SNR=5.2						
HNR				Sn	Sn	04 38 32.0	-0.8
	baz=198,slow=20,SNR=2.2						
HNR				LR	LR	04 39 58.5	
	comp=Z,1µm,18.4s,baz=118,slow=41						
DZM	Mont Dzumac	11.04	177	ePn	Pn	04 38 34.9	+1.5
	39nm,0.5s						
DZM				eLR	LR	04 41 07.3	
	comp=Z,232nm,25.3s						
DZM	Mont Dzumac	11.04	177	Pn	Pn	04 38 34.4	+1.0
	3.7nm,0.3s,baz=312,slow=21,SNR=6.3						
DZM				Sn	Sn	04 40 33.1	-3.9
	0.3nm,0.3s,baz=302,slow=9.5,SNR=2.0						
DZM				LR	LR	04 42 14.1	
	comp=Z,134nm,20.9s,baz=36,slow=34						
PINNC	Pines Island,	11.67	173	ePn	Pn	04 38 44.8	+3.0
EIDS	Eidsvold	20.00	222	eP	P	04 40 29.2	+1.1
	74nm,1.9s						
CTA	Charters Tower	20.91	242	P	P	04 40 39.1	+1.1
	9.7nm,0.7s,baz=67,slow=13,SNR=13						
CTAO	Charters Tower	20.91	242	eP	P	04 40 39.0	+1.1
	15nm,0.9s						
COEN	Coen	22.32	260	eP	P	04 40 53.7	+0.4
	24nm,1.4s						
H11S2	WAKE ISLAND Hy	29.30	2	T	T	05 12 27.3	
	baz=181,SNR=17						
H11S3	WAKE ISLAND Hy	29.30	2	T	T	05 12 26.1	
	baz=181,slow=74,SNR=13						
H11S1	WAKE ISLAND Hy	29.32	2	T	T	05 12 28.7	
	baz=181,slow=74,SNR=12						
H11N1	WAKE ISLAND Hy	30.52	2	T	T	05 13 58.3	
	baz=182,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.53	2	T	T	05 14 01.2	
	baz=182,slow=76,SNR=3.8						
H11N2	WAKE ISLAND Hy	30.54	2	T	T	05 13 58.6	
	baz=182,slow=76,SNR=4.2						
STKA	Stephens Creek	30.55	223	P	P	04 42 09.8	+0.8
	3.1nm,0.7s,baz=37,slow=9.1,SNR=8.2						
STKA				PcP	PcP	04 45 08.7	+0.7
	1.5nm,0.6s,baz=23,slow=5.7,SNR=3.5						
STKA				LR	LR	04 52 56.5	
	comp=Z,171nm,18.3s,baz=28,slow=33						
WRAB	Tennant Creek	31.57	250	eP	P	04 42 16.9	-1.3
WB2	Warramunga Arr	31.58	250	eP	P	04 42 16.9	-1.4
WRA	Warramunga Arr	31.59	250	P	P	04 42 17.6	-0.7
	11nm,0.9s,baz=82,slow=9.2,SNR=64						
WRA				PcP	PcP	04 45 11.6	+0.7
	1.2nm,0.8s,baz=78,slow=3.5,SNR=8.3						
WRA				LR	LR	04 55 15.5	
	comp=Z,211nm,18.3s,baz=70,slow=37						
GUMO	Guam	32.07	319	LR	LR	04 55 44.9	
	comp=Z,58nm,18.2s,baz=106,slow=37						
ASAR	Alice Springs	32.90	243	P	P	04 42 28.6	-1.2
	1.1nm,0.4s,baz=65,slow=10,SNR=39						
ASAR				PcP	PcP	04 45 14.8	+0.4
	1.7nm,0.7s,baz=75,slow=2.4,SNR=13						
ASAR				LR	LR	04 56 05.9	
	comp=Z,220nm,18.3s,baz=82,slow=37						
RPZ	Rata Peaks	32.92	173	P	P	04 42 29.1	-0.7
	3.9nm,0.4s,baz=47,slow=19,SNR=4.2						
PPT	Papeete	43.62	104	LR	LR	04 58 15.5	
	comp=Z,86nm,18.1s,baz=284,slow=31						
PPT2	Papeete2	43.63	104	eLR	LR	04 56 18.0	
	comp=Z,100nm,21.2s						
TAOE	Nuku Hiva Isla	53.20	93	eLR	LR	05 00 40.2	
	comp=Z,276nm,35.9s						
MJAR	Matsushiro Arr	53.96	332	P	P	04 45 18.1	-1.2
	1.8nm,0.9s,baz=174,slow=7.5,SNR=5.3						
RKT	Rikitea	57.53	110	eLR	LR	05 02 39.0	
	comp=Z,212nm,27.2s						
ASAJ	Asahikawa	58.77	341	P	P	04 45 52.0	-1.5
	2.5nm,0.6s,baz=231,slow=14,SNR=3.1						
ASAJ				LR	LR	05 06 48.9	
	comp=Z,65nm,20.1s,baz=109,slow=32						
KSRS	Korea Array	59.88	326	LR	LR	05 11 19.9	
	comp=Z,26nm,18.1s,baz=135,slow=36						
HHC	Hu-ho-hao-te	71.84	320	eP	P	04 47 16.7	-1.8
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,4.8s						
CMAR	Chiang Mai Arr	72.17	293	P	P	04 47 21.2	+0.4
	comp=Z,0.7nm,0.3s,baz=120,slow=4.7,SNR=5.3						
SONM	Songino Array	78.67	324	P	P	04 47 57.8	+0.1
	comp=Z,0.8nm,0.9s,baz=135,slow=4.9,SNR=5.4						
SONA1	Songino Array	78.67	324	eP	P	04 47 57.3	-0.4
BILL	Bilibino	78.82	0	eP	P	04 47 58.8	+0.9
	comp=Z,5.5nm,0.9s						
GTA	Gaotai	79.08	314	eP	P	04 48 01.4	+1.2
GTA				pP	PcP	04 48 10.1	+1.5
GTA				sP	sP	04 48 13.9	+10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
IL1	Eielson Array	83.43	18	eP	P	04 48 22.6	+0.1
ILAR	Eielson Array	83.43	18	P	P	04 48 22.6	0.0
	comp=Z,2.0nm,0.6s,baz=238,slow=5.2,SNR=47						
ILB	Eielson Array	83.43	18	eP	P	04 48 22.9	+0.3
MOD	Modoc Plateau	85.54	46	eP	P	04 48 34.8	+0.8
	comp=Z,1.7nm,0.6s						
TUC	Tucson	90.28	57	eP	P	04 48 57.9	+1.1
	comp=Z,0.8nm,0.4s						
MK01	Makanchi Array	93.53	317	eP	P	04 49 11.1	-0.4
MK31	Makanchi Array	93.54	317	eP	P	04 49 11.4	-0.1
MKAR	Makanchi Array	93.54	317	P	P	04 49 10.4	-1.1
	comp=Z,0.9nm,0.8s,baz=92,slow=7.3,SNR=8.3						
YKA	Yellowknife Ar	94.88	27	P	P	04 49 14.9	-2.3
	comp=Z,0.2nm,0.6s,baz=266,slow=4.6,SNR=6.5						
ESDC	Sonseca Array	150.02	344	PKPbc	PKPbc	04 55 45.4	-1.1
	comp=Z,0.3nm,0.7s,baz=41,slow=1.4,SNR=4.1						

IDC 10 04:42:58.0±2.9, 7°.28S×156°.79E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.7/28, mbtmp3.7/5, Error ellipse: s-maj=83.4km s-min=33.2km az=109.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.15	238	P	P	04 48 25.6	+0.5
	1.1nm,0.6s,baz=64,slow=9.2,SNR=15						
WRA				PcP	PcP	04 51 59.4	-0.2
	0.1nm,0.4s,baz=62,slow=2.6,SNR=5.7						
ASAR	Alice Springs	27.35	231	P	P	04 48 44.4	-0.7
	0.3nm,0.6s,baz=63,slow=8.6,SNR=3.9						
CMAR	Chiang Mai Arr	62.52	295	P	P	04 53 23.8	-0.3
	0.8nm,0.3s,baz=104,slow=5.7,SNR=3.1						
SONM	Songino Array	70.55	327	P	P	04 54 15.0	-0.1
	0.4nm,0.7s,baz=131,slow=6.7,SNR=4.3						
MKAR	Makanchi Array	84.80	318	P	P	04 55 34.8	+0.3
	0.2nm,0.4s,baz=103,slow=6.4,SNR=3.0						

IDC 10 04:52:51.1±2.0, 11°.85S×165°.15E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.6/35, mbtmp3.7/4, ML3.2/1, Error ellipse: s-maj=52.8km s-min=37.7km az=136.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.24	173	Pn	Pn	04 55 19.5	0.0
	0.2nm,0.3s,baz=342,slow=20,SNR=2.8						
WRA	Warramunga Arr	30.66	251	P	P	04 59 07.9	+0.2
	0.4nm,0.5s,baz=81,slow=9.2,SNR=7.6						
ASAR	Alice Springs	31.91	244	P	P	04 59 18.3	-0.4
	0.4nm,0.8s,baz=76,slow=8.5,SNR=5.1						
YKA	Yellowknife Ar	95.95	27	P	P	05 06 19.6	-0.1
	0.1nm,0.6s,baz=254,slow=4.3,SNR=3.9						

IDC 10 04:55:23.3±0.6, 29°.37N×142°.45E, h0^{km}, mb4.0/20, mb1 4.2/21, mb1mx4.1/40, mbtmp4.0/21, ML3.2/2, MS3.2/3, Ms1 3.2/3, ms1mx2.6/43, Error ellipse: s-maj=18.8km s-min=14.8km az=90.0

NEIC 10 04:55:24.9±1.9, 29°.36N×142°.43E, h10^{km}±11^{km}, mb4.2/12, Error ellipse: s-maj=5.5km s-min=3.6km az=86.0

ISCJB 10 04:55:25.2±0.3, 29°.38N±0°.03×142°.35E±0°.08, h24^{km}, mb4.0/31, MS3.4/2, Error ellipse: s-maj=10.4km s-min=4.7km az=175.3

ISC 10 04:55:27.1±0.5, 29°.40N±0°.06×142°.3E±0°.1, h24^{km}, n61, σ1^{s}33/65, mb4.1/31, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.30	182	ePn	Pn	04 56 03.1	-0.4
CBIJ				eSn	Sn	04 56 29.0	-2.1
JCJ	Chichijima	2.30	182	Pn	Pn	04 56 03.1	-0.4
	6.5nm,0.3s,baz=280,slow=23,SNR=6.4						
JCJ				Sn	Sn	04 56 29.0	-2.1
	29nm,0.3s,baz=92,slow=23,SNR=8.2						
MJAR	Matsushiro Arr	7.89	335	Pn	Pn	04 57 20.9	+0.5
	0.3nm,0.3s,baz=159,slow=10,SNR=32						
MJAR				Sn	Sn	04 58 46.9	-2.1
	baz=204,slow=32,SNR=1.9						
MAJO	Matsushiro	7.90	335	ePn	Pn	04 57 20.7	+0.3
MAJO				eSn	Sn	04 58 46.9	-2.1
MAT	Matsushiro	7.90	335	P	Pn	04 57 21.2	+0.8
MAT				eS	Sn	04 58 41.3	-7.7
MJB9	Matsu-Tunnel	7.90	335	ePn	Pn	04 57 21.1	+0.6
JNU	Nakatsue	10.43	294	LR	LR	05 01 37.5	
	comp=Z,79nm,18.9s,baz=118,slow=35						
KSRS	Korea Array	14.41	308	Pn	P	04 58 55.2	-1.0
	0.1nm,0.3s,baz=109,slow=12,SNR=4.6						
KSAR	Wonju Array Be	14.44	307	Pn	P	04 58 55.2	-1.2
KLR	Kul'dur	21.37	341	P	P	05 00 12.9	+0.3
	1.0nm,0.7s,baz=162,slow=20,SNR=5.0						
SONA0	Songino Array	33.15	314	eP	P	05 02 02.8	+1.2
SONM	Songino Array	33.15	314	P	P	05 02 02.8	+1.2
	1.5nm,0.5s,baz=103,slow=6.5,SNR=9.1						
CHTO	Chiang Mai	40.73	265	eP	P	05 03 06.8	+0.6
	2.2nm,0.6s						
CMAR	Chiang Mai Arr	40.87	265	P	P	05 03 08.2	+0.7
	0.7nm,0.3s,baz=65,slow=6.4,SNR=5.1						
ZALV	Zalesovo Beam	47.82	318	PcP	PcP	05 05 31.3	+0.2
	0.5nm,0.4s,baz=172,slow=2.2,SNR=2.4						
MK01	Makanchi Array	49.09	308	eP	P	05 04 13.0	+0.5
MK31	Makanchi Array	49.09	308	eP	P	05 04 14.0	+1.4
	1.2nm,0.8s						
MK32	Makanchi Array	49.09	308	eP	P	05 04 13.9	+1.4
MKAR	Makanchi Array	49.09	308	P	P	05 04 13.9	+1.4
	1.3nm,0.7s,baz=93,slow=8.5,SNR=14						
WRAB	Tennant Creek	49.64	190	eP	P	05 04 16.3	-0.6
	1.1nm,0.5s						
WB2	Warramunga Arr	49.65	190	eP	P	05 04 15.8	-1.1
WR1	Warramunga Arr	49.65	190	eP	P	05 04 16.5	-0.4
	7.1nm,0.9s						
WRA	Warramunga Arr	49.65	190	P	P	05 04 16.5	-0.4
	3.4nm,0.8s,baz=9.1,slow=8.0,SNR=33						
WRA				PcP	PcP	05 05 38.4	+0.2
	0.7nm,0.6s,baz=1.5,slow=3.7,SNR=5.3						
KURK	Kurchatov	51.45	313	eP	P	05 04 31.1	+0.9
KURBB	Kurchatov Arra	51.51	313	P	P	05 04 31.8	+1.2
	2.8nm,0.7s,baz=92,slow=6.3,SNR=14						
IM3	Indian Mountai	52.96	27	eP	P	05 04 40.9	-0.3
AS31	Alice Springs	53.37	190	eP	P	05 04 44.0	-0.8
	1.2nm,1.2s						
ASAR	Alice Springs	53.38	190	P	P	05 04 44.0	-0.8
ASAR	Alice Springs	53.38	190	P	P	05 04 44.0	-0.8
	0.5nm,0.6s,baz=3.9,slow=5.9,SNR=6.7						
BPAW	Bear Paw Mtn.	53.83	30	eP	P	05 04 47.1	-0.6
	17nm,1.2s						
ILAR	Eielson Array	55.66	29	P	P	05 05 00.0	-0.9
ILAR	Eielson Array	55.66	29	P	P	05 04 60.0	-0.9
	0.6nm,0.6s,baz=260,slow=6.2,SNR=12						
ILB	Eielson Array	55.66	29	eP	P	05 04 60.0	-0.9
BVAR	Borovoye Array	56.42	316	P	P	05 05 07.8	+1.3
	2.2nm,0.6s,baz=87,slow=9.1,SNR=15						
BRVK	Borovoye	56.48	316	eP	P	05 05 07.8	+0.9
KK31	Karatay Array	57.82	305	eP	P	05 05 17.4	+0.8
	2.2nm,0.8s						
KKAR	Karatay Array	57.82	305	eP	P	05 05 17.3	+0.6
	2.2nm,0.8s						
INK	Inuvik	60.91	25	eP	P	05 05 37.2	-0.3
	1.0nm,0.5s						
INK	Inuvik	60.91	25	P	P	05 05 37.4	-0.1
	0.7nm,0.5s,baz=310,slow=5.8,SNR=10						
ARU	Arti	62.66	322	eP	P	05 05 50.0	+0.5
	3.9nm,0.6s						
ABKAR	Akbulak array	63.56	314	eP	P	05 05 56.3	+0.7
	1.9nm,0.8s						
YKA	Yellowknife Ar	70.08	29	P	P	05 06 35.8	-1.0
	0.6nm,0.7s,baz=294,slow=6.2,SNR=9.9						
YKB5	Yellowknife Ar	70.08	29	eP	P	05 06 36.3	-0.6
ARA0	ARCESS Array S	71.40	341	eP	P	05 06 45.5	+0.7
ARCES	ARCESS Array B	71.40	341	P	P	05 06 45.5	+0.7
	4.3nm,1.0s,baz=51,slow=7.2,SNR=2.7						
OBN	Obninsk	74.69	325	LR	LR	05 42 27.9	
	comp=Z,9.9nm,18.5s,baz=188,slow=38						
FIA0	FINESS Array S	75.92	334	eP	P	05 07 11.9	+0.4
FINES	FINESS Array B	75.92	334	P	P	05 07 11.9	+0.4
	2.2nm,1.0s,baz=52,slow=7.5,SNR=4.3						
KBZ	Khabaz	76.50	313	P	P	05 07 15.6	+0.5
	2.6nm,0.9s,baz=140,slow=6.4,SNR=5.0						
KBZ				LR	LR	05 42 08.7	
	comp=Z,26nm,19.5s,baz=32,slow=37						
NV01	Mina Array Sit	79.04	52	eP	P	05 07 29.3	-0.3
NVAR	Mina Array Bea	79.04	52	P	P	05 07 30.1	+0.5
	1.5nm,0.7s,baz=291,slow=5.5,SNR=8.8						
FFC	Flin Flon	79.75	32	eP	P	05 07 32.9	+0.1
	1.5nm,0.7s						
AKASG	Malin Array Be	80.81	324	P	P	05 07 39.2	+0.5
	0.3nm,0.3s,baz=45,slow=2.9,SNR=2.3						
NB200	NORSAR Array S	81.50	338	eP	P	05 07 42.2	0.0
NOA	NORSAR Array B	81.50	338	P	P	05 07 42.2	0.0
	0.3nm,0.9s,baz=13,slow=4.6,SNR=3.3						
PDAR	Pinedale Array	82.52	45	P	P	05 07 47.9	-0.3
	0.3nm,0.6s,baz=286,slow=2.8,SNR=3.5						
BR101	Keskin Array S	84.50	313	eP	P	05 07 58.6	+0.3
BR131	Keskin Array S	84.50	313	eP	P	05 07 59.2	+0.9
BRTR	Keskin Array B	84.50	313	P	P	05 07 58.6	+0.3
	1.6nm,0.8s,baz=98,slow=3.2,SNR=11						
LTX	Lajitas	94.16	53	eP	P	05 08 44.9	+0.5
TXAR	Lajitas Array	94.16	53	P	P	05 08 44.9	+0.5
	0.9nm,0.8s,baz=302,slow=2.4,SNR=6.2						

IDC 10 04:59:03.5±2.5, 11°.28S×165°.04E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.6/31, mbtmp3.7/6, MS3.5/2, Ms1 3.5/2, ms1mx2.8/31, Error ellipse: s-maj=98.8km s-min=27.0km az=137.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.33	290	LR	LR	05 02 03.6	
	comp=Z,72nm,19.2s,baz=109,slow=34						
WRA	Warramunga Arr	30.75	250	P	P	05 05 20.6	-0.2
	0.5nm,0.6s,baz=80,slow=9.1,SNR=3.1						
ASAR	Alice Springs	32.07	243	P	P	05 05 32.5	+0.1
	0.7nm,0.5s,baz=63,slow=10,SNR=16						
SONM	Songino Array	78.44	324	P	P	05 11 06.7	+0.4
	0.4nm,0.8s,baz=138,slow=5.8,SNR=3.4						
ILAR	Eielson Array	83.95	19	P	P	05 11 34.7	-0.4
	0.3nm,0.7s,baz=219,slow=5.8,SNR=4.3						
MKAR	Makanchi Array	93.22	317	P	P	05 12 19.4	-0.5
	0.3nm,0.6s,baz=100,slow=6.0,SNR=4.8						
YKA	Yellowknife Ar	95.50	27	P	P	05 12 30.2	+0.3
	0.3nm,0.9s,baz=270,slow=4.9,SNR=2.8						
AAK	Ala-Archa	97.93	312	LR	LR	05 56 60.0	
	comp=Z,132nm,21.1s,baz=280,slow=36						

IDC 10 05:05:39.2±1.5, 10°.78S×165°.63E, h0^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.7/38, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=47.6km s-min=24.7km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.26	176	Pn	Pn	05 08 22.2	+0.7
	0.9nm,0.3s,baz=323,slow=12,SNR=12						
CTA	Charters Tower	20.82	241	P	P	05 10 22.6	+0.1
	3.9nm,0.8s,baz=73,slow=11,SNR=2.4						
H11S2	WAKE ISLAND Hy	29.10	2	T	T	05 42 06.3	
	baz=181,slow=76,SNR=10.0						
H11S3	WAKE ISLAND Hy	29.11	2	T	T	05 42 05.8	
	baz=181,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.12	2	T	T	05 42 06.3	
	baz=181,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.33	2	T	T	05 43 37.3	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	30.33	2	T	T	05 43 37.3	
	baz=182,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	30.34	2	T	T	05 43 38.4	
	baz=182,slow=76,SNR=9.8						
WRA	Warramunga Arr	31.47	249	P	P	05 12 02.5	-0.3
	1.0nm,1.0s,baz=82,slow=8.9,SNR=5.6						
ASAR	Alice Springs	32.81	243	P	P	05 12 14.8	+0.1
	1.7nm,0.8s,baz=66,slow=10,SNR=16						
SONM	Songino Array	78.39	324	P	P	05 17 42.4	+0.6
	0.1nm,0.5s,baz=108,slow=3.2,SNR=2.2						
ILAR	Eielson Array	83.30	19	P	P	05 18 07.8	+0.2
	0.5nm,0.7s,baz=230,slow=5.1,SNR=5.7						
MKAR	Makanchi Array	93.25	317	P	P	05 18 55.6	-0.3
	0.3nm,0.6s,baz=95,slow=6.1,SNR=3.9						
ARCES	ARCESS Array B	116.05	345	PKP	PKiKP	05 24 22.6	-1.2
	3.4nm,1.1s,baz=64,slow=2.8,SNR=6.6						

ISCJB ***10*** *05:17:12.6±0.9, 38°.53N±0°.04×141°.84E±0°.08, h52^{km}±5^{km}, mb3.1/2, Error ellipse: s-maj=11.3km s-min=5.8km az=12.2*

IDC ***10*** *05:17:12.7±5.8, 38°.60N×142°.23E, h63^{km}±27^{km}, mb3.0/2, mb1 3.2/6, mb1mx3.0/54, mbtmp3.4/6, ML2.8/4, Error ellipse: s-maj=83.8km s-min=19.9km az=116.0*

JMA ***10*** *05:17:13.4, 38°.54N×141°.82E, h50^{km}±1^{km}, M3.4*

JMA Felt I J1.

ISC 10 05:17:11.7±1.8**, 38°.53N**±0°.05×**142°.00E**±0°.08**, h32**^{km}±11^{km}**, n25, σ1^{s}.76**/32**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.48	242	P	Pn	05 17 22.9	+0.6
JIKH				S	Sn	05 17 29.6	+0.1
JKMT	Kesennumamotoy	0.50	304	P	Pn	05 17 23.4	+0.8
JKMT				S	Sn	05 17 30.1	0.0
JIO	Ouri	0.52	261	P	Pn	05 17 23.2	+0.3
JIO				S	Sb	05 17 29.9	0.0
OFUJ	Ofunato	0.60	335	P	Pn	05 17 25.1	+1.0
OFUJ				S	Sn	05 17 33.6	+0.9
JMK	Ichinoseki	0.74	305	P	Pn	05 17 26.3	+0.4
JMK				S	Sb	05 17 35.4	-0.6
JOU	Okura	1.06	261	P	Pn	05 17 29.9	-0.5
JOU				S	Sn	05 17 42.1	-2.0
JOM	Ohasama	1.09	330	P	Pb	05 17 31.5	-0.5
JMM	Marumori	1.16	235	P	Pn	05 17 31.2	-0.5
JMM				*e*S	Sn	05 17 44.3	-2.2
JYK	Kaneyama	1.34	287	P	Pn	05 17 34.1	-0.1
JYK				S	Sn	05 17 49.4	-1.5
JRG	Rokugo	1.37	309	P	Pn	05 17 34.9	+0.3
JRG				S	Sn	05 17 49.4	-2.2
JFK	Kawauchi	1.47	218	P	Pn	05 17 36.0	0.0
JFK				S	Sn	05 17 52.6	-1.5
JYS	Shirataka	1.55	259	P	Pn	05 17 36.8	-0.3
JYS				*e*S	Sn	05 17 54.6	-1.6
MJAR	Matsushiro Arr	3.61	238	P	Pn	05 18 07.0	+1.5
	0.5nm,0.3s,baz=38,slow=13,SNR=52						
MAT	Matsushiro	3.61	238	P	Pn	05 18 07.0	+1.6
MAT				*e*S	Sn	05 18 51.3	+4.3
ASAJ	Asahikawa	5.59	4	P	Pn	05 18 32.8	+0.1
	0.5nm,0.3s,baz=172,slow=14,SNR=3.3						
ASAJ				S	Sn	05 19 34.4	-1.4
	0.4nm,0.3s,baz=135,slow=19,SNR=2.1						
USRK	Ussuriysk Ar.	9.41	310	P	Pn	05 19 28.8	+3.8
	0.2nm,0.3s,baz=119,slow=14,SNR=5.4						
KSRS	Korea Array	11.16	269	P	Pn	05 19 53.2	+4.2
	0.1nm,0.3s,baz=69,slow=13,SNR=3.3						
H11N2	WAKE ISLAND Hy	28.56	124	T	T	05 53 18.8	
	baz=316,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	28.57	124	T	T	05 53 17.6	
	baz=316,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	28.57	124	T	T	05 53 18.2	
	baz=316,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	29.32	126	T	T	05 54 15.2	
	baz=318,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	29.32	126	T	T	05 54 15.4	
	baz=318,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	29.34	126	T	T	05 54 15.6	
	baz=318,slow=76,SNR=12						
ZALV	Zalesovo Beam	41.26	311	P	P	05 24 52.3	-1.3
	0.3nm,0.4s,baz=103,slow=8.8,SNR=2.5						
MKAR	Makanchi Array	43.73	301	P	P	05 25 12.1	-1.7
	0.2nm,0.7s,baz=86,slow=9.7,SNR=3.7						

IGQ ***10*** *05:19:59.7±1.1, 0°N±7°×8°3W±°, h10^{km}, mB4.9, mb4.6, MLv4.4, Mw(mB)4.2*

ISC 10 05:19:48.9±3.3**, 0°.90N**±0°.09×**83°.3W**±0°.2**, h35**^{km}**, n41, σ2^{s}.66**/43**, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	3.21	127	P	Pn	05 20 37.0	+0.2
MAG1	Magdalena	3.64	105	P	Pn	05 20 44.4	+1.7
SALI	Salinas	3.83	143	P	Pn	05 20 45.6	+0.3
MORR	Playas El Morr	4.58	140	P	Pn	05 20 56.8	+1.0
YANA	Yana	4.82	102	P	Pn	05 21 00.9	+1.5
NINA	Atacazo Ninahu	4.84	105	P	Pn	05 21 00.9	+1.2
NINA				S	Sn	05 21 49.8	-4.9
MILO	Milagro-Astudi	4.88	130	P	Pn	05 20 59.9	0.0
MILO				S	Sn	05 21 54.3	-0.9
PAST	Pastocalle	4.90	109	P	Pn	05 21 01.7	+1.2
CUIC	Cuicocha-Domo	4.96	97	P	Pn	05 21 02.7	+1.4
CUIC				S	Sn	05 21 55.6	-2.0
URCU	Urcuqui	5.05	95	P	Pn	05 21 04.5	+2.1
BNAS	Cotopaxi Volca	5.05	108	P	Pn	05 21 05.4	+2.9
NAS2	Nasa	5.05	108	P	Pn	05 21 05.3	+2.6
PITA	Cotopaxi Volc	5.06	107	P	Pn	05 21 05.3	+2.6
BREF	Cotopaxi Volca	5.09	108	P	Pn	05 21 06.1	+2.9
BMOR	Cotopaxi Volca	5.09	109	P	Pn	05 21 05.7	+2.5
BVC2	Cotopaxi Volca	5.11	108	P	Pn	05 21 06.1	+2.7
BTAM	Cotopaxi Volca	5.13	108	P	Pn	05 21 06.6	+2.9
ANTG	Antisana-Guama	5.22	105	P	Pn	05 21 07.5	+2.6
COHC	Cochancay	5.23	130	P	Pn	05 21 05.4	+0.8
YAHU	Yahuarcocha	5.24	96	P	Pn	05 21 07.5	+2.5
ANTM	Antisana-La Mi	5.26	106	P	Pn	05 21 08.3	+2.8
PISA	Pisayambo	5.27	112	P	Pn	05 21 10.1	+4.4
ANTI	Antisana	5.29	105	P	Pn	05 21 09.3	+3.3
ANTS	Antisana-Sarah	5.30	105	P	Pn	05 21 09.2	+3.1
BIL2	Estacion Bilba	5.32	116	P	Pn	05 21 10.3	+4.1
POND	Pondoa	5.35	115	P	Pn	05 21 10.1	+3.4
BMAS	Trigal station	5.36	116	P	Pn	05 21 10.1	+3.3
ARRY	Arrayan	5.38	116	P	Pn	05 21 10.4	+3.3
BRUN	Tungurahua Vol	5.39	115	P	Pn	05 21 09.7	+2.6
BPAT	Tungurahua Vol	5.40	116	P	Pn	05 21 10.4	+3.0
TULM	Tulcn-Chalpat	5.50	92	P	Pn	05 21 13.2	+4.5
ARDO	Archidona, Ten	5.79	109	P	Pn	05 21 17.5	+5.0
GCUF	Volcan Galeras	5.95	87	*e*P	Pn	05 21 19.1	+4.2
GCUF	Volcan Galeras	5.95	87	*e*P	Pn	05 21 19.1	+4.2
MCRA	Macar, Loja	6.20	148	P	Pn	05 21 19.0	+1.0
CRUC	La Cruz	6.36	84	*e*P	Pn	05 21 19.8	-0.8
CRUC	La Cruz	6.36	84	*e*P	Pn	05 21 19.8	-0.8
MALC	Bahia Malaga	6.70	62	*e*P	Pn	05 21 25.1	+0.2
MALC	Bahia Malaga	6.70	62	*e*P	Pn	05 21 25.1	+0.2
SOTA	Rioblanco	6.78	79	*e*P	Pn	05 21 27.1	+0.6
SOTA	Rioblanco	6.78	79	*e*P	Pn	05 21 27.1	+0.6

ISCJB ***10*** *05:27:07.8±0.3, 11°.14N±0°.01×62°.14W±0°.02, h79^{km}±2^{km}, mb4.9/239, Error ellipse: s-maj=2.6km s-min=2.5km az=23.8*

TRN ***10*** *05:27:08.8, 11°.06N×61°.96W, h68^{km}, MD5.0*

TRN Felt widely throughout Trinidad MMI II, IIIIV, V ; Grenada MMI II, III, IV; Saint Lucia MMI II.

MOS ***10*** *05:27:09.6±1.0, 11°.17N×62°.19W, h95^{km}, mb5.2/44, Error ellipse: s-maj=6.8km s-min=5.2km az=92.4*

NEIC ***10*** *05:27:09.3±0.3, 11°.10N×62°.05W, h82^{km}±2^{km}, mb5.1/170, MD4.9(TRN), Mw4.8(CAR), MW4.8(CAR), Error ellipse: s-maj=3.6km s-min=2.9km az=45.0*

NEIC Felt at Maturin. Felt [IV] at Chaguanas and Mucurapo; [III] at Port of Spain, Saint Joseph, San Juan and Tunapuna, Trinidad and Tobago. Also felt at Arima, Arouca, Crown Point, Debe and Glencoe. Felt [III] at St. George's and [II] at Saint Davids, Grenada. Also felt at Grenville and Mount Moritz Land Settlement.

IDC ***10*** *05:27:10.9±1.1, 11°.22N×62°.17W, h96^{km}±9^{km}, mb4.5/34, mb1 4.6/37, mb1mx4.6/47, mbtmp4.9/37, MS3.9/24, Ms1 3.9/24, ms1mx3.7/38, Error ellipse: s-maj=10.0km s-min=8.0km az=112.0*

GCMT ***10*** *05:27:12.3±0.2, 11°.13N±0°.01×61°.91W±0°.02, h80^{km}±3^{km}, MW5.0/108, Moment Tensor Solution. s40,c51; s108,c174; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.37±.17; M$_{\theta\theta}$-0.86±.16; M$_{\phi\phi}$1.24±.15; M$_{r\theta}$3.48±.07; M$_{\theta\phi}$2.17±.15; M$_{\phi r}$0.97±.09; Best double couple: M$_0$4.35400×10^{16} NP1:φ$_s$254.00000°, δ87.00000°, λ-57.00000°. NP2:φ$_s$349.00000°, δ34.00000°, λ-175.00000°. Principal axes: T 4.4220, Plg34.0000°, Azm316.0000°; N -0.1350, Plg33.0000°, Azm72.0000°; P -4.2860, Plg39.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 05:27:08.7±0.3**, 11°.11N**±0°.03×**62°.08W**±0°.03**, h79**^{km}±2^{km}**, h79**^{km}**:pP-P, n1089, σ1^{s}.40**/1238**, mb5.0**/243**, 26C-24D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.80	125	*i* P	Pn	05 27 23.5	-1.9
TRN	Trinidad (W)	0.80	125	⇑*i*P	Pn	05 27 23.5	-1.9
TRN	Trinidad (W)	0.80	125	*i* P	Pn	05 27 23.5	-1.9
TPP	Pointe-a-Pierr	1.00	142	*i* P	Pn	05 27 26.4	-1.3
TPP	Pointe-a-Pierr	1.00	142	⇑*i*P	Pn	05 27 26.4	-1.3
TPP	Pointe-a-Pierr	1.00	142	*i* P	Pn	05 27 26.4	-1.3
GRGR	Grenville	1.10	22	*e*Pn	Pn	05 27 28.0	-1.0
GRGR				*e*Sn	Sn	05 27 43.0	-1.1
TBH	Brigand Hill	1.17	122	*i* P	Pn	05 27 27.8	-2.0
TBH	Brigand Hill	1.17	122	⇑*i*P	Pn	05 27 27.8	-2.0
TBH	Brigand Hill	1.17	122	*i* P	Pn	05 27 27.8	-2.0
GRHS	Sauteurs	1.19	21	*e*P	Pn	05 27 30.0	-0.1
GRHS				*e*S	Sn	05 27 45.3	-0.7
GRHS	Sauteurs	1.19	21	*e*P	Pn	05 27 30.0	-0.1
GRHS				*e*S	Sn	05 27 45.3	-0.7
GRSS	Sisters	1.27	21	*e*P	Pn	05 27 31.3	+0.3
GRSS	Sisters	1.27	21	*e*P	Pn	05 27 31.3	+0.3
TPR	Prospect	1.28	86	*e*P	Pn	05 27 29.2	-2.0
TPR	Prospect	1.28	86	*e*P	Pn	05 27 29.2	-2.0
TOSP	Speyside	1.52	83	*e*P	Pn	05 27 33.7	-0.6
TOSP				*e*S	Sn	05 27 50.8	-2.9
TOSP	Speyside	1.52	83	*e*	Pn	05 27 32.0	-2.3
TOSP	Speyside	1.52	83	*e*P	Pn	05 27 33.7	-0.6
TOSP				*e*S	Sn	05 27 50.8	-2.9
FCV	Fort Charlotte	2.19	22	*e*P	Pn	05 27 43.8	+0.6
FCV	Fort Charlotte	2.19	22	*e*P	Pn	05 27 43.8	+0.6
SVB	Belmont	2.30	20	*e*Pn	Pn	05 27 44.6	0.0
SVB				*e*Sn	Sn	05 28 12.8	+0.7
SVB	Belmont	2.30	20	*e*P	Pn	05 27 44.3	-0.4
SVB				*e*S	Sn	05 28 11.5	-0.6
SVCV	St. Vincent, C	2.34	23	*e*P	Pn	05 27 44.5	-0.7
SVCV				*e*S	Sn	05 28 11.4	-1.6
SVV	Soufriere Volc	2.35	21	*e*P	Pn	05 27 46.2	+0.8
SVV	Soufriere Volc	2.35	21	*e*P	Pn	05 27 46.2	+0.8
SSV	Crater Summit	2.37	21	*e*P	Pn	05 27 46.3	+0.6
SSV	Crater Summit	2.37	21	*e*P	Pn	05 27 46.3	+0.6
SFAN	Fancy Village	2.43	21	*e*P	Pn	05 27 46.8	+0.4
SFAN	Fancy Village	2.43	21	*e*P	Pn	05 27 46.8	+0.4
MCLT	Moule a Chique	2.81	23	*e*P	Pn	05 27 51.2	-0.4
MCLT				*e*S	Sn	05 28 23.5	-1.1
MCLT	Moule a Chique	2.81	23	*e*P	Pn	05 27 51.2	-0.4
MCLT				*e*S	Sn	05 28 23.5	-1.1
SLDE	Delcer	2.86	20	*e*P	Pn	05 27 51.9	-0.3
SLDE				*e*S	Sn	05 28 25.6	0.0
SLDE	Delcer	2.86	20	*e*P	Pn	05 27 51.9	-0.3
SLDE				*e*S	Sn	05 28 25.6	0.0
SLB	Belfond	2.89	20	*e*P	Pn	05 27 53.2	+0.6
SLB				*e*S	Sn	05 28 24.6	-1.8
SLB	Belfond	2.89	20	*e*P	Pn	05 27 53.2	+0.6
SLB				*e*S	Sn	05 28 24.6	-1.8
SLPA	Patience	2.95	22	*e*P	Pn	05 27 53.0	-0.5
SLPA				*e*S	Sn	05 28 27.2	-0.7
SLPA	Patience	2.95	22	*e*P	Pn	05 27 53.0	-0.5
SLPA				*e*S	Sn	05 28 27.2	-0.7
SLW	Petit Monier	3.10	21	*e*P	Pn	05 27 55.6	+0.1
SLW				*e*S	Sn	05 28 30.1	-1.5
SLW	Petit Monier	3.10	21	*e*P	Pn	05 27 55.6	+0.1
SLW				*e*S	Sn	05 28 30.1	-1.5
BBGH	Gun Hill	3.19	50	*e*Pn	Pn	05 27 57.8	+1.2
BBGH				*e*S	Sn	05 28 30.7	-2.9
BBGH	Gun Hill	3.19	50	*e*P	Pn	05 27 56.5	-0.1
BBGH				*e*S	Sn	05 28 30.7	-2.9
BBSP	Saint Philip	3.24	52	*e*P	Pn	05 27 57.8	+0.5
BBSP				*e*S	Sn	05 28 32.1	-2.7
BBSP	Saint Philip	3.24	52	*e*P	Pn	05 27 57.8	+0.5
BBSP				*e*S	Sn	05 28 32.1	-2.7
H05S1	Guadeloupe/Mar	3.51	20	P	Pn	05 28 01.1	+0.1
H05S1				S	Sn	05 28 40.0	-1.5
	SNR=8572						
BIM	Bigot	3.53	16	⇓*e*P	Pn	05 28 01.1	-0.2
TRMF	Trois Ilets	3.55	16	*e*P	Pn	05 28 01.5	-0.1
ZAM	Aeronautique	3.59	16	*e*P	Pn	05 28 02.1	0.0
LPMF	Morne Lapointe	3.61	17	*e*P	Pn	05 28 02.5	+0.1
FDF	Fort de France	3.72	14	*e*Pn	Pn	05 28 03.6	-0.3
FDF				*e*Sn	Sn	05 28 43.3	-3.2
FDF	Fort de France	3.72	14	*e*P	Pn	05 28 03.9	0.0
FDF				*e*S	Sn	05 28 45.6	-0.9
FDF	Fort de France	3.72	14	*e*P	Pn	05 28 03.6	-0.3
FDF				*e*		05 28 43.3	
PML	Morne Lenard	3.75	13	*e*P	Pn	05 28 04.4	0.0
GBMF	Grand Be	3.77	13	*e*P	Pn	05 28 04.6	-0.1
PCM	Pelee Case Pet	3.78	13	*e*P	Pn	05 28 04.7	-0.1
PCM	Pelee Case Pet	3.78	13	*e*P	Pn	05 28 04.7	-0.1
CXM	Morne La Croix	3.79	13	*e*P	Pn	05 28 04.9	0.0
BAMF	Morne Balai	3.80	14	*e*P	Pn	05 28 05.0	0.0
ILAM	Ilet Lapin Mar	3.83	18	*e*P	Pn	05 28 05.4	0.0
DBCT	Belle View Cho	4.20	10	*e*P	Pn	05 28 12.0	+1.5
DBCT				*e*S	Sn	05 28 56.9	-1.5
DBCT	Belle View Cho	4.20	10	*e*P	Pn	05 28 12.0	+1.5
DBCT				*e*S	Sn	05 28 56.9	-1.5
MDN	Morne-Daniel	4.24	9	*e*P	Pn	05 28 12.5	+1.5
MDN				*e*S	Sn	05 28 57.9	-1.3
MDN	Morne-Daniel	4.24	9	*e*P	Pn	05 28 12.5	+1.5
DLPL	La Plaine	4.28	11	*e*P	Pn	05 28 12.0	+0.5
DLPL				*e*S	Sn	05 28 59.5	-0.7
DLPL	La Plaine	4.28	11	*e*P	Pn	05 28 12.0	+0.5
DLPL	La Plaine	4.28	11	*e*S	Sn	05 28 58.8	-1.5
BBL	Barber's Block	4.43	8	*e*P	Pn	05 28 13.7	+0.1
BBL				*e*S	Sn	05 29 02.8	-1.2
BBL	Barber's Block	4.43	8	*e*P	Pn	05 28 13.7	+0.1
MDPO	Dominica; Chan	4.48	8	*e*P	Pn	05 28 15.9	+1.7
MDPO	Dominica; Chan	4.48	8	*e*S	Sn	05 29 03.9	-1.3
DWS	Wesley	4.50	9	*e*P	Pn	05 28 15.2	+0.7
DWS				*e*S	Sn	05 29 04.5	-1.0
DWS	Wesley	4.50	9	*e*P	Pn	05 28 15.2	+0.7
MDPV	Dominica, Penn	4.54	8	*e*P	Pn	05 28 15.8	+0.7
MDPV	Dominica, Penn	4.54	8	*e*S	Sn	05 29 05.8	-0.8
TDBA	Terre de Bas,	4.73	5	*e*P	Pn	05 28 19.3	+1.6
TBG	Guadaloupe-3	4.74	5	*e*P	Pn	05 28 19.5	+1.7
TBG	Guadaloupe-3	4.74	5	*e*S	Sn	05 29 09.4	-2.0
MGG	Marie-Galante	4.84	9	*e*P	Pn	05 28 20.7	+1.6
MGG	Marie-Galante	4.84	9	*e*P	Pn	05 28 20.7	+1.6
MGG	Marie-Galante	4.84	9	*e*	Pn	05 28 33.0	+14
MAGL	Barre de l'ile	4.88	9	*e*P	Pn	05 28 20.8	+1.1
CBE	Ff, Capester	4.95	5	*e*P	Pn	05 28 21.6	+0.9
H05N1	Guadeloupe/Mar	5.27	11	P	Pn	05 28 26.0	+0.9
	SNR=1413						
H05N1				S	Sn	05 29 20.6	-3.9
MLYT	Lee's Yard	5.58	359	*e*P	Pn	05 28 30.5	+1.2
MLYT	Lee's Yard	5.58	359	*e*S	Sn	05 29 30.6	-1.6
BPA	Boggy Peak	5.91	2	*e*P	Pn	05 28 35.8	+2.1
BPA	Boggy Peak	5.91	2	*e*S	Sn	05 29 38.1	-2.0
NEV	Hard Times	6.01	355	*e*P	Pn	05 28 36.9	+1.7
NEV	Hard Times	6.01	355	*e*S	Sn	05 29 40.3	-2.4
SEUS	St. Eustatius	6.41	352	*e*Pn	Pn	05 28 42.3	+1.8
SEUS				*e*S	Sn	05 29 50.1	-2.2
SEUS	St. Eustatius	6.41	352	*e*P	Pn	05 28 42.3	+1.8
ANWB	Willy Bob	6.53	2	*e*Pn	Pn	05 28 43.6	+1.4
ANWB				*e*S	Sn	05 29 52.2	-3.0
ANWB	Willy Bob	6.53	2	*e*P	Pn	05 28 43.8	+1.6
SMRT	St. Maarten	6.97	352	*e*Pn	Pn	05 28 50.1	+1.8
SMRT				*e*S	Sn	05 30 03.6	-2.5
SMRT	St. Maarten	6.97	352	*e*P	Pn	05 28 49.7	+1.4
CDVI	St. Croix	7.10	339	*e*Pn	Pn	05 28 50.7	+0.7
MTP	Monte Pirata	7.72	335	*e*Pn	Pn	05 28 59.5	+1.0
STVI	Saint Thomas	7.72	339	*e*Pn	Pn	05 28 59.5	+1.0
STVI				*e*Sn	Sn	05 30 20.1	-4.3
CUPR	Culebra, Puert	7.80	337	*e*Pn	Pn	05 29 01.0	+1.4
ABVI	Anegada Island	7.89	344	*e*Pn	Pn	05 29 02.5	+1.8
HUMP	Col San Antoni	7.89	333	*e*Pn	Pn	05 29 01.8	+1.0
HUMP				*e*Sn	Sn	05 30 23.1	-5.4
ICMP	Isla Caja de M	8.00	328	*e*Pn	Pn	05 29 04.0	+1.7
SJG	San Juan	8.00	331	*e*Pn	Pn	05 29 03.5	+1.2
SJG				*e*Sn	Sn	05 30 25.7	-5.6
SJG	San Juan	8.00	331	*e*P	Pn	05 29 03.5	+1.2
SJG	San Juan	8.00	331	*e*P	Pn	05 29 03.5	+1.2
SJG				*e*		05 30 25.7	
SJG	San Juan	8.00	331	*e*P	Pn	05 29 03.5	+1.2
SJG	San Juan	8.00	331	P	Pn	05 29 03.0	+0.7
	24nm,0.3s,baz=152,slow=16,SNR=55						
SJG				S	Sn	05 30 25.4	-5.8
	98nm,0.3s,baz=78,slow=20,SNR=19						
SJG				LR	LR	05 32 16.7	
	comp=Z,720nm,21.5s,baz=170,slow=39						
CBYP	Canovanas	8.01	333	*e*Pn	Pn	05 29 03.7	+1.2
CBYP				*e*Sn	Sn	05 30 27.2	-4.3
OBIP	Obispado Ponce	8.17	328	*e*Pn	Pn	05 29 05.7	+1.1
EMPR	Esperanza - Ma	8.50	330	*e*Pn	Pn	05 29 12.0	+2.9
EMPR				*e*Sn	Sn	05 30 42.0	-1.4
MPR	Mayaguez	8.60	326	*e*Pn	Pn	05 29 12.3	+1.9
SDV	Santo Domingo	8.71	256	*e*Pn	Pn	05 29 12.9	+0.6
SDV				*e*Sn	Sn	05 30 49.0	0.0
SDV	Santo Domingo	8.71	256	*e*P	Pn	05 29 13.1	+0.9
SDV	Santo Domingo	8.71	256	*e*P	Pn	05 29 13.1	+0.9
SDV	Santo Domingo	8.71	256	P	Pn	05 29 12.6	+0.4
	7.1nm,0.3s,baz=120,slow=3.6,SNR=103						
SDV				S	Sn	05 30 46.9	-2.1
	50nm,0.3s,baz=42,slow=19,SNR=13						
SDV				LR	LR	05 33 23.9	
	comp=Z,543nm,18.7s,baz=78,slow=43						
AGP	Aguadilla	8.76	327	*e*Pn	Pn	05 29 15.6	+3.0
SDD	Santo Domingo	10.53	315	*e*Pn	Pn	05 29 40.5	+3.7
BANI	BANI	10.80	313	*e*Pn	Pn	05 29 44.8	+4.2
MDP	Montagnes des	11.08	122	P	Pn	05 29 36.7	-7.7
	5.5nm,0.3s,baz=319,slow=15,SNR=73						
MDP				S	Sn	05 31 28.5	-18
	397nm,0.3s,baz=44,slow=14,SNR=31						
PAMC	Pamplona, Colo	11.13	251	*e*P	Pn	05 29 44.0	-1.5
PAMC	Pamplona, Colo	11.13	251	*e*P	Pn	05 29 44.0	-1.5
CODC	Agustn Codazz	11.24	265	*e*P	Pn	05 29 51.6	+5.0
CODC	Agustn Codazz	11.24	265	*e*P	Pn	05 29 51.6	+5.0
OCAC	Ocana	11.45	257	*e*P	Pn	05 29 52.3	+2.8
OCAC	Ocana	11.45	257	*e*P	Pn	05 29 52.3	+2.8
SDDR	Presa de Saban	11.85	312	*e*Pn	Pn	05 29 58.9	+4.0
SDDR				*e*Sn	Sn	05 32 03.9	-1.4
BARC	Barichara	11.86	249	*e*P	Pn	05 29 55.7	+0.6
BARC	Barichara	11.86	249	*e*P	Pn	05 29 55.7	+0.6
PTGA	Pitinga	11.95	170	P	Pn	05 29 53.6	-2.5
	70nm,0.3s,baz=1.4,slow=14,SNR=898						
PTGA				S	Sn	05 31 56.2	-11
	48nm,0.3s,baz=74,slow=23,SNR=17						
SMLC	San Martn de	12.04	260	*e*P	Pn	05 29 56.4	-1.0
SMLC	San Martn de	12.04	260	*e*P	Pn	05 29 56.4	-1.0
RUSC	La Rusia	12.05	245	*e*P	Pn	05 29 55.7	-2.4
RUSC	La Rusia	12.05	245	*e*P	Pn	05 29 55.7	-2.4
BRRC	Barranca, Sant	12.16	252	*e*P	Pn	05 29 59.8	+0.8
BRRC	Barranca, Sant	12.16	252	*e*P	Pn	05 29 59.8	+0.8
ZARC	Zaragoza, Cauc	13.12	255	*e*P	Pn	05 30 08.1	-3.9
ZARC	Zaragoza, Cauc	13.12	255	*e*P	Pn	05 30 08.1	-3.9
VILC	Villavicencio,	13.45	240	*e*P	Pn	05 30 16.3	-0.2
VILC	Villavicencio,	13.45	240	*e*P	Pn	05 30 16.3	-0.2
GRTK	Grand Turk	13.51	321	*e*Pn	Pn	05 30 18.1	+1.0
ROSC	El Rosal	13.63	244	*e*Pn	Pn	05 30 20.6	+1.5
ROSC				S	Sn	05 32 48.0	-1.1
ROSC	El Rosal	13.63	244	*e*P	Pn	05 30 20.4	+1.3
ROSC	El Rosal	13.63	244	*e*P	Pn	05 30 20.4	+1.3
ROSC	El Rosal	13.63	244	P	Pn	05 30 19.9	+0.9
	5.3nm,0.3s,baz=110,slow=8.4,SNR=30						
ROSC				S	Sn	05 32 48.0	-1.1
	1.9nm,0.3s,baz=171,slow=19,SNR=2.0						
ROSC				LR	LR	05 37 07.0	
	comp=Z,344nm,19.2s,baz=48,slow=44						
UREC	San Jos de Ur	13.69	257	*e*P	Pn	05 30 18.4	-1.2
UREC	San Jos de Ur	13.69	257	*e*P	Pn	05 30 18.4	-1.2
SJAC	San Juan de Ar	14.11	237	*e*P	Pn	05 30 25.9	+0.7
SJAC	San Juan de Ar	14.11	237	*e*P	Pn	05 30 25.9	+0.7
HELC	Santa Helena	14.17	251	*e*P	Pn	05 30 23.9	-2.3
HELC	Santa Helena	14.17	251	*e*P	Pn	05 30 23.9	-2.3
GTBY	Guantanamo Bay	15.31	307	*e*P	P	05 30 44.5	+1.0
	89nm,0.8s						
MTDJ	Mount Denham	16.54	297	*e*Pn	P	05 30 58.9	+1.6
	166nm,1.4s						
BCIP	Isla Barro Col	17.59	265	*e*P	P	05 31 11.3	+2.5
	40nm,0.8s						
OTAV	Otavalo	19.53	238	*e*P	P	05 31 31.9	+1.4
	40nm,1.2s						
OTAV				*e*S	S	05 35 04.0	-3.4
OTAV	Otavalo	19.53	238	*e*P	P	05 31 31.9	+1.4
OTAV				*e*S	S	05 35 04.0	-3.4
OTAV				pmax	pmax		
	comp=Z,40nm,1.2s						
FSCY	Frank Sound, G	20.15	296	*e*P	P	05 31 38.9	+2.2
	comp=Z,392nm,0.8s						
WBCY	West Bay, Gran	20.36	296	*e*P	P	05 31 42.0	+3.0
	comp=Z,650nm,0.8s						
ESPN	Las Esperanzas	21.79	275	*e*P	P	05 31 56.8	+2.3
	comp=Z,50nm,0.9s						
JTS	JuntasAbangare	22.49	270	*e*P	P	05 32 03.0	+1.0
	comp=Z,14nm,0.8s						
JTS	JuntasAbangare	22.49	270	*e*P	P	05 32 03.0	+1.0
JTS				pmax	pmax		
	comp=Z,14nm,0.8s						
JTS	JuntasAbangare	22.49	270	P	P	05 32 03.0	+1.0
	comp=Z,4.3nm,0.7s,baz=133,slow=18,SNR=3.7						
062Z	Marathon	22.53	309	P	P	05 32 01.3	-1.0
	baz=124						
061Z	Ochoppi	23.07	312	P	P	05 32 07.5	-0.2
	baz=126						
060Z	West Palm Beac	23.14	314	P	P	05 32 08.6	+0.2
	baz=128						
060A	Indiantown	23.40	315	P	P	05 32 11.0	+0.2
	baz=129						
059Z	Ave Maria	23.74	312	P	P	05 32 14.2	+0.3
	baz=126						
059A	Moore Haven	23.90	314	P	P	05 32 15.8	+0.5
	baz=128						
959A	Okeechobee	24.06	315	P	P	05 32 17.6	+0.9
	baz=129						
ATAH	Atahualpa	24.34	223	P	P	05 32 22.0	+2.2
	comp=Z,90nm,0.8s,baz=36,slow=5.2,SNR=76						
ATAH				S	S	05 36 37.7	+3.7
	comp=Z,6.0nm,0.7s,baz=41,slow=11,SNR=4.2						
859A	Kempfer Cattle	24.41	316	P	P	05 32 20.8	+0.9
	baz=130						
058A	Arcadia	24.42	313	P	P	05 32 20.0	0.0
	baz=127						
958A	Wauchula	24.71	314	P	P	05 32 22.4	-0.3
	baz=128						
DWPF	Disney Wildern	24.81	316	*e*P	P	05 32 25.3	+1.8
	comp=Z,96nm,0.9s						
DWPF	Disney Wildern	24.81	316	P	P	05 32 23.8	+0.2
	baz=129						
858A	St. Cloud	24.82	316	P	P	05 32 24.1	+0.4
	baz=130						
957A	Wimauma	25.10	314	P	P	05 32 27.2	+1.0
	baz=127						
758A	Lake Helen	25.20	318	P	P	05 32 28.0	+0.9
	baz=131						
857A	Zephyrhills	25.45	315	P	P	05 32 29.0	-0.4
	baz=128						
658A	Bunnell	25.54	318	P	P	05 32 30.9	+0.7
	baz=132						
757A	Oxford	25.77	316	P	P	05 32 32.2	0.0
	baz=130						
657A	Interlachen	26.05	318	P	P	05 32 35.3	+0.6
	baz=131						
557A	Orange Park	26.24	319	P	P	05 32 36.7	+0.2
	baz=132						
656A	Willston	26.35	317	P	P	05 32 38.2	+0.7
	baz=130						
556A	Lake Butler	26.67	318	P	P	05 32 41.3	+0.9
	baz=131						

TEIG	Tepich	26.77	293	*e*P	P	05 32 43.2	+1.8
	comp=Z,30nm,1.4s						
456A	Hilliard	26.90	320	*e*P	P	05 32 43.8	+1.3
	comp=Z,123nm,1.4s						
456A	Hilliard	26.90	320	P	P	05 32 43.6	+1.2
	baz=132						
655A	Horseshoe Beac	26.93	316	P	P	05 32 42.1	-0.6
	baz=129						
NNA	Nana	27.23	213	*e*P	P	05 32 48.1	+2.5
	comp=Z,68nm,0.8s						
NNA	Nana	27.23	213	*i* P	P	05 32 47.6	+2.0
NNA	Nana	27.23	213	P	P	05 32 47.7	+2.1
	comp=Z,52nm,0.8s,baz=12,slow=7.1,SNR=45						
356A	Blackshear	27.37	320	P	P	05 32 46.2	-0.4
	baz=133						
NHSC	New Hope	27.49	326	*e*P	P	05 32 48.8	+1.1
NHSC				*e*pP	pP	05 33 08.0	+2.1
NHSC	New Hope	27.49	326	P	P	05 32 48.5	+0.8
	baz=139,SNR=7.2						
455A	Stateville	27.56	318	P	P	05 32 48.5	+0.1
	baz=131						
554A	Perry	27.58	316	P	P	05 32 48.3	-0.2
	baz=129						
256A	Glennville	27.67	322	P	P	05 32 49.5	+0.2
	baz=134						
355A	Pearson	27.84	319	P	P	05 32 50.6	-0.2
	baz=132						
LPAZ	La Paz	27.87	193	*e*P	P	05 32 54.1	+2.3
	comp=Z,41nm,0.9s						
LPAZ	La Paz	27.87	193	*e*P	P	05 32 54.2	+2.3
LPAZ				pmax	pmax		
	comp=Z,41nm,0.9s						
LPAZ	La Paz	27.87	193	P	P	05 32 53.9	+2.0
	comp=Z,30nm,0.8s,baz=1.5,slow=8.8,SNR=91						
LPAZ				LR	LR	05 44 53.4	
	comp=Z,766nm,21.4s,baz=13,slow=38						
156A	Sylvania	27.91	323	P	P	05 32 51.5	0.0
	baz=136						
APG	El Apazote	27.91	281	P	P	05 32 52.2	+0.2
	comp=Z,14nm,1.1s,baz=126,slow=4.6,SNR=7.0						
454A	Quitman	27.94	318	P	P	05 32 51.7	0.0
	baz=130						
255A	Hazlehurst	28.00	321	*e*P	P	05 32 53.3	+1.1
255A				*e*pP	sP	05 33 15.3	-4.4
255A	Hazlehurst	28.00	321	P	P	05 32 52.6	+0.4
	baz=133						
TIGA	Tifton	28.38	319	P	P	05 32 55.6	0.0
	baz=131						
155A	Kite	28.47	322	P	P	05 32 57.0	+0.5
	baz=134						
254A	Abbeville	28.52	320	P	P	05 32 57.7	+0.8
	baz=132,SNR=5.5						
353A	Camilla	28.73	318	P	P	05 32 58.8	0.0
	baz=130						
154A	Montrose	28.86	321	P	P	05 32 59.3	-0.5
	baz=133						
JSC	Jenkinsville	28.97	326	*e*P	P	05 33 01.9	+1.1
	comp=Z,43nm,1.4s						
JSC	Jenkinsville	28.97	326	*e*P	P	05 33 01.9	+1.1
JSC				pmax	pmax		
	comp=Z,43nm,1.4s						
X56A	White Oak	29.00	326	P	P	05 33 01.5	+0.4
	baz=139						
452A	Marianna	29.07	316	P	P	05 33 02.4	+0.7
	baz=128						
Z54A	Sparta	29.12	322	P	P	05 33 02.4	+0.2
	baz=134						
253A	Americus	29.13	319	*e*P	P	05 33 03.8	+1.5
	comp=Z,157nm,1.5s						
253A	Americus	29.13	319	P	P	05 33 01.7	-0.7
	baz=131						
352A	Blakely	29.28	317	*e*P	P	05 33 05.1	+1.5
	comp=Z,61nm,1.0s						
352A	Blakely	29.28	317	P	P	05 33 04.2	+0.6
	baz=129						
X55A	Gracelyn & Ava	29.31	326	P	P	05 33 04.6	+0.7
	baz=138						
451A	Vernon	29.31	315	*e*P	P	05 33 05.7	+1.7
	comp=Z,46nm,0.8s						
451A	Vernon	29.31	315	P	P	05 33 04.9	+1.0
	baz=126						
153A	Fort Valley	29.33	320	P	P	05 33 04.9	+0.8
	baz=132						
Y54A	Tignall	29.47	323	P	P	05 33 06.2	+0.9
	baz=136						
252A	Lumpkin	29.48	318	P	P	05 33 06.2	+0.7
	baz=130,SNR=5.1						
Z53A	Monticello	29.59	322	P	P	05 33 07.1	+0.7
	baz=133,SNR=5.9						
351A	Pinckard	29.61	316	P	P	05 33 07.6	+1.0
	baz=128,SNR=7.1						
GOGA	Godfrey	29.62	322	*e*P	P	05 33 07.8	+1.2
	comp=Z,33nm,0.9s						
GOGA	Godfrey	29.62	322	*e*P	P	05 33 07.9	+1.2
GOGA				pmax	pmax		
	comp=Z,33nm,0.9s						
GOGA	Godfrey	29.62	322	P	P	05 33 07.5	+0.9
	baz=134						
CCIG	Comitan	29.64	283	*e*P	P	05 33 08.6	+1.4
	comp=Z,26nm,0.8s						
KMSC	Kings Mountain	29.65	327	*e*P	P	05 33 08.1	+1.2
	comp=Z,26nm,0.9s						
KMSC	Kings Mountain	29.65	327	P	P	05 33 07.6	+0.7
	baz=139,SNR=5.2						
152A	Waverly Hall	29.90	319	*e*P	P	05 33 10.7	+1.5
	comp=Z,30nm,0.8s						
152A	Waverly Hall	29.90	319	P	P	05 33 10.2	+1.1
	baz=131,SNR=8.6						
251A	Midway	29.98	318	P	P	05 33 10.5	+0.6
	baz=129,SNR=5.7						
Y53A	Monroe	30.00	322	P	P	05 33 10.5	+0.5
	baz=134						
BDFB	Brasilia	30.00	152	*e*P	P	05 33 11.7	+1.4
	comp=Z,36nm,0.7s						
BDFB	Brasilia	30.00	152	*e*P	P	05 33 11.7	+1.4
BDFB				pmax	pmax		
	comp=Z,36nm,0.7s						
BDFB	Brasilia	30.00	152	P	P	05 33 11.7	+1.4
	comp=Z,31nm,0.7s,baz=320,slow=10,SNR=60						
BDFB				LR	LR	05 45 14.0	
	comp=Z,805nm,20.7s,baz=298,slow=36						
450A	Crestview	30.01	314	P	P	05 33 10.7	+0.6
	baz=126						
Z52A	Williamson	30.06	320	P	P	05 33 11.1	+0.6
	baz=132						
350A	Dozier	30.20	316	P	P	05 33 12.2	+0.4
	baz=127						
151A	Opelika	30.20	318	P	P	05 33 12.6	+0.7
	baz=130,SNR=5.8						
X53A	Estanollee	30.29	324	P	P	05 33 13.5	+1.0
	baz=135						
Y52A	Lilburn	30.29	322	*e*P	P	05 33 13.9	+1.3
Y52A				*e*pP	sP	05 33 35.2	-4.9
Y52A	Lilburn	30.29	322	P	P	05 33 13.8	+1.2
	baz=133						
BG3	Lake Jocassee	30.42	325	*e*P	P	05 33 15.6	+1.8
	comp=Z,55nm,1.1s						
250A	Grady	30.49	317	*e*P	P	05 33 15.6	+1.3
	comp=Z,54nm,0.9s						
250A	Grady	30.49	317	P	P	05 33 15.1	+0.8
	baz=128,SNR=6.5						
BRAL	Brewton	30.55	315	*e*P	P	05 33 16.6	+1.8
	comp=Z,84nm,0.7s						
BRAL	Brewton	30.55	315	P	P	05 33 15.9	+1.0
	baz=126,SNR=6.4						
Z51A	Franklin	30.62	320	P	P	05 33 16.4	+0.9
	baz=131						
W53A	Cullowhee	30.68	325	P	P	05 33 16.2	+0.1
	baz=136,SNR=9.9						
X52A	Dahlonega	30.70	323	P	P	05 33 16.9	+0.7
	baz=134						
150A	Eclectic	30.71	318	P	P	05 33 16.6	+0.3
	baz=129						
349A	Repton	30.75	315	P	P	05 33 17.5	+0.8
	baz=126						
BLA	Blacksburg	30.79	331	P	P	05 33 18.0	+0.9
	baz=143						
V53A	Saluda	30.85	326	*e*P	P	05 33 18.6	+1.1
	comp=Z,47nm,1.0s						
V53A	Saluda	30.85	326	P	P	05 33 18.4	+0.8
	baz=137,SNR=7.8						
Y51A	Rockmart	30.93	321	P	P	05 33 19.1	+0.9
	baz=132						
MNMC	Minye Minye	30.95	194	*e*P	P	05 33 18.1	-0.6
	comp=Z,51nm,0.8s						
RCBR	Riachuelo	31.01	122	*e*P	P	05 33 20.6	+1.4
	comp=Z,34nm,0.9s						
RCBR	Riachuelo	31.01	122	*e*P	P	05 33 20.6	+1.4
RCBR				pmax	pmax		
	comp=Z,34nm,0.9s						
Z50A	Ashland	31.05	319	P	P	05 33 20.2	+0.9
	baz=130						
249A	Camden	31.07	316	P	P	05 33 20.4	+1.0
	baz=126						
W52A	Murphy	31.07	324	*e*P	P	05 33 20.9	+1.5
W52A				*e*pP	pP	05 33 41.1	+3.3
W52A				*e*PcP	PcP	05 36 13.2	-0.3
W52A	Murphy	31.07	324	P	P	05 33 20.2	+0.7
	baz=135						
149A	Jones	31.22	317	P	P	05 33 21.4	+0.7
	baz=128,SNR=5.8						
U53A	Fall Branch	31.23	327	P	P	05 33 21.6	+0.7
	baz=139						
T54A	Tazewell	31.25	329	P	P	05 33 21.9	+0.9
	baz=141						
X51A	Calhoun	31.25	322	P	P	05 33 21.9	+0.8
	baz=133						
S55A	Lewisburg	31.28	331	P	P	05 33 22.4	+1.1
	baz=143						
Y50A	Piedmont	31.34	320	P	P	05 33 22.6	+0.8
	baz=131,SNR=6.6						
TKL	Tuckaleechee C	31.38	325	*e*P	P	05 33 22.8	+0.7
TKL				*e*pP	pP	05 33 42.8	+2.3
TKL	Tuckaleechee C	31.38	325	*e*P	P	05 33 22.8	+0.7
TKL				e*PP	pP	05 33 42.8	+2.3
V52A	Sevierville	31.41	325	*e*P	P	05 33 23.2	+0.8
	comp=Z,47nm,1.1s						
V52A	Sevierville	31.41	325	P	P	05 33 23.1	+0.6
	baz=136,SNR=5.6						
Z49A	Columbiana	31.41	318	P	P	05 33 23.5	+1.1
	baz=129,SNR=8.0						
PB11	IPOC Station P	31.57	194	*e*P	P	05 33 22.3	-1.8
	comp=Z,126nm,0.9s						
W51A	Cleveland	31.60	323	P	P	05 33 24.1	0.0
	baz=134						
LRAL	Lakeview Retre	31.62	318	*e*P	P	05 33 25.4	+1.1
	comp=Z,29nm,0.9s						
LRAL	Lakeview Retre	31.62	318	P	P	05 33 25.2	+0.9
	baz=128,SNR=8.7						
X50B	Fort Payne	31.67	321	P	P	05 33 25.5	+0.8
	baz=132						
T53A	Wise	31.68	328	P	P	05 33 25.9	+1.1
	baz=139,SNR=6.9						
U52A	Thorn Hill	31.68	326	P	P	05 33 25.7	+0.9
	baz=137						
Y49A	Blount Mountai	31.75	319	*e*P	P	05 33 26.4	+0.9
	comp=Z,30nm,1.0s						
Y49A	Blount Mountai	31.75	319	P	P	05 33 26.2	+0.7
	baz=130,SNR=5.8						
V51A	Loudon	31.81	324	*e*P	P	05 33 27.4	+1.4
V51A				*e*pP	pP	05 33 46.6	+2.3
V51A				*e*PcP	PcP	05 36 15.4	0.0
V51A	Loudon	31.81	324	P	P	05 33 26.9	+1.0
	baz=135,SNR=5.1						
TZTN	Tazewell	31.89	326	*e*P	P	05 33 28.0	+1.3
	comp=Z,42nm,1.0s						
TZTN	Tazewell	31.89	326	P	P	05 33 27.7	+1.0
	baz=137						
W50A	Signal Mountai	31.96	322	*e*P	P	05 33 28.5	+1.2
	comp=Z,50nm,0.9s						
W50A				*e*PcP	PcP	05 36 15.6	-0.2
W50A	Signal Mountai	31.96	322	P	P	05 33 28.4	+1.1
	baz=133,SNR=6.6						
S53A	Williamson	32.00	329	P	P	05 33 28.4	+0.8
	baz=141						
T52A	Hallie	32.01	327	P	P	05 33 27.8	+0.1
	baz=139						
U51A	La Follette	32.03	325	P	P	05 33 28.7	+0.8
	baz=136,SNR=5.2						
N59A	State Game Lan	32.05	340	P	P	05 33 29.0	+1.0
	baz=154						
Q55A	Buckhannon	32.08	333	P	P	05 33 29.1	+0.9
	baz=145						
X49A	Woodville	32.12	320	P	P	05 33 29.5	+0.8
	baz=131						
V50A	Pikevile	32.15	323	P	P	05 33 30.0	+1.1
	baz=134						
147A	Livingston	32.26	316	*e*P	P	05 33 30.8	+0.9
	comp=Z,73nm,0.8s						
147A	Livingston	32.26	316	P	P	05 33 30.7	+0.8
	baz=126,SNR=7.7						
Y48A	Jasper	32.28	319	P	P	05 33 30.7	+0.7
	baz=129,SNR=7.5						
SWET	Sewanee	32.34	322	*e*P	P	05 33 32.1	+1.4
SWET				*e*pP	pP	05 33 50.8	+1.7
SWET				*e*PcP	PcP	05 36 16.5	-0.4
P55A	Reedsville	32.39	334	P	P	05 33 32.0	+1.0
	baz=146						
Q54A	Coxs Mills	32.41	332	P	P	05 33 31.6	+0.4
	baz=144						
R53A	Hurricane	32.42	330	P	P	05 33 31.9	+0.6
	baz=142						
T51A	Gray	32.42	326	P	P	05 33 32.2	+1.0
	baz=137,SNR=6.2						
W49A	Belvidere	32.48	321	P	P	05 33 32.8	+1.0
	baz=132,SNR=5.4						
S52A	Salyersville	32.49	328	P	P	05 33 32.8	+0.9
	baz=139						
O56A	Blue Knob Stat	32.51	336	P	P	05 33 33.3	+1.2
	baz=149						
U50A	Jamestown	32.53	325	P	P	05 33 33.1	+0.9
	baz=135,SNR=7.7						
X48A	Hartselle	32.54	320	*e*P	P	05 33 33.1	+0.8
	comp=Z,67nm,1.3s						
X48A	Hartselle	32.54	320	P	P	05 33 33.1	+0.8
	baz=130,SNR=7.2						
SSPA	Standing Stone	32.56	337	P	P	05 33 33.3	+0.9
	baz=150						
V49A	McMinnville	32.70	323	P	P	05 33 34.7	+1.0
	baz=133,SNR=5.2						
S51A	Beattyville	32.73	327	*e*P	P	05 33 35.2	+1.3
S51A				*e*pP	pP	05 33 54.8	+2.3
S51A				*e*PcP	PcP	05 36 17.6	-0.3
S51A	Beattyville	32.73	327	P	P	05 33 34.8	+0.9
	baz=138,SNR=8.1						
P54A	Burton	32.75	333	P	P	05 33 35.1	+0.9
	baz=145						
O55A	Ligonier	32.75	335	P	P	05 33 35.3	+1.1
	baz=148						
R52A	Catlettsburg	32.77	329	P	P	05 33 34.9	+0.6
	baz=140						
PB01	IPOC Station P	32.77	193	*e*P	P	05 33 34.5	-0.1
	comp=Z,68nm,0.8s						
W48A	Pulaski	32.91	321	P	P	05 33 36.5	+0.9
	baz=131,SNR=8.4						
T50A	Nancy	32.95	325	P	P	05 33 36.9	+1.0
	baz=136,SNR=9.9						
Q52A	Bidwell	33.07	330	P	P	05 33 37.8	+1.0
	baz=142						
X47A	Russelville	33.10	319	P	P	05 33 37.9	+0.7
	baz=129,SNR=9.3						
U49A	Red Boiling Sp	33.13	324	P	P	05 33 38.3	+0.8
	baz=134,SNR=7.0						
O54A	Avella	33.18	334	P	P	05 33 38.7	+0.8
	baz=146						
S50A	Richmond	33.19	327	P	P	05 33 39.0	+1.0
	baz=137,SNR=7.2						
R51A	Hillsboro	33.22	328	P	P	05 33 39.2	+1.0
	baz=139,SNR=5.4						
V48A	Smith Brothers	33.23	322	*e*P	P	05 33 39.5	+1.1
	comp=Z,62nm,1.1s						
V48A	Smith Brothers	33.23	322	P	P	05 33 39.4	+1.1
	baz=132,SNR=6.7						
BINY	Binghamton	33.28	341	P	P	05 33 39.1	+0.4
	baz=155						
145A	Houston Renfro	33.37	314	P	P	05 33 39.8	+0.2
	baz=124						
W47A	Westpoint	33.39	320	P	P	05 33 40.6	+0.8
	baz=130,SNR=10.0						
T49A	Edmonton	33.40	325	*e*P	P	05 33 41.0	+1.2
T49A				*e*pP	sP	05 34 02.4	-5.1
T49A				*e*PcP	PcP	05 36 19.8	0.0
T49A	Edmonton	33.40	325	P	P	05 33 40.8	+0.9
	baz=135						
PLAL	Pickwick Lake	33.53	319	*e*P	P	05 33 41.6	+0.7
	comp=Z,24nm,0.6s						
U48A	Cassie Pea, Po	33.58	323	P	P	05 33 42.4	+1.0
	baz=133						
VBMS	Vicksburg	33.58	313	*e*P	P	05 33 43.1	+1.6
	comp=Z,51nm,0.8s						
VBMS	Vicksburg	33.58	313	P	P	05 33 42.4	+1.0
	baz=122						
R50A	Paris	33.59	327	P	P	05 33 42.8	+1.3
	baz=138,SNR=6.9						
X46A	Booneville	33.59	318	P	P	05 33 41.9	+0.4
	baz=128,SNR=6.3						
O53A	New Philadelph	33.60	333	P	P	05 33 42.3	+0.8
	baz=144						
M55A	Ridgway	33.61	337	P	P	05 33 41.9	+0.2
	baz=149						
Q51A	Peebles	33.65	329	P	P	05 33 43.0	+1.0
	baz=140						
N54A	Moraine State	33.67	335	P	P	05 33 42.8	+0.7
	baz=147						
V47A	Nunnelly	33.72	321	P	P	05 33 43.1	+0.5
	baz=131,SNR=16						
S49A	Springfield	33.75	326	P	P	05 33 43.6	+0.8
	baz=136,SNR=6.9						
O52A	Adamsville	33.78	332	P	P	05 33 44.1	+1.1
	baz=143						
W46A	Michie	33.82	319	P	P	05 33 43.3	-0.2
	baz=129						
Q50A	Georgetown	33.83	328	P	P	05 33 44.3	+0.8
	baz=139						
P51A	Williamsport	33.86	330	*e*P	P	05 33 44.8	+1.0
	comp=Z,12nm,0.8s						
P51A	Williamsport	33.86	330	P	P	05 33 44.3	+0.6
	baz=141						
N53A	Lisbon	33.90	334	P	P	05 33 45.3	+1.2
	baz=146						
T48A	Bowling Green	33.90	324	P	P	05 33 45.1	+0.9
	baz=134,SNR=9.7						
U47A	Clarksville	33.98	322	P	P	05 33 45.4	+0.6
	baz=132,SNR=7.3						
R49A	Shelbyville	34.05	327	P	P	05 33 46.4	+1.0
	baz=137						
V46A	Holladay	34.07	320	P	P	05 33 45.8	+0.2
	baz=130						
S48A	Wiedeman Farm,	34.09	325	P	P	05 33 46.5	+0.7
	baz=135						
LBNH	Lisbon	34.09	347	P	P	05 33 47.1	+1.3
	baz=163						
WVT	Waverly	34.10	321	*e*P	P	05 33 46.2	+0.2
	comp=Z,41nm,1.0s						
WVT	Waverly	34.10	321	*e*P	P	05 33 46.2	+0.2
WVT				pmax	pmax		
	comp=Z,41nm,1.0s						
WVT	Waverly	34.10	321	P	P	05 33 46.1	+0.2
	baz=131						
L55A	Hinsdale	34.11	338	P	P	05 33 47.1	+1.1
	baz=150						
OXF	Oxford	34.11	317	*e*P	P	05 33 46.3	+0.3
OXF				*e*pP	pP	05 34 06.7	+2.1
OXF	Oxford	34.11	317	*e*P	P	05 33 46.3	+0.3
OXF				e*PP	pP	05 34 06.7	+2.1
OXF	Oxford	34.11	317	P	P	05 33 46.2	+0.3
	baz=127						
O51A	Pataskala	34.16	331	P	P	05 33 46.9	+0.5
	baz=142						
LVC	Limon Verde	34.17	191	*e*P	P	05 33 47.6	+0.6
	comp=Z,30nm,0.8s						
LVC	Limon Verde	34.17	191	*e*P	P	05 33 47.6	+0.6
LVC				pmax	pmax		
	comp=Z,30nm,0.8s						
LVC	Limon Verde	34.17	191	P	P	05 33 47.5	+0.6
	comp=Z,23nm,0.8s,baz=6.8,slow=6.1,SNR=24						
T47A	Sharon Grove	34.23	323	P	P	05 33 48.0	+0.9
	baz=132						
N52A	McGinn's Farm,	34.27	333	P	P	05 33 47.9	+0.5
	baz=144						
P50A	Jamestown	34.32	330	P	P	05 33 48.5	+0.8
	baz=140						
M53A	WI Miller and	34.35	335	P	P	05 33 48.3	+0.3
	baz=146						
W45A	Hickory Valley	34.35	319	P	P	05 33 48.3	+0.2
	baz=128						
ACSO	Alum Creek Sta	34.40	331	P	P	05 33 49.2	+0.7
	baz=142						
Q49A	Aurora	34.43	328	P	P	05 33 49.7	+1.0
	baz=138						
U46A	Springville	34.47	321	P	P	05 33 49.7	+0.6
	baz=130,SNR=23						
R48A	Northridge Ran	34.51	326	P	P	05 33 50.4	+1.0
	baz=136,SNR=9.3						
S47A	Hartford	34.51	324	P	P	05 33 50.2	+0.7
	baz=134,SNR=15						
V45A	Humboldt	34.56	320	P	P	05 33 50.2	+0.3
	baz=129						
L53A	Girard	34.61	336	P	P	05 33 51.3	+1.0
	baz=147						
WCI	Wyandotte Cave	34.62	325	*e*P	P	05 33 51.3	+0.9
	comp=Z,72nm,1.0s						
WCI				*e*PcP	PcP	05 36 22.9	-0.3
WCI	Wyandotte Cave	34.62	325	*e*P	P	05 33 51.3	+0.9
WCI				*e*		05 36 22.9	
WCI				pmax	pmax		
	comp=Z,72nm,1.0s						
WCI	Wyandotte Cave	34.62	325	P	P	05 33 51.5	+1.1
	baz=135						
ERPA	Erie	34.64	336	P	P	05 33 51.6	+1.2
	baz=148						
O50A	Cable	34.64	330	P	P	05 33 51.5	+0.9
	baz=141						
M52A	Chesterland	34.72	334	P	P	05 33 52.1	+0.9
	baz=145						
P49A	Miami Univ. Ec	34.73	328	P	P	05 33 52.0	+0.7
	baz=138,SNR=8.9						
T46A	Princeton	34.74	322	P	P	05 33 52.0	+0.6
	baz=132,SNR=15						
Y43A	Makayla and Ka	34.79	315	P	P	05 33 52.6	+0.7
	baz=124						
R47A	Wooly Knot Far	34.80	325	P	P	05 33 52.5	+0.6
	baz=135						
Q48A	North Vernon	34.81	327	P	P	05 33 52.9	+0.9
	baz=136,SNR=7.1						
U45A	Rockin P Farm,	34.82	321	P	P	05 33 52.7	+0.6
	baz=130,SNR=11						
N50A	Nevada	34.91	331	P	P	05 33 53.2	+0.4
	baz=142						
MEDO	Medina	34.97	339	P	P	05 33 54.2	+0.9
	baz=151						
O49A	Covington	35.03	330	*e*P	P	05 33 54.5	+0.7
	comp=Z,17nm,0.8s						
O49A	Covington	35.03	330	P	P	05 33 54.2	+0.3
	baz=140						
P48A	Milroy	35.04	328	P	P	05 33 54.3	+0.3
	baz=137						
S46A	Don Dixon Farm	35.06	323	P	P	05 33 54.5	+0.3
	baz=132,SNR=6.0						
LONY	Lake Ozonia	35.09	344	P	P	05 33 55.0	+0.7
	baz=158						
X43A	Marvell	35.10	316	*e*P	P	05 33 55.4	+0.9
	comp=Z,21nm,0.8s						
X43A	Marvell	35.10	316	P	P	05 33 55.1	+0.5
	baz=125						
U44B	Burton Farm, H	35.19	320	P	P	05 33 55.6	+0.4
	baz=129						
Q47A	Bedord North L	35.20	326	P	P	05 33 56.1	+0.8
	baz=136,SNR=6.4						
R46A	Gibon Southern	35.30	324	P	P	05 33 56.8	+0.6
	baz=133,SNR=5.6						
Y42A	Garnett, Star	35.35	315	P	P	05 33 57.3	+0.6
	baz=123						
M50A	Fremont	35.36	332	P	P	05 33 57.2	+0.5
	baz=143						
CCAR	Cane Creek	35.38	315	*e*P	P	05 33 58.2	+1.2
CCAR				*e*pP	pP	05 34 18.5	+2.9
BLO	Bloomington	35.42	326	*e*P	P	05 33 58.3	+1.1
	comp=Z,61nm,0.9s						
BLO				*e*PcP	PcP	05 36 24.9	-0.6
BLO	Bloomington	35.42	326	*e*P	P	05 33 58.3	+1.1
BLO				*e*		05 36 24.9	
BLO				pmax	pmax		
	comp=Z,61nm,0.9s						
K52A	Tillsonburg	35.49	336	P	P	05 33 58.1	+0.4
	baz=147						
O48A	Farmland	35.49	329	P	P	05 33 58.1	+0.3
	baz=139						
P47A	Martinsville	35.51	327	P	P	05 33 58.8	+0.9
	baz=136						
H56A	Elgin	35.53	342	P	P	05 33 59.5	+1.4
	baz=156						
S45A	Carrier Mills	35.57	323	P	P	05 33 59.2	+0.7
	baz=131,SNR=7.8						
X42A	Stuttgart	35.63	316	P	P	05 33 59.4	+0.3
	baz=124						
DRWO	Darlington Wes	35.68	339	P	P	05 33 59.7	+0.3
	baz=151						
K51A	Iona Station	35.76	335	P	P	05 34 01.6	+1.5
	baz=146						
L50A	Kingsville	35.76	333	P	P	05 34 01.6	+1.4
	baz=144						
Z41A	Richland Creek	35.77	313	P	P	05 34 00.5	+0.2

	baz=121						
J52A	Paris baz=148	35.78	337	P	P	05 34 00.4	+0.1
R45A	Skylar, Fairfi baz=132,SNR=9.3	35.80	324	P	P	05 34 01.0	+0.5
U43A	Rector baz=128,SNR=10	35.88	319	P	P	05 34 01.2	+0.1
N48A	Decatur baz=139	35.88	330	P	P	05 34 01.7	+0.6
DELO	Deloro Mine baz=153	35.88	341	P	P	05 34 01.6	+0.4
ACTO	Acton baz=149	35.94	338	P	P	05 34 02.5	+0.9
Y41A	Eaglette Beard baz=122	35.95	314	P	P	05 34 01.9	0.0
SIUC	Southern Illin comp=Z,94nm,0.9s	35.98	322	*e*P	P	05 34 02.8	+0.8
S44A	Carbondale baz=130,SNR=17	35.99	322	P	P	05 34 02.6	+0.6
OLIL	Olney comp=Z,124nm,0.9s	35.99	324	*e*P	P	05 34 03.0	+0.8
O47A	Sheridan baz=137	36.00	328	P	P	05 34 03.2	+1.0
ELFO	Elginfield baz=147	36.07	336	P	P	05 34 03.6	+0.8
ALFO	Alfred baz=158	36.10	345	P	P	05 34 03.4	+0.4
P46A	Rosedale baz=135,SNR=7.0	36.11	326	P	P	05 34 04.0	+0.9
Q45A	Warren Harvey, baz=133,SNR=10	36.14	324	P	P	05 34 04.1	+0.7
PBMO	Poplar Bluff comp=Z,37nm,0.8s	36.14	320	*e*P	P	05 34 03.2	-0.2
V42A	Cord baz=126,SNR=11	36.18	318	P	P	05 34 03.7	-0.1
M48A	Edgerton baz=140	36.20	331	P	P	05 34 04.0	+0.1
X41A	Kaden, Bauxite baz=123,SNR=6.6	36.21	315	P	P	05 34 03.8	-0.3
N47A	Urbana baz=138	36.23	329	P	P	05 34 04.4	+0.3
T43A	Greenville baz=128,SNR=12	36.24	320	P	P	05 34 03.9	-0.3
R44A	Waltonville baz=131,SNR=24	36.24	323	P	P	05 34 04.7	+0.5
P45A	Graceland, Par	36.34	326	*e*P	P	05 34 06.2	+1.2
P45A				*e*pP	pP	05 34 21.7	-2.1
P45A	Graceland, Par baz=134,SNR=5.3	36.34	326	P	P	05 34 05.8	+0.7
AAM	Ann Arbor baz=143	36.35	333	P	P	05 34 05.3	+0.2
W41B	Gary Mavity, V comp=Z,46nm,1.4s	36.40	316	*e*P	P	05 34 05.5	-0.1
W41B				*e*PcP	PcP	05 36 28.4	-0.1
W41B	Gary Mavity, V baz=124	36.40	316	P	P	05 34 05.5	-0.1
U42A	Revenden baz=126,SNR=8.7	36.40	318	P	P	05 34 05.7	0.0
S43A	Fulton Ridge, baz=129,SNR=24	36.41	321	P	P	05 34 05.5	-0.2
NATX	Nacogdoches	36.42	309	*e*P	P	05 34 06.7	+0.8
NATX				*e*pP	pP	05 34 28.0	+3.4
NATX	Nacogdoches baz=117	36.42	309	P	P	05 34 06.0	+0.1
L48A	N Adams baz=141	36.42	331	P	P	05 34 06.3	+0.5
BANO	Bancroft baz=153	36.43	341	P	P	05 34 06.8	+1.0
X40A	Basin Creek Fa comp=Z,5.5nm,0.8s	36.43	315	*e*P	P	05 34 06.0	0.0
X40A	Basin Creek Fa baz=122	36.43	315	P	P	05 34 06.0	0.0
WHAR	Wooly Hollow comp=Z,18nm,1.1s	36.49	316	*e*P	P	05 34 06.5	+0.1
WHAR				*e*PcP	PcP	05 36 28.7	-0.1
M47A	Cromwell baz=139	36.55	330	P	P	05 34 07.5	+0.7
TRQ	Mont Tremblant	36.57	345	*e*P	P	05 34 09.0	+1.9
SFIN	Lafayette baz=136	36.59	327	P	P	05 34 07.1	-0.1
Q44A	Meyer Farm, Va comp=Z,104nm,0.8s	36.64	324	*e*P	P	05 34 08.2	+0.5
Q44A	Meyer Farm, Va baz=132,SNR=15	36.64	324	P	P	05 34 08.1	+0.5
K49A	Clarkson baz=143	36.64	333	P	P	05 34 08.4	+0.7
V41A	Mountainview baz=125,SNR=20	36.68	317	P	P	05 34 07.7	-0.4
T42A	Van Buren comp=Z,29nm,1.2s	36.71	320	*e*P	P	05 34 08.2	-0.1
T42A	Van Buren baz=127,SNR=6.5	36.71	320	P	P	05 34 07.9	-0.4
R43A	Red Bud baz=130,SNR=9.2	36.77	322	P	P	05 34 08.6	-0.1
N46A	Monticello baz=137,SNR=5.4	36.77	328	P	P	05 34 09.4	+0.6
BWLO	Walkerton baz=148	36.78	337	P	P	05 34 08.6	-0.2
GO02	Mina Guanaco comp=Z,55nm,0.9s	36.79	191	*e*P	P	05 34 09.5	+0.2
P44A	Sand Creek, Wi baz=133,SNR=9.3	36.79	325	P	P	05 34 09.6	+0.6
PEMO	Pembroke baz=155	36.81	342	P	P	05 34 10.0	+1.0
L47A	Sherwood baz=140	36.81	331	P	P	05 34 09.3	+0.2
U41A	Viola baz=126,SNR=8.9	36.84	318	P	P	05 34 09.4	-0.1
FVM	French Village comp=Z,36nm,1.1s	36.88	321	*e*P	P	05 34 09.9	+0.1
FVM	French Village	36.88	321	*e*P	P	05 34 09.9	+0.1
FVM	comp=Z,36nm,1.1s			pmax	pmax		
BASO	Ashfield baz=147	36.90	336	P	P	05 34 10.9	+1.1
K48A	Perry baz=142	36.95	333	P	P	05 34 10.9	+0.6
M46A	Old House Fiel comp=Z,87nm,1.6s	36.95	329	*e*P	P	05 34 11.3	+1.0
M46A	Old House Fiel baz=138	36.95	329	P	P	05 34 11.0	+0.8
J49A	Marlette baz=144	36.97	334	P	P	05 34 10.7	+0.3
S42A	Caledonia baz=128,SNR=15	36.98	321	P	P	05 34 10.2	-0.4
MIAR	Mount Ida baz=122	36.98	314	P	P	05 34 09.8	-0.8
Q43A	New Douglas baz=131,SNR=5.6	37.06	323	P	P	05 34 11.3	+0.1
N45A	Kentland baz=136	37.15	327	P	P	05 34 12.3	+0.4
T41A	Mountain View baz=126,SNR=19	37.15	319	P	P	05 34 11.7	-0.3
O44A	Mansfield baz=134,SNR=10	37.17	326	P	P	05 34 12.6	+0.4
J48A	Bridge Port baz=143	37.20	333	P	P	05 34 09.5	-2.8
K47A	Vermontville baz=141	37.25	332	P	P	05 34 12.8	0.0
LATQ	La Tuque baz=162	37.27	348	P	P	05 34 14.3	+1.5
R42A	Luebbering baz=129,SNR=19	37.30	321	P	P	05 34 13.3	+0.1
ALGO	Algonquin Park baz=154	37.30	342	P	P	05 34 13.7	+0.6
SPB	Sao Paulo comp=Z,14nm,1.0s	37.34	158	*e*P	P	05 34 15.1	+1.4
M45A	Boilermakers S baz=137	37.40	328	P	P	05 34 14.6	+0.5
P43A	Skaggs, Pawnee baz=132,SNR=43	37.42	324	P	P	05 34 14.7	+0.5
CCM	Cathedral Cave comp=Z,115nm,1.6s	37.44	321	*e*P	P	05 34 14.1	-0.3
CCM				*e*PcP	PcP	05 36 31.4	-0.2
CCM	Cathedral Cave	37.44	321	*e*P	P	05 34 14.1	-0.3
CCM				*e*		05 36 31.4	
CCM	comp=Z,115nm,1.6s			pmax	pmax		
CCM	Cathedral Cave baz=128	37.44	321	P	P	05 34 14.3	-0.1
N44A	Piper City baz=135,SNR=5.1	37.44	327	P	P	05 34 14.7	+0.3
S41A	Jillco Farms, baz=127,SNR=26	37.47	320	P	P	05 34 14.2	-0.5
U40A	Yellville baz=124,SNR=6.8	37.47	317	P	P	05 34 14.3	-0.5
W39A	Magazine comp=Z,29nm,1.1s	37.47	315	*e*P	P	05 34 15.1	+0.3
W39A	Magazine baz=122,SNR=6.5	37.47	315	P	P	05 34 14.9	+0.2
CPUP	Villa Florida comp=Z,18nm,0.8s	37.50	173	*e*P	P	05 34 15.0	0.0
CPUP	Villa Florida	37.50	173	*e*P	P	05 34 15.0	0.0
CPUP	comp=Z,18nm,0.8s			pmax	pmax		
CPUP	Villa Florida comp=Z,17nm,0.7s,baz=352,slow=8.1,SNR=46	37.50	173	P	P	05 34 15.2	+0.2
CPUP	comp=Z,297nm,20.7s,baz=354,slow=37			LR	LR	05 50 19.7	
Q42A	Golden Eagle baz=130,SNR=14	37.54	322	P	P	05 34 15.2	0.0
E53A	Dumoine, Ponti baz=154	37.57	342	P	P	05 34 15.4	0.0
K46A	Dorr baz=140	37.63	331	P	P	05 34 16.3	+0.2
R41A	Rosebud baz=128,SNR=24	37.67	321	P	P	05 34 16.1	-0.3
O43A	Sugar Creek Fa baz=133,SNR=7.1	37.74	325	P	P	05 34 17.2	+0.3
AHML	Horco Molle	37.80	185	*i* P	P	05 34 17.0	-0.6
M44A	Midewin, Midew baz=136	37.81	327	P	P	05 34 17.5	-0.1
P42A	Winchester comp=Z,80nm,0.8s	37.86	323	*e*P	P	05 34 17.9	0.0
P42A				*e*PcP	PcP	05 36 32.8	-0.1
P42A	Winchester baz=131,SNR=20	37.86	323	P	P	05 34 18.0	0.0
F51A	Arnstein baz=151	37.89	340	P	P	05 34 19.0	+0.9
HDIL	Hopedale	37.91	325	*e*P	P	05 34 18.6	+0.3
HDIL				*e*pP	pP	05 34 40.0	+2.8
HDIL	Hopedale baz=133	37.91	325	P	P	05 34 18.7	+0.3
D54A	Lac Fusel, La baz=156	37.98	344	P	P	05 34 18.9	0.0
Q41A	Truxton baz=129,SNR=15	37.99	322	P	P	05 34 18.8	-0.2
N43A	Stutzman Famil baz=134	38.10	326	P	P	05 34 19.7	-0.3
O42A	Bath baz=132,SNR=6.3	38.11	324	P	P	05 34 20.0	-0.1
HHAR	Hobbs	38.16	316	*e*P	P	05 34 20.2	-0.3
HHAR				*e*pP	pP	05 34 41.3	+1.9
HHAR				*e*PcP	PcP	05 36 33.6	-0.3
435B	Jarrell	38.27	306	*e*P	P	05 34 21.7	+0.1
435B				*e*pP	pP	05 34 41.6	+1.2
435B	Jarrell baz=113,SNR=9.8	38.27	306	P	P	05 34 21.4	-0.2
L44A	Lake County Fo baz=136	38.31	328	P	P	05 34 21.9	+0.2
M43A	Waltham Townsh baz=134	38.33	327	P	P	05 34 21.9	0.0
P41A	Barry, Barry baz=130,SNR=13	38.34	323	P	P	05 34 21.7	-0.3
N42A	Yates City baz=132,SNR=11	38.51	325	P	P	05 34 23.4	0.0
O41A	Passleys Farm, baz=131,SNR=7.0	38.52	324	P	P	05 34 22.9	-0.6
WHTX	Lake Whitney, comp=Z,26nm,0.7s	38.66	308	*e*P	P	05 34 24.9	+0.1
WHTX	Lake Whitney, baz=115,SNR=7.3	38.66	308	P	P	05 34 24.3	-0.4
G47A	Hillman baz=144	38.74	335	P	P	05 34 25.3	+0.1
L43A	Garden Prairie baz=135	38.74	328	P	P	05 34 25.4	0.0
GLMI	Grayling baz=143	38.78	334	P	P	05 34 26.1	+0.5
M42A	Sheffield baz=133	38.78	326	P	P	05 34 25.7	0.0
833A	Chaparral WMA, comp=Z,76nm,0.9s	38.88	302	*e*P	P	05 34 26.6	-0.1
833A	Chaparral WMA, baz=109,SNR=15	38.88	302	P	P	05 34 26.6	-0.1
N41A	Harden Midland	38.89	324	*e*P	P	05 34 26.3	-0.4
N41A				*e*pP	pP	05 34 45.9	+0.4
N41A	Harden Midland baz=131,SNR=11	38.89	324	P	P	05 34 26.2	-0.4
K43A	Burlington baz=136	38.91	329	P	P	05 34 26.7	0.0
L42A	Oliver, Polo	39.11	327	*e*P	P	05 34 28.7	+0.3
L42A				*e*pP	pP	05 34 50.5	+3.2
L42A	Oliver, Polo baz=134,SNR=6.2	39.11	327	P	P	05 34 28.2	-0.2
M41A	Milan baz=132	39.16	325	P	P	05 34 28.1	-0.7
E48A	Lockeyer baz=148	39.16	338	P	P	05 34 29.5	+0.7
TUL1	Leonard comp=Z,22nm,0.7s	39.24	315	*e*P	P	05 34 28.9	-0.6
TUL1	Leonard baz=121,SNR=9.3	39.24	315	P	P	05 34 28.6	-1.0
N40A	Mertquake, Sal baz=130,SNR=6.9	39.43	324	P	P	05 34 30.6	-0.5
CYA	Choya	39.48	185	*i* P	P	05 34 31.6	0.0
K42A	Prairie Point, baz=135	39.48	328	P	P	05 34 31.0	-0.6
L41A	Preston baz=133	39.61	326	P	P	05 34 32.3	-0.2
M40A	Post Highland baz=131,SNR=9.3	39.73	325	P	P	05 34 32.9	-0.7
LSQQ	Lebel-sur-Quev baz=157	39.82	345	P	P	05 34 35.0	+0.8
K41A	Shullsburg baz=134	39.87	327	P	P	05 34 34.5	-0.2
E46A	Sault Ste Mari baz=145	39.90	336	P	P	05 34 35.4	+0.5
JCT	Junction City comp=Z,34nm,0.8s	39.93	305	*e*P	P	05 34 35.3	-0.2
JCT	Junction City	39.93	305	*e*P	P	05 34 35.3	-0.2
JCT	comp=Z,35nm,0.8s			pmax	pmax		
JCT	Junction City baz=111,SNR=15	39.93	305	P	P	05 34 35.2	-0.4
L40A	Anamosa comp=Z,36nm,0.9s	40.00	326	*e*P	P	05 34 35.6	-0.2
L40A	Anamosa baz=132,SNR=7.8	40.00	326	P	P	05 34 35.3	-0.5
CHGQ	Chibougamau baz=161	40.00	348	P	P	05 34 37.1	+1.4
JFWS	Jewell Farm baz=134	40.05	327	P	P	05 34 36.0	-0.2
I42A	Draeger Farm, baz=137	40.06	330	P	P	05 34 36.6	+0.4
M39A	Webster baz=130,SNR=19	40.15	324	P	P	05 34 36.7	-0.4
J41A	Loganville baz=135	40.24	328	P	P	05 34 37.8	0.0
ZAIG	Zacatecas comp=Z,13nm,1.1s	40.30	292	*e*P	P	05 34 39.6	+0.7
ZAIG				*e*pP	pP	05 35 01.5	+3.5
K40A	Colesburg baz=133,SNR=6.2	40.38	326	P	P	05 34 38.8	-0.2
L39A	Vinton baz=131,SNR=15	40.47	325	P	P	05 34 39.3	-0.4
ACLC	CERRO LA CRUZ	40.57	187	*i* P	P	05 34 41.1	+0.3
ABTX	Abilene, Hawle comp=Z,26nm,0.8s	40.61	308	*e*P	P	05 34 40.5	-0.6
ABTX	Abilene, Hawle baz=113,SNR=9.3	40.61	308	P	P	05 34 40.3	-0.7
MATQ	Matagami baz=156	40.63	345	P	P	05 34 40.9	0.0
J40A	Soldiers Grove baz=134	40.64	328	P	P	05 34 40.8	-0.4
I41A	Arkdale baz=135	40.66	329	P	P	05 34 40.6	-0.7
F43A	Flat Rock, Esc baz=140	40.68	333	P	P	05 34 40.8	-0.6
LCO	Las Campanas comp=Z,50nm,1.0s	40.74	192	*e*P	P	05 34 42.5	+0.1
K39A	Oelwein baz=132,SNR=7.5	40.79	326	P	P	05 34 41.5	-0.8
G42A	Mountain baz=138	40.81	331	P	P	05 34 42.5	0.0
AGUA	GUANDACOL	40.83	189	*i* P	P	05 34 43.5	+0.6
WMOK	Wichita Mounta comp=Z,5.2nm,0.7s	40.83	311	*e*P	P	05 34 42.0	-0.8
WMOK	Wichita Mounta	40.83	311	*e*P	P	05 34 42.0	-0.8
WMOK	comp=Z,5.0nm,0.7s			pmax	pmax		
WMOK	Wichita Mounta baz=116	40.83	311	P	P	05 34 41.7	-1.2
I40A	Norwalk baz=134	40.92	328	P	P	05 34 43.0	-0.5
H41A	Junction City baz=136	40.95	330	P	P	05 34 43.2	-0.4
SCIA	State Center comp=Z,106nm,0.9s	41.02	324	*e*P	P	05 34 44.5	+0.2
SCIA	State Center baz=129,SNR=7.1	41.02	324	P	P	05 34 43.8	-0.4
F42A	Maple Grove Fa baz=139	41.07	332	P	P	05 34 43.7	-0.8
J39A	Decorah baz=132	41.12	327	P	P	05 34 44.5	-0.5
H40A	Chili baz=135	41.32	329	P	P	05 34 46.5	-0.2
I39A	Houston comp=Z,24nm,0.9s	41.37	327	*e*P	P	05 34 47.0	0.0
I39A	Houston baz=133	41.37	327	P	P	05 34 46.8	-0.3
KSU1	Kansas State U comp=Z,20nm,0.6s	41.47	318	*e*P	P	05 34 46.7	-1.2
KSU1				*e*pP	pP	05 35 07.3	+0.4
KSU1	Kansas State U baz=123,SNR=7.7	41.47	318	P	P	05 34 46.5	-1.5
E42A	Champion baz=140	41.48	333	P	P	05 34 47.8	-0.2
APLL	PUNTA DE LOS L	41.48	186	*i* P	P	05 34 48.0	-0.2
F41A	Three Lakes baz=138	41.50	331	P	P	05 34 48.8	+0.6
AROD	Rodeo	41.65	190	*i* P	P	05 34 50.7	+0.9
G40A	Rib Lake baz=136	41.69	330	P	P	05 34 49.9	+0.2
U32A	Winter Ranch, comp=Z,32nm,0.6s	41.74	313	*e*P	P	05 34 49.7	-0.6
H39A	Augusta baz=134	41.81	329	P	P	05 34 50.6	-0.1
GO04	Tololo Observa comp=Z,35nm,1.1s	41.89	191	*e*P	P	05 34 52.0	+0.3
E41A	Kenton baz=138	41.98	332	P	P	05 34 51.7	-0.3
ACCO	Cerro Coronel	41.99	189	*i* P	P	05 34 53.1	+0.4
F40A	Park Falls baz=137	42.12	331	P	P	05 34 53.0	-0.2
G39A	Holcombe baz=135	42.18	329	P	P	05 34 53.1	-0.6
D41A	Chassel baz=139	42.25	333	P	P	05 34 54.2	0.0
AMOG	MOGNA	42.26	188	*i* P	P	05 34 54.4	-0.1
H38A	Maiden Rock baz=133	42.33	328	P	P	05 34 54.3	-0.6
E40A	Wakefield baz=137	42.40	331	P	P	05 34 55.8	+0.4
G38A	Ridgeland baz=134	42.45	329	P	P	05 34 55.1	-0.7
F39A	Loretta baz=136	42.50	330	P	P	05 34 56.0	-0.3
E39A	Mellen baz=136,SNR=6.1	42.66	331	P	P	05 34 57.2	-0.3
TXAR	Lajitas Array comp=Z,6.3nm,0.7s,baz=120,slow=7.3,SNR=31	42.76	301	P	P	05 34 59.0	+0.3
TXAR	comp=Z,6.5nm,0.7s,baz=125,slow=5.9,SNR=9.0			PcP	PcP	05 36 49.4	+0.3
TXAR	comp=Z,1.3nm,0.7s,baz=116,slow=6.4,SNR=5.5			ScP	ScP	05 40 30.2	-2.9
TX31	Lajitas Ar. Si	42.76	301	*e*P	P	05 34 58.7	0.0
CFA	Coronel Fontan	42.88	188	*i* P	P	05 34 59.6	+0.2
SPMN	Marine on St. baz=133	42.97	328	P	P	05 34 59.4	-0.7
F38A	Pierce - Schro baz=134,SNR=10	43.01	329	P	P	05 35 00.3	0.0
C40A	Isle Royale Na comp=Z,41nm,0.8s	43.15	333	*e*P	P	05 35 02.2	+0.8
C40A	Isle Royale Na baz=139	43.15	333	P	P	05 35 01.6	+0.1
RTCV	Cerro Valdivia	43.17	188	*i* P	P	05 35 02.1	+0.3
RTLS	Leoncito	43.22	189	*i* P	P	05 35 03.2	+0.7
F37A	Hinrichs Farm, baz=133	43.22	329	P	P	05 35 01.5	-0.6
E38A	The Farm, Brul baz=135	43.30	330	P	P	05 35 01.7	-1.0
CBKS	Cedar Bluff baz=119	43.41	316	P	P	05 35 02.6	-1.2
MRA	San Martin	43.42	184	*i* P	P	05 35 03.7	-0.2
MSTX	Muleshoe comp=Z,24nm,0.6s	43.54	308	*e*P	P	05 35 04.5	-0.5
MSTX	Muleshoe baz=112,SNR=14	43.54	308	P	P	05 35 04.3	-0.7
AUSP	Uspallata	43.65	189	*i* P	P	05 35 06.9	+1.0
BGNE	Belgrade baz=123	43.71	320	P	P	05 35 05.2	-0.9
SCHQ	Schefferville comp=Z,32nm,0.8s	43.78	356	*e*P	P	05 35 07.7	+1.2
SCHQ				ScP	ScP	05 40 33.4	-3.2
SCHQ	Schefferville comp=Z,24nm,0.8s,baz=176,slow=5.7,SNR=47	43.78	356	P	P	05 35 07.2	+0.8
SCHQ	comp=Z,4.1nm,0.8s,baz=192,slow=4.8,SNR=4.1			ScP	ScP	05 40 33.4	-3.2
SCHQ	comp=Z,267nm,20.1s,baz=138,slow=32			LR	LR	05 50 46.0	
HPIG	comp=Z,11nm,0.9s	43.87	297	*e*P	P	05 35 08.3	+0.5
HPIG				*e*pP	pP	05 35 30.3	+3.2
ASAL	Salagasta	43.93	188	*i* P	P	05 35 08.6	+0.7
ECSD	EROS Data Cent comp=Z,55nm,1.2s	44.12	324	*e*P	P	05 35 09.0	-0.3
ECSD	EROS Data Cent baz=127,SNR=14	44.12	324	P	P	05 35 08.8	-0.5
EYMN	Ely baz=136	44.24	332	P	P	05 35 09.8	-0.4
AAGR	Agrelo	44.41	188	*i* P	P	05 35 12.5	+0.6
ROC1	El Roble comp=Z,25nm,0.8s	44.66	191	*e*P	P	05 35 14.0	0.0
PEL	Peldehue comp=Z,105nm,1.4s	44.76	190	*e*P	P	05 35 14.1	-0.5
PEL	Peldehue	44.76	190	*e*P	P	05 35 14.1	-0.5
PEL	comp=Z,105nm,1.4s			pmax	pmax		
MNTX	Cornudas Mount comp=Z,11nm,0.7s	44.85	304	*e*P	P	05 35 15.2	-0.2
MNTX	Cornudas Mount baz=107,SNR=15	44.85	304	P	P	05 35 15.3	-0.2
SUSD	Miller baz=125,SNR=12	45.90	323	P	P	05 35 22.5	-1.0
T25A	Trinidad	45.98	312	*e*P	P	05 35 24.2	-0.3
T25A				*e*pP	pP	05 35 46.9	+3.1
T25A	Trinidad baz=113	45.98	312	P	P	05 35 24.0	-0.5
BNM	Barren Site	46.61	307	*e*P	P	05 35 29.9	+0.4
LPM	Los Pinos Moun	46.66	307	*e*P	P	05 35 30.8	+1.0
ANMO	Albuquerque comp=Z,17nm,1.0s	46.73	308	*e*P	P	05 35 30.6	+0.2
ANMO	Albuquerque	46.73	308	*e*P	P	05 35 30.6	+0.2
ANMO	comp=Z,17nm,1.0s			pmax	pmax		
ANMO	Albuquerque baz=110	46.73	308	P	P	05 35 30.7	+0.2
SDCO	Great Sand Dun comp=Z,7.5nm,0.8s	47.02	312	*e*P	P	05 35 32.0	-0.7
SDCO				*e*PcP	PcP	05 37 04.5	+0.6
SDCO	Great Sand Dun baz=113,SNR=13	47.02	312	P	P	05 35 31.9	-0.7
121A	Cookes Peak, D baz=106,SNR=14	47.05	304	P	P	05 35 33.7	+0.8
LAZ	Ladron	47.09	307	*e*P	P	05 35 33.6	+0.4
ULM	Lac du Bonnet comp=Z,14nm,0.6s	47.91	331	*e*P	P	05 35 37.3	-1.7
ULM				PcP	PcP	05 37 04.8	-1.6
ULM				ScP	ScP	05 40 49.9	-3.9
ULM	Lac du Bonnet	47.91	331	*e*P	P	05 35 37.3	-1.7
ULM						05 37 04.8	
ULM	comp=Z,14nm,0.6s			pmax	pmax		
ULM	Lac du Bonnet comp=Z,11nm,0.6s,baz=125,slow=7.5,SNR=23	47.91	331	P	P	05 35 37.0	-2.0
ULM	comp=Z,5.9nm,0.7s,baz=158,slow=4.2,SNR=2.3			PcP	PcP	05 37 04.8	-1.6
ULM	comp=Z,4.4nm,0.9s,baz=180,slow=4.0,SNR=3.8			ScP	ScP	05 40 49.9	-3.9
ULM	comp=Z,268nm,21.9s,baz=146,slow=35			LR	LR	05 54 45.0	
ISCO	Idaho Springs	47.92	314	*e*P	P	05 35 39.1	-0.5
ISCO				*e*pP	pP	05 36 01.9	+2.8
ISCO	Idaho Springs	47.92	314	*e*P	P	05 35 39.2	-0.5
ISCO				e*PP	pP	05 36 01.9	+2.8
ISCO	Idaho Springs baz=114,SNR=5.3	47.92	314	P	P	05 35 38.8	-0.8
319A	Douglas comp=Z,18nm,0.9s	47.97	302	*e*P	P	05 35 40.5	+0.5
S22A	4UR Ranch, Cre comp=Z,10nm,1.2s	47.99	311	*e*P	P	05 35 40.1	-0.1
S22A	4UR Ranch, Cre	47.99	311	P	P	05 35 39.9	-0.4

	baz=112,SNR=5.6						
MDND	**Maddock**	48.26	327	P	P	05 35 41.3	-0.5
	baz=127						
SMCO	**Snowmass**	48.64	313	eP	P	05 35 44.7	-0.6
SMCO				epP	pP	05 36 07.0	+2.2
RSSD	**Black Hills**	48.82	320	P	P	05 35 45.4	-1.0
	baz=119						
TRQA	**Tornquist**	48.90	180	eP	P	05 35 47.1	+0.3
	comp=Z,15nm,1.0s						
TRQA	**Tornquist**	48.90	180	eP	P	05 35 47.1	+0.3
TRQA				pmax	pmax		
	comp=Z,15nm,1.0s						
MVCO	**Mesa Verde**	49.05	310	eP	P	05 35 48.4	+0.1
	comp=Z,6.3nm,1.0s						
MVCO	**Mesa Verde**	49.05	310	P	P	05 35 47.8	-0.5
	baz=110						
W18A	**Petrified Fore**	49.34	307	P	P	05 35 49.9	-0.6
	baz=107						
X18A	**Snowflake**	49.34	306	eP	P	05 35 51.2	+0.7
	comp=Z,49nm,1.5s						
PV01	**Paradox Valley**	49.42	311	eP	P	05 35 51.7	+0.6
	comp=Z,20nm,0.9s						
PV15	**Paradox Valley**	49.43	311	eP	P	05 35 51.6	+0.4
	comp=Z,19nm,0.9s						
TUC	**Tucson**	49.44	303	eP	P	05 35 51.5	+0.4
	comp=Z,17nm,1.1s						
TUC	**Tucson**	49.44	303	eP	P	05 35 51.5	+0.4
TUC				pmax	pmax		
	comp=Z,17nm,1.1s						
TUC	**Tucson**	49.44	303	P	P	05 35 50.8	-0.4
	baz=104						
PV02	**Paradox Valley**	49.57	311	eP	P	05 35 52.7	+0.5
	comp=Z,24nm,1.0s						
PV07	**Paradox Valley**	49.58	311	eP	P	05 35 52.4	+0.1
	comp=Z,12nm,0.9s						
PV13	**Radium Mtn., P**	49.61	311	eP	P	05 35 52.5	0.0
	comp=Z,25nm,1.0s						
PV12	**Saucer Basin,**	49.65	311	eP	P	05 35 53.2	+0.3
	comp=Z,26nm,1.0s						
PV03	**Paradox Valley**	49.67	311	eP	P	05 35 53.1	+0.1
	comp=Z,18nm,1.0s						
PV11	**David Mesa, Pa**	49.70	311	eP	P	05 35 53.4	+0.2
PV11				epP	pP	05 36 15.9	+3.1
PV16	**Nyswonger Mesa**	49.73	311	eP	P	05 35 53.6	+0.1
	comp=Z,13nm,0.9s						
K22A	**Casper**	49.75	317	eP	P	05 35 52.8	-0.6
K22A				epP	pP	05 36 15.2	+2.1
K22A	**Casper**	49.75	317	P	P	05 35 52.5	-0.9
	baz=116						
PV04	**Paradox Valley**	49.76	311	eP	P	05 35 58.7	+5.1
	comp=Z,18nm,1.0s						
PV17	**East Wray Mesa**	49.76	311	eP	P	05 35 53.7	0.0
	comp=Z,13nm,0.8s						
PV19	**Morning Glory**	49.78	311	eP	P	05 35 53.8	0.0
	comp=Z,11nm,0.8s						
PV14	**Lion Creek, Pa**	49.84	311	eP	P	05 35 54.3	0.0
PV14				epP	pP	05 36 16.8	+2.9
O20A	**White River Ci**	49.91	314	P	P	05 35 54.4	-0.3
	baz=112						
X16A	**Lo Mia Camp, P**	50.50	306	eP	P	05 36 00.1	+0.8
	comp=Z,19nm,1.4s						
WUAZ	**Wupatki**	50.74	307	eP	P	05 36 01.9	+0.9
	comp=Z,18nm,0.8s						
WUAZ	**Wupatki**	50.74	307	P	P	05 36 01.4	+0.3
	baz=106,SNR=8.4						
214A	**Organ Pipe Nat**	51.03	302	P	P	05 36 02.8	-0.3
	baz=102						
DGMT	**Dagmar**	51.15	325	eP	P	05 36 04.0	+0.3
	comp=Z,96nm,0.9s						
DGMT	**Dagmar**	51.15	325	P	P	05 36 03.7	0.0
	baz=122,SNR=12						
GO06	**Curarrehue**	51.18	189	eP	P	05 36 04.8	+0.7
	comp=Z,35nm,0.9s						
SRU	**San Rafael Swe**	51.19	312	eP	P	05 36 04.4	0.0
	comp=Z,15nm,0.9s						
SRU	**San Rafael Swe**	51.19	312	eP	P	05 36 04.4	0.0
SRU				pmax	pmax		
	comp=Z,15nm,0.9s						
LAO	**LASA Array**	51.42	322	eP	P	05 36 05.4	-0.4
	comp=Z,14nm,0.8s						
LAO	**LASA Array**	51.42	322	P	P	05 36 05.4	-0.4
	baz=119,SNR=9.2						
TMUT	**Trail Mountain**	51.75	312	eP	P	05 36 08.7	0.0
	comp=Z,15nm,1.0s						
PD31	**Pinedale Array**	51.83	316	eP	P	05 36 07.3	-1.9
PDAR	**Pinedale Array**	51.83	316	P	P	05 36 07.8	-1.3
	comp=Z,6.6nm,0.6s,baz=110,slow=9.1,SNR=81						
PDAR				PcP	PcP	05 37 20.2	-1.0
	comp=Z,6.1nm,0.8s,baz=103,slow=6.4,SNR=6.2						
PDAR				ScP	ScP	05 41 06.5	-4.6
	comp=Z,3.3nm,0.9s,baz=110,slow=5.1,SNR=8.6						
PDAR				LR	LR	05 59 14.6	
	comp=Z,156nm,21.4s,baz=103,slow=37						
BW06	**Boulder Array**	51.83	316	eP	P	05 36 07.9	-1.2
	comp=Z,15nm,1.1s						
BW06	**Boulder Array**	51.83	316	P	P	05 36 08.0	-1.2
	baz=113,SNR=15						
MTPU	**Mount Pierson**	52.09	310	eP	P	05 36 11.8	+0.5
	comp=Z,6.0nm,0.9s						
PLCA	**Paso Flores**	52.17	188	eP	P	05 36 12.4	+1.0
	comp=Z,57nm,1.1s						
PLCA	**Paso Flores**	52.17	188	eP	P	05 36 12.4	+1.0
PLCA				pmax	pmax		
	comp=Z,57nm,1.1s						
KNB	**Kanab**	52.28	308	eP	P	05 36 13.1	+0.6
	comp=Z,13nm,0.9s						
KNB	**Kanab**	52.28	308	eP	P	05 36 13.1	+0.6
KNB				pmax	pmax		
	comp=Z,13nm,0.9s						
JLU	**Jordanelle**	52.36	313	eP	P	05 36 13.2	0.0
	comp=Z,21nm,1.2s						
TCUT	**Toone Canyon**	52.51	314	eP	P	05 36 13.7	-0.6
	comp=Z,32nm,1.3s						
NLU	**North Lily Min**	52.60	312	eP	P	05 36 14.8	-0.1
NLU				epP	pP	05 36 34.0	-0.6
RLMT	**Red Lodge**	52.60	319	eP	P	05 36 14.4	-0.4
	comp=Z,9.5nm,1.0s						
RLMT	**Red Lodge**	52.60	319	P	P	05 36 14.3	-0.6
	baz=115,SNR=7.5						
LCMT	**Little Creek M**	52.60	308	eP	P	05 36 15.6	+0.7
	comp=Z,2.9nm,0.7s						
CTU	**Camp Tracy**	52.61	313	eP	P	05 36 14.6	-0.3
CTU				epP	pP	05 36 37.1	+2.5
W13A	**Hualapai Mount**	52.62	306	eP	P	05 36 15.7	+0.6
	comp=Z,18nm,1.1s						
PDMCI	**Parker Dam,Lak**	52.64	305	P	P	05 36 14.7	-0.3
	baz=103						
SZCU	**Shurtz Canyon**	52.64	309	eP	P	05 36 15.3	+0.1
SZCU				epP	pP	05 36 37.8	+2.8
CCUT	**Cedar City**	52.84	309	eP	P	05 36 17.0	+0.3
CCUT				epP	pP	05 36 35.8	-0.7
LOHW	**Long Hollow**	52.87	317	eP	P	05 36 16.2	-0.7
	comp=Z,4.3nm,0.9s						
AHID	**Auburn Hatcher**	52.88	316	eP	P	05 36 16.1	-0.9
	comp=Z,9.4nm,0.9s						
AHID				ePcP	PcP	05 37 24.9	-0.2
SNOW	**Snow King Moun**	52.91	317	eP	P	05 36 17.6	+0.4
	comp=Z,8.3nm,1.0s						
REDW	**Red Top Meadow**	52.94	317	eP	P	05 36 16.7	-0.7
	comp=Z,35nm,1.5s						
TPAW	**Teton Pass**	53.05	317	eP	P	05 36 16.7	-1.6
	comp=Z,6.1nm,0.9s						
GCMT	**Greycliff**	53.14	320	eP	P	05 36 18.4	-0.3
GCMT				epP	pP	05 36 38.0	-0.4
FXWY	**Fox Creek**	53.16	317	eP	P	05 36 18.2	-0.8
	comp=Z,4.8nm,1.0s						
IMW	**Indian Meadow**	53.20	317	eP	P	05 36 20.0	+0.6
	comp=Z,4.4nm,0.9s						
DUG	**Dugway, Tooele**	53.21	312	eP	P	05 36 18.8	-0.5
	comp=Z,8.0nm,0.8s						
DUG	**Dugway, Tooele**	53.21	312	P	P	05 36 18.8	-0.5
	baz=108,SNR=14						
FCC	**Fort Churchill**	53.34	340	eP	P	05 36 18.2	-1.4
	comp=Z,10nm,0.8s						
FCC	**Fort Churchill**	53.34	340	eP	P	05 36 18.3	-1.4
IRM	**Iron Mountain**	53.42	304	P	P	05 36 20.9	+0.1
	baz=102,SNR=8.6						
PSUT	**Pine Spring**	53.49	310	eP	P	05 36 21.9	+0.5
	comp=Z,12nm,0.9s						
YMR	**Madison River**	53.52	318	eP	P	05 36 22.4	+0.8
	comp=Z,7.9nm,1.0s						
BC3	**Big Chuckawall**	53.56	304	P	P	05 36 22.1	+0.1
	baz=102						
BGU	**Big Grassy Mou**	53.60	313	eP	P	05 36 21.8	-0.4
	comp=Z,13nm,0.8s						
FFC	**Flin Flon**	53.65	332	eP	P	05 36 19.5	-2.6
	comp=Z,7.4nm,0.8s						
FFC				epP	pP	05 36 41.8	0.0
FFC	**Flin Flon**	53.65	332	i P	P	05 36 22.6	+0.5
HVU	**Hansel Valley**	53.70	314	eP	P	05 36 22.0	-0.9
	comp=Z,7.7nm,0.9s						
HVU	**Hansel Valley**	53.70	314	eP	P	05 36 22.0	-0.9
HVU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YHB	**Horse Butte**	53.70	318	eP	P	05 36 23.4	+0.4
	comp=Z,13nm,0.8s						
QLMT	**Earthquake Lak**	53.89	318	eP	P	05 36 25.1	+0.8
GMRC	**Granite Mounta**	53.97	305	P	P	05 36 24.3	-0.6
	baz=102						
BELC	**Belle Mtn. Jos**	54.08	304	P	P	05 36 25.1	-0.6
	baz=102						
EGMT	**Eagleton**	54.16	322	eP	P	05 36 25.6	-0.5
	comp=Z,53nm,1.1s						
EGMT	**Eagleton**	54.16	322	P	P	05 36 25.5	-0.5
	baz=116,SNR=11						
MONP2	**Monument Peak**	54.21	303	P	P	05 36 26.7	-0.1
	baz=101						
PFVI	**Vila Bisbo**	54.24	52	eP	P	05 36 32.3	+5.6
	comp=Z,59nm,1.5s						
BOZ	**Bozeman (W)**	54.31	319	eP	P	05 36 26.0	-1.3
	comp=Z,24nm,1.5s						
BOZ	**Bozeman (W)**	54.31	319	eP	P	05 36 26.0	-1.3
BOZ				pmax	pmax		
	comp=Z,25nm,1.5s						
BOZ	**Bozeman (W)**	54.31	319	P	P	05 36 26.4	-0.9
	baz=113,SNR=10						
TUQ	**Turquoise Moun**	54.32	306	P	P	05 36 27.5	0.0
	baz=103						
MORF	**Marmelete**	54.42	52	eP	P	05 36 30.4	+2.4
	comp=Z,37nm,1.8s						
HEC	**Hector,Ludlow**	54.52	305	P	P	05 36 28.7	-0.2
	baz=102						
SHOC	**Shoshone, Teco**	54.70	306	P	P	05 36 30.3	+0.3
	baz=103						
PNCL	**Nicolau / Gran**	54.71	51	eP	P	05 36 32.0	+1.9
R11A	**Troy Canyon, C**	54.75	309	eP	P	05 36 31.0	+0.4
R11A				epP	pP	05 36 52.9	+2.4
R11A	**Troy Canyon, C**	54.75	309	P	P	05 36 30.6	0.0
	baz=105,SNR=5.7						
DLMT	**Dillon**	54.85	318	eP	P	05 36 31.0	-0.1
DLMT				epP	pP	05 36 52.0	+1.0
DLMT				ePcP	PcP	05 37 33.4	+0.9
HRY	**Holter Researc**	54.89	320	eP	P	05 36 31.0	-0.3
TPNV	**Topopah Spring**	54.91	307	eP	P	05 36 32.6	+0.8
TPNV				epP	pP	05 36 55.1	+3.4
TPNV	**Topopah Spring**	54.91	307	eP	P	05 36 32.6	+0.8
TPNV				e*PP	pP	05 36 55.1	+3.4
TPNV	**Topopah Spring**	54.91	307	P	P	05 36 31.9	+0.1
	baz=104,SNR=5.2						
GSC	**Goldstone, Bar**	54.99	305	P	P	05 36 31.9	-0.4
	baz=102						
RRX	**Edison Barstow**	55.06	305	P	P	05 36 31.8	-0.9
	baz=102						
ELK	**Elko**	55.14	312	eP	P	05 36 33.2	-0.3
	comp=Z,2.9nm,0.7s						
ELK				ePcP	PcP	05 37 34.7	+0.8
ELK	**Elko**	55.14	312	eP	P	05 36 33.2	-0.3
ELK				e		05 37 34.7	
ELK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ELK	**Elko**	55.14	312	LR	LR	06 01 07.0	
	comp=Z,153nm,21.8s,baz=96,slow=37						
PMTG	**Montargil**	55.19	50	eP	P	05 36 35.3	+1.8
	comp=Z,26nm,1.5s						
PTOM	**Tomar**	55.20	49	eP	P	05 36 33.1	-0.5
PCAS	**Casmilo, Conde**	55.25	49	eP	P	05 36 36.1	+2.1
	comp=Z,36nm,1.8s						
FURC	**Furnace Creek,**	55.29	307	P	P	05 36 34.2	0.0
	baz=103						
HLID	**Hailey**	55.43	316	eP	P	05 36 34.9	-0.6
	comp=Z,9.3nm,0.8s						
HLID	**Hailey**	55.43	316	P	P	05 36 34.9	-0.6
	baz=109,SNR=10						
PTO	**Porto**	55.48	47	eP	P	05 36 37.1	+1.6
PESTR	**Estremoz**	55.62	50	eP	P	05 36 38.8	+2.2
	comp=Z,30nm,1.5s						
MPMC	**Manual Prospec**	55.69	306	P	P	05 36 37.0	-0.4
	baz=102						
LRMC	**Laurel Mtn Rad**	55.73	305	P	P	05 36 37.4	-0.2
	baz=102,SNR=5.4						
DAC	**Darwin (Calif)**	55.82	306	eP	P	05 36 40.0	+1.7
DAC				epP	sP	05 37 02.5	-4.6
DAC	**Darwin (Calif)**	55.82	306	eP	P	05 36 40.0	+1.7
DAC				e*PP	sP	05 37 02.5	-4.6
PVIS	**Viseu**	55.88	48	eP	P	05 36 42.3	+3.8
	comp=Z,40nm,1.6s						
PCBR	**Castelo Branco**	55.95	49	eP	P	05 36 40.9	+2.0
	comp=Z,25nm,1.5s						
POLO	**Lamas de Olo**	56.13	47	eP	P	05 36 42.2	+1.8
	comp=Z,23nm,2.0s						
CWC	**Cottonwood Cre**	56.24	306	P	P	05 36 41.1	-0.2
	baz=102						
MSO	**Missoula**	56.27	320	P	P	05 36 40.6	-0.6
	baz=112						
SFJD	**Kangerlussuaq**	56.35	5	eP	P	05 36 42.1	+0.8
	comp=Z,20nm,0.8s						
SFJD	**Kangerlussuaq**	56.35	5	i P	P	05 36 42.0	+0.7
	comp=Z,19nm,0.8s						
SFJD	**Kangerlussuaq**	56.35	5	eP	P	05 36 42.1	+0.8
SFJD				pmax	pmax		
	comp=Z,20nm,0.8s						
SFJD	**Kangerlussuaq**	56.35	5	P	P	05 36 40.7	-0.6
	comp=Z,19nm,0.8s,baz=203,slow=8.4,SNR=8.0						
MVO	**Moncorvo**	56.63	48	eP	P	05 36 39.3	-4.6
	comp=Z,33nm,2.0s						
DBIC	**Dimbokro**	56.64	89	P	P	05 36 44.5	+0.3
	comp=Z,3.2nm,0.3s,baz=269,slow=6.8,SNR=12						
NV11	**Mina Array Sit**	56.73	309	eP	P	05 36 44.8	0.0
	comp=Z,0.7nm,1.5s						
MDT	**Midelt**	56.79	58	P	P	05 36 45.2	+0.1
	comp=Z,5.5nm,0.8s,baz=290,slow=7.2,SNR=8.9						
NV01	**Mina Array Sit**	56.84	309	eP	P	05 36 45.1	-0.5
NVAR	**Mina Array Bea**	56.84	309	P	P	05 36 45.1	-0.5
	comp=Z,2.0nm,0.7s,baz=122,slow=6.9,SNR=10.0						
NVAR				LR	LR	06 02 57.7	
	comp=Z,166nm,20.6s,baz=118,slow=38						
VES	**Vestal, Richgr**	56.92	306	P	P	05 36 45.7	-0.2
	baz=101						
MLAC	**Mammoth, Mammo**	57.08	308	P	P	05 36 47.0	-0.3
	baz=102						
OMMB	**Old Mammoth Mi**	57.20	308	eP	P	05 36 48.6	+0.4
	comp=Z,17nm,1.0s						
MDPB	**Devils Postpil**	57.27	308	eP	P	05 36 49.6	+0.9
	comp=Z,15nm,1.1s						
YERR	**Yerington**	57.68	309	eP	P	05 36 51.8	+0.4
	comp=Z,27nm,1.2s						
BMO	**Blue Mountains**	57.81	316	eP	P	05 36 51.0	-1.2
BMO				epP	pP	05 37 11.6	-0.6
BMO	**Blue Mountains**	57.81	316	eP	P	05 36 51.0	-1.2
BMO				e*PP	pP	05 37 11.6	-0.6
J08A	**Circle Bar Ran**	58.19	314	eP	P	05 36 54.1	-0.8
J08A				epP	pP	05 37 17.5	+2.6
PAB	**San Pablo**	58.22	50	eP	P	05 36 57.1	+2.0
	comp=Z,17nm,1.0s						
PAB	**San Pablo**	58.22	50	eP	P	05 36 57.1	+2.0
PAB				pmax	pmax		
	comp=Z,17nm,1.0s						
ILULI	**Ilulissat**	58.48	5	⇓iP	P	05 36 57.0	+0.8
	comp=Z,46nm,0.9s						
ILULI	**Ilulissat**	58.48	5	⇓iP	P	05 36 57.0	+0.8
ILULI				pmax	pmax		
	comp=Z,46nm,0.9s						
ESDC	**Sonseca Array**	58.54	50	P	P	05 36 59.0	+1.7
	comp=Z,7.1nm,0.9s,baz=257,slow=6.9,SNR=27						
ESLA	**Sonseca Array**	58.54	50	eP	P	05 36 59.3	+2.0
	comp=Z,11nm,0.9s						
ES19	**SONSECA Array**	58.60	50	eP	P	05 36 59.0	+1.3
NEW	**Newport**	58.79	320	eP	P	05 36 57.5	-1.4
	comp=Z,22nm,0.9s						
NEW	**Newport**	58.79	320	eP	P	05 36 57.5	-1.4
NEW				pmax	pmax		
	comp=Z,22nm,0.9s						
NEW	**Newport**	58.79	320	P	P	05 36 57.6	-1.3
	baz=110,SNR=17						
G08A	**Pilot Rock**	59.06	316	eP	P	05 36 60.0	-1.0
	comp=Z,5.1nm,1.1s						
I07A	**Izee**	59.10	315	eP	P	05 37 00.3	-0.9
	comp=Z,12nm,0.9s						
C09A	**Chrisman Ranch**	59.37	319	eP	P	05 37 02.1	-0.7
	comp=Z,9.8nm,0.9s						
HAWA	**Hanford**	59.76	318	eP	P	05 37 04.8	-0.8
	comp=Z,5.7nm,0.9s						
O03E	**Paynes Creek**	59.88	310	P	P	05 37 05.2	-1.4
	baz=102						
PINE	**Pine Mountain**	60.03	314	eP	P	05 37 07.9	+0.2
	comp=Z,5.8nm,0.8s						
J05D	**Fort Rock, OR**	60.12	314	P	P	05 37 08.3	0.0
	baz=104,SNR=5.3						
M04C	**Macdoel**	60.22	312	P	P	05 37 08.5	-0.5
	baz=102,SNR=5.3						
B08A	**Colville Reser**	60.22	320	eP	P	05 37 07.6	-1.1
B08A				epP	pP	05 37 29.2	+0.3
L04D	**Klamath Falls**	60.65	312	P	P	05 37 10.7	-1.2
	baz=102						
J04D	**Umpqua Nationa**	60.73	313	P	P	05 37 11.6	-0.9
	baz=103						
LTY	**Liberty**	60.76	318	eP	P	05 37 11.5	-0.9
	comp=Z,17nm,1.0s						
YBH	**Yreka Blue Hor**	60.84	312	LR	LR	06 04 42.8	
	comp=Z,120nm,21.6s,baz=94,slow=37						
F05D	**White Salmon**	60.91	317	P	P	05 37 12.6	-0.9
	baz=105						
I04A	**Tendick Farm,**	61.07	314	P	P	05 37 12.7	-1.9
	baz=103						
LON	**Longmire**	61.37	317	eP	P	05 37 15.4	-1.2
	comp=Z,13nm,1.4s						
LON	**Longmire**	61.37	317	eP	P	05 37 15.4	-1.2
LON				pmax	pmax		
	comp=Z,13nm,1.4s						
H04D	**Lebanon**	61.46	315	P	P	05 37 15.0	-2.1
	baz=103						
E04D	**Cinebar**	61.83	317	P	P	05 37 17.5	-2.1
	baz=104						
B05A	**Bryant**	61.96	319	P	P	05 37 18.8	-1.6
	baz=106						
G03D	**McMinnville, O**	61.98	315	P	P	05 37 19.9	-0.7
	baz=103						
J01E	**Myrtle Point**	62.02	313	P	P	05 37 20.4	-0.4
	baz=102						
TORD	**Torodi Ar. Bea**	62.23	81	P	P	05 37 21.7	-1.1
	comp=Z,2.7nm,0.4s,baz=287,slow=4.8,SNR=42						
TORD				LR	LR	06 04 30.8	
	comp=Z,37nm,19.8s,baz=300,slow=36						
TORD				PKP2bc		06 06 34.8	
	comp=Z,0.8nm,0.9s,baz=99,slow=4.5,SNR=3.7						
A04D	**Lummi Island**	62.47	319	P	P	05 37 22.9	-0.8
	baz=105						
LLLB	**Lillooet**	62.48	322	eP	P	05 37 22.7	-1.2
	comp=Z,23nm,1.0s						
EFI	**East Falkland**	62.62	177	i P	P	05 37 25.3	+0.8
EFI				pmax	pmax		
	comp=Z,29nm,1.1s						
PGC	**Sidney**	62.93	319	eP	P	05 37 25.9	-0.9
	comp=Z,31nm,1.0s						
SUMG	**Summit**	63.04	8	eP	P	05 37 28.1	+0.5
	comp=Z,97nm,1.0s						
SUMG	**Summit**	63.04	8	⇑iP	P	05 37 28.7	+1.1
	comp=Z,243nm,1.0s						
SUMG	**Summit**	63.04	8	⇑iP	P	05 37 28.7	+1.1
SUMG				pmax	pmax		
	comp=Z,240nm,1.0s						
YKA	**Yellowknife Ar**	63.47	336	P	P	05 37 28.0	-2.1
	comp=Z,2.4nm,0.7s,baz=109,slow=7.5,SNR=45						
YKA				LR	LR	06 04 04.3	
	comp=Z,20nm,21.8s,baz=112,slow=35						
SCO	**Scoresbysund**	64.37	14	eP	P	05 37 36.9	+1.0
	comp=Z,41nm,1.3s						
SCO	**Scoresbysund**	64.37	14	i P	P	05 37 36.6	+0.7
SCO	**Scoresbysund**	64.37	14	i P	P	05 37 36.6	+0.7
GO10	**Punta Arenas**	64.46	186	eP	P	05 37 39.9	+3.1
	comp=Z,116nm,1.4s						
TAM	**Tamanrasset**	65.23	70	eP	P	05 37 45.0	+2.4
	comp=Z,8.1nm,0.9s						
TAM	**Tamanrasset**	65.23	70	eP	P	05 37 45.0	+2.4
TAM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TULEG	**Thule**	65.52	358	eP	P	05 37 41.5	-1.7
	comp=Z,8.6nm,0.8s						
USHA	**Ushuaia**	65.90	184	P	P	05 37 47.0	+1.0
	comp=Z,20nm,0.8s,baz=354,slow=6.9						
RES	**Resolute Bay**	66.19	351	LR	LR	06 04 27.3	
	comp=Z,154nm,19.5s,baz=154,slow=34						
DOU	**Dourbes**	66.62	40	P	P	05 37 51.5	+0.7
BEBN	**Eben Emael**	67.43	40	⇑P	P	05 37 57.4	+1.5
WLF	**Walferdange**	67.54	41	⇑P	P	05 37 57.7	+1.1
MEM	**Membach**	67.61	40	P	P	05 37 58.1	+1.0
ECH	**Echery**	67.97	42	eP	P	05 38 00.3	+0.8
ECH				epP	pP	05 38 21.6	+1.6
ECH	**Echery**	67.97	42	eP	P	05 38 00.3	+0.8
ECH				e*PP	pP	05 38 21.6	+1.6
KEST	**Kesra**	68.55	56	LR	LR	06 07 08.0	
	comp=Z,55nm,18.6s,baz=210,slow=35						
STU	**Stuttgart**	69.39	42	eP	P	05 38 08.2	0.0
STU				epP	PcP	05 38 31.2	0.0
STU	**Stuttgart**	69.39	42	eP	P	05 38 08.2	0.0
STU				e*PP	PcP	05 38 31.2	0.0
DAVA	**Damuels**	69.69	44	eP	P	05 38 11.3	+1.0
	comp=Z,12nm,0.8s						
DAVA				ePcP	PcP	05 38 33.2	+0.5
	comp=Z,20nm,0.8s						
FETA	**Feichten**	70.24	44	eP	P	05 38 14.6	+0.9
	comp=Z,13nm,0.9s						
FETA				epP	PcP	05 38 36.9	+1.9
	comp=Z,19nm,1.0s						
RETA	**Reutte**	70.30	43	eP	P	05 38 14.6	+0.7
	comp=Z,5.4nm,0.9s						
RETA				epP	PcP	05 38 37.1	+1.9
	comp=Z,9.6nm,1.1s						
MUD	**Monsted U'grnd**	70.47	34	i P	P	05 38 16.0	+1.4
MUD	**Monsted U'grnd**	70.47	34	i P	P	05 38 16.0	+1.4
MOTA	**Moosalm**	70.52	44	eP	P	05 38 16.2	+0.8
	comp=Z,7.0nm,0.8s,SNR=9.0						
MOTA				epP	PcP	05 38 38.3	+2.1
	comp=Z,14nm,0.9s						
SQTA	**Sankt Quirin**	70.58	44	eP	P	05 38 16.6	+0.9
	comp=Z,18nm,1.0s,SNR=8.2						
SQTA				epP	PcP	05 38 38.1	+1.7
	comp=Z,19nm,0.9s						
WATA	**Walderalm**	70.84	44	eP	P	05 38 18.3	+1.0
	comp=Z,3.0nm,0.8s						
WATA				epP	sP	05 38 41.4	-5.3
	comp=Z,4.1nm,0.7s						
WTTA	**Wattenberg**	70.88	44	eP	P	05 38 18.2	+0.6
	comp=Z,5.9nm,0.9s						
ABTA	**Abfaltersbach**	71.44	44	eP	P	05 38 21.5	+0.6
	comp=Z,5.8nm,0.8s						
ABTA				epP	PcP	05 38 43.5	+3.4
	comp=Z,14nm,1.2s						
NKC	**Novy Kostel**	71.64	41	eP	P	05 38 23.2	+1.2
NKC				epP	PcP	05 38 43.6	+2.9
NKC	**Novy Kostel**	71.64	41	eP	P	05 38 23.2	+1.2
NKC				e		05 38 43.6	
KBA	**Koelnbreinsper**	72.03	44	eP	P	05 38 25.1	+0.6
	comp=Z,11nm,0.9s						
KBA				epP	sP	05 38 48.0	-5.8
	comp=Z,28nm,1.0s						
NBO00	**NORSAR Array S**	72.06	29	eP	P	05 38 26.0	+1.8
NAO01	**NORSAR Array S**	72.08	29	eP	P	05 38 25.9	+1.6
CLL	**Collm**	72.08	40	⇑iP	P	05 38 24.6	+0.1
	comp=Z,9.0nm,1.1s						
CLL				i pP	pP	05 38 45.0	-0.2
CLL				esP	sP	05 38 55.0	+1.1
CLL				e(S)	S	05 47 32.0	-8.3
CLL				esS	sS	05 48 16.0	+0.8
CLL	**Collm**	72.08	40	⇑iP	P	05 38 24.6	+0.1
CLL				i *PP	pP	05 38 45.0	-0.2
CLL				eS	S	05 47 32.0	-8.3
CLL				e*SS	sS	05 48 16.0	+0.8
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MYKA	**Terra Mystica**	72.21	45	eP	P	05 38 26.1	+0.6
	comp=Z,10.0nm,1.0s						
MYKA				epP	pP	05 38 48.1	+1.9
	comp=Z,18nm,1.2s						
NB2	**NORSAR Subarra**	72.27	29	P	P	05 38 26.5	+1.0
	comp=Z,67nm,2.0s,baz=262,slow=6.2						
NB2	**NORSAR Subarra**	72.27	29	P	P	05 38 26.5	+1.0
	baz=262,slow=6.2						
NOA	**NORSAR Array B**	72.27	29	P	P	05 38 26.1	+0.6
	comp=Z,6.0nm,0.8s,baz=262,slow=6.0,SNR=20						
KHC	**Kasperske Hory**	72.30	42	eP	P	05 38 26.8	+0.8
	comp=Z,8.3nm,1.6s						
KHC	**Kasperske Hory**	72.30	42	eP	P	05 38 27.0	+1.1
KHC				epP	sP	05 38 49.1	-6.2
KHC	**Kasperske Hory**	72.30	42	eP	P	05 38 27.0	+1.1
KHC				e		05 38 49.1	
GEC2	**GERESS Array S**	72.36	42	eP	P	05 38 23.6	-2.8
	comp=Z,11nm,0.9s						
GEC2				ePcP	pP	05 38 47.2	+0.1

GEC2	GERESS Array S	72.36	42	eP	P	05 38 23.6	-2.8
GEC2				e		05 38 47.2	
GEC2				pmax	pmax		
	comp=Z,11nm,0.9s						
GERES	GERESS Array B	72.36	42	P	P	05 38 26.8	+0.4
	comp=Z,5.5nm,0.8s,baz=246,slow=10.0,SNR=17						
GERES				LR	LR	06 06 56.0	
	comp=Z,41nm,18.9s,baz=266,slow=33						
NC602	NORSAR Array S	72.38	30	eP	P	05 38 28.1	+2.0
JAVS	Javornik	72.47	45	i P	P	05 38 27.9	+0.8
NC405	NORSAR Array S	72.52	29	eP	P	05 38 28.8	+1.8
BRG	Berggiesshubel	72.64	40	eP	P	05 38 28.6	+0.7
	comp=Z,6.0nm,1.0s						
BRG	Berggiesshubel	72.64	40	eP	P	05 38 28.6	+0.7
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MOA	Molln	72.69	43	eP	P	05 38 28.8	+0.6
	comp=Z,5.9nm,0.8s,SNR=8.8						
INK	Inuvik	72.92	338	eP	P	05 38 28.1	-1.0
	comp=Z,6.0nm,1.0s						
INK	Inuvik	72.92	338	eP	P	05 38 28.1	-1.0
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PRU	Pruhonice	72.97	41	eP	P	05 38 31.5	+1.7
PRU				epP	sP	05 38 53.7	-5.5
PRU	Pruhonice	72.97	41	eP	P	05 38 31.5	+1.7
PRU				e		05 38 53.7	
VISS	Visnje	73.01	45	eP	P	05 38 31.3	+1.1
SOKA	Soboth	73.17	45	eP	P	05 38 31.1	-0.1
	comp=Z,2.3nm,0.9s						
PERS	Pernice	73.22	45	i P	P	05 38 31.6	+0.1
ARSA	Arzberg	73.52	44	eP	P	05 38 33.9	+0.7
	comp=Z,4.3nm,0.7s						
TREC	Trest	73.56	42	eP	P	05 38 34.5	+1.2
TREC				epP	sP	05 38 56.7	-6.0
TREC	Trest	73.56	42	eP	P	05 38 34.5	+1.2
TREC				e		05 38 56.7	
EPYK	Eagle Plains	73.74	336	P	P	05 38 33.5	-0.6
	baz=100						
CONA	Conrad Observa	73.76	43	eP	P	05 38 35.3	+0.6
	comp=Z,7.7nm,1.8s						
UPC	Upice	73.94	41	eP	P	05 38 37.0	+1.5
UPC				ex	x	05 38 42.7	
UPC				epP	pP	05 38 56.5	+0.2
UPC	Upice	73.94	41	eP	P	05 38 37.0	+1.5
UPC				e		05 38 56.5	
KSP	Ksiaz	74.13	40	eP	P	05 38 37.8	+1.1
KSP	Ksiaz	74.13	40	eP	P	05 38 37.7	+1.1
DPC	Dobruska-Polom	74.13	41	eP	P	05 38 37.9	+1.2
DPC				ex	x	05 38 43.7	
DPC				epP	sP	05 39 00.4	-5.7
DPC	Dobruska-Polom	74.13	41	eP	P	05 38 37.9	+1.2
DPC				e		05 39 00.4	
KRUC	Moravsky	74.14	42	eP	P	05 38 37.4	+0.7
VRAC	Vranov	74.28	42	⇓iP	P	05 38 38.9	+1.4
VRAC	Vranov	74.28	42	⇓P	P	05 38 38.9	+1.4
VRAC	Vranov	74.28	42	eP	P	05 38 38.7	+1.2
LOF	Lofoten	74.41	22	eP	P	05 38 39.0	+1.2
MOR8	Moi Rana	74.46	24	eP	P	05 38 40.0	+1.8
ZST	Bratislava	74.60	43	eP	P	05 38 39.3	-0.1
ZST				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZST	Bratislava	74.60	43	eP	P	05 38 39.3	-0.1
MODS	Modra-Piesok	74.72	43	eP	P	05 38 41.0	+0.9
MODS				pmax	pmax		
	comp=Z,17nm,0.9s						
MODS	Modra-Piesok	74.72	43	eP	P	05 38 41.0	+0.9
MORC	Moravsky Berou	74.91	41	eP	P	05 38 42.5	+1.3
	comp=Z,7.8nm,1.2s						
MORC	Moravsky Berou	74.91	41	⇑iP	P	05 38 42.5	+1.3
MORC	Moravsky Berou	74.91	41	eP	P	05 38 42.5	+1.3
MORC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MORC	Moravsky Berou	74.91	41	eP	P	05 38 42.2	+1.0
STEI	Steigen	75.01	22	eP	P	05 38 42.7	+1.4
PMSA	Palmer Station	75.67	181	P	P	05 38 46.3	+1.3
	comp=Z,30nm,0.8s,baz=0.2,slow=7.7,SNR=3.5						
VYHS	Vyhne	75.76	43	eP	P	05 38 46.9	+0.8
VYHS				e		05 39 07.2	
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VYHS	Vyhne	75.76	43	eP	P	05 38 46.9	+0.8
VYHS				epP	pP	05 39 07.2	+0.3
LANS	Liptovska Anna	76.16	42	eP	P	05 38 49.2	+0.8
LANS	Liptovska Anna	76.16	42	eP	P	05 38 49.2	+0.8
OJC	Ojcow	76.36	41	eP	P	05 38 50.6	+1.2
OJC	Ojcow	76.36	41	eP	P	05 38 50.7	+1.3
	comp=Z,12nm,1.1s						
OJC	Ojcow	76.36	41	eP	P	05 38 50.6	+1.2
HSPB	Hornsund (broa	76.46	13	eP	P	05 38 52.0	+2.5
PSZ	Piszkesteto	76.48	43	⇑iP	P	05 38 47.8	-2.4
PSZ	Piszkesteto	76.48	43	⇑P	P	05 38 47.8	-2.4
TRO	Tromso	76.53	21	eP	P	05 38 51.4	+1.5
KLNR	Kaliningrad	76.56	36	i P	P	05 38 50.2	-0.2
KLNR				pmax	pmax		
	comp=Z,35nm,1.1s						
SPA0	Spitsbergen Ar	76.83	12	eP	P	05 38 52.5	+0.9
SIRR	Siria	77.75	45	⇓iP	P	05 38 58.9	+1.6
BZS	Buzias	77.76	46	⇓iP	P	05 38 59.0	+1.6
BZS	Buzias	77.76	46	⇓P	P	05 38 59.0	+1.6
IL1	Eielson Array	77.82	334	eP	P	05 38 55.7	-1.6
IL1				ePcP	pP	05 39 13.5	-4.8
ILAR	Eielson Array	77.82	334	P	P	05 38 55.8	-1.5
	comp=Z,1.7nm,0.6s,baz=94,slow=4.6,SNR=31						
ILAR				LR	LR	06 13 16.9	
	comp=Z,177nm,21.9s,baz=114,slow=36						
ILB	Eielson Array	77.82	334	eP	P	05 38 56.0	-1.3
MDVR	Moldovita	77.88	46	⇓iP	P	05 38 59.3	+1.2
KTK1	Kautokeino	78.03	22	eP	P	05 38 59.9	+1.5
POKR	Poker Plat Res	78.05	334	P	P	05 38 57.9	-0.7
	baz=90						
HAMF	Hammerfest	78.19	20	eP	P	05 39 00.5	+1.3
TRPA	Tarpa	78.24	43	⇑iP	P	05 39 01.2	+1.3
KWP	Kalwaria Pacla	78.26	41	eP	P	05 39 01.8	+1.7
KWP	Kalwaria Pacla	78.26	41	eP	P	05 39 01.8	+1.7
SUW	Suwalki	78.32	37	eP	P	05 39 01.3	+1.1
SUW	Suwalki	78.32	37	eP	P	05 39 01.6	+1.3
SUW	Suwalki	78.32	37	eP	P	05 39 01.6	+1.3
MDM	Murphy Dome	78.39	334	eP	P	05 38 59.3	-1.2
	comp=Z,16nm,1.0s						
DRGR		78.44	44	⇓iP	P	05 39 02.5	+1.3
DRGR		78.44	44	⇓P	P	05 39 02.5	+1.3
GZR	Gura Zlata	78.59	46	⇑iP	P	05 39 03.1	+1.1
ARCES	ARCESS Array B	78.83	21	P	P	05 39 03.5	+0.7
	comp=Z,46nm,0.9s,baz=265,slow=5.6,SNR=56						
ARE0	ARCESS Array S	78.83	21	eP	P	05 39 04.1	+1.3
	comp=Z,2.8nm,0.9s						
ARE0	ARCESS Array S	78.83	21	eP	P	05 39 03.9	+1.1
CJR	Cluj-Napoca	79.06	44	⇓iP	P	05 39 06.3	+1.7
CJR	Cluj-Napoca	79.06	44	⇓P	P	05 39 06.3	+1.7
VTS	Vitosha	79.14	49	⇑iP	P	05 39 07.4	+2.1
VTS	Vitosha	79.14	49	⇑P	P	05 39 07.4	+2.1
KEV	Kevo	79.34	21	eP	P	05 39 06.8	+1.2
	comp=Z,54nm,1.1s						
KEV	Kevo	79.34	21	eP	P	05 39 06.8	+1.2
KEV				pmax	pmax		
	comp=Z,54nm,1.1s						
TRF	Thorofare Moun	79.36	333	eP	P	05 39 05.3	-0.6
	comp=Z,9.7nm,0.8s						
FINES	FINESS Array B	79.45	29	P	P	05 39 07.0	+0.7
	comp=Z,5.0nm,0.4s,baz=273,slow=3.6,SNR=91						
FINES				LR	LR	06 08 23.0	
	comp=Z,33nm,21.9s,baz=231,slow=31						
MLY	Manley	79.45	334	eP	P	05 39 05.1	-1.2
	comp=Z,19nm,1.7s						
ARCR	ARCALIA	79.54	44	⇑iP	P	05 39 09.1	+2.0
ARR	Arges	79.89	46	⇑iP	P	05 39 10.2	+1.0
ISAL	Salakas	79.92	35	eP	P	05 39 09.9	+1.0
ISAL				IAmb	IAmb	05 39 16.0	
	comp=Z,6.3nm,0.7s						
IZAR	Zarasai	79.97	35	eP	P	05 39 10.2	+1.0
IZAR				IAmb	IAmb	05 39 11.2	
	comp=Z,5.8nm,0.4s						
IIGN	Ignalina	79.99	35	eP	P	05 39 10.3	+0.9
IIGN				IAmb	IAmb	05 39 12.1	
	comp=Z,5.7nm,0.8s						
VSU	Vasula	80.01	32	ceP	P	05 39 10.0	+0.7
VSU				pmax	pmax		
	comp=Z,47nm,1.3s						
VSU	Vasula	80.01	32	eP	P	05 39 09.1	-0.2
VSU				IAmb	IAmb	05 39 10.6	
	comp=Z,40nm,0.8s						
BUR08	Bucovina Ar. S	80.06	43	eP	P	05 39 12.2	+2.1
BUR04	Bucovina Ar. S	80.07	43	eP	P	05 39 11.8	+1.7
BURAR	Bucovina Array	80.08	43	⇓iP	P	05 39 12.3	+2.1
BURAR	Bucovina Array	80.08	43	⇓P	P	05 39 12.3	+2.1
VOIR		80.18	46	⇓iP	P	05 39 14.1	+3.4
VOIR		80.18	46	⇓P	P	05 39 14.1	+3.4
IDID	Didziasalis	80.29	35	eP	P	05 39 11.9	+1.0
IDID				IAmb	IAmb	05 39 13.7	
	comp=Z,7.4nm,0.8s						
NACGM	Naroch	80.36	36	e	P	05 39 12.0	+0.7
BIZ	Bicaz	80.75	44	⇓iP	P	05 39 16.8	+3.2
PRAR	RASCA	80.79	44	⇑iP	P	05 39 20.2	+6.4
MLR	Muntele Rosu	80.80	45	eP	P	05 39 15.4	+1.3
MLR				epP	pP	05 39 36.4	+1.3
MLR	Muntele Rosu	80.80	45	⇓iP	P	05 39 15.8	+1.7
MLR	Muntele Rosu	80.80	45	⇓P	P	05 39 15.8	+1.7
MLR	Muntele Rosu	80.80	45	P	P	05 39 15.1	+1.0
	comp=Z,5.4nm,0.8s,baz=307,slow=4.1,SNR=12						
IDI	Anoyia	81.22	56	P	P	05 39 17.2	+0.8
	comp=Z,15nm,0.8s,baz=118,slow=0.9,SNR=5.5						
PLOR	Plostina	81.25	45	⇓iP	P	05 39 20.1	+3.7
PLOR	Plostina	81.25	45	⇓P	P	05 39 20.1	+3.7
VRI	Vrincioaia	81.30	45	⇑iP	P	05 39 23.0	+6.4
VRI	Vrincioaia	81.30	45	⇑P	P	05 39 23.0	+6.4
KIEV	Kiev	82.32	40	eP	P	05 39 22.5	+0.7
	comp=Z,5.2nm,1.2s						
KIEV	Kiev	82.32	40	i P	P	05 39 21.7	-0.1
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LVZ	Lovozero	82.32	22	eP	P	05 39 22.9	+1.4
	comp=Z,39nm,0.9s						
LVZ	Lovozero	82.32	22	ceP	P	05 39 22.4	+0.9
LVZ				pmax	pmax		
	comp=Z,30nm,1.0s						
AKASG	Malin Array Be	82.33	40	P	P	05 39 21.8	0.0
	comp=Z,3.0nm,0.9s,baz=263,slow=4.8,SNR=12						
AKASG				LR	LR	06 11 03.0	
	comp=Z,29nm,20.4s,baz=290,slow=32						
TSUM	Tsumeb	84.03	111	eP	P	05 39 33.4	+2.0
	comp=Z,8.0nm,0.9s						
TMCR	Tamitsa	84.46	26	eP	P	05 39 31.4	-1.1
TMCR				pmax	pmax		
	comp=Z,35nm,1.0s						
OBN	Obninsk	85.88	35	eP	P	05 39 41.0	+1.2
	comp=Z,25nm,0.7s						
OBN	Obninsk	85.88	35	ceP	P	05 39 40.6	+0.9
OBN				eS	S	05 50 03.9	-2.7
OBN				pmax	pmax		
	comp=Z,25nm,0.7s						
OBN	Obninsk	85.88	35	P	P	05 39 40.7	+0.9
	comp=Z,3.9nm,0.5s,baz=357,slow=3.5,SNR=8.2						
OBN				LR	LR	06 14 19.6	
	comp=Z,14nm,21.8s,baz=190,slow=33						
KLMR	Klimovskoe	85.97	29	eP	P	05 39 38.0	-2.1
KLMR				pmax	pmax		
	comp=Z,50nm,1.1s						
KLMR	Klimovskoe	85.97	29	eP	P	05 39 38.0	-2.1
KLMR				AMP		05 39 42.5	
	comp=Z,50nm,1.1s						
MOS	Moscow	86.31	34	eP	P	05 39 41.8	-0.1
MOS				e		05 40 03.3	
MOS				e		05 49 58.1	
MOS				pmax	pmax		
	comp=Z,29nm,1.0s						
BR131	Keskin Array S	87.34	50	eP	P	05 39 48.6	+1.1
BRTR	Keskin Array B	87.34	50	P	P	05 39 48.2	+0.7
	comp=Z,3.1nm,0.9s,baz=256,slow=4.7,SNR=17						
LPSR	Galich'ya Gora	87.86	37	eP	P	05 39 49.9	+0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	88.37	38	eP	P	05 39 51.6	-0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PRGR	Permogore	88.53	27	⇓iP	P	05 39 54.0	+1.6
PRGR				pmax	pmax		
	comp=Z,66nm,0.9s						
ANN	Anapa	88.91	45	eP	P	05 39 46.1	-8.5
ANN				e*PP	pP	05 40 17.7	+1.7
ANN				e		05 43 20.6	
ANN				pmax	pmax		
	comp=Z,71nm,1.3s						
VNA1	Neumayer--Stat	89.27	164	P	P	05 39 56.9	+1.4
VNA3	Neumayer Olymp	89.28	165	P	P	05 39 56.9	+1.3
VNA2	Neumayer--Watz	89.67	164	P	P	05 39 58.8	+1.3
	baz=301,slow=6.8						
VRH	Novokhopyorsk	89.91	38	eP	P	05 40 00.1	+1.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SNAA	Sanae	91.30	164	P	P	05 40 06.4	+1.2
SNAA	Sanae	91.30	164	eP	P	05 40 06.8	+1.6
	comp=Z,12nm,0.9s						
SNAA	Sanae	91.30	164	i P	P	05 40 05.6	+0.4
KIRV	Kirov	91.45	29	P	P	05 40 06.2	+0.1
	comp=Z,12nm,0.4s,baz=329,slow=0.5,SNR=7.3						
KIV	Kislovodsk	92.76	44	eP	P	05 40 13.0	+0.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,33nm,20.0s						
BOSA	Boshof	92.92	118	P	P	05 40 15.1	+1.4
	comp=Z,5.6nm,0.7s,baz=272,slow=3.8,SNR=12						
BOSA				LR	LR	06 21 10.2	
	comp=Z,33nm,18.5s,baz=234,slow=35						
KBZ	Khabaz	92.98	45	P	P	05 40 15.2	+1.7
	comp=Z,2.5nm,0.8s,baz=252,slow=8.1,SNR=3.8						
KBZ				LR	LR	06 18 59.7	
	comp=Z,22nm,19.2s,baz=194,slow=33						
NEY	Neytrino	93.01	45	i P	P	05 40 14.0	+0.1
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL	Bilibino	93.90	344	i P	P	05 40 18.1	+0.8
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GNI	Garni	95.44	47	i P	P	05 40 25.6	+0.5
GNI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	Arti	96.82	29	eP	P	05 40 31.4	+0.7
	comp=Z,5.5nm,0.8s						
ARU	Arti	96.82	29	c iP	P	05 40 31.0	+0.2
ARU						05 44 26.1	
ARU				S	SKSac	05 50 58.1	-2.6
ARU				SS	SS	05 58 19.9	-2.2
ARU				pmax	pmax		
	comp=Z,16nm,2.0s						
NRIK	Noril'sk	96.98	10	LR	LR	06 22 58.9	
	comp=Z,72nm,22.0s,baz=16,slow=35						
TIXI	Tiksi	97.11	357	ceP	P	05 40 30.5	-1.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s						
QSPA	South Pole Qui	101.10	180	P	Pdif	05 40 51.8	+2.0
	comp=Z,2.8nm,1.1s,baz=104,slow=4.4,SNR=3.4						
BVAR	Borovoye Array	104.34	27	Pdiff	Pdif	05 41 05.5	+1.0
	comp=Z,0.6nm,0.7s,baz=345,slow=5.1,SNR=4.5						
ZALV	Zalesovo Beam	109.37	20	PKiKP	PKiKP	05 45 29.0	-0.9
	comp=Z,0.8nm,0.7s,baz=262,slow=4.4,SNR=4.4						
MKAR	Makanchi Array	114.14	26	PKP	PKiKP	05 45 37.9	-1.4
	comp=Z,0.3nm,0.8s,baz=0.0,slow=2.9,SNR=2.7						
MKAR				SKKPbc	SKKPbc	05 59 55.5	-3.4
	comp=Z,0.6nm,0.9s,baz=90,slow=2.4,SNR=3.9						
KSH	Kashi	116.32	35	PKP	PKPdf	05 45 41.4	-2.4
KSH				sPKP		05 46 20.2	
KSH				PP	PP	05 46 46.4	-3.4
KSH				SKS	SKSdf	05 52 44.8	-4.4
KSH				SKKS	SKKSac	05 53 36.3	-8.3
KSH	Kashi	116.32	35	SS	SS	06 02 43.2	-4.4
KSH				AMB	AMB		
	comp=Z,310nm,4.9s						
KSH				LR	LR		
	comp=N,120nm,4.2s						
KSH				LR	LR		
	comp=E,150nm,4.3s						
KSH				LR	LR		
	comp=Z,490nm,5.6s						
WMQ	Urumqi	118.80	25	eP	PKPdf	05 45 48.0	-0.3
WMQ				LR	LR		
	comp=N,150nm,29.7s						
WMQ				LR	LR		
	comp=E,190nm,26.5s						
WMQ				LR	LR		
	comp=Z,120nm,23.5s						
SONM	Songino Array	120.43	9	PKP	PKPdf	05 45 51.1	-0.3
	comp=Z,1.4nm,0.8s,baz=283,slow=1.2,SNR=12						
SONM				PP	PP	05 47 16.7	-0.9
	comp=Z,1.3nm,1.0s,baz=0.0,slow=6.5,SNR=6.2						
SONM				PKKPbc	PKKPbc	05 55 56.5	-3.0
	comp=Z,1.4nm,1.0s,baz=191,slow=3.5,SNR=6.6						
USRK	Ussuriysk Ar.	123.49	348	PKP	PKPdf	05 45 54.4	-2.8
	comp=Z,2.5nm,0.7s,baz=346,slow=3.0,SNR=4.3						
GTA	Gaotai	126.99	18	⇓PKP	PKPdf	05 46 04.4	+0.1
GTA				sPKP		05 46 40.1	
GTA				PP	PP	05 48 06.6	+4.8
GTA				SKS	SKSdf	05 53 03.6	-5.8
GTA	Gaotai	126.99	18	SS	SS	06 05 03.1	+0.4
GTA				AMB	AMB		
	comp=Z,110nm,7.3s						
GTA				LR	LR		
	comp=N,98nm,21.6s						
GTA				LR	LR		
	comp=E,230nm,21.3s						
GTA				LR	LR		
	comp=Z,130nm,20.6s						
HHC	Hu-ho-hao-te	127.97	6	eP	PKPdf	05 46 06.6	+0.5
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.3s						
MAT	Matsushiro	128.90	339	PKP	PKPdf	05 46 06.8	-1.0
MJAR	Matsushiro Arr	128.90	339	PKP	PKPdf	05 46 06.8	-1.1
	comp=Z,6.3nm,0.8s,baz=22,slow=0.5,SNR=11						
MJAR				SKPbc	SKPbc	05 49 19.7	
	comp=Z,2.0nm,0.8s,baz=317,slow=2.4,SNR=5.0						
BJT	Baijiatuau	129.11	2	ePKPdf	PKPdf	05 46 07.6	-0.5
BJT	Baijiatuau	129.11	2	ePKIKP	PKPdf	05 46 07.6	-0.5
KSRS	Korea Array	130.79	349	PKP	PKPdf	05 46 10.2	-1.2
	comp=Z,4.4nm,0.9s,baz=63,slow=0.3,SNR=14						
KSRS				SKPbc	SKPbc	05 49 25.9	-2.6
	comp=Z,4.6nm,0.8s,baz=347,slow=4.7,SNR=13						
KSAR	Wonju Array Be	130.81	350	PKP	PKPdf	05 46 10.2	-1.2
KSAR				SKPbc	SKPbc	05 49 25.9	-2.7
KSAR	Wonju Array Be	130.81	350	PKIKP	PKPdf	05 46 10.2	-1.2
LZH	Lanzhou	131.22	15	ePKP	PKPdf	05 46 12.7	+0.2
LZH				pPKP	sPKPdf	05 46 38.9	-4.1
LZH				sPKP		05 46 51.2	
XAN	Xi'an	134.29	10	P	PKPdf	05 46 17.9	-0.3
XAN				pP	pPKPdf	05 46 31.4	-9.1
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN	Xi'an	134.29	10	ePKPdf	PKPdf	05 46 17.8	-0.3
XAN	Xi'an	134.29	10	ePKIKP	PKPdf	05 46 17.8	-0.4
CD2	Chengdu	136.06	18	eP	PKPdf	05 46 20.5	-1.1
NJ2	Nanjing	137.08	359	eP	PKPdf	05 46 23.5	+0.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ENH	Enshi	138.07	11	ePKPdf	PKPdf	05 46 25.0	-0.2
GYA	Guiyang	141.09	16	ePKP	PKPdf	05 46 29.6	-1.4
GYA				sPKP		05 47 06.0	
GYA				PP	PP	05 49 34.3	+3.0
GYA				AMB	AMB		
	comp=Z,100nm,8.0s						
CHTO	Chiang Mai	144.87	32	ePKPdf	PKPab	05 46 37.2	+0.4
CHTO	Chiang Mai	144.87	32	ePKIKP	PKPab	05 46 37.2	+0.4
CHTO	Chiang Mai	144.87	32	P	PKPab	05 46 37.1	+0.4
CMMT	Chiang Mai	144.87	32	P	PKPab	05 46 37.0	+0.2
CMAR	Chiang Mai Arr	145.16	33	PKPbc	PKPbc	05 46 38.9	+1.0
	comp=Z,81nm,0.8s,baz=315,slow=5.4,SNR=272						
CMAR				SKPbc	SKPbc	05 50 10.1	-0.8
	comp=Z,1.4nm,0.5s,baz=308,slow=4.4,SNR=3.4						
CMAR				SKKPbc	SKKPbc	05 58 06.5	-2.1
	comp=Z,0.7nm,0.3s,baz=168,slow=3.6,SNR=5.1						
SUKH	Sukhothai	146.33	33	P	PKPbc	05 46 42.3	+0.9
UTTA	Uttaradit	146.59	31	P	PKPdf	05 46 42.5	+1.9
UMPA	Umpang Tak	146.95	35	P	PKPbc	05 46 44.7	+1.4
PBKT	Sadao Pong	147.79	32	P	PKPbc	05 46 46.0	+0.5
UTHA	Uthaitani	147.80	35	P	PKPbc	05 46 46.5	+0.9
SRDT	SRDT	148.58	37	P	PKPbc	05 46 48.6	+1.0
STKA	Stephens Creek	149.93	223	PKP	PKPdf	05 46 46.2	+0.5
	comp=Z,13nm,0.9s,baz=99,slow=3.8,SNR=12						
STKA				PKPbc	PKPbc	05 46 51.0	+0.4
	comp=Z,13nm,0.9s,baz=97,slow=3.5,SNR=13						
PHET	Kaeng Krachan	150.01	38	P	PKPbc	05 46 52.5	+1.3
CTA	Charters Tower	151.33	248	PKP	PKPdf	05 46 48.1	-0.1
	comp=Z,8.5nm,1.0s,baz=56,slow=3.6,SNR=5.5						
CTA				PKPbc	PKPbc	05 46 54.2	-0.1
	comp=Z,37nm,0.7s,baz=106,slow=2.8,SNR=41						
ASAR	Alice Springs	160.31	229	PKP	PKPdf	05 46 59.8	-0.2
	comp=Z,1.6nm,0.9s,baz=113,slow=2.0,SNR=13						
ASAR				PP	PP	05 51 22.9	0.0
	comp=Z,0.3nm,0.8s,baz=157,slow=6.8,SNR=4.4						
WRA	Warramunga Arr	161.92	239	PKP	PKPdf	05 47 01.3	-0.5
	comp=Z,5.5nm,1.0s,baz=115,slow=0.4,SNR=34						
WRA				PKPab	PKPab	05 47 46.1	-2.0
	comp=Z,2.0nm,0.8s,baz=114,slow=5.1,SNR=8.5						
FITZ	Fitzroy Crossi	169.80	226	PKP	PKPdf	05 47 08.0	-0.1
	comp=Z,1.7nm,0.7s,baz=90,slow=3.4						
FITZ				PKPab	PKPab	05 48 22.1	-0.6
	comp=Z,1.3nm,0.6s,baz=198,slow=3.2,SNR=5.4						

MEX 10 05:27:33.5±0.9, 16°.95N×100°.88W, h14^{km}±13^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.59	81	eP	Pg	05 27 43.2	-1.9
CAIG				eS	Sg	05 27 50.9	-2.1
ZIIG	Zihuatanejo	0.86	319	i P	Pg	05 27 46.9	-3.3
ZIIG				eS	Sg	05 27 58.4	-3.1
ACP2	Acapulco	0.95	95	i P	Pb	05 27 51.2	-0.5
ACP2				i S	Sb	05 28 02.1	-2.1
ARIG	Puente Sto Nin	1.41	21	eP	Pn	05 27 54.8	-4.0
ARIG				i S	Sn	05 28 11.5	-5.8
MEIG	Mezcala	1.54	51	i P	Pn	05 27 58.0	-2.7
MEIG				eS	Sn	05 28 15.6	-4.9
PLIG	Platanillo	1.94	42	eP	Pn	05 28 03.0	-3.1
PLIG				eS	Sn	05 28 25.9	-4.5
YAIG	Yautepec	2.56	42	i P	Pn	05 28 13.6	-1.2
YAIG				i S	Sn	05 28 42.9	-3.0

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*IDC **10** 05:32:23.3±1.6, 11°.12S×165°.70E, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.7/36, mbtmp3.8/6, ML4.0/2, Error ellipse: s-maj=39.7km s-min=28.1km az=124.0*

*ISCJB **10** 05:32:26.1±1.2, 11°.2S±0°.1×165°.6E±0°.2, h30^{km}, mb3.6/4, Error ellipse: s-maj=23.9km s-min=16.9km az=154.1*

ISC 10 05:32:27.9±1.3**, 11°.2S**±0°.1×**165°.7E**±0°.2**, h30^{km}, n12, σ0^{s}.25**/6**, mb3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	Honiara	5.88	286	Pn	Pn	05 33 53.3	+0.2
	6.3nm,0.3s,baz=84,slow=10,SNR=2.3						
DZM	Mont Dzumac	10.88	176	Pn	Pn	05 35 02.0	+0.1
	0.8nm,0.3s,baz=331,slow=18,SNR=8.6						
H11S2	WAKE ISLAND Hy	29.47	2	T	T	06 08 43.3	
	baz=181,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.48	2	T	T	06 08 43.6	
	baz=181,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	29.49	2	T	T	06 08 44.6	
	baz=181,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	30.69	2	T	T	06 10 15.1	
	baz=182,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.70	2	T	T	06 10 15.3	
	baz=182,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	30.71	2	T	T	06 10 16.3	
	baz=182,slow=76,SNR=17						
WRA	Warramunga Arr	31.37	250	P	P	05 38 46.2	-0.2
	1.3nm,0.8s,baz=82,slow=9.3,SNR=12						
ASAR	Alice Springs	32.68	243	P	P	05 38 57.5	-0.3
	0.6nm,0.8s,baz=62,slow=9.6,SNR=4.4						
SONM	Songino Array	78.71	324	P	P	05 44 27.6	+0.1
	0.3nm,0.7s,baz=123,slow=5.3,SNR=2.5						
ILAR	Eielson Array	83.64	19	P	P	05 44 53.1	-0.1
	0.5nm,0.9s,baz=219,slow=5.1,SNR=3.8						

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*ISCJB **10** 05:35:40.8±0.8, 10°.97S±0°.07×165°.9E±0°.1, h10^{km}, mb4.0/7, Error ellipse: s-maj=17.6km s-min=10.0km az=167.4*

*IDC **10** 05:35:41.0±0.9, 10°.80S×165°.90E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx4.0/37, mbtmp4.2/10, ML4.6/2, MS3.2/1, Ms1 3.2/1, ms1mx2.7/40, Error ellipse: s-maj=28.1km s-min=20.9km az=119.0*

ISC 10 05:35:42.5±0.8**, 10°.84S**±0°.09×**165°.9E**±0°.1**, h10^{km}, n17, σ1^{s}.32**/14**, mb4.1**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	Honiara	6.07	283	Pn	Pn	05 37 12.5	+0.2
	19nm,0.3s,baz=159,slow=7.2,SNR=4.1						
DZM	Mont Dzumac	11.18	178	Pn	Pn	05 38 24.9	+2.4

	3.4nm,0.3s,baz=355,slow=11,SNR=18						
DZM				Sn	**Sn**	**05 40 25.3**	**-2.5**
	0.1nm,0.3s,baz=10,slow=3.7,SNR=1.8						
DZM				LR	LR	05 42 34.3	
	comp=Z,107nm,18.6s,baz=32,slow=37						
CTA	**Charters Tower**	**21.07**	**242**	P	**P**	**05 40 28.0**	**+1.0**
	4.8nm,0.7s,baz=70,slow=13,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**29.15**	**1**	T	T	06 12 07.4	
	baz=181,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**29.16**	**1**	T	T	06 12 07.4	
	baz=181,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**29.17**	**1**	T	T	06 12 05.8	
	baz=181,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**30.37**	**2**	T	T	06 13 36.9	
	baz=182,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**30.38**	**2**	T	T	06 13 38.6	
	baz=182,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	**30.39**	**2**	T	T	06 13 36.9	
	baz=182,slow=76,SNR=10						
WRA	**Warramunga Arr**	**31.74**	**250**	P	**P**	**05 42 05.8**	**-1.2**
	1.6nm,0.9s,baz=80,slow=9.1,SNR=9.9						
WRA				PcP	**PcP**	**05 44 59.2**	**+0.5**
	0.5nm,0.9s,baz=81,slow=2.7,SNR=3.6						
RPZ	**Rata Peaks**	**33.05**	**173**	P	**P**	**05 42 18.2**	**0.0**
	2.3nm,0.6s,baz=323,slow=4.2,SNR=1.4						
ASAR	**Alice Springs**	**33.06**	**243**	P	**P**	**05 42 17.9**	**-0.7**
	2.3nm,0.8s,baz=71,slow=9.9,SNR=21						
ASAR				PcP	**PcP**	**05 45 01.6**	**-0.7**
	0.5nm,0.8s,baz=65,slow=1.3,SNR=5.0						
SONM	**Songino Array**	**78.61**	**324**	P	**P**	**05 47 44.4**	**-0.3**
	1.1nm,0.9s,baz=123,slow=5.4,SNR=4.6						
ILAR	**Eielson Array**	**83.26**	**18**	P	**P**	**05 48 10.1**	**+1.2**
	1.3nm,0.8s,baz=225,slow=6.9,SNR=12						
MKAR	**Makanchi Array**	**93.50**	**317**	P	**P**	**05 48 59.0**	**+0.3**
	0.8nm,0.7s,baz=98,slow=6.2,SNR=8.4						
YKA	**Yellowknife Ar**	**94.70**	**27**	P	**P**	**05 49 02.2**	**-1.5**
	0.1nm,0.6s,baz=262,slow=4.7,SNR=3.7						
ARCES	**ARCESS Array B**	**116.18**	**346**	PKP	**PKPdf**	**05 54 25.1**	**-0.5**
	2.8nm,1.0s,baz=46,slow=2.6,SNR=4.5						

JMA 10 05:40:15.2±0.1, 38°.26N×144°.54E, h33^{km}, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.39**	**291**	P	Pn	05 40 53.7	+1.7
OFUJ				S	Sn	05 41 22.5	+2.3
JIKH	**Ishinomakikobu**	**2.42**	**272**	P	Pn	05 40 53.7	+1.3
JIKH				S	Sn	05 41 22.4	+1.5
JKMT	**Kesennumamotoy**	**2.47**	**284**	P	Pn	05 40 54.9	+1.8
JKMT				S	Sn	05 41 24.3	+2.3
MIYJ	**Miyakonagasawa**	**2.50**	**303**	P	Pn	05 40 55.1	+1.6
MIYJ				S	Sn	05 41 24.5	+1.7
JIO	**Ouri**	**2.52**	**275**	P	Pn	05 40 55.5	+1.8
JIO				S	Sn	05 41 25.2	+1.9
JMK	**Ichinoseki**	**2.69**	**286**	P	Pn	05 40 58.1	+1.9
JMK				*e*S	Sn	05 41 30.1	+2.5
JOM	**Ohasama**	**2.81**	**297**	P	Pn	05 40 59.7	+1.9
JOM				*e*S	Sn	05 41 33.1	+2.6
JANG	**Nango**	**3.16**	**313**	P	Pn	05 41 04.3	+1.7
JYK	**Kaneyama**	**3.34**	**283**	P	Pn	05 41 08.2	+3.1
JYK				*e*S	Sn	05 41 47.1	+3.5
JFT	**Otama**	**3.41**	**259**	P	Pn	05 41 08.2	+2.2
JFT				S	Sn	05 41 47.7	+2.4
JOT	**Ohata**	**4.12**	**320**	P	Pn	05 41 18.7	+3.0
JCH	**Churui**	**4.44**	**349**	P	Pn	05 41 20.3	+0.1
JCH				*e*S	Sn	05 42 08.6	-2.1
JKB	**Kayabe**	**4.51**	**325**	P	Pn	05 41 23.7	+2.5
JRY	**Ryogami san**	**5.03**	**245**	P	Pn	05 41 29.4	+1.0
JRY				*e*S	Sn	05 42 24.1	-1.3
NEM2	**Nemuro 2**	**5.18**	**10**	P	Pn	05 41 27.4	-2.9
NEM2				*e*S	Sn	05 42 22.5	-6.4
JOD2	**Odawara 2**	**5.30**	**237**	P	Pn	05 41 34.2	+2.1
JOSM	**Okushiri--Mats**	**5.44**	**316**	P	Pn	05 41 36.9	+3.0
JTKR	**Abashiri--Toko**	**5.72**	**355**	P	Pn	05 41 37.7	-0.1
JTKR				*e*S	Sn	05 42 38.8	-3.5
JHR	**Hokuryu**	**5.88**	**340**	P	Pn	05 41 42.9	+3.0

IDC 10 05:42:45.8±3.6, 10°.36S×166°.36E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.5/43, mbtmp3.6/4, ML4.2/1, Error ellipse: s-maj=76.7km s-min=45.3km az=85.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.65**	**180**	Pn	Pn	05 45 33.4	-0.1
	1.5nm,0.3s,baz=335,slow=7.6,SNR=20						
WRA	**Warramunga Arr**	**32.29**	**249**	P	P	05 49 15.9	-0.8
	0.2nm,0.5s,baz=82,slow=9.1,SNR=2.6						
ASAR	**Alice Springs**	**33.64**	**243**	P	P	05 49 29.1	+0.6
	0.4nm,0.6s,baz=63,slow=10,SNR=4.7						
MKAR	**Makanchi Array**	**93.43**	**317**	P	P	05 56 03.2	-0.1
	0.3nm,0.9s,baz=92,slow=4.5,SNR=2.7						

ISCJB ***10*** *05:50:15.0±0.2, 10°.83S±0°.03×165°.71E±0°.04, h10^{km}, mb4.7/69, MS4.1/15, Error ellipse: s-maj=5.5km s-min=4.9km az=21.9*

NEIC ***10*** *05:50:16.4±0.2, 10°.79S×165°.69E, h10^{km}, mb4.9/45, Error ellipse: s-maj=4.9km s-min=4.3km az=111.0*

GCMT ***10*** *05:50:19.4±0.4, 10°.86S±0°.02×165°.57E±0°.03, h22^{km}±1^{km}, MW4.9/57, Moment Tensor Solution. s23,c24; s57,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.87±.29; $M_{\theta\theta}$3.14±.18; $M_{\phi\phi}$-1.27±.16; $M_{r\theta}$0.27±.21; $M_{\theta\phi}$-0.43±.11; $M_{\phi r}$-1.12±.31; Best double couple: $M_0$2.97000×10^{16} NP1:ϕ_s306.00000°, δ60.00000°, λ-45.00000°. NP2: ϕ_s64.00000°, δ52.00000°, λ-140.00000°. Principal axes: T 3.2100, Plg4.0000°, Azm7.0000°; N -0.4810, Plg37.0000°, Azm100.0000°; P -2.7300, Plg52.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***10*** *05:50:22.1±2.9, 10°.88S×165°.76E, h52^{km}±25^{km}, mb4.2/24, mb1 4.4/26, mb1mx4.3/44, mbtmp4.5/26, ML4.9/2, MS4.1/13, Ms1 4.1/13, ms1mx3.8/28 Error ellipse: s-maj=16.7km s-min=13.1km az=80.0*

ISC 10 05:50:16.1±0.4, 10°.86S±0°.05×165°.83E±0°.06, h10^{km}, n155, σ1^s.40/152, mb4.8/69, MS4.2/15, 1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.96**	**283**	*e*P	**Pn**	**05 51 47.0**	**+2.5**
HNR				*e*S	**Sn**	**05 52 58.0**	**+5.0**
HNR	**Honiara**	**5.96**	**283**	*e*Pn	**Pn**	**05 51 42.1**	**-2.4**
HNR				S	**Sn**	**05 52 53.5**	**+0.5**
HNR	**Honiara**	**5.96**	**283**	P	**Pn**	**05 51 46.6**	**+2.1**
	38nm,0.3s,baz=160,slow=2.7,SNR=11						
HNR				S	**Sn**	**05 52 53.5**	**+0.5**
	47nm,0.3s,baz=90,slow=3.0,SNR=3.7						
HNR				LR	LR	05 54 16.1	
	comp=Z,2μm,18.3s,baz=98,slow=40						
MARNC	**Mare, Loyalty**	**10.77**	**169**	*e*Pn	**Pn**	**05 52 51.8**	**+1.3**
DZM	**Mont Dzumac**	**11.17**	**177**	*e*Pn	**Pn**	**05 52 58.9**	**+2.9**
	113nm,0.6s						
DZM				*e*LR	LR	05 55 33.6	
	comp=Z,1μm,23.8s						
DZM	**Mont Dzumac**	**11.17**	**177**	*e*Pn	**Pn**	**05 52 57.0**	**+1.0**
DZM				S	**Sn**	**05 54 57.6**	**-3.5**
DZM	**Mont Dzumac**	**11.17**	**177**	P	**Pn**	**05 52 57.8**	**+1.7**
	8.2nm,0.3s,baz=42,slow=7.7,SNR=60						
DZM				S	**Sn**	**05 54 57.6**	**-3.5**
	0.2nm,0.3s,baz=318,slow=16,SNR=1.9						
DZM				LR	LR	05 56 57.2	
	comp=Z,713nm,21.1s,baz=33,slow=36						
MSVF	**Nonsavu**	**13.67**	**121**	*e*Pn	**Pn**	**05 53 31.3**	**+1.1**
RABL	**Rabaul**	**15.08**	**295**	*e*Pn	**Pn**	**05 53 46.8**	**-2.6**
EIDS	**Eidsvold**	**20.09**	**222**	P	Pn	05 54 52.9	+1.0
	baz=20,SNR=8.6						
EIDS	**Eidsvold**	**20.09**	**222**	*e*P	**P**	**05 54 50.1**	**+0.1**
	35nm,1.0s						
MANU	**Manus Island**	**20.32**	**294**	*e*P	**P**	**05 54 51.0**	**-1.6**
	83nm,0.8s						
CTA	**Charters Tower**	**20.96**	**242**	P	Pn	05 55 00.8	-1.3
	42nm,0.9s,baz=72,slow=12,SNR=14						
CTAO	**Charters Tower**	**20.96**	**242**	*e*P	**P**	**05 54 58.5**	**-1.0**
	47nm,0.9s						
MTSU	**Mount Surprise**	**22.04**	**248**	P	**P**	**05 55 12.6**	**+1.5**
	baz=22,SNR=13						
COEN	**Coen**	**22.34**	**260**	P	**P**	**05 55 14.7**	**+0.3**
	baz=22,SNR=8.0						
COEN	**Coen**	**22.34**	**260**	*e*P	**P**	**05 55 12.2**	**-2.2**
	26nm,1.1s						
RMQ	**Roma**	**22.39**	**224**	P	**P**	**05 55 17.1**	**+2.3**
	baz=23,SNR=21						
ARMA	**Armidale**	**23.52**	**212**	P	**P**	**05 55 28.4**	**+1.8**
	baz=24,SNR=4.7						
ARMA	**Armidale**	**23.52**	**212**	*e*P	**P**	**05 55 27.3**	**+0.7**
	26nm,1.1s						
KNTN	**Kanton**	**23.67**	**72**	*e*P	**P**	**05 55 29.7**	**+1.6**
	84nm,1.3s						
CMSA	**Cobar Meteorol**	**27.76**	**219**	P	**P**	**05 56 06.8**	**+1.6**
	baz=28,SNR=5.0						
CAN	**Canberra**	**28.77**	**209**	*e*P	**P**	**05 56 13.4**	**-0.8**
	30nm,1.4s						
URZ	**Urewera**	**29.10**	**162**	*e*P	**P**	**05 56 18.2**	**+1.2**
	16nm,1.1s						
URZ	**Urewera**	**29.10**	**162**	P	**P**	**05 56 18.2**	**+1.2**
	1.9nm,0.3s,baz=266,slow=13,SNR=2.6						
H11S2	**WAKE ISLAND Hy**	**29.17**	**2**	T	T	06 26 40.8	
	baz=184						
H11S3	**WAKE ISLAND Hy**	**29.18**	**2**	T	T	06 26 40.6	
	baz=184						
H11S1	**WAKE ISLAND Hy**	**29.19**	**2**	T	T	06 26 39.7	
	baz=184						
BKZ	**Black Stump Fm**	**29.75**	**163**	*e*P	**P**	**05 56 24.5**	**+1.6**
	28nm,1.3s						
H11N1	**WAKE ISLAND Hy**	**30.39**	**2**	T	T	06 28 10.0	
	baz=185						
H11N3	**WAKE ISLAND Hy**	**30.40**	**2**	T	T	06 28 11.1	
	baz=185						
H11N2	**WAKE ISLAND Hy**	**30.41**	**2**	T	T	06 28 10.5	
	baz=185						
STKA	**Stephens Creek**	**30.64**	**223**	P	**P**	**05 56 31.8**	**+1.1**
	baz=31,SNR=7.9						
STKA	**Stephens Creek**	**30.64**	**223**	*e*P	**P**	**05 56 30.3**	**-0.4**
	2.6nm,1.0s						
STKA	**Stephens Creek**	**30.64**	**223**	P	**P**	**05 56 31.5**	**+0.7**
	6.2nm,0.8s,baz=42,slow=11,SNR=11						
STKA				LR	LR	06 08 21.0	
	comp=Z,656nm,18.3s,baz=39,slow=35						
BFZ	**Birch Farm**	**31.10**	**165**	*e*P	**P**	**05 56 37.8**	**+3.1**
	36nm,1.1s						
THZ	**Tophouse**	**31.41**	**170**	*e*P	**P**	**05 56 38.8**	**+1.4**
	24nm,1.0s						
WR7	**Warramunga Arr**	**31.50**	**250**	P	**P**	**05 56 38.1**	**-0.5**
	baz=32						
WC3	**Warramunga Arr**	**31.60**	**250**	*e*P	**P**	**05 56 38.4**	**-1.0**
	12nm,0.9s						
WRAB	**Tennant Creek**	**31.62**	**250**	*e*P	**P**	**05 56 38.8**	**-0.7**
	14nm,0.9s						
WB2	**Warramunga Arr**	**31.62**	**250**	*e*P	**P**	**05 56 38.6**	**-0.9**
WB2				*e*pP	**P**	**05 56 38.8**	**-0.8**
WB2				*e*PcP	**PcP**	**05 59 32.3**	**+0.4**
WRA	**Warramunga Arr**	**31.63**	**250**	P	**P**	**05 56 39.0**	**-0.7**
	10.0nm,0.7s,baz=82,slow=9.1,SNR=93						
WRA				PcP	**PcP**	**05 59 31.1**	**-0.8**
	1.9nm,0.9s,baz=81,slow=3.0,SNR=6.8						
WRA				LR	LR	06 09 24.3	
	comp=Z,274nm,18.3s,baz=30,slow=36						
LTZ	**Lake Taylor**	**32.30**	**171**	*e*P	**P**	**05 56 46.9**	**+1.7**
	21nm,0.8s						
OXZ	**Oxford**	**32.80**	**172**	*e*P	**P**	**05 56 51.1**	**+1.5**
	38nm,1.2s						
AS17	**Alice Springs**	**32.88**	**243**	P	**P**	**05 56 50.0**	**-0.6**
	baz=33						
AS01	**Alice Springs**	**32.91**	**243**	*e*P	**P**	**05 56 50.4**	**-0.5**
AS01				*e*PcP	**PcP**	**05 59 35.4**	**0.0**
AS31	**Alice Springs**	**32.95**	**243**	*e*P	**P**	**05 56 50.8**	**-0.4**
	4.6nm,0.8s						
ASAR	**Alice Springs**	**32.95**	**243**	P	**P**	**05 56 50.8**	**-0.5**
	18nm,0.8s,baz=73,slow=9.6,SNR=126						
ASAR				PcP	**PcP**	**05 59 35.1**	**-0.4**
	2.5nm,0.9s,baz=76,slow=3.1,SNR=8.5						
ASAR				LR	LR	06 09 11.0	
	comp=Z,185nm,18.7s,baz=74,slow=34						
RPZ	**Rata Peaks**	**33.05**	**173**	*e*P	**P**	**05 56 53.0**	**+1.2**
	17nm,0.9s						
RPZ	**Rata Peaks**	**33.05**	**173**	P	**P**	**05 56 53.3**	**+1.5**
	6.8nm,0.8s,baz=256,slow=6.2,SNR=3.7						
MQZ	**McQueen's Vall**	**33.26**	**171**	*e*P	**P**	**05 56 54.1**	**+0.5**
	32nm,1.0s						
HTT	**Hallett**	**33.37**	**223**	P	**P**	**05 56 55.7**	**+0.9**
	baz=34,SNR=3.8						
RAR	**Rarotonga**	**34.55**	**112**	LR	LR	06 08 14.8	
	comp=Z,110nm,21.6s,baz=262,slow=31						
BBOO	**Buckleboo**	**35.02**	**227**	P	**P**	**05 57 09.9**	**+0.8**
	baz=35,SNR=6.0						
BBOO	**Buckleboo**	**35.02**	**227**	*e*P	**P**	**05 57 09.4**	**+0.4**
	22nm,0.9s						
WRKA	**Warakurna**	**38.25**	**243**	P	**P**	**05 57 36.8**	**+0.1**
	baz=38,SNR=12						
FITZ	**Fitzroy Crossi**	**39.51**	**255**	P	**P**	**05 57 47.9**	**+0.5**
	baz=40,SNR=14						
FITZ	**Fitzroy Crossi**	**39.51**	**255**	*e*P	**P**	**05 57 46.5**	**-0.9**
	14nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.51**	**255**	P	**P**	**05 57 47.5**	**+0.1**
	13nm,0.7s,baz=106,slow=6.3,SNR=35						
PPT2	**Papeete2**	**43.66**	**104**	*e*LR	LR	06 10 45.8	
	comp=Z,231nm,24.0s						
JCJ	**Chichijima**	**44.16**	**329**	LR	LR	06 15 37.6	
	comp=Z,95nm,19.6s,baz=133,slow=34						
MEEK	**Meekatharra**	**47.11**	**244**	P	**P**	**05 58 49.7**	**+1.0**
	baz=47,SNR=23						
KLBR	**Kellerberrin**	**48.88**	**237**	P	**P**	**05 59 02.8**	**+0.4**
	baz=49,SNR=4.8						
NWAO	**Narrogin (SRO)**	**49.64**	**236**	P	**P**	**05 59 09.1**	**+0.9**
	baz=50,SNR=5.7						
NWAO	**Narrogin (SRO)**	**49.64**	**236**	*e*P	**P**	**05 59 08.6**	**+0.4**
	35nm,0.9s						
NWAO	**Narrogin (SRO)**	**49.64**	**236**	P	**P**	**05 59 08.5**	**+0.4**
	30nm,1.0s,baz=268,slow=8.8,SNR=7.9						
MORW	**Morawa**	**49.79**	**241**	P	**P**	**05 59 10.4**	**+1.1**
	baz=50,SNR=4.7						
MORW	**Morawa**	**49.79**	**241**	*e*P	**P**	**05 59 09.4**	**+0.1**
	32nm,0.9s						
MUN	**Mundaring**	**50.25**	**237**	P	**P**	**05 59 13.8**	**+1.0**
	baz=50,SNR=4.3						
TAOE	**Nuku Hiva Isla**	**53.20**	**93**	*e*LR	LR	06 15 02.9	
	comp=Z,118nm,23.9s						
MJAR	**Matsushiro Arr**	**53.84**	**332**	P	**P**	**05 59 39.3**	**-0.1**
	7.2nm,0.9s,baz=165,slow=8.8,SNR=14						
MAT	**Matsushiro**	**53.84**	**332**	P	**P**	**05 59 39.8**	**+0.4**
MAT				*e*S	**S**	**06 07 13.2**	**-1.3**
KSRS	**Korea Array**	**59.77**	**326**	P	**P**	**06 00 22.0**	**+0.6**
	1.3nm,0.8s,baz=134,slow=7.2,SNR=4.4						
KSAR	**Wonju Array Be**	**59.78**	**325**	P	**P**	**06 00 22.0**	**+0.5**
KS01	**Wonju Array Si**	**59.80**	**326**	*e*P	**P**	**06 00 21.7**	**0.0**
NJ2	**Nanjing**	**61.95**	**315**	*e*P	**P**	**06 00 38.6**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USA0B	**Ussuriysk Arra**	**62.82**	**333**	*e*P	**P**	**06 00 41.8**	**-0.1**
	comp=Z,14nm,1.0s						
USRK	**Ussuriysk Ar.**	**62.82**	**333**	P	**P**	**06 00 43.0**	**+1.0**
	comp=Z,8.8nm,1.0s,baz=141,slow=7.3,SNR=8.9						
VNDA	**Vanda**	**66.68**	**181**	LR	LR	06 26 48.2	
	comp=Z,126nm,19.4s,baz=120,slow=33						
KLR	**Kul'dur**	**66.92**	**336**	P	**P**	**06 01 09.6**	**+1.0**
	comp=Z,5.6nm,1.1s,baz=135,slow=5.3,SNR=12						
ENH	**Enshi**	**67.85**	**309**	*e*P	**P**	**06 01 13.2**	**-1.7**
	comp=Z,3.5nm,0.6s						
GYA	**Guiyang**	**68.38**	**304**	P	**P**	**06 01 20.0**	**+1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	**Beijing**	**68.39**	**321**	P	**P**	**06 01 18.9**	**+0.8**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN	**Xi'an**	**70.06**	**312**	P	**P**	**06 01 28.8**	**+0.2**
XAN				pP	sP	06 01 38.5	+5.7
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN	**Xi'an**	**70.06**	**312**	*e*P	**P**	**06 01 28.4**	**-0.2**
	comp=Z,18nm,0.8s						
KMI	**Kunming**	**71.10**	**301**	P	**P**	**06 01 35.6**	**+0.2**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**71.74**	**320**	*e*P	**P**	**06 01 36.0**	**-2.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
CMAR	**Chiang Mai Arr**	**72.12**	**293**	P	**P**	**06 01 42.1**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=113,slow=4.6,SNR=7.0						
CD2	**Chengdu**	**72.56**	**307**	⇑P	**P**	**06 01 44.6**	**+0.8**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				pmax	pmax		
	comp=Z,180nm,4.7s						
SEY	**Seymchan**	**74.30**	**354**	P	**P**	**06 01 53.8**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=155,slow=8.6,SNR=4.1						
LZH	**Lanzhou**	**74.69**	**312**	*e*P	**P**	**06 01 58.3**	**+1.9**
LZH				pP	sP	06 02 04.6	+4.0
LZH				sP	PcP	06 02 08.4	-2.3
LZH				S	**S**	**06 11 36.0**	**+3.0**
LZH				sS	sS	06 11 50.0	+12
LZH	**Lanzhou**	**74.69**	**312**	SS	SS	06 16 21.2	+0.4
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.9s						
LZH				LR	LR		
	comp=N,310nm,11.9s						
LZH				LR	LR		
	comp=E,360nm,13.0s						
LZH				LR	LR		
	comp=Z,440nm,13.6s						
GAMB	**Gambell**	**76.37**	**10**	*e*P	**P**	**06 02 06.1**	**+0.9**
	comp=Z,9.3nm,0.9s						
KDAK	**Kodiak Island**	**76.37**	**21**	LR	LR	06 34 51.8	
	comp=Z,149nm,18.1s,baz=208,slow=35						
SONM	**Songino Array**	**78.56**	**324**	P	**P**	**06 02 18.5**	**+0.5**
	comp=Z,2.8nm,0.9s,baz=141,slow=6.5,SNR=19						
SONA1	**Songino Array**	**78.57**	**324**	*e*P	**P**	**06 02 17.9**	**-0.2**
BILL	**Bilibino**	**78.69**	**0**	*e*P	**P**	**06 02 18.3**	**+0.2**
	comp=Z,9.9nm,0.9s						
GTA	**Gaotai**	**78.99**	**314**	*e*P	**P**	**06 02 21.2**	**+0.6**
GTA				pP	sP	06 02 26.1	+1.3
GTA				sP	PcP	06 02 28.4	-0.7
GTA				S	**S**	**06 12 21.0**	**+1.3**
GTA	**Gaotai**	**78.99**	**314**	sS	sS	06 12 28.7	+3.5
GTA	**Gaotai**	**78.99**	**314**	SKS	**SKSac**	**06 12 31.6**	**-5.1**
GTA	**Gaotai**	**78.99**	**314**	SS	SS	06 17 31.0	+5.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,170nm,7.5s						
GTA				LR	LR		
	comp=N,150nm,19.7s						
GTA				LR	LR		
	comp=E,320nm,22.8s						
GTA				LR	LR		
	comp=Z,170nm,22.9s						
QSPA	**South Pole Qui**	**79.15**	**180**	*e*P	**P**	**06 02 21.1**	**+0.1**
	comp=Z,33nm,1.0s						
TLY	**Talaya**	**82.02**	**326**	*e*P	**P**	**06 02 36.8**	**+0.4**
	comp=Z,14nm,0.9s						
IM3	**Indian Mountai**	**82.22**	**16**	*e*P	**P**	**06 02 37.7**	**+0.6**
WRH	**Wood River Hil**	**82.72**	**18**	*e*P	**P**	**06 02 40.6**	**+0.8**
	comp=Z,13nm,1.1s						
MDM	**Murphy Dome**	**83.03**	**18**	*e*P	**P**	**06 02 41.6**	**+0.2**
	comp=Z,12nm,1.1s						
COLA	**College**	**83.08**	**18**	*e*P	**P**	**06 02 41.2**	**-0.3**
	comp=Z,12nm,0.8s						
IL1	**Eielson Array**	**83.31**	**18**	*e*P	**P**	**06 02 42.6**	**-0.2**
ILAR	**Eielson Array**	**83.31**	**18**	P	**P**	**06 02 43.3**	**+0.5**
	comp=Z,4.2nm,0.9s,baz=233,slow=5.5,SNR=26						
ILB	**Eielson Array**	**83.31**	**18**	*e*P	**P**	**06 02 42.7**	**-0.1**
YBH	**Yreka Blue Hor**	**83.70**	**46**	P	**P**	**06 02 46.2**	**+0.7**
	comp=Z,2.7nm,1.0s,baz=313,slow=5.1,SNR=3.5						
AFDM	**Forest Hills D**	**84.01**	**49**	*e*P	**P**	**06 02 47.1**	**+0.1**
	comp=Z,6.5nm,1.2s						
DAWY	**Dawson**	**85.35**	**21**	*e*P	**P**	**06 02 54.8**	**+1.5**
	comp=Z,15nm,1.6s						
NV01	**Mina Array Sit**	**85.84**	**50**	*e*P	**P**	**06 02 56.9**	**+0.4**
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**06 02 57.4**	**+0.9**
	comp=Z,3.1nm,1.0s,baz=235,slow=5.2,SNR=8.7						
NVAR				LR	LR	06 35 01.0	
	comp=Z,131nm,18.3s,baz=273,slow=31						
TIXI	**Tiksi**	**85.92**	**349**	P	**P**	**06 02 55.1**	**-0.8**
	comp=Z,1.6nm,0.3s,baz=149,slow=4.5,SNR=6.0						
NV11	**Mina Array Sit**	**85.95**	**50**	*e*P	**P**	**06 02 58.0**	**+1.0**
	comp=Z,0.5nm,1.3s						
G08A	**Pilot Rock**	**87.45**	**43**	*e*P	**P**	**06 03 05.2**	**+1.1**
	comp=Z,6.3nm,1.2s						
SHPR	**Sheep Range**	**87.70**	**52**	*e*P	**P**	**06 03 06.9**	**+1.3**
	comp=Z,9.9nm,1.6s						
WMQ	**Urumqi**	**89.02**	**315**	P	**P**	**06 03 11.9**	**+0.3**
WMQ				pP	sP	06 03 16.4	+0.6
WMQ				sP	pP	06 03 19.1	+4.4
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.1s						
WMQ				LR	LR		
	comp=N,180nm,23.1s						
WMQ				LR	LR		
	comp=E,170nm,23.1s						
WMQ				LR	LR		
	comp=Z,120nm,25.9s						
LCMT	**Little Creek M**	**89.32**	**52**	*e*P	**P**	**06 03 14.4**	**+1.2**
	comp=Z,5.4nm,1.2s						
INK	**Inuvik**	**89.69**	**19**	LR	LR	06 43 36.2	
	comp=Z,113nm,18.1s,baz=328,slow=36						
MTPU	**Mount Pierson**	**90.38**	**51**	*e*P	**P**	**06 03 20.0**	**+1.6**
	comp=Z,4.9nm,1.2s						
MSU	**Marysvale**	**90.50**	**51**	*e*P	**P**	**06 03 20.4**	**+1.6**
HVU	**Hansel Valley**	**90.82**	**48**	*e*P	**P**	**06 03 21.1**	**+1.0**
	comp=Z,10nm,1.4s						
NLU	**North Lily Min**	**90.91**	**50**	*e*P	**P**	**06 03 21.0**	**+0.4**
	comp=Z,3.4nm,1.1s						
DLMT	**Dillon**	**91.79**	**44**	*e*P	**P**	**06 03 24.8**	**+0.3**
	comp=Z,11nm,1.4s						
PDAR	**Pinedale Array**	**93.36**	**47**	P	**P**	**06 03 32.7**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=255,slow=5.8,SNR=3.7						
MK01	**Makanchi Array**	**93.43**	**317**	*e*P	**P**	**06 03 28.9**	**-3.1**
MK31	**Makanchi Array**	**93.44**	**317**	*e*P	**P**	**06 03 31.6**	**-0.3**
MKAR	**Makanchi Array**	**93.44**	**317**	*e*P	**P**	**06 03 31.8**	**-0.2**
	comp=Z,22nm,0.8s						
MKAR				PKKP	**PKKPdf**	**06 20 36.5**	**-2.6**
MKAR	**Makanchi Array**	**93.44**	**317**	P	**P**	**06 03 32.0**	**0.0**
	comp=Z,3.5nm,0.8s,baz=98,slow=6.2,SNR=34						
MKAR				PKKP	**PKKPdf**	**06 20 36.5**	**-2.6**
	comp=Z,0.3nm,0.6s,baz=308,slow=1.2,SNR=3.5						
ZAA0	**Zalesovo Array**	**93.45**	**324**	*e*P	**P**	**06 03 31.1**	**-0.6**
	comp=Z,4.5nm,1.0s						
ZALV	**Zalesovo Beam**	**93.45**	**324**	*e*P	**P**	**06 03 30.6**	**-1.2**
ZALV	**Zalesovo Beam**	**93.45**	**324**	P	**P**	**06 03 30.7**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=108,slow=3.3,SNR=11						
MAKZ	**Makanchi**	**93.66**	**317**	*e*P	**P**	**06 03 31.7**	**-1.3**
	comp=Z,6.3nm,1.0s						
YKA	**Yellowknife Ar**	**94.77**	**27**	P	**P**	**06 03 36.2**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=255,slow=4.6,SNR=7.6						
YKA				LR	LR	06 43 40.2	
	comp=Z,5.7nm,19.8s,baz=234,slow=34						
YKB5	**Yellowknife Ar**	**94.77**	**27**	*e*P	**P**	**06 03 36.8**	**-0.8**
TXAR	**Lajitas Array**	**95.66**	**61**	LR	LR	06 39 15.0	
	comp=Z,75nm,20.2s,baz=0.0,slow=31						
NRIK	**Noril'sk**	**95.98**	**340**	LR	LR	06 46 17.9	
	comp=Z,56nm,20.3s,baz=63,slow=35						
KURK	**Kurchatov**	**96.55**	**320**	P	**P**	**06 03 45.3**	**-0.8**
KURBB	**Kurchatov Arra**	**96.59**	**320**	P	**P**	**06 03 45.3**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=95,slow=4.3,SNR=4.6						
ARCES	**ARCESS Array B**	**116.17**	**346**	PKP	**PKiKP**	**06 08 58.6**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=60,slow=2.5,SNR=7.0						
FINES	**FINESS Array B**	**121.63**	**339**	PKP	**PKPdf**	**06 09 08.6**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=324,slow=3.8,SNR=3.8						
CPUP	**Villa Florida**	**124.09**	**132**	PKP	**PKPdf**	**06 09 15.3**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=245,slow=4.7,SNR=5.2						
BOSA	**Boshof**	**125.31**	**223**	PKP	**PKPdf**	**06 09 16.6**	**-1.5**
	comp=Z,2.1nm,0.7s,baz=119,slow=3.8,SNR=3.7						
NB2	**NORSAR Subarra**	**126.54**	**345**	PKPdf	**PKPdf**	**06 09 17.8**	**-1.6**
	comp=Z,3.3nm,1.1s,baz=24,slow=1.8						
NOA	**NORSAR Array B**	**126.54**	**345**	PKP	**PKPdf**	**06 09 16.9**	**-2.4**
	comp=Z,0.7nm,0.8s,baz=14,slow=3.8,SNR=3.9						
AKASG	**Malin Array Be**	**126.75**	**327**	PKP	**PKPdf**	**06 09 17.6**	**-2.4**
	comp=Z,0.2nm,0.4s,baz=50,slow=0.9,SNR=4.3						
BRTR	**Keskin Array B**	**128.90**	**313**	PKP	**PKPdf**	**06 09 24.0**	**-0.6**
	comp=Z,0.9nm,1.0s,baz=86,slow=4.0,SNR=5.2						
KHC	**Kasperske Hory**	**135.41**	**334**	*e*PKPDF	**PKiKP**	**06 09 38.0**	**0.0**
GERES	**GERESS Array B**	**135.57**	**334**	PKP	**PKPdf**	**06 09 36.9**	**0.0**
	comp=Z,1.0nm,0.9s,baz=85,slow=2.8,SNR=6.4						
KEST	**Kesra**	**147.32**	**323**	PKPbc	**PKPbc**	**06 09 59.6**	**-1.0**
	comp=Z,9.4nm,1.0s,baz=348,slow=9.3,SNR=3.2						
ESDC	**Sonseca Array**	**149.90**	**344**	PKPbc	**PKiKP**	**06 10 07.7**	**-0.4**
	comp=Z,2.6nm,0.9s,baz=18,slow=2.2,SNR=9.8						
ESDC				PKPab	**PKPab**	**06 10 13.3**	**+0.7**
	comp=Z,3.6nm,1.0s,baz=21,slow=3.5,SNR=8.2						
TORD	**Torodi Ar. Bea**	**164.32**	**280**	PKP	**PKPdf**	**06 10 20.3**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=351,slow=4.8,SNR=5.4						
TORD				PKPab	**PKPab**	**06 11 14.6**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=98,slow=4.2,SNR=5.5						

ISCJB ***10*** *05:51:45.7±0.2, 63°.67N±0°.02×148°.07W±0°.06, h101^{km}±3^{km}, mb3.6/11, Error ellipse: s-maj=4.7km s-min=3.5km az=26.0*

*IDC **10** 05:51:46.5±1.5, 63°.75N×148°.47W, h93km±10km, mb3.4/12, mb1 3.5/15, mb1mx3.3/52, mbtmp3.7/15, Error ellipse: s-maj=20.8km s-min=16.6km az=88.0*
*NEIC **10** 05:51:47.3±0.0, 63°.65N×148°.09W, h85km, ML3.4(AEIC), After AEIC.*
ISC 10 05:51:46.4±0.7, **63°.63N**±0°.03×**148°.11W**±0°.03, **h97**km±5km, **n68**, σ1s.**22**/79, **mb3.6**/11, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCK	**McKinley**	**0.38**	**286**	P	**Pn**	**05 52 01.0**	**-0.1**
MCK				S	**Sn**	**05 52 11.2**	**-0.8**
RND	**Reindeer**	**0.40**	**236**	P	**Pn**	**05 52 01.2**	**-0.1**
RND				S	**Sn**	**05 52 11.8**	**-0.6**
DHY	**Denali Highway**	**0.65**	**149**	P	**Pn**	**05 52 03.2**	**0.0**
DHY				S	**Sn**	**05 52 15.1**	**-0.7**
WRH	**Wood River Hil**	**0.84**	**0**	P	**Pn**	**05 52 04.9**	**+0.1**
WRH				S	**Sn**	**05 52 17.9**	**-0.9**
HDA	**Harding Lake**	**0.93**	**33**	P	**Pn**	**05 52 06.0**	**+0.2**
HDA				S	**Sn**	**05 52 19.6**	**-0.9**
HUR	**Hurricane**	**0.95**	**227**	P	**Pn**	**05 52 06.2**	**+0.2**
TRF	**Thorofare Moun**	**0.99**	**261**	P	**Pn**	**05 52 07.1**	**+0.4**
TRF				S	**Sn**	**05 52 22.0**	**+0.1**
NEA	**Nenana**	**1.04**	**336**	P	**Pn**	**05 52 07.0**	**0.0**
NEA				S	**Sn**	**05 52 21.6**	**-0.9**
PS10	**TAPS Pump St10**	**1.07**	**100**	P	**Pn**	**05 52 08.0**	**+0.7**
PS08	**TAPS Pump Stn8**	**1.08**	**31**	P	**Pn**	**05 52 07.5**	**+0.1**
COLA	**College**	**1.25**	**5**	P	**Pn**	**05 52 09.6**	**+0.2**
ILAR	**Eielson Array**	**1.26**	**24**	P	**Pn**	**05 52 09.6**	**0.0**
	127nm,0.3s,baz=207,slow=12,SNR=8841						
ILAR				S	**Sn**	**05 52 26.1**	**-1.0**
	40nm,0.3s,baz=210,slow=26,SNR=14						
MDM	**Murphy Dome**	**1.33**	**358**	P	**Pn**	**05 52 10.7**	**+0.2**
BPAW	**Bear Paw Mtn.**	**1.36**	**292**	P	**Pn**	**05 52 10.8**	**0.0**
PAX	**Paxson**	**1.36**	**118**	P	**Pn**	**05 52 11.7**	**+0.8**
RIDG	**Independ'e Rid**	**1.46**	**84**	P	**Pn**	**05 52 12.1**	**+0.1**
PS07	**TAPS Pump Stn7**	**1.69**	**358**	P	**Pn**	**05 52 15.3**	**+0.6**
CAST	**Castle Rocks**	**1.79**	**265**	P	**Pn**	**05 52 16.0**	**-0.1**
DOT	**Dot Lake**	**1.81**	**88**	P	**Pn**	**05 52 16.1**	**-0.2**
MLY	**Manley**	**1.81**	**322**	P	**Pn**	**05 52 16.9**	**+0.4**
HARP	**HAARP**	**1.82**	**131**	P	**Pn**	**05 52 17.2**	**+0.7**
SML	**Sawmill**	**1.83**	**183**	P	**Pn**	**05 52 17.6**	**+0.9**
SCRK	**Sand Creek**	**1.86**	**77**	P	**Pn**	**05 52 17.1**	**0.0**
GHO	**Glory Hole Cre**	**1.90**	**192**	P	**Pn**	**05 52 18.3**	**+0.7**
PPLA	**Purkeypile**	**1.99**	**250**	P	**Pn**	**05 52 19.4**	**+0.6**
PMR	**Palmer**	**2.10**	**193**	P	**Pn**	**05 52 21.1**	**+1.1**
PRP	**Porcupine Dome**	**2.20**	**29**	P	**Pn**	**05 52 21.8**	**+0.3**
PS06	**TAPS Pump Stn6**	**2.34**	**343**	P	**Pn**	**05 52 23.9**	**+0.7**
KLU	**Klutina**	**2.37**	**154**	P	**Pn**	**05 52 23.8**	**+0.1**
SUA	**Susitna One**	**2.49**	**211**	P	**Pn**	**05 52 26.6**	**+1.3**
RC01	**Rabbit Creek A**	**2.66**	**197**	P	**Pn**	**05 52 28.6**	**+1.1**
JPK	**Jack Peak**	**2.68**	**164**	P	**Pn**	**05 52 27.7**	**-0.1**
PWL	**Port Wells**	**2.78**	**182**	P	**Pn**	**05 52 29.7**	**+0.6**
GLI	**Glacier Island**	**2.80**	**170**	P	**Pn**	**05 52 29.3**	**-0.1**
BCA3	**Beaver Creek A**	**2.91**	**98**	P	**Pn**	**05 52 30.8**	**0.0**
CKT	**Bend**	**3.10**	**220**	P	**Pn**	**05 52 35.7**	**+2.4**
SPNN	**North Nagishla**	**3.11**	**225**	P	**Pn**	**05 52 34.9**	**+1.3**
SPWE	**Spurr West**	**3.14**	**223**	P	**Pn**	**05 52 35.5**	**+1.5**
FYU	**Fort Yukon**	**3.19**	**21**	P	**Pn**	**05 52 35.3**	**+0.9**
EGAK	**Eagle**	**3.25**	**66**	ePn	**Pn**	**05 52 35.5**	**+0.2**
EGAK				eSn	**Sn**	**05 53 12.1**	**-0.9**
SLKM	**Skilak Lake**	**3.29**	**199**	P	**Pn**	**05 52 37.6**	**+1.7**
PS05	**TAPS Pump Stn5**	**3.37**	**343**	P	**Pn**	**05 52 38.2**	**+1.3**
IM3	**Indian Mountai**	**3.38**	**317**	P	**Pn**	**05 52 37.6**	**+0.6**
SGAM	**Sherman Glacie**	**3.42**	**155**	P	**Pn**	**05 52 37.3**	**-0.4**
SEW	**Seward**	**3.60**	**191**	P	**Pn**	**05 52 41.6**	**+1.6**
TT01	**Tatalina**	**3.65**	**262**	P	**Pn**	**05 52 41.0**	**+0.3**
COLD	**Coldfoot**	**3.72**	**347**	P	**Pn**	**05 52 42.7**	**+1.2**
RDWB	**Redoubt West**	**3.86**	**217**	P	**Pn**	**05 52 45.3**	**+1.6**
DAWY	**Dawson**	**3.88**	**80**	P	**Pn**	**05 52 44.0**	**+0.1**
BM3	**Burnt Mountain**	**4.07**	**19**	P	**Pn**	**05 52 47.2**	**+0.7**
BRLK	**Bradley Lake**	**4.10**	**200**	P	**Pn**	**05 52 48.2**	**+1.4**
SVW2	**Sparrevohn**	**4.31**	**237**	P	**Pn**	**05 52 50.1**	**+0.5**
KDAK	**Kodiak Island**	**6.26**	**203**	P	**Pn**	**05 53 16.1**	**0.0**
	2.1nm,0.3s,baz=60,slow=5.5,SNR=40						
KDAK				S	**Sn**	**05 54 19.2**	**-6.9**
	2.4nm,0.3s,baz=23,slow=13,SNR=3.0						
INK	**Inuvik**	**7.57**	**45**	P	**Pn**	**05 53 34.3**	**+0.6**
	0.7nm,0.3s,baz=227,slow=16,SNR=39						
INK				S	**Sn**	**05 54 56.4**	**-1.4**
	0.4nm,0.3s,baz=247,slow=17,SNR=5.0						
YKA	**Yellowknife Ar**	**15.12**	**79**	P	**Pn**	**05 55 14.5**	**+0.1**
	0.1nm,0.3s,baz=288,slow=10.0,SNR=11						
RES	**Resolute Bay**	**20.99**	**36**	P	**P**	**05 56 20.9**	**-0.4**
	1.3nm,0.6s,baz=249,slow=12,SNR=9.3						
PDAR	**Pinedale Array**	**30.40**	**115**	P	**P**	**05 57 51.4**	**+2.1**
	0.4nm,1.0s,baz=326,slow=7.7,SNR=2.8						
TXAR	**Lajitas Array**	**44.40**	**119**	P	**P**	**05 59 49.8**	**+2.7**
	0.2nm,0.6s,baz=8.9,slow=6.4,SNR=2.7						
ARCES	**ARCESS Array B**	**47.04**	**3**	P	**P**	**06 00 07.6**	**+0.3**
	3.4nm,1.1s,baz=359,slow=7.3,SNR=2.6						
SONM	**Songino Array**	**54.49**	**307**	P	**P**	**06 01 04.2**	**+0.5**
	0.2nm,0.4s,baz=20,slow=5.8,SNR=3.4						
FINES	**FINESS Array B**	**55.16**	**3**	P	**P**	**06 01 07.8**	**-0.3**
	1.3nm,0.7s,baz=1.4,slow=7.7,SNR=8.9						
BVAR	**Borovoye Array**	**59.87**	**334**	P	**P**	**06 01 41.2**	**-0.1**
	0.6nm,0.4s,baz=39,slow=6.9,SNR=5.3						
MKAR	**Makanchi Array**	**62.97**	**324**	P	**P**	**06 02 00.2**	**-2.1**
	0.2nm,0.4s,baz=33,slow=7.2,SNR=8.6						
AKTO	**Aktyubinsk**	**64.44**	**342**	P	**P**	**06 02 09.9**	**-1.9**
	0.7nm,0.4s,baz=33,slow=9.0,SNR=3.8						
AKASG	**Malin Array Be**	**65.99**	**2**	P	**P**	**06 02 21.6**	**-0.2**
	0.8nm,0.4s,baz=3.9,slow=6.3,SNR=8.4						
GERES	**GERESS Array B**	**66.95**	**13**	P	**P**	**06 02 27.8**	**-0.3**
	0.2nm,0.4s,baz=358,slow=4.1,SNR=4.0						
ESDC	**Sonseca Array**	**73.17**	**28**	P	**P**	**06 03 07.0**	**+0.8**
	0.6nm,0.6s,baz=350,slow=6.4,SNR=4.5						
BOSA	**Boshof**	**144.71**	**10**	PKP	**PKPab**	**06 11 09.8**	**-0.5**
	2.8nm,1.0s,baz=269,slow=3.3,SNR=3.0						

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*ISCJB **10** 05:52:30.2±1.5, 13°.46N±0°.09×90°.84W±0°.05, h23km±10km, mb3.5/2, Error ellipse: s-maj=16.0km s-min=6.9km az=17.4*
*IDC **10** 05:52:30.5±12.0, 13°.00N×92°.02W, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.4/37, mbtmp3.3/3, ML4.1/1, Error ellipse: s-maj=255.7km s-min=126.3km az=8.0*
*UCR **10** 05:52:32.7±1.6, 13°.56N×90°.69W, h21km±7km, MD3.7, ML3.8*
ISC 10 05:52:30.5±2.9, **13°.60N**±0°.09×**90°.74W**±0°.08, **h8**km±16km, **n30**, σ0s.**91**/35, **1C-5D**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.63**	**26**	⇑iP	**Pn**	**05 52 45.8**	**-0.1**
PCG	**Pacaya**	**0.80**	**9**	⇓eP	**Pn**	**05 52 48.1**	**-0.1**
FUG	**Fuego 3**	**0.85**	**353**	⇓eP	**Pn**	**05 52 48.3**	**-0.5**
NBG	**Las Nubes**	**1.05**	**21**	⇓eP	**Pn**	**05 52 52.5**	**+0.8**
RTR	**El Retiro**	**1.10**	**74**	⇓eP	**Pn**	**05 52 52.5**	**+0.2**
CEVE	**Cerro Verde**	**1.10**	**78**	⇓eP	**Pn**	**05 52 52.3**	**-0.1**
CEVE				eS	**Sn**	**05 53 08.2**	**+0.2**
CEVE				IAML		05 53 09.1	
	comp=Z,6μm,0.3s						
SBLS	**San Blas**	**1.11**	**78**	eP	**Pn**	**05 52 52.2**	**-0.3**
SBLS				eS	**Sn**	**05 53 07.3**	**-0.8**
SNJE	**San Jose**	**1.13**	**76**	eP	**Pn**	**05 52 52.7**	**-0.1**
BOQS	**Boqueron**	**1.42**	**85**	eP	**Pn**	**05 52 56.8**	**0.0**
BOQS				eS	**Sg**	**05 53 16.5**	**+0.3**
UEES	**San Salvador**	**1.46**	**85**	eP	**Pn**	**05 52 57.2**	**0.0**
UEES				eS	**Sn**	**05 53 15.9**	**-0.6**
UEES				IAML		05 53 20.7	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**1.46**	**87**	eP	**Pn**	**05 52 56.8**	**-0.5**
SNET				IAML		05 53 25.2	
	comp=Z,2μm,0.3s						
OPAM	**San Salvador**	**1.50**	**85**	eP	**Pn**	**05 52 57.7**	**0.0**
OPAM				eS	**Sg**	**05 53 19.2**	**+0.6**
OPAM				IAML		05 53 22.4	
	comp=Z,2μm,0.3s						
LFU	**La Fuente**	**1.58**	**85**	eP	**Pb**	**05 52 59.3**	**-0.7**
LFRS	**El Faro**	**1.63**	**89**	eP	**Pn**	**05 52 59.8**	**+0.3**
LFRS				eS	**Sn**	**05 53 19.0**	**-1.7**
LBRS	**Las Brisas**	**1.65**	**85**	eP	**Pn**	**05 53 00.1**	**+0.3**
PAVA	**Las Pavas**	**1.75**	**86**	eP	**Pn**	**05 53 01.3**	**0.0**
PAVA				IAML		05 53 32.5	
	comp=Z,622nm,0.4s						
MRL	**Marmol**	**1.77**	**35**	eP	**Pb**	**05 53 02.7**	**-0.6**
SNVI	**San Vicente**	**1.84**	**89**	eP	**Pn**	**05 53 03.2**	**+0.7**
VICT	**Victoria**	**2.07**	**80**	eP	**Pn**	**05 53 05.4**	**-0.2**
TECA	**Tecapa**	**2.17**	**93**	eP	**Pn**	**05 53 07.5**	**+0.4**
PACA	**Pacayal**	**2.35**	**93**	eP	**Pn**	**05 53 09.7**	**+0.2**
LCY	**Lacayo**	**2.38**	**94**	eP	**Pn**	**05 53 10.9**	**+1.0**
VSM	**San Miguel**	**2.40**	**94**	eP	**Pn**	**05 53 11.4**	**+1.1**
LCND	**La Caada**	**2.78**	**96**	eP	**Pn**	**05 53 15.0**	**-0.3**
ESTN	**Estel**	**4.28**	**96**	eP	**Pn**	**05 53 36.6**	**+0.6**
COPN	**Copaltepe**	**4.28**	**109**	eP	**Pn**	**05 53 35.4**	**-0.6**
TXAR	**Lajitas Array**	**19.72**	**325**	P	**P**	**05 56 59.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=147,slow=12,SNR=4.3						
H06E1	**SOCORRO T-PHAS**	**20.06**	**288**	T	T	06 17 21.3	
NVAR	**Mina Array Bea**	**34.75**	**320**	P	**P**	**05 59 20.1**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=132,slow=8.7,SNR=8.5						
YKA	**Yellowknife Ar**	**51.70**	**346**	P	**P**	**06 01 41.2**	**+3.4**
	comp=Z,0.1nm,0.5s,baz=152,slow=7.0,SNR=2.1						

IDC 10 05:57:37.3±5.3, **10°.32S**×**166°.41E**, **h0**km, **mb3.4**/3, **mb1 3.7**/3, **mb1mx3.4**/37, **mbtmp3.4**/3, **Error ellipse: s-maj=276.7km s-min=33.8km az=138.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.34**	**249**	P	P	06 04 08.4	-0.3
	0.4nm,0.9s,baz=82,slow=8.9,SNR=2.8						
ASAR	**Alice Springs**	**33.70**	**243**	P	P	06 04 20.7	+0.2
	0.3nm,0.8s,baz=61,slow=9.7,SNR=3.4						
ILAR	**Eielson Array**	**82.62**	**18**	P	P	06 10 02.2	0.0
	0.4nm,0.8s,baz=231,slow=5.7,SNR=4.3						

IDC 10 06:05:54.1±1.4, **11°.17S**×**165°.13E**, **h0**km, **mb3.6**/4, **mb1 3.9**/5, **mb1mx3.6**/39, **mbtmp3.6**/5, **ML3.6**/1, **Error ellipse: s-maj=53.3km s-min=27.0km az=132.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.92**	**174**	Pn	Pn	06 08 32.4	+0.6
	0.5nm,0.3s,baz=233,slow=20,SNR=4.8						
WRA	**Warramunga Arr**	**30.88**	**250**	P	P	06 12 12.4	-0.1
	0.4nm,0.7s,baz=79,slow=8.7,SNR=5.1						
ASAR	**Alice Springs**	**32.20**	**243**	P	P	06 12 24.2	0.0
	0.8nm,0.9s,baz=87,slow=9.2,SNR=7.3						
ILAR	**Eielson Array**	**83.82**	**19**	P	P	06 18 26.0	+0.8
	0.5nm,0.9s,baz=232,slow=5.5,SNR=7.5						
YKA	**Yellowknife Ar**	**95.36**	**27**	P	P	06 19 18.8	-1.2
	0.1nm,0.6s,baz=263,slow=5.1,SNR=3.1						

MEX 10 06:22:24.2±0.5, **14°.17N**×**91°.85W**, **h66**km±27km, **MD3.9**, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.83**	**332**	eP	Pn	06 22 38.9	-1.5
THIG				eS	Sn	06 22 51.4	-1.0
PCIG		**2.02**	**319**	eP	Pn	06 22 55.0	-1.0
PCIG				eS	Sn	06 23 18.2	-2.0
CCIG	**Comitan**	**2.12**	**353**	eP	Pn	06 22 59.8	+2.3
CCIG				eS	Sn	06 23 27.6	+4.7

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*KRSC **10** 06:34:15.9±1.6, 51°.15N×157°.20E, h121km±12km, ML3.8*
*ISCJB **10** 06:34:16.4±0.5, 51°.16N±0°.07×157°.2E±0°.1, h125km±4km, mb3.5/7, Error ellipse: s-maj=18.4km s-min=5.2km az=37.2*
*MOS **10** 06:34:16.2±0.9, 51°.19N×157°.05E, h125km, mb4.0/1, Error ellipse: s-maj=34.3km s-min=6.1km az=71.4*
*IDC **10** 06:34:18.5±2.5, 51°.48N×156°.65E, h132km±27km, mb3.1/7, mb1 3.5/9, mb1mx3.2/50, mbtmp3.6/9, Error ellipse: s-maj=87.9km s-min=15.4km az=133.0*
ISC 10 06:34:17.3±0.7, **51°.18N**±0°.07×**157°.11E**±0°.08, **h120**km±6km, **n50**, σ1s.**09**/80, **mb3.5**/7, **1C**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.34**	**327**	eP	**Pn**	**06 34 34.2**	**-0.2**
PAU				eS	**Sn**	**06 34 47.7**	**+0.4**
PAU	**Pauzhetka**	**0.34**	**327**	PN	**Pn**	**06 34 34.2**	**-0.2**
PAU				S	**Sn**	**06 34 47.7**	**+0.4**
SKR	**Severo-Kuril's**	**0.80**	**232**	eP	**Pn**	**06 34 37.7**	**+0.3**
SKR				eS	**Sn**	**06 34 53.4**	**+0.8**
SKR	**Severo-Kuril's**	**0.80**	**232**	⇑iPN	**Pn**	**06 34 37.8**	**+0.3**
SKR				eS	**Sn**	**06 34 53.3**	**+0.7**
SKR				pmax	pmax		
	comp=Z,821nm,0.6s						
SKR				smax	smax		
	comp=N,980nm,0.7s						
SKR				smax	smax		
	comp=E,476nm,0.8s						
KDTR	**Khodutka, Kamc**	**0.87**	**44**	eP	**Pn**	**06 34 37.9**	**-0.1**
KDTR				eS	**Sn**	**06 34 53.4**	**-0.4**
KDTR	**Khodutka, Kamc**	**0.87**	**44**	PN	**Pn**	**06 34 37.9**	**-0.1**
KDTR				S	**Sn**	**06 34 53.4**	**-0.4**
MTVR	**Mutnovka**	**1.47**	**27**	eP	**Pn**	**06 34 44.2**	**-0.2**
MTVR				eS	**Sn**	**06 35 05.6**	**+0.5**
MTVR	**Mutnovka**	**1.47**	**27**	PN	**Pn**	**06 34 44.2**	**-0.2**
MTVR				S	**Sn**	**06 35 05.6**	**+0.5**
RUS	**Russkaya**	**1.53**	**34**	eP	**Pn**	**06 34 44.5**	**-0.4**
RUS				eS	**Sn**	**06 35 05.5**	**-0.6**
RUS	**Russkaya**	**1.53**	**34**	PN	**Pn**	**06 34 44.5**	**-0.4**
RUS				S	**Sn**	**06 35 05.5**	**-0.6**
APC	**Apacha**	**1.75**	**1**	eP	**Pn**	**06 34 46.5**	**-1.0**
APC				eS	**Sn**	**06 35 09.9**	**-0.8**
APC	**Apacha**	**1.75**	**1**	PN	**Pn**	**06 34 46.5**	**-1.0**
APC				S	**Sn**	**06 35 09.9**	**-0.8**
KRMR	**Karymshinskiy**	**1.77**	**21**	eP	**Pn**	**06 34 47.6**	**-0.2**
KRMR				eS	**Sn**	**06 35 13.7**	**+2.5**
KRMR	**Karymshinskiy**	**1.77**	**21**	PN	**Pn**	**06 34 47.6**	**-0.2**
KRMR				S	**Sn**	**06 35 13.7**	**+2.5**
PETK	**Petropavlovsk-**	**1.96**	**10**	P	**Pn**	**06 34 49.4**	**-0.8**
	comp=E,3.8nm,0.3s,baz=173,slow=12,SNR=148						
PET	**Petropavlovsk**	**2.08**	**27**	eP	**Pn**	**06 34 51.7**	**+0.1**
PET				eS	**Sn**	**06 35 18.9**	**+1.0**
PET	**Petropavlovsk**	**2.08**	**27**	ePN	**Pn**	**06 34 51.0**	**-0.6**
PET				eS	**Sn**	**06 35 18.6**	**+0.7**
PET				pmax	pmax		
	comp=Z,29nm,0.4s						
PET				smax	smax		
	comp=E,62nm,0.5s						
PET				smax	smax		
	comp=N,92nm,0.6s						
DALK	**Dalny**	**2.11**	**28**	eP	**Pn**	**06 34 52.0**	**0.0**
DALK				eS	**Sn**	**06 35 19.6**	**+0.9**
DALK	**Dalny**	**2.11**	**28**	PN	**Pn**	**06 34 52.0**	**0.0**
DALK				S	**Sn**	**06 35 19.6**	**+0.9**
UGLR	**Uglovaya**	**2.29**	**27**	eP	**Pn**	**06 34 55.3**	**+0.9**
UGLR	**Uglovaya**	**2.29**	**27**	PN	**Pn**	**06 34 55.3**	**+0.9**
KOK	**Koryaka**	**2.31**	**23**	eP	**Pn**	**06 34 55.4**	**+0.7**
KOK				eS	**Sn**	**06 35 23.9**	**+0.4**
KOK	**Koryaka**	**2.31**	**23**	PN	**Pn**	**06 34 55.4**	**+0.7**
KOK				S	**Sn**	**06 35 23.9**	**+0.4**
AVH	**Avacha**	**2.32**	**25**	eP	**Pn**	**06 34 55.6**	**+0.9**
AVH				eS	**Sn**	**06 35 25.6**	**+2.1**
AVH	**Avacha**	**2.32**	**25**	PN	**Pn**	**06 34 55.6**	**+0.9**
AVH				S	**Sn**	**06 35 25.6**	**+2.1**
SMAR	**Somma**	**2.33**	**26**	eP	**Pn**	**06 34 56.0**	**+1.0**
SMAR	**Somma**	**2.33**	**26**	PN	**Pn**	**06 34 56.0**	**+1.0**
KRX	**Arik**	**2.38**	**23**	eP	**Pn**	**06 34 56.1**	**+0.5**
KRX				eS	**Sn**	**06 35 25.6**	**+0.6**
KRX	**Arik**	**2.38**	**23**	PN	**Pn**	**06 34 56.1**	**+0.5**
KRX				S	**Sn**	**06 35 25.6**	**+0.6**
NLC	**Nalytchevo**	**2.42**	**34**	eP	**Pn**	**06 34 57.6**	**+1.6**
NLC				eS	**Sn**	**06 35 23.5**	**-2.2**
NLC	**Nalytchevo**	**2.42**	**34**	PN	**Pn**	**06 34 57.6**	**+1.6**
NLC				S	**Sn**	**06 35 23.5**	**-2.2**
GNL	**Ganaly**	**2.57**	**11**	eP	**Pn**	**06 34 57.3**	**-0.7**
GNL	**Ganaly**	**2.57**	**11**	PN	**Pn**	**06 34 57.3**	**-0.7**
SPN	**Mys Shipunski**	**2.63**	**42**	eP	**Pn**	**06 34 58.3**	**-0.3**
SPN				eS	**Sn**	**06 35 28.8**	**-1.7**
SPN	**Mys Shipunski**	**2.63**	**42**	PN	**Pn**	**06 34 58.3**	**-0.3**
SPN				S	**Sn**	**06 35 28.8**	**-1.7**
KII	**Karymskiy**	**3.20**	**26**	eP	**Pn**	**06 35 08.4**	**+2.3**
KII				eS	**Sn**	**06 35 45.4**	**+1.5**
KII	**Karymskiy**	**3.20**	**26**	PN	**Pn**	**06 35 08.4**	**+2.3**
KII				S	**Sn**	**06 35 45.4**	**+1.5**
TUMD	**Tumrok D**	**4.49**	**25**	eS	**Sn**	**06 36 14.5**	**0.0**
KBTR	**Krutoberegovo**	**6.07**	**32**	eP	**Pn**	**06 35 44.0**	**-0.5**
ASAJ	**Asahikawa**	**12.06**	**240**	P	**Pn**	**06 37 05.2**	**+0.2**
	comp=N,0.5nm,0.3s,baz=85,slow=15,SNR=6.7						
MJAR	**Matsushiro Arr**	**19.91**	**230**	P	**Pn**	**06 38 39.7**	**-2.4**
	comp=N,0.1nm,0.3s,baz=34,slow=6.8,SNR=5.0						
ILAR	**Eielson Array**	**31.47**	**43**	eP	**P**	**06 40 26.5**	**-0.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**31.47**	**43**	P	**P**	**06 40 26.3**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=264,slow=6.6,SNR=7.3						
INK	**Inuvik**	**36.51**	**36**	P	**P**	**06 41 09.8**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=297,slow=5.4,SNR=9.2						
ZALV	**Zalesovo Beam**	**42.27**	**303**	PcP	**PcP**	**06 43 48.1**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=71,slow=3.3,SNR=2.1						
YKA	**Yellowknife Ar**	**45.82**	**40**	P	**P**	**06 42 26.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=295,slow=7.1,SNR=11						
NVAR	**Mina Array Bea**	**58.16**	**67**	P	**P**	**06 43 59.9**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=292,slow=7.7,SNR=2.3						
PDAR	**Pinedale Array**	**60.08**	**58**	P	**P**	**06 44 12.4**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=288,slow=1.4,SNR=4.6						
TXAR	**Lajitas Array**	**73.11**	**64**	P	**P**	**06 45 35.2**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=317,slow=5.1,SNR=4.0						
WRA	**Warramunga Arr**	**73.59**	**202**	P	**P**	**06 45 37.4**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=20,slow=6.5,SNR=2.8						

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*IDC **10** 06:34:58.4±1.3, 11°.97S×165°.80E, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.7/42, mbtmp3.9/6, ML3.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/34, Error ellipse: s-maj=35.8km s-min=27.4km az=100.0*
*ISCJB **10** 06:35:01.1±1.2, 12°.1S±0°.1×165°.8E±0°.2, h30km, mb3.9/5, Error ellipse: s-maj=30.3km s-min=19.1km az=169.7*
ISC 10 06:35:02.8±1.2, **12°.0S**±0°.1×**165°.8E**±0°.2, **h30**km, **n6**, σ0s.**52**/6, **mb3.8**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.02**	**177**	Pn	**Pn**	**06 37 24.6**	**-0.3**
	0.2nm,0.3s,baz=315,slow=20,SNR=2.3						
DZM				LR	LR	06 40 15.3	
	comp=Z,51nm,19.3s,baz=16,slow=32						
WRA	**Warramunga Arr**	**31.20**	**251**	P	**P**	**06 41 19.8**	**+0.1**
	0.6nm,0.8s,baz=83,slow=9.4,SNR=6.6						
RPZ	**Rata Peaks**	**31.91**	**173**	P	**P**	**06 41 25.9**	**+0.3**
	11nm,0.9s,baz=300,slow=20,SNR=2.2						
ASAR	**Alice Springs**	**32.41**	**245**	P	**P**	**06 41 30.8**	**+0.4**
	1.9nm,0.7s,baz=74,slow=9.5,SNR=23						
ILAR	**Eielson Array**	**84.41**	**18**	P	**P**	**06 47 32.4**	**+0.3**
	0.4nm,0.9s,baz=241,slow=5.3,SNR=3.1						
MKAR	**Makanchi Array**	**94.25**	**317**	P	**P**	**06 48 18.6**	**-0.6**
	0.3nm,0.8s,baz=93,slow=5.8,SNR=1.9						

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*IDC **10** 06:39:29.7±1.0, 13°.80N×92°.85E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/55, mbtmp3.8/11, MS3.2/3, Ms1 3.2/3, ms1mx2.8/48, Error ellipse: s-maj=35.2km s-min=18.7km az=52.0*
*ISCJB **10** 06:39:32.5±0.9, 13°.9N±0°.1×93°.0E±0°.1, h32km, mb3.8/10, MS3.2/1, Error ellipse: s-maj=20.8km s-min=15.3km az=38.9*
ISC 10 06:39:34.6±1.1, **13°.9N**±0°.2×**92°.9E**±0°.1, **h32**km, **n14**, σ0s.**37**/11, **mb3.9**/10, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.38**	**51**	Pn	**Pn**	**06 41 20.0**	**-0.1**
	baz=244,slow=12,SNR=6.2						
BRDH	**Bariadhala**	**8.87**	**352**	LR	LR	06 46 01.1	
	comp=Z,169nm,18.2s,baz=190,slow=44						
PALK	**Pallekele**	**13.67**	**243**	LR	LR	06 47 23.2	
	comp=Z,61nm,18.7s,baz=295,slow=35						
AAK	**Ala-Archa**	**32.81**	**335**	LR	LR	07 01 31.8	
	comp=Z,52nm,19.2s,baz=18,slow=40						
MKAR	**Makanchi Array**	**34.03**	**347**	P	**P**	**06 46 16.2**	**+0.5**
	1.5nm,0.8s,baz=163,slow=9.1,SNR=19						
SONM	**Songino Array**	**35.70**	**16**	P	**P**	**06 46 30.3**	**+0.2**
	0.2nm,0.6s,baz=207,slow=9.2,SNR=4.0						
KURBB	**Kurchatov Arra**	**38.50**	**345**	P	**P**	**06 46 53.7**	**0.0**
	1.9nm,0.8s,baz=162,slow=7.9,SNR=12						
GEYT	**Alibeck**	**39.08**	**314**	P	**P**	**06 46 59.4**	**+0.5**
	1.1nm,0.5s,baz=111,slow=3.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**40.52**	**353**	P	**P**	**06 47 10.4**	**-0.1**
	1.2nm,0.6s,baz=168,slow=8.9,SNR=7.8						
WRA	**Warramunga Arr**	**52.80**	**129**	P	**P**	**06 48 47.3**	**+0.2**
	1.4nm,0.6s,baz=308,slow=8.1,SNR=2.9						
ASAR	**Alice Springs**	**54.73**	**133**	P	**P**	**06 49 01.4**	**+0.1**
	1.1nm,0.5s,baz=309,slow=6.7,SNR=13						
BRTR	**Keskin Array B**	**57.72**	**308**	P	**P**	**06 49 22.1**	**-0.5**
	0.7nm,0.7s,baz=121,slow=8.5,SNR=5.6						
FINES	**FINESS Array B**	**66.92**	**331**	P	**P**	**06 50 23.1**	**-0.5**
	0.4nm,0.7s,baz=72,slow=6.4,SNR=2.8						
GERES	**GERESS Array B**	**72.63**	**317**	P	**P**	**06 50 59.2**	**+0.1**
	0.3nm,0.5s,baz=85,slow=6.0,SNR=2.8						

MEX 10 06:41:54.6±1.1, **19°.62N**×**104°.97W**, **h46**km±12km, **MD3.6**, **Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**0.14**	**210**	i P	Pn	06 42 00.5	-1.7
CJM				eS	Sn	06 42 06.0	-1.4
R15V		**1.03**	**116**	eP	Pn	06 42 11.0	-1.7
R15V				eS	Sn	06 42 24.6	-1.6
EZ5V		**1.30**	**96**	eP	Pn	06 42 13.5	-3.1
EZ5V				eS	Sn	06 42 30.5	-2.3
ZIIG	**Zihuatanejo**	**3.88**	**121**	eP	Pn	06 42 45.7	-6.0

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*IDC **10** 06:45:45.2±1.1, 10°.96S×165°.84E, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.7/42, mbtmp3.9/8, ML4.5/2, Error ellipse: s-maj=38.8km s-min=23.3km az=141.0*
*NEIC **10** 06:45:46.8±0.6, 10°.92S×165°.75E, h10km, mb4.3/4, Error ellipse: s-maj=13.0km s-min=11.3km az=215.0*
*ISCJB **10** 06:45:48.0±0.6, 11°.05S±0°.08×165°.70E±0°.06, h30km, mb4.0/10, Error ellipse: s-maj=11.7km s-min=7.6km az=29.2*
ISC 10 06:45:49.9±0.7, **11°.09S**±0°.08×**165°.72E**±0°.09, **h30**km, **n23**, σ1s.**36**/29, **mb3.9**/10, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.92**	**286**	Pn	**Pn**	**06 47 17.0**	**+1.5**
	18nm,0.3s,baz=185,slow=9.0,SNR=3.2						
HNR				Sn	**Sn**	**06 48 21.9**	**-0.4**
	baz=72,slow=20,SNR=1.4						
DZM	**Mont Dzumac**	**10.94**	**176**	ePn	**Pn**	**06 48 26.0**	**+1.5**
DZM				eSn	**Sn**	**06 50 24.0**	**-2.0**
DZM	**Mont Dzumac**	**10.94**	**176**	Pn	**Pn**	**06 48 25.7**	**+1.1**
	2.7nm,0.3s,baz=6.7,slow=17,SNR=22						
DZM				Sn	**Sn**	**06 50 24.0**	**-2.0**
	baz=156,slow=20,SNR=2.0						
ONTNC	**Ouen Toro**	**11.17**	**176**	ePn	**Pn**	**06 48 30.6**	**+2.9**
PINNC	**Pines Island,**	**11.57**	**172**	ePn	**Pn**	**06 48 36.3**	**+3.2**
MSVF	**Nonsavu**	**13.64**	**120**	ePn	**Pn**	**06 49 03.0**	**+1.5**
CTA	**Charters Tower**	**20.75**	**242**	P	Pn	06 50 30.9	0.0
	1.6nm,0.5s,baz=69,slow=14,SNR=3.3						
COEN	**Coen**	**22.19**	**260**	eP	**P**	**06 50 43.6**	**-0.3**
	10nm,1.0s						
SNZO	**South Karori**	**31.12**	**167**	eP	**P**	**06 52 04.0**	**-1.7**
	68nm,1.3s						
WRAB	**Tennant Creek**	**31.43**	**250**	eP	**P**	**06 52 09.2**	**+0.4**
	4.6nm,0.9s						
WB2	**Warramunga Arr**	**31.43**	**250**	eP	**P**	**06 52 09.3**	**+0.4**
	7.8nm,1.3s						
WR1	**Warramunga Arr**	**31.44**	**250**	eP	**P**	**06 52 09.7**	**+0.8**
WR1				ePcP	**PcP**	**06 55 02.2**	**+0.3**
WRA	**Warramunga Arr**	**31.44**	**250**	P	**P**	**06 52 09.7**	**+0.8**
	2.1nm,0.8s,baz=80,slow=8.9,SNR=16						
WRA				PcP	**PcP**	**06 55 02.2**	**+0.3**
	0.2nm,0.6s,baz=74,slow=3.7,SNR=2.8						
TOO	**Toolangi**	**32.02**	**211**	eP	**P**	**06 52 13.0**	**-0.8**
AS01	**Alice Springs**	**32.70**	**243**	eP	**P**	**06 52 19.4**	**-0.6**
AS31	**Alice Springs**	**32.74**	**243**	eP	**P**	**06 52 19.1**	**-1.3**
	0.8nm,0.9s						
AS31				ePcP	**PcP**	**06 55 06.1**	**+0.6**
ASAR	**Alice Springs**	**32.75**	**243**	P	**P**	**06 52 20.6**	**+0.3**
	0.4nm,0.5s,baz=65,slow=10,SNR=8.9						
ASAR				PcP	**PcP**	**06 55 06.1**	**+0.6**
	0.3nm,0.7s,baz=66,slow=3.2,SNR=3.4						
ILAR	**Eielson Array**	**83.57**	**19**	P	**P**	**06 58 14.6**	**-0.2**
	0.4nm,0.6s,baz=237,slow=5.5,SNR=8.0						
ILB	**Eielson Array**	**83.57**	**19**	eP	**P**	**06 58 14.6**	**-0.2**
NV01	**Mina Array Sit**	**86.08**	**50**	eP	**P**	**06 58 26.3**	**-2.1**
NVAR	**Mina Array Bea**	**86.08**	**50**	P	**P**	**06 58 27.3**	**-1.1**
	0.1nm,0.3s,baz=234,slow=5.4,SNR=2.3						
MK32	**Makanchi Array**	**93.54**	**317**	eP	**P**	**06 59 02.7**	**-0.3**
MKAR	**Makanchi Array**	**93.54**	**317**	P	**P**	**06 59 02.7**	**-0.3**
	0.2nm,0.8s,baz=101,slow=6.0,SNR=3.0						

ISCJB **10** *06:50:38.3±0.2, 10°.97S±0°.03×165°.81E±0°.04, h10^{km}, mb4.9/65, MS4.4/12, Error ellipse: s-maj=5.0km s-min=4.2km az=170.4*

IDC **10** *06:50:38.2±0.5, 10°.91S×165°.85E, h0^{km}, mb4.6/23, mb1 4.8/25, mb1mx4.6/40, mbtmp4.7/25, ML4.9/2, MS4.2/8, Ms1 4.2/8, ms1mx3.8/32, Error ellipse: s-maj=16.4km s-min=13.1km az=102.0*

NEIC **10** *06:50:39.7±0.2, 10°.89S×165°.86E, h10^{km}, mb5.0/22, Error ellipse: s-maj=5.1km s-min=3.6km az=75.0*

GCMT **10** *06:50:40.7±0.3, 11°.03S±0°.03×165°.85E±0°.03, h18^{km}±1^{km}, MW5.0/63, Moment Tensor Solution. s32,c36; s63,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.82±.25; $M_{\theta\theta}$1.49±.17; $M_{\phi\phi}$2.32±.17; $M_{r\theta}$-1.21±.38; $M_{\theta\phi}$-1.07±.10; $M_{\phi r}$-0.39±.37; Best double couple: $M_0$3.60700×10^{16} NP1:ϕ_s131.00000°, δ50.00000°, λ-108.00000°. NP2: ϕ_s338.00000°, δ43.00000°, λ-70.00000°. Principal axes: T 3.0740, Plg3.0000°, Azm234.0000°; N 1.0580, Plg14.0000°, Azm143.0000°; P -4.1410, Plg76.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS **10** *06:50:41.6±0.8, 10°.97S×165°.79E, h33^{km}, mb5.2/17 Error ellipse: s-maj=10.2km s-min=9.2km az=39.4*

ISC 10 06:50:39.5±0.3**, 10°.93S**±0°.05×**165°.94E**±0°.05**, h10^{km}, n180, σ1^s.15**/187**, mb5.0**/66**, MS4.5**/13**, 9C-9D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.08	284	eP	Pn	06 52 10.0	+0.5
HNR				eS	Sn	06 53 19.0	-0.2
HNR	Honiara	6.08	284	ePn	Pn	06 52 09.8	+0.2
HNR				Sn	Sn	06 53 18.4	-0.8
HNR	Honiara	6.08	284	Pn	Pn	06 52 09.1	-0.4
	64nm,0.3s,baz=139,slow=5.3,SNR=14						
HNR				Sn	Sn	06 53 18.4	-0.8
	baz=40,slow=19,SNR=3.0						
MARNC	Mare, Loyalty	10.69	169	ePn	Pn	06 53 12.7	0.0
DZM	Mont Dzumac	11.09	178	ePn	Pn	06 53 19.7	+1.3
	66nm,0.6s						
DZM				eLR	LR	06 55 57.0	
	comp=Z,2μm,25.9s						
DZM	Mont Dzumac	11.09	178	ePn	Pn	06 53 20.0	+1.6
DZM				Sn	Sn	06 55 21.5	-1.1
DZM	Mont Dzumac	11.09	178	Pn	Pn	06 53 20.3	+1.9
	3.7nm,0.3s,baz=16,slow=19,SNR=22						
DZM				Sn	Sn	06 55 21.5	-1.1
	0.2nm,0.3s,baz=342,slow=19,SNR=1.9						
DZM				LR	LR	06 57 06.0	
	comp=Z,1μm,20.8s,baz=32,slow=35						
ONTNC	Ouen Toro	11.33	178	ePn	Pn	06 53 23.0	+1.5
PINNC	Pines Island,	11.71	173	ePn	Pn	06 53 29.2	+2.5
MSVF	Nonsavu	13.54	121	ePn	Pn	06 53 53.4	+1.5
MSVF	Nonsavu	13.54	121	eP	Pn	06 53 53.4	+1.5
EIDS	Eidsvold	20.11	222	P	Pn	06 55 15.4	0.0
	baz=20,SNR=3.7						
EIDS	Eidsvold	20.11	222	eP	Pn	06 55 14.8	-0.6
	72nm,1.2s						
MANU	Manus Island	20.44	294	eP	P	06 55 16.8	-0.5
	137nm,1.0s						
CTA	Charters Tower	21.02	242	P	P	06 55 24.2	+0.7
	12nm,0.7s,baz=73,slow=11,SNR=15						
CTAO	Charters Tower	21.02	242	eP	P	06 55 23.6	0.0
	74nm,1.2s						
CTAO	Charters Tower	21.02	242	eP	P	06 55 23.6	0.0
CTAO				pmax	pmax		
	comp=Z,74nm,1.2s						
MTSU	Mount Surprise	22.11	249	P	P	06 55 35.6	+0.3
	baz=22,SNR=41						
RMQ	Roma	22.41	224	P	P	06 55 39.6	+1.1
	baz=22,SNR=35						
COEN	Coen	22.43	260	P	P	06 55 38.2	-0.5
	baz=22,SNR=4.6						
COEN	Coen	22.43	260	eP	P	06 55 38.2	-0.5
	comp=Z,34nm,1.3s						
ARMA	Armidale	23.52	212	P	P	06 55 50.9	+0.9
	baz=24,SNR=4.2						
ARMA	Armidale	23.52	212	eP	P	06 55 50.9	+0.9
	comp=Z,48nm,1.1s						
OUZ	Omahuta	25.17	165	eP	P	06 56 05.7	+0.6
	comp=Z,15nm,0.9s						
QIS	Mount Isa	27.05	246	P	P	06 56 22.1	-0.3
	baz=27,SNR=4.7						
CMSA	Cobar Meteorol	27.77	219	P	P	06 56 28.7	+0.1
	baz=28,SNR=8.6						
CNB	Canberra Magne	28.58	209	P	P	06 56 37.1	+1.2
	baz=29,SNR=4.4						
HIZ	Hauiti	28.61	165	eP	P	06 56 36.9	+0.8
	comp=Z,28nm,0.9s						
URZ	Urewera	29.00	162	eP	P	06 56 40.1	+0.6
	comp=Z,12nm,0.7s						
URZ	Urewera	29.00	162	P	P	06 56 40.1	+0.6
	comp=Z,9.2nm,0.9s,baz=352,slow=4.0,SNR=7.4						
BKZ	Black Stump Fm	29.65	163	eP	P	06 56 46.0	+0.6
	comp=Z,29nm,0.5s						
STKA	Stephens Creek	30.66	223	P	P	06 56 55.0	+0.7
	baz=31,SNR=10						
STKA	Stephens Creek	30.66	223	eP	P	06 56 54.9	+0.6
	comp=Z,4.9nm,1.3s						
STKA	Stephens Creek	30.66	223	P	P	06 56 54.6	+0.3
	comp=Z,7.4nm,0.7s,baz=36,slow=8.1,SNR=12						
STKA				LR	LR	07 08 20.7	
	comp=Z,974nm,19.7s,baz=43,slow=35						
BFZ	Birch Farm	31.00	165	eP	P	06 56 57.3	0.0
	comp=Z,37nm,0.6s						
SNZO	South Karori	31.23	167	eP	P	06 56 59.0	-0.2
	comp=Z,33nm,0.8s						
THZ	Tophouse	31.32	170	eP	P	06 56 59.6	-0.4
	comp=Z,55nm,1.0s						
WRAB	Tennant Creek	31.69	250	eP	P	06 57 02.3	-1.3
	comp=Z,20nm,1.0s						
WRAB	Tennant Creek	31.69	250	⇓eP	P	06 57 02.2	-1.3
WRAB				pmax	pmax		
	comp=Z,28nm,1.3s						
WRA	Warramunga Arr	31.70	250	P	P	06 57 02.4	-1.3
	comp=Z,12nm,0.7s,baz=82,slow=9.0,SNR=86						
WRA				PcP	PcP	06 59 55.9	+0.3
	comp=Z,2.1nm,0.9s,baz=75,slow=3.2,SNR=5.0						
KHZ	Kahutara	32.07	169	eP	P	06 57 06.6	+0.1
	comp=Z,38nm,0.8s						
LTZ	Lake Taylor	32.21	171	eP	P	06 57 08.6	+0.7
	comp=Z,59nm,0.8s						
TOO	Toolangi	32.27	211	P	P	06 57 09.3	+0.8
	baz=32,SNR=6.8						
TOO	Toolangi	32.27	211	eP	P	06 57 08.1	-0.4
	comp=Z,17nm,0.8s						
TOO	Toolangi	32.27	211	eP	P	06 57 08.1	-0.4
TOO				pmax	pmax		
	comp=Z,17nm,0.8s						
FOZ	Fox Glacier	32.66	175	eP	P	06 57 13.4	+1.7
	comp=Z,60nm,1.3s						
OXZ	Oxford	32.71	172	eP	P	06 57 12.9	+0.7
	comp=Z,74nm,1.1s						
RPZ	Rata Peaks	32.97	173	eP	P	06 57 15.4	+1.0
	comp=Z,49nm,0.8s						
RPZ	Rata Peaks	32.97	173	P	P	06 57 15.3	+0.8
	comp=Z,58nm,0.9s,baz=37,slow=1.8,SNR=22						
AS01	Alice Springs	32.97	243	eP	P	06 57 13.3	-1.5
AS01				ePcP	PcP	06 59 58.5	-0.5
AS31	Alice Springs	33.01	243	eP	P	06 57 14.1	-1.1
	comp=Z,4.8nm,0.8s						
ASAR	Alice Springs	33.01	243	P	P	06 57 13.8	-1.4
	comp=Z,14nm,0.8s,baz=73,slow=9.5,SNR=102						
ASAR				PcP	PcP	06 59 59.1	0.0
	comp=Z,3.6nm,0.9s,baz=71,slow=2.3,SNR=10						
ASAR				LR	LR	07 09 32.2	
	comp=Z,601nm,20.3s,baz=74,slow=34						
CRLZ	Canterbury Las	33.04	171	eP	P	06 57 16.2	+1.2
	comp=Z,320nm,1.6s						
MQZ	McQueen's Vall	33.17	171	eP	P	06 57 17.0	+0.8
	comp=Z,72nm,0.9s						
HTT	Hallett	33.39	224	P	P	06 57 18.9	+0.6
	baz=34,SNR=4.8						
BBOO	Buckleboo	35.05	227	P	P	06 57 32.6	0.0
	baz=35,SNR=7.1						
BBOO	Buckleboo	35.05	227	eP	P	06 57 32.3	-0.4
	comp=Z,41nm,1.2s						
KNRA	Kununurra	36.45	258	P	P	06 57 44.7	-0.2
	baz=36,SNR=4.2						
WRKA	Warakurna	38.31	243	P	P	06 57 59.5	-1.1
	baz=38,SNR=11						
FITZ	Fitzroy Crossi	39.59	255	P	P	06 58 10.7	-0.7
	baz=40,SNR=12						
FITZ	Fitzroy Crossi	39.59	255	eP	P	06 58 10.4	-1.1
	comp=Z,15nm,0.8s						
PPT	Papeete	43.54	104	LR	LR	07 12 27.8	
	comp=Z,217nm,19.4s,baz=276,slow=30						
PPT2	Papeete2	43.54	104	eS	S	07 05 11.9	-1.4
	comp=Z,88nm,27.5s						
PPT2				eLQ	LQ	07 09 00.9	
	comp=Z,423nm,26.2s						
PPT2				eLR	LR	07 10 51.1	
	comp=Z,538nm,26.2s,baz=277						
BNSI	Bone	45.84	274	P	P	06 59 01.5	-0.7
MEEK	Meekatharra	47.17	244	P	P	06 59 13.1	+0.5
	baz=47,SNR=22						
KLBR	Kellerberrin	48.93	238	P	P	06 59 25.7	-0.4
	baz=49,SNR=6.8						
NWAO	Narrogin (SRO)	49.69	236	P	P	06 59 31.8	-0.1
	baz=50,SNR=4.3						
NWAO	Narrogin (SRO)	49.69	236	eP	P	06 59 31.3	-0.6
	comp=Z,56nm,1.1s						
NWAO	Narrogin (SRO)	49.69	236	eP	P	06 59 31.3	-0.6
NWAO				pmax	pmax		
	comp=Z,56nm,1.1s						
NWAO	Narrogin (SRO)	49.69	236	P	P	06 59 31.4	-0.6
	comp=Z,30nm,1.0s,baz=327,slow=9.7,SNR=6.2						
MORW	Morawa	49.84	241	P	P	06 59 33.6	+0.5
	baz=50,SNR=8.3						
MORW	Morawa	49.84	241	eP	P	06 59 32.9	-0.3
	comp=Z,37nm,1.1s						
MUN	Mundaring	50.30	237	P	P	06 59 36.4	-0.2
	baz=50,SNR=6.1						
TAOE	Nuku Hiva Isla	53.10	93	eS	S	07 07 25.4	-3.3
	comp=Z,80nm,25.0s						
TAOE				eLR	LR	07 15 07.3	
	comp=Z,309nm,28.6s						
MJAR	Matsushiro Arr	53.95	332	P	P	07 00 02.8	-0.7
	comp=Z,9.9nm,1.1s,baz=169,slow=8.1,SNR=12						
MAJO	Matsushiro	53.95	332	⇓eP	P	07 00 05.4	+1.8
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s						
MAT	Matsushiro	53.95	332	P	P	07 00 02.9	-0.7
MAT				eS	S	07 07 51.8	+12
JNU	Nakatsue	55.09	324	P	P	07 00 11.3	-0.7
	comp=Z,14nm,0.9s,baz=277,slow=3.8,SNR=6.1						
RKT	Rikitea	57.45	110	eLR	LR	07 17 13.0	
	comp=Z,453nm,27.0s						
ASAJ	Asahikawa	58.75	340	P	P	07 00 38.2	+0.6
	comp=Z,20nm,0.9s,baz=233,slow=12,SNR=8.0						
KSRS	Korea Array	59.89	325	P	P	07 00 46.0	+0.4
	comp=Z,1.4nm,0.7s,baz=140,slow=6.4,SNR=5.6						
KSAR	Wonju Array Be	59.90	325	P	P	07 00 46.0	+0.4
KSAR	Wonju Array Be	59.90	325	P	P	07 00 46.1	+0.4
YSS	Yuzh-Sakhalins	61.23	342	eP	P	07 00 55.1	+0.5
	comp=Z,32nm,1.1s						
YSS	Yuzh-Sakhalins	61.23	342	eP	P	07 00 56.7	+2.1
YSS				e		07 09 10.0	
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				MLR	MLR		
	comp=Z,200nm,18.0s						
NJ2	Nanjing	62.07	315	eP	P	07 01 00.7	+0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USA0B	Ussuriysk Arra	62.93	333	eP	P	07 01 06.5	+0.5
	comp=Z,37nm,1.5s						
USRK	Ussuriysk Ar.	62.93	333	P	P	07 01 06.5	+0.5
	comp=Z,12nm,1.1s,baz=145,slow=7.0,SNR=9.0						
MDJ	Mudanjiang	64.33	332	P	P	07 01 16.2	+0.8
MDJ				pmax	pmax		
	comp=Z,13nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,260nm,6.7s						
CASY	Casey	66.56	201	eP	P	07 01 29.5	+0.1
GRNR	Gornyy	66.60	340	eP	P	07 01 30.0	+0.1
KLR	Kul'dur	67.02	336	d iP	P	07 01 33.1	+0.5
KLR	Kul'dur	67.02	336	P	P	07 01 33.3	+0.6
	comp=Z,4.2nm,0.8s,baz=108,slow=2.4,SNR=15						
ENH	Enshi	67.97	309	eP	P	07 01 38.5	-0.6
	comp=Z,12nm,1.1s						
GYA	Guiyang	68.51	304	⇑iP	P	07 01 44.2	+1.5
GYA				PP	PP	07 04 18.8	+4.7
GYA				S	S	07 10 45.0	-0.2
GYA				SKS	SKiKP	07 11 39.2	+2.3
GYA	Guiyang	68.51	304	SS	SS	07 15 11.0	+1.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.4s						
GYA				LR	LR		
	comp=N,550nm,18.4s						
GYA				LR	LR		
	comp=E,560nm,18.1s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
XAN	Xi'an	70.18	312	P	P	07 01 52.3	-0.5
XAN				pP	sP	07 02 01.5	+4.3
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				LR	LR		
	comp=N,160nm,15.2s						
XAN				LR	LR		
	comp=Z,210nm,19.5s						
XAN	Xi'an	70.18	312	eP	P	07 01 49.0	-3.8
	comp=Z,21nm,0.8s						
XAN	Xi'an	70.18	312	eP	P	07 01 49.0	-3.8
XAN				pmax	pmax		
	comp=Z,21nm,0.8s						
KMI	Kunming	71.22	301	P	P	07 02 00.1	+0.6
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HHC	Hu-ho-hao-te	71.86	320	eP	P	07 02 02.1	-0.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
CMAR	Chiang Mai Arr	72.24	293	c eP	P	07 02 06.4	+0.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	72.24	293	P	P	07 02 06.0	+0.5
	comp=Z,0.8nm,0.4s,baz=115,slow=5.2,SNR=8.2						
CMAR				LR	LR	07 33 35.1	
	comp=Z,38nm,20.2s,baz=116,slow=36						
ZEA	Zeya	72.31	337	eP	P	07 02 05.2	+0.1
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
HIA	Hailar	72.36	330	⇓eP	P	07 02 06.0	+0.4
HIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CD2	Chengdu	72.68	307	⇑P	P	07 02 08.2	+0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,320nm,5.3s						
SEY	Seymchan	74.38	354	⇑iP	P	07 02 17.7	+0.5
LZH	Lanzhou	74.82	312	eP	P	07 02 21.5	+0.9
LZH				pP	sP	07 02 27.5	+2.7
LZH				sP	PcP	07 02 30.8	-3.8
LZH				PP	PP	07 05 21.4	+13
LZH				S	S	07 12 01.4	+3.6
LZH				sS	sS	07 12 15.1	+12
LZH	Lanzhou	74.82	312	SS	SS	07 17 10.0	+24
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=N,500nm,13.6s						
LZH				LR	LR		
	comp=E,460nm,15.2s						
LZH				LR	LR		
	comp=Z,510nm,15.7s						
SONM	Songino Array	78.68	324	P	P	07 02 42.2	+0.2
	comp=Z,5.0nm,1.0s,baz=137,slow=6.2,SNR=11						
BILL	Bilibino	78.76	0	eP	P	07 02 42.5	+0.5
	comp=Z,16nm,1.0s						
BILL	Bilibino	78.76	0	⇓iP	P	07 02 42.4	+0.5
BILL				pmax	pmax		
	comp=Z,22nm,1.3s						
QSPA	South Pole Qui	79.08	180	eP	P	07 02 44.2	+0.2
	comp=Z,61nm,1.2s						
GTA	Gaotai	79.11	314	⇓P	P	07 02 45.3	+0.7
GTA				pP	sP	07 02 49.7	+0.8
GTA				sP	PcP	07 02 52.3	-0.8
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,92nm,7.0s						
GTA				LR	LR		
	comp=N,180nm,18.1s						
GTA				LR	LR		
	comp=E,310nm,19.4s						
GTA				LR	LR		
	comp=Z,160nm,20.3s						
TLY	Talaya	82.13	326	⇓iP	P	07 03 00.3	-0.1
HDA	Harding Lake	83.07	19	P	P	07 03 05.6	+0.6
	baz=226						
TCOL	CIGO, UAF Yank	83.11	18	P	P	07 03 05.0	-0.1
	baz=226						
COLA	College	83.11	18	eP	P	07 03 05.2	0.0
	comp=Z,23nm,1.2s						
COLA	College	83.11	18	⇑iP	P	07 03 05.4	+0.2
COLA				pmax	pmax		
	comp=Z,45nm,3.0s						
ILAR	Eielson Array	83.34	18	P	P	07 03 06.5	+0.1
	comp=Z,4.1nm,0.8s,baz=241,slow=4.9,SNR=21						
CMB	Columbia Colle	84.12	50	eP	P	07 03 10.7	-0.4
	comp=Z,19nm,0.9s						
CMB	Columbia Colle	84.12	50	eP	P	07 03 10.7	-0.4
CMB				pmax	pmax		
	comp=Z,19nm,0.9s						
ISA	Isabella, Lake	84.85	52	P	P	07 03 16.4	+1.5
	baz=253						
EDW2	Edwards Air Fo	85.00	53	P	P	07 03 17.2	+1.7
	baz=253						
KNGR	Kungurtug, Tuv	85.12	324	⇑iP	P	07 03 15.7	-0.2
J05D	Fort Rock, OR	85.23	44	P	P	07 03 18.2	+1.5
	baz=250						
CWC	Cottonwood Cre	85.39	52	P	P	07 03 18.9	+1.2
	baz=253						
LRMC	Laurel Mtn Rad	85.42	53	P	P	07 03 18.8	+1.1
	baz=253						
NVAR	Mina Array Bea	85.80	50	P	P	07 03 21.0	+1.3
	comp=Z,2.7nm,0.8s,baz=235,slow=7.1,SNR=15						
NVAR				LR	LR	07 36 38.5	
	comp=Z,248nm,18.5s,baz=274,slow=32						
TIXI	Tiksi	86.01	349	⇓eP	P	07 03 19.3	-0.4
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
FURC	Furnace Creek,	86.33	52	P	P	07 03 23.5	+1.4
	baz=254						
GMRC	Granite Mounta	86.81	54	P	P	07 03 26.6	+1.9
	baz=254						
IRM	Iron Mountain	87.06	55	P	P	07 03 27.2	+1.5
	baz=255						
Y12C	Blythe	87.45	55	P	P	07 03 29.3	+1.7
	baz=255						
R11A	Troy Canyon, C	87.83	50	P	P	07 03 30.8	+1.2
	baz=254						
PDMCI	Parker Dam,Lak	87.90	55	P	P	07 03 31.4	+1.6
	baz=255						
WMQ	Urumqi	89.15	315	eP	P	07 03 35.4	-0.1
WMQ				pP	sP	07 03 39.6	-0.3
WMQ				sP	pP	07 03 45.1	+6.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,68nm,3.7s						
WMQ				LR	LR		
	comp=N,240nm,31.1s						
WMQ				LR	LR		
	comp=E,170nm,22.7s						
WMQ				LR	LR		
	comp=Z,120nm,21.3s						
INK	Inuvik	89.73	19	P	P	07 03 37.9	+0.4
	comp=Z,4.4nm,1.2s,baz=238,slow=5.9,SNR=4.1						
HLID	Hailey	90.06	46	P	P	07 03 41.5	+1.5
	baz=255						
TUC	Tucson	90.16	57	P	P	07 03 41.6	+1.1
	baz=257						
DUG	Dugway, Tooele	90.38	49	P	P	07 03 43.1	+1.6
	baz=256						
DGZ	Jazzator, Alta	90.93	320	⇑iP	P	07 03 43.4	-0.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SYO	Syowa Base	91.95	197	⇑eP	P	07 03 46.8	-1.2
BOZ	Bozeman (W)	92.48	44	P	P	07 03 52.7	+1.6
	baz=257						
LKWY	Lake	93.11	45	eP	P	07 03 50.8	-3.4
	comp=Z,12nm,0.4s						
LKWY	Lake	93.11	45	eP	P	07 03 50.8	-3.4
LKWY				pmax	pmax		
	comp=Z,12nm,0.4s						
PDAR	Pinedale Array	93.33	47	P	P	07 03 56.0	+0.8
	comp=Z,1.1nm,0.8s,baz=237,slow=3.3,SNR=9.3						
PDAR				LR	LR	07 38 39.5	
	comp=Z,81nm,21.0s,baz=285,slow=31						
MKAR	Makanchi Array	93.56	317	P	P	07 03 55.8	-0.1
	comp=Z,3.7nm,0.8s,baz=96,slow=6.2,SNR=33						
ZALV	Zalesovo Beam	93.57	324	P	P	07 03 54.6	-1.1
	comp=Z,2.6nm,0.9s,baz=122,slow=4.7,SNR=9.5						
YKA	Yellowknife Ar	94.78	27	P	P	07 03 59.8	-1.2
	comp=Z,0.5nm,0.6s,baz=256,slow=4.7,SNR=8.4						
TXAR	Lajitas Array	95.61	61	P	P	07 04 07.0	+1.2
	comp=Z,0.4nm,0.7s,baz=253,slow=2.7,SNR=2.5						
TXAR				LR	LR	07 39 46.1	
	comp=Z,164nm,20.2s,baz=0.0,slow=31						
KURK	Kurchatov	96.67	320	⇓eP	P	07 04 09.3	-0.7
KURK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
KSH	Kashi	96.83	309	P	P	07 04 11.9	+0.8
KSH				pmax	pmax		
	comp=Z,100nm,5.3s						
BRVK	Borovoye	102.04	322	⇑eP	Pdif	07 04 33.1	-0.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIV	Kislovodsk	121.28	315	i PKIKP	PKPdf	07 09 32.8	-0.4
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FINES	FINESS Array B	121.73	339	PKP	PKPdf	07 09 33.4	0.0
	comp=Z,1.0nm,0.8s,baz=66,slow=1.7,SNR=3.8						
CPUP	Villa Florida	123.97	132	PKP	PKPdf	07 09 38.5	-0.3
	comp=Z,1.6nm,0.8s,baz=245,slow=3.0,SNR=4.2						
NB2	NORSAR Subarra	126.64	345	PKPdf	PKPdf	07 09 42.0	-0.9
	comp=Z,0.7nm,0.7s,baz=34,slow=1.8						
NOA	NORSAR Array B	126.64	345	PKIKP	PKPdf	07 09 42.0	-0.9
NOA	NORSAR Array B	126.64	345	PKP	PKPdf	07 09 42.0	-0.9
	comp=Z,1.3nm,0.8s,baz=31,slow=1.9,SNR=4.8						
AKASG	Malin Array Be	126.87	327	PKP	PKPdf	07 09 42.8	-0.8
	comp=Z,0.1nm,0.3s,baz=55,slow=1.7,SNR=4.8						
BRTR	Keskin Array B	129.02	313	PKP	PKPdf	07 09 48.0	-0.2
	comp=Z,0.8nm,1.0s,baz=147,slow=2.9,SNR=4.7						
CLL	Collm	134.07	337	ePKPdf	PKPdf	07 09 57.0	-0.2
CLL	Collm	134.07	337	ePKIKP	PKPdf	07 09 57.0	-0.2
GERES	GERESS Array B	135.68	334	PKP	PKiKP	07 10 01.7	-0.4
	comp=Z,1.0nm,0.8s,baz=46,slow=2.8,SNR=5.5						
BDFB	Brasilia	137.26	128	PKP	PKPdf	07 10 04.2	-0.2
	comp=Z,2.3nm,0.9s,baz=210,slow=6.1,SNR=3.7						
KEST	Kesra	147.44	323	PKPbc	PKPbc	07 10 23.5	-0.8
	comp=Z,12nm,1.0s,baz=0.0,slow=1.0,SNR=3.3						
POLO	Lamas de Olo	149.17	351	ePKPdf	PKPbc	07 10 28.3	-0.4
MVO	Moncorvo	149.25	350	ePKPdf	PKPab	07 10 32.2	-1.1
PVRL	Vila Real	149.26	351	ePKPdf	PKiKP	07 10 29.6	-0.5
PVIS	Viseu	149.83	351	ePKPdf	PKiKP	07 10 30.9	-0.4
ESDC	Sonseca Array	150.00	344	PKPbc	PKPbc	07 10 30.9	+0.1
	comp=Z,1.9nm,0.8s,baz=15,slow=2.5,SNR=11						
MTE	Manteigas	150.08	350	ePKPdf	PKPbc	07 10 31.4	+0.5
PCAS	Casmilo, Conde	150.57	351	ePKPdf	PKPbc	07 10 31.9	-0.2
PTOM	Tomar	150.99	351	ePKPdf	PKiKP	07 10 33.4	-0.2
PMRV	Marv??o	151.00	349	ePKPdf	PKPbc	07 10 33.3	+0.2
PMTG	Montargil	151.50	350	ePKPdf	PKPbc	07 10 34.1	-0.1
PESTR	Estremoz	151.58	349	ePKPdf	PKPbc	07 10 34.4	-0.1
PNCL	Nicolau / Gran	152.48	351	ePKPdf	PKiKP	07 10 37.4	+0.7
TORD	Torodi Ar. Bea	164.43	280	PKP	PKPdf	07 10 43.6	-0.9
	comp=Z,0.8nm,0.9s,baz=104,slow=0.6,SNR=4.8						
TORD				PKPab	PKPab	07 11 36.8	-2.3
	comp=Z,0.5nm,0.7s,baz=96,slow=4.8,SNR=5.3						

JMA **10** *06:54:33.3±0.2, 39°.75N×143°.52E, h23^{km}, M3.3*

IDC **10** *06:54:39.8±6.6, 40°.11N×142°.29E, h0^{km}, mb3.5/3, mb1 3.4/5, mb1mx3.2/55, mbtmp3.4/5, ML2.5/2, Error ellipse: s-maj=123.5km s-min=30.1km az=111.0*

ISC 10 06:54:33.6±2.4**, 39°.82N**±0°.05×**143°.36E**±0°.09**, h8^{km}**±13^{km}**, n17, σ1^s.18**/27**, mb3.3**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.16	277	P	Pg	06 54 56.1	+0.3
JTH				S	Sn	06 55 12.8	+0.7
MIYJ	Miyakonagasawa	1.21	259	P	Pn	06 54 56.7	-0.2
JKEN	Kujiedanarisaw	1.32	288	P	Pb	06 54 58.4	-0.3
JANG	Nango	1.52	292	P	Pn	06 55 01.2	+0.1
JANG				eS	Sb	06 55 21.9	+0.4

JOM	Ohasama	1.63	259	P	Pb	06 55 03.3	-0.7
JOM				eS	Sb	06 55 24.8	+0.1
JMK	Ichinoseki	1.87	243	P	Pn	06 55 05.8	-0.1
JTM	Tenmabayashi	2.00	300	P	Pb	06 55 09.3	-1.0
JTM				eS	Sb	06 55 35.0	-0.4
JIO	Ouri	2.07	230	P	Pn	06 55 07.9	-0.8
JIO				eS	Sn	06 55 33.7	-1.0
JOT	Ohata	2.35	312	P	Pb	06 55 15.4	-0.9
JOT				eS	Sb	06 55 44.4	-1.1
JYK	Kaneyama	2.49	250	P	Pn	06 55 15.5	+1.0
JYK				eS	Sn	06 55 46.1	+1.0
JNBK	Urakawa-nobuka	2.50	350	P	Pn	06 55 15.9	+1.3
JNBK				eS	Sb	06 55 46.8	-3.0
JCH	Churui	2.80	0	P	Pn	06 55 18.9	+0.2
JCH				S	Sn	06 55 51.9	-0.7
ASAJ	Asahikawa	4.33	353	Pn	Pn	06 55 43.0	+3.2
	0.4nm,0.3s,baz=0.0,slow=20,SNR=3.0						
ASAJ				Sn	Sn	06 56 30.1	-0.4
	0.6nm,0.3s,baz=263,slow=19,SNR=2.7						
MJAR	Matsushiro Arr	5.21	233	Pn	Pn	06 55 53.3	+1.4
	0.1nm,0.3s,baz=42,slow=12,SNR=6.9						
SONM	Songino Array	27.63	299	P	P	07 00 21.9	+0.2
	0.4nm,0.7s,baz=90,slow=7.9,SNR=3.5						
ZALV	Zalesovo Beam	41.23	310	P	P	07 02 19.4	+0.6
	0.6nm,0.5s,baz=69,slow=7.9,SNR=3.1						
MKAR	Makanchi Array	43.99	300	P	P	07 02 41.1	-0.3
	0.4nm,0.7s,baz=82,slow=8.5,SNR=4.5						

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*ISCJB **10** 06:57:45.5±0.4, 10°.80S±0°.05×165°.77E±0°.07, h10^{km}, mb4.2/19, Error ellipse: s-maj=10.0km s-min=7.2km az=1.0*

*IDC **10** 06:57:45.5±0.8, 10°.78S×165°.83E, h0^{km}, mb4.2/14, mb1 4.5/16, mb1mx4.3/40, mbtmp4.3/16, ML5.0/2, Error ellipse: s-maj=24.9km s-min=17.0km az=120.0*

*NEIC **10** 06:57:47.1±0.3, 10°.72S×165°.79E, h10^{km}, mb4.3/8, Error ellipse: s-maj=7.0km s-min=5.2km az=99.0*

ISC 10 06:57:47.1±0.6**, 10°.72S**±0°.08×**165°.9E**±0°.1**, h10^{km}, n50, σ0^{s}.86**/53**, mb4.3**/20**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.95	282	eP	Pn	06 59 17.0	+1.7
HNR	Honiara	5.95	282	ePn	Pn	06 59 14.8	-0.5
HNR	Honiara	5.95	282	Pn	Pn	06 59 16.8	+1.6
	58nm,0.3s,baz=139,slow=6.6,SNR=12						
MARNC	Mare, Loyalty	10.90	169	ePn	Pn	07 00 23.8	+0.5
DZM	Mont Dzumac	11.30	177	Pn	Pn	07 00 28.8	0.0
	5.8nm,0.3s,baz=352,slow=11,SNR=29						
ONTNC	Ouen Toro	11.54	177	ePn	Pn	07 00 33.1	+1.2
PINNC	Pines Island,	11.93	173	ePn	Pn	07 00 38.1	+0.8
EIDS	Eidsvold	20.20	222	eP	P	07 02 22.0	-0.2
	13nm,0.9s						
MANU	Manus Island	20.27	294	eP	Pn	07 02 23.8	-1.2
	34nm,0.6s						
CTA	Charters Tower	21.04	241	P	P	07 02 31.9	+0.6
	12nm,0.7s,baz=72,slow=12,SNR=13						
CTAO	Charters Tower	21.04	241	eP	P	07 02 31.2	-0.1
	15nm,0.9s						
COEN	Coen	22.38	259	eP	P	07 02 43.8	-1.9
	8.8nm,1.1s						
ARMA	Armidale	23.64	212	eP	P	07 02 59.4	+0.6
	35nm,1.6s						
STKA	Stephens Creek	30.75	223	eP	P	07 04 03.0	+0.4
	1.0nm,1.4s						
STKA	Stephens Creek	30.75	223	P	P	07 04 02.3	-0.4
	1.3nm,0.5s,baz=38,slow=12,SNR=4.6						
WRAB	Tennant Creek	31.68	249	eP	P	07 04 10.4	-0.6
	3.5nm,0.9s						
WB2	Warramunga Arr	31.68	249	eP	P	07 04 10.8	-0.2
	6.3nm,1.0s						
WR1	Warramunga Arr	31.69	249	eP	P	07 04 09.8	-1.3
WR1				ePcP	PcP	07 07 02.8	-0.3
WRA	Warramunga Arr	31.69	249	P	P	07 04 09.8	-1.3
	3.9nm,0.8s,baz=80,slow=9.1,SNR=18						
WRA				PcP	PcP	07 07 02.8	-0.3
	0.6nm,0.7s,baz=73,slow=3.8,SNR=2.5						
AS01	Alice Springs	32.98	243	eP	P	07 04 21.7	-0.8
AS31	Alice Springs	33.03	243	eP	P	07 04 21.2	-1.6
	1.9nm,0.6s						
AS31				ePcP	PcP	07 07 06.9	+0.2
ASAR	Alice Springs	33.03	243	P	P	07 04 21.5	-1.4
	6.7nm,0.9s,baz=66,slow=10.0,SNR=50						
ASAR				PcP	PcP	07 07 06.9	+0.2
	1.1nm,0.8s,baz=59,slow=2.4,SNR=5.1						
RPZ	Rata Peaks	33.18	173	P	P	07 04 24.2	+0.3
	5.2nm,0.8s,baz=333,slow=2.3,SNR=2.7						
MJAR	Matsushiro Arr	53.73	332	P	P	07 07 09.1	-0.4
	1.9nm,0.8s,baz=162,slow=5.1,SNR=5.9						
MAJO	Matsushiro	53.73	332	eP	P	07 07 09.1	-0.4
KLR	Kul'dur	66.80	336	P	P	07 08 40.1	+1.3
	0.9nm,0.7s,baz=164,slow=3.5,SNR=3.9						
CM31	Chiang Mai Arr	72.07	293	eP	P	07 09 11.9	-0.1
CMAR	Chiang Mai Arr	72.07	293	P	P	07 09 11.9	-0.1
	1.4nm,0.3s,baz=88,slow=6.4,SNR=4.7						
SONA0	Songino Array	78.46	324	eP	P	07 09 49.4	+1.0
SONM	Songino Array	78.46	324	P	P	07 09 49.4	+1.0
	1.1nm,0.8s,baz=135,slow=6.5,SNR=6.1						
MDM	Murphy Dome	82.89	18	eP	P	07 10 11.6	-0.1
	11nm,1.3s						
IL1	Eielson Array	83.17	18	eP	P	07 10 13.9	+0.8
ILAR	Eielson Array	83.17	18	P	P	07 10 14.4	+1.3
	2.4nm,0.8s,baz=236,slow=5.3,SNR=26						
ILB	Eielson Array	83.17	18	eP	P	07 10 14.0	+0.9
NV01	Mina Array Sit	85.74	50	eP	P	07 10 26.0	-1.0
NVAR	Mina Array Bea	85.74	50	P	P	07 10 26.7	-0.3
	0.9nm,0.9s,baz=204,slow=3.3,SNR=4.3						
MK01	Makanchi Array	93.34	317	eP	P	07 11 02.6	+0.1
ZALV	Zalesovo Beam	93.35	324	P	P	07 11 02.7	+0.4
	0.7nm,0.6s,baz=118,slow=5.2,SNR=3.8						
ZAA1	Zalesovo Array	93.35	324	eP	P	07 11 02.7	+0.4
MK31	Makanchi Array	93.35	317	eP	P	07 11 02.8	+0.2
MK32	Makanchi Array	93.35	317	eP	P	07 11 03.1	+0.6
MKAR	Makanchi Array	93.35	317	eP	P	07 11 03.0	+0.6
	7.8nm,0.8s						
MKAR	Makanchi Array	93.35	317	P	P	07 11 03.1	+0.6
	1.3nm,0.7s,baz=94,slow=5.9,SNR=13						
YKA	Yellowknife Ar	94.64	27	P	P	07 11 07.4	-0.6
	0.3nm,0.8s,baz=259,slow=4.9,SNR=5.2						
YKB5	Yellowknife Ar	94.64	27	eP	P	07 11 06.9	-1.1
ARA0	ARCESS Array S	116.05	346	ePKPdf	PKiKP	07 16 29.4	-0.5
ARCES	ARCESS Array B	116.05	346	PKP	PKiKP	07 16 29.4	-0.5
	2.8nm,0.8s,baz=67,slow=2.4,SNR=17						
FIA0	FINESS Array S	121.51	339	ePKPdf	PKPdf	07 16 39.3	-1.3
FINES	FINESS Array B	121.51	339	PKP	PKPdf	07 16 39.3	-1.3
	1.2nm,0.8s,baz=135,slow=0.4,SNR=3.0						
ESDC	Sonseca Array	149.77	344	PKPbc	PKPbc	07 17 37.8	+0.1
	0.2nm,0.5s,baz=312,slow=7.4,SNR=4.5						

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*IDC **10** 06:58:52.6±0.5, 10°.84S×165°.79E, h0^{km}, mb4.5/19, mb1 4.7/21, mb1mx4.5/41, mbtmp4.6/21, ML5.0/2, MS4.3/4, Ms1 4.3/4, ms1mx3.9/14, Error ellipse: s-maj=18.5km s-min=14.5km az=104.0*

*NEIC **10** 06:58:54.5±0.2, 10°.80S×165°.70E, h10^{km}, mb4.8/34, Error ellipse: s-maj=5.4km s-min=4.0km az=105.0*

*ISCJB **10** 06:58:55.9±0.2, 10°.91S±0°.04×165°.66E±0°.05, h30^{km}, mb4.7/57, MS4.2/5, Error ellipse: s-maj=6.4km s-min=5.3km az=0.6*

*GCMT **10** 06:58:57.5±0.3, 10°.86S±0°.01×165°.73E±0°.03, h19^{km}±1^{km}, MW5.0/77, Moment Tensor Solution. s33,c42; s77,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.31±.26; $M_{\theta\theta}$4.19±.15; $M_{\phi\phi}$-0.87±.17; $M_{r\theta}$0.30±.26; $M_{\theta\phi}$0.04±.11; $M_{\phi r}$-1.32±.41; Best double couple: $M_0$4.05100×10^{16} NP1:ϕ_s291.00000°,δ52.00000°,λ-59.00000°. NP2: ϕ_s68.00000°,δ47.00000°,λ-123.00000°. Principal axes: T 4.2020, Plg2.0000°, Azm0.0000°; N -0.3020, Plg24.0000°, Azm91.0000°; P -3.9000, Plg66.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 06:58:57.3±0.4**, 10°.93S**±0°.06×**165°.72E**±0°.06**, h30^{km}, n100, σ1^{s}.33**/96**, mb4.7**/57**, MS4.2**/6**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.88	284	eP	Pn	07 00 24.0	+1.6
HNR				eS	Sb	07 01 44.0	-5.1
HNR	Honiara	5.88	284	ePn	Pn	07 00 20.5	-1.9
HNR				Sn	Sn	07 01 30.1	+1.3
HNR	Honiara	5.88	284	Pn	Pn	07 00 23.1	+0.7
	44nm,0.3s,baz=146,slow=8.4,SNR=4.9						
HNR				Sn	Sn	07 01 30.1	+1.3
	baz=18,slow=20,SNR=2.3						
MARNC	Mare, Loyalty	10.72	168	ePn	Pn	07 01 29.3	+0.4
DZM	Mont Dzumac	11.10	177	ePn	Pn	07 01 35.3	+1.1
	118nm,0.5s						
DZM				eLR	LR	07 04 10.6	
	comp=Z,2µm,33.4s						
DZM	Mont Dzumac	11.10	177	Pn	Pn	07 01 35.7	+1.5
	12nm,0.3s,baz=337,slow=13,SNR=23						
DZM				Sn	Sn	07 03 32.0	-5.4
	1.4nm,0.3s,baz=164,slow=20,SNR=1.9						
ONTNC	Ouen Toro	11.34	177	ePn	Pn	07 01 39.0	+1.7
PINNC	Pines Island,	11.73	172	ePn	Pn	07 01 44.6	+1.8
EIDS	Eidsvold	19.97	222	eP	Pn	07 03 29.3	+0.2
	51nm,1.5s						
CTA	Charters Tower	20.83	242	P	Pn	07 03 38.6	-0.7
	19nm,0.7s,baz=75,slow=12,SNR=12						
CTA				LR	LR	07 10 48.0	
	comp=Z,652nm,18.6s,baz=59,slow=34						
CTAO	Charters Tower	20.83	242	eP	Pn	07 03 38.4	-0.9
	22nm,0.8s						
COEN	Coen	22.22	260	eP	P	07 03 52.0	+0.3
	15nm,1.2s						
ARMA	Armidale	23.40	212	eP	P	07 04 05.4	+1.4
	24nm,1.3s						
KNTN	Kanton	23.80	72	eP	P	07 04 04.8	-3.0
	66nm,1.1s						
URZ	Urewera	29.06	161	P	P	07 04 55.3	+0.3
	4.0nm,0.5s,baz=288,slow=2.4,SNR=3.0						
URZ				LR	LR	07 15 56.1	
	comp=Z,730nm,18.3s,baz=344,slow=35						
H11S2	WAKE ISLAND Hy	29.25	2	T	T	07 35 05.0	
	baz=181,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	29.25	2	T	T	07 35 05.1	
	baz=181,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	29.27	2	T	T	07 35 06.4	
	baz=181,slow=76,SNR=24						
BKZ	Black Stump Fm	29.71	163	eP	P	07 05 02.4	+1.5
	17nm,0.5s						
H11N1	WAKE ISLAND Hy	30.47	2	T	T	07 36 36.5	
	baz=183						
H11N3	WAKE ISLAND Hy	30.48	2	T	T	07 36 36.9	
	baz=183						
H11N2	WAKE ISLAND Hy	30.49	2	T	T	07 36 37.9	
	baz=183						
STKA	Stephens Creek	30.51	223	eP	P	07 05 08.8	+0.8
	1.4nm,0.9s						
STKA	Stephens Creek	30.51	223	P	P	07 05 08.7	+0.7
	8.1nm,1.0s,baz=43,slow=11,SNR=9.4						
STKA				LR	LR	07 16 46.2	
	comp=Z,474nm,19.7s,baz=43,slow=35						
BFZ	Birch Farm	31.06	164	eP	P	07 05 12.6	-0.1
	50nm,1.2s						
SNZO	South Karori	31.28	167	eP	P	07 05 16.2	+1.6
	77nm,1.3s						
THZ	Tophouse	31.35	170	eP	P	07 05 16.5	+1.1
	32nm,1.0s						
WRAB	Tennant Creek	31.49	250	eP	P	07 05 17.1	+0.3
	8.9nm,0.8s						
WB2	Warramunga Arr	31.49	250	eP	P	07 05 16.3	-0.5
	8.0nm,0.9s						
WB2				epP	P	07 05 16.7	-0.1
WRA	Warramunga Arr	31.50	250	P	P	07 05 16.5	-0.4
	7.5nm,0.8s,baz=80,slow=9.1,SNR=16						
WRA				PcP	PcP	07 08 10.1	+0.4
	1.5nm,0.7s,baz=76,slow=3.4,SNR=6.6						
TOO	Toolangi	32.16	211	eP	P	07 05 24.2	+1.8
	38nm,1.5s						
LTZ	Lake Taylor	32.24	171	eP	P	07 05 24.3	+1.1
	34nm,0.8s						
OXZ	Oxford	32.74	171	eP	P	07 05 29.3	+1.9
	22nm,0.8s						
AS01	Alice Springs	32.78	243	eP	P	07 05 27.3	-0.9
AS31	Alice Springs	32.82	243	eP	P	07 05 28.5	0.0
	2.9nm,0.6s						
ASAR	Alice Springs	32.82	243	P	P	07 05 28.1	-0.4
	7.7nm,0.6s,baz=67,slow=10.0,SNR=27						
ASAR				PcP	PcP	07 08 13.7	+0.5
	2.2nm,0.7s,baz=62,slow=2.6,SNR=9.3						
ASAR				LR	LR	07 18 01.8	
	comp=Z,420nm,18.3s,baz=72,slow=35						
RPZ	Rata Peaks	32.99	173	eP	P	07 05 30.8	+1.2
	25nm,1.2s						
RPZ	Rata Peaks	32.99	173	P	P	07 05 30.2	+0.5
	11nm,0.6s,baz=346,slow=1.1,SNR=6.6						
MQZ	McQueen’s Vall	33.20	171	eP	P	07 05 33.5	+2.1
	38nm,1.1s						
FITZ	Fitzroy Crossi	39.39	255	eP	P	07 06 23.9	-0.7
	6.3nm,0.8s						
PPT2	Papeete2	43.75	104	eLR	LR	07 19 14.3	
	comp=Z,298nm,22.5s						
MORW	Morawa	49.66	241	eP	P	07 07 46.7	+0.1
	20nm,0.9s						
MJAR	Matsushiro Arr	53.86	333	P	P	07 08 16.6	-1.2
	3.8nm,0.7s,baz=167,slow=9.2,SNR=9.8						
MAT	Matsushiro	53.86	333	P	P	07 08 17.2	-0.6
MAT				S	S	07 15 52.8	+1.8
JNU	Nakatsue	54.97	324	P	P	07 08 25.0	-1.0
	10.0nm,0.9s,baz=188,slow=19,SNR=3.7						
RKT	Rikitea	57.65	110	eLR	LR	07 25 40.0	
	comp=Z,532nm,25.5s						
ASAJ	Asahikawa	58.68	341	P	P	07 08 52.5	+0.6
	11nm,0.7s,baz=214,slow=10,SNR=7.6						
NJ2	Nanjing	61.92	315	eP	P	07 09 16.4	+2.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	62.84	333	P	P	07 09 20.6	+0.4
	comp=Z,3.6nm,0.8s,baz=154,slow=4.3,SNR=5.2						
WHN	Wuhan	64.30	312	P	P	07 09 38.4	+8.2
KLR	Kul'dur	66.94	337	P	P	07 09 46.8	-0.2
	comp=Z,2.3nm,0.8s,baz=127,slow=9.4,SNR=4.1						
XAN	Xi'an	70.03	312	P	P	07 10 10.9	+4.3
XAN				pP	sP	07 10 19.8	+0.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.6s						
HHC	Hu-ho-hao-te	71.73	320	eP	P	07 10 14.6	-2.3
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,76nm,5.0s						
CMAR	Chiang Mai Arr	72.05	294	P	P	07 10 19.2	+0.1
	comp=Z,0.8nm,0.3s,baz=106,slow=4.6,SNR=6.5						
CD2	Chengdu	72.52	307	⇑P	P	07 10 22.1	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,220nm,6.5s						
LZH	Lanzhou	74.66	312	eP	P	07 10 39.6	+5.2
LZH				pP	pP	07 10 44.8	+1.3
LZH				sP	PcP	07 10 47.7	-0.9
LZH				pmax	pmax		
	comp=Z,11nm,1.2s						
GAMB	Gambell	76.46	10	eP	P	07 10 44.4	+0.6
	comp=Z,12nm,1.0s						
SONM	Songino Array	78.56	324	P	P	07 10 56.1	-0.1
	comp=Z,1.8nm,0.9s,baz=143,slow=7.0,SNR=8.9						
SONA1	Songino Array	78.56	324	eP	P	07 10 56.2	0.0
BILL	Bilibino	78.76	0	eP	P	07 10 56.2	-0.5
	comp=Z,8.2nm,0.9s						
GTA	Gaotai	78.96	314	eP	P	07 10 59.0	+0.5
GTA				pP	PcP	07 11 03.8	-3.3
GTA				sP	pP	07 11 06.1	-1.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,7.6s						
GTA				LR	LR		
	comp=N,180nm,19.4s						
GTA				LR	LR		
	comp=E,240nm,18.7s						
GTA				LR	LR		
	comp=Z,210nm,19.0s						
IM3	Indian Mountai	82.32	16	eP	P	07 11 15.7	-0.1
WRH	Wood River Hil	82.83	18	eP	P	07 11 18.5	+0.1
	comp=Z,18nm,1.3s						
MDM	Murphy Dome	83.13	18	eP	P	07 11 19.7	-0.4
COLA	College	83.18	18	eP	P	07 11 20.1	-0.2
	comp=Z,12nm,0.8s						
IL1	Eielson Array	83.41	19	eP	P	07 11 20.3	-1.2
ILAR	Eielson Array	83.41	19	P	P	07 11 21.1	-0.4
	comp=Z,5.3nm,0.7s,baz=229,slow=6.1,SNR=29						
ILB	Eielson Array	83.41	19	eP	P	07 11 21.1	-0.4
AFDM	Forest Hills D	84.14	49	eP	P	07 11 26.5	+0.6
	comp=Z,4.7nm,0.9s						
NV01	Mina Array Sit	85.97	50	eP	P	07 11 34.9	-0.3
NVAR	Mina Array Bea	85.97	50	P	P	07 11 35.4	+0.1
	comp=Z,2.9nm,0.9s,baz=229,slow=8.0,SNR=10						
NV11	Mina Array Sit	86.08	50	eP	P	07 11 36.0	+0.3
	comp=Z,0.4nm,1.1s						
J08A	Circle Bar Ran	87.32	45	eP	P	07 11 41.8	+0.2
	comp=Z,4.4nm,1.0s						
G08A	Pilot Rock	87.58	43	eP	P	07 11 43.4	+0.5
	comp=Z,4.7nm,1.1s						
E08A	Dider Farm, El	87.88	42	eP	P	07 11 45.0	+0.9
	comp=Z,9.1nm,1.5s						
WMQ	Urumqi	89.00	315	eP	P	07 11 49.8	+0.3
WMQ				sP	pP	07 11 57.1	-1.9
WMQ				LR	LR		
	comp=N,170nm,31.5s						
WMQ				LR	LR		
	comp=E,170nm,21.7s						
WMQ				LR	LR		
	comp=Z,160nm,23.7s						
LCMT	Little Creek M	89.45	52	eP	P	07 11 52.6	+0.7
	comp=Z,3.6nm,1.0s						
CCUT	Cedar City	89.49	52	eP	P	07 11 53.0	+0.9
	comp=Z,4.7nm,1.0s						
SZCU	Shurtz Canyon	89.71	52	eP	P	07 11 54.4	+1.2
	comp=Z,3.3nm,1.0s						
KNB	Kanab	89.78	52	eP	P	07 11 54.9	+1.4
	comp=Z,18nm,1.7s						
MTPU	Mount Pierson	90.51	51	eP	P	07 11 58.4	+1.3
	comp=Z,6.1nm,1.2s						
HVU	Hansel Valley	90.94	48	eP	P	07 11 59.4	+0.6
	comp=Z,4.1nm,1.0s						
SYO	Syowa Base	91.89	197	⇓eP	P	07 12 03.0	+0.6
PV14	Lion Creek, Pa	93.02	52	eP	P	07 12 09.2	+0.7
	comp=Z,3.4nm,0.8s						
MKAR	Makanchi Array	93.42	317	P	P	07 12 09.7	-0.2
	comp=Z,2.6nm,0.8s,baz=88,slow=6.3,SNR=15						
ZALV	Zalesovo Beam	93.45	324	P	P	07 12 08.6	-1.2
	comp=Z,1.4nm,0.6s,baz=99,slow=1.9,SNR=6.7						
PDAR	Pinedale Array	93.49	47	P	P	07 12 10.2	-0.4
	comp=Z,0.9nm,0.9s,baz=284,slow=3.6,SNR=5.5						
MAKZ	Makanchi	93.64	317	eP	P	07 12 10.7	-0.2
	comp=Z,6.5nm,1.3s						
YKA	Yellowknife Ar	94.88	27	P	P	07 12 14.4	-1.8
	comp=Z,0.6nm,0.7s,baz=254,slow=4.8,SNR=11						
ARCES	ARCESS Array B	116.22	345	PKP	PKiKP	07 17 36.3	-0.9
	comp=Z,3.7nm,0.9s,baz=77,slow=1.8,SNR=39						
FINES	FINESS Array B	121.66	339	PKP	PKPdf	07 17 47.1	-0.8
	comp=Z,1.6nm,0.8s,baz=29,slow=3.2,SNR=5.6						
BOSA	Boshof	125.18	223	PKP	PKPdf	07 17 55.6	-0.2
	comp=Z,1.9nm,0.7s,baz=201,slow=2.0,SNR=5.7						
NB2	NORSAR Subarra	126.58	345	PKPdf	PKPdf	07 17 56.7	-0.7
	comp=Z,0.8nm,0.7s,baz=34,slow=2.0						
NOA	NORSAR Array B	126.58	345	PKP	PKPdf	07 17 56.7	-0.7
	comp=Z,0.8nm,0.7s,baz=32,slow=1.9,SNR=4.8						
AKASG	Malin Array Be	126.75	327	PKP	PKPdf	07 17 57.4	-0.6
	comp=Z,1.2nm,0.7s,baz=54,slow=2.2,SNR=5.1						
CLL	Collm	133.99	336	ePKPdf	PKiKP	07 18 13.0	0.0
GERES	GERESS Array B	135.59	334	PKP	PKiKP	07 18 15.6	-0.9
	comp=Z,0.9nm,0.8s,baz=48,slow=1.5,SNR=4.9						
KEST	Kesra	147.31	323	PKPbc	PKPbc	07 18 39.1	+0.5
	comp=Z,7.8nm,0.9s,baz=309,slow=2.5,SNR=3.4						
ESDC	Sonseca Array	149.94	344	PKPbc	PKPbc	07 18 44.9	-0.3
	comp=Z,1.7nm,0.8s,baz=15,slow=2.7,SNR=9.4						
TORD	Torodi Ar. Bea	164.22	280	PKP	PKPdf	07 18 58.4	-0.5
	comp=Z,1.0nm,0.9s,baz=90,slow=0.6,SNR=4.8						

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*ISK **10** 07:02:25.9, 38°.67N×43°.17E, h7^{km}, ML2.4/9*

*ISCJB **10** 07:02:26.9±0.4, 38°.68N±0°.03×43°.16E±0°.03, h11^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=4.1km az=40.1*

*DDA **10** 07:02:26.7, 38°.68N×43°.22E, h7^{km}±4^{km}, ML2.7*

ISC 10 07:02:26.9±0.9**, 38°.68N**±0°.03×**43°.19E**±0°.03**, h15^{km}**±8^{km}**, n17, σ0^{s}.78**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.18	118	PG	Pg	07 02 31.2	-0.1
VANB				SG	Sg	07 02 35.3	+1.0
TVAN	Van	0.23	131	i P	Pg	07 02 31.6	-0.5
TVAN				i S	Sg	07 02 35.6	-0.1
ERCV	ERCIS-VAN	0.36	19	PG	Pg	07 02 33.5	-0.9
GEVA	Gevas	0.38	195	i P	Pg	07 02 34.1	-0.6
GEVA				i S	Sb	07 02 41.7	+0.5
ADCV	BITLIS_Adilcev	0.38	290	i P	Pb	07 02 35.8	+0.2
ADCV				i S	Sb	07 02 42.7	+1.3
AKDM	Akdamar-Van	0.39	205	PG	Pg	07 02 33.9	-0.9
VMUR	Van-Muradiye	0.43	44	i P	Pb	07 02 35.8	-0.6
VMUR				i S	Sb	07 02 43.7	+0.9
CLDR	Caldiran	0.73	51	PG	Pg	07 02 40.7	-0.6
CLDR				SG	Sb	07 02 51.8	+0.2
CLDR	Caldiran	0.73	51	i P	Pb	07 02 41.2	-0.4
CLDR				i S	Sb	07 02 52.8	+1.3
CLDR				IAML_P			
	comp=Z,2µm,0.1s						
TUTA	Tutak	0.78	338	i P	Pg	07 02 41.8	-0.3
BASK	Baskale_VAN	0.90	134	i P	Pg	07 02 43.1	-1.3
AGRB	Hanur-Agry	0.91	350	PG	Pg	07 02 43.4	-1.2
AGRB				SG	Sb	07 02 57.2	+0.6
GURO	Guroymak-BITLI	0.91	262	PG	Pg	07 02 43.6	-1.1
GURO				SG	Sg	07 02 56.4	-0.3
EATA	Eleskirt	1.30	336	i P	Pb	07 02 51.4	+0.1
EATA				IAML_P			
	comp=Z,531nm,0.2s						
SIRT	Sirnak	1.32	207	PN	Pg	07 02 51.9	-0.4
CUKT	Cukurca	1.47	167	PN	Pn	07 02 53.2	+0.2
TASB	TASBURUN-IGDIR	1.54	32	PN	Pb	07 02 55.3	+0.1

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*ISCJB **10** 07:03:37.5±1.4, 25°.35N±0°.08×124°.35E±0°.05, h18^{km}±12^{km}, mb3.6/6, Error ellipse: s-maj=13.5km s-min=7.7km az=172.5*

*JMA **10** 07:03:37.3±0.3, 25°.34N×124°.36E, h9^{km}±4^{km}, M3.3*

*IDC **10** 07:03:49.1±6.3, 25°.33N×124°.20E, h105^{km}±60^{km}, mb3.3/6, mb1 3.4/7, mb1mx3.2/44, mbtmp3.6/7, MS3.1/1, Ms1 3.1/1, ms1mx2.6/20, Error ellipse: s-maj=57.2km s-min=19.8km az=73.0*

ISC 10 07:03:37.6±1.6**, 25°.31N**±0°.07×**124°.38E**±0°.05**, h14^{km}**±11^{km}**, n17, σ1^{s}.22**/22**, mb3.5**/6**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	0.72	185	P	Pg	07 03 51.7	0.0
JTJ	Tarama	0.72	156	P	Pg	07 03 52.0	+0.3
JTJ				eS	Sn	07 04 02.4	-1.8
JIRB	Irabujima	0.86	124	P	Pb	07 03 54.0	-0.3
JIRB				eS	Sg	07 04 05.6	0.0
JIKM	Ikemajima	0.87	116	P	Pb	07 03 54.6	+0.1
JIKM				S	Sg	07 04 06.3	+0.3
JMJ	Miyako jima 2	0.96	121	P	Pn	07 03 56.3	-0.3
JMJ				eS	Sn	07 04 08.9	-1.2
JIJ	Ishigaki jima	0.97	193	P	Pb	07 03 55.6	-0.5
JOGS	Gusukube	1.08	120	P	Pg	07 03 58.4	0.0
JOGS				eS	Sg	07 04 13.3	+0.8
JKRS	Kuro-shima	1.12	198	P	Pg	07 03 58.9	-0.3
IRIF	Iriomote-Funau	1.14	212	P	Pn	07 03 58.7	-0.3
HATJ	Hateruma jima	1.35	203	P	Pb	07 04 02.4	-0.3
KSRS	Korea Array	12.48	13	P	P	07 06 43.2	-3.3
	0.1nm,0.3s,baz=190,slow=11,SNR=3.5						
KSRS				LR	LR	07 11 55.8	
	comp=Z,78nm,19.9s,baz=180,slow=39						
SONM	Songino Array	26.60	332	P	P	07 09 16.4	+0.9
	0.8nm,0.9s,baz=142,slow=7.2,SNR=5.3						
ZALV	Zalesovo Beam	40.94	325	P	P	07 11 21.0	+1.5
	0.7nm,0.5s,baz=100,slow=7.5,SNR=4.7						
WRA	Warramunga Arr	46.01	167	P	P	07 12 02.8	+2.1
	0.7nm,0.8s,baz=349,slow=8.5,SNR=3.9						
NRIK	Noril'sk	49.11	344	P	P	07 12 23.9	-0.3
	1.0nm,0.3s,baz=139,slow=8.8,SNR=3.6						
ASAR	Alice Springs	49.55	169	P	P	07 12 29.2	+1.0
	0.3nm,0.8s,baz=347,slow=12,SNR=3.0						
YKA	Yellowknife Ar	80.79	24	P	P	07 15 51.4	+1.0
	0.2nm,0.7s,baz=310,slow=5.3,SNR=4.2						

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*ISCJB **10** 07:06:30.7±0.9, 10°.9S±0°.1×165°.7E±0°.1, h10^{km}, mb3.6/5, Error ellipse: s-maj=19.6km s-min=17.4km az=164.1*

*IDC **10** 07:06:30.7±1.3, 10°.79S×165°.75E, h0^{km}, mb3.7/5, mb1 4.0/7, mb1mx3.7/36, mbtmp3.9/7, ML4.4/2, Error ellipse: s-maj=40.5km s-min=25.3km az=136.0*

ISC 10 07:06:32.4±1.1**, 10°.8S**±0°.1×**165°.7E**±0°.2**, h10^{km}, n13, σ0^{s}.59**/7**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.85	283	Pn	Pn	07 07 59.4	+0.2

	14nm,0.3s,baz=159,slow=14,SNR=2.6						
DZM	Mont Dzumac	11.27	177	Pn	Pn	07 09 13.9	+0.3
	1.9nm,0.3s,baz=14,slow=14,SNR=16						
H11S2	WAKE ISLAND Hy	29.08	2	T	T	07 42 57.9	
	baz=181,slow=74						
H11S3	WAKE ISLAND Hy	29.08	2	T	T	07 42 58.4	
	baz=181						
H11S1	WAKE ISLAND Hy	29.10	2	T	T	07 42 59.2	
	baz=181,slow=74						
H11N1	WAKE ISLAND Hy	30.30	2	T	T	07 44 30.0	
	baz=186						
H11N3	WAKE ISLAND Hy	30.31	2	T	T	07 44 30.4	
	baz=186,slow=74						
H11N2	WAKE ISLAND Hy	30.32	2	T	T	07 44 30.8	
	baz=186,slow=74						
WRA	Warramunga Arr	31.58	249	P	P	07 12 55.4	0.0
	0.4nm,0.7s,baz=83,slow=9.1,SNR=4.2						
ASAR	Alice Springs	32.91	243	P	P	07 13 06.5	-0.7
	0.6nm,0.8s,baz=69,slow=9.1,SNR=6.0						
ILAR	Eielson Array	83.25	19	P	P	07 18 59.2	+0.5
	0.6nm,0.7s,baz=237,slow=5.5,SNR=10.0						
MKAR	Makanchi Array	93.31	317	P	P	07 19 47.9	+0.3
	0.3nm,0.8s,baz=92,slow=5.6,SNR=2.8						
YKA	Yellowknife Ar	94.72	27	P	P	07 19 53.0	-0.7
	0.1nm,0.6s,baz=253,slow=3.7,SNR=3.2						

LDG 10 07:07:11.4±0.0,45°.69N×3°.00E,h2^{km},Md1.7/2,Ml1.4/17, Error ellipse: s-maj=0.8km s-min=0.7km az=66.0, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGF	Bois d'Agland	0.87	353	ePg	Pg	07 07 27.8	-0.4
BGF				eSg	Sg	07 07 39.2	-0.3
	7.8nm,0.3s						
CAF	Calviac	1.01	221	ePg	Pg	07 07 30.7	-0.1
CAF				eSg	Sg	07 07 43.9	0.0
	1.0nm,0.2s						
RJF	Les Rejaudoux	1.11	250	ePg	Pg	07 07 32.4	-0.3
RJF				eSg	Sg	07 07 46.3	-0.9
	0.8nm,0.2s						
SMF	Signal de Mont	1.12	31	ePg	Pg	07 07 32.5	-0.3
SMF				eSg	Sg	07 07 46.9	-0.4
	0.5nm,0.1s						
AVF	Avril sur Loir	1.13	12	ePg	Pg	07 07 32.2	-0.8
AVF				eSg	Sg	07 07 46.3	-1.3
	0.7nm,0.2s						
SSF	Saint Saulge	1.42	14	ePn	Pn	07 07 36.5	-1.7
SSF				eSn	Sg	07 07 54.4	-2.5
	0.6nm,0.2s						
VIVF	Saint-Julien-l	1.45	125	ePn	Pn	07 07 37.2	-1.4
VIVF	Saint-Julien-l	1.45	125	ePg	Pn	07 07 38.5	-0.1
VIVF				eSg	Sg	07 07 57.0	-0.8
	0.8nm,0.2s						
HYF	Humbligny	1.60	351	ePg	Pn	07 07 41.1	+0.4
HYF				eSg	Sn	07 08 01.9	0.0
LOR	Lormes	1.69	20	ePn	Pn	07 07 40.4	-1.5
	baz=201						
LOR	Lormes	1.69	20	ePg	Pb	07 07 42.9	-0.2
LOR				eSn	Sn	07 08 01.0	-3.1
LOR				eSg	Sb	07 08 04.2	-0.6
	0.6nm,0.2s						
LASF	Ste Croix	1.73	159	ePn	Pn	07 07 40.7	-1.7
LASF				eSg	Sn	07 08 05.2	+0.2
	0.3nm,0.2s						
LFF	La Frestale	1.76	246	eSg	Sn	07 08 06.3	+0.4
	0.4nm,0.2s						
ORIF	Oris-en-Rattie	2.17	110	ePn	Pn	07 07 46.5	-2.2
ORIF				eSn	Sn	07 08 12.4	-3.8
ORIF				eSg	Sg	07 08 20.1	-1.1
	0.2nm,0.2s						
MFF	Saint Martin d	2.37	294	ePn	Pn	07 07 49.5	-1.8
MFF	Saint Martin d	2.37	294	ePg	Pb	07 07 55.2	+0.4
MFF				eSg	Sb	07 08 25.6	+1.1
	0.3nm,0.2s						
MTLF	Montolieu	2.42	194	ePn	Pn	07 07 49.9	-2.0
MTLF				eSn	Sn	07 08 18.2	-3.8
	0.3nm,0.2s						
LPL	La Plagne	2.62	92	ePn	Pn	07 07 53.4	-1.6
LPL				eSn	Sn	07 08 23.5	-4.0
	0.4nm,0.2s						
MBDF	Montbardon	2.83	109	ePn	Pn	07 07 56.0	-1.8

*GUC **10** 07:08:28.0±0.6,26°.97S×70°.57W,h78^{km}±11^{km},ML4.6*
*SJA **10** 07:08:29.8±0.9,27°.04S×70°.32W,h55^{km},ML4.3,MW4.5*
*NEIC **10** 07:08:29.9±0.4,27°.00S×70°.14W,h61^{km}±4^{km},mb4.5/45, ML4.6(GUC),Error ellipse: s-maj=7.3km s-min=4.0km az=86.0*
NEIC Felt [IV] at Copiapo and Tierra Amarilla; [II] at Caldera, Chanaral, Diego de Almagro and Vallenar.
*ISCJB **10** 07:08:30.1±0.3,26°.95S±0°.02×70°.17W±0°.05,h76^{km}±3^{km}, mb4.4/57,Error ellipse: s-maj=7.6km s-min=3.3km az=171.8*
*IDC **10** 07:08:30.6±0.5,26°.99S×70°.04W,h69^{km}±3^{km},mb4.0/14, mb1 4.1/18,mb1mx4.0/33,mbtmp4.3/18,MS2.9/5, Ms1 2.9/5,ms1mx2.8/26,Error ellipse: s-maj=16.9km s-min=12.9km az=62.0*
ISC 10 07:08:30.4±0.4,26°.95S±0°.03×70°.21W±0°.05,h69^{km}±3^{km}, h69^{km}:pP-P,n142,σ1.^{s}65/170,mb4.5/57,2C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRCH	Chaqaral	0.70	328	eP	Pn	07 08 46.5	+1.3
CRCH				iS	Sn	07 08 57.7	+1.5
GO02	Mina Guanaco	1.86	18	ePn	Pn	07 09 02.5	+2.0
GO02	Mina Guanaco	1.86	18⇓	eP	Pn	07 09 02.2	+1.8
GO02				iS	Sn	07 09 27.7	+4.4
GO02				IAML		07 09 32.6	
	comp=E,7µm,0.5s						
LCO	Las Campanas	2.10	192	ePn	Pn	07 09 02.8	-0.9
LCO				eSn	Sn	07 09 28.0	-1.0
LCO	Las Campanas	2.10	192⇓	eP	Pn	07 09 02.3	-1.3
LCO				iS	Sn	07 09 28.2	-0.7
LCO				IAML		07 09 30.9	
	comp=E,5µm,0.3s						
PB14	IPOC Station P	2.32	356	eP	Pn	07 09 06.7	+0.1
PB14				eS	Sn	07 09 35.6	+1.3
PB14				IAML		07 09 42.4	
	comp=E,4µm,0.5s						
AGUA	GUANDACOL	2.95	149	eP	Pn	07 09 18.5	+3.5
GO04	Tololo Observa	3.25	189	ePn	Pn	07 09 18.5	-0.8
GO04				eSn	Sn	07 09 55.8	-1.2
GO04	Tololo Observa	3.25	189⇓	iP	Pn	07 09 17.9	-1.4
AROD	Rodeo	3.27	169	eP	Pn	07 09 21.7	+2.1
ACDV	Cuesta del Vie	3.35	164	eP	Pn	07 09 23.3	+2.8
PB10	IPOC Station P	3.43	355	ePn	Pn	07 09 21.3	-0.2
PB10	IPOC Station P	3.43	355	eP	Pn	07 09 20.5	-1.1
PB10				IAML		07 10 22.3	
	comp=E,691nm,0.3s						
ACCO	Cerro Coronel	3.76	165	eP	Pn	07 09 28.7	+2.4
PB15	IPOC Station P	3.78	10	eP	Pn	07 09 27.3	+0.8
ACLC	CERRO LA CRUZ	3.79	131	eP	Pn	07 09 29.1	+2.5
CYA	Choya	4.18	112	eP	Pn	07 09 34.0	+2.3
CYA				iP		07 09 34.0	
AMOG	MOGNA	4.25	160	eP	Pn	07 09 34.2	+1.5
CMCH	Combarbala	4.27	189	eP	Pn	07 09 30.8	-2.1
AHML	Horco Molle	4.36	89	iP	Pn	07 09 38.3	+4.1
AHML				eP		07 09 38.3	
LVC	Limon Verde	4.48	16	ePn	Pn	07 09 37.1	+1.0
LVC				S	Sn	07 10 26.5	-0.6
LVC	Limon Verde	4.48	16	P	Pn	07 09 36.6	+0.4
	comp=E,11nm,0.3s,baz=169,slow=11,SNR=74						
LVC				S	Sn	07 10 26.5	-0.6
	comp=E,53nm,0.3s,baz=178,slow=5.5,SNR=2.2						
LVC				LR	LR	07 10 59.1	
	comp=E,69nm,20.7s,baz=214,slow=33						
PB04	IPOC Station P	4.59	1	ePn	Pn	07 09 36.0	-1.6
RTLL	Cerro Villicun	4.62	161	eP	Pn	07 09 39.0	+1.2
RTLL				iP		07 09 39.1	
APLL	PUNTA DE LOS L	4.72	138	eP	Pn	07 09 40.8	+1.7
SLA	San Lorenzo	4.79	63	iP	Pn	07 09 45.8	+5.7
SLA				IAML		07 09 49.7	
	comp=Z,165nm,0.5s						
SLA				eS	Sn	07 10 29.9	-4.5
SJA	San Juan	4.79	163	eP	Pn	07 09 43.3	+3.3
RTLS	Leoncito	4.90	171	iP	Pn	07 09 42.8	+1.0
RTLS				eS	Sn	07 10 44.9	+7.6
RTLS				IAML		07 11 24.8	
	comp=Z,275nm,0.5s						
CFA	Coronel Fontan	4.95	160	eP	Pn	07 09 43.0	+0.7
RTCV	Cerro Valdivia	5.11	164	iP	Pn	07 09 45.5	+1.1
AUSP	Uspallata	5.31	172	eP	Pn	07 09 48.2	+0.9
HJA	Humahuaca	5.73	50	iP	Pn	07 09 57.3	+4.1
HJA				IAML		07 10 03.5	
	comp=Z,91nm,0.6s						
ASAL	Salagasta	5.75	168	eP	Pn	07 09 54.0	+0.8
PB01	IPOC Station P	5.92	7	ePn	Pn	07 09 54.4	-1.2
ACAN	Cantantal	5.92	154	eP	Pn	07 09 56.3	+0.7
ARCO	CERRO ARCO	5.98	170	eP	Pn	07 09 59.2	+2.8
ROC1	El Roble	6.05	186	ePn	Pn	07 09 55.2	-2.3
PEL	Peldehue	6.19	184	ePn	Pn	07 09 57.0	-2.2
AAGR	Agrelo	6.23	169	eP	Pn	07 10 00.7	+0.8
YJA	Yavi	6.39	43	iP	Pn	07 10 05.2	+2.9
AVIZ	Vizcacheras	6.67	168	eP	Pn	07 10 08.8	+3.1
MRA	San Martin	6.71	145	iP	Pn	07 10 07.1	+0.7
PB11	IPOC Station P	7.17	4	ePn	Pn	07 10 13.8	+1.0
MNMC	Minye Minye	7.80	4	ePn	Pn	07 10 19.2	-2.3
LPAZ	La Paz	10.78	11	P	Pn	07 11 02.4	-0.1
	comp=Z,0.9nm,0.3s,baz=198,slow=5.9,SNR=16						
LPAZ				S	Sn	07 12 58.8	-3.2
	baz=198,slow=21,SNR=1.2						
LPAZ				LR	LR	07 16 34.4	
	comp=Z,61nm,21.7s,baz=178,slow=45						
CPUP	Villa Florida	11.54	90	ePn	Pn	07 11 13.8	+1.5
CPUP				S	Sn	07 13 14.6	-4.9
CPUP	Villa Florida	11.54	90	P	Pn	07 11 11.8	-0.5
	comp=Z,0.1nm,0.3s,baz=272,slow=18,SNR=3.0						
CPUP				S	Sn	07 13 14.6	-4.9
	comp=Z,0.1nm,0.3s,baz=304,slow=7.3,SNR=1.3						
CPUP				LR	LR	07 15 06.7	
	comp=Z,40nm,19.8s,baz=236,slow=35						
TRQA	Tornquist	13.07	150	ePn	Pn	07 11 32.3	-0.7
PLCA	Paso Flores	13.75	181	ePn	Pn	07 11 40.5	-1.7
NNA	Nana	16.14	336	P	Pn	07 12 14.5	+1.5
	comp=Z,0.7nm,0.3s,baz=209,slow=19,SNR=2.6						
NNA				LR	LR	07 17 29.6	
	comp=Z,49nm,18.9s,baz=181,slow=33						
SPB	Sao Paulo	20.86	86	eP	P	07 13 05.9	-0.9
	comp=Z,8.6nm,1.0s						
ATAH	Atahualpa	21.18	337	P	P	07 13 11.8	+1.0
	comp=Z,2.8nm,0.7s,baz=184,slow=15,SNR=2.4						
BDFB	Brasilia	23.50	66	eP	P	07 13 33.8	-0.7
	comp=Z,10nm,1.0s						
BDFB	Brasilia	23.50	66	P	P	07 13 33.5	-0.9
	comp=Z,4.1nm,0.5s,baz=237,slow=9.8,SNR=11						
BDFB				LR	LR	07 25 00.1	
	comp=Z,69nm,18.8s,baz=201,slow=42						
PTGA	Pitinga	27.86	22	eP	P	07 14 13.8	+0.1
	comp=Z,26nm,1.4s						
PTGA	Pitinga	27.86	22	P	P	07 14 14.6	+0.9
	comp=Z,1.0nm,0.3s,baz=183,slow=18,SNR=3.5						
OTAV	Otavalo	28.17	342	eP	P	07 14 16.1	-0.8
	comp=Z,4.5nm,1.1s						
CHIC	Chingaza	31.58	353	eP	P	07 14 46.6	-0.4
CHIC	Chingaza	31.58	353	eP	P	07 14 46.6	-0.4
ROSC	El Rosal	31.85	352	P	P	07 14 51.1	+1.7
	comp=Z,3.4nm,0.5s,baz=56,slow=21,SNR=4.2						
RUSC	La Rusia	32.76	355	eP	P	07 14 58.3	+0.8
RUSC	La Rusia	32.76	355	eP	P	07 14 58.3	+0.8
HELC	Santa Helena	33.34	350	eP	P	07 15 01.2	-1.2
HELC	Santa Helena	33.34	350	eP	P	07 15 01.2	-1.2
PTBC	PUERTO BERRIO,	33.54	352	eP	P	07 15 01.7	-2.1
PTBC	PUERTO BERRIO,	33.54	352	eP	P	07 15 01.7	-2.1
RPN	Rapa Nui	34.75	261	P	P	07 15 17.5	+3.3
	comp=Z,40nm,0.6s,baz=62,slow=17,SNR=2.1						
UREC	San Jos de Ur	34.88	351	eP	P	07 15 15.3	0.0
UREC	San Jos de Ur	34.88	351	eP	P	07 15 15.3	0.0
SMLC	San Martn de	35.73	353	eP	P	07 15 21.1	-1.5
SMLC	San Martn de	35.73	353	eP	P	07 15 21.1	-1.5
VNA3	Neumayer Olymp	55.35	160	P	P	07 17 55.9	-0.9
VNA2	Neumayer--Watz	55.96	159	P	P	07 18 01.0	-0.2
	baz=298,slow=8.0						
SNAA	Sanae	57.57	160	P	P	07 18 12.0	-0.6
SNAA	Sanae	57.57	160	P	P	07 18 12.5	-0.1
	comp=Z,1.7nm,0.5s,baz=293,slow=7.6,SNR=11						
SNAA				pP	pP	07 18 30.3	-0.6
	comp=Z,4.5nm,0.6s,baz=282,slow=9.1,SNR=4.5						
SWET	Sewanee	63.59	346	eP	P	07 18 53.3	-0.6
JCT	Junction City	63.73	332	eP	P	07 18 56.0	+1.0
	comp=Z,7.7nm,0.7s						
TX31	Lajitas Ar. Si	64.50	328	eP	P	07 19 01.0	+0.9
TXAR	Lajitas Array	64.50	328	P	P	07 19 01.0	+0.9
	comp=Z,1.8nm,0.6s,baz=155,slow=9.3,SNR=22						
TXAR				pP	pP	07 19 19.4	+0.8
	comp=Z,0.6nm,0.7s,baz=160,slow=12,SNR=3.4						
TXAR				sP	sP	07 19 26.5	+0.2
	comp=Z,1.2nm,0.8s,baz=147,slow=7.5,SNR=4.2						
MNTX	Cornudas Mount	67.28	328	eP	P	07 19 17.5	-0.3
	comp=Z,6.3nm,0.8s						
MNTX				epP	PcP	07 19 42.6	-2.5
FVM	French Village	67.32	343	eP	P	07 19 17.7	-0.1
	comp=Z,9.3nm,0.7s						
CCM	Cathedral Cave	67.60	342	eP	P	07 19 19.7	0.0
	comp=Z,9.0nm,0.9s						
319A	Douglas	68.95	325	eP	P	07 19 29.6	+1.2
	comp=Z,6.7nm,0.8s						
ANMO	Albuquerque	70.47	329	eP	P	07 19 38.9	+1.1
	comp=Z,6.3nm,1.9s						
DBIC	Dimbokro	71.47	72	P	P	07 19 44.5	+0.4
	comp=Z,4.7nm,1.0s,baz=203,slow=7.1,SNR=3.1						
SYO	Syowa Base	71.85	159⇑	eP	P	07 19 44.2	-1.2
SYO	Syowa Base	71.85	159⇑	eX	P	07 19 50.4	+5.0
X16A	Lo Mia Camp, P	72.46	325	eP	P	07 19 50.8	+1.0
	comp=Z,20nm,1.9s						
MVCO	Mesa Verde	73.27	329	eP	P	07 19 55.5	+1.0
	comp=Z,4.4nm,0.9s						
SMCO	Snowmass	74.20	331	eP	P	07 20 01.2	+1.0
	comp=Z,5.7nm,1.1s						
W13A	Hualapai Mount	74.25	324	eP	P	07 20 02.4	+2.0
	comp=Z,2.2nm,0.7s						
KNB	Kanab	75.19	326	eP	P	07 20 07.5	+1.8
	comp=Z,11nm,1.2s						
LCMT	Little Creek M	75.40	326	eP	P	07 20 08.2	+1.3
	comp=Z,3.1nm,1.0s						
MTPU	Mount Pierson	75.68	327	eP	P	07 20 09.5	+0.8
	comp=Z,3.7nm,0.8s						
SRU	San Rafael Swe	75.74	329	eP	P	07 20 09.8	+1.0
	comp=Z,5.8nm,0.7s						
SZCU	Shurtz Canyon	75.77	326	eP	P	07 20 10.2	+1.1
	comp=Z,4.4nm,1.1s						
CCUT	Cedar City	75.88	326	eP	P	07 20 10.7	+1.1
	comp=Z,6.1nm,0.8s						
MSU	Marysvale	76.05	327	eP	P	07 20 12.2	+1.7
PSUT	Pine Spring	76.88	326	eP	P	07 20 16.8	+1.5
	comp=Z,4.1nm,0.8s						
MPU	Maple Canyon	76.98	329	eP	P	07 20 17.1	+1.3
	comp=Z,5.5nm,0.9s						
JLU	Jordanelle	77.36	329	eP	P	07 20 19.2	+1.2
	comp=Z,4.6nm,0.7s						
CTU	Camp Tracy	77.57	329	eP	P	07 20 19.8	+0.8
	comp=Z,2.7nm,0.8s						
R11A	Troy Canyon, C	77.61	325	eP	P	07 20 20.8	+1.4
	comp=Z,5.5nm,1.5s						
DUG	Dugway, Tooele	77.67	328	eP	P	07 20 21.2	+1.6
	comp=Z,4.2nm,0.8s						
TCUT	Toone Canyon	77.75	329	eP	P	07 20 21.5	+1.4
	comp=Z,42nm,2.0s						
PD31	Pinedale Array	78.27	332	eP	P	07 20 23.8	+0.8
PDAR	Pinedale Array	78.27	332	P	P	07 20 23.7	+0.8
	comp=Z,1.2nm,0.6s,baz=136,slow=6.6,SNR=14						
PDAR				pP	pP	07 20 43.6	+1.7
	comp=Z,0.4nm,0.6s,baz=134,slow=5.2,SNR=2.5						
SPUT	South Promonto	78.38	329	eP	P	07 20 24.6	+1.1
	comp=Z,6.9nm,0.7s						
HVU	Hansel Valley	78.90	329	eP	P	07 20 26.8	+0.4
	comp=Z,6.0nm,0.7s						
AHID	Auburn Hatcher	78.93	331	eP	P	07 20 27.5	+0.9
	comp=Z,6.7nm,0.8s						
NVAR	Mina Array Bea	79.09	323	P	P	07 20 28.3	+0.8
	comp=Z,1.1nm,0.7s,baz=160,slow=6.8,SNR=7.8						
ELK	Elko	79.27	327	eP	P	07 20 29.0	+0.6
	comp=Z,5.2nm,0.8s						
REDW	Red Top Meadow	79.30	331	eP	P	07 20 29.2	+0.6
	comp=Z,18nm,1.7s						
LOHW	Long Hollow	79.40	331	eP	P	07 20 29.7	+0.6
	comp=Z,12nm,1.5s						
KVN	Kaiserville	79.44	324	eP	P	07 20 29.9	+0.5
	comp=Z,6.6nm,1.3s						
TPAW	Teton Pass	79.45	331	eP	P	07 20 29.7	+0.3
	comp=Z,6.5nm,1.0s						
MAW	Mawson	79.47	163	P	P	07 20 28.8	-0.1
	comp=Z,18nm,0.8s,baz=253,slow=11,SNR=2.3						
FXWY	Fox Creek	79.60	331	eP	P	07 20 30.7	+0.5
	comp=Z,20nm,1.9s						
IMW	Indian Meadow	79.77	331	eP	P	07 20 32.2	+1.0
	comp=Z,22nm,1.9s						
RLMT	Red Lodge	80.07	333	eP	P	07 20 33.2	+0.5
	comp=Z,3.7nm,0.7s						
ULM	Lac du Bonnet	80.16	344	P	P	07 20 33.0	+0.2
	comp=Z,2.3nm,0.5s,baz=174,slow=5.3,SNR=8.8						
TOA0	Torodi Ar. Sit	80.32	70	eP	P	07 20 35.0	+0.6
	comp=Z,6.5nm,0.6s						
TOA0				epP	pP	07 20 53.2	-0.6
TORD	Torodi Ar. Bea	80.32	70	P	P	07 20 33.2	-1.3
	comp=Z,3.3nm,0.6s,baz=272,slow=5.2,SNR=29						
TORD				pP	pP	07 20 52.3	-1.5
	comp=Z,3.5nm,0.6s,baz=251,slow=5.0,SNR=9.9						
TORD				sP	sP	07 21 01.6	+0.1
	comp=Z,1.4nm,0.5s,baz=255,slow=4.6,SNR=3.4						
YMR	Madison River	80.41	332	eP	P	07 20 36.5	+2.0
	comp=Z,11nm,0.8s						
PAHR	Pah Rah Range	80.60	324	eP	P	07 20 36.4	+0.8
	comp=Z,5.1nm,0.9s						
HLID	Hailey	81.05	329	eP	P	07 20 39.0	+1.1
	comp=Z,4.2nm,0.8s						
SCHQ	Schefferville	81.50	2	P	P	07 20 40.3	+0.5
	comp=Z,1.5nm,0.7s,baz=144,slow=8.7,SNR=2.8						
ORV	Oroville	81.62	322	eP	P	07 20 42.5	+1.7
	comp=Z,5.3nm,1.2s						
J08A	Circle Bar Ran	82.82	327	eP	P	07 20 48.3	+1.2
	comp=Z,5.1nm,0.7s						
C09A	Chrisman Ranch	86.03	330	eP	P	07 21 03.5	+0.4
	comp=Z,8.2nm,0.6s						
YKA	Yellowknife Ar	95.92	341	P	P	07 21 49.1	+0.1
	comp=Z,0.8nm,0.7s,baz=134,slow=4.5,SNR=20						
YKA				pP	pP	07 22 07.3	-1.2
	comp=Z,0.2nm,0.6s,baz=138,slow=4.4,SNR=5.5						
AKASG	Malin Array Be	116.16	44	PKP	PKPdf	07 27 04.0	-1.4
AKASG	Malin Array Be	116.16	44	PKP	PKPdf	07 27 04.0	-1.4
	comp=Z,0.4nm,0.3s,baz=276,slow=2.6,SNR=2.2						
ASAR	Alice Springs	124.55	207	PKP	PKPdf	07 27 21.7	-0.8
	comp=Z,1.1nm,0.4s,baz=131,slow=1.8,SNR=22						
ASAR				pPKP	pPKPdf	07 27 40.8	-2.1
	comp=Z,0.6nm,0.5s,baz=129,slow=1.5,SNR=3.6						
WRA	Warramunga Arr	127.66	210	PKP	PKPdf	07 27 28.1	-0.4
	comp=Z,1.7nm,0.5s,baz=153,slow=1.8,SNR=29						
WRA				pPKP	pPKPdf	07 27 47.2	-1.6
	comp=Z,0.8nm,0.5s,baz=154,slow=1.7,SNR=4.2						
AAK	Ala-Archa	147.33	52	ePKPbc	PKPab	07 28 07.7	-0.6
ZALV	Zalesovo Beam	147.34	28	PKPbc	PKPbc	07 28 04.5	-1.3
	comp=Z,8.2nm,0.6s,baz=296,slow=3.2,SNR=30						
ZALV				pPKPbc	pPKPdf	07 28 25.3	+1.7
	comp=Z,3.8nm,0.7s,baz=304,slow=2.7,SNR=4.3						
ZALV				sPKPbc	sPKPbc	07 28 34.0	+0.6
	comp=Z,4.1nm,0.8s,baz=308,slow=5.1,SNR=2.9						
KSH	Kashi	149.24	57	PKPbc	PKiKP	07 28 12.0	-0.6
KSH				PP	PP	07 31 44.6	+0.6
KSH				AMB	AMB		
	comp=Z,280nm,5.2s						
MKAR	Makanchi Array	150.64	40	PKPbc	PKiKP	07 28 14.8	-0.3
	comp=Z,8.0nm,0.5s,baz=310,slow=2.0,SNR=173						
MKAR				pPKPbc	pPKPbc	07 28 33.7	-0.9
	comp=Z,4.7nm,0.6s,baz=318,slow=2.1,SNR=11						
MKAR				sPKPbc	pPKPab	07 28 41.1	-0.1
	comp=Z,3.9nm,1.0s,baz=313,slow=2.5,SNR=3.0						
MJAR	Matsushiro Arr	154.09	299	PKPab	PKPab	07 28 37.3	+1.0
	comp=Z,0.7nm,0.5s,baz=78,slow=2.9,SNR=3.1						
SONM	Songino Array	158.98	6	PKP	PKPdf	07 28 20.7	+0.2
	comp=Z,0.9nm,0.9s,baz=279,slow=2.8,SNR=5.7						
SONM				PKPab	PKPab	07 28 58.0	+1.0
	comp=Z,0.3nm,0.8s,baz=340,slow=3.4,SNR=4.3						
SONM				pPKPab	pPKPab	07 29 16.7	+0.1
	comp=Z,0.6nm,0.8s,baz=350,slow=2.9,SNR=3.6						
CMAR	Chiang Mai Arr	166.91	128	PKP	PKPdf	07 28 30.3	+1.5
	comp=Z,0.4nm,0.3s,baz=106,slow=3.1,SNR=5.9						

*IDC **10** 07:20:03.7±1.6,11°.53S×165°.10E,h0^{km},mb3.5/5, mb1 3.8/6,mb1mx3.6/30,mbtmp3.6/6,ML3.4/1,MS3.1/1, Ms1 3.1/1,ms1mx2.7/22,Error ellipse: s-maj=50.7km s-min=28.3km az=128.0*
*ISCJB **10** 07:20:07.0±1.2,11°.7S±0°.1×165°.1E±0°.2,h34^{km},mb3.5/4, Error ellipse: s-maj=26.7km s-min=20.5km az=1.9*
ISC 10 07:20:08.7±1.3,11°.6S±0°.2×165°.1E±0°.2,h34^{km},n6, σ0.^{s}50/6,mb3.5/4,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.49	173	Pn	Pn	07 22 36.9	0.0
	0.3nm,0.3s,baz=38,slow=18,SNR=3.3						
DZM				LR	LR	07 26 04.4	
	comp=Z,105nm,20.2s,baz=324,slow=34						
CTA	Charters Tower	19.93	243	P	Pn	07 24 39.4	-0.3
	1.7nm,0.7s,baz=51,slow=13,SNR=2.0						
WRA	Warramunga Arr	30.65	250	P	P	07 26 21.0	+0.7
	0.8nm,0.9s,baz=83,slow=9.3,SNR=5.3						
ASAR	Alice Springs	31.93	244	P	P	07 26 31.4	-0.2
	0.4nm,0.9s,baz=71,slow=9.9,SNR=3.7						
ILAR	Eielson Array	84.26	19	P	P	07 32 36.7	+0.1
	0.4nm,0.6s,baz=238,slow=5.2,SNR=2.4						
MKAR	Makanchi Array	93.47	317	P	P	07 33 20.7	-0.3
	0.1nm,0.6s,baz=106,slow=7.9,SNR=2.4						

*IDC **10** 07:20:46.4±0.9,11°.69S×164°.98E,h0^{km},mb4.1/11, mb1 4.3/13,mb1mx4.1/30,mbtmp4.0/13,ML3.9/2,MS3.3/4, Ms1 3.3/4,ms1mx3.0/28,Error ellipse: s-maj=32.1km s-min=19.0km az=129.0*
*NEIC **10** 07:20:47.5±0.4,11°.73S×165°.03E,h10^{km},mb4.3/4,Error ellipse: s-maj=12.7km s-min=7.8km az=125.0*
*ISCJB **10** 07:20:49.2±0.5,11°.84S±0°.08×165°.00E±0°.10,h33^{km}, mb4.1/14,MS3.3/4,Error ellipse: s-maj=15.4km s-min=9.8km az=34.2*
ISC 10 07:20:51.2±0.6,11°.8S±0°.1×165°.1E±0°.1,h35^{km},n35, σ1.^{s}10/38,mb4.1/14,MS3.2/4,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.30	173	ePn	Pn	07 23 16.4	-0.3
DZM	Mont Dzumac	10.30	173	Pn	Pn	07 23 16.2	-0.4
	1.0nm,0.3s,baz=345,slow=9.2,SNR=10						
CTA	Charters Tower	19.85	243	P	P	07 25 18.6	-0.6
	0.2nm,0.3s,baz=70,slow=14,SNR=6.2						
ARMA	Armidale	22.32	212	eP	P	07 25 46.1	+0.1
	28nm,1.6s						
STKA	Stephens Creek	29.43	224	eP	P	07 26 51.8	+0.2
	1.0nm,1.2s						
STKA	Stephens Creek	29.43	224	P	P	07 26 51.4	-0.2
	1.0nm,0.5s,baz=44,slow=4.0,SNR=2.9						
WB2	Warramunga Arr	30.58	251	eP	P	07 27 01.1	-0.8
WR1	Warramunga Arr	30.59	251	eP	P	07 27 02.5	+0.5
WR1				ePcP	PcP	07 30 01.6	+1.4
WRA	Warramunga Arr	30.59	251	P	P	07 27 02.5	+0.5
	4.1nm,0.8s,baz=81,slow=8.9,SNR=27						
WRA				PcP	PcP	07 30 01.6	+1.4
	0.8nm,0.8s,baz=78,slow=2.4,SNR=6.4						
WRA				LR	LR	07 38 43.5	
	comp=Z,57nm,18.5s,baz=5.0,slow=35						
AS31	Alice Springs	31.85	244	eP	P	07 27 12.8	-0.3
	1.0nm,0.4s						
AS31				ePcP	PcP	07 30 04.2	+0.6
ASAR	Alice Springs	31.85	244	P	P	07 27 13.2	+0.1
	1.2nm,0.8s,baz=72,slow=9.6,SNR=10						
ASAR				PcP	PcP	07 30 04.2	+0.6
	0.9nm,0.8s,baz=79,slow=2.1,SNR=6.9						
ASAR				LR	LR	07 38 47.4	
	comp=Z,108nm,18.9s,baz=86,slow=34						
RAR	Rarotonga	34.93	110	LR	LR	07 39 11.8	
	comp=Z,47nm,20.5s,baz=262,slow=32						
FITZ	Fitzroy Crossi	38.53	256	eP	P	07 28 10.1	-0.5
	8.6nm,0.8s						
MJAR	Matsushiro Arr	54.33	333	P	P	07 30 13.1	-1.2
	1.5nm,0.8s,baz=168,slow=9.1,SNR=5.6						
MAJO	Matsushiro	54.33	333	eP	P	07 30 13.1	-1.2
CM31	Chiang Mai Arr	71.79	294	eP	P	07 32 09.7	-1.0
CMAR	Chiang Mai Arr	71.79	294	P	P	07 32 09.7	-0.9
	1.8nm,0.6s,baz=128,slow=4.7,SNR=2.3						
SONA0	Songino Array	78.87	324	eP	P	07 32 50.1	-0.8
SONM	Songino Array	78.87	324	P	P	07 32 50.2	-0.8
	0.7nm,0.8s,baz=161,slow=5.3,SNR=4.7						
ILAR	Eielson Array	84.44	19	P	P	07 33 19.6	-0.2
	1.0nm,0.8s,baz=230,slow=6.0,SNR=6.6						
ILB	Eielson Array	84.44	19	eP	P	07 33 20.0	+0.2
NV01	Mina Array Sit	87.03	50	eP	P	07 33 32.5	-1.1
NVAR	Mina Array Bea	87.03	50	P	P	07 33 32.6	-0.9
	0.1nm,0.4s,baz=55,slow=25,SNR=2.3						
MK31	Makanchi Array	93.60	317	eP	P	07 34 06.0	+2.2
MK32	Makanchi Array	93.60	317	eP	P	07 34 04.2	+0.3
MKAR	Makanchi Array	93.60	317	eP	P	07 34 06.5	+2.6
	5.5nm,0.8s						
MKAR	Makanchi Array	93.60	317	P	P	07 34 04.2	+0.3

	0.7nm,0.7s,baz=98,slow=5.7,SNR=9.1						
ZALV	Zalesovo Beam	93.76	324	P	P	07 34 05.8	+1.4
	0.4nm,0.3s,baz=62,slow=3.0,SNR=2.8						
ZAA1	Zalesovo Array	93.76	324	*e*P	P	07 34 05.8	+1.4
LENM	Lemitar	94.87	56	*e*P	P	07 34 08.8	-1.4
YKA	Yellowknife Ar	95.95	27	P	P	07 34 15.4	+1.3
	0.4nm,0.8s,baz=254,slow=4.8,SNR=7.2						
YKA				LR	LR	08 20 42.3	
	comp=Z,7.7nm,18.1s,baz=240,slow=38						
YKB5	Yellowknife Ar	95.95	27	*e*P	P	07 34 14.4	+0.3
ARA0	ARCESS Array S	116.88	345	*e*PKPdf	PKiKP	07 39 33.3	+1.7
ARCES	ARCESS Array B	116.88	345	PKP	PKiKP	07 39 33.3	+1.7
	2.0nm,0.8s,baz=30,slow=5.5,SNR=5.0						
ESDC	Sonseca Array	150.58	343	PKPbc	PKiKP	07 40 42.1	+1.6
	0.1nm,0.3s,baz=354,slow=3.8,SNR=4.2						

*ISCJB **10** 07:43:16.1±0.5, 10°.79S±0°.05×165°.97E±0°.06, h10^{km}, mb4.2/1, Error ellipse: s-maj=9.1km s-min=6.8km az=146.5*

*NEIC **10** 07:43:17.6±0.4, 10°.68S×166°.01E, h10^{km}, mb4.4/10, Error ellipse: s-maj=9.1km s-min=7.8km az=71.0*

*IDC **10** 07:43:23.1±3.2, 10°.89S×165°.93E, h54^{km}±29^{km}, mb3.6/9, mb1 3.9/11, mb1mx3.7/35, mbtmp4.0/11, ML4.7/2, Error ellipse: s-maj=21.5km s-min=15.3km az=49.0*

ISC 10 07:43:17.6±0.7, **10°.73S**±0°.08×**166°.07E**±0°.08, **h10**^{km}, **n44, σ1^{s}42**/42, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.16	281	*e*P	Pn	07 44 50.0	+1.3
HNR				*e*S	Sn	07 46 02.0	+2.7
HNR	Honiara	6.16	281	P	Pn	07 44 50.3	+1.6
	21nm,0.3s,baz=147,slow=4.2,SNR=6.9						
HNR				S	Sn	07 45 57.9	-1.4
	baz=191,slow=16,SNR=1.5						
MARNC	Mare, Loyalty	10.86	170	*e*Pn	Pn	07 45 55.0	+1.8
DZM	Mont Dzumac	11.29	178	P	Pn	07 46 00.3	+1.1
	4.7nm,0.3s,baz=100,slow=22,SNR=54						
DZM				S	Sn	07 48 03.9	-1.6
	0.4nm,0.3s,baz=75,slow=20,SNR=3.8						
PINNC	Pines Island,	11.89	174	*e*Pn	Pn	07 46 09.6	+2.3
EIDS	Eidsvold	20.34	222	*e*P	Pn	07 47 56.1	-0.2
	17nm,0.8s						
CTA	Charters Tower	21.23	242	P	P	07 48 03.1	-0.8
	5.6nm,0.9s,baz=49,slow=12,SNR=3.5						
CTAO	Charters Tower	21.23	242	*e*P	P	07 48 05.1	+1.3
	9.7nm,0.8s						
COEN	Coen	22.59	259	*e*P	P	07 48 16.6	-1.9
	6.8nm,1.3s						
RAO	Raoul Island	23.74	143	P	P	07 48 30.2	+0.1
	200nm,0.3s,baz=221,slow=20,SNR=2.4						
ARMA	Armidale	23.76	212	*e*P	P	07 48 31.5	+1.1
	47nm,1.6s						
OUZ	Omahuta	25.33	165	*e*P	P	07 48 46.9	+2.3
	32nm,1.6s						
H11S2	WAKE ISLAND Hy	29.04	1	T	T	08 19 39.0	
	baz=181,slow=76,SNR=130						
H11S3	WAKE ISLAND Hy	29.04	1	T	T	08 19 39.3	
	baz=181,slow=76,SNR=73						
H11S1	WAKE ISLAND Hy	29.05	1	T	T	08 19 40.4	
	baz=181,slow=76,SNR=79						
BKZ	Black Stump Fm	29.81	164	*e*P	P	07 49 24.6	-0.2
	17nm,1.4s						
H11N1	WAKE ISLAND Hy	30.26	2	T	T	08 21 08.5	
	baz=182,slow=76,SNR=77						
H11N3	WAKE ISLAND Hy	30.26	2	T	T	08 21 07.9	
	baz=182,slow=76,SNR=51						
H11N2	WAKE ISLAND Hy	30.27	2	T	T	08 21 11.9	
	baz=182,slow=76,SNR=52						
STKA	Stephens Creek	30.89	223	P	P	07 49 33.7	-0.7
	0.9nm,0.6s,baz=44,slow=9.2,SNR=2.1						
THZ	Tophouse	31.49	170	*e*P	P	07 49 40.4	+0.7
	46nm,1.7s						
WRAB	Tennant Creek	31.88	249	*e*P	P	07 49 42.6	-0.7
	6.9nm,1.1s						
WB2	Warramunga Arr	31.88	249	*e*P	P	07 49 42.7	-0.6
WR1	Warramunga Arr	31.89	249	*e*P	P	07 49 41.8	-1.6
WRA	Warramunga Arr	31.89	249	P	P	07 49 41.8	-1.7
	2.2nm,0.7s,baz=81,slow=9.1,SNR=12						
TOO	Toolangi	32.51	211	*e*P	P	07 49 49.3	+0.6
	10nm,1.0s						
FOZ	Fox Glacier	32.85	175	*e*P	P	07 49 51.5	+0.1
	84nm,1.6s						
RPZ	Rata Peaks	33.15	173	*e*P	P	07 49 53.9	-0.2
RPZ	Rata Peaks	33.15	173	P	P	07 49 52.1	-2.0
	11nm,0.6s,baz=126,slow=10,SNR=7.4						
AS01	Alice Springs	33.18	243	*e*P	P	07 49 53.9	-0.8
AS31	Alice Springs	33.22	243	*e*P	P	07 49 54.1	-0.9
	1.2nm,0.8s						
AS31				*e*PcP	PcP	07 52 34.9	-2.8
ASAR	Alice Springs	33.22	243	P	P	07 49 53.3	-1.7
	1.8nm,0.6s,baz=67,slow=10,SNR=27						
ASAR				PcP	PcP	07 52 34.9	-2.8
	0.5nm,0.8s,baz=80,slow=1.9,SNR=3.3						
MQZ	McQueen’s Vall	33.35	171	*e*P	P	07 49 55.4	-0.4
	24nm,1.0s						
LBZ	Lake Benmore	33.73	175	*e*P	P	07 49 58.6	-0.5
	39nm,1.5s						
SONA0	Songino Array	78.60	324	*e*P	P	07 55 20.9	+1.2
SONM	Songino Array	78.60	324	P	P	07 55 20.9	+1.2
	0.2nm,0.3s,baz=134,slow=6.2,SNR=3.5						
ILAR	Eielson Array	83.11	18	P	P	07 55 44.1	+0.9
	0.6nm,0.7s,baz=235,slow=5.2,SNR=6.9						
ILB	Eielson Array	83.11	18	*e*P	P	07 55 44.1	+0.9
NV01	Mina Array Sit	85.58	50	*e*P	P	07 55 56.5	-0.2
NVAR	Mina Array Bea	85.58	50	P	P	07 55 57.0	+0.3
	0.5nm,0.8s,baz=272,slow=3.2,SNR=3.3						
MK32	Makanchi Array	93.51	317	*e*P	P	07 56 33.0	-0.8
MKAR	Makanchi Array	93.51	317	P	P	07 56 33.0	-0.8
	0.2nm,0.7s,baz=100,slow=4.4,SNR=2.6						
YKA	Yellowknife Ar	94.55	27	P	P	07 56 37.3	-0.8
	0.1nm,0.8s,baz=263,slow=4.4,SNR=2.7						
YKB5	Yellowknife Ar	94.55	27	*e*P	P	07 56 37.3	-0.8

*IDC **10** 07:46:10.3±0.6, 11°.53S×165°.87E, h0^{km}, mb4.4/19, mb1 4.5/21, mb1mx4.4/33, mbtmp4.4/21, ML4.5/2, MS3.9/17, Ms1 3.9/17, ms1mx3.7/35, Error ellipse: s-maj=19.7km s-min=14.4km az=87.0*

*NEIC **10** 07:46:12.1±0.2, 11°.57S×165°.81E, h10^{km}, mb5.0/24, Error ellipse: s-maj=6.7km s-min=4.1km az=67.0*

*ISCJB **10** 07:46:14.2±0.3, 11°.67S±0°.04×165°.77E±0°.05, h37^{km}, mb4.7/54, MS4.0/19, Error ellipse: s-maj=8.3km s-min=4.7km az=150.1*

ISC 10 07:46:16.2±0.4, **11°.70S**±0°.06×**165°.82E**±0°.06, **h37**^{km}, **n101, σ1^{s}56**/99, **mb4.8**/54, **MS4.0**/19, **1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.20	291	*e*P	Pn	07 47 45.0	-0.1
HNR				*e*S	Sn	07 48 55.0	+0.2
HNR	Honiara	6.20	291	*e*Pn	Pn	07 47 44.2	-0.9
HNR				*e*Sn	Sn	07 48 55.9	+1.1
HNR	Honiara	6.20	291	Pn	Pn	07 47 44.1	-1.0
	11nm,0.3s,baz=354,slow=1.9,SNR=3.9						
HNR				Sn	Sn	07 48 54.2	-0.6
	9.9nm,0.3s,baz=163,slow=20,SNR=2.7						
HNR				LR	LR	07 50 09.9	
	comp=Z,1µm,18.8s,baz=128,slow=39						
MARNC	Mare, Loyalty	9.96	168	*e*Pn	Pn	07 48 36.6	-0.1
DZM	Mont Dzumac	10.34	177	*e*Pn	Pn	07 48 42.0	0.0
	39nm,0.5s						
DZM				*e*LR	LR	07 51 12.3	
	comp=Z,965nm,25.9s						
DZM	Mont Dzumac	10.34	177	*e*Pn	Pn	07 48 41.5	-0.5
DZM				Sn	Sn	07 50 33.3	-3.4
DZM	Mont Dzumac	10.34	177	Pn	Pn	07 48 41.9	0.0
	4.7nm,0.3s,baz=312,slow=12,SNR=13						
DZM				Sn	Sn	07 50 33.3	-3.4
	0.6nm,0.3s,baz=129,slow=23,SNR=3.0						
DZM				LR	LR	07 52 05.1	
	comp=Z,633nm,20.2s,baz=25,slow=34						
PINNC	Pines Island,	10.97	172	*e*Pn	Pn	07 48 51.5	+0.9
MSVF	Nonsavu	13.26	118	*e*Pn	Pn	07 49 23.9	+1.8
EIDS	Eidsvold	19.47	224	*e*P	P	07 50 40.1	+0.1
	22nm,1.1s						
PATS	Pohnpei	19.87	338	*e*P	P	07 50 44.3	+0.1
	224nm,1.1s						
CTA	Charters Tower	20.57	244	P	P	07 50 52.6	+0.6
	6.1nm,0.8s,baz=64,slow=12,SNR=6.3						
CTAO	Charters Tower	20.57	244	*e*P	P	07 50 53.1	+1.2
	22nm,1.1s						
MANU	Manus Island	20.66	296	*e*P	P	07 50 52.5	-0.4
	245nm,1.0s						
COEN	Coen	22.19	262	*e*P	P	07 51 09.1	-0.3
	28nm,1.1s						
ARMA	Armidale	22.82	213	*e*P	P	07 51 16.6	+0.6
	68nm,1.4s						
OUZ	Omahuta	24.46	164	*e*P	P	07 51 32.6	+1.0
	86nm,1.6s						
HIZ	Hauiti	27.90	165	*e*P	P	07 52 04.5	+1.8
	34nm,1.3s						
URZ	Urewera	28.31	161	P	P	07 52 07.2	+0.9
	3.6nm,0.7s,baz=136,slow=7.2,SNR=3.0						
URZ				LR	LR	08 01 52.9	
	comp=Z,270nm,18.9s,baz=342,slow=33						
BKZ	Black Stump Fm	28.96	163	*e*P	P	07 52 12.6	+0.4
	11nm,0.8s						
STKA	Stephens Creek	30.03	224	P	P	07 52 22.0	+0.3
	0.7nm,0.2s,baz=34,slow=15,SNR=2.3						
STKA				LR	LR	08 03 09.1	
	comp=Z,248nm,21.0s,baz=35,slow=34						
BFZ	Birch Farm	30.30	164	*e*P	P	07 52 24.2	+0.2
	50nm,1.2s						
THZ	Tophouse	30.59	170	*e*P	P	07 52 27.1	+0.5
	22nm,0.9s						
WRAB	Tennant Creek	31.32	251	*e*P	P	07 52 32.2	-1.1
	6.1nm,0.9s						
WB2	Warramunga Arr	31.32	251	*e*P	P	07 52 32.4	-0.9
	11nm,1.0s						
WRA	Warramunga Arr	31.34	251	P	P	07 52 33.0	-0.4
	4.0nm,0.9s,baz=82,slow=8.9,SNR=12						
WRA				ScP	ScP	07 59 12.5	+5.2
	0.9nm,1.1s,baz=86,slow=4.8,SNR=3.3						
WRA				LR	LR	08 03 00.1	
	comp=Z,98nm,21.0s,baz=90,slow=32						
LTZ	Lake Taylor	31.48	171	*e*P	P	07 52 35.4	+1.0
	22nm,1.1s						
FOZ	Fox Glacier	31.91	174	*e*P	P	07 52 39.5	+1.5
	48nm,1.1s						
OXZ	Oxford	31.97	171	*e*P	P	07 52 39.2	+0.5
	38nm,1.1s						
RPZ	Rata Peaks	32.22	173	*e*P	P	07 52 41.2	+0.4
	42nm,0.9s						
RPZ	Rata Peaks	32.22	173	P	P	07 52 41.4	+0.5
	29nm,0.8s,baz=11,slow=8.9,SNR=11						
RPZ				LR	LR	08 04 49.3	
	comp=Z,193nm,18.5s,baz=344,slow=35						
MQZ	McQueen’s Vall	32.44	171	*e*P	P	07 52 43.5	+0.9
	45nm,1.2s						
AS31	Alice Springs	32.57	244	*e*P	P	07 52 42.2	-2.1
	1.2nm,0.6s						
ASAR	Alice Springs	32.57	244	P	P	07 52 43.5	-0.8
	3.1nm,0.7s,baz=74,slow=9.5,SNR=20						
ASAR				ScP	ScP	07 59 15.4	+3.9
	0.9nm,1.0s,baz=90,slow=3.7,SNR=4.4						
ASAR				LR	LR	08 06 02.5	
	comp=Z,119nm,18.5s,baz=78,slow=36						
GUMO	Guam	32.60	320	LR	LR	08 06 52.3	
	comp=Z,143nm,18.1s,baz=149,slow=38						
WKZ	Wanaka	33.13	176	*e*P	P	07 52 49.8	+1.0
	90nm,1.2s						
ODZ	Otahua Downs	33.49	174	*e*P	P	07 52 52.3	+0.4
	90nm,1.7s						
FITZ	Fitzroy Crossi	39.29	256	LR	LR	08 10 05.3	
	comp=Z,200nm,18.9s,baz=84,slow=36						
BATI	Baumata	41.39	268	LR	LR	08 12 13.2	
	comp=Z,173nm,18.2s,baz=122,slow=38						
PPT	Papeete	43.47	103	LR	LR	08 09 16.2	
	comp=Z,132nm,18.8s,baz=276,slow=32						
PPT2	Papeete2	43.47	103	*e*S	S	08 00 38.5	-4.2
	79nm,25.0s						
PPT2				*e*LQ	LQ	08 04 35.6	
	445nm,25.8s						
PPT2				*e*LR	LR	08 06 27.8	
	comp=Z,223nm,27.0s						
KKM	Kota Kinabalu	52.40	287	*e*P	P	07 55 25.5	+0.2
	42nm,1.0s						
TAOE	Nuku Hiva Isla	53.18	92	*e*LR	LR	08 10 42.8	
	comp=Z,97nm,23.5s						
MJAR	Matsushiro Arr	54.58	333	P	P	07 55 39.0	-1.9
	2.0nm,0.7s,baz=169,slow=8.4,SNR=6.4						
JNU	Nakatsue	55.65	324	P	P	07 55 47.7	-1.0
	6.8nm,0.8s,baz=65,slow=8.6,SNR=4.2						
RKT	Rikitea	57.30	110	*e*LR	LR	08 12 48.0	
	comp=Z,343nm,26.8s						
ASAJ	Asahikawa	59.43	341	P	P	07 56 13.9	-1.1
	1.5nm,0.2s,baz=124,slow=3.6,SNR=3.6						
KSRS	Korea Array	60.45	326	P	P	07 56 21.8	-0.4
	1.5nm,0.9s,baz=133,slow=8.4,SNR=3.9						
KSAR	Wonju Array Be	60.47	326	P	P	07 56 21.8	-0.5
NJ2	Nanjing	62.53	316	*e*P	P	07 56 36.7	+0.3
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
USRK	Ussuriysk Ar.	63.56	333	P	P	07 56 42.3	-0.6
	comp=Z,3.6nm,0.9s,baz=140,slow=6.2,SNR=7.0						
WHN	Wuhan	64.88	312	P	P	07 56 51.7	-0.2
PETK	Petropavlovsk-	64.92	355	LR	LR	08 20 31.0	
	comp=Z,18nm,21.7s,baz=126,slow=32						
VNDA	Vanda	65.85	181	P	P	07 56 59.8	+2.4
	comp=Z,6.7nm,1.0s,baz=360,slow=5.6,SNR=3.9						
VNDA				LR	LR	08 23 35.7	
	comp=Z,91nm,18.1s,baz=118,slow=34						
CN2	Changchun	66.33	329	*e*P	P	07 57 00.3	-0.7
PSI	Prapat	68.03	278	*e*P	P	07 57 11.1	-1.5
	comp=Z,9.7nm,1.0s						
ENH	Enshi	68.36	309	*e*P	P	07 57 13.7	-0.5
	comp=Z,28nm,1.1s						
GYA	Guiyang	68.84	304	⇑*i*P	P	07 57 18.2	+0.8
GYA				PP	PP	07 59 23.0	-27
GYA				S	S	08 06 21.6	+2.4
GYA				SKS	SKKSac	08 07 14.4	-0.2
GYA	Guiyang	68.84	304	SS	SS	08 10 15.9	-29
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.4s						
GYA				LR	LR		
	comp=N,520nm,18.0s						
GYA				LR	LR		
	comp=E,540nm,18.2s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
BJT	Baijiatuau	69.02	321	*e*P	P	07 57 17.9	-0.1
	comp=Z,19nm,1.4s						
BJI	Beijing	69.03	321	P	P	07 57 18.0	-0.1
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN	Xi'an	70.61	312	P	P	07 57 27.6	-0.4
XAN				pP	pP	07 57 36.6	-0.2
XAN				sP	sP	07 57 40.9	-0.3
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
XAN	Xi'an	70.61	312	*e*P	P	07 57 27.6	-0.4
	comp=Z,222nm,1.6s						
KMI	Kunming	71.52	302	P	P	07 57 35.3	+1.4
KMI				pmax	pmax		
	comp=Z,12nm,1.6s						
HHC	Hu-ho-hao-te	72.37	320	*e*P	P	07 57 35.6	-3.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,7.3s						
CM01	Chiang Mai Arr	72.41	294	*e*P	P	07 57 39.8	+0.7
CMAR	Chiang Mai Arr	72.44	294	P	P	07 57 39.9	+0.6
	comp=Z,5.4nm,1.0s,baz=119,slow=4.1,SNR=16						
CMMT	Chiang Mai	72.55	294	P	P	07 57 41.4	+1.4
	comp=Z,3.6nm,1.1s						
CHTO	Chiang Mai	72.56	294	P	P	07 57 41.5	+1.5
	comp=Z,16nm,1.1s						
CD2	Chengdu	73.05	307	*e*P	P	07 57 44.0	+1.2
LZH	Lanzhou	75.25	312	*e*P	P	07 57 56.8	+1.2
LZH				pP	pP	07 58 00.4	-4.1
LZH				sP	sP	07 58 03.8	-5.1
LZH				PP	PP	08 00 43.8	-0.8
LZH				S	S	08 07 41.9	+9.5
LZH				sS	SKSac	08 07 56.0	-6.5
LZH	Lanzhou	75.25	312	SS	SS	08 12 43.8	+21
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,4.8s						
LZH				LR	LR		
	comp=N,420nm,12.8s						
LZH				LR	LR		
	comp=E,560nm,13.6s						
LZH				LR	LR		
	comp=Z,660nm,16.3s						
KDAK	Kodiak Island	77.15	21	LR	LR	08 27 26.8	
	comp=Z,145nm,19.8s,baz=241,slow=32						
QSPA	South Pole Qui	78.31	180	*e*P	P	07 58 12.5	+0.2
	comp=Z,32nm,1.3s						
SONM	Songino Array	79.23	324	P	P	07 58 17.4	-0.2
	comp=Z,3.7nm,1.0s,baz=137,slow=5.6,SNR=21						
SONA1	Songino Array	79.23	324	*e*P	P	07 58 17.2	-0.5
BILL	Bilibino	79.52	0	*e*P	P	07 58 17.2	-1.4
	comp=Z,7.7nm,1.0s						
GTA	Gaotai	79.56	314	⇓P	P	07 58 20.2	+0.6
GTA				pP	PcP	07 58 25.1	-2.4
GTA				sP	pP	07 58 27.4	-1.8
GTA				pmax	pmax		
	comp=Z,14nm,1.5s						
GTA				pmax	pmax		
	comp=Z,51nm,7.6s						
GTA				LR	LR		
	comp=N,140nm,17.8s						
GTA				LR	LR		
	comp=E,180nm,20.0s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
SHL	Shillong	80.89	298	*e*P	P	07 58 26.0	-1.2
TLY	Talaya	82.70	326	*e*P	P	07 58 35.2	-0.7
	comp=Z,13nm,0.9s						
ILAR	Eielson Array	84.10	18	P	P	07 58 40.5	-2.3
	comp=Z,0.6nm,0.6s,baz=240,slow=5.1,SNR=8.1						
MAW	Mawson	84.15	202	LR	LR	08 29 22.1	
	comp=Z,41nm,20.9s,baz=82,slow=31						
BBB	Bella Bella	85.07	34	LR	LR	08 27 36.4	
	comp=Z,74nm,20.5s,baz=240,slow=29						
NVAR	Mina Array Bea	86.38	50	P	P	07 58 54.7	-0.5
	comp=Z,0.2nm,0.5s,baz=266,slow=9.9,SNR=2.8						
NVAR				LR	LR	08 29 23.9	
	comp=Z,68nm,19.6s,baz=314,slow=30						
WMQ	Urumqi	89.60	315	P	P	07 59 10.0	-0.2
WMQ				pP	pP	07 59 15.8	-4.1
WMQ				PP	PP	08 02 52.5	+10
WMQ				pmax	pmax		
	comp=Z,15nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,410nm,4.9s						
WMQ				LR	LR		
	comp=N,94nm,20.1s						
WMQ				LR	LR		
	comp=E,86nm,20.1s						
WMQ				LR	LR		
	comp=Z,87nm,16.5s						
MK01	Makanchi Array	94.03	317	*e*P	P	07 59 29.9	-0.7
MK31	Makanchi Array	94.04	317	*e*P	P	07 59 30.4	-0.2
MKAR	Makanchi Array	94.04	317	*e*P	P	07 59 30.4	-0.2
	comp=Z,46nm,1.0s						
MKAR	Makanchi Array	94.04	317	P	P	07 59 30.1	-0.5
	comp=Z,6.0nm,0.8s,baz=101,slow=6.3,SNR=50						
ZALV	Zalesovo Beam	94.12	324	P	P	07 59 29.7	-1.1
	comp=Z,3.5nm,0.9s,baz=108,slow=4.8,SNR=16						
MAKZ	Makanchi	94.26	317	*e*P	P	07 59 30.9	-0.7
	comp=Z,11nm,1.1s						
RLMT	Red Lodge	94.63	45	*e*P	P	07 59 36.7	+3.1
	comp=Z,11nm,1.2s						
YKA	Yellowknife Ar	95.51	27	P	P	07 59 36.0	-0.9
	comp=Z,0.2nm,0.6s,baz=259,slow=4.6,SNR=6.1						
ARCES	ARCESS Array B	116.98	345	PKP	PKPdf	08 04 54.9	-1.6
	comp=Z,2.2nm,0.8s,baz=74,slow=2.2,SNR=11						
FINES	FINESS Array B	122.40	338	PKP	PKPdf	08 05 05.8	-1.3
	comp=Z,1.1nm,0.8s,baz=48,slow=2.8,SNR=3.7						
NB2	NORSAR Subarra	127.34	345	PKPdf	PKiKP	08 05 24.5	+7.3
	comp=Z,0.4nm,0.5s,baz=32,slow=2.1						
NOA	NORSAR Array B	127.34	345	PKP	PKPdf	08 05 15.9	-0.7
	comp=Z,0.3nm,0.6s,baz=38,slow=2.6,SNR=2.8						
GERES	GERESS Array B	136.31	333	PKP	PKPdf	08 05 34.2	+0.2
	comp=Z,0.1nm,0.4s,baz=21,slow=4.2,SNR=2.7						
KEST	Kesra	147.97	322	PKPbc	PKPbc	08 05 58.2	+0.1
	comp=Z,12nm,1.0s,baz=331,slow=8.3,SNR=4.8						
ESDC	Sonseca Array	150.70	344	PKPbc	PKPbc	08 06 04.2	-0.7
	comp=Z,0.6nm,0.7s,baz=7.8,slow=3.1,SNR=3.3						
TORD	Torodi Ar. Bea	164.43	277	PKP	PKPdf	08 06 16.9	0.0
	comp=Z,1.2nm,0.9s,baz=346,slow=4.3,SNR=5.5						

IDC 10 07:48:41.7±1.4, **11°.10S**×**165°.22E**, **h0**^{km}, **mb3.7**/4, **mb1 4.0**/5, **mb1mx3.6**/29, **mbtmp3.7**/5, **ML3.6**/1, **Error ellipse: s-maj=53.6km s-min=30.8km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.97	174	Pn	Pn	07 51 20.6	+0.5
	0.5nm,0.3s,baz=180,slow=20,SNR=9.3						
WRA	Warramunga Arr	30.98	250	P	P	07 55 01.5	+0.4
	1.4nm,1.1s,baz=83,slow=9.1,SNR=1.9						
ASAR	Alice Springs	32.31	243	P	P	07 55 12.9	+0.2
	0.4nm,0.8s,baz=66,slow=9.5,SNR=1.4						
ASAR				PcP	PcP	07 57 59.6	-1.4
	0.4nm,0.8s,baz=57,slow=3.4,SNR=3.0						
ILAR	Eielson Array	83.73	19	P	P	08 01 13.1	+0.9
	0.6nm,1.0s,baz=235,slow=4.3,SNR=2.1						
YKA	Yellowknife Ar	95.26	27	P	P	08 02 06.6	-0.5
	0.2nm,0.8s,baz=264,slow=5.0,SNR=2.6						

*IDC **10** 07:59:21.2±3.4, 11°.50S×165°.70E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.5/35, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=71.9km s-min=44.8km az=82.0*

*ISCJB **10** 07:59:23.3±2.4, 11°.7S±0°.2×165°.7E±0°.3, h24^{km}, mb3.5/3, Error ellipse: s-maj=51.0km s-min=23.8km az=157.0*

ISC 10 07:59:25.1±2.4, **11°.6S**±0°.2×**165°.6E**±0°.3, **h24**^{km}, **n5, σ0^{s}80**/5, **mb3.5**/3, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.96	290	*e*P	Pb	08 01 08.0	-0.4
HNR				*e*S	Sn	08 01 27.0	-33
DZM	Mont Dzumac	10.48	176	Pn	Pn	08 01 53.7	-0.3
	0.3nm,0.3s,baz=17,slow=7.1,SNR=6.3						
WRA	Warramunga Arr	31.18	251	P	P	08 05 43.7	+1.0
	0.4nm,0.8s,baz=81,slow=9.3,SNR=2.4						
ASAR	Alice Springs	32.45	244	P	P	08 05 53.9	+0.1
	0.4nm,0.7s,baz=74,slow=8.2,SNR=3.8						
MKAR	Makanchi Array	93.81	317	P	P	08 12 40.4	0.0
	0.6nm,1.0s,baz=92,slow=6.1,SNR=3.6						

*IDC **10** 08:19:20.8±1.4, 11°.23S×165°.36E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.7/44, mbtmp3.8/7, ML2.9/1, Error ellipse: s-maj=45.0km s-min=27.2km az=130.0*

*ISCJB **10** 08:19:23.6±1.0, 11°.4S±0°.1×165°.3E±0°.2, h30^{km}, mb3.7/6, Error ellipse: s-maj=27.5km s-min=18.7km az=5.3*

ISC 10 08:19:25.4±1.0, **11°.3S**±0°.1×**165°.4E**±0°.2, **h30**^{km}, **n7, σ0^{s}84**/7, **mb3.8**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.79	175	Pn	Pn	08 21 58.4	+0.3
	0.1nm,0.3s,baz=73,slow=19,SNR=3.8						
WRA	Warramunga Arr	31.06	250	P	P	08 25 40.5	-0.6
	1.6nm,0.9s,baz=82,slow=9.3,SNR=6.8						
ASAR	Alice Springs	32.36	243	P	P	08 25 51.6	-0.9
	0.9nm,0.8s,baz=71,slow=9.5,SNR=8.6						
CMAR	Chiang Mai Arr	71.86	294	P	P	08 30 46.8	+0.7
	1.1nm,0.4s,baz=116,slow=4.2,SNR=6.0						
ILAR	Eielson Array	83.84	19	P	P	08 31 51.0	-0.7
	0.3nm,0.8s,baz=238,slow=4.4,SNR=4.1						
MKAR	Makanchi Array	93.43	317	P	P	08 32 38.8	+0.8
	0.5nm,0.9s,baz=120,slow=4.9,SNR=4.0						
YKA	Yellowknife Ar	95.34	27	P	P	08 32 46.2	-0.2
	0.1nm,0.7s,baz=271,slow=5.4,SNR=2.9						

*IDC **10** 08:21:02.3±0.9, 11°.17S×165°.16E, h0^{km}, mb4.1/11, mb1 4.3/13, mb1mx4.0/45, mbtmp4.2/13, ML4.1/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/33, Error ellipse: s-maj=23.7km s-min=20.5km az=126.0*

*NEIC **10** 08:21:03.5±0.3, 11°.23S×165°.19E, h10^{km}, mb4.0/6, Error ellipse: s-maj=8.1km s-min=6.8km az=84.0*

*ISCJB **10** 08:21:05.3±0.5, 11°.29S±0°.07×165°.08E±0°.07, h31^{km}, mb4.1/15, MS3.2/2, Error ellipse: s-maj=10.3km s-min=8.2km az=40.4*

ISC 10 08:21:06.7±0.7, **11°.24S**±0°.09×**165°.17E**±0°.09, **h31**^{km}, **n35, σ0^{s}85**/40, **mb4.1**/15, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.45	289	Pn	Pn	08 22 24.4	-1.3
	9.4nm,0.3s,baz=175,slow=11,SNR=3.2						
HNR				Sn	Sn	08 23 27.1	-0.3
	4.0nm,0.3s,baz=122,slow=5.2,SNR=2.6						

HNR				LR	LR	08 24 56.2	
	comp=Z,155nm,18.7s,baz=126,slow=43						
MARNC	**Mare, Loyalty**	**10.54**	**165**	*e*Pn	**Pn**	**08 23 32.5**	**-3.2**
DZM	**Mont Dzumac**	**10.84**	**174**	*e*Pn	**Pn**	**08 23 40.1**	**+0.3**
DZM	**Mont Dzumac**	**10.84**	**174**	Pn	**Pn**	**08 23 40.0**	**+0.1**
	0.9nm,0.3s,baz=309,slow=12,SNR=12						
CTA	**Charters Tower**	**20.21**	**242**	P	**P**	**08 25 39.3**	**+0.1**
	1.1nm,0.2s,baz=37,slow=11,SNR=2.7						
CTAO	**Charters Tower**	**20.21**	**242**	*e*P	**P**	**08 25 38.3**	**-0.9**
	12nm,1.1s						
LHI	**Lord Howe Isla**	**20.96**	**195**	*e*P	**P**	**08 25 48.3**	**+1.2**
	68nm,1.0s						
COEN	**Coen**	**21.64**	**261**	*e*P	**P**	**08 25 54.3**	**-0.3**
	6.0nm,0.9s						
OUZ	**Omahuta**	**25.07**	**164**	*e*P	**P**	**08 26 28.7**	**+0.3**
	37nm,1.7s						
CAN	**Canberra**	**28.11**	**209**	*e*P	**P**	**08 26 56.1**	**+0.1**
	28nm,1.6s						
URZ	**Urewera**	**28.95**	**160**	P	**P**	**08 27 04.1**	**+0.9**
	5.1nm,1.0s,baz=214,slow=3.6,SNR=2.2						
STKA	**Stephens Creek**	**29.91**	**223**	*e*P	**P**	**08 27 11.2**	**-0.8**
	1.4nm,1.1s						
STKA	**Stephens Creek**	**29.91**	**223**	P	**P**	**08 27 12.5**	**+0.6**
	2.3nm,0.7s,baz=31,slow=6.1,SNR=3.3						
STKA				LR	LR	08 38 30.8	
	comp=Z,44nm,21.5s,baz=21,slow=35						
WR1	**Warramunga Arr**	**30.89**	**250**	*e*P	**P**	**08 27 21.1**	**+0.4**
WR1				*e*PcP	**PcP**	**08 30 17.7**	**+0.6**
WRA	**Warramunga Arr**	**30.89**	**250**	P	**P**	**08 27 21.1**	**+0.4**
	3.6nm,0.7s,baz=83,slow=9.0,SNR=20						
WRA				PcP	**PcP**	**08 30 17.7**	**+0.6**
	0.4nm,0.7s,baz=85,slow=3.0,SNR=4.3						
AS01	**Alice Springs**	**32.16**	**243**	*e*P	**P**	**08 27 31.2**	**-0.7**
AS31	**Alice Springs**	**32.20**	**243**	*e*P	**P**	**08 27 31.7**	**-0.6**
	1.0nm,0.8s						
AS31				*e*PcP	**PcP**	**08 30 21.5**	**+0.8**
ASAR	**Alice Springs**	**32.20**	**243**	P	**P**	**08 27 31.7**	**-0.6**
	2.2nm,0.8s,baz=66,slow=9.9,SNR=21						
ASAR				PcP	**PcP**	**08 30 21.5**	**+0.8**
	0.7nm,0.7s,baz=76,slow=2.3,SNR=7.5						
ASAR				LR	LR	08 40 21.8	
	comp=Z,66nm,18.3s,baz=90,slow=36						
MTN	**Manton Dam**	**33.31**	**264**	*e*P	**P**	**08 27 41.9**	**-0.1**
	8.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.78**	**255**	*e*P	**P**	**08 28 28.8**	**0.0**
	3.4nm,1.2s						
FITZ	**Fitzroy Crossi**	**38.78**	**255**	P	**P**	**08 28 28.6**	**-0.2**
	2.0nm,0.7s,baz=59,slow=5.9,SNR=5.9						
CM31	**Chiang Mai Arr**	**71.67**	**294**	*e*P	**P**	**08 32 27.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**71.67**	**294**	P	**P**	**08 32 27.5**	**+1.4**
	2.0nm,0.3s,baz=134,slow=5.1,SNR=3.2						
SONA0	**Songino Array**	**78.49**	**324**	*e*P	**P**	**08 33 05.0**	**0.0**
SONM	**Songino Array**	**78.49**	**324**	P	**P**	**08 33 05.0**	**0.0**
	0.1nm,0.6s,baz=135,slow=7.1,SNR=3.9						
ILAR	**Eielson Array**	**83.88**	**19**	P	**P**	**08 33 33.3**	**+0.3**
	0.6nm,0.6s,baz=239,slow=5.2,SNR=11						
ILB	**Eielson Array**	**83.88**	**19**	*e*P	**P**	**08 33 32.6**	**-0.4**
MK01	**Makanchi Array**	**93.27**	**317**	*e*P	**P**	**08 34 18.6**	**+0.2**
MK31	**Makanchi Array**	**93.28**	**317**	*e*P	**P**	**08 34 18.8**	**+0.4**
MK32	**Makanchi Array**	**93.28**	**317**	*e*P	**P**	**08 34 19.1**	**+0.6**
MKAR	**Makanchi Array**	**93.28**	**317**	*e*P	**P**	**08 34 19.0**	**+0.5**
	6.0nm,0.9s						
MKAR	**Makanchi Array**	**93.28**	**317**	P	**P**	**08 34 19.1**	**+0.5**
	1.0nm,0.8s,baz=100,slow=5.9,SNR=10						
GCMT	**Greycliff**	**94.62**	**44**	*e*P	**P**	**08 34 24.7**	**-0.1**
YKA	**Yellowknife Ar**	**95.41**	**27**	P	**P**	**08 34 26.7**	**-1.0**
	0.3nm,0.8s,baz=256,slow=5.0,SNR=4.9						
YKB5	**Yellowknife Ar**	**95.41**	**27**	*e*P	**P**	**08 34 27.2**	**-0.6**

IDC 10 08:32:25.5±1.7**, 11°.04S**×**164°.49E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/30**, mbtmp3.7**/5**, ML3.4**/1**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.7**/30**, Error ellipse: s-maj=49.6km s-min=30.3km az=134.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.13**	**171**	Pn	Pn	08 35 05.6	-0.5
	0.2nm,0.3s,baz=127,slow=15,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**29.42**	**4**	T	T	09 09 32.6	
	baz=184,slow=76,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**29.42**	**4**	T	T	09 09 34.1	
	baz=184,slow=76,SNR=6.7						
H11S1	**WAKE ISLAND Hy**	**29.44**	**4**	T	T	09 09 36.1	
	baz=184,slow=76,SNR=6.1						
WRA	**Warramunga Arr**	**30.33**	**249**	P	P	08 38 39.6	+0.5
	0.5nm,1.0s,baz=79,slow=9.4,SNR=5.1						
H11N1	**WAKE ISLAND Hy**	**30.65**	**4**	T	T	09 11 04.2	
	baz=184,slow=76,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**30.65**	**4**	T	T	09 11 03.0	
	baz=184,slow=76,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**30.66**	**4**	T	T	09 11 04.7	
	baz=184,slow=76,SNR=5.5						
ASAR	**Alice Springs**	**31.70**	**243**	P	P	08 38 51.6	+0.5
	0.2nm,0.6s,baz=64,slow=10,SNR=5.1						
FITZ	**Fitzroy Crossi**	**38.19**	**255**	P	P	08 39 46.3	-0.9
	1.8nm,0.7s,baz=90,slow=6.0,SNR=5.6						
NWAO	**Narrogin (SRO)**	**48.45**	**236**	LR	LR	09 00 29.8	
	comp=Z,72nm,19.1s,baz=138,slow=35						
ILAR	**Eielson Array**	**83.90**	**19**	P	P	08 44 57.0	+0.1
	0.3nm,1.0s,baz=235,slow=3.2,SNR=3.5						

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*IDC **10** 08:37:38.3±1.5, 11°.01S×164°.73E, h0^{km}, mb3.7/4, mb1 3.9/7, mb1mx3.7/30, mbtmp3.8/7, ML3.7/3, MS3.2/2, Ms1 3.2/2, ms1mx2.7/31, Error ellipse: s-maj=33.2km s-min=28.5km az=132.0*

*ISCJB **10** 08:37:40.3±1.2, 11°.1S±0°.1×164°.7E±0°.1, h29^{km}, mb3.6/4, MS3.2/1, Error ellipse: s-maj=20.6km s-min=11.0km az=37.0*

ISC 10 08:37:42.5±1.2**, 11°.1S**±0°.1×**164°.7E**±0°.1**, h29^{km}, n14, σ1^{s}.26**/9**, mb3.7**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.96**	**289**	Pn	**Pn**	**08 38 54.2**	**-0.9**
	8.6nm,0.3s,baz=60,slow=20,SNR=2.2						
HNR				Sn	**Sn**	**08 39 51.7**	**+0.1**
	8.5nm,0.3s,baz=260,slow=6.1,SNR=3.0						
DZM	**Mont Dzumac**	**11.04**	**172**	Pn	**Pn**	**08 40 18.5**	**-0.1**
	0.8nm,0.3s,baz=140,slow=22,SNR=7.3						
DZM				LR	LR	08 43 56.1	
	comp=Z,121nm,19.1s,baz=30,slow=34						
CTA	**Charters Tower**	**19.87**	**241**	P	**Pn**	**08 42 13.2**	**-0.1**
	0.1nm,0.3s,baz=69,slow=14,SNR=2.3						
H11S2	**WAKE ISLAND Hy**	**29.47**	**4**	T	T	09 14 54.7	
	baz=184,slow=76,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**29.47**	**4**	T	T	09 14 45.5	
	baz=184,slow=76,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**29.48**	**4**	T	T	09 14 54.8	
	baz=184,slow=76,SNR=6.9						
WRA	**Warramunga Arr**	**30.50**	**250**	P	**P**	**08 43 53.5**	**+0.1**
	1.7nm,0.9s,baz=79,slow=9.3,SNR=11						
H11N1	**WAKE ISLAND Hy**	**30.69**	**4**	T	T	09 16 15.5	
	baz=184,slow=76,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**30.70**	**4**	T	T	09 16 16.3	
	baz=184,slow=76,SNR=6.6						
H11N2	**WAKE ISLAND Hy**	**30.71**	**4**	T	T	09 16 18.1	
	baz=184,slow=76,SNR=6.9						
ASAR	**Alice Springs**	**31.85**	**243**	P	**P**	**08 44 04.9**	**-0.4**
	0.8nm,0.7s,baz=62,slow=10,SNR=8.6						
ASAR				PcP	**PcP**	**08 46 57.2**	**+1.4**
	0.3nm,1.0s,baz=85,slow=2.2,SNR=2.6						
JNU	**Nakatsue**	**54.53**	**325**	LR	LR	09 06 21.2	
	comp=Z,23nm,20.3s,baz=232,slow=32						
SONM	**Songino Array**	**78.10**	**324**	P	**P**	**08 49 40.9**	**+2.0**
	0.3nm,0.8s,baz=134,slow=6.2,SNR=2.8						
ILAR	**Eielson Array**	**83.89**	**19**	P	**P**	**08 50 07.6**	**-1.7**
	0.4nm,0.8s,baz=230,slow=5.9,SNR=3.4						

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*IDC **10** 08:38:24.9±0.5, 6°.91N×33°.82W, h0^{km}, mb4.0/23, mb1 4.2/24, mb1mx4.0/51, mbtmp4.1/24, ML4.5/1, MS3.5/2, Ms1 3.5/2, ms1mx3.0/32, Error ellipse: s-maj=15.5km s-min=13.0km az=154.0*

*ISCJB **10** 08:38:25.3±0.3, 6°.85N±0°.07×33°.76W±0°.05, h15^{km}, mb4.3/49, MS3.5/2, Error ellipse: s-maj=10.2km s-min=7.1km az=167.2*

*NEIC **10** 08:38:26.2±0.2, 6°.86N×33°.79W, h10^{km}, mb4.6/29, Error ellipse: s-maj=7.0km s-min=4.8km az=167.0*

ISC 10 08:38:26.9±0.4**, 6°.85N**±0°.08×**33°.79W**±0°.08**, h15^{km}, n81, σ0^{s}.94**/78**, mb4.4**/49**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**12.77**	**190**	Pn	**Pn**	**08 41 27.0**	**-1.1**
	2.4nm,0.3s,baz=7.7,slow=1.3,SNR=9.8						
RCBR				Sn	Sn	08 43 37.6	-12
	1.4nm,0.3s,baz=357,slow=2.5,SNR=3.1						
SACV	**Santiago Islan**	**12.84**	**50**	*e*Pn	**Pn**	**08 41 27.5**	**-1.6**
H10N3	**ASCENSION HYDR**	**24.14**	**127**	T	T	09 08 54.4	
	baz=306,slow=74,SNR=41						
H10N2	**ASCENSION HYDR**	**24.15**	**127**	T	T	09 08 54.6	
	baz=306,slow=74,SNR=39						
H10N1	**ASCENSION HYDR**	**24.16**	**127**	T	T	09 08 55.9	
	baz=306,slow=74,SNR=40						
H10S3	**ASCENSION HYDR**	**24.69**	**129**	T	T	09 09 29.5	
	baz=308,slow=75,SNR=21						
H10S1	**ASCENSION HYDR**	**24.70**	**129**	T	T	09 09 33.2	
	baz=308,slow=75,SNR=24						
H10S2	**ASCENSION HYDR**	**24.71**	**129**	T	T	09 09 31.0	
	baz=308,slow=75,SNR=19						
BBGH	**Gun Hill**	**26.12**	**286**	*e*P	**P**	**08 44 02.1**	**+1.5**
	667nm,1.3s						
BDFB	**Brasilia**	**26.42**	**212**	P	**P**	**08 44 03.5**	**+0.2**
	2.8nm,0.7s,baz=28,slow=16,SNR=5.5						
MACI	**Morro de la Ar**	**26.84**	**35**	*e*P	**P**	**08 44 07.2**	**0.0**
	89nm,0.9s						
PTGA	**Pitinga**	**27.18**	**255**	*e*P	**P**	**08 44 10.2**	**0.0**
PTGA	**Pitinga**	**27.18**	**255**	P	**P**	**08 44 09.3**	**-0.9**
	0.9nm,0.3s,baz=323,slow=20,SNR=3.2						
MTP	**Monte Pirata**	**32.91**	**293**	*e*P	**P**	**08 45 02.0**	**+1.2**
	13nm,0.9s						
HUMP	**Col San Antoni**	**33.19**	**293**	*e*P	**P**	**08 45 02.9**	**-0.5**
	25nm,1.3s						
CBYP	**Canovanas**	**33.23**	**293**	*e*P	**P**	**08 45 03.6**	**-0.1**
	32nm,1.5s						
SJG	**San Juan**	**33.46**	**293**	P	**P**	**08 45 05.3**	**-0.4**
	8.7nm,0.8s,baz=149,slow=4.5,SNR=3.9						
SJG				LR	LR	08 55 59.1	
	comp=Z,54nm,19.8s,baz=108,slow=32						
TOA1	**Torodi Ar. Sit**	**35.47**	**77**	*e*P	**P**	**08 45 23.4**	**+0.2**
TOA1				*e*PcP	**PcP**	**08 47 52.5**	**-0.3**
TOA0	**Torodi Ar. Sit**	**35.47**	**77**	*e*P	**P**	**08 45 23.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**35.47**	**77**	P	**P**	**08 45 23.4**	**+0.2**
	7.7nm,1.3s,baz=275,slow=9.6,SNR=9.5						
TORD				PcP	**PcP**	**08 47 52.5**	**-0.3**
	0.9nm,1.0s,baz=233,slow=1.5,SNR=3.3						
MDT	**Midelt**	**37.45**	**42**	LR	LR	08 59 18.9	
	comp=Z,114nm,18.5s,baz=246,slow=34						
CPUP	**Villa Florida**	**40.12**	**214**	*e*P	**P**	**08 46 03.3**	**+1.0**
	13nm,1.6s						
CPUP	**Villa Florida**	**40.12**	**214**	P	**P**	**08 46 03.6**	**+1.3**
	2.3nm,1.0s,baz=87,slow=7.6,SNR=3.7						
ROSC	**El Rosal**	**40.36**	**269**	*e*P	**P**	**08 46 04.5**	**-0.5**
	3.3nm,0.9s						
ROSC	**El Rosal**	**40.36**	**269**	P	**P**	**08 46 05.8**	**+0.9**
	2.1nm,0.5s,baz=277,slow=17,SNR=3.0						
LPAZ	**La Paz**	**41.03**	**236**	*e*P	**P**	**08 46 08.0**	**-2.7**
	2.6nm,0.8s						
LPAZ	**La Paz**	**41.03**	**236**	P	**P**	**08 46 11.8**	**+1.1**
	1.6nm,0.6s,baz=69,slow=2.3,SNR=8.6						
DAVOX	**Davos/Dischmat**	**54.57**	**36**	P	**P**	**08 47 55.9**	**+1.0**
	2.8nm,0.8s,baz=255,slow=7.6,SNR=5.1						
SCHQ	**Schefferville**	**54.68**	**337**	*e*P	**P**	**08 47 56.7**	**+1.4**
	21nm,1.4s						
SCHQ	**Schefferville**	**54.68**	**337**	P	**P**	**08 47 56.0**	**+0.8**
	3.2nm,1.0s,baz=118,slow=7.2,SNR=5.5						
TSUM	**Tsumeb**	**56.84**	**118**	P	**P**	**08 48 13.0**	**+1.6**
	0.8nm,0.8s,baz=311,slow=6.9,SNR=2.0						
GERES	**GERESS Array B**	**57.85**	**35**	P	**P**	**08 48 18.3**	**+0.2**
	0.9nm,1.0s,baz=259,slow=7.9,SNR=4.8						
UALR	**University of**	**60.42**	**306**	*e*P	**P**	**08 48 36.5**	**+0.4**
	11nm,1.0s						
SFJD	**Kangerlussuaq**	**61.15**	**353**	P	**P**	**08 48 39.3**	**-1.1**
	2.2nm,0.6s,baz=330,slow=1.2,SNR=2.7						
NB2	**NORSAR Subarra**	**63.56**	**23**	P	**P**	**08 48 57.7**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=233,slow=6.5						
NB200	**NORSAR Array S**	**63.56**	**23**	*e*P	**P**	**08 48 56.4**	**-0.4**
NOA	**NORSAR Array B**	**63.56**	**23**	P	**P**	**08 48 56.4**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=231,slow=6.4,SNR=4.1						
MLR	**Muntele Rosu**	**64.14**	**42**	*e*P	**P**	**08 49 01.3**	**+0.3**
	comp=Z,19nm,1.4s						
BOSA	**Boshof**	**66.88**	**125**	P	**P**	**08 49 19.6**	**+0.6**
	comp=Z,2.0nm,0.9s,baz=280,slow=12,SNR=2.2						
ULM	**Lac du Bonnet**	**67.09**	**322**	P	**P**	**08 49 19.3**	**-0.5**
	comp=Z,1.9nm,1.0s,baz=90,slow=7.1,SNR=3.0						
AKASG	**Malin Array Be**	**67.79**	**38**	P	**P**	**08 49 24.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=253,slow=5.1,SNR=2.7						
AKBB	**Malin Array Si**	**67.79**	**38**	*e*P	**P**	**08 49 24.2**	**0.0**
	comp=Z,8.4nm,1.4s						
BRTR	**Keskin Array B**	**68.32**	**50**	P	**P**	**08 49 28.3**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=298,slow=3.1,SNR=4.6						
BR101	**Keskin Array S**	**68.33**	**50**	*e*P	**P**	**08 49 28.3**	**+0.3**
LTX	**Lajitas**	**69.14**	**299**	*e*P	**P**	**08 49 33.5**	**+0.3**
TXAR	**Lajitas Array**	**69.14**	**299**	P	**P**	**08 49 33.5**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=108,slow=6.3,SNR=9.8						
TX31	**Lajitas Ar. Si**	**69.14**	**299**	*e*P	**P**	**08 49 33.9**	**+0.6**
FIA0	**FINESS Array S**	**69.92**	**26**	*e*P	**P**	**08 49 38.3**	**+1.1**
FINES	**FINESS Array B**	**69.92**	**26**	P	**P**	**08 49 38.3**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=265,slow=8.8,SNR=4.0						
MNTX	**Cornudas Mount**	**70.78**	**301**	*e*P	**P**	**08 49 43.0**	**-0.1**
	comp=Z,3.9nm,1.1s						
N23A	**Red Feather La**	**72.06**	**311**	*e*P	**P**	**08 49 51.3**	**+0.2**
	comp=Z,7.7nm,1.1s						
LAZ	**Ladron**	**72.43**	**304**	*e*P	**P**	**08 49 53.0**	**-0.3**
SMCO	**Snowmass**	**72.67**	**309**	*e*P	**P**	**08 49 55.1**	**+0.2**
	comp=Z,9.8nm,1.3s						
O20A	**White River Ci**	**73.73**	**310**	*e*P	**P**	**08 50 00.4**	**-0.5**
	comp=Z,8.2nm,0.8s						
PV01	**Paradox Valley**	**73.83**	**308**	*e*P	**P**	**08 50 01.4**	**-0.2**
	comp=Z,8.6nm,1.2s						
PV13	**Radium Mtn., P**	**74.03**	**308**	*e*P	**P**	**08 50 03.8**	**+1.1**
	comp=Z,6.9nm,1.0s						
PV17	**East Wray Mesa**	**74.15**	**308**	*e*P	**P**	**08 50 05.7**	**+2.3**
	comp=Z,9.5nm,1.1s						
PV14	**Lion Creek, Pa**	**74.21**	**308**	*e*P	**P**	**08 50 03.9**	**+0.1**
	comp=Z,4.9nm,0.9s						
PV09	**Paradox Valley**	**74.30**	**308**	*e*P	**P**	**08 50 06.6**	**+2.2**
PD31	**Pinedale Array**	**74.94**	**312**	*e*P	**P**	**08 50 08.3**	**+0.5**
PDAR	**Pinedale Array**	**74.94**	**312**	*e*P	**P**	**08 50 07.0**	**-0.9**
PDAR	**Pinedale Array**	**74.94**	**312**	P	**P**	**08 50 07.4**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=92,slow=6.5,SNR=6.4						
TUC	**Tucson**	**75.39**	**302**	*e*P	**P**	**08 50 10.1**	**-0.5**
	comp=Z,3.4nm,0.9s						
LOHW	**Long Hollow**	**75.76**	**313**	*e*P	**P**	**08 50 12.8**	**+0.2**
	comp=Z,2.4nm,0.9s						
WUAZ	**Wupatki**	**75.96**	**305**	*e*P	**P**	**08 50 13.7**	**-0.1**
	comp=Z,8.2nm,1.0s						
X16A	**Lo Mia Camp, P**	**75.98**	**304**	*e*P	**P**	**08 50 14.2**	**+0.2**
	comp=Z,4.2nm,1.1s						
FXWY	**Fox Creek**	**76.07**	**313**	*e*P	**P**	**08 50 13.4**	**-1.0**
	comp=Z,6.4nm,1.4s						
MTPU	**Mount Pierson**	**76.68**	**307**	*e*P	**P**	**08 50 19.6**	**+1.4**
	comp=Z,6.1nm,0.9s						
SZCU	**Shurtz Canyon**	**77.38**	**307**	*e*P	**P**	**08 50 22.0**	**+0.1**
	comp=Z,3.0nm,0.9s						
BGU	**Big Grassy Mou**	**77.42**	**310**	*e*P	**P**	**08 50 21.7**	**-0.3**
	comp=Z,7.3nm,1.3s						
CCUT	**Cedar City**	**77.60**	**307**	*e*P	**P**	**08 50 23.4**	**+0.2**
	comp=Z,6.7nm,1.1s						
PSUT	**Pine Spring**	**78.00**	**308**	*e*P	**P**	**08 50 24.1**	**-1.2**
	comp=Z,3.0nm,0.9s						
YKA	**Yellowknife Ar**	**79.72**	**332**	P	**P**	**08 50 34.0**	**+0.1**
YKA	**Yellowknife Ar**	**79.72**	**332**	P	**P**	**08 50 34.0**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=98,slow=5.5,SNR=11						
YKB5	**Yellowknife Ar**	**79.72**	**332**	*e*P	**P**	**08 50 33.3**	**-0.6**
NV01	**Mina Array Sit**	**81.50**	**308**	*e*P	**P**	**08 50 44.1**	**-0.2**
NVAR	**Mina Array Bea**	**81.50**	**308**	P	**P**	**08 50 45.7**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=90,slow=5.8,SNR=3.0						
ILAR	**Eielson Array**	**93.44**	**337**	P	**P**	**08 51 41.3**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=50,slow=4.8,SNR=4.8						
ILB	**Eielson Array**	**93.44**	**337**	*e*P	**P**	**08 51 41.5**	**-0.1**
ASAR	**Alice Springs**	**159.52**	**146**	PKP	**PKPdf**	**08 58 24.1**	**-1.9**
	comp=Z,0.6nm,1.0s,baz=129,slow=1.3,SNR=3.2						
ASAR				PKPab	**PKPab**	**08 59 04.5**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=211,slow=3.2,SNR=3.2						
AS31	**Alice Springs**	**159.52**	**146**	*e*PKPdf	**PKPdf**	**08 58 23.2**	**-2.8**
AS31				*e*PKPab	**PKPab**	**08 59 03.2**	**-0.7**

IDC 10 08:43:46.8±3.0**, 54°.64N**×**86°.58E, h0^{km}, mb1 2.9**/2**, mb1mx2.8**/57**, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=24.1km s-min=16.8km az=43.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.25**	**237**	*i*		08 51 20.0	
	baz=60,slow=343,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.25**	**237**	Pg	Pg	08 44 08.9	-1.7
	1.8nm,0.3s,baz=56,slow=16,SNR=20						
ZALV				Lg	Lg	08 44 27.6	
	3.9nm,0.3s,baz=56,slow=31,SNR=12						
KURBB	**Kurchatov Arra**	**6.34**	**234**	Pn	Pn	08 45 21.6	+0.2
	0.1nm,0.3s,baz=50,slow=14,SNR=5.9						
KURBB				Sn	Sn	08 46 32.7	-1.8
	0.0nm,0.3s,baz=355,slow=39,SNR=1.3						
KURBB				Lg	Lg	08 47 09.1	
	0.0nm,0.3s,baz=45,slow=30,SNR=3.3						
MKAR	**Makanchi Array**	**8.32**	**201**	Pn	Pn	08 45 49.9	+1.4
	0.1nm,0.3s,baz=21,slow=13,SNR=9.7						
MKAR				Sn	Sn	08 47 23.9	+0.8
	0.1nm,0.3s,baz=22,slow=28,SNR=2.6						

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*IDC **10** 08:47:48.9±0.4, 6°.90N×33°.90W, h0^{km}, mb4.3/30, mb1 4.5/31, mb1mx4.3/49, mbtmp4.3/31, ML4.6/1, MS3.9/16, Ms1 3.9/16, ms1mx3.7/31, Error ellipse: s-maj=14.7km s-min=11.3km az=149.0*

*ISCJB **10** 08:47:50.5±0.3, 6°.97N±0°.05×33°.85W±0°.03, h15^{km}, mb4.7/165, MS3.9/15, Error ellipse: s-maj=7.9km s-min=3.8km az=175.5*

*NEIC **10** 08:47:51.0±0.2, 6°.87N×33°.80W, h10^{km}, mb4.9/121, Error ellipse: s-maj=6.7km s-min=4.4km az=174.0*

ISC 10 08:47:51.4±0.4**, 6°.85N**±0°.07×**33°.82W**±0°.07**, h15^{km}, n564, σ0^{s}.87**/553**, mb4.8**/164**, MS3.9**/15**, 9C-1D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**12.76**	**189**	*e*Pn	**Pn**	**08 50 50.9**	**-1.6**
RCBR				Sn	Sn	08 53 01.5	-13
RCBR	**Riachuelo**	**12.76**	**189**	Pn	**Pn**	**08 50 50.3**	**-2.1**
	3.3nm,0.3s,baz=351,slow=0.4,SNR=10						
RCBR				Sn	Sn	08 53 01.5	-13
	4.5nm,0.3s,baz=249,slow=0.9,SNR=7.1						
SACV	**Santiago Islan**	**12.87**	**50**	*e*Pn	**Pn**	**08 50 50.1**	**-3.8**
MDP	**Montagnes des**	**18.80**	**266**	LR	LR	08 58 13.3	
	comp=Z,204nm,19.0s,baz=81,slow=33						
H10N3	**ASCENSION HYDR**	**24.16**	**127**	T	T	09 18 12.0	
	baz=306,slow=74,SNR=133						
H10N2	**ASCENSION HYDR**	**24.17**	**127**	T	T	09 18 12.4	
	baz=306,slow=74,SNR=191						
H10N1	**ASCENSION HYDR**	**24.18**	**127**	T	T	09 18 13.6	
	baz=306,slow=74,SNR=170						
H10S3	**ASCENSION HYDR**	**24.71**	**129**	T	T	09 18 53.1	
	baz=308,slow=75,SNR=122						
H10S1	**ASCENSION HYDR**	**24.72**	**129**	T	T	09 18 53.4	
	baz=308,slow=75,SNR=121						
H10S2	**ASCENSION HYDR**	**24.73**	**129**	T	T	09 18 54.5	
	baz=308,slow=75,SNR=118						
BBGH	**Gun Hill**	**26.10**	**286**	*e*P	**P**	**08 53 23.2**	**-1.7**
	1µm,1.4s						
BDFB	**Brasilia**	**26.40**	**212**	*e*P	**P**	**08 53 28.2**	**+0.5**
	11nm,1.0s						
BDFB	**Brasilia**	**26.40**	**212**	P	**P**	**08 53 27.1**	**-0.6**
	6.2nm,0.8s,baz=29,slow=11,SNR=10						
BDFB				LR	LR	09 03 09.0	
	comp=Z,542nm,18.0s,baz=52,slow=35						
PTGA	**Pitinga**	**27.16**	**255**	*e*P	**P**	**08 53 34.5**	**+0.1**
	9.6nm,0.9s						
PTGA	**Pitinga**	**27.16**	**255**	P	**P**	**08 53 33.4**	**-1.1**
	7.6nm,0.8s,baz=89,slow=12,SNR=5.6						
PTGA				LR	LR	09 04 10.3	
	comp=Z,193nm,18.6s,baz=90,slow=36						
H05S1	**Guadeloupe/Mar**	**27.58**	**288**	T	T	09 22 20.3	
	SNR=8.7						
SVB	**Belmont**	**27.74**	**285**	*e*P	**P**	**08 53 38.8**	**-0.9**
	147nm,1.4s						
FDF	**Fort de France**	**27.95**	**289**	*e*P	**P**	**08 53 41.1**	**-0.5**
	228nm,1.7s						
H05N1	**Guadeloupe/Mar**	**28.26**	**292**	T	T	09 23 09.5	
	SNR=4.5						
DBIC	**Dimbokro**	**28.76**	**89**	*e*P	**P**	**08 53 49.7**	**+0.9**
	39nm,1.6s						
DBIC	**Dimbokro**	**28.76**	**89**	LR	LR	09 02 41.4	
	comp=Z,253nm,21.6s,baz=250,slow=31						
ABVI	**Anegada Island**	**31.95**	**295**	*e*P	**P**	**08 54 16.6**	**-0.4**
	80nm,1.0s						
ROSA	**Rosais**	**32.13**	**8**	*e*P	**P**	**08 54 17.7**	**-0.6**
	309nm,1.5s						
STVI	**Saint Thomas**	**32.41**	**294**	*e*P	**P**	**08 54 21.4**	**+0.5**
	22nm,0.9s						
HUMP	**Col San Antoni**	**33.16**	**293**	*e*P	**P**	**08 54 27.9**	**+0.3**
	27nm,0.9s						
SJG	**San Juan**	**33.43**	**293**	*e*P	**P**	**08 54 29.8**	**-0.1**
	18nm,0.8s						
SJG	**San Juan**	**33.43**	**293**	P	**P**	**08 54 29.4**	**-0.5**
	16nm,0.8s,baz=52,slow=13,SNR=8.1						
OBIP	**Obispado Ponce**	**33.83**	**292**	*e*P	**P**	**08 54 32.6**	**-0.8**
	42nm,1.1s						
MPR	**Mayaguez**	**34.37**	**292**	*e*P	**P**	**08 54 38.7**	**+0.7**
	24nm,1.0s						
TOA0	**Torodi Ar. Sit**	**35.50**	**77**	*e*P	**P**	**08 54 47.9**	**0.0**
TORD	**Torodi Ar. Bea**	**35.50**	**77**	P	**P**	**08 54 48.0**	**0.0**
	4.3nm,0.8s,baz=274,slow=9.4,SNR=18						
TORD				PcP	**PcP**	**08 57 16.2**	**-1.1**
	1.4nm,0.9s,baz=288,slow=2.5,SNR=3.5						
TORD				LR	LR	09 07 43.8	
	comp=Z,336nm,20.1s,baz=290,slow=34						
MDT	**Midelt**	**37.47**	**42**	P	**P**	**08 55 05.8**	**+1.2**
	1.5nm,0.8s,baz=282,slow=6.7,SNR=3.0						
PTOM	**Tomar**	**39.82**	**31**	*e*P	**P**	**08 55 25.9**	**+1.7**
	41nm,0.7s						
CPUP	**Villa Florida**	**40.10**	**214**	*e*P	**P**	**08 55 28.0**	**+1.4**
	9.9nm,1.1s						
CPUP	**Villa Florida**	**40.10**	**214**	P	**P**	**08 55 27.3**	**+0.7**
	5.2nm,1.0s,baz=38,slow=7.9,SNR=11						
CPUP				LR	LR	09 11 42.9	
	comp=Z,296nm,18.6s,baz=40,slow=36						
PMRV	**Marv??o**	**40.22**	**32**	*e*P	**P**	**08 55 29.4**	**+1.9**
	33nm,1.3s						
ROSC	**El Rosal**	**40.33**	**269**	LR	LR	09 12 14.8	
	comp=Z,148nm,18.6s,baz=78,slow=36						
LPAZ	**La Paz**	**41.01**	**236**	*e*P	**P**	**08 55 35.3**	**+0.4**
	5.0nm,0.9s						
LPAZ	**La Paz**	**41.01**	**236**	P	**P**	**08 55 35.5**	**+0.5**
	1.8nm,0.6s,baz=68,slow=3.5,SNR=12						
LPAZ				LR	LR	09 11 26.4	
	comp=Z,252nm,21.9s,baz=66,slow=35						
ESDC	**Sonseca Array**	**42.27**	**35**	P	**P**	**08 55 44.7**	**+0.3**
	1.0nm,0.7s,baz=232,slow=8.5,SNR=6.2						
ESDC				LR	LR	09 10 25.7	
	comp=Z,84nm,21.0s,baz=260,slow=32						
ES19	**SONSECA Array**	**42.33**	**35**	*e*P	**P**	**08 55 45.6**	**+0.8**
HRV	**Adam Dziewonsk**	**48.67**	**323**	P	**P**	**08 56 34.5**	**-0.5**
	baz=126						
KEST	**Kesra**	**48.84**	**48**	P	**P**	**08 56 38.3**	**+1.8**
	4.8nm,0.8s,baz=287,slow=8.6,SNR=3.8						
KEST				LR	LR	09 15 39.9	
	comp=Z,112nm,21.4s,baz=294,slow=34						
PAL	**Palisades**	**49.28**	**320**	P	**P**	**08 56 40.1**	**+0.4**
	baz=122						
NHSC	**New Hope**	**50.24**	**308**	P	**P**	**08 56 47.7**	**+0.5**
	baz=111						
N59A	**State Game Lan**	**50.44**	**319**	P	**P**	**08 56 49.5**	**+0.9**
	baz=121						
657A	**Interlachen**	**50.48**	**303**	P	**P**	**08 56 49.3**	**+0.3**
	baz=107						
257A	**Skidaway Islan**	**50.53**	**306**	P	**P**	**08 56 49.6**	**+0.3**
	baz=109						
GO04	**Tololo Observa**	**51.12**	**222**	*e*P	**P**	**08 56 54.8**	**+0.6**
	13nm,0.8s						
X56A	**White Oak**	**51.40**	**309**	P	**P**	**08 56 57.0**	**+1.1**
	baz=111						
SSPA	**Standing Stone**	**51.70**	**318**	P	**P**	**08 56 58.5**	**+0.4**
	baz=118						
BNI	**Bardonecchia**	**51.77**	**36**	*e*P	**P**	**08 56 58.8**	**+0.1**
	13nm,1.0s						
X55A	**Gracelyn & Ava**	**51.86**	**309**	P	**P**	**08 57 00.4**	**+1.1**
	baz=111						
KMSC	**Kings Mountain**	**51.87**	**310**	P	**P**	**08 57 00.2**	**+0.8**
	baz=112						
155A	**Kite**	**51.89**	**306**	P	**P**	**08 57 00.6**	**+1.1**
	baz=109						
BLA	**Blacksburg**	**51.98**	**313**	P	**P**	**08 57 01.3**	**+1.0**
	baz=114						
O56A	**Blue Knob Stat**	**51.99**	**317**	P	**P**	**08 57 01.4**	**+1.1**
	baz=118						
S55A	**Lewisburg**	**52.26**	**313**	P	**P**	**08 57 03.3**	**+0.9**
	baz=114						
LATQ	**La Tuque**	**52.30**	**327**	P	**P**	**08 57 03.3**	**+1.0**
	baz=128						
Z54A	**Sparta**	**52.39**	**307**	P	**P**	**08 57 04.0**	**+0.7**
	baz=109						
154A	**Montrose**	**52.40**	**306**	P	**P**	**08 57 03.9**	**+0.5**
	baz=108						
ALFO	**Alfred**	**52.43**	**324**	P	**P**	**08 57 04.4**	**+1.0**

	baz=125						
TIGA	Tifton baz=107	52.44	305	P	P	08 57 04.0	+0.3
O55A	Ligonier baz=117	52.46	316	P	P	08 57 04.5	+0.7
Q55A	Buckhannon baz=115	52.47	315	P	P	08 57 04.6	+0.7
Y54A	Tignall baz=110	52.47	308	P	P	08 57 04.5	+0.6
N55A	Marion Center baz=118	52.51	317	P	P	08 57 05.3	+1.2
P55A	Reedsville baz=116	52.51	315	P	P	08 57 04.6	+0.4
M55A	Ridgway baz=118	52.68	318	P	P	08 57 06.1	+0.8
T54A	Tazewell baz=113	52.77	312	P	P	08 57 06.9	+0.7
R54A	Victor baz=114	52.78	313	P	P	08 57 06.9	+0.7
553A	Crawfordville baz=106	52.79	303	P	P	08 57 06.9	+0.6
353A	Camilla baz=106	52.93	304	P	P	08 57 08.4	+1.1
J55A	Hilton baz=120	52.94	321	P	P	08 57 08.2	+1.0
Z53A	Monticello baz=108	52.98	307	P	P	08 57 08.6	+0.9
153A	Fort Valley baz=108	53.00	306	P	P	08 57 08.9	+1.1
Q54A	Coxs Mills baz=115	53.00	314	P	P	08 57 09.0	+1.3
P54A	Burton baz=115	53.01	315	P	P	08 57 09.1	+1.3
BG3	Lake Jocassee 17nm,1.0s	53.04	309	*e*P	P	08 57 08.2	+0.1
253A	Americus baz=107	53.06	305	P	P	08 57 09.1	+0.8
X53A	Estanollee baz=110	53.16	308	P	P	08 57 10.2	+1.2
Y53A	Monroe baz=109	53.17	307	P	P	08 57 10.4	+1.3
V53A	Saluda baz=111	53.19	310	P	P	08 57 09.7	+0.5
O54A	Avella baz=116	53.19	316	P	P	08 57 10.0	+0.9
H55A	Tweed baz=122	53.21	322	P	P	08 57 09.6	+0.5
U53A	Fall Branch baz=111	53.26	311	P	P	08 57 10.8	+1.1
N54A	Moraine State baz=117	53.27	317	P	P	08 57 11.0	+1.3
W53A	Cullowhee baz=110	53.28	309	P	P	08 57 11.1	+1.1
M54A	Oil Creek Stat baz=117	53.30	318	P	P	08 57 11.1	+1.2
S53A	Williamson baz=113	53.41	312	P	P	08 57 12.1	+1.3
T53A	Wise baz=112	53.45	311	P	P	08 57 12.3	+1.2
252A	Lumpkin baz=107	53.53	305	P	P	08 57 12.7	+0.9
R53A	Hurricane baz=113	53.53	313	P	P	08 57 12.7	+1.0
Y52A	Lilburn baz=108	53.55	307	P	P	08 57 12.4	+0.5
P53A	Whipple 17nm,0.9s	53.60	315	*e*P	P	08 57 11.2	-0.9
P53A	Whipple baz=114	53.60	315	P	P	08 57 13.0	+0.9
Z52A	Williamson baz=108	53.63	306	P	P	08 57 13.4	+0.9
WLVO	Wesleyville baz=120	53.63	321	P	P	08 57 13.5	+1.2
X52A	Dahlonega baz=109	53.66	308	P	P	08 57 13.9	+1.3
152A	Waverly Hall baz=107	53.72	306	P	P	08 57 14.1	+1.0
DOU	Dourbes	53.72	30	⇑P	P	08 57 13.8	+1.0
N53A	Lisbon baz=116	53.78	316	P	P	08 57 14.9	+1.5
ERPA	Erie baz=118	53.79	318	P	P	08 57 14.6	+1.1
O53A	New Philadelph baz=115	53.80	316	P	P	08 57 14.5	+0.9
DRCO	St. Marys Ceme baz=120	53.80	321	P	P	08 57 14.2	+0.7
DRWO	Darlington Wes baz=120	53.82	321	P	P	08 57 14.7	+1.1
PEMO	Pembroke baz=122	53.84	323	P	P	08 57 14.5	+0.7
U52A	Thorn Hill baz=111	53.86	311	P	P	08 57 14.9	+0.8
L53A	Girard baz=117	53.90	318	P	P	08 57 14.9	+0.7
BANO	Bancroft baz=121	53.91	322	P	P	08 57 15.2	+0.9
M53A	WI Miller and baz=116	53.94	317	P	P	08 57 15.4	+0.8
Q52A	Bidwell baz=113,SNR=5.3	54.01	314	P	P	08 57 15.8	+0.7
R52A	Catlettsburg baz=113	54.04	313	P	P	08 57 16.6	+1.2
351A	Pinckard baz=106	54.05	304	P	P	08 57 15.8	+0.3
S52A	Salyersville baz=112	54.11	312	P	P	08 57 17.1	+1.2
251A	Midway baz=106	54.11	305	P	P	08 57 16.5	+0.6
151A	Opelika baz=107	54.17	305	P	P	08 57 17.3	+0.9
O52A	Adamsville 28nm,1.0s	54.17	315	*e*P	P	08 57 16.7	+0.4
O52A	Adamsville baz=114	54.17	315	P	P	08 57 17.5	+1.1
P52A	Corning baz=114	54.18	315	P	P	08 57 17.1	+0.7
E54A	Lac Daplat, Po baz=123	54.21	324	P	P	08 57 17.2	+0.7
U51A	La Follette baz=110	54.35	310	P	P	08 57 19.0	+1.3
N52A	McGinn’s Farm, baz=115	54.36	316	P	P	08 57 18.7	+1.0
G53A	Haliburton baz=121	54.38	322	P	P	08 57 18.7	+1.0
X51A	Calhoun baz=108	54.40	308	P	P	08 57 18.9	+0.8
V51A	Loudon baz=110	54.41	309	P	P	08 57 18.4	+0.3
M52A	Chesterland baz=116	54.45	317	P	P	08 57 18.8	+0.5
E53A	Dumoine, Ponti baz=122	54.46	324	P	P	08 57 19.1	+0.8
S51A	Beattyville 14nm,0.9s	54.48	312	*e*P	P	08 57 18.6	0.0
S51A	Beattyville baz=111	54.48	312	P	P	08 57 19.7	+1.2
T51A	Gray baz=111	54.50	311	P	P	08 57 19.4	+0.7
W51A	Cleveland baz=109	54.51	309	P	P	08 57 19.7	+0.9
ACTO	Acton baz=118	54.53	320	P	P	08 57 19.6	+0.7
J52A	Paris baz=118	54.63	319	P	P	08 57 20.2	+0.6
SCHQ	Schefferville 11nm,0.8s,baz=136,slow=6.0,SNR=16	54.67	337	P	P	08 57 19.1	-0.6
CHGQ	Chibougamau baz=128	54.69	329	P	P	08 57 20.4	+0.5
R51A	Hillsboro baz=112,SNR=8.2	54.71	313	P	P	08 57 21.1	+0.9
O51A	Pataskala baz=114	54.72	315	P	P	08 57 21.1	+0.8
MEM	Membach	54.75	30	P	P	08 57 19.6	-0.7
MEM				⇑pP	P	08 57 21.6	+1.3
150A	Eclectic baz=106	54.75	305	P	P	08 57 21.4	+0.8
250A	Grady baz=106	54.78	304	P	P	08 57 21.6	+0.8
P51A	Williamsport 24nm,1.0s	54.78	314	*e*P	P	08 57 20.9	+0.2
P51A	Williamsport baz=113	54.78	314	P	P	08 57 21.6	+0.9
Q51A	Peebles 26nm,0.9s	54.81	314	*e*P	P	08 57 21.6	+0.7
Q51A	Peebles baz=112,SNR=7.0	54.81	314	P	P	08 57 21.6	+0.7
I52A	Shelburne baz=118	54.83	320	P	P	08 57 21.7	+0.7
Z50A	Ashland baz=107	54.85	306	P	P	08 57 22.2	+0.8
D53A	Lac Vacive, Po baz=123	54.86	325	P	P	08 57 21.8	+0.6
DAVA	Damuels 9.1nm,0.8s	54.87	35	*e*P	P	08 57 22.5	+1.1
Y50A	Piedmont baz=107	54.89	307	P	P	08 57 22.7	+1.0
V50A	Pikevile baz=109	54.94	309	P	P	08 57 22.7	+0.7
W50A	Signal Mountai 15nm,1.0s	54.95	308	*e*P	P	08 57 22.8	+0.8
W50A	Signal Mountai baz=108	54.95	308	P	P	08 57 22.9	+0.8
U50A	Jamestown baz=110	54.99	310	P	P	08 57 23.1	+0.7
X50B	Fort Payne baz=108	54.99	308	P	P	08 57 23.2	+0.8
E52A	Mattawa baz=121	55.00	323	P	P	08 57 22.3	+0.1
ACSO	Alum Creek Sta 25nm,1.0s	55.02	315	*e*P	P	08 57 22.8	+0.3
ACSO	Alum Creek Sta baz=114,SNR=6.3	55.02	315	P	P	08 57 23.1	+0.6
S50A	Richmond baz=111	55.09	312	P	P	08 57 23.9	+0.9
F52A	Sundridge baz=120	55.15	323	P	P	08 57 23.9	+0.7
ELFO	Elginfield baz=117	55.15	319	P	P	08 57 24.8	+1.5
T50A	Nancy baz=110	55.19	311	P	P	08 57 24.9	+1.1
Q50A	Georgetown baz=112	55.20	313	P	P	08 57 24.4	+0.6
FETA	Feichten 9.0nm,1.0s	55.21	36	*e*P	P	08 57 24.5	+0.5
D52A	ZEK Kipawa Sen baz=122	55.22	324	P	P	08 57 24.2	+0.5
BRAL	Brewton baz=104	55.22	303	P	P	08 57 25.2	+1.2
R50A	Paris baz=111	55.25	312	P	P	08 57 25.7	+1.5
449A	Pace baz=104	55.26	303	P	P	08 57 24.4	+0.1
Z49A	Columbiana baz=106,SNR=7.6	55.33	306	P	P	08 57 25.6	+0.8
N50A	Nevada baz=114	55.35	316	P	P	08 57 25.9	+1.0
P50A	Jamestown baz=112	55.36	314	P	P	08 57 25.7	+0.8
149A	Jones baz=106	55.37	305	P	P	08 57 25.4	+0.2
349A	Repton baz=104	55.38	303	P	P	08 57 26.2	+1.0
Y49A	Blount Mountai baz=107	55.42	307	P	P	08 57 26.2	+0.8
O50A	Cable baz=113	55.44	315	P	P	08 57 25.9	+0.4
SWET	Sewanee 22nm,1.2s	55.44	308	*e*P	P	08 57 25.4	-0.2
BWLO	Walkerton baz=118	55.46	320	P	P	08 57 26.3	+0.7
KLBO	Killbear Provi baz=119	55.47	322	P	P	08 57 26.2	+0.6
RETA	Reutte 4.5nm,0.8s	55.48	35	*e*P	P	08 57 26.3	+0.6
249A	Camden baz=105	55.48	304	P	P	08 57 26.8	+0.9
M50A	Fremont baz=114	55.54	316	P	P	08 57 27.1	+1.0
X49A	Woodville baz=107	55.54	307	P	P	08 57 27.0	+0.7
LSQQ	Lebel-sur-Quev baz=125	55.55	327	P	P	08 57 26.4	+0.2
V49A	McMinnville baz=108	55.59	309	P	P	08 57 27.2	+0.5
SQTA	Sankt Quirin 13nm,1.1s	55.60	36	*e*P	P	08 57 27.2	+0.6
MOTA	Moosalm 5.4nm,0.9s	55.60	36	*e*P	P	08 57 27.1	+0.4
E51A	G1948 Merrick baz=121	55.62	323	P	P	08 57 27.3	+0.6
L50A	Kingsville baz=115	55.64	317	P	P	08 57 27.6	+0.6
LRAL	Lakeview Retre 12nm,1.0s	55.66	305	*e*P	P	08 57 27.4	+0.2
LRAL	Lakeview Retre baz=106	55.66	305	P	P	08 57 27.5	+0.3
W49A	Belvidere baz=108,SNR=5.6	55.67	308	P	P	08 57 28.0	+0.7
U49A	Red Boiling Sp baz=109	55.73	310	P	P	08 57 28.4	+0.8
T49A	Edmonton baz=110	55.74	311	P	P	08 57 28.4	+0.7
S49A	Springfield baz=110	55.78	311	P	P	08 57 28.7	+0.7
D51A	Lot 18 Range I baz=121	55.84	324	P	P	08 57 29.0	+0.8
WTTA	Wattenberg 14nm,1.2s	55.87	36	*e*P	P	08 57 29.4	+0.7
WATA	Walderalm 6.3nm,0.9s	55.87	36	*e*P	P	08 57 29.7	+1.1
R49A	Shelbyville baz=110	55.87	312	P	P	08 57 29.6	+0.9
Q49A	Aurora baz=111	55.92	313	P	P	08 57 29.6	+0.6
O49A	Covington 15nm,1.0s	55.96	314	*e*P	P	08 57 29.8	+0.6
O49A	Covington baz=112	55.96	314	P	P	08 57 29.9	+0.6
P49A	Miami Univ. Ec baz=112	55.99	314	P	P	08 57 29.9	+0.4
Y48A	Jasper baz=106,SNR=8.0	56.04	306	P	P	08 57 30.6	+0.7
X48A	Hartselle baz=107	56.09	307	P	P	08 57 30.6	+0.4
ABTA	Abfaltersbach 12nm,1.2s	56.12	37	*e*P	P	08 57 31.5	+1.1
N49A	Columbus Grove baz=113	56.13	315	P	P	08 57 31.3	+0.8
W48A	Pulaski baz=107	56.20	308	P	P	08 57 31.9	+0.8
M49A	Liberty Center baz=114	56.21	316	P	P	08 57 31.8	+0.8
V48A	Smith Brothers 14nm,1.0s	56.29	309	*e*P	P	08 57 32.5	+0.8
V48A	Smith Brothers baz=108,SNR=5.4	56.29	309	P	P	08 57 32.1	+0.4
MATQ	Matagami baz=124	56.30	327	P	P	08 57 31.7	+0.2
U48A	Cassie Pea, Po baz=108	56.31	310	P	P	08 57 32.7	+0.9
S48A	Wiedeman Farm, baz=109	56.31	311	P	P	08 57 32.3	+0.5
L49A	Milan baz=114	56.32	317	P	P	08 57 32.4	+0.6
AAM	Ann Arbor baz=114	56.32	317	P	P	08 57 32.4	+0.6
K49A	Clarkson baz=115	56.39	318	P	P	08 57 32.7	+0.4
T48A	Bowling Green baz=109	56.39	310	P	P	08 57 33.4	+1.0
R48A	Northridge Ran baz=110	56.43	312	P	P	08 57 33.2	+0.6
P48A	Milroy baz=111	56.47	313	P	P	08 57 32.7	-0.2
Q48A	North Vernon baz=110	56.51	313	P	P	08 57 33.9	+0.7
O48A	Farmland baz=112	56.57	314	P	P	08 57 34.1	+0.5
147A	Livingston baz=105	56.60	305	P	P	08 57 34.5	+0.6
WCI	Wyandotte Cave 12nm,0.9s	56.68	312	*e*P	P	08 57 35.2	+0.8
WCI	Wyandotte Cave baz=110	56.68	312	P	P	08 57 35.0	+0.6
N48A	Decatur baz=112	56.70	315	P	P	08 57 35.3	+0.8
L48A	N Adams baz=113	56.71	316	P	P	08 57 35.0	+0.5
M48A	Edgerton baz=113	56.73	316	P	P	08 57 35.4	+0.7
MYKA	Terra Mystica 9.1nm,1.0s	56.74	37	*e*P	P	08 57 36.3	+1.5
W47A	Westpoint baz=107,SNR=5.7	56.75	308	P	P	08 57 35.2	+0.3
X47A	Russelville baz=106	56.75	307	P	P	08 57 35.5	+0.5
KBA	Koelnbreinsper 11nm,1.6s	56.78	37	*e*P	P	08 57 36.0	+0.9
TSUM	Tsumeb 5.4nm,0.9s	56.86	118	*e*P	P	08 57 37.2	+1.1
TSUM	Tsumeb 2.4nm,0.9s,baz=324,slow=5.4,SNR=4.5	56.86	118	P	P	08 57 36.8	+0.7
V47A	Nunnelly baz=107,SNR=6.5	56.86	309	P	P	08 57 35.9	+0.2
U47A	Clarksville baz=108,SNR=5.8	56.87	309	P	P	08 57 36.5	+0.8
R47A	Wooly Knot Far baz=109	56.88	312	P	P	08 57 36.6	+0.8
T47A	Sharon Grove baz=108	56.89	310	P	P	08 57 36.7	+0.8
S47A	Hartford baz=109,SNR=7.3	56.91	311	P	P	08 57 36.6	+0.6
Q47A	Bedord North L baz=110	57.02	312	P	P	08 57 37.7	+1.0
D49A	Beulah Townshi baz=119	57.10	323	P	P	08 57 38.0	+0.8
N47A	Urbana baz=112	57.18	315	P	P	08 57 38.5	+0.6
WVT	Waverly 11nm,0.9s	57.19	309	*e*P	P	08 57 38.3	+0.3
WVT	Waverly baz=107	57.19	309	P	P	08 57 37.7	-0.4
L47A	Sherwood baz=113	57.25	316	P	P	08 57 38.6	+0.3
O47A	Sheridan baz=111	57.29	314	P	P	08 57 39.3	+0.7
V46A	Holladay baz=107,SNR=7.8	57.32	308	P	P	08 57 39.2	+0.3
D48A	Paudash Townsh baz=119	57.32	323	P	P	08 57 38.8	0.0
X46A	Booneville baz=106,SNR=6.8	57.34	307	P	P	08 57 38.9	-0.2
K47A	Vermontville baz=113	57.38	317	P	P	08 57 39.6	+0.3
U46A	Springville baz=107	57.52	309	P	P	08 57 40.4	0.0
S46A	Don Dixon Farm baz=108	57.57	311	P	P	08 57 41.4	+0.7
R46A	Gibon Southern baz=109	57.58	311	P	P	08 57 41.0	+0.3
SOKA	Soboth 9.6nm,1.0s,SNR=5.8	57.60	38	*e*P	P	08 57 42.2	+1.4
MOA	Molln 3.9nm,0.8s	57.70	36	*e*P	P	08 57 41.4	0.0
P46A	Rosedale baz=110	57.82	313	P	P	08 57 43.0	+0.6
GO06	Curarrehue 6.3nm,0.8s	57.84	214	*e*P	P	08 57 43.3	+0.7
GEA0	GERESS Array S	57.86	35	*e*P	P	08 57 43.2	+0.5
GERES	GERESS Array B 2.4nm,1.0s,baz=226,slow=5.4,SNR=11	57.87	35	P	P	08 57 42.6	-0.1
GERES	comp=Z,126nm,20.9s,baz=267,slow=33			LR	LR	09 19 26.6	
E47A	Iron Bridge baz=117	57.88	322	P	P	08 57 42.8	+0.1
N46A	Monticello baz=111	57.92	314	P	P	08 57 43.8	+0.7
K46A	Dorr baz=113	57.92	317	P	P	08 57 43.9	+0.9
145A	Houston Renfro baz=104	57.94	304	P	P	08 57 44.1	+0.8
KHC	Kasperske Hory	57.94	35	*e*P	P	08 57 44.1	+0.9
V45A	Humboldt baz=106	57.96	308	P	P	08 57 42.7	-0.7
U45A	Rockin P Farm, baz=106	57.97	309	P	P	08 57 43.6	+0.1
W45A	Hickory Valley baz=106	57.98	307	P	P	08 57 43.4	-0.2
OXF	Oxford baz=105	57.98	307	P	P	08 57 43.1	-0.5
SFIN	Lafayette baz=110	58.00	314	P	P	08 57 44.1	+0.4
J46A	Howard City baz=113	58.09	317	P	P	08 57 45.0	+0.8
ARSA	Arzberg 2.5nm,0.7s	58.17	37	*e*P	P	08 57 45.5	+0.8
P45A	Graceland, Par 15nm,0.8s	58.18	313	*e*P	P	08 57 45.1	+0.2
P45A	Graceland, Par baz=109	58.18	313	P	P	08 57 45.6	+0.6
R45A	Skylar, Fairfi baz=108,SNR=5.9	58.18	311	P	P	08 57 45.5	+0.5
OLIL	Olney 21nm,0.9s	58.19	312	*e*P	P	08 57 44.8	-0.2
S45A	Carrier Mills baz=108	58.22	310	P	P	08 57 45.5	+0.2
Q45A	Warren Harvey, baz=108,SNR=5.4	58.28	312	P	P	08 57 46.3	+0.6
D46A	Sault St. Mari baz=117	58.54	322	P	P	08 57 47.6	+0.3
CONA	Conrad Observa 5.4nm,1.3s	58.68	37	*e*P	P	08 57 49.4	+1.0
SIUC	Southern Illin 29nm,1.1s	58.72	310	*e*P	P	08 57 48.8	+0.1
S44A	Carbondale baz=107	58.74	310	P	P	08 57 48.8	-0.1
R44A	Waltonville baz=107,SNR=5.0	58.77	311	P	P	08 57 49.0	-0.1
P44A	Sand Creek, Wi baz=108,SNR=10.0	58.80	312	P	P	08 57 49.2	-0.1
N44A	Piper City baz=110	58.88	314	P	P	08 57 50.3	+0.4
O44A	Mansfield baz=109	58.91	313	P	P	08 57 49.8	-0.3
Q44A	Meyer Farm, Va 24nm,0.9s	58.92	312	*e*P	P	08 57 50.1	0.0
Q44A	Meyer Farm, Va baz=108	58.92	312	P	P	08 57 50.5	+0.4
M44A	Midewin, Midew baz=110	59.02	315	P	P	08 57 50.8	0.0
BRG	Berggiesshubel 10nm,1.5s	59.03	33	*e*P	P	08 57 50.8	+0.1
TREC	Trest	59.11	35	*e*P	P	08 57 52.8	+1.5
X43A	Marvell 34nm,0.9s	59.16	306	*e*P	P	08 57 52.1	+0.2
X43A	Marvell baz=104	59.16	306	P	P	08 57 51.8	-0.1
L44A	Lake County Fo baz=111	59.20	315	P	P	08 57 52.4	+0.4
S43A	Fulton Ridge, baz=106	59.33	310	P	P	08 57 53.2	+0.2
T43A	Greenville baz=106	59.35	309	P	P	08 57 53.4	+0.2
R43A	Red Bud baz=107	59.42	311	P	P	08 57 54.0	+0.5
Q43A	New Douglas baz=107	59.44	311	P	P	08 57 54.1	+0.4
P43A	Skaggs, Pawnee baz=108	59.52	312	P	P	08 57 54.4	+0.2
KRUC	Moravsky	59.52	36	*e*P	P	08 57 54.7	+0.6
HDIL	Hopedale baz=109	59.64	313	P	P	08 57 54.3	-0.7
N43A	Stutzman Famil baz=109	59.67	314	P	P	08 57 55.2	-0.1
MODS	Modra-Piesok	59.73	37	*e*P	P	08 57 56.5	+0.9
VRAC	Vranov	59.76	36	⇑*i*P	P	08 57 56.5	+0.8
VRAC	Vranov	59.76	36	*e*P	P	08 57 56.3	+0.6
X42A	Stuttgart baz=104	59.77	306	P	P	08 57 56.1	0.0
V42A	Cord baz=104,SNR=8.2	59.88	308	P	P	08 57 56.2	-0.6
U42A	Revenden baz=105,SNR=6.1	59.90	308	P	P	08 57 56.2	-0.7
S42A	Caledonia baz=106,SNR=5.1	59.93	310	P	P	08 57 56.3	-0.8
T42A	Van Buren 5.7nm,0.9s	59.96	309	*e*P	P	08 57 56.0	-1.4
T42A	Van Buren baz=105	59.96	309	P	P	08 57 56.9	-0.5
F43A	Flat Rock, Esc baz=113	60.06	320	P	P	08 57 58.1	+0.2
R42A	Luebbering baz=106	60.07	310	P	P	08 57 58.0	-0.1
P42A	Winchester 12nm,1.0s	60.11	312	*e*P	P	08 57 57.6	-0.7
P42A	Winchester baz=107	60.11	312	P	P	08 57 58.3	0.0
E43A	Lone Tree Farm baz=114	60.17	320	P	P	08 57 58.6	0.0
N42A	Yates City baz=108	60.26	313	P	P	08 57 59.3	0.0
CCM	Cathedral Cave 13nm,1.0s	60.35	310	*e*P	P	08 57 58.6	-1.4
CCM	Cathedral Cave	60.35	310	P	P	08 58 00.1	+0.1

	baz=106						
UALR	University of	60.40	306	eP	P	08 58 00.0	-0.3
	22nm,1.0s						
K42A	Prairie Point,	60.40	316	P	P	08 58 00.6	+0.3
	baz=110						
W41B	Gary Mavity, V	60.41	307	eP	P	08 58 00.1	-0.3
	40nm,1.9s						
W41B	Gary Mavity, V	60.41	307	P	P	08 58 00.5	0.0
	baz=103						
U41A	Viola	60.43	308	P	P	08 57 60.0	-0.7
	baz=104,SNR=6.8						
J42A	Columbus	60.43	316	P	P	08 58 00.6	+0.1
	baz=110						
X41A	Kaden, Bauxite	60.47	306	P	P	08 58 01.0	+0.1
	baz=103						
V41A	Mountainview	60.48	307	P	P	08 58 00.1	-0.9
	baz=104,SNR=5.4						
T41A	Mountain View	60.48	309	P	P	08 58 00.3	-0.6
	baz=105,SNR=9.0						
I42A	Draeger Farm,	60.49	317	P	P	08 58 01.2	+0.4
	baz=111						
R41A	Rosebud	60.52	310	P	P	08 58 00.9	-0.2
	baz=106						
MORC	Moravsky Berou	60.52	36	eP	P	08 58 08.5	+7.5
Q41A	Truxton	60.59	311	P	P	08 58 01.0	-0.6
	baz=106						
S41A	Jillco Farms,	60.61	309	P	P	08 58 01.4	-0.4
	baz=105						
O41A	Passleys Farm,	60.66	312	P	P	08 58 01.3	-0.8
	baz=107						
P41A	Barry, Barry	60.66	312	P	P	08 58 01.6	-0.5
	baz=107,SNR=5.8						
X40A	Basin Creek Fa	60.73	306	P	P	08 58 02.5	-0.1
	baz=103						
E42A	Champion	60.77	320	P	P	08 58 03.1	+0.3
	baz=113						
L41A	Preston	60.98	315	P	P	08 58 04.1	-0.1
	baz=108						
K41A	Shullsburg	61.01	315	P	P	08 58 04.3	-0.1
	baz=109						
J41A	Loganville	61.06	316	P	P	08 58 05.0	+0.2
	baz=110						
JFWS	Jewell Farm	61.07	316	P	P	08 58 04.9	0.0
	baz=109						
MDVR	Moldovita	61.09	42	⇑iP	P	08 58 05.9	+0.9
G41A	Antigo	61.14	318	P	P	08 58 05.3	+0.1
	baz=111						
U40A	Yellville	61.16	308	P	P	08 58 05.1	-0.6
	baz=104,SNR=7.4						
I41A	Arkdale	61.20	317	P	P	08 58 05.6	-0.1
	baz=110						
F41A	Three Lakes	61.28	319	eP	P	08 58 05.9	-0.4
	19nm,1.0s						
F41A	Three Lakes	61.28	319	P	P	08 58 06.3	+0.1
	baz=112						
MIAR	Mount Ida	61.34	306	P	P	08 58 06.9	+0.1
	baz=102						
N40A	Mertquake, Sal	61.40	313	P	P	08 58 06.3	-0.7
	baz=107						
L40A	Anamosa	61.49	314	eP	P	08 58 07.3	-0.4
	13nm,0.8s						
L40A	Anamosa	61.49	314	P	P	08 58 07.5	-0.1
	baz=108						
M40A	Post Highland	61.50	314	P	P	08 58 07.4	-0.4
	baz=107						
J40A	Soldiers Grove	61.57	316	P	P	08 58 07.8	-0.5
	baz=109						
K40A	Colesburg	61.62	315	P	P	08 58 08.4	-0.2
	baz=108						
W39A	Magazine	61.64	306	eP	P	08 58 08.6	-0.2
	13nm,1.1s						
W39A	Magazine	61.64	306	P	P	08 58 09.5	+0.7
	baz=102						
NATX	Nacogdoches	61.70	302	P	P	08 58 09.7	+0.4
	baz=100						
G40A	Rib Lake	61.83	318	P	P	08 58 10.1	+0.2
	baz=110						
M39A	Webster	61.99	314	P	P	08 58 10.8	-0.3
	baz=107						
F40A	Park Falls	62.01	319	P	P	08 58 11.0	-0.2
	baz=111						
GZR	Gura Zlata	62.02	42	⇑iP	P	08 58 11.8	+0.5
E40A	Wakefield	62.05	319	P	P	08 58 11.0	-0.4
	baz=111						
L39A	Vinton	62.06	314	P	P	08 58 12.2	+0.7
	baz=107						
K39A	Oelwein	62.15	315	P	P	08 58 11.8	-0.4
	baz=108						
J39A	Decorah	62.22	316	P	P	08 58 12.2	-0.3
	baz=108,SNR=6.2						
I39A	Houston	62.26	316	P	P	08 58 12.6	-0.2
	baz=108						
H39A	Augusta	62.36	317	P	P	08 58 13.9	+0.4
	baz=109						
E39A	Mellen	62.45	319	P	P	08 58 14.2	+0.1
	baz=111						
DRGR		62.46	40	⇑iP	P	08 58 13.2	-1.0
G39A	Holcombe	62.48	318	P	P	08 58 14.2	-0.1
	baz=110						
G38A	Ridgeland	62.90	318	P	P	08 58 17.1	0.0
	baz=109						
H38A	Maiden Rock	63.03	317	P	P	08 58 18.2	+0.3
	baz=108						
ARR	Arges	63.24	42	⇑iP	P	08 58 19.7	+0.3
TUL1	Leonard	63.39	307	eP	P	08 58 19.6	-0.9
	17nm,0.9s						
TUL1	Leonard	63.39	307	P	P	08 58 20.2	-0.3
	baz=101,SNR=5.3						
VOIR		63.54	42	⇓iP	P	08 58 23.2	+1.8
SPMN	Marine on St.	63.55	317	eP	P	08 58 20.6	-0.9
	10nm,0.8s						
SPMN	Marine on St.	63.55	317	P	P	08 58 21.0	-0.4
	baz=108						
NB2	NORSAR Subarra	63.58	23	P	P	08 58 21.8	+0.5
	comp=Z,6.3nm,1.0s,baz=232,slow=6.9						
NOA	NORSAR Array B	63.58	23	P	P	08 58 21.0	-0.3
	comp=Z,2.4nm,0.8s,baz=232,slow=6.7,SNR=7.3						
NOA				LR	LR	09 21 57.3	
	comp=Z,80nm,21.0s,baz=230,slow=32						
F37A	Hinrichs Farm,	63.59	318	P	P	08 58 21.5	-0.2
	baz=108						
MLR	Muntele Rosu	64.16	42	eP	P	08 58 26.8	+1.2
	comp=Z,31nm,1.3s						
MLR	Muntele Rosu	64.16	42	⇑iP	P	08 58 26.0	+0.4
BUR04	Bucovina Ar. S	64.35	40	eP	P	08 58 27.4	+0.6
BURAR	Bucovina Array	64.35	40	⇑iP	P	08 58 28.9	+2.1
KSU1	Kansas State U	64.68	310	eP	P	08 58 27.2	-1.8
	comp=Z,16nm,0.9s						
KSU1	Kansas State U	64.68	310	P	P	08 58 28.1	-0.8
	baz=102						
833A	Chaparral WMA,	65.30	298	eP	P	08 58 32.6	-0.6
	comp=Z,21nm,0.9s						
833A	Chaparral WMA,	65.30	298	P	P	08 58 33.0	-0.2
	baz=96,SNR=5.2						
SUW	Suwalki	65.49	33	eP	P	08 58 34.6	+0.7
	comp=Z,39nm,1.1s						
WMOK	Wichita Mounta	65.59	305	P	P	08 58 34.0	-1.0
	baz=99						
SUMG	Summit	65.73	358	eP	P	08 58 35.8	+0.1
	comp=Z,19nm,1.1s						
SUMG	Summit	65.73	358	i P	P	08 58 36.2	+0.6
	comp=Z,51nm,1.1s						
ECSD	EROS Data Cent	65.76	315	eP	P	08 58 35.1	-0.8
	comp=Z,5.8nm,0.9s						
ECSD	EROS Data Cent	65.76	315	P	P	08 58 35.2	-0.6
	baz=104,SNR=5.5						
JCT	Junction City	65.88	300	eP	P	08 58 36.1	-0.9
	comp=Z,14nm,1.0s						
JCT	Junction City	65.88	300	P	P	08 58 36.5	-0.4
	baz=96,SNR=5.5						
ABTX	Abilene, Hawle	66.00	303	eP	P	08 58 36.9	-0.8
	comp=Z,13nm,1.1s						
ABTX	Abilene, Hawle	66.00	303	P	P	08 58 37.3	-0.4
	baz=97						
BGNE	Belgrade	66.33	312	P	P	08 58 39.6	0.0
	baz=102						
BOSA	Boshof	66.90	125	P	P	08 58 43.5	-0.1
	comp=Z,6.0nm,0.9s,baz=311,slow=4.0,SNR=7.0						
CBKS	Cedar Bluff	67.02	309	P	P	08 58 43.6	-0.5
	baz=100						
ULM	Lac du Bonnet	67.08	322	P	P	08 58 42.4	-1.7
	comp=Z,4.7nm,1.0s,baz=124,slow=5.1,SNR=5.7						
SUSD	Miller	67.56	315	P	P	08 58 47.0	-0.4
	baz=103						
ZAIG	Zacatecas	67.81	292	eP	P	08 58 48.7	-1.0
AKASG	Malin Array Be	67.81	38	P	P	08 58 47.8	-1.0
	comp=Z,2.2nm,0.8s,baz=255,slow=5.8,SNR=12						
AKASG				LR	LR	09 29 07.8	
	comp=Z,38nm,18.4s,baz=275,slow=36						
BR131	Keskin Array S	68.35	50	eP	P	08 58 53.1	+0.5
BRTR	Keskin Array B	68.35	50	P	P	08 58 53.2	+0.7
	comp=Z,2.6nm,0.8s,baz=239,slow=5.6,SNR=16						
BRTR				LR	LR	09 28 45.9	
	comp=Z,74nm,21.9s,baz=263,slow=36						
MSTX	Muleshoe	68.77	304	eP	P	08 58 55.4	+0.1
	comp=Z,14nm,1.1s						
MSTX	Muleshoe	68.77	304	P	P	08 58 55.6	+0.3
	baz=96						
MDND	Maddock	68.79	319	eP	P	08 58 54.5	-0.5
	comp=Z,25nm,0.9s						
MDND	Maddock	68.79	319	P	P	08 58 55.1	+0.1
	baz=104						
MMAI	Mount Meron Ar	68.89	57	P	P	08 58 56.8	+0.8
	comp=Z,0.4nm,0.3s,baz=270,slow=10,SNR=2.3						
FCC	Fort Churchill	69.04	331	eP	P	08 58 55.3	-1.0
	comp=Z,10nm,0.8s						
TXAR	Lajitas Array	69.12	299	P	P	08 58 57.2	-0.4
	comp=Z,1.8nm,0.6s,baz=106,slow=5.4,SNR=32						
TX31	Lajitas Ar. Si	69.12	299	eP	P	08 58 57.8	+0.2
KSCO	Kaye Shedlock'	69.28	309	P	P	08 58 58.9	+0.5
	baz=98						
FINES	FINESS Array B	69.93	26	P	P	08 59 01.7	0.0
	comp=Z,3.9nm,0.9s,baz=215,slow=4.6,SNR=9.3						
FINES				LR	LR	09 26 05.0	
	comp=Z,63nm,21.5s,baz=207,slow=33						
FIA1	FINESS Array S	69.93	26	eP	P	08 59 02.4	+0.6
ASF	Jabal al Asfar	70.07	58	P	P	08 59 03.1	-0.2
	comp=Z,1.1nm,0.5s,baz=243,slow=6.8,SNR=2.6						
T25A	Trinidad	70.44	307	P	P	08 59 06.4	+0.7
	baz=96						
MNTX	Cornudas Mount	70.76	301	eP	P	08 59 07.5	0.0
	comp=Z,6.0nm,1.1s						
MNTX	Cornudas Mount	70.76	301	P	P	08 59 07.2	-0.3
	baz=94						
RSSD	Black Hills	71.08	314	P	P	08 59 09.7	+0.2
	baz=99						
Q24A	Divide	71.22	309	P	P	08 59 11.2	+0.6
	baz=96						
SDCO	Great Sand Dun	71.36	307	eP	P	08 59 12.2	+0.8
	comp=Z,4.1nm,0.8s						
SDCO	Great Sand Dun	71.36	307	P	P	08 59 12.0	+0.6
	baz=96,SNR=9.3						
ISCO	Idaho Springs	71.67	310	eP	P	08 59 14.6	+1.4
	comp=Z,7.2nm,1.0s						
ISCO	Idaho Springs	71.67	310	P	P	08 59 13.8	+0.5
	baz=96,SNR=5.6						
ANMO	Albuquerque	71.89	304	eP	P	08 59 15.2	+0.7
	comp=Z,7.9nm,1.3s						
ANMO	Albuquerque	71.89	304	P	P	08 59 14.8	+0.3
	baz=94						
FFC	Flin Flon	71.90	325	eP	P	08 59 13.9	0.0
	comp=Z,29nm,1.9s						
DGMT	Dagmar	71.92	319	eP	P	08 59 15.3	+1.1
	comp=Z,27nm,1.1s						
DGMT	Dagmar	71.92	319	P	P	08 59 14.9	+0.6
	baz=100,SNR=5.5						
N23A	Red Feather La	72.05	311	eP	P	08 59 17.1	+1.6
	comp=Z,18nm,1.2s						
N23A	Red Feather La	72.05	311	P	P	08 59 15.9	+0.5
	baz=97,SNR=7.5						
TULEG	Thule	72.20	352	eP	P	08 59 15.5	+0.2
	comp=Z,14nm,1.1s						
LAZ	Ladron	72.41	304	eP	P	08 59 19.1	+1.4
LAZ	Ladron	72.41	304	eS	P	08 59 19.1	+1.4
S22A	4UR Ranch, Cre	72.41	307	eP	P	08 59 19.0	+1.3
	comp=Z,6.1nm,1.1s						
S22A	4UR Ranch, Cre	72.41	307	P	P	08 59 18.5	+0.8
	baz=95,SNR=5.8						
SMCO	Snowmass	72.65	309	eP	P	08 59 20.5	+1.2
	comp=Z,16nm,1.3s						
121A	Cookes Peak, D	72.84	302	P	P	08 59 21.4	+1.2
	baz=93,SNR=5.1						
LAO	LASA Array	72.99	317	eP	P	08 59 22.3	+1.6
	comp=Z,21nm,1.0s						
LAO	LASA Array	72.99	317	P	P	08 59 21.8	+1.1
	baz=98						
ARCES	ARCESS Array B	73.20	18	P	P	08 59 20.0	-1.3
	comp=Z,6.9nm,1.0s,baz=240,slow=5.0,SNR=4.8						
MVCO	Mesa Verde	73.69	307	eP	P	08 59 26.3	+1.1
	comp=Z,6.1nm,0.9s						
MVCO	Mesa Verde	73.69	307	P	P	08 59 25.9	+0.7
	baz=94						
O20A	White River Ci	73.71	310	eP	P	08 59 26.5	+1.2
	comp=Z,22nm,0.9s						
O20A	White River Ci	73.71	310	P	P	08 59 26.0	+0.8
	baz=95,SNR=13						
PV15	Paradox Valley	73.76	308	eP	P	08 59 27.3	+1.7
	comp=Z,7.3nm,0.8s						
PV01	Paradox Valley	73.81	308	eP	P	08 59 27.5	+1.6
	comp=Z,6.6nm,0.9s						
PV02	Paradox Valley	73.95	308	eP	P	08 59 28.2	+1.5
	comp=Z,12nm,0.8s						
PV12	Saucer Basin,	74.01	308	eP	P	08 59 28.8	+1.7
	comp=Z,7.6nm,1.0s						
PV13	Radium Mtn., P	74.01	308	eP	P	08 59 28.6	+1.5
	comp=Z,15nm,1.0s						
PV03	Paradox Valley	74.04	308	eP	P	08 59 28.6	+1.3
	comp=Z,6.4nm,0.9s						
PV11	David Mesa, Pa	74.06	308	eP	P	08 59 28.8	+1.4
	comp=Z,32nm,1.8s						
319A	Douglas	74.07	301	eP	P	08 59 28.6	+1.2
	comp=Z,10nm,1.0s						
PV04	Paradox Valley	74.10	308	eP	P	08 59 29.3	+1.8
	comp=Z,15nm,1.5s						
PV16	Nyswonger Mesa	74.10	308	eP	P	08 59 28.9	+1.3
	comp=Z,9.1nm,1.0s						
PV17	East Wray Mesa	74.13	308	eP	P	08 59 29.1	+1.4
	comp=Z,11nm,1.0s						
PV20	West Nyswonger	74.14	308	eP	P	08 59 29.4	+1.6
	comp=Z,10nm,0.9s						
PV19	Morning Glory	74.15	308	eP	P	08 59 29.3	+1.4
	comp=Z,7.7nm,0.9s						
PV21	Cone Mtn., Par	74.16	308	eP	P	08 59 29.4	+1.4
	comp=Z,9.6nm,0.9s						
PV23	Carpenter Ridg	74.18	308	eP	P	08 59 29.4	+1.3
	comp=Z,11nm,1.0s						
PV14	Lion Creek, Pa	74.19	308	eP	P	08 59 29.5	+1.4
	comp=Z,9.4nm,0.9s						
PV05	Paradox Valley	74.23	308	eP	P	08 59 29.2	+0.8
	comp=Z,8.9nm,0.8s						
PV09	Paradox Valley	74.28	308	eP	P	08 59 30.2	+1.5
X18A	Snowflake	74.73	304	eP	P	08 59 32.4	+1.1
RLMT	Red Lodge	74.92	315	eP	P	08 59 33.0	+0.8
	comp=Z,39nm,2.0s						
RLMT	Red Lodge	74.92	315	P	P	08 59 32.9	+0.8
	baz=96						
BW06	Boulder Array	74.92	312	eP	P	08 59 32.0	-0.2
	comp=Z,7.7nm,1.1s						
BW06	Boulder Array	74.92	312	P	P	08 59 32.4	+0.2
	baz=95,SNR=7.9						
PD31	Pinedale Array	74.92	312	eP	P	08 59 32.0	-0.3
PDAR	Pinedale Array	74.92	312	P	P	08 59 31.4	-0.8
	comp=Z,2.3nm,0.9s,baz=101,slow=6.3,SNR=15						
TUC	Tucson	75.37	302	eP	P	08 59 35.8	+0.9
	comp=Z,7.9nm,0.9s						
TUC	Tucson	75.37	302	P	P	08 59 35.4	+0.5
	baz=91						
SRU	San Rafael Swe	75.40	309	eP	P	08 59 36.1	+1.0
	comp=Z,20nm,1.8s						
EGMT	Eagleton	75.54	318	P	P	08 59 35.0	-0.5
	baz=96						
KBZ	Khabaz	75.70	47	P	P	08 59 37.4	+1.0
	comp=Z,1.9nm,0.9s,baz=284,slow=7.5,SNR=5.1						
LOHW	Long Hollow	75.74	313	eP	P	08 59 37.6	+0.6
	comp=Z,6.7nm,1.0s						
SNOW	Snow King Moun	75.84	313	eP	P	08 59 38.5	+1.0
	comp=Z,8.8nm,1.2s						
FLWY	Flagg Ranch	75.85	314	eP	P	08 59 38.6	+1.1
	comp=Z,11nm,0.9s						
MOOW	Moose Ponds	75.86	313	eP	P	08 59 38.1	+0.5
	comp=Z,3.4nm,0.9s						
REDW	Red Top Meadow	75.91	313	eP	P	08 59 38.6	+0.7
	comp=Z,30nm,1.8s						
WUAZ	Wupatki	75.93	305	eP	P	08 59 40.0	+1.8
	comp=Z,16nm,0.9s						
WUAZ	Wupatki	75.93	305	P	P	08 59 39.2	+1.0
	baz=92,SNR=9.7						
TMUT	Trail Mountain	75.94	309	eP	P	08 59 39.3	+1.0
	comp=Z,4.1nm,0.8s						
KLMR	Klimovskoe	75.96	29	eP	P	08 59 37.4	-0.1
KLMR					AMP	08 59 39.7	
	comp=Z,14nm,0.9s						
TPAW	Teton Pass	75.99	313	eP	P	08 59 38.1	-0.3
	comp=Z,18nm,1.5s						
IMW	Indian Meadow	76.01	313	eP	P	08 59 39.3	+0.7
	comp=Z,8.3nm,1.1s						
FXWY	Fox Creek	76.05	313	eP	P	08 59 39.0	+0.2
	comp=Z,5.0nm,1.1s						
YMR	Madison River	76.08	314	eP	P	08 59 40.4	+1.5
	comp=Z,12nm,0.8s						
TCUT	Toone Canyon	76.19	311	eP	P	08 59 40.4	+0.8
	comp=Z,6.9nm,0.8s						
JLU	Jordanelle	76.19	310	eP	P	08 59 40.7	+1.1
	comp=Z,6.8nm,1.2s						
CTU	Camp Tracy	76.42	310	eP	P	08 59 42.1	+1.2
	comp=Z,3.3nm,0.9s						
BOZ	Bozeman (W)	76.61	315	P	P	08 59 42.4	+0.6
	baz=94						
NLU	North Lily Min	76.64	309	eP	P	08 59 43.4	+1.2
	comp=Z,4.4nm,0.9s						
MTPU	Mount Pierson	76.66	307	eP	P	08 59 43.8	+1.3
	comp=Z,12nm,0.9s						
MSU	Marysvale	76.67	308	eP	P	08 59 43.6	+1.3
214A	Organ Pipe Nat	77.08	301	P	P	08 59 45.9	+1.4
	baz=90,SNR=6.2						
KNB	Kanab	77.14	306	eP	P	08 59 45.8	+0.8
	comp=Z,25nm,1.8s						
DUG	Dugway, Tooele	77.21	310	eP	P	08 59 46.3	+1.0
	comp=Z,4.1nm,1.0s						
DUG	Dugway, Tooele	77.21	310	P	P	08 59 45.6	+0.3
	baz=92						
SZCU	Shurtz Canyon	77.36	307	eP	P	08 59 47.5	+1.3
	comp=Z,7.6nm,0.9s						
BGU	Big Grassy Mou	77.40	310	eP	P	08 59 47.1	+0.8
	comp=Z,6.0nm,1.0s						
CCUT	Cedar City	77.58	307	eP	P	08 59 49.2	+1.7
	comp=Z,9.9nm,0.9s						
W13A	Hualapai Mount	77.98	304	eP	P	08 59 51.5	+1.7
PSUT	Pine Spring	77.98	308	eP	P	08 59 51.4	+1.7
	comp=Z,5.4nm,0.9s						
PDMCI	Parker Dam,Lak	78.19	304	P	P	08 59 51.7	+1.0
	baz=90						
HLID	Hailey	78.51	313	eP	P	08 59 53.5	+1.0
	comp=Z,6.1nm,1.1s						
HLID	Hailey	78.51	313	P	P	08 59 53.3	+0.8
	baz=92,SNR=5.3						
Y12C	Blythe	78.52	303	eP	P	08 59 54.2	+1.7
	comp=Z,9.7nm,0.9s						
Y12C	Blythe	78.52	303	P	P	08 59 53.6	+1.1
	baz=89,SNR=5.3						
IRM	Iron Mountain	79.03	303	P	P	08 59 56.6	+1.3
	baz=89,SNR=5.3						
ELK	Elko	79.08	310	eP	P	08 59 56.7	+1.0
	comp=Z,5.0nm,1.1s						
BC3	Big Chuckawall	79.29	303	P	P	08 59 56.9	0.0
	baz=89						
R11A	Troy Canyon, C	79.34	308	P	P	08 59 57.3	+0.1
	baz=90						
GMRC	Granite Mounta	79.44	304	P	P	08 59 58.3	+0.6
	baz=89,SNR=5.2						
SWSC	Sam W. Stewart	79.60	302	P	P	08 59 59.5	+1.1
	baz=88						
TUQ	Turquoise Moun	79.65	305	P	P	08 59 59.6	+0.8
	baz=89,SNR=6.1						
YKA	Yellowknife Ar	79.71	332	P	P	08 59 57.4	-1.0
	comp=Z,1.6nm,0.8s,baz=96,slow=5.5,SNR=32						
YKB5	Yellowknife Ar	79.71	332	eP	P	08 59 57.3	-1.1
BELC	Belle Mtn. Jos	79.74	303	P	P	09 00 00.0	+0.7
	baz=89						
IKP	In-Ko-Pah, Jac	79.87	302	P	P	09 00 00.3	+0.3
	baz=88						
TPNV	Topopah Spring	79.88	306	eP	P	09 00 01.7	+1.6
	comp=Z,8.4nm,0.9s						
TPNV	Topopah Spring	79.88	306	P	P	09 00 01.4	+1.2
	baz=89						
HEC	Hector,Ludlow	80.00	304	P	P	09 00 01.9	+1.2
	baz=89						
MONP2	Monument Peak	80.12	302	P	P	09 00 02.4	+0.9
	baz=88						
PFO	Pinyon Flats O	80.13	303	P	P	09 00 02.6	+1.1
	baz=88						
GSC	Goldstone, Bar	80.37	305	eP	P	09 00 04.1	+1.5
	comp=Z,7.7nm,0.9s						
GSC	Goldstone, Bar	80.37	305	P	P	09 00 03.6	+1.0
	baz=88						
FURC	Furnace Creek,	80.39	306	P	P	09 00 04.3	+1.7
	baz=88						
NEW	Newport	80.48	318	P	P	09 00 03.0	+0.1
	baz=90						
MURC	Murrieta	80.75	303	P	P	09 00 05.4	+0.8
	baz=88						
GRAC	Grapevine Rang	80.78	306	P	P	09 00 05.8	+1.0
	baz=88						
MPMC	Manual Prospec	80.90	305	P	P	09 00 06.7	+1.1
	baz=88,SNR=7.1						
LRMC	Laurel Mtn Rad	81.08	305	P	P	09 00 07.3	+0.8
	baz=88,SNR=6.0						
BFSC	Mount Baldy Ra	81.11	304	P	P	09 00 07.5	+0.8
	baz=88						
KVN	Kaiserville	81.30	308	eP	P	09 00 08.1	+0.4
	comp=Z,3.7nm,0.8s						
EDW2	Edwards Air Fo	81.36	304	P	P	09 00 08.6	+0.6
	baz=88,SNR=6.4						
CWC	Cottonwood Cre	81.37	306	P	P	09 00 09.2	+1.1
	baz=88						
NV01	Mina Array Sit	81.47	308	eP	P	09 00 09.2	+0.5
NVAR	Mina Array Bea	81.47	308	P	P	09 00 09.3	+0.6
	comp=Z,1.2nm,0.7s,baz=100,slow=6.1,SNR=8.1						
RYN	Ryan	81.64	308	eP	P	09 00 10.5	+1.0
	comp=Z,4.1nm,0.9s						
ISA	Isabella, Lake	81.72	305	eP	P	09 00 11.6	+1.8
	comp=Z,7.7nm,1.0s						
ISA	Isabella, Lake	81.72	305	P	P	09 00 11.2	+1.3
	baz=88,SNR=5.8						
SBC	Santa Barbara	82.80	304	P	P	09 00 16.1	+0.7
	baz=87						
SMMC	Simmler	82.98	305	P	P	09 00 17.5	+1.1
	baz=87						
BEKR	Beckworth	83.01	309	eP	P	09 00 17.8	+1.2
	comp=Z,50nm,0.5s						
I05D	Terrebonne, OR	83.50	314	P	P	09 00 19.8	+0.9
	baz=87						
F05D	White Salmon	83.50	315	P	P	09 00 20.0	+1.2
	baz=87						
B05A	Bryant	83.80	318	P	P	09 00 19.7	-0.5
	baz=87						
J04D	Umpqua Nationa	84.12	313	P	P	09 00 23.2	+0.9
	baz=86						
K02D	Willamette Mer	85.30	312	P	P	09 00 28.7	+0.6
	baz=85						
L02E	Cave Junction	85.30	312	P	P	09 00 28.9	+0.9
	baz=85						
INK	Inuvik	87.27	338	P	P	09 00 35.6	-1.5
	comp=Z,2.9nm,1.1s,baz=8.1,slow=5.2,SNR=4.8						
BVAR	Borovoye Array	93.03	36	P	P	09 01 04.4	0.0
	comp=Z,0.4nm,0.7s,baz=320,slow=3.8,SNR=3.4						
BVAR				LR	LR	09 40 54.4	
	comp=Z,50nm,20.9s,baz=295,slow=34						
IL1	Eielson Array	93.43	337	eP	P	09 01 04.5	-1.5
ILAR	Eielson Array	93.43	337	P	P	09 01 05.8	-0.2
	comp=Z,0.8nm,0.7s,baz=66,slow=4.0,SNR=5.7						
KURBB	Kurchatov Arra	98.58	37	P	Pdif	09 01 30.4	+0.7
	comp=Z,0.3nm,0.7s,baz=304,slow=5.2,SNR=2.7						
KURK	Kurchatov	98.60	36	P	Pdif	09 01 30.4	+0.6
LZH	Lanzhou	121.67	40	ePKP	PKPdf	09 06 42.7	-2.8
LZH				pPKP	sPKPdf	09 06 51.4	+0.5
LZH				sPKP		09 06 57.0	
FITZ	Fitzroy Crossi	157.07	121	PKPab	PKPab	09 08 18.6	+0.8
	comp=Z,2.0nm,0.9s,baz=199,slow=5.3,SNR=3.5						
ASAR	Alice Springs	159.53	146	PKP	PKPdf	09 07 50.0	-0.5
	comp=Z,1.4nm,0.9s,baz=189,slow=1.0,SNR=11						
ASAR				PKPab	PKPab	09 08 28.0	-0.3
	comp=Z,1.1nm,0.8s,baz=210,slow=4.0,SNR=6.4						
WRA	Warramunga Arr	162.63	140	PKP	PKPdf	09 07 52.3	-1.5
	comp=Z,0.5nm,0.9s,baz=243,slow=1.6,SNR=3.9						

IDC ***10*** *08:50:54.7±4.5, 36°.21N×71°.00E, h171km±37km, mb3.2/8,*
mb1 3.2/13, mb1mx3.0/64, mbtmp3.7/13, Error ellipse:
s-maj=41.5km s-min=22.2km az=162.0

ISCJB ***10*** *08:50:58.3±1.0, 36°.62N±0°.08×70°.8E±0°.1, h188km,*
mb3.5/7, Error ellipse: s-maj=14.7km s-min=7.8km
az=43.5

NNC ***10*** *08:51:05.2±2.1, 36°.99N×70°.87E, h188km±30km, mb2.4,*
mpv3.3, Error ellipse: s-maj=22.1km s-min=19.0km
az=66.0

ISC 10 08:50:59.0±1.4**, 36°.6N**±0°.1×**70°.9E**±0°.1**, h188**km**, n25,**
σ1ˢ.**50**/30**, mb3.5**/7**, 4C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.98	30	⇓P	Pn	08 52 03.1	+2.8
	1.4nm,0.2s						

SFK				⇓S	Sn	08 52 46.9	-1.5
	14nm,0.2s						
AML	Almayashu	5.93	21	P	Pn	08 52 27.6	+2.0
	SNR=21						
MNAS	Manas	6.01	11	⇓P	Pn	08 52 28.5	+2.2
	1.1nm,0.4s						
MNAS				⇓S	Sn	08 53 33.3	-2.0
	15nm,0.7s						
UCH	Uchtor	6.28	25	P	Pn	08 52 31.9	+1.8
	SNR=14						
EKS2	Erkin-Say	6.45	19	P	Pn	08 52 34.5	+2.5
	SNR=5.8						
KK31	Karatay Array	6.51	357	⇑P	Pn	08 52 34.0	+1.4
	0.2nm,0.2s,baz=173,slow=12,SNR=8.2						
KK31				S	Sn	08 53 44.6	-2.0
	1.5nm,0.4s,baz=179,slow=21,SNR=10.0						
AAK	Ala-Archa	6.64	24	P	Pn	08 52 36.5	+2.0
	SNR=5.3						
AAK	Ala-Archa	6.64	24	⇓P	Pn	08 52 36.1	+1.6
	3.2nm,0.5s						
AAK				⇓S	Sn	08 53 49.0	-1.0
	6.4nm,0.6s						
AAK	Ala-Archa	6.64	24	P	Pn	08 52 34.5	0.0
	1.3nm,0.3s,baz=187,slow=6.1,SNR=20						
AAK				S	Sn	08 53 49.3	-0.8
	0.4nm,0.3s,baz=212,slow=11,SNR=3.7						
TKM2	Tokmak 2	7.28	28	P	Pn	08 52 44.9	+1.9
	SNR=7.8						
TKM2	Tokmak 2	7.28	28	⇓P	Pn	08 52 44.3	+1.4
	4.5nm,0.5s						
TKM2				⇑S	Sn	08 54 03.6	-1.6
	4.6nm,0.8s						
MKAR	Makanchi Array	13.26	36	P	Pn	08 53 59.3	-0.7
	0.2nm,0.3s,baz=217,slow=15,SNR=12						
AB31	Akbulak array	14.96	331	⇑P	Pn	08 54 22.1	+1.1
	0.4nm,0.5s,baz=148,slow=12,SNR=20						
KURBB	Kurchatov Arra	15.06	19	P	Pn	08 54 22.6	+0.4
	0.1nm,0.3s,baz=205,slow=11,SNR=6.7						
BVAR	Borovoye Array	16.43	359	P	P	08 54 39.2	+1.0
	0.2nm,0.3s,baz=146,slow=10,SNR=3.8						
AKTO	Aktyubinsk	16.66	330	⇑P	P	08 54 41.1	+0.4
	2.1nm,0.7s						
AKTO	Aktyubinsk	16.66	330	P	P	08 54 40.9	+0.2
	0.3nm,0.3s,baz=142,slow=8.6,SNR=7.6						
ZALV	Zalesovo Beam	19.86	25	P	P	08 55 14.8	-0.6
	1.3nm,0.4s,baz=220,slow=12,SNR=5.6						
ASF	Jabal al Asfar	28.32	271	P	P	08 56 34.1	-1.2
	1.8nm,0.5s,baz=34,slow=7.3,SNR=2.1						
SONM	Songino Array	28.34	55	P	P	08 56 34.6	-0.8
	0.5nm,0.8s,baz=270,slow=8.7,SNR=3.5						
FINES	FINESS Array B	37.36	326	P	P	08 57 53.6	+0.5
	0.8nm,0.6s,baz=120,slow=11,SNR=6.4						
ARCES	ARCESS Array B	41.02	338	P	P	08 58 24.0	+0.7
	2.0nm,1.0s,baz=101,slow=6.4,SNR=5.0						
NOA	NORSAR Array B	44.26	323	P	P	08 58 49.5	0.0
	1.0nm,0.8s,baz=97,slow=7.2,SNR=4.4						
TORD	Torodi Ar. Bea	65.64	269	P	P	09 01 20.4	-2.9
	0.5nm,0.6s,baz=57,slow=5.9,SNR=4.1						
YKA	Yellowknife Ar	81.15	3	P	P	09 02 52.4	-0.7
	0.1nm,0.5s,baz=68,slow=16,SNR=3.2						

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*IDC **10** 08:55:29.2±1.0, 1.°67N×122.°33E, h0^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.4/56, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=111.8km s-min=17.0km az=66.0*

*ISCJB **10** 08:55:32.4±0.7, 1.°57N±0.°06×122.°1E±0.°1, h33^{km}, mb3.6/6, Error ellipse: s-maj=16.8km s-min=8.1km az=178.8*

*DJA **10** 08:55:33.8±0.7, 1°N±5°×12°2E±°, h10^{km}, M4.1/7, mb4.3/1, mB4.8/1, MLv4.0/7, Mw(mB)4.1/1*

ISC 10 08:55:35.0±0.9**, 1.°50N**±0.°07×**122.°15E**±0.°07**, h35^{km}, n14, σ2.^{s}21**/17**, mb3.6**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	1.03	192	P	Pn	08 55 50.7	-2.3
MRSI				S	Sn	08 56 03.9	-2.4
KMSI	Cibinong	2.04	117	P	Pn	08 56 09.1	+2.2
APSI	Ampana	2.44	192	P	Pn	08 56 12.5	+0.1
APSI				S	Sn	08 56 45.8	+4.7
MPSI	Mapaga	2.53	243	P	Pn	08 56 14.6	+1.0
MPSI				S	Sn	08 56 47.8	+4.5
LUWI	Luwuk	2.59	166	P	Pn	08 56 14.8	+0.3
TTSI	Tana Toraja	5.08	207	P	Pn	08 56 49.1	+0.4
BNSI	Bone	6.20	199	P	Pn	08 57 04.5	+0.4
FITZ	Fitzroy Crossi	19.77	170	P	P	09 00 00.6	-1.6
	0.1nm,0.3s,baz=11,slow=10,SNR=3.3						
WRA	Warramunga Arr	24.43	151	P	P	09 00 51.0	+0.4
	0.7nm,0.6s,baz=339,slow=9.8,SNR=9.7						
ASAR	Alice Springs	27.50	156	P	P	09 01 19.0	+0.7
	0.3nm,0.5s,baz=328,slow=10,SNR=6.8						
SONM	Songino Array	48.14	346	P	P	09 04 11.4	-0.3
	0.9nm,0.7s,baz=161,slow=8.1,SNR=8.2						
MKAR	Makanchi Array	56.91	328	P	P	09 05 15.3	-1.3
	0.6nm,0.8s,baz=127,slow=8.4,SNR=6.2						
KURBB	Kurchatov Arra	61.26	330	P	P	09 05 45.5	-1.1
	0.7nm,0.6s,baz=119,slow=6.6,SNR=8.1						
BVAR	Borovoye Array	66.77	329	P	P	09 06 21.3	-1.5
	0.3nm,0.5s,baz=111,slow=7.9,SNR=2.6						

IDC 10 09:06:17.9±1.8**, 10.°78S**×**165.°56E, h0^{km}, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/33**, mbtmp3.6**/4**, ML3.6**/1**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.3**/18**, Error ellipse: s-maj=54.5km s-min=32.1km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.26	176	Pn	Pn	09 09 00.3	0.0
	0.4nm,0.3s,baz=40,slow=7.7,SNR=12						
WRA	Warramunga Arr	31.40	249	P	P	09 12 42.4	+1.4
	0.6nm,0.8s,baz=78,slow=8.7,SNR=4.8						
ASAR	Alice Springs	32.75	243	P	P	09 12 51.5	-1.3
	0.1nm,0.3s,baz=68,slow=10,SNR=7.4						
JHJ	Hachijo jima 2	50.09	332	LR	LR	09 33 59.6	
	comp=Z,142nm,19.3s,baz=82,slow=33						
ILAR	Eielson Array	83.32	19	P	P	09 18 46.4	0.0
	0.3nm,0.6s,baz=239,slow=5.8,SNR=5.5						

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*IDC **10** 09:09:12.0±0.7, 11.°96S×165.°42E, h0^{km}, mb4.3/19, mb1 4.5/21, mb1mx4.4/36, mbtmp4.3/21, ML4.6/2, Error ellipse: s-maj=20.3km s-min=15.5km az=116.0*

*ISCJB **10** 09:09:15.9±0.2, 11.°98S±0.°04×165.°25E±0.°05, h33^{km}, mb4.5/58, Error ellipse: s-maj=7.7km s-min=5.8km az=29.2*

*NEIC **10** 09:09:16.3±2.2, 11.°91S×165.°33E, h24^{km}±16^{km}, mb4.7/45, Error ellipse: s-maj=6.0km s-min=5.1km az=191.0*

ISC 10 09:09:17.8±0.5**, 11.°92S**±0.°07×**165.°31E**±0.°09**, h35^{km}, n96, σ0.^{s}83**/92**, mb4.5**/58**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.82	295	ePn	Pn	09 10 41.1	-0.7
HNR	Honiara	5.82	295	Pn	Pn	09 10 39.6	-2.2
	28nm,0.3s,baz=209,slow=6.7,SNR=6.2						
DZM	Mont Dzumac	10.15	174	ePn	Pn	09 11 39.9	-1.3
DZM	Mont Dzumac	10.15	174	Pn	Pn	09 11 39.5	-1.8
	2.5nm,0.3s,baz=337,slow=22,SNR=18						
ONTNC	Ouen Toro	10.39	174	ePn	Pn	09 11 43.4	-1.0
PINNC	Pines Island,	10.83	169	ePn	Pn	09 11 50.2	-0.2
EIDS	Eidsvold	18.97	223	eP	Pn	09 13 37.7	+0.5
	11nm,1.0s						
CTA	Charters Tower	20.02	244	P	P	09 13 48.5	+0.7
	6.9nm,0.8s,baz=60,slow=9.1,SNR=8.5						
CTAO	Charters Tower	20.02	244	eP	Pn	09 13 48.7	-1.1
	10nm,0.9s						
ARMA	Armidale	22.36	212	eP	P	09 14 14.3	+1.2
	12nm,0.9s						
URZ	Urewera	28.27	160	eP	P	09 15 08.4	+0.6
	12nm,1.1s						
BKZ	Black Stump Fm	28.90	162	eP	P	09 15 14.0	+0.5
	8.7nm,0.9s						
STKA	Stephens Creek	29.52	224	eP	P	09 15 20.0	+1.0
	1.2nm,0.9s						
STKA	Stephens Creek	29.52	224	P	P	09 15 18.9	-0.2
	3.5nm,0.8s,baz=49,slow=7.9,SNR=6.2						
H11S2	WAKE ISLAND Hy	30.25	3	T	T	09 46 39.6	
	baz=181,slow=76,SNR=98						
H11S3	WAKE ISLAND Hy	30.25	3	T	T	09 46 43.8	
	baz=181,slow=76,SNR=63						
H11S1	WAKE ISLAND Hy	30.27	3	T	T	09 46 44.1	
	baz=181,slow=76,SNR=74						
WB2	Warramunga Arr	30.78	251	eP	P	09 15 30.3	-0.1
WRAB	Tennant Creek	30.78	251	eP	P	09 15 28.5	-1.9
	5.8nm,0.8s						
WR1	Warramunga Arr	30.79	251	eP	P	09 15 29.7	-0.8
	4.8nm,0.8s						
WR1				ePcP	PcP	09 18 26.4	-1.0
WRA	Warramunga Arr	30.79	251	P	P	09 15 29.7	-0.8
	2.3nm,0.6s,baz=81,slow=9.1,SNR=22						
WRA				PcP	PcP	09 18 26.4	-1.1
	0.8nm,0.7s,baz=88,slow=3.2,SNR=4.5						
H11N1	WAKE ISLAND Hy	31.47	3	T	T	09 48 15.2	
	baz=182,slow=76,SNR=91						
H11N3	WAKE ISLAND Hy	31.48	3	T	T	09 48 07.3	
	baz=182,slow=76,SNR=56						
H11N2	WAKE ISLAND Hy	31.49	3	T	T	09 48 17.8	
	baz=182,slow=76,SNR=80						
AS31	Alice Springs	32.03	244	eP	P	09 15 40.5	-0.9
	1.0nm,0.8s						
ASAR	Alice Springs	32.03	244	P	P	09 15 40.0	-1.4
	3.5nm,0.7s,baz=74,slow=9.5,SNR=35						
ASAR				PcP	PcP	09 18 30.6	-0.1
	0.9nm,0.8s,baz=75,slow=3.9,SNR=5.0						
RPZ	Rata Peaks	32.07	172	eP	P	09 15 41.8	+0.4
	19nm,0.8s						
RPZ	Rata Peaks	32.07	172	P	P	09 15 41.0	-0.4
	12nm,0.7s,baz=154,slow=4.5,SNR=6.2						
FITZ	Fitzroy Crossi	38.75	256	eP	P	09 16 38.6	-0.6
	8.4nm,0.9s						
FORT	Forrest	39.20	236	eP	P	09 16 43.9	+1.1
	18nm,0.9s						
MORW	Morawa	48.84	242	eP	P	09 18 00.5	+0.3
	10nm,1.0s						
MJAR	Matsushiro Arr	54.55	333	P	P	09 18 42.3	-0.3
	2.1nm,1.0s,baz=173,slow=8.4,SNR=5.0						
MAJO	Matsushiro	54.55	333	eP	P	09 18 42.3	-0.3
ASAJ	Asahikawa	59.48	341	P	P	09 19 18.1	+0.8
	7.9nm,0.9s,baz=240,slow=11,SNR=4.2						
KSRS	Korea Array	60.36	326	P	P	09 19 25.3	+1.8
	0.7nm,0.7s,baz=166,slow=11,SNR=3.2						
KS15	Wonju Array Si	60.37	326	eP	P	09 19 24.1	+0.5
KSAR	Wonju Array Be	60.37	326	P	P	09 19 25.3	+1.7
USRK	Ussuriysk Ar.	63.54	334	P	P	09 19 45.0	+0.3
	1.3nm,0.7s,baz=115,slow=4.3,SNR=4.6						
KLR	Kul'dur	67.69	337	P	P	09 20 11.6	+0.1
	1.1nm,0.8s,baz=122,slow=6.4,SNR=3.5						
ENH	Enshi	68.12	310	eP	P	09 20 14.9	+0.3
	6.8nm,0.8s						
CMAR	Chiang Mai Arr	72.07	294	P	P	09 20 40.2	+1.2
	2.7nm,0.5s,baz=123,slow=4.7,SNR=13						
QSPA	South Pole Qui	78.09	180	eP	P	09 21 12.9	-0.2
	4.9nm,0.9s						
SVW2	Sparrevohn	79.07	18	eP	P	09 21 18.5	+0.3
	18nm,1.2s						
SONA0	Songino Array	79.12	324	eP	P	09 21 19.4	+0.4
SONM	Songino Array	79.12	324	P	P	09 21 19.4	+0.4
	1.5nm,0.8s,baz=137,slow=5.9,SNR=12						
PMR	Palmer	81.52	20	eP	P	09 21 32.2	+0.8
	4.4nm,0.9s						
KNK	Knik Glacier	81.62	21	eP	P	09 21 31.8	-0.2
	28nm,1.2s						
CAST	Castle Rocks	81.91	18	eP	P	09 21 32.8	-0.7
	9.2nm,0.8s						
RND	Reindeer	82.90	19	eP	P	09 21 38.2	-0.5
	9.5nm,1.2s						
RDOG	Red Dog Mine	82.96	12	eP	P	09 21 39.4	+0.6
	8.7nm,0.9s						
IM3	Indian Mountai	83.38	16	eP	P	09 21 41.2	+0.2
KMRM	Mail Ridge	83.56	47	eP	P	09 21 42.9	+0.3
	22nm,1.1s						
WRH	Wood River Hil	83.89	18	eP	P	09 21 44.5	+0.9
	7.4nm,1.0s						
MDM	Murphy Dome	84.19	18	eP	P	09 21 44.8	-0.5
	6.6nm,1.0s						
HDA	Harding Lake	84.20	19	eP	P	09 21 44.8	-0.4
	14nm,0.8s						
ILAR	Eielson Array	84.47	19	P	P	09 21 45.7	-0.9
	3.2nm,0.6s,baz=245,slow=5.1,SNR=57						
ILB	Eielson Array	84.47	19	eP	P	09 21 46.5	-0.1
	4.1nm,0.7s						
IL1	Eielson Array	84.47	19	eP	P	09 21 46.5	-0.1
YBH	Yreka Blue Hor	84.80	46	eP	P	09 21 49.0	+0.1
	5.3nm,1.1s						
SCRK	Sand Creek	84.88	20	eP	P	09 21 48.9	+0.1
	20nm,1.1s						
HUMO	Hull Mountain	84.95	45	eP	P	09 21 49.6	0.0
	4.1nm,1.0s						
AFDM	Forest Hills D	85.09	49	eP	P	09 21 50.2	-0.2
	3.5nm,0.8s						
CMB	Columbia Colle	85.23	50	eP	P	09 21 50.8	-0.3
	2.2nm,0.9s						
HYT	Haines Junctio	85.35	24	eP	P	09 21 51.6	+0.3
	4.7nm,1.1s						
EGAK	Eagle	86.34	20	eP	P	09 21 56.3	+0.4
	6.6nm,0.7s						
PAHR	Pah Rah Range	86.50	48	eP	P	09 21 57.5	0.0
	2.5nm,0.9s						
DAWY	Dawson	86.52	21	eP	P	09 21 57.1	+0.2
	0.5nm,0.6s						
PINE	Pine Mountain	86.74	44	eP	P	09 21 59.1	+0.5
	2.9nm,0.8s						
NV01	Mina Array Sit	86.91	50	eP	P	09 21 59.8	+0.2
NVAR	Mina Array Bea	86.91	50	P	P	09 21 59.1	-0.6
	2.3nm,0.9s,baz=234,slow=7.3,SNR=8.4						
D05A	Enumclaw	87.22	41	eP	P	09 22 01.5	+0.8
	8.8nm,1.0s						
KVN	Kaiserville	87.25	49	eP	P	09 22 01.6	+0.4
	2.1nm,1.0s						
I07A	Izee	87.82	44	eP	P	09 22 03.8	+0.1
	3.0nm,0.9s						
J08A	Circle Bar Ran	88.30	45	eP	P	09 22 05.8	-0.2
	3.8nm,0.9s						
F10A	Beach Ranch, E	89.94	43	eP	P	09 22 13.3	-0.3
	2.4nm,0.9s						
PSUT	Pine Spring	90.29	51	eP	P	09 22 15.6	0.0
	2.4nm,0.8s						
U15A	North Rim	90.97	53	eP	P	09 22 19.5	+0.6
	3.5nm,0.8s						
MSU	Marysvale	91.56	51	eP	P	09 22 22.3	+0.7
HVU	Hansel Valley	91.90	48	eP	P	09 22 23.1	+0.1
	6.0nm,1.1s						
MK01	Makanchi Array	93.85	317	eP	P	09 22 31.9	+0.2
MK31	Makanchi Array	93.87	317	eP	P	09 22 32.3	+0.6
	2.2nm,0.8s						
MK32	Makanchi Array	93.87	317	eP	P	09 22 32.0	+0.3
MKAR	Makanchi Array	93.87	317	eP	P	09 22 32.1	+0.3
	15nm,0.7s						
MKAR	Makanchi Array	93.87	317	P	P	09 22 32.0	+0.3
	2.5nm,0.7s,baz=101,slow=5.7,SNR=31						
ZALV	Zalesovo Beam	94.01	324	P	P	09 22 31.2	-1.0
	1.7nm,0.8s,baz=130,slow=4.6,SNR=5.8						
ZAA1	Zalesovo Array	94.01	324	eP	P	09 22 31.2	-1.0
PDAR	Pinedale Array	94.45	47	P	P	09 22 34.0	-0.8
	0.3nm,0.5s,baz=242,slow=3.2,SNR=5.0						
YKA	Yellowknife Ar	95.94	27	P	P	09 22 38.8	-2.0
	0.5nm,0.6s,baz=258,slow=4.6,SNR=14						
YKB5	Yellowknife Ar	95.94	27	eP	P	09 22 39.4	-1.4
LTX	Lajitas	96.62	62	eP	P	09 22 44.7	-0.1
TXAR	Lajitas Array	96.62	62	P	P	09 22 44.7	-0.1
	0.4nm,0.8s,baz=212,slow=3.2,SNR=3.4						
CLL	Collm	134.73	336	e(PKPdf)	PKiKP	09 28 37.0	+2.8
ES19	SONSECA Array	150.73	343	ePKPbc	PKiKP	09 29 07.7	+0.2
ESDC	Sonseca Array	150.77	343	PKPbc	PKPbc	09 29 06.6	-0.4
	0.7nm,0.6s,baz=3.9,slow=1.7,SNR=6.1						
TORD	Torodi Ar. Bea	163.96	276	PKPab	PKPab	09 30 11.1	-0.4
	0.6nm,0.7s,baz=111,slow=3.3,SNR=3.9						
TOA1	Torodi Ar. Sit	163.96	276	ePKPab	PKPab	09 30 11.1	-0.4

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*IDC **10** 09:10:15.7±0.6, 10.°84S×165.°81E, h0^{km}, mb4.4/12, mb1 4.6/14, mb1mx4.3/35, mbtmp4.4/14, ML5.0/2, MS4.5/5, Ms1 4.5/5, ms1mx3.9/30, Error ellipse: s-maj=18.6km s-min=17.2km az=125.0*

*ISCJB **10** 09:10:16.1±0.2, 10.°96S±0.°03×165.°85E±0.°04, h10^{km}, mb4.7/54, MS4.5/6, Error ellipse: s-maj=5.8km s-min=4.9km az=156.9*

*NEIC **10** 09:10:20.4±2.0, 10.°91S×165.°87E, h29^{km}±14^{km}, mb4.9/42, Error ellipse: s-maj=6.7km s-min=5.5km az=77.0*

*GCMT **10** 09:10:20.4±0.2, 11.°01S±0.°01×165.°78E±0.°01, h20^{km}±1^{km}, MW5.1/102, Moment Tensor Solution. s57,c78; s102,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.73±.17; $M_{\theta\theta}$2.98±.15; $M_{\phi\phi}$-2.25±.15; $M_{r\theta}$2.11±.31; $M_{\theta\phi}$-5.12±.16; $M_{\phi r}$1.18±.31; Best double couple: $M_0$6.26800×10^{16} NP1:ϕ_s258.00000°, δ82.00000°, λ-157.00000°. NP2:ϕ_s165.00000°, δ68.00000°, λ-8.00000°. Principal axes: T 6.3240, Plg10.0000°, Azm30.0000°; N -0.1140, Plg66.0000°, Azm276.0000°; P -6.2120, Plg21.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 09:10:18.0±0.4**, 10.°98S**±0.°05×**165.°89E**±0.°05**, h10^{km}, n95, σ1.^{s}40**/98**, mb4.8**/54**, MS4.5**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.05	284	eP	Pn	09 11 47.0	-0.5
HNR				eS	Sn	09 12 57.0	+0.1
HNR	Honiara	6.05	284	Pn	Pn	09 11 47.1	-0.5
	62nm,0.3s,baz=92,slow=3.0,SNR=9.8						
HNR				Sn	Sn	09 12 55.9	-1.0
	baz=188,slow=18,SNR=2.9						
HNR				LR	LR	09 14 03.9	
	comp=Z,7μm,20.8s,baz=72,slow=38						
HNR	Honiara	6.05	284	eSn	Pn	09 11 47.1	-0.5
MARNC	Mare, Loyalty	10.64	169	ePn	Pn	09 12 51.9	+1.3
DZM	Mont Dzumac	11.04	177	ePn	Pn	09 12 56.4	+0.2
	33nm,0.3s						
DZM				eLR	LR	09 15 31.3	
	comp=Z,3μm,29.9s						
DZM	Mont Dzumac	11.04	177	ePn	Pn	09 12 56.6	+0.4
DZM				eSn	Sn	09 14 55.5	-4.4
DZM	Mont Dzumac	11.04	177	Pn	Pn	09 12 56.9	+0.7
	7.4nm,0.3s,baz=170,slow=22,SNR=16						
DZM				LR	LR	09 17 02.9	
	comp=Z,1μm,18.2s,baz=17,slow=36						
ONTNC	Ouen Toro	11.28	177	ePn	Pn	09 13 00.2	+0.9
ONTNC				eSn	Sn	09 15 00.8	-4.8
PINNC	Pines Island,	11.67	173	ePn	Pn	09 13 06.2	+1.6
TARA	Tarawa	14.11	30	ePn	Pn	09 13 36.7	-1.4
RABL	Rabaul	15.18	295	ePn	Pn	09 13 53.5	+0.9
	43nm,0.6s						
EIDS	Eidsvold	20.04	222	eP	P	09 14 52.8	+1.4
	15nm,0.8s						
MANU	Manus Island	20.42	294	eP	P	09 14 56.5	+1.0
	64nm,1.1s						
CTA	Charters Tower	20.96	242	P	P	09 15 01.6	+0.2
	15nm,0.9s,baz=73,slow=13,SNR=9.3						
CTAO	Charters Tower	20.96	242	eP	P	09 15 01.4	+0.1
	21nm,0.9s						
LHI	Lord Howe Isla	21.40	196	eP	P	09 15 05.8	-0.1
	37nm,0.9s						
ARMA	Armidale	23.45	212	eP	P	09 15 28.5	+0.7
	14nm,0.9s						
RAO	Raoul Island	23.65	143	P	P	09 15 30.6	+1.0
	200nm,0.4s,baz=66,slow=20,SNR=2.8						
KNTN	Kanton	23.66	71	eP	P	09 15 28.9	-1.0
	51nm,1.0s						
OUZ	Omahuta	25.13	165	eP	P	09 15 45.8	+2.6
	23nm,1.1s						
HIZ	Hauiti	28.57	165	eP	P	09 16 16.5	+2.4
	28nm,1.2s						
URZ	Urewera	28.96	162	eP	P	09 16 18.5	+0.8
	12nm,0.8s						
URZ	Urewera	28.96	162	P	P	09 16 18.1	+0.4
	11nm,1.0s,baz=290,slow=3.7,SNR=6.2						
BKZ	Black Stump Fm	29.62	163	eP	P	09 16 23.1	-0.4
	32nm,1.2s						
STKA	Stephens Creek	30.59	223	eP	P	09 16 33.5	+1.3
	1.3nm,0.8s						
STKA	Stephens Creek	30.59	223	P	P	09 16 33.5	+1.3
	3.0nm,0.6s,baz=46,slow=9.9,SNR=8.5						
STKA				LR	LR	09 28 04.3	
	comp=Z,1μm,18.1s,baz=44,slow=35						
BFZ	Birch Farm	30.97	165	eP	P	09 16 35.2	-0.2
	26nm,0.7s						
SNZO	South Karori	31.19	167	eP	P	09 16 37.9	+0.5
	47nm,1.0s						
THZ	Tophouse	31.28	170	eP	P	09 16 39.5	+1.3
	26nm,0.9s						
WRAB	Tennant Creek	31.63	250	eP	P	09 16 41.5	0.0
	11nm,0.9s						
WB2	Warramunga Arr	31.63	250	eP	P	09 16 40.0	-1.5
	12nm,0.9s						
WR1	Warramunga Arr	31.64	250	eP	P	09 16 39.9	-1.8
	14nm,0.9s						
WR1				ePcP	PcP	09 19 33.2	-0.7
WRA	Warramunga Arr	31.64	250	P	P	09 16 39.9	-1.8
	7.3nm,0.8s,baz=81,slow=9.0,SNR=13						
WRA				PcP	PcP	09 19 33.2	-0.7
	0.5nm,0.7s,baz=81,slow=3.1,SNR=2.7						
WRA				LR	LR	09 28 32.3	
	comp=Z,418nm,18.2s,baz=70,slow=35						
KHZ	Kahutara	32.02	169	eP	P	09 16 44.6	0.0
	29nm,1.1s						
LTZ	Lake Taylor	32.17	171	eP	P	09 16 44.7	-1.3
	19nm,0.8s						
TOO	Toolangi	32.20	211	eP	P	09 16 47.5	+1.1
	17nm,1.1s						
OXZ	Oxford	32.67	172	eP	P	09 16 50.3	0.0
	20nm,0.8s						
RPZ	Rata Peaks	32.92	173	eP	P	09 16 52.5	-0.1
	24nm,0.8s						
RPZ	Rata Peaks	32.92	173	P	P	09 16 52.3	-0.3
	23nm,0.8s,baz=46,slow=4.4,SNR=8.0						
RPZ				LR	LR	09 29 24.9	
	comp=Z,701nm,18.1s,baz=348,slow=35						
AS31	Alice Springs	32.95	243	eP	P	09 16 50.4	-2.7
	1.1nm,0.6s						
ASAR	Alice Springs	32.95	243	P	P	09 16 50.7	-2.4
	2.5nm,0.7s,baz=65,slow=10,SNR=6.6						
ASAR				PcP	PcP	09 19 36.7	-0.7
	0.8nm,0.8s,baz=61,slow=2.6,SNR=3.6						
MQZ	McQueen’s Vall	33.13	171	eP	P	09 16 53.4	-0.9
	41nm,1.0s						
LBZ	Lake Benmore	33.49	174	eP	P	09 16 58.1	+0.6
	22nm,1.2s						
WKZ	Wanaka	33.84	176	eP	P	09 17 01.2	+0.7
	25nm,1.1s						
BBOO	Buckleboo	34.98	227	eP	P	09 17 09.7	-0.9
	10nm,0.9s						
FITZ	Fitzroy Crossi	39.53	255	eP	P	09 17 49.4	-0.1
	5.5nm,0.8s						
SOEI	Soe	40.94	268	eP	P	09 18 02.2	+0.9
	5.5nm,0.6s						
PPT2	Papeete2	43.57	104	eS	S	09 24 56.5	+4.2
	283nm,26.2s						
PPT2				eLQ	LQ	09 28 36.8	
	2μm,27.8s						
PPT2				eLR	LR	09 30 31.3	
	comp=Z,560nm,23.8s,baz=273						
MCQ	Macquarie Isla	43.76	186	eP	P	09 18 25.1	+1.6
	122nm,1.1s						
MORW	Morawa	49.78	241	eP	P	09 19 12.4	+1.3
	9.8nm,0.9s						
JOW	Kunigami	52.41	317	eP	P	09 19 31.3	+0.5
	19nm,1.0s						
TAOE	Nuku Hiva Isla	53.14	93	eS	S	09 27 07.4	-0.3
	121nm,27.2s						
TAOE				eLQ	LQ	09 32 38.0	
	552nm,24.5s						
TAOE				eLR	LR	09 34 52.7	
	comp=Z,189nm,24.3s						
RKT	Rikitea	57.48	110	eS	S	09 28 05.4	0.0
	265nm,32.5s						
NJ2	Nanjing	62.07	315	eP	P	09 20 38.2	-0.9
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
QIZ	Qiongzhong	62.77	298	P	P	09 20 44.6	+0.5
QIZ				S	S	09 29 13.6	+0.1
QIZ				pmax	pmax		
	comp=Z,190nm,4.7s						
QIZ				LR	LR		
	comp=N,370nm,12.8s						
QIZ				LR	LR		
	comp=E,410nm,20.6s						
QIZ				LR	LR		
	comp=Z,470nm,22.5s						
GYA	Guiyang	68.50	304	P	P	09 21 22.8	+1.7
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	Xi'an	70.18	312	P	P	09 21 36.5	+5.2
XAN				pP	sP	09 21 45.2	+10
XAN				sP	PcP	09 21 50.2	-3.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				LR	LR		
	comp=N,290nm,19.5s						
XAN				LR	LR		
	comp=E,170nm,19.5s						
XAN				LR	LR		
	comp=Z,280nm,20.6s						
SPIA	Saint Paul Isl	70.71	13	eP	P	09 21 34.1	+0.3
	comp=Z,60nm,1.0s						
HHC	Hu-ho-hao-te	71.87	320	eP	P	09 21 40.5	-1.0
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						

HHC				pmax	pmax		
	comp=Z,120nm,8.0s						
CD2	Chengdu	72.68	307	eP	P	09 21 48.3	+1.9
LZH	Lanzhou	74.82	312	eP	P	09 22 01.9	+2.8
LZH				pP	sP	09 22 06.1	+3.2
LZH				sP	pP	09 22 09.5	+7.6
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
QSPA	South Pole Qui	79.03	180	eP	P	09 22 21.3	-1.0
	comp=Z,11nm,1.0s						
GTA	Gaotai	79.11	314	eP	P	09 22 23.6	+0.4
GTA				pP	pP	09 22 28.5	+2.5
GTA				sP	sP	09 22 30.9	+3.9
GTA				S	S	09 32 21.4	-1.6
GTA	Gaotai	79.11	314	sS	sS	09 32 30.1	+2.7
GTA	Gaotai	79.11	314	SS	SS	09 37 31.0	+1.7
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,7.8s						
GTA				LR	LR		
	comp=N,280nm,20.6s						
GTA				LR	LR		
	comp=E,240nm,19.4s						
GTA				LR	LR		
	comp=Z,240nm,19.4s						
CAST	Castle Rocks	80.84	18	eP	P	09 22 30.6	-1.2
	comp=Z,8.2nm,1.2s						
HMT	Hamilton	81.33	23	eP	P	09 22 33.7	-0.8
	comp=Z,62nm,0.8s						
TRF	Thorofare Moun	81.41	18	eP	P	09 22 34.3	-0.7
	comp=Z,2.9nm,0.8s						
BPAW	Bear Paw Mtn.	81.67	18	eP	P	09 22 36.0	-0.2
	comp=Z,12nm,1.1s						
DHY	Denali Highway	82.07	20	eP	P	09 22 36.4	-2.1
	comp=Z,5.9nm,1.0s						
IM3	Indian Mountai	82.32	16	eP	P	09 22 38.6	-1.0
RIDG	Independ'e Rid	83.36	20	eP	P	09 22 45.0	-0.1
	comp=Z,8.3nm,1.1s						
IL1	Eielson Array	83.40	18	eP	P	09 22 44.5	-0.7
ILAR	Eielson Array	83.40	18	P	P	09 22 44.2	-0.9
	comp=Z,0.8nm,0.6s,baz=238,slow=5.0,SNR=5.9						
ILB	Eielson Array	83.40	18	eP	P	09 22 44.3	-0.9
SCRK	Sand Creek	83.81	20	eP	P	09 22 47.0	-0.5
	comp=Z,5.5nm,1.0s						
NVAR	Mina Array Bea	85.87	50	P	P	09 22 58.1	-0.4
	comp=Z,1.9nm,0.9s,baz=232,slow=7.3,SNR=6.1						
WMQ	Urumqi	89.15	315	eP	P	09 23 14.8	+0.8
WMQ				sP	sP	09 23 20.7	+2.8
WMQ				LR	LR		
	comp=N,320nm,32.3s						
WMQ				LR	LR		
	comp=E,290nm,25.3s						
WMQ				LR	LR		
	comp=Z,380nm,32.3s						
MSU	Marysvale	90.53	51	eP	P	09 23 20.1	-0.7
HVU	Hansel Valley	90.86	48	eP	P	09 23 21.9	-0.3
	comp=Z,2.4nm,1.0s						
PDAR	Pinedale Array	93.40	47	P	P	09 23 34.8	+0.8
	comp=Z,0.9nm,1.1s,baz=254,slow=3.4,SNR=3.1						
MK32	Makanchi Array	93.57	317	eP	P	09 23 33.2	-1.2
MKAR	Makanchi Array	93.57	317	P	P	09 23 33.2	-1.2
	comp=Z,0.6nm,0.8s,baz=96,slow=7.5,SNR=2.5						
ZALV	Zalesovo Beam	93.58	324	P	P	09 23 31.3	-3.0
	comp=Z,0.5nm,0.6s,baz=145,slow=5.3,SNR=2.2						
ZAA1	Zalesovo Array	93.59	324	eP	P	09 23 31.3	-3.0
YKA	Yellowknife Ar	94.85	27	P	P	09 23 37.5	-2.4
	comp=Z,0.2nm,0.6s,baz=258,slow=4.5,SNR=4.0						
YKB5	Yellowknife Ar	94.85	27	eP	P	09 23 38.8	-1.1
061Z	Ochoppi	115.51	67	ePKPdf	PKPdf	09 29 02.1	+1.1
ARA0	ARCESS Array S	116.31	346	ePKPdf	PKiKP	09 29 00.0	-1.3
ARCES	ARCESS Array B	116.31	346	PKP	PKiKP	09 29 00.0	-1.3
	comp=Z,4.4nm,1.0s,baz=74,slow=7.6,SNR=5.7						
FIA0	FINESS Array S	121.76	339	ePKPdf	PKPdf	09 29 11.3	-0.6
FINES	FINESS Array B	121.76	339	PKP	PKPdf	09 29 11.3	-0.6
	comp=Z,2.7nm,1.1s,baz=38,slow=5.6,SNR=3.0						
CUPR	Culebra, Puert	130.09	75	ePKPdf	PKPdf	09 29 26.8	-2.4
KARP	Karpathos	135.34	310	ePKPdf	PKPdf	09 29 38.5	-0.2
ES19	SONSECA Array	149.99	344	ePKPbc	PKPdf	09 30 08.1	+3.8
ES19				ePKPab	pPKPbc	09 30 14.1	+1.9

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*IDC **10** 09:14:47.0±1.0, 11°.90S×165°.32E, h0^{km}, mb4.0/10, mb1 4.2/12, mb1mx4.0/34, mbtmp4.1/12, ML4.2/2, Error ellipse: s-maj=28.6km s-min=19.6km az=141.0*

*NEIC **10** 09:14:48.6±0.6, 11°.87S×165°.33E, h10^{km}, mb4.1/9, Error ellipse: s-maj=12.2km s-min=10.7km az=115.0*

*ISCJB **10** 09:14:50.6±0.6, 11°.95S±0°.08×165°.23E±0°.07, h33^{km}, mb4.0/16, Error ellipse: s-maj=12.1km s-min=9.4km az=35.5*

ISC 10 09:14:52.5±0.7**, 11°.88S**±0°.09×**165°.33E**±0°.09**, h35^{km}, n27, σ1^s.14**/29**, mb4.0**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.82	294	ePn	Pn	09 16 16.7	+0.3
HNR				eSn	Sn	09 17 21.5	-0.5
HNR	Honiara	5.82	294	Pn	Pn	09 16 16.3	0.0
	10nm,0.3s,baz=140,slow=16,SNR=2.4						
HNR				Sn	Sn	09 17 21.5	-0.5
	7.9nm,0.3s,baz=188,slow=14,SNR=2.3						
DZM	Mont Dzumac	10.19	174	ePn	Pn	09 17 14.8	-1.6
DZM	Mont Dzumac	10.19	174	Pn	Pn	09 17 15.2	-1.2
	1.5nm,0.3s,baz=127,slow=20,SNR=11						
CTA	Charters Tower	20.05	244	P	P	09 19 21.7	-1.1
	3.9nm,0.8s,baz=74,slow=14,SNR=3.7						
CTAO	Charters Tower	20.05	244	eP	P	09 19 23.5	+0.7
	5.7nm,1.0s						
COEN	Coen	21.69	262	eP	P	09 19 42.9	+2.4
	4.5nm,1.0s						
ARMA	Armidale	22.39	212	eP	P	09 19 50.4	+2.3
	6.9nm,0.8s						
BKZ	Black Stump Fm	28.93	162	eP	P	09 20 49.8	+1.4
	9.3nm,1.2s						
STKA	Stephens Creek	29.55	224	eP	P	09 20 54.3	+0.3
	0.9nm,1.1s						
STKA	Stephens Creek	29.55	224	P	P	09 20 54.1	+0.1
	0.9nm,0.5s,baz=53,slow=9.2,SNR=3.9						
WB2	Warramunga Arr	30.80	251	eP	P	09 21 05.1	-0.1
WR1	Warramunga Arr	30.81	251	eP	P	09 21 04.4	-1.0
	1.9nm,0.6s						
WRA	Warramunga Arr	30.82	251	P	P	09 21 04.4	-1.0
	1.2nm,0.5s,baz=80,slow=9.1,SNR=9.6						
AS01	Alice Springs	32.01	244	eP	P	09 21 15.7	-0.2
AS31	Alice Springs	32.05	244	eP	P	09 21 15.7	-0.6
	1.3nm,1.1s						
ASAR	Alice Springs	32.05	244	P	P	09 21 14.6	-1.7
	1.8nm,0.8s,baz=71,slow=9.4,SNR=10.0						
FITZ	Fitzroy Crossi	38.77	256	eP	P	09 22 13.7	-0.3
	5.8nm,0.9s						
MORW	Morawa	48.86	242	eP	P	09 23 35.1	+0.1
	8.9nm,1.1s						
CMAR	Chiang Mai Arr	72.07	294	P	P	09 26 15.5	+1.8
	1.0nm,0.3s,baz=110,slow=5.2,SNR=4.5						
SONA0	Songino Array	79.10	324	eP	P	09 26 53.2	-0.3
SONM	Songino Array	79.10	324	P	P	09 26 53.2	-0.3
	0.7nm,0.8s,baz=114,slow=4.6,SNR=4.8						
ILAR	Eielson Array	84.44	19	P	P	09 27 20.7	-0.4
	0.9nm,0.6s,baz=242,slow=5.1,SNR=12						
NVAR	Mina Array Bea	86.88	50	P	P	09 27 34.6	+0.5
	0.3nm,0.5s,baz=225,slow=2.4,SNR=3.0						
MK32	Makanchi Array	93.85	317	eP	P	09 28 04.7	-1.7
MKAR	Makanchi Array	93.85	317	P	P	09 28 04.7	-1.7
	0.8nm,0.7s,baz=95,slow=6.4,SNR=7.2						
YKA	Yellowknife Ar	95.90	27	P	P	09 28 15.5	+0.3
	0.2nm,0.5s,baz=256,slow=4.7,SNR=5.1						

IDC 10 09:15:46.4±62.0**, 14°.95S×172°.00W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/32**, mbtmp3.9**/3**, Error ellipse: s-maj=1204.0km s-min=209.3km az=79.0, Samoa Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.43	240	P	P	09 24 06.9	-0.3
	1.1nm,0.4s,baz=77,slow=8.8,SNR=4.6						
WRA	Warramunga Arr	51.26	256	P	P	09 24 51.3	-1.1
	0.3nm,0.5s,baz=92,slow=6.7,SNR=2.7						
ASAR	Alice Springs	51.53	252	P	P	09 24 55.1	+0.6
	2.5nm,0.5s,baz=89,slow=7.8,SNR=53						

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*DDA **10** 09:19:06.9, 38°.67N×43°.16E, h7^{km}±2^{km}, ML2.9*

*ISK **10** 09:19:06.8, 38°.67N×43°.17E, h8^{km}, ML2.3/8*

*ISCJB **10** 09:19:07.7±0.5, 38°.67N±0°.03×43°.17E±0°.04, h10^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=4.9km az=155.2*

ISC 10 09:19:07.5±0.9**, 38°.68N**±0°.03×**43°.20E**±0°.03**, h16^{km}**±8^{km}**, n15, σ0^s.81**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.17	120	PG	Pb	09 19 11.9	-0.6
VANB				SG	Sg	09 19 16.1	+1.3
TVAN	Van	0.22	133	i P	Pb	09 19 12.7	-0.7
TVAN				i S	Sg	09 19 16.1	-0.1
ERCV	ERCIS-VAN	0.36	18	PG	Pg	09 19 14.3	-0.6
GEVA	Gevas	0.38	196	i P	Pg	09 19 15.3	-0.1
GEVA				IAML_P			
	comp=Z,9µm,0.2s						
ADCV	BITLIS_Adilcev	0.39	289	i P	Pb	09 19 16.0	-0.2
ADCV				i S	Sb	09 19 23.2	+1.2
ADCV				IAML_P			
	comp=Z,2µm,0.1s						
AKDM	Akdamar-Van	0.39	206	PG	Pg	09 19 14.7	-0.8
VMUR	Van-Muradiye	0.42	43	i P	Pb	09 19 16.0	-0.8
VMUR				i S	Sb	09 19 24.0	+0.9
CLDR	Caldiran	0.73	50	PG	Pb	09 19 21.5	-0.5
CLDR				SG	Sb	09 19 32.9	+1.1
CLDR	Caldiran	0.73	50	i P	Pb	09 19 21.4	-0.5
CLDR				i S	Sn	09 19 33.5	-0.9
TUTA	Tutak	0.78	338	i P	Pb	09 19 22.9	0.0
AGRB	Hanur-Agry	0.91	350	PG	Pb	09 19 24.5	-0.5
GURO	Guroymak-BITLI	0.92	262	PG	Pg	09 19 24.6	-0.8
EATA	Eleskirt	1.30	335	i P	Pg	09 19 32.2	-0.4
EATA				IAML_P			
	comp=Z,442nm,0.2s						
CUKT	Cukurca	1.47	167	PN	Pn	09 19 34.2	+0.7
BNGB	Bingl	1.99	280	PN	Pb	09 19 42.5	-0.9

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*ISCJB **10** 09:21:41.8±0.2, 10°.91S±0°.04×165°.77E±0°.05, h10^{km}, mb4.5/47, MS4.8/2, Error ellipse: s-maj=7.2km s-min=5.1km az=176.4*

*IDC **10** 09:21:41.2±0.6, 10°.90S×165°.84E, h0^{km}, mb4.1/15, mb1 4.3/17, mb1mx4.2/34, mbtmp4.2/17, ML4.7/2, Error ellipse: s-maj=19.7km s-min=16.1km az=107.0*

*NEIC **10** 09:21:43.6±0.2, 10°.84S×165°.80E, h10^{km}, mb4.8/34, Error ellipse: s-maj=5.8km s-min=4.0km az=95.0*

ISC 10 09:21:43.4±0.5**, 10°.85S**±0°.07×**165°.88E**±0°.07**, h10^{km}, n91, σ1^s.23**/89**, mb4.6**/48**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.01	283	eP	Pn	09 23 14.0	+1.6
HNR				eS	Sn	09 24 25.0	+3.7
HNR	Honiara	6.01	283	ePn	Pn	09 23 13.6	+1.2
HNR				eSn	Sn	09 24 25.4	+4.1
HNR	Honiara	6.01	283	Pn	Pn	09 23 10.9	-1.5
	46nm,0.3s,baz=158,slow=3.5,SNR=19						
HNR				Sn	Sn	09 24 21.7	+0.4
	baz=17,slow=19,SNR=2.3						
MARNC	Mare, Loyalty	10.77	169	ePn	Pn	09 24 19.5	+1.8
DZM	Mont Dzumac	11.17	177	ePn	Pn	09 24 23.7	+0.4
DZM	Mont Dzumac	11.17	177	Pn	Pn	09 24 22.9	-0.4
	1.8nm,0.3s,baz=134,slow=24,SNR=13						
ONTNC	Ouen Toro	11.40	177	ePn	Pn	09 24 26.8	+0.4
PINNC	Pines Island,	11.79	173	ePn	Pn	09 24 32.6	+0.9
TARA	Tarawa	14.01	30	ePn	Pn	09 25 04.2	+2.1
RABL	Rabaul	15.11	295	ePn	P	09 25 21.8	-0.7
	25nm,0.6s						
EIDS	Eidsvold	20.12	222	eP	Pn	09 26 18.7	-0.8
	6.2nm,0.8s						
MANU	Manus Island	20.35	294	eP	Pn	09 26 20.8	-1.5
	73nm,1.0s						
CTA	Charters Tower	21.00	242	P	P	09 26 27.4	+0.2
	5.3nm,0.7s,baz=62,slow=12,SNR=9.1						
CTAO	Charters Tower	21.00	242	eP	P	09 26 27.8	+0.5
	22nm,1.0s						
COEN	Coen	22.38	260	eP	P	09 26 41.0	-1.1
	16nm,1.0s						
URZ	Urewera	29.09	162	eP	P	09 27 45.0	+0.8
	21nm,1.2s						
URZ	Urewera	29.09	162	P	P	09 27 43.2	-0.9
	5.9nm,1.0s,baz=283,slow=3.6,SNR=7.4						
H11S2	WAKE ISLAND Hy	29.17	2	T	T	09 58 08.7	
	baz=181,slow=76,SNR=97						
H11S3	WAKE ISLAND Hy	29.17	2	T	T	09 58 09.0	
	baz=181,slow=76,SNR=60						
H11S1	WAKE ISLAND Hy	29.19	2	T	T	09 58 09.1	
	baz=181,slow=76,SNR=49						
BKZ	Black Stump Fm	29.74	163	eP	P	09 27 50.0	-0.1
	14nm,0.6s						
H11N1	WAKE ISLAND Hy	30.39	2	T	T	09 59 40.3	
	baz=182,slow=76,SNR=60						
H11N3	WAKE ISLAND Hy	30.40	2	T	T	09 59 37.1	
	baz=182,slow=76,SNR=7.6						
H11N2	WAKE ISLAND Hy	30.41	2	T	T	09 59 38.0	
	baz=182,slow=76,SNR=6.1						
STKA	Stephens Creek	30.67	223	eP	P	09 27 58.3	0.0
	1.1nm,0.9s						
STKA	Stephens Creek	30.67	223	P	P	09 27 57.4	-0.9
	3.4nm,1.0s,baz=50,slow=7.9,SNR=2.5						
BFZ	Birch Farm	31.09	165	eP	P	09 28 01.4	-0.5
	10nm,0.5s						
SNZO	South Karori	31.32	167	eP	P	09 28 04.6	+0.8
	28nm,0.9s						
THZ	Tophouse	31.40	170	eP	P	09 28 05.7	+1.0
	15nm,0.8s						
WB2	Warramunga Arr	31.66	250	eP	P	09 28 06.5	-0.7
WR1	Warramunga Arr	31.67	250	eP	P	09 28 05.6	-1.7
	6.9nm,0.9s						
WR1				ePcP	PcP	09 30 58.6	-0.7
WRA	Warramunga Arr	31.67	250	P	P	09 28 05.6	-1.7
	3.9nm,0.8s,baz=81,slow=9.2,SNR=21						
WRA				PcP	PcP	09 30 58.6	-0.7
	0.5nm,0.7s,baz=94,slow=3.3,SNR=3.3						
KHZ	Kahutara	32.15	169	eP	P	09 28 10.5	-0.6
	17nm,1.2s						
LTZ	Lake Taylor	32.29	171	eP	P	09 28 12.9	+0.4
	22nm,1.2s						
FOZ	Fox Glacier	32.74	175	eP	P	09 28 18.1	+1.9
	31nm,1.0s						
OXZ	Oxford	32.79	172	eP	P	09 28 18.0	+1.2
	13nm,0.7s						
AS31	Alice Springs	32.99	243	eP	P	09 28 17.4	-1.5
	0.7nm,0.8s						
ASAR	Alice Springs	32.99	243	P	P	09 28 17.1	-1.7
	1.0nm,0.6s,baz=68,slow=9.8,SNR=11						
ASAR				PcP	PcP	09 31 02.2	-0.7
	0.5nm,0.7s,baz=84,slow=2.4,SNR=4.7						
RPZ	Rata Peaks	33.05	173	eP	P	09 28 19.0	-0.1
	15nm,0.9s						
RPZ	Rata Peaks	33.05	173	P	P	09 28 17.2	-1.9
	6.1nm,0.8s,baz=0.0,slow=4.0,SNR=4.0						
MQZ	McQueen's Vall	33.25	171	eP	P	09 28 21.8	+0.9
	28nm,1.0s						
WKZ	Wanaka	33.96	176	eP	P	09 28 27.2	+0.2
	14nm,1.0s						
FITZ	Fitzroy Crossi	39.55	255	eP	P	09 29 14.5	-0.5
	4.4nm,0.8s						
MORW	Morawa	49.83	241	eP	P	09 30 37.4	+0.5
	9.9nm,1.0s						
MJAR	Matsushiro Arr	53.86	332	P	P	09 31 05.4	-1.4
	1.5nm,0.9s,baz=171,slow=9.5,SNR=3.5						
MAJO	Matsushiro	53.86	332	eP	P	09 31 05.4	-1.4
KSRS	Korea Array	59.79	326	P	P	09 31 49.2	+0.4
	0.6nm,0.6s,baz=155,slow=7.7,SNR=3.9						
KS15	Wonju Array Si	59.81	325	eP	P	09 31 49.9	+0.9
KSAR	Wonju Array Be	59.81	325	P	P	09 31 49.2	+0.3
NJ2	Nanjing	61.98	315	eP	P	09 32 04.6	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	62.84	333	P	P	09 32 08.9	-0.5
	comp=Z,0.9nm,0.5s,baz=175,slow=29,SNR=4.7						
XAN	Xi'an	70.09	312	P	P	09 33 00.9	+4.8
XAN				pP	PcP	09 33 11.2	-7.0
XAN				sP	sP	09 33 16.3	+16
XAN				pmax	pmax		
	comp=Z,3.0nm,1.6s						
KMI	Kunming	71.13	301	P	P	09 33 03.2	+0.3
KMI				pP	sP	09 33 13.6	+6.7
KMI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
HHC	Hu-ho-hao-te	71.77	320	eP	P	09 33 04.5	-1.8
HHC				S	S	09 42 22.0	-4.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,210nm,5.4s						
HHC				LR	LR		
	comp=N,280nm,16.4s						
HHC				LR	LR		
	comp=E,260nm,15.6s						
HHC				LR	LR		
	comp=Z,450nm,15.6s						
GAMB	Gambell	76.36	10	eP	P	09 33 33.3	+0.9
	comp=Z,5.8nm,1.1s						
SONA0	Songino Array	78.59	324	eP	P	09 33 45.4	-0.1
SONM	Songino Array	78.59	324	P	P	09 33 45.4	-0.1
	comp=Z,0.6nm,0.7s,baz=138,slow=4.8,SNR=5.0						
BILL	Bilibino	78.69	0	eP	P	09 33 45.3	-0.1
	comp=Z,5.7nm,1.0s						
GTA	Gaotai	79.02	314	eP	P	09 33 48.7	+0.7
GTA				pP	sP	09 33 53.0	+0.9
GTA				sP	PcP	09 33 56.0	-0.5
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BPAW	Bear Paw Mtn.	81.56	18	eP	P	09 34 01.5	+0.5
	comp=Z,12nm,1.0s						
RND	Reindeer	81.72	19	eP	P	09 34 02.3	+0.4
	comp=Z,4.9nm,1.1s						
RDOG	Red Dog Mine	81.81	11	eP	P	09 34 03.1	+0.9
	comp=Z,3.6nm,0.8s						
IM3	Indian Mountai	82.21	16	eP	P	09 34 04.7	+0.4
MDM	Murphy Dome	83.01	18	eP	P	09 34 09.1	+0.5
	comp=Z,5.7nm,1.2s						
HDA	Harding Lake	83.02	19	eP	P	09 34 09.3	+0.6
	comp=Z,12nm,1.0s						
RIDG	Independ'e Rid	83.25	20	eP	P	09 34 09.8	-0.1
	comp=Z,3.4nm,0.8s						
IL1	Eielson Array	83.29	18	eP	P	09 34 10.0	0.0
ILAR	Eielson Array	83.29	18	P	P	09 34 10.1	+0.1
	comp=Z,1.6nm,0.7s,baz=236,slow=5.0,SNR=33						
ILB	Eielson Array	83.29	18	eP	P	09 34 10.1	+0.1
SCRK	Sand Creek	83.69	20	eP	P	09 34 12.9	+0.6
	comp=Z,5.7nm,1.2s						
AFDM	Forest Hills D	83.98	49	eP	P	09 34 15.1	+0.9
	comp=Z,3.3nm,0.9s						
BESE	Bessie Mountai	84.05	27	eP	P	09 34 14.5	+0.4
	comp=Z,23nm,1.1s						
HYT	Haines Junctio	84.16	24	eP	P	09 34 16.6	+1.9
	comp=Z,4.0nm,1.1s						
PINE	Pine Mountain	85.60	44	eP	P	09 34 24.2	+1.8
	comp=Z,4.5nm,1.1s						
NVAR	Mina Array Bea	85.80	50	P	P	09 34 23.0	-0.7
	comp=Z,1.2nm,0.8s,baz=232,slow=8.7,SNR=5.2						
WMQ	Urumqi	89.05	315	eP	P	09 34 40.4	+1.4
WMQ				sP	sP	09 34 46.5	+3.4
WMQ				LR	LR		
	comp=N,320nm,23.1s						
WMQ				LR	LR		
	comp=E,370nm,23.1s						
WMQ				LR	LR		
	comp=Z,280nm,23.1s						
MSU	Marysvale	90.46	51	eP	P	09 34 46.8	+0.9
PD31	Pinedale Array	93.33	47	eP	P	09 34 59.0	-0.2
PDAR	Pinedale Array	93.33	47	P	P	09 35 00.1	+1.0
	comp=Z,0.6nm,0.9s,baz=251,slow=2.8,SNR=4.1						
MK01	Makanchi Array	93.46	317	eP	P	09 34 58.8	-0.5
MK31	Makanchi Array	93.47	317	eP	P	09 34 58.7	-0.7
MK32	Makanchi Array	93.47	317	eP	P	09 34 59.0	-0.4
MKAR	Makanchi Array	93.47	317	eP	P	09 34 59.1	-0.3
	comp=Z,6.0nm,0.8s						
MKAR	Makanchi Array	93.47	317	P	P	09 34 59.0	-0.3
	comp=Z,0.8nm,0.7s,baz=94,slow=6.4,SNR=10.0						
YKA	Yellowknife Ar	94.75	27	P	P	09 35 03.2	-1.6
	comp=Z,0.4nm,0.7s,baz=256,slow=4.5,SNR=5.7						
YKB5	Yellowknife Ar	94.75	27	eP	P	09 35 03.3	-1.5
ARA0	ARCESS Array S	116.18	346	ePKPdf	PKiKP	09 40 25.3	-1.1
ARCES	ARCESS Array B	116.18	346	PKP	PKiKP	09 40 25.3	-1.1
	comp=Z,1.6nm,0.7s,baz=349,slow=2.8,SNR=6.3						
PB11	IPOC Station P	117.43	119	ePKPdf	PKPdf	09 40 30.2	-0.3
ES19	SONSECA Array	149.87	344	ePKPbc	PKPbc	09 41 34.3	0.0
ESDC	Sonseca Array	149.91	344	PKPbc	PKPbc	09 41 34.7	+0.3
	comp=Z,0.5nm,0.6s,baz=5.3,slow=4.7,SNR=4.0						

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*IDC **10** 09:28:58.1±0.8, 11°.59S×165°.25E, h0^{km}, mb4.1/15, mb1 4.3/16, mb1mx4.1/46, mbtmp4.1/16, ML3.6/1, Error ellipse: s-maj=28.5km s-min=17.6km az=128.0*

*NEIC **10** 09:29:00.3±0.3, 11°.51S×165°.12E, h10^{km}, mb4.4/12, Error ellipse: s-maj=9.8km s-min=7.8km az=122.0*

*ISCJB **10** 09:29:02.3±0.3, 11°.58S±0°.07×165°.03E±0°.07, h34^{km}, mb4.2/27, Error ellipse: s-maj=10.8km s-min=8.9km az=35.5*

ISC 10 09:29:03.7±0.5**, 11°.54S**±0°.08×**165°.1E**±0°.1**, h34^{km}, n44, σ1^s.27**/39**, mb4.2**/27**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.55	173	ePn	Pn	09 31 31.0	-1.6
DZM	Mont Dzumac	10.55	173	Pn	Pn	09 31 31.6	-1.0
	0.5nm,0.3s,baz=111,slow=19,SNR=10.0						
CTA	Charters Tower	20.04	243	P	P	09 33 33.6	-0.3
	5.2nm,1.0s,baz=81,slow=12,SNR=4.0						
CTAO	Charters Tower	20.04	243	eP	P	09 33 32.7	-1.2
	7.1nm,1.0s						
LHI	Lord Howe Isla	20.66	195	eP	P	09 33 39.7	-0.8
	81nm,1.0s						
OUZ	Omahuta	24.80	163	eP	P	09 34 25.1	+2.5
	3.3nm,1.1s						
NIUE	Niue	25.18	110	eP	P	09 34 27.9	+1.7
	147nm,1.1s						
BKZ	Black Stump Fm	29.31	162	eP	P	09 35 04.5	+1.3
	3.7nm,0.9s						
STKA	Stephens Creek	29.67	223	eP	P	09 35 07.5	+1.1
STKA	Stephens Creek	29.67	223	P	P	09 35 06.7	+0.3
	2.0nm,0.8s,baz=0.0,slow=11,SNR=3.3						
H11S2	WAKE ISLAND Hy	29.88	3	T	T	10 06 25.9	
	baz=180						
H11S3	WAKE ISLAND Hy	29.88	3	T	T	10 06 26.3	
	baz=180						
H11S1	WAKE ISLAND Hy	29.90	3	T	T	10 06 25.7	
	baz=180						
WRAB	Tennant Creek	30.74	250	eP	P	09 35 17.2	+1.2
	6.9nm,1.1s						
WB2	Warramunga Arr	30.74	250	eP	P	09 35 16.3	+0.3
	5.1nm,1.0s						
WR1	Warramunga Arr	30.75	250	eP	P	09 35 15.3	-0.8
	6.2nm,0.9s						
WRA	Warramunga Arr	30.75	250	P	P	09 35 15.3	-0.8
	4.7nm,0.9s,baz=81,slow=9.3,SNR=20						
H11N1	WAKE ISLAND Hy	31.11	3	T	T	10 07 58.5	
	baz=185						
H11N3	WAKE ISLAND Hy	31.11	3	T	T	10 07 59.1	
	baz=185						
H11N2	WAKE ISLAND Hy	31.12	3	T	T	10 08 10.3	
	baz=185						
ASAR	Alice Springs	32.03	244	P	P	09 35 26.8	-0.6
	1.5nm,0.9s,baz=75,slow=8.1,SNR=10						
ASAR				PcP	PcP	09 38 17.1	+0.3
	0.4nm,0.7s,baz=77,slow=4.0,SNR=4.2						
JNU	Nakatsue	55.13	325	P	P	09 38 32.9	0.0
	5.9nm,0.8s,baz=140,slow=6.2,SNR=3.3						
ASAJ	Asahikawa	59.06	341	P	P	09 39 00.1	-0.3
	5.1nm,0.8s,baz=236,slow=3.6,SNR=4.5						
USRK	Ussuriysk Ar.	63.12	334	P	P	09 39 29.1	+1.2
	1.1nm,0.8s,baz=138,slow=7.3,SNR=6.4						
USA0B	Ussuriysk Arra	63.12	334	eP	P	09 39 29.6	+1.7
	5.5nm,1.1s						
KLR	Kul'dur	67.27	337	P	P	09 39 56.7	+1.9
	0.7nm,0.7s,baz=148,slow=12,SNR=3.8						
QSPA	South Pole Qui	78.47	180	eP	P	09 41 01.5	+0.3
	2.9nm,1.0s						
SONA0	Songino Array	78.71	324	eP	P	09 41 02.7	0.0
SONM	Songino Array	78.71	324	P	P	09 41 02.7	0.0
	0.4nm,0.6s,baz=116,slow=6.8,SNR=3.5						
ILAR	Eielson Array	84.17	19	P	P	09 41 30.4	-0.6
	0.8nm,0.5s,baz=237,slow=5.0,SNR=24						
ILB	Eielson Array	84.17	19	eP	P	09 41 31.2	+0.1
BEKR	Beckworth	85.72	48	eP	P	09 41 39.5	-0.2
	3.7nm,0.6s						
NV01	Mina Array Sit	86.80	50	eP	P	09 41 45.1	0.0
NVAR	Mina Array Bea	86.80	50	P	P	09 41 44.8	-0.3
	2.2nm,1.0s,baz=234,slow=7.8,SNR=6.6						
NV11	Mina Array Sit	86.91	50	eP	P	09 41 45.6	+0.1
	0.2nm,1.0s						
WVOR	Wild Horse Val	87.76	46	eP	P	09 41 45.4	-4.1
	22nm,0.6s						
U15A	North Rim	90.88	53	eP	P	09 42 05.9	+1.3
	2.4nm,0.8s						
MTPU	Mount Pierson	91.34	52	eP	P	09 42 08.0	+1.3
	2.7nm,1.1s						
MK32	Makanchi Array	93.47	317	eP	P	09 42 16.5	+0.6

MKAR	Makanchi Array	93.47	317	P	P	09 42 16.5	+0.6
	0.4nm,0.7s,baz=100,slow=6.7,SNR=5.7						
PDAR	Pinedale Array	94.33	47	P	P	09 42 19.9	-0.3
	0.5nm,0.9s,baz=204,slow=2.0,SNR=3.0						
YKA	Yellowknife Ar	95.69	27	P	P	09 42 23.7	-1.9
	0.1nm,0.7s,baz=249,slow=5.0,SNR=4.6						
LTX	Lajitas	96.59	61	*e*P	P	09 42 29.5	-1.2
TXAR	Lajitas Array	96.59	61	P	P	09 42 29.5	-1.2
	0.4nm,0.8s,baz=198,slow=7.9,SNR=4.1						

IDC 10 09:31:33.2±1.8, 11°.54S×165°.08E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/46, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=52.5km s-min=32.8km az=123.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.56	173	Pn	Pn	09 34 06.8	+0.7
	0.3nm,0.3s,baz=342,slow=20,SNR=1.6						
WRA	Warramunga Arr	30.70	250	P	P	09 37 50.5	+0.4
	2.1nm,1.0s,baz=81,slow=9.3,SNR=5.7						
ASAR	Alice Springs	31.99	244	P	P	09 38 00.4	-1.1
	0.4nm,0.9s,baz=84,slow=8.5,SNR=3.1						
ILAR	Eielson Array	84.18	19	P	P	09 44 05.6	-0.5
	0.3nm,0.7s,baz=234,slow=5.7,SNR=4.5						
MKAR	Makanchi Array	93.43	317	P	P	09 44 51.7	+1.0
	0.2nm,0.7s,baz=103,slow=6.2,SNR=2.6						

MEX 10 09:33:10.3±0.8, 16°.37N×98°.02W, h2km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.11	284	*e*P	Pg	09 33 11.9	-0.5
PNIG				*i* S	Sg	09 33 14.6	+0.7
VHO	Vista Hermosa	1.42	60	*e*P	Pn	09 33 34.0	-3.3
VHO				*e*S	Sg	09 33 51.8	-4.1
MEIG	Mezcala	2.18	316	*e*P	Pn	09 33 44.0	-3.7
MEIG				*e*S	Sn	09 34 11.1	-4.2
PLIG	Platanillo	2.46	325	*e*P	Pn	09 33 48.7	-2.9
PLIG				*e*S	Sn	09 34 18.0	-4.4

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*ISCJB **10** 09:37:07.1±0.9, 18°.50S±0°.02×174°.75W±0°.02, h90km±8km, mb5.3/272, Error ellipse: s-maj=4.5km s-min=3.0km az=145.0*

*MOS **10** 09:37:10.3±1.1, 18°.52S×174°.79W, h114km, mb5.3/40, Error ellipse: s-maj=8.1km s-min=7.3km az=82.5*

*IDC **10** 09:37:11.7±0.4, 18°.59S×174°.63W, h123km±2km, mb4.6/29, mb1 4.7/30, mb1mx4.7/35, mbtmp5.0/30, MS4.3/19, Ms1 4.3/19, ms1mx4.2/33, Error ellipse: s-maj=10.7km s-min=8.5km az=125.0*

*NEIC **10** 09:37:11.8±0.1, 18°.61S×174°.71W, h122km, mb5.3/228, MW5.6, Error ellipse: s-maj=4.3km s-min=2.6km az=139.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.90; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$2.46; $M_{r\theta}$1.14; $M_{\theta\phi}$0.55; $M_{\phi r}$-2.22; Best double couple: $M_0$3.40000×10^{17} NP1: ϕ_s343.00000°, δ71.00000°, λ-114.00000°. NP2: ϕ_s217.00000°, δ30.00000°, λ-40.00000°. Principal axes: T 3.3900, Plg23.0000°, Azm91.0000°; N 0.0000, Plg23.0000°, Azm351.0000°; P -3.4000, Plg57.0000°, Azm221.0000°;*

NEIC Felt [IV] at Neiafu.

*BJI **10** 09:37:12.5, 18°.22S×174°.37W, h137km, mB5.6/35, mb5.0/48*

*GCMT **10** 09:37:15.9±0.1, 18°.65S±0°.01×174°.24W±0°.01, h138km, MW5.6/138, Moment Tensor Solution. s126,c233; s138,c304; Duration: 1s.6 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.55±.03; $M_{\theta\theta}$-0.46±.04; $M_{\phi\phi}$2.01±.04; $M_{r\theta}$1.07±.03; $M_{\theta\phi}$1.53±.04; $M_{\phi r}$-2.15±.03; Best double couple: $M_0$3.37700×10^{17} NP1: ϕ_s351.00000°, δ73.00000°, λ-126.00000°. NP2: ϕ_s238.00000°, δ39.00000°, λ-28.00000°. Principal axes: T 3.2840, Plg20.0000°, Azm107.0000°; N 0.1920, Plg34.0000°, Azm3.0000°; P -3.4710, Plg49.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*WEL **10** 09:37:24.7±1.1, 20°S±17°×17°4W±4°5, h181km±9km*

ISC 10 09:37:12.0±0.2, 18°.74S±0°.04×174°.58W±0°.04, h129km±2km, h129km:pP-P, n1044, σ1s.50/1191, mb5.2/273, 66C-45D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.42	95	P	Pn	09 38 13.6	-3.7
	baz=4.3,SNR=221						
NIUE				S	Sn	09 39 00.2	-7.9
	baz=4.3						
NIUE	Niue	4.42	95	*e*Pn	Pn	09 38 13.6	-3.7
NIUE				*e*Sn	Sn	09 38 59.8	-8.3
MSVF	Nonsavu	7.07	277	*e*Pn	Pn	09 38 58.6	+5.6
MSVF	Nonsavu	7.07	277*c*	*i*P	Pn	09 38 59.0	+6.0
RIZ	Raoul Island	10.90	196	P	Pn	09 39 44.1	-0.2
RIZ				S	Sn	09 41 43.0	-1.4
RAO	Raoul Island	10.90	196	*e*Pn	Pn	09 39 42.6	-1.7
RAO				*e*Sn	Sn	09 41 42.1	-2.4
RAO	Raoul Island	10.90	196	P	Pn	09 39 44.1	-0.3
	119nm,0.3s,baz=265,slow=21,SNR=5.7						
RAO				S	Sn	09 41 39.8	-4.7
	326nm,0.3s,baz=63,slow=24,SNR=19						
GLKZ	Green Lake	10.91	196	P	Pn	09 39 43.6	-0.9
GLKZ				S	Sn	09 41 43.3	-1.5
FUNA	Funafuti	11.81	328	*e*Pn	Pn	09 39 57.3	+0.8
RAR	Rarotonga	14.14	103	*e*Pn	Pn	09 40 26.3	-0.3
RAR				S	Sn	09 42 51.8	-11
RAR	Rarotonga	14.14	103	*e*P	Pn	09 40 26.3	-0.3
RAR	Rarotonga	14.14	103	P	Pn	09 40 24.1	-2.4
	18nm,0.3s,baz=255,slow=6.2,SNR=31						
RAR				S	Sn	09 42 51.7	-11
	4.8nm,0.3s,baz=102,slow=18,SNR=3.0						
RAR				LR	LR	09 45 05.3	
	comp=Z,1μm,21.1s,baz=244,slow=33						
KNTN	Kanton	16.11	10	*e*Pn	Pn	09 40 48.5	-2.8
	431nm,1.8s						
MARNC	Mare, Loyalty	16.56	258	*e*Pn	P	09 40 59.4	+2.5
	2μm,1.3s						
PINNC	Pines Island,	17.25	254	*e*P	Pn	09 41 08.2	+3.2
	2μm,1.2s						
DZM	Mont Dzumac	18.09	256	*e*P	Pn	09 41 16.0	+0.7
	1μm,1.4s						
DZM				*e*LR	LR	09 45 29.1	
	comp=Z,4μm,26.7s						
DZM	Mont Dzumac	18.09	256	*e*P	Pn	09 41 15.5	+0.3
	1μm,1.7s						
DZM	Mont Dzumac	18.09	256	P	Pn	09 41 15.8	+0.6
	7.1nm,0.3s,baz=84,slow=17,SNR=82						
DZM				LR	LR	09 46 26.0	
	comp=Z,4μm,18.3s,baz=87,slow=31						
NFK	Norfolk Island	18.97	234	P	Pn	09 41 25.7	+0.3
	baz=19,SNR=8.2						
OUZ	Omahuta	19.48	210	*e*P	Pn	09 41 30.9	-0.4
	299nm,0.8s						
OUZ	Omahuta	19.48	210	P	Pn	09 41 31.7	+0.4
GRZ	Great Barrier	19.53	205	P	Pn	09 41 33.0	+1.1
WCZ	Waipu Caves	19.73	207	P	Pn	09 41 34.9	+0.7
MXZ	Matakaoa Point	19.76	197	*e*P	Pn	09 41 35.6	+1.0
	584nm,0.6s						
MXZ	Matakaoa Point	19.76	197	P	Pn	09 41 33.7	-0.9
MXZ				S	S	09 45 01.1	-6.4
KUZ	Kuaotunu	19.86	203	P	Pn	09 41 36.8	+1.0
WMGZ	Waiomatatini S	19.98	196	P	P	09 41 35.5	+1.3
WMGZ				S	S	09 45 04.2	-7.6
HAZ	Te Kaha	20.09	198	P	P	09 41 36.2	+0.8
HAZ				S	S	09 45 08.6	-5.5
PKGZ	Pakihiroa	20.13	197	P	Pn	09 41 39.1	+0.1
PKGZ				S	S	09 45 07.0	-8.0
PUZ	Puketiti	20.25	197	P	P	09 41 37.6	+0.4
PUZ				S	S	09 45 09.0	-8.3
RUGZ	Raukumara Rang	20.32	198	P	P	09 41 38.9	+0.9
TWGZ	Tauwhareparae	20.43	197	P	Pn	09 41 41.1	-1.4
WHRZ	Whale Island	20.43	199	P	Pn	09 41 42.8	+0.4
TGRZ	Tauranga	20.55	201	P	Pn	09 41 44.3	+0.5
OPRZ	Ohinepanea	20.55	200	P	Pn	09 41 43.3	-0.6
MARZ	Manawahe	20.64	200	P	Pn	09 41 45.0	0.0
CNGZ	Carnagh Statio	20.66	196	P	Pn	09 41 44.2	-0.9
MWZ	Matawai	20.70	198	P	Pn	09 41 44.0	-1.7
TKGZ	Te Karaka	20.71	197	P	P	09 41 42.6	+0.6
EDRZ	Edgecumbe	20.73	200	P	Pn	09 41 45.5	-0.6
LIRZ	Lichensteins R	20.75	200	P	Pn	09 41 45.3	-1.0
URZ	Urewera	20.76	199	*e*P	Pn	09 41 44.4	-1.9
	2μm,0.6s						
URZ				*e*S	S	09 45 20.6	-6.5
URZ	Urewera	20.76	199	P	Pn	09 41 44.6	-1.6
	1μm,0.5s,baz=360,slow=2.8,SNR=288						
URZ				S	S	09 45 20.6	-6.5
	29nm,0.5s,baz=115,slow=18,SNR=8.1						
URZ	Urewera	20.76	199	P	P	09 41 42.8	+0.2
KMRZ	Kaimai	20.76	202	P	Pn	09 41 46.7	+0.3
KARZ	Kaharoa	20.82	201	P	Pn	09 41 46.6	-0.4
TOZ	Tahuroa Road	20.82	203	P	Pn	09 41 46.9	-0.1
MKRZ	Makatiti	20.85	200	P	Pn	09 41 48.3	+0.8
OMRZ	Omania	20.85	200	P	Pn	09 41 46.5	-1.0
RAGZ	Rawiri	20.89	198	P	P	09 41 45.9	+1.9
TARZ	Mount Tarawera	20.93	200	P	Pn	09 41 46.9	-1.5
UTU	Utuhina	20.98	201	P	Pn	09 41 48.2	-0.7
RIGZ	Rimuhau	20.98	197	P	P	09 41 46.9	+1.9
HLRZ	Highlands Stat	20.99	200	P	Pn	09 41 48.4	-0.7
RRRZ	Republican Roa	21.02	200	P	P	09 41 46.9	+1.5
HSRZ	Hossack Road	21.08	200	P	P	09 41 50.0	+4.0
RTZ	Ruatahuna	21.12	199	P	P	09 41 48.4	+1.8
HRRZ	Handcock Road	21.14	200	P	P	09 41 48.8	+2.1
PRGZ	Paritu Road	21.15	196	P	P	09 41 50.3	+3.4
GRRZ	Galatos Road	21.16	201	P	P	09 41 49.8	+2.9
SNGZ	Shannon Statio	21.17	198	P	P	09 41 48.6	+1.6
PRRZ	Plateau Road	21.20	200	P	P	09 41 48.6	+1.3
ALRZ	Allen Road	21.28	200	P	P	09 41 49.4	+1.3
WPRZ	Whakapapatarin	21.30	200	P	P	09 41 50.4	+2.0
KNZ	Kokohu	21.30	197	P	P	09 41 49.8	+1.5
TLZ	Tolley Road	21.34	202	P	P	09 41 52.3	+3.5
MHGZ	Mahia Peninsul	21.36	196	P	P	09 41 52.1	+3.0
RAHZ	Arahi	21.37	198	P	P	09 41 50.1	+0.9
MTHZ	Maungataniwha	21.39	199	P	P	09 41 49.8	+0.5
WHHZ	Waihua	21.48	198	P	P	09 41 52.0	+1.7
MRHZ	Matea Rd	21.50	199	P	P	09 41 50.7	+0.1
WATZ	Wairara	21.61	201	P	P	09 41 53.7	+2.0
NMHZ	Naumai	21.62	198	P	P	09 41 52.5	+0.6
HIZ	Hauiti	21.75	203	*e*P	P	09 41 56.1	+3.0
	2μm,0.6s						
BKZ	Black Stump Fm	21.78	199	*e*P	P	09 41 52.4	-1.1
	385nm,0.7s						
TUVZ	Tukino	22.14	200	P	P	09 41 57.5	+0.2
TRVZ	Turoa	22.20	201	P	P	09 41 58.3	+0.2
BHHZ	Black Hill Sta	22.21	199	P	P	09 41 56.9	-1.0
MOVZ	Moawhango	22.23	200	P	P	09 41 58.2	0.0
PKVZ	Pokaka	22.26	201	P	P	09 41 58.9	+0.4
MTVZ	Mangateitei	22.31	201	P	P	09 41 58.6	-0.3
VRZ	Vera Road	22.32	202	P	P	09 42 01.0	+2.0
MHEZ	Mangahewa	22.44	203	P	P	09 42 04.1	+3.9
DREZ	Durham Road	22.58	203	P	P	09 42 05.5	+3.9
WPHZ	Waipukurau	22.62	198	P	P	09 42 03.3	+1.4
PKE	Pukeiti	22.67	204	P	P	09 42 06.4	+3.9
KHEZ	Kahui Hut	22.74	203	P	P	09 42 06.5	+3.3
LREZ	Lake Rotokare	22.75	202	P	P	09 42 06.1	+2.9
NBEZ	Newall Road No	22.78	204	P	P	09 42 06.7	+3.2
WAZ	Wanganui	22.80	201	P	P	09 42 04.4	+0.7
NMEZ	Namu Road	22.90	203	P	P	09 42 08.0	+3.4
DVHZ	Dannevirke	22.92	198	P	P	09 42 06.1	+1.2
ANWZ	Angora Road	22.98	198	P	P	09 42 08.3	+3.0
POWZ	Post Office Ro	23.12	199	P	P	09 42 07.7	+1.0
BFZ	Birch Farm	23.25	198	*e*P	P	09 42 09.1	+1.3
	327nm,0.6s						
BFZ	Birch Farm	23.25	198	P	P	09 42 09.3	+1.4
MRZ	Mangatainoka R	23.43	199	P	P	09 42 10.1	+0.5
PAE	Paea	23.77	91	*e*P	P	09 42 12.8	-0.1
	22nm,0.9s						
PAE	Paea	23.77	91	*e*T	T	10 06 17.5	
	51nm,0.3s						
PPT2	Papeete2	23.79	91	*e*P	P	09 42 13.4	+0.3
	220nm,1.3s						
PPT2	Papeete2	23.79	91	*e*T	T	10 06 18.8	
	23nm,0.3s						
PPT	Papeete	23.79	91	*e*P	P	09 42 13.4	+0.3
PPT	Papeete	23.79	91	P	P	09 42 12.4	-0.6
PPT				pmax	pmax		
	comp=Z,115nm,0.8s						
PPT	Papeete	23.79	91	P	P	09 42 12.4	-0.6
	comp=Z,73nm,0.7s,baz=272,slow=4.3,SNR=13						
PPT				LR	LR	09 49 30.7	
	comp=Z,848nm,18.9s,baz=274,slow=31						
PPTF	Pamatai, Papee	23.80	91	*e*P	P	09 42 13.1	-0.1
	comp=Z,455nm,1.4s						
TIAR	Tiarei	24.01	91	*e*P	P	09 42 15.1	+0.1
	comp=Z,62nm,1.0s						
TIAR	Tiarei	24.01	91	*e*T	T	10 06 34.7	
	comp=Z,6.5nm,0.3s						
TVO	Taravao	24.07	92	*e*P	P	09 42 15.8	+0.2
	comp=Z,117nm,1.4s						
TVO	Taravao	24.07	92	*e*T	T	10 06 40.0	
	comp=Z,6.7nm,0.3s						
SNZO	South Karori	24.30	200	*e*P	P	09 42 18.1	+0.8
	comp=Z,176nm,0.6s						
SNZO				*e*S	S	09 46 30.4	+3.5
THZ	Tophouse	25.31	202	*e*P	P	09 42 28.1	+1.5
	comp=Z,309nm,0.6s						
KHZ	Kahutara	25.67	201	*e*P	P	09 42 30.7	+0.9
	comp=Z,319nm,0.6s						
KHZ				*e*S	S	09 46 51.4	+2.7
PMOR	Pomariorio Ree	25.80	86	*e*P	P	09 42 31.1	-0.1
	comp=Z,383nm,1.5s						
PMOR	Pomariorio Ree	25.80	86	*e*T	T	10 08 34.8	
	comp=Z,8.7nm,0.3s						
VAH	Vaihoa	26.00	86	*e*P	P	09 42 32.6	-0.5
VAH	Vaihoa	26.00	86	*e*T	T	10 08 29.0	
	comp=Z,8.5nm,0.3s						
HNR	Honiara	26.35	287	*e*P	P	09 42 33.6	-2.6
	comp=Z,411nm,1.4s						
HNR	Honiara	26.35	287	*e*P	P	09 42 33.6	-2.6
HNR				pmax	pmax		
	comp=Z,411nm,1.4s						
HNR	Honiara	26.35	287	P	P	09 42 33.7	-2.4
	comp=Z,69nm,0.9s,baz=177,slow=6.0,SNR=2.5						
LTZ	Lake Taylor	26.43	202	*e*P	P	09 42 36.6	-0.1
	comp=Z,595nm,0.7s						
LHI	Lord Howe Isla	26.96	237	P	P	09 42 44.4	+2.9
	baz=27,SNR=4.6						
LHI	Lord Howe Isla	26.96	237	*e*P	P	09 42 43.0	+1.5
	comp=Z,170nm,0.9s						
OXZ	Oxford	26.99	202	*e*P	P	09 42 41.4	-0.2
	comp=Z,515nm,0.8s						
CRLZ	Canterbury Las	27.01	201	*e*P	P	09 42 43.1	+1.3
	comp=Z,88nm,0.8s						
MQZ	McQueen's Vall	27.11	201	*e*P	P	09 42 44.2	+1.5
	comp=Z,139nm,0.6s						
RPZ	Rata Peaks	27.68	203	*e*P	P	09 42 49.2	+1.4
	comp=Z,366nm,0.6s						
RPZ				*e*S	S	09 47 25.0	+4.5
RPZ	Rata Peaks	27.68	203	P	P	09 42 48.3	+0.5
	comp=Z,379nm,0.6s,baz=359,slow=1.1,SNR=35						
RPZ				S	S	09 47 25.0	+4.5
	comp=Z,13nm,0.9s,baz=156,slow=20,SNR=2.9						
FOZ	Fox Glacier	28.00	205	*e*P	P	09 42 52.5	+1.9
	comp=Z,292nm,0.6s						
LBZ	Lake Benmore	28.58	203	*e*P	P	09 42 56.2	+0.4
	comp=Z,76nm,0.6s						
ODZ	Otahua Downs	28.98	202	*e*P	P	09 43 00.4	+1.1
	comp=Z,91nm,0.7s						
WKZ	Wanaka	29.40	204	*e*P	P	09 43 03.6	+0.6
	comp=Z,159nm,0.6s						
MLZ	Mavora Lakes	30.20	205	*e*P	P	09 43 11.9	+1.7
	comp=Z,107nm,0.6s						
DCZ	Deep Cove	30.67	206	*e*P	P	09 43 15.8	+1.6
	comp=Z,94nm,0.7s						
WHZ	Wether Hill Ro	30.70	204	*e*P	P	09 43 16.4	+1.8
	comp=Z,268nm,0.9s						
PYZ	Puysegur Point	31.43	205	*e*P	P	09 43 23.6	+2.7
	comp=Z,297nm,1.6s						
EIDS	Eidsvold	32.44	252	P	P	09 43 29.9	-0.2
	baz=33,SNR=36						
EIDS	Eidsvold	32.44	252	*e*P	P	09 43 30.0	0.0
	comp=Z,199nm,1.4s						
ARMA	Armidale	32.73	243	P	P	09 43 33.7	+1.0
	baz=33,SNR=81						
ARMA	Armidale	32.73	243	*e*P	P	09 43 33.8	+1.1
	comp=Z,70nm,0.8s						
MGCD	Mangrove Creek	33.87	238	P	P	09 43 43.6	+1.2
	baz=34,SNR=24						
RMQ	Roma	34.62	250	P	P	09 43 49.7	+0.7
	baz=35,SNR=102						
TAOE	Nuku Hiva Isla	34.79	78	*e*P	P	09 43 50.7	+0.1
	comp=Z,48nm,0.7s						
RABL	Rabaul	35.55	290	*e*P	P	09 43 55.9	-1.2
	comp=Z,121nm,1.5s						
CAN	Canberra	36.16	235	*e*P	P	09 44 02.1	0.0
	comp=Z,172nm,1.1s						
CAN	Canberra	36.16	235	*e*P	P	09 44 02.1	0.0
CAN				pmax	pmax		
	comp=Z,172nm,1.1s						
CTA	Charters Tower	36.91	261	P	P	09 44 08.1	-0.4
	comp=Z,350nm,0.7s,baz=96,slow=11,SNR=394						
CTA				S	S	09 49 40.2	-3.8
	comp=Z,3.1nm,0.9s,baz=250,slow=15,SNR=2.8						
CTAO	Charters Tower	36.91	261	*e*P	P	09 44 08.5	0.0
	comp=Z,376nm,0.8s						
CTAO	Charters Tower	36.91	261	*e*P	P	09 44 08.5	0.0
CTAO				pmax	pmax		
	comp=Z,376nm,0.8s						
RKT	Rikitea	37.18	104	*e*T	T	10 23 03.3	
	comp=Z,7.1nm,0.3s						
CMSA	Cobar Meteorol	37.95	243	P	P	09 44 17.2	0.0
	baz=38,SNR=92						
MTSU	Mount Surprise	38.93	264	P	P	09 44 25.1	-0.5
	baz=39,SNR=139						
TOO	Toolangi	39.53	233	P	P	09 44 30.4	+0.1
	baz=40,SNR=57						
TOO	Toolangi	39.53	233	*e*P	P	09 44 30.6	+0.3
	comp=Z,113nm,0.8s						
TOO	Toolangi	39.53	233	*e*P	P	09 44 30.6	+0.3
TOO				pmax	pmax		
	comp=Z,113nm,0.8s						
MOO	Moorlands	40.03	225	P	P	09 44 37.3	+2.9
	baz=40,SNR=3.3						
TAU	Tasmania Unive	40.13	225	*e*P	P	09 44 35.5	+0.3
	comp=Z,114nm,1.3s						
TAU	Tasmania Unive	40.13	225	*e*P	P	09 44 35.5	+0.3
TAU				pmax	pmax		
	comp=Z,114nm,1.3s						
COEN	Coen	40.74	270	P	P	09 44 40.3	-0.3
	baz=41,SNR=117						
COEN	Coen	40.74	270	*e*P	P	09 44 40.3	-0.3
	comp=Z,114nm,0.6s						
MANU	Manus Island	40.79	289	*e*P	P	09 44 40.5	-0.4
	comp=Z,425nm,1.9s						
H11S2	WAKE ISLAND Hy	41.31	333	T	T	10 28 37.0	
	baz=145,slow=76,SNR=1.5						
H11S3	WAKE ISLAND Hy	41.32	333	T	T	10 28 40.3	
	baz=145,slow=76,SNR=2.2						
H11S1	WAKE ISLAND Hy	41.33	333	T	T	10 28 40.3	
	baz=145,slow=76,SNR=1.7						
STKA	Stephens Creek	41.45	243	P	P	09 44 46.3	+0.1
	baz=42,SNR=91						
STKA	Stephens Creek	41.45	243	*e*P	P	09 44 46.3	+0.1
	comp=Z,63nm,1.3s						
STKA	Stephens Creek	41.45	243	*e*P	P	09 44 46.3	+0.1
STKA				pmax	pmax		
	comp=Z,63nm,1.3s						
STKA	Stephens Creek	41.45	243	P	P	09 44 46.4	+0.1
	comp=Z,106nm,1.0s,baz=89,slow=10.0,SNR=96						
STKA				LR	LR	09 58 25.5	
	comp=Z,490nm,21.6s,baz=74,slow=31						
ARPS	Mount Arapiles	42.14	236	P	P	09 44 52.4	+0.7
	baz=42,SNR=16						
H11N3	WAKE ISLAND Hy	42.31	334	T	T	10 29 53.7	
	baz=146,slow=75						
H11N1	WAKE ISLAND Hy	42.31	334	T	T	10 29 55.1	
	baz=146						
H11N2	WAKE ISLAND Hy	42.33	334	T	T	10 29 55.5	
	baz=146,slow=75						
QIS	Mount Isa	43.08	260	P	P	09 44 58.8	-0.7
	baz=43,SNR=26						
HTT	Hallett	43.89	241	P	P	09 45 05.7	-0.3
	baz=44,SNR=55						
BBOO	Buckleboo	46.21	242	P	P	09 45 23.9	-0.3
	baz=46,SNR=100						
BBOO	Buckleboo	46.21	242	*e*P	P	09 45 24.0	-0.3
	comp=Z,210nm,0.8s						
JAY	Jayapura	46.63	285	P	P	09 45 26.3	-1.4
GENI	Genyem	47.09	284	P	P	09 45 30.3	-1.0
AS01	Alice Springs	48.03	255	*e*P	P	09 45 38.2	-0.3
AS01				*e*S	S	09 52 23.7	-3.5
WB2	Warramunga Arr	48.05	260	*e*P	P	09 45 38.0	-0.6
	comp=Z,358nm,0.9s						
WRAB	Tennant Creek	48.05	260	*e*P	P	09 45 37.6	-1.1
	comp=Z,337nm,0.9s						
WRAB	Tennant Creek	48.05	260*d*	*i*P	P	09 45 37.7	-1.0
WRAB				pmax	pmax		
	comp=Z,434nm,1.1s						
WR1	Warramunga Arr	48.06	260	*e*P	P	09 45 38.1	-0.6
	comp=Z,403nm,0.9s						
WR1				*e*PcP	PcP	09 47 03.7	-1.0
WR1				*e*ScP	ScP	09 50 49.2	+1.9
WR1				*e*S	S	09 52 23.6	-4.0
WRA	Warramunga Arr	48.06	260	P	P	09 45 38.1	-0.6
	comp=Z,127nm,0.5s,baz=94,slow=6.1,SNR=180						
WRA				PcP	PcP	09 47 03.7	-1.0
	comp=Z,11nm,0.6s,baz=88,slow=3.9,SNR=3.4						
WRA				ScP	ScP	09 50 49.2	+1.9
	comp=Z,0.8nm,0.8s,baz=99,slow=3.5,SNR=3.2						
WRA				S	S	09 52 23.6	-4.0
	comp=Z,3.8nm,0.8s,baz=95,slow=14,SNR=6.9						
WRA				LR	LR	10 04 35.3	
	comp=Z,713nm,18.9s,baz=95,slow=34						
AS31	Alice Springs	48.07	255	*e*P	P	09 45 38.4	-0.4
	comp=Z,138nm,0.6s						
ASAR	Alice Springs	48.07	255	P	P	09 45 38.5	-0.3
	comp=Z,458nm,0.7s,baz=89,slow=8.4,SNR=1795						
ASAR				PcP	PcP	09 47 04.7	-0.1
	comp=Z,12nm,0.7s,baz=108,slow=4.1,SNR=3.5						
ASAR				ScP	ScP	09 50 48.6	+1.2
	comp=Z,1.1nm,0.7s,baz=91,slow=3.9,SNR=2.4						
ASAR				S	S	09 52 23.1	-4.7
	comp=Z,6.3nm,0.7s,baz=89,slow=16,SNR=14						
ASAR				LR	LR	10 04 25.6	
	comp=Z,759nm,18.1s,baz=100,slow=34						
KDU	Kakadu	51.17	269	P	P	09 46 01.8	-0.5
	baz=51,SNR=181						
GUMO	Guam	51.27	306	P	P	09 46 02.1	-0.9
	comp=Z,128nm,1.1s,baz=180,slow=12,SNR=3.6						
BAKI	Biak	51.37	284	P	P	09 46 04.2	+0.4
FORT	Forrest	52.95	245	P	P	09 46 14.7	-0.7
	baz=53,SNR=127						
FORT	Forrest	52.95	245	*e*P	P	09 46 14.6	-0.7
	comp=Z,524nm,0.8s						
RKPI	Ransiki, Papua	53.02	283	P	P	09 46 15.8	-0.3
WRKA	Warakurna	53.05	252	P	P	09 46 15.9	-0.3
	baz=53,SNR=235						
SAUI	Saumlaki	53.54	274	*e*P	P	09 46 19.9	0.0
	comp=Z,489nm,1.0s						
SAUI	Saumlaki	53.54	274	P	P	09 46 20.2	+0.3
KNRA	Kununurra	54.02	264	P	P	09 46 23.0	-0.3
	baz=54,SNR=257						
FAKI	Fak Fak	54.30	280	*e*P	P	09 46 24.5	-0.9
	comp=Z,289nm,1.6s						
FAKI	Fak Fak	54.30	280	P	P	09 46 24.5	-0.9
BNDI	Bandanaira	55.95	277	P	P	09 46 36.2	-1.0
SWI	Sorong	55.97	282	P	P	09 46 37.2	-0.2
	comp=Z,416nm,0.7s,comp=Z,3μm						
FITZ	Fitzroy Crossi	56.48	260	P	P	09 46 40.9	0.0
	baz=57,SNR=87						
FITZ	Fitzroy Crossi	56.48	260	*e*P	P	09 46 40.8	0.0
	comp=Z,420nm,1.6s						
FITZ				S	S	09 54 20.9	-1.6
FITZ	Fitzroy Crossi	56.48	260	S	S	09 54 20.9	-1.6
	comp=Z,2.4nm,1.0s,baz=274,slow=19,SNR=3.9						
FITZ				LR	LR	10 09 55.2	
	comp=Z,452nm,19.6s,baz=98,slow=35						
NLAI	Namlea	59.01	278	P	P	09 46 58.4	-0.3
SOEI	Soe	59.70	269	*e*P	P	09 47 04.7	+1.1
	comp=Z,824nm,0.7s						
SOEI	Soe	59.70	269	P	P	09 47 04.9	+1.3
SBA	Scott Base	59.85	184	*e*P	P	09 47 08.2	+4.8
	comp=Z,110nm,0.8s						
VNDA	Vanda	59.96	186	*e*P	P	09 47 06.9	+2.8
	comp=Z,56nm,0.9s						
VNDA	Vanda	59.96	186	P	P	09 47 07.0	+2.8
VNDA				pmax	pmax		
	comp=Z,34nm,0.7s						
VNDA	Vanda	59.96	186	P	P	09 47 07.0	+2.8
	comp=Z,34nm,0.7s,baz=0.4,slow=6.8,SNR=34						
VNDA				LR	LR	10 07 42.7	
	comp=Z,45nm,20.4s,baz=18,slow=30						
RPN	Rapa Nui	60.11	111	*e*P	P	09 47 07.2	+1.2
	comp=Z,437nm,1.4s						
RPN	Rapa Nui	60.11	111	*e*P	P	09 47 07.2	+1.2
RPN				pmax	pmax		
	comp=Z,437nm,1.4s						
BATI	Baumata	60.15	269	P	P	09 47 07.4	+0.8
TNTI	Ternate	60.19	282	*e*P	P	09 47 06.4	-0.3
	comp=Z,180nm,1.0s						
TNTI	Ternate	60.19	282	P	P	09 47 06.0	-0.8
SANI	Sanana	60.46	279	P	P	09 47 07.5	-1.1

MBWA	Marble Bar	61.39	256	*e*P	P	09 47 14.2	-0.7
	comp=Z,127nm,0.8s						
MEEK	Meekatharra	61.54	249	P	P	09 47 14.9	-1.0
	baz=62,SNR=39						
KLBR	Kellerberrin	61.72	244	P	P	09 47 16.8	-0.1
	baz=62,SNR=16						
CBIJ	Chichi jima	61.91	316	*e*P	P	09 47 17.7	-0.4
JCJ	Chichijima	61.91	316	P	P	09 47 17.7	-0.4
	comp=Z,50nm,0.8s,baz=307,slow=20						
MMRI	Maumere	61.94	270	*e*P	P	09 47 18.0	-0.6
	comp=Z,247nm,0.7s						
MMRI	Maumere	61.94	270	P	P	09 47 17.7	-0.9
NWAO	Narrogin (SRO)	62.03	242	P	P	09 47 19.4	+0.4
	baz=62,SNR=4.0						
NWAO	Narrogin (SRO)	62.03	242	*e*P	P	09 47 19.4	+0.4
	comp=Z,72nm,1.1s						
NWAO	Narrogin (SRO)	62.03	242	*e*P	P	09 47 19.4	+0.4
NWAO				pmax	pmax		
	comp=Z,72nm,1.1s						
NWAO	Narrogin (SRO)	62.03	242	LR	LR	10 12 17.5	
	comp=Z,315nm,18.6s,baz=322,slow=34						
RKGY	Rocky Gully	62.11	240	P	P	09 47 20.6	+1.1
	baz=62,SNR=7.1						
EDFI	Ende, Flores	62.42	270	P	P	09 47 20.9	-1.1
BLDU	Ballidu	62.71	245	P	P	09 47 23.0	-0.6
	baz=63,SNR=34						
KDI	Kendari	62.99	275	P	P	09 47 24.9	-0.7
BASI	Baing, Sumba	63.07	268	P	P	09 47 26.1	0.0
KMSI	Cibinong	63.26	280	P	P	09 47 27.1	-0.3
MORW	Morawa	63.48	246	P	P	09 47 28.1	-0.6
	baz=64,SNR=19						
MORW	Morawa	63.48	246	*e*P	P	09 47 28.0	-0.6
	comp=Z,77nm,1.0s						
WSI	Waingapu	63.49	268	P	P	09 47 28.6	-0.3
LUWI	Luwuk	63.82	278	*e*P	P	09 47 31.4	+0.3
	comp=Z,499nm,1.0s						
LUWI	Luwuk	63.82	278	P	P	09 47 31.3	+0.3
H01W1	Cape Leeuwin H	64.40	240	P	P	09 47 36.5	+2.2
	baz=98,slow=7.8,SNR=4.3						
H01W3	Cape Leeuwin H	64.42	240	P	P	09 47 37.2	+2.8
	baz=98,slow=7.8,SNR=5.1						
H01W2	Cape Leeuwin H	64.42	240	P	P	09 47 36.4	+2.0
	baz=98,slow=7.8,SNR=2.9						
APSI	Ampana	64.92	278	P	P	09 47 38.8	+0.6
BKSI	Bulukumba	64.92	273	P	P	09 47 37.1	-1.1
MRSI	Marisa	65.13	280	P	P	09 47 38.8	-0.8
BNSI	Bone	65.23	274	P	P	09 47 39.9	-0.3
SPSI	Sidrap Palu	65.68	274	P	P	09 47 41.6	-1.5
TTSI	Tana Toraja	65.93	275	P	P	09 47 43.9	-0.8
PLAI	Plampang	66.11	268	P	P	09 47 44.8	-1.1
GIRL	Giralia	66.13	253	P	P	09 47 47.0	+1.2
	baz=66,SNR=14						
GIRL	Giralia	66.13	253	*e*P	P	09 47 47.1	+1.2
	comp=Z,287nm,0.9s						
PCI	Palu	66.62	277	P	P	09 47 49.7	+0.5
CASY	Casey	66.92	205	*e*P	P	09 47 51.5	+1.4
	comp=Z,84nm,1.0s						
MPSI	Mapaga	66.99	279	P	P	09 47 50.9	-0.6
DNP	Denpasar	68.58	268	P	P	09 48 00.3	-1.2
SRBI	Singaraja	68.75	268	P	P	09 48 01.9	-0.6
SMKI	Samarinda	69.25	277	P	P	09 48 05.7	+0.1
KBKI	Kotabaru	69.30	274	P	P	09 48 06.0	+0.1
JAGI	Jajag, Banyuwa	69.64	268	*e*P	P	09 48 06.7	-1.4
	comp=Z,216nm,0.9s						
JAGI	Jajag, Banyuwa	69.64	268	P	P	09 48 06.6	-1.4
KMMI	Kalianget	70.23	269	P	P	09 48 12.0	+0.4
TSM	Tawau	70.29	282	P	P	09 48 12.8	+0.8
ADK	Adak	70.34	359	*e*P	P	09 48 11.8	+0.5
	comp=Z,117nm,1.4s						
ADK	Adak	70.34	359	*e*P	P	09 48 11.8	+0.5
ADK				pmax	pmax		
	comp=Z,117nm,1.4s						
GMJI	Gumukmas	70.37	268	P	P	09 48 11.6	-0.9
INU	Inuyama	70.70	320	*e*P	P	09 48 13.4	-0.6
	comp=Z,129nm,2.0s						
MJAR	Matsushiro Arr	70.78	321	P	P	09 48 13.6	-0.9
	comp=Z,12nm,0.5s,baz=162,slow=5.2,SNR=45						
MJAR				LR	LR	10 15 42.2	
	comp=Z,90nm,20.6s,baz=100,slow=33						
MAJO	Matsushiro	70.78	321	*e*P	P	09 48 13.8	-0.7
	comp=Z,24nm,0.8s						
MAJO	Matsushiro	70.78	321	*e*P	P	09 48 13.8	-0.7
MAJO				pmax	pmax		
	comp=Z,24nm,0.8s						
MAT	Matsushiro	70.78	321	P	P	09 48 13.7	-0.8
MAT				S	S	09 57 19.0	0.0
MJB9	Matsu-Tunnel	70.79	321	*e*P	P	09 48 13.7	-0.8
	comp=Z,24nm,0.8s						
MTKI	Muara Teweh, K	71.27	276	P	P	09 48 17.6	-0.3
QSPA	South Pole Qui	71.33	180	*e*P	P	09 48 20.1	+2.6
	comp=Z,159nm,0.8s						
SDKM	Sandakan	71.41	283	P	P	09 48 19.8	+1.0
NIKH	Nikolski High	71.58	4	*e*P	P	09 48 18.5	-0.3
	comp=Z,118nm,1.2s						
GRJI	Gresik	71.68	269	P	P	09 48 21.3	+0.9
ERM	Erimo	71.95	328⇓	*e*P	P	09 48 20.9	-0.4
ERM				pmax	pmax		
	comp=Z,30nm,1.4s						
PWJI	Pagerwojo	72.00	267	P	P	09 48 21.6	-0.7
TBJI	Tambak Boyo	72.31	269	P	P	09 48 23.5	-0.6
KKM	Kota Kinabalu	72.47	283	*e*P	P	09 48 24.9	-0.3
	comp=Z,227nm,1.6s						
KKM	Kota Kinabalu	72.47	283	P	P	09 48 26.7	+1.5
NGJI	Ngawi	72.51	268	P	P	09 48 25.7	+0.4
PCJI	Pacitan	72.54	267	P	P	09 48 25.2	-0.3
UNV	Unalaska Valle	72.62	5	*e*P	P	09 48 23.4	-1.6
	comp=Z,250nm,1.9s						
WOJI	Wonogiri, Jawa	72.89	267	P	P	09 48 27.3	-0.2
UGM	Wanagama	73.24	267	*e*P	P	09 48 29.7	0.0
	comp=Z,225nm,0.7s						
UGM	Wanagama	73.24	267	P	P	09 48 29.6	-0.1
JNU	Nakatsue	73.28	314	*e*P	P	09 48 29.2	-0.2
	comp=Z,151nm,1.6s						
JNU	Nakatsue	73.28	314	P	P	09 48 29.2	-0.2
	comp=Z,27nm,0.6s,baz=231,slow=2.0,SNR=50						
SMRI	Semarang	73.58	268	*e*P	P	09 48 32.5	+0.9
	comp=Z,205nm,0.7s						
SMRI	Semarang	73.58	268	P	P	09 48 31.4	-0.2
ASAJ	Asahikawa	73.79	329	P	P	09 48 32.1	-0.1
	comp=Z,11nm,0.8s,baz=187,slow=7.4,SNR=15						
ASAJ				pP	pP	09 49 02.5	-1.1
	comp=Z,8.5nm,0.9s,baz=185,slow=5.5,SNR=1.7						
PAGB	Antelope Grade	74.70	43	*e*P	P	09 48 41.5	+3.9
	comp=Z,18nm,1.1s						
KPJI	Karang Pucung	74.92	267	P	P	09 48 38.8	-0.6
SBUM	Sibu	74.92	278	*e*P	P	09 48 40.0	+0.6
	comp=Z,86nm,1.6s						
SBUM	Sibu	74.92	278	P	P	09 48 40.7	+1.3
PET	Petropavlovsk	75.13	344	*e*P	P	09 48 38.2	-1.4
PET				pmax	pmax		
	comp=Z,24nm,0.8s						
TWG	Pinlang	75.20	301	*e*P	P	09 48 40.3	-0.4
	comp=Z,156nm,0.8s						
CMJI	Cimerak	75.24	267	P	P	09 48 40.6	-0.6
MWC	Mount Wilson	75.26	46	*e*P	P	09 48 41.4	+0.2
	comp=Z,26nm,1.4s						
YULB	Yu-li	75.28	301	*e*P	P	09 48 41.3	0.0
	comp=Z,212nm,1.9s						
BAR	Barrett	75.35	48	*e*P	P	09 48 42.8	+1.4
	comp=Z,54nm,1.9s						
KMRM	Mail Ridge	75.37	38	*e*P	P	09 48 42.4	+0.9
	comp=Z,248nm,1.9s						
NACB	Ninganchiao	75.41	302	*e*P	P	09 48 42.1	+0.2
	comp=Z,202nm,1.4s						
PEA0B	Petropavlovsk-	75.46	343	*e*P	P	09 48 41.1	-0.4
	comp=Z,85nm,1.4s						
PETK	Petropavlovsk-	75.46	343	P	P	09 48 40.9	-0.7
	comp=Z,9.9nm,0.5s,baz=116,slow=9.0,SNR=56						
PETK				LR	LR	10 15 52.9	
	comp=Z,276nm,21.0s,baz=149,slow=31						
PEA1	Petropavlovsk-	75.47	343	*e*P	P	09 48 40.9	-0.7
VES	Vestal, Richgr	75.52	44	P	P	09 48 42.8	+0.5
	baz=234						
EDW2	Edwards Air Fo	75.69	45	P	P	09 48 44.1	+0.8
	baz=235						
SSLB	Suanglung	75.75	301	*e*P	P	09 48 43.2	-0.7
	comp=Z,24nm,0.7s						
TPUB	Ta-pu	75.78	301	*e*P	P	09 48 43.6	-0.5
	comp=Z,81nm,0.7s						
KHMM	Horse Mountain	75.79	37	*e*P	P	09 48 44.3	+0.4
	comp=Z,143nm,2.0s						
JCJI	Jatiwangi	75.80	268	P	P	09 48 44.6	+0.2
ISA	Isabella, Lake	75.82	44	*e*P	P	09 48 45.3	+1.1
ISA				*e*pP	pP	09 49 16.0	+0.1
ISA	Isabella, Lake	75.82	44	*e*P	P	09 48 45.3	+1.1
ISA				*e**PP	pP	09 49 16.0	+0.1
ISA	Isabella, Lake	75.82	44	P	P	09 48 45.2	+1.0
	baz=234						
YHNB	Yeheng	75.83	302	*e*P	P	09 48 44.0	-0.4
	comp=Z,367nm,2.0s						
YSS	Yuzh-Sakhalins	75.83	331	*e*P	P	09 48 44.5	+0.7
	comp=Z,47nm,1.2s						
YSS	Yuzh-Sakhalins	75.83	331	*e*P	P	09 48 44.1	+0.3
YSS				*e*		09 58 07.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
TATO	Taipei	75.88	303	*e*P	P	09 48 45.3	+0.7
	comp=Z,509nm,1.6s						
O02D	Mt. Diablo Mer	75.88	38	P	P	09 48 45.7	+1.3
	baz=230						
CISI	Cisompet, Garu	75.91	267	*e*P	P	09 48 45.2	0.0
	comp=Z,141nm,0.7s						
CISI	Cisompet, Garu	75.91	267	P	P	09 48 44.1	-1.0
CHGN	Chignik	75.98	9	*e*P	P	09 48 45.1	+0.7
	comp=Z,214nm,1.5s						
CMB	Columbia Colle	76.00	41	*e*P	P	09 48 45.5	+0.4
	comp=Z,14nm,1.2s						
CMB				*e*pP	pP	09 49 17.1	+0.3
CMB	Columbia Colle	76.00	41	*e*P	P	09 48 45.5	+0.4
CMB				*e**PP	pP	09 49 17.1	+0.3
CMB				pmax	pmax		
	comp=Z,14nm,1.2s						
AFDM	Forest Hills D	76.20	40	*e*pP	pP	09 49 18.9	+1.0
	comp=Z,7.1nm,0.9s						
LRMC	Laurel Mtn Rad	76.24	45	P	P	09 48 47.4	+0.8
	baz=235						
ORV	Oroville	76.26	40	*e*P	P	09 48 47.3	+0.9
	comp=Z,7.6nm,0.9s						
ORV				*e*pP	pP	09 49 20.7	+2.5
WDC	Whiskeytown Da	76.29	38	*e*P	P	09 48 47.3	+0.7
	comp=Z,29nm,1.3s						
WDC	Whiskeytown Da	76.29	38	*e*P	P	09 48 47.3	+0.7
WDC				pmax	pmax		
	comp=Z,29nm,1.3s						
KSM	Kuching	76.39	276	*e*P	P	09 48 48.5	+0.7
	comp=Z,218nm,1.1s						
KSM	Kuching	76.39	276	P	P	09 48 48.8	+1.0
N02D	Trinity Center	76.44	38	P	P	09 48 50.4	+2.8
	baz=230						
CWC	Cottonwood Cre	76.53	44	P	P	09 48 48.9	+0.6
	baz=234						
BELC	Belle Mtn. Jos	76.55	47	P	P	09 48 48.9	+0.6
	baz=236						
MDPB	Devils Postpil	76.59	42	*e*P	P	09 48 49.2	+0.5
	comp=Z,15nm,1.0s						
MPMC	Manual Prospec	76.70	44	P	P	09 48 50.2	+1.0
	baz=235						
GSC	Goldstone, Bar	76.72	45	*e*P	P	09 48 49.9	+0.6
	comp=Z,22nm,1.4s						
GSC				*e*pP	pP	09 49 22.2	+1.1
GSC	Goldstone, Bar	76.72	45	*e*P	P	09 48 49.9	+0.6
GSC				*e**PP	pP	09 49 22.2	+1.1
GSC				pmax	pmax		
	comp=Z,22nm,1.4s						
GSC	Goldstone, Bar	76.72	45	P	P	09 48 49.9	+0.6
	baz=236						
BC3	Big Chuckawall	76.73	47	P	P	09 48 50.5	+1.1
	baz=237						
MLAC	Mammoth, Mammo	76.74	42	P	P	09 48 50.8	+1.3
	baz=234						
DAC	Darwin (Calif)	76.76	44	*e*P	P	09 48 51.6	+2.0
	comp=Z,14nm,1.5s						
WAKR	Walker	76.88	41	*e*P	P	09 48 51.4	+1.2
	comp=Z,14nm,1.0s						
WAKR				*e*pP	pP	09 49 23.5	+1.4
YBH	Yreka Blue Hor	76.93	37	*e*P	P	09 48 50.9	+0.7
	comp=Z,13nm,0.8s						
YBH				pP	pP	09 49 21.6	-0.7
YBH	Yreka Blue Hor	76.93	37	P	P	09 48 50.6	+0.4
	comp=Z,3.4nm,0.7s,baz=146,slow=0.8,SNR=5.6						
YBH				pP	pP	09 49 21.5	-0.7
	comp=Z,12nm,0.8s,baz=266,slow=2.6,SNR=8.7						
PNTR	Pine Nut	77.13	41	*e*P	P	09 48 52.5	+0.8
	comp=Z,18nm,0.8s						
PNTR				*e*pP	pP	09 49 26.4	+3.0
BEKR	Beckworth	77.14	40	*e*P	P	09 48 51.3	-0.3
	comp=Z,58nm,1.9s						
BEKR				*e*pP	pP	09 49 24.6	+1.0
CBJI	Citeko	77.16	268	P	P	09 48 50.9	-1.2
DBJI	Dramaga	77.22	267	P	P	09 48 52.3	-0.2
IRM	Iron Mountain	77.22	47	P	P	09 48 53.3	+1.2
	baz=237						
VCNR	Virginia City	77.23	41	*e*P	P	09 48 53.2	+1.1
	comp=Z,8.7nm,0.9s						
VCNR				*e*pP	pP	09 49 25.0	+1.1
SKJI	Sukabumi	77.27	267	P	P	09 48 52.6	-0.1
YERR	Yerington	77.29	41	*e*P	P	09 48 52.6	+0.1
	comp=Z,61nm,1.8s						
YERR				*e*pP	pP	09 49 25.2	+0.9
GRAC	Grapevine Rang	77.32	44	P	P	09 48 54.1	+1.6
	baz=235						
HUMO	Hull Mountain	77.35	36	*e*pP	pP	09 49 26.0	+1.5
TUQ	Turquoise Moun	77.40	46	P	P	09 48 54.3	+1.2
	baz=236						
Y12C	Blythe	77.44	48	*e*P	P	09 48 53.8	+0.6
	comp=Z,34nm,1.6s						
Y12C	Blythe	77.44	48	P	P	09 48 54.4	+1.2
	baz=237						
113A	Mohawk Valley,	77.45	49	*e*P	P	09 48 53.8	+0.5
	comp=Z,47nm,1.8s						
M04C	Macdoel	77.46	38	P	P	09 48 55.3	+2.0
	baz=231						
RYN	Ryan	77.53	42	*e*P	P	09 48 54.3	+0.5
	comp=Z,72nm,1.9s						
RYN				*e*pP	pP	09 49 26.4	+0.8
TPI	Tanjungpandan	77.53	271	P	P	09 48 54.6	+0.4
NV01	Mina Array Sit	77.55	42	*e*P	P	09 48 54.2	+0.2
NVAR	Mina Array Bea	77.55	42	P	P	09 48 54.0	-0.1
	comp=Z,3.5nm,0.7s,baz=226,slow=9.1,SNR=19						
NVAR				pP	pP	09 49 24.8	-1.0
	comp=Z,7.2nm,0.9s,baz=224,slow=7.6,SNR=5.5						
NVAR				LR	LR	10 17 00.1	
	comp=Z,238nm,19.0s,baz=230,slow=31						
PAHR	Pah Rah Range	77.64	40	*e*P	P	09 48 55.4	+1.0
	comp=Z,49nm,1.7s						
PAHR				*e*pP	pP	09 49 27.6	+1.2
NV11	Mina Array Sit	77.65	42	*e*P	P	09 48 55.2	+0.8
	comp=Z,2.0nm,1.3s						
214A	Organ Pipe Nat	77.71	50	P	P	09 48 55.8	+1.0
	baz=239						
LDFC	Landfair	77.75	46	*e*P	P	09 48 56.0	+0.9
	comp=Z,42nm,1.3s						
KSRS	Korea Array	77.76	317	P	P	09 48 55.9	+1.0
	comp=Z,11nm,0.9s,baz=131,slow=6.9,SNR=31						
KSRS				pP	pP	09 49 26.7	+0.3
	comp=Z,0.6nm,0.6s,baz=324,slow=23,SNR=1.3						
KSRS				LR	LR	10 19 41.4	
	comp=Z,112nm,19.9s,baz=112,slow=33						
KS15	Wonju Array Si	77.78	317	*e*P	P	09 48 56.1	+1.1
KSAR	Wonju Array Be	77.78	317	P	P	09 48 55.9	+0.9
KSAR				pP	pP	09 49 26.7	+0.1
KSAR	Wonju Array Be	77.78	317	P	P	09 48 55.9	+0.9
KSAR				*PP	pP	09 49 26.7	+0.1
KS01	Wonju Array Si	77.80	317	*e*P	P	09 48 55.8	+0.8
NEE2	Needles Airpor	77.92	47	P	P	09 48 57.0	+1.1
	baz=237						
PDMCI	Parker Dam,Lak	78.00	47	P	P	09 48 57.4	+1.1
	baz=238						
TPNV	Topopah Spring	78.03	44	*e*P	P	09 48 57.6	+1.0
	comp=Z,15nm,1.0s						
KVN	Kaiserville	78.05	42	*e*P	P	09 48 57.0	+0.4
	comp=Z,38nm,1.7s						
KVN				*e*pP	pP	09 49 28.6	0.0
KVN	Kaiserville	78.05	42	*e*P	P	09 48 57.1	+0.4
KVN				*e**PP	pP	09 49 28.6	0.0
KVN				pmax	pmax		
	comp=Z,38nm,1.7s						
MOD	Modoc Plateau	78.43	38	*e*P	P	09 48 58.4	-0.3
	comp=Z,19nm,1.0s						
SHPR	Sheep Range	78.50	45	*e*P	P	09 49 00.0	+0.8
	comp=Z,36nm,1.6s						
Y14A	Wickenburg	78.61	48	*e*P	P	09 49 00.4	+0.7
	comp=Z,10nm,1.0s						
W13A	Hualapai Mount	78.61	47	*e*P	P	09 49 00.7	+0.7
	comp=Z,23nm,1.7s						
J05D	Fort Rock, OR	78.76	37	P	P	09 49 01.8	+1.3
	baz=231						
TYV	Tymovskoe	78.82	334	*e*P	P	09 48 59.7	-0.7
TYV				pmax	pmax		
	comp=Z,19nm,1.3s						
MSHR	Mys Shultsa	78.84	322⇑	*e*P	P	09 49 02.3	+1.6
H04A	Detroit Lake	79.12	35	*e*P	P	09 49 02.7	+0.4
	comp=Z,24nm,1.2s						
H04A				*e*pP	pP	09 49 36.3	+1.9
PPBI	Pangkal Pinang	79.16	271	P	P	09 49 02.8	-0.3
PINE	Pine Mountain	79.24	36	*e*P	P	09 49 04.2	+1.1
	comp=Z,40nm,1.2s						
PINE				*e*pP	pP	09 49 36.9	+1.6
R11A	Troy Canyon, C	79.25	43	*e*P	P	09 49 04.2	+0.9
	comp=Z,29nm,1.6s						
R11A	Troy Canyon, C	79.25	43	P	P	09 49 04.4	+1.1
	baz=236						
TUC	Tucson	79.37	51	*e*P	P	09 49 05.1	+1.1
	comp=Z,33nm,1.5s						
TUC				*e*pP	pP	09 49 36.5	+0.6
TUC	Tucson	79.37	51	*e*P	P	09 49 05.1	+1.1
TUC				*e**PP	pP	09 49 36.5	+0.6
TUC				pmax	pmax		
	comp=Z,33nm,1.5s						
TUC	Tucson	79.37	51	P	P	09 49 05.5	+1.6
	baz=240						
USA0B	Ussuriysk Arra	79.38	324	*e*P	P	09 49 04.1	+0.5
	comp=Z,71nm,1.6s						
USRK	Ussuriysk Ar.	79.38	324	P	P	09 49 04.8	+1.3
	comp=Z,6.2nm,0.7s,baz=103,slow=3.4,SNR=12						
USRK				pP	pP	09 49 34.9	-0.4
	comp=Z,0.8nm,0.5s,baz=173,slow=26,SNR=1.1						
USRK				LR	LR	10 17 39.6	
	comp=Z,186nm,22.0s,baz=107,slow=31						
KASI	Kota Agung	79.67	268	P	P	09 49 04.3	-1.6
X16A	Lo Mia Camp, P	79.96	49	*e*P	P	09 49 08.6	+1.3
	comp=Z,10nm,1.1s						
319A	Douglas	80.02	52	*e*P	P	09 49 07.7	+0.2
	comp=Z,20nm,1.0s						
319A				*e*pP	pP	09 49 40.8	+1.2
LCMT	Little Creek M	80.07	45	*e*P	P	09 49 08.8	+1.1
	comp=Z,47nm,2.0s						
LCMT				*e*pP	pP	09 49 40.1	+0.4
I07A	Izee	80.23	37	*e*P	P	09 49 09.3	+1.0
	comp=Z,18nm,1.1s						
LWLI	Liwa	80.23	268	P	P	09 49 08.5	-0.6
CCUT	Cedar City	80.28	45	*e*P	P	09 49 10.2	+1.3
	comp=Z,22nm,1.3s						
CCUT				*e*pP	pP	09 49 43.0	+2.0
MDSI	Maura Dua	80.29	269	P	P	09 49 07.7	-1.5
KNB	Kanab	80.36	46	*e*P	P	09 49 10.6	+1.3
	comp=Z,26nm,1.3s						
KNB				*e*pP	pP	09 49 43.1	+1.7
KNB	Kanab	80.36	46	*e*P	P	09 49 10.6	+1.3
KNB				*e**PP	pP	09 49 43.1	+1.7
KNB				pmax	pmax		
	comp=Z,26nm,1.3s						
J08A	Circle Bar Ran	80.39	38	*e*P	P	09 49 10.1	+0.9
	comp=Z,39nm,1.4s						
J08A				*e*pP	pP	09 49 42.5	+1.1
U15A	North Rim	80.41	46	*e*P	P	09 49 10.9	+1.2
	comp=Z,22nm,1.4s						
PSUT	Pine Spring	80.48	44	*e*P	P	09 49 10.5	+0.6
	comp=Z,15nm,1.3s						
PSUT				*e*pP	pP	09 49 42.7	+0.7
SZCU	Shurtz Canyon	80.49	45	*e*P	P	09 49 09.8	-0.2
	comp=Z,19nm,1.3s						
HPIG		80.77	58	*e*P	P	09 49 12.6	+0.9
	comp=Z,16nm,1.1s						
HPIG				*e*pP	pP	09 49 44.9	+1.1
ELK	Elko	80.82	41	*e*P	P	09 49 12.1	+0.3
	comp=Z,24nm,1.4s						
ELK				*e*pP	pP	09 49 45.1	+1.1
ELK	Elko	80.82	41	*e*P	P	09 49 12.1	+0.3
ELK				*e**PP	pP	09 49 45.2	+1.1
ELK				pmax	pmax		
	comp=Z,24nm,1.4s						
D05A	Enumclaw	80.84	33	*e*pP	pP	09 49 46.1	+2.5
PKCU	Pink Cliffs	80.93	46	*e*P	P	09 49 11.6	-1.0
	comp=Z,130nm,2.0s						
PKCU				*e*pP	pP	09 49 48.2	+3.5
MDJ	Mudanjiang	80.98	323	P	P	09 49 12.7	+0.5
MDJ				pP	pwP	09 49 45.8	-0.8
MDJ				sP	sP	09 50 00.3	+2.8
MDJ				PP	PP	09 52 19.0	0.0
MDJ				S	S	09 59 11.4	+0.8
MDJ				sS	sS	10 00 09.9	+4.5
MDJ				SS	SS	10 04 30.0	+1.7
MDJ				pmax	pmax		
	comp=Z,28nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,630nm,6.4s						
MDJ				LR	LR		
	comp=Z,550nm,29.5s						
MDJ				LR	LR		
	comp=Z,400nm,32.7s						
MDJ				LR	LR		
	comp=Z,670nm,36.6s						
MDJ	Mudanjiang	80.98	323	*e*P	P	09 49 13.0	+0.8
	comp=Z,62nm,1.5s						
LHSI	Lahat	81.11	269	P	P	09 49 10.8	-2.8
G08A	Pilot Rock	81.28	36	*e*P	P	09 49 14.7	+0.8
	comp=Z,33nm,1.2s						
NJ2	Nanjing	81.29	308	*e*P	P	09 49 14.8	+0.7
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
MTPU	Mount Pierson	81.33	45	*e*P	P	09 49 16.3	+1.6
	comp=Z,18nm,1.2s						
MTPU				*e*pP	pP	09 49 49.3	+2.5
NKL	Nikolayevsk	81.34	335	*e*P	P	09 49 12.4	-1.4
NKL				*e*		09 49 45.0	
NKL				pmax	pmax		
	comp=Z,65nm,1.5s						
A04D	Lummi Island	81.48	32	P	P	09 49 16.0	+1.3
	baz=229						
GRNR	Gornyy	81.48	331	*e*P	P	09 49 15.0	+0.3
GRNR				pmax	pmax		
	comp=Z,29nm,1.2s						
ZAIG	Zacatecas	81.54	63	*e*P	P	09 49 16.0	0.0
	comp=Z,18nm,1.2s						
ZAIG				*e*pP	pP	09 49 50.4	+2.2
LTY	Liberty	81.58	34	*e*P	P	09 49 15.8	+0.4
	comp=Z,22nm,1.4s						
LTY				*e*pP	pP	09 49 47.6	0.0
MSU	Marysvale	81.58	45	*e*P	P	09 49 15.4	-0.4
MSU				*e*pP	pP	09 49 49.2	+1.2
MSU	Marysvale	81.58	45	*e*P	P	09 49 15.4	-0.4
MSU				*e**PP	pP	09 49 49.2	+1.2
HAWA	Hanford	81.64	35	*e*P	P	09 49 16.7	+1.0
	comp=Z,50nm,1.5s						
HAWA				*e*pP	pP	09 49 49.1	+1.2
TPRI	Tanjung Pinang	81.67	274	P	P	09 49 16.9	+0.4
JMBI	JAMBI	81.69	271	P	P	09 49 17.6	+1.0
BMO	Blue Mountains	81.95	37	*e*P	P	09 49 16.2	-1.3
	comp=Z,46nm,1.8s						
BMO	Blue Mountains	81.95	37	*e*P	P	09 49 16.2	-1.3
BMO				pmax	pmax		
	comp=Z,46nm,1.8s						
E08A	Dider Farm, El	81.96	35	*e*pP	pP	09 49 51.8	+2.2
DUG	Dugway, Tooele	82.06	43	*e*pP	pP	09 49 51.5	+0.9
GAMB	Gambell	82.27	1	*e*P	P	09 49 18.2	-0.2
	comp=Z,28nm,1.2s						
GAMB				*e*pP	pP	09 49 52.8	+2.1
BGU	Big Grassy Mou	82.32	42	*e*P	P	09 49 19.2	-0.3
	comp=Z,38nm,1.8s						
BGU				*e*pP	pP	09 49 52.2	+0.3
D08A	Wollman Farm,	82.39	35	*e*P	P	09 49 19.5	0.0
	comp=Z,134nm,1.9s						
D08A				*e*pP	pP	09 49 51.7	-0.2
NLU	North Lily Min	82.41	43	*e*P	P	09 49 20.2	+0.1
	comp=Z,35nm,1.9s						
NLU				*e*pP	pP	09 49 53.9	+1.4
E09A	Wood Farm, Sta	82.48	35	*e*P	P	09 49 20.0	0.0
	comp=Z,40nm,1.5s						
E09A				*e*pP	pP	09 49 53.1	+0.8
MASI	Maura Aman, Be	82.54	269	P	P	09 49 19.8	-1.4
MYKOM	Kota Tinggi	82.59	274	*e*P	P	09 49 21.8	+0.4
	comp=Z,183nm,1.4s						
MYKOM	Kota Tinggi	82.59	274	P	P	09 49 22.7	+1.4
TMUT	Trail Mountain	82.64	44	*e*P	P	09 49 24.0	+2.5
	comp=Z,94nm,1.9s						
F10A	Beach Ranch, E	82.66	36	*e*P	P	09 49 21.4	+0.3
	comp=Z,45nm,1.3s						
KLR	Kul'dur	82.70	328	P	P	09 49 20.9	-0.2
	comp=Z,3.0nm,0.8s,baz=118,slow=6.4,SNR=12						
MPU	Maple Canyon	82.73	44	*e*pP	pP	09 49 54.9	+0.7
SPUT	South Promonto	82.89	42	*e*P	P	09 49 22.7	+0.2
	comp=Z,39nm,1.5s						
SPUT				*e*pP	pP	09 49 56.1	+1.2
HLID	Hailey	82.91	39	*e*P	P	09 49 23.0	+0.5
	comp=Z,32nm,1.4s						

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HLID  Hailey            82.91  39   P       P        09 49 24.0 +1.4
      baz=236
CN2   Changchun         82.92 321  eP       P        09 49 22.6 +0.2
CN2                                 pmax    pmax
      comp=Z,30nm,1.1s
HVU   Hansel Valley     82.94  42  eP       P        09 49 23.8 +1.1
      comp=Z,62nm,1.8s
HVU   Hansel Valley     82.94  42  eP       P        09 49 23.8 +1.1
HVU                                 pmax    pmax
      comp=Z,62nm,1.8s
B08A  Colville Reser    82.97  34  eP       P        09 49 22.4 -0.1
      comp=Z,12nm,1.0s
B08A                               epP      pP       09 49 53.5 -1.3
MA2   Magadan           83.00 343  eP       P        09 49 21.5 -0.9
      comp=Z,51nm,1.5s
MA2                                 pP      pP       09 49 53.0 -1.6
MA2   Magadan           83.00 343⇓eP       P        09 49 21.4 -1.0
MA2                                 pmax    pmax
      comp=Z,39nm,1.5s
MA2   Magadan           83.00 343   P       P        09 49 21.0 -1.4
      comp=Z,6.4nm,0.5s,baz=122,slow=9.0,SNR=8.6
MA2                                 pP      pP       09 49 53.0 -1.6
      comp=Z,2.1nm,0.6s,baz=171,slow=3.3,SNR=1.7
SRU   San Rafael Swe    83.00  45  eP       P        09 49 24.0 +0.9
      comp=Z,26nm,1.3s
SRU   San Rafael Swe    83.00  45  eP       P        09 49 24.0 +0.9
SRU                                 pmax    pmax
      comp=Z,26nm,1.3s
CTU   Camp Tracy        83.01  43  eP       P        09 49 23.9 +0.8
      comp=Z,40nm,1.7s
CTU                                epP      pP       09 49 56.6 +1.0
LAZ   Ladron            83.05  50  eP       P        09 49 24.6 +1.0
LAZ                                epP      pP       09 49 57.4 +1.7
MNTX  Cornudas Mount    83.11  53  eP       P        09 49 24.9 +1.3
      comp=Z,27nm,1.6s
MNTX                               epP      pP       09 49 57.8 +1.9
MNTX  Cornudas Mount    83.11  53   P       P        09 49 25.0 +1.3
      baz=243
JLU   Jordanelle        83.16  43  eP       P        09 49 25.1 +1.1
      comp=Z,18nm,1.3s
JLU                                epP      pP       09 49 57.8 +1.3
KGM   Kluang            83.16 274   P       P        09 49 25.9 +1.6
C09A  Chrisman Ranch    83.19  34  eP       P        09 49 23.4 -0.3
      comp=Z,34nm,1.4s
C09A                               epP      pP       09 49 56.3 +0.3
BNM   Barren Site       83.31  51  epP      pP       09 49 59.4 +2.3
ANM   Nome              83.34   4  eP       P        09 49 24.3 +0.3
      comp=Z,14nm,1.2s
ANM                                epP      pP       09 49 57.6 +1.3
ANM   Nome              83.34   4  eP       P        09 49 24.3 +0.3
ANM                                e*PP     pP       09 49 57.6 +1.3
ANM                                 pmax    pmax
      comp=Z,14nm,1.2s
TX31  Lajitas Ar. Si    83.40  56  eP       P        09 49 26.9 +1.6
LTX   Lajitas           83.40  56  eP       P        09 49 26.8 +1.5
LTX                                epP      pP       09 49 56.9 -0.6
LTX   Lajitas           83.40  56  eP       P        09 49 26.8 +1.5
LTX                                e*PP     pP       09 49 56.9 -0.6
TXAR  Lajitas Array     83.40  56   P       P        09 49 26.8 +1.5
      comp=Z,3.4nm,0.7s,baz=217,slow=8.3,SNR=40
TXAR                                pP      pP       09 49 56.9 -0.6
      comp=Z,2.5nm,1.1s,baz=243,slow=5.5,SNR=1.9
TXAR                                PKKPbc  PKKPbc   10 07 46.3 +1.7
      comp=Z,0.4nm,0.8s,baz=121,slow=4.8,SNR=4.6
TXAR                                PKPPKP  P'P'df   10 15 51.4 +1.9
      comp=Z,0.2nm,0.9s,baz=90,slow=0.9,SNR=2.8
TXAR                                LR      LR       10 18 36.7
      comp=Z,81nm,19.8s,baz=0.0,slow=30
MVCO  Mesa Verde        83.43  47   P       P        09 49 26.6 +1.1
      baz=241
PV05  Paradox Valley    83.44  46  eP       P        09 49 27.4 +1.9
      comp=Z,28nm,1.1s
PV05                               epP      pP       09 50 00.1 +2.4
TCUT  Toone Canyon      83.46  43  eP       P        09 49 26.5 +1.0
      comp=Z,44nm,1.0s
PV09  Paradox Valley    83.63  46  eP       P        09 49 27.5 +1.0
PV10  Paradox Valley    83.63  46  epP      pP       09 50 03.1 +4.4
PV19  Morning Glory     83.64  46  eP       P        09 49 27.6 +1.1
      comp=Z,32nm,1.1s
PV19                               epP      pP       09 50 02.8 +4.2
PV17  East Wray Mesa    83.64  46  eP       P        09 49 27.7 +1.3
      comp=Z,62nm,1.6s
PV17                               epP      pP       09 50 00.5 +1.9
PV14  Lion Creek, Pa    83.64  46  eP       P        09 49 27.1 +0.6
      comp=Z,24nm,1.1s
PV20  West Nyswonger    83.66  46  epP      pP       09 50 02.6 +3.8
PV13  Radium Mtn., P    83.67  46  eP       P        09 49 27.9 +1.2
      comp=Z,44nm,1.5s
PV13                               epP      pP       09 50 00.5 +1.7
PV16  Nyswonger Mesa    83.68  46  eP       P        09 49 27.3 +0.6
      comp=Z,65nm,1.8s
PV16                               epP      pP       09 50 00.7 +1.8
PV23  Carpenter Ridg    83.69  46  eP       P        09 49 27.8 +1.0
      comp=Z,68nm,1.5s
PV23                               epP      pP       09 50 00.1 +1.1
PV03  Paradox Valley    83.70  46  eP       P        09 49 27.3 +0.5
      comp=Z,56nm,1.8s
PV03                               epP      pP       09 50 00.8 +1.8
PV11  David Mesa, Pa    83.70  46  eP       P        09 49 28.1 +1.3
      comp=Z,57nm,1.6s
PV11                               epP      pP       09 50 00.9 +1.9
PV04  Paradox Valley    83.73  46  eP       P        09 49 27.4 +0.5
      comp=Z,90nm,2.0s
PV04                               epP      pP       09 50 00.9 +1.8
PV02  Paradox Valley    83.75  46  epP      pP       09 50 01.0 +1.8
CAST  Castle Rocks      83.76  10  eP       P        09 49 24.6 -1.6
      comp=Z,17nm,1.1s
PV12  Saucer Basin,     83.76  46  eP       P        09 49 27.9 +0.8
      comp=Z,41nm,1.4s
PV12                               epP      pP       09 50 02.0 +2.7
PV21  Cone Mtn., Par    83.77  46  eP       P        09 49 28.0 +0.8
      comp=Z,50nm,1.5s
PV21                               epP      pP       09 50 02.2 +2.9
ANMO  Albuquerque       83.80  50  eP       P        09 49 28.2 +0.8
      comp=Z,22nm,1.3s
ANMO  Albuquerque       83.80  50⇓eP       P        09 49 27.7 +0.3
ANMO                                pmax    pmax
      comp=Z,17nm,1.5s
ANMO  Albuquerque       83.80  50   P       P        09 49 28.7 +1.3
      baz=242
PV01  Paradox Valley    83.83  46  eP       P        09 49 28.1 +0.7
      comp=Z,19nm,1.1s
PV07  Paradox Valley    83.93  46  eP       P        09 49 28.9 +1.0
      comp=Z,24nm,1.2s
PV07                               epP      pP       09 50 02.0 +1.9
PV15  Paradox Valley    83.99  46  epP      pP       09 50 04.3 +3.8
WHN   Wuhan             84.04 305   P       P        09 49 29.6 +1.2
NEW   Newport           84.08  34   P       P        09 49 27.1 -1.1
      comp=Z,1.0nm,0.7s,baz=217,slow=5.1,SNR=3.0
NEW                                 pP      pP       09 49 59.7 -1.0
      comp=Z,1.9nm,0.7s,baz=232,slow=6.7,SNR=3.4
TRF   Thorofare Moun    84.09  11  eP       P        09 49 27.8 -0.3
      comp=Z,169nm,1.9s
MAW   Mawson            84.29 199   P       P        09 49 31.1 +2.1
      baz=84,SNR=12
MAW   Mawson            84.29 199  eP       P        09 49 30.7 +1.7
      comp=Z,74nm,1.9s
MAW   Mawson            84.29 199   P       P        09 49 29.1 +0.1
      comp=Z,37nm,0.8s,baz=138,slow=8.0,SNR=16
DHY   Denali Highway    84.30  12  eP       P        09 49 29.1  0.0
      comp=Z,41nm,1.6s
RND   Reindeer          84.31  11  eP       P        09 49 28.4 -0.7
      comp=Z,178nm,1.9s
RND   Reindeer          84.31  11  eP       P        09 49 28.4 -0.7
RND                                 pmax    pmax
      comp=Z,178nm,1.9s
KTGM  Kuala Trenggan    84.42 278   P       P        09 49 33.1 +2.4
TIA   Tai'an            84.51 311   P       P        09 49 31.1 +0.5
AHID  Auburn Hatcher    84.52  41  eP       P        09 49 30.4 -0.4
      comp=Z,42nm,1.3s
AHID                               epP      pP       09 50 04.4 +1.1
MCMT  McKenzie Canyo    84.55  39  eP       P        09 49 32.2 +1.3
MCMT                               epP      pP       09 50 04.9 +1.5
MCK   McKinley          84.59  11  eP       P        09 49 29.5 -0.9
      comp=Z,82nm,1.4s
MCK   McKinley          84.59  11  eP       P        09 49 29.5 -0.9
MCK                                 pmax    pmax
      comp=Z,82nm,1.4s
S22A  4UR Ranch, Cre    84.85  47  eP       P        09 49 34.0 +1.3
      comp=Z,20nm,1.0s
S22A  4UR Ranch, Cre    84.85  47   P       P        09 49 34.4 +1.7
      baz=242
PDSI  Padang            84.93 271   P       P        09 49 32.0 -1.3
REDW  Red Top Meadow    84.98  41  eP       P        09 49 34.3 +1.2
      comp=Z,43nm,1.3s
REDW                               epP      pP       09 50 06.7 +0.9
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DLMT  Dillon            84.99  39  eP       P        09 49 34.0 +1.0
      comp=Z,33nm,1.2s
DLMT                               epP      pP       09 50 06.8 +1.2
TPAW  Teton Pass        84.99  41  eP       P        09 49 32.6 -0.7
      comp=Z,52nm,1.5s
TPAW                               epP      pP       09 50 06.0 +0.2
LNIG  Linares           84.99  62  eP       P        09 49 33.8 +0.5
      comp=Z,133nm,1.8s
LNIG                               epP      pP       09 50 07.2 +1.5
MSO   Missoula          85.02  37  epP      pP       09 50 05.1 -0.5
MSO   Missoula          85.02  37   P       P        09 49 33.8 +0.7
      baz=236
FXWY  Fox Creek         85.02  41  eP       P        09 49 33.8 +0.5
      comp=Z,20nm,1.1s
O20A  White River Ci    85.03  45  eP       P        09 49 33.6 +0.2
      comp=Z,33nm,1.3s
O20A                               epP      pP       09 50 07.4 +1.4
SNOW  Snow King Moun    85.10  41  eP       P        09 49 34.5 +0.7
      comp=Z,60nm,1.2s
SNOW                               epP      pP       09 50 07.6 +1.3
PPI   Padang Panjang    85.14 271   P       P        09 49 33.9 -0.4
FRIM  Kepong            85.16 275   P       P        09 49 35.4 +1.0
DLBC  Dease Lake        85.20  22  eP       P        09 49 34.2 +0.5
      comp=Z,67nm,1.8s
DLBC  Dease Lake        85.20  22   P       P        09 49 33.4 -0.3
      comp=Z,4.7nm,0.9s,baz=244,slow=7.9,SNR=6.5
IMW   Indian Meadow     85.21  41  eP       P        09 49 34.6 +0.3
      comp=Z,32nm,1.4s
IMW                                epP      pP       09 50 08.2 +1.3
MOOW  Moose Ponds       85.25  41  eP       P        09 49 34.0 -0.4
      comp=Z,9.9nm,1.3s
MOOW                               epP      pP       09 50 08.0 +0.9
LOHW  Long Hollow       85.27  41  eP       P        09 49 34.4 -0.2
      comp=Z,26nm,1.4s
LOHW                               epP      pP       09 50 08.1 +0.9
LRM   Limekiln Ridge    85.32  38  epP      pP       09 50 07.7 +0.4
QLMT  Earthquake Lak    85.40  40  eP       P        09 49 34.5 -0.7
QLMT                               epP      pP       09 50 09.5 +1.8
RIDG  Independ'e Rid    85.41  13  eP       P        09 49 34.7 +0.2
      comp=Z,33nm,1.2s
WRH   Wood River Hil    85.42  11  eP       P        09 49 34.4 -0.2
      comp=Z,96nm,1.2s
SMCO  Snowmass          85.43  46  eP       P        09 49 35.2 -0.5
      comp=Z,10.0nm,0.9s
SMCO                               epP      pP       09 50 09.6 +1.4
SEY   Seymchan          85.44 346   P       P        09 49 33.8 -0.8
      comp=Z,9.7nm,0.7s,baz=146,slow=6.0,SNR=25
SEY                                 pP      pP       09 50 05.7 -1.3
      comp=Z,5.0nm,0.8s,baz=133,slow=5.3,SNR=2.1
FLWY  Flagg Ranch       85.45  40  eP       P        09 49 35.3 -0.1
      comp=Z,32nm,1.1s
FLWY                               epP      pP       09 50 09.5 +1.5
MLY   Manley            85.48  10  eP       P        09 49 33.7 -1.2
      comp=Z,18nm,0.9s
MLY                                epP      pP       09 50 07.6 +0.3
YPP   Pitchstone Pla    85.49  40  epP      pP       09 50 10.1 +1.8
BW06  Boulder Array     85.49  42  eP       P        09 49 36.1 +0.4
      comp=Z,17nm,1.1s
BW06                               epP      pP       09 50 08.9 +0.6
BW06  Boulder Array     85.49  42   P       P        09 49 36.1 +0.4
      baz=240
PD31  Pinedale Array    85.49  42  eP       P        09 49 35.0 -0.7
PD31                               epP      pP       09 50 09.0 +0.7
PDAR  Pinedale Array    85.49  42  eP       P        09 49 35.8 +0.1
PDAR                                pP      pP       09 50 06.9 -1.4
PDAR                                PKKPbc  PKKPbc   10 07 40.0 -0.6
PDAR  Pinedale Array    85.49  42   P       P        09 49 35.3 -0.4
      comp=Z,1.9nm,0.8s,baz=214,slow=2.7,SNR=17
PDAR                                pP      pP       09 50 06.9 -1.4
      comp=Z,5.1nm,0.7s,baz=212,slow=2.7,SNR=9.8
PDAR                                PKKPbc  PKKPbc   10 07 40.0 -0.6
      comp=Z,1.0nm,0.9s,baz=69,slow=3.2,SNR=6.8
PDAR                                LR      LR       10 22 12.5
      comp=Z,178nm,18.1s,baz=268,slow=32
YHB   Horse Butte       85.50  40  epP      pP       09 50 10.2 +1.9
YFT   Old Faithful      85.56  40  epP      pP       09 50 12.1 +3.5
HDA   Harding Lake      85.58  12  eP       P        09 49 34.6 -0.7
      comp=Z,32nm,0.8s
HDA   Harding Lake      85.58  12   P       P        09 49 34.9 -0.4
      baz=206
YMR   Madison River     85.60  40  eP       P        09 49 36.0 -0.1
      comp=Z,76nm,1.7s
YMR                                epP      pP       09 50 10.7 +1.9
BOZ   Bozeman (W)       85.69  39  eP       P        09 49 36.9 +0.4
      comp=Z,32nm,1.4s
BOZ                                epP      pP       09 50 09.5 +0.4
BOZ   Bozeman (W)       85.69  39   P       P        09 49 37.9 +1.4
      baz=238
H17A  Grant Village     85.69  40  epP      pP       09 50 11.6 +2.3
SDCO  Great Sand Dun    85.78  48  eP       P        09 49 41.8 +4.5
SDCO                               epP      pP       09 50 11.1 +1.2
YNR   Norris Junctio    85.80  40  epP      pP       09 50 12.8 +3.0
SCRK  Sand Creek        85.80  13  eP       P        09 49 35.8 -0.8
      comp=Z,85nm,2.0s
TCOL  CIGO, UAF Yank    85.83  11   P       P        09 49 35.6 -1.0
      baz=205
COLA  College           85.83  11  eP       P        09 49 35.6 -0.9
      comp=Z,61nm,0.8s
COLA                               epP      pP       09 50 09.4 +0.4
COLA  College           85.83  11d iP      P        09 49 35.5 -1.0
COLA                                pmax    pmax
      comp=Z,62nm,0.9s
MDM   Murphy Dome       85.84  11  eP       P        09 49 35.4 -1.3
      comp=Z,82nm,1.3s
MDM                                epP      pP       09 50 09.5 +0.3
IM3   Indian Mountai    85.92   8  eP       P        09 49 36.4 -0.5
IM3                                epP      pP       09 50 09.0 -0.4
IL1   Eielson Array     85.92  12  eP       P        09 49 35.9 -1.1
ILAR  Eielson Array     85.92  12   P       P        09 49 36.0 -0.9
      comp=Z,8.6nm,0.6s,baz=227,slow=6.1,SNR=181
ILAR                                pP      pP       09 50 07.7 -1.9
      comp=Z,3.4nm,0.8s,baz=227,slow=3.6,SNR=2.5
ILAR                                PKKPbc  PKKPbc   10 07 37.5 -2.9
      comp=Z,0.4nm,0.7s,baz=358,slow=3.4,SNR=4.5
ILAR                                PKPPKP  P'P'df   10 15 45.4 +3.4
      comp=Z,1.0nm,1.2s,baz=98,slow=1.4,SNR=4.4
ILAR                                LR      LR       10 19 35.6
      comp=Z,87nm,20.6s,baz=234,slow=30
ILB   Eielson Array     85.92  12  eP       P        09 49 36.1 -0.9
IPM   Ipoh              86.12 276  eP       P        09 49 39.4 +0.2
      comp=Z,157nm,1.1s
POKR  Poker Plat Res    86.13  11   P       P        09 49 38.1 +0.1
      baz=206
HRY   Holter Researc    86.17  38  epP      pP       09 50 11.8 +0.4
T25A  Trinidad          86.28  49  epP      pP       09 50 13.5 +1.4
MNSI  Mandailing Nat    86.31 272   P       P        09 49 38.7 -1.4
833A  Chaparral WMA,    86.40  59  epP      pP       09 50 16.0 +3.4
RWWY  Rawlins           86.47  44  epP      pP       09 50 13.0 -0.2
KULM  Kulim             86.74 277  eP       P        09 49 42.8 +0.6
      comp=Z,81nm,1.1s
PRP   Porcupine Dome    86.85  12  eP       P        09 49 41.0 -0.7
      comp=Z,31nm,1.1s
PRP                                epP      pP       09 50 15.3 +1.0
DAWY  Dawson            86.92  15  eP       P        09 49 41.2 -0.8
      comp=Z,24nm,0.9s
JCT   Junction City     86.93  57  eP       P        09 49 44.1 +1.3
      comp=Z,23nm,1.3s
JCT                                epP      pP       09 50 17.7 +2.5
JCT   Junction City     86.93  57  eP       P        09 49 44.1 +1.3
JCT                                e*PP     pP       09 50 17.7 +2.5
JCT                                 pmax    pmax
      comp=Z,23nm,1.3s
JCT   Junction City     86.93  57   P       P        09 49 43.8 +1.0
      baz=246
N23A  Red Feather La    86.94  45  epP      pP       09 50 16.8 +1.4
N23A  Red Feather La    86.94  45   P       P        09 49 43.9 +1.1
      baz=242
BJT   Baijiatuau        86.94 314  eP       P        09 49 43.1 +0.5
      comp=Z,184nm,1.8s
BJT   Baijiatuau        86.94 314  eP       P        09 49 43.1 +0.5
BJT                                 pmax    pmax
      comp=Z,184nm,1.8s
BJI   Beijing           86.95 314   P       P        09 49 43.1 +0.6
BJI                                 pP      pwP      09 50 17.6 +0.3
BJI                                 S       S        10 00 13.3 +3.0
BJI                                 pmax    pmax
      comp=Z,19nm,1.5s
BJI                                 LR      LR
      comp=Z,180nm,6.1s
BJI                                 LR      LR
      comp=Z,210nm,5.9s
RDOG  Red Dog Mine      86.96   4  eP       P        09 49 41.3 -0.8
      comp=Z,38nm,1.8s
GCMT  Greycliff         86.96  39  epP      pP       09 50 17.1 +1.7
EGAK  Eagle             87.11  14  eP       P        09 49 42.8  0.0
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      comp=Z,17nm,1.1s
SKLT  Songkhla          87.38 278   P       P        09 49 48.8 +3.5
K22A  Casper            87.38  43  epP      pP       09 50 18.3 +0.9
PHWY  Pilot Hill        87.45  45  epP      pP       09 50 18.9 +0.9
SKNT  Sakolnakorn       87.57 289   P       P        09 49 48.5 +2.4
PSI   Prapat            87.57 274  eP       P        09 49 46.2 -0.1
      comp=Z,120nm,1.1s
PSI   Prapat            87.57 274   P       P        09 49 46.3 -0.1
      comp=Z,59nm,1.0s,baz=180,slow=3.8,SNR=34
COLD  Coldfoot          87.60   9  eP       P        09 49 44.7 -0.4
      comp=Z,12nm,1.3s
COLD                               epP      pP       09 50 21.4 +3.7
BILL  Bilibino          87.66 353  eP       P        09 49 44.8 -0.5
      comp=Z,18nm,0.8s
BILL                               epP      pP       09 50 19.2 +1.3
BILL  Bilibino          87.66 353  eP       P        09 49 44.8 -0.5
BILL                               e*PP     pP       09 50 19.2 +1.3
BILL                                pmax    pmax
      comp=Z,18nm,0.8s
ZEA   Zeya              87.70 330  eP       P        09 49 45.8  0.0
ZEA                                 pmax    pmax
      comp=N,37nm,1.4s
ZEA                                 pmax    pmax
      comp=Z,83nm,1.4s
ENH   Enshi             87.75 303  eP       P        09 49 47.6 +0.9
      comp=Z,260nm,1.9s
GO06  Curarrehue        87.91 131  eP       P        09 49 48.7 +1.1
      comp=Z,10nm,0.9s
ABTX  Abilene, Hawle    87.91  55  eP       P        09 49 48.1 +0.6
      comp=Z,67nm,1.1s
ABTX                               epP      pP       09 50 19.7 -0.3
ABTX  Abilene, Hawle    87.91  55   P       P        09 49 48.9 +1.4
      baz=246
PLCA  Paso Flores       88.11 132  eP       P        09 49 51.0 +2.6
      comp=Z,36nm,1.7s
PLCA  Paso Flores       88.11 132  eP       P        09 49 51.0 +2.6
PLCA                                pmax    pmax
      comp=Z,36nm,1.7s
CCIG  Comitan           88.24  72  eP       P        09 49 50.1 +0.6
      comp=Z,52nm,1.9s
SRAK  Srakaew           88.32 285   P       P        09 49 49.8 +0.2
GSI   Gunungsitoli      88.37 272  eP       P        09 49 51.0 +1.0
      comp=Z,310nm,1.3s
GSI   Gunungsitoli      88.37 272   P       P        09 49 50.3 +0.3
TRTT  Trang             88.47 279   P       P        09 49 52.6 +2.2
TIY   Taiyuan           88.54 311  eP       P        09 49 51.8 +1.5
TIY                                 pmax    pmax
      comp=Z,38nm,1.3s
TIY                                 pmax    pmax
      comp=Z,190nm,4.8s
GYA   Guiyang           88.61 298⇑iP       P        09 49 51.1 +0.1
GYA                                 pP      pwP      09 50 27.8 +1.9
GYA                                 sP      sP       09 50 41.0 +4.3
GYA                                 PP      PP       09 53 25.5 +4.0
GYA                                 SKS     SKSac    10 00 07.8 -0.9
GYA                                 S       S        10 00 25.2 -1.9
GYA                                 pmax    pmax
      comp=Z,20nm,1.0s
GYA                                 pmax    pmax
      comp=Z,130nm,6.4s
NONG  Nongkai           88.69 289   P       P        09 49 54.4 +3.1
435B  Jarrell           88.80  57  epP      pP       09 50 28.7 +4.5
KCSI  Kotacane, Aceh    88.89 274   P       P        09 49 52.2 -0.2
CHAI  Chaiyaphum        89.00 287   P       P        09 49 56.5 +3.6
PATY  Pattaya           89.04 284   P       P        09 49 58.0 +5.0
SYO   Syowa Base        89.12 192⇑eP       P        09 49 52.0 -0.4
SYO   Syowa Base        89.12 192⇑iPcP     PcP      09 49 53.6 -0.2
HIA   Hailar            89.17 323  eP       P        09 49 53.1 +0.1
      comp=Z,51nm,1.6s
HIA   Hailar            89.17 323  eP       P        09 49 53.1 +0.1
HIA                                 pmax    pmax
      comp=Z,51nm,1.6s
WMOK  Wichita Mounta    89.41  53  epP      pP       09 50 30.4 +3.5
SNAA  Sanae             89.65 177   P       P        09 49 56.2 +1.2
SNAA  Sanae             89.65 177  eP       P        09 49 56.2 +1.2
      comp=Z,50nm,1.1s
SNAA  Sanae             89.65 177d iP      P        09 49 55.7 +0.7
VNA3  Neumayer Olymp    89.65 175   P       P        09 49 56.5 +1.5
XAN   Xi'an             89.66 306   P       P        09 49 56.3 +0.7
XAN                                 pP      pwP      09 50 31.7 +0.9
XAN                                 S       S        10 00 40.4 +4.0
XAN                                 pmax    pmax
      comp=Z,34nm,1.8s
XAN                                 pmax    pmax
      comp=Z,310nm,3.7s
XAN   Xi'an             89.66 306  eP       P        09 49 56.4 +0.8
      comp=Z,128nm,1.8s
RSSD  Black Hills       89.67  43  eP       P        09 49 55.9 +0.3
      comp=Z,46nm,1.9s
RSSD                               epP      pP       09 50 29.6 +1.3
RSSD  Black Hills       89.67  43  eP       P        09 49 55.9 +0.3
RSSD                               e*PP     pP       09 50 29.6 +1.3
RSSD                                pmax    pmax
      comp=Z,47nm,1.9s
RSSD  Black Hills       89.67  43   P       P        09 49 56.8 +1.1
      baz=243
VNA2  Neumayer--Watz    90.13 176   P       P        09 49 59.1 +1.9
      baz=187,slow=3.0
PHET  Kaeng Krachan     90.17 283   P       P        09 50 01.9 +3.6
VNA1  Neumayer--Stat    90.34 175   P       P        09 50 00.0 +1.9
HHC   Hu-ho-hao-te      90.46 313  eP       P        09 50 00.2 +0.9
HHC                                 S       S        10 00 42.4 -1.2
HHC                                 sS      sS       10 01 39.4 -0.1
HHC                                 pmax    pmax
      comp=Z,38nm,1.1s
HHC                                 pmax    pmax
      comp=Z,340nm,4.2s
HHC                                 LR      LR
      comp=Z,220nm,15.6s
HHC                                 LR      LR
      comp=Z,130nm,16.4s
HHC                                 LR      LR
      comp=Z,920nm,17.3s
NVL   N'lazarevskaya    90.62 182⇓iP       P        09 50 01.1 +1.7
NVL                                 pmax    pmax
      comp=Z,44nm,1.2s
EFI   East Falkland     90.78 146⇓eP       P        09 50 01.3 +0.8
UTTA  Uttaradit         90.91 288   P       P        09 50 04.8 +3.1
PEL   Peldehue          90.99 125  eP       P        09 50 04.2 +2.2
      comp=Z,15nm,0.9s
SRDT  SRDT              91.10 285   P       P        09 50 06.4 +3.7
NANT  Nan               91.12 289   P       P        09 50 05.9 +3.2
UTHA  Uthaitani         91.20 286   P       P        09 50 06.0 +2.9
BTO   Baotou            91.44 313  eP       P        09 50 04.1 +0.3
KMI   Kunming           91.45 296   P       P        09 50 06.1 +1.7
KMI                                 pP      pwP      09 50 42.2 +2.9
KMI                                 sP      sP       09 50 51.5 +1.3
KMI                                 S       S        10 00 51.4 -2.1
KMI                                 pmax    pmax
      comp=Z,26nm,1.9s
KMI                                 pmax    pmax
      comp=Z,290nm,3.7s
KMI                                 LR      LR
      comp=Z,160nm,24.5s
KMI                                 LR      LR
      comp=Z,160nm,21.8s
KMI                                 LR      LR
      comp=Z,200nm,25.6s
DGMT  Dagmar            91.53  39  epP      pP       09 50 37.5 +0.9
DGMT  Dagmar            91.53  39   P       P        09 50 06.4 +2.4
      baz=243
SUKH  Sukhothai         91.65 288   P       P        09 50 08.5 +3.4
INK   Inuvik            91.76  14  eP       P        09 50 03.4 -1.0
      comp=Z,30nm,1.2s
INK                                 pP      pP       09 50 35.4 -1.9
INK   Inuvik            91.76  14   P       P        09 50 03.8 -0.7
      comp=Z,11nm,0.9s,baz=197,slow=4.9,SNR=32
INK                                 pP      pP       09 50 35.4 -1.9
      comp=Z,6.1nm,0.9s,baz=208,slow=6.2,SNR=4.5
UMPA  Umpang Tak        91.94 286   P       P        09 50 13.2 +6.6
PAYA  Payao             92.05 290   P       P        09 50 08.6 +1.6
GO04  Tololo Observa    92.06 123  eP       P        09 50 09.2 +2.0
      comp=Z,34nm,0.9s
GO04                               epP      pP       09 50 42.9 +2.6
TUL1  Leonard           92.11  53  eP       P        09 50 08.0 +1.0
      comp=Z,51nm,1.9s
TUL1  Leonard           92.11  53   P       P        09 50 08.8 +1.9
      baz=249
CM01  Chiang Mai Arr    92.56 288  eP       P        09 50 10.7 +1.3
CD2   Chengdu           92.58 302   P       P        09 50 10.9 +1.6
CD2                                 pmax    pmax
      comp=Z,20nm,0.4s
LCO   Las Campanas      92.59 122  eP       P        09 50 11.6 +1.9
      comp=Z,32nm,1.1s
LCO   Las Campanas      92.59 122  eP       P        09 50 11.6 +1.9
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LCO				pmax	pmax		
	comp=Z,32nm,1.1s						
CM31	Chiang Mai Arr	92.59	288	eP	P	09 50 11.0	+1.5
CMAR	Chiang Mai Arr	92.59	288	i P	P	09 50 11.1	+1.6
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR	Chiang Mai Arr	92.59	288	P	P	09 50 10.4	+0.9
	comp=Z,1.8nm,0.3s,baz=119,slow=2.8,SNR=17						
CMAR				pP	pP	09 50 41.1	-0.9
	comp=Z,0.9nm,0.3s,baz=116,slow=4.1,SNR=1.1						
CMMT	Chiang Mai	92.70	289	P	P	09 50 11.9	+1.9
CHTO	Chiang Mai	92.70	289	eP	P	09 50 11.4	+1.4
	comp=Z,77nm,1.7s						
CHTO	Chiang Mai	92.70	289	eP	P	09 50 11.4	+1.4
CHTO				pmax	pmax		
	comp=Z,77nm,1.7s						
CHTO	Chiang Mai	92.70	289	P	P	09 50 12.0	+2.0
JTS	JuntasAbangare	92.90	80	epP	pP	09 50 45.9	+2.0
MIAR	Mount Ida	93.32	55	epP	pP	09 50 48.3	+3.1
W39A	Magazine	93.39	54	eP	P	09 50 14.0	+1.2
	comp=Z,60nm,1.4s						
W39A				epP	pP	09 50 48.5	+2.9
W39A	Magazine	93.39	54	P	P	09 50 14.8	+2.0
	baz=250						
YKA	Yellowknife Ar	93.59	24	P	P	09 50 12.5	-0.5
	comp=Z,1.1nm,0.6s,baz=236,slow=4.1,SNR=19						
YKA				pP	pP	09 50 43.9	-1.9
	comp=Z,2.9nm,0.9s,baz=236,slow=4.2,SNR=6.2						
YKA				PKiKP	PKiKP	09 54 58.1	+0.1
	comp=Z,0.2nm,0.8s,baz=238,slow=1.6,SNR=4.1						
YKA				PKKPbc	PKKPdf	10 07 18.8	-0.6
	comp=Z,0.2nm,0.4s,baz=44,slow=2.0,SNR=10						
YKA				LR	LR	10 25 57.8	
	comp=Z,9.3nm,18.8s,baz=238,slow=31						
YKB5	Yellowknife Ar	93.59	24	eP	P	09 50 13.4	+0.3
YKB5				epP	pP	09 50 45.9	+0.1
YKW3	Yellowknife Ar	93.62	24	epP	pP	09 50 48.0	+2.0
HHAR	Hobbs	93.65	53	epP	pP	09 50 50.1	+3.3
LZH	Lanzhou	94.28	307	eP	P	09 50 18.5	+1.4
LZH				pP	pwP	09 50 52.8	+0.8
LZH				sP	sP	09 51 10.9	+7.9
LZH				PP	PP	09 54 02.4	-3.7
LZH				S	S	10 01 13.4	-4.6
LZH				SS	SS	10 07 43.7	+0.8
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZH				pmax	pmax		
	comp=Z,250nm,4.1s						
LZH				LR	LR		
	comp=Z,320nm,13.6s						
LZH				LR	LR		
	comp=Z,460nm,14.1s						
LZH				LR	LR		
	comp=Z,470nm,14.9s						
UALR	University of	94.36	55	epP	pP	09 50 54.3	+4.4
ECSD	EROS Data Cent	94.40	45	epP	pP	09 50 51.8	+1.7
U40A	Yellville	94.50	53	P	P	09 50 19.7	+1.8
	baz=250						
W41B	Gary Mavity, V	94.56	55	eP	P	09 50 23.3	+5.1
W41B				epP	pP	09 50 53.2	+2.2
WHAR	Wooly Hollow	94.57	54	epP	pP	09 50 52.7	+1.6
U41A	Viola	95.20	54	P	P	09 50 21.8	+0.7
	baz=251						
T41A	Mountain View	95.55	53	P	P	09 50 23.7	+1.0
	baz=251						
S41A	Jillco Farms,	95.74	52	P	P	09 50 24.1	+0.5
	baz=251						
T42A	Van Buren	96.06	53	eP	P	09 50 25.6	+0.7
	comp=Z,11nm,1.0s						
T42A				epP	pP	09 50 59.7	+1.9
T42A	Van Buren	96.06	53	P	P	09 50 25.6	+0.7
	baz=251						
SONA0	Songino Array	96.56	318	eP	P	09 50 25.8	-1.4
SONA0				epP	pP	09 50 59.1	-0.7
SONA0				ePKiKP	PKiKP	09 55 04.0	+0.2
SONM	Songino Array	96.56	318	P	P	09 50 25.8	-1.4
	comp=Z,1.0nm,0.8s,baz=104,slow=3.7,SNR=3.3						
SONM				pP	pP	09 50 59.1	-0.7
	comp=Z,0.3nm,0.4s,baz=148,slow=8.5,SNR=1.7						
SONM				PKiKP	PKiKP	09 55 04.0	+0.2
	comp=Z,0.6nm,0.8s,baz=162,slow=2.2,SNR=2.5						
T43A	Greenville	96.68	53	P	P	09 50 29.0	+1.2
	baz=252						
ULM	Lac du Bonnet	97.22	39	pP	pP	09 51 01.4	-1.3
	comp=Z,6.1nm,1.1s,baz=255,slow=3.7,SNR=6.6						
ULM				LR	LR	10 27 01.4	
	comp=Z,192nm,19.7s,baz=275,slow=31						
P42A	Winchester	97.42	51	P	Pdif	09 50 32.6	+1.5
	baz=252						
SPMN	Marine on St.	97.48	45	epP	pP	09 51 05.2	+1.2
SPMN	Marine on St.	97.48	45	P	Pdif	09 50 32.7	+1.5
	baz=251						
TIXI	Tiksi	97.90	345	⇑eP	P	09 50 31.9	-0.5
TIXI				pmax	pmax		
	comp=Z,11nm,1.3s						
G38A	Ridgeland	98.09	45	P	Pdif	09 50 35.4	+1.4
	baz=252						
GTA	Gaotai	98.37	309	⇑P	Pdif	09 50 36.3	+0.7
GTA				pP	pwP	09 51 11.3	+0.6
GTA				sP	sP	09 51 26.1	+4.7
GTA				S	S	10 01 46.3	-6.6
GTA				pmax	pmax		
	comp=Z,130nm,7.8s						
GTA				LR	LR		
	comp=Z,100nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,19.7s						
GTA				LR	LR		
	comp=Z,190nm,18.7s						
LPAZ	La Paz	99.72	111	P	Pdif	09 50 43.0	+0.3
LPAZ	La Paz	99.72	111	P	Pdif	09 50 43.0	+0.3
	comp=Z,1.4nm,0.8s,baz=230,slow=7.9,SNR=2.2						
LPAZ				LR	LR	10 27 20.5	
	comp=Z,218nm,19.3s,baz=254,slow=30						
ZAA1	Zalesovo Array	111.13	321	ePKiKP	PKiKP	09 55 29.6	-0.5
ZALV	Zalesovo Beam	111.13	321	PKiKP	PKiKP	09 55 29.6	-0.5
	comp=Z,5.3nm,0.5s,baz=170,slow=1.0,SNR=32						
MK31	Makanchi Array	112.32	314	PKIKP	PKiKP	09 55 31.8	-0.8
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MK32	Makanchi Array	112.32	314	ePdif	Pdif	09 51 37.5	+0.2
MK32				ePKiKP	PKiKP	09 55 31.9	-0.7
MKAR	Makanchi Array	112.32	314	Pdiff	Pdif	09 51 37.5	+0.2
	comp=Z,0.3nm,0.9s,baz=88,slow=4.5,SNR=2.6						
MKAR				PKiKP	PKiKP	09 55 31.9	-0.7
	comp=Z,5.9nm,0.5s,baz=181,slow=0.4,SNR=81						
MKAR				PKKPbc	PKKPbc	10 06 24.6	0.0
	comp=Z,0.6nm,0.7s,baz=281,slow=3.3,SNR=6.8						
MKAR				PKKPab	PKKPab	10 06 33.0	+2.0
	comp=Z,0.8nm,0.9s,baz=252,slow=3.2,SNR=3.9						
MAKZ	Makanchi	112.54	314	PKIKP	PKiKP	09 55 31.9	-1.1
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PDGK	Podgornoye	114.08	310	PKIKP	PKPdf	09 55 35.4	-0.8
PDGK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURK	Kurchatov	114.87	318	ePKiKP	PKPdf	09 55 37.0	-0.3
KURK				PP	PP	09 56 37.4	-0.6
KURK	Kurchatov	114.87	318	d iPKIKP	PKPdf	09 55 36.5	-0.8
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURBB	Kurchatov Arra	114.93	318	PKP	PKiKP	09 55 37.0	-0.4
	comp=Z,5.9nm,0.5s,baz=92,slow=1.7,SNR=38						
KURBB				PP	PP	09 56 37.3	-1.0
	comp=Z,0.7nm,0.2s,baz=93,slow=5.9,SNR=5.0						
SCHQ	Schefferville	115.31	38	PKKPbc	PKKPbc	10 06 12.4	-2.1
	comp=Z,2.9nm,0.7s,baz=136,slow=2.8,SNR=6.8						
KSH	Kashi	116.51	305	PKP	PKiKP	09 55 42.7	+1.7
KSH				PP	PP	09 56 49.8	-0.2
KSH				SKS	SKSdf	10 02 33.8	-7.6
KSH				SKKS	SKKSac	10 03 30.1	-8.1
KSH				SS	SS	10 12 46.6	+1.0
KSH				AMB	AMB		
	comp=Z,380nm,5.1s						
KSH				LR	LR		
	comp=Z,160nm,4.1s						
KSH				LR	LR		
	comp=Z,140nm,5.0s						
KSH				LR	LR		
	comp=Z,310nm,5.8s						
NRN	Naryn	116.57	308	ePKPdf	PKPdf	09 55 41.2	-0.2
NRN	Naryn	116.57	308	ePKIKP	PKPdf	09 55 41.2	-0.2
TKM2	Tokmak 2	116.92	309	P	PKPdf	09 55 41.3	-0.5
	SNR=12						
TKM2	Tokmak 2	116.92	309	PKIKP	PKPdf	09 55 40.9	-0.9
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBK	Karagaybulak	117.39	309	P	PKPdf	09 55 42.0	-0.7
	SNR=7.2						
CHMS	Chumysh	117.54	309	P	PKPdf	09 55 42.7	-0.1
	SNR=7.1						
UCH	Uchtor	117.70	308	P	PKiKP	09 55 43.9	+0.2
	SNR=7.1						
AAK	Ala-Archa	117.72	309	ePKPdf	PKPdf	09 55 43.1	-0.2
AAK	Ala-Archa	117.72	309	⇑iPKIKP	PKPdf	09 55 42.6	-0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	Ala-Archa	117.72	309	PKP	PKPdf	09 55 42.6	-0.7
	comp=Z,4.2nm,0.7s,baz=140,slow=4.8,SNR=17						
USP	Ospenovka	117.72	310	P	PKPdf	09 55 42.4	-0.8
	SNR=11						
SFK	Sufi-Kurgan	118.43	306	PKIKP	PKPdf	09 55 44.7	-0.1
SFK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OTUK	Ortayu	119.06	315	PKIKP	PKPdf	09 55 44.9	-0.6
OTUK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MNAS	Manas	119.19	309	PKIKP	PKPdf	09 55 45.9	-0.2
MNAS				pmax	pmax		
	comp=Z,16nm,0.8s						
KBS	Kingsbay	119.69	359	ePKPdf	PKiKP	09 55 46.5	+0.6
BVA0	Borovoye Array	119.78	321	i PKIKP	PKPdf	09 55 46.2	-0.5
BVA0				pmax	pmax		
	comp=Z,11nm,0.6s						
BVAR	Borovoye Array	119.78	321	PKP	PKPdf	09 55 46.4	-0.3
	comp=Z,16nm,0.5s,baz=130,slow=0.9,SNR=159						
BVAR				PP	PP	09 57 09.0	-2.9
	comp=Z,0.9nm,0.7s,baz=85,slow=3.0,SNR=1.5						
BRVK	Borovoye	119.83	321	ePKPdf	PKPdf	09 55 46.4	-0.4
BRVK	Borovoye	119.83	321	ePKIKP	PKPdf	09 55 46.4	-0.4
SPA0	Spitsbergen Ar	120.28	357	ePKPdf	PKPdf	09 55 47.0	0.0
KK31	Karatay Array	120.64	309	ePKPdf	PKPdf	09 55 48.2	-0.5
KK31	Karatay Array	120.64	309	i PKIKP	PKPdf	09 55 48.2	-0.5
KK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	120.64	309	ePKPdf	PKPdf	09 55 48.4	-0.3
KKAR	Karatay Array	120.64	309	ePKIKP	PKPdf	09 55 48.4	-0.3
GAR	Garm	120.89	305	ePKPdf	PKiKP	09 55 49.6	0.0
GAR	Garm	120.89	305	ePKIKP	PKiKP	09 55 49.6	0.0
KBL	Kabul	121.85	299	ePKPdf	PKiKP	09 55 52.1	+0.4
KBL	Kabul	121.85	299	ePKIKP	PKiKP	09 55 52.1	+0.4
SVE	Sverdlovsk	124.32	327	ePKIKP	PKPdf	09 55 55.1	-0.2
SVE				pmax	pmax		
	comp=Z,23nm,0.9s						
ARU	Arti	125.54	327	ePKPdf	PKPdf	09 55 57.8	+0.2
ARU	Arti	125.54	327	d iPKIKP	PKPdf	09 55 57.5	-0.1
ARU				pmax	pmax		
	comp=Z,46nm,1.7s						
SCO	Scoresbysund	125.70	11	ePKPdf	PKiKP	09 55 58.5	+0.6
SCO	Scoresbysund	125.70	11	ePKIKP	PKiKP	09 55 58.5	+0.6
HAMF	Hammerfest	126.95	352	ePKPdf	PKPdf	09 56 00.2	+0.2
AB31	Akbulak array	126.98	318	PKIKP	PKPdf	09 56 00.4	-0.2
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	126.98	318	ePKPdf	PKPdf	09 56 00.8	+0.2
SUR	Sutherland	127.08	196	ePKPdf	PKiKP	09 56 03.0	+0.7
KEV	Kevo	127.30	351	ePKPdf	PKiKP	09 56 01.6	+0.4
LVZ	Lovozero	127.48	347	ePKPdf	PKiKP	09 56 01.4	-0.2
LVZ	Lovozero	127.48	347	ePKIKP	PKiKP	09 56 01.4	-0.2
ARCES	ARCESS Array B	127.73	351	PKP	PKPdf	09 56 01.3	-0.2
	comp=Z,4.1nm,0.4s,baz=1.7,slow=0.6,SNR=63						
ARCES				pPKP	pPKPdf	09 56 33.6	-1.9
	comp=Z,5.6nm,0.8s,baz=45,slow=1.9,SNR=1.2						
ARE0	ARCESS Array S	127.73	351	ePKPdf	PKPdf	09 56 01.2	-0.3
ARE0	ARCESS Array S	127.73	351	ePKPdf	PKiKP	09 56 02.0	0.0
AKTO	Aktyubinsk	127.85	320	PKP	PKPdf	09 56 02.5	+0.2
	comp=Z,4.6nm,0.7s,baz=53,slow=3.7,SNR=19						
AKTO				pPKP	pPKPdf	09 56 35.6	-0.7
	comp=Z,1.0nm,0.7s,baz=89,slow=16,SNR=1.0						
TRO	Tromso	128.44	354	ePdiff	Pdif	09 52 45.7	-2.7
TRO				ePKPdf	PKPdf	09 56 03.0	+0.2
KTK1	Kautokeino	128.53	352	ePKPdf	PKPdf	09 56 02.9	-0.1
PRGR	Permogore	128.76	337	ePKIKP	PKPdf	09 56 01.3	-2.3
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KIRV	Kirov	128.98	332	PKP	PKiKP	09 56 04.5	-0.2
	comp=Z,12nm,0.5s,baz=193,slow=0.5,SNR=9.6						
BOSA	Boshof	129.17	203	ePKPdf	PKiKP	09 56 07.0	+0.5
BOSA	Boshof	129.17	203	PKP	PKiKP	09 56 06.3	-0.1
	comp=Z,5.2nm,0.8s,baz=128,slow=2.6,SNR=9.3						
WSAR	Wadi Sarin	130.33	285	PKP	PKPdf	09 56 05.7	-2.1
	comp=Z,2.2nm,0.8s,baz=96,slow=3.0,SNR=6.8						
LOF	Lofoten	130.35	356	ePKPdf	PKiKP	09 56 07.4	+0.1
STEI	Steigen	130.43	355	ePKPdf	PKiKP	09 56 07.4	-0.1
GEYT	Alibeck	130.51	304	PKP	PKPdf	09 56 07.8	0.0
	comp=Z,3.3nm,0.6s,baz=191,slow=1.5,SNR=9.4						
GEYT				pPKP	pPKPdf	09 56 41.6	-0.2
	comp=Z,1.2nm,0.4s,baz=259,slow=32,SNR=1.2						
GEYT				PP	PP	09 58 20.9	-3.1
	comp=Z,0.8nm,0.4s,baz=64,slow=3.4,SNR=4.3						
KLMR	Klimovskoe	131.49	339	ePKIKP	PKPdf	09 56 06.8	-2.0
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	Klimovskoe	131.49	339	ePKPdf	PKPdf	09 56 06.8	-2.0
KLMR				AMP		09 56 11.3	
	comp=Z,18nm,1.3s						
KLMR				epPKPdf	SKPbc	09 59 22.5	+0.1
MOR8	Moi Rana	132.22	355	ePdif	Pdif	09 53 04.5	-0.8
MOR8				ePKPdf	PKPdf	09 56 10.5	+0.4
UOSS	Minazif	132.67	287	ePKPdf	PKiKP	09 56 12.9	-0.5
FIA1	FINESS Array S	134.91	346	ePKPdf	PKiKP	09 56 16.2	-0.5
FIA1				ePKPdf	PKPdf	09 56 16.6	+1.3
FIA0	FINESS Array S	134.92	346	ePKPdf	PKiKP	09 56 16.2	-0.5
FINES	FINESS Array B	134.92	346	PKhKP	PKPpre	09 56 04.0	
	comp=Z,1.2nm,0.6s,baz=52,slow=3.1,SNR=5.8						
FINES				PKP	PKiKP	09 56 16.2	-0.5
	comp=Z,5.2nm,0.5s,baz=75,slow=2.2,SNR=29						
MOS	Moscow	135.79	334	ePKIKP	PKPdf	09 56 11.7	-5.3
OBN	Obninsk	136.66	334	ePKPdf	PKPdf	09 56 19.3	+0.7
OBN	Obninsk	136.66	334	dePKIKP	PKPdf	09 56 17.5	-1.2
OBN				ePS	SP	10 09 13.3	+0.3
OBN				i SS	SS	10 17 34.5	+40
OBN				pmax	pmax		
	comp=Z,11nm,1.0s						
OBN				MLR	MLR		
	comp=Z,141nm,20.0s						
OBN	Obninsk	136.66	334	PKP	PKPdf	09 56 18.2	-0.5
	comp=Z,1.8nm,0.4s,baz=33,slow=2.7,SNR=6.0						
DOMB	Dombas	136.66	357	ePKPdf	PKPdf	09 56 18.6	0.0
VRH	Novokhopyorsk	136.77	327	ePKIKP	PKPdf	09 56 18.4	-0.6
VRH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LPSR	Galich'ya Gora	137.30	330	ePKIKP	PKiKP	09 56 21.2	-0.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NC303	NORSAR Array S	137.35	356	ePKPpre	PKPpre	09 56 12.4	
NC303				ePKPdf	PKiKP	09 56 22.7	+1.0
VSU	Vasula	137.36	344	⇓iPKIKP	PKiKP	09 56 21.0	-0.8
NC405	NORSAR Array S	137.43	355	ePKPpre	PKPpre	09 56 09.8	
NC405				ePKPdf	PKiKP	09 56 21.8	-0.1
NB201	NORSAR Array S	137.53	356	ePKPdf	PKiKP	09 56 22.2	0.0
NB2	NORSAR Subarra	137.54	356	PKP	PKPpre	09 56 09.9	
	comp=Z,0.7nm,0.8s,baz=10,slow=3.2						
NB2	NORSAR Subarra	137.54	356	e	PKPpre	09 56 09.9	
	baz=10,slow=3.2						
NB200	NORSAR Array S	137.54	356	ePKPdf	PKPdf	09 56 19.7	-0.6
NOA	NORSAR Array B	137.54	356	PKhKP	PKPpre	09 56 12.3	
	comp=Z,0.6nm,0.5s,baz=62,slow=1.9,SNR=5.7						
NOA				PKP	PKPdf	09 56 19.7	-0.6
	comp=Z,1.5nm,0.7s,baz=14,slow=4.0,SNR=9.1						
NBO00	NORSAR Array S	137.58	356	ePKPdf	PKPdf	09 56 20.7	+0.4
NC602	NORSAR Array S	137.82	356	ePKPdf	PKiKP	09 56 22.2	-0.5
NC602	NORSAR Array S	137.82	356	ePKPdf	PKPdf	09 56 21.3	+0.6
VSR	Storozhevoye	138.06	328	ePKIKP	PKPdf	09 56 20.9	-0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BER	Bergen	138.40	0	ePKPdf	PKPdf	09 56 22.3	+0.6
LSZ	Lusaka	139.44	215	ePKPpre	PKPpre	09 56 16.1	
LSZ				ePKPdf	PKPdf	09 56 24.0	-1.1
LSZ	Lusaka	139.44	215	ePKHKP	PKPpre	09 56 16.1	
LSZ				e		09 56 24.0	
KBZ	Khabaz	139.91	317	PKhKP	PKPpre	09 56 21.8	
	comp=Z,2.0nm,0.8s,baz=45,slow=1.4,SNR=2.8						
KIV	Kislovodsk	139.95	317	i PKIKP	PKPdf	09 56 26.2	+1.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GNI	Garni	140.08	311	⇑iPKIKP	PKiKP	09 56 27.0	-1.2
GNI	Garni	140.08	311	PKP	PKPdf	09 56 24.7	-1.0
	comp=Z,1.7nm,0.4s,baz=314,slow=0.4,SNR=6.8						
NEY	Neytrino	140.24	316	⇑iPKIKP	PKiKP	09 56 29.1	+0.7
TSUM	Tsumeb	140.45	198	ePKPpre	PKPpre	09 56 19.8	
SUW	Suwalki	142.22	343	ePKP	PKPdf	09 56 29.9	+1.1
SUW	Suwalki	142.22	343	ePKIKP	PKPdf	09 56 29.9	+1.1
KLNR	Kaliningrad	142.44	346	dePKIKP	PKPdf	09 56 29.3	+0.1
ESK	Eskdalemuir	142.90	8	ePKPpre	PKPpre	09 56 26.7	
AKASG	Malin Array Be	142.92	335	PKhKP	PKPpre	09 56 25.8	
	comp=Z,3.7nm,0.5s,baz=39,slow=4.1,SNR=40						
AKASG				pPKP	pPKPdf	09 57 02.7	-1.6
	comp=Z,0.5nm,0.3s,baz=44,slow=4.0,SNR=1.5						
AKBB	Malin Array Si	142.92	335	ePKPpre	PKPpre	09 56 25.9	
KIEV	Kiev	142.93	335	ePKPpre	PKPpre	09 56 25.4	
KIEV	Kiev	142.93	335	⇑iP	PKPdf	09 56 22.5	-7.7
KIEV	Kiev	142.93	335	c iPKHKP	PKPpre	09 56 25.7	
AK11	Malin Array Si	142.96	335	ePKPpre	PKPpre	09 56 25.9	
SHEL	Horse Pasture	143.81	162	ePKPdf	PKPdf	09 56 32.7	-0.2
SHEL	Horse Pasture	143.81	162	i PKIKP	PKPdf	09 56 34.6	+1.7
GKP	Gorka Klasztor	144.33	348	ePKP	PKPdf	09 56 33.1	+0.6
GKP	Gorka Klasztor	144.33	348	ePKIKP	PKPdf	09 56 33.1	+0.6
DSB	Dublin	144.36	12	ePKPdf	PKPdf	09 56 32.0	-0.6
HPK	Haverah Park	144.43	7	eP	PKPbc	09 56 31.7	+0.1
WME	Myndd Eilian	144.59	10	eP	PKPab	09 56 31.3	-0.6
SIM	Simferopol'	144.59	324	ePKIKP	PKPdf	09 56 33.0	-0.3
SIM				pmax	pmax		
	comp=Z,15nm,0.8s						
WLF1	Llynfaes	144.68	10	eP	PKPab	09 56 31.6	-0.6
BEL	Belsk	144.82	343	ePKP	PKPbc	09 56 33.0	+0.2
BEL	Belsk	144.82	343	ePKIKP	PKPbc	09 56 33.0	+0.2
LBWR	Ladybower, Pea	144.96	7	eP	PKPab	09 56 33.5	+0.2
LVV	L'vov	145.59	339	ePKIKP	PKPbc	09 56 35.2	-0.1
CWF	Charnwood Fore	145.66	7	eP	PKPbc	09 56 35.5	+0.1
LPW	Lampeter	145.87	10	eP	PKPbc	09 56 36.1	0.0
KIS	Kishinev	145.90	331	⇓iP	PKPdf	09 56 35.0	-0.5
	comp=Z,360nm,1.6s						
KIS	Kishinev	145.90	331	⇓iPKIKP	PKPdf	09 56 35.0	-0.5
KIS				e		09 57 10.0	
KIS				pmax	pmax		
	comp=Z,360nm,1.6s						
RSBS	Rosebush, Pemb	145.90	11	eP	PKPbc	09 56 35.8	-0.4
MCH1	Michaelchurch	146.15	9	eP	PKPbc	09 56 36.8	-0.2
MONM	Monmouth	146.34	9	eP	PKPbc	09 56 37.5	0.0
STRD	Stroud	146.49	9	eP	PKPdf	09 56 37.1	+0.8
OJC	Ojcow	146.55	343	ePKP	PKPdf	09 56 37.0	+0.5
OJC	Ojcow	146.55	343	ePKPdf	PKPbc	09 56 37.9	-0.3
OJC	Ojcow	146.55	343	ePKIKP	PKPdf	09 56 37.0	+0.5
LEOM	Leova	146.55	331	⇑iP	PKPbc	09 56 38.3	0.0
LEOM	Leova	146.55	331	⇑PKP2	PKPbc	09 56 38.3	0.0
PRAR	RASCA	146.76	334	⇑iP	PKPbc	09 56 39.2	+0.3
KSP	Ksiaz	146.82	347	ePKP	PKPbc	09 56 39.3	+0.4
KSP	Ksiaz	146.82	347	ePKP2	PKPbc	09 56 39.3	+0.4
WTSB	Winterswijk	146.82	358	ePKP	PKPbc	09 56 38.8	0.0
	comp=Z,78nm,0.9s						
CLL	Collm	146.95	351	ePKPdf	PKPdf	09 56 38.0	+0.9
CLL				⇓iPKPbc	PKPbc	09 56 39.6	+0.3
	comp=Z,91nm,0.9s						
CLL				e(PKiKP)		09 56 45.0	
CLL				epPKiKP	pPKiKP	09 57 15.0	-0.7
CLL				ePP	PP	10 00 02.0	-1.9
CLL				Lm	MLR	10 26 00.0	
	comp=Z,200nm,19.5s						
CLL				LmV		10 34 00.0	
	comp=Z,100nm,19.4s						
CLL				LmV		11 08 00.0	
	comp=Z,100nm,19.0s						
CLL	Collm	146.95	351	⇓iPKP2	PKPbc	09 56 39.6	+0.3
CLL				pmax	pmax		
	comp=Z,91nm,0.9s						
BUR08	Bucovina Ar. S	146.95	335	ePKPbc	PKPbc	09 56 39.3	-0.2
BUR04	Bucovina Ar. S	146.97	335	ePKPdf	PKPbc	09 56 38.9	-0.7
BURAR	Bucovina Array	146.97	335	⇑iP	PKPbc	09 56 39.1	-0.5
BURAR	Bucovina Array	146.97	335	⇑PKP2	PKPbc	09 56 39.1	-0.5
NIE	Niedzica	147.13	342	ePKP	PKPbc	09 56 40.7	+0.8
NIE	Niedzica	147.13	342	ePKP2	PKPbc	09 56 40.7	+0.8
ILGA	Ilgaz	147.13	319	ePKPdf	PKPbc	09 56 39.8	-0.6
UPC	Upice	147.19	347	ePKP	PKPbc	09 56 40.1	+0.1
UPC				ex	x	09 56 46.3	
UPC	Upice	147.19	347	ePKP2	PKPbc	09 56 40.1	+0.1
UZH	Uzhgorod	147.19	339	ePKIKP	PKPdf	09 56 36.6	-1.0
UZH				i		09 56 40.4	
UZH				i		09 57 08.0	
TLCR		147.22	329	⇑iP	PKPdf	09 56 38.6	+0.8
TLCR		147.22	329	⇑PKIKP	PKPdf	09 56 38.6	+0.8
BRG	Berggiesshubel	147.22	350	i PKP	PKPdf	09 56 38.6	+1.0
	comp=Z,21nm,1.4s						
BRG	Berggiesshubel	147.22	350	i PKP	PKPab	09 56 41.2	-0.8
	comp=Z,63nm,1.2s						
BRG				epPKP	pPKPab	09 57 15.1	-0.2
	comp=Z,91nm,1.9s						
BRG				esPKP		09 57 24.1	
	comp=Z,15nm,1.2s						
BRG	Berggiesshubel	147.22	350	i PKIKP	PKPdf	09 56 38.6	+1.0
BRG				i		09 56 41.2	
BRG				e		09 57 15.1	
BRG				e		09 57 24.1	
BRG				pmax	pmax		
	comp=Z,21nm,1.4s						
BRG				pmax	pmax		
	comp=Z,63nm,1.2s						
BRG				pmax	pmax		
	comp=Z,91nm,1.9s						
BRG				pmax	pmax		
	comp=N,15nm,1.2s						
DPC	Dobruska-Polom	147.28	347	ePKP	PKPbc	09 56 40.3	0.0
DPC	Dobruska-Polom	147.28	347	ePKP2	PKPbc	09 56 40.3	0.0
OKC	Ostrava-Krasne	147.33	345	ePKP	PKPbc	09 56 40.5	+0.1
OKC	Ostrava-Krasne	147.33	345	ePKP2	PKPbc	09 56 40.5	+0.1
KRLC	Kraliky	147.44	346	ePKP	PKPbc	09 56 40.0	-0.7
KRLC	Kraliky	147.44	346	ePKP2	PKPbc	09 56 40.0	-0.7
PVCC	Panska Ves	147.45	349	ePKP	PKPbc	09 56 41.6	+0.9
PVCC	Panska Ves	147.45	349	ePKP2	PKPbc	09 56 41.6	+0.9
MORC	Moravsky Berou	147.54	345	ePKPdf	PKPdf	09 56 38.6	+0.3
MORC				ePKPbc	PKPbc	09 56 41.3	+0.3
MORC	Moravsky Berou	147.54	345	⇑iP	PKPdf	09 56 39.3	+1.0
MORC	Moravsky Berou	147.54	345	⇑PKIKP	PKPdf	09 56 39.4	+1.2
MORC	Moravsky Berou	147.54	345	ePKP	PKPdf	09 56 39.2	+1.0
TRPA	Tarpa	147.54	338	⇓iP	PKPdf	09 56 38.4	+0.2
TRPA	Tarpa	147.54	338	⇓ePKiKP	PKPbc	09 56 41.0	+0.1
CFR	Carcaliu	147.56	329	⇑iP	PKPdf	09 56 37.5	-0.8
CFR	Carcaliu	147.56	329	⇑PKIKP	PKPdf	09 56 37.5	-0.8
BMR	Baia Mare	147.58	337	⇑iP	PKPdf	09 56 39.4	+1.1
BMR	Baia Mare	147.58	337	⇑PKIKP	PKPdf	09 56 39.4	+1.1
LANS	Liptovska Anna	147.61	343	ePKP2	PKiKP	09 56 42.4	-0.8
LANS	Liptovska Anna	147.61	343	ePKP	PKiKP	09 56 42.4	-0.8
ODBI	Odobesti	147.63	331	⇑iP	PKPbc	09 56 42.2	+0.9
VRI	Vrincioaia	147.70	332	⇓iP	PKPdf	09 56 38.5	-0.1
VRI	Vrincioaia	147.70	332	⇓PKIKP	PKPdf	09 56 38.5	-0.1
PLOR	Plostina	147.75	332	⇑iP	PKPbc	09 56 41.4	-0.3
PLOR	Plostina	147.75	332	⇑PKP2	PKPbc	09 56 41.4	-0.3
BR101	Keskin Array S	147.91	317	ePKPdf	PKPdf	09 56 37.7	-1.6
BR101				ePKPbc	PKPbc	09 56 42.5	+0.1
BR101				epPKPdf	pPKPbc	09 57 16.1	-0.1
BR131	Keskin Array S	147.91	317	ePKPdf	PKPdf	09 56 38.6	-0.7
BR131				ePKPbc	PKPbc	09 56 42.3	-0.1
BRTR	Keskin Array B	147.91	317	PKP	PKPdf	09 56 37.7	-1.6
	comp=N,11nm,0.7s,baz=147,slow=2.4,SNR=51						
BRTR				PKPbc	PKPbc	09 56 42.5	+0.1
	comp=N,11nm,0.7s,baz=136,slow=3.2,SNR=35						
BRTR				pPKPbc	pPKPbc	09 57 16.1	-0.1
	comp=N,3.0nm,0.9s,baz=279,slow=32,SNR=0.9						
TIRR	Tirgusor	147.95	328	ePKPbc	PKPbc	09 56 42.6	+0.4
TIRR	Tirgusor	147.95	328	⇑iP	PKPdf	09 56 38.5	-0.5
TIRR	Tirgusor	147.95	328	⇑PKIKP	PKPdf	09 56 38.5	-0.5
PRU	Pruhonice	147.97	349	ePKP	PKPbc	09 56 42.5	+0.4
PRU				epPKP	pPKPab	09 57 18.3	+0.1
PRU	Pruhonice	147.97	349	ePKP2	PKPbc	09 56 42.5	+0.4
PRU				MLR	MLR		
	comp=Z,6µm,22.2s						
UCC	Uccle	148.00	1	⇑PKP	PKiKP	09 56 43.1	-0.7
GOPC	GO Pecny, Ondr	148.00	349	ePKP	PKPbc	09 56 42.8	+0.6
GOPC	GO Pecny, Ondr	148.00	349	ePKP2	PKPbc	09 56 42.8	+0.6
BEBN	Eben Emael	148.01	360	⇑PKP	PKiKP	09 56 43.2	-0.7
HARR	Harsova	148.02	329	⇑iP	PKPdf	09 56 39.7	+0.6
HARR	Harsova	148.02	329	⇑PKIKP	PKPdf	09 56 39.7	+0.6
TLB	Topalu	148.04	329	⇑iP	PKPdf	09 56 40.4	+1.3
TLB	Topalu	148.04	329	⇑PKIKP	PKPdf	09 56 40.4	+1.3
HGN	Heimansgroeve	148.04	359	ePKP	PKPbc	09 56 41.5	-0.8
	comp=Z,234nm,2.2s						
NKC	Novy Kostel	148.07	351	ePKP	PKPbc	09 56 42.7	+0.3
NKC	Novy Kostel	148.07	351	ePKP2	PKPbc	09 56 42.7	+0.3
MFTR	Murfatlar	148.14	328	⇓iP	PKPdf	09 56 39.6	+0.3
MEM	Membach	148.19	359	⇑PKPbc	PKPbc	09 56 42.4	-0.2
MEM	Membach	148.19	359	⇑PKiKP	PKiKP	09 56 43.7	-0.6

MEM	Membach	148.19	359	⇑PKPab	PKiKP	09 56 44.8	+0.5
MEM	Membach	148.19	359	⇑pPKP	pPKPab	09 57 21.2	+2.2
VRAC	Vranov	148.20	346	⇑iP	PKPdf	09 56 39.5	+0.2
VRAC	Vranov	148.20	346	⇑PKIKP	PKPdf	09 56 39.5	+0.2
VRAC	Vranov	148.20	346	ePKP	PKPdf	09 56 40.4	+1.1
VRAC				e		09 57 19.6	
DOPR	Dopca	148.21	333	⇑iP	PKPbc	09 56 41.9	-1.0
CJR	Cluj-Napoca	148.34	336	⇑iP	PKPdf	09 56 39.0	-0.7
CJR	Cluj-Napoca	148.34	336	⇑PKIKP	PKPdf	09 56 39.0	-0.7
MLR	Muntele Rosu	148.34	332	ePKPdf	PKPdf	09 56 39.3	-0.5
MLR				ePKPbc	PKPbc	09 56 43.4	0.0
MLR	Muntele Rosu	148.34	332	⇑iP	PKPdf	09 56 41.0	+1.2
MLR	Muntele Rosu	148.34	332	⇑PKIKP	PKPdf	09 56 41.0	+1.2
ANTO	Ankara	148.38	318	ePKPdf	PKPdf	09 56 40.5	+0.5
ANTO				ePKPbc	PKPbc	09 56 44.2	+0.6
ANTO	Ankara	148.38	318	⇑PKP2	PKPbc	09 56 44.2	+0.6
VYHS	Vyhne	148.38	343	ePKP2	PKPbc	09 56 43.7	+0.5
VYHS	Vyhne	148.38	343	ePKP	PKPbc	09 56 43.7	+0.5
LTVH	Ltavrtes, Hu	148.40	338	ePKiKP	PKPbc	09 56 43.1	-0.2
TREC	Trest	148.45	347	ePKP	PKPbc	09 56 43.7	+0.3
TREC	Trest	148.45	347	ePKP2	PKPbc	09 56 43.7	+0.3
KRUC	Moravsky	148.47	346	ePKP	PKPdf	09 56 39.6	-0.1
KRUC				e		09 57 19.9	
MBAR	Mbarara	148.56	235	ePKPbc	PKiKP	09 56 46.5	+0.1
PSZ	Piszkesteto	148.59	341	ePKPdf	PKPdf	09 56 39.9	-0.2
PSZ				ePKPbc	PKPbc	09 56 43.7	-0.2
PSZ	Piszkesteto	148.59	341	⇑iP	PKPbc	09 56 42.8	-1.1
PSZ	Piszkesteto	148.59	341	⇓ePKiKP	PKPbc	09 56 44.0	+0.2
PSZ	Piszkesteto	148.59	341	⇑PKP2	PKPbc	09 56 42.8	-1.1
DRGR		148.61	337	⇑iP	PKPbc	09 56 42.8	-1.2
DRGR		148.61	337	⇑PKIKP	PKPbc	09 56 42.8	-1.2
SECR		148.64	331	⇑iP	PKPbc	09 56 42.7	-1.3
DOU	Dourbes	148.71	1	⇓PKPbc	PKPbc	09 56 44.2	+0.2
DOU				⇑PKiKP	PKiKP	09 56 45.1	-0.3
DOU				⇑PKPab	PKPab	09 56 47.7	-0.2
DOU				⇓pPKPbc	pPKPbc	09 57 18.0	+0.1
LEHL	Lehliu	148.71	330	⇓iP	PKPdf	09 56 41.8	+1.6
SMOL	Smolenice	148.74	345	ePKP2	PKiKP	09 56 45.6	+0.1
SMOL	Smolenice	148.74	345	ePKP	PKiKP	09 56 45.5	+0.1
GRA1	Grafenberg Arr	148.77	353	ePKPbc	PKPbc	09 56 44.5	+0.4
GRFO	Grafenberg	148.77	353	ePKPbc	PKPbc	09 56 44.6	+0.4
VOIR		148.78	333	⇓iP	PKPdf	09 56 41.6	+1.1
VOIR		148.78	333	⇓PKIKP	PKPdf	09 56 41.6	+1.1
MODS	Modra-Piesok	148.91	345	ePKIKP	PKPdf	09 56 41.9	+1.4
MODS				e		09 56 45.7	
MODS	Modra-Piesok	148.91	345	ePKP	PKPdf	09 56 41.9	+1.4
MODS				e		09 56 45.7	
KHC	Kasperske Hory	148.97	350	ePKPdf	PKPdf	09 56 40.5	-0.1
KHC				ePKPbc	PKPbc	09 56 45.3	+0.6
KHC	Kasperske Hory	148.97	350	ePKPDF	PKPdf	09 56 40.9	+0.3
KHC				⇑ePKP	PKPbc	09 56 44.8	0.0
KHC	Kasperske Hory	148.97	350	ePKIKP	PKPdf	09 56 40.9	+0.3
KHC				e		09 56 44.8	
ZST	Bratislava	149.11	345	ePKIKP	PKPdf	09 56 41.7	+0.9
ZST	Bratislava	149.11	345	ePKP	PKPdf	09 56 41.7	+0.9
ZST				e		09 56 44.9	
WLF	Walferdange	149.14	359	ePKPbc	PKPbc	09 56 45.2	+0.2
WLF	Walferdange	149.14	359	⇑PKP	PKPbc	09 56 45.6	+0.5
SRO	Srobarova	149.15	343	ePKP2	PKPbc	09 56 45.5	+0.4
SRO	Srobarova	149.15	343	ePKP	PKPbc	09 56 45.5	+0.4
GEC2	GERESS Array S	149.22	349	ePKPdf	PKPdf	09 56 41.8	+0.7
GEC2				ePKPbc	PKPbc	09 56 45.7	+0.2
GEC2	GERESS Array S	149.22	349	ePKIKP	PKPdf	09 56 41.8	+0.7
GERES	GERESS Array B	149.22	349	PKP	PKPdf	09 56 38.7	-2.4
	comp=Z,14nm,0.7s,baz=20,slow=3.0,SNR=71						
GERES				PKPbc	PKPbc	09 56 45.9	+0.4
	comp=Z,14nm,0.7s,baz=20,slow=3.1,SNR=99						
GERES				pPKPbc	pPKPbc	09 57 18.2	-1.1
	comp=Z,5.1nm,0.7s,baz=27,slow=3.3,SNR=3.6						
GEA0	GERESS Array S	149.23	349	ePKPdf	PKPdf	09 56 40.9	-0.1
GEA0				ePKPbc	PKPbc	09 56 45.8	+0.3
BUD	Budapest	149.24	342	ePKiKP	PKPdf	09 56 40.1	-0.9
LOT	Lotru	149.31	334	⇓iP	PKPdf	09 56 43.2	+1.8
PRD	Provadia	149.36	328	P	PKiKP	09 56 46.6	-0.3
CONA	Conrad Observa	149.66	346	ePKiKP	PKiKP	09 56 47.3	-0.2
	comp=Z,73nm,1.3s,SNR=15						
CONA				epPKiKP	pPKPab	09 57 23.2	-1.9
	comp=Z,5.8nm,0.7s						
SOP	Sopron	149.73	345	ePKiKP	PKPdf	09 56 41.1	-0.7
GZR	Gura Zlata	149.75	335	⇑iP	PKPdf	09 56 43.4	+1.4
GZR	Gura Zlata	149.75	335	⇑PKIKP	PKPdf	09 56 43.4	+1.4
BZS	Buzias	150.01	337	⇑iP	PKPdf	09 56 43.9	+1.6
BZS	Buzias	150.01	337	⇑PKHKP	PKPpre	09 56 43.9	
ZIMR		150.02	330	⇓iP	PKPbc	09 56 46.5	-0.9
ZIMR		150.02	330	⇓PKHKP	PKPpre	09 56 46.5	
SZH	Strazhica	150.04	329	P	PKPbc	09 56 47.9	+0.4
MOA	Molln	150.08	348	ePKPbc	PKPbc	09 56 47.7	+0.2
	comp=Z,5.9nm,0.5s,SNR=8.1						
MOA				epPKiKP	pPKiKP	09 57 23.6	+1.3
	comp=Z,2.4nm,0.4s						
TIH	Tihany	150.10	343	ePKiKP	PKPbc	09 56 46.0	-1.5
SRE	Strehaia	150.18	334	⇑iP	PKPdf	09 56 43.6	+1.0
SRE	Strehaia	150.18	334	⇑PKHKP	PKPpre	09 56 43.6	
VLAD	Vladila	150.19	332	⇓iP	PKPdf	09 56 44.7	+2.1
JMB	Yambol	150.30	327	P	PKiKP	09 56 48.7	-0.2
HERR	Herculane	150.32	335	⇑iP	PKPbc	09 56 46.3	-1.8
ARSA	Arzberg	150.38	346	ePKPbc	PKPbc	09 56 48.1	-0.1
	comp=Z,16nm,0.8s,SNR=6.4						
BFO	Black Forest	150.38	356	ePKPbc	PKPbc	09 56 48.4	+0.2
BFO	Black Forest	150.38	356	ePKIKP	PKPbc	09 56 48.4	+0.2
CSS	Mathiatis	150.45	309	ePKPbc	PKPbc	09 56 48.8	0.0
MORH	Mrgy, Hungar	150.50	341	⇓ePKiKP	PKPbc	09 56 47.1	-1.4
MORH	Mrgy, Hungar	150.50	341	eP	PKPdf	09 56 43.1	+0.1
ECH	Echery	150.56	358	ePKPbc	PKPbc	09 56 48.7	+0.1
ECH				ePKPab	PKPab	09 56 55.1	-0.6
ECH	Echery	150.56	358	ePKIKP	PKPbc	09 56 48.7	+0.1
ECH				e		09 56 55.1	
CLF	Chambon-Foret	150.67	4	ePKPbc	PKPbc	09 56 49.1	+0.3
MDVR	Moldovita	150.68	336	⇑iP	PKPbc	09 56 47.8	-1.3
BEHE	Becsehely	150.80	344	ePKiKP	PKPdf	09 56 42.1	-1.4
ISP	Isparta	150.99	316	ePKPbc	PKPbc	09 56 49.6	-0.5
ISP	Isparta	150.99	316	⇓iP	PKPbc	09 56 47.9	-2.2
ISP	Isparta	150.99	316	⇓PKIKP	PKPbc	09 56 47.9	-2.2
RETA	Reutte	150.99	353	ePKPbc	PKPbc	09 56 49.8	+0.1
	comp=Z,18nm,0.6s,SNR=9.0						
KBA	Koelnbreinsper	150.99	349	i PKPbc	PKPbc	09 56 49.2	-0.6
	comp=Z,27nm,0.5s,SNR=9.7						
MPEP	Malo Peshtene	151.00	332	P	PKiKP	09 56 50.1	-0.2
SOKA	Soboth	151.03	346	i PKPbc	PKPbc	09 56 49.5	-0.3
	comp=Z,42nm,1.2s,SNR=9.8						
WATA	Walderalm	151.03	351	i PKPbc	PKPbc	09 56 49.6	-0.3
	comp=Z,22nm,0.4s,SNR=31						
PERS	Pernice	151.05	346	i PKPdf	PKPdf	09 56 45.1	+1.1
PERS				i PKPbc	PKPbc	09 56 49.6	-0.3
PERS				i pPKPbc	pPKPbc	09 57 25.8	+2.0
FRGS	Fruska Gora	151.05	339	⇓iP	PKPbc	09 56 50.0	+0.1
MOTA	Moosalm	151.09	352	ePKPbc	PKPbc	09 56 49.9	-0.1
	comp=Z,41nm,1.0s,SNR=13						
WTTA	Wattenberg	151.09	351	i PKPbc	PKPbc	09 56 50.4	+0.2
	comp=Z,60nm,0.5s,SNR=20						
WTTA				epPKiKP	pPKiKP	09 57 26.7	+2.1
	comp=Z,18nm,0.6s						
SQTA	Sankt Quirin	151.19	352	ePKPbc	PKPbc	09 56 50.4	+0.2
	comp=Z,22nm,0.6s,SNR=9.1						
SQTA				epPKiKP	pPKiKP	09 57 26.7	+1.9
	comp=Z,7.5nm,0.6s						
DAVA	Damuels	151.29	354	ePKPbc	PKPbc	09 56 50.7	+0.1
	comp=Z,26nm,0.6s,SNR=10						
MYKA	Terra Mystica	151.37	348	ePKPbc	PKPbc	09 56 50.0	-0.7
	comp=Z,25nm,0.5s,SNR=9.9						
MYKA				i pPKiKP	pPKiKP	09 57 26.6	+1.6
	comp=Z,6.8nm,0.6s						
PGB	Panagyurishte	151.43	330	P	PKPbc	09 56 51.1	+0.2
FETA	Feichten	151.45	352	ePKiKP	PKiKP	09 56 51.3	-0.1
	comp=Z,20nm,0.6s,SNR=9.3						
ABTA	Abfaltersbach	151.46	350	ePKPbc	PKPbc	09 56 50.4	-0.4
	comp=Z,39nm,0.5s,SNR=15						
ABTA				i pPKiKP	pPKiKP	09 57 27.1	+1.8
	comp=Z,13nm,0.6s						
TEKS	Tekeris	151.68	338	eP	PKPbc	09 56 51.2	-0.1
ALN	Alexandroupoli	151.71	326	ePKPbc	PKPbc	09 56 51.4	0.0
CRES	Cresnjev	151.73	345	⇓iP	PKPbc	09 56 51.2	-0.2
LJU	Ljubljana	151.74	347	⇓iP	PKPbc	09 56 51.4	0.0
VTS	Vitosha	151.81	331	ePKPbc	PKPbc	09 56 52.0	+0.2
VTS	Vitosha	151.81	331	⇓iP	PKPdf	09 56 46.9	+1.5
VTS	Vitosha	151.81	331	⇓PKIKP	PKPdf	09 56 46.9	+1.5
VTS	Vitosha	151.81	331	P	PKiKP	09 56 52.2	0.0
RZN	Rozhen	151.82	328	P	PKPbc	09 56 51.2	-0.8
MANT	Manisa	151.85	319	ePKPbc	PKPbc	09 56 52.3	+0.1
VISS	Visnje	151.90	346	i PKPdf	PKPdf	09 56 46.9	+1.7
VISS				i PKPbc	PKiKP	09 56 52.0	-0.1
VISS				i pPKPbc	pPKPbc	09 57 28.4	+2.6
FUORN	Ofenpass-Fuorn	151.91	353	ePKPdf	PKPdf	09 56 46.6	+1.0
FUORN				ePKPbc	PKiKP	09 56 52.8	+0.4
DIVS	Divibare	151.91	337	ePKPbc	PKiKP	09 56 52.2	-0.1
DIVS	Divibare	151.91	337	⇓iP	PKPbc	09 56 52.1	+0.1
JAVS	Javornik	151.99	347	i PKPbc	PKPbc	09 56 51.9	-0.1
JAVS				i pPKPbc	pPKPbc	09 57 28.3	+2.3
CEY	Cerknica	152.05	346	⇓iP	PKPbc	09 56 51.9	-0.3
BOJS	Bojanci	152.08	345	i PKPdf	PKPdf	09 56 47.8	+2.3
BOJS				i PKPbc	PKiKP	09 56 52.6	+0.1
BOJS				i pPKPbc	pPKPbc	09 57 29.2	+3.0
TRI	Trieste	152.22	347	ePKPbc	PKPbc	09 56 52.5	0.0
BLY	Banja Luka	152.26	342	ePKPbc	PKPbc	09 56 52.7	+0.1
BLY	Banja Luka	152.26	342	⇑iP	PKPbc	09 56 51.2	-1.4
BLY	Banja Luka	152.26	342	⇓iP	PKiKP	09 56 52.8	-0.1
HAPS	Han Pijesak,Bl	152.29	339	eP	PKPbc	09 56 52.1	-0.7
MMB	Musomiste	152.38	329	P	PKPbc	09 56 52.9	-0.1
SENIN	Lac Senin/Sane	152.40	357	ePKPbc	PKiKP	09 56 53.8	+0.3
KKB	Krupnik	152.47	331	P	PKiKP	09 56 53.5	+0.1
STIP	Stip	153.01	332	i PKP	PKPdf	09 56 47.5	+0.5
VAY	Valandovo	153.13	331	i PKP	PKPdf	09 56 43.7	-3.4
BRY	Bratogost	153.47	338	⇓iP	PKPbc	09 56 55.0	-0.5
SSB	Saint Sauveur	153.52	1	ePKPbc	PKiKP	09 56 55.7	+0.2
PDG	Podgorica	153.62	337	⇓iP	PKPbc	09 56 51.9	-3.7
PDG	Podgorica	153.62	337	eP	PKPbc	09 56 55.3	-0.3
TTG	Podgorica	153.62	337	ePKPbc	PKPbc	09 56 55.5	-0.1
KRUS	Krusevo	153.69	332	i PKP	PKPdf	09 56 47.6	-0.5
TREB	Trebinje	153.70	338	eP	PKPbc	09 56 54.8	-1.0
BNI	Bardonecchia	153.74	358	ePKPdf	PKPdf	09 56 49.6	+1.5
BNI				ePKPbc	PKiKP	09 56 57.0	+0.9
BNI				ePKPab	PKPab	09 57 10.0	+0.8
BNI	Bardonecchia	153.74	358	ePKIKP	PKPdf	09 56 49.6	+1.5
DRME	Dracevica, Mon	153.85	336	eP	PKPbc	09 56 55.6	-0.6
OHR	Ohrid	154.10	333	i PKP	PKPdf	09 56 48.2	-0.4
LIT	Litokhoron	154.12	329	ePKPbc	PKPbc	09 56 56.8	-0.1
VLC	Villacollemand	154.31	352	ePKPbc	PKPbc	09 56 57.1	-0.1
KARP	Karpathos	154.50	315	ePKPbc	PKiKP	09 56 58.0	+0.2
KARP				ePKPab	PKPab	09 57 13.1	+0.4
AGG	Agios Georgios	155.02	328	ePKPdf	PKPdf	09 56 51.0	+1.0
AGG				ePKPbc	PKPbc	09 56 58.5	
AGG	Agios Georgios	155.02	328	ePKIKP	PKPdf	09 56 51.0	+1.0
ESDC	Sonseca Array	157.61	19	PKP	PKPdf	09 56 53.6	+0.3
	comp=Z,0.2nm,0.3s,baz=332,slow=2.4,SNR=4.9						
DBIC	Dimbokro	164.38	139	ePKPdf	PKPdf	09 57 01.4	+0.2
DBIC				pPKP	pPKPdf	09 57 32.8	-2.8
DBIC				ePKPab	PKPab	09 57 57.8	+1.7
DBIC	Dimbokro	164.38	139	PKP	PKPdf	09 57 00.9	-0.3
	comp=Z,3.5nm,0.8s,baz=230,slow=2.7,SNR=4.8						
DBIC				pPKP	pPKPdf	09 57 32.8	-2.8
	comp=Z,4.2nm,0.8s,baz=162,slow=7.4,SNR=2.6						
DBIC				PKPab	PKPab	09 57 56.9	+0.8
	comp=Z,3.8nm,0.7s,baz=242,slow=2.8,SNR=4.9						
TOA0	Torodi Ar. Sit	173.39	147	ePKPdf	PKPdf	09 57 06.2	-0.7
TOA0				ePKPab	PKPab	09 58 37.6	+1.7
TOA0				ePKPab	PKPab	09 58 37.7	+1.8
TORD	Torodi Ar. Bea	173.39	147	PKP	PKPdf	09 57 06.6	-0.3
	comp=Z,3.7nm,0.8s,baz=342,slow=1.0,SNR=21						
TORD				pPKP	pPKPdf	09 57 39.9	-1.4
	comp=Z,1.7nm,0.8s,baz=105,slow=0.4,SNR=3.2						
TORD				PKPab	PKPab	09 58 37.2	+1.4
	comp=Z,4.4nm,0.9s,baz=231,slow=4.0,SNR=10						
TORD				pPKPab	pPKPab	09 59 09.9	+1.2
	comp=Z,5.9nm,1.3s,baz=197,slow=4.3,SNR=2.7						
TORD				PP	PP	10 02 29.3	+2.5
	comp=Z,3.5nm,1.1s,baz=178,slow=6.5,SNR=5.1						
TOA1	Torodi Ar. Sit	173.39	147	ePKPdf	PKPdf	09 57 06.6	-0.3
	1.3nm,0.4s,baz=89,slow=8.6,SNR=51						

IDC 10 10:04:50.5±1.9, 8°.60S×128°.01E, h0km, mb3.4/1, mb1 3.7/5, mb1mx3.5/38, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=35.5km s-min=23.4km az=70.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	4.57	249	Pn	Pn	10 06 01.1	0.0
	2.4nm,0.3s,baz=90,slow=11,SNR=1.8						
BATI				Sn	Sn	10 06 57.9	+2.8
	6.0nm,0.3s,baz=26,slow=19,SNR=6.8						
FITZ	Fitzroy Crossi	9.72	193	Pn	Pn	10 07 11.5	-0.2
	0.1nm,0.3s,baz=18,slow=9.6,SNR=3.0						
FITZ				Sn	Sn	10 09 04.2	+2.5
	0.5nm,0.3s,baz=190,slow=18,SNR=2.4						
WRA	Warramunga Arr	12.83	152	Pn	Pn	10 07 54.5	+0.1
	0.4nm,0.3s,baz=324,slow=13,SNR=9.8						
WRA				Sn	Sn	10 10 18.9	+0.8
	0.5nm,0.3s,baz=328,slow=23,SNR=5.0						
ASAR	Alice Springs	16.01	160	Pn	Pn	10 08 37.0	-0.3
	0.2nm,0.3s,baz=336,slow=11,SNR=26						
ASAR				Sn	Sn	10 11 36.8	+1.2
	0.1nm,0.3s,baz=338,slow=22,SNR=3.6						
MKAR	Makanchi Array	68.50	328	P	P	10 15 54.8	-0.1
	0.2nm,0.5s,baz=130,slow=7.6,SNR=4.3						

MAN 10 10:07:37.9, 9°.37N×125°.50E, h3km, MS3.8, 4C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.41	359	⇑eP	Pg	10 07 45.9	+0.1
SCPH				eS	Sg	10 07 52.5	+1.4
BUTP	Butuan	0.42	163	eP	Pg	10 07 46.7	+0.8
BUTP				eS	Sb	10 07 55.1	+0.5
MSLP	Maasin	0.99	320	eP	Pg	10 07 56.4	-0.5
MSLP				eS	Sn	10 08 13.2	+0.1
CGP	Cagayan de Oro	1.21	221	⇑eP	Pg	10 08 00.5	-0.6
CGP				i S	Sn	10 08 19.6	+1.0
BUKP	Musuan	1.54	196	eP	Pn	10 08 06.4	+0.1
BUKP				eS	Sg	10 08 34.1	+6.6
TBP	Tagbilaran	1.65	281	eP	Pn	10 08 07.1	-0.7
TBP				i S	Sg	10 08 33.4	+2.6
LLP	Lapu-Lapu	1.78	302	eP	Pn	10 08 07.8	-1.7
LLP				eS	Sb	10 08 33.6	-0.3
PLP	Palo	1.85	344	⇑eP	Pn	10 08 10.8	+0.2
PLP				eS	Sn	10 08 35.2	+0.6
KCP	Kidapawan	2.38	190	⇑eP	Pn	10 08 17.7	-0.2

NORS ***10*** *10:13:56.0±0.0, 42°.50N×41°.19E, h13km, MPVA3.2*
DDA ***10*** *10:13:56.5, 42°.04N×40°.65E, h7km±5km, ML2.8*

ISC 10 10:13:54.6±3.1, 42°.35N±0°.05×40°.9E±0°.1, h9km±16km, n10, σ0ˢ.76/19, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	Batumi	0.94	142	P	Pb	10 14 13.7	+0.6
BATM				S	Sn	10 14 27.2	-0.4
DBOC	Borcka	1.15	150	i P	Pn	10 14 17.3	+0.4
DBOC				i S	Sn	10 14 32.0	-0.7
ARTV	Artvin	1.39	146	i P	Pn	10 14 20.5	+0.2
ARTV				i S	Sg	10 14 38.8	-0.5
ARTV				IAML_P			
	comp=Z,1μm,0.1s						
DBAD	Bademkaya	1.45	156	i P	Pn	10 14 21.5	+0.4
DAGI	Agillar	1.47	149	i P	Pb	10 14 22.3	+0.1
DAGI				i S	Sn	10 14 40.6	-0.2
DAGI				IAML_P			
	comp=Z,224nm,0.1s						
DDEM	Demirkent	1.58	156	i P	Pb	10 14 24.2	+0.1
DDEM				i S	Sg	10 14 45.0	-0.6
DDEM				IAML_P			
	comp=Z,614nm,0.1s						
NEY	Neytrino	1.61	55	ePg	Pn	10 14 22.9	-0.5
NEY				eSg	Sn	10 14 42.2	-2.1
SHA1	Shidzhatmaz	1.89	42	ePg	Pn	10 14 27.7	+0.5
SHA1				eSg	Sn	10 14 51.3	0.0
DIGR	Digorskoe uzhe	2.05	73	ePg	Pn	10 14 30.6	+1.2
DIGR				eSg	Sn	10 14 55.5	+0.3
ZEI	Tsey	2.25	78	ePg	Pn	10 14 32.8	+0.5
ZEI				eSg	Sn	10 15 00.1	-0.1

IDC 10 10:15:28.0±54.0, 17°.67S×176°.66W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/24, mbtmp3.8/3, Error ellipse: s-maj=1000.0km s-min=170.4km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.20	241	P	P	10 23 05.8	-0.6
	0.9nm,0.4s,baz=67,slow=7.7,SNR=5.9						
WRA	Warramunga Arr	46.31	259	P	P	10 23 56.0	+0.1
	0.2nm,0.4s,baz=91,slow=7.2,SNR=7.1						
ASAR	Alice Springs	46.45	254	P	P	10 23 57.1	0.0

DDA ***10*** *10:23:24.1, 38°.53N×43°.41E, h26km±2km, ML2.9*
ISCJB ***10*** *10:23:25.3±0.9, 38°.56N±0°.05×43°.47E±0°.08, h21km±6km, Error ellipse: s-maj=10.6km s-min=8.7km az=6.7*
ISK ***10*** *10:23:25.0, 38°.62N×43°.44E, h16km, ML2.1/5*

ISC 10 10:23:24.3±1.2, 38°.54N±0°.06×43°.44E±0°.07, h23km±7km, n9, σ0ˢ.62/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	0.03	244	i P	Pb	10 23 28.1	-0.5
TVAN				i S	Sb	10 23 32.4	+0.8
VANB	Van	0.07	322	PG	Pb	10 23 28.1	-0.6
VANB				SG	Sb	10 23 31.9	+0.3
AKDM	Akdamar-Van	0.42	240	PG	Pn	10 23 34.9	-0.2
ADCV	BITLIS_Adilcev	0.62	296	i P	Pn	10 23 37.9	0.0
ADCV				IAML_P			
	comp=Z,453nm,0.1s						
BASK	Baskale_VAN	0.66	138	i P	Pn	10 23 38.5	+0.1
BASK				IAML_P			
	comp=Z,2μm,0.1s						
CLDR	Caldiran	0.71	32	PG	Pb	10 23 37.6	-0.5
CLDR				SG	Sb	10 23 47.8	+0.3
TUTA	Tutak	0.99	331	i P	Pn	10 23 42.6	-0.4
AGRB	Hanur-Agry	1.09	341	PG	Pn	10 23 44.5	+0.2
AGRB				SG	Sn	10 23 59.8	+1.0
TASB	TASBURUN-IGDIR	1.57	23	PN	Pb	10 23 51.9	-0.8

IDC 10 10:25:58.6±3.5, 16°.51S×177°.51W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/36, mbtmp4.0/3, Error ellipse: s-maj=168.2km s-min=41.2km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.06	240	P	P	10 33 36.7	+0.8
	1.6nm,0.9s,baz=82,slow=9.9,SNR=6.3						
WRA	Warramunga Arr	45.74	258	P	P	10 34 21.4	-0.7
	0.2nm,0.3s,baz=95,slow=8.2,SNR=14						
ASAR	Alice Springs	46.01	253	P	P	10 34 24.1	-0.2
	2.4nm,0.4s,baz=89,slow=7.9,SNR=90						
BRTR	Keskin Array B	144.38	317	PKP	PKPab	10 45 35.5	+0.1
	0.5nm,0.7s,baz=58,slow=3.6,SNR=2.5						
GERES	GERESS Array B	146.47	347	PKPbc	PKPbc	10 45 41.5	-0.4
	0.2nm,0.4s,baz=21,slow=5.7,SNR=2.5						

IDC 10 10:30:30.3±504.0, 32°.79N×155°.36W, h0km, Error ellipse: s-maj=222.9km s-min=199.1km az=115.0, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I59US	HAWAII INFRASO	13.15	182	i		11 53 40.0	
	baz=1.0,slow=326,SNR=0.5						
I57US	PINON FLAT INF	32.44	78	i		13 48 42.8	
	baz=278,slow=366,SNR=0.4						
I56US	NEWPORT INFRAS	32.53	50	i		13 50 00.0	
	baz=257,slow=374,SNR=0.6						
I18DK	QAANAAQ INFRAS	57.41	15	i		16 20 40.0	
	baz=269,slow=345,SNR=6.3						

IDC ***10*** *10:31:26.1±8.2, 31°.39S×180°.00W, h438km±100km, mb2.7/2, mb1 3.2/3, mb1mx2.9/34, mbtmp3.9/3, Error ellipse: s-maj=101.7km s-min=42.4km az=8.0*
WEL ***10*** *10:31:27.6±0.8, 31°S±7°×17°9W±1°6, h355km±11km*

ISC 10 10:31:21.8±1.9, 31°.1S±0°.1×179°.4W±0°.2, h400km, n36, σ2ˢ.05/45, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.26	36	P	Pn	10 32 22.2	+2.7
GLKZ				S	S	10 33 07.2	+1.1
GRZ	Great Barrier	6.67	218	P	Pn	10 33 05.1	+3.5
GRZ				S	S	10 34 25.5	+2.4
MXZ	Matakaoa Point	6.71	195	P	Pn	10 33 03.7	+1.7
MXZ				S	S	10 34 23.6	-0.3
KUZ	Kuaotunu	6.92	214	P	Pn	10 33 08.4	+4.0
WMGZ	Waiomatatini S	6.93	194	P	P	10 33 07.3	+2.1
WMGZ				S	S	10 34 28.9	+0.4
HAZ	Te Kaha	7.02	198	P	P	10 33 07.5	+1.3
HAZ				S	S	10 34 28.3	-2.1
PKGZ	Pakihiroa	7.07	196	P	P	10 33 09.7	+2.9
PKGZ				S	S	10 34 30.4	-1.2
PUZ	Puketiti	7.21	195	P	P	10 33 09.4	+1.1
PUZ				S	S	10 34 32.9	-1.4
RUGZ	Raukumara Rang	7.25	198	P	P	10 33 10.9	+2.1
RUGZ				S	S	10 34 32.2	-3.1
TWGZ	Tauwhareparae	7.37	196	P	P	10 33 12.2	+2.1
TWGZ				S	S	10 34 37.2	-0.5
OPRZ	Ohinepanea	7.49	205	P	P	10 33 14.0	+2.6
CNGZ	Carnagh Statio	7.61	194	P	P	10 33 14.3	+1.6
MWZ	Matawai	7.63	198	P	P	10 33 13.9	+0.9
MWZ				S	S	10 34 40.9	-2.3
TKGZ	Te Karaka	7.65	196	P	P	10 33 14.0	+0.9
TKGZ				S	S	10 34 40.7	-2.7
URZ	Urewera	7.68	201	P	P	10 33 13.5	0.0
	6.1nm,0.3s,baz=282,slow=3.2,SNR=87						
URZ				S	S	10 34 40.8	-3.3
	4.1nm,0.3s,baz=87,slow=23,SNR=16						
URZ	Urewera	7.68	201	P	P	10 33 13.6	0.0
URZ				S	S	10 34 41.7	-2.4
KMRZ	Kaimai	7.73	208	P	P	10 33 17.6	+3.5
RIGZ	Rimuhau	7.93	196	P	P	10 33 16.8	+0.6
RIGZ				S	S	10 34 47.8	-1.5
MUGZ	Murupara	7.99	202	P	P	10 33 17.6	+0.7
RTZ	Ruatahuna	8.05	200	P	P	10 33 18.0	+0.3
HRRZ	Handcock Road	8.08	205	P	P	10 33 21.4	+3.4
MHGZ	Mahia Peninsul	8.32	194	P	P	10 33 23.4	+2.8
HIZ	Hauiti	8.75	211	P	P	10 33 29.1	+3.7
KATZ	Kakaramea	8.81	206	P	P	10 33 29.4	+3.2
WTVZ	West Tongariro	8.97	206	P	P	10 33 29.9	+1.9
TWVZ	Taurewa	8.99	206	P	P	10 33 30.4	+2.3
CKHZ	Cape Kidnapper	9.00	197	P	P	10 33 30.5	+2.4
NGZ	Ngauruhoe	9.02	205	P	P	10 33 30.1	+1.6
TUVZ	Tukino	9.08	205	P	P	10 33 30.3	+1.1
BHHZ	Black Hill Sta	9.14	202	P	P	10 33 30.1	+0.3
PKVZ	Pokaka	9.21	206	P	P	10 33 31.7	+1.1
VRZ	Vera Road	9.30	209	P	P	10 33 34.2	+2.7
PXZ	Pawanui	9.40	198	P	P	10 33 33.1	+0.5
ASAR	Alice Springs	41.84	268	P	P	10 38 32.4	-2.4
	0.2nm,0.4s,baz=106,slow=7.1,SNR=6.3						
WRA	Warramunga Arr	42.89	274	P	P	10 38 40.7	-2.5
	0.4nm,0.3s,baz=111,slow=8.0,SNR=17						
FINES	FINESS Array B	145.36	339	PKPbc	PKPdf	10 50 12.5	+0.5
	0.5nm,0.5s,baz=82,slow=2.9,SNR=5.9						

IDC 10 10:32:44.0±1.9, 11°.72S×164°.80E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/42, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=51.7km s-min=34.3km az=129.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.41	172	Pn	Pn	10 35 14.5	-0.3
	0.2nm,0.3s,baz=79,slow=18,SNR=3.3						
WRA	Warramunga Arr	30.39	251	P	P	10 38 58.5	+0.4
	0.6nm,0.6s,baz=82,slow=9.1,SNR=6.9						
ASAR	Alice Springs	31.66	244	P	P	10 39 09.0	-0.4
	0.2nm,0.5s,baz=59,slow=11,SNR=5.0						
ILAR	Eielson Array	84.44	19	P	P	10 45 18.2	0.0
	0.7nm,1.0s,baz=232,slow=4.8,SNR=4.2						

ISCJB ***10*** *10:34:20.3±0.4, 11°.02S±0°.05×165°.76E±0°.05, h10km, mb4.4/22, Error ellipse: s-maj=8.0km s-min=7.1km az=35.7*
IDC ***10*** *10:34:20.1±1.2, 10°.97S×165°.81E, h0km, mb4.0/8, mb1 4.2/10, mb1mx3.9/43, mbtmp4.1/10, ML4.4/2, Error ellipse: s-maj=27.5km s-min=23.0km az=112.0*
NEIC ***10*** *10:34:22.1±0.3, 10°.94S×165°.78E, h10km, mb4.5/17, Error ellipse: s-maj=7.6km s-min=6.8km az=103.0*

ISC 10 10:34:22.2±0.6, 10°.95S±0°.08×165°.82E±0°.07, h10km, n44, σ1ˢ.01/41, mb4.5/22, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC

HNR	Honiara	5.97	284	*e*P	Pn	10 35 51.0	+0.3
HNR				*e*S	Sn	10 36 58.0	-1.2
HNR	Honiara	5.97	284	Pn	Pn	10 35 51.5	+0.8
	13nm,0.3s,baz=164,slow=7.8,SNR=4.8						
HNR				Sn	Sn	10 36 59.1	-0.1
	9.8nm,0.3s,baz=197,slow=20,SNR=4.2						
MARNC	Mare, Loyalty	10.69	169	*e*Pn	Pn	10 36 55.5	+0.1
DZM	Mont Dzumac	11.08	177	*e*Pn	Pn	10 37 00.1	-0.7
DZM	Mont Dzumac	11.08	177	Pn	Pn	10 37 00.3	-0.5
	1.8nm,0.3s,baz=8.5,slow=11,SNR=24						
ONTNC	Ouen Toro	11.31	177	*e*Pn	Pn	10 37 06.6	+2.6
PINNC	Pines Island,	11.70	173	*e*Pn	Pn	10 37 09.4	+0.1
EIDS	Eidsvold	20.01	222	*e*P	P	10 38 54.5	-0.8
	8.3nm,0.8s						
CTA	Charters Tower	20.90	242	P	P	10 39 05.2	+0.3
	7.2nm,0.8s,baz=66,slow=14,SNR=7.6						
CTAO	Charters Tower	20.90	242	*e*P	P	10 39 05.6	+0.6
	11nm,0.9s						
COEN	Coen	22.31	260	*e*P	P	10 39 20.3	+0.2
	6.1nm,1.0s						
ARMA	Armidale	23.43	212	*e*P	P	10 39 31.6	-0.3
	9.1nm,0.9s						
URZ	Urewera	29.02	161	*e*P	P	10 40 23.0	+0.7
	9.7nm,1.1s						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	11 10 43.6	
	baz=181,slow=76,SNR=9.2						
H11S3	WAKE ISLAND Hy	29.27	2	T	T	11 10 50.3	
	baz=181,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	29.28	2	T	T	11 10 51.4	
	baz=181,slow=76,SNR=11						
BKZ	Black Stump Fm	29.67	163	*e*P	P	10 40 27.2	-1.0
	7.7nm,1.1s						
H11N1	WAKE ISLAND Hy	30.49	2	T	T	11 12 16.2	
	baz=182,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.49	2	T	T	11 12 15.2	
	baz=182,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.50	2	T	T	11 12 15.8	
	baz=182,slow=76,SNR=12						
STKA	Stephens Creek	30.56	223	*e*P	P	10 40 36.1	0.0
	0.7nm,1.1s						
STKA	Stephens Creek	30.56	223	P	P	10 40 35.8	-0.3
	1.1nm,0.6s,baz=14,slow=11,SNR=4.0						
WRAB	Tennant Creek	31.57	250	*e*P	P	10 40 44.4	-0.8
	6.3nm,1.0s						
WB2	Warramunga Arr	31.57	250	*e*P	P	10 40 44.2	-1.0
	7.7nm,1.0s						
WR1	Warramunga Arr	31.58	250	*e*P	P	10 40 44.1	-1.2
	8.8nm,1.0s						
WR1				*e*S	S	10 45 56.6	+2.3
WRA	Warramunga Arr	31.58	250	P	P	10 40 44.1	-1.2
	3.6nm,0.8s,baz=80,slow=9.0,SNR=22						
TOO	Toolangi	32.19	211	*e*P	P	10 40 50.6	+0.2
	10nm,1.1s						
AS31	Alice Springs	32.90	243	*e*P	P	10 40 54.8	-2.0
	0.7nm,0.8s						
ASAR	Alice Springs	32.90	243	P	P	10 40 54.8	-2.0
	0.8nm,0.7s,baz=64,slow=10,SNR=10						
RPZ	Rata Peaks	32.96	173	*e*P	P	10 40 57.0	0.0
	12nm,1.1s						
RPZ	Rata Peaks	32.96	173	P	P	10 40 56.8	-0.3
	4.2nm,0.6s,baz=17,slow=19,SNR=2.8						
BBOO	Buckleboo	34.94	227	*e*P	P	10 41 14.0	-0.5
	8.8nm,1.1s						
XMAS	Kiritimati	38.76	73	*e*P	P	10 41 47.1	0.0
	43nm,0.8s						
FITZ	Fitzroy Crossi	39.47	255	*e*P	P	10 41 52.6	-0.5
	5.5nm,1.0s						
MLOA	Mauna Loa Obse	48.62	52	*e*P	P	10 43 07.2	+0.2
	73nm,1.2s						
LPH	Laupahoehoe	49.02	51	*e*P	P	10 43 09.9	+0.3
OHAK	Old Harbor	75.79	22	*e*P	P	10 46 06.8	-1.3
	49nm,1.2s						
SONA0	Songino Array	78.63	324	*e*P	P	10 46 25.6	+1.1
SONM	Songino Array	78.63	324	P	P	10 46 25.6	+1.1
	0.4nm,0.8s,baz=123,slow=5.3,SNR=2.6						
ILAR	Eielson Array	83.40	18	P	P	10 46 48.5	-0.8
	0.4nm,0.6s,baz=239,slow=5.4,SNR=8.7						
MK01	Makanchi Array	93.49	317	*e*P	P	10 47 38.9	+0.7
MK32	Makanchi Array	93.50	317	*e*P	P	10 47 37.4	-0.9
MKAR	Makanchi Array	93.50	317	P	P	10 47 37.4	-0.9
	0.3nm,0.7s,baz=107,slow=5.0,SNR=4.6						
EGMT	Eagleton	94.35	42	*e*P	P	10 47 43.2	+0.9
	11nm,0.7s						

ISCJB ***10*** *10:35:45.8±0.6, 10°.82S±0°.06×166°.7E±0°.1, h10^{km}, mb4.4/24, Error ellipse: s-maj=16.4km s-min=8.5km az=5.4*

IDC ***10*** *10:35:45.6±1.6, 10°.85S×166°.69E, h0^{km}, mb4.2/11, mb1 4.3/12, mb1mx4.0/41, mbtmp4.2/12, Error ellipse: s-maj=48.1km s-min=20.3km az=117.0*

NEIC ***10*** *10:35:47.5±0.5, 10°.76S×166°.66E, h10^{km}, mb4.5/15, Error ellipse: s-maj=12.1km s-min=6.6km az=97.0*

ISC 10 10:35:47.4±0.9**, 10°.78S**±0°.09×**166°.7E**±0°.2**, h10**^{km}**, n36, σ0^{s}.80**/35**, mb4.4**/24**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.23	181	Pn	Pn	10 38 28.2	-0.1
	baz=342,slow=20,SNR=2.1						
PINNC	Pines Island,	11.79	177	*e*Pn	Pn	10 38 37.2	+1.4
EIDS	Eidsvold	20.73	223	*e*P	Pn	10 40 29.9	-0.7
	16nm,0.8s						
CTA	Charters Tower	21.75	242	P	P	10 40 39.7	+0.4
	5.8nm,0.8s,baz=78,slow=14,SNR=2.7						
CTAO	Charters Tower	21.75	242	*e*P	P	10 40 39.9	+0.6
	8.8nm,0.9s						
ARMA	Armidale	24.05	213	*e*P	P	10 41 03.3	+0.2
	11nm,1.0s						
CAN	Canberra	29.26	211	*e*P	P	10 41 49.8	-0.1
	13nm,1.1s						
BKZ	Black Stump Fm	29.59	164	*e*P	P	10 41 51.9	-0.9
	5.1nm,1.0s						
STKA	Stephens Creek	31.28	224	*e*P	P	10 42 08.6	+0.9
	0.3nm,0.8s						
STKA	Stephens Creek	31.28	224	P	P	10 42 07.2	-0.5
	2.2nm,0.8s,baz=37,slow=10,SNR=2.8						
WRAB	Tennant Creek	32.44	250	*e*P	P	10 42 16.9	-1.1
	4.6nm,0.8s						
WB2	Warramunga Arr	32.44	250	*e*P	P	10 42 17.6	-0.5
	7.1nm,0.9s						
WR1	Warramunga Arr	32.45	250	*e*P	P	10 42 17.2	-1.0
	8.7nm,0.9s						
WRA	Warramunga Arr	32.45	250	P	P	10 42 17.2	-1.0
	6.3nm,0.8s,baz=83,slow=9.0,SNR=19						
AS31	Alice Springs	33.74	243	*e*P	P	10 42 28.4	-1.1
	0.6nm,0.6s						
ASAR	Alice Springs	33.74	243	P	P	10 42 28.0	-1.5
	1.7nm,0.8s,baz=74,slow=9.1,SNR=7.7						
BBOO	Buckleboo	35.69	227	*e*P	P	10 42 45.9	-0.3
	10nm,1.1s						
FITZ	Fitzroy Crossi	40.35	255	*e*P	P	10 43 25.4	-0.3
	7.2nm,0.8s						
FORT	Forrest	40.96	235	*e*P	P	10 43 30.4	-0.1
	18nm,0.8s						
MBWA	Marble Bar	46.16	251	*e*P	P	10 44 13.2	+0.5
	12nm,1.0s						
JHJ2	Mitsune	50.61	331	*e*P	P	10 44 45.4	-1.3
	304nm,1.1s						
USRK	Ussuriysk Ar.	63.13	333	P	P	10 46 17.1	+1.8
	5.1nm,1.1s,baz=126,slow=9.7,SNR=6.9						
KLR	Kul'dur	67.19	336	P	P	10 46 42.4	+0.8
	1.3nm,0.9s,baz=90,slow=4.0,SNR=4.4						
CMAR	Chiang Mai Arr	72.86	293	P	P	10 47 17.4	+0.2
	0.7nm,0.3s,baz=114,slow=6.0,SNR=3.5						
SONA0	Songino Array	79.00	323	*e*P	P	10 47 51.1	-0.7
SONM	Songino Array	79.00	323	P	P	10 47 51.1	-0.7
	1.5nm,1.0s,baz=134,slow=5.5,SNR=6.2						
SONA1	Songino Array	79.00	323	*e*P	P	10 47 52.4	+0.6
GTA	Gaotai	79.54	314	⇑P	P	10 47 56.0	+1.1
GTA				pP	PcP	10 48 02.4	-0.5
GTA				sP	pwP	10 48 05.4	+5.2
ILAR	Eielson Array	82.97	18	P	P	10 48 12.1	-0.3
	1.8nm,0.9s,baz=218,slow=7.1,SNR=8.9						
ZALV	Zalesovo Beam	93.88	324	P	P	10 49 04.7	-0.4
	0.5nm,0.4s,baz=90,slow=2.9,SNR=3.6						
ZAA1	Zalesovo Array	93.88	324	*e*P	P	10 49 04.7	-0.4
MK01	Makanchi Array	93.95	317	*e*P	P	10 49 05.5	-0.2
MK31	Makanchi Array	93.96	317	*e*P	P	10 49 05.9	+0.2
	1.5nm,1.0s						
MK32	Makanchi Array	93.96	317	*e*P	P	10 49 05.5	-0.2
MKAR	Makanchi Array	93.96	317	*e*P	P	10 49 05.8	+0.1
	7.5nm,0.8s						
MKAR	Makanchi Array	93.96	317	P	P	10 49 05.5	-0.2
	1.1nm,0.7s,baz=91,slow=6.5,SNR=8.2						

ISCJB ***10*** *10:36:38.0±0.2, 10°.81S±0°.03×166°.60E±0°.03, h10^{km}, mb4.8/132, MS4.0/2, Error ellipse: s-maj=5.5km s-min=4.2km az=140.9*

NEIC ***10*** *10:36:39.4±0.1, 10°.78S×166°.64E, h10^{km}, mb4.9/107, Error ellipse: s-maj=4.2km s-min=3.3km az=136.0*

GCMT ***10*** *10:36:40.4±0.2, 10°.91S±0°.02×166°.91E±0°.02, h12^{km}, MW5.0/76, Moment Tensor Solution. s37,c44; s76,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.09±.11; M$_{\theta\theta}$0.36±.12; M$_{\phi\phi}$3.73±.11; M$_{r\theta}$-0.75±.39; M$_{\theta\phi}$-1.25±.10; M$_{\phi r}$-1.99±.38; Best double couple: M$_0$4.62700×10^{16} NP1:ϕ_s358.00000°, δ58.00000°, λ-73.00000°. NP2: ϕ_s147.00000°, δ36.00000°, λ-116.00000°. Principal axes: T 4.4770, Plg11.0000°, Azm75.0000°; N 0.2970, Plg15.0000°, Azm168.0000°; P -4.7770, Plg71.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***10*** *10:36:44.4±3.4, 10°.95S×166°.74E, h53^{km}±29^{km}, mb4.3/23, mb1 4.4/25, mb1mx4.3/43, mbtmp4.6/25, ML4.2/2, MS4.2/2, Ms1 4.2/2, ms1mx3.6/14 Error ellipse: s-maj=20.9km s-min=15.1km az=102.0*

ISC 10 10:36:39.0±0.3**, 10°.78S**±0°.06×**166°.79E**±0°.05**, h10**^{km}**, n212, σ1^{s}.34**/213**, mb4.9**/133**, 2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.87	281	*e*P	Pn	10 38 22.0	+2.2
HNR				*e*S	Sb	10 39 55.0	-5.6
HNR	Honiara	6.87	281	*e*Pn	Pn	10 38 21.8	+2.0
HNR				*e*Sn	Sn	10 39 41.0	+2.9
HNR	Honiara	6.87	281	P	Pn	10 38 22.3	+2.5
	15nm,0.3s,baz=58,slow=9.5,SNR=7.0						
HNR				S	Sn	10 39 41.0	+2.9
	baz=210,slow=16,SNR=1.3						
HNR				LR	LR	10 41 06.7	
	comp=Z,7µm,18.8s,baz=120,slow=38						
DZM	Mont Dzumac	11.23	182	*e*Pn	Pn	10 39 22.9	+3.1
	27nm,0.7s						
DZM				*e*LR	LR	10 41 50.5	
	comp=Z,2µm,26.5s						
DZM	Mont Dzumac	11.23	182	*e*Pn	Pn	10 39 20.4	+0.6
DZM	Mont Dzumac	11.23	182	P	Pn	10 39 21.3	+1.5
	0.6nm,0.3s,baz=20,slow=18,SNR=2.2						
PINNC	Pines Island,	11.79	177	*e*Pn	Pn	10 39 29.2	+1.9
MSVF	Nonsavu	12.92	124	*e*Pn	Pn	10 39 47.1	+4.3
EIDS	Eidsvold	20.79	224	P	Pn	10 41 21.7	-1.2
	baz=21,SNR=22						
EIDS	Eidsvold	20.79	224	*e*P	P	10 41 21.4	+1.0
	70nm,0.9s						
MANU	Manus Island	21.15	293	*e*P	P	10 41 23.1	-1.3
	54nm,1.0s						
CTA	Charters Tower	21.83	242	P	P	10 41 32.1	+0.4
	20nm,1.0s,baz=61,slow=11,SNR=8.0						
CTAO	Charters Tower	21.83	242	*e*P	P	10 41 32.1	+0.4
	35nm,1.0s						
MTSU	Mount Surprise	22.94	249	P	P	10 41 44.0	+0.4
	baz=23,SNR=18						
RMQ	Roma	23.10	225	P	P	10 41 45.8	+0.6
	baz=23,SNR=7.3						
COEN	Coen	23.28	260	*e*P	P	10 41 46.4	-0.7
	24nm,1.1s						
ARMA	Armidale	24.10	214	P	P	10 41 55.2	+0.2
	baz=24,SNR=7.3						
ARMA	Armidale	24.10	214	*e*P	P	10 41 55.2	+0.2
	29nm,0.9s						
QIS	Mount Isa	27.88	246	P	P	10 42 28.7	-0.5
	baz=28,SNR=3.5						
H11S2	WAKE ISLAND Hy	29.08	360	T	T	11 13 18.8	
	baz=181,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.09	360	T	T	11 13 15.4	
	baz=181,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.10	360	T	T	11 13 15.1	
	baz=181,slow=76,SNR=15						
CAN	Canberra	29.30	211	*e*P	P	10 42 41.3	-0.5
	2.6nm,0.9s						
BKZ	Black Stump Fm	29.56	165	*e*P	P	10 42 44.1	0.0
	12nm,1.1s						
H11N1	WAKE ISLAND Hy	30.30	0	T	T	11 14 54.0	
	baz=184,slow=74						
H11N3	WAKE ISLAND Hy	30.30	0	T	T	11 14 50.5	
	baz=184						
H11N2	WAKE ISLAND Hy	30.32	0	T	T	11 14 50.1	
	baz=184,slow=74						
BFZ	Birch Farm	30.93	166	*e*P	P	10 42 56.4	+0.3
	29nm,1.2s						
THZ	Tophouse	31.33	171	*e*P	P	10 43 00.7	+1.1
	12nm,0.9s						
STKA	Stephens Creek	31.34	224	P	P	10 42 59.6	-0.3
	baz=32,SNR=6.8						
STKA	Stephens Creek	31.34	224	*e*P	P	10 42 59.5	-0.3
	2.9nm,1.0s						
STKA	Stephens Creek	31.34	224	P	P	10 42 59.3	-0.5
	7.6nm,0.9s,baz=40,slow=7.9,SNR=8.4						
KHZ	Kahutara	32.06	171	*e*P	P	10 43 06.5	+0.5
	14nm,1.2s						
LTZ	Lake Taylor	32.24	172	*e*P	P	10 43 07.3	-0.3
	9.1nm,0.8s						
WB2	Warramunga Arr	32.52	250	*e*P	P	10 43 09.4	-1.0
	25nm,1.0s						
WRAB	Tennant Creek	32.52	250	*e*P	P	10 43 09.2	-1.2
	25nm,1.0s						
WR1	Warramunga Arr	32.54	250	*e*P	P	10 43 09.2	-1.3
	41nm,1.1s						
WRA	Warramunga Arr	32.54	250	P	P	10 43 09.2	-1.3
	21nm,1.0s,baz=83,slow=8.9,SNR=27						
WRA				PcP	PcP	10 45 56.6	-0.7
	1.3nm,0.8s,baz=78,slow=3.3,SNR=5.5						
TOO	Toolangi	32.84	212	P	P	10 43 12.4	-0.5
	baz=33,SNR=5.2						
TOO	Toolangi	32.84	212	*e*P	P	10 43 12.9	-0.1
	10nm,0.8s						
RPZ	Rata Peaks	33.02	174	*e*P	P	10 43 14.9	+0.5
	20nm,0.9s						
RPZ	Rata Peaks	33.02	174	P	P	10 43 12.3	-2.1
	12nm,0.8s,baz=284,slow=4.2,SNR=4.1						
KDU	Kakadu	33.64	263	P	P	10 43 19.2	-1.0
	baz=34,SNR=3.8						
AS01	Alice Springs	33.78	243	*e*P	P	10 43 19.7	-1.7
AS31	Alice Springs	33.83	243	*e*P	P	10 43 20.4	-1.4
	2.9nm,0.9s						
ASAR	Alice Springs	33.83	243	P	P	10 43 19.8	-2.0
	5.2nm,0.8s,baz=75,slow=9.3,SNR=12						
ASAR				PcP	PcP	10 45 59.4	-1.5
	1.5nm,0.9s,baz=56,slow=1.7,SNR=4.5						
HTT	Hallett	34.08	224	P	P	10 43 23.6	-0.2
	baz=34,SNR=6.0						
BBOO	Buckleboo	35.76	227	P	P	10 43 37.7	-0.6
	baz=36,SNR=6.5						
BBOO	Buckleboo	35.76	227	*e*P	P	10 43 37.9	-0.4
	31nm,0.9s						
KNRA	Kununurra	37.30	258	P	P	10 43 51.2	-0.4
	baz=37,SNR=4.2						
WRKA	Warakurna	39.12	243	P	P	10 44 05.8	-1.1
	baz=39,SNR=3.6						
FITZ	Fitzroy Crossi	40.44	255	P	P	10 44 17.4	-0.5
	baz=41,SNR=16						
FITZ	Fitzroy Crossi	40.44	255	*e*P	P	10 44 17.2	-0.7
	23nm,0.9s						
PPT2	Papeete2	42.77	104	*e*S	S	10 50 56.6	-4.8
	200nm,25.0s						
PPT2				*e*LQ	LQ	10 54 43.6	
	830nm,27.5s						
PPT2				*e*LR	LR	10 56 28.0	
	comp=Z,1µm,26.8s						
MMRI	Maumere	43.94	269	*e*P	P	10 44 45.5	-1.0
	49nm,0.9s						
LUWI	Luwuk	44.78	279	*e*P	P	10 44 53.0	-0.2
	30nm,1.1s						
MBWA	Marble Bar	46.25	251	*e*P	P	10 45 04.9	0.0
	20nm,1.0s						
MEEK	Meekatharra	47.98	244	P	P	10 45 18.0	-0.5
	baz=48,SNR=7.5						
NWAO	Narrogin (SRO)	50.46	236	*e*P	P	10 45 36.5	-0.7
	22nm,1.0s						
MORW	Morawa	50.65	241	P	P	10 45 38.5	-0.2
	baz=51,SNR=3.8						
JHJ	Hachijo jima 2	50.68	330	LR	LR	11 01 38.4	
	comp=Z,69nm,21.5s,baz=86,slow=29						
TAOE	Nuku Hiva Isla	52.27	93	*e*S	S	10 53 11.2	-5.6
	182nm,25.4s						
TAOE				*e*LR	LR	11 00 38.3	
	comp=Z,539nm,29.1s						
MJAR	Matsushiro Arr	54.22	332	P	P	10 46 04.5	-0.5
	5.7nm,0.9s,baz=167,slow=8.7,SNR=9.4						
MAJO	Matsushiro	54.22	332	*e*P	P	10 46 04.5	-0.5
MAJO				*e*sP	P	10 46 05.0	+0.1
MAT	Matsushiro	54.22	332	P	P	10 46 04.2	-0.8
MJB9	Matsu-Tunnel	54.22	332	*e*P	P	10 46 05.1	+0.1
	28nm,1.2s						
JNU	Nakatsue	55.47	323	*e*P	P	10 46 14.9	+0.7
	15nm,0.9s						
JNU	Nakatsue	55.47	323	P	P	10 46 14.5	+0.3
	13nm,0.9s,baz=101,slow=4.9,SNR=6.2						
TPUB	Ta-pu	56.45	307	*e*P	P	10 46 22.0	+0.7
	24nm,1.1s						
RKT	Rikitea	56.72	111	*e*LR	LR	11 02 58.4	
	comp=Z,698nm,26.8s						
ASAJ	Asahikawa	58.89	340	P	P	10 46 38.8	+0.7
	10.0nm,0.8s,baz=238,slow=15,SNR=5.6						
KSRS	Korea Array	60.24	325	P	P	10 46 48.3	+0.8
	2.1nm,0.7s,baz=131,slow=7.6,SNR=7.0						
KSAR	Wonju Array Be	60.26	325	P	P	10 46 48.3	+0.7
KS01	Wonju Array Si	60.27	325	*e*P	P	10 46 48.2	+0.4
YSS	Yuzh-Sakhalins	61.35	341	*e*P	P	10 46 55.5	+0.6
	27nm,1.1s						
NJ2	Nanjing	62.56	315	*e*P	P	10 47 04.1	+0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USA0B	Ussuriysk Arra	63.18	333	*e*P	P	10 47 08.9	+1.7
	comp=Z,8.7nm,1.0s						
USRK	Ussuriysk Ar.	63.18	333	P	P	10 47 08.2	+1.0
	comp=Z,16nm,1.1s,baz=132,slow=5.7,SNR=15						
QIZ	Qiongzhong	63.46	298	P	P	10 47 10.9	+1.3
QIZ				S	S	10 55 44.5	+1.4
QIZ				pmax	pmax		
	comp=Z,270nm,2.6s						
QIZ				LR	LR		
	comp=N,480nm,9.2s						
QIZ				LR	LR		
	comp=E,410nm,16.3s						
QIZ				LR	LR		
	comp=Z,360nm,30.9s						
PETK	Petropavlovsk-	64.11	354	P	P	10 47 14.3	+1.2
	comp=Z,6.4nm,1.0s,baz=134,slow=11,SNR=3.6						
PEA1	Petropavlovsk-	64.11	354	*e*P	P	10 47 14.3	+1.1
MDJ	Mudanjiang	64.60	331	*e*P	P	10 47 18.2	+1.6
	comp=Z,24nm,1.1s						
CN2	Changchun	66.05	328	*e*P	P	10 47 26.4	+0.4
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
KLR	Kul'dur	67.23	336	P	P	10 47 34.5	+1.1
	comp=Z,4.7nm,0.9s,baz=139,slow=4.7,SNR=13						
ENH	Enshi	68.53	309	*e*P	P	10 47 41.5	-0.6
	comp=Z,10nm,1.0s						
PSI	Prapat	68.85	277	*e*P	P	10 47 42.4	-2.1
	comp=Z,7.8nm,1.0s						
PSI	Prapat	68.85	277	P	P	10 47 42.9	-1.7
	comp=Z,3.4nm,0.5s,baz=180,slow=2.0,SNR=4.4						
BJT	Baijiatuau	68.92	320	*e*P	P	10 47 45.2	+0.9
	comp=Z,7.1nm,1.0s						
BJI	Beijing	68.92	321	P	P	10 47 45.0	+0.7
BJI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GYA	Guiyang	69.12	304	⇑*i*P	P	10 47 48.2	+2.2
GYA				PP	PP	10 50 23.0	+4.1
GYA				S	S	10 56 16.5	-35
GYA				SKS	SKSac	10 57 44.0	-2.5
GYA	Guiyang	69.12	304	SS	SS	11 01 21.6	+3.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.4s						
GYA				LR	LR		
	comp=N,520nm,18.0s						
GYA				LR	LR		
	comp=E,540nm,18.2s						
GYA				LR	LR		
	comp=Z,520nm,18.6s						
TIY	Taiyuan	70.07	317	*e*P	P	10 47 52.3	+0.8
XAN	Xi'an	70.70	312	P	P	10 47 55.2	-0.2
XAN				pP	PcP	10 48 09.5	-6.9
XAN				sP	pwP	10 48 16.7	+16
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
XAN				pmax	pmax		
	comp=Z,180nm,5.7s						
XAN				LR	LR		
	comp=E,150nm,20.6s						
XAN				LR	LR		
	comp=Z,200nm,17.4s						
XAN	Xi'an	70.70	312	*e*P	P	10 47 55.3	-0.2
	comp=Z,11nm,0.9s						
MA2	Magadan	71.29	351	P	P	10 47 58.4	0.0
	comp=Z,3.1nm,0.8s,baz=261,slow=8.9,SNR=3.7						
KMI	Kunming	71.86	301	P	P	10 48 01.9	-1.0
KMI				pP	pwP	10 48 10.0	+1.6
KMI				sP	PcP	10 48 14.1	-7.6
KMI				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,150nm,5.4s						
HHC	Hu-ho-hao-te	72.30	319	*e*P	P	10 48 05.8	+0.8
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
HIA	Hailar	72.65	330	*e*P	P	10 48 07.5	+0.7
	comp=Z,14nm,1.0s						
CM01	Chiang Mai Arr	72.92	293	*e*P	P	10 48 08.8	-0.3
CM31	Chiang Mai Arr	72.95	293	*e*P	P	10 48 09.0	-0.2
	comp=Z,7.9nm,0.9s						
CMAR	Chiang Mai Arr	72.95	293	P	P	10 48 09.2	-0.1
	comp=Z,2.9nm,0.9s,baz=118,slow=4.1,SNR=10						
CHTO	Chiang Mai	73.06	293	P	P	10 48 11.0	+1.2
	comp=Z,25nm,1.4s						
CD2	Chengdu	73.26	307	⇑*i*P	P	10 48 11.3	+0.4
CD2				pmax	pmax		
	comp=Z,30nm,1.2s						
CD2				pmax	pmax		
	comp=Z,360nm,3.6s						
SEY	Seymchan	74.33	353	P	P	10 48 16.5	+0.1
	comp=Z,1.0nm,0.4s,baz=132,slow=2.3,SNR=7.6						
LZH	Lanzhou	75.34	312	*e*P	P	10 48 24.6	+1.5
LZH				pP	pwP	10 48 29.2	+0.7
LZH				sP	PcP	10 48 32.1	-4.2
LZH				PP	PP	10 51 09.3	-2.7
LZH				pmax	pmax		
	comp=Z,31nm,1.0s						
LZH				pmax	pmax		
	comp=Z,200nm,4.1s						
LZH				LR	LR		
	comp=N,280nm,14.1s						
LZH				LR	LR		
	comp=E,310nm,13.6s						
LZH				LR	LR		
	comp=Z,380nm,14.6s						
GAMB	Gambell	76.13	10	*e*P	P	10 48 27.9	+1.2
	comp=Z,6.2nm,0.9s						
ANM	Nome	78.02	12	*e*P	P	10 48 38.1	+0.8
	comp=Z,4.2nm,1.1s						
BILL	Bilibino	78.61	360	*e*P	P	10 48 40.4	-0.2
	comp=Z,16nm,1.0s						
SONA0	Songino Array	79.06	323	*e*P	P	10 48 44.3	+0.6
SONM	Songino Array	79.06	323	P	P	10 48 44.3	+0.6
	comp=Z,4.8nm,1.1s,baz=137,slow=5.4,SNR=20						
SONA1	Songino Array	79.06	323	*e*P	P	10 48 44.1	+0.5
QSPA	South Pole Qui	79.22	180	*e*P	P	10 48 43.0	-1.3
	comp=Z,8.2nm,1.1s						
GTA	Gaotai	79.62	314	⇓P	P	10 48 47.8	+0.9
GTA				pP	PcP	10 48 55.2	+0.5
GTA				sP	pwP	10 48 58.2	+5.8
GTA	Gaotai	79.62	314	S	S	10 58 49.3	0.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,12nm,1.4s						
GTA				pmax	pmax		
	comp=Z,210nm,8.3s						
GTA				LR	LR		
	comp=N,120nm,19.0s						
GTA				LR	LR		
	comp=E,190nm,19.7s						
GTA				LR	LR		
	comp=Z,160nm,20.0s						
SHL	Shillong	81.29	298	*e*P	P	10 48 56.2	-0.1
	comp=Z,13nm,0.3s						
SHL	Shillong	81.29	298	*e*P	P	10 48 56.0	-0.2
IM3	Indian Mountai	81.90	15	*e*P	P	10 48 59.1	+0.8
TLY	Talaya	82.47	326	*e*P	P	10 49 01.8	+0.1
	comp=Z,7.6nm,0.9s						

HDA	**Harding Lake**	82.67	18	eP	P	10 49 02.9	+0.5
	comp=Z,17nm,0.9s						
MDM	**Murphy Dome**	82.67	18	eP	P	10 49 02.1	-0.3
	comp=Z,16nm,1.1s						
ILAR	**Eielson Array**	82.94	18	P	P	10 49 03.6	-0.2
	comp=Z,5.4nm,0.8s,baz=222,slow=6.3,SNR=21						
ILB	**Eielson Array**	82.94	18	eP	P	10 49 03.6	-0.2
	comp=Z,7.4nm,0.9s						
IL1	**Eielson Array**	82.94	18	eP	P	10 49 03.2	-0.6
ORV	**Oroville**	83.08	48	eP	P	10 49 05.4	+0.4
	comp=Z,7.6nm,1.0s						
AFDM	**Forest Hills D**	83.26	48	eP	P	10 49 06.8	+0.8
	comp=Z,15nm,1.1s						
SCRK	**Sand Creek**	83.32	20	eP	P	10 49 07.0	+1.0
	comp=Z,16nm,1.2s						
CMB	**Columbia Colle**	83.39	49	eP	P	10 49 07.6	+0.8
	comp=Z,7.0nm,1.0s						
BEKR	**Beckworth**	84.01	48	eP	P	10 49 11.1	+1.0
	comp=Z,17nm,1.2s						
ISA	**Isabella, Lake**	84.10	52	eP	P	10 49 10.6	+0.1
	comp=Z,7.0nm,1.1s						
MDPB	**Devils Postpil**	84.24	50	eP	P	10 49 12.5	+1.1
	comp=Z,20nm,1.1s						
WAKR	**Walker**	84.25	49	eP	P	10 49 12.9	+1.5
	comp=Z,23nm,1.2s						
YERR	**Yerington**	84.55	49	eP	P	10 49 13.8	+0.9
	comp=Z,4.9nm,1.1s						
PAHR	**Pah Rah Range**	84.67	48	eP	P	10 49 14.5	+1.1
	comp=Z,22nm,1.2s						
MOD	**Modoc Plateau**	84.72	46	eP	P	10 49 14.3	+0.7
	comp=Z,6.3nm,1.0s						
DAC	**Darwin (Calif)**	84.97	52	eP	P	10 49 15.7	+0.7
	comp=Z,7.4nm,1.1s						
RYN	**Ryan**	84.97	49	eP	P	10 49 15.4	+0.5
	comp=Z,15nm,1.2s						
NVAR	**Mina Array Bea**	85.07	50	P	P	10 49 15.9	+0.3
	comp=Z,3.1nm,0.9s,baz=231,slow=8.2,SNR=8.5						
NV01	**Mina Array Sit**	85.07	50	eP	P	10 49 16.3	+0.7
NV11	**Mina Array Sit**	85.18	50	eP	P	10 49 16.9	+0.9
	comp=Z,1.2nm,1.1s						
KVN	**Kaiserville**	85.41	49	eP	P	10 49 17.7	+0.5
	comp=Z,11nm,1.1s						
D05A	**Enumclaw**	85.42	40	eP	P	10 49 18.1	+1.3
	comp=Z,9.4nm,1.1s						
I07A	**Izee**	85.99	44	eP	P	10 49 20.8	+0.9
	comp=Z,12nm,1.1s						
J08A	**Circle Bar Ran**	86.47	45	eP	P	10 49 23.0	+0.8
	comp=Z,6.7nm,0.9s						
Y12C	**Blythe**	86.68	55	eP	P	10 49 24.7	+1.4
	comp=Z,9.6nm,1.1s						
G08A	**Pilot Rock**	86.75	43	eP	P	10 49 24.1	+0.5
	comp=Z,6.6nm,1.0s						
SHPR	**Sheep Range**	86.91	52	eP	P	10 49 25.7	+1.0
	comp=Z,7.8nm,1.1s						
E08A	**Dider Farm, El**	87.07	42	eP	P	10 49 25.8	+0.8
	comp=Z,12nm,1.1s						
R11A	**Troy Canyon, C**	87.09	50	eP	P	10 49 26.5	+1.0
	comp=Z,4.3nm,1.1s						
W13A	**Hualapai Mount**	87.54	54	eP	P	10 49 28.6	+0.8
	comp=Z,8.4nm,1.1s						
BMO	**Blue Mountains**	87.73	44	eP	P	10 49 28.7	+0.3
	comp=Z,2.6nm,1.0s						
F10A	**Beach Ranch, E**	88.12	43	eP	P	10 49 30.9	+0.8
	comp=Z,8.6nm,1.1s						
PSUT	**Pine Spring**	88.45	50	eP	P	10 49 32.9	+0.8
	comp=Z,6.5nm,1.1s						
LCMT	**Little Creek M**	88.53	52	eP	P	10 49 33.7	+1.4
	comp=Z,14nm,1.2s						
CCUT	**Cedar City**	88.57	51	eP	P	10 49 34.2	+1.5
	comp=Z,11nm,1.2s						
SZCU	**Shurtz Canyon**	88.80	52	eP	P	10 49 35.0	+1.3
	comp=Z,12nm,1.2s						
KNB	**Kanab**	88.86	52	eP	P	10 49 35.4	+1.4
	comp=Z,7.6nm,1.2s						
U15A	**North Rim**	89.13	53	eP	P	10 49 36.7	+1.3
	comp=Z,21nm,1.1s						
X16A	**Lo Mia Camp, P**	89.33	55	eP	P	10 49 37.6	+1.4
	comp=Z,6.3nm,0.9s						
PKCU	**Pink Cliffs**	89.36	52	eP	P	10 49 39.0	+2.5
	comp=Z,17nm,1.1s						
HLID	**Hailey**	89.36	45	eP	P	10 49 37.4	+1.3
	comp=Z,4.9nm,1.1s						
TUC	**Tucson**	89.38	57	eP	P	10 49 37.9	+1.5
	comp=Z,6.6nm,1.1s						
MTPU	**Mount Pierson**	89.60	51	eP	P	10 49 39.6	+2.0
	comp=Z,14nm,1.1s						
WMQ	**Urumqi**	89.64	315	P	P	10 49 36.9	-0.4
WMQ				sP	pwP	10 49 47.4	+4.6
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.3s						
WMQ				LR	LR		
	comp=N,110nm,24.3s						
WMQ				LR	LR		
	comp=E,88nm,20.5s						
WMQ				LR	LR		
	comp=Z,78nm,20.5s						
WMQ	**Urumqi**	89.64	315	eP	P	10 49 36.2	-1.0
	comp=Z,4.1nm,0.6s						
WUAZ	**Wupatki**	89.64	54	eP	P	10 49 38.7	+1.0
	comp=Z,14nm,1.1s						
DUG	**Dugway, Tooele**	89.65	49	eP	P	10 49 38.9	+1.3
	comp=Z,5.2nm,1.1s						
BGU	**Big Grassy Mou**	89.67	48	eP	P	10 49 38.8	+1.1
	comp=Z,10nm,1.2s						
MSU	**Marysvale**	89.72	51	eP	P	10 49 39.8	+1.8
HVU	**Hansel Valley**	90.07	48	eP	P	10 49 39.9	+0.4
	comp=Z,22nm,1.1s						
NLU	**North Lily Min**	90.14	49	eP	P	10 49 41.1	+1.2
	comp=Z,17nm,1.2s						
SPUT	**South Promonto**	90.19	48	eP	P	10 49 41.2	+1.1
	comp=Z,4.7nm,1.1s						
MPU	**Maple Canyon**	90.48	49	eP	P	10 49 42.8	+1.2
	comp=Z,9.5nm,1.2s						
X18A	**Snowflake**	90.55	55	eP	P	10 49 42.4	+0.5
	comp=Z,9.4nm,1.1s						
CTU	**Camp Tracy**	90.56	49	eP	P	10 49 42.7	+0.9
	comp=Z,11nm,1.0s						
TMUT	**Trail Mountain**	90.64	50	eP	P	10 49 43.4	+1.0
	comp=Z,9.7nm,1.0s						
JLU	**Jordanelle**	90.76	49	eP	P	10 49 44.1	+1.2
	comp=Z,12nm,1.1s						
MCMT	**McKenzie Canyo**	90.77	45	eP	P	10 49 46.4	+3.6
W18A	**Petrified Fore**	90.85	55	eP	P	10 49 44.1	+0.8
	comp=Z,11nm,1.1s						
TCUT	**Toone Canyon**	90.91	48	eP	P	10 49 44.8	+1.3
	comp=Z,16nm,0.9s						
DLMT	**Dillon**	91.08	44	eP	P	10 49 45.1	+1.1
	comp=Z,14nm,1.1s						
SRU	**San Rafael Swe**	91.11	51	eP	P	10 49 47.0	+2.5
	comp=Z,4.7nm,1.2s						
LRM	**Limekiln Ridge**	91.29	44	eP	P	10 49 45.8	+0.6
FXWY	**Fox Creek**	91.76	46	eP	P	10 49 48.2	+0.8
	comp=Z,5.5nm,1.1s						
BOZ	**Bozeman (W)**	91.79	44	eP	P	10 49 48.5	+1.1
	comp=Z,2.8nm,1.1s						
REDW	**Red Top Meadow**	91.82	46	eP	P	10 49 48.5	+0.8
	comp=Z,3.7nm,1.1s						
IMW	**Indian Meadow**	91.88	46	eP	P	10 49 49.4	+1.3
	comp=Z,6.5nm,1.1s						
MOOW	**Moose Ponds**	91.99	46	eP	P	10 49 49.2	+0.8
	comp=Z,1.6nm,1.0s						
PDAR	**Pinedale Array**	92.62	47	P	P	10 49 51.5	0.0
	comp=Z,0.7nm,0.8s,baz=207,slow=3.0,SNR=4.6						
ZAA0	**Zalesovo Array**	93.94	324	eP	P	10 49 55.9	-1.0
	comp=Z,6.5nm,1.0s						
ZALV	**Zalesovo Beam**	93.94	324	eP	P	10 49 55.2	-1.6
ZALV	**Zalesovo Beam**	93.94	324	P	P	10 49 56.1	-0.7
	comp=Z,2.4nm,0.8s,baz=115,slow=3.8,SNR=10						
ZAA1	**Zalesovo Array**	93.94	324	eP	P	10 49 56.1	-0.7
MK01	**Makanchi Array**	94.02	317	eP	P	10 49 57.4	-0.1
MK31	**Makanchi Array**	94.03	317	eP	P	10 49 57.3	-0.3
	comp=Z,7.1nm,1.0s						
MK32	**Makanchi Array**	94.03	317	eP	P	10 49 57.2	-0.3
MKAR	**Makanchi Array**	94.03	317	eP	P	10 49 57.1	-0.4
	comp=Z,30nm,0.9s						
MKAR	**Makanchi Array**	94.03	317	P	P	10 49 57.2	-0.4
	comp=Z,3.6nm,0.8s,baz=91,slow=6.4,SNR=20						
MAKZ	**Makanchi**	94.24	317	eP	P	10 49 58.3	-0.2
	comp=Z,9.2nm,1.1s						
YKA	**Yellowknife Ar**	94.27	27	P	P	10 49 57.2	-1.0
	comp=Z,0.4nm,0.7s,baz=255,slow=4.7,SNR=7.8						
YKB5	**Yellowknife Ar**	94.27	27	eP	P	10 49 56.8	-1.4
NB200	**NORSAR Array S**	126.71	345	ePKPdf	PKPdf	10 55 41.8	-0.7
NOA	**NORSAR Array B**	126.71	345	PKP	PKPdf	10 55 41.8	-0.7
	comp=Z,0.9nm,0.9s,baz=26,slow=4.0,SNR=2.4						
AKASG	**Malin Array Be**	127.20	327	PKP	PKPdf	10 55 42.8	-0.9
	comp=Z,0.2nm,0.4s,baz=44,slow=2.1,SNR=5.2						
BUR04	**Bucovina Ar. S**	131.12	326	ePKPdf	PKiKP	10 55 53.1	+0.7
VYHS	**Vyhne**	133.85	331	ePKP	PKPdf	10 55 56.1	-0.3
GERES	**GERESS Array B**	135.91	335	PKP	PKPdf	10 55 59.8	-0.6
	comp=Z,0.9nm,0.8s,baz=96,slow=4.0,SNR=5.1						
DAVOX	**Davos/Dischmat**	139.12	336	PKP	PKPdf	10 56 05.8	-0.7
	comp=Z,1.6nm,0.6s,baz=9.5,slow=6.1,SNR=3.5						
KEST	**Kesra**	147.81	324	ePKPbc	PKPbc	10 56 25.5	+0.6
KEST	**Kesra**	147.81	324	PKPbc	PKPbc	10 56 24.8	0.0
	comp=Z,9.5nm,0.9s,baz=74,slow=19,SNR=3.0						
ES19	**SONSECA Array**	150.03	346	ePKPbc	PKiKP	10 56 30.8	-0.4
ESDC	**Sonseca Array**	150.07	346	PKPbc	PKPbc	10 56 30.1	-0.4
	comp=Z,2.5nm,0.9s,baz=360,slow=3.1,SNR=8.3						
TORD	**Torodi Ar. Bea**	165.23	281	PKP	PKPdf	10 56 43.0	-1.7
	comp=Z,2.6nm,1.3s,baz=125,slow=1.0,SNR=5.1						
TORD				PKPab	PKPab	10 57 40.4	-1.7
	comp=Z,1.4nm,1.1s,baz=92,slow=3.2,SNR=3.2						

GUC 10 10:40:26.1±0.5**, 19°.37S×69°.75W, h81**^{km}±2^{km}**, ML3.6, 4C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	0.28	31	⇓iP	Pn	10 40 38.9	+0.1
MNMC				i S	Sn	10 40 48.5	+0.4
MNMC				IAML		10 40 50.5	
	comp=E,5μm,0.3s						
PB11	**IPOC Station P**	0.40	167	⇓iP	Pn	10 40 39.5	+0.2
PB11				i S	Sn	10 40 49.7	+0.6
PB11				IAML		10 40 50.0	
	comp=N,5μm,0.3s						
PSGC	**Pisagua**	0.42	238	⇓iP	Pn	10 40 39.7	+0.3
PSGC				i S	Sn	10 40 49.8	+0.6
PSGC				IAML		10 40 50.9	
	comp=E,3μm,0.2s						
PB12	**IPOC Station P**	0.93	324	⇑iP	Pn	10 40 44.7	+0.1
PB12				i S	Sn	10 40 58.7	+0.5
PB12				IAML		10 40 59.5	
	comp=E,2μm,0.3s						
PB08	**IPOC Station P**	0.95	144	⇑iP	Pn	10 40 45.6	+0.6
PB08				i S	Sn	10 41 00.3	+1.2
PB08				IAML		10 41 01.3	
	comp=N,1μm,0.2s						
ARCH	**Arica**	1.02	329	eP	Pn	10 40 45.8	+0.4
ARCH				eS	Sn	10 41 00.6	+0.7
ARCH				IAML		10 41 02.7	
	comp=E,3μm,0.3s						
PB01	**IPOC Station P**	1.68	172	⇑iP	Pn	10 40 54.5	+0.6
PB01				i S	Sn	10 41 16.2	+1.3
PB01				IAML		10 41 22.1	
	comp=N,754nm,0.2s						
PB02	**IPOC Station P**	1.94	184	⇓iP	Pn	10 40 57.9	+0.5
PB02				eS	Sn	10 41 22.7	+1.6
PB02				IAML		10 41 30.3	
	comp=E,928nm,0.3s						
PB07	**IPOC Station P**	2.34	183	eP	Pn	10 41 03.8	+0.9
PB07				IAML		10 41 38.5	
	comp=E,694nm,0.4s						
PB09	**IPOC Station P**	2.46	169	⇑iP	Pn	10 41 05.7	+1.3
PB09				IAML		10 41 48.5	
	comp=E,283nm,0.3s						
PB03	**IPOC Station P**	2.66	180	eP	Pn	10 41 07.4	+0.3
PB03				i S	Sn	10 41 38.8	+0.3
PB03				IAML		10 41 48.1	
	comp=E,310nm,0.5s						
PB04	**IPOC Station P**	2.97	187	IAML		10 42 03.7	
	comp=E,225nm,0.3s						
PB06	**IPOC Station P**	3.32	177	IAML		10 42 13.5	
	comp=E,138nm,0.5s						
PB05	**IPOC Station P**	3.49	187	IAML		10 42 14.4	
	comp=E,95nm,0.4s						

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*SJA **10** 10:53:18.1±0.5, 26°.95S×72°.17W, h11*^{km}*±28*^{km}*, ML3.6, MW3.6*
*GUC **10** 10:53:33.3±0.5, 27°.85S×71°.46W, h60*^{km}*±18*^{km}*, ML3.3*
*ISCJB **10** 10:53:34.3±1.4, 27°.82S±0°.06×71°.5W±0°.2, h18*^{km}*, Error ellipse: s-maj=20.1km s-min=8.8km az=171.0*
ISC 10 10:53:29.6±2.2**, 27°.69S**±0°.06×**71°.6W**±0°.1**, h18**^{km}**, n11, σ1**^{s}**.89**/11**, 1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	**Vallenar**	1.18	139	eP	Pb	10 53 51.3	-0.2
VACH				i S	Sb	10 54 05.8	-0.6
LCO	**Las Campanas**	1.56	148	eP	Pb	10 53 58.1	0.0
LCO				i S	Sn	10 54 16.2	-0.4
LCO				IAML		10 54 18.0	
	comp=E,446nm,0.4s						
GO04	**Tololo Observa**	2.58	164	eP	Pn	10 54 12.3	+1.5
GO04				eS	Sn	10 54 41.3	-0.6
GO02	**Mina Guanaco**	3.11	37	⇑iP	Pb	10 54 23.1	-1.6
GO02				IAML		10 55 26.1	
	comp=E,141nm,0.7s						
AROD	**Rodeo**	3.12	143	i P	Pb	10 54 22.9	-1.9
ACCO	**Cerro Coronel**	3.66	143	i P	Pb	10 54 31.2	-2.8
AMOG	**MOGNA**	4.25	140	i P	Pb	10 54 38.5	-5.4
ACLC	**CERRO LA CRUZ**	4.47	114	i P	Pn	10 54 40.0	+3.3
ACLC				i S	Sb	10 55 40.6	-0.8
RTLS	**Leoncito**	4.58	154	i P	Pb	10 54 43.8	-5.8
RTLS				IAML		10 55 54.4	
	comp=Z,27nm,0.6s						
AUSP	**Uspallata**	4.92	157	i P	Pn	10 54 47.7	+4.7
ASAL	**Salagasta**	5.46	154	i P	Pn	10 54 55.0	+4.9

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*NEIC **10** 10:57:58.7±0.0, 15°.74N×96°.53W, h16*^{km}*, MD4.0(MEX), After MEX.*
MEX 10 10:57:58.4±0.8**, 15°.71N×96°.54W, h20**^{km}±14^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.42	83	eP	Pb	10 58 05.5	-1.7
HUIG				eS	Sb	10 58 11.6	-1.5
HUIG	**Huatulco**	0.42	83	eP	Pb	10 58 05.5	-1.7
HUIG				eS	Sb	10 58 11.6	-1.5
VHO	**Vista Hermosa**	1.36	352	eP	Pn	10 58 18.7	-3.8
VHO				eS	Sn	10 58 35.0	-5.1
VHO	**Vista Hermosa**	1.36	352	eP	Pn	10 58 18.7	-3.8
VHO				eS	Sn	10 58 35.0	-5.1
PNIG	**Pinotepa**	1.67	294	eP	Pn	10 58 25.4	-1.1
PNIG				eS	Sn	10 58 42.0	-5.4
PNIG	**Pinotepa**	1.67	294	eP	Pn	10 58 23.7	-2.8
PNIG				i S	Sn	10 58 42.4	-5.0
CCIG	**Comitan**	4.27	82	ePn	Pn	10 59 01.2	-1.3
MYIG	**Mrida**	8.30	50	ePn	Pn	11 00 01.9	+4.2
BOAB	**BOACO BROADBAN**	11.04	106	ePn	Pn	11 00 37.4	+2.1
HDC	**Heredia**	13.38	114	ePn	Pn	11 01 07.3	-0.1

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*NNC **10** 11:05:48.5±3.3, 37°.01N×70°.95E, h211*^{km}*±55*^{km}*, mb2.4, mpv3.5, Error ellipse: s-maj=47.7km s-min=27.6km az=68.0*
ISC 10 11:05:45.4±3.0**, 36°.8N**±0°.2×**70°.9E**±0°.1**, h200**^{km}**, n11, σ1**^{s}**.41**/15**, 5C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	3.80	32	⇓P	Pn	11 06 45.8	+1.0
	6.9nm,0.3s						
SFK				⇑S	Sn	11 07 31.4	-0.2
	5.1nm,0.2s						
AML	**Almayashu**	5.75	21	P	Pn	11 07 10.6	+1.0
	SNR=28						
MNAS	**Manas**	5.81	12	⇓P	Pn	11 07 11.6	+1.3
	2.4nm,0.4s						
MNAS				⇑S	Sn	11 08 17.7	+0.2
	19nm,0.5s						
UCH	**Uchtor**	6.09	26	P	Pn	11 07 14.9	+0.7
	SNR=15						
EKS2	**Erkin-Say**	6.26	20	P	Pn	11 07 17.4	+1.4
	SNR=5.4						
KK31	**Karatay Array**	6.31	357	⇑P	Pn	11 07 19.3	+2.8
	0.6nm,0.3s,baz=175,slow=12,SNR=15						
KK31				⇓S	Sn	11 08 27.2	-1.6
	5.0nm,0.5s,baz=189,slow=24,SNR=16						
AAK	**Ala-Archa**	6.45	24	P	Pn	11 07 19.2	+0.7
	SNR=5.7						
AAK	**Ala-Archa**	6.45	24	⇓P	Pn	11 07 19.5	+0.9
	2.4nm,0.4s						
AAK				⇓S	Sn	11 08 31.8	-0.7
	3.1nm,0.5s						
TKM2	**Tokmak 2**	7.10	29	P	Pn	11 07 27.9	+0.9
	SNR=5.8						
AB31	**Akbulak array**	14.79	331	⇑P	Pn	11 09 04.8	0.0
	1.0nm,0.8s,baz=160,slow=12,SNR=5.1						
AKTO	**Aktyubinsk**	16.49	330	⇑P	P	11 09 22.3	-2.2
	1.2nm,0.8s						

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*IDC **10** 11:06:05.7±1.7, 10°.77S×166°.62E, h0*^{km}*, mb3.8/7, mb1 4.1/8, mb1mx3.8/34, mbtmp3.9/8, ML4.8/1, MS3.6/3, Ms1 3.6/3, ms1mx3.1/30, Error ellipse: s-maj=60.9km s-min=24.7km az=147.0*
*NEIC **10** 11:06:08.3±0.5, 10°.48S×166°.49E, h10*^{km}*, mb4.4/9, Error ellipse: s-maj=11.0km s-min=8.0km az=98.0*
*ISCJB **10** 11:06:10.6±0.6, 10°.59S±0°.08×166°.41E±0°.10, h36*^{km}*, mb4.1/15, MS3.5/2, Error ellipse: s-maj=13.9km s-min=11.1km az=176.7*
ISC 10 11:06:12.1±0.7**, 10°.50S**±0°.09×**166°.5E**±0°.1**, h36**^{km}**, n31, σ0**^{s}**.92**/24**, mb4.2**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	6.52	279	ePn	Pn	11 07 45.0	-0.6
HNR	**Honiara**	6.52	279	Pn	Pn	11 07 44.7	-0.8
	18nm,0.3s,baz=114,slow=5.7,SNR=4.1						
HNR				LR	LR	11 10 34.0	
	comp=Z,641nm,19.2s,baz=128,slow=40						
PINNC	**Pines Island,**	12.09	176	ePn	Pn	11 09 01.5	-0.3
KWAJ	**Kwajalein Atol**	19.20	3	eP	P	11 10 31.6	-1.4
	208nm,0.9s						
EIDS	**Eidsvold**	20.79	223	eP	P	11 10 50.6	+0.4
	12nm,0.9s						
ARMA	**Armidale**	24.17	213	eP	P	11 11 24.1	-1.1
	5.8nm,1.0s						
H11S2	**WAKE ISLAND Hy**	28.80	0	T	T	11 42 36.2	
	baz=181,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	28.81	0	T	T	11 42 34.4	
	baz=181,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	28.82	0	T	T	11 42 37.9	
	baz=181,slow=76,SNR=11						
CAN	**Canberra**	29.39	210	eP	P	11 12 12.9	+0.9
	8.7nm,1.0s						
BKZ	**Black Stump Fm**	29.92	164	eP	P	11 12 15.8	-0.9
	6.6nm,1.1s						
H11N1	**WAKE ISLAND Hy**	30.02	1	T	T	11 44 07.9	
	baz=182,slow=76,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	30.02	1	T	T	11 44 11.6	
	baz=182,slow=76,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	30.04	1	T	T	11 44 10.0	
	baz=182,slow=76,SNR=4.1						
STKA	**Stephens Creek**	31.33	224	LR	LR	11 24 03.0	
	comp=Z,97nm,19.1s,baz=24,slow=34						
WRAB	**Tennant Creek**	32.34	249	eP	P	11 12 38.6	+0.4
	4.1nm,0.8s						
WB2	**Warramunga Arr**	32.34	249	eP	P	11 12 38.3	0.0
	3.9nm,0.8s						
WR1	**Warramunga Arr**	32.35	249	eP	P	11 12 37.8	-0.6
	5.7nm,0.8s						
WRA	**Warramunga Arr**	32.35	249	P	P	11 12 37.8	-0.6
	2.5nm,0.8s,baz=81,slow=8.9,SNR=20						
ASAR	**Alice Springs**	33.68	243	P	P	11 12 48.0	-2.0
	1.0nm,0.8s,baz=75,slow=9.9,SNR=11						
ASAR				LR	LR	11 25 28.9	
	comp=Z,95nm,18.8s,baz=83,slow=34						
FITZ	**Fitzroy Crossi**	40.22	254	eP	P	11 13 46.0	+0.4
	3.7nm,0.7s						
LUWI	**Luwuk**	44.43	279	eP	P	11 14 18.8	-1.1
	27nm,0.4s						
VNDA	**Vanda**	67.05	181	eP	P	11 17 01.7	+0.6
CMAR	**Chiang Mai Arr**	72.56	293	P	P	11 17 37.7	+1.6
	0.4nm,0.4s,baz=121,slow=5.6,SNR=4.6						
SONA0	**Songino Array**	78.65	323	eP	P	11 18 10.6	0.0
SONM	**Songino Array**	78.65	323	P	P	11 18 10.5	0.0
	0.3nm,0.8s,baz=121,slow=5.4,SNR=3.5						
SONA1	**Songino Array**	78.65	323	eP	P	11 18 11.8	+1.2
ILAR	**Eielson Array**	82.77	18	P	P	11 18 32.1	+0.1
	0.7nm,0.8s,baz=232,slow=5.3,SNR=8.6						
NVAR	**Mina Array Bea**	85.12	50	P	P	11 18 44.6	-0.3
	0.2nm,0.3s,baz=229,slow=8.2,SNR=2.2						
MK32	**Makanchi Array**	93.62	317	eP	P	11 19 25.5	+0.8
MKAR	**Makanchi Array**	93.62	317	P	P	11 19 25.5	+0.8
	0.6nm,0.7s,baz=91,slow=6.3,SNR=7.8						

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*ISCJB **10** 11:10:09.4±0.2, 18°.18N±0°.02×78°.01W±0°.02, h23*^{km}*, mb3.7/9, Error ellipse: s-maj=3.7km s-min=2.7km az=36.3*
*IDC **10** 11:10:10.7±0.9, 18°.19N×77°.87W, h0*^{km}*, mb3.7/7, mb1 4.0/11, mb1mx3.8/36, mbtmp3.9/11, ML3.2/4, MS3.1/4, Ms1 3.1/4, ms1mx2.8/38, Error ellipse: s-maj=29.2km s-min=20.8km az=50.0*
*NEIC **10** 11:10:10.1±1.6, 18°.23N×78°.01W, h7*^{km}*±13*^{km}*, mb3.9/14, Error ellipse: s-maj=5.7km s-min=4.6km az=207.0*
NEIC Felt [V] at Savanna-la-Mar and [IV] at Montego Bay. Also felt at Black River, Culloden, Fullerswood, Mackfield and Wakefield.
*JSN **10** 11:10:11.0±0.4, 18°.13N×77°.96W, h2*^{km}*±3*^{km}*, MD4.2*
ISC 10 11:10:12.1±0.5**, 18°.19N**±0°.04×**77°.95W**±0°.03**, h23**^{km}**, n93, σ1**^{s}**.55**/100**, mb3.8**/9**, 3C-5D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBJ	**Montego Bay**	0.23	20	⇓iP	Pb	11 10 16.7	-1.3
MBJ				i S	Sb	11 10 21.3	-0.8
MCJ	**Malvern**	0.36	136	⇑iP	Pb	11 10 17.8	-2.1
NEJ	**Negril**	0.37	280	⇓iP	Pb	11 10 18.2	-1.9
CVJ	**Coleyville**	0.39	84	⇑iP	Pb	11 10 18.9	-1.6
MTDJ	**Mount Denham**	0.39	84	ePg	Pb	11 10 18.9	-1.7
MTDJ				eSg	Sb	11 10 24.7	-1.5
PCJ	**Portland Cotta**	0.87	120	⇑iP	Pb	11 10 26.7	-1.8
STH	**Stony Hill**	1.09	96	⇓iP	Pn	11 10 30.4	-1.5
HOJ	**Hope**	1.15	99	⇓iP	Pn	11 10 31.6	-1.2
GWJ	**Greenwich**	1.16	95	⇓iP	Pn	11 10 31.8	-1.2
YHJ	**Yallahs**	1.41	102	i P	Pn	11 10 36.1	-0.4
YHJ				i S	Sb	11 10 54.8	-0.7
GTBY	**Guantanamo Bay**	3.19	57	ePn	Pn	11 10 59.0	-1.9
GTBY				eSn	Sn	11 11 37.5	-0.8
FSCY	**Frank Sound, G**	3.27	291	ePn	Pn	11 10 59.0	-2.9
FSCY				eSn	Sn	11 11 37.4	-2.7
LGNH	**Logne**	5.08	86	ePn	Pn	11 11 27.4	+0.5
SDDR	**Presa de Saban**	6.36	82	ePn	Pn	11 11 45.2	+0.6
BANI	**BANI**	7.21	87	ePn	Pn	11 11 59.0	+2.7
GRTK	**Grand Turk**	7.21	62	ePn	Pn	11 11 56.0	-0.1
GRTK				eSn	Sn	11 13 13.4	-4.0
SDD	**Santo Domingo**	7.63	87	ePn	Pn	11 12 05.2	+3.3
061Z	**Ochoppi**	8.12	341	ePn	Pn	11 12 08.4	-0.2
ESPN	**Las Esperanzas**	8.55	227	ePn	Pn	11 12 14.0	-0.5
060A	**Indiantown**	9.09	346	ePn	Pn	11 12 21.6	-0.3
059A	**Moore Haven**	9.23	342	ePn	Pn	11 12 22.2	-1.5
CODC	**Agustn Codazz**	9.29	151	eP	Pn	11 12 24.2	-0.5
CODC	**Agustn Codazz**	9.29	151	eP	Pn	11 12 24.2	-0.5
BOAB	**BOACO BROADBAN**	9.38	234	ePn	Pn	11 12 27.2	+1.3
ESTN	**Estel**	9.56	239	ePn	Pn	11 12 28.0	-0.4
TGUH	**Tegucigalpa,Un**	9.86	247	ePn	Pn	11 12 32.7	+0.2
TEIG	**Tepich**	9.97	283	ePn	Pn	11 12 32.3	-1.7
TEIG				eSn	Sn	11 14 20.9	-4.3
SMLC	**San Martn de**	10.06	158	eP	Pn	11 12 35.3	0.0
SMLC	**San Martn de**	10.06	158	eP	Pn	11 12 35.3	0.0
HDC	**Heredia**	10.10	217	ePn	Pn	11 12 35.9	0.0
MPR	**Mayaguez**	10.27	88	ePn	Pn	11 12 36.9	-1.2
DWPF	**Disney Wildern**	10.39	343	ePn	Pn	11 12 39.3	-0.4
UREC	**San Jos de Ur**	10.63	167	eP	Pn	11 12 41.5	-1.7
UREC	**San Jos de Ur**	10.63	167	eP	Pn	11 12 41.5	-1.7
OBIP	**Obispado Ponce**	10.78	89	ePn	Pn	11 12 44.9	-0.3
ZARC	**Zaragoza, Cauc**	11.05	164	eP	Pn	11 12 48.8	0.0
ZARC	**Zaragoza, Cauc**	11.05	164	eP	Pn	11 12 48.8	0.0
SJG	**San Juan**	11.21	89	LR	LR	11 17 13.7	
	comp=Z,96nm,21.1s,baz=302,slow=38						
HUMP	**Col San Antoni**	11.50	88	ePn	Pn	11 12 57.5	+2.6
658A	**Bunnell**	11.59	345	ePn	Pn	11 12 56.0	-0.1
SDV	**Santo Domingo**	11.66	142	ePn	Pn	11 12 56.2	-1.1
SDV	**Santo Domingo**	11.66	142	Pn	Pn	11 12 56.0	-1.3
	0.6nm,0.3s,baz=325,slow=12,SNR=6.6						
SDV				Sn	Sn	11 15 05.8	-1.1
	0.6nm,0.3s,baz=356,slow=19,SNR=2.2						
SDV				LR	LR	11 17 57.9	
	comp=Z,100nm,18.2s,baz=50,slow=40						
BRRC	**Barranca, Sant**	11.76	159	eP	Pn	11 12 59.0	+0.5
BRRC	**Barranca, Sant**	11.76	159	eP	Pn	11 12 59.0	+0.5
MTP	**Monte Pirata**	11.78	88	ePn	Pn	11 12 59.9	+1.1
656A	**Willston**	11.90	340	ePn	Pn	11 12 59.0	-1.4
PAMC	**Pamplona, Colo**	11.93	154	eP	Pn	11 13 01.4	+0.1
PAMC	**Pamplona, Colo**	11.93	154	eP	Pn	11 13 01.4	+0.1

PTBC	PUERTO BERRIO,	12.06	163	eP	Pn	11 13 02.8	+0.1
PTBC	PUERTO BERRIO,	12.06	163	eP	Pn	11 13 02.8	+0.1
HELC	Santa Helena	12.15	169	eP	Pn	11 13 05.1	+0.9
HELC	Santa Helena	12.15	169	eP	Pn	11 13 05.1	+0.9
APG	El Apazote	12.41	257	Pn	Pn	11 13 08.8	+1.1
	0.1nm,0.3s,baz=43,slow=19,SNR=1.9						
APG				LR	LR	11 16 52.7	
	comp=Z,59nm,21.5s,baz=81,slow=32						
BARC	Barichara	12.42	157	eP	Pn	11 13 08.9	+1.1
BARC	Barichara	12.42	157	eP	Pn	11 13 08.9	+1.1
CDVI	St. Croix	12.55	90	ePn	Pn	11 13 07.6	-1.7
555A	McAlpin	12.73	340	ePn	Pn	11 13 09.9	-1.8
456A	Hilliard	13.02	344	ePn	Pn	11 13 14.9	-0.9
RUSC	La Rusia	13.11	158	eP	Pn	11 13 18.4	+1.0
RUSC	La Rusia	13.11	158	eP	Pn	11 13 18.4	+1.0
453A	Whigham	13.88	337	ePn	Pn	11 13 25.9	-1.5
TIGA	Tifton	14.15	340	ePn	Pn	11 13 31.6	+0.5
255A	Hazlehurst	14.28	344	ePn	Pn	11 13 32.0	-0.9
352A	Blakely	14.67	336	ePn	Pn	11 13 35.9	-2.3
253A	Americus	14.90	339	ePn	Pn	11 13 39.0	-2.3
152A	Waverly Hall	15.66	338	ePn	Pn	11 13 49.1	-2.2
	8.1nm,0.8s						
GOGA	Godfrey	15.95	343	ePn	Pn	11 13 53.3	-1.8
	13nm,1.1s						
CMIG	Matias Romero	16.18	269	Pn	P	11 14 02.2	+1.0
	0.1nm,0.3s,baz=91,slow=8.6,SNR=11						
JSC	Jenkinsville	16.30	350	ePn	Pn	11 14 00.0	+0.5
	20nm,1.4s						
HODGE	Hodges	16.44	347	ePn	Pn	11 14 00.1	-1.2
	9.9nm,1.1s						
Y52A	Lilburn	16.55	342	ePn	Pn	11 14 01.1	-1.6
	7.0nm,1.0s						
Z50A	Ashland	16.63	336	ePn	Pn	11 14 02.4	-1.3
	15nm,1.4s						
LRAL	Lakeview Retre	16.88	333	ePn	Pn	11 14 05.2	-1.6
	8.1nm,1.1s						
BG3	Lake Jocassee	17.32	346	ePn	Pn	11 14 11.7	-0.7
Y49A	Blount Mountai	17.35	336	ePn	Pn	11 14 12.6	-0.2
	15nm,1.4s						
V53A	Saluda	17.94	347	ePn	Pn	11 14 19.6	-0.5
	7.3nm,1.0s						
TKL	Tuckaleechee C	18.16	345	ePn	P	11 14 22.6	-0.3
	22nm,1.5s						
TKL	Tuckaleechee C	18.16	345	P	P	11 14 22.9	-0.1
	0.3nm,0.3s,baz=150,slow=17,SNR=7.0						
TKL				LR	LR	11 20 35.8	
	comp=Z,130nm,19.1s,baz=172,slow=34						
CPCT	Cooper Cave	18.16	343	ePn	P	11 14 23.2	+0.3
	10nm,1.5s						
W50A	Signal Mountai	18.17	340	ePn	P	11 14 23.4	+0.3
	7.2nm,0.9s						
LNIG	Linares	21.09	292	eP	P	11 14 54.0	-1.0
	4.2nm,1.1s						
PTGA	Pitinga	25.81	135	P	P	11 15 42.9	+1.2
	1.8nm,0.7s,baz=288,slow=13,SNR=3.3						
TXAR	Lajitas Array	25.97	300	P	P	11 15 45.4	+2.2
	0.5nm,0.7s,baz=120,slow=8.8,SNR=5.4						
TX31	Lajitas Ar. Si	25.97	300	eP	P	11 15 46.3	+3.1
SADO	Sadowa	26.52	358	eP	P	11 15 48.0	0.0
	4.7nm,1.1s						
GDL2	Guadalupe Moun	27.59	305	eP	P	11 15 57.1	-0.8
ULM	Lac du Bonnet	35.06	340	P	P	11 17 06.5	+3.3
	2.1nm,0.8s,baz=140,slow=10,SNR=4.6						
YKA	Yellowknife Ar	51.04	339	P	P	11 19 13.1	+0.9
	0.3nm,0.8s,baz=130,slow=8.6,SNR=8.0						
ILAR	Eielson Array	64.74	334	P	P	11 20 50.2	+1.9
	0.2nm,0.6s,baz=90,slow=5.4,SNR=3.4						
ARCES	ARCESS Array B	77.72	20	P	P	11 22 09.6	+2.8
	1.5nm,0.9s,baz=304,slow=6.4,SNR=3.0						
FINES	FINESS Array B	80.71	28	P	P	11 22 25.9	+2.7
	1.2nm,0.8s,baz=290,slow=5.7,SNR=4.5						
WRA	Warramunga Arr	149.46	261	PKPbc	PKPab	11 30 03.2	-1.9
	0.4nm,0.8s,baz=88,slow=2.1,SNR=2.3						
ASAR	Alice Springs	149.80	254	PKPbc	PKPab	11 30 04.0	-2.4
	0.4nm,0.8s,baz=93,slow=1.3,SNR=4.5						

JSN 10 11:17:27.3±0.5, 18°.13N×77°.93W, h5^{km}±5^{km}, MD3.9, 3C-6D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBJ	Montego Bay	0.28	12	⇓iP	Pg	11 17 32.3	-0.4
MBJ				⇓iS	Sg	11 17 36.9	+0.6
MCJ	Malvern	0.31	132	⇑iP	Pg	11 17 33.3	0.0
CVJ	Coleyville	0.38	76	⇑iP	Pg	11 17 34.6	-0.2
PCJ	Portland Cotta	0.83	118	⇓iP	Pg	11 17 42.3	-0.9
STH	Stony Hill	1.06	93	⇓iP	Pg	11 17 46.0	-1.7
STH				iS	Sg	11 18 00.2	-1.3
HOJ	Hope	1.13	96	⇑iP	Pg	11 17 47.2	-1.7
GWJ	Greenwich	1.14	93	⇓iP	Pg	11 17 47.5	-1.7
YHJ	Yallahs	1.38	100	⇓iP	Pn	11 17 51.6	-1.7

IDC 10 11:19:10.3±2.1, 6°.28S×129°.34E, h0^{km}, mb4.1/1, mb1 4.0/3, mb1mx3.6/26, mbtmp3.9/3, ML3.9/2, Error ellipse: s-maj=147.3km s-min=29.8km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.42	161	Pn	Pn	11 22 35.9	0.0
	0.6nm,0.3s,baz=343,slow=13,SNR=12						
WRA				Sn	Sn	11 25 03.3	-13
	1.0nm,0.3s,baz=338,slow=22,SNR=12						
ASAR	Alice Springs	17.84	166	P	Pn	11 23 19.9	-0.2
	0.3nm,0.3s,baz=346,slow=11,SNR=27						
ASAR				S	Sn	11 26 28.7	-11
	0.3nm,0.3s,baz=209,slow=21,SNR=6.5						
MKAR	Makanchi Array	67.27	327	P	P	11 30 06.8	0.0
	1.1nm,0.5s,baz=128,slow=8.2,SNR=22						

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*IDC **10** 11:26:27.7±0.6, 10°.91S×166°.11E, h0^{km}, mb4.5/20, mb1 4.6/21, mb1mx4.5/33, mbtmp4.5/21, ML5.2/1, MS3.9/16, Ms1 3.9/16, ms1mx3.7/38, Error ellipse: s-maj=18.0km s-min=14.4km az=109.0*

*ISCJB **10** 11:26:28.4±0.2, 10°.87S±0°.03×165°.94E±0°.04, h10^{km}, mb4.8/74, MS4.0/18, Error ellipse: s-maj=5.6km s-min=4.1km az=173.3*

*NEIC **10** 11:26:30.7±0.4, 10°.81S×165°.94E, h14^{km}±2^{km}, mb5.0/56, Error ellipse: s-maj=4.8km s-min=3.6km az=96.0*

*GCMT **10** 11:26:32.7±0.2, 10°.82S±0°.01×165°.80E±0°.01, h22^{km}±1^{km}, MW5.0/93, Moment Tensor Solution. s29,c35; s93,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.19; $M_{\theta\theta}$3.22±.14; $M_{\phi\phi}$-3.03±.14; $M_{r\theta}$1.23±.26; $M_{\theta\phi}$-2.13±.12; $M_{\phi r}$-0.06±.24; Best double couple: $M_0$3.95800×10^{16} NP1:ϕ_s61.00000°, δ83.00000°, λ165.00000°. NP2: ϕ_s153.00000°, δ75.00000°, λ7.00000°. Principal axes: T 4.2010, Plg15.0000°, Azm17.0000°; N -0.4860, Plg74.0000°, Azm217.0000°; P -3.7160, Plg5.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 11:26:30.1±0.3, 10°.83S±0°.05×165°.97E±0°.05, h10^{km}, n153, σ1^{s}59/151, mb4.9/74, MS4.0/20, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.09	283	eP	Pn	11 28 02.0	+1.7
HNR				eS	Sn	11 29 11.0	+0.9
HNR	Honiara	6.09	283	ePn	Pn	11 28 01.4	+1.1
HNR				eSn	Sn	11 29 13.7	+3.6
HNR	Honiara	6.09	283	Pn	Pn	11 28 01.9	+1.6
	53nm,0.3s,baz=165,slow=3.7,SNR=40						
HNR				Sn	Sn	11 29 13.7	+3.6
	23nm,0.3s,baz=4.4,slow=13,SNR=2.1						
HNR				LR	LR	11 30 18.3	
	comp=Z,3μm,21.2s,baz=118,slow=37						
MARNC	Mare, Loyalty	10.78	170	ePn	Pn	11 29 05.1	+0.6
DZM	Mont Dzumac	11.19	178	ePn	Pn	11 29 11.5	+1.2
	81nm,0.7s						
DZM				eLR	LR	11 31 41.5	
	comp=Z,2μm,31.9s						
DZM	Mont Dzumac	11.19	178	ePn	Pn	11 29 11.7	+1.5
DZM				eSn	Sn	11 31 14.9	-0.7
DZM	Mont Dzumac	11.19	178	Pn	Pn	11 29 11.5	+1.2
	5.0nm,0.3s,baz=320,slow=10,SNR=39						
DZM				Sn	Sn	11 31 13.5	-2.1
	1.5nm,0.3s,baz=300,slow=20,SNR=3.4						
ONTNC	Ouen Toro	11.42	178	ePn	Pn	11 29 15.2	+1.9
PINNC	Pines Island,	11.80	173	ePn	Pn	11 29 19.7	+1.1
FUNA	Funafuti	13.24	81	ePn	Pn	11 29 39.9	+1.6
MSVF	Nonsavu	13.56	122	ePn	P	11 29 49.0	-2.9
TARA	Tarawa	13.94	30	ePn	Pn	11 29 48.5	+0.7
RABL	Rabaul	15.19	295	ePn	P	11 30 08.5	-1.4
	60nm,0.6s						
EIDS	Eidsvold	20.20	222	eP	P	11 31 05.4	+0.2
	29nm,1.1s						
MANU	Manus Island	20.43	294	eP	Pn	11 31 09.6	-0.3
	178nm,1.1s						
CTA	Charters Tower	21.10	242	P	P	11 31 15.9	+1.0
	13nm,0.8s,baz=67,slow=12,SNR=14						
CTAO	Charters Tower	21.10	242	eP	P	11 31 16.0	+1.0
	53nm,1.1s						
COEN	Coen	22.48	260	eP	P	11 31 29.4	-0.4
	12nm,0.9s						
ARMA	Armidale	23.62	212	eP	P	11 31 42.6	+1.1
	28nm,1.0s						
OUZ	Omahuta	25.25	165	eP	P	11 31 57.1	+0.7
	12nm,1.0s						
HIZ	Hauiti	28.69	165	eP	P	11 32 27.7	+0.4
	25nm,1.0s						
URZ	Urewera	29.08	162	eP	P	11 32 30.5	-0.3
	11nm,1.0s						
URZ	Urewera	29.08	162	P	P	11 32 29.9	-0.9
	5.8nm,0.7s,baz=276,slow=2.5,SNR=9.4						
H11S2	WAKE ISLAND Hy	29.14	1	T	T	12 02 53.5	
	baz=181,slow=76,SNR=434						
H11S3	WAKE ISLAND Hy	29.15	1	T	T	12 02 53.7	
	baz=181,slow=76,SNR=310						
H11S1	WAKE ISLAND Hy	29.16	1	T	T	12 02 54.9	
	baz=181,slow=76,SNR=349						
BKZ	Black Stump Fm	29.74	163	eP	P	11 32 35.9	-0.8
	22nm,0.4s						
H11N1	WAKE ISLAND Hy	30.36	2	T	T	12 04 25.1	
	baz=182,slow=76,SNR=517						
H11N3	WAKE ISLAND Hy	30.37	2	T	T	12 04 25.3	
	baz=182,slow=76,SNR=172						
H11N2	WAKE ISLAND Hy	30.38	2	T	T	12 04 26.3	
	baz=182,slow=76,SNR=196						
STKA	Stephens Creek	30.75	223	eP	P	11 32 45.5	-0.2
	2.1nm,0.9s						
STKA	Stephens Creek	30.75	223	P	P	11 32 45.9	+0.2
	6.1nm,0.8s,baz=36,slow=10,SNR=12						
STKA				LR	LR	11 44 38.2	
	comp=Z,675nm,18.1s,baz=43,slow=35						
BFZ	Birch Farm	31.09	165	eP	P	11 32 47.4	-1.2
	42nm,1.1s						
SNZO	South Karori	31.32	167	eP	P	11 32 50.5	0.0
	74nm,1.1s						
THZ	Tophouse	31.41	170	eP	P	11 32 51.9	+0.5
	26nm,0.9s						
WRAB	Tennant Creek	31.75	250	eP	P	11 32 53.8	-0.9
	14nm,0.8s						
WB2	Warramunga Arr	31.75	250	eP	P	11 32 53.9	-0.8
	15nm,0.8s						
WR1	Warramunga Arr	31.77	250	eP	P	11 32 53.5	-1.3
	19nm,0.8s						
WR1				ePcP	PcP	11 35 45.7	-0.6
WR1				eScP	ScP	11 39 30.3	+0.4
WRA	Warramunga Arr	31.77	250	P	P	11 32 53.5	-1.3
	13nm,0.7s,baz=81,slow=9.1,SNR=74						
WRA				PcP	PcP	11 35 45.7	-0.6
	0.8nm,0.9s,baz=69,slow=3.4,SNR=3.1						
WRA				ScP	ScP	11 39 30.3	+0.4
	1.7nm,1.1s,baz=85,slow=3.5,SNR=5.6						
WRA				LR	LR	11 45 45.7	
	comp=Z,766nm,18.2s,baz=70,slow=36						
KHZ	Kahutara	32.16	169	eP	P	11 32 57.2	-0.6
	23nm,1.1s						
LTZ	Lake Taylor	32.30	171	eP	P	11 32 59.3	0.0
	44nm,0.9s						
TOO	Toolangi	32.37	211	eP	P	11 33 00.8	+0.9
	15nm,1.0s						
FOZ	Fox Glacier	32.75	175	eP	P	11 33 03.7	+0.6
	67nm,0.9s						
AS01	Alice Springs	33.05	243	eP	P	11 33 04.6	-1.4
RPZ	Rata Peaks	33.06	173	eP	P	11 33 06.0	+0.1
	48nm,0.8s						
RPZ	Rata Peaks	33.06	173	P	P	11 33 04.6	-1.3
	51nm,0.8s,baz=303,slow=1.1,SNR=18						
AS31	Alice Springs	33.09	243	eP	P	11 33 05.0	-1.4
	2.3nm,0.8s						
ASAR	Alice Springs	33.09	243	P	P	11 33 05.0	-1.5
	7.2nm,0.7s,baz=65,slow=10,SNR=58						
ASAR				PcP	PcP	11 35 48.8	-1.1
	0.8nm,0.9s,baz=78,slow=4.2,SNR=4.3						
ASAR				ScP	ScP	11 39 34.2	-0.3
	0.9nm,0.9s,baz=82,slow=4.6,SNR=4.8						
CRLZ	Canterbury Las	33.13	171	eP	P	11 33 06.6	+0.2
	87nm,1.1s						
MQZ	McQueen's Vall	33.27	171	eP	P	11 33 07.8	+0.2
	50nm,1.1s						
LBZ	Lake Benmore	33.63	175	eP	P	11 33 10.9	0.0
	25nm,0.9s						
WKZ	Wanaka	33.98	176	eP	P	11 33 15.3	+1.4
	29nm,1.0s						
ODZ	Otahua Downs	34.33	174	eP	P	11 33 18.3	+1.4
	23nm,1.0s						
WHZ	Wether Hill Ro	34.98	178	eP	P	11 33 22.9	+0.4
	12nm,1.0s						
BBOO	Buckleboo	35.14	227	eP	P	11 33 23.8	-0.2
	19nm,0.9s						
XMAS	Kiritimati	38.58	73	eP	P	11 33 54.4	+0.9
	66nm,0.9s						
FITZ	Fitzroy Crossi	39.65	255	eP	P	11 34 01.8	-0.7
	20nm,0.7s						
FORT	Forrest	40.35	235	eP	P	11 34 07.8	-0.3
	20nm,0.8s						
BATI	Baumata	41.58	267	P	P	11 34 18.8	+0.3
	12nm,0.5s,baz=95,slow=3.4,SNR=6.0						
PPT2	Papeete2	43.53	104	eS	S	11 41 11.2	+7.4
	206nm,25.8s						
PPT2				eLQ	LQ	11 44 54.8	
	1μm,27.2s						
PPT2				eLR	LR	11 46 43.0	
	comp=Z,360nm,24.5s,baz=275						
DAV	Davao City (W)	43.96	292	LR	LR	11 50 10.4	
	comp=Z,149nm,20.9s,baz=66,slow=32						
MBWA	Marble Bar	45.48	251	eP	P	11 34 50.2	+0.3
	13nm,0.9s						
KHLU	Kahalu`u	48.22	51	eP	P	11 35 12.4	+1.0
	91nm,1.1s						
MORW	Morawa	49.92	241	eP	P	11 35 24.5	+0.2
	18nm,1.0s						
MJAR	Matsushiro Arr	53.88	332	P	P	11 35 53.2	-0.5
	8.9nm,0.9s,baz=168,slow=8.4,SNR=17						
MAJO	Matsushiro	53.88	332	eP	P	11 35 53.4	-0.2
	11nm,0.8s						
MAT	Matsushiro	53.88	332	P	P	11 35 53.0	-0.7
MAT				S	S	11 43 21.0	-8.0
MJB9	Matsu-Tunnel	53.89	332	eP	P	11 35 53.6	-0.1
	11nm,0.8s						
JNU	Nakatsue	55.04	324	eP	P	11 36 01.9	-0.3
	24nm,1.0s						
CISI	Cisompet, Garu	57.43	268	eP	P	11 36 19.0	-0.7
	15nm,0.8s						
RKT	Rikitea	57.45	110	eLR	LR	11 53 02.7	
	comp=Z,335nm,30.5s						
ASAJ	Asahikawa	58.66	340	P	P	11 36 28.4	+0.8
	14nm,0.8s,baz=204,slow=11,SNR=10.0						
KSRS	Korea Array	59.83	325	P	P	11 36 36.7	+1.0
	2.0nm,1.0s,baz=68,slow=16,SNR=4.1						
KS15	Wonju Array Si	59.84	325	eP	P	11 36 36.9	+1.0
KSAR	Wonju Array Be	59.84	325	P	P	11 36 36.7	+0.9
NJ2	Nanjing	62.02	315	eP	P	11 36 52.0	+1.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	Ussuriysk Arra	62.85	333	eP	P	11 36 56.9	+0.8
	comp=Z,10nm,1.1s						
USRK	Ussuriysk Ar.	62.85	333	P	P	11 36 57.0	+0.8
	comp=Z,5.6nm,0.9s,baz=140,slow=7.4,SNR=6.9						
USRK				LR	LR	12 01 01.2	
	comp=Z,66nm,21.7s,baz=130,slow=33						
PETK	Petropavlovsk-	64.07	354	eP	P	11 37 04.7	+0.6
PETK	Petropavlovsk-	64.07	354	P	P	11 37 05.2	+1.1
	comp=Z,3.8nm,0.8s,baz=133,slow=8.3,SNR=3.1						
PETK				LR	LR	12 01 53.7	
	comp=Z,65nm,20.4s,baz=169,slow=33						
PEA1	Petropavlovsk-	64.08	354	eP	P	11 37 05.2	+1.1
CN2	Changchun	65.67	329	eP	P	11 37 20.3	+5.6
KLR	Kul'dur	66.95	336	LR	LR	12 06 09.7	
	comp=Z,74nm,18.6s,baz=184,slow=36						
GYA	Guiyang	68.48	304	P	P	11 37 35.0	+1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	70.14	312	P	P	11 37 42.8	-0.3
XAN				pP	sP	11 37 51.2	+3.6
XAN				sP	pP	11 37 55.3	+8.9
XAN				PcP	PcP	11 38 06.3	+1.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				LR	LR		
	comp=E,140nm,20.6s						
XAN				LR	LR		
	comp=Z,190nm,23.8s						
XAN	Xi'an	70.14	312	eP	P	11 37 42.9	-0.2
	comp=Z,4.4nm,0.9s						
KMI	Kunming	71.20	301	P	P	11 37 49.3	-0.7
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC	Hu-ho-hao-te	71.81	320	eP	P	11 37 52.5	-0.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,8.0s						
CM01	Chiang Mai Arr	72.20	293	eP	P	11 37 56.4	+0.5
CMAR	Chiang Mai Arr	72.23	293	P	P	11 37 57.5	+1.5
	comp=Z,2.3nm,0.9s,baz=118,slow=4.6,SNR=12						
CMAR				LR	LR	12 06 00.6	
	comp=Z,45nm,21.9s,baz=125,slow=33						
CHTO	Chiang Mai	72.34	294	P	P	11 38 04.3	+7.6
CD2	Chengdu	72.65	307	eP	P	11 38 00.5	+2.1
LZH	Lanzhou	74.78	312	eP	P	11 38 12.6	+1.7
LZH				pP	sP	11 38 18.2	+2.8
LZH				sP	PcP	11 38 21.1	-3.9
LZH				PP	PP	11 41 11.4	+13
LZH				S	S	11 47 55.7	+7.8
LZH				sS	sS	11 48 05.9	+13
LZH	Lanzhou	74.78	312	SS	SS	11 52 40.9	+4.9
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.4s						
LZH				LR	LR		
	comp=N,340nm,15.7s						
LZH				LR	LR		
	comp=E,330nm,13.0s						
LZH				LR	LR		
	comp=Z,440nm,15.6s						
GAMB	Gambell	76.32	10	eP	P	11 38 19.6	+0.7
	comp=Z,14nm,1.0s						
ANM	Nome	78.23	12	eP	P	11 38 30.2	+0.6
	comp=Z,6.2nm,1.2s						
SONA0	Songino Array	78.62	324	eP	P	11 38 32.1	-0.2
SONM	Songino Array	78.62	324	P	P	11 38 32.1	-0.2
	comp=Z,1.2nm,0.8s,baz=144,slow=4.8,SNR=9.6						
SONM				LR	LR	12 10 30.2	
	comp=Z,85nm,20.8s,baz=67,slow=34						
SONA1	Songino Array	78.63	324	eP	P	11 38 32.4	+0.1
BILL	Bilibino	78.66	0	eP	P	11 38 32.0	+0.1
	comp=Z,9.5nm,0.9s						
GTA	Gaotai	79.07	314	eP	P	11 38 35.3	+0.3
GTA				pP	sP	11 38 40.2	+0.7
GTA				sP	PcP	11 38 42.4	-1.1
GTA				S	S	11 48 33.0	-1.6
GTA	Gaotai	79.07	314	sS	sS	11 48 43.0	+3.1
GTA	Gaotai	79.07	314	SKS	SKSac	11 48 47.1	-4.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,6.4s						
GTA				LR	LR		
	comp=N,180nm,19.7s						
GTA				LR	LR		
	comp=E,150nm,20.0s						
GTA				LR	LR		
	comp=Z,230nm,20.3s						
SEW	Seward	79.11	21	eP	P	11 38 35.3	+0.9
	comp=Z,18nm,1.1s						
QSPA	South Pole Qui	79.17	180	eP	P	11 38 34.4	-0.7
	comp=Z,9.4nm,1.1s						
CAST	Castle Rocks	80.67	18	eP	P	11 38 43.5	+0.5
	comp=Z,5.4nm,0.9s						
IM3	Indian Mountai	82.16	15	eP	P	11 38 51.0	+0.2
MDM	Murphy Dome	82.96	18	eP	P	11 38 55.4	+0.4
	comp=Z,11nm,1.2s						
HDA	Harding Lake	82.97	19	eP	P	11 38 55.1	0.0
	comp=Z,16nm,1.0s						
COLA	College	83.01	18	eP	P	11 38 55.9	+0.6
	comp=Z,10nm,1.0s						
IL1	Eielson Array	83.24	18	eP	P	11 38 55.7	-0.7
ILAR	Eielson Array	83.24	18	P	P	11 38 55.7	-0.7
	comp=Z,3.0nm,0.9s,baz=226,slow=5.9,SNR=17						
ILAR				LR	LR	12 09 01.2	
	comp=Z,60nm,21.5s,baz=210,slow=31						
ILB	Eielson Array	83.24	18	eP	P	11 38 55.9	-0.5
YBH	Yreka Blue Hor	83.58	46	LR	LR	12 09 02.6	
	comp=Z,61nm,21.9s,baz=275,slow=31						
SCRK	Sand Creek	83.64	20	eP	P	11 38 59.0	+0.4
	comp=Z,12nm,1.2s						
MAW	Mawson	85.00	202	LR	LR	12 13 13.5	
	comp=Z,69nm,19.1s,baz=143,slow=33						
NVAR	Mina Array Bea	85.71	50	P	P	11 39 09.9	0.0
	comp=Z,1.8nm,0.9s,baz=233,slow=5.4,SNR=5.6						
WMQ	Urumqi	89.10	315	eP	P	11 39 27.2	+1.3
WMQ				sP	sP	11 39 34.2	+3.8
WMQ				LR	LR		
	comp=N,320nm,37.7s						
WMQ				LR	LR		
	comp=E,140nm,23.1s						
WMQ				LR	LR		
	comp=Z,260nm,28.9s						
U15A	North Rim	89.80	53	eP	P	11 39 29.3	-0.3
	comp=Z,6.6nm,0.9s						
X16A	Lo Mia Camp, P	90.01	55	eP	P	11 39 31.1	+0.5
	comp=Z,4.1nm,0.9s						
MTPU	Mount Pierson	90.26	51	eP	P	11 39 32.9	+1.1
	comp=Z,7.8nm,1.1s						
PD31	Pinedale Array	93.24	47	eP	P	11 39 44.6	-0.8
PDAR	Pinedale Array	93.24	47	P	P	11 39 43.5	-1.9
	comp=Z,0.1nm,0.5s,baz=272,slow=5.1,SNR=2.4						
MK01	Makanchi Array	93.50	317	eP	P	11 39 44.9	-1.4
ZAA1	Zalesovo Array	93.51	324	eP	P	11 39 44.5	-1.5
ZALV	Zalesovo Beam	93.51	324	P	P	11 39 44.5	-1.5
	comp=Z,1.2nm,0.6s,baz=26,slow=3.8,SNR=4.4						
ZALV				LR	LR	12 19 29.4	
	comp=Z,50nm,20.4s,baz=62,slow=34						
MK31	Makanchi Array	93.52	317	eP	P	11 39 45.5	-0.8
MK32	Makanchi Array	93.52	317	eP	P	11 39 45.5	-0.8
MKAR	Makanchi Array	93.52	317	eP	P	11 39 45.6	-0.7
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	93.52	317	P	P	11 39 45.5	-0.8
	comp=Z,2.2nm,0.8s,baz=100,slow=5.9,SNR=18						
MKAR				LR	LR	12 21 03.9	
	comp=Z,49nm,21.3s,baz=94,slow=35						
YKA	Yellowknife Ar	94.68	27	P	P	11 39 49.0	-2.2
YKA	Yellowknife Ar	94.68	27	P	P	11 39 49.0	-2.2
	comp=Z,0.3nm,0.7s,baz=257,slow=4.6,SNR=4.5						
YKA				LR	LR	12 24 17.1	
	comp=Z,6.3nm,18.4s,baz=251,slow=37						
YKB5	Yellowknife Ar	94.68	27	eP	P	11 39 50.3	-0.9
NRIK	Noril'sk	96.00	340	LR	LR	12 25 27.3	
	comp=Z,57nm,18.0s,baz=74,slow=37						
ARA0	ARCESS Array S	116.18	346	ePKPdf	PKiKP	11 45 11.2	-2.0
ARCES	ARCESS Array B	116.18	346	ePKPdf	PKiKP	11 45 12.5	-0.7
ARCES	ARCESS Array B	116.18	346	PKP	PKiKP	11 45 11.2	-2.0
	comp=Z,0.7nm,0.5s,baz=63,slow=2.5,SNR=10						
ARE0	ARCESS Array S	116.18	346	ePKPdf	PKiKP	11 45 12.6	-0.6
FIA0	FINESS Array S	121.65	339	ePKPdf	PKPdf	11 45 21.9	-1.9
FINES	FINESS Array B	121.65	339	PKP	PKPdf	11 45 21.9	-1.9
	comp=Z,0.7nm,0.6s,baz=341,slow=4.0,SNR=4.4						
PKME	Peaks-Kenny Pk	121.84	43	ePKPdf	PKPdf	11 45 24.7	0.0
NB200	NORSAR Array S	126.55	345	ePKPdf	PKPdf	11 45 32.1	-1.3
NOA	NORSAR Array B	126.55	345	PKP	PKPdf	11 45 32.1	-1.3
	comp=Z,0.5nm,0.7s,baz=346,slow=18,SNR=3.4						
BUR04	Bucovina Ar. S	130.71	326	ePKPdf	PKPdf	11 45 42.2	+0.4
CLL	Collm	134.00	337	ePKPdf	PKPdf	11 45 48.0	+0.3
CLL				LmV		12 00 00.0	
	comp=Z,100nm,18.7s						
CLL				Lm	MLR	12 45 00.0	
	comp=Z,100nm,18.4s						
GERES	GERESS Array B	135.61	334	PKP	PKPdf	11 45 50.5	-0.4
	comp=Z,0.4nm,0.6s,baz=86,slow=20,SNR=5.7						
KEST	Kesra	147.38	323	PKPbc	PKPbc	11 46 14.3	-0.4
	comp=Z,4.5nm,0.7s,baz=337,slow=7.7,SNR=3.5						
ES19	SONSECA Array	149.87	344	epPKPdf	pPKPdf	11 46 20.3	+0.6
ESDC	Sonseca Array	149.91	344	PKPbc	PKPbc	11 46 20.2	-0.9
	comp=Z,0.4nm,0.4s,baz=15,slow=4.1,SNR=6.9						
PESTR	Estremoz	151.49	349	epPKPdf	pPKPdf	11 46 23.6	+1.5
TOA0	Torodi Ar. Sit	164.45	280	ePKPdf	PKPdf	11 46 34.2	-0.9
TORD	Torodi Ar. Bea	164.45	280	PKP	PKPdf	11 46 33.9	-1.3
	comp=Z,1.1nm,1.0s,baz=99,slow=1.8,SNR=4.1						
TORD				PKPab	PKPab	11 47 28.9	-0.9
	comp=Z,0.6nm,0.8s,baz=1.4,slow=5.9,SNR=3.8						

TOA1	**Torodi Ar. Sit**	**164.45**	**280**	*e*PKPdf	**PKPdf**	**11 46 33.9**	**-1.3**
TOA1				*e*PKPab	**PKPab**	**11 47 28.9**	**-0.9**

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*ISCJB **10** 11:33:35.3±0.8, 18°.17N±0°.06×77°.97W±0°.06, h23^{km}, Error ellipse: s-maj=9.2km s-min=7.7km az=43.1*

*JSN **10** 11:33:35.4±0.4, 18°.13N×77°.95W, h0^{km}±4^{km}, MD4.1*

ISC 10 11:33:35.9±1.2, **18°.19N**±0°.06×**77°.93W**±0°.05, **h23^{km}, n13, σ0^{s}.97**/13, **5C-4D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBJ	**Montego Bay**	**0.22**	**18**	⇓*i*P	**Pb**	**11 33 41.2**	**-0.4**
MBJ				*i* S	**Sb**	**11 33 45.9**	**+0.3**
MCJ	**Malvern**	**0.35**	**139**	⇑*i*P	**Pb**	**11 33 42.4**	**-1.3**
CVJ	**Coleyville**	**0.38**	**85**	⇓*i*P	**Pb**	**11 33 43.6**	**-0.5**
NEJ	**Negril**	**0.38**	**279**	⇓*i*P	**Pb**	**11 33 43.0**	**-1.0**
PCJ	**Portland Cotta**	**0.86**	**121**	⇑*i*P	**Pb**	**11 33 51.1**	**-1.0**
STH	**Stony Hill**	**1.07**	**96**	⇑*i*P	**Pn**	**11 33 55.0**	**-0.5**
STH				*i* S	**Sn**	**11 34 10.2**	**+0.4**
HOJ	**Hope**	**1.14**	**99**	⇑*i*P	**Pn**	**11 33 56.3**	**-0.2**
GWJ	**Greenwich**	**1.15**	**96**	⇓*i*P	**Pn**	**11 33 56.5**	**-0.2**
YHJ	**Yallahs**	**1.40**	**102**	⇑*i*P	**Pn**	**11 34 00.7**	**+0.6**
SMRC	**Santa Marta, M**	**7.85**	**152**	*e*P	**Pn**	**11 35 30.2**	**+1.5**
SMRC	**Santa Marta, M**	**7.85**	**152**	*e*P	**Pn**	**11 35 30.2**	**+1.5**
SJCC	**San Jacinto, C**	**8.67**	**162**	*e*P	Pn	11 35 44.9	+4.9
SJCC	**San Jacinto, C**	**8.67**	**162**	*e*P	Pn	11 35 44.9	+4.9

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*ISCJB **10** 11:35:51.8±0.7, 37°.37N±0°.05×38°.56E±0°.05, h4^{km}±8^{km}, Error ellipse: s-maj=8.1km s-min=6.1km az=174.0*

*DDA **10** 11:35:51.8, 37°.30N×38°.58E, h7^{km}±6^{km}, ML3.2*

*ISK **10** 11:35:51.3, 37°.42N×38°.57E, h7^{km}, ML2.4/7*

ISC 10 11:35:51.4±1.5, **37°.35N**±0°.04×**38°.57E**±0°.03, **h3^{km}**±12^{km}, **n14, σ0^{s}.97**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.22**	**65**	PG	**Pg**	**11 35 55.8**	**+0.1**
ATAB	**Bozova**	**0.25**	**299**	*i* P	**Pg**	**11 35 56.9**	**+0.7**
ATAB				IAML_P			
	comp=Z,16µm,0.2s						
SANL	**SANLIURFA_Merk**	**0.38**	**118**	*i* P	**Pg**	**11 35 59.8**	**+1.1**
SANL				*i* S	**Sb**	**11 36 05.9**	**-1.2**
SURC	**SANLIURFA_SURC**	**0.47**	**176**	*i* P	**Pg**	**11 36 00.7**	**+0.3**
SURC				IAML_P			
	comp=Z,1µm,0.2s						
GZT	**Gaziantep**	**0.80**	**271**	*i* P	**Pb**	**11 36 07.8**	**-0.4**
GZT				*i* S	**Sn**	**11 36 22.7**	**+0.4**
GZT				IAML_P			
	comp=Z,5µm,0.2s						
AKCD	**Akcadag**	**1.08**	**332**	*i* P	**Pb**	**11 36 12.3**	**-0.5**
AKCD				*i* S	**Sn**	**11 36 30.7**	**+1.5**
AKCD				IAML_P			
	comp=Z,2µm,0.1s						
GAZ	**Gaziantep**	**1.10**	**261**	PN	**Pg**	**11 36 12.6**	**+0.1**
GAZ				SN	**Sn**	**11 36 29.2**	**-0.4**
ELZG	**Elazig**	**1.20**	**16**	*i* P	**Pn**	**11 36 15.4**	**+0.2**
ELZG				*i* S	**Sn**	**11 36 34.2**	**+2.0**
ELZG				IAML_P			
	comp=Z,2µm,0.1s						
KUZU	**Kuzuini**	**1.32**	**245**	*i* P	**Pg**	**11 36 17.2**	**+0.3**
KUZU				*i* S	**Sn**	**11 36 36.7**	**+1.6**
KUZU				IAML_P			
	comp=Z,2µm,0.1s						
KMRS	**Kahramanmaras**	**1.34**	**277**	PN	**Pn**	**11 36 16.3**	**-0.8**
KMRS				SN	**Sn**	**11 36 35.6**	**+0.1**
DARE	**Darende-Malaty**	**1.49**	**325**	PN	**Pn**	**11 36 18.7**	**-0.6**
MAZI	**Mazidag**	**1.50**	**85**	PN	**Pb**	**11 36 19.7**	**-0.3**
PTK	**Pertek**	**1.67**	**23**	PN	**Pn**	**11 36 20.6**	**-1.3**
TAHT	**Tahtakopru-Hat**	**2.14**	**244**	PN	**Pn**	**11 36 28.7**	**+0.6**

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*ISCJB **10** 11:42:04.3±0.2, 10°.93S±0°.03×166°.07E±0°.05, h10^{km}, mb4.7/64, MS4.1/18, Error ellipse: s-maj=6.8km s-min=4.2km az=165.6*

*IDC **10** 11:42:04.7±0.6, 10°.90S×165°.99E, h0^{km}, mb4.4/20, mb1 4.5/21, mb1mx4.4/37, mbtmp4.4/21, ML4.7/1, MS4.0/15, Ms1 4.0/15, ms1mx3.8/32, Error ellipse: s-maj=21.9km s-min=14.2km az=96.0*

*NEIC **10** 11:42:05.9±0.2, 10°.86S×166°.09E, h10^{km}, mb4.9/40, Error ellipse: s-maj=6.7km s-min=4.5km az=84.0*

*GCMT **10** 11:42:10.9±0.4, 10°.99S±0°.02×165°.82E±0°.03, h16^{km}±1^{km}, MW4.9/66, Moment Tensor Solution. s18,c27; s66,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.20±.17; $M_{\theta\theta}$1.29±.12; $M_{\phi\phi}$-0.09±.12; $M_{r\theta}$-0.84±.32; $M_{\theta\phi}$-1.83±.10; $M_{\phi r}$-1.66±.46; Best double couple: $M_0$2.85200×10^{16} NP1:ϕ_s341.00000°, δ65.00000°, λ-38.00000°. NP2: ϕ_s89.00000°, δ57.00000°, λ-149.00000°. Principal axes: T 2.5780, Plg5.0000°, Azm37.0000°; N 0.5470, Plg46.0000°, Azm132.0000°; P -3.1270, Plg44.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 11:42:05.8±0.4, **10°.92S**±0°.05×**166°.10E**±0°.06, **h10^{km}, n130, σ1^{s}.37**/128, **mb4.8**/64, **MS4.1**/18, **1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.23**	**283**	*e*P	**Pn**	**11 43 40.0**	**+2.1**
HNR				*e*S	**Sn**	**11 44 50.0**	**+0.7**
HNR	**Honiara**	**6.23**	**283**	Pn	**Pn**	**11 43 39.9**	**+2.0**
	119nm,0.3s,baz=152,slow=3.0,SNR=26						
HNR				Sn	**Sn**	**11 44 46.9**	**-2.3**
	baz=29,slow=19,SNR=1.2						
HNR				LR	LR	11 46 09.2	
	comp=Z,3µm,19.6s,baz=136,slow=40						
MARNC	**Mare, Loyalty**	**10.66**	**170**	*e*Pn	**Pn**	**11 44 39.8**	**+1.0**
DZM	**Mont Dzumac**	**11.09**	**178**	*e*Pn	**Pn**	**11 44 45.8**	**+1.1**
	44nm,0.4s						
DZM				*e*Sn	**Sn**	**11 46 43.0**	**-6.0**
	41nm,0.7s						
DZM				*e*LR	LR	11 47 19.8	
	comp=Z,1µm,24.3s						
DZM	**Mont Dzumac**	**11.09**	**178**	*e*Pn	**Pn**	**11 44 46.1**	**+1.3**
DZM				*e*Sn	**Sn**	**11 46 49.9**	**+0.9**
DZM	**Mont Dzumac**	**11.09**	**178**	Pn	**Pn**	**11 44 46.0**	**+1.3**
	5.4nm,0.3s,baz=341,slow=12,SNR=46						
DZM				Sn	**Sn**	**11 46 45.1**	**-3.9**
	0.9nm,0.3s,baz=131,slow=20,SNR=3.7						
ONTNC	**Ouen Toro**	**11.33**	**178**	*e*Pn	**Pn**	**11 44 49.8**	**+2.0**
ONTNC				*e*Sn	**Sn**	**11 46 54.8**	**+0.2**
PINNC	**Pines Island,**	**11.70**	**174**	*e*Pn	**Pn**	**11 44 55.7**	**+2.8**
TARA	**Tarawa**	**13.96**	**30**	*e*Pn	**Pn**	**11 45 25.9**	**+2.0**
RABL	**Rabaul**	**15.34**	**295**	*e*Pn	**P**	**11 45 44.7**	**-2.7**
	54nm,0.9s						
EIDS	**Eidsvold**	**20.22**	**223**	*e*P	Pn	11 46 43.4	+0.3
	15nm,0.9s						
MANU	**Manus Island**	**20.58**	**294**	*e*P	Pn	11 46 46.8	-0.6
	59nm,1.0s						
CTA	**Charters Tower**	**21.16**	**242**	P	**P**	**11 46 52.5**	**+1.1**
	10nm,0.8s,baz=64,slow=14,SNR=11						
CTA				LR	LR	11 54 44.4	
	comp=Z,778nm,19.2s,baz=46,slow=36						
CTAO	**Charters Tower**	**21.16**	**242**	*e*P	**P**	**11 46 53.0**	**+1.6**
	14nm,0.9s						
COEN	**Coen**	**22.58**	**260**	*e*P	**P**	**11 47 07.2**	**+0.4**
	14nm,1.0s						
ARMA	**Armidale**	**23.61**	**213**	*e*P	**P**	**11 47 18.2**	**+1.1**
	24nm,1.1s						
OUZ	**Omahuta**	**25.13**	**165**	*e*P	**P**	**11 47 32.8**	**+1.7**
	6.0nm,1.0s						
MXZ	**Matakaoa Point**	**28.71**	**160**	*e*P	**P**	**11 48 04.3**	**+1.0**
	41nm,1.1s						
URZ	**Urewera**	**28.96**	**162**	*e*P	**P**	**11 48 07.1**	**+1.6**
	12nm,1.1s						
URZ	**Urewera**	**28.96**	**162**	P	**P**	**11 48 05.8**	**+0.4**
	1.8nm,0.4s,baz=27,slow=1.0,SNR=6.7						
URZ				LR	LR	11 58 04.8	
	comp=Z,294nm,19.0s,baz=3.0,slow=33						
H11S2	**WAKE ISLAND Hy**	**29.23**	**1**	T	T	12 18 28.7	
	baz=181,slow=76,SNR=99						
H11S3	**WAKE ISLAND Hy**	**29.23**	**1**	T	T	12 18 31.0	
	baz=181,slow=76,SNR=68						
H11S1	**WAKE ISLAND Hy**	**29.25**	**1**	T	T	12 18 58.4	
	baz=181,slow=76,SNR=79						
BKZ	**Black Stump Fm**	**29.61**	**164**	*e*P	**P**	**11 48 11.4**	**0.0**
	11nm,0.7s						
WAKE	**Wake Island**	**30.02**	**1**	*e*P	**P**	**11 48 13.3**	**-1.7**
	91nm,0.4s						
STKA	**Stephens Creek**	**30.77**	**224**	*e*P	**P**	**11 48 22.4**	**+0.7**
	1.0nm,0.8s						
STKA	**Stephens Creek**	**30.77**	**224**	P	**P**	**11 48 21.9**	**+0.2**
	2.2nm,0.3s,baz=17,slow=10,SNR=6.0						
STKA				LR	LR	12 00 14.7	
	comp=Z,576nm,18.3s,baz=40,slow=36						
BFZ	**Birch Farm**	**30.97**	**165**	*e*P	**P**	**11 48 22.4**	**-0.9**
	16nm,0.8s						
THZ	**Tophouse**	**31.30**	**170**	*e*P	**P**	**11 48 26.2**	**0.0**
	13nm,0.9s						
WRAB	**Tennant Creek**	**31.84**	**250**	*e*P	**P**	**11 48 30.0**	**-1.2**
	32nm,1.0s						
WB2	**Warramunga Arr**	**31.84**	**250**	*e*P	**P**	**11 48 30.8**	**-0.5**
	35nm,1.0s						
WR1	**Warramunga Arr**	**31.85**	**250**	*e*P	**P**	**11 48 30.4**	**-1.0**
	40nm,1.0s						
WR1				*e*PcP	**PcP**	**11 51 21.1**	**-1.2**
WR1				*e*ScP	**ScP**	**11 55 05.8**	**-0.2**
WRA	**Warramunga Arr**	**31.85**	**250**	P	**P**	**11 48 30.4**	**-1.0**
	24nm,0.9s,baz=80,slow=9.3,SNR=55						
WRA				PcP	**PcP**	**11 51 21.1**	**-1.2**
	1.1nm,1.0s,baz=73,slow=3.6,SNR=3.7						
WRA				ScP	**ScP**	**11 55 05.8**	**-0.2**
	1.6nm,1.0s,baz=76,slow=3.3,SNR=6.5						
WRA				LR	LR	11 59 54.1	
	comp=Z,198nm,19.0s,baz=75,slow=34						
KHZ	**Kahutara**	**32.04**	**170**	*e*P	**P**	**11 48 33.6**	**+0.9**
	9.0nm,0.9s						
LTZ	**Lake Taylor**	**32.19**	**171**	*e*P	**P**	**11 48 34.2**	**+0.1**
	20nm,0.9s						
GUMO	**Guam**	**32.20**	**319**	LR	LR	12 00 37.4	
	comp=Z,84nm,20.8s,baz=152,slow=35						
TOO	**Toolangi**	**32.36**	**211**	*e*P	**P**	**11 48 36.7**	**+1.1**
	8.8nm,1.0s						
FOZ	**Fox Glacier**	**32.65**	**175**	*e*P	**P**	**11 48 39.1**	**+1.2**
	23nm,0.8s						
RPZ	**Rata Peaks**	**32.95**	**173**	*e*P	**P**	**11 48 41.9**	**+1.2**
	14nm,0.7s						
RPZ	**Rata Peaks**	**32.95**	**173**	P	**P**	**11 48 42.1**	**+1.4**
	12nm,0.6s,baz=313,slow=3.0,SNR=9.4						
RPZ				LR	LR	12 00 46.3	
	comp=Z,295nm,18.2s,baz=354,slow=34						
CRLZ	**Canterbury Las**	**33.02**	**171**	*e*P	**P**	**11 48 41.9**	**+0.7**
	25nm,0.9s						
AS01	**Alice Springs**	**33.11**	**243**	*e*P	**P**	**11 48 41.0**	**-1.4**
AS31	**Alice Springs**	**33.15**	**243**	*e*P	**P**	**11 48 41.7**	**-1.1**
	1.4nm,0.8s						
ASAR	**Alice Springs**	**33.15**	**243**	P	**P**	**11 48 41.5**	**-1.2**
	4.1nm,0.8s,baz=71,slow=9.6,SNR=51						
ASAR				PcP	**PcP**	**11 51 25.8**	**-0.1**
	1.0nm,1.0s,baz=94,slow=2.8,SNR=3.8						
ASAR				ScP	**ScP**	**11 55 13.4**	**+2.9**
	0.8nm,1.0s,baz=49,slow=4.2,SNR=3.3						
ASAR				LR	LR	12 00 57.4	
	comp=Z,255nm,20.2s,baz=74,slow=34						
MQZ	**McQueen's Vall**	**33.16**	**171**	*e*P	**P**	**11 48 43.0**	**+0.6**
	29nm,0.9s						
WKZ	**Wanaka**	**33.88**	**176**	*e*P	**P**	**11 48 48.5**	**-0.2**
	34nm,1.1s						
RAR	**Rarotonga**	**34.28**	**112**	LR	LR	11 59 52.1	
	comp=Z,214nm,20.6s,baz=196,slow=31						
WHZ	**Wether Hill Ro**	**34.89**	**178**	*e*P	**P**	**11 48 57.8**	**+0.3**
	10nm,1.0s						
BBOO	**Buckleboo**	**35.16**	**227**	*e*P	**P**	**11 49 00.0**	**0.0**
	20nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.74**	**255**	*e*P	**P**	**11 49 38.6**	**-0.4**
	24nm,0.8s						
MMRI	**Maumere**	**43.25**	**269**	*e*P	**P**	**11 50 07.5**	**-0.4**
	45nm,1.1s						
PPT	**Papeete**	**43.39**	**104**	LR	LR	12 04 14.9	
	comp=Z,165nm,19.1s,baz=260,slow=31						
PPT2	**Papeete2**	**43.39**	**104**	*e*LQ	LQ	12 00 35.0	
	596nm,28.5s						
PPT2				*e*LR	LR	12 02 41.3	
	comp=Z,417nm,24.2s						
MBWA	**Marble Bar**	**45.56**	**251**	*e*P	**P**	**11 50 27.2**	**+0.9**
	20nm,1.0s						
KKH	**Kailua Kona**	**48.12**	**51**	*e*P	**P**	**11 50 45.2**	**-1.0**
TAOE	**Nuku Hiva Isla**	**52.94**	**93**	*e*LR	LR	12 06 56.0	
	comp=Z,161nm,24.7s						
MJAR	**Matsushiro Arr**	**54.02**	**332**	P	**P**	**11 51 29.9**	**-0.5**
	3.4nm,0.9s,baz=165,slow=8.7,SNR=4.8						
MAJO	**Matsushiro**	**54.02**	**332**	*e*P	**P**	**11 51 27.9**	**-2.6**
	10nm,1.1s						
MJB9	**Matsu-Tunnel**	**54.03**	**332**	*e*P	**P**	**11 51 27.8**	**-2.6**
	9.8nm,1.1s						
JNU	**Nakatsue**	**55.18**	**324**	*e*P	**P**	**11 51 39.1**	**+0.1**
	12nm,0.9s						
JNU	**Nakatsue**	**55.18**	**324**	P	**P**	**11 51 38.8**	**-0.2**
	8.9nm,0.8s,baz=198,slow=3.6,SNR=4.7						
RKT	**Rikitea**	**57.31**	**110**	*e*LR	LR	12 09 05.9	
	comp=Z,457nm,26.5s						
ASAJ	**Asahikawa**	**58.79**	**340**	P	**P**	**11 52 05.6**	**+1.3**
	4.8nm,0.8s,baz=187,slow=19,SNR=3.9						
KSRS	**Korea Array**	**59.97**	**325**	P	**P**	**11 52 12.8**	**+0.3**
	1.4nm,0.9s,baz=134,slow=8.6,SNR=3.2						
KS15	**Wonju Array Si**	**59.98**	**325**	*e*P	**P**	**11 52 12.9**	**+0.2**
KSAR	**Wonju Array Be**	**59.98**	**325**	P	**P**	**11 52 12.8**	**+0.2**
NJ2	**Nanjing**	**62.17**	**315**	*e*P	**P**	**11 52 27.0**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**62.99**	**333**	P	**P**	**11 52 32.9**	**+0.1**
	comp=Z,4.2nm,0.8s,baz=147,slow=11,SNR=5.3						
IPM	**Ipoh**	**66.54**	**280**	*e*P	**P**	**11 52 56.0**	**-0.6**
	comp=Z,24nm,1.1s						
VNDA	**Vanda**	**66.62**	**181**	LR	LR	12 19 10.6	
	comp=Z,108nm,18.7s,baz=58,slow=33						
KLR	**Kul'dur**	**67.08**	**336**	P	**P**	**11 53 00.0**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=76,slow=3.3,SNR=4.7						
NIKH	**Nikolski High**	**67.16**	**16**	*e*P	**P**	**11 52 57.2**	**-2.5**
	comp=Z,57nm,0.7s						
ENH	**Enshi**	**68.09**	**309**	*e*P	**P**	**11 53 05.9**	**-0.3**
	comp=Z,8.4nm,0.9s						
NONG	**Nongkai**	**68.48**	**294**	P	**P**	**11 53 10.4**	**+1.6**
GYA	**Guiyang**	**68.63**	**304**	P	**P**	**11 53 11.2**	**+1.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PBKT	**Sadao Pong**	**69.95**	**292**	P	**P**	**11 53 19.6**	**+1.6**
XAN	**Xi'an**	**70.29**	**312**	P	**P**	**11 53 19.9**	**0.0**
XAN				pP	sP	11 53 31.8	+7.7
XAN				sP	PcP	11 53 38.3	-3.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				LR	LR		
	comp=E,130nm,16.3s						
XAN				LR	LR		
	comp=Z,190nm,19.5s						
XAN	**Xi'an**	**70.29**	**312**	*e*P	**P**	**11 53 19.8**	**0.0**
	comp=Z,6.6nm,0.9s						
KMI	**Kunming**	**71.35**	**301**	P	**P**	**11 53 27.5**	**+0.8**
KMI				pmax	pmax		
	comp=Z,11nm,1.6s						
HHC	**Hu-ho-hao-te**	**71.96**	**319**	*e*P	**P**	**11 53 28.8**	**-1.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,6.1s						
CM01	**Chiang Mai Arr**	**72.35**	**293**	*e*P	**P**	**11 53 32.8**	**+0.2**
CM31	**Chiang Mai Arr**	**72.38**	**293**	*e*P	**P**	**11 53 32.7**	**0.0**
CMAR	**Chiang Mai Arr**	**72.38**	**293**	P	**P**	**11 53 33.4**	**+0.6**
	comp=Z,4.6nm,0.9s,baz=116,slow=4.3,SNR=27						
CMAR				LR	LR	12 27 08.3	
	comp=Z,27nm,18.1s,baz=116,slow=37						
CMMT	**Chiang Mai**	**72.48**	**294**	P	**P**	**11 53 34.3**	**+1.0**
	comp=Z,6.5nm,1.1s,comp=Z,0.0nm						
CHTO	**Chiang Mai**	**72.49**	**294**	P	**P**	**11 53 34.4**	**+1.0**
	comp=Z,30nm,1.2s,comp=Z,0.1nm						
CD2	**Chengdu**	**72.80**	**307**	⇑P	**P**	**11 53 35.6**	**+0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,130nm,4.2s						
SEY	**Seymchan**	**74.39**	**354**	P	**P**	**11 53 44.2**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=89,slow=16,SNR=3.7						
LZH	**Lanzhou**	**74.93**	**312**	*e*P	**P**	**11 53 49.0**	**+1.4**
LZH				pP	sP	11 53 53.9	+2.1
LZH				sP	PcP	11 53 57.5	-3.9
LZH				PP	**PP**	**11 56 38.4**	**+3.0**
LZH				S	**S**	**12 03 26.1**	**+0.7**
LZH				sS	sS	12 03 40.8	+10
LZH	**Lanzhou**	**74.93**	**312**	SS	SS	12 08 13.1	-1.0
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,6.0s						
LZH				LR	LR		
	comp=N,250nm,11.4s						
LZH				LR	LR		
	comp=E,370nm,12.5s						
LZH				LR	LR		
	comp=Z,420nm,14.6s						
BILL	**Bilibino**	**78.75**	**0**	*e*P	**P**	**11 54 08.9**	**+0.7**
	comp=Z,4.6nm,1.1s						
SONA0	**Songino Array**	**78.77**	**324**	*e*P	**P**	**11 54 08.6**	**-0.3**
SONM	**Songino Array**	**78.77**	**324**	P	**P**	**11 54 08.6**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=138,slow=4.1,SNR=11						
SONA1	**Songino Array**	**78.77**	**324**	*e*P	**P**	**11 54 09.3**	**+0.3**
QSPA	**South Pole Qui**	**79.08**	**180**	*e*P	**P**	**11 54 10.4**	**0.0**
	comp=Z,6.6nm,1.0s						
GTA	**Gaotai**	**79.22**	**314**	⇓P	**P**	**11 54 12.4**	**+0.8**
GTA				pP	sP	11 54 17.2	+1.3
GTA				sP	PcP	11 54 19.5	-0.4
GTA				S	**S**	**12 04 11.7**	**-0.2**
GTA	**Gaotai**	**79.22**	**314**	sS	sS	12 04 20.9	+3.9
GTA	**Gaotai**	**79.22**	**314**	SKS	**SKSac**	**12 04 23.5**	**-4.6**
GTA	**Gaotai**	**79.22**	**314**	SS	SS	12 09 22.5	+3.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,57nm,6.8s						
GTA				LR	LR		
	comp=N,170nm,19.7s						
GTA				LR	LR		
	comp=E,180nm,19.0s						
GTA				LR	LR		
	comp=Z,140nm,19.0s						
SUA	**Susitna One**	**79.69**	**20**	*e*P	**P**	**11 54 13.8**	**+0.1**
	comp=Z,10nm,1.2s						
ILAR	**Eielson Array**	**83.29**	**18**	P	**P**	**11 54 33.2**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=234,slow=5.0,SNR=12						
ILB	**Eielson Array**	**83.29**	**18**	*e*P	**P**	**11 54 33.7**	**+1.2**
IL1	**Eielson Array**	**83.29**	**18**	*e*P	**P**	**11 54 33.7**	**+1.3**
MAW	**Mawson**	**84.97**	**202**	LR	LR	12 27 53.0	
	comp=Z,85nm,20.1s,baz=132,slow=32						
NVAR	**Mina Array Bea**	**85.68**	**50**	P	**P**	**11 54 47.5**	**+2.0**
	comp=Z,1.0nm,1.0s,baz=236,slow=6.4,SNR=2.3						
NVAR				LR	LR	12 27 55.2	
	comp=Z,84nm,18.0s,baz=266,slow=32						
WMQ	**Urumqi**	**89.25**	**315**	P	**P**	**11 55 02.9**	**+0.5**
WMQ				sP	sP	11 55 11.3	+4.6
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,23nm,3.7s						
WMQ				LR	LR		
	comp=N,88nm,22.9s						
WMQ				LR	LR		
	comp=E,140nm,22.9s						
WMQ				LR	LR		
	comp=Z,160nm,22.9s						
MK01	**Makanchi Array**	**93.66**	**317**	*e*P	**P**	**11 55 22.4**	**-0.3**
ZAA0	**Zalesovo Array**	**93.66**	**324**	*e*P	**P**	**11 55 20.9**	**-1.6**
	comp=Z,3.4nm,1.0s						
ZALV	**Zalesovo Beam**	**93.66**	**324**	*e*P	**P**	**11 55 20.8**	**-1.7**
ZALV	**Zalesovo Beam**	**93.66**	**324**	P	**P**	**11 55 21.8**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=99,slow=4.7,SNR=7.0						
ZAA1	**Zalesovo Array**	**93.66**	**324**	*e*P	**P**	**11 55 21.8**	**-0.7**
MK31	**Makanchi Array**	**93.67**	**317**	*e*P	**P**	**11 55 22.0**	**-0.8**
MK32	**Makanchi Array**	**93.67**	**317**	*e*P	**P**	**11 55 22.4**	**-0.4**
MKAR	**Makanchi Array**	**93.67**	**317**	*e*P	**P**	**11 55 22.1**	**-0.7**
	comp=Z,15nm,0.8s						
MKAR	**Makanchi Array**	**93.67**	**317**	P	**P**	**11 55 22.4**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=95,slow=6.3,SNR=29						
YKA	**Yellowknife Ar**	**94.71**	**27**	P	**P**	**11 55 26.4**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=264,slow=10,SNR=4.3						
YKB5	**Yellowknife Ar**	**94.71**	**27**	*e*P	**P**	**11 55 26.8**	**-0.3**
TXAR	**Lajitas Array**	**95.47**	**61**	LR	LR	12 33 21.2	
	comp=Z,58nm,18.6s,baz=0.0,slow=32						
ARA0	**ARCESS Array S**	**116.30**	**346**	*e*PKPdf	**PKiKP**	**12 00 48.4**	**-0.8**
ARCES	**ARCESS Array B**	**116.30**	**346**	*e*PKPdf	**PKiKP**	**12 00 48.7**	**-0.5**
ARCES	**ARCESS Array B**	**116.30**	**346**	PKP	**PKiKP**	**12 00 48.4**	**-0.8**
	comp=Z,3.4nm,1.0s,baz=84,slow=1.6,SNR=16						
ARE0	**ARCESS Array S**	**116.30**	**346**	*e*PKPdf	**PKiKP**	**12 00 48.6**	**-0.6**
PB01	**IPOC Station P**	**116.83**	**120**	*e*PKPdf	**PKPdf**	**12 00 50.1**	**-1.6**
FIA0	**FINESS Array S**	**121.78**	**339**	*e*PKPdf	**PKPdf**	**12 00 59.5**	**-0.4**
FINES	**FINESS Array B**	**121.78**	**339**	PKP	**PKPdf**	**12 00 59.5**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=304,slow=4.4,SNR=3.6						
CLL	**Collm**	**134.13**	**337**	*e*PKPdf	**PKPdf**	**12 01 23.0**	**-0.7**
KEST	**Kesra**	**147.52**	**323**	*e*PKPbc	**PKPbc**	**12 01 51.3**	**+0.4**
KEST	**Kesra**	**147.52**	**323**	PKPbc	**PKPbc**	**12 01 51.0**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=55,slow=5.5,SNR=3.5						
ESDC	**Sonseca Array**	**150.03**	**345**	PKPbc	**PKPbc**	**12 01 57.0**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=296,slow=25,SNR=4.4						
TORD	**Torodi Ar. Bea**	**164.58**	**280**	PKPab	**PKPab**	**12 03 04.9**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=87,slow=3.4,SNR=3.1						
TOA1	**Torodi Ar. Sit**	**164.59**	**280**	*e*PKPab	**PKPab**	**12 03 04.9**	**-1.2**

IDC 10 11:57:06.3±3.9, **16°.20S**×**175°.84W**, **h0^{km}, mb4.4**/3, **mb1 4.6**/3, **mb1mx3.8**/30, **mbtmp4.4**/3, **Error ellipse: s-maj=164.2km s-min=80.3km az=154.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.60**	**240**	P	P	12 04 56.2	-0.1
	2.1nm,0.5s,baz=87,slow=11,SNR=6.7						
WRA	**Warramunga Arr**	**47.37**	**258**	P	P	12 05 42.5	-0.2
	1.0nm,0.4s,baz=92,slow=8.2,SNR=55						
WRA				PcP	PcP	12 07 13.2	-0.3
	0.5nm,1.0s,baz=90,slow=3.4,SNR=2.7						
ASAR	**Alice Springs**	**47.63**	**253**	P	P	12 05 44.5	-0.1
	10nm,0.6s,baz=88,slow=8.5,SNR=241						
ASAR				PcP	PcP	12 07 14.1	-0.4
	0.2nm,0.5s,baz=102,slow=4.0,SNR=3.3						

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*ISCJB **10** 12:00:21.9±0.2, 57°.42N±0°.03×156°.22W±0°.04, h98^{km}±2^{km}, mb3.9/30, Error ellipse: s-maj=5.2km s-min=2.7km az=144.8*

*IDC **10** 12:00:23.2±1.8, 57°.62N×156°.38W, h86^{km}±15^{km}, mb3.7/27, mb1 3.9/31, mb1mx3.8/48, mbtmp4.1/31, Error ellipse: s-maj=19.7km s-min=10.1km az=9.0*

*NEIC **10** 12:00:24.5±0.0, 57°.35N×156°.18W, h79^{km}, mb3.9/3, ML4.0(AEIC), After AEIC.*

ISC 10 12:00:22.8±0.7, **57°.41N**±0°.05×**156°.21W**±0°.04, **h93^{km}**±6^{km}, **n129, σ1^{s}.40**/150, **mb3.9**/30, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLK4	**Peulik 4**	**0.23**	**340**	P	**Pn**	**12 00 36.6**	**+0.2**
PLK3	**Peulik 3**	**0.28**	**354**	P	**Pn**	**12 00 36.7**	**+0.2**
PLK3				S	**Sn**	**12 00 45.8**	**-1.0**
PLBL	**Peulik Blue Cr**	**0.43**	**311**	P	**Pn**	**12 00 37.7**	**+0.2**
PLK1	**Peulik 1**	**0.44**	**331**	P	**Pn**	**12 00 37.7**	**+0.3**
KJL	**Kejulik**	**0.73**	**28**	P	**Pn**	**12 00 40.4**	**+0.5**
CAHL	**Cahill**	**0.81**	**37**	P	**Pn**	**12 00 41.0**	**+0.3**
CNTC	**Contact Creek**	**0.87**	**11**	P	**Pn**	**12 00 41.8**	**+0.4**
CNTC				S	**Sn**	**12 00 55.5**	**+0.1**
ANCK	**Angle Creek**	**0.88**	**26**	P	**Pn**	**12 00 42.1**	**+0.7**
ANCK				S	**Sn**	**12 00 55.6**	**+0.2**
KABU	**Katmai Buttres**	**0.99**	**30**	P	**Pn**	**12 00 43.7**	**+0.9**
KABU				S	**Sn**	**12 00 58.7**	**+1.0**
KELA	**Mount Kelaz**	**1.06**	**14**	P	**Pn**	**12 00 43.9**	**+0.4**
KAKN	**Katmai Knife C**	**1.08**	**34**	P	**Pn**	**12 00 44.5**	**+0.8**
ANNE	**Aniakchak Nort**	**1.12**	**244**	P	**Pn**	**12 00 43.9**	**-0.4**
ANNW	**Aniakchak Nort**	**1.18**	**248**	P	**Pn**	**12 00 45.4**	**+0.6**
ANNW				S	**Sn**	**12 01 01.4**	**0.0**
ANPK	**Aniakchak Peak**	**1.19**	**242**	P	**Pn**	**12 00 45.0**	**-0.1**
KAHG	**Katmai Hook Gl**	**1.40**	**39**	P	**Pn**	**12 00 48.5**	**+1.0**
SII	**Sitkinak Islan**	**1.40**	**127**	*e*Pn	**Pn**	**12 00 46.9**	**-0.6**
SII				*e*Sn	**Sn**	**12 01 05.1**	**-1.0**
SII				*e*Sn	Sn	12 01 05.4	-0.7
OHAK	**Old Harbor**	**1.60**	**96**	*e*Pn	**Pn**	**12 00 49.4**	**-0.5**
OHAK				*e*Sn	**Sn**	**12 01 08.6**	**-1.8**
CHGN	**Chignik**	**1.65**	**228**	*e*Pn	**Pn**	**12 00 50.0**	**-0.5**
CHGN				*e*Sn	**Sn**	**12 01 09.6**	**-1.9**
KDAK	**Kodiak Island**	**1.99**	**78**	P	**Pn**	**12 00 55.1**	**+0.3**
	197nm,0.3s,baz=211,slow=3.7,SNR=1567						
KDAK				S	**Sn**	**12 01 18.6**	**-0.7**
	123nm,0.3s,baz=229,slow=20,SNR=9.1						
VNSS	**Veniaminof 8**	**2.14**	**238**	P	**Pn**	**12 00 57.5**	**+0.3**
VNFG	**Veniaminof 2**	**2.16**	**240**	P	**Pn**	**12 00 57.8**	**+0.5**
SDPT	**Sand Point**	**3.15**	**231**	*e*Pn	**Pn**	**12 01 10.1**	**-0.2**
SDPT				*e*Sn	**Sn**	**12 01 47.5**	**+0.5**
RDWB	**Redoubt West**	**3.54**	**28**	P	**Pn**	**12 01 17.4**	**+1.6**
RSO	**Redoubt South**	**3.54**	**29**	*e*Pn	**Pn**	**12 01 17.8**	**+2.0**
BRLK	**Bradley Lake**	**3.65**	**48**	P	**Pn**	**12 01 17.4**	**+0.3**
SVW2	**Sparrevohn**	**3.71**	**5**	*e*Pn	**Pn**	**12 01 18.8**	**+0.9**
PVV	**Pavlof Volcano**	**3.71**	**239**	P	**Pn**	**12 01 18.8**	**+0.8**
PS4A	**Pavlof South-4**	**3.76**	**239**	P	**Pn**	**12 01 19.3**	**+0.7**

DOL	**Dolgoi Island**	**3.88**	**237**	P	**Pn**	**12 01 20.4**	**+0.2**
DRIA	**Deer Island**	**4.18**	**237**	P	**Pn**	**12 01 24.1**	**-0.1**
SPWE	**Spurr West**	**4.30**	**24**	P	**Pn**	**12 01 28.9**	**+2.9**
SLKM	**Skilak Lake**	**4.39**	**42**	*e*Pn	**Pn**	**12 01 27.6**	**+0.5**
SEW	**Seward**	**4.43**	**50**	*e*Pn	**Pn**	**12 01 27.7**	**0.0**
SEW				*e*Sn	**Sn**	**12 02 15.7**	**-2.4**
FALS	**False Pass**	**4.78**	**241**	*e*Pn	**Pn**	**12 01 32.6**	**+0.3**
SUA	**Susitna One**	**4.93**	**32**	*e*Pn	**Pn**	**12 01 35.8**	**+1.3**
RC01	**Rabbit Creek A**	**4.96**	**39**	*e*Pn	**Pn**	**12 01 35.5**	**+0.6**
TT01	**Tatalina**	**5.51**	**1**	*e*Pn	**Pn**	**12 01 44.0**	**+1.8**
PMR	**Palmer**	**5.53**	**38**	*e*Pn	**Pn**	**12 01 42.3**	**-0.2**
MID	**Middleton Isla**	**5.57**	**65**	*e*Pn	**Pn**	**12 01 43.7**	**+0.7**
KNK	**Knik Glacier**	**5.63**	**41**	*e*Pn	**Pn**	**12 01 44.2**	**+0.2**
GHO	**Glory Hole Cre**	**5.72**	**37**	P	**Pn**	**12 01 45.0**	**-0.3**
PPLA	**Purkeypile**	**5.86**	**18**	*e*Pn	**Pn**	**12 01 49.9**	**+2.8**
SML	**Sawmill**	**5.95**	**39**	*e*Pn	**Pn**	**12 01 48.2**	**0.0**
EYAK	**Cordova Ski Ar**	**6.25**	**55**	*e*Pn	**Pn**	**12 01 52.4**	**0.0**
EYAK				*e*Sn	**Sn**	**12 02 57.4**	**-4.9**
AKUT	**Akutan**	**6.32**	**243**	*e*Pn	**Pn**	**12 01 54.3**	**+1.1**
CAST	**Castle Rocks**	**6.36**	**17**	*e*Pn	**Pn**	**12 01 55.9**	**+2.1**
DIV	**Divide**	**6.52**	**51**	*e*Pn	**Pn**	**12 01 56.0**	**0.0**
KLU	**Klutina**	**6.65**	**48**	*e*Pn	**Pn**	**12 01 58.1**	**+0.3**
TRF	**Thorofare Moun**	**6.73**	**23**	*e*Pn	**Pn**	**12 01 59.6**	**+0.7**
UNV	**Unalaska Valle**	**6.83**	**243**	*e*Pn	**Pn**	**12 02 00.2**	**-0.1**
HMT	**Hamilton**	**6.85**	**60**	*e*Pn	**Pn**	**12 02 00.8**	**+0.2**
MSW	**Makushin Switc**	**6.93**	**244**	*e*Pn	**Pn**	**12 02 01.8**	**+0.2**
BMRM	**Bremner River**	**6.94**	**54**	*e*Pn	**Pn**	**12 02 04.9**	**+3.1**
NICHA	**Nichawak Mount**	**6.96**	**61**	P	**Pn**	**12 02 02.3**	**+0.3**
MREP	**Makushin Rep’t**	**6.97**	**243**	P	**Pn**	**12 02 02.7**	**+0.5**
RND	**Reindeer**	**7.03**	**28**	*e*Pn	**Pn**	**12 02 03.0**	**0.0**
BPAW	**Bear Paw Mtn.**	**7.18**	**19**	*e*Pn	**Pn**	**12 02 05.3**	**+0.3**
DHY	**Denali Highway**	**7.18**	**34**	*e*Pn	**Pn**	**12 02 05.2**	**+0.1**
MCK	**McKinley**	**7.28**	**26**	*e*Pn	**Pn**	**12 02 06.5**	**+0.2**
KHIT	**Khitrov Hills**	**7.36**	**60**	P	**Pn**	**12 02 07.5**	**-0.1**
HARP	**HAARP**	**7.47**	**43**	*e*Pn	**Pn**	**12 02 10.3**	**+1.2**
BWN	**Browne**	**7.54**	**23**	*e*Pn	**Pn**	**12 02 10.4**	**+0.6**
PAX	**Paxson**	**7.72**	**39**	*e*Pn	**Pn**	**12 02 13.2**	**+0.8**
MLY	**Manley**	**8.08**	**17**	*e*Pn	**Pn**	**12 02 17.0**	**-0.3**
WRH	**Wood River Hil**	**8.10**	**26**	*e*Pn	**Pn**	**12 02 16.3**	**-1.2**
HDA	**Harding Lake**	**8.33**	**29**	*e*Pn	**Pn**	**12 02 19.8**	**-0.9**
ANM	**Nome**	**8.43**	**332**	*e*Pn	**Pn**	**12 02 23.3**	**+1.2**
RIDG	**Independ’e Rid**	**8.45**	**37**	*e*Pn	**Pn**	**12 02 23.1**	**+0.8**
MDM	**Murphy Dome**	**8.49**	**24**	*e*Pn	**Pn**	**12 02 22.0**	**-0.7**
NIKH	**Nikolski High**	**8.49**	**244**	*e*Pn	**Pn**	**12 02 23.0**	**+0.2**
COLA	**College**	**8.50**	**25**	*e*Pn	**Pn**	**12 02 22.0**	**-0.8**
IL1	**Eielson Array**	**8.64**	**28**	*e*Pn	**Pn**	**12 02 23.9**	**-1.0**
ILAR	**Eielson Array**	**8.64**	**28**	P	**Pn**	**12 02 23.1**	**-1.7**
	2.3nm,0.3s,baz=212,slow=13,SNR=70						
ILAR				S	**Sn**	**12 03 52.5**	**-8.0**
	2.6nm,0.3s,baz=218,slow=16,SNR=8.8						
ILB	**Eielson Array**	**8.64**	**28**	*e*Pn	**Pn**	**12 02 23.4**	**-1.4**
DOT	**Dot Lake**	**8.65**	**39**	*e*Pn	**Pn**	**12 02 26.5**	**+1.6**
IM3	**Indian Mountai**	**8.68**	**7**	*e*Pn	**Pn**	**12 02 26.8**	**+1.5**
SCRK	**Sand Creek**	**8.89**	**37**	*e*Pn	**Pn**	**12 02 28.2**	**-0.2**
PRP	**Porcupine Dome**	**9.59**	**28**	*e*Pn	**Pn**	**12 02 37.2**	**-0.7**
PRP				*e*Sn	**Sn**	**12 04 23.2**	**-0.4**
HYT	**Haines Junctio**	**10.20**	**63**	*e*Pn	**Pn**	**12 02 47.5**	**+1.3**
COLD	**Coldfoot**	**10.23**	**13**	*e*Pn	**Pn**	**12 02 46.8**	**+0.4**
FYU	**Fort Yukon**	**10.51**	**25**	*e*Pn	**Pn**	**12 02 49.0**	**-1.2**
DAWY	**Dawson**	**10.57**	**44**	*e*Pn	**Pn**	**12 02 52.1**	**+1.0**
RDOG	**Red Dog Mine**	**11.10**	**347**	*e*Pn	**Pn**	**12 03 01.3**	**+3.0**
SIT	**Sitka**	**11.32**	**83**	*e*Pn	**Pn**	**12 03 00.8**	**-0.4**
BESE	**Bessie Mountai**	**11.38**	**75**	*e*Pn	**Pn**	**12 03 04.8**	**+2.6**
WHY	**Whitehorse**	**11.44**	**65**	*e*Pn	**Pn**	**12 03 03.6**	**+0.6**
JIS	**Juneau Island**	**11.65**	**77**	*e*Pn	**Pn**	**12 03 07.8**	**+2.1**
ADK	**Adak**	**13.06**	**254**	*e*Pn	**Pn**	**12 03 23.8**	**-0.7**
DLBC	**Dease Lake**	**13.92**	**75**	*e*Pn	**P**	**12 03 38.1**	**-2.7**
DLBC	**Dease Lake**	**13.92**	**75**	P	**P**	**12 03 37.9**	**-2.9**
	1.0nm,0.3s,baz=332,slow=4.0,SNR=24						
DLBC				S	**Sn**	**12 06 05.7**	**-3.0**
	0.2nm,0.3s,baz=169,slow=19,SNR=3.7						
INK	**Inuvik**	**14.92**	**34**	*e*Pn	**Pn**	**12 03 47.5**	**-1.0**
INK	**Inuvik**	**14.92**	**34**	P	**Pn**	**12 03 47.1**	**-1.4**
	0.6nm,0.3s,baz=216,slow=11,SNR=29						
BILL	**Bilibino**	**19.84**	**318**	*e*P	**Pn**	**12 04 46.8**	**-1.4**
	4.4nm,0.8s						
YKW3	**Yellowknife Ar**	**21.14**	**59**	*e*P	**P**	**12 05 01.3**	**+1.5**
YKA	**Yellowknife Ar**	**21.15**	**59**	P	**P**	**12 05 01.1**	**+1.2**
	0.6nm,0.4s,baz=274,slow=9.4,SNR=25						
YKA				ScP	**ScP**	**12 12 30.5**	**+0.8**
	0.5nm,0.8s,baz=280,slow=2.3,SNR=7.5						
YKB5	**Yellowknife Ar**	**21.15**	**59**	*e*P	**P**	**12 05 00.0**	**+0.1**
NEW	**Newport**	**25.00**	**95**	P	**P**	**12 05 40.2**	**+2.5**
	1.1nm,0.7s,baz=330,slow=10,SNR=3.8						
SEY	**Seymchan**	**25.55**	**304**	P	**P**	**12 05 41.4**	**-1.1**
	0.8nm,0.5s,baz=78,slow=15,SNR=5.0						
PEA0B	**Petropavlovsk-**	**26.21**	**280**	*e*P	**P**	**12 05 50.8**	**+2.3**
	26nm,1.1s						
PETK	**Petropavlovsk-**	**26.21**	**280**	*e*P	**P**	**12 05 50.9**	**+2.4**
PETK	**Petropavlovsk-**	**26.21**	**280**	P	**P**	**12 05 50.3**	**+1.7**
	1.1nm,0.4s,baz=82,slow=12,SNR=9.7						
F10A	**Beach Ranch, E**	**26.36**	**99**	*e*P	**P**	**12 05 52.1**	**+2.1**
	1.6nm,1.1s						
MA2	**Magadan**	**27.18**	**297**	P	**P**	**12 05 57.0**	**-0.2**
	0.8nm,0.3s,baz=167,slow=3.9,SNR=3.6						
NVAR	**Mina Array Bea**	**31.14**	**111**	P	**P**	**12 06 35.5**	**+2.8**
	1.3nm,0.7s,baz=310,slow=7.9,SNR=7.2						
PDAR	**Pinedale Array**	**32.60**	**96**	P	**P**	**12 06 47.8**	**+2.3**
	0.3nm,0.5s,baz=316,slow=3.7,SNR=6.0						
ULM	**Lac du Bonnet**	**35.24**	**75**	P	**P**	**12 07 07.7**	**-0.3**
	0.5nm,0.3s,baz=318,slow=10,SNR=3.2						
ASAJ	**Asahikawa**	**39.54**	**278**	P	**P**	**12 07 43.9**	**-0.4**
	3.8nm,0.9s,baz=66,slow=20,SNR=2.7						
KLR	**Kul'dur**	**41.89**	**291**	P	**P**	**12 08 02.0**	**-1.5**
	2.6nm,0.4s,baz=74,slow=8.5,SNR=14						
NRIK	**Noril'sk**	**45.47**	**333**	P	**P**	**12 08 31.8**	**-0.1**
	4.4nm,0.5s,baz=65,slow=8.8,SNR=4.0						
TXAR	**Lajitas Array**	**45.80**	**105**	P	**P**	**12 08 37.1**	**+2.0**
	0.2nm,0.4s,baz=299,slow=5.6,SNR=6.3						
SCHQ	**Schefferville**	**46.42**	**53**	P	**P**	**12 08 40.0**	**+0.3**
	2.5nm,0.7s,baz=322,slow=7.7,SNR=3.6						
MJAR	**Matsushiro Arr**	**47.26**	**273**	P	**P**	**12 08 46.5**	**+0.1**
	0.5nm,0.5s,baz=40,slow=9.9,SNR=3.6						
ARCES	**ARCESS Array B**	**53.35**	**359**	P	**P**	**12 09 30.9**	**-0.9**
	0.7nm,0.5s,baz=8.2,slow=8.5,SNR=8.8						
ARCES				PcP	**PcP**	**12 10 37.5**	**-0.4**
	1.5nm,0.6s,baz=359,slow=6.1,SNR=6.6						
SONM	**Songino Array**	**54.94**	**305**	P	**P**	**12 09 43.9**	**+0.1**
	0.5nm,0.4s,baz=41,slow=5.6,SNR=19						
SONM				PcP	**PcP**	**12 10 44.9**	**+0.4**
	1.0nm,0.7s,baz=60,slow=2.0,SNR=7.2						
ZALV	**Zalesovo Beam**	**58.44**	**323**	P	**P**	**12 10 08.1**	**-0.2**
	2.0nm,0.8s,baz=36,slow=5.3,SNR=9.3						
ZALV				PcP	**PcP**	**12 10 57.8**	**-0.2**
	1.5nm,0.7s,baz=34,slow=5.5,SNR=6.0						
FINES	**FINESS Array B**	**61.47**	**359**	P	**P**	**12 10 28.5**	**-0.4**
	2.1nm,0.5s,baz=14,slow=8.6,SNR=19						
FINES				PcP	**PcP**	**12 11 10.4**	**+0.5**
	0.9nm,0.5s,baz=343,slow=4.0,SNR=4.4						
NB2	**NORSAR Subarra**	**61.47**	**7**	P	**P**	**12 10 28.5**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=353,slow=6.9						
NOA	**NORSAR Array B**	**61.47**	**7**	P	**P**	**12 10 29.0**	**0.0**
	comp=Z,2.1nm,0.8s,baz=352,slow=6.8,SNR=12						
GTA	**Gaotai**	**64.50**	**304**	*e*P	**P**	**12 10 49.6**	**+0.1**
GTA				pP	pP	12 10 54.4	-18
GTA				sP	PcP	12 10 56.8	-26
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MKAR	**Makanchi Array**	**65.37**	**320**	P	**P**	**12 10 54.4**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=39,slow=5.8,SNR=14						
AKASG	**Malin Array Be**	**72.16**	**356**	P	**P**	**12 11 36.2**	**-0.6**
	comp=Z,3.7nm,0.4s,baz=7.9,slow=6.0,SNR=34						
GERES	**GERESS Array B**	**73.78**	**7**	P	**P**	**12 11 46.9**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=349,slow=5.3,SNR=9.9						
VYHS	**Vyhne**	**74.38**	**3**	*e*P	**P**	**12 11 50.5**	**+0.5**
KBZ	**Khabaz**	**77.96**	**346**	P	**P**	**12 12 11.0**	**+0.7**
	comp=Z,5.8nm,0.9s,baz=7.0,slow=3.0,SNR=9.7						
ESDC	**Sonseca Array**	**80.50**	**21**	P	**P**	**12 12 25.7**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=344,slow=5.6,SNR=9.8						
GEYT	**Alibeck**	**80.71**	**333**	P	**P**	**12 12 25.4**	**0.0**
	comp=Z,2.6nm,0.7s,baz=321,slow=3.8,SNR=4.5						
CMAR	**Chiang Mai Arr**	**82.36**	**292**	P	**P**	**12 12 34.1**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=15,slow=5.8,SNR=11						
BRTR	**Keskin Array B**	**82.87**	**352**	P	**P**	**12 12 37.4**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=13,slow=3.1,SNR=13						
BOSA	**Boshof**	**151.19**	**357**	PKPbc	**PKiKP**	**12 20 05.2**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=25,slow=2.6,SNR=3.7						
BOSA				PKPab	**PKPab**	**12 20 13.7**	**+0.6**
	comp=Z,6.6nm,1.1s,baz=348,slow=4.8,SNR=4.4						

*IDC **10** 12:05:19.2±1.5,11°.58S×165°.80E,h0^{km},mb3.7/6, mb1 3.9/7,mb1mx3.7/29,mbtmp3.8/7,ML4.2/1,MS3.0/1, Ms1 3.0/1,ms1mx2.6/29,Error ellipse: s-maj=47.7km s-min=26.1km az=126.0*

*ISCJB **10** 12:05:23.2±1.1,11°.8S±0°.1×165°.8E±0°.2,h37^{km},mb3.6/5, Error ellipse: s-maj=27.5km s-min=18.1km az=5.9*

ISC 10 12:05:24.8±1.1,**11°.7S**±0°.1×**165°.8E**±0°.2,**h37**^{km},**n8, σ0^s.89**/8,**mb3.5**/5,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.37**	**177**	Pn	**Pn**	**12 07 51.3**	**+0.2**
	1.9nm,0.3s,baz=348,slow=16,SNR=17						
DZM				LR	LR	12 11 03.5	
	comp=Z,80nm,19.0s,baz=38,slow=33						
CTA	**Charters Tower**	**20.59**	**244**	P	**P**	**12 10 01.9**	**+1.1**
	3.6nm,0.8s,baz=59,slow=12,SNR=4.2						
WRA	**Warramunga Arr**	**31.35**	**251**	P	**P**	**12 11 41.3**	**-0.9**
	0.6nm,0.7s,baz=82,slow=9.2,SNR=11						
ASAR	**Alice Springs**	**32.59**	**244**	P	**P**	**12 11 52.2**	**-0.9**
	1.8nm,0.7s,baz=72,slow=9.4,SNR=20						
SONM	**Songino Array**	**79.20**	**324**	P	**P**	**12 17 26.5**	**+0.3**
	0.2nm,0.8s,baz=101,slow=7.5,SNR=3.3						
ILAR	**Eielson Array**	**84.06**	**18**	P	**P**	**12 17 51.3**	**0.0**
	0.4nm,1.0s,baz=230,slow=6.1,SNR=3.7						
MKAR	**Makanchi Array**	**94.02**	**317**	P	**P**	**12 18 39.6**	**+0.5**
	0.3nm,0.7s,baz=101,slow=6.3,SNR=3.3						
ARCES	**ARCESS Array B**	**116.94**	**345**	PKP	**PKPdf**	**12 24 04.1**	**-0.9**
	3.0nm,0.9s,baz=90,slow=4.9,SNR=5.3						

IDC 10 12:16:53.3±1.8,**11°.09S**×**165°.87E,h0**^{km},**mb3.5**/3, **mb1 4.0**/5,**mb1mx3.6**/37,**mbtmp3.9**/5,**ML4.2**/2,**Error ellipse: s-maj=42.0km s-min=32.0km az=132.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.06**	**285**	Pn	Pn	12 18 25.7	+1.5
	18nm,0.3s,baz=156,slow=10,SNR=4.9						
DZM	**Mont Dzumac**	**10.93**	**177**	Pn	Pn	12 19 32.7	+1.5
	0.7nm,0.3s,baz=333,slow=18,SNR=7.1						
WRA	**Warramunga Arr**	**31.58**	**250**	P	P	12 23 17.8	-0.1
	1.2nm,0.9s,baz=81,slow=9.2,SNR=10						
ASAR	**Alice Springs**	**32.88**	**243**	P	P	12 23 28.5	-0.8
	0.3nm,0.7s,baz=73,slow=9.6,SNR=4.9						
ILAR	**Eielson Array**	**83.52**	**18**	P	P	12 29 22.7	0.0
	0.3nm,0.7s,baz=225,slow=4.6,SNR=5.5						

*NIED **10** 12:21:00,34°.30N×140°.30E,h65^{km},Mw4.0 Best double couple: M$_0$1.07000×10^{15} NP1:φ$_s$61.00000°,δ13.00000°, λ144.00000°. NP2:φ$_s$187.00000°,δ83.00000°,λ80.00000°.*

*MOS **10** 12:21:38.6±0.9,34°.15N×140°.14E,h82^{km},mb4.5/17,Error ellipse: s-maj=12.2km s-min=6.4km az=115.5*

*ISCJB **10** 12:21:39.4±0.3,34°.20N±0°.02×140°.21E±0°.04,h87^{km}±2^{km}, mb4.2/70,Error ellipse: s-maj=5.2km s-min=3.9km az=169.2*

*JMA **10** 12:21:40.5±0.2,34°.29N×140°.30E,h69^{km}±3^{km},M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$179.00000°,δ88.00000°,λ82.00000°. NP2:φ$_s$79.00000°, δ8.00000°,λ169.00000°. Principal axes: T Plg46.0000°, Azm81.0000°; N Plg8.0000°, Azm179.0000°; P Plg43.0000°, Azm277.0000°;*

JMA Felt I J1.

*IDC **10** 12:21:40.9±0.7,34°.21N×140°.16E,h86^{km}±6^{km},mb3.8/21, mb1 3.9/24,mb1mx3.8/43,mbtmp4.1/24,MS2.9/4, Ms1 2.9/4,ms1mx2.6/45 Error ellipse: s-maj=15.2km s-min=6.7km az=75.0*

*NEIC **10** 12:21:41.1±0.4,34°.19N×140°.10E,h87^{km}±3^{km},mb4.4/41, Error ellipse: s-maj=4.2km s-min=3.8km az=80.0*

NEIC Recorded [1 JMA] in Chiba and Tokyo.

ISC 10 12:21:39.9±0.7,**34°.24N**±0°.03×**140°.31E**±0°.05,**h78**^{km}±6^{km}, **n176,σ1^s.36**/192,**mb4.3**/76,**12C-13D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**0.59**	**17**	⇓P	**Pn**	**12 21 54.0**	**0.0**
JMKN	**Mikurajimanish**	**0.69**	**240**	⇑P	**Pn**	**12 21 55.6**	**+0.4**
JMKN				S	**Sn**	**12 22 07.1**	**+0.5**
BSO1	**Boso 1**	**0.69**	**53**	⇓P	**Pn**	**12 21 54.9**	**+0.2**
BSO4	**Boso 4**	**0.75**	**2**	P	**Pn**	**12 21 56.1**	**+0.2**
TATJ	**Tateyama 2**	**0.86**	**337**	⇑P	**Pn**	**12 21 57.5**	**+0.3**
JIM2	**Oshima 3**	**0.87**	**304**	⇑P	**Pn**	**12 21 56.9**	**-0.4**
JIM2				S	**Sn**	**12 22 09.2**	**-1.1**
JTHY	**Toshimahigashi**	**0.89**	**289**	P	**Pn**	**12 21 57.8**	**+0.3**
JTHY				S	**Sn**	**12 22 11.3**	**+0.7**
KTR	**Katsuura**	**0.91**	**0**	P	**Pn**	**12 21 57.4**	**-0.3**
KTR				S	**Sn**	**12 22 10.7**	**-0.3**
JKO	**Kozu shima**	**0.97**	**267**	P	**Pn**	**12 21 58.7**	**+0.3**
JHJ2	**Mitsune**	**1.19**	**200**	*e*Pn	**Pn**	**12 22 02.2**	**+1.0**
JHJ2				*e*Sn	**Sn**	**12 22 17.5**	**+0.3**
JHJ2	**Mitsune**	**1.19**	**200**	⇑P	**Pn**	**12 22 02.2**	**+1.0**
JHJ2				S	**Sn**	**12 22 18.5**	**+1.3**
JHJ	**Hachijo jima 2**	**1.20**	**202**	P	**Pn**	**12 22 02.3**	**+1.0**
	1μm,0.3s,baz=61,slow=19,SNR=331						
JHJ				S	**Sn**	**12 22 17.7**	**+0.5**
	2μm,0.3s,baz=73,slow=19,SNR=76						
KTJ3	**Kamata3**	**1.23**	**305**	⇑P	**Pn**	**12 22 01.3**	**-0.4**
KTJ3				S	**Sn**	**12 22 17.1**	**-1.0**
JIZS	**Izushimoda**	**1.27**	**293**	⇑P	**Pn**	**12 22 02.5**	**+0.3**
JIZS				*e*S	**Sn**	**12 22 19.2**	**+0.2**
JSMT	**Sammumatsuo**	**1.41**	**5**	P	**Pn**	**12 22 03.8**	**-0.1**
JOD2	**Odawara 2**	**1.43**	**316**	⇑P	**Pn**	**12 22 03.9**	**-0.4**
JOD2				S	**Sn**	**12 22 21.8**	**-0.9**
MJAR	**Matsushiro Arr**	**2.87**	**324**	P	**Pn**	**12 22 23.8**	**+0.4**
	7.5nm,0.3s,baz=157,slow=12,SNR=424						
MJAR				S	**Sn**	**12 22 56.6**	**-0.3**
	6.9nm,0.3s,baz=155,slow=24,SNR=12						
MJAR				LR	LR	12 23 37.1	
	comp=Z,89nm,18.9s,baz=100,slow=42						
MAJO	**Matsushiro**	**2.87**	**324**	*e*Pn	**Pn**	**12 22 24.2**	**+0.8**
MAJO				*e*Sn	**Sn**	**12 22 58.6**	**+1.6**
MAJO	**Matsushiro**	**2.87**	**324**	*d i*P	**Pn**	**12 22 24.4**	**+1.0**
MAT	**Matsushiro**	**2.87**	**324**	P	**Pn**	**12 22 24.4**	**+1.0**
MAT				S	**Sn**	**12 22 58.2**	**+1.2**
MJB9	**Matsu-Tunnel**	**2.88**	**324**	*e*Pn	**Pn**	**12 22 24.4**	**+0.9**
MJB9				*e*Sn	**Sn**	**12 22 59.7**	**+2.6**
INU	**Inuyama**	**2.93**	**293**	*e*Pn	**Pn**	**12 22 25.7**	**+1.5**
CBIJ	**Chichi jima**	**7.30**	**167**	*e*Pn	**Pn**	**12 23 23.2**	**-0.6**
CBIJ				*e*Sn	**Sn**	**12 24 38.9**	**-6.2**
JCJ	**Chichijima**	**7.30**	**167**	P	**Pn**	**12 23 23.2**	**-0.6**
	22nm,0.3s,baz=8.8,slow=23,SNR=9.4						
JCJ				S	**Sn**	**12 24 38.9**	**-6.2**
	9.2nm,0.3s,baz=90,slow=20,SNR=3.1						
JNU	**Nakatsue**	**7.94**	**265**	P	**Pn**	**12 23 35.0**	**+2.4**
	2.9nm,0.3s,baz=71,slow=1.5,SNR=26						
JNU				LR	LR	12 26 35.0	
	comp=Z,89nm,18.9s,baz=114,slow=38						
ERM	**Erimo**	**8.09**	**15**	*e*Pn	**Pn**	**12 23 31.8**	**-2.6**
ERM				*e*Sn	Sn	12 24 57.5	-6.7
ERM	**Erimo**	**8.09**	**15**	⇓*e*P	**Pn**	**12 23 32.0**	**-2.4**
ASAJ	**Asahikawa**	**10.03**	**10**	P	**Pn**	**12 23 57.9**	**-3.0**
	1.0nm,0.3s,baz=216,slow=5.9,SNR=15						
ASAJ				S	Sn	12 25 43.8	-7.8
	0.5nm,0.3s,baz=162,slow=20,SNR=3.2						
KSRS	**Korea Array**	**10.55**	**291**	P	**Pn**	**12 24 12.2**	**+4.1**
	0.3nm,0.3s,baz=105,slow=14,SNR=7.5						
KSRS				LR	LR	12 27 53.4	
	comp=Z,85nm,20.1s,baz=52,slow=36						
KSAR	**Wonju Array Be**	**10.58**	**291**	P	**Pn**	**12 24 12.2**	**+3.8**
KSAR	**Wonju Array Be**	**10.58**	**291**	P	**Pn**	**12 24 12.3**	**+3.8**
USRK	**Ussuriysk Ar.**	**11.85**	**330**	P	**Pn**	**12 24 26.2**	**+0.4**
	0.3nm,0.3s,baz=143,slow=10,SNR=5.4						
YSS	**Yuzh-Sakhalins**	**12.84**	**8**	⇓*e*P	**Pn**	**12 24 39.0**	**-0.1**
YSS				pmax	pmax		
	comp=Z,19nm,1.7s						
KLR	**Kul'dur**	**16.27**	**340**	⇑*e*P	**Pn**	**12 25 23.4**	**0.0**
KLR	**Kul'dur**	**16.27**	**340**	P	**Pn**	**12 25 21.2**	**-2.2**
	comp=Z,1.1nm,0.3s,baz=168,slow=15,SNR=12						
NACB	**Ninganchiao**	**19.14**	**243**	*e*P	**P**	**12 25 56.6**	**-0.2**
	comp=Z,15nm,1.0s						
GUMO	**Guam**	**20.97**	**168**	LR	LR	12 32 19.8	
	comp=Z,46nm,20.6s,baz=92,slow=30						
ZEA	**Zeya**	**21.58**	**339**	*e*P	**P**	**12 26 21.2**	**-1.7**
ZEA				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.66**	**295**	*e*P	**P**	**12 26 43.7**	**-0.6**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,7.4s						
XAN	**Xi'an**	**25.93**	**278**	P	**P**	**12 27 02.6**	**-2.3**
XAN				pP	pP	12 27 18.6	-4.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN	**Xi'an**	**25.93**	**278**	*e*P	**P**	**12 27 02.1**	**-2.7**
	comp=Z,3.8nm,0.6s						
XAN	**Xi'an**	**25.93**	**278**	*e*P	**P**	**12 27 02.1**	**-2.7**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ENH	**Enshi**	**26.31**	**270**	*e*P	**P**	**12 27 05.6**	**-2.7**
	comp=Z,6.7nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**27.65**	**115**	T	T	12 56 22.5	
	baz=306,slow=75,SNR=110						
H11N1	**WAKE ISLAND Hy**	**27.65**	**115**	T	T	12 56 30.6	
	baz=306,slow=75,SNR=83						
H11N3	**WAKE ISLAND Hy**	**27.66**	**115**	T	T	12 56 31.5	
	baz=306,slow=75,SNR=71						
H11S3	**WAKE ISLAND Hy**	**28.25**	**117**	T	T	12 57 17.2	
	baz=308,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**28.25**	**117**	T	T	12 57 17.0	
	baz=308,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**28.26**	**117**	T	T	12 57 18.0	
	baz=308,slow=75,SNR=18						
SONA1	**Songino Array**	**28.71**	**309**	*e*P	**P**	**12 27 29.2**	**-0.5**
SONA0	**Songino Array**	**28.71**	**309**	*e*P	**P**	**12 27 29.7**	**0.0**
SONA0				*e*PcP	**PcP**	**12 30 38.6**	**+0.3**
SONM	**Songino Array**	**28.71**	**309**	P	**P**	**12 27 29.7**	**0.0**
	comp=Z,3.1nm,0.7s,baz=110,slow=8.7,SNR=37						
SONM				PcP	**PcP**	**12 30 38.6**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=147,slow=1.8,SNR=4.4						
ZAK	**Zakamensk**	**31.39**	**312**	*e*P	**P**	**12 27 53.4**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TLY	**Talaya**	**31.57**	**315**	*e*P	**P**	**12 27 55.9**	**+1.1**
	comp=Z,22nm,0.9s						
TLY	**Talaya**	**31.57**	**315**	⇓*e*P	**P**	**12 27 55.8**	**+1.1**
GTA	**Gaotai**	**32.62**	**291**	*e*P	**P**	**12 28 02.9**	**-1.4**
GTA				pP	pP	12 28 23.9	+1.6
GTA				sP	sP	12 28 35.1	+3.8
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,58nm,6.7s						
GTA				LR	LR		
	comp=N,110nm,15.6s						
GTA				LR	LR		
	comp=E,150nm,15.9s						
GTA				LR	LR		
	comp=Z,86nm,15.6s						
MOY	**Mondy**	**33.14**	**314**	*e*P	**P**	**12 28 09.0**	**+0.4**
KMI	**Kunming**	**33.72**	**265**	P	**P**	**12 28 14.3**	**+0.2**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KNGR	**Kungurtug, Tuv**	**35.01**	**311**	⇑*e*P	**P**	**12 28 23.7**	**-1.2**
TIXI	**Tiksi**	**37.97**	**354**	⇓*e*P	**P**	**12 28 49.2**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CM31	**Chiang Mai Arr**	**39.96**	**258**	*e*P	**P**	**12 29 05.2**	**-1.7**
CMAR	**Chiang Mai Arr**	**39.96**	**258**	P	**P**	**12 29 04.6**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=47,slow=9.2,SNR=3.3						
DGZ	**Jazzator, Alta**	**41.36**	**308**	*d i*P	**P**	**12 29 19.0**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ	**Urumqi**	**41.36**	**300**	P	**P**	**12 29 19.4**	**+1.2**
WMQ				sP	sP	12 29 47.3	+1.8
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,300nm,7.5s						
WMQ				LR	LR		
	comp=N,81nm,18.7s						
WMQ				LR	LR		
	comp=E,84nm,17.7s						
WMQ				LR	LR		
	comp=Z,81nm,17.7s						
ZAA0	**Zalesovo Array**	**43.18**	**315**	*e*P	**P**	**12 29 32.7**	**0.0**
	comp=Z,4.1nm,0.9s						
ZAA1	**Zalesovo Array**	**43.18**	**315**	*e*P	**P**	**12 29 32.8**	**+0.1**
ZAA1				*e*PP	**PcP**	**12 31 20.6**	**-0.2**
ZALV	**Zalesovo Beam**	**43.18**	**315**	P	**P**	**12 29 32.8**	**+0.1**
	comp=Z,3.2nm,0.3s,baz=109,slow=7.2,SNR=19						
ZALV				PcP	**PcP**	**12 31 20.6**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=122,slow=3.6,SNR=6.0						
NVS	**Novosibirsk**	**44.17**	**316**	*e*P	**P**	**12 29 40.9**	**+0.3**
MK01	**Makanchi Array**	**44.89**	**304**	*e*P	**P**	**12 29 46.3**	**-0.2**
MK31	**Makanchi Array**	**44.89**	**304**	*e*P	**P**	**12 29 46.4**	**-0.2**
MK31	**Makanchi Array**	**44.89**	**304**	*e*P	**P**	**12 29 46.4**	**-0.2**
MK32	**Makanchi Array**	**44.89**	**304**	*e*P	**P**	**12 29 46.5**	**0.0**
MK32				*e*PcP	**PcP**	**12 31 27.2**	**+0.3**
MKAR	**Makanchi Array**	**44.89**	**304**	*e*P	**P**	**12 29 46.4**	**-0.2**
	comp=Z,34nm,0.7s						
MKAR				PcP	**PcP**	**12 31 27.2**	**+0.3**
MKAR	**Makanchi Array**	**44.89**	**304**	*e*P	**P**	**12 29 46.4**	**-0.2**
MKAR						12 31 27.2	
MKAR				pmax	pmax		
	comp=Z,34nm,0.7s						
MKAR	**Makanchi Array**	**44.89**	**304**	P	**P**	**12 29 46.5**	**0.0**
	comp=Z,5.5nm,0.7s,baz=90,slow=9.8,SNR=69						
MKAR				PcP	**PcP**	**12 31 27.2**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=59,slow=3.5,SNR=3.8						
MAKZ	**Makanchi**	**45.11**	**304**	*e*P	**P**	**12 29 48.0**	**-0.2**
	comp=Z,4.6nm,0.6s						
MAKZ	**Makanchi**	**45.11**	**304**	*e*P	**P**	**12 29 48.0**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RAMN	**Ramite**	**46.35**	**276**	*e*P	**P**	**12 29 56.7**	**-1.9**
	comp=Z,5.6nm,0.3s						
JIRN	**Jiri**	**46.42**	**277**	*e*P	**P**	**12 29 58.0**	**-1.3**
	comp=Z,20nm,0.3s						
GUN	**Gumba**	**46.58**	**278**	*e*P	**P**	**12 29 59.2**	**-1.3**
	comp=Z,9.1nm,0.6s						
KURK	**Kurchatov**	**46.99**	**310**	*e*P	**P**	**12 30 02.2**	**-0.7**
	comp=Z,7.2nm,0.9s						
KURK	**Kurchatov**	**46.99**	**310**	*c i*P	**P**	**12 30 02.9**	**0.0**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PKI	**Pulchoki**	**47.10**	**277**	*e*P	**P**	**12 30 02.6**	**-1.9**
	comp=Z,6.3nm,0.6s						
DANN	**Dangsing**	**48.16**	**279**	*e*P	**P**	**12 30 11.5**	**-1.2**
	comp=Z,22nm,0.5s						
TARG	**Taragay, Kyrgy**	**48.88**	**298**	*e*P	**P**	**12 30 18.6**	**+0.5**
	comp=Z,7.6nm,0.7s						
PYUN	**Piuthan**	**48.88**	**279**	*e*P	**P**	**12 30 16.7**	**-1.4**
	comp=Z,9.2nm,0.4s						
KDAK	**Kodiak Island**	**49.80**	**40**	*e*P	**P**	**12 30 25.3**	**+0.9**
	comp=Z,30nm,1.0s						
KDAK	**Kodiak Island**	**49.80**	**40**	*e*P	**P**	**12 30 25.3**	**+0.9**
KDAK				pmax	pmax		
	comp=Z,30nm,1.0s						
KDAK	**Kodiak Island**	**49.80**	**40**	P	**P**	**12 30 25.1**	**+0.7**
	comp=Z,7.1nm,0.7s,baz=248,slow=8.7,SNR=3.8						
PPLA	**Purkeypile**	**49.98**	**34**	*e*P	**P**	**12 30 28.1**	**+2.1**
	comp=Z,6.9nm,1.2s						
CAST	**Castle Rocks**	**50.05**	**33**	*e*P	**P**	**12 30 28.0**	**+1.7**
	comp=Z,1.0nm,0.9s						
SUA	**Susitna One**	**50.65**	**35**	*e*P	**P**	**12 30 31.7**	**+0.8**
	comp=Z,9.9nm,1.1s						
MLY	**Manley**	**50.70**	**31**	*e*P	**P**	**12 30 33.1**	**+1.9**
	comp=Z,2.6nm,0.7s						
AAK	**Ala-Archa**	**51.06**	**300**	*e*P	**P**	**12 30 33.5**	**-0.9**
	comp=Z,4.8nm,0.9s						
AAK	**Ala-Archa**	**51.06**	**300**	*de*P	**P**	**12 30 34.2**	**-0.2**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GHO	**Glory Hole Cre**	**51.51**	**35**	*e*P	**P**	**12 30 39.0**	**+1.6**
	comp=Z,7.0nm,0.9s						
MDM	**Murphy Dome**	**51.77**	**31**	*e*P	**P**	**12 30 40.9**	**+1.7**
	comp=Z,6.9nm,0.8s						
SML	**Sawmill**	**51.79**	**35**	*e*P	**P**	**12 30 40.9**	**+1.6**
	comp=Z,19nm,1.1s						
SML	**Sawmill**	**51.79**	**35**	*e*P	**P**	**12 30 40.9**	**+1.6**
SML				pmax	pmax		
	comp=Z,19nm,1.1s						
BRVK	**Borovoye**	**51.88**	**314**	*e*P	**P**	**12 30 40.7**	**+0.6**
	comp=Z,2.7nm,0.9s						
BRVK	**Borovoye**	**51.88**	**314**	⇓*e*P	**P**	**12 30 40.0**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
COLA	**College**	**51.93**	**31**	⇑*e*P	**P**	**12 30 41.6**	**+1.3**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HDA	**Harding Lake**	**52.33**	**32**	*e*P	**P**	**12 30 44.1**	**+0.8**
	comp=Z,2.5nm,1.0s						
ILAR	**Eielson Array**	**52.34**	**31**	P	**P**	**12 30 44.1**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=268,slow=6.7,SNR=18						
ILB	**Eielson Array**	**52.34**	**31**	*e*P	**P**	**12 30 44.0**	**+0.7**
IL1	**Eielson Array**	**52.34**	**31**	*e*P	**P**	**12 30 44.0**	**+0.7**

KLU	**Klutina**	**52.96**	**35**	*e*P	**P**	**12 30 49.5**	**+1.5**
	comp=Z,5.4nm,0.9s						
SCRK	**Sand Creek**	**53.64**	**32**	*e*P	**P**	**12 30 54.2**	**+1.1**
	comp=Z,1.9nm,0.6s						
KK31	**Karatay Array**	**53.78**	**302**	*e*P	**P**	**12 30 54.2**	**-0.1**
KK31	**Karatay Array**	**53.78**	**302**	*e*P	**P**	**12 30 54.2**	**-0.1**
KKAR	**Karatay Array**	**53.78**	**302**	*e*P	**P**	**12 30 54.3**	**0.0**
KKAR	**Karatay Array**	**53.78**	**302**	*e*P	**P**	**12 30 54.3**	**0.0**
FITZ	**Fitzroy Crossi**	**53.88**	**197**	*e*P	**P**	**12 30 55.3**	**+0.1**
	comp=Z,1.5nm,1.0s						
WRAB	**Tennant Creek**	**54.16**	**187**	*e*P	**P**	**12 30 57.0**	**-0.2**
	comp=Z,4.1nm,0.9s						
WRAB	**Tennant Creek**	**54.16**	**187⇓**	*e*P	**P**	**12 30 56.3**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WB2	**Warramunga Arr**	**54.17**	**187**	*e*P	**P**	**12 30 56.6**	**-0.7**
WR1	**Warramunga Arr**	**54.17**	**187**	*e*P	**P**	**12 30 56.9**	**-0.4**
	comp=Z,2.8nm,0.8s						
WRA	**Warramunga Arr**	**54.17**	**187**	P	**P**	**12 30 56.9**	**-0.4**
	comp=Z,2.2nm,0.4s,baz=4.6,slow=7.7,SNR=61						
GAR	**Garm**	**55.12**	**297**	*e*P	**P**	**12 31 03.8**	**-0.4**
	comp=Z,8.4nm,0.7s						
GAR	**Garm**	**55.12**	**297**	*e*P	**P**	**12 31 03.8**	**-0.4**
GAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
INK	**Inuvik**	**57.29**	**26**	*e*P	**P**	**12 31 20.0**	**+1.0**
INK	**Inuvik**	**57.29**	**26**	P	**P**	**12 31 20.0**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=272,slow=4.5,SNR=7.5						
ARU	**Arti**	**57.88**	**320**	*e*P	**P**	**12 31 23.2**	**-0.2**
	comp=Z,3.7nm,0.6s						
ARU	**Arti**	**57.88**	**320⇓**	*e*P	**P**	**12 31 23.1**	**-0.2**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AS01	**Alice Springs**	**57.90**	**187**	*e*P	**P**	**12 31 23.6**	**-0.2**
AS31	**Alice Springs**	**57.90**	**187**	*e*P	**P**	**12 31 24.1**	**+0.2**
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**57.90**	**187**	P	**P**	**12 31 23.5**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=15,slow=14,SNR=18						
WHY	**Whitehorse**	**58.38**	**35**	*e*P	**P**	**12 31 29.4**	**+2.4**
	comp=Z,6.1nm,1.1s						
ABKAR	**Akbulak array**	**59.07**	**311**	*e*P	**P**	**12 31 31.4**	**-0.3**
DZM	**Mont Dzumac**	**61.27**	**152**	*e*P	**P**	**12 31 48.3**	**+1.3**
	comp=Z,10nm,0.9s						
GEYT	**Alibeck**	**64.42**	**300**	P	**P**	**12 32 07.7**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=288,slow=0.9,SNR=3.6						
FORT	**Forrest**	**65.69**	**192**	*e*P	**P**	**12 32 17.1**	**+1.2**
	comp=Z,17nm,0.8s						
ARA0	**ARCESS Array S**	**66.30**	**340**	*e*P	**P**	**12 32 18.7**	**-0.8**
ARCES	**ARCESS Array B**	**66.30**	**340**	P	**P**	**12 32 18.7**	**-0.8**
	comp=Z,2.2nm,0.9s,baz=48,slow=6.7,SNR=3.2						
YKA	**Yellowknife Ar**	**66.68**	**29**	P	**P**	**12 32 22.4**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=296,slow=6.4,SNR=6.3						
YKB5	**Yellowknife Ar**	**66.68**	**29**	*e*P	**P**	**12 32 22.5**	**+0.5**
NLWA	**Neilton Lookou**	**69.28**	**46**	*e*P	**P**	**12 32 41.1**	**+2.5**
	comp=Z,11nm,1.1s						
FIA0	**FINESS Array S**	**70.87**	**332**	*e*P	**P**	**12 32 47.9**	**-0.1**
FIA0	**FINESS Array S**	**70.87**	**332**	*e*P	**P**	**12 32 47.9**	**-0.1**
FINES	**FINESS Array B**	**70.87**	**332**	P	**P**	**12 32 47.9**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=54,slow=4.1,SNR=10						
NCK	**Nalchik**	**71.72**	**310⇑**	*e*P	**P**	**12 32 54.8**	**+1.3**
NCK				pmax	pmax		
	comp=Z,12nm,0.7s						
KBZ	**Khabaz**	**72.04**	**311**	P	**P**	**12 32 55.5**	**+0.1**
	comp=Z,4.0nm,0.9s,baz=30,slow=2.1,SNR=5.9						
KIV	**Kislovodsk**	**72.06**	**311**	*e*P	**P**	**12 32 56.4**	**+0.7**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ORV	**Oroville**	**74.70**	**52**	*e*P	**P**	**12 33 12.4**	**+1.3**
	comp=Z,0.4nm,0.6s						
ORV	**Oroville**	**74.70**	**52**	*e*P	**P**	**12 33 12.4**	**+1.3**
BEKR	**Beckworth**	**75.28**	**52**	*e*P	**P**	**12 33 16.1**	**+1.4**
	comp=Z,3.0nm,1.0s						
AKASG	**Malin Array Be**	**75.95**	**322**	P	**P**	**12 33 17.7**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=48,slow=6.1,SNR=16						
AKBB	**Malin Array Si**	**75.95**	**322**	*e*P	**P**	**12 33 17.9**	**-0.2**
	comp=Z,4.1nm,0.6s						
KIEV	**Kiev**	**75.97**	**322**	*e*P	**P**	**12 33 17.8**	**-0.3**
	comp=Z,3.9nm,0.6s						
KIEV	**Kiev**	**75.97**	**322⇓**	*e*P	**P**	**12 33 17.7**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AK11	**Malin Array Si**	**76.00**	**322**	*e*P	**P**	**12 33 18.4**	**+0.1**
PAHR	**Pah Rah Range**	**76.00**	**51**	*e*P	**P**	**12 33 20.3**	**+1.5**
	comp=Z,2.6nm,1.1s						
NC204	**NORSAR Array S**	**76.38**	**337**	*e*P	**P**	**12 33 20.7**	**+0.3**
NB2	**NORSAR Subarra**	**76.41**	**337**	P	**P**	**12 33 20.1**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=41,slow=5.9						
NB200	**NORSAR Array S**	**76.41**	**337**	*e*P	**P**	**12 33 20.1**	**-0.5**
NOA	**NORSAR Array B**	**76.41**	**337**	P	**P**	**12 33 20.1**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=41,slow=5.7,SNR=4.7						
YERR	**Yerington**	**76.48**	**52**	*e*P	**P**	**12 33 23.4**	**+1.8**
	comp=Z,3.3nm,1.2s						
DLMT	**Dillon**	**76.97**	**44**	*e*P	**P**	**12 33 25.8**	**+1.6**
	comp=Z,0.8nm,0.8s						
KVN	**Kaiserville**	**77.19**	**51**	*e*P	**P**	**12 33 27.9**	**+2.3**
	comp=Z,3.9nm,1.2s						
KVN	**Kaiserville**	**77.19**	**51**	*e*P	**P**	**12 33 27.9**	**+2.3**
KVN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NV01	**Mina Array Sit**	**77.40**	**52**	*e*P	**P**	**12 33 28.5**	**+1.7**
NVAR	**Mina Array Bea**	**77.40**	**52**	P	**P**	**12 33 27.7**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=274,slow=5.8,SNR=4.1						
HVU	**Hansel Valley**	**78.97**	**47**	*e*P	**P**	**12 33 37.2**	**+1.9**
	comp=Z,1.2nm,0.8s						
HVU	**Hansel Valley**	**78.97**	**47**	*e*P	**P**	**12 33 37.2**	**+1.9**
HVU				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BR101	**Keskin Array S**	**80.02**	**311**	*e*P	**P**	**12 33 40.8**	**-0.3**
BRTR	**Keskin Array B**	**80.03**	**311**	P	**P**	**12 33 40.8**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=97,slow=5.1,SNR=5.5						
PD31	**Pinedale Array**	**80.28**	**45**	*e*P	**P**	**12 33 43.7**	**+1.1**
PDAR	**Pinedale Array**	**80.28**	**45**	*e*P	**P**	**12 33 43.6**	**+1.1**
PDAR	**Pinedale Array**	**80.28**	**45**	P	**P**	**12 33 43.1**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=252,slow=3.0,SNR=4.7						
GERES	**GERESS Array B**	**84.60**	**328**	P	**P**	**12 34 04.2**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=42,slow=6.1,SNR=4.0						
GEA0	**GERESS Array S**	**84.61**	**328**	*e*P	**P**	**12 34 04.6**	**-0.1**
LTX	**Lajitas**	**92.55**	**52**	*e*P	**P**	**12 34 43.8**	**+0.9**
LTX	**Lajitas**	**92.55**	**52**	*e*P	**P**	**12 34 43.8**	**+0.9**
TXAR	**Lajitas Array**	**92.55**	**52**	P	**P**	**12 34 43.8**	**+0.8**
	comp=Z,0.1nm,0.7s,baz=271,slow=3.1,SNR=3.7						
TOA1	**Torodi Ar. Sit**	**118.61**	**313**	*e*PKPdf	**PKPdf**	**12 40 18.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**118.61**	**313**	PKP	**PKPdf**	**12 40 18.7**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=341,slow=3.1,SNR=3.9						

IDC 10 12:21:42.5±8.9**, 15°.94S**×**173°.84W, h0^{km}, mb4.4**/2**, mb1 4.6**/2**, mb1mx3.7**/31**, mbtmp4.4**/2**, Error ellipse: s-maj=455.3km s-min=43.6km az=143.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.31**	**257**	P	P	12 30 33.6	-0.1
	1.1nm,0.7s,baz=90,slow=6.9,SNR=25						
ASAR	**Alice Springs**	**49.54**	**252**	P	P	12 30 35.5	-0.1
	8.2nm,0.6s,baz=88,slow=7.9,SNR=224						
BRTR	**Keskin Array B**	**146.30**	**320**	PKPbc	PKPdf	12 41 24.5	0.0
	0.5nm,0.6s,baz=80,slow=3.5,SNR=3.1						
GERES	**GERESS Array B**	**146.60**	**351**	PKPbc	PKPbc	12 41 25.5	-0.7
	0.3nm,0.7s,baz=0.0,slow=2.0,SNR=3.1						

IDC 10 12:30:24.0±3.0**, 10°.79S**×**165°.54E, h0^{km}, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.4**/28**, mbtmp3.5**/4**, ML3.7**/1**, Error ellipse: s-maj=65.8km s-min=42.3km az=88.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.25**	**176**	Pn	Pn	12 33 06.0	-0.2
	0.5nm,0.3s,baz=352,slow=10,SNR=16						
H11S2	**WAKE ISLAND Hy**	**29.12**	**2**	T	T	13 06 48.6	
	baz=181,slow=76,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**29.12**	**2**	T	T	13 06 48.7	
	baz=181,slow=76,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**29.14**	**2**	T	T	13 06 49.8	
	baz=181,slow=76,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**30.34**	**3**	T	T	13 08 19.4	
	baz=182,slow=76,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**30.35**	**3**	T	T	13 08 20.4	
	baz=182,slow=76,SNR=8.6						
H11N2	**WAKE ISLAND Hy**	**30.36**	**3**	T	T	13 08 21.3	
	baz=182,slow=76,SNR=6.9						
WRA	**Warramunga Arr**	**31.38**	**249**	P	P	12 36 47.1	+0.3
	0.4nm,0.8s,baz=80,slow=9.1,SNR=4.1						
ASAR	**Alice Springs**	**32.73**	**243**	P	P	12 36 58.4	-0.3
	0.4nm,0.7s,baz=61,slow=11,SNR=6.6						
MKAR	**Makanchi Array**	**93.20**	**317**	P	P	12 43 40.3	-0.1
	0.1nm,0.7s,baz=102,slow=4.7,SNR=3.0						

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*ISCJB **10** 12:38:06.9±0.9, 11°.0S±0°.1×165°.92E±0°.09, h61^{km}, mb3.7/5, Error ellipse: s-maj=16.8km s-min=11.2km az=22.9*

*IDC **10** 12:38:09.0±3.9, 10°.97S×165°.97E, h67^{km}±35^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.5/33, mbtmp3.8/8, ML4.3/2, MS3.1/4, Ms1 3.1/4, ms1mx2.9/18, Error ellipse: s-maj=37.0km s-min=28.6km az=141.0*

ISC 10 12:38:08.3±1.0**, 11°.0S**±0°.1×**166°.0E**±0°.1**, h61^{km}, n17, σ0^{s}.70**/10**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.13**	**284**	*e*P	**Pn**	**12 39 36.0**	**-0.3**
HNR	**Honiara**	**6.13**	**284**	P	**Pn**	**12 39 37.3**	**+1.0**
	13nm,0.3s,baz=136,slow=4.9,SNR=5.2						
HNR				S	**Sn**	**12 40 44.7**	**-0.5**
	7.0nm,0.3s,baz=197,slow=18,SNR=2.7						
HNR				LR	LR	12 41 42.3	
	comp=Z,83nm,19.9s,baz=86,slow=35						
DZM	**Mont Dzumac**	**11.05**	**178**	P	**Pn**	**12 40 43.6**	**-0.2**
	1.4nm,0.3s,baz=308,slow=14,SNR=13						
DZM				LR	LR	12 43 49.1	
	comp=Z,65nm,18.3s,baz=80,slow=31						
CTA	**Charters Tower**	**21.04**	**242**	P	**P**	**12 42 48.1**	**+0.7**
	1.7nm,0.7s,baz=53,slow=14,SNR=2.3						
H11S2	**WAKE ISLAND Hy**	**29.27**	**1**	T	T	13 14 22.1	
	baz=181,slow=76,SNR=52						
H11S3	**WAKE ISLAND Hy**	**29.28**	**1**	T	T	13 14 26.3	
	baz=181,slow=76,SNR=50						
H11S1	**WAKE ISLAND Hy**	**29.29**	**1**	T	T	13 14 22.5	
	baz=181,slow=76,SNR=28						
H11N1	**WAKE ISLAND Hy**	**30.50**	**2**	T	T	13 15 53.8	
	baz=182,slow=76,SNR=38						
H11N3	**WAKE ISLAND Hy**	**30.50**	**2**	T	T	13 15 53.0	
	baz=182,slow=76,SNR=45						
H11N2	**WAKE ISLAND Hy**	**30.51**	**2**	T	T	13 15 55.1	
	baz=182,slow=76,SNR=36						
WRA	**Warramunga Arr**	**31.73**	**250**	P	**P**	**12 44 26.8**	**0.0**
	2.0nm,0.7s,baz=80,slow=9.3,SNR=18						
ASAR	**Alice Springs**	**33.03**	**243**	P	**P**	**12 44 37.8**	**-0.4**
	1.0nm,0.8s,baz=67,slow=9.9,SNR=11						
RAR	**Rarotonga**	**34.38**	**112**	LR	LR	12 58 17.6	
	comp=Z,48nm,18.4s,baz=224,slow=35						
JNU	**Nakatsue**	**55.15**	**324**	LR	LR	13 10 00.9	
	comp=Z,20nm,19.1s,baz=338,slow=35						
ILAR	**Eielson Array**	**83.36**	**18**	P	**P**	**12 50 27.9**	**-0.6**
	0.2nm,0.8s,baz=219,slow=6.9,SNR=3.3						
MKAR	**Makanchi Array**	**93.62**	**317**	P	**P**	**12 51 17.6**	**-0.5**
	0.2nm,0.7s,baz=114,slow=6.5,SNR=3.1						
YKA	**Yellowknife Ar**	**94.80**	**27**	P	**P**	**12 51 23.9**	**+0.9**
	0.3nm,0.9s,baz=269,slow=5.3,SNR=3.5						

MEX 10 12:57:25.7±0.4**, 15°.06N**×**93°.57W, h44^{km}**±26^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.72**	**28**	*i* P	Pn	12 57 37.7	-1.8
PCIG				*e*S	Sn	12 57 47.5	-2.0
THIG		**1.27**	**97**	*e*P	Pn	12 57 45.6	-1.4
CCIG	**Comitan**	**1.84**	**49**	*e*P	Pn	12 57 53.6	-1.4
CCIG				*e*S	Sn	12 58 14.7	-2.4

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*IDC **10** 12:57:48.5±1.2, 10°.83S×164°.80E, h0^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.9/35, mbtmp3.9/11, ML4.3/2, Error ellipse: s-maj=32.9km s-min=22.4km az=132.0*

*ISCJB **10** 12:57:52.0±0.4, 10°.85S±0°.06×164°.70E±0°.05, h31^{km}, mb4.3/17, Error ellipse: s-maj=8.4km s-min=7.3km az=12.7*

*NEIC **10** 12:57:52.2±3.4, 10°.80S×164°.76E, h20^{km}±22^{km}, mb4.4/10, Error ellipse: s-maj=8.9km s-min=7.8km az=146.0*

ISC 10 12:57:53.6±0.5**, 10°.79S**±0°.08×**164°.78E**±0°.06**, h31^{km}, n45, σ1^{s}.18**/42**, mb4.1**/17**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.95**	**285**	*e*P	**Pn**	**12 59 08.0**	**+2.2**
HNR				*e*S	**Sb**	**13 00 17.0**	**-1.6**
HNR	**Honiara**	**4.95**	**285**	*e*Pn	**Pn**	**12 59 06.8**	**+1.0**
HNR				*e*Sn	**Sn**	**13 00 02.1**	**0.0**
HNR	**Honiara**	**4.95**	**285**	Pn	**Pn**	**12 59 05.5**	**-0.3**
	11nm,0.3s,baz=225,slow=0.8,SNR=9.1						
HNR				Sn	**Sn**	**13 00 02.1**	**0.0**
	baz=162,slow=19,SNR=1.5						
DZM	**Mont Dzumac**	**11.33**	**172**	*e*Pn	**Pn**	**13 00 32.3**	**-1.2**
DZM	**Mont Dzumac**	**11.33**	**172**	Pn	**Pn**	**13 00 32.0**	**-1.5**
	1.9nm,0.3s,baz=300,slow=18,SNR=13						
ONTNC	**Ouen Toro**	**11.56**	**172**	*e*Pn	**Pn**	**13 00 37.3**	**+0.7**
PINNC	**Pines Island,**	**12.03**	**168**	*e*Pn	**Pn**	**13 00 40.0**	**-2.9**
FUNA	**Funafuti**	**14.39**	**82**	*e*P	**P**	**13 01 19.6**	**-2.2**
TARA	**Tarawa**	**14.53**	**34**	*e*Pn	**Pn**	**13 01 17.0**	**-0.2**
MSVF	**Nonsavu**	**14.59**	**120**	*e*Pn	**Pn**	**13 01 19.0**	**+0.9**
CTA	**Charters Tower**	**20.09**	**240**	P	**P**	**13 02 25.5**	**+0.7**
	6.9nm,1.0s,baz=67,slow=12,SNR=5.4						
CTAO	**Charters Tower**	**20.09**	**240**	*e*P	**P**	**13 02 25.0**	**+0.2**
	16nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**29.16**	**4**	T	T	13 34 28.0	
	baz=184,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.16**	**4**	T	T	13 34 27.0	
	baz=184,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**29.18**	**4**	T	T	13 34 26.1	
	baz=184,slow=76,SNR=10						
BKZ	**Black Stump Fm**	**30.12**	**162**	*e*P	**P**	**13 04 02.1**	**+1.5**
	15nm,1.2s						
H11N1	**WAKE ISLAND Hy**	**30.39**	**4**	T	T	13 35 55.8	
	baz=184,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**30.39**	**4**	T	T	13 35 57.6	
	baz=184,slow=76,SNR=8.3						
H11N2	**WAKE ISLAND Hy**	**30.40**	**4**	T	T	13 35 57.6	
	baz=184,slow=76,SNR=9.8						
WR1	**Warramunga Arr**	**30.68**	**249**	*e*P	**P**	**13 04 04.1**	**-1.7**
	5.1nm,1.1s						
WRA	**Warramunga Arr**	**30.68**	**249**	P	**P**	**13 04 04.1**	**-1.7**
	1.2nm,0.9s,baz=76,slow=9.0,SNR=6.8						
AS31	**Alice Springs**	**32.06**	**242**	*e*P	**P**	**13 04 17.6**	**-0.4**
	1.2nm,1.1s						
ASAR	**Alice Springs**	**32.06**	**242**	P	**P**	**13 04 17.1**	**-0.9**
	0.8nm,0.7s,baz=65,slow=9.8,SNR=9.6						
RPZ	**Rata Peaks**	**33.25**	**172**	*e*P	**P**	**13 04 30.2**	**+2.1**
	20nm,1.1s						
FITZ	**Fitzroy Crossi**	**38.53**	**255**	*e*P	**P**	**13 05 12.8**	**-0.8**
	4.1nm,1.1s						
HPO	**Honuapo**	**49.10**	**53**	*e*P	**P**	**13 06 36.7**	**-1.8**
HUH	**Hualalai**	**49.21**	**52**	*e*P	**P**	**13 06 39.9**	**+0.3**
	50nm,0.9s						
NPOC	**North of Pu‘u**	**49.61**	**53**	*e*P	**P**	**13 06 43.3**	**+0.7**
	267nm,0.7s						
MJAR	**Matsushiro Arr**	**53.32**	**333**	P	**P**	**13 07 09.9**	**0.0**
	2.3nm,0.9s,baz=166,slow=8.0,SNR=4.1						
MAJO	**Matsushiro**	**53.32**	**333**	*e*P	**P**	**13 07 09.9**	**0.0**
CMAR	**Chiang Mai Arr**	**71.14**	**294**	P	**P**	**13 09 08.6**	**-1.1**
	0.4nm,0.6s,baz=115,slow=6.5,SNR=3.2						
SONA0	**Songino Array**	**77.91**	**324**	*e*P	**P**	**13 09 49.4**	**+0.8**
SONM	**Songino Array**	**77.91**	**324**	P	**P**	**13 09 49.4**	**+0.8**
	0.4nm,0.7s,baz=151,slow=5.8,SNR=5.2						
QSPA	**South Pole Qui**	**79.21**	**180**	*e*P	**P**	**13 09 55.8**	**+0.3**
	7.4nm,1.1s						
IL1	**Eielson Array**	**83.58**	**19**	*e*P	**P**	**13 10 19.1**	**+0.7**
ILAR	**Eielson Array**	**83.58**	**19**	P	**P**	**13 10 18.1**	**-0.3**
	0.5nm,0.8s,baz=230,slow=7.1,SNR=5.2						
ILB	**Eielson Array**	**83.58**	**19**	*e*P	**P**	**13 10 19.2**	**+0.8**
	1.4nm,0.9s						
NVAR	**Mina Array Bea**	**86.59**	**50**	P	**P**	**13 10 34.4**	**0.0**
	0.9nm,0.7s,baz=243,slow=12,SNR=4.1						
MK01	**Makanchi Array**	**92.68**	**317**	*e*P	**P**	**13 11 03.2**	**+0.5**
MK31	**Makanchi Array**	**92.69**	**317**	*e*P	**P**	**13 11 04.0**	**+1.3**
	1.5nm,0.9s						
MK32	**Makanchi Array**	**92.69**	**317**	*e*P	**P**	**13 11 02.8**	**+0.1**
MKAR	**Makanchi Array**	**92.69**	**317**	*e*P	**P**	**13 11 04.1**	**+1.4**
	8.9nm,0.8s						
MKAR	**Makanchi Array**	**92.69**	**317**	P	**P**	**13 11 02.8**	**+0.1**
	1.0nm,0.8s,baz=90,slow=5.9,SNR=12						
SCHQ	**Schefferville**	**120.31**	**32**	*e*PKPdf	**PKiKP**	**13 16 42.7**	**+1.0**
MTE	**Manteigas**	**149.74**	**348**	*e*PKPbc	**PKPbc**	**13 17 41.4**	**+0.6**

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*ISCJB **10** 13:20:29.2±0.3, 11°.22S±0°.05×165°.85E±0°.05, h10^{km}, mb4.4/25, MS4.0/15, Error ellipse: s-maj=7.1km s-min=6.3km az=139.3*

*IDC **10** 13:20:29.4±0.6, 11°.12S×165°.93E, h0^{km}, mb4.2/14, mb1 4.4/16, mb1mx4.2/30, mbtmp4.2/16, ML4.7/2, MS3.9/15, Ms1 3.9/15, ms1mx3.5/39, Error ellipse: s-maj=20.4km s-min=16.5km az=116.0*

*NEIC **10** 13:20:33.5±1.9, 11°.18S×165°.89E, h29^{km}±13^{km}, mb4.8/15, Error ellipse: s-maj=7.4km s-min=7.0km az=144.0*

ISC 10 13:20:30.9±0.4**, 11°.21S**±0°.06×**165°.89E**±0°.06**, h10^{km}, n72, σ1^{s}.20**/65**, mb4.4**/25**, MS3.9**/15**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.11**	**286**	*e*P	**Pn**	**13 22 02.0**	**+0.6**
HNR	**Honiara**	**6.11**	**286**	Pn	**Pn**	**13 22 02.2**	**+0.8**
	90nm,0.3s,baz=145,slow=5.7,SNR=54						
HNR				Sn	**Sn**	**13 23 11.1**	**-0.3**
	baz=18,slow=19,SNR=1.2						
HNR				LR	LR	13 24 48.7	
	comp=Z,1μm,18.1s,baz=111,slow=42						
MARNC	**Mare, Loyalty**	**10.41**	**169**	*e*Pn	**Pn**	**13 23 02.7**	**+2.3**
DZM	**Mont Dzumac**	**10.81**	**177**	*e*Pn	**Pn**	**13 23 06.0**	**0.0**
	25nm,0.8s						
DZM				*e*LR	LR	13 25 34.0	
	comp=Z,483nm,23.5s						
DZM	**Mont Dzumac**	**10.81**	**177**	*e*Pn	**Pn**	**13 23 05.4**	**-0.6**
DZM				Sn	**Sn**	**13 25 05.5**	**-1.7**
DZM	**Mont Dzumac**	**10.81**	**177**	Pn	**Pn**	**13 23 07.7**	**+1.8**
	1.0nm,0.3s,baz=328,slow=3.7,SNR=14						
DZM				Sn	**Sn**	**13 25 05.5**	**-1.7**
	0.2nm,0.3s,baz=307,slow=20,SNR=2.2						
DZM				LR	LR	13 27 13.0	
	comp=Z,428nm,18.5s,baz=52,slow=37						
ONTNC	**Ouen Toro**	**11.05**	**177**	*e*Pn	**Pn**	**13 23 10.5**	**+1.4**
PINNC	**Pines Island,**	**11.43**	**173**	*e*Pn	**Pn**	**13 23 16.2**	**+1.8**
FUNA	**Funafuti**	**13.38**	**80**	*e*Pn	**Pn**	**13 23 39.7**	**-1.3**
TARA	**Tarawa**	**14.31**	**30**	*e*Pn	**Pn**	**13 23 55.7**	**+1.9**
RABL	**Rabaul**	**15.28**	**296**	*e*Pn	**Pn**	**13 24 07.4**	**+0.4**
	21nm,0.6s						
MANU	**Manus Island**	**20.52**	**295**	*e*P	**P**	**13 25 08.8**	**-0.7**
	149nm,1.4s						
CTA	**Charters Tower**	**20.85**	**243**	P	**P**	**13 25 14.5**	**+1.3**
	7.8nm,0.8s,baz=72,slow=12,SNR=7.9						
CTAO	**Charters Tower**	**20.85**	**243**	*e*P	**P**	**13 25 13.1**	**-0.1**
	45nm,1.5s						
COEN	**Coen**	**22.34**	**261**	*e*P	**P**	**13 25 29.3**	**+0.1**
	28nm,1.3s						
URZ	**Urewera**	**28.74**	**161**	P	**P**	**13 26 29.9**	**+1.2**
	4.5nm,0.7s,baz=53,slow=5.1,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**29.53**	**2**	T	T	13 57 06.6	
	baz=181,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**29.53**	**2**	T	T	13 57 09.0	
	baz=181,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**29.54**	**2**	T	T	13 57 11.8	
	baz=181,slow=76,SNR=17						
STKA	**Stephens Creek**	**30.42**	**224**	*e*P	**P**	**13 26 43.8**	**+0.1**
	0.9nm,0.8s						
STKA	**Stephens Creek**	**30.42**	**224**	P	**P**	**13 26 44.6**	**+0.9**
	2.9nm,0.6s,baz=29,slow=11,SNR=7.7						
STKA				LR	LR	13 38 43.3	
	comp=Z,263nm,18.3s,baz=26,slow=36						
H11N1	**WAKE ISLAND Hy**	**30.75**	**2**	T	T	13 58 40.2	
	baz=182,slow=76,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**30.75**	**2**	T	T	13 58 33.9	
	baz=182,slow=76,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**30.77**	**2**	T	T	13 58 41.5	
	baz=182,slow=76,SNR=4.9						
WB2	**Warramunga Arr**	**31.55**	**250**	*e*P	**P**	**13 26 52.4**	**-1.4**
	7.6nm,0.8s						
WR1	**Warramunga Arr**	**31.56**	**250**	*e*P	**P**	**13 26 53.0**	**-0.9**
	16nm,1.1s						
WR1				*e*PcP	**PcP**	**13 29 46.8**	**+0.2**
WRA	**Warramunga Arr**	**31.56**	**250**	P	**P**	**13 26 53.0**	**-0.9**
	6.2nm,0.6s,baz=81,slow=9.1,SNR=78						
WRA				PcP	**PcP**	**13 29 46.8**	**+0.2**
	0.4nm,0.7s,baz=76,slow=3.0,SNR=3.7						
WRA				LR	LR	13 39 42.7	
	comp=Z,276nm,18.3s,baz=85,slow=36						
LTZ	**Lake Taylor**	**31.94**	**171**	*e*P	**P**	**13 26 57.8**	**+0.9**
	33nm,1.4s						
GUMO	**Guam**	**32.28**	**319**	LR	LR	13 39 09.7	
	comp=Z,98nm,19.1s,baz=127,slow=35						
RPZ	**Rata Peaks**	**32.69**	**173**	P	**P**	**13 27 04.6**	**+1.1**
	7.2nm,0.7s,baz=312,slow=4.8,SNR=8.8						
AS31	**Alice Springs**	**32.84**	**244**	*e*P	**P**	**13 27 04.1**	**-1.1**
	5.3nm,2.0s						
ASAR	**Alice Springs**	**32.85**	**244**	P	**P**	**13 27 03.9**	**-1.3**
	1.7nm,0.7s,baz=64,slow=10,SNR=23						
ASAR				PcP	**PcP**	**13 29 49.9**	**-0.2**
	0.2nm,0.6s,baz=61,slow=2.6,SNR=4.1						
ASAR				LR	LR	13 39 44.9	
	comp=Z,247nm,18.5s,baz=81,slow=35						
FITZ	**Fitzroy Crossi**	**39.48**	**255**	*e*P	**P**	**13 28 00.7**	**-1.2**
	4.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.48**	**255**	LR	LR	13 43 40.9	
	comp=Z,211nm,19.5s,baz=84,slow=35						
BATI	**Baumata**	**41.48**	**267**	LR	LR	13 45 48.6	
	comp=Z,172nm,18.1s,baz=124,slow=37						
PPT	**Papeete**	**43.52**	**104**	LR	LR	13 43 54.0	
	comp=Z,124nm,20.9s,baz=252,slow=32						
PPT2	**Papeete2**	**43.52**	**104**	*e*LR	LR	13 40 55.6	
	comp=Z,245nm,24.2s,baz=276						
DAV	**Davao City (W)**	**44.03**	**293**	LR	LR	13 47 00.1	
	comp=Z,74nm,19.0s,baz=334,slow=36						
TAOE	**Nuku Hiva Isla**	**53.13**	**93**	*e*S	**S**	**13 37 23.2**	**+2.7**
	55nm,29.1s						
TAOE				*e*LR	LR	13 45 25.5	
	comp=Z,110nm,23.6s						
RKT	**Rikitea**	**57.40**	**110**	*e*LR	LR	13 47 32.2	
	comp=Z,311nm,23.2s						
CM01	**Chiang Mai Arr**	**72.28**	**294**	*e*P	**P**	**13 31 56.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**72.31**	**294**	P	**P**	**13 31 58.8**	**+1.4**
	0.7nm,0.7s,baz=126,slow=4.6,SNR=4.7						
CMAR				LR	LR	14 01 37.8	
	comp=Z,16nm,21.6s,baz=118,slow=34						
SEY	**Seymchan**	**74.66**	**354**	LR	LR	13 59 00.1	
	comp=Z,4μm,21.8s,baz=330,slow=31						
QSPA	**South Pole Qui**	**78.79**	**180**	*e*P	**P**	**13 32 34.0**	**+0.1**
	40nm,2.0s						
SONA0	**Songino Array**	**78.89**	**324**	*e*P	**P**	**13 32 35.5**	**+0.8**
SONM	**Songino Array**	**78.89**	**324**	P	**P**	**13 32 35.5**	**+0.8**
	0.5nm,0.8s,baz=122,slow=5.2,SNR=3.1						
GTA	**Gaotai**	**79.28**	**314**	⇑P	**P**	**13 32 38.4**	**+1.4**
GTA				pP	sP	13 32 43.1	+3.1
GTA				sP	pwP	13 32 45.5	+1.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,98nm,7.8s						
GTA				LR	LR		
	comp=N,87nm,16.8s						
GTA				LR	LR		
	comp=E,120nm,18.4s						
GTA				LR	LR		
	comp=Z,120nm,16.5s						
HDA	**Harding Lake**	**83.36**	**19**	*e*P	**P**	**13 32 56.7**	**-1.3**
	comp=Z,6.2nm,0.8s						
ILAR	**Eielson Array**	**83.62**	**18**	P	**P**	**13 32 58.4**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=235,slow=4.9,SNR=19						
ILB	**Eielson Array**	**83.62**	**18**	*e*P	**P**	**13 32 58.4**	**-0.9**
SCRK	**Sand Creek**	**84.03**	**20**	*e*P	**P**	**13 33 00.8**	**-0.7**
	comp=Z,9.7nm,1.2s						
AFDM	**Forest Hills D**	**84.20**	**49**	*e*P	**P**	**13 33 02.5**	**-0.4**
	comp=Z,20nm,2.0s						
NV01	**Mina Array Sit**	**86.02**	**50**	*e*P	**P**	**13 33 11.4**	**-0.8**
NVAR	**Mina Array Bea**	**86.02**	**50**	P	**P**	**13 33 12.2**	**0.0**
	comp=Z,1.0nm,0.8s,baz=241,slow=9.5,SNR=4.3						
NVAR				LR	LR	14 04 47.6	
	comp=Z,134nm,18.7s,baz=264,slow=31						
PDAR	**Pinedale Array**	**93.56**	**47**	P	**P**	**13 33 47.3**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=306,slow=2.1,SNR=3.4						
PDAR				LR	LR	14 13 07.2	
	comp=Z,29nm,18.1s,baz=282,slow=34						
MK32	**Makanchi Array**	**93.74**	**317**	*e*P	**P**	**13 33 47.8**	**-0.4**
MK32				*e*PKKPdf	**PKKPdf**	**13 50 51.5**	**-1.9**
MKAR	**Makanchi Array**	**93.74**	**317**	*e*P	**P**	**13 33 48.0**	**-0.2**
	comp=Z,7.6nm,0.8s						
MKAR				PKKPbc	**PKKPdf**	**13 50 51.5**	**-1.9**
MKAR	**Makanchi Array**	**93.74**	**317**	P	**P**	**13 33 47.8**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=90,slow=7.3,SNR=5.3						
MKAR				PKKPbc	**PKKPdf**	**13 50 51.5**	**-1.9**
	comp=Z,0.3nm,0.7s,baz=263,slow=3.7,SNR=3.7						
ZALV	**Zalesovo Beam**	**93.78**	**324**	P	**P**	**13 33 47.4**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=98,slow=4.3,SNR=2.7						
ZALV				LR	LR	14 17 13.3	
	comp=Z,29nm,18.0s,baz=79,slow=36						

ZAA1	**Zalesovo Array**	**93.78**	**324**	*e*P	**P**	**13 33 47.4**	**-0.7**
MAKZ	**Makanchi**	**93.95**	**317**	*e*P	**P**	**13 33 48.9**	**-0.2**
	comp=Z,3.7nm,1.1s						
YKA	**Yellowknife Ar**	**95.06**	**27**	P	**P**	**13 33 51.6**	**-2.1**
	comp=Z,0.3nm,0.6s,baz=257,slow=4.5,SNR=9.4						
YKB5	**Yellowknife Ar**	**95.06**	**27**	*e*P	P	13 33 51.4	-2.4
TXAR	**Lajitas Array**	**95.78**	**61**	LR	LR	14 09 29.3	
	comp=Z,83nm,20.5s,baz=0.0,slow=31						
ARA0	**ARCESS Array S**	**116.53**	**345**	*e*PKPdf	**PKPdf**	**13 39 12.6**	**-2.1**
ARCES	**ARCESS Array B**	**116.53**	**345**	PKP	**PKPdf**	**13 39 12.6**	**-2.1**
	comp=Z,2.0nm,0.7s,baz=64,slow=2.8,SNR=7.4						
BOSA	**Boshof**	**125.09**	**223**	PKP	**PKPdf**	**13 39 33.2**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=37,slow=2.3,SNR=4.7						
CLL	**Collm**	**134.31**	**336**	*e*PKPdf	**PKPdf**	**13 39 49.0**	**-0.1**
GERES	**GERESS Array B**	**135.92**	**334**	PKP	**PKPdf**	**13 39 53.5**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=129,slow=1.4,SNR=3.0						
ESDC	**Sonseca Array**	**150.26**	**344**	PKPbc	**PKPbc**	**13 40 22.9**	**0.0**
	comp=Z,0.1nm,0.4s,baz=1.4,slow=5.1,SNR=2.7						
TORD	**Torodi Ar. Bea**	**164.43**	**279**	PKPab	**PKPab**	**13 41 31.7**	**+1.1**
	comp=Z,0.8nm,1.0s,baz=93,slow=2.9,SNR=1.9						
TOA1	**Torodi Ar. Sit**	**164.44**	**279**	*e*PKPab	**PKPab**	**13 41 31.7**	**+1.1**

IDC ***10*** *13:25:13.7±2.4, 36°.90N×140°.76E, h0^{km}, mb3.4/2, mb1 3.5/3, mb1mx3.2/41, mbtmp3.2/3, ML2.2/1, Error ellipse: s-maj=42.0km s-min=28.4km az=54.0*

ISCJB ***10*** *13:25:14.8±0.5, 37°.03N±0°.03×140°.64E±0°.04, h10^{km}±3^{km}, mb3.2/2, Error ellipse: s-maj=5.8km s-min=4.2km az=22.4*

JMA ***10*** *13:25:15.2, 37°.03N×140°.61E, h5^{km}±1^{km}, M3.1*

JMA Felt I J1.

ISC 10 13:25:14.8±0.9**, 37°.01N**±0°.05×**140°.64E**±0°.03**, h8**^{km}±8^{km}**, n18, σ0^{s}73**/22**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFFD	**Fukushimafurud**	**0.10**	**320**	P	**Pg**	**13 25 17.0**	**-0.2**
JFFD				S	**Sg**	**13 25 18.1**	**-0.8**
ONAJ	**Iwakimizuishiy**	**0.15**	**54**	P	**Pg**	**13 25 18.6**	**+0.6**
ONAJ				S	**Sg**	**13 25 21.2**	**+0.9**
JFK	**Kawauchi**	**0.40**	**28**	P	**Pg**	**13 25 22.8**	**+0.2**
JFK				S	**Sg**	**13 25 28.3**	**+0.5**
JHO	**Hitachi**	**0.41**	**188**	P	**Pb**	**13 25 23.2**	**-1.0**
JHO				S	**Sb**	**13 25 29.3**	**-1.3**
JFT	**Otama**	**0.56**	**334**	P	**Pg**	**13 25 25.7**	**+0.1**
JFT				S	**Sg**	**13 25 33.1**	**+0.1**
JSB	**Shiboa**	**0.58**	**266**	P	**Pg**	**13 25 26.8**	**+0.8**
JSB				S	**Sg**	**13 25 34.9**	**+1.3**
JFY	**Yanaizu**	**0.85**	**298**	P	**Pg**	**13 25 30.9**	**-0.1**
JFY				S	**Sg**	**13 25 41.6**	**-0.4**
JMM	**Marumori**	**0.86**	**8**	P	**Pg**	**13 25 30.8**	**-0.5**
JMM				S	**Sg**	**13 25 42.3**	**-0.2**
JYT	**Yasato**	**0.86**	**205**	P	**Pb**	**13 25 31.4**	**-0.6**
JYT				S	**Sb**	**13 25 43.2**	**-0.5**
MJAR	**Matsushiro Arr**	**2.01**	**257**	Pn	**Pn**	**13 25 49.8**	**+0.7**
	0.8nm,0.3s,baz=80,slow=13,SNR=60						
MJAR				Sn	**Sb**	**13 26 17.0**	**+0.2**
	0.8nm,0.3s,baz=82,slow=26,SNR=6.0						
SONM	**Songino Array**	**27.29**	**304**	P	**P**	**13 31 00.7**	**+0.9**
	0.4nm,0.9s,baz=101,slow=7.5,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**28.67**	**120**	T	T	14 01 00.3	
	baz=312,slow=75,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**28.68**	**120**	T	T	14 01 00.9	
	baz=312,slow=75,SNR=8.4						
H11N3	**WAKE ISLAND Hy**	**28.69**	**120**	T	T	14 00 57.9	
	baz=312,slow=75,SNR=8.7						
H11S1	**WAKE ISLAND Hy**	**29.37**	**122**	T	T	14 01 50.6	
	baz=314,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**29.37**	**122**	T	T	14 01 50.3	
	baz=314,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**29.39**	**122**	T	T	14 01 47.6	
	baz=314,slow=75,SNR=9.2						
WRA	**Warramunga Arr**	**56.96**	**187**	P	**P**	**13 35 00.5**	**-0.3**
	0.4nm,0.8s,baz=7.1,slow=7.7,SNR=5.5						

IDC 10 13:40:27.8±3.2**, 5°.92S**×**127°.99E, h390**^{km}±33^{km}**, mb2.5**/1**, mb1 3.1**/5**, mb1mx2.8**/44**, mbtmp3.9**/5**, Error ellipse: s-maj=47.3km s-min=16.3km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.04**	**225**	P	Pn	13 42 01.2	+0.6
	5.2nm,0.3s,baz=77,slow=4.4,SNR=7.2						
BATI				S	S	13 43 15.2	-0.8
	2.6nm,0.3s,baz=150,slow=21,SNR=6.9						
FITZ	**Fitzroy Crossi**	**12.32**	**191**	P	Pn	13 43 12.3	-0.5
	0.2nm,0.3s,baz=0.1,slow=12,SNR=14						
WRA	**Warramunga Arr**	**15.24**	**157**	P	P	13 43 43.4	0.0
	0.8nm,0.3s,baz=337,slow=11,SNR=41						
WRA				S	S	13 46 23.3	-2.1
	0.1nm,0.3s,baz=328,slow=20,SNR=3.7						
ASAR	**Alice Springs**	**18.54**	**163**	P	P	13 44 18.9	+0.3
	0.6nm,0.3s,baz=346,slow=11,SNR=68						
ASAR				S	S	13 47 29.6	+0.5
	0.0nm,0.3s,baz=346,slow=22,SNR=3.8						
MKAR	**Makanchi Array**	**66.24**	**328**	P	P	13 50 35.3	-0.1
	0.1nm,0.4s,baz=134,slow=7.9,SNR=4.1						

IDC ***10*** *13:46:40.0±3.3, 11°.08S×165°.72E, h49^{km}±29^{km}, mb3.3/5, mb1 3.7/7, mb1mx3.4/37, mbtmp3.8/7, ML4.3/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/17, Error ellipse: s-maj=29.9km s-min=20.3km az=51.0*

ISC 10 13:46:37.0±3.9**, 11°.1S**±0°.3×**165°.7E**±0°.3**, h10**^{km}**, n13, σ1^{s}20**/5**, mb3.5**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.88**	**286**	P	**Pn**	**13 48 04.9**	**+0.6**
	21nm,0.3s,baz=140,slow=6.2,SNR=12						
HNR				S	**Sn**	**13 49 12.1**	**+0.2**
	4.4nm,0.3s,baz=214,slow=18,SNR=2.3						
DZM	**Mont Dzumac**	**10.93**	**176**	P	**Pn**	**13 49 14.5**	**+0.8**
	0.8nm,0.3s,baz=324,slow=21,SNR=12						
DZM				S	**Sn**	**13 51 15.9**	**-0.3**
	0.1nm,0.3s,baz=287,slow=19,SNR=2.1						
H11S2	**WAKE ISLAND Hy**	**29.42**	**2**	T	T	14 22 58.5	
	baz=181,slow=76,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**29.43**	**2**	T	T	14 22 58.8	
	baz=181,slow=76,SNR=8.2						
H11S1	**WAKE ISLAND Hy**	**29.44**	**2**	T	T	14 23 00.9	
	baz=181,slow=76,SNR=17						
H11N1	**WAKE ISLAND Hy**	**30.64**	**2**	T	T	14 24 28.6	
	baz=182,slow=76,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**30.65**	**2**	T	T	14 24 28.8	
	baz=182,slow=76,SNR=8.1						
H11N2	**WAKE ISLAND Hy**	**30.66**	**2**	T	T	14 24 29.9	
	baz=182,slow=76,SNR=8.6						
WRA	**Warramunga Arr**	**31.41**	**250**	P	P	13 52 57.0	-1.6
	0.4nm,0.7s,baz=82,slow=9.2,SNR=3.3						
ASAR	**Alice Springs**	**32.71**	**243**	P	P	13 53 08.2	-1.9
	0.2nm,0.6s,baz=66,slow=9.9,SNR=6.2						
FITZ	**Fitzroy Crossi**	**39.30**	**255**	P	**P**	**13 54 05.2**	**-1.3**
	1.3nm,0.9s,baz=89,slow=6.4,SNR=2.9						
FITZ				LR	LR	14 09 40.6	
	comp=Z,54nm,18.4s,baz=102,slow=35						
ILAR	**Eielson Array**	**83.59**	**19**	P	P	13 59 02.5	-2.6
	0.3nm,0.6s,baz=232,slow=4.4,SNR=3.5						
MKAR	**Makanchi Array**	**93.52**	**317**	P	P	13 59 50.3	-3.0
	0.2nm,0.8s,baz=98,slow=6.1,SNR=2.9						

IDC 10 13:52:56.0±3.6**, 19°.87S**×**169°.48E, h249**^{km}±44^{km}**, mb3.2**/4**, mb1 3.3**/5**, mb1mx3.1**/24**, mbtmp3.7**/5**, Error ellipse: s-maj=153.7km s-min=37.3km az=150.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.58**	**232**	P	Pn	13 53 54.9	0.0
	1.0nm,0.3s,baz=103,slow=19,SNR=11						
WRA	**Warramunga Arr**	**33.00**	**264**	P	P	13 59 07.2	-0.9
	0.2nm,0.3s,baz=99,slow=8.5,SNR=14						
ASAR	**Alice Springs**	**33.20**	**257**	P	P	13 59 10.1	+0.2
	2.5nm,0.5s,baz=82,slow=9.2,SNR=104						
FITZ	**Fitzroy Crossi**	**41.41**	**265**	P	P	14 00 18.9	+0.4
	1.1nm,0.8s,baz=90,slow=6.1,SNR=3.4						
SONM	**Songino Array**	**87.86**	**323**	P	P	14 05 17.2	-0.1
	0.3nm,0.7s,baz=134,slow=6.2,SNR=3.1						
GERES	**GERESS Array B**	**145.16**	**332**	PKPbc	PKPdf	14 12 03.0	-0.8
	0.1nm,0.4s,baz=46,slow=4.2,SNR=4.0						

IDC ***10*** *13:56:05.0±1.3, 39°.78N×20°.42E, h0^{km}, mb3.6/7, mb1 3.6/9, mb1mx3.4/37, mbtmp3.5/9, ML3.3/2, Error ellipse: s-maj=20.8km s-min=17.4km az=64.0*

ROM ***10*** *13:56:07.8±0.4, 39°.73N±0°.03×20°.58E±0°.02, h21^{km}±1^{km}, ML3.3/26*

ATH ***10*** *13:56:08.5, 39°.75N×20°.51E, h22^{km}±1^{km}, ML3.2/19, Error ellipse: s-maj=1.1km s-min=0.7km az=275.0*

BEO ***10*** *13:56:08.2±0.9, 39°.61N×20°.29E, h17^{km}±6^{km}, ML3.1/7*

ISCJB ***10*** *13:56:09.0±0.3, 39°.82N±0°.01×20°.39E±0°.01, h17^{km}±3^{km}, mb3.6/6, Error ellipse: s-maj=2.3km s-min=1.7km az=25.5*

THE ***10*** *13:56:09.8, 39°.78N×20°.53E, h0^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=1.0km s-min=0.4km az=317.0*

ISC 10 13:56:08.6±0.7**, 39°.74N**±0°.02×**20°.47E**±0°.02**, h20**^{km}±2^{km}**, n232, σ1^{s}83**/296**, mb3.6**/6**, 8C-7D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.23**	**206**	P	**Pb**	**13 56 14.2**	**-0.3**
IGT				S	**Sb**	**13 56 19.6**	**+1.1**
IGT				AML	AML	13 56 20.1	
	comp=E,56917µm,0.2s						
IGT				AML	AML	13 56 20.1	
	comp=N,31801µm,0.2s						
IGT	**Igoumenitsa**	**0.23**	**206**	P	**Pb**	**13 56 14.6**	**+0.1**
IGT				S	**Sb**	**13 56 19.7**	**+1.2**
JAN	**Janina**	**0.31**	**106**	P	**Pb**	**13 56 14.8**	**-0.6**
JAN				S	**Sb**	**13 56 19.8**	**-0.3**
JAN				AML	AML	13 56 20.0	
	comp=N,36965µm,0.3s						
JAN				AML	AML	13 56 20.5	
	comp=E,38245µm,0.4s						
JAN	**Janina**	**0.31**	**106**	P	**Pb**	**13 56 14.9**	**-0.6**
JAN				S	**Sb**	**13 56 19.9**	**-0.3**
SRN	**Sarande**	**0.38**	**291**	P	**Pb**	**13 56 17.3**	**+0.6**
SRN				S	**Sb**	**13 56 24.2**	**+2.1**
SRN	**Sarande**	**0.38**	**291**	P	**Pb**	**13 56 17.2**	**+0.6**
SRN				S	**Sn**	**13 56 25.0**	**-0.8**
SRN				AML	AML		
	comp=E,6240µm,0.4s						
SRN				AML	AML		
	comp=N,4485µm,1.5s						
SRN				AML	AML		
	comp=E,6240µm,0.4s						
SRN				AML	AML		
	comp=N,4485µm,1.5s						
SRN				AML	AML		
	comp=E,6240µm,0.4s						
SRN				AML	AML		
	comp=N,4485µm,1.5s						
SRN				AML	AML		
	comp=E,6240µm,0.4s						
SRN				AML	AML		
	comp=N,4485µm,1.5s						
KASA	**Kassiopi**	**0.41**	**271**	P	**Pb**	**13 56 17.6**	**+0.5**
KASA				S	**Sn**	**13 56 25.1**	**-1.3**
KASA				AML	AML	13 56 26.1	
	comp=E,12357µm,0.3s						
KASA				AML	AML	13 56 26.5	
	comp=N,13594µm,0.3s						
KEK	**Kerkira**	**0.52**	**267**	P	**Pb**	**13 56 19.2**	**+0.2**
KEK				S	**Sn**	**13 56 28.6**	**-0.5**
KEK				AML	AML	13 56 29.1	
	comp=E,5148µm,0.2s						
KEK				AML	AML	13 56 30.1	
	comp=N,3927µm,0.2s						
KEK	**Kerkira**	**0.52**	**267**	P	**Pn**	**13 56 20.6**	**-0.2**
KEK				S	**Sn**	**13 56 29.2**	**+0.1**
KEK	**Kerkira**	**0.52**	**267**	P	**Pb**	**13 56 19.2**	**+0.2**
KEK				S	**Sn**	**13 56 28.5**	**-0.5**
KEK				AML	AML		
	comp=E,752µm,0.3s						
KEK				AML	AML		
	comp=N,642µm,0.6s						
KEK				AML	AML		
	comp=E,752µm,0.3s						
KEK				AML	AML		
	comp=N,642µm,0.6s						
KEK				AML	AML		
	comp=E,752µm,0.3s						
KEK				AML	AML		
	comp=N,642µm,0.6s						
KEK				AML	AML		
	comp=E,752µm,0.3s						
KEK				AML	AML		
	comp=N,642µm,0.6s						
PENT	**Pentalofos**	**0.69**	**49**	P	**Pb**	**13 56 21.5**	**-0.5**
PENT				AML	AML	13 56 34.6	
	comp=N,2926µm,0.5s						
PENT				AML	AML	13 56 37.7	
	comp=E,2278µm,0.5s						
PENT	**Pentalofos**	**0.69**	**49**	P	**Pb**	**13 56 21.7**	**-0.3**
PENT				S	**Sb**	**13 56 30.9**	**-0.2**
KPRO	**Kipourio**	**0.72**	**73**	P	**Pb**	**13 56 21.6**	**-0.9**
KPRO				S	**Sb**	**13 56 32.1**	**0.0**
KPRO				AML	AML	13 56 34.7	
	comp=E,5896µm,0.3s						
KPRO				AML	AML	13 56 35.1	
	comp=N,3713µm,0.6s						
KPRO	**Kipourio**	**0.72**	**73**	P	**Pb**	**13 56 21.7**	**-0.9**
KPRO				S	**Sb**	**13 56 32.1**	**0.0**
NEST	**Nestorio**	**0.81**	**33**	P	**Pb**	**13 56 24.1**	**+0.1**
NEST				S	**Sb**	**13 56 35.1**	**+0.6**
NEST				AML	AML	13 56 38.0	
	comp=E,2286µm,0.5s						
NEST				AML	AML	13 56 39.6	
	comp=N,2326µm,0.5s						
NEST	**Nestorio**	**0.81**	**33**	P	**Pn**	**13 56 24.5**	**-0.4**
TSLK	**Tsoukalades, L**	**0.93**	**171**	P	**Pb**	**13 56 25.6**	**-0.5**
TSLK				S	**Sn**	**13 56 39.6**	**+0.3**
TSLK				AML	AML	13 56 43.9	
	comp=N,4949µm,0.7s						
TSLK				AML	AML	13 56 45.2	
	comp=E,2604µm,0.3s						
LKD2	**Lefkada island**	**0.96**	**171**	P	**Pb**	**13 56 25.7**	**-0.9**
LKD2				S	**Sn**	**13 56 41.9**	**+1.7**
LKD2				AML	AML	13 56 43.7	
	comp=N,4354µm,0.4s						
LKD2				AML	AML	13 56 46.1	
	comp=E,3247µm,0.4s						
LKD2	**Lefkada island**	**0.96**	**171**	P	**Pn**	**13 56 28.7**	**+1.7**
LKD2				S	**Sn**	**13 56 43.7**	**+3.5**
VLO	**Vlora**	**1.04**	**314**	P	**Pb**	**13 56 29.6**	**+1.7**
EVGI	**Lefkada island**	**1.13**	**172**	P	**Pn**	**13 56 28.6**	**-0.7**
EVGI				S	**Sn**	**13 56 46.9**	**+2.7**
EVGI	**Lefkada island**	**1.13**	**172**	P	**Pb**	**13 56 31.7**	**+2.2**
EVGI				S	**Sn**	**13 56 47.6**	**+3.4**
KZN	**Kozani**	**1.15**	**60**	P	**Pn**	**13 56 29.1**	**-0.5**
KZN				AML	AML	13 56 49.4	
	comp=N,1209µm,0.6s						
KZN				AML	AML	13 56 52.9	
	comp=E,2079µm,0.5s						
KZN	**Kozani**	**1.15**	**60**	P	**Pb**	**13 56 29.9**	**+0.1**
KZN				S	**Sn**	**13 56 46.9**	**+2.1**
THL	**Klokotos Trika**	**1.21**	**98**	P	**Pn**	**13 56 29.6**	**-0.7**
THL				S	**Sb**	**13 56 47.6**	**+1.6**
THL				AML	AML	13 56 50.9	
	comp=N,1062µm,1.0s						
THL				AML	AML	13 56 52.1	
	comp=E,1326µm,0.7s						
THL	**Klokotos Trika**	**1.21**	**98**	P	**Pb**	**13 56 31.0**	**+0.2**
THL				S	**Sb**	**13 56 48.9**	**+3.0**
EVR	**Evrytania**	**1.33**	**128**	P	**Pn**	**13 56 32.3**	**+0.2**
EVR				AML	AML	13 56 56.0	
	comp=N,948µm,0.4s						
EVR				AML	AML	13 56 58.6	
	comp=E,829µm,0.5s						
EVR	**Evrytania**	**1.33**	**128**	P	**Pb**	**13 56 35.4**	**+2.5**
EVR				S	**Sb**	**13 56 53.6**	**+4.1**
OHR	**Ohrid**	**1.39**	**10**	*i* Pn	**Pb**	**13 56 35.6**	**+1.7**
OHR				*i* Sn	**Sb**	**13 56 56.4**	**+5.2**
PVO	**Paravola**	**1.39**	**143**	P	**Pb**	**13 56 34.8**	**+0.8**
PVO				AML	AML	13 56 59.2	
	comp=N,1956µm,0.9s						
PVO				AML	AML	13 56 59.7	
	comp=E,1530µm,0.8s						
PVO	**Paravola**	**1.39**	**143**	P	**Pb**	**13 56 35.3**	**+1.3**
PVO				S	**Sb**	**13 56 55.8**	**+4.5**
BIA	**Bitola**	**1.43**	**27**	*e*Pn	**Pb**	**13 56 35.9**	**+1.2**
BIA				*i* Sn	**Sb**	**13 56 56.6**	**+4.1**
VLS	**Valsamata**	**1.57**	**176**	P	**Pn**	**13 56 35.8**	**+0.5**
VLS				AML	AML	13 56 59.3	
	comp=E,2760µm,0.5s						
VLS				AML	AML	13 57 00.5	
	comp=N,1818µm,0.5s						
VLS	**Valsamata**	**1.57**	**176**	P	**Pb**	**13 56 38.2**	**+1.3**
VLS	**Valsamata**	**1.57**	**176**	P	**Pb**	**13 56 36.8**	**-0.2**
VLS				AML	AML		
	comp=E,442µm,0.5s						
VLS				AML	AML		
	comp=N,286µm,0.5s						
VLS				AML	AML		
	comp=E,442µm,0.5s						
VLS				AML	AML		
	comp=N,286µm,0.5s						
VLS				AML	AML		
	comp=E,442µm,0.5s						
VLS				AML	AML		
	comp=N,286µm,0.5s						
SCTE	**Santa Cesarea**	**1.57**	**283**	P	**Pb**	**13 56 36.6**	**-0.4**
SCTE	**Santa Cesarea**	**1.57**	**283**	P	**Pb**	**13 56 36.6**	**-0.4**
SCTE				AML	AML		
	comp=E,424µm,1.1s						
SCTE				AML	AML		
	comp=N,382µm,0.3s						
SCTE				AML	AML		
	comp=E,424µm,1.1s						
SCTE				AML	AML		
	comp=N,382µm,0.3s						
SCTE				AML	AML		
	comp=E,424µm,1.1s						
SCTE				AML	AML		
	comp=N,382µm,0.3s						
LIT	**Litokhoron**	**1.60**	**76**	P	**Pb**	**13 56 37.4**	**-0.1**
LIT				AML	AML	13 57 02.4	
	comp=E,786µm,0.3s						
LIT				AML	AML	13 57 02.7	
	comp=N,829µm,0.4s						
LIT	**Litokhoron**	**1.60**	**76**	P	**Pb**	**13 56 38.2**	**+0.8**
LIT				S	**Sb**	**13 56 59.6**	**+2.4**
ANX	**Ano Chora**	**1.61**	**135**	P	**Pb**	**13 56 38.1**	**+0.3**
ANX				AML	AML	13 57 07.3	
	comp=N,1388µm,0.5s						
ANX				AML	AML	13 57 09.9	
	comp=E,856µm,0.5s						
ANX	**Ano Chora**	**1.61**	**135**	P	**Pb**	**13 56 38.8**	**+1.1**
ANX				S	**Sb**	**13 57 01.9**	**+4.2**
AGG	**Agios Georgios**	**1.61**	**116**	P	**Pb**	**13 56 37.5**	**-0.3**
AGG				S	**Sb**	**13 56 59.2**	**+1.5**
AGG				AML	AML	13 57 06.9	
	comp=E,736µm,0.3s						
AGG				AML	AML	13 57 09.7	
	comp=N,813µm,0.8s						
AGG	**Agios Georgios**	**1.61**	**116**	P	**Pb**	**13 56 38.1**	**+0.4**
AGG				S	**Sb**	**13 57 01.1**	**+3.4**
TIR	**Tirane**	**1.67**	**344**	*e*Pn	**Pb**	**13 56 39.2**	**+0.6**
TIR				*e*Sg	**Sb**	**13 57 04.4**	**+5.2**
TIR	**Tirane**	**1.67**	**344**	P	**Pb**	**13 56 39.3**	**+0.6**
TIR	**Tirane**	**1.67**	**344**	P	**Pb**	**13 56 39.5**	**+0.9**
TIR	**Tirane**	**1.67**	**344**	P	**Pb**	**13 56 39.5**	**+0.9**
TIR				AML	AML		
	comp=E,671µm,0.9s						
TIR				AML	AML		
	comp=N,683µm,1.6s						
TIR				AML	AML		
	comp=E,671µm,0.9s						
TIR				AML	AML		
	comp=N,684µm,1.6s						
TIR				AML	AML		
	comp=E,671µm,0.9s						
TIR				AML	AML		
	comp=N,684µm,1.6s						
AXS	**Araxos**	**1.70**	**155**	P	**Pb**	**13 56 38.5**	**-0.7**
AXS				S	**Sb**	**13 57 01.0**	**+0.9**
AXS				AML	AML	13 57 07.0	
	comp=N,887µm,0.5s						
AXS				AML	AML	13 57 11.5	
	comp=E,597µm,1.0s						
AXS	**Araxos**	**1.70**	**155**	P	**Pb**	**13 56 40.3**	**+1.1**
AXS				S	**Sb**	**13 57 03.2**	**+3.1**
EFP	**Efpalio**	**1.73**	**139**	P	**Pb**	**13 56 39.9**	**+0.3**
EFP	**Efpalio**	**1.73**	**139**	P	**Pb**	**13 56 40.2**	**+0.6**
EFP				S	**Sb**	**13 57 03.2**	**+2.3**
KRUS	**Krusevo**	**1.73**	**20**	*i* Pn	**Pb**	**13 56 40.2**	**+0.4**
SERG	**Sergoula**	**1.81**	**137**	P	**Pb**	**13 56 41.6**	**+0.4**
SERG	**Sergoula**	**1.81**	**137**	P	**Pb**	**13 56 41.9**	**+0.7**
RLS	**Riolos of Patr**	**1.85**	**155**	P	**Pb**	**13 56 40.9**	**-0.9**
RLS	**Riolos of Patr**	**1.85**	**155**	P	**Pb**	**13 56 42.5**	**+0.7**
TRIZ	**Trizonia**	**1.86**	**137**	P	**Pb**	**13 56 41.6**	**-0.3**
TRIZ	**Trizonia**	**1.86**	**137**	P	**Pb**	**13 56 42.2**	**+0.3**
KALE	**Kalithea**	**1.88**	**136**	P	**Pb**	**13 56 42.4**	**+0.2**
KALE				AML	AML	13 57 17.3	
	comp=N,993µm,0.6s						
KALE				AML	AML	13 57 20.1	
	comp=E,615µm,0.7s						
KALE	**Kalithea**	**1.88**	**136**	P	**Pb**	**13 56 42.6**	**+0.4**
KALE				S	**Sb**	**13 57 07.9**	**+2.6**
LAKA	**Lakka**	**1.91**	**141**	P	**Pb**	**13 56 42.1**	**-0.6**
LAKA	**Lakka**	**1.91**	**141**	P	**Pb**	**13 56 42.4**	**-0.4**
GRG	**Griva**	**1.91**	**50**	P	**Pb**	**13 56 41.6**	**-1.2**
GRG	**Griva**	**1.91**	**50**	P	**Pb**	**13 56 42.3**	**-0.5**
PHP	**Peshkopia**	**1.94**	**359**	P	**Pb**	**13 56 43.4**	**+0.1**
FYTO	**Fytoko, Volos**	**1.94**	**99**	P	**Pb**	**13 56 42.4**	**-0.9**
FYTO	**Fytoko, Volos**	**1.94**	**99**	P	**Pb**	**13 56 42.9**	**-0.4**
ALIK	**Aliki, Aigiali**	**1.96**	**139**	P	**Pb**	**13 56 43.7**	**+0.1**
DRO	**Drossia**	**2.04**	**151**	P	**Pn**	**13 56 43.2**	**+1.5**
DRO	**Drossia**	**2.04**	**151**	P	**Pb**	**13 56 44.9**	**0.0**
DSF	**Desfina**	**2.08**	**129**	P	**Pb**	**13 56 44.4**	**-1.4**
DSF	**Desfina**	**2.08**	**129**	P	**Pb**	**13 56 45.4**	**-0.4**
KLV	**Kalavryta, Ach**	**2.15**	**142**	P	**Pb**	**13 56 45.5**	**-1.4**
KLV	**Kalavryta, Ach**	**2.15**	**142**	P	**Pb**	**13 56 45.9**	**-0.9**
HORT	**Hortiatis**	**2.19**	**66**	P	**Pb**	**13 56 46.1**	**-1.5**
HORT	**Hortiatis**	**2.19**	**66**	P	**Pb**	**13 56 46.2**	**-1.4**
HORT				S	**Sb**	**13 57 14.1**	**-0.2**
ATAL	**Atalanti**	**2.25**	**117**	P	**Pb**	**13 56 48.0**	**-0.5**
VAY	**Valandovo**	**2.25**	**45**	*i* Pn	**Pb**	**13 56 46.7**	**-1.9**
LKR	**Lokris**	**2.25**	**118**	P	**Pn**	**13 56 45.6**	**+0.9**
LKR	**Lokris**	**2.25**	**118**	P	**Pb**	**13 56 47.4**	**-1.2**
GUR	**Goura**	**2.32**	**140**	P	**Pb**	**13 56 48.0**	**-1.9**
GUR	**Goura**	**2.32**	**140**	P	**Pb**	**13 56 48.0**	**-1.9**
KNT	**Kendrikon**	**2.33**	**52**	P	**Pn**	**13 56 47.8**	**+2.0**
KNT	**Kendrikon**	**2.33**	**52**	P	**Pb**	**13 56 48.1**	**-1.9**
PLG	**Polygyros**	**2.37**	**74**	P	**Pn**	**13 56 47.8**	**+1.4**
PLG	**Polygyros**	**2.37**	**74**	P	**Pn**	**13 56 48.0**	**+1.6**
SKIA	**Skiathos**	**2.39**	**103**	P	**Pb**	**13 56 50.0**	**-1.0**
AMT	**Artemida-Makis**	**2.41**	**156**	P	**Pb**	**13 56 49.4**	**-2.0**
SOH	**Sokhos**	**2.46**	**63**	P	**Pn**	**13 56 49.7**	**+2.1**
SOH	**Sokhos**	**2.46**	**63**	P	**Pn**	**13 56 49.5**	**+1.9**
SOH				S	**Sb**	**13 57 21.2**	**-0.8**
CGL1	**Ceglie Messapi**	**2.46**	**293**	*e*Pn	**Pn**	**13 56 48.6**	**+1.0**
CGL1				Sn	**Sn**	**13 57 17.8**	**+0.7**
PAIG	**Paliouri**	**2.48**	**85**	P	**Pn**	**13 56 49.2**	**+1.4**
PAIG	**Paliouri**	**2.48**	**85**	P	**Pn**	**13 56 49.5**	**+1.7**
PAIG				S	**Sb**	**13 57 20.8**	**-1.8**
TAR1	**Taranto**	**2.56**	**289**	*e*Pn	**Pn**	**13 56 49.7**	**+0.7**
LTK	**Loutraki**	**2.60**	**131**	P	**Pn**	**13 56 50.9**	**+1.4**
LTK	**Loutraki**	**2.60**	**131**	P	**Pb**	**13 56 52.3**	**-2.2**
FASA	**Fasano**	**2.61**	**295**	*e*Pn	**Pn**	**13 56 50.8**	**+1.2**
FASA				Sn	**Sn**	**13 57 21.2**	**+0.5**
DRME	**Dracevica, Mon**	**2.63**	**339**	*e*Pn	**Pn**	**13 56 51.4**	**+1.5**
VIL2	**Platees**	**2.67**	**124**	P	**Pn**	**13 56 53.0**	**+2.5**
MASS	**Massafra**	**2.70**	**290**	*e*Pn	**Pn**	**13 56 52.0**	**+1.2**
AOS	**Alonnisos**	**2.70**	**101**	P	**Pn**	**13 56 52.9**	**+2.0**
VILL	**Villia**	**2.72**	**125**	P	**Pn**	**13 56 53.8**	**+2.6**
LADO	**San Nicola del**	**2.74**	**261**	P	**Pn**	**13 56 52.7**	**+1.3**
SRS	**Serrai**	**2.75**	**59**	P	**Pn**	**13 56 52.8**	**+1.2**
SRS	**Serrai**	**2.75**	**59**	P	**Pn**	**13 56 53.5**	**+1.9**
OUR	**Ouranopolis**	**2.76**	**77**	P	**Pn**	**13 56 53.8**	**+2.1**
VLX	**Vlachokerasia**	**2.80**	**147**	P	**Pn**	**13 56 54.9**	**+2.5**
ITM	**Ithomi**	**2.81**	**155**	P	**Pn**	**13 56 54.9**	**+2.6**
NOCI	**Noci**	**2.81**	**293**	P	**Pn**	**13 56 53.3**	**+1.0**
NOCI				S	**Sn**	**13 57 25.8**	**+0.2**
NOCI				AML	AML		
	comp=E,572µm,0.4s						
NOCI				AML	AML		
	comp=N,704µm,0.4s						
NOCI				AML	AML		
	comp=E,572µm,0.4s						
NOCI				AML	AML		
	comp=N,704µm,0.4s						
PIPA	**Pietrapaola**	**2.83**	**266**	P	**Pn**	**13 56 53.9**	**+1.2**
PIPA				S	**Sn**	**13 57 27.8**	**+1.6**
PIPA				AML	AML		
	comp=E,248µm,1.3s						
PIPA				AML	AML		
	comp=N,252µm,0.4s						
PIPA				AML	AML		
	comp=E,248µm,1.3s						
PIPA				AML	AML		

	comp=N,252µm,0.4s						
PDG	Podgorica	2.84	342	*e*Pn	Pn	13 56 54.0	+1.3
PDG				*e*Sn	Sn	13 57 29.3	+3.0
PDG	Podgorica	2.84	342	*e*Pn	Pn	13 56 53.4	+0.7
KKB	Krupnik	2.91	42	P	Pn	13 56 56.4	+2.7
TIP	Timpagrande	2.93	260	⇓*i*P	Pn	13 56 54.9	+0.9
TIP	Timpagrande	2.93	260	P	Pn	13 56 54.9	+0.9
TIP				AML	AML		
	comp=E,53µm,1.3s						
TIP				AML	AML		
	comp=N,62µm,0.8s						
TIP				AML	AML		
	comp=N,62µm,0.8s						
TIP				AML	AML		
	comp=E,53µm,1.3s						
SERS	Sersale	3.01	258	P	Pn	13 56 56.1	+0.8
SERS				AML	AML		
	comp=E,100µm,1.0s						
SERS				AML	AML		
	comp=N,77µm,0.9s						
SERS				AML	AML		
	comp=E,69µm,1.2s						
SERS				AML	AML		
	comp=N,70µm,0.5s						
SERS				AML	AML		
	comp=E,69µm,1.2s						
SERS				AML	AML		
	comp=N,77µm,0.9s						
SERS				AML	AML		
	comp=E,100µm,1.0s						
SERS				AML	AML		
	comp=N,70µm,0.5s						
PYL	PYLOS	3.02	160	P	Pn	13 56 57.2	+2.0
MATE	Matera	3.02	289	⇓*i*P	Pn	13 56 56.7	+1.5
NVR	Nevrokopi	3.04	57	P	Pn	13 56 57.4	+1.7
NVR	Nevrokopi	3.04	57	P	Pn	13 56 58.3	+2.7
BAI	Bari	3.06	298	⇑*i*Pn	Pn	13 56 56.8	+1.0
BAI				Sn	Sn	13 57 32.4	+0.7
CELI	Celico	3.08	265	P	Pn	13 56 57.5	+1.3
CELI				S	Sn	13 57 34.3	+1.8
CELI				AML	AML		
	comp=E,162µm,0.6s						
CELI				AML	AML		
	comp=N,156µm,1.5s						
CELI				AML	AML		
	comp=N,156µm,1.5s						
CELI				AML	AML		
	comp=E,162µm,0.6s						
HCY	Herceg Novi	3.08	332	*e*Pn	Pn	13 56 56.3	+0.1
MMB	Musomiste	3.09	52	P	Pn	13 56 59.0	+2.7
SG1	Sgolgore (BA)	3.10	292	*e*Pn	Pn	13 56 57.4	+1.0
SG1				Sn	Sn	13 57 33.4	+0.6
DID	Didima	3.11	135	P	Pn	13 56 57.8	+1.2
DID	Didima	3.11	135	P	Pn	13 56 59.3	+2.7
AMUR	Altamura	3.17	293	P	Pn	13 56 58.6	+1.2
AMUR				S	Sn	13 57 34.6	-0.1
AMUR				AML	AML		
	comp=E,252µm,1.3s						
AMUR				AML	AML		
	comp=N,312µm,0.3s						
AMUR				AML	AML		
	comp=N,312µm,0.3s						
AMUR				AML	AML		
	comp=E,252µm,1.3s						
SALB	San Lorenzo Be	3.18	274	P	Pn	13 56 58.3	+0.8
SALB				S	Sn	13 57 34.7	-0.2
SALB				AML	AML		
	comp=E,178µm,1.3s						
SALB				AML	AML		
	comp=N,101µm,0.3s						
SALB				AML	AML		
	comp=E,148µm,0.3s						
SALB				AML	AML		
	comp=N,108µm,0.3s						
SALB				AML	AML		
	comp=N,101µm,0.3s						
SALB				AML	AML		
	comp=N,108µm,0.3s						
SALB				AML	AML		
	comp=E,148µm,0.3s						
SALB				AML	AML		
	comp=E,178µm,1.3s						
MIGL	Miglionico	3.20	287	P	Pn	13 56 59.2	+1.4
MIGL				S	Sn	13 57 36.0	+0.7
MIGL				AML	AML		
	comp=E,682µm,0.6s						
MIGL				AML	AML		
	comp=N,972µm,0.7s						
MIGL				AML	AML		
	comp=N,972µm,0.7s						
MIGL				AML	AML		
	comp=E,682µm,0.6s						
BARS	Barje	3.23	18	*e*Pn	Pn	13 57 00.6	+2.4
BARS	Barje	3.23	18	*e*Pn	Pb	13 57 17.8	+12
KAVA	Kavala	3.33	67	P	Pn	13 57 00.7	+1.1
KAVA	Kavala	3.33	67	P	Pn	13 57 01.9	+2.3
THAS	Thassos island	3.37	74	P	Pn	13 57 01.9	+1.8
TREB	Trebinje	3.37	332	*e*Pn	Pn	13 57 00.7	+0.6
TREB				*e*Sn	Sn	13 57 39.9	+0.4
TREB	Trebinje	3.37	332	*e*Pn	Pn	13 57 00.4	+0.3
PLAC	Placanica	3.39	249	P	Pn	13 57 01.2	+0.8
PLAC				AML	AML		
	comp=E,68µm,1.6s						
PLAC				AML	AML		
	comp=N,82µm,1.1s						
PLAC				AML	AML		
	comp=N,82µm,1.1s						
PLAC				AML	AML		
	comp=E,68µm,1.6s						
SCHR	S. Chirico Rap	3.40	279	P	Pn	13 57 02.7	+2.1
SCHR				AML	AML		
	comp=E,81µm,0.8s						
SCHR				AML	AML		
	comp=N,67µm,1.3s						
SCHR				AML	AML		
	comp=E,81µm,0.8s						
SCHR				AML	AML		
	comp=N,67µm,1.3s						
BRY	Bratogost	3.47	336	*e*Pn	Pn	13 57 01.8	+0.2
SJES	Sjenica	3.53	354	*e*Pn	Pn	13 57 04.9	+2.4
VTS	Vitosha	3.55	35	*e*Pn	Pn	13 57 04.9	+2.2
VTS				*e*Sn	Sn	13 57 46.8	+2.6
VTS	Vitosha	3.55	35	⇓*i*P	Pn	13 57 05.0	+2.2
VTS	Vitosha	3.55	35	P	Pn	13 57 05.5	+2.8
ACER	Acerenza	3.62	288	P	Pn	13 57 06.2	+2.6
ACER				S	Sn	13 57 45.0	-0.6
ACER				AML	AML		
	comp=E,499µm,1.1s						
ACER				AML	AML		
	comp=N,376µm,0.4s						
ACER				AML	AML		
	comp=E,489µm,1.1s						
ACER				AML	AML		
	comp=N,399µm,0.4s						
ACER				AML	AML		
	comp=E,489µm,1.1s						
ACER				AML	AML		
	comp=E,499µm,1.1s						
ACER				AML	AML		
	comp=N,399µm,0.4s						
ACER				AML	AML		
	comp=N,376µm,0.4s						
MCEL	Monticello	3.63	281	P	Pn	13 57 04.8	+1.1
MCEL				AML	AML		
	comp=E,118µm,0.4s						
MCEL				AML	AML		
	comp=N,178µm,0.4s						
MCEL				AML	AML		
	comp=E,124µm,1.2s						
MCEL				AML	AML		
	comp=N,184µm,0.4s						
MCEL				AML	AML		
	comp=N,178µm,0.4s						
MCEL				AML	AML		
	comp=E,118µm,0.4s						
MCEL				AML	AML		
	comp=E,124µm,1.2s						
MCEL				AML	AML		
	comp=N,184µm,0.4s						
PALZ	Palazzo San Ge	3.65	291	P	Pn	13 57 06.0	+2.1
PALZ				AML	AML		
	comp=E,379µm,1.6s						
PALZ				AML	AML		
	comp=N,319µm,1.2s						
PALZ				AML	AML		
	comp=E,379µm,1.6s						
PALZ				AML	AML		
	comp=N,319µm,1.2s						
JOPP	Joppolo	3.74	254	P	Pn	13 57 06.4	+1.2
STON	Ston	3.76	327	*e*Pn	Pn	13 57 05.5	+0.2
STON				Sn	Sn	13 57 45.1	-3.9
SLCN	Sala Consilina	3.77	281	P	Pn	13 57 07.8	+2.2
SLCN				AML	AML		
	comp=E,242µm,0.3s						
SLCN				AML	AML		
	comp=N,138µm,0.3s						
SLCN				AML	AML		
	comp=N,138µm,0.3s						
SLCN				AML	AML		
	comp=E,242µm,0.3s						
MGR	Morigerati	3.80	278	P	Pn	13 57 08.3	+2.3
MGR				AML	AML		
	comp=E,82µm,0.9s						
MGR				AML	AML		
	comp=N,79µm,0.5s						
MGR				AML	AML		
	comp=N,79µm,0.5s						
MGR				AML	AML		
	comp=E,82µm,0.9s						
IVAS	Ivanjica	3.84	357	*e*Pn	Pn	13 57 08.0	+1.4
ZAPS	Zavoj	3.88	24	*e*Pn	Pn	13 57 09.6	+2.4
BULG	Bulgheria - Ca	3.93	277	P	Pn	13 57 09.7	+1.9
BULG				AML	AML		
	comp=E,128µm,1.5s						
BULG				AML	AML		
	comp=N,176µm,1.5s						
BULG				AML	AML		
	comp=E,128µm,1.5s						
BULG				AML	AML		
	comp=N,176µm,1.5s						
MRLC	Muro Lucano	3.94	286	P	Pn	13 57 09.5	+1.5
MRLC				AML	AML		
	comp=E,71µm,0.8s						
MRLC				AML	AML		
	comp=N,88µm,0.6s						
MRLC				AML	AML		
	comp=N,88µm,0.6s						
MRLC				AML	AML		
	comp=E,71µm,0.8s						
MSAG	Monte S. Angel	3.98	301	P	Pn	13 57 09.7	+1.1
MSAG				AML	AML		
	comp=E,188µm,0.9s						
MSAG				AML	AML		
	comp=N,456µm,0.2s						
MSAG				AML	AML		
	comp=E,188µm,0.9s						
MSAG				AML	AML		
	comp=N,456µm,0.2s						
BOVS	Bovan	4.00	13	*e*Pn	Pn	13 57 10.6	+1.9
BOVS				*e*Sn	Sn	13 57 58.2	+3.3
CMPR	Campora	4.01	280	P	Pn	13 57 10.9	+2.0
CMPR				AML	AML		
	comp=E,70µm,0.9s						
CMPR				AML	AML		
	comp=N,81µm,0.4s						
CMPR				AML	AML		
	comp=E,70µm,0.9s						
CMPR				AML	AML		
	comp=N,81µm,0.4s						
KTHR	Kythira	4.01	149	P	Pn	13 57 11.8	+2.9
KTHR				S	Sb	13 58 01.3	-5.4
KYTH	Kithira	4.03	149	P	Pn	13 57 11.9	+2.8
SGRT	San Giovanni R	4.11	301	P	Pn	13 57 12.2	+1.9
SGRT				S	Sn	13 57 58.0	+0.1
SGRT				AML	AML		
	comp=E,282µm,0.8s						
SGRT				AML	AML		
	comp=N,282µm,0.4s						
SGRT				AML	AML		
	comp=E,282µm,0.8s						
SGRT				AML	AML		
	comp=N,282µm,0.4s						
SGTA	Sant Agata di	4.13	291	S	Sn	13 58 01.0	+2.6
MSRU	Castanea	4.14	251	P	Pb	13 57 17.9	-2.9
GRUS	Gruza	4.15	2	*e*Pn	Pn	13 57 12.3	+1.6
BBLS	Lazići	4.20	349	*e*Pn	Pn	13 57 12.4	+0.9
BBLS	Lazići	4.20	349	*e*Pn	Pn	13 57 12.8	+1.3
ZAGS	Zajecar	4.28	17	*e*Pn	Pn	13 57 15.1	+2.6
MILZ	Milazzo	4.33	252	S	Sn	13 58 09.0	+5.8
MPEP	Malo Peshtene	4.37	33	P	Pn	13 57 18.6	+4.8
DIVS	Divibare	4.37	355	*e*Pn	Pn	13 57 15.1	+1.3
DIVS	Divibare	4.37	355	*e*Pn	Pn	13 57 14.8	+0.9
DIVS	Divibare	4.37	355	P	Pn	13 57 15.2	+1.3
MRB1	Monte Rocchett	4.41	290	P	Pn	13 57 17.7	+3.2
ALN	Alexandroupoli	4.42	73	P	Pn	13 57 17.1	+2.6
TRUS	Trudelj	4.48	359	*e*Pn	Pn	13 57 16.7	+1.4
HAPS	Han Pijesak,BI	4.48	346	*e*Pn	Pn	13 57 16.5	+1.0
HAPS	Han Pijesak,BI	4.48	346	*e*Pn	Pn	13 57 15.3	-0.2
KUBS	Kucevo	4.75	11	*e*Pn	Pn	13 57 20.4	+1.3
BSSO	Busso	4.82	294	P	Pn	13 57 20.9	+0.8
HAVL	Avola	5.04	238	P	Pn	13 57 20.8	-2.2
MDVR	Moldovita	5.12	10	⇑*i*P	Pn	13 57 25.8	+1.6
HERR	Herculane	5.33	15	⇑*i*P	Pb	13 57 39.1	-2.0
FRGS	Fruska Gora	5.43	355	*e*Pn	Pn	13 57 29.8	+1.4
FRGS	Fruska Gora	5.43	355	*e*Pn	Pn	13 57 29.4	+1.0
INTR	Introdacqua	5.46	297	P	Pn	13 57 31.5	+2.5
BLY	Banja Luka	5.56	335	⇓*i*P	Pn	13 57 31.0	+0.8
BLY	Banja Luka	5.56	335	*e*Pn	Pn	13 57 30.0	-0.2
BLY	Banja Luka	5.56	335	P	Pn	13 57 31.1	+0.8
GZR	Gura Zlata	5.90	16	⇑*i*P	Pn	13 57 37.4	+2.5
UDBI	Udbina	5.92	325	*e*Pn	Pn	13 57 36.8	+1.6
UDBI				Sn	Sn	13 58 42.1	-0.4
BZS	Buzias	5.93	8	*e*Pn	Pn	13 57 36.3	+1.1
BZS	Buzias	5.93	8	⇓*i*P	Pn	13 57 37.4	+2.2
LNSS	Leonessa	6.29	299	P	Pn	13 57 43.2	+2.9
NVLJ	Novalja	6.36	321	*e*Pn	Pn	13 57 41.6	+0.4
ARR	Arges	6.41	27	⇑*i*P	Pn	13 57 44.8	+2.9
EL6	Elcito	6.58	305	P	Pn	13 57 46.9	+2.5
MORH	Mrgy, Hungar	6.60	349	*e*Pn	Pn	13 57 45.3	+0.8
VOIR		6.62	29	⇓*i*P	Pn	13 57 47.9	+3.1
SECR		6.72	36	⇑*i*P	Pn	13 57 48.3	+2.2
BOJS	Bojanci	6.92	328	*i* Pn	Pn	13 57 49.5	+0.6
BOJS				*i* Sn	Sn	13 59 04.6	-2.3
BOJS	Bojanci	6.92	328	P	Pn	13 57 49.0	+0.2
OZLJ	Ozalj	6.93	330	*e*Pn	Pn	13 57 49.7	+0.8
MLR	Muntele Rosu	7.02	33	⇑*i*P	Pn	13 57 51.8	+1.4
MLR	Muntele Rosu	7.02	33	Pn	Pn	13 57 51.8	+1.4
	comp=N,0.1nm,0.3s,baz=212,slow=15,SNR=2.2						
NARO	Abbazia di Nar	7.05	306	P	Pn	13 57 52.7	+2.0
CRES	Cresnjev	7.11	330	*i* Pn	Pn	13 57 51.7	+0.2
CRES				*i* Sn	Sn	13 59 07.4	-4.1
CRES	Cresnjev	7.11	330	*e*Pn	Pn	13 57 51.4	0.0
VISS	Visnje	7.33	327	*i* Pn	Pn	13 57 55.1	+0.6
VISS				*i* Sn	Sn	13 59 14.6	-2.5
CEY	Cerknica	7.46	325	*e*Pn	Pn	13 57 56.8	+0.5
SKDS	Skadanscina	7.50	323	*i* Pn	Pn	13 57 56.7	-0.1
SKDS				*i* Sn	Sn	13 59 16.4	-4.8
PLOR	Plostina	7.61	35	⇑*i*P	Pn	13 58 02.2	+3.9
VRI	Vrincioaia	7.66	35	⇓*i*P	Pn	13 58 02.6	+3.7
LJU	Ljubljana	7.66	327	*e*Pn	Pn	13 57 59.4	+0.4
LJU	Ljubljana	7.66	327	P	Pn	13 57 59.6	+0.6
SOKA	Soboth	7.98	332	*e*Pn	Pn	13 58 03.9	+0.4
	comp=N,1.6nm,0.2s,SNR=6.1						
SOKA				Pg	Pb	13 58 40.8	+15
	comp=N,1.1nm,0.3s						
SOKA				*e*Sn	Sn	13 59 30.7	-2.5
	comp=N,0.7nm,0.3s						
ARSA	Arzberg	8.32	336	*e*Pn	Pn	13 58 08.7	+0.6
	comp=N,1.8nm,0.4s						
ACOM	Acomizza, Ital	8.49	326	P	Pn	13 58 11.9	+1.4
ABTA	Abfaltersbach	9.09	323	*e*Pn	Pn	13 58 19.3	+0.6
	comp=N,0.4nm,0.2s						
ABTA				*e*Sn	Sn	13 59 57.0	-3.4
	comp=N,1.2nm,0.3s						
MOA	Molln	9.26	333	*e*Pn	Pn	13 58 22.1	+1.2
	comp=N,0.2nm,0.1s,SNR=6.1						
MOA				*e*Sn	Sn	14 00 06.3	+1.9
	comp=N,1.1nm,0.3s						
WTTA	Wattenberg	9.88	322	*e*Pn	Pn	13 58 31.5	+1.9
	comp=N,0.8nm,0.2s						
WATA	Walderalm	9.96	323	*e*Pn	Pn	13 58 32.7	+2.1
	comp=N,1.0nm,0.2s						
MOTA	Moosalm	10.19	321	*e*Pn	Pn	13 58 34.8	+1.1
	comp=N,0.6nm,0.2s						
GERES	GERESS Array B	10.30	334	Pn	Pn	13 58 34.7	-0.6
	comp=N,0.2nm,0.3s,baz=155,slow=14,SNR=6.4						
GERES				Sn	Sn	14 00 27.8	-2.4
	comp=N,0.3nm,0.3s,baz=150,slow=24,SNR=4.7						
KHC	Kasperske Hory	10.59	335	*e*PN	Pn	13 58 39.5	+0.3
KHC				*e*SN	Sn	14 00 30.9	-6.3
HFS	Hagfors	20.85	350	P	P	14 00 48.2	-0.7
	comp=N,0.9nm,0.5s,baz=150,slow=12,SNR=9.4						
FINES	FINESS Array B	22.00	7	P	P	14 00 59.4	-1.8
	comp=N,1.1nm,0.6s,baz=196,slow=9.5,SNR=4.8						
NB2	NORSAR Subarra	22.08	348	P	P	14 01 01.3	-0.8
	comp=Z,1.0nm,0.7s,baz=158,slow=9.3						
NOA	NORSAR Array B	22.08	348	P	P	14 01 00.8	-1.3
	comp=Z,0.6nm,0.7s,baz=155,slow=10,SNR=4.3						
ARCES	ARCESS Array B	29.97	4	P	P	14 02 13.6	-1.7
	comp=Z,1.2nm,0.8s,baz=190,slow=10,SNR=4.3						
TORD	Torodi Ar. Bea	31.23	217	P	P	14 02 27.0	+0.2
	comp=Z,0.3nm,0.4s,baz=25,slow=10,SNR=6.5						
MKAR	Makanchi Array	44.53	60	P	P	14 04 17.7	-1.1
	comp=Z,0.6nm,0.5s,baz=283,slow=7.1,SNR=11						
ZALV	Zalesovo Beam	44.69	49	P	P	14 04 18.7	-1.1
	comp=Z,0.6nm,0.4s,baz=276,slow=8.6,SNR=3.7						

TIF ***10*** *13:59:30.6, 42°.35N×40°.98E, h17^{km}±4^{km}*
NORS ***10*** *13:59:32.9±0.0, 42°.51N×41°.30E, h10^{km}, MPVA3.2*
MOS ***10*** *13:59:32.9±0.0, 42°.51N×41°.30E, h10^{km}, MPVA3.2*
ISC 10 13:59:31.0±2.1**, 42°.39N**±0°.05×**41°.17E**±0°.09**, h5^{km}**±15^{km}**,**
n12, σ0^{s}.47/24**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.88	153	P	Pb	13 59 49.3	+0.5
BATM				S	Sb	14 00 01.8	+0.9
DBOC	Borcka	1.11	160	*i* P	Pb	13 59 52.5	-0.3
DBOC				*i* S	Sb	14 00 08.3	+0.8
DBOC				IAML_P			
	comp=Z,2µm,0.1s						
ARTV	Artvin	1.33	154	*i* P	Pn	13 59 56.7	+0.1
ARTV				*i* S	Sn	14 00 14.0	-0.8
ARTV				IAML_P			
	comp=Z,2µm,0.2s						
DAGI	Agillar	1.43	157	*i* P	Pn	13 59 57.0	-0.7
DAGI				*i* S	Sn	14 00 17.0	+0.1
DAGI				IAML_P			
	comp=Z,261nm,0.1s						
DBAD	Bademkaya	1.43	164	*i* P	Pn	13 59 57.5	-0.3
DBAD				*i* S	Sn	14 00 16.6	-0.3
NEY	Neytrino	1.43	53	*e*Pg	Pb	13 59 58.4	+0.1
NEY				*e*Sg	Sg	14 00 17.4	+0.4
DDEM	Demirkent	1.56	163	*i* P	Pn	13 59 59.3	-0.3
DDEM				*i* S	Sn	14 00 20.6	+0.4
SHA1	Shidzhatmaz	1.73	39	*e*Pg	Pg	14 00 04.2	-0.1
SHA1				*e*Sg	Sg	14 00 26.4	-0.3
DIGR	Digorskoe uzhe	1.85	73	*e*Pg	Pb	14 00 06.1	+0.6
DIGR				*e*Sg	Sg	14 00 30.8	+0.2
ZEI	Tsey	2.06	78	*e*Pg	Pb	14 00 09.3	+0.3
ZEI				*e*Sg	Sg	14 00 37.2	0.0
TRLG	Trialeti	2.35	110	P	Pb	14 00 13.6	-0.4
TRLG				S	Sg	14 00 46.1	-0.4
LACR	Lac	2.35	78	*e*Pg	Pb	14 00 13.5	-0.5
LACR				*e*Sg	Sb	14 00 43.5	+0.2

ISCJB ***10*** *14:00:56.8±1.4, 36°.90N±0°.04×141°.55E±0°.07, h4^{km}±6^{km}, mb3.1/3, MS3.1/1, Error ellipse: s-maj=9.6km s-min=7.0km az=10.3*
IDC ***10*** *14:00:57.7±2.1, 36°.83N×141°.56E, h0^{km}, mb3.2/3, mb1 3.3/4, mb1mx3.2/43, mbtmp3.1/4, ML2.0/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/14, Error ellipse: s-maj=43.8km s-min=26.2km az=60.0*
JMA ***10*** *14:00:59.5±0.1, 36°.91N×141°.43E, h30^{km}±1^{km}, M3.0*
ISC 10 14:00:58.3±2.1**, 36°.91N**±0°.04×**141°.48E**±0°.08**, h4^{km}**±11^{km}**,**
n21, σ1^{s}.07/22**, mb3.2**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.57	289	P	Pg	14 01 10.1	+0.8
ONAJ				S	Sb	14 01 18.2	-1.3
JFK	Kawauchi	0.66	313	P	Pg	14 01 11.7	+0.7
JFK				S	Sg	14 01 20.5	+1.0
JFFD	Fukushimafurud	0.75	284	P	Pg	14 01 12.9	+0.1
JFFD				S	Sg	14 01 22.8	+0.3
JHO	Hitachi	0.79	248	P	Pg	14 01 13.7	+0.3
JHO				S	Sb	14 01 24.5	-1.1
JHYU	Hitachinakayam	0.92	232	P	Pg	14 01 16.2	+0.3
JHYU				*e*S	Sg	14 01 27.6	-0.2
JFT	Otama	1.09	304	P	Pg	14 01 19.2	0.0
JFT				*e*S	Sg	14 01 33.0	-0.4
JMM	Marumori	1.09	330	P	Pg	14 01 18.7	-0.6
JMM				*e*S	Sg	14 01 33.0	-0.5
JFY	Yanaizu	1.50	290	P	Pn	14 01 25.4	-0.5
MJAR	Matsushiro Arr	2.65	263	Pn	Pn	14 01 41.9	+0.1
	0.3nm,0.3s,baz=87,slow=14,SNR=15						
MJAR				Sn	Sn	14 02 16.0	+1.6
	0.5nm,0.3s,baz=78,slow=30,SNR=5.4						
MAT	Matsushiro	2.65	263	P	Pn	14 01 41.2	-0.6
MAT				*e*S	Sb	14 02 16.8	-2.5
KSRS	Korea Array	10.83	277	LR	LR	14 07 11.3	
	comp=Z,38nm,19.1s,baz=100,slow=34						
SONM	Songino Array	27.89	304	P	P	14 06 51.4	+2.1
	0.1nm,0.4s,baz=100,slow=7.5,SNR=2.2						
H11N2	WAKE ISLAND Hy	28.04	121	T	T	14 36 14.2	
	baz=313,slow=75,SNR=157						
H11N1	WAKE ISLAND Hy	28.05	121	T	T	14 36 14.7	
	baz=313,slow=75,SNR=151						
H11N3	WAKE ISLAND Hy	28.06	121	T	T	14 36 15.5	
	baz=313,slow=75,SNR=109						
H11S1	WAKE ISLAND Hy	28.75	123	T	T	14 37 04.7	
	baz=315,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	28.75	123	T	T	14 37 05.9	
	baz=315,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	28.77	123	T	T	14 37 06.9	
	baz=315,slow=76,SNR=21						
DAV	Davao City (W)	33.05	210	LR	LR	14 21 48.6	
	comp=Z,34nm,18.9s,baz=64,slow=38						
MKAR	Makanchi Array	44.23	302	P	P	14 09 08.8	+0.3
	0.3nm,0.8s,baz=88,slow=9.1,SNR=3.7						
WRA	Warramunga Arr	56.95	188	P	P	14 10 43.9	-0.8
	0.4nm,0.8s,baz=4.1,slow=7.4,SNR=4.5						

ISCJB ***10*** *14:06:50.4±0.5, 23°.60N±0°.02×122°.44E±0°.02, h15^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=2.6km az=154.9*
JMA ***10*** *14:06:51.0±0.1, 23°.60N×122°.41E, h34^{km}, M2.2*
TAP ***10*** *14:06:51.7, 23°.64N×122°.31E, h13^{km}, ML2.6, D*
ISC 10 14:06:50.7±1.3**, 23°.60N**±0°.03×**122°.40E**±0°.03**, h23^{km}**±14^{km}**,**
n64, σ0^{s}.37/98**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.79	292	P	Pn	14 07 06.2	-0.2
	baz=291						
ENLB				*e*S	Sb	14 07 16.0	-0.2
	baz=291						
TWD	Chiawan	0.88	303	P	Pb	14 07 07.2	0.0
	baz=304						
TWD				*e*S	Sn	14 07 18.9	-0.8
	baz=304						
EGFH	Guangfu	0.90	274	P	Pn	14 07 07.9	0.0
	baz=271						
EGFH				S	Sn	14 07 20.1	0.0
	baz=271						
HGSD	Ruisui	0.91	263	P	Pb	14 07 07.8	+0.1
	baz=259						
HGSD				S	Sn	14 07 19.6	-0.8
	baz=259						
ESL	Shilin	0.92	283	P	Pb	14 07 07.7	-0.2
	baz=282						
NACB	Ninganchiao	0.93	308	P	Pb	14 07 08.0	-0.2
	baz=309						
NACB				S	Sn	14 07 20.4	-0.6
	baz=309						
EOS1	EOS1	0.97	345	*e*S	Sn	14 07 22.4	+0.4
	baz=349						
EHY	Hungye	1.00	265	P	Pn	14 07 09.4	+0.1
	baz=261						
EHY				*e*S	Sn	14 07 22.3	-0.3
	baz=261						
YOJ	Yonaguni jima	1.02	33	P	Pn	14 07 09.6	+0.1
YOJ				S	Sb	14 07 22.4	-0.2
ENA	Nanau	1.02	324	P	Pb	14 07 09.8	+0.2
	baz=326						
ENA				*e*S	Sn	14 07 23.2	0.0
	baz=326						
ETLH	Xiulin Townshi	1.04	306	*e*P	Pn	14 07 09.9	0.0
	baz=306						
ETLH				*e*S	Sn	14 07 23.5	-0.2
	baz=306						

YULB	**Yu-li**	**1.04**	**258**	P	**Pb**	**14 07 10.1**	**+0.1**
	baz=254						
YULB				S	**Sn**	**14 07 23.6**	**-0.1**
	baz=254						
TWF1	**Yuli**	**1.05**	**256**	P	**Pn**	**14 07 10.1**	**+0.1**
	baz=252						
CHKT	**Chengkung**	**1.08**	**242**	*e*P	**Pn**	**14 07 09.8**	**-0.6**
	baz=237						
TWC	**Suao**	**1.12**	**333**	*e*P	**Pb**	**14 07 11.7**	**+0.3**
	baz=337						
TWC				*e*S	**Sn**	**14 07 26.4**	**+0.7**
	baz=337						
VWDT	**VWDT**	**1.17**	**278**	*e*P	**Pb**	**14 07 12.3**	**+0.1**
	baz=275						
WHF	**Hehuan Shan**	**1.17**	**298**	P	**Pn**	**14 07 12.1**	**0.0**
	baz=297						
WHF				S	**Sn**	**14 07 27.3**	**-0.3**
	baz=297						
OWD	**Renai**	**1.18**	**287**	P	**Pb**	**14 07 12.3**	**-0.2**
	baz=286						
OWD				*e*S	**Sn**	**14 07 27.3**	**0.0**
	baz=286						
CHGB	**Renai**	**1.22**	**292**	P	**Pb**	**14 07 13.1**	**0.0**
	baz=291						
CHGB				S	**Sb**	**14 07 28.6**	**+0.1**
	baz=291						
NNSB	**Datong**	**1.24**	**311**	*e*P	**Pb**	**14 07 13.4**	**-0.2**
	baz=312						
NNSB				*e*S	**Sb**	**14 07 29.5**	**+0.3**
	baz=312						
NNS	**Nan Shan**	**1.26**	**312**	P	**Pb**	**14 07 13.6**	**-0.2**
	baz=313						
NNS				S	**Sb**	**14 07 29.7**	**+0.1**
	baz=313						
ENTT	**Nioudou**	**1.28**	**324**	P	**Pb**	**14 07 14.3**	**+0.1**
	baz=326						
ENTT				*e*S	**Sb**	**14 07 30.6**	**+0.3**
	baz=326						
NDT	**Datong Townshi**	**1.28**	**321**	*e*P	**Pb**	**14 07 14.3**	**+0.1**
	baz=322						
NDT				*e*S	**Sb**	**14 07 30.0**	**-0.3**
	baz=322						
TWE	**Neicheng**	**1.30**	**329**	P	**Pb**	**14 07 14.6**	**+0.2**
	baz=332						
TWE				*e*S	**Sb**	**14 07 31.0**	**+0.3**
	baz=332						
TDCB	**Techi**	**1.31**	**300**	*e*P	**Pb**	**14 07 14.5**	**-0.2**
	baz=300						
ELDTW	**Lidau**	**1.34**	**252**	*e*P	**Pn**	**14 07 14.4**	**+0.3**
	baz=248						
SSLB	**Suanglung**	**1.34**	**278**	*e*P	**Pn**	**14 07 14.6**	**+0.5**
	baz=276						
SSLB				*e*S	**Sb**	**14 07 32.3**	**+0.3**
	baz=276						
SLBB	**Yuanshan**	**1.34**	**329**	P	**Pb**	**14 07 15.3**	**+0.1**
	baz=331						
SLBB				*e*S	**Sb**	**14 07 32.4**	**+0.4**
	baz=331						
HATJ	**Hateruma jima**	**1.36**	**70**	P	**Pn**	**14 07 14.2**	**0.0**
HATJ				*e*S	**Sn**	**14 07 31.1**	**-0.4**
SMLT	**Sun Moon Lake**	**1.41**	**282**	P	**Pb**	**14 07 16.0**	**-0.3**
	baz=280						
IRIF	**Iriomote-Funau**	**1.41**	**59**	P	**Pn**	**14 07 15.5**	**+0.5**
IRIF				*e*S	**Sn**	**14 07 33.1**	**+0.2**
YHNB	**Yeheng**	**1.42**	**319**	*e*P	**Pb**	**14 07 16.2**	**-0.3**
	baz=320						
YHNB				*e*S	**Sb**	**14 07 33.6**	**-0.6**
	baz=320						
WHYT	**Xinyi Township**	**1.43**	**274**	*e*P	**Pb**	**14 07 16.6**	**0.0**
	baz=272						
NWLT	**Wulai**	**1.43**	**325**	*e*P	**Pb**	**14 07 16.8**	**+0.1**
	baz=327						
NWLT				*e*S	**Sb**	**14 07 34.9**	**+0.5**
	baz=327						
NSK	**Sanguang**	**1.43**	**318**	*e*P	**Pb**	**14 07 16.3**	**-0.4**
	baz=320						
NSK				*e*S	**Sb**	**14 07 33.9**	**-0.8**
	baz=320						
TTN	**Taitung**	**1.43**	**234**	*e*P	**Pb**	**14 07 16.7**	**0.0**
	baz=230						
TWGBT	**Beinan**	**1.45**	**238**	*e*P	**Pn**	**14 07 15.7**	**+0.2**
	baz=233						
TWGBT				*e*S	**Sn**	**14 07 34.1**	**+0.3**
	baz=233						
TYC	**Yuchr**	**1.45**	**282**	P	**Pb**	**14 07 16.6**	**-0.4**
	baz=281						
TWG	**Pinlang**	**1.45**	**238**	*e*P	**Pn**	**14 07 15.6**	**+0.1**
	baz=233						
TWG				*e*S	**Sn**	**14 07 34.1**	**+0.2**
	baz=233						
ALS	**Alishan**	**1.47**	**267**	*e*P	**Pb**	**14 07 17.7**	**+0.1**
	baz=264						
WHP	**Taichung City**	**1.49**	**297**	*e*P	**Pb**	**14 07 18.2**	**+0.4**
	baz=296						
WJS	**Zhushan**	**1.55**	**278**	*e*P	**Pb**	**14 07 19.4**	**+0.6**
	baz=277						
TWA	**Mucha**	**1.56**	**331**	*e*P	**Pb**	**14 07 18.2**	**-0.8**
	baz=333						
STYT	**Tauyuan**	**1.58**	**254**	*e*P	**Pb**	**14 07 19.3**	**+0.2**
	baz=251						
STYT				*e*S	**Sb**	**14 07 38.1**	**-0.6**
	baz=251						
CHN5	**Tsauling**	**1.58**	**270**	*e*P	**Pb**	**14 07 19.6**	**+0.3**
	baz=268						
JKRS	**Kuro-shima**	**1.60**	**66**	P	**Pn**	**14 07 18.0**	**+0.5**
JKRS				*e*S	**Sn**	**14 07 37.4**	**0.0**
WNT	**Mingjian**	**1.60**	**280**	*e*P	**Pb**	**14 07 20.2**	**+0.6**
	baz=278						
LIOB	**Emei**	**1.64**	**310**	*e*P	**Pb**	**14 07 20.3**	**+0.1**
	baz=310						
NSTT	**Nanjuang**	**1.64**	**309**	*e*P	**Pb**	**14 07 20.6**	**+0.4**
	baz=309						
TPUB	**Ta-pu**	**1.66**	**260**	*e*P	**Pb**	**14 07 20.5**	**-0.1**
	baz=257						
TPUB				*e*S	**Sb**	**14 07 41.0**	**0.0**
	baz=257						
TWQ1	**Liyutan**	**1.67**	**297**	*e*P	**Pb**	**14 07 21.0**	**+0.3**
	baz=296						
CHN4	**Tsaushan**	**1.68**	**262**	*e*P	**Pb**	**14 07 21.4**	**+0.4**
	baz=259						
WTP	**Ta-pu**	**1.68**	**258**	P	**Pb**	**14 07 20.7**	**-0.3**
	baz=255						
SLGT	**Liugui**	**1.73**	**250**	*e*P	**Pb**	**14 07 21.8**	**+0.1**
	baz=247						
YM11	**YM11**	**1.73**	**334**	*e*P	**Pb**	**14 07 22.1**	**+0.3**
	baz=336						
YM05	**YM05**	**1.73**	**334**	*e*S	**Sn**	**14 07 41.7**	**+0.8**
	baz=336						
TWS1	**Kuangyinshan**	**1.74**	**329**	*e*P	**Pb**	**14 07 21.3**	**-0.6**
	baz=331						
TWS1				*e*S	**Sb**	**14 07 42.6**	**-0.8**
	baz=331						
JIJ	**Ishigaki jima**	**1.76**	**64**	P	**Pn**	**14 07 20.0**	**+0.2**
JIJ				S	**Sn**	**14 07 40.9**	**-0.6**
CHN1	**Nanshi**	**1.77**	**257**	*e*P	**Pb**	**14 07 23.1**	**+0.5**
	baz=254						
WDJ	**Dajia District**	**1.77**	**295**	*e*P	**Pb**	**14 07 22.6**	**+0.1**
	baz=294						
TWK	**Hsinying**	**1.79**	**260**	*e*P	**Pb**	**14 07 22.7**	**-0.1**
	baz=257						
SNST	**Tainan City**	**1.79**	**258**	*e*P	**Pb**	**14 07 23.4**	**+0.5**
	baz=255						
SSD	**Sandimen**	**1.84**	**243**	*e*P	**Pb**	**14 07 24.0**	**+0.3**
	baz=239						
JISG	**Ishigakijimahi**	**2.00**	**60**	P	**Pn**	**14 07 22.8**	**-0.2**
JISG				*e*S	**Sn**	**14 07 46.9**	**-0.4**

*IDC **10** 14:07:48.0±2.4, 7°.80S×148°.51E, h0^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.6/39, mbtmp3.8/5, ML3.7/1, MS3.6/4, Ms1 3.6/4, ms1mx3.0/28, Error ellipse: s-maj=86.1km s-min=24.1km az=121.0*

*ISCJB **10** 14:07:49.9±1.1, 8°.1S±0°.2×148°.9E±0°.3, h33^{km}, mb3.7/5, MS3.6/4, Error ellipse: s-maj=45.8km s-min=9.0km az=36.5*

*NEIC **10** 14:07:52.2±3.2, 8°.06S×148°.75E, h33^{km}±28^{km}, mb4.1/1, Error ellipse: s-maj=47.1km s-min=7.8km az=129.0*

ISC 10 14:07:52.1±1.3**, 8°.1S**±0°.3×**148°.8E**±0°.3**, h35^{km}, n19, σ0^{s}.83**/15**, mb3.5**/5**, MS3.4**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**5.13**	**41**	*e*Pn	**Pn**	**14 09 06.5**	**-0.1**
COEN	**Coen**	**8.01**	**223**	*e*Pn	**Pn**	**14 09 45.9**	**-0.3**
WB2	**Warramunga Arr**	**18.27**	**228**	*e*Pn	**Pn**	**14 12 03.8**	**+0.7**
WR1	**Warramunga Arr**	**18.28**	**228**	*e*Pn	**Pn**	**14 12 04.0**	**+0.8**
	6.1nm,1.3s						
WRA	**Warramunga Arr**	**18.28**	**228**	P	**Pn**	**14 12 04.0**	**+0.8**
	0.3nm,0.3s,baz=51,slow=11,SNR=14						
AS31	**Alice Springs**	**21.05**	**221**	*e*P	**P**	**14 12 33.9**	**+0.6**
	0.8nm,0.9s						
ASAR	**Alice Springs**	**21.05**	**221**	P	**P**	**14 12 33.6**	**+0.4**
	0.6nm,0.4s,baz=50,slow=9.0,SNR=24						
FITZ	**Fitzroy Crossi**	**24.60**	**244**	*e*P	**P**	**14 13 08.2**	**-1.1**
	8.4nm,1.4s						
FITZ	**Fitzroy Crossi**	**24.60**	**244**	P	**P**	**14 13 08.5**	**-0.8**
	1.4nm,0.5s,baz=56,slow=9.6,SNR=13						
BATI	**Baumata**	**24.88**	**263**	LR	LR	14 24 47.0	
	comp=Z,78nm,19.1s,baz=299,slow=41						
RAO	**Raoul Island**	**37.71**	**128**	LR	LR	14 26 54.4	
	comp=Z,740nm,21.4s,baz=96,slow=30						
USRK	**Ussuriysk Ar.**	**54.22**	**345**	LR	LR	14 36 52.7	
	comp=Z,35nm,20.0s,baz=81,slow=32						
PETK	**Petropavlovsk-**	**61.44**	**6**	P	**P**	**14 18 05.4**	**+0.6**
	6.6nm,1.1s,baz=165,slow=6.9,SNR=4.2						
PEA1	**Petropavlovsk-**	**61.44**	**6**	*e*P	**P**	**14 18 05.4**	**+0.5**
PALK	**Pallekele**	**69.56**	**281**	LR	LR	14 51 40.4	
	comp=Z,17nm,18.5s,baz=116,slow=38						
MK32	**Makanchi Array**	**80.22**	**320**	*e*P	**P**	**14 19 59.5**	**+0.3**
MKAR	**Makanchi Array**	**80.22**	**320**	P	**P**	**14 19 59.5**	**+0.3**
	0.6nm,1.0s,baz=118,slow=4.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**147.28**	**282**	PKPbc	**PKPbc**	**14 27 31.7**	**-1.3**
	0.5nm,0.6s,baz=90,slow=3.7,SNR=5.0						
TOA1	**Torodi Ar. Sit**	**147.28**	**282**	*e*PKPdf	**PKPbc**	**14 27 31.7**	**-1.3**

IDC 10 14:12:17.1±3.0**, 11°.90S**×**165°.22E, h0^{km}, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/39**, mbtmp3.5**/4**, ML3.4**/1**, Error ellipse: s-maj=63.1km s-min=42.3km az=84.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.18**	**174**	Pn	Pn	14 14 44.0	-0.8
	0.3nm,0.3s,baz=308,slow=19,SNR=2.7						
WRA	**Warramunga Arr**	**30.71**	**251**	P	P	14 18 34.1	-0.1
	0.3nm,0.6s,baz=81,slow=9.8,SNR=3.8						
ASAR	**Alice Springs**	**31.96**	**244**	P	P	14 18 45.3	+0.2
	0.2nm,0.6s,baz=67,slow=9.3,SNR=6.2						
MKAR	**Makanchi Array**	**93.79**	**317**	P	P	14 25 36.3	0.0
	0.1nm,0.6s,baz=91,slow=5.8,SNR=2.2						

IDC 10 14:25:43.4±5.0**, 10°.73S**×**165°.00E, h0^{km}, mb3.3**/3**, mb1 3.7**/3**, mb1mx3.4**/20**, mbtmp3.3**/3**, Error ellipse: s-maj=259.6km s-min=34.6km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**29.08**	**3**	T	T	15 02 21.4	
	baz=183,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.08**	**3**	T	T	15 02 21.9	
	baz=183						
H11S1	**WAKE ISLAND Hy**	**29.10**	**3**	T	T	15 02 23.7	
	baz=183,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.30**	**4**	T	T	15 03 51.7	
	baz=182,slow=74						
H11N3	**WAKE ISLAND Hy**	**30.31**	**4**	T	T	15 03 55.4	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.32**	**4**	T	T	15 03 49.1	
	baz=182,slow=74						
WRA	**Warramunga Arr**	**30.91**	**249**	P	P	14 32 02.4	+0.2
	0.3nm,0.7s,baz=80,slow=8.9,SNR=3.6						
ASAR	**Alice Springs**	**32.29**	**242**	P	P	14 32 13.9	-0.3
	0.3nm,0.9s,baz=65,slow=10.0,SNR=4.3						
ILAR	**Eielson Array**	**83.45**	**19**	P	P	14 38 12.6	0.0
	0.2nm,0.6s,baz=235,slow=5.6,SNR=4.3						

IDC 10 14:37:23.7±2.8**, 11°.73S**×**165°.99E, h0^{km}, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.5**/35**, mbtmp3.5**/5**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.5**/16**, Error ellipse: s-maj=110.4km s-min=29.9km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.12**	**224**	LR	LR	14 53 48.2	
	comp=Z,21nm,21.1s,baz=26,slow=33						
WRA	**Warramunga Arr**	**31.48**	**251**	P	P	14 43 47.2	-0.2
	0.5nm,1.0s,baz=83,slow=9.3,SNR=3.0						
ASAR	**Alice Springs**	**32.71**	**244**	P	P	14 43 58.1	-0.1
	0.3nm,0.9s,baz=69,slow=10,SNR=2.9						
SONM	**Songino Array**	**79.35**	**324**	P	P	14 49 31.7	+0.1
	0.2nm,0.4s,baz=134,slow=6.0,SNR=4.0						
ILAR	**Eielson Array**	**84.08**	**18**	P	P	14 49 55.5	-0.4
	0.2nm,0.5s,baz=238,slow=3.9,SNR=6.2						
MKAR	**Makanchi Array**	**94.18**	**317**	P	P	14 50 44.6	0.0
	0.6nm,0.7s,baz=90,slow=6.1,SNR=8.9						
ARCES	**ARCESS Array B**	**117.05**	**345**	PKP	PKiKP	14 56 10.5	+0.3
	3.4nm,1.1s,baz=61,slow=2.2,SNR=4.7						

IDC 10 14:43:25.5±2.2**, 11°.06S**×**165°.94E, h0^{km}, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.5**/35**, mbtmp3.7**/5**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.6**/15**, Error ellipse: s-maj=73.4km s-min=30.0km az=143.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.11**	**285**	Pn	Pn	14 44 58.8	+1.6
	baz=156,slow=6.5						
HNR				Sn	Sn	14 46 05.5	-2.4
	2.1nm,0.3s,baz=166,slow=17,SNR=1.6						
HNR				LR	LR	14 47 24.8	
	comp=Z,121nm,18.1s,baz=246,slow=39						
H11S2	**WAKE ISLAND Hy**	**29.37**	**1**	T	T	15 19 49.8	
	baz=181,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.37**	**1**	T	T	15 19 51.4	
	baz=181,slow=76,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**29.39**	**1**	T	T	15 19 52.5	
	baz=181,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**30.59**	**2**	T	T	15 21 21.1	
	baz=182,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**30.59**	**2**	T	T	15 21 21.8	
	baz=182,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**30.61**	**2**	T	T	15 21 22.4	
	baz=182,slow=76,SNR=19						
WRA	**Warramunga Arr**	**31.66**	**250**	P	P	14 49 50.8	0.0
	0.3nm,0.5s,baz=81,slow=9.5,SNR=4.1						
ASAR	**Alice Springs**	**32.95**	**243**	P	P	14 50 02.2	-0.1
	0.4nm,0.6s,baz=64,slow=10.0,SNR=7.3						
ILAR	**Eielson Array**	**83.46**	**18**	P	P	14 55 55.4	+0.7
	0.5nm,1.0s,baz=229,slow=5.5,SNR=2.9						
MKAR	**Makanchi Array**	**93.66**	**317**	P	P	14 56 42.7	-1.4
	0.1nm,0.5s,baz=100,slow=6.0,SNR=2.9						

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*IDC **10** 14:48:38.6±0.4, 36°.67S×53°.38E, h0^{km}, mb4.9/24, mb1 4.9/25, mb1mx4.9/27, mbtmp4.8/25, ML4.4/1, MS4.0/20, Ms1 4.0/20, ms1mx3.9/27, Error ellipse: s-maj=15.0km s-min=13.1km az=33.0*

*MOS **10** 14:48:38.8±1.1, 36°.70S×53°.42E, h10^{km}, mb5.4/47, Error ellipse: s-maj=13.8km s-min=7.2km az=91.5*

*ISCJB **10** 14:48:39.4±0.2, 36°.74S±0°.04×53°.34E±0°.05, h15^{km}, mb5.0/117, MS4.1/24, Error ellipse: s-maj=5.7km s-min=5.4km az=10.8*

*NEIC **10** 14:48:39.9±0.1, 36°.68S×53°.37E, h10^{km}, mb5.2/60, Error ellipse: s-maj=4.8km s-min=4.3km az=136.0*

*GCMT **10** 14:48:41.9±0.3, 36°.58S±0°.02×53°.53E±0°.04, h12^{km}, MW4.9/65, Moment Tensor Solution. s18,c20; s65,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.20±.09; M$_{\theta\theta}$-2.20±.08; M$_{\phi\phi}$0.00±.11; M$_{r\theta}$-0.36±.35; M$_{\theta\phi}$-0.93±.08; M$_{\phi r}$1.50±.40; Best double couple: M$_0$2.80900×10^{16} NP1:ϕ_s43.00000°, δ54.00000°, λ53.00000°. NP2: ϕ_s275.00000°, δ50.00000°, λ130.00000°. Principal axes: T 3.0660, Plg61.0000°, Azm253.0000°; N -0.5200, Plg29.0000°, Azm67.0000°; P -2.5510, Plg3.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 14:48:40.4±0.6**, 36°.72S**±0°.05×**53°.30E**±0°.06**, h12^{km}**±3^{km}**, h12^{km}:pP-P, n838, σ0^{s}.96**/819**, mb5.1**/118**, MS4.1**/25**, 26C-16D, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**9.76**	**186**	*e*Pn	**Pn**	**14 50 59.7**	**-0.9**
RER	**Riviere de l'E**	**15.65**	**8**	*e*Pn	**Pn**	**14 52 18.1**	**-2.8**
	58nm,1.0s						
MRIV	**Mauritius Mete**	**16.77**	**14**	*e*Pn	**Pn**	**14 52 33.4**	**-1.8**
	42nm,1.4s						
ABPO	**Ambohimpanom**	**18.42**	**342**	*e*P	**Pn**	**14 52 58.7**	**+2.8**
	42nm,1.0s						
ABPO	**Ambohimpanom**	**18.42**	**342**	*e*P	**Pn**	**14 52 58.7**	**+2.8**
ABPO				pmax	pmax		
	comp=Z,42nm,1.0s						
OPO	**Ambohidratompo**	**18.86**	**342**	P	**Pn**	**14 53 01.2**	**0.0**
	comp=Z,1.1nm,0.3s,baz=151,slow=14,SNR=12						
BOSA	**Boshof**	**24.89**	**281**	*i* P	**P**	**14 54 03.2**	**-0.1**
BOSA	**Boshof**	**24.89**	**281**	*e*P	**P**	**14 54 03.0**	**-0.3**
	comp=Z,63nm,0.8s						
BOSA	**Boshof**	**24.89**	**281**	*e*P	**P**	**14 54 03.0**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,63nm,0.8s						
BOSA	**Boshof**	**24.89**	**281**	P	**P**	**14 54 03.1**	**-0.1**
	comp=Z,58nm,0.8s,baz=117,slow=9.9,SNR=70						
BOSA				LR	LR	15 02 37.1	
	comp=Z,119nm,18.1s,baz=118,slow=34						
LBTB	**Lobatse**	**26.39**	**288**	*e*P	**P**	**14 54 16.2**	**-0.8**
	comp=Z,27nm,0.9s						
LBTB	**Lobatse**	**26.39**	**288**	*e*P	**P**	**14 54 16.2**	**-0.8**
LBTB				pmax	pmax		
	comp=Z,27nm,0.9s						
SUR	**Sutherland**	**27.03**	**270**	*e*P	**P**	**14 54 23.2**	**+0.5**
	comp=Z,86nm,1.0s						
SUR	**Sutherland**	**27.03**	**270**	P	**P**	**14 54 23.2**	**+0.5**
	comp=Z,39nm,0.8s,baz=113,slow=7.4,SNR=17						
SUR				LR	LR	15 03 40.0	
	comp=Z,154nm,18.1s,baz=115,slow=33						
MATP	**Matopo**	**27.05**	**300**	P	**P**	**14 54 21.9**	**-1.0**
	comp=Z,6.0nm,0.8s,baz=124,slow=8.5,SNR=10						
MATP				LR	LR	15 03 31.9	
	comp=Z,308nm,20.3s,baz=136,slow=33						
LSZ	**Lusaka**	**30.90**	**307**	*e*P	**P**	**14 54 57.5**	**+0.3**
	comp=Z,16nm,1.1s						
LSZ	**Lusaka**	**30.90**	**307**	*e*P	**P**	**14 54 57.5**	**+0.3**
LSZ				pmax	pmax		
	comp=Z,16nm,1.1s						
MAW	**Mawson**	**31.41**	**173**	LR	LR	15 04 25.5	
	comp=Z,787nm,20.9s,baz=4.0,slow=30						
SYO	**Syowa Base**	**33.22**	**189**	⇓*e*P	**P**	**14 55 16.2**	**-0.6**
SYO	**Syowa Base**	**33.22**	**189**	⇑*e*pP	pP	14 55 19.0	-0.3
H08S1	**Diego Carcia H**	**33.80**	**36**	T	T	15 30 44.7	
	baz=208,slow=75,SNR=8.9						
H08S2	**Diego Garcia H**	**33.81**	**36**	T	T	15 30 46.8	
	baz=208,slow=75,SNR=5.9						
H08S3	**Diego Garcia H**	**33.82**	**36**	T	T	15 30 45.8	
	baz=208,slow=75,SNR=10						
H08N3	**Diego Garcia H**	**34.28**	**32**	T	T	15 31 32.0	
	baz=206,slow=75,SNR=13						
H08N1	**Diego Carcia H**	**34.30**	**32**	T	T	15 31 33.0	
	baz=206,slow=75,SNR=15						
H08N2	**Diego Garcia H**	**34.31**	**32**	T	T	15 31 33.7	
	baz=206,slow=75,SNR=13						
TSUM	**Tsumeb**	**35.79**	**289**	*e*P	**P**	**14 55 39.5**	**-0.4**
	comp=Z,13nm,0.9s						
NVL	**N'lazarevskaya**	**40.43**	**200**	*e*P	**P**	**14 56 17.9**	**-0.3**
NVL				pmax	pmax		
	comp=Z,22nm,1.0s						
SNAA	**Sanae**	**45.06**	**202**	P	**P**	**14 56 56.8**	**+1.0**
SNAA	**Sanae**	**45.06**	**202**	*e*P	**P**	**14 56 56.0**	**+0.1**
	comp=Z,52nm,0.8s						
SNAA	**Sanae**	**45.06**	**202**	*e*P	**P**	**14 56 56.0**	**+0.1**
SNAA				pmax	pmax		
	comp=Z,52nm,0.8s						
SNAA	**Sanae**	**45.06**	**202**	P	**P**	**14 56 56.6**	**+0.7**
	comp=Z,46nm,0.8s,baz=94,slow=6.5,SNR=77						
VNA2	**Neumayer--Watz**	**46.25**	**203**	P	**P**	**14 57 06.4**	**+1.3**
	baz=64,slow=7.7						
VNA3	**Neumayer Olymp**	**47.05**	**203**	P	**P**	**14 57 12.3**	**+0.9**
H01W2	**Cape Leeuwin H**	**48.63**	**107**	T	T	15 49 51.5	
	baz=250,slow=75,SNR=98						
H01W3	**Cape Leeuwin H**	**48.64**	**107**	T	T	15 49 52.0	
	baz=250,slow=75,SNR=98						
H01W1	**Cape Leeuwin H**	**48.65**	**107**	T	T	15 49 52.8	
	baz=250,slow=75,SNR=85						
H09N1	**TRISTAN DA CUN**	**51.49**	**249**	T	T	15 53 36.0	
	SNR=21						
MORW	**Morawa**	**52.42**	**101**	*e*P	**P**	**14 57 52.9**	**0.0**
	comp=Z,38nm,1.3s						
QSPA	**South Pole Qui**	**53.47**	**180**	*e*P	**P**	**14 57 59.8**	**-0.5**
	comp=Z,74nm,0.9s						
QSPA	**South Pole Qui**	**53.47**	**180**	P	**P**	**14 58 00.2**	**-0.1**
	comp=Z,59nm,0.9s,baz=263,slow=2.9,SNR=112						
KASI	**Kota Agung**	**56.07**	**69**	P	**P**	**14 58 20.4**	**+0.8**
PDSI	**Padang**	**56.24**	**62**	P	**P**	**14 58 23.3**	**+2.4**
LHSI	**Lahat**	**56.47**	**67**	P	**P**	**14 58 25.3**	**+2.9**
MDSI	**Maura Dua**	**56.51**	**68**	P	**P**	**14 58 24.5**	**+1.7**
MDSI				pP	**pwP**	**14 58 30.6**	**+0.3**
MNSI	**Mandailing Nat**	**56.83**	**60**	P	**P**	**14 58 29.3**	**+4.3**
DBJI	**Dramaga**	**57.12**	**72**	P	**P**	**14 58 30.3**	**+3.2**
CBJI	**Citeko**	**57.28**	**72**	P	**P**	**14 58 30.0**	**+1.8**
MHTO	**MHTO**	**57.56**	**5**	P	**P**	**14 58 30.3**	**+0.3**
	SNR=5.5						
MHTO				P	**P**	**14 58 30.3**	**+0.3**
	SNR=5.5						
KCSI	**Kotacane, Aceh**	**57.59**	**56**	P	**P**	**14 58 33.7**	**+3.3**
PSI	**Prapat**	**57.83**	**57**	*e*P	**P**	**14 58 30.3**	**-1.9**
	comp=Z,27nm,1.1s						
PSI	**Prapat**	**57.83**	**57**	*e*P	**P**	**14 58 30.3**	**-1.9**
PSI				pmax	pmax		
	comp=Z,27nm,1.1s						
KPJI	**Karang Pucung**	**58.30**	**74**	P	**P**	**14 58 36.3**	**+0.9**
	comp=Z,25nm,0.9s						
VNDA	**Vanda**	**58.30**	**166**	P	**P**	**14 58 34.2**	**-0.4**
	comp=Z,9.9nm,0.8s,baz=267,slow=11,SNR=4.2						
VNDA				LR	LR	15 20 58.7	
	comp=Z,338nm,20.1s,baz=250,slow=33						
HYB	**Hyderabad**	**58.89**	**28**	*i* P	**P**	**14 58 40.5**	**+1.2**
MZR	**Muzera**	**59.40**	**0**	P	**P**	**14 58 44.3**	**+1.6**
	SNR=6.9						
SMRI	**Semarang**	**59.65**	**75**	*e*P	**P**	**14 58 43.9**	**-0.9**
	comp=Z,79nm,0.9s						
SMRI	**Semarang**	**59.65**	**75**	P	**P**	**14 58 48.4**	**+3.6**
	comp=Z,111nm,1.1s						
PWJI	**Pagerwojo**	**60.11**	**77**	P	**P**	**14 58 48.6**	**+0.6**
NGJI	**Ngawi**	**60.25**	**76**	P	P	14 58 58.9	+10
TPI	**Tanjungpandan**	**60.25**	**69**	P	**P**	**14 58 51.4**	**+2.5**
	comp=Z,47nm,1.3s,comp=Z,7µm						
SOHO	**SOHO**	**60.60**	**3**	P	**P**	**14 58 51.5**	**+0.5**
	SNR=6.5						
SOHO				P	**P**	**14 58 51.5**	**+0.5**
	SNR=6.5						
JAGI	**Jajag, Banyuwa**	**61.69**	**79**	*e*P	**P**	**14 58 57.9**	**-0.8**
	comp=Z,92nm,1.0s						
JAGI	**Jajag, Banyuwa**	**61.69**	**79**	P	P	14 59 04.7	+6.0
KMMI	**Kalianget**	**62.40**	**78**	P	**P**	**14 59 06.7**	**+3.2**
	comp=Z,41nm,0.9s						
SRBI	**Singaraja**	**62.76**	**79**	P	**P**	**14 59 08.1**	**+2.3**
FITZ	**Fitzroy Crossi**	**65.44**	**95**	*e*P	**P**	**14 59 22.9**	**-0.6**
	comp=Z,26nm,1.1s						
UTHA	**Uthaitani**	**67.80**	**49**	P	**P**	**14 59 39.8**	**+1.4**
	comp=Z,6.2nm,0.8s,comp=Z,56nm						
MMRI	**Maumere**	**68.02**	**84**	*e*P	**P**	**14 59 36.6**	**-3.3**
	comp=Z,98nm,0.9s						
SRAK	**Srakaew**	**68.22**	**52**	P	**P**	**14 59 44.9**	**+3.8**
	comp=Z,49nm,1.1s						
SOEI	**Soe**	**68.99**	**87**	*e*P	**P**	**14 59 45.6**	**-0.6**
	comp=Z,46nm,1.1s						
ASAR	**Alice Springs**	**69.03**	**104**	P	**P**	**14 59 46.0**	**-0.2**
	comp=Z,11nm,0.7s,baz=232,slow=5.7,SNR=115						
ASAR				LR	LR	15 25 02.8	
	comp=Z,82nm,20.4s,baz=222,slow=32						
ASAR				PKP2bc		15 27 56.2	
	comp=Z,2.1nm,0.9s,baz=55,slow=2.9,SNR=15						
AS31	**Alice Springs**	**69.03**	**104**	*e*P	**P**	**14 59 45.1**	**-1.1**
	comp=Z,4.1nm,0.8s						
AS01	**Alice Springs**	**69.07**	**104**	*e*P	**P**	**14 59 45.2**	**-1.3**
KIC	**Kosan Boka**	**69.07**	**295**	*e*P	**P**	**14 59 47.4**	**+0.9**
	comp=Z,53nm,1.0s						
LIC	**Lamto**	**69.19**	**295**	*e*P	**P**	**14 59 48.3**	**+1.1**
	comp=Z,71nm,1.0s						
DBIC	**Dimbokro**	**69.36**	**296**	*e*P	**P**	**14 59 48.1**	**-0.2**
	comp=Z,22nm,1.0s						
DBIC	**Dimbokro**	**69.36**	**296**	*e*P	**P**	**14 59 48.1**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,22nm,1.0s						
DBIC	**Dimbokro**	**69.36**	**296**	P	**P**	**14 59 49.4**	**+1.1**
	comp=Z,16nm,0.9s,baz=116,slow=6.5,SNR=17						
DBIC				LR	LR	15 28 04.7	
	comp=Z,97nm,19.2s,baz=116,slow=34						
TOA0	**Torodi Ar. Sit**	**69.42**	**305**	*e*P	**P**	**14 59 49.0**	**+0.4**
TOA0	**Torodi Ar. Sit**	**69.42**	**305**	P	**P**	**14 59 49.9**	**+1.3**
	SNR=7.2						
TORD	**Torodi Ar. Bea**	**69.42**	**305**	P	**P**	**14 59 47.9**	**-0.7**
	comp=Z,15nm,0.9s,baz=57,slow=1.3,SNR=65						

TORD				LR	LR	15 29 10.3	
	comp=Z,142nm,20.5s,baz=25,slow=35						
TIC	Toumodi	69.47	295	eP	P	14 59 50.2	+1.2
PBKT	Sadao Pong	69.50	49	eP	P	14 59 48.5	-0.4
PBKT	Sadao Pong	69.50	49	P	P	14 59 50.4	+1.4
	comp=Z,22nm,1.1s						
CHAI	Chaiyaphum	69.61	50	P	P	14 59 50.9	+1.2
	comp=Z,7.2nm,1.0s						
CM01	Chiang Mai Arr	69.74	46	eP	P	14 59 49.8	-0.8
CM31	Chiang Mai Arr	69.76	46	eP	P	14 59 50.1	-0.5
CM31	Chiang Mai Arr	69.76	46	P	P	14 59 51.5	+0.8
	SNR=9.2						
CMAR	Chiang Mai Arr	69.76	46	ceP	P	14 59 50.5	-0.1
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	Chiang Mai Arr	69.76	46	P	P	14 59 50.2	-0.4
	comp=Z,8.1nm,0.9s,baz=230,slow=6.4,SNR=45						
CMAR				LR	LR	15 27 22.4	
	comp=Z,88nm,18.1s,baz=212,slow=33						
CHTO	Chiang Mai	70.04	46	eP	P	14 59 50.7	-1.7
	comp=Z,30nm,1.6s						
CHTO	Chiang Mai	70.04	46	eP	P	14 59 50.7	-1.7
CHTO				pmax	pmax		
	comp=Z,29nm,1.6s						
KOLN	Koldanda	70.19	28	eP	P	14 59 52.1	-1.2
	comp=Z,72nm,1.3s						
PYUN	Piuthan	70.26	28	eP	P	14 59 52.7	-1.0
	comp=Z,63nm,1.1s						
STKA	Stephens Creek	70.54	116	eP	P	14 59 54.6	-0.8
	comp=Z,2.3nm,0.8s						
STKA	Stephens Creek	70.54	116	eP	P	14 59 54.6	-0.8
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	70.54	116	P	P	14 59 55.2	-0.2
	comp=Z,9.2nm,0.9s,baz=275,slow=3.6,SNR=13						
STKA				LR	LR	15 23 39.2	
	comp=Z,184nm,21.6s,baz=209,slow=30						
DMN	Daman	70.64	30	eP	P	14 59 55.1	-1.0
	comp=Z,28nm,0.8s						
RAMN	Ramite	70.66	31	eP	P	14 59 55.7	-0.6
	comp=Z,32nm,0.7s						
PKI	Pulchoki	70.72	30	eP	P	14 59 55.3	-1.4
PKIN	Phulchoki	70.72	30	eP	P	14 59 55.3	-1.4
	comp=Z,6.9nm,0.7s						
DANN	Dangsing	70.78	28	eP	P	14 59 55.4	-1.6
	comp=Z,19nm,0.8s						
JIRN	Jiri	71.12	31	eP	P	14 59 58.2	-1.0
	comp=Z,27nm,0.8s						
GUN	Gumba	71.22	30	eP	P	14 59 59.1	-0.6
	comp=Z,64nm,0.9s						
WRA	Warramunga Arr	71.36	101	P	P	15 00 00.4	-0.2
	comp=Z,7.8nm,0.8s,baz=233,slow=5.3,SNR=83						
WRA				LR	LR	15 27 01.6	
	comp=Z,55nm,21.1s,baz=125,slow=32						
WB2	Warramunga Arr	71.37	101	eP	P	14 59 59.9	-0.7
WRAB	Tennant Creek	71.38	101	eP	P	15 00 00.2	-0.5
	comp=Z,71nm,1.6s						
WRAB	Tennant Creek	71.38	101	c iP	P	15 00 00.3	-0.4
WRAB				pmax	pmax		
	comp=Z,40nm,1.7s						
MPSI	Mapaga	71.60	75	P	P	15 00 02.4	+0.4
SHL	Shillong	71.83	36	eP	P	15 00 02.4	-0.9
	comp=Z,25nm,0.2s						
SHL	Shillong	71.83	36	eP	P	15 00 02.4	-0.9
SHL				pmax	pmax		
	comp=Z,25nm,0.2s						
SHL	Shillong	71.83	36	eP	P	15 00 01.0	-2.3
APSI	Ampana	72.19	77	P	P	15 00 08.9	+3.3
	comp=Z,16nm,1.0s,comp=Z,452nm						
KBL	Kabul	72.40	14	eP	P	15 00 06.7	+0.2
	comp=Z,10.0nm,1.0s						
NIL	Nilore	72.44	17	eP	P	15 00 06.2	-0.4
	comp=Z,24nm,1.5s						
NIL	Nilore	72.44	17	eP	P	15 00 06.2	-0.4
NIL				pmax	pmax		
	comp=Z,24nm,1.5s						
EFI	East Falkland	73.53	217	eP	P	15 00 13.1	+0.2
	comp=Z,61nm,1.0s						
EFI	East Falkland	73.53	217	c iP	P	15 00 13.0	+0.1
EFI				pmax	pmax		
	comp=Z,75nm,1.1s						
TAM	Tamanrasset	74.39	315	eP	P	15 00 18.1	-0.3
	comp=Z,11nm,1.2s						
TAM	Tamanrasset	74.39	315	eP	P	15 00 18.2	-0.3
TAM				pmax	pmax		
	comp=Z,11nm,1.2s						
GEYT	Alibeck	74.41	4	P	P	15 00 18.2	+0.1
	comp=Z,2.5nm,0.7s,baz=197,slow=4.6,SNR=8.6						
GEYT				LR	LR	15 31 43.0	
	comp=Z,46nm,18.1s,baz=340,slow=35						
GYA0B	ALIBECK ARRAY	74.41	4	eP	P	15 00 18.6	+0.5
	comp=Z,7.4nm,0.9s						
LSA	Lhasa	75.01	34	eP	P	15 00 21.6	-0.7
	comp=Z,20nm,1.1s						
LSA	Lhasa	75.01	34	eP	P	15 00 21.6	-0.7
LSA				pmax	pmax		
	comp=Z,20nm,1.1s						
BNDI	Bandanaira	76.57	86	P	P	15 00 32.0	+0.9
GNI	Garni	76.90	353	⇑eP	P	15 00 34.2	+1.8
GNI				pmax	pmax		
	comp=Z,142nm,1.3s						
GNI	Garni	76.90	353	P	P	15 00 34.2	+1.8
	SNR=6.3						
GNI				P	P	15 00 34.2	+1.8
	SNR=6.3						
GAR	Garm	76.96	14	eP	P	15 00 32.1	-0.7
	comp=Z,19nm,1.0s						
GAR	Garm	76.96	14	eP	P	15 00 32.1	-0.7
GAR				pmax	pmax		
	comp=Z,19nm,1.0s						
KMI	Kunming	77.16	45	P	P	15 00 35.3	+1.0
KMI				pP	pwP	15 00 41.4	-0.3
KMI				sP	PcP	15 00 44.7	-0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BTK	Batken	78.08	14	eP	P	15 00 39.0	0.0
	comp=Z,30nm,1.3s						
BTK	Batken	78.08	14	eP	P	15 00 39.0	0.0
BTK				pmax	pmax		
	comp=Z,30nm,1.3s						
BRTR	Keskin Array B	78.19	345	P	P	15 00 39.1	-0.5
	comp=Z,3.2nm,0.8s,baz=170,slow=7.8,SNR=22						
BRTR				LR	LR	15 33 59.8	
	comp=Z,65nm,18.6s,baz=132,slow=35						
BR131	Keskin Array S	78.19	345	eP	P	15 00 38.8	-0.9
MANT	Manisa	78.25	340	eP	P	15 00 39.9	-0.2
	comp=Z,30nm,0.9s						
KSH	Kashi	78.68	18	P	P	15 00 40.0	-2.4
KSH				pP	pwP	15 00 49.7	-0.1
KSH				PP	PP	15 03 40.3	-0.6
KSH				S	S	15 10 32.7	-6.6
KSH	Kashi	78.68	18	sS	sS	15 10 46.2	+2.3
KSH	Kashi	78.68	18	ScS	ScS	15 11 02.1	-1.2
KSH	Kashi	78.68	18	SS	SS	15 15 44.3	0.0
KSH				pmax	pmax		
	comp=Z,360nm,4.1s						
KSH				pmax	pmax		
	comp=Z,45nm,0.7s						
KSH				LR	LR		
	comp=N,140nm,6.1s						
KSH				LR	LR		
	comp=E,120nm,4.7s						
KSH				LR	LR		
	comp=Z,330nm,4.9s						
ZEI	Tsey	79.59	353	eP	P	15 00 46.5	-0.9
ZEI				pmax	pmax		
	comp=Z,16nm,0.9s						
ARSB	Arslanbob	79.73	15	eP	P	15 00 47.5	-0.6
	comp=Z,23nm,1.3s						
NEY	Neytrino	80.17	352	⇑iP	P	15 00 53.0	+2.6
NEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NCK	Nalchik	80.32	353	⇓iP	P	15 00 52.0	+0.9
NCK				pmax	pmax		
	comp=Z,25nm,1.1s						
GYA	Guiyang	80.44	47	P	P	15 00 54.2	+1.9
GYA				PP	PP	15 04 00.8	+5.0
GYA	Guiyang	80.44	47	S	S	15 11 01.3	+2.8
GYA	Guiyang	80.44	47	SKS	SKSac	15 11 08.9	-1.3
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.8s						
NRN	Naryn	80.50	17	eP	P	15 00 52.4	-0.1
	comp=Z,35nm,1.8s						
CTAO	Charters Tower	80.54	108	eP	P	15 00 52.0	-1.0
	comp=Z,33nm,1.1s						
CTAO	Charters Tower	80.54	108	eP	P	15 00 52.0	-1.0
CTAO				pmax	pmax		
	comp=Z,33nm,1.1s						
KBZ	Khabaz	80.63	352	P	P	15 00 53.0	+0.4
KBZ	Khabaz	80.63	352	P	P	15 00 53.0	+0.4
	comp=Z,4.9nm,0.9s,baz=143,slow=4.1,SNR=9.8						
KBZ				LR	LR	15 33 52.2	
	comp=Z,103nm,21.9s,baz=156,slow=34						
AML	Almayashu	80.66	15	P	P	15 00 55.8	+2.4
	SNR=10						
KIV	Kislovodsk	80.87	352	eP	P	15 00 54.2	+0.1
	comp=Z,46nm,1.5s						
KIV	Kislovodsk	80.87	352	eP	P	15 00 54.9	+0.8
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KIV				MLR	MLR		
	comp=Z,102nm,19.0s						
KIV	Kislovodsk	80.87	352	P	P	15 00 55.2	+1.1
	SNR=7.9						
KIV				P	P	15 00 55.2	+1.1
	SNR=7.9						
UCH	Uchtor	80.92	16	P	P	15 00 55.9	+1.0
	SNR=16						
KZA	Kyzart	80.94	16	P	P	15 00 55.7	+0.8
	SNR=11						
KK31	Karatay Array	80.98	13	eP	P	15 00 54.5	-0.1
KK31	Karatay Array	80.98	13	eP	P	15 00 54.5	-0.1
KKAR	Karatay Array	80.98	13	eP	P	15 00 54.3	-0.3
KKAR	Karatay Array	80.98	13	eP	P	15 00 54.3	-0.3
EIDS	Eidsvold	81.07	115	eP	P	15 00 55.7	0.0
	comp=Z,18nm,0.9s						
EKS2	Erkin-Say	81.18	15	P	P	15 00 57.1	+1.3
	SNR=14						
AAK	Ala-Archa	81.31	16	P	P	15 00 57.7	+1.1
	SNR=13						
AAK	Ala-Archa	81.31	16	eP	P	15 00 57.0	+0.4
	comp=Z,34nm,1.3s						
AAK	Ala-Archa	81.31	16	c iP	P	15 00 57.2	+0.6
AAK				pmax	pmax		
	comp=Z,43nm,1.7s						
AAK	Ala-Archa	81.31	16	P	P	15 00 58.3	+1.8
	SNR=16						
KBK	Karagaybulak	81.43	16	P	P	15 00 55.7	-1.5
	SNR=9.0						
KDJ	Kajisay	81.45	18	eP	P	15 00 57.4	+0.1
	comp=Z,27nm,0.9s						
KDJ	Kajisay	81.45	18	eP	P	15 00 57.4	+0.1
KDJ				pmax	pmax		
	comp=Z,27nm,0.9s						
FRU	Bishkek	81.52	16	eP	P	15 01 00.0	+2.5
FRU				pmax	pmax		
	comp=Z,90nm,2.0s						
CHMS	Chumysh	81.71	16	P	P	15 00 59.0	+0.5
	SNR=7.5						
USP	Ospenovka	81.91	15	P	P	15 00 59.8	+0.3
	SNR=5.4						
GOF	Gofitskoye	81.92	353	eP	P	15 00 59.0	-0.5
PRZ	Przheval'sk	82.08	18	eP	P	15 01 01.2	+0.5
	comp=Z,36nm,0.8s						
PRZ	Przheval'sk	82.08	18	eP	P	15 01 01.2	+0.5
PRZ				pmax	pmax		
	comp=Z,36nm,0.8s						
CD2	Chengdu	82.22	42	⇑iP	P	15 01 02.8	+1.3
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,120nm,3.5s						
ANN	Anapa	82.40	349	eP	P	15 01 00.9	-1.1
ANN				e*PP	pP	15 01 03.7	-1.0
ANN				ePPP	PPP	15 06 00.2	
ANN				eS	S	15 11 17.6	-0.1
ANN				eSS	SS	15 16 37.8	-1.7
ANN				pmax	pmax		
	comp=Z,22nm,1.3s						
KEST	Kesra	82.85	325	P	P	15 01 06.4	+1.7
	comp=Z,7.4nm,0.8s,baz=127,slow=3.5,SNR=4.3						
KEST				LR	LR	15 40 31.7	
	comp=Z,132nm,18.5s,baz=297,slow=38						
SRPI	Serui, Papua	83.22	87	P	P	15 01 08.2	+1.1
VTS	Vitosha	83.59	338	eP	P	15 01 07.9	-0.5
	comp=Z,6.1nm,1.1s						
VTS	Vitosha	83.59	338	⇑iP	P	15 01 07.8	-0.6
VTS	Vitosha	83.59	338	⇑P	P	15 01 07.8	-0.6
CFR	Carcaliu	84.63	342	⇓iP	P	15 01 12.1	-1.3
CFR	Carcaliu	84.63	342	⇓P	P	15 01 12.1	-1.3
ENH	Enshi	84.94	46	eP	P	15 01 15.0	-0.5
	comp=Z,56nm,1.6s						
MLR	Muntele Rosu	85.48	341	eP	P	15 01 17.4	-0.5
	comp=Z,43nm,1.6s						
MLR	Muntele Rosu	85.48	341	eP	P	15 01 17.4	-0.5
MLR				pmax	pmax		
	comp=Z,43nm,1.6s						
ARR	Arges	85.71	340	⇓iP	P	15 01 18.7	-0.3
ABKAR	Akbulak array	85.80	4	eP	P	15 01 18.7	-0.5
HERR	Herculane	85.89	339	⇓iP	P	15 01 21.5	+1.7
MDVR	Moldovita	86.01	338	⇑iP	P	15 01 20.8	+0.3
WMQ	Urumqi	86.03	24	eP	P	15 01 21.8	+1.2
WMQ				sP	pwP	15 01 29.1	+1.0
WMQ				PP	PP	15 04 37.5	-3.8
WMQ				pmax	pmax		
	comp=Z,27nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,430nm,4.1s						
WMQ				LR	LR		
	comp=N,190nm,21.5s						
WMQ				LR	LR		
	comp=E,210nm,22.9s						
WMQ				LR	LR		
	comp=Z,170nm,30.1s						
WMQ	Urumqi	86.03	24	eP	P	15 01 18.5	-2.1
	comp=Z,61nm,1.9s						
WMQ	Urumqi	86.03	24	eP	P	15 01 18.5	-2.1
WMQ				pmax	pmax		
	comp=Z,61nm,1.9s						
GZR	Gura Zlata	86.25	339	⇑iP	P	15 01 21.8	+0.1
GZR	Gura Zlata	86.25	339	⇑P	P	15 01 21.8	+0.1
LZH	Lanzhou	86.30	39	eP	P	15 01 21.9	-0.4
LZH				pP	sP	15 01 25.7	-0.3
LZH				sP	pwP	15 01 28.9	-0.8
LZH				PP	PP	15 04 36.6	-7.1
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,84nm,4.3s						
BZS	Buzias	86.80	338	⇓iP	P	15 01 24.8	+0.6
BZS	Buzias	86.80	338	⇓P	P	15 01 24.8	+0.6
GTA	Gaotai	87.02	34	eP	P	15 01 25.3	-0.4
GTA				pP	sP	15 01 29.6	+0.2
GTA				sP	pwP	15 01 32.4	-0.7
GTA	Gaotai	87.02	34	SKS	SKSac	15 11 51.0	-1.6
GTA	Gaotai	87.02	34	S	S	15 12 05.6	+1.3
GTA	Gaotai	87.02	34	sS	sS	15 12 13.4	+4.5
GTA	Gaotai	87.02	34	SS	SS	15 17 55.5	+7.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,71nm,6.8s						
GTA				LR	LR		
	comp=N,130nm,18.4s						
GTA				LR	LR		
	comp=E,130nm,20.0s						
GTA				LR	LR		
	comp=Z,130nm,19.0s						
MAKZ	Makanchi	87.04	19	eP	P	15 01 24.8	-0.6
	comp=Z,9.4nm,1.0s						
MK01	Makanchi Array	87.09	19	eP	P	15 01 25.0	-0.7
MK31	Makanchi Array	87.11	19	eP	P	15 01 24.8	-1.0
MK31	Makanchi Array	87.11	19	eP	P	15 01 24.8	-1.0
MKAR	Makanchi Array	87.11	19	eP	P	15 01 24.9	-0.9
	comp=Z,49nm,1.5s						
MKAR	Makanchi Array	87.11	19	eP	P	15 01 24.9	-0.9
MKAR				pmax	pmax		
	comp=Z,49nm,1.5s						
MKAR	Makanchi Array	87.11	19	P	P	15 01 25.6	-0.2
	comp=Z,3.4nm,0.9s,baz=210,slow=5.1,SNR=25						
PLCA	Paso Flores	87.32	219	eP	P	15 01 26.9	-0.4
	comp=Z,25nm,1.0s						
PLCA	Paso Flores	87.32	219	eP	P	15 01 27.0	-0.4
PLCA				pmax	pmax		
	comp=Z,25nm,1.0s						
ARCR	ARCALIA	87.37	341	⇑iP	P	15 01 27.8	+0.8
XAN	Xi'an	87.42	43	P	P	15 01 27.3	-0.3
XAN				pP	pwP	15 01 41.9	+6.9
XAN				sP	sP	15 01 49.5	+18
XAN				pmax	pmax		
	comp=Z,8.0nm,1.8s						
XAN	Xi'an	87.42	43	eP	P	15 01 25.2	-2.4
	comp=Z,23nm,1.6s						
XAN	Xi'an	87.42	43	eP	P	15 01 25.2	-2.4
XAN				pmax	pmax		
	comp=Z,23nm,1.6s						
DRGR		87.55	340	⇑iP	P	15 01 28.0	+0.1
DRGR		87.55	340	⇑P	P	15 01 28.1	+0.1
BURAR	Bucovina Array	87.63	341	⇓iP	P	15 01 29.6	+1.2
BURAR	Bucovina Array	87.63	341	⇓P	P	15 01 29.6	+1.2
BUR04	Bucovina Ar. S	87.64	341	eP	P	15 01 28.5	+0.1
BUR08	Bucovina Ar. S	87.67	341	eP	P	15 01 29.0	+0.5
VRH	Novokhopyorsk	88.14	353	eP	P	15 01 29.9	-0.6
VRH				pmax	pmax		
	comp=Z,30nm,1.1s						
VSR	Storozhevoye	88.44	351	⇓eP	P	15 01 31.4	-0.5
VSR				pmax	pmax		
	comp=Z,37nm,1.1s						
GO06	Curarrehue	88.64	219	eP	P	15 01 34.3	+0.6
	comp=Z,11nm,0.8s						
TATO	Taipei	88.80	57	P	P	15 01 34.9	+0.6
TRPA	Tarpa	88.82	340	⇑iP	P	15 01 34.5	+0.7
URZ	Urewera	89.13	139	LR	LR	15 34 43.3	
	comp=Z,143nm,19.7s,baz=182,slow=31						
UZH	Uzhgorod	89.34	340	eP	P	15 01 37.3	+1.0
UZH				e		15 01 40.5	
CPUP	Villa Florida	89.51	237	eP	P	15 01 38.3	+0.5
	comp=Z,20nm,1.0s						
CPUP	Villa Florida	89.51	237	eP	P	15 01 38.3	+0.5
CPUP				pmax	pmax		
	comp=Z,20nm,1.0s						
CPUP	Villa Florida	89.51	237	P	P	15 01 39.0	+1.1
	comp=Z,16nm,0.9s,baz=126,slow=3.9,SNR=33						
CPUP				LR	LR	15 35 08.6	
	comp=Z,47nm,19.2s,baz=198,slow=31						
BDFB	Brasilia	89.56	251	eP	P	15 01 39.0	+0.6
	comp=Z,17nm,1.1s						
BDFB	Brasilia	89.56	251	P	P	15 01 39.3	+0.9
	comp=Z,10nm,0.9s,baz=116,slow=3.7,SNR=13						
AK11	Malin Array Si	89.58	345	eP	P	15 01 36.0	-1.3
KIEV	Kiev	89.59	345	eP	P	15 01 36.7	-0.7
	comp=Z,10nm,0.8s						
KIEV	Kiev	89.59	345	⇑iP	P	15 01 37.2	-0.2
KIEV	Kiev	89.59	345	c iP	P	15 01 36.8	-0.6
KIEV				pmax	pmax		
	comp=Z,13nm,0.9s						
AKASG	Malin Array Be	89.59	345	P	P	15 01 37.0	-0.4
	comp=Z,7.9nm,0.8s,baz=168,slow=4.4,SNR=21						
AKBB	Malin Array Si	89.59	345	eP	P	15 01 36.6	-0.8
	comp=Z,11nm,0.8s						
AKBB	Malin Array Si	89.59	345	eP	P	15 01 36.6	-0.8
AKBB				pmax	pmax		
	comp=Z,11nm,0.8s						
LPSR	Galich'ya Gora	89.83	351	eP	P	15 01 37.6	-0.8
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SOKA	Soboth	89.85	335	eP	P	15 01 39.3	+0.5
	comp=Z,10nm,1.2s						
KURK	Kurchatov	89.87	16	eP	P	15 01 38.8	+0.1
	comp=Z,10nm,1.3s						
KURK	Kurchatov	89.87	16	⇓iP	P	15 01 40.4	+1.7
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARSA	Arzberg	90.18	335	ePcP	P	15 01 43.1	+2.8
	comp=Z,2.4nm,0.9s						
VYHS	Vyhne	90.22	338	eP	P	15 01 41.7	+1.3
VYHS	Vyhne	90.22	338	eP	P	15 01 41.7	+1.3
BRVK	Borovoye	90.62	10	eP	P	15 01 42.0	-0.1
	comp=Z,10nm,1.5s						
BRVK	Borovoye	90.62	10	⇑eP	P	15 01 41.8	-0.3
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
CONA	Conrad Observa	90.66	336	eP	P	15 01 43.4	+0.8
	comp=Z,4.2nm,1.2s						
KBA	Koelnbreinsper	90.78	334	eP	P	15 01 45.0	+1.8
	comp=Z,11nm,1.4s						
ABTA	Abfaltersbach	90.79	333	eP	P	15 01 44.6	+1.4
	comp=Z,10.0nm,0.9s						
MOA	Molln	91.12	335	eP	P	15 01 45.6	+1.0
	comp=Z,6.4nm,1.1s						
DGZ	Jazzator, Alta	91.19	21	ceP	P	15 01 46.5	+1.4
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.9s						
FUORN	Ofenpass-Fuorn	91.52	332	eP	P	15 01 46.5	-0.3
	comp=Z,23nm,1.6s						
WTTA	Wattenberg	91.55	333	eP	P	15 01 47.8	+0.9
	comp=Z,6.9nm,0.9s						
WATA	Walderalm	91.63	333	eP	P	15 01 48.1	+0.9
	comp=Z,6.8nm,0.9s						
SQTA	Sankt Quirin	91.67	333	eP	P	15 01 47.9	+0.6
	comp=Z,12nm,1.1s						
FETA	Feichten	91.68	332	eP	P	15 01 48.3	+0.9
	comp=Z,9.2nm,1.0s						
MOTA	Moosalm	91.81	333	eP	P	15 01 49.0	+0.9
	comp=Z,6.6nm,0.9s						
NJ2	Nanjing	91.83	51	eP	P	15 01 50.2	+1.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
RETA	Reutte	92.06	333	eP	P	15 01 50.2	+1.2
	comp=Z,5.2nm,0.7s						
GEA0	GERESS Array S	92.17	335	eP	P	15 01 48.9	-0.6
GERES	GERESS Array B	92.17	335	P	P	15 01 49.5	-0.1
	comp=Z,1.4nm,0.9s,baz=161,slow=5.2,SNR=8.5						
DAVA	Damuels	92.22	332	eP	P	15 01 50.9	+0.9
	comp=Z,5.9nm,0.9s						
KHC	Kasperske Hory	92.46	335	eP	P	15 01 51.0	+0.2
KHC	Kasperske Hory	92.46	335	eP	P	15 01 51.0	+0.2
ES19	SONSECA Array	92.46	320	eP	P	15 01 50.1	-1.0
ESDC	Sonseca Array	92.47	319	P	P	15 01 51.4	+0.2
	comp=Z,2.0nm,0.8s,baz=146,slow=3.2,SNR=9.9						
ESDC				LR	LR	15 44 11.0	
	comp=Z,78nm,18.6s,baz=30,slow=36						
OBN	Obninsk	92.59	350	⇑eP	P	15 01 52.0	+0.8
OBN				e		15 05 31.6	
OBN				eSS	SS	15 19 16.7	+8.8
OBN				pmax	pmax		
	comp=Z,13nm,1.4s						
OBN				MLR	MLR		
	comp=Z,52nm,17.0s						
DPC	Dobruska-Polom	92.63	337	eP	P	15 01 52.5	+0.9
DPC	Dobruska-Polom	92.63	337	eP	P	15 01 52.5	+0.9
ARU	Arti	92.89	3	eP	P	15 01 51.9	-0.7
	comp=Z,20nm,1.6s						
ARU	Arti	92.89	3	c iP	P	15 01 52.2	-0.4
ARU						15 05 32.7	
ARU				S	SKSac	15 12 25.1	-0.6
ARU				pmax	pmax		
	comp=Z,13nm,1.6s						
PEL	Peldehue	93.03	224	eP	P	15 01 52.9	-1.3
	comp=Z,47nm,1.7s						
PEL	Peldehue	93.03	224	eP	P	15 01 52.9	-1.3
PEL				pmax	pmax		
	comp=Z,47nm,1.7s						
BRG	Berggiesshubel	93.84	336	eP	P	15 01 57.6	+0.5
	comp=Z,8.9nm,1.2s						
BRG	Berggiesshubel	93.84	336	eP	P	15 01 57.6	+0.5
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HHC	Hu-ho-hao-te	93.85	40	eP	P	15 01 58.4	+0.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,92nm,7.2s						
DZM	Mont Dzumac	94.05	121	eLR	LR	15 32 19.0	
	comp=Z,212nm,30.9s						
ZAA0	Zalesovo Array	94.32	18	eP	P	15 01 57.7	-1.5
	comp=Z,7.4nm,0.9s						
ZALV	Zalesovo Beam	94.32	18	eP	P	15 01 57.1	-2.1
ZALV	Zalesovo Beam	94.32	18	P	P	15 01 57.9	-1.3
	comp=Z,6.5nm,0.8s,baz=220,slow=3.9,SNR=23						
ZALV				LR	LR	15 40 26.8	
	comp=Z,54nm,21.9s,baz=80,slow=33						
CLL	Collm	94.52	336	eP	P	15 02 00.0	-0.2
CLL				L	L	15 39 00.0	
	comp=Z,100nm,18.6s						
CLL	Collm	94.52	336	eP	P	15 02 00.0	-0.2
NVS	Novosibirsk	94.75	17	eP	P	15 01 55.9	-5.2
NVS				pmax	pmax		
	comp=N,6.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KNGR	Kungurtug, Tuv	95.27	27	⇓eP	P	15 02 03.4	-0.4
LCO	Las Campanas	96.11	227	eP	P	15 02 07.8	-0.8

	comp=Z,9.1nm,1.0s						
LCO	Las Campanas	96.11	227	*e*P	P	15 02 07.8	-0.8
LCO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SONM	Songino Array	96.59	33	P	P	15 02 10.2	+0.2
	comp=Z,0.4nm,0.8s,baz=221,slow=5.1,SNR=4.2						
SONM				PP	PP	15 06 06.6	+1.7
	comp=Z,0.8nm,1.1s,baz=207,slow=6.3,SNR=3.9						
SONM				LR	LR	15 42 13.8	
	comp=Z,101nm,20.9s,baz=202,slow=33						
VSU	Vasula	97.39	346⇓	*e*P	Pdif	15 02 13.2	+0.1
VSU				pmax	pmax		
	comp=Z,27nm,0.8s						
PRGR	Permogore	98.21	356	*e*P	P	15 02 16.2	-0.5
PRGR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TIXI	Tiksi	120.08	21⇓	*e*PKIKP	PKPdf	15 07 29.0	-0.9
PPT2	Papeete2	121.83	154	*e*LR	LR	15 45 11.7	
	comp=Z,86nm,23.0s						
MA2	Magadan	124.44	38⇓	*e*PKIKP	PKiKP	15 07 39.1	+0.2
SEY	Seymchan	125.97	34⇑	*i*PKIKP	PKiKP	15 07 42.3	+0.4
BILL	Bilibino	132.03	28⇑	*e*PKIKP	PKPdf	15 07 53.0	+0.1
BILL				pmax	pmax		
	comp=Z,11nm,2.1s						
TULEG	Thule	132.75	344	*e*PKPdf	PKPdf	15 07 54.1	+0.1
TAOE	Nuku Hiva Isla	132.94	162	*e*LR	LR	15 50 21.0	
	comp=Z,75nm,23.3s						
X56A	White Oak	143.07	280	P	PKPbc	15 08 11.6	+0.5
	baz=107						
G53A	Haliburton	143.18	298	P	PKPbc	15 08 11.8	+0.7
	baz=94						
BLA	Blacksburg	143.31	285	P	PKPbc	15 08 11.6	-0.2
	baz=104						
P55A	Reedsville	143.34	289	P	PKPbc	15 08 12.3	+0.6
	baz=101						
Q55A	Buckhannon	143.43	288	P	PKPbc	15 08 12.7	+0.7
	baz=101						
KMSC	Kings Mountain	143.49	281	*e*PKPpre	PKPbc	15 08 11.8	-0.5
KMSC	Kings Mountain	143.49	281	P	PKPbc	15 08 12.8	+0.5
	baz=106						
S55A	Lewisburg	143.50	286	P	PKPbc	15 08 12.9	+0.7
	baz=103						
355A	Pearson	143.51	275	P	PKPbc	15 08 12.8	+0.4
	baz=111						
X55A	Gracelyn & Ava	143.54	280	P	PKPbc	15 08 12.4	0.0
	baz=107,SNR=5.2						
M54A	Oil Creek Stat	143.55	292	*e*PKPdf	PKPbc	15 08 13.6	+1.3
M54A	Oil Creek Stat	143.55	292	P	PKPbc	15 08 12.7	+0.4
	baz=98						
155A	Kite	143.63	277	P	PKPbc	15 08 12.7	0.0
	baz=109,SNR=6.9						
F52A	Sundridge	143.71	300	P	PKPbc	15 08 12.7	+0.2
	baz=93						
D51A	Lot 18 Range I	143.78	302	P	PKPbc	15 08 12.7	0.0
	baz=91						
P54A	Burton	143.85	289	P	PKPbc	15 08 13.4	+0.2
	baz=100						
E51A	G1948 Merrick	143.85	301	P	PKPbc	15 08 13.0	0.0
	baz=92						
ERPA	Erie	143.87	293	P	PKPbc	15 08 13.5	+0.3
	baz=97						
O54A	Avella	143.87	290	P	PKPbc	15 08 13.5	+0.2
	baz=100						
ANM	Nome	143.88	27	*e*PKPdf	PKPbc	15 08 13.4	+1.0
ANM	Nome	143.88	27	*e*PKIKP	PKPbc	15 08 13.4	+0.9
454A	Quitman	143.91	273	P	PKPbc	15 08 13.7	+0.1
	baz=111						
R54A	Victor	143.96	286	P	PKPbc	15 08 13.6	0.0
	baz=102						
HODGE	Hodges	143.97	280	*e*PKPdf	PKPbc	15 08 13.4	-0.2
Q54A	Coxs Mills	144.00	288	P	PKPbc	15 08 13.6	-0.1
	baz=101,SNR=5.4						
254A	Abbeville	144.07	275	P	PKPab	15 08 13.8	+0.2
	baz=110,SNR=5.4						
D50A	G1974 Best Tow	144.10	302	P	PKPbc	15 08 13.6	-0.1
	baz=90,SNR=5.2						
F51A	Arnstein	144.13	300	P	PKPbc	15 08 14.1	+0.3
	baz=92						
Z54A	Sparta	144.13	278	P	PKPbc	15 08 14.0	-0.2
	baz=108,SNR=11						
TIGA	Tifton	144.13	274	P	PKPbc	15 08 14.1	-0.1
	baz=110,SNR=14						
154A	Montrose	144.14	277	*e*PKPdf	PKPbc	15 08 14.2	-0.1
154A	Montrose	144.14	277	P	PKPbc	15 08 14.1	-0.1
	baz=109,SNR=5.4						
T54A	Tazewell	144.17	284	P	PKPbc	15 08 14.2	-0.1
	baz=103,SNR=12						
Y54A	Tignall	144.20	279	P	PKPbc	15 08 14.4	0.0
	baz=107,SNR=17						
M53A	WI Miller and	144.29	292	P	PKPbc	15 08 15.1	+0.6
	baz=98						
KLBO	Killbear Provi	144.31	299	P	PKPbc	15 08 14.9	+0.5
	baz=93						
N53A	Lisbon	144.32	291	P	PKPbc	15 08 15.1	+0.5
	baz=99						
J52A	Paris	144.35	295	P	PKPbc	15 08 15.2	+0.6
	baz=95						
K52A	Tillsonburg	144.48	294	P	PKPab	15 08 14.5	-0.2
	baz=96						
453A	Whigham	144.51	273	P	PKPab	15 08 15.3	+0.1
	baz=111						
O53A	New Philadelph	144.52	290	P	PKPab	15 08 15.0	0.0
	baz=99,SNR=8.2						
P53A	Whipple	144.52	289	*e*PKPdf	PKPbc	15 08 15.4	+0.1
P53A	Whipple	144.52	289	P	PKPab	15 08 14.7	-0.4
	baz=100,SNR=7.0						
353A	Camilla	144.60	274	P	PKPab	15 08 15.6	+0.1
	baz=110,SNR=7.2						
GOGA	Godfrey	144.68	278	*e*PKPdf	PKPab	15 08 15.5	-0.3
GOGA	Godfrey	144.68	278	*e*PKIKP	PKPab	15 08 15.5	-0.3
GOGA	Godfrey	144.68	278	P	PKPbc	15 08 15.9	0.0
	baz=108,SNR=12						
BG3	Lake Jocassee	144.71	281	*e*PKPdf	PKPab	15 08 15.9	0.0
E50A	Wahnapitae	144.71	301	P	PKPbc	15 08 15.7	+0.1
	baz=91						
Z53A	Monticello	144.72	277	P	PKPab	15 08 15.9	0.0
	baz=108,SNR=18						
153A	Fort Valley	144.73	276	P	PKPab	15 08 15.8	-0.2
	baz=109						
R53A	Hurricane	144.73	286	P	PKPbc	15 08 16.0	0.0
	baz=102						
S53A	Williamson	144.74	285	P	PKPab	15 08 16.0	0.0
	baz=102,SNR=12						
253A	Americus	144.78	275	P	PKPbc	15 08 16.3	0.0
	baz=110,SNR=6.7						
U53A	Fall Branch	144.78	283	P	PKPab	15 08 16.0	-0.1
	baz=104,SNR=18						
I51A	Listowel	144.80	296	P	PKPab	15 08 15.8	-0.2
	baz=94						
V53A	Saluda	144.80	282	*e*PKPdf	PKPab	15 08 15.9	-0.3
V53A	Saluda	144.80	282	P	PKPab	15 08 16.2	-0.1
	baz=105,SNR=16						
M52A	Chesterland	144.81	292	P	PKPbc	15 08 16.3	+0.1
	baz=97						
X53A	Estanollee	144.87	280	P	PKPab	15 08 16.2	-0.3
	baz=106,SNR=12						
T53A	Wise	144.90	284	P	PKPbc	15 08 16.7	+0.1
	baz=103,SNR=5.3						
Y53A	Monroe	144.91	278	P	PKPab	15 08 16.3	-0.3
	baz=107,SNR=12						
W53A	Cullowhee	144.94	281	P	PKPab	15 08 16.4	-0.5
	baz=106,SNR=12						
N52A	McGinn’s Farm,	144.96	291	P	PKPab	15 08 16.1	-0.5
	baz=98						
O52A	Adamsville	144.97	290	*e*PKPbc	PKPab	15 08 16.4	-0.2
O52A	Adamsville	144.97	290	P	PKPbc	15 08 16.8	+0.2
	baz=99,SNR=9.2						
BMRO	Meriville Lake	144.99	297	P	PKPdf	15 08 17.1	-0.2
	baz=93						
K51A	Iona Station	145.06	294	P	PKPbc	15 08 16.8	0.0
	baz=96						
Q52A	Bidwell	145.10	287	P	PKPab	15 08 17.1	0.0
	baz=100,SNR=10						
P52A	Corning	145.11	289	P	PKPab	15 08 17.3	+0.1
	baz=100,SNR=24						
D49A	Beulah Townshi	145.14	302	P	PKPbc	15 08 16.7	-0.3
	baz=89,SNR=6.8						
452A	Marianna	145.20	273	P	PKPbc	15 08 17.1	-0.6
	baz=111						
TOBO	Tobermory, Bru	145.23	298	P	PKPbc	15 08 17.3	0.0
	baz=92						
252A	Lumpkin	145.24	275	P	PKPbc	15 08 17.6	-0.2
	baz=110,SNR=7.3						
R52A	Catlettsburg	145.27	286	P	PKPdf	15 08 17.9	0.0
	baz=101,SNR=22						
BASO	Ashfield	145.27	296	P	PKPab	15 08 17.6	-0.1
	baz=94,SNR=5.4						
T52A	Hallie	145.28	284	P	PKPab	15 08 18.0	0.0
	baz=103,SNR=7.9						
Y52A	Lilburn	145.29	278	*e*PKPbc	PKPbc	15 08 17.6	-0.4
Y52A	Lilburn	145.29	278	P	PKPbc	15 08 17.9	0.0
	baz=107,SNR=12						
X52A	Dahlonega	145.37	280	P	PKPbc	15 08 18.1	-0.1
	baz=106,SNR=13						
Z52A	Williamson	145.37	277	P	PKPbc	15 08 18.0	-0.2
	baz=108,SNR=14						
M51A	Elyria	145.40	292	P	PKPbc	15 08 17.9	-0.1
	baz=97,SNR=15						
U52A	Thorn Hill	145.41	283	P	PKPbc	15 08 18.0	-0.3
	baz=104						
D48A	Paudash Townsh	145.45	302	P	PKPdf	15 08 17.7	-0.3
	baz=89,SNR=7.7						
152A	Waverly Hall	145.45	276	*e*PKPdf	PKPdf	15 08 18.0	-0.4
152A	Waverly Hall	145.45	276	P	PKPdf	15 08 18.1	-0.4
	baz=109						
V52A	Sevierville	145.46	282	*e*PKPdf	PKPdf	15 08 17.9	-0.5
V52A	Sevierville	145.46	282	P	PKPdf	15 08 18.4	0.0
	baz=104						
S52A	Salyersville	145.47	285	P	PKPdf	15 08 18.3	0.0
	baz=102,SNR=22						
W52A	Murphy	145.53	280	*e*PKPdf	PKPdf	15 08 18.3	-0.2
W52A	Murphy	145.53	280	P	PKPdf	15 08 18.5	0.0
	baz=105						
O51A	Pataskala	145.55	289	P	PKPab	15 08 18.8	0.0
	baz=99,SNR=26						
451A	Vernon	145.57	272	P	PKPdf	15 08 18.2	-0.5
	baz=111						
TZTN	Tazewell	145.59	283	*e*PKPdf	PKPdf	15 08 18.1	-0.5
TZTN	Tazewell	145.59	283	P	PKPdf	15 08 18.5	0.0
	baz=104						
F49A	Sandfield	145.61	299	P	PKPbc	15 08 18.7	+0.2
	baz=91						
351A	Pinckard	145.69	273	P	PKPdf	15 08 18.8	-0.1
	baz=110						
E48A	Lockeyer	145.70	301	P	PKPbc	15 08 18.7	-0.1
	baz=90,SNR=8.2						
P51A	Williamsport	145.79	288	*e*PKPdf	PKPdf	15 08 18.4	-0.3
P51A	Williamsport	145.79	288	P	PKPdf	15 08 19.0	+0.2
	baz=99,SNR=6.7						
251A	Midway	145.81	275	P	PKPdf	15 08 19.3	+0.2
	baz=109,SNR=26						
ACSO	Alum Creek Sta	145.85	290	*e*PKPdf	PKPdf	15 08 18.9	+0.1
ACSO	Alum Creek Sta	145.85	290	P	PKPbc	15 08 19.4	0.0
	baz=98,SNR=15						
S51A	Beattyville	145.86	285	*e*PKPdf	PKPbc	15 08 19.3	-0.3
S51A	Beattyville	145.86	285	P	PKPbc	15 08 19.6	0.0
	baz=102,SNR=16						
151A	Opelika	145.89	275	P	PKPbc	15 08 19.6	-0.2
	baz=109,SNR=9.3						
U51A	La Follette	145.92	283	P	PKPdf	15 08 19.3	+0.2
	baz=104,SNR=7.4						
Q51A	Peebles	145.94	287	*e*PKPdf	PKPdf	15 08 19.0	-0.1
Q51A	Peebles	145.94	287	P	PKPbc	15 08 19.6	-0.2
	baz=100,SNR=6.9						
L50A	Kingsville	145.95	293	P	PKPbc	15 08 19.6	-0.1
	baz=96,SNR=11						
R51A	Hillsboro	145.99	286	P	PKPdf	15 08 19.6	+0.4
	baz=101,SNR=11						
T51A	Gray	146.00	284	P	PKPdf	15 08 19.6	+0.3
	baz=103,SNR=14						
V51A	Loudon	146.04	281	*e*PKPdf	PKPbc	15 08 20.0	-0.2
V51A	Loudon	146.04	281	P	PKPdf	15 08 19.6	+0.3
	baz=104,SNR=6.5						
M50A	Fremont	146.05	292	P	PKPbc	15 08 19.9	-0.1
	baz=97,SNR=13						
N50A	Nevada	146.05	290	P	PKPbc	15 08 20.2	+0.2
	baz=98,SNR=23						
CPCT	Cooper Cave	146.09	281	*e*PKPdf	PKPbc	15 08 20.1	-0.2
Y51A	Rockmart	146.10	278	P	PKPbc	15 08 20.1	-0.4
	baz=107,SNR=16						
I49A	Point Hope	146.10	296	P	PKPbc	15 08 20.0	-0.1
	baz=93						
X51A	Calhoun	146.12	279	*e*PKPdf	PKPbc	15 08 20.6	+0.1
X51A	Calhoun	146.12	279	P	PKPbc	15 08 20.3	-0.1
	baz=106,SNR=10.0						
W51A	Cleveland	146.20	280	P	PKPbc	15 08 20.5	-0.2
	baz=105,SNR=6.3						
O50A	Cable	146.32	289	P	PKPbc	15 08 20.6	-0.4
	baz=98,SNR=8.7						
D47A	Chapleau	146.33	302	P	PKPbc	15 08 20.6	-0.2
	baz=88						
P50A	Jamestown	146.38	288	P	PKPdf	15 08 20.4	+0.6
	baz=99,SNR=11						
Q50A	Georgetown	146.39	287	P	PKPbc	15 08 20.8	-0.4
	baz=100,SNR=12						
250A	Grady	146.46	274	*e*PKPdf	PKPdf	15 08 20.8	+0.6
250A	Grady	146.46	274	P	PKPbc	15 08 20.9	-0.7
	baz=109,SNR=5.9						
150A	Eclectic	146.47	275	P	PKPbc	15 08 21.0	-0.5
	baz=108,SNR=7.4						
E47A	Iron Bridge	146.47	301	P	PKPbc	15 08 20.9	-0.2
	baz=89,SNR=7.7						
K49A	Clarkson	146.49	294	P	PKPbc	15 08 21.1	-0.3
	baz=94						
H48A	Harrisville	146.49	297	P	PKPbc	15 08 21.3	0.0
	baz=92						
S50A	Richmond	146.50	285	P	PKPbc	15 08 21.1	-0.4
	baz=102,SNR=10						
R50A	Paris	146.56	286	P	PKPdf	15 08 20.9	+0.7
	baz=101						
U50A	Jamestown	146.57	282	P	PKPbc	15 08 21.6	-0.2
	baz=103,SNR=9.9						
Z50A	Ashland	146.59	276	*e*PKPdf	PKPbc	15 08 21.2	-0.7
Z50A	Ashland	146.59	276	P	PKPbc	15 08 21.4	-0.5
	baz=108						
AAM	Ann Arbor	146.60	293	*e*P	PKPbc	15 08 21.3	-0.3
AAM	Ann Arbor	146.60	293	*e*PKP2	PKPbc	15 08 21.3	-0.3
AAM	Ann Arbor	146.60	293	P	PKPbc	15 08 21.6	0.0
	baz=95						
V50A	Pikevile	146.60	281	P	PKPbc	15 08 21.8	0.0
	baz=104,SNR=6.5						
Y50A	Piedmont	146.63	278	P	PKPbc	15 08 21.9	-0.1
	baz=107						
COLD	Coldfoot	146.63	16	*e*PKPbc	PKPbc	15 08 21.2	+0.2
W50A	Signal Mountai	146.65	280	*e*PKPdf	PKPbc	15 08 21.3	-0.8
W50A	Signal Mountai	146.65	280	P	PKPbc	15 08 21.8	-0.3
	baz=105,SNR=9.9						
L49A	Milan	146.66	293	P	PKPbc	15 08 21.5	-0.4
	baz=95,SNR=7.1						
T50A	Nancy	146.70	283	P	PKPbc	15 08 21.8	-0.4
	baz=102,SNR=6.6						
X50B	Fort Payne	146.72	279	P	PKPbc	15 08 22.3	0.0
	baz=106,SNR=16						
IM3	Indian Mountai	146.72	20	*e*PKPdf	PKPdf	15 08 19.9	+0.3
IM3				*e*PKPbc	PKPbc	15 08 21.7	+0.4
I48A	Sherman Twp	146.75	297	P	PKPbc	15 08 21.4	-0.6
	baz=92						
M49A	Liberty Center	146.75	292	P	PKPbc	15 08 22.0	-0.1
	baz=96,SNR=12						
J48A	Bridge Port	146.76	295	P	PKPdf	15 08 19.9	-0.4
	baz=93						
N49A	Columbus Grove	146.85	291	*e*PKPdf	PKPdf	15 08 20.2	-0.4
N49A				*e*PKPbc	PKPbc	15 08 22.0	-0.4
N49A	Columbus Grove	146.85	291	P	PKPbc	15 08 21.7	-0.7
	baz=97,SNR=16						
O49A	Covington	146.87	289	*e*PKPdf	PKPdf	15 08 19.8	-0.8
O49A				*e*PKPbc	PKPbc	15 08 22.1	-0.4
O49A	Covington	146.87	289	P	PKPbc	15 08 22.1	-0.4
	baz=98,SNR=6.3						
G47A	Hillman	146.88	298	P	PKPbc	15 08 22.3	0.0
	baz=90						
D46A	Sault St. Mari	146.98	301	P	PKPbc	15 08 22.5	-0.1
	baz=88						
K48A	Perry	146.98	294	P	PKPbc	15 08 22.4	-0.3
	baz=94,SNR=7.6						
349A	Repton	146.99	272	P	PKPbc	15 08 22.1	-1.0
	baz=110						
Z49A	Columbiana	147.06	276	P	PKPbc	15 08 22.5	-0.8
	baz=108						
P49A	Miami Univ. Ec	147.07	288	P	PKPbc	15 08 22.1	-0.9
	baz=99,SNR=9.4						
149A	Jones	147.08	275	P	PKPdf	15 08 21.4	+0.2
	baz=108,SNR=11						
H47A	Mio	147.12	297	P	PKPbc	15 08 22.6	-0.5
	baz=91						
Q49A	Aurora	147.12	287	P	PKPbc	15 08 22.3	-1.0
	baz=99						
L48A	N Adams	147.14	292	P	PKPbc	15 08 22.9	-0.3
	baz=95,SNR=6.4						
SWET	Sewanee	147.14	280	*e*PKPbc	PKPbc	15 08 23.1	-0.4
249A	Camden	147.15	274	P	PKPbc	15 08 22.8	-0.7
	baz=109						
Y49A	Blount Mountai	147.16	277	*e*PKPbc	PKPbc	15 08 23.3	-0.3
Y49A	Blount Mountai	147.16	277	P	PKPbc	15 08 22.9	-0.7
	baz=107,SNR=6.7						
E46A	Sault Ste Mari	147.18	301	P	PKPbc	15 08 22.6	-0.6
	baz=88						
S49A	Springfield	147.21	285	P	PKPbc	15 08 22.6	-0.9
	baz=101,SNR=6.8						
R49A	Shelbyville	147.21	286	P	PKPbc	15 08 22.8	-0.7
	baz=100,SNR=11						
V49A	McMinnville	147.26	281	P	PKPbc	15 08 23.3	-0.5
	baz=104,SNR=8.4						
T49A	Edmonton	147.27	283	*e*PKPbc	PKPbc	15 08 23.0	-0.7
T49A	Edmonton	147.27	283	P	PKPbc	15 08 23.0	-0.7
	baz=102,SNR=14						
X49A	Woodville	147.27	278	P	PKPbc	15 08 23.1	-0.7
	baz=106						
M48A	Edgerton	147.31	291	P	PKPbc	15 08 23.0	-0.7
	baz=96						
I47A	Gladwin	147.32	296	P	PKPbc	15 08 23.2	-0.4
	baz=92						
U49A	Red Boiling Sp	147.33	282	P	PKPbc	15 08 23.4	-0.5
	baz=103,SNR=8.3						
W49A	Belvidere	147.38	279	P	PKPbc	15 08 24.1	0.0
	baz=105,SNR=15						
LRAL	Lakeview Retre	147.38	275	*e*PKPdf	PKPdf	15 08 21.4	-0.3
LRAL				*e*PKPbc	PKPbc	15 08 23.3	-0.9
LRAL				*e*PKPbc	PKPbc	15 08 23.8	-0.3
LRAL	Lakeview Retre	147.38	275	P	PKPbc	15 08 23.9	-0.2
	baz=108,SNR=6.1						
GLMI	Grayling	147.42	298	*e*PKPbc	PKPbc	15 08 22.8	-1.1
GLMI	Grayling	147.42	298	P	PKPbc	15 08 23.6	-0.2
	baz=90						
N48A	Decatur	147.48	290	P	PKPbc	15 08 23.5	-0.7
	baz=96,SNR=9.8						
O48A	Farmland	147.50	289	P	PKPbc	15 08 23.2	-1.1
	baz=97,SNR=8.0						
F46A	Macinaw City C	147.51	299	P	PKPbc	15 08 24.0	-0.1
	baz=89						
J47A	Sunmer	147.52	295	P	PKPbc	15 08 23.6	-0.6
	baz=93						
G46A	Petoskey	147.59	299	P	PKPbc	15 08 24.0	-0.3
	baz=89,SNR=5.5						
P48A	Milroy	147.60	288	P	PKPbc	15 08 23.6	-1.0
	baz=98,SNR=7.5						
K47A	Vermontville	147.62	294	P	PKPbc	15 08 23.9	-0.5
	baz=94,SNR=6.2						
L47A	Sherwood	147.72	292	P	PKPbc	15 08 24.3	-0.4
	baz=94,SNR=5.7						
Q48A	North Vernon	147.75	287	P	PKPbc	15 08 24.1	-0.9
	baz=99,SNR=6.1						
R48A	Northridge Ran	147.77	286	P	PKPbc	15 08 24.4	-0.6
	baz=100,SNR=5.7						
Y48A	Jasper	147.78	277	P	PKPbc	15 08 24.8	-0.4
	baz=106,SNR=17						
S48A	Wiedeman Farm,	147.78	284	P	PKPbc	15 08 24.5	-0.6
	baz=101						
E45A	Wooded Hills,	147.78	301	P	PKPbc	15 08 24.7	-0.1
	baz=88						
X48A	Hartselle	147.83	278	*e*PKPbc	PKPbc	15 08 24.6	-0.7
X48A	Hartselle	147.83	278	P	PKPbc	15 08 25.0	-0.3
	baz=106,SNR=16						
H46A	Fife Lake	147.83	297	P	PKPbc	15 08 25.0	0.0
	baz=90,SNR=5.6						
W48A	Pulaski	147.92	279	P	PKPbc	15 08 25.2	-0.3
	baz=105,SNR=10						
U48A	Cassie Pea, Po	147.93	282	P	PKPbc	15 08 25.0	-0.5
	baz=103,SNR=6.5						
T48A	Bowling Green	147.94	283	P	PKPbc	15 08 25.2	-0.4
	baz=102,SNR=11						
M47A	Cromwell	147.98	291	P	PKPbc	15 08 24.9	-0.6
	baz=95,SNR=15						
V48A	Smith Brothers	147.98	280	P	PKPbc	15 08 25.2	-0.5
	baz=104						
N47A	Urbana	147.98	290	P	PKPbc	15 08 24.9	-0.6
	baz=96,SNR=9.8						
I46A	Reed City	148.00	296	P	PKPbc	15 08 24.9	-0.6
	baz=91,SNR=5.9						
F45A	CMU Biological	148.04	299	P	PKPbc	15 08 25.3	-0.2
	baz=88						
WCI	Wyandotte Cave	148.07	285	*e*PKPdf	PKPdf	15 08 22.1	-0.6
WCI				*e*PKPbc	pPKPdf	15 08 25.4	-0.1
WCI	Wyandotte Cave	148.07	285	*e*PKIKP	PKPdf	15 08 22.1	-0.6
WCI				*e*		15 08 25.4	
WCI	Wyandotte Cave	148.07	285	P	PKPbc	15 08 25.2	-0.7
	baz=100						
INK	Inuvik	148.13	5	*e*PKPbc	PKPbc	15 08 24.9	-0.1
G45A	Suttons Bay	148.16	298	P	PKPbc	15 08 25.3	-0.6
	baz=89						
K46A	Dorr	148.19	294	P	PKPbc	15 08 25.6	-0.4
	baz=93						
FYU	Fort Yukon	148.24	14	*e*PKPbc	PKiKP	15 08 26.4	-0.6
P47A	Martinsville	148.25	288	P	PKPbc	15 08 25.7	-0.6
	baz=98						
MLY	Manley	148.26	19	*e*PKPbc	PKPbc	15 08 25.8	+0.2
R47A	Wooly Knot Far	148.26	285	P	PKPbc	15 08 25.9	-0.4
	baz=100,SNR=12						
O47A	Sheridan	148.27	289	P	PKPbc	15 08 25.9	-0.4
	baz=97						
Q47A	Bedord North L	148.29	286	P	PKPbc	15 08 25.4	-1.0
	baz=99,SNR=6.5						
147A	Livingston	148.29	274	*e*PKPbc	PKPbc	15 08 26.4	-0.2
147A	Livingston	148.29	274	P	PKPbc	15 08 25.4	-1.2
	baz=108						
BLO	Bloomington	148.40	287	*e*PKPbc	PKPbc	15 08 26.0	-0.7
S47A	Hartford	148.41	284	P	PKPbc	15 08 25.9	-0.8
	baz=101,SNR=13						
W47A	Westpoint	148.47	279	P	PKPbc	15 08 26.5	-0.5
	baz=104,SNR=7.2						
X47A	Russelville	148.49	278	P	PKPbc	15 08 26.4	-0.7
	baz=105,SNR=10						
U47A	Clarksville	148.50	282	P	PKPbc	15 08 26.8	-0.3
	baz=102,SNR=7.5						
M46A	Old House Fiel	148.53	291	*e*PKPbc	PKPbc	15 08 26.6	-0.3
M46A	Old House Fiel	148.53	291	P	PKPbc	15 08 27.0	+0.1
	baz=95						
L46A	Eue Claire	148.53	292	P	PKPbc	15 08 26.3	-0.6
	baz=94,SNR=5.6						
V47A	Nunnelly	148.55	280	P	PKPbc	15 08 26.7	-0.5
	baz=103,SNR=6.3						
N46A	Monticello	148.77	290	P	PKPbc	15 08 27.4	-0.2
	baz=95						
PLAL	Pickwick Lake	148.78	279	*e*PKPdf	PKPdf	15 08 24.4	+0.4
PLAL				*e*PKPbc	pPKPdf	15 08 26.9	+0.2
WVT	Waverly	148.86	281	*e*PKPdf	PKPdf	15 08 24.3	+0.3
WVT				*e*PKPbc	sPKPdf	15 08 27.5	-0.4
WVT	Waverly	148.86	281	*e*PKIKP	PKPdf	15 08 24.3	+0.3
WVT				*e*		15 08 27.5	
WVT	Waverly	148.86	281	P	PKPbc	15 08 27.3	-0.6
	baz=103						
BPAW	Bear Paw Mtn.	148.92	20	*e*PKPbc	PKPbc	15 08 27.1	-0.2
MDM	Murphy Dome	148.96	18	*e*PKPbc	PKPbc	15 08 27.0	-0.3
P46A	Rosedale	148.99	288	P	PKPbc	15 08 26.6	-1.5
	baz=97						
SFIN	Lafayette	148.99	289	*e*PKPbc	PKPbc	15 08 27.1	-1.0
SFIN	Lafayette	148.99	289	P	PKPbc	15 08 27.5	-0.6
	baz=96						
R46A	Gibon Southern	149.01	285	P	PKPbc	15 08 27.3	-0.9
	baz=100						
V46A	Holladay	149.01	280	P	PKPbc	15 08 27.6	-0.8
	baz=103,SNR=16						
POKR	Poker Plat Res	149.02	17	P	PKPbc	15 08 27.5	0.0
	baz=326						
E43A	Lone Tree Farm	149.04	301	*e*PKPbc	PKPbc	15 08 28.1	0.0
E43A	Lone Tree Farm	149.04	301	P	PKPbc	15 08 28.3	+0.2
	baz=86,SNR=6.4						
W46A	Michie	149.06	279	P	PKPbc	15 08 28.3	-0.2
	baz=104						
X46A	Booneville	149.08	278	P	PKPbc	15 08 28.0	-0.5
	baz=105,SNR=7.9						
S46A	Don Dixon Farm	149.08	284	P	PKPbc	15 08 27.9	-0.5
	baz=100						
PRP	Porcupine Dome	149.10	15	*e*PKPbc	PKPbc	15 08 28.4	+0.6
T46A	Princeton	149.10	282	P	PKPbc	15 08 28.4	-0.1
	baz=101,SNR=11						
CAST	Castle Rocks	149.12	22	*e*PKPbc	PKPbc	15 08 28.0	+0.2
TCOL	CIGO, UAF Yank	149.12	17	P	PKPbc	15 08 27.2	-0.5
	baz=326						
COLA	College	149.12	17	*e*PKPbc	PKPbc	15 08 27.5	-0.1
COLA	College	149.12	17⇑	*e*PKP2	PKPbc	15 08 26.4	-1.3
U46A	Springville	149.19	281	P	PKPbc	15 08 28.5	-0.3
	baz=102						
F43A	Flat Rock, Esc	149.19	300	P	PKPbc	15 08 28.6	+0.2
	baz=87,SNR=7.3						
P45A	Graceland, Par	149.39	287	*e*PKPbc	PKPbc	15 08 28.4	-0.7
P45A	Graceland, Par	149.39	287	P	PKPbc	15 08 28.8	-0.3
	baz=97						
WRH	Wood River Hil	149.39	18	*e*PKPbc	PKPbc	15 08 27.9	-0.5
FCC	Fort Churchill	149.41	327	*e*PKPbc	PKPbc	15 08 28.1	-0.5
IL1	Eielson Array	149.44	17	*e*PKPbc	PKPbc	15 08 27.6	-0.9

ILAR	Eielson Array	149.44	17	PKPbc	PKPbc	15 08 27.6	-0.9
	comp=Z,36nm,0.9s,baz=311,slow=2.9,SNR=148						
ILB	Eielson Array	149.44	17	ePKPbc	PKPbc	15 08 27.6	-0.9
O45A	Potomac	149.45	289	P	PKPbc	15 08 28.5	-0.8
	baz=96						
PPLA	Purkeypile	149.47	23	ePKPbc	PKPbc	15 08 29.0	+0.1
OLIL	Olney	149.55	286	ePKPdf	PKPdf	15 08 25.1	+0.1
OLIL				ePKPbc	PKPbc	15 08 29.8	+0.2
G43A	Wallace	149.59	299	ePKPbc	PKPbc	15 08 29.4	-0.1
G43A	Wallace	149.59	299	P	PKPbc	15 08 29.3	-0.1
	baz=87						
145A	Houston Renfro	149.60	273	P	PKPbc	15 08 28.7	-1.2
	baz=108						
Q45A	Warren Harvey,	149.62	286	P	PKPbc	15 08 29.3	-0.4
	baz=98,SNR=9.3						
TRF	Thorofare Moun	149.62	21	ePKPbc	PKPbc	15 08 29.7	+0.5
R45A	Skylar, Fairfi	149.63	285	P	PKPbc	15 08 29.4	-0.3
	baz=99						
U45A	Rockin P Farm,	149.65	281	P	PKPbc	15 08 29.5	-0.4
	baz=102						
V45A	Humboldt	149.67	280	P	PKPbc	15 08 29.2	-0.8
	baz=103						
E42A	Champion	149.67	301	P	PKPbc	15 08 29.3	-0.4
	baz=85,SNR=6.6						
W45A	Hickory Valley	149.71	278	P	PKPbc	15 08 29.5	-0.6
	baz=104						
HDA	Harding Lake	149.72	17	ePKPbc	PKPbc	15 08 28.6	-0.6
HDA	Harding Lake	149.72	17	P	PKPbc	15 08 28.8	-0.4
	baz=326						
OXF	Oxford	149.73	277	ePKPbc	PKPbc	15 08 29.3	-0.8
OXF	Oxford	149.73	277	P	PKPbc	15 08 29.5	-0.7
	baz=105						
L44A	Lake County Fo	149.74	292	P	PKPbc	15 08 30.1	+0.1
	baz=93						
S45A	Carrier Mills	149.76	283	P	PKPbc	15 08 30.1	0.0
	baz=100,SNR=6.0						
MCK	McKinley	149.77	20	ePKPbc	PKPbc	15 08 29.6	+0.2
M44A	Midewin, Midew	149.79	291	P	PKPbc	15 08 30.0	-0.1
	baz=94						
F42A	Maple Grove Fa	149.87	300	P	PKPbc	15 08 30.3	+0.1
	baz=86						
I43A	Langenfeld Bro	149.95	296	P	PKPbc	15 08 30.5	+0.1
	baz=90						
O44A	Mansfield	150.01	288	P	PKPbc	15 08 30.6	-0.1
	baz=96,SNR=7.6						
P44A	Sand Creek, Wi	150.05	287	P	PKPbc	15 08 30.8	0.0
	baz=97,SNR=11						
RND	Reindeer	150.06	20	ePKPbc	PKPbc	15 08 30.4	+0.2
D41A	Chassel	150.06	302	ePKPbc	PKPbc	15 08 30.8	+0.2
D41A	Chassel	150.06	302	P	PKPbc	15 08 30.9	+0.3
	baz=84,SNR=5.3						
K43A	Burlington	150.07	294	ePKPbc	PKPbc	15 08 30.7	0.0
K43A	Burlington	150.07	294	P	PKPbc	15 08 30.8	0.0
	baz=91						
U44B	Burton Farm, H	150.11	281	P	PKPbc	15 08 31.1	0.0
	baz=102						
G42A	Mountain	150.11	299	ePKPbc	PKPbc	15 08 30.9	+0.1
G42A	Mountain	150.11	299	P	PKPbc	15 08 30.8	+0.1
	baz=87						
J43A	Natural Harves	150.15	295	P	PKPbc	15 08 30.9	0.0
	baz=90						
R44A	Waltonville	150.24	284	P	PKPbc	15 08 31.1	-0.2
	baz=99						
SIUC	Southern Illin	150.26	283	ePKPbc	PKPbc	15 08 31.5	+0.1
Q44A	Meyer Farm, Va	150.28	286	ePKPbc	PKPbc	15 08 30.9	-0.5
Q44A	Meyer Farm, Va	150.28	286	P	PKPbc	15 08 31.0	-0.3
	baz=98,SNR=7.9						
S44A	Carbondale	150.29	283	P	PKPbc	15 08 31.5	+0.1
	baz=100,SNR=6.3						
C40A	Isle Royale Na	150.34	304	P	PKPbc	15 08 31.2	0.0
	baz=82						
L43A	Garden Prairie	150.36	292	P	PKPbc	15 08 31.6	+0.2
	baz=92,SNR=21						
E41A	Kenton	150.39	301	P	PKPbc	15 08 31.4	0.0
	baz=84,SNR=9.7						
M43A	Waltham Townsh	150.49	291	P	PKPbc	15 08 31.6	-0.2
	baz=93,SNR=7.6						
I42A	Draeger Farm,	150.50	296	ePKPbc	PKPbc	15 08 31.8	0.0
I42A	Draeger Farm,	150.50	296	P	PKPbc	15 08 31.8	0.0
	baz=89						
COWI	Conover	150.54	300	ePKPdf	PKPdf	15 08 26.8	+0.3
COWI				ePKPbc	PKPbc	15 08 32.1	+0.3
F41A	Three Lakes	150.55	300	ePKPdf	PKPdf	15 08 26.4	0.0
F41A				ePKPbc	PKPbc	15 08 31.5	-0.4
F41A	Three Lakes	150.55	300	P	PKPbc	15 08 31.7	-0.2
	baz=86						
N43A	Stutzman Famil	150.62	290	P	PKPbc	15 08 32.2	+0.1
	baz=94,SNR=7.4						
J42A	Columbus	150.66	295	P	PKPbc	15 08 32.4	+0.3
	baz=90,SNR=6.2						
O43A	Sugar Creek Fa	150.67	289	P	PKPbc	15 08 32.2	0.0
	baz=95						
HDIL	Hopedale	150.68	289	ePKPbc	PKPbc	15 08 32.3	+0.1
HDIL	Hopedale	150.68	289	P	PKPbc	15 08 32.1	-0.2
	baz=95						
DHY	Denali Highway	150.72	19	ePKPbc	PKiKP	15 08 32.2	-0.3
P43A	Skaggs, Pawnee	150.76	287	P	PKPbc	15 08 32.5	0.0
	baz=96,SNR=7.7						
SCRK	Sand Creek	150.77	16	ePKPbc	PKPbc	15 08 32.1	+0.2
RIDG	Independ'e Rid	150.79	16	ePKPbc	PKPbc	15 08 31.8	-0.1
Q43A	New Douglas	150.82	286	P	PKiKP	15 08 33.1	-0.2
	baz=97						
K42A	Prairie Point,	150.82	294	P	PKPbc	15 08 32.8	+0.2
	baz=91,SNR=5.9						
R43A	Red Bud	150.91	284	P	PKPbc	15 08 32.5	-0.4
	baz=98,SNR=5.5						
S43A	Fulton Ridge,	150.91	283	P	PKPbc	15 08 32.9	0.0
	baz=100,SNR=15						
SUA	Susitna One	150.99	24	ePKPbc	PKPbc	15 08 32.2	-0.2
T43A	Greenville	150.99	282	P	PKPbc	15 08 33.2	+0.1
	baz=100,SNR=22						
H41A	Junction City	151.01	297	ePKPbc	PKPbc	15 08 32.3	-0.7
H41A	Junction City	151.01	297	P	PKPbc	15 08 32.7	-0.3
	baz=87						
L42A	Oliver, Polo	151.04	292	ePKPbc	PKPbc	15 08 33.2	+0.1
L42A	Oliver, Polo	151.04	292	P	PKiKP	15 08 33.6	-0.1
	baz=92,SNR=12						
PBMO	Poplar Bluff	151.05	281	ePKPdf	PKPdf	15 08 28.6	+1.2
PBMO				ePKPbc	PKPbc	15 08 32.9	-0.3
M42A	Sheffield	151.09	291	P	PKPbc	15 08 33.5	+0.3
	baz=93						
I41A	Arkdale	151.19	296	ePKPbc	PKPbc	15 08 33.0	-0.4
I41A	Arkdale	151.19	296	P	PKPbc	15 08 32.9	-0.4
	baz=88,SNR=8.6						
SLM	Saint Louis	151.19	285	ePKPbc	PKPbc	15 08 33.2	-0.3
F40A	Park Falls	151.25	300	P	PKPbc	15 08 33.2	-0.3
	baz=84						
O42A	Bath	151.25	288	P	PKPbc	15 08 33.5	-0.1
	baz=95						
FVM	French Village	151.25	284	ePKPdf	PKPdf	15 08 27.4	-0.3
FVM				ePKPbc	PKPbc	15 08 33.6	-0.1
FVM				ePKPab	PKPab	15 08 42.5	+0.7
FVM	French Village	151.25	284	ePKIKP	PKPdf	15 08 27.4	-0.3
FVM				e		15 08 33.6	
N42A	Yates City	151.26	290	P	PKPbc	15 08 33.4	-0.2
	baz=94,SNR=7.2						
J41A	Loganville	151.31	295	P	PKPbc	15 08 33.5	-0.2
	baz=89,SNR=5.5						
G40A	Rib Lake	151.36	299	ePKPbc	PKPbc	15 08 33.3	-0.5
G40A	Rib Lake	151.36	299	P	PKPbc	15 08 33.6	-0.1
	baz=85						
P42A	Winchester	151.39	287	ePKPbc	PKPbc	15 08 33.5	-0.4
P42A	Winchester	151.39	287	P	PKPbc	15 08 33.9	-0.1
	baz=96,SNR=6.4						
PMR	Palmer	151.40	22	ePKPbc	PKPbc	15 08 33.1	-0.2
SML	Sawmill	151.47	22	ePKPbc	PKiKP	15 08 33.8	-0.1
JFWS	Jewell Farm	151.49	294	ePKPdf	PKPdf	15 08 27.8	-0.1
JFWS				ePKPbc	PKiKP	15 08 34.4	-0.2
JFWS	Jewell Farm	151.49	294	ePKIKP	PKPdf	15 08 27.8	-0.1
JFWS				e		15 08 34.4	
JFWS	Jewell Farm	151.49	294	P	PKPbc	15 08 34.1	0.0
	baz=90,SNR=7.4						
E39A	Mellen	151.50	301	P	PKPbc	15 08 34.0	0.0
	baz=83,SNR=7.3						
S42A	Caledonia	151.50	283	P	PKPbc	15 08 34.2	-0.1
	baz=99,SNR=9.5						
K41A	Shullsburg	151.53	293	P	PKPbc	15 08 34.3	+0.1
	baz=90,SNR=8.2						
H40A	Chili	151.53	297	P	PKPbc	15 08 34.0	-0.2
	baz=86,SNR=7.9						
DAWY	Dawson	151.56	12	ePKPbc	PKPbc	15 08 33.7	+0.1
R42A	Luebbering	151.58	284	P	PKPbc	15 08 34.5	+0.1
	baz=98,SNR=6.2						
RC01	Rabbit Creek A	151.59	24	ePKPbc	PKPbc	15 08 33.9	+0.1
W42A	Bald Knob	151.60	278	P	PKPbc	15 08 34.2	-0.3
	baz=103						
U42A	Revenden	151.60	280	P	PKPbc	15 08 34.0	-0.6
	baz=101,SNR=6.6						
V42A	Cord	151.61	279	P	PKPbc	15 08 34.5	-0.1
	baz=102						
T42A	Van Buren	151.61	281	ePKPbc	PKPbc	15 08 34.1	-0.4
T42A	Van Buren	151.61	281	P	PKPbc	15 08 34.3	-0.2
	baz=100,SNR=12						
L41A	Preston	151.66	292	P	PKPbc	15 08 34.4	-0.1
	baz=91,SNR=9.5						
M41A	Milan	151.67	291	P	PKPbc	15 08 34.5	0.0
	baz=92,SNR=5.8						
I40A	Norwalk	151.73	296	P	PKPbc	15 08 34.6	0.0
	baz=88						
F39A	Loretta	151.80	300	P	PKPbc	15 08 34.7	0.0
	baz=84						
J40A	Soldiers Grove	151.84	295	P	PKPbc	15 08 34.6	-0.3
	baz=88						
O41A	Passleys Farm,	151.85	288	P	PKPbc	15 08 34.7	-0.3
	baz=95,SNR=6.0						
N41A	Harden Midland	151.87	289	ePKPbc	PKPbc	15 08 34.7	-0.3
N41A	Harden Midland	151.87	289	P	PKPbc	15 08 34.8	-0.2
	baz=94						
EYMN	Ely	151.89	305	ePKPdf	PKPdf	15 08 28.8	+0.4
EYMN				ePKPbc	PKPbc	15 08 34.6	-0.3
EYMN	Ely	151.89	305	P	PKPbc	15 08 34.7	-0.2
	baz=79,SNR=9.3						
CCM	Cathedral Cave	151.90	284	ePKPbc	PKPbc	15 08 35.0	-0.2
CCM	Cathedral Cave	151.90	284	P	PKiKP	15 08 35.4	-0.1
	baz=98						
P41A	Barry, Barry	151.95	287	P	PKPbc	15 08 35.3	0.0
	baz=95						
Q41A	Truxton	152.00	285	P	PKPbc	15 08 35.5	+0.1
	baz=97,SNR=7.0						
G39A	Holcombe	152.04	299	P	PKPbc	15 08 35.2	-0.1
	baz=85,SNR=6.4						
R41A	Rosebud	152.04	284	P	PKPbc	15 08 35.3	-0.2
	baz=98,SNR=9.0						
Y41A	Eaglette Beard	152.12	274	P	PKPbc	15 08 35.9	+0.1
	baz=106						
UALR	University of	152.13	276	ePKPbc	PKPbc	15 08 35.5	-0.2
U41A	Viola	152.14	280	P	PKPbc	15 08 35.7	-0.1
	baz=101,SNR=6.8						
K40A	Colesburg	152.14	293	P	PKPbc	15 08 35.5	0.0
	baz=90						
T41A	Mountain View	152.15	281	P	PKPbc	15 08 35.7	-0.1
	baz=100,SNR=6.7						
E38A	The Farm, Brul	152.15	302	ePKPbc	PKPbc	15 08 35.3	-0.2
E38A	The Farm, Brul	152.15	302	P	PKPbc	15 08 35.4	0.0
	baz=82						
W41B	Gary Mavity, V	152.15	277	ePKPbc	PKPbc	15 08 35.9	+0.1
W41B	Gary Mavity, V	152.15	277	P	PKPbc	15 08 35.7	-0.1
	baz=103,SNR=11						
H39A	Augusta	152.17	298	P	PKPbc	15 08 35.5	-0.1
	baz=86						
L40A	Anamosa	152.20	292	ePKPab	PKPab	15 08 45.6	+0.1
L40A	Anamosa	152.20	292	P	PKPbc	15 08 35.6	-0.1
	baz=91						
X41A	Kaden, Bauxite	152.20	276	P	PKPbc	15 08 36.0	+0.1
	baz=104						
WHAR	Wooly Hollow	152.21	277	ePKPbc	PKPbc	15 08 35.4	-0.5
V41A	Mountainview	152.21	279	P	PKPbc	15 08 35.8	-0.2
	baz=102,SNR=6.4						
I39A	Houston	152.39	296	ePKPbc	PKPbc	15 08 35.4	-0.7
I39A				ePKPab	PKPab	15 08 46.2	-0.1
I39A	Houston	152.39	296	P	PKPbc	15 08 35.9	-0.2
	baz=87,SNR=7.2						
M40A	Post Highland	152.40	291	P	PKPbc	15 08 35.9	-0.3
	baz=92						
KLU	Klutina	152.41	20	ePKPbc	PKiKP	15 08 36.0	0.0
N40A	Mertquake, Sal	152.44	290	P	PKPbc	15 08 36.0	-0.3
	baz=93						
X40A	Basin Creek Fa	152.46	276	ePKPbc	PKiKP	15 08 36.8	0.0
X40A	Basin Creek Fa	152.46	276	P	PKPbc	15 08 36.3	-0.2
	baz=104						
F38A	Pierce - Schro	152.46	301	P	PKPbc	15 08 36.2	+0.1
	baz=83,SNR=6.0						
G38A	Ridgeland	152.53	299	P	PKPbc	15 08 35.7	-0.7
	baz=84						
J39A	Decorah	152.54	295	P	PKPbc	15 08 36.0	-0.4
	baz=88,SNR=8.0						
K39A	Oelwein	152.69	293	P	PKPbc	15 08 36.5	-0.3
	baz=89,SNR=7.0						
L39A	Vinton	152.78	292	P	PKiKP	15 08 37.2	0.0
	baz=90						
U40A	Yellville	152.88	279	P	PKPbc	15 08 37.1	-0.3
	baz=101						
M39A	Webster	152.90	291	P	PKiKP	15 08 37.5	0.0
	baz=91						
F37A	Hinrichs Farm,	153.01	300	P	PKiKP	15 08 37.6	0.0
	baz=82						
MIAR	Mount Ida	153.06	275	ePKPbc	PKiKP	15 08 38.2	+0.1
MIAR	Mount Ida	153.06	275	P	PKPbc	15 08 37.9	0.0
	baz=104						
YKW3	Yellowknife Ar	153.07	348	ePKPbc	PKPbc	15 08 36.3	-0.6
YKA	Yellowknife Ar	153.13	348	PKP	PKPdf	15 08 28.9	-0.8
	comp=Z,1.4nm,0.8s,baz=25,slow=1.6,SNR=11						
YKA				PKPbc	PKPbc	15 08 36.7	-0.4
	comp=Z,8.0nm,0.8s,baz=17,slow=2.1,SNR=44						
YKA				PKPab	PKPab	15 08 48.3	-0.4
	comp=Z,4.3nm,0.8s,baz=18,slow=4.1,SNR=8.5						
YKB5	Yellowknife Ar	153.13	348	ePKPdf	PKPdf	15 08 28.5	-1.2
YKB5				ePKPbc	PKPbc	15 08 36.6	-0.5
NATX	Nacogdoches	153.13	269	P	PKiKP	15 08 38.2	0.0
	baz=109						
SPMN	Marine on St.	153.19	299	ePKPbc	PKPbc	15 08 37.3	-0.6
SPMN	Marine on St.	153.19	299	P	PKPbc	15 08 37.9	+0.1
	baz=83						
W39A	Magazine	153.38	277	ePKPab	PKPab	15 08 51.5	+0.8
W39A	Magazine	153.38	277	P	PKPab	15 08 50.5	-0.3
	baz=103						
HHAR	Hobbs	153.73	279	ePKPbc	PKPbc	15 08 38.3	-1.0
LNIG	Linares	153.90	251	ePKPbc	PKPbc	15 08 39.2	-0.9
ULM	Lac du Bonnet	154.08	311	ePKPdf	PKPdf	15 08 29.7	-1.8
ULM				ePKPbc	PKPbc	15 08 38.5	-1.0
ULM	Lac du Bonnet	154.08	311	ePKIKP	PKPdf	15 08 29.7	-1.8
ULM	Lac du Bonnet	154.08	311	PKP	PKPdf	15 08 32.8	+1.3
	comp=Z,5.8nm,1.1s,baz=159,slow=4.2,SNR=5.1						
ULM				PKPbc	PKPbc	15 08 39.0	-0.6
	comp=Z,10nm,1.0s,baz=60,slow=2.8,SNR=11						
FFC	Flin Flon	155.27	325	ePKPab	PKPab	15 08 58.1	0.0
ECSD	EROS Data Cent	156.07	296	ePKPab	PKPab	15 09 01.3	-0.7
ECSD	EROS Data Cent	156.07	296	P	PKPab	15 09 01.8	-0.2
	baz=83						
KSU1	Kansas State U	156.19	285	ePKPab	PKPab	15 09 01.9	-0.7
KSU1	Kansas State U	156.19	285	P	PKPab	15 09 02.6	0.0
	baz=94						
JCT	Junction City	156.79	262	ePKPdf	PKPdf	15 08 36.0	+0.2
JCT				ePKPab	PKPab	15 09 06.0	+0.5
JCT	Junction City	156.79	262	ePKIKP	PKPdf	15 08 36.0	+0.2
JCT	Junction City	156.79	262	P	PKPab	15 09 05.6	+0.1
	baz=113						
WMOK	Wichita Mounta	157.28	273	P	PKPab	15 09 07.1	-0.3
	baz=103						
BGNE	Belgrade	157.39	291	P	PKPab	15 09 07.9	+0.1
	baz=87						
SUSD	Miller	157.63	299	P	PKPab	15 09 09.4	+0.7
	baz=79						
CBKS	Cedar Bluff	158.61	284	P	PKPab	15 09 13.3	+0.2
	baz=93						
TXAR	Lajitas Array	159.36	256	PKP	PKPdf	15 08 40.0	+0.9
	comp=Z,2.6nm,0.9s,baz=145,slow=2.3,SNR=18						
TXAR				PKPab	PKPab	15 09 15.3	-1.4
	comp=Z,3.1nm,0.9s,baz=121,slow=5.9,SNR=9.2						
TX31	Lajitas Ar. Si	159.36	256	ePKPdf	PKPdf	15 08 39.2	+0.1
DGMT	Dagmar	159.78	313	ePKPab	PKPab	15 09 18.7	+0.9
DGMT	Dagmar	159.78	313	P	PKPab	15 09 18.3	+0.4
	baz=63						
MSTX	Muleshoe	160.30	269	ePKPab	PKPab	15 09 20.6	-0.2
MSTX	Muleshoe	160.30	269	P	PKPab	15 09 20.6	-0.2
	baz=105						
RSSD	Black Hills	161.26	300	P	PKPab	15 09 25.3	+0.6
	baz=74						
MNTX	Cornudas Mount	161.68	260	ePKPdf	PKPdf	15 08 41.6	+0.1
MNTX				ePKPab	PKPab	15 09 27.1	+0.4
MNTX	Cornudas Mount	161.68	260	P	PKPab	15 09 27.5	+0.7
	baz=112						
PHWY	Pilot Hill	162.88	292	ePKPdf	PKPdf	15 08 43.3	+0.5
PHWY				ePKPab	PKPab	15 09 32.9	+0.9
SDCO	Great Sand Dun	163.09	280	P	PKPab	15 09 33.1	0.0
	baz=93						
ISCO	Idaho Springs	163.16	287	ePKPdf	PKPdf	15 08 43.7	+0.6
EGMT	Eagleton	163.18	317	ePKPdf	PKPdf	15 08 43.0	+0.5
N23A	Red Feather La	163.30	291	ePKPdf	PKPdf	15 08 43.0	-0.1
N23A				ePKPab	PKPab	15 09 34.7	+0.8
N23A	Red Feather La	163.30	291	P	PKPab	15 09 34.1	+0.2
	baz=82						
K22A	Casper	163.39	297	ePKPdf	PKPdf	15 08 41.0	-2.1
K22A				ePKPab	PKPab	15 09 34.4	+0.3
K22A	Casper	163.39	297	P	PKPab	15 09 34.1	0.0
	baz=76						
ANMO	Albuquerque	163.49	270	ePKPdf	PKPdf	15 08 43.7	+0.3
ANMO	Albuquerque	163.49	270	P	PKPab	15 09 35.4	+0.6
	baz=102						
121A	Cookes Peak, D	163.88	261	P	PKPab	15 09 38.5	+1.9
	baz=110						
S22A	4UR Ranch, Cre	164.14	280	ePKPdf	PKPdf	15 08 44.3	+0.3
RLMT	Red Lodge	164.40	308	ePKPdf	PKPdf	15 08 43.3	-0.6
BW06	Boulder Array	165.50	300	ePKPdf	PKPdf	15 08 43.9	-1.1
PD31	Pinedale Array	165.50	300	ePKPdf	PKPdf	15 08 43.9	-1.1
PDAR	Pinedale Array	165.50	300	ePKPdf	PKPdf	15 08 43.4	-1.6
PDAR				PKPab	PKPab	15 09 43.4	-0.1
PDAR				PP	PP	15 13 31.9	+1.0
PDAR	Pinedale Array	165.50	300	PKP	PKPdf	15 08 44.0	-1.0
	comp=Z,3.0nm,0.9s,baz=76,slow=2.2,SNR=18						
PDAR				PKPab	PKPab	15 09 43.4	-0.1
	comp=Z,1.1nm,0.9s,baz=77,slow=4.7,SNR=2.9						
PDAR				PP	PP	15 13 31.9	+1.0
	comp=Z,1.2nm,1.1s,baz=70,slow=5.3,SNR=4.3						
H17A	Grant Village	165.56	307	ePKPdf	PKPdf	15 08 46.1	+1.1
BOZ	Bozeman (W)	165.61	313	ePKPdf	PKPdf	15 08 43.2	-1.7
BOZ	Bozeman (W)	165.61	313	ePKIKP	PKPdf	15 08 43.2	-1.7
BOZ	Bozeman (W)	165.61	313	P	PKPab	15 09 43.8	+0.1
	baz=57						
YMR	Madison River	165.68	309	ePKPdf	PKPdf	15 08 45.6	+0.6
PV12	Saucer Basin,	165.70	282	ePKPdf	PKPdf	15 08 45.8	+0.5
PV13	Radium Mtn., P	165.72	281	ePKPdf	PKPdf	15 08 44.7	-0.6
PV03	Paradox Valley	165.74	282	ePKPdf	PKPdf	15 08 46.5	+1.2
PV11	David Mesa, Pa	165.76	282	ePKPdf	PKPdf	15 08 46.2	+0.9
PV04	Paradox Valley	165.78	282	ePKPdf	PKPdf	15 08 46.2	+0.9
YHB	Horse Butte	165.78	309	ePKPdf	PKPdf	15 08 44.8	-0.4
PV16	Nyswonger Mesa	165.79	282	ePKPdf	PKPdf	15 08 46.2	+0.8
PV17	East Wray Mesa	165.83	282	ePKPdf	PKPdf	15 08 45.8	+0.5
PV19	Morning Glory	165.84	282	ePKPdf	PKPdf	15 08 43.5	-1.9
PV23	Carpenter Ridg	165.86	282	ePKPdf	PKPdf	15 08 46.0	+0.6
PV14	Lion Creek, Pa	165.88	282	ePKPdf	PKPdf	15 08 45.5	+0.1
LOHW	Long Hollow	165.91	304	ePKPdf	PKPdf	15 08 45.0	-0.2
PV05	Paradox Valley	165.94	281	ePKPdf	PKPdf	15 08 43.9	-1.6
LRM	Limekiln Ridge	165.96	315	ePKPdf	PKPdf	15 08 44.6	-0.7
IMW	Indian Meadow	166.01	306	ePKPdf	PKPdf	15 08 44.7	-0.7
MSO	Missoula	166.14	321	P	PKPab	15 09 44.0	-1.8
	baz=47						
TUC	Tucson	166.16	256	ePKPdf	PKPdf	15 08 46.2	+0.5
TUC	Tucson	166.16	256	P	PKPab	15 09 47.4	+0.9
	baz=113						
REDW	Red Top Meadow	166.17	304	ePKPdf	PKPdf	15 08 45.9	+0.4
FXWY	Fox Creek	166.18	305	ePKPdf	PKPdf	15 08 45.0	-0.5
TPAW	Teton Pass	166.19	304	ePKPdf	PKPdf	15 08 44.4	-1.1
X18A	Snowflake	166.20	266	ePKPdf	PKPdf	15 08 44.1	-1.7
NEW	Newport	166.48	332	ePKPdf	PKPdf	15 08 44.2	-1.1
NEW	Newport	166.48	332	ePKIKP	PKPdf	15 08 44.2	-1.1
SRU	San Rafael Swe	167.00	285	ePKPdf	PKPdf	15 08 46.9	+0.7
SRU	San Rafael Swe	167.00	285	ePKIKP	PKPdf	15 08 46.9	+0.7
TCUT	Toone Canyon	167.31	295	ePKPab	PKPab	15 09 51.0	-0.5
TMUT	Trail Mountain	167.51	287	ePKPdf	PKPdf	15 08 46.8	0.0
WUAZ	Wupatki	167.55	269	ePKPdf	PKPdf	15 08 47.3	+0.6
WUAZ	Wupatki	167.55	269	P	PKPab	15 09 51.9	-0.7
	baz=100						
B05A	Bryant	167.97	345	P	PKPab	15 09 55.2	+1.6
	baz=18						
NLU	North Lily Min	168.07	290	ePKPdf	PKPdf	15 08 48.6	+1.6
E09A	Wood Farm, Sta	168.31	330	ePKPdf	PKPdf	15 08 46.7	0.0
MTPU	Mount Pierson	168.38	281	ePKPdf	PKPdf	15 08 49.8	+2.3
HLID	Hailey	168.38	310	ePKPab	PKPab	15 09 56.8	+0.7
HLID	Hailey	168.38	310	P	PKPab	15 09 56.7	+0.7
	baz=58						
Y14A	Wickenburg	168.48	260	ePKPdf	PKPdf	15 08 46.4	-0.8
BGU	Big Grassy Mou	168.54	296	ePKPdf	PKPdf	15 08 47.0	-0.2
BGU				ePKPab	PKPab	15 09 56.9	0.0
DUG	Dugway, Tooele	168.57	292	ePKPdf	PKPdf	15 08 47.5	+0.3
DUG	Dugway, Tooele	168.57	292	ePKIKP	PKPdf	15 08 47.5	+0.3
DUG	Dugway, Tooele	168.57	292	P	PKPab	15 09 57.4	+0.4
	baz=76						
Y12C	Blythe	169.61	257	ePKPdf	PKPdf	15 08 50.0	+2.2
G08A	Pilot Rock	169.63	328	ePKPdf	PKPdf	15 08 50.2	+2.6
PSUT	Pine Spring	169.65	284	ePKPdf	PKPdf	15 08 47.1	-1.0
F05D	White Salmon	170.03	338	P	PKPab	15 10 03.5	+0.6
	baz=25						
ELK	Elko	170.19	298	ePKPdf	PKPdf	15 08 47.7	-0.6
ELK				ePKPab	PKPab	15 10 04.5	+0.3
ELK	Elko	170.19	298	ePKIKP	PKPdf	15 08 47.7	-0.6
ELK				e		15 10 04.5	
IRM	Iron Mountain	170.23	258	P	PKPab	15 10 04.8	+0.4
	baz=108						
G05D	Wamic, OR	170.56	336	P	PKPab	15 10 04.8	-0.6
	baz=27						
MONP2	Monument Peak	170.73	249	P	PKPab	15 10 05.7	-1.1
	baz=117						
BELC	Belle Mtn. Jos	170.85	256	P	PKPab	15 10 08.4	+1.1
	baz=110						
R11A	Troy Canyon, C	171.02	284	P	PKPab	15 10 08.2	+0.2
	baz=83						
PFO	Pinyon Flats O	171.06	253	PKPab	PKPab	15 10 08.6	+0.4
	comp=Z,3.0nm,0.8s,baz=119,slow=4.4,SNR=3.3						
GSC	Goldstone, Bar	171.86	263	ePKPdf	PKPdf	15 08 48.8	-0.3
GSC	Goldstone, Bar	171.86	263	ePKIKP	PKPdf	15 08 48.8	-0.3
J05D	Fort Rock, OR	172.22	329	P	PKPab	15 10 11.8	-1.1
	baz=34						
FMP	Fort Macarthur	172.50	249	P	PKPab	15 10 14.9	+0.5
	baz=116						
MPMC	Manual Prospec	172.54	268	P	PKPab	15 10 15.5	+0.7
	baz=98						
I03D	Drain, OR	172.57	341	P	PKPab	15 10 14.9	+0.7
	baz=21						
EDW2	Edwards Air Fo	172.69	258	P	PKPab	15 10 17.2	+1.9
	baz=107						
KVN	Kaiserville	172.81	292	ePKPdf	PKPdf	15 08 51.8	+2.2
KVN	Kaiserville	172.81	292	ePKIKP	PKPdf	15 08 51.8	+2.2
NV11	Mina Array Sit	173.00	287	ePKPdf	PKPdf	15 08 51.9	+2.3
NV01	Mina Array Sit	173.12	287	ePKPdf	PKPdf	15 08 49.2	-0.5
NVAR	Mina Array Bea	173.12	287	PKP	PKPdf	15 08 51.7	+1.9
	comp=Z,4.0nm,0.9s,baz=72,slow=1.1,SNR=12						
NVAR				PKPab	pPKPab	15 10 18.8	-1.3
	comp=Z,1.5nm,0.3s,baz=101,slow=3.2,SNR=7.8						
ISA	Isabella, Lake	173.27	263	P	PKPab	15 10 18.9	+1.0
	baz=101						
BEKR	Beckworth	174.11	304	ePKPdf	PKPdf	15 08 51.5	+1.5

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*ISCJB **10** 14:59:00.6±0.6, 45°.55N±0°.02×26°.41E±0°.03, h115^{km}±4^{km},*
Error ellipse: s-maj=3.9km s-min=3.6km az=18.1
*BUC **10** 14:59:00.9±0.3, 45°.56N×26°.41E, h116^{km}±3^{km}, MD3.5/4,*
Error ellipse: s-maj=2.8km s-min=2.4km az=64.0
*SOF **10** 14:59:01.4, 45°.43N×26°.46E, h10^{km}*
ISC 10 14:59:00.8±1.4, **45°.56N**±0°.03×**26°.41E**±0°.03, **h116**^{km}±7^{km},
n73, σ**0^{s}.62**/105, **36C-26D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLR	Muntele Rosu	0.33	258	⇑iP	Pn	14 59 17.6	0.0
MLR	Muntele Rosu	0.33	258	⇑iP	Pn	14 59 17.6	0.0
MLR				iS	Sn	14 59 30.2	0.0
PLOR	Plostina	0.34	30	⇑iP	Pn	14 59 17.2	-0.3
PLOR	Plostina	0.34	30	⇑iP	Pn	14 59 17.2	-0.3
PLOR				iS	Sn	14 59 29.9	-0.2
VRI	Vrincioaia	0.38	36	⇑iP	Pn	14 59 17.7	+0.1
VRI	Vrincioaia	0.38	36	⇑iP	Pn	14 59 17.7	+0.1
VRI				iS	Sn	14 59 30.2	-0.1
ISR	Istrita	0.45	168	S	Sn	14 59 30.6	-0.5
ISR	Istrita	0.45	168	iS	Sn	14 59 30.6	-0.5
ODBI	Odobesti	0.50	66	⇑iP	Pn	14 59 18.9	+0.6
ODBI	Odobesti	0.50	66	⇑iP	Pn	14 59 18.9	+0.6
ODBI				iS	Sn	14 59 32.1	+0.7
SECR		0.58	205	⇓iP	Pn	14 59 19.4	+0.5
SECR		0.58	205	⇓iP	Pn	14 59 19.4	+0.5
SECR				iS	Sn	14 59 32.7	+0.3
PETR	Petresti	0.60	74	⇓iP	Pn	14 59 19.5	+0.6
PETR	Petresti	0.60	74	⇓iP	Pn	14 59 19.5	+0.6
PETR				iS	Sn	14 59 33.3	+0.7
OZUR		0.69	321	⇓iP	Pn	14 59 19.2	-0.5
OZUR		0.69	321	⇓iP	Pn	14 59 19.2	-0.5
OZUR				iS	Sn	14 59 32.8	-1.2
PLAR	PLOIESTI	0.70	203	⇑iP	Pn	14 59 20.4	+0.7
PLAR	PLOIESTI	0.70	203	⇑iP	Pn	14 59 20.4	+0.7
PLAR				iS	Sn	14 59 35.2	+1.2
PGOR	Pogoanele	0.77	148	⇑iP	Pn	14 59 20.8	+0.5
PGOR	Pogoanele	0.77	148	⇑iP	Pn	14 59 20.8	+0.5
PGOR				iS	Sn	14 59 35.0	0.0
DOPR	Dopca	0.82	300	⇑iP	Pn	14 59 20.5	-0.3

DOPR	Dopca	0.82	300	⇑iP	Pn	14 59 20.5	-0.3
DOPR				iS	Sn	14 59 35.1	-0.8
VOIR		0.96	263	⇑iP	Pn	14 59 22.0	-0.2
VOIR		0.96	263	⇑iP	Pn	14 59 22.0	-0.2
VOIR				iS	Sn	14 59 37.2	-1.2
BIR	Birlad	1.10	50	⇑iP	Pn	14 59 23.8	+0.3
BIR	Birlad	1.10	50	⇑iP	Pn	14 59 23.8	+0.3
BIR				iS	Sn	14 59 40.2	-0.5
LEHL	Lehliu	1.13	165	⇑iP	Pn	14 59 24.1	+0.3
LEHL	Lehliu	1.13	165	⇑iP	Pn	14 59 24.1	+0.3
LEHL				iS	Sn	14 59 41.4	+0.3
AMRR	Amara	1.16	145	⇓iP	Pn	14 59 24.4	+0.3
AMRR	Amara	1.16	145	⇓iP	Pn	14 59 24.4	+0.3
AMRR				iS	Sn	14 59 41.7	0.0
BUC1	Bucharest	1.24	193	⇓iP	Pn	14 59 25.3	+0.3
BUC1	Bucharest	1.24	193	⇓iP	Pn	14 59 25.3	+0.3
BUC1				iS	Sn	14 59 43.3	0.0
ARR	Arges	1.26	262	⇑iP	Pn	14 59 25.2	-0.1
ARR	Arges	1.26	262	⇑iP	Pn	14 59 25.2	-0.1
ARR				iS	Sn	14 59 42.9	-1.0
GIUM	Giurgiulesti	1.27	93	⇑iP	Pn	14 59 25.7	+0.4
GIUM	Giurgiulesti	1.27	93	⇑iP	Pn	14 59 25.7	+0.4
GIUM				iS	Sn	14 59 43.7	-0.1
CFR	Carcaliu	1.28	107	⇓iP	Pn	14 59 25.0	-0.4
CFR	Carcaliu	1.28	107	⇓iP	Pn	14 59 25.0	-0.4
CFR				iS	Sn	14 59 43.9	-0.1
SGRR	Singureni	1.37	193	⇑iP	Pn	14 59 26.6	+0.1
SGRR	Singureni	1.37	193	⇑iP	Pn	14 59 26.6	+0.1
SGRR				iS	Sn	14 59 45.5	-0.5
HARR	Harsova	1.39	128	⇓iP	Pn	14 59 26.6	0.0
HARR	Harsova	1.39	128	⇓iP	Pn	14 59 26.6	0.0
BIZ	Bicaz	1.39	351	⇑iP	Pn	14 59 27.5	+0.8
BIZ	Bicaz	1.39	351	⇑iP	Pn	14 59 27.5	+0.8
BIZ				iS	Sn	14 59 46.9	+0.4
HUMR	Humele	1.45	225	⇑iP	Pn	14 59 29.0	+1.7
HUMR				S	Sn	14 59 47.0	-0.5
HUMR	Humele	1.45	225	⇑iP	Pn	14 59 29.0	+1.7
HUMR				iS	Sn	14 59 47.0	-0.5
TLB	Topalu	1.51	130	⇓iP	Pn	14 59 28.1	0.0
TLB	Topalu	1.51	130	⇓iP	Pn	14 59 28.1	0.0
TLB				iS	Sn	14 59 47.8	-1.0
LEOM	Leova	1.57	54	⇓iP	Pn	14 59 28.9	+0.1
LEOM	Leova	1.57	54	⇓iP	Pn	14 59 28.9	+0.1
LEOM				iS	Sn	14 59 49.8	-0.3
CVDA	Cernavoda	1.69	136	⇑iP	Pn	14 59 30.4	+0.2
CVDA				S	Sn	14 59 51.3	-1.2
CVDA	Cernavoda	1.69	136	⇑iP	Pn	14 59 30.4	+0.2
CVDA				iS	Sn	14 59 51.3	-1.2
TLCR		1.74	102	⇓iP	Pn	14 59 31.0	+0.2
TLCR		1.74	102	⇓iP	Pn	14 59 31.0	+0.2
TLCR				iS	Sn	14 59 53.4	-0.2
ICOR	Ion Corvin	1.75	145	⇓iP	Pn	14 59 31.4	+0.4
ICOR	Ion Corvin	1.75	145	⇓iP	Pn	14 59 31.4	+0.4
ICOR				iS	Sn	14 59 53.5	-0.4
TIRR	Tirgusor	1.80	127	⇓iP	Pn	14 59 31.6	+0.1
TIRR	Tirgusor	1.80	127	⇓iP	Pn	14 59 31.6	+0.1
TIRR				iS	Sn	14 59 53.3	-1.7
LOT	Lotru	1.86	267	S	Sn	14 59 56.2	-0.3
LOT	Lotru	1.86	267	iS	Sn	14 59 56.2	-0.3
MFTR	Murfatlar	1.99	133	⇓iP	Pn	14 59 34.0	+0.1
MFTR	Murfatlar	1.99	133	⇓iP	Pn	14 59 34.0	+0.1
MFTR				iS	Sn	14 59 59.2	0.0
MILM	Milestii Mici	2.15	50	⇑iP	Pn	14 59 35.8	-0.1
MILM	Milestii Mici	2.15	50	⇑iP	Pn	14 59 35.8	-0.1
MILM				iS	Sn	15 00 01.5	-1.3
BURAR	Bucovina Array	2.21	339	⇑iP	Pn	14 59 38.0	+1.2
BURAR	Bucovina Array	2.21	339	⇑iP	Pn	14 59 38.0	+1.2
BURAR				iS	Sn	15 00 05.1	+0.7
PSN	Preselentsi	2.27	145	P	Pn	14 59 38.2	+0.8
SZH	Strazhica	2.32	189	P	Pn	14 59 38.1	0.0
SRE	Strehaia	2.44	250	S	Sn	15 00 08.4	-1.0
SRE	Strehaia	2.44	250	iS	Sn	15 00 08.4	-1.0
PRD	Provadia	2.47	163	P	Pn	14 59 40.8	+0.8
ROIA	ROIAK	2.56	164	P	Pn	14 59 42.0	+0.7
MPEP	Malo Peshtene	2.92	222	P	Pn	14 59 46.1	+0.2

PRU 10 15:00:18.0±0.0, 49°.80N×18°.68E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.35	276	ePG	Pg	15 00 25.4	+0.8
OKC				eSG	Sg	15 00 28.6	-0.5
	comp=Z,6.7nm,0.5s						
MORC	Moravsky Berou	0.74	269	ePG	Pg	15 00 32.7	+0.6
VRAC	Vranov	1.45	251	ePG	Pn	15 00 45.4	0.0
VRAC				eSG	Sg	15 01 03.7	-0.7
DPC	Dobruska-Polom	1.62	291	ePG	Pn	15 00 47.6	-0.2
DPC				eSG	Sn	15 01 09.3	-0.1
UPC	Upice	1.86	293	ePG	Pn	15 00 51.6	+0.5
UPC				eSG	Sb	15 01 16.9	+0.3
KHC	Kasperske Hory	3.40	261	eSG	Sg	15 02 06.3	-0.7

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*ISCJB **10** 15:10:50.5±0.9, 15°.10S±0°.09×73°.61W±0°.09, h98^{km}, mb3.5/2, Error ellipse: s-maj=17.2km s-min=7.1km az=43.5*

*IDC **10** 15:10:55.7±2.0, 15°.13S×73°.52W, h124^{km}±21^{km}, mb3.2/2, mb1 3.5/6, mb1mx3.3/26, mbtmp3.8/6, Error ellipse: s-maj=38.5km s-min=21.8km az=35.0*

ISC 10 15:10:53.5±0.9, 15°.1S±0°.1×73°.57W±0°.10, h98^{km}, n7, σ2^s.50/10, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	4.45	314	P	Pn	15 12 02.7	+3.9
	4.3nm,0.3s,baz=143,slow=14,SNR=7.8						
NNA				S	Sn	15 12 45.7	-3.9
	7.1nm,0.3s,baz=198,slow=20,SNR=7.9						
LPAZ	La Paz	5.36	103	P	Pn	15 12 13.5	+1.8
	1.2nm,0.3s,baz=297,slow=9.0,SNR=11						
LPAZ				S	Sn	15 13 10.7	-1.9
	0.2nm,0.3s,baz=218,slow=18,SNR=1.9						
LVC	Limon Verde	8.66	150	P	Pn	15 12 57.4	+1.1
	0.3nm,0.3s,baz=336,slow=11,SNR=5.7						
LVC				S	Sn	15 14 30.6	-1.8
	0.2nm,0.3s,baz=261,slow=19,SNR=3.3						
PTGA	Pitinga	19.62	44	P	P	15 15 14.2	-0.1
	1.0nm,0.3s,baz=213,slow=16,SNR=12						
TXAR	Lajitas Array	52.90	327	P	P	15 19 58.9	-0.8
	0.4nm,0.4s,baz=150,slow=8.5,SNR=12						
YKA	Yellowknife Ar	83.76	342	P	P	15 23 10.0	-1.3
	0.4nm,0.8s,baz=134,slow=5.5,SNR=6.2						
SONM	Songino Array	147.38	0	PKPbc	PKPbc	15 30 25.9	-0.2
	0.6nm,0.7s,baz=334,slow=2.4,SNR=5.6						

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*ISCJB **10** 15:15:08.4±0.8, 11°.06S±0°.07×165°.85E±0°.09, h35^{km}, mb3.7/6, Error ellipse: s-maj=13.3km s-min=9.0km az=144.6*

*IDC **10** 15:15:12.3±3.9, 10°.95S×165°.84E, h55^{km}±35^{km}, mb3.6/7, mb1 3.8/9, mb1mx3.6/28, mbtmp3.9/9, ML4.4/2, MS3.5/1, Ms1 3.5/1, ms1mx2.8/20, Error ellipse: s-maj=35.6km s-min=26.6km az=140.0*

ISC 10 15:15:10.0±0.9, 10°.94S±0°.09×165°.9E±0°.1, h35^{km}, n16, σ1^s.32/12, mb3.9/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.08	284	P	Pn	15 16 37.8	+0.4
	13nm,0.3s,baz=168,slow=12,SNR=4.0						
HNR				S	Sn	15 17 45.4	-0.4
	baz=37,slow=20,SNR=2.1						
HNR				LR	LR	15 19 04.0	
	comp=Z,372nm,18.4s,baz=104,slow=39						
DZM	Mont Dzumac	11.08	178	P	Pn	15 17 48.3	+2.1
	2.1nm,0.3s,baz=323,slow=21,SNR=44						
DZM				S	Sn	15 19 46.6	-2.4
	0.3nm,0.3s,baz=307,slow=20,SNR=3.8						
CTA	Charters Tower	21.01	242	P	P	15 19 52.0	+1.3
	1.8nm,0.3s,baz=90,slow=7.1,SNR=5.0						
H11S2	WAKE ISLAND Hy	29.25	2	T	T	15 51 29.1	
	baz=181,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	29.26	1	T	T	15 51 31.6	
	baz=181,slow=76,SNR=23						
H11S1	WAKE ISLAND Hy	29.27	1	T	T	15 51 30.8	
	baz=181,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	30.47	2	T	T	15 53 01.1	
	baz=182,slow=76,SNR=7.6						
H11N3	WAKE ISLAND Hy	30.48	2	T	T	15 53 01.5	
	baz=182,slow=76,SNR=6.6						
H11N2	WAKE ISLAND Hy	30.49	2	T	T	15 53 02.5	
	baz=182,slow=76,SNR=5.7						
WRA	Warramunga Arr	31.69	250	P	P	15 21 29.7	-0.9
	1.2nm,0.7s,baz=83,slow=9.1,SNR=11						
ASAR	Alice Springs	33.00	243	P	P	15 21 41.1	-1.0
	0.7nm,0.9s,baz=67,slow=10,SNR=12						
SONM	Songino Array	78.69	324	P	P	15 27 09.0	+0.2
	0.4nm,0.8s,baz=134,slow=5.6,SNR=4.1						
ILAR	Eielson Array	83.36	18	P	P	15 27 33.8	+0.6
	0.7nm,0.6s,baz=232,slow=5.4,SNR=14						
MKAR	Makanchi Array	93.57	317	P	P	15 28 22.4	-0.1
	0.5nm,0.7s,baz=91,slow=6.9,SNR=6.5						
YKA	Yellowknife Ar	94.80	27	P	P	15 28 26.7	-1.0
	0.1nm,0.5s,baz=254,slow=4.4,SNR=3.2						
ARCES	ARCESS Array B	116.28	346	PKP	PKiKP	15 33 48.7	-0.6
	1.7nm,0.8s,baz=64,slow=2.1,SNR=6.8						

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*ISN **10** 15:19:23.5±1.0, 36°.93N×44°.29E, h2^{km}±4^{km}, ML2.5*

*ISK **10** 15:19:55.6, 36°.75N×43°.39E, h5^{km}, ML2.7/6*

ISC 10 15:19:42.4±1.3, 36°.05N±0°.04×43°.87E±0°.06, h18^{km}±7^{km}, n14, σ2^s.26/21, Iraq

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSL	Mosul	0.70	300	ePg	Pg	15 19 48.0	-8.2
MSL				AML	AML	15 19 50.4	
	comp=Z,211nm,0.3s						
MSL				eSg	Sg	15 20 04.3	-1.3
IKRK	Kirkuk	0.76	149	ePg	Pg	15 19 57.6	+0.4
IKRK				AML	AML	15 19 59.7	
	comp=Z,62nm,0.3s						
IKRK				eSg	Sn	15 20 20.8	+12
CUKT	Cukurca	1.21	350	PG	Pg	15 20 06.9	+1.1
CUKT				SG	Sb	15 20 15.7	-4.5
CUKT	Cukurca	1.21	350	iP	Pg	15 20 06.5	+0.7
CUKT				iS	Sg	15 20 22.6	+0.9
CUKT				IAML_P			
	comp=Z,2μm,0.2s						
YOVA	Hakkari_Yksek	1.57	12	iP	Pg	15 20 14.3	+1.7
YOVA				iS	Sg	15 20 36.0	+2.9
YOVA				IAML_P			
	comp=Z,3μm,0.3s						
SIRT	Sirnak	1.84	322	PG	Pg	15 20 17.1	-0.8
SIRN	Sırnak	1.85	321	iP	Pg	15 20 17.6	-0.5
SIRN				iS	Sb	15 20 40.1	+1.4
SIRN				IAML_P			
	comp=Z,6μm,0.3s						
AKDM	Akdamar-Van	2.38	343	PN	Pg	15 20 26.5	-1.6
SRTM	Siirt_Merkez	2.48	322	iP	Pg	15 20 29.4	-0.6
SRTM				iS	Sb	15 20 59.4	+2.5
SRTM				IAML_P			
	comp=Z,535nm,0.2s						
SVAN	Silvan-Diyarba	2.99	315	PN	Pb	15 20 35.2	+0.1
SVAN	Silvan-Diyarba	2.99	315	iP	Pg	15 20 40.5	+0.8
SVAN				iS	Sb	15 21 12.9	+1.6
SVAN				IAML_P			
	comp=Z,590nm,0.5s						
MAZI	Mazidag	3.08	298	PN	Pb	15 20 38.9	+2.1
AGRB	Hanur-Agry	3.58	349	PN	Pb	15 20 43.9	-1.5
RTB	Rutbah	4.21	225	ePn	Pn	15 20 42.0	-3.7
RTB				AML	AML	15 20 47.6	
	comp=Z,19nm,0.3s						
RTB				eSn	Sn	15 21 38.5	+4.0

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*IDC **10** 15:22:54.1±1.1, 12°.14N×92°.44E, h0^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.6/34, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=34.4km s-min=19.4km az=65.0*

*ISCJB **10** 15:22:55.3±0.8, 12°.2N±0°.1×92°.5E±0°.1, h23^{km}, mb3.6/6, Error ellipse: s-maj=18.1km s-min=10.1km az=137.9*

ISC 10 15:22:57.6±1.0, 12°.1N±0°.1×92°.4E±0°.1, h23^{km}, n11, σ0^s.37/9, mb3.6/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	8.88	44	Pn	Pn	15 25 04.3	-0.3
	0.2nm,0.3s,baz=235,slow=16,SNR=6.3						
CMAR				Sn	Sn	15 26 44.5	+0.5
	0.2nm,0.3s,baz=235,slow=29,SNR=3.1						
PALK	Pallekele	12.53	248	Pn	Pn	15 25 54.9	+0.2
	0.6nm,0.3s,baz=116,slow=15,SNR=4.4						
PALK				Sn	Sn	15 28 03.2	-11
	1.3nm,0.3s,baz=116,slow=12,SNR=9.2						
H08S3	Diego Garcia H	27.91	226	T	T	15 57 51.2	
	baz=46,slow=75,SNR=18						
H08S2	Diego Garcia H	27.92	226	T	T	15 57 49.2	
	baz=46,slow=75,SNR=12						
H08S1	Diego Carcia H	27.93	226	T	T	15 57 50.0	
	baz=46,slow=75,SNR=7.6						
MKAR	Makanchi Array	35.59	348	P	P	15 29 52.8	-0.5
	0.5nm,0.6s,baz=169,slow=8.7,SNR=8.4						
SONM	Songino Array	37.46	16	P	P	15 30 09.8	+0.4
	0.1nm,0.5s,baz=209,slow=8.1,SNR=2.4						
ZALV	Zalesovo Beam	42.14	353	P	P	15 30 48.0	-0.1
	0.5nm,0.5s,baz=177,slow=11,SNR=3.3						
WRA	Warramunga Arr	52.13	127	P	P	15 32 06.4	-0.1
	0.9nm,0.7s,baz=306,slow=8.4,SNR=23						
ASAR	Alice Springs	53.95	131	P	P	15 32 19.9	0.0
	0.3nm,0.4s,baz=311,slow=6.7,SNR=18						
ARCES	ARCESS Array B	70.71	340	P	P	15 34 11.4	0.0
	1.7nm,0.8s,baz=93,slow=6.6,SNR=4.4						

MEX 10 15:35:38.8±0.8, 16°.28N×97°.36W, h33^{km}±16^{km}, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.75	279	eP	Pn	15 35 51.0	-2.1
PNIG				eS	Sn	15 36 01.0	-2.3
VHO	Vista Hermosa	0.99	37	eP	Pn	15 35 54.9	-1.7
VHO				iS	Sn	15 36 07.0	-2.6
PLIG	Platanillo	2.94	316	eP	Pn	15 36 21.9	-1.4
PLIG				eS	Sn	15 36 56.6	-1.0

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*ISCJB **10** 15:37:09.6±1.1, 11°.2S±0°.1×164°.8E±0°.2, h29^{km}, mb3.5/4, MS3.3/4, Error ellipse: s-maj=24.5km s-min=17.0km az=151.1*

*IDC **10** 15:37:15.2±3.8, 11°.19S×164°.70E, h66^{km}±33^{km}, mb3.2/4, mb1 3.6/6, mb1mx3.3/31, mbtmp3.7/6, ML3.9/2, MS3.2/5, Ms1 3.2/5, ms1mx3.0/19, Error ellipse: s-maj=35.4km s-min=32.8km az=110.0*

ISC 10 15:37:11.4±1.3, 11°.0S±0°.2×164°.9E±0°.2, h29^{km}, n16, σ2^s.07/6, mb3.5/4, MS3.3/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.09	288	P	Pn	15 38 27.5	+1.8
	3.6nm,0.3s,baz=120,slow=8.1,SNR=2.1						
HNR				LR	LR	15 40 11.5	
	comp=Z,97nm,18.6s,baz=85,slow=35						
DZM	Mont Dzumac	11.07	172	P	Pn	15 39 49.1	+1.1
	1.2nm,0.3s,baz=319,slow=20,SNR=2.8						
H11S2	WAKE ISLAND Hy	29.40	4	T	T	16 13 50.0	
	baz=182,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	29.40	4	T	T	16 13 47.7	
	baz=182,slow=76,SNR=9.1						
H11S1	WAKE ISLAND Hy	29.42	4	T	T	16 13 48.1	
	baz=182,slow=76,SNR=4.4						
STKA	Stephens Creek	29.85	222	LR	LR	15 53 36.7	
	comp=Z,68nm,19.6s,baz=23,slow=33						
H11N1	WAKE ISLAND Hy	30.63	4	T	T	16 15 21.5	
	baz=182,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	30.63	4	T	T	16 15 20.5	
	baz=182,slow=76,SNR=3.6						
H11N2	WAKE ISLAND Hy	30.64	4	T	T	16 15 15.4	
	baz=182,slow=76,SNR=3.8						
WRA	Warramunga Arr	30.66	249	P	P	15 43 22.9	-0.8
	0.3nm,0.6s,baz=81,slow=8.9,SNR=4.9						
GUMO	Guam	31.49	320	LR	LR	15 56 00.6	
	comp=Z,33nm,18.7s,baz=97,slow=36						
ASAR	Alice Springs	32.01	243	P	P	15 43 33.2	-2.3
	0.4nm,0.7s,baz=71,slow=10.0,SNR=7.3						
FITZ	Fitzroy Crossi	38.53	255	LR	LR	16 00 44.3	
	comp=Z,54nm,19.9s,baz=105,slow=37						
BATI	Baumata	40.47	267	LR	LR	16 02 15.7	
	comp=Z,50nm,19.4s,baz=280,slow=37						
ILAR	Eielson Array	83.79	19	P	P	15 49 38.2	+0.6
	0.3nm,0.6s,baz=231,slow=5.4,SNR=5.3						
MKAR	Makanchi Array	92.92	317	P	P	15 50 20.5	-1.4
	0.3nm,0.8s,baz=90,slow=5.8,SNR=3.0						

IDC 10 15:40:05.6±1.8, 11°.30S×165°.01E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.5/30, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=52.2km s-min=32.4km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.80	173	Pn	Pn	15 42 41.2	-0.5
	0.8nm,0.3s,baz=323,slow=20,SNR=7.4						
WRA	Warramunga Arr	30.72	250	P	P	15 46 23.2	+0.5
	0.7nm,0.8s,baz=78,slow=8.7,SNR=4.5						
ASAR	Alice Springs	32.03	243	P	P	15 46 33.8	-0.5
	0.2nm,0.5s,baz=66,slow=10,SNR=5.8						
ILAR	Eielson Array	83.98	19	P	P	15 52 37.5	+0.1
	0.2nm,0.5s,baz=238,slow=4.9,SNR=6.2						

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*SOME **10** 15:44:11.2, 40°.67N×73°.23E, h10^{km}*

*KRNET **10** 15:44:12.0±0.1, 40°.69N×73°.23E, h18^{km}, mb3.0*

*NNC **10** 15:44:12.1±0.7, 40°.70N×73°.25E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=7.7km s-min=5.0km az=83.0*

*ISCJB **10** 15:44:13.0±0.4, 40°.65N±0°.02×73°.23E±0°.04, h10^{km}, Error ellipse: s-maj=4.1km s-min=3.0km az=25.2*

ISC 10 15:44:12.7±0.8, 40°.69N±0°.02×73°.21E±0°.02, h10^{km}, n55, σ1^s.84/84, 30C-20D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	Arslanbob	0.65	345	⇑iP	Pg	15 44 24.6	-0.9
	baz=43						
ARSB				⇑iS	Sg	15 44 34.2	+0.1
	baz=43						
SFK	Sufi-Kurgan	0.71	162	Pg	Pg	15 44 25.3	-1.4
	7.4nm,0.1s						
SFK				Lg	Lg	15 44 35.2	
	82nm,0.2s						
SFK	Sufi-Kurgan	0.71	162	⇓iP	Pg	15 44 25.2	-1.4
	baz=63						
SFK				⇓iS	Sg	15 44 35.1	-0.9
	baz=63						
ARLS	Aral	1.44	35	⇑iP	Pn	15 44 38.6	-0.4
	baz=35						
ARLS				⇑iS	Sb	15 44 58.1	-0.1
	baz=35						
ARK	Arkit	1.45	320	⇓iP	Pn	15 44 38.9	-0.3
	baz=20						
ARK				⇓iS	Sg	15 44 58.6	-0.8
	baz=20						
AML	Almayashu	1.48	14	P	Pb	15 44 39.9	-0.8
	SNR=62						
AML	Almayashu	1.48	14	⇓iP	Pb	15 44 39.9	-0.8
	baz=13						
AML				⇓iS	Sb	15 44 59.7	0.0
	baz=13						
DRK	Karamyk	1.62	222	⇑iP	Pb	15 44 42.0	-1.0
	baz=23						
DRK				⇑iS	Sb	15 45 03.3	-0.3
	baz=23						
UCH	Uchtor	1.82	32	P	Pb	15 44 45.1	-1.3
	SNR=49						
UCH	Uchtor	1.82	32	⇑iP	Pb	15 44 45.1	-1.3
	baz=32						
UCH				⇑iS	Sb	15 45 09.8	+0.3
	baz=32						
MNAS	Manas	1.87	344	⇓Pn	Pb	15 44 45.9	-1.2
	10.0nm,0.4s						
MNAS				⇑Lg	Lg	15 45 11.7	
	20nm,0.3s						
MNAS	Manas	1.87	344	⇑iP	Pb	15 44 46.0	-1.1
	baz=43						
MNAS				⇑iS	Sg	15 45 11.6	-1.3
	baz=43						
BTK	Batken	1.93	252	⇑iP	Pb	15 44 47.5	-0.6
	baz=52						
BTK				⇑iS	Sg	15 45 13.6	-1.3
	baz=52						
EKS2	Erkin-Say	2.01	12	P	Pb	15 44 48.5	-1.0
	SNR=38						
EKS2	Erkin-Say	2.01	12	⇑iP	Pb	15 44 48.3	-1.2
	baz=11						
EKS2				⇑iS	Sb	15 45 14.5	-0.2
	baz=11						
MRKS	Merke	2.05	0	Pg	Pb	15 44 48.4	-1.8
	30nm,0.3s						
MRKS				Lg	Lg	15 45 16.4	
	70nm,0.3s						
MRKS	Merke	2.05	0	eP	Pb	15 44 48.4	-1.8
	30nm,0.3s						
MRKS				eS	Sb	15 45 16.4	+0.7
	70nm,0.3s						
KZA	Kyzart	2.07	47	P	Pn	15 44 47.0	-0.9
	SNR=11						
KZA	Kyzart	2.07	47	iP	Pb	15 44 48.9	-1.7
	baz=47						
KZA				iS	Sb	15 45 16.3	-0.2
	baz=47						
AAK	Ala-Archa	2.17	26	P	Pb	15 44 50.6	-1.6
	SNR=20						
AAK	Ala-Archa	2.17	26	⇓Pn	Pb	15 44 50.4	-1.8
	9.1nm,0.4s						
AAK				⇓Lg	Lg	15 45 19.8	
	41nm,0.6s						
AAK	Ala-Archa	2.17	26	⇑iP	Pb	15 44 50.4	-1.8
	baz=25						
AAK				⇑iS	Sb	15 45 18.4	-0.8
	baz=25						
NRN	Naryn	2.24	70	⇑iP	Pn	15 44 51.2	+1.0
	baz=70						
NRN				⇑iS	Sn	15 45 19.3	+1.3
	baz=70						
KBK	Karagaybulak	2.35	33	P	Pb	15 44 53.4	-2.0
	SNR=14						
KBK	Karagaybulak	2.35	33	⇑iP	Pb	15 44 53.2	-2.2
	baz=33						
KBK				⇑iS	Sb	15 45 23.0	-1.6
	baz=33						
FRU1	Bishkek	2.37	26	⇓iP	Pb	15 44 53.3	-2.2
	baz=26						
FRU1				⇓iS	Sb	15 45 23.3	-1.5
	baz=26						
CHMS	Chumysh	2.58	26	P	Pn	15 44 56.1	+1.6
	SNR=7.8						
CHMS	Chumysh	2.58	26	⇓iP	Pn	15 44 55.9	+1.3
	baz=26						
CHMS				⇓iS	Sn	15 45 27.6	+1.6
	baz=26						
USP	Ospenovka	2.75	20	⇓iP	Pn	15 44 58.2	+1.3
	baz=20						
USP				⇓iS	Sn	15 45 32.3	+2.1
	baz=20						
ULHL	Ulahol	2.76	55	P	Pn	15 44 57.9	+0.7
	SNR=12						
ULHL	Ulahol	2.76	55	⇓iP	Pn	15 44 58.5	+1.3
	baz=54						
ULHL				⇓iS	Sn	15 45 32.6	+1.9
	baz=54						
IUG	Iuzhnay	2.80	302	Pg	Pb	15 45 02.7	-0.1
	6.1nm,0.2s						
IUG				Lg	Lg	15 45 39.7	
	32nm,0.4s						
IUG	Iuzhnay	2.80	302	eP	Pb	15 45 02.9	+0.1
	3.4nm,0.3s						
IUG				eS	Sb	15 45 39.1	+1.9
	14nm,0.3s						
TKM2	Tokmak 2	2.85	38	⇑Pn	Pn	15 44 59.6	+1.1
	2.6nm,0.3s						
TKM2				⇑Lg	Lg	15 45 40.3	
	9.4nm,0.5s						
TKM2	Tokmak 2	2.85	38	⇑iP	Pn	15 44 59.8	+1.3
	baz=38						
TKM2				⇑iS	Sn	15 45 35.1	+2.0
	baz=38						
KST	Kastek	3.12	40	eP	Pb	15 45 07.8	-0.6
	6.5nm,0.5s						
KST				eS	Sb	15 45 48.3	+1.7
	11nm,0.4s						
KK31	Karatay Array	3.14	321	⇑Pn	Pn	15 45 03.3	+1.0
	0.1nm,0.2s,baz=133,slow=13,SNR=14						
KK31				Pg	Pb	15 45 08.9	+0.3
	0.8nm,0.3s,baz=132,slow=17,SNR=18						
KK31				⇓Lg	Lg	15 45 50.9	
	7.3nm,0.5s,baz=135,slow=29,SNR=13						
DGS	Degeres	3.18	36	Pg	Pb	15 45 09.7	+0.3
	5.6nm,0.4s						
DGS				Lg	Lg	15 45 51.7	
	20nm,0.5s						
DGS	Degeres	3.18	36	eP	Pb	15 45 09.7	+0.3
	5.6nm,0.4s						

DGS				*e*S	Sg	15 45 51.7	-3.3
	20nm,0.5s						
KDJ	Kajisay	3.31	63	⇑*i*P	Pn	15 45 06.1	+1.3
	baz=63						
KDJ				⇑*i*S	Sn	15 45 45.9	+1.5
	baz=63						
IZV	Izvestkoviy	3.46	46	Pg	Pb	15 45 14.6	+0.5
	3.5nm,0.4s						
IZV				Lg	Lg	15 46 00.9	
	19nm,0.6s						
IZV	Izvestkoviy	3.46	46	*e*P	Pb	15 45 14.6	+0.5
	3.1nm,0.6s						
IZV				*e*S	Sg	15 46 00.8	-2.9
	20nm,0.6s						
MDOK	Medeo	3.78	48	Pg	Pg	15 45 26.2	+1.0
	3.6nm,0.6s						
MDOK				⇑Lg	Lg	15 46 10.5	
	17nm,0.9s						
MDOK	Medeo	3.78	48	*e*P	Pb	15 45 21.2	+1.5
	2.2nm,0.6s						
MDOK				*e*S	Sg	15 46 11.0	-3.2
	10nm,0.5s						
KOTS	Kotyrbulak	3.86	48	Pg	Pb	15 45 22.5	+1.5
	6.0nm,0.4s						
KOTS				Lg	Lg	15 46 13.7	
	20nm,0.5s						
KOTS	Kotyrbulak	3.86	48	*e*P	Pb	15 45 22.5	+1.5
	6.0nm,0.4s						
KOTS				*e*S	Sg	15 46 13.7	-3.0
	20nm,0.5s						
KUU	Kurty	3.95	35	*e*P	Pb	15 45 23.1	+0.6
	2.0nm,0.3s						
KUU				*e*S	Sg	15 46 14.9	-4.7
	9.6nm,0.5s						
KTBS	Karatobe	3.97	39	Pg	Pb	15 45 24.0	+1.2
	3.0nm,0.7s						
KTBS				Lg	Lg	15 46 16.3	
	14nm,0.5s						
KTBS	Karatobe	3.97	39	*e*P	Pb	15 45 24.0	+1.2
	3.0nm,0.7s						
KTBS				*e*S	Sg	15 46 16.3	-3.9
	14nm,0.5s						
ARXS	Arharly	4.90	43	Lg	Lg	15 46 43.7	
	7.2nm,0.5s						
ARXS	Arharly	4.90	43	*e*P	Pb	15 45 40.1	+1.4
	1.5nm,0.5s						
ARXS				*e*S	Sb	15 46 43.7	+5.9
	7.2nm,0.5s						
MNBS	Baschi	5.12	47	Lg	Lg	15 46 50.6	
	5.3nm,0.5s						
MNBS	Baschi	5.12	47	*e*P	Pb	15 45 44.2	+1.8
	0.6nm,0.4s						
MNBS				*e*S	Sb	15 46 50.4	+6.3
	3.5nm,0.5s						
PDGK	Podgornoye	5.37	59	⇓Pg	Pg	15 45 53.1	-2.4
	1.4nm,0.7s						
PDGK				⇓Lg	Lg	15 46 58.4	
	6.1nm,1.0s						
OTUK	Ortayu	7.58	356	⇑Lg	Lg	15 48 07.6	
	0.6nm,0.4s						

*IDC **10** 15:44:19.7±1.3, 11°.51S×164°.89E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.8/38, mbtmp3.9/9, ML4.0/2, Error ellipse: s-maj=36.6km s-min=25.0km az=125.0*
*NEIC **10** 15:44:21.1±0.6, 11°.53S×164°.88E, h10^{km}, mb4.3/3, Error ellipse: s-maj=14.1km s-min=10.8km az=87.0*
*ISCJB **10** 15:44:23.4±0.7, 11°.64S±0°.10×164°.72E±0°.09, h34^{km}, mb3.8/9, Error ellipse: s-maj=15.8km s-min=10.8km az=41.1*
ISC 10 15:44:25.0±1.0, **11°.6S**±0°.1×**164°.8E**±0°.1, **h34**^{km}, **n19, σ0^s.61**/19, **mb3.8**/9, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.22	294	Pn	Pn	15 45 41.4	+0.7
	13nm,0.3s,baz=147,slow=6.7,SNR=4.8						
HNR				Sn	Sn	15 46 38.7	-1.1
	9.6nm,0.3s,baz=170,slow=19,SNR=4.8						
DZM	Mont Dzumac	10.56	172	*e*Pn	Pn	15 46 53.9	-0.2
DZM	Mont Dzumac	10.56	172	Pn	Pn	15 46 53.7	-0.4
	0.5nm,0.3s,baz=304,slow=18,SNR=9.5						
H11S2	WAKE ISLAND Hy	29.93	4	T	T	16 21 43.2	
	baz=184						
H11S3	WAKE ISLAND Hy	29.93	4	T	T	16 21 52.6	
	baz=184						
H11S1	WAKE ISLAND Hy	29.95	4	T	T	16 21 49.5	
	baz=184						
WR1	Warramunga Arr	30.43	250	*e*P	P	15 50 34.9	+0.3
	10.0nm,1.4s						
WR1				*e*PcP	PcP	15 53 34.6	+0.7
WRA	Warramunga Arr	30.43	250	P	P	15 50 34.9	+0.3
	0.6nm,0.6s,baz=79,slow=9.1,SNR=8.4						
WRA				PcP	PcP	15 53 34.6	+0.7
	0.2nm,0.7s,baz=78,slow=2.8,SNR=3.3						
AS31	Alice Springs	31.72	244	*e*P	P	15 50 45.1	-0.9
	1.1nm,1.1s						
ASAR	Alice Springs	31.73	244	P	P	15 50 45.8	-0.2
	1.2nm,0.8s,baz=63,slow=10,SNR=13						
FITZ	Fitzroy Crossi	38.35	255	*e*P	P	15 51 43.4	+0.3
	18nm,1.8s						
FITZ	Fitzroy Crossi	38.35	255	P	P	15 51 44.0	+0.9
	0.8nm,0.6s,baz=92,slow=9.4,SNR=4.4						
SONA0	Songino Array	78.54	324	*e*P	P	15 56 23.2	+0.1
SONM	Songino Array	78.54	324	P	P	15 56 23.2	+0.1
	0.3nm,0.7s,baz=123,slow=5.3,SNR=3.5						
ILAR	Eielson Array	84.31	19	P	P	15 56 52.9	-0.2
	0.3nm,0.9s,baz=236,slow=6.4,SNR=3.0						
MK32	Makanchi Array	93.27	317	*e*P	P	15 57 36.3	0.0
MKAR	Makanchi Array	93.27	317	P	P	15 57 36.3	0.0
	0.8nm,0.8s,baz=106,slow=6.1,SNR=6.0						
ZALV	Zalesovo Beam	93.44	324	P	P	15 57 36.1	-0.7
	0.4nm,0.3s,baz=126,slow=4.8,SNR=2.7						
ZAA1	Zalesovo Array	93.44	324	*e*P	P	15 57 36.1	-0.7

*NIED **10** 15:51:00, 28°.40N×130°.70E, h5^{km}, Mw3.7 Best double couple: M$_0$3.82000×10^{14} NP1:φ$_s$25.00000°, δ43.00000°, λ-90.00000°. NP2:φ$_s$205.00000°, δ47.00000°, λ-90.00000°.*
*IDC **10** 15:51:23.1±1.0, 28°.42N×130°.62E, h0^{km}, mb3.4/5, mb1 3.5/7, mb1mx3.3/46, mbtmp3.4/7, ML2.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/21, Error ellipse: s-maj=35.0km s-min=20.0km az=90.0*
*JMA **10** 15:51:25.9, 28°.37N×130°.70E, h58^{km}±1^{km}, M3.5*
ISC 10 15:51:26.8±1.6, **28°.36N**±0°.03×**130°.70E**±0°.05, **h30**^{km}±11^{km}, **n26, σ1^s.12**/44, **mb3.5**/5, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	0.65	266	P	Pb	15 51 39.4	-0.2
JZK				S	Sb	15 51 49.2	+0.9
JAM	Amami Oshima	0.97	273	P	Pn	15 51 43.6	-0.7
JAM				S	Sn	15 51 56.5	-0.5
JAMN	Amaminishikomi	1.35	265	P	Pn	15 51 48.9	-0.7
JAMN				S	Sn	15 52 06.3	-0.2
JTAJ	Takarajima	1.53	301	P	Pn	15 51 51.2	-0.9
JTAJ				S	Sn	15 52 09.6	-1.4
JNN	Nakanoshima	1.64	334	P	Pn	15 51 52.9	-0.7
JTK	Tokunoshima	1.65	250	P	Pn	15 51 53.5	-0.2
JTK				S	Sn	15 52 13.5	-0.4
JYAK	Yakushimahirau	1.88	355	P	Pn	15 51 56.2	-0.6
JYAK				S	Sn	15 52 18.3	-1.2
JMTN	Minamitane	2.04	5	P	Pn	15 51 58.3	-0.7
JMTN				S	Sn	15 52 22.5	-0.9
JOKE	Okinoerabujima	2.13	243	P	Pn	15 52 00.0	-0.4
JOKE				S	Sn	15 52 25.0	-0.9
JKC	Kuchinoerabu	2.14	348	P	Pn	15 51 59.9	-0.5
JKC				S	Sn	15 52 24.8	-1.2
JTN	Tanegashima 3	2.30	6	P	Pn	15 52 01.9	-0.7
JTN				S	Sn	15 52 28.9	-1.0
JYRO	Yoronjima	2.40	237	P	Pn	15 52 03.5	-0.5
JYRO				S	Sn	15 52 30.8	-1.6
JMZ	Minamidaito 2	2.58	170	P	Pn	15 52 05.6	-0.8
JMZ				S	Sn	15 52 34.7	-2.0
JOW	Kunigami	2.64	235	P	Pn	15 52 06.8	-0.5
JOW				*e*S	Sn	15 52 36.9	-1.4
JOW	Kunigami	2.64	235	Pn	Pn	15 52 06.6	-0.7
	2.8nm,0.3s,baz=97,slow=18,SNR=42						
JOW				Sn	Sn	15 52 36.1	-2.2
	8.3nm,0.3s,baz=76,slow=19,SNR=21						
JIH	Iheya	2.76	242	P	Pn	15 52 08.8	-0.2
JIH				S	Sn	15 52 39.0	-2.3
JTSR	Tashiro 2	2.80	4	P	Pn	15 52 09.5	-0.1
JTSR				S	Sn	15 52 41.3	-1.1
JNTH	Nagotoyohara	3.01	233	P	Pn	15 52 11.8	-0.6
JNTH				S	Sn	15 52 46.1	-1.3
JSU	Suzuyama	3.14	356	P	Pn	15 52 13.3	-0.9
JSU				*e*S	Sn	15 52 49.5	-1.2
JNU	Nakatsue	4.75	2	Pn	Pn	15 52 36.3	0.0
	0.8nm,0.3s,baz=182,slow=17,SNR=2.7						
JNU				Sn	Sn	15 53 28.1	-2.3
	1.3nm,0.3s,baz=223,slow=19,SNR=3.7						
JCJ	Chichijima	10.25	94	LR	LR	15 56 57.6	
	comp=Z,69nm,18.7s,baz=307,slow=32						
MKAR	Makanchi Array	41.81	310	P	P	15 59 13.5	-0.2
	0.1nm,0.5s,baz=105,slow=8.0,SNR=2.4						
WRA	Warramunga Arr	48.15	175	P	P	16 00 05.2	+0.9
	0.4nm,0.5s,baz=354,slow=8.4,SNR=6.9						
ASAR	Alice Springs	51.82	176	P	P	16 00 33.9	+1.7
	0.4nm,0.6s,baz=7.9,slow=14,SNR=8.3						
FINES	FINESS Array B	72.09	331	P	P	16 02 48.6	+0.7
	0.4nm,0.5s,baz=72,slow=5.6,SNR=4.2						
YKA	Yellowknife Ar	75.66	26	P	P	16 03 09.5	+0.7
	0.3nm,0.8s,baz=299,slow=6.8,SNR=3.6						

IDC 10 16:02:35.1±1.6, **11°.84S**×**165°.32E, h0**^{km}, **mb3.6**/3, **mb1 3.9**/4, **mb1mx3.6**/29, **mbtmp3.7**/4, **ML3.3**/1, **Error ellipse: s-maj=50.2km s-min=29.6km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.23	174	Pn	Pn	16 05 02.9	-0.5
	0.3nm,0.3s,baz=346,slow=8.2,SNR=9.5						
H11S2	WAKE ISLAND Hy	30.17	3	T	T	16 40 44.5	
	baz=181,slow=76,SNR=9.4						
H11S3	WAKE ISLAND Hy	30.18	3	T	T	16 40 41.8	
	baz=181,slow=76,SNR=8.7						
H11S1	WAKE ISLAND Hy	30.19	3	T	T	16 40 43.0	
	baz=181,slow=76,SNR=8.5						
WRA	Warramunga Arr	30.82	251	P	P	16 08 53.3	+0.3
	0.3nm,0.4s,baz=81,slow=9.1,SNR=7.5						
H11N1	WAKE ISLAND Hy	31.40	3	T	T	16 42 12.9	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	31.40	3	T	T	16 42 12.9	
	baz=182,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	31.41	3	T	T	16 42 14.8	
	baz=182,slow=76,SNR=11						
ASAR	Alice Springs	32.07	244	P	P	16 09 03.7	-0.3
	0.4nm,0.7s,baz=71,slow=9.1,SNR=7.1						
ILAR	Eielson Array	84.40	19	P	P	16 15 09.1	0.0
	0.5nm,0.6s,baz=238,slow=4.6,SNR=16						

IDC 10 16:04:28.4±1.6, **10°.75S**×**165°.66E, h0**^{km}, **mb3.3**/3, **mb1 3.8**/4, **mb1mx3.5**/26, **mbtmp3.6**/4, **ML4.2**/1, **Error ellipse: s-maj=54.9km s-min=31.7km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.28	176	Pn	Pn	16 07 11.5	+0.5
	1.5nm,0.3s,baz=326,slow=8.3,SNR=20						
WRA	Warramunga Arr	31.51	249	P	P	16 10 52.4	0.0
	0.1nm,0.5s,baz=83,slow=9.3,SNR=3.2						
ASAR	Alice Springs	32.85	243	P	P	16 11 04.3	+0.1
	0.4nm,0.8s,baz=63,slow=10,SNR=5.6						
ILAR	Eielson Array	83.26	19	P	P	16 16 57.1	+0.6
	0.3nm,0.7s,baz=238,slow=5.0,SNR=3.9						
ARCES	ARCESS Array B	116.03	345	PKP	PKiKP	16 23 11.8	-1.1
	2.1nm,0.9s,baz=60,slow=2.5,SNR=3.7						

MEX 10 16:11:59.9±0.3, **14°.83N**×**94°.30W, h0**^{km}±92^{km}, **MD4.1, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.36	50	*e*P	Pg	16 12 22.2	-3.8
PCIG				*i* S	Sg	16 12 39.7	-3.9
THIG		1.97	87	*e*P	Pn	16 12 31.4	-3.1
THIG				*e*S	Sn	16 12 55.5	-4.4
CCIG	Comitan	2.54	55	*e*P	Pn	16 12 39.7	-2.8
CCIG				*e*S	Sn	16 13 10.3	-3.9

IDC 10 16:16:14.4±1.7, **10°.90S**×**165°.34E, h0**^{km}, **mb3.4**/3, **mb1 3.8**/4, **mb1mx3.5**/35, **mbtmp3.6**/4, **ML3.7**/1, **Error ellipse: s-maj=53.2km s-min=30.9km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.16	175	Pn	Pn	16 18 54.7	-0.6
	0.6nm,0.3s,baz=315,slow=20,SNR=6.7						
WRA	Warramunga Arr	31.16	249	P	P	16 22 35.4	+0.1
	0.3nm,0.5s,baz=79,slow=8.6,SNR=5.6						
ASAR	Alice Springs	32.50	243	P	P	16 22 47.0	-0.1
	0.4nm,0.8s,baz=66,slow=10,SNR=6.9						
ILAR	Eielson Array	83.50	19	P	P	16 28 43.9	+0.1
	0.2nm,0.5s,baz=230,slow=5.6,SNR=3.5						

*ISCJB **10** 16:19:53.9±2.6, 29°.7N±0°.1×142°.2E±0°.6, h35^{km}, mb3.5/4, MS3.2/1, Error ellipse: s-maj=83.0km s-min=7.1km az=167.3*
*IDC **10** 16:19:53.3±4.0, 29°.48N×141°.72E, h0^{km}, mb3.4/4, mb1 3.4/6, mb1mx3.3/33, mbtmp3.4/6, ML2.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.3/28, Error ellipse: s-maj=157.7km s-min=18.6km az=71.0*
ISC 10 16:19:55.8±3.2, **29°.7N**±0°.2×**142°.3E**±0°.7, **h35**^{km}, **n7, σ0^s.86**/8, **mb3.5**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.58	183	Pn	Pn	16 20 35.2	+0.1
	1.8nm,0.3s,baz=330,slow=20,SNR=3.4						
JCJ				Sn	Sn	16 21 04.4	-0.9
	7.2nm,0.3s,baz=287,slow=19,SNR=4.0						
MJAR	Matsushiro Arr	7.66	334	Pn	Pn	16 21 44.0	-0.9
	0.1nm,0.3s,baz=162,slow=11,SNR=14						
MJAR				Sn	Sn	16 23 09.9	-0.6
	0.1nm,0.3s,baz=174,slow=38,SNR=4.9						
SONM	Songino Array	32.98	313	P	P	16 26 28.0	+0.6
	0.6nm,0.8s,baz=108,slow=7.9,SNR=5.2						
BATI	Baumata	43.55	207	LR	LR	16 43 17.1	
	comp=Z,35nm,21.4s,baz=255,slow=33						
MKAR	Makanchi Array	48.96	308	P	P	16 28 39.5	+0.8
	0.8nm,0.8s,baz=90,slow=9.3,SNR=8.5						
WRA	Warramunga Arr	49.94	190	P	P	16 28 45.7	-0.6
	0.4nm,0.9s,baz=8.5,slow=8.0,SNR=3.6						
ASAR	Alice Springs	53.66	190	P	P	16 29 14.8	+0.7
	0.3nm,0.9s,baz=2.7,slow=5.8,SNR=3.1						

IDC 10 16:31:54.1±2.3, **1°.33N**×**126°.90E, h0**^{km}, **mb3.0**/3, **mb1 3.3**/3, **mb1mx3.1**/27, **mbtmp3.1**/3, **Error ellipse: s-maj=171.9km s-min=28.7km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.36	161	P	P	16 36 54.3	+0.3
	0.2nm,0.4s,baz=340,slow=11,SNR=5.2						
ASAR	Alice Springs	25.76	165	P	P	16 37 26.5	-0.3
	0.9nm,1.1s,baz=345,slow=11,SNR=4.4						
MKAR	Makanchi Array	59.62	326	P	P	16 42 00.0	0.0
	0.1nm,0.4s,baz=131,slow=8.2,SNR=3.1						

*ISK **10** 16:35:42.8, 34°.84N×32°.45E, h12^{km}, ML2.9/17*
*ISCJB **10** 16:35:43.8±0.8, 34°.84N±0°.05×32°.49E±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=8.3km s-min=4.9km az=23.1*
*NIC **10** 16:35:44.6±0.2, 34°.89N×32°.54E, h15^{km}, ML3.4*
*DDA **10** 16:35:46.7, 35°.11N×32°.57E, h14^{km}±4^{km}, ML2.9*
ISC 10 16:35:44.2±1.4, **34°.88N**±0°.04×**32°.52E**±0°.03, **h11**^{km}±11^{km}, **n40, σ1^s.00**/49, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPCY	Paphos	0.15	270	P	Pb	16 35 49.0	0.0
	baz=87						
ALFC	Alefka	0.28	13	P	Pg	16 35 50.6	+0.7
	baz=190						
ALFC				S	Sb	16 35 55.2	-0.9
SZAC	Souni	0.32	113	P	Pg	16 35 51.1	+0.4
	baz=295						
SZAC				S	Sb	16 35 56.5	-0.8
LEF	Lefka	0.38	52	PG	Pg	16 35 51.4	-0.4
LEF				SG	Sb	16 35 58.1	-0.9
LEF	Lefka	0.38	52	*i* P	Pg	16 35 52.1	+0.3
AKDN	Akdeniz- Kıbrı	0.55	41	PG	Pg	16 35 55.2	+0.2
MAMC	Mammari	0.64	63	P	Pb	16 35 57.2	-0.2
	baz=243						
CSS	Mathiatis	0.67	83	PG	Pb	16 35 57.8	-0.1
CSS				SG	Sn	16 36 08.5	-1.7
CSS	Mathiatis	0.67	83	P	Pg	16 35 57.1	-0.1
	baz=263						
CSS				S	Sb	16 36 07.2	0.0
AKIN	Akıncılar- Kıb	0.79	80	PG	Pg	16 35 59.3	-0.1
TEKE	Tekeli-Mersin	1.34	21	PN	Pn	16 36 08.6	-0.4
EREN	Erenkoy	1.50	64	PN	Pb	16 36 11.5	-0.5
EREN	Erenkoy	1.50	64	*i* P	Pg	16 36 14.0	+1.1
AKK2	Akkuyu-Mersin	1.50	34	PN	Pn	16 36 10.8	-0.4
AKKU	Akkuyu-Mersin	1.52	33	PN	Pn	16 36 10.8	-0.6
GULN	MERSIN_Gulnar	1.54	32	*i* P	Pn	16 36 11.3	-0.3
GULN				IAML_P			
	comp=Z,1μm,0.2s						
BERE	Bereket-Mersin	1.57	21	PN	Pn	16 36 12.3	+0.1
YESI	Yesilovacik-Me	1.60	35	PN	Pn	16 36 12.6	+0.2
IKL	Isikli	1.65	35	PN	Pn	16 36 12.6	-0.6
ALAN	Alanya-ANTALYA	1.72	347	PN	Pn	16 36 14.3	+0.2
TEVE	Tevekalti-Mers	1.72	26	PN	Pn	16 36 14.7	+0.5
ERMK	Ermenek	1.78	10	*i* P	Pg	16 36 18.0	-0.5
KEBE	Keben-Mersin	1.84	32	PN	Pn	16 36 16.1	+0.3
KIZK	Mersin	2.07	39	PN	Pn	16 36 19.5	+0.6
KIZK	Mersin	2.07	39	*i* P	Pb	16 36 20.6	-1.2
KEPZ	Antalya-Kepez	2.15	340	*i* P	Pn	16 36 21.6	+1.5
KEPZ				*i* S	Sb	16 36 49.8	0.0
KEPZ				IAML_P			
	comp=Z,244nm,0.2s						
MERS	Mersin	2.56	39	PN	Pn	16 36 26.7	+0.9
KORT	Korkueli	2.75	321	PN	Pn	16 36 28.1	-0.3
KERG	Konya-Eregli	2.84	27	*i* P	Pb	16 36 33.5	-1.5
KERG				*i* S	Sb	16 37 12.0	+2.2
SUTC	Sutluce-Ispart	2.87	335	PN	Pn	16 36 30.3	+0.3
KRTS	Karatas	2.87	53	PN	Pn	16 36 30.4	+0.5
GULE	Gulek	3.01	37	*i* P	Pb	16 36 35.3	-2.7
GULE				*i* S	Sb	16 37 16.1	+1.3
KONT	Konya--Tatoy	3.06	358	PN	Pn	16 36 33.4	+0.8
KARA	Karaisali	3.13	40	PN	Pn	16 36 34.6	+1.0
YAYL	Yayladag	3.14	68	*i* P	Pn	16 36 35.6	+1.8
YAYL				*i* S	Sn	16 37 13.5	+2.1
YAYL				IAML_P			
	comp=Z,689nm,0.2s						
YURE	YUREGIR	3.18	52	PN	Pn	16 36 35.4	+1.1
TAHT	Tahtakopru-Hat	3.33	62	PN	Pn	16 36 37.3	+1.0
MMLI	Mount Malkishu	3.44	134	PN	Pn	16 36 37.3	-0.5
DALY	Dalyan (Mula)	3.69	303	PN	Pn	16 36 41.3	+0.1
KOZT	Kozan	3.72	45	PN	Pn	16 36 43.3	+1.6

MAN 10 16:38:13.3, 13°.42N×**121°.64E, h1**^{km}, **MS3.5, 1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOAC	Boac	0.20	77	*e*P	Pg	16 38 16.6	-0.6
BOAC				*e*S	Sg	16 38 19.6	-0.3
GQP	Guinayangan	0.92	58	⇓*e*P	Pb	16 38 31.8	-0.3
GQP				*i* S	Sb	16 38 44.6	-0.3
AUQP	San Andres	1.01	95	*e*P	Pb	16 38 33.7	+0.1
AUQP				*e*S	Sn	16 38 49.7	+0.3
SJMP	San Jose	1.08	208	*e*P	Pb	16 38 34.6	-0.2
SJMP				*e*S	Sn	16 38 51.9	+0.7
OTRP	Odiongan	1.11	161	*e*P	Pg	16 38 33.2	-1.5
OTRP				*e*S	Sg	16 38 48.7	-0.4
POLP	Polilio Island	1.34	12	*e*P	Pg	16 38 38.4	-0.6
POLP				*e*S	Sn	16 39 00.4	+2.8
BUSP	Coron	1.99	225	*e*P	Pn	16 38 48.5	+0.4
BUSP				*e*S	Sb	16 39 15.6	0.0
RCP	Roxas	2.13	150	⇑*e*P	Pb	16 38 52.9	+0.1
BALP	Baler	2.31	358	*e*P	Pb	16 38 55.4	-0.4
PVCP	Virac	2.45	85	*e*P	Pb	16 38 58.3	+0.1
PVCP				*e*S	Sb	16 39 27.9	-1.0
APYP	Conner	4.44	355	*e*P	Pb	16 39 28.6	-3.5

*NEIC **10** 16:44:07.5±0.4, 10°.75S×165°.75E, h10^{km}, mb4.6/8, Error ellipse: s-maj=10.0km s-min=7.1km az=101.0*
*ISCJB **10** 16:44:09.4±0.5, 10°.89S±0°.06×165°.72E±0°.08, h35^{km}, mb4.2/14, MS3.4/1, Error ellipse: s-maj=10.9km s-min=8.8km az=176.1*
*IDC **10** 16:44:12.3±3.3, 10°.88S×165°.74E, h46^{km}±28^{km}, mb3.9/11, mb1 4.1/13, mb1mx3.8/43, mbtmp4.2/13, ML4.7/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/38, Error ellipse: s-maj=25.0km s-min=20.5km az=101.0*
ISC 10 16:44:10.8±0.7, **10°.92S**±0°.08×**165°.8E**±0°.1, **h35**^{km}, **n45, σ1^s.21**/37, **mb4.2**/14, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.95	284	*e*P	Pn	16 45 27.0	-9.4
HNR				*e*S	Sn	16 46 50.0	+6.6
HNR	Honiara	5.95	284	P	Pn	16 45 37.0	+0.6
	28nm,0.3s,baz=125,slow=5.1,SNR=7.4						
HNR				S	Sn	16 46 44.1	+0.7
	baz=41,slow=19,SNR=3.2						
DZM	Mont Dzumac	11.11	177	*e*Pn	Pn	16 46 49.2	+1.9
	36nm,0.5s						
DZM				*e*Sn	Sn	16 48 46.5	-3.9
	14nm,0.5s						
DZM				*e*LR	LR	16 49 24.7	
	comp=Z,130nm,23.6s						
DZM	Mont Dzumac	11.11	177	*e*Pn	Pn	16 46 49.6	+2.3
DZM	Mont Dzumac	11.11	177	P	Pn	16 46 49.3	+1.9
	4.1nm,0.3s,baz=334,slow=12,SNR=26						
DZM				LR	LR	16 51 10.8	
	comp=Z,93nm,18.2s,baz=290,slow=38						
ONTNC	Ouen Toro	11.34	177	*e*Pn	Pn	16 46 52.4	+1.9
PINNC	Pines Island,	11.74	173	*e*Pn	Pn	16 46 59.1	+3.3
CTA	Charters Tower	20.91	242	P	Pn	16 48 52.3	-0.8
	12nm,0.9s,baz=70,slow=12,SNR=3.6						
CTAO	Charters Tower	20.91	242	*e*P	Pn	16 48 50.7	-2.4
	13nm,0.9s						
H11S2	WAKE ISLAND Hy	29.23	2	T	T	17 20 18.3	
	baz=181,slow=76,SNR=6.6						
H11S3	WAKE ISLAND Hy	29.24	2	T	T	17 20 19.2	
	baz=181,slow=76,SNR=4.5						
H11S1	WAKE ISLAND Hy	29.25	2	T	T	17 20 20.2	
	baz=181,slow=76,SNR=7.8						
H11N1	WAKE ISLAND Hy	30.46	2	T	T	17 21 49.8	
	baz=182,slow=76,SNR=8.6						
H11N3	WAKE ISLAND Hy	30.46	2	T	T	17 21 50.2	
	baz=182,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.47	2	T	T	17 21 51.1	
	baz=182,slow=76,SNR=9.5						
STKA	Stephens Creek	30.57	223	*e*P	P	16 50 21.2	-0.1
	7.4nm,1.9s						
STKA	Stephens Creek	30.57	223	P	P	16 50 21.2	-0.1
	1.0nm,0.5s,baz=357,slow=12,SNR=3.6						
WR1	Warramunga Arr	31.58	250	*e*P	P	16 50 29.6	-0.8
	18nm,1.6s						
WR1				*e*PcP	PcP	16 53 23.1	+0.6
WRA	Warramunga Arr	31.58	250	P	P	16 50 29.6	-0.8
	2.4nm,0.8s,baz=82,slow=8.8,SNR=19						
WRA				PcP	PcP	16 53 23.1	+0.6
	0.5nm,0.7s,baz=74,slow=3.2,SNR=3.7						
AS01	Alice Springs	32.86	243	*e*P	P	16 50 41.2	-0.4
AS31	Alice Springs	32.90	243	*e*P	P	16 50 41.8	-0.2
	1.1nm,0.6s						
ASAR	Alice Springs	32.90	243	P	P	16 50 41.5	-0.5
	3.4nm,0.8s,baz=64,slow=10,SNR=64						
ASAR				PcP	PcP	16 53 26.8	+0.7
	0.7nm,0.7s,baz=38,slow=1.6,SNR=6.8						
RPZ	Rata Peaks	32.99	173	LR	LR	17 02 15.1	
	comp=Z,73nm,19.6s,baz=205,slow=33						
FITZ	Fitzroy Crossi	39.47	255	*e*P	P	16 51 38.4	+0.3
	9.5nm,1.4s						
FITZ	Fitzroy Crossi	39.47	255	P	P	16 51 38.0	-0.1
	2.5nm,0.7s,baz=99,slow=6.1,SNR=10						
PPT2	Papeete2	43.67	104	*e*LR	LR	17 04 49.5	
	comp=Z,66nm,22.2s						
MJAR	Matsushiro Arr	53.88	332	P	P	16 53 29.8	-0.9
	1.4nm,0.8s,baz=158,slow=9.1,SNR=5.0						
MAJO	Matsushiro	53.88	332	*e*P	P	16 53 29.8	-0.9
RKT	Rikitea	57.58	110	*e*LR	LR	17 11 07.5	
	comp=Z,292nm,32.8s						
SONA0	Songino Array	78.60	324	*e*P	P	16 56 09.5	+0.4
SONM	Songino Array	78.60	324	P	P	16 56 09.5	+0.4

	0.6nm,0.7s,baz=137,slow=5.2,SNR=6.6						
HDA	Harding Lake	83.11	19	eP	P	16 56 33.0	+0.4
	9.3nm,0.9s						
ILAR	Eielson Array	83.37	18	P	P	16 56 34.5	+0.5
	1.9nm,0.8s,baz=236,slow=5.3,SNR=21						
ILB	Eielson Array	83.37	18	eP	P	16 56 34.5	+0.5
BEKR	Beckworth	84.82	48	eP	P	16 56 41.9	-0.2
	7.4nm,0.7s						
MK01	Makanchi Array	93.45	317	eP	P	16 57 22.8	-0.1
MK31	Makanchi Array	93.47	317	eP	P	16 57 22.9	0.0
MK32	Makanchi Array	93.47	317	eP	P	16 57 22.9	0.0
MKAR	Makanchi Array	93.47	317	eP	P	16 57 22.8	-0.1
	6.8nm,0.8s						
MKAR	Makanchi Array	93.47	317	P	P	16 57 22.9	+0.1
	0.9nm,0.7s,baz=90,slow=6.5,SNR=14						
ZALV	Zalesovo Beam	93.48	324	P	P	16 57 22.5	-0.2
	0.5nm,0.4s,baz=112,slow=3.0,SNR=4.2						
ZAA1	Zalesovo Array	93.49	324	eP	P	16 57 22.5	-0.2
YKA	Yellowknife Ar	94.83	27	P	P	16 57 27.7	-1.0
	0.2nm,0.9s,baz=251,slow=3.8,SNR=3.6						
ARA0	ARCESS Array S	116.22	345	ePKPdf	PKPdf	17 02 49.7	-0.2
ARCES	ARCESS Array B	116.22	345	PKP	PKPdf	17 02 49.7	-0.2
	2.4nm,1.0s,baz=90,slow=1.8,SNR=12						

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*ISCJB **10** 16:46:05.9±0.6, 10°.96S±0°.07×165°.92E±0°.08, h10^{km}, mb3.9/8, Error ellipse: s-maj=11.8km s-min=9.3km az=163.9*

*IDC **10** 16:46:05.3±1.6, 10°.93S×166°.02E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.8/43, mbtmp4.0/8, ML4.2/2, Error ellipse: s-maj=40.5km s-min=27.5km az=130.0*

*NEIC **10** 16:46:08.1±0.6, 10°.90S×165°.89E, h10^{km}, mb4.4/4, Error ellipse: s-maj=12.7km s-min=10.0km az=73.0*

ISC 10 16:46:08.0±0.7**, 10°.91S**±0°.09×**165°.93E**±0°.10**, h10^{km}, n19, σ1^{s}27**/19**, mb3.9**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.07	283	ePn	Pn	16 47 39.6	+1.7
HNR	Honiara	6.07	283	Pn	Pn	16 47 39.4	+1.4
	17nm,0.3s,baz=159,slow=3.3,SNR=3.7						
DZM	Mont Dzumac	11.11	178	ePn	Pn	16 48 47.3	+0.2
DZM	Mont Dzumac	11.11	178	Pn	Pn	16 48 47.1	-0.1
	0.6nm,0.3s,baz=351,slow=19,SNR=4.9						
ONTNC	Ouen Toro	11.35	178	ePn	Pn	16 48 51.0	+0.6
PINNC	Pines Island,	11.73	173	ePn	Pn	16 48 58.2	+2.7
MSVF	Nonsavu	13.55	121	ePn	Pn	16 49 20.5	-0.1
TARA	Tarawa	14.03	30	ePn	Pn	16 49 27.8	+0.8
PATS	Pohnpei	19.19	336	eP	Pn	16 50 33.7	+0.6
	277nm,1.4s						
WR1	Warramunga Arr	31.70	250	eP	P	16 52 31.2	-1.1
	3.2nm,0.8s						
WRA	Warramunga Arr	31.70	250	P	P	16 52 31.2	-1.1
	2.7nm,0.8s,baz=81,slow=9.2,SNR=12						
AS31	Alice Springs	33.02	243	eP	P	16 52 42.0	-1.8
	2.0nm,1.5s						
ASAR	Alice Springs	33.02	243	P	P	16 52 42.1	-1.6
	0.5nm,0.6s,baz=64,slow=10.0,SNR=5.5						
FITZ	Fitzroy Crossi	39.59	255	eP	P	16 53 39.2	-0.8
	25nm,2.0s						
FITZ	Fitzroy Crossi	39.59	255	P	P	16 53 39.0	-1.0
	2.5nm,0.7s,baz=99,slow=5.5,SNR=7.8						
CMAR	Chiang Mai Arr	72.23	293	P	P	16 57 34.1	+0.1
	0.6nm,0.7s,baz=127,slow=2.8,SNR=5.3						
ILAR	Eielson Array	83.33	18	P	P	16 58 33.4	-1.4
	0.5nm,0.9s,baz=231,slow=4.8,SNR=4.0						
MK32	Makanchi Array	93.55	317	eP	P	16 59 23.7	-0.7
MKAR	Makanchi Array	93.55	317	P	P	16 59 23.7	-0.7
	0.4nm,0.8s,baz=100,slow=6.0,SNR=4.5						

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*ISCJB **10** 16:47:57.8±0.9, 11°.2S±0°.1×165°.9E±0°.1, h10^{km}, mb3.8/8, MS3.7/6, Error ellipse: s-maj=19.8km s-min=15.3km az=173.6*

*IDC **10** 16:47:57.8±1.6, 11°.03S×165°.87E, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.8/45, mbtmp3.9/9, ML4.2/2, MS3.6/7, Ms1 3.6/7, ms1mx3.2/34, Error ellipse: s-maj=40.3km s-min=27.2km az=125.0*

*NEIC **10** 16:47:59.3±0.7, 11°.11S×165°.92E, h10^{km}, mb4.5/2, Error ellipse: s-maj=15.3km s-min=11.7km az=86.0*

ISC 10 16:47:59.4±1.1**, 11°.1S**±0°.1×**165°.9E**±0°.2**, h10^{km}, n20, σ0^{s}77**/16**, mb3.8**/8**, MS3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.11	285	ePn	Pn	16 49 30.6	+0.7
HNR	Honiara	6.11	285	Pn	Pn	16 49 30.7	+0.8
	11nm,0.3s,baz=132,slow=14,SNR=3.8						
HNR				LR	LR	16 51 48.0	
	comp=Z,205nm,21.7s,baz=136,slow=38						
DZM	Mont Dzumac	10.95	178	ePn	Pn	16 50 36.1	-0.3
DZM	Mont Dzumac	10.95	178	Pn	Pn	16 50 37.3	+1.0
	0.8nm,0.3s,baz=338,slow=19,SNR=8.1						
RAO	Raoul Island	23.55	143	LR	LR	16 59 45.3	
	comp=Z,290nm,21.5s,baz=129,slow=30						
WR1	Warramunga Arr	31.65	250	eP	P	16 54 22.5	-0.6
	8.2nm,1.1s						
WRA	Warramunga Arr	31.65	250	P	P	16 54 22.5	-0.6
	3.3nm,0.8s,baz=80,slow=9.2,SNR=15						
ASAR	Alice Springs	32.95	243	P	P	16 54 33.4	-1.1
	0.8nm,0.8s,baz=72,slow=9.5,SNR=5.4						
ASAR				LR	LR	17 06 34.5	
	comp=Z,67nm,19.9s,baz=78,slow=34						
FITZ	Fitzroy Crossi	39.55	255	eP	P	16 55 30.6	-0.5
	15nm,1.8s						
FITZ	Fitzroy Crossi	39.55	255	P	P	16 55 31.0	-0.1
	2.2nm,0.9s,baz=74,slow=6.3,SNR=4.2						
NWAO	Narrogin (SRO)	49.60	236	LR	LR	17 19 03.3	
	comp=Z,141nm,19.1s,baz=328,slow=38						
CM31	Chiang Mai Arr	72.29	293	eP	P	16 59 26.4	+0.6
CMAR	Chiang Mai Arr	72.29	293	P	P	16 59 24.8	-1.0
	0.4nm,0.9s,baz=102,slow=3.8,SNR=3.4						
CMAR				LR	LR	17 33 47.3	
	comp=Z,8.3nm,18.0s,baz=195,slow=38						
KDAK	Kodiak Island	76.54	21	LR	LR	17 29 27.9	
	comp=Z,95nm,19.0s,baz=301,slow=32						
SONA0	Songino Array	78.80	324	eP	P	17 00 01.9	-0.8
SONM	Songino Array	78.80	324	P	P	17 00 01.9	-0.8
	0.2nm,0.6s,baz=120,slow=5.2,SNR=3.5						
ILAR	Eielson Array	83.48	18	P	P	17 00 27.4	+0.3
	0.7nm,0.8s,baz=233,slow=5.5,SNR=5.2						
NVAR	Mina Array Bea	85.90	50	LR	LR	17 33 31.2	
	comp=Z,53nm,18.1s,baz=280,slow=32						
MK32	Makanchi Array	93.67	317	eP	P	17 01 16.8	+0.5
MKAR	Makanchi Array	93.67	317	P	P	17 01 16.8	+0.5
	0.2nm,0.7s,baz=100,slow=5.1,SNR=2.8						

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*NEIC **10** 16:51:35.1±0.0, 17°.61N×95°.49W, h125^{km}, MD4.1(MEX), After MEX.*

MEX 10 16:51:34.6±0.8**, 17°.57N×95°.44W, h130^{km}**±8^{km}**, MD4.1, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.71	132	i P	Pn	16 51 54.2	-1.0
CMIG				eS	Sn	16 52 03.8	-6.9
CMIG	Matias Romero	0.71	132	i P	Pn	16 51 54.2	-1.0
CMIG				i S	Sn	16 52 08.2	-2.5
VHO	Vista Hermosa	1.33	248	eP	Pn	16 52 00.1	-1.0
VHO				eS	Sn	16 52 20.0	-1.2
VHO	Vista Hermosa	1.33	248	eP	Pn	16 52 00.0	-1.0
VHO				eS	Sn	16 52 19.7	-1.4
HUIG	Huatulco	1.90	200	eP	Pn	16 52 05.9	-1.6
HUIG				eS	Sn	16 52 31.1	-1.4
HUIG	Huatulco	1.90	200	eP	Pn	16 52 06.0	-1.4
HUIG				eS	Sn	16 52 31.1	-1.4
PNIG	Pinotepa	2.82	246	eP	Pn	16 52 16.0	-3.0
PNIG				eS	Sn	16 52 50.5	-2.7
PNIG	Pinotepa	2.82	246	eP	Pn	16 52 16.1	-2.9
PNIG				i S	Sn	16 52 50.6	-2.6

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*IDC **10** 16:51:38.4±1.3, 10°.40N×84°.46W, h49^{km}±13^{km}, mb3.8/18, mb1 4.0/18, mb1mx3.9/40, mbtmp4.0/18, MS3.3/8, Ms1 3.3/8, ms1mx3.0/47, Error ellipse: s-maj=25.2km s-min=20.6km az=33.0*

*ISCJB **10** 16:51:40.3±0.2, 10°.19N±0°.03×84°.73W±0°.03, h84^{km}±1^{km}, mb4.1/47, Error ellipse: s-maj=5.9km s-min=2.1km az=40.3*

*NEIC **10** 16:51:40.7±0.7, 10°.03N×84°.70W, h83^{km}±4^{km}, mb4.3/34, MD4.5(UCR), Error ellipse: s-maj=12.3km s-min=6.4km az=207.0*

NEIC Felt in Guanacaste, western Puntarenas and in much of the Valle Central.

*UCR **10** 16:51:41.3±1.6, 10°.16N×84°.74W, h69^{km}±3^{km}, MD3.7, ML4.3, mb4.3(NEIC)*

ISC 10 16:51:40.7±0.6**, 10°.17N**±0°.04×**84°.72W**±0°.03**, h74^{km}**±4^{km}**, n301, σ1^{s}14**/331**, mb4.2**/47**, 4C-24D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRA1	San Ramn	0.25	110	⇑iP	Pn	16 51 52.2	0.0
SRA1				eS	Sn	16 52 00.6	-0.1
JTS	JuntasAbangare	0.26	297	ePn	Pn	16 51 51.9	-0.2
JTS				eSn	Sn	16 52 00.3	-0.2
JTS	JuntasAbangare	0.26	297	P	Pn	16 51 51.7	-0.5
	2µm,0.3s,baz=172,slow=2.4,SNR=5460						
JTS				S	Sn	16 51 59.8	-0.8
	4µm,0.3s,baz=24,slow=19,SNR=320						
JTS	JuntasAbangare	0.26	297	eP	Pn	16 51 51.9	-0.2
JTS				eS	Sn	16 51 59.9	-0.7
CASO	Castillo	0.26	357	⇓iP	Pn	16 51 52.5	+0.2
CASO				i S	Sn	16 52 00.8	+0.1
ARE1	Arenal 1	0.29	1	⇓iP	Pn	16 51 52.8	+0.5
ARE1				eS	Sn	16 52 01.8	+0.9
FORC	Fortuna	0.30	10	⇓iP	Pn	16 51 52.8	+0.4
CEDE	Laguna Cedeo	0.31	3	⇓iP	Pn	16 51 53.0	+0.4
CEDE				eS	Sn	16 52 01.9	+0.7
AMAS	Alto Masis	0.51	329	⇓iP	Pn	16 51 54.4	+0.2
ACAL	Aguas Claras	0.55	326	⇓iP	Pn	16 51 54.9	+0.4
PTEN	Parque Tenorio	0.60	334	⇓iP	Pn	16 51 55.5	+0.5
PTEN				i S	Sn	16 52 06.4	+0.9
HDC	Heredia	0.62	106	ePn	Pn	16 51 55.7	+0.4
HDC				eSn	Sn	16 52 06.2	+0.2
HDC	Heredia	0.62	106	i P	Pn	16 51 55.8	+0.6
HDC				eS	Sn	16 52 06.8	+0.8
PLVR	Palo Verde	0.64	286	⇓iP	Pn	16 51 56.0	+0.4
PLVR				eS	Sn	16 52 07.3	+0.8
CUI	Cuipilapa	0.65	318	⇓iP	Pn	16 51 55.9	+0.4
CUI				eS	Sn	16 52 07.0	+0.6
COLC	Colonia	0.68	316	⇓iP	Pn	16 51 56.1	+0.3
COLC				i S	Sn	16 52 07.3	+0.3
SJS	Escuela Geolog	0.70	109	⇑iP	Pn	16 51 57.4	+1.3
SJS				eS	Sn	16 52 08.7	+1.2
GUAB	Guayabo de Bag	0.73	317	⇓iP	Pn	16 51 56.6	+0.3
MESS	Mesas	0.73	321	⇓iP	Pn	16 51 56.8	+0.4
MESS				⇓iP		16 51 56.9	
MESS				eS	Sn	16 52 08.5	+0.6
LIM1	Limonal	0.74	315	⇓iP	Pn	16 51 56.8	+0.3
LIM1				i S	Sn	16 52 08.5	+0.4
LCR2	La Lucha 2	0.83	121	eP	Pn	16 51 58.0	+0.3
LCR2				eS	Sn	16 52 10.7	+0.6
GPS2	Hotel Rincn d	0.85	313	⇓iP	Pn	16 51 58.2	+0.5
GPS3	Bodega del ICE	0.86	313	⇓iP	Pn	16 51 58.3	+0.5
GPS1	Guardaparques	0.86	314	⇓iP	Pn	16 51 58.3	+0.4
LAPC	Finca la Perla	0.92	310	⇓iP	Pn	16 51 58.8	+0.3
BUEV	Buena Vista	0.92	313	⇓iP	Pn	16 51 59.0	+0.5
BUEV				eS	Sn	16 52 12.4	+0.6
BUAI	Buenos Aires	0.92	319	⇓iP	Pn	16 51 59.1	+0.6
GB1A	Borinquen Arri	0.92	314	⇓iP	Pn	16 51 59.1	+0.5
GB1A				eS	Sn	16 52 12.9	+0.9
NY14	Universidad de	0.93	301	i P	Pn	16 51 59.6	+1.0
NY14				i S	Sn	16 52 12.9	+1.1
GBS3	Finca Las Img	0.94	310	⇓iP	Pn	16 51 59.1	+0.3
GBS3				i S	Sn	16 52 12.3	+0.1
EDDO	Dominical	1.25	137	eP	Pn	16 52 02.6	+0.1
EDDO				eS	Sn	16 52 19.9	+1.0
EDLM	Las Mercedes	1.43	128	eP	Pn	16 52 05.9	+1.0
EDLM				eS	Sn	16 52 24.7	+1.5
CONN	Concepcion	1.64	327	eP	Pn	16 52 08.1	+0.4
EDPN	Palmar Norte	1.73	134	eP	Pn	16 52 09.8	+0.8
EDPN				eS	Sn	16 52 31.7	+1.4
EDBA	Buenos Aires	1.74	125	⇓eP	Pn	16 52 09.7	+0.6
EDBA				eS	Sn	16 52 31.5	+0.9
ACON	Acoyapa	1.84	346	eP	Pn	16 52 11.3	+1.0
ACON				eS	Sn	16 52 33.3	+0.5
ESPN	Las Esperanzas	2.05	12	ePn	Pn	16 52 14.2	+1.1
ESPN				eSn	Sn	16 52 38.5	+0.7
ESPN	Las Esperanzas	2.05	12	⇑iP	Pn	16 52 14.3	+1.1
ESPN				eS	Sn	16 52 38.6	+0.7
PTJ1	Puerto Jimnez	2.15	139	eP	Pn	16 52 14.4	0.0
EDSV	San Vito	2.19	128	eP	Pn	16 52 16.6	+1.5
EDSV				eS	Sn	16 52 43.5	+2.1
BRU2	Volcan	2.43	124	⇓eP	Pn	16 52 19.5	+1.2
BRU2				eS	Sn	16 52 48.7	+1.5
BOAB	BOACO BROADBAN	2.44	338	ePn	Pn	16 52 19.3	+0.9
BOAB				eSn	Sn	16 52 47.4	0.0
BOAB	BOACO BROADBAN	2.44	338	eP	Pn	16 52 19.4	+0.9
BOAB				eS	Sn	16 52 47.6	+0.2
COPN	Copaltepe	2.71	318	eP	Pn	16 52 23.4	+1.4
DVD	David	2.83	127	i P	Pn	16 52 24.6	+0.9
DVD				i S	Sn	16 52 57.6	+0.9
MOMN	Momotombo	2.85	321	eP	Pn	16 52 24.8	+0.9
MATN	Matagalpa	2.98	337	eP	Pn	16 52 26.9	+1.1
CNGN	Cerro Negro	3.02	320	eP	Pn	16 52 27.9	+1.6
CNGN				eS	Sn	16 53 03.2	+1.8
ESTN	Estel	3.33	331	ePn	Pn	16 52 32.0	+1.5
ESTN	Estel	3.33	331	⇑iP	Pn	16 52 32.1	+1.6
ESTN				eS	Sn	16 53 11.8	+2.8
CRIN	San Cristobal	3.39	318	eP	Pn	16 52 33.2	+1.8
CRIN				eS	Sn	16 53 12.1	+1.5
CNCH	Conchagua	4.34	316	eS	Sn	16 53 34.4	+0.7
TGUH	Tegucigalpa,Un	4.60	327	ePn	Pn	16 52 49.3	+1.6
PACA	Pacayal	4.81	313	eP	Pn	16 52 53.4	+2.6
PACA				eS	Sn	16 53 46.0	+0.7
BCIP	Isla Barro Col	4.92	101	ePn	Pn	16 52 53.3	+1.2
BCIP	Isla Barro Col	4.92	101	eP	Pn	16 52 53.0	+0.9
ZANG	Zanguenga, Cho	4.94	104	eP	Pn	16 52 53.7	+1.3
TECA	Tecapa	4.96	312	eP	Pn	16 52 55.8	+2.9
AZU	Azuero	4.99	118	eP	Pn	16 52 56.6	+3.5
AZU	Azuero	4.99	118	eP	Pn	16 52 56.6	+3.5
AZU	Azuero	4.99	118	eP	Pn	16 52 56.6	+3.5
FRIJ	El Hiral	5.02	100	i P	Pn	16 52 54.6	+1.1
ICCO	Coco Island	5.15	207	eP	Pn	16 52 54.8	-0.5
FLAM	Flamenco Islan	5.26	103	eP	Pn	16 52 59.0	+2.1
FLAM				eS	Sn	16 53 57.6	+1.4
SNVI	San Vicente	5.28	311	eS	Sn	16 53 57.4	+0.5
LFRS	El Faro	5.46	309	eP	Pn	16 53 02.3	+2.6
CEVE	Cerro Verde	6.02	308	IAML		16 54 20.4	
	comp=Z,410nm,0.3s						
SJCC	San Jacinto, C	9.40	91	eP	Pn	16 53 56.7	+3.2
WBCY	West Bay, Gran	9.70	19	ePn	Pn	16 54 02.0	+4.6
ZARC	Zaragoza, Cauc	10.11	104	eP	Pn	16 54 01.1	-2.0
ZARC	Zaragoza, Cauc	10.11	104	eP	Pn	16 54 01.1	-2.0
SMLC	San Martn de	10.60	96	eP	Pn	16 54 10.5	+0.8
SMLC	San Martn de	10.60	96	eP	Pn	16 54 10.5	+0.8
PTBC	PUERTO BERRIO,	10.78	109	eP	Pn	16 54 15.2	+2.9
PTBC	PUERTO BERRIO,	10.78	109	eP	Pn	16 54 15.2	+2.9
POPC	Popayan, Colom	11.02	133	eP	Pn	16 54 18.5	+2.8
POPC	Popayan, Colom	11.02	133	eP	Pn	16 54 18.5	+2.8
SOTA	Rioblanco	11.35	134	eP	Pn	16 54 23.8	+3.4
SOTA	Rioblanco	11.35	134	eP	Pn	16 54 23.8	+3.4
PCON	Cinco Dias	11.36	133	eP	Pn	16 54 25.8	+5.1
PCON	Cinco Dias	11.36	133	eP	Pn	16 54 25.8	+5.1
OCAC	Ocana	11.42	99	eP	Pn	16 54 22.5	+1.4
OCAC	Ocana	11.42	99	eP	Pn	16 54 22.5	+1.4
PAMC	Pamplona, Colo	12.21	102	eP	Pn	16 54 35.1	+2.9
PAMC	Pamplona, Colo	12.21	102	eP	Pn	16 54 35.1	+2.9
URIC	Uribia, Colomb	12.59	82	eP	Pn	16 54 28.5	-8.5
URIC	Uribia, Colomb	12.59	82	eP	Pn	16 54 28.5	-8.5
SDV	Santo Domingo	13.96	94	ePn	Pn	16 54 56.4	+1.2
SDV				e		17 01 44.5	
SDV	Santo Domingo	13.96	94	LR	LR	17 01 44.5	
	comp=Z,45nm,19.7s,baz=232,slow=44						
061Z	Ochoppi	16.02	13	eP	P	16 55 24.2	+0.6
	comp=Z,291nm,1.2s						
ATAH	Atahualpa	18.31	160	LR	LR	17 02 10.2	
	comp=Z,94nm,19.8s,baz=15,slow=34						
757A	Oxford	18.84	7	P	Pn	16 55 57.0	+1.0
	baz=188						
557A	Orange Park	19.94	8	P	Pn	16 56 08.3	-0.6
	baz=188						
CBYP	Canovanas	19.97	64	eP	P	16 56 05.3	-1.8
	comp=Z,14nm,1.0s						
LNIG	Linares	20.27	318	eP	P	16 56 10.3	-0.1
	comp=Z,15nm,1.3s						
351A	Pinckard	21.02	358	P	P	16 56 20.0	+1.8
	baz=178						
353A	Camilla	21.08	1	P	P	16 56 20.5	+1.6
	baz=181						
254A	Abbeville	21.71	3	P	P	16 56 27.3	+1.7
	baz=184						
249A	Camden	21.81	355	P	P	16 56 29.0	+2.3
	baz=174						
151A	Opelika	22.25	359	P	P	16 56 32.8	+1.3
	baz=178						
150A	Eclectic	22.36	357	P	P	16 56 33.9	+1.3
	baz=177,SNR=5.2						
152A	Waverly Hall	22.39	0	eP	P	16 56 34.7	+1.7
	comp=Z,15nm,0.6s						
152A	Waverly Hall	22.39	0	P	P	16 56 34.2	+1.2
	baz=180						
149A	Jones	22.40	355	P	P	16 56 34.1	+1.0
	baz=175,SNR=6.5						
147A	Livingston	22.63	352	eP	P	16 56 36.2	+0.7
	comp=Z,32nm,0.8s						
147A	Livingston	22.63	352	P	P	16 56 37.0	+1.4
	baz=171,SNR=5.7						
833A	Chaparral WMA,	22.71	325	P	P	16 56 37.1	+0.6
	baz=140						
LRAL	Lakeview Retre	22.85	355	eP	P	16 56 38.9	+1.1
	comp=Z,18nm,0.6s						
LRAL	Lakeview Retre	22.85	355	P	P	16 56 39.5	+1.6
	baz=174,SNR=16						
Z52A	Williamson	22.91	1	P	P	16 56 39.4	+0.9
	baz=181						
Z49A	Columbiana	22.97	356	P	P	16 56 40.3	+1.2
	baz=175,SNR=7.0						
Z50A	Ashland	23.00	357	eP	P	16 56 39.4	0.0
	comp=Z,14nm,0.7s						
Z50A	Ashland	23.00	357	P	P	16 56 39.8	+0.4
	baz=177,SNR=7.0						
Z53A	Monticello	23.02	2	P	P	16 56 40.2	+0.7
	baz=183						
GOGA	Godfrey	23.16	3	eP	P	16 56 41.4	+0.6
	comp=Z,7.8nm,0.9s						
GOGA	Godfrey	23.16	3	P	P	16 56 41.8	+1.0
	baz=183						
NNA	Nana	23.37	160	LR	LR	17 04 58.9	
	comp=Z,40nm,18.6s,baz=347,slow=34						
Y52A	Lilburn	23.59	1	eP	P	16 56 45.8	+1.0
	comp=Z,9.2nm,1.0s						
Y52A	Lilburn	23.59	1	P	P	16 56 45.9	+1.0
	baz=182						
Y53A	Monroe	23.59	2	P	P	16 56 46.0	+1.1
	baz=183						
Y51A	Rockmart	23.62	359	P	P	16 56 46.1	+1.0
	baz=179						
Y49A	Blount Mountai	23.62	356	eP	P	16 56 45.2	0.0
	comp=Z,12nm,1.4s						
Y49A	Blount Mountai	23.62	356	P	P	16 56 46.0	+0.8
	baz=176						
Y54A	Tignall	23.65	4	P	P	16 56 46.5	+1.1
	baz=185						
Y48A	Jasper	23.74	355	P	P	16 56 46.9	+0.8
	baz=174,SNR=8.5						
435B	Jarrell	23.74	332	eP	P	16 56 47.0	+0.8
	comp=Z,31nm,0.7s						
435B	Jarrell	23.74	332	P	P	16 56 46.9	+0.7
	baz=147,SNR=6.8						
HODGE	Hodges	24.05	5	eP	P	16 56 49.9	+0.9
	comp=Z,6.8nm,0.8s						
X53A	Estanollee	24.25	3	P	P	16 56 51.7	+1.0
	baz=183						
X48A	Hartselle	24.26	355	eP	P	16 56 52.4	+1.6
	comp=Z,9.2nm,0.8s						
X48A	Hartselle	24.26	355	P	P	16 56 51.8	+1.0
	baz=174						
X49A	Woodville	24.27	357	P	P	16 56 52.0	+1.1
	baz=176						
X52A	Dahlonega	24.33	2	P	P	16 56 52.8	+1.3
	baz=182						
X55A	Gracelyn & Ava	24.35	6	P	P	16 56 52.5	+0.8
	baz=187						
X47A	Russelville	24.40	354	P	P	16 56 52.8	+0.6
	baz=172,SNR=14						
X46A	Booneville	24.53	352	P	P	16 56 53.5	+0.2
	baz=171,SNR=6.1						
JCT	Junction City	24.61	327	P	P	16 56 54.3	+0.2
	baz=142						
BG3	Lake Jocassee	24.76	4	eP	P	16 56 56.3	+0.9
	comp=Z,4.7nm,0.7s						
W49A	Belvidere	24.87	357	P	P	16 56 57.4	+1.0
	baz=176						
W51A	Cleveland	24.87	360	P	P	16 56 57.3	+0.9
	baz=180						
W50A	Signal Mountai	24.92	359	eP	P	16 56 58.8	+1.9
	comp=Z,13nm,0.8s						
W50A	Signal Mountai	24.92	359	P	P	16 56 56.7	-0.2
	baz=179						
W47A	Westpoint	25.10	354	P	P	16 56 59.3	+0.7
	baz=173						
CPCT	Cooper Cave	25.16	0	eP	P	16 57 00.3	+1.2
	comp=Z,9.1nm,0.9s						
V50A	Pikevile	25.39	359	P	P	16 57 01.8	+0.7
	baz=179						
MIAR	Mount Ida	25.58	343	eP	P	16 57 03.2	+0.4
	comp=Z,7.0nm,0.8s						
MIAR	Mount Ida	25.58	343	P	P	16 57 03.8	+0.9
	baz=160						
V47A	Nunnelly	25.67	355	P	P	16 57 03.9	+0.3
	baz=174,SNR=5.8						
V46A	Holladay	25.70	354	P	P	16 57 03.3	-0.6
	baz=172						
WHAR	Wooly Hollow	25.94	346	eP	P	16 57 05.5	-0.6
	comp=Z,12nm,1.4s						
WVT	Waverly	25.99	354	eP	P	16 57 06.0	-0.5
	comp=Z,3.8nm,0.8s						
WVT	Waverly	25.99	354	P	P	16 57 07.0	+0.4
	baz=173						
TXAR	Lajitas Array	26.03	320	P	P	16 57 07.4	+0.3
	comp=Z,0.7nm,0.5s,baz=146,slow=9.0,SNR=17						
TXAR				PcP	PcP	17 00 33.7	+0.1
	comp=Z,0.4nm,0.7s,baz=144,slow=5.1,SNR=3.7						
LTX	Lajitas	26.03	320	eP	P	16 57 07.4	+0.3
LTX				ePcP	PcP	17 00 33.7	+0.1
TX31	Lajitas Ar. Si	26.03	320	eP	P	16 57 07.6	+0.5
U50A	Jamestown	26.13	360	P	P	16 57 07.3	-0.5
	baz=180						
U53A	Fall Branch	26.15	4	P	P	16 57 08.8	+0.8
	baz=185						
V42A	Cord	26.23	348	P	P	16 57 08.1	-0.6
	baz=165						
U49A	Red Boiling Sp	26.24	358	P	P	16 57 09.0	+0.2
	baz=178						
W39A	Magazine	26.25	343	P	P	16 57 09.0	+0.2
	baz=160						
U47A	Clarksville	26.25	355	P	P	16 57 09.2	+0.2
	baz=174						
U48A	Cassie Pea, Po	26.27	357	P	P	16 57 08.6	-0.5
	baz=176						
V41A	Mountainview	26.38	346	P	P	16 57 09.7	-0.4
	baz=163						
T51A	Gray	26.68	1	P	P	16 57 12.7	-0.1
	baz=182						
U42A	Revenden	26.72	348	P	P	16 57 13.0	-0.2
	baz=166						
PTGA	Pitinga	26.91	112	LR	LR	17 10 07.0	
	comp=Z,44nm,19.2s,baz=268,slow=41						
T42A	Van Buren	27.35	349	eP	P	16 57 18.2	-0.6
	comp=Z,6.1nm,0.9s						
T42A	Van Buren	27.35	349	P	P	16 57 18.6	-0.2
	baz=166						
S51A	Beattyville	27.37	2	P	P	16 57 18.3	-0.6
	baz=182						
S49A	Springfield	27.50	359	P	P	16 57 19.7	-0.4
	baz=179						
T41A	Mountain View	27.50	348	P	P	16 57 20.2	+0.1
	baz=165						
TUL1	Leonard	27.53	340	P	P	16 57 20.2	-0.2
	baz=156						
S55A	Lewisburg	27.74	7	P	P	16 57 21.9	-0.5
	baz=189						
WCI	Wyandotte Cave	27.97	357	P	P	16 57 24.0	-0.3
	baz=177						
R50A	Paris	27.99	1	P	P	16 57 24.3	-0.2
	baz=181						
R49A	Shelbyville	28.00	359	P	P	16 57 24.0	-0.6
	baz=179						
S42A	Caledonia	28.02	350	P	P	16 57 24.1	-0.6
	baz=167						
R51A	Hillsboro	28.03	2	P	P	16 57 24.8	0.0
	baz=182						
R47A	Wooly Knot Far	28.05	357	P	P	16 57 24.7	-0.3
	baz=176						
R53A	Hurricane	28.15	5	P	P	16 57 25.4	-0.5
	baz=186						
R45A	Skylar, Fairfi	28.18	354	P	P	16 57 25.6	-0.5
	baz=173						
R44A	Waltonville	28.23	353	P	P	16 57 25.4	-1.2

	baz=171						
R43A	Red Bud	28.37	351	P	P	16 57 27.7	-0.1
	baz=169						
CCM	Cathedral Cave	28.38	349	P	P	16 57 28.0	+0.1
	baz=166						
R41A	Rosebud	28.64	349	P	P	16 57 30.2	0.0
	baz=166						
Q47A	Bedord North L	28.68	357	P	P	16 57 30.6	0.0
	baz=176						
Q49A	Aurora	28.71	360	P	P	16 57 31.2	+0.3
	baz=180						
MNTX	Cornudas Mount	28.72	321	P	P	16 57 31.8	+0.7
	baz=134						
Q52A	Bidwell	28.75	4	P	P	16 57 32.1	+0.8
	baz=185						
Q51A	Peebles	28.76	2	*e*P	P	16 57 31.4	+0.1
	comp=Z,9.9nm,0.6s						
Q51A	Peebles	28.76	2	P	P	16 57 32.0	+0.7
	baz=183						
Q55A	Buckhannon	29.00	7	P	P	16 57 34.9	+1.4
	baz=189						
P51A	Williamsport	29.23	3	P	P	16 57 35.3	-0.1
	baz=183						
P49A	Miami Univ. Ec	29.24	0	P	P	16 57 35.2	-0.3
	baz=180						
Q41A	Truxton	29.25	350	P	P	16 57 35.2	-0.4
	baz=167						
P53A	Whipple	29.34	5	P	P	16 57 37.0	+0.5
	baz=187						
P45A	Graceland, Par	29.36	355	P	P	16 57 37.0	+0.4
	baz=174						
P52A	Corning	29.43	4	P	P	16 57 37.3	0.0
	baz=185						
O50A	Cable	29.87	2	P	P	16 57 40.8	-0.3
	baz=182						
O51A	Pataskala	29.91	3	P	P	16 57 41.5	0.0
	baz=184						
O48A	Farmland	29.96	359	P	P	16 57 41.3	-0.7
	baz=179						
ACSO	Alum Creek Sta	29.98	3	P	P	16 57 41.9	-0.2
	baz=183						
O53A	New Philadelph	30.11	5	P	P	16 57 43.4	+0.1
	baz=187						
N47A	Urbana	30.60	359	P	P	16 57 46.6	-1.0
	baz=178						
N49A	Columbus Grove	30.63	1	P	P	16 57 47.2	-0.7
	baz=181						
N46A	Monticello	30.65	357	P	P	16 57 47.2	-0.8
	baz=176						
N42A	Yates City	30.89	352	P	P	16 57 49.4	-0.7
	baz=170						
LPAZ	La Paz	31.00	148	LR	LR	17 11 01.1	
	comp=Z,54nm,20.2s,baz=4.0,slow=37						
319A	Douglas	31.04	316	*e*P	P	16 57 52.9	+1.1
	comp=Z,8.2nm,0.8s						
M46A	Old House Fiel	31.14	358	P	P	16 57 52.6	+0.2
	baz=177						
M53A	WI Miller and	31.35	6	P	P	16 57 54.5	+0.3
	baz=188						
M52A	Chesterland	31.38	5	P	P	16 57 54.7	+0.2
	baz=186						
M55A	Ridgway	31.61	9	P	P	16 57 56.8	+0.3
	baz=191						
ANMO	Albuquerque	31.65	325	*e*P	P	16 57 57.6	+0.5
	comp=Z,2.3nm,0.8s						
ANMO	Albuquerque	31.65	325	P	P	16 57 57.0	-0.1
	baz=136						
ANMO	Albuquerque	31.65	325	P	P	16 57 57.9	+0.8
	comp=Z,1.3nm,0.6s,baz=137,slow=6.0,SNR=6.2						
L53A	Girard	31.90	6	P	P	16 57 58.5	-0.5
	baz=188						
L41A	Preston	32.18	352	P	P	16 58 00.5	-1.0
	baz=169						
K47A	Vermontville	32.37	360	P	P	16 58 02.2	-1.0
	baz=180						
TUC	Tucson	32.62	316	P	P	16 58 05.0	-0.6
	baz=127						
K41A	Shullsburg	32.68	352	P	P	16 58 04.9	-0.9
	baz=170						
BINY	Binghamton	32.81	12	P	P	16 58 06.7	-0.4
	baz=196						
K40A	Colesburg	32.88	351	P	P	16 58 06.7	-1.0
	baz=168						
K55A	Perry	32.95	9	P	P	16 58 08.5	+0.3
	baz=192						
SDCO	Great Sand Dun	33.22	329	P	P	16 58 10.3	-0.6
	baz=141						
X18A	Snowflake	33.46	320	*e*P	P	16 58 13.7	+0.7
	comp=Z,3.9nm,0.8s						
J40A	Soldiers Grove	33.51	352	P	P	16 58 12.6	-0.4
	baz=169						
ACTO	Acton	33.56	6	P	P	16 58 14.3	+0.9
	baz=188						
X16A	Lo Mia Camp, P	34.34	319	*e*P	P	16 58 21.8	+1.2
	comp=Z,4.4nm,0.7s						
SADO	Sadowa	34.81	7	*e*P	P	16 58 24.3	0.0
	comp=Z,13nm,1.3s						
SADO	Sadowa	34.81	7	P	P	16 58 23.6	-0.7
	comp=Z,2.0nm,0.4s,baz=193,slow=7.6,SNR=6.3						
ECSD	EROS Data Cent	35.00	345	P	P	16 58 24.6	-1.3
	baz=159						
Y14A	Wickenburg	35.09	317	*e*P	P	16 58 28.2	+1.3
	comp=Z,3.8nm,0.6s						
PV03	Paradox Valley	35.36	326	*e*P	P	16 58 30.3	+0.9
	comp=Z,3.7nm,0.9s						
PV12	Saucer Basin,	35.38	326	*e*P	P	16 58 30.1	+0.6
	comp=Z,4.7nm,0.8s						
G38A	Ridgeland	35.41	351	P	P	16 58 27.9	-1.5
	baz=168						
G39A	Holcombe	35.42	352	P	P	16 58 28.0	-1.6
	baz=169						
GLA	Glamis	35.85	314	P	P	16 58 33.6	+0.2
	baz=123						
PDMCI	Parker Dam,Lak	36.07	316	P	P	16 58 36.8	+1.5
	baz=125,SNR=5.6						
ALGO	Algonquin Park	36.11	8	P	P	16 58 34.9	-0.5
	baz=191						
E43A	Lone Tree Farm	36.13	357	P	P	16 58 34.3	-1.2
	baz=176						
F38A	Pierce - Schro	36.18	352	P	P	16 58 34.8	-1.3
	baz=168						
E42A	Champion	36.23	356	P	P	16 58 36.0	-0.5
	baz=175						
E40A	Wakefield	36.41	354	P	P	16 58 38.0	-0.1
	baz=171						
E51A	G1948 Merrick	36.51	6	P	P	16 58 38.3	-0.5
	baz=189						
IRM	Iron Mountain	36.67	315	P	P	16 58 39.6	-0.8
	baz=124						
PKCU	Pink Cliffs	36.80	322	*e*P	P	16 58 44.0	+2.2
	comp=Z,3.4nm,0.8s						
KNB	Kanab	36.84	321	*e*P	P	16 58 44.9	+2.9
	comp=Z,2.5nm,1.0s						
SRU	San Rafael Swe	36.89	326	*e*P	P	16 58 43.1	+0.7
	comp=Z,3.3nm,0.7s						
BELC	Belle Mtn. Jos	37.19	314	P	P	16 58 45.6	+0.7
	baz=122						
PFO	Pinyon Flats O	37.31	314	P	P	16 58 47.5	+1.5
	comp=Z,8.8nm,0.7s,baz=122,slow=4.9,SNR=6.9						
GMRC	Granite Mounta	37.37	316	P	P	16 58 47.6	+1.1
	baz=124						
D54A	Lac Fusel, La	37.48	9	P	P	16 58 47.0	-0.1
	baz=193						
MURC	Murrieta	37.83	313	P	P	16 58 50.1	-0.1
	baz=121						
PSUT	Pine Spring	38.44	322	*e*P	P	16 58 56.2	+0.7
	comp=Z,2.2nm,0.9s						
LATQ	La Tuque	38.44	13	P	P	16 58 55.7	+0.6
	baz=199						
GSC	Goldstone, Bar	38.44	316	P	P	16 58 56.1	+0.7
	baz=123						
PDAR	Pinedale Array	39.05	331	P	P	16 58 59.6	-0.9
	comp=Z,0.3nm,0.6s,baz=123,slow=9.8,SNR=4.1						
BW06	Boulder Array	39.05	331	P	P	16 59 00.6	0.0
	baz=139						
FURC	Furnace Creek,	39.12	317	P	P	16 59 01.8	+0.9
	baz=124						
LSQQ	Lebel-sur-Quev	39.30	8	P	P	16 59 02.3	0.0
	baz=192						
MPMC	Manual Prospec	39.32	316	P	P	16 59 03.6	+0.7
	baz=123,SNR=5.0						
R11A	Troy Canyon, C	39.39	321	P	P	16 59 04.1	+0.6
	baz=128						
MATQ	Matagami	39.90	7	P	P	16 59 07.9	+0.6
	baz=191						
ELK	Elko	40.67	324	P	P	16 59 12.8	-1.3
	comp=Z,0.8nm,0.7s,baz=173,slow=1.0,SNR=4.5						
ULM	Lac du Bonnet	41.01	349	P	P	16 59 13.7	-2.7
	comp=Z,2.3nm,0.5s,baz=158,slow=7.4,SNR=5.3						
NV11	Mina Array Sit	41.07	319	*e*P	P	16 59 18.3	+0.9
	comp=Z,0.3nm,0.8s						
NV01	Mina Array Sit	41.17	319	*e*P	P	16 59 18.6	+0.4
NV01				*e*PcP	PcP	17 01 17.7	+1.5
NVAR	Mina Array Bea	41.17	319	P	P	16 59 19.8	+1.6
	comp=Z,3.3nm,0.6s,baz=130,slow=7.3,SNR=12						
NVAR				PcP	PcP	17 01 17.8	+1.6
	comp=Z,1.7nm,0.7s,baz=126,slow=4.6,SNR=5.4						
HLID	Hailey	42.08	328	P	P	16 59 25.9	+0.4
	baz=134						
BOZ	Bozeman (W)	42.16	332	P	P	16 59 26.9	+0.8
	baz=139						
BDFB	Brasilia	44.49	125	LR	LR	17 20 10.0	
	comp=Z,37nm,21.8s,baz=212,slow=38						
SCHQ	Schefferville	46.75	14	*e*P	P	17 00 01.9	-0.4
	comp=Z,9.9nm,1.5s						
SCHQ	Schefferville	46.75	14	P	P	17 00 00.5	-1.8
	comp=Z,2.6nm,0.4s,baz=203,slow=7.2,SNR=13						
BBB	Bella Bella	54.64	329	LR	LR	17 25 46.5	
	comp=Z,44nm,18.7s,baz=202,slow=38						
YKA	Yellowknife Ar	56.51	344	P	P	17 01 13.5	-1.5
	comp=Z,0.7nm,0.6s,baz=139,slow=7.1,SNR=14						
YKA				PcP	PcP	17 02 10.4	-0.4
	comp=Z,0.2nm,0.5s,baz=140,slow=4.0,SNR=3.4						
YKB5	Yellowknife Ar	56.51	344	*e*P	P	17 01 13.9	-1.1
SFJD	Kangerlussuaq	61.20	15	LR	LR	17 29 06.3	
	comp=Z,49nm,18.0s,baz=192,slow=37						
INK	Inuvik	66.17	342	*e*P	P	17 02 19.2	-0.8
	comp=Z,3.0nm,1.1s						
INK	Inuvik	66.17	342	P	P	17 02 18.9	-1.2
	comp=Z,1.8nm,1.0s,baz=63,slow=4.4,SNR=7.0						
ILAR	Eielson Array	69.17	336	P	P	17 02 38.1	-0.9
	comp=Z,0.5nm,0.6s,baz=116,slow=4.7,SNR=12						
ILB	Eielson Array	69.17	336	*e*P	P	17 02 38.7	-0.3
ESDC	Sonseca Array	76.49	52	P	P	17 03 22.1	-0.8
	comp=Z,0.8nm,0.6s,baz=272,slow=4.7,SNR=4.0						
NB200	NORSAR Array S	84.05	29	*e*P	P	17 04 02.4	-0.6
NOA	NORSAR Array B	84.05	29	P	P	17 04 02.4	-0.6
	comp=Z,0.9nm,1.0s,baz=280,slow=4.4,SNR=2.2						
TOA1	Torodi Ar. Sit	84.28	78	*e*P	P	17 04 04.0	-1.0
TORD	Torodi Ar. Bea	84.28	78	P	P	17 04 04.0	-1.0
	comp=Z,0.7nm,0.6s,baz=272,slow=3.6,SNR=4.6						
ARA0	ARCESS Array S	87.45	19	*e*P	P	17 04 17.9	-1.8
ARCES	ARCESS Array B	87.45	19	P	P	17 04 17.9	-1.8
	comp=Z,2.6nm,0.9s,baz=276,slow=4.4,SNR=6.8						
GERES	GERESS Array B	87.91	41	P	P	17 04 21.3	-1.1
	comp=Z,0.3nm,0.6s,baz=260,slow=3.9,SNR=3.7						
FIA0	FINESS Array S	90.81	27	*e*P	P	17 04 33.5	-2.0
FINES	FINESS Array B	90.81	27	P	P	17 04 33.5	-2.0
	comp=Z,0.9nm,0.7s,baz=270,slow=5.6,SNR=3.2						
MK32	Makanchi Array	122.11	11	*e*PKPdf	PKPdf	17 10 26.7	-0.4
MKAR	Makanchi Array	122.11	11	PKP	PKPdf	17 10 26.7	-0.4
	comp=Z,0.2nm,0.7s,baz=332,slow=3.2,SNR=3.6						
ASAR	Alice Springs	140.83	245	PKhKP	PKPpre	17 10 57.4	
	comp=Z,0.4nm,0.5s,baz=112,slow=3.3,SNR=6.5						
ASAR				PKP	PKPdf	17 11 03.7	+0.8
	comp=Z,1.6nm,0.7s,baz=108,slow=1.8,SNR=14						
WR1	Warramunga Arr	141.14	251	*e*PKPpre	PKPpre	17 10 57.7	
WR1				*e*PKPdf	PKPdf	17 11 04.8	+1.2
WRA	Warramunga Arr	141.14	251	PKhKP	PKPpre	17 10 57.7	
	comp=Z,1.7nm,0.6s,baz=94,slow=2.5,SNR=8.1						
WRA				PKP	PKPdf	17 11 04.8	+1.2
	comp=Z,1.5nm,0.6s,baz=94,slow=2.4,SNR=19						
FITZ	Fitzroy Crossi	149.56	252	*e*PKPbc	PKPbc	17 11 23.6	+1.0
FITZ	Fitzroy Crossi	149.56	252	PKPbc	PKiKP	17 11 24.2	+0.6
	comp=Z,4.0nm,0.8s,baz=123,slow=1.2,SNR=8.0						
CM31	Chiang Mai Arr	151.32	353	*e*PKPbc	PKPbc	17 11 26.2	-0.6
CMAR	Chiang Mai Arr	151.32	353	PKPbc	PKPbc	17 11 26.3	-0.5
	comp=Z,0.9nm,0.8s,baz=340,slow=3.0,SNR=8.4						
CMAR				PKPab	PKPab	17 11 33.9	-1.0
	comp=Z,0.2nm,0.4s,baz=336,slow=4.3,SNR=4.3						

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*IDC **10** 16:53:24.2±1.5, 10°.72S×165°.65E, h0^{km}, mb3.6/3, mb1 3.9/5, mb1mx3.5/44, mbtmp3.8/5, ML4.0/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/25, Error ellipse: s-maj=42.4km s-min=30.4km az=135.0*

*ISCJB **10** 16:53:27.3±1.4, 10°.9S±0°.1×165°.5E±0°.2, h31^{km}, mb3.5/3, MS3.5/2, Error ellipse: s-maj=25.4km s-min=17.7km az=144.4*

ISC 10 16:53:29.0±1.3**, 10°.8S**±0°.2×**165°.6E**±0°.2**, h31^{km}, n14, σ0^{s}84**/6**, mb3.5**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.71	283	Pn	Pn	16 54 51.1	-0.6
	7.9nm,0.3s,baz=73,slow=20,SNR=4.0						
DZM	Mont Dzumac	11.25	176	Pn	Pn	16 56 07.5	-0.3
	0.5nm,0.3s,baz=31,slow=9.2,SNR=12						
H11S2	WAKE ISLAND Hy	29.11	2	T	T	17 29 46.6	
	baz=183,slow=76,SNR=4.7						
H11S3	WAKE ISLAND Hy	29.12	2	T	T	17 29 47.4	
	baz=183,slow=76,SNR=3.7						
H11S1	WAKE ISLAND Hy	29.13	2	T	T	17 29 47.8	
	baz=183,slow=76						
H11N1	WAKE ISLAND Hy	30.34	2	T	T	17 31 16.0	
	baz=182,slow=76,SNR=3.5						
H11N3	WAKE ISLAND Hy	30.34	2	T	T	17 31 08.1	
	baz=182,slow=76,SNR=3.8						
H11N2	WAKE ISLAND Hy	30.35	2	T	T	17 31 18.2	
	baz=182,slow=76,SNR=3.0						
WRA	Warramunga Arr	31.42	249	P	P	16 59 48.6	+0.9
	0.5nm,1.0s,baz=82,slow=9.1,SNR=3.1						
ASAR	Alice Springs	32.77	243	P	P	17 00 00.0	+0.5
	0.4nm,0.6s,baz=63,slow=10,SNR=5.9						
ASAJ	Asahikawa	58.50	341	LR	LR	17 24 06.2	
	comp=Z,24nm,19.4s,baz=336,slow=32						
MA2	Magadan	71.13	352	LR	LR	17 32 37.8	
	comp=Z,30nm,18.2s,baz=145,slow=33						
ILAR	Eielson Array	83.32	19	P	P	17 05 52.8	+0.3
	0.5nm,0.8s,baz=241,slow=4.9,SNR=5.0						
ARCES	ARCESS Array B	116.05	345	PKP	PKiKP	17 12 07.7	-0.7
	3.7nm,1.1s,baz=60,slow=2.9,SNR=4.1						

MEX 10 16:54:29.8±0.5**, 14°.73N×94°.40W, h17^{km}**±181^{km}**, MD4.1, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.50	49	*e*P	Pn	16 54 52.4	-3.5
PCIG				*i* S	Sn	16 55 09.9	-5.3
THIG		2.08	85	*e*P	Pn	16 55 00.2	-3.7
THIG				*e*S	Sn	16 55 25.0	-4.4
CCIG	Comitan	2.68	54	*e*P	Pn	16 55 10.4	-2.0
CCIG				*e*S	Sn	16 55 41.5	-3.0

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*ISCJB **10** 16:59:00.7±0.7, 22°.66S±0°.08×176°.9W±0°.1, h150^{km}, mb4.3/15, Error ellipse: s-maj=14.6km s-min=11.7km az=176.9*

*NEIC **10** 16:59:03.9±0.3, 22°.54S×176°.84W, mb4.5/13, Error ellipse: s-maj=9.8km s-min=8.1km az=116.0*

*IDC **10** 16:59:05.5±0.9, 22°.49S×176°.84W, h181^{km}±7^{km}, mb3.9/8, mb1 4.1/8, mb1mx3.6/34, mbtmp4.3/8, Error ellipse: s-maj=28.3km s-min=15.5km az=149.0*

ISC 10 16:59:03.0±0.6**, 22°.6S**±0°.1×**176°.8W**±0°.1**, h150^{km}, n50, σ2^{s}43**/55**, mb4.5**/15**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.88	314	*e*Pn	Pn	17 00 42.1	+0.5
NIUE	Niue	7.28	62	*e*Pn	Pn	17 00 41.6	-5.2
OUZ	Omahuta	15.14	212	*e*Pn	Pn	17 02 32.1	+3.0
	11nm,0.8s						
DZM	Mont Dzumac	15.56	269	*e*Pn	P	17 02 40.6	+4.9
	26nm,1.1s						
URZ	Urewera	16.47	197	*e*P	P	17 02 45.0	-0.4
URZ				*e*S	S	17 05 34.8	-14
URZ	Urewera	16.47	197	P	P	17 02 43.8	-1.6
	2.4nm,0.3s,baz=312,slow=5.4,SNR=17						
URZ				S	S	17 05 34.8	-14
	0.6nm,0.3s,baz=94,slow=19,SNR=5.7						
BKZ	Black Stump Fm	17.49	198	*e*P	P	17 02 54.8	-1.9
	29nm,1.6s						
BFZ	Birch Farm	18.97	197	*e*P	P	17 03 11.3	-1.5
	59nm,1.6s						
RPZ	Rata Peaks	23.35	203	P	P	17 03 57.2	-0.7
	3.8nm,0.5s,baz=321,slow=6.5,SNR=4.8						
CTA	Charters Tower	34.50	267	P	P	17 05 36.5	-0.5
	17nm,0.7s,baz=99,slow=10.0,SNR=33						
CTAO	Charters Tower	34.50	267	*e*P	P	17 05 36.1	-0.9
	22nm,0.9s						
STKA	Stephens Creek	37.98	247	*e*P	P	17 06 05.3	-1.1
	3.1nm,1.4s						
STKA	Stephens Creek	37.98	247	P	P	17 06 05.5	-1.0
	3.7nm,0.5s,baz=95,slow=12,SNR=13						
AS01	Alice Springs	45.17	259	*e*P	P	17 07 03.5	-1.6
AS01				*e*PcP	PcP	17 08 41.7	-1.3
AS31	Alice Springs	45.21	259	*e*P	P	17 07 03.8	-1.7
	2.7nm,0.7s						
ASAR	Alice Springs	45.21	259	P	P	17 07 03.8	-1.7
	6.7nm,0.7s,baz=91,slow=5.8,SNR=102						
ASAR				pP	pwP	17 07 45.1	+3.7
	2.0nm,0.8s,baz=84,slow=8.3,SNR=2.7						
ASAR				PcP	PcP	17 08 41.5	-1.7
	1.9nm,0.7s,baz=109,slow=3.8,SNR=8.0						
WB2	Warramunga Arr	45.49	264	*e*P	P	17 07 05.2	-2.4
WRAB	Tennant Creek	45.49	264	*e*P	P	17 07 04.9	-2.8
	8.0nm,0.6s						
WR1	Warramunga Arr	45.50	264	*e*P	P	17 07 05.5	-2.3
	14nm,0.6s						
WR1				*e*PcP	PcP	17 08 43.0	-1.2
WRA	Warramunga Arr	45.50	264	P	P	17 07 05.5	-2.3
	7.7nm,0.6s,baz=101,slow=8.5,SNR=155						
WRA				PcP	PcP	17 08 43.0	-1.2
	1.3nm,0.8s,baz=95,slow=3.5,SNR=5.1						
FORT	Forrest	49.57	248	*e*P	P	17 07 35.8	-3.2
	32nm,0.6s						
FITZ	Fitzroy Crossi	53.93	264	*e*P	P	17 08 10.5	-1.0
	7.5nm,0.8s						
SOEI	Soe	57.75	273	*e*P	P	17 08 36.9	-2.0
	24nm,0.9s						
QSPA	South Pole Qui	67.48	180	*e*P	P	17 09 42.8	+0.2
	11nm,1.3s						
LTX	Lajitas	87.22	57	*e*P	P	17 11 32.4	-0.4
LTX				*e*pP	pwP	17 12 15.1	+2.8
TX31	Lajitas Ar. Si	87.22	57	*e*pP	pP	17 12 14.3	+4.3
TXAR	Lajitas Array	87.22	57	P	P	17 11 32.4	-0.4
	0.4nm,0.9s,baz=231,slow=4.3,SNR=3.3						
TXAR				pP	pwP	17 12 15.1	+2.8
	0.8nm,0.9s,baz=243,slow=4.0,SNR=4.7						
ILAR	Eielson Array	90.10	12	P	P	17 11 42.9	-2.6
	0.3nm,0.5s,baz=223,slow=5.4,SNR=7.9						
CMAR	Chiang Mai Arr	91.91	289	P	P	17 11 54.0	-0.9
	0.4nm,0.5s,baz=149,slow=2.1,SNR=4.3						
MK32	Makanchi Array	113.48	313	*e*PKiKP	PKiKP	17 17 21.0	-2.2
MKAR	Makanchi Array	113.48	313	PKiKP	PKiKP	17 17 21.0	-2.2
	0.1nm,0.4s,baz=158,slow=0.5,SNR=3.8						
ARA0	ARCESS Array S	131.19	350	*e*PKPdf	PKPdf	17 17 54.5	-2.0
ARCES	ARCESS Array B	131.19	350	PKP	PKPdf	17 17 54.5	-2.0
	2.2nm,0.9s,baz=336,slow=2.0,SNR=5.9						
FIA0	FINESS Array S	138.11	344	*e*PKPpre	PKPpre	17 18 02.4	
FINES	FINESS Array B	138.11	344	PKhKP	PKPpre	17 18 02.4	
	1.0nm,0.9s,baz=10,slow=1.6,SNR=2.4						
SUW	Suwalki	145.21	339	*e*PKPdf	PKPbc	17 18 20.5	-2.0
AKASG	Malin Array Be	145.41	331	PKPbc	PKPdf	17 18 20.4	-2.5
	6.0nm,0.6s,baz=43,slow=4.4,SNR=34						
AKASG				pPKPbc	pPKPdf	17 19 07.5	+5.6
	0.7nm,0.4s,baz=40,slow=4.3,SNR=1.4						
AKBB	Malin Array Si	145.41	331	*e*PKPdf	PKPdf	17 18 20.5	-2.4
KIEV	Kiev	145.42	331	*e*PKPdf	PKPdf	17 18 20.5	-2.5
AK11	Malin Array Si	145.45	331	*e*PKPdf	PKPdf	17 18 20.4	-2.6
BR101	Keskin Array S	149.10	311	*e*PKPbc	PKPdf	17 18 31.9	+2.3
BR131	Keskin Array S	149.10	311	*e*PKPbc	PKPdf	17 18 31.7	+2.1
BRTR	Keskin Array B	149.10	311	PKPbc	PKPdf	17 18 31.9	+2.3
	2.2nm,0.6s,baz=134,slow=5.2,SNR=18						
BUR08	Bucovina Ar. S	149.44	330	*e*PKPbc	PKPdf	17 18 33.4	+3.5
BUR04	Bucovina Ar. S	149.46	330	*e*PKPbc	PKPdf	17 18 33.5	+3.6
CLL	Collm	150.36	348	*e*PKPbc	PKPdf	17 18 35.0	+4.0
CLL				*e*PKPab	PKiKP	17 18 41.0	+3.9
GERES	GERESS Array B	152.53	345	PKPbc	PKPdf	17 18 39.6	+5.1
	0.4nm,0.5s,baz=28,slow=3.8,SNR=4.7						
GERES				PKPab	PKPab	17 18 50.8	-1.7
	0.1nm,0.3s,baz=33,slow=5.8,SNR=4.4						
TOA0	Torodi Ar. Sit	170.48	171	*e*PKPab	PKPab	17 20 09.5	-1.8
TORD	Torodi Ar. Bea	170.48	171	PKPab	PKPab	17 20 11.6	+0.3
	1.0nm,0.7s,baz=186,slow=2.9,SNR=7.0						
TOA1	Torodi Ar. Sit	170.49	171	*e*PKPab	PKPab	17 20 11.6	+0.3

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*DDA **10** 17:05:35.4, 40°.36N×35°.32E, h7^{km}±2^{km}, ML2.6*

*ISK **10** 17:05:36.0, 40°.32N×35°.38E, h5^{km}, ML1.9/9*

ISC 10 17:05:36.2±1.0**, 40°.34N**±0°.02×**35°.34E**±0°.03**, h14^{km}**±10^{km}**, n19, σ0^{s}65**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COAL	Corum-Alaca	0.28	253	*i* P	Pg	17 05 41.4	-0.7
COAL				*i* S	Sg	17 05 46.9	+0.7
COAL				IAML_P			
	comp=Z,2μm,0.2s						
YOZ	Yozgat	0.69	181	PG	Pg	17 05 49.4	-0.4
YOZ				SG	Sb	17 05 59.4	-0.2
HAVZ	Havza	0.79	21	*i* P	Pg	17 05 51.6	0.0
HAVZ				*i* S	Sb	17 06 02.6	+0.3
HAVZ				IAML_P			
	comp=Z,692nm,0.1s						
KVT	Kavak	0.92	36	PG	Pg	17 05 53.6	-0.4
TOKT	Tokat	0.92	91	PG	Pg	17 05 53.8	-0.3
TOKT				SG	Sb	17 06 06.3	+0.2
SIRC	Yozgat	1.01	188	*i* P	Pb	17 05 54.0	-1.4
SIRC				*i* S	Sg	17 06 09.5	+0.6
SIRC				IAML_P			
	comp=Z,227nm,0.1s						
CDAG	Cicekdag	1.03	226	*i* P	Pb	17 05 55.6	-0.1
CDAG				IAML_P			
	comp=Z,392nm,0.1s						
DELI	KIRIKKALE	1.14	253	*i* P	Pb	17 05 57.5	-0.2
DELI				*i* S	Sb	17 06 12.2	-0.1
CUSAR	Sarkisla-SIVAS	1.15	142	*i* P	Pg	17 05 58.3	-0.1
DIKM	Dikmen	1.31	357	PN	Pg	17 06 01.8	+0.3
SVSK	Karacayir	1.34	108	PN	Pg	17 06 01.5	-0.5
ILGA	Ilgaz	1.42	301	*i* P	Pn	17 06 01.9	+0.1
ILGA				IAML_P			
	comp=Z,223nm,0.1s						
BNN	Bunyan	1.53	165	PN	Pb	17 06 04.4	0.0
AVNS	Nevsehir-Avano	1.57	194	*i* P	Pg	17 06 06.0	-0.5
AVNS				*i* S	Sg	17 06 28.9	+2.1
AVNS				IAML_P			
	comp=Z,421nm,0.2s						
SINO	SINOP_Merkez	1.68	357	*i* P	Pg	17 06 07.8	-0.8
SINO				*i* S	Sg	17 06 29.9	-0.5
SINO				IAML_P			
	comp=Z,360nm,0.2s						
SNOP	Sinop	1.69	357	PN	Pb	17 06 07.0	+0.1
YAYX	Yaylak	1.83	221	PN	Pb	17 06 09.3	-0.1
AFSR	Afar-Bala (An	1.96	244	PN	Pb	17 06 11.4	-0.2
KKUL	Konya-Kulu	2.20	239	*i* P	Pb	17 06 16.1	+0.3
KKUL				IAML_P			
	comp=Z,51nm,0.2s						

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*ISCJB **10** 17:12:28.2±0.8, 46°.09N±0°.09×106°.9W±0°.1, h0^{km}, Error ellipse: s-maj=14.1km s-min=11.0km az=42.2*

*IDC **10** 17:12:29.1±1.5, 46°.00N×107°.22W, h0^{km}, mb1 3.2/3, mb1mx3.0/41, mbtmp3.0/3, ML2.7/3, Error ellipse: s-maj=42.6km s-min=9.3km az=128.0*

*NEIC **10** 17:12:32.3±0.8, 45°.78N×106°.93W, h0^{km}, ML2.8, Error ellipse: s-maj=12.6km s-min=11.3km az=117.0, Suspected Mining explosion.*

NEIC 27 km [17 miles] WSW of Colstrip.

ISC 10 17:12:29.6±1.1**, 46°.01N**±0°.06×**106°.86W**±0°.07**, h0^{km}, n10, σ0^{s}55**/9**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	2.75	132	*e*Pn	Pn	17 13 15.9	+0.7
EGMT	Eagleton	2.82	316	*e*Pn	Pb	17 13 21.5	+0.5
DGMT	Dagmar	3.06	35	*e*Pn	Pb	17 13 24.6	-0.3
BOZ	Bozeman (W)	3.36	265	*e*Pn	Pn	17 13 23.8	+0.2
BW06	Boulder Array	3.78	212	*e*Pn	Pn	17 13 29.6	+0.3
PDAR	Pinedale Array	3.78	212	Pn	Pn	17 13 29.0	-0.3
	0.4nm,0.3s,baz=44,slow=11,SNR=10						
PDAR				Pg	Pb	17 13 37.1	-0.1
	1.8nm,0.3s,baz=49,slow=19,SNR=26						
PDAR				Lg	Lg	17 14 23.4	
	2.8nm,0.3s,baz=34,slow=33,SNR=6.1						
NEW	Newport	7.35	292	Lg	Lg	17 16 21.1	
	0.2nm,0.3s,baz=215,slow=12,SNR=3.7						
I10CA	LAC DU BONNET	8.37	56	*i*		18 06 40.0	
	baz=239,slow=307,SNR=3.1						
ULM	Lac du Bonnet	8.48	56	Pn	Pn	17 14 34.0	+0.4
	0.4nm,0.3s,baz=253,slow=13,SNR=4.6						
ULM				Lg	Lg	17 17 00.1	
	0.4nm,0.3s,baz=336,slow=20,SNR=5.0						
YKA	Yellowknife Ar	17.10	348	P	Pn	17 16 29.0	-0.7
	0.0nm,0.3s,baz=159,slow=12,SNR=2.8						

IDC ***10*** *17:17:26.6±1.1, 10°.94S×165°.59E, h0^{km}, mb4.0/9, mb1 4.2/11, mb1mx4.0/41, mbtmp4.1/11, ML4.2/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/29, Error ellipse: s-maj=34.1km s-min=20.7km az=129.0*

ISCJB ***10*** *17:17:29.3±0.8, 11°.05S±0°.10×165°.52E±0°.08, h30^{km}, mb4.0/8, MS4.0/1, Error ellipse: s-maj=15.0km s-min=10.8km az=27.5*

ISC 10 17:17:31.1±0.8**, 11°.0S**±0°.1×**165°.6E**±0°.1**, h30^{km}, n19, σ0^s.70**/15**, mb4.0**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.76	285	Pn	Pn	17 18 54.7	+0.2
	10nm,0.3s,baz=160,slow=1.9,SNR=11						
HNR				Sn	Sn	17 19 59.4	-0.2
	baz=192,slow=20,SNR=1.5						
HNR				LR	LR	17 21 00.5	
	comp=Z,130nm,18.1s,baz=150,slow=37						
DZM	Mont Dzumac	11.07	176	Pn	Pn	17 20 07.7	+0.1
	1.3nm,0.3s,baz=298,slow=16,SNR=9.5						
DZM				LR	LR	17 24 20.5	
	comp=Z,67nm,18.6s,baz=29,slow=37						
CTA	Charters Tower	20.70	242	P	P	17 22 09.7	+0.6
	4.5nm,0.9s,baz=79,slow=13,SNR=4.6						
H11S2	WAKE ISLAND Hy	29.29	2	T	T	17 54 12.1	
	baz=181,slow=76,SNR=6.5						
H11S3	WAKE ISLAND Hy	29.29	2	T	T	17 54 15.2	
	baz=181,slow=76,SNR=5.1						
H11S1	WAKE ISLAND Hy	29.31	2	T	T	17 54 16.2	
	baz=181,slow=76,SNR=6.1						
STKA	Stephens Creek	30.39	223	P	P	17 23 40.8	+0.1
	2.6nm,0.8s,baz=65,slow=14,SNR=3.4						
H11N1	WAKE ISLAND Hy	30.51	2	T	T	17 55 43.6	
	baz=182,slow=76,SNR=8.9						
H11N3	WAKE ISLAND Hy	30.52	2	T	T	17 55 46.7	
	baz=182,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.53	2	T	T	17 55 47.7	
	baz=182,slow=76,SNR=10						
WRA	Warramunga Arr	31.36	250	P	P	17 23 48.6	-0.8
	3.2nm,0.7s,baz=82,slow=8.9,SNR=43						
WRA				PcP	PcP	17 26 44.2	+1.2
	0.7nm,0.7s,baz=76,slow=3.2,SNR=8.3						
ASAR	Alice Springs	32.69	243	P	P	17 24 00.1	-1.0
	4.9nm,0.9s,baz=66,slow=9.8,SNR=53						
ASAR				PcP	PcP	17 26 46.9	+0.3
	0.9nm,0.7s,baz=87,slow=2.6,SNR=6.7						
CMAR	Chiang Mai Arr	71.94	294	P	P	17 28 52.9	+0.7
	0.8nm,0.7s,baz=123,slow=4.3,SNR=6.8						
SONM	Songino Array	78.51	324	P	P	17 29 29.9	+0.3
	0.6nm,0.9s,baz=144,slow=6.1,SNR=4.9						
ILAR	Eielson Array	83.49	19	P	P	17 29 56.1	+0.6
	1.1nm,0.7s,baz=236,slow=5.0,SNR=15						
ELK	Elko	89.01	48	LR	LR	18 06 49.5	
	comp=Z,48nm,18.6s,baz=316,slow=33						
MKAR	Makanchi Array	93.36	317	P	P	17 30 42.6	-0.7
	0.3nm,0.7s,baz=101,slow=6.4,SNR=4.8						
YKA	Yellowknife Ar	94.97	27	P	P	17 30 49.6	-0.7
	0.2nm,0.6s,baz=259,slow=4.6,SNR=4.1						
ARCES	ARCESS Array B	116.22	345	PKP	PKiKP	17 36 10.5	-0.5
	1.2nm,0.8s,baz=43,slow=6.8,SNR=3.3						

MEX 10 17:28:22.8±0.7**, 16°.67N**×**94°.16W, h141^{km}**±9^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.81	302	*i* P	Pn	17 28 43.5	-1.6
CMIG				*i* S	Sn	17 29 00.2	-1.9
CCIG	Comitan	1.98	101	*e*P	Pn	17 28 56.1	-1.2
CCIG				*e*S	Sn	17 29 22.2	-1.5
HUIG	Huatulco	2.07	245	*e*P	Pn	17 28 56.3	-1.9
HUIG				*e*S	Sn	17 29 25.7	+0.3
VHO	Vista Hermosa	2.50	280	*e*P	Pn	17 29 03.6	0.0
VHO				*e*S	Sn	17 29 34.2	-0.8

IDC ***10*** *17:39:17.5±2.0, 32°.16N×50°.04E, h0^{km}, mb3.6/7, mb1 3.6/11, mb1mx3.4/49, mbtmp3.5/11, ML3.4/3, Error ellipse: s-maj=48.3km s-min=19.4km az=158.0*

TEH ***10*** *17:39:18.1, 32°.10N×50°.19E, h10^{km}, ML3.6*

ISCJB ***10*** *17:39:19.3±0.3, 32°.04N±0°.03×50°.18E±0°.04, h16^{km}, mb3.6/7, Error ellipse: s-maj=5.7km s-min=3.8km az=136.9*

THR ***10*** *17:39:22.4, 32°.31N×50°.25E, h14^{km}, ML3.7*

DSN ***10*** *17:39:28.4±0.2, 32°.28N×51°.63E, h15^{km}, ML3.0/5, Error ellipse: s-maj=16.5km s-min=3.5km az=239.0*

ISC 10 17:39:20.0±0.6**, 32°.14N**±0°.05×**50°.32E**±0°.03**, h16^{km}, n63, σ1^s.97**/65**, mb3.6**/7**, 3C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZNGN	Zangian	0.46	92	*e*Pg	Pb	17 39 30.5	+0.6
ROKH	ROKH	0.64	71	*e*Pg	Pb	17 39 32.9	-0.1
ROKH				IAMB	IAmb	17 39 46.5	
	comp=Z,0.0nm,0.2s						
IPIR	Pirpir	0.73	41	*e*Pg	Pg	17 39 34.0	-0.4
IPIR				IAMB	IAmb	17 39 50.4	
	comp=E,23µm,0.3s						
SHGR	Shooshtar-Gavs	1.29	269	*e*AML	AML	17 40 06.4	
	comp=N,1µm,0.6s						
SHGR				*e*Pg	Pg	17 39 45.3	+0.5
SHGR				*e*Sg	Sg	17 40 02.4	+0.7
SHGR				*e*AML	AML	17 40 09.1	
	comp=E,1µm,0.5s						
IGAR	Gharneh	1.48	79	*e*Pn	Pg	17 39 47.9	-0.7
IGAR				IAMB	IAmb	17 39 51.8	
	comp=Z,15µm,0.2s						
IKLH	Kolahrood	1.59	42	*e*Pn	Pn	17 39 48.6	+0.9
IKLH				IAMB	IAmb	17 40 20.2	
	comp=Z,5µm,0.4s						
KHMZ	Khomeyn	1.63	349	*e*Pg	Pn	17 39 49.0	+0.8
KHMZ	Khomeyn	1.63	349	*e*Pg	Pn	17 39 49.0	+0.8
KHMZ				*e*Sg	Sn	17 40 08.6	-0.4
IRAM	Ramesheh	1.78	100	*e*Pn	Pg	17 39 54.4	+0.1
IRAM				IAMB	IAmb	17 39 58.5	
	comp=Z,3µm,0.3s						
IZEF	Zefreh	1.86	65	*e*Pn	Pg	17 39 54.8	-1.0
IZEF				IAMB	IAmb	17 39 59.3	
	comp=Z,3µm,0.3s						
IKMR	Kamar-syah	2.14	311	*e*Pn	Pn	17 39 55.9	+0.9
IKMR				IAMB	IAmb	17 40 31.3	
	comp=Z,0.0nm,0.4s						
ASAO	Ashtian	2.42	354	*e*Pn	Pn	17 40 01.4	+2.3
ASAO	Ashtian	2.42	354	*e*Pn	Pn	17 40 01.4	+2.3
IKFM	Kafar-mosalman	2.50	304	*e*Pn	Pn	17 40 00.9	+0.9
IKFM				IAMB	IAmb	17 40 51.8	
	comp=Z,0.0nm,0.6s						
HSAM	Samen	2.52	326	IAMB	IAmb	17 40 04.4	
	comp=Z,0.0nm,0.2s						
HSAM				*e*Pn	Pn	17 40 01.5	+0.9
IKAZ	Kazeroun	2.69	151	*e*Pn	Pb	17 40 07.2	-0.8
IKAZ				IAMB	IAmb	17 41 05.3	
	comp=Z,3µm,0.8s						
HAGD	Aghdareh	2.85	340	*e*Pn	Pn	17 40 07.2	+2.1
ANAR	Anarak	3.06	69	*e*Pn	Pb	17 40 11.5	-2.7
IKOM	Komasi	3.11	312	*e*Pn	Pn	17 40 09.2	+0.6
IKOM				IAMB	IAmb	17 41 08.9	
	comp=Z,0.0nm,0.8s						
IRAZ	Razeghan	3.28	354	*e*Pn	Pn	17 40 13.5	+2.6
IRAZ				IAMB	IAmb	17 41 11.6	
	comp=Z,1µm,0.8s						
HSRG	Sareghieh	3.53	332	*e*Pn	Pn	17 40 16.1	+1.6
HSRG				IAMB	IAmb	17 41 00.2	
	comp=N,0.0nm,0.9s						
IMHD	Mahdasht	3.55	5	*e*Pn	Pn	17 40 16.5	+1.9
YZKH	Yazd	3.63	85	*e*Pn	Pb	17 40 21.0	-2.9
YZKH	Yazd	3.63	85	*e*Pn	Pb	17 40 21.0	-2.9
IDMV	Damavand	3.72	22	*e*Pn	Pn	17 40 19.4	+2.4
IDMV				IAMB	IAmb	17 40 44.2	
	comp=Z,473nm,0.5s						
IMEH	Mehriz	3.73	100	*e*Pn	Pb	17 40 21.2	-4.5
IMEH				IAMB	IAmb	17 40 40.2	
	comp=Z,262nm,0.4s						
IVIS	Veis	3.76	310	*e*Pn	Pn	17 40 17.3	-0.1
IVIS				IAMB	IAmb	17 41 03.5	
	comp=Z,800nm,0.3s						
IGHG	Ghaleghazi	3.83	306	*e*Pn	Pn	17 40 18.5	0.0
IGHG				IAMB	IAmb	17 41 41.4	
	comp=Z,1µm,0.7s						
ILAS	Lasjerd	3.91	33	*e*Pn	Pn	17 40 22.7	+3.0
ILAS				IAMB	IAmb	17 41 45.0	
	comp=Z,570nm,0.8s						
ILIN	Lien	3.94	316	*e*Pn	Pn	17 40 20.6	+0.5
ILIN				IAMB	IAmb	17 41 14.7	
	comp=Z,666nm,0.3s						
IFIR	Firoozkooh	4.04	29	*e*Pn	Pn	17 40 24.7	+3.2
IFIR				IAMB	IAmb	17 41 40.0	
	comp=N,464nm,0.5s						
ISHM	Shahmirzad	4.42	33	*e*Pn	Pn	17 40 30.0	+3.4
ISHM				IAMB	IAmb	17 40 51.9	
	comp=Z,803nm,0.5s						
IANJ	Anjilo	4.47	41	*e*Pn	Pn	17 40 30.2	+2.8
SHME	Shamm	7.92	139	*e*Pn	Pn	17 41 16.2	+1.6
BANOM	Banah	8.11	138	*i* P	Pn	17 41 19.7	+2.6
	SNR=15						
MSFE	Esma-Masafi	8.47	141	*i* P	Pn	17 41 23.2	+1.1
	SNR=5.9						
MSFE	Esma-Masafi	8.47	141	*e*Pn	Pn	17 41 23.6	+1.4
MDH	Madha	8.60	141	*e*Pn	Pn	17 41 24.8	+1.0
GEYT	Alibeck	8.62	46	Pn	Pn	17 41 27.1	+3.1
	comp=Z,0.3nm,0.3s,baz=248,slow=12,SNR=2.8						
ASUD	Al Ashush, Dub	8.69	148	*i* P	Pn	17 41 28.4	+3.4
	SNR=8.0						
ASUD	Al Ashush, Dub	8.69	148	*e*Pn	Pn	17 41 28.4	+3.4
FAQ	Al Faqa, Dubai	8.70	146	P	Pn	17 41 28.7	+3.4
FAQ	Al Faqa, Dubai	8.70	146	*e*Pn	Pn	17 41 29.0	+3.7
UOSS	Minazif	8.84	143	P	Pn	17 41 29.0	+1.9
UOSS				S	Sn	17 43 04.6	-1.8
UOSS	Minazif	8.84	143	*e*Pn	Pn	17 41 29.3	+2.2
ASHO	Ashiyiah	8.98	144	*i* P	Pn	17 41 30.2	+1.2
	SNR=9.2						
ASHO				S	Sn	17 43 08.0	-1.9
ASHO	Ashiyiah	8.98	144	*e*Pn	Pn	17 41 30.3	+1.2
ALNE	Al Ain	9.37	148	*e*Pn	Pn	17 41 36.5	+2.1
ASF	Jabal al Asfar	11.38	274	Pn	Pn	17 41 59.5	-2.5
	comp=Z,0.9nm,0.3s,baz=23,slow=2.7,SNR=6.9						
ASF				Sn	Sn	17 44 00.0	-8.8
	comp=Z,0.4nm,0.3s,baz=138,slow=22,SNR=4.6						
MMAI	Mount Meron Ar	12.61	278	Pn	Pn	17 42 13.4	-5.5
	baz=79,slow=15,SNR=1.8						
BRTR	Keskin Array B	15.47	304	Pn	Pn	17 42 59.1	+1.4
	comp=Z,0.1nm,0.3s,baz=122,slow=15,SNR=2.7						
VOIR		23.64	311	⇓*i*P	P	17 44 30.3	-0.2
BURAR	Bucovina Array	24.55	316	⇑*i*P	P	17 44 38.9	-0.1
GZR	Gura Zlata	25.09	310	⇑*i*P	P	17 44 43.1	-0.7
BVAR	Borovoye Array	25.41	29	P	P	17 44 48.4	+1.7
	comp=Z,0.6nm,0.6s,baz=243,slow=9.1,SNR=4.3						
DRGR		25.69	313	⇓*i*P	P	17 44 50.6	+1.3
MKAR	Makanchi Array	28.46	50	P	P	17 45 15.6	+1.4
	comp=Z,0.2nm,0.5s,baz=242,slow=9.6,SNR=3.8						
CIMO	Cimolais	32.25	307	⇑*e*Pg	P	17 46 39.6	+52
CIMO				*e*Sg		17 46 41.5	
ZALV	Zalesovo Beam	32.83	38	P	P	17 45 52.9	+0.3
	comp=Z,0.4nm,0.3s,baz=262,slow=11,SNR=3.0						
FINES	FINESS Array B	33.28	339	P	P	17 45 55.0	-1.5
	comp=Z,1.6nm,0.8s,baz=152,slow=8.6,SNR=6.7						
NOA	NORSAR Array B	38.48	330	P	P	17 46 39.7	-1.4
	comp=Z,0.2nm,0.5s,baz=120,slow=9.0,SNR=2.9						
TORD	Torodi Ar. Bea	48.25	258	P	P	17 47 58.8	-1.6
	comp=Z,1.3nm,0.6s,baz=59,slow=7.8,SNR=13						
YKA	Yellowknife Ar	84.92	353	P	P	17 51 53.2	-0.7
	comp=Z,0.2nm,0.5s,baz=20,slow=5.4,SNR=4.1						

IDC 10 17:41:29.8±3.9**, 26°.40S**×**176°.22W, h0^{km}, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.6**/28**, mbtmp3.7**/2**, Error ellipse: s-maj=204.1km s-min=39.7km az=155.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.05	262	P	P	17 49 47.7	0.0
	0.4nm,0.6s,baz=98,slow=7.3,SNR=19						
WRA	Warramunga Arr	45.69	267	P	P	17 49 52.9	+0.2
	1.6nm,0.7s,baz=106,slow=7.7,SNR=21						
MKAR	Makanchi Array	116.36	311	PKP	PKPdf	18 00 14.1	-1.1
	0.2nm,0.7s,baz=101,slow=2.9,SNR=3.2						
NOA	NORSAR Array B	145.00	354	PKPbc	PKPbc	18 01 07.7	-0.1
	0.6nm,0.7s,baz=0.3,slow=4.0,SNR=3.1						
AKASG	Malin Array Be	148.91	328	PKPbc	PKPbc	18 01 18.4	-0.9
	0.4nm,0.3s,baz=42,slow=3.2,SNR=2.1						

IDC 10 17:45:21.1±4.2**, 10°.99S**×**165°.94E, h50^{km}**±38^{km}**, mb3.4**/3**, mb1 3.9**/5**, mb1mx3.4**/37**, mbtmp3.9**/5**, ML4.4**/2**, Error ellipse: s-maj=38.5km s-min=36.5km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	284	P	Pn	17 46 49.0	+0.3
	32nm,0.3s,baz=147,slow=4.6,SNR=17						
DZM	Mont Dzumac	11.03	178	P	Pn	17 47 56.0	-0.3
	0.8nm,0.3s,baz=334,slow=17,SNR=10						
H11S2	WAKE ISLAND Hy	29.30	1	T	T	18 21 43.5	
	baz=181,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.31	1	T	T	18 21 44.2	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.32	1	T	T	18 21 43.5	
	baz=181,slow=76,SNR=8.7						
H11N1	WAKE ISLAND Hy	30.52	2	T	T	18 23 11.3	
	baz=182,slow=76,SNR=9.3						
H11N3	WAKE ISLAND Hy	30.53	2	T	T	18 23 16.1	
	baz=182,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.54	2	T	T	18 23 17.1	
	baz=182,slow=76,SNR=7.2						
WRA	Warramunga Arr	31.68	250	P	P	17 51 40.4	+0.2
	1.2nm,0.8s,baz=80,slow=9.2,SNR=9.5						
ASAR	Alice Springs	32.99	243	P	P	17 51 51.0	-0.5
	0.6nm,1.0s,baz=67,slow=9.6,SNR=4.1						
ILAR	Eielson Array	83.40	18	P	P	17 57 42.7	+0.1
	0.7nm,1.1s,baz=207,slow=5.8,SNR=3.9						

IDC ***10*** *17:45:44.8±1.5, 27°.58N×52°.79E, h0^{km}, mb3.7/11, mb1 3.8/13, mb1mx3.6/47, mbtmp3.7/13, ML3.2/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/43, Error ellipse: s-maj=31.8km s-min=21.3km az=170.0*

TEH ***10*** *17:45:46.9, 27°.64N×52°.79E, h13^{km}, ML3.8*

ISCJB ***10*** *17:45:47.1±0.5, 27°.64N±0°.04×52°.78E±0°.07, h20^{km}, mb3.7/11, MS3.5/1, Error ellipse: s-maj=9.4km s-min=3.6km az=150.3*

THR ***10*** *17:45:48.9, 27°.75N×52°.76E, h18^{km}, ML3.5*

OMAN ***10*** *17:45:51.1±0.3, 27°.66N×52°.93E, h24^{km}, ml3.6/8, Error ellipse: s-maj=12.0km s-min=4.2km az=226.0*

DSN ***10*** *17:45:52.3±0.3, 27°.61N×53°.09E, h15^{km}, ML3.6/7, Error ellipse: s-maj=6.0km s-min=3.7km az=344.0*

ISC 10 17:45:48.6±0.8**, 27°.68N**±0°.06×**52°.83E**±0°.08**, h20^{km}, n52, σ1^s.19**/56**, mb3.6**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.62	13	*e*Pn	Pb	17 46 00.0	-0.9
GHIR	Ghir-Karzin	0.62	13	*e*Pg	Pb	17 46 00.0	-0.9
IKAZ	Kazeroun	2.26	338	*e*Pn	Pn	17 46 25.8	+0.5
IKAZ				IAMB	IAmb	17 47 09.8	
	comp=Z,4µm,0.5s						
SHME	Shamm	3.38	118	P	Pn	17 46 41.2	+0.9
SHME				S	Sn	17 47 18.9	-0.9
SHME	Shamm	3.38	118	*e*Pn	Pn	17 46 41.2	+0.9
NIAN	Nian	3.56	91	*e*Pn	Pn	17 46 42.7	-0.1
NIAN				IAMB	IAmb	17 47 55.5	
	comp=Z,0.0nm,0.6s						
BANOM	Banah	3.56	119	*i* P	Pn	17 46 43.6	+0.8
	SNR=12						
BANOM	Banah	3.56	119	P	Pn	17 46 43.8	+1.0
	SNR=12						
NAZ	Nazwa, Dubai	3.70	136	P	Pn	17 46 46.1	+1.5
NAZ	Nazwa, Dubai	3.70	136	P	Pn	17 46 46.1	+1.5
NAZ				S	Sn	17 47 28.9	+1.2
MSFE	Esma-Masafi	3.78	127	*i* P	Pn	17 46 46.7	+0.9
	SNR=8.6						
MSFE	Esma-Masafi	3.78	127	*e*Pn	Pn	17 46 46.7	+0.9
ASUD	Al Ashush, Dub	3.78	143	*i* P	Pn	17 46 47.8	+2.0
	SNR=9.7						
ASUD	Al Ashush, Dub	3.78	143	P	Pn	17 46 47.5	+1.7
	SNR=10						
FAQ	Al Faqa, Dubai	3.84	139	P	Pn	17 46 47.8	+1.2
FAQ	Al Faqa, Dubai	3.84	139	*e*Pn	Pn	17 46 47.8	+1.2
MDH	Madha	3.91	127	P	Pn	17 46 48.4	+0.7
MDH				S	Sn	17 47 32.1	-0.9
MDH	Madha	3.91	127	*e*Pn	Pn	17 46 48.3	+0.7
UOSS	Minazif	4.08	131	*i* P	Pn	17 46 50.3	+0.4
	SNR=11						
UOSS	Minazif	4.08	131	P	Pn	17 46 50.3	+0.4
UOSS				S	Sn	17 47 35.4	-1.6
UOSS	Minazif	4.08	131	*e*Pn	Pn	17 46 50.2	+0.4
HATD	Hatta, Dubai	4.11	133	P	Pn	17 46 51.4	+1.0
HATD				S	Sn	17 47 37.8	-0.1
HATD	Hatta, Dubai	4.11	133	*e*Pn	Pn	17 46 51.3	+1.0
KRBR	Kerman	4.14	55	*e*Pn	Pn	17 46 53.8	+2.7
KRBR	Kerman	4.14	55	*e*AML	AML	17 48 14.0	
	comp=E,55nm,0.4s						
KRBR	Kerman	4.14	55	*e*Pn	Pn	17 46 53.8	+2.7
ASHO	Ashiyiah	4.16	135	*i* P	Pn	17 46 51.9	+0.8
	SNR=14						
ASHO	Ashiyiah	4.16	135	P	Pn	17 46 51.7	+0.5
	SNR=14						
ASHO				S	Sn	17 47 38.1	-1.1
ASHO	Ashiyiah	4.16	135	*e*Pn	Pn	17 46 52.0	+0.9
KHGB	Koh Gabri	4.18	49	*e*Pn	Pn	17 46 52.9	+1.4
KHGB				IAMB	IAmb	17 47 45.3	
	comp=Z,0.0nm,0.7s						
ALNE	Al Ain	4.47	143	*e*Pn	Pn	17 46 56.8	+1.5
CHMN	Cheshme madani	4.67	61	*e*Pn	Pn	17 47 00.8	+2.4
CHMN				IAMB	IAmb	17 47 07.6	
	comp=Z,0.0nm,0.6s						
ICHK	Chekchek	4.75	16	IAMB	IAmb	17 47 01.8	
	comp=Z,1µm,0.5s						
ICHK				*e*Pn	Pn	17 47 01.1	+1.7
YZKH	Yazd	4.94	18	*e*Pn	Pn	17 47 03.9	+2.1
YZKH	Yazd	4.94	18	*e*Pn	Pn	17 47 03.9	+2.1
ANAR	Anarak	5.55	8	*e*Pn	Pn	17 47 10.7	+0.5
HOQ	Hoqain	5.75	134	*e*Pn	Pn	17 47 13.5	+0.6
MHTO	MHTO	8.15	144	P	Pn	17 47 46.0	+0.1
GEYT	Alibeck	11.14	22	Pn	Pn	17 48 27.2	+0.3
	comp=Z,0.2nm,0.3s,baz=211,slow=13,SNR=6.1						
BRTR	Keskin Array B	19.93	312	P	P	17 50 20.1	+0.7
	comp=Z,0.1nm,0.3s,baz=103,slow=3.1,SNR=3.2						
AKTO	Aktyubinsk	23.07	8	P	P	17 50 54.1	+1.4
	comp=Z,1.1nm,0.6s,baz=178,slow=11,SNR=4.6						
AAK	Ala-Archa	23.07	44	P	P	17 50 53.4	+0.3
	comp=Z,1.1nm,0.6s,baz=179,slow=9.4,SNR=3.7						
BVAR	Borovoye Array	28.48	22	P	P	17 51 42.2	-0.1
	comp=Z,0.6nm,0.6s,baz=210,slow=8.4,SNR=5.0						
KURBB	Kurchatov Arra	30.09	33	P	P	17 51 56.5	-0.1
	comp=Z,0.8nm,0.8s,baz=234,slow=9.1,SNR=4.2						
ZALV	Zalesovo Beam	35.18	33	P	P	17 52 40.8	-0.3
	comp=Z,2.5nm,0.5s,baz=243,slow=9.6,SNR=14						
FINES	FINESS Array B	38.21	340	P	P	17 53 06.0	-0.7
	comp=Z,0.6nm,0.4s,baz=144,slow=9.4,SNR=6.5						
CMAR	Chiang Mai Arr	43.20	92	P	P	17 53 48.4	-0.2
	comp=Z,0.4nm,0.7s,baz=279,slow=10,SNR=5.0						
ARCES	ARCESS Array B	44.79	347	P	P	17 54 00.6	-0.1
	comp=Z,1.8nm,0.9s,baz=145,slow=9.1,SNR=18						
SONM	Songino Array	45.87	49	P	P	17 54 09.6	0.0
	comp=Z,0.7nm,0.9s,baz=269,slow=8.3,SNR=6.0						
TORD	Torodi Ar. Bea	49.72	264	P	P	17 54 38.6	-1.1
	comp=Z,1.0nm,0.8s,baz=54,slow=7.9,SNR=6.6						
LBTB	Lobatse	58.59	209	LR	LR	18 20 29.7	
	comp=Z,39nm,19.5s,baz=132,slow=36						
YKA	Yellowknife Ar	89.58	354	P	P	17 58 44.2	-0.3
	comp=Z,0.2nm,0.6s,baz=10,slow=5.7,SNR=2.6						

ISCJB ***10*** *17:46:02.2±4.1, 19°.6S±0°.4×177°.4W±0°.4, h600^{km}, mb3.9/4, Error ellipse: s-maj=70.6km s-min=29.6km az=43.9*

IDC ***10*** *17:46:04.1±3.2, 19°.71S×177°.52W, h586^{km}±36^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.0/32, mbtmp4.3/5, Error ellipse: s-maj=33.5km s-min=21.1km az=169.0*

ISC 10 17:46:04.1±1.3**, 19°.6S**±0°.3×**177°.4W**±0°.2**, h600^{km}, n10, σ0^s.71**/13**, mb3.9**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	19.15	193	P	P	17 49 49.5	-0.5
	2.1nm,0.3s,baz=31,slow=12,SNR=10						
CTA	Charters Tower	34.14	263	P	P	17 52 00.7	-0.3
	1.9nm,0.8s,baz=87,slow=10,SNR=6.4						
STKA	Stephens Creek	38.66	243	P	P	17 52 38.5	+0.6
	1.5nm,0.5s,baz=77,slow=7.3,SNR=5.4						
ASAR	Alice Springs	45.26	256	P	P	17 53 29.6	-0.1
	1.6nm,0.3s,baz=85,slow=8.5,SNR=78						
ASAR				PcP	PcP	17 54 57.5	+0.9
	0.4nm,0.4s,baz=116,slow=4.2,SNR=5.5						
ASAR				S	S	17 59 27.5	-0.1
	0.7nm,0.8s,baz=94,slow=17,SNR=4.6						
WRA	Warramunga Arr	45.28	261	P	P	17 53 29.2	-0.6
	1.5nm,0.3s,baz=98,slow=7.6,SNR=74						
WRA				PcP	PcP	17 54 57.8	+1.2
	0.2nm,0.4s,baz=92,slow=3.3,SNR=3.1						
MKAR	Makanchi Array	111.02	314	PKiKP	PKiKP	18 03 30.2	0.0
	0.2nm,0.7s,baz=110,slow=1.0,SNR=4.0						
ARCES	ARCESS Array B	128.18	350	PKP	PKiKP	18 04 02.8	-0.3
	1.3nm,0.8s,baz=48,slow=1.3,SNR=4.0						
BRTR	Keskin Array B	146.67	314	PKPbc	PKiKP	18 04 40.8	-1.2
	0.4nm,0.4s,baz=141,slow=3.3,SNR=4.2						
MMAI	Mount Meron Ar	147.86	301	PKPbc	PKiKP	18 04 44.9	+0.4
	0.7nm,0.4s,baz=72,slow=5.4,SNR=4.6						
GERES	GERESS Array B	149.52	345	PKPbc	PKiKP	18 04 47.6	+0.2
	0.3nm,0.5s,baz=355,slow=4.3,SNR=2.9						

UCR 10 17:47:08.4±2.2**, 10°.06N**×**86°.48W, h16^{km}**±7^{km}**, ML3.8, 5C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLVR	Palo Verde	1.15	76	⇑*i*P	Pn	17 47 28.5	-1.5
PLVR				*e*S	Sb	17 47 44.3	-0.4
BUEV	Buena Vista	1.29	55	⇑*e*P	Pn	17 47 30.8	-1.0
BUEV				*e*S	Sg	17 47 49.6	-0.5
GB1A	Borinquen Arri	1.30	55	⇑*e*P	Pn	17 47 31.1	-0.9
GPS2	Hotel Rincn d	1.31	58	*e*P	Pn	17 47 31.4	-0.6
GPS2				*e*S	Sg	17 47 50.4	-0.4
CUI	Cuipilapa	1.43	65	*e*P	Pn	17 47 33.0	-0.7
CUI				*e*S	Sb	17 47 52.6	0.0
MESS	Mesas	1.44	62	*e*P	Pn	17 47 33.4	-0.4
JTS	JuntasAbangare	1.52	81	*e*P	Pn	17 47 33.6	-1.4
JTS				*e*S	Sn	17 47 52.0	-2.5
ARE1	Arenal 1	1.78	77	*e*P	Pn	17 47 38.4	-0.1
ARE1				*e*S	Sb	17 48 02.6	-0.2
CEDE	Laguna Cedeo	1.80	76	*e*P	Pn	17 47 39.8	+0.9
CEDE				*e*S	Sb	17 48 03.5	0.0
SRA1	San Ramn	1.97	89	*e*P	Pn	17 47 40.2	-1.0
SRA1				*e*S	Sn	17 48 05.4	-0.3
MGAN	Managua	2.08	6	*e*P	Pn	17 47 42.6	-0.1
COPN	Copaltepe	2.11	357	*e*P	Pn	17 47 42.6	-0.5
ACON	Acoyapa	2.29	34	⇑*i*P	Pn	17 47 45.2	-0.3
ACON				*e*S	Sn	17 48 13.7	+0.3
HDC	Heredia	2.33	91	*e*P	Pn	17 47 47.2	+0.9
HDC				*e*S	Sn	17 48 15.2	+0.5
MOMN	Momotombo	2.33	359	*e*P	Pn	17 47 45.8	-0.4
CNGN	Cerro Negro	2.43	355	*e*P	Pn	17 47 47.1	-0.5
CNGN				IAML		17 48 22.9	
	comp=N,254nm,0.3s						
LCR2	La Lucha 2	2.46	97	*e*P	Pn	17 47 47.7	-0.4
LCR2				*e*S	Sn	17 48 17.5	-0.5
BOAB	BOACO BROADBAN	2.50	19	*e*P	Pn	17 47 48.5	0.0
CRIN	San Cristobal	2.68	348	*e*P	Pn	17 47 51.0	0.0
CRIN				IAML		17 48 28.8	
	comp=N,756nm,0.4s						
CVTR	Volcan Turrial	2.68	91	*e*P	Pn	17 47 53.0	+1.7
MATN	Matagalpa	2.90	11	⇑*i*P	Pn	17 47 53.9	-0.1
ESTN	Estel	3.02	2	*e*P	Pn	17 47 55.9	+0.2
CNCH	Conchagua	3.46	338	*e*P	Pn	17 48 01.8	+0.1
CNCH				*e*S	Sn	17 48 41.5	-0.9
CNCH				IAML		17 48 45.0	
	comp=Z,740nm,0.4s						
PACA	Pacayal	3.84	332	*e*P	Pn	17 48 07.0	0.0
PACA				*e*S	Sn	17 48 50.1	-1.7
TGUH	Tegucigalpa,Un	4.04	349	*e*P	Pn	17 48 10.5	+0.8
ICCO	Coco Island	4.53	187	*e*P	Pn	17 48 11.7	-4.6

SJA ***10*** *17:58:27.6±0.5, 30°.74S×71°.57W, h69^{km}±96^{km}, ML3.7, MW4.1*

ISCJB ***10*** *17:58:28.0±1.4, 30°.77S±0°.04×71°.6W±0°.2, h63^{km}±15^{km}, Error ellipse: s-maj=21.8km s-min=6.4km az=5.3*

GUC ***10*** *17:58:28.9±0.6, 30°.77S×70°.93W, h82^{km}±4^{km}, ML3.8*

ISC 10 17:58:28.2±1.8**, 30°.75S**±0°.04×**71°.7W**±0°.1**, h55^{km}**±26^{km}**, n16, σ0^s.72**/22**, 6C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	Combarbala	0.72	126	⇑*i*P	Pn	17 58 43.1	+0.6
CMCH				*i* S	Sn	17 58 53.3	+0.3
CMCH				IAML		17 58 53.7	
	comp=N,21µm,0.1s						
GO04	Tololo Observa	0.96	53	*e*P	Pn	17 58 45.4	-0.3

GO04				i S	Sn	17 58 57.4	-1.2
LCO	Las Campanas	1.93	27	i P	Pn	17 58 59.4	+0.5
LCO				i S	Sn	17 59 23.3	+1.1
LCO	Las Campanas	1.93	27	⇑iP	Pn	17 58 59.3	+0.4
LCO				i S	Sn	17 59 21.3	-0.9
LCO				IAML		17 59 24.3	
	comp=N,1μm,0.2s						
AROD	Rodeo	2.00	74	i P	Pn	17 59 00.5	+0.6
ACCO	Cerro Coronel	2.26	87	i P	Pn	17 59 03.8	+0.3
ROCH	El Roble	2.29	166	⇑iP	Pn	17 59 04.0	+0.2
ROCH				IAML		17 59 48.8	
	comp=N,421nm,0.4s						
RTLS	Leoncito	2.30	118	i P	Pn	17 59 04.7	+0.7
RTLS				IAML		17 59 32.1	
	comp=Z,453nm,0.3s						
AUSP	Uspallata	2.45	127	i P	Pn	17 59 06.8	+0.8
PEL	Peldehue	2.53	161	⇑iP	Pn	17 59 07.1	+0.1
PEL				i S	Sn	17 59 36.0	-0.6
PEL				IAML		17 59 46.4	
	comp=E,316nm,0.3s						
SJA	San Juan	2.79	107	i P	Pn	17 59 10.6	+0.2
CLCH	Cerro Calan	2.81	160	⇑iP	Pn	17 59 11.2	+0.4
CLCH				IAML		18 00 01.2	
	comp=E,464nm,0.7s						
RTLL	Cerro Villicun	2.82	103	⇑iP	Pn	17 59 10.1	-0.7
RTLL				i S	Sn	17 59 35.6	-7.9
FCH	Farellones	2.83	156	eP	Pn	17 59 10.9	-0.4
FCH				i S	Sn	17 59 43.4	-0.9
FCH				IAML		17 59 46.6	
	comp=E,264nm,0.3s						
RTCV	Cerro Valdivia	2.91	113	i P	Pn	17 59 12.4	+0.3
ASAL	Salagasta	3.05	128	i P	Pn	17 59 15.0	+1.0

IDC ***10*** *18:03:25.3±1.4, 11°.08S×164°.78E, h0^{km}, mb3.8/4, mb1 4.1/6, mb1mx3.8/28, mbtmp4.0/6, ML4.2/2, MS2.7/1, Ms1 2.7/1, ms1mx2.5/30, Error ellipse: s-maj=37.6km s-min=30.8km az=130.0*

ISCJB ***10*** *18:03:28.3±1.1, 11°.2S±0°.1×164°.7E±0°.1, h31^{km}, mb3.8/4, Error ellipse: s-maj=21.0km s-min=11.1km az=36.9*

ISC 10 18:03:30.1±1.2**, 11°.1S**±0°.1×**164°.8E**±0°.1**, h31^{km}, n13, σ1^{s}.00**/10**, mb3.9**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.05	289	Pn	Pn	18 04 44.0	+0.2
	20nm,0.3s,baz=130,slow=7.4,SNR=14						
HNR				Sn	Sn	18 05 40.6	-0.6
	4.3nm,0.3s,baz=225,slow=20,SNR=1.8						
HNR				LR	LR	18 06 05.2	
	comp=Z,94nm,21.3s,baz=50,slow=32						
DZM	Mont Dzumac	11.00	172	Pn	Pn	18 06 05.3	-0.2
	0.9nm,0.3s,baz=330,slow=18,SNR=7.5						
CTA	Charters Tower	19.94	241	P	Pn	18 08 02.6	+1.2
	0.3nm,0.3s,baz=71,slow=8.9,SNR=5.1						
H11S2	WAKE ISLAND Hy	29.49	4	T	T	18 40 29.1	
	baz=184,slow=76,SNR=6.9						
H11S3	WAKE ISLAND Hy	29.49	4	T	T	18 40 30.0	
	baz=184,slow=76,SNR=6.2						
H11S1	WAKE ISLAND Hy	29.50	4	T	T	18 40 32.2	
	baz=184,slow=76,SNR=5.9						
WRA	Warramunga Arr	30.58	250	P	P	18 09 40.2	-1.1
	1.8nm,0.8s,baz=79,slow=9.4,SNR=18						
WRA				PcP	PcP	18 12 40.4	+0.7
	0.4nm,0.9s,baz=75,slow=3.7,SNR=3.6						
H11N1	WAKE ISLAND Hy	30.71	4	T	T	18 42 04.1	
	baz=184,slow=76,SNR=6.4						
H11N3	WAKE ISLAND Hy	30.72	4	T	T	18 42 03.6	
	baz=184,slow=76,SNR=6.7						
H11N2	WAKE ISLAND Hy	30.73	4	T	T	18 42 06.6	
	baz=184,slow=76,SNR=6.3						
ASAR	Alice Springs	31.92	243	P	P	18 09 52.6	-0.6
	1.4nm,0.5s,baz=63,slow=9.9,SNR=28						
ASAR				PcP	PcP	18 12 43.3	0.0
	0.4nm,0.7s,baz=84,slow=2.0,SNR=4.5						
ILAR	Eielson Array	83.89	19	P	P	18 15 55.5	-1.0
	0.4nm,0.8s,baz=233,slow=5.3,SNR=4.0						
MKAR	Makanchi Array	92.94	317	P	P	18 16 41.8	+1.4
	0.4nm,0.9s,baz=93,slow=5.8,SNR=3.4						

BEO ***10*** *18:10:40.9±0.9, 39°.65N×25°.78E, h4^{km}±6^{km}, ML4.1/11*

ISCJB ***10*** *18:10:41.3±0.4, 39°.76N±0°.01×25°.56E±0°.01, h3^{km}±3^{km}, mb3.6/7, MS3.1/4, Error ellipse: s-maj=1.8km s-min=1.5km az=16.9*

DDA ***10*** *18:10:41.2, 39°.73N×25°.60E, h19^{km}±1^{km}, ML4.1*

ISK ***10*** *18:10:41.3, 39°.73N×25°.59E, h6^{km}, ML4.1/33*

ATH ***10*** *18:10:42.1, 39°.72N×25°.59E, h30^{km}, ML3.8/21, Error ellipse: s-maj=1.0km s-min=0.6km az=74.0*

IDC ***10*** *18:10:42.4±0.9, 39°.80N×25°.56E, h0^{km}, mb3.7/7, mb1 3.7/15, mb1mx3.6/45, mbtmp3.7/15, ML3.3/7, MS3.1/11, Ms1 3.1/11, ms1mx2.9/58, Error ellipse: s-maj=15.0km s-min=11.6km az=70.0*

THE ***10*** *18:10:43.0, 39°.72N×25°.58E, h4^{km}, ML3.7/7, Error ellipse: s-maj=0.7km s-min=0.3km az=72.0*

ISC 10 18:10:42.6±1.0**, 39°.73N**±0°.01×**25°.59E**±0°.01**, h5^{km}**±8^{km}**, n316, σ1^{s}.05**/363**, mb3.7**/7**, MS3.2**/4**, 30C-22D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIA	Limnos Island	0.36	298	P	Pb	18 10 50.3	-1.1
LIA				S	Sb	18 10 56.2	-1.2
LIA				AML	AML	18 11 01.0	
	comp=N,58723μm,0.6s						
LIA				AML	AML	18 11 04.2	
	comp=E,43919μm,0.6s						
LIA	Limnos Island	0.36	298	P	Pb	18 10 50.3	-1.1
LIA				S	Sg	18 10 55.4	+1.2
BOZC	Bozcaada	0.37	72	PG	Pg	18 10 49.4	-0.4
BOZC				SG	Sg	18 10 54.7	+0.1
BOZC	Bozcaada	0.37	72	⇓iP	Pg	18 10 49.9	+0.1
BOZC				i S	Sg	18 10 55.3	+0.7
EFSA	Agios Efstrati	0.50	248	P	Pb	18 10 53.5	-0.4
EFSA				S	Sb	18 11 00.8	-0.8
EFSA				AML	AML	18 11 07.6	
	comp=E,61912μm,0.5s						
EFSA				AML	AML	18 11 07.7	
	comp=N,68429μm,0.6s						
SIGR	SIGRI	0.56	159	PG	Pg	18 10 53.0	-0.2
SIGR				SG	Sg	18 11 00.2	-0.2
SIGR	SIGRI	0.56	159	P	Pg	18 10 53.0	-0.2
SIGR				S	Sg	18 11 01.5	+1.1
SIGR				AML	AML	18 11 06.9	
	comp=E,18494μm,0.7s						
SIGR				AML	AML	18 11 06.9	
	comp=N,25724μm,0.7s						
SIGR	SIGRI	0.56	159	P	Pg	18 10 53.1	-0.2
SIGR				S	Sb	18 11 02.2	-0.8
EZN	Ezine	0.57	80	PG	Pg	18 10 52.9	-0.7
EZN				SG	Sg	18 11 01.7	+0.7
EZN	Ezine	0.57	80	P	Pg	18 10 53.1	-0.5
PRK	Paraskevi	0.71	132	P	Pb	18 10 57.1	-0.3
PRK				S	Sb	18 11 07.4	-0.1
PRK				AML	AML	18 11 13.3	
	comp=N,46272μm,0.7s						
PRK				AML	AML	18 11 13.7	
	comp=E,46106μm,0.8s						
PRK	Paraskevi	0.71	132	P	Pb	18 10 57.3	-0.2
PRK				S	Sb	18 11 07.4	-0.1
BAYC	CANAKKALE_Bayr	0.73	89	⇓iP	Pg	18 10 56.0	-0.7
BAYC				i S	Sg	18 11 06.4	+0.1
BAYC				IAML_P			
	comp=Z,43μm,0.2s						
SMTH	Samothraki Isl	0.74	356	P	Pg	18 10 56.9	+0.1
SMTH				S	Sb	18 11 08.5	0.0
SMTH				AML	AML	18 11 10.8	
	comp=E,5864μm,0.6s						
SMTH				AML	AML	18 11 15.1	
	comp=N,4978μm,0.4s						
SMTH	Samothraki Isl	0.74	356	P	Pg	18 10 57.0	+0.1
SMTH				S	Sb	18 11 09.1	+0.6
AYVA	Ayvalik	0.95	116	⇓iP	Pg	18 11 00.9	+0.2
AYVA				i S	Sn	18 11 16.0	-0.4
GELI	Tayfur-Gelibol	0.95	45	PG	Pg	18 11 00.0	-0.8
GELI				SG	Sg	18 11 13.6	+0.4
ENEZ	Enez	1.09	23	PN	Pg	18 11 03.0	-0.6
LPK	Lapseki	1.10	54	PN	Pg	18 11 02.7	-1.0
THAS	Thassos island	1.10	323	P	Pg	18 11 03.2	-0.5
THAS				S	Sb	18 11 18.3	-0.6
THAS				AML	AML	18 11 19.3	
	comp=E,8613μm,0.7s						
THAS				AML	AML	18 11 20.0	
	comp=N,9109μm,0.3s						
THAS	Thassos island	1.10	323	P	Pg	18 11 03.4	-0.3
THAS				S	Sb	18 11 19.3	+0.5
SKY	Skiros Island	1.17	224	P	Pg	18 11 04.1	-1.0
SKY				S	Sg	18 11 20.3	0.0
SKY				AML	AML	18 11 27.7	
	comp=N,9743μm,0.3s						
SKY				AML	AML	18 11 28.0	
	comp=E,17490μm,0.4s						
SKY	Skiros Island	1.17	224	P	Pg	18 11 04.4	-0.7
SKY				S	Sb	18 11 21.1	+0.2
ERIK	Erikli-Kesan	1.18	37	PN	Pg	18 11 03.7	-1.4
PSRA	Psara	1.19	181	P	Pg	18 11 05.0	-0.3
PSRA				AML	AML	18 11 28.5	
	comp=E,11341μm,0.6s						
PSRA				AML	AML	18 11 31.0	
	comp=N,8457μm,0.7s						
ALN	Alexandroupoli	1.22	16	PN	Pg	18 11 04.8	-1.1
ALN	Alexandroupoli	1.22	16	P	Pg	18 11 04.8	-1.1
ALN				S	Sg	18 11 21.5	-0.2
ALN				AML	AML	18 11 28.3	
	comp=E,4440μm,0.8s						
ALN				AML	AML	18 11 30.2	
	comp=N,4665μm,0.6s						
ALN	Alexandroupoli	1.22	16	P	Pg	18 11 05.0	-0.9
FOCM	Foa	1.34	139	PN	Pn	18 11 07.1	-0.9
KRBN	Karaburun	1.36	146	PN	Pn	18 11 07.5	-0.7
KESN	Edirne-Kesan	1.38	37	⇑iP	Pn	18 11 07.1	-1.7
KESN				i S	Sg	18 11 26.2	-0.7
OUR	Ouranopolis	1.38	297	PN	Pn	18 11 07.7	-0.7
OUR	Ouranopolis	1.38	297	P	Pn	18 11 07.6	-0.9
OUR				AML	AML	18 11 33.2	
	comp=E,7419μm,0.8s						
OUR				AML	AML	18 11 35.6	
	comp=N,12067μm,0.8s						
OUR	Ouranopolis	1.38	297	P	Pn	18 11 07.8	-0.7
OUR				S	Sn	18 11 27.3	+0.2
CHOS	Chios island	1.39	165	PN	Pn	18 11 07.4	-1.3
CHOS	Chios island	1.39	165	P	Pn	18 11 07.3	-1.4
CHOS				AML	AML	18 11 32.5	
	comp=E,9694μm,0.6s						
CHOS				AML	AML	18 11 35.0	
	comp=N,8320μm,0.7s						
CHOS	Chios island	1.39	165	P	Pn	18 11 08.3	-0.4
CHOS				S	Sn	18 11 27.6	+0.2
RDO	Rodhopi	1.42	358	PN	Pn	18 11 07.5	-1.5
RDO	Rodhopi	1.42	358	P	Pn	18 11 08.0	-0.9
RDO				AML	AML	18 11 32.6	
	comp=N,4071μm,0.7s						
RDO				AML	AML	18 11 39.0	
	comp=E,2078μm,0.6s						
RDO	Rodhopi	1.42	358	P	Pn	18 11 08.1	-0.9
AOS	Alonnisos	1.44	248	PN	Pn	18 11 08.5	-0.8
AOS	Alonnisos	1.44	248	P	Pn	18 11 08.2	-1.1
AOS				AML	AML	18 11 42.5	
	comp=N,6644μm,0.7s						
AOS				AML	AML	18 11 42.9	
	comp=E,6755μm,1.0s						
AOS	Alonnisos	1.44	248	P	Pn	18 11 08.5	-0.8
ALNA	Alonissos	1.46	247	P	Pn	18 11 08.3	-1.2
KRBG	Karabiga-Canak	1.47	63	PN	Pn	18 11 08.9	-0.8
PAIG	Paliouri	1.49	278	P	Pn	18 11 08.9	-1.1
PAIG				AML	AML	18 11 40.7	
	comp=E,2689μm,1.4s						
PAIG				AML	AML	18 11 42.3	
	comp=N,5201μm,0.6s						
PAIG	Paliouri	1.49	278	P	Pn	18 11 09.0	-1.0
PAIG				S	Sn	18 11 29.4	-0.4
KAVA	Kavala	1.51	327	P	Pn	18 11 09.2	-1.1
KAVA				S	Sn	18 11 28.5	-1.9
KAVA				AML	AML	18 11 36.0	
	comp=N,3579μm,0.5s						
KAVA				AML	AML	18 11 42.3	
	comp=E,3124μm,0.9s						
KAVA	Kavala	1.51	327	P	Pn	18 11 09.4	-0.9
KAVA				S	Sg	18 11 31.4	+0.2
KVLA	Kavala	1.52	323	P	Pn	18 11 09.4	-1.0
KVLA				S	Sn	18 11 28.4	-2.2
KVLA				AML	AML	18 11 33.6	
	comp=E,3431μm,0.4s						
KVLA				AML	AML	18 11 37.8	
	comp=N,3120μm,0.7s						
RKY	Sarkoy-Tekirda	1.55	51	PN	Pn	18 11 10.3	-0.5
SART	Tekirdag	1.55	51	⇑iP	Pn	18 11 10.5	-0.4
SART				i S	Sg	18 11 32.1	-0.2
SART				IAML_P			
	comp=Z,12μm,0.1s						
BALY	Balya	1.56	89	⇓iP	Pn	18 11 10.6	-0.5
BALY				i S	Sg	18 11 32.6	-0.2
URLA	Izmir	1.57	150	PN	Pn	18 11 10.0	-1.2
URLA	Izmir	1.57	150	⇑iP	Pn	18 11 10.1	-1.2
URLA				i S	Sg	18 11 35.7	+2.6
KNL	Balıkesir	1.58	69	i P	Pn	18 11 11.1	-0.2
KNL				i S	Sb	18 11 32.5	-0.1
KNL				IAML_P			
	comp=Z,5μm,0.2s						
GONE	Gonen-Balikesi	1.64	78	PN	Pn	18 11 11.6	-0.5
ZEY	zmir	1.65	154	⇑iP	Pn	18 11 11.8	-0.4
ZEY				i S	Sg	18 11 36.5	+1.1
STEP	BALIKESIR_Sava	1.68	101	⇓iP	Pn	18 11 12.3	-0.4
STEP				i S	Sn	18 11 34.1	-0.4
STEP				IAML_P			
	comp=Z,7μm,0.2s						
SKIA	Skiathos	1.74	252	P	Pn	18 11 12.2	-1.3
SKIA				AML	AML	18 11 47.5	
	comp=N,7607μm,0.5s						
SKIA				AML	AML	18 11 49.8	
	comp=E,7681μm,0.6s						
SKIA	Skiathos	1.74	252	P	Pn	18 11 13.3	-0.2
BLCB	Balcova	1.75	139	PN	Pn	18 11 13.2	-0.4
PLG	Polygyros	1.77	292	P	Pn	18 11 13.1	-0.8
PLG				AML	AML	18 11 48.4	
	comp=E,2184μm,0.7s						
PLG				AML	AML	18 11 49.2	
	comp=N,3503μm,0.6s						
PLG	Polygyros	1.77	292	P	Pn	18 11 14.5	+0.6
PLG				S	Sb	18 11 37.4	-0.7
EREA	Eretria	1.84	225	P	Pn	18 11 13.6	-1.2
EDC	Edincik	1.85	70	PN	Pn	18 11 14.5	-0.5
MRKA	Markates	1.86	237	P	Pn	18 11 13.7	-1.5
MRKA				AML	AML	18 11 50.9	
	comp=N,4811μm,0.6s						
MRKA				AML	AML	18 11 54.9	
	comp=E,7086μm,0.8s						
MRKA	Markates	1.86	237	P	Pn	18 11 14.6	-0.6
MRKA				S	Sn	18 11 39.4	+0.3
NEO	Neokhori	1.88	258	P	Pn	18 11 13.7	-1.7
NEO	Neokhori	1.88	258	P	Pn	18 11 15.0	-0.4
XOR	Xorichti	1.89	260	P	Pn	18 11 14.0	-1.5
XOR	Xorichti	1.89	260	P	Pn	18 11 15.5	-0.1
AKS	Akhisar	1.92	116	PN	Pn	18 11 15.4	-0.5
AKHS	Akhisar	1.92	116	⇓iP	Pn	18 11 15.7	-0.2
AKHS				i S	Sg	18 11 44.5	+0.2
GMLD	Gumuldur	1.94	148	PN	Pn	18 11 15.9	-0.4
TKR	Tekirdag	1.95	49	PN	Pn	18 11 15.8	-0.5
DGB	zmir	1.95	149	i P	Pn	18 11 16.9	+0.6
DGB				i S	Sb	18 11 43.3	0.0
SOH	Sokhos	2.03	303	P	Pn	18 11 16.8	-0.7
SOH	Sokhos	2.03	303	P	Pn	18 11 17.4	-0.1
SMIA	Simia	2.04	246	P	Pn	18 11 16.1	-1.4
SMIA	Simia	2.04	246	P	Pn	18 11 17.8	+0.3
SRS	Serrai	2.06	313	ePn	Pn	18 11 17.1	-0.8
SRS				eSn	Sb	18 11 45.4	-1.1
SRS	Serrai	2.06	313	P	Pn	18 11 16.9	-1.1
SRS	Serrai	2.06	313	P	Pn	18 11 17.5	-0.4
FYTO	Fytoko, Volos	2.08	262	P	Pn	18 11 17.1	-1.0
FYTO	Fytoko, Volos	2.08	262	P	Pn	18 11 17.5	-0.6
NVR	Nevrokopi	2.09	321	P	Pn	18 11 17.5	-0.7
NVR	Nevrokopi	2.09	321	P	Pn	18 11 17.6	-0.7
NVR				S	Sn	18 11 45.0	+0.3
HORT	Hortiatis	2.10	295	PN	Pn	18 11 17.6	-0.9
HORT	Hortiatis	2.10	295	P	Pn	18 11 17.8	-0.7
HORT				AML	AML	18 11 57.8	
	comp=N,1659μm,0.7s						
HORT				AML	AML	18 11 58.0	
	comp=E,1291μm,0.8s						
HORT	Hortiatis	2.10	295	P	Pn	18 11 18.2	-0.3
CRLT	Corlu	2.15	49	PN	Pn	18 11 19.1	0.0
PTL	Penteli	2.15	219	P	Pn	18 11 17.3	-1.9
PTL	Penteli	2.15	219	P	Pn	18 11 18.8	-0.4
KCTX	Karacabey (Bur	2.19	75	PN	Pn	18 11 19.0	-0.7
THE	Thessaloniki	2.21	295	P	Pn	18 11 18.9	-1.0
DURS	Dursunbey	2.23	92	⇓iP	Pn	18 11 20.3	0.0
DURS				i S	Sn	18 11 48.8	+0.6
DURS				IAML_P			
	comp=Z,6μm,0.3s						
SMG	Samos	2.24	154	P	Pn	18 11 18.6	-1.7
SMG	Samos	2.24	154	P	Pn	18 11 19.9	-0.4
ATAL	Atalanti	2.25	243	P	Pn	18 11 19.4	-1.1
ATAL				AML	AML	18 12 05.9	
	comp=N,1940μm,0.8s						
ATAL				AML	AML	18 12 07.8	
	comp=E,1762μm,0.7s						
ATAL	Atalanti	2.25	243	P	Pn	18 11 19.6	-0.9
ATHU	Athens Univers	2.26	219	P	Pn	18 11 19.1	-1.4
ATHU	Athens Univers	2.26	219	P	Pn	18 11 19.6	-1.0
ATHU				S	Sn	18 11 48.3	-0.5
ATH	Athens Observa	2.29	220	P	Pn	18 11 19.9	-1.0
LKR	Lokris	2.29	243	P	Pn	18 11 19.9	-1.0
EDRB	Edirne	2.29	22	PN	Pn	18 11 19.6	-1.4
EDRB	Edirne	2.29	22	P	Pn	18 11 21.3	+0.3
EDRB				S	Sn	18 11 50.5	+0.9
DST	Dursunbey	2.34	92	PN	Pn	18 11 21.2	-0.5
VLY	Voula,Athens	2.34	217	P	Pn	18 11 20.4	-1.4
VLY	Voula,Athens	2.34	217	P	Pn	18 11 21.2	-0.5
VIL2	Platees	2.36	231	P	Pn	18 11 20.7	-1.4
VILL	Villia	2.37	229	P	Pn	18 11 21.1	-1.0
GCAM	G?zelcaml?	2.40	147	PN	Pn	18 11 22.3	-0.2
GCAM	G?zelcaml?	2.40	147	i P	Pb	18 11 24.8	-1.4
PHSR	Pinarhisar	2.40	37	PN	Pn	18 11 21.9	-0.7
LIT	Litokhoron	2.42	280	P	Pn	18 11 21.8	-1.0
LIT	Litokhoron	2.42	280	P	Pn	18 11 22.4	-0.4
LIT				S	Sn	18 11 54.3	+1.5
PLD	Plovdiv	2.47	344	PN	Pn	18 11 23.5	0.0
SLVT	Silivri	2.50	52	PN	Pn	18 11 23.4	-0.5
KNT	Kendrikon	2.51	306	P	Pn	18 11 24.0	0.0
KNT	Kendrikon	2.51	306	P	Pn	18 11 24.2	+0.2
DEMI	Demirci	2.52	105	i P	Pn	18 11 25.0	+0.8
DEMI				i S	Sb	18 11 58.1	-1.5
ORLT	Orhaneli	2.56	82	PN	Pn	18 11 24.3	-0.5
PROD	Prodromos	2.56	236	P	Pn	18 11 24.2	-0.6
ELBA	Catalca	2.59	56	i P	Pb	18 11 29.8	+0.3
MDNY	Mudanya-Bursa	2.60	75	PN	Pn	18 11 25.4	+0.1
MANT	Manisa	2.62	117	i P	Pn	18 11 25.3	-0.5
MANT				IAML_P			
	comp=Z,986nm,0.1s						
AGG	Agios Georgios	2.63	255	P	Pn	18 11 24.9	-0.7
AGG	Agios Georgios	2.63	255	P	Pn	18 11 25.0	-0.7
ARMT	Armutlu	2.64	70	PN	Pn	18 11 25.0	-0.9
APE	Apeiranthos	2.66	181	P	Pn	18 11 25.5	-0.6
APE	Apeiranthos	2.66	181	⇑iP	Pn	18 11 27.6	+1.5
APE	Apeiranthos	2.66	181	S	Sb	18 12 02.4	-1.2
LTK	Loutraki	2.67	231	P	Pn	18 11 25.4	-0.8
KULA	Kula-Manisa	2.68	116	PN	Pn	18 11 25.9	-0.5
KULA	Kula-Manisa	2.68	116	P	Pn	18 11 26.5	+0.1
KULA				S	Sn	18 11 59.5	+0.2
CTKS	Kestanelik-??a	2.68	55	PN	Pn	18 11 25.9	-0.5
LOUT	Loutraki	2.68	230	P	Pn	18 11 24.5	-2.0
LOUT	Loutraki	2.68	230	P	Pn	18 11 25.6	-0.8
SERI	Serifos	2.71	199	P	Pn	18 11 27.4	+0.6
DSF	Desfina	2.73	242	P	Pn	18 11 25.7	-1.4
DSF	Desfina	2.73	242	P	Pn	18 11 26.1	-1.0
AYDN	Tasoluk	2.73	138	i P	Pn	18 11 26.8	-0.4
GRG	Griva	2.73	298	P	Pn	18 11 27.4	+0.3
GRG	Griva	2.73	298	P	Pn	18 11 27.5	+0.4
GRG				S	Sn	18 12 01.0	+0.5
THL	Klokotos Trika	2.77	268	P	Pn	18 11 27.3	-0.3
VAY	Valandovo	2.80	306	ePn	Pn	18 11 29.6	+1.6
VAY				i Sn	Sg	18 12 13.6	+1.1
BGKT	Bogazkoy	2.83	58	PN	Pn	18 11 28.3	-0.1
GEMT	Gemlik	2.85	74	PN	Pn	18 11 28.9	+0.2
DID	Didima	2.89	221	P	Pn	18 11 27.4	-1.9
DID	Didima	2.89	221	P	Pn	18 11 28.1	-1.2
SHAP	Saphane-Kutahy	2.90	103	PN	Pn	18 11 29.3	-0.2
AMGA	Amorgos Island	2.90	175	P	Pn	18 11 27.7	-1.8
BODT	Bodrum	2.98	153	P	Pn	18 11 30.0	-0.6
KZN	Kozani	2.99	282	P	Pn	18 11 30.9	+0.1
KZN				S	Sn	18 12 06.6	-0.4
KALE	Kalithea	3.00	245	P	Pn	18 11 30.3	-0.5
KALE	Kalithea	3.00	245	P	Pn	18 11 30.4	-0.5
KRND	KRANIDI	3.02	220	P	Pn	18 11 30.0	-1.1
KRND	KRANIDI	3.02	220	P	Pn	18 11 30.5	-0.6
BDRM	Kayabasi	3.03	151	i P	Pn	18 11 31.3	+0.1
BDRM				IAML_P			
	comp=Z,5μm,0.4s						
EVR	Evrytania	3.05	256	P	Pn	18 11 30.9	-0.6
EVR	Evrytania	3.05	256	P	Pn	18 11 31.4	-0.1
SERG	Sergoula	3.05	246	P	Pn	18 11 30.4	-1.1
SERG	Sergoula	3.05	246	P	Pn	18 11 31.0	-0.5
TRIZ	Trizonia	3.06	245	P	Pn	18 11 30.9	-0.6
TRIZ	Trizonia	3.06	245	P	Pn	18 11 31.1	-0.5
TRAZ	Trapeza	3.06	240	P	Pn	18 11 31.2	-0.5
ANX	Ano Chora	3.07	250	P	Pn	18 11 31.5	-0.4
ANX	Ano Chora	3.07	250	P	Pn	18 11 31.8	-0.1
GDZ	Gediz	3.08	101	i P	Pn	18 11 32.5	+0.5
ALIK	Aliki, Aigiali	3.08	243	P	Pn	18 11 32.1	+0.2
GUR	Goura	3.11	236	P	Pn	18 11 31.3	-1.0
GUR	Goura	3.11	236	P	Pn	18 11 31.9	-0.4
EFP	Efpalio	3.15	247	P	Pn	18 11 32.2	-0.7
EFP	Efpalio	3.15	247	P	Pn	18 11 32.6	-0.2
KLV	Kalavryta, Ach	3.17	239	P	Pn	18 11 32.1	-1.1
KLV	Kalavryta, Ach	3.17	239	P	Pn	18 11 32.4	-0.8
MHLO	Agia Marina, M	3.18	198	P	Pn	18 11 32.7	-0.5
LAKA	Lakka	3.19	243	P	Pn	18 11 32.9	-0.5
LAKA	Lakka	3.19	243	P	Pn	18 11 33.1	-0.3
STIP	Stip	3.25	308	i Pn	Pn	18 11 32.7	-1.5
KPRO	Kipourio	3.27	275	P	Pn	18 11 34.8	+0.3
KPRO	Kipourio	3.27	275	P	Pn	18 11 35.3	+0.8
THR2	Thira island,	3.28	182	P	Pn	18 11 34.8	+0.2
THR8	Santorini-Mono	3.32	182	P	Pn	18 11 35.6	+0.5
KHAL	Karahalli	3.32	113	i P	Pn	18 11 36.1	+0.7
KHAL				IAML_P			
	comp=Z,2μm,0.4s						
PVO	Paravola	3.35	252	P	Pn	18 11 36.3	+0.7
DAT	Datca	3.38	152	i P	Pn	18 11 35.0	-1.1
VTS	Vitosha	3.39	329	ePn	Pn	18 11 36.3	0.0
VTS				eSn	Sn	18 12 18.8	+1.8
VTS				eSg	Sg	18 12 33.0	+1.5
VTS	Vitosha	3.39	329	⇑iP	Pn	18 11 36.4	+0.1
VTS	Vitosha	3.39	329	S	Sn	18 12 16.8	-0.2
VTS	Vitosha	3.39	329	P	Pn	18 11 36.6	+0.3
TRIP	Tripoli	3.41	231	P	Pn	18 11 35.7	-0.7
TRIP	Tripoli	3.41	231	P	Pn	18 11 36.1	-0.3
VLX	Vlachokerasia	3.45	228	P	Pn	18 11 36.6	-0.5
PENT	Pentalofos	3.46	279	P	Pn	18 11 37.8	+0.7
DRO	Drossia	3.51	241	P	Pn	18 11 37.1	-0.7
DRO	Drossia	3.51	241	P	Pn	18 11 37.6	-0.3
NEST	Nestorio	3.55	283	P	Pn	18 11 39.4	+0.9
VLI	Veliai	3.66	216	P	Pn	18 11 38.5	-1.4
GEYV	SAKARYA_Geyve	3.68	77	i P	Pn	18 11 41.7	+1.5
GEYV				IAML_P			
	comp=Z,1μm,0.3s						
KRUS	Krusevo	3.69	298	i Pn	Pn	18 11 41.0	+0.5
TURN	Turunc	3.71	139	i P	Pn	18 11 39.1	-1.3
BORA	Eskisehir	3.75	86	i P	Pn	18 11 42.8	+1.7
BORA				IAML_P			
	comp=Z,1μm,0.1s						
KAND	Kocaeli-Kandir	3.77	67	i P	Pn	18 11 42.6	+1.3
KAND				IAML_P			
	comp=Z,477nm,0.1s						
DALY	Dalyan (Mula)	3.77	139	i P	Pn	18 11 42.9	+1.5
KZIL	AFYON_Kizioren	3.84	111	i P	Pn	18 11 43.8	+1.4
ITM	Ithomi	3.84	230	P	Pn	18 11 41.9	-0.5
AUKIR	Kırka- Seyitga	3.85	95	i P	Pn	18 11 43.9	+1.4
ZIMR		3.93	358	⇓iP	Pn	18 11 44.0	+0.5
LKD2	Lefkada island	3.94	258	P	Pn	18 11 44.4	+0.6
BRDR	BURDUR-Merkez	4.04	119	i P	Pn	18 11 46.1	+0.9
IGT	Igoumenitsa	4.07	269	ePn	Pn	18 11 46.3	+0.8
IGT	Igoumenitsa	4.07	269	P	Pn	18 11 44.5	-1.0
FETY	Fethiye	4.13	137	i P	Pn	18 11 47.8	+1.4
SAHE	Sakarya_HENDEK	4.18	73	i P	Pn	18 11 48.4	+1.4
ZAPS	Zavoj	4.18	329	ePn	Pn	18 11 48.1	+1.0
BARS	Barje	4.20	319	ePn	Pn	18 11 47.6	+0.3
BARS	Barje	4.20	319	ePn	Pb	18 11 58.1	+1.2
BARS				eSn	Sn	18 12 37.4	+0.7
BTAS	Taskesti	4.23	77	i P	Pn	18 11 48.9	+1.2
BOLV	Bolvadin	4.28	102	i P	Pn	18 11 49.8	+1.3
ISP	Isparta	4.30	115	⇓iP	Pn	18 11 49.4	+0.7
VLAD	Vladila	4.36	349	⇑iP	Pn	18 11 49.0	-0.4
BAGO	Egridir - ISPA	4.41	112	i P	Pn	18 11 52.0	+1.7
IDI	Anoyia	4.47	187	⇑iP	Pn	18 11 49.4	-1.6
IDI	Anoyia	4.47	187	Pn	Pn	18 11 51.1	+0.1
	comp=Z,0.5nm,0.3s,baz=337,slow=13,SNR=3.2						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDI				Lg	Lg	18 13 07.7	
	comp=Z,1.2nm,0.3s,baz=353,slow=12,SNR=1.8						
IDI				LR	LR	18 13 33.8	
	comp=Z,111nm,21.5s,baz=44,slow=38						
SGRR	Singureni	4.50	3	⇓iP	Pn	18 11 51.6	+0.2
AUMIH	MIHALICIK	4.54	86	iP	Pn	18 11 52.5	+0.4
KORT	Korkueli	4.62	125	iP	Pn	18 11 55.5	+2.2
RASA	Rasa	4.63	14	⇓iP	Pn	18 11 53.3	+0.1
ICOR	Ion Corvin	4.68	20	⇑iP	Pn	18 11 56.5	+2.6
AKAS	Kas	4.71	137	iP	Pn	18 11 56.8	+2.3
ZAGS	Zajecar	4.79	329	ePn	Pn	18 11 55.7	+0.3
HUMR	Humele	4.82	355	⇓iP	Pn	18 11 55.3	-0.5
LEHL	Lehliu	4.83	10	⇑iP	Pn	18 11 55.1	-0.8
KIBS	BOLU	4.85	80	iP	Pn	18 11 57.6	+1.3
BOVS	Bovan	4.87	325	ePn	Pn	18 11 56.5	0.0
PUNG	Punghina	4.96	337	⇓iP	Pn	18 11 53.7	-4.0
DOGA	KONYA_Doganhis	5.01	107	iP	Pn	18 11 59.1	+0.6
BCAM	Yenicaga	5.07	76	iP	Pn	18 12 00.7	+1.4
TIRR	Tirgusor	5.17	23	⇓iP	Pn	18 12 02.5	+1.9
TLB	Topalu	5.18	20	⇑iP	Pn	18 11 59.6	-1.2
KDHN	Kadinhani	5.21	101	iP	Pn	18 12 02.0	+0.7
SRE	Strehaia	5.24	341	⇑iP	Pn	18 11 59.6	-2.0
CMDR	Camlidere-ANKA	5.33	80	iP	Pn	18 12 03.4	+0.5
BTIN	Bartın	5.41	67	iP	Pn	18 12 04.1	+0.3
ISR	Istrita	5.43	7	⇓iP	Pn	18 12 03.1	-1.2
PDG	Podgorica	5.50	301	⇑iP	Pn	18 12 02.9	-2.2
PDG	Podgorica	5.50	301	S	Sn	18 13 08.1	-0.6
SJES	Sjenica	5.50	312	ePn	Pn	18 12 05.9	+0.6
KEPZ	Antalya-Kepez	5.50	119	iP	Pn	18 12 06.2	+1.0
KUBS	Kucevo	5.51	329	ePn	Pn	18 12 04.6	-0.7
GRUS	Gruza	5.53	320	ePn	Pn	18 12 05.7	+0.2
ANTO	Ankara	5.55	86	⇓iP	Pn	18 12 08.4	+2.5
KBUK	KARABUK-Merkez	5.57	72	iP	Pn	18 12 07.7	+1.6
KONT	Konya--Tatoy	5.58	106	iP	Pn	18 12 08.3	+2.1
IVAS	Ivanjica	5.60	315	ePn	Pn	18 12 06.3	-0.3
KMER	Konya-Meram	5.64	108	iP	Pn	18 12 09.3	+2.1
HERR	Herculane	5.66	336	⇑iP	Pn	18 12 06.4	-1.0
ARR	Arges	5.68	353	⇑iP	Pn	18 12 06.4	-1.3
KKUL	Konya-Kulu	5.70	93	iP	Pn	18 12 10.4	+2.4
VOIR		5.72	356	⇑iP	Pn	18 12 08.0	-0.2
MLR	Muntele Rosu	5.76	2	⇑iP	Pn	18 12 09.3	+0.4
MLR	Muntele Rosu	5.76	2	Pn	Pn	18 12 09.2	+0.3
	comp=Z,1.0nm,0.3s,baz=218,slow=5.0,SNR=20						
MLR				Lg	Lg	18 13 42.7	
	comp=Z,0.7nm,0.3s,baz=314,slow=19,SNR=2.6						
MLR				LR	LR	18 14 53.9	
	comp=Z,210nm,21.3s,baz=208,slow=44						
MDVR	Moldovita	5.81	332	⇓iP	Pn	18 12 09.1	-0.4
LOT	Lotru	5.87	347	⇓iP	Pn	18 12 09.8	-0.6
TRUS	Trudelj	5.92	321	ePn	Pn	18 12 10.3	-0.7
GZR	Gura Zlata	6.03	341	⇑iP	Pn	18 12 11.5	-1.0
DIVS	Divibare	6.04	318	ePn	Pn	18 12 12.7	0.0
ODBI	Odobesti	6.13	10	⇑iP	Pn	18 12 14.9	+1.2
PLOR	Plostina	6.17	7	⇑iP	Pn	18 12 15.6	+1.2
VRI	Vrincioaia	6.19	7	⇑iP	Pn	18 12 15.8	+1.2
BBLS	Lazići	6.20	314	ePn	Pn	18 12 15.3	+0.5
BRTR	Keskin Array B	6.20	87	Pn	Pn	18 12 15.2	+0.2
	comp=Z,2.8nm,0.3s,baz=258,slow=11,SNR=56						
BRTR				Sn	Sn	18 13 18.8	-7.6
	baz=271,slow=18,SNR=2.2						
BRTR				Lg	Lg	18 14 00.3	
	baz=269,slow=22,SNR=9.5						
DOPR	Dopca	6.24	359	⇑iP	Pn	18 12 15.6	+0.3
DEV	Deva	6.46	343	⇓iP	Pn	18 12 18.4	+0.1
BZS	Buzias	6.57	335	ePn	Pn	18 12 19.4	-0.5
BZS	Buzias	6.57	335	⇑iP	Pn	18 12 19.4	-0.5
TEKS	Tekeris	6.60	319	ePn	Pn	18 12 19.0	-1.2
CDAG	Cicekdag	6.77	88	iP	Pn	18 12 23.5	+0.8
TIP	Timpagrande	6.86	268	⇑iP	Pn	18 12 23.5	-0.4
MATE	Matera	6.87	281	⇓iP	Pn	18 12 22.2	-1.7
FRGS	Fruska Gora	6.91	324	ePn	Pn	18 12 24.3	-0.2
CTAK	Corum_Osmancik	7.10	80	iP	Pn	18 12 17.6	-10
CJR	Cluj-Napoca	7.13	349	⇑iP	Pn	18 12 27.9	+0.3
SIRR	Siria	7.14	337	⇑iP	Pn	18 12 27.5	-0.2
GULN	MERSIN_Gulnar	7.21	117	iP	Pn	18 12 31.0	+2.4
BIZ	Bicaz	7.22	3	⇑iP	Pn	18 12 29.3	+0.6
GIRR	Girov	7.25	5	⇓iP	Pn	18 12 30.0	+0.8
DRGR		7.37	344	ePn	Pn	18 12 29.8	-1.0
DRGR		7.37	344	⇑iP	Pn	18 12 29.6	-1.2
ARCR	ARCALIA	7.41	353	⇓iP	Pn	18 12 31.3	0.0
MILM	Milestii Mici	7.56	17	⇑iP	Pn	18 12 32.7	-0.7
KIS	Kishinev	7.64	17	e	Pn	18 12 40.0	+5.6
BURAR	Bucovina Array	7.89	358	⇑iP	Pn	18 12 39.3	+1.3
BLY	Banja Luka	8.00	312	S	Pb	18 13 07.6	+5.9
MORH	Mrgy, Hungar	8.24	324	ePn	Pn	18 12 42.1	-0.7
VYHS	Vyhne	10.02	333	ePN	Pn	18 13 05.9	-1.2
MMAI	Mount Meron Ar	10.36	127	Pn	Pn	18 13 11.3	-0.6
	comp=Z,0.8nm,0.3s,baz=314,slow=12,SNR=4.9						
MMAI				LR	LR	18 18 07.1	
	comp=Z,56nm,18.4s,baz=35,slow=43						
AKASG	Malin Array Be	11.27	12	Pn	Pn	18 13 22.2	-1.9
	comp=Z,0.4nm,0.3s,baz=196,slow=12,SNR=5.2						
VRAC	Vranov	11.52	329	LR	LR	18 18 54.6	
	comp=Z,64nm,20.5s,baz=139,slow=43						
ABTA	Abfaltersbach	11.83	311	Pn	Pn	18 13 33.3	+1.3
	comp=Z,1.6nm,0.7s						
GERES	GERESS Array B	12.46	321	Pn	Pn	18 13 40.4	-0.2
	comp=Z,0.0nm,0.3s,baz=123,slow=14,SNR=4.3						
GERES				LR	LR	18 18 53.8	
	comp=Z,102nm,19.8s,baz=292,slow=40						
DAVOX	Davos/Dischmat	13.44	307	Pn	Pn	18 13 53.8	-0.2
	comp=Z,0.2nm,0.3s,baz=134,slow=18,SNR=3.9						
DAVOX				LR	LR	18 19 10.4	
	comp=Z,105nm,19.6s,baz=258,slow=38						
GNI	Garni	14.70	82	Pn	P	18 14 16.0	-1.6
	comp=Z,0.2nm,0.3s,baz=240,slow=20,SNR=3.6						
GNI				LR	LR	18 19 46.6	
	comp=Z,29nm,18.3s,baz=302,slow=37						
FINES	FINESS Array B	21.74	1	P	P	18 15 33.9	-0.7
	comp=Z,1.0nm,0.6s,baz=173,slow=14,SNR=3.3						
FINES				LR	LR	18 24 48.7	
	comp=Z,110nm,18.7s,baz=212,slow=39						
HFS	Hagfors	21.75	344	LR	LR	18 25 37.2	
	comp=Z,93nm,20.6s,baz=238,slow=41						
KLMR	Klimovskoe	22.85	18	eP	P	18 15 45.8	-0.6
KLMR				AMP		18 15 55.3	
	comp=Z,9.0nm,1.1s						
NB2	NORSAR Subarra	23.12	342	P	P	18 15 47.9	-1.4
	comp=Z,5.2nm,1.1s,baz=154,slow=10						
NOA	NORSAR Array B	23.12	342	P	P	18 15 47.9	-1.4
	comp=Z,1.0nm,0.8s,baz=130,slow=8.8,SNR=3.9						
NOA				LR	LR	18 25 39.9	
	comp=Z,27nm,18.4s,baz=265,slow=39						
MDT	Midelt	25.23	264	LR	LR	18 25 57.2	
	comp=Z,73nm,18.5s,baz=350,slow=36						
GEYT	Alibeck	25.33	84	P	P	18 16 11.9	+1.7
	comp=Z,2.1nm,0.6s,baz=295,slow=8.0,SNR=4.2						
TORD	Torodi Ar. Bea	33.83	225	P	P	18 17 27.1	+1.2
	comp=Z,0.5nm,0.6s,baz=48,slow=8.5,SNR=5.5						
MKAR	Makanchi Array	41.11	61	P	P	18 18 27.7	+0.3
	comp=Z,1.0nm,0.6s,baz=277,slow=6.5,SNR=15						
ZALV	Zalesovo Beam	41.69	50	P	P	18 18 33.5	+1.5
	comp=Z,1.3nm,0.6s,baz=287,slow=5.4,SNR=6.3						
CMAR	Chiang Mai Arr	65.79	86	P	P	18 21 29.3	+0.3
	comp=Z,0.4nm,0.7s,baz=296,slow=7.5,SNR=4.6						

ISCJB ***10*** *18:10:59.0±0.8, 10°.97S±0°.09×165°.97E±0°.09, h10^{km}, mb4.0/11, MS3.6/3, Error ellipse: s-maj=15.0km s-min=10.2km az=37.4*

IDC ***10*** *18:10:58.8±1.0, 10°.86S×166°.00E, h0^{km}, mb4.1/10, mb1 4.3/12, mb1mx4.1/33, mbtmp4.2/12, ML4.9/2, MS3.7/3, Ms1 3.7/3, ms1mx3.1/37, Error ellipse: s-maj=25.5km s-min=20.5km az=114.0*

NEIC ***10*** *18:11:00.4±0.8, 10°.85S×166°.00E, h10^{km}, mb4.0/1, Error ellipse: s-maj=17.6km s-min=14.1km az=86.0*

ISC 10 18:11:00.4±0.9**, 10°.96S**±0°.08×**166°.1E**±0°.1**, h10^{km}, n24, σ1^{s}78**/19**, mb4.1**/11**, MS3.6**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.19	284	Pn	Pn	18 12 32.7	+0.7
	49nm,0.3s,baz=149,slow=2.8,SNR=51						
HNR				Sn	Sn	18 13 42.9	0.0
	13nm,0.3s,baz=268,slow=16,SNR=1.8						
DZM	Mont Dzumac	11.05	178	ePn	Pn	18 13 41.2	+2.4
	40nm,0.6s						
DZM				eSn	Sn	18 15 38.6	-4.0
	20nm,0.7s						
DZM				eLR	LR	18 16 16.7	
	comp=Z,454nm,24.4s						
DZM	Mont Dzumac	11.05	178	Pn	Pn	18 13 41.5	+2.7
	4.4nm,0.3s,baz=44,slow=4.1,SNR=35						
DZM				Sn	Sn	18 15 40.7	-1.9
	0.7nm,0.3s,baz=303,slow=21,SNR=3.6						
CTA	Charters Tower	21.10	242	P	P	18 15 46.4	+1.0
	7.3nm,0.9s,baz=84,slow=15,SNR=7.7						
URZ	Urewera	28.93	162	LR	LR	18 26 42.4	
	comp=Z,79nm,18.2s,baz=354,slow=32						
H11S2	WAKE ISLAND Hy	29.27	1	T	T	18 47 22.7	
	baz=181,slow=76,SNR=286						
H11S3	WAKE ISLAND Hy	29.28	1	T	T	18 47 23.0	
	baz=181,slow=76,SNR=178						
H11S1	WAKE ISLAND Hy	29.29	1	T	T	18 47 24.0	
	baz=181,slow=76,SNR=204						
H11N1	WAKE ISLAND Hy	30.49	2	T	T	18 48 54.3	
	baz=182,slow=76,SNR=192						
H11N3	WAKE ISLAND Hy	30.50	2	T	T	18 48 54.6	
	baz=182,slow=76,SNR=90						
H11N2	WAKE ISLAND Hy	30.51	2	T	T	18 48 55.6	
	baz=182,slow=76,SNR=128						
STKA	Stephens Creek	30.70	224	P	P	18 17 16.4	+0.7
	1.8nm,0.6s,baz=133,slow=22,SNR=4.0						
STKA				LR	LR	18 29 26.4	
	comp=Z,118nm,18.0s,baz=30,slow=36						
WRAB	Tennant Creek	31.78	250	eP	P	18 17 22.8	-2.5
	0.8nm,0.4s						
WRA	Warramunga Arr	31.79	250	P	P	18 17 24.2	-1.2
	2.2nm,0.7s,baz=81,slow=9.2,SNR=19						
WRA				LR	LR	18 30 24.8	
	comp=Z,244nm,18.0s,baz=85,slow=37						
RPZ	Rata Peaks	32.92	173	P	P	18 17 36.3	+1.3
	10.0nm,0.5s,baz=348,slow=2.7,SNR=5.1						
ASAR	Alice Springs	33.09	243	P	P	18 17 35.5	-1.3
	1.8nm,0.8s,baz=62,slow=10,SNR=23						
PPT2	Papeete2	43.43	104	eLR	LR	18 31 47.0	
	comp=Z,61nm,23.0s						
CMAR	Chiang Mai Arr	72.35	293	P	P	18 22 27.4	+0.3
	1.1nm,1.0s,baz=125,slow=4.5,SNR=6.7						
SONM	Songino Array	78.78	324	P	P	18 23 04.1	+0.6
	0.3nm,0.6s,baz=149,slow=5.9,SNR=3.0						
ILAR	Eielson Array	83.34	18	P	P	18 23 27.3	0.0
	0.7nm,0.6s,baz=234,slow=5.0,SNR=9.8						
ZALV	Zalesovo Beam	93.66	324	P	P	18 24 15.8	-1.3
	0.3nm,0.3s,baz=100,slow=1.8,SNR=3.2						
MKAR	Makanchi Array	93.66	317	P	P	18 24 16.6	-0.8
	0.6nm,0.7s,baz=99,slow=6.1,SNR=7.9						
ARCES	ARCESS Array B	116.33	346	PKP	PKiKP	18 29 42.6	-1.2
	0.9nm,0.6s,baz=35,slow=4.4,SNR=5.4						
FINES	FINESS Array B	121.80	339	PKP	PKPdf	18 29 53.4	-1.1
	0.7nm,0.7s,baz=331,slow=1.7,SNR=4.0						

SJA 10 18:23:15.4±0.4**, 31°.78S**×**68°.38W, h105^{km}**±3^{km}**, ML2.4, MW3.7, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.16	239	iP	Pn	18 23 30.9	+0.8
RTCV				iS	Sn	18 23 42.1	+0.9
RTLL	Cerro Villicun	0.46	350	iP	Pn	18 23 32.1	+0.5
RTLL				IAML		18 23 46.6	
	comp=Z,113nm,0.2s						
RTLS	Leoncito	0.78	268	iP	Pn	18 23 35.5	+1.2
RTLS				iS	Sn	18 23 50.3	+1.8
RTLS				IAML		18 23 52.1	
	comp=Z,72nm,0.2s						
AMOG	MOGNA	0.84	354	iP	Pn	18 23 35.6	+0.9
ASAL	Salagasta	0.89	205	iP	Pn	18 23 36.3	+1.0
ASAL				iS	Sn	18 23 51.1	+1.0
AUSP	Uspallata	0.96	242	iP	Pn	18 23 37.3	+1.2
AUSP				iS	Sn	18 23 53.6	+2.0
ACAN	Cantantal	1.13	116	iP	Pn	18 23 38.4	+0.8
ACCO	Cerro Coronel	1.33	334	iP	Pn	18 23 41.5	+1.2

KRSC 10 18:29:59.5±1.4**, 51°.30N**×**158°.33E, h85^{km}**±13^{km}**, ML4.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.53	343	iP	Pn	18 30 15.2	+1.3
KDTR				eS	Sn	18 30 25.6	+0.9
PAU	Pauzhetka	0.96	281	eP	Pn	18 30 19.9	+1.6
PAU				eS	Sn	18 30 33.8	+1.3
RUS	Russkaya	1.14	6	eP	Pn	18 30 21.9	+1.5
RUS				eS	Sn	18 30 37.1	+0.9
MTVR	Mutnovka	1.19	356	eP	Pn	18 30 23.0	+1.8
MTVR				eS	Sn	18 30 39.2	+1.7
GRL	Gorelyy	1.27	353	eP	Pn	18 30 24.1	+2.0
GRL				eS	Sn	18 30 41.3	+2.2
SKR	Severo-Kuril's	1.53	247	iP	Pn	18 30 25.8	+0.5
SKR				eS	Sn	18 30 44.5	-0.3
KRMR	Karymshinskiy	1.54	356	eP	Pn	18 30 27.6	+2.2
KRMR				eS	Sn	18 30 46.5	+1.5
DALK	Dalny	1.75	8	eP	Pn	18 30 30.1	+1.9
DALK				eS	Sn	18 30 51.5	+1.5
APC	Apacha	1.78	337	eP	Pn	18 30 30.8	+2.2
APC				eS	Sn	18 30 52.9	+2.2
UGLR	Uglovaya	1.94	9	eP	Pn	18 30 33.1	+2.4
UGLR				eS	Sn	18 30 56.9	+2.4
NLC	Nalytchevo	1.98	18	eS	Sn	18 30 54.5	-0.7
AVH	Avacha	1.98	7	eP	Pn	18 30 34.0	+2.7
AVH				eS	Sn	18 30 58.9	+3.3
SMAR	Somma	1.99	8	eP	Pn	18 30 33.4	+1.9
KOK	Koryaka	2.00	5	eP	Pn	18 30 34.6	+3.0
KOK				eS	Sn	18 30 59.4	+3.3
KRX	Arik	2.07	5	eP	Pn	18 30 35.0	+2.5
KRX				eS	Sn	18 30 59.7	+1.9
SPN	Mys Shipunski	2.08	29	eP	Pn	18 30 35.0	+2.5
SPN				eS	Sn	18 30 58.7	+0.9
GNL	Ganaly	2.41	355	eP	Pn	18 30 39.8	+2.8
KII	Karymskiy	2.83	14	eP	Pn	18 30 44.8	+2.3
KII				eS	Sn	18 31 18.8	+3.1
KZV	Kizimen	4.00	16	eP	Pn	18 31 01.9	+3.4
KZV				eS	Sn	18 31 44.8	+0.6
TUMD	Tumrok D	4.10	17	eS	Sn	18 31 47.6	+1.0
TUMR	Tumrok	4.14	15	eP	Pn	18 31 02.8	+2.5
ESO	Esso	4.64	3	eP	Pn	18 31 09.7	+2.6
BDR	Baidarnaya	5.55	17	eP	Pn	18 31 22.8	+3.4
KBTR	Krutoberegovo	5.59	27	eP	Pn	18 31 21.8	+1.8
SRKR	Sorokina	5.62	16	eP	Pn	18 31 22.5	+2.1

ISCJB ***10*** *18:34:29.6±0.6, 30°.67N±0°.07×138°.1E±0°.1, h477^{km}, mb3.2/6, Error ellipse: s-maj=15.9km s-min=8.3km az=162.5*

IDC ***10*** *18:34:30.3±1.1, 30°.68N×137°.80E, h456^{km}±16^{km}, mb2.9/6, mb1 3.0/12, mb1mx2.7/53, mbtmp3.8/12, Error ellipse: s-maj=25.5km s-min=12.1km az=82.0*

ISC 10 18:34:30.7±0.8**, 30°.70N**±0°.09×**138°.1E**±0°.1**, h477^{km}, n12, σ1^{s}60**/14**, mb3.2**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.80	30	P	P	18 35 38.6	+0.2
	14nm,0.3s,baz=234,slow=19,SNR=5.2						
JCJ	Chichijima	5.06	134	P	P	18 35 55.8	-1.3
	2.0nm,0.3s,baz=294,slow=20,SNR=3.7						
JCJ				S	S	18 37 05.3	-2.1
	8.2nm,0.3s,baz=126,slow=23,SNR=6.9						
MJAR	Matsushiro Arr	5.83	1	P	P	18 36 02.7	-1.5
	0.1nm,0.3s,baz=191,slow=12,SNR=7.3						
MJAR				S	S	18 37 18.5	-2.3
	0.1nm,0.3s,baz=51,slow=48,SNR=4.5						
ASAJ	Asahikawa	13.86	14	P	P	18 37 30.7	+1.8
	0.5nm,0.3s,baz=239,slow=12,SNR=9.4						
USRK	Ussuriysk Ar.	14.32	342	P	P	18 37 33.5	-0.4
	0.5nm,0.3s,baz=151,slow=10,SNR=9.6						
KLR	Kul'dur	19.13	347	P	P	18 38 22.8	+0.5
	0.2nm,0.3s,baz=197,slow=7.6,SNR=7.6						
CMAR	Chiang Mai Arr	37.47	260	P	P	18 41 01.9	-0.9
	0.6nm,0.3s,baz=65,slow=6.3,SNR=4.4						
MKAR	Makanchi Array	45.45	307	P	P	18 42 04.8	-1.1
	0.2nm,0.4s,baz=88,slow=11,SNR=8.1						
WRA	Warramunga Arr	50.48	185	P	P	18 42 44.6	+0.8
	0.7nm,0.4s,baz=1.8,slow=7.7,SNR=27						
ASAR	Alice Springs	54.20	185	P	P	18 43 11.8	+1.2
	0.3nm,0.5s,baz=23,slow=11,SNR=16						
ARCES	ARCESS Array B	68.96	340	P	P	18 44 47.7	+0.9
	2.7nm,1.1s,baz=61,slow=9.4,SNR=3.2						
YKA	Yellowknife Ar	70.67	28	P	P	18 44 59.4	+2.4
	0.3nm,0.7s,baz=297,slow=6.1,SNR=5.4						

JMA 10 18:39:15.2±0.3**, 36°.83N**×**143°.68E, h54^{km}, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.30	311	P	Pn	18 39 51.5	+0.9
JIKH				eS	Sn	18 40 18.8	+1.1
JFK	Kawauchi	2.31	284	P	Pn	18 39 51.9	+1.1
JFK				eS	Sn	18 40 18.8	+0.8
ONAJ	Iwakimizuishiy	2.32	278	eS	Sn	18 40 19.1	+0.6
JIO	Ouri	2.46	312	P	Pn	18 39 54.0	+1.2
JIO				eS	Sn	18 40 22.3	+0.6
JFT	Otama	2.76	285	P	Pn	18 39 59.1	+2.2
JMK	Ichinoseki	2.88	318	P	Pn	18 39 59.6	+1.1
JOM	Ohasama	3.24	325	P	Pn	18 40 04.5	+1.0
JOM				eS	Sn	18 40 41.1	+0.2
JYK	Kaneyama	3.35	309	P	Pn	18 40 07.0	+1.9
JAG	Ashikaga	3.42	264	P	Pn	18 40 07.6	+1.5
JAG				eS	Sn	18 40 45.6	+0.2
JRY	Ryogami san	3.94	260	P	Pn	18 40 14.4	+1.3
JOD2	Odawara 2	4.04	249	P	Pn	18 40 15.2	+0.7
JOD2				eS	Sn	18 40 59.4	-1.1
JOT	Ohata	4.99	337	P	Pn	18 40 28.9	+1.5
JKB	Kayabe	5.45	339	P	Pn	18 40 34.6	+0.8
JCH	Churui	5.78	358	P	Pn	18 40 37.1	-1.2
NEM2	Nemuro 2	6.72	13	P	Pn	18 40 48.1	-3.0
NEM2				eS	Sn	18 41 58.5	-7.7

IDC ***10*** *18:39:30.1±0.4, 10°.96S×165°.55E, h0^{km}, mb5.2/34, mb1 5.3/36, mb1mx5.2/43, mbtmp5.2/36, ML5.6/2, MS5.7/17, Ms1 5.7/17, ms1mx5.3/29, Error ellipse: s-maj=14.1km s-min=10.9km az=101.0*

NEIC ***10*** *18:39:32.1±0.1, 10°.94S×165°.46E, h11^{km}, mb5.5/17, ME5.7, MS5.9/136, MW5.9, MW6.0, Error ellipse: s-maj=4.3km s-min=3.4km az=123.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M_{rr}0.34; $M_{\theta\theta}$6.46; $M_{\phi\phi}$-6.80; $M_{r\theta}$-4.23; $M_{\theta\phi}$-1.99; $M_{\phi r}$-1.53; Best double couple: $M_0$8.30000×10^{17} NP1:ϕ_s232.00000°, δ84.00000°, λ149.00000°. NP2:ϕ_s326.00000°, δ59.00000°, λ7.00000°. Principal axes: T 8.7000, Plg26.0000°, Azm185.0000°; N -0.9600, Plg58.0000°, Azm42.0000°; P -7.7400, Plg17.0000°, Azm283.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s288.00000°, δ46.00000°, λ-36.00000°. NP2:ϕ_s45.00000°, δ65.00000°, λ-130.00000°. Principal axes: T Plg11.0000°, Azm163.0000°; N Plg0.0000°, Azm0.0000°; P Plg52.0000°, Azm267.0000°; Apparent Stress 0.15 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

BJI ***10*** *18:39:33.6, 10°.91S×165°.52E, h33^{km}, mB6.0/79, mb5.4/44, Ms6.1/91, Ms7 5.9/82*

MOS ***10*** *18:39:34.3±1.0, 10°.87S×165°.31E, h33^{km}, mb5.5/48, MS5.8/45, Error ellipse: s-maj=7.2km s-min=6.3km az=95.0*

ISCJB ***10*** *18:39:34.5±0.1, 11°.01S±0°.02×165°.40E±0°.02, h37^{km}, mb5.3/129, MS5.9/202, Error ellipse: s-maj=3.0km s-min=2.5km az=170.0*

NEIC ***10*** *18:39:35.0±0.0, 10°.78S×165°.44E, h13^{km}, Moment Tensor Solution. s31 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.69; $M_{\theta\theta}$1.00; $M_{\phi\phi}$-0.32; $M_{r\theta}$-0.43; $M_{\theta\phi}$-0.32; $M_{\phi r}$-0.38; Best double couple: $M_0$1.10000×10^{18} NP1: ϕ_s73.00000°, δ64.00000°, λ-127.00000°. NP2: ϕ_s314.00000°, δ45.00000°, λ-38.00000°. Principal axes: T 1.1400, Plg11.0000°, Azm189.0000°; N -0.0800, Plg33.0000°, Azm91.0000°; P -1.0600, Plg54.0000°, Azm295.0000°;*

GCMT ***10*** *18:39:38.1±0.1, 11°.02S×165°.32E, h12^{km}, MW6.0/136, Moment Tensor Solution. s136,c296; s133,c446; Duration: 2^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.81±.01; $M_{\theta\theta}$1.21±.01; $M_{\phi\phi}$-0.40±.01; $M_{r\theta}$-0.32±.02; $M_{\theta\phi}$-0.41±.01; $M_{\phi r}$-0.12±.03; Best double couple: $M_0$1.14100×10^{18} NP1:ϕ_s83.00000°, δ57.00000°, λ-119.00000°. NP2:ϕ_s308.00000°, δ43.00000°, λ-53.00000°. Principal axes: T 1.3470, Plg8.0000°, Azm193.0000°; N -0.4150, Plg24.0000°, Azm99.0000°; P -0.9350, Plg65.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 10 18:39:36.1±0.3**, 10°.97S**±0°.04×**165°.54E**±0°.04**, h36^{km}**±1^{km}**, h39^{km}:pP-P, n897, σ1^{s}81**/859**, mb5.4**/136**, MS5.9**/214**, 45C-37D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.72	285	eP	Pn	18 40 57.0	-1.6
HNR				eS	Sn	18 42 02.0	-1.0
HNR	Honiara	5.72	285	ePn	Pn	18 40 56.4	-2.2
HNR				Sn	Sn	18 42 04.5	+1.5
HNR	Honiara	5.72	285	eP	Pn	18 40 56.4	-2.2
HNR						18 42 04.5	
HNR	Honiara	5.72	285	Pn	Pn	18 40 57.1	-1.4
	270nm,0.3s,baz=178,slow=3.9,SNR=116						
HNR				Sn	Sn	18 42 04.5	+1.5
	24nm,0.3s,baz=175,slow=23,SNR=2.3						
HNR				LR	LR	18 43 13.6	
	comp=Z,170µm,20.7s,baz=140,slow=39						
MARNC	Mare, Loyalty	10.72	167	ePn	Pn	18 42 05.7	-1.4
DZM	Mont Dzumac	11.07	176	ePn	Pn	18 42 09.6	-2.4
	474nm,0.6s						
DZM				eLR	LR	18 44 43.1	
	comp=Z,175µm,26.2s						
DZM	Mont Dzumac	11.07	176	ePn	Pn	18 42 09.8	-2.2
DZM	Mont Dzumac	11.07	176	Pn	Pn	18 42 09.6	-2.4
	25nm,0.3s,baz=346,slow=11,SNR=36						
DZM				LR	LR	18 45 52.8	
	comp=Z,77µm,19.9s,baz=36,slow=34						
PINNC	Pines Island,	11.72	171	ePn	Pn	18 42 21.5	+0.7
FUNA	Funafuti	13.67	81	ePn	Pn	18 42 49.2	+1.6
MSVF	Nonsavu	13.85	120	ePn	Pn	18 42 54.1	+4.0
MSVF	Nonsavu	13.85	120	⇓eP	Pn	18 42 54.2	+4.1
TARA	Tarawa	14.28	31	ePn	Pn	18 42 56.5	+0.6
RABL	Rabaul	14.87	296	ePn	Pn	18 43 05.6	+1.6
PATS	Pohnpei	19.10	338	P	P	18 43 56.6	+0.7
	baz=19,SNR=7.3						
EIDS	Eidsvold	19.82	222	P	P	18 44 03.6	-0.2
	baz=20,SNR=29						
EIDS	Eidsvold	19.82	222	eP	P	18 44 03.8	0.0
MANU	Manus Island	20.11	295	eP	P	18 44 06.8	-0.2
CTA	Charters Tower	20.66	242	P	P	18 44 12.2	-0.7
	225nm,1.1s,baz=66,slow=12,SNR=57						
CTAO	Charters Tower	20.66	242	eP	P	18 44 12.8	-0.2
CTAO				LR	LR		
	comp=Z,18µm,19.0s						
CTAO	Charters Tower	20.66	242	eP	P	18 44 12.8	-0.2
CTAO				MLR	MLR		
	comp=Z,18µm,19.0s						
LHI	Lord Howe Isla	21.31	195	P	P	18 44 21.2	+1.3
	baz=21,SNR=5.0						
LHI	Lord Howe Isla	21.31	195	eP	P	18 44 20.7	+0.9
MTSU	Mount Surprise	21.73	248	P	P	18 44 23.7	-0.8
	baz=22,SNR=72						
COEN	Coen	22.04	260	P	P	18 44 26.7	-1.2
	baz=22,SNR=51						
COEN	Coen	22.04	260	eP	P	18 44 27.0	-0.9
RMQ	Roma	22.11	223	P	P	18 44 27.9	-0.7
	baz=22,SNR=192						
ARMA	Armidale	23.27	212	P	P	18 44 39.7	-1.1
	baz=23,SNR=51						
ARMA	Armidale	23.27	212	eP	P	18 44 40.1	-0.7
RAO	Raoul Island	23.86	142	PFAKE		18 45 00.0	+14
RAO				LR	LR		
	comp=Z,18µm,21.0s						
OUZ	Omahuta	25.23	164	eP	P	18 44 58.8	+0.1
MGCD	Mangrove Creek	25.80	209	P	P	18 45 05.1	+1.2
	baz=26,SNR=8.3						
JAY	Jayapura	26.04	287	P	P	18 45 02.2	-4.1
RIV	Riverview	26.29	208	P	P	18 45 09.6	+1.3
	baz=26,SNR=7.2						
GENI	Genyem	26.52	286	P	P	18 45 22.1	+11
QIS	Mount Isa	26.68	246	P	P	18 45 10.4	-1.7
	baz=27,SNR=80						
CMSA	Cobar Meteorol	27.49	219	P	P	18 45 17.7	-1.5
	baz=28,SNR=46						
YNG	Young	28.01	211	P	P	18 45 24.2	+0.4
	baz=28,SNR=5.3						
OPRZ	Ohinepanea	28.52	162	P	P	18 45 29.5	+1.2
CAN	Canberra	28.53	209	eP	P	18 45 28.3	-0.1
CAN	Canberra	28.53	209	eP	P	18 45 28.3	-0.1
HIZ	Hauiti	28.66	165	eP	P	18 45 31.1	+1.6

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WHRZ  Whale Island      28.67 161   P       P       18 45 32.5 +2.8
OMRZ  Omania            28.71 162   P       P       18 45 31.4 +1.4
HAZ   Te Kaha           28.84 160   P       P       18 45 33.1 +1.9
MXZ   Matakaoa Point    28.85 159  eP       P       18 45 30.9 -0.4
MXZ   Matakaoa Point    28.85 159   P       P       18 45 31.2 -0.1
TARZ  Mount Tarawera    28.87 162   P       P       18 45 32.5 +1.0
RUGZ  Raukumara Rang    29.00 160   P       P       18 45 33.6 +0.9
URZ   Urewera           29.08 161  eP       P       18 45 31.9 -1.4
URZ                                 S       S       18 50 25.9 +3.3
URZ   Urewera           29.08 161   P       P       18 45 32.2 -1.0
      comp=Z,118nm,1.0s,baz=332,slow=2.1,SNR=40
URZ                                 S       S       18 50 25.9 +3.3
      comp=Z,12nm,1.0s,baz=5.4,slow=22,SNR=3.4
URZ                                 LR      LR      18 56 45.7
      comp=Z,35µm,18.1s,baz=340,slow=36
URZ   Urewera           29.08 161   P       P       18 45 32.6 -0.6
MUGZ  Murupara          29.17 162   P       P       18 45 34.7 +0.6
RATZ  Rangitukua        29.24 164   P       P       18 45 36.2 +1.5
MWZ   Matawai           29.28 160   P       P       18 45 34.4 -0.7
TWGZ  Tauwhareparae     29.29 160   P       P       18 45 34.8 -0.4
H11S2 WAKE ISLAND Hy    29.30   2   T       T       19 16 11.5
      baz=181,slow=76,SNR=366
H11S3 WAKE ISLAND Hy    29.30   2   T       T       19 16 18.0
      baz=181,slow=76,SNR=377
H11S1 WAKE ISLAND Hy    29.32   2   T       T       19 16 19.0
      baz=181,slow=76,SNR=443
RTZ   Ruatahuna         29.36 162   P       P       18 45 34.8 -1.1
RAGZ  Rawiri            29.39 161   P       P       18 45 35.1 -1.0
MRHZ  Matea Rd          29.39 163   P       P       18 45 35.9 -0.3
SNGZ  Shannon Statio    29.63 161   P       P       18 45 37.4 -0.8
RAHZ  Arahi             29.67 162   P       P       18 45 37.8 -0.7
RIGZ  Rimuhau           29.70 160   P       P       18 45 39.6 +0.8
BKZ   Black Stump Fm    29.72 163  eP       P       18 45 38.1 -0.9
WHHZ  Waihua            29.86 162   P       P       18 45 39.2 -1.0
MILA  Mila              29.88 207   P       P       18 45 41.6 +1.2
      baz=30,SNR=3.8
WAKE  Wake Island       30.09   2   PFAKE           18 45 50.0 +7.7
WAKE                                LR      LR
      comp=Z,23µm,21.0s
STKA  Stephens Creek    30.36 223   P       P       18 45 43.8 -0.9
      baz=30,SNR=40
STKA  Stephens Creek    30.36 223  eP       P       18 45 43.8 -0.9
STKA                                S       S       18 50 48.2 +5.3
STKA  Stephens Creek    30.36 223   P       P       18 45 43.5 -1.2
      comp=Z,57nm,0.9s,baz=37,slow=9.0,SNR=35
STKA                                S       S       18 50 48.2 +5.3
      comp=Z,4.9nm,0.9s,baz=323,slow=18,SNR=1.8
STKA                                LR      LR      18 57 12.7
      comp=Z,27µm,18.2s,baz=44,slow=35
SRPI  Serui, Papua      30.46 285   P       P       18 45 46.7 +0.9
H11N1 WAKE ISLAND Hy    30.52   2   T       T       19 17 45.7
      baz=182,slow=76,SNR=525
H11N3 WAKE ISLAND Hy    30.53   3   T       T       19 17 50.1
      baz=182,slow=76,SNR=279
H11N2 WAKE ISLAND Hy    30.54   3   T       T       19 17 49.3
      baz=182,slow=76,SNR=367
BAKI  Biak              30.81 286   P       P       18 45 48.8 -0.1
      comp=Z,144nm,1.5s
BFZ   Birch Farm        31.06 164  eP       P       18 45 49.1 -1.7
SNZO  South Karori      31.27 167  eP       P       18 45 52.7 +0.1
SNZO                                LR      LR
      comp=Z,21µm,19.0s
WRAB  Tennant Creek     31.31 250  eP       P       18 45 51.8 -1.4
WRAB                                LR      LR
      comp=Z,22µm,19.0s
WRAB  Tennant Creek     31.31 250d iP       P       18 45 51.3 -2.0
WRAB                                pmax    pmax
      comp=Z,331nm,1.2s
WRAB                                MLR     MLR
      comp=Z,23µm,12.0s
WB2   Warramunga Arr    31.31 250  eP       P       18 45 50.9 -2.3
WRA   Warramunga Arr    31.32 250  i P      P       18 45 50.5 -2.9
WRA                                 pmax    pmax
      comp=Z,125nm,1.0s
WRA   Warramunga Arr    31.32 250   P       P       18 45 51.4 -2.0
      comp=Z,125nm,1.0s,baz=81,slow=9.0,SNR=112
WRA                                 PcP     PcP     18 48 46.9 -0.1
      comp=Z,16nm,1.0s,baz=75,slow=3.2,SNR=5.4
WRA                                 PKiKP   PKiKP   18 56 16.8 -0.2
      comp=Z,1.2nm,0.9s,baz=75,slow=3.5,SNR=7.2
THZ   Tophouse          31.34 169  eP       P       18 45 53.1 -0.2
GUMO  Guam              31.88 319   PFAKE           18 46 10.0  +12
GUMO                                LR      LR
      comp=Z,19µm,20.0s
GUMO  Guam              31.88 319   LR      LR      18 58 18.6
      comp=Z,18µm,19.1s,baz=138,slow=35
TOO   Toolangi          32.03 211   P       P       18 45 58.8 -0.6
      baz=32,SNR=15
TOO   Toolangi          32.03 211  eP       P       18 45 58.9 -0.6
TOO   Toolangi          32.03 211  eP       P       18 45 58.9 -0.5
KHZ   Kahutara          32.09 169  eP       P       18 45 59.2 -0.6
LTZ   Lake Taylor       32.23 171  eP       P       18 46 01.2 +0.1
KDU   Kakadu            32.40 264   P       P       18 45 60.0 -2.9
      baz=32,SNR=16
RKPI  Ransiki, Papua    32.53 285   P       P       18 45 59.1 -4.9
AS01  Alice Springs     32.61 243  eP       P       18 46 02.4 -2.2
AS31  Alice Springs     32.65 243  eP       P       18 46 02.6 -2.4
ASAR  Alice Springs     32.65 243   P       P       18 46 03.1 -1.9
      comp=Z,112nm,0.9s,baz=65,slow=9.4,SNR=126
ASAR                                PcP     PcP     18 48 51.6 +1.0
      comp=Z,9.4nm,0.7s,baz=74,slow=2.3,SNR=7.3
ASAR                                PKiKP   PKiKP   18 56 18.3 +0.5
      comp=Z,0.5nm,0.9s,baz=92,slow=2.9,SNR=3.8
ASAR                                LR      LR      18 57 07.4
      comp=Z,9µm,21.5s,baz=74,slow=32
FOZ   Fox Glacier       32.65 174  eP       P       18 46 03.6 -1.1
RPZ   Rata Peaks        32.97 173  eP       P       18 46 07.2 -0.3
RPZ   Rata Peaks        32.97 173   P       P       18 46 06.1 -1.4
      comp=Z,22nm,0.5s,baz=23,slow=9.5,SNR=6.4
RPZ                                 LR      LR      18 58 30.4
      comp=Z,15µm,18.1s,baz=332,slow=35
HTT   Hallett           33.09 223   P       P       18 46 07.6 -1.2
      baz=33,SNR=20
MQZ   McQueen's Vall    33.19 171  eP       P       18 46 09.8 +0.5
ARPS  Mount Arapiles    33.42 216   P       P       18 46 09.3 -2.2
      baz=34,SNR=6.9
WKZ   Wanaka            33.87 176  eP       P       18 46 17.0 +1.7
SAUI  Saumlaki          33.90 272  eP       P       18 46 14.4 -1.6
SAUI  Saumlaki          33.90 272   P       P       18 46 13.0 -2.9
ODZ   Otahua Downs      34.23 174  eP       P       18 46 20.5 +2.0
BBOO  Buckleboo         34.73 227   P       P       18 46 21.6 -1.4
      baz=35,SNR=19
BBOO  Buckleboo         34.73 227  eP       P       18 46 21.9 -1.1
RAR   Rarotonga         34.77 111   PFAKE           18 46 40.0  +17
RAR                                 LR      LR
      comp=Z,7µm,20.0s
RAR   Rarotonga         34.77 111   LR      LR      18 58 20.8
      comp=Z,6µm,19.3s,baz=272,slow=32
MOO   Moorlands         35.21 204   P       P       18 46 28.1 +1.2
      baz=35,SNR=4.7
TAU   Tasmania Unive    35.55 203  eP       P       18 46 28.6 -1.3
TAU                                 LR      LR
      comp=Z,16µm,19.0s
TAU   Tasmania Unive    35.55 203  eP       P       18 46 28.6 -1.3
TAU                                 MLR     MLR
      comp=Z,16µm,19.0s
BNDI  Bandanaira        35.87 277   P       P       18 46 29.9 -3.0
PALU  Palau             35.88 299   P       P       18 46 33.4 +0.4
      baz=36,SNR=8.0
KNRA  Kununurra         36.06 258   P       P       18 46 32.4 -2.2
      baz=36,SNR=14
JOHN  Johnston Islan    36.95  42   PFAKE           18 46 50.0 +7.9
JOHN                                LR      LR
      comp=Z,1µm,19.0s
WRKA  Warakurna         37.94 243   P       P       18 46 48.3 -2.3
      baz=38,SNR=66
NLAI  Namlea            38.88 278   P       P       18 46 57.5 -1.0
FITZ  Fitzroy Crossi    39.21 255   P       P       18 46 59.0 -2.2
      baz=39,SNR=50
FITZ  Fitzroy Crossi    39.21 255  eP       P       18 46 59.0 -2.2
TNTI  Ternate           39.71 285   P       P       18 47 07.4 +2.0
FORT  Forrest           39.92 235   P       P       18 47 06.4 -0.6
      baz=40,SNR=6.0
FORT  Forrest           39.92 235  eP       P       18 47 07.2 +0.2
SANI  Sanana            40.24 280   P       P       18 47 05.5 -4.4
SOEI  Soe               40.60 268   P       P       18 47 13.5 +0.5
      comp=Z,65nm,1.6s,comp=Z,2µm
BATI  Baumata           41.15 267   P       P       18 47 16.6 -0.8
BATI  Baumata           41.15 267   P       P       18 47 16.4 -1.1
      comp=Z,35nm,0.7s,baz=227,slow=1.7,SNR=19
MIDW  Midway            42.32  23   PFAKE           18 47 40.0  +13
MIDW                                LR      LR
      comp=Z,17µm,20.0s
MMRI  Maumere           42.71 269   P       P       18 47 26.7 -3.4
BBSI  Bau Bau           42.85 274   P       P       18 47 32.4 +1.2
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KMSI  Cibinong          42.88 283   P       P       18 47 30.0 -1.5
MATI  Mati              42.96 293  eP       P       18 47 31.5 -0.6
DDMP  Don Marcelino,    43.12 291  eP       P       18 47 33.7 +0.2
EDFI  Ende, Flores      43.24 269   P       P       18 47 33.0 -1.5
LUWI  Luwuk             43.60 280   P       P       18 47 36.0 -1.4
DAV   Davao City (W)    43.63 292   PFAKE           18 47 50.0  +12
DAV                                 LR      LR
      comp=Z,4µm,20.0s
DAV   Davao City (W)    43.63 292⇓ iP       P       18 47 34.0 -3.5
DAV   Davao City (W)    43.63 292   P       P       18 47 36.0 -1.5
PAE   Paea              43.91 104  eP       P       18 47 39.8 +0.1
      comp=Z,6.3nm,1.2s
PPT   Papeete           43.91 104   LR      LR      19 03 31.3
      comp=Z,6µm,18.2s,baz=269,slow=33
PPT2  Papeete2          43.91 104  eP       P       18 47 40.2 +0.4
      comp=Z,40nm,1.3s
PPT2                               eS       S       18 54 08.0 -1.2
      comp=Z,3µm,25.5s
PPT2                               eLQ      LQ      18 57 57.6
      comp=Z,17µm,25.0s
PPT2                               eLR      LR      18 59 48.0
      comp=Z,11µm,22.5s,baz=283
KCP   Kidapawan         44.05 292⇓ iP       P       18 47 41.1 +0.2
CBIJ  Chichi jima       44.11 329   P       P       18 47 40.6 -0.6
JCJ   Chichijima        44.11 329   P       P       18 47 40.6 -0.6
      comp=Z,20nm,0.5s,baz=131,slow=13,SNR=3.8
JCJ                                 LR      LR      19 03 12.0
      comp=Z,9µm,21.7s,baz=142,slow=32
TIAR  Tiarei            44.12 104  eP       P       18 47 41.8 +0.3
      comp=Z,9.1nm,1.0s
TVO   Taravao           44.22 104  eP       P       18 47 42.6 +0.3
      comp=Z,7.9nm,0.7s
SKMP  Bagumbayan, Su    44.36 291  eP       P       18 47 41.0 -2.4
BUTP  Butuan            44.38 295  eP       P       18 47 42.6 -1.0
BUKP  Musuan            44.42 293  eP       P       18 47 43.6 -0.3
APSI  Ampana            44.72 280   P       P       18 47 46.4 +0.1
      comp=Z,96nm,1.5s,comp=Z,2µm
MRSI  Marisa            44.81 282   P       P       18 47 44.0 -3.0
CTBH  Cotabato--PC H    44.90 292⇑ iP       P       18 47 47.1 -0.6
CGP   Cagayan de Oro    44.99 294  eP       P       18 47 49.6 +1.1
MBWA  Marble Bar        45.03 251  eP       P       18 47 47.5 -1.2
MBWA                                LR      LR
      comp=Z,17µm,19.0s
MBWA  Marble Bar        45.03 251   P       P       18 47 47.3 -1.4
BKSI  Bulukumba         45.27 273   P       P       18 47 49.9 -0.8
BNSI  Bone              45.46 275   P       P       18 47 51.4 -0.8
PMOR  Pomariorio Ree    45.48 100  eP       P       18 47 52.8 +0.5
      comp=Z,57nm,1.1s
MSLP  Maasin            45.57 296  eP       P       18 47 52.1 -0.8
KAPI  Kappang           45.69 274   PFAKE           18 48 00.0 +6.0
KAPI                                LR      LR
      comp=Z,6µm,22.0s
VAH   Vaihoa            45.74 101  eP       P       18 47 54.6 +0.3
      comp=Z,34nm,1.1s
SPSI  Sidrap Palu       45.87 275   P       P       18 47 53.8 -1.6
PAGZ  Pagadian          45.93 292  eP       P       18 47 55.7 -0.2
TTSI  Tana Toraja       46.01 276   P       P       18 48 07.3  +11
OCLP  Ormoc             46.19 297  eP       P       18 47 53.2 -4.7
PCI   Palu              46.48 279   P       P       18 48 00.5 +0.3
IPIL  Ipil              46.65 292  eP       P       18 48 01.0 -0.5
MPSI  Mapaga            46.74 281   P       P       18 48 00.0 -2.2
MEEK  Meekatharra       46.80 244   P       P       18 48 01.7 -0.9
      baz=47,SNR=69
PLAI  Plampang          47.07 268   P       P       18 47 59.7 -5.1
PVCP  Virac             47.77 300  eP       P       18 48 07.0 -3.2
GUIM  Jordan            47.79 295  eP       P       18 48 08.3 -2.1
RCP   Roxas             48.05 296⇓ eP       P       18 48 14.9 +2.4
KIP   Kipapa            48.14  48   PFAKE           18 48 20.0 +7.0
KIP                                 LR      LR
      comp=Z,16µm,19.0s
KIP   Kipapa            48.14  48⇓ eP       P       18 48 13.0  0.0
KIP                                 pmax    pmax
      comp=Z,171nm,1.9s
KIP                                 MLR     MLR
      comp=Z,6µm,17.0s
KLBR  Kellerberrin      48.58 237   P       P       18 48 16.0 -0.3
      baz=48,SNR=9.2
HMH   Humu'ula Sheep    48.96  52  eP       P       18 48 21.3 +1.6
POHA  Pohakuloa         49.01  52   PFAKE           18 48 30.0  +10
POHA                                LR      LR
      comp=Z,9µm,19.0s
OTRP  Odiongan          49.04 297  eP       P       18 48 19.4 -0.6
SMKI  Samarinda         49.14 279   P       P       18 48 17.2 -3.7
BLDU  Ballidu           49.23 239   P       P       18 48 20.3 -1.0
      baz=49,SNR=5.5
BKB   Balikpapan        49.25 278   P       P       18 48 25.7 +4.0
      comp=Z,107nm,1.3s,comp=Z,5µm
CUYO  Cuyo Island       49.28 295  eP       P       18 48 14.4 -7.5
NWAO  Narrogin (SRO)    49.34 236   P       P       18 48 22.1  0.0
      baz=49,SNR=5.5
NWAO  Narrogin (SRO)    49.34 236  eP       P       18 48 21.8 -0.3
NWAO                                LR      LR
      comp=Z,22µm,20.0s
NWAO  Narrogin (SRO)    49.34 236  eP       P       18 48 21.8 -0.3
NWAO                                MLR     MLR
      comp=Z,22µm,20.0s
NWAO  Narrogin (SRO)    49.34 236   P       P       18 48 21.9 -0.2
NWAO  Narrogin (SRO)    49.34 236   LR      LR      19 09 16.1
      comp=Z,15µm,19.5s,baz=312,slow=36
MORW  Morawa            49.48 241   P       P       18 48 22.8 -0.5
      baz=49,SNR=22
MORW  Morawa            49.48 241  eP       P       18 48 22.4 -0.9
KBKI  Kotabaru          49.53 275   P       P       18 48 24.6 +0.8
      comp=Z,12nm,1.4s
DNP   Denpasar          49.60 268   P       P       18 48 25.3 +0.9
      comp=Z,130nm,1.0s
SRBI  Singaraja         49.68 269   P       P       18 48 25.0 +0.1
      comp=Z,54nm,1.4s,comp=Z,2µm
BOAC  Boac              49.69 298  eP       P       18 48 25.4 +0.5
SJMP  San Jose          49.88 297  eP       P       18 48 26.2 -0.2
POLP  Polilio Island    50.19 300  eP       P       18 48 27.8 -1.0
GIRL  Giralia           50.25 250   P       P       18 48 28.7 -0.5
      baz=50,SNR=3.5
BUSP  Coron             50.49 296  eP       P       18 48 30.7 -0.4
JAGI  Jajag, Banyuwa    50.67 268  eP       P       18 48 30.9 -1.6
JAGI  Jajag, Banyuwa    50.67 268   P       P       18 48 31.9 -0.6
      comp=Z,107nm,1.5s,comp=Z,2µm
ENPP  El Nido           50.85 294  eP       P       18 48 34.7 +0.9
PALP  Palanan           50.92 303  eP       P       18 48 31.9 -2.3
CAUP  Cauayan           51.36 302  eP       P       18 48 37.4 -0.1
GMJI  Gumukmas          51.39 268   P       P       18 48 40.3 +2.4
      comp=Z,44nm,1.1s,comp=Z,2µm
BATP  Bataraza          51.40 291  eP       P       18 48 36.9 -1.0
SGCP  Mt. Cagua         51.82 304  eP       P       18 48 41.2 +0.3
KKM   Kota Kinabalu     51.93 287  eP       P       18 48 41.7 -0.3
SMPP  San Manuel, Pa    51.93 301  eP       P       18 48 39.1 -2.7
SCZP  Santa Cruz        52.41 300  eP       P       18 48 58.4  +13
ABRA  Dolores           52.63 302  eP       P       18 48 44.6 -2.4
PWJI  Pagerwojo         53.03 268   P       P       18 48 51.2 +1.1
      comp=Z,86nm,1.4s,comp=Z,2µm
NGJI  Ngawi             53.46 269   P       P       18 48 55.4 +2.2
      comp=Z,130nm,1.3s,comp=Z,5µm
TAOE  Nuku Hiva Isla    53.48  93  eS       S       18 56 21.8 -2.5
      comp=Z,3µm,25.7s
TAOE                               eLQ      LQ      19 01 50.2
      comp=Z,5µm,26.8s
TAOE                               eLR      LR      19 04 16.5
      comp=Z,6µm,23.1s,baz=269
PCJI  Pacitan           53.62 268   P       P       18 48 54.5 +0.1
      comp=Z,401nm,1.4s,comp=Z,6µm
MJAR  Matsushiro Arr    53.82 333   P       P       18 48 53.9 -1.5
      comp=Z,12nm,0.7s,baz=172,slow=8.6,SNR=16
MAJO  Matsushiro        53.82 333  eP       P       18 48 54.3 -1.2
MAJO                                LR      LR
      comp=Z,8µm,19.0s
MAJO  Matsushiro        53.82 333ceP       P       18 48 55.1 -0.4
MAJO                                pmax    pmax
      comp=Z,80nm,1.5s
MAT   Matsushiro        53.82 333   P       P       18 48 54.0 -1.5
MAT                                 S       S       18 56 30.6 +2.7
MJB9  Matsu-Tunnel      53.82 333  eP       P       18 48 55.7 +0.2
WOJI  Wonogiri, Jawa    53.92 268   P       P       18 48 58.3 +1.7
      comp=Z,53nm,1.4s
UGM   Wanagama          54.30 268  eP       P       18 48 56.7 -2.8
UGM   Wanagama          54.30 268   P       P       18 49 02.7 +3.2
      comp=Z,235nm,1.3s
SMRI  Semarang          54.51 269   P       P       18 49 02.2 +1.3
      comp=Z,185nm,2.0s
JNU   Nakatsue          54.91 324  eP       P       18 49 03.4 -0.1
JNU   Nakatsue          54.91 324   P       P       18 49 02.2 -1.3
      comp=Z,212nm,1.2s,baz=44,slow=5.4,SNR=10
JNU                                 LR      LR      19 08 44.5
      comp=Z,3µm,19.3s,baz=124,slow=32
TATO  Taipei            55.87 310   PFAKE           18 49 20.0 +9.5
TATO                                LR      LR
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      comp=Z,9µm,20.0s
KPJI  Karang Pucung     55.95 269   P       P       18 49 11.5 +0.2
      comp=Z,104nm,1.3s,comp=Z,3µm
KSM   Kuching           56.30 279  eP       P       18 49 12.9 -0.9
CMJI  Cimerak           56.36 268   P       P       18 49 14.7 +0.5
      comp=Z,91nm,1.1s,comp=Z,3µm
ERM   Erimo             56.60 340   PFAKE           18 49 30.0  +15
ERM                                 LR      LR
      comp=Z,8µm,19.0s
JCJI  Jatiwangi         56.72 269   P       P       18 49 17.9 +1.1
      comp=Z,362nm,1.4s,comp=Z,8µm
CISI  Cisompet, Garu    57.01 268   P       P       18 49 18.9  0.0
      comp=Z,95nm,0.8s,comp=Z,3µm
YUK   Yuzh-Kuril'sk     57.60 343  eP       P       18 49 10.9  -11
YUK                                e                18 50 09.8
YUK                                eS       S       18 57 09.6 -8.3
YUK                                 pmax    pmax
      comp=Z,156nm,5.7s
RKT   Rikitea           57.80 110  eLQ      LQ      19 03 48.4
      comp=Z,5µm,29.0s
RKT                                eLR      LR      19 06 09.3
      comp=Z,10µm,27.2s
TPI   Tanjungpandan     57.97 274   P       P       18 49 27.3 +1.7
      comp=Z,74nm,1.7s,comp=Z,2µm
CBJI  Citeko            58.12 269   P       P       18 49 25.9 -0.8
      comp=Z,232nm,1.5s,comp=Z,4µm
KUR   Kuril'sk          58.18 345   P       P       18 49 22.5 -3.9
KUR                                e                18 50 13.5
KUR                                 S       S       18 57 32.6 +7.1
KUR                                 MLR     MLR
      comp=Z,5µm,14.0s
KUR                                 MLR     MLR
      comp=N,8µm,13.0s
DBJI  Dramaga           58.20 269   P       P       18 49 26.8 -0.5
      comp=N,90nm,1.6s,comp=N,3µm
SKJI  Sukabumi          58.32 269   P       P       18 49 29.3 +1.2
      comp=N,219nm,1.1s,comp=N,3µm
ASAJ  Asahikawa         58.66 341   P       P       18 49 29.2 -0.6
      comp=N,22nm,0.8s,baz=219,slow=6.2,SNR=18
PPBI  Pangkal Pinang    59.57 274   P       P       18 49 38.3 +1.5
      comp=N,41nm,1.8s,comp=N,1µm
SSE   Sheshan           59.66 316   P       P       18 49 36.0 -1.0
SSE                                 S       S       18 57 45.5 +0.2
SSE                                 pmax    pmax
      comp=N,620nm,7.8s
SSE                                 LR      LR
      comp=N,4µm,18.2s
SSE                                 LR      LR
      comp=N,3µm,17.4s
SSE   Sheshan           59.66 316  eP       P       18 49 36.4 -0.6
      comp=N,53nm,1.1s
SSE                                 LR      LR
      comp=Z,6µm,19.0s
KSRS  Korea Array       59.71 326   P       P       18 49 36.9 -0.3
      comp=Z,11nm,1.1s,baz=138,slow=5.3,SNR=11
KSRS                                LR      LR      19 14 03.9
      comp=Z,3µm,18.9s,baz=133,slow=35
KS15  Wonju Array Si    59.72 326  eP       P       18 49 38.9 +1.6
KSAR  Wonju Array Be    59.72 326   P       P       18 49 36.9 -0.4
KSAR  Wonju Array Be    59.72 326   P       P       18 49 36.9 -0.4
HKC   Hong Kong Obse    60.24 304  ⇑P       P       18 49 44.0 +2.8
KASI  Kota Agung        60.58 270   P       P       18 49 43.3 -0.4
      comp=Z,42nm,1.4s,comp=Z,2µm
MDSI  Maura Dua         61.06 271   P       P       18 49 45.6 -1.4
      comp=Z,41nm,1.8s,comp=Z,1µm
LWLI  Liwa              61.09 270   P       P       18 49 52.9 +5.6
YSS   Yuzh-Sakhalins    61.16 342  eP       P       18 49 47.8 +0.8
YSS                                 LR      LR
      comp=Z,5µm,20.0s
YSS   Yuzh-Sakhalins    61.16 342⇑eP       P       18 49 47.7 +0.8
YSS                                e                18 49 53.7
YSS                                e*SP     sP      18 50 05.3 +5.0
YSS                                e                18 50 28.3
YSS                                eS       S       18 58 08.1 +4.2
YSS                                ePS              18 58 24.2
YSS                                eSSS     SSS     19 04 41.0
YSS                                 pmax    pmax
      comp=Z,40nm,1.9s
YSS                                 pmax    pmax
      comp=Z,700nm,6.3s
YSS                                 pmax    pmax
      comp=N,300nm,4.9s
GZH   Guangzhou         61.28 304⇓ iP       P       18 49 46.8 -1.5
GZH                                 S       S       18 58 03.6 -2.7
GZH                                 SS      SS      19 02 03.7 -3.7
GZH                                 pmax    pmax
      comp=N,2µm,9.2s
GZH                                 LR      LR
      comp=N,3µm,13.1s
GZH                                 LR      LR
      comp=N,5µm,22.4s
TEY   Ternei            61.58 337⇓eP       P       18 49 46.0 -3.8
TEY                                 pmax    pmax
      comp=Z,10.0nm,2.5s
TEY                                 pmax    pmax
      comp=N,30nm,1.0s
TEY                                 MLR     MLR
      comp=E,200nm,14.0s
TEY                                 MLR     MLR
      comp=N,200nm,17.0s
TEY                                 MLR     MLR
      comp=Z,300nm,17.0s
NJ2   Nanjing           61.83 315  eP       P       18 49 51.1 -0.7
NJ2                                 sP      pP      18 50 04.3 +2.2
NJ2                                 S       S       18 58 15.9 +2.9
NJ2                                 SS      SS      19 02 14.8 -0.9
NJ2                                 pmax    pmax
      comp=Z,27nm,1.5s
NJ2                                 pmax    pmax
      comp=Z,2µm,8.1s
NJ2                                 LR      LR
      comp=Z,6µm,15.7s
NJ2                                 LR      LR
      comp=Z,6µm,16.3s
NJ2                                 LR      LR
      comp=Z,8µm,17.9s
MSHR  Mys Shultsa       61.90 332⇑eP       P       18 49 52.6 +0.6
SKR   Severo-Kuril's    61.95 353  eP       P       18 49 48.4 -3.7
SKR                                eS       S       18 58 18.5 +4.8
SKR                                eSS      SS      19 02 21.8 +5.0
SKR                                 MLR     MLR
      comp=Z,6µm,17.0s
SKR                                 MLR     MLR
      comp=Z,5µm,17.0s
VLA   Vladivostok       61.99 333deP       P       18 49 52.6  0.0
VLA                                 pmax    pmax
      comp=Z,70nm,1.4s
VLA                                 MLR     MLR
      comp=Z,4µm,17.0s
JMBI  JAMBI             62.12 274   P       P       18 49 58.5 +4.4
      comp=Z,258nm,1.6s,comp=Z,8µm
QIZ   Qiongzhong        62.47 298   P       P       18 49 56.4  0.0
QIZ                                 S       S       18 58 23.9 +2.4
QIZ                                 sS      pS      18 58 37.7 +3.8
QIZ                                 pmax    pmax
      comp=Z,1µm,7.4s
QIZ                                 LR      LR
      comp=Z,4µm,18.6s
QIZ                                 LR      LR
      comp=Z,5µm,22.6s
QIZ                                 LR      LR
      comp=Z,8µm,21.6s
QIZ   Qiongzhong        62.47 298   PFAKE           18 50 10.0  +14
QIZ                                 LR      LR
      comp=Z,1µm,21.0s
MYKOM Kota Tinggi       62.64 278  eP       P       18 49 55.7 -2.0
USA0B Ussuriysk Arra    62.80 333  eP       P       18 49 58.6 +0.6
USRK  Ussuriysk Ar.     62.80 333   P       P       18 49 57.6 -0.3
      comp=Z,20nm,1.0s,baz=158,slow=6.0,SNR=14
USRK                                S       S       18 58 29.7 +5.0
      comp=Z,3.4nm,1.0s,baz=125,slow=23,SNR=2.8
USRK                                LR      LR      19 14 18.2
      comp=Z,2µm,21.6s,baz=130,slow=33
PET   Petropavlovsk     64.01 355   PFAKE           18 50 20.0  +14
PET                                 LR      LR
      comp=Z,10µm,21.0s
PET   Petropavlovsk     64.01 355  eP       P       18 50 07.2 +1.4
PET                                eS       S       18 58 40.0 +0.5
PET                                eSS      SS      19 02 50.4 +1.4
PET                                 pmax    pmax
      comp=Z,1µm,14.7s
PET                                 pmax    pmax
      comp=Z,64nm,1.4s
PETK  Petropavlovsk-    64.18 355   P       P       18 50 07.0  0.0
PETK  Petropavlovsk-    64.18 355   P       P       18 50 07.0  0.0
      comp=Z,7.2nm,0.6s,baz=170,slow=6.4,SNR=16
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PETK				PKP2bc		19 19 04.3	
	comp=Z,10.0nm,1.1s,baz=87,slow=10,SNR=3.9						
MDJ	**Mudanjiang**	**64.19**	**332**	P	**P**	**18 50 07.2**	**0.0**
MDJ				pP	pP	18 50 17.8	+0.3
MDJ				sP	pwP	18 50 21.7	+1.3
MDJ				PcP	**PcP**	**18 50 40.4**	**-1.6**
MDJ				PP	**PP**	**18 52 29.6**	**+0.7**
MDJ				S	**S**	**18 58 45.7**	**+3.6**
MDJ				sS	sS	18 59 02.6	+4.3
MDJ				ScS	**SKSac**	**18 59 53.0**	**-5.5**
MDJ				pmax	pmax		
	comp=Z,35nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,2µm,13.0s						
MDJ				LR	LR		
	comp=Z,7µm,15.5s						
MDJ				LR	LR		
	comp=Z,9µm,16.7s						
MDJ				LR	LR		
	comp=Z,9µm,15.5s						
MDJ	**Mudanjiang**	**64.19**	**332**	*e*P	**P**	**18 50 04.4**	**-2.8**
	comp=Z,32nm,1.0s						
MDJ				LR	LR		
	comp=Z,6µm,22.0s						
WHN	**Wuhan**	**64.20**	**312**	⇑P	**P**	**18 50 07.0**	**-0.5**
WHN				S	**S**	**18 58 43.1**	**+0.4**
WHN				LR	LR		
	comp=Z,17µm,16.0s						
WHN				LR	LR		
	comp=Z,2µm,11.8s						
WHN				LR	LR		
	comp=Z,15µm,15.6s						
DL2	**Dalian**	**64.30**	**323**	P	**P**	**18 50 07.6**	**-0.5**
DL2				S	**S**	**18 58 48.7**	**+5.1**
DL2				pmax	pmax		
	comp=Z,37nm,1.5s						
DL2				pmax	pmax		
	comp=Z,1µm,8.6s						
DL2				LR	LR		
	comp=Z,8µm,16.1s						
DL2				LR	LR		
	comp=Z,4µm,17.3s						
DL2				LR	LR		
	comp=Z,6µm,21.6s						
KIWB	**Kanaga Island**	**64.33**	**12**	*e*P	**P**	**18 50 09.9**	**+1.9**
ADK	**Adak**	**64.46**	**12**	PFAKE		18 50 20.0	+11
ADK				LR	LR		
	comp=Z,15µm,21.0s						
TYV	**Tymovskoe**	**64.72**	**344**	*e*P	**P**	**18 50 11.2**	**+0.7**
TYV				pmax	pmax		
	comp=Z,22nm,1.5s						
TYV				MLR	MLR		
	comp=Z,7µm,18.0s						
BKNI	**Bangkinang**	**65.06**	**276**	*e*P	**P**	**18 50 13.7**	**+0.1**
SNY	**Shenyang**	**65.16**	**327**	⇑P	**P**	**18 50 15.5**	**+1.9**
SNY				S	**S**	**18 58 59.1**	**+5.0**
SNY				pmax	pmax		
	comp=Z,2µm,8.4s						
SNY				LR	LR		
	comp=Z,10µm,17.5s						
SNY				LR	LR		
	comp=Z,8µm,17.3s						
SNY				LR	LR		
	comp=Z,9µm,15.6s						
TIA	**Tai'an**	**65.43**	**318**	P	**P**	**18 50 14.6**	**-0.9**
TIA				S	**S**	**18 58 59.7**	**+2.0**
TIA				pmax	pmax		
	comp=Z,520nm,7.9s						
TIA				LR	LR		
	comp=Z,4µm,19.6s						
TIA				LR	LR		
	comp=Z,3µm,17.7s						
TIA				LR	LR		
	comp=Z,5µm,19.2s						
CN2	**Changchun**	**65.58**	**329**	*e*P	**P**	**18 50 15.5**	**-0.8**
CN2				*e*S	**S**	**18 59 02.2**	**+3.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,1µm,7.0s						
CN2				LR	LR		
	comp=Z,7µm,17.0s						
CN2				LR	LR		
	comp=Z,6µm,17.0s						
CN2				LR	LR		
	comp=Z,7µm,17.0s						
IPM	**Ipoh**	**66.01**	**280**	*e*P	**P**	**18 50 19.0**	**-0.7**
CASY	**Casey**	**66.37**	**201**	PFAKE		18 50 30.0	+8.9
CASY				LR	LR		
	comp=Z,906nm,19.0s						
GRNR	**Gornyy**	**66.51**	**340**	*e*P	**P**	**18 50 22.0**	**-0.1**
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
VNDA	**Vanda**	**66.56**	**181**	P	**P**	**18 50 23.4**	**+1.2**
	comp=Z,19nm,0.9s,baz=358,slow=6.2,SNR=8.7						
VNDA				S	**S**	**18 59 16.6**	**+6.3**
	comp=Z,12nm,1.1s,baz=44,slow=13,SNR=2.4						
KULM	**Kulim**	**66.57**	**281**	*e*P	**P**	**18 50 23.0**	**-0.3**
SBA	**Scott Base**	**66.87**	**180**	PFAKE		18 50 40.0	+16
SBA				LR	LR		
	comp=Z,6µm,19.0s						
SKNT	**Sakolnakorn**	**66.88**	**294**	P	**P**	**18 50 26.5**	**+1.3**
	comp=Z,27nm,1.4s,comp=Z,954nm						
KLR	**Kul'dur**	**66.91**	**337**	*d* *i*P	**P**	**18 50 24.6**	**-0.1**
KLR	**Kul'dur**	**66.91**	**337**	P	**P**	**18 50 24.8**	**0.0**
	comp=Z,20nm,1.0s,baz=127,slow=5.9,SNR=16						
KLR				LR	LR	19 20 56.7	
	comp=Z,745nm,18.0s,baz=142,slow=37						
COCO	**West Island**	**67.15**	**261**	PFAKE		18 50 40.0	+13
COCO				LR	LR		
	comp=Z,5µm,21.0s						
NKL	**Nikolayevsk**	**67.32**	**344**	*e*P	**P**	**18 50 27.0**	**-0.1**
NKL				*e*		18 59 26.0	
NKL				pmax	pmax		
	comp=Z,36nm,0.9s						
PSI	**Prapat**	**67.67**	**278**	*e*P	**P**	**18 50 28.6**	**-1.8**
PSI	**Prapat**	**67.67**	**278**	*e*P	**P**	**18 50 28.6**	**-1.8**
ENH	**Enshi**	**67.70**	**309**	*e*P	**P**	**18 50 28.6**	**-1.6**
	comp=Z,105nm,1.3s						
ENH				LR	LR		
	comp=Z,6µm,21.0s						
TRTT	**Trang**	**68.14**	**283**	P	**P**	**18 50 35.3**	**+2.1**
	comp=Z,17nm,1.7s,comp=Z,976nm						
GYA	**Guiyang**	**68.21**	**304**	⇑*i*P	**P**	**18 50 33.3**	**-0.3**
GYA				pP	pP	18 50 46.2	+2.2
GYA				PP	**PP**	**18 53 08.8**	**+4.3**
GYA				S	**S**	**18 59 31.0**	**-0.9**
GYA				SKS	**SKSac**	**19 00 26.5**	**-3.6**
GYA				SS	**SS**	**19 03 56.4**	**+0.8**
GYA				pmax	pmax		
	comp=Z,100nm,1.0s						
GYA				pmax	pmax		
	comp=Z,10µm,11.5s						
GYA				LR	LR		
	comp=Z,22µm,18.6s						
GYA				LR	LR		
	comp=Z,22µm,20.5s						
GYA				LR	LR		
	comp=Z,18µm,22.0s						
BJT	**Baijiatuau**	**68.29**	**321**	*e*P	**P**	**18 50 33.3**	**-0.3**
	comp=Z,57nm,1.3s						
BJT				LR	LR		
	comp=Z,7µm,20.0s						
BJT	**Baijiatuau**	**68.29**	**321**	*e*P	**P**	**18 50 33.3**	**-0.3**
BJT				pmax	pmax		
	comp=Z,57nm,1.3s						
BJT				MLR	MLR		
	comp=Z,7µm,20.0s						
BJI	**Beijing**	**68.30**	**321**	P	**P**	**18 50 33.6**	**-0.1**
BJI				S	**S**	**18 59 35.5**	**+3.3**
BJI				LR	LR		
	comp=Z,6µm,17.4s						
BJI				LR	LR		
	comp=Z,5µm,17.9s						
BJI				LR	LR		
	comp=Z,6µm,31.6s						
CHAI	**Chaiyaphum**	**68.33**	**292**	P	**P**	**18 50 37.6**	**+3.3**
	comp=Z,6.1nm,1.3s,comp=Z,81nm						
PATY	**Pattaya**	**68.44**	**289**	P	**P**	**18 50 39.1**	**+4.1**
	comp=Z,10nm,1.0s						
GSI	**Gunungsitoli**	**68.66**	**276**	*e*P	**P**	**18 50 34.9**	**-1.6**
TIY	**Taiyuan**	**69.37**	**317**	*e*P	**P**	**18 50 40.8**	**+0.3**
TIY				pP	**pP**	**18 50 53.3**	**+2.4**
TIY				S	**S**	**18 59 39.5**	**-5.7**
TIY				pmax	pmax		
	comp=Z,34nm,1.3s						
TIY				pmax	pmax		
	comp=Z,950nm,6.2s						
TIY				LR	LR		
	comp=Z,5µm,13.5s						
TIY				LR	LR		
	comp=Z,2µm,13.0s						
TIY				LR	LR		
	comp=Z,5µm,17.9s						
PBKT	**Sadao Pong**	**69.47**	**292**	*e*P	**P**	**18 50 41.8**	**+0.4**
PBKT	**Sadao Pong**	**69.47**	**292**	P	**P**	**18 50 43.2**	**+1.8**
	comp=Z,35nm,1.6s,comp=Z,2µm						
XAN	**Xi'an**	**69.93**	**312**	P	**P**	**18 50 43.0**	**-1.0**
XAN				pP	pP	18 50 56.2	+1.8
XAN				sP	sP	18 51 02.3	+4.7
XAN				PcP	**PcP**	**18 51 07.1**	**+0.9**
XAN				PP	**PP**	**18 53 22.8**	**+3.6**
XAN				S	**S**	**18 59 45.4**	**-6.4**
XAN				SS	**SS**	**19 04 23.9**	**+2.2**
XAN				pmax	pmax		
	comp=Z,2µm,8.4s						
XAN				LR	LR		
	comp=Z,5µm,18.4s						
XAN				LR	LR		
	comp=Z,3µm,18.4s						
XAN				LR	LR		
	comp=Z,5µm,21.7s						
XAN	**Xi'an**	**69.93**	**312**	*e*P	**P**	**18 50 42.7**	**-1.3**
	comp=Z,276nm,1.3s						
XAN	**Xi'an**	**69.93**	**312**	*e*P	**P**	**18 50 42.7**	**-1.3**
XAN				pmax	pmax		
	comp=Z,276nm,1.3s						
UTTA	**Uttaradit**	**70.22**	**293**	P	**P**	**18 50 50.5**	**+4.5**
	comp=Z,5.1nm,1.0s,comp=Z,71nm						
NANT	**Nan**	**70.44**	**294**	P	**P**	**18 50 48.8**	**+1.5**
	comp=Z,10nm,1.2s,comp=Z,102nm						
SRDT	**SRDT**	**70.48**	**290**	P	P	18 50 54.8	+7.1
UTHA	**Uthaitani**	**70.55**	**291**	P	P	18 50 53.9	+5.9
	comp=Z,6.1nm,1.0s,comp=Z,86nm						
KMI	**Kunming**	**70.92**	**301**	P	**P**	**18 50 50.8**	**+0.4**
KMI				pP	pP	18 51 04.1	+3.2
KMI				sP	pwP	18 51 07.9	+4.7
KMI				S	**S**	**19 00 05.1**	**+1.1**
KMI				sS	sS	19 00 22.0	+1.6
KMI				SS	**SS**	**19 04 38.3**	**+0.8**
KMI				pmax	pmax		
	comp=Z,47nm,1.8s						
KMI				pmax	pmax		
	comp=Z,2µm,8.0s						
KMI				LR	LR		
	comp=Z,4µm,17.0s						
KMI				LR	LR		
	comp=Z,2µm,18.5s						
KMI				LR	LR		
	comp=Z,5µm,21.1s						
SUKH	**Sukhothai**	**70.97**	**293**	P	P	18 50 57.5	+6.9
MA2	**Magadan**	**71.31**	**352**	P	**P**	**18 50 52.0**	**+0.3**
MA2				LR	LR		
	comp=Z,11µm,20.0s						
MA2	**Magadan**	**71.31**	**352**	*c* *i*P	**P**	**18 50 52.7**	**+0.9**
MA2				pmax	pmax		
	comp=Z,32nm,1.7s						
MA2				MLR	MLR		
	comp=Z,5µm,17.0s						
MA2	**Magadan**	**71.31**	**352**	P	**P**	**18 50 52.0**	**+0.3**
	comp=Z,6.6nm,0.8s,baz=138,slow=5.3,SNR=11						
HHC	**Hu-ho-hao-te**	**71.65**	**320**	*e*P	**P**	**18 50 54.0**	**-0.4**
HHC				sP	pwP	18 51 10.0	+2.6
HHC				S	**S**	**19 00 09.9**	**-1.8**
HHC				sS	SKiKP	19 00 28.9	-1.8
HHC				SS	**SS**	**19 04 48.5**	**+0.5**
HHC				pmax	pmax		
	comp=Z,2µm,7.8s						
HHC				LR	LR		
	comp=Z,8µm,15.6s						
HHC				LR	LR		
	comp=Z,6µm,17.3s						
HHC				LR	LR		
	comp=Z,8µm,16.4s						
CM01	**Chiang Mai Arr**	**71.88**	**294**	*e*P	**P**	**18 50 54.9**	**-1.1**
CM31	**Chiang Mai Arr**	**71.90**	**294**	*e*P	**P**	**18 50 56.7**	**+0.5**
CM31	**Chiang Mai Arr**	**71.90**	**294**	P	**P**	**18 50 56.2**	**0.0**
	SNR=15						
CMAR	**Chiang Mai Arr**	**71.90**	**294**	*ce*P	**P**	**18 50 56.2**	**0.0**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**71.90**	**294**	P	**P**	**18 50 56.0**	**-0.3**
	comp=Z,5.9nm,0.8s,baz=127,slow=4.5,SNR=22						
CMAR				S	**S**	**19 00 20.7**	**+5.5**
	comp=Z,0.7nm,1.0s,baz=219,slow=24,SNR=2.6						
CMAR				PKP2bc		19 18 40.2	
	comp=Z,0.8nm,0.8s,baz=261,slow=4.0,SNR=4.6						
CMMT	**Chiang Mai**	**72.01**	**294**	P	**P**	**18 50 57.5**	**+0.6**
	comp=Z,23nm,1.2s,comp=Z,2µm						
CHTO	**Chiang Mai**	**72.02**	**294**	*e*P	**P**	**18 50 57.0**	**+0.1**
CHTO				LR	LR		
	comp=Z,5µm,22.0s						
CHTO	**Chiang Mai**	**72.02**	**294**	*e*P	**P**	**18 50 57.0**	**+0.1**
CHTO	**Chiang Mai**	**72.02**	**294**	P	**P**	**18 50 55.6**	**-1.3**
	SNR=13						
CHTO	**Chiang Mai**	**72.02**	**294**	P	**P**	**18 50 57.6**	**+0.7**
	comp=Z,105nm,1.2s,comp=Z,7µm						
ZEA	**Zeya**	**72.20**	**337**	*e*P	**P**	**18 50 57.2**	**0.0**
ZEA				*e*		18 51 18.5	
ZEA				*e*PPP	PPP	18 55 24.5	
ZEA				*e*S	**SKiKP**	**19 00 23.0**	**-8.0**
ZEA				*e*PS		19 01 02.0	
ZEA				pmax	pmax		
	comp=Z,1µm,9.0s						
ZEA				pmax	pmax		
	comp=N,800nm,8.0s						
ZEA				pmax	pmax		
	comp=N,110nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,190nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,1µm,8.0s						
ZEA				pmax	pmax		
	comp=E,400nm,9.0s						
ZEA				pmax	pmax		
	comp=N,500nm,5.0s						
ZEA				smax	smax		
	comp=E,2µm,10.0s						
ZEA				smax	smax		
	comp=N,800nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,8µm,16.0s						
ZEA				MLR	MLR		
	comp=E,4µm,17.0s						
ZEA				MLR	MLR		
	comp=N,6µm,15.0s						
HIA	**Hailar**	**72.21**	**330**	*e*P	**P**	**18 50 54.5**	**-3.0**
	comp=N,45nm,1.3s						
HIA				LR	LR		
	comp=Z,4µm,19.0s						
HIA	**Hailar**	**72.21**	**330**	*e*P	**P**	**18 50 54.5**	**-3.0**
HIA				pmax	pmax		
	comp=Z,45nm,1.3s						
HIA				MLR	MLR		
	comp=Z,4µm,19.0s						
CD2	**Chengdu**	**72.40**	**307**	P	**P**	**18 50 58.5**	**-0.5**
CD2				pP	pP	18 51 09.3	-0.2
CD2				sP	pwP	18 51 13.6	+1.7
CD2				PP	**PP**	**18 53 39.6**	**-0.9**
CD2				S	**S**	**19 00 22.3**	**+1.7**
CD2				SS	**SS**	**19 05 00.4**	**+0.6**
CD2				pmax	pmax		
	comp=Z,60nm,0.7s						
CD2				pmax	pmax		
	comp=Z,3µm,7.8s						
CD2				LR	LR		
	comp=Z,8µm,16.9s						
CD2				LR	LR		
	comp=Z,7µm,16.4s						
CD2				LR	LR		
	comp=Z,5µm,18.4s						
BTO	**Baotou**	**72.51**	**319**	*e*P	**P**	**18 50 57.1**	**-2.4**
CMBY	**CAMPBELL BAY**	**73.47**	**281**	*e*P	**P**	**18 51 04.5**	**-1.2**
CMBY				IAMs_20	IAMs_20	19 39 10.4	
	comp=Z,2µm,18.5s						
SEY	**Seymchan**	**74.38**	**354**	⇓*e*P	**P**	**18 51 09.1**	**-0.8**
SEY	**Seymchan**	**74.38**	**354**	P	**P**	**18 51 09.6**	**-0.3**
	comp=Z,6.6nm,1.0s,baz=180,slow=7.1,SNR=9.4						
LZH	**Lanzhou**	**74.56**	**312**	⇓P	**P**	**18 51 12.3**	**+0.5**
LZH				pP	pP	18 51 22.4	+0.1
LZH				sP	pwP	18 51 27.1	+2.3
LZH				S	**S**	**19 00 49.4**	**+4.3**
LZH				sS	pS	19 01 02.4	+4.2
LZH				pmax	pmax		
	comp=Z,240nm,1.3s						
LZH				pmax	pmax		
	comp=Z,2µm,5.4s						
LZH				LR	LR		
	comp=Z,8µm,15.7s						
LZH				LR	LR		
	comp=Z,8µm,13.6s						
LZH				LR	LR		
	comp=Z,9µm,15.6s						
PBA	**Port Blair**	**75.73**	**285**	*e*P	P	18 51 17.6	-1.1
PBA				IAMs_20	IAMs_20	19 38 57.6	
	comp=Z,2µm,20.6s						
KDAK	**Kodiak Island**	**76.58**	**22**	*e*P	**P**	**18 51 21.4**	**-1.2**
KDAK				LR	LR		
	comp=Z,3µm,22.0s						
KDAK	**Kodiak Island**	**76.58**	**22**	*i* P	**P**	**18 51 24.5**	**+1.9**
KDAK	**Kodiak Island**	**76.58**	**22**	P	**P**	**18 51 22.5**	**-0.2**
	comp=Z,39nm,0.9s,baz=225,slow=8.6,SNR=7.3						
KDAK				LR	LR	19 23 18.7	
	comp=Z,3µm,18.2s,baz=225,slow=34						
CIT	**Chita**	**77.00**	**330**	*e*P	**P**	**18 51 24.0**	**-1.2**
CIT				*e*		18 51 35.3	
CIT				pmax	pmax		
	comp=Z,113nm,1.6s						
YAK	**Yakutsk**	**77.97**	**344**	*d* *i*P	**P**	**18 51 29.2**	**-1.1**
YAK				*e**PP	**PcP**	**18 51 38.0**	**-1.9**
YAK				*e*S	**S**	**19 01 14.6**	**-6.4**
YAK				*e**SS	**pS**	**19 01 37.1**	**+2.8**
YAK				*e*		19 01 47.6	
YAK				*e*SSS	SSS	19 09 47.0	
YAK				pmax	pmax		
	comp=Z,57nm,1.3s						
YAK				pmax	pmax		
	comp=N,21nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.0s						
YAK				pmax	pmax		
	comp=Z,1µm,3.5s						
YAK				pmax	pmax		
	comp=N,242nm,2.2s						
YAK				pmax	pmax		
	comp=E,1µm,4.1s						
YAK				smax	smax		
	comp=E,4µm,7.7s						
YAK				smax	smax		
	comp=N,3µm,5.8s						
YAK				MLR	MLR		
	comp=Z,36µm,18.0s						
YAK				MLR	MLR		
	comp=N,28µm,21.0s						
YAK				MLR	MLR		
	comp=E,14µm,19.0s						
SVW2	**Sparrevohn**	**78.11**	**18**	*e*P	**P**	**18 51 30.4**	**-0.7**
ANM	**Nome**	**78.46**	**12**	*e*P	**P**	**18 51 33.2**	**+0.2**
ANM	**Nome**	**78.46**	**12**	*e*P	**P**	**18 51 33.2**	**+0.2**
SONM	**Songino Array**	**78.49**	**324**	P	**P**	**18 51 33.0**	**-0.7**
	comp=E,8.2nm,0.9s,baz=143,slow=5.2,SNR=21						
SONM				LR	LR	19 22 07.3	
	comp=E,4µm,21.9s,baz=114,slow=33						
SONA1	**Songino Array**	**78.49**	**324**	*e*P	**P**	**18 51 32.9**	**-0.9**
RSO	**Redoubt South**	**78.52**	**20**	*e*P	**P**	**18 51 34.8**	**+1.1**
BRLK	**Bradley Lake**	**78.64**	**21**	*e*P	**P**	**18 51 34.5**	**+0.3**
BILL	**Bilibino**	**78.81**	**0**	*e*P	**P**	**18 51 34.1**	**-0.7**
BILL				LR	LR		
	comp=Z,6µm,20.0s						
BILL	**Bilibino**	**78.81**	**0**	*d* *i*P	**P**	**18 51 34.3**	**-0.6**
BILL				*i*		18 51 44.2	
BILL				*e*		18 54 33.9	
BILL				*i* S	**S**	**19 01 35.2**	**+5.3**
BILL				*e*SS	**SS**	**19 06 39.0**	**+3.6**
BILL				pmax	pmax		
	comp=Z,65nm,1.7s						
GTA	**Gaotai**	**78.87**	**314**	⇓P	**P**	**18 51 36.3**	**+0.3**
GTA				pP	PcP	18 51 46.5	+1.9
GTA				sP	pP	18 51 50.6	+4.0
GTA				S	**S**	**19 01 31.4**	**-0.5**
GTA				SKS	**SKSac**	**19 01 45.0**	**-4.1**
GTA				sS	SKKSac	19 01 48.2	-2.1
GTA				SS	**SS**	**19 06 40.0**	**+2.3**
GTA				pmax	pmax		
	comp=Z,1µm,8.1s						
GTA				LR	LR		
	comp=Z,6µm,17.5s						
GTA				LR	LR		
	comp=Z,4µm,18.1s						
GTA				LR	LR		
	comp=Z,6µm,18.1s						
QSPA	**South Pole Qui**	**79.03**	**180**	PFAKE		18 51 50.0	+14
QSPA				LR	LR		
	comp=Z,8µm,19.0s						
SEW	**Seward**	**79.39**	**21**	*e*P	**P**	**18 51 40.2**	**+2.0**
SUA	**Susitna One**	**79.92**	**20**	*e*P	**P**	**18 51 41.7**	**+0.4**
SHL	**Shillong**	**80.31**	**298**	*e*P	**P**	**18 51 44.1**	**-0.1**
SHL	**Shillong**	**80.31**	**298**	*e*P	**P**	**18 51 45.0**	**+0.8**
SHL				*i* S	**S**	**19 01 50.0**	**+2.2**
BOD	**Bodaibo**	**80.38**	**335**	*e*P	**P**	**18 51 42.0**	**-1.6**
BOD				pmax	pmax		
	comp=Z,22nm,1.5s						
RPN	**Rapa Nui**	**80.78**	**116**	PFAKE		18 52 00.0	+13
RPN				LR	LR		
	comp=Z,4µm,19.0s						
CAST	**Castle Rocks**	**80.94**	**18**	*e*P	**P**	**18 51 47.0**	**+0.4**
CAST				*e*SKSac	**SKSac**	**19 01 59.0**	**-3.3**
SML	**Sawmill**	**80.98**	**20**	*e*P	**P**	**18 51 48.5**	**+1.7**
SML	**Sawmill**	**80.98**	**20**	*e*P	**P**	**18 51 48.5**	**+1.7**
TRF	**Thorofare Moun**	**81.51**	**18**	*e*P	**P**	**18 51 49.4**	**-0.3**
ZAK	**Zakamensk**	**81.53**	**325**	*e*P	**P**	**18 51 48.1**	**-2.0**
ZAK				pmax	pmax		
	comp=Z,22nm,1.3s						
KLU	**Klutina**	**81.60**	**21**	*e*P	**P**	**18 51 52.1**	**+1.9**
BPAW	**Bear Paw Mtn.**	**81.77**	**18**	*e*P	**P**	**18 51 49.7**	**-1.3**
IRK	**Irkutsk**	**81.89**	**327**	*e*P	**P**	**18 51 49.9**	**-1.9**
IRK				pmax	pmax		
	comp=Z,70nm,2.4s						
RND	**Reindeer**	**81.93**	**19**	*e*P	**P**	**18 51 48.7**	**-3.2**
RND	**Reindeer**	**81.93**	**19**	*e*P	**P**	**18 51 48.7**	**-3.2**
TLY	**Talaya**	**81.95**	**326**	*e*P	**P**	**18 51 51.5**	**-0.7**
	comp=Z,65nm,1.1s						
TLY				LR	LR		
	comp=Z,2µm,20.0s						
TLY	**Talaya**	**81.95**	**326**	*de*P	**P**	**18 51 51.4**	**-0.7**
TLY	**Talaya**	**81.95**	**326**	P	**P**	**18 51 52.4**	**+0.3**
	SNR=9.2						
LSA	**Lhasa**	**82.15**	**302**	P	**P**	**18 51 51.7**	**-2.5**
LSA	**Lhasa**	**82.15**	**302**	*e*P	**P**	**18 51 53.5**	**-0.8**
	comp=Z,25nm,1.2s						
LSA				LR	LR		
	comp=Z,4µm,21.0s						
LSA	**Lhasa**	**82.15**	**302**	*e*P	**P**	**18 51 53.5**	**-0.8**
LSA				pmax	pmax		
	comp=Z,25nm,1.2s						
LSA				MLR	MLR		
	comp=Z,4µm,21.0s						
DHY	**Denali Highway**	**82.18**	**20**	*e*P	**P**	**18 51 54.2**	**+1.0**
IM3	**Indian Mountai**	**82.41**	**16**	*e*P	**P**	**18 51 53.6**	**-0.6**
MLY	**Manley**	**82.53**	**17**	*e*P	**P**	**18 51 54.9**	**0.0**
WRH	**Wood River Hil**	**82.92**	**18**	*e*P	**P**	**18 51 55.6**	**-1.3**
MDM	**Murphy Dome**	**83.22**	**18**	*e*P	**P**	**18 51 57.5**	**-1.0**
HDA	**Harding Lake**	**83.24**	**19**	P	**P**	**18 51 58.3**	**-0.3**
	baz=227						
SAO	**San Andreas Ge**	**83.24**	**51**	*e*P	**P**	**18 51 59.2**	**+0.1**
	comp=Z,23nm,0.9s						
TCOL	**CIGO, UAF Yank**	**83.28**	**18**	P	**P**	**18 51 59.6**	**+0.9**
	baz=226,SNR=13						
COLA	**College**	**83.28**	**18**	*e*P	**P**	**18 51 57.7**	**-1.0**
	comp=Z,61nm,0.8s						
COLA				LR	LR		
	comp=Z,9µm,21.0s						
COLA	**College**	**83.28**	**18**	*ce*P	**P**	**18 52 00.1**	**+1.4**
COLA				pmax	pmax		
	comp=Z,57nm,0.8s						
COLA				MLR	MLR		
	comp=Z,2µm,18.0s						
O02D	**Mt. Diablo Mer**	**83.39**	**47**	P	**P**	**18 51 59.6**	**-0.3**
	baz=250,SNR=27						
MOY	**Mondy**	**83.41**	**326**	*e*P	**P**	**18 51 58.6**	**-1.2**
MOY				pmax	pmax		
	comp=Z,76nm,3.7s						
RIDG	**Independ'e Rid**	**83.47**	**20**	*e*P	**P**	**18 51 59.8**	**0.0**
IL1	**Eielson Array**	**83.51**	**19**	*e*P	**P**	**18 51 59.6**	**-0.3**
ILAR	**Eielson Array**	**83.51**	**19**	P	**P**	**18 51 58.4**	**-1.6**
	comp=Z,16nm,0.7s,baz=236,slow=5.6,SNR=61						
ILAR				PKKPbc	**PKKPbc**	**19 10 20.6**	**-1.1**

	comp=Z,0.9nm,0.9s,baz=5.5,slow=2.4,SNR=4.6						
ILB	Eielson Array	83.51	19	eP	P	18 51 59.4	-0.6
L02E	Cave Junction	83.51	45	P	P	18 52 00.6	+0.2
	baz=249						
POKR	Poker Flat Res	83.58	18	P	P	18 52 00.7	+0.4
	baz=226						
SNCC	San Nicolas Is	83.64	55	P	P	18 52 01.2	-0.1
	baz=253						
J01E	Myrtle Point	83.65	44	P	P	18 52 02.5	+1.4
	baz=249,SNR=5.8						
K02D	Willamette Mer	83.66	44	P	P	18 52 02.2	+0.9
	baz=249,SNR=16						
WDC	Whiskeytown Da	83.71	47	eP	P	18 52 03.1	+1.6
WDC	Whiskeytown Da	83.71	47	eP	P	18 52 03.1	+1.6
N02D	Trinity Center	83.72	46	P	P	18 52 02.2	+0.5
	baz=250,SNR=11						
M02C	Callahan	83.77	46	P	P	18 52 02.8	+0.9
	baz=250,SNR=13						
SCZ2	Santa Cruz Isl	83.78	54	P	P	18 52 01.7	-0.3
	baz=252						
SBC	Santa Barbara	83.85	53	P	P	18 52 02.2	-0.2
	baz=253						
SMMC	Simmler	83.90	52	P	P	18 52 02.2	-0.5
	baz=252						
PKM	Mcpherson Peak	83.91	53	P	P	18 52 02.8	-0.1
	baz=252						
SCRK	Sand Creek	83.92	20	eP	P	18 52 01.9	-0.3
YBH	Yreka Blue Hor	83.98	46	P	P	18 52 03.4	+0.4
	comp=Z,34nm,0.8s,baz=341,slow=0.5,SNR=46						
I02D	Swisshome	84.05	43	P	P	18 52 03.6	+0.5
	baz=249						
ORV	Oroville	84.11	48	eP	P	18 52 02.8	-0.8
ORV	Oroville	84.11	48	eP	P	18 52 02.8	-0.8
HUMO	Hull Mountain	84.12	45	eP	P	18 52 04.4	+0.8
O03E	Paynes Creek	84.14	47	P	P	18 52 04.7	+0.9
	baz=250,SNR=15						
I03D	Drain, OR	84.24	44	P	P	18 52 05.2	+1.1
	baz=249						
BLG	Laguna Peak, P	84.26	54	P	P	18 52 05.2	+0.7
	baz=253						
AFDM	Forest Hills D	84.30	49	eP	P	18 52 04.0	-0.6
WRAK	Wrangell Islan	84.38	30	PFAKE		18 52 20.0	+16
WRAK				LR	LR		
	comp=Z,10µm,19.0s						
HYT	Haines Junctio	84.40	24	eP	P	18 52 04.8	+0.1
L04D	Klamath Falls	84.44	45	P	P	18 52 05.6	+0.3
	baz=250,SNR=11						
CMB	Columbia Colle	84.45	50	eP	P	18 52 04.6	-0.8
CMB	Columbia Colle	84.45	50	eP	P	18 52 04.6	-0.8
CIS	Catalina Islan	84.58	55	P	P	18 52 06.6	+0.5
	baz=253						
M04C	Macdoel	84.61	46	P	P	18 52 07.1	+0.8
	baz=250,SNR=14						
VOG	Valley Oaks Go	84.68	52	P	P	18 52 06.7	+0.2
	baz=252						
OSI	Osito Audit: C	84.68	53	P	P	18 52 07.5	+0.8
	baz=253						
MAW	Mawson	84.71	202	P	P	18 52 06.9	+0.8
	comp=Z,30nm,1.1s,baz=90,slow=1.0,SNR=1.6						
ARVC	Arvin	84.75	53	P	P	18 52 07.4	+0.5
	baz=253						
FMP	Fort Macarthur	84.76	54	P	P	18 52 08.0	+1.0
	baz=253						
VES	Vestal, Richgr	84.76	52	P	P	18 52 07.7	+0.7
	baz=253						
G03D	McMinnville, O	84.84	42	P	P	18 52 08.2	+1.1
	baz=249						
DECC	Green Verdugo	84.89	54	P	P	18 52 08.3	+0.6
	baz=253						
I04A	Tendick Farm,	84.91	44	P	P	18 52 08.3	+0.8
	baz=250,SNR=12						
J04D	Umpqua Nationa	84.92	44	P	P	18 52 08.6	+0.8
	baz=250,SNR=15						
KNGR	Kungurtug, Tuv	84.93	324⇓	eP	P	18 52 06.4	-1.2
H04D	Lebanon	84.94	43	P	P	18 52 09.0	+1.3
	baz=249						
K04D	Chiloquin, OR	84.96	45	P	P	18 52 08.7	+0.8
	baz=250						
BOK	Bokaro	85.09	295	eP	P	18 52 07.9	-1.0
BOK				IAmb	IAmb	18 52 15.7	
	comp=Z,0.9nm,5.5s						
BOK				IAMs_20	IAMs_20	19 27 30.3	
	comp=Z,3µm,25.3s						
ISA	Isabella, Lake	85.19	52	eP	P	18 52 08.5	-0.7
ISA	Isabella, Lake	85.19	52	eP	P	18 52 08.5	-0.7
ISA	Isabella, Lake	85.19	52	P	P	18 52 09.7	+0.5
	baz=253,SNR=13						
NLWA	Neilton Lookou	85.24	40	PFAKE		18 52 20.0	+11
NLWA				LR	LR		
	comp=Z,9µm,19.0s						
RAMN	Ramite	85.25	298	eP	P	18 52 09.4	-0.5
WAKR	Walker	85.30	50	eP	P	18 52 09.7	-0.2
MDPB	Devils Postpil	85.31	50	eP	P	18 52 10.5	+0.5
F04D	Rainier, OR	85.31	41	P	P	18 52 10.3	+0.8
	baz=249						
EDW2	Edwards Air Fo	85.34	53	P	P	18 52 10.3	+0.4
	baz=253,SNR=25						
OMMB	Old Mammoth Mi	85.36	50	eP	P	18 52 10.4	+0.1
PNTR	Pine Nut	85.36	49	eP	P	18 52 10.7	+0.5
H04A	Detroit Lake	85.37	43	eP	P	18 52 09.2	-0.7
EGAK	Eagle	85.38	20	PFAKE		18 52 20.0	+11
EGAK				LR	LR		
	comp=Z,4µm,20.0s						
WHY	Whitehorse	85.39	25	eP	P	18 52 09.3	-0.4
BFSC	Mount Baldy Ra	85.42	54	P	P	18 52 10.9	+0.5
	baz=254,SNR=12						
109C	Camp Elliot, M	85.48	55	P	P	18 52 11.3	+0.6
	baz=254						
MLAC	Mammoth, Mammo	85.49	50	P	P	18 52 11.1	+0.2
	baz=253						
J05D	Fort Rock, OR	85.54	45	P	P	18 52 11.4	+0.5
	baz=251						
YERR	Yerington	85.59	49	eP	P	18 52 11.6	+0.3
MURC	Murrieta	85.61	55	P	P	18 52 12.2	+0.9
	baz=254						
PAHR	Pah Rah Range	85.71	48	eP	P	18 52 11.7	-0.1
CWC	Cottonwood Cre	85.72	52	P	P	18 52 12.8	+0.8
	baz=253						
MOD	Modoc Plateau	85.74	46	eP	P	18 52 11.3	-0.6
LRMC	Laurel Mtn Rad	85.75	53	P	P	18 52 12.9	+0.8
	baz=253,SNR=20						
E04D	Cinebar	85.77	41	P	P	18 52 13.3	+1.6
	baz=249						
JIRN	Jiri	85.78	299	eP	P	18 52 12.2	-0.5
	comp=Z,217nm,1.6s						
TIN	Tinemaha, Big	85.78	51	P	P	18 52 13.1	+0.9
	baz=253						
D03D	Eldon	85.78	40	P	P	18 52 13.6	+1.8
	baz=249						
I05D	Terrebonne, OR	85.82	44	P	P	18 52 12.4	+0.3
	baz=250						
PINE	Pine Mountain	85.91	44	eP	P	18 52 12.6	-0.2
PGC	Sidney	85.96	39	eP	P	18 52 12.1	-0.5
TIXI	Tiksi	85.98	349	d iP	P	18 52 11.2	-1.0
TIXI				pmax	pmax		
	comp=Z,24nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,2µm,18.0s						
MONP2	Monument Peak	86.04	56	P	P	18 52 14.2	+0.5
	baz=254,SNR=10						
DAC	Darwin (Calif)	86.05	52	eP	P	18 52 13.0	-0.6
	comp=Z,35nm,1.3s						
DAC	Darwin (Calif)	86.05	52	eP	P	18 52 13.0	-0.6
DAC				pmax	pmax		
	comp=Z,35nm,1.3s						
MPMC	Manual Prospec	86.07	52	P	P	18 52 14.8	+1.1
	baz=254,SNR=14						
GUN	Gumba	86.11	299	eP	P	18 52 13.7	-0.6
	comp=Z,160nm,1.6s						
RRX	Edison Barstow	86.12	54	P	P	18 52 14.2	+0.4
	baz=254						
NV01	Mina Array Sit	86.13	50	eP	P	18 52 13.1	-0.9
NVAR	Mina Array Bea	86.13	50	P	P	18 52 13.5	-0.5
	comp=Z,22nm,0.9s,baz=236,slow=7.7,SNR=40						
G05D	Wamic, OR	86.14	43	P	P	18 52 14.1	+0.5
	baz=250						
PFO	Pinyon Flats O	86.20	55	eP	P	18 52 13.3	-1.1
	comp=Z,34nm,1.4s						
PFO				LR	LR		
	comp=Z,9µm,19.0s						
PFO	Pinyon Flats O	86.20	55	eP	P	18 52 13.3	-1.1
PFO				pmax	pmax		
	comp=Z,34nm,1.4s						
PFO				MLR	MLR		
	comp=Z,9µm,19.0s						
PFO	Pinyon Flats O	86.20	55	P	P	18 52 14.6	+0.2
	baz=254						
IKP	In-Ko-Pah, Jac	86.23	56	P	P	18 52 14.9	+0.5
	baz=254						
F05D	White Salmon	86.26	42	P	P	18 52 15.7	+1.5
	baz=250						
LON	Longmire	86.33	41	eP	P	18 52 14.9	+0.3
LON	Longmire	86.33	41	eP	P	18 52 14.9	+0.3
PALK	Pallekele	86.34	278	P	P	18 52 15.6	+0.3
D05A	Enumclaw	86.36	41	eP	P	18 52 15.1	+0.5
GSC	Goldstone, Bar	86.39	53	eP	P	18 52 15.4	+0.2
GSC	Goldstone, Bar	86.39	53	eP	P	18 52 15.4	+0.2
GSC	Goldstone, Bar	86.39	53	P	P	18 52 15.5	+0.2
	baz=254,SNR=11						
GRAC	Grapevine Rang	86.43	51	P	P	18 52 15.7	+0.4
	baz=254,SNR=18						
PKI	Pulchoki	86.43	299	eP	P	18 52 15.0	-0.9
DLBC	Dease Lake	86.44	28	P	P	18 52 14.7	-0.2
	comp=Z,8.5nm,0.9s,baz=207,slow=5.4,SNR=8.4						
PKIN	Phulchoki	86.44	299	eP	P	18 52 14.9	-0.9
	comp=Z,101nm,1.5s						
A04D	Lummi Island	86.45	39	P	P	18 52 15.3	+0.3
	baz=249,SNR=21						
KVN	Kaiserville	86.46	49	eP	P	18 52 15.3	-0.3
KVN	Kaiserville	86.46	49	eP	P	18 52 15.3	-0.3
SWSC	Sam W. Stewart	86.56	56	P	P	18 52 16.4	+0.5
	baz=255,SNR=8.5						
HEC	Hector,Ludlow	86.63	54	P	P	18 52 16.4	+0.1
	baz=254						
FURC	Furnace Creek,	86.67	52	P	P	18 52 17.2	+0.8
	baz=254						
B05A	Bryant	86.67	40	P	P	18 52 17.0	+0.9
	baz=250,SNR=7.7						
BELC	Belle Mtn. Jos	86.68	55	P	P	18 52 16.7	-0.1
	baz=254,SNR=20						
DMN	Daman	86.70	299	eP	P	18 52 16.1	-1.0
	comp=Z,156nm,1.3s						
SHOC	Shoshone, Teco	86.97	53	P	P	18 52 18.5	+0.6
	baz=254,SNR=10.0						
I07A	Izee	86.98	44	eP	P	18 52 17.5	-0.4
BC3	Big Chuckawall	87.02	55	P	P	18 52 19.2	+0.9
	baz=255,SNR=11						
WVOR	Wild Horse Val	87.08	46	eP	P	18 52 17.5	-0.9
	comp=Z,46nm,1.3s						
WVOR				LR	LR		
	comp=Z,5µm,21.0s						
WVOR	Wild Horse Val	87.08	46	eP	P	18 52 17.5	-0.9
WVOR				pmax	pmax		
	comp=Z,46nm,1.3s						
WVOR				MLR	MLR		
	comp=Z,5µm,21.0s						
TUQ	Turquoise Moun	87.12	53	P	P	18 52 18.9	+0.1
	baz=254						
GMRC	Granite Mounta	87.16	54	P	P	18 52 19.6	+0.6
	baz=255,SNR=13						
LTY	Liberty	87.23	41	eP	P	18 52 18.4	-0.6
TPNV	Topopah Spring	87.27	52	P	P	18 52 19.4	-0.1
	baz=254						
C06D	Leavenworth	87.31	40	P	P	18 52 20.3	+1.1
	baz=251						
GLA	Glamis	87.38	56	P	P	18 52 21.0	+1.0
	baz=255,SNR=13						
IRM	Iron Mountain	87.40	55	P	P	18 52 20.6	+0.5
	baz=255,SNR=27						
J08A	Circle Bar Ran	87.47	45	eP	P	18 52 20.1	-0.2
LLLB	Lillooet	87.62	37	eP	P	18 52 20.4	-0.3
HAWA	Hanford	87.69	42	PFAKE		18 52 30.0	+8.9
HAWA				LR	LR		
	comp=Z,4µm,20.0s						
G08A	Pilot Rock	87.73	43	eP	P	18 52 21.1	-0.3
Y12C	Blythe	87.80	55	eP	P	18 52 22.2	+0.2
Y12C	Blythe	87.80	55	P	P	18 52 22.1	+0.2
	baz=255,SNR=17						
MDRS	Chennai	87.94	284	eP	P	18 52 21.5	-1.4
MDRS				IAmb	IAmb	18 52 52.0	
	comp=Z,0.8nm,7.5s						
NEE2	Needles Airpor	87.98	54	P	P	18 52 23.7	+0.9
	baz=255						
DANN	Dangsing	88.03	299	eP	P	18 52 21.9	-1.7
	comp=Z,38nm,1.1s						
KOLN	Koldanda	88.03	299	eP	P	18 52 21.7	-1.8
	comp=Z,70nm,1.6s						
R11A	Troy Canyon, C	88.16	51	eP	P	18 52 23.4	-0.3
R11A	Troy Canyon, C	88.16	51	P	P	18 52 24.3	+0.5
	baz=255,SNR=14						
PDMCI	Parker Dam,Lak	88.24	55	P	P	18 52 24.2	+0.2
	baz=256,SNR=27						
PYUN	Piuthan	88.64	299	eP	P	18 52 24.5	-1.8
	comp=Z,73nm,1.7s						
BMO	Blue Mountains	88.72	44	eP	P	18 52 25.3	-0.8
BMO				LR	LR		
	comp=Z,6µm,20.0s						
BMO	Blue Mountains	88.72	44	eP	P	18 52 25.3	-0.8
BMO				MLR	MLR		
	comp=Z,6µm,20.0s						
214A	Organ Pipe Nat	88.76	57	P	P	18 52 26.7	+0.2
	baz=256						
WMQ	Urumqi	88.91	315	P	P	18 52 26.5	-0.5
WMQ				sP	pwP	18 52 42.6	+1.3
WMQ				PP	PP	18 56 00.7	+3.8
WMQ				S	S	19 03 12.9	+0.4
WMQ				pmax	pmax		
	comp=Z,42nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,2µm,10.1s						
WMQ				LR	LR		
	comp=Z,6µm,20.7s						
WMQ				LR	LR		
	comp=Z,6µm,21.7s						
WMQ				LR	LR		
	comp=Z,5µm,22.9s						
ELK	Elko	89.05	48	eP	P	18 52 27.1	-0.9
ELK	Elko	89.05	48	eP	P	18 52 27.1	-0.9
F10A	Beach Ranch, E	89.09	43	eP	P	18 52 27.1	-0.8
PSUT	Pine Spring	89.52	51	eP	P	18 52 30.4	+0.2
LCMT	Little Creek M	89.61	52	eP	P	18 52 30.9	+0.2
CCUT	Cedar City	89.65	52	eP	P	18 52 31.2	+0.3
NEW	Newport	89.82	41	P	P	18 52 30.5	-0.7
NEW				LR	LR		
	comp=Z,3µm,20.0s						
NEW	Newport	89.82	41	P	P	18 52 31.4	+0.2
	baz=253						
NEW	Newport	89.82	41	P	P	18 52 30.5	-0.7
	comp=Z,10nm,0.8s,baz=239,slow=4.3,SNR=24						
INK	Inuvik	89.90	19	eP	P	18 52 30.4	-0.6
INK	Inuvik	89.90	19	P	P	18 52 29.8	-1.2
	comp=Z,3.4nm,0.8s,baz=188,slow=8.0,SNR=8.3						
KNB	Kanab	89.94	52	eP	P	18 52 32.7	+0.5
KNB	Kanab	89.94	52	eP	P	18 52 32.7	+0.5
TRD	Trivandrum	90.22	279	eP	P	18 52 32.8	-1.0
TRD				IAmb	IAmb	18 52 40.0	
	comp=Z,0.7nm,8.0s						
JBP	Jabalpur	90.23	293	eP	P	18 52 35.5	+2.0
HLID	Hailey	90.37	46	eP	P	18 52 33.9	-0.2
HLID				LR	LR		
	comp=Z,4µm,19.0s						
HLID	Hailey	90.37	46	P	P	18 52 34.8	+0.7
	baz=255,SNR=20						
HYB	Hyderabad	90.40	288	iP	P	18 52 34.5	-0.1
HYB				eSKS	SKSac	19 03 04.0	+0.2
HYB				eS	S	19 03 28.0	+0.6
HYB	Hyderabad	90.40	288	eP	P	18 52 33.7	-0.9
HYB				IAmb	IAmb	18 53 03.3	
	comp=Z,0.6nm,7.0s						
PKCU	Pink Cliffs	90.44	52	eP	P	18 52 35.2	+0.5
TUC	Tucson	90.51	57	eP	P	18 52 35.4	+0.5
TUC				LR	LR		
	comp=Z,5µm,20.0s						
TUC	Tucson	90.51	57	eP	P	18 52 35.4	+0.5
TUC				MLR	MLR		
	comp=Z,5µm,20.0s						
TUC	Tucson	90.51	57	P	P	18 52 35.3	+0.5
	baz=257						
MTPU	Mount Pierson	90.68	51	eP	P	18 52 36.4	+0.6
DUG	Dugway, Tooele	90.70	49	eP	P	18 52 35.5	-0.1
DUG				LR	LR		
	comp=Z,5µm,19.0s						
DUG	Dugway, Tooele	90.70	49	eP	P	18 52 35.5	-0.1
DUG				MLR	MLR		
	comp=Z,5µm,19.0s						
DUG	Dugway, Tooele	90.70	49	P	P	18 52 35.8	+0.2
	baz=256						
BGU	Big Grassy Mou	90.72	49	eP	P	18 52 35.8	+0.1
DGZ	Jazzator, Alta	90.72	321	d iP	P	18 52 34.1	-1.4
DGZ				pmax	pmax		
	comp=Z,12nm,1.5s						
DGZ				MLR	MLR		
	comp=Z,1µm,14.0s						
WUAZ	Wupatki	90.74	54	eP	P	18 52 34.3	-1.7
	comp=Z,31nm,1.1s						
WUAZ				LR	LR		
	comp=Z,7µm,19.0s						
WUAZ	Wupatki	90.74	54	P	P	18 52 36.1	+0.2
	baz=257						
MSU	Marysvale	90.79	51	eP	P	18 52 36.6	+0.4
MSU	Marysvale	90.79	51	eP	P	18 52 36.6	+0.4
HVU	Hansel Valley	91.10	48	eP	P	18 52 38.3	+0.8
HVU	Hansel Valley	91.10	48	eP	P	18 52 38.3	+0.8
NLU	North Lily Min	91.20	50	eP	P	18 52 38.1	+0.1
MSO	Missoula	91.51	43	P	P	18 52 39.5	+0.3
	baz=256						
DGAR	Diego Garcia	91.62	262	PFAKE		18 52 50.0	+10
DGAR				LR	LR		
	comp=Z,3µm,19.0s						
TMUT	Trail Mountain	91.70	50	eP	P	18 52 41.0	+0.5
MCMT	McKenzie Canyo	91.77	45	eP	P	18 52 40.5	-0.1
ZSN	Zaisan	91.77	318	d iP	P	18 52 39.6	-0.7
ZSN				e		18 56 18.7	
ZSN				pmax	pmax		
	comp=Z,36nm,1.8s						
ZSN				MLR	MLR		
	comp=Z,483nm,16.0s						
ZSN	Zaisan	91.77	318⇓	iP	P	18 52 39.6	-0.7
	comp=Z,36nm,1.8s						
ZSN				ePP	PP	18 56 18.7	-0.9
ZSN				eLR	LR	19 35 44.8	
	comp=Z,483nm,15.8s						
SYO	Syowa Base	91.79	197⇑	eP	P	18 52 38.6	-1.3
HWUT	Hardware Ranch	91.95	48	eP	P	18 52 39.9	-1.5
	comp=Z,6.5nm,0.8s						
HWUT				LR	LR		
	comp=Z,4µm,20.0s						
W18A	Petrified Fore	91.96	55	P	P	18 52 41.2	-0.5
	baz=258						
DLMT	Dillon	92.07	44	eP	P	18 52 42.0	+0.1
LRM	Limekiln Ridge	92.27	44	eP	P	18 52 42.2	-0.7
BHPL	Bhopal	92.55	293	eP	P	18 52 42.8	-1.6
BHPL				IAmb	IAmb	18 52 49.5	
	comp=Z,126nm,7.0s						
BHPL				IAMs_20	IAMs_20	19 33 31.4	
	comp=Z,2µm,19.5s						
FXWY	Fox Creek	92.78	46	eP	P	18 52 44.9	-0.4
BOZ	Bozeman (W)	92.78	44	PFAKE		18 53 00.0	+15
BOZ				LR	LR		
	comp=Z,6µm,20.0s						
BOZ	Bozeman (W)	92.78	44	eP	P	18 52 45.2	0.0
BOZ	Bozeman (W)	92.78	44	P	P	18 52 45.4	+0.2
	baz=257						
TPAW	Teton Pass	92.80	46	eP	P	18 52 45.8	+0.4
121A	Cookes Peak, D	93.04	58	P	P	18 52 46.9	+0.2
	baz=259						
PV23	Carpenter Ridg	93.20	52	eP	P	18 52 49.5	+2.1
H17A	Grant Village	93.26	46	P	P	18 52 48.0	+0.5
	baz=258						
DDI	Dehra Dun	93.31	300	eP	P	18 52 46.0	-1.9
DDI				IAmb	IAmb	18 52 53.5	
	comp=Z,0.4nm,6.0s						
DDI				IAMs_20	IAMs_20	19 33 19.2	
	comp=Z,2µm,22.9s						
MK01	Makanchi Array	93.32	317	eP	P	18 52 46.0	-1.4
MK31	Makanchi Array	93.33	317	eP	P	18 52 46.6	-0.9
MK31	Makanchi Array	93.33	317	eP	P	18 52 46.6	-0.9
MKAR	Makanchi Array	93.33	317	P	P	18 52 46.5	-1.0
	comp=Z,6.7nm,0.9s,baz=95,slow=6.7,SNR=31						
MKAR				S	SKSac	19 03 20.0	+0.8
	comp=Z,0.2nm,0.4s,baz=186,slow=25,SNR=7.2						
MKAR				PKKPbc	PKKPdf	19 09 54.9	-0.3
	comp=Z,4.2nm,0.8s,baz=282,slow=3.4,SNR=24						
MKAR				PKPPKP		19 18 06.6	
	comp=Z,0.5nm,0.8s,baz=327,slow=2.0,SNR=4.4						
MVCO	Mesa Verde	93.36	53	PFAKE		18 53 00.0	+12
MVCO				LR	LR		
	comp=Z,6µm,19.0s						
ZALV	Zalesovo Beam	93.38	324	P	P	18 52 45.5	-2.0
	comp=Z,8.5nm,0.9s,baz=32,slow=2.1,SNR=15						
LKWY	Lake	93.42	45	PFAKE		18 53 00.0	+12
LKWY				LR	LR		
	comp=Z,7µm,19.0s						
BW06	Boulder Array	93.65	47	PFAKE		18 53 00.0	+11
BW06				LR	LR		
	comp=Z,3µm,22.0s						
BW06	Boulder Array	93.65	47	P	P	18 52 49.1	-0.2
	baz=259						
PDAR	Pinedale Array	93.65	47	eP	P	18 52 47.9	-1.4
PDAR				PP	PP	18 56 28.4	-6.2
PDAR				PKKPbc	PKKPbc	19 09 55.5	-0.2
PDAR				P'P'		19 18 10.2	
PDAR	Pinedale Array	93.65	47	P	P	18 52 48.4	-1.0
	comp=Z,6.2nm,0.8s,baz=107,slow=1.5,SNR=32						
PDAR				PP	PP	18 56 28.4	-6.2
	comp=Z,2.9nm,1.0s,baz=264,slow=4.1,SNR=4.7						
PDAR				PKKPbc	PKKPbc	19 09 55.5	-0.2
	comp=Z,0.7nm,0.8s,baz=98,slow=3.3,SNR=3.9						
PDAR				PKPPKP		19 18 10.2	
	comp=Z,0.9nm,1.0s,baz=169,slow=1.5,SNR=4.6						
MNCY	Minicoy	93.99	278	eP	P	18 52 49.7	-1.5
O20A	White River Ci	94.11	50	P	P	18 52 51.9	+0.5
	baz=259						
SMLA	Simla	94.21	301	eP	P	18 52 50.8	-1.1
SMLA				IAmb	IAmb	18 52 57.1	
	comp=Z,0.3nm,6.0s						
SMLA				IAMs_20	IAMs_20	19 34 16.8	
	comp=Z,3µm,24.8s						
RLMT	Red Lodge	94.32	45	PFAKE		18 53 00.0	+7.7
RLMT				LR	LR		
	comp=Z,6µm,20.0s						
RLMT	Red Lodge	94.32	45	P	P	18 52 53.0	+0.7
	baz=259						
NVS	Novosibirsk	94.49	325	eP	P	18 52 48.6	-3.9
NVS				eS	SKSac	19 03 29.0	+4.1
NVS				pmax	pmax		
	comp=N,13nm,2.0s						
NVS				pmax	pmax		
	comp=E,11nm,2.0s						
NVS				pmax	pmax		
	comp=Z,96nm,2.0s						
NVS				pmax	pmax		
	comp=N,10.0nm,1.9s						
NVS				pmax	pmax		
	comp=E,13nm,1.9s						
NVS				pmax	pmax		
	comp=Z,22nm,1.9s						
NVS				smax	smax		
	comp=N,12nm,2.4s						
NVS				smax	smax		
	comp=E,22nm,2.4s						
GOA	Goa	94.51	285	eP	P	18 52 52.0	-1.5
GOA				IAmb	IAmb	18 52 59.8	
	comp=Z,0.4nm,6.5s						
GOA				IAMs_20	IAMs_20	19 42 07.0	
	comp=Z,2µm,25.2s						
EGMT	Eagleton	94.55	42	PFAKE		18 53 00.0	+6.9
EGMT				LR	LR		
	comp=Z,3µm,19.0s						
EGMT	Eagleton	94.55	42	P	P	18 52 54.0	+0.9
	baz=259						
ANMO	Albuquerque	94.57	55	eP	P	18 52 55.0	+1.3
ANMO				LR	LR		
	comp=Z,4µm,19.0s						
ANMO	Albuquerque	94.57	55	d iP	P	18 52 54.7	+1.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANMO				MLR	MLR		
	comp=Z,2µm,16.0s						
ANMO	Albuquerque	94.57	55	P	P	18 52 54.0	+0.3
	baz=260						
S22A	4UR Ranch, Cre	94.76	53	P	P	18 52 54.9	+0.3
	baz=260						
UZB	Uzynbulak	94.89	313	c iP	P	18 52 52.2	-2.7
UZB				e		18 56 40.6	
UZB				pmax	pmax		
	comp=Z,51nm,1.8s						
UZB				MLR	MLR		
	comp=Z,486nm,15.0s						
UZB	Uzynbulak	94.89	313⇑	iP	P	18 52 52.2	-2.7
	comp=Z,51nm,1.8s						
UZB				ePP	PP	18 56 40.7	-3.6
UZB				eLR	LR	19 36 39.5	
	comp=Z,486nm,15.1s						
MNTX	Cornudas Mount	94.90	59	eP	P	18 52 53.2	-1.9
	comp=Z,6.0nm,0.8s						
MNTX				LR	LR		
	comp=Z,5µm,19.0s						
MNTX	Cornudas Mount	94.90	59	P	P	18 52 55.8	+0.8

	baz=260						
YKA	**Yellowknife Ar**	**95.00**	**27**	P	**P**	**18 52 52.3**	**-2.4**
	comp=Z,8.4nm,0.8s,baz=255,slow=4.6,SNR=56						
YKA				PP	**PP**	**18 56 45.1**	**+0.8**
	comp=Z,0.7nm,1.0s,baz=253,slow=6.8,SNR=2.8						
YKA				PKKPbc	**PKKPbc**	**19 09 54.5**	**+1.9**
	comp=Z,0.8nm,0.9s,baz=80,slow=2.2,SNR=5.1						
YKB5	**Yellowknife Ar**	**95.00**	**27**	*e*P	**P**	**18 52 51.3**	**-3.4**
POO	**Poona**	**95.01**	**288**	*e*P	**P**	**18 52 54.1**	**-1.8**
POO				IAmb	IAmb	18 53 01.1	
	comp=Z,0.2nm,6.5s						
POO				IAMs_20	IAMs_20	19 41 15.1	
	comp=Z,2µm,12.2s						
POO	**Poona**	**95.01**	**288**	*e*P	**P**	**18 52 53.0**	**-2.8**
DHRM	**DHARAMSHALA**	**95.13**	**302**	*e*P	**P**	**18 52 55.0**	**-1.4**
DHRM				IAMs_20	IAMs_20	19 34 05.8	
	comp=Z,4µm,24.2s						
SATY	**Saty**	**95.32**	**313**	*ce*P	**P**	**18 52 56.9**	**+0.1**
SATY				*e*		18 56 51.1	
SATY				pmax	pmax		
	comp=Z,568nm,7.9s						
SATY	**Saty**	**95.32**	**313**	⇑*e*P	**P**	**18 52 57.0**	**+0.1**
	comp=Z,568nm,7.9s						
SATY				⇓*e*PP	**PP**	**18 56 51.1**	**+3.5**
SEM	**Semipalatinsk**	**95.38**	**320**	*e*P	**P**	**18 53 01.1**	**+4.1**
SEM				*e*		18 56 48.9	
SEM				pmax	pmax		
	comp=Z,29nm,0.6s						
SEM				MLR	MLR		
	comp=Z,2µm,18.0s						
SEM	**Semipalatinsk**	**95.38**	**320**	*e*P	**P**	**18 53 01.2**	**+4.1**
	comp=Z,29nm,0.6s						
SEM				*e*PP	**PP**	**18 56 49.0**	**+1.0**
SEM				*e*LR	LR	19 37 19.8	
	comp=Z,2µm,18.2s						
TDK	**Taldyqorghan**	**95.65**	**315**	*de*P	**P**	**18 52 55.7**	**-2.4**
TDK				*e*		18 56 47.9	
TDK				pmax	pmax		
	comp=Z,123nm,1.5s						
TDK				MLR	MLR		
	comp=Z,3µm,17.0s						
TDK	**Taldyqorghan**	**95.65**	**315**	⇓*e*P	**P**	**18 52 55.8**	**-2.4**
	comp=Z,123nm,1.5s						
TDK				*e*PP	**PP**	**18 56 48.0**	**-2.0**
TDK				*e*LR	LR	19 37 19.8	
	comp=Z,3µm,17.1s						
SDCO	**Great Sand Dun**	**95.80**	**53**	PFAKE		18 53 10.0	+11
SDCO				LR	LR		
	comp=Z,5µm,19.0s						
SDCO	**Great Sand Dun**	**95.80**	**53**	P	**P**	**18 52 59.7**	**+0.3**
	baz=261						
K22A	**Casper**	**95.83**	**48**	P	**P**	**18 52 59.8**	**+0.6**
	baz=261						
PMSA	**Palmer Station**	**95.85**	**161**	PFAKE		18 53 10.0	+11
PMSA				LR	LR		
	comp=Z,4µm,20.0s						
TXAR	**Lajitas Array**	**95.97**	**61**	P	**P**	**18 52 59.8**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=243,slow=5.5,SNR=5.8						
TXAR				PP	**PP**	**18 56 52.7**	**-0.2**
	comp=Z,3.1nm,1.2s,baz=248,slow=6.6,SNR=6.5						
TXAR				PKKPbc	**PKKPdf**	**19 09 52.1**	**+2.1**
	comp=Z,0.6nm,0.6s,baz=105,slow=4.0,SNR=4.9						
N23A	**Red Feather La**	**95.97**	**50**	P	**P**	**18 53 00.0**	**0.0**
	baz=261						
NRIK	**Noril'sk**	**95.99**	**340**	P	**P**	**18 52 57.6**	**-1.5**
	comp=Z,2.3nm,0.4s,baz=145,slow=5.5,SNR=6.3						
NRIK				PP	**PP**	**18 56 55.8**	**+4.0**
	comp=Z,5.2nm,0.5s,baz=149,slow=6.0,SNR=4.2						
ISCO	**Idaho Springs**	**96.04**	**51**	PFAKE		18 53 10.0	+10
ISCO				LR	LR		
	comp=Z,8µm,20.0s						
ISCO	**Idaho Springs**	**96.04**	**51**	P	**P**	**18 53 00.6**	**+0.1**
	baz=261						
MDOK	**Medeo**	**96.32**	**313**	*ce*P	**P**	**18 52 59.4**	**-2.0**
MDOK				pmax	pmax		
	comp=Z,450nm,8.7s						
MDOK	**Medeo**	**96.32**	**313**	⇑*e*P	**P**	**18 52 59.4**	**-2.0**
	comp=Z,450nm,8.7s						
MDOK				⇑*e*PP	PP	18 56 42.2	-13
MDOK				*e*LR	LR	19 36 59.2	
	comp=Z,1µm,16.6s						
KURK	**Kurchatov**	**96.46**	**320**	*e*P	**P**	**18 52 59.5**	**-2.1**
	comp=Z,154nm,1.4s						
KURK				LR	LR		
	comp=Z,9µm,21.0s						
KURK	**Kurchatov**	**96.46**	**320**	*e*P	**P**	**18 52 59.5**	**-2.1**
KURK				pmax	pmax		
	comp=Z,153nm,1.4s						
KURK				MLR	MLR		
	comp=Z,9µm,21.0s						
KURK	**Kurchatov**	**96.46**	**320**	P	**P**	**18 53 00.4**	**-1.2**
	SNR=6.8						
CHKK	**Chushkaly**	**96.47**	**313**	⇓*e*P	**P**	**18 53 00.0**	**-1.9**
CHKK				*e*		18 56 50.4	
CHKK				pmax	pmax		
	comp=Z,22nm,1.4s						
CHKK	**Chushkaly**	**96.47**	**313**	⇓*e*P	**P**	**18 53 00.0**	**-1.9**
	comp=Z,22nm,1.4s						
CHKK				⇓*e*PP	**PP**	**18 56 50.5**	**-5.8**
NVL	**N'lazarevskaya**	**96.51**	**188**	*e*P	**P**	**18 53 02.3**	**+0.8**
NVL				pmax	pmax		
	comp=Z,13nm,1.1s						
KSH	**Kashi**	**96.56**	**309**	P	**P**	**18 53 05.1**	**+2.5**
KSH				pP	pP	18 53 15.9	+3.0
KSH				PP	**PP**	**18 57 03.4**	**+6.2**
KSH				SKS	**SKSac**	**19 03 40.1**	**+3.2**
KSH				S	**S**	**19 04 17.8**	**-3.4**
KSH				SS	**SS**	**19 10 59.3**	**+3.4**
KSH				pmax	pmax		
	comp=Z,1µm,9.5s						
KSH				LR	LR		
	comp=Z,3µm,14.1s						
KSH				LR	LR		
	comp=Z,5µm,17.0s						
KSH				LR	LR		
	comp=Z,5µm,17.1s						
T25A	**Trinidad**	**96.56**	**54**	P	**P**	**18 53 03.4**	**+0.6**
	baz=261						
LAO	**LASA Array**	**96.68**	**44**	PFAKE		18 53 10.0	+7.1
LAO				LR	LR		
	comp=Z,4µm,20.0s						
KUU	**Kurty**	**96.94**	**313**	*e*P	**P**	**18 53 01.5**	**-2.5**
KUU				pmax	pmax		
	comp=Z,27nm,1.5s						
KUU	**Kurty**	**96.94**	**313**	*e*P	**P**	**18 53 01.6**	**-2.5**
	comp=Z,27nm,1.5s						
KUU				*e*LR	LR	19 37 54.6	
	comp=Z,847nm,18.2s						
SNAA	**Sanae**	**97.17**	**184**	⇑*e*P	Pdif	18 53 05.9	+1.2
NIL	**Nilore**	**97.88**	**303**	PFAKE		18 53 20.0	+11
NIL				LR	LR		
	comp=Z,2µm,22.0s						
AAK	**Ala-Archa**	**98.10**	**312**	PFAKE		18 53 20.0	+10
AAK				LR	LR		
	comp=Z,3µm,19.0s						
DGMT	**Dagmar**	**98.29**	**42**	PFAKE		18 53 20.0	+10
DGMT				LR	LR		
	comp=Z,4µm,19.0s						
DGMT	**Dagmar**	**98.29**	**42**	Pdiff	Pdif	18 53 10.8	+0.8
	baz=263						
OGNE	**Ogallala**	**98.91**	**50**	PFAKE		18 53 20.0	+6.9
OGNE				LR	LR		
	comp=Z,7µm,19.0s						
JCT	**Junction City**	**99.45**	**61**	PFAKE		18 53 30.0	+14
JCT				LR	LR		
	comp=Z,7µm,19.0s						
BHJ	**Bhuj**	**99.61**	**292**	*e*P	**Pdif**	**18 53 15.9**	**-0.6**
BHJ				IAmb	IAmb	18 53 29.2	
	comp=Z,62nm,6.5s						
BHJ				IAMs_20	IAMs_20	19 43 57.1	
	comp=Z,2µm,19.5s						
FFC	**Flin Flon**	**100.29**	**36**	PFAKE		18 53 30.0	+11
FFC				LR	LR		
	comp=Z,9µm,21.0s						
FFC	**Flin Flon**	**100.29**	**36**	*i* P	**Pdif**	**18 53 19.9**	**+1.1**
CBKS	**Cedar Bluff**	**100.44**	**52**	PFAKE		18 53 30.0	+10
CBKS				LR	LR		
	comp=Z,6µm,21.0s						
KVTX	**Kingsville**	**100.76**	**64**	PFAKE		18 53 30.0	+8.6
KVTX				LR	LR		
	comp=Z,3µm,19.0s						
WMOK	**Wichita Mounta**	**100.79**	**57**	PFAKE		18 53 30.0	+8.5
WMOK				LR	LR		
	comp=Z,4µm,19.0s						
BRVK	**Borovoye**	**101.84**	**322**	PFAKE		18 53 40.0	+14
BRVK				LR	LR		
	comp=Z,3µm,21.0s						
BRVK	**Borovoye**	**101.84**	**322**	⇑*i*P	**Pdif**	**18 53 24.4**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRVK				MLR	MLR		
	comp=Z,4µm,17.0s						
KSU1	**Kansas State U**	**102.89**	**52**	PFAKE		18 53 40.0	+9.3
KSU1				LR	LR		
	comp=Z,7µm,20.0s						
ECSD	**EROS Data Cent**	**103.14**	**48**	PFAKE		18 53 40.0	+8.3
ECSD				LR	LR		
	comp=Z,4µm,20.0s						
PAYG	**Puerto Ayora**	**103.78**	**93**	PFAKE		18 53 50.0	+15
PAYG				LR	LR		
	comp=Z,2µm,21.0s						
ULM	**Lac du Bonnet**	**103.83**	**41**	Pdiff	**Pdif**	**18 53 34.8**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=270,slow=4.0,SNR=4.1						
NATX	**Nacogdoches**	**103.97**	**60**	PFAKE		18 53 50.0	+14
NATX				LR	LR		
	comp=Z,5µm,20.0s						
MIAR	**Mount Ida**	**105.06**	**57**	PFAKE		18 58 10.0	+15
MIAR				LR	LR		
	comp=Z,7µm,19.0s						
SCIA	**State Center**	**105.59**	**49**	PFAKE		18 58 10.0	+14
SCIA				LR	LR		
	comp=Z,7µm,19.0s						
EYMN	**Ely**	**106.74**	**43**	PFAKE		18 58 10.0	+12
EYMN				LR	LR		
	comp=Z,7µm,20.0s						
EFI	**East Falkland**	**107.14**	**153**	PFAKE		18 58 10.0	+12
EFI				LR	LR		
	comp=Z,5µm,21.0s						
JFWS	**Jewell Farm**	**107.78**	**48**	PFAKE		18 58 10.0	+10
JFWS				LR	LR		
	comp=Z,4µm,19.0s						
COWI	**Conover**	**108.44**	**45**	PFAKE		18 58 10.0	+8.9
COWI				LR	LR		
	comp=Z,5µm,21.0s						
ARU	**Arti**	**108.46**	**326**	PFAKE		18 58 10.0	+9.3
ARU				LR	LR		
	comp=Z,3µm,21.0s						
HDIL	**Hopedale**	**108.55**	**51**	PFAKE		18 58 10.0	+8.6
HDIL				LR	LR		
	comp=Z,4µm,20.0s						
GEYT	**Alibeck**	**110.39**	**306**	PP	**PP**	**18 58 37.1**	**-3.3**
	comp=Z,0.7nm,0.5s,baz=69,slow=8.1,SNR=3.8						
GEYT				PKKPbc	**PKKPbc**	**19 09 05.9**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=264,slow=14,SNR=4.4						
BRAL	**Brewton**	**110.44**	**61**	PFAKE		18 58 20.0	+15
BRAL				LR	LR		
	comp=Z,4µm,19.0s						
KBS	**Kingsbay**	**110.83**	**355**	PFAKE		18 58 20.0	+15
KBS				LR	LR		
	comp=Z,4µm,20.0s						
JTS	**JuntasAbangare**	**110.87**	**83**	PFAKE		18 58 20.0	+13
JTS				LR	LR		
	comp=Z,3µm,19.0s						
GLMI	**Grayling**	**111.72**	**46**	PFAKE		18 58 20.0	+13
GLMI				LR	LR		
	comp=Z,8µm,20.0s						
ABPO	**Ambohimpanom**	**112.30**	**244**	PFAKE		18 58 20.0	+11
ABPO				LR	LR		
	comp=Z,2µm,19.0s						
HOPE	**Hope Point**	**112.37**	**166**	PFAKE		18 58 20.0	+12
HOPE				LR	LR		
	comp=Z,2µm,22.0s						
AAM	**Ann Arbor**	**112.67**	**49**	PFAKE		18 58 20.0	+11
AAM				LR	LR		
	comp=Z,7µm,19.0s						
LCO	**Las Campanas**	**112.75**	**128**	PFAKE		18 58 20.0	+10
LCO				LR	LR		
	comp=Z,33µm,19.0s						
ACSO	**Alum Creek Sta**	**113.38**	**51**	PFAKE		18 58 20.0	+9.4
ACSO				LR	LR		
	comp=Z,5µm,21.0s						
GOGA	**Godfrey**	**113.44**	**58**	PFAKE		18 58 20.0	+9.1
GOGA				LR	LR		
	comp=Z,6µm,20.0s						
PRGR	**Permogore**	**113.58**	**333**	*i* PKIKP	**PKiKP**	**18 58 10.1**	**-0.1**
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NNA	**Nana**	**113.97**	**108**	PFAKE		18 58 20.0	+7.5
NNA				LR	LR		
	comp=Z,1µm,20.0s						
TRQA	**Tornquist**	**114.04**	**140**	PFAKE		18 58 20.0	+8.0
TRQA				LR	LR		
	comp=Z,2.0nm,21.0s						
LVZ	**Lovozero**	**114.73**	**342**	PFAKE		18 58 20.0	+7.6
LVZ				LR	LR		
	comp=Z,4µm,22.0s						
APA	**Apatity**	**115.31**	**342**	⇓*i*PKIKP	**PKPdf**	**18 58 15.1**	**+1.7**
APA				*i*		18 59 12.0	
APA				*i*		19 05 01.0	
APA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OTAV	**Otavalo**	**115.55**	**95**	PFAKE		18 58 30.0	+14
OTAV				LR	LR		
	comp=Z,2µm,19.0s						
BLA	**Blacksburg**	**115.67**	**54**	PFAKE		18 58 30.0	+15
BLA				LR	LR		
	comp=Z,5µm,21.0s						
KEV	**Kevo**	**115.69**	**345**	PFAKE		18 58 30.0	+16
KEV				LR	LR		
	comp=Z,9µm,20.0s						
BCIP	**Isla Barro Col**	**115.71**	**85**	PFAKE		18 58 30.0	+14
BCIP				LR	LR		
	comp=Z,2µm,21.0s						
NHSC	**New Hope**	**116.21**	**59**	PFAKE		18 58 30.0	+14
NHSC				LR	LR		
	comp=Z,7µm,19.0s						
ARCES	**ARCESS Array B**	**116.22**	**345**	PKP	**PKiKP**	**18 58 13.8**	**-1.3**
	comp=Z,3.3nm,0.8s,baz=77,slow=1.8,SNR=33						
ARCES				PKKPbc	**PKKPbc**	**19 08 46.8**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=197,slow=2.0,SNR=4.6						
KLMR	**Klimovskoe**	**116.59**	**334**	*e*PKIKP	**PKPdf**	**18 58 14.2**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KLMR	**Klimovskoe**	**116.59**	**334**	*e*PKPdf	**PKPdf**	**18 58 14.2**	**-1.9**
KLMR				AMP		18 58 20.4	
	comp=Z,9.0nm,1.1s						
LVC	**Limon Verde**	**117.08**	**122**	PFAKE		18 58 30.0	+11
LVC				LR	LR		
	comp=Z,8µm,20.0s						
MAK	**Makhachkala**	**117.86**	**313**	*e*P	**Pdif**	**18 54 31.5**	**-5.6**
MAK				*e*PPP	PPP	19 01 56.8	
MAK				*e*		19 05 03.8	
MAK				*e*PS	**PKKPdf**	**19 09 11.7**	**+2.3**
MAK				*e*SS	SS	19 15 36.4	-7.6
MAK				pmax	pmax		
	comp=Z,203nm,0.8s						
CNNC	**Cliffs of the**	**117.91**	**56**	PFAKE		18 58 30.0	+11
CNNC				LR	LR		
	comp=Z,4µm,20.0s						
CBN	**Corbin Frederi**	**117.95**	**53**	PFAKE		18 58 30.0	+11
CBN				LR	LR		
	comp=Z,8µm,20.0s						
BINY	**Binghamton**	**118.32**	**48**	PFAKE		18 58 30.0	+10
BINY				LR	LR		
	comp=Z,4µm,19.0s						
MTDJ	**Mount Denham**	**118.77**	**75**	PFAKE		18 58 30.0	+8.3
MTDJ				LR	LR		
	comp=Z,2µm,20.0s						
LONY	**Lake Ozonia**	**118.79**	**45**	PFAKE		18 58 30.0	+9.1
LONY				LR	LR		
	comp=Z,4µm,20.0s						
GROC	**Groznyy**	**119.03**	**313**	*i* PKIKP	**PKiKP**	**18 58 23.8**	**+2.4**
GROC				*e*		18 59 37.5	
GROC				*e*		19 05 27.7	
GROC				pmax	pmax		
	comp=Z,33nm,1.5s						
SFJD	**Kangerlussuaq**	**119.04**	**15**	PFAKE		18 58 30.0	+9.3
SFJD				LR	LR		
	comp=Z,6µm,20.0s						
VRH	**Novokhopyorsk**	**119.40**	**323**	*i* PKIKP	**PKiKP**	**18 58 21.8**	**0.0**
VRH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VRH				MLR	MLR		
	comp=Z,4µm,17.0s						
MOS	**Moscow**	**119.82**	**329**	*i* PKIKP	PKPpre	18 58 15.0	
MOS				*e*		18 58 21.8	
MOS				*e*		18 59 41.9	
MOS				pmax	pmax		
	comp=Z,34nm,0.8s						
LPAZ	**La Paz**	**120.39**	**116**	PKP	**PKPdf**	**18 58 23.6**	**-1.8**
	comp=Z,5.2nm,0.9s,baz=193,slow=2.1,SNR=21						
GNI	**Garni**	**120.46**	**310**	*e*PKPdf	**PKPdf**	**18 58 24.0**	**-0.4**
GNI				LR	LR		
	comp=Z,3µm,20.0s						
LPSR	**Galich'ya Gora**	**120.47**	**325**	*i* PKIKP	**PKiKP**	**18 58 25.3**	**+1.4**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEI	**Tsey**	**120.48**	**313**	*i* PKIKP	**PKPdf**	**18 58 22.2**	**-2.2**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
OBN	**Obninsk**	**120.64**	**329**	PFAKE		18 58 40.0	+16
OBN				LR	LR		
	comp=Z,2µm,20.0s						
OBN	**Obninsk**	**120.64**	**329**	⇓*i*PKIKP	**PKiKP**	**18 58 24.7**	**+0.6**
OBN				*i*		18 58 30.9	
OBN				*e*		18 59 52.3	
OBN				*e*PS	**PS**	**19 09 32.9**	**-10**
OBN				*e*SS	SS	19 16 23.0	+4.2
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,3µm,21.0s						
VSR	**Storozhevoye**	**120.89**	**324**	*i* PKIKP	**PKiKP**	**18 58 24.9**	**+0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV	**Kislovodsk**	**121.04**	**315**	PFAKE		18 58 40.0	+15
KIV				LR	LR		
	comp=Z,3µm,19.0s						
KIV	**Kislovodsk**	**121.04**	**315**	*i* PKIKP	**PKiKP**	**18 58 27.0**	**+1.6**
KIV				*e*		18 59 54.8	
KIV				*e*PS	PKKPdf	19 09 46.1	+43
KIV				*e*SS	SS	19 16 27.0	+1.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,3µm,23.0s						
GTBY	**Guantanamo Bay**	**121.12**	**73**	PFAKE		18 58 40.0	+14
GTBY				LR	LR		
	comp=Z,1µm,21.0s						
FIA1	**FINESS Array S**	**121.63**	**338**	*e*PKPdf	**PKiKP**	**18 58 27.5**	**+1.6**
FINES	**FINESS Array B**	**121.63**	**338**	PKP	**PKPdf**	**18 58 24.4**	**-1.3**
	comp=Z,4.6nm,0.8s,baz=118,slow=6.9,SNR=12						
PKME	**Peaks-Kenny Pk**	**122.23**	**43**	PFAKE		18 58 40.0	+12
PKME				LR	LR		
	comp=Z,7µm,20.0s						
SOC	**Sochi**	**123.20**	**315**	*i* PKIKP	**PKPdf**	**18 58 26.4**	**-2.9**
SOC				*e*PS	PS	19 10 08.4	+1.8
SOC				MLR	MLR		
	comp=Z,2µm,19.0s						
VSU	**Vasula**	**123.32**	**336**	*e*P	**PKPdf**	**18 58 28.8**	**-0.3**
VSU				IAmb	IAmb	18 58 32.1	
	comp=Z,26nm,0.9s						
CPUP	**Villa Florida**	**124.22**	**132**	*e*PKPdf	**PKiKP**	**18 58 32.8**	**+0.6**
CPUP	**Villa Florida**	**124.22**	**132**	PKP	**PKPdf**	**18 58 30.9**	**-0.9**
	comp=Z,6.7nm,0.8s,baz=274,slow=2.0,SNR=16						
ANN	**Anapa**	**124.35**	**317**	*i* PKIKP	**PKPdf**	**18 58 28.8**	**-2.7**
ANN				*e*		19 00 12.9	
ANN				*e*SS	SS	19 17 10.1	+3.3
ANN				pmax	pmax		
	comp=Z,14nm,1.4s						
SDV	**Santo Domingo**	**124.69**	**87**	*e*PKPdf	**PKPdf**	**18 58 31.5**	**-1.8**
SDV				LR	LR		
	comp=Z,1µm,19.0s						
SDDR	**Presa de Saban**	**124.72**	**75**	PFAKE		18 58 40.0	+6.7
SDDR				LR	LR		
	comp=Z,3µm,19.0s						
GRTK	**Grand Turk**	**124.84**	**71**	PFAKE		18 58 40.0	+6.6
GRTK				LR	LR		
	comp=Z,3µm,21.0s						
BOSA	**Boshof**	**125.03**	**223**	PKP	**PKiKP**	**18 58 33.5**	**-0.4**
	comp=Z,23nm,0.9s,baz=128,slow=1.7,SNR=30						
BOSA				PP	**PP**	**19 00 21.8**	**0.0**
	comp=Z,6.9nm,0.8s,baz=93,slow=2.7,SNR=4.0						
IZAR	**Zarasai**	**125.23**	**333**	*e*P	**PKPdf**	**18 58 32.6**	**-0.2**
IZAR				IAmb	IAmb	18 58 36.2	
	comp=Z,7.5nm,1.1s						
IDID	**Didziasalis**	**125.28**	**333**	*e*P	**PKiKP**	**18 58 33.6**	**+0.3**
IDID				IAmb	IAmb	18 58 36.4	
	comp=Z,4.9nm,0.9s						
SUR	**Sutherland**	**125.28**	**217**	*e*PKPdf	**PKiKP**	**18 58 36.6**	**+2.2**
SUR				LR	LR		
	comp=Z,7µm,20.0s						
ISAL	**Salakas**	**125.40**	**333**	*e*P	**PKiKP**	**18 58 34.5**	**+1.0**
ISAL				IAmb	IAmb	18 58 44.5	
	comp=Z,20nm,1.5s						
IIGN	**Ignalina**	**125.49**	**333**	*e*P	**PKiKP**	**18 58 35.4**	**+1.7**
IIGN				IAmb	IAmb	18 58 36.9	
	comp=Z,10nm,1.0s						
NACGM	**Naroch**	**125.51**	**332**	*e*PKP	**PKiKP**	**18 58 34.0**	**+0.2**
NACGM				*e*PP	PP	19 00 33.0	+8.6
NACGM				*e*PKS		19 02 12.0	
NACGM				*e*SKKS		19 07 12.0	
NACGM				*e*SKSP		19 10 18.0	
NACGM				*e*SS	SS	19 17 32.0	+12
NACGM				*e*SSS	SSS	19 22 20.0	
NACGM				*e*LQ	LQ	19 40 20.0	
NACGM				*e*LR	LR	19 47 46.0	
NACGM				LRM	MLR	19 53 15.0	
	comp=Z,8.1nm,20.0s						
SIM	**Simferopol'**	**126.48**	**319**	*i* PKIKP	**PKiKP**	**18 58 37.3**	**+1.3**
SIM				*i*		19 00 34.0	
SIM				*e*		19 10 37.0	
SIM				pmax	pmax		
	comp=Z,200nm,8.6s						
SIM				MLR	MLR		
	comp=Z,3µm,18.0s						
NB2	**NORSAR Subarra**	**126.58**	**345**	PKPdf	**PKiKP**	**18 58 35.5**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=34,slow=1.9						
NOA	**NORSAR Array B**	**126.58**	**345**	PKP	**PKPdf**	**18 58 34.5**	**-0.8**
	comp=Z,2.7nm,0.9s,baz=34,slow=2.0,SNR=8.5						
AKASG	**Malin Array Be**	**126.69**	**327**	PKP	**PKPdf**	**18 58 34.6**	**-1.2**
	comp=Z,4.7nm,0.9s,baz=58,slow=2.1,SNR=17						
AKBB	**Malin Array Si**	**126.69**	**327**	*e*PKPdf	**PKiKP**	**18 58 36.5**	**+0.3**
AKBB	**Malin Array Si**	**126.69**	**327**	*e*PKIKP	**PKiKP**	**18 58 36.5**	**+0.3**
KIEV	**Kiev**	**126.71**	**327**	*e*PKPdf	**PKPdf**	**18 58 35.2**	**-0.6**
KIEV				LR	LR		
	comp=Z,5µm,21.0s						
KIEV	**Kiev**	**126.71**	**327**	⇑*i*P	**PKPdf**	**18 58 34.1**	**-1.7**
KIEV	**Kiev**	**126.71**	**327**	⇑PKIKP	**PKPdf**	**18 58 34.1**	**-1.7**
AK11	**Malin Array Si**	**126.74**	**327**	*e*PKPdf	**PKPdf**	**18 58 35.0**	**-0.8**
KMBO	**Kilima Mbogo**	**127.20**	**260**	PKP	**PKiKP**	**18 58 38.2**	**-0.5**
KMBO				LR	LR		
	comp=Z,4µm,19.0s						
KMBO	**Kilima Mbogo**	**127.20**	**260**	PKIKP	**PKiKP**	**18 58 38.2**	**-0.5**
KMBO				MLR	MLR		
	comp=Z,4µm,19.0s						
KMBO	**Kilima Mbogo**	**127.20**	**260**	PKP	**PKiKP**	**18 58 38.2**	**-0.5**
	comp=Z,6.9nm,1.1s,baz=100,slow=2.8,SNR=14						
BRTR	**Keskin Array B**	**128.77**	**313**	PKP	**PKPdf**	**18 58 39.5**	**-0.8**
	comp=Z,3.9nm,1.1s,baz=129,slow=3.3,SNR=12						
BRTR				PP	PP	19 00 54.8	+8.0
	comp=Z,2.2nm,1.0s,baz=90,slow=7.2,SNR=4.5						
KIS	**Kishinev**	**128.85**	**323**	*e*PKP	**PKPdf**	**18 58 36.0**	**-4.0**
KIS	**Kishinev**	**128.85**	**323**	*e*PP	PP	19 00 36.0	-11
KIS	**Kishinev**	**128.85**	**323**	*e*PS	PS	19 10 40.0	-16
KIS				*e*SS	SS	19 18 10.0	+7.5
KIS				*e*L	L	19 45 04.0	
KIS				LRM	MLR	19 57 00.0	
	comp=Z,4µm,22.0s						
KIS	**Kishinev**	**128.85**	**323**	*e*PKIKP	**PKPdf**	**18 58 36.0**	**-4.0**
KIS				MLR	MLR		
	comp=Z,4µm,22.0s						
KIS				MLR	MLR		
	comp=N,4µm,22.0s						
ANTO	**Ankara**	**129.33**	**313**	*e*PKPdf	**PKiKP**	**18 58 44.0**	**+2.0**
ANTO				LR	LR		
	comp=Z,2µm,20.0s						
ANTO	**Ankara**	**129.33**	**313**	⇓*i*P	**PKiKP**	**18 58 43.0**	**+1.1**
ANTO	**Ankara**	**129.33**	**313**	⇓PKIKP	**PKiKP**	**18 58 43.1**	**+1.1**
SJG	**San Juan**	**129.59**	**76**	*e*PKPdf	**PKPdf**	**18 58 41.6**	**-0.6**
SJG				LR	LR		
	comp=Z,2µm,20.0s						
SJG	**San Juan**	**129.59**	**76**	*e*PKIKP	**PKPdf**	**18 58 41.6**	**-0.6**
SJG				MLR	MLR		
	comp=Z,2µm,20.0s						
GHAJ	**Ghor Haditha**	**129.63**	**302**	PKP	**PKiKP**	**18 58 44.3**	**+1.6**
LVV	**L'vov**	**129.94**	**328**	*e*PKIKP	**PKiKP**	**18 58 42.3**	**-0.5**
LVV				*e*		19 00 57.5	
LVV				pmax	pmax		
	comp=E,2µm,22.0s						
LVV				pmax	pmax		
	comp=N,2µm,21.0s						
LVV				pmax	pmax		
	comp=Z,3µm,22.0s						
LSZ	**Lusaka**	**130.36**	**239**	*e*PKPdf	**PKiKP**	**18 58 44.4**	**-0.4**

LSZ				LR	LR		
	comp=Z,3µm,20.0s						
LSZ	Lusaka	130.36	239	ePKIKP	PKiKP	18 58 44.4	-0.4
LSZ				MLR	MLR		
	comp=Z,3µm,20.0s						
EFOR	EFORIE	130.39	320	⇑iP	PKiKP	18 58 46.3	+2.5
BIZ	Bicaz	130.46	324	⇓iP	PKiKP	18 58 44.0	0.0
EIL	Elat	130.48	300	PKP	PKPdf	18 58 43.4	-0.3
BURAR	Bucovina Array	130.59	325	⇑iP	PKiKP	18 58 45.5	+1.2
BURAR	Bucovina Array	130.59	325	⇑PKIKP	PKiKP	18 58 45.5	+1.2
BUR04	Bucovina Ar. S	130.59	325	ePKPdf	PKPdf	18 58 43.4	-0.1
MLR	Muntele Rosu	131.33	323	⇑iP	PKPdf	18 58 44.2	-0.8
MLR	Muntele Rosu	131.33	323	⇑PKIKP	PKPdf	18 58 44.2	-0.8
DOPR	Dopca	131.41	323	⇑iP	PKiKP	18 58 48.8	+2.9
UZH	Uzhgorod	131.57	328	ePKHKP	PKPpre	18 58 32.0	
UZH				e		18 58 45.1	
UZH				e		18 58 55.7	
UZH				eSS	SS	19 18 30.7	-4.9
UZH				MLR	MLR		
	comp=Z,300nm,17.0s						
TRPA	Tarpa	131.75	327	⇑iP	PKPdf	18 58 44.1	-1.4
VOIR		131.89	323	⇑iP	PKPdf	18 58 45.2	-0.8
VOIR		131.89	323	⇑PKIKP	PKPdf	18 58 45.2	-0.8
TRIS	Tristan da Cun	132.17	182	PFAKE		18 59 00.0	+12
TRIS				LR	LR		
	comp=Z,8µm,22.0s						
HUMR	Humele	132.42	322	⇑iP	PKPdf	18 58 45.3	-1.6
DRGR		132.46	326	⇑iP	PKPdf	18 58 46.4	-0.6
DRGR		132.46	326	⇑PKIKP	PKPdf	18 58 46.4	-0.6
OKC	Ostrava-Krasne	132.82	332	AMS	AMS	19 53 10.0	
	comp=Z,5µm,22.5s						
MORC	Moravsky Berou	133.15	332	⇑iP	PKPdf	18 58 47.6	-0.6
MORC	Moravsky Berou	133.15	332	⇑PKIKP	PKPdf	18 58 47.6	-0.6
GZR	Gura Zlata	133.24	324	⇓iP	PKPdf	18 58 48.4	-0.1
GZR	Gura Zlata	133.24	324	⇓PKIKP	PKPdf	18 58 48.4	-0.1
PTGA	Pitinga	133.29	101	PFAKE		18 59 00.0	+9.4
PTGA				LR	LR		
	comp=Z,13µm,19.0s						
DPC	Dobruska-Polom	133.29	333	ePKPDF	PKiKP	18 58 49.1	-0.5
DPC				ex	x	19 02 40.4	
DPC				AMS	AMS	19 55 20.0	
	comp=Z,3µm,18.8s						
DPC	Dobruska-Polom	133.29	333	ePKIKP	PKiKP	18 58 49.1	-0.5
DPC				MLR	MLR		
	comp=Z,3µm,18.8s						
UPC	Upice	133.31	334	ePP	PP	19 01 14.0	-1.2
UPC				ex	x	19 02 40.3	
UPC				AMS	AMS	19 56 30.0	
	comp=Z,4µm,19.7s						
SIRR	Siria	133.35	326	⇑iP	PKPdf	18 58 47.7	-0.9
VYHS	Vyhne	133.41	330	ePKIKP	PKiKP	18 58 52.3	+2.4
VYHS				e		19 01 14.4	
VYHS				MLR	MLR		
	comp=Z,2µm,23.6s						
VYHS	Vyhne	133.41	330	ePKP	PKiKP	18 58 52.3	+2.4
VYHS				ePP	PP	19 01 14.3	-1.7
MBAR	Mbarara	133.63	259	PFAKE		18 59 00.0	+8.4
MBAR				LR	LR		
	comp=Z,308nm,19.0s						
ANWB	Willy Bob	133.76	76	PFAKE		18 59 00.0	+8.6
ANWB				LR	LR		
	comp=Z,2µm,20.0s						
BZS	Buzias	133.77	325	⇓iP	PKiKP	18 58 51.3	+0.6
BZS	Buzias	133.77	325	⇓PKIKP	PKiKP	18 58 51.3	+0.6
GRGR	Grenville	133.79	84	PFAKE		18 59 00.0	+8.4
GRGR				LR	LR		
	comp=Z,2µm,21.0s						
BRG	Berggiesshubel	133.92	335	ePKP	PKiKP	18 58 53.2	+2.4
	comp=Z,7.2nm,1.1s						
BRG				e		18 58 56.5	
	comp=Z,11nm,1.2s						
BRG				PP	PP	19 01 17.0	-2.0
BRG				PKS		19 02 29.0	
BRG				SS	SS	19 19 20.0	+16
	comp=N,4µm,18.7s						
	comp=E,2µm,20.4s						
	comp=Z,7µm,20.5s						
BRG	Berggiesshubel	133.92	335	ePKIKP	PKiKP	18 58 53.2	+2.4
BRG						19 01 17.0	
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,11nm,1.3s						
BRG				MLR	MLR		
	comp=N,4µm,18.7s						
BRG				MLR	MLR		
	comp=E,2µm,20.4s						
BRG				MLR	MLR		
	comp=Z,7µm,20.5s						
PVCC	Panska Ves	133.92	335	ePKPDF	PKiKP	18 58 52.6	+1.8
PVCC				AMS	AMS	19 57 10.0	
	comp=Z,6µm,21.0s						
PVCC	Panska Ves	133.92	335	ePKIKP	PKiKP	18 58 52.6	+1.8
PVCC				MLR	MLR		
	comp=Z,6µm,21.0s						
VRAC	Vranov	133.92	332	⇑iP	PKiKP	18 58 51.1	+0.2
VRAC	Vranov	133.92	332	⇑PKIKP	PKiKP	18 58 51.1	+0.2
CLL	Collm	133.96	336	ePKPdf	PKiKP	18 58 52.0	+1.1
	comp=Z,11nm,1.2s						
CLL				e		18 58 58.0	
CLL				ePP	PP	19 01 19.0	-0.2
	comp=Z,58nm,2.0s						
CLL				ePKSbc	PKSbc	19 02 21.0	+1.2
CLL				ePKSdfmax		19 02 30.0	
CLL				ePPS	PPS	19 13 18.0	
CLL				eSS	SS	19 19 18.0	+14
CLL				eSSS	SSS	19 23 54.0	
CLL				LmH		19 58 00.0	
	comp=N,4µm,20.2s						
CLL				LmH		19 58 00.0	
	comp=E,2µm,20.3s						
CLL				LmV		19 58 00.0	
	comp=Z,5µm,20.9s						
CLL	Collm	133.96	336	ePKIKP	PKiKP	18 58 52.0	+1.1
CLL				e		18 58 58.0	
CLL				pmax	pmax		
	comp=Z,11nm,1.2s						
CLL				MLR	MLR		
	comp=Z,5µm,20.9s						
KRUC	Moravsky	134.18	332	ePKP	PKPdf	18 58 49.1	-1.0
MDVR	Moldovita	134.21	324	⇑iP	PKPdf	18 58 50.6	+0.3
MODS	Modra-Piesok	134.25	331	ePKIKP	PKiKP	18 58 53.6	+2.0
MODS				e		19 01 21.8	
MODS	Modra-Piesok	134.25	331	ePKP	PKiKP	18 58 53.6	+2.0
MODS				ePP	PP	19 01 21.8	+0.5
GOPC	GO Pecny, Ondr	134.28	334	AMS	AMS	19 54 00.0	
	comp=Z,5µm,22.4s						
PRU	Pruhonice	134.33	334	ePP	PP	19 01 21.1	-0.6
PRU				ex	x	19 02 38.2	
PRU				AMS	AMS	19 54 30.0	
	comp=Z,6µm,22.2s						
TREC	Trest	134.43	333	ePKPDF	PKiKP	18 58 54.5	+2.6
TREC				AMS	AMS	19 56 00.0	
	comp=Z,3µm,22.6s						
TREC	Trest	134.43	333	ePKIKP	PKiKP	18 58 54.5	+2.6
TREC				MLR	MLR		
	comp=Z,3µm,22.6s						
ZST	Bratislava	134.46	331	ePP	PP	19 01 21.4	-1.2
VTS	Vitosha	134.52	321	⇑iP	PKPpre	18 58 43.7	
VTS	Vitosha	134.52	321	⇑PKIKP	PKPpre	18 58 43.7	
ESK	Eskdalemuir	134.89	351	PFAKE		18 59 00.0	+7.4
ESK				LR	LR		
	comp=Z,4µm,22.0s						
MORH	Mrgy, Hungar	135.01	328	ePKiKP	PKPdf	18 58 49.0	-2.7
NKC	Novy Kostel	135.02	336	AMS	AMS	19 56 50.0	
	comp=Z,6µm,20.4s						
CONA	Conrad Observa	135.24	331	eP	PKiKP	18 58 56.3	+2.6
	comp=Z,6.1nm,0.9s						
KHC	Kasperske Hory	135.39	334	ePKPpre	PKPpre	18 58 44.7	
KHC				ePKPDF	PKiKP	18 58 54.5	+0.6
KHC				ePP	PP	19 01 23.3	-5.1
KHC				AMS	AMS	19 56 50.0	
	comp=Z,6µm,22.6s						
KHC	Kasperske Hory	135.39	334	ePKIKP	PKPpre	18 58 44.7	
KHC				e		18 58 54.5	
KHC				e		19 01 23.3	
KHC				MLR	MLR		
	comp=Z,6µm,22.6s						
GERES	GERESS Array B	135.55	334	PKP	PKiKP	18 58 54.1	-0.3
	comp=Z,3.1nm,0.9s,baz=22,slow=1.4,SNR=18						
APE	Apeiranthos	135.67	313	⇑iP	PKPdf	18 58 52.8	-0.5
APE	Apeiranthos	135.67	313	⇑PKIKP	PKPdf	18 58 52.8	-0.5
BBGH	Gun Hill	135.88	82	PFAKE		18 59 10.0	+14
BBGH				LR	LR		
	comp=Z,3µm,21.0s						
MOA	Molln	136.04	332	eP	PKiKP	18 58 57.4	+2.1
	comp=Z,4.2nm,1.0s						
TSUM	Tsumeb	136.45	227	ePKPdf	PKPdf	18 58 55.7	+0.4
TSUM				LR	LR		
	comp=Z,6µm,19.0s						
PERS	Pernice	136.51	330	i PKPdf	PKiKP	18 58 58.0	+1.7
SOKA	Soboth	136.53	330	eP	PKiKP	18 58 58.4	+2.0
	comp=Z,8.8nm,1.2s						
KBA	Koelnbreinsper	137.03	332	epPKPdf	PKiKP	18 58 58.9	+1.4
	comp=Z,6.3nm,1.1s						
MYKA	Terra Mystica	137.22	331	eP	PKiKP	18 58 59.7	+1.9
	comp=Z,4.6nm,1.0s						
VISS	Visnje	137.24	330	i PKPdf	PKiKP	18 59 00.1	+2.4
BOJS	Bojanci	137.24	329	i PKPdf	PKiKP	18 59 00.4	+2.7
BDFB	Brasilia	137.53	128	PKhKP	PKPpre	18 58 54.3	
	comp=Z,9.4nm,0.8s,baz=169,slow=2.2,SNR=8.9						
JAVS	Javornik	137.56	330	i PKPdf	PKiKP	18 59 00.7	+2.2
WATA	Walderalm	137.63	334	epPKPdf	PKiKP	18 58 58.9	+0.2
	comp=Z,9.1nm,1.0s						
WTTA	Wattenberg	137.66	334	ePKiKP	PKiKP	18 58 58.2	-0.5
	comp=Z,11nm,1.2s						
ABTA	Abfaltersbach	137.66	332	epPKPdf	PKiKP	18 58 58.6	-0.1
	comp=Z,11nm,1.0s						
MOTA	Moosalm	137.82	334	epPKPdf	PKiKP	18 58 59.6	+0.5
	comp=Z,4.9nm,0.8s						
SQTA	Sankt Quirin	137.88	334	epPKPdf	PKiKP	18 58 59.7	+0.5
	comp=Z,14nm,1.2s						
BFO	Black Forest	138.16	337	PFAKE		18 59 10.0	+10
BFO				LR	LR		
	comp=Z,94nm,21.0s						
FETA	Feichten	138.24	334	epPKPdf	PKiKP	18 59 00.5	+0.6
	comp=Z,12nm,1.1s						
DAVA	Damuels	138.39	335	epPKPdf	PKiKP	18 59 00.7	+0.5
	comp=Z,5.5nm,0.9s						
MAHO	Mahon	146.75	333	PKP	PKPbc	18 59 13.6	-1.0
KEST	Kesra	147.24	323	PKPbc	PKPbc	18 59 16.4	+0.1
	comp=Z,40nm,1.1s,baz=357,slow=0.9,SNR=14						
PGAV	Gavieira, Arco	148.66	351	A	A	20 03 18.5	
	comp=Z,4µm,20.0s						
SET	Setif	149.12	328	P	PKPab	18 59 25.0	-0.6
UCM	Universidad Co	149.14	343	PKP	PKiKP	18 59 23.3	+0.9
POLO	Lamas de Olo	149.16	350	ePKPdf	PKPab	18 59 24.1	-1.4
MVO	Moncorvo	149.22	349	ePKPdf	PKPab	18 59 24.0	-1.8
MVO	Moncorvo	149.22	349	eLR	LR	19 50 15.5	
	comp=Z,4µm,20.0s						
PVIS	Viseu	149.81	350	ePKPdf	PKiKP	18 59 24.6	+0.8
ESDC	Sonseca Array	149.93	344	PKPbc	PKiKP	18 59 24.2	+0.2
	comp=Z,6.8nm,0.9s,baz=24,slow=3.1,SNR=16						
MTE	Manteigas	150.06	349	ePKPdf	PKiKP	18 59 26.2	+1.9
MTE	Manteigas	150.06	349	A	A	20 04 45.2	
	comp=Z,3µm,20.0s						
PAB	San Pablo	150.16	344	PFAKE		18 59 30.0	+0.4
PAB				LR	LR		
	comp=Z,4µm,21.0s						
PCAS	Casmilo, Conde	150.56	351	ePKPdf	PKiKP	18 59 26.1	+0.8
PCBR	Castelo Branco	150.59	349	ePKPfd	PKiKP	18 59 26.3	+1.0
CART	Cartagena	150.87	338	PKP	PKPab	18 59 30.2	-2.4
PMRV	Marv??o	150.97	349	ePKPdf	PKiKP	18 59 27.7	+1.5
PMRV	Marv??o	150.97	349	A	A	20 03 31.1	
	comp=Z,3µm,22.0s						
PMTG	Montargil	151.47	350	ePKPdf	PKiKP	18 59 29.1	+1.9
CMLA	Cha da Macela	151.53	19	PFAKE		18 59 30.0	+2.7
CMLA				LR	LR		
	comp=Z,4µm,19.0s						
PESTR	Estremoz	151.55	349	ePKPdf	PKPab	18 59 32.7	-2.6
SHEL	Horse Pasture	151.89	198	PFAKE		18 59 30.0	+1.3
SHEL				LR	LR		
	comp=Z,2µm,20.0s						
LIS	Lisbon	151.97	351	ePKPdf	PKPdf	18 59 20.0	-1.3
LIS				AMS	AMS	20 16 29.1	
	comp=Z,3µm,17.3s						
LIS	Lisbon	151.97	351	ePKIKP	PKPdf	18 59 20.0	-1.3
MESJ	Messejana	152.67	349	ePKPdf	PKPdf	18 59 21.1	-1.3
MESJ				AMS	AMS	20 02 17.5	
	comp=Z,3µm,17.2s						
MESJ	Messejana	152.67	349	ePKIKP	PKPdf	18 59 21.1	-1.3
EMAL	Malaga-Limoner	152.78	342	PKP	PKPpre	18 59 10.8	
RCBR	Riachuelo	152.90	127	PFAKE		18 59 30.0	-0.7
RCBR				LR	LR		
	comp=Z,48µm,21.0s						
LIJA	Lijar	152.92	344	PKP	PKiKP	18 59 30.8	+0.4
PVAQ	Vaqueiros	152.99	348	ePKPdf	PKPab	18 59 41.8	+0.4
PVAQ	Vaqueiros	152.99	348	A	A	20 01 37.7	
	comp=Z,3µm,22.0s						
MORF	Marmelete	153.26	350	ePKPdf	PKPdf	18 59 22.1	-1.3
MORF				AMS	AMS	20 07 32.8	
	comp=Z,3µm,19.9s						
MORF	Marmelete	153.26	350	ePKIKP	PKPdf	18 59 22.0	-1.3
SFS	San Fernando	153.55	345	PKP	PKPdf	18 59 19.4	-4.2
MELI	Melilla	153.62	338	PKP	PKPdf	18 59 25.8	+1.9
CEU	Ceuta	153.85	343	PKP	PKPdf	18 59 23.6	-0.5
IFR	Ifrane	155.99	341	PKP	PKPdf	18 59 26.6	-0.9
AVE	Averroes	156.86	345	PKP	PKPdf	18 59 28.1	-0.2
PMOZ	Porto Moniz, M	158.11	6	eLR	LR	19 54 10.3	
	comp=Z,2µm,20.0s						
ASCN	Ascension	161.22	180	PFAKE		18 59 40.0	+6.0
ASCN				LR	LR		
	comp=Z,32µm,20.0s						
TORD	Torodi Ar. Bea	164.06	279	PKP	PKPdf	18 59 35.6	-1.1
	comp=Z,9.8nm,1.0s,baz=1.5,slow=2.5,SNR=29						
TORD				PKPab	PKPab	19 00 29.2	-0.9
	comp=Z,8.3nm,1.1s,baz=89,slow=2.3,SNR=6.4						
TORD				PP	PP	19 04 15.0	-1.2
	comp=Z,3.9nm,1.2s,baz=132,slow=10,SNR=3.8						
KIC	Kosan Boka	169.36	245	eP	PKPab	19 00 51.8	-1.7
	comp=Z,214nm,1.7s						
LIC	Lamto	169.55	244	eP	PKPab	19 00 55.5	+1.2
	comp=Z,103nm,1.4s						
DBIC	Dimbokro	169.60	247	PKP	PKPdf	18 59 40.2	-0.7
	comp=Z,13nm,1.0s,baz=32,slow=1.6,SNR=9.0						
DBIC				PKPab	PKPab	19 00 54.7	+0.2
	comp=Z,4.9nm,0.7s,baz=114,slow=5.7,SNR=5.0						
TIC	Toumodi	169.73	246	eP	PKPab	19 00 55.0	-0.2
SACV	Santiago Islan	170.24	65	PFAKE		18 59 50.0	+8.7
SACV				LR	LR		
	comp=Z,2µm,21.0s						

IDC ***10*** *18:41:18.1±0.6, 10°.94S×165°.53E, h0^{km}, mb4.9/21, mb1 5.0/22, mb1mx4.9/39, mbtmp4.9/22, ML4.8/1, MS5.6/1, Ms1 5.6/1, ms1mx4.2/18, Error ellipse: s-maj=21.6km s-min=16.0km az=125.0*

NEIC ***10*** *18:41:19.6±0.3, 10°.93S×165°.53E, h10^{km}, mb4.6/1, Error ellipse: s-maj=10.3km s-min=7.5km az=111.0*

ISCJB ***10*** *18:41:20.8±0.5, 11°.02S±0°.08×165°.5E±0°.1, h30^{km}, mb4.8/21, MS5.5/1, Error ellipse: s-maj=14.7km s-min=10.7km az=19.9*

ISC 10 18:41:22.7±0.6**, 10°.97S**±0°.09×**165°.5E**±0°.1**, h30^{km}, n27, σ0^{s}.67**/27**, mb4.9**/21**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.07	176	Pn	Pn	18 43 59.0	-0.2
	7.5nm,0.3s,baz=331,slow=19,SNR=5.4						
CTA	Charters Tower	20.64	242	P	P	18 46 00.4	+0.4
	48nm,0.8s,baz=63,slow=7.9,SNR=3.5						
RAO	Raoul Island	23.87	142	LR	LR	18 53 09.8	
	comp=Z,15µm,20.0s,baz=296,slow=30						
URZ	Urewera	29.09	161	P	P	18 47 21.2	+0.6
	53nm,0.9s,baz=344,slow=7.2,SNR=3.1						
STKA	Stephens Creek	30.35	223	P	P	18 47 32.0	+0.1
	22nm,0.9s,baz=46,slow=7.0,SNR=3.5						
WRAB	Tennant Creek	31.30	250	P	P	18 47 34.7	-5.7
	5.0nm,0.6s						
WRA	Warramunga Arr	31.31	250	P	P	18 47 39.6	-0.9
	20nm,0.8s,baz=82,slow=8.7,SNR=5.5						
WRA				PcP	PcP	18 50 35.0	+0.6
	7.5nm,0.9s,baz=71,slow=2.9,SNR=5.0						
ASAR	Alice Springs	32.63	243	P	P	18 47 51.0	-1.1
	42nm,0.8s,baz=70,slow=9.8,SNR=7.8						
ASAR				PcP	PcP	18 50 38.2	+0.2
	5.4nm,0.9s,baz=66,slow=2.0,SNR=4.6						
MJAR	Matsushiro Arr	53.80	333	P	P	18 50 41.8	-0.9
	6.4nm,1.0s,baz=166,slow=7.3,SNR=3.4						
JNU	Nakatsue	54.89	324	P	P	18 50 50.5	-0.2
	16nm,0.9s,baz=108,slow=9.6,SNR=2.3						
ASAJ	Asahikawa	58.65	341	P	P	18 51 17.6	+0.5
	9.9nm,0.8s,baz=121,slow=12,SNR=2.0						
PETK	Petropavlovsk-	64.17	355	P	P	18 51 54.5	+0.3
	11nm,1.1s,baz=108,slow=9.3,SNR=2.8						
CMAR	Chiang Mai Arr	71.88	294	P	P	18 52 44.7	+1.2
	3.7nm,0.9s,baz=124,slow=4.9,SNR=2.5						
SONM	Songino Array	78.48	324	P	P	18 53 22.0	+1.0
	4.0nm,0.9s,baz=123,slow=5.3,SNR=1.8						
ILAR	Eielson Array	83.51	19	P	P	18 53 47.4	+0.1
	4.6nm,0.7s,baz=240,slow=5.0,SNR=4.7						
YBH	Yreka Blue Hor	83.99	46	P	P	18 53 51.0	+0.6
YBH	Yreka Blue Hor	83.99	46	P	P	18 53 51.0	+0.6
	16nm,0.8s,baz=302,slow=1.2,SNR=7.2						
NVAR	Mina Array Bea	86.14	50	P	P	18 54 01.7	+0.2
	16nm,1.0s,baz=230,slow=8.6,SNR=6.3						
DLBC	Dease Lake	86.44	28	P	P	18 54 01.6	-0.6
	9.7nm,1.0s,baz=243,slow=8.2,SNR=3.1						
NEW	Newport	89.83	41	P	P	18 54 18.5	-0.1
	5.2nm,0.8s,baz=256,slow=6.7,SNR=4.0						
MKAR	Makanchi Array	93.32	317	P	P	18 54 34.6	-0.2
	3.7nm,1.1s,baz=99,slow=8.9,SNR=1.7						
ZALV	Zalesovo Beam	93.37	324	P	P	18 54 34.2	-0.6
	2.7nm,0.8s,baz=106,slow=3.1,SNR=2.4						
PDAR	Pinedale Array	93.66	47	P	P	18 54 36.5	-0.3
	4.7nm,1.0s,baz=251,slow=2.1,SNR=6.0						
YKA	Yellowknife Ar	95.00	27	P	P	18 54 40.7	-1.4
	3.3nm,0.8s,baz=257,slow=4.7,SNR=5.7						
TXAR	Lajitas Array	95.98	61	P	P	18 54 47.4	-0.1
	0.6nm,0.7s,baz=226,slow=4.9,SNR=3.7						
ARCES	ARCESS Array B	116.21	345	PKP	PKiKP	19 00 02.1	-0.5
	2.2nm,0.8s,baz=72,slow=4.0,SNR=6.2						
LPAZ	La Paz	120.41	116	PKP	PKiKP	19 00 13.3	+0.3
	2.4nm,0.8s,baz=294,slow=2.7,SNR=3.8						

IDC ***10*** *18:43:01.3±0.9, 11°.04S×165°.59E, h0^{km}, mb4.5/11, mb1 4.8/13, mb1mx4.5/40, mbtmp4.6/13, ML4.8/2, Error ellipse: s-maj=30.2km s-min=19.7km az=138.0*

NEIC ***10*** *18:43:03.0±0.6, 11°.00S×165°.57E, h10^{km}, mb4.5/1, Error ellipse: s-maj=14.8km s-min=11.8km az=130.0*

ISCJB ***10*** *18:43:04.5±0.5, 11°.04S±0°.07×165°.43E±0°.07, h30^{km}, mb4.5/11, Error ellipse: s-maj=11.5km s-min=7.4km az=40.4*

ISC 10 18:43:06.1±0.6**, 11°.0S**±0°.1×**165°.50E**±0°.10**, h30^{km}, n24, σ0^{s}.94**/24**, mb4.5**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.68	285	Pn	Pn	18 44 28.9	+0.3
	30nm,0.3s,baz=86,slow=16,SNR=1.9						
HNR				Sn	Sn	18 45 32.6	-0.3
	18nm,0.3s,baz=204,slow=20,SNR=2.6						
DZM	Mont Dzumac	11.04	175	Pn	Pn	18 45 42.0	-0.2
	5.8nm,0.3s,baz=310,slow=22,SNR=7.5						
CTA	Charters Tower	20.60	242	P	Pn	18 47 44.6	-0.8
	37nm,1.1s,baz=71,slow=16,SNR=3.0						
RTZ	Ruatahuna	29.35	161	P	P	18 49 06.9	+0.4
MTHZ	Maungataniwha	29.52	162	P	P	18 49 09.3	+1.3
BKZ	Black Stump Fm	29.71	163	P	P	18 49 10.7	+1.1
BHHZ	Black Hill Sta	29.88	163	P	P	18 49 12.3	+1.1
KAHZ	Kahuranaki	30.40	163	P	P	18 49 16.6	+0.8
MRZ	Mangatainoka R	30.85	165	P	P	18 49 21.3	+1.6
HOWZ	Holdsworth Sta	31.06	165	P	P	18 49 21.3	-0.2
WRAB	Tennant Creek	31.26	250	eP	P	18 49 22.7	-0.9
	4.7nm,0.6s						
WRA	Warramunga Arr	31.27	250	P	P	18 49 23.1	-0.5
	25nm,1.2s,baz=81,slow=9.2,SNR=4.3						
TRWZ	Traveller	31.57	165	P	P	18 49 25.9	-0.2
ASAR	Alice Springs	32.59	243	P	P	18 49 34.6	-0.7
	14nm,0.9s,baz=69,slow=10,SNR=6.0						
MJAR	Matsushiro Arr	53.82	333	P	P	18 52 27.0	+0.7
	3.1nm,1.0s,baz=170,slow=8.8,SNR=4.1						
PETK	Petropavlovsk-	64.21	355	P	P	18 53 38.5	+0.5
	7.8nm,1.1s,baz=180,slow=7.1,SNR=2.9						
CMAR	Chiang Mai Arr	71.87	294	P	P	18 54 27.3	+0.4
	1.6nm,0.8s,baz=125,slow=5.3,SNR=2.9						
SONM	Songino Array	78.49	324	P	P	18 55 05.6	+1.0
	3.3nm,0.9s,baz=116,slow=6.0,SNR=3.1						
ILAR	Eielson Array	83.55	19	P	P	18 55 30.4	-0.6
	2.6nm,0.6s,baz=236,slow=6.3,SNR=3.1						
YBH	Yreka Blue Hor	84.04	46	P	P	18 55 35.2	+1.0
	5.0nm,1.1s,baz=210,slow=5.1,SNR=2.6						
NVAR	Mina Array Bea	86.18	50	P	P	18 55 45.2	0.0
	2.4nm,0.8s,baz=236,slow=6.4,SNR=2.7						
YKA	Yellowknife Ar	95.05	27	P	P	18 56 23.8	-2.0
	0.6nm,0.7s,baz=253,slow=4.7,SNR=3.4						
ARCES	ARCESS Array B	116.23	345	PKP	PKiKP	19 01 44.6	-1.4
	1.7nm,0.9s,baz=71,slow=3.9,SNR=3.0						
BOSA	Boshof	124.98	223	PKP	PKPdf	19 02 04.2	-0.1
	3.3nm,0.9s,baz=198,slow=3.2,SNR=3.5						

IDC 10 18:46:39.2±1.8**, 11°.01S**×**165°.39E, h0^{km}, mb4.0**/3**, mb1 4.3**/4**, mb1mx3.8**/37**, mbtmp4.1**/4**, ML3.9**/1**, Error ellipse: s-maj=54.1km s-min=31.6km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.05	175	Pn	Pn	18 49 18.7	0.0
	0.8nm,0.3s,baz=3.5,slow=19,SNR=3.5						
WRA	Warramunga Arr	31.17	250	P	P	18 53 00.3	+0.1
	1.1nm,0.5s,baz=81,slow=8.7,SNR=7.4						
ASAR	Alice Springs	32.50	243	P	P	18 53 11.8	-0.2
	1.6nm,0.6s,baz=66,slow=10,SNR=5.9						
ILAR	Eielson Array	83.59	19	P	P	18 59 09.1	0.0
	0.4nm,0.5s,baz=241,slow=4.7,SNR=6.5						

IDC ***10*** *18:55:59.3±1.1, 10°.99S×165°.50E, h0^{km}, mb4.1/10, mb1 4.3/12, mb1mx4.1/41, mbtmp4.2/12, ML5.0/2, MS4.9/2, Ms1 4.9/2, ms1mx4.2/41, Error ellipse: s-maj=33.7km s-min=20.6km az=131.0*

NEIC ***10*** *18:56:00.9±0.6, 10°.96S×165°.52E, h10^{km}, mb4.2/1, Error ellipse: s-maj=14.3km s-min=11.6km az=117.0*

ISCJB ***10*** *18:56:02.5±0.8, 11°.08S±0°.10×165°.40E±0°.08, h30^{km}, mb4.0/10, MS5.4/1, Error ellipse: s-maj=14.6km s-min=10.7km az=28.5*

ISC 10 18:56:04.1±0.8**, 11°.0S**±0°.1×**165°.48E**±0°.10**, h30^{km}, n23, σ0^{s}.74**/20**, mb4.0**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.66	285	eP	Pn	18 57 27.0	+0.7
HNR				eS	Sn	18 58 30.0	-0.4
HNR	Honiara	5.66	285	Pn	Pn	18 57 26.5	+0.2
	66nm,0.3s,baz=142,slow=7.1,SNR=11						
HNR				Sn	Sn	18 58 29.6	-0.8
	baz=148,slow=21,SNR=2.6						
HNR				LR	LR	18 58 57.7	
	comp=Z,5µm,19.6s,baz=66,slow=31						
DZM	Mont Dzumac	11.06	175	Pn	Pn	18 58 40.5	0.0
	5.6nm,0.3s,baz=213,slow=6.0,SNR=19						
CTA	Charters Tower	20.60	242	P	P	19 00 41.0	0.0
	8.3nm,1.0s,baz=72,slow=13,SNR=5.4						
CTAO	Charters Tower	20.60	242	eP	P	19 00 41.8	+0.8
H11S2	WAKE ISLAND Hy	29.31	2	T	T	19 32 41.7	
	baz=181,slow=76,SNR=5.4						
H11S3	WAKE ISLAND Hy	29.32	2	T	T	19 32 44.8	
	baz=181,slow=76,SNR=3.5						
H11S1	WAKE ISLAND Hy	29.33	2	T	T	19 32 45.8	
	baz=181,slow=76,SNR=5.4						
STKA	Stephens Creek	30.31	223	P	P	19 02 13.3	+0.3
	2.9nm,0.9s,baz=357,slow=8.2,SNR=3.3						
H11N1	WAKE ISLAND Hy	30.54	3	T	T	19 34 17.4	
	baz=182,slow=76,SNR=3.7						
H11N3	WAKE ISLAND Hy	30.54	3	T	T	19 34 15.5	
	baz=182,slow=76,SNR=3.2						
H11N2	WAKE ISLAND Hy	30.55	3	T	T	19 34 15.7	
	baz=182,slow=76,SNR=3.4						
WRAB	Tennant Creek	31.25	250	P	P	19 02 21.2	-0.3
	2.1nm,0.6s						
WRA	Warramunga Arr	31.26	250	P	P	19 02 20.7	-0.9
	3.4nm,0.9s,baz=81,slow=9.2,SNR=20						
WRA				PcP	PcP	19 05 16.1	+0.3
	1.1nm,1.0s,baz=73,slow=2.8,SNR=4.7						
ASAR	Alice Springs	32.59	243	P	P	19 02 32.2	-1.1
	7.5nm,0.8s,baz=72,slow=9.6,SNR=46						
ASAR				PcP	PcP	19 05 19.3	-0.1
	1.2nm,1.0s,baz=83,slow=2.6,SNR=4.5						
FITZ	Fitzroy Crossi	39.15	255	P	P	19 03 28.2	-1.3
	2.3nm,0.9s,baz=104,slow=8.8,SNR=5.3						
CMAR	Chiang Mai Arr	71.85	294	P	P	19 07 25.6	+0.8
	0.7nm,0.8s,baz=122,slow=4.8,SNR=5.1						
SONM	Songino Array	78.47	324	P	P	19 08 02.6	+0.2
	1.0nm,1.1s,baz=134,slow=5.9,SNR=5.3						
ILAR	Eielson Array	83.54	19	P	P	19 08 29.2	+0.3
	1.1nm,0.7s,baz=235,slow=5.0,SNR=6.2						
NEW	Newport	89.87	41	LR	LR	19 44 05.2	
	comp=Z,1µm,18.3s,baz=322,slow=32						
MKAR	Makanchi Array	93.30	317	P	P	19 09 17.1	+0.9
	0.3nm,0.8s,baz=94,slow=6.3,SNR=3.1						
YKA	Yellowknife Ar	95.04	27	P	P	19 09 22.6	-1.1

	0.1nm,0.5s,baz=256,slow=4.2,SNR=4.7						
ARCES	ARCESS Array B	116.21	345	PKP	PKiKP	19 14 43.2	-0.8
	2.1nm,0.9s,baz=72,slow=4.0,SNR=5.5						

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*IDC **10** 19:00:26.3±0.6, 57°.34N×153°.01W, h0^{km}, mb4.0/24, mb1 4.2/27, mb1mx4.1/48, mbtmp4.0/27, ML3.5/3, Error ellipse: s-maj=12.8km s-min=9.3km az=139.0*

*ISCJB **10** 19:00:30.6±0.3, 57°.59N±0°.03×152°.47W±0°.05, h31^{km}, mb3.9/24, Error ellipse: s-maj=5.5km s-min=3.1km az=143.6*

*NEIC **10** 19:00:32.7±0.0, 57°.53N×152°.47W, h33^{km}, ML3.8(AEIC), After AEIC.*

NEIC Felt [III] at Kodiak.

ISC 10 19:00:31.6±0.5, 57°.60N±0°.05×152°.58W±0°.04, h31^{km}, n87, σ1s.33/93, mb3.9/24, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	0.18	359	Pg	Pn	19 00 38.9	+0.6
	4μm,0.3s,baz=179,slow=3.9						
KDAK				Lg	Lg	19 00 44.1	
	baz=307,slow=20						
OHAK	Old Harbor	0.54	226	ePg	Pn	19 00 43.1	-0.1
OHAK				eSg	Sn	19 00 51.0	-0.2
SII	Sitkinak Islan	1.36	221	ePn	Pn	19 00 54.7	+0.2
SII				eSn	Sn	19 01 09.4	-2.1
KAHG	Katmai Hook Gl	1.38	311	P	Pb	19 00 56.5	-0.3
KAKN	Katmai Knife C	1.50	299	P	Pn	19 00 57.5	+1.1
KAKN				S	Sb	19 01 17.1	-0.4
CAHL	Cahill	1.53	288	P	Pn	19 00 57.6	+0.8
KJL	Kejulik	1.67	287	P	Pn	19 01 00.2	+1.5
PLK3	Peulik 3	1.99	274	P	Pn	19 01 04.2	+1.1
PLK1	Peulik 1	2.17	277	P	Pn	19 01 06.7	+1.1
PLBL	Peulik Blue Cr	2.28	274	P	Pn	19 01 08.6	+1.5
BRLK	Bradley Lake	2.34	21	ePn	Pn	19 01 09.1	+1.1
RSO	Redoubt South	2.87	358	ePn	Pn	19 01 17.3	+1.9
RDN	Redoubt North	2.92	358	P	Pn	19 01 18.1	+2.0
SEW	Seward	2.99	32	ePn	Pn	19 01 17.1	+0.4
RDJH	Redoubt Jeurge	3.00	358	P	Pn	19 01 18.9	+1.8
ANPK	Aniakchak Peak	3.11	258	P	Pn	19 01 19.7	+1.1
SLKM	Skilak Lake	3.16	22	P	Pn	19 01 20.0	+0.8
CHGN	Chignik	3.45	250	ePn	Pn	19 01 23.2	0.0
SPNN	North Nagishla	3.78	359	P	Pn	19 01 29.3	+1.5
RC01	Rabbit Creek A	3.79	21	ePn	Pn	19 01 28.9	+1.1
SVW2	Sparrevohn	3.83	338	ePn	Pn	19 01 30.0	+1.6
PWL	Port Wells	3.93	32	P	Pn	19 01 30.6	+0.8
SUA	Susitna One	3.98	13	ePn	Pn	19 01 31.8	+1.2
KNK	Knik Glacier	4.36	27	ePn	Pn	19 01 36.4	+0.7
PMR	Palmer	4.37	22	ePn	Pn	19 01 36.3	+0.6
GHO	Glory Hole Cre	4.57	22	P	Pn	19 01 39.4	+0.7
EYAK	Cordova Ski Ar	4.60	47	ePn	Pn	19 01 39.5	+0.6
SML	Sawmill	4.73	25	ePn	Pn	19 01 41.9	+1.1
SGAM	Sherman Glacie	4.79	50	P	Pn	19 01 42.1	+0.6
SDPT	Sand Point	4.93	246	ePn	Pn	19 01 44.7	+1.3
DIV	Divide	4.96	42	ePn	Pn	19 01 44.8	+0.8
HMT	Hamilton	5.10	54	ePn	Pn	19 01 46.9	+1.0
KLU	Klutina	5.16	38	ePn	Pn	19 01 47.9	+1.1
PPLA	Purkeypile	5.32	2	ePn	Pn	19 01 51.5	+2.6
CAST	Castle Rocks	5.84	2	ePn	Pn	19 01 57.1	+1.1
TRF	Thorofare Moun	5.97	10	ePn	Pn	19 01 58.9	+1.0
DHY	Denali Highway	6.07	23	ePn	Pn	19 02 00.6	+1.4
HARP	HAARP	6.09	35	ePn	Pn	19 02 00.6	+1.2
RND	Reindeer	6.11	16	ePn	Pn	19 02 00.8	+1.2
MCK	McKinley	6.41	15	ePn	Pn	19 02 05.0	+1.3
BPAW	Bear Paw Mtn.	6.57	6	ePn	Pn	19 02 06.5	+0.6
WRH	Wood River Hil	7.23	16	ePn	Pn	19 02 15.6	+0.6
RIDG	Independ'e Rid	7.23	28	ePn	Pn	19 02 16.6	+1.5
HDA	Harding Lake	7.35	19	ePn	Pn	19 02 18.9	+2.2
MLY	Manley	7.51	6	ePn	Pn	19 02 19.5	+0.7
COLA	College	7.64	15	ePn	Pn	19 02 20.4	-0.2
SCRK	Sand Creek	7.65	30	ePn	Pn	19 02 21.6	+0.7
MDM	Murphy Dome	7.67	14	ePn	Pn	19 02 22.0	+0.9
ILAR	Eielson Array	7.70	18	Pn	Pn	19 02 21.9	+0.4
	1.3nm,0.3s,baz=204,slow=14,SNR=37						
ILAR				Sn	Sn	19 03 43.8	-3.7
	1.3nm,0.3s,baz=92,slow=33,SNR=4.6						
ILB	Eielson Array	7.70	18	ePn	Pn	19 02 21.4	-0.1
PRP	Porcupine Dome	8.62	20	ePn	Pn	19 02 36.2	+2.1
UNV	Unalaska Valle	8.71	250	ePn	Pn	19 02 34.8	-0.5
SKAG	Skagway	9.21	71	ePn	Pn	19 02 39.2	-2.9
ANM	Nome	9.32	324	ePn	Pn	19 02 46.3	+2.7
WHY	Whitehorse	9.59	64	ePn	Pn	19 02 48.9	+1.4
FYU	Fort Yukon	9.62	18	ePn	Pn	19 02 48.6	+0.8
DLBC	Dease Lake	11.97	76	Pn	Pn	19 03 21.2	+1.2
	0.2nm,0.3s,baz=303,slow=15,SNR=6.3						
DLBC				Sn	Sn	19 05 29.2	-3.1
	0.3nm,0.3s,baz=124,slow=18,SNR=3.5						
INK	Inuvik	13.71	31	Pn	P	19 03 48.9	-2.9
	0.0nm,0.3s,baz=247,slow=12,SNR=3.1						
YKA	Yellowknife Ar	19.37	59	P	Pn	19 04 55.9	+0.3
	0.4nm,0.3s,baz=271,slow=10,SNR=36						
YKA				PcP	PcP	19 09 15.5	+0.6
	0.1nm,0.3s,baz=257,slow=1.2,SNR=4.7						
NEW	Newport	23.07	99	P	P	19 05 35.1	+0.7
	3.0nm,0.8s,baz=320,slow=15,SNR=2.1						
SEY	Seymchan	27.07	305	P	P	19 06 09.3	-1.5
	0.2nm,0.3s,baz=88,slow=6.5,SNR=2.8						
RES	Resolute Bay	27.26	29	P	P	19 06 13.3	+0.8
	1.1nm,0.5s,baz=251,slow=8.4,SNR=8.2						
PETK	Petropavlovsk-	28.09	282	P	P	19 06 19.4	-0.8
	2.2nm,0.8s,baz=70,slow=13,SNR=8.3						
NVAR	Mina Array Bea	29.42	116	P	P	19 06 32.8	+0.4
	0.4nm,0.3s,baz=338,slow=6.8,SNR=2.6						
PDAR	Pinedale Array	30.68	100	P	P	19 06 45.1	+1.6
	1.3nm,0.5s,baz=313,slow=4.4,SNR=13						
ULM	Lac du Bonnet	33.29	78	P	P	19 07 07.5	+1.4
	3.6nm,0.7s,baz=297,slow=7.7,SNR=8.7						
KLR	Kul'dur	43.64	293	P	P	19 08 32.5	-0.4
	4.6nm,1.0s,baz=24,slow=8.4,SNR=7.8						
TXAR	Lajitas Array	43.97	109	P	P	19 08 38.1	+2.3
	1.9nm,0.8s,baz=318,slow=6.6,SNR=21						
SCHQ	Schefferville	44.73	55	P	P	19 08 43.1	+1.6
	2.5nm,0.6s,baz=328,slow=5.0,SNR=3.6						
CN2	Changchun	50.53	292	eP	P	19 09 36.3	+10
ARCES	ARCESS Array B	53.16	1	P	P	19 09 46.1	+0.2
	1.0nm,0.4s,baz=11,slow=6.3,SNR=11						
KSRS	Korea Array	53.96	285	P	P	19 09 49.8	-2.3
	1.0nm,0.8s,baz=46,slow=5.9,SNR=3.0						
KSAR	Wonju Array Be	53.99	285	P	P	19 09 49.8	-2.6
SONM	Songino Array	56.40	307	P	P	19 10 10.6	+0.8
	1.6nm,0.7s,baz=43,slow=7.1,SNR=15						
ZALV	Zalesovo Beam	59.45	325	P	P	19 10 30.8	-0.1
	0.8nm,0.4s,baz=4.3,slow=5.9,SNR=4.3						
NB2	NORSAR Subarra	61.02	9	P	P	19 10 42.1	+0.5
	comp=Z,0.6nm,0.7s,baz=350,slow=6.9						
NOA	NORSAR Array B	61.02	9	P	P	19 10 41.8	+0.2
	comp=Z,0.6nm,0.6s,baz=350,slow=6.9,SNR=4.7						
FINES	FINESS Array B	61.29	1	P	P	19 10 43.8	+0.5
	comp=Z,1.6nm,0.4s,baz=356,slow=8.3,SNR=29						
MKAR	Makanchi Array	66.46	322	P	P	19 11 17.1	-0.5
	comp=Z,0.4nm,0.4s,baz=39,slow=6.1,SNR=7.9						
AKASG	Malin Array Be	72.05	359	P	P	19 11 52.2	+0.2
	comp=Z,0.5nm,0.4s,baz=2.9,slow=6.1,SNR=8.6						
GERES	GERESS Array B	73.31	9	P	P	19 12 00.8	+1.0
	comp=Z,0.7nm,0.7s,baz=347,slow=5.5,SNR=5.1						
KBZ	Khabaz	78.21	349	P	P	19 12 28.1	+0.4
	comp=Z,1.6nm,0.8s,baz=0.0,slow=4.0,SNR=3.7						
ESDC	Sonseca Array	79.56	24	P	P	19 12 35.4	+0.2
	comp=Z,0.6nm,0.6s,baz=336,slow=5.7,SNR=3.5						
GEYT	Alibeck	81.39	336	P	P	19 12 45.0	-0.1
	comp=Z,0.9nm,0.5s,baz=27,slow=9.7,SNR=2.2						
BRTR	Keskin Array B	82.89	355	P	P	19 12 53.4	+0.3
	comp=Z,0.5nm,0.7s,baz=9.1,slow=2.5,SNR=3.1						
CMAR	Chiang Mai Arr	84.08	295	P	P	19 12 58.9	-0.4
	comp=Z,1.0nm,0.6s,baz=10,slow=5.1,SNR=14						
BOSA	Boshof	150.98	4	PKPbc	PKPbc	19 20 20.9	0.0
	comp=Z,2.6nm,1.0s,baz=0.0,slow=3.0,SNR=4.1						
BOSA				PKPab	sPKPdf	19 20 29.1	+0.1
	comp=Z,0.9nm,0.4s,baz=22,slow=6.0,SNR=4.6						

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*IDC **10** 19:00:45.2±1.4, 11°.06S×165°.52E, h0^{km}, mb3.8/4, mb1 4.1/6, mb1mx3.7/32, mbtmp3.9/6, ML3.9/2, Error ellipse: s-maj=41.5km s-min=26.8km az=137.0*

*ISCJB **10** 19:00:47.9±1.1, 11°.2S±0°.1×165°.5E±0°.2, h30^{km}, mb3.7/4, Error ellipse: s-maj=21.8km s-min=18.7km az=151.9*

ISC 10 19:00:49.8±1.1, 11°.1S±0°.1×165°.5E±0°.2, h30^{km}, n6, σ0s.70/6, mb3.7/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.74	286	Pn	Pn	19 02 13.5	+0.5
	19nm,0.3s,baz=124,slow=18,SNR=4.2						
DZM	Mont Dzumac	10.94	176	Pn	Pn	19 03 24.6	+0.2
	0.2nm,0.3s,baz=331,slow=19,SNR=4.9						
WRA	Warramunga Arr	31.26	250	P	P	19 07 06.2	-1.1
	0.8nm,0.6s,baz=80,slow=9.3,SNR=6.8						
ASAR	Alice Springs	32.57	243	P	P	19 07 18.8	0.0
	1.5nm,1.0s,baz=64,slow=10,SNR=9.5						
ILAR	Eielson Array	83.64	19	P	P	19 13 15.0	-0.1
	0.4nm,0.6s,baz=240,slow=4.5,SNR=3.8						
YKA	Yellowknife Ar	95.13	27	P	P	19 14 09.9	+0.1
	0.1nm,0.5s,baz=267,slow=4.3,SNR=2.9						

IDC 10 19:01:10.5±6.0, 10°.46S×165°.05E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.6/28, mbtmp3.7/3, Error ellipse: s-maj=321.3km s-min=36.1km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.05	249	P	P	19 07 30.5	0.0
	1.4nm,0.9s,baz=79,slow=9.6,SNR=4.9						
ASAR	Alice Springs	32.45	242	P	P	19 07 42.8	0.0
	0.6nm,0.8s,baz=69,slow=9.0,SNR=4.7						
ILAR	Eielson Array	83.18	19	P	P	19 13 38.3	0.0
	0.3nm,0.6s,baz=238,slow=5.1,SNR=3.3						

IDC 10 19:04:25.4±2.0, 10°.83S×165°.61E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.6/32, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=55.0km s-min=35.3km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.21	176	Pn	Pn	19 07 07.5	+0.4
	0.9nm,0.3s,baz=358,slow=11,SNR=6.8						
WRA	Warramunga Arr	31.43	249	P	P	19 10 48.8	+0.1
	0.8nm,0.8s,baz=82,slow=8.7,SNR=4.6						
ASAR	Alice Springs	32.77	243	P	P	19 11 00.2	-0.2
	0.5nm,0.8s,baz=67,slow=10,SNR=5.5						
ILAR	Eielson Array	83.35	19	P	P	19 16 54.0	0.0
	0.5nm,1.1s,baz=237,slow=5.7,SNR=2.6						

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*ISCJB **10** 19:08:07.6±0.9, 11°.0S±0°.1×165°.96E±0°.09, h35^{km}, mb3.9/7, Error ellipse: s-maj=16.8km s-min=11.3km az=22.5*

*IDC **10** 19:08:11.4±3.8, 11°.00S×165°.88E, h53^{km}±32^{km}, mb3.7/7, mb1 4.0/9, mb1mx3.7/37, mbtmp4.1/9, ML4.6/2, Error ellipse: s-maj=26.8km s-min=25.1km az=179.0*

ISC 10 19:08:09.3±0.9, 10°.9S±0°.1×166°.02E±0°.10, h35^{km}, n17, σ1s.27/13, mb3.8/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.17	284	eP	Pn	19 09 39.0	+1.0
HNR				eS	Sn	19 10 49.0	+1.7
HNR	Honiara	6.17	284	P	Pn	19 09 37.7	-0.2
	20nm,0.3s,baz=183,slow=1.6,SNR=15						
HNR				S	Sn	19 10 47.6	+0.3
	4.9nm,0.3s,baz=196,slow=18,SNR=2.4						
DZM	Mont Dzumac	11.07	178	P	Pn	19 10 46.5	+1.1
	3.4nm,0.3s,baz=4.6,slow=16,SNR=14						
CTA	Charters Tower	21.09	242	P	P	19 12 51.7	+0.8
	4.2nm,0.7s,baz=66,slow=14,SNR=4.6						
H11S2	WAKE ISLAND Hy	29.25	1	T	T	19 44 27.5	
	baz=181,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.26	1	T	T	19 44 28.0	
	baz=181,slow=76,SNR=9.4						
H11S1	WAKE ISLAND Hy	29.27	1	T	T	19 44 28.8	
	baz=181,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.47	2	T	T	19 45 59.0	
	baz=182,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.48	2	T	T	19 45 59.4	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.49	2	T	T	19 46 00.4	
	baz=182,slow=76,SNR=9.5						
WRA	Warramunga Arr	31.77	250	P	P	19 14 29.5	-1.1
	4.1nm,0.7s,baz=81,slow=9.2,SNR=36						
ASAR	Alice Springs	33.08	243	P	P	19 14 40.0	-2.1
	0.7nm,0.6s,baz=64,slow=10,SNR=16						
FITZ	Fitzroy Crossi	39.67	255	P	P	19 15 37.2	-1.1
	4.5nm,0.7s,baz=96,slow=6.7,SNR=26						
ILAR	Eielson Array	83.33	18	P	P	19 20 32.2	-0.1
	0.6nm,0.8s,baz=237,slow=5.2,SNR=6.0						
MKAR	Makanchi Array	93.63	317	P	P	19 21 21.0	-1.1
	0.2nm,0.8s,baz=83,slow=6.0,SNR=3.3						
YKA	Yellowknife Ar	94.76	27	P	P	19 21 27.7	+0.8
	0.1nm,0.6s,baz=256,slow=4.3,SNR=2.2						
ARCES	ARCESS Array B	116.30	346	PKP	PKPdf	19 26 49.9	+1.2
	3.2nm,1.1s,baz=57,slow=3.3,SNR=3.1						

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*IDC **10** 19:09:30.4±1.7, 11°.59S×165°.27E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.7/36, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=49.9km s-min=30.0km az=119.0*

*ISCJB **10** 19:09:32.1±1.2, 11°.8S±0°.1×165°.3E±0°.2, h24^{km}, mb3.7/5, Error ellipse: s-maj=32.4km s-min=19.5km az=177.2*

ISC 10 19:09:33.9±1.2, 11°.7S±0°.1×165°.3E±0°.3, h24^{km}, n6, σ0s.70/6, mb3.8/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.38	174	Pn	Pn	19 12 01.5	0.0
	0.6nm,0.3s,baz=350,slow=18,SNR=3.1						
WRA	Warramunga Arr	30.87	251	P	P	19 15 49.0	+0.3
	1.2nm,0.6s,baz=80,slow=8.7,SNR=6.6						
ASAR	Alice Springs	32.13	244	P	P	19 15 59.6	-0.2
	0.8nm,0.8s,baz=71,slow=9.7,SNR=4.2						
SONM	Songino Array	78.93	324	P	P	19 21 36.2	+0.6
	0.3nm,0.7s,baz=133,slow=7.3,SNR=3.1						
ILAR	Eielson Array	84.25	19	P	P	19 22 03.3	+0.1
	0.5nm,0.6s,baz=242,slow=5.0,SNR=5.2						
MKAR	Makanchi Array	93.70	317	P	P	19 22 47.7	-0.9
	0.3nm,0.8s,baz=84,slow=6.1,SNR=2.7						

IDC 10 19:10:41.2±2.0, 10°.83S×165°.48E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.5/37, mbtmp3.8/4, ML4.2/1, Error ellipse: s-maj=54.3km s-min=35.1km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.21	175	Pn	Pn	19 13 22.8	-0.2
	1.5nm,0.3s,baz=331,slow=19,SNR=4.7						
WRA	Warramunga Arr	31.31	249	P	P	19 17 03.5	+0.1
	0.5nm,0.6s,baz=81,slow=9.0,SNR=4.9						
ASAR	Alice Springs	32.65	243	P	P	19 17 15.1	-0.1
	0.9nm,0.7s,baz=64,slow=10,SNR=7.4						
ILAR	Eielson Array	83.39	19	P	P	19 23 10.0	0.0
	0.2nm,0.6s,baz=242,slow=5.0,SNR=2.8						

IDC 10 19:14:17.9±2.1, 7°.22S×144°.33E, h0^{km}, mb3.8/5, mb1 3.9/7, mb1mx3.7/32, mbtmp3.7/7, ML3.4/2, Error ellipse: s-maj=59.9km s-min=26.3km az=113.0, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.94	216	Pn	Pn	19 18 01.8	-1.9
	0.1nm,0.3s,baz=33,slow=13,SNR=7.3						
WRA				Sn	Sn	19 20 50.1	-11
	0.1nm,0.3s,baz=38,slow=22,SNR=3.6						
WRA				Lg	Lg	19 22 36.0	
	0.1nm,0.3s,baz=33,slow=30,SNR=4.0						
ASAR	Alice Springs	19.18	210	P	Pn	19 18 44.6	+0.5
	0.4nm,0.3s,baz=43,slow=8.2,SNR=31						
ASAR				S	Sn	19 22 07.4	-12
	0.0nm,0.3s,baz=32,slow=24,SNR=4.2						
ASAR				Lg	Lg	19 24 22.0	
	0.1nm,0.3s,baz=18,slow=29,SNR=4.4						
FITZ	Fitzroy Crossi	21.18	238	P	P	19 19 04.4	-0.7
	1.8nm,0.6s,baz=62,slow=13,SNR=9.1						
FITZ				S	S	19 22 48.8	-13
	0.7nm,0.6s,baz=135,slow=19,SNR=3.6						
CMAR	Chiang Mai Arr	51.53	300	P	P	19 23 26.3	+0.3
	1.3nm,0.7s,baz=114,slow=5.5,SNR=9.8						
MKAR	Makanchi Array	76.76	321	P	P	19 26 11.8	+0.4
	1.0nm,0.9s,baz=118,slow=5.4,SNR=7.7						
ZALV	Zalesovo Beam	78.64	329	P	P	19 26 20.9	-0.7
	0.5nm,0.4s,baz=107,slow=5.0,SNR=3.9						
ILAR	Eielson Array	87.64	24	P	P	19 27 07.9	-0.1
	0.5nm,0.9s,baz=262,slow=5.2,SNR=3.3						

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*IDC **10** 19:19:47.1±0.6, 10°.93S×165°.50E, h0^{km}, mb4.2/17, mb1 4.4/19, mb1mx4.2/44, mbtmp4.3/19, ML4.5/2, Error ellipse: s-maj=20.1km s-min=15.6km az=128.0*

*NEIC **10** 19:19:48.5±0.4, 10°.95S×165°.51E, h10^{km}, mb4.1/1, Error ellipse: s-maj=11.1km s-min=9.2km az=114.0*

*ISCJB **10** 19:19:49.8±0.5, 11°.05S±0°.08×165°.43E±0°.07, h30^{km}, mb4.2/17, Error ellipse: s-maj=11.2km s-min=9.0km az=21.9*

ISC 10 19:19:51.6±0.6, 10°.98S±0°.09×165°.51E±0°.09, h30^{km}, n32, σ0s.89/30, mb4.2/17, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.69	285	Pn	Pn	19 21 14.7	+0.6
	17nm,0.3s,baz=59,slow=0.5,SNR=4.7						
HNR				Sn	Sn	19 22 18.2	-0.1
	11nm,0.3s,baz=330,slow=20,SNR=2.9						
DZM	Mont Dzumac	11.06	175	Pn	Pn	19 22 27.5	-0.5
	2.4nm,0.3s,baz=15,slow=11,SNR=17						
CTA	Charters Tower	20.62	242	P	P	19 24 29.9	+1.2
	10nm,0.9s,baz=76,slow=13,SNR=8.5						
CTAO	Charters Tower	20.62	242	eP	P	19 24 28.4	-0.4
URZ	Urewera	29.08	161	P	P	19 25 49.3	-0.1
	5.1nm,0.6s,baz=32,slow=9.5,SNR=4.8						
H11S2	WAKE ISLAND Hy	29.31	2	T	T	19 56 26.1	
	baz=181,slow=74						
H11S3	WAKE ISLAND Hy	29.31	2	T	T	19 56 31.6	
	baz=181						
H11S1	WAKE ISLAND Hy	29.32	2	T	T	19 56 27.1	
	baz=181,slow=74						
STKA	Stephens Creek	30.33	223	P	P	19 26 00.9	+0.3
	2.8nm,1.0s,baz=8.4,slow=11,SNR=4.3						
H11N1	WAKE ISLAND Hy	30.53	3	T	T	19 58 01.0	
	baz=181,slow=74						
H11N3	WAKE ISLAND Hy	30.54	3	T	T	19 58 01.1	
	baz=181,slow=74						
H11N2	WAKE ISLAND Hy	30.55	3	T	T	19 58 02.3	
	baz=181						
WRAB	Tennant Creek	31.27	250	eP	P	19 26 07.3	-1.9
	1.2nm,0.5s						
WRA	Warramunga Arr	31.29	250	P	P	19 26 08.5	-0.7
	6.2nm,1.0s,baz=82,slow=8.8,SNR=15						
WRA				PcP	PcP	19 29 03.3	0.0
	0.7nm,0.8s,baz=75,slow=2.7,SNR=4.5						
ASAR	Alice Springs	32.61	243	P	P	19 26 20.1	-0.7
	3.9nm,1.0s,baz=65,slow=9.8,SNR=16						
ASAR				PcP	PcP	19 29 07.3	+0.5
	0.7nm,0.6s,baz=75,slow=2.5,SNR=7.3						
FITZ	Fitzroy Crossi	39.17	255	P	P	19 27 15.9	-1.2
	3.6nm,1.0s,baz=86,slow=7.1,SNR=4.0						
MJAR	Matsushiro Arr	53.81	333	P	P	19 29 09.3	-2.3
	1.8nm,0.8s,baz=176,slow=8.3,SNR=4.3						
ASAJ	Asahikawa	58.66	341	P	P	19 29 44.6	-1.4
	4.7nm,0.9s,baz=214,slow=7.3,SNR=4.1						
KLR	Kul'dur	66.91	337	P	P	19 30 41.3	+0.4
	0.8nm,0.5s,baz=137,slow=8.0,SNR=4.3						
CMAR	Chiang Mai Arr	71.87	294	P	P	19 31 13.7	+1.3
	1.0nm,0.7s,baz=132,slow=4.7,SNR=8.8						
SONM	Songino Array	78.48	324	P	P	19 31 50.7	+0.8
	1.1nm,0.8s,baz=141,slow=6.8,SNR=10						
QSPA	South Pole Qui	79.02	180	eP	P	19 31 53.2	+0.5
ILAR	Eielson Array	83.53	19	P	P	19 32 16.8	+0.5
	1.2nm,0.7s,baz=241,slow=5.0,SNR=17						
YBH	Yreka Blue Hor	84.01	46	P	P	19 32 20.3	+0.8
	3.9nm,0.8s,baz=281,slow=4.1,SNR=5.0						
NVAR	Mina Array Bea	86.16	50	P	P	19 32 30.6	+0.2
	2.1nm,0.8s,baz=230,slow=7.1,SNR=6.1						
MKAR	Makanchi Array	93.31	317	P	P	19 33 04.2	+0.5
	0.6nm,0.7s,baz=93,slow=6.8,SNR=7.9						
ZALV	Zalesovo Beam	93.37	324	P	P	19 33 03.0	-0.7
	0.8nm,0.8s,baz=143,slow=3.2,SNR=4.4						
YKA	Yellowknife Ar	95.02	27	P	P	19 33 10.2	-0.8
	0.7nm,0.8s,baz=255,slow=4.7,SNR=8.1						
ARCES	ARCESS Array B	116.21	345	PKP	PKiKP	19 38 31.1	-0.3
	0.9nm,0.6s,baz=56,slow=3.4,SNR=3.8						
BOSA	Boshof	125.00	223	PKP	PKiKP	19 38 50.5	+0.3
	1.3nm,0.7s,baz=149,slow=5.9,SNR=2.6						
BRTR	Keskin Array B	128.75	313	PKP	PKiKP	19 38 57.3	+0.1
	0.3nm,0.7s,baz=69,slow=4.8,SNR=2.8						
TORD	Torodi Ar. Bea	164.02	279	PKP	PKPdf	19 39 53.3	+0.3
	1.1nm,1.0s,baz=80,slow=0.8,SNR=4.2						
TORD				PKPab	PKPab	19 40 46.5	+0.2
	0.6nm,0.9s,baz=70,slow=5.1,SNR=2.9						

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*KRSC **10** 19:22:28.0±0.6, 55°.43N×162°.88E, h41^{km}±12^{km}, ML4.1*

*ISCJB **10** 19:22:29.8±0.8, 55°.47N±0°.02×162°.82E±0°.04, h30^{km}±6^{km}, mb3.6/10, Error ellipse: s-maj=4.2km s-min=3.6km az=20.5*

*MOS **10** 19:22:30.6±0.7, 55°.48N×162°.76E, h39^{km}, mb3.8/5, Error ellipse: s-maj=7.6km s-min=5.2km az=77.1*

*IDC **10** 19:22:32.2±0.8, 55°.70N×162°.23E, h37^{km}±7^{km}, mb3.4/10, mb1 3.7/11, mb1mx3.4/41, mbtmp3.6/11, ML2.2/1, Error ellipse: s-maj=27.7km s-min=14.6km az=142.0*

ISC 10 19:22:31.1±0.7, 55°.48N±0°.03×162°.82E±0°.03, h31^{km}±4^{km}, n90, σ1s.38/130, mb3.6/10, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.73	0	eP	Pn	19 22 43.8	-1.6
KBTR				eS	Sb	19 22 54.3	-0.8
KBTR	Krutoberegovo	0.73	0	PN	Pn	19 22 43.8	-1.6
KBTR				S	Sb	19 22 54.3	-0.8
ZLN	Zelenaya	1.26	296	eP	Pn	19 22 51.3	-1.4
ZLN	Zelenaya	1.26	296	PN	Pn	19 22 51.3	-1.4
BZGR	Bezymyannyi-Gr	1.29	292	eP	Pn	19 22 51.5	-1.6
BZGR				eS	Sn	19 23 07.9	-1.4
BZGR	Bezymyannyi-Gr	1.29	292	PN	Pn	19 22 51.5	-1.6
BZGR				S	Sn	19 23 07.9	-1.4
CIRR	Tsirk	1.33	300	eP	Pn	19 22 52.3	-1.4
CIRR	Tsirk	1.33	300	PN	Pn	19 22 52.3	-1.4
SMKR	Semkarok	1.34	326	eP	Pn	19 22 52.4	-1.4
SMKR				eS	Sn	19 23 11.1	+0.5
SMKR	Semkarok	1.34	326	PN	Pn	19 22 52.4	-1.4
SMKR				S	Sn	19 23 11.1	+0.5
LGNR	Loginova	1.35	298	eP	Pn	19 22 52.8	-1.2
LGNR				eS	Sn	19 23 10.5	-0.5
LGNR	Loginova	1.35	298	PN	Pn	19 22 52.8	-1.2
LGNR				S	Sn	19 23 10.5	-0.5
BZMR	Bezymyannaya	1.39	290	eP	Pn	19 22 53.2	-1.4
BZMR				eS	Sn	19 23 10.5	-1.5
BZMR	Bezymyannaya	1.39	290	PN	Pn	19 22 53.2	-1.4
BZMR				S	Sn	19 23 10.5	-1.5
BZWR	Bezymyannyi-We	1.40	291	eP	Pn	19 22 53.3	-1.4
BZWR	Bezymyannyi-We	1.40	291	PN	Pn	19 22 53.3	-1.4
TUMD	Tumrok D	1.41	260	eP	Pn	19 22 53.5	-1.1
TUMD				eS	Sn	19 23 10.7	-1.4
BDR	Baidarnaya	1.42	321	eP	Pn	19 22 53.9	-0.9
BDR				eS	Sn	19 23 12.1	-0.4
BDR	Baidarnaya	1.42	321	PN	Pn	19 22 53.9	-0.9
BDR				S	Sn	19 23 12.1	-0.4
KIRR	Kirishev	1.48	290	eP	Pn	19 22 55.1	-0.6
KIRR	Kirishev	1.48	290	PN	Pn	19 22 55.1	-0.6
KLY	Klyuchi	1.48	305	eP	Pn	19 22 52.9	-2.7
KLY				eS	Sn	19 23 10.4	-3.4
KLY	Klyuchi	1.48	305	PN	Pn	19 22 52.9	-2.7
KLY				S	Sn	19 23 10.4	-3.4
KZV	Kizimen	1.49	257	eP	Pn	19 22 54.7	-1.2
KZV				eS	Sn	19 23 12.8	-1.5
KZV	Kizimen	1.49	257	PN	Pn	19 22 54.7	-1.2
KZV				S	Sn	19 23 12.8	-1.5
SRKR	Sorokina	1.50	323	eP	Pn	19 22 55.1	-0.8
SRKR				eS	Sn	19 23 13.6	-0.9
SRKR	Sorokina	1.50	323	PN	Pn	19 22 55.1	-0.8
SRKR				S	Sn	19 23 13.6	-0.9
TUMR	Tumrok	1.54	264	eP	Pn	19 22 55.9	-0.6
TUMR				eS	Sn	19 23 14.7	-0.7
TUMR	Tumrok	1.54	264	PN	Pn	19 22 53.5	-3.0
TUMR				S	Sn	19 23 10.7	-4.7
KPT	Kopyto	1.55	290	eP	Pn	19 22 56.3	-0.3
KPT				eS	Sn	19 23 15.6	-0.1
KPT	Kopyto	1.55	290	PN	Pn	19 22 56.3	-0.3
KPT				S	Sn	19 23 15.6	-0.1
KOZ	Kozyrevsk	1.76	291	eP	Pn	19 22 59.6	+0.1
KOZ				eS	Sn	19 23 20.7	-0.2
KOZ	Kozyrevsk	1.76	291	PN	Pn	19 22 59.6	+0.1
KOZ				S	Sn	19 23 20.7	-0.2
BKI	Bering	1.82	97	eP	Pn	19 22 57.8	-2.5
BKI				eS	Sn	19 23 20.6	-1.7
BKI	Bering	1.82	97	PN	Pn	19 22 57.8	-2.5

BKI				S	Sn	19 23 20.6	-1.7
SRDR	Sredinnyy	1.94	297	eP	Pn	19 23 01.9	-0.1
SRDR				eS	Sn	19 23 25.3	0.0
SRDR	Sredinnyy	1.94	297	PN	Pn	19 23 01.9	-0.1
SRDR				S	Sn	19 23 25.3	0.0
ESO	Esso	2.37	283	eP	Pn	19 23 08.2	+0.3
ESO	Esso	2.37	283	PN	Pn	19 23 08.2	+0.3
KII	Karymskiy	2.43	235	eP	Pn	19 23 08.4	-0.3
KII	Karymskiy	2.43	235	PN	Pn	19 23 08.4	-0.3
SPN	Mys Shipunski	2.89	216	eP	Pn	19 23 13.5	-1.5
SPN				eS	Sn	19 23 47.5	-1.2
SPN	Mys Shipunski	2.89	216	PN	Pn	19 23 13.5	-1.5
SPN				S	Sn	19 23 47.5	-1.2
NLC	Nalytchevo	3.08	223	eP	Pn	19 23 17.4	-0.1
NLC	Nalytchevo	3.08	223	PN	Pn	19 23 17.4	-0.1
KRX	Arik	3.23	231	eP	Pn	19 23 20.2	+0.4
KRX	Arik	3.23	231	PN	Pn	19 23 20.2	+0.4
SMAR	Somma	3.23	228	eP	Pn	19 23 19.9	0.0
SMAR	Somma	3.23	228	PN	Pn	19 23 19.9	0.0
AVH	Avacha	3.26	229	eP	Pn	19 23 20.6	+0.5
AVH	Avacha	3.26	229	PN	Pn	19 23 20.6	+0.5
UGLR	Uglovaya	3.26	227	eP	Pn	19 23 20.3	+0.1
UGLR	Uglovaya	3.26	227	PN	Pn	19 23 20.3	+0.1
KOK	Koryaka	3.28	230	eP	Pn	19 23 20.7	+0.2
KOK	Koryaka	3.28	230	PN	Pn	19 23 20.7	+0.2
GNL	Ganaly	3.35	240	eP	Pn	19 23 22.0	+0.6
GNL	Ganaly	3.35	240	PN	Pn	19 23 22.0	+0.6
DALK	Dalny	3.42	226	eP	Pn	19 23 22.2	0.0
DALK	Dalny	3.42	226	PN	Pn	19 23 22.2	0.0
PET	Petropavlovsk	3.46	227	eP	Pn	19 23 23.0	+0.1
PET	Petropavlovsk	3.46	227	ePN	Pn	19 23 25.2	+2.3
PET				eS	Sn	19 24 03.2	+0.4
PET				pmax	pmax		
	comp=Z,34nm,0.6s						
PET				smax	smax		
	comp=E,72nm,0.5s						
PET				smax	smax		
	comp=N,94nm,0.7s						
OSSR	Ossora	3.79	2	eP	Pn	19 23 27.8	+0.6
OSSR				eS	Sn	19 24 11.1	+0.4
OSSR	Ossora	3.79	2	PN	Pn	19 23 27.8	+0.6
OSSR				S	Sn	19 24 11.1	+0.4
KRMR	Karymshinskiy	3.82	228	eP	Pn	19 23 28.6	+0.8
KRMR				eS	Sn	19 24 13.4	+1.7
KRMR	Karymshinskiy	3.82	228	PN	Pn	19 23 28.6	+0.8
KRMR				S	Sn	19 24 13.4	+1.7
PETK	Petropavlovsk-	3.82	234	Pn	Pn	19 23 28.4	+0.6
	comp=N,1.0nm,0.3s,baz=56,slow=16,SNR=21						
PETK				Sn	Sn	19 24 14.2	+2.5
	comp=N,1.3nm,0.3s,baz=90,slow=20,SNR=2.6						
PALN	Palana	3.94	338	eP	Pn	19 23 32.2	+2.9
PALN	Palana	3.94	338	PN	Pn	19 23 32.2	+2.9
MTVR	Mutnovka	4.06	224	eP	Pn	19 23 31.6	+0.4
MTVR	Mutnovka	4.06	224	PN	Pn	19 23 31.6	+0.4
APC	Apacha	4.19	235	eP	Pn	19 23 33.5	+0.6
APC	Apacha	4.19	235	PN	Pn	19 23 33.5	+0.6
TILK	Tilichiki	5.29	18	eP	Pn	19 23 50.0	+2.1
TILK	Tilichiki	5.29	18	PN	Pn	19 23 50.0	+2.1
PAU	Pauzhetka	5.38	224	P	Pn	19 23 50.0	+0.8
PAU	Pauzhetka	5.38	224	PN	Pn	19 23 50.0	+0.8
ASAJ	Asahikawa	17.23	237	P	P	19 26 30.7	+0.1
	comp=N,0.1nm,0.3s,baz=233,slow=20,SNR=2.2						
KDAK	Kodiak Island	24.31	66	iP	P	19 27 47.3	+1.8
MJAR	Matsushiro Arr	25.28	232	P	P	19 27 54.6	+0.1
	comp=N,0.9nm,0.6s,baz=14,slow=5.3,SNR=4.8						
ILAR	Eielson Array	26.02	49	P	P	19 28 01.9	+0.9
	comp=N,1.5nm,0.9s,baz=270,slow=6.3,SNR=12						
YKA	Yellowknife Ar	40.34	45	P	P	19 30 06.2	+1.0
	comp=N,0.4nm,0.6s,baz=299,slow=7.9,SNR=3.8						
YKA				pP	sP	19 30 16.8	+0.5
	comp=N,0.5nm,0.8s,baz=299,slow=8.3,SNR=4.5						
MKAR	Makanchi Array	48.57	295	eP	P	19 31 11.3	+0.1
MKAR	Makanchi Array	48.57	295	P	P	19 31 07.8	-3.4
	comp=N,0.2nm,0.7s,baz=64,slow=8.8,SNR=3.9						
NVAR	Mina Array Bea	53.48	74	P	P	19 31 50.7	+2.2
	comp=N,0.4nm,0.5s,baz=330,slow=5.2,SNR=2.3						
FINES	FINESS Array B	58.55	337	iP	P	19 32 24.0	-0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	58.55	337	P	P	19 32 22.9	-1.2
	comp=Z,0.6nm,0.6s,baz=70,slow=8.3,SNR=4.1						
AKASG	Malin Array Be	67.36	330	P	P	19 33 20.0	-2.8
	comp=Z,0.6nm,0.4s,baz=25,slow=7.1,SNR=2.3						
TXAR	Lajitas Array	68.27	70	P	P	19 33 31.0	+2.0
	comp=Z,0.7nm,0.5s,baz=298,slow=5.2,SNR=13						
TXAR				pP	pwP	19 33 42.2	-0.1
	comp=Z,0.4nm,0.6s,baz=304,slow=3.9,SNR=4.2						
WRA	Warramunga Arr	78.93	207	P	P	19 34 31.5	+0.1
	comp=Z,0.4nm,0.9s,baz=26,slow=3.9,SNR=3.3						
WRA				pP	sP	19 34 42.7	0.0
	comp=Z,0.4nm,0.7s,baz=17,slow=6.1,SNR=3.7						
ASAR	Alice Springs	82.60	207	P	P	19 34 50.8	-0.1
	comp=Z,0.3nm,0.6s,baz=17,slow=4.8,SNR=6.2						

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*KRSC **10** 19:29:07.0±0.7, 55°.47N×162°.87E, h38^{km}±13^{km}, ML3.9*

*IDC **10** 19:29:07.3±1.4, 55°.73N×162°.65E, h0^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.2/53, mbtmp3.2/5, ML1.9/1, Error ellipse: s-maj=55.4km s-min=21.2km az=153.0*

*MOS **10** 19:29:09.5±1.0, 55°.52N×162°.75E, h41^{km}, mb4.1/1, Error ellipse: s-maj=8.0km s-min=5.7km az=82.4*

ISC 10 19:29:06.5±1.4**, 55°.62N**±0°.03×**162°.88E**±0°.03**, h8^{km}**±10^{km}**, n74, σ1^{s}.85**/108**, mb3.3**/4**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.59	357	eP	Pn	19 29 22.3	+1.1
KBTR				eS	Sn	19 29 33.2	+2.2
ZLN	Zelenaya	1.24	290	eP	Pb	19 29 29.9	-0.2
ZLN				eS	Sn	19 29 45.8	-1.2
ZLN	Zelenaya	1.24	290	PN	Pb	19 29 29.9	-0.2
ZLN				S	Sn	19 29 45.8	-1.2
SMKR	Semkarok	1.25	321	eP	Pg	19 29 31.0	+0.5
SMKR				eS	Sg	19 29 47.8	+1.1
SMKR	Semkarok	1.25	321	PN	Pg	19 29 31.0	+0.5
SMKR				S	Sg	19 29 47.8	+1.1
BZGR	Bezymyannyi-Gr	1.27	286	eP	Pb	19 29 30.7	-0.1
BZGR				eS	Sn	19 29 46.2	-1.8
BZGR	Bezymyannyi-Gr	1.27	286	PN	Pb	19 29 30.7	-0.1
BZGR				S	Sn	19 29 46.2	-1.8
CIRR	Tsirk	1.30	293	eP	Pb	19 29 31.0	-0.2
CIRR				eS	Sn	19 29 46.8	-1.9
CIRR	Tsirk	1.30	293	PN	Pb	19 29 31.0	-0.2
CIRR				S	Sn	19 29 46.8	-1.9
LGNR	Loginova	1.32	292	eP	Pb	19 29 31.4	-0.3
LGNR	Loginova	1.32	292	PN	Pb	19 29 31.4	-0.3
BDR	Baidarnaya	1.34	316	eP	Pg	19 29 32.4	+0.3
BDR				eS	Sg	19 29 50.4	+0.9
BDR	Baidarnaya	1.34	316	PN	Pg	19 29 32.4	+0.3
BDR				S	Sg	19 29 50.4	+0.9
BZMR	Bezymyannaya	1.39	284	eP	Pb	19 29 32.5	-0.2
BZMR	Bezymyannaya	1.39	284	PN	Pb	19 29 32.5	-0.2
BZWR	Bezymyannyi-We	1.39	286	eP	Pb	19 29 32.5	-0.3
BZWR				eS	Sn	19 29 49.6	-1.3
BZWR	Bezymyannyi-We	1.39	286	PN	Pb	19 29 32.5	-0.3
BZWR				S	Sn	19 29 49.6	-1.3
SRKR	Sorokina	1.41	318	eP	Pg	19 29 33.6	0.0
SRKR				eS	Sg	19 29 53.1	+1.2
SRKR	Sorokina	1.41	318	PN	Pg	19 29 33.6	0.0
SRKR				S	Sg	19 29 53.1	+1.2
KLY	Klyuchi	1.43	300	eP	Pn	19 29 31.6	-1.1
KLY				eS	Sn	19 29 48.9	-2.8
KLY	Klyuchi	1.43	300	PN	Pn	19 29 31.6	-1.1
KLY				S	Sn	19 29 48.9	-2.8
KIRR	Kirishev	1.47	284	eP	Pn	19 29 32.8	-0.6
KIRR	Kirishev	1.47	284	PN	Pn	19 29 32.8	-0.6
TUMD	Tumrok D	1.47	255	eP	Pn	19 29 32.4	-0.9
TUMD				eS	Sn	19 29 49.3	-3.4
KPT	Kopyto	1.54	284	eP	Pn	19 29 33.9	-0.4
KPT				eS	Sb	19 29 53.9	-1.1
KPT	Kopyto	1.54	284	PN	Pn	19 29 33.9	-0.4
KPT				S	Sb	19 29 53.9	-1.1
KZV	Kizimen	1.56	252	eP	Pn	19 29 33.4	-1.2
KZV				eS	Sn	19 29 51.4	-3.6
KZV	Kizimen	1.56	252	PN	Pn	19 29 33.4	-1.2
KZV				S	Sn	19 29 51.4	-3.6
TUMR	Tumrok	1.59	259	eP	Pn	19 29 34.8	-0.2
TUMR				eS	Sn	19 29 54.3	-1.5
TUMR	Tumrok	1.59	259	PN	Pn	19 29 32.4	-2.6
TUMR				S	Sn	19 29 49.3	-6.5
KOZ	Kozyrevsk	1.75	286	eP	Pb	19 29 37.8	-1.1
KOZ				eS	Sn	19 29 58.9	-0.7
KOZ	Kozyrevsk	1.75	286	PN	Pb	19 29 37.8	-1.1
KOZ				S	Sn	19 29 58.9	-0.7
BKI	Bering	1.81	102	eP	Pn	19 29 36.6	-1.3
BKI				eS	Sn	19 29 59.4	-1.6
BKI	Bering	1.81	102	PN	Pn	19 29 36.6	-1.3
BKI				S	Sn	19 29 59.4	-1.6
SRDR	Sredinnyy	1.91	293	eP	Pb	19 29 40.6	-1.0
SRDR				eS	Sb	19 30 04.0	-1.6
SRDR	Sredinnyy	1.91	293	PN	Pb	19 29 40.6	-1.0
SRDR				S	Sb	19 30 04.0	-1.6
ESO	Esso	2.38	279	eP	Pb	19 29 47.6	-2.0
ESO	Esso	2.38	279	PN	Pb	19 29 47.6	-2.0
KII	Karymskiy	2.54	233	eP	Pn	19 29 47.2	-0.8
KII	Karymskiy	2.54	233	PN	Pn	19 29 47.2	-0.8
SPN	Mys Shipunski	3.03	215	eP	Pn	19 29 53.8	-0.8
SPN				eS	Sn	19 30 26.9	-4.1
SPN	Mys Shipunski	3.03	215	PN	Pn	19 29 53.8	-0.8
SPN				S	Sn	19 30 26.9	-4.1
SMAR	Somma	3.35	227	eP	Pn	19 29 58.9	-0.4
SMAR	Somma	3.35	227	PN	Pn	19 29 58.9	-0.4
AVH	Avacha	3.38	227	eP	Pn	19 29 59.7	+0.2
AVH	Avacha	3.38	227	PN	Pn	19 29 59.7	+0.2
UGLR	Uglovaya	3.38	226	eP	Pn	19 30 00.5	+0.9
UGLR	Uglovaya	3.38	226	PN	Pn	19 30 00.5	+0.9
KOK	Koryaka	3.40	229	eP	Pn	19 29 58.9	-0.9
KOK	Koryaka	3.40	229	PN	Pn	19 29 58.9	-0.9
GNL	Ganaly	3.45	238	eP	Pn	19 30 00.8	+0.2
GNL	Ganaly	3.45	238	PN	Pn	19 30 00.8	+0.2
DALK	Dalny	3.54	225	eP	Pn	19 30 02.3	+0.6
DALK				eS	Sn	19 30 42.3	-1.3
DALK	Dalny	3.54	225	PN	Pn	19 30 02.3	+0.6
DALK				S	Sn	19 30 42.3	-1.3
PET	Petropavlovsk	3.59	225	ePN	Pn	19 30 03.7	+1.4
PET				eS	Sn	19 30 41.6	-3.2
PET				pmax	pmax		
	comp=Z,30nm,0.6s						
PET				smax	smax		
	comp=N,45nm,0.7s						
PET				smax	smax		
	comp=E,59nm,0.7s						
OSSR	Ossora	3.65	1	eP	Pb	19 30 06.5	-4.6
OSSR	Ossora	3.65	1	PN	Pb	19 30 06.5	-4.6
PALN	Palana	3.82	337	eP	Pb	19 30 09.5	-4.6
PALN	Palana	3.82	337	PN	Pb	19 30 09.5	-4.6
PETK	Petropavlovsk-	3.94	232	Pn	Pn	19 30 08.9	+1.8
	comp=E,0.4nm,0.3s,baz=82,slow=16,SNR=8.4						
PETK				Sn	Sn	19 30 56.3	+2.8
	comp=E,0.4nm,0.3s,baz=80,slow=20,SNR=2.0						
KRMR	Karymshinskiy	3.94	227	eP	Pn	19 30 06.7	-0.5
KRMR				eS	Sn	19 30 53.3	-0.3
KRMR	Karymshinskiy	3.94	227	PN	Pn	19 30 06.7	-0.5
KRMR				S	Sn	19 30 53.3	-0.3
MTVR	Mutnovka	4.18	223	eP	Pn	19 30 11.6	+0.9
MTVR	Mutnovka	4.18	223	PN	Pn	19 30 11.6	+0.9
APC	Apacha	4.30	234	eP	Pn	19 30 14.4	+2.3
APC	Apacha	4.30	234	PN	Pn	19 30 14.4	+2.3
TILK	Tilichiki	5.14	18	eP	Pn	19 30 28.2	+4.5
TILK	Tilichiki	5.14	18	PN	Pn	19 30 28.2	+4.5
KMSK	Kamenskaya	7.08	13	eP	Pn	19 30 55.2	+5.0
KMSK	Kamenskaya	7.08	13	PN	Pn	19 30 55.2	+5.0
ILAR	Eielson Array	25.90	49	P	P	19 34 40.2	+1.8
	comp=E,0.6nm,0.9s,baz=270,slow=10,SNR=5.0						
YKA	Yellowknife Ar	40.21	45	P	P	19 36 45.6	+2.7
	comp=E,0.2nm,0.6s,baz=298,slow=7.7,SNR=3.7						
MKAR	Makanchi Array	48.54	295	P	P	19 37 50.2	+0.4
	comp=E,0.2nm,0.7s,baz=54,slow=7.4,SNR=2.8						
TXAR	Lajitas Array	68.19	70	P	P	19 40 09.7	+2.4
	comp=E,0.2nm,0.5s,baz=298,slow=5.8,SNR=4.5						

IDC 10 19:29:34.7±2.7**, 12°.05S**×**165°.39E, h0^{km}, mb3.8**/7**, mb1 4.0**/7**, mb1mx3.7**/39**, mbtmp3.8**/7**, Error ellipse: s-maj=111.9km s-min=25.1km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.04	244	P	Pn	19 34 11.5	+0.3
	2.8nm,0.8s,baz=88,slow=13,SNR=3.2						
WRA	Warramunga Arr	30.83	251	P	P	19 35 52.5	-0.2
	0.6nm,0.5s,baz=81,slow=8.8,SNR=16						
ASAR	Alice Springs	32.05	245	P	P	19 36 02.7	-0.7
	1.1nm,0.8s,baz=67,slow=10,SNR=12						
CMAR	Chiang Mai Arr	72.20	294	P	P	19 41 02.0	0.0
	0.5nm,0.7s,baz=109,slow=5.0,SNR=4.2						
ILAR	Eielson Array	84.56	19	P	P	19 42 09.5	0.0
	0.7nm,0.8s,baz=236,slow=5.0,SNR=8.5						
MKAR	Makanchi Array	94.01	317	P	P	19 42 54.9	0.0
	0.4nm,0.6s,baz=96,slow=3.5,SNR=5.3						
YKA	Yellowknife Ar	96.01	27	P	P	19 43 03.6	0.0
	0.1nm,0.6s,baz=254,slow=4.4,SNR=3.4						

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*IDC **10** 19:31:44.0±0.6, 10°.90S×165°.46E, h0^{km}, mb4.3/18, mb1 4.5/20, mb1mx4.4/43, mbtmp4.4/20, ML4.7/2, MS4.0/1, Ms1 4.0/1, ms1mx3.5/34, Error ellipse: s-maj=20.3km s-min=15.4km az=132.0*

*NEIC **10** 19:31:45.2±0.3, 10°.94S×165°.48E, h10^{km}, mb4.8/8, Error ellipse: s-maj=8.4km s-min=6.6km az=131.0*

*ISCJB **10** 19:31:46.7±0.3, 11°.06S±0°.05×165°.42E±0°.05, h30^{km}, mb4.4/29, MS4.0/1, Error ellipse: s-maj=7.8km s-min=7.2km az=174.1*

ISC 10 19:31:48.5±0.5**, 11°.00S**±0°.08×**165°.48E**±0°.08**, h30^{km}, n59, σ0^{s}.98**/57**, mb4.5**/29**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.67	285	eP	Pn	19 33 12.0	+1.3
HNR				eS	Sn	19 34 15.0	+0.2
HNR	Honiara	5.67	285	Pn	Pn	19 33 10.1	-0.6
	22nm,0.3s,baz=156,slow=18,SNR=13						
HNR				Sn	Sn	19 34 14.7	-0.1
	9.3nm,0.3s,baz=184,slow=19,SNR=2.2						
DZM	Mont Dzumac	11.05	175	ePn	Pn	19 34 24.1	-0.6
DZM	Mont Dzumac	11.05	175	Pn	Pn	19 34 25.4	+0.7
	6.8nm,0.3s,baz=351,slow=16,SNR=21						
ONTNC	Ouen Toro	11.28	175	ePn	Pn	19 34 28.3	+0.5
EIDS	Eidsvold	19.76	222	eP	Pn	19 36 18.0	+0.2
	35nm,1.1s						
MANU	Manus Island	20.06	295	eP	P	19 36 18.1	-1.5
	207nm,1.0s						
CTA	Charters Tower	20.59	242	P	P	19 36 25.8	+0.5
	55nm,1.0s,baz=74,slow=13,SNR=18						
CTAO	Charters Tower	20.59	242	eP	P	19 36 24.9	-0.4
	90nm,1.1s						
COEN	Coen	21.97	260	eP	P	19 36 40.3	+0.1
	35nm,1.3s						
ARMA	Armidale	23.22	212	eP	P	19 36 50.4	-2.9
	38nm,1.1s						
URZ	Urewera	29.07	161	P	P	19 37 47.2	+0.8
	20nm,1.0s,baz=23,slow=7.2,SNR=8.0						
H11S2	WAKE ISLAND Hy	29.33	2	T	T	20 08 30.1	
	baz=182,slow=76,SNR=7.7						
H11S3	WAKE ISLAND Hy	29.33	2	T	T	20 08 30.9	
	baz=182,slow=76,SNR=4.8						
H11S1	WAKE ISLAND Hy	29.34	2	T	T	20 08 29.8	
	baz=182,slow=76,SNR=8.0						
STKA	Stephens Creek	30.30	223	P	P	19 37 57.7	+0.4
	9.4nm,0.9s,baz=27,slow=11,SNR=13						
H11N1	WAKE ISLAND Hy	30.55	3	T	T	20 09 54.3	
	baz=187,slow=74						
H11N3	WAKE ISLAND Hy	30.56	3	T	T	20 10 01.8	
	baz=187						
H11N2	WAKE ISLAND Hy	30.57	3	T	T	20 10 01.6	
	baz=187,slow=74						
WRAB	Tennant Creek	31.24	250	eP	P	19 38 05.1	-0.7
	22nm,1.2s						
WB2	Warramunga Arr	31.24	250	eP	P	19 38 05.4	-0.4
WRA	Warramunga Arr	31.25	250	P	P	19 38 05.1	-0.8
	6.5nm,0.8s,baz=83,slow=9.0,SNR=29						
WRA				PcP	PcP	19 41 00.9	+0.8
	2.4nm,0.9s,baz=73,slow=3.2,SNR=8.1						
GUMO	Guam	31.86	320	LR	LR	19 50 58.8	
	comp=Z,285nm,19.2s,baz=134,slow=36						
AS01	Alice Springs	32.54	243	eP	P	19 38 15.2	-2.0
AS31	Alice Springs	32.58	243	eP	P	19 38 16.7	-0.8
	7.8nm,0.9s						
ASAR	Alice Springs	32.58	243	P	P	19 38 16.8	-0.8
	28nm,0.9s,baz=73,slow=9.5,SNR=127						
ASAR				PcP	PcP	19 41 04.1	+0.4
	2.5nm,0.9s,baz=85,slow=2.0,SNR=7.8						
MJAR	Matsushiro Arr	53.81	333	P	P	19 41 07.2	-1.4
	1.6nm,0.8s,baz=171,slow=8.1,SNR=4.3						
NJ2	Nanjing	61.80	316	eP	P	19 42 05.4	+0.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	Wuhan	64.17	312	P	P	19 42 22.8	+2.3
KLR	Kul'dur	66.91	337	P	P	19 42 38.1	+0.2
	comp=Z,2.8nm,1.0s,baz=171,slow=8.5,SNR=4.2						
XAN	Xi'an	69.90	312	P	P	19 42 56.8	-0.2
XAN				pP	pwP	19 43 06.9	-2.6
XAN				pmax	pmax		
	comp=Z,4.0nm,2.2s						
KMI	Kunming	70.88	301	P	P	19 43 05.0	+1.6
KMI				pP	sP	19 43 14.9	-0.1
KMI				sP	pwP	19 43 18.6	+2.9
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HHC	Hu-ho-hao-te	71.63	320	eP	P	19 43 06.8	-0.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.1s						
CM01	Chiang Mai Arr	71.83	294	eP	P	19 43 09.6	+0.6
CMAR	Chiang Mai Arr	71.86	294	P	P	19 43 09.6	+0.4
	comp=Z,2.4nm,0.9s,baz=111,slow=3.8,SNR=9.1						
CD2	Chengdu	72.37	307	⇑P	P	19 43 12.8	+0.8
LZH	Lanzhou	74.53	312	eP	P	19 43 25.8	+1.0
LZH				pP	pwP	19 43 35.5	-1.8
LZH				sP	PcP	19 43 40.9	+1.7
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
SONM	Songino Array	78.48	324	P	P	19 43 47.0	+0.1
	comp=Z,0.8nm,0.8s,baz=136,slow=5.4,SNR=7.2						
SONA1	Songino Array	78.48	324	eP	P	19 43 47.1	+0.2
GTA	Gaotai	78.84	314	P	P	19 43 50.3	+1.3
GTA				pP	pwP	19 43 59.3	-1.7
GTA				sP	sP	19 44 03.4	+2.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ILAR	Eielson Array	83.55	19	P	P	19 44 13.3	-0.1
	comp=Z,1.0nm,0.5s,baz=242,slow=4.7,SNR=32						
YBH	Yreka Blue Hor	84.05	46	P	P	19 44 16.9	+0.4
	comp=Z,3.9nm,0.9s,baz=271,slow=3.1,SNR=4.4						
NV01	Mina Array Sit	86.19	50	eP	P	19 44 26.4	-1.1
NVAR	Mina Array Bea	86.19	50	P	P	19 44 27.6	+0.1
	comp=Z,3.2nm,1.0s,baz=227,slow=6.0,SNR=7.2						
NV11	Mina Array Sit	86.30	50	eP	P	19 44 27.8	-0.2
	comp=Z,0.4nm,1.0s						
KVN	Kaiserville	86.53	49	eP	P	19 44 28.8	-0.3
	comp=Z,9.1nm,1.4s						
WMQ	Urumqi	88.88	315	eP	P	19 44 40.2	+0.1
ELK	Elko	89.11	48	P	P	19 44 41.3	-0.2
	comp=Z,0.7nm,0.7s,baz=13,slow=2.1,SNR=3.0						
MSU	Marysvale	90.85	51	eP	P	19 44 47.9	-1.9
MK01	Makanchi Array	93.30	317	eP	P	19 45 00.1	-0.5
MKAR	Makanchi Array	93.31	317	P	P	19 44 59.9	-0.8
	comp=Z,1.9nm,1.0s,baz=98,slow=6.2,SNR=11						
ZALV	Zalesovo Beam	93.37	324	eP	P	19 44 59.6	-1.0
ZALV	Zalesovo Beam	93.37	324	P	P	19 44 59.1	-1.5
	comp=Z,0.8nm,0.6s,baz=120,slow=2.4,SNR=4.9						
PDAR	Pinedale Array	93.71	47	P	P	19 45 02.7	-0.1
	comp=Z,0.5nm,0.8s,baz=273,slow=1.5,SNR=4.0						
YKA	Yellowknife Ar	95.05	27	P	P	19 45 06.3	-1.8
	comp=Z,0.3nm,0.6s,baz=257,slow=4.6,SNR=5.6						
TXAR	Lajitas Array	96.03	61	P	P	19 45 15.0	+1.4
	comp=Z,0.2nm,0.6s,baz=241,slow=1.9,SNR=2.3						
BOSA	Boshof	124.97	223	PKP	PKPdf	19 50 46.8	+0.1
	comp=Z,3.9nm,0.9s,baz=85,slow=5.7,SNR=3.8						
AKASG	Malin Array Be	126.68	327	PKP	PKiKP	19 50 49.4	-0.1
	comp=Z,0.2nm,0.2s,baz=69,slow=1.8,SNR=4.1						
TORD	Torodi Ar. Bea	164.00	279	PKP	PKPdf	19 51 49.4	-0.5
	comp=Z,1.1nm,1.1s,baz=133,slow=1.3,SNR=4.1						
TORD				PKPab	PKPab	19 52 43.9	+0.8
	comp=Z,0.8nm,0.9s,baz=17,slow=1.5,SNR=3.8						

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*IDC **10** 19:33:58.4±1.2, 11°.00S×165°.57E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.7/40, mbtmp3.9/7, ML4.2/1, MS4.4/1, Ms1 4.4/1, ms1mx3.6/33, Error ellipse: s-maj=45.8km s-min=26.7km az=128.0*

*ISCJB **10** 19:34:00.9±0.9, 11°.2S±0°.1×165°.6E±0°.2, h30^{km}, mb3.8/6, MS4.4/1, Error ellipse: s-maj=27.0km s-min=18.0km az=6.8*

ISC 10 19:34:02.8±1.0**, 11°.1S**±0°.1×**165°.6E**±0°.2**, h30^{km}, n8, σ1^{s}.02**/9**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.98	176	Pn	Pn	19 36 38.3	+0.2
	1.9nm,0.3s,baz=6.3,slow=18,SNR=6.8						
WRA	Warramunga Arr	31.36	250	P	P	19 40 19.9	-1.2
	2.5nm,1.0s,baz=81,slow=9.3,SNR=4.5						
WRA				PcP	PcP	19 43 15.5	+0.8
	0.5nm,0.9s,baz=65,slow=3.0,SNR=4.3						
ASAR	Alice Springs	32.67	243	P	P	19 40 31.9	-0.8
	0.6nm,0.8s,baz=70,slow=9.8,SNR=4.9						
ASAR				PcP	PcP	19 43 19.2	+1.0
	0.5nm,0.6s,baz=68,slow=2.8,SNR=6.1						
ASAJ	Asahikawa	58.76	341	LR	LR	20 04 35.5	
	comp=Z,302nm,20.2s,baz=0.5,slow=31						
CMAR	Chiang Mai Arr	71.99	294	P	P	19 45 25.3	+1.1
	0.3nm,0.6s,baz=123,slow=6.6,SNR=3.2						
ILAR	Eielson Array	83.56	19	P	P	19 46 27.9	+0.2
	0.8nm,0.5s,baz=237,slow=5.1,SNR=15						
MKAR	Makanchi Array	93.44	317	P	P	19 47 15.7	+0.2
	0.5nm,1.0s,baz=91,slow=6.3,SNR=3.7						
YKA	Yellowknife Ar	95.04	27	P	P	19 47 21.2	-1.2
	0.2nm,0.6s,baz=255,slow=4.6,SNR=4.1						

IDC 10 19:42:16.6±3.5**, 10°.77S**×**165°.63E, h0^{km}, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/43**, mbtmp3.5**/4**, ML3.6**/1**, Error ellipse: s-maj=73.0km s-min=46.0km az=83.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.27	176	Pn	Pn	19 44 59.7	+0.6
	0.4nm,0.3s,baz=45,slow=20,SNR=4.9						
WRA	Warramunga Arr	31.48	249	P	P	19 48 40.3	+0.1
	0.4nm,0.8s,baz=83,slow=9.6,SNR=2.6						
ASAR	Alice Springs	32.82	243	P	P	19 48 52.0	-0.1
	0.3nm,0.6s,baz=74,slow=9.5,SNR=5.5						
MKAR	Makanchi Array	93.24	317	P	P	19 55 32.9	-0.3
	0.2nm,0.7s,baz=84,slow=5.9,SNR=2.8						

IDC 10 19:46:07.9±1.8**, 10°.96S**×**165°.39E, h0^{km}, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/45**, mbtmp3.7**/4**, ML3.9**/1**, Error ellipse: s-maj=54.8km s-min=33.2km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.10	175	Pn	Pn	19 48 48.0	0.0
	0.9nm,0.3s,baz=319,slow=11,SNR=5.5						
WRA	Warramunga Arr	31.18	250	P	P	19 52 29.1	0.0
	1.0nm,1.1s,baz=81,slow=8.9,SNR=3.3						
ASAR	Alice Springs	32.52	243	P	P	19 52 40.6	-0.1
	1.4nm,0.9s,baz=68,slow=8.2,SNR=9.3						
ILAR	Eielson Array	83.54	19	P	P	19 58 37.5	0.0
	0.2nm,0.5s,baz=230,slow=5.6,SNR=4.6						

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*IDC **10** 19:46:18.1±1.5, 10°.92S×165°.52E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx3.9/46, mbtmp4.1/10, ML4.5/2, Error ellipse: s-maj=38.0km s-min=25.1km az=124.0*

*ISCJB **10** 19:46:21.1±1.1, 11°.0S±0°.1×165°.4E±0°.1, h30^{km}, mb4.0/7, Error ellipse: s-maj=21.2km s-min=16.1km az=160.7*

ISC 10 19:46:22.9±1.2**, 10°.9S**±0°.1×**165°.5E**±0°.2**, h30^{km}, n16, σ1^{s}.03**/10**, mb3.9**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.62	285	Pn	Pn	19 47 43.4	-1.1
	24nm,0.3s,baz=166,slow=5.6,SNR=5.4						
DZM	Mont Dzumac	11.11	175	Pn	Pn	19 48 59.5	-0.3
	2.2nm,0.3s,baz=282,slow=11,SNR=17						
CTA	Charters Tower	20.59	241	P	P	19 51 00.2	+0.6
	4.3nm,0.8s,baz=68,slow=14,SNR=6.2						
H11S2	WAKE ISLAND Hy	29.27	2	T	T	20 23 00.9	
	baz=181,slow=76,SNR=7.5						
H11S3	WAKE ISLAND Hy	29.28	2	T	T	20 23 01.2	
	baz=181,slow=76,SNR=6.0						
H11S1	WAKE ISLAND Hy	29.29	2	T	T	20 23 02.6	

	baz=181,slow=76,SNR=5.5						
STKA	Stephens Creek	30.32	223	P	P	19 52 32.0	+0.2
	2.9nm,0.8s,baz=42,slow=8.7,SNR=4.5						
H11N1	WAKE ISLAND Hy	30.50	3	T	T	20 24 33.9	
	baz=182,slow=76,SNR=7.4						
H11N3	WAKE ISLAND Hy	30.50	3	T	T	20 24 31.5	
	baz=182,slow=76,SNR=7.5						
H11N2	WAKE ISLAND Hy	30.52	3	T	T	20 24 33.9	
	baz=182,slow=76,SNR=4.5						
WRA	Warramunga Arr	31.25	250	P	P	19 52 39.3	-0.9
	2.7nm,0.6s,baz=81,slow=9.1,SNR=22						
ASAR	Alice Springs	32.58	243	P	P	19 52 51.4	-0.5
	3.5nm,0.7s,baz=65,slow=9.9,SNR=34						
FITZ	Fitzroy Crossi	39.13	255	P	P	19 53 49.4	+1.4
	1.4nm,0.7s,baz=122,slow=9.5,SNR=2.7						
CMAR	Chiang Mai Arr	71.81	294	P	P	19 57 44.8	+1.5
	0.2nm,0.3s,baz=139,slow=5.9,SNR=3.1						
ILAR	Eielson Array	83.51	19	P	P	19 58 46.8	-0.7
	0.7nm,0.8s,baz=238,slow=4.8,SNR=6.9						
MKAR	Makanchi Array	93.25	317	P	P	19 59 34.8	+0.1
	0.4nm,0.9s,baz=84,slow=5.9,SNR=2.6						

IDC 10 19:47:51.9±2.2, 6°.44S×130°.41E, h0^{km}, mb3.6/1, mb1 3.4/4, mb1mx3.2/45, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=89.0km s-min=27.8km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.48	201	Pn	Pn	19 50 52.6	+1.7
	0.0nm,0.3s,baz=29,slow=13,SNR=5.9						
FITZ				Sn	Sn	19 53 01.0	-10
	0.2nm,0.3s,baz=287,slow=18,SNR=6.6						
WRA	Warramunga Arr	13.95	164	Pn	Pn	19 51 09.2	-1.9
	0.1nm,0.3s,baz=345,slow=14,SNR=9.1						
WRA				Sn	Sn	19 53 33.3	-14
	0.0nm,0.3s,baz=352,slow=24,SNR=2.7						
ASAR	Alice Springs	17.45	169	P	Pn	19 51 57.1	+0.2
	0.1nm,0.3s,baz=356,slow=12,SNR=7.0						
ASAR				S	Sn	19 54 59.4	-13
	baz=350,slow=23,SNR=3.1						
MKAR	Makanchi Array	67.98	327	P	P	19 58 52.9	0.0
	0.2nm,0.4s,baz=115,slow=7.8,SNR=9.9						

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*WEL **10** 19:53:27.9±0.8, 33°S±11°×18°0W±3°0, h116^{km}±46^{km}*

*IDC **10** 19:53:29.9±8.3, 32°.99S×179°.82E, h260^{km}±88^{km}, mb3.1/2, mb1 3.5/3, mb1mx3.1/38, mbtmp3.9/3, Error ellipse: s-maj=96.2km s-min=41.4km az=3.0*

ISC 10 19:53:23.5±1.3, 32°.59S±0°.09×179°.8W±0°.2, h200^{km}, n50, σ2^{s}.27/62, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.70	27	S	Sn	19 55 08.0	+0.9
MXZ	Matakaoa Point	5.19	197	P	Pn	19 54 42.9	+2.7
MXZ				S	Sn	19 55 40.2	-0.7
WMGZ	Waiomatatini S	5.41	195	P	Pn	19 54 45.0	+1.9
WMGZ				S	Sn	19 55 46.9	+0.8
HAZ	Te Kaha	5.51	200	P	Pn	19 54 46.1	+1.8
HAZ				S	Sn	19 55 50.4	+2.1
PKGZ	Pakihiroa	5.56	197	P	Pn	19 54 46.6	+1.6
PKGZ				S	Sn	19 55 48.5	-1.0
PUZ	Puketiti	5.69	195	P	Pn	19 54 48.5	+1.8
PUZ				S	Sn	19 55 51.2	-1.3
RUGZ	Raukumara Rang	5.74	200	P	Pn	19 54 49.3	+1.9
RUGZ				S	Sn	19 55 50.8	-3.0
TWGZ	Tauwhareparae	5.86	197	P	Pn	19 54 52.5	+3.7
TWGZ				S	Sn	19 55 56.1	-0.3
OPRZ	Ohinepanea	6.02	208	P	Pn	19 54 55.5	+4.6
MARZ	Manawahe	6.09	207	P	Pn	19 54 56.2	+4.3
CNGZ	Carnagh Statio	6.10	195	P	Pn	19 54 52.6	+0.8
MWZ	Matawai	6.12	200	P	Pn	19 54 54.8	+2.5
MWZ				S	Sn	19 56 00.7	-2.0
TKGZ	Te Karaka	6.14	197	P	Pn	19 54 54.0	+1.6
TKGZ				S	Sn	19 56 02.2	-0.6
URZ	Urewera	6.18	203	P	Pn	19 54 55.8	+2.8
	9.6nm,0.3s,baz=34,slow=18,SNR=50						
URZ				S	Sn	19 56 01.3	-2.6
	8.1nm,0.3s,baz=82,slow=20,SNR=12						
URZ	Urewera	6.18	203	P	Pn	19 54 56.1	+3.1
URZ				S	Sn	19 56 01.3	-2.6
RAGZ	Rawiri	6.31	200	P	Pn	19 54 58.5	+3.8
RIGZ	Rimuhau	6.41	197	P	Pn	19 54 58.5	+2.6
RIGZ				S	Sn	19 56 08.0	-1.4
MUGZ	Murupara	6.50	204	P	Pn	19 54 58.3	+1.2
RTZ	Ruatahuna	6.55	202	P	Pn	19 54 58.4	+0.6
PRGZ	Paritu Road	6.59	196	P	Pn	19 55 02.3	+4.0
SNGZ	Shannon Statio	6.59	200	P	Pn	19 55 01.9	+3.6
PRRZ	Plateau Road	6.65	206	P	Pn	19 55 02.6	+3.5
ALRZ	Allen Road	6.72	206	P	Pn	19 55 03.4	+3.4
KNZ	Kokohu	6.73	197	P	Pn	19 55 01.9	+1.8
RAHZ	Arahi	6.79	201	P	Pn	19 55 01.8	+0.9
MHGZ	Mahia Peninsul	6.80	195	P	Pn	19 55 03.5	+2.5
MTHZ	Maungataniwha	6.81	202	P	Pn	19 55 02.7	+1.5
WHHZ	Waihua	6.90	199	P	Pn	19 55 04.9	+2.7
MRHZ	Matea Rd	6.94	205	P	Pn	19 55 05.1	+2.3
NMHZ	Naumai	7.04	202	P	Pn	19 55 07.2	+2.9
ARHZ	Aropaoanui	7.14	200	P	Pn	19 55 07.1	+1.7
BKZ	Black Stump Fm	7.21	203	P	Pn	19 55 08.1	+1.7
MCHZ	McNeill Hill	7.40	201	P	Pn	19 55 10.9	+2.2
KRVZ	Karewarewa	7.46	208	P	Pn	19 55 12.2	+2.5
KWHZ	Kaweka Forest	7.46	203	P	Pn	19 55 10.9	+1.2
CKHZ	Cape Kidnapper	7.49	199	P	Pn	19 55 11.9	+2.1
WTVZ	West Tongariro	7.50	208	P	Pn	19 55 12.9	+2.7
TWVZ	Taurewa	7.52	209	P	Pn	19 55 12.9	+2.4
NGZ	Ngauruhoe	7.54	208	P	Pn	19 55 13.5	+2.6
FWVZ	Far West T-bar	7.63	208	P	Pn	19 55 14.1	+2.1
BHHZ	Black Hill Sta	7.65	205	P	Pn	19 55 12.8	+0.7
KAHZ	Kahuranaki	7.67	199	P	Pn	19 55 12.8	+0.5
PXZ	Pawanui	7.89	199	P	Pn	19 55 16.0	+0.8
WPHZ	Waipukurau	8.04	201	P	Pn	19 55 18.1	+0.9
DVHZ	Dannevirke	8.34	202	P	Pn	19 55 21.4	+0.3
ANWZ	Angora Road	8.40	200	P	Pn	19 55 22.1	+0.3
CPWZ	Castlepoint	8.89	200	P	Pn	19 55 28.6	+0.5
ASAR	Alice Springs	41.49	270	P	P	20 00 50.0	-1.2
	0.2nm,0.3s,baz=109,slow=7.6,SNR=11						
WRA	Warramunga Arr	42.68	276	P	P	20 00 59.2	-1.5
	0.6nm,0.3s,baz=114,slow=8.1,SNR=28						
FINES	FINESS Array B	146.61	338	PKPbc	PKPbc	20 12 39.8	-0.8
	0.8nm,0.7s,baz=86,slow=4.6,SNR=3.2						

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*SJA **10** 19:54:26.0±1.0, 33°.29S×72°.41W, h5^{km}±11^{km}, ML5.4, MW4.8*

*IDC **10** 19:54:27.0±0.4, 33°.47S×71°.89W, h0^{km}, mb5.0/25, mb1 5.1/26, mb1mx5.0/32, mbtmp5.1/26, ML4.6/1, MS5.1/9, Ms1 5.0/9, ms1mx4.7/25, Error ellipse: s-maj=18.1km s-min=10.8km az=81.0*

*NEIC **10** 19:54:30.0±0.0, 33°.46S×72°.10W, h46^{km}, mb5.3/92, ML5.3(GUC), After GUC.*

NEIC Felt [V] at Navidad; [IV] at Alhue, Colina, El Monte, Las Cabras, Melipilla, Paine, Puente Alto, San Antonio, San Bernardo, Santiago, Talagante, Tiltil, Valparaiso, Villa Alemana, Vina del Mar and Zapallar; [III] at Constitucion, Curico, Duao, Hualane, Iloca, Paredones, Pichilemu, Rancagua, Rio Claro, Sagrada Familia, San Fernando, San Javier, Santa Cruz, Talca and Villa Alegre. Felt at Mendoza, Argentina.

*GUC **10** 19:54:30.3±0.6, 33°.46S×72°.10W, h46^{km}±4^{km}, ML5.3*

*MOS **10** 19:54:31.6±1.2, 33°.39S×71°.78W, h33^{km}, mb5.5/38, MS5.3/6, Error ellipse: s-maj=11.8km s-min=6.7km az=95.3*

*ISCJB **10** 19:54:32.4±0.5, 33°.41S±0°.02×72°.06W±0°.04, h47^{km}±4^{km}, mb5.2/112, MS5.2/15, Error ellipse: s-maj=5.8km s-min=4.1km az=173.1*

*GCMT **10** 19:54:32.0±0.2, 33°.58S±0°.02×72°.21W±0°.02, h31^{km}±1^{km}, MW5.5/75, Moment Tensor Solution. s54,c67; s75,c101; Duration: 1^{s}.3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.43±.07; M$_{\theta\theta}$-0.11±.04; M$_{\phi\phi}$-1.32±.04; M$_{r\theta}$0.17±.05; M$_{\theta\phi}$-0.03±.03; M$_{\phi r}$-1.23±.06; Best double couple: M$_0$1.85200×10^{17} NP1:φ$_s$176.00000°, δ66.00000°, λ86.00000°. NP2:φ$_s$6.00000°, δ24.00000°, λ100.00000°. Principal axes: T 1.9140, Plg69.0000°, Azm77.0000°; N -0.1200, Plg4.0000°, Azm177.0000°; P -1.7900, Plg21.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **10** 19:54:33.2, 33°.40S×71°.80W, h34^{km}, mB5.4/15, Ms5.5/23, Ms7 5.4/23*

ISC 10 19:54:33.6±0.8, 33°.46S±0°.03×71°.99W±0°.05, h45^{km}±6^{km}, n973, σ1^{s}.21/989, mb5.3/112, MS5.3/15, 43C-34D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.93	180	eP	Pn	19 54 47.7	-2.5
CHPI				i S	Sn	19 54 60.0	-2.4
ROC1	El Roble	0.95	60	ePn	Pn	19 54 49.3	-1.5
ROC1	El Roble	0.95	60	⇓eP	Pn	19 54 49.6	-1.1
ROC1				eS	Sn	19 55 06.3	+3.0
ROCH	El Roble	0.96	60	⇓iP	Pn	19 54 49.2	-1.6
ROCH				i S	Sn	19 55 03.9	+0.5
ROCH				IAML		19 55 06.8	
	comp=N,123µm,0.4s						
PEL	Peldehue	1.14	74	ePn	Pn	19 54 52.5	-0.6
PEL	Peldehue	1.14	74	eP	Pn	19 54 52.5	-0.6
PEL				eS	Sn	19 55 10.7	+3.0
PEL	Peldehue	1.14	74	eP	Pn	19 54 52.5	-0.6
PEL	Peldehue	1.14	74	⇑iP	Pn	19 54 51.8	-1.4
PEL				i S	Sn	19 55 08.7	+1.1
PEL				IAML		19 55 15.8	
	comp=N,90µm,0.6s						
CHCH	Chadas Angostu	1.21	113	⇑iP	Pn	19 54 52.4	-1.8
CLCH	Cerro Calan	1.22	87	⇓iP	Pn	19 54 53.4	-0.9
CLCH				i S	Sn	19 55 11.0	+1.3
CLCH				IAML		19 55 20.1	
	comp=E,193µm,0.6s						
FSR	Penalolen	1.23	91	⇓iP	Pn	19 54 55.7	+1.4
FSR				i S	Sn	19 55 13.2	+3.5
FCH	Farellones	1.43	85	⇑iP	Pn	19 54 56.9	-0.5
FCH				i S	Sn	19 55 17.1	+2.0
FCH				IAML		19 55 22.3	
	comp=N,60µm,0.6s						
LMEL	Las Melosas	1.54	105	⇓iP	Pn	19 54 58.0	-0.8
LMEL				i S	Sn	19 55 18.9	+1.2
LMEL				IAML		19 55 25.3	
	comp=N,73µm,0.5s						
CMCH	Combarbala	2.43	20	⇓iP	Pn	19 55 09.6	-1.3
CMCH				i S	Sn	19 55 46.4	+7.0
AUSP	Uspallata	2.52	61	eP	Pn	19 55 14.2	+1.9
ARCO	CERRO ARCO	2.64	77	eP	Pn	19 55 17.1	+3.3
ARCO				IAML		19 55 22.8	
	comp=Z,13µm,0.5s						
AAGR	Agrelo	2.68	83	eP	Pn	19 55 17.1	+2.9
ASAL	Salagasta	2.79	73	eP	Pn	19 55 18.5	+2.6
RTLS	Leoncito	2.81	55	eP	Pn	19 55 21.1	+4.8
RTLS				IAML		19 56 06.3	
	comp=Z,14µm,0.8s						
CCHI	Chillan	3.14	181	eP	Pn	19 55 32.7	+12
CCHI	Chillan	3.14	181	eP	Pn	19 55 18.4	-2.1
RTCV	Cerro Valdivia	3.32	62	eP	Pn	19 55 24.8	+1.7
ZON	Zonda	3.39	57	eP	Pn	19 55 28.8	+4.7
ZON				IAML		19 56 28.0	
	comp=Z,5µm,0.7s						
GO04	Tololo Observa	3.43	18	ePn	Pn	19 55 23.2	-1.6
GO04	Tololo Observa	3.43	18	eP	Pn	19 55 23.1	-1.6
GO04	Tololo Observa	3.43	18	⇑iP	Pn	19 55 23.2	-1.6
SJA	San Juan	3.48	57	eP	Pn	19 55 14.4	-11
SJA				IAML		19 56 31.6	
	comp=Z,3µm,0.7s						
RTLL	Cerro Villicun	3.66	55	eP	Pn	19 55 28.6	+0.9
RTLL				IAML		19 56 30.1	
	comp=Z,4µm,0.6s						
ACCO	Cerro Coronel	3.79	42	⇓eP	Pn	19 55 31.3	+1.5
AMOG	MOGNA	3.89	51	eP	Pn	19 55 32.4	+1.5
ACDV	Cuesta del Vie	4.09	37	eP	Pn	19 55 36.3	+2.5
ACAN	Cantantal	4.21	75	eP	Pn	19 55 37.0	+1.7
CANA	Caviahue	4.48	171	eP	Pn	19 55 41.6	+2.5
CANA				IAML		19 56 28.6	
	comp=Z,2µm,0.8s						
LCO	Las Campanas	4.57	14	ePn	Pn	19 55 38.5	-2.0
LCO				eSn	Sn	19 56 28.9	-3.5
LCO	Las Campanas	4.57	14	eP	Pn	19 55 38.2	-2.2
LCO	Las Campanas	4.57	14	eP	Pn	19 55 38.5	-2.0
LCO				e		19 56 28.9	
AGUA	GUANDACOL	4.96	38	eP	Pn	19 55 47.1	+1.4
MRA	San Martin	5.38	81	eP	Pn	19 55 54.4	+3.0
APLL	PUNTA DE LOS L	5.56	58	eP	Pn	19 55 53.1	-0.7
ACLC	CERRO LA CRUZ	5.89	48	eP	Pn	19 56 04.0	+5.4
SUCO	SUCO	5.95	91	eP	Pn	19 56 01.1	+2.0
SUCO				IAML		19 56 16.0	
	comp=Z,1µm,0.6s						
GO06	Curarrehue	6.13	176	ePn	Pn	19 55 59.6	-2.0
GO06				eSn	Sn	19 57 07.9	-2.5
GO06	Curarrehue	6.13	176	eP	Pn	19 56 06.8	+5.2
TCA	Tanti	6.61	73	eP	Pn	19 56 07.6	-0.6
CYA	Choya	7.30	48	eP	Pn	19 56 16.7	-1.0
PLCA	Paso Flores	7.35	171	ePn	Pn	19 56 16.9	-1.5
PLCA				eSn	Sn	19 57 32.3	-8.2
PLCA	Paso Flores	7.35	171	eP	Pn	19 56 16.9	-1.5
GO02	Mina Guanaco	8.53	15	ePn	Pn	19 56 30.3	-4.5
GO02				eSn	Sn	19 58 04.1	-5.8
AHML	Horco Molle	8.80	43	eP	Pn	19 56 34.9	-3.4
TRQA	Tornquist	9.34	122	ePn	Pn	19 56 45.1	-0.5
TRQA	Tornquist	9.34	122	eP	Pn	19 56 45.1	-0.5
LVC	Limon Verde	11.15	15	Pn	Pn	19 57 04.5	-6.2
	comp=Z,0.6nm,0.3s,baz=211,slow=12,SNR=5.4						
LVC				Sn	Sn	19 59 13.7	-0.4
	comp=Z,4.5nm,0.3s,baz=178,slow=16,SNR=4.6						
LVC				LR	LR	20 01 45.6	
	comp=Z,10µm,19.1s,baz=208,slow=39						
PB04	IPOC Station P	11.20	9	ePn	Pn	19 57 14.5	+3.2
PB01	IPOC Station P	12.57	11	ePn	Pn	19 57 30.5	+0.6
PB11	IPOC Station P	13.80	9	ePn	Pn	19 57 46.6	-0.2
MNMC	Minye Minye	14.43	9	ePn	Pn	19 57 54.7	-0.7
CPUP	Villa Florida	14.56	65	ePn	Pn	19 57 51.8	-5.1
CPUP				Sn	Sn	20 00 36.9	-0.1
CPUP	Villa Florida	14.56	65	eP	Pn	19 57 51.8	-5.0
CPUP						20 00 36.9	
CPUP	Villa Florida	14.56	65	Pn	Pn	19 57 50.5	-6.3
	comp=Z,0.3nm,0.3s,baz=224,slow=12,SNR=6.5						
CPUP				Sn	Sn	20 00 36.9	-0.1
	comp=Z,1.1nm,0.3s,baz=270,slow=20,SNR=2.0						
CPUP				LR	LR	20 03 58.0	
	comp=Z,11µm,18.9s,baz=239,slow=39						
LPAZ	La Paz	17.45	12	ePn	Pn	19 58 33.6	-0.7
	comp=Z,100nm,0.8s						
LPAZ	La Paz	17.45	12	P	Pn	19 58 33.5	-0.9
	comp=Z,0.8nm,0.3s,baz=183,slow=7.4,SNR=83						
GO09	Cerro Castillo	17.80	181	ePn	Pn	19 58 38.7	+0.9
	comp=Z,124nm,0.8s						
EFI	East Falkland	20.83	155	eP	P	19 59 13.0	+1.8
	comp=Z,340nm,0.6s						
EFI	East Falkland	20.83	155	c iP	P	19 59 09.6	-1.6
EFI				pmax	pmax		
	comp=Z,219nm,1.2s						
USHA	Ushuaia	21.51	174	P	P	19 59 18.5	0.0
	comp=Z,82nm,0.8s,baz=27,slow=9.2,SNR=19						
USHA				LR	LR	20 08 42.9	
	comp=Z,5µm,18.8s,baz=358,slow=40						
NNA	Nana	21.83	347	eP	P	19 59 17.6	-4.7
	comp=Z,125nm,0.9s						
NNA	Nana	21.83	347	i P	P	19 59 23.0	+0.8
NNA	Nana	21.83	347	P	P	19 59 22.7	+0.5
	comp=Z,33nm,1.1s,baz=193,slow=9.8,SNR=12						
SPB	Sao Paulo	23.66	72	eP	P	19 59 39.7	-1.3
	comp=Z,433nm,0.9s						
ATAH	Atahualpa	26.86	346	P	P	20 00 11.6	+1.0
	comp=Z,5.3nm,0.9s,baz=148,slow=10,SNR=4.5						
BDFB	Brasilia	28.00	57	eP	P	20 00 19.3	-1.2
	comp=Z,270nm,1.5s						
BDFB	Brasilia	28.00	57	eP	P	20 00 19.3	-1.2
BDFB				pmax	pmax		
	comp=Z,270nm,1.5s						
BDFB	Brasilia	28.00	57	P	P	20 00 18.5	-2.0
	comp=Z,56nm,0.8s,baz=224,slow=8.9,SNR=60						
BDFB				LR	LR	20 13 11.4	
	comp=Z,6µm,19.9s,baz=235,slow=40						
PMSA	Palmer Station	31.72	174	LR	LR	20 13 27.4	
	comp=Z,3µm,18.4s,baz=331,slow=36						
HOPE	Hope Point	32.48	141	eP	P	20 01 00.3	+0.8
RPN	Rapa Nui	32.73	271	LR	LR	20 10 34.9	
	comp=Z,4µm,19.0s,baz=62,slow=30						
PTLC	Puerto Leguiza	33.56	355	eP	P	20 01 07.4	-2.0
PTLC	Puerto Leguiza	33.56	355	eP	P	20 01 07.4	-2.0
OTAV	Otavalo	34.07	348	eP	P	20 01 13.3	-0.9
	comp=Z,27nm,1.2s						
OTAV				ePcP	PcP	20 03 52.7	+1.4
OTAV	Otavalo	34.07	348	eP	P	20 01 13.3	-0.9
OTAV				e		20 03 52.7	
OTAV				pmax	pmax		
	comp=Z,27nm,1.2s						
PTGA	Pitinga	34.46	22	eP	P	20 01 16.8	-0.4
	comp=Z,127nm,1.0s						
PTGA	Pitinga	34.46	22	P	P	20 01 16.4	-0.7
	comp=Z,108nm,1.1s,baz=202,slow=9.9,SNR=80						
GCUF	Volcan Galeras	34.87	351	eP	P	20 01 25.1	+3.8
GCUF	Volcan Galeras	34.87	351	eP	P	20 01 25.1	+3.8
CRUC	La Cruz	35.15	351	eP	P	20 01 25.5	+2.0
CRUC	La Cruz	35.15	351	eP	P	20 01 25.5	+2.0
SOTA	Rioblanco	35.67	352	eP	P	20 01 30.0	+1.8
SOTA	Rioblanco	35.67	352	eP	P	20 01 30.0	+1.8
PCON	Cinco Dias	35.84	352	eP	P	20 01 32.4	+2.7
PCON	Cinco Dias	35.84	352	eP	P	20 01 32.4	+2.7
POPC	Popayan, Colom	36.08	352	eP	P	20 01 31.6	+0.2
POPC	Popayan, Colom	36.08	352	eP	P	20 01 31.6	+0.2
VILC	Villavicencio,	37.40	357	eP	P	20 01 44.5	+2.0
VILC	Villavicencio,	37.40	357	eP	P	20 01 44.5	+2.0
YOTC	Yotoco, Valle	37.47	353	eP	P	20 01 43.9	+0.8
YOTC	Yotoco, Valle	37.47	353	eP	P	20 01 43.9	+0.8
CHIC	Chingaza	37.92	357	eP	P	20 01 48.0	+0.9
CHIC	Chingaza	37.92	357	eP	P	20 01 48.0	+0.9
ROSC	El Rosal	38.16	356	eP	P	20 01 52.3	+3.2
ROSC	El Rosal	38.16	356	eP	P	20 01 52.3	+3.2
ROSC	El Rosal	38.16	356	P	P	20 01 49.0	-0.2
	comp=Z,6.4nm,0.6s,baz=114,slow=12,SNR=2.8						
CTAB	Cerro Tablazo,	38.32	356	eP	P	20 01 53.6	+3.1
CTAB	Cerro Tablazo,	38.32	356	eP	P	20 01 53.6	+3.1
NORC	Norcasia	38.91	355	eP	P	20 01 57.3	+2.2
NORC	Norcasia	38.91	355	eP	P	20 01 57.3	+2.2
RUSC	La Rusia	39.15	358	eP	P	20 01 58.6	+1.1
RUSC	La Rusia	39.15	358	eP	P	20 01 58.6	+1.1
HELC	Santa Helena	39.58	354	eP	P	20 02 01.1	+0.2
HELC	Santa Helena	39.58	354	eP	P	20 02 01.1	+0.2
BARC	Barichara	39.85	358	eP	P	20 02 04.9	+1.8
BARC	Barichara	39.85	358	eP	P	20 02 04.9	+1.8
PTBC	PUERTO BERRIO,	39.85	356	eP	P	20 01 59.6	-3.2
PTBC	PUERTO BERRIO,	39.85	356	eP	P	20 01 59.6	-3.2
PAMC	Pamplona, Colo	40.58	359	eP	P	20 02 10.9	+1.5
PAMC	Pamplona, Colo	40.58	359	eP	P	20 02 10.9	+1.5
ZARC	Zaragoza, Cauc	40.82	356	eP	P	20 02 10.9	+0.1
ZARC	Zaragoza, Cauc	40.82	356	eP	P	20 02 10.9	+0.1
SMLC	San Martn de	42.07	357	eP	P	20 02 19.9	-1.2
SMLC	San Martn de	42.07	357	eP	P	20 02 19.9	-1.2
SDV	Santo Domingo	42.13	2	eP	P	20 02 21.5	-0.4
	comp=Z,48nm,1.0s						
SDV	Santo Domingo	42.13	2	P	P	20 02 20.9	-0.9
	comp=Z,18nm,0.9s,baz=202,slow=8.6,SNR=18						
RCBR	Riachuelo	43.33	59	eP	P	20 02 29.4	-2.1
	comp=Z,72nm,1.0s						
RCBR	Riachuelo	43.33	59	eP	P	20 02 29.4	-2.1
RCBR				pmax	pmax		
	comp=Z,72nm,1.0s						
RCBR	Riachuelo	43.33	59	P	P	20 02 31.0	-0.5
	comp=Z,132nm,1.1s,baz=214,slow=4.8,SNR=6.8						
JTS	JuntasAbangare	45.22	342	⇓eP	P	20 02 46.7	+0.2
JTS	JuntasAbangare	45.22	342	P	P	20 02 47.0	+0.5
	comp=Z,8.5nm,1.1s,baz=149,slow=18,SNR=2.5						
VNA3	Neumayer Olymp	49.84	158	P	P	20 03 22.4	+0.6
VNA1	Neumayer--Stat	50.15	157	P	P	20 03 25.2	+1.1
VNA2	Neumayer--Watz	50.49	157	P	P	20 03 27.1	+0.4
	baz=280,slow=8.2						
APG	El Apazote	51.32	337	P	P	20 03 34.8	+1.1
	comp=Z,5.6nm,1.0s,baz=175,slow=4.9,SNR=4.3						
OBIP	Obispado Ponce	51.47	7	eP	P	20 03 34.0	-0.5
	comp=Z,118nm,1.2s						
SJG	San Juan	51.59	7	eP	P	20 03 34.4	-1.0
	comp=Z,86nm,1.2s						
SJG	San Juan	51.59	7	P	P	20 03 34.0	-1.4
SJG				pmax	pmax		
	comp=Z,44nm,1.1s						
SJG	San Juan	51.59	7	P	P	20 03 34.0	-1.4
	comp=Z,44nm,1.1s,baz=211,slow=1.7,SNR=9.1						
MPR	Mayaguez	51.59	6	eP	P	20 03 34.4	-1.0
	comp=Z,202nm,1.3s						
HUMP	Col San Antoni	51.65	7	eP	P	20 03 34.5	-1.3
	comp=Z,55nm,1.3s						
ANWB	Willy Bob	51.77	12	eP	P	20 03 33.5	-3.2
	comp=Z,119nm,0.8s						
CBYP	Canovanas	51.77	7	eP	P	20 03 35.5	-1.3
	comp=Z,98nm,1.2s						
SNAA	Sanae	52.07	158	P	P	20 03 38.9	+0.4
SNAA	Sanae	52.07	158	eP	P	20 03 38.5	-0.1
	comp=Z,143nm,1.1s						
SNAA	Sanae	52.07	158	deP	P	20 03 37.5	-1.0
SNAA	Sanae	52.07	158	P	P	20 03 38.9	+0.4
	comp=Z,50nm,0.9s,baz=274,slow=7.1,SNR=60						
SDDR	Presa de Saban	52.15	1	eP	P	20 03 38.6	-1.1
	comp=Z,51nm,1.3s						
CMIG	Matias Romero	54.81	333	P	P	20 04 00.2	+1.1
	comp=Z,1.0nm,0.6s,baz=155,slow=6.5,SNR=5.3						
RKT	Rikitea	55.67	263	eS	S	20 11 49.3	+0.6
	comp=Z,564nm,31.8s						
RKT				eLR	LR	20 20 16.8	
	comp=Z,898nm,26.2s						
RKT	Rikitea	55.67	263	eT	T	21 04 10.8	
	comp=Z,3.1nm,0.2s						
QSPA	South Pole Qui	56.77	180	eP	P	20 04 13.0	+0.1
	comp=Z,70nm,1.1s						
QSPA	South Pole Qui	56.77	180	P	P	20 04 13.5	+0.7
	comp=Z,51nm,1.1s,baz=150,slow=2.8,SNR=66						
NVL	N'lazarevskaya	56.80	157	eP	P	20 04 12.6	-0.2
859A	Kempfer Cattle	61.76	351	P	P	20 04 46.6	-0.9
	baz=172						
557A	Orange Park	63.80	351	P	P	20 05 00.6	-0.4
	baz=171						
556A	Lake Butler	63.88	350	P	P	20 05 01.4	-0.1
	baz=170						
555A	McAlpin	64.08	349	P	P	20 05 02.5	-0.3
	baz=170						
VNDA	Vanda	64.64	191	P	P	20 05 07.1	+1.1
	comp=Z,8.4nm,1.0s,baz=101,slow=10,SNR=2.8						
VNDA				LR	LR	20 31 05.2	
	comp=Z,431nm,18.5s,baz=132,slow=34						
452A	Marianna	65.17	348	P	P	20 05 09.5	-0.4
	baz=168						
TIGA	Tifton	65.47	349	P	P	20 05 11.5	-0.4
	baz=170						
449A	Pace	65.47	346	P	P	20 05 11.5	-0.4
	baz=166						
353A	Camilla	65.49	349	P	P	20 05 11.5	-0.4
	baz=169						
351A	Pinckard	65.66	347	P	P	20 05 12.8	-0.3
	baz=168						
254A	Abbeville	65.92	349	P	P	20 05 14.4	-0.4
	baz=170						
253A	Americus	66.17	349	P	P	20 05 16.0	-0.4
	baz=169						
SYO	Syowa Base	66.35	159	⇑iX	P	20 05 15.4	-1.8
SYO	Syowa Base	66.35	159	⇑eX	P	20 05 20.2	+3.0
251A	Midway	66.42	348	P	P	20 05 17.0	-1.0
	baz=168,SNR=5.7						
250A	Grady	66.47	347	P	P	20 05 17.6	-0.6
	baz=167						
155A	Kite	66.47	350	P	P	20 05 17.8	-0.4
	baz=171						
154A	Montrose	66.55	350	eP	P	20 05 18.8	0.0
154A	Montrose	66.55	350	P	P	20 05 18.3	-0.5
	baz=170						
249A	Camden	66.63	346	P	P	20 05 19.5	+0.2
	baz=166						
833A	Chaparral WMA,	66.72	334	P	P	20 05 19.6	-0.3
	baz=155						
151A	Opelika	66.83	348	P	P	20 05 20.3	-0.3
	baz=168						
152A	Waverly Hall	66.86	348	P	P	20 05 20.6	-0.2
	baz=169						
TAOE	Nuku Hiva Isla	66.96	275	eS	S	20 14 12.9	+0.4
	comp=Z,2µm,28.1s						
TAOE	Nuku Hiva Isla	66.96	275	eLR	LR	20 25 29.8	
	comp=Z,962nm,21.7s,baz=142						
150A	Eclectic	67.03	347	P	P	20 05 21.1	-0.7
	baz=167						
Z54A	Sparta	67.12	350	P	P	20 05 21.9	-0.5
	baz=170						
149A	Jones	67.17	346	P	P	20 05 22.4	-0.4
	baz=167						
Z53A	Monticello	67.28	349	P	P	20 05 22.8	-0.6
	baz=170						
Z52A	Williamson	67.32	349	P	P	20 05 23.1	-0.6
	baz=169						
GOGA	Godfrey	67.39	350	eP	P	20 05 24.1	0.0
GOGA	Godfrey	67.39	350	P	P	20 05 23.8	-0.3
	baz=170						
147A	Livingston	67.55	345	P	P	20 05 25.2	+0.1

	baz=166						
LRAL	Lakeview Retre	67.63	346	P	P	20 05 25.3	-0.4
	baz=167						
Z50A	Ashland	67.64	347	P	P	20 05 25.6	-0.2
	baz=168,SNR=7.2						
Z49A	Columbiana	67.70	347	P	P	20 05 25.7	-0.4
	baz=167						
Y54A	Tignall	67.72	350	P	P	20 05 25.6	-0.6
	baz=170,SNR=5.2						
Y53A	Monroe	67.84	350	P	P	20 05 26.7	-0.3
	baz=170,SNR=5.1						
Y52A	Lilburn	67.92	349	P	P	20 05 27.3	-0.2
	baz=169						
Y51A	Rockmart	68.12	348	P	P	20 05 27.9	-0.8
	baz=168,SNR=6.6						
X56A	White Oak	68.13	352	P	P	20 05 28.2	-0.5
	baz=172						
X55A	Gracelyn & Ava	68.18	351	P	P	20 05 28.8	-0.3
	baz=172						
Y50A	Piedmont	68.23	348	P	P	20 05 28.6	-0.8
	baz=168,SNR=5.1						
NATX	Nacogdoches	68.31	339	P	P	20 05 30.0	+0.1
	baz=160						
Y49A	Blount Mountai	68.32	347	P	P	20 05 30.0	0.0
	baz=167						
X53A	Estanollee	68.44	350	P	P	20 05 30.3	-0.4
	baz=170,SNR=6.4						
Y48A	Jasper	68.52	346	P	P	20 05 31.1	-0.1
	baz=167						
X52A	Dahlonega	68.62	349	P	P	20 05 31.6	-0.3
	baz=170,SNR=8.2						
X51A	Calhoun	68.74	349	P	P	20 05 32.4	-0.1
	baz=169,SNR=6.1						
X50B	Fort Payne	68.77	348	P	P	20 05 32.3	-0.5
	baz=168,SNR=6.0						
KMSC	Kings Mountain	68.80	352	P	P	20 05 32.7	-0.3
	baz=172,SNR=5.1						
JCT	Junction City	68.82	334	*e*P	P	20 05 29.6	-3.6
	comp=Z,40nm,1.1s						
JCT	Junction City	68.82	334	*e*P	P	20 05 29.6	-3.6
JCT				pmax	pmax		
	comp=Z,40nm,1.1s						
JCT	Junction City	68.82	334	P	P	20 05 33.7	+0.5
	baz=156,SNR=6.4						
BG3	Lake Jocassee	68.86	350	*e*P	P	20 05 33.8	+0.5
X49A	Woodville	68.94	347	P	P	20 05 33.9	+0.1
	baz=167						
X48A	Hartselle	69.02	347	*e*P	P	20 05 34.8	+0.5
	comp=Z,39nm,1.1s						
X48A	Hartselle	69.02	347	P	P	20 05 34.3	0.0
	baz=167,SNR=9.6						
W53A	Cullowhee	69.07	350	P	P	20 05 34.7	-0.1
	baz=170,SNR=9.4						
W52A	Murphy	69.11	350	P	P	20 05 35.4	+0.5
	baz=170						
Z41A	Richland Creek	69.19	341	P	P	20 05 36.1	+0.7
	baz=162						
X47A	Russelville	69.24	346	P	P	20 05 35.2	-0.4
	baz=166,SNR=10						
TXAR	Lajitas Array	69.28	331	P	P	20 05 36.7	+0.5
	comp=Z,1.6nm,0.6s,baz=152,slow=6.9,SNR=20						
TXAR				PKPPKP	P'P'df	20 33 46.1	+4.8
	comp=Z,0.9nm,1.1s,baz=292,slow=2.8,SNR=4.0						
TX31	Lajitas Ar. Si	69.28	331	*e*P	P	20 05 36.8	+0.6
W51A	Cleveland	69.30	349	P	P	20 05 36.0	0.0
	baz=169,SNR=6.7						
Y43A	Makayla and Ka	69.34	343	P	P	20 05 36.8	+0.5
	baz=163						
WHTX	Lake Whitney,	69.39	337	*e*P	P	20 05 37.0	+0.3
	comp=Z,30nm,0.8s						
WHTX	Lake Whitney,	69.39	337	P	P	20 05 37.2	+0.6
	baz=158,SNR=5.7						
X46A	Booneville	69.43	345	P	P	20 05 37.1	+0.2
	baz=165						
W50A	Signal Mountai	69.43	348	*e*P	P	20 05 37.0	+0.1
	comp=Z,27nm,0.8s						
W50A	Signal Mountai	69.43	348	P	P	20 05 36.9	-0.1
	baz=168,SNR=8.9						
V53A	Saluda	69.51	351	P	P	20 05 37.1	-0.3
	baz=170,SNR=6.6						
W49A	Belvidere	69.52	348	P	P	20 05 37.4	0.0
	baz=167						
CPCT	Cooper Cave	69.55	349	*e*P	P	20 05 37.5	0.0
	comp=Z,27nm,1.0s						
SWET	Sewanee	69.56	348	*e*P	P	20 05 37.8	+0.1
OXF	Oxford	69.56	345	*e*P	P	20 05 37.5	-0.2
	comp=Z,76nm,1.0s						
OXF	Oxford	69.56	345	*e*P	P	20 05 37.5	-0.2
OXF				pmax	pmax		
	comp=Z,77nm,1.0s						
OXF	Oxford	69.56	345	P	P	20 05 37.7	0.0
	baz=165						
TKL	Tuckaleechee C	69.64	350	*e*P	P	20 05 38.2	+0.1
W48A	Pulaski	69.66	347	P	P	20 05 38.5	+0.2
	baz=167						
Y41A	Eaglette Beard	69.73	342	P	P	20 05 39.3	+0.6
	baz=162,SNR=11						
V52A	Sevierville	69.79	350	*e*P	P	20 05 38.7	-0.4
	comp=Z,26nm,1.0s						
V52A	Sevierville	69.79	350	P	P	20 05 38.7	-0.4
	baz=170,SNR=7.3						
V50A	Pikevile	69.86	349	P	P	20 05 39.5	0.0
	baz=168,SNR=8.7						
V51A	Loudon	69.87	349	P	P	20 05 39.3	-0.2
	baz=169,SNR=5.4						
W47A	Westpoint	69.90	346	P	P	20 05 39.6	-0.1
	baz=166,SNR=6.7						
VAH	Vaihoa	69.91	265	*e*P	P	20 05 41.9	+1.6
	comp=Z,33nm,1.2s						
W46A	Michie	69.94	346	P	P	20 05 39.8	-0.2
	baz=166						
TVO	Taravao	69.98	262	*e*T	T	21 22 03.9	
	comp=Z,1.2nm,0.2s						
V49A	McMinnville	70.09	348	P	P	20 05 40.5	-0.3
	baz=168,SNR=11						
W45A	Hickory Valley	70.14	345	P	P	20 05 41.1	-0.1
	baz=165						
U53A	Fall Branch	70.17	351	P	P	20 05 41.0	-0.4
	baz=171						
TIAR	Tiarei	70.17	262	*e*T	T	21 22 18.3	
	comp=Z,2.6nm,0.2s						
V48A	Smith Brothers	70.23	347	*e*P	P	20 05 41.9	+0.2
	comp=Z,92nm,1.0s						
V48A	Smith Brothers	70.23	347	P	P	20 05 41.7	0.0
	baz=167,SNR=32						
X41A	Kaden, Bauxite	70.29	342	P	P	20 05 41.8	-0.3
	baz=162						
U52A	Thorn Hill	70.30	350	P	P	20 05 41.6	-0.6
	baz=170						
PPT2	Papeete2	70.35	262	*e*P	P	20 05 44.7	+1.6
	comp=Z,63nm,1.6s						
PPT2				*e*S	S	20 14 52.5	0.0
	comp=Z,951nm,23.2s						
PPT2	Papeete2	70.35	262	*e*LR	LR	20 27 05.0	
	comp=Z,1μm,28.0s,baz=110						
PPT	Papeete	70.36	262	LR	LR	20 29 01.7	
	comp=Z,657nm,21.5s,baz=112,slow=30						
X40A	Basin Creek Fa	70.36	342	*e*P	P	20 05 42.9	+0.3
X40A	Basin Creek Fa	70.36	342	P	P	20 05 42.6	0.0
	baz=162						
U51A	La Follette	70.38	350	P	P	20 05 42.3	-0.4
	baz=170,SNR=5.1						
V47A	Nunnelly	70.44	347	P	P	20 05 42.7	-0.3
	baz=166,SNR=21						
V46A	Holladay	70.53	346	P	P	20 05 43.3	-0.3
	baz=166,SNR=12						
U50A	Jamestown	70.55	349	P	P	20 05 43.3	-0.4
	baz=169,SNR=7.5						
MIAR	Mount Ida	70.62	341	P	P	20 05 44.4	+0.2
	baz=161						
V45A	Humboldt	70.65	345	P	P	20 05 44.3	0.0
	baz=165						
ABTX	Abilene, Hawle	70.70	335	*e*P	P	20 05 44.8	0.0
	comp=Z,61nm,1.4s						
ABTX	Abilene, Hawle	70.70	335	P	P	20 05 44.8	0.0
	baz=156,SNR=5.9						
T54A	Tazewell	70.73	352	P	P	20 05 44.6	-0.2
	baz=172,SNR=6.8						
BLA	Blacksburg	70.75	353	P	P	20 05 45.1	+0.1
	baz=173						
T53A	Wise	70.77	351	P	P	20 05 45.1	0.0
	baz=171						
U49A	Red Boiling Sp	70.79	348	P	P	20 05 45.2	0.0
	baz=168,SNR=6.1						
WVT	Waverly	70.80	346	*e*P	P	20 05 45.1	-0.1
	comp=Z,86nm,0.9s						
WVT	Waverly	70.80	346	*e*P	P	20 05 45.1	-0.1
WVT				pmax	pmax		
	comp=Z,86nm,0.9s						
WVT	Waverly	70.80	346	P	P	20 05 45.4	+0.3
	baz=166						
W41B	Gary Mavity, V	70.87	343	*e*P	P	20 05 44.6	-1.0
	comp=Z,18nm,1.0s						
W41B	Gary Mavity, V	70.87	343	P	P	20 05 45.7	+0.1
	baz=162,SNR=7.6						
U48A	Cassie Pea, Po	70.92	348	P	P	20 05 45.8	-0.2
	baz=167,SNR=8.1						
T51A	Gray	70.95	350	P	P	20 05 45.7	-0.3
	baz=170,SNR=7.2						
T52A	Hallie	70.95	351	P	P	20 05 45.9	-0.3
	baz=170						
WHAR	Wooly Hollow	70.99	343	*e*P	P	20 05 46.9	+0.6
	comp=Z,43nm,1.2s						
U47A	Clarksville	71.00	347	P	P	20 05 46.3	-0.1
	baz=167,SNR=34						
U46A	Springville	71.09	346	P	P	20 05 46.9	-0.1
	baz=166,SNR=9.0						
T50A	Nancy	71.14	349	P	P	20 05 47.5	+0.2
	baz=169						
U45A	Rockin P Farm,	71.19	346	P	P	20 05 47.6	0.0
	baz=165						
V42A	Cord	71.26	343	P	P	20 05 47.9	-0.1
	baz=163						
R58B	Mineral	71.27	355	*e*P	P	20 05 49.1	+1.1
	comp=Z,49nm,1.3s						
R58B	Mineral	71.27	355	P	P	20 05 48.6	+0.6
	baz=175,SNR=7.2						
W39A	Magazine	71.29	341	*e*P	P	20 05 48.8	+0.6
	comp=Z,51nm,0.8s						
W39A	Magazine	71.29	341	P	P	20 05 48.7	+0.5
	baz=161,SNR=19						
S55A	Lewisburg	71.31	353	P	P	20 05 48.4	0.0
	baz=173,SNR=6.6						
T49A	Edmonton	71.33	349	*e*P	P	20 05 48.1	-0.3
	comp=Z,76nm,1.7s						
T49A	Edmonton	71.33	349	P	P	20 05 48.0	-0.4
	baz=168,SNR=9.9						
S53A	Williamson	71.41	352	P	P	20 05 48.5	-0.4
	baz=171						
V41A	Mountainview	71.42	343	P	P	20 05 48.7	-0.3
	baz=162,SNR=14						
T48A	Bowling Green	71.48	348	P	P	20 05 48.9	-0.4
	baz=168,SNR=8.0						
T47A	Sharon Grove	71.49	347	P	P	20 05 49.3	-0.1
	baz=167						
S52A	Salyersville	71.53	351	P	P	20 05 49.1	-0.5
	baz=170,SNR=6.1						
S51A	Beattyville	71.56	350	*e*P	P	20 05 49.8	+0.1
S51A	Beattyville	71.56	350	P	P	20 05 49.2	-0.6
	baz=170,SNR=5.8						
T46A	Princeton	71.69	347	P	P	20 05 50.7	+0.2
	baz=166						
S50A	Richmond	71.71	350	P	P	20 05 50.4	-0.3
	baz=169,SNR=7.6						
U42A	Revenden	71.74	344	P	P	20 05 50.7	-0.2
	baz=163,SNR=15						
R54A	Victor	71.77	353	P	P	20 05 50.9	-0.2
	baz=172,SNR=5.2						
R55A	Marlinton	71.78	353	P	P	20 05 51.5	+0.3
	baz=173,SNR=8.5						
U41A	Viola	71.90	343	P	P	20 05 51.7	-0.2
	baz=163,SNR=5.8						
S49A	Springfield	71.95	349	P	P	20 05 51.5	-0.7
	baz=168,SNR=5.3						
S48A	Wiedeman Farm,	71.96	348	P	P	20 05 51.3	-0.9
	baz=168,SNR=11						
PBMO	Poplar Bluff	71.97	345	*e*P	P	20 05 52.6	+0.4
R53A	Hurricane	72.03	352	P	P	20 05 51.9	-0.7
	baz=171						
S47A	Hartford	72.04	348	P	P	20 05 52.0	-0.6
	baz=167,SNR=5.8						
MNTX	Cornudas Mount	72.06	330	*e*P	P	20 05 52.0	-1.0
	comp=Z,14nm,0.9s						
MNTX	Cornudas Mount	72.06	330	P	P	20 05 52.5	-0.4
	baz=151,SNR=18						
GDL2	Guadalupe Moun	72.09	332	*e*P	P	20 05 54.5	+1.3
R52A	Catlettsburg	72.12	351	P	P	20 05 52.8	-0.3
	baz=171						
U40A	Yellville	72.14	342	P	P	20 05 53.1	-0.2
	baz=162,SNR=13						
R51A	Hillsboro	72.21	350	P	P	20 05 53.4	-0.2
	baz=170,SNR=6.2						
T43A	Greenville	72.23	345	P	P	20 05 53.2	-0.6
	baz=164,SNR=13						
S46A	Don Dixon Farm	72.28	347	P	P	20 05 53.2	-0.9
	baz=166,SNR=7.0						
R50A	Paris	72.29	350	P	P	20 05 53.5	-0.7
	baz=169						
WMOK	Wichita Mounta	72.34	337	P	P	20 05 54.5	-0.1
	baz=157,SNR=8.8						
HHAR	Hobbs	72.35	342	*e*P	P	20 05 54.9	+0.4
T42A	Van Buren	72.36	344	*e*P	P	20 05 54.0	-0.6
	comp=Z,16nm,1.2s						
T42A	Van Buren	72.36	344	P	P	20 05 54.5	0.0
	baz=164						
R49A	Shelbyville	72.43	349	P	P	20 05 54.6	-0.4
	baz=169						
S45A	Carrier Mills	72.44	346	P	P	20 05 54.6	-0.4
	baz=166						
Q55A	Buckhannon	72.48	353	P	P	20 05 55.4	0.0
	baz=173						
TUL1	Leonard	72.51	340	*e*P	P	20 05 55.3	-0.2
	comp=Z,29nm,0.9s						
TUL1	Leonard	72.51	340	P	P	20 05 55.5	-0.1
	baz=160,SNR=7.6						
Q54A	Coxs Mills	72.55	353	P	P	20 05 55.4	-0.2
	baz=172						
WCI	Wyandotte Cave	72.56	348	*e*P	P	20 05 55.2	-0.5
	comp=Z,27nm,1.1s						
WCI	Wyandotte Cave	72.56	348	*e*P	P	20 05 55.2	-0.5
WCI				pmax	pmax		
	comp=Z,27nm,1.1s						
WCI	Wyandotte Cave	72.56	348	P	P	20 05 55.2	-0.5
	baz=168						
S44A	Carbondale	72.59	346	P	P	20 05 55.6	-0.4
	baz=165,SNR=8.0						
SIUC	Southern Illin	72.61	346	*e*P	P	20 05 55.9	-0.1
S43A	Fulton Ridge,	72.65	345	P	P	20 05 55.9	-0.4
	baz=164,SNR=28						
R48A	Northridge Ran	72.65	349	P	P	20 05 55.9	-0.4
	baz=168,SNR=7.3						
R47A	Wooly Knot Far	72.66	348	P	P	20 05 55.7	-0.6
	baz=167						
Q52A	Bidwell	72.69	352	P	P	20 05 55.9	-0.5
	baz=171,SNR=9.1						
R46A	Gibon Southern	72.75	347	P	P	20 05 56.1	-0.7
	baz=167,SNR=5.9						
Q50A	Georgetown	72.80	350	P	P	20 05 56.2	-0.9
	baz=170						
Q51A	Peebles	72.89	351	P	P	20 05 57.6	-0.1
	baz=170,SNR=8.9						
P55A	Reedsville	72.97	354	P	P	20 05 58.0	-0.2
	baz=173						
R45A	Skylar, Fairfi	72.98	347	P	P	20 05 57.7	-0.5
	baz=166						
S42A	Caledonia	73.00	345	P	P	20 05 57.7	-0.6
	baz=164,SNR=11						
MSTX	Muleshoe	73.04	334	P	P	20 05 58.5	-0.4
	baz=154,SNR=12						
Q49A	Aurora	73.09	350	P	P	20 05 58.3	-0.5
	baz=169,SNR=9.9						
R44A	Waltonville	73.09	346	P	P	20 05 58.8	0.0
	baz=165						
P53A	Whipple	73.10	352	P	P	20 05 58.8	-0.1
	baz=172						
MCWV	Mont Chateau	73.11	354	P	P	20 05 58.9	-0.1
	baz=173						
P54A	Burton	73.12	353	P	P	20 05 59.0	-0.1
	baz=173,SNR=8.2						
Q48A	North Vernon	73.14	349	P	P	20 05 58.7	-0.5
	baz=168,SNR=9.4						
MVL	Millersville	73.20	357	*e*P	P	20 06 00.7	+1.2
Q47A	Bedord North L	73.27	348	P	P	20 05 59.4	-0.5
	baz=168						
R43A	Red Bud	73.30	345	P	P	20 05 59.7	-0.4
	baz=165,SNR=7.9						
P51A	Williamsport	73.30	351	*e*P	P	20 05 59.8	-0.3
	comp=Z,65nm,1.4s						
P51A	Williamsport	73.30	351	P	P	20 05 59.4	-0.6
	baz=170,SNR=7.7						
P52A	Corning	73.33	352	P	P	20 05 60.0	-0.3
	baz=171,SNR=6.7						
CCM	Cathedral Cave	73.37	344	*e*P	P	20 06 00.6	+0.1
	comp=Z,52nm,0.9s						
CCM	Cathedral Cave	73.37	344	*e*P	P	20 06 00.6	+0.1
CCM				pmax	pmax		
	comp=Z,52nm,0.9s						
CCM	Cathedral Cave	73.37	344	P	P	20 06 00.6	+0.1
	baz=163						
AMTX	Amarillo	73.47	335	P	P	20 05 59.4	-1.9
	comp=Z,35nm,1.0s						
AMTX	Amarillo	73.47	335	P	P	20 06 01.4	+0.1
	baz=155						
319A	Douglas	73.47	327	*e*P	P	20 06 02.2	+0.8
	comp=Z,26nm,1.2s						
R42A	Luebbering	73.49	345	P	P	20 06 00.8	-0.4
	baz=164,SNR=5.2						
P50A	Jamestown	73.52	351	P	P	20 06 00.9	-0.5
	baz=170,SNR=7.1						
Q45A	Warren Harvey,	73.54	347	P	P	20 06 00.8	-0.7
	baz=166,SNR=7.6						
P49A	Miami Univ. Ec	73.58	350	P	P	20 06 01.0	-0.8
	baz=169,SNR=7.0						
O55A	Ligonier	73.61	354	P	P	20 06 02.1	+0.2
	baz=174						
O56A	Blue Knob Stat	73.61	355	P	P	20 06 01.8	-0.2
	baz=174						
P48A	Milroy	73.62	349	P	P	20 06 01.1	-0.9
	baz=168,SNR=10						
R41A	Rosebud	73.64	344	P	P	20 06 02.2	+0.1
	baz=163,SNR=20						
MAW	Mawson	73.69	164	P	P	20 06 02.1	0.0
	comp=Z,25nm,1.0s,baz=255,slow=12,SNR=2.8						
O54A	Avella	73.69	353	P	P	20 06 02.0	-0.3
	baz=173						
Q44A	Meyer Farm, Va	73.71	346	P	P	20 06 02.0	-0.5
	baz=165						
O52A	Adamsville	73.77	352	P	P	20 06 02.4	-0.4
	baz=172,SNR=5.4						
P47A	Martinsville	73.78	349	P	P	20 06 02.7	-0.2
	baz=168						
121A	Cookes Peak, D	73.80	329	P	P	20 06 04.4	+1.0
	baz=150,SNR=7.2						
O53A	New Philadelph	73.84	353	P	P	20 06 03.1	-0.1
	baz=172						
Q43A	New Douglas	73.89	346	P	P	20 06 03.3	-0.3
	baz=165						
O51A	Pataskala	73.90	352	P	P	20 06 03.0	-0.6
	baz=171,SNR=8.9						
SSPA	Standing Stone	73.93	355	*e*P	P	20 06 03.6	-0.2
	comp=Z,64nm,1.5s						
SSPA	Standing Stone	73.93	355	P	P	20 06 03.8	0.0
	baz=175						
ACSO	Alum Creek Sta	74.03	351	*e*P	P	20 06 03.8	-0.6
	comp=Z,42nm,0.8s						
ACSO	Alum Creek Sta	74.03	351	P	P	20 06 04.0	-0.3
	baz=171,SNR=12						
O50A	Cable	74.03	351	P	P	20 06 04.0	-0.3
	baz=170,SNR=8.0						
Q42A	Golden Eagle	74.03	345	P	P	20 06 04.4	0.0
	baz=164,SNR=13						
P46A	Rosedale	74.07	348	P	P	20 06 04.2	-0.4
	baz=167,SNR=5.8						
P45A	Graceland, Par	74.07	347	P	P	20 06 04.5	-0.2
	baz=166						
N59A	State Game Lan	74.09	357	*e*P	P	20 06 06.2	+1.4
N59A	State Game Lan	74.09	357	P	P	20 06 05.1	+0.4
	baz=177						
N55A	Marion Center	74.16	354	P	P	20 06 05.2	+0.1
	baz=174,SNR=9.0						
O49A	Covington	74.17	350	*e*P	P	20 06 04.7	-0.5
O49A	Covington	74.17	350	P	P	20 06 04.9	-0.3
	baz=169,SNR=10						
P44A	Sand Creek, Wi	74.18	347	P	P	20 06 04.9	-0.4
	baz=166						
Q41A	Truxton	74.23	345	P	P	20 06 05.4	-0.1
	baz=164,SNR=19						
N53A	Lisbon	74.35	353	P	P	20 06 05.8	-0.4
	baz=172						
O48A	Farmland	74.35	350	P	P	20 06 05.4	-0.9
	baz=169,SNR=7.4						
N54A	Moraine State	74.42	354	*e*P	P	20 06 05.9	-0.7
	comp=Z,69nm,1.6s						
N54A	Moraine State	74.42	354	P	P	20 06 06.4	-0.2
	baz=173,SNR=5.3						
N52A	McGinn’s Farm,	74.44	352	P	P	20 06 06.2	-0.6
	baz=172						
O47A	Sheridan	74.49	349	P	P	20 06 06.2	-0.9
	baz=168,SNR=7.9						
P43A	Skaggs, Pawnee	74.53	346	P	P	20 06 06.9	-0.4
	baz=165,SNR=8.8						
LIC	Lamto	74.57	72	*e*P	P	20 06 08.2	+0.1
	comp=Z,190nm,1.4s						
N50A	Nevada	74.58	351	P	P	20 06 07.2	-0.3
	baz=170,SNR=12						
P42A	Winchester	74.64	345	P	P	20 06 07.4	-0.5
	baz=164,SNR=7.6						
O45A	Potomac	74.77	348	P	P	20 06 08.4	-0.3
	baz=167						
SFIN	Lafayette	74.79	348	P	P	20 06 08.6	-0.2
	baz=167						
O44A	Mansfield	74.81	347	P	P	20 06 08.5	-0.4
	baz=166						
M55A	Ridgway	74.82	355	P	P	20 06 08.8	-0.1
	baz=174,SNR=6.6						
TIC	Toumodi	74.83	71	*e*P	P	20 06 09.8	+0.1
N49A	Columbus Grove	74.86	350	*e*P	P	20 06 08.9	-0.3
N49A	Columbus Grove	74.86	350	P	P	20 06 08.7	-0.5
	baz=170,SNR=12						
KIC	Kosan Boka	74.88	72	*e*P	P	20 06 10.2	+0.3
	comp=Z,150nm,1.0s						
P41A	Barry, Barry	74.88	345	P	P	20 06 09.2	-0.1
	baz=164						
N48A	Decatur	74.92	350	P	P	20 06 08.9	-0.6
	baz=169,SNR=5.3						
M54A	Oil Creek Stat	74.93	354	P	P	20 06 09.4	-0.3
	baz=174						
TUC	Tucson	74.94	327	P	P	20 06 03.1	-6.8
	comp=Z,22nm,1.3s						
TUC	Tucson	74.94	327	P	P	20 06 03.1	-6.9
TUC				pmax	pmax		
	comp=Z,22nm,1.3s						
TUC	Tucson	74.94	327	P	P	20 06 10.7	+0.7
	baz=147						
M53A	WI Miller and	74.96	353	P	P	20 06 09.9	+0.1
	baz=173						
DBIC	Dimbokro	74.97	71	*e*P	P	20 06 10.9	+0.4
	comp=Z,47nm,0.8s						
DBIC	Dimbokro	74.97	71	P	P	20 06 10.8	+0.3
	comp=Z,39nm,0.8s,baz=202,slow=6.2,SNR=40						
M51A	Elyria	75.02	352	P	P	20 06 09.6	-0.4
	baz=171,SNR=7.7						
N47A	Urbana	75.05	349	P	P	20 06 09.4	-0.8
	baz=168,SNR=9.4						
O43A	Sugar Creek Fa	75.11	346	P	P	20 06 10.6	0.0
	baz=165						
M52A	Chesterland	75.13	353	P	P	20 06 10.5	-0.2
	baz=172						
O42A	Bath	75.17	346	P	P	20 06 11.2	+0.2
	baz=165						
M50A	Fremont	75.19	351	P	P	20 06 10.6	-0.4
	baz=171						
N46A	Monticello	75.23	348	P	P	20 06 10.3	-0.9
	baz=167,SNR=5.6						
O41A	Passleys Farm,	75.27	345	P	P	20 06 10.8	-0.7
	baz=164,SNR=9.4						
N45A	Kentland	75.31	348	P	P	20 06 11.0	-0.8
	baz=167						
ANMO	Albuquerque	75.33	331	P	P	20 06 11.6	-0.7
	comp=Z,12nm,1.0s						
ANMO	Albuquerque	75.33	331⇑	*e*P	P	20 06 13.2	+0.9
ANMO				pmax	pmax		
	comp=Z,20nm,1.7s						
ANMO	Albuquerque	75.33	331	P	P	20 06 13.1	+0.9
	baz=151						
HDIL	Hopedale	75.36	346	P	P	20 06 11.9	-0.1
	baz=165						
N44A	Piper City	75.38	347	P	P	20 06 11.6	-0.5
	baz=166						
M49A	Liberty Center	75.38	351	P	P	20 06 11.6	-0.5
	baz=170,SNR=7.5						
BINY	Binghamton	75.38	357	P	P	20 06 12.5	+0.3
	baz=177						
L53A	Girard	75.43	354	P	P	20 06 11.8	-0.7
	baz=173,SNR=5.1						
M48A	Edgerton	75.49	350	P	P	20 06 12.3	-0.5
	baz=169						
M47A	Cromwell	75.50	349	P	P	20 06 12.2	-0.6
	baz=168						
L55A	Hinsdale	75.51	355	P	P	20 06 13.2	+0.3
	baz=175,SNR=8.0						
ERPA	Erie	75.57	354	P	P	20 06 13.0	-0.2
	baz=173						
N43A	Stutzman Famil	75.71	347	P	P	20 06 13.7	-0.4

	baz=165,SNR=6.5						
KSU1	Kansas State U	75.72	340	P	P	20 06 14.2	+0.1
	baz=159						
N42A	Yates City	75.77	346	P	P	20 06 14.5	+0.1
	baz=165						
L50A	Kingsville	75.79	352	P	P	20 06 14.3	-0.2
	baz=171						
N41A	Harden Midland	75.83	345	P	P	20 06 14.6	-0.1
	baz=164						
L48A	N Adams	75.90	350	P	P	20 06 14.1	-1.1
	baz=169,SNR=5.2						
M44A	Midewin, Midew	75.93	348	*e*P	P	20 06 14.8	-0.6
	comp=Z,58nm,1.0s						
M44A	Midewin, Midew	75.93	348	P	P	20 06 14.7	-0.6
	baz=166						
L49A	Milan	75.97	351	P	P	20 06 15.7	+0.2
	baz=170						
MMNY	Mt. Morris Dam	76.02	356	*e*P	P	20 06 16.3	+0.6
K55A	Perry	76.02	355	P	P	20 06 15.9	+0.1
	baz=175						
L47A	Sherwood	76.04	350	P	P	20 06 15.8	-0.2
	baz=169						
N40A	Mertquake, Sal	76.15	345	P	P	20 06 16.0	-0.6
	baz=163,SNR=6.1						
L46A	Eue Claire	76.25	349	P	P	20 06 16.6	-0.5
	baz=168						
K52A	Tillsonburg	76.29	353	P	P	20 06 17.0	-0.3
	baz=173						
K51A	Iona Station	76.31	353	P	P	20 06 17.2	-0.3
	baz=172						
M41A	Milan	76.40	346	P	P	20 06 17.5	-0.5
	baz=164,SNR=5.2						
X18A	Snowflake	76.44	329	*e*P	P	20 06 20.6	+2.0
T25A	Trinidad	76.47	334	P	P	20 06 19.8	+1.1
	baz=153,SNR=18						
TYNO	Tyneside	76.53	354	P	P	20 06 18.8	+0.2
	baz=173						
J55A	Hilton	76.54	356	P	P	20 06 18.9	+0.2
	baz=175						
STCO	Saint Catharin	76.58	355	P	P	20 06 19.0	+0.1
	baz=174						
M40A	Post Highland	76.64	345	P	P	20 06 18.9	-0.4
	baz=164						
K47A	Vermontville	76.69	350	P	P	20 06 19.3	-0.3
	baz=169						
K48A	Perry	76.70	351	P	P	20 06 18.7	-1.0
	baz=170,SNR=6.2						
J52A	Paris	76.73	354	P	P	20 06 19.6	-0.2
	baz=173,SNR=5.7						
L43A	Garden Prairie	76.83	347	P	P	20 06 20.2	-0.2
	baz=166						
L42A	Oliver, Polo	76.83	347	P	P	20 06 20.6	+0.2
	baz=165						
M39A	Webster	76.85	345	P	P	20 06 20.6	+0.1
	baz=163						
X16A	Lo Mia Camp, P	77.00	327	*e*P	P	20 06 22.6	+0.8
	comp=Z,20nm,1.0s						
L41A	Preston	77.07	346	P	P	20 06 20.9	-0.8
	baz=164,SNR=9.6						
J49A	Marlette	77.13	352	P	P	20 06 21.4	-0.6
	baz=171						
J48A	Bridge Port	77.15	351	P	P	20 06 21.5	-0.6
	baz=170,SNR=7.4						
L40A	Anamosa	77.20	345	*e*P	P	20 06 22.2	-0.3
	comp=Z,48nm,0.9s						
L40A	Anamosa	77.20	345	P	P	20 06 22.0	-0.5
	baz=164,SNR=12						
DRWO	Darlington Wes	77.21	355	P	P	20 06 22.6	+0.2
	baz=174						
DRCO	St. Marys Ceme	77.21	355	P	P	20 06 22.6	+0.2
	baz=174						
J47A	Sunmer	77.23	350	P	P	20 06 22.0	-0.6
	baz=169						
I53A	Kortright Cn E	77.23	354	P	P	20 06 22.8	+0.3
	baz=174						
WLVO	Wesleyville	77.24	355	P	P	20 06 22.7	+0.2
	baz=175						
Y14A	Wickenburg	77.32	326	*e*P	P	20 06 24.7	+1.2
PKRO	Pickering	77.33	355	P	P	20 06 23.0	-0.1
	baz=174,SNR=5.2						
I51A	Listowel	77.34	353	P	P	20 06 22.7	-0.5
	baz=172,SNR=8.0						
SDCO	Great Sand Dun	77.41	333	*e*P	P	20 06 25.2	+1.1
	comp=Z,11nm,1.0s						
SDCO	Great Sand Dun	77.41	333	P	P	20 06 24.8	+0.7
	baz=152,SNR=11						
L39A	Vinton	77.43	345	P	P	20 06 23.9	+0.2
	baz=163						
I55A	Frankford	77.48	356	P	P	20 06 24.1	+0.1
	baz=175						
SCIA	State Center	77.50	344	P	P	20 06 21.9	-2.3
	comp=Z,28nm,0.9s						
SCIA	State Center	77.50	344	P	P	20 06 24.3	+0.2
	baz=162						
I52A	Shelburne	77.52	354	P	P	20 06 24.1	-0.1
	baz=173						
K42A	Prairie Point,	77.52	347	P	P	20 06 24.0	-0.3
	baz=165,SNR=7.3						
K41A	Shullsburg	77.54	346	P	P	20 06 24.1	-0.3
	baz=164,SNR=7.5						
BASO	Ashfield	77.61	353	P	P	20 06 24.7	+0.1
	baz=172						
BWLO	Walkerton	77.66	353	P	P	20 06 25.1	+0.2
	baz=172						
LONY	Lake Ozonia	77.75	358	P	P	20 06 26.0	+0.5
	baz=178,SNR=5.2						
DELO	Deloro Mine	77.78	356	P	P	20 06 25.9	+0.3
	baz=175						
H56A	Elgin	77.78	357	P	P	20 06 25.8	+0.1
	baz=176,SNR=5.8						
H55A	Tweed	77.78	356	P	P	20 06 25.9	+0.3
	baz=176						
K40A	Colesburg	77.80	346	P	P	20 06 25.5	-0.3
	baz=164,SNR=6.2						
BRCO	Bruce Peninsul	77.81	353	P	P	20 06 25.7	-0.2
	baz=172						
JFWS	Jewell Farm	77.82	346	*e*P	P	20 06 25.9	0.0
	comp=Z,49nm,1.2s						
JFWS	Jewell Farm	77.82	346	*e*P	P	20 06 26.3	+0.4
SWSC	Sam W. Stewart	77.86	323	P	P	20 06 26.6	+0.2
	baz=144						
Y12C	Blythe	77.89	325	*e*P	P	20 06 28.5	+2.0
Y12C	Blythe	77.89	325	P	P	20 06 27.9	+1.4
	baz=145						
WUAZ	Wupatki	77.89	328	*e*P	P	20 06 23.9	-2.9
	comp=Z,19nm,1.0s						
WUAZ	Wupatki	77.89	328	P	P	20 06 28.0	+1.3
	baz=147,SNR=5.4						
S22A	4UR Ranch, Cre	77.91	332	*e*P	P	20 06 28.5	+1.6
	comp=Z,6.6nm,0.8s						
S22A	4UR Ranch, Cre	77.91	332	P	P	20 06 28.0	+1.1
	baz=151,SNR=7.5						
J43A	Natural Harves	77.93	348	P	P	20 06 26.4	-0.2
	baz=166						
I47A	Gladwin	77.95	351	P	P	20 06 26.4	-0.2
	baz=169						
K39A	Oelwein	77.96	345	P	P	20 06 26.7	0.0
	baz=163						
J42A	Columbus	78.00	347	P	P	20 06 27.0	+0.1
	baz=166						
I46A	Reed City	78.00	350	P	P	20 06 26.9	-0.1
	baz=169						
I48A	Sherman Twp	78.01	351	P	P	20 06 26.8	-0.1
	baz=170						
MVCO	Mesa Verde	78.11	331	P	P	20 06 22.4	-5.6
	comp=Z,13nm,1.0s						
MVCO	Mesa Verde	78.11	331	P	P	20 06 28.8	+0.8
	baz=150,SNR=7.2						
MONP2	Monument Peak	78.13	323	P	P	20 06 29.6	+1.4
	baz=144						
J41A	Loganville	78.21	347	P	P	20 06 28.0	0.0
	baz=165,SNR=5.7						
BC3	Big Chuckawall	78.26	324	P	P	20 06 30.0	+1.2
	baz=144,SNR=11						
PLVO	Plevna	78.27	356	*e*P	P	20 06 29.0	+0.6
PLVO	Plevna	78.27	356	P	P	20 06 29.1	+0.8
	baz=176						
BANO	Bancroft	78.30	356	P	P	20 06 29.2	+0.7
	baz=175						
Q24A	Divide	78.35	334	P	P	20 06 29.5	+0.2
	baz=152,SNR=6.9						
I43A	Langenfeld Bro	78.38	348	P	P	20 06 28.8	-0.1
	baz=166						
J40A	Soldiers Grove	78.39	346	P	P	20 06 28.8	-0.3
	baz=164,SNR=8.9						
PKME	Peaks-Kenny Pk	78.39	2	P	P	20 06 30.4	+1.4
	baz=182						
G53A	Haliburton	78.44	355	P	P	20 06 29.6	+0.2
	baz=174,SNR=5.6						
G55A	Calabogie	78.46	357	P	P	20 06 29.6	+0.2
	baz=176						
H48A	Harrisville	78.47	352	P	P	20 06 29.6	+0.2
	baz=170						
H47A	Mio	78.48	351	P	P	20 06 29.1	-0.4
	baz=170						
I42A	Draeger Farm,	78.52	348	P	P	20 06 29.7	0.0
	baz=166						
IRM	Iron Mountain	78.52	325	P	P	20 06 30.6	+0.5
	baz=144,SNR=6.6						
J39A	Decorah	78.53	345	P	P	20 06 29.9	+0.1
	baz=163						
H46A	Fife Lake	78.56	350	P	P	20 06 29.3	-0.6
	baz=169						
W13A	Hualapai Mount	78.69	326	*e*P	P	20 06 33.1	+1.9
PFO	Pinyon Flats O	78.73	323	P	P	20 06 31.5	+0.1
	baz=144						
ALFO	Alfred	78.76	358	P	P	20 06 31.7	+0.7
	baz=178						
KLBO	Killbear Provi	78.80	354	P	P	20 06 31.1	-0.2
	baz=173,SNR=6.9						
BUKO	Buck Lake	78.82	355	P	P	20 06 31.5	+0.1
	baz=174						
I40A	Norwalk	78.84	346	P	P	20 06 31.5	-0.1
	baz=164						
I41A	Arkdale	78.86	347	*e*P	P	20 06 31.6	0.0
	comp=Z,23nm,0.9s						
I41A	Arkdale	78.86	347	P	P	20 06 31.6	0.0
	baz=165						
PEMO	Pembroke	78.91	356	P	P	20 06 32.2	+0.4
	baz=176						
I39A	Houston	78.98	346	*e*P	P	20 06 32.2	-0.2
	comp=Z,33nm,0.8s						
I39A	Houston	78.98	346	P	P	20 06 32.1	-0.3
	baz=164,SNR=7.7						
G47A	Hillman	79.00	351	P	P	20 06 32.6	+0.3
	baz=170						
F55A	Otter Lake	79.02	357	P	P	20 06 33.0	+0.6
	baz=176						
H42A	Shiocton	79.05	348	P	P	20 06 32.6	0.0
	baz=166						
U15A	North Rim	79.06	328	*e*P	P	20 06 34.7	+1.4
	comp=Z,12nm,0.9s						
PV17	East Wray Mesa	79.22	331	*e*P	P	20 06 34.6	+0.6
	comp=Z,12nm,0.8s						
ALGO	Algonquin Park	79.24	356	P	P	20 06 33.7	+0.1
	baz=175						
ISCO	Idaho Springs	79.26	334	P	P	20 06 34.9	+0.6
	baz=152,SNR=6.4						
GMRC	Granite Mounta	79.28	325	P	P	20 06 34.9	+0.6
	baz=144,SNR=12						
TSUM	Tsumeb	79.33	106	*e*P	P	20 06 35.7	+0.6
	comp=Z,64nm,1.0s						
TRQ	Mont Tremblant	79.35	358	*e*P	P	20 06 34.2	-0.1
H41A	Junction City	79.35	347	*e*P	P	20 06 34.1	-0.2
H41A	Junction City	79.35	347	P	P	20 06 34.4	+0.1
	baz=165						
F49A	Sandfield	79.38	353	P	P	20 06 34.0	-0.4
	baz=172						
H40A	Chili	79.50	347	P	P	20 06 35.1	0.0
	baz=165						
E52A	Mattawa	79.61	355	P	P	20 06 35.5	-0.1
	baz=174						
E53A	Dumoine, Ponti	79.64	356	P	P	20 06 35.8	0.0
	baz=175,SNR=5.3						
HEC	Hector,Ludlow	79.64	324	P	P	20 06 37.3	+1.1
	baz=144,SNR=8.3						
E54A	Lac Daplat, Po	79.66	356	P	P	20 06 36.2	+0.2
	baz=176						
F46A	Macinaw City C	79.71	351	P	P	20 06 36.5	+0.3
	baz=169						
G42A	Mountain	79.74	348	P	P	20 06 36.6	+0.2
	baz=166						
KNB	Kanab	79.79	328	*e*P	P	20 06 38.5	+1.4
	comp=Z,30nm,1.0s						
KNB	Kanab	79.79	328	*e*P	P	20 06 38.5	+1.4
KNB				pmax	pmax		
	comp=Z,30nm,1.0s						
G41A	Antigo	79.84	348	P	P	20 06 37.3	+0.3
	baz=166						
E51A	G1948 Merrick	79.91	355	P	P	20 06 37.3	0.0
	baz=174						
H38A	Maiden Rock	79.93	345	P	P	20 06 37.5	+0.1
	baz=163						
ECSD	EROS Data Cent	80.05	342	*e*P	P	20 06 38.2	+0.1
	comp=Z,34nm,1.0s						
ECSD	EROS Data Cent	80.05	342	P	P	20 06 38.1	-0.1
	baz=159,SNR=29						
G40A	Rib Lake	80.08	347	P	P	20 06 38.1	-0.2
	baz=165						
E48A	Lockeyer	80.10	353	P	P	20 06 38.2	-0.1
	baz=172						
F43A	Flat Rock, Esc	80.11	349	P	P	20 06 38.1	-0.3
	baz=167						
F44A	Big Bay de Noc	80.14	350	P	P	20 06 38.7	+0.2
	baz=168						
F42A	Maple Grove Fa	80.19	349	P	P	20 06 39.4	+0.5
	baz=166						
E47A	Iron Bridge	80.20	352	P	P	20 06 38.5	-0.3
	baz=171						
E46A	Sault Ste Mari	80.23	351	P	P	20 06 38.7	-0.3
	baz=170,SNR=6.5						
GSC	Goldstone, Bar	80.25	324	*e*P	P	20 06 41.5	+2.0
GSC	Goldstone, Bar	80.25	324	*e*P	P	20 06 41.5	+2.0
GSC	Goldstone, Bar	80.25	324	P	P	20 06 40.2	+0.6
	baz=144,SNR=5.9						
D52A	ZEK Kipawa Sen	80.28	356	P	P	20 06 39.5	+0.2
	baz=175,SNR=5.3						
BOSA	Boshof	80.29	118	*i* P	P	20 06 40.9	+0.8
BOSA	Boshof	80.29	118	*e*P	P	20 06 40.3	+0.1
	comp=Z,133nm,1.5s						
BOSA	Boshof	80.29	118	*e*P	P	20 06 39.8	-0.4
BOSA	Boshof	80.29	118	*i* P	P	20 06 40.5	+0.3
BOSA	Boshof	80.29	118	P	P	20 06 40.0	-0.2
	comp=Z,66nm,1.2s,baz=237,slow=4.0,SNR=37						
G39A	Holcombe	80.29	346	P	P	20 06 39.3	0.0
	baz=164						
G38A	Ridgeland	80.31	346	P	P	20 06 39.0	-0.5
	baz=163						
D53A	Lac Vacive, Po	80.34	356	P	P	20 06 39.7	+0.1
	baz=175,SNR=7.4						
F41A	Three Lakes	80.34	348	P	P	20 06 39.5	-0.2
	baz=166						
D54A	Lac Fusel, La	80.35	357	P	P	20 06 39.2	-0.5
	baz=176,SNR=7.5						
D51A	Lot 18 Range I	80.46	355	P	P	20 06 40.5	+0.2
	baz=174						
LATQ	La Tuque	80.48	359	P	P	20 06 40.7	+0.4
	baz=179						
EDW2	Edwards Air Fo	80.50	323	P	P	20 06 41.5	+0.7
	baz=143						
O20A	White River Ci	80.53	333	P	P	20 06 41.5	+0.4
	baz=150						
SRU	San Rafael Swe	80.56	331	*e*P	P	20 06 42.3	+1.1
SRU	San Rafael Swe	80.56	331	*e*P	P	20 06 42.3	+1.1
SPMN	Marine on St.	80.56	345	P	P	20 06 40.9	+0.1
	baz=163						
D50A	G1974 Best Tow	80.57	355	P	P	20 06 41.1	+0.2
	baz=174						
E43A	Lone Tree Farm	80.61	350	P	P	20 06 41.4	+0.3
	baz=168						
F40A	Park Falls	80.70	347	P	P	20 06 41.9	+0.4
	baz=165						
D46A	Sault St. Mari	80.72	352	P	P	20 06 41.7	0.0
	baz=170						
D48A	Paudash Townsh	80.75	353	P	P	20 06 41.8	0.0
	baz=172						
D47A	Chapleau	80.77	352	P	P	20 06 42.4	+0.5
	baz=171						
E42A	Champion	80.81	349	P	P	20 06 42.3	+0.1
	baz=167						
LRMC	Laurel Mtn Rad	80.82	324	P	P	20 06 42.8	+0.1
	baz=143						
F39A	Loretta	80.84	347	P	P	20 06 42.7	+0.4
	baz=164						
TMUT	Trail Mountain	81.00	330	*e*P	P	20 06 44.1	+0.3
	comp=Z,9.5nm,0.8s						
F37A	Hinrichs Farm,	81.00	346	P	P	20 06 42.9	-0.3
	baz=163,SNR=6.2						
E41A	Kenton	81.02	348	P	P	20 06 43.4	+0.2
	baz=166						
F38A	Pierce - Schro	81.07	346	P	P	20 06 43.4	-0.2
	baz=163,SNR=5.9						
E40A	Wakefield	81.16	348	P	P	20 06 44.3	+0.3
	baz=165,SNR=5.1						
MPMC	Manual Prospec	81.19	324	P	P	20 06 45.3	+0.6
	baz=143,SNR=7.1						
FURC	Furnace Creek,	81.21	325	P	P	20 06 45.4	+0.9
	baz=144						
E39A	Mellen	81.22	347	P	P	20 06 44.7	+0.4
	baz=164						
TPNV	Topopah Spring	81.30	326	*e*P	P	20 06 46.4	+1.2
	comp=Z,19nm,1.0s						
TPNV	Topopah Spring	81.30	326	*e*P	P	20 06 46.9	+1.7
TPNV	Topopah Spring	81.30	326	P	P	20 06 46.1	+0.9
	baz=144,SNR=9.4						
VLDQ	Val d'Or	81.35	356	*e*P	P	20 06 44.1	-0.9
	comp=Z,37nm,1.0s						
DAC	Darwin (Calif)	81.41	324	*e*P	P	20 06 41.4	-4.5
	comp=Z,23nm,1.0s						
DAC	Darwin (Calif)	81.41	324	*e*P	P	20 06 41.4	-4.5
DAC				pmax	pmax		
	comp=Z,23nm,1.0s						
D41A	Chassel	81.53	349	*e*P	P	20 06 46.3	+0.4
D41A	Chassel	81.53	349	P	P	20 06 46.1	+0.2
	baz=166,SNR=9.2						
CWC	Cottonwood Cre	81.78	324	P	P	20 06 49.0	+1.2
	baz=143						
VES	Vestal, Richgr	81.81	323	P	P	20 06 49.2	+1.5
	baz=142						
SMMC	Simmler	81.86	322	P	P	20 06 49.8	+1.8
	baz=141						
R11A	Troy Canyon, C	82.13	327	*e*P	P	20 06 49.9	+0.4
	comp=Z,12nm,1.0s						
R11A	Troy Canyon, C	82.13	327	P	P	20 06 50.2	+0.7
	baz=145,SNR=19						
LSQQ	Lebel-sur-Quev	82.27	357	P	P	20 06 50.1	+0.3
	baz=176						
DUG	Dugway, Tooele	82.43	330	*e*P	P	20 06 51.4	+0.4
	comp=Z,32nm,1.4s						
DUG	Dugway, Tooele	82.43	330	*e*P	P	20 06 51.4	+0.4
DUG				pmax	pmax		
	comp=Z,32nm,1.4s						
DUG	Dugway, Tooele	82.43	330	P	P	20 06 51.8	+0.8
	baz=147,SNR=13						
C40A	Isle Royale Na	82.46	348	P	P	20 06 50.9	+0.2
	baz=166						
LBTB	Lobatse	82.50	115	*e*P	P	20 06 52.1	+0.2
	comp=Z,118nm,1.1s						
LBTB	Lobatse	82.50	115	*e*P	P	20 06 52.1	+0.2
LBTB				pmax	pmax		
	comp=Z,118nm,1.1s						
RSSD	Black Hills	82.55	337	P	P	20 06 51.6	0.0
	baz=154						
TCUT	Toone Canyon	82.62	331	*e*P	P	20 06 53.2	+1.1
MATQ	Matagami	83.00	356	P	P	20 06 53.7	+0.1
	baz=175						
CHGQ	Chibougamau	83.03	358	P	P	20 06 53.5	-0.2
	baz=178						
PDAR	Pinedale Array	83.30	333	P	P	20 06 56.5	+0.9
	comp=Z,4.2nm,0.9s,baz=123,slow=5.5,SNR=11						
NV01	Mina Array Sit	83.46	325	*e*P	P	20 06 56.5	0.0
NVAR	Mina Array Bea	83.46	325	P	P	20 06 57.4	+0.8
	comp=Z,5.4nm,0.8s,baz=149,slow=6.1,SNR=12						
KVN	Kaiserville	83.86	326	*e*P	P	20 06 59.3	+0.8
	comp=Z,14nm,1.0s						
KVN	Kaiserville	83.86	326	*e*P	P	20 06 59.8	+1.3
ELK	Elko	83.92	328	*e*P	P	20 06 58.9	+0.1
	comp=Z,14nm,0.9s						
ELK	Elko	83.92	328	*e*P	P	20 06 59.7	+0.8
TOA0	Torodi Ar. Sit	83.99	70	*e*P	P	20 06 59.8	+0.3
TORD	Torodi Ar. Bea	83.99	70	P	P	20 06 57.8	-1.7
	comp=Z,30nm,0.8s,baz=270,slow=1.5,SNR=147						
URZ	Urewera	84.05	228	LR	LR	20 37 05.4	
	comp=Z,673nm,18.8s,baz=162,slow=30						
RPZ	Rata Peaks	84.08	221	P	P	20 06 59.6	0.0
	comp=Z,4.7nm,0.3s,baz=48,slow=16,SNR=2.8						
CMB	Columbia Colle	84.17	324	P	P	20 06 57.8	-2.1
	comp=Z,53nm,1.2s						
CMB	Columbia Colle	84.17	324	P	P	20 06 57.8	-2.1
CMB				pmax	pmax		
	comp=Z,53nm,1.2s						
TPAW	Teton Pass	84.45	333	*e*P	P	20 07 00.7	-0.8
	comp=Z,16nm,0.9s						
MOOW	Moose Ponds	84.59	333	*e*P	P	20 07 02.6	+0.5
MDND	Maddock	84.64	342	P	P	20 07 02.2	+0.2
	baz=157,SNR=6.6						
FLWY	Flagg Ranch	84.86	333	*e*P	P	20 07 04.4	+0.9
PAHR	Pah Rah Range	84.99	325	*e*P	P	20 07 06.0	+1.8
	comp=Z,34nm,1.8s						
RLMT	Red Lodge	85.22	335	*e*P	P	20 07 05.6	+0.3
	comp=Z,15nm,0.8s						
RLMT	Red Lodge	85.22	335	P	P	20 07 05.6	+0.3
	baz=150						
YFT	Old Faithful	85.22	333	*e*P	P	20 07 07.6	+2.3
YHH	Holmes Hill	85.51	333	*e*P	P	20 07 07.8	+1.0
	comp=Z,27nm,1.0s						
HLID	Hailey	85.89	331	*e*P	P	20 07 09.7	+1.1
	comp=Z,15nm,1.1s						
HLID	Hailey	85.89	331	P	P	20 07 09.3	+0.8
	baz=146,SNR=12						
GCMT	Greycliff	85.94	335	*e*P	P	20 07 08.9	+0.2
ULM	Lac du Bonnet	85.99	345	*e*P	P	20 07 08.1	-0.5
	comp=Z,16nm,0.9s						
ULM	Lac du Bonnet	85.99	345	P	P	20 07 07.9	-0.7
	comp=Z,14nm,1.0s,baz=156,slow=3.4,SNR=18						
MCMT	McKenzie Canyo	86.31	332	*e*P	P	20 07 11.8	+1.1
BOZ	Bozeman (W)	86.49	333	*e*P	P	20 07 11.9	+0.5
	comp=Z,7.2nm,0.9s						
BOZ	Bozeman (W)	86.49	333	*e*P	P	20 07 11.9	+0.5
BOZ	Bozeman (W)	86.49	333	P	P	20 07 12.0	+0.6
	baz=148,SNR=8.5						
DGMT	Dagmar	86.49	339	*e*P	P	20 07 07.0	-4.3
	comp=Z,61nm,1.0s						
DGMT	Dagmar	86.49	339	P	P	20 07 11.7	+0.5
	baz=154,SNR=10						
O03E	Paynes Creek	86.61	324	P	P	20 07 12.7	+0.6
	baz=140						
CGR	Cap Guir	86.63	50	P	P	20 07 15.0	+2.7
DLMT	Dillon	86.66	333	*e*P	P	20 07 13.1	+0.8
	comp=Z,24nm,1.1s						
WVOR	Wild Horse Val	86.79	327	P	P	20 07 09.9	-3.1
	comp=Z,15nm,1.2s						
WVOR	Wild Horse Val	86.79	327	P	P	20 07 09.9	-3.1
WVOR				pmax	pmax		
	comp=Z,15nm,1.2s						
O02D	Mt. Diablo Mer	87.01	324	P	P	20 07 14.8	+0.8
	baz=140						
MOD	Modoc Plateau	87.14	326	*e*P	P	20 07 14.9	+0.2
	comp=Z,10nm,0.8s						
WDC	Whiskeytown Da	87.19	324	*e*P	P	20 07 14.9	+0.1
	comp=Z,16nm,0.8s						
WDC	Whiskeytown Da	87.19	324	*e*P	P	20 07 14.9	+0.1
WDC				pmax	pmax		
	comp=Z,16nm,0.8s						
J08A	Circle Bar Ran	87.45	328	*e*P	P	20 07 17.2	+1.1
	comp=Z,35nm,0.8s						
TTIG	Tnine Tigouga,	87.50	51	P	P	20 07 19.0	+2.3
BLWY	Bulawayo	87.52	112	*i* S	P	20 07 18.1	+0.8
BLWY	Bulawayo	87.52	112	*i* P	P	20 07 17.2	0.0
N02D	Trinity Center	87.57	324	P	P	20 07 17.5	+0.7
	baz=140						
M04C	Macdoel	87.77	325	P	P	20 07 18.4	+0.7
	baz=140,SNR=5.7						
EGMT	Eagleton	87.89	336	P	P	20 07 18.4	+0.3
	baz=149						
M02C	Callahan	87.96	324	P	P	20 07 19.7	+1.1
	baz=140						
SCHQ	Schefferville	88.05	3	P	P	20 07 18.1	-0.5
	comp=Z,18nm,1.1s,baz=186,slow=3.3,SNR=6.7						
BMO	Blue Mountains	88.14	330	*e*P	P	20 07 19.2	-0.2
	comp=Z,13nm,1.0s						
BMO	Blue Mountains	88.14	330	*e*P	P	20 07 19.2	-0.2
BMO				pmax	pmax		
	comp=Z,13nm,1.0s						
YBH	Yreka Blue Hor	88.15	325	*e*P	P	20 07 19.3	-0.2
	comp=Z,13nm,0.8s						
YBH	Yreka Blue Hor	88.15	325	*e*P	P	20 07 19.3	-0.2
YBH				pmax	pmax		
	comp=Z,13nm,0.8s						
OUK	Oukaimeden	88.30	50	P	P	20 07 23.0	+2.2
L04D	Klamath Falls	88.33	325	P	P	20 07 21.3	+0.9
	baz=140						
MSO	Missoula	88.40	333	P	P	20 07 21.5	+0.9
	baz=146						
I07A	Izee	88.48	328	*e*P	P	20 07 22.6	+1.6
J05D	Fort Rock, OR	88.65	326	P	P	20 07 22.8	+0.9
	baz=141						
OUZM	OUZ	88.83	51	P	P	20 07 25.3	+2.3
L02E	Cave Junction	88.91	324	P	P	20 07 23.9	+0.9
	baz=139						
F10A	Beach Ranch, E	89.01	330	*e*P	P	20 07 24.0	+0.6
J04D	Umpqua Nationa	89.02	326	P	P	20 07 25.0	+1.3
	baz=140						

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K02D  Willamette Mer    89.34 325   P       P        20 07 26.3 +1.2
      baz=139
LSZ   Lusaka            89.94 108  eP       P        20 07 25.1  -3.5
      comp=Z,56nm,1.4s
LSZ   Lusaka            89.94 108  eP       P        20 07 25.1  -3.5
LSZ                                 pmax    pmax
      comp=Z,56nm,1.4s
GOLM  Goulmima          90.52  52   P       P        20 07 33.0 +2.1
NEW   Newport           90.81 332   P       P        20 07 31.5  -0.3
      baz=144
MDT   Midelt            91.45  51   P       P        20 07 36.5 +1.3
FFC   Flin Flon         91.55 343 i P       P        20 07 36.1 +1.2
PBDV  Barranco-do-Ve    92.23  46  eP       P        20 07 40.0 +1.4
      comp=Z,76nm,1.4s
PBEJ  Beja              92.78  45  eP       P        20 07 42.7 +1.6
      comp=Z,30nm,2.1s
FIGM  Figuig            93.23  53   P       P        20 07 45.0 +1.6
PESTR Estremoz          93.50  45  eP       P        20 07 45.3 +0.9
PESTR                               -Mb              20 07 46.1
FCC   Fort Churchill    93.71 349  eP       P        20 07 44.3  -0.4
      comp=Z,13nm,1.3s
FCC   Fort Churchill    93.71 349  eP       P        20 07 44.9 +0.2
MTE   Manteigas         94.53  44  eP       P        20 07 52.6 +3.5
      comp=Z,65nm,1.7s
MVO   Moncorvo          95.32  43  eP       P        20 07 52.2  -0.5
      comp=Z,46nm,1.4s
ESDC  Sonseca Array     96.18  46   P       P        20 07 56.4  -0.2
      comp=Z,4.3nm,0.8s,baz=250,slow=3.6,SNR=9.5
ES19  SONSECA Array     96.23  46  eP       P        20 07 55.9  -1.0
YKA   Yellowknife Ar   101.56 341   P       Pdif     20 08 18.4  -1.7
      comp=Z,0.6nm,0.7s,baz=143,slow=4.4,SNR=12
DZM   Mont Dzumac      101.59 234  eLR      LR       20 41 32.5
      comp=Z,919nm,24.6s
GERES GERESS Array B   111.75  45   PKiKP   PKiKP    20 13 03.1 +0.1
      comp=Z,1.4nm,0.7s,baz=225,slow=0.8,SNR=9.9
CLL   Collm            112.42  43  ePKiKP   PKiKP    20 13 05.0 +0.9
CLL                                 Lm      MLR      20 59 00.0
      comp=Z,800nm,18.9s
CLL   Collm            112.42  43  ePKIKP   PKiKP    20 13 05.0 +0.9
CLL                                 MLR     MLR
      comp=Z,800nm,18.9s
ILAR  Eielson Array    113.73 333   PKiKP   PKiKP    20 13 06.4 +0.2
      comp=Z,1.1nm,1.0s,baz=165,slow=2.8,SNR=6.2
VYHS  Vyhne            114.70  47  ePKIKP   PKiKP    20 13 08.8 +0.2
TIM   Timisoara        115.12  51⇓iP        PKPpre   20 13 05.2
TIM   Timisoara        115.12  51 ⇓PKIKP    PKPpre   20 13 05.2
PSZ   Piszkesteto      115.12  48⇑iP        PKPdf    20 13 07.8  -1.7
PSZ   Piszkesteto      115.12  48 ⇑PKIKP    PKPdf    20 13 07.9  -1.6
VTS   Vitosha          115.24  54⇑iP        PKPdf    20 13 07.4  -2.6
VTS   Vitosha          115.24  54 ⇑PKIKP    PKPdf    20 13 07.4  -2.6
BZS   Buzias           115.33  51⇑iP        PKiKP    20 13 09.9   0.0
BZS   Buzias           115.33  51 ⇑PKIKP    PKiKP    20 13 09.9   0.0
NB2   NORSAR Subarra   115.55  32   PKPdf   PKPdf    20 13 09.6  -0.3
      comp=Z,4.3nm,1.1s,baz=248,slow=1.9
NOA   NORSAR Array B   115.55  32   PKP     PKPdf    20 13 09.2  -0.7
      comp=Z,1.3nm,0.8s,baz=244,slow=1.8,SNR=4.3
NIE   Niedzica         115.94  47  eP       PKiKP    20 13 12.5 +1.5
NIE   Niedzica         115.94  47  ePKIKP   PKiKP    20 13 12.5 +1.5
TOLK  Toolik Lake Re   116.41 336  ePKPdf   PKiKP    20 13 11.6 +0.2
TOLK  Toolik Lake Re   116.41 336   PKiKP   PKPdf    20 13 11.1  -0.3
      baz=114
DRGR                   116.48  50⇑iP        PKPdf    20 13 11.8  -0.4
DRGR                   116.48  50 ⇑PKIKP    PKPdf    20 13 11.8  -0.4
TRPA  Tarpa            116.85  48⇓iP        PKiKP    20 13 13.2 +0.5
UZH   Uzhgorod         116.88  48  ePKIKP   PKiKP    20 13 22.8  +10
UZH                                e                 20 13 34.7
HUMR  Humele           117.14  53⇑iP        PKPdf    20 13 12.7  -0.7
ARR   Arges            117.21  52⇑iP        PKPdf    20 13 12.1  -1.5
VOIR                   117.51  52⇓iP        PKPdf    20 13 11.1  -3.1
VOIR                   117.51  52 ⇓PKIKP    PKPdf    20 13 11.1  -3.1
AS01  Alice Springs    118.05 207  ePKPdf   PKPdf    20 13 14.9  -1.1
ASAR  Alice Springs    118.06 207   PKP     PKPdf    20 13 15.2  -0.8
      comp=Z,2.1nm,0.8s,baz=155,slow=2.0,SNR=21
ASAR                                PKKPbc  PKKPbc   20 23 35.4 +0.5
      comp=Z,1.9nm,1.0s,baz=338,slow=3.0,SNR=10
MLR   Muntele Rosu     118.12  52⇑iP        PKPdf    20 13 11.7  -3.8
MLR   Muntele Rosu     118.12  52 ⇑PKIKP    PKPdf    20 13 11.7  -3.8
MLR   Muntele Rosu     118.12  52   PKP     PKPdf    20 13 14.4  -1.1
      comp=Z,8.9nm,1.1s,baz=19,slow=2.6,SNR=4.0
MLR                                 PP      PP       20 14 27.9  -3.6
      comp=Z,7.9nm,1.1s,baz=260,slow=7.0,SNR=6.5
BUR04 Bucovina Ar. S   118.36  50  ePKPdf   PKiKP    20 13 15.9   0.0
BURAR Bucovina Array   118.37  50⇑iP        PKiKP    20 13 15.8  -0.1
BURAR Bucovina Array   118.37  50 ⇑PKIKP    PKiKP    20 13 15.8  -0.1
PLOR  Plostina         118.70  52⇑iP        PKPdf    20 13 14.4  -2.0
PLOR  Plostina         118.70  52 ⇑PKIKP    PKPdf    20 13 14.4  -2.0
BIZ   Bicaz            118.71  51⇓iP        PKPdf    20 13 14.7  -1.7
VRI   Vrincioaia       118.76  52⇑iP        PKPdf    20 13 15.3  -1.2
VRI   Vrincioaia       118.76  52 ⇑PKIKP    PKPdf    20 13 15.3  -1.2
EIL   Elat             118.84  72   PKP     PKPdf    20 13 15.5  -1.6
      comp=Z,3.6nm,0.7s,baz=278,slow=7.1,SNR=3.6
SUW   Suwalki          119.18  42  eP       PKiKP    20 13 17.2 +0.1
SUW   Suwalki          119.18  42  ePKPdf   PKiKP    20 13 17.1 +0.1
SUW   Suwalki          119.18  42  ePKIKP   PKiKP    20 13 17.2 +0.1
TLB   Topalu           119.21  54⇓iP        PKPpre   20 13 11.0
TLB   Topalu           119.21  54 ⇓PKIKP    PKPpre   20 13 11.0
TIRR  Tirgusor         119.42  54⇓iP        PKPpre   20 13 07.8
TIRR  Tirgusor         119.42  54 ⇓PKIKP    PKPpre   20 13 07.8
CFR   Carcaliu         119.47  53⇑iP        PKiKP    20 13 17.8  -0.1
CFR   Carcaliu         119.47  53 ⇑PKIKP    PKiKP    20 13 17.8  -0.1
TLCR                   119.92  53⇓iP        PKPdf    20 13 16.9  -1.8
TLCR                   119.92  53 ⇓PKIKP    PKPdf    20 13 16.9  -1.8
LEOM  Leova            119.96  52⇑iP        PKPdf    20 13 16.4  -2.3
LEOM  Leova            119.96  52 ⇑PKIKP    PKPdf    20 13 16.4  -2.3
MMAI  Mount Meron Ar   120.50  69   PKP     PKiKP    20 13 20.5   0.0
      comp=Z,3.6nm,0.7s,baz=298,slow=1.8,SNR=7.8
WB2   Warramunga Arr   121.25 209  ePKPdf   PKPdf    20 13 21.7  -0.5
WB2                                ePKPdf   PKiKP    20 13 21.9  -0.4
WRA   Warramunga Arr   121.25 209   PKP     PKPdf    20 13 21.2  -1.0
      comp=Z,4.2nm,0.8s,baz=160,slow=1.7,SNR=27
WRA                                 PKKPbc  PKKPbc   20 23 22.6  -0.6
      comp=Z,0.8nm,0.9s,baz=342,slow=4.7,SNR=6.5
WRAB  Tennant Creek    121.25 209  ePKPdf   PKPpre   20 13 18.4
WRAB  Tennant Creek    121.25 209⇑iPKIKP    PKPdf    20 13 21.8  -0.4
ASF   Jabal al Asfar   121.36  70   PKP     PKiKP    20 13 22.4 +0.3
      comp=Z,2.1nm,0.6s,baz=158,slow=3.4,SNR=5.6
ASF                                 PP      PP       20 14 51.6  -2.5
      comp=Z,0.8nm,0.4s,baz=231,slow=6.5,SNR=3.3
BR131 Keskin Array S   121.54  61  ePKPdf   PKiKP    20 13 22.5 +0.1
BRTR  Keskin Array B   121.54  61   PKP     PKPdf    20 13 22.2   0.0
      comp=Z,3.0nm,0.7s,baz=192,slow=2.8,SNR=23
BRTR                                PP      PP       20 14 52.9  -2.3
      comp=Z,1.2nm,0.8s,baz=217,slow=6.8,SNR=3.3
AK11  Malin Array Si   121.76  47  ePKPdf   PKPdf    20 13 21.1  -1.0
KIEV  Kiev             121.79  47  ePKPdf   PKPdf    20 13 21.1  -1.0
KIEV  Kiev             121.79  47⇑iP        PKPdf    20 13 21.4  -0.7
KIEV  Kiev             121.79  47c iPKIKP   PKPdf    20 13 21.0  -1.1
AKBB  Malin Array Si   121.80  47  ePKPdf   PKPdf    20 13 21.4  -0.8
AKBB  Malin Array Si   121.80  47  ePKIKP   PKPdf    20 13 21.4  -0.8
AKASG Malin Array Be   121.80  47   PKP     PKPdf    20 13 21.2  -0.9
      comp=Z,5.2nm,0.7s,baz=262,slow=2.7,SNR=32
AKASG                               PP      PP       20 14 52.5  -4.0
      comp=Z,1.1nm,0.6s,baz=254,slow=7.7,SNR=5.6
VSU   Vasula           122.25  38⇑iPKIKP    PKPdf    20 13 22.2  -0.5
FINES FINESS Array B   122.53  34   PKP     PKPdf    20 13 22.1  -1.1
      comp=Z,6.8nm,1.0s,baz=349,slow=1.9,SNR=9.0
ARCES ARCESS Array B   123.51  25   PKP     PKPdf    20 13 24.4  -0.5
      comp=Z,2.7nm,0.7s,baz=260,slow=2.4,SNR=10
H11S2 WAKE ISLAND Hy   125.81 270   T       T        22 32 25.3
      baz=118,slow=74,SNR=290
H11S1 WAKE ISLAND Hy   125.83 270   T       T        22 32 27.2
      baz=118,slow=74,SNR=387
H11S3 WAKE ISLAND Hy   125.83 269   T       T        22 32 21.5
      baz=118,slow=74,SNR=180
FITZ  Fitzroy Crossi   126.04 201  ePKPdf   PKPdf    20 13 31.5 +0.1
H11N3 WAKE ISLAND Hy   126.21 271   T       T        22 32 53.0
      baz=113,slow=78,SNR=18
H11N1 WAKE ISLAND Hy   126.23 271   T       T        22 32 51.0
      baz=113,slow=78,SNR=30
H11N2 WAKE ISLAND Hy   126.23 271   T       T        22 32 54.4
      baz=113,slow=78,SNR=45
APA   Apatity          126.30  27⇓iPKIKP    PKPdf    20 13 30.1  -0.2
APA                                 pmax    pmax
      comp=Z,8.0nm,0.8s
APA                                 MLR     MLR
      comp=Z,700nm,17.0s
LVZ   Lovozero         126.77  27⇓iPKIKP    PKPdf    20 13 31.0  -0.3
OBN   Obninsk          127.02  43d iPKIKP   PKiKP    20 13 32.4  -0.1
OBN                                i                 20 13 37.8
OBN                                e                 20 15 29.2
OBN                                eSS      SS       20 32 28.3  -7.4
OBN                                 pmax    pmax
      comp=Z,39nm,1.2s
SIRT  Sirnak           127.42  66  ePKPdf   PKiKP    20 13 34.7 +0.7
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VSR   Storozhevoye     128.06  48 i PKIKP   PKPdf    20 13 33.3  -0.8
VSR                                 pmax    pmax
      comp=Z,20nm,1.5s
VSR                                 MLR     MLR
      comp=Z,770nm,20.0s
LPSR  Galich'ya Gora   128.09  46 i PKIKP   PKPdf    20 13 33.2  -0.9
LPSR                                pmax    pmax
      comp=Z,20nm,0.9s
LPSR                                MLR     MLR
      comp=Z,690nm,20.0s
TMCR  Tamitsa          128.22  32  ePKIKP   PKPdf    20 13 34.2 +0.2
TMCR                                pmax    pmax
      comp=Z,19nm,0.9s
KLMR  Klimovskoe       128.95  36  ePKIKP   PKPdf    20 13 33.1  -2.4
KLMR                                pmax    pmax
      comp=Z,57nm,1.2s
KLMR  Klimovskoe       128.95  36  ePKPdf   PKPdf    20 13 33.1  -2.4
KLMR                                AMP              20 13 38.1
      comp=Z,57nm,1.2s
NEY   Neytrino         129.06  59⇑iPKIKP    PKiKP    20 13 37.4 +0.1
KIV   Kislovodsk       129.17  58⇑iP        PKiKP    20 13 37.6 +0.2
KIV   Kislovodsk       129.17  58 ⇑PKIKP    PKiKP    20 13 37.6 +0.2
KIV   Kislovodsk       129.17  58   PKiKP   PKiKP    20 13 38.0 +0.6
      SNR=5.4
KBZ   Khabaz           129.28  58   PKP     PKPdf    20 13 36.9 +0.2
      comp=Z,6.4nm,1.0s,baz=301,slow=4.3,SNR=7.8
VRH   Novokhopyorsk    129.65  48 i PKIKP   PKPdf    20 13 34.4  -2.7
VRH                                 pmax    pmax
      comp=Z,30nm,1.5s
VRH                                 MLR     MLR
      comp=Z,620nm,19.0s
NCK   Nalchik          129.73  59⇓iPKIKP    PKiKP    20 13 38.9 +0.5
ZEI   Tsey             129.81  60 i PKIKP   PKPdf    20 13 38.0   0.0
ZEI                                 pmax    pmax
      comp=Z,9.0nm,1.2s
GNI   Garni            129.84  63⇑iPKIKP    PKiKP    20 13 38.5  -0.4
GNI   Garni            129.84  63   PKP     PKPdf    20 13 37.6  -0.5
      comp=Z,8.3nm,1.0s,baz=184,slow=2.0,SNR=5.7
GROC  Groznyy          131.25  59 i PKIKP   PKPdf    20 13 40.5   0.0
GROC                               e                 20 15 57.3
GROC                                pmax    pmax
      comp=Z,35nm,1.2s
PRGR  Permogore        131.85  35  ePKIKP   PKPdf    20 13 39.6  -1.4
PRGR                               e                 20 16 01.5
PRGR                                pmax    pmax
      comp=Z,29nm,0.9s
BILL  Bilibino         132.37 334⇓iPKIKP    PKiKP    20 13 42.8  -0.1
BILL                               e                 20 16 03.9
BILL                               e                 20 20 50.5
BILL                                pmax    pmax
      comp=Z,18nm,1.5s
BILL                                MLR     MLR
      comp=Z,622nm,19.0s
SOEI  Soe              134.32 203   PKP     PKiKP    20 13 59.6  +11
CISI  Cisompet, Garu   139.21 180   PKP     PKiKP    20 13 59.5 +0.9
ARU   Arti             139.31  40 i PKIKP   PKPdf    20 13 55.8 +0.7
ARU                                                  20 16 49.8
ARU                                 SS      SS       20 35 08.0 +3.6
SEY   Seymchan         139.58 330⇓iPKIKP    PKiKP    20 13 56.9  -0.8
SEY   Seymchan         139.58 330   PKP     PKPdf    20 13 56.5 +1.1
      comp=Z,14nm,1.1s,baz=115,slow=3.0,SNR=25
GEYT  Alibeck          139.62  69   PKhKP   PKPpre   20 13 47.0
      comp=Z,1.7nm,0.8s,baz=276,slow=5.8,SNR=5.3
GEYT                                PKP     PKPdf    20 13 56.8 +0.5
      comp=Z,7.6nm,0.8s,baz=236,slow=5.0,SNR=4.1
GEYT                                PP      PP       20 16 50.2  -2.1
      comp=Z,3.0nm,1.1s,baz=301,slow=12,SNR=3.7
TIXI  Tiksi            140.17 350⇑ePKIKP    PKPdf    20 13 56.2   0.0
SVE   Sverdlovsk       140.32  39  ePKHKP   PKPpre   20 13 51.2
SVE                                 pmax    pmax
      comp=Z,17nm,1.6s
BNSI  Bone             140.64 199   PKP     PKiKP    20 14 00.8  -0.7
SANI  Sanana           140.82 209   PKP     PKPpre   20 13 54.4
SANI                                PKP     PKPdf    20 13 59.6 +0.4
SPSI  Sidrap Palu      141.15 199   PKP     PKPdf    20 14 00.9 +1.1
ABKAR Akbulak array    141.32  51  ePKPpre  PKPpre   20 13 52.6
MA2   Magadan          141.70 326⇑iPKIKP    PKiKP    20 14 00.8  -1.4
MA2   Magadan          141.70 326   PKP     PKPdf    20 13 58.0  -1.3
      comp=Z,1.5nm,0.4s,baz=97,slow=4.5,SNR=4.5
MDSI  Maura Dua        142.09 174   PKP     PKPpre   20 13 56.1
MDSI                                PKP     PKPpre   20 13 56.6
MDSI                                PKP     PKPpre   20 13 58.0
NRIK  Noril'sk         142.28  12   PKP     PKPdf    20 13 59.8  -0.3
      comp=Z,3.6nm,0.5s,baz=43,slow=9.7,SNR=8.1
PALK  Pallekele        143.70 130  ePKPpre  PKPab    20 14 01.5 +0.4
PALK  Pallekele        143.70 130  ePKIKP   PKPab    20 14 01.5 +0.4
TPI   Tanjungpandan    143.98 179   PKP     PKPdf    20 14 04.3  -0.5
KRJI  Kerinci          144.10 169   PKP     PKPbc    20 14 03.7 +0.5
KRJI                                PKP     PKPab    20 14 03.9 +1.2
BKB   Balikpapan       144.46 195   PKP     PKPdf    20 14 06.8 +1.1
PPBI  Pangkal Pinang   144.53 177   PKP     PKPab    20 14 03.6  -0.5
PPBI                                PKP     PKPbc    20 14 04.9 +0.5
MTKI  Muara Teweh, K   145.17 192   PKP     PKPdf    20 14 08.1 +1.2
SMKI  Samarinda        145.18 196   PKP     PKiKP    20 14 09.2  -1.6
MPSI  Mapaga           145.21 201   PKP     PKPbc    20 14 06.0  -0.5
MPSI                                PKP     PKPbc    20 14 06.0  -0.5
SDSI  Sungai Dareh     145.23 168   PKP     PKPdf    20 14 07.5 +0.5
POO   Poona            146.07 107⇓iP        PKPdf    20 14 07.0  -1.3
      comp=Z,25nm,1.0s
BKNI  Bangkinang       146.40 167   PKP     PKPab    20 14 11.2 +0.1
GSI   Gunungsitoli     146.55 161  ePKPdf   PKPbc    20 14 11.2 +0.4
GSI   Gunungsitoli     146.55 161   PKP     PKPbc    20 14 11.1 +0.4
GSI                                 PKP     PKiKP    20 14 13.1  -0.5
MNSI  Mandailing Nat   146.56 165   PKP     PKPdf    20 14 09.9 +0.7
MNSI                                PKP     PKPbc    20 14 10.6  -0.1
BRVK  Borovoye         146.79  42  ePKPdf   PKPbc    20 14 09.3  -0.9
BRVK  Borovoye         146.79  42  ePKP2    PKPbc    20 14 09.3  -0.9
BRVK  Borovoye         146.79  42   PKPdf   PKPdf    20 14 06.5  -1.9
      SNR=31
BVAR  Borovoye Array   146.86  42   PKPbc   PKPbc    20 14 09.8  -0.6
      comp=Z,33nm,0.7s,baz=322,slow=2.7,SNR=6.0
SNSI  Sinabang, Aceh   147.23 158   PKP     PKPdf    20 14 10.4   0.0
SNSI                                PKP     PKiKP    20 14 15.4 +0.4
TPRI  Tanjung Pinang   147.46 174   PKP     PKPab    20 14 14.6  -0.6
KBL   Kabul            147.81  77  ePKPdf   PKPdf    20 14 12.0 +1.0
YAK   Yakutsk          148.24 341  ePKIKP   PKPdf    20 14 10.1  -0.4
YAK                                e                 20 17 45.3
YAK                                 pmax    pmax
      comp=N,23nm,0.9s
YAK                                 pmax    pmax
      comp=Z,243nm,1.1s
YAK                                 pmax    pmax
      comp=E,18nm,1.3s
YAK                                 pmax    pmax
      comp=E,299nm,2.4s
YAK                                 pmax    pmax
      comp=Z,1µm,5.7s
YAK                                 pmax    pmax
      comp=N,228nm,2.3s
PSI   Prapat           148.34 163  ePKPdf   PKPdf    20 14 12.0  -0.4
PSI   Prapat           148.34 163  ePKIKP   PKPdf    20 14 12.0  -0.4
MATI  Mati             148.66 217  eP       PKPbc    20 14 16.9 +0.5
KCSI  Kotacane, Aceh   148.72 160   PKP     PKPbc    20 14 16.0  -0.6
KCSI                                PKP     PKiKP    20 14 16.3  -1.8
TSI   Tuntungan        148.91 162   PKP     PKPbc    20 14 17.2 +0.1
SKMP  Bagumbayan, Su   149.11 213  eP       PKPpre   20 14 06.0
HYB   Hyderabad        149.12 114 i PKP     PKPdf    20 14 14.0 +0.7
HYB                                epPKP    pPKPbc   20 14 33.0 +2.0
GAR   Garm             149.25  69  ePKPdf   PKPdf    20 14 14.4 +1.3
GAR   Garm             149.25  69  ePKIKP   PKPdf    20 14 14.4 +1.3
KK31  Karatay Array    149.25  61  ePKPbc   PKPbc    20 14 17.5 +0.4
KKAR  Karatay Array    149.25  61  ePKPbc   PKPbc    20 14 17.5 +0.4
KCP   Kidapawan        149.28 215⇓iP        PKPbc    20 14 18.6 +0.5
TYV   Tymovskoe        149.35 315  ePKHKP   PKPpre   20 14 14.3
TYV                                 pmax    pmax
      comp=Z,400nm,4.8s
TYV                                 pmax    pmax
      comp=Z,28nm,1.5s
NKL   Nikolayevsk      149.53 320  ePKHKP   PKPpre   20 14 16.8
NKL                                 pmax    pmax
      comp=Z,190nm,1.5s
CBIJ  Chichi jima      149.90 267   PKPbc   PKPbc    20 14 17.9  -1.3
JCJ   Chichijima       149.90 267   PKPbc   PKPbc    20 14 17.9  -1.3
      comp=Z,38nm,0.9s,baz=13,slow=19,SNR=1.8
BUKP  Musuan           150.05 216  eP       PKPbc    20 14 20.1 +0.1
IPM   Ipoh             150.44 166  ePKPdf   PKPdf    20 14 15.6   0.0
YSS   Yuzh-Sakhalins   150.50 308 i PKIKP   PKPbc    20 14 20.1 +0.2
YSS                                                  20 14 32.9
YSS                                e                 20 18 05.0
YSS                                 pmax    pmax
      comp=Z,20nm,0.8s
BUTP  Butuan           150.71 218  eP       PKPdf    20 14 17.2 +1.3
ERM   Erimo            151.08 297⇓iPKIKP    PKPdf    20 14 18.4 +2.8
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NIL   Nilore           151.12  80  ePKPdf   PKPdf    20 14 16.8 +0.8
NIL   Nilore           151.12  80  ePKIKP   PKPdf    20 14 16.8 +0.8
KULM  Kulim            151.15 165  ePKPbc   PKPbc    20 14 22.2  -0.3
ASAJ  Asahikawa        151.21 302   PKPbc   PKPbc    20 14 19.9  -1.9
      comp=Z,22nm,1.1s,baz=102,slow=4.2,SNR=7.0
ARSB  Arslanbob        151.24  64  ePKPdf   PKPdf    20 14 17.6 +1.4
EKS2  Erkin-Say        151.69  61   P       PKPdf    20 14 18.0 +1.2
      SNR=6.5
AML   Almayashu        151.69  62   P       PKPdf    20 14 18.6 +1.5
      SNR=16
MSLP  Maasin           152.09 218  eP       PKPbc    20 14 24.2  -0.4
USP   Ospenovka        152.12  60   P       PKPdf    20 14 18.1 +0.8
      SNR=8.2
AAK   Ala-Archa        152.21  61   P       PKPdf    20 14 18.8 +1.2
      SNR=6.4
AAK   Ala-Archa        152.21  61  ePKPdf   PKPdf    20 14 19.0 +1.4
AAK   Ala-Archa        152.21  61d iPKIKP   PKPdf    20 14 18.1 +0.5
AAK                                i                 20 14 23.5
FRU   Bishkek          152.28  60 i PKIKP   PKPbc    20 14 24.0  -0.3
FRU                                i                 20 14 34.0
FRU                                e                 20 18 14.0
FRU                                 pmax    pmax
      comp=Z,120nm,1.8s
UCH   Uchtor           152.28  62   P       PKPdf    20 14 19.5 +1.4
      SNR=13
FRU1  Bishkek          152.29  61  ePKPbc   PKiKP    20 14 25.7 +1.0
CHMS  Chumysh          152.35  60   P       PKiKP    20 14 25.2 +0.5
      SNR=9.1
KURBB Kurchatov Arra   152.45  43   PKP     PKPdf    20 14 17.6 +0.1
      comp=Z,3.9nm,0.8s,baz=297,slow=2.2,SNR=1.7
KURBB                               PKPbc   PKiKP    20 14 24.9 +0.3
      comp=Z,22nm,0.7s,baz=301,slow=3.0,SNR=7.2
KURBB                               PKPab   PKPab    20 14 35.7 +1.0
      comp=Z,23nm,0.9s,baz=296,slow=4.2,SNR=5.8
KURBB                               PP      PP       20 18 04.7  -2.8
      comp=Z,0.8nm,0.7s,baz=281,slow=6.6,SNR=3.4
KURK  Kurchatov        152.46  42  ePKPdf   PKPdf    20 14 17.8 +0.4
KURK                                PKPbc   PKiKP    20 14 24.9 +0.3
KURK                                PKPab   PKPab    20 14 35.7 +0.9
KURK                                PP      PP       20 18 04.7  -2.9
KURK  Kurchatov        152.46  42  ePKIKP   PKPdf    20 14 17.8 +0.4
KURK                                                 20 14 24.9
KURK                                                 20 18 04.7
NVS   Novosibirsk      152.46  32⇑iPKIKP    PKPdf    20 14 17.8 +0.5
NVS                                 pmax    pmax
      comp=N,12nm,1.3s
NVS                                 pmax    pmax
      comp=E,22nm,1.3s
NVS                                 pmax    pmax
      comp=Z,96nm,1.3s
KBK   Karagaybulak     152.54  61   P       PKiKP    20 14 26.0 +0.7
      SNR=10
TKM2  Tokmak 2         152.97  60   P       PKPdf    20 14 19.2 +0.4
      SNR=6.5
GRNR  Gornyy           152.98 318  ePKIKP   PKPpre   20 14 10.5
NRN   Naryn            153.49  63  ePKPdf   PKPdf    20 14 20.3 +0.6
KRAB  Krabi            153.60 160   P       PKPpre   20 14 13.7
KSH   Kashi            153.63  68   PKPbc   PKPdf    20 14 20.7 +1.0
KSH                                 pPKP    PKiKP    20 14 27.9 +0.3
KSH                                 sPKP             20 14 37.6
KSH                                 SKS     SKSdf    20 21 20.9  -2.2
KSH                                 SKKS    SKKSac   20 25 00.3  -0.9
KSH                                 SS      SS       20 37 43.8  -4.6
KSH                                 AMB     AMB
      comp=Z,820nm,5.7s
KSH                                 LR      LR
      comp=Z,290nm,7.8s
KSH                                 LR      LR
      comp=Z,270nm,5.2s
KSH                                 LR      LR
      comp=Z,880nm,18.1s
ZAA0  Zalesovo Array   153.75  32  ePKPdf   PKPdf    20 14 19.1  -0.1
ZALV  Zalesovo Beam    153.75  32  ePKPdf   PKPdf    20 14 18.9  -0.3
ZALV                                PKPbc   PKiKP    20 14 27.6 +0.5
ZALV  Zalesovo Beam    153.75  32  ePKIKP   PKPdf    20 14 18.9  -0.3
ZALV                                                 20 14 27.6
ZALV  Zalesovo Beam    153.75  32   PKP     PKPdf    20 14 19.4 +0.2
      comp=Z,11nm,0.9s,baz=272,slow=2.6,SNR=32
ZALV                                PKPbc   PKiKP    20 14 27.6 +0.5
      comp=Z,31nm,0.7s,baz=316,slow=2.7,SNR=45
BOD   Bodaibo          155.30 352  ePKIKP   PKPdf    20 14 19.6  -1.6
BOD                                e                 20 14 45.6
BOD                                 pmax    pmax
      comp=Z,25nm,1.3s
ZEA   Zeya             155.55 332  ePKIKP   PKPdf    20 14 30.2 +8.5
ZEA                                 pmax    pmax
      comp=Z,14nm,1.2s
MAKZ  Makanchi         156.18  48  ePKPdf   PKPdf    20 14 22.7  -0.1
KLR   Kul'dur          156.35 319dePKIKP    PKPdf    20 14 22.5  -0.4
KLR   Kul'dur          156.35 319   PKP     PKPdf    20 14 22.1  -0.8
      comp=Z,4.0nm,1.1s,baz=353,slow=1.6,SNR=8.1
MK31  Makanchi Array   156.38  48  ePKPdf   PKPdf    20 14 23.3 +0.2
MK31                               ePKPab   PKPab    20 14 52.0 +0.3
MK31  Makanchi Array   156.38  48  ePKIKP   PKPdf    20 14 23.3 +0.2
MKAR  Makanchi Array   156.38  48  ePKPdf   PKPdf    20 14 23.3 +0.2
MKAR                               ePKPab   PKPab    20 14 52.0 +0.3
MKAR                                PP      PP       20 18 29.2  -0.6
MKAR  Makanchi Array   156.38  48  ePKIKP   PKPdf    20 14 23.3 +0.2
MKAR                                                 20 18 29.2
MKAR  Makanchi Array   156.38  48   PKP     PKPdf    20 14 23.0  -0.1
      comp=Z,7.4nm,1.0s,baz=299,slow=2.0,SNR=37
MKAR                                PKPab   PKPab    20 14 52.0 +0.3
      comp=Z,23nm,0.7s,baz=282,slow=4.0,SNR=45
MKAR                                PP      PP       20 18 29.2  -0.6
      comp=Z,3.6nm,1.1s,baz=293,slow=4.9,SNR=3.0
MK01  Makanchi Array   156.40  48  ePKPdf   PKPdf    20 14 23.0  -0.1
MK01                               ePKPab   PKPab    20 14 52.2 +0.4
DGZ   Jazzator, Alta   157.75  37d iPKIKP   PKPdf    20 14 25.7 +0.8
PYUN  Piuthan          157.88  97  eP       PKPdf    20 14 25.8   0.0
      comp=Z,36nm,1.0s
KOLN  Koldanda         158.26  99  eP       PKPdf    20 14 26.1  -0.2
      comp=Z,50nm,1.2s
DANN  Dangsing         158.60  97  eP       PKPdf    20 14 27.0 +0.2
      comp=Z,89nm,1.0s
DMN   Daman            159.45 100  eP       PKPdf    20 14 27.8   0.0
      comp=Z,48nm,1.3s
PKIN  Phulchoki        159.68 101  eP       PKPdf    20 14 27.7  -0.3
      comp=Z,27nm,1.4s
PKI   Pulchoki         159.68 101  eP       PKPdf    20 14 27.7  -0.4
      comp=Z,43nm,1.3s
MDJ   Mudanjiang       159.93 310   PKP     PKPdf    20 14 27.2  -0.2
MDJ                                 pPKP    pPKPdf   20 14 38.5  -2.5
MDJ                                 sPKP             20 14 42.6
MDJ                                 PP      PP       20 18 51.0 +1.8
MDJ                                 SS      SS       20 38 57.5 +2.7
MDJ                                 AMB     AMB
      comp=Z,420nm,12.5s
MDJ                                 LR      LR
      comp=Z,590nm,19.9s
MDJ                                 LR      LR
      comp=Z,450nm,20.7s
MDJ                                 LR      LR
      comp=Z,510nm,21.5s
GUN   Gumba            160.20 100  eP       PKPdf    20 14 28.7   0.0
      comp=Z,54nm,1.3s
JIRN  Jiri             160.36 101  eP       PKPdf    20 14 28.7  -0.2
      comp=Z,58nm,1.2s
RAMN  Ramite           160.41 104  eP       PKPdf    20 14 29.1 +0.2
      comp=Z,74nm,1.3s
UTHA  Uthaitani        160.56 154   P       PKPab    20 15 10.7 +0.3
UMPA  Umpang Tak       160.94 152   P       PKPab    20 15 13.9 +1.9
MOY   Mondy            161.10  14  ePKIKP   PKPdf    20 14 29.4 +0.7
MOY                                 pmax    pmax
      comp=Z,18nm,2.3s
WMQ   Urumqi           161.11  51  ePKP     PKPdf    20 14 29.4 +0.5
WMQ                                 pPKP    pPKPdf   20 14 39.5  -3.0
WMQ                                 LR      LR
      comp=Z,550nm,18.9s
WMQ                                 LR      LR
      comp=Z,620nm,18.9s
WMQ                                 LR      LR
      comp=Z,740nm,21.3s
WMQ   Urumqi           161.11  51  ePKPdf   PKPdf    20 14 29.9 +1.0
WMQ                                ePKPab   PKPab    20 15 13.7 +1.3
WMQ   Urumqi           161.11  51  ePKIKP   PKPdf    20 14 29.9 +1.0
KNGR  Kungurtug, Tuv   161.21  21⇓iPKIKP    PKPdf    20 14 29.1 +0.3
TLY   Talaya           161.52   9⇑ePKIKP    PKPdf    20 14 29.2 +0.2
PBKT  Sadao Pong       162.02 158   PKP     PKPdf    20 14 31.8 +1.3
PBKT  Sadao Pong       162.02 158   P       PKPdf    20 14 31.8 +1.3
ZAK   Zakamensk        162.74  10  ePKIKP   PKPdf    20 14 29.9  -0.4
ZAK                                e                 20 15 18.7
ZAK                                 pmax    pmax
      comp=Z,9.0nm,1.4s
ZAK                                 pmax    pmax
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	comp=Z,8.0nm,1.1s						
CM01	Chiang Mai Arr	162.97	149	*e*PKPdf	PKPdf	20 14 30.5	-0.9
CM01				*e*PKPab	PKPab	20 15 20.0	-0.9
UTTA	Uttaradit	162.98	155	P	PKPdf	20 14 32.2	+0.8
	comp=Z,3.6nm,1.1s,comp=Z,46nm						
CM31	Chiang Mai Arr	163.00	149	*e*PKPdf	PKPdf	20 14 32.0	+0.6
CMAR	Chiang Mai Arr	163.00	149	PKP	PKPdf	20 14 30.8	-0.7
	comp=Z,4.3nm,1.0s,baz=247,slow=2.5,SNR=22						
CMAR				PKPab	PKPab	20 15 20.4	-0.5
	comp=Z,4.7nm,1.1s,baz=232,slow=4.5,SNR=6.5						
SKNT	Sakolnakorn	163.19	167	P	PKPdf	20 14 33.6	+2.0
	comp=Z,5.9nm,2.5s						
KSRS	Korea Array	163.29	289	PKP	PKPdf	20 14 30.9	-0.3
	comp=Z,3.6nm,1.1s,baz=86,slow=1.6,SNR=6.9						
CHTO	Chiang Mai	163.31	149	PKP	PKPdf	20 14 32.2	+0.5
CHTO	Chiang Mai	163.31	149	P	PKPdf	20 14 32.2	+0.5
	comp=Z,32nm,1.3s						
CMMT	Chiang Mai	163.31	149	P	PKPdf	20 14 32.1	+0.4
	comp=Z,7.0nm,1.3s						
KS01	Wonju Array Si	163.31	290	*e*PKPdf	PKPdf	20 14 29.8	-1.3
KSAR	Wonju Array Be	163.33	289	PKP	PKPdf	20 14 30.9	-0.3
KSAR	Wonju Array Be	163.33	289	PKIKP	PKPdf	20 14 30.9	-0.3
SHL	Shillong	163.92	115	*e*PKPdf	PKPdf	20 14 32.8	+0.4
SHL	Shillong	163.92	115	*e*P	PKPdf	20 14 34.0	+1.6
	comp=Z,3.0nm,0.9s						
SHL				*i* S	PP	20 19 10.0	-1.1
LSA	Lhasa	165.15	100	*e*PKPdf	PKPdf	20 14 34.9	+1.2
LSA				*e*PKPab	PKPab	20 15 32.1	+1.0
SONA1	Songino Array	165.58	4	*e*PKPdf	PKPdf	20 14 32.6	-0.4
SONA1				*e*PKPab	PKPab	20 15 32.3	+0.5
SONM	Songino Array	165.59	4	PKP	PKPdf	20 14 32.6	-0.5
	comp=Z,2.1nm,1.1s,baz=302,slow=3.2,SNR=10						
SONM				PKPab	PKPab	20 15 32.8	+1.0
	comp=Z,5.1nm,1.0s,baz=339,slow=3.4,SNR=16						
SONM				PP	PP	20 19 18.7	+0.4
	comp=Z,4.2nm,1.2s,baz=337,slow=4.8,SNR=7.7						
KMI	Kunming	170.51	150	PKP	PKPdf	20 14 38.0	+0.8
KMI				pPKP	pPKPdf	20 14 48.4	-2.5
KMI				sPKP		20 14 52.5	
NJ2	Nanjing	170.76	264	*e*PKP	PKPdf	20 14 38.2	+1.4
GTA	Gaotai	171.12	46	⇑PKP	PKPdf	20 14 37.5	+0.5
GTA				pPKP	pPKPdf	20 14 47.6	-3.1
GTA				sPKP		20 14 52.0	
GTA				PKPab	PKPab	20 15 57.2	+0.5
GTA				LR	LR		
	comp=Z,320nm,20.3s						
GTA				LR	LR		
	comp=Z,310nm,21.3s						
GTA				LR	LR		
	comp=Z,360nm,22.5s						
TIA	Tai'an	172.02	293	PKP	PKPdf	20 14 37.2	-0.2
HHC	Hu-ho-hao-te	172.10	340	*e*PKP	PKPdf	20 14 37.8	+0.4
GYA	Guiyang	172.93	170	PKP	PKPdf	20 14 38.0	-0.2
GYA				PKPab	PKPab	20 16 06.2	+1.4
GYA				PKS		20 18 09.4	
GYA				PP	PP	20 19 59.8	+4.5
GYA				AMB	AMB		
	comp=Z,160nm,8.6s						
WHN	Wuhan	173.88	243	PKP	PKPdf	20 14 38.9	+0.6
CD2	Chengdu	175.59	124	PKP	PKPdf	20 14 38.8	-0.1
LZH	Lanzhou	175.69	51	*e*PKP	PKPdf	20 14 38.6	-0.3
LZH				pPKP	pPKPdf	20 14 50.6	-2.0
LZH				sPKP		20 14 59.6	
LZH				PKPab	PKPab	20 16 18.2	+1.1
LZH				PP	PP	20 20 16.6	+6.7
LZH				SS	SS	20 41 26.3	-7.3
LZH				AMB	AMB		
	comp=Z,560nm,7.8s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,19.5s						
LZH				LR	LR		
	comp=Z,2µm,19.0s						
XAN	Xi'an	179.04	307	PKP	PKPdf	20 14 39.4	+0.1
XAN				pPKP	pPKPdf	20 14 50.8	-2.2
XAN				LR	LR		
	comp=Z,320nm,17.4s						
XAN				LR	LR		
	comp=Z,400nm,21.7s						
XAN	Xi'an	179.04	307	*e*PKPdf	PKPdf	20 14 39.5	+0.2
XAN	Xi'an	179.04	307	*e*PKIKP	PKPdf	20 14 39.5	+0.2

IDC 10 19:56:00.0±1.7,10°.94S×165°.38E,h0^{km},mb3.7/3, mb1 4.1/4,mb1mx3.6/37,mbtmp3.8/4,ML3.9/1,Error ellipse: s-maj=53.8km s-min=30.1km az=129.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.12	175	Pn	Pn	19 58 40.0	-0.4
	0.9nm,0.3s,baz=312,slow=16,SNR=6.6						
WRA	Warramunga Arr	31.18	250	P	P	20 02 21.6	+0.4
	1.6nm,1.0s,baz=79,slow=9.2,SNR=6.0						
ASAR	Alice Springs	32.52	243	P	P	20 02 32.6	-0.4
	0.8nm,0.8s,baz=66,slow=10,SNR=9.2						
ILAR	Eielson Array	83.53	19	P	P	20 08 29.6	0.0
	0.4nm,0.6s,baz=234,slow=5.1,SNR=10.0						

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*IDC **10** 19:58:27.1±0.9,10°.96S×165°.56E,h0^{km},mb4.0/12, mb1 4.2/14,mb1mx4.1/36,mbtmp4.0/14,ML4.4/2,Error ellipse: s-maj=27.5km s-min=18.1km az=139.0*

*NEIC **10** 19:58:28.6±0.5,10°.95S×165°.54E,h10^{km},mb4.1/1,Error ellipse: s-maj=13.5km s-min=10.2km az=129.0*

*ISCJB **10** 19:58:29.7±0.6,11°.10S±0°.09×165°.53E±0°.07,h30^{km}, mb3.9/12,Error ellipse: s-maj=12.9km s-min=10.1km az=10.5*

ISC 10 19:58:31.5±0.7,11°.0S±0°.1×165°.59E±0°.10,h30^{km},n22, σ1ˢ.03/19,mb4.0/12,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.77	285	Pn	Pn	19 59 54.0	-1.1
	11nm,0.3s,baz=171,slow=3.7,SNR=5.2						
HNR				Sn	Sn	20 01 02.0	+1.7
	1.8nm,0.3s,baz=204,slow=20,SNR=1.4						
DZM	Mont Dzumac	11.04	176	Pn	Pn	20 01 07.9	+0.3
	2.9nm,0.3s,baz=347,slow=19,SNR=19						
CTA	Charters Tower	20.69	242	P	P	20 03 10.1	+0.8
	9.2nm,1.0s,baz=64,slow=14,SNR=3.4						
CTAO	Charters Tower	20.69	242	*e*P	P	20 03 08.6	-0.8
H11S2	WAKE ISLAND Hy	29.32	2	T	T	20 35 09.8	
	baz=181,slow=76,SNR=8.2						
H11S3	WAKE ISLAND Hy	29.33	2	T	T	20 35 12.3	
	baz=181,slow=76,SNR=5.6						
H11S1	WAKE ISLAND Hy	29.34	2	T	T	20 35 14.7	
	baz=181,slow=76,SNR=6.6						
STKA	Stephens Creek	30.37	223	P	P	20 04 41.6	+0.7
	1.9nm,0.7s,baz=45,slow=15,SNR=3.8						
H11N1	WAKE ISLAND Hy	30.55	2	T	T	20 36 41.5	
	baz=182,slow=76,SNR=7.5						
H11N3	WAKE ISLAND Hy	30.55	2	T	T	20 36 44.1	
	baz=182,slow=76,SNR=7.4						
H11N2	WAKE ISLAND Hy	30.56	2	T	T	20 36 44.1	
	baz=182,slow=76,SNR=6.9						
WRAB	Tennant Creek	31.34	250	*e*P	P	20 04 48.2	-1.4
	2.4nm,1.0s						
WRA	Warramunga Arr	31.36	250	P	P	20 04 48.6	-1.1
	1.6nm,0.6s,baz=82,slow=8.8,SNR=13						
WRA				PcP	PcP	20 07 44.1	+0.8
	0.7nm,0.9s,baz=64,slow=2.9,SNR=4.6						
ASAR	Alice Springs	32.68	243	P	P	20 04 59.8	-1.6
	4.7nm,0.8s,baz=64,slow=10,SNR=35						
ASAR				PcP	PcP	20 07 47.2	+0.3
	1.1nm,0.8s,baz=92,slow=2.9,SNR=4.4						
MJAR	Matsushiro Arr	53.86	333	P	P	20 07 51.8	-0.1
	1.2nm,0.7s,baz=159,slow=7.2,SNR=4.4						
CMAR	Chiang Mai Arr	71.95	294	P	P	20 09 53.3	+0.6
	0.5nm,0.8s,baz=104,slow=2.9,SNR=3.9						
SONM	Songino Array	78.54	324	P	P	20 10 30.9	+0.7
	0.6nm,0.9s,baz=130,slow=7.4,SNR=4.2						
ILAR	Eielson Array	83.52	19	P	P	20 10 55.9	-0.3
	0.5nm,0.7s,baz=237,slow=4.8,SNR=9.2						
NVAR	Mina Array Bea	86.11	50	P	P	20 11 11.0	+0.9
	2.0nm,0.8s,baz=227,slow=5.9,SNR=4.0						
MKAR	Makanchi Array	93.38	317	P	P	20 11 43.9	0.0
	0.5nm,0.8s,baz=102,slow=5.1,SNR=5.4						
PDAR	Pinedale Array	93.63	47	P	P	20 11 46.2	+0.8
	0.8nm,0.9s,baz=190,slow=2.6,SNR=3.4						
YKA	Yellowknife Ar	95.00	27	P	P	20 11 49.5	-1.5
	0.2nm,0.6s,baz=253,slow=4.9,SNR=4.0						

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*IDC **10** 20:00:32.1±0.6,33°.46S×71°.98W,h0^{km},mb4.5/15, mb1 4.6/16,mb1mx4.4/31,mbtmp4.5/16,ML3.8/1,Error ellipse: s-maj=26.8km s-min=16.2km az=88.0*

*GUC **10** 20:00:33.8±0.6,33°.45S×72°.22W,h46^{km}±6^{km},ML4.4*

*NEIC **10** 20:00:33.0±0.0,33°.45S×72°.22W,h46^{km},mb5.0/11, ML4.4(GUC),After GUC.*

NEIC Felt [III] at San Antonio and Valparaiso and [II] at Salamanca and Talca. Also felt at Melipilla, Providencia, Quillota, Recoleta and Santiago.

*ISCJB **10** 20:00:35.9±0.7,33°.50S±0°.03×72°.18W±0°.06,h39^{km}±6^{km}, mb4.7/26,Error ellipse: s-maj=7.8km s-min=5.2km az=12.6*

*MOS **10** 20:00:35.9±1.3,33°.49S×72°.02W,h33^{km},mb5.1/8,Error ellipse: s-maj=17.9km s-min=9.9km az=89.6*

*SJA **10** 20:00:45.8±0.5,33°.28S×71°.30W,h13^{km}±3^{km},ML4.1, MW5.2*

ISC 10 20:00:36.6±1.6,33°.49S±0°.04×72°.05W±0°.07,h31^{km}±10^{km}, n199,σ0ˢ.87/216,mb4.7/26,12C-10D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.90	177	⇑*i*P	Pn	20 00 52.8	-0.3
CHPI				*i* S	Sn	20 01 04.4	-0.7
ROC1	El Roble	1.01	60	*e*Pg	Pn	20 00 54.4	-0.5
ROC1				*e*Sn	Sb	20 01 11.0	+2.3
ROC1	El Roble	1.01	60	*i* P	Pn	20 00 54.3	-0.5
ROCH	El Roble	1.01	60	⇓*i*P	Pn	20 00 54.1	-0.8
ROCH				*i* S	Sb	20 01 09.9	+1.1
ROCH				IAML		20 01 12.0	
	comp=E,17µm,0.5s						
PEL	Peldehue	1.20	74	*e*Pn	Pn	20 00 57.3	0.0
PEL				*e*Sn	Sb	20 01 15.6	+1.8
PEL	Peldehue	1.20	74	*i* P	Pn	20 00 56.6	-0.6
PEL	Peldehue	1.20	74	*e*P	Pn	20 00 57.3	0.0
PEL				*e*		20 01 15.6	
PEL	Peldehue	1.20	74	⇓*i*P	Pn	20 00 57.2	0.0
PEL				*i* S	Sb	20 01 14.6	+0.8
PEL				IAML		20 01 22.9	
	comp=N,9µm,0.5s						
CLCH	Cerro Calan	1.27	86	⇓*i*P	Pn	20 00 58.4	+0.1
CLCH				*i* S	Sb	20 01 16.7	+0.7
CLCH				IAML		20 01 24.7	
	comp=E,13µm,0.5s						
FCH	Farellones	1.48	84	⇓*i*P	Pn	20 01 01.8	+0.3
FCH				*i* S	Sb	20 01 23.5	+1.2
FCH				IAML		20 01 31.0	
	comp=N,7µm,0.4s						
LMEL	Las Melosas	1.58	104	*e*P	Pn	20 01 02.6	0.0
LMEL				*i* S	Sb	20 01 24.9	-0.1
LMEL				IAML		20 01 36.9	
	comp=N,6µm,0.7s						
CMCH	Combarbala	2.48	21	⇑*i*P	Pn	20 01 14.9	0.0
CMCH				*i* S	Sb	20 01 51.0	+0.4
AUSP	Uspallata	2.57	61	*i* P	Pb	20 01 20.9	-1.4
AAGR	Agrelo	2.73	82	*i* P	Pb	20 01 23.0	-1.8
RTLS	Leoncito	2.87	55	*i* P	Pb	20 01 25.5	-1.9
RTLS				*i* S	Sn	20 01 55.2	+1.0
RTLS				IAML		20 02 09.1	
	comp=Z,1µm,0.7s						
AVIZ	Vizcacheras	2.95	91	*i* P	Pb	20 01 26.4	-2.3
GO04	Tololo Observa	3.48	18	*e*Pn	Pn	20 01 29.0	+0.2
LCO	Las Campanas	4.61	15	*e*Pn	Pn	20 01 43.8	-0.7
LCO	Las Campanas	4.61	15	*e*P	Pn	20 01 43.8	-0.7
GO06	Curarrehue	6.10	176	*e*Pn	Pn	20 02 06.1	+1.4
PLCA	Paso Flores	7.33	171	*e*P	Pn	20 02 22.2	+0.7
LPAZ	La Paz	17.49	13	P	Pn	20 04 39.0	+0.2
	comp=Z,0.1nm,0.3s,baz=215,slow=7.4,SNR=3.7						
EFI	East Falkland	20.82	155	⇑*e*P	P	20 05 14.2	-1.2
USHA	Ushuaia	21.49	174	P	P	20 05 23.2	+0.8
	comp=Z,9.6nm,0.8s,baz=0.5,slow=6.9,SNR=3.2						
BDFB	Brasilia	28.06	57	P	P	20 06 25.0	-0.5
	comp=Z,5.5nm,0.7s,baz=219,slow=13,SNR=3.5						
PTGA	Pitinga	34.51	22	*e*P	P	20 07 21.7	-0.4
	comp=Z,19nm,1.0s						
PTGA	Pitinga	34.51	22	P	P	20 07 21.2	-0.9
	comp=Z,12nm,0.8s,baz=199,slow=11,SNR=6.5						
SDV	Santo Domingo	42.16	2	P	P	20 08 26.1	-0.6
	comp=Z,3.3nm,0.8s,baz=190,slow=13,SNR=3.6						
MDP	Montagnes des	42.56	29	P	P	20 08 29.6	-0.1
	comp=Z,12nm,0.7s,baz=217,slow=9.9,SNR=5.0						
VNA3	Neumayer Olymp	49.83	158	P	P	20 09 25.5	-0.8
VNA2	Neumayer--Watz	50.48	157	P	P	20 09 32.1	+0.9
	baz=287,slow=8.4						
SNAA	Sanae	52.06	158	P	P	20 09 42.8	-0.3
SNAA	Sanae	52.06	158	*e*P	P	20 09 43.1	0.0
	comp=Z,33nm,1.2s						
SNAA	Sanae	52.06	158	P	P	20 09 43.8	+0.7
	comp=Z,8.4nm,0.9s,baz=278,slow=7.6,SNR=7.2						
QSPA	South Pole Qui	56.74	180	P	P	20 10 17.9	+0.6
	comp=Z,7.1nm,0.9s,baz=127,slow=2.6,SNR=4.9						
SYO	Syowa Base	66.34	159	⇑*i*pP	pP	20 11 29.8	-1.4
SYO	Syowa Base	66.34	159	⇑*i*sP	sP	20 11 35.3	+0.7
X48A	Hartselle	69.04	347	P	P	20 11 39.8	+0.7
	baz=167						
W53A	Cullowhee	69.09	350	P	P	20 11 40.1	+0.5
	baz=170						
X47A	Russelville	69.26	346	P	P	20 11 40.8	+0.3
	baz=166						
TX31	Lajitas Ar. Si	69.29	331	*e*P	P	20 11 42.0	+1.0
TXAR	Lajitas Array	69.29	331	P	P	20 11 41.9	+0.9
	comp=Z,0.8nm,0.8s,baz=151,slow=7.8,SNR=5.9						
WHTX	Lake Whitney,	69.40	337	P	P	20 11 42.8	+1.3
	baz=158						
W50A	Signal Mountai	69.45	348	P	P	20 11 42.3	+0.6
	baz=168						
OXF	Oxford	69.58	345	P	P	20 11 43.0	+0.5
	baz=165						
Y41A	Eaglette Beard	69.75	342	P	P	20 11 44.9	+1.4
	baz=162						
V50A	Pikevile	69.88	349	P	P	20 11 44.8	+0.5
	baz=169						
V49A	McMinnville	70.11	348	P	P	20 11 45.8	+0.1
	baz=168						
V48A	Smith Brothers	70.25	347	*e*P	P	20 11 47.1	+0.6
	comp=Z,21nm,1.0s						
V48A	Smith Brothers	70.25	347	P	P	20 11 47.4	+0.8
	baz=167						
V47A	Nunnelly	70.46	347	P	P	20 11 47.9	0.0
	baz=166						
V46A	Holladay	70.55	346	P	P	20 11 48.3	-0.1
	baz=166						
U49A	Red Boiling Sp	70.81	348	P	P	20 11 50.3	+0.4
	baz=168						
WVT	Waverly	70.81	347	*e*P	P	20 11 50.0	0.0
	comp=Z,22nm,0.8s						
WVT	Waverly	70.81	347	*e*P	P	20 11 50.0	0.0
WVT				pmax	pmax		
	comp=Z,22nm,0.8s						
WVT	Waverly	70.81	347	P	P	20 11 50.3	+0.3
	baz=166						
W41B	Gary Mavity, V	70.88	343	P	P	20 11 50.7	+0.3
	baz=162						
T51A	Gray	70.97	350	P	P	20 11 51.0	0.0
	baz=170						
U47A	Clarksville	71.01	347	P	P	20 11 51.3	+0.1
	baz=167						
U46A	Springville	71.11	346	P	P	20 11 52.1	+0.4
	baz=166						
W39A	Magazine	71.30	341	*e*P	P	20 11 54.1	+1.2
	comp=Z,14nm,0.8s						
W39A	Magazine	71.30	341	P	P	20 11 54.1	+1.2
	baz=161						
T49A	Edmonton	71.35	349	P	P	20 11 53.4	+0.2
	baz=168						
V41A	Mountainview	71.44	343	P	P	20 11 54.2	+0.4
	baz=163						
T48A	Bowling Green	71.50	348	P	P	20 11 54.1	0.0
	baz=168						
S52A	Salyersville	71.55	351	P	P	20 11 54.7	+0.2
	baz=170						
S51A	Beattyville	71.58	350	P	P	20 11 54.7	+0.1
	baz=170						
S50A	Richmond	71.73	350	P	P	20 11 55.9	+0.3
	baz=169						
U42A	Revenden	71.76	344	P	P	20 11 55.9	+0.2
	baz=163						
R55A	Marlinton	71.80	353	P	P	20 11 56.9	+0.9
	baz=173						
S48A	Wiedeman Farm,	71.98	348	P	P	20 11 56.5	-0.5
	baz=168						
S47A	Hartford	72.06	348	P	P	20 11 56.8	-0.6
	baz=167						
MNTX	Cornudas Mount	72.06	331	*e*P	P	20 11 57.4	-0.3
	comp=Z,3.7nm,0.9s						
MNTX	Cornudas Mount	72.06	331	P	P	20 11 57.9	+0.2
	baz=151						
U40A	Yellville	72.15	342	P	P	20 11 58.4	+0.3
	baz=162						
R51A	Hillsboro	72.23	350	P	P	20 11 58.7	+0.3
	baz=170						
T43A	Greenville	72.24	345	P	P	20 11 59.0	+0.4
	baz=164						
S46A	Don Dixon Farm	72.30	347	P	P	20 11 57.7	-1.2
	baz=166						
WMOK	Wichita Mounta	72.35	337	P	P	20 11 59.3	-0.1
TUL1	Leonard	72.53	340	P	P	20 11 60.0	-0.3
	baz=160						
Q54A	Coxs Mills	72.57	353	P	P	20 12 00.5	+0.1
	baz=172						
S43A	Fulton Ridge,	72.67	345	P	P	20 12 01.2	+0.1
	baz=164						
R45A	Skylar, Fairfi	73.00	347	P	P	20 12 02.9	-0.1
	baz=166						
S42A	Caledonia	73.01	345	P	P	20 12 02.8	-0.4
	baz=164						
MSTX	Muleshoe	73.05	334	P	P	20 12 04.6	+1.0
	baz=154						
Q49A	Aurora	73.11	350	P	P	20 12 03.6	-0.1
	baz=169						
P54A	Burton	73.14	353	P	P	20 12 03.9	-0.1
	baz=173						
Q48A	North Vernon	73.17	349	P	P	20 12 04.1	+0.1
	baz=168						
R43A	Red Bud	73.31	345	P	P	20 12 04.9	0.0
	baz=165						
P52A	Corning	73.36	352	P	P	20 12 05.3	+0.1
	baz=171						
CCM	Cathedral Cave	73.39	344	*e*P	P	20 12 05.7	+0.4
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	73.39	344	*e*P	P	20 12 05.7	+0.4
CCM				pmax	pmax		
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	73.39	344	P	P	20 12 05.8	+0.4
	baz=164						
R42A	Luebbering	73.50	345	P	P	20 12 06.4	+0.4
	baz=164						
Q45A	Warren Harvey,	73.56	347	P	P	20 12 05.8	-0.5
	baz=166						
P49A	Miami Univ. Ec	73.60	350	P	P	20 12 06.3	-0.3
	baz=169						
P48A	Milroy	73.64	349	P	P	20 12 06.1	-0.7
	baz=169						
O55A	Ligonier	73.64	354	P	P	20 12 07.1	+0.3
	baz=174						
R41A	Rosebud	73.65	344	P	P	20 12 07.3	+0.3
	baz=163						
O51A	Pataskala	73.92	352	P	P	20 12 08.3	-0.1
	baz=171						
O50A	Cable	74.05	351	P	P	20 12 08.8	-0.4
	baz=170						
ACSO	Alum Creek Sta	74.05	351	P	P	20 12 09.3	+0.1
	baz=171						
Q42A	Golden Eagle	74.05	345	P	P	20 12 09.4	+0.1
	baz=164						
N55A	Marion Center	74.18	355	P	P	20 12 10.4	+0.4
	baz=174						
O49A	Covington	74.19	350	P	P	20 12 09.8	-0.2
	baz=170						
Q41A	Truxton	74.25	345	P	P	20 12 10.7	+0.4
	baz=164						
O48A	Farmland	74.37	350	P	P	20 12 10.6	-0.5
	baz=169						
N54A	Moraine State	74.45	354	P	P	20 12 12.1	+0.6
	baz=173						
O47A	Sheridan	74.51	349	P	P	20 12 11.4	-0.5
	baz=168						
P43A	Skaggs, Pawnee	74.54	346	P	P	20 12 11.9	-0.2
	baz=165						
N50A	Nevada	74.60	351	P	P	20 12 12.4	0.0
	baz=171						
LIC	Lamto	74.62	72	*e*P	P	20 12 12.9	-0.3
	comp=Z,48nm,1.5s						
P42A	Winchester	74.66	345	P	P	20 12 12.8	0.0
	baz=164						
M55A	Ridgway	74.85	355	P	P	20 12 14.2	+0.4
	baz=174						
TIC	Toumodi	74.88	71	*e*P	P	20 12 14.8	+0.1
N49A	Columbus Grove	74.89	351	P	P	20 12 13.9	-0.1
	baz=170						
P41A	Barry, Barry	74.90	345	P	P	20 12 14.5	+0.4
	baz=164						
KIC	Kosan Boka	74.93	72	*e*P	P	20 12 15.1	+0.1
	comp=Z,49nm,1.3s						
DBIC	Dimbokro	75.03	71	P	P	20 12 15.3	-0.2
	comp=Z,4.1nm,0.8s,baz=200,slow=6.2,SNR=4.6						
N47A	Urbana	75.07	349	P	P	20 12 14.4	-0.6
	baz=168						
O41A	Passleys Farm,	75.28	345	P	P	20 12 16.2	-0.1
	baz=164						
ANMO	Albuquerque	75.33	331	⇓*e*P	P	20 12 17.8	+0.8
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
M49A	Liberty Center	75.40	351	P	P	20 12 16.5	-0.4
	baz=170						
L55A	Hinsdale	75.53	355	P	P	20 12 18.3	+0.5
	baz=175						
N43A	Stutzman Famil	75.73	347	P	P	20 12 18.5	-0.3
	baz=166						
M43A	Waltham Townsh	76.17	347	P	P	20 12 21.3	-0.1
	baz=166						
K47A	Vermontville	76.72	350	P	P	20 12 23.6	-0.8
	baz=169						
L41A	Preston	77.08	346	P	P	20 12 26.4	-0.1
	baz=164						
J48A	Bridge Port	77.17	351	P	P	20 12 26.7	-0.3
	baz=170						
L40A	Anamosa	77.22	345	P	P	20 12 27.3	0.0
	baz=164						
I51A	Listowel	77.36	353	P	P	20 12 28.5	+0.4
	baz=172						
K41A	Shullsburg	77.56	346	P	P	20 12 29.3	+0.1
	baz=165						
J41A	Loganville	78.23	347	P	P	20 12 32.9	0.0
	baz=165						
J40A	Soldiers Grove	78.40	346	P	P	20 12 33.9	0.0
	baz=164						
ALGO	Algonquin Park	79.26	356	P	P	20 12 38.6	+0.1
	baz=175						
ECSD	EROS Data Cent	80.06	342	*e*P	P	20 12 43.5	+0.5
	comp=Z,12nm,0.9s						
ECSD	EROS Data Cent	80.06	342	P	P	20 12 43.2	+0.2
	baz=160						
BOSA	Boshof	80.32	118	P	P	20 12 44.9	-0.2
	comp=Z,6.4nm,1.1s,baz=252,slow=4.4,SNR=3.6						
LATQ	La Tuque	80.51	359	P	P	20 12 46.2	+1.0
	baz=180						
F39A	Loretta	80.86	347	P	P	20 12 47.8	+0.6
	baz=164						
F38A	Pierce - Schro	81.09	346	P	P	20 12 49.0	+0.6
	baz=164						
LSQQ	Lebel-sur-Quev	82.30	357	P	P	20 12 55.2	+0.5
	baz=176						
LBTB	Lobatse	82.53	115	*e*P	P	20 12 57.0	+0.2
	comp=Z,24nm,1.3s						
LBTB	Lobatse	82.53	115	*e*P	P	20 12 57.0	+0.2
LBTB				pmax	pmax		
	comp=Z,24nm,1.3s						
PDAR	Pinedale Array	83.30	333	P	P	20 13 01.1	+0.7
	comp=Z,1.0nm,0.7s,baz=132,slow=5.4,SNR=6.0						
NVAR	Mina Array Bea	83.46	325	P	P	20 13 02.6	+1.4
	comp=Z,1.5nm,0.6s,baz=134,slow=5.2,SNR=3.8						
KVN	Kaiserville	83.86	326	*e*P	P	20 13 03.4	+0.2
	comp=Z,4.7nm,1.1s						
KVN	Kaiserville	83.86	326	*e*P	P	20 13 03.4	+0.2
KVN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TOA0	Torodi Ar. Sit	84.05	70	*e*P	P	20 13 04.6	0.0
TORD	Torodi Ar. Bea	84.05	70	P	P	20 13 04.3	-0.2
	comp=Z,4.5nm,0.9s,baz=273,slow=3.9,SNR=9.6						
RLMT	Red Lodge	85.22	335	P	P	20 13 10.5	+0.5
	baz=150						
HLID	Hailey	85.89	331	P	P	20 13 15.1	+1.8
	baz=146						
ULM	Lac du Bonnet	86.00	345	P	P	20 13 12.1	-1.4
	comp=Z,2.4nm,0.8s,baz=194,slow=8.4,SNR=3.5						
MCMT	McKenzie Canyo	86.31	332	*e*P	P	20 13 17.2	+1.7
BOZ	Bozeman (W)	86.50	333	P	P	20 13 17.2	+1.0
	baz=148						
DGMT	Dagmar	86.50	339	P	P	20 13 17.2	+1.1
	baz=154						

J08A	Circle Bar Ran	87.45	328	eP	P	20 13 21.9	+1.0
	comp=Z,17nm,0.9s						
SCHQ	Schefferville	88.08	3	P	P	20 13 23.2	-0.2
	comp=Z,5.8nm,1.1s,baz=199,slow=3.2,SNR=3.0						
YKA	Yellowknife Ar	101.57	341	P	Pdif	20 14 24.8	-0.1
	comp=Z,0.3nm,0.5s,baz=144,slow=4.6,SNR=5.8						
ASAR	Alice Springs	118.02	207	PKIKP	PKPdf	20 19 20.0	-0.8
ASAR	Alice Springs	118.02	207	PKP	PKPdf	20 19 19.9	-0.8
	comp=Z,0.6nm,0.8s,baz=149,slow=2.4,SNR=4.7						
WRA	Warramunga Arr	121.20	209	PKP	PKPdf	20 19 26.4	-0.5
	comp=Z,1.0nm,0.7s,baz=155,slow=1.6,SNR=9.4						
BRTR	Keskin Array B	121.59	61	PKP	PKPdf	20 19 27.0	-0.3
	comp=Z,0.4nm,0.7s,baz=249,slow=4.0,SNR=4.0						
KIEV	Kiev	121.84	47	⇓iPKIKP	PKPdf	20 19 25.9	-1.2
AKASG	Malin Array Be	121.86	47	PKP	PKPdf	20 19 26.7	-0.4
	comp=Z,0.5nm,0.5s,baz=261,slow=2.8,SNR=5.2						
VSU	Vasula	122.30	38	⇑iPKIKP	PKPdf	20 19 27.4	-0.3
ARCES	ARCESS Array B	123.56	25	PKP	PKPdf	20 19 29.7	-0.2
	comp=Z,0.9nm,0.7s,baz=268,slow=4.5,SNR=4.3						
OBN	Obninsk	127.07	43	d iPKIKP	PKPdf	20 19 34.4	-2.5
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KLMR	Klimovskoe	129.00	36	ePKIKP	PKPdf	20 19 39.6	-0.9
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
KLMR	Klimovskoe	129.00	36	ePKPdf	PKPdf	20 19 39.6	-0.9
KLMR				AMP		20 19 48.5	
	comp=Z,12nm,1.3s						
NCK	Nalchik	129.78	59	⇑iPKIKP	PKiKP	20 19 43.4	0.0
BILL	Bilibino	132.37	334	⇓iPKIKP	PKiKP	20 19 47.8	0.0
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ARU	Arti	139.37	40	i PKIKP	PKPdf	20 19 58.7	-1.3
ARU						20 22 52.4	
SEY	Seymchan	139.59	330	⇑iPKIKP	PKiKP	20 20 01.5	-1.1
SEY	Seymchan	139.59	330	PKP	PKPdf	20 20 00.9	+0.7
	comp=Z,2.1nm,0.7s,baz=70,slow=3.0,SNR=6.1						
GEYT	Alibeck	139.68	69	PKP	PKPdf	20 20 02.1	+0.8
	comp=Z,1.3nm,0.7s,baz=228,slow=3.8,SNR=3.7						
TIXI	Tiksi	140.19	350	⇑ePKIKP	PKPdf	20 20 01.2	+0.1
BRVK	Borovoye	146.84	42	c iPKP2	PKPbc	20 20 15.9	+0.7
BVAR	Borovoye Array	146.91	42	PKPbc	PKPbc	20 20 15.2	-0.3
	comp=Z,5.5nm,0.6s,baz=308,slow=3.3,SNR=14						
YAK	Yakutsk	148.25	341	ePKP2	PKPab	20 20 24.0	+2.2
YAK				pmax	pmax		
	comp=Z,107nm,1.2s						
YAK				pmax	pmax		
	comp=N,16nm,1.6s						
YAK				pmax	pmax		
	comp=E,11nm,1.3s						
HYB	Hyderabad	149.15	114	i PKP	PKPbc	20 20 23.0	+0.5
NKL	Nikolayevsk	149.52	320	ePKP2	PKPbc	20 20 22.7	+0.5
AAK	Ala-Archa	152.27	61	c iPKIKP	PKiKP	20 20 30.1	+0.5
KURBB	Kurchatov Arra	152.50	43	PKP	PKPdf	20 20 23.2	+0.9
	comp=E,0.8nm,0.7s,baz=295,slow=2.8,SNR=4.2						
KURBB				PKPbc	PKiKP	20 20 30.0	+0.4
	comp=E,4.0nm,0.8s,baz=299,slow=2.8,SNR=12						
KURK	Kurchatov	152.51	42	PKP	PKPdf	20 20 23.2	+0.9
KURK				PKPbc	PKiKP	20 20 30.0	+0.4
KURK	Kurchatov	152.51	42	c iPKIKP	PKPbc	20 20 29.1	-0.2
NVS	Novosibirsk	152.51	32	ePKIKP	PKPbc	20 20 28.6	-0.6
NVS				pmax	pmax		
	comp=Z,16nm,1.3s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.6s						
KSH	Kashi	153.69	68	PKPbc	PKPdf	20 20 25.0	+0.3
KSH				sPKP		20 20 36.2	
KSH				PP	PP	20 24 21.2	+1.1
KSH				SKS	SKSdf	20 27 26.3	-3.1
ZALV	Zalesovo Beam	153.80	32	PKP	PKPdf	20 20 25.0	+0.8
	comp=E,1.6nm,0.8s,baz=314,slow=1.4,SNR=3.5						
ZALV				PKPbc	PKiKP	20 20 32.6	+0.5
	comp=E,6.7nm,0.6s,baz=295,slow=3.3,SNR=12						
MAJO	Matsushiro	155.08	286	⇓ePKIKP	PKPdf	20 20 23.3	-3.2
MKAR	Makanchi Array	156.44	48	PKPab	PKPab	20 20 57.0	+0.3
	comp=E,2.9nm,0.7s,baz=293,slow=3.0,SNR=10.0						
DGZ	Jazzator, Alta	157.80	37	dePKIKP	PKPdf	20 20 29.4	-0.4
WMQ	Urumqi	161.16	51	eP	PKPdf	20 20 34.0	+0.2
WMQ				pP	sPKPdf	20 20 48.2	+1.2
WMQ				LR	LR		
	comp=N,680nm,18.3s						
WMQ				LR	LR		
	comp=E,620nm,18.3s						
WMQ				LR	LR		
	comp=Z,750nm,19.5s						
CMAR	Chiang Mai Arr	162.99	149	PKP	PKPdf	20 20 37.1	+0.7
	comp=Z,0.7nm,0.8s,baz=256,slow=3.6,SNR=3.4						
NJ2	Nanjing	170.71	264	eP	PKPdf	20 20 42.3	+0.6
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GTA	Gaotai	171.18	46	ePKP	PKPdf	20 20 42.5	+0.6
GTA				pPKP	pPKPdf	20 20 53.3	+1.5
GTA				sPKP		20 20 57.2	
GTA				PKPab	PKPab	20 22 02.7	+1.0
HHC	Hu-ho-hao-te	172.11	340	eP	PKPdf	20 20 39.5	-2.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,6.1s						
GYA	Guiyang	172.90	171	ePKPbc	PKPdf	20 20 42.0	-1.1
GYA				PKPab	PKPab	20 22 11.8	+2.4
GYA				PKS	PKSdf	20 24 13.3	-2.3
GYA				PP	PP	20 26 03.6	+3.6
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
CD2	Chengdu	175.61	125	PKP	PKPdf	20 20 43.5	-0.3

IDC 10 20:06:29.1±2.1**, 4°.26S×151°.48E, h0km, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.4**/37**, mbtmp3.2**/3**, Error ellipse: s-maj=169.5km s-min=27.8km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.85	226	P	P	20 11 33.5	-0.7
	0.2nm,0.7s,baz=53,slow=11,SNR=3.3						
ASAR	Alice Springs	25.69	220	P	P	20 12 02.5	+1.2
	0.5nm,1.0s,baz=56,slow=9.2,SNR=6.5						
ILAR	Eielson Array	82.16	22	P	P	20 18 51.2	-0.5
	0.3nm,0.5s,baz=251,slow=5.6,SNR=7.5						

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*ISCJB **10** 20:09:36.2±1.1, 11°.0S±0°.1×165°.9E±0°.1, h35km, mb3.8/4, MS3.8/1, Error ellipse: s-maj=20.2km s-min=11.8km az=31.3*

*IDC **10** 20:09:39.7±4.1, 11°.01S×165°.89E, h52km±35km, mb3.6/4, mb1 4.0/6, mb1mx3.6/37, mbtmp4.1/6, ML4.4/2, MS3.8/1, Ms1 3.8/1, ms1mx3.3/26, Error ellipse: s-maj=32.3km s-min=25.7km az=43.0*

ISC 10 20:09:38.0±1.3**, 11°.0S**±0°.1×**166°.0E**±0°.1**, h35km, n13, σ0ˢ90**/7**, mb3.7**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.13	284	P	Pn	20 11 06.8	+0.6
	14nm,0.3s,baz=138,slow=3.4,SNR=10						
HNR				S	Sn	20 12 15.4	+0.3
	4.3nm,0.3s,baz=142,slow=18,SNR=1.5						
DZM	Mont Dzumac	11.07	178	P	Pn	20 12 14.6	+0.6
	1.5nm,0.3s,baz=315,slow=16,SNR=16						
H11S2	WAKE ISLAND Hy	29.26	1	T	T	20 45 55.6	
	baz=181,slow=76,SNR=25						
H11S3	WAKE ISLAND Hy	29.27	1	T	T	20 45 55.9	
	baz=181,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	29.28	1	T	T	20 45 57.5	
	baz=181,slow=76,SNR=18						
H11N1	WAKE ISLAND Hy	30.48	2	T	T	20 47 26.4	
	baz=182,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.49	2	T	T	20 47 26.8	
	baz=182,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.50	2	T	T	20 47 27.8	
	baz=182,slow=76,SNR=12						
WRA	Warramunga Arr	31.74	250	P	P	20 15 58.0	-1.0
	3.1nm,0.8s,baz=80,slow=9.0,SNR=13						
RPZ	Rata Peaks	32.94	173	LR	LR	20 26 35.9	
	comp=Z,181nm,21.0s,baz=304,slow=31						
ASAR	Alice Springs	33.05	243	P	P	20 16 09.3	-1.2
	0.7nm,0.7s,baz=64,slow=9.8,SNR=7.8						
SONM	Songino Array	78.73	324	P	P	20 21 37.1	+0.1
	1.1nm,1.1s,baz=133,slow=5.7,SNR=2.9						
ILAR	Eielson Array	83.35	18	P	P	20 22 01.1	0.0
	0.6nm,1.0s,baz=235,slow=5.5,SNR=6.2						

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*SJA **10** 20:11:44.5±0.7, 31°.72S×70°.53W, h10km±11km, ML1.8, MW2.9*

*ISCJB **10** 20:11:45.4±1.6, 31°.73S±0°.03×70°.55W±0°.05, h5km±15km, Error ellipse: s-maj=7.8km s-min=5.2km az=10.3*

*GUC **10** 20:11:48.8±0.6, 31°.71S×70°.53W, h15km±8km, ML2.2*

ISC 10 20:11:45.0±1.7**, 31°.71S**±0°.04×**70°.52W**±0°.06**, h12km**±14km**, n13, σ0ˢ30**/18**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	0.67	322	i S	Sb	20 12 08.3	+0.3
RTLS	Leoncito	1.05	95	i P	Pg	20 12 05.3	+0.1
RTLS				i S	Sn	20 12 20.1	-0.5
RTLS				IAML		20 12 24.5	
	comp=Z,25nm,0.2s						
AUSP	Uspallata	1.09	118	i P	Pb	20 12 06.1	0.0
ROCH	El Roble	1.33	198	eP	Pn	20 12 09.4	-0.3
ROCH				i S	Sn	20 12 27.9	+0.4
ROCH				IAML		20 12 29.9	
	comp=N,36nm,0.2s						
ROC1	El Roble	1.33	198	i P	Pn	20 12 09.4	-0.3
PEL	Peldehue	1.44	185	eP	Pn	20 12 11.1	+0.1
PEL				i S	Sn	20 12 30.0	+0.1
PEL				IAML		20 12 34.4	
	comp=E,36nm,0.7s						
GO04	Tololo Observa	1.55	351	⇑iP	Pg	20 12 14.6	-0.1
GO04				i S	Sb	20 12 33.6	+0.1
GO04				IAML		20 12 46.5	
	comp=N,366nm,0.3s						
FCH	Farellones	1.63	173	⇑iP	Pb	20 12 15.0	-0.3
FCH				i S	Sb	20 12 36.1	+0.2
FCH				IAML		20 12 48.8	
	comp=E,32nm,0.4s						
ASAL	Salagasta	1.68	122	⇓iP	Pb	20 12 16.2	+0.2
RTCV	Cerro Valdivia	1.70	96	i P	Pb	20 12 16.6	+0.3
ARCO	CERRO ARCO	1.76	130	i P	Pb	20 12 17.4	+0.1
AROD	Rodeo	1.78	31	i P	Pb	20 12 18.1	+0.3
AMOG	MOGNA	1.90	67	i P	Pb	20 12 19.4	-0.3

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*ISCJB **10** 20:13:16.1±1.4, 36°.81N±0°.05×141°.46E±0°.08, h15km±9km, mb3.6/3, Error ellipse: s-maj=11.1km s-min=8.5km az=10.7*

*JMA **10** 20:13:18.3, 36°.82N×141°.30E, h32km±1km, M3.2*

*IDC **10** 20:13:19.4±2.5, 36°.36N×141°.19E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.2/49, mbtmp3.2/3, ML2.2/1, Error ellipse: s-maj=51.4km s-min=28.9km az=49.0*

ISC 10 20:13:17.6±2.1**, 36°.83N**±0°.05×**141°.27E**±0°.09**, h7km**±13km**, n19, σ1ˢ56**/21**, mb3.5**/3**, 1C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.47	306	P	Pb	20 13 28.3	+0.1
ONAJ				S	Sb	20 13 35.6	+0.2
JHO	Hitachi	0.60	249	P	Pb	20 13 30.4	-0.1
JHO				S	Sb	20 13 39.0	-0.3
JFK	Kawauchi	0.62	330	P	Pb	20 13 30.6	-0.3
JFK				S	Sb	20 13 39.3	-0.6
JFFD	Fukushimafurud	0.62	295	P	Pb	20 13 30.6	-0.3
JFFD				S	Sb	20 13 39.5	-0.4
JHYU	Hitachinakayam	0.73	229	P	Pg	20 13 32.2	+0.5
JFT	Otama	1.01	313	P	Pb	20 13 37.5	-0.1
JFT				S	Sb	20 13 51.0	-0.2
JMM	Marumori	1.10	340	P	Pb	20 13 37.9	-1.2
JMM				S	Sg	20 13 52.8	-0.4
JAG	Ashikaga	1.52	255	P	Pn	20 13 44.3	-0.9
MJAR	Matsushiro Arr	2.48	264	Pn	Pn	20 13 58.8	+0.4
	0.5nm,0.3s,baz=89,slow=15,SNR=13						
MJAR				Sn	Sb	20 14 31.2	-2.0
	0.5nm,0.3s,baz=90,slow=18,SNR=5.0						
MAT	Matsushiro	2.48	264	P	Pn	20 13 59.6	+1.1
MAT				eS	Sb	20 14 32.3	-1.0
SONM	Songino Array	27.80	304	P	P	20 19 12.7	+5.2
	0.3nm,0.6s,baz=98,slow=8.8,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.14	120	T	T	20 48 36.4	
	baz=312,slow=75,SNR=27						
H11N1	WAKE ISLAND Hy	28.15	120	T	T	20 48 36.0	
	baz=312,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	28.16	120	T	T	20 48 40.0	
	baz=312,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	28.85	122	T	T	20 49 28.0	
	baz=315,slow=75,SNR=9.2						
H11S3	WAKE ISLAND Hy	28.85	122	T	T	20 49 25.6	
	baz=315,slow=75,SNR=8.8						
H11S2	WAKE ISLAND Hy	28.86	122	T	T	20 49 29.8	
	baz=315,slow=75,SNR=7.1						
GTA	Gaotai	32.51	287	⇑P	P	20 19 47.3	-1.9
GTA				pP	pP	20 19 51.3	+0.1
GTA				sP	sP	20 19 54.2	+2.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	56.84	188	P	P	20 23 02.2	-0.8
	comp=Z,0.5nm,1.0s,baz=6.1,slow=7.5,SNR=5.1						

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*ISCJB **10** 20:14:15.3±0.6, 36°.65N±0°.04×3°.07W±0°.05, h15km±5km, Error ellipse: s-maj=7.4km s-min=5.5km az=137.2*

*SFS **10** 20:14:16.0, 36°.66N×2°.96W, h10km, ML2.4, ADRA (ALMERIA)*

*MDD **10** 20:14:16.7±0.8, 36°.65N×2°.98W, h4km±8km, mbLg2.4/12, Error ellipse: s-maj=6.9km s-min=3.4km az=159.0, PRXIMO*

*CNRM **10** 20:14:18.2, 36°.50N×2°.66W, h26km, ml3.4*

ISC 10 20:14:15.8±1.3**, 36°.60N**±0°.04×**3°.03W**±0°.04**, h14km**±11km**, n25, σ1ˢ55**/34**, 3D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBER	Berja	0.32	21	⇓Pg	Pg	20 14 21.4	-1.1
	11nm,0.1s,SNR=18						
EBER				Lg	Lg	20 14 24.9	
	424nm,0.1s,SNR=13						
ELGU	Los Guajares,	0.55	299	⇓Pg	Pb	20 14 27.1	-0.2
	54nm,0.1s,SNR=18						
ELGU				Lg	Lg	20 14 34.3	
	405nm,0.1s,SNR=7.9						
EQUE	Quentar	0.69	332	⇓Pg	Pb	20 14 29.3	-0.4
	28nm,0.1s,SNR=18						
EQUE				Lg	Lg	20 14 37.0	
	49nm,0.1s,SNR=31						
GORA	Gorafe	0.88	359	Pg	Pb	20 14 32.0	-1.0
	7.2nm,0.2s,SNR=7.9						
GORA				Lg	Lg	20 14 42.0	
	36nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	1.00	301	Pg	Pb	20 14 35.5	+0.4
	4.8nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	20 14 49.8	
	9.3nm,0.1s,SNR=7.9						
EMAL	Malaga-Limoner	1.14	279	Pg	Pn	20 14 37.2	0.0
EMAL				Lg	Lg	20 14 49.7	
EMAL	Malaga-Limoner	1.14	279	i P	Pn	20 14 37.2	0.0
EMAL				eS	Sb	20 14 49.7	-2.2
EQES	Quesada	1.20	358	Pg	Pn	20 14 38.4	+0.1
	1.3nm,0.1s,SNR=57						
EQES				Lg	Lg	20 14 55.0	
	7.7nm,0.2s,SNR=4.7						
GOG	Mont Gurugu	1.38	179	P	Pn	20 14 40.3	-0.3
EMIJ	Mijas	1.40	269	Pn	Pn	20 14 38.6	-2.4
	0.3nm,0.1s,SNR=12						
EMIJ				Pg	Pb	20 14 40.1	-1.7
	1.1nm,0.1s,SNR=7.9						
EMIJ				Lg	Lg	20 14 54.5	
	6.1nm,0.1s						
SESP	Santiago Espad	1.57	14	Lg	Lg	20 15 04.5	
	40nm,0.1s,SNR=7.9						
SESP	Santiago Espad	1.57	14	P	Pb	20 14 44.0	-0.7
SESP				S	Sg	20 15 06.9	+0.6
EMUR	La Murta	1.89	49	Pn	Pn	20 14 47.1	-0.7
	0.7nm,0.2s,SNR=7.6						
EMUR				Lg	Lg	20 15 08.1	
	5.4nm,0.3s						
EADA	Adamuz	1.99	322	Pg	Pb	20 14 53.7	+1.8
	5.1nm,0.3s,SNR=28						
EADA				Lg	Lg	20 15 20.1	
	5.8nm,0.2s,SNR=7.9						
HORN	Hornachuelos	2.17	306	P	Pg	20 14 57.9	+0.5
HORN				S	Sg	20 15 26.1	+0.5
AKLM	AKL	2.19	198	P	Pn	20 14 53.4	+1.5
AKLM				S	Sn	20 15 19.9	+1.0
JBK	JBK	2.29	170	P	Pn	20 14 53.8	+0.4
JBK				S	Sn	20 15 21.2	-0.3
ETOB	Tobarra	2.36	30	Pg	Pn	20 14 55.8	+1.6
	0.9nm,0.2s,SNR=8.7						
ECAB	El Cabril	2.41	308	Pg	Pb	20 15 01.5	+2.5
	1.2nm,0.3s,SNR=11						
ECAB				Lg	Lg	20 15 31.7	
	4.9nm,0.3s,SNR=11						
PAB	San Pablo	3.12	341	Pg	Pb	20 15 12.9	+1.8
	0.1nm,0.2s,SNR=4.0						
PAB				Lg	Lg	20 15 55.5	
	0.7nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.13	293	Pn	Pn	20 15 06.3	+1.5
	0.1nm,0.2s,SNR=4.0						
EMIN				Sn	Sn	20 15 40.9	-1.1
	0.6nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	20 15 56.5	
	1.6nm,0.3s,SNR=4.0						
ESDC	Sonseca Array	3.16	347	Pg	Pb	20 15 14.4	+2.6
	0.9nm,0.2s,baz=163,slow=16,SNR=11						
ESDC				Lg	Lg	20 15 53.2	
	0.6nm,0.2s,baz=165,slow=27,SNR=6.3						
EBAD	Badajoz	3.82	305	Pn	Pn	20 15 11.7	-2.6
	0.5nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	20 15 57.0	-2.0
	0.9nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	3.84	283	eP	Pn	20 15 17.1	+2.7
PVAQ				eS	Sn	20 15 59.4	+0.1
PVAQ				A	A	20 15 59.9	
	1.8nm,0.6s						
PVAQ	Vaqueiros	3.84	283	Pn	Pn	20 15 17.1	+2.7
PVAQ				Sn	Sn	20 15 59.4	+0.1
	1.8nm,0.6s						

IDC 10 20:20:16.2±1.6**, 10°.96S×165°.52E, h0km, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.7**/30**, mbtmp3.8**/5**, ML3.6**/1**, Error ellipse: s-maj=51.0km s-min=28.5km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.08	176	Pn	Pn	20 22 56.5	+0.4
	0.4nm,0.3s,baz=308,slow=18,SNR=2.8						
WRA	Warramunga Arr	31.30	250	P	P	20 26 38.0	-0.3
	1.1nm,0.7s,baz=82,slow=8.8,SNR=7.6						
ASAR	Alice Springs	32.63	243	P	P	20 26 50.1	0.0
	1.1nm,0.7s,baz=64,slow=10,SNR=11						
ILAR	Eielson Array	83.50	19	P	P	20 32 45.4	-0.2
	0.5nm,0.6s,baz=235,slow=5.3,SNR=11						
MKAR	Makanchi Array	93.31	317	P	P	20 33 33.4	+0.3
	0.2nm,0.8s,baz=103,slow=6.5,SNR=3.1						

SVSA 10 20:24:02.8±1.6**, 38°.34N×26°.82W, h1km**±7km**, MD3.5, ML2.9, Error ellipse: s-maj=8.2km s-min=3.3km az=37.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSCM	Serra do Cume	0.43	327	eP	Pg	20 24 10.6	-0.4
PSCM				eS	Sg	20 24 16.4	-0.2
PSCM				A	A	20 24 18.4	
	422nm,0.3s						
ADH	Angra Heroismo	0.45	314	eP	Pg	20 24 11.0	-0.5
ADH				eS	Sg	20 24 17.5	+0.1
ADH				A	A	20 24 20.8	
	456nm,0.5s						
PSET	Sete Cidades	1.01	120	eP	Pg	20 24 19.0	-3.1
PSET				eS	Sg	20 24 31.4	-3.8
PSET				A	A	20 24 36.2	
	130nm,0.3s						
PDA	Ponta Delgada	1.09	123	eP	Pg	20 24 19.3	-4.3
PDA				eS	Sg	20 24 33.4	-4.3
PDA				A	A	20 24 37.6	
	118nm,0.3s						
CMLA	Cha da Macela	1.17	119	eP	Pg	20 24 21.8	-3.5
CMLA				eS	Sg	20 24 35.5	-5.0
CMLA				A	A	20 24 45.1	
	167nm,0.4s						
ROSA	Rosais	1.18	289	eP	Pg	20 24 22.1	-3.3
ROSA				eS	Sg	20 24 35.3	-5.4
ROSA				A	A	20 24 46.7	
	38nm,0.6s						
PCALD	Caldeiras da R	1.18	117	eP	Pg	20 24 21.6	-3.8
PCALD				eS	Sg	20 24 35.4	-5.4
PCALD				A	A	20 24 38.7	
	192nm,0.3s						
PICO	Pico	1.27	278	eP	Pg	20 24 22.7	-4.5
PICO				eS	Sg	20 24 37.8	-5.9
PICO				A	A	20 24 38.5	
	61nm,0.6s						
BART	Pico Bartolome	1.42	113	eP	Pn	20 24 24.4	-5.4
BART				eS	Sg	20 24 41.5	-6.9
BART				A	A	20 24 43.5	
	40nm,0.3s						
PSMA	Santa Maria	1.90	135	eP	Pn	20 24 32.0	-4.3
PSMA				A	A	20 24 54.6	
	34nm,0.2s						
PSMN	Pico do Norte,	1.93	133	eP	Pn	20 24 32.3	-4.4
PSMN				A	A	20 24 55.8	
	23nm,0.2s						

IDC 10 20:30:44.0±1.8**, 11°.06S×165°.36E, h0km, mb3.6**/3**, mb1 3.9**/5**, mb1mx3.6**/34**, mbtmp3.8**/5**, ML4.0**/2**, MS4.3**/1**, Ms1 4.2**/1**, ms1mx3.4**/26**, Error ellipse: s-maj=41.3km s-min=32.9km az=130.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.57	286	Pn	Pn	20 32 09.1	+0.9
	7.0nm,0.3s,baz=242,slow=10,SNR=3.7						
DZM	Mont Dzumac	11.00	175	Pn	Pn	20 33 23.5	+0.7
	0.8nm,0.3s,baz=149,slow=18,SNR=6.8						
H11S2	WAKE ISLAND Hy	29.39	3	T	T	21 07 29.9	
	baz=181,slow=76,SNR=5.2						
H11S3	WAKE ISLAND Hy	29.40	3	T	T	21 07 30.2	
	baz=181,slow=76,SNR=4.3						
H11S1	WAKE ISLAND Hy	29.41	3	T	T	21 07 31.1	
	baz=181,slow=76,SNR=5.3						
STKA	Stephens Creek	30.17	223	LR	LR	20 48 03.6	
	comp=Z,517nm,19.4s,baz=135,slow=34						
H11N1	WAKE ISLAND Hy	30.62	3	T	T	21 09 00.9	
	baz=182,slow=76,SNR=4.4						
H11N3	WAKE ISLAND Hy	30.62	3	T	T	21 09 01.7	
	baz=182,slow=76,SNR=7.3						
H11N2	WAKE ISLAND Hy	30.64	3	T	T	21 09 02.7	
	baz=182,slow=76,SNR=7.3						
WRA	Warramunga Arr	31.12	250	P	P	20 37 04.5	-0.2
	0.4nm,0.6s,baz=82,slow=9.2,SNR=6.1						
ASAR	Alice Springs	32.45	243	P	P	20 37 16.0	-0.3
	0.7nm,0.6s,baz=63,slow=10.0,SNR=14						
ILAR	Eielson Array	83.65	19	P	P	20 43 14.1	0.0
	0.2nm,0.6s,baz=232,slow=5.6,SNR=4.4						

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*IDC **10** 20:43:12.4±0.6, 10°.90S×164°.90E, h0km, mb4.6/20, mb1 4.8/22, mb1mx4.7/34, mbtmp4.6/22, ML4.7/2, MS4.1/1, Ms1 4.1/1, ms1mx3.3/37, Error ellipse: s-maj=20.9km s-min=14.8km az=125.0*

*NEIC **10** 20:43:14.5±0.1, 10°.91S×164°.73E, h10km, mb4.9/63, Error ellipse: s-maj=6.1km s-min=4.0km az=148.0*

*ISCJB **10** 20:43:16.2±0.2, 10°.99S±0°.05×164°.68E±0°.04, h31km, mb4.8/93, Error ellipse: s-maj=7.0km s-min=4.6km az=157.1*

ISC 10 20:43:17.3±0.4**, 10°.94S**±0°.07×**164°.83E**±0°.07**, h31km, n166, σ1ˢ08**/164**, mb4.9**/93**, 1C-1D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.03	287	eP	Pn	20 44 32.0	+1.3
HNR				eS	Sn	20 45 30.0	+2.2
HNR	Honiara	5.03	287	ePn	Pn	20 44 29.9	-0.9
HNR				Sn	Sn	20 45 28.2	+0.4
HNR	Honiara	5.03	287	Pn	Pn	20 44 31.3	+0.6
	52nm,0.3s,baz=178,slow=4.3,SNR=16						
HNR				Sn	Sn	20 45 28.2	+0.4
	22nm,0.3s,baz=180,slow=20,SNR=2.4						
HNR				LR	LR	20 46 33.5	
	comp=Z,2µm,19.1s,baz=104,slow=40						
MARNC	Mare, Loyalty	10.93	164	ePn	Pn	20 45 46.8	-4.8
DZM	Mont Dzumac	11.18	172	ePn	Pn	20 45 55.5	+0.4
DZM	Mont Dzumac	11.18	172	Pn	Pn	20 45 55.3	+0.1
	3.2nm,0.3s,baz=344,slow=14,SNR=16						
PINNC	Pines Island,	11.88	168	ePn	Pn	20 46 05.3	+0.7
MANU	Manus Island	19.45	296	eP	P	20 47 42.0	+0.4

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               66nm,1.0s
CTA    Charters Tower    20.06 241  P       Pn       20 47 49.7  -0.4
               29nm,0.9s,baz=65,slow=13,SNR=24
CTAO   Charters Tower    20.06 241  eP      Pn       20 47 49.8  -0.3
               151nm,1.0s
MTSU   Mount Surprise    21.09 248  P       P        20 47 59.3  -0.1
               baz=21,SNR=16
COEN   Coen              21.35 260  P       P        20 48 02.5 +0.2
               baz=21,SNR=4.3
COEN   Coen              21.35 260  eP      P        20 48 01.2  -1.0
               17nm,0.9s
RMQ    Roma              21.66 222  P       P        20 48 07.9 +2.4
               baz=22,SNR=7.7
ARMA   Armidale          22.94 210  P       P        20 48 21.6 +2.4
               baz=23,SNR=3.7
ARMA   Armidale          22.94 210  eP      P        20 48 18.9  -0.3
               20nm,1.1s
QIS    Mount Isa         26.06 245  P       P        20 48 47.2  -1.0
               baz=26,SNR=3.5
H11S2  WAKE ISLAND Hy    29.30   4  T       T        21 19 51.7
               baz=184,slow=76,SNR=34
H11S3  WAKE ISLAND Hy    29.30   4  T       T        21 19 52.8
               baz=184,slow=76,SNR=32
H11S1  WAKE ISLAND Hy    29.32   4  T       T        21 19 53.2
               baz=184,slow=76,SNR=34
STKA   Stephens Creek    29.91 222  P       P        20 49 24.2 +1.7
               baz=30,SNR=6.0
STKA   Stephens Creek    29.91 222  P       P        20 49 23.7 +1.2
               4.4nm,0.8s,baz=25,slow=9.8,SNR=6.9
STKA                                PcP     PcP      20 52 25.8 +0.8
               2.4nm,0.7s,baz=37,slow=5.1,SNR=3.0
H11N1  WAKE ISLAND Hy    30.53   4  T       T        21 21 28.4
               baz=184,slow=76,SNR=41
H11N3  WAKE ISLAND Hy    30.53   4  T       T        21 21 23.9
               baz=184,slow=76,SNR=24
H11N2  WAKE ISLAND Hy    30.54   4  T       T        21 21 24.9
               baz=184,slow=76,SNR=28
WRAB   Tennant Creek     30.66 249  eP      P        20 49 28.1  -1.3
               13nm,0.8s
WB2    Warramunga Arr    30.66 249  eP      P        20 49 27.5  -1.9
WRA    Warramunga Arr    30.68 249  P       P        20 49 28.5  -0.9
               6.0nm,0.8s,baz=80,slow=9.1,SNR=27
WRA                                 PcP     PcP      20 52 27.5 +0.3
               2.2nm,0.8s,baz=75,slow=3.1,SNR=8.4
KDU    Kakadu            31.71 264  P       P        20 49 36.6  -1.9
               baz=32,SNR=3.4
AS01   Alice Springs     32.00 243  eP      P        20 49 39.4  -1.7
AS31   Alice Springs     32.03 243  eP      P        20 49 39.8  -1.6
               3.5nm,0.6s
ASAR   Alice Springs     32.04 243  P       P        20 49 40.2  -1.3
               6.1nm,0.8s,baz=64,slow=10.0,SNR=47
ASAR                                PcP     PcP      20 52 30.8  -0.1
               2.3nm,0.7s,baz=68,slow=2.7,SNR=9.8
HTT    Hallett           32.64 223  P       P        20 49 47.9 +1.3
               baz=33,SNR=4.0
BBOO   Buckleboo         34.25 226  P       P        20 50 01.3 +0.7
               baz=34,SNR=6.3
KNRA   Kununurra         35.38 258  P       P        20 50 09.2  -1.3
               baz=35,SNR=6.3
WRKA   Warakurna         37.33 243  P       P        20 50 26.5  -0.7
               baz=37,SNR=14
FITZ   Fitzroy Crossi    38.54 255  P       P        20 50 36.0  -1.4
               baz=39,SNR=6.3
FITZ   Fitzroy Crossi    38.54 255  eP      P        20 50 36.4  -1.0
               7.1nm,0.7s
FORT   Forrest           39.37 234  eP      P        20 50 41.4  -2.8
               82nm,1.0s
MEEK   Meekatharra       46.19 244  P       P        20 51 39.8 +0.2
               baz=46,SNR=5.2
MORW   Morawa            48.88 241  P       P        20 51 59.6  -0.9
               baz=49,SNR=3.2
MJAR   Matsushiro Arr    53.47 333  P       P        20 52 33.8  -1.0
               2.9nm,0.7s,baz=169,slow=9.6,SNR=9.8
MAT    Matsushiro        53.47 333  P       P        20 52 34.4  -0.3
KSRS   Korea Array       59.28 326  P       P        20 53 16.3 +0.1
               3.2nm,1.0s,baz=152,slow=6.9,SNR=5.4
KSAR   Wonju Array Be    59.30 326  P       P        20 53 16.3   0.0
NJ2    Nanjing           61.31 316  eP      P        20 53 30.3 +0.2
NJ2                                 pmax    pmax
               comp=Z,11nm,0.5s
USRK   Ussuriysk Ar.     62.45 334  P       P        20 53 37.8 +0.2
               comp=Z,9.3nm,1.0s,baz=123,slow=5.5,SNR=8.4
WHN    Wuhan             63.65 312  P       P        20 53 48.2 +2.4
PETK   Petropavlovsk-    64.08 355  P       P        20 53 48.3 +0.1
               comp=Z,13nm,0.8s,baz=158,slow=9.1,SNR=11
CN2    Changchun         65.19 330  eP      P        20 53 56.0 +0.4
CN2                                 pmax    pmax
               comp=Z,20nm,1.0s
KLR    Kul'dur           66.60 337  P       P        20 54 05.6 +1.0
               comp=Z,10nm,1.0s,baz=143,slow=3.9,SNR=21
ENH    Enshi             67.13 309  eP      P        20 54 07.4  -1.0
               comp=Z,20nm,0.9s
NONG   Nongkai           67.35 295  P       P        20 54 21.5   +12
               comp=Z,0.4nm,1.2s
GYA    Guiyang           67.61 305  P       P        20 54 13.0 +1.3
GYA                                 pmax    pmax
               comp=Z,10.0nm,1.0s
BJI    Beijing           67.83 322  P       P        20 54 13.1 +0.5
BJI                                 pmax    pmax
               comp=Z,5.0nm,1.6s
PBKT   Sadao Pong        68.81 293  eP      P        20 54 20.1 +1.0
PBKT   Sadao Pong        68.81 293  P       P        20 54 31.2   +12
               comp=Z,8.2nm,0.8s
XAN    Xi'an             69.38 313  P       P        20 54 22.4  -0.1
XAN                                 pP      sP       20 54 33.5 +0.1
XAN                                 sP      pwP      20 54 38.9 +1.4
XAN                                 PcP     PcP      20 54 45.8   0.0
XAN                                 pmax    pmax
               comp=Z,13nm,0.9s
XAN                                 pmax    pmax
               comp=Z,220nm,6.3s
XAN                                 LR      LR
               comp=N,260nm,23.9s
XAN                                 LR      LR
               comp=Z,460nm,23.9s
XAN    Xi'an             69.38 313  eP      P        20 54 21.6  -0.9
               comp=Z,52nm,0.8s
UTTA   Uttaradit         69.56 294  P       P        20 54 36.1   +12
               comp=Z,2.0nm,1.0s
NANT   Nan               69.78 295  P       P        20 54 36.5   +11
KMI    Kunming           70.30 302  P       P        20 54 30.0 +1.5
KMI                                 pP      sP       20 54 40.6 +1.1
KMI                                 sP      pwP      20 54 47.0 +2.9
KMI                                 pmax    pmax
               comp=Z,9.0nm,1.5s
KMI                                 pmax    pmax
               comp=Z,82nm,5.1s
HHC    Hu-ho-hao-te      71.17 320  eP      P        20 54 34.4 +1.1
HHC                                 pP      sP       20 54 45.8 +1.5
HHC                                 S       S        21 03 46.6  -1.8
HHC                                 pmax    pmax
               comp=Z,11nm,0.8s
HHC                                 pmax    pmax
               comp=Z,160nm,5.7s
HHC                                 LR      LR
               comp=N,470nm,17.3s
HHC                                 LR      LR
               comp=E,330nm,17.3s
HHC                                 LR      LR
               comp=Z,590nm,18.1s
MA2    Magadan           71.18 352  eP      P        20 54 32.3  -0.5
               comp=Z,8.0nm,0.8s
MA2    Magadan           71.18 352  P       P        20 54 32.4  -0.5
               comp=Z,6.7nm,0.7s,baz=162,slow=6.0,SNR=9.2
CMAR   Chiang Mai Arr    71.24 294  P       P        20 54 34.8 +0.6
               comp=Z,2.7nm,0.8s,baz=123,slow=4.1,SNR=20
CD2    Chengdu           71.82 308⇑iP      P        20 54 38.2 +0.8
CD2                                 pmax    pmax
               comp=Z,50nm,0.9s
CD2                                 pmax    pmax
               comp=Z,190nm,5.7s
HIA    Hailar            71.83 331  eP      P        20 54 37.3 +0.2
               comp=Z,28nm,1.0s
BTO    Baotou            72.02 319  eP      P        20 54 40.3 +1.8
LZH    Lanzhou           74.02 313  eP      P        20 54 52.1 +1.6
LZH                                 pP      sP       20 55 03.4 +1.9
LZH                                 sP      pwP      20 55 09.3 +3.7
LZH                                 pmax    pmax
               comp=Z,23nm,1.0s
LZH                                 pmax    pmax
               comp=Z,140nm,4.3s
LZH                                 LR      LR
               comp=N,480nm,12.8s
LZH                                 LR      LR
               comp=E,480nm,11.4s
LZH                                 LR      LR
               comp=Z,490nm,14.1s
SEY    Seymchan          74.27 354  P       P        20 54 51.0  -0.1
               comp=Z,5.3nm,0.8s,baz=161,slow=4.6,SNR=19
GAMB   Gambell           76.62  10  eP      P        20 55 05.6 +1.0
               comp=Z,17nm,0.9s
SONM   Songino Array     78.05 324  P       P        20 55 13.8 +0.6
               comp=Z,6.8nm,0.9s,baz=147,slow=7.6,SNR=47
SONA1  Songino Array     78.05 324  eP      P        20 55 13.3 +0.2
GTA    Gaotai            78.34 314 ⇓P       P        20 55 16.1 +1.2
GTA                                 pP      sP       20 55 26.4 +0.4
GTA                                 sP      pwP      20 55 31.0 +0.9
GTA                                 pmax    pmax
               comp=Z,14nm,1.4s
GTA                                 pmax    pmax
               comp=Z,91nm,7.5s
GTA                                 LR      LR
               comp=N,210nm,17.8s
GTA                                 LR      LR
               comp=E,280nm,17.8s
GTA                                 LR      LR
               comp=Z,400nm,17.8s
ANM    Nome              78.58  13  eP      P        20 55 17.0 +1.5
               comp=Z,16nm,1.4s
BILL   Bilibino          78.78   1  eP      P        20 55 17.1 +0.6
               comp=Z,23nm,1.0s
QSPA   South Pole Qui    79.06 180  eP      P        20 55 18.6 +0.1
CAST   Castle Rocks      81.12  18  eP      P        20 55 29.2  -0.2
               comp=Z,12nm,1.0s
RDOG   Red Dog Mine      82.10  12  eP      P        20 55 36.0 +1.6
               comp=Z,18nm,1.0s
IM3    Indian Mountai    82.57  16  eP      P        20 55 37.5 +0.6
IL1    Eielson Array     83.70  19  eP      P        20 55 41.9  -0.8
ILAR   Eielson Array     83.70  19  P       P        20 55 42.1  -0.6
               comp=Z,6.2nm,0.7s,baz=232,slow=4.8,SNR=68
ILB    Eielson Array     83.70  19  eP      P        20 55 42.5  -0.3
SCRK   Sand Creek        84.13  20  eP      P        20 55 46.1 +0.9
YBH    Yreka Blue Hor    84.46  46  eP      P        20 55 48.5 +1.2
               comp=Z,12nm,0.9s
HUMO   Hull Mountain     84.59  45  eP      P        20 55 49.1 +1.2
               comp=Z,11nm,1.1s
ORV    Oroville          84.61  48  eP      P        20 55 48.4 +0.4
               comp=Z,5.2nm,0.9s
AFDM   Forest Hills D    84.81  49  eP      P        20 55 49.8 +0.7
               comp=Z,8.6nm,0.9s
AFDM                                epP     sP       20 56 00.4 +0.2
JIRN   Jiri              85.15 299  eP      P        20 55 51.6 +0.2
               comp=Z,14nm,0.8s
GUN    Gumba             85.48 299  eP      P        20 55 53.1 +0.1
               comp=Z,15nm,0.9s
ISA    Isabella, Lake    85.72  53  eP      P        20 55 54.4 +0.6
               comp=Z,6.3nm,1.0s
PKIN   Phulchoki         85.81 299  eP      P        20 55 54.1  -0.5
               comp=Z,16nm,1.2s
WAKR   Walker            85.82  50  eP      P        20 55 54.8 +0.5
               comp=Z,15nm,1.4s
MDPB   Devils Postpil    85.83  51  eP      P        20 55 55.3 +0.8
               comp=Z,35nm,1.4s
OMMB   Old Mammoth Mi    85.88  51  eP      P        20 55 56.0 +1.2
               comp=Z,7.6nm,1.3s
DMN    Daman             86.07 299  eP      P        20 55 55.4  -0.5
               comp=Z,31nm,1.2s
PAHR   Pah Rah Range     86.21  49  eP      P        20 55 56.9 +0.7
               comp=Z,5.9nm,1.0s
MOD    Modoc Plateau     86.22  46  eP      P        20 55 56.8 +0.6
               comp=Z,5.2nm,0.8s
DAC    Darwin (Calif)    86.58  52  eP      P        20 55 59.0 +0.8
               comp=Z,4.9nm,1.1s
NV01   Mina Array Sit    86.64  50  eP      P        20 55 58.6 +0.2
NVAR   Mina Array Bea    86.64  50  P       P        20 55 58.6 +0.2
               comp=Z,4.8nm,0.9s,baz=232,slow=7.3,SNR=9.0
NV11   Mina Array Sit    86.76  50  eP      P        20 55 59.5 +0.6
               comp=Z,0.9nm,1.1s
KVN    Kaiserville       86.97  49  eP      P        20 56 00.1 +0.1
               comp=Z,8.7nm,1.2s
DANN   Dangsing          87.40 299  eP      P        20 56 01.5  -0.9
               comp=Z,5.6nm,0.6s
I07A   Izee              87.45  44  eP      P        20 56 02.5 +0.5
WVOR   Wild Horse Val    87.56  46  eP      P        20 56 03.6 +0.9
               comp=Z,10nm,1.2s
TPNV   Topopah Spring    87.81  52  eP      P        20 56 04.5 +0.5
               comp=Z,1.6nm,0.8s
GLA    Glamis            87.94  56  eP      P        20 56 05.7 +1.1
               comp=Z,13nm,0.8s
J08A   Circle Bar Ran    87.95  45  eP      P        20 56 04.8 +0.4
               comp=Z,12nm,1.1s
PYUN   Piuthan           88.00 299  eP      P        20 56 03.8  -1.4
               comp=Z,8.5nm,0.8s
HAWA   Hanford           88.14  42  eP      P        20 56 05.9 +0.7
               comp=Z,4.3nm,0.8s
G08A   Pilot Rock        88.19  43  eP      P        20 56 06.2 +0.6
               comp=Z,7.1nm,0.9s
LDFC   Landfair          88.22  54  eP      P        20 56 07.0 +1.1
               comp=Z,14nm,1.0s
Y12C   Blythe            88.36  55  eP      P        20 56 07.8 +1.3
WMQ    Urumqi            88.38 315  eP      P        20 56 06.6 +0.2
WMQ                                 pP      sP       20 56 17.6   0.0
WMQ                                 sP      pwP      20 56 25.2 +3.5
WMQ                                 pmax    pmax
               comp=Z,14nm,1.9s
WMQ                                 pmax    pmax
               comp=Z,260nm,5.5s
WMQ                                 LR      LR
               comp=N,680nm,18.1s
WMQ                                 LR      LR
               comp=E,620nm,18.1s
WMQ                                 LR      LR
               comp=Z,750nm,21.1s
E08A   Dider Farm, El    88.48  42  eP      P        20 56 07.7 +0.9
               comp=Z,9.2nm,1.1s
SHPR   Sheep Range       88.54  53  eP      P        20 56 09.1 +1.6
               comp=Z,5.2nm,1.0s
BMO    Blue Mountains    89.18  44  eP      P        20 56 10.2   0.0
               comp=Z,3.5nm,0.9s
F10A   Beach Ranch, E    89.55  43  eP      P        20 56 12.3 +0.4
               comp=Z,4.6nm,0.7s
ELK    Elko              89.55  48  eP      P        20 56 12.8 +0.5
               comp=Z,2.2nm,0.9s
PSUT   Pine Spring       90.04  51  eP      P        20 56 15.5 +0.9
               comp=Z,3.7nm,0.8s
LCMT   Little Creek M    90.15  52  eP      P        20 56 16.1 +1.1
               comp=Z,7.4nm,1.0s
CCUT   Cedar City        90.19  52  eP      P        20 56 16.7 +1.4
               comp=Z,6.9nm,0.8s
SZCU   Shurtz Canyon     90.41  52  eP      P        20 56 17.5 +1.2
               comp=Z,5.8nm,0.9s
KNB    Kanab             90.48  52  eP      P        20 56 17.9 +1.4
               comp=Z,8.9nm,1.1s
HLID   Hailey            90.85  46  eP      P        20 56 18.9 +0.8
               comp=Z,6.0nm,0.9s
PKCU   Pink Cliffs       90.97  52  eP      P        20 56 21.1 +2.0
               comp=Z,24nm,1.2s
TUC    Tucson            91.09  57  eP      P        20 56 20.8 +1.4
               comp=Z,3.2nm,1.0s
MTPU   Mount Pierson     91.21  52  eP      P        20 56 22.0 +1.8
               comp=Z,6.3nm,0.8s
WUAZ   Wupatki           91.29  54  eP      P        20 56 21.6 +1.2
               comp=Z,6.8nm,0.9s
MSU    Marysvale         91.32  51  eP      P        20 56 22.2 +1.7
HVU    Hansel Valley     91.60  48  eP      P        20 56 22.9 +1.2
               comp=Z,11nm,0.8s
NLU    North Lily Min    91.71  50  eP      P        20 56 23.3 +1.0
               comp=Z,5.0nm,0.8s
CTU    Camp Tracy        92.11  49  eP      P        20 56 25.4 +1.3
               comp=Z,5.2nm,0.9s
TMUT   Trail Mountain    92.22  51  eP      P        20 56 26.1 +1.3
               comp=Z,11nm,1.4s
MCMT   McKenzie Canyo    92.24  45  eP      P        20 56 25.6 +0.9
TCUT   Toone Canyon      92.46  49  eP      P        20 56 27.1 +1.4
               comp=Z,10nm,1.1s
DLMT   Dillon            92.54  44  eP      P        20 56 26.9 +1.0
               comp=Z,10nm,0.9s
LRM    Limekiln Ridge    92.74  44  eP      P        20 56 27.5 +0.5
MK31   Makanchi Array    92.83 317  eP      P        20 56 27.1 +0.1
MKAR   Makanchi Array    92.83 317  P       P        20 56 27.1 +0.1
               comp=Z,7.0nm,0.8s,baz=98,slow=6.1,SNR=87
MKAR                                PKKP    PKKPdf   21 13 38.1 +0.1
               comp=Z,0.5nm,0.7s,baz=301,slow=1.8,SNR=6.8
ZALV   Zalesovo Beam     92.94 324  P       P        20 56 26.1  -1.2
               comp=Z,5.1nm,1.0s,baz=104,slow=4.7,SNR=17
MAKZ   Makanchi          93.04 317  eP      P        20 56 28.3 +0.3
               comp=Z,13nm,1.1s
BOZ    Bozeman (W)       93.25  44  eP      P        20 56 30.1 +1.0
               comp=Z,6.9nm,1.0s
FXWY   Fox Creek         93.26  46  eP      P        20 56 30.2 +0.8
               comp=Z,4.0nm,0.8s
PV23   Carpenter Ridg    93.73  52  eP      P        20 56 33.4 +1.6
               comp=Z,5.5nm,0.7s
PV12   Saucer Basin,     93.87  52  eP      P        20 56 33.9 +1.6
               comp=Z,6.9nm,1.1s
BW06   Boulder Array     94.14  47  eP      P        20 56 33.9 +0.5
               comp=Z,3.0nm,0.9s
PDAR   Pinedale Array    94.14  47  P       P        20 56 32.5  -1.0
               comp=Z,2.6nm,0.9s,baz=247,slow=2.6,SNR=17
YKA    Yellowknife Ar    95.29  27  P       P        20 56 36.3  -1.6
               comp=Z,1.5nm,0.9s,baz=256,slow=4.5,SNR=20
KSH    Kashi             95.98 309  P       P        20 56 43.4 +1.6
KSH                                 pP      pwP      20 56 57.6 +0.6
KSH                                 pmax    pmax
               comp=Z,260nm,5.2s
TXAR   Lajitas Array     96.57  61  P       P        20 56 44.5  -0.2
               comp=Z,0.7nm,0.9s,baz=216,slow=5.3,SNR=4.6
ARCES  ARCESS Array B   116.00 345  PKP     PKiKP    21 01 56.1  -0.6
               comp=Z,1.1nm,0.6s,baz=60,slow=2.2,SNR=15
LPAZ   La Paz           121.04 117  PKP     PKiKP    21 02 09.6 +0.8
               comp=Z,1.5nm,0.7s,baz=262,slow=3.3,SNR=6.1
FINES  FINESS Array B   121.34 338  PKP     PKPdf    21 02 06.4  -0.7
               comp=Z,2.2nm,1.0s,baz=50,slow=2.4,SNR=6.1
AKASG  Malin Array Be   126.28 327  PKP     PKPdf    21 02 16.6  -0.3
               comp=Z,0.3nm,0.6s,baz=69,slow=2.1,SNR=5.0
NB2    NORSAR Subarra126.36 344     PKPdf   PKPdf    21 02 16.1  -0.7
               comp=Z,3.9nm,1.0s,baz=27,slow=1.9
NOA    NORSAR Array B 126.36 344    PKP     PKPdf    21 02 16.4  -0.5
               comp=Z,1.2nm,0.8s,baz=29,slow=2.0,SNR=4.8
BRTR   Keskin Array B   128.23 312  PKP     PKPdf    21 02 21.4 +0.3
               comp=Z,0.9nm,0.9s,baz=102,slow=3.0,SNR=5.1
CLL    Collm            133.64 336  ePKPdf  PKPdf    21 02 27.0  -3.9
CLL                                 ePP     PP       21 04 57.0  -2.1
KHC    Kasperske Hory   135.05 333  ePKPDF  PKiKP    21 02 35.7 +0.6
GERES  GERESS Array B   135.21 333  PKP     PKiKP    21 02 35.3  -0.2
               comp=Z,0.5nm,0.7s,baz=48,slow=2.0,SNR=7.4
KEST   Kesra            146.78 322  PKPbc   PKPbc    21 02 57.1 +0.2
               comp=Z,6.7nm,0.8s,baz=310,slow=2.2,SNR=6.5
ESDC   Sonseca Array    149.70 343  PKPbc   PKPbc    21 03 04.5   0.0
               comp=Z,1.2nm,0.8s,baz=45,slow=1.7,SNR=4.2
TORD   Torodi Ar. Bea   163.36 279  PKP     PKPdf    21 03 17.5  -0.4
               comp=Z,2.0nm,1.1s,baz=355,slow=3.0,SNR=6.2
```

WEL 10 20:46:33.5±0.6,**38°S**±4°×**17°7E**±°,**h48**^{km}±6^{km},**ML4.1**/23,
Off east coast of North Island

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Code   Station Name       Δ°   AZ°    Phase ID          Time       Res
                                     Op     ISC       h  m  s     ISC
WIZ    White Island       0.23 295   P      Pn        20 46 43.1 +1.2
WIZ                                  P                20 46 43.2
HAZ    Te Kaha            0.29 117   P      Pn        20 46 43.5 +1.2
HAZ                                  S      Sn        20 46 52.2 +3.6
RUGZ   Raukumara Rang     0.38 153   P      Pn        20 46 43.8 +0.4
RUGZ                                 S      Sn        20 46 52.7 +2.2
WHRZ   Whale Island       0.45 239   P      Pn        20 46 45.4 +1.4
WHRZ                                 S      Sn        20 46 55.7 +4.2
PKGZ   Pakihiroa          0.56 118   P      Pn        20 46 45.9 +0.5
PKGZ                                 S      Sn        20 46 57.5 +3.5
MXZ    Matakaoa Point     0.68  85   P      Pn        20 46 47.5 +0.6
MXZ                                  S      Sn        20 46 59.6 +3.1
TWGZ   Tauwhareparae      0.69 143   P      Pn        20 46 48.1 +1.0
URZ    Urewera            0.69 203   P      Pn        20 46 47.2 +0.2
URZ                                  S      Sn        20 46 58.0 +1.3
MWZ    Matawai            0.71 175   P      Pn        20 46 47.6 +0.2
MWZ                                  S      Sn        20 46 59.1 +1.8
MARZ   Manawahe           0.71 240   P      Pn        20 46 47.6 +0.2
MARZ                                 S      Sn        20 46 59.4 +2.0
EDRZ   Edgecumbe          0.74 230   P      Pn        20 46 48.1 +0.3
EDRZ                                 S      Sn        20 46 59.4 +1.2
OPRZ   Ohinepanea         0.75 253   P      Pn        20 46 47.9 +0.2
OPRZ                                 S      Sn        20 46 59.2 +1.1
PUZ    Puketiti           0.78 125   P      Pn        20 46 48.3 +0.1
WMGZ   Waiomatatini S     0.78 105   P      Pn        20 46 48.7 +0.5
WMGZ                                 S      Sn        20 47 00.7 +1.7
RAGZ   Rawiri             0.87 182   P      Pn        20 46 50.1 +0.6
RAGZ                                 S      Sn        20 47 03.7 +2.5
TKGZ   Te Karaka          0.87 159   P      Pn        20 46 49.6 +0.2
MKRZ   Makatiti           0.94 237   P      Pn        20 46 51.0 +0.6
TGRZ   Tauranga           0.95 263   P      Pn        20 46 50.4  -0.1
TARZ   Mount Tarawera     0.97 231   P      Pn        20 46 51.0 +0.2
TARZ                                 P                20 46 51.1
TARZ                                 S      Sn        20 47 04.8 +1.3
OMRZ   Omania             0.98 240   P      Pn        20 46 51.0   0.0
MUGZ   Murupara           1.01 212   P      Pn        20 46 50.9  -0.4
MUGZ                                 S      Sn        20 47 04.8 +0.4
MYRZ   Mayor Island       1.03 289   P      Pn        20 46 52.6 +1.1
RRRZ   Republican Roa     1.03 226   P      Pn        20 46 51.6   0.0
RRRZ                                 P                20 46 51.6
KARZ   Kaharoa            1.04 247   P      Pn        20 46 51.5  -0.2
CNGZ   Carnagh Statio     1.04 146   P      Pn        20 46 51.7   0.0
RTZ    Ruatahuna          1.06 201   P      Pn        20 46 51.6  -0.4
RTZ                                  S      Sn        20 47 06.4 +0.7
HLRZ   Highlands Stat     1.07 234   P      Pn        20 46 52.3 +0.1
RIGZ   Rimuhau            1.10 167   P      Pn        20 46 52.9 +0.3
NGRZ   Ngongotaha         1.11 244   P                20 46 53.0
NGRZ                                 P      Pn        20 46 53.0 +0.3
SNGZ   Shannon Statio     1.16 185   P      Pn        20 46 53.5 +0.2
HSRZ   Hossack Road       1.18 234   P      Pn        20 46 53.9 +0.4
HRRZ   Handcock Road      1.20 230   P      Pn        20 46 54.1 +0.2
PRRZ   Plateau Road       1.21 224   P      Pn        20 46 53.8  -0.3
KMRZ   Kaimai             1.22 259   P      Pn        20 46 53.8  -0.4
ALRZ   Allen Road         1.28 223   P      Pn        20 46 54.8  -0.2
GRRZ   Galatos Road       1.29 235   P      Pn        20 46 55.3 +0.2
MTHZ   Maungataniwha      1.32 201   P      Pn        20 46 55.4  -0.1
RAHZ   Arahi              1.32 193   P      Pn        20 46 55.7 +0.1
PRGZ   Paritu Road        1.34 166   P      Pn        20 46 56.4 +0.6
WPRZ   Whakapapatarin     1.36 228   P      Pn        20 46 56.1   0.0
KNZ    Kokohu             1.40 173   P      Pn        20 46 55.7  -0.9
MRHZ   Matea Rd           1.46 214   P      Pn        20 46 56.8  -0.6
WHHZ   Waihua             1.46 187   P      Pn        20 46 57.1  -0.3
KUTZ   Kaahu Road         1.55 236   P      Pn        20 46 58.6  -0.1
TOZ    Tahuroa Road       1.55 266   P      Pn        20 46 58.3  -0.4
NMHZ   Naumai             1.56 199   P      Pn        20 46 59.2 +0.4
MHGZ   Mahia Peninsul     1.56 167   P      Pn        20 46 57.9  -0.9
WHTZ   Whakaora           1.57 228   P      Pn        20 46 59.3 +0.3
KUZ    Kuaotunu           1.64 302   P      Pn        20 46 59.1  -0.7
HATZ   Hinemaiaia         1.66 220   P      Pn        20 46 59.6  -0.5
TLZ    Tolley Road        1.67 245   P      Pn        20 46 59.9  -0.5
ARHZ   Aropaoanui         1.67 192   P      Pn        20 46 59.8  -0.5
BKZ    Black Stump Fm     1.71 206   P      Pn        20 47 00.4  -0.6
WATZ   Wairara            1.73 231   P      Pn        20 47 00.9  -0.3
RATZ   Rangitukua         1.81 226   P      Pn        20 47 02.2  -0.1
RITZ   Rihia Road         1.84 222   P      Pn        20 47 02.9 +0.2
MKAZ   Moumakai           1.90 285   P      Pn        20 47 03.0  -0.5
MCHZ   McNeill Hill       1.91 198   P      Pn        20 47 02.8  -0.8
KATZ   Kakaramea          1.93 225   P      Pn        20 47 03.9  -0.1
KWHZ   Kaweka Forest      1.97 204   P      Pn        20 47 03.5  -1.0
WIAZ   Waiheke Island     2.03 293   P      Pn        20 47 04.9  -0.3
KRVZ   Karewarewa         2.05 224   P      Pn        20 47 05.5   0.0
CKHZ   Cape Kidnapper     2.05 188   P      Pn        20 47 03.7  -1.8
WTVZ   West Tongariro     2.09 224   P      Pn        20 47 06.0  -0.2
GRZ    Great Barrier      2.11 310   P      Pn        20 47 05.9  -0.4
NGZ    Ngauruhoe          2.13 223   P      Pn        20 47 06.7   0.0
TWVZ   Taurewa            2.15 227   P      Pn        20 47 06.7  -0.1
BHHZ   Black Hill Sta     2.16 210   P      Pn        20 47 06.1  -0.9
COVZ   Chateau Observ     2.17 223   P      Pn        20 47 07.4 +0.1
FWVZ   Far West T-bar     2.21 222   P      Pn        20 47 07.7  -0.2
WHVZ   Whangaehu Hut      2.21 221   P      Pn        20 47 07.7  -0.2
KAHZ   Kahuranaki         2.21 192   P      Pn        20 47 06.0  -1.7
MBAZ   Motutapu North     2.21 292   P      Pn        20 47 07.2  -0.5
DRZ    Dome Shelter       2.22 221   P      Pn        20 47 08.1   0.0
MOVZ   Moawhango          2.22 216   P      Pn        20 47 07.0  -1.0
HIZ    Hauiti             2.23 246   P      Pn        20 47 08.2 +0.2
TRVZ   Turoa              2.24 221   P      Pn        20 47 08.0  -0.4
MTVZ   Mangateitei        2.35 221   P      Pn        20 47 09.4  -0.3
WPHZ   Waipukurau         2.56 198   P      Pn        20 47 10.0  -2.5
VRZ    Vera Road          2.59 234   P      Pn        20 47 13.5 +0.5
PRHZ   Porangahau         2.71 193   P      Pn        20 47 11.7  -2.8
WAZ    Wanganui           2.87 222   P      Pn        20 47 16.6  -0.2
LREZ   Lake Rotokare      3.01 232   P      Pn        20 47 19.5 +0.8
POWZ   Post Office Ro     3.06 205   P      Pn        20 47 16.8  -2.6
PKE    Pukeiti            3.14 239   P      Pn        20 47 21.4 +0.9
PRWZ   Pori Road          3.15 201   P      Pn        20 47 17.7  -2.8
KHEZ   Kahui Hut          3.17 237   P      Pn        20 47 22.2 +1.3
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*IDC **10** 20:54:20.2±1.6, 11°.08S×164°.15E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.7/31, mbtmp3.7/6, ML4.4/1, Error ellipse: s-maj=46.6km s-min=29.4km az=117.0*

*ISCJB **10** 20:54:22.6±1.0, 11°.3S±0°.1×164°.2E±0°.2, h29^{km}, mb3.5/5, Error ellipse: s-maj=28.6km s-min=18.2km az=172.3*

ISC 10 20:54:24.4±1.2,**11°.2S**±0°.1×**164°.2E**±0°.2,**h29**^{km},**n12**, σ**1^{s}.15**/6,**mb3.5**/5,**Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.03**	**169**	Pn	**Pn**	**20 57 00.2**	**-0.2**
	2.9nm,0.3s,baz=310,slow=23,SNR=24						
H11S2	**WAKE ISLAND Hy**	**29.60**	**5**	T	T	21 30 57.4	
	baz=184,slow=76,SNR=9.1						
H11S3	**WAKE ISLAND Hy**	**29.60**	**5**	T	T	21 31 01.0	
	baz=184,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.62**	**5**	T	T	21 31 00.6	
	baz=184,slow=76,SNR=14						
WRA	**Warramunga Arr**	**29.99**	**249**	P	**P**	**21 00 31.8**	**+1.0**
	0.3nm,0.8s,baz=80,slow=9.1,SNR=8.8						
H11N1	**WAKE ISLAND Hy**	**30.83**	**5**	T	T	21 32 32.6	
	baz=184,slow=76,SNR=6.4						
H11N3	**WAKE ISLAND Hy**	**30.83**	**5**	T	T	21 32 35.1	
	baz=184,slow=76,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**30.84**	**5**	T	T	21 32 33.1	
	baz=184,slow=76,SNR=5.5						
ASAR	**Alice Springs**	**31.36**	**243**	P	**P**	**21 00 43.0**	**+0.2**
	0.2nm,0.5s,baz=68,slow=10,SNR=8.1						
SONM	**Songino Array**	**77.88**	**324**	P	**P**	**21 06 19.0**	**-0.6**
	0.5nm,1.0s,baz=108,slow=4.7,SNR=2.5						
ILAR	**Eielson Array**	**84.14**	**19**	P	**P**	**21 06 53.5**	**+1.1**
	0.6nm,0.9s,baz=227,slow=5.3,SNR=3.9						
MKAR	**Makanchi Array**	**92.58**	**317**	P	**P**	**21 07 32.1**	**-1.1**
	0.6nm,0.9s,baz=101,slow=5.1,SNR=5.3						

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*IDC **10** 20:59:53.8±1.1, 11°.00S×165°.50E, h0^{km}, mb4.0/5, mb1 4.3/7, mb1mx3.8/40, mbtmp4.0/7, ML4.2/2, Error ellipse: s-maj=39.7km s-min=22.9km az=143.0*

*ISCJB **10** 20:59:56.7±0.9, 11°.1S±0°.1×165°.4E±0°.1, h30^{km}, mb4.0/5, Error ellipse: s-maj=18.4km s-min=18.4km az=161.0*

ISC 10 20:59:58.5±0.9, 11°.0S±0°.1×165°.5E±0°.1, h30^{km}, n7, σ0^{s}.98/7, mb4.0/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.68**	**285**	Pn	**Pn**	**21 01 21.4**	**+0.6**
	8.8nm,0.3s,baz=237,slow=8.2,SNR=5.2						
DZM	**Mont Dzumac**	**11.05**	**175**	Pn	**Pn**	**21 02 35.0**	**+0.4**
	1.5nm,0.3s,baz=351,slow=13,SNR=11						
WRA	**Warramunga Arr**	**31.27**	**250**	P	**P**	**21 06 15.5**	**-0.5**
	2.0nm,0.8s,baz=81,slow=9.2,SNR=15						
ASAR	**Alice Springs**	**32.59**	**243**	P	**P**	**21 06 26.9**	**-0.8**
	2.6nm,0.8s,baz=71,slow=9.3,SNR=24						
ILAR	**Eielson Array**	**83.55**	**19**	P	**P**	**21 12 24.1**	**+0.8**
	1.4nm,1.1s,baz=228,slow=4.3,SNR=7.0						
NVAR	**Mina Array Bea**	**86.18**	**50**	P	**P**	**21 12 37.9**	**+0.4**
	1.1nm,0.8s,baz=204,slow=6.5,SNR=3.6						
YKA	**Yellowknife Ar**	**95.05**	**27**	P	**P**	**21 13 16.8**	**-1.3**
	0.3nm,0.8s,baz=264,slow=5.1,SNR=3.7						

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*IDC **10** 21:01:05.5±0.6, 10°.76S×165°.12E, h0^{km}, mb4.4/19, mb1 4.5/21, mb1mx4.4/44, mbtmp4.4/21, ML4.8/2, MS4.1/4, Ms1 4.1/4, ms1mx3.5/43, Error ellipse: s-maj=18.1km s-min=14.6km az=113.0*

*NEIC **10** 21:01:07.3±0.3, 10°.74S×165°.09E, h10^{km}, mb4.9/35, Error ellipse: s-maj=8.0km s-min=6.2km az=108.0*

*ISCJB **10** 21:01:08.5±0.3, 10°.80S±0°.04×165°.08E±0°.05, h31^{km}, mb4.7/52, MS4.4/5, Error ellipse: s-maj=7.0km s-min=5.2km az=168.7*

ISC 10 21:01:10.5±0.4, 10°.73S±0°.06×165°.13E±0°.06, h31^{km}, n106, σ1^{s}.21/106, mb4.7/52, MS4.6/6, 1C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.26**	**284**	*e*Pn	**Pn**	**21 02 27.5**	**+0.5**
HNR				*e*Sn	**Sn**	**21 03 28.9**	**+2.3**
HNR	**Honiara**	**5.26**	**284**	Pn	**Pn**	**21 02 27.1**	**0.0**
	64nm,0.3s,baz=171,slow=4.2,SNR=17						
HNR				Sn	**Sn**	**21 03 28.9**	**+2.3**
	19nm,0.3s,baz=198,slow=19,SNR=2.0						
HNR				LR	LR	21 04 46.1	
	comp=Z,2μm,18.6s,baz=122,slow=42						
DZM	**Mont Dzumac**	**11.35**	**174**	*e*Pn	**Pn**	**21 03 49.4**	**-1.1**
DZM				*e*Sn	**Sn**	**21 05 57.3**	**+0.9**
DZM	**Mont Dzumac**	**11.35**	**174**	Pn	**Pn**	**21 03 50.4**	**-0.2**
	2.8nm,0.3s,baz=135,slow=22,SNR=9.3						
DZM				Sn	**Sn**	**21 05 57.3**	**+0.9**
	1.1nm,0.3s,baz=41,slow=18,SNR=7.6						
MSVF	**Nonsavu**	**14.32**	**121**	*e*P	**P**	**21 04 40.4**	**+2.3**
KWAJ	**Kwajalein Atol**	**19.56**	**7**	*e*P	**P**	**21 05 35.3**	**-0.6**
	192nm,0.9s						
MANU	**Manus Island**	**19.63**	**295**	*e*P	**Pn**	**21 05 37.9**	**-0.4**
	197nm,1.0s						
EIDS	**Eidsvold**	**19.73**	**221**	*e*P	**Pn**	**21 05 39.3**	**0.0**
	40nm,1.3s						
CTA	**Charters Tower**	**20.41**	**241**	P	**P**	**21 05 45.0**	**-0.2**
	22nm,0.8s,baz=70,slow=12,SNR=22						
CTAO	**Charters Tower**	**20.41**	**241**	*e*P	**P**	**21 05 45.8**	**+0.5**
	77nm,1.2s						
COEN	**Coen**	**21.68**	**259**	*e*P	**P**	**21 05 56.8**	**-2.1**
	12nm,0.8s						
ARMA	**Armidale**	**23.27**	**211**	*e*P	**P**	**21 06 15.8**	**+0.2**
	35nm,1.4s						
OUZ	**Omahuta**	**25.57**	**164**	*e*P	**P**	**21 06 40.2**	**+3.5**
	22nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**29.08**	**3**	T	T	21 37 43.1	
	baz=184,slow=76,SNR=78						
H11S3	**WAKE ISLAND Hy**	**29.08**	**3**	T	T	21 37 41.0	
	baz=184,slow=76,SNR=71						
H11S1	**WAKE ISLAND Hy**	**29.10**	**3**	T	T	21 37 40.8	
	baz=184,slow=76,SNR=70						
MXZ	**Matakaoa Point**	**29.23**	**158**	*e*P	**P**	**21 07 07.8**	**-1.7**
	44nm,1.1s						
URZ	**Urewera**	**29.44**	**161**	P	**P**	**21 07 11.4**	**0.0**
	6.3nm,0.9s,baz=45,slow=7.1,SNR=2.8						
BKZ	**Black Stump Fm**	**30.07**	**162**	*e*P	**P**	**21 07 18.2**	**+1.1**
	16nm,0.5s						
STKA	**Stephens Creek**	**30.25**	**222**	*e*P	**P**	**21 07 19.4**	**+0.6**
	3.0nm,0.8s						
STKA	**Stephens Creek**	**30.25**	**222**	P	**P**	**21 07 19.1**	**+0.4**
	11nm,0.8s,baz=35,slow=12,SNR=19						
WRAB	**Tennant Creek**	**31.01**	**249**	*e*P	**P**	**21 07 23.5**	**-2.0**
	12nm,1.4s						
WB2	**Warramunga Arr**	**31.01**	**249**	*e*P	**P**	**21 07 23.7**	**-1.9**
	14nm,1.4s						
WR1	**Warramunga Arr**	**31.02**	**249**	*e*P	**P**	**21 07 23.5**	**-2.2**
	14nm,1.4s						
WRA	**Warramunga Arr**	**31.02**	**249**	P	**P**	**21 07 23.5**	**-2.2**
	3.6nm,0.9s,baz=77,slow=9.0,SNR=28						
BFZ	**Birch Farm**	**31.41**	**164**	*e*P	**P**	**21 07 30.5**	**+1.7**
	48nm,1.2s						
THZ	**Tophouse**	**31.66**	**169**	*e*P	**P**	**21 07 28.3**	**-2.7**
	14nm,0.9s						
TOO	**Toolangi**	**32.03**	**210**	*e*P	**P**	**21 07 34.4**	**+0.1**
	9.4nm,0.8s						
AS01	**Alice Springs**	**32.35**	**243**	*e*P	**P**	**21 07 35.5**	**-1.9**
AS31	**Alice Springs**	**32.39**	**243**	*e*P	**P**	**21 07 35.9**	**-1.9**
	2.1nm,1.0s						
ASAR	**Alice Springs**	**32.39**	**243**	P	**P**	**21 07 35.5**	**-2.2**
	7.1nm,0.9s,baz=72,slow=9.7,SNR=24						
KHZ	**Kahutara**	**32.41**	**168**	*e*P	**P**	**21 07 37.8**	**+0.3**
	35nm,1.2s						
MTN	**Manton Dam**	**33.33**	**263**	*e*P	**P**	**21 07 43.8**	**-2.1**
	9.8nm,1.0s						
BBOO	**Buckleboo**	**34.60**	**226**	*e*P	**P**	**21 07 56.8**	**0.0**
	38nm,0.7s						
RAR	**Rarotonga**	**35.24**	**112**	LR	LR	21 19 12.6	
	comp=Z,114nm,18.9s,baz=57,slow=31						
FITZ	**Fitzroy Crossi**	**38.88**	**255**	*e*P	**P**	**21 08 31.3**	**-2.1**
	4.9nm,0.9s						
FORT	**Forrest**	**39.73**	**234**	*e*P	**P**	**21 08 39.7**	**-0.7**
	48nm,1.1s						
BATI	**Baumata**	**40.76**	**267**	P	**P**	**21 08 48.4**	**-0.8**
	9.6nm,0.5s,baz=147,slow=4.5,SNR=4.4						
DAV	**Davao City (W)**	**43.16**	**293**	LR	LR	21 25 40.6	
	comp=Z,165nm,20.2s,baz=292,slow=34						
MJAR	**Matsushiro Arr**	**53.42**	**333**	P	**P**	**21 10 26.7**	**-0.8**
	1.0nm,0.6s,baz=125,slow=27,SNR=5.3						
MAJO	**Matsushiro**	**53.42**	**333**	*e*P	**P**	**21 10 26.7**	**-0.9**
JNU	**Nakatsue**	**54.47**	**325**	*e*P	**P**	**21 10 35.5**	**+0.2**
	43nm,1.4s						
JNU	**Nakatsue**	**54.47**	**325**	P	**P**	**21 10 35.5**	**+0.2**
	7.7nm,0.6s,baz=180,slow=2.4,SNR=6.8						
KSRS	**Korea Array**	**59.28**	**326**	P	**P**	**21 11 09.3**	**0.0**
	0.7nm,0.8s,baz=202,slow=27,SNR=4.4						
KS15	**Wonju Array Si**	**59.29**	**326**	*e*P	**P**	**21 11 09.2**	**-0.1**
KSAR	**Wonju Array Be**	**59.29**	**326**	P	**P**	**21 11 09.2**	**-0.1**
NJ2	**Nanjing**	**61.37**	**316**	*e*P	**P**	**21 11 24.5**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
QIZ	**Qiongzhong**	**62.00**	**298**	P	**P**	**21 11 27.4**	**-0.8**
QIZ				S	**S**	**21 19 51.6**	**+0.6**
QIZ				pmax	pmax		
	comp=Z,280nm,3.3s						
QIZ				LR	LR		
	comp=N,340nm,26.0s						
QIZ				LR	LR		
	comp=E,400nm,18.6s						
QIZ				LR	LR		
	comp=Z,540nm,18.6s						
USRK	**Ussuriysk Ar.**	**62.40**	**334**	P	**P**	**21 11 31.6**	**+1.3**
	comp=Z,1.9nm,0.7s,baz=104,slow=6.1,SNR=2.8						
PETK	**Petropavlovsk-**	**63.90**	**355**	P	**P**	**21 11 40.5**	**+0.4**
	comp=Z,3.8nm,0.8s,baz=174,slow=8.7,SNR=6.3						
PEA1	**Petropavlovsk-**	**63.91**	**355**	*e*P	**P**	**21 11 40.5**	**+0.3**
CN2	**Changchun**	**65.16**	**329**	*e*P	**P**	**21 11 49.2**	**+0.6**
KLR	**Kul'dur**	**66.53**	**337**	P	**P**	**21 11 57.7**	**+0.4**
	comp=Z,5.4nm,1.0s,baz=125,slow=2.0,SNR=9.0						
ENH	**Enshi**	**67.23**	**309**	*e*P	**P**	**21 12 01.9**	**-0.3**
	comp=Z,17nm,0.9s						
PBKT	**Sadao Pong**	**69.00**	**292**	*e*P	**P**	**21 12 14.3**	**+0.9**
	comp=Z,7.1nm,0.9s						
XAN	**Xi'an**	**69.46**	**313**	P	**P**	**21 12 16.0**	**-0.1**
XAN				pP	pP	21 12 23.5	-1.3
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi'an**	**69.46**	**313**	*e*P	**P**	**21 12 16.5**	**+0.4**
	comp=Z,8.1nm,0.8s						
KMI	**Kunming**	**70.44**	**302**	P	**P**	**21 12 23.6**	**+1.1**
KMI				pP	sP	21 12 34.2	+0.3
KMI				sP	pwP	21 12 38.9	+2.4
KMI				pmax	pmax		
	comp=Z,17nm,1.3s						
KMI				pmax	pmax		
	comp=Z,69nm,4.2s						
KMI	**Kunming**	**70.44**	**302**	*e*P	**P**	**21 12 23.9**	**+1.4**
	comp=Z,21nm,1.1s						
HHC	**Hu-ho-hao-te**	**71.20**	**320**	*e*P	**P**	**21 12 27.5**	**+0.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,6.2s						
CM01	**Chiang Mai Arr**	**71.41**	**294**	*e*P	**P**	**21 12 28.7**	**+0.5**
CM31	**Chiang Mai Arr**	**71.43**	**294**	*e*P	**P**	**21 12 29.4**	**+1.0**
	comp=Z,7.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**71.43**	**294**	P	**P**	**21 12 29.1**	**+0.7**
	comp=Z,3.6nm,0.8s,baz=124,slow=4.6,SNR=27						
CHTO	**Chiang Mai**	**71.54**	**294**	*e*P	**P**	**21 12 29.6**	**+0.5**
	comp=Z,13nm,1.4s						
CHTO	**Chiang Mai**	**71.54**	**294**	P	**P**	**21 12 30.3**	**+1.2**
HIA	**Hailar**	**71.80**	**331**	*e*P	**P**	**21 12 30.9**	**+0.8**
	comp=Z,12nm,1.0s						
CD2	**Chengdu**	**71.93**	**307**	⇑*i*P	**P**	**21 12 31.8**	**+0.6**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH	**Lanzhou**	**74.10**	**312**	*e*P	**P**	**21 12 45.5**	**+1.4**
LZH				pP	sP	21 12 55.8	+0.3
LZH				sP	PcP	21 13 01.0	+1.9
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.5s						
LZH				LR	LR		
	comp=N,400nm,12.8s						
LZH				LR	LR		
	comp=E,470nm,13.5s						
LZH				LR	LR		
	comp=Z,510nm,15.1s						
GAMB	**Gambell**	**76.37**	**10**	*e*P	**P**	**21 12 58.1**	**+1.8**
	comp=Z,9.3nm,1.0s						
GTA	**Gaotai**	**78.41**	**314**	⇓P	**P**	**21 13 09.4**	**+0.9**
GTA				pP	sP	21 13 19.8	-0.1
GTA				sP	pwP	21 13 24.0	+1.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,59nm,6.5s						
GTA				LR	LR		
	comp=N,220nm,18.1s						
GTA				LR	LR		
	comp=E,230nm,18.4s						
GTA				LR	LR		
	comp=Z,230nm,17.1s						
QSPA	**South Pole Qui**	**79.27**	**180**	*e*P	**P**	**21 13 13.2**	**+0.5**
	comp=Z,13nm,1.0s						
RDOG	**Red Dog Mine**	**81.84**	**12**	*e*P	**P**	**21 13 27.2**	**+1.0**
	comp=Z,12nm,1.4s						
ILAR	**Eielson Array**	**83.41**	**19**	P	**P**	**21 13 35.0**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=236,slow=5.2,SNR=16						
ILB	**Eielson Array**	**83.41**	**19**	*e*P	**P**	**21 13 35.4**	**+0.9**
DLBC	**Dease Lake**	**86.43**	**28**	LR	LR	21 44 40.5	
	comp=Z,246nm,21.4s,baz=254,slow=30						
WMQ	**Urumqi**	**88.45**	**315**	*e*P	**P**	**21 14 02.8**	**+2.9**
WMQ				pP	sP	21 14 11.9	+0.5
C09A	**Chrisman Ranch**	**89.03**	**41**	*e*P	**P**	**21 14 00.2**	**-2.3**
	comp=Z,20nm,0.3s						
MK01	**Makanchi Array**	**92.87**	**317**	*e*P	**P**	**21 14 20.0**	**-0.4**
MK31	**Makanchi Array**	**92.88**	**317**	*e*P	**P**	**21 14 20.4**	**-0.1**
MK32	**Makanchi Array**	**92.88**	**317**	*e*P	**P**	**21 14 20.1**	**-0.3**
MKAR	**Makanchi Array**	**92.88**	**317**	*e*P	**P**	**21 14 20.4**	**-0.1**
	comp=Z,12nm,0.8s						
MKAR	**Makanchi Array**	**92.88**	**317**	P	**P**	**21 14 20.1**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=111,slow=5.3,SNR=13						
MKAR				PKKPbc	**PKKPdf**	**21 31 30.8**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=276,slow=2.6,SNR=5.8						
ZALV	**Zalesovo Beam**	**92.95**	**324**	*e*P	**P**	**21 14 19.5**	**-1.0**
ZALV	**Zalesovo Beam**	**92.95**	**324**	P	**P**	**21 14 19.7**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=98,slow=6.1,SNR=5.3						
ZAA1	**Zalesovo Array**	**92.95**	**324**	*e*P	**P**	**21 14 19.7**	**-0.8**
MAKZ	**Makanchi**	**93.09**	**317**	*e*P	**P**	**21 14 21.4**	**0.0**
	comp=Z,5.8nm,1.3s						
PD31	**Pinedale Array**	**93.79**	**47**	*e*P	**P**	**21 14 23.4**	**-1.6**
PDAR	**Pinedale Array**	**93.79**	**47**	P	**P**	**21 14 23.4**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=228,slow=3.8,SNR=3.9						
YKA	**Yellowknife Ar**	**94.98**	**27**	P	**P**	**21 14 27.9**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=260,slow=4.6,SNR=8.5						
YKB5	**Yellowknife Ar**	**94.98**	**27**	*e*P	**P**	**21 14 27.9**	**-1.7**
LTX	**Lajitas**	**96.21**	**61**	*e*P	**P**	**21 14 37.6**	**+1.4**
TXAR	**Lajitas Array**	**96.21**	**61**	P	**P**	**21 14 37.6**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=246,slow=8.8,SNR=3.5						
BVAR	**Borovoye Array**	**101.33**	**322**	P	**Pdif**	**21 14 58.3**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=123,slow=5.5,SNR=3.6						
ARA0	**ARCESS Array S**	**115.88**	**345**	*e*PKPdf	**PKiKP**	**21 19 48.2**	**-1.4**
ARCES	**ARCESS Array B**	**115.88**	**345**	PKP	**PKiKP**	**21 19 48.2**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=349,slow=2.5,SNR=5.9						
FIA0	**FINESS Array S**	**121.26**	**338**	*e*PKPdf	**PKPdf**	**21 19 59.6**	**-0.5**
FINES	**FINESS Array B**	**121.26**	**338**	PKP	**PKPdf**	**21 19 59.6**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=18,slow=0.6,SNR=5.3						
NB2	**NORSAR Subarra**	**126.24**	**345**	PKPdf	**PKPdf**	**21 20 09.1**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=29,slow=1.9						
NB200	**NORSAR Array S**	**126.24**	**345**	*e*PKPdf	**PKPdf**	**21 20 09.0**	**-0.8**
NOA	**NORSAR Array B**	**126.24**	**345**	PKP	**PKPdf**	**21 20 09.0**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=33,slow=2.0,SNR=3.7						
CLL	**Collm**	**133.58**	**336**	*e*PKPdf	**PKPdf**	**21 20 24.0**	**+0.1**
CLL				*e*		21 20 30.0	
GEC2	**GERESS Array S**	**135.16**	**333**	*e*PKPdf	**PKiKP**	**21 20 28.2**	**-0.4**
GERES	**GERESS Array B**	**135.16**	**333**	PKP	**PKiKP**	**21 20 28.2**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=85,slow=1.5,SNR=4.6						
DAVOX	**Davos/Dischmat**	**138.39**	**334**	PKP	**PKiKP**	**21 20 34.8**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=225,slow=4.3						
KEST	**Kesra**	**146.80**	**322**	PKPbc	**PKPbc**	**21 20 49.9**	**-0.3**
	comp=Z,7.6nm,0.8s,baz=250,slow=1.1,SNR=6.4						
ESDC	**Sonseca Array**	**149.59**	**343**	PKPbc	**PKPbc**	**21 20 57.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=42,slow=1.8,SNR=3.6						

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*IDC **10** 21:09:05.4±1.5, 11°.43S×165°.62E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.6/45, mbtmp3.7/6, ML4.0/1, Error ellipse: s-maj=48.8km s-min=28.1km az=122.0*

*ISCJB **10** 21:09:07.6±1.2, 11°.6S±0°.1×165°.6E±0°.2, h24^{km}, mb3.6/5, Error ellipse: s-maj=32.2km s-min=19.1km az=178.6*

ISC 10 21:09:09.3±1.1, 11°.5S±0°.1×165°.6E±0°.3, h24^{km}, n7, σ0^{s}.76/7, mb3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.59**	**176**	Pn	**Pn**	**21 11 40.0**	**+0.3**
	1.1nm,0.3s,baz=355,slow=15,SNR=6.6						
WRA	**Warramunga Arr**	**31.21**	**250**	P	**P**	**21 15 26.9**	**-0.2**
	1.0nm,0.8s,baz=80,slow=9.1,SNR=6.5						
ASAR	**Alice Springs**	**32.49**	**244**	P	**P**	**21 15 37.5**	**-0.7**
	0.3nm,0.7s,baz=64,slow=9.6,SNR=3.1						
SONM	**Songino Array**	**78.91**	**324**	P	**P**	**21 21 11.5**	**+0.6**
	0.4nm,0.7s,baz=142,slow=6.0,SNR=3.8						
ILAR	**Eielson Array**	**83.94**	**19**	P	**P**	**21 21 36.3**	**-0.7**
	0.4nm,0.6s,baz=230,slow=5.3,SNR=6.4						
MKAR	**Makanchi Array**	**93.72**	**317**	P	**P**	**21 22 24.9**	**+0.7**
	0.4nm,0.9s,baz=92,slow=6.8,SNR=3.0						
ARCES	**ARCESS Array B**	**116.69**	**345**	PKP	**PKPdf**	**21 27 50.5**	**-0.5**
	1.1nm,0.8s,baz=85,slow=1.3,SNR=5.3						

KRSC 10 21:21:55.1±1.2, 54°.41N×161°.88E, h40^{km}±15^{km}, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZV	**Kizimen**	**1.16**	**308**	*e*P	Pn	21 22 16.1	+1.1
KZV				*e*S	Sn	21 22 31.1	+1.4
TUMD	**Tumrok D**	**1.17**	**314**	*e*P	Pn	21 22 15.6	+0.6
TUMD				*e*S	Sn	21 22 29.8	0.0
TUMR	**Tumrok**	**1.33**	**312**	*e*P	Pn	21 22 18.7	+1.4
KII	**Karymskiy**	**1.47**	**256**	*e*P	Pn	21 22 21.0	+1.8
KII				*e*S	Sn	21 22 39.8	+2.5
SPN	**Mys Shipunski**	**1.71**	**221**	*e*P	Pn	21 22 23.1	+0.7
SPN				*e*S	Sn	21 22 45.6	+2.5
ZLN	**Zelenaya**	**1.73**	**340**	*e*P	Pn	21 22 23.4	+0.7
CIRR	**Tsirk**	**1.83**	**340**	*e*P	Pn	21 22 27.1	+2.9
KBTR	**Krutoberegovo**	**1.88**	**16**	*e*P	Pn	21 22 26.1	+1.3
KBTR				*e*S	Sn	21 22 48.1	+0.8
NLC	**Nalytchevo**	**1.95**	**231**	*e*P	Pn	21 22 27.9	+2.3
NLC				*e*S	Sn	21 22 51.0	+2.2
KOZ	**Kozyrevsk**	**2.01**	**326**	*e*P	Pn	21 22 29.0	+2.4
KLY	**Klyuchi**	**2.03**	**340**	*e*P	Pn	21 22 29.5	+2.7
KLY				*e*S	Sn	21 22 54.4	+3.4
SMAR	**Somma**	**2.15**	**239**	*e*P	Pn	21 22 30.5	+1.8
UGLR	**Uglovaya**	**2.17**	**238**	*e*P	Pn	21 22 31.4	+2.5
KRX	**Arik**	**2.18**	**242**	*e*P	Pn	21 22 32.8	+3.8
AVH	**Avacha**	**2.18**	**240**	*e*P	Pn	21 22 32.5	+3.5
AVH				*e*S	Sn	21 22 59.0	+4.2
SMKR	**Semkarok**	**2.19**	**354**	*e*P	Pn	21 22 31.9	+2.8
BDR	**Baidarnaya**	**2.20**	**350**	*e*P	Pn	21 22 32.5	+3.3
KOK	**Koryaka**	**2.22**	**241**	*e*P	Pn	21 22 32.0	+2.5
SRDR	**Sredinnyy**	**2.28**	**328**	*e*P	Pn	21 22 32.2	+2.0
SRKR	**Sorokina**	**2.29**	**350**	*e*P	Pn	21 22 33.4	+3.0
DALK	**Dalny**	**2.31**	**235**	*e*P	Pn	21 22 33.3	+2.7
DALK				*e*S	Sn	21 23 01.1	+3.3
ESO	**Esso**	**2.37**	**311**	*e*P	Pn	21 22 35.1	+3.6
GNL	**Ganaly**	**2.43**	**254**	*e*P	Pn	21 22 34.9	+2.5
GNL				*e*S	Sn	21 23 03.8	+3.0
KRMR	**Karymshinskiy**	**2.73**	**236**	*e*P	Pn	21 22 39.8	+3.3
KRMR				*e*S	Sn	21 23 12.2	+4.0
MTVR	**Mutnovka**	**2.93**	**230**	*e*P	Pn	21 22 42.3	+3.0
MTVR				*e*S	Sn	21 23 16.4	+3.1

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*ISCJB **10** 21:50:10.4±0.5, 7°.25N±0°.04×76°.95W±0°.03, h45^{km}±6^{km}, mb3.6/1, MS3.6/3, Error ellipse: s-maj=6.2km s-min=4.3km az=19.6*

*IDC **10** 21:50:13.0±2.0, 7°.33N×76°.90W, h52^{km}±20^{km}, mb3.7/12, mb1 4.0/16, mb1mx3.8/32, mbtmp4.0/16, ML3.3/4, MS3.5/9, Ms1 3.5/9, ms1mx3.2/40, Error ellipse: s-maj=18.0km s-min=12.2km az=53.0*

*RSNC **10** 21:50:12.1±1.3, 7°.23N×76°.92W, h34^{km}±29^{km}, ML3.9, Mw4.3*

ISC 10 21:50:11.2±0.8, 7°.21N±0°.04×76°.97W±0°.04, h36^{km}±1^{km}, n45, σ1^{s}.56/55, MS3.6/3, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UREC	**San Jos de Ur**	**1.52**	**69**	*e*Pg	**Pn**	**21 50 35.0**	**-0.9**
UREC				*e*Sg	**Sn**	**21 50 53.9**	**-0.6**
UPD2	**Meteti**	**1.69**	**322**	*e*Pg	**Pn**	**21 50 38.7**	**+0.6**
UPD2				*e*S	**Sn**	**21 50 59.8**	**+1.4**
UPD2				*i*		21 51 07.0	
	comp=Z,820nm,0.3s						
HELC	**Santa Helena**	**1.75**	**125**	⇓*i*P	**Pn**	**21 50 38.6**	**-0.7**
	comp=Z,535nm,0.4s						
HELC				*e*S	**Sn**	**21 51 01.2**	**+0.6**
HELC				*i*		21 51 05.1	
	comp=Z,535nm,0.4s						
ZARC	**Zaragoza, Cauc**	**2.11**	**82**	*e*P	**Pn**	**21 50 43.2**	**-0.8**
ZARC				*e*S	**Sn**	**21 51 09.1**	**0.0**
ZARC				*i*		21 51 12.4	
	comp=Z,1μm,0.4s						
PLMC	**San Jos del P**	**2.39**	**163**	*e*P	**Pn**	**21 50 45.2**	**-2.6**
PLMC				*e*S	**Sn**	**21 51 11.6**	**-4.4**
PTBC	**PUERTO BERRIO,**	**2.58**	**105**	*e*Pg	**Pn**	**21 50 50.2**	**-0.3**
PTBC				*e*S	**Sn**	**21 51 20.3**	**-0.4**
PTBC				*i*		21 51 32.4	
	comp=Z,639nm,0.7s						
NORC	**Norcasia**	**2.65**	**128**	*e*Pg	**Pn**	**21 50 52.2**	**+0.7**
NORC				*e*S	**Sn**	**21 51 22.9**	**+0.5**
NORC				*i*		21 51 37.2	
	comp=Z,291nm,0.4s						
MALC	**Bahia Malaga**	**3.20**	**187**	*e*Pg	**Pn**	**21 51 00.4**	**+1.5**
SJCC	**San Jacinto, C**	**3.20**	**33**	*e*P	**Pn**	**21 50 58.1**	**-1.0**
BRRC	**Barranca, Sant**	**3.23**	**92**	*e*P	**Pn**	**21 51 00.2**	**+0.8**
BRRC				*i*		21 51 49.0	
	comp=Z,222nm,0.6s						
YOTC	**Yotoco, Valle**	**3.26**	**169**	*e*P	**Pn**	**21 50 57.7**	**-2.2**
YOTC				*e*S	**Sn**	**21 51 33.5**	**-4.2**
SMLC	**San Martn de**	**3.28**	**61**	*e*P	**Pn**	**21 50 59.6**	**-0.5**
SMLC				*e*S	**Sn**	**21 51 37.2**	**-0.6**
AZU	**Azuero**	**3.33**	**280**	*e*P	**Pn**	**21 51 01.9**	**+1.2**
AZU				*e*S	**Sn**	**21 51 39.9**	**+0.9**
AZU				*i*		21 51 45.6	
	comp=Z,314nm,0.7s						
ROSC	**El Rosal**	**3.53**	**132**	*e*P	**Pn**	**21 51 06.5**	**+2.6**
ROSC	**El Rosal**	**3.53**	**132**	P	**Pn**	**21 51 06.9**	**+3.0**
	comp=Z,18nm,0.3s,baz=4.7,slow=3.1,SNR=48						
ROSC				S	**Sn**	**21 51 49.2**	**+4.6**
	comp=Z,8.7nm,0.3s,baz=223,slow=22,SNR=3.8						
OCAC	**Ocana**	**3.76**	**74**	*e*P	**Pn**	**21 51 06.8**	**0.0**
OCAC				*i*		21 51 52.3	
	comp=Z,636nm,0.5s						
RUSC	**La Rusia**	**4.08**	**108**	*e*P	**Pn**	**21 51 12.2**	**+0.7**
RUSC				*e*S	**Sn**	**21 51 58.9**	**+0.7**
RUSC				*i*		21 52 17.8	
	comp=Z,182nm,0.6s						
CHIC	**Chingaza**	**4.12**	**128**	*e*P	**Pn**	**21 51 15.4**	**+3.5**
PAMC	**Pamplona, Colo**	**4.24**	**88**	*e*P	**Pn**	**21 51 14.3**	**+0.6**
PAMC				*e*S	**Sn**	**21 52 01.8**	**-0.4**
CODC	**Agustn Codazz**	**4.42**	**52**	*e*P	**Pn**	**21 51 15.9**	**+0.3**
MARP	**Paez Belalcaza**	**4.45**	**167**	*e*P	**Pn**	**21 51 17.8**	**+1.3**
POPC	**Popayan, Colom**	**4.65**	**176**	*e*P	**Pn**	**21 51 19.0**	**-0.1**
SDV	**Santo Domingo**	**6.49**	**75**	P	**Pn**	**21 51 44.6**	**+0.2**
	comp=Z,7.0nm,0.3s,baz=174,slow=3.5,SNR=46						
SDV				S	**Sn**	**21 52 54.8**	**-2.5**
	comp=Z,38nm,0.3s,baz=353,slow=15,SNR=15						
SDV				LR	LR	21 54 40.5	
	comp=Z,253nm,20.5s,baz=242,slow=42						
JTS	**JuntasAbangare**	**8.46**	**292**	P	**Pn**	**21 52 11.4**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=18,slow=20,SNR=2.6						
JTS				LR	LR	21 55 44.7	
	comp=Z,159nm,19.8s,baz=112,slow=39						
ATAH	**Atahualpa**	**14.32**	**186**	LR	LR	22 00 56.3	
	comp=Z,151nm,18.4s,slow=44						
APG	**El Apazote**	**15.33**	**301**	LR	LR	21 58 53.6	
	comp=Z,84nm,22.0s,baz=116,slow=34						
PTGA	**Pitinga**	**18.71**	**114**	P	**P**	**21 54 26.1**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=306,slow=19,SNR=3.6						
PTGA				LR	LR	22 02 11.3	
	comp=Z,255nm,18.4s,baz=294,slow=38						
NNA	**Nana**	**19.07**	**180**	LR	LR	22 02 23.2	
	comp=Z,79nm,18.1s,baz=352,slow=38						
CMIG	**Matias Romero**	**20.06**	**301**	LR	LR	22 03 36.9	
	comp=Z,126nm,20.2s,baz=63,slow=40						
MDP	**Montagnes des**	**24.28**	**94**	LR	LR	22 05 18.6	
	comp=Z,205nm,18.7s,baz=258,slow=37						
LPAZ	**La Paz**	**24.93**	**160**	P	**P**	**21 55 32.0**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=337,slow=7.7,SNR=4.8						
LVC	**Limon Verde**	**30.67**	**165**	P	**P**	**21 56 24.3**	**+1.4**
	comp=Z,3.8nm,0.5s,baz=352,slow=3.6,SNR=5.3						
TXAR	**Lajitas Array**	**33.41**	**315**	P	**P**	**21 56 47.1**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=134,slow=8.9,SNR=4.3						
TXAR				PcP	**PcP**	**21 59 28.5**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=146,slow=6.9,SNR=7.6						
BDFB	**Brasilia**	**36.58**	**128**	LR	LR	22 13 00.4	
	comp=Z,162nm,18.2s,baz=233,slow=37						
PDAR	**Pinedale Array**	**45.58**	**326**	P	**P**	**21 58 27.9**	**0.0**
	comp=Z,0.8nm,0.8s,baz=120,slow=5.8,SNR=6.1						
ULM	**Lac du Bonnet**	**45.72**	**343**	P	**P**	**21 58 27.9**	**-0.8**
	comp=Z,5.6nm,0.9s,baz=157,slow=7.8,SNR=9.1						
SCHQ	**Schefferville**	**48.18**	**8**	P	**P**	**21 58 47.6**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=185,slow=7.0,SNR=4.0						
NVAR	**Mina Array Bea**	**48.52**	**316**	P	**P**	**21 58 51.9**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=115,slow=5.8,SNR=4.4						
NVAR				PcP	**PcP**	**22 00 16.7**	**+0.1**

	comp=Z,1.2nm,0.6s,baz=133,slow=4.7,SNR=4.7						
YKA	Yellowknife Ar comp=Z,3.2nm,0.8s,baz=131,slow=7.1,SNR=52	61.63	341	P	P	22 00 24.1	-0.8
ILAR	Eielson Array comp=Z,1.6nm,0.8s,baz=112,slow=4.4,SNR=17	75.01	335	P	P	22 01 48.5	-0.2
TORD	Torodi Ar. Bea comp=Z,0.9nm,1.1s,baz=267,slow=6.9,SNR=3.9	77.40	78	P	P	22 02 02.9	-0.3
GERES	GERESS Array B comp=Z,0.3nm,0.6s,baz=205,slow=2.8,SNR=3.4	85.07	42	P	P	22 02 43.2	-0.2
ARCES	ARCESS Array B comp=Z,2.5nm,1.0s,baz=310,slow=7.0,SNR=2.9	87.63	20	P	P	22 02 55.1	-0.3
ASAR	Alice Springs comp=Z,1.7nm,0.6s,baz=120,slow=4.1,SNR=15	146.16	238	PKPbc	PKPdf	22 09 47.2	-0.3
WRA	Warramunga Arr comp=Z,1.7nm,0.7s,baz=99,slow=3.5,SNR=18	147.12	244	PKPbc	PKPdf	22 09 48.9	-0.3

IDC 10 21:56:54.8±1.7,11°.15S×165°.21E,h0^{km},mb3.5/3,mb1 3.9/4,mb1mx3.6/38,mbtmp3.7/4,ML3.7/1,Error ellipse: s-maj=52.3km s-min=30.7km az=129.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.5nm,0.3s,baz=299,slow=19,SNR=5.8	10.92	174	Pn	Pn	21 59 33.3	+0.8
WRA	Warramunga Arr 0.3nm,0.6s,baz=83,slow=9.1,SNR=4.1	30.95	250	P	P	22 03 13.9	0.0
ASAR	Alice Springs 1.1nm,0.7s,baz=74,slow=9.8,SNR=9.8	32.27	243	P	P	22 03 25.4	-0.2
ILAR	Eielson Array 0.2nm,0.8s,baz=230,slow=4.2,SNR=3.2	83.78	19	P	P	22 09 25.5	-0.1

SJA 10 22:03:26.6±0.6,32°.98S×71°.57W,h39^{km}±4^{km},ML2.4,MW3.5,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	0.47	90	*i* P	Pn	22 03 38.2	+1.2
ROC1				*i* S	Sn	22 03 46.2	+1.8
AUSP	Uspallata	1.99	68	*i* P	Pn	22 04 00.0	+2.0
AUSP				*i* S	Sn	22 04 25.4	+3.5
RTLS	Leoncito	2.25	59	*i* P	Pn	22 04 04.5	+2.8
RTLS	comp=Z,22nm,0.7s			IAML		22 04 35.5	
ASAL	Salagasta	2.34	81	*i* P	Pn	22 04 04.6	+2.1
AMOG	MOGNA	3.31	53	*i* P	Pn	22 04 18.3	+2.3

IDC 10 22:04:24.5±1.8,10°.88S×165°.30E,h0^{km},mb3.6/3,mb1 4.0/4,mb1mx3.6/34,mbtmp3.7/4,ML4.2/1,Error ellipse: s-maj=53.6km s-min=33.0km az=128.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.5nm,0.3s,baz=163,slow=20,SNR=9.9	11.19	174	Pn	Pn	22 07 05.9	0.0
WRA	Warramunga Arr 0.6nm,0.9s,baz=78,slow=8.9,SNR=3.9	31.13	249	P	P	22 10 44.8	-0.4
ASAR	Alice Springs 0.9nm,0.8s,baz=73,slow=9.4,SNR=5.3	32.47	243	P	P	22 10 57.4	+0.4
ILAR	Eielson Array 0.3nm,0.6s,baz=232,slow=4.8,SNR=4.7	83.50	19	P	P	22 16 53.9	0.0

*IDC **10** 22:12:30.1±0.6,10°.58S×164°.53E,h0^{km},mb4.5/18,mb1 4.6/21,mb1mx4.6/33,mbtmp4.5/21,ML4.9/3,MS4.8/28,Ms1 4.8/28,ms1mx4.8/30,Error ellipse: s-maj=18.8km s-min=15.1km az=128.0*

*ISCJB **10** 22:12:32.2±0.2,10°.75S±0°.03×164°.59E±0°.03,h24^{km},mb4.8/90,MS4.9/40,Error ellipse: s-maj=5.0km s-min=4.1km az=163.0*

*GCMT **10** 22:12:32.4±0.1,10°.61S±0°.01×164°.80E±0°.01,h12^{km},MW5.3/122,Moment Tensor Solution. s86,c143; s122,c224; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.23±.01; $M_{\theta\theta}$0.24±.01; $M_{\phi\phi}$-0.47±.01; $M_{r\theta}$-0.12±.04; $M_{\theta\phi}$1.03±.01; $M_{\phi r}$-0.20±.04; Best double couple: $M_0$1.12100×10^{17} NP1:ϕ_s189.00000°,δ82.00000°,λ167.00000°. NP2:ϕ_s280.00000°,δ77.00000°,λ8.00000°. Principal axes: T 1.0300, Plg15.0000°, Azm144.0000°; N 0.1830, Plg75.0000°, Azm339.0000°; P -1.2120, Plg4.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 22:12:34.4±2.4,10°.66S×164°.58E,h27^{km}±17^{km},mb5.1/58 Error ellipse: s-maj=7.5km s-min=6.0km az=219.0*

ISC 10 22:12:33.7±0.3,10°.72S±0°.05×164°.71E±0°.05,h24^{km},n224,σ1^{s}75/228,mb5.0/96,MS4.9/42,2C-1D,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.86	285	*e*P	Pn	22 13 45.0	-0.4
HNR				*e*S	Sn	22 14 43.0	+2.0
HNR	Honiara	4.86	285	*e*Pn	Pn	22 13 45.6	+0.3
HNR				*e*Sn	Sn	22 14 37.6	-3.3
HNR	Honiara 112nm,0.3s,baz=13,slow=4.4,SNR=33	4.86	285	Pn	Pn	22 13 43.2	-2.2
HNR	57nm,0.3s,baz=168,slow=15,SNR=2.2			Sn	Sn	22 14 39.3	-1.6
MARNC	Mare, Loyalty	11.16	164	*e*Pn	Pn	22 15 11.0	-0.8
DZM	Mont Dzumac 85nm,0.5s	11.41	172	*e*Pn	Pn	22 15 14.8	-0.5
DZM	comp=Z,8μm,23.0s			*e*LR	LR	22 17 48.7	
DZM	Mont Dzumac	11.41	172	*e*Pn	Pn	22 15 15.0	-0.2
DZM				*e*Sn	Sn	22 17 21.3	-0.8
DZM	Mont Dzumac 11nm,0.3s,baz=31,slow=9.3,SNR=38	11.41	172	Pn	Pn	22 15 15.1	-0.2
DZM	3.9nm,0.3s,baz=54,slow=19,SNR=8.1			Sn	Sn	22 17 24.8	+2.7
DZM	comp=Z,8μm,18.8s,baz=24,slow=33			LR	LR	22 18 48.3	
ONTNC	Ouen Toro	11.64	172	*e*Pn	Pn	22 15 18.3	-0.1
ONTNC				*e*Sn	Sn	22 17 27.4	-0.3
PINNC	Pines Island,	12.11	168	*e*Pn	Pn	22 15 25.8	+1.0
PINNC				*e*Sn	Sn	22 17 35.1	-4.1
RABL	Rabaul	14.03	297	*e*Pn	Pn	22 15 50.2	-0.8
MSVF	Nonsavu	14.69	120	*e*Pn	P	22 16 05.3	-0.8
MSVF				*e*Sn	Sn	22 18 39.7	-2.5
MANU	Manus Island 244nm,0.9s	19.26	295	*e*P	P	22 16 55.9	-0.7
EIDS	Eidsvold baz=20,SNR=12	19.47	220	P	P	22 17 01.2	+2.3
EIDS	Eidsvold 114nm,1.3s	19.47	220	*e*P	Pn	22 17 01.6	+1.4
CTA	Charters Tower 0.9nm,0.3s,baz=69,slow=11,SNR=17	20.07	240	P	P	22 17 04.8	-0.6
CTA	comp=Z,4μm,18.7s,baz=51,slow=36			LR	LR	22 24 23.6	
CTAO	Charters Tower 54nm,1.0s	20.07	240	*e*P	P	22 17 06.6	+1.1
MTSU	Mount Surprise baz=21,SNR=18	21.07	247	P	P	22 17 16.1	-0.2
COEN	Coen baz=21,SNR=9.1	21.28	259	P	P	22 17 18.3	-0.3
COEN	Coen 20nm,0.8s	21.28	259	*e*P	P	22 17 19.4	+0.7
LHI	Lord Howe Isla 156nm,1.4s	21.35	193	*e*P	P	22 17 20.9	+1.7
RMQ	Roma baz=22,SNR=35	21.74	222	P	P	22 17 25.6	+2.1
ARMA	Armidale baz=23,SNR=6.0	23.07	210	P	P	22 17 39.1	+1.4
ARMA	Armidale 46nm,0.9s	23.07	210	*e*P	P	22 17 38.7	+1.0
RAO	Raoul Island comp=Z,2μm,18.2s,baz=344,slow=33	24.56	141	LR	LR	22 26 06.2	
JAY	Jayapura 2μm,1.0s,16μm	25.18	287	P	P	22 17 56.9	-0.7
OUZ	Omahuta 53nm,1.5s	25.70	163	*e*P	P	22 18 05.7	+3.7
CMSA	Cobar Meteorol baz=27,SNR=12	27.19	218	P	P	22 18 16.0	+0.5
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=950	29.09	4	T	T	22 48 44.6	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=1380	29.09	4	T	T	22 48 44.8	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=1518	29.11	4	T	T	22 48 45.9	
URZ	Urewera 37nm,1.4s	29.59	160	*e*P	P	22 18 38.4	+1.5
URZ	Urewera 4.2nm,0.5s,baz=245,slow=0.8,SNR=3.9	29.59	160	P	P	22 18 39.4	+2.5
URZ	comp=Z,5μm,18.3s,baz=350,slow=34			LR	LR	22 29 19.3	
STKA	Stephens Creek baz=30,SNR=15	29.99	222	P	P	22 18 41.7	+1.2
STKA	Stephens Creek 6.9nm,1.1s	29.99	222	*e*P	P	22 18 41.4	+0.8
STKA	Stephens Creek 7.7nm,0.7s,baz=53,slow=9.6,SNR=14	29.99	222	P	P	22 18 40.9	+0.4
STKA	comp=Z,4μm,18.6s,baz=41,slow=36			LR	LR	22 30 17.5	
BKZ	Black Stump Fm 32nm,1.1s	30.21	162	*e*P	P	22 18 43.0	+0.5
H11N1	WAKE ISLAND Hy baz=184,slow=76,SNR=453	30.32	4	T	T	22 50 17.6	
H11N3	WAKE ISLAND Hy baz=184,slow=76,SNR=308	30.32	4	T	T	22 50 15.2	
H11N2	WAKE ISLAND Hy baz=184,slow=76,SNR=154	30.34	4	T	T	22 50 17.0	
WRAB	Tennant Creek 23nm,1.4s	30.63	249	*e*P	P	22 18 44.0	-2.4
WB2	Warramunga Arr 13nm,1.0s	30.64	249	*e*P	P	22 18 44.1	-2.3
WR1	Warramunga Arr 20nm,1.2s	30.65	249	*e*P	P	22 18 44.1	-2.3
WRA	Warramunga Arr 4.5nm,0.7s,baz=79,slow=9.2,SNR=30	30.65	249	P	P	22 18 44.1	-2.4
WRA	comp=Z,3μm,21.3s,baz=75,slow=35			LR	LR	22 30 06.2	
BFZ	Birch Farm 34nm,1.1s	31.54	163	*e*P	P	22 18 55.7	+1.7
KDU	Kakadu baz=32,SNR=4.8	31.62	263	P	P	22 18 52.7	-2.4
THZ	Tophouse 22nm,1.0s	31.75	168	*e*P	P	22 18 57.0	+1.0
TOO	Toolangi 34nm,1.4s	31.84	210	*e*P	P	22 18 59.1	+2.3
AS01	Alice Springs	32.00	242	*e*P	P	22 18 58.9	+0.6
AS31	Alice Springs 1.6nm,0.8s	32.04	242	*e*P	P	22 18 56.1	-2.6
ASAR	Alice Springs 1.7nm,0.6s,baz=62,slow=10,SNR=30	32.04	242	P	P	22 18 56.3	-2.4
ASAR	comp=Z,4μm,18.4s,baz=70,slow=36			LR	LR	22 31 30.4	
KHZ	Kahutara 42nm,1.2s	32.51	168	*e*P	P	22 19 03.3	+0.8
HTT	Hallett baz=33,SNR=7.9	32.72	222	P	P	22 19 05.1	+0.5
RPZ	Rata Peaks comp=Z,3μm,19.4s,baz=350,slow=34	33.33	172	LR	LR	22 31 29.8	
BBOO	Buckleboo 32nm,1.0s	34.32	226	*e*P	P	22 19 17.7	-0.8
KNRA	Kununurra baz=35,SNR=8.0	35.31	258	P	P	22 19 25.1	-2.1
RAR	Rarotonga comp=Z,567nm,18.4s,baz=288,slow=34	35.62	111	LR	LR	22 32 49.4	
WRKA	Warakurna baz=37,SNR=5.1	37.33	243	P	P	22 19 43.9	-0.5
FITZ	Fitzroy Crossi baz=38,SNR=10	38.48	254	P	P	22 19 52.0	-2.2
FITZ	Fitzroy Crossi 10nm,0.8s	38.48	254	*e*P	P	22 19 52.0	-2.2
SANI	Sanana	39.39	280	P	P	22 20 01.1	-0.8
FORT	Forrest 29nm,0.9s	39.41	234	*e*P	P	22 19 58.7	-3.1
BATI	Baumata	40.35	267	P	P	22 20 09.9	0.0
KMSI	Cibinong	42.02	283	P	P	22 20 30.6	+7.0
KCP	Kidapawan	43.20	292	⇓*i*P	P	22 20 33.2	0.0
SKMP	Bagumbayan, Su	43.50	291	*e*P	P	22 20 35.4	-0.2
BUKP	Musuan	43.57	293	*e*P	P	22 20 37.0	+0.7
BNSI	Bone	44.62	275	P	P	22 20 44.0	-0.6
MSLP	Maasin	44.72	296	*e*P	P	22 20 46.1	+0.8
PPT	Papeete comp=Z,1μm,18.1s,baz=274,slow=31	44.76	104	LR	LR	22 35 54.0	
PPT2	Papeete2 409nm,23.8s	44.76	104	*e*S	S	22 27 23.3	+1.5
PPT2	3μm,28.0s			*e*LQ	LQ	22 31 24.0	
PPT2	comp=Z,2μm,22.2s,baz=274			*e*LR	LR	22 33 13.2	
SPSI	Sidrap Palu	45.03	275	P	P	22 20 48.0	+0.1
PAGZ	Pagadian	45.08	292	*e*P	P	22 20 48.8	+0.6
PCI	Palu	45.63	279	P	P	22 20 54.4	+1.7
MPSI	Mapaga	45.88	281	P	P	22 20 54.1	-0.6
MEEK	Meekatharra baz=46,SNR=5.7	46.18	243	P	P	22 20 55.9	-1.0
GUIM	Jordan	46.94	296	*e*P	P	22 21 02.9	0.0
OTRP	Odiongan	48.20	297	*e*P	P	22 21 13.2	+0.5
MJAR	Matsushiro Arr 11nm,1.2s,baz=171,slow=6.8,SNR=8.6	53.22	333	P	P	22 21 48.1	-2.1
MJAR	comp=Z,292nm,21.0s,baz=145,slow=34			LR	LR	22 42 36.2	
MAJO	Matsushiro	53.22	333	*e*P	P	22 21 48.1	-2.1
MAT	Matsushiro	53.22	333	P	P	22 21 49.8	-0.4
MAT				S	S	22 29 15.8	-4.2
JNU	Nakatsue 55nm,1.0s	54.23	325	*e*P	P	22 21 57.1	-0.6
TAOE	Nuku Hiva Isla 296nm,25.0s	54.31	93	*e*S	S	22 29 37.0	+1.2
TAOE	comp=Z,1μm,23.4s			*e*LR	LR	22 37 42.5	
ASAJ	Asahikawa comp=Z,691nm,19.9s,baz=162,slow=33	58.16	341	LR	LR	22 44 31.0	
RKT	Rikitea 1μm,31.8s	58.65	111	*e*LQ	LQ	22 37 13.8	
RKT	comp=Z,873nm,23.2s,baz=281			*e*LR	LR	22 39 42.7	
SSE	Sheshan 50nm,0.9s	58.91	316	*e*P	P	22 22 31.2	+0.1
KSRS	Korea Array 7.9nm,0.9s,baz=135,slow=7.4,SNR=15	59.04	326	P	P	22 22 30.5	-1.3
KSRS	comp=Z,440nm,19.9s,baz=142,slow=34			LR	LR	22 46 02.4	
KS15	Wonju Array Si	59.05	326	*e*P	P	22 22 30.5	-1.4
KSAR	Wonju Array Be	59.05	326	P	P	22 22 30.5	-1.4
KS01	Wonju Array Si	59.07	326	*e*P	P	22 22 30.9	-1.1
NJ2	Nanjing	61.08	316	*e*P	P	22 22 46.8	+0.9
NJ2				S	S	22 31 12.7	+9.0
NJ2	comp=Z,24nm,0.8s			pmax	pmax		
NJ2	comp=Z,390nm,6.0s			pmax	pmax		
NJ2	comp=N,750nm,18.4s			LR	LR		
NJ2	comp=E,690nm,20.1s			LR	LR		
NJ2	comp=Z,1μm,21.1s			LR	LR		
QIZ	Qiongzhong	61.63	298	P	P	22 22 50.8	+0.9
QIZ				S	S	22 31 10.7	-0.5
QIZ	comp=Z,440nm,6.9s			pmax	pmax		
QIZ	comp=N,370nm,22.1s			LR	LR		
USRK	Ussuriysk Ar. comp=N,6.9nm,0.9s,baz=110,slow=6.5,SNR=7.8	62.21	334	P	P	22 22 51.6	-1.6
USRK	comp=N,318nm,21.7s,baz=133,slow=33			LR	LR	22 46 32.8	
WHN	Wuhan	63.42	312	P	P	22 23 01.7	+0.1
WHN				S	S	22 31 38.5	+5.2
WHN	comp=N,2μm,17.9s			LR	LR		
WHN	comp=E,310nm,13.1s			LR	LR		
WHN	comp=Z,2μm,20.0s			LR	LR		
MDJ	Mudanjiang	63.59	333	P	P	22 23 01.6	-0.9
MDJ				pP	sP	22 23 12.1	+0.6
MDJ				sP	pwP	22 23 16.4	+3.0
MDJ				PcP	PcP	22 23 33.2	-5.6
MDJ				PP	PP	22 25 25.1	+2.4
MDJ				S	S	22 31 42.9	+8.0
MDJ				sS	sS	22 32 01.0	+15
MDJ				ScS	SKSac	22 32 53.7	-0.7
MDJ	Mudanjiang	63.59	333	SS	SS	22 35 56.4	+13
MDJ	comp=Z,15nm,1.1s			pmax	pmax		
MDJ	comp=Z,250nm,5.6s			pmax	pmax		
MDJ	comp=N,920nm,20.7s			LR	LR		
MDJ	comp=E,820nm,21.5s			LR	LR		
MDJ	comp=Z,800nm,27.1s			LR	LR		
MDJ	Mudanjiang comp=Z,36nm,1.4s	63.59	333	*e*P	P	22 23 02.6	+0.1
DL2	Dalian	63.61	323	P	P	22 23 05.1	+2.4
DL2				S	S	22 31 40.1	+4.8
DL2	comp=Z,18nm,1.3s			pmax	pmax		
DL2	comp=Z,160nm,4.5s			pmax	pmax		
DL2	comp=N,610nm,16.1s			LR	LR		
DL2	comp=E,640nm,16.9s			LR	LR		
DL2	comp=Z,890nm,17.7s			LR	LR		
PETK	Petropavlovsk- comp=Z,3.3nm,0.8s,baz=151,slow=3.4,SNR=5.5	63.86	355	P	P	22 23 02.4	-1.6
PETK	comp=Z,367nm,20.8s,baz=172,slow=31			LR	LR	22 45 48.1	
PEA1	Petropavlovsk-	63.86	355	*e*P	P	22 23 02.4	-1.7
TIA	Tai'an	64.70	319	P	P	22 23 03.8	-6.1
TIA	comp=Z,4.0nm,2.4s			pmax	pmax		
CN2	Changchun	64.94	330	*e*P	P	22 23 10.2	-1.2
CN2				*e*S	S	22 31 59.9	+8.2
CN2	comp=Z,30nm,1.0s			pmax	pmax		
CN2	comp=Z,310nm,5.0s			pmax	pmax		
CN2	comp=N,680nm,16.0s			LR	LR		
CN2	comp=E,530nm,16.0s			LR	LR		
CN2	comp=Z,630nm,20.0s			LR	LR		
IPM	Ipoh comp=Z,40nm,1.1s	65.17	280	*e*P	P	22 23 12.8	-0.6
MNSI	Mandailing Nat	65.75	276	P	P	22 23 15.6	-1.6
SKNT	Sakolnakorn comp=Z,17nm,1.5s	66.03	294	P	P	22 23 20.8	+1.9
KLR	Kul'dur comp=Z,486nm,20.5s,baz=158,slow=34	66.36	337	LR	LR	22 50 18.0	
VNDA	Vanda comp=Z,840nm,18.6s,baz=7.0,slow=34	66.80	181	LR	LR	22 50 14.1	
PSI	Prapat comp=Z,24nm,1.3s	66.82	278	*e*P	P	22 23 24.5	+0.2
SRAK	Srakaew comp=Z,20nm,1.0s	66.83	290	P	P	22 23 28.1	+4.1
ENH	Enshi comp=Z,30nm,1.1s	66.91	309	*e*P	P	22 23 24.0	-0.4
NONG	Nongkai comp=Z,0.7nm,1.6s	67.16	295	P	P	22 23 29.0	+2.9
GYA	Guiyang	67.40	305	⇑*i*P	P	22 23 29.4	+1.8
GYA				pP	pwP	22 23 40.6	-0.3
GYA				PP	PP	22 26 00.2	+3.7
GYA				S	S	22 32 21.8	-0.6
GYA				SKS	SKSac	22 33 20.2	-4.1
GYA	Guiyang	67.40	305	SS	SS	22 36 41.5	-1.5
GYA	comp=Z,20nm,1.0s			pmax	pmax		
GYA	comp=Z,120nm,7.4s			pmax	pmax		
GYA	comp=N,520nm,18.0s			LR	LR		
GYA	comp=E,540nm,18.2s			LR	LR		
GYA	comp=Z,520nm,18.6s			LR	LR		
CHAI	Chaiyaphum comp=Z,2.6nm,1.3s	67.48	292	P	P	22 23 33.8	+5.6
BJT	Baijiatuau comp=Z,6.2nm,0.9s	67.58	321	*e*P	P	22 23 29.4	+1.1
PATY	Pattaya comp=Z,11nm,0.9s	67.59	289	P	P	22 23 32.0	+3.1
BJI	Beijing	67.59	322	P	P	22 23 29.3	+0.9
BJI	comp=Z,7.0nm,1.5s			pmax	pmax		
PBKT	Sadao Pong comp=Z,29nm,1.3s	68.62	293	*e*P	P	22 23 35.8	+0.5
PBKT	Sadao Pong comp=Z,21nm,1.4s,comp=Z,1μm	68.62	293	P	P	22 23 37.5	+2.2
TIY	Taiyuan	68.64	318	*e*P	P	22 23 35.5	+0.4
TIY	comp=Z,220nm,4.8s			pmax	pmax		
TIY	comp=N,190nm,7.4s			LR	LR		
TIY	comp=E,290nm,12.1s			LR	LR		
TIY	comp=Z,920nm,16.9s			LR	LR		
XAN	Xi'an	69.15	313	P	P	22 23 38.1	-0.3
XAN				pP	pwP	22 23 51.3	-0.5
XAN				sP	PcP	22 23 57.8	-4.4
XAN				PP	PP	22 26 18.6	+7.1
XAN				S	S	22 32 42.4	-0.6
XAN	Xi'an	69.15	313	SS	SS	22 37 11.0	+1.2
XAN	comp=Z,15nm,1.0s			pmax	pmax		
XAN	comp=Z,260nm,4.9s			pmax	pmax		
XAN	comp=N,570nm,20.6s			LR	LR		
XAN	comp=E,450nm,20.6s			LR	LR		
XAN	comp=Z,770nm,22.8s			LR	LR		
XAN	Xi'an comp=Z,15nm,1.0s	69.15	313	*e*P	P	22 23 37.7	-0.8
NANT	Nan comp=Z,5.0nm,1.2s,comp=Z,66nm	69.59	295	P	P	22 23 43.1	+1.8
SRDT	SRDT	69.63	290	P	P	22 23 50.2	+8.6
UTHA	Uthaitani comp=Z,3.1nm,1.3s,comp=Z,56nm	69.69	291	P	P	22 23 47.1	+5.1
KMI	Kunming	70.09	302	P	P	22 23 46.1	+1.5
KMI				pP	pwP	22 23 57.7	-0.1
KMI				sP	PcP	22 24 01.1	-5.5
KMI				PP	PP	22 26 18.0	-2.0
KMI				S	S	22 32 54.3	-0.3
KMI				sS	sS	22 33 09.0	+4.0
KMI				SKS	SKSac	22 33 40.2	-4.8
KMI	Kunming	70.09	302	SS	SS	22 37 26.4	+1.6
KMI	comp=Z,30nm,1.5s			pmax	pmax		
KMI	comp=Z,160nm,3.7s			pmax	pmax		
KMI	comp=N,280nm,16.7s			LR	LR		
KMI	comp=E,280nm,19.3s			LR	LR		
KMI	comp=Z,500nm,21.1s			LR	LR		
KMI	Kunming comp=Z,63nm,1.4s	70.09	302	*e*P	P	22 23 46.7	+2.1
HHC	Hu-ho-hao-te	70.93	320	*e*P	P	22 23 50.5	+1.3
HHC				S	S	22 33 03.9	+0.2
HHC	Hu-ho-hao-te	70.93	320	SS	SS	22 37 41.2	+4.2
HHC	comp=Z,15nm,1.2s			pmax	pmax		
HHC	comp=Z,290nm,4.3s			pmax	pmax		
HHC	comp=N,880nm,15.6s			LR	LR		
HHC	comp=E,540nm,15.6s			LR	LR		
HHC	comp=Z,1μm,15.6s			LR	LR		
CM01	Chiang Mai Arr	71.03	294	*e*P	P	22 23 51.8	+1.6
CM31	Chiang Mai Arr	71.05	294	*e*P	P	22 23 50.1	-0.2
CMAR	Chiang Mai Arr comp=Z,3.6nm,0.8s,baz=121,slow=4.2,SNR=15	71.05	294	P	P	22 23 50.1	-0.2
CMAR	comp=Z,144nm,18.6s,baz=106,slow=37			LR	LR	22 56 29.6	
CMMT	Chiang Mai comp=Z,20nm,1.5s,comp=Z,465nm	71.16	294	P	P	22 23 52.6	+1.6
CHTO	Chiang Mai comp=Z,38nm,1.4s	71.17	294	*e*P	P	22 23 50.8	-0.2
CHTO	Chiang Mai comp=Z,88nm,1.5s,comp=Z,2μm	71.17	294	P	P	22 23 52.7	+1.7
HIA	Hailar comp=Z,22nm,1.1s	71.59	331	*e*P	P	22 23 52.4	-0.5
CD2	Chengdu	71.60	308	P	P	22 23 53.5	+0.1
CD2				S	S	22 33 10.7	-1.0
CD2	comp=Z,30nm,0.9s			pmax	pmax		
CD2	comp=Z,300nm,5.8s			pmax	pmax		

CD2				LR	LR		
	comp=N,500nm,16.9s						
CD2				LR	LR		
	comp=E,560nm,22.9s						
CD2				LR	LR		
	comp=Z,600nm,13.9s						
BTO	Baotou	71.78	319	eP	P	22 23 52.5	-1.9
LZH	Lanzhou	73.79	313	eP	P	22 24 08.1	+1.6
LZH				pP	sP	22 24 16.6	+1.6
LZH				sP	PcP	22 24 21.3	-0.7
LZH				PP	PP	22 26 57.3	+5.9
LZH				S	S	22 33 40.7	+4.0
LZH				sS	sS	22 33 51.6	+4.4
LZH	Lanzhou	73.79	313	SS	SS	22 38 20.2	-0.9
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
LZH				pmax	pmax		
	comp=Z,310nm,4.5s						
LZH				LR	LR		
	comp=N,820nm,14.1s						
LZH				LR	LR		
	comp=E,680nm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,19.0s						
GAMB	Gambell	76.43	11	eP	P	22 24 20.4	-0.5
	comp=Z,12nm,1.0s						
SONA0	Songino Array	77.81	324	eP	P	22 24 28.8	-0.4
SONM	Songino Array	77.81	324	P	P	22 24 28.7	-0.4
	comp=Z,6.2nm,1.0s,baz=138,slow=3.6,SNR=32						
SONM				LR	LR	22 58 07.0	
	comp=Z,426nm,19.4s,baz=126,slow=35						
SONA1	Songino Array	77.81	324	eP	P	22 24 28.5	-0.7
GTA	Gaotai	78.10	314	⇑P	P	22 24 32.1	+1.1
GTA				pP	pwP	22 24 42.9	-1.6
GTA				sP	PcP	22 24 46.7	+6.1
GTA				S	S	22 34 22.8	-1.3
GTA	Gaotai	78.10	314	sS	sS	22 34 40.1	+5.4
GTA	Gaotai	78.10	314	SS	SS	22 39 26.0	-0.3
GTA				pmax	pmax		
	comp=Z,13nm,1.5s						
GTA				pmax	pmax		
	comp=Z,150nm,7.5s						
GTA				LR	LR		
	comp=N,290nm,19.0s						
GTA				LR	LR		
	comp=E,550nm,20.3s						
GTA				LR	LR		
	comp=Z,890nm,20.0s						
ANM	Nome	78.39	13	eP	P	22 24 31.5	-0.4
	comp=Z,18nm,1.3s						
BILL	Bilibino	78.56	1	eP	P	22 24 31.5	-1.2
	comp=Z,35nm,1.4s						
QSPA	South Pole Qui	79.28	180	eP	P	22 24 37.7	+0.6
	comp=Z,16nm,1.0s						
SHL	Shillong	79.47	299	eP	P	22 24 40.2	+1.4
	comp=Z,69nm,1.5s						
SHL	Shillong	79.47	299	eP	P	22 24 40.0	+1.1
CAST	Castle Rocks	80.95	18	eP	P	22 24 44.7	-1.1
CAST				epP	pwP	22 24 57.8	+0.8
TLY	Talaya	81.29	327	eP	P	22 24 48.2	+0.3
	comp=Z,8.3nm,1.1s						
LSA	Lhasa	81.32	302	eP	P	22 24 50.4	+1.3
	comp=Z,14nm,1.4s						
RDOG	Red Dog Mine	81.91	12	eP	P	22 24 51.0	+0.2
	comp=Z,23nm,1.2s						
IM3	Indian Mountai	82.39	16	eP	P	22 24 52.2	-1.1
MLY	Manley	82.53	17	eP	P	22 24 56.2	+2.0
	comp=Z,8.0nm,1.2s						
MLY				epP	pwP	22 25 07.4	+2.1
MDM	Murphy Dome	83.24	18	eP	P	22 24 58.0	+0.2
	comp=Z,13nm,1.0s						
HDA	Harding Lake	83.27	19	eP	P	22 24 57.4	-0.5
	comp=Z,26nm,1.1s						
RIDG	Independ'e Rid	83.52	20	eP	P	22 25 00.8	+1.5
	comp=Z,13nm,0.9s						
IL1	Eielson Array	83.53	19	eP	P	22 24 57.3	-2.0
ILAR	Eielson Array	83.53	19	P	P	22 24 58.5	-0.8
	comp=Z,7.6nm,0.9s,baz=245,slow=5.7,SNR=38						
ILAR				LR	LR	22 56 27.6	
	comp=Z,523nm,21.6s,baz=244,slow=32						
ILB	Eielson Array	83.53	19	eP	P	22 24 58.2	-1.0
SCRK	Sand Creek	83.96	20	eP	P	22 25 01.2	-0.5
	comp=Z,26nm,1.5s						
RAMN	Ramite	84.41	299	eP	P	22 25 05.5	+0.6
MAW	Mawson	84.64	202	LR	LR	22 58 33.8	
	comp=Z,373nm,18.2s,baz=94,slow=33						
JIRN	Jiri	84.94	299	eP	P	22 25 07.3	-0.5
	comp=Z,260nm,1.9s						
GUN	Gumba	85.27	299	eP	P	22 25 07.8	-1.6
	comp=Z,105nm,1.5s						
TOLK	Toolik Lake Re	85.44	15	eP	P	22 25 10.3	+1.3
	comp=Z,8.7nm,1.2s						
TIXI	Tiksi	85.58	349	eP	P	22 25 09.6	+0.1
	comp=Z,19nm,1.4s						
PKIN	Phulchoki	85.60	299	eP	P	22 25 10.0	-1.0
	comp=Z,54nm,1.4s						
DAWY	Dawson	85.62	21	eP	P	22 25 12.3	+2.3
	comp=Z,12nm,1.1s						
DMN	Daman	85.86	299	eP	P	22 25 11.6	-0.6
	comp=Z,105nm,1.4s						
NV01	Mina Array Sit	86.59	50	eP	P	22 25 17.3	+1.8
NVAR	Mina Array Bea	86.59	50	P	P	22 25 15.6	0.0
	comp=Z,1.6nm,0.7s,baz=225,slow=8.2,SNR=6.2						
NVAR				LR	LR	22 56 27.8	
	comp=Z,1µm,20.1s,baz=271,slow=30						
NV11	Mina Array Sit	86.70	50	eP	P	22 25 17.3	+1.3
	comp=Z,1.0nm,1.5s						
DANN	Dangsing	87.19	299	eP	P	22 25 17.1	-1.7
	comp=Z,66nm,1.7s						
KOLN	Koldanda	87.20	299	eP	P	22 25 17.9	-0.8
PYUN	Piuthan	87.80	299	eP	P	22 25 19.7	-1.9
	comp=Z,21nm,1.2s						
G08A	Pilot Rock	88.11	43	eP	P	22 25 25.2	+2.7
	comp=Z,4.7nm,1.1s						
WMQ	Urumqi	88.15	315	eP	P	22 25 22.4	-0.3
WMQ				pP	pwP	22 25 33.3	-1.9
WMQ				sP	sP	22 25 37.5	+6.2
WMQ				pmax	pmax		
	comp=Z,28nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.9s						
WMQ				LR	LR		
	comp=N,610nm,22.7s						
WMQ				LR	LR		
	comp=E,740nm,24.1s						
WMQ				LR	LR		
	comp=Z,980nm,21.3s						
WMQ	Urumqi	88.15	315	eP	P	22 25 23.5	+0.8
	comp=Z,28nm,1.4s						
INK	Inuvik	89.93	19	eP	P	22 25 30.6	+0.2
	comp=Z,4.9nm,1.4s						
INK	Inuvik	89.93	19	P	P	22 25 30.6	+0.2
	comp=Z,1.3nm,1.0s,baz=180,slow=1.0,SNR=2.6						
U15A	North Rim	90.72	53	eP	P	22 25 37.1	+1.9
	comp=Z,6.1nm,1.0s						
HLID	Hailey	90.78	46	eP	P	22 25 36.6	+1.4
	comp=Z,3.9nm,1.1s						
MSU	Marysvale	91.27	51	eP	P	22 25 40.9	+3.2
MK01	Makanchi Array	92.58	317	eP	P	22 25 41.8	-1.5
MK31	Makanchi Array	92.59	317	eP	P	22 25 42.3	-1.1
MK32	Makanchi Array	92.59	317	eP	P	22 25 42.3	-1.0
MKAR	Makanchi Array	92.59	317	eP	P	22 25 42.3	-1.0
	comp=Z,24nm,0.7s						
MKAR	Makanchi Array	92.59	317	P	P	22 25 42.3	-1.0
	comp=Z,3.5nm,0.6s,baz=92,slow=6.2,SNR=32						
MKAR				LR	LR	23 06 26.6	
	comp=Z,465nm,21.6s,baz=96,slow=35						
ZAA0	Zalesovo Array	92.70	324	eP	P	22 25 42.6	-1.0
	comp=Z,12nm,1.4s						
ZALV	Zalesovo Beam	92.70	324	eP	P	22 25 42.0	-1.6
ZALV	Zalesovo Beam	92.70	324	P	P	22 25 41.8	-1.8
	comp=Z,0.6nm,0.5s,baz=101,slow=3.2,SNR=7.1						
ZALV				LR	LR	23 05 57.7	
	comp=Z,250nm,21.5s,baz=78,slow=35						
ZAA1	Zalesovo Array	92.70	324	eP	P	22 25 41.8	-1.8
MAKZ	Makanchi	92.81	317	eP	P	22 25 43.7	-0.6
	comp=Z,29nm,1.5s						
BOZ	Bozeman (W)	93.17	44	eP	P	22 25 47.8	+1.6
	comp=Z,2.2nm,0.9s						
PD31	Pinedale Array	94.08	47	eP	P	22 25 52.0	+1.5
PDAR	Pinedale Array	94.08	47	P	P	22 25 52.0	+1.5
	comp=Z,0.7nm,0.8s,baz=220,slow=3.9,SNR=6.3						
PDAR				LR	LR	23 01 23.8	
	comp=Z,528nm,20.5s,baz=268,slow=31						
YKA	Yellowknife Ar	95.15	27	P	P	22 25 54.5	-0.1
	comp=Z,0.7nm,0.9s,baz=254,slow=4.3,SNR=7.3						
YKA				LR	LR	23 01 58.3	
	comp=Z,80nm,20.9s,baz=258,slow=31						
YKB5	Yellowknife Ar	95.15	27	eP	P	22 25 54.5	-0.1
NRIK	Noril'sk	95.47	340	LR	LR	23 08 34.0	
	comp=Z,505nm,20.7s,baz=102,slow=35						
KURK	Kurchatov	95.74	320	eP	P	22 25 58.8	+1.2
	comp=Z,7.5nm,1.3s						
KSH	Kashi	95.76	309	P	P	22 26 00.1	+1.9
KSH				pP	pwP	22 26 11.2	+0.5
KSH				pmax	pmax		
	comp=Z,150nm,5.0s						
LTX	Lajitas	96.57	61	eP	P	22 26 02.4	+0.4
TXAR	Lajitas Array	96.57	61	P	P	22 26 02.4	+0.4
	comp=Z,0.2nm,0.7s,baz=231,slow=4.3,SNR=3.1						
TXAR				LR	LR	23 03 32.8	
	comp=Z,818nm,19.2s,baz=0.0,slow=32						
CLNB	Carlsbad	96.81	59	eP	P	22 26 00.6	-2.5
ARA0	ARCESS Array S	115.76	345	ePKPdf	PKiKP	22 31 13.8	+0.1
ARCES	ARCESS Array B	115.76	345	PKP	PKiKP	22 31 13.8	+0.1
	comp=Z,1.9nm,0.8s,baz=132,slow=1.8,SNR=4.8						
FIA0	FINESS Array S	121.10	338	ePKPdf	PKPdf	22 31 24.1	0.0
FINES	FINESS Array B	121.10	338	PKP	PKPdf	22 31 24.1	0.0
	comp=Z,0.7nm,0.6s,baz=301,slow=1.1,SNR=4.8						
AKASG	Malin Array Be	126.03	327	PKP	PKPdf	22 31 33.5	-0.4
	comp=Z,0.2nm,0.4s,baz=68,slow=2.7,SNR=2.5						
AKBB	Malin Array Si	126.03	327	ePKPdf	PKPdf	22 31 33.5	-0.4
BANI	BANI	126.32	75	ePKPdf	PKPdf	22 31 35.3	-0.2
BR101	Keskin Array S	128.00	312	ePKPdf	PKiKP	22 31 39.5	+0.7
BRTR	Keskin Array B	128.00	312	PKP	PKiKP	22 31 39.5	+0.7
	comp=Z,0.3nm,0.6s,baz=338,slow=1.6,SNR=3.3						
CLL	Collm	133.40	336	e(PKPdf)	PKPdf	22 31 46.0	-1.8
CLL				epPKPdf	pPKPdf	22 31 55.0	+0.7
CLL				eSSS	SSS	22 57 30.0	
CLL				LmH		23 37 00.0	
	comp=N,200nm,20.1s						
CLL				LmH		23 37 00.0	
	comp=E,300nm,19.7s						
CLL				LmV		23 40 00.0	
	comp=Z,400nm,18.3s						
KEST	Kesra	146.54	322	PKPbc	PKPbc	22 32 13.6	-0.1
	comp=Z,10nm,0.9s,baz=304,slow=4.3,SNR=6.5						
ESDC	Sonseca Array	149.46	343	PKPbc	PKPbc	22 32 21.1	-0.1
	comp=Z,1.1nm,0.8s,baz=354,slow=2.6,SNR=3.6						
TORD	Torodi Ar. Bea	163.21	280	PKP	PKPdf	22 32 34.6	-0.7
	comp=Z,0.7nm,0.9s,baz=25,slow=4.3,SNR=3.3						
TORD				PKPab	PKPab	22 33 24.4	-1.2
	comp=Z,1.9nm,1.1s,baz=159,slow=2.1,SNR=4.8						
TOA1	Torodi Ar. Sit	163.21	280	ePKPdf	PKPdf	22 32 34.6	-0.7
TOA1				ePKPab	PKPab	22 33 24.4	-1.2

SOME **10** *22:28:35.8, 40°.43N×71°.97E, h5km*
BJI **10** *22:28:35.9, 40°.03N×71°.73E, h23km, mB4.5/2, mb3.8/3, ML3.7/4*
IDC **10** *22:28:36.6±0.9, 40°.36N×71°.98E, h31km±5km, mb3.5/14, mb1 3.7/21, mb1mx3.5/59, mbtmp3.7/21, ML3.3/7, Error ellipse: s-maj=15.4km s-min=9.5km az=144.0*
NNC **10** *22:28:36.0±1.4, 40°.42N×71°.96E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=11.7km s-min=5.6km az=55.0*
KRNET **10** *22:28:37.6±0.1, 40°.45N×72°.01E, h22km, mb4.0*
ISC 10 22:28:36.3±0.6**, 40°.38N**±0°.03×**71°.91E**±0°.03**, h25**km±4km**,**
n101, σ2.§71/136**, mb3.8**/14**, 40C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.90	249	⇓iP	Pn	22 28 56.4	+3.0
	baz=47						
BTK				⇓iS	Sn	22 29 10.0	+4.3
	baz=47						
DRK	Karamyk	0.91	186	⇓iP	Pn	22 28 55.7	+2.0
	baz=89						
DRK				⇓iS	Sn	22 29 09.5	+3.4
	baz=89						
ARSB	Arslanbob	1.24	40	⇑iP	Pb	22 28 58.6	-0.5
	baz=40						
ARSB				⇑iS	Sn	22 29 14.3	+0.1
	baz=40						
SFK	Sufi-Kurgan	1.27	106	⇑P	Pb	22 28 59.5	-0.2
	31nm,0.3s						
SFK				⇑S	Sb	22 29 17.2	+1.5
	534nm,0.3s						
SFK	Sufi-Kurgan	1.27	106	Pg	Pb	22 28 59.6	-0.2
	60nm,0.1s						
SFK				Lg	Lg	22 29 17.0	
	692nm,0.2s						
SFK	Sufi-Kurgan	1.27	106	⇑iP	Pb	22 28 59.8	+0.1
	baz=10.0						
SFK				⇑iS	Sb	22 29 16.7	+1.0
	baz=10.0						
ARK	Arkit	1.41	1	⇑iP	Pb	22 29 01.8	-0.3
	baz=59						
ARK				⇑iS	Sb	22 29 19.9	+0.2
	baz=59						
MNAS	Manas	2.15	12	⇓Pn	Pb	22 29 14.2	-0.4
	58nm,0.4s						
MNAS				⇓Sn	Sb	22 29 42.1	+1.3
	168nm,0.4s						
MNAS	Manas	2.15	12	Pg	Pb	22 29 13.9	-0.8
	55nm,0.4s						
MNAS				Lg	Lg	22 29 42.3	
	176nm,0.4s						
MNAS	Manas	2.15	12	⇑iP	Pb	22 29 13.8	-0.8
	baz=10.0						
MNAS				⇑iS	Sb	22 29 39.5	-1.4
	baz=10.0						
AML	Almayashu	2.20	37	P	Pb	22 29 12.9	-2.7
	SNR=45						
AML	Almayashu	2.20	37	⇓iP	Pb	22 29 14.3	-1.4
	baz=37						
AML				⇓iS	Sb	22 29 41.0	-1.7
	baz=37						
TAS	Tashkent	2.21	296	⇑iP	Pb	22 29 15.7	+0.2
	baz=94						
TAS				⇑iS	Sb	22 29 43.0	+0.6
	baz=94						
ARLS	Aral	2.34	50	⇑iP	Pb	22 29 16.1	-1.8
	baz=50						
ARLS				⇑iS	Sb	22 29 43.8	-2.7
	baz=50						
DZA	Taraz	2.54	350	eP	Pb	22 29 21.3	0.0
	537nm,0.4s						
DZA				eS	Sb	22 29 53.5	+1.3
	602nm,0.3s						
MRKS	Merke	2.56	22	Pg	Pb	22 29 20.4	-1.1
	159nm,0.5s						
MRKS				Lg	Lg	22 29 54.4	
	168nm,0.3s						
MRKS	Merke	2.56	22	eP	Pb	22 29 21.2	-0.4
	108nm,0.5s						
MRKS				eS	Sb	22 29 54.9	+2.3
	162nm,0.4s						
EKS2	Erkin-Say	2.67	31	P	Pb	22 29 19.9	-3.5
	SNR=12						
EKS2	Erkin-Say	2.67	31	⇑iP	Pb	22 29 21.1	-2.4
	baz=30						
EKS2				⇑iS	Sb	22 29 51.5	-4.4
	baz=30						
UCH	Uchtor	2.69	46	P	Pb	22 29 20.3	-3.7
	SNR=25						
UCH	Uchtor	2.69	46	⇑iP	Pb	22 29 21.0	-3.0
	baz=46						
UCH				⇑iS	Sb	22 29 52.4	-4.3
	baz=46						
KK31	Karatay Array	2.91	339	⇑Pn	Pn	22 29 22.5	+1.4
	2.8nm,0.5s,baz=140,slow=12,SNR=528						
KK31				Pg	Pb	22 29 29.3	+1.7
	34nm,0.3s,baz=146,slow=14,SNR=6.4						
KK31				Lg	Lg	22 30 07.5	
	53nm,0.3s,baz=145,slow=29,SNR=6.4						
AAK	Ala-Archa	2.97	40	P	Pn	22 29 24.2	+2.3
	SNR=21						
AAK	Ala-Archa	2.97	40	⇑Pg	Pb	22 29 34.7	+6.0
	14nm,0.3s						
AAK				⇑Lg	Lg	22 30 09.3	
	98nm,0.5s						
AAK	Ala-Archa	2.97	40	⇓iP	Pb	22 29 25.3	-3.3
	baz=40						
AAK				⇓iS	Sn	22 29 59.1	+2.2
	baz=40						
AAK	Ala-Archa	2.97	40	Pn	Pn	22 29 24.1	+2.1
	4.3nm,0.3s,baz=202,slow=4.2,SNR=50						
AAK				Sn	Sb	22 30 03.8	-0.8
	39nm,0.3s,baz=1.3,slow=17,SNR=12						
KZA	Kyzart	3.03	55	P	Pn	22 29 25.4	+2.3
	SNR=13						
KZA	Kyzart	3.03	55	⇑iP	Pn	22 29 25.3	+2.3
	baz=55						
KZA				⇑iS	Sn	22 30 00.9	+2.2
	baz=55						
FRU1	Bishkek	3.17	39	⇑iP	Pn	22 29 26.6	+2.0
	baz=39						
FRU1				⇑iS	Sn	22 30 03.2	+1.6
	baz=39						
KBK	Karagaybulak	3.22	44	P	Pb	22 29 28.4	-4.4
	SNR=12						
KBK	Karagaybulak	3.22	44	⇑iP	Pb	22 29 28.9	-3.9
	baz=44						
KBK				⇑iS	Sn	22 30 04.4	+1.4
	baz=44						
KSH	Kashi	3.24	104	Pn	Pn	22 29 26.4	+0.8
KSH				Sn	Sn	22 30 00.4	-3.0
KSH				smax	smax		
	comp=N,420nm,0.5s						
KSH				smax	smax		
	comp=E,350nm,0.5s						
NRN	Naryn	3.27	70	⇑eP	Pn	22 29 28.4	+2.2
	baz=71						
NRN				⇑iS	Sn	22 30 05.6	+1.1
	baz=71						
CHMS	Chumysh	3.37	38	P	Pn	22 29 29.7	+2.4
	SNR=25						
CHMS	Chumysh	3.37	38	⇑iP	Pb	22 29 30.8	-4.5
	baz=38						
CHMS				⇑iS	Sn	22 30 07.6	+1.1
	baz=38						
USP	Ospenovka	3.47	33	P	Pn	22 29 30.1	+1.4
	SNR=11						
USP	Ospenovka	3.47	33	⇓iP	Pn	22 29 31.6	+2.9
	baz=33						
USP				⇓iS	Sn	22 30 10.7	+1.7
	baz=33						
SGDS	Sogindy	3.68	33	Pg	Pb	22 29 41.2	+0.7
	30nm,0.4s						
SGDS				Lg	Lg	22 30 29.0	
	115nm,0.7s						
TKM2	Tokmak 2	3.75	46	P	Pn	22 29 34.9	+2.3
	SNR=15						
TKM2	Tokmak 2	3.75	46	⇓Pn	Pn	22 29 35.0	+2.3
	6.4nm,0.3s						
TKM2				Pg	Pb	22 29 47.9	+6.1
	22nm,0.5s						
TKM2				Lg	Lg	22 30 32.3	
	74nm,0.6s						
TKM2	Tokmak 2	3.75	46	⇑iP	Pn	22 29 35.8	+3.1
	baz=46						
TKM2				⇑iS	Sn	22 30 18.0	+1.9
	baz=46						
ULHL	Ulahol	3.75	59	⇑iP	Pn	22 29 35.5	+2.7
	baz=59						
ULHL				⇑iS	Sn	22 30 18.1	+1.9
	baz=59						
KST	Kastek	4.03	47	Pg	Pb	22 29 48.6	+1.9
	14nm,0.3s						
KST				Lg	Lg	22 30 41.2	
	125nm,0.6s						
KST	Kastek	4.03	47	eP	Pb	22 29 49.0	+2.3
	16nm,0.4s						
KST				eS	Sb	22 30 40.5	+5.5
	87nm,0.7s						
DGS	Degeres	4.06	44	Pg	Pb	22 29 48.4	+1.3
	22nm,0.6s						
DGS				Lg	Lg	22 30 41.3	
	87nm,0.7s						
DGS	Degeres	4.06	44	eP	Pb	22 29 48.7	+1.6
	9.3nm,0.4s						
DGS				eS	Sb	22 30 41.0	+5.2
	105nm,0.7s						
MTBS	Maitube	4.35	49	eP	Pb	22 29 53.6	+1.6
	4.5nm,0.5s						
MTBS				eS	Sb	22 30 50.3	+6.2
	70nm,0.6s						
IZV	Izvestkoviy	4.40	51	Pg	Pb	22 29 54.9	+1.9
	14nm,0.4s						
IZV				Lg	Lg	22 30 52.6	
	70nm,0.6s						
IZV	Izvestkoviy	4.40	51	eP	Pb	22 29 55.0	+1.9
	12nm,0.6s						
IZV				eS	Sb	22 30 52.3	+6.6
	53nm,0.6s						
AAA	Alma-Ata	4.68	51	Pg	Pb	22 30 01.0	+3.3
	17nm,0.4s						
AAA				Lg	Lg	22 31 02.8	
	78nm,0.7s						
MDOK	Medeo	4.74	52	Pg	Pb	22 30 05.7	+7.0
	24nm,0.6s						
MDOK				Lg	Lg	22 31 02.6	
	38nm,0.8s						
MDOK	Medeo	4.74	52	eP	Pb	22 30 00.2	+1.5
	16nm,0.7s						
MDOK				eS	Sb	22 31 00.8	+5.5
	48nm,0.9s						
KUU	Kurty	4.81	42	eP	Pb	22 30 01.5	+1.7
	4.7nm,0.3s						
KUU				eS	Sb	22 31 03.0	+5.8
	78nm,0.4s						
KOTS	Kotyrbulak	4.82	52	Pg	Pb	22 30 01.5	+1.5
	11nm,0.6s						
KOTS				Lg	Lg	22 31 03.6	
	57nm,0.4s						
KTBS	Karatobe	4.86	45	Pg	Pb	22 30 03.1	+2.3
	11nm,0.6s						
KTBS				Lg	Lg	22 31 06.4	
	76nm,0.6s						
KTBS	Karatobe	4.86	45	eP	Pb	22 30 03.3	+2.5
	3.7nm,0.4s						
KTBS				eS	Sb	22 31 06.0	+7.1
	53nm,0.9s						
PDGK	Podgornoye	6.38	60	⇓Pg	Pb	22 30 31.8	+5.3
	6.9nm,0.8s						
PDGK				⇓Lg	Lg	22 31 52.5	
	19nm,0.6s						
CEP	Cherat	6.55	180	P	Pn	22 30 18.7	+7.6
CEP				S	Sn	22 31 32.0	+7.0
CHCP	Chirah Chowk	6.80	170	P	Pn	22 30 19.4	+5.0
THW	Thamme Wali	7.58	181	P	Pn	22 30 29.5	+4.4
OTUK	Ortayu	7.87	2	⇑Pg	Pb	22 30 59.6	+7.7
	7.1nm,0.9s						
OTUK				⇑Lg	Lg	22 32 42.6	
	17nm,0.7s						
DHRM	DHARAMSHALA	8.85	155	eP	Pn	22 30 44.4	+1.6
DHRM				eS	Sn	22 32 20.1	-1.8
DHRM				IAML		22 32 41.5	
	comp=E,62nm,0.6s						
DHRM				IAML		22 32 42.9	
	comp=N,34nm,0.5s						
MK31	Makanchi Array	9.88	46	⇑Pn	Pn	22 30 59.1	+2.4
	comp=N,0.6nm,0.5s,baz=232,slow=14,SNR=3.1						
MKAR	Makanchi Array	9.88	46	Pn	Pn	22 30 57.2	+0.6
	comp=N,0.2nm,0.3s,baz=229,slow=14,SNR=8.1						
MKAR				Lg	Lg	22 33 47.2	
	comp=N,0.3nm,0.3s,baz=240,slow=23,SNR=3.4						
SMLA	Simla	10.17	154	eP	Pn	22 31 01.7	+1.1
SMLA				eS	Sn	22 32 48.6	-5.2
SMLA				IAML		22 33 09.2	
	comp=N,42nm,0.4s						
SMLA				IAML		22 33 09.5	
	comp=E,25nm,0.4s						
GEYT	Alibeck	10.99	262	Pn	Pn	22 31 11.1	-0.8
	comp=E,0.3nm,0.3s,baz=98,slow=10,SNR=3.6						
GEYT				Sn	Sn	22 33 12.2	-1.8
	comp=E,0.9nm,0.3s,baz=66,slow=14,SNR=3.2						
KKR	Kurukshetra	11.14	157	eP	Pn	22 31 11.7	-2.3
KURBB	Kurchatov Arra	11.24	22	Pn	Pn	22 31 13.4	-1.7
	comp=E,0.1nm,0.3s,baz=213,slow=12,SNR=5.8						
KURBB				Lg	Lg	22 34 28.9	
	comp=E,0.1nm,0.3s,baz=215,slow=30,SNR=5.5						
JOSI	Joshimath	11.61	145	eP	Pn	22 31 23.7	+3.1
JOSI				eS	Sn	22 33 30.7	+1.2
JOSI				IAML		22 33 41.7	
	comp=N,55nm,0.3s						
JOSI				IAML		22 33 41.8	
	comp=E,71nm,0.6s						
KALG	Kalgarh	12.21	151	eS	Sn	22 33 37.3	-6.6
AB31	Akbulak array	12.27	320	Pn	Pn	22 31 27.1	-2.2
	comp=E,0.5nm,0.3s,baz=128,slow=14,SNR=28						
BHGR	Bahadurgarh	12.38	159	eP	Pn	22 31 29.6	-1.2
BHGR				eS	Sn	22 33 36.9	-11
BVA0	Borovoye Array	12.69	356	⇑Pn	Pn	22 31 38.8	+3.8
	comp=E,0.9nm,0.6s,baz=164,slow=12,SNR=4.9						
BVAR	Borovoye Array	12.69	356	Pn	Pn	22 31 33.4	-1.6
	comp=E,0.2nm,0.3s,baz=165,slow=12,SNR=5.9						
BVAR				Lg	Lg	22 35 16.4	
	comp=E,0.3nm,0.3s,baz=183,slow=29,SNR=3.5						
BRVK	Borovoye	12.73	356	⇑Pn	Pn	22 31 36.5	+0.9

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      comp=E,1.3nm,0.7s
KUDL  Kundal            12.78 161 eP     Pn       22 31 33.4 -2.9
KUDL                              eS     Sn       22 33 43.6  -14
AKTO  Aktyubinsk        13.99 321  Pn    Pn       22 31 50.0 -2.7
      comp=E,0.2nm,0.3s,baz=128,slow=17,SNR=4.5
AKTO                               Sn    Sn       22 34 17.6 -9.5
      comp=E,0.3nm,0.3s,baz=142,slow=19,SNR=3.5
PYUN  Piuthan           15.28 140 eP     Pn       22 32 08.1 -2.4
      comp=E,4.7nm,0.3s
PYUN                              eS     Sn       22 34 45.1  -14
DANN  Dangsing          15.46 137 eP     Pn       22 32 09.1 -3.9
      comp=E,8.1nm,0.5s
KOLN  Koldanda          15.86 139 eP     Pn       22 32 14.9 -3.1
      comp=E,4.4nm,0.4s
ZALV  Zalesovo Beam     16.12  28  Pn    Pn       22 32 20.4 -0.6
      comp=E,0.3nm,0.3s,baz=221,slow=12,SNR=4.7
DMN   Daman             16.77 135 eP     Pn       22 32 26.3 -3.3
      comp=E,5.9nm,0.5s
PKIN  Phulchoki         16.95 135 eP     Pn       22 32 28.5 -3.4
      comp=E,5.7nm,0.5s
GUN   Gumba             16.95 133 eP     Pn       22 32 28.7 -3.4
      comp=E,4.8nm,0.3s
JIRN  Jiri              17.32 133 eP     Pn       22 32 33.6 -3.1
      comp=E,10nm,0.3s
WSAR  Wadi Sarin        20.44 217  P     P        22 33 11.3 -0.5
      comp=E,6.9nm,1.2s,baz=135,slow=7.1,SNR=2.5
KBZ   Khabaz            21.75 288  P     P        22 33 26.5 +0.8
      comp=E,2.0nm,1.0s,baz=100,slow=18,SNR=2.6
KVAR  Kislovodsk Arr    21.90 289  P     P        22 33 31.9 +4.5
      comp=E,1.5nm,0.7s,baz=258,slow=19,SNR=3.8
SONM  Songino Array     25.69  62  P     P        22 34 04.6 +0.3
      comp=E,1.0nm,0.8s,baz=273,slow=9.5,SNR=9.6
BRTR  Keskin Array B    29.16 281  P     P        22 34 35.6 +0.1
      comp=E,0.3nm,0.7s,baz=113,slow=6.4,SNR=3.4
FINES FINESS Array B    34.74 323  P     P        22 35 23.7 -0.3
      comp=E,1.3nm,0.9s,baz=131,slow=7.8,SNR=5.8
WHN   Wuhan             35.64  92  P     P        22 35 40.1 +8.0
ARCES ARCESS Array B    37.87 335  P     P        22 35 50.6 -0.1
      comp=E,1.5nm,0.9s,baz=56,slow=8.9,SNR=4.4
GERES GERESS Array B    41.38 302  P     P        22 36 21.2 +0.9
      comp=E,0.1nm,0.3s,baz=70,slow=6.4,SNR=2.8
GERES                              pP    sP       22 36 30.6 -0.7
      comp=E,0.2nm,0.3s,baz=264,slow=39,SNR=2.2
TORD  Torodi Ar. Bea    66.57 267  P     P        22 39 23.5 -0.9
      comp=E,1.3nm,0.4s,baz=52,slow=5.5,SNR=33
TORD                               pP    pP       22 39 33.1 +0.5
      comp=E,0.6nm,0.5s,baz=50,slow=5.5,SNR=4.1
LSZ   Lusaka            68.67 226  P     P        22 39 37.3 -0.4
      comp=E,0.8nm,0.6s,baz=45,slow=11,SNR=3.2
INK   Inuvik            69.96  10  P     P        22 39 45.4 +0.5
      comp=E,0.6nm,0.4s,baz=358,slow=8.2,SNR=5.1
ILAR  Eielson Array     70.86  17  P     P        22 39 50.0 -0.5
      comp=E,0.4nm,0.8s,baz=13,slow=2.5,SNR=4.4
YKA   Yellowknife Ar    77.34   3  P     P        22 40 28.1 -0.2
      comp=E,0.9nm,0.7s,baz=351,slow=5.9,SNR=17
YKA                                pP    sP       22 40 38.4 -1.2
      comp=E,0.4nm,0.6s,baz=350,slow=5.9,SNR=4.7
WRA   Warramunga Arr    83.46 123  P     P        22 41 00.6 -1.2
      comp=E,0.4nm,0.8s,baz=328,slow=5.0,SNR=4.1
ASAR  Alice Springs     85.91 126  P     P        22 41 13.2 -0.9
      comp=E,0.4nm,0.6s,baz=297,slow=4.1,SNR=4.2
```

ISCJB ***10*** *22:36:45.1±1.0, 11°.0S±0°.1×165°.81E±0°.10, h10^{km}, mb3.8/5, Error ellipse: s-maj=18.7km s-min=11.8km az=31.5*

IDC ***10*** *22:36:45.0±1.4, 10°.98S×165°.89E, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/39, mbtmp4.0/8, ML4.5/2, MS3.7/1, Ms1 3.7/1, ms1mx3.1/32, Error ellipse: s-maj=34.3km s-min=24.4km az=131.0*

ISC 10 22:36:46.7±1.1**, 11°.0S**±0°.1×**165°.9E**±0°.1**, h10**^{km}**, n11, σ1s.37**/8**, mb3.8**/5**, Santa Cruz Islands**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s    ISC
HNR   Honiara            6.01 284 Pn     Pn       22 38 14.8 -0.9
      28nm,0.3s,baz=166,slow=4.2,SNR=6.7
HNR                               Sn     Sn       22 39 25.4 +0.7
      7.8nm,0.3s,baz=246,slow=18,SNR=1.8
HNR                               LR     LR       22 40 40.7
      comp=Z,645nm,18.1s,baz=344,slow=39
DZM   Mont Dzumac       11.05 177 Pn     Pn       22 39 25.4 +0.4
      1.5nm,0.3s,baz=324,slow=18,SNR=15
CTA   Charters Tower    20.93 242 P      Pn       22 41 31.1 -1.2
      1.4nm,0.2s,baz=62,slow=12,SNR=2.2
H11S2 WAKE ISLAND Hy 29.29      2 T      T        23 13 08.0
      baz=181,slow=76,SNR=107
H11S3 WAKE ISLAND Hy 29.29      2 T      T        23 13 08.2
      baz=181,slow=76,SNR=84
H11S1 WAKE ISLAND Hy 29.30      2 T      T        23 13 07.0
      baz=181,slow=76,SNR=74
WRA   Warramunga Arr    31.61 250 P      P        22 43 09.2 -0.9
      0.8nm,0.6s,baz=82,slow=8.8,SNR=8.6
ASAR  Alice Springs     32.92 243 P      P        22 43 21.1 -0.5
      0.6nm,0.5s,baz=62,slow=10,SNR=7.3
SONM  Songino Array     78.67 324 P      P        22 48 51.1 +1.9
      0.6nm,1.1s,baz=134,slow=6.2,SNR=3.0
ILAR  Eielson Array     83.41  18 P      P        22 49 12.3 -1.6
      0.6nm,0.7s,baz=231,slow=4.9,SNR=8.3
MKAR  Makanchi Array    93.54 317 P      P        22 50 03.7 +0.7
      0.5nm,0.7s,baz=101,slow=6.4,SNR=4.3
```

IDC ***10*** *22:43:38.0±0.8, 35°.49N×142°.75E, h0^{km}, mb3.6/9, mb1 3.8/12, mb1mx3.6/37, mbtmp3.6/12, ML3.3/3, Error ellipse: s-maj=20.8km s-min=18.9km az=86.0*

JMA ***10*** *22:43:42.0±0.3, 35°.56N×142°.54E, h86^{km}, M3.3*

ISCJB ***10*** *22:43:43.6±0.6, 35°.48N±0°.05×142°.47E±0°.06, h56^{km}, mb3.5/9, Error ellipse: s-maj=8.1km s-min=6.2km az=29.0*

ISC 10 22:43:44.9±0.8**, 35°.58N**±0°.06×**142°.60E**±0°.07**, h56**^{km}**, n21, σ2s.24**/29**, mb3.7**/9**, Off east coast of Honshu**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s    ISC
CHOJ  Chosi              1.42 276 P      Pn       22 44 06.5 -1.9
CHOJ                              S      Sn       22 44 24.4 -1.7
BSO1  Boso 1             1.62 236 P      Pn       22 44 08.5 -2.0
JHYU  Hitachinakayam     1.80 296 P      Pn       22 44 11.4 -2.1
JHYU                              S      Sn       22 44 32.9 -2.4
JFT   Otama              2.66 317 P      Pn       22 44 23.3 -2.0
JFT                               S      Sn       22 44 54.2 -2.1
JAG   Ashikaga           2.69 289 P      Pn       22 44 23.5 -2.2
JAG                               S      Sn       22 44 54.5 -2.5
JOD2  Odawara 2          2.88 265 P      Pn       22 44 26.5 -1.9
JRY   Ryogami san        3.04 279 P      Pn       22 44 29.5 -1.0
JYN   Shimob             3.31 270 P      Pn       22 44 33.0 -1.2
JHJ   Hachijo jima 2     3.38 224 Pn     Pn       22 44 32.9 -2.2
      16nm,0.3s,baz=234,slow=19,SNR=2.6
JHJ                               Sn     Sn       22 45 09.2 -4.8
      56nm,0.3s,baz=87,slow=21,SNR=8.2
MJAR  Matsushiro Arr     3.69 286 Pn     Pn       22 44 38.6 -0.8
      0.3nm,0.3s,baz=116,slow=5.5,SNR=15
MJAR                              Sn     Sn       22 45 22.9 +1.4
      0.4nm,0.3s,baz=35,slow=18,SNR=5.1
MAT   Matsushiro         3.69 286 P      Pn       22 44 38.4 -1.0
MAT                               eS     Sn       22 45 21.0 -0.6
ASAJ  Asahikawa          8.53 360 Pn     Pn       22 45 42.5 -3.1
      0.7nm,0.3s,baz=211,slow=14,SNR=5.3
ASAJ                              Sn     Sn       22 47 14.9 -5.5
      0.9nm,0.3s,baz=308,slow=19,SNR=4.0
SONM  Songino Array     29.40 306 P      P        22 49 44.6 +1.7
      0.2nm,0.5s,baz=94,slow=9.3,SNR=4.0
ZALV  Zalesovo Beam     43.61 314 P      P        22 51 44.7 +1.4
      0.7nm,0.5s,baz=96,slow=8.9,SNR=2.4
MKAR  Makanchi Array    45.71 304 P      P        22 52 01.6 +1.3
      0.2nm,0.6s,baz=92,slow=9.2,SNR=2.7
ILAR  Eielson Array     50.22  32 P      P        22 52 35.4 +0.6
      0.6nm,0.8s,baz=272,slow=7.3,SNR=6.5
WRA   Warramunga Arr    55.77 189 P      P        22 53 15.9 -0.2
      0.7nm,0.7s,baz=8.9,slow=7.6,SNR=9.1
ASAR  Alice Springs     59.49 189 P      P        22 53 42.1 -0.1
      0.3nm,0.5s,baz=15,slow=7.7,SNR=3.9
NVAR  Mina Array Bea    75.09  53 P      P        22 55 22.1 +0.9
      0.4nm,0.4s,baz=277,slow=7.4,SNR=4.6
BRTR  Keskin Array B    80.54 312 P      P        22 55 53.2 +1.9
      0.6nm,0.9s,baz=86,slow=2.7,SNR=4.5
TXAR  Lajitas Array     90.24  53 P      P        22 56 40.8 +1.0
      0.2nm,0.6s,baz=339,slow=3.2,SNR=3.4
```

IDC 10 23:13:45.0±1.7**, 11°.33S**×**164°.96E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.5**/46**, mbtmp3.7**/4**, ML3.6**/1**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.1**/24**, Error ellipse: s-maj=51.5km s-min=31.5km az=127.0, Santa Cruz Islands region**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s    ISC
DZM   Mont Dzumac       10.77 173 Pn     Pn       23 16 21.0 +0.4
      0.5nm,0.3s,baz=287,slow=19,SNR=3.9
WRA   Warramunga Arr    30.66 250 P      P        23 20 01.7 +0.2
      0.4nm,0.6s,baz=82,slow=9.4,SNR=5.4
ASAR  Alice Springs     31.97 243 P      P        23 20 12.8 -0.3
      0.4nm,0.6s,baz=66,slow=10.0,SNR=5.3
RAR   Rarotonga         35.18 111 LR     LR       23 32 29.8
      comp=Z,100nm,18.5s,baz=126,slow=32
ILAR  Eielson Array     84.03  19 P      P        23 26 17.0 -0.1
      0.8nm,1.1s,baz=234,slow=4.2,SNR=3.3
```

IDC ***10*** *23:19:23.0±0.9, 31°.35N×88°.31E, h0^{km}, mb3.4/11, mb1 3.6/14, mb1mx3.5/53, mbtmp3.4/14, ML3.3/3, MS3.6/5, Ms1 3.6/5, ms1mx3.3/38, Error ellipse: s-maj=32.8km s-min=16.5km az=51.0*

ISCJB ***10*** *23:19:26.7±0.5, 31°.54N±0°.08×88°.4E±0°.1, h33^{km}, mb3.5/10, MS3.9/3, Error ellipse: s-maj=19.2km s-min=6.6km az=147.8*

ISC 10 23:19:28.6±0.7**, 31°.6N**±0°.1×**88°.4E**±0°.2**, h35**^{km}**, n26, σ1s.50**/24**, mb3.5**/10**, MS4.2**/3**, 5C-2D, Xizang**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s    ISC
SHL   Shillong           6.71 152 eP     Pn       23 21 06.0 +1.2
SHL                               eS     Sn       23 22 22.0 +1.8
BRDH  Bariadhala         9.30 161 LR     LR       23 25 27.2
      comp=Z,146nm,18.2s,baz=32,slow=40
AAK   Ala-Archa         15.63 319 Pn     Pn       23 23 07.0 +0.7
      0.0nm,0.3s,baz=206,slow=6.9,SNR=2.1
MKAR  Makanchi Array    15.93 345 Pn     Pn       23 23 08.4 -1.5
      0.0nm,0.3s,baz=150,slow=15,SNR=4.7
CMAR  Chiang Mai Arr    16.16 141 Pn     Pn       23 23 09.6 -3.5
      0.3nm,0.3s,baz=322,slow=12,SNR=3.6
CMAR                              LR     LR       23 30 07.3
      comp=Z,38nm,20.4s,baz=330,slow=40
KURBB Kurchatov Arra    20.41 342 P      P        23 24 02.5  0.0
      1.2nm,0.7s,baz=156,slow=11,SNR=4.5
SONM  Songino Array     21.30  35 P      P        23 24 13.7 +1.6
      0.8nm,0.7s,baz=221,slow=11,SNR=10.0
ZALV  Zalesovo Beam     22.54 355 P      P        23 24 25.5 +0.3
      0.7nm,0.6s,baz=163,slow=11,SNR=4.3
ZALV                              LR     LR       23 34 28.0
      comp=Z,116nm,18.8s,baz=15,slow=40
BVAR  Borovoye Array    25.11 334 P      P        23 24 51.4 +1.5
      0.3nm,0.5s,baz=140,slow=9.2,SNR=2.6
ASAJ  Asahikawa         43.90  57 LR     LR       23 44 52.6
      comp=Z,316nm,21.7s,baz=146,slow=35
BRTR  Keskin Array B    44.63 296 P      P        23 27 37.9 +0.1
      0.5nm,0.8s,baz=139,slow=9.6,SNR=3.6
AKASG Malin Array Be    47.13 312 P      P        23 27 57.4 +0.2
      0.3nm,0.4s,baz=83,slow=7.1,SNR=8.9
KIEV  Kiev              47.15 312⇓iP     P        23 27 57.3  0.0
TIRR  Tirgusor          47.97 303⇑iP     P        23 28 00.7 -3.1
VRI   Vrincioaia        49.02 305⇑iP     P        23 28 12.8 +0.9
PLOR  Plostina          49.07 305⇓iP     P        23 28 13.9 +1.6
MA2   Magadan           49.50  36 LR     LR       23 50 41.1
      comp=Z,264nm,19.4s,baz=315,slow=38
MLR   Muntele Rosu      49.60 305⇑iP     P        23 28 18.1 +1.6
ARR   Arges             50.53 305⇑iP     P        23 28 21.7 -1.8
DRGR                    51.68 307⇑iP     P        23 28 33.0 +1.0
NB2   NORSAR Subarra    56.82 325 P      P        23 29 09.2  0.0
      comp=Z,0.4nm,0.6s,baz=84,slow=7.4
NOA   NORSAR Array B    56.82 325 P      P        23 29 09.3  0.0
      comp=Z,0.6nm,0.7s,baz=101,slow=4.4,SNR=4.0
GERES GERESS Array B    57.31 311 P      P        23 29 14.1 +1.1
      comp=Z,1.1nm,0.8s,baz=81,slow=4.5,SNR=7.2
WRA   Warramunga Arr    67.56 133 P      P        23 30 21.8 +0.1
      comp=Z,0.2nm,0.7s,baz=324,slow=6.4,SNR=4.5
ASAR  Alice Springs     70.09 136 P      P        23 30 36.1 -1.3
      comp=Z,0.2nm,0.3s,baz=319,slow=6.7,SNR=3.6
ESDC  Sonseca Array     72.28 306 P      P        23 30 50.3 -0.3
      comp=Z,0.6nm,0.7s,baz=46,slow=7.3,SNR=3.1
```

ISCJB ***10*** *23:20:53.1±0.7, 49°.17N±0°.06×155°.9E±0°.2, h50^{km}, mb3.7/8, Error ellipse: s-maj=15.6km s-min=6.0km az=25.7*

MOS ***10*** *23:20:53.0±0.9, 49°.13N×155°.79E, h70^{km}, mb4.0/5, Error ellipse: s-maj=31.0km s-min=5.2km az=74.3*

KRSC ***10*** *23:20:53.9±2.1, 49°.22N×156°.50E, h40^{km}±25^{km}, ML4.3*

IDC ***10*** *23:20:59.4±4.1, 49°.66N×155°.10E, h104^{km}±34^{km}, mb3.3/8, mb1 3.6/9, mb1mx3.2/53, mbtmp3.6/9, Error ellipse: s-maj=51.7km s-min=16.9km az=150.0*

ISC 10 23:20:52.7±0.9**, 49°.11N**±0°.10×**155°.8E**±0°.1**, h50**^{km}**, n48, σ1s.82**/69**, mb3.7**/8**, 1D, Kuril Islands**

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Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s    ISC
SKR   Severo-Kuril's     1.59   8 eP     Pn       23 21 17.8 -0.6
SKR                               eS     Sn       23 21 36.8 -1.0
SKR   Severo-Kuril's     1.59   8 ePN    Pn       23 21 18.0 -0.4
SKR                               eS     Sn       23 21 35.9 -1.9
SKR                                smax  smax
      comp=E,356nm,0.4s
SKR                                smax  smax
      comp=N,331nm,0.3s
PAU   Pauzhetka          2.46  15 eP     Pn       23 21 30.8 +0.6
PAU                               eS     Sn       23 21 58.6 -0.4
PAU   Pauzhetka          2.46  15  PN    Pn       23 21 30.8 +0.6
PAU                                S     Sn       23 21 58.6 -0.4
KDTR  Khodutka, Kamc     3.08  28 eP     Pn       23 21 39.8 +1.0
KDTR                              eS     Sn       23 22 13.0 -1.3
KDTR  Khodutka, Kamc     3.08  28  PN    Pn       23 21 39.8 +1.0
KDTR                               S     Sn       23 22 13.0 -1.3
MTVR  Mutnovka           3.71  24 eP     Pn       23 21 49.3 +1.7
MTVR                              eS     Sn       23 22 29.7 -0.4
MTVR  Mutnovka           3.71  24  PN    Pn       23 21 49.3 +1.7
MTVR                               S     Sn       23 22 29.7 -0.4
RUS   Russkaya           3.76  27 eP     Pn       23 21 50.0 +2.0
RUS                               eS     Sn       23 22 30.5 -0.5
RUS   Russkaya           3.76  27  PN    Pn       23 21 50.0 +2.0
RUS                                S     Sn       23 22 30.5 -0.5
APC   Apacha             3.92  12 eP     Pn       23 21 54.2 +3.9
APC                               eS     Sn       23 22 35.2 +0.2
APC   Apacha             3.92  12  PN    Pn       23 21 54.2 +3.9
APC                                S     Sn       23 22 35.2 +0.2
KRMR  Karymshinskiy      4.02  21 eP     Pn       23 21 54.7 +3.1
KRMR                              eS     Sn       23 22 35.5 -1.8
KRMR  Karymshinskiy      4.02  21  PN    Pn       23 21 54.7 +3.1
KRMR                               S     Sn       23 22 35.5 -1.8
PETK  Petropavlovsk-     4.19  16  P     Pn       23 21 56.0 +2.1
      comp=N,2.7nm,0.3s,baz=182,slow=14,SNR=14
PET   Petropavlovsk      4.33  24 eP     Pn       23 21 55.7 -0.1
PET                               eS     Sn       23 22 45.1 +0.2
PET   Petropavlovsk      4.33  24  PN    Pn       23 21 55.7 -0.1
PET                                S     Sn       23 22 45.1 +0.2
DALK  Dalny              4.36  24 eP     Pn       23 21 57.8 +1.6
DALK                              eS     Sn       23 22 45.8 +0.1
DALK  Dalny              4.36  24  PN    Pn       23 21 57.8 +1.6
DALK                               S     Sn       23 22 45.8 +0.1
UGLR  Uglovaya           4.54  24 eP     Pn       23 22 01.1 +2.3
UGLR  Uglovaya           4.54  24  PN    Pn       23 22 01.1 +2.3
KOK   Koryaka            4.56  22 eP     Pn       23 22 01.5 +2.3
KOK   Koryaka            4.56  22  PN    Pn       23 22 01.5 +2.3
AVH   Avacha             4.56  23 eP     Pn       23 22 02.1 +2.9
AVH   Avacha             4.56  23  PN    Pn       23 22 02.1 +2.9
SMAR  Somma              4.58  24 eP     Pn       23 22 02.1 +2.6
SMAR  Somma              4.58  24  PN    Pn       23 22 02.1 +2.6
KRX   Arik               4.63  22 eP     Pn       23 22 02.7 +2.6
KRX   Arik               4.63  22  PN    Pn       23 22 02.7 +2.6
NLC   Nalytchevo         4.65  28 eP     Pn       23 22 01.3 +1.0
NLC                               eS     Sn       23 22 50.6 -2.3
NLC   Nalytchevo         4.65  28  PN    Pn       23 22 01.3 +1.0
NLC                                S     Sn       23 22 50.6 -2.3
GNL   Ganaly             4.79  16 eP     Pn       23 22 04.7 +2.4
GNL   Ganaly             4.79  16  PN    Pn       23 22 04.7 +2.4
SPN   Mys Shipunski      4.81  32 eP     Pn       23 22 02.2 -0.3
SPN                               eS     Sn       23 22 56.5 -0.4
SPN   Mys Shipunski      4.81  32  PN    Pn       23 22 02.2 -0.3
SPN                                S     Sn       23 22 56.5 -0.4
KUR   Kuril'sk           6.63 237⇓ePN    Pn       23 22 36.8 +9.4
KBTR  Krutoberegovo      8.30  28 eP     Pn       23 22 51.0 +0.7
KBTR  Krutoberegovo      8.30  28  PN    Pn       23 22 51.0 +0.7
KSRS  Korea Array       23.24 250  P     P        23 25 55.8 +0.4
      comp=N,1.3nm,0.8s,baz=40,slow=11,SNR=3.0
ILAR  Eielson Array     33.60  41  P     P        23 27 27.0 -0.6
      comp=N,0.4nm,0.8s,baz=263,slow=6.1,SNR=4.1
INK   Inuvik            38.70  34  P     P        23 28 11.4 +0.3
      comp=N,1.0nm,0.6s,baz=307,slow=6.2,SNR=10.0
MKAR  Makanchi Array    47.46 297 i P    P        23 29 23.6 +1.4
MKAR                               pmax  pmax
      comp=Z,1.0nm,0.7s
YKA   Yellowknife Ar    47.97  39  P     P        23 29 26.4 +0.6
      comp=Z,0.3nm,0.7s,baz=296,slow=7.3,SNR=4.1
CMAR  Chiang Mai Arr    54.65 257  P     P        23 30 15.4 -1.0
      comp=Z,0.6nm,0.4s,baz=18,slow=7.4,SNR=5.0
PDAR  Pinedale Array    61.94  56  P     P        23 31 08.9 +1.7
      comp=Z,0.8nm,0.9s,baz=296,slow=2.5,SNR=5.1
FINES FINESS Array B    62.65 335 i P    P        23 31 08.0 -3.4
FINES                              pmax  pmax
      comp=Z,1.0nm,0.6s
FINES FINESS Array B    62.65 335  P     P        23 31 07.4 -4.0
      comp=Z,0.7nm,0.6s,baz=20,slow=6.1,SNR=5.3
TXAR  Lajitas Array     74.81  63  P     P        23 32 28.6 +0.9
      comp=Z,0.4nm,0.7s,baz=323,slow=5.4,SNR=5.5
```

NIED ***10*** *23:21:00, 37°.20N×142°.30E, h8^{km}, Mw3.6   Best double couple: M$_0$2.80000×10^{14} NP1:φ$_s$234.00000°, δ58.00000°, λ-28.00000°.   NP2:φ$_s$340.00000°, δ66.00000°, λ-144.00000°.*

JMA ***10*** *23:21:07.3±0.4, 37°.25N×142°.32E, h7^{km}±4^{km}, M3.8*

IDC ***10*** *23:21:14.8±5.5, 37°.07N×142°.32E, h69^{km}±42^{km}, mb3.4/6, mb1 3.5/8, mb1mx3.2/50, mbtmp3.7/8, ML2.5/2, Error ellipse: s-maj=42.0km s-min=19.2km az=74.0*

ISC 10 23:21:07.6±1.3**, 37°.08N**±0°.08×**142°.19E**±0°.08**, h10**^{km}**, n23, σ1s.17**/20**, mb3.6**/6**, Off east coast of Honshu**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s    ISC
JFK   Kawauchi           1.08 286 P      Pn       23 21 29.0 +0.1
ONAJ  Iwakimizuishiy     1.11 272 P      Pn       23 21 30.6 +1.3
JFFD  Fukushimafurud     1.30 271 P      Pg       23 21 32.8 +0.2
JFFD                              eS     Sg       23 21 51.2 +1.7
JMM   Marumori           1.36 306 P      Pn       23 21 32.3 -0.3
JFT   Otama              1.54 287 P      Pb       23 21 36.4 +0.2
JOU   Okura              1.76 317 P      Pn       23 21 38.2  0.0
JOU                               eS     Sn       23 22 00.2 -0.5
JMK   Ichinoseki         2.02 338 eS     Sn       23 22 05.2 -1.8
JYK   Kaneyama           2.33 322 P      Pn       23 21 46.2 +0.1
MJAR  Matsushiro Arr     3.24 262 P      Pb       23 22 03.0 -2.2
      0.5nm,0.3s,baz=49,slow=28,SNR=11
MJAR                              S      Sb       23 22 43.3 -1.4
      0.5nm,0.3s,baz=107,slow=8.6,SNR=5.3
MAT   Matsushiro         3.24 262 P      Pb       23 22 03.1 -2.1
MAT                               eS     Sb       23 22 44.6 -0.1
USRK  Ussuriysk Ar.     10.51 316 P      Pn       23 23 44.5 +6.3
      0.3nm,0.3s,baz=132,slow=14,SNR=5.8
H11N2 WAKE ISLAND Hy 27.64 122    T      T        23 55 45.6
      baz=314,slow=75,SNR=20
H11N1 WAKE ISLAND Hy 27.65 122    T      T        23 55 46.3
      baz=314,slow=75,SNR=12
H11N3 WAKE ISLAND Hy 27.66 122    T      T        23 55 47.0
      baz=314,slow=75,SNR=12
SONM  Songino Array     28.27 304 P      P        23 27 02.0 +0.8
      0.8nm,0.8s,baz=103,slow=9.1,SNR=5.9
H11S1 WAKE ISLAND Hy 28.37 124    T      T        23 56 38.3
      baz=316,slow=75,SNR=12
H11S3 WAKE ISLAND Hy 28.37 124    T      T        23 56 44.5
      baz=316,slow=75,SNR=13
H11S2 WAKE ISLAND Hy 28.39 124    T      T        23 56 47.2
      baz=316,slow=75,SNR=10
ZALV  Zalesovo Beam     42.34 312 P      P        23 29 03.1 +1.5
      0.4nm,0.4s,baz=92,slow=6.0,SNR=2.4
MKAR  Makanchi Array    44.62 302 P      P        23 29 20.1  0.0
      0.5nm,0.7s,baz=88,slow=10,SNR=9.0
KURBB Kurchatov Arra    46.46 308 P      P        23 29 35.2 +0.6
      1.3nm,0.6s,baz=83,slow=8.2,SNR=11
WRA   Warramunga Arr    57.20 189 P      P        23 30 54.7 -0.2
      0.8nm,0.6s,baz=6.9,slow=7.3,SNR=16
ASAR  Alice Springs     60.92 189 P      P        23 31 20.7  0.0
      0.6nm,1.0s,baz=21,slow=13,SNR=4.1
```

IDC ***10*** *23:23:42.5±1.7, 31°.85S×68°.44W, h0^{km}, mb3.8/1, mb1 4.0/2, mb1mx3.6/19, mbtmp3.9/2, ML3.9/1, MS3.9/1, Ms1 3.8/1, ms1mx3.3/19, Error ellipse: s-maj=84.9km s-min=56.0km az=114.0*

ISCJB ***10*** *23:23:57.0±0.6, 31°.24S±0°.03×68°.57W±0°.05, h108^{km}±6^{km}, mb3.5/1, Error ellipse: s-maj=7.2km s-min=5.3km az=1.2*

GUC ***10*** *23:23:56.6±0.5, 31°.25S×69°.11W, h184^{km}±14^{km}, ML3.9*

SJA ***10*** *23:23:57.5±0.6, 31°.26S×68°.63W, h96^{km}±3^{km}, ML3.7, MW3.9*

ISC 10 23:23:57.3±0.9**, 31°.23S**±0°.04×**68°.57W**±0°.05**, h104**^{km}±6^{km}**, n26, σ0s.83**/38**, 3C-2D, San Juan Province**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s    ISC
RTLL  Cerro Villicun     0.13 141 i P    Pn       23 24 12.0 +0.1
RTLL                              i S    Sn       23 24 21.7 -1.1
RTLL                               IAML           23 24 24.9
      comp=Z,3µm,0.2s
RTLL  Cerro Villicun     0.13 141⇓iP     Pn       23 24 11.9  0.0
RTLL                              i S    Sn       23 24 22.9 +0.1
RTLL                               IAML           23 24 23.5
      comp=N,9µm,0.5s
AMOG  MOGNA              0.30  13 i P    Pn       23 24 13.0 +0.5
SJA   San Juan           0.30 179 i P    Pn       23 24 12.3 -0.1
SJA                                IAML           23 24 24.9
      comp=Z,1µm,0.2s
CFA   Coronel Fontan     0.47 143 i P    Pn       23 24 13.4 +0.1
RTCV  Cerro Valdivia     0.63 178 i P    Pn       23 24 14.6  0.0
ACCO  Cerro Coronel      0.77 326 i P    Pn       23 24 16.8 +0.7
RTLS  Leoncito           0.84 227 i P    Pn       23 24 17.0 +0.3
RTLS                              i S    Sn       23 24 31.3 -0.1
RTLS                               IAML           23 24 34.0
      comp=Z,1µm,0.6s
AUSP  Uspallata          1.21 215 i P    Pn       23 24 20.9 +0.3
AROD  Rodeo              1.31 323 i P    Pn       23 24 22.8 +0.9
ASAL  Salagasta          1.38 189 i P    Pn       23 24 22.7 +0.3
ASAL                              i S    Sn       23 24 41.7 +0.3
ACAN  Cantantal          1.57 132 i P    Pn       23 24 25.6 +1.0
ARCO  CERRO ARCO         1.64 191 i P    Pn       23 24 26.0 +0.4
ARCO                              i S    Sn       23 24 47.1  0.0
ARCO                               IAML           23 24 49.0
      comp=Z,940nm,0.3s
CMCH  Combarbala         2.08 271⇓iP     Pn       23 24 31.6 +0.4
CMCH                              i S    Sn       23 24 57.2 +0.1
CMCH                               IAML           23 24 58.0
      comp=N,1µm,0.5s
GO04  Tololo Observa     2.19 298⇑iP     Pn       23 24 33.0 +0.3
GO04                              i S    Sn       23 25 00.4 +0.6
GO04                               IAML           23 25 04.7
      comp=E,2µm,0.5s
FCH   Farellones         2.55 214⇑iP     Pn       23 24 38.3 +0.9
FCH                               i S    Sn       23 25 09.8 +1.5
FCH                                IAML           23 25 12.9
      comp=E,170nm,0.2s
PEL   Peldehue           2.62 223 eP     Pn       23 24 37.8 -0.4
PEL                               i S    Sn       23 25 08.8 -0.8
ROCH  El Roble           2.71 229 eP     Pn       23 24 38.5 -0.9
ROCH                              i S    Sn       23 25 10.9 -0.9
ROCH                               IAML           23 25 12.3
      comp=N,194nm,0.4s
CLCH  Cerro Calan        2.73 217 eP     Pn       23 24 40.1 +0.5
CLCH                              i S    Sn       23 25 12.2 +0.1
CLCH                               IAML           23 25 14.9
      comp=E,452nm,0.6s
LCO   Las Campanas       2.88 320⇑iP     Pn       23 24 42.0 +0.2
LCO                               i S    Sn       23 25 16.1 +0.1
LCO                                IAML           23 25 19.7
      comp=E,282nm,0.2s
LMEL  Las Melosas        2.95 207 eP     Pn       23 24 43.5 +0.9
LMEL                              i S    Sn       23 25 20.5 +2.9
LMEL                               IAML           23 25 27.4
      comp=N,112nm,0.2s
LPAZ  La Paz            14.88   2 Pn     Pn       23 27 23.8 +0.8
      comp=N,0.2nm,0.3s,baz=196,slow=5.5,SNR=8.9
BDFB  Brasilia          24.36  55 LR     LR       23 38 58.4
      comp=N,262nm,18.5s,baz=204,slow=37
TORD  Torodi Ar. Bea    80.49  68 P      P        23 35 57.6 -0.5
      comp=N,0.7nm,0.8s,baz=247,slow=5.3,SNR=6.7
WRA   Warramunga Arr   124.57 206 PKP    PKPdf    23 42 43.6 -1.4
      comp=N,0.2nm,0.5s,baz=163,slow=1.8,SNR=8.3
MKAR  Makanchi Array   152.74  47 PKPbc  PKPbc    23 43 41.0 -0.6
      comp=N,0.4nm,0.9s,baz=320,slow=1.1,SNR=4.3
```

IDC ***10*** *23:25:06.8±0.4, 10°.69S×164°.75E, h0^{km}, mb5.0/30, mb1 5.1/32, mb1mx5.0/43, mbtmp5.0/32, ML5.7/2, MS4.9/36, Ms1 4.9/36, ms1mx4.9/37, Error ellipse: s-maj=14.4km*

s-min=11.2km az=96.0

*BJI **10** 23:25:10.4, 10°.46S×164°.91E, $h33^{km}$, mB5.5/52, mb5.2/70, Ms5.3/63, Ms7 5.1/60*

*ISCJB **10** 23:25:10.9±0.1, 10°.68S±0°.02×164°.68E±0°.02, $h35^{km}$, mb5.2/201, MS5.2/161, Error ellipse: s-maj=3.6km s-min=3.2km az=175.1*

*MOS **10** 23:25:10.6±1.0, 10°.68S×164°.64E, $h34^{km}$, mb5.5/48, MS5.1/21, Error ellipse: s-maj=8.4km s-min=6.9km az=119.3*

*NEIC **10** 23:25:11.4±1.8, 10°.67S×164°.74E, $h28^{km}$±13^{km}, mb5.3/141, MS5.2/106, MW5.4, Error ellipse: s-maj=5.3km s-min=4.6km az=173.0, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.37; $M_{\theta\theta}$0.93; $M_{\phi\phi}$-0.57; $M_{r\theta}$0.44; $M_{\theta\phi}$1.35; $M_{\phi r}$-0.24; Best double couple: $M_0$1.70000×10^{17} NP1:ϕ_s282.00000°,δ81.00000°, λ-20.00000°. NP2:ϕ_s16.00000°,δ70.00000°, λ-170.00000°. Principal axes: T 1.7600, Plg7.0000°, Azm330.0000°; N -0.2300, Plg68.0000°, Azm78.0000°; P -1.5300, Plg21.0000°, Azm238.0000°;*

*GCMT **10** 23:25:11.4±0.1, 10°.63S±0°.01×164°.79E±0°.01, $h12^{km}$, MW5.5/125, Moment Tensor Solution. s98,c171; s125,c238; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.22±.02; $M_{\theta\theta}$0.86±.02; $M_{\phi\phi}$-0.63±.02; $M_{r\theta}$-0.05±.05; $M_{\theta\phi}$1.53±.02; $M_{\phi r}$-0.83±.05; Best double couple: $M_0$1.90300×10^{17} NP1:ϕ_s15.00000°,δ84.00000°, λ-154.00000°. NP2:ϕ_s282.00000°,δ64.00000°, λ-7.00000°. Principal axes: T 1.9270, Plg13.0000°, Azm145.0000°; N -0.0500, Plg63.0000°, Azm28.0000°; P -1.8780, Plg23.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 23:25:12.7±0.3**, 10°.74S**±0°.04×**164°.74E**±0°.04**, $h35^{km}$, n578, σ1^{s}57**/519**, mb5.2**/205**, MS5.2**/162**, 10C-14D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.89**	**285**	*e*P	**Pn**	**23 26 25.0**	**+1.2**
HNR				*e*S	**Sn**	**23 27 12.0**	**-7.2**
HNR	**Honiara**	**4.89**	**285**	*e*Pn	**Pn**	**23 26 24.1**	**+0.3**
HNR				*e*Sn	**Sn**	**23 27 18.5**	**-0.7**
HNR	**Honiara**	**4.89**	**285**	Pn	**Pn**	**23 26 23.7**	**0.0**
	259nm,0.3s,baz=220,slow=1.6,SNR=64						
HNR				Sn	**Sn**	**23 27 20.6**	**+1.5**
	107nm,0.3s,baz=168,slow=20,SNR=3.4						
HNR				LR	LR	23 28 40.7	
	comp=Z,24μm,18.3s,baz=117,slow=44						
MARNC	**Mare, Loyalty**	**11.14**	**164**	*e*Pn	**Pn**	**23 27 49.5**	**-0.1**
DZM	**Mont Dzumac**	**11.39**	**172**	*e*Pn	**Pn**	**23 27 52.4**	**-0.7**
	351nm,0.5s						
DZM				*e*LR	LR	23 30 26.6	
	comp=Z,21μm,23.4s						
DZM	**Mont Dzumac**	**11.39**	**172**	*e*Pn	**Pn**	**23 27 52.6**	**-0.4**
DZM				Sn	**Sn**	**23 29 59.3**	**+0.1**
DZM	**Mont Dzumac**	**11.39**	**172**	Pn	**Pn**	**23 27 53.0**	**0.0**
	52nm,0.3s,baz=29,slow=16,SNR=255						
DZM				Sn	**Sn**	**23 29 59.3**	**+0.1**
	1.0nm,0.3s,baz=163,slow=20,SNR=2.9						
DZM				LR	LR	23 31 26.6	
	comp=Z,17μm,19.8s,baz=19,slow=33						
PINNC	**Pines Island,**	**12.09**	**168**	*e*Pn	**Pn**	**23 28 01.6**	**-1.0**
FUNA	**Funafuti**	**14.43**	**83**	*e*Pn	**Pn**	**23 28 35.0**	**+0.4**
TARA	**Tarawa**	**14.51**	**35**	*e*Pn	Pn	23 28 31.8	-3.9
MSVF	**Nonsavu**	**14.66**	**120**	*e*Pn	**Pn**	**23 28 37.1**	**-0.6**
MSVF	**Nonsavu**	**14.66**	**120**	⇑*e*P	**Pn**	**23 28 37.9**	**+0.2**
PATS	**Pohnpei**	**18.59**	**340**	*e*P	**P**	**23 29 24.0**	**-3.0**
	289nm,1.1s						
MANU	**Manus Island**	**19.29**	**295**	*e*P	**P**	**23 29 35.5**	**+0.8**
	2μm,1.4s						
EIDS	**Eidsvold**	**19.48**	**220**	P	**Pn**	**23 29 39.4**	**+1.3**
	baz=20,SNR=20						
EIDS	**Eidsvold**	**19.48**	**220**	*e*P	**Pn**	**23 29 39.0**	**+0.9**
	285nm,1.1s						
CTA	**Charters Tower**	**20.08**	**240**	P	**P**	**23 29 42.9**	**-0.4**
	11nm,0.5s,baz=62,slow=12,SNR=24						
CTA				LR	LR	23 36 54.2	
	comp=Z,5μm,18.8s,baz=55,slow=35						
CTAO	**Charters Tower**	**20.08**	**240**	*e*P	**P**	**23 29 44.0**	**+0.7**
	253nm,1.4s						
CTAO				LR	LR		
	comp=Z,8μm,22.0s						
CTAO	**Charters Tower**	**20.08**	**240**	*e*P	**P**	**23 29 44.0**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,253nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,8μm,22.0s						
MTSU	**Mount Surprise**	**21.08**	**247**	P	**P**	**23 29 54.5**	**+0.2**
	baz=21,SNR=26						
COEN	**Coen**	**21.30**	**259**	P	**P**	**23 29 56.4**	**-0.1**
	baz=21,SNR=20						
COEN	**Coen**	**21.30**	**259**	*e*P	**P**	**23 29 56.5**	**-0.1**
	comp=Z,57nm,1.0s						
LHI	**Lord Howe Isla**	**21.34**	**193**	*e*P	**P**	**23 29 58.9**	**+2.0**
	comp=Z,156nm,1.3s						
RMQ	**Roma**	**21.75**	**222**	P	**P**	**23 30 02.8**	**+1.5**
	baz=22,SNR=110						
ARMA	**Armidale**	**23.07**	**210**	P	**P**	**23 30 16.8**	**+1.4**
	baz=23,SNR=10						
ARMA	**Armidale**	**23.07**	**210**	*e*P	**P**	**23 30 16.8**	**+1.4**
	comp=Z,80nm,1.0s						
RAO	**Raoul Island**	**24.54**	**141**	PFAKE		23 30 40.0	+11
RAO				LR	LR		
	comp=Z,5μm,20.0s						
RAO	**Raoul Island**	**24.54**	**141**	LR	LR	23 38 44.0	
	comp=Z,4μm,18.5s,baz=320,slow=33						
KNTN	**Kanton**	**24.67**	**73**	*e*P	**P**	**23 30 32.7**	**+2.3**
	comp=Z,192nm,1.1s						
JAY	**Jayapura**	**25.21**	**287**	P	**P**	**23 30 35.1**	**-0.4**
MGCD	**Mangrove Creek**	**25.64**	**207**	P	**P**	**23 30 42.0**	**+2.9**
	baz=26,SNR=8.8						
OUZ	**Omahuta**	**25.68**	**163**	*e*P	**P**	**23 30 41.7**	**+2.3**
	comp=Z,102nm,1.1s						
QIS	**Mount Isa**	**26.06**	**245**	P	**P**	**23 30 41.9**	**-1.2**
	baz=26,SNR=4.0						
RIV	**Riverview**	**26.14**	**206**	P	**P**	**23 30 45.2**	**+1.5**
	baz=26,SNR=8.6						
CMSA	**Cobar Meteorol**	**27.19**	**218**	P	**P**	**23 30 53.6**	**+0.5**
	baz=27,SNR=17						
YNG	**Young**	**27.81**	**210**	P	**P**	**23 31 00.6**	**+1.9**
	baz=28,SNR=8.8						
H11S2	**WAKE ISLAND Hy**	**29.11**	**4**	T	T	00 01 20.8	
	baz=184,slow=76,SNR=622						
HIZ	**Hauiti**	**29.11**	**164**	*e*P	**P**	**23 31 11.4**	**+1.3**
	comp=Z,42nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**29.11**	**4**	T	T	00 01 21.1	
	baz=184,slow=76,SNR=736						
H11S1	**WAKE ISLAND Hy**	**29.12**	**4**	T	T	00 01 22.2	
	baz=184,slow=76,SNR=953						
HAZ	**Te Kaha**	**29.35**	**159**	P	**P**	**23 31 13.7**	**+1.4**
MXZ	**Matakaoa Point**	**29.37**	**158**	*e*P	**P**	**23 31 12.6**	**+0.1**
	comp=Z,82nm,1.2s						
URZ	**Urewera**	**29.57**	**160**	P	**P**	**23 31 13.4**	**-0.8**
	comp=Z,37nm,0.9s,baz=56,slow=3.6,SNR=17						
URZ				LR	LR	23 41 56.7	
	comp=Z,9μm,18.6s,baz=347,slow=34						
PKGZ	**Pakihiroa**	**29.57**	**158**	P	**P**	**23 31 16.4**	**+2.1**
MWZ	**Matawai**	**29.78**	**159**	P	**P**	**23 31 17.6**	**+1.5**
TWGZ	**Tauwhareparae**	**29.79**	**159**	P	**P**	**23 31 17.9**	**+1.6**
PUZ	**Puketiti**	**29.80**	**158**	P	**P**	**23 31 16.2**	**-0.1**
RTZ	**Ruatahuna**	**29.85**	**160**	P	**P**	**23 31 18.9**	**+2.1**
MRHZ	**Matea Rd**	**29.86**	**161**	P	**P**	**23 31 20.4**	**+3.5**
STKA	**Stephens Creek**	**30.00**	**222**	P	**P**	**23 31 18.8**	**+0.6**
	baz=30,SNR=30						
STKA	**Stephens Creek**	**30.00**	**222**	*e*P	**P**	**23 31 18.5**	**+0.4**
	comp=Z,17nm,1.0s						
STKA	**Stephens Creek**	**30.00**	**222**	P	**P**	**23 31 19.1**	**+0.9**
	comp=Z,35nm,0.8s,baz=38,slow=12,SNR=38						
STKA				LR	LR	23 43 32.8	
	comp=Z,3μm,18.1s,baz=41,slow=37						
SNGZ	**Shannon Statio**	**30.11**	**160**	P	**P**	**23 31 20.9**	**+1.8**
CNGZ	**Carnagh Statio**	**30.15**	**159**	P	**P**	**23 31 19.7**	**+0.3**
BKZ	**Black Stump Fm**	**30.19**	**162**	P	**P**	**23 31 22.5**	**+2.7**
H11N1	**WAKE ISLAND Hy**	**30.33**	**4**	T	T	00 02 55.2	
	baz=184,slow=76,SNR=486						
H11N3	**WAKE ISLAND Hy**	**30.34**	**4**	T	T	00 02 58.1	
	baz=184,slow=76,SNR=326						
H11N2	**WAKE ISLAND Hy**	**30.35**	**4**	T	T	00 02 56.5	
	baz=184,slow=76,SNR=370						
WRAB	**Tennant Creek**	**30.65**	**249**	*e*P	**P**	**23 31 22.4**	**-1.6**
	comp=Z,23nm,0.9s						
WRAB				LR	LR		
	comp=Z,4μm,21.0s						
WRAB	**Tennant Creek**	**30.65**	**249**	*d i*P	**P**	**23 31 21.8**	**-2.3**
WRAB				pmax	pmax		
	comp=Z,48nm,1.4s						
WB2	**Warramunga Arr**	**30.65**	**249**	*e*P	**P**	**23 31 22.2**	**-1.9**
	comp=Z,19nm,0.8s						
WRA	**Warramunga Arr**	**30.66**	**249**	P	**P**	**23 31 22.0**	**-2.2**
WRA	**Warramunga Arr**	**30.66**	**249**	P	**P**	**23 31 22.0**	**-2.2**
	comp=Z,6.4nm,0.5s,baz=79,slow=9.2,SNR=55						
WRA				LR	LR	23 42 35.4	
	comp=Z,4μm,21.9s,baz=55,slow=34						
GUMO	**Guam**	**31.19**	**320**	PFAKE		23 31 40.0	+11
GUMO				LR	LR		
	comp=Z,4μm,21.0s						
GUMO	**Guam**	**31.19**	**320**	LR	LR	23 42 28.9	
	comp=Z,4μm,21.6s,baz=132,slow=33						
BFZ	**Birch Farm**	**31.52**	**163**	*e*P	**P**	**23 31 35.1**	**+3.7**
	comp=Z,43nm,0.8s						
KDU	**Kakadu**	**31.64**	**263**	P	**P**	**23 31 30.6**	**-2.2**
	baz=32,SNR=8.5						
SNZO	**South Karori**	**31.70**	**166**	PFAKE		23 31 50.0	+17
SNZO				LR	LR		
	comp=Z,6μm,19.0s						
THZ	**Tophouse**	**31.73**	**168**	*e*P	**P**	**23 31 36.3**	**+2.9**
	comp=Z,38nm,0.8s						
TOO	**Toolangi**	**31.83**	**210**	P	**P**	**23 31 35.8**	**+1.4**
	baz=32,SNR=6.0						
TOO	**Toolangi**	**31.83**	**210**	*e*P	**P**	**23 31 35.9**	**+1.6**
	comp=Z,70nm,1.4s						
AS01	**Alice Springs**	**32.01**	**242**	*e*P	P	23 31 31.8	-4.2
AS31	**Alice Springs**	**32.05**	**242**	*e*P	**P**	**23 31 34.5**	**-2.0**
	comp=Z,3.3nm,0.6s						
ASAR	**Alice Springs**	**32.05**	**242**	P	**P**	**23 31 34.5**	**-2.0**
	comp=Z,7.0nm,0.5s,baz=63,slow=10,SNR=95						
ASAR				PcP	**PcP**	**23 34 25.4**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=64,slow=2.8,SNR=4.1						
ASAR				LR	LR	23 44 09.8	
	comp=Z,4μm,18.3s,baz=70,slow=36						
HTT	**Hallett**	**32.72**	**222**	P	**P**	**23 31 42.6**	**+0.4**
	baz=33,SNR=31						
FOZ	**Fox Glacier**	**32.97**	**173**	*e*P	**P**	**23 31 45.4**	**+1.3**
	comp=Z,51nm,0.9s						
RPZ	**Rata Peaks**	**33.31**	**172**	P	**P**	**23 31 47.8**	**+0.7**
	comp=Z,31nm,0.8s,baz=68,slow=10,SNR=7.6						
BBOO	**Buckleboo**	**34.32**	**226**	P	**P**	**23 31 56.3**	**+0.2**
	baz=34,SNR=14						
BBOO	**Buckleboo**	**34.32**	**226**	*e*P	**P**	**23 31 56.3**	**+0.2**
	comp=Z,105nm,1.2s						
BNDI	**Bandanaira**	**35.05**	**277**	P	**P**	**23 32 02.1**	**-0.5**
PALU	**Palau**	**35.07**	**300**	P	**P**	**23 32 01.2**	**-1.6**
	baz=35,SNR=3.4						
KNRA	**Kununurra**	**35.33**	**258**	P	**P**	**23 32 03.2**	**-1.8**
	baz=35,SNR=10						
WRKA	**Warakurna**	**37.34**	**243**	P	**P**	**23 32 20.6**	**-1.5**
	baz=37,SNR=16						
NLAI	**Namlea**	**38.06**	**279**	P	**P**	**23 32 30.6**	**+2.4**
FITZ	**Fitzroy Crossi**	**38.50**	**254**	P	**P**	**23 32 30.0**	**-1.9**
	baz=38,SNR=25						
FITZ	**Fitzroy Crossi**	**38.50**	**254**	*e*P	**P**	**23 32 29.5**	**-2.4**
	comp=Z,18nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.50**	**254**	P	**P**	**23 32 29.6**	**-2.4**
	comp=Z,14nm,0.6s,baz=87,slow=7.5,SNR=50						
FORT	**Forrest**	**39.41**	**234**	*e*P	**P**	**23 32 38.8**	**-0.6**
	comp=Z,87nm,1.0s						
SANI	**Sanana**	**39.42**	**280**	P	**P**	**23 32 38.7**	**-1.0**
BATI	**Baumata**	**40.37**	**267**	P	**P**	**23 32 46.7**	**-0.9**
BATI	**Baumata**	**40.37**	**267**	P	**P**	**23 32 46.4**	**-1.2**
	comp=Z,13nm,0.4s,baz=158,slow=4.3,SNR=10						
BATI				LR	LR	23 51 50.8	
	comp=Z,2μm,18.2s,baz=112,slow=40						
MMRI	**Maumere**	**41.92**	**269**	*e*P	**P**	**23 32 58.1**	**-2.3**
	comp=Z,118nm,1.3s						
MMRI	**Maumere**	**41.92**	**269**	P	**P**	**23 33 01.3**	**+0.9**
MATI	**Mati**	**42.14**	**293**	*e*P	**P**	**23 33 01.0**	**-1.1**
EDFI	**Ende, Flores**	**42.45**	**269**	P	**P**	**23 33 01.3**	**-3.5**
LUWI	**Luwuk**	**42.78**	**280**	*e*P	**P**	**23 33 05.5**	**-1.8**
	comp=Z,211nm,1.4s						
LUWI	**Luwuk**	**42.78**	**280**	P	**P**	**23 33 08.0**	**+0.6**
DAV	**Davao City (W)**	**42.80**	**293**	PFAKE		23 33 20.0	+12
DAV				LR	LR		
	comp=Z,753nm,22.0s						
DAV	**Davao City (W)**	**42.80**	**293**	LR	LR	23 51 05.3	
	comp=Z,719nm,19.4s,baz=106,slow=36						
KCP	**Kidapawan**	**43.22**	**292**	⇓*i*P	**P**	**23 33 11.4**	**+0.4**
JCJ	**Chichijima**	**43.51**	**330**	LR	LR	23 49 43.3	
	comp=Z,1μm,21.9s,baz=150,slow=34						
BUTP	**Butuan**	**43.56**	**295**	*e*P	**P**	**23 33 13.1**	**-0.6**
BUKP	**Musuan**	**43.60**	**293**	*e*P	**P**	**23 33 12.4**	**-1.6**
MBWA	**Marble Bar**	**44.36**	**251**	PFAKE		23 33 30.0	+10
MBWA				LR	LR		
	comp=Z,4μm,20.0s						
BKSI	**Bulukumba**	**44.47**	**273**	P	**P**	**23 33 23.8**	**+2.9**
	comp=Z,8.4nm,1.0s,comp=Z,261nm						
BNSI	**Bone**	**44.65**	**275**	P	**P**	**23 33 21.8**	**-0.6**
	comp=Z,56nm,1.3s,comp=Z,949nm						
PPT	**Papeete**	**44.73**	**104**	LR	LR	23 49 06.0	
	comp=Z,2μm,18.2s,baz=274,slow=32						
PPT2	**Papeete2**	**44.73**	**104**	*e*S	**S**	**23 39 58.1**	**+0.1**
	comp=Z,231nm,24.2s						
PPT2				*e*LQ	LQ	23 43 51.3	
	comp=Z,5μm,28.0s						
PPT2				*e*LR	LR	23 45 47.2	
	comp=Z,2μm,23.0s						
MSLP	**Maasin**	**44.75**	**296**	*e*P	**P**	**23 33 23.1**	**0.0**
KAPI	**Kappang**	**44.88**	**274**	PFAKE		23 33 40.0	+16
KAPI				LR	LR		
	comp=Z,617nm,19.0s						
SPSI	**Sidrap Palu**	**45.06**	**275**	P	**P**	**23 33 23.1**	**-2.6**
PCI	**Palu**	**45.66**	**279**	P	**P**	**23 33 32.6**	**+2.2**
	comp=Z,122nm,1.4s,comp=Z,2μm						
MEEK	**Meekatharra**	**46.20**	**243**	P	**P**	**23 33 33.8**	**-0.8**
	baz=46,SNR=11						
PLAI	**Plampang**	**46.28**	**268**	P	**P**	**23 33 37.6**	**+2.3**
GUIM	**Jordan**	**46.97**	**296**	*e*P	**P**	**23 33 39.2**	**-1.4**
OTRP	**Odiongan**	**48.23**	**297**	*e*P	**P**	**23 33 49.5**	**-0.9**
CUYO	**Cuyo Island**	**48.46**	**295**	*e*P	**P**	**23 33 52.5**	**+0.3**
NWAO	**Narrogin (SRO)**	**48.82**	**235**	PFAKE		23 34 10.0	+15
NWAO				LR	LR		
	comp=Z,5μm,22.0s						
BOAC	**Boac**	**48.88**	**298**	*e*P	**P**	**23 33 55.9**	**+0.4**
MORW	**Morawa**	**48.90**	**241**	P	**P**	**23 33 55.2**	**-0.3**
	baz=49,SNR=3.7						
BUSP	**Coron**	**49.67**	**296**	*e*P	**P**	**23 34 01.3**	**-0.2**
JHJ	**Hachijo jima 2**	**49.68**	**332**	LR	LR	23 52 06.7	
	comp=Z,755nm,19.4s,baz=84,slow=33						
JAGI	**Jajag, Banyuwa**	**49.88**	**268**	*e*P	**P**	**23 34 01.8**	**-1.4**
	comp=Z,48nm,1.2s						
TGY	**Tagaytay City**	**49.95**	**299**	LR	LR	23 54 13.0	
	comp=Z,1μm,19.4s,baz=116,slow=35						
CAUP	**Cauayan**	**50.56**	**302**	*e*P	**P**	**23 34 09.1**	**+0.9**
BATP	**Bataraza**	**50.57**	**291**	*e*P	**P**	**23 34 08.4**	**0.0**
APYP	**Conner**	**51.49**	**303**	*e*P	**P**	**23 34 14.3**	**-0.9**
INU	**Inuyama**	**52.80**	**331**	*e*P	**P**	**23 34 24.9**	**+0.3**
	comp=Z,180nm,1.5s						
MJAR	**Matsushiro Arr**	**53.24**	**333**	P	**P**	**23 34 26.6**	**-1.3**
	comp=Z,51nm,1.3s,baz=166,slow=7.5,SNR=14						
MJAR				LR	LR	23 55 04.6	
	comp=Z,471nm,21.5s,baz=145,slow=34						
MAJO	**Matsushiro**	**53.25**	**333**	*e*P	**P**	**23 34 27.1**	**-0.8**
	comp=Z,110nm,1.4s						
MAJO				LR	LR		
	comp=Z,1μm,19.0s						
MAJO	**Matsushiro**	**53.25**	**333**	*d i*P	**P**	**23 34 27.5**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,101nm,1.5s						
MAT	**Matsushiro**	**53.25**	**333**	P	**P**	**23 34 26.4**	**-1.5**
MAT				S	**S**	**23 41 52.6**	**-4.3**
MJB9	**Matsu-Tunnel**	**53.25**	**333**	*e*P	**P**	**23 34 27.5**	**-0.5**
	comp=Z,102nm,1.4s						
JNU	**Nakatsue**	**54.25**	**325**	*e*P	**P**	**23 34 34.8**	**-0.6**
	comp=Z,141nm,1.1s						
JNU	**Nakatsue**	**54.25**	**325**	P	**P**	**23 34 33.9**	**-1.6**
	comp=Z,47nm,0.8s,baz=105,slow=3.1,SNR=20						
JNU				LR	LR	23 54 36.9	
	comp=Z,681nm,21.7s,baz=134,slow=33						
TAOE	**Nuku Hiva Isla**	**54.29**	**93**	*e*S	**S**	**23 42 12.7**	**+0.8**
	comp=Z,513nm,24.5s						
TAOE				*e*LR	LR	23 50 04.3	
	comp=Z,1μm,23.3s						
YULB	**Yu-li**	**54.37**	**309**	*e*P	**P**	**23 34 36.0**	**-0.4**
	comp=Z,44nm,1.0s						
NACB	**Ninganchiao**	**54.58**	**310**	*e*P	**P**	**23 34 39.1**	**+1.2**
	comp=Z,146nm,1.4s						
TPUB	**Ta-pu**	**54.83**	**308**	*e*P	**P**	**23 34 39.0**	**-0.7**
	comp=Z,112nm,1.3s						
YHNB	**Yeheng**	**55.02**	**310**	*e*P	**P**	**23 34 41.6**	**+0.4**
	comp=Z,278nm,1.5s						
TATO	**Taipei**	**55.11**	**311**	PFAKE		23 34 50.0	+8.3
TATO				LR	LR		
	comp=Z,2μm,21.0s						
ERM	**Erimo**	**56.11**	**341**	PFAKE		23 35 00.0	+11
ERM				LR	LR		
	comp=Z,869nm,20.0s						
CISI	**Cisompet, Garu**	**56.22**	**268**	*e*P	**P**	**23 34 48.7**	**-1.4**
	comp=Z,119nm,1.4s						
YUK	**Yuzh-Kuril'sk**	**57.15**	**344**	P	P	23 34 46.7	-9.2
YUK				*e*PPP	PPP	23 38 28.1	
YUK				*e*S	**S**	**23 42 54.4**	**+5.7**
YUK				*e*SSS	SSS	23 48 48.9	
YUK				MLR	MLR		
	comp=Z,1μm,18.0s						
YUK				MLR	MLR		
	comp=N,983nm,15.0s						
KUR	**Kuril'sk**	**57.75**	**346**	P	**P**	**23 35 03.8**	**+3.7**
KUR				S	S	23 43 07.9	+11
KUR				*i*		23 44 48.1	
KUR				MLR	MLR		
	comp=Z,1μm,15.0s						
KUR				MLR	MLR		
	comp=N,600nm,13.0s						
ASAJ	**Asahikawa**	**58.18**	**341**	P	**P**	**23 35 02.4**	**-0.8**
	comp=N,64nm,0.9s,baz=206,slow=10.0,SNR=23						
TJN	**Taejon**	**58.60**	**325**	⇓*e*P	**P**	**23 35 05.3**	**-0.9**
RKT	**Rikitea**	**58.63**	**111**	*e*LQ	LQ	23 49 46.9	
	comp=N,2μm,31.2s						
RKT				*e*LR	LR	23 52 10.4	
	comp=N,1μm,23.8s						
SSE	**Sheshan**	**58.94**	**316**	*e*P	**P**	**23 35 08.0**	**-0.7**
	comp=N,108nm,1.5s						
SSE				LR	LR		
	comp=Z,1μm,19.0s						
KSRS	**Korea Array**	**59.06**	**326**	P	**P**	**23 35 09.1**	**-0.3**
	comp=Z,10nm,0.9s,baz=142,slow=5.9,SNR=15						
KSRS				LR	LR	23 58 40.8	
	comp=Z,654nm,20.0s,baz=142,slow=34						
KS15	**Wonju Array Si**	**59.08**	**326**	*e*P	**P**	**23 35 11.6**	**+2.0**
KSAR	**Wonju Array Be**	**59.08**	**326**	P	**P**	**23 35 09.1**	**-0.4**
KSAR	**Wonju Array Be**	**59.08**	**326**	P	**P**	**23 35 09.1**	**-0.4**
KS01	**Wonju Array Si**	**59.10**	**326**	*e*P	**P**	**23 35 09.1**	**-0.6**
YSS	**Yuzh-Sakhalins**	**60.70**	**343**	*e*P	**P**	**23 35 22.1**	**+1.6**
	comp=Z,93nm,1.2s						
YSS				LR	LR		
	comp=Z,899nm,19.0s						
YSS	**Yuzh-Sakhalins**	**60.70**	**343**	⇑*e*P	**P**	**23 35 22.0**	**+1.6**
YSS				*e**PP	**pP**	**23 35 32.3**	**+2.5**
YSS				*e*		23 36 06.1	
YSS				*e*		23 37 32.5	
YSS				*e*S	**S**	**23 43 37.9**	**+3.2**
YSS				*e*S	**S**	**23 43 37.9**	**+3.2**
YSS				*e*PS	**PnS**	**23 43 54.6**	**+3.0**
YSS				*e*PS	**PnS**	**23 43 54.6**	**+3.0**
YSS				*e*SSS	SSS	23 50 15.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				MLR	MLR		
	comp=N,1μm,16.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS				MLR	MLR		
	comp=E,800nm,12.0s						
NJ2	**Nanjing**	**61.10**	**316**	*e*P	**P**	**23 35 23.5**	**-0.1**
NJ2				pP	**pP**	**23 35 33.8**	**+0.9**
NJ2				S	**S**	**23 43 46.3**	**+5.8**
NJ2				pmax	pmax		
	comp=E,43nm,1.2s						
NJ2				pmax	pmax		
	comp=E,570nm,8.7s						
NJ2				LR	LR		
	comp=E,1μm,20.6s						
NJ2				LR	LR		
	comp=E,950nm,20.1s						
NJ2				LR	LR		
	comp=E,1μm,19.0s						
MSHR	**Mys Shultsa**	**61.32**	**332**	⇑*e*P	**P**	**23 35 24.9**	**+0.1**
VLA	**Vladivostok**	**61.41**	**333**	*de*P	**P**	**23 35 26.6**	**+1.2**
VLA				pmax	pmax		
	comp=Z,134nm,1.6s						
QIZ	**Qiongzhong**	**61.66**	**298**	P	**P**	**23 35 28.0**	**+0.4**
QIZ				S	**S**	**23 43 49.6**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,310nm,1.9s						
QIZ				LR	LR		
	comp=Z,500nm,18.1s						
QIZ				LR	LR		
	comp=Z,640nm,21.1s						
QIZ				LR	LR		
	comp=Z,990nm,24.5s						
QIZ	**Qiongzhong**	**61.66**	**298**	*e*P	**P**	**23 35 27.5**	**-0.1**
	comp=Z,110nm,1.7s						
QIZ				LR	LR		
	comp=Z,119nm,21.0s						
USA0B	**Ussuriysk Arra**	**62.23**	**334**	*e*P	**P**	**23 35 32.1**	**+1.2**
	comp=Z,108nm,1.4s						
USRK	**Ussuriysk Ar.**	**62.23**	**334**	P	**P**	**23 35 31.4**	**+0.5**
	comp=Z,147nm,1.4s,baz=134,slow=5.5,SNR=21						
USRK				LR	LR	23 59 11.6	
	comp=Z,625nm,21.8s,baz=133,slow=33						
MDJ	**Mudanjiang**	**63.62**	**333**	P	**P**	**23 35 40.3**	**+0.2**
MDJ				pP	pP	23 35 51.0	+1.4
MDJ				sP	sP	23 35 54.9	+1.6
MDJ				PcP	**PcP**	**23 36 15.5**	**-0.8**
MDJ				PP	**PP**	**23 38 01.1**	**+0.6**
MDJ				sS	sS	23 44 31.7	+4.1
MDJ				ScS	**SKSac**	**23 45 31.0**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,63nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,730nm,5.8s						
MDJ				LR	LR		
	comp=Z,1μm,20.3s						
MDJ				LR	LR		
	comp=Z,1μm,20.3s						
MDJ				LR	LR		
	comp=Z,2μm,27.9s						
MDJ	**Mudanjiang**	**63.62**	**333**	*e*P	**P**	**23 35 39.7**	**-0.4**
	comp=Z,82nm,1.4s						
MDJ				LR	LR		
	comp=Z,714nm,19.0s						
DL2	**Dalian**	**63.64**	**323**	P	**P**	**23 35 41.4**	**+1.0**
DL2				S	**S**	**23 44 17.0**	**+4.9**
DL2				pmax	pmax		
	comp=Z,30nm,1.0s						
DL2				pmax	pmax		
	comp=Z,270nm,5.7s						
DL2				LR	LR		
	comp=Z,790nm,16.6s						
DL2				LR	LR		
	comp=Z,980nm,15.1s						
DL2				LR	LR		
	comp=Z,1μm,16.5s						
PET	**Petropavlovsk**	**63.72**	**356**	PFAKE		23 35 50.0	+9.4
PET				LR	LR		
	comp=Z,2μm,21.0s						
PET	**Petropavlovsk**	**63.72**	**356**	*i* P	**P**	**23 35 41.2**	**+0.6**
PEA0B	**Petropavlovsk-**	**63.87**	**355**	*e*P	**P**	**23 35 43.7**	**+2.1**
	comp=Z,144nm,1.5s						
PETK	**Petropavlovsk-**	**63.87**	**355**	*e*P	**P**	**23 35 42.5**	**+0.9**
PETK	**Petropavlovsk-**	**63.87**	**355**	*e*P	**P**	**23 35 42.5**	**+0.9**
PETK	**Petropavlovsk-**	**63.87**	**355**	P	**P**	**23 35 41.2**	**-0.4**
	comp=Z,20nm,0.9s,baz=157,slow=9.0,SNR=13						
PETK				LR	LR	23 58 27.3	
	comp=Z,805nm,21.0s,baz=174,slow=31						
KIWB	**Kanaga Island**	**64.27**	**12**	*e*P	**P**	**23 35 45.6**	**+1.3**
TYV	**Tymovskoe**	**64.28**	**345**	*e*P	**P**	**23 35 42.3**	**-2.0**
TYV				*e*S	**P**	**23 35 47.5**	**+3.2**
TYV				pmax	pmax		
	comp=Z,400nm,6.0s						
ADK	**Adak**	**64.40**	**13**	PFAKE		23 36 00.0	+15
ADK				LR	LR		
	comp=Z,1μm,19.0s						
TIA	**Tai'an**	**64.73**	**319**	P	**P**	**23 35 46.2**	**-1.4**
TIA				pmax	pmax		
	comp=Z,12nm,1.7s						
CN2	**Changchun**	**64.97**	**330**	*e*P	**P**	**23 35 48.1**	**-0.9**
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						
CN2				pmax	pmax		
	comp=Z,470nm,7.0s						
CN2				LR	LR		
	comp=Z,900nm,20.0s						
CN2				LR	LR		
	comp=Z,900nm,20.0s						
CN2				LR	LR		

	comp=Z,800nm,19.0s						
GRNR	Gornyy	66.02	341	eP	P	23 35 57.1	+1.4
SKNT	Sakolnakorn	66.06	294	P	P	23 35 56.9	+0.3
	comp=Z,33nm,1.8s,comp=Z,691nm						
CASY	Casey	66.31	201	PFAKE		23 36 10.0	+13
CASY				LR	LR		
	comp=Z,270nm,19.0s						
KLR	Kul'dur	66.38	337	⇓eP	P	23 35 57.2	-0.8
KLR	Kul'dur	66.38	337	P	P	23 35 57.3	-0.7
	comp=Z,17nm,0.9s,baz=267,slow=2.5,SNR=25						
VNDA	Vanda	66.79	181	eP	P	23 36 01.8	+1.5
	comp=Z,85nm,1.4s						
VNDA	Vanda	66.79	181	eP	P	23 36 01.8	+1.5
VNDA				pmax	pmax		
	comp=Z,85nm,1.4s						
VNDA	Vanda	66.79	181	P	P	23 36 00.7	+0.5
	comp=Z,21nm,1.0s,baz=3.0,slow=5.2,SNR=6.1						
VNDA				LR	LR	00 02 42.4	
	comp=Z,2µm,18.6s,baz=6.0,slow=34						
PSI	Prapat	66.84	278	eP	P	23 35 59.3	-2.6
	comp=Z,65nm,1.4s						
PSI	Prapat	66.84	278	eP	P	23 35 59.3	-2.6
PSI				pmax	pmax		
	comp=Z,65nm,1.4s						
SRAK	Srakaew	66.85	290	P	P	23 36 01.4	-0.3
	comp=Z,42nm,1.0s,comp=Z,454nm						
NKL	Nikolayevsk	66.87	345	eP	P	23 36 00.5	-0.5
NKL				pmax	pmax		
	comp=Z,55nm,1.0s						
ENH	Enshi	66.93	309	eP	P	23 36 01.0	-1.0
	comp=Z,202nm,1.6s						
ENH				LR	LR		
	comp=Z,762nm,19.0s						
NONG	Nongkai	67.18	295	P	P	23 36 04.0	+0.3
	comp=Z,1.1nm,1.6s						
TRTT	Trang	67.31	283	P	P	23 36 08.2	+3.6
	comp=Z,12nm,1.8s						
NIKH	Nikolski High	67.36	17	eP	P	23 36 04.7	+0.6
	comp=Z,134nm,1.1s						
CHAI	Chaiyaphum	67.50	292	P	P	23 36 05.9	+0.1
	comp=Z,7.6nm,1.0s,comp=Z,91nm						
BJT	Baijiatuau	67.61	321	eP	P	23 36 06.0	0.0
	comp=Z,96nm,1.6s						
BJT				LR	LR		
	comp=Z,2µm,22.0s						
BJT	Baijiatuau	67.61	321	eP	P	23 36 06.0	0.0
BJT				pmax	pmax		
	comp=Z,96nm,1.6s						
BJT				MLR	MLR		
	comp=Z,2µm,22.0s						
PATY	Pattaya	67.61	289	P	P	23 36 07.8	+1.3
	comp=Z,12nm,0.8s						
BJI	Beijing	67.62	322	P	P	23 36 05.8	-0.2
BJI				S	S	23 45 03.5	+2.7
BJI				pmax	pmax		
	comp=Z,14nm,1.7s						
BJI				LR	LR		
	comp=Z,850nm,27.4s						
BJI				LR	LR		
	comp=Z,780nm,27.9s						
BJI				LR	LR		
	comp=Z,2µm,32.1s						
GSI	Gunungsitoli	67.84	276	eP	P	23 36 11.5	+3.5
	comp=Z,81nm,1.3s						
PBKT	Sadao Pong	68.64	293	eP	P	23 36 13.3	+0.4
	comp=Z,47nm,1.2s						
PBKT	Sadao Pong	68.64	293	P	P	23 36 13.3	+0.4
	comp=Z,38nm,1.8s,comp=Z,1µm						
TIY	Taiyuan	68.66	318	eP	P	23 36 13.4	+0.6
TIY				pP	sP	23 36 25.4	-0.4
TIY				S	S	23 45 18.6	+5.1
TIY				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TIY				pmax	pmax		
	comp=Z,370nm,6.3s						
TIY				LR	LR		
	comp=Z,600nm,14.7s						
TIY				LR	LR		
	comp=Z,770nm,14.7s						
TIY				LR	LR		
	comp=Z,1µm,17.8s						
PHET	Kaeng Krachan	68.76	288	P	P	23 36 16.4	+2.7
	comp=Z,8.5nm,1.9s,comp=Z,136nm						
XAN	Xi'an	69.18	313	P	P	23 36 15.0	-1.0
XAN				pP	pP	23 36 27.5	+1.9
XAN				sP	pwP	23 36 33.0	+2.2
XAN				S	S	23 45 15.1	-4.6
XAN				ScS	SKSac	23 46 12.6	-1.1
XAN				SS	SS	23 49 50.5	+3.6
XAN				pmax	pmax		
	comp=Z,32nm,1.6s						
XAN				pmax	pmax		
	comp=Z,370nm,5.3s						
XAN				LR	LR		
	comp=Z,720nm,18.4s						
XAN				LR	LR		
	comp=Z,650nm,21.7s						
XAN				LR	LR		
	comp=Z,1µm,21.7s						
XAN	Xi'an	69.18	313	eP	P	23 36 15.4	-0.7
	comp=Z,580nm,1.6s						
XAN	Xi'an	69.18	313	eP	P	23 36 15.4	-0.7
XAN				pmax	pmax		
	comp=Z,580nm,1.6s						
UTTA	Uttaradit	69.40	294	P	P	23 36 18.2	+0.6
	comp=Z,6.8nm,1.7s,comp=Z,91nm						
NANT	Nan	69.62	295	P	P	23 36 19.2	+0.2
	comp=Z,5.5nm,1.1s,comp=Z,11µm						
SRDT	SRDT	69.65	290	P	P	23 36 20.3	+1.1
	comp=Z,42nm,1.7s,comp=Z,781nm						
UTHA	Uthaitani	69.72	291	P	P	23 36 20.7	+1.1
	comp=Z,7.1nm,1.1s,comp=Z,106nm						
KMI	Kunming	70.11	302	P	P	23 36 22.7	+0.5
KMI				pP	pP	23 36 32.7	+1.5
KMI				sP	sP	23 36 36.0	+1.4
KMI				PP	PP	23 38 59.8	+2.0
KMI				S	S	23 45 35.8	+4.4
KMI				sS	sS	23 45 49.4	+2.7
KMI				SS	SS	23 50 01.7	-0.2
KMI				pmax	pmax		
	comp=Z,58nm,1.7s						
KMI				pmax	pmax		
	comp=Z,510nm,6.3s						
KMI				LR	LR		
	comp=Z,400nm,20.0s						
KMI				LR	LR		
	comp=Z,450nm,19.6s						
KMI				LR	LR		
	comp=Z,570nm,20.0s						
SUKH	Sukhothai	70.15	293	P	P	23 36 24.1	+1.9
	comp=Z,5.0nm,1.0s						
UMPA	Umpang Tak	70.45	291	P	P	23 36 26.4	+2.2
	comp=Z,6.1nm,1.1s						
HHC	Hu-ho-hao-te	70.96	320	eP	P	23 36 26.9	0.0
HHC				S	S	23 45 44.9	+4.5
HHC				sS	sS	23 45 56.1	-0.3
HHC				SS	SS	23 50 13.6	-0.5
HHC				pmax	pmax		
	comp=Z,38nm,1.8s						
HHC				pmax	pmax		
	comp=Z,500nm,7.3s						
HHC				LR	LR		
	comp=Z,1µm,19.0s						
HHC				LR	LR		
	comp=Z,1µm,20.7s						
HHC				LR	LR		
	comp=Z,2µm,19.0s						
MA2	Magadan	70.97	353	eP	P	23 36 26.9	+0.5
	comp=Z,16nm,0.9s						
MA2				LR	LR		
	comp=Z,1µm,22.0s						
MA2	Magadan	70.97	353	deP	P	23 36 26.7	+0.3
MA2				pmax	pmax		
	comp=Z,46nm,2.5s						
MA2	Magadan	70.97	353	P	P	23 36 26.6	+0.3
	comp=Z,8.9nm,0.8s,baz=151,slow=6.0,SNR=9.5						
CM01	Chiang Mai Arr	71.05	294	eP	P	23 36 26.6	-1.1
CMAR	Chiang Mai Arr	71.08	294	P	P	23 36 28.1	+0.1
	comp=Z,9.3nm,0.9s,baz=122,slow=3.9,SNR=43						
CMAR				LR	LR	00 08 59.4	
	comp=Z,148nm,18.8s,baz=100,slow=37						
CMMT	Chiang Mai	71.19	294	P	P	23 36 28.9	+0.3
	comp=Z,40nm,1.8s,comp=Z,916nm						
CHTO	Chiang Mai	71.19	294	eP	P	23 36 29.0	+0.4
	comp=Z,66nm,1.4s						
CHTO				LR	LR		
	comp=Z,479nm,22.0s						
CHTO	Chiang Mai	71.19	294	eP	P	23 36 29.0	+0.4
CHTO				pmax	pmax		
	comp=Z,65nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,479nm,22.0s						
CHTO	Chiang Mai	71.19	294	P	P	23 36 29.0	+0.4
	comp=Z,178nm,1.8s,comp=Z,4µm						
HIA	Hailar	71.61	331	eP	P	23 36 30.6	0.0
	comp=Z,120nm,1.5s						
HIA				LR	LR		
	comp=Z,1µm,19.0s						
HIA	Hailar	71.61	331	eP	P	23 36 30.6	0.0
HIA				pmax	pmax		
	comp=Z,120nm,1.5s						
HIA				MLR	MLR		
	comp=Z,1µm,19.0s						
CD2	Chengdu	71.63	308	P	P	23 36 30.5	-0.6
CD2				pP	pP	23 36 41.2	+1.1
CD2				PP	PP	23 39 09.6	-0.9
CD2				S	S	23 45 48.4	0.0
CD2				sS	sS	23 46 06.7	+2.1
CD2				SS	SS	23 50 25.5	+0.9
CD2				pmax	pmax		
	comp=Z,80nm,0.8s						
CD2				pmax	pmax		
	comp=Z,360nm,4.8s						
CD2				LR	LR		
	comp=Z,870nm,18.4s						
CD2				LR	LR		
	comp=Z,1µm,24.3s						
CD2				LR	LR		
	comp=Z,1µm,22.8s						
ZEA	Zeya	71.68	338	eP	P	23 36 30.2	-0.6
ZEA				pmax	pmax		
	comp=N,93nm,1.4s						
ZEA				pmax	pmax		
	comp=E,37nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,130nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,500nm,6.0s						
ZEA				MLR	MLR		
	comp=N,600nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,16.0s						
BTO	Baotou	71.81	319	eP	P	23 36 32.7	+0.7
CMBY	CAMPBELL BAY	72.65	281	eP	P	23 36 36.9	-0.6
LZH	Lanzhou	73.82	313	eP	P	23 36 44.9	+0.8
LZH				pP	pP	23 36 55.8	+2.1
LZH				sP	PcP	23 37 00.6	+1.0
LZH				S	S	23 46 15.1	+1.7
LZH				sS	sS	23 46 30.9	+1.2
LZH				pmax	pmax		
	comp=Z,60nm,1.4s						
LZH				pmax	pmax		
	comp=Z,810nm,4.8s						
LZH				LR	LR		
	comp=Z,980nm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,19.5s						
LZH				LR	LR		
	comp=Z,1µm,19.4s						
SEY	Seymchan	74.06	354	⇑eP	P	23 36 43.7	-1.0
SEY	Seymchan	74.06	354	P	P	23 36 43.9	-0.8
	comp=Z,14nm,0.9s,baz=153,slow=5.7,SNR=30						
PBA	Port Blair	74.90	285	eP	P	23 36 49.7	-0.9
PBA				IAmb	IAmb	23 36 50.7	
CIT	Chita	76.40	330	eP	P	23 36 58.9	+0.4
CIT				pmax	pmax		
	comp=Z,196nm,1.6s						
GAMB	Gambell	76.44	11	eP	P	23 36 57.8	-0.6
	comp=Z,51nm,1.2s						
KDAK	Kodiak Island	76.66	22	PFAKE		23 37 10.0	+10
KDAK				LR	LR		
	comp=Z,552nm,20.0s						
YAK	Yakutsk	77.52	344	eP	P	23 37 05.1	+0.6
YAK				e		23 37 10.0	
YAK				eS	S	23 46 53.2	+0.3
YAK				e*SS	SKSac	23 47 13.4	-1.4
YAK				e		23 47 45.5	
YAK				eSS	SS	23 51 47.9	-5.0
YAK				pmax	pmax		
	comp=Z,386nm,1.3s						
YAK				pmax	pmax		
	comp=N,103nm,1.3s						
YAK				pmax	pmax		
	comp=E,61nm,1.3s						
YAK				pmax	pmax		
	comp=Z,393nm,2.9s						
YAK				pmax	pmax		
	comp=N,113nm,1.5s						
YAK				pmax	pmax		
	comp=E,346nm,3.3s						
YAK				smax	smax		
	comp=N,1µm,7.6s						
YAK				smax	smax		
	comp=E,2µm,8.2s						
YAK				MLR	MLR		
	comp=Z,6µm,21.0s						
YAK				MLR	MLR		
	comp=N,4µm,17.0s						
YAK				MLR	MLR		
	comp=E,4µm,22.0s						
SONM	Songino Array	77.83	324	P	P	23 37 06.4	-0.4
	comp=E,9.1nm,0.9s,baz=139,slow=5.0,SNR=42						
SONM				LR	LR	00 10 55.4	
	comp=E,660nm,19.2s,baz=127,slow=35						
SONA1	Songino Array	77.83	324	eP	P	23 37 05.8	-0.9
GTA	Gaotai	78.13	314	⇓P	P	23 37 08.8	+0.2
GTA				pP	pP	23 37 19.0	+0.7
GTA				sP	sP	23 37 23.1	+1.3
GTA				S	S	23 47 03.9	+3.1
GTA				SKS	SKSac	23 47 16.7	-3.9
GTA				sS	SKKSac	23 47 21.5	0.0
GTA				pmax	pmax		
	comp=E,31nm,1.5s						
GTA				pmax	pmax		
	comp=E,400nm,8.3s						
GTA				LR	LR		
	comp=E,400nm,20.6s						
GTA				LR	LR		
	comp=E,880nm,20.9s						
GTA				LR	LR		
	comp=E,1µm,21.3s						
SVW2	Sparrevohn	78.13	18	eP	P	23 37 08.2	+0.3
	comp=E,50nm,1.2s						
ANM	Nome	78.40	13	eP	P	23 37 09.0	-0.4
	comp=E,30nm,1.2s						
RSO	Redoubt South	78.57	20	eP	P	23 37 12.5	+1.9
BILL	Bilibino	78.58	1	eP	P	23 37 08.9	-1.3
	comp=E,47nm,1.0s						
BILL				LR	LR		
	comp=Z,510nm,19.0s						
BILL	Bilibino	78.58	1	diP	P	23 37 09.0	-1.3
BILL				e		23 40 07.5	
BILL				eS	S	23 47 03.4	-0.7
BILL				pmax	pmax		
	comp=Z,64nm,1.3s						
BILL				MLR	MLR		
	comp=Z,444nm,19.0s						
BRDH	Bariadhala	78.87	296	P	P	23 37 13.2	+0.3
	comp=Z,77nm,0.3s,baz=76,slow=8.5,SNR=6.7						
QSPA	South Pole Qui	79.27	180	eP	P	23 37 14.8	+0.4
	comp=Z,60nm,1.0s						
QSPA				LR	LR		
	comp=Z,901nm,19.0s						
QSPA	South Pole Qui	79.27	180	LR	LR	00 08 28.2	
	comp=Z,670nm,19.9s,baz=36,slow=33						
SHL	Shillong	79.50	299	eP	P	23 37 16.6	+0.1
	comp=Z,65nm,1.2s						
SHL	Shillong	79.50	299	eP	P	23 37 16.6	+0.1
SHL				pmax	pmax		
	comp=Z,65nm,1.2s						
SHL	Shillong	79.50	299	eP	P	23 37 16.1	-0.3
BOD	Bodaibo	79.83	335	eP	P	23 37 14.2	-3.1
BOD				pmax	pmax		
	comp=Z,49nm,1.5s						
SUA	Susitna One	79.97	20	eP	P	23 37 18.4	+0.3
	comp=Z,21nm,1.0s						
ZAK	Zakamensk	80.88	325	eP	P	23 37 22.1	-1.2
ZAK				e		23 40 24.6	
ZAK				pmax	pmax		
	comp=Z,19nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
CAST	Castle Rocks	80.96	18	eP	P	23 37 22.3	-1.0
	comp=Z,24nm,1.3s						
TLY	Talaya	81.32	327	eP	P	23 37 24.5	-1.0
	comp=Z,82nm,1.4s						
TLY				LR	LR		
	comp=Z,329nm,20.0s						
TLY	Talaya	81.32	327	diP	P	23 37 24.4	-1.0
LSA	Lhasa	81.35	302	eP	P	23 37 26.8	+0.1
	comp=Z,47nm,1.4s						
LSA				LR	LR		
	comp=Z,714nm,22.0s						
LSA	Lhasa	81.35	302	eP	P	23 37 26.8	+0.1
LSA				pmax	pmax		
	comp=Z,47nm,1.4s						
LSA				MLR	MLR		
	comp=Z,714nm,22.0s						
RPN	Rapa Nui	81.60	116	LR	LR	00 07 40.2	
	comp=Z,482nm,21.2s,baz=280,slow=31						
KLU	Klutina	81.67	22	eP	P	23 37 29.3	+2.0
	comp=Z,36nm,1.3s						
RDOG	Red Dog Mine	81.92	12	eP	P	23 37 28.5	+0.2
	comp=Z,39nm,1.0s						
RND	Reindeer	81.97	19	eP	P	23 37 29.2	+0.5
	comp=Z,47nm,1.3s						
RND	Reindeer	81.97	19	eP	P	23 37 29.2	+0.5
RND				pmax	pmax		
	comp=Z,47nm,1.3s						
MCK	McKinley	82.17	19	eP	P	23 37 29.9	+0.2
	comp=Z,52nm,1.5s						
MCK	McKinley	82.17	19	eP	P	23 37 29.9	+0.2
MCK				pmax	pmax		
	comp=Z,52nm,1.5s						
DHY	Denali Highway	82.23	20	eP	P	23 37 31.2	+1.0
	comp=Z,17nm,1.2s						
IM3	Indian Mountai	82.40	16	eP	P	23 37 29.7	-1.1
MLY	Manley	82.54	17	eP	P	23 37 31.9	+0.3
	comp=Z,25nm,1.4s						
MOY	Mondy	82.76	326	eP	P	23 37 31.9	-1.3
MOY				pmax	pmax		
	comp=Z,45nm,3.3s						
WRH	Wood River Hil	82.95	19	eP	P	23 37 34.2	+0.4
	comp=Z,15nm,1.0s						
MDM	Murphy Dome	83.25	18	eP	P	23 37 34.2	-1.1
	comp=Z,35nm,1.2s						
HDA	Harding Lake	83.27	19	P	P	23 37 35.2	-0.2
	baz=228						
TCOL	CIGO, UAF Yank	83.30	18	P	P	23 37 35.4	-0.1
	baz=227						
COLA	College	83.31	18	eP	P	23 37 35.9	+0.4
	comp=Z,20nm,0.8s						
COLA				LR	LR		
	comp=Z,405nm,20.0s						
COLA	College	83.31	18	⇑eP	P	23 37 35.9	+0.4
COLA				pmax	pmax		
	comp=Z,21nm,0.9s						
RIDG	Independ'e Rid	83.53	20	eP	P	23 37 37.1	+0.4
	comp=Z,30nm,1.0s						
ILAR	Eielson Array	83.54	19	P	P	23 37 35.7	-1.1
	comp=Z,20nm,1.1s,baz=230,slow=4.2,SNR=60						
ILAR				LR	LR	00 09 25.1	
	comp=Z,336nm,19.7s,baz=242,slow=32						
ILB	Eielson Array	83.54	19	eP	P	23 37 35.5	-1.2
IL1	Eielson Array	83.54	19	eP	P	23 37 33.6	-3.1
SCRK	Sand Creek	83.97	20	eP	P	23 37 38.9	-0.2
	comp=Z,16nm,0.8s						
M02C	Callahan	84.17	46	P	P	23 37 39.7	-1.0
	baz=250						
KNGR	Kungurtug, Tuv	84.27	324	⇑iP	P	23 37 40.1	-0.8
BOK	Bokaro	84.27	295	eP	P	23 37 41.0	-0.4
BOK				IAmb	IAmb	23 37 45.9	
	comp=Z,11nm,0.7s						
YBH	Yreka Blue Hor	84.39	46	eP	P	23 37 41.4	-0.4
	comp=Z,12nm,1.1s						
RAMN	Ramite	84.44	299	eP	P	23 37 41.8	-0.7
	comp=Z,150nm,1.6s						
HUMO	Hull Mountain	84.51	45	eP	P	23 37 42.0	-0.2
	comp=Z,9.5nm,1.0s						
ORV	Oroville	84.55	48	eP	P	23 37 40.9	-1.6
	comp=Z,13nm,1.4s						
ORV	Oroville	84.55	48	eP	P	23 37 40.9	-1.6
ORV				pmax	pmax		
	comp=Z,13nm,1.4s						
O03E	Paynes Creek	84.56	47	P	P	23 37 41.5	-1.2
	baz=251						
MAW	Mawson	84.63	202	LR	LR	00 11 11.5	
	comp=Z,606nm,19.6s,baz=94,slow=33						
AFDM	Forest Hills D	84.75	49	eP	P	23 37 42.5	-1.0
	comp=Z,17nm,1.2s						
CMB	Columbia Colle	84.90	50	eP	P	23 37 42.8	-1.6
	comp=Z,10.0nm,1.2s						
CMB	Columbia Colle	84.90	50	eP	P	23 37 42.8	-1.6
CMB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
JIRN	Jiri	84.97	299	eP	P	23 37 44.8	-0.5
	comp=Z,409nm,1.5s						
M04C	Macdoel	85.02	46	P	P	23 37 44.0	-1.0
	baz=251						
GUN	Gumba	85.30	299	eP	P	23 37 46.3	-0.7
	comp=Z,331nm,1.6s						
J04D	Umpqua Nationa	85.31	45	P	P	23 37 46.5	0.0
	baz=251						
EGAK	Eagle	85.43	20	eP	P	23 37 46.4	+0.1
	comp=Z,105nm,0.6s						
TOLK	Toolik Lake Re	85.45	15	eP	P	23 37 48.5	+2.1
	comp=Z,11nm,1.0s						
TOLK	Toolik Lake Re	85.45	15	P	P	23 37 46.6	+0.2
	baz=225						
BEKR	Beckworth	85.48	48	eP	P	23 37 46.0	-1.4
	comp=Z,20nm,0.9s						
NLWA	Neilton Lookou	85.57	40	PFAKE		23 38 00.0	+13
NLWA				LR	LR		
	comp=Z,1µm,19.0s						
MWC	Mount Wilson	85.60	54	eP	P	23 37 47.0	-1.1
	comp=Z,30nm,1.5s						
TIXI	Tiksi	85.60	349	eP	P	23 37 45.1	-1.9
	comp=Z,50nm,1.4s						
TIXI	Tiksi	85.60	349	diP	P	23 37 44.9	-2.1
TIXI				pmax	pmax		
	comp=Z,51nm,1.7s						
PKI	Pulchoki	85.62	299	eP	P	23 37 47.6	-0.9
	comp=Z,165nm,1.3s						
DAWY	Dawson	85.63	21	eP	P	23 37 47.9	+0.5
	comp=Z,31nm,1.3s						
PKIN	Phulchoki	85.63	299	eP	P	23 37 47.6	-0.9
	comp=Z,144nm,1.4s						
ISA	Isabella, Lake	85.67	53	eP	P	23 37 46.9	-1.4
	comp=Z,11nm,1.2s						
ISA	Isabella, Lake	85.67	53	eP	P	23 37 46.9	-1.4
ISA				pmax	pmax		
	comp=Z,11nm,1.2s						
ISA	Isabella, Lake	85.67	53	P	P	23 37 47.2	-1.1
	baz=254						
H04A	Detroit Lake	85.74	43	eP	P	23 37 45.5	-2.9
	comp=Z,40nm,1.5s						
WAKR	Walker	85.75	50	eP	P	23 37 48.3	-0.5
	comp=Z,23nm,1.4s						
PNTR	Pine Nut	85.81	49	eP	P	23 37 48.4	-0.7
	comp=Z,22nm,1.3s						
OMMB	Old Mammoth Mi	85.82	51	eP	P	23 37 48.5	-0.8
	comp=Z,14nm,1.3s						
VCNR	Virginia City	85.83	49	eP	P	23 37 48.7	-0.4
	comp=Z,13nm,1.3s						
EDW2	Edwards Air Fo	85.83	54	P	P	23 37 47.8	-1.3
	baz=254						
DMN	Daman	85.89	299	eP	P	23 37 49.2	-0.6
	comp=Z,430nm,1.4s						
BFSC	Mount Baldy Ra	85.92	54	P	P	23 37 48.0	-1.7
	baz=254						
J05D	Fort Rock, OR	85.93	45	P	P	23 37 48.2	-1.3
	baz=251						
YERR	Yerington	86.04	49	eP	P	23 37 50.2	0.0
	comp=Z,22nm,1.5s						
E04D	Cinebar	86.11	41	P	P	23 37 49.6	-0.5
	baz=250						
MOD	Modoc Plateau	86.15	46	eP	P	23 37 49.4	-1.2
	comp=Z,16nm,1.3s						
PAHR	Pah Rah Range	86.15	49	eP	P	23 37 49.4	-1.2
	comp=Z,11nm,1.2s						
CWC	Cottonwood Cre	86.20	52	P	P	23 37 49.2	-1.8
	baz=254						
LRMC	Laurel Mtn Rad	86.24	53	P	P	23 37 50.0	-1.2
	baz=254						
PINE	Pine Mountain	86.29	44	eP	P	23 37 50.9	-0.4
	comp=Z,21nm,1.3s						
RYN	Ryan	86.48	50	eP	P	23 37 52.2	-0.1
	comp=Z,19nm,1.4s						
G05D	Wamic, OR	86.50	43	P	P	23 37 50.2	-1.9
	baz=251						
DAC	Darwin (Calif)	86.53	52	eP	P	23 37 51.3	-1.4

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       comp=Z,15nm,1.5s
MPMC   Manual Prospec   86.55  53  P       P       23 37 51.3 -1.5
       baz=254
MONP2  Monument Peak    86.56  56  P       P       23 37 51.7 -1.2
       baz=255
NV01   Mina Array Sit   86.58  50 eP       P       23 37 50.4 -2.6
NVAR   Mina Array Bea   86.58  50  P       P       23 37 51.2 -1.8
       comp=Z,5.0nm,0.9s,baz=232,slow=6.9,SNR=14
NVAR                               LR      LR      00 09 04.7
       comp=Z,1µm,20.0s,baz=270,slow=30
LON    Longmire         86.67  41 eP       P       23 37 48.3 -4.7
       comp=Z,11nm,1.4s
LON    Longmire         86.67  41 eP       P       23 37 48.3 -4.6
LON                                pmax    pmax
       comp=Z,11nm,1.4s
NV11   Mina Array Sit   86.70  50 eP       P       23 37 47.5 -5.9
       comp=Z,1.2nm,1.3s
D05A   Enumclaw         86.70  41 eP       P       23 37 49.9 -3.1
       comp=Z,71nm,1.4s
PFO    Pinyon Flats O   86.72  55  PFAKE           23 38 00.0 +6.4
PFO                                LR      LR
       comp=Z,1µm,20.0s
A04D   Lummi Island     86.77  39  P       P       23 37 52.9 -0.3
       baz=250
GSC    Goldstone, Bar   86.89  53 eP       P       23 37 49.6 -4.7
       comp=Z,8.6nm,1.3s
GSC    Goldstone, Bar   86.89  53 eP       P       23 37 49.6 -4.7
GSC                                pmax    pmax
       comp=Z,9.0nm,1.3s
KVN    Kaiserville      86.91  49 eP       P       23 37 53.2 -1.3
       comp=Z,18nm,1.4s
KVN    Kaiserville      86.91  49 eP       P       23 37 53.2 -1.3
KVN                                pmax    pmax
       comp=Z,18nm,1.4s
B05A   Bryant           86.99  40  P       P       23 37 54.0 -0.3
       baz=250
SWSC   Sam W. Stewart   87.08  56  P       P       23 37 54.1 -1.0
       baz=255
HEC    Hector,Ludlow    87.13  54  P       P       23 37 53.9 -1.6
       baz=255
BELC   Belle Mtn. Jos   87.19  55  P       P       23 37 54.6 -1.3
       baz=255
DANN   Dangsing         87.22 299 eP       P       23 37 54.7 -1.6
KOLN   Koldanda         87.22 299 eP       P       23 37 54.6 -1.7
       comp=Z,93nm,1.5s
I07A   Izee             87.37  44 eP       P       23 37 55.5 -1.0
WVOR   Wild Horse Val   87.49  46 eP       P       23 37 56.0 -1.1
       comp=Z,21nm,1.3s
WVOR                               LR      LR
       comp=Z,880nm,20.0s
WVOR   Wild Horse Val   87.49  46 eP       P       23 37 56.0 -1.1
WVOR                               pmax    pmax
       comp=Z,21nm,1.3s
WVOR                               MLR     MLR
       comp=Z,880nm,20.0s
BC3    Big Chuckawall   87.54  55  P       P       23 37 56.0 -1.6
       baz=256
GMRC   Granite Mounta   87.66  54  P       P       23 37 56.6 -1.5
       baz=255
TPNV   Topopah Spring   87.75  52 eP       P       23 37 59.5 +1.0
TPNV   Topopah Spring   87.75  52 eP       P       23 37 59.5 +1.0
TPNV   Topopah Spring   87.75  52  P       P       23 37 58.9 +0.3
       baz=255
PYUN   Piuthan          87.83 299 eP       P       23 37 57.2 -1.9
       comp=Z,48nm,1.2s
EPYK   Eagle Plains     87.86  20 eP       P       23 37 60.0 +1.7
       comp=Z,28nm,1.1s
EPYK   Eagle Plains     87.86  20  P       P       23 37 58.7 +0.5
       baz=237
J08A   Circle Bar Ran   87.87  45 eP       P       23 37 57.7 -1.2
       comp=Z,12nm,1.0s
IRM    Iron Mountain    87.91  55  P       P       23 37 58.1 -1.1
       baz=256
HAWA   Hanford          88.05  42 eP       P       23 37 59.0 -0.5
       comp=Z,20nm,1.4s
HAWA                               LR      LR
       comp=Z,1µm,19.0s
G08A   Pilot Rock       88.10  43 eP       P       23 37 58.5 -1.4
WMQ    Urumqi           88.17 315  P       P       23 37 59.6 -0.7
WMQ                                PP      PP      23 41 27.0 -0.7
WMQ                                S       SKSac   23 48 30.5 +4.0
WMQ                                SS      SS      23 54 30.3 -1.6
WMQ                                pmax    pmax
       comp=Z,66nm,1.5s
WMQ                                pmax    pmax
       comp=Z,210nm,3.7s
WMQ                                LR      LR
       comp=Z,1µm,15.9s
WMQ                                LR      LR
       comp=Z,1µm,23.7s
WMQ                                LR      LR
       comp=Z,1µm,21.5s
WMQ    Urumqi           88.17 315 eP       P       23 37 59.7 -0.6
       comp=Z,94nm,1.5s
WMQ                               ePP      PP      23 41 25.4 -2.4
WMQ    Urumqi           88.17 315 eP       P       23 37 59.7 -0.6
WMQ                               e                23 41 25.4
WMQ                                pmax    pmax
       comp=Z,94nm,1.5s
Y12C   Blythe           88.32  55 eP       P       23 38 00.1 -0.9
       comp=Z,16nm,1.1s
Y12C   Blythe           88.32  55  P       P       23 38 00.3 -0.8
       baz=256
E08A   Dider Farm, El   88.39  42 eP       P       23 38 00.8 -0.3
       comp=Z,21nm,1.4s
SHPR   Sheep Range      88.48  53 eP       P       23 38 01.0 -1.1
       comp=Z,14nm,1.5s
R11A   Troy Canyon, C   88.62  51 eP       P       23 38 01.7 -1.0
       comp=Z,13nm,1.4s
R11A   Troy Canyon, C   88.62  51  P       P       23 38 01.7 -1.0
       baz=255
D08A   Wollman Farm,    88.65  42 eP       P       23 38 01.8 -0.6
       comp=Z,18nm,1.4s
PDMCI  Parker Dam,Lak   88.76  55  P       P       23 38 02.1 -1.0
       baz=256
B08A   Colville Reser   88.77  40 eP       P       23 38 01.9 -1.0
       comp=Z,16nm,1.4s
E09A   Wood Farm, Sta   89.00  42 eP       P       23 38 03.5 -0.5
       comp=Z,15nm,1.4s
BMO    Blue Mountains   89.10  44 eP       P       23 38 03.1 -1.5
       comp=Z,15nm,1.4s
BMO    Blue Mountains   89.10  44 eP       P       23 38 03.1 -1.5
BMO                                pmax    pmax
       comp=Z,15nm,1.4s
214A   Organ Pipe Nat   89.30  57  P       P       23 38 05.1 -0.7
       baz=257
TRD    Trivandrum       89.40 279 eP       P       23 38 06.3 -0.3
F10A   Beach Ranch, E   89.46  43 eP       P       23 38 05.0 -1.3
       comp=Z,15nm,1.3s
ELK    Elko             89.48  48 eP       P       23 38 05.5 -1.2
ELK    Elko             89.48  48 eP       P       23 38 05.5 -1.2
HYB    Hyderabad        89.58 288 i P      P       23 38 07.5 +0.1
INK    Inuvik           89.93  19 eP       P       23 38 09.1 +1.3
       comp=Z,12nm,1.4s
INK    Inuvik           89.93  19  P       P       23 38 07.8 -0.1
       comp=Z,2.3nm,1.0s,baz=234,slow=4.1,SNR=6.1
PSUT   Pine Spring      89.98  51 eP       P       23 38 07.9 -1.2
       comp=Z,9.4nm,1.1s
DGZ    Jazzator, Alta   90.03 321d iP      P       23 38 07.5 -1.4
DGZ                                pmax    pmax
       comp=Z,7.0nm,0.9s
LCMT   Little Creek M   90.10  52 eP       P       23 38 08.7 -0.9
       comp=Z,12nm,1.2s
CCUT   Cedar City       90.13  52 eP       P       23 38 09.1 -0.8
       comp=Z,18nm,1.4s
NEW    Newport          90.16  41 eP       P       23 38 08.5 -0.9
NEW                                LR      LR
       comp=Z,678nm,20.0s
NEW    Newport          90.16  41 eP       P       23 38 08.5 -0.9
NEW                                MLR     MLR
       comp=Z,678nm,20.0s
SZCU   Shurtz Canyon    90.36  52 eP       P       23 38 10.7 -0.1
       comp=Z,8.3nm,1.0s
KNB    Kanab            90.43  53 eP       P       23 38 10.9 -0.3
       comp=Z,24nm,1.3s
KNB    Kanab            90.43  53 eP       P       23 38 10.9 -0.3
KNB                                pmax    pmax
       comp=Z,25nm,1.3s
HLID   Hailey           90.77  46 eP       P       23 38 11.7 -0.9
       comp=Z,17nm,1.4s
HLID                               LR      LR
       comp=Z,966nm,19.0s
HLID   Hailey           90.77  46  P       P       23 38 11.8 -0.9
       baz=256
DGAR   Diego Garcia     90.86 262  PFAKE           23 38 20.0 +6.6
DGAR                               LR      LR
       comp=Z,505nm,19.0s
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PKCU   Pink Cliffs      90.92  52 eP       P       23 38 13.6  0.0
       comp=Z,44nm,1.4s
TUC    Tucson           91.05  57 eP       P       23 38 13.5 -0.5
       comp=Z,5.5nm,1.2s
TUC                                LR      LR
       comp=Z,2µm,21.0s
TUC    Tucson           91.05  57 eP       P       23 38 13.5 -0.5
TUC                                pmax    pmax
       comp=Z,6.0nm,1.2s
TUC                                MLR     MLR
       comp=Z,2µm,21.0s
TUC    Tucson           91.05  57  P       P       23 38 12.8 -1.3
       baz=258
DUG    Dugway, Tooele   91.15  49 eP       P       23 38 13.8 -0.6
       comp=Z,8.5nm,1.3s
DUG                                LR      LR
       comp=Z,866nm,21.0s
DUG    Dugway, Tooele   91.15  49 eP       P       23 38 13.8 -0.6
DUG                                pmax    pmax
       comp=Z,9.0nm,1.3s
DUG                                MLR     MLR
       comp=Z,866nm,21.0s
DUG    Dugway, Tooele   91.15  49  P       P       23 38 13.5 -0.9
       baz=257
MTPU   Mount Pierson    91.15  52 eP       P       23 38 14.4 -0.4
       comp=Z,21nm,1.4s
BGU    Big Grassy Mou   91.16  49 eP       P       23 38 13.0 -1.4
       comp=Z,11nm,1.2s
WUAZ   Wupatki          91.25  54 eP       P       23 38 14.9 -0.1
       comp=Z,16nm,1.3s
WUAZ                               LR      LR
       comp=Z,830nm,20.0s
MSU    Marysvale        91.26  51 eP       P       23 38 14.7 -0.3
MSU    Marysvale        91.26  51 eP       P       23 38 14.7 -0.3
HVU    Hansel Valley    91.53  48 eP       P       23 38 15.4 -0.8
       comp=Z,26nm,1.4s
HVU    Hansel Valley    91.53  48 eP       P       23 38 15.4 -0.8
HVU                                pmax    pmax
       comp=Z,27nm,1.4s
NLU    North Lily Min   91.65  50 eP       P       23 38 16.3 -0.5
       comp=Z,12nm,1.3s
BHPL   Bhopal           91.73 293 eP       P       23 38 16.5 -0.8
BHPL                               IAmb    IAmb    23 38 20.1
       comp=Z,3.9nm,1.0s
SYO    Syowa Base       91.79 197⇑eP       P       23 38 15.0 -1.6
CTU    Camp Tracy       92.05  49 eP       P       23 38 20.1 +1.5
       comp=Z,9.0nm,1.1s
MCMT   McKenzie Canyo   92.16  45 eP       P       23 38 18.3 -0.8
TMUT   Trail Mountain   92.17  51 eP       P       23 38 19.2 -0.1
       comp=Z,6.8nm,1.2s
JLU    Jordanelle       92.26  49 eP       P       23 38 20.0 +0.3
       comp=Z,18nm,1.5s
TCUT   Toone Canyon     92.39  49 eP       P       23 38 20.3  0.0
       comp=Z,10nm,0.9s
DLMT   Dillon           92.45  44 eP       P       23 38 19.5 -0.8
       comp=Z,15nm,1.0s
DDI    Dehra Dun        92.51 300 eP       P       23 38 19.4 -1.4
MK01   Makanchi Array   92.61 317 eP       P       23 38 19.9 -1.0
MK31   Makanchi Array   92.62 317 eP       P       23 38 20.0 -0.9
MKAR   Makanchi Array   92.62 317 eP       P       23 38 20.0 -0.9
       comp=Z,197nm,1.4s
MKAR                               PKKPbc  PKKPdf  23 55 31.5 -1.7
MKAR   Makanchi Array   92.62 317  P       P       23 38 20.4 -0.5
       comp=Z,8.9nm,0.7s,baz=96,slow=5.8,SNR=64
MKAR                               PKKPbc  PKKPdf  23 55 31.5 -1.7
       comp=Z,0.6nm,0.8s,baz=275,slow=3.3,SNR=6.2
MKAR                               LR      LR      00 18 55.0
       comp=Z,840nm,21.9s,baz=95,slow=35
LRM    Limekiln Ridge   92.66  44 eP       P       23 38 20.1 -1.2
ZALV   Zalesovo Beam    92.73 324  P       P       23 38 19.5 -1.6
       comp=Z,2.6nm,0.8s,baz=116,slow=3.4,SNR=17
ZALV                               LR      LR      00 18 36.0
       comp=Z,396nm,22.0s,baz=80,slow=35
MAKZ   Makanchi         92.83 317 eP       P       23 38 21.3 -0.5
       comp=Z,36nm,1.2s
MAKZ   Makanchi         92.83 317 eP       P       23 38 21.3 -0.5
MAKZ                               pmax    pmax
       comp=Z,36nm,1.2s
BOZ    Bozeman (W)      93.17  44 eP       P       23 38 22.9 -0.7
       comp=Z,10nm,1.3s
BOZ                                LR      LR
       comp=Z,1µm,19.0s
BOZ    Bozeman (W)      93.17  44 eP       P       23 38 22.9 -0.7
BOZ                                pmax    pmax
       comp=Z,10.0nm,1.3s
BOZ                                MLR     MLR
       comp=Z,1µm,19.0s
BOZ    Bozeman (W)      93.17  44  P       P       23 38 22.4 -1.2
       baz=258
FXWY   Fox Creek        93.19  46 eP       P       23 38 23.2 -0.7
       comp=Z,8.0nm,1.3s
REDW   Red Top Meadow   93.26  47 eP       P       23 38 23.5 -0.7
       comp=Z,17nm,1.5s
HRY    Holter Researc   93.27  43 eP       P       23 38 24.2 +0.3
IMW    Indian Meadow    93.30  46 eP       P       23 38 26.1 +1.7
       comp=Z,8.7nm,1.2s
SMLA   Simla            93.41 301 eP       P       23 38 24.1 -0.8
SMLA                               IAmb    IAmb    23 38 25.3
       comp=Z,15nm,0.2s
MOOW   Moose Ponds      93.41  46 eP       P       23 38 24.1 -0.8
       comp=Z,8.1nm,1.4s
LOHW   Long Hollow      93.48  46 eP       P       23 38 26.7 +1.5
       comp=Z,2.6nm,1.0s
H17A   Grant Village    93.66  46 eP       P       23 38 28.8 +2.7
       comp=Z,6.6nm,1.1s
GOA    Goa              93.68 285 eP       P       23 38 25.2 -1.2
GOA                                IAmb    IAmb    23 38 25.4
       comp=Z,8.8nm,0.3s
LKWY   Lake             93.82  46  PFAKE           23 38 40.0  +13
LKWY                               LR      LR
       comp=Z,2µm,20.0s
NVS    Novosibirsk      93.84 325 eP       P       23 38 24.6 -1.6
NVS                               eS       SKSac   23 49 01.4 +3.2
NVS                                pmax    pmax
       comp=N,15nm,1.8s
NVS                                pmax    pmax
       comp=E,24nm,1.8s
NVS                                pmax    pmax
       comp=Z,43nm,1.8s
NVS                                pmax    pmax
       comp=N,6.0nm,1.8s
NVS                                pmax    pmax
       comp=E,10.0nm,1.8s
NVS                                pmax    pmax
       comp=Z,11nm,1.8s
NVS                                smax    smax
       comp=N,16nm,2.6s
NVS                                smax    smax
       comp=E,34nm,2.6s
MVCO   Mesa Verde       93.85  53  PFAKE           23 38 40.0  +13
MVCO                               LR      LR
       comp=Z,1µm,19.0s
BW06   Boulder Array    94.07  47 eP       P       23 38 28.7 +0.8
BW06                               LR      LR
       comp=Z,852nm,19.0s
BW06   Boulder Array    94.07  47  P       P       23 38 26.6 -1.4
       baz=259
PD31   Pinedale Array   94.07  47 eP       P       23 38 28.8 +0.8
PDAR   Pinedale Array   94.07  47 eP       P       23 38 25.1 -2.8
PDAR   Pinedale Array   94.07  47  P       P       23 38 26.3 -1.7
       comp=Z,2.0nm,0.9s,baz=222,slow=2.0,SNR=11
PDAR                               LR      LR      00 13 51.0
       comp=Z,491nm,20.5s,baz=265,slow=31
POO    Poona            94.18 288 eP       P       23 38 26.3 -2.4
DHRM   DHARAMSHALA      94.33 302 eP       P       23 38 28.8 -0.5
RLMT   Red Lodge        94.71  45  PFAKE           23 38 40.0 +9.2
RLMT                               LR      LR
       comp=Z,2µm,21.0s
EGMT   Eagleton         94.91  42  PFAKE           23 38 40.0 +8.6
EGMT                               LR      LR
       comp=Z,740nm,19.0s
ANMO   Albuquerque      95.09  56  PFAKE           23 38 40.0 +7.2
ANMO                               LR      LR
       comp=Z,816nm,20.0s
ANMO   Albuquerque      95.09  56⇑eP       P       23 38 32.5 -0.2
ANMO                               pmax    pmax
       comp=Z,3.0nm,1.4s
YKA    Yellowknife Ar   95.16  27  P       P       23 38 29.6 -2.5
       comp=Z,0.6nm,0.9s,baz=254,slow=4.6,SNR=6.9
YKA                                LR      LR      00 14 35.4
       comp=Z,76nm,21.0s,baz=261,slow=31
MNTX   Cornudas Mount   95.45  59  PFAKE           23 38 50.0  +16
MNTX                               LR      LR
       comp=Z,1µm,19.0s
NRIK   Noril'sk         95.49 340  P       P       23 38 31.1 -2.4
       comp=Z,6.6nm,1.2s,baz=106,slow=6.4,SNR=8.8
NRIK                               LR      LR      00 21 02.9
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       comp=Z,833nm,20.8s,baz=104,slow=35
KURK   Kurchatov        95.77 320 eP       P       23 38 34.0 -1.2
       comp=Z,18nm,1.4s
KURK                               LR      LR
       comp=Z,2µm,21.0s
KURK   Kurchatov        95.77 320⇓eP       P       23 38 33.1 -2.1
KURK                               pmax    pmax
       comp=Z,31nm,1.9s
KSH    Kashi            95.79 309  P       P       23 38 36.7 +1.0
KSH                                pP      pP      23 38 48.1 +2.7
KSH                                PP      PP      23 42 32.3 +4.3
KSH                                SKS     SKSac   23 49 05.3 -4.4
KSH                                S       S       23 49 47.2 -4.1
KSH                                SS      SS      23 56 27.3 +5.6
KSH                                pmax    pmax
       comp=Z,460nm,5.3s
KSH                                LR      LR
       comp=Z,170nm,5.6s
KSH                                LR      LR
       comp=Z,190nm,6.1s
KSH                                LR      LR
       comp=Z,1µm,15.1s
KURBB  Kurchatov Arra   95.81 320  P       P       23 38 33.8 -1.6
       comp=Z,1.9nm,1.1s,baz=104,slow=3.6,SNR=15
SDCO   Great Sand Dun   96.29  53  PFAKE           23 38 50.0  +12
SDCO                               LR      LR
       comp=Z,694nm,20.0s
PMSA   Palmer Station   96.33 161  LR      LR      00 17 27.5
       comp=Z,547nm,19.0s,baz=280,slow=33
ISCO   Idaho Springs    96.51  51  PFAKE           23 38 50.0  +11
ISCO                               LR      LR
       comp=Z,2µm,21.0s
TXAR   Lajitas Array    96.55  61  P       P       23 38 39.6 +0.2
       comp=Z,0.5nm,0.9s,baz=258,slow=5.0,SNR=4.2
TXAR                               LR      LR      00 16 09.7
       comp=Z,890nm,19.1s,baz=0.0,slow=32
LAO    LASA Array       97.06  44  PFAKE           23 38 50.0 +8.6
LAO                                LR      LR
       comp=Z,1µm,20.0s
NIL    Nilore           97.08 303  PFAKE           23 38 50.0 +8.3
NIL                                LR      LR
       comp=Z,223nm,22.0s
AAK    Ala-Archa        97.35 312  PFAKE           23 38 50.0 +7.1
AAK                                LR      LR
       comp=Z,477nm,19.0s
AAK    Ala-Archa        97.35 312⇓eP       P       23 38 42.6 -0.2
AAK                                pmax    pmax
       comp=Z,8.0nm,2.0s
AAK    Ala-Archa        97.35 312  LR      LR      00 21 23.4
       comp=Z,233nm,21.1s,baz=71,slow=35
BHJ    Bhuj             98.78 292 eP       P       23 38 48.3 -1.2
OGNE   Ogallala         99.37  50  PFAKE           23 39 00.0 +8.2
OGNE                               LR      LR
       comp=Z,1µm,21.0s
JCT    Junction City   100.03  61  PFAKE           23 39 10.0  +15
JCT                                LR      LR
       comp=Z,1µm,20.0s
FFC    Flin Flon       100.57  36  PFAKE           23 39 10.0  +13
FFC                                LR      LR
       comp=Z,1µm,19.0s
CBKS   Cedar Bluff     100.92  52  PFAKE           23 39 10.0  +11
CBKS                               LR      LR
       comp=Z,1µm,21.0s
BVAR   Borovoye Array  101.10 322  P       Pdif    23 38 58.0 -1.1
BVAR   Borovoye Array  101.10 322  P       Pdif    23 38 58.0 -1.1
       comp=Z,1.3nm,0.8s,baz=104,slow=6.3,SNR=9.2
BRVK   Borovoye        101.16 322 ePdif    Pdif    23 38 58.5 -0.9
BRVK                               LR      LR
       comp=Z,788nm,22.0s
BRVK   Borovoye        101.16 322⇑eP       Pdif    23 38 57.7 -1.6
BRVK                               pmax    pmax
       comp=Z,11nm,2.0s
WMOK   Wichita Mounta  101.33  57  PFAKE           23 39 10.0 +9.4
WMOK                               LR      LR
       comp=Z,1µm,19.0s
KSU1   Kansas State U  103.38  52  PFAKE           23 39 20.0  +10
KSU1                               LR      LR
       comp=Z,2µm,20.0s
ECSD   EROS Data Cent  103.57  47  PFAKE           23 39 20.0  +10
ECSD                               LR      LR
       comp=Z,1µm,19.0s
NATX   Nacogdoches     104.54  60  PFAKE           23 39 30.0  +15
NATX                               LR      LR
       comp=Z,1µm,20.0s
PAYG   Puerto Ayora    104.59  94  PFAKE           23 39 30.0  +14
PAYG                               LR      LR
       comp=Z,997nm,19.0s
MIAR   Mount Ida       105.59  57  PFAKE           23 43 40.0 +7.2
MIAR                               LR      LR
       comp=Z,2µm,22.0s
SCIA   State Center    106.04  49  PFAKE           23 43 40.0 +6.6
SCIA                               LR      LR
       comp=Z,817nm,19.0s
EFI    East Falkland   107.71 154  PFAKE           23 43 50.0  +14
EFI                                LR      LR
       comp=Z,1µm,22.0s
ARU    Arti            107.81 326  PFAKE           23 43 50.0  +14
ARU                                LR      LR
       comp=Z,419nm,19.0s
JFWS   Jewell Farm     108.22  48  PFAKE           23 43 50.0  +13
JFWS                               LR      LR
       comp=Z,648nm,20.0s
COWI   Conover         108.84  45  PFAKE           23 43 50.0  +12
COWI                               LR      LR
       comp=Z,1µm,19.0s
KBS    Kingsbay        110.52 355  PFAKE           23 43 50.0 +9.3
KBS                                LR      LR
       comp=Z,426nm,22.0s
BRAL   Brewton         111.02  61  PFAKE           23 43 50.0 +7.0
BRAL                               LR      LR
       comp=Z,1µm,19.0s
JTS    JuntasAbangare  111.63  83  PFAKE           23 44 00.0  +15
JTS                                LR      LR
       comp=Z,764nm,19.0s
ABPO   Ambohimpanom    111.68 245  PFAKE           23 44 00.0  +15
ABPO                               LR      LR
       comp=Z,308nm,19.0s
GLMI   Grayling        112.12  46  PFAKE           23 44 00.0  +15
GLMI                               LR      LR
       comp=Z,2µm,19.0s
AAM    Ann Arbor       113.11  49  PFAKE           23 44 00.0  +13
AAM                                LR      LR
       comp=Z,931nm,20.0s
LCO    Las Campanas    113.52 128  PFAKE           23 44 00.0  +12
LCO                                LR      LR
       comp=Z,972nm,19.0s
ACSO   Alum Creek Sta  113.85  51  PFAKE           23 44 00.0  +12
ACSO                               LR      LR
       comp=Z,1µm,20.0s
GOGA   Godfrey         114.00  58  PFAKE           23 44 00.0  +11
GOGA                               LR      LR
       comp=Z,1µm,22.0s
LVZ    Lovozero        114.25 341  PFAKE           23 44 00.0  +12
LVZ                                LR      LR
       comp=Z,382nm,22.0s
TRQA   Tornquist       114.73 141  PFAKE           23 44 00.0  +10
TRQA                               LR      LR
       comp=Z,3.0nm,21.0s
NNA    Nana            114.80 109  PFAKE           23 44 00.0 +9.3
NNA                                LR      LR
       comp=Z,344nm,20.0s
KEV    Kevo            115.25 345  PFAKE           23 44 00.0  +10
KEV                                LR      LR
       comp=Z,960nm,19.0s
ARCES  ARCESS Array B  115.78 345  PKIKP   PKiKP   23 43 50.0 -1.0
ARCES  ARCESS Array B  115.78 345  PKP     PKiKP   23 43 50.0 -1.0
       comp=Z,2.2nm,0.7s,baz=55,slow=2.7,SNR=7.3
KLMR   Klimovskoe      116.03 334 ePKIKP   PKiKP   23 43 51.2 -0.5
KLMR                              e                23 44 56.1
KLMR                               pmax    pmax
       comp=Z,5.0nm,1.0s
KLMR   Klimovskoe      116.03 334 ePKPdf   PKiKP   23 43 51.2 -0.5
KLMR                               AMP             23 43 57.8
       comp=Z,5.0nm,1.0s
KLMR                              ePP      PP      23 44 56.1 -0.1
BLA    Blacksburg      116.17  54  PFAKE           23 44 00.0 +7.2
BLA                                LR      LR
       comp=Z,978nm,21.0s
OTAV   Otavalo         116.36  95  PFAKE           23 44 10.0  +16
OTAV                               LR      LR
       comp=Z,405nm,19.0s
BCIP   Isla Barro Col  116.48  85  PFAKE           23 44 10.0  +16
BCIP                               LR      LR
       comp=Z,533nm,20.0s
NHSC   New Hope        116.77  58  PFAKE           23 44 10.0  +16
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NHSC				LR	LR		
	comp=Z,1µm,19.0s						
LVC	Limon Verde	117.88	123	PFAKE		23 44 10.0	+13
LVC				LR	LR		
	comp=Z,369nm,19.0s						
CBN	Corbin Frederi	118.44	52	PFAKE		23 44 10.0	+13
CBN				LR	LR		
	comp=Z,1µm,20.0s						
CNNC	Cliffs of the	118.44	56	PFAKE		23 44 10.0	+13
CNNC				LR	LR		
	comp=Z,1µm,20.0s						
BINY	Binghamton	118.75	48	PFAKE		23 44 10.0	+12
BINY				LR	LR		
	comp=Z,2µm,21.0s						
SFJD	Kangerlussuaq	119.02	15	PFAKE		23 44 10.0	+13
SFJD				LR	LR		
	comp=Z,404nm,19.0s						
MTDJ	Mount Denham	119.48	75	PFAKE		23 44 10.0	+10
MTDJ				LR	LR		
	comp=Z,383nm,20.0s						
GNI	Garni	119.70	310	PFAKE		23 44 10.0	+10
GNI				LR	LR		
	comp=Z,538nm,20.0s						
OBN	Obninsk	120.02	329	PFAKE		23 44 10.0	+10
OBN				LR	LR		
	comp=Z,301nm,19.0s						
OBN	Obninsk	120.02	329	⇑*i*PKIKP	PKPdf	23 43 59.2	-0.3
OBN				*e*		23 45 26.7	
OBN				*e*PS	SP	23 55 10.2	+1.0
OBN				*e*SS	SKKSdf	00 01 56.8	+4.4
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,476nm,22.0s						
KIV	Kislovodsk	120.31	315	PFAKE		23 44 10.0	+9.3
KIV				LR	LR		
	comp=Z,494nm,20.0s						
FINES	FINESS Array B	121.12	338	PKP	PKPdf	23 44 00.6	-0.8
	comp=Z,2.3nm,0.8s,baz=84,slow=5.9,SNR=5.6						
LPAZ	La Paz	121.21	116	PKP	PKPdf	23 44 03.1	-0.7
	comp=Z,1.3nm,0.7s,baz=30,slow=11,SNR=5.1						
BOSA	Boshof	124.66	224	PKP	PKPdf	23 44 09.5	0.0
	comp=Z,2.8nm,0.9s,baz=137,slow=2.1,SNR=3.7						
CPUP	Villa Florida	124.97	133	PKP	PKPdf	23 44 08.7	-1.3
	comp=Z,2.5nm,0.8s,baz=280,slow=1.6,SNR=8.0						
SUR	Sutherland	124.99	217	PFAKE		23 44 20.0	+10
SUR				LR	LR		
	comp=Z,952nm,21.0s						
SDDR	Presa de Saban	125.42	74	PFAKE		23 44 20.0	+8.6
SDDR				LR	LR		
	comp=Z,955nm,19.0s						
SDV	Santo Domingo	125.47	87	*e*PKPdf	PKPdf	23 44 09.2	-2.3
SDV				LR	LR		
	comp=Z,294nm,19.0s						
AKASG	Malin Array Be	126.06	327	PKP	PKPdf	23 44 09.2	-2.0
	comp=Z,2.3nm,0.9s,baz=60,slow=2.4,SNR=4.0						
KIEV	Kiev	126.07	327	PFAKE		23 44 20.0	+8.3
KIEV				LR	LR		
	comp=Z,683nm,19.0s						
NOA	NORSAR Array B	126.14	344	PKP	PKPdf	23 44 10.7	-0.5
	comp=Z,0.8nm,0.8s,baz=35,slow=2.0,SNR=3.5						
KMBO	Kilima Mbogo	126.46	261	PFAKE		23 44 20.0	+6.1
KMBO				LR	LR		
	comp=Z,710nm,20.0s						
BRTR	Keskin Array B	128.02	312	PKP	PKPdf	23 44 16.9	+1.3
	comp=Z,1.2nm,1.0s,baz=34,slow=0.6,SNR=6.0						
ANTO	Ankara	128.59	313	PFAKE		23 44 30.0	+13
ANTO				LR	LR		
	comp=Z,335nm,20.0s						
LSZ	Lusaka	129.79	240	PFAKE		23 44 30.0	+10
LSZ				LR	LR		
	comp=Z,719nm,22.0s						
SJG	San Juan	130.30	75	PFAKE		23 44 30.0	+8.9
SJG				LR	LR		
	comp=Z,375nm,20.0s						
UZH	Uzhgorod	130.94	328	*e*PKHKP	PKPpre	23 44 05.9	
UZH				*i*		23 44 19.5	
UZH				*e*		23 44 27.7	
DPC	Dobruska-Polom	132.72	333	AMS	AMS	00 42 20.0	
	comp=Z,900nm,25.7s						
UPC	Upice	132.74	333	AMS	AMS	00 42 10.0	
	comp=Z,1µm,25.1s						
VYHS	Vyhne	132.80	329	*e*PKIKP	PKPdf	23 44 25.5	+1.3
VYHS				*e*		23 46 49.7	
VYHS	Vyhne	132.80	329	*e*PKP	PKPdf	23 44 25.5	+1.3
VYHS				*e*PP	PP	23 46 49.7	+0.9
MBAR	Mbarara	132.89	259	PFAKE		23 44 40.0	+13
MBAR				LR	LR		
	comp=Z,1µm,22.0s						
BRG	Berggiesshubel	133.37	335	*e*PKP	PKiKP	23 44 27.5	+1.1
	comp=Z,19nm,1.8s						
BRG	Berggiesshubel	133.37	335	*e*PKIKP	PKiKP	23 44 27.5	+1.1
BRG				pmax	pmax		
	comp=Z,19nm,1.8s						
CLL	Collm	133.42	336	*e*PKPdf	PKiKP	23 44 27.0	+0.5
CLL				*e*SS	SS	00 05 06.0	+32
CLL				*e*SSS	SSS	00 09 54.0	
CLL				LmV		00 50 00.0	
	comp=Z,500nm,18.0s						
CLL	Collm	133.42	336	*e*PKIKP	PKPdf	23 44 22.0	-3.2
CLL				*e*		23 44 27.0	
CLL				MLR	MLR		
	comp=Z,500nm,18.0s						
MODS	Modra-Piesok	133.65	330	*e*PKIKP	PKPdf	23 44 24.9	-0.9
MODS	Modra-Piesok	133.65	330	*e*PKP	PKPdf	23 44 24.9	-0.9
GOPC	GO Pecny, Ondr	133.72	333	AMS	AMS	00 39 50.0	
	comp=Z,1µm,23.9s						
PRU	Pruhonice	133.77	334	AMS	AMS	00 39 50.0	
	comp=Z,1µm,24.1s						
PTGA	Pitinga	134.12	102	PFAKE		23 44 40.0	+11
PTGA				LR	LR		
	comp=Z,12µm,22.0s						
ANWB	Willy Bob	134.47	76	PFAKE		23 44 40.0	+10
ANWB				LR	LR		
	comp=Z,565nm,22.0s						
GRGR	Grenville	134.55	84	PFAKE		23 44 40.0	+10
GRGR				LR	LR		
	comp=Z,262nm,20.0s						
CONA	Conrad Observa	134.65	331	PKiKP	PKPdf	23 44 27.6	-0.2
	comp=Z,7.0nm,1.8s						
KHC	Kasperske Hory	134.83	333	*e*PKPDF	PKPdf	23 44 27.5	-0.5
KHC				AMS	AMS	00 40 20.0	
	comp=Z,1µm,25.3s						
KHC	Kasperske Hory	134.83	333	*e*PKIKP	PKPdf	23 44 27.5	-0.5
KHC				MLR	MLR		
	comp=Z,1µm,25.3s						
GERES	GERESS Array B	134.98	333	PKP	PKPdf	23 44 29.1	+0.7
	comp=Z,1.1nm,0.8s,baz=78,slow=3.1,SNR=7.6						
TSUM	Tsumeb	136.03	228	PFAKE		23 44 40.0	+7.1
TSUM				LR	LR		
	comp=Z,1µm,22.0s						
KBA	Koelnbreinsper	136.45	332	*e*PKiKP	PKPdf	23 44 32.4	+1.1
	comp=Z,4.0nm,1.2s						
WATA	Walderalm	137.06	333	*e*PKPdf	PKPdf	23 44 31.6	-0.7
	comp=Z,5.6nm,1.0s						
ABTA	Abfaltersbach	137.08	332	*e*PKPdf	PKPdf	23 44 32.0	-0.3
	comp=Z,5.2nm,0.9s						
MOTA	Moosalm	137.26	334	*e*PKiKP	PKPdf	23 44 32.6	-0.1
	comp=Z,2.3nm,0.8s						
SQTA	Sankt Quirin	137.31	333	*e*PKiKP	PKPdf	23 44 34.2	+1.4
	comp=Z,4.8nm,1.0s						
BFO	Black Forest	137.63	337	PFAKE		23 44 40.0	+4.8
BFO				LR	LR		
	comp=Z,28nm,19.0s						
FETA	Feichten	137.67	334	*e*PKPdf	PKPdf	23 44 30.6	-2.9
	comp=Z,6.4nm,1.1s						
KEST	Kesra	146.57	322	PKPbc	PKPbc	23 44 51.5	+0.4
	comp=Z,17nm,1.1s,baz=69,slow=0.6,SNR=6.8						
ATAF	Djebel Tarf	149.33	328	P	PKiKP	23 45 01.3	+1.6
ESDC	Sonseca Array	149.48	343	PKPbc	PKPbc	23 44 59.7	+1.0
	comp=Z,4.5nm,0.9s,baz=355,slow=4.4,SNR=10						
ADJB	Djebel Djouab	149.54	329	P	PKPbc	23 45 00.5	+1.5
RCBR	Riachuelo	153.68	128	PFAKE		23 45 10.0	+0.8
RCBR				LR	LR		
	comp=Z,56µm,19.0s						
ASCN	Ascension	161.43	183	PFAKE		23 45 20.0	+9.1
ASCN				LR	LR		
	comp=Z,59µm,21.0s						
TORD	Torodi Ar. Bea	163.23	280	PKP	PKPdf	23 45 14.3	+1.7
	comp=Z,2.3nm,0.9s,baz=0.6,slow=2.1,SNR=9.1						
TORD				PKPab	PKPab	23 46 03.6	+0.5
	comp=Z,9.1nm,1.2s,baz=111,slow=4.7,SNR=8.9						
SACV	Santiago Islan	170.84	62	PFAKE		23 45 30.0	+12
SACV				LR	LR		
	comp=Z,668nm,22.0s						

NNC 10 23:26:49.9±4.8, 38°.70N×70°.05E, h0^{km}, mb3.7, mpv3.3, 7C-3D, Error ellipse: s-maj=36.1km s-min=20.7km az=19.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.98	63	⇓Pg	Pb	23 27 41.8	-2.3
	5.0nm,0.4s						
SFK				⇑Sn	Sb	23 28 18.7	-2.4
	27nm,0.5s						
MNAS	Manas	4.22	25	⇑Pn	Pn	23 27 55.5	-0.1
	2.7nm,0.4s						
MNAS				⇑Sn	Sn	23 28 46.8	+1.1
	7.0nm,0.7s						
KK31	Karatay Array	4.42	4	⇓Pn	Pn	23 27 59.0	+0.9
	0.7nm,0.3s,baz=183,slow=13						
KK31				⇓Sn	Sn	23 28 52.0	+1.7
	3.7nm,0.5s,baz=183,slow=25						
AAK	Ala-Archa	5.19	39	⇑Pg	Pb	23 28 21.1	-0.4
	3.8nm,0.6s						
AAK				⇑Lg	Lg	23 29 27.8	
	9.2nm,1.1s						
TKM2	Tokmak 2	5.96	43	⇑Pn	Pn	23 28 20.1	+0.5
	3.4nm,0.5s						
TKM2				⇑Sn	Sn	23 29 29.4	+0.8
	2.9nm,0.7s						
AB31	Akbulak array	12.81	329	P	Pn	23 29 52.1	-1.0
	0.5nm,0.6s,baz=144,slow=12,SNR=9.3						

MEX 10 23:33:35.6±0.6, 14°.97N×92°.76W, h110^{km}±7^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.48	97	*i* P	Pn	23 33 51.2	-1.0
THIG				*e*S	Sn	23 34 02.8	-1.9
PCIG		0.86	329	*e*P	Pn	23 33 54.2	-1.2
PCIG				*i* S	Sn	23 34 08.4	-1.8
CCIG	Comitan	1.44	24	*e*P	Pn	23 34 01.0	-0.8
CCIG				*i* S	Sn	23 34 19.5	-2.2

IDC 10 23:57:18.2±1.7, 11°.16S×165°.53E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.7/39, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=50.2km s-min=29.8km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.88	176	Pn	Pn	23 59 55.2	-0.2
	0.3nm,0.3s,baz=49,slow=19,SNR=3.4						
WRA	Warramunga Arr	31.25	250	P	P	00 03 40.3	+0.3
	2.5nm,1.1s,baz=79,slow=9.0,SNR=5.4						
ASAR	Alice Springs	32.55	243	P	P	00 03 50.5	-1.0
	0.3nm,0.4s,baz=82,slow=10,SNR=4.3						
FITZ	Fitzroy Crossi	39.15	255	P	P	00 04 48.6	+0.6
	2.1nm,0.7s,baz=95,slow=8.3,SNR=6.3						
ILAR	Eielson Array	83.69	19	P	P	00 09 48.6	0.0
	0.2nm,0.7s,baz=235,slow=4.4,SNR=3.0						

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*SJA **10** 23:59:47.5±0.7, 30°.88S×72°.00W, h10^{km}±8^{km}, ML3.8, MW4.1*

*IDC **10** 23:59:47.5±1.2, 30°.89S×71°.66W, h0^{km}, mb3.8/3, mb1 3.7/6, mb1mx3.6/31, mbtmp3.7/6, ML3.6/3, MS4.3/1, Ms1 4.3/1, ms1mx3.1/30, Error ellipse: s-maj=54.5km s-min=23.5km az=104.0*

*ISCJB **10** 23:59:50.7±1.5, 30°.92S±0°.03×71°.87W±0°.09, h18^{km}±9^{km}, mb3.8/3, MS4.2/1, Error ellipse: s-maj=13.0km s-min=5.0km az=3.1*

*GUC **10** 23:59:51.6±0.6, 30°.90S×71°.58W, h44^{km}±4^{km}, ML4.1*

ISC 10 23:59:52.5±2.0, 30°.92S±0°.04×71°.65W±0°.09, h27^{km}±13^{km}, n26, σ2ˢ.07/34, mb4.1/3, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	Combarbala	0.62	115	⇑*i*P	Pn	00 00 04.9	-0.8
CMCH				*i* S	Sn	00 00 13.7	-1.0
CMCH				IAML		00 00 14.1	
	comp=N,18µm,0.2s						
GO04	Tololo Observa	1.05	45	*i* P	Pn	00 00 11.6	-0.1
GO04				*i* S	Sb	00 00 28.7	+3.2
GO04	Tololo Observa	1.05	45	⇓*i*P	Pn	00 00 11.5	-0.2
GO04				*i* S	Sn	00 00 25.7	+0.2
GO04				IAML		00 00 28.8	
	comp=E,10µm,0.3s						
AROD	Rodeo	2.02	69	*i* P	Pb	00 00 28.4	-0.4
LCO	Las Campanas	2.07	24	*i* P	Pn	00 00 26.3	+0.4
LCO	Las Campanas	2.07	24	⇑*i*P	Pn	00 00 26.1	+0.3
LCO				*i* S	Sn	00 00 52.5	+1.6
ROCH	El Roble	2.12	165	⇑*i*P	Pn	00 00 26.6	+0.1
ROCH				*i* S	Sn	00 00 54.6	+2.5
ROCH				IAML		00 01 00.1	
	comp=N,2µm,0.3s						
ROC1	El Roble	2.12	165	*i* P	Pn	00 00 26.9	+0.4
RTLS	Leoncito	2.20	114	*i* P	Pb	00 00 31.4	-0.4
RTLS				IAML		00 01 10.2	
	comp=Z,478nm,0.3s						
ACCO	Cerro Coronel	2.25	82	*i* P	Pb	00 00 32.1	-0.6
ACDV	Cuesta del Vie	2.31	72	*i* P	Pb	00 00 32.5	-1.1
AUSP	Uspallata	2.33	125	*i* P	Pb	00 00 32.8	-1.3
PEL	Peldehue	2.37	160	⇑*i*P	Pn	00 00 30.3	+0.6
PEL				*i* S	Sn	00 00 59.8	+1.9
PEL				IAML		00 01 05.6	
	comp=E,1µm,0.3s						
FCH	Farellones	2.67	155	*e*P	Pn	00 00 35.1	+1.0
FCH				*i* S	Sn	00 01 08.5	+2.7
FCH				IAML		00 01 18.0	
	comp=E,635nm,0.2s						
LMEL	Las Melosas	3.17	158	*e*P	Pn	00 00 42.3	+1.4
LMEL				*i* S	Sn	00 01 19.4	+1.5
LMEL				IAML		00 01 33.9	
	comp=N,636nm,0.2s						
LVC	Limon Verde	8.63	17	Pn	Pn	00 01 53.3	-2.7
	comp=N,0.2nm,0.3s,baz=204,slow=12,SNR=2.4						
LVC				Sn	Sn	00 03 39.3	+6.6
	comp=N,0.3nm,0.3s,baz=177,slow=18,SNR=2.3						
CPUP	Villa Florida	13.38	74	Pn	Pn	00 02 57.8	-3.0
	comp=N,0.1nm,0.3s,baz=160,slow=15,SNR=2.2						
CPUP				Sn	Sn	00 05 33.1	+4.4
	comp=N,0.2nm,0.3s,baz=284,slow=8.3,SNR=3.0						
LPAZ	La Paz	14.91	13	Pn	Pn	00 03 21.5	-0.8
	comp=N,0.1nm,0.3s,baz=203,slow=8.9,SNR=5.2						
USHA	Ushuaia	24.01	175	LR	LR	00 14 37.1	
	comp=N,795nm,21.3s,baz=226,slow=37						
SNAA	Sanae	54.32	159	P	P	00 09 16.0	-0.3
	comp=N,1.5nm,0.8s,baz=280,slow=9.9,SNR=6.2						
QSPA	South Pole Qui	59.31	180	P	P	00 09 51.4	-0.5
	comp=N,1.9nm,1.1s,baz=97,slow=0.9,SNR=3.4						
TORD	Torodi Ar. Bea	82.86	70	P	P	00 12 13.2	-1.8
	comp=N,0.2nm,0.5s,baz=255,slow=5.5,SNR=5.3						
WRA	Warramunga Arr	123.60	210	PKP	PKPdf	00 18 46.4	-1.9
	comp=N,0.3nm,0.7s,baz=158,slow=1.6,SNR=7.6						
BVAR	Borovoye Array	144.76	40	PKP	PKPbc	00 19 24.9	-0.6
	comp=N,0.4nm,0.6s,baz=278,slow=5.2,SNR=4.0						
ZALV	Zalesovo Beam	151.42	30	PKPbc	PKPbc	00 19 42.3	-1.1
	comp=N,0.4nm,0.3s,baz=306,slow=4.8,SNR=3.6						
MKAR	Makanchi Array	154.41	44	PKPab	PKPab	00 20 05.0	+0.3
	comp=N,0.3nm,0.8s,baz=281,slow=5.4,SNR=3.2						

IDC 11 00:00:40.0±3.8, 11°.50S×165°.29E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.6/37, mbtmp3.8/3, MS4.0/1, Ms1 4.0/1, ms1mx3.2/31, Error ellipse: s-maj=182.8km s-min=33.9km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	28.67	160	LR	LR	00 16 58.7	
	comp=Z,303nm,18.4s,baz=317,slow=34						
WRA	Warramunga Arr	30.91	250	P	P	00 06 58.4	-0.3
	0.8nm,0.5s,baz=82,slow=9.0,SNR=15						
ASAR	Alice Springs	32.19	244	P	P	00 07 10.2	+0.3
	1.4nm,0.6s,baz=67,slow=9.7,SNR=15						
ILAR	Eielson Array	84.08	19	P	P	00 13 12.3	0.0
	0.4nm,0.7s,baz=234,slow=4.6,SNR=4.1						

IDC 11 00:12:59.6±6.1, 9°.91S×166°.12E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.5/24, mbtmp3.4/3, Error ellipse: s-maj=332.1km s-min=31.1km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.23	248	P	P	00 19 29.5	-0.4
	0.5nm,0.8s,baz=79,slow=9.9,SNR=3.3						
ASAR	Alice Springs	33.63	242	P	P	00 19 42.6	+0.3
	0.3nm,0.7s,baz=77,slow=9.4,SNR=3.3						
ILAR	Eielson Array	82.33	18	P	P	00 25 22.9	0.0
	0.4nm,0.8s,baz=231,slow=6.6,SNR=3.4						

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*ISCJB **11** 00:16:05.4±0.5, 21°.14S±0°.03×69°.12W±0°.09, h121^{km}±5^{km}, mb3.4/4, Error ellipse: s-maj=13.1km s-min=5.3km az=1.9*

*GUC **11** 00:16:05.5±0.6, 21°.12S×69°.14W, h114^{km}±3^{km}, ML3.7*

*IDC **11** 00:16:06.9±1.2, 21°.17S×68°.93W, h118^{km}±16^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.3/26, mbtmp3.6/6, Error ellipse: s-maj=27.8km s-min=20.3km az=93.0*

ISC 11 00:16:06.0±0.8, 21°.12S±0°.04×69°.07W±0°.08, h115^{km}±7^{km}, n19, σ1ˢ.12/32, mb3.4/4, 8C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.40	281	*e*P	Pn	00 16 22.6	-0.3
PB01				*e*S	Sn	00 16 35.0	-0.6
PB09	IPOC Station P	0.69	193	⇓*e*P	Pn	00 16 24.9	-0.1
PB09				*e*S	Sn	00 16 39.3	0.0
PB09				IAML		00 16 40.7	
	comp=E,2µm,0.3s						
PB02	IPOC Station P	0.79	255	⇑*e*P	Pn	00 16 25.9	+0.2
PB02				*e*S	Sn	00 16 40.6	0.0
PB02				IAML		00 16 42.4	
	comp=E,7µm,0.5s						
PB07	IPOC Station P	0.97	231	⇑*e*P	Pn	00 16 27.4	-0.1
PB07				*e*S	Sn	00 16 43.4	-0.3
PB07				IAML		00 16 44.9	
	comp=E,2µm,0.3s						
PB08	IPOC Station P	0.98	356	⇓*i*P	Pn	00 16 28.1	+0.3
PB08				*e*S	Sn	00 16 44.8	+0.6
PB08				IAML		00 16 46.3	
	comp=E,2µm,0.4s						
PB03	IPOC Station P	1.12	214	⇑*e*P	Pn	00 16 28.8	-0.2
PB03				*e*S	Sn	00 16 46.3	-0.1
PB11	IPOC Station P	1.46	338	⇑*e*P	Pn	00 16 32.8	-0.1
PB11				*e*S	Sn	00 16 53.5	+0.4
PB11				IAML		00 16 55.9	
	comp=E,1µm,0.4s						
LVC	Limon Verde	1.49	174	P	Pn	00 16 33.7	+0.3
	baz=332,slow=9.3						
LVC				S	Sn	00 16 54.1	0.0
	comp=E,115nm,0.3s,baz=272,slow=22,SNR=5.0						
PB04	IPOC Station P	1.57	219	⇑*e*P	Pn	00 16 34.0	-0.1
PB04				*e*S	Sn	00 16 55.0	-0.4
PB04				IAML		00 16 56.9	
	comp=N,1µm,0.3s						
PB06	IPOC Station P	1.64	196	⇑*e*P	Pn	00 16 35.0	-0.1
PB06				*e*S	Sn	00 16 57.0	0.0
PSGC	Pisagua	1.81	327	⇑*e*P	Pn	00 16 36.4	-0.6
PSGC				*e*S	Sn	00 17 00.6	0.0
PSGC				IAML		00 17 01.1	
	comp=N,358nm,0.2s						
PB05	IPOC Station P	2.02	211	⇑*e*P	Pn	00 16 39.3	-0.3
PB05				*e*S	Sn	00 17 03.0	-2.2
LPAZ	La Paz	4.89	11	P	Pn	00 17 19.8	+1.8
	comp=N,0.6nm,0.3s,baz=207,slow=6.8,SNR=14						
LPAZ				S	Sn	00 18 09.1	-4.8
	comp=N,0.5nm,0.3s,baz=168,slow=6.0,SNR=6.1						
BDFB	Brasilia	20.71	78	P	P	00 20 37.1	-0.4
	comp=N,2.4nm,0.5s,baz=252,slow=9.9,SNR=6.3						
PTGA	Pitinga	22.13	25	P	P	00 20 52.1	-0.4
	comp=N,1.6nm,0.3s,baz=243,slow=14,SNR=2.3						
TXAR	Lajitas Array	60.23	325	P	P	00 26 03.8	+1.3
	comp=N,0.1nm,0.5s,baz=158,slow=9.1,SNR=3.3						
TORD	Torodi Ar. Bea	77.37	70	P	P	00 27 48.3	-0.5
	comp=N,0.3nm,0.4s,baz=257,slow=5.4,SNR=5.1						
YKA	Yellowknife Ar	90.78	341	P	P	00 28 56.0	+0.3
	comp=N,0.2nm,0.6s,baz=132,slow=4.3,SNR=5.5						
MKAR	Makanchi Array	145.42	35	PKPbc	PKPab	00 35 31.4	+0.4
	comp=N,0.4nm,0.6s,baz=328,slow=3.7,SNR=5.2						

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*ISCJB **11** 00:23:36.6±0.9, 10°.89S±0°.07×166°.11E±0°.09, h35^{km}, mb3.8/7, MS3.7/1, Error ellipse: s-maj=14.4km s-min=8.6km az=148.0*

*IDC **11** 00:23:40.4±4.0, 10°.88S×166°.07E, h54^{km}±33^{km}, mb3.6/7, mb1 3.9/9, mb1mx3.7/31, mbtmp4.0/9, ML4.6/2, MS3.2/2, Ms1 3.2/2, ms1mx2.9/29, Error ellipse: s-maj=29.9km s-min=20.7km az=53.0*

ISC 11 00:23:38.3±1.0, 10°.79S±0°.10×166°.2E±0°.1, h35^{km}, n16, σ0ˢ.91/12, mb3.8/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.29	282	P	Pn	00 25 09.4	+0.8
	20nm,0.3s,baz=167,slow=9.8,SNR=2.2						
HNR				S	Sn	00 26 19.7	+0.4
	16nm,0.3s,baz=116,slow=21,SNR=2.6						
DZM	Mont Dzumac	11.22	179	P	Pn	00 26 17.1	+0.9
	2.6nm,0.3s,baz=338,slow=14,SNR=18						
DZM				S	Sn	00 28 20.4	-0.1
	0.5nm,0.3s,baz=132,slow=23,SNR=3.4						
DZM				LR	LR	00 28 51.5	
	comp=Z,34nm,21.8s,baz=64,slow=28						
CTA	Charters Tower	21.30	242	P	P	00 28 22.3	+0.2
	2.7nm,0.7s,baz=95,slow=10,SNR=3.6						
H11S2	WAKE ISLAND Hy	29.10	1	T	T	00 59 57.2	
	baz=181,slow=76,SNR=31						
H11S3	WAKE ISLAND Hy	29.11	1	T	T	00 59 57.2	
	baz=181,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	29.12	1	T	T	00 59 58.3	
	baz=181,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	30.32	1	T	T	01 01 28.8	
	baz=182,slow=76,SNR=27						
H11N3	WAKE ISLAND Hy	30.33	1	T	T	01 01 29.2	
	baz=182,slow=76,SNR=19						
H11N2	WAKE ISLAND Hy	30.34	1	T	T	01 01 30.2	
	baz=182,slow=76,SNR=27						
WRA	Warramunga Arr	31.97	250	P	P	00 30 00.0	-1.3
	2.1nm,1.1s,baz=81,slow=9.2,SNR=4.9						
WRA				PcP	PcP	00 32 50.8	-0.2
	0.1nm,0.6s,baz=75,slow=3.8,SNR=3.5						
ASAR	Alice Springs	33.29	243	P	P	00 30 11.3	-1.5
	0.7nm,0.7s,baz=74,slow=9.3,SNR=8.0						
BATI	Baumata	41.79	267	LR	LR	00 48 51.6	
	comp=Z,92nm,18.6s,baz=246,slow=36						
CMAR	Chiang Mai Arr	72.41	293	P	P	00 35 01.4	-0.1
	0.7nm,0.3s,baz=123,slow=4.8,SNR=3.1						
SONM	Songino Array	78.72	324	P	P	00 35 37.9	+0.7
	0.4nm,0.6s,baz=137,slow=3.0,SNR=3.1						
ILAR	Eielson Array	83.14	18	P	P	00 36 00.7	+0.4
	0.4nm,0.5s,baz=236,slow=5.1,SNR=8.3						
MKAR	Makanchi Array	93.63	317	P	P	00 36 50.1	-1.0
	0.5nm,0.6s,baz=91,slow=6.1,SNR=6.9						

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*ISCJB **11** 00:30:10.3±0.6, 71°.92N±0°.05×55°.1W±0°.2, h10^{km}, Error ellipse: s-maj=8.3km s-min=6.0km az=151.1*

*OTT **11** 00:30:14.2±0.1, 71°.96N×54°.86W, h18^{km}, MN3.1/4, Western Greenland. 521km northeast from Clyde River, Nu Eastern Arctic Background Seismic Zone.*

ISC 11 00:30:10.6±1.0, 71°.97N±0°.05×54°.96W±0°.07, h10^{km}, n11, σ2ˢ.20/17, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULLO	Kullorsuaq	2.71	347	PN	Pn	00 30 56.8	+2.7
KULLO				SN	Sn	00 31 28.2	+1.3
KULLO				LG	Lg	00 31 37.3	
KULLO				Trac		00 31 43.7	
	comp=Z,77nm,0.3s						
KULLO	Kullorsuaq	2.71	347	*i* P	Pb	00 30 57.5	-1.6
ILULI	Ilulissat	3.05	153	PN	Pn	00 31 00.7	+1.8
ILULI				SN	Sn	00 31 35.9	+0.6
ILULI				LG	Lg	00 31 48.9	
ILULI	Ilulissat	3.05	153	*i* P	Pn	00 31 00.5	+1.7
CLRN	Clyde River	4.65	258	PN	Pn	00 31 23.2	+2.5
CLRN				SN	Sn	00 32 14.3	-0.3
CLRN				Trac		00 32 17.7	
	comp=Z,4.0nm,0.1s						
SUMG	Summit	5.08	75	*i* P	Pn	00 31 27.5	+0.5
SFJD	Kangerlussuaq	5.22	161	PN	Pn	00 31 29.1	+0.6
SFJD				SN	Sn	00 32 26.6	-2.2
SFJD				Trac		00 32 37.0	
	comp=Z,5.3nm,0.2s						

SFJD	Kangerlussuaq	5.22	161	*i* P	Pn	00 31 29.0	+0.4
TULEG	Thule	5.93	327	PN	Pn	00 31 40.9	+2.6
TULEG				SN	Sn	00 32 44.9	-1.2
TULEG				Trac		00 32 55.5	
	comp=Z,10nm,0.3s						
ILON	Igloolik, Nuna	9.23	267	PN	Pn	00 32 24.6	+1.1
ILON				SN	Sn	00 34 03.3	-3.9
ILON				Trac		00 34 31.6	
	comp=Z,388nm,3.5s						
FRB	Frobisher Bay	9.68	218	PN	Pn	00 32 33.2	+3.5
FRB				Trac		00 34 05.7	
	comp=Z,511nm,3.6s						
FRB				SN	Sn	00 34 10.5	-7.8

IDC 11 00:49:13.9±1.8**,5°.85S**×**130°.17E,h0^{km},mb3.1**/2**, mb1 3.6**/4**,mb1mx3.5**/20**,mbtmp3.4**/4**,ML3.7**/2**,Error ellipse: s-maj=123.7km s-min=27.9km az=73.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.58	164	Pn	Pn	00 52 39.6	-2.1
	0.2nm,0.3s,baz=347,slow=13,SNR=20						
WRA				Sn	Sn	00 55 12.0	-12
	0.5nm,0.3s,baz=339,slow=25,SNR=7.6						
ASAR	Alice Springs	18.07	169	P	P	00 53 27.6	+0.4
	0.4nm,0.3s,baz=352,slow=10,SNR=16						
ASAR				S	Sn	00 56 34.8	-14
	0.1nm,0.3s,baz=327,slow=14,SNR=3.7						
SONM	Songino Array	57.41	341	P	P	00 59 04.2	-0.2
	0.1nm,0.6s,baz=143,slow=7.4,SNR=2.2						
MKAR	Makanchi Array	67.36	326	P	P	01 00 11.3	+0.2
	0.1nm,0.4s,baz=113,slow=7.5,SNR=5.8						

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*ISCJB **11** 01:02:03.2±0.3,4°.92N±0°.04×95°.81E±0°.05,h29^{km}, mb4.1/25,MS3.6/3,Error ellipse: s-maj=8.1km s-min=4.8km az=143.4*

*DJA **11** 01:02:05.0±0.8,5°N±3°×9°6E±°,h10^{km},M4.7/7,mb4.6/7, mB5.1/3,MLv4.8/6,Mw(mB)4.5/3*

*NEIC **11** 01:02:09.8±1.2,5°.08N×96°.16E,h70^{km}±11^{km},mb4.2/9, Error ellipse: s-maj=17.0km s-min=7.4km az=67.0*

*IDC **11** 01:02:10.5±6.3,5°.03N×96°.01E,h75^{km}±57^{km},mb3.6/12, mb1 3.8/13,mb1mx3.6/38,mbtmp3.9/13,ML4.5/1,MS3.3/2, Ms1 3.3/2,ms1mx3.0/40,Error ellipse: s-maj=35.2km s-min=13.7km az=48.0*

ISC 11 01:02:04.7±0.5**,4°.80N**±0°.05×**95°.80E**±0°.06**,h29^{km},n73, σ2^s.10**/74**,mb4.1**/25**,MS3.7**/3**,3C-4D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.23	69	*e*Pn	Pn	01 02 23.6	-2.4
LHMI				*e*Sn	Sn	01 02 36.5	-5.0
LHMI	Lhok Sumawe	1.23	69	P	Pn	01 02 23.5	-2.4
KCSI	Kotacane, Aceh	2.34	123	P	Pb	01 02 43.6	-2.7
SNSI	Sinabang, Aceh	2.43	167	P	Pb	01 02 45.7	-2.1
TSI	Tuntungan	3.05	115	P	Pb	01 02 57.6	-0.7
PSI	Prapat	3.70	122	*e*Pn	Pn	01 03 03.1	+3.0
GSI	Gunungsitoli	3.90	153	*e*Pn	Pb	01 03 12.0	-0.8
GSI				*e*Sn	Sn	01 03 45.0	-2.5
GSI	Gunungsitoli	3.90	153	P	Pb	01 03 08.6	-4.2
PKDT	Phuket	3.98	39	P	Pn	01 03 02.4	-1.4
KULM	Kulim	4.86	84	*e*Pn	Pn	01 03 14.9	-1.1
TRTT	Trang	4.91	52	P	Pn	01 03 22.2	+5.6
IPM	Ipoh	5.22	93	*e*Pn	Pn	01 03 19.1	-1.9
IPM				*e*Sn	Sn	01 04 04.4	-16
MNSI	Mandailing Nat	5.49	136	P	Pn	01 03 28.1	+3.6
BKNI	Bangkinang	6.87	130	*e*Pn	Pn	01 03 47.0	+3.5
PDSI	Padang	7.34	140	P	Pn	01 03 52.4	+2.3
	22nm,0.7s,0.4nm						
KRJI	Kerinci	8.88	140	P	Pn	01 04 23.6	+12
SRAK	Srakaew	11.03	33	P	Pn	01 04 44.6	+3.9
	126nm,0.5s,2µm						
UMPA	Umpang Tak	11.73	15	P	Pn	01 04 51.1	+0.8
	5.4nm,1.1s						
MDSI	Maura Dua	12.46	138	P	Pn	01 05 00.0	-0.2
PBKT	Sadao Pong	12.75	23	*e*Pn	Pn	01 05 04.1	-0.1
PBKT	Sadao Pong	12.75	23	P	Pn	01 05 04.4	+0.2
	20nm,0.6s,799nm						
KASI	Kota Agung	13.44	140	P	Pn	01 05 11.1	-2.5
CM31	Chiang Mai Arr	13.92	13	*e*Pn	Pn	01 05 21.0	+0.8
CMAR	Chiang Mai Arr	13.92	13	P	Pn	01 05 21.0	+0.8
	0.8nm,0.3s,baz=202,slow=14,SNR=4.1						
CMMT	Chiang Mai	14.27	12	P	P	01 05 42.5	+11
CHTO	Chiang Mai	14.27	12	*e*Pn	Pn	01 05 23.1	-1.8
CHTO	Chiang Mai	14.27	12	P	P	01 05 42.6	+11
PALK	Pallekele	15.21	280	S	Sn	01 08 19.6	-5.8
	0.6nm,0.3s,baz=286,slow=1.2,SNR=2.9						
PALK				LR	LR	01 10 42.4	
	comp=Z,88nm,21.3s,baz=116,slow=33						
SHL	Shillong	20.99	350	*e*P	P	01 06 47.0	+1.0
	10nm,0.6s						
KMI	Kunming	21.28	18	P	P	01 06 52.7	+3.4
KMI				pP	sP	01 07 01.3	+0.1
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SRBI	Singaraja	23.21	123	P	P	01 07 12.6	+3.0
	comp=Z,28nm,1.2s						
GYA	Guiyang	23.92	25	⇑*i*P	P	01 07 16.1	-0.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
MPSI	Mapaga	24.48	100	P	P	01 07 22.6	+1.0
LSA	Lhasa	25.16	350	*e*P	P	01 07 25.5	-2.6
	comp=Z,3.7nm,1.1s						
BKSI	Bulukumba	26.29	112	P	P	01 07 37.9	-0.1
XAN	Xi'an	31.55	21	P	P	01 08 23.8	-0.9
XAN				pP	pP	01 08 32.7	-0.7
XAN				sP	sP	01 08 37.2	+0.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN				LR	LR		
	comp=N,190nm,16.3s						
XAN				LR	LR		
	comp=E,210nm,16.3s						
XAN				LR	LR		
	comp=Z,140nm,14.1s						
XAN	Xi'an	31.55	21	*e*P	P	01 08 22.6	-2.1
	comp=Z,3.6nm,0.8s						
GTA	Gaotai	34.65	5	*e*P	P	01 08 55.2	+3.4
GTA				pP	pP	01 08 59.6	-1.1
GTA				sP	sP	01 09 02.2	-1.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,140nm,6.7s						
GTA				LR	LR		
	comp=N,140nm,19.0s						
GTA				LR	LR		
	comp=E,120nm,17.8s						
GTA				LR	LR		
	comp=Z,100nm,19.4s						
FITZ	Fitzroy Crossi	37.20	128	*e*P	P	01 09 12.7	-1.0
	comp=Z,6.8nm,0.9s						
WSAR	Wadi Sarin	40.27	301	P	P	01 09 42.6	+3.1
	comp=Z,2.7nm,0.6s,baz=135,slow=6.9,SNR=7.2						
GAR	Garm	41.14	329	*e*P	P	01 09 45.9	-0.7
	comp=Z,3.9nm,0.9s						
NWAO	Narrogin (SRO)	42.68	153	LR	LR	01 26 26.0	
	comp=Z,45nm,20.7s,baz=218,slow=34						
MK31	Makanchi Array	43.44	347	*e*P	P	01 10 04.9	-0.1
	comp=Z,1.6nm,1.1s						
MK32	Makanchi Array	43.44	347	*e*P	P	01 10 04.1	-0.9
MKAR	Makanchi Array	43.44	347	P	P	01 10 04.1	-0.9
	comp=Z,0.5nm,0.6s,baz=156,slow=8.7,SNR=9.0						
SONA0	Songino Array	43.83	10	*e*P	P	01 10 08.2	-0.2
SONA0				*e*PP	PcP	01 11 53.8	-0.7
SONM	Songino Array	43.83	10	P	P	01 10 08.2	-0.2
	comp=Z,1.2nm,0.6s,baz=190,slow=8.6,SNR=14						
SONM				PcP	PcP	01 11 53.8	-0.7
	comp=Z,0.3nm,0.4s,baz=190,slow=3.9,SNR=4.9						
WR1	Warramunga Arr	45.16	124	*e*P	P	01 10 19.3	0.0
	comp=Z,7.4nm,1.0s						
WR1				*e*PcP	PcP	01 12 00.4	+0.9
WRA	Warramunga Arr	45.16	124	P	P	01 10 19.3	0.0
	comp=Z,2.4nm,0.6s,baz=301,slow=9.3,SNR=28						
WRA				PcP	PcP	01 12 00.4	+0.9
	comp=Z,0.4nm,0.6s,baz=306,slow=2.8,SNR=2.5						
WRAB	Tennant Creek	45.17	124	*e*P	P	01 10 19.8	+0.5
	comp=Z,8.2nm,1.1s						
WB2	Warramunga Arr	45.17	124	*e*P	P	01 10 18.5	-0.8
ASAR	Alice Springs	46.70	129	P	P	01 10 31.6	+0.2
	comp=Z,11nm,0.4s,baz=298,slow=7.8,SNR=62						
GEYT	Alibeck	47.58	319	P	P	01 10 38.5	+0.5
	comp=Z,3.1nm,0.7s,baz=147,slow=8.3,SNR=6.8						
ZALV	Zalesovo Beam	49.81	352	P	P	01 10 55.2	+0.4
	comp=Z,0.6nm,0.4s,baz=193,slow=5.9,SNR=3.3						
ZAA1	Zalesovo Array	49.82	352	*e*P	P	01 10 55.2	+0.3
ABKAR	Akbulak array	53.70	332	*e*P	P	01 11 22.1	-1.9
	comp=Z,1.2nm,0.8s						
STKA	Stephens Creek	56.81	133	P	P	01 11 47.9	+1.2
	comp=Z,1.2nm,0.5s,baz=323,slow=8.8,SNR=3.1						
BR101	Keskin Array S	65.68	312	*e*P	P	01 12 46.0	-0.9
BRTR	Keskin Array B	65.68	312	P	P	01 12 46.0	-0.9
	comp=Z,0.5nm,0.5s,baz=125,slow=5.9,SNR=9.3						
VRI	Vrincioaia	72.05	317	⇑*i*P	P	01 13 26.5	+0.3
PLOR	Plostina	72.10	317	⇓*i*P	P	01 13 25.5	-1.1
MLR	Muntele Rosu	72.51	316	⇓*i*P	P	01 13 33.2	+4.0
VOIR		73.12	316	⇓*i*P	P	01 13 30.5	-2.2
BURAR	Bucovina Array	73.42	318	⇓*i*P	P	01 13 30.5	-3.9
DRGR		74.95	317	⇑*i*P	P	01 13 43.5	+0.1
FIA0	FINESS Array S	76.18	332	*e*P	P	01 13 48.4	-1.6
FINES	FINESS Array B	76.18	332	P	P	01 13 48.4	-1.6
	comp=Z,1.4nm,0.7s,baz=90,slow=5.7,SNR=5.7						
ARA0	ARCESS Array S	78.70	340	*e*P	P	01 14 02.2	-1.8
ARCES	ARCESS Array B	78.70	340	P	P	01 14 02.2	-1.8
	comp=Z,1.6nm,0.8s,baz=81,slow=5.8,SNR=4.7						
GEC2	GERESS Array S	81.20	319	*e*P	P	01 14 18.0	-0.1
GERES	GERESS Array B	81.20	319	P	P	01 14 18.0	-0.1
	comp=Z,0.4nm,0.5s,baz=66,slow=4.7,SNR=3.6						
TORD	Torodi Ar. Bea	92.90	283	P	P	01 15 18.5	+2.7
	comp=Z,0.4nm,0.8s,baz=74,slow=5.3,SNR=4.1						
TOA1	Torodi Ar. Sit	92.91	283	*e*P	P	01 15 18.5	+2.7

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*IDC **11** 01:03:46.0±1.3,10°.82S×167°.33E,h0^{km},mb3.9/7, mb1 4.1/9,mb1mx3.9/33,mbtmp4.0/9,ML4.5/2,MS3.5/4, Ms1 3.5/4,ms1mx3.2/25,Error ellipse: s-maj=39.1km s-min=23.3km az=133.0*

*ISCJB **11** 01:03:49.5±0.9,10°.9S±0°.1×167°.2E±0°.1,h33^{km},mb3.9/7, MS3.5/3,Error ellipse: s-maj=18.8km s-min=15.8km az=20.6*

ISC 11 01:03:51.3±1.0**,10°.8S**±0°.1×**167°.3E**±0°.1**,h35^{km},n14, σ1^s.08**/9**,mb3.8**/7**,MS3.4**/3**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.36	280	Pn	Pn	01 05 36.3	0.0
	26nm,0.3s,baz=199,slow=7.4,SNR=2.7						
DZM	Mont Dzumac	11.19	184	Pn	Pn	01 06 29.1	+0.2
	0.8nm,0.3s,baz=151,slow=22,SNR=6.6						
DZM				LR	LR	01 10 00.1	
	comp=Z,207nm,20.0s,baz=197,slow=33						
CTA	Charters Tower	22.23	243	P	P	01 08 44.7	-0.5
	2.5nm,0.7s,baz=65,slow=14,SNR=1.6						
H11S2	WAKE ISLAND Hy	29.15	359	T	T	01 40 37.2	
	baz=183,slow=74,SNR=2.1						
H11S3	WAKE ISLAND Hy	29.16	359	T	T	01 40 39.1	
	baz=183						
H11S1	WAKE ISLAND Hy	29.17	359	T	T	01 40 38.3	
	baz=183,slow=74,SNR=2.7						
STKA	Stephens Creek	31.64	225	P	P	01 10 12.3	+1.0
	3.1nm,0.7s,baz=47,slow=12,SNR=4.8						
STKA				LR	LR	01 22 05.9	
	comp=Z,171nm,18.9s,baz=29,slow=35						
FITZ	Fitzroy Crossi	40.89	255	P	P	01 11 29.0	-1.4
	4.4nm,0.7s,baz=107,slow=6.5,SNR=6.0						
PPT	Papeete	42.28	104	LR	LR	01 25 58.9	
	comp=Z,50nm,20.4s,baz=2.0,slow=32						
KSRS	Korea Array	60.58	325	LR	LR	01 37 36.3	
	comp=Z,22nm,20.6s,baz=355,slow=34						
SONM	Songino Array	79.40	323	P	P	01 15 55.1	+1.1
	1.0nm,1.1s,baz=83,slow=4.7,SNR=2.5						
ILAR	Eielson Array	82.85	18	P	P	01 16 12.6	+0.8
	0.6nm,0.8s,baz=218,slow=4.3,SNR=6.0						
NVAR	Mina Array Bea	84.74	49	P	P	01 16 21.0	-1.4
	0.2nm,0.4s,baz=236,slow=6.4,SNR=2.0						
MKAR	Makanchi Array	94.41	317	P	P	01 17 07.7	0.0
	0.3nm,0.7s,baz=84,slow=6.2,SNR=3.0						

IDC 11 01:06:33.4±1.7**,10°.77S**×**165°.65E,h0^{km},mb3.7**/4**, mb1 3.9**/5**,mb1mx3.6**/31**,mbtmp3.7**/5**,ML3.3**/1**,Error ellipse: s-maj=53.1km s-min=29.7km az=133.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.27	176	Pn	Pn	01 09 16.1	+0.3
	0.2nm,0.3s,baz=305,slow=18,SNR=1.7						
WRA	Warramunga Arr	31.49	249	P	P	01 12 58.1	+0.9
	0.5nm,0.7s,baz=81,slow=9.0,SNR=2.8						
ASAR	Alice Springs	32.83	243	P	P	01 13 08.4	-0.6
	0.7nm,0.6s,baz=69,slow=10,SNR=4.6						
FITZ	Fitzroy Crossi	39.36	255	P	P	01 14 04.3	-0.6
	0.8nm,0.7s,baz=39,slow=6.5,SNR=3.5						
ILAR	Eielson Array	83.28	19	P	P	01 19 01.6	0.0
	0.6nm,1.0s,baz=230,slow=4.3,SNR=3.9						

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*IDC **11** 01:19:29.7±3.2,27°.37N×58°.25E,h0^{km},mb3.5/4, mb1 3.5/4,mb1mx3.2/50,mbtmp3.5/4,Error ellipse: s-maj=93.7km s-min=29.0km az=143.0*

*ISCJB **11** 01:19:35.5±0.4,27°.36N±0°.02×58°.33E±0°.04,h10^{km}, mb3.4/4,Error ellipse: s-maj=5.2km s-min=3.1km az=1.1*

*TEH **11** 01:19:36.4,27°.39N×58°.30E,h20^{km},ML3.6*

*THR **11** 01:19:37.8,27°.40N×58°.36E,h33^{km},ML3.4*

*DSN **11** 01:19:42.7±1.5,26°.94N×58°.33E,h35^{km},ML3.0/7,Error ellipse: s-maj=51.4km s-min=11.8km az=132.0*

*OMAN **11** 01:19:43.4±0.2,27°.09N×58°.09E,h30^{km},ml3.4/15,Error ellipse: s-maj=3.7km s-min=2.5km az=355.0*

ISC 11 01:19:34.7±1.0**,27°.38N**±0°.04×**58°.29E**±0°.04**,h10^{km},n56, σ2^s.49**/71**,mb3.5**/4**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	Nian	1.31	278	*e*Pg	Pn	01 20 01.2	+2.1
NIAN				IAMB	IAmb	01 20 22.5	
	comp=Z,0.0nm,0.3s						
GENO	Geno	1.89	271	IAMB	IAmb	01 20 39.0	
	comp=Z,0.0nm,0.4s						
GENO				*e*Pn	Pn	01 20 08.6	+1.4
BANOM	Banah	2.30	231	*e*P	Pn	01 20 14.1	+1.4
	SNR=46						
BANOM	Banah	2.30	231	P	Pn	01 20 16.1	+3.4
	SNR=6.1						
SHME	Shamm	2.33	236	*e*Pn	Pn	01 20 15.2	+1.9
CHMN	Cheshme madani	2.56	345	*e*Pn	Pn	01 20 18.2	+1.5
CHMN				IAMB	IAmb	01 21 02.3	
	comp=E,0.0nm,0.4s						
NGRK	Negar Kerman	2.64	329	*e*Pn	Pn	01 20 19.4	+1.6
NGRK				IAMB	IAmb	01 20 52.4	
	comp=Z,0.0nm,0.2s						
CHBR	Chabahar	2.65	132	*e*Pn	Pn	01 20 19.8	+2.3
CHBR	Chabahar	2.65	132	*e*Pn	Pn	01 20 19.8	+2.3
CHBR				*e*Sn	Sn	01 20 50.4	+0.8
MDH	Madha	2.74	221	*e*P	Pn	01 20 19.1	+0.3
	SNR=58						
MDH				S	Sn	01 20 49.3	-2.6
MDH	Madha	2.74	221	P	Pn	01 20 19.2	+0.5
	SNR=58						
MDH				S	Sn	01 20 49.4	-2.5
MSFE	Esma-Masafi	2.77	224	*e*Pn	Pn	01 20 19.9	+0.6
KRBR	Kerman	2.92	333	*e*Pn	Pn	01 20 24.5	+2.9
KRBR	Kerman	2.92	333	*e*AML	AML	01 21 01.2	
	comp=N,127nm,0.4s						
KRBR				*e*AML	AML	01 21 02.5	
	comp=E,121nm,0.5s						
KRBR	Kerman	2.92	333	*e*Pn	Pn	01 20 24.5	+2.9
KRBR				*e*Sn	Sn	01 20 58.7	+1.7
TVBK	TV Kerman	2.93	333	*e*Pn	Pn	01 20 24.3	+2.6
TVBK				IAMB	IAmb	01 21 03.5	
	comp=Z,0.0nm,0.3s						
UMQ	Umm Al-Quwin	2.99	233	*e*Pn	Pn	01 20 25.9	+3.6
UOSS	Minazif	3.06	218	*e*P	Pn	01 20 23.4	+0.1
	SNR=38						
UOSS				S	Sn	01 20 57.3	-2.7
UOSS	Minazif	3.06	218	P	Pn	01 20 23.6	+0.3
UOSS				S	Sn	01 20 56.9	-3.1
SZD1	Zahaedan-tmp	3.09	47	*e*Pn	Pn	01 20 25.7	+2.0
ZHSF	Zahedan	3.12	44	*e*Pn	Pn	01 20 26.1	+2.0
ZHSF	Zahedan	3.12	44	*e*Pn	Pn	01 20 26.1	+2.0
HATD	Hatta, Dubai	3.20	218	*e*P	Pn	01 20 25.4	+0.4
	SNR=18						
HATD	Hatta, Dubai	3.20	218	P	Pn	01 20 25.5	+0.4
	SNR=19						
HATD				S	Sn	01 21 00.6	-2.7
ASHO	Ashiyiah	3.35	217	*i* P	Pn	01 20 28.4	+1.2
	SNR=23						
ASHO	Ashiyiah	3.35	217	P	Pn	01 20 30.6	+3.4
	SNR=23						
NAZ	Nazwa, Dubai	3.35	225	*i* P	Pn	01 20 30.3	+3.0
	SNR=19						
NAZ	Nazwa, Dubai	3.35	225	P	Pn	01 20 30.3	+3.0
	SNR=19						
KHGB	Koh Gabri	3.39	332	*e*Pn	Pn	01 20 30.4	+2.5
KHGB				IAMB	IAmb	01 21 13.1	
	comp=N,0.0nm,0.4s						
FAQ	Al Faqa, Dubai	3.57	223	*i* P	Pn	01 20 32.9	+2.6
	SNR=38						
FAQ	Al Faqa, Dubai	3.57	223	P	Pn	01 20 33.2	+2.9
	SNR=38						
FAQ				S	Sn	01 21 15.0	+2.4
SOHO	SOHO	3.60	207	P	Pn	01 20 31.0	+0.4
	SNR=52						
SOHO				S	Sn	01 21 10.9	-2.3
ASUD	Al Ashush, Dub	3.82	225	*i* P	Pn	01 20 36.8	+3.1
	SNR=61						
ASUD	Al Ashush, Dub	3.82	225	P	Pn	01 20 37.0	+3.3
	SNR=61						
ASUD				S	Sn	01 21 21.9	+3.2
HOQ	Hoqain	3.88	193	P	Pn	01 20 36.2	+1.6
	SNR=5.9						
HOQ				S	Sn	01 21 18.3	-1.9
ALNE	Al Ain	4.02	215	*e*Pn	Pn	01 20 40.0	+3.5
AJN	Ajban	4.09	227	*e*Pn	Pn	01 20 39.8	+2.5
WSAR	Wadi Sarin	4.13	176	P	Pn	01 20 40.8	+2.9
SMDO	Samad	4.30	183	P	Pn	01 20 43.2	+2.8
	SNR=15						
SMDO				S	Sn	01 21 31.6	+0.9
ARQ	Araqi	4.33	202	P	Pn	01 20 44.6	+3.9
ARQ				S	Sn	01 21 34.5	+3.2
BSY	Bisya	4.72	192	P	Pn	01 20 50.2	+4.2
	SNR=6.9						
BSY				S	Sn	01 21 43.0	+2.1
GHIR	Ghir-Karzin	4.79	282	*e*AML	AML	01 21 39.7	
	comp=E,25nm,0.3s						
GHIR				*e*AML	AML	01 21 40.1	
	comp=N,29nm,0.3s						
WBK	Wadi Bani Khal	4.79	172	P	Pn	01 20 50.0	+3.1
	SNR=9.2						
WBK				S	Sn	01 21 41.5	-1.0
JMDO	Jabal Madar	4.99	182	P	Pn	01 20 53.5	+3.8
	SNR=5.4						
JMDO				S	Sn	01 21 49.4	+1.9
JLN	Jalan Bani Buh	5.30	169	P	Pn	01 20 56.3	+2.2
	SNR=70						
JLN				S	Sn	01 21 52.8	-2.4
	SNR=26						
IDAH	Dahanechah	5.51	14	*e*Pn	Pn	01 20 58.1	+0.9
IDAH				IAMB	IAmb	01 21 15.3	
	comp=Z,164nm,0.3s						
ITEG	Tejag	5.51	4	*e*Pn	Pn	01 20 57.3	+0.2
ITEG				IAMB	IAmb	01 22 37.9	
	comp=Z,302nm,0.5s						
IMON	Monand	5.92	11	IAMB	IAmb	01 21 05.2	
	comp=Z,184nm,0.4s						
IMON				*e*Pn	Pn	01 21 03.7	+1.0
YZKH	Yazd	5.94	328	*e*Pn	Pn	01 21 06.1	+3.2
YZKH	Yazd	5.94	328	*e*Pn	Pn	01 21 06.1	+3.2
MHTO	MHTO	6.37	183	P	Pn	01 21 12.3	+3.6
MHTO				S	Sn	01 22 22.9	+1.4
DQM	DQM	7.45	185	P	Pn	01 21 26.4	+2.9
	SNR=7.2						
DQM				S	Sn	01 22 45.9	-2.2
AKTO	Aktyubinsk	23.03	360	P	P	01 24 36.5	-3.4
	comp=Z,1.3nm,0.5s,baz=165,slow=11,SNR=4.9						
MKAR	Makanchi Array	27.06	38	P	P	01 25 14.6	-2.8
	comp=Z,0.2nm,0.5s,baz=229,slow=9.1,SNR=3.6						
ZALV	Zalesovo Beam	32.94	29	P	P	01 26 05.3	-3.9
	comp=Z,0.6nm,0.4s,baz=230,slow=9.1,SNR=3.7						
TORD	Torodi Ar. Bea	54.53	267	P	P	01 28 59.5	-3.8
	comp=Z,0.2nm,0.5s,baz=63,slow=8.3,SNR=4.0						

IDC 11 01:21:49.3±1.5**,10°.94S**×**165°.42E,h0^{km},mb3.8**/4**, mb1 4.0**/5**,mb1mx3.7**/31**,mbtmp3.8**/5**,ML3.8**/1**,Error ellipse: s-maj=52.1km s-min=28.6km az=127.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.11	175	Pn	Pn	01 24 28.7	-1.0
	0.6nm,0.3s,baz=9.1,slow=23,SNR=1.6						
WRA	Warramunga Arr	31.22	250	P	P	01 28 10.9	+0.2
	1.6nm,0.8s,baz=79,slow=9.1,SNR=10						
WRA				PcP	PcP	01 31 06.1	+0.4
	0.4nm,0.9s,baz=63,slow=2.8,SNR=3.2						
ASAR	Alice Springs	32.55	243	P	P	01 28 21.7	-0.8
	0.4nm,0.4s,baz=64,slow=10.0,SNR=6.6						
ILAR	Eielson Array	83.52	19	P	P	01 34 18.2	-0.5
	0.5nm,0.6s,baz=236,slow=4.9,SNR=15						
MKAR	Makanchi Array	93.22	317	P	P	01 35 07.1	+1.2
	0.2nm,0.8s,baz=99,slow=4.4,SNR=2.4						

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*IDC **11** 01:29:46.9±1.6,10°.75S×164°.57E,h0^{km},mb3.7/5, mb1 3.9/7,mb1mx3.8/30,mbtmp3.8/7,ML4.2/2,MS3.4/5, Ms1 3.4/5,ms1mx3.0/32,Error ellipse: s-maj=47.2km s-min=26.7km az=119.0*

*ISCJB **11** 01:29:48.6±1.0,10°.9S±0°.1×164°.69E±0°.10,h24^{km}, mb3.6/5,MS3.6/3,Error ellipse: s-maj=18.2km s-min=11.2km az=31.9*

ISC 11 01:29:50.5±1.1**,10°.8S**±0°.1×**164°.7E**±0°.1**,h24^{km},n16, σ1^s.47**/9**,mb3.5**/5**,MS3.6**/3**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.91	286	Pn	Pn	01 31 04.0	+1.1
	16nm,0.3s,baz=313,slow=1.0,SNR=9.3						
HNR				Sn	Sn	01 31 59.7	+0.7
	17nm,0.3s,baz=75,slow=23,SNR=1.3						
HNR				LR	LR	01 32 34.1	
	comp=Z,55nm,20.2s,baz=342,slow=35						
DZM	Mont Dzumac	11.34	172	Pn	Pn	01 32 32.5	+1.4
	3.1nm,0.3s,baz=40,slow=17,SNR=29						
DZM				LR	LR	01 35 57.3	
	comp=Z,171nm,18.5s,baz=48,slow=32						
CTA	Charters Tower	20.06	240	P	P	01 34 21.5	-0.7
	0.3nm,0.3s,baz=69,slow=15,SNR=1.4						
H11S2	WAKE ISLAND Hy	29.16	4	T	T	02 06 04.1	
	baz=184,slow=76,SNR=69						
H11S3	WAKE ISLAND Hy	29.16	4	T	T	02 06 04.4	
	baz=184,slow=76,SNR=80						
H11S1	WAKE ISLAND Hy	29.18	4	T	T	02 06 04.6	
	baz=184,slow=76,SNR=74						
STKA	Stephens Creek	29.96	222	LR	LR	01 46 20.4	
	comp=Z,104nm,21.1s,baz=25,slow=33						
H11N1	WAKE ISLAND Hy	30.38	4	T	T	02 07 37.2	
	baz=184,slow=76,SNR=35						
H11N3	WAKE ISLAND Hy	30.39	4	T	T	02 07 39.9	
	baz=184,slow=76,SNR=34						
H11N2	WAKE ISLAND Hy	30.40	4	T	T	02 07 38.8	
	baz=184,slow=76,SNR=42						
WRA	Warramunga Arr	30.65	249	P	P	01 36 01.4	-1.9
	0.8nm,1.1s,baz=80,slow=11,SNR=4.2						
ASAR	Alice Springs	32.03	242	P	P	01 36 13.6	-2.0
	0.3nm,0.6s,baz=60,slow=11,SNR=5.4						
ASAR				LR	LR	01 48 57.8	
	comp=Z,115nm,18.9s,baz=84,slow=36						
NWAO	Narrogin (SRO)	48.79	236	LR	LR	01 59 11.7	
	comp=Z,120nm,18.5s,baz=275,slow=36						
SONM	Songino Array	77.88	324	P	P	01 41 47.1	+0.7
	0.1nm,0.4s,baz=132,slow=4.7,SNR=6.2						
ILAR	Eielson Array	83.59	19	P	P	01 42 15.6	-0.8
	0.7nm,1.0s,baz=232,slow=5.1,SNR=5.2						
MKAR	Makanchi Array	92.66	317	P	P	01 43 00.7	+0.2
	0.9nm,0.8s,baz=92,slow=6.2,SNR=11						

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*ISK **11** 01:41:01.8,38°.70N×43°.25E,h22^{km},ML2.0/7*

*ISCJB **11** 01:41:03.3±0.8,38°.70N±0°.03×43°.25E±0°.05,h21^{km}±10^{km}, Error ellipse: s-maj=6.3km s-min=4.4km az=27.1*

*DDA **11** 01:41:03.1,38°.71N×43°.26E,h7^{km}±4^{km},ML2.5*

ISC 11 01:41:03.2±0.9**,38°.74N**±0°.03×**43°.24E**±0°.03**,h14^{km}**±9^{km}**, n14,σ0^s.92**/25**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.19	140	PG	Pg	01 41 07.7	+0.1
VANB				SG	Sg	01 41 12.2	+1.6
TVAN	Van	0.25	147	*i* P	Pg	01 41 08.4	-0.3

TVAN				*i* S	**Sg**	**01 41 13.0**	**+0.6**
TVAN				IAML_P			
	comp=Z,11μm,0.1s						
ERCV	**ERCIS-VAN**	**0.29**	**16**	PG	**Pb**	**01 41 09.7**	**-0.7**
ERCV				SG	**Sb**	**01 41 14.9**	**-0.3**
VMUR	**Van-Muradiye**	**0.36**	**46**	*i* P	**Pb**	**01 41 11.3**	**-0.3**
VMUR				*i* S	**Sb**	**01 41 17.3**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.41**	**280**	*i* P	**Pb**	**01 41 12.3**	**0.0**
ADCV				*i* S	**Sb**	**01 41 19.0**	**+0.6**
ADCV				IAML_P			
	comp=Z,409nm,0.1s						
GEVA	**Gevas**	**0.45**	**198**	*i* P	**Pg**	**01 41 11.1**	**-1.1**
GEVA				*i* S	**Sg**	**01 41 16.2**	**-2.0**
GEVA				IAML_P			
	comp=Z,1μm,0.2s						
AKDM	**Akdamar-Van**	**0.46**	**206**	PG	**Pg**	**01 41 11.2**	**-1.1**
CLDR	**Caldiran**	**0.67**	**53**	PG	**Pg**	**01 41 15.6**	**-0.7**
CLDR				SG	**Sb**	**01 41 26.2**	**+0.1**
CLDR	**Caldiran**	**0.67**	**53**	*i* P	**Pb**	**01 41 16.2**	**-0.6**
CLDR				IAML_P			
	comp=Z,836nm,0.1s						
MLAZ	**Malazgirt-MUS**	**0.67**	**307**	PG	**Pg**	**01 41 16.0**	**-0.3**
TUTA	**Tutak**	**0.74**	**334**	*i* P	**Pg**	**01 41 17.6**	**0.0**
TUTA				*i* S	**Sg**	**01 41 27.2**	**-0.1**
AGRB	**Hanur-Agry**	**0.86**	**347**	PG	**Pg**	**01 41 19.5**	**-0.3**
AGRB				SG	**Sb**	**01 41 32.0**	**+0.5**
GURO	**Guroymak-BITLI**	**0.96**	**259**	PG	**Pg**	**01 41 20.5**	**-1.3**
GURO				SG	**Sg**	**01 41 34.4**	**0.0**
SRTM	**Siirt_Merkez**	**1.27**	**234**	*i* P	**Pg**	**01 41 28.3**	**+0.6**
SRTM				*i* S	**Sn**	**01 41 45.6**	**+1.9**
SRTM				IAML_P			
	comp=Z,373nm,0.2s						

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*IDC **11** 01:48:09.3±1.5, 11°.10S×164°.71E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx4.0/33, mbtmp4.1/10, ML4.0/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/32, Error ellipse: s-maj=42.7km s-min=21.1km az=118.0*

*ISCJB **11** 01:48:11.6±0.9, 11°.2S±0°.1×164°.7E±0°.2, h29^{km}, mb4.0/8, MS3.8/2, Error ellipse: s-maj=23.0km s-min=15.0km az=8.8*

ISC 11 01:48:13.7±1.1, 11°.2S±0°.1×164°.7E±0°.2, h29^{km}, n19, σ0^{s}.80/10, mb4.0/8, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.99**	**290**	LR	LR	01 51 30.7	
	comp=Z,195nm,21.1s,baz=128,slow=40						
DZM	**Mont Dzumac**	**10.99**	**172**	Pn	**Pn**	**01 50 49.0**	**-0.1**
	1.6nm,0.3s,baz=351,slow=11,SNR=13						
DZM				LR	LR	01 54 13.1	
	comp=Z,88nm,18.7s,baz=12,slow=33						
CTA	**Charters Tower**	**19.86**	**241**	P	**Pn**	**01 52 44.0**	**-0.4**
	0.3nm,0.3s,baz=66,slow=13,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**29.51**	**4**	T	T	02 25 14.1	
	baz=184,slow=76,SNR=7.2						
H11S3	**WAKE ISLAND Hy**	**29.52**	**4**	T	T	02 25 13.1	
	baz=184,slow=76,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**29.53**	**4**	T	T	02 25 14.6	
	baz=184,slow=76,SNR=8.1						
STKA	**Stephens Creek**	**29.68**	**222**	P	**P**	**01 54 18.4**	**+1.3**
	2.0nm,0.8s,baz=0.0,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**30.50**	**250**	P	**P**	**01 54 24.0**	**-0.6**
	1.9nm,0.7s,baz=80,slow=8.8,SNR=23						
H11N1	**WAKE ISLAND Hy**	**30.74**	**4**	T	T	02 26 43.3	
	baz=184,slow=76,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**30.74**	**4**	T	T	02 26 46.4	
	baz=184,slow=76,SNR=9.4						
H11N2	**WAKE ISLAND Hy**	**30.76**	**4**	T	T	02 26 44.8	
	baz=184,slow=76,SNR=5.5						
ASAR	**Alice Springs**	**31.85**	**243**	P	**P**	**01 54 35.3**	**-1.1**
	1.3nm,0.6s,baz=65,slow=9.7,SNR=14						
FITZ	**Fitzroy Crossi**	**38.38**	**255**	P	**P**	**01 55 32.3**	**-0.3**
	4.7nm,0.7s,baz=98,slow=6.7,SNR=23						
BATI	**Baumata**	**40.33**	**267**	LR	LR	02 13 35.0	
	comp=Z,80nm,19.2s,baz=247,slow=38						
USRK	**Ussuriysk Ar.**	**62.59**	**334**	P	**P**	**01 58 35.8**	**+0.7**
	2.6nm,0.8s,baz=134,slow=14,SNR=3.5						
SONM	**Songino Array**	**78.15**	**324**	P	**P**	**02 00 10.7**	**+0.4**
	0.6nm,0.8s,baz=154,slow=5.8,SNR=4.3						
ILAR	**Eielson Array**	**83.93**	**19**	P	**P**	**02 00 39.9**	**-0.7**
	0.6nm,0.9s,baz=248,slow=4.4,SNR=5.1						
NVAR	**Mina Array Bea**	**86.86**	**50**	LR	LR	02 39 13.1	
	comp=Z,48nm,18.1s,baz=319,slow=35						
MKAR	**Makanchi Array**	**92.90**	**317**	P	**P**	**02 01 23.9**	**-0.2**
	0.3nm,0.8s,baz=96,slow=7.4,SNR=4.0						

IDC 11 01:48:38.5±14.0, 6°.17S×129°.00E, h374^{km}±184^{km}, mb2.3/1, mb1 2.6/4, mb1mx2.5/34, mbtmp3.3/4, Error ellipse: s-maj=75.9km s-min=63.4km az=142.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.30**	**195**	P	P	01 51 21.8	-0.7
	0.0nm,0.3s,baz=14,slow=13,SNR=1.9						
FITZ				S	S	01 53 36.7	-1.6
	0.0nm,0.3s,baz=46,slow=17,SNR=1.4						
WRA	**Warramunga Arr**	**14.64**	**160**	P	P	01 51 48.2	0.0
	0.1nm,0.3s,baz=340,slow=11,SNR=9.8						
ASAR	**Alice Springs**	**18.03**	**165**	P	P	01 52 25.0	+0.4
	0.3nm,0.3s,baz=344,slow=11,SNR=8.5						
MKAR	**Makanchi Array**	**66.99**	**327**	P	P	01 58 52.3	0.0
	0.1nm,0.4s,baz=136,slow=7.7,SNR=3.3						

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*IDC **11** 02:03:45.9±1.2, 10°.71S×166°.27E, h0^{km}, mb3.9/5, mb1 4.1/7, mb1mx3.8/39, mbtmp4.0/7, ML4.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/26, Error ellipse: s-maj=28.0km s-min=24.5km az=12.0*

*ISCJB **11** 02:03:46.3±1.0, 10°.8S±0°.1×166°.2E±0°.1, h10^{km}, mb4.3/6, Error ellipse: s-maj=21.2km s-min=14.6km az=42.3*

ISC 11 02:03:47.6±1.2, 10°.7S±0°.1×166°.3E±0°.2, h10^{km}, n14, σ0^{s}.83/8, mb3.9/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.36**	**281**	Pn	**Pn**	**02 05 22.0**	**+0.5**
	9.5nm,0.3s,baz=159,slow=14,SNR=2.2						
HNR				LR	LR	02 07 54.6	
	comp=Z,94nm,20.7s,baz=84,slow=39						
DZM	**Mont Dzumac**	**11.33**	**179**	Pn	**Pn**	**02 06 30.6**	**+0.8**
	1.2nm,0.3s,baz=184,slow=19,SNR=8.8						
RAO	**Raoul Island**	**23.65**	**144**	P	**P**	**02 08 58.6**	**-0.7**
	699nm,0.3s,baz=218,slow=19,SNR=11						
H11S2	**WAKE ISLAND Hy**	**28.99**	**1**	T	T	02 40 09.1	
	baz=181,slow=76,SNR=81						
H11S3	**WAKE ISLAND Hy**	**28.99**	**1**	T	T	02 40 09.4	
	baz=181,slow=76,SNR=50						
H11S1	**WAKE ISLAND Hy**	**29.01**	**1**	T	T	02 40 12.1	
	baz=181,slow=76,SNR=50						
H11N1	**WAKE ISLAND Hy**	**30.21**	**1**	T	T	02 41 40.7	
	baz=182,slow=76,SNR=64						
H11N3	**WAKE ISLAND Hy**	**30.21**	**1**	T	T	02 41 41.0	
	baz=182,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**30.23**	**1**	T	T	02 41 43.3	
	baz=182,slow=76,SNR=44						
WRA	**Warramunga Arr**	**32.10**	**249**	P	**P**	**02 10 14.5**	**-0.9**
	2.0nm,0.9s,baz=82,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**33.42**	**243**	P	**P**	**02 10 26.2**	**-0.7**
	1.0nm,0.7s,baz=66,slow=10.0,SNR=9.0						
FITZ	**Fitzroy Crossi**	**39.98**	**255**	P	**P**	**02 11 22.4**	**-0.4**
	3.3nm,0.6s,baz=75,slow=5.8,SNR=18						
ILAR	**Eielson Array**	**83.00**	**18**	P	**P**	**02 16 12.7**	**-0.1**
	0.6nm,1.1s,baz=228,slow=5.8,SNR=2.8						
MKAR	**Makanchi Array**	**93.62**	**317**	P	**P**	**02 17 05.0**	**+0.7**
	0.2nm,0.6s,baz=91,slow=5.6,SNR=4.6						

IDC 11 02:23:28.8±10.0, 18°.06S×175°.57W, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.6/26, mbtmp3.6/3, Error ellipse: s-maj=463.0km s-min=35.8km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.26**	**259**	P	P	02 32 03.6	-0.6
	0.1nm,0.4s,baz=88,slow=7.6,SNR=3.0						
ASAR	**Alice Springs**	**47.35**	**254**	P	P	02 32 05.5	+0.6
	0.9nm,0.5s,baz=87,slow=8.1,SNR=15						
ILAR	**Eielson Array**	**85.45**	**12**	P	P	02 36 08.9	+0.9
	0.4nm,0.7s,baz=216,slow=5.3,SNR=8.8						
BRTR	**Keskin Array B**	**146.78**	**317**	PKPbc	PKPdf	02 43 10.6	-1.0
	0.4nm,0.6s,baz=109,slow=4.8,SNR=6.1						

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*NORS **11** 02:36:41.7±0.0, 41°.35N×45°.50E, h25^{km}, MPVA3.3*

*MOS **11** 02:36:41.6±0.0, 41°.41N×45°.49E, h20^{km}, MPVA3.3*

*DDA **11** 02:36:43.0, 41°.34N×45°.37E, h5^{km}±2^{km}, ML2.5*

*TIF **11** 02:36:43.9, 41°.39N×45°.33E, h23^{km}±4^{km}*

*DRS **11** 02:36:49.7±0.0, 41°.35N×44°.88E, h39^{km}*

ISC 11 02:36:42.4±1.3, 41°.39N±0°.03×45°.38E±0°.03, h7^{km}±11^{km}, n26, σ0^{s}.98/46, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEAG	**Tbilisi Sea**	**0.58**	**311**	P	**Pb**	**02 36 55.1**	**+0.3**
SEAG				S	**Sb**	**02 37 04.0**	**+0.7**
TBLG	**Delisi**	**0.59**	**306**	P	**Pb**	**02 36 55.1**	**0.0**
TBLG				S	**Sb**	**02 37 03.9**	**+0.1**
TBLG	**Delisi**	**0.59**	**306**	*i* P	**Pb**	**02 36 55.1**	**0.0**
TBLG				*i* S	**Sb**	**02 37 04.7**	**+0.9**
TBLG				IAML_P			
	comp=Z,12μm,0.1s						
TBLG	**Delisi**	**0.59**	**306**	*e*Pg	**Pb**	**02 36 55.1**	**0.0**
KZRT	**Kazreti**	**0.74**	**270**	P	**Pb**	**02 36 57.6**	**0.0**
KZRT				S	**Sb**	**02 37 08.2**	**+0.2**
TRLG	**Trialeti**	**0.98**	**279**	P	**Pb**	**02 37 01.1**	**-0.7**
TRLG				S	**Sb**	**02 37 14.3**	**-0.5**
GNI	**Garni**	**1.33**	**202**	P	**Pb**	**02 37 08.9**	**+1.1**
GNI				S	**Sn**	**02 37 28.2**	**+2.7**
BGD	**Bogdanovka**	**1.35**	**265**	P	**Pg**	**02 37 08.5**	**+0.2**
BGD				S	**Sn**	**02 37 25.9**	**-0.3**
BTLR	**Botlikh**	**1.42**	**26**	*i* Pg	**Pn**	**02 37 08.4**	**-0.3**
BTLR				*e*Sg	**Sn**	**02 37 26.9**	**-0.8**
KMKR	**Kumukh**	**1.48**	**59**	*e*Pg	**Pb**	**02 37 10.0**	**-0.4**
KMKR				*e*Sg	**Sn**	**02 37 29.0**	**-0.4**
EAK	**Akyaka**	**1.52**	**243**	*i* P	**Pg**	**02 37 11.2**	**-0.3**
EAK				*i* S	**Sg**	**02 37 32.3**	**+1.1**
EAK				IAML_P			
	comp=Z,293nm,0.2s						
GNBR	**Gunib**	**1.55**	**49**	*i* Pg	**Pn**	**02 37 10.1**	**-0.3**
GNBR				*i* Sg	**Sn**	**02 37 30.4**	**-0.4**
LACR	**Lac**	**1.65**	**331**	*e*Pg	**Pb**	**02 37 12.7**	**-0.6**
LACR				*e*Sg	**Sb**	**02 37 34.6**	**+0.4**
TASB	**TASBURUN-IGDIR**	**1.65**	**212**	*e*P	**Pg**	**02 37 14.3**	**+0.2**
KMGR	**Komgaron**	**1.71**	**347**	*e*Pg	**Pg**	**02 37 14.8**	**-0.4**
KMGR				*e*Sg	**Sg**	**02 37 38.6**	**+1.2**
AKT	**Akhty**	**1.77**	**86**	*e*Pg	**Pn**	**02 37 13.1**	**-0.4**
AKT				*e*Sg	**Sn**	**02 37 35.9**	**-0.3**
ZEI	**Tsey**	**1.78**	**322**	*e*Pg	**Pb**	**02 37 15.0**	**-0.5**
ZEI				*e*Sg	**Sb**	**02 37 38.6**	**+0.4**
DIGO	**Kars**	**1.81**	**238**	*i* P	**Pg**	**02 37 18.0**	**+0.9**
DIGO				*i* S	**Sg**	**02 37 40.9**	**+0.4**
DIGO				IAML_P			
	comp=Z,336nm,0.2s						
IGDI	**IGDIR**	**1.81**	**214**	*i* P	**Pg**	**02 37 16.1**	**-1.1**
IGDI				IAML_P			
	comp=Z,49nm,0.1s						
KORR	**Kora**	**1.96**	**330**	*e*Pg	**Pb**	**02 37 18.2**	**-0.2**
KORR				*e*Sg	**Sb**	**02 37 44.7**	**+1.6**
DIGR	**Digorskoe uzhe**	**2.02**	**319**	*e*Pg	**Pb**	**02 37 19.2**	**-0.4**
DIGR				*e*Sg	**Sb**	**02 37 45.9**	**+0.9**
LSNR	**Lesken**	**2.21**	**329**	*e*Pg	**Pb**	**02 37 23.8**	**+1.0**
LSNR				*e*Sg	**Sb**	**02 37 52.3**	**+1.9**
AGRB	**Hanur-Agry**	**2.57**	**226**	*e*P	**Pb**	**02 37 27.0**	**-1.9**
DAGI	**Agillar**	**2.63**	**264**	*i* P	**Pg**	**02 37 32.6**	**-0.3**
DAGI				*i* S	**Sg**	**02 38 07.2**	**+0.1**
DAGI				IAML_P			
	comp=Z,37nm,0.4s						
DBAD	**Bademkaya**	**2.81**	**264**	*i* P	**Pg**	**02 37 34.9**	**-1.3**
DBAD				IAML_P			
	comp=Z,67nm,0.2s						
BCA	**Borcka**	**2.83**	**272**	*e*P	**Pb**	**02 37 30.3**	**-3.0**

IDC 11 03:11:02.1±1.7, 11°.00S×165°.36E, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.6/39, mbtmp3.7/4, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/28, Error ellipse: s-maj=52.7km s-min=30.7km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.55**	**286**	LR	LR	03 14 41.3	
	comp=Z,110nm,20.8s,baz=130,slow=40						
DZM	**Mont Dzumac**	**11.06**	**175**	Pn	Pn	03 13 41.7	-0.1
	1.1nm,0.3s,baz=0.0,slow=20,SNR=9.5						
H11S2	**WAKE ISLAND Hy**	**29.33**	**3**	T	T	03 47 52.5	
	baz=182,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.33**	**3**	T	T	03 47 55.1	
	baz=182,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.35**	**3**	T	T	03 47 53.8	
	baz=182						
H11N1	**WAKE ISLAND Hy**	**30.55**	**3**	T	T	03 49 23.8	
	baz=181						
H11N3	**WAKE ISLAND Hy**	**30.56**	**3**	T	T	03 49 18.6	
	baz=181						
H11N2	**WAKE ISLAND Hy**	**30.57**	**3**	T	T	03 49 25.3	
	baz=181						
WRA	**Warramunga Arr**	**31.14**	**250**	P	P	03 17 23.1	+0.2
	1.0nm,0.9s,baz=80,slow=9.3,SNR=4.3						
ASAR	**Alice Springs**	**32.48**	**243**	P	P	03 17 34.4	-0.2
	0.6nm,0.8s,baz=68,slow=10,SNR=3.4						
ILAR	**Eielson Array**	**83.59**	**19**	P	P	03 23 31.9	0.0
	0.4nm,0.8s,baz=231,slow=5.4,SNR=3.9						

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*NEIC **11** 03:16:52.4±0.0, 16°.93N×99°.69W, h12^{km}, MD4.0(MEX), After MEX.*

MEX 11 03:16:49.2±0.6, 16°.75N×99°.63W, h7^{km}±7^{km}, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.28**	**296**	*e*P	Pg	03 16 54.5	-0.2
ACP2				*i* S	Sg	03 16 58.8	+0.3
CAIG	**El Cayaco**	**0.68**	**296**	*e*P	Pg	03 17 00.6	-1.8
CAIG				*e*S	Sg	03 17 10.2	-1.1
CAIG	**El Cayaco**	**0.68**	**296**	*e*P	Pg	03 17 00.6	-1.8
CAIG				*e*S	Sg	03 17 10.2	-1.1
MEIG	**Mezcala**	**1.17**	**0**	*e*P	Pg	03 17 06.8	-4.8
MEIG				*e*S	Sg	03 17 20.3	-6.5
MEIG	**Mezcala**	**1.17**	**0**	*e*P	Pg	03 17 07.9	-3.8
MEIG				*i* S	Sg	03 17 22.9	-3.9
PNIG	**Pinotepa**	**1.48**	**104**	*e*P	Pn	03 17 12.9	-3.4
PNIG				*e*S	Sn	03 17 32.3	-3.6
PNIG	**Pinotepa**	**1.48**	**104**	*e*P	Pn	03 17 12.5	-3.7
PNIG				*i* S	Sn	03 17 30.8	-5.0
PLIG	**Platanillo**	**1.64**	**4**	*e*P	Pn	03 17 15.6	-2.9
PLIG				*e*S	Sn	03 17 32.4	-7.4
PLIG	**Platanillo**	**1.64**	**4**	*e*P	Pn	03 17 15.2	-3.3
PLIG				*i* S	Sn	03 17 33.9	-6.0
ARIG	**Puente Sto Nin**	**1.67**	**336**	*e*P	Pn	03 17 15.9	-3.0
ARIG				*e*S	Sn	03 17 37.1	-3.5
ARIG	**Puente Sto Nin**	**1.67**	**336**	*e*P	Pn	03 17 15.9	-3.0
ARIG				*e*S	Sn	03 17 37.9	-2.7
KVTX	**Kingsville**	**10.86**	**8**	Pn	Pn	03 19 21.8	-3.3

IDC 11 03:19:35.6±1.5, 10°.69S×165°.76E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.6/38, mbtmp3.7/5, ML4.1/1, MS3.9/1, Ms1 3.9/1, ms1mx2.8/24, Error ellipse: s-maj=50.9km s-min=29.0km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.34**	**177**	Pn	Pn	03 22 19.3	+0.3
	1.2nm,0.3s,baz=355,slow=12,SNR=9.8						
H11S2	**WAKE ISLAND Hy**	**29.00**	**2**	T	T	03 56 03.3	
	baz=181,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**29.01**	**2**	T	T	03 56 03.6	
	baz=181,slow=76,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**29.02**	**2**	T	T	03 56 04.7	
	baz=181,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**30.23**	**2**	T	T	03 57 34.8	
	baz=182,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**30.23**	**2**	T	T	03 57 35.3	
	baz=182,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	**30.25**	**2**	T	T	03 57 36.1	
	baz=182,slow=76,SNR=11						
WRA	**Warramunga Arr**	**31.62**	**249**	P	P	03 25 59.8	-0.8
	0.4nm,0.6s,baz=81,slow=9.1,SNR=5.9						
ASAR	**Alice Springs**	**32.97**	**243**	P	P	03 26 11.9	-0.5
	0.5nm,0.6s,baz=63,slow=10,SNR=5.0						
FITZ	**Fitzroy Crossi**	**39.49**	**255**	P	P	03 27 09.1	+0.9
	1.3nm,0.8s,baz=70,slow=11,SNR=3.9						
ASAJ	**Asahikawa**	**58.46**	**341**	LR	LR	03 50 36.9	
	comp=Z,100nm,19.3s,baz=161,slow=32						
ILAR	**Eielson Array**	**83.17**	**19**	P	P	03 32 03.5	+0.2
	0.2nm,0.6s,baz=232,slow=5.4,SNR=4.7						
ARCES	**ARCESS Array B**	**115.99**	**346**	PKP	PKiKP	03 38 19.4	-0.6
	3.0nm,1.0s,baz=50,slow=2.8,SNR=3.5						

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*SOME **11** 03:21:42.2, 43°.38N×83°.90E, h10^{km}*

*NNC **11** 03:21:47.5±2.2, 43°.66N×83°.67E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=17.9km s-min=7.8km az=132.0*

ISC 11 03:21:47.3±2.2, 43°.64N±0°.10×83°.71E±0°.10, h10^{km}, n14, σ1^{s}.55/17, 10C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**2.91**	**285**	Pg	**Pb**	**03 22 38.8**	**-0.6**
	2.6nm,0.3s						
DJR				Lg	Lg	03 23 21.4	
	18nm,0.3s						
DJR	**Jarkent**	**2.91**	**285**	*e*P	**Pb**	**03 22 38.8**	**-0.6**
	2.6nm,0.3s						
DJR				*e*S	**Sg**	**03 23 21.4**	**+0.5**
	18nm,0.3s						
PDGK	**Podgornoye**	**3.09**	**266**	Pg	**Pb**	**03 22 41.0**	**-1.4**
	4.9nm,0.3s						
PDGK				Lg	Lg	03 23 24.9	
	12nm,0.4s						
PDGK	**Podgornoye**	**3.09**	**266**	⇑Pg	**Pb**	**03 22 44.1**	**+1.8**
	8.0nm,0.6s						
PDGK				⇓Lg	Lg	03 23 25.7	
	12nm,0.5s						
MK31	**Makanchi Array**	**3.31**	**343**	⇑Pn	**Pn**	**03 22 41.8**	**+2.7**
	0.2nm,0.3s,baz=162,slow=15,SNR=57						
MK31				⇓Lg	Lg	03 23 31.3	
	7.0nm,0.3s,baz=161,slow=28,SNR=16						
MAKZ	**Makanchi**	**3.40**	**339**	⇑Pg	**Pg**	**03 22 51.3**	**-1.1**
	0.7nm,0.3s						
MAKZ				⇑Lg	Lg	03 23 34.4	
	6.2nm,0.4s						
ZSN	**Zaisan**	**3.90**	**12**	Pg	**Pb**	**03 22 55.7**	**-0.4**
	2.9nm,0.3s						
ZSN				Lg	Lg	03 23 50.0	
	12nm,0.6s						
ZSN	**Zaisan**	**3.90**	**12**	*e*P	**Pb**	**03 22 55.6**	**-0.4**
	2.9nm,0.3s						
ZSN				⇓*i*S	**Sg**	**03 23 50.0**	**-2.4**
	12nm,0.6s						
SATY	**Saty**	**3.91**	**263**	Pg	**Pb**	**03 22 56.2**	**-0.2**
	9.2nm,0.3s						
SATY				Lg	Lg	03 23 51.2	
	16nm,0.4s						
SATY	**Saty**	**3.91**	**263**	*e*P	**Pb**	**03 22 56.2**	**-0.2**
	9.2nm,0.3s						
SATY				*e*S	**Sg**	**03 23 51.2**	**-1.7**
	16nm,0.4s						
TKM2	**Tokmak 2**	**5.97**	**266**	⇓Pg	**Pg**	**03 23 39.5**	**-2.1**
	2.6nm,0.8s						
TKM2				⇓Lg	Lg	03 24 54.5	
	3.9nm,1.1s						
AAK	**Ala-Archa**	**6.82**	**265**	⇑Pn	**Pn**	**03 23 29.4**	**+1.9**
	2.1nm,1.0s						
AAK				⇑Lg	Lg	03 25 24.7	
	3.4nm,0.8s						
KURBB	**Kurchatov Arra**	**7.83**	**335**	⇓Pg	Pb	03 24 09.6	+6.7
	0.5nm,0.7s						
KURBB				⇑Sn	**Sn**	**03 25 10.2**	**+0.5**
	3.3nm,0.7s						
KURBB				⇓Lg	Lg	03 25 53.6	
	5.0nm,0.6s						
KURK	**Kurchatov**	**7.88**	**336**	⇑Pg	Pb	03 24 09.3	+5.4
	1.5nm,0.7s						
KURK				⇑Sn	**Sn**	**03 25 12.5**	**+1.5**
	1.3nm,0.5s						
KURK				⇑Lg	Lg	03 25 55.4	
	5.3nm,0.7s						

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*IDC **11** 03:22:51.8±1.2, 10°.91S×165°.56E, h0^{km}, mb3.9/7, mb1 4.2/9, mb1mx3.9/41, mbtmp4.1/9, ML4.5/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/28, Error ellipse: s-maj=34.0km s-min=21.1km az=136.0*

*ISCJB **11** 03:22:54.4±0.9, 11°.09S±0°.07×165°.55E±0°.09, h30^{km}, mb3.8/6, Error ellipse: s-maj=13.9km s-min=8.5km az=144.9*

ISC 11 03:22:56.2±1.0, 10°.99S±0°.09×165°.6E±0°.1, h30^{km}, n15, σ0^{s}.95/11, mb3.9/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.78**	**285**	Pn	**Pn**	**03 24 18.6**	**-1.2**
	11nm,0.3s,baz=268,slow=7.2,SNR=1.3						
HNR				Sn	**Sn**	**03 25 26.2**	**+1.1**
	9.6nm,0.3s,baz=172,slow=21,SNR=1.2						
HNR				LR	LR	03 26 29.1	
	comp=Z,165nm,19.5s,baz=110,slow=38						
DZM	**Mont Dzumac**	**11.05**	**176**	Pn	**Pn**	**03 25 32.9**	**+0.6**
	3.9nm,0.3s,baz=316,slow=11,SNR=24						
DZM				Sn	**Sn**	**03 27 34.2**	**-0.9**
	0.2nm,0.3s,baz=53,slow=14,SNR=1.6						
CTA	**Charters Tower**	**20.70**	**242**	P	**P**	**03 27 34.3**	**+0.2**
	7.0nm,0.9s,baz=67,slow=13,SNR=7.4						
H11S2	**WAKE ISLAND Hy**	**29.31**	**2**	T	T	03 59 22.1	
	baz=181						
H11S3	**WAKE ISLAND Hy**	**29.32**	**2**	T	T	03 59 22.6	
	baz=181						
H11S1	**WAKE ISLAND Hy**	**29.33**	**2**	T	T	03 59 24.1	
	baz=181						
STKA	**Stephens Creek**	**30.38**	**223**	P	**P**	**03 29 06.7**	**+1.0**
	2.0nm,0.7s,baz=296,slow=21,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**30.54**	**2**	T	T	04 00 52.1	
	baz=183						
H11N3	**WAKE ISLAND Hy**	**30.54**	**2**	T	T	04 00 57.7	
	baz=183						
H11N2	**WAKE ISLAND Hy**	**30.55**	**2**	T	T	04 00 55.1	
	baz=183						
WRA	**Warramunga Arr**	**31.37**	**250**	P	**P**	**03 29 14.0**	**-0.6**
	3.4nm,0.7s,baz=80,slow=9.0,SNR=21						
ASAR	**Alice Springs**	**32.69**	**243**	P	**P**	**03 29 25.5**	**-0.7**
	1.7nm,0.8s,baz=65,slow=10,SNR=15						
ILAR	**Eielson Array**	**83.50**	**19**	P	**P**	**03 35 21.6**	**+0.9**
	0.6nm,0.7s,baz=236,slow=5.1,SNR=12						
MKAR	**Makanchi Array**	**93.38**	**317**	P	**P**	**03 36 08.8**	**+0.3**
	0.1nm,0.8s,baz=98,slow=5.2,SNR=2.6						
YKA	**Yellowknife Ar**	**94.99**	**27**	P	**P**	**03 36 14.6**	**-0.9**
	0.1nm,0.6s,baz=257,slow=4.8,SNR=4.1						

IDC 11 03:26:36.8±1.8, 10°.98S×165°.34E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.6/40, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=53.8km s-min=33.2km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.08**	**175**	Pn	Pn	03 29 17.1	+0.4
	0.9nm,0.3s,baz=10,slow=16,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**29.32**	**3**	T	T	04 02 57.5	
	baz=184,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.32**	**3**	T	T	04 02 59.3	
	baz=184,slow=76						
H11S1	**WAKE ISLAND Hy**	**29.34**	**3**	T	T	04 03 00.2	
	baz=184,slow=76						
H11N1	**WAKE ISLAND Hy**	**30.54**	**3**	T	T	04 04 29.9	
	baz=182,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**30.55**	**3**	T	T	04 04 29.2	
	baz=182,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**30.56**	**3**	T	T	04 04 30.4	
	baz=182,slow=76,SNR=11						
WRA	**Warramunga Arr**	**31.13**	**250**	P	P	03 32 57.7	+0.2
	0.8nm,0.9s,baz=82,slow=8.8,SNR=4.5						
ASAR	**Alice Springs**	**32.46**	**243**	P	P	03 33 08.8	-0.4
	0.7nm,0.7s,baz=70,slow=9.7,SNR=7.5						
ILAR	**Eielson Array**	**83.58**	**19**	P	P	03 39 06.5	0.0
	0.5nm,0.9s,baz=238,slow=5.2,SNR=4.6						

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*ISCJB **11** 03:29:05.7±0.3, 1°.45N±0°.05×99°.69E±0°.05, h192^{km}±4^{km}, mb3.7/20, Error ellipse: s-maj=10.8km s-min=5.3km az=138.1*

*DJA **11** 03:29:06.5±0.3, 1°N±3°×10°0E±°, h185^{km}±4^{km}, M4.6/18, mB5.5/3, mb4.8/5, MLv4.4/18, Mw(mB)4.9/3*

*IDC **11** 03:29:08.2±1.9, 1°.50N×99°.75E, h194^{km}±16^{km}, mb3.5/18, mb1 3.7/19, mb1mx3.5/46, mbtmp4.1/19, Error ellipse: s-maj=23.4km s-min=8.8km az=53.0*

ISC 11 03:29:06.7±0.7, 1°.45N±0°.07×99°.69E±0°.06, h186^{km}±6^{km}, n44, σ0^{s}.98/60, mb3.8/20, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	0.66	189	P	Pn	03 29 33.5	+0.6
MNSI				S	Sn	03 29 53.8	+0.5
BKNI	**Bangkinang**	1.75	129	P	Pn	03 29 41.6	0.0
BKNI				S	Sn	03 30 08.8	0.0
PPI	**Padang Panjang**	2.02	159	P	Pn	03 29 45.7	+1.3
PPI				S	Sn	03 30 14.7	+0.8
PBSI	**Pulau Batu**	2.05	223	P	Pn	03 29 45.0	+0.2
PBSI				S	Sn	03 30 13.0	-1.4
GSI	**Gunungsitoli**	2.12	266	P	Pn	03 29 45.8	+0.3
GSI				S	Sn	03 30 14.4	-1.2
TSI	**Tuntungan**	2.33	331	P	Pn	03 29 48.0	+0.2
PDSI	**Padang**	2.47	162	P	Pn	03 29 49.4	0.0
KCSI	**Kotacane, Aceh**	2.81	317	P	Pn	03 29 53.3	-0.1
SDSI	**Sungai Dareh**	2.94	144	P	Pn	03 29 55.6	+0.7
TPTI		3.08	306	P	Pn	03 29 56.6	-0.1
SNSI	**Sinabang, Aceh**	3.49	286	P	Pn	03 30 01.5	-0.2
KRJI	**Kerinci**	3.94	153	P	Pn	03 30 07.4	0.0
PPSI	**Pulau Pagai**	4.20	176	P	Pn	03 30 09.1	-1.4
LHMI	**Lhok Sumawe**	4.65	324	P	Pn	03 30 16.7	+0.4
MASI	**Maura Aman, Be**	5.22	151	P	Pn	03 30 23.3	-0.5
TRTT	**Trang**	6.35	0	P	Pn	03 30 37.2	-1.1
	36nm,0.8s,1µm0.1nm						
LHSI	**Lahat**	6.49	144	P	Pn	03 30 40.0	-0.2
MNAI	**Manna**	6.63	151	P	Pn	03 30 41.1	-1.0
	112nm,0.6s,1.5nm						
MDSI	**Maura Dua**	7.41	143	P	Pn	03 30 52.0	-0.3
	43nm,0.7s,0.2nm						
KASI	**Kota Agung**	8.43	145	P	Pn	03 31 03.4	-2.2
CMJI	**Cimerak**	12.67	137	P	Pn	03 31 56.7	-3.8
CMAR	**Chiang Mai Arr**	16.92	358	P	P	03 32 51.2	-0.6
	0.6nm,0.3s,baz=185,slow=12,SNR=5.6						
FITZ	**Fitzroy Crossi**	32.09	128	P	P	03 35 16.5	0.0
	0.7nm,0.5s,baz=318,slow=10,SNR=4.1						
FITZ				PcP	PcP	03 38 01.9	+0.5
	0.3nm,0.3s,baz=320,slow=7.4,SNR=3.9						
FITZ				ScP	ScP	03 41 26.8	-0.8
	0.6nm,0.6s,baz=357,slow=15,SNR=4.0						
XAN	**Xi'an**	33.55	14	P	P	03 35 28.1	-0.9
XAN				pP	pP	03 35 36.9	-31
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	40.08	124	P	P	03 36 24.5	+0.2
	comp=Z,12nm,0.4s,baz=302,slow=9.0,SNR=208						
WRA				PcP	PcP	03 38 25.9	+0.5
	comp=Z,1.6nm,0.4s,baz=316,slow=2.5,SNR=21						
WRA				ScP	ScP	03 41 54.3	-2.6
	comp=Z,0.2nm,0.5s,baz=314,slow=3.3,SNR=3.4						
ASAR	**Alice Springs**	41.59	129	P	P	03 36 37.5	+0.9
	comp=Z,1.0nm,0.4s,baz=300,slow=8.2,SNR=21						
ASAR				PcP	PcP	03 38 30.9	+0.7
	comp=Z,1.6nm,0.7s,baz=309,slow=3.0,SNR=11						
ASAR				ScP	ScP	03 42 01.8	-1.2
	comp=Z,0.3nm,0.6s,baz=307,slow=4.9,SNR=4.1						
KSRS	**Korea Array**	44.27	33	P	P	03 36 57.1	-0.7
	comp=Z,1.2nm,0.8s,baz=219,slow=8.7,SNR=4.2						
SONM	**Songino Array**	46.57	6	P	P	03 37 16.9	+1.0
	comp=Z,4.8nm,0.5s,baz=190,slow=9.6,SNR=26						
SONM				PcP	PcP	03 38 47.2	+0.3
	comp=Z,2.4nm,0.5s,baz=190,slow=4.3,SNR=11						
SONM				ScP	ScP	03 42 22.0	-0.9
	comp=Z,0.3nm,0.8s,baz=186,slow=4.2,SNR=3.1						
AAK	**Ala-Archa**	46.81	334	P	P	03 37 18.7	+0.8
	comp=Z,0.4nm,0.3s,baz=156,slow=10.0,SNR=2.8						
AAK				PcP	PcP	03 38 48.9	+0.9
	comp=Z,0.9nm,0.5s,baz=139,slow=7.9,SNR=5.2						
MKAR	**Makanchi Array**	47.65	344	P	P	03 37 24.8	+0.7
	comp=Z,1.3nm,0.3s,baz=157,slow=8.0,SNR=64						
MKAR				PcP	PcP	03 38 51.8	+1.1
	comp=Z,0.5nm,0.5s,baz=144,slow=4.5,SNR=3.8						
STKA	**Stephens Creek**	51.70	134	P	P	03 37 54.9	-0.1
	comp=Z,0.6nm,0.3s,baz=318,slow=9.6,SNR=4.0						
KURBB	**Kurchatov Arra**	52.18	343	P	P	03 37 58.6	+0.5
	comp=Z,1.2nm,0.6s,baz=163,slow=7.2,SNR=10						
KURBB				PcP	PcP	03 39 07.7	+0.5
	comp=Z,1.1nm,0.5s,baz=155,slow=3.4,SNR=8.4						
ZALV	**Zalesovo Beam**	53.74	349	P	P	03 38 10.0	+0.5
	comp=Z,6.4nm,0.4s,baz=179,slow=6.8,SNR=29						
KLR	**Kul'dur**	54.95	25	P	P	03 38 17.7	-0.6
	comp=Z,0.9nm,0.5s,baz=216,slow=7.9,SNR=5.3						
BVAR	**Borovoye Array**	56.87	339	P	P	03 38 31.5	-0.3
	comp=Z,1.6nm,0.5s,baz=138,slow=9.1,SNR=11						
BVAR				PcP	PcP	03 39 26.0	+0.8
	comp=Z,1.4nm,0.6s,baz=141,slow=4.3,SNR=7.5						
KBZ	**Khabaz**	65.53	318	P	P	03 39 31.0	+0.8
	comp=Z,0.8nm,0.5s,baz=108,slow=6.4,SNR=3.0						
BRTR	**Keskin Array B**	70.79	312	P	P	03 40 03.2	0.0
	comp=Z,1.1nm,0.6s,baz=124,slow=6.8,SNR=12						
AKASG	**Malin Array Be**	76.59	322	P	P	03 40 36.1	-0.5
	comp=Z,0.5nm,0.5s,baz=87,slow=5.0,SNR=2.5						
FINES	**FINESS Array B**	80.94	332	P	P	03 41 00.4	+0.4
	comp=Z,1.0nm,0.4s,baz=109,slow=5.5,SNR=16						
ARCES	**ARCESS Array B**	83.15	340	P	P	03 41 11.8	+0.3
	comp=Z,1.5nm,0.4s,baz=99,slow=4.6,SNR=33						
GERES	**GERESS Array B**	86.27	319	P	P	03 41 28.7	+1.1
	comp=Z,0.3nm,0.5s,baz=112,slow=6.7,SNR=2.7						
NOA	**NORSAR Array B**	88.00	331	P	P	03 41 36.2	+0.7
	comp=Z,0.6nm,0.9s,baz=98,slow=5.7,SNR=2.3						
TXAR	**Lajitas Array**	142.11	34	PKhKP	PKPpre	03 48 10.8	
	comp=Z,0.2nm,0.4s,baz=278,slow=0.6,SNR=3.7						
CPUP	**Villa Florida**	146.82	220	PKPbc	PKPbc	03 48 28.2	+0.5
	comp=Z,2.4nm,0.8s,baz=103,slow=2.8,SNR=7.4						

NIED **11** *03:45:00, 38°.60N×142°.20E, h44^{km}, Mw4.5 Best double couple: $M_0$7.15000×10^{15} NP1:ϕ_s191.00000°, δ24.00000°, λ73.00000°. NP2:ϕ_s29.00000°, δ67.00000°, λ97.00000°.*

BJI **11** *03:45:36.7, 38°.38N×142°.49E, h34^{km}, mB4.8/40, mb4.6/59, Ms4.2/30, Ms7 3.9/30*

ISCJB **11** *03:45:41.0±0.4, 38°.63N±0°.02×142°.22E±0°.03, h45^{km}±3^{km}, mb4.6/120, MS3.9/22, Error ellipse: s-maj=4.7km s-min=3.3km az=35.4*

MOS **11** *03:45:41.4±1.1, 38°.74N×142°.15E, h43^{km}, mb4.9/60, Error ellipse: s-maj=6.3km s-min=4.2km az=109.3*

JMA **11** *03:45:42.4±0.1, 38°.65N×142°.15E, h41^{km}±1^{km}, M4.5*

JMA Felt III J1.

NEIC **11** *03:45:43.8±0.5, 38°.60N×142°.17E, h58^{km}±4^{km}, mb4.6/59, Error ellipse: s-maj=5.3km s-min=3.7km az=125.0*

NEIC Recorded [3 JMA] in Miyagi.

IDC **11** *03:45:44.4±1.6, 38°.66N×142°.09E, h56^{km}±14^{km}, mb4.1/26, mb1 4.2/35, mb1mx4.2/39, mbtmp4.4/35, MS3.7/17, Ms1 3.8/17, ms1mx3.6/39, Error ellipse: s-maj=13.9km s-min=10.7km az=103.0*

ISC 11 03:45:41.4±0.4, **38°.61N**±0°.04×**142°.29E**±0°.04, **h36**^{km}±1^{km}, **h36**^{km}**:pP-P, n341,** σ1^{s}**58**/388, **mb4.7**/135, **MS3.9**/23, **36C-24D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	0.67	288	P	Pn	03 45 53.9	-0.5
JKMT				S	Sn	03 46 01.9	-1.6
OFUJ	**Ofunato**	0.67	315	⇓P	Pn	03 45 54.2	-0.3
OFUJ				S	Sn	03 46 02.3	-1.4
JIKH	**Ishinomakikobu**	0.71	245	P	Pn	03 45 54.9	0.0
JIKH				S	Sn	03 46 03.5	-1.0
JIO	**Ouri**	0.75	258	⇓P	Pn	03 45 55.2	-0.2
JIO				S	Sn	03 46 04.0	-1.5
JMK	**Ichinoseki**	0.90	293	⇓P	Pn	03 45 57.2	-0.3
JMK				eS	Sn	03 46 07.6	-1.7
JOM	**Ohasama**	1.16	318	⇓P	Pn	03 46 01.2	+0.1
JOM				eS	Sn	03 46 15.0	-0.7
JOU	**Okura**	1.29	260	⇓P	Pn	03 46 03.1	+0.2
JOU				S	Sn	03 46 18.6	-0.4
JMM	**Marumori**	1.39	238	⇓P	Pn	03 46 04.3	+0.1
JMM				eS	Sn	03 46 20.2	-1.1
JRG	**Rokugo**	1.51	302	⇓P	Pn	03 46 06.0	+0.1
JYK	**Kaneyama**	1.54	282	⇓P	Pn	03 46 06.4	+0.2
JFK	**Kawauchi**	1.67	222	⇓P	Pn	03 46 08.4	+0.3
ERM	**Erimo**	3.47	11	ePn	Pn	03 46 34.9	+2.1
ERM				eSn	Sn	03 47 06.0	-6.5
ERM	**Erimo**	3.47	11	⇑eP	Pn	03 46 34.1	+1.3
MJAR	**Matsushiro Arr**	3.84	239	P	Pn	03 46 39.9	+2.0
	6.5nm,0.3s,baz=337,slow=5.9,SNR=141						
MJAR				S	Sn	03 47 28.6	+6.8
	2.7nm,0.3s,baz=146,slow=9.5,SNR=5.6						
MJAR				LR	LR	03 48 18.2	
	comp=Z,924nm,19.0s,baz=45,slow=41						
MAJO	**Matsushiro**	3.84	239	ePn	Pn	03 46 40.4	+2.4
MAJO				eSn	Sn	03 47 28.6	+6.8
MAJO	**Matsushiro**	3.84	239	d iP	Pn	03 46 40.0	+2.1
MAT	**Matsushiro**	3.84	239	P	Pn	03 46 39.9	+2.0
MAT				eS	Sn	03 47 20.3	-1.5
MJB9	**Matsu-Tunnel**	3.84	239	ePn	Pn	03 46 40.6	+2.7
INU	**Inuyama**	5.33	234	ePn	Pn	03 47 01.1	+2.7
INU				eSn	Sn	03 47 42.5	-16
ASAJ	**Asahikawa**	5.51	2	P	Pn	03 47 02.7	+1.9
	4.5nm,0.3s,baz=213,slow=9.6,SNR=17						
ASAJ				S	Sn	03 48 04.8	+1.9
	4.7nm,0.3s,baz=182,slow=14,SNR=4.3						
GLVR	**Golovnino**	5.68	24	eP	Pn	03 47 03.6	+0.5
GLVR				eS	Sn	03 48 05.9	-1.1
GLVR				pmax	pmax		
	comp=Z,90nm,0.5s						
GLVR				smax	smax		
	comp=N,754nm,0.3s						
GLVR				smax	smax		
	comp=E,341nm,0.3s						
JHJ2	**Mitsune**	5.84	201	ePn	Pn	03 47 05.3	-0.1
JHJ2				eSn	Sn	03 48 05.6	-5.5
JHJ	**Hachijo jima 2**	5.84	201	P	Pn	03 47 08.2	+2.7
	comp=E,23nm,0.3s,baz=96,slow=22,SNR=5.7						
JHJ				S	Sn	03 48 06.0	-5.1
	comp=E,48nm,0.3s,baz=268,slow=23,SNR=1.7						
GRPR	**Tuman**	5.99	25	eP	Pn	03 47 08.0	+0.6
GRPR				eS	Sn	03 48 11.6	-3.0
GRPR				pmax	pmax		
	comp=Z,112nm,0.3s						
GRPR				smax	smax		
	comp=N,294nm,0.3s						
GRPR				smax	smax		
	comp=E,527nm,0.3s						
SHO	**Shikotan**	6.27	32	P	Pn	03 47 10.3	-1.0
SHO				eS	Sn	03 48 17.1	-4.6
SHO				pmax	pmax		
	comp=Z,15nm,0.1s						
SHO				smax	smax		
	comp=N,193nm,0.4s						
SHO				smax	smax		
	comp=E,56nm,0.2s						
KUR	**Kuril'sk**	7.82	30	eP	Pn	03 47 31.5	-1.0
KUR				eS	Sn	03 48 57.9	-1.7
KUR				pmax	pmax		
	comp=Z,49nm,0.6s						
KUR				pmax	pmax		
	comp=N,26nm,0.3s						
KUR				pmax	pmax		
	comp=E,19nm,0.3s						
KUR				smax	smax		
	comp=E,112nm,0.6s						
KUR				smax	smax		
	comp=N,81nm,0.7s						
YSS	**Yuzh-Sakhalins**	8.35	2	eP	Pn	03 47 41.5	+1.7
YSS				eS	Sn	03 49 12.7	0.0
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				smax	smax		
	comp=N,20nm,1.2s						
YSS				smax	smax		
	comp=E,20nm,0.9s						
VLA	**Vladivostok**	9.07	303	⇑eP	Pn	03 47 52.5	+2.8
VLA				pmax	pmax		
	comp=Z,55nm,0.8s						
MSHR	**Mys Shultsa**	9.35	299	⇓eP	Pn	03 47 55.3	+1.8
USA0B	**Ussuriysk Arra**	9.54	309	ePn	Pn	03 47 53.3	-2.8
USRK	**Ussuriysk Ar.**	9.54	309	P	Pn	03 47 57.6	+1.5
	comp=Z,3.7nm,0.3s,baz=121,slow=14,SNR=69						
USRK				LR	LR	03 51 25.1	
	comp=Z,521nm,19.4s,baz=110,slow=36						
JNU	**Nakatsue**	10.75	243	P	Pn	03 48 14.8	+2.0
	comp=Z,0.7nm,0.3s,baz=17,slow=3.0,SNR=8.6						
JNU				LR	LR	03 52 38.8	
	comp=Z,479nm,20.6s,baz=66,slow=39						
MDJ	**Mudanjiang**	11.23	306	ePn	Pn	03 48 21.9	+2.6
	comp=Z,24nm,0.8s						
KSRS	**Korea Array**	11.39	269	P	Pn	03 48 24.2	+2.8
	comp=Z,0.7nm,0.3s,baz=82,slow=14,SNR=23						
KSRS				LR	LR	03 52 10.2	
	comp=Z,367nm,21.9s,baz=80,slow=34						
KS01	**Wonju Array Si**	11.41	269	ePn	Pn	03 48 24.8	+3.1
KS15	**Wonju Array Si**	11.42	269	ePn	Pn	03 48 26.1	+4.3
KSAR	**Wonju Array Be**	11.42	269	P	Pn	03 48 24.2	+2.3
KSAR	**Wonju Array Be**	11.42	269	P	Pn	03 48 24.2	+2.3
CBIJ	**Chichi jima**	11.48	180	P	Pn	03 48 24.5	+1.8
CBIJ				S	Sn	03 50 25.3	-4.4
JCJ	**Chichijima**	11.48	180	P	Pn	03 48 24.5	+1.8
	comp=Z,2.4nm,0.3s,baz=7.5,slow=12,SNR=3.0						
JCJ				S	Sn	03 50 25.3	-4.5
	comp=Z,5.1nm,0.3s,baz=307,slow=21,SNR=1.9						
TJN	**Taejon**	12.06	264	⇑eP	Pn	03 48 33.0	+2.4
KLR	**Kul'dur**	13.04	328	⇑eP	Pn	03 48 42.5	-1.4
KLR	**Kul'dur**	13.04	328	P	Pn	03 48 44.0	0.0
	comp=Z,0.1nm,0.3s,baz=128,slow=14,SNR=9.6						
KLR				LR	LR	03 53 38.8	
	comp=Z,442nm,19.0s,baz=144,slow=37						
CN2	**Changchun**	13.69	298	eP	Pn	03 48 54.3	+1.4
CN2				eS	Sn	03 51 25.6	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,6.3s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
CN2				LR	LR		
	comp=Z,300nm,12.2s						
DL2	**Dalian**	16.12	278	P	Pn	03 49 25.8	+0.7
DL2				eS	Sn	03 52 21.5	-1.2
DL2				pmax	pmax		
	comp=Z,37nm,1.1s						
DL2				pmax	pmax		
	comp=Z,170nm,4.2s						
DL2				LR	LR		
	comp=Z,260nm,15.2s						
DL2				LR	LR		
	comp=Z,310nm,13.6s						
DL2				LR	LR		
	comp=Z,340nm,16.4s						
PETK	**Petropavlovsk-**	17.98	31	P	P	03 49 49.0	+0.4
	comp=Z,0.2nm,0.3s,baz=218,slow=14,SNR=2.8						
PEA1	**Petropavlovsk-**	17.99	31	ePn	P	03 49 49.0	+0.4
ZEA	**Zeya**	18.31	331	eP	P	03 49 49.5	-2.6
ZEA				pmax	pmax		
	comp=N,53nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,58nm,1.0s						
ZEA				MLR	MLR		
	comp=E,300nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,15.0s						
ZEA				MLR	MLR		
	comp=N,400nm,16.0s						
SSE	**Sheshan**	18.84	253	ePn	P	03 49 58.5	+0.3
	comp=N,28nm,0.9s						
HIA	**Hailar**	19.34	311	eP	P	03 50 01.4	-2.2
	comp=N,9.6nm,0.8s						
HIA	**Hailar**	19.34	311	eP	P	03 50 01.4	-2.2
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIA	**Tai'an**	20.11	271	P	P	03 50 10.6	-1.5
TIA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NJ2	**Nanjing**	20.18	258	eP	P	03 50 12.3	-0.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI	**Beijing**	20.23	282	P	P	03 50 11.8	-1.5
BJI				S	S	03 53 57.5	-0.7
BJI				LR	LR		
	comp=Z,93nm,5.7s						
BJI				LR	LR		
	comp=Z,290nm,14.9s						
BJT	**Baijiatuau**	20.24	282	eP	P	03 50 11.7	-1.6
	comp=Z,8.7nm,0.5s						
BJT				eS	S	03 53 53.5	-4.9
BJT	**Baijiatuau**	20.24	282	eP	P	03 50 11.7	-1.6
BJT				eS	S	03 53 53.5	-4.9
BJT				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MA2	**Magadan**	21.67	12	eP	P	03 50 29.6	+1.0
	comp=Z,15nm,0.5s						
MA2	**Magadan**	21.67	12	c iP	P	03 50 29.4	+0.8
MA2				pmax	pmax		
	comp=Z,11nm,1.1s						
MA2	**Magadan**	21.67	12	P	P	03 50 29.9	+1.2
	comp=Z,4.4nm,0.4s,baz=180,slow=9.3,SNR=4.0						
YHNB	**Yeheng**	22.51	238	eP	P	03 50 35.2	-2.9
	comp=Z,24nm,1.0s						
NACB	**Ninganchiao**	22.71	237	eP	P	03 50 37.0	-3.0
	comp=Z,14nm,0.9s						
SSLB	**Suanglung**	23.40	237	eP	P	03 50 44.3	-2.7
	comp=Z,5.7nm,0.9s						
TIY	**Taiyuan**	23.45	277	eP	P	03 50 48.5	+1.0
TIY				pmax	pmax		
	comp=Z,16nm,0.7s						
YULB	**Yu-li**	23.45	236	eP	P	03 50 46.2	-1.3
	comp=Z,6.5nm,0.7s						
HHC	**Hu-ho-hao-te**	23.68	285	eP	P	03 50 47.7	-2.0
HHC				sP	pP	03 51 00.5	+0.9
HHC				S	S	03 54 56.3	-5.9
HHC				SS	SnSn	03 55 47.7	+6.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,73nm,4.9s						
HHC				LR	LR		
	comp=Z,100nm,9.9s						
HHC				LR	LR		
	comp=Z,320nm,9.5s						
HHC				LR	LR		
	comp=Z,490nm,11.2s						
TPUB	**Ta-pu**	23.95	237	eP	P	03 50 50.9	-1.4
	comp=Z,24nm,1.0s						
TWG	**Pinlang**	24.00	235	eP	P	03 50 51.5	-1.3
	comp=Z,64nm,0.6s						
WHN	**Wuhan**	24.30	259	⇓P	P	03 50 54.9	-0.5
WHN				pP	pP	03 51 01.8	-3.7
YAK	**Yakutsk**	24.70	346	eP	P	03 50 57.8	-0.9
YAK				e*PP	pP	03 51 08.7	-0.1
YAK				e		03 51 18.4	
YAK				eS	S	03 55 14.8	-3.1
YAK				e*SS	sS	03 55 33.3	-0.7
YAK				e		04 01 52.8	
YAK				pmax	pmax		
	comp=Z,119nm,1.0s						
YAK				pmax	pmax		
	comp=N,81nm,1.2s						
YAK				pmax	pmax		
	comp=E,22nm,1.2s						
YAK				pmax	pmax		
	comp=Z,147nm,0.9s						
YAK				pmax	pmax		
	comp=N,79nm,1.3s						
YAK				pmax	pmax		
	comp=E,119nm,1.5s						
YAK				smax	smax		
	comp=N,878nm,4.0s						
YAK				smax	smax		
	comp=E,758nm,4.3s						
YAK				MLR	MLR		
	comp=N,937nm,14.0s						
YAK				MLR	MLR		
	comp=Z,971nm,15.0s						
YAK				MLR	MLR		
	comp=E,1µm,17.0s						
SEY	**Seymchan**	25.12	11	P	P	03 51 04.5	+2.0
	comp=E,13nm,0.8s,baz=199,slow=6.3,SNR=57						
BOD	**Bodaibo**	26.60	326	eP	P	03 51 15.3	-0.7
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN	**Xi'an**	27.18	271	P	P	03 51 20.5	-1.1
XAN				pP	pP	03 51 28.6	-3.0
XAN				sP	sP	03 51 32.6	-3.5
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,140nm,5.9s						
XAN				LR	LR		
	comp=Z,160nm,17.4s						
XAN				LR	LR		
	comp=Z,170nm,20.6s						
XAN	**Xi'an**	27.18	271	eP	P	03 51 20.4	-1.1
	comp=Z,28nm,0.4s						
XAN	**Xi'an**	27.18	271	eP	P	03 51 20.4	-1.1
XAN				pmax	pmax		
	comp=Z,28nm,0.4s						
SONA1	**Songino Array**	27.52	301	eP	P	03 51 24.2	-0.3
SONA0	**Songino Array**	27.52	301	eP	P	03 51 24.2	-0.4
SONA0				ePcP	PcP	03 54 42.2	+0.3
SONM	**Songino Array**	27.52	301	P	P	03 51 24.2	-0.4
	comp=Z,1.5nm,0.5s,baz=99,slow=9.2,SNR=18						
SONM				PcP	PcP	03 54 42.3	+0.3
	comp=Z,0.5nm,0.5s,baz=128,slow=2.4,SNR=3.9						
SONM				LR	LR	04 02 42.9	
	comp=Z,122nm,18.6s,baz=146,slow=37						
ENH	**Enshi**	28.18	263	eP	P	03 51 29.6	-1.0
	comp=Z,31nm,0.6s						
H11N2	**WAKE ISLAND Hy**	28.41	124	T	T	04 21 56.9	
	baz=317,slow=75,SNR=1531						
H11N1	**WAKE ISLAND Hy**	28.42	124	T	T	04 21 52.1	
	baz=317,slow=75,SNR=1576						
H11N3	**WAKE ISLAND Hy**	28.43	124	T	T	04 21 58.3	
	baz=317,slow=75,SNR=1516						
H11S1	**WAKE ISLAND Hy**	29.19	126	T	T	04 22 59.6	
	baz=318,slow=76,SNR=358						
H11S3	**WAKE ISLAND Hy**	29.19	126	T	T	04 22 59.7	
	baz=318,slow=76,SNR=418						
H11S2	**WAKE ISLAND Hy**	29.20	126	T	T	04 22 56.4	
	baz=318,slow=76,SNR=159						
TLY	**Talaya**	29.86	309	eP	P	03 51 45.4	+0.3
	comp=Z,9.8nm,1.1s						
TLY	**Talaya**	29.86	309	c iP	P	03 51 44.8	-0.3
ZAK	**Zakamensk**	29.87	306	eP	P	03 51 44.5	-0.9
ZAK				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH	**Lanzhou**	30.52	277	eP	P	03 51 53.4	+2.1
LZH				pP	pP	03 52 03.6	+2.1
LZH				sP	sP	03 52 07.6	+1.7
LZH				PP	PnPn	03 52 54.7	+3.8
LZH				S	S	03 56 47.8	-2.7
LZH				sS	sS	03 57 06.4	+1.5
LZH				SS	ScP	03 58 35.0	+5.6
LZH				pmax	pmax		
	comp=Z,35nm,1.0s						
LZH				pmax	pmax		
	comp=Z,290nm,4.8s						
LZH				LR	LR		
	comp=Z,500nm,12.1s						
LZH				LR	LR		
	comp=Z,470nm,13.6s						
LZH				LR	LR		
	comp=Z,510nm,13.6s						
ADK	**Adak**	31.35	51	eP	P	03 51 56.8	-1.5
	comp=Z,40nm,1.1s						
ADK	**Adak**	31.35	51	eP	P	03 51 56.8	-1.5
ADK				pmax	pmax		
	comp=Z,40nm,1.1s						
MOY	**Mondy**	31.48	308	eP	P	03 51 59.0	-0.6
MOY				pmax	pmax		
	comp=Z,19nm,3.4s						
GYA	**Guiyang**	32.19	259	⇑iP	P	03 52 04.8	-1.3
GYA				pP	pP	03 52 17.0	+0.7
GYA				PP	PnPn	03 53 14.8	+2.2
GYA				S	S	03 57 15.2	-1.5
GYA				sS	sS	03 57 33.6	+2.3
GYA				SS	SnSn	03 59 09.4	+0.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=Z,480nm,16.9s						
GYA				LR	LR		
	comp=Z,510nm,17.2s						
GYA				LR	LR		
	comp=Z,490nm,17.0s						
BILL	**Bilibino**	32.32	17	eP	P	03 52 06.6	-0.1
	comp=Z,6.7nm,1.1s						
BILL	**Bilibino**	32.32	17	i P	P	03 52 07.0	+0.3
BILL				i		03 52 20.4	
BILL				i		03 53 15.2	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CD2	**Chengdu**	32.39	268	eP	P	03 52 07.0	-0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,4.8s						
GTA	**Gaotai**	32.79	285	⇑P	P	03 52 11.5	+0.2
GTA				pP	pP	03 52 20.7	-0.8
GTA				sP	sP	03 52 24.9	-1.1
GTA				PcP	PcP	03 54 57.0	+1.2

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GTA                              S      S      03 57 23.6 -2.3
GTA                              sS     sS     03 57 38.8 -2.2
GTA                              ScP    ScP    03 58 36.6 -0.4
GTA                              pmax   pmax
       comp=Z,6.0nm,1.1s
GTA                              pmax   pmax
       comp=Z,61nm,7.1s
GTA                              LR     LR
       comp=Z,120nm,16.5s
GTA                              LR     LR
       comp=Z,260nm,18.1s
GTA                              LR     LR
       comp=Z,360nm,17.1s
KNGR   Kungurtug, Tuv   33.55 306⇓ eP   P      03 52 16.1 -1.7
TIXI   Tiksi            33.82 352⇑ eP   P      03 52 19.0 -0.6
TIXI                             pmax   pmax
       comp=Z,3.0nm,0.8s
TIXI   Tiksi            33.82 352  P    P      03 52 18.8 -0.9
       comp=Z,3.6nm,0.7s,baz=153,slow=4.4,SNR=6.9
KMI    Kunming          35.90 260  P    P      03 52 37.4 -1.0
KMI                              pP     pP     03 52 49.0 +0.4
KMI                              sP     sP     03 52 52.8 -0.3
KMI                              pmax   pmax
       comp=Z,10.0nm,1.3s
KMI                              pmax   pmax
       comp=Z,29nm,4.4s
KMI                              LR     LR
       comp=Z,210nm,18.0s
KMI                              LR     LR
       comp=Z,170nm,19.4s
KMI                              LR     LR
       comp=Z,180nm,19.9s
ANM    Nome             39.90  32  eP   P      03 53 10.6 -0.8
       comp=Z,2.4nm,0.6s
ANM    Nome             39.90  32  eP   P      03 53 10.6 -0.8
ANM                              pmax   pmax
       comp=Z,2.0nm,0.6s
DGZ    Jazzator, Alta   40.05 304c iP   P      03 53 13.8 +0.7
DGZ                              pmax   pmax
       comp=Z,17nm,0.7s
WMQ    Urumqi           40.77 295  P    P      03 53 19.6 +0.6
WMQ                              pP     pP     03 53 30.4 +1.1
WMQ                              PcP    PcP    03 55 22.1 +2.4
WMQ                              pmax   pmax
       comp=Z,49nm,1.1s
WMQ                              pmax   pmax
       comp=Z,260nm,3.7s
WMQ                              LR     LR
       comp=Z,84nm,16.5s
WMQ                              LR     LR
       comp=Z,150nm,19.3s
WMQ                              LR     LR
       comp=Z,150nm,24.1s
WMQ    Urumqi           40.77 295  eP   P      03 53 19.5 +0.6
       comp=Z,22nm,0.8s
WMQ    Urumqi           40.77 295  eP   P      03 53 19.5 +0.6
WMQ                              pmax   pmax
       comp=Z,22nm,0.8s
ZAA0   Zalesovo Array   41.38 311  eP   P      03 53 23.8  0.0
       comp=Z,8.4nm,0.7s
ZAA1   Zalesovo Array   41.38 311  eP   P      03 53 23.7 -0.1
ZALV   Zalesovo Beam    41.38 311  P    P      03 53 23.7 -0.1
       comp=Z,6.8nm,0.5s,baz=89,slow=7.6,SNR=36
ZALV                             PcP    PcP    03 55 21.4  0.0
       comp=Z,3.3nm,0.7s,baz=96,slow=3.1,SNR=4.8
ZALV                             LR     LR     04 11 15.2
       comp=Z,164nm,18.4s,baz=68,slow=37
UTTA   Uttaradit        41.80 252  P    P      03 53 29.6 +2.0
       comp=Z,1.9nm,0.9s
CHAI   Chaiyaphum       41.91 249  P    P      03 53 28.7 +0.2
       comp=Z,4.6nm,0.8s
NRIK   Noril'sk         42.14 334  P    P      03 53 28.9 -0.9
       comp=Z,3.4nm,0.6s,baz=125,slow=9.8,SNR=4.2
NRIK                             LR     LR     04 11 53.6
       comp=Z,204nm,19.1s,baz=84,slow=37
PBKT   Sadao Pong       42.23 250  P    P      03 53 34.6 +3.5
       comp=Z,4.3nm,0.8s
CMMT   Chiang Mai       42.36 255  P    P      03 53 41.5 +9.3
       comp=Z,6.2nm,1.0s
CHTO   Chiang Mai       42.36 255  eP   P      03 53 32.1 -0.1
       comp=Z,4.0nm,0.6s
CHTO   Chiang Mai       42.36 255  eP   P      03 53 32.1 -0.1
CHTO                             pmax   pmax
       comp=Z,4.0nm,0.6s
CHTO   Chiang Mai       42.36 255  P    P      03 53 43.0  +11
CM31   Chiang Mai Arr   42.57 254  eP   P      03 53 34.0 +0.1
       comp=Z,5.5nm,0.4s
CMAR   Chiang Mai Arr   42.57 254  P    P      03 53 34.0 +0.1
       comp=Z,1.1nm,0.3s,baz=42,slow=7.6,SNR=5.7
CMAR                             LR     LR     04 12 41.1
       comp=Z,31nm,18.1s,baz=35,slow=38
CM01   Chiang Mai Arr   42.58 254  eP   P      03 53 32.2 -1.8
LSA    Lhasa            42.77 274  eP   P      03 53 36.7 +0.7
       comp=Z,5.1nm,0.6s
LSA    Lhasa            42.77 274  eP   P      03 53 36.7 +0.7
LSA                              pmax   pmax
       comp=Z,5.0nm,0.6s
MK01   Makanchi Array   43.88 301  eP   P      03 53 43.7 -0.5
MK31   Makanchi Array   43.89 301  eP   P      03 53 44.1 -0.2
       comp=Z,8.9nm,0.8s
MK31   Makanchi Array   43.89 301  eP   P      03 53 44.1 -0.2
MK31                             pmax   pmax
       comp=Z,9.0nm,0.8s
MK32   Makanchi Array   43.89 301  eP   P      03 53 44.0 -0.2
MKAR   Makanchi Array   43.89 301  i P  P      03 53 44.0 -0.2
MKAR                             pmax   pmax
       comp=Z,9.0nm,0.7s
MKAR   Makanchi Array   43.89 301  P    P      03 53 44.0 -0.2
       comp=Z,8.4nm,0.7s,baz=85,slow=8.8,SNR=85
MKAR                             PcP    PcP    03 55 30.0 +0.1
       comp=Z,1.7nm,0.8s,baz=98,slow=4.4,SNR=2.7
MKAR                             LR     LR     04 12 09.8
       comp=Z,77nm,21.1s,baz=50,slow=36
MAKZ   Makanchi         44.09 301  eP   P      03 53 45.8 -0.1
       comp=Z,9.5nm,0.8s
MAKZ   Makanchi         44.09 301  eP   P      03 53 45.8 -0.1
MAKZ                             pmax   pmax
       comp=Z,10.0nm,0.8s
SHL    Shillong         44.13 268  eP   P      03 53 45.8 -0.8
SHL    Shillong         44.13 268  eP   P      03 53 45.8 -0.8
IM3    Indian Mountai   44.95  31  eP   P      03 53 53.8 +1.4
KDAK   Kodiak Island    45.47  43  eP   P      03 53 57.9 +1.2
       comp=Z,8.4nm,0.9s
KDAK   Kodiak Island    45.47  43  eP   P      03 53 57.9 +1.2
KDAK                             pmax   pmax
       comp=Z,8.0nm,0.9s
KURK   Kurchatov        45.52 307  eP   P      03 53 56.6 -0.5
KURK   Kurchatov        45.52 307c iP   P      03 53 56.7 -0.5
KURK                             pmax   pmax
       comp=Z,32nm,0.7s
PDGK   Podgornoye       46.66 297  P    P      03 54 07.2 +0.7
PDGK                             pmax   pmax
       comp=Z,9.0nm,1.0s
JIRN   Jiri             47.58 274  eP   P      03 54 14.1 +0.1
       comp=Z,20nm,0.4s
RAMN   Ramite           47.59 273  eP   P      03 54 13.9 -0.1
       comp=Z,46nm,0.8s
GUN    Gumba            47.70 275  eP   P      03 54 14.9 -0.1
       comp=Z,23nm,0.5s
IL1    Eielson Array    47.80  33  eP   P      03 54 16.0 +1.2
ILAR   Eielson Array    47.80  33  P    P      03 54 16.4 +1.6
       comp=Z,1.6nm,0.6s,baz=266,slow=6.3,SNR=39
ILB    Eielson Array    47.80  33  eP   P      03 54 16.5 +1.6
       comp=Z,3.0nm,0.8s
PKI    Pulchoki         48.23 275  eP   P      03 54 18.6 -0.5
       comp=Z,6.2nm,0.4s
PKIN   Phulchoki        48.23 275  eP   P      03 54 18.9 -0.1
       comp=Z,9.0nm,0.4s
TARG   Taragay, Kyrgy   48.34 295  eP   P      03 54 19.8  0.0
       comp=Z,8.9nm,0.6s
DMN    Daman            48.45 275  eP   P      03 54 20.5 -0.2
       comp=Z,13nm,0.4s
DANN   Dangsing         49.15 276  eP   P      03 54 26.2 +0.1
       comp=Z,87nm,0.5s
KOLN   Koldanda         49.55 276  eP   P      03 54 29.0  0.0
       comp=Z,12nm,0.5s
PYUN   Piuthan          49.87 277  eP   P      03 54 31.3 -0.1
       comp=Z,48nm,0.8s
BVA0   Borovoye Array   50.04 311  i P  P      03 54 30.8 -1.3
BVA0                             pmax   pmax
       comp=Z,4.0nm,0.6s
OTUK   Ortayu           50.08 305  P    P      03 54 32.4 -0.2
OTUK                             pmax   pmax
       comp=Z,8.0nm,1.2s
BRVK   Borovoye         50.09 312  eP   P      03 54 32.2 -0.3
       comp=Z,16nm,0.6s
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BRVK                             ePcP   PcP    03 55 50.8 -0.9
BRVK   Borovoye         50.09 312c iP   P      03 54 32.1 -0.4
BRVK                             pmax   pmax
       comp=Z,5.0nm,0.6s
AAK    Ala-Archa        50.36 297  eP   P      03 54 34.6 -0.4
       comp=Z,4.4nm,0.8s
AAK    Ala-Archa        50.36 297⇑ iP   P      03 54 34.1 -0.9
AAK                              pmax   pmax
       comp=Z,4.0nm,0.8s
KSH    Kashi            50.41 293  P    P      03 54 39.1 +3.8
KSH                              sP     sP     03 54 55.5 +5.3
KSH                              PP     PP     03 56 34.4 +3.5
KSH                              S      S      04 01 48.6 +2.3
KSH                              sS     sS     04 02 06.6 +4.5
KSH                              SS     SS     04 05 21.7 +1.7
KSH                              pmax   pmax
       comp=Z,10.0nm,0.6s
KSH                              pmax   pmax
       comp=Z,220nm,5.3s
KSH                              LR     LR
       comp=Z,110nm,4.5s
KSH                              LR     LR
       comp=Z,140nm,4.4s
KSH                              LR     LR
       comp=Z,310nm,4.7s
HNR    Honiara          50.55 157  LR   LR     04 13 39.4
       comp=Z,85nm,19.3s,baz=318,slow=33
MNAS   Manas            51.80 298  P    P      03 54 46.1 +0.4
MNAS                             pmax   pmax
       comp=Z,8.0nm,0.8s
EPYK   Eagle Plains     51.82  30  eP   P      03 54 47.4 +2.0
       comp=Z,0.7nm,0.6s
ARSB   Arslanbob        51.88 296  eP   P      03 54 46.3 -0.1
       comp=Z,14nm,0.9s
SFK    Sufi-Kurgan      51.99 295  P    P      03 54 47.5 +0.2
KK31   Karatay Array    52.95 299  eP   P      03 54 53.2 -0.9
       comp=Z,6.0nm,0.9s
KK31   Karatay Array    52.95 299  i P  P      03 54 53.4 -0.7
KK31                             pmax   pmax
       comp=Z,5.0nm,0.8s
KKAR   Karatay Array    52.95 299  eP   P      03 54 53.2 -0.9
       comp=Z,6.0nm,0.9s
KKAR   Karatay Array    52.95 299  eP   P      03 54 53.2 -0.9
KKAR                             pmax   pmax
       comp=Z,6.0nm,0.9s
SVE    Sverdlovsk       54.43 318  eP   P      03 55 04.1 -0.6
SVE                              pmax   pmax
       comp=Z,18nm,0.9s
GAR    Garm             54.66 295  eP   P      03 55 06.1 -0.7
       comp=Z,6.8nm,0.5s
GAR    Garm             54.66 295  eP   P      03 55 06.1 -0.7
GAR                              pmax   pmax
       comp=Z,7.0nm,0.5s
NIL    Nilore           54.79 288  eP   P      03 55 08.3 +0.6
       comp=Z,24nm,0.6s
NIL    Nilore           54.79 288  eP   P      03 55 08.3 +0.6
NIL                              pmax   pmax
       comp=Z,24nm,0.6s
ARU    Arti             55.65 318  eP   P      03 55 13.3 -0.2
       comp=Z,27nm,0.8s
ARU                              ePcP   PcP    03 56 11.8 -0.9
ARU    Arti             55.65 318c iP   P      03 55 13.2 -0.2
ARU                              *PP    pP     03 55 26.5 +2.4
ARU                                            03 57 15.4
ARU                              S      S      04 02 57.5 +0.7
ARU                              SS     SS     04 06 41.4 -0.3
ARU                              pmax   pmax
       comp=Z,17nm,1.0s
ARU                              MLR    MLR
       comp=Z,200nm,19.0s
AB31   Akbulak array    57.46 310  i P  P      03 55 25.5 -1.0
AB31                             pmax   pmax
       comp=Z,4.0nm,0.5s
ABKAR  Akbulak array    57.46 310  eP   P      03 55 26.1 -0.4
       comp=Z,7.4nm,0.6s
AKTO   Aktyubinsk       58.14 311  P    P      03 55 29.6 -1.7
AKTO                             pmax   pmax
       comp=Z,6.0nm,0.8s
WRAB   Tennant Creek    58.70 189  eP   P      03 55 35.6 +0.2
       comp=Z,6.4nm,0.8s
WRAB   Tennant Creek    58.70 189⇑ eP   P      03 55 35.7 +0.3
WR1    Warramunga Arr   58.72 189  eP   P      03 55 36.0 +0.5
       comp=Z,2.7nm,0.9s
WRA    Warramunga Arr   58.72 189  P    P      03 55 36.0 +0.5
WRA                              pmax   pmax
       comp=Z,3.0nm,0.6s
WRA    Warramunga Arr   58.72 189  P    P      03 55 36.0 +0.5
       comp=Z,3.0nm,0.6s,baz=7.0,slow=7.1,SNR=43
PRGR   Permogore        59.83 327  eP   P      03 55 42.0 -0.7
PRGR                             pmax   pmax
       comp=Z,12nm,0.9s
TMCR   Tamitsa          61.70 331  eP   P      03 55 55.6 +0.2
TMCR                             pmax   pmax
       comp=Z,10.0nm,0.8s
YKA    Yellowknife Ar   62.10  31  P    P      03 55 59.4 +1.3
       comp=Z,0.5nm,0.6s,baz=302,slow=6.7,SNR=12
AS01   Alice Springs    62.44 189  eP   P      03 56 01.2 +0.4
AS31   Alice Springs    62.44 189  eP   P      03 56 01.3 +0.4
       comp=Z,0.7nm,0.9s
ASAR   Alice Springs    62.44 189  P    P      03 56 01.8 +0.9
       comp=Z,1.0nm,0.8s,baz=12,slow=6.7,SNR=10
ARA0   ARCESS Array S   62.77 339  eP   P      03 56 02.5 -0.1
ARCES  ARCESS Array B   62.77 339  P    P      03 56 02.5 -0.1
       comp=Z,2.0nm,0.6s,baz=48,slow=8.1,SNR=11
KLMR   Klimovskoe       62.80 328  eP   P      03 56 01.4 -1.4
KLMR                             pmax   pmax
       comp=Z,7.0nm,1.1s
KLMR   Klimovskoe       62.80 328  eP   P      03 56 01.4 -1.4
KLMR                             AMP           03 56 03.4
       comp=Z,7.0nm,1.1s
GEYT   Alibeck          63.68 299  P    P      03 56 08.8 -0.3
       comp=Z,4.2nm,0.7s,baz=49,slow=2.9,SNR=7.7
GEYT                             LR     LR     04 25 40.2
       comp=Z,77nm,18.6s,baz=40,slow=38
OUL    Oulu             65.45 335  P    P      03 56 20.8 +0.6
OUL                              pmax   pmax
       comp=Z,15nm,1.4s
VRH    Novokhopyorsk    66.88 318  eP   P      03 56 28.4 -1.1
VRH                              pmax   pmax
       comp=Z,6.0nm,0.5s
OBN    Obninsk          67.25 323  i P  P      03 56 31.3 -0.5
OBN                              i             03 56 58.5
OBN                              pmax   pmax
       comp=Z,5.0nm,0.9s
LPSR   Galich'ya Gora   67.54 320  eP   P      03 56 32.9 -0.8
LPSR                             pmax   pmax
       comp=Z,10.0nm,0.8s
FIA1   FINESS Array S   67.74 332  eP   P      03 56 34.6 -0.3
FIA0   FINESS Array S   67.75 332  eP   P      03 56 34.9 +0.1
FIA0   FINESS Array S   67.75 332  eP   P      03 56 34.9 +0.1
FINES  FINESS Array B   67.75 332  P    P      03 56 34.9 +0.1
       comp=Z,9.7nm,0.7s,baz=47,slow=8.4,SNR=31
FINES                            LR     LR     04 27 12.8
       comp=Z,102nm,19.8s,baz=22,slow=37
VSR    Storozhevoye     68.20 319c eP   P      03 56 37.1 -0.8
VSR                              pmax   pmax
       comp=Z,13nm,0.5s
SUMG   Summit           69.11   0  eP   P      03 56 44.4 +0.6
       comp=Z,7.5nm,0.8s
SUMG   Summit           69.11   0  eP   P      03 56 44.4 +0.6
SUMG                             pmax   pmax
       comp=Z,8.0nm,0.8s
VSU    Vasula           69.45 330⇑ eP   P      03 56 45.6 +0.1
VSU                              pmax   pmax
       comp=Z,38nm,0.8s
STKA   Stephens Creek   70.13 181  P    P      03 56 51.1 +1.2
       comp=Z,0.9nm,0.5s,baz=17,slow=8.6,SNR=3.1
KIV    Kislovodsk       70.40 311  eP   P      03 56 52.5 +0.8
       comp=Z,28nm,1.0s
KIV    Kislovodsk       70.40 311⇓ iP   P      03 56 52.7 +0.9
KIV    Kislovodsk       70.40 311  eP   P      03 56 52.6 +0.8
KIV                              pmax   pmax
       comp=Z,31nm,1.0s
KIV                              MLR    MLR
       comp=Z,50nm,17.0s
KBZ    Khabaz           70.40 311  P    P      03 56 52.4 +0.7
       comp=Z,8.9nm,0.9s,baz=24,slow=4.1,SNR=12
NEY    Neytrino         70.78 310⇓ eP   P      03 56 55.4 +1.2
NEY                              pmax   pmax
       comp=Z,2.0nm,1.0s
WSAR   Wadi Sarin       71.13 285  LR   LR     04 31 21.8
       comp=Z,32nm,18.3s,baz=72,slow=39
UOSS   Minazif          71.99 288  eP   P      03 57 01.5 -0.1
       comp=Z,3.7nm,0.7s
FFC    Flin Flon        72.01  33  i P  P      03 57 02.7 +1.5
NC204  NORSAR Array S   72.95 338  eP   P      03 57 06.4 -0.3
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       comp=Z,8.2nm,0.7s
NB2    NORSAR Subarra   73.00 337  P    P      03 57 06.7 -0.3
       comp=Z,1.8nm,0.6s,baz=39,slow=6.2
NB200  NORSAR Array S   73.00 337  eP   P      03 57 07.0 -0.1
NOA    NORSAR Array B   73.00 337  P    P      03 57 07.0 -0.1
NOA                              pmax   pmax
       comp=Z,3.0nm,0.7s
NOA                              MLR    MLR
       comp=Z,90nm,20.7s
NOA    NORSAR Array B   73.00 337  P    P      03 57 07.0 -0.1
       comp=Z,4.9nm,0.8s,baz=38,slow=6.0,SNR=17
NOA                              LR     LR     04 31 45.0
       comp=Z,90nm,20.7s,baz=35,slow=38
KVN    Kaiserville      73.26  53  eP   P      03 57 09.7 +0.5
       comp=Z,0.9nm,0.8s
AKASG  Malin Array Be   73.47 322  P    P      03 57 09.6 -0.3
       comp=Z,5.3nm,0.5s,baz=46,slow=6.0,SNR=48
AKASG                            LR     LR     04 30 45.1
       comp=Z,50nm,18.1s,baz=315,slow=37
AKBB   Malin Array Si   73.47 322  eP   P      03 57 08.9 -1.1
       comp=Z,10nm,0.8s
AKBB   Malin Array Si   73.47 322  eP   P      03 57 08.9 -1.1
AKBB                             pmax   pmax
       comp=Z,10.0nm,0.8s
KIEV   Kiev             73.49 322  eP   P      03 57 09.6 -0.5
       comp=Z,8.8nm,0.8s
KIEV   Kiev             73.49 322⇑ iP   P      03 57 09.5 -0.5
KIEV   Kiev             73.49 322c iP   P      03 57 09.6 -0.5
KIEV                             pmax   pmax
       comp=Z,11nm,0.9s
NV01   Mina Array Sit   73.50  54  eP   P      03 57 10.1 -0.6
NVAR   Mina Array Bea   73.50  54  P    P      03 57 11.9 +1.3
       comp=Z,0.7nm,0.7s,baz=287,slow=5.9,SNR=4.4
AK11   Malin Array Si   73.52 322  eP   P      03 57 09.8 -0.4
PD31   Pinedale Array   76.08  46  eP   P      03 57 26.4 +0.9
       comp=Z,0.1nm,0.4s
PDAR   Pinedale Array   76.08  46  P    P      03 57 27.2 +1.7
       comp=Z,1.3nm,0.6s,baz=243,slow=2.1,SNR=19
KWP    Kalwaria Pacla   77.25 325  eP   P      03 57 32.5 +0.8
KWP    Kalwaria Pacla   77.25 325  eP   P      03 57 31.7  0.0
       comp=Z,94nm,0.7s
KWP    Kalwaria Pacla   77.25 325  eP   P      03 57 32.5 +0.8
TLCR                    77.37 318⇑ iP   P      03 57 33.0 +0.6
BUR08  Bucovina Ar. S   77.49 322  eP   P      03 57 33.4 +0.2
       comp=Z,5.0nm,0.7s
BUR04  Bucovina Ar. S   77.50 322  eP   P      03 57 33.4 +0.1
BURAR  Bucovina Array   77.50 322⇑ iP   P      03 57 33.6 +0.3
BURAR  Bucovina Array   77.50 322  P    P      03 57 33.5 +0.3
BIZ    Bicaz            77.54 321⇓ iP   P      03 57 32.8 -0.6
CFR    Carcaliu         77.72 319⇑ iP   P      03 57 34.3 -0.1
CFR    Carcaliu         77.72 319  P    P      03 57 34.2 -0.1
SRU    San Rafael Swe   77.86  49  eP   P      03 57 35.4 -0.1
       comp=Z,2.5nm,0.6s
SRU    San Rafael Swe   77.86  49  eP   P      03 57 35.4 -0.1
SRU                              pmax   pmax
       comp=Z,3.0nm,0.6s
ODBI   Odobesti         77.88 320⇓ iP   P      03 57 35.9 +0.7
VRI    Vrincioaia       77.97 320⇓ iP   P      03 57 36.6 +0.8
VRI    Vrincioaia       77.97 320  P    P      03 57 36.5 +0.8
OJC    Ojcow            78.12 326  eP   P      03 57 37.1 +0.6
OJC    Ojcow            78.12 326  eP   P      03 57 36.2 -0.3
       comp=Z,15nm,1.1s
OJC    Ojcow            78.12 326  eP   P      03 57 37.1 +0.6
TLB    Topalu           78.18 318⇓ iP   P      03 57 36.8 -0.1
TLB    Topalu           78.18 318  P    P      03 57 36.8 -0.1
BR101  Keskin Array S   78.32 312  eP   P      03 57 38.0  0.0
BR131  Keskin Array S   78.32 312  eP   P      03 57 37.4 -0.6
       comp=Z,2.2nm,0.6s
BRTR   Keskin Array B   78.32 312  P    P      03 57 38.0  0.0
       comp=Z,1.7nm,0.4s,baz=114,slow=3.3,SNR=62
BRTR                             LR     LR     04 37 34.1
       comp=Z,27nm,18.7s,baz=45,slow=40
TRPA   Tarpa            78.41 324⇑ iP   P      03 57 38.4 +0.3
NIE    Niedzica         78.49 326  eP   P      03 57 39.5 +0.9
NIE    Niedzica         78.49 326  eP   P      03 57 39.5 +0.9
DOPR   Dopca            78.57 321⇑ iP   P      03 57 39.5 +0.4
ISR    Istrita          78.58 319⇓ iP   P      03 57 40.0 +0.8
ISR    Istrita          78.58 319  P    P      03 57 40.0 +0.8
MLR    Muntele Rosu     78.63 320⇑ iP   P      03 57 40.3 +0.7
ANTO   Ankara           78.72 312  eP   P      03 57 39.6 -0.5
       comp=Z,24nm,0.8s
ANTO   Ankara           78.72 312⇑ iP   P      03 57 39.2 -0.9
ANTO   Ankara           78.72 312  eP   P      03 57 39.6 -0.5
ANTO                             pmax   pmax
       comp=Z,24nm,0.8s
BR231  Keskin MP Arra   78.75 312  eP   P      03 57 40.3  0.0
       comp=Z,9.2nm,0.8s
CJR    Cluj-Napoca      78.92 322⇑ iP   P      03 57 41.7 +0.6
CJR    Cluj-Napoca      78.92 322  P    P      03 57 41.7 +0.6
VOIR                    79.11 320⇑ iP   P      03 57 42.6 +0.4
VOIR                    79.11 320  P    P      03 57 42.5 +0.4
KSP    Ksiaz            79.12 329  eP   P      03 57 42.7 +0.7
KSP    Ksiaz            79.12 329  eP   P      03 57 42.7 +0.7
DRGR                    79.29 323⇑ iP   P      03 57 42.8 -0.4
DRGR                    79.29 323  P    P      03 57 42.7 -0.4
ARR    Arges            79.37 321⇑ iP   P      03 57 44.8 +1.2
MORC   Moravsky Berou   79.42 327  eP   P      03 57 43.2 -0.5
       comp=Z,8.7nm,1.0s
MORC   Moravsky Berou   79.42 327⇓ iP   P      03 57 44.7 +1.0
MORC   Moravsky Berou   79.42 327  P    P      03 57 44.0 +0.3
MORC                             pmax   pmax
       comp=Z,9.0nm,1.0s
DPC    Dobruska-Polom   79.49 328  eP   P      03 57 45.2 +1.1
DPC    Dobruska-Polom   79.49 328  eP   P      03 57 45.2 +1.1
UPC    Upice            79.50 328  eP   P      03 57 44.9 +0.8
UPC    Upice            79.50 328  eP   P      03 57 44.9 +0.8
PSZ    Piszkesteto      79.78 325⇑ iP   P      03 57 45.8 +0.1
VYHS   Vyhne            79.82 326  eP   P      03 57 46.5 +0.6
VYHS                             pmax   pmax
       comp=Z,25nm,3.1s
VYHS   Vyhne            79.82 326  eP   P      03 57 46.5 +0.6
BRG    Berggiesshubel   80.05 330  i P  P      03 57 47.3 +0.3
       comp=Z,5.5nm,0.9s
BRG    Berggiesshubel   80.05 330  i P  P      03 57 47.3 +0.3
BRG                              pmax   pmax
       comp=Z,6.0nm,0.9s
PVCC   Panska Ves       80.07 329  eP   P      03 57 47.8 +0.7
PVCC   Panska Ves       80.07 329  eP   P      03 57 47.8 +0.7
CLL    Collm            80.07 330  eP   P      03 57 46.2 -1.0
       comp=Z,11nm,0.8s
CLL    Collm            80.07 330  i P  P      03 57 47.1 -0.1
       comp=Z,13nm,0.8s
CLL                              ePcP   PcP    03 57 52.0 -2.5
CLL                              epP    sP     03 58 05.0 +2.7
CLL    Collm            80.07 330  i P  P      03 57 47.1 -0.1
CLL                              pmax   pmax
       comp=Z,13nm,0.8s
VRAC   Vranov           80.17 327⇑ iP   P      03 57 48.4 +0.6
VRAC   Vranov           80.17 327  P    P      03 57 48.3 +0.5
GZR    Gura Zlata       80.27 322⇑ iP   P      03 57 48.3 -0.1
GOPC   GO Pecny, Ondr   80.46 329  eP   P      03 57 50.5 +1.2
GOPC   GO Pecny, Ondr   80.46 329  eP   P      03 57 50.5 +1.2
PRU    Pruhonice        80.50 329  eP   P      03 57 50.1 +0.6
PRU    Pruhonice        80.50 329  eP   P      03 57 50.1 +0.6
TREC   Trest            80.65 328  eP   P      03 57 51.3 +1.0
TREC   Trest            80.65 328  eP   P      03 57 51.3 +1.0
BZS    Buzias           80.67 322⇑ iP   P      03 57 50.5  0.0
BZS    Buzias           80.67 322  P    P      03 57 50.5  0.0
PUNG   Punghina         81.00 321⇓ iP   P      03 57 52.6 +0.4
NKC    Novy Kostel      81.14 330  eP   P      03 57 54.0 +1.1
NKC    Novy Kostel      81.14 330  eP   P      03 57 54.0 +1.1
MDVR   Moldovita        81.23 322⇑ iP   P      03 57 52.8 -0.8
SOP    Sopron           81.43 326  P    P      03 57 55.9 +1.4
SOP                              pmax   pmax
       comp=Z,13nm,1.0s
CONA   Conrad Observa   81.54 327  i P  P      03 57 56.0 +0.8
       comp=Z,4.3nm,0.8s,SNR=6.1
KHC    Kasperske Hory   81.56 329  eP   P      03 57 54.9 -0.4
       comp=Z,2.5nm,0.8s
KHC    Kasperske Hory   81.56 329  eP   P      03 57 55.5 +0.3
KHC    Kasperske Hory   81.56 329  eP   P      03 57 55.5 +0.3
GEC2   GERESS Array S   81.73 329  eP   P      03 57 55.4 -0.8
       comp=Z,4.1nm,1.0s
GEC2   GERESS Array S   81.73 329  eP   P      03 57 55.4 -0.8
GEC2                             pmax   pmax
       comp=Z,4.0nm,1.0s
GERES  GERESS Array B   81.73 329  P    P      03 57 56.1 -0.1
       comp=Z,1.6nm,0.6s,baz=36,slow=5.4,SNR=12
GEA0   GERESS Array S   81.74 329  eP   P      03 57 55.5 -0.7
VTS    Vitosha          82.04 319  eP   P      03 57 57.8 -0.2
       comp=Z,8.4nm,0.8s
VTS    Vitosha          82.04 319⇑ iP   P      03 57 58.2 +0.2
VTS    Vitosha          82.04 319  eP   P      03 57 57.8 -0.2
VTS                              pmax   pmax
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	comp=Z,8.0nm,0.8s						
MOA	Molln	82.28	328	*i* P	P	03 57 57.0	-2.0
	comp=Z,8.9nm,1.8s						
SOKA	Soboth	82.87	326	*i* P	P	03 58 02.2	0.0
	comp=Z,8.6nm,0.9s,SNR=12						
ANMO	Albuquerque	83.05	50	⇓*e*P	P	03 58 06.0	+2.5
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
KBA	Koelnbreinsper	83.28	328	*i* P	P	03 58 04.4	0.0
	comp=Z,6.6nm,0.9s						
MYKA	Terra Mystica	83.50	327	*i* P	P	03 58 05.0	-0.4
	comp=Z,3.3nm,0.4s						
SCHQ	Schefferville	83.64	16	P	P	03 58 06.1	+0.2
	comp=Z,3.5nm,1.0s,baz=47,slow=19,SNR=3.6						
WATA	Walderalm	83.80	329	*i* PcP	P	03 58 07.3	+0.2
	comp=Z,2.1nm,0.5s						
ABTA	Abfaltersbach	83.89	328	*i* P	P	03 58 06.4	-1.1
	comp=Z,6.1nm,1.1s						
MOTA	Moosalm	83.98	329	*i* PcP	P	03 58 08.4	+0.4
	comp=Z,3.1nm,0.7s						
RETA	Reutte	84.01	329	*i* PcP	P	03 58 08.6	+0.6
	comp=Z,9.2nm,1.0s,SNR=7.0						
SQTA	Sankt Quirin	84.04	329	*i* PcP	P	03 58 08.5	+0.3
	comp=Z,6.1nm,1.1s						
PDG	Podgorica	84.17	321	⇓*i*P	P	03 58 08.5	-0.3
FETA	Feichten	84.40	329	*i* PcP	P	03 58 10.4	+0.3
	comp=Z,4.7nm,0.7s,SNR=4.6						
DAVA	Damuels	84.52	330	*i* PcP	P	03 58 11.2	+0.5
	comp=Z,11nm,1.0s,SNR=5.7						
FUORN	Ofenpass-Fuorn	84.91	329	*e*P	P	03 58 13.4	+0.6
	comp=Z,15nm,0.8s						
LTX	Lajitas	88.62	53	*e*P	P	03 58 32.6	+1.6
LTX	Lajitas	88.62	53	*e*P	P	03 58 32.6	+1.6
TXAR	Lajitas Array	88.62	53	P	P	03 58 32.6	+1.6
	comp=Z,0.6nm,0.6s,baz=302,slow=2.9,SNR=7.8						
KEST	Kesra	94.18	323	P	P	03 58 56.6	-0.1
	comp=Z,7.0nm,1.2s,baz=42,slow=14,SNR=2.4						
TORD	Torodi Ar. Bea	116.69	316	PKP	PKPdf	04 04 20.8	-1.5
	comp=Z,0.4nm,0.8s,baz=0.0,slow=4.3,SNR=3.1						
DBIC	Dimbokro	125.59	318	PKP	PKPdf	04 04 37.9	-1.5
	comp=Z,1.4nm,0.7s,baz=0.0,slow=5.1,SNR=2.5						
LPAZ	La Paz	145.29	59	PKPbc	PKPdf	04 05 17.1	+0.6
	comp=Z,1.0nm,0.5s,baz=336,slow=2.4,SNR=7.2						

ISCJB ***11*** *04:14:33.3±0.4,24°.21S±0°.03×66°.89W±0°.08,h200km, mb3.4/6,Error ellipse: s-maj=10.1km s-min=4.3km az=167.9*
SJA ***11*** *04:14:33.5±0.6,24°.25S×66°.64W,h248km±12km,ML3.5, MW3.1*
IDC ***11*** *04:14:34.0±1.4,24°.11S×66°.83W,h188km±10km,mb3.4/6, mb1 3.6/10,mb1mx3.5/26,mbtmp3.9/10,Error ellipse: s-maj=25.0km s-min=14.3km az=20.0*
ISC 11 04:14:34.0±0.6,**24°.24S**±0°.05×**66°.92W**±0°.09,**h200**km,**n23,** σ**1ˢ.62**/31,**mb3.5**/6,**Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.45	311	P	Pn	04 15 17.6	-0.1
	14nm,0.3s,baz=103,slow=9.1,SNR=197						
LVC				S	Sn	04 15 49.9	-1.8
	49nm,0.3s,baz=299,slow=19,SNR=49						
AHML	Horco Molle	2.91	151	*e*P	Pn	04 15 23.7	+1.1
AHML				IAML		04 15 24.7	
	comp=Z,88nm,0.6s						
AHML				*e*S	Sn	04 16 01.5	+0.7
CYA	Choya	4.30	167	*e*P	Pn	04 15 41.2	+1.6
CYA				IAML		04 15 42.6	
	comp=Z,18nm,0.5s						
CYA				*e*S	Sn	04 16 30.1	-1.2
ACLC	CERRO LA CRUZ	5.16	180	*e*P	Pn	04 15 51.9	+1.2
ACLC				*e*S	Sn	04 16 50.3	-0.9
AGUA	GUANDACOL	5.41	195	*e*P	Pn	04 15 56.0	+2.3
AGUA				*e*S	Sn	04 16 56.4	-0.4
APLL	PUNTA DE LOS L	6.14	177	*e*P	Pn	04 16 03.5	+0.4
APLL				*e*S	Sn	04 17 10.4	-3.3
APLL				IAML		04 17 12.5	
	comp=Z,19nm,0.4s						
LPAZ	La Paz	8.00	352	P	Pn	04 16 26.9	-1.0
	comp=Z,1.3nm,0.3s,baz=155,slow=9.1,SNR=26						
LPAZ				S	Sn	04 17 55.5	-2.9
	comp=Z,0.2nm,0.3s,baz=133,slow=2.2,SNR=5.1						
ACAN	Cantantal	8.01	182	*e*P	Pn	04 16 27.2	-0.1
ACAN				*e*S	Sn	04 17 52.3	-5.4
MRA	San Martin	8.21	173	*e*P	Pn	04 16 29.7	-0.5
MRA				IAML		04 18 16.8	
	comp=Z,5.3nm,0.5s						
CPUP	Villa Florida	8.93	105	P	Pn	04 16 38.3	-1.0
	comp=Z,0.2nm,0.3s,baz=272,slow=11,SNR=5.2						
BDFB	Brasilia	19.71	68	P	P	04 18 48.2	-0.4
	comp=Z,0.8nm,0.3s,baz=242,slow=9.6,SNR=18						
TXAR	Lajitas Array	63.92	324	P	P	04 24 46.9	+1.1
	comp=Z,0.4nm,0.8s,baz=142,slow=6.3,SNR=3.8						
TORD	Torodi Ar. Bea	76.59	69	P	P	04 26 03.1	+0.2
	comp=Z,0.7nm,0.6s,baz=252,slow=5.2,SNR=12						
PDAR	Pinedale Array	77.39	329	P	P	04 26 08.2	+1.2
	comp=Z,0.2nm,0.5s,baz=123,slow=6.6,SNR=3.2						
ULM	Lac du Bonnet	78.48	342	P	P	04 26 13.1	+0.6
	comp=Z,1.3nm,0.5s,baz=150,slow=5.5,SNR=5.5						
NVAR	Mina Array Bea	78.77	321	P	P	04 26 14.9	+0.2
	comp=Z,0.3nm,0.5s,baz=138,slow=6.9,SNR=2.5						
YKA	Yellowknife Ar	94.38	340	P	P	04 27 31.5	+1.1
	comp=Z,0.5nm,0.5s,baz=133,slow=4.6,SNR=23						
ASAR	Alice Springs	128.27	205	PKP	PKiKP	04 33 18.9	+0.9
	comp=Z,0.7nm,0.6s,baz=125,slow=2.0,SNR=6.9						
WRA	Warramunga Arr	131.44	207	PKP	PKiKP	04 33 25.0	+0.6
	comp=Z,0.5nm,0.5s,baz=153,slow=1.8,SNR=13						
FITZ	Fitzroy Crossi	136.17	197	PKP	PKiKP	04 33 34.1	+0.1
	comp=Z,1.0nm,1.0s,baz=168,slow=20,SNR=3.2						
ZALV	Zalesovo Beam	143.57	28	PKP	PKPdf	04 33 43.9	-0.6
	comp=Z,1.7nm,0.5s,baz=308,slow=4.3,SNR=9.4						
MKAR	Makanchi Array	146.66	40	PKPbc	PKPbc	04 33 52.1	0.0
	comp=Z,3.5nm,0.7s,baz=330,slow=2.0,SNR=26						
SONM	Songino Array	155.86	11	PKPab	PKPab	04 34 32.9	+1.0
	comp=Z,0.3nm,0.7s,baz=330,slow=4.1,SNR=2.0						

IDC ***11*** *04:15:52.2±1.9,6°.79S×123°.67E,h0km,mb3.5/1, mb1 3.6/3,mb1mx3.3/44,mbtmp3.4/3,ML3.6/2,Error ellipse: s-maj=230.1km s-min=30.8km az=59.0*
DJA ***11*** *04:16:04.7±1.4,8°S±12°×12°2E±°,h10km,M3.3/5, MLv3.3/5*
ISC 11 04:16:02.5±1.4,**8°.0S**±0°.1×**121°.67E**±0°.09,**h100**km,**n8,** σ**3ˢ.96**/9,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.75	179	P	Pn	04 16 17.1	-3.4
MMRI	Maumere	0.84	139	P	Pn	04 16 19.3	-2.0
WSI	Waingapu	2.15	219	P	Pn	04 16 39.8	+2.8
BATI	Baumata	2.95	138	P	Pn	04 16 50.5	+3.0
BATI				S	Sn	04 17 26.2	+3.9
SOEI	Soe	3.10	124	P	Pn	04 16 52.7	+3.0
WRA	Warramunga Arr	17.07	135	Pn	Pn	04 19 49.7	-5.4
	0.2nm,0.3s,baz=318,slow=12,SNR=4.3						
ASAR	Alice Springs	19.50	144	P	P	04 20 19.7	-2.2
	0.2nm,0.3s,baz=324,slow=13,SNR=13						
MKAR	Makanchi Array	64.82	331	P	P	04 26 32.5	+1.9
	0.2nm,0.5s,baz=142,slow=7.0,SNR=2.8						

ISCJB ***11*** *04:21:18.3±0.4,0°.20N±0°.05×122°.29E±0°.06,h200km, mb3.9/9,Error ellipse: s-maj=8.9km s-min=6.1km az=164.0*
IDC ***11*** *04:21:19.2±0.8,0°.41N×122°.65E,h190km±8km,mb3.7/9, mb1 3.9/10,mb1mx3.5/42,mbtmp4.3/10,Error ellipse: s-maj=51.7km s-min=9.2km az=64.0*
DJA ***11*** *04:21:19.1±0.4,0°N±3°×12°2E±°,h162km±4km,M4.2/14, mB4.8/4,mb4.4/4,MLv4.2/14,Mw(mB)4.0/4*
ISC 11 04:21:19.4±0.5,**0°.24N**±0°.06×**122°.27E**±0°.06,**h200**km,**n33,** σ**2ˢ.20**/44,**mb4.3**/16,**1D,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.41	305	P	Pn	04 21 42.0	-4.2
MRSI				S	Sn	04 21 59.2	-7.7
APSI	Ampana	1.30	209	P	Pn	04 21 48.5	-3.0
APSI				S	Sn	04 22 11.5	-4.9
LUWI	Luwuk	1.37	159	P	Pn	04 21 49.6	-2.4
LUWI				S	Sn	04 22 13.3	-4.1
KMSI	Cibinong	1.74	79	P	Pn	04 21 53.5	-1.9
MPSI	Mapaga	2.38	272	P	Pn	04 21 59.3	-2.7
PCI	Palu	2.69	245	P	Pn	04 22 03.4	-2.1
TTSI	Tana Toraja	4.08	217	P	Pn	04 22 21.4	-0.9
KDI	Kendari	4.18	175	P	Pn	04 22 23.4	-0.2
SANI	Sanana	4.36	121	P	Pn	04 22 23.2	-2.5
SGKI	Sangatta, Kali	4.73	261	P	Pn	04 22 27.9	-2.6
SPSI	Sidrap Palu	4.87	211	P	Pn	04 22 31.6	-0.6
BNSI	Bone	5.09	205	P	Pn	04 22 35.3	+0.2
	137nm,0.7s,1µm						
BKSI	Bulukumba	5.93	201	P	Pn	04 22 46.0	+0.2
	43nm,0.9s,391nm						
KCP	Kidapawan	7.29	23	⇓*e*P	Pn	04 23 03.7	+0.2
EDFI	Ende, Flores	8.95	184	P	Pn	04 23 26.1	+0.9
FITZ	Fitzroy Crossi	18.52	170	P	P	04 25 21.9	+0.9
	2.1nm,0.3s,baz=8.5,slow=8.3,SNR=76						
WRA	Warramunga Arr	23.28	150	P	P	04 26 09.9	+0.4
	4.6nm,0.5s,baz=327,slow=11,SNR=54						
WRA				pP	pP	04 26 45.2	-1.0
	0.7nm,0.7s,baz=333,slow=10.0,SNR=1.3						
WRA				PcP	PcP	04 29 51.6	+0.5
	0.6nm,0.5s,baz=324,slow=2.2,SNR=9.3						
ASAR	Alice Springs	26.31	155	P	P	04 26 37.7	+0.8
	2.8nm,0.6s,baz=343,slow=15,SNR=42						
ASAR				pP	pP	04 27 14.6	-2.4
	0.6nm,0.7s,baz=332,slow=7.7,SNR=1.6						
ASAR				PcP	PcP	04 29 58.5	+0.7
	1.6nm,0.3s,baz=342,slow=2.2,SNR=17						
CMAR	Chiang Mai Arr	29.20	310	P	P	04 27 06.3	+3.6
	0.8nm,0.3s,baz=133,slow=8.0,SNR=3.7						
STKA	Stephens Creek	36.81	152	P	P	04 28 09.4	+1.1
	4.9nm,0.6s,baz=325,slow=8.6,SNR=10						
RAMN	Ramite	43.36	311	*e*P	P	04 29 03.9	+1.3
	17nm,0.5s						
JIRN	Jiri	44.05	311	*e*P	P	04 29 09.0	+0.9
	18nm,0.4s						
GUN	Gumba	44.41	311	*e*P	P	04 29 11.9	+0.9
	19nm,0.4s						
PKIN	Phulchoki	44.60	311	*e*P	P	04 29 13.0	+0.6
	4.2nm,0.3s						
KOLN	Koldanda	46.07	310	*e*P	P	04 29 24.9	+1.0
	27nm,0.5s						
DANN	Dangsing	46.24	311	*e*P	P	04 29 26.0	+0.7
	47nm,0.5s						
PYUN	Piuthan	46.70	310	*e*P	P	04 29 29.8	+1.0
	42nm,0.5s						
SONM	Songino Array	49.37	346	P	P	04 29 49.6	+0.8
	1.3nm,0.7s,baz=162,slow=9.3,SNR=8.5						
SONM				pP	pP	04 30 31.9	-0.3
	0.2nm,0.3s,baz=168,slow=8.8,SNR=1.5						
SONM				PcP	PcP	04 31 07.9	-0.2
	0.3nm,0.4s,baz=167,slow=2.5,SNR=3.3						
MKAR	Makanchi Array	58.03	329	P	P	04 30 52.2	+0.8
	1.3nm,0.3s,baz=127,slow=8.6,SNR=52						
MKAR				pP	pP	04 31 35.6	-1.3
	0.6nm,0.6s,baz=127,slow=8.8,SNR=2.5						
MKAR				PcP	PcP	04 31 41.2	0.0
	1.1nm,0.6s,baz=132,slow=4.4,SNR=7.8						
KURBB	Kurchatov Arra	62.39	330	P	P	04 31 21.5	+0.6
	baz=116,slow=5.9						
BVAR	Borovoye Array	67.90	329	P	P	04 31 57.3	+0.9
	0.5nm,0.6s,baz=119,slow=9.0,SNR=4.0						
VNDA	Vanda	80.58	172	P	P	04 33 09.9	+0.8
	3.1nm,1.0s,baz=297,slow=4.5,SNR=2.1						
ARCES	ARCESS Array B	92.15	340	P	P	04 34 06.3	+0.4
	2.2nm,0.9s,baz=81,slow=5.6,SNR=2.9						

SOME ***11*** *04:21:37.7,42°.55N×79°.62E,h10km*
KRNET ***11*** *04:21:37.1±0.1,42°.55N×79°.65E,h8km,mb3.5*
NNC ***11*** *04:21:38.1±0.8,42°.59N×79°.62E,h0km,mb3.8,mpv3.6, Error ellipse: s-maj=5.6km s-min=2.9km az=134.0*
ISCJB ***11*** *04:21:39.2±0.7,42°.55N±0°.03×79°.68E±0°.04,h10km,Error ellipse: s-maj=5.9km s-min=3.1km az=141.0*
ISC 11 04:21:38.2±1.0,**42°.54N**±0°.04×**79°.64E**±0°.03,**h10**km,**n83,** σ**1ˢ.44**/140,**36C-23D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.76	323	P	Pg	04 21 51.6	-1.3
	35nm,0.2s						
UZB				S	Sg	04 22 01.7	-1.1
	258nm,0.2s						
UZB	Uzynbulak	0.76	323	*e*P	Pg	04 21 51.6	-1.3
	baz=23						
UZB				*e*S	Sg	04 22 01.7	-1.1
	baz=23						
UZB	Uzynbulak	0.76	323	*e*P	Pg	04 21 51.6	-1.3
	35nm,0.2s						
UZB				*e*S	Sg	04 22 01.7	-1.1
	258nm,0.2s						
PDGK	Podgornoye	0.80	352	P	Pg	04 21 52.3	-1.3
	11nm,0.1s						
PDGK				S	Sg	04 22 02.9	-1.1
	86nm,0.2s						
PDGK	Podgornoye	0.80	352	⇑P	Pg	04 21 52.1	-1.5
	3.9nm,0.3s						
PDGK				⇑S	Sg	04 22 03.1	-0.9
	81nm,0.4s						
PDGK	Podgornoye	0.80	352	⇓*i*P	Pg	04 21 52.3	-1.3
	baz=51						
PDGK				⇓*i*S	Sg	04 22 03.0	-1.1
	baz=51						
PRZ	Przheval'sk	0.92	267	⇓*i*P	Pg	04 21 54.5	-1.4
	baz=67						
PRZ				⇓*i*S	Sg	04 22 07.1	-0.8
	baz=67						
KTMS	Ketmen	1.05	30	P	Pg	04 21 57.0	-1.3
	98nm,0.1s						
KTMS				S	Sg	04 22 11.0	-0.9
	158nm,0.2s						
KTMS	Ketmen	1.05	30	*e*P	Pg	04 21 57.0	-1.3
	baz=29						
KTMS				*e*S	Sg	04 22 11.0	-0.9
	baz=29						
KTMS	Ketmen	1.05	30	*e*P	Pg	04 21 57.0	-1.3
	98nm,0.1s						
KTMS				*e*S	Sg	04 22 11.0	-0.9
	158nm,0.2s						
SATY	Saty	1.05	300	P	Pg	04 21 56.5	-1.8
	39nm,0.1s						
SATY				S	Sg	04 22 10.2	-1.8
	298nm,0.2s						
SATY	Saty	1.05	300	⇓*i*P	Pg	04 21 56.5	-1.8
	39nm,0.1s						
SATY				*e*S	Sg	04 22 10.2	-1.8
	298nm,0.2s						
KURS	Kuram	1.44	312	P	Pn	04 22 04.0	-0.3
	9.1nm,0.2s						
KURS				S	Sb	04 22 23.0	-0.5
	57nm,0.4s						
KURS	Kuram	1.44	312	*e*P	Pn	04 22 04.0	-0.3
	baz=11						
KURS				*e*S	Sb	04 22 23.0	-0.5
	baz=11						
KURS	Kuram	1.44	312	*e*P	Pn	04 22 04.0	-0.3
	9.1nm,0.2s						
KURS				*e*S	Sb	04 22 23.0	-0.5
	57nm,0.4s						
MNBS	Baschi	1.79	330	P	Pb	04 22 09.9	-1.2
	13nm,0.2s						
MNBS				S	Sb	04 22 33.2	-0.3
	140nm,0.3s						
MNBS	Baschi	1.79	330	*e*P	Pb	04 22 09.9	-1.2
	baz=30						
MNBS				*e*S	Sb	04 22 33.3	-0.3
	baz=30						
MNBS	Baschi	1.79	330	*e*P	Pb	04 22 09.8	-1.2
	13nm,0.2s						
MNBS				*e*S	Sb	04 22 33.2	-0.3
	140nm,0.3s						
DJR	Jarkent	1.80	3	P	Pb	04 22 10.8	-0.4
	6.0nm,0.3s						
DJR				S	Sg	04 22 34.6	-1.3
	55nm,0.2s						
DJR	Jarkent	1.80	3	*e*P	Pb	04 22 10.8	-0.4
	6.0nm,0.3s						
DJR				*e*S	Sg	04 22 34.6	-1.3
	55nm,0.2s						
KDJ	Kajisay	1.87	258	⇓*i*P	Pb	04 22 12.0	-0.5
	baz=58						
KDJ				⇓*i*S	Sb	04 22 36.6	+0.6
	baz=58						
MDOK	Medeo	2.01	289	Pn	Pn	04 22 13.0	+0.8
	15nm,0.5s						
MDOK				Sn	Sb	04 22 39.7	-0.2
	52nm,0.6s						
MDOK	Medeo	2.01	289	Pg	Pb	04 22 13.4	-1.5
	31nm,0.4s						
MDOK				Lg	Lg	04 22 39.1	
	59nm,0.6s						
MDOK	Medeo	2.01	289	*e*P	Pb	04 22 13.4	-1.5
	baz=89						
MDOK				⇑*i*S	Sb	04 22 39.1	-0.8
	baz=89						
MDOK	Medeo	2.01	289	*e*P	Pb	04 22 13.4	-1.5
	31nm,0.4s						
MDOK				⇑*i*S	Sb	04 22 39.1	-0.8
	59nm,0.6s						
TNSS	Tian-Shan	2.04	285	Pg	Pb	04 22 14.6	-1.0
	43nm,0.3s						
TNSS				Lg	Lg	04 22 41.0	
	72nm,0.2s						
TNSS	Tian-Shan	2.04	285	*e*P	Pb	04 22 14.6	-1.0
	baz=85						
TNSS				⇑*i*S	Sb	04 22 41.0	-0.3
	baz=85						
TNSS	Tian-Shan	2.04	285	*e*P	Pb	04 22 14.6	-1.0
	43nm,0.3s						
TNSS				⇑*i*S	Sb	04 22 41.0	-0.3
	72nm,0.2s						
KNDC	Almaty	2.08	290	⇓Pn	Pb	04 22 15.9	-0.1
	13nm,0.4s						
KNDC				⇓Sn	Sg	04 22 43.4	-1.6
	52nm,0.5s						
AAA	Alma-Ata	2.11	289	Pg	Pb	04 22 17.0	+0.4
	50nm,0.2s						
AAA				Lg	Lg	04 22 45.3	
	80nm,0.2s						
AAA	Alma-Ata	2.11	289	*e*P	Pb	04 22 17.0	+0.4
	baz=89						
AAA				*e*S	Sg	04 22 45.4	-0.7
	baz=89						
AAA	Alma-Ata	2.11	289	*e*P	Pb	04 22 17.0	+0.4
	50nm,0.2s						
AAA				*e*S	Sg	04 22 45.3	-0.7
	80nm,0.2s						
ARXS	Arharly	2.13	322	Pg	Pb	04 22 16.1	-0.9
ARXS				Lg	Lg	04 22 43.5	
ARXS	Arharly	2.13	322	*e*P	Pb	04 22 15.7	-1.3
	21nm,0.5s						
ARXS				*e*S	Sb	04 22 43.5	-0.1
	149nm,0.4s						
IZV	Izvestkoviy	2.28	284	Pg	Pb	04 22 18.7	-0.9
	50nm,0.2s						
IZV				Lg	Lg	04 22 48.2	
	167nm,0.4s						
IZV	Izvestkoviy	2.28	284	*e*P	Pb	04 22 18.7	-0.9
	baz=83						
IZV				*e*S	Sb	04 22 48.1	+0.2
	baz=83						
IZV	Izvestkoviy	2.28	284	*e*P	Pb	04 22 18.7	-0.9
	50nm,0.2s						
IZV				*e*S	Sb	04 22 48.2	+0.2
	167nm,0.4s						
CHKK	Chushkaly	2.34	305	Pg	Pb	04 22 19.9	-0.6
	9.9nm,0.2s						
CHKK				Lg	Lg	04 22 50.4	
	105nm,0.1s						
CHKK	Chushkaly	2.34	305	*e*P	Pb	04 22 19.9	-0.6
	baz=5.0						
CHKK				*e*S	Sb	04 22 50.3	+0.8
	baz=5.0						
CHKK	Chushkaly	2.34	305	*e*P	Pb	04 22 19.9	-0.6
	9.9nm,0.2s						
CHKK				*e*S	Sb	04 22 50.4	+0.8
	105nm,0.1s						
MTBS	Maitube	2.44	285	Pg	Pb	04 22 21.5	-0.6
	54nm,0.2s						
MTBS				Lg	Lg	04 22 52.8	
	92nm,0.3s						
MTBS	Maitube	2.44	285	*e*P	Pb	04 22 21.5	-0.6
	baz=85						
MTBS				⇑*i*S	Sb	04 22 52.8	+0.6
	baz=85						
MTBS	Maitube	2.44	285	*e*P	Pb	04 22 21.5	-0.6
	54nm,0.2s						
MTBS				⇑*i*S	Sb	04 22 52.8	+0.6
	92nm,0.3s						
KTBS	Karatobe	2.46	299	Pg	Pb	04 22 21.7	-0.9
	13nm,0.3s						
KTBS				Lg	Lg	04 22 53.1	
	70nm,0.4s						
KTBS	Karatobe	2.46	299	*e*P	Pb	04 22 21.7	-0.9
	baz=98						
KTBS				*e*S	Sb	04 22 53.1	+0.1
	baz=98						
KTBS	Karatobe	2.46	299	*e*P	Pb	04 22 21.7	-0.9
	13nm,0.3s						
KTBS				*e*S	Sb	04 22 53.1	+0.1
	70nm,0.4s						
ULHL	Ulahol	2.54	265	⇑*i*P	Pb	04 22 21.5	-2.4
	baz=64						
ULHL				⇑*i*S	Sb	04 22 53.8	-1.4
	baz=64						
TDK	Taldyqorghan	2.62	340	Pg	Pb	04 22 24.5	-0.8
	51nm,0.3s						
TDK				Lg	Lg	04 22 57.8	
	111nm,0.5s						
TDK	Taldyqorghan	2.62	340	*e*P	Pb	04 22 24.4	-0.8
	51nm,0.3s						
TDK				*e*S	Sb	04 22 57.8	+0.4
	111nm,0.5s						
BOOM	Boomskoye usch	2.74	270	⇑*i*P	Pn	04 22 24.4	+2.1
	baz=70						
BOOM				⇑*i*S	Sb	04 22 58.1	-2.9
	baz=70						
KAPS	Kapalarasan	2.75	356	Pg	Pb	04 22 26.8	-0.8
	4.7nm,0.3s						
KAPS				Lg	Lg	04 23 02.0	
	31nm,0.4s						
KAPS	Kapalarasan	2.75	356	*e*P	Pb	04 22 26.8	-0.8
	4.7nm,0.3s						
KAPS				*e*S	Sb	04 23 02.0	+0.7
	31nm,0.4s						
KST	Kastek	2.75	282	Pg	Pb	04 22 26.8	-0.8
	34nm,0.4s						
KST				Lg	Lg	04 23 02.1	
	62nm,0.5s						
KST	Kastek	2.75	282	*e*P	Pb	04 22 26.8	-0.8
	baz=82						
KST				⇑*i*S	Sb	04 23 02.1	+0.7
	baz=82						
KST	Kastek	2.75	282	*e*P	Pb	04 22 26.8	-0.8
	34nm,0.4s						
KST				⇑*i*S	Sb	04 23 02.1	+0.7
	62nm,0.5s						
KUU	Kurty	2.77	300	Pg	Pb	04 22 26.5	-1.2
	4.7nm,0.3s						
KUU				Lg	Lg	04 23 02.0	
	41nm,0.3s						
KUU	Kurty	2.77	300	*e*P	Pb	04 22 26.5	-1.2
	baz=0.0						
KUU				*e*S	Sb	04 23 02.0	+0.3
	baz=0.0						
KUU	Kurty	2.77	300	*e*P	Pb	04 22 26.5	-1.2
	4.7nm,0.3s						
KUU				*e*S	Sb	04 23 02.0	+0.3
	41nm,0.3s						
DGS	Degeres	2.93	285	Pg	Pb	04 22 29.9	-0.6
	28nm,0.3s						
DGS				Lg	Lg	04 23 07.2	
	114nm,0.6s						
DGS	Degeres	2.93	285	*e*P	Pb	04 22 29.9	-0.6
	baz=85						
DGS				*e*S	Sb	04 23 07.2	+0.8
	baz=85						
DGS	Degeres	2.93	285	*e*P	Pb	04 22 29.9	-0.6
	28nm,0.3s						
DGS				*e*S	Sb	04 23 07.2	+0.8
	114nm,0.6s						
NRN	Naryn	2.93	249	⇑*i*P	Pb	04 22 27.9	-2.8
	baz=49						
NRN				⇑*i*S	Sb	04 23 03.7	-3.0
	baz=49						
TKM2	Tokmak 2	3.00	279	⇑Pg	Pb	04 22 30.8	-1.1
	3.5nm,0.3s						
TKM2				⇓Lg	Lg	04 23 11.6	
	24nm,0.5s						
TKM2	Tokmak 2	3.00	279	⇓*i*P	Pn	04 22 28.1	+2.1
	baz=79						
TKM2				⇓*e*S	Sb	04 23 05.0	-3.7
	baz=79						
KZA	Kyzart	3.29	263	⇑*i*P	Pn	04 22 32.2	+2.1
	baz=63						
KZA				⇑*i*S	Sn	04 23 11.8	+2.3
	baz=63						
KBK	Karagaybulak	3.47	274	⇓*i*P	Pn	04 22 34.5	+2.1

	baz=73						
KBK				⇓*i*S	**Sn**	**04 23 15.6**	**+2.0**
	baz=73						
CHMS	**Chumysh**	**3.63**	**279**	⇓*i*P	**Pn**	**04 22 36.5**	**+2.0**
	baz=79						
CHMS				⇓*i*S	**Sn**	**04 23 19.6**	**+2.2**
	baz=79						
FRU1	**Bishkek**	**3.71**	**276**	⇑*i*P	**Pn**	**04 22 37.4**	**+1.9**
	baz=76						
FRU1				⇑*i*S	**Sn**	**04 23 21.5**	**+2.2**
	baz=76						
AAK	**Ala-Archa**	**3.80**	**273**	⇓Pg	**Pb**	**04 22 45.9**	**+0.5**
	2.9nm,0.6s						
AAK				⇑Lg	Lg	04 23 36.3	
	9.2nm,0.5s						
AAK	**Ala-Archa**	**3.80**	**273**	⇓*e*P	**Pn**	**04 22 38.8**	**+1.9**
	baz=73						
AAK				⇓*e*S	**Sn**	**04 23 23.7**	**+1.9**
	baz=73						
UCH	**Uchtor**	**3.81**	**267**	⇓*e*P	**Pn**	**04 22 39.5**	**+2.2**
	baz=67						
UCH				⇓*i*S	**Sn**	**04 23 24.6**	**+2.2**
	baz=67						
ARLS	**Aral**	**4.01**	**262**	⇑*i*P	**Pn**	**04 22 41.9**	**+2.1**
	baz=62						
ARLS				⇑*i*S	**Sn**	**04 23 28.0**	**+1.1**
	baz=62						
EKS2	**Erkin-Say**	**4.33**	**274**	⇑*e*P	**Pn**	**04 22 46.2**	**+2.0**
	baz=74						
EKS2				⇑*i*S	**Sn**	**04 23 36.2**	**+1.4**
	baz=74						
MAKZ	**Makanchi**	**4.58**	**21**	⇑Pn	**Pn**	**04 22 49.4**	**+1.9**
	1.4nm,0.3s						
MAKZ				⇑Lg	Lg	04 24 00.5	
	0.8nm,0.3s						
MK31	**Makanchi Array**	**4.66**	**23**	⇑Pn	**Pn**	**04 22 50.1**	**+1.6**
	1.6nm,0.5s,baz=205,slow=13,SNR=82						
MK31				⇑Lg	Lg	04 24 02.3	
	2.9nm,0.5s,baz=208,slow=26,SNR=4.4						
MRKS	**Merke**	**4.74**	**275**	Pg	**Pb**	**04 23 02.6**	**+1.3**
	6.0nm,0.4s						
MRKS				Lg	Lg	04 24 03.3	
	13nm,0.3s						
MRKS	**Merke**	**4.74**	**275**	*e*P	**Pb**	**04 23 02.6**	**+1.3**
	baz=75						
MRKS				*e*S	**Sb**	**04 24 03.3**	**+4.8**
	baz=75						
MRKS	**Merke**	**4.74**	**275**	*e*P	**Pb**	**04 23 02.6**	**+1.3**
	6.0nm,0.4s						
MRKS				*e*S	**Sb**	**04 24 03.3**	**+4.8**
	13nm,0.3s						
SFK	**Sufi-Kurgan**	**5.27**	**243**	⇑Pg	**Pg**	**04 23 15.7**	**-3.3**
	0.4nm,0.4s						
SFK				⇑Lg	Lg	04 24 24.2	
	1.8nm,0.5s						
MNAS	**Manas**	**5.28**	**272**	⇓Pg	**Pb**	**04 23 12.7**	**+2.1**
	1.1nm,0.6s						
MNAS				⇑Lg	Lg	04 24 24.7	
	2.9nm,0.7s						
KK31	**Karatay Array**	**6.74**	**278**	⇑Pg	Pb	04 23 39.9	+4.6
	0.5nm,0.5s,baz=84,slow=17,SNR=5.0						
KK31				⇓Lg	Lg	04 25 10.7	
	2.0nm,0.6s,baz=95,slow=28,SNR=6.9						
KURBB	**Kurchatov Arra**	**8.12**	**355**	⇑Lg	Lg	04 25 50.8	
	3.7nm,0.6s						
KURK	**Kurchatov**	**8.21**	**355**	⇑Lg	Lg	04 25 55.0	
	2.2nm,0.6s						

OTT 11 04:26:59.9±0.1,60°.58N×58°.91W,h18^{km},ML3.6/4, LAlbertaRADOR Sea Seismic Zone. 326km east from Killiniq, Qc,Davis Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAJQ	**Kangiqsualujju**	**4.03**	**245**	PN	Pn	04 28 00.1	-0.6
KAJQ				SN	Sn	04 28 45.0	-2.3
KAJQ				Trac		04 28 47.3	
	comp=Z,5.0nm,0.2s						
MKVL	**Makkovik**	**5.50**	**182**	PN	Pn	04 28 16.3	-4.6
MKVL				SN	Sn	04 29 12.8	-11
MKVL				Trac		04 29 14.4	
	comp=Z,2.4nm,0.1s						
FRB	**Frobisher Bay**	**5.52**	**309**	PN	Pn	04 28 20.4	-0.6
FRB				SN	Sn	04 29 20.0	-3.9
FRB				Trac		04 29 24.1	
	comp=Z,4.1nm,0.2s						
KNGQ	**Kangiqsujuaq**	**6.41**	**285**	PN	Pn	04 28 32.7	-0.5
KNGQ				SN	Sn	04 29 42.8	-2.9
KNGQ				Trac		04 29 44.9	
	comp=Z,37nm,0.9s						
SCHQ	**Schefferville**	**7.15**	**220**	PN	Pn	04 28 42.3	-1.2
SCHQ				SN	Sn	04 29 59.1	-5.1
SCHQ				Trac		04 30 02.1	
	comp=Z,2.8nm,0.3s						
SFJD	**Kangerlussuaq**	**7.41**	**26**	PN	Pn	04 28 46.1	-0.8
SFJD				SN	Sn	04 30 04.8	-5.5
SFJD				Trac		04 30 08.7	
	comp=Z,43nm,1.4s						

MEX 11 04:40:26.8±0.3,14°.26N×92°.51W,h56^{km}±13^{km},MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.69**	**21**	*e*P	Pn	04 40 39.2	-1.5
THIG				*e*S	Sn	04 40 48.7	-2.0
PCIG		**1.59**	**335**	*e*P	Pn	04 40 51.1	-1.4
PCIG				*e*S	Sn	04 41 08.8	-3.2
CCIG	**Comitan**	**2.04**	**10**	*e*P	Pn	04 40 57.3	-1.7
CCIG				*i* S	Sn	04 41 21.2	-2.2

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*IDC **11** 04:41:29.8±0.9,15°.02S×173°.71W,h0^{km},mb4.1/10, mb1 4.3/10,mb1mx4.1/23,mbtmp4.1/10,MS3.5/6, Ms1 3.5/6,ms1mx3.2/27,Error ellipse: s-maj=44.7km s-min=18.8km az=138.0*

*NEIC **11** 04:41:30.8±0.3,15°.19S×173°.61W,h10^{km},mb4.5/4,Error ellipse: s-maj=12.3km s-min=9.0km az=137.0*

*ISCJB **11** 04:41:31.8±0.5,15°.25S±0°.09×173°.63W±0°.09,h30^{km}, MS3.5/6,Error ellipse: s-maj=14.6km s-min=10.8km az=139.7*

ISC 11 04:41:33.6±0.5,15°.30S±0°.10×173°.5W±0°.1,h30^{km},n57, σ1^{s}.02/39,MS3.5/6,1C,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.07**	**138**	*e*Pn	**Pn**	**04 42 48.2**	**+0.6**
NIUE				*e*Sn	**Sn**	**04 43 43.0**	**-2.1**
KNTN	**Kanton**	**12.57**	**8**	*e*Pn	Pn	04 44 21.3	-9.2
KNTN				*e*Sn	Sn	04 46 26.6	-23
DZM	**Mont Dzumac**	**20.16**	**247**	*e*LR	LR	04 51 27.2	
	comp=Z,337nm,26.9s						
PAE	**Paea**	**23.04**	**99**	*e*T	T	05 10 00.9	
	3.1nm,0.3s						
PPT	**Papeete**	**23.04**	**99**	LR	LR	04 52 59.3	
	comp=Z,64nm,20.7s,baz=235,slow=30						
PPT2	**Papeete2**	**23.04**	**99**	*e*LQ	LQ	04 51 05.0	
	506nm,27.5s						
PPT2				*e*LR	LR	04 52 07.6	
	comp=Z,192nm,24.8s						
PPT2	**Papeete2**	**23.04**	**99**	*e*T	T	05 10 02.0	
	7.1nm,0.5s						
TIAR	**Tiarei**	**23.26**	**99**	*e*T	T	05 10 17.5	
	2.8nm,0.3s						
TVO	**Taravao**	**23.36**	**99**	*e*T	T	05 10 26.7	
	1.5nm,0.3s						
KHZ	**Kahutara**	**29.24**	**200**	*e*P	**P**	**04 47 32.6**	**-0.2**
	14nm,1.1s						
RPZ	**Rata Peaks**	**31.24**	**202**	P	**P**	**04 47 53.1**	**+2.5**
	11nm,0.6s,baz=38,slow=14,SNR=3.5						
RKT	**Rikitea**	**37.10**	**108**	*e*T	T	05 27 43.9	
	4.5nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**38.84**	**329**	T	T	05 29 57.9	
	baz=148,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**38.85**	**329**	T	T	05 30 07.3	
	baz=148,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**38.85**	**329**	T	T	05 30 03.9	
	baz=148,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**39.78**	**330**	T	T	05 31 04.5	
	baz=150,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**39.79**	**330**	T	T	05 31 14.6	
	baz=150,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**39.80**	**330**	T	T	05 31 03.8	
	baz=150,slow=76,SNR=12						
STKA	**Stephens Creek**	**44.02**	**240**	P	**P**	**04 49 38.9**	**+0.2**
	0.7nm,0.5s,baz=80,slow=11,SNR=2.4						
WR1	**Warramunga Arr**	**49.79**	**257**	*e*P	**P**	**04 50 22.9**	**-1.1**
	2.7nm,0.7s						
WRA	**Warramunga Arr**	**49.79**	**257**	P	**P**	**04 50 22.9**	**-1.1**
	1.4nm,0.7s,baz=92,slow=6.7,SNR=27						
AS01	**Alice Springs**	**50.02**	**252**	*e*P	**P**	**04 50 24.4**	**-1.3**
AS31	**Alice Springs**	**50.06**	**252**	*e*P	**P**	**04 50 25.0**	**-1.1**
	2.5nm,0.7s						
ASAR	**Alice Springs**	**50.06**	**252**	P	**P**	**04 50 25.6**	**-0.5**
	10nm,0.7s,baz=86,slow=8.2,SNR=63						
ASAR				LR	LR	05 12 03.9	
	comp=Z,55nm,18.9s,baz=93,slow=37						
NWAO	**Narrogin (SRO)**	**64.60**	**241**	LR	LR	05 18 18.4	
	comp=Z,62nm,20.5s,baz=26,slow=34						
MJAR	**Matsushiro Arr**	**68.81**	**320**	LR	LR	05 16 18.8	
	comp=Z,45nm,21.9s,baz=100,slow=30						
PETK	**Petropavlovsk-**	**72.51**	**342**	P	**P**	**04 52 56.4**	**-1.0**
	5.7nm,0.9s,baz=123,slow=11,SNR=3.7						
PEA1	**Petropavlovsk-**	**72.51**	**342**	*e*P	**P**	**04 52 56.4**	**-1.0**
NV01	**Mina Array Sit**	**74.31**	**42**	*e*P	**P**	**04 53 08.4**	**-0.2**
NVAR	**Mina Array Bea**	**74.31**	**42**	P	**P**	**04 53 08.4**	**-0.2**
	0.3nm,0.6s,baz=219,slow=7.0,SNR=2.8						
KSRS	**Korea Array**	**76.03**	**316**	LR	LR	05 21 22.2	
	comp=Z,20nm,21.5s,baz=95,slow=32						
TCUT	**Toone Canyon**	**80.23**	**43**	*e*P	**P**	**04 53 42.8**	**+1.0**
	5.2nm,0.7s						
LTX	**Lajitas**	**80.62**	**56**	*e*P	**P**	**04 53 45.6**	**+1.6**
TXAR	**Lajitas Array**	**80.62**	**56**	P	**P**	**04 53 45.6**	**+1.6**
	0.4nm,0.8s,baz=195,slow=9.1,SNR=4.4						
PD31	**Pinedale Array**	**82.25**	**42**	*e*P	**P**	**04 53 51.0**	**-1.4**
PDAR	**Pinedale Array**	**82.25**	**42**	P	**P**	**04 53 53.2**	**+0.8**
	0.3nm,0.6s,baz=199,slow=3.1,SNR=3.7						
ILAR	**Eielson Array**	**82.36**	**11**	P	**P**	**04 53 51.0**	**-1.2**
	1.1nm,1.0s,baz=219,slow=4.7,SNR=4.1						
YKA	**Yellowknife Ar**	**90.04**	**23**	P	**P**	**04 54 29.7**	**-0.3**
	0.5nm,0.8s,baz=241,slow=4.3,SNR=8.7						
CMAR	**Chiang Mai Arr**	**92.50**	**288**	LR	LR	05 35 00.8	
	comp=Z,16nm,18.2s,baz=185,slow=35						
AKASG	**Malin Array Be**	**140.22**	**337**	PKP	**PKPdf**	**05 01 00.4**	**+1.0**
	0.7nm,0.5s,baz=30,slow=2.9,SNR=1.9						
MLR	**Muntele Rosu**	**145.74**	**335**	PKPbc	**PKPab**	**05 01 10.5**	**+0.2**
	1.9nm,0.8s,baz=160,slow=9.0,SNR=4.1						
DRGR		**145.82**	**340**	⇑*i*P	**PKPab**	**05 01 11.2**	**+0.7**
BR101	**Keskin Array S**	**146.03**	**321**	*e*PKPdf	**PKPab**	**05 01 11.4**	**-0.2**
BR131	**Keskin Array S**	**146.03**	**321**	*e*PKPdf	**PKPab**	**05 01 12.3**	**+0.8**
BRTR	**Keskin Array B**	**146.03**	**321**	PKPbc	**PKPab**	**05 01 11.4**	**-0.2**
	1.6nm,0.7s,baz=77,slow=1.9,SNR=15						
GERES	**GERESS Array B**	**146.03**	**351**	PKPbc	**PKPbc**	**05 01 10.7**	**+0.1**
	0.6nm,0.6s,baz=20,slow=4.3,SNR=4.7						
CONA	**Conrad Observa**	**146.56**	**349**	*i* PKPab	**PKPbc**	**05 01 11.8**	**-0.5**
	7.7nm,1.3s						
MOA	**Molln**	**146.91**	**350**	*i* pPKPdf	**PKPab**	**05 01 14.4**	**-0.2**
	6.2nm,1.2s						
RETA	**Reutte**	**147.71**	**355**	pPKPbc	**PKPab**	**05 01 18.0**	**+0.2**
	8.7nm,1.2s						
WATA	**Walderalm**	**147.78**	**354**	*e*PKPbc	**PKPbc**	**05 01 14.7**	**-1.1**
	2.7nm,0.4s						
MOTA	**Moosalm**	**147.82**	**354**	*i* P	**PKPbc**	**05 01 16.7**	**+0.7**
	29nm,2.0s						
SOKA	**Soboth**	**147.92**	**349**	*i* P	**PKPbc**	**05 01 16.8**	**+0.7**
	7.0nm,1.2s						
SQTA	**Sankt Quirin**	**147.93**	**354**	*i* PKPbc	**PKPbc**	**05 01 15.3**	**-0.9**
	16nm,1.8s						
FETA	**Feichten**	**148.18**	**355**	*i* pPKiKP	**PKPab**	**05 01 21.4**	**+1.6**
	6.6nm,1.2s						
ABTA	**Abfaltersbach**	**148.25**	**352**	*i* PKPab	**PKiKP**	**05 01 18.5**	**-0.2**
	6.1nm,1.1s						
TOA1	**Torodi Ar. Sit**	**174.86**	**114**	*e*PKPdf	**PKPdf**	**05 01 41.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**174.86**	**114**	PKP	**PKPdf**	**05 01 41.4**	**-0.2**
	0.9nm,1.1s,baz=236,slow=1.6,SNR=3.5						

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*IDC **11** 04:51:02.7±0.7,10°.93S×165°.51E,h0^{km},mb4.0/12, mb1 4.2/14,mb1mx4.1/37,mbtmp4.1/14,ML4.4/2,MS3.3/2, Ms1 3.3/2,ms1mx2.9/29,Error ellipse: s-maj=21.4km s-min=18.1km az=140.0*

*ISCJB **11** 04:51:05.3±0.5,11°.08S±0°.08×165°.45E±0°.07,h30^{km}, mb4.0/14,MS3.3/1,Error ellipse: s-maj=11.3km s-min=9.6km az=166.0*

*NEIC **11** 04:51:05.5±3.8,11°.05S×165°.52E,h21^{km}±27^{km},mb4.0/4, Error ellipse: s-maj=12.4km s-min=9.3km az=199.0*

ISC 11 04:51:07.0±0.6,11°.04S±0°.10×165°.46E±0°.08,h30^{km},n34, σ1^{s}.38/33,mb4.0/14,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.66**	**286**	Pn	**Pn**	**04 52 29.7**	**+0.7**
HNR				*e*Sn	**Sn**	**04 53 27.9**	**-5.2**
HNR	**Honiara**	**5.66**	**286**	Pn	**Pn**	**04 52 29.7**	**+0.7**
	19nm,0.3s,baz=339,slow=0.3,SNR=8.7						
HNR				Sn	**Sn**	**04 53 35.2**	**+2.2**
	19nm,0.3s,baz=228,slow=18,SNR=1.4						
HNR				LR	LR	04 54 45.5	
	comp=Z,314nm,20.4s,baz=127,slow=39						
DZM	**Mont Dzumac**	**11.01**	**175**	Pn	**Pn**	**04 53 43.5**	**+0.9**
	1.3nm,0.3s,baz=326,slow=15,SNR=12						
PINNC	**Pines Island,**	**11.67**	**171**	*e*Pn	**Pn**	**04 53 48.2**	**-3.3**
CTA	**Charters Tower**	**20.55**	**242**	P	**P**	**04 55 44.0**	**+0.6**
	2.8nm,0.7s,baz=78,slow=9.3,SNR=3.5						
URZ	**Urewera**	**29.05**	**161**	P	**P**	**04 57 05.5**	**+1.0**
	6.7nm,1.0s,baz=7.6,slow=6.5,SNR=2.3						
H11S2	**WAKE ISLAND Hy**	**29.37**	**2**	T	T	05 27 44.6	
	baz=182,slow=76,SNR=5.6						
H11S3	**WAKE ISLAND Hy**	**29.37**	**2**	T	T	05 27 48.5	
	baz=182,slow=76,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	**29.39**	**2**	T	T	05 27 37.9	
	baz=182,slow=76,SNR=6.0						
STKA	**Stephens Creek**	**30.25**	**223**	LR	LR	05 07 54.1	
	comp=Z,65nm,20.6s,baz=32,slow=33						
H11N1	**WAKE ISLAND Hy**	**30.59**	**3**	T	T	05 29 19.0	
	baz=182,slow=76,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	**30.60**	**3**	T	T	05 29 19.3	
	baz=182,slow=76,SNR=8.4						
H11N2	**WAKE ISLAND Hy**	**30.61**	**3**	T	T	05 29 20.2	
	baz=182,slow=76,SNR=6.9						
WR1	**Warramunga Arr**	**31.22**	**250**	*e*P	**P**	**04 57 24.2**	**+0.2**
	8.0nm,1.1s						
WR1				*e*PcP	**PcP**	**05 00 19.9**	**+1.5**
WRA	**Warramunga Arr**	**31.22**	**250**	P	**P**	**04 57 24.2**	**+0.2**
	2.5nm,0.7s,baz=81,slow=9.0,SNR=19						
WRA				PcP	**PcP**	**05 00 19.9**	**+1.5**
	1.1nm,0.9s,baz=78,slow=2.8,SNR=7.3						
AS01	**Alice Springs**	**32.50**	**243**	*e*P	**P**	**04 57 35.2**	**-0.2**
AS31	**Alice Springs**	**32.54**	**243**	*e*P	**P**	**04 57 35.6**	**-0.1**
	1.6nm,1.0s						
AS31				*e*PcP	**PcP**	**05 00 22.6**	**+0.6**
ASAR	**Alice Springs**	**32.55**	**243**	P	**P**	**04 57 36.2**	**+0.5**
	4.3nm,0.9s,baz=73,slow=9.3,SNR=29						
ASAR				PcP	**PcP**	**05 00 22.6**	**+0.6**
	0.8nm,0.9s,baz=72,slow=2.9,SNR=5.5						
FITZ	**Fitzroy Crossi**	**39.11**	**255**	*e*P	**P**	**04 58 31.2**	**-0.8**
	2.7nm,1.0s						
KLR	**Kul'dur**	**66.94**	**337**	P	**P**	**05 01 56.2**	**-0.4**
	1.0nm,0.8s,baz=78,slow=16,SNR=2.5						
CMAR	**Chiang Mai Arr**	**71.85**	**294**	P	**P**	**05 02 28.5**	**+0.9**
	1.0nm,0.6s,baz=123,slow=4.4,SNR=3.2						
SONA0	**Songino Array**	**78.50**	**324**	*e*P	**P**	**05 03 05.2**	**-0.2**
SONM	**Songino Array**	**78.50**	**324**	P	**P**	**05 03 05.2**	**-0.2**
	0.7nm,0.8s,baz=138,slow=5.8,SNR=5.5						
IL1	**Eielson Array**	**83.60**	**19**	*e*P	**P**	**05 03 31.4**	**-0.7**
ILAR	**Eielson Array**	**83.60**	**19**	P	**P**	**05 03 32.4**	**+0.4**
	1.1nm,0.7s,baz=243,slow=3.8,SNR=13						
ILB	**Eielson Array**	**83.60**	**19**	*e*P	**P**	**05 03 32.4**	**+0.4**
NVAR	**Mina Array Bea**	**86.23**	**50**	P	**P**	**05 03 46.7**	**+0.5**
	1.0nm,0.9s,baz=235,slow=7.6,SNR=2.7						
NV01	**Mina Array Sit**	**86.23**	**50**	*e*P	**P**	**05 03 46.4**	**+0.2**
MK32	**Makanchi Array**	**93.33**	**317**	*e*P	**P**	**05 04 19.4**	**+0.2**
MKAR	**Makanchi Array**	**93.33**	**317**	P	**P**	**05 04 19.4**	**+0.2**
	0.5nm,0.8s,baz=97,slow=6.3,SNR=4.5						
PD31	**Pinedale Array**	**93.75**	**47**	*e*P	**P**	**05 04 20.2**	**-1.3**
	1.0nm,1.1s						
PDAR	**Pinedale Array**	**93.75**	**47**	P	**P**	**05 04 20.2**	**-1.3**
	0.1nm,0.5s,baz=253,slow=2.7,SNR=2.6						
YKA	**Yellowknife Ar**	**95.10**	**27**	P	**P**	**05 04 26.5**	**-0.4**
	0.3nm,0.6s,baz=255,slow=4.8,SNR=7.2						
YKB5	**Yellowknife Ar**	**95.10**	**27**	*e*P	**P**	**05 04 26.5**	**-0.4**

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*NNC **11** 04:53:43.0±5.7,37°.78N×72°.39E,h13^{km}±32^{km},mb3.6, mpv3.2,Error ellipse: s-maj=45.4km s-min=36.0km az=126.0*

ISC 11 04:53:42.2±4.5,37°.6N±0°.2×72°.5E±0°.1,h100^{km},n11, σ1^{s}.18/15,6C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**2.58**	**18**	⇑Pn	**Pn**	**04 54 22.8**	**+0.3**
	3.7nm,0.5s						
SFK				⇑Lg	Lg	04 54 58.9	
	3.5nm,0.3s						
AML	**Almayashu**	**4.66**	**11**	P	**Pn**	**04 54 51.2**	**+0.5**
	SNR=13						
UCH	**Uchtor**	**4.92**	**18**	P	**Pn**	**04 54 54.4**	**+0.3**
	SNR=13						
MNAS	**Manas**	**4.92**	**0**	⇓Pn	**Pn**	**04 54 53.9**	**-0.1**
	1.6nm,0.4s						
MNAS				⇓Sn	**Sn**	**04 55 50.8**	**+1.1**
	4.6nm,0.6s						
KZA	**Kyzart**	**4.99**	**24**	P	**Pn**	**04 54 54.9**	**-0.2**
	SNR=5.6						
EKS2	**Erkin-Say**	**5.19**	**11**	P	**Pn**	**04 54 59.1**	**+1.5**
	SNR=7.7						
AAK	**Ala-Archa**	**5.30**	**16**	P	**Pn**	**04 54 59.9**	**+0.8**
	SNR=9.3						
AAK	**Ala-Archa**	**5.30**	**16**	⇑Pn	**Pn**	**04 54 59.3**	**+0.2**
	6.2nm,0.6s						
AAK				⇑Sn	**Sn**	**04 56 00.7**	**+1.7**
	1.7nm,0.5s						
ULHL	**Ulahol**	**5.50**	**30**	P	**Pn**	**04 55 02.2**	**+0.4**
	SNR=5.8						
KK31	**Karatay Array**	**5.74**	**345**	⇑Pn	**Pn**	**04 55 04.7**	**-0.2**
	1.9nm,0.6s,baz=162,slow=11,SNR=15						
KK31				⇓Sn	**Sn**	**04 56 08.2**	**-1.3**
	1.6nm,0.5s,baz=170,slow=22,SNR=11						
TKM2	**Tokmak 2**	**5.86**	**23**	⇓Pn	**Pn**	**04 55 06.2**	**-0.5**
	1.6nm,0.7s						
TKM2				⇑Sn	**Sn**	**04 56 09.9**	**-2.7**
	0.8nm,0.6s						

UCR 11 04:56:26.0±1.6,10°.38N×86°.29W,h11^{km}±7^{km},MD4.0,8C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NY14	**Universidad de**	**0.79**	**70**	*i* P	Pb	04 56 41.5	-0.2
NY14				*i* S	Sb	04 56 52.9	+0.5
GBS3	**Finca Las Img**	**0.91**	**64**	⇑*i*P	Pg	04 56 42.9	-0.8
PLVR	**Palo Verde**	**0.92**	**92**	⇑*e*P	Pg	04 56 42.7	-1.2
PLVR				*e*S	Sb	04 56 56.3	-0.2
LAPC	**Finca la Perla**	**0.93**	**65**	⇑*i*P	Pg	04 56 42.9	-0.9
LAPC				*i* S	Sg	04 56 55.5	-0.5
BUEV	**Buena Vista**	**0.96**	**64**	⇑*e*P	Pg	04 56 43.6	-1.0
BUEV				*e*S	Sg	04 56 56.7	-0.4
GB1A	**Borinquen Arri**	**0.98**	**64**	*i* P	Pg	04 56 44.3	-0.6
GB1A				*e*S	Sg	04 56 57.5	-0.1
GPS3	**Bodega del ICE**	**0.98**	**68**	*i* P	Pg	04 56 43.8	-1.2
GPS3				*i* S	Sg	04 56 57.4	-0.4
GPS2	**Hotel Rincn d**	**0.99**	**68**	*i* P	Pg	04 56 44.1	-1.1
GPS2				*e*S	Sg	04 56 56.5	-1.6
GPS1	**Guardaparques**	**1.00**	**67**	*i* P	Pg	04 56 44.3	-1.1
BUAI	**Buenos Aires**	**1.06**	**62**	*i* P	Pb	04 56 45.9	-0.5
LIM1	**Limonal**	**1.07**	**73**	*i* P	Pb	04 56 45.2	-1.3
COLC	**Colonia**	**1.10**	**75**	*i* P	Pb	04 56 45.7	-1.5
MESS	**Mesas**	**1.13**	**72**	*i* P	Pb	04 56 46.2	-1.5
MESS				⇑*i*P	Pg	04 56 46.2	-1.6
MESS				*e*S	Sb	04 57 02.1	-0.3
MESS				*i* S	Sg	04 57 02.1	-0.5
CUI	**Cuipilapa**	**1.14**	**76**	⇑*e*P	Pb	04 56 46.4	-1.4
CUI				*e*S	Sb	04 57 02.3	-0.3
JTS	**JuntasAbangare**	**1.32**	**94**	*e*P	Pn	04 56 48.5	-1.9
JTS				*e*S	Sb	04 57 07.5	-0.2
CONN	**Concepcion**	**1.34**	**29**	*e*P	Pn	04 56 50.0	-0.7
ARE1	**Arenal 1**	**1.55**	**87**	⇑*e*P	Pn	04 56 52.8	-0.7
CEDE	**Laguna Cedeo**	**1.56**	**86**	*e*P	Pn	04 56 53.0	-0.7
SRA1	**San Ramn**	**1.81**	**99**	*e*P	Pn	04 56 57.7	+0.5
COPN	**Copaltepe**	**1.81**	**351**	*e*P	Pn	04 56 57.2	+0.1
COPN				*e*S	Sn	04 57 18.9	-1.2
ACON	**Acoyapa**	**1.92**	**35**	⇑*i*P	Pn	04 56 57.9	-0.7
ACON				*e*S	Sb	04 57 24.5	-0.4
MOMN	**Momotombo**	**2.03**	**353**	*e*P	Pn	04 57 00.1	0.0
HDC	**Heredia**	**2.17**	**100**	*e*P	Pn	04 57 02.8	+0.5
LCR2	**La Lucha 2**	**2.34**	**106**	*e*P	Pn	04 57 05.0	+0.4
MATN	**Matagalpa**	**2.56**	**8**	*e*P	Pn	04 57 07.5	0.0
ESPN	**Las Esperanzas**	**2.66**	**47**	*e*P	Pn	04 57 08.5	-0.3

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*ISCJB **11** 04:59:32.6±0.7,39°.70N±0°.03×25°.60E±0°.05,h10^{km},Error ellipse: s-maj=5.9km s-min=4.9km az=0.4*

*ISK **11** 04:59:32.1,39°.70N×25°.63E,h5^{km},ML2.1/12*

*DDA **11** 04:59:37.8,39°.78N×26°.08E,h7^{km}±3^{km},ML2.4*

*ATH **11** 05:00:40.9,34°.89N×25°.45E,h25^{km}±12^{km},ML2.0/1,Error ellipse: s-maj=14.6km s-min=2.0km az=7.0*

ISC 11 04:59:32.2±0.9,39°.69N±0°.03×25°.64E±0°.04,h10^{km},n27, σ1^{s}.35/34,4C-1D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.35**	**64**	PG	**Pg**	**04 59 39.7**	**+0.6**
BOZC				SG	**Sb**	**04 59 45.3**	**-0.8**
BOZC	**Bozcaada**	**0.35**	**64**	*i* P	**Pb**	**04 59 40.4**	**-0.1**
BOZC				*i* S	**Sb**	**04 59 45.1**	**-1.0**
SIGR	**SIGRI**	**0.50**	**161**	PG	**Pg**	**04 59 42.6**	**+0.6**
SIGR				SG	**Sb**	**04 59 50.1**	**-0.4**
EZN	**Ezine**	**0.54**	**75**	PG	**Pg**	**04 59 43.3**	**+0.6**
EZN				SG	**Sg**	**04 59 50.8**	**+0.9**
BAYC	**CANAKKALE_Bayr**	**0.70**	**85**	*i* P	**Pg**	**04 59 46.1**	**+0.4**
BAYC				*i* S	**Sn**	**04 59 57.8**	**-1.2**
BAYC				IAML_P			
	comp=Z,1µm,0.1s						
AYVA	**Ayvalik**	**0.89**	**115**	*i* P	**Pn**	**04 59 50.6**	**-0.2**
AYVA				*i* S	**Sn**	**05 00 03.7**	**0.0**
AYVA				IAML_P			
	comp=Z,207nm,0.1s						
GELI	**Tayfur-Gelibol**	**0.95**	**42**	PG	**Pb**	**04 59 50.8**	**0.0**
LPK	**Lapseki**	**1.10**	**51**	PN	**Pn**	**04 59 53.4**	**-0.2**
ENEZ	**Enez**	**1.12**	**20**	PN	**Pn**	**04 59 53.9**	**0.0**
ERIK	**Erikli-Kesan**	**1.19**	**34**	PN	**Pn**	**04 59 54.7**	**-0.1**
ALN	**Alexandroupoli**	**1.25**	**14**	PN	**Pn**	**04 59 55.5**	**-0.1**
CHOS	**Chios island**	**1.34**	**166**	PN	**Pg**	**04 59 57.9**	**0.0**
KESN	**Edirne-Kesan**	**1.39**	**35**	*i* P	**Pb**	**04 59 58.5**	**+0.1**
KESN				*i* S	**Sg**	**05 00 18.0**	**+1.1**
OUR	**Ouranopolis**	**1.43**	**297**	PN	**Pb**	**04 59 58.9**	**0.0**
KRBG	**Karabiga-Canak**	**1.45**	**60**	PN	**Pb**	**04 59 59.5**	**+0.2**
BALY	**Balya**	**1.52**	**87**	*i* P	**Pg**	**05 00 01.7**	**+0.3**
BALY				*i* S	**Sn**	**05 00 17.1**	**-2.4**
BALY				IAML_P			
	comp=Z,109nm,0.1s						
RKY	**Sarkoy-Tekirda**	**1.54**	**49**	PN	**Pb**	**05 00 00.5**	**-0.4**
KCTX	**Karacabey (Bur**	**2.16**	**74**	PN	**Pn**	**05 00 09.7**	**+1.4**
NPS	**Neapolis**	**4.42**	**180**	P	**Pb**	**05 00 49.3**	**-0.5**
NPS				S	**Pg**	**05 00 55.4**	**-1.3**
VAM	**Vamos**	**4.42**	**195**	P	Pg	05 01 03.2	+6.3
IDI	**Anoyia**	**4.43**	**188**	⇑*i*P	Pg	05 01 03.3	+6.2
LAST	**Lasithi**	**4.52**	**182**	P	**Pb**	**05 00 47.4**	**-4.3**
LAST				S	Pg	05 00 52.1	-6.7
LAST				AML	AML	05 00 52.2	
	comp=N,511µm,0.1s						
LAST				AML	AML	05 00 52.6	
	comp=E,854µm,0.2s						
ZKR	**Zakros**	**4.59**	**174**	P	**Pb**	**05 00 54.1**	**+1.3**
ZKR				S	**Pg**	**05 01 04.0**	**+3.9**
ARR	**Arges**	**5.72**	**353**	⇑*i*P	**Pb**	**05 01 13.5**	**+1.4**
VOIR		**5.76**	**356**	⇓*i*P	**Pb**	**05 01 11.6**	**-1.2**
MLR	**Muntele Rosu**	**5.80**	**2**	⇑*i*P	**Pb**	**05 01 14.3**	**+0.8**
BZS	**Buzias**	**6.63**	**335**	⇑*i*P	Pn	05 01 17.9	+8.3

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*NIED **11** 05:00:00,36°.30N×141°.10E,h53^{km},Mw3.8 Best double couple: $M_0$5.11000×10^{14} NP1:φ$_s$86.00000°,δ36.00000°, λ-93.00000°. NP2:φ$_s$269.00000°,δ55.00000°, λ-88.00000°.*

*ISCJB **11** 05:00:22.8±0.6,36°.23N±0°.04×141°.09E±0°.07,h47^{km}±5^{km}, mb3.6/15,Error ellipse: s-maj=8.8km s-min=6.3km az=177.7*

*JMA **11** 05:00:23.6±0.1,36°.24N×141°.00E,h47^{km}±1^{km},M3.5*

JMA Felt I J1.

*IDC **11** 05:00:24.1±2.2,36°.14N×141°.02E,h46^{km}±21^{km},mb3.4/14, mb1 3.7/17,mb1mx3.6/40,mbtmp3.7/17,ML2.5/2,MS2.5/1, Ms1 2.5/1,ms1mx2.2/35,Error ellipse: s-maj=19.1km s-min=13.9km az=76.0*

ISC 11 05:00:22.2±1.5,36°.22N±0°.04×141°.09E±0°.06,h30^{km}±11^{km}, n37,σ1^{s}.46/41,mb3.6/15,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.42	287	P	Pn	05 00 33.0	+0.7
JHYU				S	Sn	05 00 39.5	+0.4
JIHU	Itakohorinouch	0.52	242	P	Pn	05 00 34.9	+1.3
CHOJ	Chosi	0.54	200	P	Pn	05 00 35.3	+1.4
CHOJ				S	Sn	05 00 43.3	+1.3
JHO	Hitachi	0.58	313	P	Pn	05 00 34.5	+0.1
JHO				S	Sn	05 00 42.4	-0.5
JYT	Yasato	0.72	271	P	Pn	05 00 36.6	+0.2
JYT				S	Sb	05 00 45.7	-0.2
JSMT	Sammumatsuo	0.77	223	P	Pb	05 00 38.4	+1.3
ONAJ	Iwakimizuishiy	0.92	345	P	Pn	05 00 39.2	+0.1
JFK	Kawauchi	1.16	352	P	Pn	05 00 42.5	0.0
JFK				S	Sn	05 00 57.6	+0.2
JAG	Ashikaga	1.34	279	P	Pn	05 00 45.2	+0.3
JAG				S	Sn	05 01 01.2	-0.5
JFT	Otama	1.43	335	P	Pb	05 00 47.6	-0.7
MJAR	Matsushiro Arr	2.35	279	P	Pn	05 01 00.1	+1.3
	1.7nm,0.3s,baz=182,slow=11,SNR=54						
MJAR				S	Sb	05 01 29.8	-2.6
	1.8nm,0.3s,baz=80,slow=33,SNR=6.6						
MAT	Matsushiro	2.35	279	P	Pn	05 01 00.3	+1.5
MAT				S	Sb	05 01 29.5	-2.9
JCJ	Chichijima	9.14	174	P	Pn	05 02 30.7	-1.3
	6.5nm,0.3s,baz=279,slow=22,SNR=5.9						
JCJ				S	Sn	05 04 08.0	-6.0
	4.3nm,0.3s,baz=264,slow=22,SNR=1.5						
USRK	Ussuriysk Ar.	10.58	322	P	Pn	05 02 54.5	+2.8
	0.2nm,0.3s,baz=143,slow=13,SNR=2.8						
KSRS	Korea Array	10.63	281	LR	LR	05 06 32.0	
	comp=Z,26nm,19.7s,baz=75,slow=35						
GUMO	Guam	22.78	170	P	P	05 05 21.9	-0.5
	24nm,0.3s,baz=344,slow=7.4,SNR=2.3						
MA2	Magadan	24.21	12	P	P	05 05 36.8	+0.8
	1.8nm,0.4s,baz=166,slow=19,SNR=2.7						
H11N2	WAKE ISLAND Hy	27.97	119	T	T	05 35 45.4	
	baz=312,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	27.97	119	T	T	05 35 47.8	
	baz=312,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	27.98	119	T	T	05 35 48.2	
	baz=312,slow=75,SNR=17						
SONM	Songino Array	28.04	305	P	P	05 06 10.0	-0.8
	0.4nm,0.7s,baz=109,slow=9.1,SNR=5.5						
H11S1	WAKE ISLAND Hy	28.65	121	T	T	05 36 22.3	
	baz=314,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	28.65	121	T	T	05 36 37.0	
	baz=314,slow=76,SNR=20						
H11S2	WAKE ISLAND Hy	28.66	121	T	T	05 36 29.4	
	baz=314,slow=76,SNR=14						
ZALV	Zalesovo Beam	42.28	313	P	P	05 08 12.6	-0.1
	0.6nm,0.4s,baz=97,slow=4.9,SNR=3.2						
ZALV				PcP	PcP	05 10 06.1	0.0
	0.4nm,0.5s,baz=83,slow=4.5,SNR=3.0						
MKAR	Makanchi Array	44.34	303	P	P	05 08 29.6	+0.1
	0.5nm,0.7s,baz=93,slow=7.9,SNR=5.8						
MKAR				PcP	PcP	05 10 13.2	0.0
	0.2nm,0.6s,baz=86,slow=7.9,SNR=2.8						
ILAR	Eielson Array	50.33	32	P	P	05 09 16.8	+0.9
	0.9nm,0.9s,baz=265,slow=6.4,SNR=8.7						
WRA	Warramunga Arr	56.22	188	P	P	05 09 59.2	-0.3
	0.4nm,0.4s,baz=5.6,slow=7.3,SNR=14						
ASAR	Alice Springs	59.94	188	P	P	05 10 25.2	-0.5
	0.6nm,0.6s,baz=12,slow=7.8,SNR=7.3						
YKA	Yellowknife Ar	64.65	30	P	P	05 10 57.2	+0.6
	0.3nm,0.7s,baz=298,slow=6.4,SNR=6.8						
AKASG	Malin Array Be	74.78	322	P	P	05 11 58.8	-0.5
	0.5nm,0.6s,baz=44,slow=5.1,SNR=5.7						
NOA	NORSAR Array B	74.84	337	P	P	05 11 59.2	-0.4
	0.6nm,0.8s,baz=38,slow=5.7,SNR=3.5						
NVAR	Mina Array Bea	75.69	53	P	P	05 12 05.3	+0.3
	0.3nm,0.6s,baz=282,slow=4.5,SNR=3.6						
PDAR	Pinedale Array	78.43	45	P	P	05 12 20.8	+0.4
	0.2nm,0.5s,baz=291,slow=3.8,SNR=3.3						
BRTR	Keskin Array B	79.20	311	P	P	05 12 24.9	+0.4
	0.6nm,1.0s,baz=147,slow=2.5,SNR=3.6						
TXAR	Lajitas Array	90.83	52	P	P	05 13 23.9	+0.9
	0.2nm,0.7s,baz=303,slow=5.0,SNR=2.9						
LPAZ	La Paz	147.33	60	PKPbc	PKPbc	05 20 03.6	-0.5
	0.7nm,0.6s,baz=314,slow=10,SNR=3.5						

IDC 11 05:02:20.6±1.7, 10°.97S×165°.43E, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.5/30, mbtmp3.6/4, ML3.6/1, MS4.2/1, Ms1 4.2/1, ms1mx2.8/22, Error ellipse: s-maj=54.0km s-min=34.3km az=112.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.08	175	Pn	Pn	05 05 00.5	0.0
	0.4nm,0.3s,baz=348,slow=20,SNR=4.7						
H11N1	WAKE ISLAND Hy	30.52	3	T	T	05 40 52.6	
	baz=182						
H11N3	WAKE ISLAND Hy	30.53	3	T	T	05 40 53.5	
	baz=182						
H11N2	WAKE ISLAND Hy	30.54	3	T	T	05 40 52.5	
	baz=182						
WRA	Warramunga Arr	31.22	250	P	P	05 08 41.9	-0.2
	0.8nm,0.9s,baz=79,slow=9.2,SNR=4.8						
RAR	Rarotonga	34.88	111	LR	LR	05 20 05.2	
	comp=Z,403nm,21.3s,baz=248,slow=30						
SONM	Songino Array	78.42	324	P	P	05 14 23.8	+0.4
	0.1nm,0.5s,baz=126,slow=7.3,SNR=3.3						
ILAR	Eielson Array	83.54	19	P	P	05 14 50.0	-0.2
	0.4nm,0.7s,baz=230,slow=4.8,SNR=6.9						

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*IDC **11** 05:08:27.2±1.3, 18°.70S×167°.38E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.8/30, mbtmp3.8/7, ML3.7/2, Error ellipse: s-maj=46.1km s-min=23.1km az=148.0*

*ISCJB **11** 05:08:29.3±1.1, 18°.90S±0°.08×167°.3E±0°.2, h25^{km}, mb3.8/5, Error ellipse: s-maj=22.3km s-min=11.4km az=9.3*

ISC 11 05:08:30.7±1.1, 18°.9S±0°.1×167°.4E±0°.2, h25^{km}, n8, σ0^{s}.91/9, mb3.8/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.27	196	Pn	Pn	05 09 21.3	+0.7
	2.5nm,0.3s,baz=16,slow=11,SNR=29						
DZM				Sn	Sn	05 09 57.7	-1.1
	8.4nm,0.3s,baz=138,slow=22,SNR=11						
CTA	Charters Tower	19.99	263	P	P	05 13 00.5	-1.1
	0.3nm,0.3s,baz=106,slow=10,SNR=2.4						
WRA	Warramunga Arr	31.19	263	P	P	05 14 47.6	-0.6
	0.2nm,0.7s,baz=86,slow=8.3,SNR=4.5						
ASAR	Alice Springs	31.54	255	P	P	05 14 52.0	+0.8
	1.7nm,0.7s,baz=82,slow=9.1,SNR=17						
FITZ	Fitzroy Crossi	39.56	264	P	P	05 16 00.7	+0.5
	1.2nm,0.7s,baz=90,slow=8.1,SNR=8.5						
NVAR	Mina Array Bea	89.88	49	P	P	05 21 28.3	+0.3
	0.9nm,0.8s,baz=223,slow=8.1,SNR=3.9						
ILAR	Eielson Array	90.44	18	P	P	05 21 28.9	-0.8
	0.3nm,0.6s,baz=237,slow=4.7,SNR=6.5						
YKA	Yellowknife Ar	101.17	28	P	Pdif	05 22 18.3	-0.2
	0.1nm,0.6s,baz=251,slow=3.8,SNR=2.7						

IDC 11 05:14:54.4±3.4, 30°.40S×138°.36E, h0^{km}, mb1 3.1/3, mb1mx3.0/29, mbtmp2.8/3, ML2.8/3, Error ellipse: s-maj=80.7km s-min=16.0km az=42.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.14	119	Pn	Pn	05 15 44.8	-0.3
	0.4nm,0.3s,baz=298,slow=13,SNR=4.1						
STKA				Pg	Pb	05 15 52.3	+1.2
	1.5nm,0.3s,baz=294,slow=14,SNR=15						
STKA				Sn	Sn	05 16 23.0	-0.3
	2.1nm,0.3s,baz=310,slow=13,SNR=3.2						
STKA				Lg	Lg	05 16 34.1	
	4.3nm,0.3s,baz=9.0,slow=24,SNR=6.7						
ASAR	Alice Springs	7.80	328	Pn	Pn	05 16 50.0	+0.8
	0.2nm,0.3s,baz=150,slow=12,SNR=6.2						
ASAR				Sn	Sn	05 18 18.4	+0.1
	0.2nm,0.3s,baz=152,slow=22,SNR=4.1						
WRA	Warramunga Arr	11.03	340	Pn	Pn	05 17 33.0	-0.5
	0.1nm,0.3s,baz=158,slow=13,SNR=3.7						

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*ISK **11** 05:21:54.7, 38°.69N×43°.18E, h3^{km}, ML2.4/8*

*DDA **11** 05:21:55.5, 38°.69N×43°.18E, h7^{km}±3^{km}, ML2.7*

*ISCJB **11** 05:21:56.2±0.4, 38°.70N±0°.03×43°.18E±0°.04, h15^{km}, Error ellipse: s-maj=5.1km s-min=4.0km az=160.2*

ISC 11 05:21:56.2±1.0, 38°.70N±0°.03×43°.17E±0°.03, h15^{km}, n21, σ0^{s}.61/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.20	120	PG	Pg	05 22 00.6	-0.3
VANB				SG	Sg	05 22 04.9	+0.8
TVAN	Van	0.25	131	*i* P	Pg	05 22 01.3	-0.5
TVAN				IAML_P			
	comp=Z,12µm,0.1s						
ADCV	BITLIS_Adilcev	0.36	288	*i* P	Pb	05 22 04.5	0.0
ADCV				IAML_P			
	comp=Z,1µm,0.1s						
GEVA	Gevas	0.39	193	*i* P	Pg	05 22 03.2	-0.9
GEVA				IAML_P			
	comp=Z,6µm,0.1s						
AKDM	Akdamar-Van	0.39	202	PG	Pg	05 22 03.3	-0.9
VMUR	Van-Muradiye	0.43	47	*i* P	Pg	05 22 04.7	-0.2
VMUR				IAML_P			
	comp=Z,3µm,0.1s						
MLAZ	Malazgirt-MUS	0.66	313	PG	Pg	05 22 08.6	-0.5
CLDR	Caldiran	0.74	52	PG	Pg	05 22 09.7	-0.9
CLDR				SG	Sg	05 22 20.8	+0.4
CLDR	Caldiran	0.74	52	*i* P	Pg	05 22 10.5	-0.1
CLDR				IAML_P			
	comp=Z,817nm,0.1s						
TUTA	Tutak	0.76	339	*i* P	Pg	05 22 10.2	-0.8
TUTA				IAML_P			
	comp=Z,5µm,0.1s						
AGRB	Hanur-Agry	0.89	351	PG	Pb	05 22 12.6	-0.9
GURO	Guroymak-BITLI	0.90	261	PG	Pb	05 22 12.8	-0.8
GURO				SG	Sg	05 22 26.2	+0.7
SRTM	Siirt_Merkez	1.20	235	*i* P	Pg	05 22 19.6	+0.2
EATA	Eleskirt	1.28	336	*i* P	Pn	05 22 19.7	-0.1
EATA				IAML_P			
	comp=Z,324nm,0.1s						
SIRT	Sirnak	1.32	206	PN	Pb	05 22 21.1	+0.4
SVAN	Silvan-Diyarba	1.64	251	PN	Pb	05 22 25.6	-0.5
SVAN	Silvan-Diyarba	1.64	251	*i* P	Pb	05 22 26.5	+0.4
SVAN				IAML_P			
	comp=Z,112nm,0.1s						
HOMI	Horasan	1.67	324	*i* P	Pb	05 22 27.0	+0.3
HOMI				IAML_P			
	comp=Z,186nm,0.3s						
BTMN	Batman	1.69	242	*i* P	Pb	05 22 27.8	+0.8
BTMN				IAML_P			
	comp=Z,101nm,0.4s						
DIGO	Kars	1.73	5	*i* P	Pg	05 22 29.4	+0.1
DIGO				IAML_P			
	comp=Z,318nm,0.2s						
EAK	Akyaka	2.02	10	*i* P	Pg	05 22 35.3	+0.4

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*ISCJB **11** 05:26:24.5±0.8, 10°.99S±0°.06×166°.12E±0°.09, h10^{km}, mb4.0/9, Error ellipse: s-maj=13.4km s-min=7.9km az=152.8*

*IDC **11** 05:26:25.1±1.6, 10°.88S×166°.01E, h0^{km}, mb3.9/7, mb1 4.2/9, mb1mx3.9/34, mbtmp4.1/9, ML4.4/2, MS2.7/2, Ms1 2.7/2, ms1mx2.5/31, Error ellipse: s-maj=40.3km s-min=25.4km az=123.0*

*NEIC **11** 05:26:26.7±0.8, 10°.86S×166°.03E, h10^{km}, mb4.4/2, Error ellipse: s-maj=16.8km s-min=11.6km az=76.0*

ISC 11 05:26:26.2±1.0, 10°.89S±0°.09×166°.2E±0°.1, h10^{km}, n23, σ1^{s}.45/21, mb4.2/9, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.33	283	*e*Pn	Pn	05 27 59.8	+0.1
HNR				*e*Sn	Sn	05 29 13.9	+1.9
HNR	Honiara	6.33	283	Pn	Pn	05 27 58.1	-1.5
	21nm,0.3s,baz=283,slow=2.5,SNR=9.4						
HNR				Sn	Sn	05 29 13.9	+1.9
	6.9nm,0.3s,baz=136,slow=8.4,SNR=1.4						
HNR				LR	LR	05 29 37.7	
	comp=Z,21nm,18.4s,baz=84,slow=31						
DZM	Mont Dzumac	11.12	179	*e*Pn	Pn	05 29 07.4	+2.0
DZM				*e*Sn	Sn	05 31 09.3	-0.6
DZM	Mont Dzumac	11.12	179	Pn	Pn	05 29 06.8	+1.4
	1.4nm,0.3s,baz=359,slow=19,SNR=11						
DZM				Sn	Sn	05 31 09.1	-0.8
	0.2nm,0.3s,baz=164,slow=14,SNR=1.7						
DZM				LR	LR	05 33 04.9	
	comp=Z,95nm,19.0s,baz=339,slow=36						
PINNC	Pines Island,	11.71	174	*e*Pn	Pn	05 29 14.9	+1.4
CTA	Charters Tower	21.27	242	P	P	05 31 13.2	+0.3
	3.0nm,0.2s,baz=62,slow=13,SNR=3.7						
H11S2	WAKE ISLAND Hy	29.20	1	T	T	06 02 47.9	
	baz=181,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	29.21	1	T	T	06 02 48.2	
	baz=181,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	29.22	1	T	T	06 02 49.2	
	baz=181,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	30.42	1	T	T	06 04 19.8	
	baz=184						
H11N3	WAKE ISLAND Hy	30.43	1	T	T	06 04 20.1	
	baz=184						
H11N2	WAKE ISLAND Hy	30.44	1	T	T	06 04 21.0	
	baz=184						
WB2	Warramunga Arr	31.95	250	*e*P	P	05 32 50.5	-2.0
WR1	Warramunga Arr	31.96	250	*e*P	P	05 32 50.8	-1.9
	7.7nm,0.9s						
WRA	Warramunga Arr	31.96	250	P	P	05 32 50.8	-1.9
	5.1nm,0.8s,baz=80,slow=9.0,SNR=31						
ASAR	Alice Springs	33.26	243	P	P	05 33 02.0	-2.1
	0.6nm,0.6s,baz=70,slow=10.0,SNR=8.5						
FITZ	Fitzroy Crossi	39.85	255	*e*P	P	05 33 59.2	-1.1
	4.6nm,0.8s						
CMAR	Chiang Mai Arr	72.47	293	P	P	05 37 54.2	+0.6
	1.0nm,0.3s,baz=90,slow=4.5,SNR=3.1						
SONA0	Songino Array	78.81	324	*e*P	P	05 38 28.7	-0.8
SONM	Songino Array	78.81	324	P	P	05 38 28.7	-0.8
	0.4nm,1.1s,baz=108,slow=4.7,SNR=2.2						
ILAR	Eielson Array	83.23	18	P	P	05 38 53.5	+1.0
	0.3nm,0.7s,baz=230,slow=4.6,SNR=4.9						
MK32	Makanchi Array	93.72	317	*e*P	P	05 39 43.2	-0.2
MKAR	Makanchi Array	93.72	317	P	P	05 39 43.2	-0.2
	0.4nm,0.9s,baz=90,slow=6.1,SNR=4.3						

IDC 11 05:37:47.0±11.0, 2°.88S×96°.41W, h0^{km}, mb3.4/3, mb1 3.8/3, mb1mx3.6/18, mbtmp3.4/3, Error ellipse: s-maj=462.7km s-min=201.7km az=96.0, Southwest of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDAR	Pinedale Array	46.97	347	P	P	05 46 20.0	-0.1
	0.3nm,0.6s,baz=154,slow=8.4,SNR=4.4						
YKA	Yellowknife Ar	66.65	351	P	P	05 48 39.7	+0.4
	0.2nm,0.7s,baz=152,slow=7.2,SNR=3.6						
ILAR	Eielson Array	76.86	340	P	P	05 49 40.5	-0.2
	0.6nm,0.8s,baz=144,slow=4.7,SNR=8.7						

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*IDC **11** 05:46:18.6±3.7, 36°.17N×71°.34E, h63^{km}±30^{km}, mb3.3/9, mb1 3.5/15, mb1mx3.3/61, mbtmp3.6/15, ML3.2/6, Error ellipse: s-maj=31.6km s-min=22.1km az=166.0*

*ISCJB **11** 05:46:19.0±0.5, 36°.29N±0°.04×71°.18E±0°.06, h100^{km}, mb3.6/12, Error ellipse: s-maj=7.5km s-min=5.5km az=154.3*

*NNC **11** 05:46:23.9±2.0, 36°.67N×70°.78E, h122^{km}±45^{km}, mb3.0, mpv3.5, Error ellipse: s-maj=19.7km s-min=13.6km az=141.0*

*MOS **11** 05:46:40.3±1.3, 38°.05N×71°.13E, h168^{km}, mb4.2/6, Error ellipse: s-maj=14.7km s-min=8.2km az=85.6*

ISC 11 05:46:20.9±0.7, 36°.32N±0°.07×71°.12E±0°.06, h100^{km}, n47, σ2^{s}.84/49, mb3.7/12, 11C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.14	26	⇑P	Pn	05 47 23.4	+1.3
	2.5nm,0.3s						
SFK				⇓S	Sn	05 48 10.2	+0.6
	9.1nm,0.3s						
SFK	Sufi-Kurgan	4.14	26	PN	Pn	05 47 23.4	+1.3
SFK				S	Sn	05 48 10.2	+0.6
SFK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SFK				smax	smax		
	comp=N,9.0nm,0.3s						
MNAS	Manas	6.25	9	⇑P	Pn	05 47 51.0	+0.3
	comp=N,1.7nm,0.4s						
MNAS				⇓S	Sn	05 48 57.3	-3.4
	comp=N,5.2nm,0.6s						
MNAS	Manas	6.25	9	PN	Pn	05 47 51.0	+0.3
MNAS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KK31	Karatay Array	6.79	356	⇑P	Pn	05 47 57.4	-0.5
	comp=Z,1.1nm,0.3s,baz=176,slow=12,SNR=51						
KK31				⇑S	Sn	05 49 09.3	-4.3
	comp=Z,1.8nm,0.3s,baz=181,slow=21,SNR=4.6						
KK31	Karatay Array	6.79	356	PN	Pn	05 47 57.4	-0.5
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	Ala-Archa	6.83	21	⇓P	Pn	05 47 58.2	-0.3
	comp=Z,3.8nm,0.6s						
AAK				⇓S	Sn	05 49 13.0	-1.7
	comp=Z,7.8nm,0.8s						
AAK	Ala-Archa	6.83	21	P	Pn	05 47 58.6	+0.1
	comp=Z,1.1nm,0.3s,baz=191,slow=5.3,SNR=14						
AAK				S	Sn	05 49 12.6	-2.2
	baz=309,slow=14						
TKM2	Tokmak 2	7.44	26	⇑P	Pn	05 48 06.3	-0.6
	comp=Z,4.2nm,1.1s						
TKM2				⇑S	Sn	05 49 26.6	-3.2
	comp=Z,2.3nm,0.8s						
TKM2	Tokmak 2	7.44	26	PN	Pn	05 48 06.3	-0.6
TKM2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GEYT	Alibeck	10.51	283	P	Pn	05 48 48.0	-0.5
	comp=Z,0.9nm,0.3s,baz=138,slow=11,SNR=4.0						
GEYT				S	Sn	05 50 37.9	-6.3
	comp=Z,0.9nm,0.3s,baz=88,slow=34,SNR=3.0						
GYA0B	ALIBECK ARRAY	10.51	283	⇓P	Pn	05 48 47.4	-1.1
	comp=Z,2.1nm,0.4s						
GYA0B				⇓S	Sn	05 50 35.7	-8.5
	comp=Z,7.8nm,0.7s						
PYUN	Piuthan	12.96	126	*e*P	Pn	05 49 19.2	-2.3
	comp=Z,31nm,0.4s						
DANN	Dangsing	13.31	123	*e*P	Pn	05 49 23.5	-2.6
	comp=Z,15nm,0.4s						
MKAR	Makanchi Array	13.38	35	P	Pn	05 49 25.6	-1.0
	comp=Z,0.0nm,0.3s,baz=213,slow=13,SNR=3.0						
KOLN	Koldanda	13.58	125	*e*P	Pn	05 49 26.9	-2.7
	comp=Z,6.5nm,0.3s						
GUN	Gumba	15.04	120	*e*P	P	05 49 45.7	-5.8
	comp=Z,6.0nm,0.3s						
KURBB	Kurchatov Arra	15.26	18	P	P	05 49 52.4	-0.9
	comp=Z,0.0nm,0.3s,baz=206,slow=11,SNR=4.1						
AB31	Akbulak array	15.29	331	⇑P	Pn	05 49 49.0	-2.1
	comp=Z,0.5nm,0.5s						
AB31				⇑S	Sn	05 52 30.9	-8.9
	comp=Z,1.4nm,0.7s,baz=154,slow=23,SNR=5.0						
AB31	Akbulak array	15.29	331	P	Pn	05 49 49.0	-2.1
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	15.37	18	*i* P	Pn	05 49 47.6	-4.5
JIRN	Jiri	15.41	120	*e*P	P	05 49 49.7	-5.9
	comp=Z,20nm,0.4s						
RAMN	Ramite	16.14	121	*e*P	P	05 49 58.6	-4.9
	comp=Z,5.8nm,0.4s						
BVAR	Borovoye Array	16.71	358	P	P	05 50 08.7	-0.7
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=2.4						
AKTO	Aktyubinsk	16.98	330	⇑P	Pn	05 50 09.2	-2.9
	comp=Z,3.7nm,0.9s						
AKTO				⇑S	Sn	05 53 14.8	-5.8
	comp=Z,2.1nm,0.9s						
AKTO	Aktyubinsk	16.98	330	P	Pn	05 50 09.2	-2.9
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKTO	Aktyubinsk	16.98	330	P	P	05 50 15.2	+2.8
	comp=Z,0.3nm,0.3s,baz=134,slow=14,SNR=8.7						
DGZ	Jazzator, Alta	17.87	36	*i* P	Pn	05 50 25.5	+2.5
ZALV	Zalesovo Beam	20.04	24	P	P	05 50 45.4	-0.3
	comp=Z,1.1nm,0.3s,baz=230,slow=9.5,SNR=11						
GNI	Garni	21.04	288	*i* P	P	05 51 07.2	+10
GNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARU	Arti	21.83	341	*c i*P	P	05 51 03.9	-1.0
ARU						05 51 36.5	
ARU				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NCK	Nalchik	22.23	297	*i* P	P	05 51 18.0	+8.7
NCK				pmax	pmax		
	comp=Z,19nm,0.6s						
KIV	Kislovodsk	22.96	298	*e*P	P	05 51 24.2	+7.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKASG	Malin Array Be	33.13	309	*e*P	P	05 52 52.7	+5.4
AKASG	Malin Array Be	33.13	309	P	P	05 52 51.0	+3.6
	comp=Z,0.3nm,0.4s,baz=79,slow=7.7,SNR=6.1						
HIA	Hailar	37.32	54	*i* P	P	05 53 29.8	+6.5
HIA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	37.69	326	P	P	05 53 29.9	+3.7
	comp=Z,0.9nm,0.7s,baz=120,slow=8.2,SNR=3.0						
ARCES	ARCESS Array B	41.35	338	P	P	05 54 00.1	+3.6
	comp=Z,1.0nm,0.7s,baz=118,slow=7.9,SNR=7.7						
NB2	NORSAR Subarra	44.58	323	P	P	05 54 26.2	+3.5
	comp=Z,0.6nm,0.5s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.58	323	P	P	05 54 26.1	+3.4
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	44.58	323	P	P	05 54 26.5	+3.8
	comp=Z,0.9nm,0.6s,baz=96,slow=7.7,SNR=6.8						
TIXI	Tiksi	45.90	22	*i* P	P	05 54 34.4	+1.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TORD	Torodi Ar. Bea	65.81	269	P	P	05 56 58.0	+2.2
	comp=Z,0.3nm,0.5s,baz=44,slow=6.4,SNR=7.0						
INK	Inuvik	74.07	9	P	P	05 57 48.1	+2.7
	comp=Z,0.5nm,0.7s,baz=320,slow=6.8,SNR=3.9						
YKA	Yellowknife Ar	81.42	3	*e*P	P	05 58 28.6	+2.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	81.42	3	P	P	05 58 27.9	+1.6
	comp=Z,0.1nm,0.5s,baz=350,slow=5.3,SNR=7.2						
WRA	Warramunga Arr	81.81	122	P	P	05 58 30.8	+1.8
	comp=Z,0.2nm,0.7s,baz=326,slow=4.8,SNR=3.2						

IDC 11 05:53:18.8±4.5, 2°.76S×95°.08W, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.7/26, mbtmp3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/27, Error ellipse: s-maj=209.6km s-min=30.8km az=50.0, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	19.73	1	LR	LR	06 03 42.6	
	comp=Z,71nm,20.3s,baz=186,slow=32						
LPAZ	La Paz	29.72	119	P	P	05 59 27.5	-0.2
	0.6nm,0.5s,baz=284,slow=8.3,SNR=2.4						
TXAR	Lajitas Array	32.96	346	P	P	05 59 54.6	-0.9
	0.3nm,0.8s,baz=162,slow=12,SNR=3.0						
PDAR	Pinedale Array	47.17	345	P	P	06 01 52.8	-0.7
	0.6nm,0.6s,baz=143,slow=9.1,SNR=7.3						
YKA	Yellowknife Ar	66.75	350	P	P	06 04 13.0	+1.3
	0.7nm,0.9s,baz=157,slow=6.0,SNR=7.6						
ILAR	Eielson Array	77.20	340	P	P	06 05 14.2	-0.2
	1.0nm,0.8s,baz=149,slow=4.8,SNR=12						

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*IDC **11** 05:56:21.2±0.6, 11°.67S×165°.61E, h0^{km}, mb4.5/19, mb1 4.6/21, mb1mx4.4/42, mbtmp4.5/21, ML4.6/2, MS3.7/7, Ms1 3.7/7, ms1mx3.2/38, Error ellipse: s-maj=18.2km s-min=15.1km az=115.0*

*NEIC **11** 05:56:22.9±0.3, 11°.57S×165°.32E, h10^{km}, mb4.8/22, Error ellipse: s-maj=9.9km s-min=8.1km az=99.0*

*BJI **11** 05:56:22.4, 11°.41S×165°.14E, h6^{km}, mb4.6/33, mB5.1/17, Ms4.5/2, Ms7 4.2/3*

*ISCJB **11** 05:56:23.4±0.3, 11°.71S±0°.04×165°.40E±0°.06, h24^{km}, mb4.6/41, MS3.8/7, Error ellipse: s-maj=7.8km s-min=6.3km az=171.0*

ISC 11 05:56:25.0±0.4, 11°.66S±0°.06×165°.43E±0°.07, h24^{km}, n85, σ1^{s}.55/85, mb4.7/41, MS3.8/7, 1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.83	292	*e*P	Pn	05 57 46.0	-4.0
HNR				*e*S	Sn	05 58 59.0	+2.9
HNR	Honiara	5.83	292	*e*Pn	Pn	05 57 46.7	-3.2
HNR				*e*Sn	Sn	05 58 51.8	-4.2
HNR	Honiara	5.83	292	Pn	Pn	05 57 52.2	+2.3
	28nm,0.3s,baz=355,slow=2.9,SNR=7.5						
HNR				Sn	Sn	05 58 56.6	+0.5
	26nm,0.3s,baz=201,slow=23,SNR=12						
DZM	Mont Dzumac	10.40	175	*e*Pn	Pn	05 58 53.9	+1.0
	14nm,0.4s						
DZM				*e*LR	LR	06 01 17.0	

	comp=Z,227nm,21.2s						
DZM	Mont Dzumac	10.40	175	ePn	Pn	05 58 54.2	+1.3
DZM				eSn	Sn	06 00 48.3	-0.5
DZM	Mont Dzumac	10.40	175	Pn	Pn	05 58 52.6	-0.2
	2.1nm,0.3s,baz=288,slow=21,SNR=27						
DZM				Sn	Sn	06 00 45.6	-3.1
	0.2nm,0.3s,baz=308,slow=21,SNR=1.6						
DZM				LR	LR	06 02 09.3	
	comp=Z,194nm,18.7s,baz=18,slow=34						
CTA	Charters Tower	20.24	243	P	Pn	06 01 00.5	-0.2
	9.3nm,0.8s,baz=67,slow=10,SNR=9.4						
LHI	Lord Howe Isla	20.62	196	eP	P	06 01 01.7	-1.0
	47nm,1.0s						
ARMA	Armidale	22.64	212	eP	P	06 01 23.2	-1.3
	30nm,1.0s						
KNTN	Kanton	24.31	70	eP	P	06 01 43.0	+2.0
	101nm,1.1s						
OUZ	Omahuta	24.60	164	eP	P	06 01 45.5	+2.1
	18nm,1.0s						
URZ	Urewera	28.48	160	eP	P	06 02 18.4	+0.1
URZ	Urewera	28.48	160	P	P	06 02 17.5	-0.8
	4.7nm,0.8s,baz=344,slow=3.5,SNR=2.5						
BKZ	Black Stump Fm	29.11	162	eP	P	06 02 25.4	+1.4
	5.4nm,0.9s						
STKA	Stephens Creek	29.79	224	eP	P	06 02 31.3	+1.2
	1.6nm,1.0s						
STKA	Stephens Creek	29.79	224	P	P	06 02 31.3	+1.2
	5.7nm,0.8s,baz=54,slow=7.8,SNR=8.3						
STKA				LR	LR	06 13 41.1	
	comp=Z,254nm,18.7s,baz=29,slow=35						
H11S2	WAKE ISLAND Hy	29.98	2	T	T	06 34 10.4	
	baz=182						
H11S3	WAKE ISLAND Hy	29.98	2	T	T	06 34 19.7	
	baz=182						
H11S1	WAKE ISLAND Hy	30.00	2	T	T	06 34 09.7	
	baz=182						
SNZO	South Karori	30.64	166	eP	P	06 02 38.5	+1.1
	65nm,1.1s						
THZ	Tophouse	30.70	169	eP	P	06 02 37.7	-0.3
	11nm,1.1s						
WAKE	Wake Island	30.77	2	eP	P	06 02 36.8	-1.9
	57nm,1.0s						
WRAB	Tennant Creek	30.97	251	eP	P	06 02 39.1	-1.6
	15nm,1.1s						
WB2	Warramunga Arr	30.98	251	eP	P	06 02 39.8	-0.9
	15nm,1.0s						
WR1	Warramunga Arr	30.98	251	eP	P	06 02 41.5	+0.7
	18nm,1.0s						
WR1				ePcP	PcP	06 05 37.5	+0.7
WRA	Warramunga Arr	30.99	251	P	P	06 02 41.5	+0.7
	13nm,1.1s,baz=79,slow=9.3,SNR=44						
WRA				PcP	PcP	06 05 37.5	+0.7
	0.8nm,0.9s,baz=93,slow=2.7,SNR=4.6						
WRA				LR	LR	06 14 55.9	
	comp=Z,95nm,18.6s,baz=95,slow=36						
H11N1	WAKE ISLAND Hy	31.20	3	T	T	06 35 42.6	
	baz=182						
H11N3	WAKE ISLAND Hy	31.21	3	T	T	06 35 41.7	
	baz=182						
H11N2	WAKE ISLAND Hy	31.22	3	T	T	06 35 41.3	
	baz=182						
AS01	Alice Springs	32.20	244	eP	P	06 02 51.3	-0.2
AS31	Alice Springs	32.24	244	eP	P	06 02 52.2	+0.3
	1.4nm,1.0s						
ASAR	Alice Springs	32.24	244	P	P	06 02 52.2	+0.3
	4.7nm,0.9s,baz=76,slow=9.6,SNR=29						
ASAR				PcP	PcP	06 05 40.6	+0.4
	0.6nm,0.8s,baz=86,slow=4.1,SNR=4.0						
ASAR				LR	LR	06 14 56.3	
	comp=Z,202nm,18.8s,baz=82,slow=34						
RAR	Rarotonga	34.63	110	eP	P	06 03 19.9	+7.3
RAR	Rarotonga	34.63	110	LR	LR	06 14 50.1	
	comp=Z,89nm,21.1s,baz=263,slow=32						
FITZ	Fitzroy Crossi	38.92	256	eP	P	06 03 46.1	-3.1
	12nm,0.8s						
FITZ	Fitzroy Crossi	38.92	256	P	P	06 03 50.2	+0.9
	11nm,0.8s,baz=86,slow=7.6,SNR=34						
FITZ				LR	LR	06 18 51.9	
	comp=Z,156nm,18.9s,baz=83,slow=35						
BATI	Baumata	41.01	268	LR	LR	06 22 45.1	
	comp=Z,118nm,18.1s,baz=174,slow=38						
PPT2	Papeete2	43.86	103	eLR	LR	06 16 47.5	
	comp=Z,262nm,31.8s						
OPA	Opana	48.85	47	eP	P	06 05 08.2	-0.6
	80nm,0.9s						
NWAO	Narrogin (SRO)	48.87	236	P	P	06 05 08.9	0.0
	5.0nm,0.7s,baz=63,slow=9.0,SNR=3.1						
MJAR	Matsushiro Arr	54.37	333	P	P	06 05 50.1	+0.1
	1.7nm,0.9s,baz=150,slow=3.1,SNR=3.6						
MAJO	Matsushiro	54.37	333	eP	P	06 05 50.1	+0.1
YHNB	Yeheng	56.14	310	eP	P	06 05 59.2	-3.8
	25nm,0.9s						
LEM	Lembang	57.19	269	P	P	06 06 12.1	+1.3
	17nm,0.4s,baz=72,slow=8.6,SNR=5.0						
NJ2	Nanjing	62.24	316	eP	P	06 06 43.5	-1.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
USRK	Ussuriysk Ar.	63.35	334	P	P	06 06 53.9	+1.7
	25nm,1.4s,baz=140,slow=9.2,SNR=5.4						
CN2	Changchun	66.11	329	eP	P	06 07 11.3	+1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PSI	Prapat	67.64	278	P	P	06 07 21.1	+0.4
	6.5nm,0.9s,baz=180,slow=3.4,SNR=4.6						
GYA	Guiyang	68.50	305	eP	P	06 07 26.0	+0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	70.30	313	P	P	06 07 38.1	+1.3
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	Chiang Mai Arr	72.07	294	P	P	06 07 48.6	+0.9
	3.1nm,0.8s,baz=120,slow=4.6,SNR=13						
HHC	Hu-ho-hao-te	72.09	320	eP	P	06 07 47.0	-0.6
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
CD2	Chengdu	72.73	308	eP	P	06 07 49.0	-2.5
LZH	Lanzhou	74.94	312	eP	P	06 08 04.7	+0.2
LZH				pP	pP	06 08 08.2	-2.3
LZH				sP	sP	06 08 11.4	-1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	78.35	180	eP	P	06 08 23.5	+0.2
	5.3nm,0.9s						
QSPA	South Pole Qui	78.35	180	P	P	06 08 24.0	+0.7
	3.8nm,0.8s,baz=27,slow=2.4,SNR=11						
SONA0	Songino Array	78.97	324	eP	P	06 08 28.5	+1.5
SONM	Songino Array	78.97	324	P	P	06 08 28.5	+1.5
	1.2nm,0.9s,baz=143,slow=3.1,SNR=8.9						
GTA	Gaotai	79.26	314	⇑P	P	06 08 31.4	+2.7
GTA				pP	pP	06 08 35.3	+0.6
GTA				sP	sP	06 08 38.5	+1.6
GTA				S	S	06 18 32.2	+4.4
GTA				sS	sS	06 18 39.5	+2.0
GTA				SKS	SKSac	06 18 42.0	-1.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,140nm,8.3s						
GTA				LR	LR		
	comp=N,81nm,19.7s						
GTA				LR	LR		
	comp=Z,100nm,18.4s						
HDA	Harding Lake	83.92	19	eP	P	06 08 52.7	+0.1
	5.5nm,0.8s						
IL1	Eielson Array	84.19	19	eP	P	06 08 54.5	+0.5
ILAR	Eielson Array	84.19	19	P	P	06 08 53.8	-0.2
	1.3nm,0.8s,baz=241,slow=5.0,SNR=29						
ILB	Eielson Array	84.19	19	eP	P	06 08 54.1	+0.1
	1.4nm,0.6s						
SCRK	Sand Creek	84.59	20	eP	P	06 08 56.8	+0.6
	3.7nm,1.0s						
NV01	Mina Array Sit	86.65	50	eP	P	06 09 06.6	-0.5
NV01				ePcP	PcP	06 09 07.1	-2.4
NVAR	Mina Array Bea	86.65	50	P	P	06 09 06.6	-0.6
	1.1nm,0.8s,baz=242,slow=6.8,SNR=4.7						
WMQ	Urumqi	89.30	315	eP	P	06 09 19.4	-0.1
MK01	Makanchi Array	93.74	317	eP	P	06 09 40.5	+0.5
MK31	Makanchi Array	93.75	317	eP	P	06 09 38.5	-1.5
	3.4nm,0.9s						
MK32	Makanchi Array	93.75	317	eP	P	06 09 41.1	+1.1
MKAR	Makanchi Array	93.75	317	eP	P	06 09 38.4	-1.7
	16nm,0.8s						
MKAR	Makanchi Array	93.75	317	P	P	06 09 41.1	+1.1
	2.8nm,0.8s,baz=100,slow=6.3,SNR=31						
ZALV	Zalesovo Beam	93.87	324	P	P	06 09 40.3	0.0
	2.1nm,0.8s,baz=106,slow=5.3,SNR=8.7						
ZAA1	Zalesovo Array	93.87	324	eP	P	06 09 40.3	0.0
YKA	Yellowknife Ar	95.66	27	P	P	06 09 46.8	-1.5
	0.3nm,0.6s,baz=258,slow=4.5,SNR=9.1						
ARA0	ARCESS Array S	116.84	345	ePKPdf	PKPdf	06 15 06.9	-0.1
ARCES	ARCESS Array B	116.84	345	PKP	PKPdf	06 15 06.9	-0.1
	3.1nm,1.1s,baz=32,slow=1.6,SNR=5.2						
LPAZ	La Paz	120.19	117	PKP	PKPdf	06 15 14.1	-1.6
	0.7nm,0.6s,baz=252,slow=3.2,SNR=2.7						
BOSA	Boshof	124.46	223	PKP	PKPdf	06 15 23.3	+0.2
	3.6nm,0.9s,baz=132,slow=15,SNR=1.6						
BR101	Keskin Array S	129.14	312	ePKPdf	PKPdf	06 15 31.3	-0.4
BRTR	Keskin Array B	129.14	312	PKP	PKPdf	06 15 31.3	-0.4
	0.5nm,0.9s,baz=48,slow=2.1,SNR=3.1						
KEST	Kesra	147.71	322	PKPbc	PKPbc	06 16 09.0	+0.8
	3.3nm,0.9s,baz=72,slow=3.2,SNR=2.3						
ESDC	Sonseca Array	150.55	343	PKPbc	PKPbc	06 16 15.9	+0.6
	0.9nm,0.7s,baz=17,slow=4.0,SNR=3.4						
TORD	Torodi Ar. Bea	164.04	277	PKP	PKPdf	06 16 27.4	0.0
	0.5nm,0.9s,baz=77,slow=0.7,SNR=3.6						
TOA1	Torodi Ar. Sit	164.04	277	ePKPdf	PKPdf	06 16 27.4	0.0

IDC 11 06:04:52.3±1.6**, 11°.08S**×**164°.87E, h0^{km}, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.5**/40**, mbtmp3.6**/5**, ML3.2**/1**, MS4.3**/1**, Ms1 4.3**/1**, ms1mx2.9**/28**, Error ellipse: s-maj=45.7km s-min=29.7km az=122.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.03	172	Pn	Pn	06 07 31.3	-0.3
	0.2nm,0.3s,baz=343,slow=19,SNR=2.8						
RAO	Raoul Island	24.19	141	LR	LR	06 17 16.5	
	comp=Z,816nm,21.9s,baz=144,slow=31						
H11S2	WAKE ISLAND Hy	29.44	4	T	T	06 41 08.7	
	baz=182						
H11S3	WAKE ISLAND Hy	29.44	4	T	T	06 41 09.2	
	baz=182						
H11S1	WAKE ISLAND Hy	29.46	4	T	T	06 41 10.0	
	baz=182						
WRA	Warramunga Arr	30.66	250	P	P	06 11 09.8	+0.9
	0.7nm,0.8s,baz=81,slow=9.5,SNR=4.8						
H11N1	WAKE ISLAND Hy	30.66	4	T	T	06 42 40.6	
	baz=184						
H11N3	WAKE ISLAND Hy	30.67	4	T	T	06 42 39.1	
	baz=184						
H11N2	WAKE ISLAND Hy	30.68	4	T	T	06 42 41.9	
	baz=184						
FITZ	Fitzroy Crossi	38.54	255	P	P	06 12 16.5	-0.5
	1.0nm,0.8s,baz=90,slow=9.1,SNR=4.3						
SONM	Songino Array	78.19	324	P	P	06 16 53.4	-0.4
	0.4nm,1.0s,baz=134,slow=4.2,SNR=2.7						
ILAR	Eielson Array	83.82	19	P	P	06 17 23.7	+0.4
	0.4nm,0.9s,baz=228,slow=6.8,SNR=3.1						

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*ISCJB **11** 06:17:08.0±0.4, 11°.02S±0°.05×165°.83E±0°.06, h10^{km}, mb4.3/27, MS3.9/21, Error ellipse: s-maj=8.9km s-min=6.3km az=153.7*

*IDC **11** 06:17:08.1±0.6, 10°.87S×165°.83E, h0^{km}, mb4.2/17, mb1 4.3/19, mb1mx4.2/48, mbtmp4.2/19, ML4.7/2, MS3.9/23, Ms1 3.9/23, ms1mx3.8/33, Error ellipse: s-maj=18.8km s-min=15.5km az=123.0*

*NEIC **11** 06:17:09.6±0.2, 10°.93S×165°.89E, h10^{km}, mb4.5/16, Error ellipse: s-maj=7.3km s-min=5.2km az=80.0*

*GCMT **11** 06:17:11.6±0.4, 10°.88S±0°.02×165°.78E±0°.02, h15^{km}, MW4.9/72, Moment Tensor Solution. s13,c14; s72,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.39±.11; $M_{\theta\theta}$1.00±.10; $M_{\phi\phi}$-0.60±.11; $M_{r\theta}$0.18±.34; $M_{\theta\phi}$-2.12±.08; $M_{\phi r}$-1.48±.36; Best double couple: $M_0$2.73300×10^{16} NP1:ϕ_s347.00000°, δ84.00000°, λ-34.00000°. NP2: ϕ_s81.00000°, δ56.00000°, λ-173.00000°. Principal axes: T 2.7960, Plg19.0000°, Azm39.0000°; N -0.1300, Plg55.0000°, Azm158.0000°; P -2.6690, Plg28.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 06:17:09.5±0.5**, 11°.01S**±0°.06×**165°.87E**±0°.08**, h10^{km}, n69, σ1^{s}43**/57**, mb4.4**/27**, MS3.9**/21**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.04	285	eP	Pn	06 18 40.0	+1.1
HNR				eS	Sn	06 19 48.0	-0.1
HNR	Honiara	6.04	285	ePn	Pn	06 18 39.8	+0.9
HNR				eSn	Sn	06 19 44.0	-4.1
HNR	Honiara	6.04	285	Pn	Pn	06 18 38.9	0.0
	36nm,0.3s,baz=202,slow=2.6,SNR=10						
HNR				Sn	Sn	06 19 49.2	+1.0
	2.7nm,0.3s,baz=190,slow=12,SNR=3.2						
HNR				LR	LR	06 20 57.2	
	comp=Z,1μm,21.1s,baz=116,slow=38						
MARNC	Mare, Loyalty	10.62	169	ePn	Pn	06 19 42.9	+1.1
DZM	Mont Dzumac	11.02	177	ePn	Pn	06 19 48.7	+1.3
	34nm,0.5s						
DZM				eSn	Sn	06 21 46.0	-4.8
	12nm,0.4s						
DZM				eLR	LR	06 22 19.0	
	comp=Z,1μm,29.2s						
DZM	Mont Dzumac	11.02	177	ePn	Pn	06 19 49.0	+1.6
DZM				eSn	Sn	06 21 50.5	-0.3
DZM	Mont Dzumac	11.02	177	Pn	Pn	06 19 49.2	+1.9
	3.6nm,0.3s,baz=13,slow=10.0,SNR=56						
DZM				Sn	Sn	06 21 46.4	-4.4
	0.3nm,0.3s,baz=285,slow=8.2,SNR=1.7						
DZM				LR	LR	06 24 04.6	
	comp=Z,709nm,18.0s,baz=24,slow=37						
PINNC	Pines Island,	11.64	173	ePn	Pn	06 19 58.5	+2.7
EIDS	Eidsvold	20.00	222	eP	P	06 21 43.7	+1.2
	22nm,1.1s						
CTA	Charters Tower	20.92	242	P	P	06 21 53.7	+1.2
	3.5nm,0.7s,baz=102,slow=19,SNR=4.8						
CTAO	Charters Tower	20.92	242	eP	P	06 21 53.7	+1.2
	14nm,1.0s						
OUZ	Omahuta	25.11	165	eP	P	06 22 34.8	+0.2
	5.7nm,1.0s						
URZ	Urewera	28.94	162	eP	P	06 23 09.0	0.0
	8.3nm,1.0s						
URZ	Urewera	28.94	162	P	P	06 23 10.9	+1.8
	5.6nm,0.8s,baz=315,slow=4.3,SNR=3.5						
URZ				LR	LR	06 32 39.0	
	comp=Z,268nm,19.7s,baz=349,slow=32						
H11S2	WAKE ISLAND Hy	29.32	2	T	T	06 53 33.3	
	baz=181,slow=76,SNR=91						
H11S3	WAKE ISLAND Hy	29.33	2	T	T	06 53 33.5	
	baz=181,slow=76,SNR=51						
H11S1	WAKE ISLAND Hy	29.34	2	T	T	06 53 36.5	
	baz=181,slow=76,SNR=78						
BKZ	Black Stump Fm	29.60	163	eP	P	06 23 14.5	-0.4
	17nm,1.2s						
H11N1	WAKE ISLAND Hy	30.54	2	T	T	06 55 04.9	
	baz=182,slow=76,SNR=57						
H11N3	WAKE ISLAND Hy	30.55	2	T	T	06 55 05.3	
	baz=182,slow=76,SNR=16						
STKA	Stephens Creek	30.55	223	P	P	06 23 24.0	+0.6
	1.0nm,0.5s,baz=39,slow=5.5,SNR=3.8						
STKA				LR	LR	06 34 50.2	
	comp=Z,459nm,18.9s,baz=34,slow=35						
H11N2	WAKE ISLAND Hy	30.56	2	T	T	06 55 06.2	
	baz=182,slow=76,SNR=36						
BFZ	Birch Farm	30.95	165	eP	P	06 23 26.8	0.0
	33nm,1.1s						
THZ	Tophouse	31.25	170	eP	P	06 23 31.1	+1.6
	15nm,0.9s						
WC3	Warramunga Arr	31.58	250	eP	P	06 23 32.8	+0.1
	4.7nm,1.0s						
WB2	Warramunga Arr	31.60	250	eP	P	06 23 32.9	+0.1
	4.4nm,0.9s						
WR1	Warramunga Arr	31.61	250	eP	P	06 23 32.6	-0.3
	4.9nm,0.9s						
WRA	Warramunga Arr	31.61	250	P	P	06 23 32.6	-0.3
	4.7nm,1.0s,baz=80,slow=9.1,SNR=21						
WRA				LR	LR	06 34 35.2	
	comp=Z,205nm,20.7s,baz=70,slow=33						
KHZ	Kahutara	32.00	169	eP	P	06 23 37.1	+1.1
	10nm,1.0s						
GUMO	Guam	32.11	319	LR	LR	06 35 41.9	
	comp=Z,205nm,18.2s,baz=146,slow=35						
RPZ	Rata Peaks	32.90	173	P	P	06 23 44.9	+1.0
	20nm,0.9s,baz=298,slow=3.6,SNR=6.4						
RPZ				LR	LR	06 36 06.4	
	comp=Z,401nm,18.8s,baz=348,slow=34						
ASAR	Alice Springs	32.92	243	P	P	06 23 43.5	-0.9
	1.7nm,0.7s,baz=69,slow=9.6,SNR=13						
ASAR				PcP	PcP	06 26 29.1	+0.2
	0.7nm,0.8s,baz=73,slow=2.2,SNR=3.0						
ASAR				LR	LR	06 36 05.0	
	comp=Z,278nm,21.4s,baz=73,slow=34						
MQZ	McQueen's Vall	33.10	171	eP	P	06 23 46.5	+0.9
	44nm,1.2s						
LBZ	Lake Benmore	33.47	174	eP	P	06 23 48.3	-0.6
FITZ	Fitzroy Crossi	39.51	255	eP	P	06 24 41.8	+1.0
	3.9nm,0.8s						
FITZ	Fitzroy Crossi	39.51	255	P	P	06 24 40.6	-0.2
	3.3nm,0.8s,baz=83,slow=5.5,SNR=12						
PPT	Papeete	43.59	104	LR	LR	06 39 03.1	
	comp=Z,166nm,20.7s,baz=258,slow=30						
PPT2	Papeete2	43.59	104	eLQ	LQ	06 35 39.6	
	855nm,28.2s						
PPT2				eLR	LR	06 37 25.5	
	comp=Z,290nm,23.0s						
KSRS	Korea Array	59.91	326	LR	LR	06 51 47.8	
	comp=Z,92nm,18.6s,baz=134,slow=35						
USRK	Ussuriysk Ar.	62.97	333	LR	LR	06 52 57.4	
	comp=Z,55nm,20.9s,baz=138,slow=34						
PETK	Petropavlovsk-	64.24	355	LR	LR	06 49 21.4	
	comp=Z,68nm,20.1s,baz=160,slow=30						
VNDA	Vanda	66.53	181	LR	LR	06 53 45.7	
	comp=Z,141nm,19.7s,baz=338,slow=33						
KLR	Kul'dur	67.07	336	P	P	06 28 01.8	-1.2
	0.4nm,0.2s,baz=90,slow=7.1,SNR=3.0						
CMAR	Chiang Mai Arr	72.21	293	P	P	06 28 35.7	+0.3
	1.4nm,0.3s,baz=70,slow=4.7,SNR=4.0						
CMAR				LR	LR	07 01 47.7	
	comp=Z,31nm,18.6s,baz=125,slow=37						
KDAK	Kodiak Island	76.50	21	LR	LR	06 57 20.2	
	comp=Z,80nm,18.8s,baz=167,slow=32						
GAMB	Gambell	76.51	10	eP	P	06 28 60.0	+0.5
	4.7nm,1.2s						
SONA0	Songino Array	78.71	324	eP	P	06 29 12.1	-0.1
SONM	Songino Array	78.71	324	P	P	06 29 12.1	-0.1
	1.3nm,1.1s,baz=123,slow=5.5,SNR=5.9						
ILAR	Eielson Array	83.44	18	P	P	06 29 36.6	-0.3
	0.8nm,0.6s,baz=237,slow=5.2,SNR=18						
ILAR				LR	LR	07 04 10.6	
	comp=Z,43nm,19.1s,baz=214,slow=34						
ILB	Eielson Array	83.44	18	eP	P	06 29 37.5	+0.6
	2.8nm,0.8s						
IL1	Eielson Array	83.44	18	eP	P	06 29 36.9	-0.1
MAW	Mawson	84.80	202	LR	LR	07 01 16.5	
	comp=Z,106nm,19.3s,baz=110,slow=31						
NVAR	Mina Array Bea	85.91	50	P	P	06 29 50.4	+0.1
	0.5nm,0.7s,baz=241,slow=7.1,SNR=2.6						
NVAR				LR	LR	07 00 20.9	
	comp=Z,84nm,18.8s,baz=238,slow=30						
TIXI	Tiksi	86.08	349	P	P	06 29 49.5	-0.6
	1.6nm,0.4s,baz=76,slow=6.1,SNR=3.6						
KVN	Kaiserville	86.24	49	eP	P	06 29 56.9	+5.0
	4.7nm,1.2s						
INK	Inuvik	89.83	19	LR	LR	07 02 18.1	
	comp=Z,134nm,21.9s,baz=214,slow=30						
PDAR	Pinedale Array	93.44	47	P	P	06 30 26.3	+0.5
	0.3nm,0.9s,baz=272,slow=6.8,SNR=2.3						
PDAR				LR	LR	07 05 06.0	
	comp=Z,68nm,19.2s,baz=287,slow=31						
MK01	Makanchi Array	93.56	317	eP	P	06 30 25.7	-0.3
MK32	Makanchi Array	93.58	317	eP	P	06 30 24.9	-1.1
MKAR	Makanchi Array	93.58	317	P	P	06 30 24.9	-1.1
	0.7nm,0.8s,baz=107,slow=6.6,SNR=8.3						
ZALV	Zalesovo Beam	93.60	324	P	P	06 30 27.3	+1.4
	0.8nm,0.7s,baz=113,slow=3.9,SNR=5.6						
ZAA1	Zalesovo Array	93.60	324	eP	P	06 30 27.2	+1.4
YKA	Yellowknife Ar	94.89	27	P	P	06 30 29.9	-1.7
	0.2nm,0.7s,baz=257,slow=4.7,SNR=4.0						
YKA				LR	LR	07 08 22.4	
	comp=Z,8.8nm,19.0s,baz=243,slow=32						
TXAR	Lajitas Array	95.71	61	LR	LR	07 08 53.6	
	comp=Z,54nm,18.6s,baz=0.0,slow=32						
NRIK	Noril'sk	96.13	340	LR	LR	07 12 50.0	
	comp=Z,35nm,20.2s,baz=94,slow=35						
ARA0	ARCESS Array S	116.33	346	ePKPdf	PKiKP	06 35 51.7	-1.2
ARCES	ARCESS Array B	116.33	346	PKP	PKiKP	06 35 51.7	-1.2
	2.5nm,0.9s,baz=62,slow=2.1,SNR=3.7						
TORD	Torodi Ar. Bea	164.38	279	PKP	PKPdf	06 37 15.2	+0.6
	0.5nm,1.0s,baz=75,slow=2.0,SNR=2.3						
TOA1	Torodi Ar. Sit	164.38	279	ePKPdf	PKPdf	06 37 15.2	+0.6

IDC 11 06:23:47.4±6.2**, 21°.13S**×**174°.58W, h0^{km}, mb3.8**/5**, mb1 4.1**/5**, mb1mx3.7**/32**, mbtmp3.8**/5**, Error ellipse: s-maj=260.2km s-min=35.1km az=146.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.62	264	P	P	06 30 56.9	+1.1
	1.8nm,0.3s,baz=78,slow=9.3,SNR=3.0						
ASAR	Alice Springs	47.49	257	P	P	06 32 24.0	-0.6
	1.2nm,0.8s,baz=100,slow=7.6,SNR=10						
WRA	Warramunga Arr	47.69	262	P	P	06 32 25.4	-0.8
	0.4nm,0.3s,baz=96,slow=8.4,SNR=28						
FITZ	Fitzroy Crossi	56.12	262	P	P	06 33 29.1	+0.1
	0.8nm,0.7s,baz=103,slow=7.1,SNR=9.1						
ILAR	Eielson Array	88.25	11	P	P	06 36 40.1	0.0
	0.3nm,0.9s,baz=219,slow=7.0,SNR=3.0						

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*ISCJB **11** 06:35:23.4±0.9, 11°.36S±0°.08×166°.0E±0°.2, h10^{km}, mb3.8/6, Error ellipse: s-maj=25.4km s-min=11.5km az=179.6*

*IDC **11** 06:35:24.1±1.2, 11°.04S×165°.77E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.8/31, mbtmp3.8/7, ML4.1/1, Error ellipse: s-maj=48.4km s-min=23.6km az=127.0*

ISC 11 06:35:25.5±1.0**, 11°.19S**±0°.10×**165°.9E**±0°.2**, h10^{km}, n13, σ1^{s}67**/10**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.84	177	Pn	Pn	06 38 03.6	+2.7
	1.4nm,0.3s,baz=11,slow=8.6,SNR=26						
DZM				Sn	Sn	06 39 59.4	-3.0
	0.1nm,0.3s,baz=67,slow=15,SNR=1.8						
H11S2	WAKE ISLAND Hy	29.50	2	T	T	07 11 57.9	
	baz=181,slow=76,SNR=5.8						
H11S3	WAKE ISLAND Hy	29.50	2	T	T	07 11 58.1	
	baz=181,slow=76,SNR=4.2						
H11S1	WAKE ISLAND Hy	29.52	2	T	T	07 11 58.9	
	baz=181,slow=76,SNR=5.4						
STKA	Stephens Creek	30.44	224	P	P	06 41 39.0	+0.6
	1.8nm,0.7s,baz=336,slow=12,SNR=3.0						
H11N1	WAKE ISLAND Hy	30.72	2	T	T	07 13 28.9	
	baz=182,slow=76,SNR=4.2						
H11N3	WAKE ISLAND Hy	30.72	2	T	T	07 13 29.6	
	baz=182,slow=76,SNR=4.4						
H11N2	WAKE ISLAND Hy	30.74	2	T	T	07 13 30.2	
	baz=182,slow=76,SNR=3.7						
WRA	Warramunga Arr	31.57	250	P	P	06 41 48.0	-0.6
	3.5nm,0.9s,baz=82,slow=9.1,SNR=26						
WRA				PcP	PcP	06 44 40.9	-0.4
	0.3nm,0.8s,baz=67,slow=2.2,SNR=3.3						
ASAR	Alice Springs	32.86	244	P	P	06 41 58.9	-1.0
	0.8nm,0.8s,baz=74,slow=9.8,SNR=9.8						
ASAR				PcP	PcP	06 44 44.3	-0.4
	0.4nm,0.9s,baz=82,slow=3.2,SNR=3.3						
ILAR	Eielson Array	83.60	18	P	P	06 47 53.1	-0.6
	0.4nm,0.7s,baz=234,slow=4.6,SNR=4.7						
MKAR	Makanchi Array	93.72	317	P	P	06 48 43.6	+0.9
	0.2nm,0.7s,baz=100,slow=6.7,SNR=2.4						
YKA	Yellowknife Ar	95.03	27	P	P	06 48 47.7	-0.6
	0.1nm,0.6s,baz=262,slow=4.7,SNR=3.0						

IDC 11 06:42:25.4±1.7**, 10°.80S**×**165°.70E, h0^{km}, mb3.9**/3**, mb1 4.2**/4**, mb1mx3.7**/31**, mbtmp3.9**/4**, ML3.8**/1**, Error ellipse: s-maj=52.8km s-min=30.1km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.23	176	Pn	Pn	06 45 07.4	0.0
	0.7nm,0.3s,baz=320,slow=16,SNR=12						
H11S2	WAKE ISLAND Hy	29.12	2	T	T	07 18 49.8	
	baz=181,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	29.13	2	T	T	07 18 50.2	
	baz=181,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	29.14	2	T	T	07 18 51.1	
	baz=181,slow=76,SNR=22						
H11N1	WAKE ISLAND Hy	30.35	2	T	T	07 20 19.9	
	baz=182,slow=76,SNR=27						
H11N3	WAKE ISLAND Hy	30.35	2	T	T	07 20 20.3	
	baz=182,slow=76,SNR=24						
H11N2	WAKE ISLAND Hy	30.36	2	T	T	07 20 22.5	

	baz=182,slow=76,SNR=26						
WRA	**Warramunga Arr**	**31.52**	**249**	P	P	06 48 49.7	+0.1
	2.8nm,0.9s,baz=80,slow=9.2,SNR=15						
ASAR	**Alice Springs**	**32.86**	**243**	P	P	06 49 01.1	-0.2
	1.7nm,0.9s,baz=72,slow=9.4,SNR=10						
ILAR	**Eielson Array**	**83.30**	**19**	P	P	06 54 53.8	0.0
	0.6nm,1.1s,baz=219,slow=7.0,SNR=2.9						

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*SOME **11** 06:59:23.6, 41°.83N×77°.27E, h15^{km}*

*NNC **11** 06:59:23.9±0.5, 41°.87N×77°.26E, h0^{km}, mb2.5, mpv2.5, Error ellipse: s-maj=3.5km s-min=1.9km az=174.0*

KRNET 11 06:59:23.4±0.1**, 41°.81N×77°.26E, h20^{km}, mb2.2, 21C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.33**	**350**	⇑*i*P	Pb	06 59 30.5	-0.1
	baz=52						
KDJ				⇑*i*S	Sb	06 59 34.7	-0.9
	baz=52						
TARG	**Taragay, Kyrgy**	**0.42**	**101**	⇑*i*P	Pb	06 59 31.8	-0.5
	baz=1.0						
TARG				⇑*i*S	Sb	06 59 37.6	-0.8
	baz=1.0						
ULHL	**Ulahol**	**0.87**	**300**	⇑*i*P	Pb	06 59 39.9	-0.1
	baz=0.0						
ULHL				⇑*i*S	Sb	06 59 51.6	+0.3
	baz=0.0						
NRN	**Naryn**	**1.01**	**249**	⇑*i*P	Pn	06 59 42.6	-0.1
	baz=49						
NRN				⇑*i*S	Sn	06 59 56.4	-0.2
	baz=49						
PRZ	**Przheval'sk**	**1.09**	**51**	⇑*i*P	Pb	06 59 43.5	-0.1
	baz=52						
PRZ				⇑*i*S	Sn	06 59 58.3	+0.1
	baz=52						
BOOM	**Boomskoye usch**	**1.19**	**305**	⇑*i*P	Pb	06 59 45.3	-0.1
	baz=5.0						
BOOM				⇑*i*S	Sn	07 00 01.4	+0.6
	baz=5.0						
TNSS	**Tian-Shan**	**1.25**	**350**	P	Pb	06 59 46.4	-0.2
	2.6nm,0.1s						
TNSS				S	Sn	07 00 02.7	+0.2
	3.8nm,0.1s						
TNSS	**Tian-Shan**	**1.25**	**350**	*e*P	Pb	06 59 46.4	-0.2
	2.6nm,0.1s						
TNSS				*e*S	Sn	07 00 02.7	+0.2
	3.8nm,0.1s						
IZV	**Izvestkoviy**	**1.32**	**339**	P	Pb	06 59 47.6	+0.1
	1.7nm,0.2s						
IZV				S	Sb	07 00 05.1	+1.0
	6.2nm,0.1s						
IZV	**Izvestkoviy**	**1.32**	**339**	*e*P	Pb	06 59 47.5	0.0
	1.7nm,0.2s						
IZV				*e*S	Sb	07 00 05.1	+1.0
	6.2nm,0.1s						
MDOK	**Medeo**	**1.36**	**354**	Pg	Pb	06 59 48.6	+0.3
	1.7nm,0.2s						
MDOK				Lg	Lg	07 00 06.6	
	3.8nm,0.3s						
MDOK	**Medeo**	**1.36**	**354**	*e*P	Pb	06 59 48.6	+0.3
	1.7nm,0.3s						
MDOK				*e*S	Sb	07 00 06.6	+1.3
	3.7nm,0.3s						
KOTS	**Kotyrbulak**	**1.43**	**356**	P	Pb	06 59 49.8	+0.4
	2.9nm,0.2s						
KOTS				S	Sb	07 00 09.0	+1.8
	5.3nm,0.2s						
KOTS	**Kotyrbulak**	**1.43**	**356**	*e*P	Pb	06 59 49.8	+0.4
	2.9nm,0.2s						
KOTS				*e*S	Sb	07 00 08.8	+1.5
	5.3nm,0.2s						
MTBS	**Maitube**	**1.46**	**335**	*e*P	Pb	06 59 49.8	0.0
	2.6nm,0.1s						
MTBS				*e*S	Sb	07 00 08.5	+0.6
	8.9nm,0.2s						
SATY	**Saty**	**1.51**	**34**	P	Pb	06 59 50.4	-0.4
	2.4nm,0.4s						
SATY				S	Sb	07 00 10.5	+0.9
	22nm,0.1s						
SATY	**Saty**	**1.51**	**34**	*e*P	Pb	06 59 51.0	+0.2
	1.8nm,0.2s						
SATY				*e*S	Sb	07 00 10.5	+0.9
	18nm,0.1s						
KZA	**Kyzart**	**1.52**	**281**	⇓*i*P	Pb	06 59 51.6	+0.5
	baz=81						
KZA				⇓*i*S	Sb	07 00 11.9	+1.8
	baz=81						
KST	**Kastek**	**1.56**	**323**	*e*P	Pb	06 59 51.9	+0.2
	1.2nm,0.1s						
KST				*e*S	Sb	07 00 12.0	+1.0
	5.1nm,0.2s						
TKM2	**Tokmak 2**	**1.66**	**313**	⇓P	Pb	06 59 53.7	+0.4
	0.3nm,0.4s						
TKM2				⇑S	Sb	07 00 15.6	+1.7
	0.8nm,0.3s						
TKM2	**Tokmak 2**	**1.66**	**313**	⇓*i*P	Pb	06 59 53.6	+0.3
	baz=13						
TKM2				⇓*i*S	Sb	07 00 15.6	+1.7
	baz=13						
DGS	**Degeres**	**1.80**	**323**	P	Pb	06 59 56.1	+0.3
	0.8nm,0.3s						
DGS				S	Sb	07 00 19.5	+1.5
	4.9nm,0.2s						
DGS	**Degeres**	**1.80**	**323**	*e*P	Pb	06 59 56.0	+0.3
	0.8nm,0.3s						
DGS				*e*S	Sb	07 00 19.5	+1.5
	4.9nm,0.2s						
KURS	**Kuram**	**1.81**	**22**	P	Pb	06 59 56.2	+0.4
	1.5nm,0.4s						
KURS				S	Sb	07 00 19.7	+1.6
	2.1nm,0.3s						
KURS	**Kuram**	**1.81**	**22**	*e*P	Pb	06 59 56.2	+0.4
	1.5nm,0.4s						
KURS				*e*S	Sb	07 00 19.7	+1.6
	2.1nm,0.3s						
UZB	**Uzynbulak**	**1.87**	**44**	P	Pb	06 59 57.1	+0.2
	2.9nm,0.2s						
UZB				S	Sb	07 00 21.0	+1.0
	9.4nm,0.1s						
UZB	**Uzynbulak**	**1.87**	**44**	*e*P	Pb	06 59 57.1	+0.2
	2.5nm,0.4s						
UZB				*e*S	Sb	07 00 20.9	+1.0
	9.4nm,0.1s						
KBK	**Karagaybulak**	**1.91**	**297**	⇓*i*P	Pb	06 59 57.6	-0.1
	baz=97						
KBK				⇓*i*S	Sb	07 00 22.5	+1.3
	baz=97						
KTBS	**Karatobe**	**1.95**	**348**	Pg	Pb	06 59 58.8	+0.6
	0.9nm,0.2s						
KTBS				Lg	Lg	07 00 24.2	
	6.9nm,0.3s						
KTBS	**Karatobe**	**1.95**	**348**	*e*P	Pb	06 59 58.8	+0.6
	0.9nm,0.2s						
KTBS				*e*S	Sb	07 00 24.2	+2.1
	6.9nm,0.3s						
ARLS	**Aral**	**2.19**	**272**	⇑*i*P	Pb	07 00 01.5	-0.9
	baz=73						
ARLS				⇑*i*S	Sb	07 00 29.1	-0.1
	baz=73						
AAK	**Ala-Archa**	**2.21**	**293**	⇓Pg	Pb	07 00 03.6	+0.8
	1.0nm,0.8s						
AAK				⇓Lg	Lg	07 00 32.7	
	4.8nm,0.9s						
PDGK	**Podgornoye**	**2.24**	**47**	⇑Pg	Pb	07 00 03.2	-0.1
	0.6nm,0.4s						
PDGK				⇑Lg	Lg	07 00 32.5	
	4.5nm,0.4s						
PDGK	**Podgornoye**	**2.24**	**47**	⇑*i*P	Pb	07 00 02.3	-1.0
	baz=47						
PDGK				⇑*i*S	Sb	07 00 30.8	+0.1
	baz=47						
MNBS	**Baschi**	**2.42**	**20**	Pg	Pb	07 00 06.4	+0.1
	0.6nm,0.1s						
MNBS				Lg	Lg	07 00 37.1	
	8.4nm,0.3s						
MNBS	**Baschi**	**2.42**	**20**	*e*P	Pb	07 00 06.4	+0.1
	0.6nm,0.1s						
MNBS				*e*S	Sb	07 00 37.0	+1.3
	8.4nm,0.3s						
ARXS	**Arharly**	**2.44**	**10**	Pg	Pb	07 00 07.1	+0.5
	2.2nm,0.5s						
ARXS				Lg	Lg	07 00 38.3	
	11nm,0.2s						
ARXS	**Arharly**	**2.44**	**10**	*e*P	Pb	07 00 07.1	+0.5
	2.2nm,0.5s						
ARXS				*e*S	Sb	07 00 38.3	+2.1
	11nm,0.2s						
AML	**Almayashu**	**2.67**	**278**	⇑*i*P	Pb	07 00 08.4	-2.4
	baz=78						
AML				⇑*i*S	Sb	07 00 41.4	-1.9
	baz=78						
KAPS	**Kapalarasan**	**3.80**	**23**	*e*P	Pb	07 00 31.1	+1.4
	0.4nm,0.2s						
KAPS				*e*S	Sb	07 01 19.2	+4.0
	1.2nm,0.3s						

IDC 11 07:01:56.2±1.7**, 10°.75S×165°.34E, h0^{km}, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.6**/4**, ML3.8**/1**, Error ellipse: s-maj=52.9km s-min=30.5km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.30**	**175**	Pn	Pn	07 04 39.0	-0.3
	0.7nm,0.3s,baz=15,slow=12,SNR=19						
WRA	**Warramunga Arr**	**31.21**	**249**	P	P	07 08 17.8	+0.2
	0.3nm,0.5s,baz=82,slow=8.7,SNR=3.8						
ASAR	**Alice Springs**	**32.57**	**243**	P	P	07 08 29.4	-0.2
	0.4nm,0.6s,baz=64,slow=10.0,SNR=8.5						
ILAR	**Eielson Array**	**83.36**	**19**	P	P	07 14 24.9	0.0
	0.3nm,0.9s,baz=210,slow=6.9,SNR=3.0						

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*ISCJB **11** 07:03:28.3±0.3, 10°.85S±0°.04×165°.69E±0°.06, h10^{km}, mb4.5/35, MS3.6/1, Error ellipse: s-maj=8.3km s-min=6.1km az=173.7*

*IDC **11** 07:03:28.4±0.5, 10°.79S×165°.84E, h0^{km}, mb4.2/16, mb1 4.4/18, mb1mx4.3/33, mbtmp4.3/18, ML4.7/2, MS3.7/2, Ms1 3.7/2, ms1mx3.0/31, Error ellipse: s-maj=19.5km s-min=15.4km az=114.0*

*NEIC **11** 07:03:29.9±0.2, 10°.78S×165°.75E, h10^{km}, mb4.7/23, Error ellipse: s-maj=6.5km s-min=4.6km az=91.0*

ISC 11 07:03:29.9±0.4**, 10°.88S**±0°.06×**165°.82E**±0°.07**, h10^{km}, n77, σ1^{s}39**/77**, mb4.5**/35**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.96**	**283**	*e*P	**Pn**	**07 05 01.0**	**+2.8**
HNR				*e*S	**Sn**	**07 06 10.0**	**+3.4**
HNR	**Honiara**	**5.96**	**283**	*e*Pn	**Pn**	**07 04 57.9**	**-0.4**
HNR				*e*Sn	**Sn**	**07 06 02.5**	**-4.1**
HNR	**Honiara**	**5.96**	**283**	Pn	**Pn**	**07 04 59.4**	**+1.2**
	14nm,0.3s,baz=188,slow=7.1,SNR=4.0						
HNR				LR	LR	07 07 25.9	
	comp=Z,727nm,18.2s,baz=76,slow=40						
MARNC	**Mare, Loyalty**	**10.75**	**169**	*e*Pn	**Pn**	**07 06 06.2**	**+2.2**
DZM	**Mont Dzumac**	**11.14**	**177**	*e*Pn	**Pn**	**07 06 11.8**	**+2.3**
DZM				*e*Sn	**Sn**	**07 08 11.7**	**-2.5**
DZM	**Mont Dzumac**	**11.14**	**177**	Pn	**Pn**	**07 06 11.8**	**+2.3**
	7.0nm,0.3s,baz=39,slow=21,SNR=36						
DZM				Sn	**Sn**	**07 08 09.0**	**-5.2**
	0.3nm,0.3s,baz=342,slow=20,SNR=1.7						
PINNC	**Pines Island,**	**11.77**	**173**	*e*Pn	**Pn**	**07 06 21.2**	**+3.3**
CTA	**Charters Tower**	**20.94**	**242**	P	Pn	07 08 15.3	-0.4
	7.2nm,0.9s,baz=65,slow=12,SNR=5.2						
CTAO	**Charters Tower**	**20.94**	**242**	*e*P	**P**	**07 08 12.1**	**-1.0**
	10.0nm,1.0s						
OUZ	**Omahuta**	**25.24**	**165**	*e*P	**P**	**07 08 55.6**	**-0.4**
	4.3nm,1.0s						
URZ	**Urewera**	**29.08**	**162**	*e*P	**P**	**07 09 31.5**	**+0.9**
URZ	**Urewera**	**29.08**	**162**	P	**P**	**07 09 31.1**	**+0.5**
	1.9nm,0.3s,baz=307,slow=20,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**29.20**	**2**	T	T	07 39 53.1	
	baz=181,slow=76,SNR=8.8						
H11S3	**WAKE ISLAND Hy**	**29.20**	**2**	T	T	07 39 52.6	
	baz=181,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**29.22**	**2**	T	T	07 39 54.2	
	baz=181,slow=76,SNR=10						
BKZ	**Black Stump Fm**	**29.73**	**163**	*e*P	**P**	**07 09 37.8**	**+1.4**
	12nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**30.42**	**2**	T	T	07 41 24.4	
	baz=182,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**30.43**	**2**	T	T	07 41 24.4	
	baz=182,slow=76,SNR=7.8						
H11N2	**WAKE ISLAND Hy**	**30.44**	**2**	T	T	07 41 25.6	
	baz=182,slow=76,SNR=10.0						
STKA	**Stephens Creek**	**30.61**	**223**	P	**P**	**07 09 45.5**	**+1.2**
	0.6nm,0.3s,baz=52,slow=12,SNR=2.5						
STKA				LR	LR	07 21 23.6	
	comp=Z,120nm,18.6s,baz=23,slow=35						
BFZ	**Birch Farm**	**31.08**	**165**	*e*P	**P**	**07 09 48.3**	**+0.1**
	30nm,1.0s						
THZ	**Tophouse**	**31.38**	**170**	*e*P	**P**	**07 09 52.0**	**+1.0**
	17nm,1.1s						
WB2	**Warramunga Arr**	**31.60**	**250**	*e*P	**P**	**07 09 52.5**	**-0.6**
	4.7nm,0.8s						
WR1	**Warramunga Arr**	**31.61**	**250**	*e*P	**P**	**07 09 52.6**	**-0.6**
	5.0nm,0.8s						
WR1				*e*PcP	**PcP**	**07 12 46.2**	**+0.6**
WRA	**Warramunga Arr**	**31.61**	**250**	P	**P**	**07 09 52.6**	**-0.7**
	2.2nm,0.9s,baz=81,slow=9.0,SNR=16						
WRA				PcP	**PcP**	**07 12 46.2**	**+0.6**
	0.4nm,0.9s,baz=82,slow=3.5,SNR=6.1						
FOZ	**Fox Glacier**	**32.71**	**175**	*e*P	**P**	**07 10 04.3**	**+1.7**
	38nm,1.1s						
OXZ	**Oxford**	**32.77**	**172**	*e*P	**P**	**07 10 02.2**	**-0.9**
	27nm,1.2s						
AS01	**Alice Springs**	**32.89**	**243**	*e*P	**P**	**07 10 03.5**	**-1.0**
ASAR	**Alice Springs**	**32.93**	**243**	P	**P**	**07 10 04.3**	**-0.6**
	2.1nm,0.6s,baz=65,slow=10,SNR=34						
ASAR				PcP	**PcP**	**07 12 49.5**	**+0.2**
	1.6nm,0.9s,baz=85,slow=2.3,SNR=9.7						
RPZ	**Rata Peaks**	**33.02**	**173**	P	**P**	**07 10 07.1**	**+1.8**
	10nm,0.7s,baz=291,slow=4.9,SNR=3.7						
CRLZ	**Canterbury Las**	**33.10**	**171**	*e*P	**P**	**07 10 06.6**	**+0.6**
	13nm,0.7s						
MQZ	**McQueen's Vall**	**33.24**	**171**	*e*P	**P**	**07 10 08.3**	**+1.1**
LBZ	**Lake Benmore**	**33.59**	**174**	*e*P	**P**	**07 10 11.6**	**+1.2**
	12nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.49**	**255**	*e*P	**P**	**07 10 59.5**	**-1.5**
	3.0nm,0.9s						
ASAJ	**Asahikawa**	**58.67**	**341**	P	**P**	**07 13 27.8**	**+0.4**
	9.2nm,1.1s,baz=182,slow=10,SNR=5.2						
USRK	**Ussuriysk Ar.**	**62.84**	**333**	P	**P**	**07 13 55.9**	**0.0**
	2.0nm,0.8s,baz=144,slow=10,SNR=3.3						
ADK	**Adak**	**64.31**	**12**	*e*P	**P**	**07 14 04.4**	**-1.0**
	30nm,1.1s						
GAMB	**Gambell**	**76.40**	**10**	*e*P	**P**	**07 15 19.5**	**+0.4**
	5.5nm,1.0s						
SONA0	**Songino Array**	**78.58**	**324**	*e*P	**P**	**07 15 32.1**	**+0.2**
SONM	**Songino Array**	**78.58**	**324**	P	**P**	**07 15 32.1**	**+0.2**
	0.8nm,0.8s,baz=135,slow=4.5,SNR=7.8						
WRH	**Wood River Hil**	**82.75**	**18**	*e*P	**P**	**07 15 54.4**	**+0.7**
	5.1nm,0.9s						
MDM	**Murphy Dome**	**83.05**	**18**	*e*P	**P**	**07 15 55.4**	**+0.1**
	5.2nm,0.9s						
HDA	**Harding Lake**	**83.07**	**19**	*e*P	**P**	**07 15 55.5**	**+0.1**
	16nm,0.9s						
IL1	**Eielson Array**	**83.33**	**18**	*e*P	**P**	**07 15 56.6**	**-0.1**
ILAR	**Eielson Array**	**83.33**	**18**	P	**P**	**07 15 57.0**	**+0.3**
	3.1nm,0.8s,baz=235,slow=5.5,SNR=37						
ILB	**Eielson Array**	**83.33**	**18**	*e*P	**P**	**07 15 57.7**	**+1.0**
	3.1nm,0.8s						
NV01	**Mina Array Sit**	**85.86**	**50**	*e*P	**P**	**07 16 11.1**	**+0.7**
NVAR	**Mina Array Bea**	**85.86**	**50**	P	**P**	**07 16 10.2**	**-0.2**
	1.9nm,0.9s,baz=232,slow=7.7,SNR=7.6						
CCUT	**Cedar City**	**89.38**	**52**	*e*P	**P**	**07 16 27.9**	**+0.6**
	2.6nm,1.0s						
U15A	**North Rim**	**89.95**	**53**	*e*P	**P**	**07 16 29.6**	**-0.6**
	3.3nm,0.9s						
PKCU	**Pink Cliffs**	**90.17**	**52**	*e*P	**P**	**07 16 29.9**	**-1.2**
	2.9nm,0.9s						
PDAR	**Pinedale Array**	**93.39**	**47**	P	**P**	**07 16 45.7**	**-0.1**
	0.7nm,1.1s,baz=244,slow=5.6,SNR=3.2						
MK01	**Makanchi Array**	**93.44**	**317**	*e*P	**P**	**07 16 45.6**	**-0.2**
MK31	**Makanchi Array**	**93.45**	**317**	*e*P	**P**	**07 16 44.1**	**-1.7**
	1.2nm,0.8s						
MK32	**Makanchi Array**	**93.45**	**317**	*e*P	**P**	**07 16 45.5**	**-0.3**
MKAR	**Makanchi Array**	**93.45**	**317**	*e*P	**P**	**07 16 44.1**	**-1.7**
	6.8nm,0.6s						
MKAR	**Makanchi Array**	**93.45**	**317**	P	**P**	**07 16 45.5**	**-0.3**
	1.4nm,0.8s,baz=90,slow=6.1,SNR=16						
ZALV	**Zalesovo Beam**	**93.47**	**324**	*e*P	**P**	**07 16 44.9**	**-0.7**
ZALV	**Zalesovo Beam**	**93.47**	**324**	P	**P**	**07 16 44.2**	**-1.4**
	0.7nm,0.6s,baz=139,slow=3.4,SNR=4.6						
ZAA1	**Zalesovo Array**	**93.47**	**324**	*e*P	**P**	**07 16 44.2**	**-1.4**
YKA	**Yellowknife Ar**	**94.80**	**27**	P	**P**	**07 16 50.3**	**-1.2**
	0.4nm,0.6s,baz=256,slow=4.8,SNR=9.6						
YKB5	**Yellowknife Ar**	**94.80**	**27**	*e*P	**P**	**07 16 50.8**	**-0.7**
LTX	**Lajitas**	**95.69**	**61**	*e*P	**P**	**07 16 56.5**	**0.0**
TXAR	**Lajitas Array**	**95.69**	**61**	P	**P**	**07 16 56.5**	**0.0**
	0.1nm,0.7s,baz=221,slow=6.8,SNR=2.6						
ARA0	**ARCESS Array S**	**116.20**	**346**	*e*PKPdf	**PKiKP**	**07 22 12.3**	**-0.6**
ARCES	**ARCESS Array B**	**116.20**	**346**	PKP	**PKiKP**	**07 22 12.3**	**-0.6**
	1.4nm,0.7s,baz=82,slow=2.3,SNR=16						
LPAZ	**La Paz**	**120.19**	**116**	*e*PKPdf	**PKiKP**	**07 22 23.6**	**+0.5**
LPAZ	**La Paz**	**120.19**	**116**	PKP	**PKPdf**	**07 22 23.2**	**+0.3**
	0.7nm,0.6s,baz=191,slow=5.2,SNR=3.3						
FIA0	**FINESS Array S**	**121.65**	**339**	*e*PKPdf	**PKPdf**	**07 22 22.7**	**-0.9**
FINES	**FINESS Array B**	**121.65**	**339**	PKP	**PKPdf**	**07 22 22.7**	**-0.9**
	1.5nm,0.9s,baz=45,slow=2.2,SNR=3.6						
CPUP	**Villa Florida**	**124.08**	**132**	*e*PKPdf	**PKPdf**	**07 22 29.8**	**+0.3**
CPUP	**Villa Florida**	**124.08**	**132**	PKP	**PKPdf**	**07 22 28.9**	**-0.5**
	1.0nm,0.6s,baz=278,slow=15,SNR=4.7						
BOSA	**Boshof**	**125.29**	**223**	PKP	**PKPdf**	**07 22 31.4**	**-0.5**
	2.1nm,0.9s,baz=139,slow=11,SNR=3.0						
NB200	**NORSAR Array S**	**126.56**	**345**	*e*PKPdf	**PKPdf**	**07 22 32.9**	**-0.3**
NOA	**NORSAR Array B**	**126.56**	**345**	PKP	**PKPdf**	**07 22 32.9**	**-0.3**
	0.8nm,0.9s,baz=44,slow=6.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**164.31**	**280**	PKP	**PKPdf**	**07 23 35.6**	**+0.7**
	0.4nm,0.8s,baz=64,slow=3.4,SNR=3.0						
TOA1	**Torodi Ar. Sit**	**164.31**	**280**	*e*PKPdf	**PKPdf**	**07 23 35.6**	**+0.7**

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*SOME **11** 07:06:54.1, 42°.58N×79°.63E, h5^{km}*

*NNC **11** 07:06:54.3±1.1, 42°.60N×79°.65E, h0^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=6.9km s-min=4.3km az=137.0*

KRNET 11 07:06:53.7±0.1**, 42°.56N×79°.67E, h8^{km}, mb2.7, 20C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.76**	**321**	P	Pg	07 07 08.2	-0.1
	12nm,0.1s						
UZB				S	Sg	07 07 18.5	+0.2
	23nm,0.2s						
UZB	**Uzynbulak**	**0.76**	**321**	*e*P	Pg	07 07 08.2	-0.1
	baz=21						
UZB				*e*S	Sg	07 07 18.5	+0.3
	baz=21						
UZB	**Uzynbulak**	**0.76**	**321**	*e*P	Pg	07 07 08.2	-0.1
	12nm,0.1s						
UZB				*e*S	Sg	07 07 18.5	+0.2
	23nm,0.2s						
PDGK	**Podgornoye**	**0.78**	**350**	P	Pg	07 07 08.8	0.0
	1.6nm,0.1s						
PDGK				S	Sg	07 07 19.2	+0.2
	10.0nm,0.2s						
PDGK	**Podgornoye**	**0.78**	**350**	⇑P	Pg	07 07 08.7	-0.1
	0.8nm,0.4s						
PDGK				⇑S	Sg	07 07 19.0	0.0
	11nm,0.5s						
PDGK	**Podgornoye**	**0.78**	**350**	⇓*i*P	Pg	07 07 08.8	0.0
	baz=50						
PDGK				⇓*i*S	Sg	07 07 19.3	+0.3
	baz=50						
PRZ	**Przheval'sk**	**0.94**	**266**	⇑*i*P	Pg	07 07 11.5	-0.3
	baz=66						
PRZ				⇑*i*S	Sg	07 07 24.0	-0.1
	baz=66						
KTMS	**Ketmen**	**1.02**	**29**	P	Pg	07 07 13.2	-0.1
	4.1nm,0.1s						
KTMS				S	Sg	07 07 26.8	+0.3
	8.5nm,0.2s						
KTMS	**Ketmen**	**1.02**	**29**	*e*P	Pg	07 07 13.2	-0.1
	baz=28						
KTMS				*e*S	Sg	07 07 26.9	+0.3
	baz=28						
KTMS	**Ketmen**	**1.02**	**29**	*e*P	Pg	07 07 13.2	-0.1
	4.1nm,0.1s						
KTMS				*e*S	Sg	07 07 26.9	+0.3
	8.5nm,0.2s						
SATY	**Saty**	**1.06**	**299**	P	Pg	07 07 13.9	-0.1
	5.6nm,0.1s						
SATY				S	Sb	07 07 28.3	-0.1
	16nm,0.1s						
SATY	**Saty**	**1.06**	**299**	⇑*i*P	Pg	07 07 13.9	-0.1
	5.6nm,0.1s						
SATY				*e*S	Sb	07 07 28.3	-0.1
	16nm,0.1s						
KURS	**Kuram**	**1.44**	**311**	P	Pn	07 07 20.4	+0.2
	2.6nm,0.3s						
KURS				S	Sn	07 07 39.1	-0.3
	5.5nm,0.5s						
KURS	**Kuram**	**1.44**	**311**	*e*P	Pn	07 07 20.4	+0.2
	baz=11						
KURS				*e*S	Sn	07 07 39.1	-0.2
	baz=11						
KURS	**Kuram**	**1.44**	**311**	*e*P	Pn	07 07 20.4	+0.2
	2.6nm,0.3s						
KURS				*e*S	Sn	07 07 39.1	-0.3
	5.5nm,0.5s						
DJR	**Jarkent**	**1.78**	**3**	P	Pb	07 07 26.6	+0.1
	1.1nm,0.3s						
DJR				S	Sg	07 07 50.5	-0.3
	5.4nm,0.2s						
DJR	**Jarkent**	**1.78**	**3**	*e*P	Pb	07 07 26.6	+0.1
	1.0nm,0.2s						
DJR				*e*S	Sg	07 07 50.1	-0.7
	6.4nm,0.2s						
MNBS	**Baschi**	**1.78**	**329**	P	Pb	07 07 26.5	-0.2
	3.8nm,0.2s						
MNBS				S	Sb	07 07 50.1	+0.9
	19nm,0.3s						
MNBS	**Baschi**	**1.78**	**329**	*e*P	Pb	07 07 26.5	-0.2
	baz=29						
MNBS				*e*S	Sb	07 07 49.9	+0.7
	baz=29						
MNBS	**Baschi**	**1.78**	**329**	*e*P	Pb	07 07 26.5	-0.2
	3.8nm,0.2s						
MNBS				*e*S	Sb	07 07 49.9	+0.7
	19nm,0.3s						
KDJ	**Kajisay**	**1.90**	**258**	⇑*i*P	Pb	07 07 28.9	+0.2
	baz=58						
KDJ				⇑*i*S	Sg	07 07 53.8	-0.8
	baz=58						
KOTS	**Kotyrbulak**	**2.00**	**291**	Pg	Pb	07 07 30.5	+0.1
	3.9nm,0.2s						
KOTS				Lg	Lg	07 07 57.0	
	15nm,0.4s						
KOTS	**Kotyrbulak**	**2.00**	**291**	*e*P	Pb	07 07 30.5	+0.1
	baz=91						
KOTS				*e*S	Sb	07 07 56.5	+1.0
	baz=91						
KOTS	**Kotyrbulak**	**2.00**	**291**	*e*P	Pb	07 07 30.5	+0.1
	3.9nm,0.2s						
KOTS				*e*S	Sb	07 07 56.5	+1.0
	15nm,0.4s						
ARXS	**Arharly**	**2.13**	**322**	Pg	Pb	07 07 32.8	+0.1
	2.4nm,0.3s						
ARXS				Lg	Lg	07 08 00.5	
	15nm,0.3s						
ARXS	**Arharly**	**2.13**	**322**	*e*P	Pb	07 07 32.8	+0.1
	2.4nm,0.3s						
ARXS				*e*S	Sb	07 08 00.5	+1.2
	15nm,0.3s						
IZV	**Izvestkoviy**	**2.30**	**283**	Pg	Pb	07 07 35.8	+0.3
	7.0nm,0.1s						
IZV				Lg	Lg	07 08 05.8	
	9.4nm,0.3s						
IZV	**Izvestkoviy**	**2.30**	**283**	*e*P	Pb	07 07 35.8	+0.2
	baz=83						
IZV				*e*S	Sb	07 08 05.8	+1.6
	baz=83						
IZV	**Izvestkoviy**	**2.30**	**283**	*e*P	Pb	07 07 35.8	+0.3
	7.0nm,0.1s						
IZV				*e*S	Sb	07 08 05.8	+1.6
	9.4nm,0.3s						
KTBS	**Karatobe**	**2.47**	**299**	Pg	Pb	07 07 38.6	+0.2
	1.9nm,0.2s						
KTBS				Lg	Lg	07 08 10.5	
	7.2nm,0.4s						
KTBS	**Karatobe**	**2.47**	**299**	*e*P	Pb	07 07 38.6	+0.2
	baz=98						
KTBS				*e*S	Sb	07 08 10.5	+1.4
	baz=98						
KTBS	**Karatobe**	**2.47**	**299**	*e*P	Pb	07 07 38.6	+0.2
	1.9nm,0.2s						
KTBS				*e*S	Sb	07 08 10.5	+1.5
	7.2nm,0.4s						
ULHL	**Ulahol**	**2.56**	**264**	⇑*i*P	Pb	07 07 37.9	-2.1
	baz=64						
ULHL				⇑*i*S	Sb	07 08 09.9	-1.8
	baz=64						
KAPS	**Kapalarasan**	**2.74**	**355**	Pg	Pg	07 07 44.8	-1.3
	0.6nm,0.3s						
KAPS				Lg	Lg	07 08 20.6	
	2.6nm,0.2s						
KAPS	**Kapalarasan**	**2.74**	**355**	*e*P	Pb	07 07 42.7	-0.2

	0.3nm,0.3s						
KAPS				*e*S	Sb	07 08 17.5	+0.9
	3.5nm,0.3s						
BOOM	**Boomskoye usch**	**2.76**	**270**	⇑*i*P	Pn	07 07 40.8	+2.4
	baz=70						
BOOM				⇑*i*S	Sb	07 08 14.7	-2.7
	baz=70						
DGS	**Degeres**	**2.95**	**285**	Pg	Pb	07 07 46.8	+0.3
	4.8nm,0.3s						
DGS				Lg	Lg	07 08 24.0	
	5.7nm,0.5s						
DGS	**Degeres**	**2.95**	**285**	*e*P	Pb	07 07 46.8	+0.3
	baz=85						
DGS				*e*S	Sb	07 08 25.0	+2.3
	baz=85						
DGS	**Degeres**	**2.95**	**285**	*e*P	Pb	07 07 46.8	+0.3
	4.8nm,0.3s						
DGS				*e*S	Sb	07 08 25.0	+2.3
	5.7nm,0.5s						
NRN	**Naryn**	**2.96**	**249**	⇑*i*P	Pb	07 07 44.3	-2.5
	baz=49						
NRN				⇑*i*S	Sb	07 08 20.5	-2.8
	baz=49						
TKM2	**Tokmak 2**	**3.02**	**278**	⇑Pg	Pb	07 07 47.9	0.0
	0.5nm,0.5s						
TKM2				⇓Lg	Lg	07 08 28.3	
	0.9nm,0.3s						
TKM2	**Tokmak 2**	**3.02**	**278**	⇑*i*P	Pn	07 07 44.7	+2.6
	baz=78						
TKM2				⇑*i*S	Sn	07 08 20.9	+2.3
	baz=78						
KZA	**Kyzart**	**3.31**	**263**	⇓*i*P	Pn	07 07 48.8	+2.6
	baz=63						
KZA				⇓*i*S	Sn	07 08 28.2	+2.2
	baz=63						
KBK	**Karagaybulak**	**3.49**	**273**	⇑*e*P	Pn	07 07 51.0	+2.6
	baz=73						
KBK				⇑*i*S	Sn	07 08 32.1	+2.1
	baz=73						
ARLS	**Aral**	**4.03**	**262**	⇑*e*P	Pn	07 07 58.4	+2.5
	baz=62						
ARLS				⇑*i*S	Sn	07 08 44.8	+1.4
	baz=62						

SOME ***11*** *07:10:31.9, 42°.55N×79°.67E, h20^{km}*

NNC ***11*** *07:10:37.5±4.6, 41°.45N×78°.20E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=30.6km s-min=29.4km az=123.0, Suspected Mining explosion.*

ISC 11 07:10:28.5±2.5**, 42°.45N**±0°.10×**79°.8E**±0°.1**, h0^{km}, n11,** σ**0ˢ90**/14**, 3C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**0.89**	**322**	*e*P	**Pg**	**07 10 46.1**	**+0.6**
	5.0nm,0.2s						
UZB				*e*S	**Sg**	**07 10 56.3**	**-0.6**
	6.4nm,0.2s						
SATY	**Saty**	**1.17**	**302**	*e*P	**Pg**	**07 10 51.4**	**+0.4**
	1.6nm,0.2s						
SATY				*e*S	**Sg**	**07 11 05.6**	**-0.6**
	12nm,0.2s						
DJR	**Jarkent**	**1.88**	**0**	*e*P	**Pb**	**07 11 04.0**	**+0.3**
	0.6nm,0.2s						
DJR				*e*S	**Sb**	**07 11 27.4**	**-0.4**
	2.8nm,0.3s						
KOTS	**Kotyrbulak**	**2.11**	**293**	P	Pg	07 11 13.9	+5.0
	1.5nm,0.2s						
KOTS				S	**Sg**	**07 11 37.9**	**+1.7**
	7.5nm,0.3s						
IZV	**Izvestkoviy**	**2.40**	**285**	Pg	**Pg**	**07 11 15.7**	**+1.3**
	2.2nm,0.1s						
IZV				Lg	Lg	07 11 41.3	
	7.8nm,0.3s						
KTBS	**Karatobe**	**2.59**	**300**	Pg	Pg	07 11 24.9	+6.8
	4.5nm,0.6s						
KTBS				Lg	Lg	07 11 57.3	
	13nm,0.6s						
KAPS	**Kapalarasan**	**2.85**	**354**	*e*P	**Pb**	**07 11 20.4**	**+0.2**
	0.3nm,0.2s						
KAPS				*e*S	**Sb**	**07 11 55.2**	**-0.4**
	1.6nm,0.2s						
KST	**Kastek**	**2.87**	**283**	Pg	**Pb**	**07 11 20.4**	**-0.2**
	5.4nm,0.6s						
KST				Lg	Lg	07 11 49.0	
	13nm,0.7s						
DGS	**Degeres**	**3.04**	**286**	Pg	**Pg**	**07 11 25.6**	**-1.2**
	5.2nm,0.5s						
DGS				Lg	Lg	07 11 58.4	
	7.7nm,0.8s						
TKM2	**Tokmak 2**	**3.11**	**280**	⇑Pg	**Pn**	**07 11 18.1**	**-0.9**
	1.0nm,0.7s						
TKM2				⇓Lg	Lg	07 11 57.7	
	5.9nm,0.9s						
AAK	**Ala-Archa**	**3.90**	**274**	⇑Pg	**Pn**	**07 11 30.2**	**+0.3**
	1.8nm,0.8s						
AAK				⇑Lg	Lg	07 12 16.6	
	9.5nm,1.2s						

IDC ***11*** *07:19:43.9±1.1, 10°.91S×165°.87E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.9/39, mbtmp4.0/10, ML4.5/2, MS3.3/4, Ms1 3.3/4, ms1mx3.0/33, Error ellipse: s-maj=35.5km s-min=23.1km az=127.0*

ISCJB ***11*** *07:19:44.3±0.5, 10°.92S±0°.07×165°.7E±0°.1, h10^{km}, MS3.4/2, Error ellipse: s-maj=15.4km s-min=9.3km az=168.6*

NEIC ***11*** *07:19:46.0±0.5, 10°.82S×165°.64E, h10^{km}, mb4.8/4, Error ellipse: s-maj=13.7km s-min=9.1km az=80.0*

ISC 11 07:19:46.1±0.6**, 10°.85S**±0°.10×**165°.65E**±0°.08**, h10^{km}, n34,** σ**1ˢ64**/31**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.79**	**284**	*e*P	**Pn**	**07 21 16.0**	**+3.9**
HNR				*e*S	**Sg**	**07 22 53.0**	**+0.8**
HNR	**Honiara**	**5.79**	**284**	*e*Pn	**Pn**	**07 21 10.6**	**-1.5**
HNR				*e*Sn	**Sn**	**07 22 14.5**	**-4.2**
HNR	**Honiara**	**5.79**	**284**	Pn	**Pn**	**07 21 15.8**	**+3.7**
	38nm,0.3s,baz=163,slow=11,SNR=3.5						
HNR				LR	LR	07 23 37.5	
	comp=Z,411nm,19.9s,baz=118,slow=39						
MARNC	**Mare, Loyalty**	**10.82**	**168**	*e*Pn	**Pn**	**07 22 22.7**	**+1.6**
DZM	**Mont Dzumac**	**11.19**	**176**	*e*Pn	**Pn**	**07 22 26.9**	**+0.6**
DZM	**Mont Dzumac**	**11.19**	**176**	Pn	**Pn**	**07 22 26.3**	**0.0**
	0.9nm,0.3s,baz=64,slow=7.9,SNR=31						
DZM				LR	LR	07 25 16.9	
	comp=Z,35nm,20.5s,baz=30,slow=30						
PINNC	**Pines Island,**	**11.83**	**172**	*e*Pn	**Pn**	**07 22 35.3**	**+0.3**
URZ	**Urewera**	**29.16**	**161**	LR	LR	07 35 17.7	
	comp=Z,93nm,18.1s,baz=350,slow=32						
H11S2	**WAKE ISLAND Hy**	**29.17**	**2**	T	T	07 56 21.2	
	baz=181,slow=76,SNR=128						
H11S3	**WAKE ISLAND Hy**	**29.17**	**2**	T	T	07 56 21.6	
	baz=181,slow=76,SNR=90						
H11S1	**WAKE ISLAND Hy**	**29.19**	**2**	T	T	07 56 22.5	
	baz=181,slow=76,SNR=89						
BKZ	**Black Stump Fm**	**29.81**	**163**	*e*P	**P**	**07 25 52.4**	**-1.0**
	40nm,1.5s						
H11N1	**WAKE ISLAND Hy**	**30.39**	**2**	T	T	07 57 52.8	
	baz=182,slow=76,SNR=84						
H11N3	**WAKE ISLAND Hy**	**30.40**	**2**	T	T	07 57 52.5	
	baz=182,slow=76,SNR=58						
H11N2	**WAKE ISLAND Hy**	**30.41**	**2**	T	T	07 57 53.3	
	baz=182,slow=76,SNR=59						
STKA	**Stephens Creek**	**30.52**	**223**	LR	LR	07 39 02.3	
	comp=Z,78nm,18.0s,baz=190,slow=38						
WB2	**Warramunga Arr**	**31.45**	**249**	*e*P	**P**	**07 26 06.6**	**-1.6**
	14nm,1.4s						
WR1	**Warramunga Arr**	**31.47**	**249**	*e*P	**P**	**07 26 08.7**	**+0.4**
	6.5nm,0.8s						
WR1				*e*PcP	**PcP**	**07 29 01.8**	**+0.2**
WRA	**Warramunga Arr**	**31.47**	**249**	P	**P**	**07 26 08.7**	**+0.4**
	0.7nm,0.7s,baz=83,slow=9.1,SNR=8.7						
WRA				PcP	**PcP**	**07 29 01.8**	**+0.2**
	0.5nm,0.9s,baz=76,slow=3.0,SNR=4.7						
ASAR	**Alice Springs**	**32.80**	**243**	P	**P**	**07 26 19.4**	**-0.5**
	0.3nm,0.4s,baz=65,slow=10,SNR=8.9						
ASAR				PcP	**PcP**	**07 29 05.3**	**+0.2**
	0.9nm,0.7s,baz=72,slow=2.1,SNR=7.3						
KLR	**Kul'dur**	**66.84**	**337**	P	**P**	**07 30 39.2**	**+1.2**
	1.0nm,1.0s,baz=124,slow=7.8,SNR=4.3						
GAMB	**Gambell**	**76.39**	**10**	*e*P	**P**	**07 31 36.6**	**+1.3**
	23nm,2.0s						
SONA0	**Songino Array**	**78.45**	**324**	*e*P	**P**	**07 31 47.7**	**+0.2**
SONM	**Songino Array**	**78.45**	**324**	P	**P**	**07 31 47.7**	**+0.2**
	0.3nm,0.6s,baz=144,slow=6.6,SNR=3.6						
ILAR	**Eielson Array**	**83.35**	**19**	P	**P**	**07 32 13.1**	**0.0**
	1.2nm,0.5s,baz=238,slow=5.0,SNR=31						
ILB	**Eielson Array**	**83.35**	**19**	*e*P	**P**	**07 32 13.3**	**+0.2**
MK32	**Makanchi Array**	**93.31**	**317**	*e*P	**P**	**07 33 01.7**	**+0.3**
MKAR	**Makanchi Array**	**93.31**	**317**	P	**P**	**07 33 01.7**	**+0.3**
	0.5nm,0.7s,baz=96,slow=6.7,SNR=6.5						
ZALV	**Zalesovo Beam**	**93.34**	**324**	P	**P**	**07 33 01.7**	**+0.5**
	0.4nm,0.3s,baz=150,slow=3.2,SNR=2.7						
ZAA1	**Zalesovo Array**	**93.34**	**324**	*e*P	**P**	**07 33 01.8**	**+0.5**
YKA	**Yellowknife Ar**	**94.84**	**27**	P	**P**	**07 33 05.4**	**-2.6**
	0.2nm,0.6s,baz=258,slow=4.7,SNR=6.0						
YKB5	**Yellowknife Ar**	**94.84**	**27**	*e*P	**P**	**07 33 05.5**	**-2.5**
ARA0	**ARCESS Array S**	**116.12**	**345**	*e*PKPdf	**PKiKP**	**07 38 28.0**	**-1.1**
ARCES	**ARCESS Array B**	**116.12**	**345**	PKP	**PKiKP**	**07 38 28.0**	**-1.1**
	5.2nm,1.1s,baz=45,slow=2.1,SNR=5.2						

WEL 11 07:20:58.1±0.5**, 44°S**±3°×**17°0E**±°**, h5^{km}, ML3.6**/4**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBZ	**Lake Benmore**	**0.53**	**116**	P	Pb	07 21 09.2	-0.7
LBZ				S	Sg	07 21 15.9	+0.7
JCZ	**Jackson Bay**	**0.54**	**279**	P	Pb	07 21 09.5	-0.6
JCZ				S	Sg	07 21 16.3	+0.9
FOZ	**Fox Glacier**	**0.66**	**19**	P	Pg	07 21 11.0	+0.2
FOZ				S	Sb	07 21 20.5	-1.1
WKZ	**Wanaka**	**0.76**	**208**	P	Pg	07 21 12.7	-0.1
EAZ	**Earnscleugh**	**1.08**	**188**	P	Pg	07 21 18.3	-0.6
RPZ	**Rata Peaks**	**1.19**	**69**	P	Pb	07 21 21.1	-0.1
RPZ				S	Sn	07 21 39.2	+1.1
ODZ	**Otahua Downs**	**1.20**	**138**	P	Pg	07 21 20.7	-0.4
ODZ				S	Sb	07 21 37.3	+0.3
MSZ	**Milford Sound**	**1.25**	**245**	P	Pg	07 21 22.0	-0.2
MSZ				S	Sg	07 21 37.7	-0.7
WVZ	**Waitaha Valley**	**1.40**	**40**	P	Pn	07 21 24.1	-0.1
WVZ				S	Sn	07 21 45.6	+2.5
MLZ	**Mavora Lakes**	**1.57**	**219**	P	Pb	07 21 27.3	-0.4
MLZ				S	Sg	07 21 48.6	0.0
TUZ	**Tuapeka**	**1.80**	**178**	P	Pn	07 21 29.4	-0.4
HHSZ	**Highcliff Hill**	**1.89**	**156**	P	Pb	07 21 33.2	+0.1
HHSZ				S	Sb	07 21 57.4	+0.4
INZ	**Inchbonnie**	**2.00**	**45**	P	Pb	07 21 34.0	-1.0
OXZ	**Oxford**	**2.01**	**66**	P	Pn	07 21 33.0	+0.4
WHZ	**Wether Hill Ro**	**2.06**	**212**	P	Pn	07 21 33.2	-0.2
DCZ	**Deep Cove**	**2.13**	**231**	P	Pn	07 21 35.4	+1.1
MQZ	**McQueen's Vall**	**2.31**	**80**	P	Pn	07 21 38.1	+1.4
SYZ	**Scrubby Hill**	**2.40**	**186**	P	Pn	07 21 38.3	+0.3
LTZ	**Lake Taylor**	**2.43**	**56**	P	Pn	07 21 39.6	+1.1
AKCZ	**Akaroa Harbour**	**2.46**	**85**	P	Pb	07 21 41.9	-1.0
AMCZ	**Amberley**	**2.48**	**68**	P	Pn	07 21 40.0	+0.9
OKCZ	**Okains Bay**	**2.59**	**82**	P	Pn	07 21 42.6	+1.9
PYZ	**Puysegur Point**	**2.84**	**224**	P	Pn	07 21 46.3	+2.2
APZ	**The Paps**	**2.88**	**201**	P	Pn	07 21 47.1	+2.3
DSZ	**Denniston Nort**	**2.94**	**36**	P	Pn	07 21 46.7	+1.2
THZ	**Tophouse**	**3.45**	**47**	P	Pn	07 21 53.4	+0.9
QRZ	**Quartz Range**	**4.00**	**35**	P	Pn	07 22 00.6	+0.5
NNZ	**Nelson**	**4.09**	**45**	P	Pn	07 22 04.5	+3.3

IDC 11 07:32:23.6±5.7**, 10°.72S**×**166°.47E, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/30**, mbtmp3.4**/3**, Error ellipse: s-maj=295.2km s-min=34.3km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.27**	**250**	P	P	07 38 53.8	-0.4
	0.3nm,0.8s,baz=81,slow=8.8,SNR=2.8						
ASAR	**Alice Springs**	**33.58**	**243**	P	P	07 39 06.1	+0.4
	0.3nm,0.7s,baz=72,slow=9.9,SNR=4.3						
ILAR	**Eielson Array**	**82.98**	**18**	P	P	07 44 50.3	0.0
	0.5nm,0.9s,baz=234,slow=4.3,SNR=4.6						

ISCJB ***11*** *07:33:10.0±1.1, 23°.94S±0°.09×67°.5W±0°.1, h215^{km}±13^{km}, mb3.2/2, Error ellipse: s-maj=22.2km s-min=14.1km az=10.9*

IDC ***11*** *07:33:10.3±2.1, 23°.87S×67°.27W, h192^{km}±18^{km}, mb3.2/2, mb1 3.6/4, mb1mx3.3/26, mbtmp4.0/4, Error ellipse: s-maj=33.1km s-min=25.9km az=161.0*

GUC ***11*** *07:33:11.0±0.5, 23°.78S×67°.85W, h235^{km}±11^{km}, ML4.3*

ISC 11 07:33:10.1±1.6**, 24°.0S**±0°.1×**67°.4W**±0°.2**, h203^{km}**±15^{km}**, n15,** σ**0ˢ67**/23**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.91**	**314**	P	**Pn**	**07 33 48.6**	**+0.3**
	31nm,0.3s,baz=125,slow=8.5,SNR=478						
LVC				S	**S**	**07 34 17.3**	**-0.1**
	7.0nm,0.3s,baz=50,slow=19,SNR=3.7						
PB06	**IPOC Station P**	**2.33**	**302**	*e*P	**Pn**	**07 33 53.0**	**+0.5**
PB06				*i* S	**S**	**07 34 25.0**	**+0.2**
PB06				IAML		07 34 27.5	
	comp=E,961nm,0.7s						
PB09	**IPOC Station P**	**2.72**	**322**	*e*P	**Pn**	**07 33 57.7**	**+0.8**
PB09				*i* S	**S**	**07 34 33.6**	**+0.9**
PB05	**IPOC Station P**	**2.77**	**293**	*e*P	**Pn**	**07 33 57.7**	**+0.3**
PB05				*i* S	**S**	**07 34 32.8**	**-0.9**
PB05				IAML		07 34 35.6	
	comp=E,414nm,0.9s						
PB03	**IPOC Station P**	**2.86**	**311**	*e*P	**Pn**	**07 33 58.7**	**+0.2**
PB03				*i* S	**S**	**07 34 35.3**	**-0.2**
PB03				IAML		07 34 37.2	
	comp=N,778nm,0.3s						
PB10	**IPOC Station P**	**2.90**	**278**	*e*P	**Pn**	**07 33 58.9**	**+0.1**
PB04	**IPOC Station P**	**2.98**	**302**	*e*P	**Pn**	**07 34 00.3**	**+0.4**
PB04				*i* S	**S**	**07 34 37.4**	**-0.7**
PB04				IAML		07 34 45.0	
	comp=N,438nm,0.2s						
PB07	**IPOC Station P**	**3.17**	**314**	*e*P	**Pn**	**07 34 02.5**	**+0.4**
PB07				*i* S	**S**	**07 34 41.3**	**-0.8**
PB01	**IPOC Station P**	**3.46**	**326**	*i* S	**S**	**07 34 47.7**	**-0.7**
LPAZ	**La Paz**	**7.65**	**355**	P	**Pn**	**07 35 00.3**	**+0.9**
	comp=N,2.4nm,0.3s,baz=183,slow=10,SNR=56						
LPAZ				S	**S**	**07 36 25.2**	**-1.1**
	comp=N,0.2nm,0.3s,baz=122,slow=19,SNR=2.7						
BDFB	**Brasilia**	**20.03**	**69**	P	**P**	**07 37 27.1**	**-0.8**
	comp=N,1.1nm,0.3s,baz=237,slow=10,SNR=18						
TORD	**Torodi Ar. Bea**	**76.91**	**69**	P	**P**	**07 44 40.2**	**-0.3**
	comp=N,0.4nm,0.5s,baz=254,slow=6.3,SNR=4.5						
YKA	**Yellowknife Ar**	**93.94**	**340**	P	**P**	**07 46 04.2**	**0.0**
	comp=N,0.1nm,0.4s,baz=137,slow=4.5,SNR=4.4						
WRA	**Warramunga Arr**	**131.50**	**208**	PKP	**PKiKP**	**07 52 01.4**	**+1.1**
	comp=N,0.1nm,0.5s,baz=149,slow=1.9,SNR=2.9						
MKAR	**Makanchi Array**	**146.73**	**39**	PKPbc	**PKPab**	**07 52 29.6**	**-0.1**
	comp=N,0.1nm,0.6s,baz=315,slow=2.3,SNR=3.3						

IDC ***11*** *07:51:14.9±0.8, 10°.89S×165°.88E, h0^{km}, mb4.3/13, mb1 4.5/15, mb1mx4.2/46, mbtmp4.3/15, ML4.8/2, MS3.7/16, Ms1 3.8/16, ms1mx3.5/43, Error ellipse: s-maj=23.0km s-min=17.2km az=133.0*

ISCJB ***11*** *07:51:15.3±0.3, 11°.00S±0°.05×165°.81E±0°.05, h10^{km}, mb4.7/39, MS3.9/17, Error ellipse: s-maj=8.2km s-min=5.7km az=142.9*

BJI ***11*** *07:51:16.2, 10°.47S×166°.00E, h6^{km}, mb4.7/22, mB5.1/11, Ms4.8/5, Ms7 4.5/7*

NEIC ***11*** *07:51:18.2±2.9, 10°.89S×165°.83E, h20^{km}±20^{km}, mb5.0/22, Error ellipse: s-maj=11.3km s-min=7.3km az=214.0*

ISC 11 07:51:17.1±0.5**, 10°.95S**±0°.08×**165°.87E**±0°.07**, h10^{km}, n76,** σ**1ˢ30**/73**, mb4.9**/39**, MS3.8**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.02**	**284**	*e*Pn	**Pn**	**07 52 44.5**	**-1.7**
HNR				*e*Sn	**Sn**	**07 53 53.4**	**-1.9**
HNR	**Honiara**	**6.02**	**284**	Pn	**Pn**	**07 52 46.9**	**+0.7**
	39nm,0.3s,baz=160,slow=5.7,SNR=7.7						
HNR				Sn	**Sn**	**07 53 55.4**	**+0.2**
	17nm,0.3s,baz=192,slow=19,SNR=5.7						
HNR				LR	LR	07 55 11.7	
	comp=Z,1µm,19.3s,baz=114,slow=39						
MARNC	**Mare, Loyalty**	**10.68**	**169**	*e*Pn	**Pn**	**07 53 50.1**	**0.0**
DZM	**Mont Dzumac**	**11.07**	**177**	*e*Pn	**Pn**	**07 53 56.3**	**+0.6**
	48nm,0.4s						
DZM				*e*LR	LR	07 56 23.0	
	comp=Z,616nm,24.6s						
DZM	**Mont Dzumac**	**11.07**	**177**	*e*Pn	**Pn**	**07 53 56.1**	**+0.4**
DZM	**Mont Dzumac**	**11.07**	**177**	Pn	**Pn**	**07 53 56.5**	**+0.8**
	4.3nm,0.3s,baz=324,slow=9.6,SNR=35						
DZM				Sn	Sn	07 55 52.2	-7.5
	baz=56,slow=13,SNR=1.7						
DZM				LR	LR	07 58 09.1	
	comp=Z,364nm,18.7s,baz=17,slow=37						
PINNC	**Pines Island,**	**11.70**	**173**	*e*Pn	**Pn**	**07 54 05.9**	**+1.8**
MSVF	**Nonsavu**	**13.59**	**121**	*e*Pn	**Pn**	**07 54 30.8**	**+0.6**
EIDS	**Eidsvold**	**20.05**	**222**	*e*P	**P**	**07 55 49.3**	**-1.2**
	37nm,1.1s						
CTA	**Charters Tower**	**20.95**	**242**	P	**P**	**07 56 01.4**	**+1.0**
	12nm,0.8s,baz=78,slow=11,SNR=13						
CTAO	**Charters Tower**	**20.95**	**242**	*e*P	**P**	**07 56 01.4**	**+1.0**
	22nm,0.9s						
COEN	**Coen**	**22.36**	**260**	*e*P	**P**	**07 56 15.6**	**+0.1**
	35nm,1.5s						
ARMA	**Armidale**	**23.46**	**212**	*e*P	**P**	**07 56 27.8**	**+0.8**
	19nm,0.9s						
OUZ	**Omahuta**	**25.16**	**165**	*e*P	**P**	**07 56 45.8**	**+3.1**
	50nm,1.9s						
H11S2	**WAKE ISLAND Hy**	**29.27**	**2**	T	T	08 27 44.2	
	baz=181,slow=76,SNR=61						
H11S3	**WAKE ISLAND Hy**	**29.27**	**2**	T	T	08 27 44.8	
	baz=181,slow=76,SNR=40						
H11S1	**WAKE ISLAND Hy**	**29.28**	**2**	T	T	08 27 44.2	
	baz=181,slow=76,SNR=45						
BKZ	**Black Stump Fm**	**29.65**	**163**	*e*P	**P**	**07 57 22.7**	**-0.3**
	22nm,1.2s						
H11N1	**WAKE ISLAND Hy**	**30.49**	**2**	T	T	08 29 14.2	
	baz=182,slow=76,SNR=46						
H11N3	**WAKE ISLAND Hy**	**30.49**	**2**	T	T	08 29 14.1	
	baz=182,slow=76,SNR=21						
H11N2	**WAKE ISLAND Hy**	**30.50**	**2**	T	T	08 29 15.6	
	baz=182,slow=76,SNR=26						
STKA	**Stephens Creek**	**30.59**	**223**	*e*P	**P**	**07 57 31.9**	**+0.5**
	2.9nm,1.2s						
STKA	**Stephens Creek**	**30.59**	**223**	P	**P**	**07 57 31.3**	**0.0**
	5.2nm,0.8s,baz=36,slow=9.9,SNR=8.9						
STKA				LR	LR	08 09 40.6	
	comp=Z,154nm,18.0s,baz=27,slow=36						
BFZ	**Birch Farm**	**31.00**	**165**	*e*P	**P**	**07 57 33.5**	**-1.3**
	88nm,1.3s						
SNZO	**South Karori**	**31.23**	**167**	*e*P	**P**	**07 57 35.9**	**-0.8**
	181nm,1.4s						
THZ	**Tophouse**	**31.31**	**170**	*e*P	**P**	**07 57 36.6**	**-0.9**
	155nm,2.0s						
WB2	**Warramunga Arr**	**31.61**	**250**	*e*P	**P**	**07 57 39.7**	**-0.8**
WR1	**Warramunga Arr**	**31.63**	**250**	*e*P	**P**	**07 57 39.8**	**-0.8**
	24nm,1.0s						
WR1				*e*PcP	**PcP**	**08 00 32.5**	**-0.4**
WRA	**Warramunga Arr**	**31.63**	**250**	P	**P**	**07 57 39.8**	**-0.8**
	15nm,1.0s,baz=80,slow=9.1,SNR=68						
WRA				PcP	**PcP**	**08 00 32.5**	**-0.4**
	0.2nm,0.7s,baz=78,slow=2.8,SNR=4.6						
WRA				LR	LR	08 10 20.0	
	comp=Z,270nm,18.1s,baz=75,slow=36						
LTZ	**Lake Taylor**	**32.20**	**171**	*e*P	**P**	**07 57 45.5**	**+0.1**
	220nm,2.0s						
TOO	**Toolangi**	**32.22**	**211**	*e*P	**P**	**07 57 44.5**	**-1.1**
	44nm,1.5s						
FOZ	**Fox Glacier**	**32.64**	**175**	*e*P	**P**	**07 57 50.7**	**+1.5**
	76nm,1.2s						
OXZ	**Oxford**	**32.70**	**172**	*e*P	**P**	**07 57 49.8**	**+0.1**
	231nm,2.0s						
AS01	**Alice Springs**	**32.90**	**243**	*e*P	**P**	**07 57 50.3**	**-1.5**
AS31	**Alice Springs**	**32.94**	**243**	*e*P	**P**	**07 57 51.2**	**-0.9**
	0.8nm,0.8s						
ASAR	**Alice Springs**	**32.94**	**243**	P	**P**	**07 57 50.7**	**-1.4**
	1.9nm,0.6s,baz=64,slow=10,SNR=32						
ASAR				PcP	**PcP**	**08 00 36.0**	**-0.4**
	1.7nm,0.9s,baz=72,slow=2.5,SNR=8.5						
ASAR				LR	LR	08 10 23.0	
	comp=Z,170nm,19.4s,baz=78,slow=35						
RPZ	**Rata Peaks**	**32.95**	**173**	*e*P	**P**	**07 57 52.1**	**+0.2**
RPZ	**Rata Peaks**	**32.95**	**173**	P	**P**	**07 57 51.8**	**-0.1**
	17nm,0.8s,baz=311,slow=3.6,SNR=6.7						
RPZ				LR	LR	08 10 14.4	
	comp=Z,203nm,18.2s,baz=9.0,slow=34						
MQZ	**McQueen's Vall**	**33.16**	**171**	*e*P	**P**	**07 57 54.2**	**+0.5**
	337nm,1.9s						
LBZ	**Lake Benmore**	**33.52**	**174**	*e*P	**P**	**07 57 57.6**	**+0.7**
	38nm,1.3s						
RAR	**Rarotonga**	**34.48**	**112**	LR	LR	08 10 15.1	
	comp=Z,47nm,19.6s,baz=230,slow=33						
BBOO	**Buckleboo**	**34.98**	**227**	*e*P	**P**	**07 58 09.5**	**-0.2**
	82nm,1.8s						
FITZ	**Fitzroy Crossi**	**39.52**	**255**	*e*P	**P**	**07 58 47.7**	**-0.7**
	8.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.52**	**255**	P	**P**	**07 58 47.9**	**-0.5**
	9.5nm,0.9s,baz=95,slow=7.3						
FITZ				LR	LR	08 13 56.4	
	comp=Z,145nm,21.1s,baz=81,slow=34						
PPT	**Papeete**	**43.60**	**104**	LR	LR	08 13 15.0	
	comp=Z,50nm,20.7s,baz=287,slow=30						
PPT2	**Papeete2**	**43.60**	**104**	*e*LR	LR	08 11 37.3	
	comp=Z,71nm,24.0s						
MBWA	**Marble Bar**	**45.34**	**251**	*e*P	**P**	**07 59 36.1**	**+0.3**
	13nm,0.9s						
JNU	**Nakatsue**	**55.07**	**324**	LR	LR	08 20 55.6	
	comp=Z,37nm,18.6s,baz=285,slow=32						
ASAJ	**Asahikawa**	**58.74**	**341**	LR	LR	08 22 07.0	
	comp=Z,63nm,19.8s,baz=128,slow=32						
NJ2	**Nanjing**	**62.03**	**315**	*e*P	**P**	**08 01 36.8**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GYA	**Guiyang**	**68.46**	**304**	P	**P**	**08 02 21.4**	**+1.4**
GYA				PP	**PP**	**08 04 54.2**	**+2.9**
GYA				S	**S**	**08 11 22.8**	**+0.6**
GYA				SKS	**SKiKP**	**08 12 16.6**	**+2.2**
GYA				SS	**SS**	**08 15 47.7**	**+1.3**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.3s						
GYA				LR	LR		
	comp=N,480nm,17.9s						
GYA				LR	LR		
	comp=Z,490nm,18.0s						
XAN	**Xi'an**	**70.14**	**312**	P	P	08 02 37.5	+7.3
XAN				pP	PcP	08 02 46.1	-6.0
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KMI	**Kunming**	**71.17**	**301**	P	**P**	**08 02 40.9**	**+4.1**
KMI				pP	sP	08 02 45.4	+4.9
KMI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
HHC	**Hu-ho-hao-te**	**71.83**	**320**	*e*P	**P**	**08 02 40.8**	**+0.4**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
CMAR	**Chiang Mai Arr**	**72.18**	**293**	P	**P**	**08 02 43.1**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=124,slow=3.3,SNR=4.4						
CMAR				LR	LR	08 36 12.3	
	comp=Z,17nm,18.0s,baz=80,slow=37						
CD2	**Chengdu**	**72.64**	**307**	*e*P	**P**	**08 02 46.0**	**+0.7**
LZH	**Lanzhou**	**74.78**	**312**	*e*P	**P**	**08 02 58.8**	**+0.9**
LZH				pP	sP	08 03 03.8	+2.2
LZH				sP	pP	08 03 07.2	+6.6
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
GAMB	**Gambell**	**76.45**	**10**	*e*P	**P**	**08 03 07.2**	**+0.5**
	comp=Z,5.0nm,1.0s						
SONA0	**Songino Array**	**78.66**	**324**	*e*P	**P**	**08 03 20.0**	**+0.4**
SONM	**Songino Array**	**78.66**	**324**	P	**P**	**08 03 20.0**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=144,slow=6.1,SNR=5.3						
GTA	**Gaotai**	**79.08**	**314**	*e*P	**P**	**08 03 23.6**	**+1.6**
GTA				pP	sP	08 03 28.4	+2.7
GTA				sP	PcP	08 03 30.8	+0.3
GTA				S	**S**	**08 13 22.9**	**+1.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,43nm,7.8s						
GTA				LR	LR		
	comp=Z,140nm,23.2s						
GTA				LR	LR		
	comp=Z,110nm,19.7s						
HDA	**Harding Lake**	**83.11**	**19**	*e*P	**P**	**08 03 42.7**	**-0.2**
	comp=Z,11nm,1.1s						
ILAR	**Eielson Array**	**83.39**	**18**	P	**P**	**08 03 44.1**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=233,slow=5.3,SNR=9.4						
BBB	**Bella Bella**	**84.43**	**34**	LR	LR	08 38 10.3	
	comp=Z,92nm,18.0s,baz=264,slow=33						
NVAR	**Mina Array Bea**	**85.87**	**50**	P	**P**	**08 03 57.7**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=251,slow=5.6,SNR=2.9						
NVAR				LR	LR	08 40 31.1	
	comp=Z,61nm,18.3s,baz=321,slow=34						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**89.11**	**315**	P	**P**	**08 04 14.3**	**+1.3**
WMQ				pP	pP	08 04 17.1	+1.4
WMQ				sP	sP	08 04 20.6	+3.9
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,290nm,5.3s						
WMQ				LR	LR		
	comp=Z,81nm,14.9s						
WMQ				LR	LR		
	comp=Z,81nm,16.1s						
WMQ				LR	LR		
	comp=Z,85nm,18.3s						
MK01	**Makanchi Array**	**93.52**	**317**	eP	**P**	**08 04 31.7**	**-1.6**
MK32	**Makanchi Array**	**93.53**	**317**	eP	**P**	**08 04 31.8**	**-1.6**
MKAR	**Makanchi Array**	**93.53**	**317**	P	**P**	**08 04 31.8**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=99,slow=6.3,SNR=9.6						
ZALV	**Zalesovo Beam**	**93.55**	**324**	P	**P**	**08 04 31.4**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=116,slow=3.4,SNR=3.1						
ZAA1	**Zalesovo Array**	**93.55**	**324**	eP	**P**	**08 04 31.4**	**-1.8**
YKA	**Yellowknife Ar**	**94.83**	**27**	P	**P**	**08 04 36.3**	**-2.6**
	comp=Z,0.1nm,0.7s,baz=258,slow=4.6,SNR=3.7						
TXAR	**Lajitas Array**	**95.68**	**61**	LR	LR	08 43 38.8	
	comp=Z,44nm,18.2s,baz=0.0,slow=33						
NRIK	**Noril'sk**	**96.07**	**340**	LR	LR	08 44 55.9	
	comp=Z,30nm,21.9s,baz=92,slow=34						
TORD	**Torodi Ar. Bea**	**164.37**	**280**	PKP	**PKPdf**	**08 11 19.9**	**-2.2**
	comp=Z,0.8nm,1.1s,baz=132,slow=2.1,SNR=2.8						
TORD				PKPab	**PKPab**	**08 12 15.4**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=86,slow=6.2,SNR=3.6						
TOA1	**Torodi Ar. Sit**	**164.37**	**280**	ePKPdf	**PKPdf**	**08 11 19.9**	**-2.2**
TOA1				ePKPab	**PKPab**	**08 12 15.3**	**-1.1**

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*DDA **11** 07:59:37.6, 36°.14N×36°.14E, h8^{km}±2^{km}, ML3.5*
*ISK **11** 07:59:39.4, 36°.20N×36°.16E, h9^{km}, ML3.4/18*
*GII **11** 07:59:41.2±0.0, 36°.18N×35°.94E, h11^{km}, MD2.8/2*
ISC 11 07:59:40.5±1.0, **36°.24N**±0°.03×**36°.10E**±0°.02, **h10**^{km}±8^{km}, **n53**, σ**0ˢ.80**/70, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAHT	**Tahtakopru-Hat**	**0.15**	**28**	PG	**Pg**	**07 59 43.5**	**-0.4**
TAHT				SG	**Sg**	**07 59 46.5**	**+0.2**
KRTS	**Karatas**	**0.67**	**300**	PG	**Pg**	**07 59 53.9**	**+0.4**
KRTS				SG	**Sn**	**08 00 05.2**	**-1.5**
YURE	**YUREGIR**	**0.69**	**328**	PG	**Pb**	**07 59 54.4**	**-0.4**
CEYT	**Ceyhan**	**0.82**	**340**	PG	**Pb**	**07 59 56.7**	**-0.2**
KUZU	**Kuzuini**	**0.95**	**56**	iP	**Pb**	**07 59 59.2**	**+0.1**
KUZU				iS	**Sn**	**08 00 13.6**	**-0.2**
KOZT	**Kozan**	**1.26**	**350**	PN	**Pn**	**08 00 03.8**	**-0.4**
GAZ	**Gaziantep**	**1.29**	**44**	PN	**Pn**	**08 00 04.6**	**-0.2**
KARA	**Karaisali**	**1.32**	**321**	PN	**Pb**	**08 00 05.3**	**-0.1**
ANDN	**Andirin**	**1.35**	**8**	iP	**Pn**	**08 00 05.3**	**-0.3**
ANDN				iS	**Sg**	**08 00 25.5**	**+1.4**
ANDN				IAML_P			
	comp=Z,2μm,0.2s						
MERS	**Mersin**	**1.41**	**297**	PN	**Pb**	**08 00 06.9**	**-0.2**
KMRS	**Kahramanmaras**	**1.42**	**27**	PN	**Pn**	**08 00 06.5**	**0.0**
GULE	**Gulek**	**1.48**	**315**	iP	**Pb**	**08 00 08.6**	**+0.2**
GULE				iS	**Sg**	**08 00 28.9**	**+0.5**
GULE				IAML_P			
	comp=Z,4μm,0.3s						
KIZK	**Mersin**	**1.59**	**279**	PN	**Pb**	**08 00 09.6**	**-0.5**
KIZK	**Mersin**	**1.59**	**279**	iP	**Pb**	**08 00 10.2**	**+0.1**
KIZK				iS	**Sg**	**08 00 32.4**	**+0.6**
GZT	**Gaziantep**	**1.62**	**46**	iP	**Pb**	**08 00 09.8**	**-0.9**
GZT				iS	**Sg**	**08 00 32.7**	**0.0**
EREN	**Erenkoy**	**1.72**	**246**	PN	**Pn**	**08 00 10.6**	**+0.1**
SAIM	**ADANA**	**1.73**	**360**	iP	**Pb**	**08 00 11.5**	**-1.0**
SAIM				IAML_P			
	comp=Z,2μm,0.1s						
KEBE	**Keben-Mersin**	**1.93**	**277**	PN	**Pn**	**08 00 14.1**	**+0.5**
YAHY	**KAYSERI_Yahyal**	**1.94**	**343**	iP	**Pb**	**08 00 15.6**	**-0.5**
YAHY				iS	**Sb**	**08 00 39.3**	**-1.1**
YAHY				IAML_P			
	comp=Z,896nm,0.2s						
IKL	**Isikli**	**1.95**	**271**	PN	**Pn**	**08 00 14.2**	**+0.5**
HWQ	**Hawqa**	**1.96**	**184**	eP	**Pn**	**08 00 13.8**	**-0.2**
KERG	**Konya-Eregli**	**1.97**	**307**	iP	**Pb**	**08 00 15.4**	**-1.1**
KERG				iS	**Sb**	**08 00 41.9**	**+0.7**
YESI	**Yesilovacik-Me**	**1.98**	**269**	PN	**Pn**	**08 00 14.6**	**+0.4**
TEPE	**Tepekoy-Mersin**	**2.05**	**270**	PN	**Pn**	**08 00 15.4**	**+0.3**
AKKU	**Akkuyu-Mersin**	**2.06**	**268**	PN	**Pn**	**08 00 15.7**	**+0.5**
AKK2	**Akkuyu-Mersin**	**2.06**	**268**	PN	**Pn**	**08 00 15.4**	**+0.1**
GULN	**MERSIN_Gulnar**	**2.06**	**269**	iP	**Pn**	**08 00 16.0**	**+0.7**
GULN				iS	**Sb**	**08 00 42.7**	**-1.1**
GULN				IAML_P			
	comp=Z,2μm,0.1s						
SURC	**SANLIURFA_SURC**	**2.12**	**72**	iP	**Pn**	**08 00 16.0**	**-0.2**
SURC				iS	**Sb**	**08 00 44.5**	**-1.2**
OREN	**Orenkoy-Mersin**	**2.13**	**270**	PN	**Pn**	**08 00 16.1**	**-0.1**
ATAB	**Bozova**	**2.15**	**55**	iP	**Pg**	**08 00 21.0**	**-0.8**
ATAB				iS	**Sb**	**08 00 45.1**	**-1.2**
TEVE	**Tevekalti-Mers**	**2.15**	**276**	PN	**Pn**	**08 00 17.7**	**+1.1**
YORU	**Yoruktepe-Mers**	**2.18**	**268**	PN	**Pn**	**08 00 17.5**	**+0.6**
BERE	**Bereket-Mersin**	**2.32**	**273**	PN	**Pn**	**08 00 19.5**	**+0.5**
BHL	**Bhannes**	**2.36**	**189**	eP	**Pn**	**08 00 19.3**	**-0.2**
TEKE	**Tekeli-Mersin**	**2.41**	**269**	PN	**Pn**	**08 00 20.9**	**+0.8**
URFA	**Urfa**	**2.49**	**60**	PN	**Pn**	**08 00 21.7**	**+0.4**
SANL	**SANLIURFA_Merk**	**2.50**	**67**	iP	**Pn**	**08 00 22.7**	**+1.3**
SANL				iS	**Sb**	**08 00 58.5**	**+2.0**
AKCD	**Akcadag**	**2.52**	**35**	iP	**Pn**	**08 00 22.0**	**+0.4**
AKCD				iS	**Sg**	**08 01 03.6**	**+2.2**
DQRL	**Deir Qamar**	**2.57**	**190**	eP	**Pn**	**08 00 22.7**	**+0.4**
DARE	**Darende-Malaty**	**2.58**	**25**	PN	**Pn**	**08 00 22.4**	**0.0**
CSS	**Mathiatis**	**2.59**	**241**	Pn	**Pn**	**08 00 21.6**	**-0.9**
ERMK	**Ermenek**	**2.60**	**280**	iP	**Pb**	**08 00 26.1**	**-1.2**
ERMK				iS	**Sb**	**08 00 59.7**	**+0.3**
BNN	**Bunyan**	**2.61**	**356**	PN	**Pn**	**08 00 23.6**	**+0.6**
RCY	**Rachaya**	**2.75**	**185**	eP	**Pn**	**08 00 25.1**	**+0.3**
SHBL	**Chebaa**	**2.90**	**186**	eP	**Pn**	**08 00 27.5**	**+0.6**
NATI	**Neve Ativ**	**2.99**	**186**	Pn	**Pn**	**08 00 28.2**	**+0.2**
NATI				Sn	**Sn**	**08 01 04.5**	**+0.7**
KSDI	**Kefar Szold**	**3.06**	**187**	Pn	**Pn**	**08 00 29.1**	**+0.1**
CUSAR	**Sarkisla-SIVAS**	**3.17**	**2**	iP	**Pn**	**08 00 30.5**	**-0.2**
CUKAN	**kangal_SIVAS**	**3.26**	**19**	iP	**Pn**	**08 00 34.3**	**+2.5**
MMA0B	**Mount Meron ar**	**3.27**	**190**	Pn	**Pn**	**08 00 31.7**	**-0.2**
MMA0B				Sn	**Sn**	**08 01 11.5**	**+0.6**
OFRI	**`Ofer**	**3.73**	**195**	Pn	**Pn**	**08 00 37.9**	**-0.3**
MMLI	**Mount Malkishu**	**3.83**	**189**	Pn	**Pn**	**08 00 40.1**	**+0.4**
DSI	**Dead Sea**	**4.70**	**187**	Pn	**Pn**	**08 00 52.0**	**+0.5**

IDC 11 08:02:00.9±1.8, **9°.56S**×**119°.77E**, **h0**^{km}, **mb3.3**/1, **mb1 3.6**/5, **mb1mx3.4**/44, **mbtmp3.5**/5, **ML3.4**/4, **Error ellipse: s-maj=77.3km s-min=23.5km az=47.0, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.89**	**100**	Pn	Pn	08 03 02.8	+0.7
	19nm,0.3s,baz=246,slow=6.1,SNR=11						
BATI				Sn	Sn	08 03 38.7	-10
	11nm,0.3s,baz=291,slow=21,SNR=6.2						
FITZ	**Fitzroy Crossi**	**10.22**	**147**	Pn	Pn	08 04 29.5	+0.5
	0.0nm,0.3s,baz=338,slow=14,SNR=2.5						
FITZ				Sn	Sn	08 06 15.4	-9.1
	0.2nm,0.3s,baz=279,slow=17,SNR=5.2						
WRA	**Warramunga Arr**	**17.45**	**128**	P	Pn	08 06 04.2	-1.8
	0.2nm,0.3s,baz=306,slow=14,SNR=13						
ASAR	**Alice Springs**	**19.47**	**138**	P	P	08 06 30.1	+0.5
	0.1nm,0.3s,baz=312,slow=10,SNR=4.7						
MKAR	**Makanchi Array**	**65.30**	**333**	P	P	08 12 44.7	-0.1
	0.1nm,0.5s,baz=142,slow=7.2,SNR=2.6						

MEX 11 08:11:01.2±0.5, **14°.01N**×**91°.55W**, **h101**^{km}±16^{km}, **MD3.9**, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.13**	**322**	iP	Pn	08 11 21.8	-1.4
THIG				iS	Sn	08 11 38.5	-1.3
PCIG		**2.34**	**316**	eP	Pn	08 11 37.5	-0.7
PCIG				eS	Sn	08 12 04.9	-1.6

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*IDC **11** 08:13:38.7±1.5, 11°.01S×165°.10E, h0^{km}, mb3.4/4, mb1 3.8/6, mb1mx3.5/43, mbtmp3.6/6, ML3.7/2, MS3.2/3, Ms1 3.2/3, ms1mx2.9/17, Error ellipse: s-maj=39.4km s-min=28.3km az=124.0*
*ISCJB **11** 08:13:41.0±1.3, 11°.1S±0°.1×165°.0E±0°.2, h31^{km}, mb3.4/4, MS3.2/2, Error ellipse: s-maj=24.9km s-min=16.9km az=147.0*
ISC 11 08:13:43.4±1.3, **11°.0S**±0°.1×**165°.0E**±0°.2, **h31**^{km}, **n14**, σ**1ˢ.94**/6, **mb3.4**/4, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.19**	**287**	Pn	**Pn**	**08 14 57.6**	**-1.4**
	3.6nm,0.3s,baz=196,slow=7.4,SNR=1.7						
HNR				LR	LR	08 16 41.2	
	comp=Z,8.7nm,19.7s,baz=93,slow=34						
DZM	**Mont Dzumac**	**11.07**	**173**	Pn	**Pn**	**08 16 19.4**	**-0.4**
	0.3nm,0.3s,baz=332,slow=18,SNR=2.9						
DZM				LR	LR	08 20 11.5	
	comp=Z,101nm,18.5s,baz=16,slow=36						
H11S2	**WAKE ISLAND Hy**	**29.38**	**3**	T	T	08 50 10.6	
	baz=183,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**29.38**	**3**	T	T	08 50 10.8	
	baz=183,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.40**	**3**	T	T	08 50 10.2	
	baz=183,slow=76,SNR=20						
STKA	**Stephens Creek**	**29.93**	**223**	LR	LR	08 31 39.2	
	comp=Z,61nm,18.4s,baz=21,slow=36						
H11N1	**WAKE ISLAND Hy**	**30.61**	**4**	T	T	08 51 42.2	
	baz=182,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**30.61**	**4**	T	T	08 51 37.3	
	baz=182,slow=76,SNR=20						
H11N2	**WAKE ISLAND Hy**	**30.62**	**4**	T	T	08 51 43.7	
	baz=182,slow=76,SNR=25						
WRA	**Warramunga Arr**	**30.77**	**250**	P	**P**	**08 19 56.9**	**+0.5**
	0.8nm,1.0s,baz=82,slow=10,SNR=6.0						
ASAR	**Alice Springs**	**32.12**	**243**	P	**P**	**08 20 08.9**	**+0.7**
	0.3nm,0.8s,baz=64,slow=10,SNR=3.9						
DAV	**Davao City (W)**	**43.12**	**293**	LR	LR	08 39 34.7	
	comp=Z,26nm,18.4s,baz=194,slow=36						
SONM	**Songino Array**	**78.20**	**324**	P	**P**	**08 25 42.5**	**+2.5**
	0.2nm,0.7s,baz=132,slow=4.1,SNR=2.3						
ILAR	**Eielson Array**	**83.74**	**19**	P	**P**	**08 26 07.5**	**-1.6**
	0.5nm,1.1s,baz=226,slow=4.8,SNR=3.1						

IDC 11 08:15:52.2±3.8, **11°.67S**×**165°.51E**, **h0**^{km}, **mb3.5**/4, **mb1 3.8**/4, **mb1mx3.5**/42, **mbtmp3.5**/4, **Error ellipse: s-maj=160.8km s-min=34.0km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.06**	**251**	P	P	08 22 12.9	+0.6
	0.4nm,0.8s,baz=82,slow=8.8,SNR=5.1						
ASAR	**Alice Springs**	**32.31**	**244**	P	P	08 22 23.1	-0.2
	0.3nm,0.5s,baz=74,slow=9.5,SNR=5.8						
ILAR	**Eielson Array**	**84.18**	**19**	P	P	08 28 25.7	+0.6
	0.5nm,1.1s,baz=240,slow=5.0,SNR=4.2						
MKAR	**Makanchi Array**	**93.82**	**317**	P	P	08 29 10.1	-1.5
	0.2nm,0.7s,baz=107,slow=5.0,SNR=2.4						

IDC 11 08:21:03.5±1.7, **11°.52S**×**165°.21E**, **h0**^{km}, **mb3.7**/3, **mb1 4.0**/4, **mb1mx3.6**/37, **mbtmp3.8**/4, **ML3.6**/1, **Error ellipse: s-maj=51.5km s-min=31.1km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.56**	**174**	Pn	Pn	08 23 36.3	0.0
	0.5nm,0.3s,baz=300,slow=13,SNR=8.0						
WRA	**Warramunga Arr**	**30.82**	**250**	P	P	08 27 22.0	+0.5
	2.4nm,0.9s,baz=81,slow=9.2,SNR=15						
ASAR	**Alice Springs**	**32.11**	**244**	P	P	08 27 32.1	-0.7
	0.6nm,0.7s,baz=70,slow=10,SNR=5.0						
ILAR	**Eielson Array**	**84.13**	**19**	P	P	08 33 36.1	0.0
	0.3nm,0.8s,baz=241,slow=5.4,SNR=3.5						

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*ISCJB **11** 08:27:03.0±0.5, 38°.82N±0°.03×122°.82W±0°.04, h4^{km}±3^{km}, Error ellipse: s-maj=5.8km s-min=3.7km az=44.1*
*IDC **11** 08:27:03.0±3.3, 38°.87N×123°.00W, h0^{km}, mb1 3.6/4, mb1mx3.3/41, mbtmp3.2/4, ML3.0/4, Error ellipse: s-maj=41.8km s-min=15.2km az=41.0*
*NEIC **11** 08:27:03.4±0.0, 38°.82N×122°.82W, h3^{km}, MD2.9(NCEDC), After NCEDC.*
ISC 11 08:27:03.4±0.9, **38°.81N**±0°.03×**122°.81W**±0°.03, **h3**^{km}±5^{km}, **n38**, σ**2ˢ.02**/54, **Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.01**	**117**	ePg	**Pg**	**08 27 04.2**	**+0.1**
GDXM				eSg	**Sg**	**08 27 04.6**	**0.0**
HOPS	**Hopland Field**	**0.27**	**311**	ePg	**Pg**	**08 27 09.2**	**+0.6**
HOPS				eSg	**Sg**	**08 27 10.5**	**-1.7**
MCCM	**Marconi Confer**	**0.67**	**185**	ePg	**Pb**	**08 27 17.4**	**-0.3**
MCCM				eSg	**Sg**	**08 27 24.5**	**-0.4**
KCPM	**Cahto Peak**	**1.06**	**326**	ePn	**Pn**	**08 27 24.9**	**-0.4**
KCPM				eSg	**Sb**	**08 27 39.1**	**+0.4**
ORV	**Oroville**	**1.26**	**54**	ePg	**Pg**	**08 27 25.6**	**-1.8**
ORV				eSg	**Sg**	**08 27 43.4**	**-0.4**
AFDM	**Forest Hills D**	**1.44**	**84**	ePn	**Pn**	**08 27 28.4**	**-1.9**
AFDM				eSn	**Sb**	**08 27 45.0**	**-4.5**
KMRM	**Mail Ridge**	**1.57**	**334**	ePn	**Pg**	**08 27 34.9**	**+1.4**
KMRM				eSn	**Sn**	**08 27 50.9**	**-2.2**
WDC	**Whiskeytown Da**	**1.78**	**7**	ePn	**Pg**	**08 27 38.1**	**+0.6**
CMB	**Columbia Colle**	**2.05**	**111**	ePn	**Pn**	**08 27 38.8**	**-0.1**
RUBR	**Rubicon Trail**	**2.08**	**83**	ePn	**Pn**	**08 27 40.5**	**+1.2**
RUBR				eSn	**Sn**	**08 28 06.7**	**+0.7**
BEKR	**Beckworth**	**2.17**	**60**	ePn	**Pn**	**08 27 41.7**	**+1.2**
BEKR				eSn	**Sn**	**08 28 08.6**	**+0.5**
KHMM	**Horse Mountain**	**2.18**	**341**	ePn	**Pn**	**08 27 38.5**	**-2.2**
JCC	**Jacoby Creek,**	**2.21**	**335**	ePn	**Pn**	**08 27 39.8**	**-1.1**
JCC				eSn	**Sn**	**08 28 09.0**	**+0.2**
SAO	**San Andreas Ge**	**2.31**	**152**	ePn	**Pn**	**08 27 41.1**	**-1.3**
VCNR	**Virginia City**	**2.50**	**78**	ePn	**Pn**	**08 27 46.5**	**+1.3**
PNTR	**Pine Nut**	**2.52**	**83**	ePn	**Pn**	**08 27 47.5**	**+2.1**
WAKR	**Walker**	**2.66**	**96**	ePn	**Pn**	**08 27 49.5**	**+2.2**
WAKR				eSn	**Sn**	**08 28 20.1**	**0.0**
YERR	**Yerington**	**2.79**	**85**	ePn	**Pn**	**08 27 50.5**	**+1.5**
PAHR	**Pah Rah Range**	**2.80**	**70**	ePn	**Pn**	**08 27 49.5**	**+0.2**
PAHR				eSn	**Sn**	**08 28 23.6**	**0.0**
YBH	**Yreka Blue Hor**	**2.92**	**1**	ePn	**Pn**	**08 27 50.9**	**+0.2**
YBH	**Yreka Blue Hor**	**2.92**	**1**	Pn	**Pn**	**08 27 51.9**	**+1.2**
	0.1nm,0.3s,baz=185,slow=12,SNR=3.5						
MDPB	**Devils Postpil**	**3.16**	**111**	ePn	**Pn**	**08 27 54.5**	**+0.2**
OMMB	**Old Mammoth Mi**	**3.23**	**111**	ePn	**Pn**	**08 27 55.2**	**0.0**
RYN	**Ryan**	**3.36**	**92**	ePn	**Pn**	**08 27 57.5**	**+0.6**
NV01	**Mina Array Sit**	**3.55**	**95**	ePn	**Pn**	**08 27 59.8**	**+0.3**
NVAR	**Mina Array Bea**	**3.55**	**95**	Pn	**Pn**	**08 28 00.8**	**+1.2**
	0.6nm,0.3s,baz=270,slow=15,SNR=14						
NVAR				Pg	**Pb**	**08 28 07.4**	**+0.5**
	1.8nm,0.3s,baz=270,slow=19,SNR=49						
NVAR				Lg	Lg	08 28 59.9	
	0.6nm,0.3s,baz=277,slow=28,SNR=2.5						
NV11	**Mina Array Sit**	**3.66**	**95**	ePn	**Pn**	**08 28 01.8**	**+0.8**
NV11				eSn	**Sn**	**08 28 44.8**	**0.0**
KVN	**Kaiserville**	**3.68**	**85**	ePn	**Pn**	**08 28 01.5**	**+0.2**
PAGB	**Antelope Grade**	**3.69**	**146**	ePn	**Pn**	**08 28 00.2**	**-1.2**
HUMO	**Hull Mountain**	**3.79**	**358**	ePn	**Pn**	**08 27 58.5**	**-4.2**
ISA	**Isabella, Lake**	**4.67**	**131**	ePn	**Pn**	**08 28 15.2**	**+0.3**
WVOR	**Wild Horse Val**	**4.81**	**40**	ePn	**Pn**	**08 28 12.4**	**-4.4**
WVOR				eSn	**Sn**	**08 29 11.1**	**-2.0**
DAC	**Darwin (Calif)**	**4.86**	**120**	ePn	**Pn**	**08 28 13.2**	**-4.3**
DAC				eSn	**Sn**	**08 29 11.4**	**-2.9**
ELK	**Elko**	**6.14**	**69**	Pn	**Pn**	**08 28 37.9**	**+2.7**
	0.1nm,0.3s,baz=260,slow=14,SNR=4.2						
PD31	**Pinedale Array**	**10.79**	**64**	ePn	**Pn**	**08 29 43.3**	**+4.3**
PDAR	**Pinedale Array**	**10.79**	**64**	Pn	**Pn**	**08 29 43.3**	**+4.3**
	0.0nm,0.3s,baz=238,slow=14,SNR=6.5						
LTX	**Lajitas**	**18.43**	**115**	eP	**P**	**08 31 23.3**	**+3.3**
TXAR	**Lajitas Array**	**18.43**	**115**	P	**P**	**08 31 23.3**	**+3.3**
	0.0nm,0.3s,baz=292,slow=6.6,SNR=4.9						

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*KRNET **11** 08:32:32.8±0.1, 42°.61N×79°.67E, h17^{km}, mb3.2*
*ISCJB **11** 08:32:33.9±0.7, 42°.60N±0°.04×79°.76E±0°.04, h10^{km}, Error ellipse: s-maj=6.3km s-min=3.0km az=139.9*
*SOME **11** 08:32:33.3, 42°.60N×79°.67E, h15^{km}*
*NNC **11** 08:32:33.4±0.7, 42°.64N×79°.68E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=4.7km s-min=2.7km az=134.0*
ISC 11 08:32:32.9±1.2, **42°.64N**±0°.05×**79°.76E**±0°.04, **h10**^{km}, **n63**, σ**1ˢ.38**/105, **17C-27D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**0.72**	**344**	P	**Pb**	**08 32 46.9**	**-0.7**
	18nm,0.2s						
PDGK				S	**Sb**	**08 32 56.8**	**-0.8**
	22nm,0.2s						
PDGK	**Podgornoye**	**0.72**	**344**	⇑P	**Pb**	**08 32 46.7**	**-0.9**
	15nm,0.3s						
PDGK				⇓S	**Sb**	**08 32 57.2**	**-0.4**
	8.2nm,0.3s						
PDGK	**Podgornoye**	**0.72**	**344**	⇓iP	**Pb**	**08 32 46.9**	**-0.7**
	baz=49						
PDGK				⇓iS	**Sb**	**08 32 57.5**	**0.0**
	baz=49						
UZB	**Uzynbulak**	**0.74**	**313**	P	**Pg**	**08 32 46.7**	**-0.5**
	23nm,0.1s						
UZB				S	**Sb**	**08 32 56.7**	**-1.5**
	146nm,0.2s						
UZB	**Uzynbulak**	**0.74**	**313**	eP	**Pg**	**08 32 46.7**	**-0.5**
	baz=19						
UZB				eS	**Sb**	**08 32 56.7**	**-1.5**
	baz=19						
UZB	**Uzynbulak**	**0.74**	**313**	eP	**Pg**	**08 32 46.7**	**-0.5**
	23nm,0.1s						
UZB				eS	**Sb**	**08 32 56.7**	**-1.5**
	146nm,0.2s						
KTMS	**Ketmen**	**0.92**	**28**	P	**Pn**	**08 32 51.2**	**-0.8**
	15nm,0.1s						
KTMS				S	**Sn**	**08 33 04.4**	**-1.0**
	29nm,0.2s						
KTMS	**Ketmen**	**0.92**	**28**	eP	**Pn**	**08 32 51.3**	**-0.8**
	baz=30						
KTMS				eS	**Sn**	**08 33 04.3**	**-1.0**
	baz=30						
KTMS	**Ketmen**	**0.92**	**28**	eP	**Pn**	**08 32 51.3**	**-0.8**
	11nm,0.1s						
KTMS				eS	**Sn**	**08 33 04.2**	**-1.1**
	26nm,0.2s						
PRZ	**Przheval'sk**	**1.01**	**262**	⇓iP	**Pg**	**08 32 50.1**	**-2.3**
	baz=63						
PRZ				⇓iS	**Sg**	**08 33 03.0**	**-2.6**
	baz=63						
KURS	**Kuram**	**1.44**	**307**	P	**Pb**	**08 32 59.4**	**-0.5**
	4.2nm,0.3s						
KURS				S	**Sg**	**08 33 18.1**	**-1.1**
	22nm,0.4s						
KURS	**Kuram**	**1.44**	**307**	eP	**Pb**	**08 32 59.4**	**-0.5**
	baz=9.0						
KURS				eS	**Sg**	**08 33 18.1**	**-1.1**
	baz=9.0						
KURS	**Kuram**	**1.44**	**307**	eP	**Pb**	**08 32 59.4**	**-0.5**
	4.2nm,0.3s						
KURS				eS	**Sg**	**08 33 18.1**	**-1.1**
	22nm,0.4s						
DJR	**Jarkent**	**1.69**	**1**	P	**Pg**	**08 33 05.7**	**+0.3**
	5.2nm,0.2s						
DJR				S	**Sg**	**08 33 28.9**	**+1.6**
	18nm,0.2s						
DJR	**Jarkent**	**1.69**	**1**	eP	**Pg**	**08 33 05.7**	**+0.3**
	5.2nm,0.2s						
DJR				eS	**Sg**	**08 33 28.9**	**+1.6**
	18nm,0.2s						
MNBS	**Baschi**	**1.75**	**326**	P	**Pb**	**08 33 04.9**	**-0.2**
	13nm,0.2s						
MNBS				S	**Sg**	**08 33 28.1**	**-0.9**
	139nm,0.3s						
MNBS	**Baschi**	**1.75**	**326**	eP	**Pg**	**08 33 05.0**	**-1.4**
	13nm,0.2s						
MNBS				eS	**Sg**	**08 33 27.9**	**-1.2**
	139nm,0.3s						
KDJ	**Kajisay**	**1.98**	**256**	⇓iP	**Pb**	**08 33 07.7**	**-1.4**
	baz=56						
KDJ				⇓iS	**Sb**	**08 33 32.9**	**-0.9**
	baz=56						
KOTS	**Kotyrbulak**	**2.03**	**288**	Pg	**Pb**	**08 33 10.2**	**+0.2**
	14nm,0.2s						
KOTS				Lg	Lg	08 33 36.8	
	110nm,0.3s						
KOTS	**Kotyrbulak**	**2.03**	**288**	eP	**Pb**	**08 33 10.2**	**+0.2**
	14nm,0.2s						
KOTS				eS	**Sg**	**08 33 36.8**	**-1.4**
	110nm,0.3s						
MDOK	**Medeo**	**2.06**	**286**	Pn	**Pb**	**08 33 09.2**	**-1.3**
	8.2nm,0.5s						
MDOK				Sn	**Sb**	**08 33 35.5**	**-0.7**
	19nm,0.4s						
MDOK	**Medeo**	**2.06**	**286**	Pg	**Pg**	**08 33 11.2**	**-1.1**
	12nm,0.2s						
MDOK				Lg	Lg	08 33 38.3	
	49nm,0.4s						
MDOK	**Medeo**	**2.06**	**286**	eP	**Pg**	**08 33 11.2**	**-1.1**
	12nm,0.2s						
MDOK				eS	**Sg**	**08 33 38.4**	**-0.7**
	49nm,0.4s						
TNSS	**Tian-Shan**	**2.10**	**282**	Pg	**Pb**	**08 33 11.3**	**-0.1**
	16nm,0.3s						
TNSS				Lg	Lg	08 33 38.3	
	30nm,0.3s						
TNSS	**Tian-Shan**	**2.10**	**282**	eP	**Pb**	**08 33 11.3**	**-0.1**
	16nm,0.3s						
TNSS				eS	**Sb**	**08 33 38.4**	**+0.6**
	30nm,0.3s						
ARXS	**Arharly**	**2.11**	**319**	Pg	**Pb**	**08 33 11.3**	**0.0**
	9.9nm,0.4s						
ARXS				Lg	Lg	08 33 38.5	
	69nm,0.4s						
ARXS	**Arharly**	**2.11**	**319**	eP	**Pb**	**08 33 11.3**	**0.0**
	9.9nm,0.4s						
ARXS				eS	**Sg**	**08 33 38.5**	**-2.2**
	69nm,0.4s						
IZV	**Izvestkoviy**	**2.34**	**281**	Pg	**Pb**	**08 33 15.3**	**-0.1**
	19nm,0.1s						
IZV				Lg	Lg	08 33 45.3	
	66nm,0.2s						
IZV	**Izvestkoviy**	**2.34**	**281**	eP	**Pb**	**08 33 15.3**	**-0.1**
	19nm,0.1s						
IZV				eS	**Sb**	**08 33 45.3**	**+0.9**
	66nm,0.2s						
CHKK	**Chushkaly**	**2.36**	**302**	Pg	**Pb**	**08 33 15.2**	**-0.3**
	4.3nm,0.1s						
CHKK				Lg	Lg	08 33 45.3	
	79nm,0.2s						
CHKK	**Chushkaly**	**2.36**	**302**	eP	**Pb**	**08 33 15.2**	**-0.3**
	4.3nm,0.1s						
CHKK				eS	**Sb**	**08 33 45.3**	**+0.6**
	79nm,0.2s						
KTBS	**Karatobe**	**2.49**	**297**	Pg	**Pb**	**08 33 17.3**	**-0.5**
	5.2nm,0.2s						
KTBS				Lg	Lg	08 33 48.9	
	59nm,0.2s						
KTBS	**Karatobe**	**2.49**	**297**	eP	**Pb**	**08 33 17.3**	**-0.5**
	baz=97						
KTBS				eS	**Sb**	**08 33 48.9**	**+0.4**
	baz=97						
KTBS	**Karatobe**	**2.49**	**297**	eP	**Pb**	**08 33 17.3**	**-0.5**
	5.2nm,0.2s						
KTBS				eS	**Sb**	**08 33 48.9**	**+0.4**
	59nm,0.2s						
MTBS	**Maitube**	**2.49**	**282**	Pg	**Pb**	**08 33 17.7**	**-0.2**
	25nm,0.2s						
MTBS				Lg	Lg	08 33 49.4	
	31nm,0.4s						
MTBS	**Maitube**	**2.49**	**282**	eP	**Pb**	**08 33 17.7**	**-0.2**
	25nm,0.2s						
MTBS				eS	**Sb**	**08 33 49.4**	**+0.7**
	31nm,0.4s						
ULHL	**Ulahol**	**2.63**	**263**	⇑iP	**Pn**	**08 33 17.3**	**+1.7**
	baz=63						
ULHL				⇑iS	**Sn**	**08 33 49.3**	**+1.6**
	baz=63						
KAPS	**Kapalarasan**	**2.66**	**354**	Pg	**Pg**	**08 33 21.8**	**-2.1**
	3.7nm,0.2s						
KAPS				Lg	Lg	08 33 56.4	
	12nm,0.2s						
KAPS	**Kapalarasan**	**2.66**	**354**	eP	**Pg**	**08 33 21.8**	**-2.1**
	3.7nm,0.2s						
KAPS				eS	**Sg**	**08 33 56.4**	**-2.0**
	12nm,0.2s						
KUU	**Kurty**	**2.79**	**298**	Pg	**Pb**	**08 33 22.7**	**-0.2**
	2.7nm,0.2s						
KUU				Lg	Lg	08 33 58.1	
	26nm,0.3s						
KUU	**Kurty**	**2.79**	**298**	eP	**Pb**	**08 33 22.7**	**-0.2**
	2.7nm,0.2s						
KUU				eS	**Sb**	**08 33 58.1**	**+1.0**
	26nm,0.3s						
KST	**Kastek**	**2.82**	**280**	Pg	**Pb**	**08 33 23.4**	**0.0**
	14nm,0.2s						
KST				Lg	Lg	08 33 59.2	
	14nm,0.2s						

KST	**Kastek**	**2.82**	**280**	*e*P	**Pb**	**08 33 23.4**	**0.0**
	14nm,0.2s						
KST				*e*S	**Sb**	**08 33 59.2**	**+1.2**
	14nm,0.2s						
BOOM	**Boomskoye usch**	**2.82**	**268**	⇓*i*P	**Pn**	**08 33 20.1**	**+1.9**
	baz=69						
BOOM				⇓*i*S	**Sn**	**08 33 54.0**	**+1.6**
	baz=69						
DGS	**Degeres**	**2.99**	**283**	Pg	**Pb**	**08 33 26.3**	**0.0**
	9.2nm,0.3s						
DGS				Lg	Lg	08 34 04.5	
	44nm,0.5s						
DGS	**Degeres**	**2.99**	**283**	*e*P	**Pb**	**08 33 26.3**	**0.0**
	9.2nm,0.3s						
DGS				*e*S	**Sb**	**08 34 04.5**	**+1.7**
	44nm,0.5s						
NRN	**Naryn**	**3.05**	**248**	⇑*i*P	**Pn**	**08 33 23.4**	**+1.9**
	baz=48						
NRN				⇑*i*S	**Sn**	**08 34 00.0**	**+1.9**
	baz=48						
TKM2	**Tokmak 2**	**3.07**	**277**	⇓Pn	**Pb**	**08 33 24.5**	**-3.4**
	2.9nm,0.5s						
TKM2				⇓Lg	Lg	08 34 09.3	
	8.8nm,0.5s						
TKM2	**Tokmak 2**	**3.07**	**277**	⇑*i*P	**Pn**	**08 33 23.5**	**+1.8**
	baz=77						
TKM2				⇑*i*S	**Sn**	**08 34 00.1**	**+1.4**
	baz=77						
KZA	**Kyzart**	**3.39**	**262**	⇓*i*P	**Pn**	**08 33 27.9**	**+1.7**
	baz=62						
KZA				⇓*i*S	**Sn**	**08 34 07.6**	**+1.0**
	baz=62						
KBK	**Karagaybulak**	**3.55**	**272**	⇓*i*P	**Pn**	**08 33 29.9**	**+1.7**
	baz=72						
KBK				⇓*i*S	**Sn**	**08 34 11.5**	**+1.2**
	baz=72						
CHMS	**Chumysh**	**3.70**	**277**	⇑*i*P	**Pn**	**08 33 32.0**	**+1.8**
	baz=78						
CHMS				⇑*i*S	**Sn**	**08 34 15.2**	**+1.4**
	baz=78						
AAK	**Ala-Archa**	**3.88**	**272**	⇑Pg	**Pb**	**08 33 41.7**	**+0.1**
	5.2nm,0.8s						
AAK				⇓Lg	Lg	08 34 34.3	
	6.1nm,0.8s						
AAK	**Ala-Archa**	**3.88**	**272**	⇓*i*P	**Pn**	**08 33 34.4**	**+1.6**
	baz=72						
AAK				⇓*i*S	**Sn**	**08 34 19.4**	**+0.9**
	baz=72						
UCH	**Uchtor**	**3.90**	**266**	⇓*i*P	**Pn**	**08 33 34.9**	**+1.6**
	baz=66						
UCH				⇓*e*S	**Sn**	**08 34 20.4**	**+1.0**
	baz=66						
ARLS	**Aral**	**4.11**	**261**	⇑*i*P	**Pn**	**08 33 37.2**	**+1.3**
	baz=61						
ARLS				⇑*i*S	**Sn**	**08 34 24.7**	**+0.6**
	baz=61						
MAKZ	**Makanchi**	**4.46**	**20**	⇑Pn	**Pn**	**08 33 43.1**	**+2.5**
	0.5nm,0.5s						
MAKZ				⇓Sn	**Sn**	**08 34 36.0**	**+3.5**
	0.3nm,0.3s						
MAKZ				⇑Lg	Lg	08 34 53.4	
	0.6nm,0.6s						
MK31	**Makanchi Array**	**4.53**	**23**	⇓Pn	**Pn**	**08 33 43.9**	**+2.4**
	0.2nm,0.3s,baz=205,slow=13,SNR=26						
MK31				⇑Sn	**Sn**	**08 34 37.3**	**+3.0**
	0.3nm,0.3s,baz=203,slow=24,SNR=4.1						
MK31				⇑Lg	Lg	08 34 54.9	
	0.4nm,0.3s,baz=201,slow=25,SNR=6.0						
MRKS	**Merke**	**4.81**	**273**	Pg	**Pb**	**08 33 59.5**	**+2.1**
	3.2nm,0.3s						
MRKS				Lg	Lg	08 35 01.0	
	4.1nm,0.3s						
MNAS	**Manas**	**5.36**	**271**	⇓Pg	**Pb**	**08 34 08.7**	**+2.0**
	0.8nm,0.5s						
MNAS				⇓Lg	Lg	08 35 21.8	
	0.7nm,0.6s						
KK31	**Karatay Array**	**6.81**	**277**	⇑Pg	**Pg**	**08 34 39.2**	**-4.1**
	0.7nm,0.7s,baz=94,slow=16,SNR=4.9						
KK31				⇓Lg	Lg	08 36 07.1	
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**8.03**	**354**	⇓Lg	Lg	08 36 49.1	
	21nm,1.0s						
KURK	**Kurchatov**	**8.12**	**355**	⇓Lg	Lg	08 36 49.3	
	15nm,1.3s						

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*DDA **11** 08:34:07.9, 37°.29N×37°.14E, h7^{km}±4^{km}, ML2.9*

*ISCJB **11** 08:34:08.9±0.5, 37°.26N±0°.03×37°.11E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=5.3km s-min=3.5km az=23.7*

*ISK **11** 08:34:08.1, 37°.28N×37°.13E, h8^{km}, ML2.1/7*

ISC 11 08:34:08.5±0.9, 37°.27N±0°.03×37°.12E±0°.02, h11^{km}±7^{km}, n16, σ0^{s}.40/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	**Gaziantep**	**0.12**	**141**	PG	**Pg**	**08 34 11.6**	**-0.1**
GAZ				SG	**Sg**	**08 34 13.8**	**-0.1**
KMRS	**Kahramanmaras**	**0.29**	**324**	PG	**Pg**	**08 34 14.4**	**-0.2**
KMRS				SG	**Sg**	**08 34 18.9**	**+0.3**
GZT	**Gaziantep**	**0.37**	**76**	*i* P	**Pg**	**08 34 15.9**	**0.0**
GZT				*i* S	**Sg**	**08 34 21.6**	**+0.7**
GZT				IAML_P			
	comp=Z,3μm,0.1s						
KUZU	**Kuzuini**	**0.49**	**184**	*i* P	**Pb**	**08 34 19.1**	**-0.1**
KUZU				*i* S	**Sb**	**08 34 26.3**	**-0.2**
ANDN	**Andirin**	**0.69**	**297**	*i* P	**Pb**	**08 34 22.5**	**-0.1**
ANDN				*i* S	**Sn**	**08 34 34.5**	**-0.5**
ANDN				IAML_P			
	comp=Z,2μm,0.1s						
KOZT	**Kozan**	**1.05**	**282**	PG	**Pg**	**08 34 28.3**	**-0.4**
KOZT				SG	**Sn**	**08 34 43.9**	**+0.1**
SAIM	**ADANA**	**1.08**	**311**	*i* P	**Pn**	**08 34 29.6**	**-0.1**
SAIM				*i* S	**Sb**	**08 34 44.2**	**+0.7**
SAIM				IAML_P			
	comp=Z,1μm,0.2s						
CEYT	**Ceyhan**	**1.12**	**257**	PN	**Pn**	**08 34 30.8**	**+0.7**
TAHT	**Tahtakopru-Hat**	**1.16**	**220**	PN	**Pg**	**08 34 30.8**	**-0.1**
AKCD	**Akcadag**	**1.21**	**32**	*i* P	**Pb**	**08 34 31.2**	**-0.3**
AKCD				*i* S	**Sn**	**08 34 48.0**	**0.0**
AKCD				IAML_P			
	comp=Z,766nm,0.1s						
SURC	**SANLIURFA_SURC**	**1.26**	**107**	*i* P	**Pn**	**08 34 31.4**	**-0.6**
SURC				*i* S	**Sn**	**08 34 49.5**	**+0.5**
DARE	**Darende-Malaty**	**1.33**	**12**	PN	**Pb**	**08 34 33.5**	**-0.1**
URFA	**Urfa**	**1.37**	**82**	PN	**Pn**	**08 34 33.9**	**+0.2**
SANL	**SANLIURFA_Merk**	**1.50**	**93**	*i* P	**Pb**	**08 34 36.4**	**0.0**
YAHY	**KAYSERI_Yahyal**	**1.62**	**301**	*i* P	**Pb**	**08 34 38.2**	**-0.2**
YAHY				*i* S	**Sb**	**08 34 59.1**	**+0.2**
YAHY				IAML_P			
	comp=Z,309nm,0.1s						
ELZG	**Elazig**	**1.92**	**50**	*i* P	**Pg**	**08 34 45.5**	**0.0**
ELZG				*i* S	**Sg**	**08 35 09.6**	**-0.8**
ELZG				IAML_P			
	comp=Z,222nm,0.1s						

IDC 11 08:54:52.0±1.3, 10°.87S×165°.49E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.7/33, mbtmp3.8/5, ML3.8/1, MS4.4/1, Ms1 4.4/1, ms1mx2.8/34, Error ellipse: s-maj=51.6km s-min=26.2km az=131.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.17**	**175**	Pn	Pn	08 57 33.7	+0.5
	0.7nm,0.3s,baz=338,slow=19,SNR=14						
RAO	**Raoul Island**	**23.97**	**142**	LR	LR	09 07 08.6	
	comp=Z,916nm,20.1s,baz=88,slow=31						
H11S2	**WAKE ISLAND Hy**	**29.20**	**2**	T	T	09 31 28.7	
	baz=182						
H11S3	**WAKE ISLAND Hy**	**29.21**	**2**	T	T	09 31 30.1	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**29.22**	**2**	T	T	09 31 29.6	
	baz=182						
H11N1	**WAKE ISLAND Hy**	**30.43**	**3**	T	T	09 32 55.7	
	baz=185						
H11N3	**WAKE ISLAND Hy**	**30.43**	**3**	T	T	09 32 55.7	
	baz=185						
H11N2	**WAKE ISLAND Hy**	**30.44**	**3**	T	T	09 32 55.7	
	baz=185						
WRA	**Warramunga Arr**	**31.31**	**249**	P	P	09 01 14.2	0.0
	0.6nm,0.5s,baz=81,slow=8.9,SNR=9.6						
WRA				PcP	PcP	09 04 07.3	-1.4
	0.3nm,0.8s,baz=79,slow=2.9,SNR=3.3						
ASAR	**Alice Springs**	**32.65**	**243**	P	P	09 01 26.3	+0.3
	0.8nm,0.8s,baz=65,slow=10,SNR=7.7						
ILAR	**Eielson Array**	**83.43**	**19**	P	P	09 07 21.5	+0.5
	0.5nm,0.6s,baz=238,slow=5.2,SNR=5.0						
YKA	**Yellowknife Ar**	**94.94**	**27**	P	P	09 08 15.7	-0.3
	0.1nm,0.7s,baz=254,slow=4.5,SNR=2.8						

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*ISCJB **11** 08:54:54.6±0.4, 34°.05N±0°.03×25°.85E±0°.06, h26^{km}, mb3.6/9, Error ellipse: s-maj=7.0km s-min=4.3km az=12.8*

*HLW **11** 08:54:57.0, 34°.19N×25°.91E, h33^{km}±26^{km}, Ml3.2*

*IDC **11** 08:55:01.2±2.5, 34°.31N×25°.72E, h67^{km}±17^{km}, mb3.4/9, mb1 3.4/11, mb1mx3.3/47, mbtmp3.6/11, MS2.5/1, Ms1 2.5/1, ms1mx2.2/24, Error ellipse: s-maj=24.9km s-min=18.4km az=163.0*

ISC 11 08:54:55.7±0.7, 34°.08N±0°.04×25°.89E±0°.06, h26^{km}, n28, σ2^{s}.23/33, mb3.8/9, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.46**	**326**	P	**Pb**	**08 55 22.0**	**-0.3**
	3.7nm,0.3s,baz=151,slow=19,SNR=18						
IDI				S	**Sn**	**08 55 37.8**	**-1.0**
	9.3nm,0.3s,baz=74,slow=22,SNR=7.5						
SLUM	**Salum**	**2.64**	**193**	P	**Pn**	**08 55 37.9**	**+1.3**
	baz=193						
SLUM				S	**Sn**	**08 56 07.8**	**0.0**
	baz=193						
DAT	**Datca**	**2.98**	**27**	*i* P	**Pn**	**08 55 43.5**	**+2.1**
DALY	**Dalyan (Mula)**	**3.54**	**39**	*i* P	**Pn**	**08 55 52.5**	**+3.5**
DALY				*i* S	**Sn**	**08 56 24.6**	**-5.4**
DALY				IAML_P			
	comp=Z,72nm,0.1s						
TURN	**Turunc**	**3.56**	**38**	*i* P	**Pn**	**08 55 49.1**	**-0.1**
TURN				IAML_P			
	comp=Z,358nm,0.1s						
FETY	**Fethiye**	**3.65**	**45**	*i* P	**Pn**	**08 55 53.0**	**+2.5**
FETY				*i* S	**Sn**	**08 56 32.6**	**-0.1**
FETY				IAML_P			
	comp=Z,139nm,0.1s						
AKAS	**Kas**	**3.73**	**54**	*i* P	**Pn**	**08 55 54.1**	**+2.5**
AKAS				*i* S	**Sn**	**08 56 35.3**	**+0.6**
AYDN	**Tasoluk**	**3.92**	**24**	*i* P	**Pn**	**08 55 56.6**	**+2.3**
AYDN				IAML_P			
	comp=Z,261nm,0.2s						
TAVA	**DENIZLI_Tavas**	**4.18**	**35**	*i* P	**Pn**	**08 56 01.4**	**+3.6**
TAVA				IAML_P			
	comp=Z,249nm,0.2s						
KORT	**Korkueli**	**4.66**	**50**	*i* P	Pn	08 56 10.2	+5.6
KORT				IAML_P			
	comp=Z,944nm,0.2s						
SWA2		**4.83**	**185**	P	**Pn**	**08 56 08.0**	**+1.2**
	baz=185						
SWA2				S	**Sn**	**08 57 00.1**	**-1.8**
	baz=185						
KHAL	**Karahalli**	**5.18**	**33**	*i* P	**Pn**	**08 56 15.2**	**+3.6**
KHAL				IAML_P			
	comp=Z,192nm,0.1s						
HSAF	**As Saff**	**6.55**	**131**	P	**Pn**	**08 56 32.2**	**+1.8**
	baz=132						
GLL	**Jalalah**	**6.68**	**131**	P	**Pn**	**08 56 33.6**	**+1.5**
	baz=131						
HFRF	**Wahat Farafira**	**7.21**	**163**	P	**Pn**	**08 56 40.8**	**+1.3**
	baz=163						
HFRF				S	**Sn**	**08 57 57.1**	**-3.5**
	baz=163						
RSH		**7.31**	**113**	P	**Pn**	**08 56 41.4**	**+0.6**
	baz=113						
BRTR	**Keskin Array B**	**8.38**	**46**	P	**Pn**	**08 57 00.2**	**+4.7**
	comp=Z,0.1nm,0.3s,baz=203,slow=14,SNR=2.4						
EIL	**Elat**	**8.87**	**117**	LR	LR	09 01 36.8	
	comp=Z,30nm,18.2s,baz=75,slow=44						
AKASG	**Malin Array Be**	**16.79**	**7**	P	**Pn**	**08 58 48.0**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=197,slow=12,SNR=4.9						
HFS	**Hagfors**	**27.27**	**347**	P	**P**	**09 00 36.4**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=160,slow=8.8,SNR=4.0						
FINES	**FINESS Array B**	**27.38**	**0**	P	**P**	**09 00 37.0**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=170,slow=11,SNR=7.0						
TORD	**Torodi Ar. Bea**	**30.28**	**232**	P	**P**	**09 01 05.7**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=28,slow=9.8,SNR=4.2						
ARCES	**ARCESS Array B**	**35.51**	**360**	P	**P**	**09 01 48.0**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=177,slow=7.7,SNR=10.0						
KURBB	**Kurchatov Arra**	**41.34**	**50**	P	**P**	**09 02 39.9**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=270,slow=8.5,SNR=7.2						
MKAR	**Makanchi Array**	**43.88**	**56**	P	**P**	**09 03 01.1**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=268,slow=8.7,SNR=5.8						
ZALV	**Zalesovo Beam**	**45.32**	**45**	P	**P**	**09 03 11.4**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=264,slow=9.1,SNR=4.3						
SCHQ	**Schefferville**	**64.40**	**320**	P	**P**	**09 05 29.1**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=86,slow=3.9,SNR=9.0						
YKA	**Yellowknife Ar**	**78.66**	**342**	P	**P**	**09 06 55.2**	**+0.1**
	comp=Z,0.1nm,0.6s,baz=34,slow=5.9,SNR=4.2						

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*ISCJB **11** 09:03:09.7±1.0, 14°.27S±0°.08×167°.1E±0°.2, h150^{km}, mb3.8/6, Error ellipse: s-maj=23.1km s-min=11.0km az=2.8*

*IDC **11** 09:03:09.4±6.2, 14°.18S×167°.15E, h134^{km}±59^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.5/35, mbtmp4.0/8, Error ellipse: s-maj=50.0km s-min=24.3km az=161.0*

ISC 11 09:03:10.9±1.1, 14°.3S±0°.1×167°.2E±0°.2, h150^{km}, n11, σ1^{s}.04/11, mb4.0/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.79**	**185**	P	**Pn**	**09 05 02.6**	**+1.0**
	0.6nm,0.3s,baz=119,slow=21,SNR=14						
DZM				S	**Sn**	**09 06 27.6**	**-1.1**
	0.3nm,0.3s,baz=287,slow=19,SNR=2.2						
CTA	**Charters Tower**	**20.83**	**251**	P	**P**	**09 07 40.8**	**-0.1**
	1.2nm,0.4s,baz=91,slow=7.6,SNR=3.5						
STKA	**Stephens Creek**	**29.25**	**229**	P	**P**	**09 08 59.8**	**+0.9**
	6.9nm,0.5s,baz=50,slow=8.6,SNR=28						
WRA	**Warramunga Arr**	**31.88**	**255**	P	**P**	**09 09 21.4**	**-0.9**
	0.7nm,0.4s,baz=85,slow=9.1,SNR=13						
ASAR	**Alice Springs**	**32.78**	**248**	P	**P**	**09 09 29.1**	**-1.0**
	1.9nm,0.4s,baz=79,slow=8.9,SNR=39						
ILAR	**Eielson Array**	**86.11**	**18**	P	**P**	**09 15 33.7**	**-0.8**
	0.3nm,0.7s,baz=244,slow=5.2,SNR=5.7						
MKAR	**Makanchi Array**	**96.83**	**316**	P	**P**	**09 16 26.3**	**+1.4**
	0.4nm,0.7s,baz=95,slow=7.1,SNR=4.3						
YKA	**Yellowknife Ar**	**97.17**	**27**	P	Pdif	09 16 25.4	-0.6
	0.1nm,0.5s,baz=258,slow=4.5,SNR=2.6						
ARCES	**ARCESS Array B**	**119.79**	**345**	PKP	**PKiKP**	**09 21 43.0**	**+0.2**
	1.0nm,0.3s,baz=67,slow=1.8,SNR=42						
FINES	**FINESS Array B**	**125.28**	**338**	PKP	**PKiKP**	**09 21 53.8**	**+0.1**
	0.9nm,0.3s,baz=22,slow=1.5,SNR=4.6						
NOA	**NORSAR Array B**	**130.17**	**345**	PKP	**PKiKP**	**09 22 02.7**	**-1.0**
	0.5nm,0.6s,baz=28,slow=2.0,SNR=3.1						

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*IDC **11** 09:05:05.7±1.7, 11°.32S×164°.92E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/36, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=50.3km s-min=30.0km az=115.0*

*ISCJB **11** 09:05:09.0±1.1, 11°.5S±0°.1×164°.9E±0°.2, h34^{km}, mb3.5/5, Error ellipse: s-maj=31.6km s-min=19.5km az=175.9*

ISC 11 09:05:10.8±1.2, 11°.4S±0°.1×164°.9E±0°.3, h34^{km}, n6, σ0^{s}.47/6, mb3.5/5, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.70**	**172**	Pn	**Pn**	**09 07 41.7**	**-0.1**
	0.5nm,0.3s,baz=102,slow=18,SNR=4.1						
WRA	**Warramunga Arr**	**30.61**	**250**	P	**P**	**09 11 22.1**	**+0.2**
	0.5nm,0.8s,baz=82,slow=8.5,SNR=3.0						
ASAR	**Alice Springs**	**31.92**	**243**	P	**P**	**09 11 33.5**	**+0.1**
	0.3nm,0.8s,baz=83,slow=7.9,SNR=2.8						
SONM	**Songino Array**	**78.49**	**324**	P	**P**	**09 17 07.9**	**-0.7**
	0.2nm,0.4s,baz=141,slow=4.8,SNR=5.8						
ILAR	**Eielson Array**	**84.11**	**19**	P	**P**	**09 17 38.2**	**+0.3**
	0.3nm,0.8s,baz=232,slow=4.4,SNR=3.6						
MKAR	**Makanchi Array**	**93.24**	**317**	P	**P**	**09 18 22.2**	**+0.3**
	0.5nm,0.8s,baz=101,slow=6.3,SNR=5.6						

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*NNC **11** 09:10:01.8±0.6, 42°.77N×76°.48E, h0^{km}±3^{km}, mb2.5, mpv2.5, Error ellipse: s-maj=5.4km s-min=1.8km az=163.0*

*SOME **11** 09:10:02.1, 42°.73N×76°.52E, h10^{km}*

KRNET 11 09:10:02.0±0.1, 42°.76N×76°.51E, h18^{km}, mb2.3, 22C-21D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZV	**Izvestkoviy**	**0.29**	**15**	P	Pg	09 10 08.4	-0.2
	6.8nm,0.1s						
IZV				S	Sg	09 10 12.7	-0.2
	90nm,0.1s						
IZV	**Izvestkoviy**	**0.29**	**15**	⇓*e*P	Pg	09 10 08.4	-0.1
	baz=15						
IZV				⇓*e*S	Sg	09 10 12.7	-0.2
	baz=15						
IZV	**Izvestkoviy**	**0.29**	**15**	⇓*e*P	Pg	09 10 08.4	-0.1
	6.8nm,0.1s						
IZV				*e*S	Sg	09 10 12.7	-0.2
	90nm,0.1s						
MTBS	**Maitube**	**0.38**	**351**	P	Pg	09 10 09.6	-0.4
	8.8nm,0.1s						
MTBS				S	Sg	09 10 15.0	-0.3
	85nm,0.2s						
MTBS	**Maitube**	**0.38**	**351**	⇑*i*P	Pg	09 10 09.6	-0.4
	baz=51						
MTBS				⇑*e*S	Sg	09 10 15.0	-0.3
	baz=51						
MTBS	**Maitube**	**0.38**	**351**	⇑*i*P	Pg	09 10 09.6	-0.4
	8.8nm,0.1s						
MTBS				*e*S	Sg	09 10 14.9	-0.4
	85nm,0.2s						
TNSS	**Tian-Shan**	**0.42**	**49**	P	Pg	09 10 10.6	-0.3
	6.2nm,0.1s						
TNSS				S	Sg	09 10 16.8	-0.2
	19nm,0.3s						
TNSS	**Tian-Shan**	**0.42**	**49**	⇓*e*P	Pg	09 10 10.6	-0.3
	baz=49						
TNSS				⇓*e*S	Sg	09 10 16.7	-0.2
	baz=49						
TNSS	**Tian-Shan**	**0.42**	**49**	⇓*e*P	Pg	09 10 10.6	-0.3
	6.2nm,0.1s						
TNSS				*e*S	Sg	09 10 16.8	-0.2
	19nm,0.3s						
KST	**Kastek**	**0.49**	**305**	P	Pg	09 10 12.0	-0.1
	3.8nm,0.1s						
KST				S	Sg	09 10 18.9	+0.1
	23nm,0.4s						
KST	**Kastek**	**0.49**	**305**	*e*P	Pg	09 10 12.0	-0.1
	baz=5.0						
KST				*e*S	Sg	09 10 18.9	+0.1
	baz=5.0						
KST	**Kastek**	**0.49**	**305**	*e*P	Pg	09 10 12.0	-0.1
	3.8nm,0.1s						
KST				*e*S	Sg	09 10 18.9	+0.1
	23nm,0.4s						
BOOM	**Boomskoye usch**	**0.50**	**238**	⇑*i*P	Pg	09 10 11.6	-0.6
	baz=38						
BOOM				⇑*i*S	Sg	09 10 18.9	-0.1
	baz=38						
ULHL	**Ulahol**	**0.55**	**202**	⇓*e*P	Pg	09 10 12.3	-0.8
	baz=2.0						
ULHL				⇓*i*S	Sg	09 10 20.4	-0.2
	baz=2.0						
MDOK	**Medeo**	**0.56**	**44**	Pg	Pg	09 10 13.0	-0.4
	1.2nm,0.2s						
MDOK				Lg	Lg	09 10 20.5	
	8.4nm,0.2s						
MDOK	**Medeo**	**0.56**	**44**	*e*P	Pg	09 10 13.0	-0.4
	baz=44						
MDOK				*e*S	Sg	09 10 20.6	-0.4
	baz=44						
MDOK	**Medeo**	**0.56**	**44**	*e*P	Pg	09 10 13.0	-0.4
	1.2nm,0.2s						
MDOK				*e*S	Sg	09 10 20.5	-0.5
	8.4nm,0.2s						
KOTS	**Kotyrbulak**	**0.65**	**43**	P	Pb	09 10 14.8	-0.1
	2.4nm,0.1s						
KOTS				S	Sb	09 10 23.6	0.0
	20nm,0.3s						
KOTS	**Kotyrbulak**	**0.65**	**43**	*e*P	Pb	09 10 14.8	-0.1
	baz=43						
KOTS				*e*S	Sb	09 10 23.7	+0.1
	baz=43						
KOTS	**Kotyrbulak**	**0.65**	**43**	*e*P	Pb	09 10 14.8	-0.1
	2.4nm,0.1s						
KOTS				*e*S	Sb	09 10 23.6	0.0
	20nm,0.3s						
TKM2	**Tokmak 2**	**0.69**	**284**	⇓P	Pb	09 10 15.6	-0.1
	0.4nm,0.4s						
TKM2				⇑S	Sb	09 10 23.7	-1.4
	3.1nm,0.3s						
TKM2	**Tokmak 2**	**0.69**	**284**	⇑*i*P	Pb	09 10 15.1	-0.6
	baz=84						
TKM2				⇑*i*S	Sb	09 10 24.5	-0.5
	baz=84						
DGS	**Degeres**	**0.73**	**312**	P	Pb	09 10 16.0	-0.3
	2.5nm,0.1s						
DGS				S	Sb	09 10 25.8	-0.1
	8.5nm,0.2s						
DGS	**Degeres**	**0.73**	**312**	*e*P	Pb	09 10 16.0	-0.3
	baz=12						
DGS				*e*S	Sb	09 10 25.8	-0.2
	baz=12						
DGS	**Degeres**	**0.73**	**312**	*e*P	Pb	09 10 16.0	-0.3
	2.5nm,0.1s						
DGS				*e*S	Sb	09 10 25.8	-0.1
	8.5nm,0.2s						
KDJ	**Kajisay**	**0.80**	**142**	⇓*i*P	Pb	09 10 17.1	-0.4
	baz=41						
KDJ				⇓*i*S	Sg	09 10 28.2	-0.1
	baz=41						
KTBS	**Karatobe**	**0.96**	**7**	P	Pb	09 10 20.0	-0.2
	4.2nm,0.1s						
KTBS				S	Sb	09 10 32.8	+0.1
	15nm,0.2s						
KTBS	**Karatobe**	**0.96**	**7**	*e*P	Pb	09 10 20.0	-0.2
	baz=59						
KTBS				*e*S	Sb	09 10 32.8	+0.2
	baz=59						
KTBS	**Karatobe**	**0.96**	**7**	*e*P	Pb	09 10 20.0	-0.2
	4.2nm,0.1s						
KTBS				*e*S	Sb	09 10 32.8	+0.1
	15nm,0.2s						
KUU	**Kurty**	**1.14**	**354**	P	Pn	09 10 23.1	-0.1
	1.7nm,0.2s						
KUU				S	Sb	09 10 37.9	+0.1
	5.1nm,0.3s						
KUU	**Kurty**	**1.14**	**354**	*e*P	Pn	09 10 23.1	-0.1
	baz=54						
KUU				*e*S	Sb	09 10 37.9	+0.1
	baz=54						
KUU	**Kurty**	**1.14**	**354**	*e*P	Pn	09 10 23.1	-0.1
	1.7nm,0.2s						
KUU				*e*S	Sb	09 10 37.9	+0.1
	5.1nm,0.3s						
CHKK	**Chushkaly**	**1.15**	**17**	P	Pb	09 10 23.6	+0.2
	1.9nm,0.1s						
CHKK				S	Sn	09 10 38.8	+0.3
	21nm,0.2s						
CHKK	**Chushkaly**	**1.15**	**17**	*e*P	Pb	09 10 23.6	+0.2
	baz=18						
CHKK				*e*S	Sn	09 10 38.8	+0.2
	baz=18						
CHKK	**Chushkaly**	**1.15**	**17**	*e*P	Pb	09 10 23.6	+0.2
	1.9nm,0.1s						
CHKK				*e*S	Sn	09 10 38.8	+0.3
	21nm,0.2s						
KZA	**Kyzart**	**1.16**	**234**	⇑*i*P	Pn	09 10 23.5	-0.2
	baz=34						
KZA				⇑*i*S	Sg	09 10 39.6	-0.1
	baz=34						
KBK	**Karagaybulak**	**1.16**	**265**	⇓*e*P	Pn	09 10 23.4	-0.1
	baz=65						
KBK				⇓*i*S	Sn	09 10 39.0	0.0
	baz=65						
CHMS	**Chumysh**	**1.32**	**281**	⇓*i*P	Pb	09 10 26.1	-0.2
	baz=81						
CHMS				⇓*i*S	Sb	09 10 43.7	+0.9
	baz=81						
NRN	**Naryn**	**1.38**	**196**	⇑*e*P	Pb	09 10 27.2	-0.3
	baz=97						
NRN				⇑*i*S	Sg	09 10 46.5	-0.2
	baz=97						
TARG	**Taragay, Kyrgy**	**1.41**	**137**	⇓*e*P	Pb	09 10 27.8	-0.2
	baz=37						
TARG				⇓*i*S	Sb	09 10 46.3	+0.5
	baz=37						
PRZ	**Przheval'sk**	**1.42**	**101**	⇑*i*P	Pb	09 10 27.9	-0.2
	baz=0.0						
PRZ				⇑*i*S	Sg	09 10 47.1	-0.9
	baz=0.0						
SATY	**Saty**	**1.42**	**77**	P	Pg	09 10 29.1	-0.4
	2.1nm,0.2s						
SATY				S	Sg	09 10 48.3	+0.2
	7.5nm,0.1s						
SATY	**Saty**	**1.42**	**77**	*e*P	Pb	09 10 28.6	+0.5
	1.1nm,0.1s						
SATY				*e*S	Sg	09 10 47.7	-0.4
	5.8nm,0.2s						
AAK	**Ala-Archa**	**1.49**	**266**	⇓P	Pb	09 10 29.7	+0.4
	0.4nm,0.3s						

AAK				⇑S	Sg	09 10 49.5	-0.8
	0.5nm,0.3s						
AAK	**Ala-Archa**	**1.49**	**266**	⇑*i*P	Pb	09 10 29.4	0.0
	baz=66						
AAK				⇑*i*S	Sg	09 10 49.4	-0.9
	baz=66						
SGDS	**Sogindy**	**1.54**	**297**	P	Pb	09 10 30.6	+0.4
	1.2nm,0.2s						
SGDS				S	Sg	09 10 50.7	-1.2
	4.7nm,0.3s						
UCH	**Uchtor**	**1.57**	**251**	⇑*i*P	Pb	09 10 31.0	+0.1
	baz=51						
UCH				⇑*i*S	Sg	09 10 52.2	-0.7
	baz=51						
ARXS	**Arharly**	**1.74**	**33**	P	Pb	09 10 33.9	+0.4
	2.1nm,0.3s						
ARXS				S	Sb	09 10 56.4	+1.4
	6.6nm,0.2s						
ARXS	**Arharly**	**1.74**	**33**	*e*P	Pb	09 10 33.9	+0.4
	2.1nm,0.3s						
ARXS				*e*S	Sb	09 10 56.4	+1.4
	6.6nm,0.2s						
ARLS	**Aral**	**1.86**	**242**	⇑*i*P	Pb	09 10 35.7	+0.2
	baz=42						
ARLS				⇑*i*S	Sb	09 11 00.0	+1.5
	baz=42						
UZB	**Uzynbulak**	**1.88**	**77**	*e*P	Pg	09 10 37.2	-1.0
	baz=77						
UZB				*e*S	Sg	09 11 02.1	-0.6
	baz=77						
UZB	**Uzynbulak**	**1.88**	**77**	*e*P	Pg	09 10 37.2	-1.1
	0.8nm,0.2s						
UZB				*e*S	Sg	09 11 02.1	-0.7
	2.2nm,0.3s						
EKS2	**Erkin-Say**	**2.02**	**268**	⇓*i*P	Pb	09 10 37.8	-0.5
	baz=68						
EKS2				⇓*i*S	Sb	09 11 04.1	+1.0
	baz=68						
PDGK	**Podgornoye**	**2.25**	**74**	⇓Pg	Pb	09 10 41.7	-0.6
	0.8nm,0.7s						
PDGK				⇑Lg	Lg	09 11 11.9	
	0.3nm,0.3s						

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*IDC **11** 09:11:10.4±0.9, 11°.16S×164°.86E, h0^{km}, mb4.1/10, mb1 4.2/13, mb1mx4.1/40, mbtmp4.1/13, ML4.3/3, MS3.4/5, Ms1 3.4/5, ms1mx3.1/28, Error ellipse: s-maj=29.2km s-min=19.4km az=128.0*

*NEIC **11** 09:11:12.4±0.4, 11°.10S×164°.75E, h10^{km}, mb4.1/4, Error ellipse: s-maj=9.6km s-min=7.9km az=89.0*

*ISCJB **11** 09:11:13.3±0.5, 11°.24S±0°.06×164°.71E±0°.07, h29^{km}, mb4.0/13, MS3.5/3, Error ellipse: s-maj=10.3km s-min=7.9km az=135.9*

ISC 11 09:11:15.1±0.7**, 11°.18S**±0°.10×**164°.75E**±0°.08**, h29^{km}, n34, σ0^{s}.69**/32**, mb4.1**/13**, MS3.4**/3**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.04**	**290**	*e*Pn	**Pn**	**09 12 28.6**	**-0.1**
HNR				*e*Pn	**Pn**	**09 12 29.5**	**+0.8**
HNR				*e*Sn	**Sn**	**09 13 26.7**	**+0.7**
HNR	**Honiara**	**5.04**	**290**	Pn	**Pn**	**09 12 28.6**	**-0.1**
	22nm,0.3s,baz=136,slow=10,SNR=4.1						
HNR				Sn	**Sn**	**09 13 26.7**	**+0.7**
	18nm,0.3s,baz=47,slow=23,SNR=7.8						
HNR				LR	LR	09 14 42.0	
	comp=Z,278nm,18.4s,baz=131,slow=41						
DZM	**Mont Dzumac**	**10.95**	**172**	*e*Pn	**Pn**	**09 13 50.0**	**+0.1**
DZM	**Mont Dzumac**	**10.95**	**172**	Pn	**Pn**	**09 13 49.4**	**-0.6**
	2.0nm,0.3s,baz=341,slow=14,SNR=17						
DZM				LR	LR	09 17 18.5	
	comp=Z,87nm,20.9s,baz=216,slow=34						
ONTNC	**Ouen Toro**	**11.18**	**172**	*e*Pn	**Pn**	**09 13 53.9**	**+0.8**
PINNC	**Pines Island,**	**11.65**	**168**	*e*Pn	**Pn**	**09 14 00.7**	**+1.2**
CTA	**Charters Tower**	**19.88**	**241**	P	**Pn**	**09 15 46.0**	**+0.1**
	0.3nm,0.3s,baz=63,slow=11,SNR=7.5						
CTAO	**Charters Tower**	**19.88**	**241**	*e*P	**Pn**	**09 15 45.8**	**-0.1**
	9.2nm,0.9s						
COEN	**Coen**	**21.24**	**260**	*e*P	**P**	**09 15 58.0**	**-0.9**
	10nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**29.55**	**4**	T	T	09 48 19.1	
	baz=184,slow=76,SNR=9.1						
H11S3	**WAKE ISLAND Hy**	**29.55**	**4**	T	T	09 48 14.2	
	baz=184,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**29.57**	**4**	T	T	09 48 19.2	
	baz=184,slow=76,SNR=10						
STKA	**Stephens Creek**	**29.68**	**223**	LR	LR	09 27 56.4	
	comp=Z,101nm,20.4s,baz=25,slow=34						
WR1	**Warramunga Arr**	**30.52**	**250**	*e*P	**P**	**09 17 25.9**	**-0.2**
WRA	**Warramunga Arr**	**30.52**	**250**	P	**P**	**09 17 25.9**	**-0.2**
	2.6nm,0.8s,baz=77,slow=9.0,SNR=21						
WRA				PcP	**PcP**	**09 20 25.4**	**+0.5**
	0.5nm,0.8s,baz=78,slow=3.1,SNR=3.7						
WRA				LR	LR	09 29 57.2	
	comp=Z,121nm,18.3s,baz=35,slow=37						
H11N1	**WAKE ISLAND Hy**	**30.77**	**4**	T	T	09 49 44.0	
	baz=184,slow=76,SNR=7.8						
H11N3	**WAKE ISLAND Hy**	**30.78**	**4**	T	T	09 49 49.9	
	baz=184,slow=76,SNR=7.7						
H11N2	**WAKE ISLAND Hy**	**30.79**	**4**	T	T	09 49 47.4	
	baz=184,slow=76,SNR=8.0						
AS31	**Alice Springs**	**31.86**	**243**	*e*P	**P**	**09 17 37.4**	**-0.5**
	0.7nm,0.8s						
ASAR	**Alice Springs**	**31.86**	**243**	P	**P**	**09 17 38.0**	**0.0**
	2.3nm,0.8s,baz=65,slow=10,SNR=25						
ASAR				PcP	**PcP**	**09 20 28.9**	**+0.5**
	0.6nm,0.7s,baz=76,slow=2.3,SNR=6.2						
ASAR				LR	LR	09 29 54.7	
	comp=Z,67nm,19.2s,baz=97,slow=35						
FITZ	**Fitzroy Crossi**	**38.40**	**255**	*e*P	**P**	**09 18 33.7**	**-0.6**
	9.4nm,0.8s						
ASAJ	**Asahikawa**	**58.61**	**341**	P	**P**	**09 21 09.8**	**+0.5**
	9.6nm,0.9s,baz=162,slow=9.6,SNR=6.8						
USRK	**Ussuriysk Ar.**	**62.64**	**334**	P	**P**	**09 21 37.6**	**+0.8**
	1.2nm,0.6s,baz=141,slow=4.8,SNR=3.4						
KLR	**Kul'dur**	**66.80**	**337**	P	**P**	**09 22 04.3**	**+0.5**
	1.4nm,0.7s,baz=119,slow=7.2,SNR=6.2						
SONA0	**Songino Array**	**78.20**	**324**	*e*P	**P**	**09 23 12.0**	**0.0**
SONM	**Songino Array**	**78.20**	**324**	P	**P**	**09 23 12.0**	**0.0**
	0.8nm,0.9s,baz=142,slow=5.2,SNR=6.0						
ILAR	**Eielson Array**	**83.95**	**19**	P	**P**	**09 23 40.9**	**-1.2**
	0.5nm,0.7s,baz=239,slow=4.8,SNR=9.0						
NVAR	**Mina Array Bea**	**86.86**	**50**	P	**P**	**09 23 57.6**	**+0.1**
	0.5nm,0.6s,baz=244,slow=7.5,SNR=4.2						
MK32	**Makanchi Array**	**92.95**	**317**	*e*P	**P**	**09 24 25.3**	**-0.4**
MKAR	**Makanchi Array**	**92.95**	**317**	P	**P**	**09 24 25.3**	**-0.4**
	0.6nm,0.9s,baz=116,slow=6.6,SNR=4.2						
PDAR	**Pinedale Array**	**94.36**	**47**	P	**P**	**09 24 31.7**	**-0.8**
	0.3nm,0.8s,baz=292,slow=4.8,SNR=2.8						
CLNB	**Carlsbad**	**97.02**	**59**	*e*P	Pdif	09 24 46.9	+2.1
CLNB				*e*S	**S**	**09 36 07.9**	**+1.8**
ARA0	**ARCESS Array S**	**116.22**	**345**	*e*PKPdf	**PKiKP**	**09 29 54.4**	**-0.7**
ARCES	**ARCESS Array B**	**116.22**	**345**	PKP	**PKiKP**	**09 29 54.4**	**-0.7**
	5.5nm,1.0s,baz=84,slow=3.7,SNR=5.1						

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*ISCJB **11** 09:14:06.4±0.6, 21°.74S±0°.04×68°.53W±0°.08, h122^{km}±8^{km}, mb3.8/2, Error ellipse: s-maj=12.8km s-min=6.5km az=176.7*

*IDC **11** 09:14:07.4±0.9, 21°.78S×68°.33W, h107^{km}±12^{km}, mb3.7/2, mb1 3.5/5, mb1mx3.3/35, mbtmp3.7/5, Error ellipse: s-maj=30.4km s-min=20.5km az=127.0*

*GUC **11** 09:14:07.0±0.7, 21°.73S×68°.63W, h119^{km}±6^{km}, ML3.6*

ISC 11 09:14:06.8±0.8**, 21°.69S**±0°.05×**68°.45W**±0°.07**, h109^{km}**±9^{km}**, n18, σ1^{s}.65**/30**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.75**	**261**	*e*P	**Pn**	**09 14 26.3**	**+0.6**
PB09				*i* S	**Sn**	**09 14 40.5**	**+0.5**
LVC	**Limon Verde**	**1.01**	**205**	P	**Pn**	**09 14 29.0**	**+0.4**
	94nm,0.3s,baz=11,slow=9.3,SNR=784						
LVC				S	**Sn**	**09 14 44.8**	**-0.1**
	102nm,0.3s,baz=270,slow=20,SNR=57						
PB01	**IPOC Station P**	**1.16**	**303**	*e*P	**Pn**	**09 14 30.0**	**+0.2**
PB01				*i* S	**Sn**	**09 14 47.3**	**+0.1**
PB01				IAML		09 14 48.9	
	comp=N,1μm,0.3s						
PB03	**IPOC Station P**	**1.27**	**253**	*e*P	**Pn**	**09 14 30.8**	**-0.2**
PB03				*i* S	**Sn**	**09 14 48.3**	**-1.1**
PB03				IAML		09 14 49.8	
	comp=N,2μm,0.5s						
PB07	**IPOC Station P**	**1.34**	**268**	*e*P	**Pn**	**09 14 31.4**	**-0.4**
PB07				*i* S	**Sn**	**09 14 50.2**	**-0.7**
PB07				IAML		09 14 52.6	
	comp=N,1μm,0.1s						
PB02	**IPOC Station P**	**1.40**	**285**	*e*P	**Pn**	**09 14 32.3**	**-0.2**
PB02				*i* S	**Sn**	**09 14 51.1**	**-0.9**
PB02				IAML		09 14 53.1	
	comp=E,1μm,0.3s						
PB06	**IPOC Station P**	**1.45**	**226**	*e*P	**Pn**	**09 14 32.5**	**-0.7**
PB06				*i* S	**Sn**	**09 14 52.6**	**-0.7**
PB06				IAML		09 14 53.8	
	comp=E,1μm,0.2s						
PB08	**IPOC Station P**	**1.67**	**337**	*e*P	**Pn**	**09 14 38.1**	**+2.0**
PB08				*i* S	**Sn**	**09 15 00.5**	**+2.1**
PB08				IAML		09 15 03.5	
	comp=N,776nm,0.2s						
PB04	**IPOC Station P**	**1.71**	**247**	*e*P	**Pn**	**09 14 35.5**	**-0.8**
PB04				*i* S	**Sn**	**09 14 57.5**	**-1.2**
PB04				IAML		09 15 00.2	
	comp=N,1μm,0.1s						
PB15	**IPOC Station P**	**1.79**	**212**	*e*P	**Pn**	**09 14 37.2**	**-0.2**
PB15				*i* S	**Sn**	**09 15 00.3**	**-0.2**
PB11	**IPOC Station P**	**2.22**	**329**	*e*P	**Pn**	**09 14 43.2**	**+0.3**
PB11				*i* S	**Sn**	**09 15 10.7**	**+0.3**
LPAZ	**La Paz**	**5.38**	**3**	P	**Pn**	**09 15 28.5**	**+3.1**
	comp=N,0.5nm,0.3s,baz=246,slow=4.6,SNR=9.9						
SIV	**San Ignacio**	**8.99**	**52**	P	**Pn**	**09 16 12.5**	**-1.3**
	comp=N,2.4nm,0.3s,baz=270,slow=9.0,SNR=49						
SIV				S	**Sn**	**09 17 47.0**	**-6.4**
	baz=311,slow=19,SNR=4.5						
CPUP	**Villa Florida**	**11.16**	**117**	P	**Pn**	**09 16 42.5**	**-0.6**
	comp=N,0.1nm,0.3s,baz=0.0,slow=0.0,SNR=2.1						
TORD	**Torodi Ar. Bea**	**77.01**	**70**	P	**P**	**09 25 48.4**	**+0.1**
	comp=N,0.9nm,0.5s,baz=242,slow=5.7,SNR=14						
YKA	**Yellowknife Ar**	**91.50**	**340**	P	**P**	**09 27 00.6**	**+0.1**
	comp=N,0.3nm,0.5s,baz=134,slow=4.5,SNR=8.7						
WRA	**Warramunga Arr**	**133.01**	**210**	PKP	**PKPdf**	**09 33 10.9**	**+0.6**
	comp=N,0.2nm,0.6s,baz=152,slow=1.7,SNR=3.9						
MKAR	**Makanchi Array**	**145.53**	**36**	PKPbc	**PKPab**	**09 33 34.2**	**+1.4**
	comp=N,0.4nm,0.8s,baz=9.5,slow=3.9,SNR=2.8						

IDC 11 09:14:15.8±1.9**, 10°.79S**×**166°.03E, h0^{km}, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.4**/36**, mbtmp3.5**/4**, ML3.3**/1**, Error ellipse: s-maj=55.5km s-min=33.1km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.22**	**178**	Pn	Pn	09 16 57.2	-0.4
	0.2nm,0.3s,baz=345,slow=20,SNR=7.4						
DZM				Sn	Sn	09 18 59.6	-4.3
	0.1nm,0.3s,baz=289,slow=21,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**29.11**	**1**	T	T	09 50 37.8	
	baz=181,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**29.11**	**1**	T	T	09 50 38.8	
	baz=181,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**29.12**	**1**	T	T	09 50 39.3	
	baz=181,slow=76,SNR=29						
H11N1	**WAKE ISLAND Hy**	**30.33**	**2**	T	T	09 52 09.3	
	baz=182,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**30.33**	**2**	T	T	09 52 09.4	
	baz=182,slow=76,SNR=19						
H11N2	**WAKE ISLAND Hy**	**30.34**	**2**	T	T	09 52 10.7	
	baz=182,slow=76,SNR=19						
WRA	**Warramunga Arr**	**31.84**	**250**	P	P	09 20 41.1	-1.6
	0.4nm,0.7s,baz=80,slow=8.8,SNR=3.8						
ASAR	**Alice Springs**	**33.16**	**243**	P	P	09 20 55.9	+1.6
	0.3nm,0.9s,baz=72,slow=9.8,SNR=2.5						
ILAR	**Eielson Array**	**83.19**	**18**	P	P	09 26 43.6	+0.1
	0.4nm,0.9s,baz=238,slow=5.0,SNR=4.1						

NNC 11 09:22:42.6±2.2**, 53°.49N**×**88°.02E, h0^{km}, mb3.5, mpv3.2, 6C-5D, Error ellipse: s-maj=20.0km s-min=9.1km az=55.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.96**	**285**	⇑Pn	Pn	09 23 16.7	-0.4
	5.5nm,0.6s						
ZAA0				⇑Sn	Sb	09 23 43.6	-0.5
	18nm,0.8s						
KURK	**Kurchatov**	**6.42**	**248**	⇓Pn	Pn	09 24 16.2	-2.1
	1.8nm,0.8s						
KURK				⇓Lg	Lg	09 26 02.4	
	3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**6.52**	**248**	⇑Pn	Pn	09 24 20.2	+0.5
	3.7nm,0.8s						
KURBB				⇑Lg	Lg	09 26 08.5	
	4.5nm,0.7s						
MK31	**Makanchi Array**	**7.64**	**211**	⇑Pn	Pn	09 24 35.9	+0.7
	0.8nm,0.8s,baz=24,slow=13,SNR=7.1						
MK31				⇓Lg	Lg	09 26 45.9	
	1.9nm,0.9s,baz=29,slow=29,SNR=5.2						
MAKZ	**Makanchi**	**7.73**	**213**	⇓Pn	Pn	09 24 37.8	+1.5
	0.7nm,0.7s						
MAKZ				⇑Sn	Sn	09 26 05.9	+1.4
	0.8nm,0.9s						
MAKZ				⇓Lg	Lg	09 26 45.9	
	1.5nm,1.1s						

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*IDC **11** 09:24:28.0±0.8, 10°.92S×164°.99E, h0^{km}, mb3.9/9, mb1 4.1/11, mb1mx3.9/31, mbtmp3.9/11, ML4.1/2, Error ellipse: s-maj=23.1km s-min=20.8km az=139.0*

*ISCJB **11** 09:24:31.3±0.7, 11°.04S±0°.10×164°.97E±0°.08, h31^{km}, mb3.8/8, Error ellipse: s-maj=14.7km s-min=10.3km az=26.9*

ISC 11 09:24:32.7±0.8**, 10°.9S**±0°.1×**164°.96E**±0°.10**, h31^{km}, n17, σ1^{s}.60**/13**, mb3.7**/8**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.16**	**286**	Pn	**Pn**	**09 25 44.7**	**-3.1**
	9.2nm,0.3s,baz=209,slow=16,SNR=2.3						
HNR				Sn	**Sn**	**09 26 48.3**	**+2.0**
	21nm,0.3s,baz=204,slow=16,SNR=5.7						
DZM	**Mont Dzumac**	**11.17**	**173**	Pn	**Pn**	**09 27 10.8**	**+0.3**
	0.9nm,0.3s,baz=338,slow=16,SNR=11						
CTA	**Charters Tower**	**20.18**	**241**	P	**P**	**09 29 06.6**	**+1.7**
	6.6nm,0.9s,baz=79,slow=14,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**29.28**	**3**	T	T	10 01 08.9	
	baz=184,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.28**	**3**	T	T	10 01 08.3	
	baz=184,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**29.30**	**3**	T	T	10 01 06.9	
	baz=184,slow=76,SNR=9.5						
URZ	**Urewera**	**29.31**	**160**	P	**P**	**09 30 32.1**	**-0.4**
	8.8nm,1.1s,baz=138,slow=16,SNR=2.8						
H11N1	**WAKE ISLAND Hy**	**30.51**	**4**	T	T	10 02 39.4	
	baz=182,slow=76,SNR=6.4						
H11N3	**WAKE ISLAND Hy**	**30.51**	**4**	T	T	10 02 40.9	
	baz=182,slow=76,SNR=9.8						
H11N2	**WAKE ISLAND Hy**	**30.52**	**4**	T	T	10 02 41.1	
	baz=182,slow=76,SNR=7.6						
WRA	**Warramunga Arr**	**30.80**	**249**	P	**P**	**09 30 46.1**	**+0.1**
	1.1nm,0.7s,baz=79,slow=8.9,SNR=7.5						
WRA				PcP	**PcP**	**09 33 40.7**	**-2.3**
	0.1nm,0.6s,baz=75,slow=2.9,SNR=3.1						
ASAR	**Alice Springs**	**32.16**	**243**	P	**P**	**09 30 57.7**	**-0.2**
	1.6nm,0.7s,baz=63,slow=10,SNR=15						
SONM	**Songino Array**	**78.12**	**324**	P	**P**	**09 36 30.1**	**+1.2**
	0.3nm,0.6s,baz=132,slow=6.2,SNR=1.9						
ILAR	**Eielson Array**	**83.65**	**19**	P	**P**	**09 36 58.7**	**+0.9**
	0.6nm,0.8s,baz=237,slow=4.6,SNR=6.1						
MKAR	**Makanchi Array**	**92.91**	**317**	P	**P**	**09 37 43.8**	**+1.0**
	0.2nm,0.7s,baz=103,slow=5.6,SNR=3.2						
PDAR	**Pinedale Array**	**94.04**	**47**	P	**P**	**09 37 48.0**	**-0.3**
	0.2nm,0.7s,baz=258,slow=4.5,SNR=2.1						
YKA	**Yellowknife Ar**	**95.22**	**27**	P	**P**	**09 37 52.6**	**-0.4**
	0.3nm,1.0s,baz=250,slow=4.0,SNR=3.7						

IDC 11 09:38:24.9±3.0**, 9°.31S**×**155°.14E, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.6**/28**, mbtmp3.7**/5**, Error ellipse: s-maj=86.7km s-min=28.5km az=106.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.71**	**240**	P	P	09 43 29.2	+0.7
	1.4nm,0.8s,baz=61,slow=9.8,SNR=7.7						
ASAR	**Alice Springs**	**24.82**	**232**	P	P	09 43 48.1	-0.9
	1.1nm,0.9s,baz=64,slow=10,SNR=6.7						
STKA	**Stephens Creek**	**25.74**	**207**	P	P	09 43 56.3	-0.9
	2.9nm,0.9s,baz=13,slow=17,SNR=3.6						
SONM	**Songino Array**	**71.35**	**328**	P	P	09 49 47.6	+0.9
	0.7nm,0.8s,baz=142,slow=4.8,SNR=6.5						
MKAR	**Makanchi Array**	**85.23**	**319**	P	P	09 51 03.2	-0.2
	0.3nm,0.8s,baz=107,slow=4.8,SNR=2.6						

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*ISCJB **11** 09:40:18.2±1.0, 11°.03S±0°.02×166°.79E±0°.02, h9^{km}±6^{km}, mb5.5/318, MS5.5/177, Error ellipse: s-maj=4.0km s-min=3.3km az=165.6*

*IDC **11** 09:40:18.2±0.4, 10°.99S×166°.93E, h0^{km}, mb5.0/25, mb1 5.1/27, mb1mx5.0/34, mbtmp5.0/27, ML4.6/2, MS5.4/28, Ms1 5.4/28, ms1mx5.3/35, Error ellipse: s-maj=14.3km s-min=12.1km az=97.0*

*NEIC **11** 09:40:19.6±0.1, 11°.05S×166°.80E, h10^{km}, mb5.7/260, MS5.6/109, MW5.6, MW5.7, Error ellipse: s-maj=3.0km s-min=2.5km az=134.0, Moment Tensor Solution. s47 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.96; M$_{\theta\theta}$2.24; M$_{\phi\phi}$1.72; M$_{r\theta}$0.50; M$_{\theta\phi}$-1.09; M$_{\phi r}$0.21; Best double couple: M$_{0}$3.60000×10^{17} NP1:φ$_{s}$303.00000°,δ47.00000°, λ-98.00000°. NP2:φ$_{s}$134.00000°,δ43.00000°, λ-82.00000°. Principal axes: T 3.1100, Plg2.0000°, Azm38.0000°; N 0.9100, Plg6.0000°, Azm308.0000°; P -4.0200, Plg84.0000°, Azm149.0000°;*

*MOS **11** 09:40:21.1±0.9, 10°.93S×166°.79E, h24^{km}, mb5.7/71, MS5.5/24 Error ellipse: s-maj=6.9km s-min=6.0km az=97.1*

*GCMT **11** 09:40:22.6±0.1, 11°.01S±0°.01×166°.94E±0°.01, h12^{km}, MW5.8/144, Moment Tensor Solution. s134,c240; s144,c418; Duration: 1^{s}.9 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-6.03±.04; M$_{\theta\theta}$2.30±.04; M$_{\phi\phi}$3.74±.04; M$_{r\theta}$-1.33±.12; M$_{\theta\phi}$-2.75±.04; M$_{\phi r}$-0.49±.13; Best double couple: M$_{0}$6.10200×10^{17} NP1:φ$_{s}$131.00000°,δ48.00000°, λ-106.00000°. NP2:φ$_{s}$334.00000°,δ44.00000°, λ-73.00000°. Principal axes: T 5.8780, Plg2.0000°, Azm232.0000°; N 0.4570, Plg12.0000°, Azm141.0000°; P -6.3250, Plg78.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **11** 09:40:23.0±0.0, 10°.76S×166°.74E, h11^{km}, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-4.05; M$_{\theta\theta}$1.53; M$_{\phi\phi}$2.51; M$_{r\theta}$1.10; M$_{\theta\phi}$-2.46; M$_{\phi r}$-1.06; Best double couple: M$_{0}$4.60000×10^{17} NP1:φ$_{s}$318.00000°, δ55.00000°,λ-93.00000°. NP2:φ$_{s}$143.00000°,δ35.00000°, λ-85.00000°. Principal axes: T 4.7900, Plg9.0000°, Azm50.0000°; N -0.4800, Plg2.0000°, Azm319.0000°; P -4.3200, Plg79.0000°, Azm215.0000°;*

*BJI **11** 09:40:24.6, 10°.49S×166°.67E, h34^{km}, mB6.0/71, mb5.2/70, Ms5.6/91, Ms7 5.3/80*

ISC 11 09:40:22.8±0.4**, 11°.03S**±0°.04×**166°.90E**±0°.04**, h30^{km}**±2^{km}**, h30^{km}:pP-P, n853, σ1^{s}.31**/835**, mb5.6**/317**, MS5.5**/178**, 13C-16D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.02**	**282**	*e*P	**Pn**	**09 42 02.0**	**-1.6**
HNR				*e*S	**Sn**	**09 43 30.0**	**+7.6**
HNR	**Honiara**	**7.02**	**282**	*e*Pn	**Pn**	**09 42 03.3**	**-0.2**
HNR	**Honiara**	**7.02**	**282**	P	**Pn**	**09 42 04.3**	**+0.8**
HNR				pmax	pmax		
	comp=Z,33nm,0.3s						
HNR				MLR	MLR		
	comp=Z,95μm,19.6s						
HNR	**Honiara**	**7.02**	**282**	Pn	**Pn**	**09 42 04.3**	**+0.8**
	comp=Z,33nm,0.3s,baz=195,slow=3.6,SNR=11						
MARNC	**Mare, Loyalty**	**10.45**	**174**	*e*Pn	**Pn**	**09 42 51.1**	**+0.5**
DZM	**Mont Dzumac**	**10.99**	**182**	*e*Pn	**Pn**	**09 42 59.5**	**+1.4**
	comp=Z,56nm,0.7s						
DZM				*e*LR	LR	09 45 34.2	
	comp=Z,68μm,26.6s						
DZM	**Mont Dzumac**	**10.99**	**182**	*e*Pn	**Pn**	**09 42 58.8**	**+0.7**
DZM				*e*Sn	**Sn**	**09 45 03.1**	**+3.0**
DZM	**Mont Dzumac**	**10.99**	**182**	Pn	**Pn**	**09 42 59.5**	**+1.4**
	comp=Z,1.7nm,0.3s,baz=22,slow=18,SNR=24						
DZM				Sn	**Sn**	**09 45 03.1**	**+3.0**
	comp=Z,0.4nm,0.3s,baz=345,slow=16,SNR=2.8						
ONTNC	**Ouen Toro**	**11.22**	**182**	*e*Pn	**Pn**	**09 42 59.2**	**-2.0**
PINNC	**Pines Island,**	**11.53**	**177**	*e*Pn	**Pn**	**09 43 03.8**	**-1.6**
FUNA	**Funafuti**	**12.38**	**80**	*e*Pn	**Pn**	**09 43 14.4**	**-2.6**
MSVF	**Nonsavu**	**12.69**	**123**	*e*Pn	**Pn**	**09 43 24.1**	**+2.7**
MSVF	**Nonsavu**	**12.69**	**123**	*i* P	**Pn**	**09 43 24.8**	**+3.4**
TARA	**Tarawa**	**13.68**	**26**	*e*Pn	**Pn**	**09 43 36.2**	**+1.3**
RABL	**Rabaul**	**16.10**	**294**	*e*Pn	**Pn**	**09 44 06.6**	**-0.5**
	comp=Z,129nm,1.4s						
PATS	**Pohnpei**	**19.70**	**334**	*e*P	**P**	**09 44 50.0**	**+0.3**
	comp=Z,249nm,1.2s						
KWAJ	**Kwajalein Atol**	**19.71**	**2**	*e*P	**P**	**09 44 50.2**	**+0.3**
	comp=Z,774nm,1.4s						
KWAJ	**Kwajalein Atol**	**19.71**	**2**	*e*P	**P**	**09 44 50.2**	**+0.3**
KWAJ				pmax	pmax		
	comp=Z,773nm,1.4s						
EIDS	**Eidsvold**	**20.68**	**224**	P	Pn	09 45 02.5	-0.4
	baz=21,SNR=32						
EIDS	**Eidsvold**	**20.68**	**224**	*e*P	**P**	**09 44 59.5**	**-1.0**
	comp=Z,632nm,1.6s						
MANU	**Manus Island**	**21.34**	**293**	*e*P	**P**	**09 45 07.8**	**+0.2**
	comp=Z,345nm,1.5s						
LHI	**Lord Howe Isla**	**21.64**	**198**	P	**P**	**09 45 13.1**	**+2.4**
	baz=22,SNR=5.3						
LHI	**Lord Howe Isla**	**21.64**	**198**	*e*P	**P**	**09 45 11.2**	**+0.5**
	comp=Z,571nm,1.6s						
CTA	**Charters Tower**	**21.81**	**243**	P	**P**	**09 45 13.7**	**+1.1**
	comp=Z,38nm,0.9s,baz=64,slow=12,SNR=30						
CTA				LR	LR	09 52 46.9	
	comp=Z,26μm,18.7s,baz=64,slow=34						
CTAO	**Charters Tower**	**21.81**	**243**	*e*P	**P**	**09 45 13.1**	**+0.5**
	comp=Z,253nm,1.4s						
CTAO				LR	LR		
	comp=Z,38μm,19.0s						
CTAO	**Charters Tower**	**21.81**	**243**	*e*P	**P**	**09 45 13.1**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,253nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,38μm,19.0s						
KNTN	**Kanton**	**22.74**	**70**	*e*P	**P**	**09 45 21.0**	**-1.6**
	comp=Z,487nm,1.4s						
MTSU	**Mount Surprise**	**22.95**	**249**	P	**P**	**09 45 25.6**	**+0.8**
	baz=23,SNR=32						
RMQ	**Roma**	**23.00**	**226**	P	**P**	**09 45 26.6**	**+1.3**
	baz=23,SNR=42						
RAO	**Raoul Island**	**23.02**	**144**	*e*P	**P**	**09 45 25.4**	**0.0**
	comp=Z,1μm,1.2s						
RAO				*e*P	**P**	**09 45 25.6**	**+0.2**
RAO	**Raoul Island**	**23.02**	**144**	P	**P**	**09 45 25.6**	**+0.2**
	comp=Z,146nm,0.3s,baz=240,slow=8.2,SNR=3.6						
RAO				LR	LR	09 52 25.6	
	comp=Z,9μm,21.3s,baz=304,slow=32						
COEN	**Coen**	**23.34**	**260**	P	**P**	**09 45 29.6**	**+0.9**
	baz=24,SNR=22						
COEN	**Coen**	**23.34**	**260**	*e*P	**P**	**09 45 27.3**	**-1.4**
	comp=Z,303nm,1.4s						
NIUE	**Niue**	**23.75**	**112**	*e*P	**P**	**09 45 32.8**	**+0.2**
	comp=Z,640nm,1.6s						
ARMA	**Armidale**	**23.95**	**214**	P	**P**	**09 45 35.6**	**+1.0**
	baz=24,SNR=27						
ARMA	**Armidale**	**23.95**	**214**	*e*P	**P**	**09 45 33.8**	**-0.8**
	comp=Z,472nm,1.6s						
OUZ	**Omahuta**	**24.84**	**167**	*e*P	**P**	**09 45 42.4**	**-0.1**
	comp=Z,283nm,1.7s						
QIS	**Mount Isa**	**27.88**	**247**	P	**P**	**09 46 10.6**	**+0.4**
	baz=28,SNR=5.5						
HIZ	**Hauiti**	**28.28**	**167**	*e*P	**P**	**09 46 13.8**	**+0.3**
	comp=Z,122nm,1.6s						
CMSA	**Cobar Meteorol**	**28.30**	**221**	P	**P**	**09 46 13.9**	**+0.1**
	baz=29,SNR=25						
MXZ	**Matakaoa Point**	**28.34**	**161**	*e*P	**P**	**09 46 13.8**	**-0.2**
	comp=Z,177nm,1.5s						
URZ	**Urewera**	**28.62**	**163**	*e*P	**P**	**09 46 16.7**	**+0.2**
	comp=Z,78nm,1.5s						
URZ	**Urewera**	**28.62**	**163**	P	**P**	**09 46 16.7**	**+0.2**
	comp=Z,12nm,0.9s,baz=21,slow=6.0,SNR=6.6						
URZ				LR	LR	09 55 32.6	
	comp=Z,5μm,20.1s,baz=342,slow=32						
YNG	**Young**	**28.67**	**213**	P	**P**	**09 46 18.0**	**+0.9**
	baz=29,SNR=5.0						
CNB	**Canberra Magne**	**28.96**	**211**	P	**P**	**09 46 20.3**	**+0.6**
	baz=29						
CAN	**Canberra**	**29.15**	**211**	*e*P	**P**	**09 46 20.1**	**-1.2**
	comp=Z,39nm,1.5s						
CAN	**Canberra**	**29.15**	**211**	*e*P	**P**	**09 46 20.1**	**-1.2**
CAN				pmax	pmax		
	comp=Z,39nm,1.5s						

Sta	Name	Dist	Az	Phase	ISC	Time	Res
BKZ	Black Stump Fm	29.30	165	eP	P	09 46 22.6	0.0
	comp=Z,112nm,1.6s						
WAKE	Wake Island	30.12	360	eP	P	09 46 29.4	-0.5
	comp=Z,114nm,0.9s						
THZ	Tophouse	31.07	171	eP	P	09 46 37.9	-0.3
	comp=Z,68nm,1.0s						
STKA	Stephens Creek	31.24	225	P	P	09 46 40.6	+0.8
	baz=32,SNR=18						
STKA	Stephens Creek	31.24	225	eP	P	09 46 38.7	-1.1
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	31.24	225	P	P	09 46 40.9	+1.1
	comp=Z,30nm,1.1s,baz=24,slow=9.0,SNR=21						
STKA				LR	LR	09 58 27.9	
	comp=Z,21µm,20.5s,baz=48,slow=35						
LTZ	Lake Taylor	31.98	173	eP	P	09 46 45.5	-0.7
	comp=Z,110nm,1.3s						
FOZ	Fox Glacier	32.48	176	eP	P	09 46 49.5	-1.0
	comp=Z,70nm,0.9s						
OXZ	Oxford	32.49	173	eP	P	09 46 49.9	-0.8
	comp=Z,85nm,1.0s						
WRAB	Tennant Creek	32.54	250	eP	P	09 46 49.5	-1.9
	comp=Z,196nm,1.5s						
WRAB				LR	LR		
	comp=Z,18µm,19.0s						
WRAB	Tennant Creek	32.54	250	ceP	P	09 46 50.3	-1.1
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WB2	Warramunga Arr	32.54	250	eP	P	09 46 49.6	-1.8
WB2				eP	P	09 46 50.3	-1.1
WR1	Warramunga Arr	32.55	250	eP	P	09 46 50.6	-0.9
	comp=Z,162nm,1.4s						
WRA	Warramunga Arr	32.55	250	P	P	09 46 50.6	-0.9
	comp=Z,27nm,0.9s,baz=82,slow=9.0,SNR=86						
WRA				LR	LR	10 00 02.3	
	comp=Z,16µm,18.7s,baz=75,slow=36						
TOO	Toolangi	32.68	212	P	P	09 46 52.9	+0.5
	baz=33,SNR=6.5						
TOO	Toolangi	32.68	212	P	P	09 46 55.9	+3.4
TOO				pmax	pmax		
	comp=Z,23nm,1.6s						
RPZ	Rata Peaks	32.77	174	eP	P	09 46 51.8	-1.2
	comp=Z,113nm,1.3s						
RPZ				eP	P	09 46 53.2	+0.1
RPZ	Rata Peaks	32.77	174	P	P	09 46 53.2	+0.1
	comp=Z,40nm,1.0s,baz=54,slow=2.9,SNR=5.5						
RPZ				LR	LR	09 58 57.5	
	comp=Z,7µm,20.2s,baz=346,slow=34						
GUMO	Guam	32.80	318	PFAKE		09 47 00.0	+6.4
GUMO				LR	LR		
	comp=Z,5µm,19.0s						
GUMO	Guam	32.80	318	LR	LR	10 00 51.9	
	comp=Z,2µm,18.2s,baz=133,slow=38						
MQZ	McQueen's Vall	32.94	172	eP	P	09 46 54.1	-0.4
	comp=Z,69nm,1.0s						
RAR	Rarotonga	33.52	112	LR	LR	09 58 26.6	
	comp=Z,2µm,19.6s,baz=278,slow=32						
KDU	Kakadu	33.72	264	P	P	09 47 01.8	+0.1
	baz=34,SNR=14						
WKZ	Wanaka	33.73	177	eP	P	09 47 01.3	-0.1
	comp=Z,97nm,1.2s						
AS01	Alice Springs	33.77	244	eP	P	09 47 01.1	-1.1
AS31	Alice Springs	33.81	244	eP	P	09 47 01.4	-1.1
	comp=Z,14nm,1.3s						
ASAR	Alice Springs	33.81	244	P	P	09 47 01.4	-1.2
	comp=Z,17nm,0.9s,baz=74,slow=8.9,SNR=90						
ASAR				PcP	PcP	09 49 41.1	-0.2
	comp=Z,7.1nm,1.1s,baz=87,slow=3.8,SNR=5.4						
ASAR				LR	LR	10 00 03.4	
	comp=Z,20µm,19.1s,baz=75,slow=35						
HTT	Hallett	33.97	225	P	P	09 47 04.6	+0.8
	baz=34,SNR=17						
ARPS	Mount Arapiles	34.17	217	P	P	09 47 06.6	+1.2
	baz=35,SNR=5.8						
DCZ	Deep Cove	34.32	180	eP	P	09 47 06.2	-0.3
	comp=Z,168nm,1.3s						
WHZ	Wether Hill Ro	34.76	179	eP	P	09 47 09.7	-0.6
	comp=Z,68nm,1.3s						
BBOO	Buckleboo	35.67	228	P	P	09 47 19.1	+0.7
	baz=36,SNR=9.4						
BBOO	Buckleboo	35.67	228	eP	P	09 47 17.7	-0.8
	comp=Z,223nm,1.5s						
TAU	Tasmania Unive	36.05	205	PFAKE		09 47 30.0	+8.6
TAU				LR	LR		
	comp=Z,7µm,20.0s						
JOHN	Johnston Islan	36.12	41	PFAKE		09 47 30.0	+7.7
JOHN				LR	LR		
	comp=Z,797nm,19.0s						
KNRA	Kununurra	37.35	259	P	P	09 47 33.1	+0.2
	baz=38,SNR=22						
WRKA	Warakurna	39.10	244	P	P	09 47 48.3	+0.6
	baz=40,SNR=8.8						
NLAI	Namlea	40.20	278	P	P	09 47 58.9	+2.0
FITZ	Fitzroy Crossi	40.48	255	P	P	09 47 58.9	-0.2
	baz=41,SNR=22						
FITZ	Fitzroy Crossi	40.48	255	eP	P	09 47 57.9	-1.2
	comp=Z,188nm,1.4s						
FITZ	Fitzroy Crossi	40.48	255	P	P	09 47 59.0	-0.1
	comp=Z,76nm,1.1s,baz=90,slow=6.8,SNR=63						
FITZ				LR	LR	10 03 50.4	
	comp=Z,15µm,20.2s,baz=84,slow=35						
FORT	Forrest	40.98	235	P	P	09 48 03.7	+0.6
	baz=41,SNR=7.4						
FORT	Forrest	40.98	235	eP	P	09 48 01.6	-1.5
	comp=Z,412nm,1.6s						
SANI	Sanana	41.56	279	P	P	09 48 10.2	+2.1
MIDW	Midway	41.88	21	PFAKE		09 48 20.0	+10
MIDW				LR	LR		
	comp=Z,7µm,20.0s						
SOEI	Soe	41.92	268	eP	P	09 48 10.0	-1.2
	comp=Z,121nm,1.5s						
BATI	Baumata	42.47	267	P	P	09 48 15.7	+0.1
	comp=Z,13nm,0.3s,baz=51,slow=4.3,SNR=7.5						
BATI				LR	LR	10 05 38.9	
	comp=Z,9µm,21.8s,baz=122,slow=36						
PAE	Paea	42.60	104	eP	P	09 48 18.9	+2.4
	comp=Z,18nm,1.5s						
PPT	Papeete	42.60	104	eP	P	09 48 17.8	+1.2
PPT	Papeete	42.60	104	eP	P	09 48 17.8	+1.2
PPT	Papeete	42.60	104	LR	LR	10 02 42.8	
	comp=Z,5µm,18.8s,baz=268,slow=32						
PPT2	Papeete2	42.60	104	eP	P	09 48 18.9	+2.2
	comp=Z,110nm,1.5s						
PPT2				eS	S	09 54 38.5	+0.5
	comp=Z,3µm,24.8s						
PPT2				eLQ	LQ	09 58 10.3	
	comp=Z,14µm,28.0s						
PPT2				eLR	LR	09 59 57.0	
	comp=Z,15µm,27.0s,baz=279						
PPTF	Pamatai, Papee	42.62	104	eP	P	09 48 17.4	+0.6
	comp=Z,304nm,1.6s						
TIAR	Tiarei	42.82	104	eP	P	09 48 20.5	+2.1
	comp=Z,34nm,1.5s						
TVO	Taravao	42.92	104	eP	P	09 48 21.7	+2.5
	comp=Z,38nm,1.5s						
MMRI	Maumere	44.04	269	eP	P	09 48 26.1	-2.1
	comp=Z,200nm,1.5s						
PMOR	Pomariorio Ree	44.17	100	eP	P	09 48 31.3	+2.1
	comp=Z,286nm,1.3s						
VAH	Vaihoa	44.43	101	eP	P	09 48 33.3	+2.0
	comp=Z,194nm,1.3s						
JCJ	Chichijima	44.85	328	LR	LR	10 05 42.9	
	comp=Z,996nm,19.1s,baz=148,slow=34						
DAV	Davao City (W)	44.88	292	PFAKE		09 48 50.0	+15
DAV				LR	LR		
	comp=Z,2µm,22.0s						
DAV	Davao City (W)	44.88	292	⇓eP	P	09 48 33.1	-1.8
DAV	Davao City (W)	44.88	292	LR	LR	10 06 38.9	
	comp=Z,2µm,19.3s,baz=108,slow=35						
LUWI	Luwuk	44.92	280	eP	P	09 48 33.6	-1.6
	comp=Z,312nm,1.5s						
KCP	Kidapawan	45.30	291	⇑eP	P	09 48 39.7	+1.3
SKMP	Bagumbayan, Su	45.61	290	eP	P	09 48 40.5	-0.3
APSI	Ampana	46.04	279	P	P	09 48 46.3	+2.2
MBWA	Marble Bar	46.27	251	eP	P	09 48 44.8	-1.0
	comp=Z,320nm,1.5s						
MBWA				LR	LR		
	comp=Z,7µm,20.0s						
BNSI	Bone	46.78	274	P	P	09 48 50.8	+0.8
	comp=Z,68nm,2.5s,comp=Z,3µm						
KAPI	Kappang	47.02	273	PFAKE		09 49 00.0	+8.2
KAPI				LR	LR		
	comp=Z,2µm,20.0s						
PAGZ	Pagadian	47.19	292	eP	P	09 48 53.5	+0.4
KIP	Kipapa	47.20	47	PFAKE		09 49 10.0	+17
KIP				LR	LR		
	comp=Z,11µm,20.0s						
SPSI	Sidrap Palu	47.20	275	P	P	09 48 55.3	+2.1
TTSI	Tana Toraja	47.34	276	P	P	09 48 56.4	+2.1
MEEK	Meekatharra	47.97	244	P	P	09 48 59.4	+0.3
	baz=48,SNR=9.6						
POHA	Pohakuloa	48.01	51	PFAKE		09 49 10.0	+10
POHA				LR	LR		
	comp=Z,9µm,22.0s						
MPSI	Mapaga	48.05	280	P	P	09 48 59.0	-0.8
PLAI	Plampang	48.39	268	P	P	09 49 04.4	+1.9
GUIM	Jordan	49.02	295	eP	P	09 49 07.7	+0.5
KLBR	Kellerberrin	49.67	238	P	P	09 49 12.0	0.0
	baz=50,SNR=6.8						
BLDU	Ballidu	50.34	239	P	P	09 49 17.6	+0.5
	baz=51,SNR=6.1						
NWAO	Narrogin (SRO)	50.41	236	P	P	09 49 17.6	0.0
	baz=51,SNR=7.5						
NWAO	Narrogin (SRO)	50.41	236	eP	P	09 49 16.9	-0.8
	comp=Z,119nm,1.2s						
NWAO				LR	LR		
	comp=Z,29µm,19.0s						
NWAO	Narrogin (SRO)	50.41	236	eP	P	09 49 18.2	+0.6
NWAO				pmax	pmax		
	comp=Z,120nm,1.2s						
MORW	Morawa	50.62	241	P	P	09 49 20.1	+0.8
	baz=51,SNR=8.4						
MORW	Morawa	50.62	241	eP	P	09 49 18.4	-0.9
	comp=Z,245nm,1.5s						
MUN	Mundaring	51.04	238	P	P	09 49 23.2	+0.8
	baz=51,SNR=18						
JAGI	Jajag, Banyuwa	51.99	268	eP	P	09 49 28.5	-1.3
	comp=Z,73nm,1.3s						
ENPP	El Nido	52.09	294	eP	P	09 49 28.5	-1.9
TAOE	Nuku Hiva Isla	52.15	93	eP	P	09 49 33.8	+2.7
	comp=Z,154nm,1.5s						
TAOE				eS	S	09 56 53.3	-0.7
	comp=Z,3µm,24.9s						
TAOE				eLQ	LQ	10 02 10.5	
	comp=Z,3µm,25.6s						
TAOE				eLR	LR	10 04 16.5	
	comp=Z,8µm,29.1s,baz=269						
TAOE	Nuku Hiva Isla	52.15	93	eP	P	09 49 31.4	+0.3
	comp=Z,116nm,1.3s						
KKM	Kota Kinabalu	53.22	286	eP	P	09 49 35.9	-3.0
	comp=Z,149nm,1.4s						
INU	Inuyama	54.09	330	eP	P	09 49 44.3	-0.5
	comp=Z,117nm,1.4s						
MJAR	Matsushiro Arr	54.48	332	P	P	09 49 46.7	-1.0
	comp=Z,7.4nm,0.9s,baz=168,slow=7.4,SNR=10						
MAJO	Matsushiro	54.48	332	eP	P	09 49 46.6	-1.1
	comp=Z,140nm,1.6s						
MAJO				LR	LR		
	comp=Z,2µm,20.0s						
MAJO	Matsushiro	54.48	332	i P	P	09 49 45.7	-2.0
MAJO				pmax	pmax		
	comp=Z,61nm,1.7s						
MAT	Matsushiro	54.48	332	P	P	09 49 47.0	-0.7
MAT				S	S	09 57 30.6	+5.8
MJB9	Matsu-Tunnel	54.49	332	eP	P	09 49 47.0	-0.7
	comp=Z,144nm,1.6s						
JNU	Nakatsue	55.73	323	eP	P	09 49 56.3	-0.5
	comp=Z,456nm,1.6s						
JNU	Nakatsue	55.73	323	LR	LR	10 11 23.1	
	comp=Z,482nm,21.1s,baz=131,slow=34						
SBUM	Sibu	56.01	281	eP	P	09 49 58.4	-0.7
	comp=Z,22nm,1.5s						
RKT	Rikitea	56.54	110	eS	S	09 57 53.8	+1.1
	comp=Z,2µm,31.0s						
RKT				eLQ	LQ	10 04 03.1	
	comp=Z,3µm,30.8s						
RKT				eLR	LR	10 06 25.0	
	comp=Z,6µm,29.5s,baz=279						
ERM	Erimo	57.11	339	PFAKE		09 50 20.0	+14
ERM				LR	LR		
	comp=Z,1µm,20.0s						
YUK	Yuzh-Kuril'sk	58.04	342	eP	P	09 50 03.9	-9.0
YUK				eS	S	09 58 12.7	+1.1
YUK				pmax	pmax		
	comp=Z,399nm,2.8s						
KUR	Kuril'sk	58.58	344	c iP	P	09 50 18.9	+2.3
KUR				e		09 51 03.8	
KUR				ePPP	PPP	09 53 46.1	
KUR				eS	S	09 58 30.6	+12
KUR				pmax	pmax		
	comp=Z,2µm,4.3s						
KUR				MLR	MLR		
	comp=Z,1µm,12.0s						
KUR				MLR	MLR		
	comp=N,1µm,13.0s						
LEM	Lembang	58.63	269	LR	LR	10 17 39.7	
	comp=N,2µm,18.9s,baz=102,slow=38						
QZH	Quanzhou	59.13	308	⇓iP	P	09 50 21.6	+0.8
QZH				S	S	09 58 27.4	+1.0
QZH				pmax	pmax		
	comp=N,42nm,2.1s						
QZH				pmax	pmax		
	comp=N,2µm,7.1s						
QZH				LR	LR		
	comp=N,1µm,18.0s						
QZH				LR	LR		
	comp=N,2µm,20.8s						
ASAJ	Asahikawa	59.16	340	P	P	09 50 21.1	+0.4
	comp=N,15nm,0.9s,baz=244,slow=16,SNR=7.6						
ASAJ				LR	LR	10 10 46.5	
	comp=N,3µm,21.2s,baz=185,slow=31						
TJN	Taejon	60.07	324	ceP	P	09 50 28.3	+1.2
KSRS	Korea Array	60.51	325	P	P	09 50 30.5	+0.4
	comp=N,7.1nm,1.1s,baz=151,slow=6.7,SNR=15						
KS15	Wonju Array Si	60.52	325	eP	P	09 50 30.3	+0.1
KSAR	Wonju Array Be	60.52	325	P	P	09 50 30.4	+0.3
KSAR	Wonju Array Be	60.52	325	P	P	09 50 30.5	+0.3
KS01	Wonju Array Si	60.54	325	eP	P	09 50 29.8	-0.5
SSE	Sheshan	60.63	315	P	P	09 50 32.7	+1.7
SSE				S	S	09 58 48.4	+2.8
SSE				pmax	pmax		
	comp=N,15nm,2.0s						
SSE				pmax	pmax		
	comp=N,650nm,4.6s						
SSE				LR	LR		
	comp=N,570nm,16.3s						
SSE				LR	LR		
	comp=N,570nm,16.7s						
SSE	Sheshan	60.63	315	eP	P	09 50 30.1	-0.9
	comp=N,307nm,1.6s						
YSS	Yuzh-Sakhalins	61.62	341	eP	P	09 50 37.6	+0.1
	comp=N,148nm,1.5s						
YSS	Yuzh-Sakhalins	61.62	341	κ iP	P	09 50 38.6	+1.2
YSS				e		09 50 45.3	
YSS				e		09 52 59.0	
YSS				eS	S	09 58 57.5	-0.1
YSS				eSSS	SSS	10 05 43.0	
YSS				pmax	pmax		
	comp=Z,200nm,7.0s						
YSS				pmax	pmax		
	comp=Z,40nm,1.8s						
YSS				smax	smax		
	comp=N,1µm,13.0s						
YSS				smax	smax		
	comp=E,900nm,9.0s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=E,1µm,16.0s						
SKR	Severo-Kuril's	62.17	352	eP	P	09 50 38.5	-2.5
SKR				e		09 51 15.6	
SKR				eS	S	09 59 16.5	+12
SKR				pmax	pmax		
	comp=Z,83nm,1.0s						
SKR				pmax	pmax		
	comp=Z,1µm,8.5s						
SKR				pmax	pmax		
	comp=Z,3µm,4.1s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,3µm,16.0s						
GZH	Guangzhou	62.42	303	P	P	09 50 42.7	-0.6
GZH				PP	PP	09 53 00.9	-0.1
GZH				PcS	PcS	09 55 25.1	-1.0
GZH				S	S	09 59 07.6	-1.0
GZH				pmax	pmax		
	comp=Z,1µm,7.6s						
GZH				LR	LR		
	comp=Z,1µm,19.2s						
GZH				LR	LR		
	comp=Z,2µm,19.7s						
MSHR	Mys Shultsa	62.58	331	i P	P	09 50 43.5	-0.5
VLA	Vladivostok	62.65	332	i P	P	09 50 44.8	+0.4
VLA				pmax	pmax		
	comp=Z,237nm,1.7s						
NJ2	Nanjing	62.80	315	eP	P	09 50 46.2	+0.5
NJ2				pP	sP	09 50 55.1	-2.7
NJ2				sP	pwP	09 50 58.6	+1.5
NJ2				S	S	09 59 13.6	+0.5
NJ2				sS	pS	09 59 22.8	-0.9
NJ2				pmax	pmax		
	comp=Z,23nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.7s						
NJ2				LR	LR		
	comp=Z,1µm,21.7s						
NJ2				LR	LR		
	comp=Z,1µm,16.8s						
NJ2				LR	LR		
	comp=Z,2µm,19.5s						
USA0B	Ussuriysk Arra	63.44	333	eP	P	09 50 49.8	+0.1
	comp=Z,221nm,1.6s						
USRK	Ussuriysk Ar.	63.44	333	P	P	09 50 50.7	+1.0
	comp=Z,28nm,1.1s,baz=140,slow=6.5,SNR=22						
QIZ	Qiongzhong	63.67	298	P	P	09 50 52.0	+0.3
QIZ				sP	pwP	09 51 05.5	+2.3
QIZ				S	S	09 59 23.3	-1.1
QIZ				sS	sS	09 59 40.8	+1.9
QIZ				pmax	pmax		
	comp=Z,440nm,4.3s						
QIZ				LR	LR		
	comp=Z,1µm,21.6s						
QIZ				LR	LR		
	comp=Z,2µm,20.6s						
QIZ				LR	LR		
	comp=Z,4µm,24.5s						
QIZ	Qiongzhong	63.67	298	PFAKE		09 51 00.0	+8.3
QIZ				LR	LR		
	comp=Z,442nm,22.0s						
PET	Petropavlovsk	64.18	354	PFAKE		09 51 10.0	+16
PET				LR	LR		
	comp=Z,4µm,20.0s						
PET	Petropavlovsk	64.18	354	eP	P	09 50 57.7	+3.4
PET				eS	S	09 59 30.7	+1.2
PET				pmax	pmax		
	comp=Z,44nm,1.4s						
PET				pmax	pmax		
	comp=Z,1µm,9.6s						
ADK	Adak	64.24	11	eP	P	09 50 55.4	+0.7
	comp=Z,127nm,1.3s						
ADK				LR	LR		
	comp=Z,5µm,19.0s						
ADK	Adak	64.24	11	eP	P	09 50 55.7	+0.9
ADK				pmax	pmax		
	comp=Z,130nm,1.2s						
PEA0B	Petropavlovsk-	64.36	354	eP	P	09 50 56.0	+0.4
	comp=Z,211nm,1.6s						
PETK	Petropavlovsk-	64.36	354	eP	P	09 50 55.4	-0.2
PETK	Petropavlovsk-	64.36	354	P	P	09 50 56.5	+0.9
PETK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PETK	Petropavlovsk-	64.36	354	P	P	09 50 56.5	+0.9
	comp=Z,7.1nm,0.9s,baz=151,slow=10,SNR=5.8						
PETK				LR	LR	10 13 38.9	
	comp=Z,3µm,21.0s,baz=162,slow=31						
PEA1	Petropavlovsk-	64.37	354	eP	P	09 50 56.5	+0.9
MDJ	Mudanjiang	64.87	331	P	P	09 51 00.3	+1.3
MDJ				pP	sP	09 51 09.8	-1.5
MDJ				sP	pwP	09 51 13.4	+3.3
MDJ				PP	PP	09 53 23.2	+1.1
MDJ				S	S	09 59 42.0	+3.7
MDJ				pmax	pmax		
	comp=Z,49nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,2µm,3.6s						
MDJ				LR	LR		
	comp=Z,1µm,19.4s						
MDJ				LR	LR		
	comp=Z,1µm,18.4s						
MDJ				LR	LR		
	comp=Z,2µm,26.3s						
MDJ	Mudanjiang	64.87	331	eP	P	09 50 59.3	+0.2
	comp=Z,120nm,1.5s						
MDJ				LR	LR		
	comp=Z,1µm,19.0s						
TYV	Tymovskoe	65.14	343	eP	P	09 51 01.4	+0.7
TYV				eS	S	09 59 48.5	+7.1
TYV				pmax	pmax		
	comp=Z,29nm,2.2s						
TYV				pmax	pmax		
	comp=Z,1µm,4.4s						
TYV				smax	smax		
	comp=E,1µm,9.2s						
DL2	Dalian	65.15	322	⇓P	P	09 51 01.6	+0.6
DL2				S	S	09 59 41.0	-1.0
DL2				pmax	pmax		
	comp=E,110nm,1.6s						
DL2				pmax	pmax		
	comp=E,2µm,6.4s						
DL2				LR	LR		
	comp=E,2µm,19.3s						
DL2				LR	LR		
	comp=E,1µm,19.5s						
DL2				LR	LR		
	comp=E,2µm,18.1s						
WHN	Wuhan	65.23	311	⇑P	P	09 51 01.8	+0.1
WHN				sP	pwP	09 51 14.7	+1.6
WHN				PP	PP	09 53 30.9	+5.3
WHN				LR	LR		
	comp=E,4µm,16.8s						
WHN				LR	LR		
	comp=E,1µm,15.6s						
WHN				LR	LR		
	comp=E,4µm,18.2s						
SNY	Shenyang	65.95	326	⇓P	P	09 51 05.4	-0.7
SNY				S	S	09 59 48.1	-3.5
SNY				pmax	pmax		
	comp=E,64nm,2.5s						
SNY				pmax	pmax		
	comp=E,1µm,4.2s						
SNY				LR	LR		
	comp=E,1µm,20.2s						
SNY				LR	LR		
	comp=E,1µm,20.2s						
SNY				LR	LR		
	comp=E,2µm,19.0s						
CN2	Changchun	66.31	328	eP	P	09 51 08.9	+0.5
CN2				epP	sP	09 51 19.5	-1.1
CN2				esP	pwP	09 51 22.6	+3.1
CN2				eS	S	09 59 58.2	+2.2
CN2				pmax	pmax		
	comp=E,40nm,1.1s						
CN2				pmax	pmax		
	comp=E,1µm,5.0s						
CN2				LR	LR		
	comp=E,2µm,16.0s						
CN2				LR	LR		
	comp=E,600nm,16.0s						
CN2				LR	LR		
	comp=E,2µm,17.0s						
TIA	Tai'an	66.36	318	P	P	09 51 09.1	+0.2
TIA				S	S	10 00 00.5	+3.6
TIA				pmax	pmax		
	comp=E,7.0nm,1.1s						
TIA				pmax	pmax		
	comp=E,340nm,4.3s						
TIA				LR	LR		
	comp=E,570nm,14.2s						
TIA				LR	LR		
	comp=E,580nm,14.2s						
TIA				LR	LR		
	comp=E,560nm,17.8s						
BKNI	Bangkinang	66.39	275	eP	P	09 51 08.5	-1.0
	comp=E,104nm,1.1s						
VNDA	Vanda	66.53	181	eP	P	09 51 09.7	+0.3
VNDA				e		09 51 10.0	
VNDA	Vanda	66.53	181	P	P	09 51 10.8	+1.4
	comp=E,13nm,1.1s,baz=336,slow=5.9,SNR=6.8						
VNDA				LR	LR	10 18 23.6	
	comp=E,1µm,18.1s,baz=18,slow=34						
CASY	Casey	66.81	201	PFAKE		09 51 20.0	+8.8
CASY				LR	LR		
	comp=Z,944nm,21.0s						
GRNR	Gornyy	67.01	340	eP	P	09 51 12.7	0.0
IPM	Ipoh	67.33	280	eP	P	09 51 15.2	-0.3
	comp=Z,167nm,1.6s						
KLR	Kul'dur	67.50	336	d iP	P	09 51 16.1	+0.3
KLR	Kul'dur	67.50	336	LR	LR	10 16 39.0	
	comp=Z,1µm,20.2s,baz=144,slow=32						

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NKL   Nikolayevsk       67.74 343  eP      P        09 51 18.0 +0.8
NKL                                e                10 00 20.0
NKL                                 pmax   pmax
      comp=E,800nm,4.0s
NKL                                 pmax   pmax
      comp=Z,290nm,2.0s
NKL                                 MLR    MLR
      comp=Z,2µm,12.0s
SKNT  Sakolnakorn       68.12 293   P      P        09 51 21.3 +0.9
      comp=Z,23nm,1.6s,comp=Z,1µm
COCO  West Island       68.45 261   PFAKE           09 51 30.0 +7.5
COCO                                LR     LR
      comp=Z,4µm,20.0s
ENH   Enshi             68.77 309  eP      P        09 51 23.9 -0.4
      comp=Z,108nm,1.6s
ENH                                 LR     LR
      comp=Z,1µm,20.0s
PSI   Prapat            68.99 277  eP      P        09 51 23.7 -2.4
      comp=Z,24nm,1.1s
PSI   Prapat            68.99 277  eP      P        09 51 23.7 -2.4
PSI                                 pmax   pmax
      comp=Z,25nm,1.1s
PSI   Prapat            68.99 277   LR     LR       10 26 19.2
      comp=Z,2µm,18.2s,baz=91,slow=40
BJT   Baijiatuau        69.17 320  eP      P        09 51 26.8 +0.3
      comp=Z,191nm,1.6s
BJT                                 LR     LR
      comp=Z,2µm,20.0s
BJT   Baijiatuau        69.17 320  eP      P        09 51 26.8 +0.3
BJT                                 pmax   pmax
      comp=Z,191nm,1.6s
BJT                                 MLR    MLR
      comp=Z,2µm,20.0s
BJI   Beijing           69.18 321   P      P        09 51 27.2 +0.7
BJI                                 S      S        10 00 29.8 -0.7
BJI                                 pmax   pmax
      comp=Z,18nm,1.3s
BJI                                 LR     LR
      comp=Z,1µm,21.1s
BJI                                 LR     LR
      comp=Z,910nm,23.5s
BJI                                 LR     LR
      comp=Z,1µm,24.0s
NONG  Nongkai           69.23 294   P      P        09 51 28.5 +1.2
      comp=Z,1.0nm,2.2s
GYA   Guiyang           69.34 304⇑iP      P        09 51 28.2 +0.2
GYA                                 pP     pwP      09 51 40.8 +1.2
GYA                                 PP     PP       09 54 05.4 +3.7
GYA                                 S      S        10 00 32.0 -1.2
GYA                                 sS     sS       10 00 50.2 +2.3
GYA                                 SKS    SKSac    10 01 23.0 -3.6
GYA                                 pmax   pmax
      comp=Z,40nm,1.0s
GYA                                 pmax   pmax
      comp=Z,980nm,8.7s
GYA                                 LR     LR
      comp=Z,1µm,21.3s
GYA                                 LR     LR
      comp=Z,2µm,21.9s
GYA                                 LR     LR
      comp=Z,2µm,21.7s
TIY   Taiyuan           70.32 317  eP      P        09 51 34.7 +1.0
TIY                                 pmax   pmax
      comp=Z,15nm,0.6s
TIY                                 pmax   pmax
      comp=Z,750nm,6.7s
TIY                                 LR     LR
      comp=Z,1µm,15.4s
TIY                                 LR     LR
      comp=Z,560nm,13.9s
TIY                                 LR     LR
      comp=Z,2µm,21.3s
PBKT  Sadao Pong        70.72 292  eP      P        09 51 35.4 -1.1
PBKT  Sadao Pong        70.72 292   P      P        09 51 39.6 +3.2
      comp=Z,33nm,2.7s
XAN   Xi'an             70.95 312   P      P        09 51 37.2 -0.4
XAN                                 pP     sP       09 51 46.9 -2.8
XAN                                 S      S        10 00 51.7 +0.1
XAN                                 SKS    SKiKP    10 01 28.9  +11
XAN                                 SS     SS       10 05 19.1 -6.1
XAN                                 pmax   pmax
      comp=Z,34nm,1.8s
XAN                                 pmax   pmax
      comp=Z,2µm,5.1s
XAN                                 LR     LR
      comp=Z,900nm,17.3s
XAN                                 LR     LR
      comp=Z,980nm,20.6s
XAN                                 LR     LR
      comp=Z,1µm,20.6s
XAN   Xi'an             70.95 312  eP      P        09 51 37.6  0.0
      comp=Z,70nm,1.2s
XAN   Xi'an             70.95 312  eP      P        09 51 37.6  0.0
XAN                                 pmax   pmax
      comp=Z,70nm,1.2s
UTTA  Uttaradit         71.46 293   P      P        09 51 55.1  +14
MA2   Magadan           71.55 351  eP      P        09 51 40.2 -0.4
      comp=Z,35nm,1.3s
MA2                                 LR     LR
      comp=Z,2µm,22.0s
MA2   Magadan           71.55 351ceP      P        09 51 39.1 -1.5
MA2                                 pmax   pmax
      comp=Z,75nm,2.5s
KMI   Kunming           72.08 301   P      P        09 51 46.0 +1.2
KMI                                 pP     sP       09 51 54.0 -3.0
KMI                                 sP     pwP      09 51 59.1 +2.6
KMI                                 PP     PP       09 54 27.2 +1.8
KMI                                 S      S        10 01 02.1 -3.2
KMI                                 sS     sS       10 01 17.7 -2.4
KMI                                 SKS    SKSac    10 01 44.3 -3.2
KMI                                 pmax   pmax
      comp=Z,33nm,2.0s
KMI                                 pmax   pmax
      comp=Z,760nm,4.0s
KMI                                 LR     LR
      comp=Z,280nm,21.2s
KMI                                 LR     LR
      comp=Z,2µm,20.3s
KMI                                 LR     LR
      comp=Z,3µm,22.1s
KMI   Kunming           72.08 301  eP      P        09 51 45.7 +0.9
      comp=Z,186nm,1.6s
KMI   Kunming           72.08 301  eP      P        09 51 45.7 +0.9
KMI                                 pmax   pmax
      comp=Z,186nm,1.6s
HHC   Hu-ho-hao-te      72.55 319  eP      P        09 51 48.5 +1.3
HHC                                 pmax   pmax
      comp=Z,25nm,1.0s
HHC                                 pmax   pmax
      comp=Z,1µm,4.3s
HHC                                 LR     LR
      comp=Z,1µm,19.9s
HHC                                 LR     LR
      comp=Z,900nm,18.1s
HHC                                 LR     LR
      comp=Z,2µm,19.9s
ZEA   Zeya              72.77 337deP      P        09 51 49.2 +1.2
ZEA                                e                09 54 36.0
ZEA                                ePPP    PPP      09 56 08.0
ZEA                                 pmax   pmax
      comp=Z,3µm,6.0s
ZEA                                 pmax   pmax
      comp=N,380nm,2.0s
ZEA                                 pmax   pmax
      comp=E,250nm,2.0s
ZEA                                 pmax   pmax
      comp=Z,690nm,1.8s
ZEA                                 pmax   pmax
      comp=N,500nm,6.0s
ZEA                                 pmax   pmax
      comp=Z,800nm,6.0s
ZEA                                 pmax   pmax
      comp=E,400nm,8.0s
HIA   Hailar            72.92 330  eP      P        09 51 50.0 +1.0
      comp=E,242nm,1.6s
HIA                                 LR     LR
      comp=Z,1µm,19.0s
HIA   Hailar            72.92 330  eP      P        09 51 50.1 +1.0
HIA                                 pmax   pmax
      comp=Z,242nm,1.6s
HIA                                 MLR    MLR
      comp=Z,1µm,19.0s
CM01  Chiang Mai Arr    73.12 293  eP      P        09 51 50.1 -0.7
CM31  Chiang Mai Arr    73.14 293  eP      P        09 51 50.9 -0.2
      comp=Z,45nm,1.5s
CMAR  Chiang Mai Arr    73.14 293   P      P        09 51 51.8 +0.8
      comp=Z,4.6nm,0.9s,baz=111,slow=4.5,SNR=19
CMMT  Chiang Mai        73.25 294   P      P        09 51 53.3 +1.7
      comp=Z,40nm,2.0s,comp=Z,1µm
CHTO  Chiang Mai        73.25 294  eP      P        09 51 50.6 -1.1
      comp=Z,116nm,1.6s
CHTO                                LR     LR
      comp=Z,1µm,20.0s
CHTO  Chiang Mai        73.25 294  eP      P        09 51 50.6 -1.1
CHTO                                pmax   pmax
      comp=Z,116nm,1.6s
CHTO                                MLR    MLR
      comp=Z,1µm,20.0s
CHTO  Chiang Mai        73.25 294   P      P        09 51 53.3 +1.6
      comp=Z,177nm,2.0s,comp=Z,6µm
BTO   Baotou            73.42 318  eP      P        09 51 52.5 +0.1
BTO                                 S      SKiKP    10 01 22.0 +0.6
CD2   Chengdu           73.49 307   P      P        09 51 53.5 +0.6
CD2                                 pP     pwP      09 52 03.9 -0.6
CD2                                 sP     PcP      09 52 08.1 -0.8
CD2                                 PP     PP       09 54 37.3 +0.2
CD2                                 S      S        10 01 21.3 +0.4
CD2                                 pmax   pmax
      comp=Z,110nm,0.8s
CD2                                 pmax   pmax
      comp=Z,1µm,9.4s
CD2                                 LR     LR
      comp=Z,2µm,18.4s
CD2                                 LR     LR
      comp=Z,2µm,22.9s
CD2                                 LR     LR
      comp=Z,2µm,21.4s
SEY   Seymchan          74.58 353ceP      P        09 51 58.7 +0.2
LZH   Lanzhou           75.58 312  eP      P        09 52 06.6 +1.5
LZH                                 pP     PcP      09 52 17.9  0.0
LZH                                 sP     sP       09 52 22.7 +5.4
LZH                                 S      S        10 01 47.1 +2.7
LZH                                 sS     sS       10 02 03.8 +4.5
LZH                                 SS     SS       10 06 31.5 -4.6
LZH                                 pmax   pmax
      comp=Z,54nm,1.0s
LZH                                 pmax   pmax
      comp=Z,2µm,4.3s
LZH                                 LR     LR
      comp=Z,2µm,16.8s
LZH                                 LR     LR
      comp=Z,1µm,15.2s
LZH                                 LR     LR
      comp=Z,2µm,18.5s
KDAK  Kodiak Island     76.15  21   PFAKE           09 52 20.0  +12
KDAK                                LR     LR
      comp=Z,3µm,20.0s
GAMB  Gambell           76.36  10  eP      P        09 52 08.1 -0.5
      comp=Z,37nm,0.9s
CIT   Chita             77.72 330  eP      P        09 52 18.2 +1.6
CIT                                e                09 52 30.2
CIT                                 pmax   pmax
      comp=Z,295nm,2.2s
SVW2  Sparrevohn        77.75  18  eP      P        09 52 16.7 +0.1
      comp=Z,108nm,1.4s
BRLK  Bradley Lake      78.22  20  eP      P        09 52 18.9 -0.3
      comp=Z,195nm,1.4s
ANM   Nome              78.24  12  eP      P        09 52 19.6 +0.4
      comp=Z,155nm,1.7s
ANM   Nome              78.24  12  eP      P        09 52 20.6 +1.4
ANM                                 pmax   pmax
      comp=Z,150nm,1.6s
YAK   Yakutsk           78.40 343diP      P        09 52 20.2 +0.1
YAK                                e*PP    pP       09 52 25.3 -3.8
YAK                                e                09 52 30.0
YAK                                eS      S        10 02 12.2 -1.4
YAK                                e*SS    sS       10 02 28.5 +0.2
YAK                                e                10 02 41.8
YAK                                 pmax   pmax
      comp=Z,261nm,1.6s
YAK                                 pmax   pmax
      comp=N,117nm,1.6s
YAK                                 pmax   pmax
      comp=E,68nm,1.9s
YAK                                 smax   smax
      comp=N,757nm,4.0s
YAK                                 smax   smax
      comp=E,2µm,5.3s
YAK                                 MLR    MLR
      comp=Z,8µm,20.0s
YAK                                 MLR    MLR
      comp=N,6µm,21.0s
YAK                                 MLR    MLR
      comp=E,3µm,19.0s
BILL  Bilibino          78.86 360  eP      P        09 52 22.5 -0.1
      comp=E,155nm,1.4s
BILL                                LR     LR
      comp=Z,1µm,21.0s
BILL  Bilibino          78.86 360diP      P        09 52 21.6 -1.0
BILL                               i                09 52 30.0
BILL                               i                09 55 16.8
BILL                                pmax   pmax
      comp=Z,24nm,1.3s
QSPA  South Pole Qui    78.98 180  eP      P        09 52 22.6 -1.0
      comp=Z,137nm,1.2s
SONA0 Songino Array     79.32 323  eP      P        09 52 26.8 +1.1
SONM  Songino Array     79.32 323   P      P        09 52 26.8 +1.1
      comp=Z,15nm,1.1s,baz=137,slow=5.0,SNR=58
SONA1 Songino Array     79.32 323  eP      P        09 52 25.8 +0.1
SUA   Susitna One       79.53  19  eP      P        09 52 26.5  0.0
      comp=Z,87nm,1.4s
RC01  Rabbit Creek A    79.59  20  eP      P        09 52 26.1 -0.6
      comp=Z,73nm,1.2s
GTA   Gaotai            79.86 314 ⇓P      P        09 52 30.0 +1.2
GTA                                 pP     sP       09 52 41.6 +0.5
GTA                                 sP     pwP      09 52 46.4 +5.9
GTA                                 S      S        10 02 28.4 -2.0
GTA                                 SKS    SKSac    10 02 39.0 -5.1
GTA                                 sS     SKKSac   10 02 45.5 -0.3
GTA                                 SS     SS       10 07 38.5 -1.9
GTA                                 pmax   pmax
      comp=Z,23nm,1.8s
GTA                                 pmax   pmax
      comp=Z,840nm,8.9s
GTA                                 LR     LR
      comp=Z,780nm,18.4s
GTA                                 LR     LR
      comp=Z,820nm,19.7s
GTA                                 LR     LR
      comp=Z,1µm,18.4s
PMR   Palmer            80.16  20  eP      P        09 52 29.4 -0.3
      comp=Z,102nm,1.4s
PMR   Palmer            80.16  20  eP      P        09 52 29.4 -0.3
PMR                                 pmax   pmax
      comp=Z,100nm,1.4s
PPLA  Purkeypile        80.16  18  eP      P        09 52 25.1 -4.8
      comp=Z,79nm,1.6s
KNK   Knik Glacier      80.25  20  eP      P        09 52 29.4 -0.9
      comp=Z,98nm,1.5s
SML   Sawmill           80.58  20  eP      P        09 52 31.6 -0.4
      comp=Z,162nm,1.6s
SML   Sawmill           80.58  20  eP      P        09 52 32.1 +0.1
SML                                 pmax   pmax
      comp=Z,160nm,1.5s
CAST  Castle Rocks      80.59  17  eP      P        09 52 30.6 -1.4
      comp=Z,50nm,1.2s
BRDH  Bariadhala        80.91 295   LR     LR       10 26 57.9
      comp=Z,1µm,21.9s,baz=136,slow=35
SCM   Sheep Creek Mo    80.93  20  eP      P        09 52 33.5 -0.5
      comp=Z,145nm,1.5s
SCM   Sheep Creek Mo    80.93  20  eP      P        09 52 33.5 -0.5
SCM                                 pmax   pmax
      comp=Z,140nm,1.4s
DIV   Divide            80.98  21  eP      P        09 52 34.0 -0.2
      comp=Z,105nm,1.4s
BOD   Bodaibo           81.00 334  eP      P        09 52 34.8 +0.5
BOD                                 pmax   pmax
      comp=Z,186nm,1.8s
TRF   Thorofare Moun    81.15  18  eP      P        09 52 34.4 -0.8
      comp=Z,50nm,1.2s
KLU   Klutina           81.18  21  eP      P        09 52 34.6 -0.7
      comp=Z,97nm,1.6s
BPAW  Bear Paw Mtn.     81.42  17  eP      P        09 52 36.8 +0.3
      comp=Z,51nm,1.4s
SHL   Shillong          81.50 298  eP      P        09 52 37.6 -0.4
      comp=Z,222nm,1.7s
SHL   Shillong          81.50 298  eP      P        09 52 38.7 +0.7
SHL                                 pmax   pmax
      comp=Z,220nm,1.6s
RND   Reindeer          81.56  19  eP      P        09 52 37.3  0.0
      comp=Z,126nm,1.4s
RND   Reindeer          81.56  19  eP      P        09 52 37.3  0.0
RND                                 pmax   pmax
      comp=Z,130nm,1.4s
MCCM  Marconi Confer    81.66  49  eP      P        09 52 38.3  0.0
      comp=Z,105nm,1.1s
KCPM  Cahto Peak        81.71  47  eP      P        09 52 38.3 -0.4
      comp=Z,89nm,1.0s
MCK   McKinley          81.77  18  eP      P        09 52 37.9 -0.5
      comp=Z,224nm,1.6s
MCK   McKinley          81.77  18  eP      P        09 52 37.9 -0.5
MCK                                 pmax   pmax
      comp=Z,224nm,1.6s
RDOG  Red Dog Mine      81.79  11  eP      P        09 52 38.2 -0.1
      comp=Z,144nm,1.6s
DHY   Denali Highway    81.79  19  eP      P        09 52 38.8 +0.1
      comp=Z,90nm,1.6s
KMRM  Mail Ridge        81.82  46  eP      P        09 52 38.9 -0.3
      comp=Z,69nm,1.0s
HOPS  Hopland Field     81.83  48  eP      P        09 52 39.0 -0.2
      comp=Z,93nm,1.1s
GDXM  Geysers           81.96  48  eP      P        09 52 40.4 +0.4
      comp=Z,46nm,1.0s
KHMM  Horse Mountain    82.05  46  eP      P        09 52 40.1 -0.4
      comp=Z,64nm,1.1s
HARP  HAARP             82.07  20  eP      P        09 52 41.0 +1.0
      comp=Z,67nm,1.0s
IM3   Indian Mountai    82.11  15  eP      P        09 52 40.3 +0.3
MLY   Manley            82.19  17  eP      P        09 52 40.7 +0.1
      comp=Z,89nm,1.6s
SAO   San Andreas Ge    82.25  50  eP      P        09 52 41.8 +0.3
      comp=Z,48nm,1.0s
SAO   San Andreas Ge    82.25  50  eP      P        09 52 42.9 +1.5
SAO                                 pmax   pmax
      comp=Z,49nm,1.0s
ZAK   Zakamensk         82.34 325  eP      P        09 52 41.1 -0.6
ZAK                                 pmax   pmax
      comp=Z,58nm,1.6s
O02D  Mt. Diablo Mer    82.46  47   P      P        09 52 43.8 +1.2
      baz=249
WRH   Wood River Hil    82.56  18  eP      P        09 52 42.3 -0.2
      comp=Z,37nm,0.9s
SNCC  San Nicolas Is    82.60  54   P      P        09 52 44.2 +0.9
      baz=252
L02E  Cave Junction     82.61  45   P      P        09 52 44.2 +1.0
      baz=248
IRK   Irkutsk           82.66 327  eP      P        09 52 43.3 +0.1
IRK                                 pmax   pmax
      comp=Z,319nm,2.2s
TLY   Talaya            82.74 326  eP      P        09 52 43.4 -0.3
      comp=Z,79nm,1.4s
TLY                                 LR     LR
      comp=Z,823nm,21.0s
TLY   Talaya            82.74 326ceP      P        09 52 44.3 +0.6
SCZ2  Santa Cruz Isl    82.74  53   P      P        09 52 44.0 -0.1
      baz=252
J01E  Myrtle Point      82.77  44   P      P        09 52 44.7 +0.7
      baz=248
K02D  Willamette Mer    82.77  44   P      P        09 52 45.2 +1.0
      baz=248
WDC   Whiskeytown Da    82.78  46  eP      P        09 52 44.2 +0.1
      comp=Z,33nm,1.3s
WDC   Whiskeytown Da    82.78  46  eP      P        09 52 45.5 +1.4
WDC                                 pmax   pmax
      comp=Z,33nm,1.3s
N02D  Trinity Center    82.81  46   P      P        09 52 45.4 +1.1
      baz=249,SNR=6.4
PAGB  Antelope Grade    82.82  52  eP      P        09 52 45.2 +0.7
      comp=Z,92nm,1.4s
SBC   Santa Barbara     82.82  53   P      P        09 52 44.6 +0.1
      baz=251
M02C  Callahan          82.85  46   P      P        09 52 45.8 +1.2
      baz=249
HDA   Harding Lake      82.87  18  eP      P        09 52 43.7 -0.3
      comp=Z,95nm,1.0s
HDA   Harding Lake      82.87  18   P      P        09 52 44.2 +0.1
      baz=226
MDM   Murphy Dome       82.87  18  eP      P        09 52 43.7 -0.4
      comp=Z,58nm,1.0s
SMMC  Simmler           82.88  52   P      P        09 52 45.8 +1.0
      baz=251
PKM   Mcpherson Peak    82.89  53   P      P        09 52 45.9 +0.9
      baz=251
TCOL  CIGO, UAF Yank    82.92  18   P      P        09 52 42.9 -1.3
      baz=225
COLA  College           82.92  18  eP      P        09 52 43.8 -0.4
      comp=Z,68nm,0.9s
COLA                                LR     LR
      comp=Z,4µm,20.0s
COLA  College           82.92  18diP      P        09 52 42.9 -1.3
COLA                                pmax   pmax
      comp=Z,31nm,1.0s
YBH   Yreka Blue Hor    83.08  45  eP      P        09 52 46.0 +0.3
      comp=Z,72nm,1.2s
YBH   Yreka Blue Hor    83.08  45  eP      P        09 52 47.4 +1.6
YBH                                 pmax   pmax
      comp=Z,72nm,1.2s
RIDG  Independ'e Rid    83.08  20  eP      P        09 52 45.7 +0.5
      comp=Z,160nm,1.4s
IL1   Eielson Array     83.14  18  eP      P        09 52 44.4 -1.0
ILAR  Eielson Array     83.14  18   P      P        09 52 44.9 -0.5
      comp=Z,22nm,1.1s,baz=228,slow=6.0,SNR=65
ILAR                                LR     LR       10 23 55.6
      comp=Z,2µm,21.5s,baz=232,slow=32
ILB   Eielson Array     83.14  18  eP      P        09 52 45.0 -0.5
ORV   Oroville          83.17  48  eP      P        09 52 46.1 -0.1
      comp=Z,158nm,1.6s
ORV   Oroville          83.17  48  eP      P        09 52 46.8 +0.7
ORV                                 pmax   pmax
      comp=Z,160nm,1.6s
I02D  Swisshome         83.18  43   P      P        09 52 47.2 +1.1
      baz=248
O03E  Paynes Creek      83.21  47   P      P        09 52 46.8 +0.4
      baz=250,SNR=16
POKR  Poker Plat Res    83.22  18   P      P        09 52 45.6 -0.2
      baz=225
HUMO  Hull Mountain     83.23  44  eP      P        09 52 47.1 +0.7
      comp=Z,56nm,1.2s
BLG   Laguna Peak, P    83.23  53   P      P        09 52 46.4 -0.2
      baz=252
SCI2  San Clemente I    83.29  55   P      P        09 52 47.5 +0.6
      baz=252
LSA   Lhasa             83.30 302  eP      P        09 52 47.0 -0.6
      comp=Z,2.0nm,0.6s
LSA                                 LR     LR
      comp=Z,2µm,22.0s
AFDM  Forest Hills D    83.34  48  eP      P        09 52 47.0 -0.1
      comp=Z,188nm,1.6s
I03D  Drain, OR         83.36  43   P      P        09 52 47.9 +0.8
      baz=248
CMB   Columbia Colle    83.47  49  eP      P        09 52 47.8  0.0
      comp=Z,104nm,1.5s
CMB   Columbia Colle    83.47  49  eP      P        09 52 48.3 +0.5
CMB                                 pmax   pmax
      comp=Z,100nm,1.5s
SCRK  Sand Creek        83.52  20  eP      P        09 52 47.5  0.0
      comp=Z,188nm,1.4s
CIS   Catalina Islan    83.53  54   P      P        09 52 48.1 -0.1
      baz=252
L04D  Klamath Falls     83.53  45   P      P        09 52 48.6 +0.4
      baz=249,SNR=5.2
OSI   Osito Audit: C    83.65  53   P      P        09 52 49.4 +0.5
      baz=252
VOG   Valley Oaks Go    83.67  51   P      P        09 52 48.7 -0.1
      baz=251
M04C  Macdoel           83.70  45   P      P        09 52 49.5 +0.4
      baz=249,SNR=22
FMP   Fort Macarthur    83.72  54   P      P        09 52 49.2 +0.2
      baz=252
ARVC  Arvin             83.73  53   P      P        09 52 49.8 +0.6
      baz=252
VES   Vestal, Richgr    83.75  52   P      P        09 52 49.6 +0.3
      baz=252
DECC  Green Verdugo     83.85  53   P      P        09 52 50.1 +0.3
      baz=252
HYT   Haines Junctio    83.91  24  eP      P        09 52 49.9 +0.2
      comp=Z,56nm,1.4s
PASC  Pasadena Art C    83.94  54  eP      P        09 52 50.5 +0.2
      comp=Z,62nm,1.6s
COLD  Coldfoot          83.98  15  eP      P        09 52 50.3 +0.6
      comp=Z,28nm,1.1s
G03D  McMinnville, O    83.99  42   P      P        09 52 50.3 +0.1
      baz=248
I04A  Tendick Farm,     84.03  43   P      P        09 52 50.3 -0.2
      baz=249
SKAG  Skagway           84.03  26  eP      P        09 52 51.0 +0.9
      comp=Z,153nm,1.4s
J04D  Umpqua Nationa    84.04  44   P      P        09 52 51.8 +1.0
      baz=249,SNR=5.9
MWC   Mount Wilson      84.06  54  eP      P        09 52 51.4 +0.3
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	comp=Z,65nm,1.3s						
MWC	Mount Wilson	84.06	54	*e*P	P	09 52 52.1	+1.0
MWC				pmax	pmax		
	comp=Z,65nm,1.2s						
K04D	Chiloquin, OR	84.06	45	P	P	09 52 51.0	+0.2
	baz=249						
H04D	Lebanon	84.08	43	P	P	09 52 51.4	+0.7
	baz=248						
BEKR	Beckworth	84.10	48	*e*P	P	09 52 51.9	+0.7
	comp=Z,77nm,1.2s						
ISA	Isabella, Lake	84.17	52	*e*P	P	09 52 51.8	+0.3
	comp=Z,99nm,1.5s						
ISA	Isabella, Lake	84.17	52	*e*P	P	09 52 51.8	+0.3
ISA				pmax	pmax		
	comp=Z,99nm,1.5s						
ISA	Isabella, Lake	84.17	52	P	P	09 52 52.0	+0.5
	baz=252,SNR=13						
MOY	Mondy	84.20	325	*e*P	P	09 52 52.2	+0.9
MOY				pmax	pmax		
	comp=Z,401nm,3.3s						
EDW2	Edwards Air Fo	84.31	53	P	P	09 52 52.7	+0.5
	baz=252,SNR=11						
MDPB	Devils Postpil	84.32	50	*e*P	P	09 52 53.3	+0.8
	comp=Z,70nm,1.1s						
WAKR	Walker	84.33	49	*e*P	P	09 52 52.9	+0.5
	comp=Z,281nm,1.7s						
BFSC	Mount Baldy Ra	84.38	54	P	P	09 52 51.8	-0.9
	baz=253						
PNTR	Pine Nut	84.40	49	*e*P	P	09 52 53.1	+0.3
	comp=Z,94nm,1.1s						
109C	Camp Elliot, M	84.43	55	P	P	09 52 53.2	+0.4
	baz=253						
CPE	Camp Elliot	84.43	55	*e*P	P	09 52 53.0	+0.3
	comp=Z,36nm,1.1s						
VCNR	Virginia City	84.43	48	*e*P	P	09 52 53.8	+0.9
	comp=Z,76nm,1.4s						
NLWA	Neilton Lookou	84.43	40	*e*P	P	09 52 53.2	+0.7
	comp=Z,28nm,1.3s						
NLWA				LR	LR		
	comp=Z,5µm,20.0s						
F04D	Rainier, OR	84.48	41	P	P	09 52 53.2	+0.5
	baz=248						
MLAC	Mammoth, Mammo	84.50	50	P	P	09 52 54.3	+0.9
	baz=252						
H04A	Detroit Lake	84.50	43	*e*P	P	09 52 51.5	-1.4
	comp=Z,70nm,1.3s						
MURC	Murrieta	84.56	54	P	P	09 52 53.8	+0.4
	baz=253						
YERR	Yerington	84.63	49	*e*P	P	09 52 54.3	+0.4
	comp=Z,144nm,1.7s						
J05D	Fort Rock, OR	84.65	44	P	P	09 52 54.7	+0.9
	baz=250						
CWC	Cottonwood Cre	84.71	51	P	P	09 52 55.2	+0.9
	baz=252						
BAR	Barrett	84.72	55	*e*P	P	09 52 54.3	0.0
	comp=Z,61nm,1.6s						
LRMC	Laurel Mtn Rad	84.73	52	P	P	09 52 54.6	+0.2
	baz=253						
PAHR	Pah Rah Range	84.76	48	*e*P	P	09 52 54.6	+0.2
	comp=Z,90nm,1.2s						
TIN	Tinemaha, Big	84.78	51	P	P	09 52 55.2	+0.6
	baz=252						
MOD	Modoc Plateau	84.82	46	*e*P	P	09 52 54.9	+0.2
	comp=Z,89nm,1.6s						
WHY	Whitehorse	84.88	25	*e*P	P	09 52 55.1	+0.6
	comp=Z,51nm,1.4s						
FYU	Fort Yukon	84.88	17	*e*P	P	09 52 54.6	+0.4
	comp=Z,34nm,1.2s						
E04D	Cinebar	84.94	41	P	P	09 52 56.3	+1.3
	baz=248						
I05D	Terrebonne, OR	84.95	43	P	P	09 52 55.8	+0.6
	baz=249						
BBRC	Big Bear Solar	84.97	54	P	P	09 52 55.9	+0.1
	baz=253						
D03D	Eldon	84.97	40	P	P	09 52 55.7	+0.6
	baz=248						
EGAK	Eagle	84.97	20	*e*P	P	09 52 55.4	+0.7
	comp=Z,439nm,1.9s						
EGAK				LR	LR		
	comp=Z,3µm,20.0s						
MONP2	Monument Peak	84.98	55	P	P	09 52 56.3	+0.5
	baz=254,SNR=6.7						
PINE	Pine Mountain	85.03	44	*e*P	P	09 52 56.2	+0.4
	comp=Z,80nm,1.3s						
DAC	Darwin (Calif)	85.04	52	*e*P	P	09 52 56.5	+0.5
	comp=Z,64nm,1.4s						
DAC	Darwin (Calif)	85.04	52	*e*P	P	09 52 56.7	+0.7
DAC				pmax	pmax		
	comp=Z,64nm,1.3s						
D04E	Lakebay	85.04	40	P	P	09 52 56.2	+0.7
	baz=248						
RYN	Ryan	85.05	49	*e*P	P	09 52 56.4	+0.4
	comp=Z,55nm,1.1s						
MPMC	Manual Prospec	85.05	52	P	P	09 52 56.6	+0.6
	baz=253,SNR=11						
RRX	Edison Barstow	85.09	53	P	P	09 52 56.6	+0.5
	baz=253						
DAWY	Dawson	85.14	21	*e*P	P	09 52 56.6	+0.9
	comp=Z,16nm,1.0s						
NV01	Mina Array Sit	85.15	50	*e*P	P	09 52 56.3	-0.2
NVAR	Mina Array Bea	85.15	50	P	P	09 52 57.0	+0.4
	comp=Z,14nm,1.0s,baz=232,slow=7.8,SNR=42						
NVAR				LR	LR	10 22 48.9	
	comp=Z,7µm,21.3s,baz=269,slow=30						
PFO	Pinyon Flats O	85.15	55	*e*P	P	09 52 57.3	+0.8
	comp=Z,56nm,1.5s						
PFO				LR	LR		
	comp=Z,4µm,20.0s						
PFO	Pinyon Flats O	85.15	55	*e*P	P	09 52 57.7	+1.2
PFO				pmax	pmax		
	comp=Z,56nm,1.5s						
PFO	Pinyon Flats O	85.15	55	P	P	09 52 56.3	-0.2
	baz=253						
XPFO	Pion Flat	85.15	55	*e*P	P	09 52 57.2	+0.6
	comp=Z,60nm,1.5s						
IKP	In-Ko-Pah, Jac	85.16	56	P	P	09 52 56.6	0.0
	baz=254						
PGC	Sidney	85.17	39	*e*P	P	09 52 57.1	+1.0
	comp=Z,185nm,1.6s						
NV11	Mina Array Sit	85.26	50	*e*P	P	09 52 57.0	0.0
	comp=Z,16nm,1.6s						
G05D	Wamic, OR	85.28	42	P	P	09 52 57.4	+0.6
	baz=249						
GSC	Goldstone, Bar	85.36	53	*e*P	P	09 52 57.9	+0.4
	comp=Z,22nm,1.5s						
GSC	Goldstone, Bar	85.36	53	*e*P	P	09 52 58.2	+0.7
GSC				pmax	pmax		
	comp=Z,22nm,1.5s						
GSC	Goldstone, Bar	85.36	53	P	P	09 52 57.7	+0.2
	baz=253,SNR=7.0						
F05D	White Salmon	85.41	42	P	P	09 52 58.0	+0.6
	baz=249						
GRAC	Grapevine Rang	85.42	51	P	P	09 52 58.5	+0.8
	baz=253,SNR=24						
SWSC	Sam W. Stewart	85.49	55	P	P	09 52 58.7	+0.6
	baz=254						
KVN	Kaiserville	85.50	49	*e*P	P	09 52 57.9	-0.3
	comp=Z,159nm,1.6s						
KVN	Kaiserville	85.50	49	*e*P	P	09 52 58.5	+0.3
KVN				pmax	pmax		
	comp=Z,160nm,1.6s						
LON	Longmire	85.50	41	*e*P	P	09 52 58.0	+0.1
	comp=Z,65nm,1.6s						
LON	Longmire	85.50	41	*e*P	P	09 52 58.6	+0.7
LON				pmax	pmax		
	comp=Z,65nm,1.6s						
D05A	Enumclaw	85.54	40	*e*P	P	09 52 58.7	+0.7
	comp=Z,211nm,1.4s						
HEC	Hector,Ludlow	85.59	53	P	P	09 52 59.1	+0.4
	baz=253,SNR=6.6						
BELC	Belle Mtn. Jos	85.63	54	P	P	09 52 59.4	+0.4
	baz=254						
FURC	Furnace Creek,	85.66	52	P	P	09 52 59.2	+0.4
	baz=253,SNR=13						
A04D	Lummi Island	85.66	39	P	P	09 52 59.2	+0.8
	baz=248						
ODAN	Odare	85.74	298	*e*P	P	09 53 00.0	+0.3
KNGR	Kungurtug, Tuv	85.76	323	*d i*P	P	09 52 58.8	-0.4
DLBC	Dease Lake	85.86	28	*e*P	P	09 53 00.2	+0.8
	comp=Z,118nm,1.6s						
B05A	Bryant	85.87	39	P	P	09 53 00.5	+0.9
	baz=249						
SHOC	Shoshone, Teco	85.95	52	P	P	09 53 00.6	+0.3
	baz=253						
BC3	Big Chuckawall	85.97	55	P	P	09 53 00.6	0.0
	baz=254,SNR=6.3						
TUQ	Turquoise Moun	86.09	53	P	P	09 53 01.3	+0.1
	baz=254,SNR=9.7						
I07A	Izee	86.10	44	*e*P	P	09 53 01.2	+0.2
	comp=Z,46nm,1.0s						
GMRC	Granite Mounta	86.12	54	P	P	09 53 01.6	+0.2
	baz=254,SNR=7.7						
WVOR	Wild Horse Val	86.17	46	*e*P	P	09 53 01.5	+0.2
	comp=Z,181nm,1.6s						
WVOR	Wild Horse Val	86.17	46	*e*P	P	09 53 02.3	+0.9
WVOR				pmax	pmax		
	comp=Z,180nm,1.6s						
TPNV	Topopah Spring	86.27	51	*e*P	P	09 53 01.9	-0.1
	comp=Z,25nm,1.0s						
TPNV	Topopah Spring	86.27	51	*e*P	P	09 53 02.8	+0.7
TPNV				pmax	pmax		
	comp=Z,25nm,1.0s						
TPNV	Topopah Spring	86.27	51	P	P	09 53 02.6	+0.6
	baz=253,SNR=12						
TIXI	Tiksi	86.29	349	*de*P	P	09 53 00.8	-0.3
TIXI				pmax	pmax		
	comp=Z,155nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,558nm,17.0s						
GLA	Glamis	86.31	55	*e*P	P	09 53 02.6	+0.4
	comp=Z,115nm,1.4s						
GLA	Glamis	86.31	55	*e*P	P	09 53 04.0	+1.8
GLA				pmax	pmax		
	comp=Z,110nm,1.4s						
GLA	Glamis	86.31	55	P	P	09 53 03.3	+1.1
	baz=254						
B06A	Marblemount	86.34	39	*e*P	P	09 53 02.2	+0.3
	comp=Z,60nm,1.6s						
IRM	Iron Mountain	86.35	54	P	P	09 53 03.0	+0.7
	baz=254,SNR=12						
F07A	Phinny Hill Vi	86.42	42	*e*P	P	09 53 03.1	+0.7
	comp=Z,85nm,1.4s						
C06D	Leavenworth	86.50	40	P	P	09 53 03.2	+0.5
	baz=250						
J08A	Circle Bar Ran	86.57	45	*e*P	P	09 53 03.3	-0.1
	comp=Z,42nm,1.0s						
Y12C	Blythe	86.74	55	*e*P	P	09 53 04.7	+0.5
	comp=Z,124nm,1.5s						
Y12C	Blythe	86.74	55	P	P	09 53 05.2	+0.9
	baz=254,SNR=8.4						
HAWA	Hanford	86.85	42	*e*P	P	09 53 04.7	+0.2
	comp=Z,39nm,1.0s						
LLLB	Lillooet	86.85	37	*e*P	P	09 53 05.2	+0.8
	comp=Z,28nm,1.1s						
G08A	Pilot Rock	86.86	43	*e*P	P	09 53 05.4	+0.7
	comp=Z,94nm,1.4s						
NEE2	Needles Airpor	86.94	54	P	P	09 53 05.9	+0.7
	baz=254						
JIRN	Jiri	86.97	299	*e*P	P	09 53 06.1	+0.1
	comp=Z,790nm,2.0s						
SHPR	Sheep Range	86.98	52	*e*P	P	09 53 06.7	+1.2
	comp=Z,88nm,1.5s						
113A	Mohawk Valley,	87.10	56	*e*P	P	09 53 07.4	+1.4
	comp=Z,84nm,1.6s						
R11A	Troy Canyon, C	87.17	50	*e*P	P	09 53 07.0	+0.5
	comp=Z,44nm,1.6s						
R11A	Troy Canyon, C	87.17	50	P	P	09 53 06.7	+0.2
	baz=254,SNR=17						
E08A	Dider Farm, El	87.19	42	*e*P	P	09 53 07.0	+0.9
	comp=Z,213nm,1.6s						
PDMCI	Parker Dam,Lak	87.19	54	P	P	09 53 07.3	+0.9
	baz=255,SNR=14						
GUN	Gumba	87.30	299	*e*P	P	09 53 07.5	0.0
	comp=Z,463nm,2.0s						
EPYK	Eagle Plains	87.41	20	*e*P	P	09 53 06.6	-0.2
	comp=Z,59nm,1.1s						
EPYK	Eagle Plains	87.41	20	P	P	09 53 06.9	+0.1
	baz=235						
D08A	Wollman Farm,	87.46	41	*e*P	P	09 53 08.2	+0.7
	comp=Z,113nm,1.6s						
W13A	Hualapai Mount	87.60	54	*e*P	P	09 53 09.6	+0.9
	comp=Z,30nm,1.0s						
PKI	Pulchoki	87.62	299	*e*P	P	09 53 08.5	-0.6
	comp=Z,486nm,1.8s						
B08A	Colville Reser	87.63	40	*e*P	P	09 53 08.6	+0.3
	comp=Z,25nm,1.3s						
PKIN	Phulchoki	87.63	299	*e*P	P	09 53 08.6	-0.4
	comp=Z,369nm,1.9s						
PALK	Pallekele	87.66	278	LR	LR	10 35 27.3	
	comp=Z,1µm,19.1s,baz=116,slow=38						
214A	Organ Pipe Nat	87.67	57	P	P	09 53 10.1	+1.2
	baz=256,SNR=8.2						
E09A	Wood Farm, Sta	87.79	42	*e*P	P	09 53 09.8	+0.7
	comp=Z,52nm,1.3s						
BMO	Blue Mountains	87.84	44	*e*P	P	09 53 09.8	+0.4
	comp=Z,27nm,1.5s						
BMO	Blue Mountains	87.84	44	*e*P	P	09 53 09.8	+0.4
BMO				pmax	pmax		
	comp=Z,27nm,1.5s						
DMN	Daman	87.89	298	*e*P	P	09 53 10.0	-0.3
	comp=Z,297nm,1.7s						
Y14A	Wickenburg	88.01	55	*e*P	P	09 53 11.3	+0.9
	comp=Z,56nm,1.5s						
ELK	Elko	88.09	48	*e*P	P	09 53 11.7	+0.8
	comp=Z,29nm,1.6s						
ELK	Elko	88.09	48	*e*P	P	09 53 11.7	+0.8
ELK				pmax	pmax		
	comp=Z,29nm,1.6s						
C09A	Chrisman Ranch	88.12	41	*e*P	P	09 53 11.5	+0.9
	comp=Z,74nm,1.6s						
F10A	Beach Ranch, E	88.23	43	*e*P	P	09 53 11.7	+0.4
	comp=Z,35nm,1.3s						
PSUT	Pine Spring	88.53	50	*e*P	P	09 53 14.3	+1.3
	comp=Z,109nm,1.7s						
HSIG		88.53	60	*e*P	P	09 53 12.2	-0.8
	comp=Z,28nm,1.5s						
LCMT	Little Creek M	88.60	52	*e*P	P	09 53 14.8	+1.5
	comp=Z,60nm,1.3s						
CCUT	Cedar City	88.65	51	*e*P	P	09 53 15.2	+1.6
	comp=Z,203nm,1.7s						
SZCU	Shurtz Canyon	88.87	51	*e*P	P	09 53 16.4	+1.7
	comp=Z,145nm,1.5s						
KNB	Kanab	88.93	52	*e*P	P	09 53 15.5	+0.6
	comp=Z,186nm,1.5s						
KNB	Kanab	88.93	52	*e*P	P	09 53 15.5	+0.6
KNB				pmax	pmax		
	comp=Z,190nm,1.5s						
NEW	Newport	89.00	40	*e*P	P	09 53 15.1	+0.4
	comp=Z,21nm,1.0s						
NEW				LR	LR		
	comp=Z,4µm,21.0s						
NEW	Newport	89.00	40	*e*P	P	09 53 15.1	+0.4
NEW				pmax	pmax		
	comp=Z,21nm,1.0s						
NEW	Newport	89.00	40	P	P	09 53 14.7	0.0
	baz=252						
U15A	North Rim	89.19	53	*e*P	P	09 53 17.4	+1.1
	comp=Z,229nm,1.6s						
DANN	Dangsing	89.22	299	*e*P	P	09 53 15.6	-1.0
	comp=Z,260nm,1.9s						
KOLN	Koldanda	89.23	298	*e*P	P	09 53 15.6	-0.9
	comp=Z,206nm,1.8s						
X16A	Lo Mia Camp, P	89.38	55	*e*P	P	09 53 18.5	+1.4
	comp=Z,76nm,1.5s						
TUC	Tucson	89.43	57	*e*P	P	09 53 18.7	+1.5
	comp=Z,86nm,1.6s						
TUC	Tucson	89.43	57	*e*P	P	09 53 18.7	+1.5
TUC				pmax	pmax		
	comp=Z,86nm,1.6s						
TUC	Tucson	89.43	57	P	P	09 53 18.1	+0.9
	baz=257						
HLID	Hailey	89.46	45	*e*P	P	09 53 18.0	+0.8
	comp=Z,68nm,1.5s						
HLID				LR	LR		
	comp=Z,2µm,20.0s						
HLID	Hailey	89.46	45	P	P	09 53 16.9	-0.3
	baz=254						
INK	Inuvik	89.52	19	*e*P	P	09 53 16.3	-0.3
	comp=Z,6.1nm,1.1s						
INK	Inuvik	89.52	19	*e*P	P	09 53 16.3	-0.3
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TCRU	Three Creeks R	89.61	51	*e*P	P	09 53 19.8	+1.7
	comp=Z,80nm,1.1s						
MTPU	Mount Pierson	89.67	51	*e*P	P	09 53 19.3	+0.7
	comp=Z,194nm,1.6s						
WUAZ	Wupatki	89.70	54	*e*P	P	09 53 19.8	+1.3
	comp=Z,152nm,1.5s						
WUAZ	Wupatki	89.70	54	P	P	09 53 19.1	+0.6
	baz=256						
DUG	Dugway, Tooele	89.73	49	*e*P	P	09 53 19.5	+0.9
	comp=Z,60nm,1.3s						
DUG				LR	LR		
	comp=Z,4µm,21.0s						
DUG	Dugway, Tooele	89.73	49	*e*P	P	09 53 19.5	+0.9
DUG				pmax	pmax		
	comp=Z,60nm,1.2s						
DUG	Dugway, Tooele	89.73	49	P	P	09 53 18.8	+0.3
	baz=255						
BGU	Big Grassy Mou	89.76	48	*e*P	P	09 53 20.0	+1.4
	comp=Z,58nm,1.2s						
MSU	Marysvale	89.79	51	*e*P	P	09 53 20.7	+1.8
MSU	Marysvale	89.79	51	*e*P	P	09 53 20.7	+1.8
PYUN	Piuthan	89.83	299	*e*P	P	09 53 17.7	-1.6
	comp=Z,158nm,1.6s						
WMQ	Urumqi	89.88	315	P	P	09 53 19.6	+0.6
WMQ				pP	pwP	09 53 32.3	+1.6
WMQ				sP	sP	09 53 39.8	+8.4
WMQ				PP	PP	09 56 52.2	+0.1
WMQ				S	S	10 04 12.6	+3.0
WMQ				SS	SS	10 10 03.0	-4.9
WMQ				pmax	pmax		
	comp=Z,49nm,2.1s						
WMQ				LR	LR		
	comp=Z,1µm,23.3s						
WMQ				LR	LR		
	comp=Z,1µm,21.1s						
WMQ				LR	LR		
	comp=Z,1µm,21.1s						
WMQ	Urumqi	89.88	315	*e*P	P	09 53 19.9	+0.9
	comp=Z,81nm,1.5s						
WMQ	Urumqi	89.88	315	*e*P	P	09 53 19.9	+0.9
WMQ				pmax	pmax		
	comp=Z,81nm,1.5s						
HVU	Hansel Valley	90.16	48	*e*P	P	09 53 21.4	+1.0
	comp=Z,278nm,1.5s						
HVU	Hansel Valley	90.16	48	*e*P	P	09 53 21.5	+1.0
HVU				pmax	pmax		
	comp=Z,280nm,1.5s						
NLU	North Lily Min	90.22	49	*e*P	P	09 53 22.1	+1.2
	comp=Z,57nm,1.1s						
319A	Douglas	90.47	58	*e*P	P	09 53 23.1	+1.0
	comp=Z,101nm,1.4s						
MPU	Maple Canyon	90.57	49	*e*P	P	09 53 23.6	+1.1
	comp=Z,103nm,1.5s						
X18A	Snowflake	90.61	55	*e*P	P	09 53 24.2	+1.4
	comp=Z,114nm,1.5s						
CTU	Camp Tracy	90.64	49	*e*P	P	09 53 23.8	+1.0
	comp=Z,88nm,1.3s						
MSO	Missoula	90.66	42	*e*P	P	09 53 23.1	+0.4
	comp=Z,36nm,1.5s						
MSO	Missoula	90.66	42	P	P	09 53 22.6	-0.1
	baz=255						
TMUT	Trail Mountain	90.72	50	*e*P	P	09 53 24.7	+1.4
	comp=Z,77nm,1.5s						
JLU	Jordanelle	90.84	49	*e*P	P	09 53 24.9	+1.1
	comp=Z,64nm,1.1s						
MCMT	McKenzie Canyo	90.88	45	*e*P	P	09 53 24.9	+1.0
W18A	Petrified Fore	90.91	55	*e*P	P	09 53 26.1	+1.9
	comp=Z,123nm,1.4s						
W18A	Petrified Fore	90.91	55	P	P	09 53 25.1	+0.9
	baz=257						
TCUT	Toone Canyon	91.00	48	*e*P	P	09 53 26.1	+1.5
	comp=Z,116nm,1.1s						
P17A	Butcher Ranch,	91.11	50	*e*P	P	09 53 26.6	+1.6
	comp=Z,29nm,1.5s						
DLMT	Dillon	91.18	44	*e*P	P	09 53 26.2	+1.0
	comp=Z,179nm,1.5s						
SRU	San Rafael Swe	91.19	51	*e*P	P	09 53 26.6	+1.2
	comp=Z,51nm,1.6s						
SRU	San Rafael Swe	91.19	51	*e*P	P	09 53 26.6	+1.2
SRU				pmax	pmax		
	comp=Z,51nm,1.6s						
LRM	Limekiln Ridge	91.39	44	*e*P	P	09 53 27.0	+0.7
DGZ	Jazzator, Alta	91.60	320	*d i*P	P	09 53 26.9	-0.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AHID	Auburn Hatcher	91.61	47	*e*P	P	09 53 28.4	+1.2
	comp=Z,23nm,1.2s						
AHID				LR	LR		
	comp=Z,3µm,22.0s						
HYB	Hyderabad	91.69	287	*i* P	P	09 53 28.0	+0.1
HYB				*e*ScS	S	10 04 28.0	+1.0
QLMT	Earthquake Lak	91.86	45	*e*P	P	09 53 29.3	+0.9
FXWY	Fox Creek	91.86	46	*e*P	P	09 53 29.0	+0.6
	comp=Z,34nm,1.3s						
TPAW	Teton Pass	91.88	46	*e*P	P	09 53 28.6	0.0
	comp=Z,29nm,1.4s						
BOZ	Bozeman (W)	91.90	44	*e*P	P	09 53 29.5	+1.0
	comp=Z,69nm,1.4s						
BOZ				LR	LR		
	comp=Z,3µm,20.0s						
BOZ	Bozeman (W)	91.90	44	*e*P	P	09 53 29.5	+1.0
BOZ				pmax	pmax		
	comp=Z,69nm,1.3s						
BOZ	Bozeman (W)	91.90	44	P	P	09 53 28.8	+0.3
	baz=256						
REDW	Red Top Meadow	91.92	46	*e*P	P	09 53 30.0	+1.2
	comp=Z,167nm,1.6s						
121A	Cookes Peak, D	91.95	57	P	P	09 53 30.1	+1.0
	baz=258						
IMW	Indian Meadow	91.98	46	*e*P	P	09 53 30.1	+1.1
	comp=Z,37nm,1.2s						
YHB	Horse Butte	92.00	45	*e*P	P	09 53 30.5	+1.4
	comp=Z,40nm,1.2s						
SNOW	Snow King Moun	92.01	46	*e*P	P	09 53 30.7	+1.5
	comp=Z,27nm,1.2s						
HRY	Holter Researc	92.03	43	*e*P	P	09 53 30.0	+0.9
PV05	Paradox Valley	92.05	52	*e*P	P	09 53 30.5	+1.0
	comp=Z,69nm,1.7s						
MOOW	Moose Ponds	92.08	46	*e*P	P	09 53 30.3	+0.8
	comp=Z,37nm,1.5s						
PV09	Paradox Valley	92.11	51	*e*P	P	09 53 31.0	+1.2
SYO	Syowa Base	92.13	197	⇓*e*sP	sP	09 53 45.0	+3.9
YMR	Madison River	92.14	45	*e*P	P	09 53 31.1	+1.4
	comp=Z,135nm,1.6s						
LOHW	Long Hollow	92.15	46	*e*P	P	09 53 28.7	-1.1
	comp=Z,50nm,1.5s						
PV10	Paradox Valley	92.16	51	*e*P	P	09 53 29.2	-0.8
	comp=Z,37nm,1.4s						
YPP	Pitchstone Pla	92.16	45	*e*P	P	09 53 30.1	+0.2
	comp=Z,28nm,1.5s						
PV14	Lion Creek, Pa	92.17	51	*e*P	P	09 53 31.3	+1.2
	comp=Z,30nm,1.4s						
YFT	Old Faithful	92.18	45	*e*P	P	09 53 31.9	+1.9
	comp=Z,17nm,1.0s						
PV19	Morning Glory	92.19	52	*e*P	P	09 53 30.4	+0.3
	comp=Z,38nm,1.5s						
FLWY	Flagg Ranch	92.19	46	*e*P	P	09 53 31.2	+1.2
	comp=Z,41nm,1.3s						
PV23	Carpenter Ridg	92.20	51	*e*P	P	09 53 31.8	+1.6
	comp=Z,14nm,1.1s						
PV17	East Wray Mesa	92.20	52	*e*P	P	09 53 29.6	-0.5
	comp=Z,1.2nm,1.0s						
PV20	West Nyswonger	92.21	52	*e*P	P	09 53 30.6	+0.5
	comp=Z,47nm,1.6s						
PV16	Nyswonger Mesa	92.24	52	*e*P	P	09 53 31.1	+0.7
	comp=Z,11nm,1.6s						
YHH	Holmes Hill	92.25	45	*e*P	P	09 53 32.1	+1.8
	comp=Z,24nm,1.5s						
PV21	Cone Mtn., Par	92.25	51	*e*P	P	09 53 30.7	+0.3
	comp=Z,41nm,1.4s						
PV04	Paradox Valley	92.27	51	*e*P	P	09 53 31.8	+1.3
	comp=Z,25nm,1.3s						
PV11	David Mesa, Pa	92.27	52	*e*P	P	09 53 32.5	+2.0
	comp=Z,25nm,1.4s						
PV03	Paradox Valley	92.28	52	*e*P	P	09 53 31.3	+0.8
	comp=Z,45nm,1.6s						
PV13	Radium Mtn., P	92.28	52	*e*P	P	09 53 29.9	-0.7
	comp=Z,13nm,1.5s						
MVCO	Mesa Verde	92.34	53	*e*P	P	09 53 34.0	+3.2
	comp=Z,26nm,1.5s						
MVCO				LR	LR		
	comp=Z,3µm,19.0s						
MVCO	Mesa Verde	92.34	53	P	P	09 53 31.0	+0.1
	baz=258						
H17A	Grant Village	92.35	45	*e*P	P	09 53 32.1	+1.4
	comp=Z,15nm,1.0s						
H17A	Grant Village	92.35	45	P	P	09 53 32.2	+1.4
	baz=257						
YNR	Norris Junctio	92.35	45	*e*P	P	09 53 31.6	+0.8
	comp=Z,64nm,1.6s						
PV02	Paradox Valley	92.36	52	*e*P	P	09 53 31.8	+0.9
	comp=Z,10nm,1.2s						
PV01	Paradox Valley	92.47	52	*e*P	P	09 53 32.1	+0.7
	comp=Z,69nm,1.7s						
PV07	Paradox Valley	92.47	51	*e*P	P	09 53 31.8	+0.4
	comp=Z,40nm,1.6s						
LKWY	Lake	92.51	45	PFAKE		09 53 40.0	+8.5
LKWY				LR	LR		
	comp=Z,3µm,20.0s						
PV15	Paradox Valley	92.58	52	*e*P	P	09 53 31.3	-0.7
	comp=Z,47nm,1.5s						

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HPIG                     92.66  63 eP       P        09 53 30.4 -2.1
       comp=Z,6.4nm,1.3s
BW06   Boulder Array     92.71  47 eP       P        09 53 33.0 +0.6
       comp=Z,46nm,1.4s
BW06                               LR       LR
       comp=Z,2µm,20.0s
BW06   Boulder Array     92.71  47  P       P        09 53 32.8 +0.4
       baz=258
PD31   Pinedale Array    92.71  47 eP       P        09 53 33.0 +0.6
PDAR   Pinedale Array    92.71  47 eP       P        09 53 32.1 -0.3
PDAR   Pinedale Array    92.71  47  P       P        09 53 32.9 +0.5
       comp=Z,2.8nm,1.0s,baz=222,slow=2.0,SNR=15
PDAR                               LR       LR       10 29 47.9
       comp=Z,1µm,19.3s,baz=264,slow=32
LAZ    Ladron            92.85  56 eP       P        09 53 33.0 -0.2
DGAR   Diego Garcia      92.93 262  PFAKE            09 53 40.0 +6.3
DGAR                               LR       LR
       comp=Z,1µm,22.0s
O20A   White River Ci    93.13  50 eP       P        09 53 33.4 -1.0
       comp=Z,29nm,1.4s
O20A   White River Ci    93.13  50  P       P        09 53 35.0 +0.6
       baz=258
BNM    Barren Site       93.22  56 eP       P        09 53 35.0 +0.1
GCMT   Greycliff         93.28  44 eP       P        09 53 35.2 +0.4
RLMT   Red Lodge         93.42  45 eP       P        09 53 36.5 +0.9
       comp=Z,66nm,1.6s
RLMT                               LR       LR
       comp=Z,4µm,19.0s
RLMT   Red Lodge         93.42  45  P       P        09 53 36.8 +1.2
       baz=258
ANMO   Albuquerque       93.51  55 eP       P        09 53 36.9 +0.6
       comp=Z,17nm,1.6s
ANMO                               LR       LR
       comp=Z,3µm,20.0s
ANMO   Albuquerque       93.51  55ceP       P        09 53 35.4 -0.8
ANMO                               pmax     pmax
       comp=Z,17nm,1.8s
ANMO   Albuquerque       93.51  55  P       P        09 53 36.7 +0.4
       baz=259
EGMT   Eagleton          93.70  42 eP       P        09 53 37.3 +0.7
       comp=Z,50nm,1.1s
EGMT                               LR       LR
       comp=Z,2µm,22.0s
EGMT   Eagleton          93.70  42  P       P        09 53 37.3 +0.7
       baz=258
S22A   4UR Ranch, Cre    93.74  52 eP       P        09 53 38.0 +0.6
       comp=Z,40nm,1.6s
S22A   4UR Ranch, Cre    93.74  52  P       P        09 53 37.4  0.0
       baz=259
MNTX   Cornudas Mount    93.79  59 eP       P        09 53 37.2 -0.2
       comp=Z,11nm,1.5s
MNTX                               LR       LR
       comp=Z,5µm,22.0s
MNTX   Cornudas Mount    93.79  59  P       P        09 53 37.0 -0.3
       baz=259
SMCO   Snowmass          93.90  51 eP       P        09 53 39.7 +1.5
       comp=Z,19nm,1.4s
RWWY   Rawlins           94.20  49 eP       P        09 53 39.1 -0.3
       comp=Z,49nm,1.6s
ZAA0   Zalesovo Array    94.20 324 eP       P        09 53 38.0 -0.6
       comp=Z,110nm,1.6s
ZALV   Zalesovo Beam     94.20 324 eP       P        09 53 37.5 -1.2
ZALV   Zalesovo Beam     94.20 324  P       P        09 53 38.2 -0.5
       comp=Z,10.0nm,1.0s,baz=114,slow=3.6,SNR=25
ZAA1   Zalesovo Array    94.20 324 eP       P        09 53 38.2 -0.5
MK01   Makanchi Array    94.27 317 eP       P        09 53 38.6 -0.6
MK31   Makanchi Array    94.28 317 eP       P        09 53 38.6 -0.7
       comp=Z,130nm,1.5s
MK31   Makanchi Array    94.28 317 eP       P        09 53 39.0 -0.3
MK32   Makanchi Array    94.28 317 eP       P        09 53 39.0 -0.3
MKAR   Makanchi Array    94.28 317 eP       P        09 53 38.2 -1.1
       comp=Z,356nm,1.4s
MKAR   Makanchi Array    94.28 317  P       P        09 53 39.0 -0.3
       comp=Z,14nm,1.0s,baz=102,slow=5.4,SNR=55
MKAR                               PKKPbc   PKKPdf   10 10 39.0 -2.0
       comp=Z,4.0nm,1.1s,baz=289,slow=2.6,SNR=11
YKA    Yellowknife Ar    94.44  27  P       P        09 53 38.2 -1.3
       comp=Z,2.9nm,1.0s,baz=255,slow=4.4,SNR=18
YKA                                PKKPbc   PKKPdf   10 10 36.3 -4.7
       comp=Z,0.3nm,0.8s,baz=66,slow=2.5,SNR=4.1
YKA                                LR       LR       10 32 29.7
       comp=Z,92nm,18.6s,baz=270,slow=33
YKB5   Yellowknife Ar    94.44  27 eP       P        09 53 38.5 -1.0
YKW3   Yellowknife Ar    94.45  27 eP       P        09 53 38.5 -1.1
       comp=Z,3.9nm,1.1s
MAKZ   Makanchi          94.50 317 eP       P        09 53 39.7 -0.5
       comp=Z,178nm,1.6s
MAKZ   Makanchi          94.50 317 eP       P        09 53 40.4 +0.1
MAKZ                               pmax     pmax
       comp=Z,180nm,1.6s
SDCO   Great Sand Dun    94.78  53  PFAKE            09 53 50.0 +7.9
SDCO                               LR       LR
       comp=Z,3µm,21.0s
SDCO   Great Sand Dun    94.78  53  P       P        09 53 41.9 -0.2
       baz=260
TX31   Lajitas Ar. Si    94.83  61 eP       P        09 53 41.9 -0.4
TX31                              eP       P        09 53 42.0 -0.3
LTX    Lajitas           94.83  61 eP       P        09 53 42.8 +0.5
LTX                               ePP      PP       09 57 32.2 +0.8
LTX    Lajitas           94.83  61 eP       P        09 53 42.8 +0.5
LTX                               e                 09 57 32.2
TXAR   Lajitas Array     94.83  61  P       P        09 53 42.7 +0.4
       comp=Z,0.9nm,1.0s,baz=228,slow=3.2,SNR=5.5
TXAR                               PP       PP       09 57 32.2 +0.8
       comp=Z,0.3nm,0.7s,baz=243,slow=4.0,SNR=2.4
TXAR                               LR       LR       10 28 17.1
       comp=Z,4µm,20.7s,baz=0.0,slow=30
K22A   Casper            94.88  48 eP       P        09 53 42.7 +0.3
       comp=Z,45nm,1.6s
K22A   Casper            94.88  48  P       P        09 53 43.0 +0.7
       baz=260
N23A   Red Feather La    95.00  49 eP       P        09 53 43.0 -0.1
       comp=Z,30nm,1.4s
N23A   Red Feather La    95.00  49  P       P        09 53 43.2 +0.2
       baz=260
ISCO   Idaho Springs     95.05  51 eP       P        09 53 43.0 -0.4
       comp=Z,2.4nm,1.0s
ISCO                               LR       LR
       comp=Z,6µm,22.0s
ISCO   Idaho Springs     95.05  51 eP       P        09 53 43.0 -0.4
ISCO                               pmax     pmax
       comp=Z,2.0nm,1.0s
ISCO                               MLR      MLR
       comp=Z,6µm,22.0s
ISCO   Idaho Springs     95.05  51  P       P        09 53 43.5 +0.1
       baz=260
NVS    Novosibirsk       95.30 325⇑iP       P        09 53 44.3 +0.6
NVS                               e                 09 57 41.4
NVS                                pmax     pmax
       comp=E,61nm,2.3s
NVS                                pmax     pmax
       comp=Z,143nm,2.3s
NVS                                pmax     pmax
       comp=N,2.0nm,0.3s
PMSA   Palmer Station    95.36 160  PFAKE            09 54 00.0  +16
PMSA                               LR       LR
       comp=Z,1µm,20.0s
T25A   Trinidad          95.53  53  P       P        09 53 46.2 +0.7
       baz=260
LAO    LASA Array        95.80  44 eP       P        09 53 46.3 +0.1
       comp=Z,21nm,1.5s
LAO                                LR       LR
       comp=Z,3µm,21.0s
LAO    LASA Array        95.80  44  P       P        09 53 46.6 +0.3
       baz=260
POO    Poona             96.29 288 eP       P        09 53 50.0 +0.9
NRIK   Noril'sk          96.50 339  P       P        09 53 48.8  0.0
       comp=Z,2.4nm,0.3s,baz=104,slow=5.7,SNR=8.1
RSSD   Black Hills       96.91  46 eP       P        09 53 51.6  0.0
       comp=Z,30nm,1.6s
RSSD   Black Hills       96.91  46 eP       P        09 53 53.5 +1.9
RSSD                               pmax     pmax
       comp=Z,30nm,1.6s
RSSD   Black Hills       96.91  46  P       P        09 53 52.2 +0.6
       baz=261
KURK   Kurchatov         97.35 320 eP       P        09 53 51.8 -1.3
       comp=Z,96nm,1.6s
KURK                               LR       LR
       comp=Z,1µm,19.0s
KURK   Kurchatov         97.35 320 i P      P        09 53 53.0 -0.1
KURK                               pmax     pmax
       comp=Z,27nm,2.0s
AMTX   Amarillo          97.37  56  P       P        09 53 52.7 -1.0
       baz=262
DGMT   Dagmar            97.44  42 eP       Pdif     09 53 55.1 +1.5
       comp=Z,28nm,1.3s
DGMT                               LR       LR
       comp=Z,2µm,20.0s
DGMT   Dagmar            97.44  42  P       P        09 53 53.1 -0.5
       baz=262
KSH    Kashi             97.62 309  P       Pdif     09 53 57.5 +2.6
KSH                                pP       pwP      09 54 07.4 +0.8
KSH                                PP       PP       09 57 54.7 +1.9
KSH                                SKS      SKSac    10 04 31.7 +1.2
KSH                                S        S        10 05 15.0 -3.3
KSH                                SS       SS       10 12 01.0 +2.2
KSH                                LR       LR
       comp=Z,490nm,7.3s
KSH                                LR       LR
       comp=Z,510nm,7.9s
KSH                                LR       LR
       comp=Z,1µm,13.7s
OGNE   Ogallala          97.93  50  PFAKE            09 54 10.0  +14
OGNE                               LR       LR
       comp=Z,6µm,20.0s
JCT    Junction City     98.32  61  PFAKE            09 54 10.0  +12
JCT                                LR       LR
       comp=Z,5µm,20.0s
JCT    Junction City     98.32  61  Pdiff   P        09 53 58.1 +0.1
       baz=262
NIL    Nilore            99.03 303  PFAKE            09 54 10.0 +8.9
NIL                                LR       LR
       comp=Z,527nm,22.0s
FRU    Bishkek           99.06 312 eP       Pdif     09 54 01.0 -0.1
FRU                               e                 10 06 59.0
AAK    Ala-Archa         99.13 312  PFAKE            09 54 10.0 +8.5
AAK                                LR       LR
       comp=Z,798nm,19.0s
AAK    Ala-Archa         99.13 312 i P      Pdif     09 54 02.2 +0.7
AAK                                pmax     pmax
       comp=Z,10.0nm,2.5s
CBKS   Cedar Bluff       99.42  52  PFAKE            09 54 10.0 +7.2
CBKS                               LR       LR
       comp=Z,3µm,19.0s
FFC    Flin Flon         99.56  36 ePdif    Pdif     09 54 01.7 -1.2
       comp=Z,27nm,1.4s
FFC                                LR       LR
       comp=Z,5µm,21.0s
FFC    Flin Flon         99.56  36 eP       Pdif     09 54 03.0 +0.1
FFC                                pmax     pmax
       comp=Z,27nm,1.3s
KVTX   Kingsville        99.59  64  PFAKE            09 54 20.0  +16
KVTX                               LR       LR
       comp=Z,2µm,19.0s
KSU1   Kansas State U   101.88  52  PFAKE            09 54 30.0  +16
KSU1                               LR       LR
       comp=Z,3µm,20.0s
ECSD   EROS Data Cent   102.20  47  PFAKE            09 54 30.0  +15
ECSD                               LR       LR
       comp=Z,3µm,20.0s
PAYG   Puerto Ayora     102.45  93  PFAKE            09 54 30.0  +13
PAYG                               LR       LR
       comp=Z,1µm,19.0s
BRVK   Borovoye         102.69 322  PFAKE            09 54 30.0  +13
BRVK                               LR       LR
       comp=Z,521nm,19.0s
NATX   Nacogdoches      102.85  60  PFAKE            09 54 30.0  +12
NATX                               LR       LR
       comp=Z,4µm,21.0s
ULM    Lac du Bonnet    103.00  41  P       Pdif     09 54 19.1 +0.8
       comp=Z,1.1nm,0.7s,baz=12,slow=5.3,SNR=4.0
MIAR   Mount Ida        103.97  57  PFAKE            09 54 30.0 +7.0
MIAR                               LR       LR
       comp=Z,5µm,21.0s
EYMN   Ely              105.87  43  PFAKE            09 59 00.0  +16
EYMN                               LR       LR
       comp=Z,2µm,21.0s
EFI    East Falkland    106.49 153  PFAKE            09 59 00.0  +15
EFI                                LR       LR
       comp=Z,720nm,20.0s
JFWS   Jewell Farm      106.82  48  PFAKE            09 59 00.0  +14
JFWS                               LR       LR
       comp=Z,3µm,19.0s
COWI   Conover          107.54  45  PFAKE            09 59 00.0  +13
COWI                               LR       LR
       comp=Z,3µm,20.0s
HDIL   Hopedale         107.56  51  PFAKE            09 59 00.0  +13
HDIL                               LR       LR
       comp=Z,3µm,21.0s
ARU    Arti             109.24 326  PFAKE            09 59 00.0  +10
ARU                                LR       LR
       comp=Z,509nm,21.0s
BRAL   Brewton          109.31  61  PFAKE            09 59 00.0 +9.5
BRAL                               LR       LR
       comp=Z,2µm,21.0s
JTS    JuntasAbangare   109.56  83  PFAKE            09 59 00.0 +8.5
JTS                                LR       LR
       comp=Z,1µm,19.0s
GLMI   Grayling         110.80  46  PFAKE            09 59 00.0 +7.0
GLMI                               LR       LR
       comp=Z,3µm,22.0s
KBS    Kingsbay         111.00 355  PFAKE            09 59 00.0 +7.6
KBS                                LR       LR
       comp=Z,963nm,20.0s
LCO    Las Campanas     111.66 127  PFAKE            09 59 10.0  +15
LCO                                LR       LR
       comp=Z,1µm,19.0s
AAM    Ann Arbor        111.71  49  PFAKE            09 59 10.0  +15
AAM                                LR       LR
       comp=Z,4µm,19.0s
GOGA   Godfrey          112.34  58  PFAKE            09 59 10.0  +14
GOGA                               LR       LR
       comp=Z,3µm,21.0s
ACSO   Alum Creek Sta   112.39  51  PFAKE            09 59 10.0  +14
ACSO                               LR       LR
       comp=Z,4µm,20.0s
NNA    Nana             112.70 108  PFAKE            09 59 10.0  +13
NNA                                LR       LR
       comp=Z,642nm,19.0s
ABPO   Ambohimpanom     113.47 244  PFAKE            09 59 10.0  +11
ABPO                               LR       LR
       comp=Z,907nm,20.0s
OTAV   Otavalo          114.22  95  PFAKE            09 59 10.0 +9.0
OTAV                               LR       LR
       comp=Z,1µm,20.0s
BCIP   Isla Barro Col   114.39  85  PFAKE            09 59 10.0 +9.3
BCIP                               LR       LR
       comp=Z,1µm,22.0s
BLA    Blacksburg       114.63  54  PFAKE            09 59 10.0 +9.5
BLA                                LR       LR
       comp=Z,4µm,22.0s
NHSC   New Hope         115.11  59  PFAKE            09 59 10.0 +8.5
NHSC                               LR       LR
       comp=Z,4µm,21.0s
LVZ    Lovozero         115.19 342  PFAKE            09 59 10.0 +9.3
LVZ                                LR       LR
       comp=Z,700nm,20.0s
APA    Apatity          115.77 342⇑iPKIKP   PKPdf    09 59 11.8  +10
APA                                pmax     pmax
       comp=Z,4.0nm,1.0s
LVC    Limon Verde      115.93 122  PFAKE            09 59 20.0  +16
LVC                                LR       LR
       comp=Z,1µm,19.0s
KEV    Kevo             116.07 346  PFAKE            09 59 10.0 +7.7
KEV                                LR       LR
       comp=Z,2µm,22.0s
ARA0   ARCESS Array S   116.60 346 ePKPdf   PKPdf    09 59 03.5 +0.2
ARCES  ARCESS Array B   116.60 346  PKP     PKPdf    09 59 03.5 +0.2
       comp=Z,2.2nm,0.8s,baz=40,slow=2.1,SNR=9.4
CNNC   Cliffs of the    116.84  56  PFAKE            09 59 20.0  +15
CNNC                               LR       LR
       comp=Z,3µm,21.0s
CBN    Corbin Frederi   116.93  53  PFAKE            09 59 20.0  +15
CBN                                LR       LR
       comp=Z,6µm,21.0s
KLMR   Klimovskoe       117.22 334 ePKIKP   PKPdf    09 59 03.6 -1.1
KLMR                               pmax     pmax
       comp=Z,22nm,1.4s
KLMR   Klimovskoe       117.22 334 ePKPdf   PKPdf    09 59 03.7 -1.0
KLMR                               AMP               09 59 18.9
       comp=Z,22nm,1.4s
BINY   Binghamton       117.37  48  PFAKE            09 59 20.0  +14
BINY                               LR       LR
       comp=Z,4µm,19.0s
MTDJ   Mount Denham     117.50  75  PFAKE            09 59 20.0  +13
MTDJ                               LR       LR
       comp=Z,1µm,21.0s
LONY   Lake Ozonia      117.89  45  PFAKE            09 59 20.0  +13
LONY                               LR       LR
       comp=Z,2µm,20.0s
MAK    Makhachkala      118.86 313 i PKIKP  PKPdf    09 59 05.6 -2.8
LPAZ   La Paz           119.17 116 eP       PKPpre   09 59 05.3
LPAZ                               PKP      PKPdf    09 59 10.4 -0.2
LPAZ   La Paz           119.17 116  PKP     PKPdf    09 59 10.4 -0.2
       comp=Z,1.5nm,0.9s,baz=21,slow=1.3,SNR=4.3
GTBY   Guantanamo Bay   119.86  73  PFAKE            09 59 20.0 +8.9
GTBY                               LR       LR
       comp=Z,1µm,20.0s
VRH    Novokhopyorsk    120.23 323 ePKIKP   PKPpre   09 59 05.8
VRH                                                  10 00 43.1
VRH                                pmax     pmax
       comp=Z,40nm,1.6s
LPSR   Galich'ya Gora   121.27 326 ePKIKP   PKPpre   09 59 00.6
LPSR                               e                 10 00 39.3
LPSR                               pmax     pmax
       comp=Z,9.0nm,0.6s
PKME   Peaks-Kenny Pk   121.36  43  PFAKE            09 59 20.0 +6.7
PKME                               LR       LR
       comp=Z,2µm,19.0s
OBN    Obninsk          121.37 329  PFAKE            09 59 20.0 +7.0
OBN                                LR       LR
       comp=Z,634nm,20.0s
OBN    Obninsk          121.37 329 i PKIKP  PKPdf    09 59 12.3 -0.5
OBN                                i                 09 59 23.6
OBN                                pmax     pmax
       comp=Z,9.0nm,1.1s
OBN                                MLR      MLR
       comp=Z,1µm,20.0s
GNI    Garni            121.50 310  PFAKE            09 59 30.0  +16
GNI                                LR       LR
       comp=Z,835nm,21.0s
GNI    Garni            121.50 310c iPKIKP  PKPdf    09 59 13.8 -0.1
GNI                                pmax     pmax
       comp=Z,57nm,1.7s
VSR    Storozhevoye     121.71 324 ePKIKP   PKPdf    09 59 12.8 -0.8
VSR                                e                 10 00 44.1
VSR                                pmax     pmax
       comp=Z,6.0nm,0.6s
KIV    Kislovodsk       122.01 315  PFAKE            09 59 30.0  +15
KIV                                LR       LR
       comp=Z,635nm,20.0s
KIV    Kislovodsk       122.01 315 i PKIKP  PKPdf    09 59 14.6  0.0
KIV                                e                 10 00 47.8
KIV                                ePS      PS       10 10 41.4 -2.2
KIV                                pmax     pmax
       comp=Z,9.0nm,1.0s
FIA1   FINESS Array S   122.16 339 ePKPdf   PKPdf    09 59 13.9 -0.3
FIA0   FINESS Array S   122.16 339 ePKPdf   PKPdf    09 59 13.9 -0.3
FIA0   FINESS Array S   122.16 339 ePKIKP   PKPdf    09 59 13.9 -0.3
FINES  FINESS Array B   122.16 339  PKP     PKPdf    09 59 13.9 -0.3
       comp=Z,6.0nm,1.0s,baz=5.7,slow=1.9,SNR=8.5
CPUP   Villa Florida    123.20 132 ePKPdf   PKPdf    09 59 14.9 -2.4
CPUP   Villa Florida    123.20 132  PKP     PKPdf    09 59 16.6 -0.8
       comp=Z,5.1nm,1.1s,baz=245,slow=1.7,SNR=6.4
SDV    Santo Domingo    123.37  87 ePKPdf   PKPdf    09 59 16.5 -1.7
SDV    Santo Domingo    123.37  87  PKP     PKPdf    09 59 17.3 -0.8
       comp=Z,7.0nm,1.0s,baz=140,slow=4.4,SNR=6.2
GRTK   Grand Turk       123.60  72  PFAKE            09 59 30.0  +12
GRTK                               LR       LR
       comp=Z,2µm,22.0s
SOC    Sochi            124.17 316 i PKIKP  PKiKP    09 59 19.2 +0.3
SOC                                ePS      PS       10 10 52.1  -10
SOC                                eSS      SS       10 17 43.9 -8.7
SOC                                MLR      MLR
       comp=Z,580nm,21.0s
ANN    Anapa            125.29 318 i PKIKP  PKPdf    09 59 19.2 -1.5
ANN                                e                 10 01 09.7
ANN                                pmax     pmax
       comp=Z,36nm,1.4s
BOSA   Boshof           125.89 222  PKIKP   PKPdf    09 59 22.9 +0.3
BOSA                               pmax     pmax
       comp=Z,5.0nm,1.0s
BOSA   Boshof           125.89 222  PKP     PKPdf    09 59 22.9 +0.3
       comp=Z,3.1nm,0.9s,baz=39,slow=5.5,SNR=4.2
MICGM  Minsk            125.92 332 ePKP     PKPdf    09 59 21.0 -0.6
MICGM                              ePP      PP       10 01 15.0 +0.5
MICGM                              ePPP     PPP      10 04 06.0
MICGM                              eSKS     SKSac    10 06 18.0 -6.3
MICGM                              eSKSP             10 11 20.0
MICGM                              eLQ      LQ       10 51 04.0
MICGM                              eLR      LR       10 53 20.0
MICGM                               LRM     MLR      10 58 14.0
       comp=Z,2.8nm,20.0s
MNK    Minsk            125.92 332 ePKIKP   PKPdf    09 59 21.0 -0.6
MNK                                e                 10 01 15.0
MNK                                e                 10 04 06.0
MNK                                e                 10 06 18.0
MNK                                e                 10 11 20.0
SUR    Sutherland       126.02 216  PFAKE            09 59 30.0 +6.7
SUR                                LR       LR
       comp=Z,3µm,20.0s
NACGM  Naroch           126.17 333 e        PKPdf    09 59 22.0 -0.1
NACGM                              eLQ      LQ       10 49 36.0
NACGM                              eLR      LR       10 52 14.0
NB2    NORSAR Subarra126.97 345     PKPdf   PKPdf    09 59 23.2 -0.3
       comp=Z,0.7nm,0.7s,baz=32,slow=1.8
NB200  NORSAR Array S 126.97 345   ePKPdf   PKPdf    09 59 23.3 -0.3
NOA    NORSAR Array B 126.97 345    PKP     PKPdf    09 59 23.3 -0.3
       comp=Z,2.6nm,0.9s,baz=35,slow=2.0,SNR=4.9
SIM    Simferopol'      127.39 319  PKIKP   PKiKP    09 59 38.9  +14
SIM                                e                 10 01 33.0
SIM                                pmax     pmax
       comp=Z,80nm,8.5s
SIM                                pmax     pmax
       comp=Z,210nm,9.5s
AKASG  Malin Array Be   127.46 327  PKP     PKPdf    09 59 24.3 -0.4
       comp=Z,1.7nm,0.7s,baz=55,slow=2.2,SNR=11
AKASG                              PP       PP       10 01 25.1 +0.3
       comp=Z,0.3nm,0.4s,baz=41,slow=5.9,SNR=4.6
AKBB   Malin Array Si   127.46 327 ePKPdf   PKPdf    09 59 24.3 -0.4
AKBB                               ePP      PP       10 01 25.1 +0.3
KIEV   Kiev             127.47 327 ePKPdf   PKPdf    09 59 24.3 -0.4
KIEV                               LR       LR
       comp=Z,1µm,19.0s
KIEV   Kiev             127.47 327 i PKIKP  PKPdf    09 59 25.0 +0.3
AK11   Malin Array Si   127.50 327 ePKPdf   PKPdf    09 59 24.8  0.0
SJG    San Juan         128.32  76  PKP     PKPdf    09 59 26.9 -0.4
       comp=Z,22nm,0.9s,baz=316,slow=2.3,SNR=4.7
SUW    Suwalki          128.35 334 ePKPdf   PKiKP    09 59 27.5 +0.6
SUW    Suwalki          128.35 334 ePKIKP   PKiKP    09 59 27.5 +0.6
KMBO   Kilima Mbogo     128.50 260 ePKPdf   PKiKP    09 59 28.9 +0.1
KMBO                               LR       LR
       comp=Z,1µm,21.0s
KMBO   Kilima Mbogo     128.50 260  PKP     PKiKP    09 59 28.9 +0.1
       comp=Z,1.2nm,0.3s,baz=338,slow=2.2,SNR=7.9
HUMP   Col San Antoni   128.61  76 ePKPdf   PKPdf    09 59 25.3 -2.5
ILGA   Ilgaz            129.23 315 ePKPdf   PKPdf    09 59 26.8 -1.9
KIS    Kishinev         129.68 324 ePKP     PKPdf    09 59 27.0 -2.0
KIS    Kishinev         129.68 324 ePP      PP       10 01 39.0 -0.5
KIS    Kishinev         129.68 324 ePKS     PKSab    10 02 50.0 -1.8
KIS    Kishinev         129.68 324 ePS      PS       10 12 00.0  +10
KIS    Kishinev         129.68 324 ePKIKP   PKPdf    09 59 27.0 -2.0
KIS                                e                 10 01 39.0
KIS                                ePPP     PPP      10 04 30.0
BR101  Keskin Array S   129.78 313 ePKPdf   PKPdf    09 59 30.1 +0.4
BR101                              ePP      PP       10 01 39.9 -0.9
BRTR   Keskin Array B   129.78 313  PKP     PKPdf    09 59 30.1 +0.4
       comp=Z,0.7nm,0.6s,baz=124,slow=3.7,SNR=5.3
BRTR                               PP       PP       10 01 39.9 -0.9
       comp=Z,0.8nm,0.9s,baz=120,slow=5.7,SNR=3.6
ANTO   Ankara           130.33 314  PFAKE            09 59 40.0 +8.5
ANTO                               LR       LR
       comp=Z,602nm,19.0s
LVV    L'vov            130.67 329 i PKIKP  PKiKP    09 59 40.9 +9.2
LVV                                ePPP     PPP      10 04 38.5
LVV                                e                 10 06 39.9
LVV                                MLR      MLR
       comp=N,400nm,20.0s
LVV                                MLR      MLR
       comp=E,400nm,20.0s
LVV                                MLR      MLR
       comp=Z,500nm,20.0s
BUR04  Bucovina Ar. S   131.38 326 ePKPdf   PKPdf    09 59 30.6 -1.8
LSZ    Lusaka           131.47 238 ePKPdf   PKPdf    09 59 33.3 -0.2
LSZ                                LR       LR
       comp=Z,3µm,20.0s
LSZ    Lusaka           131.47 238 ePKIKP   PKPdf    09 59 33.3 -0.2
LSZ                                MLR      MLR
       comp=Z,3µm,20.0s
SPB    Sao Paulo        131.93 136 ePKPdf   PKPdf    09 59 32.7 -1.4
PTGA   Pitinga          131.98 101 ePKPdf   PKPdf    09 59 33.9 -0.5
PTGA                               LR       LR
       comp=Z,17µm,20.0s
PTGA   Pitinga          131.98 101  PKP     PKPdf    09 59 35.1 +0.7
       comp=Z,6.2nm,0.8s,baz=324,slow=5.5,SNR=5.7
UZH    Uzhgorod         132.31 329 ePKIKP   PKPdf    09 59 34.5 +0.5
```

UZH				e		09 59 41.4	
GRGR	Grenville	132.47	84	PFAKE		09 59 50.0	+14
GRGR				LR	LR		
	comp=Z,812nm,21.0s						
ANWB	Willy Bob	132.48	76	PFAKE		09 59 50.0	+14
ANWB				LR	LR		
	comp=Z,1µm,20.0s						
OKC	Ostrava-Krasne	133.49	332	ePP	PP	10 02 12.2	+8.4
OKC				AMS	AMS	10 52 50.0	
	comp=Z,1µm,22.5s						
MORC	Moravsky Berou	133.81	333	ePKIKP	PKiKP	09 59 39.1	+1.0
MORC				ePP	PP	10 02 06.3	+0.4
DPC	Dobruska-Polom	133.93	334	ePP	PP	10 02 14.7	+8.1
DPC				AMS	AMS	10 57 00.0	
	comp=Z,2µm,24.1s						
UPC	Upice	133.94	334	AMS	AMS	11 01 50.0	
	comp=Z,2µm,22.1s						
VYHS	Vyhne	134.11	331	ePKIKP	PKiKP	09 59 38.9	+0.1
VYHS	Vyhne	134.11	331	ePKP	PKiKP	09 59 38.9	+0.1
BRG	Berggiesshubel	134.51	336	ePKP	PKiKP	09 59 39.8	+0.3
	comp=Z,25nm,1.6s						
BRG				i		09 59 53.8	
	comp=Z,76nm,1.9s						
BRG				PP	PP	10 02 10.0	-0.1
BRG				PKS		10 03 08.0	
	comp=N,1µm,23.0s						
	comp=E,650nm,25.3s						
	comp=Z,2µm,21.7s						
BRG	Berggiesshubel	134.51	336	ePKIKP	PKiKP	09 59 39.8	+0.3
BRG						10 02 10.0	
BRG				pmax	pmax		
	comp=Z,25nm,1.6s						
BRG				MLR	MLR		
	comp=N,1µm,23.0s						
BRG				MLR	MLR		
	comp=E,650nm,25.3s						
BRG				MLR	MLR		
	comp=Z,2µm,21.7s						
PVCC	Panska Ves	134.53	335	AMS	AMS	10 55 30.0	
	comp=Z,1µm,22.0s						
CLL	Collm	134.53	337	ePKPdf	PKPdf	09 59 39.0	+0.9
CLL				ePP	PP	10 02 09.0	-1.2
CLL				ePKSdf	PKSdf	10 03 15.0	+0.8
CLL				ePPS	PPS	10 14 14.0	
CLL				e		10 15 24.0	
CLL				eSS	SS	10 20 18.0	+19
CLL				eSKSSKSac		10 22 06.0	
CLL				eSSS	SSS	10 25 00.0	
CLL				eSSSS		10 28 18.0	
CLL				Lm	MLR	11 06 00.0	
	comp=N,800nm,20.4s						
CLL				Lm	MLR	11 06 00.0	
	comp=E,500nm,20.4s						
CLL				Lm	MLR	11 06 00.0	
	comp=Z,1µm,20.3s						
CLL	Collm	134.53	337	ePKIKP	PKPdf	09 59 39.0	+0.9
CLL				MLR	MLR		
	comp=Z,1µm,20.3s						
BBGH	Gun Hill	134.57	82	PFAKE		09 59 50.0	+9.4
BBGH				LR	LR		
	comp=Z,2µm,21.0s						
VRAC	Vranov	134.58	333	ePP	PP	10 02 12.4	+1.7
KRUC	Moravsky	134.84	333	ePKIKP	PKiKP	09 59 40.7	+0.5
KRUC				ePP	PP	10 02 14.0	+1.6
GOPC	GO Pecny, Ondr	134.91	335	ePP	PP	10 02 23.3	+11
GOPC				AMS	AMS	10 58 50.0	
	comp=Z,1µm,20.8s						
MBAR	Mbarara	134.92	258	PFAKE		09 59 50.0	+8.4
MBAR				LR	LR		
	comp=Z,1µm,22.0s						
MODS	Modra-Piesok	134.94	332	ePKIKP	PKPdf	09 59 39.0	0.0
MODS	Modra-Piesok	134.94	332	ePKP	PKPdf	09 59 39.0	0.0
PRU	Pruhonice	134.95	335	ePP	PP	10 02 23.3	+10
PRU				AMS	AMS	10 55 40.0	
	comp=Z,1µm,20.2s						
TREC	Trest	135.07	334	AMS	AMS	10 53 00.0	
	comp=Z,2µm,26.9s						
CONA	Conrad Observa	135.92	332	i PKiKP	PKiKP	09 59 42.4	-0.1
	comp=Z,14nm,1.2s						
CONA				i PP	PP	10 02 20.0	+0.8
	comp=Z,17nm,1.7s						
KHC	Kasperske Hory	136.01	335	ePKPdf	PKPdf	09 59 39.2	-1.8
KHC	Kasperske Hory	136.01	335	ePKPDF	PKiKP	09 59 44.1	+1.5
KHC				ePP	PP	10 02 26.5	+6.8
KHC				AMS	AMS	10 57 40.0	
	comp=Z,2µm,24.0s						
KHC	Kasperske Hory	136.01	335	ePKIKP	PKiKP	09 59 44.1	+1.5
KHC				e		10 02 26.5	
KHC				MLR	MLR		
	comp=Z,2µm,24.0s						
GEC2	GERESS Array S	136.18	335	ePKPdf	PKPdf	09 59 38.0	-3.4
GEC2	GERESS Array S	136.18	335	ePKIKP	PKPdf	09 59 38.0	-3.4
GERES	GERESS Array B	136.18	335	PKP	PKPdf	09 59 41.4	0.0
	comp=Z,3.3nm,0.9s,baz=66,slow=1.6,SNR=14						
GEA0	GERESS Array S	136.19	335	ePKPdf	PKPdf	09 59 41.1	-0.3
DIVS	Divibare	136.42	325	ePKPdf	PKPdf	09 59 41.1	-0.8
ARSA	Arzberg	136.57	332	i PKiKP	PKPdf	09 59 42.8	+0.8
	comp=Z,6.7nm,1.1s						
MOA	Molln	136.69	333	i PKPdf	PKPdf	09 59 42.5	+0.2
	comp=Z,11nm,1.6s						
MOA				i PP	PP	10 02 22.6	-1.4
	comp=Z,29nm,1.8s						
SOKA	Soboth	137.22	331	i pPKPdf	PKiKP	09 59 45.6	+0.4
	comp=Z,11nm,1.5s						
MYKA	Terra Mystica	137.89	332	i PKPdf	PKPdf	09 59 42.3	-2.2
	comp=Z,6.3nm,0.9s						
MYKA				i PP	PP	10 02 32.3	+0.7
	comp=Z,17nm,1.5s						
WTTA	Wattenberg	138.28	335	i PKiKP	PKiKP	09 59 47.2	-0.3
	comp=Z,24nm,1.3s						
WTTA				i PP	PP	10 02 32.8	-1.2
	comp=Z,16nm,1.2s						
ABTA	Abfaltersbach	138.31	333	i PKPdf	PKPdf	09 59 45.0	-0.4
	comp=Z,13nm,1.3s						
ABTA				i PP	PP	10 02 32.5	-1.6
	comp=Z,16nm,1.7s						
MOTA	Moosalm	138.44	335	i PKiKP	PKiKP	09 59 47.5	-0.3
	comp=Z,3.8nm,0.7s						
RETA	Reutte	138.47	336	i pPKPdf	PKiKP	09 59 48.6	+0.8
	comp=Z,13nm,1.6s						
RETA				i PP	PP	10 02 36.5	+1.5
	comp=Z,21nm,1.9s						
SQTA	Sankt Quirin	138.50	335	i PKiKP	PKiKP	09 59 47.6	-0.3
	comp=Z,22nm,1.6s						
SQTA				i PP	PP	10 02 34.9	-0.4
	comp=Z,13nm,1.2s						
BFO	Black Forest	138.71	338	PFAKE		10 00 00.0	+12
BFO				LR	LR		
	comp=Z,52nm,20.0s						
FETA	Feichten	138.85	335	i PKPdf	PKPdf	09 59 45.9	-0.6
	comp=Z,16nm,1.1s						
FETA				i PP	PP	10 02 38.9	+1.3
	comp=Z,34nm,1.7s						
DAVA	Damuels	138.98	336	i pPKPdf	PKiKP	09 59 49.8	+0.9
	comp=Z,24nm,1.5s						
DAVA				i PP	PP	10 02 39.1	+0.8
	comp=Z,35nm,2.5s						
FUORN	Ofenpass-Fuorn	139.37	335	ePKPdf	PKPdf	09 59 48.6	+1.1
H07S1	FLORES T-PHASE	147.50	27	ePKP	PKPbc	10 00 05.6	+1.3
KEST	Kesra	148.07	324	PKPbc	PKPbc	10 00 06.7	+0.7
	comp=Z,44nm,1.1s,baz=292,slow=2.9,SNR=14						
PBRG	Braganca	148.84	351	ePKPdf	PKPbc	10 00 07.0	-0.8
PGAV	Gavieira, Arco	148.89	353	eLR	LR	10 53 28.2	
	comp=Z,2µm,20.0s						
SRBC	Serra Branca	149.09	23	ePKP	PKPbc	10 00 08.0	-0.4
PGRA	Graciosa	149.12	23	ePKP	PKPbc	10 00 08.2	-0.3
ROSA	Rosais	149.29	24	ePKP	PKPbc	10 00 08.4	-0.5
PICO	Pico	149.40	24	ePKP	PKPbc	10 00 08.1	-1.2
POLO	Lamas de Olo	149.41	352	ePKPdf	PKPbc	10 00 08.0	-1.3
MVO	Moncorvo	149.51	351	ePKPdf	PKPbc	10 00 10.0	+0.5
MVO	Moncorvo	149.51	351	eLR	LR	10 53 51.7	
	comp=Z,2µm,20.0s						
PSCM	Serra do Cume	149.73	22	ePKP	PKPbc	10 00 09.8	-0.3
PVIS	Viseu	150.07	352	ePKPdf	PKiKP	10 00 11.8	0.0
ES19	SONSECA Array	150.29	346	ePKPbc	PKPbc	10 00 11.3	-0.2
MTE	Manteigas	150.33	351	eLR	LR	10 53 55.6	
	comp=Z,1µm,22.0s						
ESDC	Sonseca Array	150.34	346	PKPbc	PKPbc	10 00 11.9	+0.3
	comp=Z,10nm,1.1s,baz=20,slow=2.7,SNR=14						
PAB	San Pablo	150.55	346	PFAKE		10 00 20.0	+1.3
PAB				LR	LR		
	comp=Z,2µm,20.0s						
PCBR	Castelo Branco	150.87	351	ePKPdf	PKPdf	10 00 10.3	+3.2
PSET	Sete Cidades	151.01	21	ePKP	PKPbc	10 00 11.5	-1.7
CMLA	Cha da Macela	151.14	21	PFAKE		10 00 20.0	-1.1
CMLA				LR	LR		
	comp=Z,3µm,19.0s						
PTOM	Tomar	151.22	352	ePKPdf	PKPbc	10 00 12.8	-0.7
BART	Pico Bartolome	151.25	20	ePKP	PKPbc	10 00 11.9	-1.9
PMRV	Marv??o	151.26	351	ePKPdf	PKPbc	10 00 12.7	-1.0
PMRV	Marv??o	151.26	351	eLR	LR	10 53 16.8	
	comp=Z,1µm,18.0s						
PMTG	Montargil	151.74	352	ePKPdf	PKPbc	10 00 15.2	+0.5
RCBR	Riachuelo	151.80	125	ePKPdf	PKPdf	10 00 07.5	-1.8
RCBR				ePKPbc	PKPbc	10 00 15.0	-0.7
RCBR				ePKPab	pPKPbc	10 00 24.0	-0.9
RCBR	Riachuelo	151.80	125	ePKIKP	PKPdf	10 00 07.5	-1.8
RCBR				e		10 00 15.0	
RCBR				e		10 00 24.0	
PESTR	Estremoz	151.84	351	ePKPdf	PKiKP	10 00 16.9	+1.5
PMAFR	Mafra	151.98	354	ePKPdf	PKiKP	10 00 20.4	+4.7
PSMN	Pico do Norte,	151.98	21	ePKP	PKPdf	10 00 11.9	+3.0
SHEL	Horse Pasture	152.22	195	ePKPdf	PKPdf	10 00 08.8	-1.0
SHEL				ePKPbc	pPKPdf	10 00 18.5	-0.8
SHEL				LR	LR		
	comp=Z,887nm,20.0s						
SHEL	Horse Pasture	152.22	195	ePKIKP	PKPdf	10 00 08.8	-1.0
SHEL				e		10 00 18.5	
SHEL				MLR	MLR		
	comp=Z,887nm,20.0s						
PBEJ	Beja	152.71	351	ePKPab	PKPab	10 00 30.4	+2.8
PNCL	Nicolau / Gran	152.72	352	ePKPdf	PKPbc	10 00 16.8	-0.2
MESJ	Messejana	152.94	351	ePKPdf	PKPdf	10 00 09.5	-0.7
MESJ				AMS	AMS	11 09 56.2	
	comp=Z,2µm,17.9s						
MESJ	Messejana	152.94	351	ePKIKP	PKPdf	10 00 09.5	-0.7
PTEO	Sao Teotonio	153.30	352	ePKPdf	PKPab	10 00 26.3	-3.8
PMOZ	Porto Moniz, M	157.98	9	eLR	LR	10 53 51.7	
	comp=Z,1µm,22.0s						
ASCN	Ascension	161.12	176	PFAKE		10 00 30.0	+8.7
ASCN				LR	LR		
	comp=Z,78µm,22.0s						
TOA0	Torodi Ar. Sit	165.38	280	ePKPdf	PKPdf	10 00 24.6	-0.7
TOA0				ePKPdf	PKPdf	10 00 25.1	-0.2
TORD	Torodi Ar. Bea	165.38	280	PKP	PKPdf	10 00 25.1	-0.2
	comp=Z,5.3nm,1.1s,baz=137,slow=2.1,SNR=15						
TORD				PKPab	PKPab	10 01 23.0	-0.3
	comp=Z,4.1nm,1.0s,baz=33,slow=3.6,SNR=5.3						
TORD				PP	PP	10 05 12.5	+2.0
	comp=Z,2.0nm,1.0s,baz=108,slow=4.8,SNR=4.6						
TOA1	Torodi Ar. Sit	165.38	280	ePKPdf	PKPdf	10 00 25.1	-0.2
TOA1				ePKPab	PKPab	10 01 23.0	-0.3
TOA1				ePP	PP	10 05 12.5	+2.0
SACV	Santiago Islan	169.04	68	PFAKE		10 00 40.0	+12
SACV				LR	LR		
	comp=Z,1µm,21.0s						
KIC	Kosan Boka	170.52	241	ePKIKP	PKPdf	10 00 27.8	-1.1
	comp=Z,178nm,1.8s						
KIC	Kosan Boka	170.52	241	eP	PKPab	10 01 43.2	-2.8
	comp=Z,311nm,2.4s						
LIC	Lamto	170.70	240	ePKIKP	PKPdf	10 00 27.9	-1.1
	comp=Z,128nm,1.9s						
LIC	Lamto	170.70	240	eP	PKPab	10 01 47.0	+0.2
	comp=Z,204nm,2.1s						
TIC	Toumodi	170.90	242	ePKIKP	PKPdf	10 00 27.9	-1.3
TIC	Toumodi	170.90	242	eP	PKPab	10 01 46.7	-1.0

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*IDC **11** 09:43:08.5±1.1, 11°.00S×166°.94E, h0^{km}, mb4.3/12, mb1 4.5/14, mb1mx4.3/34, mbtmp4.3/14, ML4.4/1, Error ellipse: s-maj=34.3km s-min=20.6km az=131.0*

*ISCJB **11** 09:43:11.1±0.7, 11°.1S±0°.1×166°.9E±0°.1, h28^{km}, mb4.3/12, Error ellipse: s-maj=17.6km s-min=13.9km az=25.4*

ISC 11 09:43:12.8±0.8**, 11°.0S**±0°.1×**166°.9E**±0°.1**, h28^{km}, n14, σ0^{s}.87**/14**, mb4.4**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.05	283	Pn	Pn	09 44 54.1	-0.2
	6.7nm,0.3s,baz=120,slow=39,SNR=1.4						
DZM	Mont Dzumac	10.97	182	Pn	Pn	09 45 47.9	-0.2
	baz=221,slow=20,SNR=2.0						
STKA	Stephens Creek	31.25	225	P	P	09 49 31.4	+1.2
	7.9nm,0.9s,baz=43,slow=8.4,SNR=3.8						
WRA	Warramunga Arr	32.57	250	P	P	09 49 41.8	-0.3
	4.6nm,0.9s,baz=82,slow=9.0,SNR=5.3						
ASAR	Alice Springs	33.83	244	P	P	09 49 52.6	-0.4
	2.5nm,0.9s,baz=68,slow=10,SNR=5.5						
FITZ	Fitzroy Crossi	40.50	255	P	P	09 50 49.9	+0.3
	12nm,0.9s,baz=70,slow=10.0,SNR=3.6						
USRK	Ussuriysk Ar.	63.47	333	P	P	09 53 41.1	+0.8
	5.2nm,1.1s,baz=196,slow=4.2,SNR=2.3						
CMAR	Chiang Mai Arr	73.17	293	P	P	09 54 39.9	-1.7
	3.0nm,0.3s,baz=111,slow=5.0,SNR=4.2						
SONM	Songino Array	79.35	323	P	P	09 55 17.5	+1.3
	1.8nm,1.1s,baz=141,slow=4.8,SNR=4.0						
ILAR	Eielson Array	83.15	18	P	P	09 55 36.4	+0.5
	1.2nm,0.8s,baz=236,slow=4.2,SNR=4.2						
NVAR	Mina Array Bea	85.14	50	P	P	09 55 46.8	-0.1
	0.6nm,0.7s,baz=225,slow=8.7,SNR=3.1						
ZALV	Zalesovo Beam	94.23	324	P	P	09 56 29.0	-0.2
	0.5nm,0.3s,baz=115,slow=6.5,SNR=2.5						
MKAR	Makanchi Array	94.31	317	P	P	09 56 29.3	-0.5
	2.1nm,1.1s,baz=106,slow=6.0,SNR=5.6						
YKA	Yellowknife Ar	94.44	27	P	P	09 56 29.2	-0.8
	0.2nm,0.6s,baz=256,slow=4.2,SNR=3.9						

IDC 11 09:43:35.4±1.8**, 11°.05S×166°.80E, h0^{km}, mb4.1**/7**, mb1 4.3**/7**, mb1mx4.1**/32**, mbtmp4.1**/7**, Error ellipse: s-maj=63.6km s-min=27.7km az=145.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.45	250	P	P	09 50 07.5	-0.2
	4.8nm,0.9s,baz=81,slow=8.6,SNR=4.8						
ASAR	Alice Springs	33.72	244	P	P	09 50 19.0	+0.3
	3.6nm,1.1s,baz=73,slow=9.8,SNR=2.8						
KSRS	Korea Array	60.47	325	P	P	09 53 47.6	+0.5
	0.6nm,0.6s,baz=150,slow=7.8,SNR=3.5						
SONM	Songino Array	79.29	323	P	P	09 55 43.1	+0.1
	2.0nm,1.0s,baz=134,slow=4.2,SNR=3.2						
ILAR	Eielson Array	83.19	18	P	P	09 56 03.1	-0.1
	1.3nm,0.8s,baz=216,slow=5.6,SNR=2.9						
NVAR	Mina Array Bea	85.24	50	P	P	09 56 14.6	+0.1
	0.4nm,0.7s,baz=240,slow=4.3,SNR=2.2						
MKAR	Makanchi Array	94.24	317	P	P	09 56 55.7	-0.9
	1.6nm,0.9s,baz=112,slow=5.3,SNR=4.3						

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*ISCJB **11** 09:45:42.2±0.8, 10°.99S±0°.09×166°.4E±0°.1, h10^{km}, mb4.2/13, Error ellipse: s-maj=16.1km s-min=12.8km az=10.9*

*IDC **11** 09:45:42.3±1.2, 10°.89S×166°.39E, h0^{km}, mb4.1/8, mb1 4.3/10, mb1mx4.1/34, mbtmp4.2/10, ML3.8/2, Error ellipse: s-maj=38.6km s-min=20.7km az=139.0*

*NEIC **11** 09:45:43.7±0.6, 10°.93S×166°.42E, h10^{km}, mb4.4/9, Error ellipse: s-maj=12.2km s-min=9.9km az=105.0*

ISC 11 09:45:43.2±0.9**, 11°.0S**±0°.1×**166°.5E**±0°.1**, h10^{km}, n24, σ1^{s}.07**/21**, mb4.3**/13**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.61	283	ePn	Pn	09 47 19.3	-1.3
HNR				ePn	Pn	09 47 20.1	-0.5
HNR	Honiara	6.61	283	Pn	Pn	09 47 19.3	-1.3
	4.9nm,0.3s,baz=45,slow=19,SNR=2.9						
DZM	Mont Dzumac	11.02	180	Pn	Pn	09 48 22.8	+1.7
	0.2nm,0.3s,baz=113,slow=18,SNR=1.8						
EIDS	Eidsvold	20.43	223	eP	Pn	09 50 22.8	-0.1
	18nm,1.1s						
CTA	Charters Tower	21.46	243	P	P	09 50 33.0	+1.0
	2.1nm,0.6s,baz=61,slow=16,SNR=2.7						
CTAO	Charters Tower	21.46	243	eP	P	09 50 32.3	+0.3
	12nm,1.0s						
LHI	Lord Howe Isla	21.55	197	eP	P	09 50 31.9	-0.9
	32nm,1.0s						
COEN	Coen	22.94	260	eP	P	09 50 48.7	+0.9
	9.4nm,0.9s						
ARMA	Armidale	23.75	213	eP	P	09 50 56.4	+0.4
	14nm,0.9s						
H11S2	WAKE ISLAND Hy	29.30	0	T	T	10 22 28.9	
	baz=183						
H11S3	WAKE ISLAND Hy	29.30	0	T	T	10 22 23.3	
	baz=183						
H11S1	WAKE ISLAND Hy	29.31	0	T	T	10 22 30.4	
	baz=183						
BKZ	Black Stump Fm	29.44	164	eP	P	09 51 44.2	-3.0
	7.1nm,1.1s						
STKA	Stephens Creek	30.98	224	eP	P	09 52 01.7	+0.9
	0.8nm,1.0s						
STKA	Stephens Creek	30.98	224	P	P	09 52 01.7	+0.9
	2.4nm,0.7s,baz=68,slow=13,SNR=3.3						
WR1	Warramunga Arr	32.18	250	eP	P	09 52 11.6	+0.1
	4.7nm,0.8s						
WRA	Warramunga Arr	32.18	250	P	P	09 52 11.6	0.0
	2.7nm,0.7s,baz=83,slow=9.2,SNR=7.5						
ASAR	Alice Springs	33.46	244	P	P	09 52 22.4	-0.4
	1.7nm,0.9s,baz=64,slow=10,SNR=5.4						
FITZ	Fitzroy Crossi	40.09	255	eP	P	09 53 19.1	-0.1
	7.9nm,0.8s						
FITZ	Fitzroy Crossi	40.09	255	P	P	09 53 19.3	0.0
	7.0nm,0.7s,baz=128,slow=7.3,SNR=8.1						
SONA0	Songino Array	79.05	324	eP	P	09 57 48.0	+0.2
SONM	Songino Array	79.05	324	P	P	09 57 48.0	+0.2
	0.2nm,0.5s,baz=106,slow=5.1,SNR=3.2						
ILAR	Eielson Array	83.23	18	P	P	09 58 09.9	+0.3
	2.5nm,0.9s,baz=230,slow=6.0,SNR=7.4						
NVAR	Mina Array Bea	85.44	50	P	P	09 58 22.4	+0.7
	1.6nm,0.8s,baz=232,slow=7.6,SNR=6.4						

NNC 11 09:46:01.3±7.7**, 53°.58N×88°.32E, h0^{km}, mb3.5, mpv3.1, 8C-3D, Error ellipse: s-maj=71.2km s-min=38.2km az=45.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	2.11	282	⇓Pn	Pn	09 46 37.7	-0.1
	5.7nm,0.7s						
ZAA0				⇑Sn	Sn	09 47 05.2	+0.5
	13nm,0.8s						
KURK	Kurchatov	6.62	248	⇑Pn	Pn	09 47 41.3	+1.6
	2.5nm,0.5s						
KURK				⇑Lg	Lg	09 49 31.5	
	4.0nm,0.9s						
KURBB	Kurchatov Arra	6.71	248	⇑Pn	Pn	09 47 41.5	+0.5
	1.3nm,0.6s						
KURBB				⇑Sn	Sn	09 48 58.1	-0.1
	1.8nm,0.7s						
KURBB				⇑Lg	Lg	09 49 34.0	
	5.8nm,0.9s						
MK31	Makanchi Array	7.81	212	⇑Pn	Pn	09 47 59.0	+2.8
	0.3nm,0.5s,baz=31,slow=14,SNR=8.2						
MK31				⇑Lg	Lg	09 50 06.4	
	2.5nm,0.9s,baz=38,slow=36						
MAKZ	Makanchi	7.90	213	⇓Pn	Pn	09 47 59.6	+2.2
	1.0nm,1.0s						
MAKZ				⇓Lg	Lg	09 50 09.3	
	1.9nm,0.9s						

IDC 11 09:53:21.6±5.1**, 11°.11S×166°.78E, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.6**/35**, mbtmp3.6**/3**, Error ellipse: s-maj=261.2km s-min=33.4km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.41	250	P	P	09 59 53.4	-0.2
	1.0nm,0.8s,baz=81,slow=8.9,SNR=3.5						
ASAR	Alice Springs	33.67	244	P	P	10 00 04.6	0.0
	0.7nm,0.9s,baz=77,slow=8.7,SNR=3.1						
ILAR	Eielson Array	83.25	18	P	P	10 05 49.7	0.0
	0.3nm,0.4s,baz=239,slow=6.1,SNR=8.9						

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*IDC **11** 10:04:00.8±0.8, 0°.33N×125°.88E, h0^{km}, mb4.0/10, mb1 4.1/11, mb1mx3.9/41, mbtmp4.0/11, ML3.7/1, Error ellipse: s-maj=47.8km s-min=14.6km az=78.0*

*NEIC **11** 10:04:02.0±0.3, 0°.42N×126°.15E, h10^{km}, mb4.4/14, Error ellipse: s-maj=11.5km s-min=6.3km az=72.0*

*DJA **11** 10:04:03.7±0.4, 1°N±5°×12°6E±°, h10^{km}, M4.3/10, mb4.7/2, MLv4.1/10*

*ISCJB **11** 10:04:05.0±0.3, 0°.41N±0°.04×126°.23E±0°.04, h47^{km}, mb4.2/21, Error ellipse: s-maj=6.3km s-min=5.2km az=177.7*

ISC 11 10:04:06.8±0.6**, 0°.41N**±0°.06×**126°.27E**±0°.05**, h47^{km}, n48, σ1^{s}.39**/49**, mb4.3**/21**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.15	72	ePn	Pn	10 04 25.4	-1.1
TNTI				eSn	Sn	10 04 41.6	+0.4
TNTI	Ternate	1.15	72	P	Pn	10 04 25.3	-1.2
KMSI	Cibinong	2.30	274	P	Pn	10 04 42.1	-0.1
SANI	Sanana	2.46	187	P	Pn	10 04 43.6	-0.8
NLAI	Namlea	3.71	167	P	Pn	10 05 02.5	+0.8
LUWI	Luwuk	3.79	248	ePn	Pn	10 05 02.6	-0.1
LUWI	Luwuk	3.79	248	P	Pn	10 05 03.7	+1.1
MRSI	Marisa	4.33	271	P	Pn	10 05 16.7	+6.6
APSI	Ampana	4.80	254	P	Pn	10 05 16.8	+0.2
TTSI	Tana Toraja	7.30	242	P	Pn	10 05 50.5	-0.5
	25nm,0.5s,0.1nm						
SPSI	Sidrap Palu	7.82	236	P	Pn	10 05 58.8	+0.8
MTN	Manton Dam	14.02	160	ePn	Pn	10 07 21.3	-1.5
KSM	Kuching	16.00	274	ePn	Pn	10 07 43.2	-5.5
	12nm,0.8s						
FITZ	Fitzroy Crossi	18.40	182	eP	P	10 08 18.2	+0.1
	1.9nm,0.8s						
FITZ	Fitzroy Crossi	18.40	182	P	P	10 08 18.2	+0.1
	0.2nm,0.3s,baz=9.6,slow=9.0,SNR=6.8						
WRAB	Tennant Creek	21.71	159	eP	P	10 08 53.8	-0.3
	13nm,0.7s						
WRA	Warramunga Arr	21.71	159	P	P	10 08 53.7	-0.4
	9.8nm,0.6s,baz=336,slow=12,SNR=59						
WR1	Warramunga Arr	21.71	159	eP	P	10 08 53.7	-0.4
	16nm,0.7s						
WB2	Warramunga Arr	21.72	159	eP	P	10 08 52.2	-1.9
WB2				eP	P	10 08 53.9	-0.3
COEN	Coen	22.00	131	eP	P	10 08 57.1	-0.1
	6.0nm,0.8s						
TWG	Pinlang	22.85	348	eP	P	10 09 05.7	-0.5
	108nm,1.1s						
YULB	Yu-li	23.35	348	eP	P	10 09 08.4	-2.8
	14nm,1.1s						
TPUB	Ta-pu	23.41	347	eP	P	10 09 09.3	-2.4
	10nm,0.9s						
NACB	Ninganchiao	24.06	349	eP	P	10 09 16.1	-1.7
	15nm,1.0s						
YHNB	Yeheng	24.58	349	eP	P	10 09 21.4	-1.2
	15nm,1.0s						
AS31	Alice Springs	25.05	163	eP	P	10 09 28.5	+1.6
	1.8nm,0.6s						
ASAR	Alice Springs	25.05	163	P	P	10 09 27.8	+0.9
	2.1nm,0.3s,baz=348,slow=12,SNR=52						
AS01	Alice Springs	25.06	163	eP	P	10 09 27.4	+0.4
STKA	Stephens Creek	35.23	157	eP	P	10 10 57.1	+0.2
	0.3nm,0.9s						
STKA	Stephens Creek	35.23	157	P	P	10 10 57.1	+0.2
	2.1nm,0.7s,baz=317,slow=7.5,SNR=7.2						
KSAR	Wonju Array Be	36.88	2	P	P	10 11 12.6	+1.7
KSRS	Korea Array	36.90	2	P	P	10 11 12.6	+1.6
	0.4nm,0.3s,baz=187,slow=11,SNR=4.4						
USRK	Ussuriysk Ar.	43.90	6	P	P	10 12 09.5	+0.8
	1.1nm,0.6s,baz=164,slow=5.7,SNR=2.9						
ASAJ	Asahikawa	45.88	16	P	P	10 12 26.2	+1.6
	2.4nm,0.7s,baz=255,slow=20,SNR=2.9						
SONA0	Songino Array	50.30	343	eP	P	10 12 59.1	+0.3
SONM	Songino Array	50.30	343	P	P	10 12 59.1	+0.3
	0.2nm,0.4s,baz=163,slow=8.3,SNR=3.0						
PETK	Petropavlovsk-	58.66	22	P	P	10 14 01.8	+2.5
	3.2nm,0.9s,baz=150,slow=6.8,SNR=4.3						
PEA1	Petropavlovsk-	58.67	22	eP	P	10 14 01.8	+2.5
MK01	Makanchi Array	60.01	327	eP	P	10 14 08.1	-0.6
MK31	Makanchi Array	60.03	327	eP	P	10 14 08.4	-0.5
	1.2nm,0.9s						
MK32	Makanchi Array	60.03	327	eP	P	10 14 08.2	-0.7
MKAR	Makanchi Array	60.03	327	eP	P	10 14 08.4	-0.5
	10nm,0.5s						
MKAR	Makanchi Array	60.03	327	P	P	10 14 08.2	-0.7
	1.3nm,0.4s,baz=120,slow=8.2,SNR=28						
MAKZ	Makanchi	60.21	326	eP	P	10 14 09.9	-0.2
	1.4nm,0.6s						
ZALV	Zalesovo Beam	63.34	334	P	P	10 14 30.5	-0.5
	0.4nm,0.3s,baz=112,slow=4.0,SNR=2.3						
ZAA1	Zalesovo Array	63.34	334	eP	P	10 14 30.4	-0.5
TORD	Torodi Ar. Bea	123.45	286	PKP	PKPdf	10 23 00.0	+0.1
	0.3nm,0.7s,baz=57,slow=5.3,SNR=2.6						
TOA1	Torodi Ar. Sit	123.45	286	ePKPdf	PKPdf	10 23 00.0	+0.1

IDC 11 10:08:19.9±1.1**,19°.29N**×**122°.21E,h0^{km},mb3.3**/5**, mb1 3.5**/5**,mb1mx3.3**/41**,mbtmp3.3**/5**,Error ellipse: s-maj=75.3km s-min=20.8km az=67.0,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.77**	**162**	P	P	10 16 03.0	-0.1
	0.2nm,0.7s,baz=342,slow=8.9,SNR=3.1						
H11S3	**WAKE ISLAND Hy**	**42.00**	**84**	T	T	11 01 17.5	
	baz=274,slow=76,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**42.01**	**84**	T	T	11 01 15.3	
	baz=274,slow=76,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**42.02**	**84**	T	T	11 01 14.3	
	baz=274,slow=76,SNR=6.7						
H11N1	**WAKE ISLAND Hy**	**42.03**	**82**	T	T	11 01 16.0	
	baz=277,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**42.03**	**82**	T	T	11 01 17.1	
	baz=277,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**42.05**	**82**	T	T	11 01 16.9	
	baz=277,slow=75,SNR=10						
MKAR	**Makanchi Array**	**42.58**	**319**	P	P	10 16 18.5	+0.9
	0.4nm,0.7s,baz=110,slow=8.3,SNR=3.5						
ASAR	**Alice Springs**	**44.20**	**165**	P	P	10 16 30.7	-0.2
	0.1nm,0.4s,baz=345,slow=6.6,SNR=2.6						
ZALV	**Zalesovo Beam**	**44.89**	**329**	P	P	10 16 34.8	-1.3
	0.8nm,0.6s,baz=141,slow=7.1,SNR=2.7						
YKA	**Yellowknife Ar**	**87.08**	**23**	P	P	10 21 07.6	+0.2
	0.2nm,0.7s,baz=307,slow=4.5,SNR=5.6						

IDC 11 10:18:38.0±4.2**,12°.92N**×**67°.25E,h0^{km},mb3.6**/3**, mb1 3.9**/4**,mb1mx3.4**/51**,mbtmp3.8**/4**,ML4.2**/1**,Error ellipse: s-maj=414.1km s-min=26.7km az=42.0,Arabian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**13.13**	**323**	Pn	Pn	10 21 44.9	-1.0
	1.3nm,0.3s,baz=147,slow=13,SNR=21						
WSAR				Sn	Sn	10 24 00.3	-12
	0.3nm,0.3s,baz=95,slow=12,SNR=2.6						
BRTR	**Keskin Array B**	**39.85**	**318**	P	P	10 26 13.8	+0.2
	0.7nm,0.7s,baz=131,slow=9.2,SNR=4.9						
WRA	**Warramunga Arr**	**73.64**	**115**	P	P	10 30 13.8	-0.1
	0.6nm,0.8s,baz=294,slow=5.0,SNR=4.0						
ASAR	**Alice Springs**	**74.60**	**119**	P	P	10 30 19.7	+0.1
	0.3nm,0.7s,baz=296,slow=5.7,SNR=5.3						

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*ISCJB **11** 10:20:32.0±0.6, 36°.40N±0°.04×70°.72E±0°.08, h188^{km}, mb3.5/8, Error ellipse: s-maj=9.5km s-min=5.6km az=158.4*

*IDC **11** 10:20:32.1±3.7, 36°.29N×70°.88E, h191^{km}±31^{km}, mb3.3/9, mb1 3.3/14, mb1mx3.1/58, mbtmp3.8/14, Error ellipse: s-maj=25.5km s-min=19.1km az=33.0*

*NNC **11** 10:20:40.4±2.0, 37°.00N×70°.89E, h223^{km}±28^{km}, mb2.6, mpv3.8, Error ellipse: s-maj=23.5km s-min=16.7km az=67.0*

ISC 11 10:20:33.0±0.8**,36°.51N**±0°.07×**70°.76E**±0°.09**,h188^{km},n34,** σ**1^{s}69**/41**,mb3.6**/8**,7C-5D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.11**	**31**	⇑P	**Pn**	**10 21 38.2**	**+2.2**
	3.7nm,0.4s						
SFK				⇓S	**Sn**	**10 22 26.4**	**+1.0**
	55nm,0.8s						
AML	**Almayashu**	**6.05**	**21**	P	**Pn**	**10 22 02.9**	**+1.8**
	SNR=59						
MNAS	**Manas**	**6.12**	**12**	⇓P	**Pn**	**10 22 03.8**	**+2.1**
	6.6nm,0.4s						
MNAS				⇑S	**Sn**	**10 23 09.4**	**-2.4**
	31nm,0.8s						
UCH	**Uchtor**	**6.41**	**26**	P	**Pn**	**10 22 07.9**	**+2.1**
	SNR=26						
KZA	**Kyzart**	**6.56**	**31**	P	**Pn**	**10 22 09.8**	**+2.0**
	SNR=7.3						
EKS2	**Erkin-Say**	**6.57**	**20**	P	**Pn**	**10 22 09.6**	**+2.0**
	SNR=16						
KK31	**Karatay Array**	**6.58**	**358**	⇑P	**Pn**	**10 22 09.3**	**+1.6**
	3.7nm,0.5s,baz=171,slow=11,SNR=74						
KK31				⇑S	**Sn**	**10 23 19.7**	**-2.8**
	3.0nm,0.3s,baz=180,slow=18,SNR=7.5						
AAK	**Ala-Archa**	**6.76**	**24**	P	**Pn**	**10 22 12.0**	**+1.8**
	SNR=15						
AAK	**Ala-Archa**	**6.76**	**24**	⇓P	**Pn**	**10 22 11.8**	**+1.7**
	7.4nm,0.4s						
AAK				⇑S	**Sn**	**10 23 25.6**	**-1.4**
	14nm,0.8s						
AAK	**Ala-Archa**	**6.76**	**24**	P	**Pn**	**10 22 12.1**	**+1.9**
	4.9nm,0.3s,baz=155,slow=5.0,SNR=46						
AAK				S	**Sn**	**10 23 25.8**	**-1.2**
	1.1nm,0.3s,baz=135,slow=24,SNR=17						
KBK	**Karagaybulak**	**6.94**	**27**	P	**Pn**	**10 22 14.5**	**+2.0**
	SNR=6.1						
CHMS	**Chumysh**	**7.17**	**24**	P	**Pn**	**10 22 17.2**	**+1.8**
	SNR=6.0						
USP	**Ospenovka**	**7.33**	**22**	P	**Pn**	**10 22 19.1**	**+1.6**
	SNR=9.3						
TKM2	**Tokmak 2**	**7.41**	**29**	P	**Pn**	**10 22 20.2**	**+1.6**
	SNR=5.7						
TKM2	**Tokmak 2**	**7.41**	**29**	⇑P	**Pn**	**10 22 19.5**	**+0.9**
	5.8nm,0.8s						
TKM2				⇓S	**Sn**	**10 23 39.0**	**-3.3**
	7.0nm,0.9s						
PYUN	**Piuthan**	**13.31**	**126**	*e*P	**Pn**	**10 23 35.3**	**+0.2**
	8.9nm,0.3s						
PYUN				*e*S	Sn	10 25 55.2	-8.3
MKAR	**Makanchi Array**	**13.39**	**36**	P	**Pn**	**10 23 35.4**	**-0.3**
	0.2nm,0.3s,baz=216,slow=9.6,SNR=10						
DANN	**Dangsing**	**13.66**	**123**	*e*P	**Pn**	**10 23 39.4**	**-0.1**
	5.9nm,0.2s						
KOLN	**Koldanda**	**13.93**	**125**	*e*P	**Pn**	**10 23 43.9**	**+1.1**
	3.9nm,0.2s						
AB31	**Akbulak array**	**14.98**	**332**	⇑P	**P**	**10 23 58.8**	**+2.5**
	0.9nm,0.5s						
AB31				⇓S	**Sn**	**10 26 40.2**	**-2.4**
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**15.17**	**19**	P	**P**	**10 23 58.2**	**-0.2**
	0.1nm,0.3s,baz=204,slow=11,SNR=4.7						
PKIN	**Phulchoki**	**15.27**	**122**	*e*P	**Pn**	**10 23 59.5**	**+0.2**
	7.4nm,0.3s						
JIRN	**Jiri**	**15.77**	**120**	*e*P	**Pn**	**10 24 05.8**	**+0.3**
	12nm,0.3s						
BVAR	**Borovoye Array**	**16.51**	**359**	P	**Pn**	**10 24 14.8**	**+1.0**
	0.2nm,0.3s,baz=169,slow=16,SNR=3.5						
AKTO	**Aktyubinsk**	**16.67**	**331**	P	**Pn**	**10 24 16.9**	**+1.1**
	0.3nm,0.3s,baz=146,slow=13,SNR=3.8						
ZALV	**Zalesovo Beam**	**19.98**	**25**	P	**P**	**10 24 50.6**	**-0.2**
	1.8nm,0.4s,baz=216,slow=13,SNR=8.0						
FINES	**FINESS Array B**	**37.36**	**326**	P	**P**	**10 27 28.1**	**+1.0**
	0.7nm,0.3s,baz=113,slow=11,SNR=6.9						
ARCES	**ARCESS Array B**	**41.06**	**338**	P	**P**	**10 27 58.6**	**+1.0**
	1.1nm,0.4s,baz=113,slow=7.9,SNR=21						
TIXI	**Tiksi**	**45.84**	**22**	P	**P**	**10 28 35.3**	**-0.5**
	1.5nm,0.3s,baz=294,slow=4.1						
TORD	**Torodi Ar. Bea**	**65.52**	**268**	P	**P**	**10 30 55.1**	**-1.4**
	0.4nm,0.4s,baz=43,slow=6.4,SNR=6.0						
INK	**Inuvik**	**73.92**	**9**	P	**P**	**10 31 47.0**	**+0.1**
	0.5nm,0.4s,baz=347,slow=6.9,SNR=7.4						
YKA	**Yellowknife Ar**	**81.24**	**3**	P	**P**	**10 32 27.3**	**-0.3**
	0.3nm,0.4s,baz=352,slow=5.4,SNR=13						
WRA	**Warramunga Arr**	**82.17**	**122**	P	**P**	**10 32 30.8**	**-2.2**
	0.2nm,0.5s,baz=324,slow=5.0,SNR=6.9						
ASAR	**Alice Springs**	**84.42**	**125**	P	**P**	**10 32 42.6**	**-2.0**
	0.3nm,0.7s,baz=315,slow=5.3,SNR=5.6						

IDC 11 10:23:05.9±5.3**,12°.20S**×**165°.28E,h0^{km},mb3.6**/3**, mb1 3.9**/3**,mb1mx3.5**/35**,mbtmp3.6**/3**,Error ellipse: s-maj=268.4km s-min=35.1km az=140.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.67**	**251**	P	P	10 29 22.4	-0.1
	0.8nm,0.9s,baz=82,slow=8.8,SNR=6.1						
ASAR	**Alice Springs**	**31.88**	**245**	P	P	10 29 33.2	+0.1
	0.7nm,0.8s,baz=76,slow=10,SNR=7.7						
ILAR	**Eielson Array**	**84.75**	**19**	P	P	10 35 41.6	0.0
	0.1nm,0.4s,baz=223,slow=4.4,SNR=4.2						

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*ISCJB **11** 10:23:39.4±0.6, 2°.32S±0°.05×78°.98W±0°.05, h105^{km}±5^{km}, Error ellipse: s-maj=10.7km s-min=4.3km az=39.9*

*IGQ **11** 10:23:39.8±0.4, 2°S±3°×7°9W±°, h91^{km}, MLv3.5*

ISC 11 10:23:40.0±1.5**,2°.34S**±0°.05×**78°.94W**±0°.06**,h99^{km}**±9^{km}**, n44,** σ**1^{s}00**/59**,1C,Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	**Cochancay**	**0.34**	**248**	P	**Pn**	**10 23 54.9**	**+0.2**
COHC				S	**Sn**	**10 24 06.9**	**+1.2**
MILO	**Milagro-Astudi**	**0.62**	**275**	P	**Pn**	**10 23 56.2**	**-0.4**
MILO				S	**Sn**	**10 24 09.2**	**0.0**
AMIL	**Milagro (Trans**	**0.69**	**287**	P	**Pn**	**10 23 56.2**	**-1.0**
AMIL				S	**Sn**	**10 24 08.7**	**-1.4**
IGUA	**Igualata**	**0.89**	**20**	P	**Pn**	**10 23 59.7**	**-0.2**
BMAS	**Trigal station**	**0.94**	**29**	P	**Pn**	**10 23 59.5**	**-0.7**
BMAS				S	**Sn**	**10 24 15.0**	**-0.3**
ARRY	**Arrayan**	**0.95**	**30**	P	**Pn**	**10 23 59.7**	**-0.6**
PAT1	**Patacocha**	**0.96**	**31**	P	**Pn**	**10 24 00.3**	**-0.3**
BPAT	**Tungurahua Vol**	**0.97**	**31**	P	**Pn**	**10 24 00.1**	**-0.4**
BPAT				S	**Sn**	**10 24 15.7**	**-0.2**
BIL2	**Estacion Bilba**	**0.98**	**27**	P	**Pn**	**10 24 01.1**	**+0.6**
BBIL	**Ulba Tungurahu**	**0.99**	**27**	P	**Pn**	**10 24 00.5**	**-0.2**
RETU	**Refugio**	**1.01**	**29**	P	**Pn**	**10 24 00.9**	**-0.1**
JUI6	**Juive**	**1.02**	**27**	P	**Pn**	**10 24 00.5**	**-0.4**
POND	**Pondoa**	**1.03**	**28**	P	**Pn**	**10 24 00.6**	**-0.6**
BULB	**Ulba Tungurahu**	**1.04**	**31**	P	**Pn**	**10 24 00.7**	**-0.5**
BULB				S	**Sn**	**10 24 17.0**	**-0.2**
RUN5	**Runtun**	**1.05**	**29**	P	**Pn**	**10 24 00.9**	**-0.4**
BRUN	**Tungurahua Vol**	**1.05**	**30**	P	**Pn**	**10 24 00.8**	**-0.6**
SAGO	**Sagoatoa**	**1.21**	**13**	P	**Pn**	**10 24 02.7**	**-0.6**
PUYO	**Puyo, Santa Ro**	**1.24**	**48**	P	**Pn**	**10 24 03.2**	**0.0**
PUYO				S	**Sn**	**10 24 21.5**	**+0.8**
PIS1	**Pisayambo**	**1.38**	**24**	P	**Pn**	**10 24 05.1**	**-0.3**
PIS1				S	**Sn**	**10 24 24.5**	**+0.1**
PISA	**Pisayambo**	**1.38**	**24**	P	**Pn**	**10 24 05.0**	**-0.4**
MORR	**Playas El Morr**	**1.43**	**258**	P	**Pn**	**10 24 05.2**	**-0.1**
MORR				S	**Sn**	**10 24 25.7**	**+1.1**
ILLI	**Illinizas Sur**	**1.62**	**7**	P	**Pn**	**10 24 10.5**	**+2.2**
ILLI				S	**Sn**	**10 24 33.6**	**+4.0**
PAST	**Pastocalle**	**1.66**	**10**	P	**Pn**	**10 24 10.6**	**+1.9**
BTAM	**Cotopaxi Volca**	**1.73**	**18**	P	**Pn**	**10 24 09.7**	**-0.1**
ARDO	**Archidona, Ten**	**1.75**	**41**	P	**Pn**	**10 24 08.8**	**-0.7**
ARDO				S	**Sn**	**10 24 31.5**	**-0.4**
ANTM	**Antisana-La Mi**	**1.93**	**22**	P	**Pn**	**10 24 11.8**	**-0.4**
ANTG	**Antisana-Guama**	**1.94**	**21**	P	**Pn**	**10 24 11.6**	**-0.8**
ANTG				S	**Sn**	**10 24 36.9**	**-0.1**
GONZ	**Gonzanam**	**1.94**	**194**	P	**Pn**	**10 24 13.5**	**+1.2**
NINA	**Atacazo Ninahu**	**1.96**	**9**	P	**Pn**	**10 24 14.4**	**+1.9**
ANTS	**Antisana-Sarah**	**1.98**	**23**	P	**Pn**	**10 24 12.4**	**-0.5**
SALI	**Salinas**	**2.06**	**274**	P	**Pn**	**10 24 13.0**	**-0.3**
GGPC	**Guagua Pichinc**	**2.17**	**9**	P	**Pn**	**10 24 15.6**	**+0.2**
YANA	**Yana**	**2.23**	**9**	P	**Pn**	**10 24 15.2**	**-0.9**
MCRA	**Macar, Loja**	**2.26**	**207**	P	**Pn**	**10 24 14.9**	**-1.2**
MCRA				S	**Sn**	**10 24 43.5**	**-0.2**
PULU	**Pululahua**	**2.38**	**11**	P	**Pn**	**10 24 17.3**	**-0.6**
CAYA	**Cayambe**	**2.57**	**22**	P	**Pn**	**10 24 19.5**	**-1.1**
CAYA				S	**Sn**	**10 24 52.8**	**+1.1**
PAC1	**Pacto, Paraso**	**2.59**	**3**	P	**Pn**	**10 24 19.6**	**-0.8**
PAC1				S	**Sn**	**10 24 49.4**	**-2.1**
CUIC	**Cuicocha-Domo**	**2.68**	**12**	P	**Pn**	**10 24 21.0**	**-0.9**
IMBA	**Imbabura, San**	**2.70**	**16**	P	**Pn**	**10 24 23.2**	**+1.1**
URCU	**Urcuqui**	**2.84**	**14**	P	**Pn**	**10 24 23.2**	**-0.8**
CMBC	**Cumbal**	**3.44**	**19**	*e*P	**Pn**	**10 24 32.2**	**+0.1**
GCUF	**Volcan Galeras**	**3.88**	**24**	⇑*i*P	**Pn**	**10 24 37.6**	**-0.4**
GCUF				*i*		10 24 38.5	
	comp=Z,9.3nm,0.5s						
CRUC	**La Cruz**	**4.36**	**27**	*e*P	**Pn**	**10 24 44.9**	**+0.5**
CRUC				*i*		10 24 48.5	
	comp=Z,11nm,0.5s						
SOTA	**Rioblanco**	**5.01**	**28**	*e*P	**Pn**	**10 24 52.8**	**-0.6**
SOTA				*i*		10 24 58.2	
	comp=Z,5.3nm,0.6s						

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*ISCJB **11** 10:27:00.7±1.1, 13°.93N±0°.08×92°.31W±0°.10, h10^{km}, mb3.7/2, MS4.2/3, Error ellipse: s-maj=14.9km s-min=9.9km az=152.3*

*IDC **11** 10:27:00.4±1.8, 13°.93N×92°.38W, h0^{km}, mb3.6/2, mb1 3.8/6, mb1mx3.5/35, mbtmp3.5/6, ML3.2/4, MS4.2/4, Ms1 4.2/4, ms1mx3.8/35, Error ellipse: s-maj=28.8km s-min=16.3km az=5.0*

*MEX **11** 10:27:07.7±0.4, 14°.05N×92°.53W, h16^{km}±86^{km}, MD4.0*

*NEIC **11** 10:27:08.0±0.0, 14°.07N×92°.53W, h16^{km}, MD4.0(MEX), After MEX.*

ISC 11 10:27:01.7±1.1**,14°.00N**±0°.08×**92°.38W**±0°.07**,h10^{km},n17,** σ**2^{s}47**/19**,MS4.3**/3**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.91**	**7**	*e*P	**Pg**	**10 27 16.4**	**-2.9**
THIG				*e*S	**Sn**	**10 27 39.8**	**+6.0**
THIG		**0.91**	**7**	*i* P	**Pn**	**10 27 22.3**	**+1.7**
THIG				*e*S	**Sn**	**10 27 32.4**	**-1.4**
PCIG		**1.88**	**335**	*e*P	**Pb**	**10 27 34.5**	**-1.7**
PCIG				*e*S	**Sn**	**10 27 54.8**	**-2.9**
PCIG		**1.88**	**335**	*e*P	**Pb**	**10 27 34.5**	**-1.7**
PCIG				*e*S	**Sn**	**10 27 54.8**	**-2.9**
APG	**El Apazote**	**2.11**	**61**	Pn	**Pb**	**10 27 38.7**	**-1.5**
	5.7nm,0.3s,baz=202,slow=14,SNR=90						
APG				Lg	Lg	10 28 08.2	
	20nm,0.3s,baz=91,slow=14,SNR=8.8						
CCIG	**Comitan**	**2.28**	**6**	*e*P	**Pg**	**10 27 44.7**	**-0.8**
CCIG				*e*S	**Sn**	**10 28 07.7**	**-0.3**
CCIG	**Comitan**	**2.28**	**6**	*e*P	**Pg**	**10 27 44.6**	**-0.9**
CCIG				*e*S	**Sn**	**10 28 07.7**	**-0.3**
CMIG	**Matias Romero**	**3.91**	**322**	Pn	**Pn**	**10 28 04.4**	**+2.6**
	1.2nm,0.3s,baz=167,slow=12,SNR=13						
CMIG				Lg	Lg	10 29 05.1	
	3.6nm,0.3s,baz=23,slow=20,SNR=4.9						
JTS	**JuntasAbangare**	**8.14**	**116**	Pn	**Pn**	**10 28 59.7**	**-0.5**
	0.2nm,0.3s,baz=288,slow=12,SNR=2.9						
TXAR	**Lajitas Array**	**18.50**	**327**	Pn	**Pn**	**10 31 21.9**	**+3.6**
	0.0nm,0.3s,baz=128,slow=12,SNR=3.3						
ROSC	**El Rosal**	**19.99**	**115**	LR	LR	10 39 02.5	
	comp=Z,513nm,21.1s,baz=292,slow=36						
SDV	**Santo Domingo**	**21.90**	**101**	LR	LR	10 41 22.1	
	comp=Z,314nm,20.7s,baz=260,slow=39						
YKA	**Yellowknife Ar**	**50.94**	**347**	P	**P**	**10 36 03.5**	**+0.4**
	0.8nm,0.7s,baz=151,slow=7.4,SNR=14						
ILAR	**Eielson Array**	**62.70**	**337**	P	**P**	**10 37 27.2**	**+0.7**
	0.5nm,0.9s,baz=120,slow=5.3,SNR=4.6						
HFS	**Hagfors**	**85.78**	**29**	LR	LR	11 17 45.7	
	comp=Z,273nm,19.6s,baz=164,slow=36						
TIXI	**Tiksi**	**90.18**	**348**	LR	LR	11 26 42.6	
	comp=Z,112nm,18.2s,baz=292,slow=40						
CMAR	**Chiang Mai Arr**	**145.87**	**341**	PKPbc	**PKPab**	**10 46 41.4**	**-1.3**
	1.1nm,0.5s,baz=335,slow=3.0,SNR=4.6						

IDC 11 10:36:17.4±1.4**,11°.70N**×**142°.76E,h0^{km},mb3.4**/4**, mb1 3.7**/5**,mb1mx3.4**/42**,mbtmp3.4**/5**,ML3.8**/1**,Error ellipse: s-maj=85.2km s-min=20.0km az=118.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.79**	**47**	Pn	Pn	10 37 04.9	+1.7
	15nm,0.3s,baz=172,slow=15,SNR=5.9						
GUMO				Sn	Sn	10 37 38.0	+0.4
	10nm,0.3s,baz=180,slow=20,SNR=4.0						
WRA	**Warramunga Arr**	**32.52**	**195**	P	P	10 42 49.8	-0.3
	0.3nm,0.6s,baz=18,slow=9.7,SNR=5.8						
ASAR	**Alice Springs**	**36.20**	**194**	P	P	10 43 22.4	+0.3
	0.2nm,0.6s,baz=27,slow=10,SNR=5.6						
ILAR	**Eielson Array**	**71.14**	**25**	P	P	10 47 36.8	-0.8
	0.3nm,0.6s,baz=260,slow=5.9,SNR=4.4						
YKA	**Yellowknife Ar**	**85.47**	**27**	P	P	10 48 57.1	+0.2
	0.2nm,0.7s,baz=283,slow=5.5,SNR=3.7						

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*ISCJB **11** 10:43:42.0±0.9, 11°.5S±0°.1×167°.08E±0°.09, h10^{km}, mb4.0/8, MS3.7/1, Error ellipse: s-maj=20.9km s-min=12.8km az=4.0*

*IDC **11** 10:43:42.2±1.4, 11°.43S×167°.10E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx3.9/42, mbtmp4.0/9, ML4.4/1, MS3.7/2, Ms1 3.7/2, ms1mx3.2/30, Error ellipse: s-maj=44.0km s-min=22.1km az=141.0*

ISC 11 10:43:43.6±1.1**,11°.4S**±0°.2×**167°.1E**±0°.1**,h10^{km},n9,** σ**1^{s}08**/10**,mb4.0**/8**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.35**	**285**	Pn	**Pn**	**10 45 29.5**	**-1.6**
	5.6nm,0.3s,baz=164,slow=5.6,SNR=4.0						
HNR				Sn	**Sn**	**10 46 56.0**	**+1.4**
	baz=267,slow=17,SNR=1.9						
HNR				LR	LR	10 47 55.4	
	comp=Z,422nm,18.8s,baz=117,slow=35						
CTA	**Charters Tower**	**21.84**	**244**	P	**P**	**10 48 36.1**	**-0.4**
	5.5nm,1.1s,baz=74,slow=11,SNR=3.7						
STKA	**Stephens Creek**	**31.12**	**225**	P	**P**	**10 50 03.5**	**+1.1**
	1.7nm,0.8s,baz=46,slow=8.4,SNR=3.1						
WRA	**Warramunga Arr**	**32.64**	**251**	P	**P**	**10 50 15.3**	**-0.7**
	1.9nm,0.9s,baz=80,slow=9.0,SNR=14						
ASAR	**Alice Springs**	**33.85**	**244**	P	**P**	**10 50 25.8**	**-0.7**
	1.7nm,0.9s,baz=72,slow=9.5,SNR=15						
ASAR				LR	LR	11 02 56.6	
	comp=Z,150nm,19.0s,baz=348,slow=34						
CMAR	**Chiang Mai Arr**	**73.52**	**293**	P	**P**	**10 55 17.7**	**+0.5**
	1.4nm,0.8s,baz=111,slow=5.1,SNR=2.8						
SONM	**Songino Array**	**79.80**	**323**	P	**P**	**10 55 52.9**	**+0.7**
	1.5nm,1.1s,baz=96,slow=2.9,SNR=3.6						
ILAR	**Eielson Array**	**83.46**	**18**	P	**P**	**10 56 11.3**	**+0.3**
	1.1nm,0.9s,baz=236,slow=7.2,SNR=9.0						
YKA	**Yellowknife Ar**	**94.70**	**27**	P	**P**	**10 57 04.1**	**-0.6**
	0.6nm,1.1s,baz=257,slow=5.1,SNR=4.6						

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*IDC **11** 10:48:50.6±0.5, 30°.85N×78°.21E, h0^{km}, mb4.4/27, mb1 4.5/31, mb1mx4.4/49, mbtmp4.4/31, ML4.0/4, MS5.0/1, Ms1 5.0/1, ms1mx3.3/53, Error ellipse: s-maj=13.7km s-min=11.1km az=36.0*

*ISCJB **11** 10:48:52.7±0.5, 31°.04N±0°.02×78°.31E±0°.02, h22^{km}±4^{km}, mb4.5/91, MS4.3/5, Error ellipse: s-maj=3.7km s-min=2.5km az=137.5*

*NEIC **11** 10:48:52.1±0.2, 30°.97N×78°.27E, h10^{km}, mb4.6/35, Error ellipse: s-maj=4.9km s-min=3.5km az=215.0*

NEIC Felt [III] at Mohali. Also felt at Chandigarh and Panchkula.

*BJI **11** 10:48:52.2, 31°.08N×78°.49E, h8^{km}, mB4.7/33, mb4.6/45, Ms4.1/19, Ms7 3.9/18*

*MOS **11** 10:48:53.3±1.0, 31°.03N×78°.29E, h25^{km}, mb4.6/52, Error ellipse: s-maj=7.5km s-min=3.9km az=107.4*

*NDI **11** 10:48:53.3±2.4, 31°.00N×78°.35E, h10^{km}, ML4.3*

*NNC **11** 10:48:57.8±5.5, 31°.09N×78°.15E, h39^{km}±43^{km}, mb4.5, Error ellipse: s-maj=47.9km s-min=35.5km az=79.0*

ISC 11 10:48:51.6±0.9**,31°.00N**±0°.03×**78°.33E**±0°.03**,h6^{km}**±5^{km}**, n264,** σ**1^{s}76**/306**,mb4.6**/91**,MS4.2**/5**,24C-10D,Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**0.71**	**199**	*e*P	**Pb**	**10 49 06.8**	**+0.4**
DDI				*e*S	**Sb**	**10 49 16.0**	**-0.4**
SMLA	**Simla**	**1.00**	**278**	*e*P	**Pn**	**10 49 12.2**	**0.0**
SMLA				*e*S	**Sn**	**10 49 25.6**	**-1.0**
SMLA				IAML		10 49 25.9	
	comp=N,8μm,0.4s						
SMLA				IAML		10 49 26.6	
	comp=E,12μm,0.5s						
JOSI	**Joshimath**	**1.15**	**112**	*i* P	**Pn**	**10 49 15.0**	**+0.6**
JOSI				*e*S	**Sg**	**10 49 29.0**	**+0.4**
JOSI				IAML		10 49 35.4	
	comp=N,6μm,0.5s						
JOSI				IAML		10 49 36.8	
	comp=E,5μm,0.5s						
KALG	**Kalgarh**	**1.53**	**166**	*i* P	**Pg**	**10 49 20.9**	**-0.1**
KALG				*e*S	**Sg**	**10 49 42.3**	**+1.4**
KALG				IAML		10 49 44.8	
	comp=E,4μm,0.4s						
KKR	**Kurukshetra**	**1.66**	**232**	*e*P	**Pg**	**10 49 23.6**	**+0.2**
KKR				*e*S	**Sg**	**10 49 45.9**	**+1.0**
DHRM	**DHARAMSHALA**	**2.13**	**306**	*e*P	**Pg**	**10 49 31.4**	**-1.1**
DHRM				*e*S	**Sb**	**10 49 57.3**	**-0.2**
DHRM				IAML		10 50 03.1	
	comp=E,7μm,0.6s						
DHRM				IAML		10 50 03.2	
	comp=N,7μm,0.3s						
NDI	**New Delhi**	**2.50**	**203**	*e*P	**Pn**	**10 49 35.0**	**+2.2**
NDI				*e*S	**Sn**	**10 50 05.0**	**+1.4**
SONA	**Sohna**	**2.94**	**202**	*e*S	**Sn**	**10 50 15.8**	**+1.3**
SONA				IAML		10 50 24.4	
	comp=E,6μm,0.3s						
SONA				IAML		10 50 24.7	
	comp=N,3μm,0.3s						
SARP	**Sargodha**	**4.92**	**282**	P	**Pn**	**10 50 07.3**	**+1.3**
PYUN	**Piuthan**	**4.99**	**124**	*e*Pn	**Pn**	**10 50 09.1**	**+1.9**
PYUN				*e*Sn	**Sn**	**10 51 06.1**	**+0.9**
	comp=N,546nm,0.5s						
CHCP	**Chirah Chowk**	**5.04**	**303**	P	**Pn**	**10 50 10.7**	**+3.0**
NIL	**Nilore**	**5.04**	**303**	*e*Pn	**Pn**	**10 50 07.8**	**0.0**
NIL	**Nilore**	**5.04**	**303**	*e*P	**Pn**	**10 50 07.8**	**0.0**
DANN	**Dangsing**	**5.42**	**118**	*e*Pn	**Pn**	**10 50 15.7**	**+2.6**
KOLN	**Koldanda**	**5.62**	**124**	*e*Pn	**Pn**	**10 50 18.2**	**+2.4**
KOLN				*e*Sn	**Sn**	**10 51 21.0**	**+0.3**
	comp=N,212nm,0.5s						
THW	**Thamme Wali**	**5.88**	**289**	⇑P	**Pn**	**10 50 20.5**	**+1.3**
CEP	**Cherat**	**6.11**	**299**	P	**Pn**	**10 50 24.0**	**+1.4**
DMN	**Daman**	**6.82**	**118**	*e*Pn	**Pn**	**10 50 34.4**	**+2.0**
KKN	**Kakani**	**6.86**	**116**	*e*Pn	**Pn**	**10 50 35.2**	**+2.3**
PKIN	**Phulchoki**	**7.05**	**117**	*e*Pn	**Pn**	**10 50 37.8**	**+2.2**
PKIN				*e*Sn	**Sn**	**10 51 55.2**	**-1.1**
	comp=N,240nm,0.5s						
PKI	**Pulchoki**	**7.07**	**117**	*e*Pn	**Pn**	**10 50 38.0**	**+2.1**
PKI				*e*Sn	**Sn**	**10 51 55.5**	**-1.2**
	comp=N,295nm,0.6s						
GUN	**Gumba**	**7.27**	**113**	*e*Pn	**Pn**	**10 50 40.6**	**+1.9**
JIRN	**Jiri**	**7.63**	**114**	*e*Pn	**Pn**	**10 50 45.7**	**+2.1**
JIRN				*e*Sn	**Sn**	**10 52 08.8**	**-1.8**
	comp=N,223nm,0.3s						
JBP	**Jabalpur**	**7.94**	**169**	*e*P	**Pn**	**10 50 48.9**	**+1.4**
JBP				*e*S	**Sn**	**10 52 12.9**	**-4.8**
RAMN	**Ramite**	**8.29**	**117**	*e*Pn	**Pn**	**10 50 53.7**	**+1.1**
RAMN				*e*Sn	**Sn**	**10 52 24.2**	**-2.6**
	comp=N,299nm,0.5s						
KBL	**Kabul**	**8.58**	**297**	*e*Pn	**Pn**	**10 50 56.4**	**-0.1**
KBL				*e*Sn	**Sn**	**10 52 31.3**	**-2.3**
KBL	**Kabul**	**8.58**	**297**	*e*P	**Pn**	**10 50 56.4**	**-0.1**
KBL				*e*		10 52 31.3	
KSH	**Kashi**	**8.71**	**348**	P	**Pn**	**10 50 58.7**	**+0.5**
KSH				sP	sP	10 51 02.1	
KSH				S	**Sn**	**10 52 32.4**	**-4.4**
KSH				sS	sS	10 52 37.1	
KSH				pmax	pmax		
	comp=N,42nm,0.6s						
KSH				LR	LR		
	comp=N,1μm,5.8s						
KSH				LR	LR		
	comp=N,770nm,5.0s						
KSH				LR	LR		
	comp=N,1μm,7.8s						
ODAN	**Odare**	**8.95**	**115**	*e*Pn	**Pn**	**10 51 03.0**	**+1.4**
ODAN				*e*Sn	**Sn**	**10 52 40.3**	**-2.5**
	comp=N,169nm,0.6s						
SFK	**Sufi-Kurgan**	**9.81**	**338**	⇑Pn	**Pn**	**10 51 16.1**	**+2.7**
	comp=N,23nm,0.8s						
SFK				⇑Sn	**Sn**	**10 53 05.3**	**+1.3**
	comp=N,23nm,0.4s						
SFK	**Sufi-Kurgan**	**9.81**	**338**	P	**Pn**	**10 51 15.4**	**+2.0**
SFK				S	**Sn**	**10 53 03.8**	**-0.2**
SFK				pmax	pmax		
	comp=Z,14nm,0.5s						
SFK				smax	smax		
	comp=N,22nm,0.5s						
NGP	**Nagpur**	**9.83**	**176**	*e*P	**Pn**	**10 51 13.6**	**+0.1**
NGP				*e*S	**Sn**	**10 52 58.5**	**-5.8**
NGP				IAML		10 54 07.5	
	comp=N,43nm,0.7s						
NGP				IAML		10 54 07.8	
	comp=E,79nm,1.1s						
GAR	**Garm**	**10.33**	**323**	*e*Pn	**Pn**	**10 51 20.6**	**+0.2**
GAR				*e*Sn	**Sn**	**10 53 13.7**	**-2.9**
GAR	**Garm**	**10.33**	**323**	*e*P	**Pn**	**10 51 20.6**	**+0.2**
GAR				*e*		10 53 13.7	
NRN	**Naryn**	**10.58**	**350**	*e*Pn	**Pn**	**10 51 26.5**	**+2.5**
NRN	**Naryn**	**10.58**	**350**	*e*P	**Pn**	**10 51 26.5**	**+2.5**
TARG	**Taragay, Kyrgy**	**10.72**	**358**	*e*Pn	**Pn**	**10 51 26.6**	**+0.6**
BTK	**Batken**	**10.91**	**328**	*e*Pn	**Pn**	**10 51 29.6**	**+1.3**
BTK	**Batken**	**10.91**	**328**	*e*P	**Pn**	**10 51 29.6**	**+1.3**
KDJ	**Kajisay**	**11.15**	**356**	*e*Pn	Pn	10 51 36.9	+5.3
LSA	**Lhasa**	**11.16**	**93**	*e*Pn	**Pn**	**10 51 33.6**	**+1.5**
LSA	**Lhasa**	**11.16**	**93**	*e*P	**Pn**	**10 51 33.6**	**+1.5**
ARSB	**Arslanbob**	**11.17**	**339**	*e*Pn	**Pn**	**10 51 32.6**	**+0.8**
KZA	**Kyzart**	**11.33**	**348**	P	**Pn**	**10 51 36.6**	**+2.3**
	SNR=62						
PRZ	**Przheval'sk**	**11.46**	**0**	*e*Pn	**Pn**	**10 51 36.7**	**+0.8**

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PRZ   Przheval'sk     11.46   0 eP    Pn      10 51 36.7 +0.8
UCH   Uchtor          11.62 346  P    Pn      10 51 40.4 +2.1
      SNR=37
AML   Almayashu       11.71 343  P    Pn      10 51 42.1 +2.5
      SNR=6.2
KBK   Karagaybulak    11.94 348  P    Pn      10 51 45.2 +2.7
      SNR=17
AAK   Ala-Archa       12.01 346 ePn   Pn      10 51 43.2  -0.2
AAK                             ePn   Pn      10 51 45.5 +2.0
AAK                             eSn   Sn      10 53 58.8 +0.9
AAK   Ala-Archa       12.01 346 ⥣Pn   Pn      10 51 45.1 +1.7
      comp=E,9.8nm,0.7s
AAK                             ⥣Sn   Sn      10 53 59.6 +1.8
      comp=E,16nm,1.1s
AAK   Ala-Archa       12.01 346ceP    Pn      10 51 46.1 +2.7
AAK                              pmax pmax
      comp=Z,15nm,1.0s
AAK   Ala-Archa       12.01 346  Pn   Pn      10 51 45.5 +2.0
      comp=Z,1.8nm,0.3s,baz=156,slow=9.7,SNR=30
AAK                              Sn   Sn      10 53 58.8 +0.9
      comp=Z,0.2nm,0.3s,baz=2.3,slow=16,SNR=3.7
TKM2  Tokmak 2        12.10 350  P    Pn      10 51 48.0 +3.4
      SNR=15
TKM2  Tokmak 2        12.10 350 ⥣Pn   Pn      10 51 47.5 +2.8
      comp=Z,11nm,0.8s
TKM2                            ⥣Sn   Sn      10 53 55.8  -4.1
      comp=Z,10.0nm,1.1s
TKM2  Tokmak 2        12.10 350  P    Pn      10 51 46.2 +1.6
TKM2                             pmax pmax
      comp=Z,7.0nm,0.6s
FRU   Bishkek         12.18 347 eP    Pn      10 51 47.0 +1.4
MDOK  Medeo           12.18 356  Pn   Pn      10 51 48.5 +2.7
      comp=Z,6.7nm,0.6s
MDOK                             Sn   Sn      10 53 59.2  -2.8
      comp=Z,14nm,0.8s
EKS2  Erkin-Say       12.19 344  P    Pn      10 51 48.3 +2.4
      SNR=21
CHMS  Chumysh         12.31 348  P    Pn      10 51 49.5 +2.1
      SNR=7.2
PDGK  Podgornoye      12.34   4 ⥥Pn   Pn      10 51 49.6 +1.7
      comp=Z,13nm,0.7s
PDGK                            ⥣Sn   Sn      10 54 05.9   0.0
      comp=Z,36nm,0.9s
PDGK  Podgornoye      12.34   4  P    Pn      10 51 49.1 +1.2
PDGK                             S    Sn      10 54 03.7  -2.1
PDGK                             pmax pmax
      comp=Z,11nm,0.6s
MNAS  Manas           12.38 340 ⥥Pn   Pn      10 51 48.6 +0.2
      comp=Z,41nm,1.0s
MNAS                            ⥥Sn   Sn      10 54 06.9 +0.2
      comp=Z,57nm,1.3s
MNAS  Manas           12.38 340  P    Pn      10 51 49.1 +0.7
MNAS                             pmax pmax
      comp=Z,41nm,1.0s
USP   Ospenovka       12.62 347  P    Pn      10 51 52.9 +1.3
      SNR=12
BOM   Bombay          13.04 204 ex    Pn      10 51 51.9  -5.5
BOM                             eS    Sn      10 54 11.9   -11
SHL   Shillong        13.11 111 ePn   Pn      10 51 56.3  -2.3
SHL   Shillong        13.11 111 eP    Pn      10 51 56.3  -2.3
SHL   Shillong        13.11 111 eP    Pn      10 51 56.7  -1.8
SHL                             eS    Sn      10 54 14.4   -10
HYB   Hyderabad       13.52 179 i P   Pn      10 52 01.0  -3.1
HYB                             e             10 54 30.0
KK31  Karatay Array   13.59 335 ePn   Pn      10 52 03.7  -1.2
KK31  Karatay Array   13.59 335 ⥥Pn   Pn      10 52 04.3  -0.5
      comp=Z,12nm,0.6s,baz=151,slow=13,SNR=197
KK31                            ⥥Sn   Sn      10 54 32.0  -4.1
      comp=Z,17nm,0.6s,baz=161,slow=25,SNR=12
KK31  Karatay Array   13.59 335 i P   Pn      10 52 04.1  -0.7
KK31                             pmax pmax
      comp=Z,12nm,0.6s
KKAR  Karatay Array   13.59 335 ePn   Pn      10 52 03.5  -1.3
KKAR  Karatay Array   13.59 335 eP    Pn      10 52 03.5  -1.3
WMQ   Urumqi          14.79  27  P    Pn      10 52 22.1 +0.8
WMQ                              sP   P       10 52 29.8 +2.4
WMQ                              S    Sn      10 55 01.5  -4.0
WMQ                              pmax pmax
      comp=Z,13nm,1.1s
WMQ                              pmax pmax
      comp=Z,640nm,5.5s
WMQ                              LR   LR
      comp=Z,290nm,20.3s
WMQ                              LR   LR
      comp=Z,450nm,18.3s
WMQ                              LR   LR
      comp=Z,370nm,17.3s
WMQ   Urumqi          14.79  27 ePn   Pn      10 52 22.6 +1.3
WMQ   Urumqi          14.79  27 eP    Pn      10 52 22.6 +1.3
MAKZ  Makanchi        16.04   9 ePn   Pn      10 52 35.9  -1.8
      comp=Z,11nm,0.8s
MAKZ  Makanchi        16.04   9 ⥣P    Pn      10 52 35.7  -2.0
      comp=Z,12nm,1.0s
MAKZ  Makanchi        16.04   9  P    Pn      10 52 36.0  -1.6
MAKZ                             pmax pmax
      comp=Z,17nm,1.3s
MK01  Makanchi Array  16.05  10 ePn   Pn      10 52 37.0  -0.8
MK31  Makanchi Array  16.07  10 ePn   Pn      10 52 36.9  -1.1
      comp=Z,7.2nm,0.8s
MK31  Makanchi Array  16.07  10 ⥣P    Pn      10 52 37.4  -0.6
      comp=Z,6.7nm,0.6s,baz=187,slow=13,SNR=122
MK31  Makanchi Array  16.07  10 eP    Pn      10 52 36.9  -1.1
MK31                             pmax pmax
      comp=Z,7.0nm,0.8s
MK32  Makanchi Array  16.07  10 ePn   Pn      10 52 37.5  -0.6
MK32                            eSn   Sn      10 55 29.2  -7.3
MKAR  Makanchi Array  16.07  10 ePn   Pn      10 52 37.1  -0.9
      comp=Z,54nm,0.6s
MKAR                             Sn   Sn      10 55 29.2  -7.3
MKAR  Makanchi Array  16.07  10  Pn   Pn      10 52 37.4  -0.6
      comp=Z,0.5nm,0.3s,baz=187,slow=13,SNR=20
MKAR                             Sn   Sn      10 55 29.2  -7.3
      comp=Z,0.3nm,0.3s,baz=185,slow=22,SNR=4.2
OTUK  Ortayu          17.82 347  P    P       10 53 00.7  -0.2
OTUK                             pmax pmax
      comp=Z,22nm,1.1s
GEYT  Alibeck         18.02 298  P    Pn      10 53 01.8  -0.9
      comp=Z,0.5nm,0.3s,baz=132,slow=15,SNR=5.1
GYA0B ALIBECK ARRAY   18.02 298 ePn   Pn      10 53 01.5  -1.2
      comp=Z,8.7nm,0.8s
WSAR  Wadi Sarin      19.14 251  P    Pn      10 53 16.6 +0.2
      comp=Z,0.8nm,0.3s,baz=112,slow=6.2,SNR=5.4
WSAR                             S    Sn      10 56 33.5   -18
      comp=Z,0.3nm,0.3s,baz=29,slow=19,SNR=4.1
GTA   Gaotai          19.43  59 eP    Pn      10 53 20.8 +0.9
GTA                              pP   sP      10 53 24.5 +1.5
GTA                              sP   pP      10 53 27.0 +5.4
GTA                              pmax pmax
      comp=Z,8.0nm,1.3s
KURBB Kurchatov Arra  19.61   0 ⥥P    P       10 53 21.0 +0.6
      comp=Z,12nm,0.8s
KURBB Kurchatov Arra  19.61   0  P    Pn      10 53 21.4  -0.3
      comp=Z,0.3nm,0.3s,baz=192,slow=10.0,SNR=49
KURK  Kurchatov       19.70   1 eP    P       10 53 20.6  -0.8
      comp=Z,22nm,0.8s
KURK                            eP    Pn      10 53 21.4  -1.4
KURK  Kurchatov       19.70   1 ⥥P    P       10 53 22.1 +0.7
      comp=Z,22nm,0.9s
KURK  Kurchatov       19.70   1ceP    Pn      10 53 22.3  -0.5
KURK                             pmax pmax
      comp=Z,26nm,1.0s
DGZ   Jazzator, Alta  19.90  18c iP   Pn      10 53 25.8 +0.4
DGZ                              pmax pmax
      comp=Z,6.0nm,0.5s
UOSS  Minazif         20.43 258 eP    P       10 53 29.7   0.0
      comp=Z,6.5nm,0.9s
CD2   Chengdu         21.80  84  P    P       10 53 45.3 +0.9
CD2                              pmax pmax
      comp=Z,30nm,0.7s
CD2                              pmax pmax
      comp=Z,160nm,4.6s
LZH   Lanzhou         21.84  70 eP    P       10 53 46.6 +1.7
LZH                              pP   sP      10 53 52.1 +2.9
LZH                              sP   pP      10 53 54.8 +7.0
LZH                              S    S       10 57 37.1   -10
LZH                              sS   sS      10 57 48.0  -3.4
LZH                              SS   Sn      10 58 18.3   +22
LZH                              pmax pmax
      comp=Z,40nm,1.1s
LZH                              pmax pmax
      comp=Z,470nm,4.9s
LZH                              LR   LR
      comp=Z,780nm,12.0s
LZH                              LR   LR
      comp=Z,860nm,11.1s
LZH                              LR   LR
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      comp=Z,960nm,12.4s
CHTO  Chiang Mai      22.25 118 eP    P       10 53 49.2   0.0
      comp=Z,6.1nm,0.7s
CHTO  Chiang Mai      22.25 118 eP    P       10 53 49.2   0.0
CHTO                             pmax pmax
      comp=Z,6.0nm,0.7s
CHTO  Chiang Mai      22.25 118  P    P       10 53 50.0 +0.8
      comp=Z,45nm,1.0s
CMMT  Chiang Mai      22.25 118  P    P       10 53 49.9 +0.6
      comp=Z,10.0nm,1.0s
KMI   Kunming         22.30  99  P    P       10 53 50.3 +0.2
KMI                              pP   sP      10 53 55.3 +1.4
KMI                              sP   pP      10 53 57.2 +4.5
KMI                              pmax pmax
      comp=Z,17nm,0.8s
KMI                              pmax pmax
      comp=Z,160nm,4.8s
KMI   Kunming         22.30  99 eP    P       10 53 50.8 +0.7
      comp=Z,15nm,0.8s
KMI   Kunming         22.30  99 eP    P       10 53 50.8 +0.7
KMI                              pmax pmax
      comp=Z,15nm,0.8s
CM31  Chiang Mai Arr  22.46 119 eP    P       10 53 51.5   0.0
CMAR  Chiang Mai Arr  22.46 119  P    P       10 53 52.2 +0.7
      comp=Z,8.6nm,1.0s,baz=309,slow=8.8,SNR=38
CM01  Chiang Mai Arr  22.50 119 eP    P       10 53 51.9   0.0
PAYA  Payao           22.64 116  P    P       10 53 55.9 +2.5
      comp=Z,5.9nm,0.7s,comp=Z,203nm
BVA0  Borovoye Array  22.76 348 ⥣P    P       10 53 55.4 +1.0
      comp=Z,10nm,1.2s,baz=159,slow=12,SNR=34
BVA0  Borovoye Array  22.76 348 i P   P       10 53 55.7 +1.3
BVA0                             pmax pmax
      comp=Z,9.0nm,0.7s
BVAR  Borovoye Array  22.76 348  P    P       10 53 55.5 +1.1
      comp=Z,5.1nm,0.6s,baz=153,slow=10.0,SNR=15
BRVK  Borovoye        22.81 347 eP    P       10 53 54.7  -0.2
      comp=Z,8.9nm,0.8s
BRVK  Borovoye        22.81 347 ⥣P    P       10 53 56.4 +1.5
      comp=Z,8.3nm,0.8s
BRVK  Borovoye        22.81 347ceP    P       10 53 56.5 +1.6
BRVK                             pmax pmax
      comp=Z,7.0nm,0.8s
AB31  Akbulak array   22.92 328 ⥥P    P       10 53 56.8 +0.7
      comp=Z,15nm,1.1s,baz=130,slow=12,SNR=61
AB31  Akbulak array   22.92 328 i P   P       10 53 56.5 +0.4
AB31                             pmax pmax
      comp=Z,5.0nm,0.7s
ABKAR Akbulak array   22.92 328 eP    P       10 53 55.9  -0.2
      comp=Z,11nm,0.9s
ZAA0  Zalesovo Array  23.41  10 eP    P       10 54 01.2 +0.1
      comp=Z,6.0nm,0.8s
ZALV  Zalesovo Beam   23.41  10 eP    P       10 54 01.2 +0.1
ZALV  Zalesovo Beam   23.41  10  P    P       10 54 02.4 +1.3
      comp=Z,7.4nm,0.7s,baz=205,slow=9.8,SNR=30
ZAA1  Zalesovo Array  23.41  10 eP    P       10 54 02.4 +1.3
NANT  Nan             23.60 116  P    P       10 54 03.0  -0.3
      comp=Z,23nm,0.7s,comp=Z,178nm
NVS   Novosibirsk     24.09   7 eP    P       10 54 08.3 +0.7
UTTA  Uttaradit       24.11 118  P    P       10 54 09.5 +1.4
      comp=Z,8.7nm,0.7s
KNGR  Kungurtug, Tuv  24.25  31 i P   P       10 54 10.1 +0.7
AKTO  Aktyubinsk      24.63 328 ⥥P    P       10 54 13.1 +0.4
      comp=Z,22nm,1.2s
AKTO  Aktyubinsk      24.63 328  P    P       10 54 14.0 +1.3
      comp=Z,5.4nm,0.5s,baz=134,slow=7.2,SNR=25
PBKT  Sadao Pong      25.14 120 eP    P       10 54 16.8  -0.7
      comp=Z,13nm,0.8s
PBKT  Sadao Pong      25.14 120  P    P       10 54 18.4 +0.9
      comp=Z,21nm,0.9s
GYA   Guiyang         25.23  93⥣iP    P       10 54 20.5 +2.1
GYA                              PP   PnPn    10 54 58.3 +5.9
GYA                              S    S       10 58 41.8  -2.6
GYA                              pmax pmax
      comp=Z,20nm,0.8s
GYA                              pmax pmax
      comp=Z,110nm,4.8s
GYA                              LR   LR
      comp=Z,510nm,16.9s
GYA                              LR   LR
      comp=Z,520nm,17.2s
GYA                              LR   LR
      comp=Z,490nm,17.0s
XAN   Xi'an           25.93  75  P    P       10 54 24.8 +0.1
XAN                              pP   sP      10 54 34.2 +5.1
XAN                              sP   pP      10 54 38.6   +11
XAN                              pmax pmax
      comp=Z,14nm,0.7s
XAN                              pmax pmax
      comp=Z,330nm,9.8s
XAN                              LR   LR
      comp=Z,280nm,16.3s
XAN                              LR   LR
      comp=Z,280nm,17.4s
XAN   Xi'an           25.93  75 eP    P       10 54 24.9 +0.3
      comp=Z,10.0nm,0.6s
XAN   Xi'an           25.93  75 eP    P       10 54 25.0 +0.3
XAN                              pmax pmax
      comp=Z,10.0nm,0.6s
CHAI  Chaiyaphum      26.32 119  P    P       10 54 32.7 +4.5
      comp=Z,3.8nm,0.6s,comp=Z,172nm
ENH   Enshi           26.78  83 eP    P       10 54 32.8 +0.4
      comp=Z,7.1nm,0.6s
ZAK   Zakamensk       26.86  37 eP    P       10 54 33.6 +0.6
ZAK                              pmax pmax
      comp=Z,5.0nm,1.0s
SONA0 Songino Array   27.23  44 eP    P       10 54 38.8 +2.5
SONA0                           ePcP  PcP     10 57 56.5 +0.2
SONM  Songino Array   27.23  44  P    P       10 54 38.8 +2.5
      comp=Z,3.8nm,0.6s,baz=239,slow=10.0,SNR=42
SONM                             PcP  PcP     10 57 56.5 +0.2
      comp=Z,0.4nm,0.6s,baz=239,slow=3.3,SNR=4.7
SONA1 Songino Array   27.24  44 eP    P       10 54 36.7 +0.3
HHC   Hu-ho-hao-te    28.51  61 eP    P       10 54 47.6  -0.3
HHC                              pmax pmax
      comp=Z,4.0nm,0.8s
HHC                              pmax pmax
      comp=Z,65nm,6.9s
ARU   Arti            28.95 337c iP   P       10 54 52.6 +1.2
ARU                                           10 55 41.6
ARU                              S    S       10 59 45.9 +3.6
ARU                              SS   SnSn    11 01 04.9 +0.3
ARU                              pmax pmax
      comp=Z,4.0nm,0.7s
KIV   Kislovodsk      30.85 305 eP    P       10 55 09.4 +0.8
KIV                              pmax pmax
      comp=Z,6.0nm,1.0s
WHN   Wuhan           30.88  81⥥iP    P       10 55 10.4 +1.6
DOMR  Dombai          31.48 303 i P   P       10 55 15.7 +1.6
VRH   Novokhopyorsk   33.69 317 eP    P       10 55 33.5 +0.3
VRH                              pmax pmax
      comp=Z,10.0nm,0.6s
NJ2   Nanjing         34.42  77 eP    P       10 55 40.6 +0.8
NJ2                              pmax pmax
      comp=Z,6.0nm,0.9s
VSR   Storozhevoye    35.19 316 eP    P       10 55 45.9  -0.4
VSR                              pmax pmax
      comp=Z,7.0nm,0.5s
LPSR  Galich'ya Gora  35.82 319 eP    P       10 55 51.5  -0.1
LPSR                             pmax pmax
      comp=Z,20nm,0.7s
HIA   Hailar          36.00  48 i P   P       10 55 55.3 +2.1
HIA                              pmax pmax
      comp=Z,4.0nm,1.0s
BOD   Bodaibo         36.27  32 eP    P       10 55 56.2 +0.8
BOD                              pmax pmax
      comp=Z,4.0nm,1.7s
BR101 Keskin Array S  37.15 296 eP    P       10 56 03.5 +0.2
BR131 Keskin Array S  37.15 296 eP    P       10 56 02.2  -1.1
      comp=Z,8.6nm,1.5s
BRTR  Keskin Array B  37.15 296ceP    P       10 56 04.0 +0.7
BRTR                             pmax pmax
      comp=Z,1.0nm,0.6s
BRTR  Keskin Array B  37.15 296  P    P       10 56 03.5 +0.2
      comp=Z,1.0nm,0.6s,baz=114,slow=11,SNR=7.5
PRGR  Permogore       37.31 335 eP    P       10 56 04.7 +0.5
PRGR                             pmax pmax
      comp=Z,16nm,0.8s
OBN   Obninsk         38.05 322 eP    P       10 56 10.0  -0.5
      comp=Z,33nm,0.8s
OBN   Obninsk         38.05 322ceP    P       10 56 11.7 +1.2
OBN                             i             10 56 16.3
OBN                             i             10 58 29.2
OBN                              pmax pmax
      comp=Z,31nm,0.9s
CN2   Changchun       39.06  57 eP    P       10 56 20.7 +1.5
CN2                             eS    S       11 02 19.8 +1.0
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CN2                              pmax pmax
      comp=Z,20nm,0.6s
CN2                              pmax pmax
      comp=Z,100nm,3.0s
CN2                              LR   LR
      comp=Z,200nm,14.0s
CN2                              LR   LR
      comp=Z,300nm,14.0s
CN2                              LR   LR
      comp=Z,200nm,15.1s
KLMR  Klimovskoe      39.24 331 eP    P       10 56 20.3  -0.2
KLMR                             pmax pmax
      comp=Z,5.0nm,0.6s
KLMR  Klimovskoe      39.24 331 eP    P       10 56 20.4  -0.1
KLMR                             AMP          10 56 22.7
      comp=Z,5.0nm,0.6s
KSAR  Wonju Array Be  41.10  67  P    P       10 56 36.7 +0.5
KSAR  Wonju Array Be  41.10  67  P    P       10 56 36.7 +0.5
KSRS  Korea Array     41.13  67  P    P       10 56 36.7 +0.3
      comp=Z,1.6nm,0.7s,baz=274,slow=9.9,SNR=7.5
AKASG Malin Array Be  41.15 313  P    P       10 56 36.3  -0.1
      comp=Z,2.1nm,0.6s,baz=78,slow=7.3,SNR=16
AKBB  Malin Array Si  41.15 313 eP    P       10 56 36.2  -0.2
      comp=Z,7.7nm,0.6s
KIEV  Kiev            41.16 313 eP    P       10 56 35.2  -1.3
KIEV  Kiev            41.16 313 i P   P       10 56 36.4  -0.1
KIEV                             pmax pmax
      comp=Z,8.0nm,0.7s
AK11  Malin Array Si  41.18 313 eP    P       10 56 35.8  -0.9
TMCR  Tamitsa         41.61 335 eP    P       10 56 40.5 +0.5
TMCR                             pmax pmax
      comp=Z,13nm,0.7s
MLR   Muntele Rosu    42.86 305 eP    P       10 56 51.2 +0.5
      comp=Z,15nm,1.0s
MLR   Muntele Rosu    42.86 305 eP    P       10 56 51.2 +0.5
MLR                              pmax pmax
      comp=Z,15nm,1.0s
BUR04 Bucovina Ar. S  43.44 308 eP    P       10 56 55.0  -0.3
BUR08 Bucovina Ar. S  43.45 308 eP    P       10 56 55.0  -0.3
VOIR                  43.49 305  P    P       10 56 55.2  -0.5
VOIR                             pmax pmax
      comp=Z,4.0nm,1.7s
KLR   Kul'dur         43.74  50c iP   P       10 56 59.0 +1.4
USRK  Ussuriysk Ar.   43.78  57  P    P       10 56 59.6 +1.7
      comp=Z,5.7nm,0.8s,baz=268,slow=7.2,SNR=14
VSU   Vasula          44.24 324ceP    P       10 57 02.8 +1.4
VSU                              pmax pmax
      comp=Z,28nm,1.3s
LVZ   Lovozero        44.81 338 i P   P       10 57 06.9 +1.0
LVZ                              pmax pmax
      comp=Z,8.0nm,1.0s
DRGR                  45.12 307  P    P       10 57 09.8 +1.0
DRGR                             pmax pmax
      comp=Z,12nm,1.0s
KWP   Kalwaria Pacla  45.20 311  P    P       10 57 10.1 +0.9
KWP                              pmax pmax
      comp=Z,17nm,0.9s
FIA1  FINESS Array S  45.41 328 eP    P       10 57 10.4  -0.3
FIA1                            eP    P       10 57 10.9 +0.3
FIA0  FINESS Array S  45.41 328 eP    P       10 57 11.7 +1.0
FIA0  FINESS Array S  45.41 328 eP    P       10 57 11.7 +1.0
FINES FINESS Array B  45.41 328  P    P       10 57 11.7 +1.0
      comp=Z,8.8nm,0.6s,baz=114,slow=8.5,SNR=44
MSF   Maaselka        45.80 334  P    P       10 57 14.8 +1.1
MSF                              pmax pmax
      comp=Z,9.0nm,1.1s
BZS   Buzias          45.90 305  P    P       10 57 15.5 +0.6
BZS                              pmax pmax
      comp=Z,3.0nm,1.6s
OUL   Oulu            46.68 333  P    P       10 57 20.9 +0.2
OUL                              pmax pmax
      comp=Z,11nm,1.9s
NIE   Niedzica        46.76 310  P    P       10 57 22.9 +1.3
SGF   Sodankyl        47.34 336  P    P       10 57 26.8 +1.0
SGF                              pmax pmax
      comp=Z,13nm,2.3s
VAF   Ylistaro        47.39 329  P    P       10 57 27.8 +1.6
VAF                              pmax pmax
      comp=Z,24nm,2.1s
ARA0  ARCESS Array S  48.53 338 eP    P       10 57 36.4 +1.4
ARCES ARCESS Array B  48.53 338 eP    P       10 57 34.7  -0.3
ARCES ARCESS Array B  48.53 338  P    P       10 57 36.4 +1.4
      comp=Z,10nm,0.8s,baz=115,slow=8.2,SNR=33
MORC  Moravsky Berou  48.55 311  P    P       10 57 36.4 +0.9
MORC                             pmax pmax
      comp=Z,7.0nm,1.6s
TIXI  Tiksi           48.78  19 eP    P       10 57 36.5  -0.3
      comp=Z,6.6nm,0.7s
TIXI  Tiksi           48.78  19ceP    P       10 57 38.2 +1.3
TIXI                             pmax pmax
      comp=Z,7.0nm,0.8s
KMBO  Kilima Mbogo    50.41 238 i P   P       10 57 53.7 +3.3
KMBO                             pmax pmax
      comp=Z,2.0nm,0.8s
KMBO  Kilima Mbogo    50.41 238  P    P       10 57 50.6 +0.3
      comp=Z,1.6nm,0.8s,baz=37,slow=10,SNR=3.6
GERES GERESS Array B  51.11 310  P    P       10 57 54.9  -0.1
GERES                            pmax pmax
      comp=Z,1.0nm,0.7s
GERES GERESS Array B  51.11 310  P    P       10 57 54.9  -0.1
      comp=Z,0.3nm,0.3s,baz=87,slow=6.0,SNR=2.7
ASAJ  Asahikawa       51.39  56  P    P       10 57 58.0 +0.9
      comp=Z,5.4nm,0.6s,baz=299,slow=15,SNR=6.8
CLL   Collm           51.39 313 eP    P       10 57 57.0   0.0
CLL   Collm           51.39 313 eP    P       10 57 57.0   0.0
NC405 NORSAR Array S  52.15 326 eP    P       10 58 02.2  -0.3
NORES NORESS Array B  52.22 325  P    P       10 58 05.7 +2.7
NORES                            pmax pmax
      comp=Z,1.0nm,0.4s
NB2   NORSAR Subarra  52.39 326  P    P       10 58 04.2  -0.2
      comp=Z,4.1nm,0.7s,baz=94,slow=7.4
NB200 NORSAR Array S  52.39 326 eP    P       10 58 04.8 +0.4
NOA   NORSAR Array B  52.39 326  P    P       10 58 04.8 +0.4
NOA                              pmax pmax
      comp=Z,7.0nm,0.7s
NOA   NORSAR Array B  52.39 326  P    P       10 58 04.8 +0.4
      comp=Z,6.4nm,0.7s,baz=94,slow=7.3,SNR=27
NC204 NORSAR Array S  52.62 326 eP    P       10 58 05.3  -0.8
MA2   Magadan         55.04  36  LR   LR      11 24 47.5
      comp=Z,1µm,18.8s,baz=350,slow=39
BILL  Bilibino        60.90  25 i P   P       10 59 05.6 +0.9
BILL                            i             10 59 49.4
BILL                            i             11 01 21.6
BILL                             pmax pmax
      comp=Z,4.0nm,1.0s
ES19  SONSECA Array   65.44 303 eP    P       10 59 35.0  -0.4
ESDC  Sonseca Array   65.49 303  P    P       10 59 35.9 +0.1
      comp=Z,4.7nm,0.7s,baz=63,slow=7.0,SNR=18
PAB   San Pablo       65.82 303 eP    P       10 59 37.2  -0.7
      comp=Z,32nm,1.4s
PAB   San Pablo       65.82 303 eP    P       10 59 37.2  -0.7
PAB                              pmax pmax
      comp=Z,32nm,1.4s
GAMB  Gambell         70.80  26 eP    P       11 00 08.7 +0.1
      comp=Z,7.7nm,1.2s
TOA0  Torodi Ar. Sit  71.99 275 eP    P       11 00 14.2  -2.3
TOA0                            eP    pP      11 00 16.0  -3.5
TOA1  Torodi Ar. Sit  71.99 275 eP    P       11 00 14.1  -2.5
TORD  Torodi Ar. Bea  71.99 275  P    P       11 00 14.1  -2.4
      comp=Z,11nm,0.7s,baz=61,slow=4.8,SNR=40
ANM   Nome            72.67  24 eP    P       11 00 21.9 +2.1
      comp=Z,4.6nm,0.7s
ANM   Nome            72.67  24 eP    P       11 00 21.9 +2.1
ANM                              pmax pmax
      comp=Z,5.0nm,0.7s
WR1   Warramunga Arr  73.87 126 eP    P       11 00 27.7 +0.2
      comp=Z,5.3nm,0.6s
WRA   Warramunga Arr  73.87 126  P    P       11 00 27.7 +0.2
      comp=Z,3.2nm,0.5s,baz=321,slow=5.8,SNR=72
WRAB  Tennant Creek   73.87 126 eP    P       11 00 27.0  -0.5
      comp=Z,4.9nm,0.8s
WRAB  Tennant Creek   73.87 126 eP    P       11 00 27.0  -0.5
WRAB                             pmax pmax
      comp=Z,5.0nm,0.8s
IM3   Indian Mountai  75.43  19 eP    P       11 00 36.3 +0.4
COLD  Coldfoot        75.48  18 eP    P       11 00 36.9 +0.7
      comp=Z,1.4nm,0.9s
AS31  Alice Springs   76.08 129 eP    P       11 00 40.3   0.0
      comp=Z,1.1nm,0.5s
ASAR  Alice Springs   76.08 129  P    P       11 00 40.2   0.0
      comp=Z,2.0nm,0.6s,baz=313,slow=6.3,SNR=55
AS01  Alice Springs   76.11 129 eP    P       11 00 40.2  -0.2
MLY   Manley          76.98  19 eP    P       11 00 46.0 +1.1
      comp=Z,8.0nm,1.3s
CAST  Castle Rocks    77.79  21 eP    P       11 00 50.7 +1.4
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	comp=Z,5.6nm,1.0s						
BOSA	Boshof	77.91	226	P	P	11 00 49.6	-1.0
	comp=Z,2.6nm,0.8s,baz=59,slow=5.9,SNR=3.2						
PRP	Porcupine Dome	78.01	17	eP	P	11 00 49.4	-1.3
	comp=Z,13nm,0.7s						
INK	Inuvik	78.20	12	eP	P	11 00 52.2	+0.8
	comp=Z,17nm,1.4s						
INK	Inuvik	78.20	12	P	P	11 00 52.2	+0.8
	comp=Z,4.2nm,0.5s,baz=340,slow=6.0,SNR=62						
IL1	Eielson Array	78.24	18	eP	P	11 00 51.6	-0.2
ILAR	Eielson Array	78.24	18	P	P	11 00 52.2	+0.4
	comp=Z,1.4nm,0.6s,baz=302,slow=4.9,SNR=32						
ILB	Eielson Array	78.24	18	eP	P	11 00 52.4	+0.5
EPYK	Eagle Plains	79.30	14	eP	P	11 00 58.4	+0.7
	comp=Z,7.8nm,0.8s						
SCRK	Sand Creek	79.64	18	eP	P	11 01 00.6	+1.0
	comp=Z,19nm,1.4s						
DBIC	Dimbokro	80.77	272	P	P	11 01 06.4	0.0
	comp=Z,5.8nm,0.8s,baz=16,slow=7.3,SNR=6.2						
KIC	Kosan Boka	80.83	272	ePKIKP	P	11 01 06.6	-0.1
	comp=Z,21nm,0.9s						
TIC	Toumodi	80.92	272	ePKIKP	P	11 01 06.8	-0.5
LIC	Lamto	81.14	272	ePKIKP	P	11 01 06.1	-2.3
	comp=Z,43nm,1.4s						
KDAK	Kodiak Island	81.80	25	eP	P	11 01 11.8	+0.7
	comp=Z,82nm,1.5s						
KDAK	Kodiak Island	81.80	25	ceP	P	11 01 12.1	+1.0
KDAK	Kodiak Island	81.80	25	P	P	11 01 11.8	+0.7
	comp=Z,7.9nm,0.7s,baz=290,slow=1.6,SNR=4.7						
CTA	Charters Tower	82.63	119	P	P	11 01 16.4	+0.3
	comp=Z,1.4nm,0.3s,baz=358,slow=3.9,SNR=5.3						
YKW3	Yellowknife Ar	86.19	6	eP	P	11 01 33.5	+0.1
	comp=Z,4.7nm,0.8s						
YKA	Yellowknife Ar	86.25	6	P	P	11 01 33.7	-0.1
	comp=Z,4.8nm,0.7s,baz=343,slow=5.0,SNR=89						
YKB5	Yellowknife Ar	86.25	6	eP	P	11 01 33.1	-0.6
STKA	Stephens Creek	86.60	130	P	P	11 01 35.2	-0.7
	comp=Z,2.1nm,0.5s,baz=326,slow=1.8,SNR=6.1						
LTX	Lajitas	119.97	2	ePKPdf	PKPdf	11 07 43.9	+0.3
LTX	Lajitas	119.97	2	ePKIKP	PKPdf	11 07 43.9	+0.3
TXAR	Lajitas Array	119.97	2	PKP	PKPdf	11 07 43.9	+0.3
	comp=Z,0.1nm,0.4s,baz=129,slow=0.3,SNR=6.4						
LPAZ	La Paz	146.12	288	PKPbc	PKPdf	11 08 33.6	+0.5
	comp=Z,3.3nm,0.8s,baz=74,slow=2.2,SNR=7.7						
USHA	Ushuaia	146.46	215	PKPbc	PKPdf	11 08 32.3	+0.6
	comp=Z,3.5nm,0.7s,baz=63,slow=14,SNR=4.9						

MAN 11 10:48:51.7, 6°.74N×125°.60E, h41km, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	0.35	345	⇓eP	Pn	10 49 06.3	+5.7
DMPH				eS	Sn	10 49 12.3	+5.4
KCP	Kidapawan	0.57	298	⇑iP	Pn	10 49 04.0	+0.5
KCP				i S	Sn	10 49 14.3	+2.4
DDMP	Don Marcelino,	0.64	170	eP	Pn	10 49 05.3	+0.9
DDMP				eS	Sn	10 49 16.1	+2.7
MATI	Mati	0.69	72	eP	Pn	10 49 10.7	+5.7
MATI				eS	Sn	10 49 13.3	-1.2
SKMP	Bagumbayan, Su	1.07	258	eP	Pn	10 49 11.1	+0.9
SKMP				eS	Sn	10 49 26.7	+2.8
BUKP	Musuan	1.25	335	eP	Pn	10 49 12.9	+0.1
BUKP				eS	Sn	10 49 29.9	+1.5

IDC 11 10:50:56.4±3.5, 11°.02S×164°.51E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/34, mbtmp3.6/3, Error ellipse: s-maj=171.8km s-min=33.6km az=138.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.36	249	P	P	10 57 11.2	+0.9
	0.5nm,0.6s,baz=80,slow=9.1,SNR=8.4						
ASAR	Alice Springs	31.73	243	P	P	10 57 21.2	-1.1
	0.5nm,0.7s,baz=61,slow=9.5,SNR=5.2						
ILAR	Eielson Array	83.88	19	P	P	11 03 27.7	0.0
	0.4nm,0.7s,baz=233,slow=4.8,SNR=5.1						

IDC 11 10:58:11.9±1.8, 11°.00S×165°.22E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.6/37, mbtmp3.7/4, ML4.3/1, Error ellipse: s-maj=52.4km s-min=33.4km az=126.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.07	174	Pn	Pn	11 00 52.1	+0.4
	2.1nm,0.3s,baz=302,slow=18,SNR=18						
WRA	Warramunga Arr	31.01	250	P	P	11 04 31.6	+0.1
	0.3nm,0.7s,baz=83,slow=8.9,SNR=4.8						
ASAR	Alice Springs	32.35	243	P	P	11 04 43.1	-0.2
	0.8nm,0.7s,baz=65,slow=10,SNR=9.2						
ILAR	Eielson Array	83.64	19	P	P	11 10 41.9	-0.1
	0.4nm,0.9s,baz=240,slow=4.9,SNR=4.3						

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*IDC **11** 11:04:00.6±0.8, 34°.40S×71°.73W, h0km, mb3.8/7, mb1 4.1/8, mb1mx3.9/25, mbtmp3.8/8, ML3.8/1, Error ellipse: s-maj=36.7km s-min=24.4km az=82.0*
*NEIC **11** 11:04:02.0±0.0, 34°.32S×72°.00W, h7km, mb3.9/2, ML3.9(GUC), After GUC.*
NEIC Felt [IV] at Pichilemu.
*GUC **11** 11:04:02.4±0.7, 34°.32S×72°.00W, h7km±20km, ML3.9*
*SJA **11** 11:04:05.6±1.0, 33°.86S×72°.35W, h33km, ML3.9, MW4.0*
ISC 11 11:04:01.6±1.1, 34°.28S±0°.04×71°.93W±0°.05, h5km±7km, n50, σ1ˢ65/61, mb4.0/6, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.12	209	eP	Pg	11 04 04.2	0.0
CHPI				eS	Sg	11 04 05.3	-0.6
CLCH	Cerro Calan	1.46	53	⇑eP	Pn	11 04 28.8	+0.1
CLCH				eS	Sg	11 04 48.9	+0.4
CLCH				IAML		11 05 00.5	
	comp=N,3µm,0.7s						
LMEL	Las Melosas	1.50	74	⇑eP	Pn	11 04 29.3	0.0
LMEL				eS	Sb	11 04 49.6	+0.2
LMEL				IAML		11 04 54.7	
	comp=N,2µm,0.5s						
ROC1	El Roble	1.51	31	ePn	Pb	11 04 30.1	-0.2
ROC1				eSn	Sg	11 04 51.0	+0.9
ROC1	El Roble	1.51	31	eP	Pg	11 04 31.1	+0.6
ROC1				eS	Sg	11 04 51.2	+1.0
ROCH	El Roble	1.51	31	eP	Pn	11 04 28.8	-0.8
ROCH				eS	Sn	11 04 49.1	-0.7
ROCH				IAML		11 04 58.3	
	comp=N,4µm,0.4s						
PEL	Peldehue	1.54	43	ePn	Pn	11 04 29.9	+0.1
PEL				eSn	Sn	11 04 50.0	-0.1
PEL	Peldehue	1.54	43	eP	Pg	11 04 31.7	+0.6
PEL				eS	Sg	11 04 53.3	+2.3
PEL	Peldehue	1.54	43	⇓eP	Pn	11 04 29.6	-0.1
PEL				eS	Sb	11 04 50.5	+0.1
PEL				IAML		11 04 54.8	
	comp=N,3µm,0.3s						
FCH	Farellones	1.66	56	eP	Pn	11 04 31.8	+0.1
FCH				eS	Sb	11 04 54.7	+0.4
FCH				IAML		11 04 59.9	
	comp=N,1µm,0.4s						
AAGR	Agrelo	2.85	66	eP	Pb	11 04 54.5	+1.5
ARCO	CERRO ARCO	2.89	61	eP	Pb	11 04 54.5	+0.8
ARCO				IAML		11 04 57.5	
	comp=Z,364nm,0.6s						
AVIZ	Vizcacheras	2.95	75	eP	Pg	11 04 57.3	-0.9
AUSP	Uspallata	2.96	47	eP	Pb	11 04 54.6	-0.3
ASAL	Salagasta	3.09	58	eP	Pb	11 04 56.4	-0.7
RTLS	Leoncito	3.32	43	eP	Pb	11 05 02.6	+1.5
RTLS				IAML		11 05 50.2	
	comp=Z,516nm,0.5s						
RTCV	Cerro Valdivia	3.73	51	eP	Pg	11 05 11.6	-1.5
RTLL	Cerro Villicun	4.14	46	eP	Pb	11 05 12.3	-2.7
RTLL				IAML		11 06 16.7	
	comp=Z,113nm,0.6s						
GO04	Tololo Observa	4.21	13	ePn	Pn	11 05 07.6	+1.0
ACCO	Cerro Coronel	4.41	34	eP	Pn	11 05 12.4	+3.0
ACCO				eS	Sg	11 06 20.7	-2.5
AMOG	MOGNA	4.42	42	eP	Pn	11 05 12.6	+3.2
ACAN	Cantantal	4.45	65	eP	Pn	11 05 11.8	+2.1
AROD	Rodeo	4.60	28	eP	Pn	11 05 15.9	+3.8
GO06	Curarrehue	5.31	176	ePn	Pn	11 05 24.0	+2.4
LCO	Las Campanas	5.36	12	ePn	Pn	11 05 22.7	+0.3
MRA	San Martin	5.52	72	eP	Pn	11 05 27.2	+2.6
MRA				IAML		11 07 01.3	
	comp=Z,43nm,0.5s						
AGUA	GUANDACOL	5.60	32	eP	Pn	11 05 28.4	+2.7
APLL	PUNTA DE LOS L	5.99	51	eP	Pn	11 05 32.6	+1.6
ACLC	CERRO LA CRUZ	6.43	43	eP	Pn	11 05 41.5	+4.4
ACLC				eS	Sg	11 07 22.9	-5.2
PLCA	Paso Flores	6.53	171	ePn	Pn	11 05 38.8	+0.3
CYA	Choya	7.83	44	IAML		11 08 31.2	
	comp=Z,13nm,0.6s						
TRQA	Tornquist	8.88	118	ePn	Pn	11 06 10.5	-0.2
MNMC	Minye Minye	15.23	8	ePn	Pn	11 07 39.2	+1.5
	comp=Z,12nm,1.0s						
LPAZ	La Paz	18.24	12	ePn	P	11 08 16.5	+0.1
	comp=Z,3.7nm,0.7s						
LPAZ	La Paz	18.24	12	P	P	11 08 16.8	+0.3
	comp=Z,0.1nm,0.3s,baz=164,slow=6.7,SNR=9.3						
SIV	San Ignacio	20.67	31	P	P	11 08 41.4	-1.0
	comp=Z,1.9nm,0.6s,baz=220,slow=8.8,SNR=11						
QSPA	South Pole Qui	55.96	180	eP	P	11 13 41.1	+0.5
QSPA	South Pole Qui	55.96	180	P	P	11 13 39.4	-1.2
	comp=Z,2.3nm,1.0s,baz=133,slow=2.2,SNR=3.9						
LTX	Lajitas	70.02	331	eP	P	11 15 14.9	+0.5
TXAR	Lajitas Array	70.02	331	P	P	11 15 14.9	+0.5
	comp=Z,0.2nm,0.6s,baz=153,slow=8.1,SNR=3.6						
TX31	Lajitas Ar. Si	70.02	331	eP	P	11 15 15.2	+0.8
BOSA	Boshof	79.86	118	P	P	11 16 10.4	-1.3
	comp=Z,1.5nm,0.6s,baz=189,slow=5.3,SNR=3.2						
PDAR	Pinedale Array	84.05	333	P	P	11 16 34.4	+1.1
	comp=Z,0.3nm,0.6s,baz=205,slow=5.9,SNR=3.8						
NVAR	Mina Array Bea	84.17	325	P	P	11 16 35.1	+1.2
	comp=Z,0.5nm,0.7s,baz=37,slow=30,SNR=4.2						
TOA1	Torodi Ar. Sit	84.22	70	eP	P	11 16 33.5	-1.0
TORD	Torodi Ar. Bea	84.22	70	P	P	11 16 33.5	-1.0
	comp=Z,0.9nm,0.8s,baz=251,slow=4.5,SNR=5.2						
WRA	Warramunga Arr	120.56	209	PKP	PKPdf	11 22 53.5	-1.4
	comp=Z,0.2nm,0.7s,baz=168,slow=1.2,SNR=4.6						
BVAR	Borovoye Array	147.42	43	PKPbc	PKPbc	11 23 46.4	+0.4
	comp=Z,1.0nm,0.6s,baz=270,slow=3.0,SNR=6.1						
AAK	Ala-Archa	152.56	62	PKPbc	PKiKP	11 23 59.1	-0.3
	comp=Z,1.6nm,0.6s,baz=236,slow=10,SNR=6.5						
ZALV	Zalesovo Beam	154.41	33	PKPbc	PKiKP	11 24 02.2	-0.4
	comp=Z,1.3nm,0.7s,baz=352,slow=3.0,SNR=6.0						

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*IDC **11** 11:04:31.4±1.8, 52°.75N×132°.73W, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/55, mbtmp3.2/3, ML2.5/1, Error ellipse: s-maj=40.8km s-min=11.4km az=101.0*
*PGC **11** 11:04:32.9±0.9, 52°.80N×132°.32W, h25km, ML3.5/14, ML3.5/14, 60km southwest of Sandspit, Bc Haida Gwaii Region*
ISC 11 11:04:30.8±1.6, 52°.74N±0°.04×132°.49W±0°.06, h9km±9km, n20, σ2ˢ28/37, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG1B	Mitchell Dam	0.29	48	P	Pb	11 04 37.9	-0.4
HG1B				S	Sg	11 04 40.8	+0.2
DIB	Dawson Inlet,	0.47	1	P	Pb	11 04 41.5	+0.3
DIB				S	Sb	11 04 47.0	-1.3
H02S1	DAWSON INLET T	0.47	1	Pg	Pb	11 04 41.3	+0.1
H02S1				Lg	Lg	11 04 47.0	
BNB	Barry Inlet	0.48	110	P	Pb	11 04 41.5	0.0
BNB				S	Sg	11 04 47.1	+0.8
MOBC	Moresby Island	0.52	38	P	Pb	11 04 41.6	-0.5
MOBC				S	Sg	11 04 47.5	-0.1
HG3B	Hotspring	0.66	104	P	Pg	11 04 44.0	+0.5
HG4B	Hotspring	0.91	119	P	Pb	11 04 48.4	-0.3
HG4B				S	Sb	11 04 60.0	-1.0
NDB	Naden	1.25	348	P	Pg	11 04 54.3	-0.5
NDB				S	Sg	11 05 10.4	-0.6
MASB	Masset	1.31	12	P	Pb	11 04 55.1	-0.5
MASB				S	Sn	11 05 11.7	-1.2
BBB	Bella Bella	2.73	100	Pn	Pn	11 05 13.6	-1.2
BBB				Sn	Sn	11 05 43.5	-4.5
BBB				Sg	Sb	11 05 52.6	-0.9
PHC	Port Hardy	3.75	121	Pn	Pn	11 05 27.0	-1.8
PHC				Sn	Sn	11 06 08.2	-4.8
PACB	Port Alice, BC	3.88	125	Pn	Pn	11 05 30.3	-0.2
PACB				Sn	Sn	11 06 13.2	-3.0
TLCB	Telegraph Cove	4.15	120	Pn	Pn	11 05 33.3	-1.0
TLCB				Sn	Sn	11 06 20.6	-2.3
FSB	Fort Saint Jam	5.16	67	Pn	Pn	11 05 48.3	0.0
FSB				Pg	Pb	11 06 02.9	+1.6
FSB				Sg	Sb	11 07 07.9	+4.5
CBB	Campbell River	5.22	118	Pn	Pn	11 05 49.8	+0.7
CBB				Sn	Sn	11 06 47.2	-2.1
DLBC	Dease Lake	5.88	13	Pn	Pn	11 06 01.0	+2.9
DLBC				Sn	Sn	11 07 07.1	+1.4
DLBC				Sg	Sg	11 07 32.3	-7.2
TXB	Texada	5.91	118	Pn	Pn	11 05 59.5	+1.0
YKA	Yellowknife Ar	13.64	37	Pn	Pn	11 07 43.6	-0.6
	0.0nm,0.3s,baz=228,slow=12,SNR=6.6						
TXAR	Lajitas Array	31.56	126	P	P	11 10 56.6	+3.0
	0.3nm,0.8s,baz=335,slow=6.3,SNR=3.7						
MKAR	Makanchi Array	76.48	336	P	P	11 16 22.0	+1.3
	0.2nm,0.6s,baz=25,slow=4.0,SNR=3.6						

NNC 11 11:08:17.6±3.7, 37°.22N×71°.02E, h0km, mb3.7, mpv3.4, 4C-6D, Error ellipse: s-maj=33.3km s-min=27.2km az=82.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.40	34	⇑Pn	Pn	11 09 13.1	+1.1
	2.3nm,0.3s						
SFK				⇑Lg	Lg	11 10 05.1	
	7.3nm,0.5s						
AML	Almayashu	5.32	22	P	Pn	11 09 38.6	0.0
	SNR=12						
MNAS	Manas	5.38	12	⇓Pn	Pn	11 09 39.1	-0.2
	0.9nm,0.5s						
MNAS				⇑Sn	Sn	11 10 43.6	+1.5
	0.9nm,0.4s						
MNAS				⇓Lg	Lg	11 11 13.4	
	3.6nm,1.0s						
UCH	Uchtor	5.68	27	P	Pn	11 09 44.0	+0.4
	SNR=5.2						
KK31	Karatay Array	5.89	356	⇓Pn	Pn	11 09 45.6	-0.5
	1.8nm,0.6s,baz=182,slow=14,SNR=13						
KK31				⇓Sn	Sn	11 10 54.2	-0.1
	1.1nm,0.6s,baz=177,slow=19						
KK31				⇓Lg	Lg	11 11 26.2	
	4.6nm,0.8s,baz=169,slow=27,SNR=7.2						
AAK	Ala-Archa	6.03	25	P	Pn	11 09 48.9	+0.6
	SNR=5.0						
AAK	Ala-Archa	6.03	25	Pn	Pn	11 09 48.2	0.0
	2.3nm,0.4s						
AAK				Lg	Lg	11 11 33.5	
	3.1nm,1.1s						
CHMS	Chumysh	6.44	25	P	Pn	11 09 53.8	+0.1
	SNR=6.0						
TKM2	Tokmak 2	6.69	30	P	Pn	11 09 57.3	+0.1
	SNR=10.0						
TKM2	Tokmak 2	6.69	30	⇑Pn	Pn	11 09 55.9	-1.3
	3.2nm,0.5s						
TKM2				⇓Lg	Lg	11 11 49.1	
	0.5nm,0.5s						

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*IDC **11** 11:10:50.8±0.7, 45°.08S×81°.73W, h0km, mb4.4/13, mb1 4.5/13, mb1mx4.4/23, mbtmp4.4/13, MS4.2/6, Ms1 4.3/6, ms1mx4.0/22, Error ellipse: s-maj=25.9km s-min=17.6km az=99.0*
*ISCJB **11** 11:10:51.9±0.3, 44°.97S±0°.06×81°.36W±0°.08, h10km, mb4.8/57, MS4.3/5, Error ellipse: s-maj=8.2km s-min=7.8km az=166.8*
*NEIC **11** 11:10:53.0±0.2, 44°.99S×81°.47W, h10km, mb4.9/51, Error ellipse: s-maj=5.4km s-min=5.0km az=123.0*
*BJI **11** 11:10:53.6, 44°.90S×81°.50W, h10km, mB5.2/2, Ms5.2/1, Ms7 5.2/1*
ISC 11 11:10:53.1±0.4, 44°.94S±0°.07×81°.5W±0°.1, h10km, n109, σ1ˢ08/120, mb4.9/57, MS4.4/5, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO09	Cerro Castillo	8.81	139	ePn	Pn	11 13 00.8	+0.4
PLCA	Paso Flores	9.08	66	ePn	Pn	11 13 04.3	+0.1
GO06	Curarrehue	9.16	58	ePn	Pn	11 13 05.8	+0.4
USHA	Ushuaia	12.98	144	LR	LR	11 18 26.8	
	comp=Z,428nm,19.2s,baz=272,slow=35						
ROC1	El Roble	14.46	38	ePn	Pn	11 14 17.8	-0.1
PEL	Peldehue	14.46	39	ePn	Pn	11 14 15.9	-1.9
TRQA	Tornquist	16.15	72	ePn	Pn	11 14 39.4	-0.7
	56nm,1.5s						
GO04	Tololo Observa	16.99	33	ePn	Pn	11 14 51.1	+0.1
	137nm,1.4s						
LCO	Las Campanas	18.07	32	ePn	Pn	11 15 03.6	-0.9
	42nm,1.5s						
GO02	Mina Guanaco	21.97	30	eP	P	11 15 47.1	-0.3
	37nm,1.3s						
PMSA	Palmer Station	22.12	160	LR	LR	11 21 38.6	
	comp=Z,410nm,18.2s,baz=330,slow=29						
LVC	Limon Verde	24.56	29	eP	P	11 16 13.7	+0.3
	50nm,1.3s						
LVC	Limon Verde	24.56	29	P	P	11 16 14.2	+0.8
	18nm,1.1s,baz=205,slow=8.8,SNR=14						
LVC				LR	LR	11 23 35.4	
	comp=Z,419nm,20.2s,baz=174,slow=31						
CPUP	Villa Florida	26.87	54	eP	P	11 16 34.4	+0.4
	17nm,1.2s						
CPUP	Villa Florida	26.87	54	P	P	11 16 35.0	+1.0
	8.9nm,1.0s,baz=232,slow=9.5,SNR=8.5						
CPUP				LR	LR	11 27 15.2	
	comp=Z,1µm,19.4s,baz=235,slow=36						
LPAZ	La Paz	30.71	26	eP	P	11 17 08.9	+0.1
	10nm,1.2s						
LPAZ	La Paz	30.71	26	P	P	11 17 10.7	+1.9
	5.0nm,1.1s,baz=186,slow=6.9,SNR=11						
SIV	San Ignacio	33.61	37	P	P	11 17 34.1	+0.4
	1.4nm,1.0s,baz=240,slow=17,SNR=4.4						
ATAH	Atahualpa	37.76	5	P	P	11 18 11.2	+1.5
	3.0nm,0.5s,baz=198,slow=2.9,SNR=5.4						
BDFB	Brasilia	40.60	55	eP	P	11 18 33.3	+0.1
	25nm,1.3s						
BDFB	Brasilia	40.60	55	P	P	11 18 34.5	+1.3
	11nm,1.1s,baz=200,slow=6.2,SNR=8.6						
SNAA	Sanae	44.60	154	P	P	11 19 03.9	-1.1
	8.3nm,1.2s,baz=321,slow=4.6,SNR=5.6						
OTAV	Otavalo	45.07	4	eP	P	11 19 10.4	+0.7
	23nm,1.6s						
QSPA	South Pole Qui	45.30	180	P	P	11 19 09.9	-0.9
	3.0nm,1.1s,baz=141,slow=3.8,SNR=3.2						
ROSC	El Rosal	49.98	9	eP	P	11 19 48.5	+0.7
	7.1nm,1.1s						
ROSC	El Rosal	49.98	9	P	P	11 19 48.1	+0.3
	4.2nm,0.3s,baz=163,slow=11,SNR=3.3						
MAW	Mawson	64.59	166	eP	P	11 21 31.3	+1.3
	16nm,1.1s						
RAR	Rarotonga	67.17	262	LR	LR	11 42 31.1	
	comp=Z,339nm,20.4s,baz=93,slow=28						
CASY	Casey	68.72	185	eP	P	11 21 57.7	+1.3
	52nm,1.4s						
RPZ	Rata Peaks	70.70	227	LR	LR	11 44 51.5	
	comp=Z,311nm,20.9s,baz=119,slow=29						
HPIG		74.85	338	eP	P	11 22 34.1	+0.2
	21nm,1.6s						
LTX	Lajitas	76.63	340	eP	P	11 22 44.0	+0.1
TXAR	Lajitas Array	76.63	340	P	P	11 22 44.0	+0.1
	1.0nm,0.9s,baz=157,slow=6.8,SNR=8.3						
TX31	Lajitas Ar. Si	76.64	340	eP	P	11 22 43.8	0.0
JCT	Junction City	76.89	344	eP	P	11 22 45.1	-0.2
	20nm,1.6s						
MSTX	Muleshoe	80.88	342	eP	P	11 23 07.0	-0.1
	18nm,1.5s						
LENM	Lemitar	82.06	339	eP	P	11 23 13.5	0.0
LAZ	Ladron	82.33	339	eP	P	11 23 14.7	-0.2
ANMO	Albuquerque	82.67	340	eP	P	11 23 17.1	+0.4
	9.5nm,1.4s						
CCM	Cathedral Cave	83.09	352	eP	P	11 23 18.0	-0.5
	12nm,1.0s						
X18A	Snowflake	83.20	337	eP	P	11 23 19.7	+0.2
	17nm,1.6s						
GLA	Glamis	83.33	332	eP	P	11 23 20.5	+0.6
	5.8nm,0.7s						
Y14A	Wickenburg	83.56	334	eP	P	11 23 21.8	+0.7
	15nm,1.6s						
LBTB	Lobatse	83.89	119	eP	P	11 23 23.4	0.0
	19nm,1.5s						
LIC	Lamto	84.88	76	ePKP1	P	11 23 28.7	+0.4
	67nm,1.4s						
W13A	Hualapai Mount	84.91	334	eP	P	11 23 28.3	+0.1
	3.8nm,1.0s						
KIC	Kosan Boka	85.18	76	ePKP1	P	11 23 28.8	-1.0
	41nm,1.5s						
TIC	Toumodi	85.19	76	ePKP1	P	11 23 30.0	+0.1
DBIC	Dimbokro	85.32	76	eP	P	11 23 30.7	+0.3
	16nm,1.2s						
DBIC	Dimbokro	85.32	76	P	P	11 23 30.4	-0.1
	13nm,1.3s,baz=166,slow=4.6,SNR=4.3						
MVCO	Mesa Verde	85.34	339	eP	P	11 23 30.8	+0.5
	9.5nm,1.4s						
S22A	4UR Ranch, Cre	85.43	340	eP	P	11 23 31.4	+0.6
	8.4nm,1.5s						
GSC	Goldstone, Bar	86.04	332	eP	P	11 23 34.1	+0.5
	15nm,1.6s						
PV01	Paradox Valley	86.23	339	eP	P	11 23 35.2	+0.5
	13nm,1.6s						
KNB	Kanab	86.35	335	eP	P	11 23 35.8	+0.6
	22nm,1.7s						
LCMT	Little Creek M	86.48	335	eP	P	11 23 36.4	+0.6
	7.1nm,1.5s						
SHPR	Sheep Range	86.60	333	eP	P	11 23 36.9	+0.5
	22nm,1.7s						
SMCO	Snowmass	86.82	340	eP	P	11 23 38.2	+0.4
	12nm,1.5s						
SZCU	Shurtz Canyon	86.97	335	eP	P	11 23 39.0	+0.7
	20nm,1.6s						
CCUT	Cedar City	87.01	335	eP	P	11 23 39.2	+0.7
	5.3nm,1.4s						
MTPU	Mount Pierson	87.12	336	eP	P	11 23 39.6	+0.4
	6.6nm,1.3s						
TPNV	Topopah Spring	87.36	333	eP	P	11 23 40.7	+0.6
	14nm,1.4s						
MSU	Marysvale	87.56	336	eP	P	11 23 41.8	+0.7
SRU	San Rafael Swe	87.66	338	eP	P	11 23 41.7	+0.2
	11nm,1.3s						
TMUT	Trail Mountain	88.02	337	eP	P	11 23 43.4	0.0
	20nm,1.5s						
P17A	Butcher Ranch,	88.06	338	eP	P	11 23 44.0	+0.6
	17nm,1.5s						
PSUT	Pine Spring	88.06	335	eP	P	11 23 44.0	+0.4
	7.2nm,1.3s						
N23A	Red Feather La	88.22	342	eP	P	11 23 44.9	+0.6
	10nm,1.3s						
R11A	Troy Canyon, C	88.42	334	eP	P	11 23 45.4	+0.2
	7.2nm,1.4s						
MPU	Maple Canyon	88.81	337	eP	P	11 23 47.3	+0.3
	28nm,1.7s						
NLU	North Lily Min	88.87	337	eP	P	11 23 47.9	+0.6
	31nm,1.5s						
DUG	Dugway, Tooele	89.30	337	eP	P	11 23 49.5	+0.3
	18nm,1.5s						
NV01	Mina Array Sit	89.38	332	eP	P	11 23 50.0	+0.3
NVAR	Mina Array Bea	89.38	332	P	P	11 23 50.1	+0.4
	1.2nm,1.0s,baz=186,slow=6.0,SNR=5.2						
CMB	Columbia Colle	89.74	330	eP	P	11 23 51.8	+0.6
	7.9nm,1.5s						
TCUT	Toone Canyon	89.77	338	eP	P	11 23 51.7	+0.1
	29nm,1.3s						
ELK	Elko	90.52	335	eP	P	11 23 55.6	+0.6
	8.0nm,1.6s						
BW06	Boulder Array	90.85	340	eP	P	11 23 56.4	-0.1
	6.4nm,1.3s						
PD31	Pinedale Array	90.85	340	eP	P	11 23 56.2	-0.3
PDAR	Pinedale Array	90.85	340	P	P	11 23 55.7	-0.8
	1.3nm,1.1s,baz=176,slow=4.3,SNR=7.0						
IMW	Indian Meadow	92.25	339	eP	P	11 24 02.5	-0.6
	5.0nm,1.3s						
YMR	Madison River	92.98	339	eP	P	11 24 06.7	+0.4
	13nm,1.5s						
YHH	Holmes Hill	93.06	340	eP	P	11 24 06.8	-0.1
	7.0nm,1.5s						
GEYT	Alibeck	149.18	89	PKPbc	PKPbc	11 30 40.5	-1.0
	1.3nm,0.3s,baz=154,slow=4.4,SNR=4.3						
TIXI	Tiksi	149.52	342	ePKPdf	PKPdf	11 30 37.5	+0.9
TIXI				ePKPdf	PKPdf	11 30 38.8	+2.2
TIXI	Tiksi	149.52	342	PKPbc	PKPdf	11 30 38.8	+2.2
	1.1nm,0.3s,baz=65,slow=4.2,SNR=7.0						
CM01	Chiang Mai Arr	153.55	181	ePKPdf	PKPdf	11 30 43.8	-0.6
CM31	Chiang Mai Arr	153.59	181	ePKPdf	PKPdf	11 30 44.2	-0.2
CMAR	Chiang Mai Arr	153.59	181	PKP	PKPdf	11 30 42.6	-1.9
	0.2nm,0.3s,baz=203,slow=3.5,SNR=3.2						
GAR	Garm	158.29	96	ePKPab	PKPab	11 31 25.2	+0.7
NJ2	Nanjing	159.58	238	ePKP	PKPdf	11 30 52.7	+0.9
GYA	Guiyang	160.42	202	ePKP	PKPdf	11 30 52.8	-0.3
GYA				PKPab	sPKPab	11 31 37.6	+0.7
GYA				PKS	PKSdf	11 34 25.0	-1.7

GYA				PP	**PP**	**11 35 20.4**	**+4.8**
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
KSH	**Kashi**	**162.49**	**100**	PKP	**PKPdf**	**11 30 57.4**	**+2.5**
KSH				PP	**PP**	**11 35 28.4**	**+0.6**
KSH				SKS	**SKSdf**	**11 37 59.9**	**+0.3**
KSH				SKKS	**SKKSac**	**11 42 15.7**	**+0.2**
KSH				SS	**SS**	**11 55 49.3**	**-0.8**
CD2	**Chengdu**	**165.39**	**198**	PKP	**PKPdf**	**11 30 57.1**	**-0.6**
XAN	**Xi'an**	**166.47**	**220**	*e*PKPab	**PKPab**	**11 31 58.7**	**-1.6**
ZAA1	**Zalesovo Array**	**167.35**	**40**	*e*PKPdf	**PKPdf**	**11 30 55.6**	**-2.8**
ZAA1				*e*PKPab	**PKPab**	**11 32 02.9**	**-0.7**
ZALV	**Zalesovo Beam**	**167.36**	**40**	*e*PKPdf	**PKPdf**	**11 30 57.3**	**-1.1**
ZALV				PKPab	**PKPab**	**11 32 02.9**	**-0.7**
ZALV	**Zalesovo Beam**	**167.36**	**40**	PKP	**PKPdf**	**11 30 55.6**	**-2.8**
	0.3nm,0.4s,baz=45,slow=2.2,SNR=3.3						
ZALV				PKPab	**PKPab**	**11 32 02.9**	**-0.7**
	0.2nm,0.4s,baz=338,slow=3.4,SNR=2.9						
MAKZ	**Makanchi**	**168.34**	**75**	*e*PKPdf	**PKPdf**	**11 30 58.0**	**-1.4**
MAKZ				*e*PKPab	**PKPab**	**11 32 08.2**	**-0.1**
MK31	**Makanchi Array**	**168.55**	**75**	*e*PKPdf	**PKPdf**	**11 30 58.5**	**-1.0**
MK31				*e*PKPab	**PKPab**	**11 32 08.3**	**-0.9**
MK32	**Makanchi Array**	**168.55**	**75**	*e*PKPab	**PKPab**	**11 32 09.0**	**-0.3**
MKAR	**Makanchi Array**	**168.55**	**75**	*e*PKPdf	**PKPdf**	**11 30 58.5**	**-1.0**
MKAR				*e*PKPab	**PKPab**	**11 32 08.8**	**-0.5**
MKAR	**Makanchi Array**	**168.55**	**75**	PKPab	**PKPab**	**11 32 09.0**	**-0.3**
	3.3nm,1.2s,baz=302,slow=2.3,SNR=11						
MK01	**Makanchi Array**	**168.56**	**75**	*e*PKPdf	**PKPdf**	**11 30 58.5**	**-1.0**
MK01				*e*PKPab	**PKPab**	**11 32 08.7**	**-0.7**
HHC	**Hu-ho-hao-te**	**169.57**	**251**	*e*PKP	**PKPdf**	**11 30 55.9**	**-4.5**
LZH	**Lanzhou**	**170.26**	**207**	PKP	**PKPdf**	**11 30 59.6**	**-1.5**
WMQ	**Urumqi**	**172.18**	**94**	*e*PKP	**PKPdf**	**11 31 02.9**	**+1.2**
SONA0	**Songino Array**	**173.82**	**301**	*e*PKPab	**PKPab**	**11 32 31.5**	**-1.2**
SONM	**Songino Array**	**173.82**	**301**	PKPab	**PKPab**	**11 32 31.5**	**-1.2**
	0.6nm,1.0s,baz=88,slow=3.6,SNR=5.3						

IDC 11 11:27:33.5±1.9**, 30°.30S**×**178°.14W, h97**^{km}±13^{km}**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.6**/19**, mbtmp4.0**/4**, MS4.6**/1**, Ms1 4.6**/1**, ms1mx3.3**/26**, Error ellipse: s-maj=50.4km s-min=17.4km az=107.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.06**	**11**	P	Pn	11 27 55.7	+1.2
	174nm,0.3s,baz=90,slow=20,SNR=4.0						
RAO				S	Sn	11 28 10.4	+0.2
	1µm,0.3s,baz=114,slow=22,SNR=13						
URZ	**Urewera**	**8.86**	**205**	P	Pn	11 29 39.3	+0.7
	0.2nm,0.3s,baz=265,slow=6.1,SNR=14						
URZ				S	Sn	11 31 15.5	-1.1
	2.1nm,0.3s,baz=95,slow=16,SNR=5.6						
CTA	**Charters Tower**	**33.66**	**279**	P	P	11 34 06.3	+1.1
	2.0nm,0.4s,baz=124,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**42.99**	**267**	P	P	11 35 23.2	-0.3
	0.5nm,0.4s,baz=104,slow=7.6,SNR=21						
WRA	**Warramunga Arr**	**43.97**	**272**	P	P	11 35 30.7	-0.7
	0.6nm,0.3s,baz=110,slow=8.1,SNR=32						
GUMO	**Guam**	**56.33**	**315**	LR	LR	11 59 01.4	
	comp=Z,511nm,18.1s,baz=121,slow=34						
FINES	**FINESS Array B**	**145.01**	**340**	PKPbc	PKPbc	11 46 57.9	-0.4
	0.5nm,0.4s,baz=83,slow=4.3,SNR=8.1						

ISCJB ***11*** *11:38:05.9±1.1, 34°.48S±0°.06×179°.8E±0°.2, h200^{km}, mb3.3/2, Error ellipse: s-maj=23.9km s-min=7.6km az=12.7*

IDC ***11*** *11:38:07.2±6.8, 34°.73S×179°.90E, h205^{km}±63^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.1/30, mbtmp3.6/3, Error ellipse: s-maj=79.8km s-min=44.6km az=7.0*

WEL ***11*** *11:38:07.5±1.2, 35°S±24°×18°0E±2°4, h226^{km}±36^{km}*

ISC 11 11:38:07.1±1.7**, 34°.5S**±0°.1×**179°.8E**±0°.2**, h200**^{km}**, n23, σ0^{s}.87**/40**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.46**	**198**	P	**Pn**	**11 39 02.6**	**+0.5**
WMGZ				S	**Sn**	**11 39 46.9**	**+1.5**
HAZ	**Te Kaha**	**3.60**	**206**	P	**Pn**	**11 39 04.5**	**+0.7**
HAZ				S	**Sn**	**11 39 48.9**	**+0.5**
PKGZ	**Pakihiroa**	**3.62**	**202**	P	**Pn**	**11 39 04.0**	**-0.1**
PKGZ				S	**Sn**	**11 39 49.8**	**+0.7**
PUZ	**Puketiti**	**3.73**	**199**	P	**Pn**	**11 39 05.1**	**-0.5**
PUZ				S	**Sn**	**11 39 52.2**	**+0.6**
RUGZ	**Raukumara Rang**	**3.82**	**206**	P	**Pn**	**11 39 06.8**	**+0.1**
RUGZ				S	**Sn**	**11 39 52.7**	**-0.9**
TWGZ	**Tauwhareparae**	**3.91**	**201**	P	**Pn**	**11 39 08.3**	**+0.5**
TWGZ				S	**Sn**	**11 39 57.4**	**+1.9**
CNGZ	**Carnagh Statio**	**4.14**	**197**	P	**Pn**	**11 39 10.8**	**+0.2**
TKGZ	**Te Karaka**	**4.19**	**201**	P	**Pn**	**11 39 10.6**	**-0.7**
TKGZ				S	**Sn**	**11 40 02.4**	**+0.7**
MWZ	**Matawai**	**4.20**	**205**	P	**Pn**	**11 39 11.0**	**-0.4**
MWZ				S	**Sn**	**11 40 01.6**	**-0.4**
OPRZ	**Ohinepanea**	**4.21**	**218**	P	**Pn**	**11 39 12.9**	**+1.5**
URZ	**Urewera**	**4.29**	**209**	P	**Pn**	**11 39 11.7**	**-0.8**
	2.2nm,0.3s,baz=322,slow=4.6,SNR=11						
URZ				S	**Sn**	**11 40 02.1**	**-1.9**
	8.9nm,0.3s,baz=151,slow=21,SNR=17						
URZ	**Urewera**	**4.29**	**209**	P	**Pn**	**11 39 12.1**	**-0.4**
URZ				S	**Sn**	**11 40 03.5**	**-0.5**
RIGZ	**Rimuhau**	**4.46**	**201**	P	**Pn**	**11 39 14.6**	**-0.1**
RIGZ				S	**Sn**	**11 40 08.9**	**+0.9**
MUGZ	**Murupara**	**4.62**	**211**	P	**Pn**	**11 39 15.8**	**-0.8**
MUGZ				S	**Sn**	**11 40 11.2**	**-0.3**
RTZ	**Ruatahuna**	**4.65**	**208**	P	**Pn**	**11 39 17.0**	**-0.1**
RTZ				S	**Sn**	**11 40 11.1**	**-1.2**
SNGZ	**Shannon Statio**	**4.67**	**204**	P	**Pn**	**11 39 16.9**	**-0.3**
SNGZ				S	**Sn**	**11 40 13.4**	**+0.8**
NMHZ	**Naumai**	**5.14**	**207**	P	**Pn**	**11 39 22.7**	**-0.6**
NMHZ				S	**Sn**	**11 40 23.4**	**0.0**
BKZ	**Black Stump Fm**	**5.32**	**209**	P	**Pn**	**11 39 24.5**	**-1.1**
BKZ				S	**Sn**	**11 40 27.0**	**-0.6**
KAHZ	**Kahuranaki**	**5.74**	**203**	P	**Pn**	**11 39 29.4**	**-1.5**
TRVZ	**Turoa**	**5.84**	**214**	P	**Pn**	**11 39 33.6**	**+1.1**
ASAR	**Alice Springs**	**41.22**	**273**	P	**P**	**11 45 33.5**	**+0.9**
	0.6nm,0.6s,baz=111,slow=7.1,SNR=4.3						
ASAR				PcP	**PcP**	**11 47 27.1**	**-0.5**
	0.4nm,0.8s,baz=96,slow=5.7,SNR=2.7						
WRA	**Warramunga Arr**	**42.59**	**278**	P	**P**	**11 45 43.8**	**+0.1**
	1.6nm,1.0s,baz=119,slow=7.4,SNR=9.9						
FINES	**FINESS Array B**	**148.28**	**336**	PKPbc	**PKPbc**	**11 57 28.2**	**-0.6**
	1.7nm,0.8s,baz=59,slow=4.0,SNR=3.0						

IDC ***11*** *11:38:13.7±0.6, 12°.03S×166°.14E, h0^{km}, mb4.5/17, mb1 4.6/19, mb1mx4.4/38, mbtmp4.5/19, ML4.6/2, MS4.3/18, Ms1 4.3/18, ms1mx4.1/38, Error ellipse: s-maj=21.8km s-min=15.9km az=111.0*

NEIC ***11*** *11:38:15.7±0.2, 12°.03S×165°.92E, h10^{km}, mb5.0/37, Error ellipse: s-maj=4.7km s-min=4.1km az=77.0*

ISCJB ***11*** *11:38:16.8±0.2, 12°.10S±0°.03×165°.91E±0°.04, h30^{km}, mb4.8/66, MS4.5/25, Error ellipse: s-maj=6.1km s-min=4.5km az=162.8*

MOS ***11*** *11:38:17.6±1.0, 12°.04S×165°.91E, h33^{km}, mb5.0/23, Error ellipse: s-maj=12.6km s-min=9.5km az=31.3*

BJI ***11*** *11:38:17.9, 12°.10S×165°.90E, h35^{km}, mB5.2/34, mb4.7/54, Ms4.8/22, Ms7 4.5/23*

GCMT ***11*** *11:38:19.7±0.3, 12°.14S±0°.03×165°.91E±0°.02, h22^{km}, MW5.1/71, Moment Tensor Solution. s40,c46; s71,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.13±.31; $M_{\theta\theta}$-1.80±.18; $M_{\phi\phi}$-4.32±.20; $M_{r\theta}$3.11±.34; $M_{\theta\phi}$1.30±.12; $M_{\phi r}$-1.64±.29; Best double couple: $M_0$6.44400×10^{16} NP1:ϕ_s139.00000°, δ60.00000°, λ76.00000°. NP2: ϕ_s346.00000°, δ32.00000°, λ113.00000°. Principal axes: T 7.3160, Plg71.0000°, Azm18.0000°; N -1.7330, Plg12.0000°, Azm146.0000°; P -5.5730, Plg14.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 11:38:19.0±0.3**, 12°.10S**±0°.05×**165°.90E**±0°.05**, h30**^{km}**, n158, σ1^{s}.44**/165**, mb5.0**/66**, MS4.5**/25**, 1C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.43**	**294**	*e*P	**Pn**	**11 39 52.0**	**+0.3**
HNR				*e*S	**Sn**	**11 41 02.0**	**-2.0**
HNR	**Honiara**	**6.43**	**294**	*e*Pn	**Pn**	**11 39 51.9**	**+0.3**
HNR				*e*Sn	**Sn**	**11 41 03.5**	**-0.6**
HNR	**Honiara**	**6.43**	**294**	*e*P	**Pn**	**11 39 51.9**	**+0.3**
HNR				*e*		11 41 03.5	
HNR	**Honiara**	**6.43**	**294**	Pn	**Pn**	**11 39 52.8**	**+1.1**
	31nm,0.3s,baz=180,slow=3.3,SNR=21						
HNR				Sn	**Sn**	**11 41 02.2**	**-1.8**
	16nm,0.3s,baz=80,slow=22,SNR=7.5						
HNR				LR	LR	11 42 47.2	
	comp=Z,2µm,19.9s,baz=132,slow=41						
MARNC	**Mare, Loyalty**	**9.54**	**168**	*e*Pn	**Pn**	**11 40 34.8**	**+0.4**
MARNC				*e*Sn	**Sn**	**11 42 23.2**	**+2.5**
DZM	**Mont Dzumac**	**9.93**	**177**	*e*Pn	**Pn**	**11 40 41.3**	**+1.6**
	46nm,0.5s						
DZM				*e*LR	LR	11 43 00.5	
	comp=Z,2µm,23.7s						
DZM	**Mont Dzumac**	**9.93**	**177**	*e*Pn	**Pn**	**11 40 41.0**	**+1.3**
DZM				*e*Sn	**Sn**	**11 42 27.9**	**-2.3**
DZM	**Mont Dzumac**	**9.93**	**177**	Pn	**Pn**	**11 40 40.5**	**+0.7**
	2.1nm,0.3s,baz=310,slow=12,SNR=30						
DZM				Sn	**Sn**	**11 42 24.7**	**-5.5**
	baz=202,slow=19,SNR=1.6						
DZM				LR	LR	11 43 17.4	
	comp=Z,350nm,20.8s,baz=15,slow=30						
PINNC	**Pines Island,**	**10.55**	**172**	*e*Pn	**Pn**	**11 40 49.0**	**+0.7**
MSVF	**Nonsavu**	**13.00**	**117**	*e*Pn	**Pn**	**11 41 22.6**	**+0.7**
MSVF	**Nonsavu**	**13.00**	**117**	*e*P	**Pn**	**11 41 22.6**	**+0.7**
FUNA	**Funafuti**	**13.55**	**76**	*e*Pn	**Pn**	**11 41 29.5**	**+0.2**
TARA	**Tarawa**	**15.08**	**28**	*e*Pn	**Pn**	**11 41 49.3**	**-0.7**
	187nm,0.8s						
RABL	**Rabaul**	**15.70**	**299**	*e*Pn	**Pn**	**11 41 58.5**	**+0.3**
	56nm,1.4s						
EIDS	**Eidsvold**	**19.24**	**225**	*e*P	**P**	**11 42 41.1**	**+0.1**
	30nm,1.1s						
CTA	**Charters Tower**	**20.46**	**245**	P	Pn	11 42 56.0	-0.7
	23nm,1.2s,baz=57,slow=12,SNR=7.6						
CTAO	**Charters Tower**	**20.46**	**245**	*e*P	**P**	**11 42 54.9**	**+0.5**
	48nm,1.3s						
CTAO	**Charters Tower**	**20.46**	**245**	*e*P	**P**	**11 42 54.9**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,48nm,1.3s						
MANU	**Manus Island**	**20.91**	**297**	*e*P	**P**	**11 42 59.6**	**+0.3**
	comp=Z,107nm,1.4s						
COEN	**Coen**	**22.22**	**263**	*e*P	**P**	**11 43 13.4**	**+0.1**
	comp=Z,57nm,1.5s						
ARMA	**Armidale**	**22.52**	**214**	*e*P	**P**	**11 43 17.4**	**+0.8**
	comp=Z,102nm,1.5s						
OUZ	**Omahuta**	**24.05**	**164**	*e*P	**P**	**11 43 32.0**	**+0.5**
	comp=Z,26nm,1.4s						
URZ	**Urewera**	**27.90**	**161**	*e*P	**P**	**11 44 05.5**	**-0.9**
	comp=Z,18nm,1.2s						
BKZ	**Black Stump Fm**	**28.55**	**163**	*e*P	**P**	**11 44 11.7**	**-0.5**
	comp=Z,42nm,1.7s						
STKA	**Stephens Creek**	**29.79**	**225**	*e*P	**P**	**11 44 23.0**	**-0.3**
	comp=Z,3.2nm,1.4s						
STKA	**Stephens Creek**	**29.79**	**225**	P	**P**	**11 44 24.1**	**+0.8**
	comp=Z,2.9nm,0.9s,baz=225,slow=3.9,SNR=3.7						
THZ	**Tophouse**	**30.17**	**170**	*e*P	**P**	**11 44 26.4**	**-0.1**
	comp=Z,31nm,1.3s						
WRAB	**Tennant Creek**	**31.27**	**252**	*e*P	**P**	**11 44 35.8**	**-0.7**
	comp=Z,35nm,1.6s						
WRAB	**Tennant Creek**	**31.27**	**252**	*e*P	**P**	**11 44 35.8**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,35nm,1.6s						
WR1	**Warramunga Arr**	**31.28**	**252**	*e*P	**P**	**11 44 36.5**	**-0.1**
	comp=Z,36nm,1.6s						
WRA	**Warramunga Arr**	**31.28**	**252**	P	**P**	**11 44 36.5**	**-0.1**
	comp=Z,5.0nm,1.1s,baz=79,slow=8.6,SNR=20						
WRA				PcP	**PcP**	**11 47 32.3**	**+1.7**
	comp=Z,1.1nm,0.9s,baz=70,slow=3.5,SNR=5.2						
WRA				ScP	**ScP**	**11 51 15.2**	**+3.4**
	comp=Z,1.8nm,1.2s,baz=62,slow=4.1,SNR=4.7						
WRA				LR	LR	11 57 12.9	
	comp=Z,524nm,18.4s,baz=95,slow=36						
RPZ	**Rata Peaks**	**31.81**	**173**	*e*P	**P**	**11 44 41.3**	**+0.3**
	comp=Z,20nm,0.9s						
AS01	**Alice Springs**	**32.43**	**245**	*e*P	**P**	**11 44 45.7**	**-1.0**
AS31	**Alice Springs**	**32.47**	**245**	*e*P	**P**	**11 44 46.3**	**-0.7**
	comp=Z,4.6nm,1.6s						
ASAR	**Alice Springs**	**32.47**	**245**	P	**P**	**11 44 46.7**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=75,slow=9.6,SNR=33						
ASAR				PcP	**PcP**	**11 47 35.8**	**+1.9**
	comp=Z,1.5nm,1.1s,baz=115,slow=3.7,SNR=4.8						
ASAR				ScP	**ScP**	**11 51 19.3**	**+3.6**
	comp=Z,0.7nm,1.0s,baz=62,slow=4.3,SNR=4.4						
ASAR				LR	LR	11 57 56.2	
	comp=Z,585nm,18.1s,baz=84,slow=36						
DCZ	**Deep Cove**	**33.26**	**178**	*e*P	**P**	**11 44 52.7**	**-0.9**
	comp=Z,70nm,1.5s						
MTN	**Manton Dam**	**33.94**	**265**	*e*P	**P**	**11 44 59.1**	**-0.8**
	comp=Z,9.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**39.27**	**256**	*e*P	**P**	**11 45 44.3**	**-1.0**
	comp=Z,8.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.27**	**256**	LR	LR	12 02 16.2	
	comp=Z,550nm,18.3s,baz=72,slow=36						
SOEI	**Soe**	**40.92**	**269**	*e*P	**P**	**11 45 58.7**	**-0.5**
	comp=Z,17nm,1.1s						
BATI	**Baumata**	**41.46**	**268**	LR	LR	12 03 27.7	
	comp=Z,496nm,19.3s,baz=144,slow=36						
MMRI	**Maumere**	**43.06**	**270**	*e*P	**P**	**11 46 16.2**	**-0.3**
	comp=Z,46nm,1.2s						
PPT	**Papeete**	**43.30**	**103**	LR	LR	12 01 50.1	
	comp=Z,601nm,18.6s,baz=253,slow=33						
PPT2	**Papeete2**	**43.30**	**103**	*e*S	**S**	**11 52 49.2**	**+4.7**
	comp=Z,249nm,26.0s						
PPT2				*e*LQ	LQ	11 56 33.8	
	comp=Z,1µm,25.8s						
PPT2				*e*LR	LR	11 58 22.5	
	comp=Z,816nm,26.8s						
DAV	**Davao City (W)**	**44.39**	**293**	LR	LR	12 05 26.8	
	comp=Z,115nm,18.1s,baz=104,slow=37						
MBWA	**Marble Bar**	**45.01**	**252**	*e*P	**P**	**11 46 32.1**	**-0.1**
	comp=Z,24nm,1.1s						
NWAO	**Narrogin (SRO)**	**49.01**	**237**	LR	LR	12 08 26.0	
	comp=Z,949nm,18.1s,baz=327,slow=37						
TAOE	**Nuku Hiva Isla**	**53.08**	**92**	*e*S	**S**	**11 55 05.0**	**+2.0**
	comp=Z,167nm,25.8s						
TAOE				*e*LR	LR	12 02 45.2	
	comp=Z,370nm,23.2s,baz=264						
MJAR	**Matsushiro Arr**	**54.98**	**333**	P	**P**	**11 47 46.0**	**-1.5**
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJAR	**Matsushiro Arr**	**54.98**	**333**	P	**P**	**11 47 46.0**	**-1.5**
	comp=Z,5.3nm,0.9s,baz=172,slow=9.3,SNR=7.6						
MAJO	**Matsushiro**	**54.98**	**333**	*e*P	**P**	**11 47 46.0**	**-1.5**
MAJO	**Matsushiro**	**54.98**	**333**	*e*P	**P**	**11 47 46.0**	**-1.5**
MAT	**Matsushiro**	**54.98**	**333**	P	**P**	**11 47 46.1**	**-1.4**
ASAJ	**Asahikawa**	**59.84**	**341**	P	**P**	**11 48 21.4**	**-0.2**
	comp=Z,8.1nm,0.8s,baz=97,slow=8.1,SNR=4.9						
KSRS	**Korea Array**	**60.83**	**326**	P	**P**	**11 48 28.7**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=141,slow=6.5,SNR=6.2						
KSRS				PcP	**PcP**	**11 49 12.4**	**+0.3**
	comp=Z,2.7nm,1.1s,baz=152,slow=5.7,SNR=5.5						
KSRS				LR	LR	12 13 55.6	
	comp=Z,88nm,18.5s,baz=325,slow=35						
KS01	**Wonju Array Si**	**60.87**	**326**	*e*P	**P**	**11 48 28.2**	**-0.6**
YSS	**Yuzh-Sakhalins**	**62.34**	**342**	⇓*e*P	**P**	**11 48 38.8**	**+0.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
NJ2	**Nanjing**	**62.88**	**316**	*e*P	**P**	**11 48 42.9**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**63.96**	**333**	*e*P	**P**	**11 48 49.1**	**-0.2**
	comp=Z,49nm,1.5s						
USRK	**Ussuriysk Ar.**	**63.96**	**333**	P	**P**	**11 48 49.8**	**+0.4**
	comp=Z,16nm,1.1s,baz=144,slow=5.8,SNR=12						
MDJ	**Mudanjiang**	**65.35**	**332**	*e*P	**P**	**11 48 58.3**	**-0.2**
	comp=Z,20nm,1.1s						
DL2	**Dalian**	**65.41**	**323**	P	**P**	**11 49 00.9**	**+2.0**
DL2				*e*S	**S**	**11 57 42.9**	**+1.4**
DL2				pmax	pmax		
	comp=Z,31nm,1.2s						
DL2				LR	LR		
	comp=Z,260nm,16.7s						
DL2				LR	LR		
	comp=Z,230nm,16.6s						
DL2				LR	LR		
	comp=Z,280nm,16.8s						
IPM	**Ipoh**	**66.56**	**280**	*e*P	**P**	**11 49 07.1**	**+0.2**
	comp=Z,49nm,1.4s						
CN2	**Changchun**	**66.72**	**329**	*e*P	**P**	**11 49 07.2**	**-0.1**
CN2				*e*S	**S**	**11 57 59.3**	**+2.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
SKNT	**Sakolnakorn**	**67.66**	**294**	P	P	11 49 20.2	+6.4
	comp=Z,7.3nm,1.1s						
SKNT	**Sakolnakorn**	**67.66**	**294**	P	P	11 49 20.2	+6.4
	comp=Z,7.3nm,1.1s						
PSI	**Prapat**	**68.17**	**278**	LR	LR	12 22 02.6	
	comp=Z,321nm,19.6s,baz=271,slow=38						
ENH	**Enshi**	**68.68**	**309**	*e*P	**P**	**11 49 19.8**	**-0.2**
	comp=Z,21nm,1.0s						
NONG	**Nongkai**	**68.80**	**295**	P	P	11 49 27.3	+6.4
	comp=Z,0.3nm,1.1s						
GYA	**Guiyang**	**69.14**	**304**	P	**P**	**11 49 27.2**	**+4.2**
GYA				pP	pwP	11 49 36.4	-4.0
GYA				PP	**PP**	**11 52 00.8**	**+4.6**
GYA				S	**S**	**11 58 27.6**	**+0.5**
GYA				sS	sS	11 58 45.0	+6.7
GYA				SKS	**SKSac**	**11 59 18.5**	**-2.8**
GYA				SS	**SS**	**12 02 55.3**	**+1.3**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,5.9s						
GYA				LR	LR		
	comp=Z,520nm,18.3s						
GYA				LR	LR		
	comp=Z,540nm,18.2s						
GYA				LR	LR		
	comp=Z,500nm,18.0s						
BJT	**Baijiatuau**	**69.39**	**321**	*e*P	**P**	**11 49 24.2**	**+0.1**
	comp=Z,14nm,1.0s						
BJT	**Baijiatuau**	**69.39**	**321**	*e*P	**P**	**11 49 24.2**	**+0.1**
BJT				pmax	pmax		
	comp=Z,14nm,1.0s						
BJI	**Beijing**	**69.40**	**321**	P	**P**	**11 49 25.1**	**+1.0**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
XAN	**Xi'an**	**70.95**	**313**	P	**P**	**11 49 35.9**	**+2.0**
XAN				pP	sP	11 49 44.9	+1.7
XAN				sP	pwP	11 49 49.4	-1.9
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,150nm,6.1s						
XAN				LR	LR		
	comp=Z,200nm,19.5s						
XAN				LR	LR		
	comp=Z,260nm,23.9s						
XAN	**Xi'an**	**70.95**	**313**	*e*P	**P**	**11 49 33.7**	**-0.1**
	comp=Z,26nm,1.4s						
XAN	**Xi'an**	**70.95**	**313**	*e*P	**P**	**11 49 33.7**	**-0.1**
XAN				pmax	pmax		
	comp=Z,26nm,1.4s						
KMI	**Kunming**	**71.80**	**302**	P	**P**	**11 49 43.5**	**+4.1**
KMI				pP	sP	11 49 52.6	+3.8
KMI				sP	pwP	11 49 57.5	+0.6
KMI				S	**S**	**11 58 57.7**	**-0.8**
KMI				pmax	pmax		
	comp=Z,11nm,1.2s						
KMI				pmax	pmax		
	comp=Z,160nm,6.6s						
KMI				LR	LR		
	comp=Z,200nm,17.9s						
KMI				LR	LR		
	comp=Z,140nm,22.2s						
KMI				LR	LR		
	comp=Z,180nm,20.0s						
CM01	**Chiang Mai Arr**	**72.65**	**294**	*e*P	**P**	**11 49 44.5**	**+0.1**
CM31	**Chiang Mai Arr**	**72.68**	**294**	*e*P	**P**	**11 49 44.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**72.68**	**294**	P	**P**	**11 49 45.9**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,45nm,19.5s						
CMAR	**Chiang Mai Arr**	**72.68**	**294**	P	**P**	**11 49 45.9**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=125,slow=4.2,SNR=12						
CMAR				LR	LR	12 21 33.9	
	comp=Z,45nm,19.5s,baz=290,slow=36						
HHC	**Hu-ho-hao-te**	**72.73**	**320**	*e*P	**P**	**11 49 46.4**	**+1.9**
HHC				S	**SKiKP**	**11 59 15.1**	**-1.6**
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,160nm,5.5s						
HHC				LR	LR		
	comp=Z,250nm,16.4s						
HHC				LR	LR		
	comp=Z,180nm,16.4s						
HHC				LR	LR		
	comp=Z,340nm,16.4s						
CHTO	**Chiang Mai**	**72.79**	**294**	*e*P	**P**	**11 49 44.5**	**-0.7**
	comp=Z,15nm,1.4s						
CHTO	**Chiang Mai**	**72.79**	**294**	*e*P	**P**	**11 49 44.5**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,15nm,1.4s						
CHTO	**Chiang Mai**	**72.79**	**294**	P	P	11 49 51.8	+6.6
	comp=Z,37nm,1.3s						
HIA	**Hailar**	**73.36**	**330**	*e*P	**P**	**11 49 47.8**	**-0.2**
	comp=Z,26nm,1.0s						
HIA	**Hailar**	**73.36**	**330**	*e*P	**P**	**11 49 47.8**	**-0.2**
HIA				pmax	pmax		
	comp=Z,25nm,1.0s						
CD2	**Chengdu**	**73.36**	**308**	*e*P	**P**	**11 49 48.5**	**+0.1**
ZEA	**Zeya**	**73.37**	**337**	*e*P	**P**	**11 49 48.2**	**+0.3**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=E,14nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
LZH	**Lanzhou**	**75.58**	**312**	*e*P	**P**	**11 50 04.6**	**+3.3**
LZH				pP	PcP	11 50 14.3	+0.1
LZH				sP	pwP	11 50 19.4	+2.1
LZH				PP	**PP**	**11 52 54.3**	**+3.1**
LZH				S	**S**	**11 59 39.2**	**-1.4**
LZH				sS	sS	11 59 54.2	+1.9
LZH				SS	**SS**	**12 04 37.3**	**+4.9**
LZH				pmax	pmax		
	comp=Z,34nm,1.0s						
LZH				pmax	pmax		
	comp=Z,330nm,4.9s						
LZH				LR	LR		
	comp=Z,370nm,17.0s						
LZH				LR	LR		
	comp=Z,350nm,17.4s						
LZH				LR	LR		
	comp=Z,390nm,17.9s						
QSPA	**South Pole Qui**	**77.91**	**180**	*e*P	**P**	**11 50 13.4**	**-0.5**
	comp=Z,26nm,1.1s						
QSPA	**South Pole Qui**	**77.91**	**180**	P	**P**	**11 50 14.1**	**+0.2**
	comp=Z,17nm,1.0s,baz=18,slow=2.1,SNR=19						
CIT	**Chita**	**78.15**	**330**	*e*P	**P**	**11 50 16.2**	**+0.9**
CIT				*e*		11 50 22.1	
CIT				*e*		11 50 30.4	
CIT				pmax	pmax		
	comp=Z,118nm,1.4s						
YAK	**Yakutsk**	**79.15**	**344**	*e*P	**P**	**11 50 19.4**	**-1.1**
YAK				pmax	pmax		
	comp=Z,87nm,1.1s						
YAK				pmax	pmax		
	comp=E,14nm,1.1s						
YAK				pmax	pmax		
	comp=N,28nm,1.3s						
SONA0	**Songino Array**	**79.61**	**324**	*e*P	**P**	**11 50 23.7**	**+0.2**
SONM	**Songino Array**	**79.61**	**324**	P	**P**	**11 50 23.7**	**+0.2**
	comp=N,9.2nm,1.1s,baz=135,slow=4.2,SNR=45						
SONA1	**Songino Array**	**79.61**	**324**	*e*P	**P**	**11 50 22.9**	**-0.6**
GTA	**Gaotai**	**79.90**	**314**	⇑P	**P**	**11 50 26.4**	**+1.1**
GTA				pP	sP	11 50 36.5	+1.1
GTA				sP	pwP	11 50 40.6	-0.8
GTA				S	**S**	**12 00 26.0**	**-1.1**
GTA				pmax	pmax		
	comp=N,4.0nm,1.8s						
GTA				pmax	pmax		
	comp=N,130nm,7.8s						
GTA				LR	LR		
	comp=N,130nm,18.7s						
GTA				LR	LR		
	comp=N,130nm,18.4s						
GTA				LR	LR		
	comp=N,130nm,18.4s						
BILL	**Bilibino**	**79.93**	**0**	*i* P	**P**	**11 50 21.9**	**-2.7**
BILL				*i*		11 50 30.2	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						

BOD	Bodaibo	81.55	335	*e*P	P	11 50 32.8	-0.7
BOD				pmax	pmax		
	comp=Z,20nm,1.6s						
TRF	Thorofare Moun	82.47	18	*e*P	P	11 50 37.5	-0.9
	comp=Z,20nm,1.5s						
ZAK	Zakamensk	82.65	325	*e*P	P	11 50 39.3	-0.3
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s						
TLY	Talaya	83.08	326	*e*P	P	11 50 41.4	-0.3
	comp=Z,42nm,1.0s						
TLY	Talaya	83.08	326	*e*P	P	11 50 41.4	-0.3
TLY				pmax	pmax		
	comp=Z,42nm,1.0s						
IM3	Indian Mountai	83.40	15	*e*P	P	11 50 43.0	0.0
RIDG	Independ'e Rid	84.41	20	*e*P	P	11 50 47.0	-1.3
	comp=Z,22nm,1.4s						
ILAR	Eielson Array	84.46	18	P	P	11 50 47.9	-0.6
	comp=Z,1.7nm,0.9s,baz=227,slow=5.1,SNR=6.0						
ILB	Eielson Array	84.46	18	*e*P	P	11 50 48.3	-0.2
IL1	Eielson Array	84.46	18	*e*P	P	11 50 48.0	-0.5
MOY	Mondy	84.53	325	*e*P	P	11 50 49.4	+0.1
MOY				pmax	pmax		
	comp=Z,29nm,2.0s						
SCRK	Sand Creek	84.85	20	*e*P	P	11 50 50.2	-0.4
	comp=Z,5.2nm,0.9s						
NV01	Mina Array Sit	86.59	50	*e*P	P	11 50 58.4	-1.6
NVAR	Mina Array Bea	86.59	50	P	P	11 50 57.2	-2.7
	comp=Z,0.1nm,0.3s,baz=232,slow=4.4,SNR=2.8						
NVAR				LR	LR	12 26 43.5	
	comp=Z,524nm,18.0s,baz=4.5,slow=34						
WMQ	Urumqi	89.95	315	P	P	11 51 16.6	+1.0
WMQ				pP	sP	11 51 27.8	+2.1
WMQ				pmax	pmax		
	comp=Z,22nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.6s						
WMQ				LR	LR		
	comp=Z,220nm,19.7s						
WMQ				LR	LR		
	comp=Z,230nm,18.3s						
WMQ				LR	LR		
	comp=Z,200nm,20.9s						
WMQ	Urumqi	89.95	315	*e*P	P	11 51 16.1	+0.5
	comp=Z,12nm,0.9s						
WMQ	Urumqi	89.95	315	*e*P	P	11 51 16.1	+0.5
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
PDAR	Pinedale Array	94.15	47	LR	LR	12 29 46.6	
	comp=Z,158nm,18.4s,baz=25,slow=33						
MK01	Makanchi Array	94.38	317	*e*P	P	11 51 35.6	-0.4
MK31	Makanchi Array	94.39	317	*e*P	P	11 51 35.4	-0.6
MK32	Makanchi Array	94.39	317	*e*P	P	11 51 36.2	+0.2
MKAR	Makanchi Array	94.39	317	P	P	11 51 36.2	+0.2
	comp=Z,6.3nm,0.8s,baz=96,slow=6.3,SNR=65						
ZAA0	Zalesovo Array	94.50	324	*e*P	P	11 51 35.0	-1.3
	comp=Z,18nm,1.1s						
ZALV	Zalesovo Beam	94.50	324	*e*P	P	11 51 34.9	-1.4
ZALV	Zalesovo Beam	94.50	324	P	P	11 51 35.4	-0.9
	comp=Z,9.4nm,1.0s,baz=108,slow=4.8,SNR=33						
ZAA1	Zalesovo Array	94.50	324	*e*P	P	11 51 35.4	-0.9
MAKZ	Makanchi	94.61	317	*e*P	P	11 51 36.1	-1.0
	comp=Z,24nm,1.1s						
MAKZ	Makanchi	94.61	317	*e*P	P	11 51 36.1	-1.0
MAKZ				pmax	pmax		
	comp=Z,24nm,1.1s						
ANMO	Albuquerque	94.92	55	LR	LR	12 30 38.1	
	comp=Z,302nm,18.0s,baz=274,slow=33						
NVS	Novosibirsk	95.61	325	*i* P	P	11 51 40.9	-0.4
YKA	Yellowknife Ar	95.84	27	P	P	11 51 39.1	-3.1
	comp=Z,0.1nm,0.6s,baz=254,slow=5.5,SNR=3.1						
YKB5	Yellowknife Ar	95.84	27	*e*P	P	11 51 41.5	-0.7
TXAR	Lajitas Array	96.20	61	LR	LR	12 29 03.8	
	comp=Z,204nm,18.9s,baz=0.0,slow=32						
NRIK	Noril'sk	97.16	339	P	P	11 51 46.6	-1.5
	comp=Z,2.1nm,0.4s,baz=112,slow=6.2,SNR=3.8						
NRIK				LR	LR	12 36 34.8	
	comp=Z,124nm,19.0s,baz=18,slow=36						
AAK	Ala-Archa	99.11	312	LR	LR	12 37 46.9	
	comp=Z,138nm,20.2s,baz=270,slow=36						
ARA0	ARCESS Array S	117.39	345	*e*PKPdf	PKPdf	11 57 00.1	-1.0
ARCES	ARCESS Array B	117.39	345	PKP	PKPdf	11 57 00.1	-1.0
	comp=Z,3.8nm,1.0s,baz=79,slow=1.5,SNR=13						
FIA0	FINESS Array S	122.81	338	*e*PKPdf	PKPdf	11 57 11.0	-0.7
FIA0	FINESS Array S	122.81	338	*e*PKIKP	PKPdf	11 57 11.0	-0.7
FINES	FINESS Array B	122.81	338	PKP	PKPdf	11 57 11.0	-0.7
	comp=Z,3.8nm,0.9s,baz=289,slow=5.8,SNR=5.6						
NB200	NORSAR Array S	127.76	345	*e*PKPdf	PKPdf	11 57 20.5	-0.8
NOA	NORSAR Array B	127.76	345	PKP	PKPdf	11 57 20.5	-0.8
	comp=Z,1.7nm,1.0s,baz=39,slow=2.3,SNR=2.4						
AKASG	Malin Array Be	127.83	326	PKP	PKPdf	11 57 20.8	-0.8
	comp=Z,0.5nm,0.4s,baz=58,slow=1.9,SNR=11						
AKBB	Malin Array Si	127.83	326	*e*PKPdf	PKPdf	11 57 20.7	-0.9
AKBB	Malin Array Si	127.83	326	*e*PKIKP	PKPdf	11 57 20.7	-0.9
BR101	Keskin Array S	129.79	312	*e*PKPdf	PKPdf	11 57 25.1	-0.9
BRTR	Keskin Array B	129.79	312	PKP	PKPdf	11 57 25.1	-0.9
	comp=Z,3.1nm,1.1s,baz=90,slow=1.2,SNR=8.8						
BUR04	Bucovina Ar. S	131.71	325	*e*PKPdf	PKPdf	11 57 29.5	+0.2
GERES	GERESS Array B	136.72	333	PKP	PKPdf	11 57 38.1	-0.5
	comp=Z,1.5nm,0.9s,baz=298,slow=2.9,SNR=4.9						
GEA0	GERESS Array S	136.72	333	*e*PKPdf	PKPdf	11 57 38.0	-0.7
KEST	Kesra	148.34	322	*e*PKPdf	PKPdf	11 58 00.2	+0.6
KEST	Kesra	148.34	322	PKPbc	PKPbc	11 58 03.0	0.0
	comp=Z,16nm,1.0s,baz=264,slow=4.2,SNR=7.3						
ESDC	Sonseca Array	151.11	344	PKPbc	PKPbc	11 58 08.9	-0.7
	comp=Z,0.8nm,0.7s,baz=0.0,slow=1.5,SNR=5.0						
TOA0	Torodi Ar. Sit	164.55	276	*e*PKPdf	PKPdf	11 58 20.7	-0.1
TORD	Torodi Ar. Bea	164.55	276	PKP	PKPdf	11 58 20.1	-0.7
	comp=Z,4.1nm,1.0s,baz=355,slow=3.2,SNR=17						
TORD				PKPab	PKPab	11 59 15.3	-0.6
	comp=Z,1.4nm,1.2s,baz=111,slow=3.2,SNR=2.3						
TOA1	Torodi Ar. Sit	164.56	276	*e*PKPdf	PKPdf	11 58 20.1	-0.7
TOA1				*e*PKPab	PKPab	11 59 15.3	-0.6
KIC	Kosan Boka	169.15	239	*e*PKP2	PKPab	11 59 49.9	+14
	comp=Z,36nm,1.2s						
LIC	Lamto	169.31	238	*e*PKP2	PKPab	11 59 50.5	+14
	comp=Z,66nm,1.4s						
TIC	Toumodi	169.53	240	*e*PKP2	PKPab	11 59 51.4	+13

*ISCJB **11** 11:53:53.8±0.9, 6°.64S±0°.07×129°.89E±0°.09, h146^{km}, mb3.4/1, Error ellipse: s-maj=13.0km s-min=9.7km az=6.8*

*IDC **11** 11:53:55.8±2.1, 6°.58S×129°.94E, h145^{km}±24^{km}, mb3.3/1, mb1 3.5/6, mb1mx3.2/29, mbtmp3.9/6, Error ellipse: s-maj=34.9km s-min=19.4km az=96.0*

ISC 11 11:53:53.7±1.0**, 6°.61S**±0°.07×**130°.1E**±0°.1**, h146^{km}, n6, σ4^{s}.10**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.82	12	P	Pn	11 55 19.5	+1.4
	3.5nm,0.3s,baz=187,slow=18,SNR=56						
SIJI				S	Sn	11 56 18.9	-5.2
	10.0nm,0.3s,baz=90,slow=20,SNR=16						
BATI	Baumata	7.30	240	P	Pn	11 55 40.2	+2.4
	6.8nm,0.3s,baz=74,slow=6.0,SNR=4.8						
BATI				S	Sn	11 56 55.4	-4.2
	1.6nm,0.3s,baz=320,slow=7.9,SNR=2.0						
FITZ	Fitzroy Crossi	12.22	200	P	Pn	11 56 43.5	+0.6
	0.5nm,0.3s,baz=26,slow=11,SNR=40						
FITZ				S	Sn	11 58 48.7	-9.3
	0.4nm,0.3s,baz=344,slow=20,SNR=4.3						
WRA	Warramunga Arr	13.87	163	P	Pn	11 57 05.4	+1.1
	0.5nm,0.3s,baz=340,slow=14,SNR=29						
WRA				S	Sn	11 59 27.9	-10
	0.3nm,0.3s,baz=340,slow=19,SNR=4.8						
ASAR	Alice Springs	17.34	168	P	Pn	11 57 50.5	+3.4
	0.4nm,0.3s,baz=350,slow=9.9,SNR=29						
ASAR				S	S	12 00 53.7	-5.8
	0.1nm,0.3s,baz=345,slow=24,SNR=3.4						
MKAR	Makanchi Array	67.96	327	P	P	12 04 38.3	+1.4
	0.4nm,0.5s,baz=117,slow=7.8,SNR=13						

IDC 11 12:07:54.0±1.6**, 11°.77S**×**165°.24E, h0^{km}, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.5**/47**, mbtmp3.6**/5**, ML3.5**/1**, Error ellipse: s-maj=49.2km s-min=29.7km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.31	174	Pn	Pn	12 10 22.7	-0.7
	0.4nm,0.3s,baz=294,slow=20,SNR=2.9						
WRA	Warramunga Arr	30.77	251	P	P	12 14 12.0	+0.4
	0.3nm,0.7s,baz=78,slow=9.2,SNR=3.7						
ASAR	Alice Springs	32.03	244	P	P	12 14 21.9	-0.7
	0.4nm,0.8s,baz=69,slow=9.9,SNR=2.9						
ILAR	Eielson Array	84.35	19	P	P	12 20 27.4	-0.3
	0.4nm,0.6s,baz=242,slow=5.3,SNR=7.7						
MKAR	Makanchi Array	93.70	317	P	P	12 21 13.5	+0.7
	0.3nm,0.7s,baz=97,slow=3.5,SNR=2.7						

*ISCJB **11** 12:10:35.6±0.4, 26°.05N±0°.07×125°.40E±0°.06, h125^{km}±6^{km}, mb3.3/9, Error ellipse: s-maj=14.2km s-min=3.4km az=143.1*

*IDC **11** 12:10:35.3±2.7, 26°.04N×125°.38E, h108^{km}±26^{km}, mb3.1/9, mb1 3.3/9, mb1mx3.2/46, mbtmp3.5/9, Error ellipse: s-maj=24.7km s-min=15.8km az=63.0*

*JMA **11** 12:10:36.8±0.1, 26°.08N×125°.35E, h118^{km}, M3.4*

ISC 11 12:10:36.6±0.8**, 26°.08N**±0°.09×**125°.38E**±0°.07**, h122^{km}**±10^{km}**, n30, σ1^{s}.11**/49**, mb3.3**/9**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	Ikemajima	1.15	186	P	Pn	12 11 00.7	+0.4
JIKM				S	Sn	12 11 18.2	-0.1
JIRB	Irabujima	1.25	189	P	Pn	12 11 01.5	+0.1
JIRB				S	Sn	12 11 19.1	-1.1
JMJ	Miyako jima 2	1.26	183	P	Pn	12 11 01.8	+0.3
JMJ				S	Sn	12 11 20.1	-0.2
JKE	Kume jima 2	1.29	78	P	Pn	12 11 02.6	+0.8
JKE				S	Sn	12 11 21.0	+0.1
JOGS	Gusukube	1.31	179	P	Pn	12 11 02.6	+0.6
JOGS				S	Sn	12 11 20.9	-0.4
JTJ	Tarama	1.55	203	P	Pn	12 11 04.9	+0.1
JTJ				S	Sn	12 11 25.1	-1.1
JAGN	Aguni-jima	1.75	73	P	Pn	12 11 07.9	+0.8
JAGN				S	Sn	12 11 30.4	+0.1
JISG	Ishigakijimahi	1.77	213	P	Pn	12 11 07.5	+0.2
JISG				S	Sn	12 11 29.4	-1.3
JIJ	Ishigaki jima	2.04	214	P	Pn	12 11 10.3	-0.3
JIJ				S	Sn	12 11 34.1	-2.6
JJT3	Tamagusuku3	2.17	88	P	Pn	12 11 13.0	+0.8
JJT3				S	Sn	12 11 39.6	+0.1
JKRS	Kuro-shima	2.21	214	P	Pn	12 11 12.6	-0.2
JKRS				S	Sn	12 11 39.4	-1.1
IRIF	Iriomote-Funau	2.29	221	P	Pn	12 11 13.7	-0.1
IRIF				S	Sn	12 11 41.3	-0.9
JNTH	Nagotoyohara	2.42	79	P	Pn	12 11 16.0	+0.6
JNTH				S	Sn	12 11 43.6	-1.5
HATJ	Hateruma jima	2.46	216	S	Sn	12 11 44.8	-1.5
JIH	Iheya	2.51	67	P	Pn	12 11 17.3	+0.7
JIH				S	Sn	12 11 46.7	-0.6
JOW	Kunigami	2.70	73	P	Pn	12 11 19.2	+0.1
JOW				S	Sn	12 11 49.7	-2.1
JOW	Kunigami	2.70	73	P	Pn	12 11 19.3	+0.1
	0.6nm,0.3s,baz=165,slow=12,SNR=11						
JOW				S	Sn	12 11 50.0	-1.9
	4.9nm,0.3s,baz=84,slow=21,SNR=17						
JYNG	Yonagunijimaku	2.73	234	P	Pn	12 11 20.3	+0.8
JYRO	Yoronjima	2.91	70	P	Pn	12 11 21.8	0.0
JYRO				*e*S	Sn	12 11 54.0	-2.6
JOKE	Okinoerabujima	3.13	65	P	Pn	12 11 24.5	-0.2
JOKE				S	Sn	12 11 59.1	-2.7
JTK	Tokunoshima	3.62	61	P	Pn	12 11 30.8	-0.3
JTK				*e*S	Sn	12 12 10.5	-2.7
SONM	Songino Array	26.36	330	P	P	12 16 02.4	+1.0
	0.2nm,0.4s,baz=147,slow=8.3,SNR=7.3						
MKAR	Makanchi Array	39.74	313	P	P	12 17 57.4	+0.1
	0.2nm,0.3s,baz=101,slow=9.6,SNR=6.2						
ZALV	Zalesovo Beam	40.84	324	P	P	12 18 06.1	-0.1
	0.5nm,0.4s,baz=128,slow=7.3,SNR=3.0						
KURBB	Kurchatov Arra	43.21	317	P	P	12 18 25.7	+0.2
	0.2nm,0.4s,baz=118,slow=6.5,SNR=2.5						
WRA	Warramunga Arr	46.56	168	P	P	12 18 51.7	-0.6
	0.7nm,0.7s,baz=350,slow=8.6,SNR=5.4						
ASAR	Alice Springs	50.13	170	P	P	12 19 19.7	0.0
	0.3nm,0.4s,baz=353,slow=7.7,SNR=11						
ILAR	Eielson Array	65.78	28	P	P	12 21 09.8	+1.4
	0.2nm,0.5s,baz=296,slow=9.1,SNR=6.9						
NOA	NORSAR Array B	78.30	333	P	P	12 22 22.4	-0.6
	0.1nm,0.4s,baz=64,slow=9.3,SNR=2.8						
YKA	Yellowknife Ar	79.73	24	P	P	12 22 31.1	+0.4
	0.8nm,1.0s,baz=303,slow=5.5,SNR=7.8						

IDC 11 12:12:46.4±10.0**, 53°.96N**×**159°.30E, h0^{km}, Error ellipse: s-maj=97.1km s-min=25.7km az=48.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I44RU	PETROPAVLOVSK-	1.28	228	*i*		12 20 30.0	
	baz=47,slow=343,SNR=0.8						
PETK	Petropavlovsk-	1.28	229	Pg	Pg	12 13 10.8	0.0
	0.1nm,0.3s,baz=49,slow=15,SNR=4.2						
I53US	FAIRBANKS INFR	28.13	46	*i*		15 05 40.0	
	baz=270,slow=327,SNR=0.8						

DJA 11 12:12:54.4±0.4**, 9°S**±6°×**11°8E**±°**, h109^{km}**±5^{km}**, M3.5**/9**, MLv3.5**/9**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.56	254	P	Pn	12 13 12.7	+1.1
PLAI				S	Sn	12 13 26.6	+2.1
WSI	Waingapu	2.19	117	P	Pn	12 13 30.2	+0.4
BASI	Baing, Sumba	2.71	125	P	Pn	12 13 36.7	+0.2
DNP	Denpasar	3.08	270	P	Pn	12 13 41.8	+0.4
SRBI	Singaraja	3.13	280	P	Pn	12 13 42.3	+0.2
EDFI	Ende, Flores	3.33	92	P	Pn	12 13 45.2	+0.3
BKSI	Bulukumba	3.78	28	P	Pn	12 13 50.5	-0.3
JAGI	Jajag, Banyuwa	4.13	272	P	Pn	12 13 54.8	-0.7

MEX 11 12:14:01.7±0.8**, 16°.26N**×**94°.21W, h90^{km}**±41^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	1.05	322	*e*P	Pn	12 14 19.9	-2.1
CMIG				*i* S	Sn	12 14 35.7	-1.5
PCIG		1.10	120	*e*P	Pn	12 14 21.9	-0.6
HUIG	Huatulco	1.89	255	*i* P	Pn	12 14 31.3	-1.2
HUIG				*i* S	Sn	12 14 55.2	-0.7
CCIG	Comitan	1.99	89	*i* P	Pn	12 14 32.9	-1.1
CCIG				*e*S	Sn	12 14 57.2	-1.2
VHO	Vista Hermosa	2.55	289	*e*P	Pn	12 14 41.0	-0.4
VHO				*e*S	Sn	12 15 10.3	-1.6

*ISCJB **11** 12:15:01.7±0.6, 31°.73N±0°.04×103°.92E±0°.08, h15^{km}, mb3.3/6, Error ellipse: s-maj=9.8km s-min=5.7km az=3.9*

*IDC **11** 12:15:01.2±1.3, 31°.75N×103°.80E, h0^{km}, mb3.4/6, mb1 3.5/8, mb1mx3.3/54, mbtmp3.3/8, ML3.2/2, Error ellipse: s-maj=51.4km s-min=24.3km az=66.0*

*BJI **11** 12:15:06.1, 31°.74N×104°.03E, h23^{km}, ML3.5/9*

ISC 11 12:15:03.2±0.7**, 31°.82N**±0°.05×**103°.84E**±0°.07**, h15^{km}, n12, σ2^{s}.45**/18**, mb3.5**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	0.91	184	Pg	Pn	12 15 22.0	+0.4
CD2				Sg	Sb	12 15 30.7	-2.0
CD2				smax	smax		
	comp=N,1µm,0.6s						
CD2				smax	smax		
	comp=E,1µm,0.4s						
XAN	Xi'an	4.81	61	Pn	Pn	12 16 14.8	-0.4
XAN				Pg	Pg	12 16 31.0	-4.4
XAN				Sn	Sn	12 17 12.5	+1.8
XAN				Sg	Sb	12 17 28.0	+3.0
XAN				smax	smax		
	comp=N,74nm,0.8s						
XAN				smax	smax		
	comp=E,82nm,0.9s						
GYA	Guiyang	5.89	154	*e*Pn	Pn	12 16 32.2	+2.1
GYA				Sn	Sn	12 17 33.8	-3.5
GYA				Sg	Sb	12 18 01.5	+5.5
GYA				smax	smax		
	comp=N,50nm,0.7s						
GYA				smax	smax		
	comp=E,50nm,0.7s						
CMAR	Chiang Mai Arr	14.02	200	Pn	Pn	12 18 21.0	-0.4
	0.1nm,0.3s,baz=13,slow=12,SNR=3.0						
SONM	Songino Array	16.11	6	Pn	P	12 18 51.4	-1.1
	0.0nm,0.3s,baz=186,slow=12,SNR=3.3						
WMQ	Urumqi	17.46	318	*e*P	P	12 19 08.5	+1.1
MKAR	Makanchi Array	22.29	318	P	P	12 19 59.2	-0.8
	0.2nm,0.6s,baz=127,slow=12,SNR=1.3						
ZALV	Zalesovo Beam	25.98	334	P	P	12 20 36.3	+1.2
	0.5nm,0.5s,baz=132,slow=10,SNR=1.6						
KURBB	Kurchatov Arra	26.53	322	P	P	12 20 40.3	+0.1
	0.3nm,0.3s,baz=126,slow=9.4,SNR=1.7						
FINES	FINESS Array B	56.85	326	P	P	12 24 48.4	+1.6
	0.9nm,0.7s,baz=77,slow=6.0,SNR=1.4						
WRA	Warramunga Arr	59.19	146	P	P	12 25 03.7	-0.1
	0.3nm,0.7s,baz=339,slow=7.3,SNR=2.4						
YKA	Yellowknife Ar	81.07	17	P	P	12 27 17.7	+0.3
	0.1nm,0.5s,baz=326,slow=5.4,SNR=2.6						

*IDC **11** 12:18:19.1±2.2, 1°.51N×93°.60E, h0^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.4/47, mbtmp3.5/5, ML3.9/2, Error ellipse: s-maj=58.6km s-min=28.1km az=55.0*

*DJA **11** 12:18:22.8±2.5, 2°N±11°×9°3E±4°7, h30^{km}±88^{km}, M4.3/7, mb4.5/3, mB5.1/1, MLv4.3/7, Mw(mB)4.5/1*

*ISCJB **11** 12:18:27.5±1.5, 2°.1N±0°.1×93°.9E±0°.1, h33^{km}, mb3.4/3, Error ellipse: s-maj=21.8km s-min=11.1km az=30.0*

ISC 11 12:18:28.6±1.6**, 2°.2N**±0°.1×**93°.7E**±0°.1**, h35^{km}, n12, σ2^{s}.13**/14**, mb3.5**/3**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	2.63	85	P	Pn	12 19 07.4	-1.2
SNSI				S	Sn	12 19 42.5	+3.2
TPTI		3.63	73	P	Pn	12 19 20.9	-1.4
GSI	Gunungsitoli	3.97	103	P	Pn	12 19 26.0	-1.0
GSI				S	Sn	12 20 15.3	+2.9
KCSI	Kotacane, Aceh	4.27	72	P	Pn	12 19 29.8	-1.4
PBSI	Pulau Batu	5.09	116	P	Pn	12 19 41.1	-1.4
	101nm,0.6s						
PSI	Prapat	5.25	83	Pn	Pn	12 19 42.2	-2.6
	1.3nm,0.3s,baz=0.0,slow=21,SNR=6.3						
PSI				Sn	Sn	12 20 42.2	-1.9
	0.8nm,0.3s,baz=180,slow=20,SNR=3.2						
MNSI	Mandailing Nat	6.04	103	P	Pn	12 19 54.1	-1.3
CMAR	Chiang Mai Arr	16.95	17	P	P	12 22 24.7	-0.2
	0.4nm,0.3s,baz=220,slow=13,SNR=6.0						
MKAR	Makanchi Array	45.52	349	P	P	12 26 45.5	+0.7
	0.2nm,0.5s,baz=168,slow=8.6,SNR=3.4						
WRA	Warramunga Arr	45.54	121	P	P	12 26 38.5	-6.7
	0.5nm,0.8s,baz=301,slow=8.5,SNR=4.5						
SONM	Songino Array	46.77	12	P	P	12 26 56.7	+2.1
	0.5nm,0.7s,baz=192,slow=9.1,SNR=5.4						
TXAR	Lajitas Array	144.50	27	PKPbc	PKPab	12 37 58.0	-2.5
	0.1nm,0.5s,baz=300,slow=1.8,SNR=2.4						

IDC 11 12:33:24.0±5.0**, 16°.29S**×**176°.12W, h0^{km}, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.6**/49**, mbtmp4.0**/4**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.9**/32**, Error ellipse: s-maj=151.8km s-min=99.1km az=155.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	41.33	240	P	P	12 41 12.3	+0.6
	2.1nm,0.9s,baz=96,slow=9.9,SNR=5.2						
WRA	Warramunga Arr	47.10	258	P	P	12 41 57.4	-0.8
	0.4nm,0.4s,baz=95,slow=7.6,SNR=17						
ASAR	Alice Springs	47.35	253	P	P	12 41 59.8	-0.3
	4.2nm,0.4s,baz=89,slow=7.7,SNR=171						
ASAR				PcP	PcP	12 43 30.7	-0.4
	0.2nm,0.4s,baz=107,slow=3.8,SNR=4.7						
FITZ	Fitzroy Crossi	55.47	259	P	P	12 43 01.3	+0.3
	0.8nm,0.8s,baz=79,slow=5.2,SNR=4.0						
FITZ				LR	LR	13 05 54.9	
	comp=Z,61nm,19.3s,baz=98,slow=35						

*IDC **11** 12:38:59.5±1.2, 21°.96N×96°.27W, h0^{km}, mb3.6/8, mb1 3.9/12, mb1mx3.7/40, mbtmp3.6/12, ML3.8/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/35, Error ellipse: s-maj=52.5km s-min=17.1km az=52.0*

*MEX **11** 12:39:07.8±1.7, 21°.50N×96°.47W, h16^{km}±127^{km}, MD4.2*

ISC 11 12:38:59.5±0.7**, 21°.65N**±0°.05×**96°.81W**±0°.07**, h10^{km}, n16, σ2^{s}.64**/20**, mb3.7**/8**, Gulf of Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVIG	Laguna Verde	1.95	169	*i* P	Pn	12 39 34.3	+1.6
LVIG				*e*S	Sn	12 39 54.9	-2.4
DEIG	Demacu	2.48	238	*e*P	Pg	12 39 46.7	-0.3
DEIG				*e*S	Sg	12 40 19.3	+0.1
PPM	Popocatepetl	3.08	214	*e*P	Pb	12 39 56.1	+1.3
PPM				*i* S	Sn	12 40 22.3	-3.7
CMIG	Matias Romero	4.88	158	Pn	Pn	12 40 14.6	+1.5
	9.7nm,0.3s,baz=340,slow=10,SNR=59						
CMIG				Sn	Sn	12 41 07.1	-2.6
	7.7nm,0.3s,baz=215,slow=21,SNR=12						
APG	El Apazote	8.94	137	Pn	Pn	12 41 08.8	-0.2
	1.5nm,0.3s,baz=239,slow=21,SNR=8.9						
APG				Sn	Sn	12 42 34.9	-15
	1.2nm,0.3s,baz=192,slow=20,SNR=3.1						
TXAR	Lajitas Array	9.84	322	Pn	Pn	12 41 24.9	+3.7
	0.2nm,0.3s,baz=142,slow=15,SNR=17						
TXAR				Sn	Sn	12 43 05.0	-6.8
	0.1nm,0.3s,baz=112,slow=14,SNR=2.4						
LPIG	La Paz	12.68	284	LR	LR	12 47 48.2	
	comp=Z,87nm,21.5s,baz=162,slow=40						
ANMO	Albuquerque	15.72	329	Pn	P	12 42 44.0	-1.4
	0.1nm,0.3s,baz=140,slow=16,SNR=2.2						
PDAR	Pinedale Array	23.60	336	P	P	12 44 11.5	+0.7
	0.1nm,0.4s,baz=116,slow=12,SNR=2.4						
ELK	Elko	24.62	325	P	P	12 44 23.4	+2.9
	0.3nm,0.4s,baz=104,slow=4.2,SNR=2.8						
NVAR	Mina Array Bea	24.92	317	P	P	12 44 26.6	+3.5
	0.8nm,0.7s,baz=146,slow=9.8,SNR=3.6						
SDV	Santo Domingo	28.20	113	P	P	12 44 52.3	-0.6
	2.0nm,0.5s,baz=282,slow=9.3,SNR=3.5						
YKA	Yellowknife Ar	42.60	348	P	P	12 46 54.5	-1.0
	0.4nm,0.5s,baz=151,slow=8.1,SNR=11						
INK	Inuvik	51.85	344	P	P	12 48 07.6	+0.1
	1.9nm,1.2s,baz=132,slow=6.3,SNR=6.0						
ILAR	Eielson Array	54.04	336	P	P	12 48 24.6	+0.8
	0.7nm,0.7s,baz=142,slow=4.5,SNR=12						
ARCES	ARCESS Array B	80.30	18	P	P	12 51 09.4	-1.0
	2.8nm,0.9s,baz=305,slow=6.4,SNR=3.5						

*IDC **11** 12:50:36.7±2.2, 29°.25N×141°.21E, h0^{km}, mb3.6/6, mb1 3.7/8, mb1mx3.4/53, mbtmp3.6/8, ML3.1/2, Error ellipse: s-maj=97.0km s-min=17.7km az=69.0*

*ISCJB **11** 12:50:37.6±1.1, 29°.64N±0°.08×142°.0E±0°.3, h35^{km}, mb3.6/6, Error ellipse: s-maj=41.2km s-min=6.8km az=168.1*

ISC 11 12:50:39.0±1.2**, 29°.62N**±0°.08×**142°.1E**±0°.3**, h35^{km}, n9, σ1^{s}.35**/11**, mb3.7**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	2.52	179	Pn	Pn	12 51 16.6	-0.9
	9.0nm,0.3s,baz=332,slow=17,SNR=9.9						
JCJ				Sn	Sn	12 51 49.0	+2.0
	24nm,0.3s,baz=306,slow=23,SNR=6.2						
MJAR	Matsushiro Arr	7.64	335	Pn	Pn	12 52 29.2	+1.3
	0.2nm,0.3s,baz=155,slow=8.0,SNR=8.6						
MJAR				Sn	Sn	12 53 51.7	-1.6
	0.0nm,0.3s,baz=235,slow=29,SNR=3.2						
ASAJ	Asahikawa	14.47	1	Pn	Pn	12 54 01.9	+0.7
	0.1nm,0.3s,baz=242,slow=15,SNR=2.9						
ZALV	Zalesovo Beam	47.58	318	P	P	12 59 11.3	+0.3
	0.3nm,0.4s,baz=104,slow=6.1,SNR=2.5						
MKAR	Makanchi Array	48.87	308	P	P	12 59 20.6	-0.6
	0.2nm,0.6s,baz=89,slow=8.2,SNR=4.3						
WRA	Warramunga Arr	49.85	190	P	P	12 59 27.7	-1.1
	0.3nm,0.3s,baz=7.6,slow=7.9,SNR=13						
KURBB	Kurchatov Arra	51.27	313	P	P	12 59 40.1	+0.8
	0.3nm,0.2s,baz=90,slow=8.5,SNR=4.2						
ASAR	Alice Springs	53.57	189	P	P	12 59 55.6	-1.0
	0.1nm,0.3s,baz=7.6,slow=6.4,SNR=4.4						
BVAR	Borovoye Array	56.18	316	P	P	13 00 16.5	+1.4
	0.4nm,0.4s,baz=87,slow=5.9,SNR=4.4						

*ISCJB **11** 12:50:58.7±0.2, 10°.90S±0°.04×165°.70E±0°.05, h10^{km}, mb4.5/52, Error ellipse: s-maj=6.5km s-min=5.2km az=177.2*

*IDC **11** 12:50:58.9±0.6, 10°.82S×165°.81E, h0^{km}, mb4.3/21, mb1 4.4/23, mb1mx4.3/45, mbtmp4.3/23, ML4.7/2, MS3.5/4,*

Ms1 3.5/4, ms1mx3.1/28, Error ellipse: s-maj=19.7km s-min=14.1km az=109.0

*BJI **11** 12:50:59.8, 10°.50S×165°.78E, h9^{km}, mB5.0/18, mb4.5/29, Ms4.6/1*

*NEIC **11** 12:51:00.4±0.1, 10°.85S×165°.75E, h10^{km}, mb4.7/30, Error ellipse: s-maj=5.0km s-min=3.3km az=99.0*

ISC 11 12:51:00.3±0.4**, 10°.89S**±0°.06×**165°.80E**±0°.07**, h10^{km}, n101, σ0^{s}.89**/103**, mb4.5**/52**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.94	284	eP	Pn	12 52 26.0	-2.3
HNR	Honiara	5.94	284	eP	Sn	12 53 40.0	+3.5
HNR	Honiara	5.94	284	ePn	Pn	12 52 28.3	-0.1
HNR				eSn	Sn	12 53 35.3	-1.2
HNR	Honiara	5.94	284	Pn	Pn	12 52 29.1	+0.8
	13nm,0.3s,baz=223,slow=2.8,SNR=9.1						
HNR				Sn	Sn	12 53 35.3	-1.2
	baz=58,slow=19,SNR=1.5						
HNR				LR	LR	12 55 08.1	
	comp=Z,477nm,18.1s,baz=71,slow=42						
MARNC	Mare, Loyalty	10.75	169	ePn	Pn	12 53 35.2	+0.8
DZM	Mont Dzumac	11.14	177	ePn	Pn	12 53 41.7	+1.9
DZM				Sn	Sn	12 55 42.8	-1.8
DZM	Mont Dzumac	11.14	177	Pn	Pn	12 53 42.2	+2.4
	7.1nm,0.3s,baz=312,slow=12,SNR=89						
DZM				Sn	Sn	12 55 42.8	-1.8
	0.3nm,0.3s,baz=137,slow=19,SNR=2.2						
DZM				LR	LR	12 56 37.1	
	comp=Z,153nm,20.0s,baz=28,slow=30						
OUENC	Ouen Island, N	11.51	175	ePn	Pn	12 53 46.2	+1.4
PINNC	Pines Island,	11.77	173	ePn	Pn	12 53 49.7	+1.4
TARA	Tarawa	14.07	31	ePn	Pn	12 54 20.3	+0.4
MANU	Manus Island	20.30	294	eP	P	12 55 36.0	-0.5
	62nm,1.0s						
CTA	Charters Tower	20.92	242	P	Pn	12 55 45.0	-0.8
	11nm,0.9s,baz=77,slow=14,SNR=8.7						
CTAO	Charters Tower	20.92	242	eP	P	12 55 43.5	+0.2
	9.9nm,0.8s						
OUZ	Omahuta	25.24	165	eP	P	12 56 26.9	+0.4
	14nm,1.2s						
URZ	Urewera	29.08	161	eP	P	12 57 01.2	+0.2
	21nm,1.4s						
URZ	Urewera	29.08	161	P	P	12 57 02.1	+1.1
	2.3nm,0.5s,baz=343,slow=14,SNR=3.1						
URZ				LR	LR	13 06 21.7	
	comp=Z,146nm,20.1s,baz=24,slow=32						
H11S2	WAKE ISLAND Hy	29.20	2	T	T	13 27 23.0	
	baz=181,slow=76,SNR=141						
H11S3	WAKE ISLAND Hy	29.21	2	T	T	13 27 23.3	
	baz=181,slow=76,SNR=63						
H11S1	WAKE ISLAND Hy	29.22	2	T	T	13 27 24.7	
	baz=181,slow=76,SNR=75						
BKZ	Black Stump Fm	29.73	163	eP	P	12 57 06.9	0.0
	33nm,1.5s						
H11N1	WAKE ISLAND Hy	30.42	2	T	T	13 28 54.6	
	baz=182,slow=76,SNR=66						
H11N3	WAKE ISLAND Hy	30.43	2	T	T	13 28 57.7	
	baz=182,slow=76,SNR=37						
H11N2	WAKE ISLAND Hy	30.44	2	T	T	13 28 56.0	
	baz=182,slow=76,SNR=44						
STKA	Stephens Creek	30.59	223	eP	P	12 57 15.3	+0.8
	1.8nm,1.3s						
STKA	Stephens Creek	30.59	223	P	P	12 57 16.4	+1.9
	3.2nm,1.0s,baz=346,slow=15,SNR=2.7						
BFZ	Birch Farm	31.08	165	eP	P	12 57 19.1	+0.4
	113nm,1.5s						
WRAB	Tennant Creek	31.57	250	eP	P	12 57 23.7	+0.4
	2.7nm,0.8s						
WR1	Warramunga Arr	31.59	250	eP	P	12 57 22.5	-0.9
	3.7nm,0.9s						
WRA	Warramunga Arr	31.59	250	P	P	12 57 22.5	-1.0
	2.1nm,0.9s,baz=80,slow=8.9,SNR=12						
WRA				PcP	PcP	13 00 16.2	+0.2
	0.8nm,0.6s,baz=76,slow=3.2,SNR=5.7						
TOO	Toolangi	32.23	211	eP	P	12 57 29.3	+0.3
	16nm,1.5s						
FOZ	Fox Glacier	32.71	175	eP	P	12 57 33.8	+0.8
	166nm,1.7s						
AS01	Alice Springs	32.87	243	eP	P	12 57 34.1	-0.6
AS31	Alice Springs	32.91	243	eP	P	12 57 34.3	-0.8
	1.4nm,0.7s						
ASAR	Alice Springs	32.91	243	P	P	12 57 34.5	-0.5
	4.2nm,0.8s,baz=67,slow=9.9,SNR=63						
ASAR				PcP	PcP	13 00 19.9	+0.3
	1.4nm,0.9s,baz=82,slow=3.3,SNR=8.0						
RPZ	Rata Peaks	33.02	173	eP	P	12 57 36.0	+0.2
	36nm,1.3s						
RPZ	Rata Peaks	33.02	173	P	P	12 57 36.0	+0.2
	22nm,1.1s,baz=52,slow=10,SNR=3.5						
FITZ	Fitzroy Crossi	39.47	255	eP	P	12 58 30.5	-0.7
	5.1nm,0.9s						
MJAR	Matsushiro Arr	53.85	332	P	P	13 00 23.2	-0.5
	3.7nm,0.8s,baz=172,slow=9.4,SNR=5.9						
MAJO	Matsushiro	53.85	332	eP	P	13 00 23.2	-0.5
ASAJ	Asahikawa	58.66	341	P	P	13 00 58.1	+0.3
	10nm,0.9s,baz=74,slow=15,SNR=6.2						
NJ2	Nanjing	61.94	315	eP	P	13 01 19.8	-0.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,1.1s						
USRK	Ussuriysk Ar.	62.83	333	P	P	13 01 26.9	+0.7
	3.5nm,0.9s,baz=156,slow=8.4,SNR=4.8						
PETK	Petropavlovsk-	64.11	355	P	P	13 01 35.8	+1.2
	1.9nm,0.8s,baz=163,slow=5.4,SNR=4.2						
PETK				LR	LR	13 27 11.8	
	comp=Z,26nm,18.4s,baz=141,slow=34						
PEA1	Petropavlovsk-	64.12	355	eP	P	13 01 35.8	+1.2
CN2	Changchun	65.63	329	eP	P	13 01 45.1	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	70.05	312	P	P	13 02 12.6	-0.2
XAN				pP	sP	13 02 19.5	+2.4
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,150nm,4.7s						
HHC	Hu-ho-hao-te	71.74	320	eP	P	13 02 23.0	0.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,89nm,7.3s						
CM01	Chiang Mai Arr	72.07	293	eP	P	13 02 25.1	-0.1
CMAR	Chiang Mai Arr	72.09	293	P	P	13 02 25.7	+0.3
	1.4nm,1.0s,baz=114,slow=4.2,SNR=6.6						
CD2	Chengdu	72.55	307	eP	P	13 02 28.0	0.0
SEY	Seymchan	74.32	354	P	P	13 02 37.8	+0.1
	0.8nm,0.6s,baz=164,slow=11,SNR=4.3						
LZH	Lanzhou	74.69	312	eP	P	13 02 41.8	+1.2
LZH				pP	PcP	13 02 50.2	-4.6
LZH				sP	sP	13 02 54.6	+10
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
GAMB	Gambell	76.40	10	eP	P	13 02 50.2	+0.6
	7.4nm,0.9s						
SONA0	Songino Array	78.57	324	eP	P	13 03 02.0	-0.2
SONM	Songino Array	78.57	324	P	P	13 03 02.0	-0.2
	1.8nm,0.9s,baz=141,slow=6.4,SNR=12						
SONA1	Songino Array	78.57	324	eP	P	13 03 01.6	-0.6
BILL	Bilibino	78.72	0	eP	P	13 03 02.7	+0.3
	6.9nm,0.9s						
GTA	Gaotai	78.98	314	⇑P	P	13 03 05.9	+1.2
GTA				pP	sP	13 03 10.0	+1.0
GTA				sP	PcP	13 03 12.9	-0.4
GTA				S	S	13 13 04.3	+0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,6.8s						
GTA				LR	LR		
	comp=N,100nm,20.6s						
GTA				LR	LR		
	comp=E,140nm,19.4s						
QSPA	South Pole Qui	79.12	180	eP	P	13 03 04.3	-0.7
	3.8nm,1.1s						
TRF	Thorofare Moun	81.35	18	eP	P	13 03 17.2	+0.2
	30nm,1.7s						
RND	Reindeer	81.77	19	eP	P	13 03 19.0	-0.1
	9.9nm,1.2s						
RDOG	Red Dog Mine	81.86	11	eP	P	13 03 19.8	+0.5
	5.3nm,0.8s						
DHY	Denali Highway	82.02	20	eP	P	13 03 20.9	+0.4
	11nm,1.4s						
BWN	Browne	82.13	18	eP	P	13 03 21.9	+1.1
	21nm,1.2s						
IM3	Indian Mountai	82.26	16	eP	P	13 03 21.7	+0.2
MLY	Manley	82.37	17	eP	P	13 03 23.4	+1.2
	4.4nm,1.2s						
WRH	Wood River Hil	82.76	18	eP	P	13 03 24.4	+0.2
	7.5nm,1.0s						
MDM	Murphy Dome	83.06	18	eP	P	13 03 25.4	-0.3
	9.2nm,1.0s						
HDA	Harding Lake	83.08	19	eP	P	13 03 25.7	-0.1
	15nm,0.9s						
COLA	College	83.12	18	eP	P	13 03 25.8	-0.2
	11nm,0.8s						
IL1	Eielson Array	83.35	18	eP	P	13 03 26.9	-0.3
ILAR	Eielson Array	83.35	18	P	P	13 03 26.9	-0.4
	3.7nm,0.8s,baz=232,slow=5.3,SNR=49						
ILB	Eielson Array	83.35	18	eP	P	13 03 27.3	+0.1
DOT	Dot Lake	83.51	20	eP	P	13 03 28.3	+0.2
	6.3nm,1.0s						
SCRK	Sand Creek	83.75	20	eP	P	13 03 29.7	+0.2
	3.9nm,0.8s						
DAWY	Dawson	85.39	21	eP	P	13 03 38.3	+0.6
	3.7nm,1.0s						
NV01	Mina Array Sit	85.88	50	eP	P	13 03 40.7	-0.2
NVAR	Mina Array Bea	85.88	50	P	P	13 03 41.1	+0.2
	1.4nm,0.9s,baz=234,slow=8.8,SNR=6.5						
TIXI	Tiksi	85.94	349	P	P	13 03 39.9	-0.2
	0.8nm,0.5s,baz=119,slow=10,SNR=3.5						
WMQ	Urumqi	89.02	315	eP	P	13 03 55.7	0.0
INK	Inuvik	89.73	19	P	P	13 03 57.9	-0.5
	2.1nm,1.2s,baz=236,slow=3.6						
PDAR	Pinedale Array	93.41	47	P	P	13 04 17.2	+0.8
	0.4nm,0.9s,baz=288,slow=0.9,SNR=3.2						
MK01	Makanchi Array	93.43	317	eP	P	13 04 15.7	-0.4
MK31	Makanchi Array	93.44	317	eP	P	13 04 15.8	-0.4
MK32	Makanchi Array	93.44	317	eP	P	13 04 16.0	-0.1
MKAR	Makanchi Array	93.44	317	eP	P	13 04 15.8	-0.3
	11nm,0.8s						
MKAR	Makanchi Array	93.44	317	P	P	13 04 16.0	-0.1
	2.0nm,0.8s,baz=93,slow=6.2,SNR=22						
ZALV	Zalesovo Beam	93.46	324	eP	P	13 04 14.6	-1.4
ZALV	Zalesovo Beam	93.46	324	P	P	13 04 14.9	-1.1
	1.1nm,0.6s,baz=124,slow=3.3,SNR=7.5						
ZAA1	Zalesovo Array	93.46	324	eP	P	13 04 14.9	-1.1
MAKZ	Makanchi	93.65	317	eP	P	13 04 16.6	-0.6
	2.2nm,0.9s						
YKA	Yellowknife Ar	94.81	27	P	P	13 04 20.6	-1.3
	0.3nm,0.6s,baz=260,slow=4.5,SNR=7.3						
YKB5	Yellowknife Ar	94.81	27	eP	P	13 04 20.7	-1.3
ARA0	ARCESS Array S	116.19	345	ePKPdf	PKiKP	13 09 42.7	-0.7
ARCES	ARCESS Array B	116.19	345	PKP	PKiKP	13 09 42.7	-0.7
	1.0nm,0.6s,baz=69,slow=1.5,SNR=11						
NB200	NORSAR Array S	126.56	345	ePKPdf	PKPdf	13 10 02.6	-1.0
NOA	NORSAR Array B	126.56	345	PKP	PKPdf	13 10 02.6	-1.0
	0.3nm,0.6s,baz=60,slow=6.1,SNR=2.6						
GERES	GERESS Array B	135.58	334	PKP	PKPdf	13 10 20.2	-0.9
	0.5nm,0.6s,baz=43,slow=1.9,SNR=3.5						
ESDC	Sonseca Array	149.92	344	PKPbc	PKPbc	13 10 51.3	-0.1
	0.8nm,0.6s,baz=23,slow=2.8,SNR=4.2						
TORD	Torodi Ar. Bea	164.29	280	PKP	PKPdf	13 11 04.7	-0.5
	0.4nm,0.6s,baz=284,slow=1.2,SNR=3.9						
TORD				PKPab	PKPab	13 11 59.9	+0.6
	1.2nm,1.1s,baz=104,slow=6.1,SNR=4.1						
TOA1	Torodi Ar. Sit	164.29	280	ePKPdf	PKPdf	13 11 04.7	-0.5
TOA1				ePKPab	PKPab	13 11 59.9	+0.6

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*IDC **11** 12:56:29.9±0.7, 11°.86S×165°.33E, h0^{km}, mb4.0/14, mb1 4.2/16, mb1mx4.0/45, mbtmp4.0/16, ML4.3/2, Error ellipse: s-maj=22.3km s-min=18.5km az=144.0*

*NEIC **11** 12:56:31.4±0.2, 11°.88S×165°.33E, h10^{km}, mb4.6/8, Error ellipse: s-maj=7.7km s-min=6.1km az=137.0*

*ISCJB **11** 12:56:33.3±0.4, 11°.95S±0°.07×165°.20E±0°.06, h33^{km}, mb4.1/22, Error ellipse: s-maj=9.9km s-min=8.1km az=4.5*

ISC 11 12:56:35.1±0.6**, 11°.90S**±0°.09×**165°.27E**±0°.09**, h35^{km}, n39, σ0^{s}.70**/41**, mb4.2**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.77	295	ePn	Pn	12 57 58.2	-0.2
HNR				eSn	Sn	12 59 02.8	-0.6
HNR	Honiara	5.77	295	Pn	Pn	12 57 57.1	-1.3
	11nm,0.3s,baz=144,slow=14,SNR=2.8						
HNR				Sn	Sn	12 59 03.0	-0.4
	baz=210,slow=20,SNR=3.9						
DZM	Mont Dzumac	10.18	174	ePn	Pn	12 58 58.4	-0.5
DZM	Mont Dzumac	10.18	174	Pn	Pn	12 58 58.1	-0.8
	1.6nm,0.3s,baz=284,slow=13,SNR=15						
URZ	Urewera	28.30	160	P	P	13 02 26.1	+0.7
	3.1nm,0.7s,baz=34,slow=9.3,SNR=1.8						
WR1	Warramunga Arr	30.76	251	eP	P	13 02 47.6	+0.2
WRA	Warramunga Arr	30.76	251	P	P	13 02 47.6	+0.2
	1.2nm,0.7s,baz=81,slow=9.1,SNR=11						
AS01	Alice Springs	31.95	244	eP	P	13 02 57.4	-0.6
AS31	Alice Springs	32.00	244	eP	P	13 02 58.0	-0.4
ASAR	Alice Springs	32.00	244	P	P	13 02 57.9	-0.5
	0.9nm,0.6s,baz=69,slow=9.4,SNR=16						
FITZ	Fitzroy Crossi	38.71	256	eP	P	13 03 56.8	+0.7
	7.1nm,1.4s						
FITZ	Fitzroy Crossi	38.71	256	P	P	13 03 56.2	+0.1
	2.2nm,0.7s,baz=82,slow=10,SNR=8.4						
CM01	Chiang Mai Arr	72.00	294	eP	P	13 07 55.8	-0.1
CMAR	Chiang Mai Arr	72.02	294	P	P	13 07 58.2	+2.1
	0.6nm,0.4s,baz=124,slow=4.2,SNR=5.1						
SEY	Seymchan	75.27	354	P	P	13 08 14.4	+0.3
	0.5nm,0.6s,baz=142,slow=6.2,SNR=3.6						
GAMB	Gambell	77.49	10	eP	P	13 08 26.6	0.0
	3.0nm,1.3s						
QSPA	South Pole Qui	78.11	180	eP	P	13 08 30.7	+0.2
	8.1nm,1.5s						
SONA0	Songino Array	79.07	324	eP	P	13 08 37.1	+1.1
SONM	Songino Array	79.07	324	P	P	13 08 37.1	+1.1
	0.1nm,0.3s,baz=98,slow=6.1,SNR=3.6						
IM3	Indian Mountai	83.37	16	eP	P	13 08 58.9	+0.7
WRH	Wood River Hil	83.88	18	eP	P	13 09 00.9	0.0
	4.4nm,1.0s						
MDM	Murphy Dome	84.18	18	eP	P	13 09 02.6	+0.2
	3.0nm,1.0s						
HDA	Harding Lake	84.20	19	eP	P	13 09 02.5	-0.1
	6.7nm,0.9s						
RIDG	Independ'e Rid	84.43	20	eP	P	13 09 04.0	+0.2
	20nm,1.4s						
ILAR	Eielson Array	84.47	19	P	P	13 09 03.9	+0.1
	1.3nm,0.6s,baz=244,slow=5.1,SNR=40						
ILB	Eielson Array	84.47	19	eP	P	13 09 04.0	+0.1
SCRK	Sand Creek	84.87	20	eP	P	13 09 06.0	0.0
	9.1nm,1.2s						
NV01	Mina Array Sit	86.93	50	eP	P	13 09 16.6	-0.4
NVAR	Mina Array Bea	86.93	50	P	P	13 09 17.0	0.0
	0.7nm,0.7s,baz=232,slow=9.6,SNR=5.3						
LON	Longmire	87.20	41	eP	P	13 09 17.9	0.0
	6.5nm,1.5s						
MK32	Makanchi Array	93.82	317	eP	P	13 09 49.6	+0.8
MKAR	Makanchi Array	93.82	317	P	P	13 09 49.6	+0.8
	0.7nm,0.7s,baz=93,slow=6.1,SNR=8.1						
ZALV	Zalesovo Beam	93.97	324	P	P	13 09 49.1	-0.2
	0.5nm,0.5s,baz=48,slow=2.1,SNR=3.3						
ZAA1	Zalesovo Array	93.97	324	eP	P	13 09 49.1	-0.2
PDAR	Pinedale Array	94.47	47	P	P	13 09 51.8	-0.4
	0.4nm,0.8s,baz=225,slow=3.7,SNR=3.4						
YKA	Yellowknife Ar	95.94	27	P	P	13 09 56.9	-1.2
	0.2nm,0.5s,baz=258,slow=4.5,SNR=6.2						
YKB5	Yellowknife Ar	95.94	27	eP	P	13 09 56.5	-1.5
LTX	Lajitas	96.65	62	eP	P	13 10 01.7	-0.5
TXAR	Lajitas Array	96.65	62	P	P	13 10 01.7	-0.5
	0.2nm,0.7s,baz=5.2,slow=2.0,SNR=2.6						

MEX 11 13:15:28.8±0.4**, 13°.55N×92°.42W, h5^{km}**±313^{km}**, MD4.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		2.27	340	eP	Pn	13 16 04.0	-3.1
PCIG				eS	Sn	13 16 21.8	-14
CCIG	Comitan	2.73	6	eP	Pn	13 16 14.0	+0.5
CCIG				eS	Sn	13 16 43.1	-3.9

UCR 11 13:21:35.4±1.3**, 11°.07N×86°.07W, h33^{km}**±3^{km}**, MD3.7, 5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONN	Concepcion	0.65	42	eP	Pn	13 21 48.3	-0.1
GBS3	Finca Las Img	0.67	116	i P	Pn	13 21 48.3	-0.3
NY14	Universidad de	0.67	129	i P	Pb	13 21 48.8	0.0
LAPC	Finca la Perla	0.69	116	i P	Pn	13 21 48.5	-0.5
BUEV	Buena Vista	0.70	113	⇓eP	Pn	13 21 49.1	0.0
BUEV				eS	Sn	13 21 59.8	+0.9
GB1A	Borinquen Arri	0.70	111	eP	Pn	13 21 49.1	-0.1
GB1A				eS	Sn	13 22 00.4	+1.4
GPS2	Hotel Rincn d	0.77	114	i P	Pn	13 21 50.0	0.0
LIM1	Limonal	0.88	115	i P	Pn	13 21 51.3	-0.3
MESS	Mesas	0.92	111	⇓eP	Pn	13 21 51.9	-0.2
MESS				i P	Pb	13 21 52.0	-1.0
MESS				i S	Sb	13 22 05.0	+0.1
MESS				eS	Sn	13 22 05.2	+0.9
CUI	Cuipilapa	0.98	115	⇓iP	Pn	13 21 52.6	-0.3
CUI				eS	Sb	13 22 06.6	0.0
PLVR	Palo Verde	1.01	136	⇓eP	Pn	13 21 52.8	-0.7
PLVR				eS	Sb	13 22 07.2	-0.3
ACAL	Aguas Claras	1.10	113	i P	Pn	13 21 54.5	-0.2
COPN	Copaltepe	1.21	335	eP	Pn	13 21 56.2	0.0
COPN				eS	Sb	13 22 12.8	-0.4
ACON	Acoyapa	1.25	44	eP	Pn	13 21 55.9	-0.7
JTS	JuntasAbangare	1.34	125	eP	Pn	13 21 57.1	-0.8
JTS				eS	Sn	13 22 14.7	0.0
MOMN	Momotombo	1.41	341	eP	Pn	13 21 58.6	-0.2
MOMN				eS	Sn	13 22 17.1	+0.8
ARE1	Arenal 1	1.46	115	⇓iP	Pn	13 21 59.2	-0.2
CEDE	Laguna Cedeo	1.46	113	eP	Pn	13 21 58.9	-0.7
CEDE				eS	Sn	13 22 19.0	+1.3
CNGN	Cerro Negro	1.55	337	eP	Pn	13 22 01.0	+0.2

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*ISCJB **11** 13:22:30.9±1.0, 14°.95S±0°.07×167°.4E±0°.1, h129^{km}, mb3.8/7, Error ellipse: s-maj=17.8km s-min=8.1km az=163.1*

*IDC **11** 13:22:32.8±2.9, 14°.95S×167°.38E, h133^{km}±24^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.6/32, mbtmp4.2/10, Error ellipse: s-maj=26.7km s-min=17.4km az=79.0*

ISC 11 13:22:32.6±0.9**, 14°.92S**±0°.08×**167°.4E**±0°.1**, h129^{km}, n12, σ1^{s}.24**/14**, mb4.0**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.17	187	P	Pn	13 24 15.3	+0.4
	13nm,0.3s,baz=302,slow=23,SNR=118						
DZM				S	Sn	13 25 34.3	-0.7
	0.7nm,0.3s,baz=319,slow=19,SNR=2.1						
HNR	Honiara	9.10	306	P	Pn	13 24 41.7	+0.8
	6.7nm,0.3s,baz=138,slow=8.8,SNR=4.3						
HNR				S	Sn	13 26 22.7	+1.1
	5.0nm,0.3s,baz=61,slow=19,SNR=3.2						
RAO	Raoul Island	19.68	139	S	S	13 30 28.9	+2.2
	183nm,0.3s,baz=241,slow=23,SNR=4.3						
CTA	Charters Tower	20.80	253	P	P	13 27 03.2	-0.6
	6.5nm,0.8s,baz=76,slow=14,SNR=6.5						
STKA	Stephens Creek	28.96	230	P	P	13 28 21.1	+1.1
	3.4nm,0.4s,baz=53,slow=8.9,SNR=16						
WRA	Warramunga Arr	31.90	256	P	P	13 28 44.4	-1.6
	0.9nm,0.7s,baz=84,slow=8.9,SNR=8.6						
ASAR	Alice Springs	32.72	249	P	P	13 28 52.0	-1.2
	3.0nm,0.7s,baz=80,slow=8.9,SNR=62						
SONM	Songino Array	82.72	324	P	P	13 34 42.7	+0.6
	0.3nm,0.7s,baz=130,slow=7.9,SNR=3.0						
ILAR	Eielson Array	86.67	18	P	P	13 34 59.6	-1.7
	0.4nm,0.8s,baz=216,slow=7.8,SNR=4.7						
MKAR	Makanchi Array	97.42	316	P	P	13 35 52.0	+0.3
	0.5nm,0.9s,baz=101,slow=6.3,SNR=5.5						
ZALV	Zalesovo Beam	97.62	324	P	P	13 35 51.8	-0.4
	0.3nm,0.3s,baz=130,slow=2.3,SNR=3.0						
ARCES	ARCESS Array B	120.47	345	PKP	PKPdf	13 41 08.3	+0.1
	4.4nm,0.8s,baz=90,slow=1.8,SNR=4.1						

IDC 11 13:34:11.1±3.3**, 10°.86S×165°.74E, h0^{km}, mb3.4**/3**, mb1 3.7**/5**, mb1mx3.5**/30**, mbtmp3.7**/5**, ML4.1**/2**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.5**/17**, Error ellipse: s-maj=62.4km s-min=40.2km az=66.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.88	283	Pn	Pn	13 35 41.5	+2.0
	8.9nm,0.3s,baz=230,slow=1.5,SNR=4.1						
DZM	Mont Dzumac	11.17	177	Pn	Pn	13 36 54.1	+1.9
	0.8nm,0.3s,baz=313,slow=18,SNR=12						
RAO	Raoul Island	23.83	143	LR	LR	13 46 17.2	
	comp=Z,90nm,18.3s,baz=52,slow=30						
WRA	Warramunga Arr	31.54	250	P	P	13 40 35.1	-0.4
	0.2nm,0.7s,baz=83,slow=8.9,SNR=2.0						
ASAR	Alice Springs	32.87	243	P	P	13 40 46.4	-0.7
	0.7nm,0.8s,baz=70,slow=9.2,SNR=9.2						
MKAR	Makanchi Array	93.38	317	P	P	13 47 28.2	-0.3
	0.1nm,0.5s,baz=122,slow=5.2,SNR=1.7						

IDC 11 13:43:08.7±4.1**, 11°.53S×164°.83E, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/23**, mbtmp3.4**/3**, Error ellipse: s-maj=208.2km s-min=34.6km az=139.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.48	250	P	P	13 49 24.0	+0.4
	0.2nm,0.5s,baz=80,slow=8.7,SNR=2.2						
ASAR	Alice Springs	31.77	243	P	P	13 49 34.6	-0.4
	0.4nm,0.9s,baz=78,slow=8.6,SNR=4.3						
ILAR	Eielson Array	84.25	19	P	P	13 55 42.0	+0.1
	0.2nm,0.8s,baz=248,slow=4.5,SNR=5.9						

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*ISK **11** 13:48:40.7, 39°.91N×33°.09E, h9^{km}, ML2.1/3*

*ISCJB **11** 13:48:41.9±0.8, 39°.88N±0°.04×33°.10E±0°.07, h9^{km}, Error ellipse: s-maj=8.3km s-min=4.8km az=162.8*

*DDA **11** 13:48:41.6, 39°.87N×33°.12E, h7^{km}±4^{km}, ML2.5*

ISC 11 13:48:41.5±1.1**, 39°.89N**±0°.04×**33°.10E**±0°.07**, h9^{km}, n10, σ0^{s}.82**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTO	Ankara	0.23	266	PG	Pg	13 48 45.9	-0.3
ANTO				SG	Sg	13 48 49.7	+0.3
AFSR	Afar-Bala (An	0.44	182	PG	Pg	13 48 50.4	+0.4
AFSR				SG	Sb	13 48 57.2	-0.9
ELDT	Eldivan	0.66	23	i P	Pb	13 48 55.0	-0.2
ELDT				IAML_P			
	comp=Z,824nm,0.1s						
CMDR	Camlidere-ANKA	0.77	322	i P	Pn	13 48 57.7	-1.0
CMDR				IAML_P			
	comp=Z,678nm,0.1s						
KULU	Kulu	0.84	185	PG	Pb	13 48 58.1	-0.3
KULU				SG	Sb	13 49 10.8	+1.0
KIBS	BOLU	1.09	300	i P	Pn	13 49 04.9	+1.8
KIBS				IAML_P			
	comp=Z,425nm,0.3s						
YAYX	Yaylak	1.10	149	PN	Pb	13 49 02.5	-0.2
BCAM	Yenicaga	1.22	320	i P	Pg	13 49 05.1	+0.3
BCAM				IAML_P			
	comp=Z,401nm,0.2s						
AUMIH	MIHALICIK	1.24	270	PN	Pn	13 49 04.7	-0.4
SVRH	Sivrihisar-ESK	1.29	251	PN	Pn	13 49 05.5	-0.3

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*KRNET **11** 13:50:55.8±0.1, 42°.61N×79°.69E, h17^{km}, mb2.4*

*SOME **11** 13:50:55.9, 42°.57N×79°.72E, h30^{km}*

*NNC **11** 13:50:55.5±1.4, 42°.61N×79°.69E, h4^{km}±5^{km}, mpv2.5, Error ellipse: s-maj=11.6km s-min=3.9km az=171.0*

ISC 11 13:50:55.7±1.7**, 42°.60N**±0°.07×**79°.69E**±0°.05**, h15^{km}**±11^{km}**, n11, σ0^{s}.37**/22**, 8C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.73	318	P	Pb	13 51 10.2	-0.1
	2.4nm,0.1s						
UZB				S	Sb	13 51 20.4	+0.2
	4.0nm,0.2s						
UZB	Uzynbulak	0.73	318	eP	Pb	13 51 10.2	-0.1
	baz=18						
UZB				eS	Sb	13 51 20.4	+0.2
	baz=18						
UZB	Uzynbulak	0.73	318	eP	Pb	13 51 10.2	-0.1
	2.4nm,0.1s						
UZB				eS	Sb	13 51 20.4	+0.2
	4.0nm,0.2s						
PDGK	Podgornoye	0.74	349	⇑iP	Pg	13 51 10.1	-0.1
	baz=48						
PDGK				⇑iS	Sg	13 51 20.2	+0.2
	baz=48						
PRZ	Przheval'sk	0.96	263	⇑iP	Pb	13 51 14.0	-0.1
	baz=63						
PRZ				⇑iS	Sb	13 51 26.6	-0.1
	baz=63						

KTMS	**Ketmen**	**0.97**	**30**	P	**Pb**	**13 51 14.3**	**-0.1**
	0.6nm,0.1s						
KTMS				S	**Sn**	**13 51 28.4**	**-0.3**
	1.7nm,0.2s						
KTMS	**Ketmen**	**0.97**	**30**	*e*P	**Pb**	**13 51 14.3**	**-0.1**
	baz=29						
KTMS				*e*S	**Sg**	**13 51 27.6**	**+0.2**
	baz=29						
KTMS	**Ketmen**	**0.97**	**30**	*e*P	**Pb**	**13 51 14.3**	**-0.1**
	0.6nm,0.1s						
KTMS				*e*S	**Sg**	**13 51 27.6**	**+0.2**
	1.7nm,0.2s						
SATY	**Saty**	**1.05**	**296**	*e*P	**Pn**	**13 51 16.0**	**0.0**
	1.4nm,0.3s						
SATY				*e*S	**Sn**	**13 51 30.4**	**-0.1**
	3.6nm,0.1s						
KDJ	**Kajisay**	**1.92**	**257**	⇑*i*P	**Pb**	**13 51 31.4**	**+0.9**
	baz=56						
KDJ				⇑*i*S	**Sg**	**13 51 56.5**	**-0.9**
	baz=56						
ULHL	**Ulahol**	**2.57**	**263**	⇑*i*P	**Pb**	**13 51 41.5**	**-0.2**
	baz=63						
ULHL				⇑*i*S	**Sb**	**13 52 13.8**	**+0.5**
	baz=63						

MEX 11 13:51:02.2±0.7**, 16°.48N×98°.40W, h2^{km}, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.27**	**108**	*e*P	Pg	13 51 06.4	-1.0
PNIG				*i* S	Sg	13 51 11.3	+0.3
PLIG	**Platanillo**	**2.18**	**331**	*e*P	Pn	13 51 37.1	-2.5
PLIG				*e*S	Sn	13 52 02.4	-4.9

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*IDC **11** 13:59:09.5±0.8, 10°.26S×74°.52W, h0^{km}, mb3.8/9, mb1 4.1/12, mb1mx4.0/36, mbtmp3.9/12, ML4.7/3, MS3.3/9, Ms1 3.3/9, ms1mx3.1/29, Error ellipse: s-maj=20.2km s-min=17.7km az=26.0*

*ISCJB **11** 13:59:12.8±0.4, 10°.28S±0°.05×74°.47W±0°.05, h33^{km}, mb3.9/10, MS3.4/4, Error ellipse: s-maj=7.2km s-min=6.0km az=41.2*

*ARE **11** 13:59:13.0±0.0, 10°.34S×74°.74W, h137^{km}*

*NEIC **11** 13:59:15.4±0.5, 10°.30S×74°.50W, h45^{km}±5^{km}, mb4.5/3, ML4.6(ARE), Error ellipse: s-maj=7.7km s-min=5.0km az=47.0*

NEIC Felt [II] at Oxapampa.

ISC 11 13:59:14.9±0.5**, 10°.33S**±0°.06×**74°.48W**±0°.07**, h35^{km}, n47, σ1^{s}.71**/43**, mb3.9**/10**, MS3.4**/4**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**2.84**	**234**	*e*Pn	**Pn**	**13 59 57.7**	**-0.2**
NNA				*e*Sn	**Sn**	**14 00 31.2**	**+0.3**
NNA				*e*Sn	Sn	14 00 31.5	+0.6
NNA	**Nana**	**2.84**	**234**	Pn	**Pn**	**13 59 57.7**	**-0.2**
	211nm,0.3s,baz=52,slow=8.3,SNR=450						
NNA				Sn	**Sn**	**14 00 31.5**	**+0.6**
	242nm,0.3s,baz=316,slow=22,SNR=26						
NNA				LR	LR	14 01 07.8	
	comp=Z,538nm,19.1s,baz=78,slow=41						
ATAH	**Atahualpa**	**5.01**	**309**	Pn	**Pn**	**14 00 28.1**	**+0.1**
	3.9nm,0.3s,baz=146,slow=4.9,SNR=22						
ATAH				Sn	**Sn**	**14 01 25.4**	**+0.5**
	6.4nm,0.3s,baz=77,slow=18,SNR=1.8						
ATAH				LR	LR	14 01 49.9	
	comp=Z,28nm,20.9s,baz=81,slow=32						
LPAZ	**La Paz**	**8.55**	**134**	*e*Pn	**Pn**	**14 01 18.5**	**+1.6**
LPAZ				Lg	Lg	14 03 43.1	
LPAZ	**La Paz**	**8.55**	**134**	Pn	**Pn**	**14 01 20.2**	**+3.3**
	0.4nm,0.3s,baz=302,slow=8.5,SNR=16						
LPAZ				Lg	Lg	14 03 43.1	
	2.7nm,0.3s,baz=192,slow=19,SNR=3.0						
LPAZ				LR	LR	14 05 31.2	
	comp=Z,68nm,19.5s,baz=39,slow=44						
OTAV	**Otavalo**	**11.22**	**339**	*e*Pn	**Pn**	**14 01 53.6**	**+0.3**
SOTA	**Rioblanco**	**12.57**	**350**	*e*P	**Pn**	**14 02 12.9**	**+1.1**
SOTA	**Rioblanco**	**12.57**	**350**	*e*P	**Pn**	**14 02 12.9**	**+1.1**
LVC	**Limon Verde**	**13.32**	**157**	LR	LR	14 08 12.7	
	comp=Z,58nm,20.4s,baz=1.0,slow=40						
PB10	**IPOC Station P**	**13.63**	**165**	*e*Pn	**Pn**	**14 02 26.8**	**+0.9**
SIV	**San Ignacio**	**14.21**	**115**	Pn	**Pn**	**14 02 33.9**	**0.0**
	2.6nm,0.3s,baz=307,slow=13,SNR=39						
SIV				Lg	Lg	14 06 37.3	
	3.4nm,0.3s,baz=21,slow=18,SNR=4.2						
SIV				LR	LR	14 09 06.9	
	comp=Z,82nm,21.3s,baz=294,slow=42						
ROSC	**El Rosal**	**15.07**	**1**	Lg	Lg	14 07 05.6	
	0.9nm,0.3s,baz=217,slow=20,SNR=3.0						
RUSC	**La Rusia**	**16.18**	**5**	*e*P	P	14 03 10.1	+7.0
RUSC	**La Rusia**	**16.18**	**5**	*e*P	P	14 03 10.1	+7.0
PTBC	**PUERTO BERRIO,**	**16.76**	**0**	*e*P	**P**	**14 03 11.4**	**+2.3**
PTBC	**PUERTO BERRIO,**	**16.76**	**0**	*e*P	**P**	**14 03 11.4**	**+2.3**
PTGA	**Pitinga**	**17.30**	**57**	*e*Pn	**Pn**	**14 03 13.7**	**-0.1**
	16nm,0.6s						
PTGA				Lg	Lg	14 08 19.0	
PTGA	**Pitinga**	**17.30**	**57**	P	**Pn**	**14 03 13.9**	**0.0**
	2.0nm,0.3s,baz=238,slow=16,SNR=17						
PTGA				Lg	Lg	14 08 19.0	
	0.7nm,0.3s,baz=330,slow=20,SNR=2.4						
PTGA				LR	LR	14 10 14.5	
	comp=Z,172nm,18.1s,baz=254,slow=38						
DBBC	**Dabeiba**	**17.32**	**354**	*e*P	**P**	**14 03 21.4**	**+6.0**
DBBC	**Dabeiba**	**17.32**	**354**	*e*P	**P**	**14 03 21.4**	**+6.0**
PAMC	**Pamplona, Colo**	**17.65**	**6**	*e*P	P	14 03 26.7	+7.3
PAMC	**Pamplona, Colo**	**17.65**	**6**	*e*P	P	14 03 26.7	+7.3
SMLC	**San Martn de**	**19.01**	**1**	*e*P	**Pn**	**14 03 35.3**	**+0.5**
SMLC	**San Martn de**	**19.01**	**1**	*e*P	**Pn**	**14 03 35.3**	**+0.5**
SDV	**Santo Domingo**	**19.47**	**11**	*e*P	**P**	**14 03 38.3**	**-0.8**
SDV				*e*Pn	**P**	**14 03 39.0**	**-0.1**
SDV	**Santo Domingo**	**19.47**	**11**	P	**P**	**14 03 39.0**	**-0.1**
	0.6nm,0.3s,baz=286,slow=20,SNR=4.0						
SDV				Lg	Lg	14 09 25.4	
	0.4nm,0.3s,baz=276,slow=18,SNR=2.4						
CPUP	**Villa Florida**	**22.72**	**137**	*e*P	**P**	**14 04 14.2**	**+0.3**
	8.3nm,1.3s						
CPUP	**Villa Florida**	**22.72**	**137**	P	**P**	**14 04 14.3**	**+0.4**
	5.7nm,0.9s,baz=312,slow=8.5,SNR=10.0						
CPUP				LR	LR	14 15 28.9	
	comp=Z,57nm,19.3s,baz=294,slow=43						
BDFB	**Brasilia**	**26.31**	**104**	P	**P**	**14 04 48.5**	**+0.7**
	1.5nm,0.5s,baz=225,slow=13,SNR=2.6						
BDFB				Lg	Lg	14 13 02.4	
	5.9nm,1.0s,baz=198,slow=20,SNR=2.7						
BDFB				LR	LR	14 15 54.0	
	comp=Z,128nm,19.2s,baz=227,slow=38						
MDP	**Montagnes des**	**26.61**	**56**	LR	LR	14 15 47.3	
	comp=Z,102nm,19.4s,baz=210,slow=38						
LTX	**Lajitas**	**48.45**	**325**	*e*P	**P**	**14 07 53.2**	**-1.1**
TXAR	**Lajitas Array**	**48.45**	**325**	P	**P**	**14 07 53.2**	**-1.1**
	0.2nm,0.4s,baz=146,slow=7.1,SNR=4.2						
SDMD	**Soldier's Deli**	**49.54**	**358**	*e*P	**P**	**14 08 00.9**	**-1.3**
	18nm,0.5s						
PDAR	**Pinedale Array**	**61.81**	**331**	P	**P**	**14 09 31.4**	**+0.8**
	0.3nm,0.5s,baz=124,slow=7.7,SNR=2.3						
ULM	**Lac du Bonnet**	**63.16**	**345**	P	**P**	**14 09 38.1**	**-1.1**
	1.8nm,0.8s,baz=191,slow=13,SNR=3.3						
NV01	**Mina Array Sit**	**63.43**	**323**	*e*P	**P**	**14 09 40.2**	**-1.3**
NVAR	**Mina Array Bea**	**63.43**	**323**	P	**P**	**14 09 40.8**	**-0.8**
	0.2nm,0.5s,baz=149,slow=11,SNR=2.5						
SCHQ	**Schefferville**	**65.24**	**5**	LR	LR	14 38 03.6	
	comp=Z,39nm,19.0s,baz=327,slow=36						
DBIC	**Dimbokro**	**71.35**	**79**	P	**P**	**14 10 31.8**	**-0.1**
	1.4nm,0.5s,baz=224,slow=4.6,SNR=3.3						
YKA	**Yellowknife Ar**	**78.96**	**342**	P	**P**	**14 11 13.9**	**-0.8**
	0.1nm,0.4s,baz=140,slow=5.9,SNR=4.2						
YKB5	**Yellowknife Ar**	**78.96**	**342**	*e*P	**P**	**14 11 13.8**	**-0.9**
TOA1	**Torodi Ar. Sit**	**79.12**	**74**	*e*P	**P**	**14 11 16.0**	**-0.6**
TOA0	**Torodi Ar. Sit**	**79.12**	**74**	*e*P	**P**	**14 11 14.8**	**-1.8**
TORD	**Torodi Ar. Bea**	**79.12**	**74**	P	**P**	**14 11 16.0**	**-0.6**
	1.1nm,0.8s,baz=253,slow=4.7,SNR=5.8						
ASAR	**Alice Springs**	**136.27**	**219**	PKP	**PKPdf**	**14 18 32.6**	**-1.1**
	0.4nm,0.6s,baz=132,slow=1.9,SNR=4.7						
WR1	**Warramunga Arr**	**138.65**	**223**	*e*PKPdf	**PKPdf**	**14 18 37.8**	**-0.3**
WRA	**Warramunga Arr**	**138.65**	**223**	PKP	**PKPdf**	**14 18 37.8**	**-0.4**
	0.7nm,0.7s,baz=126,slow=2.1,SNR=6.8						

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*DDA **11** 14:04:53.7, 39°.86N×25°.74E, h28^{km}±1^{km}, ML2.8*

*ATH **11** 14:04:53.9, 39°.71N×25°.66E, h29^{km}±2^{km}, ML2.3/2, Error ellipse: s-maj=3.1km s-min=1.3km az=227.0*

*ISK **11** 14:04:53.1, 39°.71N×25°.66E, h10^{km}, ML2.7/10*

*ISCJB **11** 14:04:54.7±0.4, 39°.72N±0°.03×25°.68E±0°.03, h18^{km}±6^{km}, Error ellipse: s-maj=4.7km s-min=3.7km az=27.9*

*THE **11** 14:04:54.4, 39°.72N×25°.69E, h3^{km}±2^{km}, ML2.2/3, Error ellipse: s-maj=2.6km s-min=0.4km az=165.0*

ISC 11 14:04:54.1±1.0**, 39°.71N**±0°.02×**25°.70E**±0°.02**, h18^{km}**±4^{km}**, n34, σ0^{s}.55**/50**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.31**	**64**	PG	**Pg**	**14 05 00.2**	**-0.5**
BOZC				SG	**Sg**	**14 05 05.3**	**0.0**
BOZC	**Bozcaada**	**0.31**	**64**	*i* P	**Pg**	**14 05 00.2**	**-0.5**
BOZC				*i* S	**Sb**	**14 05 06.2**	**+0.5**
BOZC				IAML_P			
	comp=Z,3µm,0.1s						
LIA	**Limnos Island**	**0.44**	**296**	P	**Pg**	**14 05 02.8**	**-0.2**
LIA				S	**Sb**	**14 05 09.1**	**-0.4**
LIA				AML	AML	14 05 09.3	
	comp=N,477µm,0.1s						
LIA				AML	AML	14 05 09.6	
	comp=E,685µm,0.5s						
LIA	**Limnos Island**	**0.44**	**296**	P	**Pg**	**14 05 02.8**	**-0.2**
LIA				S	**Sg**	**14 05 09.0**	**-0.1**
EZN	**Ezine**	**0.50**	**76**	PG	**Pb**	**14 05 03.9**	**-0.4**
EZN	**Ezine**	**0.50**	**76**	P	**Pb**	**14 05 04.0**	**-0.4**
EZN				S	**Sb**	**14 05 11.4**	**+0.1**
SIGR	**SIGRI**	**0.51**	**166**	PG	**Pb**	**14 05 03.8**	**-0.7**
SIGR				SG	**Sg**	**14 05 11.3**	**+0.1**
SIGR	**SIGRI**	**0.51**	**166**	P	**Pb**	**14 05 04.1**	**-0.4**
SIGR				S	**Sg**	**14 05 12.0**	**+0.8**
SIGR				AML	AML	14 05 12.4	
	comp=N,1152µm,0.4s						
SIGR				AML	AML	14 05 12.4	
	comp=E,1096µm,0.5s						
SIGR	**SIGRI**	**0.51**	**166**	P	**Pb**	**14 05 04.1**	**-0.4**
SIGR				S	**Sg**	**14 05 12.0**	**+0.8**
EFSA	**Agios Efstrati**	**0.57**	**253**	P	**Pg**	**14 05 06.1**	**+0.6**
EFSA				S	**Sg**	**14 05 13.7**	**+0.7**
PRK	**Paraskevi**	**0.64**	**136**	P	**Pn**	**14 05 07.8**	**-0.4**
PRK				S	**Sn**	**14 05 17.4**	**-0.5**
PRK	**Paraskevi**	**0.64**	**136**	P	**Pg**	**14 05 06.7**	**0.0**
PRK				S	**Sn**	**14 05 16.7**	**-1.3**
BAYC	**CANAKKALE_Bayr**	**0.66**	**87**	*i* P	**Pg**	**14 05 07.3**	**+0.2**
BAYC				*i* S	**Sg**	**14 05 16.5**	**+0.6**
BAYC				IAML_P			
	comp=Z,2µm,0.2s						
SMTH	**Samothraki Isl**	**0.77**	**351**	P	**Pb**	**14 05 08.9**	**-0.1**
SMTH	**Samothraki Isl**	**0.77**	**351**	P	**Pb**	**14 05 09.0**	**-0.1**
AYVA	**Ayvalik**	**0.87**	**117**	*i* P	**Pn**	**14 05 12.3**	**+0.9**
AYVA				*i* S	**Sn**	**14 05 24.9**	**+1.4**
AYVA				IAML_P			
	comp=Z,186nm,0.1s						
GELI	**Tayfur-Gelibol**	**0.91**	**41**	PG	**Pb**	**14 05 11.5**	**+0.1**
LPK	**Lapseki**	**1.05**	**51**	PG	**Pn**	**14 05 14.1**	**+0.1**
ENEZ	**Enez**	**1.09**	**19**	PN	**Pb**	**14 05 14.5**	**+0.2**
ERIK	**Erikli-Kesan**	**1.15**	**33**	PN	**Pb**	**14 05 15.7**	**+0.3**
THAS	**Thassos island**	**1.17**	**321**	P	**Pg**	**14 05 16.3**	**-0.4**
THAS				S	**Sn**	**14 05 30.8**	**-0.2**
ALN	**Alexandroupoli**	**1.22**	**13**	PN	**Pb**	**14 05 16.4**	**-0.2**
ALN	**Alexandroupoli**	**1.22**	**13**	P	**Pb**	**14 05 16.8**	**+0.2**
ALN	**Alexandroupoli**	**1.22**	**13**	P	**Pb**	**14 05 16.8**	**+0.2**
ALN				S	**Sg**	**14 05 33.6**	**0.0**
CHOS	**Chios island**	**1.35**	**168**	PN	**Pb**	**14 05 18.4**	**-0.5**
CHOS	**Chios island**	**1.35**	**168**	P	**Pb**	**14 05 18.4**	**-0.5**
KRBG	**Karabiga-Canak**	**1.41**	**60**	PN	**Pb**	**14 05 19.5**	**-0.3**
RDO	**Rodhopi**	**1.44**	**355**	PN	**Pb**	**14 05 19.6**	**-0.8**
RDO	**Rodhopi**	**1.44**	**355**	P	**Pb**	**14 05 19.8**	**-0.6**
BALY	**Balya**	**1.48**	**88**	*i* P	**Pb**	**14 05 21.1**	**-0.1**
BALY				*i* S	**Sg**	**14 05 41.2**	**-0.8**
BALY				IAML_P			
	comp=Z,674nm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.50**	**49**	PN	**Pb**	**14 05 20.8**	**-0.6**
URLA	**Izmir**	**1.52**	**152**	PN	**Pb**	**14 05 21.0**	**-0.7**
KAVA	**Kavala**	**1.57**	**325**	P	**Pb**	**14 05 22.6**	**0.0**
EDC	**Edincik**	**1.78**	**68**	PN	**Pn**	**14 05 24.9**	**+0.9**

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*IDC **11** 14:09:29.1±1.1, 10°.83S×165°.76E, h0^{km}, mb4.0/10, mb1 4.2/11, mb1mx4.0/39, mbtmp4.0/11, ML4.1/1, MS3.7/14, Ms1 3.8/14, ms1mx3.6/27, Error ellipse: s-maj=37.5km s-min=20.4km az=129.0*

*ISCJB **11** 14:09:32.1±0.6, 11°.05S±0°.05×165°.74E±0°.07, h30^{km}, mb4.1/14, MS3.8/13, Error ellipse: s-maj=11.2km s-min=6.5km az=152.7*

*NEIC **11** 14:09:35.7±0.7, 11°.24S×165°.06E, h10^{km}, mb4.6/2, Error ellipse: s-maj=14.3km s-min=10.0km az=210.0*

ISC 11 14:09:35.4±0.6**, 11°.05S**±0°.07×**165°.62E**±0°.07**, h30^{km}, n45, σ1^{s}.98**/37**, mb4.1**/14**, MS3.7**/14**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.81**	**286**	*e*Pn	**Pn**	**14 10 55.0**	**-4.5**
HNR				Sn	**Sn**	**14 12 08.6**	**+3.5**
HNR	**Honiara**	**5.81**	**286**	Pn	**Pn**	**14 11 01.4**	**+1.9**
	26nm,0.3s,baz=156,slow=6.2,SNR=12						
HNR				Sn	**Sn**	**14 12 08.6**	**+3.5**
	2.5nm,0.3s,baz=336,slow=20,SNR=4.1						
HNR				LR	LR	14 13 25.7	
	comp=Z,2µm,19.9s,baz=95,slow=40						
MARNC	**Mare, Loyalty**	**10.63**	**168**	*e*Pn	**Pn**	**14 12 05.5**	**-0.2**
DZM	**Mont Dzumac**	**10.99**	**176**	*e*Pn	**Pn**	**14 12 10.2**	**-0.5**
	25nm,0.7s						
DZM				*e*LR	LR	14 14 47.4	
	comp=Z,570nm,24.1s						
DZM	**Mont Dzumac**	**10.99**	**176**	*e*Pn	**Pn**	**14 12 10.0**	**-0.7**
DZM				Sn	**Sn**	**14 14 13.0**	**+0.2**
DZM	**Mont Dzumac**	**10.99**	**176**	Pn	**Pn**	**14 12 10.6**	**-0.2**
	1.2nm,0.3s,baz=323,slow=3.1,SNR=38						
DZM				Sn	**Sn**	**14 14 13.0**	**+0.2**
	0.5nm,0.3s,baz=84,slow=19,SNR=3.0						
DZM				LR	LR	14 16 21.4	
	comp=Z,376nm,18.6s,baz=24,slow=37						
OUENC	**Ouen Island, N**	**11.37**	**174**	*e*Pn	**Pn**	**14 12 16.4**	**+0.6**
PINNC	**Pines Island,**	**11.63**	**172**	*e*Pn	**Pn**	**14 12 19.9**	**+0.5**
FUNA	**Funafuti**	**13.62**	**81**	*e*Pn	**P**	**14 12 58.1**	**+3.0**
MSVF	**Nonsavu**	**13.75**	**120**	*e*Pn	**P**	**14 12 57.9**	**+1.2**
CTA	**Charters Tower**	**20.69**	**242**	P	**P**	**14 14 14.1**	**+0.9**
	9.0nm,0.8s,baz=67,slow=12,SNR=8.5						
CTAO	**Charters Tower**	**20.69**	**242**	*e*P	**P**	**14 14 13.4**	**+0.2**
	79nm,0.9s						
RAO	**Raoul Island**	**23.76**	**142**	LR	LR	14 22 12.3	
	comp=Z,219nm,19.3s,baz=108,slow=32						
JAY	**Jayapura**	**26.13**	**287**	LR	LR	14 26 28.8	
	comp=Z,169nm,18.1s,baz=262,slow=39						
H11S2	**WAKE ISLAND Hy**	**29.37**	**2**	T	T	14 46 00.9	
	baz=181,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**29.37**	**2**	T	T	14 46 01.3	
	baz=181,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.39**	**2**	T	T	14 46 02.4	
	baz=181,slow=76,SNR=20						
STKA	**Stephens Creek**	**30.35**	**223**	P	**P**	**14 15 45.4**	**+0.8**
	5.1nm,1.0s,baz=54,slow=4.8,SNR=4.9						
STKA				LR	LR	14 27 25.6	
	comp=Z,199nm,19.9s,baz=27,slow=35						
H11N1	**WAKE ISLAND Hy**	**30.59**	**2**	T	T	14 47 32.5	
	baz=182,slow=76,SNR=21						
H11N3	**WAKE ISLAND Hy**	**30.60**	**2**	T	T	14 47 32.2	
	baz=182,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**30.61**	**2**	T	T	14 47 33.1	
	baz=182,slow=76,SNR=13						
WRAB	**Tennant Creek**	**31.35**	**250**	*e*P	**P**	**14 15 52.7**	**-0.9**
	17nm,1.1s						
WB2	**Warramunga Arr**	**31.35**	**250**	*e*P	**P**	**14 15 51.9**	**-1.8**
WRA	**Warramunga Arr**	**31.36**	**250**	P	**P**	**14 15 53.4**	**-0.3**
	10nm,1.0s,baz=80,slow=9.3,SNR=36						
GUMO	**Guam**	**31.98**	**319**	LR	LR	14 28 06.6	
	comp=Z,54nm,20.9s,baz=126,slow=35						
AS01	**Alice Springs**	**32.64**	**243**	*e*P	**P**	**14 16 03.4**	**-1.5**
AS01				*e*PcP	**PcP**	**14 18 48.7**	**-2.0**
ASAR	**Alice Springs**	**32.68**	**243**	P	**P**	**14 16 04.3**	**-1.0**
	1.3nm,0.8s,baz=67,slow=10,SNR=13						
ASAR				LR	LR	14 28 26.2	
	comp=Z,223nm,19.5s,baz=78,slow=35						
FITZ	**Fitzroy Crossi**	**39.26**	**255**	*e*P	**P**	**14 17 00.6**	**-1.1**
	8.0nm,0.9s						
PPT	**Papeete**	**43.82**	**104**	LR	LR	14 32 46.4	
	comp=Z,100nm,20.8s,baz=241,slow=32						
PPT2	**Papeete2**	**43.82**	**104**	*e*LR	LR	14 30 07.9	
	comp=Z,172nm,25.0s						
TAOE	**Nuku Hiva Isla**	**53.41**	**93**	*e*LR	LR	14 34 28.2	
	comp=Z,56nm,22.2s						
NJ2	**Nanjing**	**61.93**	**315**	*e*P	**P**	**14 19 52.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PETK	**Petropavlovsk-**	**64.26**	**355**	LR	LR	14 43 03.4	
	comp=Z,34nm,20.7s,baz=128,slow=31						
HHC	**Hu-ho-hao-te**	**71.75**	**320**	*e*P	**P**	**14 20 56.6**	**+1.6**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
CM01	**Chiang Mai Arr**	**71.97**	**294**	*e*P	**P**	**14 20 55.3**	**-1.4**
CMAR	**Chiang Mai Arr**	**72.00**	**294**	P	**P**	**14 20 56.9**	**0.0**
	comp=Z,0.8nm,0.9s,baz=115,slow=4.7,SNR=6.8						
CMAR				LR	LR	14 54 37.4	
	comp=Z,22nm,18.2s,baz=190,slow=38						
SONM	**Songino Array**	**78.59**	**324**	P	**P**	**14 21 31.5**	**-2.8**
	comp=Z,0.6nm,0.9s,baz=142,slow=4.4,SNR=4.3						
GTA	**Gaotai**	**78.97**	**314**	⇑P	**P**	**14 21 37.2**	**+0.6**
GTA				pP	PcP	14 21 44.5	-0.6
GTA				sP	pwP	14 21 48.0	0.0
GTA				S	**S**	**14 31 35.7**	**+2.1**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,74nm,7.3s						
GTA				LR	LR		
	comp=N,130nm,20.9s						
GTA				LR	LR		
	comp=E,130nm,18.7s						
GTA				LR	LR		
	comp=Z,110nm,19.7s						
IL1	**Eielson Array**	**83.56**	**19**	*e*P	**P**	**14 22 04.0**	**+3.7**
ILAR	**Eielson Array**	**83.56**	**19**	P	**P**	**14 21 57.4**	**-2.8**
	comp=Z,0.6nm,0.8s,baz=237,slow=6.6,SNR=5.0						
NVAR	**Mina Array Bea**	**86.12**	**50**	P	**P**	**14 22 11.4**	**-2.6**
	comp=Z,0.4nm,0.8s,baz=191,slow=2.4,SNR=2.6						
NVAR				LR	LR	14 55 32.1	
	comp=Z,70nm,18.6s,baz=280,slow=32						
WMQ	**Urumqi**	**89.01**	**315**	*e*P	**P**	**14 22 30.0**	**+2.4**
WMQ				LR	LR		
	comp=N,130nm,28.7s						
WMQ				LR	LR		
	comp=E,90nm,20.1s						
WMQ				LR	LR		
	comp=Z,79nm,22.5s						
MKAR	**Makanchi Array**	**93.44**	**317**	P	**P**	**14 22 46.0**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=93,slow=6.3,SNR=5.4						
MKAR				LR	LR	15 06 42.9	
	comp=Z,25nm,18.3s,baz=340,slow=37						
ZALV	**Zalesovo Beam**	**93.48**	**324**	P	**P**	**14 22 46.0**	**-2.0**
	comp=Z,0.3nm,0.4s,baz=101,slow=7.5,SNR=2.4						
ZALV				LR	LR	15 02 09.1	
	comp=Z,65nm,21.8s,baz=248,slow=34						
TXAR	**Lajitas Array**	**95.94**	**61**	LR	LR	14 58 27.8	
	comp=Z,44nm,20.7s,baz=0.0,slow=31						

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*IDC **11** 14:20:50.6±2.1, 36°.47N×142°.04E, h0^{km}, mb3.4/3, mb1 3.4/5, mb1mx3.2/36, mbtmp3.3/5, ML2.8/2, Error ellipse: s-maj=38.6km s-min=31.4km az=70.0*

*ISCJB **11** 14:20:51.4±1.1, 36°.42N±0°.06×141°.97E±0°.10, h19^{km}, mb3.3/3, Error ellipse: s-maj=12.4km s-min=7.4km az=34.4*

*JMA **11** 14:20:53.0±0.2, 36°.38N×141°.78E, h76^{km}±5^{km}, M2.9*

ISC 11 14:20:53.1±1.2**, 36°.41N**±0°.06×**141°.82E**±0°.08**, h19^{km}, n15, σ1^{s}.54**/19**, mb3.3**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.99**	**266**	P	**Pg**	**14 21 11.5**	**-1.0**
JHYU				S	**Sn**	**14 21 25.1**	**-0.4**
JHO	**Hitachi**	**1.02**	**282**	P	**Pb**	**14 21 11.6**	**-0.6**
CHOJ	**Chosi**	**1.05**	**228**	P	**Pb**	**14 21 12.2**	**-0.4**
CHOJ				*e*S	**Sn**	**14 21 27.1**	**+0.2**
ONAJ	**Iwakimizuishiy**	**1.07**	**311**	P	**Pb**	**14 21 12.6**	**-0.5**
JIHU	**Itakohorinouch**	**1.13**	**247**	P	**Pb**	**14 21 13.6**	**-0.5**
JFK	**Kawauchi**	**1.22**	**322**	P	**Pn**	**14 21 15.2**	**0.0**
JFT	**Otama**	**1.62**	**313**	P	**Pn**	**14 21 21.2**	**+0.5**
JMM	**Marumori**	**1.67**	**331**	P	**Pn**	**14 21 21.5**	**+0.2**
MJAR	**Matsushiro Arr**	**2.91**	**274**	Pn	**Pn**	**14 21 39.7**	**+1.3**
	0.4nm,0.3s,baz=114,slow=8.6,SNR=8.4						
MJAR				Sn	**Sb**	**14 22 19.1**	**-0.5**
	0.1nm,0.3s,baz=9.3,slow=23,SNR=1.6						
MAT	**Matsushiro**	**2.91**	**274**	P	**Pn**	**14 21 40.0**	**+1.6**
MAT				*e*S	**Sn**	**14 22 10.5**	**-2.4**
JHJ	**Hachijo jima 2**	**3.68**	**208**	Sn	**Sn**	**14 22 27.7**	**-4.2**
	14nm,0.3s,baz=73,slow=19,SNR=1.5						
ASAJ	**Asahikawa**	**7.72**	**4**	Pn	**Pn**	**14 22 43.4**	**-1.1**
	0.3nm,0.3s,baz=207,slow=18,SNR=6.6						
SONM	**Songino Array**	**28.40**	**305**	P	**P**	**14 26 48.6**	**+2.1**
	0.6nm,0.7s,baz=102,slow=9.2,SNR=5.0						
MKAR	**Makanchi Array**	**44.73**	**303**	P	**P**	**14 29 05.3**	**+0.2**
	0.2nm,0.7s,baz=84,slow=9.6,SNR=2.6						
WRA	**Warramunga Arr**	**56.49**	**188**	P	**P**	**14 30 35.2**	**+1.2**
	0.3nm,1.0s,baz=12,slow=8.9,SNR=2.1						

MEX 11 14:43:51.3±0.6**, 18°.06N×100°.72W, h65^{km}**±11^{km}**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.42**	**58**	*e*P	Pn	14 44 01.7	-1.3
ARIG				*i* S	Sn	14 44 09.8	-1.7
ZIIG	**Zihuatanejo**	**0.84**	**238**	*i* P	Pn	14 44 06.1	-1.4
ZIIG				*i* S	Sn	14 44 17.2	-2.3
MEIG	**Mezcala**	**1.06**	**97**	*e*P	Pn	14 44 08.2	-2.2
MEIG				*e*S	Sn	14 44 23.5	-1.1
CAIG	**El Cayaco**	**1.10**	**157**	*e*P	Pn	14 44 09.4	-1.4
CAIG				*e*S	Sn	14 44 23.4	-1.9
PLIG	**Platanillo**	**1.21**	**74**	*e*P	Pn	14 44 11.3	-1.0
PLIG				*i* S	Sn	14 44 25.3	-2.7
YAIG	**Yautepec**	**1.76**	**63**	*e*P	Pn	14 44 18.0	-1.8
YAIG				*e*S	Sn	14 44 36.3	-5.1

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*KRNET **11** 15:00:09.2±0.1, 41°.87N×79°.64E, h11^{km}, mb3.0*

*SOME **11** 15:00:10.3, 41°.88N×79°.53E, h15^{km}*

*NNC **11** 15:00:10.2±1.9, 41°.88N×79°.62E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=13.5km s-min=7.8km az=158.0*

ISC 11 15:00:10.1±2.1**, 41°.87N**±0°.06×**79°.61E**±0°.05**, h1^{km}**±12^{km}**, n45, σ1^{s}.25**/79**, 21C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.08**	**305**	⇑*i*P	**Pg**	**15 00 29.9**	**-1.0**
	baz=5.0						
PRZ				⇑*i*S	**Sg**	**15 00 45.0**	**0.0**
	baz=5.0						
UZB	**Uzynbulak**	**1.34**	**341**	P	**Pn**	**15 00 34.7**	**-1.5**
	25nm,0.1s						
UZB				S	**Sb**	**15 00 52.1**	**-1.9**
	34nm,0.2s						
UZB	**Uzynbulak**	**1.34**	**341**	*e*P	**Pn**	**15 00 34.7**	**-1.5**
	25nm,0.1s						
UZB				*e*S	**Sb**	**15 00 52.1**	**-1.9**
	34nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.35**	**265**	⇑*i*P	**Pn**	**15 00 34.6**	**-2.0**
	baz=65						
TARG				⇑*i*S	**Sb**	**15 00 53.8**	**-0.7**
	baz=65						
PDGK	**Podgornoye**	**1.46**	**357**	⇑Pn	**Pn**	**15 00 36.6**	**-1.1**
	15nm,0.4s						
PDGK				⇓Sn	**Sg**	**15 01 00.4**	**+3.4**
	71nm,0.5s						
PDGK	**Podgornoye**	**1.46**	**357**	⇑*i*P	**Pn**	**15 00 36.6**	**-1.1**
	baz=56						
PDGK				⇑*i*S	**Sn**	**15 00 56.3**	**-1.3**
	baz=56						
SATY	**Saty**	**1.48**	**324**	P	**Pn**	**15 00 37.0**	**-1.0**
	25nm,0.1s						
SATY				S	**Sn**	**15 00 56.0**	**-2.1**
	88nm,0.1s						
SATY	**Saty**	**1.48**	**324**	*e*P	**Pn**	**15 00 37.0**	**-1.0**
	25nm,0.1s						
SATY				*e*S	**Sn**	**15 00 56.0**	**-2.1**
	88nm,0.1s						
KTMS	**Ketmen**	**1.67**	**19**	P	**Pn**	**15 00 40.6**	**0.0**
	40nm,0.1s						
KTMS				S	**Sn**	**15 01 02.0**	**-0.7**
	77nm,0.2s						
KTMS	**Ketmen**	**1.67**	**19**	*e*P	**Pn**	**15 00 40.6**	**0.0**
	40nm,0.1s						
KTMS				*e*S	**Sn**	**15 01 02.0**	**-0.7**
	77nm,0.2s						
KDJ	**Kajisay**	**1.83**	**279**	⇑*i*P	**Pn**	**15 00 43.7**	**+0.9**

	baz=79						
KDJ				⇑*i*S	**Sb**	**15 01 08.0**	**+0.1**
	baz=79						
KURS	**Kuram**	**1.93**	**327**	P	**Pn**	**15 00 45.3**	**+1.2**
	32nm,0.2s						
KURS				S	**Sb**	**15 01 10.5**	**-0.3**
	20nm,0.5s						
KURS	**Kuram**	**1.93**	**327**	*e*P	**Pn**	**15 00 45.3**	**+1.2**
	32nm,0.2s						
KURS				*e*S	**Sb**	**15 01 10.5**	**-0.3**
	20nm,0.5s						
TNSS	**Tian-Shan**	**2.29**	**301**	Pg	**Pn**	**15 00 51.1**	**+1.7**
	17nm,0.2s						
TNSS				Lg	Lg	15 01 21.4	
	44nm,0.4s						
TNSS	**Tian-Shan**	**2.29**	**301**	*e*P	**Pn**	**15 00 51.1**	**+1.7**
	17nm,0.2s						
TNSS				*e*S	**Sb**	**15 01 20.8**	**-0.5**
	44nm,0.4s						
MDOK	**Medeo**	**2.29**	**305**	Pn	**Pn**	**15 00 50.8**	**+1.7**
	20nm,0.5s						
MDOK				Sn	**Sb**	**15 01 20.7**	**-0.5**
	74nm,0.6s						
MDOK	**Medeo**	**2.29**	**305**	Pg	**Pn**	**15 00 50.9**	**+1.7**
	30nm,0.4s						
MDOK				Lg	Lg	15 01 21.2	
	80nm,0.4s						
MDOK	**Medeo**	**2.29**	**305**	*e*P	**Pb**	**15 00 51.3**	**-1.0**
	30nm,0.4s						
MDOK				*e*S	**Sb**	**15 01 21.2**	**0.0**
	80nm,0.4s						
KOTS	**Kotyrbulak**	**2.29**	**307**	Pg	**Pb**	**15 00 51.5**	**-0.9**
	20nm,0.3s						
KOTS				Lg	Lg	15 01 21.0	
	89nm,0.4s						
KOTS	**Kotyrbulak**	**2.29**	**307**	*e*P	**Pb**	**15 00 51.5**	**-0.9**
	20nm,0.3s						
KOTS				*e*S	**Sb**	**15 01 21.1**	**-0.2**
	89nm,0.4s						
KNDC	**Almaty**	**2.37**	**305**	⇓Pn	**Pb**	**15 00 52.5**	**-1.1**
	18nm,0.6s						
KNDC				⇓Sn	**Sb**	**15 01 24.2**	**+0.8**
	31nm,0.3s						
MNBS	**Baschi**	**2.38**	**339**	Pg	**Pn**	**15 00 52.4**	**+2.0**
	39nm,0.3s						
MNBS				Lg	Lg	15 01 22.6	
	60nm,0.3s						
MNBS	**Baschi**	**2.38**	**339**	*e*P	**Pn**	**15 00 52.4**	**+2.0**
	39nm,0.3s						
MNBS				*e*S	**Sb**	**15 01 22.6**	**-1.1**
	60nm,0.3s						
DJR	**Jarkent**	**2.46**	**3**	*e*P	**Pb**	**15 00 54.9**	**-0.3**
	1.6nm,0.2s						
DJR				*e*S	**Sb**	**15 01 26.7**	**+0.6**
	15nm,0.3s						
IZV	**Izvestkoviy**	**2.50**	**299**	Pg	**Pb**	**15 00 54.9**	**-1.0**
	18nm,0.2s						
IZV				Lg	Lg	15 01 27.5	
	73nm,0.5s						
IZV	**Izvestkoviy**	**2.50**	**299**	*e*P	**Pb**	**15 00 54.9**	**-1.0**
	18nm,0.2s						
IZV				*e*S	**Sb**	**15 01 27.0**	**-0.3**
	73nm,0.5s						
ULHL	**Ulahol**	**2.53**	**280**	⇑*i*P	**Pn**	**15 00 54.1**	**+1.5**
	baz=80						
ULHL				⇑*i*S	**Sb**	**15 01 26.2**	**-2.0**
	baz=80						
MTBS	**Maitube**	**2.66**	**299**	*e*P	**Pb**	**15 00 58.1**	**-0.5**
	13nm,0.3s						
MTBS				*e*S	**Sb**	**15 01 32.2**	**+0.3**
	35nm,0.3s						
ARXS	**Arharly**	**2.68**	**331**	Pg	**Pb**	**15 00 58.6**	**-0.2**
	16nm,0.5s						
ARXS				Lg	Lg	15 01 32.7	
	20nm,0.2s						
ARXS	**Arharly**	**2.68**	**331**	*e*P	**Pb**	**15 00 58.6**	**-0.2**
	16nm,0.5s						
ARXS				*e*S	**Sb**	**15 01 33.4**	**+1.1**
	20nm,0.2s						
NRN	**Naryn**	**2.74**	**262**	⇓*i*P	**Pn**	**15 00 56.2**	**+0.7**
	baz=62						
NRN				⇓*i*S	**Sn**	**15 01 30.3**	**+0.9**
	baz=62						
CHKK	**Chushkaly**	**2.76**	**317**	Pg	**Pb**	**15 00 59.2**	**-1.1**
	20nm,0.2s						
CHKK				Lg	Lg	15 01 33.8	
	78nm,0.3s						
CHKK	**Chushkaly**	**2.76**	**317**	*e*P	**Pb**	**15 00 59.8**	**-0.5**
	20nm,0.2s						
CHKK				*e*S	**Sb**	**15 01 35.4**	**+0.8**
	78nm,0.3s						
BOOM	**Boomskoye usch**	**2.79**	**284**	⇑*e*P	**Pn**	**15 00 57.1**	**+1.0**
	baz=84						
BOOM				⇑*i*S	**Sn**	**15 01 32.4**	**+1.8**
	baz=84						
KTBS	**Karatobe**	**2.83**	**311**	Pg	**Pb**	**15 01 01.1**	**-0.4**
	6.0nm,0.1s						
KTBS				Lg	Lg	15 01 37.4	
	44nm,0.3s						
KTBS	**Karatobe**	**2.83**	**311**	*e*P	**Pb**	**15 01 01.1**	**-0.4**
	6.0nm,0.1s						
KTBS				*e*S	**Sb**	**15 01 37.4**	**+0.8**
	44nm,0.3s						
DGS	**Degeres**	**3.15**	**297**	Pg	**Pb**	**15 01 05.2**	**-1.6**
	11nm,0.3s						
DGS				Lg	Lg	15 01 44.4	
	25nm,0.6s						
DGS	**Degeres**	**3.15**	**297**	*e*P	**Pb**	**15 01 05.2**	**-1.6**
	11nm,0.3s						
DGS				*e*S	**Sb**	**15 01 44.4**	**-1.4**
	25nm,0.6s						
TKM2	**Tokmak 2**	**3.15**	**291**	⇓Pg	**Pb**	**15 01 05.5**	**-1.5**
	3.8nm,0.5s						
TKM2				⇑Lg	Lg	15 01 49.8	
	11nm,0.6s						
TKM2	**Tokmak 2**	**3.15**	**291**	⇑*i*P	**Pn**	**15 01 02.1**	**+1.1**
	baz=91						
TKM2				⇑*i*S	**Sn**	**15 01 41.2**	**+1.8**
	baz=91						
KAPS	**Kapalarasan**	**3.42**	**357**	*e*P	**Pb**	**15 01 11.5**	**+0.1**
	2.2nm,0.2s						
KAPS				*e*S	**Sb**	**15 01 55.1**	**+1.6**
	16nm,0.4s						
AAK	**Ala-Archa**	**3.87**	**283**	Pg	**Pb**	**15 01 19.9**	**+0.6**
	1.8nm,0.3s						
AAK				Lg	Lg	15 02 13.0	
	4.4nm,0.5s						
ARLS	**Aral**	**3.94**	**272**	⇑*e*P	**Pn**	**15 01 13.0**	**+1.0**
	baz=72						
ARLS				⇑*e*S	**Sn**	**15 01 59.9**	**+0.9**
	baz=72						
MAKZ	**Makanchi**	**5.22**	**18**	⇑Pn	**Pn**	**15 01 29.7**	**+0.4**
	0.4nm,0.3s						
MAKZ				⇓Sn	**Sn**	**15 02 29.3**	**-0.8**
	1.0nm,0.6s						
MAKZ				⇑Lg	Lg	15 02 55.2	
	1.1nm,0.5s						
MK31	**Makanchi Array**	**5.28**	**20**	⇓Pn	**Pn**	**15 01 31.2**	**+1.0**
	0.1nm,0.3s,baz=197,slow=12,SNR=28						
MK31				⇓Sn	**Sn**	**15 02 33.2**	**+1.5**
	0.9nm,0.4s,baz=193,slow=24						
MK31				⇑Lg	Lg	15 02 57.5	
	0.4nm,0.3s,baz=198,slow=32						

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*IDC **11** 15:00:27.8±2.1,39°.64N×25°.50E,h0^{km},mb3.4/1,*
mb1 3.6/6,mb1mx3.3/36,mbtmp3.5/6,ML3.8/4,MS3.3/1,
Ms1 3.3/1,ms1mx2.3/30,Error ellipse: s-maj=30.6km
s-min=18.6km az=63.0
*ISK **11** 15:00:28.8,39°.74N×25°.60E,h6^{km},ML3.7/15*
*BEO **11** 15:00:28.1±1.0,39°.61N×25°.64E,h0^{km},ML3.5/3*
*ATH **11** 15:00:29.3,39°.73N×25°.60E,h29^{km}±1^{km},ML3.5/13,Error*
ellipse: s-maj=1.5km s-min=0.9km az=82.0
*ISCJB **11** 15:00:29.0±0.4,39°.75N±0°.01×25°.57E±0°.02,h7^{km}±3^{km},*
mb3.1/1,MS3.1/1,Error ellipse: s-maj=2.5km s-min=2.1km
az=36.3
*DDA **11** 15:00:29.4,39°.73N×25°.66E,h23^{km}±1^{km},ML4.0*
*THE **11** 15:00:30.1,39°.74N×25°.63E,h12^{km},ML3.6/10,Error*
ellipse: s-maj=1.0km s-min=0.5km az=83.0
*SOF **11** 15:00:31.3,39°.90N×25°.65E,h10^{km},MD3.5*
ISC 11 15:00:29.7±1.0**,39°.73N**±0°.02×**25°.63E**±0°.02**,h12**^{km}±8^{km}**,**
n150,σ0^{s}.81/185**,13C-7D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.35**	**71**	PG	**Pg**	**15 00 36.5**	**-0.2**
BOZC	**Bozcaada**	**0.35**	**71**	⇓*i*P	**Pb**	**15 00 37.2**	**-0.7**
BOZC				*i* S	**Sb**	**15 00 42.1**	**-1.2**
LIA	**Limnos Island**	**0.38**	**296**	P	**Pg**	**15 00 37.4**	**+0.1**
LIA				S	**Sb**	**15 00 43.1**	**-1.2**
LIA				AML	AML	15 00 48.0	
	comp=N,25866µm,0.6s						
LIA				AML	AML	15 00 50.4	
	comp=E,17238µm,0.6s						
LIA	**Limnos Island**	**0.38**	**296**	P	**Pg**	**15 00 37.3**	**+0.1**
LIA				S	**Sb**	**15 00 43.1**	**-1.2**
EFSA	**Agios Efstrati**	**0.53**	**249**	P	**Pb**	**15 00 40.7**	**-0.1**
EFSA				AML	AML	15 00 54.7	
	comp=N,21031µm,0.4s						
EFSA				AML	AML	15 00 56.8	
	comp=E,22304µm,0.4s						
SIGR	**SIGRI**	**0.55**	**161**	PG	**Pg**	**15 00 40.3**	**-0.1**
SIGR				SG	**Sb**	**15 00 48.4**	**-0.6**
SIGR	**SIGRI**	**0.55**	**161**	P	**Pg**	**15 00 40.2**	**-0.1**
SIGR				S	**Sb**	**15 00 48.6**	**-0.4**
SIGR				AML	AML	15 00 49.4	
	comp=N,14853µm,0.6s						
SIGR				AML	AML	15 00 49.4	
	comp=E,12639µm,0.7s						
SIGR	**SIGRI**	**0.55**	**161**	P	**Pg**	**15 00 40.2**	**-0.1**
SIGR				S	**Sb**	**15 00 48.5**	**-0.6**
EZN	**Ezine**	**0.55**	**80**	PG	**Pg**	**15 00 40.2**	**-0.2**
EZN				SG	**Sb**	**15 00 48.3**	**-0.8**
EZN	**Ezine**	**0.55**	**80**	P	**Pg**	**15 00 40.2**	**-0.2**
EZN				S	**Sb**	**15 00 48.0**	**-1.1**
PRK	**Paraskevi**	**0.69**	**134**	P	**Pb**	**15 00 44.2**	**+0.5**
PRK				S	**Sn**	**15 00 54.8**	**-1.2**
PRK				AML	AML	15 01 00.3	
	comp=N,21051µm,0.6s						
PRK				AML	AML	15 01 00.8	
	comp=E,19993µm,0.9s						
PRK	**Paraskevi**	**0.69**	**134**	P	**Pb**	**15 00 44.3**	**+0.6**
PRK				S	**Sb**	**15 00 54.4**	**+1.1**
BAYC	**CANAKKALE_Bayr**	**0.71**	**89**	⇓*i*P	**Pb**	**15 00 43.4**	**-0.7**
BAYC				*i* S	**Sb**	**15 00 53.7**	**-0.1**
BAYC				IAML_P			
	comp=Z,36µm,0.2s						
SMTH	**Samothraki Isl**	**0.74**	**354**	P	**Pb**	**15 00 44.0**	**-0.6**
SMTH				S	**Sb**	**15 00 54.7**	**-0.1**
SMTH				AML	AML	15 00 57.3	
	comp=E,6012µm,0.4s						
SMTH				AML	AML	15 00 58.0	
	comp=N,3861µm,0.4s						
SMTH	**Samothraki Isl**	**0.74**	**354**	P	**Pb**	**15 00 44.0**	**-0.6**
SMTH				S	**Sb**	**15 00 55.5**	**+0.7**
AYVA	**Ayvalik**	**0.93**	**117**	⇑*i*P	**Pn**	**15 00 47.9**	**-0.6**
AYVA				*i* S	**Sn**	**15 01 02.7**	**+1.0**
GELI	**Tayfur-Gelibol**	**0.93**	**44**	PG	**Pb**	**15 00 47.6**	**-0.2**
GELI				SG	**Sn**	**15 01 00.9**	**-1.1**
LPK	**Lapseki**	**1.08**	**53**	PN	**Pb**	**15 00 50.1**	**-0.3**
ENEZ	**Enez**	**1.08**	**22**	PN	**Pb**	**15 00 50.2**	**-0.2**
THAS	**Thassos island**	**1.12**	**322**	P	**Pb**	**15 00 50.2**	**-0.7**
THAS				S	**Sb**	**15 01 05.6**	**0.0**
THAS				AML	AML	15 01 06.3	
	comp=N,5145µm,0.4s						
THAS				AML	AML	15 01 07.6	
	comp=E,6254µm,0.3s						
THAS	**Thassos island**	**1.12**	**322**	P	**Pb**	**15 00 50.3**	**-0.7**
THAS				S	**Sb**	**15 01 05.5**	**0.0**
ERIK	**Erikli-Kesan**	**1.16**	**36**	PN	**Pg**	**15 00 51.5**	**-0.5**
PSRA	**Psara**	**1.19**	**182**	P	**Pg**	**15 00 52.5**	**0.0**
SKY	**Skiros Island**	**1.19**	**225**	P	**Pb**	**15 00 51.5**	**-0.7**
SKY	**Skiros Island**	**1.19**	**225**	P	**Pb**	**15 00 51.5**	**-0.7**
SKY				S	**Sg**	**15 01 07.9**	**-0.2**
ALN	**Alexandroupoli**	**1.21**	**15**	PN	**Pn**	**15 00 51.9**	**-0.6**
ALN	**Alexandroupoli**	**1.21**	**15**	P	**Pn**	**15 00 51.8**	**-0.6**
ALN				S	**Sb**	**15 01 08.0**	**-0.2**
ALN				AML	AML	15 01 15.2	
	comp=E,2208µm,0.5s						
ALN				AML	AML	15 01 15.3	
	comp=N,1619µm,0.4s						
ALN	**Alexandroupoli**	**1.21**	**15**	P	**Pn**	**15 00 51.8**	**-0.6**
ALN				S	**Sb**	**15 01 07.3**	**-0.9**
FOCM	**Foa**	**1.33**	**139**	PN	**Pg**	**15 00 54.8**	**-0.4**
KRBN	**Karaburun**	**1.34**	**147**	PN	**Pg**	**15 00 55.4**	**-0.1**
KESN	**Edirne-Kesan**	**1.36**	**36**	⇑*i*P	**Pb**	**15 00 55.1**	**-0.3**
KESN				*i* S	**Sg**	**15 01 14.3**	**+0.7**
KESN				IAML_P			
	comp=Z,4µm,0.2s						
CHOS	**Chios island**	**1.38**	**166**	PN	**Pb**	**15 00 55.1**	**-0.4**
CHOS	**Chios island**	**1.38**	**166**	P	**Pn**	**15 00 54.5**	**-0.3**
CHOS				AML	AML	15 01 18.0	
	comp=N,2974µm,0.5s						
CHOS				AML	AML	15 01 18.6	
	comp=E,5712µm,0.7s						
CHOS	**Chios island**	**1.38**	**166**	P	**Pn**	**15 00 54.6**	**-0.3**
CHOS				S	**Sg**	**15 01 13.8**	**-0.4**
RDO	**Rodhopi**	**1.42**	**357**	PN	**Pn**	**15 00 54.9**	**-0.4**
RDO	**Rodhopi**	**1.42**	**357**	P	**Pn**	**15 00 54.9**	**-0.4**
RDO	**Rodhopi**	**1.42**	**357**	P	**Pn**	**15 00 54.9**	**-0.4**
KRBG	**Karabiga-Canak**	**1.44**	**62**	PN	**Pb**	**15 00 56.2**	**-0.3**
AOS	**Alonnisos**	**1.46**	**248**	P	**Pn**	**15 00 55.5**	**-0.4**
AOS	**Alonnisos**	**1.46**	**248**	P	**Pn**	**15 00 55.5**	**-0.4**
ALNA	**Alonissos**	**1.48**	**247**	P	**Pn**	**15 00 55.5**	**-0.6**
PAIG	**Paliouri**	**1.51**	**278**	P	**Pn**	**15 00 56.1**	**-0.5**
PAIG	**Paliouri**	**1.51**	**278**	P	**Pn**	**15 00 56.1**	**-0.5**
KAVA	**Kavala**	**1.52**	**326**	P	**Pn**	**15 00 56.3**	**-0.4**
KAVA				S	**Sn**	**15 01 15.5**	**-1.1**
KAVA				AML	AML	15 01 20.7	
	comp=E,2142µm,0.3s						
KAVA				AML	AML	15 01 20.7	
	comp=N,1533µm,0.3s						
KAVA	**Kavala**	**1.52**	**326**	P	**Pn**	**15 00 56.4**	**-0.4**
KAVA				S	**Sn**	**15 01 16.3**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.53**	**51**	PN	**Pb**	**15 00 57.8**	**-0.2**
SART	**Tekirdag**	**1.53**	**51**	*i* P	**Pg**	**15 00 58.2**	**-0.9**
SART				*i* S	**Sg**	**15 01 19.8**	**+0.9**
KVLA	**Kavala**	**1.53**	**322**	P	**Pn**	**15 00 56.6**	**-0.4**
BALY	**Balya**	**1.54**	**89**	⇓*i*P	**Pb**	**15 00 58.0**	**-0.2**
BALY				*i* S	**Sg**	**15 01 18.7**	**-0.4**
URLA	**Izmir**	**1.56**	**151**	PN	**Pn**	**15 00 57.3**	**0.0**
URLA	**Izmir**	**1.56**	**151**	⇑*i*P	**Pn**	**15 00 57.4**	**+0.1**
URLA				*i* S	**Sn**	**15 01 17.2**	**-0.3**
GONE	**Gonen-Balikesi**	**1.62**	**78**	PN	**Pn**	**15 00 58.4**	**+0.4**
ZEY	**zmir**	**1.64**	**155**	*i* P	**Pg**	**15 01 00.4**	**-0.7**
ZEY				*i* S	**Sg**	**15 01 22.0**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.66**	**102**	⇓*i*P	**Pb**	**15 00 59.5**	**-0.7**
STEP				*i* S	**Sg**	**15 01 24.4**	**+1.5**
STEP				IAML_P			
	comp=Z,10µm,0.3s						
SKIA	**Skiathos**	**1.76**	**252**	P	**Pn**	**15 00 59.5**	**-0.6**
SKIA				AML	AML	15 01 35.8	
	comp=N,2602µm,0.5s						
SKIA				AML	AML	15 01 36.9	
	comp=E,2284µm,0.6s						
SKIA	**Skiathos**	**1.76**	**252**	P	**Pn**	**15 00 59.5**	**-0.6**
SKIA				S	**Sb**	**15 01 23.5**	**-0.6**
PLG	**Polygyros**	**1.79**	**292**	P	**Pn**	**15 01 00.6**	**0.0**
PLG				AML	AML	15 01 29.5	
	comp=E,972µm,0.3s						
PLG				AML	AML	15 01 29.5	
	comp=N,1038µm,0.4s						
PLG	**Polygyros**	**1.79**	**292**	P	**Pn**	**15 01 00.4**	**-0.1**
EDC	**Edincik**	**1.82**	**70**	PN	**Pb**	**15 01 01.9**	**-1.1**
MRKA	**Markates**	**1.88**	**238**	P	**Pn**	**15 01 01.1**	**-0.6**
MRKA				AML	AML	15 01 38.7	
	comp=N,1869µm,0.6s						
MRKA				AML	AML	15 01 40.7	
	comp=E,1952µm,0.6s						
MRKA	**Markates**	**1.88**	**238**	P	**Pn**	**15 01 00.8**	**-1.0**
AKS	**Akhisar**	**1.90**	**116**	PN	**Pn**	**15 01 02.5**	**+0.6**
AKHS	**Akhisar**	**1.90**	**116**	*i* P	**Pb**	**15 01 03.2**	**-1.1**
NEO	**Neokhori**	**1.91**	**258**	P	**Pn**	**15 01 02.2**	**+0.1**
XOR	**Xorichti**	**1.92**	**260**	P	**Pn**	**15 01 01.8**	**-0.4**
XOR	**Xorichti**	**1.92**	**260**	P	**Pn**	**15 01 02.0**	**-0.2**
KDZ	**Kurdzhali**	**1.93**	**355**	*i* P	**Pg**	**15 01 05.9**	**-0.7**
TKR	**Tekirdag**	**1.93**	**49**	PN	**Pn**	**15 01 02.9**	**+0.6**
DGB	**zmir**	**1.94**	**149**	*i* P	**Pn**	**15 01 03.2**	**+0.8**
SOH	**Sokhos**	**2.05**	**303**	P	**Pn**	**15 01 04.3**	**+0.2**
SOH	**Sokhos**	**2.05**	**303**	P	**Pn**	**15 01 03.8**	**-0.3**
SMIA	**Simia**	**2.06**	**246**	P	**Pn**	**15 01 03.5**	**-0.7**
RZN	**Rozhen**	**2.08**	**341**	*i* P	**Pn**	**15 01 04.8**	**+0.2**
SRS	**Serrai**	**2.08**	**312**	*e*Pn	**Pn**	**15 01 04.2**	**-0.3**
SRS				*e*Sn	**Sb**	**15 01 32.2**	**-1.1**
SRS	**Serrai**	**2.08**	**312**	P	**Pn**	**15 01 04.3**	**-0.2**
SRS	**Serrai**	**2.08**	**312**	P	**Pn**	**15 01 04.2**	**-0.3**
FYTO	**Fytoko, Volos**	**2.10**	**262**	P	**Pn**	**15 01 04.6**	**-0.1**
FYTO	**Fytoko, Volos**	**2.10**	**262**	P	**Pn**	**15 01 04.6**	**-0.1**
NVR	**Nevrokopi**	**2.10**	**321**	P	**Pn**	**15 01 04.8**	**-0.1**
NVR				AML	AML	15 01 39.6	
	comp=N,737µm,0.3s						
NVR				AML	AML	15 01 41.1	
	comp=E,779µm,0.4s						
NVR	**Nevrokopi**	**2.10**	**321**	P	**Pn**	**15 01 04.6**	**-0.2**
NVR				S	**Sn**	**15 01 29.9**	**-1.1**
HORT	**Hortiatis**	**2.12**	**295**	P	**Pn**	**15 01 05.4**	**+0.3**
HORT	**Hortiatis**	**2.12**	**295**	P	**Pn**	**15 01 05.2**	**+0.1**
KCTX	**Karacabey (Bur**	**2.17**	**75**	PN	**Pn**	**15 01 06.4**	**+0.8**
DURS	**Dursunbey**	**2.20**	**92**	*i* P	**Pb**	**15 01 07.8**	**-1.7**
SMG	**Samos**	**2.23**	**154**	P	**Pn**	**15 01 06.8**	**+0.3**
SMG	**Samos**	**2.23**	**154**	P	**Pn**	**15 01 06.8**	**+0.3**
ATAL	**Atalanti**	**2.27**	**244**	P	**Pn**	**15 01 06.6**	**-0.4**
ATAL	**Atalanti**	**2.27**	**244**	P	**Pn**	**15 01 06.7**	**-0.4**
EDRB	**Edirne**	**2.28**	**22**	P	**Pn**	**15 01 06.6**	**-0.6**
LKR	**Lokris**	**2.31**	**243**	P	**Pn**	**15 01 07.4**	**-0.2**
DIM	**Dimitrovgrad**	**2.32**	**358**	*i* P	**Pn**	**15 01 07.9**	**+0.2**
MMB	**Musomiste**	**2.35**	**323**	*i* P	**Pn**	**15 01 08.3**	**+0.1**
VLY	**Voula,Athens**	**2.36**	**218**	P	**Pn**	**15 01 07.7**	**-0.5**
GCAM	**G?zelcaml?**	**2.38**	**148**	*i* P	**Pb**	**15 01 13.4**	**+0.8**
LIT	**Litokhoron**	**2.44**	**280**	P	**Pn**	**15 01 09.7**	**+0.3**
LIT	**Litokhoron**	**2.44**	**280**	P	**Pn**	**15 01 09.8**	**+0.3**
PLD	**Plovdiv**	**2.47**	**344**	*e*Pn	**Pn**	**15 01 10.8**	**+1.0**
PLD				*e*Sn	**Sb**	**15 01 44.1**	**-0.4**
DEMI	**Demirci**	**2.49**	**105**	*i* P	**Pn**	**15 01 11.9**	**+1.7**
AGG	**Agios Georgios**	**2.65**	**256**	P	**Pn**	**15 01 12.2**	**-0.1**
KULA	**Kula-Manisa**	**2.65**	**116**	P	**Pn**	**15 01 12.8**	**+0.4**
APE	**Apeiranthos**	**2.66**	**182**	⇓*i*P	**Pn**	**15 01 14.4**	**+2.0**
AYDN	**Tasoluk**	**2.71**	**139**	*i* P	**Pn**	**15 01 13.8**	**+0.5**
GRG	**Griva**	**2.75**	**297**	P	**Pn**	**15 01 13.7**	**0.0**
VAY	**Valandovo**	**2.82**	**305**	*i* Pn	**Pg**	**15 01 24.3**	**+0.5**
VAY				*i* Sn	**Sg**	**15 02 00.8**	**+0.5**
AMGA	**Amorgos Island**	**2.90**	**176**	P	**Pn**	**15 01 14.9**	**-0.8**
DID	**Didima**	**2.90**	**221**	P	**Pn**	**15 01 15.1**	**-0.7**
PGB	**Panagyurishte**	**3.03**	**339**	*i* P	**Pn**	**15 01 17.5**	**0.0**
SERG	**Sergoula**	**3.07**	**246**	P	**Pn**	**15 01 17.5**	**-0.6**
ANX	**Ano Chora**	**3.10**	**250**	P	**Pn**	**15 01 18.9**	**+0.4**
ANX	**Ano Chora**	**3.10**	**250**	P	**Pn**	**15 01 18.9**	**+0.4**
GUR	**Goura**	**3.13**	**236**	P	**Pn**	**15 01 18.7**	**-0.2**
EFP	**Efpalio**	**3.17**	**247**	P	**Pn**	**15 01 19.8**	**+0.4**
LAKA	**Lakka**	**3.21**	**244**	P	**Pn**	**15 01 20.4**	**+0.4**
STIP	**Stip**	**3.27**	**308**	*i* Pn	**Pn**	**15 01 20.1**	**-0.6**
VTS	**Vitosha**	**3.39**	**328**	*e*Pn	**Pn**	**15 01 23.5**	**+0.9**
VTS				*e*Sn	**Sn**	**15 02 05.3**	**+2.4**
VTS	**Vitosha**	**3.39**	**328**	⇑*i*P	**Pn**	**15 01 23.5**	**+0.9**
VTS	**Vitosha**	**3.39**	**328**	S	**Sb**	**15 02 07.0**	**-4.1**
VTS	**Vitosha**	**3.39**	**328**	P	**Pn**	**15 01 23.6**	**+0.9**
KRUS	**Krusevo**	**3.71**	**298**	*i* Pn	**Pn**	**15 01 28.7**	**+1.7**
ZAPS	**Zavoj**	**4.19**	**329**	*e*Pn	**Pn**	**15 01 34.8**	**+1.3**
BARS	**Barje**	**4.21**	**318**	*e*Pn	**Pn**	**15 01 35.3**	**+1.5**
BARS	**Barje**	**4.21**	**318**	*e*Pn	**Pb**	**15 01 45.5**	**+1.7**
IDI	**Anoyia**	**4.47**	**188**	Pn	**Pn**	**15 01 35.1**	**-2.3**
	comp=E,0.3nm,0.3s,baz=0.0,slow=13,SNR=2.7						
ZAGS	**Zajecar**	**4.80**	**329**	*e*Pn	**Pn**	**15 01 42.8**	**+0.9**
BOVS	**Bovan**	**4.88**	**324**	*e*Pn	**Pn**	**15 01 44.1**	**+1.2**
SJES	**Sjenica**	**5.52**	**312**	*e*Pn	**Pn**	**15 01 52.5**	**+0.7**
KUBS	**Kucevo**	**5.53**	**329**	*e*Pn	**Pn**	**15 01 52.1**	**+0.3**
GRUS	**Gruza**	**5.54**	**320**	*e*Pn	**Pn**	**15 01 52.8**	**+0.8**
IVAS	**Ivanjica**	**5.62**	**315**	*e*Pn	**Pn**	**15 01 53.2**	**+0.1**
HERR	**Herculane**	**5.67**	**336**	⇑*i*P	**Pn**	**15 01 53.4**	**-0.4**
ARR	**Arges**	**5.68**	**353**	⇑*i*P	**Pn**	**15 01 53.8**	**-0.2**
VOIR		**5.72**	**356**	⇑*i*P	**Pn**	**15 01 54.0**	**-0.5**
MLR	**Muntele Rosu**	**5.76**	**2**	⇑*i*P	**Pn**	**15 01 54.1**	**-1.1**
MLR	**Muntele Rosu**	**5.76**	**2**	Pn	**Pn**	**15 01 56.2**	**+1.0**
	comp=E,1.3nm,0.3s,baz=283,slow=8.5,SNR=7.6						
MLR				Lg	Lg	15 03 30.2	
	comp=E,0.4nm,0.3s,baz=295,slow=19,SNR=1.7						
MDVR	**Moldovita**	**5.82**	**331**	⇑*i*P	**Pn**	**15 01 56.0**	**+0.1**
LOT	**Lotru**	**5.88**	**347**	⇓*i*P	**Pn**	**15 01 56.9**	**+0.2**
TRUS	**Trudelj**	**5.94**	**321**	*e*Pn	**Pn**	**15 01 58.1**	**+0.6**
GZR	**Gura Zlata**	**6.04**	**341**	⇓*i*P	**Pn**	**15 01 58.7**	**-0.2**
DIVS	**Divibare**	**6.06**	**318**	*e*Pn	**Pn**	**15 01 59.8**	**+0.6**
BRTR	**Keskin Array B**	**6.18**	**87**	Pn	**Pn**	**15 02 02.4**	**+1.5**
	comp=E,3.0nm,0.3s,baz=266,slow=12,SNR=78						
BRTR				Sn	**Sn**	**15 03 10.7**	**-0.8**
	comp=E,0.0nm,0.3s,baz=271,slow=17,SNR=1.3						
BRTR				Lg	Lg	15 03 47.5	
	baz=271,slow=21,SNR=7.3						
BBLS	**Lazići**	**6.22**	**314**	*e*Pn	**Pn**	**15 02 01.9**	**+0.5**
DOPR	**Dopca**	**6.24**	**358**	⇑*i*P	**Pn**	**15 01 59.3**	**-2.3**
OZUR		**6.36**	**1**	⇑*i*P	**Pn**	**15 02 02.5**	**-0.8**
BZS	**Buzias**	**6.58**	**335**	*e*Pn	**Pn**	**15 02 06.5**	**+0.3**
BZS	**Buzias**	**6.58**	**335**	⇑*i*P	**Pn**	**15 02 06.6**	**+0.3**
BURAR	**Bucovina Array**	**7.89**	**358**	⇑*i*P	**Pn**	**15 02 23.2**	**-1.1**
MMAI	**Mount Meron Ar**	**10.34**	**127**	Pn	**Pn**	**15 02 58.9**	**+1.0**
	comp=E,0.7nm,0.3s,baz=317,slow=10,SNR=2.4						
AKASG	**Malin Array Be**	**11.26**	**12**	Pn	**Pn**	**15 03 10.9**	**+0.5**
	comp=E,1.0nm,0.3s,baz=201,slow=12,SNR=1.6						
KIRV	**Kirov**	**24.23**	**31**	LR	LR	15 14 38.9	
	comp=E,59nm,18.6s,baz=207,slow=35						
MKAR	**Makanchi Array**	**41.09**	**61**	P	**P**	**15 08 14.6**	**+1.3**
	comp=E,0.3nm,0.6s,baz=272,slow=7.8,SNR=5.4						

MEX 11 15:10:29.4±0.8**,16°.32N×98°.52W,h1**^{km}±6^{km}**,MD3.6,Near**
coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.39**	**79**	*e*P	Pg	15 10 36.2	-0.6
PNIG				*i* S	Sg	15 10 42.5	+0.5

IDC 11 15:11:19.2±3.4**,10°.93S×166°.76E,h0**^{km}**,mb3.6**/5**,**
mb1 3.8/5**,mb1mx3.6**/27**,mbtmp3.6**/5**,MS2.9**/1**,Ms1 2.9**/1**,**
ms1mx2.5/29**,Error ellipse: s-maj=121.0km**
s-min=30.9km az=134.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.87**	**282**	LR	LR	15 15 41.8	
	comp=Z,103nm,20.4s,baz=102,slow=38						
WRA	**Warramunga Arr**	**32.46**	**250**	P	P	15 17 51.7	+0.2
	1.0nm,1.0s,baz=81,slow=9.0,SNR=4.8						
ASAR	**Alice Springs**	**33.73**	**244**	P	P	15 18 02.5	-0.2
	0.7nm,1.0s,baz=68,slow=10,SNR=5.3						
SONM	**Songino Array**	**79.16**	**323**	P	P	15 23 26.3	+0.2
	0.6nm,1.1s,baz=113,slow=6.6,SNR=3.4						
ILAR	**Eielson Array**	**83.09**	**18**	P	P	15 23 46.4	0.0
	0.5nm,1.0s,baz=227,slow=4.4,SNR=3.6						
MKAR	**Makanchi Array**	**94.12**	**317**	P	P	15 24 39.4	-0.4
	0.4nm,0.8s,baz=92,slow=6.7,SNR=4.7						

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*IDC **11** 15:18:53.9±1.4,10°.74S×164°.80E,h0^{km},mb3.7/6,*
mb1 3.9/8,mb1mx3.7/29,mbtmp3.9/8,ML4.5/2,MS3.2/2,
Ms1 3.2/2,ms1mx2.7/24,Error ellipse: s-maj=32.8km
s-min=25.4km az=122.0
*ISCJB **11** 15:18:54.1±1.0,10°.88S±0°.08×164°.77E±0°.10,h10^{km},*
mb3.6/6,MS3.3/1,Error ellipse: s-maj=16.2km
s-min=8.3km az=143.5
ISC 11 15:18:55.7±1.1**,10°.8S**±0°.1×**164°.8E**±0°.1**,h10**^{km}**,n16,**
σ1^{s}.28/11**,mb3.7**/6**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.99**	**285**	*e*P	**Pn**	**15 20 12.0**	**+1.2**
HNR	**Honiara**	**4.99**	**285**	Pn	**Pn**	**15 20 10.9**	**+0.2**
	22nm,0.3s,baz=38,slow=1.3,SNR=13						
HNR				Sn	**Sn**	**15 21 08.3**	**-0.3**
	baz=148,slow=19,SNR=1.3						
DZM	**Mont Dzumac**	**11.35**	**172**	Pn	**Pn**	**15 21 39.8**	**+1.7**
	2.6nm,0.3s,baz=313,slow=10,SNR=56						
DZM				Sn	**Sn**	**15 23 43.8**	**-1.3**
	0.1nm,0.3s,baz=115,slow=17,SNR=2.1						
DZM				LR	LR	15 25 25.1	
	comp=Z,83nm,19.1s,baz=28,slow=34						
H11S2	**WAKE ISLAND Hy**	**29.13**	**4**	T	T	15 55 11.5	
	baz=184,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy**	**29.13**	**4**	T	T	15 55 11.6	
	baz=184,slow=76,SNR=55						
H11S1	**WAKE ISLAND Hy**	**29.15**	**4**	T	T	15 55 12.7	
	baz=184,slow=76,SNR=44						
URZ	**Urewera**	**29.50**	**160**	LR	LR	15 36 05.3	
	comp=Z,70nm,18.1s,baz=276,slow=35						
STKA	**Stephens Creek**	**30.04**	**222**	P	**P**	**15 25 05.3**	**+0.2**
	1.3nm,0.7s,baz=33,slow=13,SNR=3.1						
H11N1	**WAKE ISLAND Hy**	**30.36**	**4**	T	T	15 56 43.1	
	baz=184,slow=76,SNR=25						
H11N3	**WAKE ISLAND Hy**	**30.36**	**4**	T	T	15 56 43.0	
	baz=184,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**30.37**	**4**	T	T	15 56 45.2	

	baz=184,slow=76,SNR=23						
WRA	Warramunga Arr	30.74	249	P	P	15 25 10.8	-0.7
	0.3nm,0.6s,baz=78,slow=9.2,SNR=4.9						
ASAR	Alice Springs	32.12	242	P	P	15 25 21.6	-1.9
	0.3nm,0.6s,baz=64,slow=10.0,SNR=11						
SONM	Songino Array	77.92	324	P	P	15 30 55.1	+1.1
	0.6nm,1.0s,baz=122,slow=7.0,SNR=3.8						
ILAR	Eielson Array	83.54	19	P	P	15 31 22.4	-1.3
	0.5nm,0.7s,baz=236,slow=5.1,SNR=7.9						
MKAR	Makanchi Array	92.71	317	P	P	15 32 08.3	+0.1
	0.3nm,0.7s,baz=116,slow=3.4,SNR=3.1						

IDC 11 15:27:54.8±1.8,10°.75S×165°.38E,h0^{km},mb3.5/4, mb1 3.8/5,mb1mx3.5/26,mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=52.9km s-min=32.9km az=119.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.30	175	Pn	Pn	15 30 37.2	-0.5
	0.6nm,0.3s,baz=1.1,slow=19,SNR=14						
WRA	Warramunga Arr	31.25	249	P	P	15 34 16.6	+0.1
	0.5nm,1.1s,baz=81,slow=9.0,SNR=3.0						
ASAR	Alice Springs	32.60	243	P	P	15 34 28.8	+0.4
	0.3nm,0.6s,baz=67,slow=10.0,SNR=7.8						
ILAR	Eielson Array	83.35	19	P	P	15 40 24.2	+0.8
	0.4nm,0.8s,baz=236,slow=4.8,SNR=2.8						
MKAR	Makanchi Array	93.06	317	P	P	15 41 09.0	-1.6
	0.3nm,0.9s,baz=108,slow=4.7,SNR=2.8						

ISCJB 11 15:36:27.0±1.0,10°.8S±0°.1×165°.92E±0°.10,h10^{km}, mb3.6/5,MS3.1/2,Error ellipse: s-maj=19.1km s-min=12.1km az=27.0

IDC 11 15:36:26.9±1.4,10°.74S×166°.00E,h0^{km},mb3.6/5, mb1 3.9/7,mb1mx3.7/32,mbtmp3.7/7,ML4.4/2,MS3.2/3, Ms1 3.1/3,ms1mx2.8/20,Error ellipse: s-maj=34.9km s-min=26.7km az=132.0

ISC 11 15:36:28.5±1.1,10°.7S±0°.1×166°.0E±0°.1,h10^{km},n8, σ0^s.97/8,mb3.7/5,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.09	282	Pn	Pn	15 37 59.0	+0.3
	23nm,0.3s,baz=136,slow=7.4,SNR=9.9						
HNR				Sn	Sn	15 39 08.2	-0.3
	1.7nm,0.3s,baz=180,slow=20,SNR=1.9						
HNR				LR	LR	15 40 17.1	
	comp=Z,155nm,21.3s,baz=58,slow=38						
DZM	Mont Dzumac	11.29	178	Pn	Pn	15 39 10.5	+0.3
	1.3nm,0.3s,baz=354,slow=13,SNR=16						
STKA	Stephens Creek	30.84	223	LR	LR	15 54 10.6	
	comp=Z,52nm,18.9s,baz=24,slow=34						
WRA	Warramunga Arr	31.82	249	P	P	15 42 54.2	+0.4
	1.0nm,0.7s,baz=81,slow=8.9,SNR=7.4						
ASAR	Alice Springs	33.15	243	P	P	15 43 04.5	-1.0
	0.6nm,0.6s,baz=64,slow=10,SNR=6.1						
ASAR				LR	LR	15 55 12.6	
	comp=Z,40nm,21.8s,baz=85,slow=34						
SONM	Songino Array	78.55	324	P	P	15 48 31.8	+1.4
	0.2nm,0.8s,baz=110,slow=6.2,SNR=2.3						
ILAR	Eielson Array	83.13	18	P	P	15 48 54.0	-0.4
	0.4nm,0.8s,baz=221,slow=5.4,SNR=3.2						
MKAR	Makanchi Array	93.45	317	P	P	15 49 43.4	-1.1
	0.3nm,0.7s,baz=86,slow=4.6,SNR=2.9						

IDC 11 15:49:45.4±2.1,3°.97N×125°.93E,h0^{km},mb3.1/3, mb1 3.3/3,mb1mx3.1/30,mbtmp3.1/3,Error ellipse: s-maj=191.3km s-min=25.4km az=65.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.16	161	P	P	15 55 11.6	-1.0
	0.2nm,0.6s,baz=340,slow=11,SNR=16						
ASAR	Alice Springs	28.55	165	P	P	15 55 44.1	+1.1
	0.2nm,0.7s,baz=339,slow=10,SNR=4.9						
MKAR	Makanchi Array	56.91	326	P	P	15 59 32.3	0.0
	0.1nm,0.5s,baz=142,slow=7.3,SNR=3.3						

IDC 11 15:51:07.6±1.6,11°.45S×164°.87E,h0^{km},mb3.6/4, mb1 3.9/6,mb1mx3.6/28,mbtmp3.8/6,ML3.9/2,Error ellipse: s-maj=33.1km s-min=30.9km az=135.0

ISCJB 11 15:51:11.0±1.1,11°.6S±0°.1×164°.8E±0°.1,h34^{km},mb3.5/4, Error ellipse: s-maj=22.7km s-min=11.0km az=40.5

ISC 11 15:51:12.6±1.3,11°.6S±0°.1×164°.9E±0°.1,h34^{km},n12, σ0^s.49/7,mb3.6/4,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.29	293	Pn	Pn	15 52 28.9	-0.4
	11nm,0.3s,baz=149,slow=8.5,SNR=5.1						
HNR				Sn	Sn	15 53 29.6	+0.5
	1.4nm,0.3s,baz=207,slow=18,SNR=2.7						
DZM	Mont Dzumac	10.57	172	Pn	Pn	15 53 42.0	+0.2
	0.3nm,0.3s,baz=331,slow=18,SNR=6.1						
H11S2	WAKE ISLAND Hy	29.90	3	T	T	16 28 39.9	
	baz=184,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.91	3	T	T	16 28 40.5	
	baz=184,slow=76,SNR=7.1						
H11S1	WAKE ISLAND Hy	29.92	3	T	T	16 28 39.1	
	baz=184,slow=76,SNR=8.5						
WRA	Warramunga Arr	30.52	250	P	P	15 57 22.8	-0.2
	0.4nm,0.8s,baz=78,slow=9.0,SNR=5.6						
H11N1	WAKE ISLAND Hy	31.13	4	T	T	16 30 11.5	
	baz=182,slow=76,SNR=6.8						
H11N3	WAKE ISLAND Hy	31.13	4	T	T	16 30 13.4	
	baz=182,slow=76,SNR=4.3						
H11N2	WAKE ISLAND Hy	31.15	4	T	T	16 30 10.1	
	baz=182,slow=76,SNR=6.1						
ASAR	Alice Springs	31.81	244	P	P	15 57 34.0	-0.4
	0.5nm,0.8s,baz=65,slow=10,SNR=7.9						
ILAR	Eielson Array	84.26	19	P	P	16 03 40.2	-0.3
	0.4nm,0.7s,baz=234,slow=4.8,SNR=5.4						
MKAR	Makanchi Array	93.31	317	P	P	16 04 24.6	+0.6
	0.4nm,0.9s,baz=92,slow=5.7,SNR=3.7						

MEX 11 16:04:44.2±0.4,16°.26N×98°.26W,h11^{km}±1^{km},MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.18	45	i P	Pg	16 04 47.6	-0.5
PNIG				i S	Sg	16 04 50.5	-0.4

IDC 11 16:05:34.9±1.2,40°.43N×72°.40E,h0^{km},mb3.5/4, mb1 3.6/10,mb1mx3.4/52,mbtmp3.5/10,ML3.1/6,MS1.9/1, Ms1 1.9/1,ms1mx1.8/38,Error ellipse: s-maj=25.4km s-min=10.8km az=134.0

SOME 11 16:05:38.7,40°.47N×72°.50E,h5^{km}

NNC 11 16:05:39.0±0.7,40°.54N×72°.34E,h0^{km},mb4.3,mpv4.1, Error ellipse: s-maj=6.0km s-min=3.2km az=55.0

KRNET 11 16:05:40.1±0.1,40°.56N×72°.38E,h30^{km},mb3.9

MOS 11 16:05:42.5±3.1,40°.67N×72°.42E,h55^{km},mb4.2/3,Error ellipse: s-maj=13.7km s-min=8.0km az=75.5

ISC 11 16:05:37.7±0.9,40°.50N±0°.03×72°.46E±0°.03,h7^{km}±7^{km}, n99,σ2^s.42/124,mb3.5/6,31C-34D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	Arslanbob	0.91	25	⇓iP	Pb	16 05 57.1	+1.1
	baz=30						
ARSB				⇓iS	Sg	16 06 09.4	+2.3
	baz=30						
SFK	Sufi-Kurgan	0.93	121	⇑P	Pn	16 05 58.6	+1.1
	15nm,0.1s						
SFK				⇑S	Sn	16 06 12.9	+1.6
	284nm,0.3s						
SFK	Sufi-Kurgan	0.93	121	Pg	Pn	16 05 59.3	+1.8
	82nm,0.1s						
SFK				Lg	Lg	16 06 13.3	
	391nm,0.2s						
SFK	Sufi-Kurgan	0.93	121	P	Pn	16 05 58.6	+1.1
SFK				S	Sn	16 06 12.8	+1.6
SFK				pmax	pmax		
	comp=Z,15nm,0.1s						
SFK				smax	smax		
	comp=N,284nm,0.3s						
SFK	Sufi-Kurgan	0.93	121	⇑iP	Pn	16 05 58.7	+1.1
	baz=22						
SFK				⇑iS	Sn	16 06 12.7	+1.4
	baz=22						
DRK	Karamyk	1.14	207	⇑iP	Pn	16 06 01.8	+1.4
	baz=3.0						
DRK				⇑iS	Sn	16 06 16.9	+0.5
	baz=3.0						
BTK	Batken	1.33	251	⇑iP	Pn	16 06 04.4	+1.6
	baz=48						
BTK				⇑iS	Sg	16 06 21.7	+1.2
	baz=48						
ARK	Arkit	1.35	344	⇓iP	Pn	16 06 03.3	+0.2
	baz=46						
ARK				⇓iS	Sb	16 06 20.1	-0.9
	baz=46						
AML	Almayashu	1.88	29	P	Pn	16 06 12.8	+2.1
	SNR=396						
AML	Almayashu	1.88	29	⇓iP	Pn	16 06 12.7	+2.1
	baz=32						
AML				⇓iS	Sn	16 06 36.9	+2.1
	baz=32						
ARLS	Aral	1.96	45	⇓iP	Pb	16 06 14.4	+0.6
	baz=48						
ARLS				⇓iS	Sb	16 06 39.7	+1.3
	baz=48						
MNAS	Manas	1.98	1	⇓Pn	Pn	16 06 13.4	+1.5
	comp=N,32nm,0.2s						
MNAS				⇓Sn	Sb	16 06 41.1	+1.8
	comp=N,68nm,0.3s						
MNAS	Manas	1.98	1	Pg	Pb	16 06 14.8	+0.5
	comp=N,75nm,0.1s						
MNAS				Lg	Lg	16 06 40.8	
	comp=N,120nm,0.2s						
MNAS	Manas	1.98	1	PN	Pn	16 06 13.3	+1.5
MNAS						16 06 41.0	
MNAS				pmax	pmax		
	comp=Z,32nm,0.2s						
MNAS				smax	smax		
	comp=N,68nm,0.3s						
MNAS	Manas	1.98	1	⇓iP	Pn	16 06 13.4	+1.5
	baz=3.0						
MNAS				⇓iS	Sn	16 06 38.5	+1.4
	baz=3.0						
MRKS	Merke	2.31	14	Pg	Pb	16 06 20.8	+0.9
	comp=N,162nm,0.4s						
MRKS				Lg	Lg	16 06 51.1	
	comp=N,178nm,0.3s						
MRKS	Merke	2.31	14	eP	Pb	16 06 20.8	+0.9
	comp=N,87nm,0.3s						
MRKS				⇑iS	Sb	16 06 51.1	+2.4
	comp=N,347nm,0.3s						
UCH	Uchtor	2.32	41	P	Pn	16 06 19.6	+2.9
	SNR=27						
UCH	Uchtor	2.32	41	⇓iP	Pn	16 06 19.4	+2.7
	baz=43						
UCH				⇓iS	Sn	16 06 47.8	+2.1
	baz=43						
EKS2	Erkin-Say	2.38	24	P	Pn	16 06 19.8	+2.6
	SNR=42						
EKS2	Erkin-Say	2.38	24	⇓iP	Pn	16 06 19.7	+2.5
	baz=26						
EKS2				⇓iS	Sn	16 06 49.0	+2.3
	baz=26						
IUG	Iuzhnay	2.46	313	Pg	Pb	16 06 22.5	+0.1
	comp=N,350nm,0.2s						
IUG				Lg	Lg	16 06 53.3	
	comp=N,453nm,0.4s						
AAK	Ala-Archa	2.62	35	P	Pn	16 06 23.6	+2.9
	SNR=6.2						
AAK	Ala-Archa	2.62	35	Pn	Pn	16 06 23.8	+3.1
	comp=N,42nm,0.5s						
AAK				Lg	Lg	16 07 03.5	
	comp=N,238nm,0.4s						
AAK	Ala-Archa	2.62	35	d iPN	Pn	16 06 23.5	+2.8
AAK	Ala-Archa	2.62	35	⇑iP	Pn	16 06 23.6	+2.9
	baz=37						
AAK				⇑iS	Sn	16 06 55.3	+2.4
	baz=37						
AAK	Ala-Archa	2.62	35	Pn	Pn	16 06 23.6	+2.9
	comp=N,6.4nm,0.3s,baz=192,slow=5.2,SNR=51						
AAK				Pg	Pb	16 06 26.8	+1.6
	comp=N,19nm,0.3s,baz=190,slow=7.1,SNR=65						
AAK				Lg	Lg	16 07 01.5	
	comp=N,27nm,0.3s,baz=319,slow=3.0,SNR=5.6						
AAK				LR	LR	16 07 21.0	
	comp=N,19nm,18.3s,baz=223,slow=39						
KZA	Kyzart	2.63	52	P	Pb	16 06 24.5	-0.8
	SNR=36						
KZA	Kyzart	2.63	52	⇑iP	Pn	16 06 24.0	+3.0
	baz=54						
KZA				⇑iS	Sn	16 06 55.9	+2.6
	baz=54						
FRU1	Bishkek	2.82	34	⇑iP	Pn	16 06 25.9	+2.6
	baz=36						
FRU1				⇑iS	Sn	16 06 59.7	+2.0
	baz=36						
NRN	Naryn	2.84	70	⇓iP	Pn	16 06 26.3	+2.5
	baz=71						
NRN				⇓iS	Sn	16 07 01.1	+2.7
	baz=71						
KBK	Karagaybulak	2.85	40	P	Pb	16 06 27.7	-1.3
	SNR=20						
KBK	Karagaybulak	2.85	40	⇑eP	Pn	16 06 27.0	+3.2
	baz=42						
KBK				⇑iS	Sn	16 07 00.7	+2.2
	baz=42						
KSH	Kashi	2.87	109	Pn	Pb	16 06 27.3	-2.1
KSH				Sn	Sb	16 07 02.5	-2.2
KSH				smax	smax		
	comp=N,870nm,1.2s						
KSH				smax	smax		
	comp=E,310nm,0.6s						
KK31	Karatay Array	2.98	331	⇑Pn	Pn	16 06 25.7	+0.2
	comp=E,5.2nm,0.2s,baz=163,slow=17						
KK31				⇑Lg	Lg	16 07 09.2	
	comp=E,50nm,0.4s,baz=155,slow=27						
KK31	Karatay Array	2.98	331	PN	Pn	16 06 25.7	+0.2
KK31				pmax	pmax		
	comp=Z,5.0nm,0.3s						
CHMS	Chumysh	3.03	34	P	Pn	16 06 28.9	+2.8
	SNR=11						
CHMS	Chumysh	3.03	34	⇓iP	Pn	16 06 28.8	+2.7
	baz=35						
CHMS				⇓iS	Sn	16 07 04.7	+2.0
	baz=35						
USP	Ospenovka	3.16	28	P	Pn	16 06 30.3	+2.4
	SNR=18						
USP	Ospenovka	3.16	28	⇓iP	Pn	16 06 30.3	+2.4
	baz=30						
USP				⇓iS	Sn	16 07 07.5	+1.7
	baz=30						
ULHL	Ulahol	3.34	57	P	Pn	16 06 34.1	+3.6
	SNR=15						
ULHL	Ulahol	3.34	57	⇓iP	Pn	16 06 34.0	+3.5
	baz=59						
ULHL				⇓iS	Sn	16 07 13.3	+2.8
	baz=59						
SGDS	Sogindy	3.36	28	Pg	Pb	16 06 39.8	+2.1
	comp=Z,16nm,0.2s						
SGDS				Lg	Lg	16 07 24.6	
	comp=Z,370nm,0.6s						
TKM2	Tokmak 2	3.37	43	P	Pn	16 06 34.2	+3.2
	SNR=8.0						
TKM2	Tokmak 2	3.37	43	⇓Pn	Pn	16 06 34.2	+3.2
	comp=Z,2.9nm,0.4s						
TKM2				⇓Pg	Pg	16 06 43.4	+1.1
	comp=Z,46nm,0.7s						
TKM2				⇑Lg	Lg	16 07 26.9	
	comp=Z,64nm,0.5s						
TKM2	Tokmak 2	3.37	43	PN	Pn	16 06 34.2	+3.2
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.4s						
TKM2	Tokmak 2	3.37	43	⇑iP	Pn	16 06 34.1	+3.1
	baz=44						
TKM2				⇑iS	Sn	16 07 13.5	+2.1
	baz=44						
KST	Kastek	3.65	45	Pg	Pg	16 06 46.3	-1.3
	comp=Z,33nm,0.3s						
KST				Lg	Lg	16 07 34.9	
	comp=Z,138nm,0.5s						
KST	Kastek	3.65	45	eP	Pg	16 06 46.3	-1.3
	comp=Z,33nm,0.3s						
KST				eS	Sg	16 07 34.9	0.0
	comp=Z,138nm,0.5s						
DGS	Degeres	3.69	41	Pg	Pg	16 06 47.2	-1.3
	comp=Z,115nm,0.5s						
DGS				Lg	Lg	16 07 35.7	
	comp=Z,162nm,0.5s						
DGS	Degeres	3.69	41	eP	Pg	16 06 47.2	-1.3
	comp=Z,115nm,0.5s						
DGS				eS	Sg	16 07 35.7	-0.6
	comp=Z,162nm,0.5s						
MTBS	Maitube	3.96	47	Pg	Pg	16 06 51.9	-1.8
	comp=Z,14nm,0.2s						
MTBS				Lg	Lg	16 07 43.9	
	comp=Z,67nm,0.4s						
MTBS	Maitube	3.96	47	eP	Pg	16 06 51.9	-1.8
	comp=Z,14nm,0.2s						
MTBS				⇑iS	Sg	16 07 43.9	-1.1
	comp=Z,67nm,0.4s						
IZV	Izvestkoviy	4.01	49	Pg	Pg	16 06 52.7	-1.8
	comp=Z,21nm,0.6s						
IZV				Lg	Lg	16 07 45.9	
	comp=Z,93nm,0.7s						
IZV	Izvestkoviy	4.01	49	eP	Pg	16 06 52.7	-1.8
	comp=Z,21nm,0.6s						
IZV				eS	Sg	16 07 45.9	-0.5
	comp=Z,93nm,0.7s						
TNSS	Tian-Shan	4.21	51	eP	Pg	16 06 57.4	-0.9
	comp=Z,13nm,0.4s						
TNSS				eS	Sg	16 07 53.6	+0.8
	comp=Z,68nm,0.7s						
KNDC	Almaty	4.32	50	⇑Pg	Pg	16 07 01.6	+1.0
	comp=Z,35nm,0.6s						
KNDC				⇑Lg	Lg	16 07 57.0	
	comp=Z,105nm,0.7s						
MDOK	Medeo	4.34	51	Pn	Pn	16 06 47.6	+3.4
	comp=Z,2.8nm,0.4s						
MDOK				Pg	Pg	16 06 59.1	-1.8
	comp=Z,11nm,0.5s						
MDOK				Lg	Lg	16 07 58.5	
	comp=Z,68nm,0.8s						
MDOK	Medeo	4.34	51	Pg	Pg	16 06 59.0	-1.8
	comp=Z,16nm,0.4s						
MDOK				Lg	Lg	16 07 56.2	
	comp=Z,52nm,0.8s						
MDOK	Medeo	4.34	51	eP	Pg	16 06 59.0	-1.8
	comp=Z,16nm,0.4s						
MDOK				eS	Sg	16 07 56.2	-0.8
	comp=Z,52nm,0.8s						
KOTS	Kotyrbulak	4.42	50	Pg	Pg	16 07 00.8	-1.5
	comp=Z,40nm,0.2s						
KOTS				Lg	Lg	16 08 00.1	
	comp=Z,68nm,0.6s						
KOTS	Kotyrbulak	4.42	50	eP	Pg	16 07 00.8	-1.5
	comp=Z,40nm,0.2s						
KOTS				eS	Sg	16 08 00.1	+0.5
	comp=Z,68nm,0.6s						
KUU	Kurty	4.45	39	Pg	Pb	16 06 60.0	+3.8
	comp=Z,8.7nm,0.3s						
KUU				Lg	Lg	16 07 58.4	
	comp=Z,97nm,0.6s						
KUU	Kurty	4.45	39	eP	Pb	16 06 60.0	+3.8
	comp=Z,8.7nm,0.3s						
KUU				⇓iS	Sg	16 07 58.4	-2.2
	comp=Z,97nm,0.6s						
KTBS	Karatobe	4.49	43	Pg	Pb	16 07 01.1	+4.2
	comp=Z,17nm,0.4s						
KTBS				Lg	Lg	16 08 00.3	
	comp=Z,146nm,0.4s						
KTBS	Karatobe	4.49	43	eP	Pb	16 07 01.1	+4.2
	comp=Z,17nm,0.4s						
KTBS				eS	Sg	16 08 00.3	-1.6
	comp=Z,146nm,0.4s						
CHKK	Chushkaly	4.75	44	Pg	Pb	16 07 05.9	+4.6
	comp=Z,5.1nm,0.4s						
CHKK				Lg	Lg	16 08 08.3	
	comp=Z,102nm,0.5s						
CHKK	Chushkaly	4.75	44	eP	Pb	16 07 05.9	+4.6
	comp=Z,5.1nm,0.4s						
CHKK				eS	Sg	16 08 08.3	-1.8
	comp=Z,102nm,0.5s						
ARXS	Arharly	5.44	45	Pg	Pb	16 07 17.9	+4.9
	comp=Z,12nm,0.3s						
ARXS				Lg	Lg	16 08 29.9	
	comp=Z,58nm,0.5s						
ARXS	Arharly	5.44	45	eP	Pb	16 07 18.5	+5.5
	comp=Z,12nm,0.3s						
ARXS				eS	Sg	16 08 29.9	-2.4
	comp=Z,58nm,0.5s						
MNBS	Baschi	5.67	49	Pg	Pb	16 07 21.5	+4.4
	comp=Z,3.6nm,0.6s						
MNBS				Lg	Lg	16 08 35.0	
	comp=Z,20nm,0.3s						
MNBS	Baschi	5.67	49	eP	Pb	16 07 21.5	+4.4
	comp=Z,3.6nm,0.6s						
MNBS				eS	Sg	16 08 35.0	-4.8
	comp=Z,20nm,0.3s						
PDGK	Podgornoye	5.96	59	⇓Pg	Pb	16 07 27.5	+5.6
	comp=Z,3.8nm,0.5s						
PDGK				⇓Lg	Lg	16 08 50.9	
	comp=Z,27nm,0.7s						
OTUK	Ortayu	7.74	359	⇑Pg	Pb	16 07 57.7	+5.5
	comp=Z,1.7nm,0.5s						
OTUK				⇓Lg	Lg	16 09 42.9	
	comp=Z,8.2nm,0.7s						
MAKZ	Makanchi	9.34	44	⇑Pn	Pn	16 07 59.5	+6.7
	comp=Z,0.9nm,0.9s						
MAKZ				⇓Lg	Lg	16 10 40.6	
	comp=Z,9.5nm,1.2s						
MAKZ	Makanchi	9.34	44	P	Pn	16 07 59.5	+6.8
MAKZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	Makanchi Array	9.50	45	⇓Pn	Pn	16 08 00.1	+5.1
	comp=Z,0.3nm,0.6s,baz=239,slow=9.1,SNR=3.7						
MK31				⇑Lg	Lg	16 10 44.5	
	comp=Z,1.2nm,0.5s,baz=240,slow=27,SNR=4.2						
MK31	Makanchi Array	9.50	45	P	Pn	16 08 00.7	+5.8
MKAR	Makanchi Array	9.50	45	i P	Pn	16 07 57.2	+2.3
MKAR	Makanchi Array	9.50	45	Pn	Pn	16 07 55.8	+0.9
	comp=Z,0.0nm,0.3s,baz=232,slow=15,SNR=3.8						
MKAR				Lg	Lg	16 10 35.5	
	comp=Z,0.3nm,0.3s,baz=235,slow=24,SNR=5.1						
KURBB	Kurchatov Arra	10.98	21	⇓Lg	Lg	16 11 27.5	
	comp=Z,9.2nm,0.7s						
KURBB	Kurchatov Arra	10.98	21	Pn	Pn	16 08 13.8	-1.3
	comp=Z,0.1nm,0.3s,baz=208,slow=12,SNR=4.2						
KURBB				Sn	Sn	16 10 14.2	-3.8
	comp=Z,0.0nm,0.3s,baz=213,slow=24,SNR=3.5						
KURBB				Lg	Lg	16 11 22.2	
	comp=Z,0.2nm,0.3s,baz=154,slow=33,SNR=5.0						
KURK	Kurchatov	11.08	21	⇑Lg	Lg	16 11 28.9	
	comp=Z,12nm,0.8s						
KURK	Kurchatov	11.08	21	i P	Pn	16 08 16.6	0.0
GEYT	Alibeck	11.42	262	Pn	Pn	16 08 17.3	-4.0
	comp=Z,0.4nm,0.3s,baz=91,slow=9.0,SNR=6.9						
AB31	Akbulak array	12.45	319	P	Pn	16 08 32.2	-3.1
BVA0	Borovoye Array	12.61	354	⇑Lg	Lg	16 12 17.1	
	comp=Z,8.6nm,1.2s,baz=163,slow=31,SNR=4.5						
BVAR	Borovoye Array	12.61	354	Pn	Pn	16 08 35.3	-2.1
	comp=Z,0.1nm,0.3s,baz=168,slow=18,SNR=3.2						
BVAR				Lg	Lg	16 12 14.5	
	comp=Z,0.2nm,0.3s,baz=163,slow=27,SNR=6.1						
BRVK	Borovoye	12.65	354	⇑Lg	Lg	16 12 17.4	
	comp=Z,5.3nm,1.0s						
DGZ	Jazzator, Alta	13.99	44	i P	Pn	16 08 59.0	+2.5
ZALV	Zalesovo Beam	15.82	28	Pn	Pn	16 09 18.1	-2.7
	comp=Z,0.2nm,0.3s,baz=216,slow=14,SNR=2.6						
GNI	Garni	21.11	278	i P	P	16 10 29.9	+6.9
GNI				pmax	pmax		
	comp=Z,11nm,0.9s						
KIV	Kislovodsk	22.26	289	eP	P	16 10 40.2	+4.9
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NEY	Neytrino	22.26	287	i P	P	16 10 43.3	+7.9
NEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BRTR	Keskin Array B	29.54	281	P	P	16 11 42.0	-1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	29.54	281	P	P	16 11 42.0	-1.1
	comp=Z,0.5nm,0.6s,baz=91,slow=7.3,SNR=4.0						
TORD	Torodi Ar. Bea	66.99	268	P	P	16 16 29.0	-2.4
	comp=Z,0.6nm,0.5s,baz=41,slow=5.3,SNR=5.2						
YKA	Yellowknife Ar	77.20	3	P	P	16 17 29.4	-2.4
	comp=Z,0.1nm,0.3s,baz=353,slow=5.6,SNR=2.4						
WRA	Warramunga Arr	83.18	123	P	P	16 18 02.6	-2.1
	comp=Z,0.2nm,0.8s,baz=325,slow=4.4,SNR=1.4						

IDC 11 16:12:07.5±1.9,10°.64S×165°.95E,h0^{km},mb3.6/4, mb1 3.8/5,mb1mx3.5/27,mbtmp3.6/5,ML3.4/1,Error ellipse: s-maj=55.8km s-min=32.4km az=122.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.38	178	Pn	Pn	16 14 51.6	+0.2

	0.3nm,0.3s,baz=308,slow=19,SNR=3.9						
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=82,slow=9.1,SNR=6.8	**31.82**	**249**	P	P	16 18 34.3	+0.1
ASAR	**Alice Springs** 0.8nm,0.8s,baz=68,slow=10.0,SNR=7.9	**33.16**	**243**	P	P	16 18 45.9	-0.1
ILAR	**Eielson Array** 0.2nm,0.9s,baz=228,slow=3.5,SNR=1.1	**83.07**	**18**	P	P	16 24 34.8	+0.2
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=101,slow=7.5,SNR=2.2	**93.37**	**317**	P	P	16 25 24.1	-0.5

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*SOME **11** 16:13:56.9,42°.52N×79°.68E,h20^{km}*
*KRNET **11** 16:13:56.9±0.1,42°.56N×79°.62E,h14^{km},mb2.5*
NNC 11 16:13:57.7±1.0,42°.60N×79°.64E,h0^{km},mb2.9,mpv2.6, 10C-14D,Error ellipse: s-maj=6.4km s-min=3.6km az=137.0,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	**Podgornoye** 4.3nm,0.1s	**0.74**	**352**	P	Pg	16 14 11.8	-0.1
PDGK	7.2nm,0.3s			S	Sg	16 14 22.5	+1.0
PDGK	**Podgornoye** 0.9nm,0.4s	**0.74**	**352**	⇓P	Pg	16 14 11.6	-0.3
PDGK	3.0nm,0.3s			⇓S	Sg	16 14 22.5	+0.9
PDGK	**Podgornoye** baz=53	**0.74**	**352**	⇓*i*P	Pg	16 14 11.8	-0.1
PDGK	baz=53			⇓*i*S	Sg	16 14 22.5	+1.0
PRZ	**Przheval'sk** baz=65	**0.92**	**263**	⇓*i*P	Pg	16 14 13.6	-1.8
PRZ	baz=65			⇓*i*S	Sg	16 14 25.7	-1.6
KTMS	**Ketmen** 3.5nm,0.1s	**1.00**	**31**	P	Pg	16 14 16.5	-0.3
KTMS	6.2nm,0.2s			S	Sg	16 14 30.4	+0.7
KTMS	**Ketmen** baz=30	**1.00**	**31**	*e*P	Pg	16 14 16.5	-0.3
KTMS	baz=30			*e*S	Sg	16 14 30.4	+0.6
KTMS	**Ketmen** 2.7nm,0.1s	**1.00**	**31**	*e*P	Pg	16 14 16.5	-0.3
KTMS	6.2nm,0.2s			*e*S	Sg	16 14 30.4	+0.7
SATY	**Saty** 2.9nm,0.1s	**1.02**	**297**	P	Pb	16 14 17.8	-0.5
SATY	9.9nm,0.1s			S	Sb	16 14 31.6	-0.7
SATY	**Saty** 1.5nm,0.2s	**1.02**	**297**	*e*P	Pg	16 14 17.1	-0.1
SATY	9.9nm,0.1s			*e*S	Sb	16 14 31.6	-0.7
KURS	**Kuram** 0.5nm,0.1s	**1.40**	**310**	P	Pg	16 14 23.6	-0.9
KURS	3.1nm,0.3s			S	Sb	16 14 42.9	-0.2
KURS	**Kuram** baz=12	**1.40**	**310**	*e*P	Pg	16 14 23.6	-0.9
KURS	baz=12			*e*S	Sb	16 14 42.9	-0.3
KURS	**Kuram** 0.5nm,0.1s	**1.40**	**310**	*e*P	Pg	16 14 23.6	-0.9
KURS	3.1nm,0.3s			*e*S	Sb	16 14 42.9	-0.2
MNBS	**Baschi** 2.1nm,0.3s	**1.74**	**329**	P	Pn	16 14 29.5	+0.3
MNBS	6.6nm,0.2s			S	Sg	16 14 53.5	0.0
MNBS	**Baschi** 2.1nm,0.3s	**1.74**	**329**	*e*P	Pn	16 14 29.5	+0.3
MNBS	6.6nm,0.2s			*e*S	Sb	16 14 53.0	+0.1
DJR	**Jarkent** 0.7nm,0.2s	**1.74**	**4**	P	Pn	16 14 29.6	+0.4
DJR	2.9nm,0.1s			S	Sg	16 14 53.5	0.0
DJR	**Jarkent** 0.8nm,0.3s	**1.74**	**4**	*e*P	Pb	16 14 30.0	-0.6
DJR	2.9nm,0.1s			*e*S	Sg	16 14 53.5	0.0
KDJ	**Kajisay** baz=57	**1.88**	**257**	⇑*i*P	Pn	16 14 31.6	+0.3
KDJ	baz=57			⇑*i*S	Sn	16 14 55.7	-0.1
KOTS	**Kotyrbulak** 7.1nm,0.3s	**1.96**	**290**	Pg	Pg	16 14 34.9	-0.4
KOTS	9.2nm,0.2s			Lg	Lg	16 15 01.8	
KOTS	**Kotyrbulak** baz=91	**1.96**	**290**	*e*P	Pn	16 14 33.1	+0.7
KOTS	baz=91			*e*S	Sb	16 14 59.2	-0.3
KOTS	**Kotyrbulak** 4.5nm,0.2s	**1.96**	**290**	*e*P	Pn	16 14 33.1	+0.7
KOTS	9.2nm,0.2s			*e*S	Sb	16 14 59.2	-0.3
MDOK	**Medeo** 1.2nm,0.5s	**1.99**	**287**	⇓Pn	Pb	16 14 33.8	-1.0
MDOK	5.6nm,0.8s			⇓Sn	Sn	16 14 59.1	+0.7
MDOK	**Medeo** 1.7nm,0.2s	**1.99**	**287**	Pg	Pb	16 14 34.1	-0.7
MDOK	3.8nm,0.5s			Lg	Lg	16 14 59.8	
MDOK	**Medeo** baz=89	**1.99**	**287**	*e*P	Pn	16 14 33.6	+0.9
MDOK	baz=89			⇑*e*S	Sb	16 14 59.8	-0.4
MDOK	**Medeo** 1.4nm,0.5s	**1.99**	**287**	*e*P	Pn	16 14 33.6	+0.9
MDOK	3.8nm,0.5s			⇑*e*S	Sb	16 14 59.8	-0.4
TNSS	**Tian-Shan** 2.0nm,0.3s	**2.03**	**283**	Pg	Pn	16 14 34.5	+0.9
TNSS	4.0nm,0.2s			Lg	Lg	16 15 00.8	
TNSS	**Tian-Shan** baz=85	**2.03**	**283**	*e*P	Pn	16 14 34.2	+0.7
TNSS	baz=85			*e*S	Sb	16 15 00.8	-0.8
TNSS	**Tian-Shan** 2.0nm,0.3s	**2.03**	**283**	*e*P	Pn	16 14 34.2	+0.7
TNSS	4.0nm,0.2s			*e*S	Sb	16 15 00.8	-0.8
IZV	**Izvestkoviy** 1.5nm,0.2s	**2.27**	**282**	Pg	Pb	16 14 38.2	-1.5
IZV	9.7nm,0.5s			Lg	Lg	16 15 08.0	
IZV	**Izvestkoviy** 1.5nm,0.2s	**2.27**	**282**	*e*P	Pb	16 14 38.2	-1.5
IZV	9.7nm,0.5s			*e*S	Sb	16 15 08.0	-0.3
CHKK	**Chushkaly** 1.3nm,0.1s	**2.31**	**304**	Pg	Pb	16 14 39.1	-1.2
CHKK	11nm,0.2s			Lg	Lg	16 15 09.5	
CHKK	**Chushkaly** 1.3nm,0.1s	**2.31**	**304**	*e*P	Pb	16 14 39.1	-1.2
CHKK	11nm,0.2s			*e*S	Sb	16 15 09.5	+0.2
KTBS	**Karatobe** 0.7nm,0.2s	**2.44**	**298**	Pg	Pb	16 14 40.9	-1.4
KTBS	8.9nm,0.2s			Lg	Lg	16 15 13.3	
KTBS	**Karatobe** 0.7nm,0.2s	**2.44**	**298**	*e*P	Pb	16 14 41.2	-1.2
KTBS	8.9nm,0.2s			*e*S	Sb	16 15 13.0	0.0
ULHL	**Ulahol** baz=64	**2.54**	**263**	⇓*i*P	Pn	16 14 41.2	+0.8
ULHL	baz=64			⇓*i*S	Sn	16 15 12.3	+0.2
KAPS	**Kapalarasan** 0.3nm,0.1s	**2.70**	**356**	Pg	Pb	16 14 46.3	-0.6
KAPS	3.0nm,0.3s			Lg	Lg	16 15 22.1	
KAPS	**Kapalarasan** 0.3nm,0.1s	**2.70**	**356**	*e*P	Pb	16 14 46.3	-0.5
KAPS	3.0nm,0.3s			*e*S	Sb	16 15 22.1	+1.6
BOOM	**Boomskoye usch** baz=70	**2.74**	**269**	⇑*i*P	Pn	16 14 43.8	+0.8
BOOM	baz=70			⇑*i*S	Sn	16 15 16.5	-0.4
TKM2	**Tokmak 2** 0.6nm,0.6s	**3.00**	**278**	⇓Pg	Pb	16 14 50.5	-1.5
TKM2	1.3nm,0.5s			⇓Lg	Lg	16 15 31.0	
MAKZ	**Makanchi** 0.6nm,0.8s	**4.53**	**21**	⇑Pn	Pn	16 15 08.8	+1.3
MAKZ	0.3nm,0.6s			⇑Sn	Sn	16 16 03.0	+2.2
MAKZ	0.5nm,0.8s			⇓Lg	Lg	16 16 18.5	
MK31	**Makanchi Array** 0.1nm,0.3s,baz=198,slow=13,SNR=4.8	**4.60**	**23**	⇑Pn	Pn	16 15 10.1	+1.6
MK31	0.1nm,0.4s,baz=208,slow=26,SNR=3.7			⇓Sn	Sn	16 16 05.1	+2.4
MK31	0.1nm,0.3s			⇑Lg	Lg	16 16 19.7	

MAN 11 16:29:40.9,5°.37N×126°.36E,h61^{km},MS3.8,1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.97**	**319**	*e*P	Pn	16 30 00.4	+1.7
DDMP				*e*S	Sn	16 30 08.9	-2.9
KCP	**Kidapawan**	**2.06**	**322**	⇓*e*P	Pn	16 30 13.5	+0.2
SKMP	**Bagumbayan, Su**	**2.13**	**302**	*e*P	Pn	16 30 16.0	+1.8
SKMP				*e*S	Sn	16 30 40.5	+0.8
BUKP	**Musuan**	**2.80**	**333**	*e*P	Pn	16 30 24.1	+0.7
BUKP				*e*S	Sn	16 30 58.3	+2.2

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*IDC **11** 16:41:17.5±0.9,52°.25N×131°.91W,h0^{km},mb3.9/7, mb1 3.8/15,mb1mx3.7/43,mbtmp3.7/15,ML3.7/7,MS3.0/3, Ms1 3.0/3,ms1mx2.7/44,Error ellipse: s-maj=13.5km s-min=8.2km az=28.0*
*PGC **11** 16:41:17.8±5.2,52°.18N×132°.11W,h32^{km},ML3.8/11, ML3.7/11,121km Ssw of Sandspit, Bc Haida Gwaii Region*
ISC 11 16:41:17.9±1.7**,52°.16N**±0°.05×**132°.04W**±0°.05**, h11^{km}**±10^{km}**,n57,**σ**2^{s}.53**/64**,mb3.9**/7**,Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNB	**Barry Inlet**	**0.45**	**23**	P	**Pg**	**16 41 27.5**	**+0.6**
BNB				S	**Sg**	**16 41 34.1**	**+1.3**
MOBC	**Moresby Island**	**0.99**	**2**	P	**Pg**	**16 41 35.3**	**-1.6**
MOBC				S	**Sg**	**16 41 47.6**	**-2.2**
DIB	**Dawson Inlet,**	**1.08**	**346**	P	**Pb**	**16 41 35.9**	**-2.7**
DIB				S	**Sb**	**16 41 49.1**	**-3.6**
H02S1	**DAWSON INLET T**	**1.08**	**346**	Pg	**Pb**	**16 41 35.8**	**-2.8**
H02S1				Lg	Lg	16 41 49.6	
MASB	**Masset**	**1.86**	**0**	Pn	**Pb**	**16 41 51.9**	**0.0**
NDB	**Naden**	**1.88**	**344**	Pn	**Pn**	**16 41 47.8**	**-2.3**
NDB				Sn	**Sn**	**16 42 10.2**	**-3.6**
BBB	**Bella Bella**	**2.42**	**88**	Pn	**Pn**	**16 41 55.5**	**-1.9**
BBB				Sn	**Sn**	**16 42 22.9**	**-4.1**
BBB				Sg	**Sb**	**16 42 29.7**	**-1.5**
BBB	**Bella Bella** 10nm,0.3s,baz=261,slow=7.7,SNR=128	**2.42**	**88**	Pn	**Pn**	**16 41 55.5**	**-1.9**
BBB	42nm,0.3s,baz=270,slow=17,SNR=34			Pg	**Pb**	**16 42 00.4**	**-1.0**
BBB	62nm,0.3s,baz=29,slow=22,SNR=9.7			Sn	**Sn**	**16 42 21.6**	**-5.4**
BBB	72nm,0.3s,baz=155,slow=21,SNR=7.6			Lg	Lg	16 42 29.6	
BBB	comp=Z,290nm,20.9s,baz=24,slow=45			LR	LR	16 43 02.2	
PHC	**Port Hardy**	**3.23**	**115**	Pn	Pn	16 42 03.8	-4.8
PHC				Sn	**Sn**	**16 42 40.3**	**-6.7**
PACB	**Port Alice, BC**	**3.33**	**119**	Pn	**Pn**	**16 42 07.3**	**-2.7**
PACB				Sn	**Sn**	**16 42 42.5**	**-7.1**
TLCB	**Telegraph Cove**	**3.64**	**114**	Pn	**Pn**	**16 42 11.9**	**-2.3**
TLCB				Sn	**Sn**	**16 42 51.9**	**-5.2**
GDR	**Gold River**	**4.48**	**120**	Sn	**Sn**	**16 43 16.3**	**-1.6**
CBB	**Campbell River**	**4.71**	**114**	Pn	**Pn**	**16 42 27.8**	**-1.2**
CBB				Sn	**Sn**	**16 43 19.3**	**-4.3**
BTB	**Buttle Lake**	**4.93**	**121**	Pn	**Pn**	**16 42 31.3**	**-0.8**
BTB				Sn	**Sn**	**16 43 27.5**	**-1.8**
FSB	**Fort Saint Jam**	**5.17**	**60**	Pn	**Pn**	**16 42 35.3**	**0.0**
FSB				Sg	**Sb**	**16 43 55.7**	**+5.2**
TXB	**Texada**	**5.40**	**114**	Pn	**Pn**	**16 42 37.9**	**-0.6**
MGB	**Mount Grey**	**5.65**	**121**	Pn	**Pn**	**16 42 41.1**	**-0.8**
SHB	**Sechelt**	**5.77**	**113**	Pn	**Pn**	**16 42 45.4**	**+1.9**
B926	**Mesachie Lake**	**6.05**	**120**	Pn	**Pn**	**16 42 51.0**	**+3.7**
BIB	**Bowen Island**	**6.19**	**113**	Pn	**Pn**	**16 42 50.5**	**+1.4**
LZB	**Mount Lazard**	**6.34**	**121**	Pn	**Pn**	**16 42 53.0**	**+1.7**
DLBC	**Dease Lake**	**6.40**	**10**	Pn	**Pn**	**16 42 54.2**	**+2.1**
DLBC	**Dease Lake** 1.9nm,0.3s,baz=191,slow=14,SNR=31	**6.40**	**10**	Pn	**Pn**	**16 42 53.7**	**+1.6**
DLBC	0.5nm,0.3s,baz=49,slow=19,SNR=1.6			Sn	**Sn**	**16 44 02.8**	**-2.3**
DLBC	1.6nm,0.3s,baz=300,slow=18,SNR=2.3			Lg	Lg	16 44 36.1	
BMBC	**Bull Mountain**	**7.01**	**52**	Pn	**Pn**	**16 43 01.3**	**+0.8**
BMBC				Sg	Sb	16 44 53.4	+10
MBW	**Mount Baker**	**7.30**	**114**	Pn	**Pn**	**16 43 04.7**	**0.0**
BLBC	**Blue River**	**7.88**	**86**	Pn	**Pn**	**16 43 13.4**	**+0.7**
MNB	**Mounoet Dainar**	**8.40**	**84**	Pn	**Pn**	**16 43 20.9**	**+1.2**
FNBB	**Fort Nelson**	**8.46**	**34**	Pn	**Pn**	**16 43 20.9**	**+0.5**
FMW	**Mount Fremont**	**8.53**	**124**	Pn	**Pn**	**16 43 23.2**	**+1.7**
LON	**Longmire**	**8.58**	**125**	Pn	**Pn**	**16 43 24.6**	**+2.5**
WHY	**Whitehorse**	**8.67**	**351**	Pn	**Pn**	**16 43 23.6**	**+0.4**
SLEB	**Sale Mountain**	**8.71**	**91**	P	**Pn**	**16 43 23.9**	**0.0**
YKA	**Yellowknife Ar** 0.3nm,0.3s,baz=228,slow=12,SNR=24	**13.94**	**35**	Pn	**Pn**	**16 44 33.2**	**-2.0**
YKA	comp=Z,16nm,20.3s,baz=226,slow=40			LR	LR	16 50 37.4	
YKW1	**Yellowknife Ar**	**13.97**	**35**	P	**Pn**	**16 44 34.7**	**-1.0**
YKW3	**Yellowknife Ar**	**13.98**	**35**	P	**Pn**	**16 44 34.2**	**-1.5**
ILAR	**Eielson Array** 0.0nm,0.3s,baz=164,slow=13,SNR=2.6	**14.78**	**335**	Pn	**Pn**	**16 44 47.8**	**+1.1**
ELK	**Elko** 0.1nm,0.3s,baz=326,slow=9.0,SNR=7.2	**16.21**	**128**	Pn	**P**	**16 45 10.1**	**+1.1**
INK	**Inuvik**	**16.22**	**358**	P	**Pn**	**16 45 06.0**	**+0.6**
INK	**Inuvik** 0.0nm,0.3s,baz=108,slow=3.2,SNR=2.4	**16.22**	**358**	Pn	**Pn**	**16 45 05.3**	**-0.1**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=309,slow=12,SNR=3.8	**16.75**	**140**	Pn	**P**	**16 45 16.3**	**+1.4**
COLD	**Coldfoot**	**17.55**	**336**	P	**P**	**16 45 27.0**	**+3.6**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=310,slow=9.7,SNR=2.9	**17.80**	**113**	P	**P**	**16 45 27.1**	**+0.5**
FCC	**Fort Churchill**	**22.27**	**58**	P	**P**	**16 46 15.8**	**+1.1**
ULM	**Lac du Bonnet** comp=Z,173nm,20.4s,baz=264,slow=38	**22.59**	**80**	LR	LR	16 55 33.7	
TXAR	**Lajitas Array** 1.6nm,0.8s,baz=327,slow=7.5,SNR=17	**30.99**	**126**	P	**P**	**16 47 37.3**	**+1.9**
SEY	**Seymchan** 2.1nm,0.8s,baz=100,slow=6.4,SNR=8.9	**39.59**	**316**	P	**P**	**16 48 50.1**	**+1.3**
PETK	**Petropavlovsk-** 1.9nm,0.8s,baz=84,slow=10,SNR=2.9	**41.07**	**300**	P	**P**	**16 49 02.0**	**+0.8**
H11N2	**WAKE ISLAND Hy** baz=39,slow=76,SNR=52	**56.97**	**260**	T	T	17 53 10.2	
H11N3	**WAKE ISLAND Hy** baz=39,slow=76,SNR=57	**56.97**	**260**	T	T	17 53 12.3	
H11N1	**WAKE ISLAND Hy** baz=39,slow=76,SNR=42	**56.98**	**260**	T	T	17 53 14.3	
H11S1	**WAKE ISLAND Hy** baz=40,slow=76	**58.02**	**259**	T	T	17 54 51.7	
H11S2	**WAKE ISLAND Hy** baz=40	**58.03**	**259**	T	T	17 54 42.5	
H11S3	**WAKE ISLAND Hy** baz=40,slow=76	**58.04**	**259**	T	T	17 54 48.4	
FINES	**FINESS Array B** 1.0nm,0.8s,baz=348,slow=5.8,SNR=2.6	**65.41**	**11**	P	**P**	**16 52 00.5**	**+0.5**
SONM	**Songino Array** 0.8nm,1.2s,baz=46,slow=4.2,SNR=3.1	**68.60**	**322**	P	**P**	**16 52 20.1**	**-0.7**
ZALV	**Zalesovo Beam** 0.6nm,0.6s,baz=5.2,slow=4.9,SNR=3.7	**69.88**	**338**	P	**P**	**16 52 28.1**	**-0.3**
MKAR	**Makanchi Array** 1.0nm,0.6s,baz=33,slow=5.0,SNR=15	**77.13**	**337**	P	**P**	**16 53 11.3**	**+0.1**

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*SOME **11** 16:42:03.4,42°.53N×79°.70E,h20^{km}*
*KRNET **11** 16:42:03.2±0.1,42°.57N×79°.69E,h7^{km},mb2.9*
NNC 11 16:42:03.1±1.3,42°.59N×79°.71E,h0^{km},mb3.1,mpv2.9, 13C-10D,Error ellipse: s-maj=8.1km s-min=4.9km az=134.0,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak** 6.0nm,0.1s	**0.75**	**318**	P	Pg	16 42 17.8	+0.3
UZB	21nm,0.2s			S	Sg	16 42 28.0	+0.7
UZB	**Uzynbulak** baz=20	**0.75**	**318**	*e*P	Pg	16 42 17.8	+0.3
UZB	baz=20			*e*S	Sg	16 42 28.1	+0.8
UZB	**Uzynbulak** 6.0nm,0.1s	**0.75**	**318**	*e*P	Pg	16 42 17.8	+0.3
UZB	21nm,0.2s			*e*S	Sg	16 42 28.1	+0.9
PDGK	**Podgornoye** 1.4nm,0.1s	**0.76**	**348**	P	Pg	16 42 18.2	+0.6
PDGK	8.0nm,0.1s			S	Sg	16 42 28.7	+1.3
PDGK	**Podgornoye** 2.3nm,0.5s	**0.76**	**348**	⇓P	Pg	16 42 17.9	+0.3
PDGK	10nm,0.4s			⇓S	Sg	16 42 28.4	+0.9
PDGK	**Podgornoye** baz=49	**0.76**	**348**	⇑*i*P	Pg	16 42 18.1	+0.5
PDGK	baz=49			⇑*i*S	Sg	16 42 28.6	+1.2
PRZ	**Przheval'sk** baz=65	**0.97**	**264**	⇑*i*P	Pg	16 42 21.5	-0.3
PRZ	baz=65			⇑*i*S	Sg	16 42 33.7	-0.7
KTMS	**Ketmen** 9.4nm,0.1s	**0.98**	**29**	P	Pb	16 42 22.5	-0.5
KTMS	3.6nm,0.2s			S	Sb	16 42 36.0	-0.5
KTMS	**Ketmen** baz=28	**0.98**	**29**	*e*P	Pb	16 42 22.4	-0.6
KTMS	baz=28			*e*S	Sb	16 42 36.0	-0.5
KTMS	**Ketmen** 9.4nm,0.1s	**0.98**	**29**	*e*P	Pb	16 42 22.4	-0.6
KTMS	3.6nm,0.2s			*e*S	Sb	16 42 36.0	-0.5
SATY	**Saty** 4.9nm,0.1s	**1.07**	**296**	P	Pg	16 42 23.2	-0.3
SATY	17nm,0.1s			S	Sg	16 42 37.5	+0.1
SATY	**Saty** 4.9nm,0.1s	**1.07**	**296**	*e*P	Pg	16 42 23.2	-0.3
SATY	17nm,0.1s			*e*S	Sg	16 42 37.5	+0.1
KURS	**Kuram** 2.1nm,0.2s	**1.44**	**309**	P	Pn	16 42 30.0	-0.5
KURS	8.3nm,0.4s			S	Sg	16 42 49.1	-0.4
KURS	**Kuram** baz=10.0	**1.44**	**309**	*e*P	Pn	16 42 30.0	-0.5
KURS	baz=10.0			*e*S	Sg	16 42 49.0	-0.5
KURS	**Kuram** 2.1nm,0.2s	**1.44**	**309**	*e*P	Pn	16 42 30.0	-0.5
KURS	8.3nm,0.4s			*e*S	Sg	16 42 49.1	-0.4
DJR	**Jarkent** 2.3nm,0.2s	**1.74**	**2**	*e*P	Pb	16 42 35.8	-0.2
DJR	6.8nm,0.3s			*e*S	Sg	16 42 59.2	+0.2
MNBS	**Baschi** 1.6nm,0.1s	**1.77**	**328**	P	Pb	16 42 36.0	-0.5
MNBS	33nm,0.2s			S	Sb	16 42 59.4	+0.1
MNBS	**Baschi** baz=29	**1.77**	**328**	*e*P	Pb	16 42 36.0	-0.5
MNBS	baz=29			*e*S	Sb	16 42 59.4	+0.1
MNBS	**Baschi** 1.6nm,0.1s	**1.77**	**328**	*e*P	Pb	16 42 36.0	-0.5
MNBS	33nm,0.2s			*e*S	Sb	16 42 59.4	+0.1
KDJ	**Kajisay** baz=58	**1.93**	**257**	⇑*i*P	Pb	16 42 39.1	-0.2
KDJ	baz=58			⇑*i*S	Sb	16 43 03.6	-0.4
KOTS	**Kotyrbulak** 6.7nm,0.2s	**2.02**	**290**	Pg	Pb	16 42 40.4	-0.3
KOTS	19nm,0.4s			Lg	Lg	16 43 08.2	
KOTS	**Kotyrbulak** baz=90	**2.02**	**290**	*e*P	Pb	16 42 40.4	-0.3
KOTS	baz=90			*e*S	Sb	16 43 07.1	+0.7
KOTS	**Kotyrbulak** 6.7nm,0.2s	**2.02**	**290**	*e*P	Pb	16 42 40.4	-0.3
KOTS	19nm,0.4s			*e*S	Sg	16 43 07.1	-0.7
MDOK	**Medeo** 3.6nm,0.5s	**2.04**	**287**	Pn	Pn	16 42 39.6	+0.8
MDOK	6.5nm,0.8s			Sn	Sb	16 43 07.0	-0.1
MDOK	**Medeo** 3.8nm,0.4s	**2.04**	**287**	Pg	Pb	16 42 40.1	-1.0
MDOK	5.8nm,0.6s			Lg	Lg	16 43 07.1	
MDOK	**Medeo** baz=88	**2.04**	**287**	⇓*i*P	Pb	16 42 40.1	-1.0
MDOK	baz=88			⇓*e*S	Sb	16 43 06.4	-0.7
MDOK	**Medeo** 3.8nm,0.4s	**2.04**	**287**	⇓*i*P	Pb	16 42 40.1	-1.0
MDOK	5.8nm,0.6s			*e*S	Sb	16 43 06.4	-0.7
TNSS	**Tian-Shan** 4.6nm,0.3s	**2.08**	**283**	Pg	Pn	16 42 40.4	+0.8
TNSS	2.8nm,0.3s			Lg	Lg	16 43 08.6	
TNSS	**Tian-Shan** baz=84	**2.08**	**283**	*e*P	Pn	16 42 40.4	+0.8
TNSS	baz=84			*e*S	Sn	16 43 07.4	+0.9
TNSS	**Tian-Shan** 4.6nm,0.3s	**2.08**	**283**	*e*P	Pn	16 42 40.4	+0.8
TNSS	2.8nm,0.3s			*e*S	Sn	16 43 07.4	+0.9
ARXS	**Arharly** 2.5nm,0.3s	**2.13**	**320**	Pg	Pb	16 42 41.6	-0.9
ARXS	10nm,0.3s			Lg	Lg	16 43 09.6	
ARXS	**Arharly** 2.5nm,0.3s	**2.13**	**320**	*e*P	Pb	16 42 41.6	-0.9
ARXS	10nm,0.3s			*e*S	Sb	16 43 09.1	-0.4
IZV	**Izvestkoviy** 5.7nm,0.2s	**2.32**	**282**	Pg	Pb	16 42 44.6	-1.3
IZV	6.8nm,0.3s			Lg	Lg	16 43 15.1	
IZV	**Izvestkoviy** baz=83	**2.32**	**282**	*e*P	Pb	16 42 44.9	-1.0
IZV	baz=83			*e*S	Sb	16 43 15.0	-0.2
IZV	**Izvestkoviy** 5.7nm,0.2s	**2.32**	**282**	*e*P	Pb	16 42 44.9	-1.1
IZV	6.8nm,0.3s			*e*S	Sb	16 43 14.9	-0.3
CHKK	**Chushkaly** 1.1nm,0.2s	**2.36**	**303**	Pg	Pb	16 42 45.2	-1.2
CHKK	7.2nm,0.3s			Lg	Lg	16 43 15.7	
CHKK	**Chushkaly** baz=4.0	**2.36**	**303**	*e*P	Pb	16 42 45.2	-1.2
CHKK	baz=4.0			*e*S	Sb	16 43 15.2	-0.9
CHKK	**Chushkaly** 1.1nm,0.2s	**2.36**	**303**	*e*P	Pb	16 42 45.2	-1.2
CHKK	7.2nm,0.3s			*e*S	Sb	16 43 15.2	-0.9
KTBS	**Karatobe** 1.3nm,0.2s	**2.48**	**298**	Pg	Pb	16 42 47.1	-1.6
KTBS	7.7nm,0.2s			Lg	Lg	16 43 18.9	
KTBS	**Karatobe** baz=98	**2.48**	**298**	*e*P	Pb	16 42 47.1	-1.5
KTBS	baz=98			*e*S	Sb	16 43 18.4	-1.4
KTBS	**Karatobe** 1.3nm,0.2s	**2.48**	**298**	*e*P	Pb	16 42 47.1	-1.6
KTBS	7.7nm,0.2s			*e*S	Sb	16 43 18.4	-1.4
ULHL	**Ulahol** baz=64	**2.59**	**264**	⇑*i*P	Pb	16 42 48.7	-1.9
ULHL	baz=64			⇑*i*S	Sn	16 43 20.8	+2.0
KAPS	**Kapalarasan** 0.5nm,0.3s	**2.71**	**355**	*e*P	Pb	16 42 52.5	+0.1
KAPS	7.8nm,0.5s			*e*S	Sb	16 43 27.6	+1.4

BOOM	Boomskoye usch baz=70	2.79	269	⇑iP	Pn	16 42 51.2	+2.1
BOOM	baz=70			⇑iS	Sn	16 43 24.9	+1.3
DGS	Degeres 2.3nm,0.3s	2.97	284	Pg	Pb	16 42 55.3	-1.6
DGS	3.5nm,0.4s			Lg	Lg	16 43 33.1	
DGS	Degeres baz=85	2.97	284	eP	Pb	16 42 55.3	-1.6
DGS	baz=85			eS	Sb	16 43 32.8	-0.9
DGS	Degeres 2.3nm,0.3s	2.97	284	eP	Pb	16 42 55.3	-1.6
DGS	3.5nm,0.4s			eS	Sb	16 43 32.8	-0.9
TKM2	Tokmak 2 2.2nm,0.8s	3.05	278	⇓Pg	Pb	16 42 57.8	-0.5
TKM2	1.5nm,0.5s			⇑Lg	Lg	16 43 40.0	
AAK	Ala-Archa 0.8nm,0.6s	3.85	272	⇓Pg	Pg	16 43 17.0	+0.1
AAK	2.6nm,1.1s			⇓Lg	Lg	16 44 05.0	
MAKZ	Makanchi 0.2nm,0.3s	4.52	20	⇑Pn	Pn	16 43 08.2	-4.5
MAKZ	0.2nm,0.5s			⇓Lg	Lg	16 44 24.9	
MK31	Makanchi Array 0.1nm,0.3s,baz=200,slow=17,SNR=14	4.59	23	⇑Pn	Pn	16 43 14.9	+1.2
MK31	0.1nm,0.4s,baz=194,slow=26			⇓Lg	Lg	16 44 24.9	

*DDA **11** 16:42:22.3, 39°.78N×42°.61E, h7km±2km, ML2.7*
*ISK **11** 16:42:22.7, 39°.64N×42°.47E, h10km, ML1.9/5*
*ISCJB **11** 16:42:23.2±0.6, 39°.64N±0°.04×42°.43E±0°.10, h8km±8km, Error ellipse: s-maj=13.5km s-min=5.1km az=157.8*
ISC 11 16:42:23.1±1.0, **39°.66N**±0°.04×**42°.47E**±0°.05, **h11**km±11km, **n9**, σ**0ˢ.22**/13, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EATA	Eleskirt	0.20	4	iP	Pg	16 42 27.7	0.0
EATA				iS	Sg	16 42 30.8	0.0
EATA	comp=Z,15µm,0.1s			IAML_P			
TUTA	Tutak	0.37	134	iP	Pg	16 42 30.7	+0.2
TUTA				iS	Sb	16 42 37.9	+0.3
AGRB	Hanur-Agry	0.41	101	PG	Pg	16 42 31.1	-0.1
MLAZ	Malazgirt-MUS	0.52	173	PG	Pg	16 42 33.2	0.0
MLAZ				SG	Sg	16 42 40.2	+0.1
KOPR	Koprukoy-ERZUR	0.58	305	PG	Pg	16 42 34.5	0.0
HOMI	Horasan	0.58	312	iP	Pg	16 42 34.9	+0.3
HOMI				iS	Sb	16 42 43.8	-0.1
HOMI	comp=Z,776nm,0.1s			IAML_P			
GURO	Guroymak-BITLI	1.16	197	PN	Pb	16 42 44.8	-0.4
AKDM	Akdamar-Van	1.38	163	PN	Pn	16 42 48.6	+0.1
BNGB	Bingl	1.54	245	PN	Pn	16 42 50.7	+0.1

IDC 11 16:56:25.3±1.9, **2°.32S**×**126°.35E**, **h0**km, **mb2.9**/2, **mb1 3.2**/3, **mb1mx3.1**/32, **mbtmp3.0**/3, **ML3.3**/1, **Error ellipse: s-maj=194.8km s-min=25.4km az=65.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=335,slow=11,SNR=10	19.17	157	P	Pn	17 00 51.8	+0.3
ASAR	Alice Springs 0.1nm,0.4s,baz=345,slow=12,SNR=6.6	22.44	162	P	P	17 01 25.1	-1.0
MKAR	Makanchi Array 0.1nm,0.6s,baz=132,slow=8.2,SNR=3.7	62.35	327	P	P	17 06 49.8	+0.1

*ISCJB **11** 16:56:40.1±0.5, 47°.58N±0°.06×146°.8E±0°.1, h403km, mb3.0/8, Error ellipse: s-maj=11.9km s-min=6.1km az=27.5*
*IDC **11** 16:56:42.1±1.5, 47°.66N×146°.80E, h420km±18km, mb2.6/8, mb1 2.9/14, mb1mx2.8/44, mbtmp3.5/14, Error ellipse: s-maj=21.1km s-min=13.1km az=136.0*
ISC 11 16:56:40.8±0.7, **47°.49N**±0°.09×**146°.78E**±0°.10, **h403**km, **n29**, σ**2ˢ.53**/35, **mb3.0**/8, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	3.86	231	P	P	16 57 56.1	+4.6
JWK2	Keihoku	4.02	239	P	P	16 57 58.1	+5.1
JTKR	Abashiri--Toko	4.05	211	P	P	16 57 57.3	+3.9
NEM2	Nemuro 2	4.19	190	P	P	16 57 56.0	+1.3
NEM2				eS	S	16 58 55.0	0.0
ASAJ	Asahikawa 1.3nm,0.3s,baz=33,slow=4.0,SNR=23	4.46	222	P	P	16 58 01.9	+4.6
ASAJ	0.2nm,0.3s,baz=153,slow=9.0,SNR=2.7			S	S	16 58 56.5	-3.3
JAR	Ashorobuto	4.70	208	P	P	16 58 02.8	+3.1
JAK	Akkeshi	4.73	199	P	P	16 58 01.8	+1.8
JAK				eS	S	16 59 04.2	-0.5
JHR	Hokuryu	5.16	225	P	P	16 58 08.4	+4.1
JFR	Furan	5.24	216	P	P	16 58 07.9	+2.7
JCH	Churui	5.44	208	P	P	16 58 09.0	+1.7
JCH				eS	S	16 59 16.6	-1.6
JNBK	Urakawa-nobuka	5.94	210	P	P	16 58 14.1	+1.5
JNBK				eS	S	16 59 26.4	-1.5
JEW	Eniwo	5.98	221	P	P	16 58 16.3	+3.3
JKB	Kayabe	6.94	218	P	P	16 58 24.9	+0.6
JKB				eS	S	16 59 44.6	-3.4
JOT	Ohata	7.36	216	P	P	16 58 29.3	+0.3
JOT				eS	S	16 59 52.2	-4.4
JANG	Nango	8.06	210	eS	S	17 00 06.8	-4.6
PETK	Petropavlovsk- 0.1nm,0.3s,baz=230,slow=12,SNR=6.1	8.96	47	P	P	16 58 46.1	-0.4
KLR	Kul'dur 0.6nm,0.3s,baz=79,slow=10,SNR=22	10.16	285	P	P	16 59 01.5	+1.7
USRK	Ussuriysk Ar. 0.4nm,0.3s,baz=74,slow=10,SNR=6.4	10.83	258	P	P	16 59 07.6	+0.2
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=12,slow=11,SNR=7.4	12.65	213	P	P	16 59 29.7	+2.1
KSRS	Korea Array 0.1nm,0.3s,baz=43,slow=10,SNR=9.4	17.11	241	P	P	17 00 17.9	+2.3
SONM	Songino Array 0.3nm,0.8s,baz=89,slow=8.4,SNR=3.0	26.99	286	P	P	17 01 48.5	+0.7
ZALV	Zalesovo Beam 0.5nm,0.6s,baz=93,slow=7.8,SNR=3.5	38.63	303	PcP	PcP	17 05 27.6	-1.8
ILAR	Eielson Array 0.3nm,0.5s,baz=252,slow=5.9,SNR=5.9	38.68	39	P	P	17 03 25.7	-1.5
MKAR	Makanchi Array 0.2nm,0.5s,baz=68,slow=7.4,SNR=4.3	42.72	294	P	P	17 03 58.5	-1.6
CMAR	Chiang Mai Arr 0.2nm,0.5s,baz=27,slow=6.1,SNR=1.5	48.44	250	P	P	17 04 45.8	+1.2
PDAR	Pinedale Array 0.3nm,0.4s,baz=319,slow=1.0,SNR=4.4	67.71	51	P	P	17 06 55.7	-0.7
WRA	Warramunga Arr 0.3nm,0.5s,baz=7.8,slow=6.6,SNR=11	68.05	193	P	P	17 06 58.0	-0.3
ASAR	Alice Springs 0.2nm,0.4s,baz=6.3,slow=5.6,SNR=14	71.77	192	P	P	17 07 22.1	+1.5
TXAR	Lajitas Array 0.3nm,0.6s,baz=269,slow=3.6,SNR=4.6	80.79	56	P	P	17 08 11.0	0.0

MEX 11 16:56:54.2±0.4, **16°.43N**×**98°.52W**, **h30**km±17km, **MD3.5**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.38	95	iP	Pb	16 57 01.3	-1.4
PNIG				iS	Sb	16 57 06.8	-1.8

*DDA **11** 17:03:59.6, 39°.09N×42°.07E, h7km±3km, ML2.7*
*ISK **11** 17:03:59.2, 39°.09N×42°.06E, h9km, ML2.2/9*
ISC 11 17:03:59.5±1.4, **39°.09N**±0°.03×**42°.07E**±0°.03, **h8**km±13km, **n18**, σ**0ˢ.59**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLAZ	Malazgirt-MUS	0.38	82	PG	Pg	17 04 07.4	+0.4
MLAZ				SG	Sb	17 04 13.3	-1.4
GURO	Guroymak-BITLI	0.54	183	PG	Pg	17 04 10.1	+0.2
GURO				SG	Sb	17 04 18.1	-1.0
ADCV	BITLIS_Adilcev	0.58	118	iP	Pb	17 04 11.4	-0.6
ADCV				iS	Sb	17 04 20.4	-0.2
ADCV	comp=Z,886nm,0.1s			IAML_P			
TUTA	Tutak	0.66	61	iP	Pb	17 04 12.9	-0.5
TUTA				iS	Sb	17 04 22.1	-0.7
EATA	Eleskirt	0.84	23	iP	Pb	17 04 16.2	-0.3
EATA				iS	Sb	17 04 29.0	+0.9
EATA	comp=Z,801nm,0.1s			IAML_P			
AGRB	Hanur-Agry	0.87	56	PG	Pg	17 04 16.1	-0.1
KOPR	Koprukoy-ERZUR	0.92	350	PG	Pg	17 04 17.1	0.0
HOMI	Horasan	0.96	353	iP	Pb	17 04 18.7	+0.1
HOMI				iS	Sn	17 04 34.0	+0.4
ECAT	Cat-ERZURUM	0.99	302	iP	Pg	17 04 17.9	-0.6
AKDM	Akdamar-Van	1.04	136	PG	Pg	17 04 19.6	+0.1
BNGB	Bingl	1.08	265	PN	Pb	17 04 20.4	-0.1
GEVA	Gevas	1.10	135	iP	Pb	17 04 20.9	+0.2
GEVA	comp=Z,356nm,0.2s			IAML_P			
SRTM	Siirt_Merkez	1.10	186	iP	Pn	17 04 22.0	+0.7
SVAN	Silvan-Diyarba	1.16	216	PN	Pn	17 04 22.1	+0.1
SVAN	Silvan-Diyarba	1.16	216	iP	Pn	17 04 22.1	+0.1
SVAN	comp=Z,191nm,0.1s			IAML_P			
SIRT	Sirnak	1.61	169	PN	Pn	17 04 28.6	+0.3
MAZI	Mazidag	2.06	219	PN	Pn	17 04 35.1	+0.6
PTK	Pertek	2.09	266	PN	Pn	17 04 35.4	+0.4

*IDC **11** 17:05:47.7±2.2, 0°.75N×92°.81E, h0km, mb3.2/4, mb1 3.4/6, mb1mx3.3/38, mbtmp3.2/6, ML3.5/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/14, Error ellipse: s-maj=57.9km s-min=23.6km az=62.0*
ISC 11 17:05:54.5±1.6, **0°.9N**±0°.2×**93°.1E**±0°.1, **h35**km, **n6**, σ**1ˢ.78**/7, **mb3.2**/4, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat 0.7nm,0.3s,baz=360,slow=17,SNR=2.8	6.08	72	Pn	Pn	17 07 24.4	+2.3
PSI	0.3nm,0.3s,baz=180,slow=19,SNR=2.4			Sn	Sn	17 08 28.2	-2.3
PSI	comp=Z,85nm,18.3s,baz=277,slow=35			LR	LR	17 09 34.1	
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=215,slow=13,SNR=7.4	18.35	18	P	Pn	17 10 06.8	+0.5
WRA	Warramunga Arr 0.3nm,0.7s,baz=298,slow=8.9,SNR=3.5	45.38	119	P	P	17 14 09.3	-0.7
ASAR	Alice Springs 0.2nm,0.9s,baz=299,slow=8.1,SNR=3.2	46.52	124	P	P	17 14 18.8	-0.2
MKAR	Makanchi Array 0.1nm,0.3s,baz=173,slow=8.0,SNR=2.9	46.67	350	P	P	17 14 18.7	-1.0
SONM	Songino Array 0.7nm,0.8s,baz=198,slow=7.5,SNR=5.5	48.14	12	P	P	17 14 31.4	+0.2

*ISCJB **11** 17:06:38.5±1.9, 31°.48N±0°.09×115°.5W±0°.2, h13km±26km, Error ellipse: s-maj=28.2km s-min=6.3km az=151.8*
*ECX **11** 17:06:39.5±0.3, 31°.47N×115°.51W, h7km, MD2.3, ML2.5*
*MEX **11** 17:06:40.3±0.6, 31°.05N×115°.95W, h16km±999km, MD3.5*
ISC 11 17:06:38.4±1.1, **31°.45N**±0°.06×**115°.53W**±0°.06, **h17**km±12km, **n9**, σ**0ˢ.44**/14, **4C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIG	San Pedro Mart	0.40	173	eP	Pb	17 06 47.5	+0.2
SPIG				eS	Sb	17 06 53.4	+0.2
SPIG	San Pedro Mart	0.40	173	⇓eP	Pb	17 06 47.4	+0.1
SPIG				eS	Sb	17 06 53.5	+0.2
SPX	San Pedro Mart	0.41	172	eP	Pb	17 06 47.2	-0.1
SPX				iS	Sb	17 06 53.3	0.0
SPX	San Pedro Mart	0.41	172	⇑eP	Pb	17 06 47.5	+0.2
SPX				eS	Sb	17 06 53.5	+0.2
SPX				⇑e		17 06 53.9	
SPX	comp=N,291nm,0.1s			IAML		17 06 53.9	
ECBX	El Chinero	0.41	87	⇑eP	Pg	17 06 46.8	0.0
ECBX				eS	Sg	17 06 52.1	-0.3
ECNX	Esteban Cantu	0.94	283	⇓eP	Pg	17 06 56.1	-0.6
RMX	La Rumorosa comp=E,94nm,0.2s	1.24	338	IAML		17 07 17.5	
RMX				e		17 07 17.5	
RMX				⇑e		17 07 17.8	
RMX	comp=N,108nm,0.2s			IAML		17 07 17.8	
CBX	Cerro Bola	1.30	312	⇓e	Sg	17 07 21.5	+1.1
CBX	comp=N,87nm,0.4s			IAML		17 07 21.5	
TJIG	Tijuana	1.39	315	eP	Pb	17 07 03.8	0.0
TJIG				eS	Sn	17 07 20.5	-0.3

*IDC **11** 17:16:51.4±1.0, 11°.45S×165°.68E, h0km, mb3.8/11, mb1 4.0/13, mb1mx3.9/40, mbtmp3.9/13, ML4.4/2, Error ellipse: s-maj=32.4km s-min=19.2km az=135.0*
*ISCJB **11** 17:16:53.6±0.6, 11°.53S±0°.09×165°.6E±0°.1, h24km, mb4.0/14, Error ellipse: s-maj=14.9km s-min=12.0km az=31.6*
*NEIC **11** 17:16:53.3±5.0, 11°.43S×165°.65E, h12km±31km, mb4.6/5, Error ellipse: s-maj=12.6km s-min=11.6km az=48.0*
ISC 11 17:16:54.9±0.7, **11°.57S**±0°.08×**165°.6E**±0°.1, **h24**km, **n22**, σ**1ˢ.46**/23, **mb3.9**/14, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 12nm,0.3s,baz=145,slow=6.6,SNR=8.6	5.92	291	Pn	Pn	17 18 20.9	-0.3
HNR	8.1nm,0.3s,baz=27,slow=21,SNR=8.7			Sn	Sn	17 19 25.7	-2.7
DZM	Mont Dzumac 2.4nm,0.3s,baz=124,slow=20,SNR=25	10.47	176	Pn	Pn	17 19 25.3	+1.6
DZM	0.1nm,0.3s,baz=300,slow=20,SNR=2.4			Sn	Sn	17 21 16.2	-4.3
CTA	Charters Tower 2.6nm,0.7s,baz=79,slow=16,SNR=3.5	20.40	243	P	Pn	17 21 32.8	+0.2
STKA	Stephens Creek 1.8nm,0.9s,baz=70,slow=7.4,SNR=3.7	29.94	224	P	P	17 23 03.5	+2.1
WR1	Warramunga Arr 6.8nm,1.1s	31.14	251	eP	P	17 23 12.9	+0.8
WRA	Warramunga Arr 1.5nm,0.8s,baz=81,slow=9.0,SNR=15	31.14	251	P	P	17 23 12.9	+0.8
ASAR	Alice Springs 0.4nm,0.7s,baz=63,slow=9.8,SNR=10	32.40	244	P	P	17 23 23.1	-0.1
CMAR	Chiang Mai Arr 0.4nm,0.7s,baz=112,slow=5.7,SNR=5.8	72.16	294	P	P	17 28 20.1	+1.8
SONA0	Songino Array 5.5nm,1.8s	78.99	324	eP	P	17 28 57.8	+0.8
SONM	Songino Array 0.7nm,0.9s,baz=141,slow=6.1,SNR=6.6	78.99	324	P	P	17 28 57.8	+0.8
BILL	Bilibino 2.2nm,0.9s	79.41	0	eP	P	17 28 57.7	-1.0
HDA	Harding Lake 32nm,1.9s	83.80	19	eP	P	17 29 21.6	-0.3
ILAR	Eielson Array 0.6nm,0.5s,baz=236,slow=4.8,SNR=13	84.06	19	P	P	17 29 23.0	-0.3
ILB	Eielson Array 24nm,1.9s	84.06	19	eP	P	17 29 22.8	-0.5
MK32	Makanchi Array	93.79	317	eP	P	17 30 10.3	+0.2
MKAR	Makanchi Array 0.5nm,0.7s,baz=85,slow=7.7,SNR=5.2	93.79	317	P	P	17 30 10.3	+0.2
ZALV	Zalesovo Beam 0.2nm,0.4s,baz=130,slow=4.5,SNR=3.6	93.88	324	P	P	17 30 10.1	-0.2
ZAA1	Zalesovo Array	93.88	324	eP	P	17 30 10.1	-0.2
PDAR	Pinedale Array 0.2nm,0.7s,baz=246,slow=3.1,SNR=2.2	94.03	47	P	P	17 30 11.8	+0.2
YKA	Yellowknife Ar 0.2nm,0.5s,baz=254,slow=4.7,SNR=3.5	95.52	27	P	P	17 30 16.1	-1.5
ARA0	ARCESS Array S	116.80	345	ePKPdf	PKiKP	17 35 36.5	-0.3
ARCES	ARCESS Array B 3.9nm,1.0s,baz=58,slow=2.3,SNR=11	116.80	345	PKP	PKiKP	17 35 36.5	-0.3

*IDC **11** 17:31:12.2±2.9, 2°.68N×89°.46E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/43, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=93.2km s-min=23.3km az=63.0*
*ISCJB **11** 17:31:13.2±1.0, 2°.7N±0°.2×89°.72E±0°.10, h10km, mb3.8/5, Error ellipse: s-maj=24.7km s-min=10.4km az=24.5*
ISC 11 17:31:15.9±1.3, **2°.8N**±0°.2×**89°.9E**±0°.1, **h10**km, **n13**, σ**1ˢ.99**/8, **mb3.9**/5, **North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele 0.2nm,0.3s,baz=116,slow=17,SNR=2.7	10.13	296	Pn	Pn	17 33 43.6	+2.0
PALK	2.4nm,0.3s,baz=84,slow=0.1,SNR=9.0			Sn	Sn	17 35 34.0	-1.4
CMAR	Chiang Mai Arr 0.0nm,0.3s,baz=222,slow=11,SNR=2.7	17.92	29	Pn	P	17 35 28.6	+2.6
H08S3	Diego Garcia H baz=61,slow=75,SNR=18	20.19	239	T	T	17 57 11.9	
H08S2	Diego Garcia H baz=61,slow=75,SNR=14	20.20	239	T	T	17 56 53.9	
H08S1	Diego Carcia H baz=61,slow=75,SNR=6.4	20.21	239	T	T	17 56 53.4	
H01W3	Cape Leeuwin H baz=318	43.88	151	T	T	18 25 18.4	
H01W2	Cape Leeuwin H baz=318	43.89	151	T	T	18 25 21.2	
H01W1	Cape Leeuwin H baz=318	43.90	151	T	T	18 25 27.6	
MKAR	Makanchi Array 1.0nm,0.7s,baz=168,slow=8.9,SNR=11	44.30	353	P	P	17 39 25.7	-0.2
SONM	Songino Array 2.1nm,0.5s,baz=194,slow=9.4,SNR=35	47.07	15	P	P	17 39 46.7	-1.3
WRA	Warramunga Arr 1.0nm,0.8s,baz=297,slow=8.6,SNR=7.2	49.17	119	P	P	17 40 04.9	+0.4
ASAR	Alice Springs 0.2nm,0.8s,baz=297,slow=7.5,SNR=5.2	50.30	124	P	P	17 40 12.6	-0.5
ZALV	Zalesovo Beam 0.7nm,0.4s,baz=181,slow=7.0,SNR=4.6	51.14	356	P	P	17 40 16.6	-2.2

*ISCJB **11** 17:33:53.5±0.7, 11°.51S±0°.09×165°.71E±0°.09, h10km, mb3.8/8, MS3.6/3, Error ellipse: s-maj=15.1km s-min=9.9km az=37.8*
*IDC **11** 17:33:53.1±1.1, 11°.41S×165°.83E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.8/41, mbtmp3.9/10, ML4.1/2, MS3.6/5, Ms1 3.6/5, ms1mx3.0/29, Error ellipse: s-maj=34.3km s-min=21.7km az=141.0*
*NEIC **11** 17:33:54.8±0.7, 11°.38S×165°.85E, h10km, mb4.6/2, Error ellipse: s-maj=14.7km s-min=13.6km az=108.0*
ISC 11 17:33:54.8±0.8, **11°.46S**±0°.09×**165°.8E**±0°.1, **h10**km, **n15**, σ**1ˢ.33**/15, **mb3.8**/8, **MS3.5**/3, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 5.5nm,0.3s,baz=272,slow=4.8,SNR=7.7	6.11	289	Pn	Pn	17 35 25.0	-0.3
HNR	1.2nm,0.3s,baz=106,slow=15,SNR=1.8			Sn	Sn	17 36 34.2	-1.0
HNR	comp=Z,268nm,20.0s,baz=106,slow=40			LR	LR	17 37 59.9	
DZM	Mont Dzumac 1.5nm,0.3s,baz=119,slow=23,SNR=22	10.57	177	Pn	Pn	17 36 27.7	+1.3
DZM	0.3nm,0.3s,baz=137,slow=19,SNR=2.9			Sn	Sn	17 38 22.7	-2.3
DZM	comp=Z,197nm,18.1s,baz=44,slow=37			LR	LR	17 40 29.5	
CTA	Charters Tower 6.5nm,0.9s,baz=61,slow=17,SNR=4.8	20.66	243	P	P	17 38 36.9	+1.9
CTAO	Charters Tower 15nm,0.7s	20.66	243	eP	P	17 38 36.7	+1.7
RAO	Raoul Island comp=Z,860nm,20.2s,baz=59,slow=32	23.31	142	LR	LR	17 46 09.1	
STKA	Stephens Creek comp=Z,56nm,18.4s,baz=25,slow=36	30.18	224	LR	LR	17 51 51.2	
WRA	Warramunga Arr 0.7nm,0.5s,baz=81,slow=9.0,SNR=9.5	31.40	250	P	P	17 40 16.1	-0.3
ASAR	Alice Springs 0.7nm,0.9s,baz=62,slow=9.9,SNR=9.5	32.66	244	P	P	17 40 26.1	-1.3
ASAR	comp=Z,80nm,18.7s,baz=88,slow=37			LR	LR	17 53 56.0	
CMAR	Chiang Mai Arr 0.5nm,0.8s,baz=114,slow=3.4,SNR=4.7	72.34	294	P	P	17 45 22.9	+1.5
QSPA	South Pole Qui 4.7nm,0.7s	78.54	180	P	P	17 45 56.5	+0.1
SONM	Songino Array 0.6nm,1.1s,baz=134,slow=4.2,SNR=2.4	79.04	324	P	P	17 45 58.8	-0.6
ILAR	Eielson Array 0.3nm,0.6s,baz=241,slow=4.9,SNR=8.8	83.89	18	P	P	17 46 23.4	-1.0
NVAR	Mina Array Bea 1.2nm,0.9s,baz=240,slow=9.0,SNR=2.9	86.24	50	P	P	17 46 37.6	+0.4
MKAR	Makanchi Array 0.4nm,0.6s,baz=93,slow=5.9,SNR=5.7	93.87	317	P	P	17 47 13.1	+0.5
ARCES	ARCESS Array B 3.0nm,0.9s,baz=17,slow=8.9,SNR=4.7	116.75	345	PKP	PKPdf	17 52 37.9	-1.1

*SOME **11** 17:45:41.3, 42°.53N×79°.77E, h20km*
*KRNET **11** 17:45:42.7±0.1, 42°.68N×79°.88E, mb2.5*
NNC 11 17:45:42.0±1.2, **42°.61N**×**79°.70E**, **h0**km, **mb2.9**, **mpv2.7**, **9C-5D, Error ellipse: s-maj=8.0km s-min=4.5km az=132.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak 7.9nm,0.1s	0.73	318	P	Pg	17 45 56.0	0.0
UZB	9.6nm,0.2s			S	Sg	17 46 06.3	+0.8
UZB	Uzynbulak 7.9nm,0.1s	0.73	318	eP	Pg	17 45 56.0	0.0
UZB	9.6nm,0.2s			eS	Sg	17 46 06.3	+0.8
PDGK	Podgornoye 3.8nm,0.1s	0.74	348	P	Pg	17 45 56.4	+0.3
PDGK	1.7nm,0.2s			S	Sg	17 46 07.0	+1.3
PDGK	Podgornoye 0.7nm,0.3s	0.74	348	⇓P	Pg	17 45 56.3	+0.1
PDGK	1.0nm,0.3s			⇓S	Sg	17 46 06.6	+0.9
PDGK	Podgornoye baz=36	0.74	348	⇑iP	Pg	17 45 56.1	0.0
PDGK	baz=36			⇑iS	Sg	17 46 06.8	+1.1
KTMS	Ketmen 3.3nm,0.1s	0.97	30	P	Pg	17 46 00.8	+0.4
KTMS	3.7nm,0.1s			S	Sb	17 46 14.1	-1.0
KTMS	Ketmen 3.3nm,0.1s	0.97	30	eP	Pg	17 46 00.7	+0.2
KTMS	3.7nm,0.1s			eS	Sb	17 46 14.2	-0.9
PRZ	Przheval'sk baz=60	0.97	263	⇑iP	Pn	17 46 03.1	+0.1
PRZ	baz=60			⇑iS	Sn	17 46 18.2	+0.7
SATY	Saty 2.4nm,0.1s	1.05	296	P	Pg	17 46 01.3	-0.8
SATY	17nm,0.1s			S	Sg	17 46 15.8	0.0
SATY	Saty 2.4nm,0.1s	1.05	296	eP	Pg	17 46 01.3	-0.8
SATY	17nm,0.1s			eS	Sg	17 46 15.8	0.0
DJR	Jarkent 1.2nm,0.1s	1.73	2	P	Pb	17 46 14.0	-0.6
DJR	4.6nm,0.3s			S	Sg	17 46 38.2	+0.8
DJR	Jarkent 1.2nm,0.1s	1.73	2	eP	Pb	17 46 14.2	-0.4
DJR	4.6nm,0.3s			eS	Sg	17 46 38.2	+0.8
MNBS	Baschi 2.3nm,0.2s	1.75	328	P	Pn	17 46 14.2	+0.5
MNBS	6.9nm,0.2s			S	Sb	17 46 37.9	+0.3
MNBS	Baschi 2.3nm,0.2s	1.75	328	eP	Pn	17 46 14.2	+0.5
MNBS	6.9nm,0.2s			eS	Sb	17 46 37.9	+0.3
KDJ	Kajisay baz=55	1.93	257	⇑iP	Pb	17 46 17.9	-0.2
KDJ	baz=55			⇑iS	Sb	17 46 42.6	-0.1
KOTS	Kotyrbulak	2.00	289	Pg	Pg	17 46 20.1	-0.2
KOTS				Lg	Lg	17 46 48.2	
MDOK	Medeo 0.6nm,0.4s	2.02	287	Pn	Pn	17 46 17.5	0.0
MDOK	3.4nm,0.5s			Sn	Sb	17 46 46.2	+0.6
MDOK	Medeo 1.0nm,0.2s	2.02	287	Pg	Pb	17 46 19.4	-0.4
MDOK	5.0nm,0.4s			Lg	Lg	17 46 47.6	
MDOK	Medeo 1.0nm,0.2s	2.02	287	eP	Pb	17 46 19.4	-0.4
MDOK	5.0nm,0.4s			eS	Sg	17 46 47.1	+0.1
TNSS	Tian-Shan	2.07	283	Pg	Pb	17 46 19.6	-1.0

	1.1nm,0.3s						
TNSS				Lg	Lg	17 46 47.1	
	3.9nm,0.4s						
TNSS	**Tian-Shan**	**2.07**	**283**	*e*P	Pb	17 46 19.6	-1.0
	1.1nm,0.3s						
TNSS				*e*S	Sb	17 46 47.1	0.0
	3.9nm,0.4s						
ARXS	**Arharly**	**2.11**	**320**	Pg	Pb	17 46 20.0	-1.1
	2.2nm,0.4s						
ARXS				Lg	Lg	17 46 47.9	
	3.9nm,0.4s						
ARXS	**Arharly**	**2.11**	**320**	*e*P	Pb	17 46 20.0	-1.1
	2.2nm,0.4s						
ARXS				*e*S	Sb	17 46 47.9	+0.1
	3.9nm,0.4s						
IZV	**Izvestkoviy**	**2.31**	**282**	Pg	Pn	17 46 22.9	+1.5
	1.6nm,0.2s						
IZV				Lg	Lg	17 46 53.8	
	5.5nm,0.3s						
IZV	**Izvestkoviy**	**2.31**	**282**	*e*P	Pb	17 46 23.4	-1.2
	1.6nm,0.2s						
IZV				*e*S	Sb	17 46 53.8	0.0
	5.5nm,0.3s						
KTBS	**Karatobe**	**2.47**	**298**	Pg	Pb	17 46 26.0	-1.2
	0.7nm,0.1s						
KTBS				Lg	Lg	17 46 58.2	
	3.3nm,0.3s						
KTBS	**Karatobe**	**2.47**	**298**	*e*P	Pb	17 46 26.0	-1.2
	0.7nm,0.1s						
KTBS				*e*S	Sb	17 46 58.2	0.0
	3.3nm,0.3s						
ULHL	**Ulahol**	**2.58**	**263**	⇓*i*P	Pn	17 46 27.1	+1.8
	baz=62						
ULHL				⇓*i*S	Sn	17 46 59.1	+1.6
	baz=62						
KAPS	**Kapalarasan**	**2.69**	**355**	Pg	Pb	17 46 28.9	-2.1
	0.5nm,0.1s						
KAPS				Lg	Lg	17 47 03.5	
	1.3nm,0.3s						
KAPS	**Kapalarasan**	**2.69**	**355**	*e*P	Pb	17 46 29.5	-1.5
	0.5nm,0.1s						
KAPS				*e*S	Sb	17 47 03.9	-0.6
	1.3nm,0.3s						
BOOM	**Boomskoye usch**	**2.78**	**269**	⇑*i*P	Pn	17 46 29.5	+1.6
	baz=68						
BOOM				⇑*i*S	Sn	17 47 03.6	+1.4
	baz=68						
DGS	**Degeres**	**2.95**	**284**	Pg	Pb	17 46 34.2	-1.3
	1.2nm,0.4s						
DGS				Lg	Lg	17 47 12.2	
	3.4nm,0.5s						
DGS	**Degeres**	**2.95**	**284**	*e*P	Pb	17 46 34.2	-1.3
	1.2nm,0.4s						
DGS				*e*S	Sb	17 47 12.2	0.0
	3.4nm,0.5s						
TKM2	**Tokmak 2**	**3.04**	**277**	⇑Pg	Pb	17 46 35.5	-1.5
	1.3nm,0.7s						
TKM2				⇓Lg	Lg	17 47 15.8	
	0.5nm,0.3s						

ROM 11 17:59:11.9±0.1**, 42°.480N**±0°.004×**12°.941E**±0°.006**, h11^{km}, ML1.9**/7**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.14**	**31**	P	Pg	17 59 16.0	+0.6
LNSS				S	Sg	17 59 18.7	+0.9
LNSS				AML	AML		
	comp=E,1740μm,1.4s						
LNSS				AML	AML		
	comp=N,2355μm,1.0s						
ARRO	**Arrone**	**0.16**	**307**	P	Pg	17 59 16.2	+0.6
ARRO				S	Sg	17 59 19.1	+1.0
ARRO				AML	AML		
	comp=E,1390μm,0.2s						
ARRO				AML	AML		
	comp=N,826μm,0.2s						
ARRO				AML	AML		
	comp=E,1390μm,0.2s						
ARRO				AML	AML		
	comp=N,826μm,0.2s						
ARRO				AML	AML		
	comp=E,1390μm,0.2s						
ARRO				AML	AML		
	comp=N,826μm,0.2s						
FIAM	**Fiamignano**	**0.25**	**148**	P	Pg	17 59 17.7	+0.6
FIAM				S	Sg	17 59 21.8	+1.3
FIAM				AML	AML		
	comp=E,448μm,0.3s						
FIAM				AML	AML		
	comp=N,388μm,0.5s						
FIAM				AML	AML		
	comp=E,448μm,0.3s						
FIAM				AML	AML		
	comp=N,388μm,0.5s						
FIAM				AML	AML		
	comp=N,388μm,0.5s						
FIAM				AML	AML		
	comp=E,448μm,0.3s						
CESX	**Cesi**	**0.30**	**296**	P	Pg	17 59 18.3	+0.4
CESX				S	Sg	17 59 23.0	+1.1
CESX				AML	AML		
	comp=E,200μm,1.4s						
CESX				AML	AML		
	comp=N,222μm,1.5s						
CESX				AML	AML		
	comp=E,200μm,1.4s						
CESX				AML	AML		
	comp=N,222μm,1.5s						
CESX				AML	AML		
	comp=N,222μm,1.5s						
CESX				AML	AML		
	comp=E,200μm,1.4s						
TERO	**Teramo**	**0.51**	**74**	P	Pg	17 59 21.9	0.0
TERO				S	Sg	17 59 29.4	+0.7
TERO				AML	AML		
	comp=E,114μm,0.4s						
TERO				AML	AML		
	comp=N,120μm,1.0s						
TERO				AML	AML		
	comp=E,114μm,0.4s						
TERO				AML	AML		
	comp=N,120μm,1.0s						
CESI	**CESI - Serrava**	**0.53**	**357**	P	Pg	17 59 22.4	+0.2
CESI				S	Sb	17 59 30.4	-0.6
CESI				AML	AML		
	comp=E,122μm,0.2s						
CESI				AML	AML		
	comp=N,77μm,1.0s						
CESI				AML	AML		
	comp=E,122μm,0.2s						
CESI				AML	AML		
	comp=N,77μm,1.0s						
CESI				AML	AML		
	comp=E,122μm,0.2s						
CESI				AML	AML		
	comp=N,77μm,1.0s						
CERT	**Cerreto**	**0.53**	**177**	P	Pg	17 59 22.2	0.0
CERT				S	Sb	17 59 30.7	-0.3
FDMO	**Fiordimonte**	**0.57**	**11**	P	Pg	17 59 22.9	-0.1
FDMO				S	Sb	17 59 31.4	-0.6
FDMO				AML	AML		
	comp=E,177μm,0.8s						
FDMO				AML	AML		
	comp=N,139μm,0.3s						
FDMO				AML	AML		
	comp=N,139μm,0.3s						
FDMO				AML	AML		
	comp=E,177μm,0.8s						
ASSB	**Assisi San Ben**	**0.60**	**340**	AML	AML		
	comp=N,588μm,0.2s						
ASSB				AML	AML		
	comp=E,483μm,0.3s						
ASSB				AML	AML		
	comp=N,588μm,0.2s						
ASSB				AML	AML		
	comp=E,506μm,0.5s						
ASSB				AML	AML		
	comp=N,588μm,0.2s						
ASSB				AML	AML		
	comp=E,506μm,0.5s						

ROM 11 17:59:49.8±0.1**, 43°.250N**±0°.003×**12°.727E**±0°.003**, h10^{km}, ML2.0**/17**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATCC	**AVT- Casa Cast**	**0.09**	**225**	P	Pg	17 59 52.8	+0.5
ATCC				S	Sg	17 59 54.9	+0.9
ATCC				AML	AML		
	comp=E,1795μm,0.2s						
ATCC				AML	AML		
	comp=N,1043μm,0.1s						
ATCC				AML	AML		
	comp=E,1790μm,0.2s						
ATCC				AML	AML		
	comp=N,1044μm,0.1s						
ATCC				AML	AML		
	comp=N,1044μm,0.1s						
ATCC				AML	AML		
	comp=E,1790μm,0.2s						
MURB	**Monte Urbino**	**0.15**	**275**	P	Pg	17 59 53.8	+0.6
MURB				S	Sg	17 59 56.6	+1.1
MURB				AML	AML		
	comp=E,2160μm,0.3s						
MURB				AML	AML		
	comp=N,2755μm,0.3s						
MURB				AML	AML		
	comp=E,2160μm,0.3s						
MURB				AML	AML		
	comp=N,2755μm,0.3s						
MURB				AML	AML		
	comp=N,2755μm,0.3s						
MURB				AML	AML		
	comp=E,2160μm,0.3s						
SNTG	**Esanatoglia**	**0.16**	**88**	P	Pg	17 59 53.9	+0.6
SNTG				S	Sg	17 59 56.7	+1.1
SNTG				AML	AML		
	comp=E,1060μm,0.5s						
SNTG				AML	AML		
	comp=N,1062μm,0.2s						
SNTG				AML	AML		
	comp=N,1062μm,0.2s						
SNTG				AML	AML		
	comp=E,1060μm,0.5s						
SSFR	**Montelago di S**	**0.19**	**12**	P	Pg	17 59 54.3	+0.5
SSFR				S	Sg	17 59 57.6	+1.0
SSFR				AML	AML		
	comp=E,1525μm,0.2s						
SSFR				AML	AML		
	comp=N,2350μm,0.1s						
SSFR				AML	AML		
	comp=N,2350μm,0.1s						
SSFR				AML	AML		
	comp=E,1525μm,0.2s						
ASSB	**Assisi San Ben**	**0.21**	**194**	P	Pg	17 59 54.8	+0.5
ASSB				S	Sg	17 59 58.5	+1.2
ASSB				AML	AML		
	comp=E,506μm,0.5s						
ASSB				AML	AML		
	comp=N,588μm,0.2s						
ASSB				AML	AML		
	comp=N,588μm,0.2s						
ASSB				AML	AML		
	comp=E,506μm,0.5s						
ATBU	**Serra di Buran**	**0.26**	**330**	P	Pb	17 59 55.9	-0.7
ATBU				S	Sb	18 00 00.2	-1.1
ATBU				AML	AML		
	comp=E,458μm,0.2s						
ATBU				AML	AML		
	comp=N,492μm,1.4s						
ATBU				AML	AML		
	comp=E,458μm,0.2s						
ATBU				AML	AML		
	comp=N,492μm,1.4s						
ATBU				AML	AML		
	comp=E,458μm,0.2s						
ATBU				AML	AML		
	comp=N,492μm,1.4s						
ATVO	**AVT- Monte Val**	**0.27**	**300**	P	Pg	17 59 55.7	+0.5
ATVO				S	Sg	18 00 00.2	+1.3
ATVO				AML	AML		
	comp=E,190μm,0.2s						
ATVO				AML	AML		
	comp=N,369μm,0.3s						
ATVO				AML	AML		
	comp=N,369μm,0.3s						
ATVO				AML	AML		
	comp=E,190μm,0.2s						
EL6	**Elcito**	**0.28**	**74**	P	Pg	17 59 56.1	+0.6
EL6				S	Sb	18 00 00.9	-1.1
ARVD	**Arcevia**	**0.29**	**32**	P	Pg	17 59 56.2	+0.5
ARVD				S	Sb	18 00 01.0	-1.1
ARVD				AML	AML		
	comp=E,312μm,0.1s						
ARVD				AML	AML		
	comp=N,262μm,0.2s						
ARVD				AML	AML		
	comp=E,312μm,0.1s						
ARVD				AML	AML		
	comp=N,262μm,0.2s						
ATPC	**Poggio Castell**	**0.30**	**320**	P	Pg	17 59 56.6	+0.7
ATPC				S	Sb	18 00 01.8	-0.6
ATPC				AML	AML		
	comp=E,348μm,1.3s						
ATPC				AML	AML		
	comp=N,287μm,1.0s						
ATPC				AML	AML		
	comp=E,348μm,1.3s						
ATPC				AML	AML		
	comp=N,287μm,1.0s						
ATPC				AML	AML		
	comp=N,287μm,1.0s						
ATPC				AML	AML		
	comp=E,348μm,1.3s						
ATPI	**Pietralunga -**	**0.31**	**310**	P	Pg	17 59 56.6	+0.6
ATPI				S	Sb	18 00 01.7	-0.9
PIEI	**Pieia**	**0.32**	**334**	P	Pg	17 59 56.6	+0.4
PIEI				AML	AML		
	comp=E,376μm,0.7s						
PIEI				AML	AML		
	comp=N,216μm,1.2s						
PIEI				AML	AML		
	comp=E,376μm,0.7s						
PIEI				AML	AML		
	comp=N,216μm,1.2s						
CING	**Cingoli**	**0.36**	**70**	P	Pg	17 59 57.6	+0.6
CING				S	Sb	18 00 03.7	-0.5
CING				AML	AML		
	comp=E,224μm,0.2s						
CING				AML	AML		
	comp=N,197μm,0.2s						
CING				AML	AML		
	comp=E,224μm,0.2s						
CING				AML	AML		
	comp=N,197μm,0.2s						
NARO	**Abbazia di Nar**	**0.38**	**344**	P	Pg	17 59 57.6	+0.4
NARO				S	Sb	18 00 03.6	-0.9
NARO				AML	AML		
	comp=E,267μm,0.4s						
NARO				AML	AML		
	comp=N,206μm,0.3s						
NARO				AML	AML		
	comp=N,206μm,0.3s						
NARO				AML	AML		
	comp=E,267μm,0.4s						
BADI	**Badiali**	**0.44**	**307**	P	Pb	17 59 59.0	-0.6
BADI				S	Sb	18 00 06.0	-0.3
BADI				AML	AML		
	comp=E,236μm,1.2s						
BADI				AML	AML		
	comp=N,190μm,1.1s						
BADI				AML	AML		
	comp=E,236μm,1.2s						
BADI				AML	AML		
	comp=N,190μm,1.1s						
FSSB	**Fossombrone**	**0.44**	**5**	P	Pg	17 59 58.9	+0.4
FSSB				S	Sb	18 00 06.1	-0.4
FSSB				AML	AML		
	comp=E,410μm,0.5s						
FSSB				AML	AML		
	comp=N,456μm,0.3s						
FSSB				AML	AML		
	comp=N,456μm,0.3s						
FSSB				AML	AML		
	comp=E,410μm,0.5s						

MEX 11 18:07:40.1±0.6**, 27°.61N×111°.65W, h12^{km}**±12^{km}**, MD3.8, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.60**	**242**	*e*P	Pg	18 07 50.0	-1.7
SRIG				*i* S	Sg	18 07 58.4	-1.2
GUYB	**Guaymas**	**0.75**	**67**	*e*P	Pg	18 07 52.0	-2.6
GUYB				*e*S	Sg	18 08 02.4	-2.0
HSIG		**1.54**	**24**	*e*P	Pn	18 08 04.6	-2.8
HSIG				*i* S	Sn	18 08 22.0	-5.4

IDC 11 18:16:44.5±2.0**, 10°.94S×166°.25E, h0^{km}, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.5**/37**, mbtmp3.7**/5**, ML4.6**/1**, Error ellipse: s-maj=57.8km s-min=32.1km az=152.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.38**	**283**	Pn	Pn	18 18 20.5	+0.6
	12nm,0.3s,baz=102,slow=2.9,SNR=10.0						
HNR				Sn	Sn	18 19 32.9	-0.6
	baz=165,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**31.98**	**250**	P	P	18 23 12.7	-0.1
	1.0nm,0.7s,baz=81,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**33.28**	**243**	P	P	18 23 23.9	-0.2
	0.4nm,0.9s,baz=64,slow=10,SNR=2.2						
ILAR	**Eielson Array**	**83.26**	**18**	P	P	18 29 12.3	-0.4
	0.2nm,0.8s,baz=231,slow=6.5,SNR=1.3						
MKAR	**Makanchi Array**	**93.78**	**317**	P	P	18 30 04.2	+0.5
	0.2nm,0.6s,baz=87,slow=6.2,SNR=3.3						

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*IDC **11** 18:20:47.6±1.2, 11°.49S×165°.79E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.7/35, mbtmp3.8/8, ML3.8/2, Error ellipse: s-maj=34.0km s-min=25.9km az=142.0*

*ISCJB **11** 18:20:51.5±0.9, 11°.6S±0°.1×165°.65E±0°.10, h37^{km}, mb3.6/6, Error ellipse: s-maj=18.3km s-min=11.4km az=32.1*

ISC 11 18:20:53.2±0.9**, 11°.5S**±0°.1×**165°.8E**±0°.1**, h37^{km}, n9, σ1^{s}20**/10**, mb3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.07**	**289**	Pn	**Pn**	**18 22 21.2**	**+0.7**
	4.2nm,0.3s,baz=290,slow=18,SNR=2.8						
HNR				Sn	**Sn**	**18 23 28.0**	**-0.8**
	3.8nm,0.3s,baz=86,slow=15,SNR=1.9						
DZM	**Mont Dzumac**	**10.53**	**176**	Pn	**Pn**	**18 23 22.2**	**+0.5**
	0.4nm,0.3s,baz=33,slow=17,SNR=4.4						
WRA	**Warramunga Arr**	**31.34**	**251**	P	**P**	**18 27 10.2**	**-0.3**
	0.8nm,0.9s,baz=80,slow=9.4,SNR=6.3						
ASAR	**Alice Springs**	**32.59**	**244**	P	**P**	**18 27 19.8**	**-1.7**
	0.4nm,0.9s,baz=73,slow=9.5,SNR=3.0						
SONM	**Songino Array**	**79.04**	**324**	P	**P**	**18 32 54.5**	**+0.8**
	0.4nm,0.6s,baz=143,slow=5.5,SNR=8.1						
ILAR	**Eielson Array**	**83.94**	**18**	P	**P**	**18 33 18.9**	**-0.2**
	0.6nm,0.6s,baz=244,slow=5.2,SNR=15						
MKAR	**Makanchi Array**	**93.86**	**317**	P	**P**	**18 34 08.2**	**+1.3**
	0.7nm,0.7s,baz=93,slow=6.8,SNR=8.3						
YKA	**Yellowknife Ar**	**95.38**	**27**	P	**P**	**18 34 11.6**	**-1.7**
	0.1nm,0.6s,baz=272,slow=4.4,SNR=3.0						
ARCES	**ARCESS Array B**	**116.78**	**345**	PKP	**PKiKP**	**18 39 33.8**	**+0.6**
	2.7nm,0.9s,baz=57,slow=3.3,SNR=1.8						

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*ISCJB **11** 18:22:01.4±0.5, 37°.26N±0°.04×71°.73E±0°.05, h109^{km}, mb3.6/4, Error ellipse: s-maj=5.9km s-min=5.1km az=148.0*

*IDC **11** 18:22:01.8±4.3, 37°.16N×71°.79E, h96^{km}±29^{km}, mb3.4/4, mb1 3.4/11, mb1mx3.1/48, mbtmp3.6/11, MS3.6/1, Ms1 3.7/1, ms1mx2.4/30, Error ellipse: s-maj=55.5km s-min=24.5km az=144.0*

*NNC **11** 18:22:10.5±2.2, 37°.84N×71°.48E, h106^{km}±48^{km}, mb2.9, mpv3.2, Error ellipse: s-maj=20.8km s-min=15.9km az=134.0*

ISC 11 18:22:03.1±0.8**, 37°.40N**±0°.07×**71°.71E**±0°.06**, h109^{km}, n27, σ2^{s}51**/38**, mb3.7**/4**, 8C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.96**	**28**	⇑P	**Pn**	**18 22 51.7**	**+2.9**
	3.2nm,0.3s						
SFK				⇑S	**Sn**	**18 23 25.4**	**+1.4**
	17nm,0.4s						
MNAS	**Manas**	**5.12**	**7**	⇑P	**Pn**	**18 23 19.8**	**+2.1**
	2.6nm,0.3s						
MNAS				⇓S	**Sn**	**18 24 14.4**	**-1.2**
	11nm,0.5s						
AAK	**Ala-Archa**	**5.65**	**21**	⇓P	**Pn**	**18 23 27.1**	**+2.2**
	1.5nm,0.4s						
AAK				⇓S	**Sn**	**18 24 26.8**	**-1.7**
	3.4nm,0.4s						
AAK	**Ala-Archa**	**5.65**	**21**	P	**Pn**	**18 23 26.9**	**+2.1**
	1.4nm,0.3s,baz=159,slow=7.2,SNR=23						
AAK				S	**Sn**	**18 24 26.8**	**-1.7**
	0.9nm,0.3s,baz=202,slow=9.0,SNR=3.8						
KK31	**Karatay Array**	**5.78**	**351**	⇑P	**Pn**	**18 23 28.5**	**+2.2**
	3.4nm,0.5s,baz=175,slow=12						
KK31				⇑S	**Sn**	**18 24 28.3**	**-2.9**
	6.4nm,0.3s,baz=173,slow=21						
TKM2	**Tokmak 2**	**6.27**	**27**	⇓P	**Pn**	**18 23 36.1**	**+2.9**
	0.8nm,0.7s						
TKM2				⇓S	**Sn**	**18 24 45.8**	**+2.3**
	3.3nm,0.7s						
GEYT	**Alibeck**	**10.79**	**277**	P	**Pn**	**18 24 34.2**	**-0.3**
	0.9nm,0.3s,baz=84,slow=9.6,SNR=10						
GEYT				S	**Sn**	**18 26 30.9**	**-2.4**
	1.6nm,0.3s,baz=106,slow=21,SNR=8.3						
GYA0B	**ALIBECK ARRAY**	**10.79**	**277**	⇑P	Pn	18 24 42.7	+8.2
	3.5nm,0.8s						
GYA0B				⇑S	**Sn**	**18 26 33.5**	**+0.2**
	18nm,0.7s						
MKAR	**Makanchi Array**	**12.23**	**37**	P	**Pn**	**18 24 55.3**	**+1.8**
	0.0nm,0.3s,baz=211,slow=9.8,SNR=4.2						
MKAR				S	**Sn**	**18 27 04.0**	**-4.0**
	0.0nm,0.3s,baz=246,slow=14,SNR=2.7						
PYUN	**Piuthan**	**13.26**	**131**	*e*P	**Pn**	**18 25 04.8**	**-2.4**
	12nm,0.4s						
DANN	**Dangsing**	**13.55**	**128**	*e*P	**Pn**	**18 25 08.7**	**-2.4**
	9.3nm,0.3s						
KOLN	**Koldanda**	**13.86**	**130**	*e*P	**Pn**	**18 25 12.9**	**-2.2**
	4.9nm,0.4s						
KURBB	**Kurchatov Arra**	**14.09**	**18**	P	**Pn**	**18 25 18.0**	**+0.4**
	0.0nm,0.3s,baz=207,slow=10,SNR=3.3						
KURBB				S	**Sn**	**18 27 51.3**	**-1.5**
	0.1nm,0.3s,baz=259,slow=15,SNR=6.4						
AB31	**Akbulak array**	**14.60**	**328**	⇓P	**Pn**	**18 25 24.2**	**0.0**
	0.8nm,0.6s						
AB31				⇑S	Sn	18 27 56.7	-8.5
	2.7nm,0.7s						
PKI	**Pulchoki**	**15.13**	**126**	*e*P	**Pn**	**18 25 28.9**	**-2.5**
	4.0nm,0.3s						
GUN	**Gumba**	**15.21**	**124**	*e*P	**Pn**	**18 25 29.4**	**-3.0**
	4.0nm,0.3s						
JIRN	**Jiri**	**15.58**	**124**	*e*P	**Pn**	**18 25 34.6**	**-2.5**
	14nm,0.3s						
BVAR	**Borovoye Array**	**15.66**	**357**	P	**Pn**	**18 25 39.2**	**+1.8**
	0.2nm,0.3s,baz=161,slow=9.7,SNR=6.6						
BVAR				S	**Sn**	**18 28 23.8**	**-6.8**
	0.1nm,0.3s,baz=169,slow=20,SNR=5.2						
AKTO	**Aktyubinsk**	**16.31**	**327**	⇓P	**Pn**	**18 25 48.1**	**+2.6**
	7.6nm,0.8s						
AKTO				⇓S	**Sn**	**18 28 42.3**	**-4.1**
	2.6nm,0.7s						
AKTO	**Aktyubinsk**	**16.31**	**327**	P	**Pn**	**18 25 47.5**	**+2.0**
	1.0nm,0.3s,baz=131,slow=8.2,SNR=24						
AKTO				S	Sn	18 28 39.3	-7.1
	0.2nm,0.3s,baz=44,slow=17,SNR=6.8						
RAMN	**Ramite**	**16.33**	**125**	*e*P	**Pn**	**18 25 43.9**	**-2.3**
	7.4nm,0.4s						
ZALV	**Zalesovo Beam**	**18.86**	**24**	P	**P**	**18 26 15.2**	**+0.7**
	0.1nm,0.3s,baz=216,slow=12,SNR=3.7						
FINES	**FINESS Array B**	**37.07**	**325**	P	**P**	**18 29 04.4**	**+2.1**
	0.8nm,0.4s,baz=116,slow=9.7,SNR=12						
ARCES	**ARCESS Array B**	**40.54**	**337**	P	**P**	**18 29 33.2**	**+2.1**
	1.4nm,0.8s,baz=104,slow=8.9,SNR=5.2						
ARCES				LR	LR	18 46 15.7	
	comp=Z,82nm,19.1s,baz=316,slow=36						
NB2	**NORSAR Subarra**	**44.02**	**322**	P	**P**	**18 30 01.4**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=97,slow=7.4						
NOA	**NORSAR Array B**	**44.02**	**322**	P	**P**	**18 30 00.7**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=90,slow=9.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**66.31**	**269**	P	**P**	**18 32 40.7**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=40,slow=6.1,SNR=3.1						

IDC ***11*** *18:37:29.9±0.8, 11°.12S×165°.97E, h0^{km}, mb3.9/16, mb1 4.1/17, mb1mx4.0/39, mbtmp3.9/17, ML5.1/1, MS4.0/1, Ms1 4.0/1, ms1mx3.1/26, Error ellipse: s-maj=26.3km s-min=17.8km az=131.0*

ISCJB ***11*** *18:37:30.4±0.4, 11°.02S±0°.05×165°.79E±0°.07, h10^{km}, mb4.2/21, Error ellipse: s-maj=10.2km s-min=6.7km az=155.8*

NEIC ***11*** *18:37:32.1±0.3, 10°.96S×165°.86E, h10^{km}, mb4.8/6, Error ellipse: s-maj=10.3km s-min=6.5km az=77.0*

ISC 11 18:37:32.0±0.6**, 11°.10S**±0°.07×**165°.87E**±0°.08**, h10^{km}, n48, σ1^{s}68**/52**, mb4.1**/21**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.06**	**285**	*e*P	**Pn**	**18 39 03.0**	**+1.3**
HNR				*e*S	**Sn**	**18 40 15.0**	**+3.8**
HNR	**Honiara**	**6.06**	**285**	*e*Pn	**Pn**	**18 39 02.5**	**+0.7**
HNR				*e*Sn	**Sn**	**18 40 08.5**	**-2.7**
HNR	**Honiara**	**6.06**	**285**	Pn	**Pn**	**18 39 03.0**	**+1.3**
	42nm,0.3s,baz=166,slow=1.7,SNR=19						
HNR				Sn	**Sn**	**18 40 08.5**	**-2.7**
	baz=198,slow=20,SNR=2.3						
HNR				LR	LR	18 41 28.3	
	comp=Z,1μm,18.9s,baz=60,slow=39						
DZM	**Mont Dzumac**	**10.93**	**177**	*e*Pn	**Pn**	**18 40 11.7**	**+3.1**
DZM				Sn	**Sn**	**18 42 07.4**	**-3.7**
DZM	**Mont Dzumac**	**10.93**	**177**	Pn	**Pn**	**18 40 10.7**	**+2.1**
	4.0nm,0.3s,baz=301,slow=21,SNR=31						
DZM				Sn	**Sn**	**18 42 07.4**	**-3.7**
	baz=143,slow=20,SNR=1.7						
ONTNC	**Ouen Toro**	**11.16**	**177**	*e*Pn	**Pn**	**18 40 14.6**	**+2.8**
OUENC	**Ouen Island, N**	**11.30**	**175**	*e*Pn	**Pn**	**18 40 17.5**	**+3.9**
PINNC	**Pines Island,**	**11.55**	**173**	*e*Pn	**Pn**	**18 40 19.8**	**+2.7**
MANU	**Manus Island**	**20.45**	**295**	*e*P	Pn	18 42 10.7	-1.3
	67nm,0.9s						
CTA	**Charters Tower**	**20.88**	**242**	P	**P**	**18 42 14.1**	**-0.5**
	2.7nm,0.8s,baz=66,slow=13,SNR=2.5						
H11S2	**WAKE ISLAND Hy**	**29.41**	**2**	T	T	19 13 56.2	
	baz=181,slow=76,SNR=86						
H11S3	**WAKE ISLAND Hy**	**29.42**	**2**	T	T	19 13 56.7	
	baz=181,slow=76,SNR=52						
H11S1	**WAKE ISLAND Hy**	**29.43**	**2**	T	T	19 13 56.6	
	baz=181,slow=76,SNR=52						
BKZ	**Black Stump Fm**	**29.51**	**163**	*e*P	**P**	**18 43 37.6**	**+1.0**
	19nm,0.5s						
STKA	**Stephens Creek**	**30.48**	**224**	P	**P**	**18 43 46.0**	**+0.6**
	1.2nm,0.6s,baz=166,slow=8.3,SNR=2.8						
BFZ	**Birch Farm**	**30.86**	**165**	*e*P	**P**	**18 43 49.2**	**+0.7**
	24nm,0.6s						
THZ	**Tophouse**	**31.16**	**170**	*e*P	**P**	**18 43 52.9**	**+1.7**
	18nm,0.7s						
WR1	**Warramunga Arr**	**31.58**	**250**	*e*P	**P**	**18 43 54.6**	**-0.5**
	13nm,0.8s						
WR1				*e*PcP	**PcP**	**18 46 48.6**	**+0.8**
WRA	**Warramunga Arr**	**31.58**	**250**	P	**P**	**18 43 54.6**	**-0.5**
	1.7nm,0.8s,baz=81,slow=8.9,SNR=15						
WRA				PcP	**PcP**	**18 46 48.6**	**+0.8**
	0.6nm,1.0s,baz=63,slow=3.0,SNR=3.1						
RPZ	**Rata Peaks**	**32.81**	**173**	P	**P**	**18 44 03.9**	**-1.7**
	8.5nm,0.8s,baz=122,slow=15,SNR=1.9						
AS01	**Alice Springs**	**32.83**	**243**	*e*P	**P**	**18 44 07.0**	**+0.8**
AS31	**Alice Springs**	**32.87**	**243**	*e*P	**P**	**18 44 05.8**	**-0.7**
	1.8nm,0.7s						
ASAR	**Alice Springs**	**32.88**	**243**	P	**P**	**18 44 06.1**	**-0.4**
	0.7nm,0.6s,baz=66,slow=10.0,SNR=16						
ASAR				PcP	**PcP**	**18 46 51.4**	**+0.1**
	0.5nm,0.8s,baz=82,slow=2.5,SNR=2.9						
FITZ	**Fitzroy Crossi**	**39.48**	**255**	*e*P	**P**	**18 45 02.8**	**-0.3**
	6.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.48**	**255**	P	**P**	**18 45 03.4**	**+0.4**
	2.1nm,0.6s,baz=100,slow=7.8,SNR=6.8						
MJAR	**Matsushiro Arr**	**54.07**	**333**	P	**P**	**18 46 57.1**	**+0.1**
	1.8nm,0.9s,baz=168,slow=9.8,SNR=2.6						
MAJO	**Matsushiro**	**54.07**	**333**	*e*P	**P**	**18 46 57.1**	**0.0**
KSRS	**Korea Array**	**59.99**	**326**	P	**P**	**18 47 37.6**	**-1.3**
	0.5nm,0.9s,baz=147,slow=7.1,SNR=2.7						
KS15	**Wonju Array Si**	**60.00**	**326**	*e*P	**P**	**18 47 36.2**	**-2.7**
	58nm,1.9s						
KSAR	**Wonju Array Be**	**60.00**	**326**	P	**P**	**18 47 37.6**	**-1.4**
USRK	**Ussuriysk Ar.**	**63.05**	**333**	P	**P**	**18 48 00.0**	**+0.6**
	0.9nm,0.7s,baz=112,slow=7.0,SNR=3.0						
CMAR	**Chiang Mai Arr**	**72.24**	**294**	P	**P**	**18 48 57.8**	**-0.3**
	0.1nm,0.5s,baz=122,slow=4.4,SNR=2.7						
SONA0	**Songino Array**	**78.78**	**324**	*e*P	**P**	**18 49 34.7**	**-0.5**
SONM	**Songino Array**	**78.78**	**324**	P	**P**	**18 49 34.7**	**-0.5**
	0.2nm,0.7s,baz=144,slow=7.2,SNR=2.9						
ILAR	**Eielson Array**	**83.52**	**18**	P	**P**	**18 49 58.6**	**-1.3**
	1.4nm,0.9s,baz=239,slow=4.0,SNR=11						
ILB	**Eielson Array**	**83.52**	**18**	*e*P	**P**	**18 49 58.6**	**-1.3**
	22nm,1.9s						
NVAR	**Mina Array Bea**	**85.97**	**50**	P	**P**	**18 50 12.6**	**-0.5**
	0.7nm,0.8s,baz=244,slow=5.6,SNR=3.5						
PDAR	**Pinedale Array**	**93.50**	**47**	P	**P**	**18 50 46.7**	**-1.8**
	0.2nm,0.5s,baz=75,slow=1.0,SNR=2.7						
MK01	**Makanchi Array**	**93.63**	**317**	*e*P	**P**	**18 50 48.6**	**-0.1**
MK32	**Makanchi Array**	**93.64**	**317**	*e*P	**P**	**18 50 47.8**	**-1.1**
MKAR	**Makanchi Array**	**93.64**	**317**	P	**P**	**18 50 47.8**	**-1.1**
	0.5nm,0.8s,baz=97,slow=7.3,SNR=3.4						
ZALV	**Zalesovo Beam**	**93.67**	**324**	P	**P**	**18 50 49.5**	**+0.8**
	0.3nm,0.4s,baz=358,slow=32,SNR=2.5						
ZAA1	**Zalesovo Array**	**93.67**	**324**	*e*P	**P**	**18 50 49.5**	**+0.8**
ARA0	**ARCESS Array S**	**116.42**	**345**	*e*PKPdf	**PKPdf**	**18 56 16.1**	**+0.6**
ARCES	**ARCESS Array B**	**116.42**	**345**	PKP	**PKPdf**	**18 56 16.1**	**+0.6**
	2.1nm,0.8s,baz=106,slow=2.0,SNR=1.7						
ESDC	**Sonseca Array**	**150.14**	**344**	PKPbc	**PKiKP**	**18 57 24.1**	**-0.4**
	0.2nm,0.6s,baz=0.0,slow=4.3,SNR=2.6						
TORD	**Torodi Ar. Bea**	**164.39**	**279**	PKP	**PKPdf**	**18 57 36.8**	**-0.3**
	0.3nm,0.7s,baz=273,slow=2.7,SNR=2.1						
TOA1	**Torodi Ar. Sit**	**164.39**	**279**	*e*PKPdf	**PKPdf**	**18 57 36.8**	**-0.3**

IDC 11 18:41:57.8±1.3**, 6°.61S×129°.20E, h207^{km}**±17^{km}**, mb2.7**/1**, mb1 3.0**/6**, mb1mx2.8**/32**, mbtmp3.6**/6**, Error ellipse: s-maj=23.5km s-min=12.3km az=110.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.06**	**20**	P	Pn	18 43 27.8	+1.7
	2.5nm,0.3s,baz=196,slow=23,SNR=29						
SIJI				S	S	18 44 34.7	-1.0
	0.9nm,0.3s,baz=253,slow=19,SNR=4.2						
BATI	**Baumata**	**6.54**	**236**	P	Pn	18 43 33.7	+1.4
	4.3nm,0.3s,baz=124,slow=2.6,SNR=16						
BATI				S	S	18 44 46.3	-0.7
	2.5nm,0.3s,baz=25,slow=11,SNR=6.4						
FITZ	**Fitzroy Crossi**	**11.94**	**197**	P	Pn	18 44 41.7	-0.1
	0.1nm,0.3s,baz=3.7,slow=13,SNR=14						
WRA	**Warramunga Arr**	**14.17**	**160**	P	Pn	18 45 08.3	-1.4
	0.0nm,0.3s,baz=332,slow=13,SNR=3.8						
WRA				S	S	18 47 43.7	-3.2
	0.1nm,0.3s,baz=336,slow=23,SNR=4.6						
ASAR	**Alice Springs**	**17.56**	**166**	P	P	18 45 48.6	+0.1
	0.3nm,0.3s,baz=340,slow=9.2,SNR=17						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	18 52 31.3	-0.1
	0.2nm,0.7s,baz=112,slow=7.8,SNR=2.0						

ISCJB ***11*** *18:58:58.7±0.9, 11°.8S±0°.1×165°.01E±0°.10, h10^{km}, mb3.7/5, Error ellipse: s-maj=19.0km s-min=10.7km az=35.1*

IDC ***11*** *18:58:58.8±1.1, 11°.64S×165°.04E, h0^{km}, mb3.7/5, mb1 4.0/7, mb1mx3.7/34, mbtmp3.8/7, ML4.0/2, Error ellipse: s-maj=32.0km s-min=24.2km az=154.0*

ISC 11 18:59:00.2±1.0**, 11°.7S**±0°.1×**165°.1E**±0°.1**, h10^{km}, n13, σ0^{s}87**/8**, mb3.7**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.52**	**294**	Pn	**Pn**	**19 00 21.4**	**-1.1**
	5.7nm,0.3s,baz=189,slow=13,SNR=2.5						
HNR				Sn	**Sn**	**19 01 27.4**	**+1.3**
	7.5nm,0.3s,baz=188,slow=15,SNR=2.3						
DZM	**Mont Dzumac**	**10.40**	**173**	Pn	**Pn**	**19 01 29.8**	**+0.2**
	1.1nm,0.3s,baz=306,slow=16,SNR=8.8						
H11S2	**WAKE ISLAND Hy**	**30.04**	**3**	T	T	19 34 53.3	
	baz=184,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	**30.04**	**3**	T	T	19 34 55.8	
	baz=184,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	**30.06**	**3**	T	T	19 34 54.7	
	baz=184,slow=76,SNR=30						
WRA	**Warramunga Arr**	**30.64**	**251**	P	**P**	**19 05 15.6**	**+0.6**
	0.6nm,0.5s,baz=80,slow=9.0,SNR=12						
H11N1	**WAKE ISLAND Hy**	**31.27**	**3**	T	T	19 36 28.5	
	baz=182,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**31.27**	**3**	T	T	19 36 27.7	
	baz=182,slow=76,SNR=21						
H11N2	**WAKE ISLAND Hy**	**31.28**	**3**	T	T	19 36 29.9	
	baz=182,slow=76,SNR=18						
ASAR	**Alice Springs**	**31.91**	**244**	P	**P**	**19 05 25.6**	**-0.7**
	0.5nm,0.7s,baz=76,slow=9.2,SNR=4.8						
ILAR	**Eielson Array**	**84.34**	**19**	P	**P**	**19 11 32.1**	**-0.1**
	0.6nm,0.6s,baz=238,slow=5.2,SNR=9.9						
NVAR	**Mina Array Bea**	**86.95**	**50**	P	**P**	**19 11 46.3**	**+0.3**
	0.3nm,0.6s,baz=243,slow=5.5,SNR=2.8						
MKAR	**Makanchi Array**	**93.54**	**317**	P	**P**	**19 12 16.7**	**+0.1**
	0.3nm,0.8s,baz=84,slow=4.5,SNR=2.3						

SOME ***11*** *19:05:50.7, 42°.48N×78°.47E, h20^{km}*

KRNET ***11*** *19:05:50.4±0.1, 42°.50N×78°.43E, h23^{km}, mb3.0*

NNC 11 19:05:51.1±0.8**, 42°.57N×78°.43E, h0^{km}, mb3.1, mpv3.0, 20C-23D, Error ellipse: s-maj=6.2km s-min=2.4km az=168.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.09**	**194**	⇑*i*P	Pg	19 05 52.6	-0.2
	baz=24						
PRZ				⇑*i*S	Sg	19 05 54.7	+0.7
	baz=24						
SATY	**Saty**	**0.49**	**358**	P	Pg	19 06 01.1	+0.8
	21nm,0.2s						
SATY				S	Sb	19 06 08.7	-1.7
	122nm,0.2s						
SATY	**Saty**	**0.49**	**358**	*e*P	Pg	19 06 01.1	+0.8
	21nm,0.2s						
SATY				*e*S	Sb	19 06 08.7	-1.7
	122nm,0.2s						
UZB	**Uzynbulak**	**0.72**	**37**	P	Pg	19 06 05.0	+0.1
	2.3nm,0.2s						
UZB				S	Sg	19 06 15.5	+1.3
	28nm,0.3s						
UZB	**Uzynbulak**	**0.72**	**37**	*e*P	Pg	19 06 05.1	+0.2
	baz=33						
UZB				*e*S	Sg	19 06 15.3	+1.1
	baz=33						
UZB	**Uzynbulak**	**0.72**	**37**	*e*P	Pg	19 06 05.1	+0.2
	2.3nm,0.2s						
UZB				*e*S	Sg	19 06 15.3	+1.1
	28nm,0.3s						
KURS	**Kuram**	**0.93**	**348**	P	Pg	19 06 09.3	+0.3
	6.0nm,0.4s						
KURS				S	Sb	19 06 22.4	-0.7
	15nm,0.3s						
KURS	**Kuram**	**0.93**	**348**	*e*P	Pg	19 06 09.3	+0.3
	baz=49						
KURS				*e*S	Sb	19 06 22.5	-0.7
	baz=49						
KURS	**Kuram**	**0.93**	**348**	*e*P	Pg	19 06 09.3	+0.3
	6.0nm,0.4s						
KURS				*e*S	Sb	19 06 22.4	-0.7
	15nm,0.3s						
KDJ	**Kajisay**	**1.03**	**245**	⇓*i*P	Pg	19 06 09.4	-1.3
	baz=49						
KDJ				⇓*i*S	Sg	19 06 22.9	-1.1
	baz=49						
PDGK	**Podgornoye**	**1.08**	**46**	P	Pg	19 06 11.3	-0.5
	1.0nm,0.2s						
PDGK				S	Sg	19 06 26.3	+0.4
	7.0nm,0.4s						
PDGK	**Podgornoye**	**1.08**	**46**	⇑P	Pg	19 06 11.5	-0.3
	1.6nm,0.3s						
PDGK				⇓S	Sg	19 06 25.5	-0.4
	6.5nm,0.4s						
PDGK	**Podgornoye**	**1.08**	**46**	⇓*i*P	Pg	19 06 11.3	-0.6
	baz=43						
PDGK				⇓*i*S	Sg	19 06 26.4	+0.5
	baz=43						
KOTS	**Kotyrbulak**	**1.17**	**305**	P	Pg	19 06 13.1	-0.4
	6.5nm,0.2s						
KOTS				S	Sg	19 06 29.3	+0.5
	47nm,0.3s						
KOTS	**Kotyrbulak**	**1.17**	**305**	*e*P	Pg	19 06 13.1	-0.4
	baz=8.0						
KOTS				*e*S	Sg	19 06 29.2	+0.5
	baz=8.0						
KOTS	**Kotyrbulak**	**1.17**	**305**	*e*P	Pg	19 06 13.1	-0.4
	6.5nm,0.2s						
KOTS				*e*S	Sg	19 06 29.2	+0.5
	47nm,0.3s						
MDOK	**Medeo**	**1.17**	**301**	P	Pg	19 06 12.7	-0.8
	3.0nm,0.4s						
MDOK				S	Sg	19 06 28.5	-0.3
	30nm,0.5s						
MDOK	**Medeo**	**1.17**	**301**	Pg	Pg	19 06 12.9	-0.7
	6.4nm,0.2s						
MDOK				Lg	Lg	19 06 28.9	
	41nm,0.5s						
MDOK	**Medeo**	**1.17**	**301**	*e*P	Pg	19 06 12.9	-0.7
	baz=4.0						
MDOK				*e*S	Sg	19 06 28.8	0.0
	baz=4.0						
MDOK	**Medeo**	**1.17**	**301**	*e*P	Pg	19 06 12.9	-0.7
	6.4nm,0.2s						
MDOK				*e*S	Sg	19 06 28.9	+0.1
	41nm,0.5s						
TNSS	**Tian-Shan**	**1.19**	**294**	P	Pg	19 06 13.0	-0.8
	4.7nm,0.2s						
TNSS				S	Sg	19 06 29.0	-0.2
	30nm,0.3s						
TNSS	**Tian-Shan**	**1.19**	**294**	*e*P	Pg	19 06 13.0	-0.8
	baz=97						
TNSS				*e*S	Sg	19 06 29.0	-0.2
	baz=97						
TNSS	**Tian-Shan**	**1.19**	**294**	*e*P	Pg	19 06 13.0	-0.8
	4.7nm,0.2s						
TNSS				*e*S	Sg	19 06 29.0	-0.1
	30nm,0.3s						
KNDC	**Almaty**	**1.25**	**301**	⇑P	Pn	19 06 17.1	+1.1
	6.6nm,0.3s						
KNDC				⇓S	Sg	19 06 31.5	+0.1
	24nm,0.5s						
IZV	**Izvestkoviy**	**1.42**	**290**	P	Pg	19 06 17.0	-1.2
	8.8nm,0.1s						
IZV				S	Sg	19 06 36.0	-0.6
	48nm,0.2s						
IZV	**Izvestkoviy**	**1.42**	**290**	*e*P	Pg	19 06 17.0	-1.2
	baz=93						
IZV				*e*S	Sg	19 06 36.0	-0.5
	baz=93						
IZV	**Izvestkoviy**	**1.42**	**290**	*e*P	Pg	19 06 17.0	-1.2
	8.8nm,0.1s						
IZV				*e*S	Sg	19 06 36.0	-0.6
	48nm,0.2s						
MNBS	**Baschi**	**1.50**	**359**	P	Pg	19 06 19.8	-0.1
	7.8nm,0.2s						
MNBS				S	Sn	19 06 40.5	+0.7
	39nm,0.3s						
MNBS	**Baschi**	**1.50**	**359**	*e*P	Pg	19 06 19.8	-0.1
	baz=2.0						
MNBS				*e*S	Sn	19 06 40.6	+0.8
	baz=2.0						
MNBS	**Baschi**	**1.50**	**359**	*e*P	Pg	19 06 19.8	-0.1
	7.8nm,0.2s						
MNBS				*e*S	Sn	19 06 40.5	+0.7
	39nm,0.3s						
MTBS	**Maitube**	**1.57**	**291**	P	Pn	19 06 20.1	-0.2
	4.9nm,0.2s						
MTBS				S	Sn	19 06 40.4	-1.0
	24nm,0.2s						
MTBS	**Maitube**	**1.57**	**291**	*e*P	Pn	19 06 19.6	-0.7
	baz=94						
MTBS				*e*S	Sn	19 06 40.5	-1.0
	baz=94						
MTBS	**Maitube**	**1.57**	**291**	*e*P	Pn	19 06 19.6	-0.8
	4.9nm,0.2s						
MTBS				*e*S	Sn	19 06 40.4	-1.0
	24nm,0.2s						
ULHL	**Ulahol**	**1.65**	**259**	⇓*i*P	Pn	19 06 20.0	-1.6
	baz=62						
ULHL				⇓*i*S	Sn	19 06 42.2	-1.4
	baz=62						
CHKK	**Chushkaly**	**1.66**	**321**	P	Pb	19 06 22.0	-0.5
	10nm,0.2s						
CHKK				S	Sg	19 06 44.8	+0.4
	144nm,0.3s						
CHKK	**Chushkaly**	**1.66**	**321**	*e*P	Pb	19 06 22.0	-0.5
	baz=23						
CHKK				*e*S	Sg	19 06 44.7	+0.4
	baz=23						
CHKK	**Chushkaly**	**1.66**	**321**	*e*P	Pb	19 06 22.0	-0.5
	10nm,0.2s						
CHKK				*e*S	Sg	19 06 44.8	+0.4
	144nm,0.3s						
KTMS	**Ketmen**	**1.66**	**58**	P	Pn	19 06 21.8	+0.2
	2.9nm,0.1s						
KTMS				S	Sn	19 06 43.5	-0.1
	13nm,0.3s						
KTMS	**Ketmen**	**1.66**	**58**	*e*P	Pn	19 06 21.8	+0.2
	baz=55						
KTMS				*e*S	Sn	19 06 43.5	-0.1
	baz=55						
KTMS	**Ketmen**	**1.66**	**58**	*e*P	Pn	19 06 21.8	+0.2
	2.9nm,0.1s						
KTMS				*e*S	Sn	19 06 43.5	-0.1
	13nm,0.3s						
ARXS	**Arharly**	**1.70**	**345**	P	Pb	19 06 23.2	0.0
	6.2nm,0.4s						
ARXS				S	Sg	19 06 46.3	+0.7
	31nm,0.3s						
ARXS	**Arharly**	**1.70**	**345**	*e*P	Pb	19 06 23.2	0.0
	6.2nm,0.4s						
ARXS				*e*S	Sg	19 06 46.3	+0.7
	31nm,0.3s						
KTBS	**Karatobe**	**1.71**	**312**	P	Pb	19 06 22.9	-0.5
	10nm,0.2s						
KTBS				S	Sg	19 06 46.0	-0.1
	45nm,0.3s						
KTBS	**Karatobe**	**1.71**	**312**	*e*P	Pb	19 06 22.9	-0.5
	baz=12						
KTBS				*e*S	Sg	19 06 46.0	-0.1
	baz=12						
KTBS	**Karatobe**	**1.71**	**312**	*e*P	Pb	19 06 22.9	-0.5
	10nm,0.2s						
KTBS				*e*S	Sg	19 06 46.0	-0.1
	45nm,0.3s						
BOOM	**Boomskoye usch**	**1.84**	**268**	⇓*i*P	Pn	19 06 23.5	-0.6
	baz=71						
BOOM				⇓*i*S	Sn	19 06 47.8	-0.4
	baz=71						
KST	**Kastek**	**1.88**	**285**	P	Pn	19 06 24.7	+0.2
	13nm,0.2s						
KST				S	Sn	19 06 49.4	+0.5
	17nm,0.3s						
KST	**Kastek**	**1.88**	**285**	*e*P	Pn	19 06 24.7	+0.2
	baz=88						
KST				*e*S	Sn	19 06 49.4	+0.4
	baz=88						
KST	**Kastek**	**1.88**	**285**	*e*P	Pn	19 06 24.7	+0.2
	13nm,0.2s						
KST				*e*S	Sn	19 06 49.4	+0.5
	17nm,0.3s						
DJR	**Jarkent**	**2.02**	**29**	*e*P	Pb	19 06 27.6	-1.0
	1.9nm,0.3s						
DJR				*e*S	Sb	19 06 54.0	-0.4
	15nm,0.3s						
KUU	**Kurty**	**2.02**	**312**	Pg	Pg	19 06 29.7	-0.1
	2.6nm,0.1s						
KUU				Lg	Lg	19 06 55.3	
	40nm,0.2s						
KUU	**Kurty**	**2.02**	**312**	*e*P	Pb	19 06 28.0	-0.7
	baz=13						
KUU				*e*S	Sb	19 06 54.8	+0.5
	baz=13						
KUU	**Kurty**	**2.02**	**312**	*e*P	Pb	19 06 27.9	-0.7
	10nm,0.4s						
KUU				*e*S	Sb	19 06 54.8	+0.4
	44nm,0.4s						
DGS	**Degeres**	**2.06**	**290**	Pg	Pb	19 06 28.8	-0.7
	9.2nm,0.3s						
DGS				Lg	Lg	19 06 55.7	
	55nm,0.4s						
DGS	**Degeres**	**2.06**	**290**	*e*P	Pb	19 06 28.8	-0.7
	baz=92						
DGS				*e*S	Sb	19 06 55.7	0.0
	baz=92						
DGS	**Degeres**	**2.06**	**290**	*e*P	Pb	19 06 28.8	-0.7
	9.2nm,0.3s						
DGS				*e*S	Sb	19 06 55.7	0.0
	55nm,0.4s						
TKM2	**Tokmak 2**	**2.12**	**280**	⇑Pn	Pn	19 06 29.0	+1.1
	3.3nm,0.5s						
TKM2				⇑Sn	Sb	19 06 57.0	-0.3
	8.6nm,0.3s						
TKM2	**Tokmak 2**	**2.12**	**280**	⇑*i*P	Pn	19 06 27.9	0.0
	baz=82						
TKM2				⇑*i*S	Sn	19 06 55.1	+0.1
	baz=82						
NRN	**Naryn**	**2.14**	**239**	⇓*i*P	Pn	19 06 28.5	+0.2
	baz=41						
NRN				⇓*i*S	Sn	19 06 56.2	+0.5
	baz=41						
KZA	**Kyzart**	**2.41**	**259**	⇑*i*P	Pn	19 06 32.0	-0.1
	baz=61						
KZA				⇑*i*S	Sn	19 07 02.2	-0.3
	baz=61						
TDK	**Taldyqorghan**	**2.43**	**360**	Pg	Pb	19 06 36.1	+0.5
	16nm,0.1s						
TDK				Lg	Lg	19 07 08.3	
	63nm,0.3s						
TDK	**Taldyqorghan**	**2.43**	**360**	*e*P	Pb	19 06 36.1	+0.5
	16nm,0.1s						
TDK				*e*S	Sg	19 07 08.3	-0.7
	63nm,0.3s						
KBK	**Karagaybulak**	**2.57**	**273**	⇑*i*P	Pn	19 06 34.1	0.0
	baz=75						
KBK				⇑*i*S	Sn	19 07 06.0	-0.2
	baz=75						
CHMS	**Chumysh**	**2.74**	**280**	⇑*i*P	Pn	19 06 36.3	0.0
	baz=82						
CHMS				⇑*i*S	Sn	19 07 09.7	-0.5
	baz=82						
KAPS	**Kapalarasan**	**2.79**	**14**	Pg	Pb	19 06 42.1	+0.2
	0.6nm,0.2s						
KAPS				Lg	Lg	19 07 19.2	
	8.3nm,0.2s						
KAPS	**Kapalarasan**	**2.79**	**14**	*e*P	Pb	19 06 42.1	+0.2
	0.6nm,0.2s						
KAPS				*e*S	Sg	19 07 19.2	-1.6
	8.3nm,0.2s						
AAK	**Ala-Archa**	**2.91**	**273**	Pn	Pn	19 06 39.2	+0.5
	2.7nm,0.8s						
AAK				Lg	Lg	19 07 21.4	
	2.8nm,0.5s						
AAK	**Ala-Archa**	**2.91**	**273**	⇑*i*P	Pn	19 06 38.6	-0.1
	baz=74						
AAK				⇑*i*S	Sn	19 07 13.7	-0.7
	baz=74						
USP	**Ospenovka**	**2.97**	**285**	⇓*i*P	Pn	19 06 39.7	+0.2
	baz=86						
USP				⇓*i*S	Sn	19 07 15.3	-0.5
	baz=86						
ARLS	**Aral**	**3.13**	**258**	⇓*i*P	Pn	19 06 41.5	-0.3
	baz=60						
ARLS				⇓*i*S	Sn	19 07 19.2	-0.8
	baz=60						
MNAS	**Manas**	**4.38**	**271**	⇑Pg	Pb	19 07 10.2	+1.2
	0.3nm,0.4s						
MNAS				⇓Lg	Lg	19 08 08.7	
	1.2nm,0.7s						
MAKZ	**Makanchi**	**4.93**	**30**	⇑Pn	Pn	19 07 08.0	+1.5
	0.5nm,0.4s						
MAKZ				⇓Lg	Lg	19 08 23.7	
	0.8nm,0.5s						
MK31	**Makanchi Array**	**5.04**	**32**	⇓Pn	Pn	19 07 10.3	+2.4
	0.2nm,0.3s,baz=209,slow=14,SNR=14						
MK31				⇓Sn	Sn	19 08 08.7	+1.9
	0.7nm,0.7s						
MK31				⇓Lg	Lg	19 08 25.4	
	0.4nm,0.3s,baz=209,slow=27,SNR=5.7						
KK31	**Karatay Array**	**5.85**	**278**	⇑Pg	Pb	19 07 36.7	+2.9
	0.5nm,0.6s						
KK31				⇓Lg	Lg	19 08 55.5	
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**8.05**	**0**	⇓Lg	Lg	19 10 01.9	
	3.3nm,0.7s						
KURK	**Kurchatov**	**8.15**	**1**	⇑Lg	Lg	19 10 08.0	
	3.1nm,1.0s						

ISCJB ***11*** *19:08:19.5±1.3, 11°.1S±0°.1×165°.7E±0°.1, h10^{km}, mb3.5/4, Error ellipse: s-maj=24.4km s-min=12.2km az=34.2*

IDC ***11*** *19:08:19.3±1.9, 11°.03S×165°.78E, h0^{km}, mb3.5/4, mb1 3.9/6, mb1mx3.6/46, mbtmp3.8/6, ML4.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.6/23, Error ellipse: s-maj=36.1km s-min=33.2km az=165.0*

ISC 11 19:08:21.1±1.5**, 11°.0S**±0°.2×**165°.8E**±0°.1**, h10^{km}, n6, σ0^{s}93**/7**, mb3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.98**	**285**	Pn	**Pn**	**19 09 51.0**	**+1.3**
	16nm,0.3s,baz=132,slow=18,SNR=5.6						
HNR				Sn	**Sn**	**19 10 57.6**	**-0.6**
	7.6nm,0.3s,baz=73,slow=19,SNR=2.3						
HNR				LR	LR	19 12 05.6	
	comp=Z,111nm,19.5s,baz=78,slow=38						
DZM	**Mont Dzumac**	**10.98**	**177**	Pn	**Pn**	**19 10 58.9**	**+0.4**
	1.2nm,0.3s,baz=352,slow=10,SNR=29						
WRA	**Warramunga Arr**	**31.53**	**250**	P	**P**	**19 14 43.3**	**-0.5**
	0.5nm,0.6s,baz=81,slow=8.9,SNR=6.6						
ASAR	**Alice Springs**	**32.84**	**243**	P	**P**	**19 14 54.3**	**-0.9**
	0.2nm,0.5s,baz=63,slow=11,SNR=5.2						
FITZ	**Fitzroy Crossi**	**39.43**	**255**	P	**P**	**19 15 51.3**	**-0.4**
	1.4nm,0.9s,baz=108,slow=10,SNR=2.9						
ILAR	**Eielson Array**	**83.49**	**18**	P	**P**	**19 20 48.6**	**-0.2**
	0.3nm,0.8s,baz=230,slow=5.4,SNR=2.0						

ISCJB ***11*** *19:13:00.1±0.1, 38°.51N±0°.02×92°.30E±0°.02, h16^{km}, mb5.3/225, MS4.4/64, Error ellipse: s-maj=2.4km s-min=1.6km az=31.9*

BJI ***11*** *19:13:00.1, 38°.50N×92°.45E, h8^{km}, mB5.0/34, mb5.2/68, ML5.2/10, Ms5.1/84, Ms7 5.0/76*

NEIC ***11*** *19:13:01.7±0.1, 38°.48N×92°.37E, mb5.3/76, Error ellipse: s-maj=3.2km s-min=2.4km az=216.0*

IDC ***11*** *19:13:01.3±0.3, 38°.48N×92°.40E, h16^{km}±1^{km}, mb5.1/48, mb1 5.1/54, mb1mx5.1/62, mbtmp5.1/54, ML4.0/4, MS4.2/30, Ms1 4.2/30, ms1mx4.1/49, Error ellipse: s-maj=9.2km s-min=6.3km az=38.0*

MOS ***11*** *19:13:01.9±1.2, 38°.50N×92°.29E, h32^{km}, mb5.5/98, MS4.3/35, Error ellipse: s-maj=5.0km s-min=2.9km az=128.9*

GCMT ***11*** *19:13:02.7±0.2, 38°.56N±0°.02×92°.41E±0°.02, h20^{km}, MW5.0/92, Moment Tensor Solution. s41,c45; s92,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.33±.14; $M_{\theta\theta}$-1.69±.09; $M_{\phi\phi}$-1.63±.09; $M_{r\theta}$0.63±.17; $M_{\theta\phi}$1.50±.05; $M_{\phi r}$-0.23±.16; Best double couple: $M_0$3.31300×10^{16} NP1:ϕ_s130.00000°, δ51.00000°, λ84.00000°. NP2: ϕ_s319.00000°, δ40.00000°, λ97.00000°. Principal axes: T 3.4090, Plg83.0000°, Azm4.0000°; N -0.1810, Plg4.0000°, Azm134.0000°; P -3.2180, Plg5.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NNC ***11*** *19:13:04.4±3.5, 38°.61N×92°.19E, h32^{km}±27^{km}, mb5.4 Error ellipse: s-maj=27.9km s-min=16.2km az=20.0*

ISC 11 19:13:01.2±0.3**, 38°.56N**±0°.03×**92°.32E**±0°.02**, h14**^{km}±1^{km}**, h14**^{km}**:pP-P, n808,** σ**1**^{s}**47**/948**, mb5.3**/236**, MS4.3**/64**, 105C-43D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**5.91**	**79**	⇑Pn	**Pn**	**19 14 28.8**	**+0.4**
GTA				Pg	**Pb**	**19 14 47.1**	**+3.1**
GTA				Sn	**Sn**	**19 15 35.1**	**-0.9**
GTA				Sg	**Sg**	**19 16 05.7**	**-5.1**
GTA				smax	smax		
	comp=N,2μm,1.1s						
GTA				smax	smax		
	comp=E,880nm,1.2s						
GTA				LR	LR		
	comp=N,12μm,13.0s						
GTA				LR	LR		
	comp=E,17μm,12.1s						
GTA				LR	LR		
	comp=Z,17μm,15.9s						
WMQ	**Urumqi**	**6.31**	**328**	Pn	**Pn**	**19 14 36.4**	**+2.5**
WMQ				Sn	**Sn**	**19 15 49.6**	**+3.8**
WMQ				smax	smax		
	comp=N,3μm,1.1s						
WMQ				smax	smax		
	comp=E,5μm,0.9s						
WMQ				LR	LR		
	comp=N,25μm,9.9s						
WMQ				LR	LR		
	comp=E,11μm,9.9s						
WMQ				LR	LR		
	comp=Z,5μm,13.1s						
WMQ	**Urumqi**	**6.31**	**328**	*e*Pn	**Pn**	**19 14 35.8**	**+1.9**
	440nm,0.8s						
WMQ	**Urumqi**	**6.31**	**328**	*e*P	**Pn**	**19 14 35.8**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,440nm,0.8s						
LSA	**Lhasa**	**8.88**	**187**	P	**Pn**	**19 15 13.0**	**+3.4**
LSA				pmax	pmax		
	comp=Z,31nm,0.8s						
LSA				LR	LR		
	comp=Z,3μm,11.5s						
LSA				LR	LR		
	comp=Z,9μm,11.0s						
LSA	**Lhasa**	**8.88**	**187**	*e*Pn	**Pn**	**19 15 12.2**	**+2.6**
	comp=Z,64nm,0.8s						
LSA	**Lhasa**	**8.88**	**187**	P	**Pn**	**19 15 12.7**	**+3.1**
LSA	**Lhasa**	**8.88**	**187**	*e*P	**Pn**	**19 15 12.2**	**+2.6**
LSA				pmax	pmax		
	comp=Z,64nm,0.8s						
LZH	**Lanzhou**	**9.51**	**101**	*e*P	**Pn**	**19 15 16.4**	**-1.5**
LZH				pP		19 15 20.8	
LZH				sP		19 15 23.1	
LZH				S	**Sn**	**19 17 02.6**	**-2.0**
LZH				SS	**SnSn**	**19 17 17.7**	**+1.6**
LZH				pmax	pmax		
	comp=Z,300nm,1.2s						
LZH				pmax	pmax		
	comp=Z,386μm,3.3s						
LZH				LR	LR		
	comp=Z,12μm,11.4s						
LZH				LR	LR		
	comp=Z,12μm,10.7s						
LZH				LR	LR		
	comp=Z,13μm,12.5s						
ZSN	**Zaisan**	**10.43**	**331**	*c i*P	**Pn**	**19 15 30.3**	**0.0**
ZSN				*e*S	**Sn**	**19 17 31.0**	**+4.2**
ZSN				pmax	pmax		
	comp=Z,476nm,1.1s						
ZSN				smax	smax		
	comp=N,1μm,1.5s						
ZSN				MLR	MLR		
	comp=Z,628nm,9.0s						
ZSN	**Zaisan**	**10.43**	**331**	⇑*i*P	**Pn**	**19 15 30.3**	**0.0**
	comp=Z,476nm,1.1s						
ZSN				⇓*e*S	**Sn**	**19 17 31.1**	**+4.2**
	comp=Z,1μm,1.5s						
ZSN				*e*LR	LR	19 19 40.0	
	comp=Z,628nm,9.2s						
PDGK	**Podgornoye**	**10.81**	**300**	⇑Pn	**Pn**	**19 15 35.2**	**-0.4**
	comp=Z,51nm,0.6s						
PDGK				⇓Sn	**Sn**	**19 17 39.5**	**+3.1**
	comp=Z,250nm,1.0s						
PDGK	**Podgornoye**	**10.81**	**300**	P	**Pn**	**19 15 35.2**	**-0.4**
PDGK						19 17 39.5	
PDGK				pmax	pmax		
	comp=Z,51nm,0.6s						
PDGK				smax	smax		
	comp=N,250nm,1.0s						
MK01	**Makanchi Array**	**11.03**	**321**	*e*Pn	**Pn**	**19 15 39.1**	**+0.6**
MK31	**Makanchi Array**	**11.05**	**321**	*e*Pn	**Pn**	**19 15 40.1**	**+1.3**
MK31	**Makanchi Array**	**11.05**	**321**	⇑Pn	**Pn**	**19 15 40.2**	**+1.3**
	comp=N,41nm,0.4s,baz=129,slow=13,SNR=3317						
MK31				⇑Sn	**Sn**	**19 17 41.0**	**-1.2**
	comp=N,184nm,0.9s,baz=128,slow=25,SNR=3.8						
MK31	**Makanchi Array**	**11.05**	**321**	*e*P	**Pn**	**19 15 40.1**	**+1.3**
MKAR	**Makanchi Array**	**11.05**	**321**	*e*Pn	**Pn**	**19 15 40.1**	**+1.3**
MKAR				Sn	**Sn**	**19 17 39.8**	**-2.4**
MKAR				Lg	Lg	19 18 51.9	
MKAR	**Makanchi Array**	**11.05**	**321**	*e*P	**Pn**	**19 15 40.1**	**+1.3**
MKAR						19 17 39.8	
MKAR	**Makanchi Array**	**11.05**	**321**	Pn	**Pn**	**19 15 39.0**	**+0.2**
	comp=N,43nm,0.3s,baz=131,slow=14,SNR=900						
MKAR				Sn	**Sn**	**19 17 39.8**	**-2.4**
	comp=N,8.9nm,0.3s,baz=142,slow=24,SNR=4.8						
MKAR				Lg	Lg	19 18 51.9	
	baz=147,slow=32,SNR=2.7						
MKAR				LR	LR	19 20 56.5	
	comp=N,362nm,18.4s,baz=130,slow=43						
UZB	**Uzynbulak**	**11.06**	**299**	*e*P	**Pn**	**19 15 38.3**	**-0.8**
UZB				*i* S	**Sn**	**19 17 42.3**	**-0.4**
UZB				pmax	pmax		
	comp=Z,320nm,0.9s						
UZB				smax	smax		
	comp=E,2μm,1.8s						
UZB				MLR	MLR		
	comp=Z,197nm,5.0s						
UZB	**Uzynbulak**	**11.06**	**299**	*e*P	**Pn**	**19 15 38.4**	**-0.8**
	comp=Z,320nm,0.9s						
UZB				⇓*i*S	**Sn**	**19 17 42.3**	**-0.4**
	comp=Z,2μm,1.8s						
UZB				*e*LQ	LQ	19 18 24.1	
UZB				*e*LR	LR	19 19 36.8	
	comp=Z,197nm,4.6s						
MAKZ	**Makanchi**	**11.21**	**321**	*e*Pn	**Pn**	**19 15 41.2**	**+0.2**
MAKZ	**Makanchi**	**11.21**	**321**	⇑Pn	**Pn**	**19 15 41.2**	**+0.2**
	comp=Z,162nm,0.6s						
MAKZ				⇑Sn	**Sn**	**19 17 41.2**	**-5.0**
	comp=Z,154nm,1.0s						
MAKZ	**Makanchi**	**11.21**	**321**	P	**Pn**	**19 15 41.2**	**+0.2**
MAKZ						19 17 41.1	
MAKZ				pmax	pmax		
	comp=Z,162nm,0.6s						
MAKZ				smax	smax		
	comp=N,154nm,1.0s						
SATY	**Saty**	**11.46**	**298**	*de*P	**Pn**	**19 15 44.7**	**+0.2**
SATY				*i* S	**Sn**	**19 17 50.3**	**-2.0**
SATY				pmax	pmax		
	comp=Z,497nm,0.6s						
SATY				smax	smax		
	comp=E,2μm,1.5s						
SATY				MLR	MLR		
	comp=Z,775nm,10.0s						
SATY	**Saty**	**11.46**	**298**	⇓*e*P	**Pn**	**19 15 44.7**	**+0.2**
	comp=Z,497nm,0.6s						
SATY				⇑*i*S	**Sn**	**19 17 50.4**	**-2.0**
	comp=Z,2μm,1.5s						
SATY				*e*LR	LR	19 20 50.4	
	comp=Z,775nm,9.7s						
DGZ	**Jazzator, Alta**	**11.68**	**344**	*c i*P	**Pn**	**19 15 49.3**	**+1.8**
GUN	**Gumba**	**11.90**	**209**	*e*P	**Pn**	**19 15 50.9**	**+0.1**
	comp=Z,106nm,1.0s						
JIRN	**Jiri**	**12.01**	**207**	*e*P	**Pn**	**19 15 52.4**	**0.0**
	comp=Z,63nm,0.7s						
CD2	**Chengdu**	**12.11**	**126**	P	**Pn**	**19 15 53.9**	**+0.5**
CD2				S	**Sn**	**19 18 09.0**	**+0.8**
CD2				pmax	pmax		
	comp=Z,60nm,0.7s						
CD2				pmax	pmax		
	comp=Z,180nm,4.0s						
CD2				LR	LR		
	comp=Z,10μm,10.7s						
CD2				LR	LR		
	comp=Z,6μm,9.9s						
CD2				LR	LR		
	comp=Z,12μm,11.1s						
TDK	**Taldyqorghan**	**12.21**	**306**	*e*P	**Pn**	**19 15 54.2**	**-0.5**
TDK				*i* S	**Sn**	**19 18 10.3**	**-0.3**
TDK				pmax	pmax		
	comp=Z,2μm,1.1s						
TDK				smax	smax		
	comp=E,4μm,0.8s						
TDK				MLR	MLR		
	comp=Z,3μm,12.0s						
TDK	**Taldyqorghan**	**12.21**	**306**	*e*P	**Pn**	**19 15 54.3**	**-0.5**
	comp=Z,2μm,1.1s						
TDK				*e*PP	**PnPn**	**19 16 01.3**	**-1.1**
TDK				⇓*i*S	**Sn**	**19 18 10.3**	**-0.3**
	comp=Z,4μm,0.8s						
TDK				*e*LR	LR	19 20 12.7	
	comp=Z,3μm,12.5s						
KKN	**Kakani**	**12.24**	**211**	*e*P	**Pn**	**19 15 55.0**	**-0.4**
	comp=Z,58nm,0.9s						
PKI	**Pulchoki**	**12.38**	**210**	*e*P	**Pn**	**19 15 57.1**	**-0.3**
	comp=Z,155nm,1.3s						
PKIN	**Phulchoki**	**12.38**	**210**	*e*P	**Pn**	**19 15 57.0**	**-0.4**
	comp=Z,53nm,0.9s						
DANN	**Dangsing**	**12.43**	**218**	*e*P	**Pn**	**19 15 58.4**	**+0.4**
	comp=Z,37nm,0.9s						
MDOK	**Medeo**	**12.44**	**297**	⇑Pn	**Pn**	**19 15 57.4**	**-0.6**
	comp=Z,138nm,1.0s						
MDOK				⇓Sn	**Sn**	**19 18 15.1**	**-1.3**
	comp=Z,125nm,1.2s						
MDOK	**Medeo**	**12.44**	**297**	*e*P	**Pn**	**19 15 56.7**	**-1.3**
MDOK				*i* S	**Sn**	**19 18 15.9**	**-0.5**
MDOK				pmax	pmax		
	comp=Z,238nm,0.8s						
MDOK				MLR	MLR		
	comp=Z,820nm,11.0s						
MDOK	**Medeo**	**12.44**	**297**	*e*P	**Pn**	**19 15 56.7**	**-1.3**
	comp=Z,238nm,0.8s						
MDOK				⇑*i*S	**Sn**	**19 18 15.9**	**-0.5**
	comp=Z,978nm,1.7s						
MDOK				*e*LR	LR	19 21 09.5	
	comp=Z,820nm,11.4s						
DMN	**Daman**	**12.47**	**211**	*e*P	**Pn**	**19 15 58.3**	**-0.3**
	comp=Z,136nm,0.9s						
TNSS	**Tian-Shan**	**12.47**	**296**	*e*P	**Pn**	**19 15 58.0**	**-0.7**
TNSS				*e*S	**Sn**	**19 18 18.3**	**+0.7**
TNSS				pmax	pmax		
	comp=Z,218nm,0.9s						
TNSS				smax	smax		
	comp=E,384nm,1.0s						
TNSS	**Tian-Shan**	**12.47**	**296**	*e*P	**Pn**	**19 15 58.0**	**-0.7**
	comp=E,218nm,0.9s						
TNSS				*e*S	**Sn**	**19 18 18.4**	**+0.7**
	comp=E,384nm,1.0s						
KNDC	**Almaty**	**12.51**	**297**	⇑Pn	**Pn**	**19 15 58.3**	**-0.6**
	comp=E,191nm,0.8s						
KNDC				⇑Sn	**Sn**	**19 18 17.5**	**-0.5**
	comp=E,137nm,0.9s						
RAMN	**Ramite**	**12.53**	**204**	*e*P	**Pn**	**19 15 57.6**	**-1.7**
	comp=E,140nm,0.9s						
AAA	**Alma-Ata**	**12.54**	**297**	*de*P	**Pn**	**19 15 59.0**	**-0.3**
AAA				*i* S	**Sn**	**19 18 18.8**	**0.0**
AAA				pmax	pmax		
	comp=Z,326nm,1.0s						
AAA				smax	smax		
	comp=E,2μm,1.8s						
AAA				MLR	MLR		
	comp=Z,544nm,12.0s						
AAA	**Alma-Ata**	**12.54**	**297**	⇓*e*P	**Pn**	**19 15 59.1**	**-0.3**
	comp=Z,326nm,1.0s						
AAA				⇓*i*S	**Sn**	**19 18 18.9**	**0.0**
	comp=Z,2μm,1.8s						
AAA				*e*LR	LR	19 21 16.1	
	comp=Z,544nm,11.7s						
CHKK	**Chushkaly**	**12.69**	**300**	⇑*i*P	**Pn**	**19 15 59.6**	**-1.7**
CHKK				*e*S	**Sn**	**19 18 20.1**	**-2.3**
CHKK				pmax	pmax		
	comp=Z,126nm,0.7s						
CHKK				smax	smax		
	comp=N,336nm,1.3s						
CHKK	**Chushkaly**	**12.69**	**300**	⇑*i*P	**Pn**	**19 15 59.7**	**-1.7**
	comp=N,126nm,0.7s						
CHKK				⇓*e*S	**Sn**	**19 18 20.1**	**-2.3**
	comp=N,336nm,1.2s						
KSH	**Kashi**	**12.75**	**279**	⇑*i*P	**Pn**	**19 16 06.2**	**+4.0**
KSH				pP	P	19 16 12.5	-0.8
KSH				SS	Sn	19 18 50.6	+27
KSH				pmax	pmax		
	comp=N,290nm,0.9s						
KSH				LR	LR		
	comp=N,6μm,4.7s						
KSH				LR	LR		
	comp=N,4μm,3.9s						
KSH				LR	LR		
	comp=N,3μm,5.7s						
ULHL	**Ulahol**	**12.79**	**292**	P	**Pn**	**19 16 03.1**	**+0.3**
	SNR=8.0						
MTBS	**Maitube**	**12.87**	**296**	⇓*e*P	**Pn**	**19 16 02.7**	**-1.0**
MTBS				*e*S	**Sn**	**19 18 26.4**	**-0.3**
MTBS				pmax	pmax		
	comp=Z,174nm,1.0s						
MTBS				smax	smax		
	comp=E,75nm,0.7s						
MTBS	**Maitube**	**12.87**	**296**	⇓*e*P	**Pn**	**19 16 02.7**	**-1.0**
	comp=E,174nm,1.0s						
MTBS				*e*S	**Sn**	**19 18 26.5**	**-0.3**
	comp=E,75nm,0.7s						
SHL	**Shillong**	**12.96**	**182**	*e*Pn	**Pn**	**19 16 02.9**	**-2.2**
SHL	**Shillong**	**12.96**	**182**	*e*P	**Pn**	**19 16 02.9**	**-2.2**
SHL	**Shillong**	**12.96**	**182**	*e*P	**Pn**	**19 16 02.0**	**-3.1**
KOLN	**Koldanda**	**12.99**	**217**	*e*P	**Pn**	**19 16 04.2**	**-1.4**
	comp=E,36nm,1.0s						
PYUN	**Piuthan**	**13.01**	**219**	*e*P	**Pn**	**19 16 04.6**	**-1.3**
	comp=E,119nm,1.0s						
KUU	**Kurty**	**13.15**	**299**	*e*P	**Pn**	**19 16 06.8**	**-0.7**
KUU				*e*S	**Sn**	**19 18 38.4**	**+4.9**
KUU				pmax	pmax		
	comp=Z,198nm,0.8s						
KUU				smax	smax		
	comp=E,332nm,1.5s						
KUU				MLR	MLR		
	comp=Z,474nm,13.0s						
KUU	**Kurty**	**13.15**	**299**	*e*P	**Pn**	**19 16 06.8**	**-0.7**
	comp=Z,198nm,0.8s						
KUU				*e*S	**Sn**	**19 18 38.5**	**+4.9**
	comp=Z,332nm,1.5s						
KUU				*e*LR	LR	19 20 50.8	
	comp=Z,474nm,12.6s						
TKM2	**Tokmak 2**	**13.40**	**294**	P	**Pn**	**19 16 11.3**	**+0.1**
	SNR=40						
TKM2	**Tokmak 2**	**13.40**	**294**	⇑Pn	**Pn**	**19 16 09.7**	**-1.6**
	comp=Z,68nm,0.7s						
TKM2				⇓Sn	**Sn**	**19 18 41.6**	**+1.5**
	comp=Z,68nm,1.0s						
TKM2	**Tokmak 2**	**13.40**	**294**	P	**Pn**	**19 16 09.6**	**-1.6**
TKM2						19 18 35.2	
TKM2				pmax	pmax		
	comp=Z,68nm,0.7s						
TKM2				smax	smax		
	comp=N,68nm,1.0s						
KZA	**Kyzart**	**13.49**	**291**	P	**Pn**	**19 16 12.3**	**-0.2**
	SNR=27						
BTO	**Baotou**	**13.81**	**76**	*e*P	Pn	19 16 11.7	-5.0
BTO				S	Sn	19 18 24.6	-25
BTO				LR	LR		
	comp=N,1701μm,1.9s						
BTO				LR	LR		
	comp=E,904μm,1.8s						
KBK	**Karagaybulak**	**13.81**	**293**	P	**Pn**	**19 16 16.4**	**-0.3**
	SNR=48						
SONM	**Songino Array**	**13.82**	**43**	Pn	**Pn**	**19 16 17.3**	**+0.6**
	comp=E,2.0nm,0.3s,baz=232,slow=14,SNR=75						
SONM				Lg	Lg	19 20 17.0	
	comp=E,3.0nm,0.3s,baz=211,slow=33,SNR=5.2						
SONM				LR	LR	19 21 52.7	
	comp=E,3μm,21.6s,baz=228,slow=38						
SONA1	**Songino Array**	**13.83**	**43**	*e*Pn	**Pn**	**19 16 17.6**	**+0.6**
UCH	**Uchtor**	**14.05**	**291**	P	**Pn**	**19 16 19.8**	**-0.5**
	SNR=19						
FRU	**Bishkek**	**14.09**	**293**	*e*P	**Pn**	**19 16 19.0**	**-1.4**
FRU				*e*S	**Sn**	**19 18 58.0**	**+1.5**
FRU				pmax	pmax		
	comp=Z,76nm,1.8s						
XAN	**Xi'an**	**14.13**	**104**	P	Pn	19 16 15.4	-5.6
XAN				pP	P	19 16 20.9	-7.7
XAN				S	Sn	19 18 44.8	-13
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN				LR	LR		
	comp=N,4μm,9.8s						
XAN				LR	LR		
	comp=E,4μm,9.8s						
XAN				LR	LR		
	comp=Z,4μm,9.6s						
XAN	**Xi'an**	**14.13**	**104**	*e*Pn	Pn	19 16 15.3	-5.6
	comp=Z,318nm,0.8s						
XAN	**Xi'an**	**14.13**	**104**	*e*P	Pn	19 16 15.3	-5.7
XAN				pmax	pmax		
	comp=Z,318nm,0.8s						
AAK	**Ala-Archa**	**14.14**	**292**	P	**Pn**	**19 16 21.0**	**-0.2**
	SNR=5.6						
AAK	**Ala-Archa**	**14.14**	**292**	*e*Pn	**Pn**	**19 16 19.4**	**-1.8**
AAK				Sn	**Sn**	**19 18 54.4**	**-3.5**
AAK				Lg	Lg	19 20 31.8	
AAK	**Ala-Archa**	**14.14**	**292**	⇑Pn	**Pn**	**19 16 21.6**	**+0.4**
	comp=Z,23nm,0.8s						
AAK				⇑Sn	**Sn**	**19 18 53.0**	**-4.9**
	comp=Z,56nm,1.1s						
AAK	**Ala-Archa**	**14.14**	**292**	*i* P	**Pn**	**19 16 21.1**	**-0.1**
	SNR=14						
AAK	**Ala-Archa**	**14.14**	**292**	*ce*P	**Pn**	**19 16 20.7**	**-0.5**
AAK				pmax	pmax		
	comp=Z,12nm,1.3s						
AAK	**Ala-Archa**	**14.14**	**292**	Pn	**Pn**	**19 16 20.4**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=106,slow=12,SNR=16						
AAK				Sn	**Sn**	**19 18 54.4**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=107,slow=21,SNR=3.9						
AAK				Lg	Lg	19 20 31.7	
	comp=Z,0.4nm,0.3s,baz=324,slow=17,SNR=2.5						
AAK				LR	LR	19 22 29.6	
	comp=Z,950nm,21.5s,baz=124,slow=40						
ZAK	**Zakamensk**	**14.16**	**30**	*e*P	**Pn**	**19 16 22.9**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,35nm,1.3s						
USP	**Ospenovka**	**14.27**	**295**	P	**Pn**	**19 16 21.9**	**-1.0**
	SNR=13						
MOY	**Mondy**	**14.46**	**22**	*e*P	**Pn**	**19 16 27.6**	**+2.2**
MOY				pmax	pmax		
	comp=Z,122nm,1.7s						
SEM	**Semipalatinsk**	**14.62**	**328**	*c i*P	**Pn**	**19 16 25.5**	**-2.3**
SEM				*e*S	**Sn**	**19 19 05.7**	**-4.0**
SEM				pmax	pmax		
	comp=Z,110nm,0.9s						
SEM				MLR	MLR		
	comp=Z,3μm,10.0s						
SEM	**Semipalatinsk**	**14.62**	**328**	⇑*i*P	**Pn**	**19 16 25.5**	**-2.3**
	comp=Z,110nm,0.9s						
SEM				⇓*i*PP	**P**	**19 16 34.1**	**-0.1**
	comp=Z,2μm,1.0s						
SEM				*e*S	**Sn**	**19 19 05.8**	**-4.0**
SEM				*e*LR	LR	19 21 57.3	
	comp=Z,3μm,9.7s						
AML	**Almayashu**	**14.64**	**290**	P	**P**	**19 16 37.6**	**+3.0**
	SNR=23						
SFK	**Sufi-Kurgan**	**14.64**	**282**	⇑Pn	**Pn**	**19 16 26.8**	**-1.4**
	comp=Z,34nm,0.9s						
SFK	**Sufi-Kurgan**	**14.64**	**282**	P	**Pn**	**19 16 26.8**	**-1.4**
SFK				pmax	pmax		
	comp=Z,34nm,0.9s						
EKS2	**Erkin-Say**	**14.66**	**292**	P	**Pn**	**19 16 30.1**	**+1.8**
	SNR=7.4						
HHC	**Hu-ho-hao-te**	**14.99**	**75**	*e*P	**Pn**	**19 16 32.1**	**-0.8**
HHC				S	**Sn**	**19 19 19.9**	**+1.2**
HHC				LR	LR		
	comp=N,2μm,8.0s						
HHC				LR	LR		
	comp=E,3μm,9.9s						
HHC	**Hu-ho-hao-te**	**14.99**	**75**	*e*P	**Pn**	**19 16 32.0**	**-0.8**
HHC				S	**Sn**	**19 19 21.3**	**+2.6**
HHC				SS	**S**	**19 19 36.0**	**-0.4**
HHC				pmax	pmax		
	comp=E,10.0nm,1.4s						
HHC				pmax	pmax		
	comp=E,410nm,5.2s						
HHC				LR	LR		
	comp=E,2μm,7.4s						
HHC				LR	LR		
	comp=E,3μm,9.1s						
HHC				LR	LR		
	comp=E,4μm,10.4s						
TLY	**Talaya**	**15.34**	**28**	*e*Pn	**Pn**	**19 16 37.5**	**+0.2**
	comp=E,121nm,1.1s						
TLY	**Talaya**	**15.34**	**28**	*i* P	**Pn**	**19 16 39.0**	**+1.7**
TLY	**Talaya**	**15.34**	**28**	P	**P**	**19 16 43.3**	**+1.3**
	SNR=22						
KURBB	**Kurchatov Arra**	**15.52**	**325**	⇑P	**Pn**	**19 16 38.6**	**-1.0**
	comp=E,232nm,0.6s						
KURBB	**Kurchatov Arra**	**15.52**	**325**	Pn	**Pn**	**19 16 37.4**	**-2.2**
	comp=E,0.3nm,0.3s,baz=134,slow=12,SNR=60						
KURBB				Sn	**Sn**	**19 19 23.4**	**-7.8**
	baz=122,slow=25,SNR=2.2						
KURK	**Kurchatov**	**15.55**	**326**	*e*Pn	**Pn**	**19 16 37.9**	**-2.0**
	comp=E,166nm,0.7s						
KURK				Sn	**Sn**	**19 19 23.4**	**-8.5**
KURK	**Kurchatov**	**15.55**	**326**	⇑P	**Pn**	**19 16 38.9**	**-1.0**
	comp=E,147nm,0.7s						
KURK	**Kurchatov**	**15.55**	**326**	*ce*P	**Pn**	**19 16 38.3**	**-1.6**
KURK				pmax	pmax		
	comp=Z,34nm,1.3s						
MNAS	**Manas**	**15.56**	**291**	⇑Pn	**Pn**	**19 16 39.1**	**-1.2**
	comp=Z,51nm,1.0s						
MNAS				⇓Sn	**Sn**	**19 19 26.0**	**-6.6**
	comp=Z,34nm,1.3s						
MNAS	**Manas**	**15.56**	**291**	P	**Pn**	**19 16 39.1**	**-1.2**
MNAS				pmax	pmax		
	comp=Z,51nm,1.0s						
BRDH	**Bariadhala**	**15.84**	**182**	Pn	**Pn**	**19 16 43.3**	**-0.5**
	comp=Z,99nm,0.3s,baz=58,slow=14,SNR=4.2						
BRDH				LR	LR	19 24 48.7	
	comp=Z,2μm,18.4s,baz=22,slow=45						
TIY	**Taiyuan**	**15.86**	**87**	*e*P	**Pn**	**19 16 39.5**	**-4.6**
TIY				pmax	pmax		
	comp=Z,41nm,0.9s						
TIY				LR	LR		
	comp=Z,3μm,7.3s						

TIY				LR	LR		
	comp=Z,7µm,9.1s						
TIY				LR	LR		
	comp=Z,8µm,12.6s						
IRK	**Irkutsk**	**16.03**	**27**	*e*P	**P**	**19 16 48.1**	**-1.4**
IRK				pmax	pmax		
	comp=Z,192nm,2.4s						
KMI	**Kunming**	**16.04**	**144**	P	**Pn**	**19 16 43.9**	**-2.7**
KMI				pP	P	19 16 48.7	-1.3
KMI				sP	pP	19 16 49.9	-4.8
KMI				PP	**sP**	**19 16 59.9**	**+3.1**
KMI				S	**Sn**	**19 19 49.8**	**+5.4**
KMI				pmax	pmax		
	comp=Z,18nm,1.5s						
KMI				pmax	pmax		
	comp=Z,140nm,3.1s						
KMI				LR	LR		
	comp=Z,3µm,8.6s						
KMI				LR	LR		
	comp=Z,980nm,10.9s						
KMI				LR	LR		
	comp=Z,2µm,8.3s						
CHCP	**Chirah Chowk**	**16.15**	**258**	P	**Pn**	**19 16 47.1**	**-0.7**
NIL	**Nilore**	**16.16**	**258**	*e*Pn	**Pn**	**19 16 46.1**	**-1.8**
	comp=Z,61nm,0.8s						
NIL	**Nilore**	**16.16**	**258**	*e*P	**Pn**	**19 16 46.1**	**-1.8**
NIL				pmax	pmax		
	comp=Z,61nm,0.8s						
ZAA0	**Zalesovo Array**	**16.23**	**344**	*e*Pn	**Pn**	**19 16 48.5**	**-0.1**
	comp=Z,65nm,1.1s						
ZAA0	**Zalesovo Array**	**16.23**	**344**	⇓P	**Pn**	**19 16 48.6**	**-0.1**
	comp=Z,81nm,1.2s						
ZALV	**Zalesovo Beam**	**16.23**	**344**	*i* P	**Pn**	**19 16 48.4**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,32nm,0.9s						
ZALV	**Zalesovo Beam**	**16.23**	**344**	Pn	**Pn**	**19 16 48.3**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=168,slow=11,SNR=117						
ZALV				Sn	**Sn**	**19 19 43.7**	**-4.6**
	comp=Z,1.0nm,0.3s,baz=165,slow=23,SNR=5.3						
ZALV				Lg	Lg	19 21 38.6	
	comp=Z,0.1nm,0.3s,baz=153,slow=25,SNR=2.6						
ZALV				LR	LR	19 23 16.4	
	comp=Z,1µm,18.4s,baz=249,slow=38						
ENH	**Enshi**	**16.39**	**115**	*e*P	**Pn**	**19 16 47.5**	**-3.3**
	comp=Z,105nm,0.7s						
DZA	**Taraz**	**16.48**	**292**	*e*P	**Pn**	**19 16 52.5**	**+0.6**
DZA				pmax	pmax		
	comp=Z,453nm,1.1s						
DZA	**Taraz**	**16.48**	**292**	*e*P	**Pn**	**19 16 52.6**	**+0.6**
	comp=Z,452nm,1.1s						
GYA	**Guiyang**	**17.06**	**131**	⇑*i*P	**Pn**	**19 16 59.7**	**+0.2**
GYA				pP	pP	19 17 05.0	-0.9
GYA				PP	**PnPn**	**19 17 15.4**	**+6.2**
GYA				S	**Sn**	**19 20 08.9**	**-0.1**
GYA				sS	S	19 20 14.8	-4.0
GYA				SS	**SnSn**	**19 20 29.0**	**+6.7**
GYA				PcP	**PcP**	**19 21 47.2**	**+2.7**
GYA				pmax	pmax		
	comp=Z,260nm,0.9s						
GYA				pmax	pmax		
	comp=Z,260nm,4.9s						
GYA				LR	LR		
	comp=Z,3µm,15.4s						
GYA				LR	LR		
	comp=Z,3µm,12.0s						
GYA				LR	LR		
	comp=Z,5µm,12.6s						
KK31	**Karatay Array**	**17.10**	**292**	*e*Pn	**Pn**	**19 16 59.9**	**+0.1**
KK31	**Karatay Array**	**17.10**	**292**	⇑Pn	**Pn**	**19 17 00.8**	**+0.9**
	comp=Z,33nm,0.8s						
KK31	**Karatay Array**	**17.10**	**292**	P	**Pn**	**19 16 58.5**	**-1.3**
KK31				pmax	pmax		
	comp=Z,33nm,0.9s						
KKAR	**Karatay Array**	**17.10**	**292**	*e*Pn	**Pn**	**19 16 59.9**	**+0.1**
CEP	**Cherat**	**17.13**	**260**	P	**Pn**	**19 17 00.5**	**+0.2**
GAR	**Garm**	**17.16**	**278**	*e*Pn	**Pn**	**19 16 57.9**	**-2.8**
	comp=Z,103nm,1.1s						
GAR	**Garm**	**17.16**	**278**	*e*P	**Pn**	**19 16 57.9**	**-2.8**
GAR				pmax	pmax		
	comp=Z,103nm,1.1s						
SARP	**Sargodha**	**17.34**	**254**	P	**Pn**	**19 16 59.9**	**-3.0**
IUG	**Iuzhnay**	**17.35**	**289**	*e*P	**Pn**	**19 17 02.6**	**-0.4**
IUG				*i* S	**Sn**	**19 20 16.3**	**+0.4**
IUG				pmax	pmax		
	comp=Z,699nm,1.1s						
IUG				smax	smax		
	comp=E,433nm,5.1s						
IUG	**Iuzhnay**	**17.35**	**289**	*e*P	**Pn**	**19 17 02.6**	**-0.4**
	comp=E,700nm,1.1s						
IUG				⇓*i*S	**Sn**	**19 20 16.3**	**+0.4**
	comp=E,433nm,5.1s						
OTUK	**Ortayu**	**17.41**	**310**	⇑Pn	**Pn**	**19 17 02.3**	**-1.3**
	comp=E,107nm,1.0s						
OTUK	**Ortayu**	**17.41**	**310**	P	**Pn**	**19 17 02.3**	**-1.3**
OTUK				pmax	pmax		
	comp=Z,107nm,1.0s						
NVS	**Novosibirsk**	**17.41**	**342**	⇑*i*P	**Pn**	**19 17 03.5**	**-0.1**
NVS				*i* S	**Sn**	**19 20 17.2**	**+0.1**
THW	**Thamme Wali**	**17.66**	**257**	P	**Pn**	**19 17 05.8**	**-1.1**
BJT	**Baijiatuau**	**18.51**	**78**	*e*P	**Pn**	**19 17 17.5**	**+0.3**
	comp=Z,154nm,0.9s						
BJT	**Baijiatuau**	**18.51**	**78**	*e*P	**Pn**	**19 17 17.5**	**+0.3**
BJT				pmax	pmax		
	comp=Z,154nm,0.9s						
BJI	**Beijing**	**18.52**	**78**	P	**Pn**	**19 17 17.6**	**+0.3**
BJI				S	**S**	**19 20 47.8**	**-0.2**
BJI				LR	LR		
	comp=Z,2µm,9.0s						
BJI				LR	LR		
	comp=Z,3µm,12.4s						
BJI				LR	LR		
	comp=Z,1µm,20.6s						
JBP	**Jabalpur**	**18.61**	**218**	⇑*e*P	**Pn**	**19 17 24.6**	**+6.1**
JBP				*e*S	Sn	19 20 33.6	-13
KBL	**Kabul**	**19.11**	**265**	*e*P	**P**	**19 17 22.9**	**-0.9**
	comp=Z,52nm,0.8s						
KBL	**Kabul**	**19.11**	**265**	*e*P	**P**	**19 17 23.0**	**-0.9**
KBL				pmax	pmax		
	comp=Z,52nm,0.8s						
WHN	**Wuhan**	**19.80**	**107**	⇑P	**P**	**19 17 30.8**	**-0.4**
WHN				S	**S**	**19 21 13.9**	**0.0**
WHN				LR	LR		
	comp=Z,4µm,10.6s						
WHN				LR	LR		
	comp=Z,5µm,9.4s						
WHN				LR	LR		
	comp=Z,6µm,9.6s						
TIA	**Tai'an**	**19.84**	**89**	P	**P**	**19 17 31.2**	**-0.4**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TIA				LR	LR		
	comp=Z,2µm,10.7s						
TIA				LR	LR		
	comp=Z,3µm,12.8s						
TIA				LR	LR		
	comp=Z,5µm,11.4s						
CIT	**Chita**	**20.02**	**41**	*e*P	**P**	**19 17 34.1**	**+0.6**
CIT				*e*		19 17 42.1	
CIT				*e*		19 17 58.1	
CIT				*e*		19 18 07.8	
CIT				pmax	pmax		
	comp=Z,155nm,1.2s						
CHTO	**Chiang Mai**	**20.50**	**162**	*e*P	**P**	**19 17 38.0**	**-0.9**
	comp=Z,69nm,1.2s						
CHTO				LR	LR		
	comp=Z,960nm,19.0s						
CHTO	**Chiang Mai**	**20.50**	**162**	*e*P	**P**	**19 17 38.0**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,69nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,960nm,19.0s						
CHTO	**Chiang Mai**	**20.50**	**162**	P	**P**	**19 17 37.8**	**-1.1**
	SNR=21						
CHTO	**Chiang Mai**	**20.50**	**162**	P	**P**	**19 17 38.4**	**-0.5**
	comp=Z,184nm,1.0s,comp=Z,4µm						
CMMT	**Chiang Mai**	**20.50**	**162**	P	**P**	**19 17 38.4**	**-0.5**
	comp=Z,42nm,1.0s,comp=Z,761nm						
CM31	**Chiang Mai Arr**	**20.84**	**162**	*e*P	**P**	**19 17 42.4**	**-0.2**
CM31	**Chiang Mai Arr**	**20.84**	**162**	P	**P**	**19 17 42.3**	**-0.3**
	SNR=63						
CMAR	**Chiang Mai Arr**	**20.84**	**162**	*i* P	**P**	**19 17 42.4**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,24nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.84**	**162**	P	**P**	**19 17 41.8**	**-0.9**
	comp=Z,24nm,0.8s,baz=335,slow=10,SNR=134						
CMAR				PcP	**PcP**	**19 21 50.5**	**-0.5**
	comp=Z,4.5nm,0.9s,baz=330,slow=2.9,SNR=7.2						
CMAR				pPcP		19 21 56.6	
	comp=Z,3.6nm,0.9s,baz=312,slow=2.8,SNR=5.3						
CMAR				LR	LR	19 26 37.6	
	comp=Z,715nm,18.4s,baz=342,slow=39						
CMAR				PKiKP	**PKiKP**	**19 29 37.0**	**-1.9**
	comp=Z,0.5nm,0.8s,baz=227,slow=2.1,SNR=3.9						
CM01	**Chiang Mai Arr**	**20.88**	**162**	*e*P	**P**	**19 17 41.2**	**-1.8**
BVA0	**Borovoye Array**	**20.93**	**321**	⇑P	**P**	**19 17 44.1**	**+0.7**
	comp=Z,116nm,1.0s,baz=124,slow=10.0,SNR=506						
BVA0	**Borovoye Array**	**20.93**	**321**	*i* P	**P**	**19 17 44.2**	**+0.8**
BVA0				pmax	pmax		
	comp=Z,116nm,1.0s						
BVAR	**Borovoye Array**	**20.93**	**321**	P	**P**	**19 17 44.4**	**+1.0**
	comp=Z,51nm,0.5s,baz=121,slow=11,SNR=468						
BRVK	**Borovoye**	**21.00**	**321**	*e*P	**P**	**19 17 45.3**	**+1.2**
	comp=Z,154nm,0.8s						
BRVK				LR	LR		
	comp=Z,219nm,20.0s						
BRVK	**Borovoye**	**21.00**	**321**	⇓P	**P**	**19 17 44.1**	**0.0**
	comp=Z,158nm,0.9s						
BRVK	**Borovoye**	**21.00**	**321**	*ce*P	**P**	**19 17 45.1**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,159nm,0.8s						
BRVK	**Borovoye**	**21.00**	**321**	P	**P**	**19 17 45.4**	**+1.2**
	SNR=70						
UTTA	**Uttaradit**	**21.95**	**159**	P	**P**	**19 17 55.2**	**+0.7**
	comp=Z,23nm,0.9s,comp=Z,158nm						
SUKH	**Sukhothai**	**21.95**	**161**	P	**P**	**19 17 55.0**	**+0.5**
	comp=Z,56nm,0.8s,comp=Z,431nm						
HIA	**Hailar**	**22.35**	**52**	*e*P	**P**	**19 17 58.8**	**+0.1**
	comp=Z,89nm,0.9s						
HIA	**Hailar**	**22.35**	**52**	*e*P	**P**	**19 17 58.8**	**+0.1**
HIA				pmax	pmax		
	comp=Z,89nm,0.9s						
NONG	**Nongkai**	**22.50**	**152**	P	**P**	**19 18 00.6**	**+0.2**
	comp=Z,2.3nm,1.1s						
NJ2	**Nanjing**	**22.57**	**99**	*e*P	**P**	**19 18 00.1**	**-0.9**
NJ2				pP	**pP**	**19 18 02.3**	**-3.5**
NJ2				sP	**sP**	**19 18 06.6**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,35nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,290nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,11.4s						
NJ2				LR	LR		
	comp=Z,1µm,12.5s						
NJ2				LR	LR		
	comp=Z,2µm,11.4s						
DL2	**Dalian**	**22.83**	**80**	⇑P	**P**	**19 18 04.5**	**+0.7**
DL2				S	**S**	**19 22 13.9**	**+1.2**
DL2				pmax	pmax		
	comp=Z,110nm,1.0s						
DL2				pmax	pmax		
	comp=Z,280nm,6.0s						
DL2				LR	LR		
	comp=Z,1µm,12.1s						
DL2				LR	LR		
	comp=Z,1µm,11.1s						
DL2				LR	LR		
	comp=Z,2µm,10.5s						
UMPA	**Umpang Tak**	**23.00**	**164**	P	**P**	**19 18 08.5**	**+2.8**
	comp=Z,18nm,0.8s,comp=Z,151nm						
PBKT	**Sadao Pong**	**23.18**	**158**	*e*P	**P**	**19 18 07.6**	**+0.1**
	comp=Z,57nm,0.9s						
PBKT	**Sadao Pong**	**23.18**	**158**	P	**P**	**19 18 07.8**	**+0.3**
	comp=Z,70nm,1.3s						
GZH	**Guangzhou**	**23.66**	**125**	P	**P**	**19 18 09.0**	**-3.3**
GZH				S	**S**	**19 22 21.8**	**-4.9**
GZH				LR	LR		
	comp=Z,2µm,9.0s						
GZH				LR	LR		
	comp=Z,3µm,9.5s						
UTHA	**Uthaitani**	**23.75**	**163**	P	**P**	**19 18 13.6**	**+0.4**
	comp=Z,70nm,1.0s,comp=Z,561nm						
SKNT	**Sakolnakorn**	**23.81**	**151**	P	**P**	**19 18 13.1**	**-0.6**
	comp=Z,90nm,0.8s,comp=Z,930nm						
BOD	**Bodaibo**	**23.90**	**29**	*e*P	**P**	**19 18 15.1**	**+0.8**
BOD				pmax	pmax		
	comp=Z,126nm,1.4s						
SNY	**Shenyang**	**24.04**	**72**	⇑P	**P**	**19 18 14.9**	**-0.8**
SNY				pmax	pmax		
	comp=Z,100nm,1.7s						
SNY				pmax	pmax		
	comp=Z,520nm,3.5s						
SNY				LR	LR		
	comp=Z,2µm,8.8s						
SNY				LR	LR		
	comp=Z,930nm,10.0s						
SNY				LR	LR		
	comp=Z,2µm,11.0s						
CHAI	**Chaiyaphum**	**24.12**	**157**	P	**P**	**19 18 16.3**	**-0.3**
	comp=Z,24nm,1.0s,comp=Z,203nm						
HYB	**Hyderabad**	**24.26**	**214**	*i* P	**P**	**19 18 16.5**	**-1.5**
	comp=Z,110nm,1.0s						
HYB				*e*S	**S**	**19 22 34.0**	**-2.3**
MCO	**Taipa Grande**	**24.49**	**126**	P	**P**	**19 18 20.0**	**-0.1**
QIZ	**Qiongzhong**	**24.71**	**137**	P	**P**	**19 18 21.9**	**-0.1**
QIZ				S	**S**	**19 22 46.2**	**+2.7**
QIZ				sS	**sS**	**19 22 51.4**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,46nm,0.8s						
QIZ				LR	LR		
	comp=Z,2µm,13.7s						
QIZ				LR	LR		
	comp=Z,2µm,15.7s						
QIZ				LR	LR		
	comp=Z,2µm,12.3s						
QIZ	**Qiongzhong**	**24.71**	**137**	*e*P	**P**	**19 18 21.2**	**-0.8**
	comp=Z,50nm,0.9s						
SSE	**Sheshan**	**24.77**	**99**	P	**P**	**19 18 22.7**	**+0.2**
SSE				pmax	pmax		
	comp=Z,89nm,0.8s						
SSE				pmax	pmax		
	comp=Z,150nm,3.7s						
SSE				LR	LR		
	comp=Z,600nm,11.6s						
SSE				LR	LR		
	comp=Z,420nm,11.1s						
SSE	**Sheshan**	**24.77**	**99**	*e*P	**P**	**19 18 22.5**	**-0.1**
	comp=Z,180nm,0.9s						
SRDT	**SRDT**	**24.85**	**164**	P	**P**	**19 18 23.6**	**+0.3**
	comp=Z,74nm,0.9s,comp=Z,896nm						
CN2	**Changchun**	**25.38**	**67**	*e*P	**P**	**19 18 27.7**	**-0.2**
CN2				*e*sP	sP	19 18 34.9	-0.1
CN2				*e*S	**S**	**19 22 55.3**	**+1.4**
CN2				pmax	pmax		
	comp=Z,100nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,1µm,11.0s						
CN2				LR	LR		
	comp=Z,3µm,11.0s						
CN2				LR	LR		
	comp=Z,4µm,13.0s						
AB31	**Akbulak array**	**25.47**	**305**	⇓P	**P**	**19 18 28.2**	**-0.5**
	comp=Z,26nm,0.8s						
AB31	**Akbulak array**	**25.47**	**305**	P	**P**	**19 18 28.2**	**-0.5**
AB31				pmax	pmax		
	comp=Z,26nm,0.8s						
ABKAR	**Akbulak array**	**25.47**	**305**	*e*P	**P**	**19 18 30.0**	**+1.3**
SRAK	**Srakaew**	**25.92**	**158**	P	**P**	**19 18 35.1**	**+2.1**
	comp=Z,170nm,0.9s,comp=Z,1µm						
QZH	**Quanzhou**	**26.03**	**114**	⇑*i*P	**P**	**19 18 34.1**	**+0.1**
QZH				S	**S**	**19 23 03.9**	**-0.7**
QZH				pmax	pmax		
	comp=Z,63nm,1.1s						
QZH				LR	LR		
	comp=Z,1µm,8.5s						
QZH				LR	LR		
	comp=Z,2µm,9.5s						
QZH				LR	LR		
	comp=Z,2µm,9.5s						
PHET	**Kaeng Krachan**	**26.36**	**164**	P	**P**	**19 18 39.6**	**+2.6**
	comp=Z,29nm,0.9s,comp=Z,246nm						
PATY	**Pattaya**	**26.64**	**161**	P	**P**	**19 18 45.9**	**+6.4**
GEYT	**Alibeck**	**26.78**	**279**	P	**P**	**19 18 42.0**	**+1.3**
	comp=Z,25nm,1.0s,baz=87,slow=5.0,SNR=46						
GEYT				LR	LR	19 30 55.5	
	comp=Z,756nm,20.3s,baz=85,slow=40						
GEYT				P3KPbc		19 51 21.5	
	comp=Z,1.8nm,0.8s,baz=358,slow=4.5,SNR=4.0						
GYA0B	**ALIBECK ARRAY**	**26.78**	**279**	*e*P	**P**	**19 18 41.5**	**+0.8**
	comp=Z,33nm,1.0s						
AKTO	**Aktyubinsk**	**26.95**	**307**	⇑P	**P**	**19 18 41.7**	**-0.4**
	comp=Z,77nm,0.9s						
AKTO	**Aktyubinsk**	**26.95**	**307**	P	**P**	**19 18 43.2**	**+1.1**
	comp=Z,59nm,1.0s,baz=101,slow=8.8,SNR=103						
AKTO				PcP	**PcP**	**19 22 03.6**	**0.0**
	comp=Z,7.4nm,0.8s,baz=56,slow=5.1,SNR=3.0						
AKTO				LR	LR	19 30 17.5	
	comp=Z,398nm,19.5s,baz=104,slow=38						
SVE	**Sverdlovsk**	**27.71**	**322**	*d i*P	**P**	**19 18 49.9**	**+1.1**
SVE				pmax	pmax		
	comp=Z,125nm,1.1s						
SVE				MLR	MLR		
	comp=Z,486nm,12.0s						
TJN	**Taejon**	**27.80**	**83**	*c i*P	**P**	**19 18 48.6**	**-1.3**
KS01	**Wonju Array Si**	**27.95**	**81**	*e*P	**P**	**19 18 50.2**	**-0.9**
KS15	**Wonju Array Si**	**27.95**	**81**	*e*P	**P**	**19 18 51.0**	**-0.2**
KSAR	**Wonju Array Be**	**27.95**	**81**	P	**P**	**19 18 50.4**	**-0.7**
KSAR	**Wonju Array Be**	**27.95**	**81**	P	**P**	**19 18 50.4**	**-0.7**
KSRS	**Korea Array**	**27.98**	**81**	P	**P**	**19 18 50.4**	**-1.0**
	comp=Z,22nm,0.8s,baz=282,slow=8.5,SNR=74						
KSRS				LR	LR	19 30 54.7	
	comp=Z,491nm,21.1s,baz=284,slow=38						
ZEA	**Zeya**	**28.22**	**46**	*e*P	**P**	**19 18 54.0**	**+0.6**
ZEA				pmax	pmax		
	comp=N,18nm,1.0s						
ZEA				pmax	pmax		
	comp=E,18nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=E,7µm,10.0s						
ZEA				MLR	MLR		
	comp=Z,8µm,10.0s						
ZEA				MLR	MLR		
	comp=N,3µm,12.0s						
MDJ	**Mudanjiang**	**28.35**	**66**	P	**P**	**19 18 55.0**	**+0.3**
MDJ				pP	pP	19 18 59.9	+0.1
MDJ				PP	**PnPn**	**19 19 43.8**	**+0.4**
MDJ				S	**S**	**19 23 42.4**	**+1.5**
MDJ				SS	**SnSn**	**19 25 00.9**	**+2.5**
MDJ				pmax	pmax		
	comp=N,200nm,2.1s						
MDJ				LR	LR		
	comp=N,1µm,8.1s						
MDJ				LR	LR		
	comp=N,2µm,10.7s						
MDJ				LR	LR		
	comp=N,3µm,11.3s						
MDJ	**Mudanjiang**	**28.35**	**66**	*e*P	**P**	**19 18 54.6**	**-0.2**
	comp=N,54nm,1.1s						
MDJ				LR	LR		
	comp=Z,446nm,22.0s						
ARU	**Arti**	**28.57**	**320**	*e*P	**P**	**19 18 57.5**	**+1.1**
	comp=Z,98nm,0.9s						
ARU	**Arti**	**28.57**	**320**	*ce*P	**P**	**19 18 57.4**	**+0.9**
ARU				pmax	pmax		
	comp=Z,205nm,1.7s						
TWG	**Pinlang**	**29.13**	**114**	*e*P	**P**	**19 19 02.1**	**+0.3**
	comp=Z,112nm,0.8s						
MSHR	**Mys Shultsa**	**29.60**	**70**	*i* P	**P**	**19 19 05.5**	**-0.3**
KLR	**Kul'dur**	**30.04**	**56**	*c i*P	**P**	**19 19 09.4**	**-0.2**
KLR	**Kul'dur**	**30.04**	**56**	P	**P**	**19 19 09.8**	**+0.2**
	comp=Z,38nm,0.7s,baz=270,slow=9.8,SNR=120						
KLR				PcP	**PcP**	**19 22 11.2**	**-0.1**
	comp=Z,5.3nm,0.9s,baz=291,slow=4.2,SNR=3.6						
KLR				LR	LR	19 32 17.3	
	comp=Z,792nm,20.1s,baz=267,slow=38						
USA0B	**Ussuriysk Arra**	**30.09**	**66**	*e*P	**P**	**19 19 10.2**	**+0.2**
	comp=Z,21nm,0.9s						
USRK	**Ussuriysk Ar.**	**30.09**	**66**	P	**P**	**19 19 09.8**	**-0.2**
	comp=Z,17nm,0.8s,baz=266,slow=7.7,SNR=43						
USRK				PcP	**PcP**	**19 22 10.8**	**-0.7**
	comp=Z,4.1nm,0.9s,baz=242,slow=3.5,SNR=4.1						
USRK				LR	LR	19 32 31.4	
	comp=Z,361nm,20.5s,baz=162,slow=39						
VLA	**Vladivostok**	**30.09**	**69**	*d i*P	**P**	**19 19 10.3**	**+0.2**
VLA				pmax	pmax		
	comp=Z,52nm,0.9s						
NRIK	**Noril'sk**	**30.95**	**357**	P	**P**	**19 19 18.1**	**+0.6**
	comp=Z,66nm,0.6s,baz=162,slow=6.4,SNR=46						
NRIK				LR	LR	19 32 08.0	
	comp=Z,676nm,20.4s,baz=174,slow=37						
PKDT	**Phuket**	**31.01**	**168**	P	P	19 19 24.4	+6.0
TRTT	**Trang**	**31.30**	**166**	P	**P**	**19 19 23.1**	**+2.1**
	comp=Z,18nm,1.0s						
JNU	**Nakatsue**	**31.57**	**88**	*e*P	**P**	**19 19 22.7**	**-0.6**
	comp=Z,35nm,0.8s						
JNU				PcP	**PcP**	**19 22 15.1**	**-0.6**
JNU	**Nakatsue**	**31.57**	**88**	P	**P**	**19 19 22.4**	**-0.9**
	comp=Z,26nm,0.7s,baz=68,slow=0.3,SNR=19						
JNU				PcP	**PcP**	**19 22 15.1**	**-0.6**
	comp=Z,17nm,0.9s,baz=53,slow=3.6,SNR=6.2						
JNU				LR	LR	19 33 05.5	
	comp=Z,1µm,19.9s,baz=303,slow=38						
JOW	**Kunigami**	**32.25**	**100**	P	**P**	**19 19 28.3**	**-1.0**
	baz=100,slow=13						
WSAR	**Wadi Sarin**	**32.48**	**252**	P	**P**	**19 19 33.4**	**+2.0**
YAK	**Yakutsk**	**32.74**	**32**	*e*P	**P**	**19 19 33.1**	**-0.1**
YAK				*e**PP	**pP**	**19 19 39.0**	**+0.8**
YAK				*e*		19 20 44.3	
YAK				*e*		19 22 23.2	
YAK				*e*S	**S**	**19 24 47.7**	**-1.4**
YAK				*e**SS	**sS**	**19 25 00.1**	**+2.6**
YAK				*e*SS	**SnSn**	**19 26 45.9**	**+1.4**
YAK				pmax	pmax		
	comp=Z,152nm,0.9s						
YAK				pmax	pmax		
	comp=N,52nm,1.1s						
YAK				pmax	pmax		
	comp=E,116nm,1.4s						
YAK				pmax	pmax		
	comp=Z,113nm,1.5s						
YAK				pmax	pmax		
	comp=E,152nm,2.0s						
YAK				pmax	pmax		
	comp=N,139nm,2.0s						
YAK				smax	smax		
	comp=N,392nm,3.7s						
YAK				smax	smax		
	comp=E,427nm,3.8s						
YAK				MLR	MLR		
	comp=E,3µm,10.0s						
YAK				MLR	MLR		
	comp=N,3µm,10.0s						
YAK				MLR	MLR		
	comp=Z,5µm,11.0s						
GRNR	**Gornyy**	**33.18**	**54**	⇑*i*P	**P**	**19 19 37.0**	**-0.2**
GRNR				*e*		19 22 18.7	
GRNR				pmax	pmax		
	comp=E,31nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,51nm,0.8s						
LHMI	**Lhok Sumawe**	**33.44**	**172**	*e*P	**P**	**19 19 40.8**	**+1.1**
	comp=Z,141nm,0.9s						
LHMI	**Lhok Sumawe**	**33.44**	**172**	P	**P**	**19 19 41.4**	**+1.7**
	comp=Z,170nm,1.0s						
MAK	**Makhachkala**	**33.92**	**292**	*e*P	**P**	**19 19 42.2**	**-1.5**
MAK				*e*		19 20 57.6	
MAK				*e*S	**S**	**19 25 06.2**	**-1.7**
MAK				*e*SS	**SnSn**	**19 27 15.6**	**+1.9**
MAK				pmax	pmax		
	comp=Z,408nm,1.3s						
MAK				MLR	MLR		
	comp=Z,1µm,16.0s						
KULM	**Kulim**	**33.97**	**165**	*e*P	**P**	**19 19 43.9**	**-0.5**
	comp=Z,54nm,1.1s						
ARQ	**Araqi**	**34.00**	**254**	P	P	19 19 50.2	+5.5
MHTO	**MHTO**	**34.32**	**249**	P	**P**	**19 19 48.7**	**+1.3**
	SNR=12						
IPM	**Ipoh**	**34.83**	**165**	*e*P	**P**	**19 19 50.7**	**-1.2**
	comp=Z,25nm,0.9s						
KCSI	**Kotacane, Aceh**	**35.22**	**171**	P	**P**	**19 19 56.8**	**+1.6**
	comp=Z,30nm,1.1s,comp=Z,1µm						
PSI	**Prapat**	**36.09**	**169**	*e*P	**P**	**19 20 00.6**	**-2.2**
	comp=Z,9.4nm,0.7s						
PSI				*e*PcP	**PcP**	**19 22 28.8**	**0.0**
PSI	**Prapat**	**36.09**	**169**	*e*P	**P**	**19 20 00.6**	**-2.2**
PSI				*e*		19 22 28.8	
PSI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PSI	**Prapat**	**36.09**	**169**	LR	LR	19 36 00.7	
	comp=Z,243nm,19.6s,baz=283,slow=38						
TBLG	**Delisi**	**36.15**	**290**	*e*P	**P**	**19 20 01.1**	**-1.9**
	comp=Z,12nm,0.8s						
TBLG	**Delisi**	**36.15**	**290**	*e*P	**P**	**19 20 01.1**	**-1.9**
TBLG				pmax	pmax		
	comp=Z,12nm,0.8s						

MJB9	Matsu-Tunnel	36.15	79	*e*P	P	19 20 01.4	-1.7
	comp=Z,91nm,1.8s						
MAJO	Matsushiro	36.15	79	*e*P	P	19 20 01.4	-1.7
	comp=Z,96nm,1.8s						
MAJO	Matsushiro	36.15	79	*i* P	P	19 20 01.4	-1.7
MAJO				pmax	pmax		
	comp=Z,44nm,1.8s						
MAT	Matsushiro	36.15	79	P	P	19 20 00.8	-2.3
MAT				S	S	19 25 46.8	+4.3
MJAR	Matsushiro Arr	36.16	79	P	P	19 20 01.3	-1.9
	comp=Z,12nm,0.8s,baz=283,slow=9.8,SNR=16						
MJAR				PcP	PcP	19 22 28.8	+0.1
	comp=Z,6.3nm,0.9s,baz=278,slow=3.4,SNR=7.2						
MJAR				pPcP		19 22 33.6	
	comp=Z,6.8nm,1.1s,baz=336,slow=2.7,SNR=4.8						
MJAR				LR	LR	19 35 50.1	
	comp=Z,195nm,18.3s,baz=290,slow=38						
SNSI	Sinabang, Aceh	36.16	173	P	P	19 20 04.9	+1.6
	comp=Z,152nm,1.0s						
GNI	Garni	36.48	288	*e*P	P	19 20 08.2	+2.2
	comp=Z,20nm,0.9s						
GNI				LR	LR		
	comp=Z,344nm,22.0s						
GNI	Garni	36.48	288	*i* P	P	19 20 08.5	+2.5
	SNR=8.5						
GNI	Garni	36.48	288*c*	*e*P	P	19 20 05.2	-0.8
GNI				pmax	pmax		
	comp=Z,133nm,1.3s						
ZEI	Tsey	36.56	292	*e*P	P	19 20 06.4	-0.4
ZEI				pmax	pmax		
	comp=Z,14nm,1.4s						
PRGR	Permogore	36.66	324⇑	*i*P	P	19 20 07.7	+0.6
PRGR				pmax	pmax		
	comp=Z,62nm,0.9s						
NCK	Nalchik	36.66	294	*e*P	P	19 20 08.0	+0.6
NCK				pmax	pmax		
	comp=Z,20nm,0.9s						
GOF	Gofitskoye	36.83	296	*e*P	P	19 20 10.1	+1.4
GOF				pmax	pmax		
	comp=Z,60nm,0.6s						
KBZ	Khabaz	37.13	294	P	P	19 20 12.3	+1.1
	comp=Z,9.7nm,0.9s,baz=103,slow=7.1,SNR=16						
KBZ				LR	LR	19 37 05.9	
	comp=Z,216nm,19.8s,baz=82,slow=39						
TYV	Tymovskoe	37.13	54	*e*P	P	19 20 12.1	+0.9
TYV				*e*S	S	19 26 00.7	+3.7
TYV				pmax	pmax		
	comp=Z,40nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,4.4s						
TYV				smax	smax		
	comp=N,200nm,6.1s						
KIV	Kislovodsk	37.24	295	*e*P	P	19 20 13.5	+1.1
	comp=N,23nm,0.8s						
KIV				LR	LR		
	comp=Z,252nm,20.0s						
KIV	Kislovodsk	37.24	295	*i* P	P	19 20 13.6	+1.1
	SNR=10						
KIV	Kislovodsk	37.24	295	*e*P	P	19 20 13.5	+1.1
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
KIV				MLR	MLR		
	comp=Z,262nm,16.0s						
KIV	Kislovodsk	37.24	295	P	P	19 20 13.7	+1.3
	SNR=5.3						
VRH	Novokhopyorsk	37.29	307	*e*P	P	19 20 13.1	+0.6
VRH				pmax	pmax		
	comp=Z,100nm,0.6s						
VRH				MLR	MLR		
	comp=Z,400nm,15.0s						
NEY	Neytrino	37.33	293*d*	*i*P	P	19 20 15.4	+2.1
NEY				pmax	pmax		
	comp=Z,12nm,2.0s						
GSI	Gunungsitoli	37.38	171	*e*P	P	19 20 12.8	-0.9
	comp=Z,340nm,1.4s						
GSI	Gunungsitoli	37.38	171	P	P	19 20 15.2	+1.5
	comp=Z,188nm,1.2s,comp=Z,2µm						
YSS	Yuzh-Sakhalins	37.41	60	*e*P	P	19 20 13.3	-0.4
	comp=Z,50nm,1.3s						
YSS	Yuzh-Sakhalins	37.41	60⇑	*e*P	P	19 20 13.0	-0.7
YSS				*e*		19 21 40.1	
YSS				*e*S	S	19 25 54.0	-7.4
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1µm,12.0s						
YSS				MLR	MLR		
	comp=N,500nm,13.0s						
YSS				MLR	MLR		
	comp=E,900nm,11.0s						
ASAJ	Asahikawa	37.68	65	P	P	19 20 15.2	-0.8
	comp=E,90nm,0.8s,baz=279,slow=7.6,SNR=49						
TIXI	Tiksi	37.98	18	*e*P	P	19 20 17.9	-0.2
	comp=E,32nm,0.9s						
TIXI	Tiksi	37.98	18*c*	*e*P	P	19 20 17.7	-0.4
TIXI				pmax	pmax		
	comp=Z,62nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,684nm,17.0s						
TIXI	Tiksi	37.98	18	P	P	19 20 18.1	-0.1
	comp=Z,23nm,0.8s,baz=220,slow=5.1,SNR=59						
DOMR	Dombai	38.12	294	*i* P	P	19 20 20.5	+0.6
MNSI	Mandailing Nat	38.16	168	P	P	19 20 21.6	+1.3
	comp=Z,27nm,0.9s						
ERM	Erimo	38.48	68	*e*P	P	19 20 22.9	+0.2
	comp=Z,123nm,1.1s						
ERM				LR	LR		
	comp=Z,336nm,20.0s						
ERM	Erimo	38.48	68*c*	*e*P	P	19 20 22.7	0.0
ERM				pmax	pmax		
	comp=Z,199nm,1.7s						
DMTO	DMTO	38.59	248	P	P	19 20 25.3	+1.4
DMTO				P	P	19 20 25.3	+1.4
DMTO				S	S	19 26 22.2	+2.6
DMTO				S	S	19 26 22.2	+2.6
PBSI	Pulau Batu	38.81	170	P	P	19 20 27.2	+1.5
	comp=Z,80nm,1.1s						
VORR	Voronezh	38.85	307	*e*P	P	19 20 25.0	-0.7
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
BKNI	Bangkinang	38.88	166	P	P	19 20 27.5	+1.2
	comp=Z,168nm,0.9s						
VSR	Storozhevoye	38.89	307*c*	*i*P	P	19 20 25.9	-0.2
VSR				pmax	pmax		
	comp=Z,87nm,0.8s						
SIRT	Sirnak	38.91	284	*e*P	P	19 20 28.7	+2.1
	comp=Z,98nm,0.9s						
KKM	Kota Kinabalu	38.94	140	*e*P	P	19 20 27.3	+0.3
KKM				*e*pP	pP	19 20 32.1	0.0
LPSR	Galich'ya Gora	39.01	309	*e*P	P	19 20 27.6	+0.6
LPSR				pmax	pmax		
	comp=Z,200nm,0.7s						
LPSR				MLR	MLR		
	comp=Z,600nm,11.0s						
WHFO	Wadi Hawf	39.32	249	P	P	19 20 30.6	+0.6
WHFO				S	S	19 26 28.8	-2.0
KLMR	Klimovskoe	39.35	322	*e*P	P	19 20 27.6	-2.2
KLMR				*e*		19 22 35.3	
KLMR				pmax	pmax		
	comp=Z,123nm,0.6s						
KLMR	Klimovskoe	39.35	322	*e*P	P	19 20 27.7	-2.1
KLMR				AMP		19 20 31.4	
	comp=Z,123nm,0.7s						
KLMR				*e*PcP	PcP	19 22 35.3	-2.6
SOC	Sochi	39.42	295	*e*P	P	19 20 29.5	-1.1
SOC				*e*		19 22 00.1	
SOC				*e*S	S	19 26 32.2	+0.3
SOC				pmax	pmax		
	comp=Z,15nm,0.6s						
SOC				MLR	MLR		
	comp=Z,303nm,14.0s						
MOS	Moscow	39.81	314	*e*P	P	19 20 33.1	-0.6
MOS				*e*		19 20 38.6	
MOS				*e*S	S	19 26 29.6	-7.7
MOS				pmax	pmax		
	comp=Z,300nm,1.1s						
MOS				pmax	pmax		
	comp=Z,248nm,1.0s						
MOS				MLR	MLR		
	comp=E,600nm,11.0s						
MOS				MLR	MLR		
	comp=Z,800nm,11.0s						
PDSI	Padang	39.98	167	P	P	19 20 36.8	+1.3
	comp=Z,27nm,1.2s						
ABTO	Aybut	40.02	249	P	P	19 20 36.5	+0.5
ABTO				S	S	19 26 41.4	-0.1
SISI	Saibi	40.17	169	P	P	19 20 38.5	+1.4
	comp=Z,31nm,0.9s						
SBUM	Sibu	40.28	148	*e*P	P	19 20 38.7	+0.7
	comp=Z,37nm,1.3s						
OBN	Obninsk	40.40	313	*e*P	P	19 20 39.5	+0.9
	comp=Z,111nm,1.0s						
OBN				LR	LR		
	comp=Z,460nm,20.0s						
OBN	Obninsk	40.40	313	*i* P	P	19 20 39.2	+0.7
OBN				*i*		19 20 44.0	
OBN				*i*		19 22 13.8	
OBN				*i*		19 22 40.6	
OBN				pmax	pmax		
	comp=Z,138nm,1.1s						
OBN				MLR	MLR		
	comp=Z,538nm,18.0s						
KSM	Kuching	40.42	152	*e*P	P	19 20 39.7	+0.5
TMCR	Tamitsa	40.67	327	*e*P	P	19 20 41.5	+0.9
TMCR				pmax	pmax		
	comp=Z,118nm,1.0s						
ANN	Anapa	40.80	297	*e*P	P	19 20 42.1	+0.1
ANN				*e*S	S	19 26 53.6	+1.2
ANN				*e*SS	SS	19 29 53.4	+0.2
ANN				pmax	pmax		
	comp=Z,96nm,1.0s						
ANN				MLR	MLR		
	comp=Z,392nm,13.0s						
JMBI	JAMBI	41.33	163	P	P	19 20 47.7	+1.1
	comp=Z,196nm,0.9s						
PPSI	Pulau Pagai	41.72	168	P	P	19 20 51.2	+1.4
	comp=Z,106nm,1.2s						
MA2	Magadan	42.01	40	*e*P	P	19 20 52.7	+0.9
	comp=Z,47nm,0.9s						
MA2				PcP	PcP	19 22 45.9	-0.7
MA2				LR	LR		
	comp=Z,131nm,19.0s						
MA2	Magadan	42.01	40*c*	*e*P	P	19 20 51.9	+0.1
MA2				pmax	pmax		
	comp=Z,99nm,1.7s						
MA2	Magadan	42.01	40	P	P	19 20 52.1	+0.4
	comp=Z,34nm,0.8s,baz=268,slow=7.9,SNR=56						
MA2				PcP	PcP	19 22 45.9	-0.7
	comp=Z,17nm,0.8s,baz=183,slow=1.6,SNR=7.6						
PPBI	Pangkal Pinang	42.48	159	P	P	19 20 56.9	+0.9
	comp=Z,19nm,1.3s						
LVZ	Lovozero	42.84	332	*e*P	P	19 20 59.2	+0.7
	comp=Z,69nm,0.8s						
LVZ				LR	LR		
	comp=Z,542nm,20.0s						
LVZ	Lovozero	42.84	332*c*	*e*P	P	19 20 59.2	+0.7
LVZ				pmax	pmax		
	comp=Z,90nm,1.0s						
SEY	Seymchan	43.04	36*c*	*e*P	P	19 21 01.4	+1.3
SEY	Seymchan	43.04	36	P	P	19 21 00.8	+0.7
	comp=Z,24nm,0.9s,baz=260,slow=6.5,SNR=105						
SEY				PcP	PcP	19 22 49.8	-0.1
	comp=Z,5.3nm,0.8s,baz=315,slow=4.3,SNR=3.6						
SIM	Simferopol'	43.08	298	*e*P	P	19 21 01.6	+0.9
SIM				*e*S	S	19 27 28.0	+1.9
KCP	Kidapawan	43.15	128⇓	*e*P	P	19 21 02.6	+1.1
APA	Apatity	43.23	331⇑	*i*P	P	19 21 01.0	-0.6
APA				pmax	pmax		
	comp=Z,21nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,16.0s						
DAV	Davao City (W)	43.40	128	PFAKE		19 21 10.0	+6.4
DAV				LR	LR		
	comp=Z,439nm,19.0s						
PUL	Pulkovo	43.81	320*c*	*e*P	P	19 21 07.4	+1.1
PUL				pmax	pmax		
	comp=Z,110nm,0.4s						
PUL	Pulkovo	43.81	320	*e*P	P	19 21 07.2	+0.9
MDSI	Maura Dua	44.21	163	P	P	19 21 11.0	+1.0
	comp=Z,13nm,0.9s,comp=Z,796nm						
ILGA	Ilgaz	44.35	293	*e*P	P	19 21 13.3	+2.0
	comp=Z,66nm,0.8s						
LWLI	Liwa	44.70	163	P	P	19 21 14.9	+0.9
	comp=Z,29nm,0.8s,comp=Z,5µm						
BR131	Keskin Array S	44.81	291	*e*P	P	19 21 15.9	+1.1
BR131	Keskin Array S	44.81	291	P	P	19 21 15.9	+1.1
	SNR=26						
BRTR	Keskin Array B	44.81	291	P	P	19 21 16.0	+1.1
BRTR						19 22 58.0	
BRTR				pmax	pmax		
	comp=Z,33nm,0.8s						
BRTR				MLR	MLR		
	comp=Z,96nm,20.0s						
BRTR	Keskin Array B	44.81	291	P	P	19 21 15.9	+1.1
	comp=Z,34nm,0.8s,baz=99,slow=7.7,SNR=205						
BRTR				PcP	PcP	19 22 58.0	+1.4
	comp=Z,3.0nm,1.0s,baz=140,slow=1.1,SNR=2.9						
BRTR				LR	LR	19 43 49.8	
	comp=Z,96nm,20.0s,baz=81,slow=41						
AKASG	Malin Array Be	45.20	307	P	P	19 21 17.8	+0.3
AKASG				*PP	pP	19 21 23.1	+0.3
AKASG				pmax	pmax		
	comp=Z,22nm,0.8s						
AKASG	Malin Array Be	45.20	307	P	P	19 21 17.8	+0.3
	comp=Z,32nm,0.8s,baz=70,slow=7.6,SNR=27						
AKASG				pP	pP	19 21 23.1	+0.3
	comp=Z,2.7nm,0.6s,baz=103,slow=12,SNR=2.6						
AKBB	Malin Array Si	45.20	307	*e*P	P	19 21 17.9	+0.4
	comp=Z,43nm,0.9s						
KIEV	Kiev	45.21	307	*e*P	P	19 21 17.9	+0.3
	comp=Z,45nm,1.0s						
KIEV				LR	LR		
	comp=Z,164nm,19.0s						
KIEV	Kiev	45.21	307⇓	*i*P	P	19 21 18.4	+0.8
KIEV	Kiev	45.21	307	*i* P	P	19 21 17.7	+0.1
	SNR=34						
KIEV	Kiev	45.21	307*c*	*i*P	P	19 21 17.5	-0.1
KIEV				pmax	pmax		
	comp=Z,45nm,0.9s						
KASI	Kota Agung	45.29	163	P	P	19 21 19.6	+1.0
	comp=Z,30nm,0.8s						
ANTO	Ankara	45.38	291	*e*P	P	19 21 20.9	+1.6
	comp=Z,48nm,0.8s						
ANTO				LR	LR		
	comp=Z,204nm,20.0s						
ANTO	Ankara	45.38	291⇓	*i*P	P	19 21 21.2	+1.9
ANTO	Ankara	45.38	291	*e*P	P	19 21 20.9	+1.6
ANTO				pmax	pmax		
	comp=Z,48nm,0.8s						
ANTO				MLR	MLR		
	comp=Z,204nm,20.0s						
ANTO	Ankara	45.38	291	P	P	19 21 20.7	+1.4
	SNR=7.5						
BR231	Keskin MP Arra	45.40	291	*e*P	P	19 21 21.4	+1.9
MICGM	Minsk	45.45	312⇓	*e*P	P	19 21 20.0	+0.5
MICGM				PM		19 21 21.0	
	comp=Z,0.3nm,1.0s						
MNK	Minsk	45.45	312⇓	*e*P	P	19 21 20.0	+0.5
MPSI	Mapaga	45.69	140	P	P	19 21 21.7	-0.1
VSU	Vasula	45.70	318*c*	*e*P	P	19 21 22.1	+0.7
VSU				pmax	pmax		
	comp=Z,303nm,0.8s						
VSU	Vasula	45.70	318	*e*P	P	19 21 22.2	+0.7
VSU				IAmb	IAmb	19 21 22.9	
	comp=Z,247nm,0.8s						
FIA1	FINESS Array S	45.88	322	*e*P	P	19 21 23.4	+0.6
FIA1				*e*P	P	19 21 23.6	+0.8
FINES	FINESS Array B	45.88	322	P	P	19 21 23.3	+0.5
	comp=Z,30nm,0.6s,baz=82,slow=7.7,SNR=206						
FINES				LR	LR	19 41 50.0	
	comp=Z,295nm,18.3s,baz=92,slow=38						
IDID	Didziasalis	46.00	314	*e*P	P	19 21 25.3	+1.4
IDID				IAmb	IAmb	19 21 26.5	
	comp=Z,49nm,0.9s						
NACGM	Naroch	46.03	313	*e*	P	19 21 22.0	-2.1
NACGM				*e*LR	LR	19 39 44.0	
PEA0B	Petropavlovsk-	46.20	49	*e*P	P	19 21 26.4	+1.0
	comp=Z,48nm,0.9s						
PETK	Petropavlovsk-	46.20	49	*e*P	P	19 21 25.6	+0.1
PETK	Petropavlovsk-	46.20	49	P	P	19 21 25.2	-0.2
	comp=Z,22nm,0.8s,baz=258,slow=1.9,SNR=26						
PETK				LR	LR	19 41 56.4	
	comp=Z,339nm,18.4s,baz=278,slow=38						
KIS	Kishinev	46.21	302⇑	*i*P	P	19 21 25.0	-0.6
	comp=Z,200nm,1.0s						
KIS	Kishinev	46.21	302	*e*PcS	PcS	19 27 22.0	+26
KIS				*e*S	S	19 28 10.0	-1.5
KIS				*e*SSS	SSS	19 32 34.0	
KIS				LRM	MLR	19 45 00.0	
	comp=Z,300nm,16.0s						
KIS	Kishinev	46.21	302⇑	*i*P	P	19 21 25.0	-0.6
KIS				*e*S	S	19 28 10.0	-1.5
KIS				*e*SSS	SSS	19 32 34.0	
KIS				pmax	pmax		
	comp=Z,200nm,1.0s						
KIS				MLR	MLR		
	comp=Z,300nm,16.0s						
IZAR	Zarasai	46.23	314	*e*P	P	19 21 27.0	+1.4
IZAR				IAmb	IAmb	19 21 28.4	
	comp=Z,47nm,1.1s						
IIGN	Ignalina	46.29	314	*e*P	P	19 21 27.8	+1.6
IIGN				IAmb	IAmb	19 21 28.9	
	comp=Z,67nm,0.8s						
ISAL	Salakas	46.32	314	*e*P	P	19 21 27.8	+1.5
ISAL				IAmb	IAmb	19 21 29.1	
	comp=Z,49nm,0.8s						
ARCES	ARCESS Array B	46.40	333	P	P	19 21 27.6	+0.8
	comp=Z,42nm,0.8s,baz=89,slow=7.7,SNR=136						
ARCES				pP	pP	19 21 32.8	+0.7
	comp=Z,16nm,0.6s,baz=107,slow=7.8,SNR=7.7						
ARCES				PcP	PcP	19 23 01.6	+0.2
	comp=Z,9.9nm,0.7s,baz=106,slow=2.6,SNR=4.8						
ARCES				LR	LR	19 43 26.7	
	comp=Z,583nm,19.1s,baz=71,slow=39						
ARE0	ARCESS Array S	46.40	333	*e*P	P	19 21 28.2	+1.4
	comp=Z,4.1nm,1.0s						
ARE0	ARCESS Array S	46.40	333	*e*P	P	19 21 28.0	+1.2
TNG	Tangerang	46.45	160	P	P	19 21 27.9	+0.2
MRSI	Marisa	46.63	137	P	P	19 21 28.7	-0.5
	comp=Z,14nm,1.3s,comp=Z,294nm						
TLCR		46.67	300⇓	*i*P	P	19 21 30.3	+1.1
LEOM	Leova	46.72	301⇓	*i*P	P	19 21 30.6	+1.0
LEOM	Leova	46.72	301	P	P	19 21 30.6	+1.0
PCI	Palu	46.73	141	P	P	19 21 29.9	-0.1
	comp=Z,42nm,1.0s						
PET	Petropavlovsk	46.78	49	*e*P	P	19 21 29.5	-0.5
	comp=Z,89nm,0.8s						
PET	Petropavlovsk	46.78	49⇑	*i*P	P	19 21 29.3	-0.7
PET				*e*S	S	19 28 16.4	-3.1
PET				pmax	pmax		
	comp=Z,137nm,0.9s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
HAMF	Hammerfest	47.12	335	*e*P	P	19 21 33.7	+1.3
KBKI	Kotabaru	47.12	147	P	P	19 21 33.5	+0.5
CFR	Carcaliu	47.13	300⇑	*i*P	P	19 21 33.7	+0.9
CFR	Carcaliu	47.13	300	P	P	19 21 33.7	+0.9
TIRR	Tirgusor	47.14	299⇓	*i*P	P	19 21 34.1	+1.2
TIRR	Tirgusor	47.14	299	P	P	19 21 34.1	+1.2
BIR	Birlad	47.19	301⇑	*i*P	P	19 21 34.4	+1.1
BIR	Birlad	47.19	301	P	P	19 21 34.4	+1.1
MFTR	Murfatlar	47.21	298⇓	*i*P	P	19 21 35.2	+1.7
TLB	Topalu	47.36	299⇓	*i*P	P	19 21 36.0	+1.4
TLB	Topalu	47.36	299	P	P	19 21 36.0	+1.4
HOPEN	Hopen	47.59	343	*e*P	P	19 21 36.8	+0.8
PETR	Petresti	47.60	301⇓	*i*P	P	19 21 38.8	+2.3
APSI	Ampana	47.65	138	P	P	19 21 37.1	-0.1
	comp=Z,30nm,1.3s,comp=Z,448nm						
ICOR	Ion Corvin	47.66	298⇑	*i*P	P	19 21 38.7	+1.7
ODBI	Odobesti	47.70	301⇑	*i*P	P	19 21 39.6	+2.3
PRAR	RASCA	47.84	303⇓	*i*P	P	19 21 39.6	+1.3
VRI	Vrincioaia	47.90	301⇑	*i*P	P	19 21 40.2	+1.3
VRI	Vrincioaia	47.90	301	P	P	19 21 40.2	+1.3
PLOR	Plostina	47.95	301⇑	*i*P	P	19 21 41.0	+1.7
PLOR	Plostina	47.95	301	P	P	19 21 41.0	+1.7
BIZ	Bicaz	48.03	303⇑	*i*P	P	19 21 41.2	+1.4
SLIT	Slitere, Latvi	48.14	317	*e*P	P	19 21 40.5	+0.1
SLIT				IAmb	IAmb	19 21 41.2	
	comp=Z,497nm,0.6s						
KPJI	Karang Pucung	48.20	158	P	P	19 21 42.1	+0.7
	comp=Z,81nm,1.0s						
PRD	Provadia	48.21	297	*i* P	P	19 21 42.2	+1.0
LEHL	Lehliu	48.23	299⇑	*i*P	P	19 21 43.2	+1.8
ISR	Istrita	48.23	300⇑	*i*P	P	19 21 43.6	+2.1
ISR	Istrita	48.23	300	P	P	19 21 43.5	+2.1
SUW	Suwalki	48.25	312	*e*P	P	19 21 41.9	+0.5
SUW	Suwalki	48.25	312	*e*P	P	19 21 41.9	+0.5
	comp=Z,220nm,1.2s						
SUW	Suwalki	48.25	312	*e*P	P	19 21 41.9	+0.5
SMRI	Semarang	48.40	156	*e*P	P	19 21 44.5	+1.5
	comp=Z,133nm,1.0s						
SMRI	Semarang	48.40	156	P	P	19 21 43.6	+0.6
	comp=Z,174nm,1.1s						
BURAR	Bucovina Array	48.43	304⇓	*i*P	P	19 21 44.3	+1.2
BURAR	Bucovina Array	48.43	304	P	P	19 21 44.2	+1.2
BUR04	Bucovina Ar. S	48.44	304	*e*P	P	19 21 43.7	+0.6
BUR08	Bucovina Ar. S	48.44	304	*e*P	P	19 21 43.8	+0.7
OZUR		48.47	301⇑	*i*P	P	19 21 44.8	+1.5
MLR	Muntele Rosu	48.53	301	*e*P	P	19 21 45.4	+1.5
	comp=Z,35nm,0.9s						
MLR	Muntele Rosu	48.53	301⇑	*i*P	P	19 21 45.5	+1.6
MLR	Muntele Rosu	48.53	301	*e*P	P	19 21 45.4	+1.5
MLR				pmax	pmax		
	comp=Z,35nm,0.9s						
SULR		48.55	300⇑	*i*P	P	19 21 45.0	+1.1
TTSI	Tana Toraja	48.57	142	P	P	19 21 44.3	0.0
	comp=Z,60nm,1.2s,comp=Z,576nm						
SECR		48.58	300⇓	*i*P	P	19 21 44.5	+0.4
PBUR	Paburg	48.59	315	*e*P	P	19 21 42.6	-1.4
PBUR				IAmb	IAmb	19 21 46.1	
	comp=Z,184nm,0.7s						
LVV	L'vov	48.64	307	*e*P	P	19 21 45.4	+0.9
DOPR	Dopca	48.77	301⇑	*i*P	P	19 21 47.4	+1.8
BILL	Bilibino	48.96	29	*e*P	P	19 21 48.0	+1.3
	comp=Z,27nm,1.0s						
BILL	Bilibino	48.96	29	*i* P	P	19 21 47.9	+1.3
BILL				*i*		19 21 53.2	
BILL				*i*		19 23 11.1	
BILL				*i*		19 23 41.9	
BILL				pmax	pmax		
	comp=Z,36nm,1.2s						
BILL				MLR	MLR		
	comp=Z,664nm,15.0s						
JMB	Yambol	49.01	297	*i* P	P	19 21 49.0	+1.6
ARCR	ARCALIA	49.14	303⇑	*i*P	P	19 21 50.5	+2.1
VOIR		49.15	301⇓	*i*P	P	19 21 49.7	+1.1
VOIR		49.15	301	P	P	19 21 49.7	+1.1
MTUR	Matau	49.20	301⇓	*i*P	P	19 21 50.1	+1.1
SZH	Strazhica	49.20	298	*i* P	P	19 21 49.9	+1.0
SPSI	Sidrap Palu	49.35	143	P	P	19 21 50.3	+0.1
	comp=Z,82nm,1.1s,comp=Z,813nm						
ARR	Arges	49.45	301⇑	*i*P	P	19 21 52.5	+1.7
HUMR	Humele	49.47	300⇑	*i*P	P	19 21 51.9	+1.0
KWP	Kalwaria Pacla	49.52	307	*e*P	P	19 21 52.8	+1.6
KWP	Kalwaria Pacla	49.52	307	*e*P	P	19 21 52.8	+1.6
KMMI	Kalianget	49.64	151	P	P	19 21 52.7	+0.3
	comp=Z,45nm,0.7s,comp=Z,520nm						
SPA0	Spitsbergen Ar	49.71	345	*e*P	P	19 21 53.8	+1.4
PWJI	Pagerwojo	49.76	154	P	P	19 21 55.4	+2.0
	comp=Z,72nm,1.0s						
HSPB	Hornsund (broa	49.82	343	*e*P	P	19 21 54.5	+1.3
KLNR	Kaliningrad	49.84	314*c*	*i*P	P	19 21 54.0	+0.5
KLNR				pmax	pmax		
	comp=Z,314nm,0.9s						
BNSI	Bone	49.89	143	P	P	19 21 54.4	+0.1
	comp=Z,34nm,1.3s						
ALN	Alexandroupoli	49.91	295	*e*P	P	19 21 55.4	+1.1
	comp=Z,14nm,1.1s						
ALN	Alexandroupoli	49.91	295	*e*P	P	19 21 55.4	+1.1
ALN				pmax	pmax		
	comp=Z,14nm,1.1s						
LOT	Lotru	50.01	301⇑	*i*P	P	19 21 56.5	+1.4
TRPA	Tarpa	50.03	305⇑	*i*P	P	19 21 56.6	+1.5
TRPA	Tarpa	50.03	305⇑	*e*P	P	19 21 56.0	+0.9
UZH	Uzhgorod	50.05	306	*e*P	P	19 21 54.7	-0.5
UZH				*i*		19 22 01.7	
UZH				*e*		19 22 07.7	
UZH				*e*S	S	19 29 02.2	-3.5
UZH				*e*		19 29 12.0	
UZH				*e*		19 29 25.4	
UZH				*e*		19 32 32.0	
UZH				MLR	MLR		
	comp=N,70nm,16.0s						
UZH				MLR	MLR		
	comp=E,80nm,16.0s						
UZH				MLR	MLR		
	comp=Z,60nm,16.0s						
BEL	Belsk	50.14	310	*e*P	P	19 21 57.2	+1.3
BEL	Belsk	50.14	310	*e*P	P	19 21 57.2	+1.3
DRGR		50.30	303⇑	*i*P	P	19 21 58.8	+1.4
DRGR		50.30	303	P	P	19 21 58.7	+1.4
KBS	Kingsbay	50.63	346	*e*P	P	19 21 60.0	+0.7
SRE	Strehaia	50.63	300⇑	*i*P	P	19 22 00.5	+0.8

LTVH	Ltavrtes, Hu	50.66	304	⇑eP	P	19 22 01.0	+1.2
PGB	Panagyurishte	50.66	298	i P	P	19 22 08.4	+8.3
GZR	Gura Zlata	50.69	301	⇓iP	P	19 22 01.8	+1.6
BKSI	Bulukumba	50.70	143	P	P	19 22 00.6	+0.1
	comp=Z,12nm,1.5s,comp=Z,226nm						
PUNG	Punghina	50.94	300	⇓iP	P	19 22 02.9	+0.9
SANI	Sanana	50.95	134	P	P	19 22 02.2	-0.2
	comp=Z,46nm,1.1s						
SRBI	Singaraja	51.06	150	P	P	19 22 03.6	+0.4
	comp=Z,25nm,1.1s						
NIE	Niedzica	51.09	307	eP	P	19 22 04.8	+1.7
NIE	Niedzica	51.09	307	eP	P	19 22 04.8	+1.7
HERR	Herculane	51.09	301	⇓iP	P	19 22 04.2	+1.0
OJC	Ojcow	51.17	308	eP	P	19 22 04.8	+1.1
OJC	Ojcow	51.17	308	eP	P	19 22 04.8	+1.1
VTS	Vitosha	51.29	298	eP	P	19 22 06.4	+1.5
	comp=Z,36nm,1.3s						
VTS	Vitosha	51.29	298	⇑iP	P	19 22 06.6	+1.7
VTS	Vitosha	51.29	298	eP	P	19 22 06.4	+1.5
VTS				pmax	pmax		
	comp=Z,36nm,1.3s						
VTS	Vitosha	51.29	298	i P	P	19 22 06.2	+1.3
MMB	Musomiste	51.30	297	i P	P	19 22 05.8	+0.9
BZS	Buzias	51.39	302	⇑iP	P	19 22 06.6	+1.2
BZS	Buzias	51.39	302	P	P	19 22 06.6	+1.2
SRS	Serrai	51.57	296	P	P	19 22 09.0	+2.1
MDVR	Moldovita	51.60	301	⇑iP	P	19 22 08.4	+1.3
KKB	Krupnik	51.66	297	i P	P	19 22 08.4	+0.9
LANS	Liptovska Anna	51.69	307	eP	P	19 22 09.3	+1.6
LANS	Liptovska Anna	51.69	307	eP	P	19 22 09.3	+1.6
PSZ	Piszkesteto	51.79	305	eP	P	19 22 09.3	+0.8
	comp=Z,22nm,0.9s						
PSZ	Piszkesteto	51.79	305	⇑iP	P	19 22 10.1	+1.6
PSZ	Piszkesteto	51.79	305	eP	P	19 22 09.3	+0.8
PSZ				pmax	pmax		
	comp=Z,23nm,0.9s						
PSZ	Piszkesteto	51.79	305	eP	P	19 22 09.1	+0.6
GKP	Gorka Klasztor	51.86	312	eP	P	19 22 10.0	+1.2
GKP	Gorka Klasztor	51.86	312	eP	P	19 22 10.0	+1.2
VAY	Valandovo	52.21	297	i P	P	19 22 12.2	+0.6
VYHS	Vyhne	52.28	306	eP	P	19 22 13.5	+1.4
VYHS				pmax	pmax		
	comp=Z,25nm,1.2s						
VYHS	Vyhne	52.28	306	eP	P	19 22 13.5	+1.4
OKC	Ostrava-Krasne	52.30	308	eP	P	19 22 13.6	+1.4
OKC	Ostrava-Krasne	52.30	308	eP	P	19 22 13.6	+1.4
STIP	Stip	52.34	297	i P	P	19 22 11.9	-0.8
BUD	Budapest	52.48	305	eP	P	19 22 13.1	-0.4
BUD	Budapest	52.48	305	P	P	19 22 15.6	+2.1
GUMO	Guam	52.52	103	P	P	19 22 13.7	-0.5
	comp=Z,100nm,1.0s,baz=339,slow=3.5,SNR=2.0						
KOLL	Kolacno	52.53	306	eP	P	19 22 15.4	+1.5
KOLL	Kolacno	52.53	306	eP	P	19 22 15.4	+1.5
NLAI	Namlea	52.55	134	P	P	19 22 15.1	+0.8
BSD	Bornholm Skovb	52.68	315	⇑iP	P	19 22 14.8	0.0
	comp=Z,31nm,0.7s						
BSD	Bornholm Skovb	52.68	315	⇑eP	P	19 22 14.8	0.0
BSD				pmax	pmax		
	comp=Z,31nm,0.7s						
MORC	Moravsky Berou	52.69	308	eP	P	19 22 16.4	+1.3
	comp=Z,40nm,0.9s						
MORC	Moravsky Berou	52.69	308	⇑iP	P	19 22 16.6	+1.5
MORC	Moravsky Berou	52.69	308	P	P	19 22 16.4	+1.3
MORC	Moravsky Berou	52.69	308	eP	P	19 22 16.2	+1.1
LIT	Litokhoron	52.72	295	eP	P	19 22 15.6	+0.1
	comp=Z,23nm,0.8s						
LIT	Litokhoron	52.72	295	eP	P	19 22 15.6	+0.1
LIT				pmax	pmax		
	comp=Z,23nm,0.8s						
FRGS	Fruska Gora	52.74	302	eP	P	19 22 16.3	+0.8
NC405	NORSAR Array S	52.79	323	eP	P	19 22 16.2	+0.6
NC303	NORSAR Array S	52.92	323	eP	P	19 22 17.4	+0.8
NC602	NORSAR Array S	52.96	323	eP	P	19 22 17.1	+0.3
NORES	NORESS Array B	52.96	323	P	P	19 22 17.1	+0.2
DIVS	Divibare	52.99	301	eP	P	19 22 18.2	+0.7
DIVS	Divibare	52.99	301	eP	P	19 22 18.0	+0.5
NB201	NORSAR Array S	53.00	323	eP	P	19 22 17.6	+0.4
NB2	NORSAR Subarra	53.04	323	P	P	19 22 17.5	0.0
	comp=Z,34nm,0.7s,baz=75,slow=7.4						
NB2	NORSAR Subarra	53.04	323	P	P	19 22 17.5	0.0
	baz=75,slow=7.4						
NOA	NORSAR Array B	53.04	323	P	P	19 22 17.7	+0.2
	comp=Z,32nm,0.7s,baz=76,slow=7.4,SNR=138						
NOA				pP	pP	19 22 22.5	-0.3
	comp=Z,20nm,0.7s,baz=78,slow=7.8,SNR=18						
NOA				LR	LR	19 45 53.2	
	comp=Z,204nm,20.5s,baz=65,slow=37						
KRLC	Kraliky	53.07	309	eP	P	19 22 19.3	+1.4
KRLC	Kraliky	53.07	309	eP	P	19 22 19.3	+1.4
SIJI	Sorong	53.11	128	P	P	19 22 17.1	-1.4
	comp=Z,7.8nm,0.9s,baz=303,slow=4.8,SNR=3.9						
SIJI				PcP	PcP	19 23 26.3	-0.5
	comp=Z,21nm,0.9s,baz=302,slow=4.7,SNR=6.9						
KRUS	Krusevo	53.12	297	i P	P	19 22 18.4	0.0
KSP	Ksiaz	53.12	310	eP	P	19 22 19.5	+1.3
KSP	Ksiaz	53.12	310	eP	P	19 22 19.5	+1.3
MORH	Mrgy, Hungar	53.15	304	eP	P	19 22 19.1	+0.6
MORH	Mrgy, Hungar	53.15	304	⇑eP	P	19 22 19.0	+0.6
NC204	NORSAR Array S	53.19	323	eP	P	19 22 19.0	+0.3
NAO01	NORSAR Array S	53.24	323	eP	P	19 22 19.1	+0.1
NBO00	NORSAR Array S	53.25	323	eP	P	19 22 19.4	+0.4
AGG	Agios Georgios	53.26	294	eP	P	19 22 19.4	0.0
	comp=Z,28nm,0.8s						
AGG	Agios Georgios	53.26	294	eP	P	19 22 19.4	0.0
AGG				pmax	pmax		
	comp=Z,29nm,0.8s						
DPC	Dobruska-Polom	53.26	309	eP	P	19 22 21.0	+1.7
DPC				epP	pP	19 22 25.3	+0.7
DPC	Dobruska-Polom	53.26	309	eP	P	19 22 21.0	+1.7
MODS	Modra-Piesok	53.30	307	eP	P	19 22 21.1	+1.5
MODS				pmax	pmax		
	comp=Z,32nm,1.2s						
MODS	Modra-Piesok	53.30	307	eP	P	19 22 21.1	+1.5
UPC	Upice	53.40	309	eP	P	19 22 21.8	+1.5
UPC	Upice	53.40	309	eP	P	19 22 21.8	+1.5
VRAC	Vranov	53.43	308	⇑iP	P	19 22 21.9	+1.4
VRAC	Vranov	53.43	308	eP	P	19 22 21.8	+1.3
BBLS	Lazići	53.47	301	eP	P	19 22 21.7	+0.7
OHR	Ohrid	53.53	297	i P	P	19 22 07.8	-14
KRUC	Moravsky	53.63	308	eP	P	19 22 23.5	+1.5
HAPS	Han Pijesak,BI	53.69	301	eP	P	19 22 22.3	-0.4
DOMB	Dombas	53.78	325	eP	P	19 22 23.4	+0.4
SOP	Sopron	53.99	306	eP	P	19 22 25.0	+0.4
SOP	Sopron	53.99	306	P	P	19 22 26.1	+1.5
RUE	Ruedersdorf	54.10	312	eP	P	19 22 25.9	+0.6
RUE				IAmb	IAmb	19 22 27.5	
	comp=Z,78nm,1.1s						
PDG	Podgorica	54.10	299	⇓iP	P	19 22 26.6	+1.1
PDG	Podgorica	54.10	299	eP	P	19 22 26.2	+0.7
TTG	Podgorica	54.10	299	eP	P	19 22 26.4	+0.9
	comp=Z,48nm,0.7s						
TTG	Podgorica	54.10	299	eP	P	19 22 26.4	+0.9
TTG				pmax	pmax		
	comp=Z,48nm,0.7s						
KONO	Kongsberg	54.18	322	eP	P	19 22 26.4	+0.6
	comp=Z,63nm,1.1s						
KONO	Kongsberg	54.18	322	ceP	P	19 22 26.3	+0.5
KONO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DRME	Dracevica, Mon	54.24	299	eP	P	19 22 27.3	+0.7
PVCC	Panska Ves	54.26	310	eP	P	19 22 28.3	+1.7
PVCC				epP	pP	19 22 31.5	-0.4
PVCC	Panska Ves	54.26	310	eP	P	19 22 28.3	+1.7
BEHE	Becsehely	54.27	304	eP	P	19 22 28.0	+1.3
BEHE	Becsehely	54.27	304	eP	P	19 22 27.8	+1.1
GOPC	GO Pecny, Ondr	54.34	309	eP	P	19 22 28.3	+1.1
GOPC				epP	pP	19 22 32.4	-0.1
GOPC	GO Pecny, Ondr	54.34	309	eP	P	19 22 28.3	+1.1
CONA	Conrad Observa	54.35	306	i P	P	19 22 28.8	+1.5
	comp=Z,20nm,0.8s,SNR=13						
PRU	Pruhonice	54.46	309	eP	P	19 22 29.4	+1.4
PRU				AMS	AMS	19 47 10.0	
	comp=Z,800nm,15.8s						
PRU	Pruhonice	54.46	309	eP	P	19 22 29.4	+1.4
PRU				MLR	MLR		
	comp=Z,800nm,15.8s						
BRG	Berggiesshubel	54.53	310	⇑iP	P	19 22 29.4	+0.9
	comp=Z,22nm,0.9s						
BRG				i		19 22 33.9	
	comp=Z,38nm,1.4s						
BRG	Berggiesshubel	54.53	310	⇑iP	P	19 22 29.4	+0.9
BRG				pmax	pmax		
	comp=Z,22nm,0.9s						
BRG				MLR	MLR		
	comp=N,2µm,18.8s						
BRG				MLR	MLR		
	comp=E,2µm,20.2s						
BRG				MLR	MLR		
	comp=Z,4µm,19.3s						
TREB	Trebinje	54.61	300	eP	P	19 22 29.9	+0.7
BLY	Banja Luka	54.63	302	eP	P	19 22 29.7	+0.4
AKN	Aaknes	54.68	325	eP	P	19 22 30.4	+1.0
ARSA	Arzberg	54.80	306	i P	P	19 22 30.5	-0.1
	comp=Z,15nm,1.0s,SNR=6.7						
CLL	Collm	54.94	311	eP	P	19 22 32.2	+0.7
	comp=Z,31nm,0.8s						
CLL	Collm	54.94	311	⇑iP	P	19 22 32.1	+0.6
	comp=Z,39nm,1.0s						
CLL				epP	pP	19 22 37.0	+0.3
	comp=Z,38nm,1.1s						
CLL				i PcP	PcP	19 23 36.8	+3.6
CLL	Collm	54.94	311	⇑iP	P	19 22 32.1	+0.6
CLL				e*PP	pP	19 22 37.0	+0.3
CLL				pmax	pmax		
	comp=Z,39nm,1.0s						
GROS	Grobnik	55.10	305	eP	P	19 22 33.4	+0.6
GOLS	Golise	55.19	304	eP	P	19 22 34.4	+1.0
SOKA	Soboth	55.32	305	i P	P	19 22 35.2	+0.7
	comp=Z,29nm,1.2s,SNR=11						
KHC	Kasperske Hory	55.35	308	eP	P	19 22 35.3	+0.7
	comp=Z,15nm,1.5s						
KHC	Kasperske Hory	55.35	308	eP	P	19 22 35.1	+0.6
KHC				epP	pP	19 22 40.6	+0.8
KHC				ex	x	19 23 25.0	
KHC				AMS	AMS	19 47 40.0	
	comp=Z,700nm,16.4s						
KHC	Kasperske Hory	55.35	308	eP	P	19 22 35.1	+0.6
KHC				e		19 22 40.6	
KHC				MLR	MLR		
	comp=Z,700nm,16.4s						
CRES	Cresnjev	55.36	304	eP	P	19 22 35.5	+0.8
GEC2	GERESS Array S	55.37	308	eP	P	19 22 36.2	+1.5
GEC2	GERESS Array S	55.37	308	eP	P	19 22 36.3	+1.5
GERES	GERESS Array B	55.37	308	P	P	19 22 35.7	+0.9
	comp=Z,9.6nm,0.8s,baz=68,slow=7.4,SNR=29						
GERES				pP	pP	19 22 40.3	+0.2
	comp=Z,6.4nm,0.7s,baz=68,slow=7.4,SNR=9.9						
GERES				LR	LR	19 48 31.4	
	comp=Z,248nm,18.9s,baz=95,slow=38						
MUD	Monsted U'grnd	55.37	318	i P	P	19 22 35.7	+1.2
	comp=Z,44nm,1.0s						
MUD	Monsted U'grnd	55.37	318	i P	P	19 22 35.7	+1.2
MUD				pmax	pmax		
	comp=Z,44nm,1.0s						
GEA0	GERESS Array S	55.38	308	eP	P	19 22 35.8	+1.0
FOO	Floro	55.74	325	eP	P	19 22 37.7	+0.6
BLS5	Blasjo	55.78	322	eP	P	19 22 38.5	+1.1
LJU	Ljubljana	55.88	305	eP	P	19 22 39.8	+1.4
BER	Bergen	56.00	323	eP	P	19 22 39.8	+0.9
CEY	Cerknica	56.06	304	eP	P	19 22 38.8	-0.9
KBA	Koelnbreinsper	56.25	306	eP	P	19 22 41.6	+0.5
	comp=Z,24nm,1.4s						
SOEI	Soe	56.55	141	eP	P	19 22 41.5	-2.0
	comp=Z,56nm,1.0s						
GRA1	Grafenberg Arr	56.58	310	eP	P	19 22 44.9	+1.6
	comp=Z,39nm,0.9s						
GRF	Grafenberg Arr	56.58	310	eP	P	19 22 44.9	+1.6
GRF				pmax	pmax		
	comp=Z,39nm,0.9s						
GRFO	Grafenberg	56.58	310	eP	P	19 22 44.9	+1.6
	comp=Z,34nm,0.9s						
GRFO	Grafenberg	56.58	310	eP	P	19 22 44.9	+1.6
GRFO				pmax	pmax		
	comp=Z,34nm,0.9s						
BATI	Baumata	56.64	142	P	P	19 22 42.6	-1.4
	comp=Z,64nm,0.6s,baz=315,slow=0.8,SNR=36						
BATI				pP	pP	19 22 47.9	-1.5
	comp=Z,64nm,0.6s,baz=170,slow=0.5,SNR=13						
TIP	Timpagrande	57.14	296	eP	P	19 22 47.8	+0.3
	comp=Z,50nm,1.2s						
WTTA	Wattenberg	57.25	307	i P	P	19 22 48.6	+0.3
	comp=Z,40nm,0.9s,SNR=5.2						
WATA	Walderalm	57.26	307	i P	P	19 22 48.8	+0.5
	comp=Z,20nm,0.8s,SNR=12						
DAG	Danmarks Havn	57.36	345	⇑iP	P	19 22 48.1	-0.3
	comp=Z,41nm,0.7s						
DAG	Danmarks Havn	57.36	345	⇑iP	P	19 22 48.1	-0.3
DAG				pmax	pmax		
	comp=Z,28nm,0.7s						
SQTA	Sankt Quirin	57.53	307	i P	P	19 22 50.7	+0.4
	comp=Z,62nm,1.3s,SNR=7.7						
MOTA	Moosalm	57.55	307	i P	P	19 22 50.8	+0.4
	comp=Z,60nm,1.1s,SNR=22						
RETA	Reutte	57.71	307	eP	P	19 22 51.6	+0.2
	comp=Z,22nm,0.9s						
FETA	Feichten	57.91	307	eP	P	19 22 53.4	+0.4
	comp=Z,30nm,1.0s,SNR=6.2						
CEL	Celeste	58.15	296	eP	P	19 22 54.8	+0.2
	comp=Z,82nm,0.9s						
FUORN	Ofenpass-Fuorn	58.37	307	eP	P	19 22 57.0	+0.8
GAMB	Gambell	58.68	31	eP	P	19 22 58.6	+0.8
BFO	Black Forest	58.86	309	eP	P	19 23 00.3	+0.9
	comp=Z,23nm,1.1s						
BFO	Black Forest	58.86	309	ceP	P	19 23 00.3	+0.9
MEM	Membach	59.30	312	P	P	19 23 03.1	+0.8
MEM				sP	pP	19 23 08.7	+1.0
CDF	Champ du Feu	59.47	310	eP	P	19 23 03.6	-0.1
CDF				pmax	pmax		
	comp=Z,18nm,1.0s						
WLF	Walferdange	59.61	311	P	P	19 23 04.8	+0.3
	comp=Z,30nm,1.6s						
WLF				⇑sP	sP	19 23 11.6	-0.3
HINF	Hinteralfeld	59.98	309	eP	P	19 23 06.9	-0.2
HINF				pmax	pmax		
	comp=Z,19nm,1.2s						
GIVF	Givet	60.20	312	eP	P	19 23 08.8	+0.3
GIVF				pmax	pmax		
	comp=Z,23nm,1.1s						
HAU	Haudompre	60.20	309	eP	P	19 23 08.5	-0.1
HAU				pmax	pmax		
	comp=Z,17nm,1.1s						
SENIN	Lac Senin/Sane	60.33	307	eP	P	19 23 10.4	+0.6
DOU	Dourbes	60.34	312	P	P	19 23 10.1	+0.6
DOU				sP	pP	19 23 15.4	+0.6
BAIF	Baives	60.58	312	eP	P	19 23 11.5	+0.4
BAIF				pmax	pmax		
	comp=Z,19nm,1.0s						
ANM	Nome	60.81	29	eP	P	19 23 13.7	+1.2
ANM				ePcP	PcP	19 23 57.3	+1.1
ANM	Nome	60.81	29	eP	P	19 23 13.7	+1.2
ANM				e		19 23 57.3	
LPG	La Plagne	61.06	307	eP	P	19 23 15.4	+0.5
LPG				pmax	pmax		
	comp=Z,40nm,1.0s						
LPL	La Plagne	61.06	307	eP	P	19 23 15.3	+0.5
LPL				pmax	pmax		
	comp=Z,54nm,1.2s						
BIGH	Upper Bighouse	61.08	323	eP	P	19 23 15.3	+0.9
BIGH				IAmb	IAmb	19 23 15.4	
	comp=Z,198nm,1.3s						
MCD	Coleburn Disti	61.19	322	eP	P	19 23 15.8	+0.6
MBDF	Montbardon	61.40	306	eP	P	19 23 18.9	+1.9
MBDF				pmax	pmax		
	comp=Z,21nm,0.9s						
EDU	Dundee	61.54	321	eP	P	19 23 18.5	+0.9
SCO	Scoresbysund	61.56	340	eP	P	19 23 19.0	+1.6
SCO	Scoresbysund	61.56	340	i P	P	19 23 19.1	+1.7
	comp=Z,19nm,0.8s						
SCO	Scoresbysund	61.56	340	i P	P	19 23 19.1	+1.7
SCO				pmax	pmax		
	comp=Z,19nm,0.8s						
EDMD	Edmundbyers	61.81	319	eP	P	19 23 19.6	+0.2
EDMD				IAmb	IAmb	19 23 29.3	
	comp=Z,145nm,1.6s						
ORIF	Oris-en-Rattie	61.87	306	eP	P	19 23 20.6	+0.5
ORIF				pmax	pmax		
	comp=Z,14nm,0.8s						
FRF	La Foret Royal	62.01	305	eP	P	19 23 18.6	-2.4
FRF				pmax	pmax		
	comp=Z,233nm,2.4s						
HPK	Haverah Park	62.04	318	eP	P	19 23 20.8	-0.1
KAC	Achnashellach	62.20	323	eP	P	19 23 22.2	+0.2
ESK	Eskdalemuir	62.21	320	eP	P	19 23 22.9	+0.8
ESK	Eskdalemuir	62.21	320	eP	P	19 23 22.3	+0.2
ESK				IAmb	IAmb	19 23 23.3	
	comp=Z,63nm,1.1s						
ESK	Eskdalemuir	62.21	320	ceP	P	19 23 23.8	+1.7
AVF	Avril sur Loir	62.57	309	eP	P	19 23 24.3	-0.3
AVF				pmax	pmax		
	comp=Z,25nm,1.1s						
VIVF	Saint-Julien-l	62.66	307	eP	P	19 23 25.2	-0.1
VIVF				pmax	pmax		
	comp=Z,233nm,2.7s						
BGF	Bois d'Agland	62.98	309	eP	P	19 23 27.0	-0.4
FOEL	Foel Wylfa	63.38	318	eP	P	19 23 30.3	+0.4
FOEL				IAmb	IAmb	19 23 31.4	
	comp=Z,48nm,0.9s						
TCF	Toulx Ste Croi	63.50	309	eP	P	19 23 30.9	0.0
TCF				pmax	pmax		
	comp=Z,45nm,1.1s						
LLW	Llanuwychllyn	63.64	318	eP	P	19 23 31.6	0.0
MCH1	Michaelchurch	63.71	317	eP	P	19 23 32.5	+0.4
MCH1				IAmb	IAmb	19 23 33.2	
	comp=Z,64nm,1.0s						
LDF	La Druitiere	63.77	312	eP	P	19 23 32.2	-0.3
KEST	Kesra	63.96	296	eP	P	19 23 35.1	+0.9
KEST	Kesra	63.96	296	P	P	19 23 34.7	+0.6
	comp=Z,20nm,0.9s,baz=334,slow=2.3,SNR=14						
KEST				LR	LR	19 57 39.1	
	comp=Z,60nm,18.6s,baz=304,slow=42						
SUMG	Summit	64.05	345	eP	P	19 23 34.6	+0.1
SUMG	Summit	64.05	345	⇑iP	P	19 23 34.7	+0.2
	comp=Z,190nm,1.3s						
SUMG	Summit	64.05	345	eP	P	19 23 34.6	+0.1
KMBO	Kilima Mbogo	64.10	246	P	P	19 23 35.8	+0.3
	comp=Z,10nm,0.9s,baz=38,slow=10.0,SNR=20						
KMBO				pP	pP	19 23 41.1	+0.3
	comp=Z,13nm,0.9s,baz=31,slow=7.0,SNR=12						
KMBO				LR	LR	19 52 25.4	
	comp=Z,57nm,18.4s,baz=92,slow=37						
IM3	Indian Mountai	64.14	25	eP	P	19 23 34.6	-0.1
FITZ	Fitzroy Crossi	64.44	145	eP	P	19 23 37.0	-0.2
FITZ	Fitzroy Crossi	64.44	145	P	P	19 23 36.6	-0.5
	comp=Z,27nm,0.8s,baz=342,slow=5.5,SNR=92						
FITZ				pP	pP	19 23 42.0	-0.6
	comp=Z,26nm,0.7s,baz=338,slow=7.4,SNR=22						
COLD	Coldfoot	64.48	23	eP	P	19 23 38.1	+1.2
MBWA	Marble Bar	64.73	152	eP	P	19 23 38.9	-0.1
KULLO	Kullorsuaq	65.34	351	⇑iP	P	19 23 41.9	-0.5
	comp=Z,42nm,1.2s						
KULLO	Kullorsuaq	65.34	351	⇑iP	P	19 23 41.9	-0.5
KULLO				pmax	pmax		
	comp=Z,42nm,1.2s						
CAST	Castle Rocks	66.30	26	eP	P	19 23 50.0	+1.2
FYU	Fort Yukon	66.38	22	eP	P	19 23 51.1	+1.9
SVW2	Sparrevohn	66.47	29	eP	P	19 23 51.3	+1.4
POKR	Poker Plat Res	66.72	23	P	P	19 23 52.4	+1.0
	baz=312,SNR=12						
TCOL	CIGO, UAF Yank	66.75	24	P	P	19 23 52.1	+0.6
	baz=312,SNR=8.7						
COLA	College	66.75	24	eP	P	19 23 52.9	+1.3
COLA	College	66.75	24	eP	P	19 23 52.9	+1.3
IL1	Eielson Array	67.12	24	eP	P	19 23 53.7	-0.3
ILAR	Eielson Array	67.12	24	P	P	19 23 54.1	+0.1
	comp=Z,21nm,0.9s,baz=301,slow=4.9,SNR=177						
ILAR				PP	PP	19 26 18.3	-3.1
	comp=Z,5.6nm,1.0s,baz=306,slow=7.7,SNR=7.0						
ILAR				LR	LR	19 54 48.1	
	comp=Z,142nm,19.1s,baz=323,slow=37						
ILB	Eielson Array	67.12	24	eP	P	19 23 54.2	+0.2
HDA	Harding Lake	67.35	24	P	P	19 23 54.6	-0.8
	baz=313						
INK	Inuvik	68.09	17	P	P	19 24 00.4	+0.4
	comp=Z,27nm,1.0s,baz=328,slow=7.8,SNR=66						
DHY	Denali Highway	68.13	25	eP	P	19 24 00.9	+0.3
MBAR	Mbarara	68.49	251	eP	P	19 24 03.9	+0.4
PMR	Palmer	68.54	27	eP	P	19 24 03.2	+0.3
PMR	Palmer	68.54	27	eP	P	19 24 03.2	+0.3
EPYK	Eagle Plains	68.85	19	eP	P	19 24 04.8	-0.1
EPYK	Eagle Plains	68.85	19	P	P	19 24 04.7	-0.1
	baz=321						
ILULI	Ilulissat	69.20	347	i P	P	19 24 06.6	-0.3
	comp=Z,44nm,0.8s						
ILULI	Ilulissat	69.20	347	i P	P	19 24 06.6	-0.3
ILULI				pmax	pmax		
	comp=Z,44nm,0.8s						
HARP	HAARP	69.33	25	eP	P	19 24 09.5	+1.6
KDAK	Kodiak Island	69.76	31	P	P	19 24 10.5	0.0
	comp=Z,22nm,0.7s,baz=309,slow=4.4,SNR=16						
DAWY	Dawson	69.89	22	eP	P	19 24 11.1	-0.2
	comp=Z,29nm,1.1s						
WRAB	Tennant Creek	70.27	138	eP	P	19 24 12.8	-1.4
WRAB	Tennant Creek	70.27	138	eP	P	19 24 12.8	-1.4
WRA	Warramunga Arr	70.28	138	P	P	19 24 13.5	-0.7
	comp=Z,31nm,0.8s,baz=331,slow=5.8,SNR=265						
WRA				pP	pP	19 24 18.9	-0.7
	comp=Z,29nm,0.9s,baz=337,slow=6.0,SNR=22						
WRA				PKPPKP	P'P'df	19 52 15.8	+4.5
	comp=Z,2.4nm,1.1s,baz=134,slow=3.4,SNR=7.9						
COEN	Coen	70.63	127	eP	P	19 24 15.8	-0.6
ESDC	Sonseca Array	70.82	306	P	P	19 24 18.1	+0.6
	comp=Z,18nm,0.8s,baz=50,slow=6.1,SNR=67						
ESDC				pP	pP	19 24 22.9	0.0
	comp=Z,14nm,0.8s,baz=49,slow=5.7,SNR=16						
MORW	Morawa	70.83	158	eP	P	19 24 16.9	-0.4
SFJD	Kangerlussuaq	71.04	345	i P	P	19 24 17.7	-0.5
	comp=Z,34nm,0.7s						
SFJD	Kangerlussuaq	71.04	345	i P	P	19 24 17.7	-0.5
SFJD				pmax	pmax		
	comp=Z,34nm,0.7s						
PBRG	Braganca	71.34	309	eP	P	19 24 21.5	+0.9
	comp=Z,52nm,1.6s						
MVO	Moncorvo	71.89	308	eP	P	19 24 24.7	+0.8
	comp=Z,75nm,1.6s						
PGAV	Gavieira, Arco	72.18	310	eP	P	19 24 27.0	+1.3
PCAB	Cabril	72.18	309	eP	P	19 24 26.3	+0.7
	comp=Z,104nm,2.1s						
POLO	Lamas de Olo	72.23	309	eP	P	19 24 25.2	-0.8
MTE	Manteigas	72.65	308	eP	P	19 24 29.2	+0.7
PVIS	Viseu	72.68	308	eP	P	19 24 29.5	+0.8
	comp=Z,62nm,2.3s						
PMRV	Marv??o	73.13	307	eP	P	19 24 32.0	+0.7
ASAR	Alice Springs	73.15	141	P	P	19 24 31.1	-0.3
	comp=Z,32nm,0.8s,baz=331,slow=6.0,SNR=363						
ASAR				pP	pP	19 24 36.2	-0.6
	comp=Z,29nm,0.8s,baz=329,slow=6.4,SNR=25						
ASAR				PKiKP	PKiKP	19 30 30.9	+0.6
	comp=Z,0.6nm,0.9s,baz=359,slow=1.5,SNR=4.1						
PCAS	Casmilo, Conde	73.44	308	eP	P	19 24 33.6	+0.5
PTOM	Tomar	73.65	308	eP	P	19 24 35.7	+1.4
PMTG	Montargil	73.86	307	eP	P	19 24 36.3	+0.7
PBEJ	Beja	74.26	306	eP	P	19 24 40.0	+2.1
	comp=Z,34nm,1.3s						
MESJ	Messejana	74.59	306	eP	P	19 24 40.9	+1.1
MESJ				AMb	AMB	19 24 42.0	
	comp=Z,60nm,1.7s						
MESJ	Messejana	74.59	306	eP	P	19 24 40.9	+1.1
	comp=Z,61nm,1.3s						
MESJ	Messejana	74.59	306	eP	P	19 24 40.9	+1.1
MESJ				pmax	pmax		
	comp=Z,60nm,1.7s						
PNCL	Nicolau / Gran	74.62	307	eP	P	19 24 41.4	+1.4
	comp=Z,49nm,1.5s						
NWAO	Narrogin (SRO)	74.80	158	P	P	19 24 40.2	-0.7
	comp=Z,23nm,0.9s,baz=185,slow=3.2,SNR=8.2						
NWAO				pP	pP	19 24 45.5	-0.7
	comp=Z,26nm,0.8s,baz=202,slow=7.9,SNR=7.5						
YKA	Yellowknife Ar	76.99	12	P	P	19 24 53.5	+0.4
	comp=Z,11nm,0.8s,baz=339,slow=5.3,SNR=122						
YKA				pP	pP	19 24 58.9	+0.4
	comp=Z,7.2nm,1.0s,baz=334,slow=5.5,SNR=11						
YKA				PKPPKP	P'P'df	19 52 00.5	-10
	comp=Z,0.2nm,0.7s,baz=107,slow=7.2,SNR=4.2						
YKA				LR	LR	20 02 10.0	
	comp=Z,5.0nm,18.6s,baz=328,slow=38						
CTA	Charters Tower	77.18	129	P	P	19 24 53.8	-1.0
	comp=Z,20nm,0.8s,baz=333,slow=8.4,SNR=22						
CTA				pP	pP	19 24 59.6	-0.6
	comp=Z,12nm,0.8s,baz=333,slow=8.9,SNR=6.1						
CTAO	Charters Tower	77.18	129	eP	P	19 24 54.0	-0.7
	comp=Z,118nm,0.9s						
CTAO	Charters Tower	77.18	129	eP	P	19 24 54.0	-0.7
CTAO				pmax	pmax		
	comp=Z,118nm,0.9s						
LSZ	Lusaka	80.35	242	eP	P	19 25 11.7	-0.7
	comp=Z,2.3nm,0.8s						
LSZ				LR	LR		
	comp=Z,208nm,21.0s						
LSZ	Lusaka	80.35	242	eP	P	19 25 11.7	-0.7
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LSZ				MLR	MLR		
	comp=Z,208nm,21.0s						
TOA0	Torodi Ar. Sit	82.41	281	P	P	19 25 23.3	-0.1

	SNR=5.4						
TORD	Torodi Ar. Bea	82.41	281	P	P	19 25 21.7	-1.6
	comp=Z,21nm,0.8s,baz=25,slow=4.4,SNR=90						
TORD				pP	PcP	19 25 27.9	-0.6
	comp=Z,15nm,0.8s,baz=42,slow=4.6,SNR=17						
TORD				LR	LR	20 09 06.6	
	comp=Z,69nm,19.7s,baz=5.0,slow=41						
FCC	Fort Churchill	82.89	3	eP	P	19 25 24.4	-0.7
	comp=Z,44nm,1.3s						
FCC	Fort Churchill	82.89	3	eP	P	19 25 24.4	-0.7
FCC				pmax	pmax		
	comp=Z,44nm,1.3s						
STKA	Stephens Creek	83.75	140	P	P	19 25 29.0	-0.8
	comp=Z,18nm,0.7s,baz=327,slow=5.3,SNR=41						
STKA				pP	PcP	19 25 34.1	+0.3
	comp=Z,20nm,0.8s,baz=323,slow=4.8,SNR=15						
SCHQ	Schefferville	85.28	348	P	P	19 25 37.3	0.0
	comp=Z,27nm,0.7s,baz=31,slow=6.2,SNR=34						
SCHQ				LR	LR	20 07 24.0	
	comp=Z,134nm,18.5s,baz=339,slow=38						
FFC	Flin Flon	86.28	8	eP	P	19 25 42.0	-0.4
	comp=Z,36nm,1.0s						
FFC	Flin Flon	86.28	8	i P	P	19 25 42.2	-0.1
A04D	Lummi Island	87.72	22	P	P	19 25 49.6	+0.2
	baz=333						
B05A	Bryant	88.31	22	P	P	19 25 52.8	+0.6
	baz=334						
D03D	Eldon	88.66	23	P	P	19 25 55.3	+1.4
	baz=333						
C06D	Leavenworth	88.96	22	P	P	19 25 56.1	+0.7
	baz=335						
D04E	Lakebay	89.07	23	P	P	19 25 57.7	+1.9
	baz=333						
NEW	Newport	89.68	19	P	P	19 25 59.7	+0.9
	baz=337						
NEW	Newport	89.68	19	P	P	19 25 59.1	+0.3
	comp=Z,17nm,0.9s,baz=330,slow=6.3,SNR=13						
E04D	Cinebar	89.69	23	P	P	19 26 00.1	+1.4
	baz=333						
F04D	Rainier, OR	89.97	24	P	P	19 26 01.7	+1.6
	baz=333						
F05D	White Salmon	90.63	23	P	P	19 26 04.4	+1.2
	baz=334						
G03D	McMinnville, O	90.67	24	P	P	19 26 04.7	+1.3
	baz=333						
CHGQ	Chibougamau	91.13	351	P	P	19 26 05.3	-0.2
	baz=10						
ULM	Lac du Bonnet	91.28	5	P	P	19 26 05.0	-1.0
	comp=Z,7.5nm,0.8s,baz=2.0,slow=5.4,SNR=14						
ULM				LR	LR	20 10 50.7	
	comp=Z,80nm,18.8s,baz=328,slow=38						
H04D	Lebanon	91.45	24	P	P	19 26 07.8	+0.7
	baz=333						
I02D	Swisshome	91.46	25	P	P	19 26 07.3	+0.3
	baz=332						
DBIC	Dimbokro	91.47	280	P	P	19 26 06.5	-1.0
	comp=Z,9.3nm,0.9s,baz=20,slow=7.7,SNR=9.5						
DBIC				pP	pP	19 26 12.2	-0.9
	comp=Z,5.5nm,0.8s,baz=43,slow=6.1,SNR=4.7						
BOSA	Boshof	91.55	234	P	P	19 26 06.8	-0.9
	comp=Z,4.3nm,0.8s,baz=35,slow=2.6,SNR=4.5						
BOSA				pP	pP	19 26 11.9	-1.3
	comp=Z,4.3nm,0.8s,baz=357,slow=2.3,SNR=3.7						
BOSA				LR	LR	20 06 58.6	
	comp=Z,89nm,18.8s,baz=36,slow=35						
KIC	Kosan Boka	91.57	279	ePKIKP	P	19 26 07.4	-0.7
	comp=Z,40nm,1.1s						
EGMT	Eagleton	91.59	15	eP	P	19 26 07.6	-0.1
	comp=Z,41nm,1.1s						
EGMT	Eagleton	91.59	15	P	P	19 26 07.8	+0.1
	baz=343						
TIC	Toumodi	91.61	280	ePKIKP	P	19 26 07.5	-0.8
MATQ	Matagami	91.62	354	P	P	19 26 07.8	+0.1
	baz=7.8						
MSO	Missoula	91.81	18	P	P	19 26 08.9	+0.2
	baz=340						
LIC	Lamto	91.88	279	ePKIKP	P	19 26 07.0	-2.5
	comp=Z,44nm,1.3s						
DZM	Mont Dzumac	91.89	117	P	P	19 26 08.3	-1.0
	comp=Z,7.0nm,0.9s,baz=356,slow=19,SNR=3.5						
I03D	Drain, OR	91.99	25	P	P	19 26 10.6	+1.1
	baz=333						
I05D	Terrebonne, OR	92.06	23	P	P	19 26 10.6	+0.6
	baz=334						
DGMT	Dagmar	92.12	11	eP	P	19 26 10.5	+0.4
	comp=Z,89nm,1.0s						
DGMT	Dagmar	92.12	11	P	P	19 26 10.5	+0.4
	baz=347,SNR=11						
I04A	Tendick Farm,	92.21	24	P	P	19 26 11.1	+0.5
	baz=334,SNR=6.7						
LSQQ	Lebel-sur-Quev	92.25	353	P	P	19 26 10.6	0.0
	baz=8.3						
J01E	Myrtle Point	92.27	26	P	P	19 26 11.7	+1.0
	baz=332						
J04D	Umpqua Nationa	92.80	24	P	P	19 26 14.5	+1.0
	baz=334,SNR=5.1						
J05D	Fort Rock, OR	93.05	24	P	P	19 26 16.1	+1.5
	baz=334,SNR=7.5						
L02E	Cave Junction	93.27	26	P	P	19 26 16.8	+1.3
	baz=333						
MDND	Maddock	93.32	8	P	P	19 26 15.8	+0.2
	baz=351						
LATQ	La Tuque	93.41	350	P	P	19 26 16.2	+0.2
	baz=12						
K04D	Chiloquin, OR	93.47	24	P	P	19 26 17.7	+1.1
	baz=334						
BOZ	Bozeman (W)	93.50	17	eP	P	19 26 16.8	+0.1
	comp=Z,15nm,1.2s						
BOZ	Bozeman (W)	93.50	17	eP	P	19 26 16.8	+0.1
BOZ				pmax	pmax		
	comp=Z,15nm,1.2s						
BOZ	Bozeman (W)	93.50	17	P	P	19 26 16.9	+0.3
	baz=341,SNR=17						
LAO	LASA Array	93.53	13	P	P	19 26 17.2	+0.6
	baz=346						
L04D	Klamath Falls	93.66	25	P	P	19 26 18.2	+0.8
	baz=334						
EYMN	Ely	93.81	3	P	P	19 26 18.3	+0.5
	baz=357						
D54A	Lac Fusel, La	94.11	352	P	P	19 26 19.2	0.0
	baz=8.6						
M04C	Macdoel	94.20	25	P	P	19 26 20.7	+0.8
	baz=334						
M02C	Callahan	94.21	26	P	P	19 26 21.1	+1.2
	baz=333						
D53A	Lac Vacive, Po	94.28	353	P	P	19 26 19.7	-0.3
	baz=7.8						
RLMT	Red Lodge	94.46	15	P	P	19 26 21.3	+0.1
	baz=343,SNR=6.6						
MOD	Modoc Plateau	94.59	24	eP	P	19 26 22.5	+0.8
	comp=Z,18nm,1.1s						
WVOR	Wild Horse Val	94.62	22	eP	P	19 26 22.6	+0.8
	comp=Z,11nm,1.0s						
WVOR	Wild Horse Val	94.62	22	eP	P	19 26 22.6	+0.8
WVOR				pmax	pmax		
	comp=Z,11nm,1.0s						
D47A	Chapleau	94.67	357	P	P	19 26 21.4	-0.4
	baz=3.5						
HLID	Hailey	94.75	19	P	P	19 26 22.9	+0.4
	baz=339,SNR=6.3						
LKWY	Lake	94.75	16	eP	P	19 26 24.3	+1.7
	comp=Z,33nm,0.1s						
LKWY	Lake	94.75	16	eP	P	19 26 24.3	+1.7
E54A	Lac Daplat, Po	94.87	353	P	P	19 26 22.4	-0.3
	baz=8.2						
D46A	Sault St. Mari	94.87	357	P	P	19 26 22.4	-0.4
	baz=2.8						
H17A	Grant Village	94.88	16	P	P	19 26 24.8	+1.7
	baz=342,SNR=7.2						
PKME	Peaks-Kenny Pk	94.93	347	P	P	19 26 22.8	-0.2
	baz=14						
E53A	Dumoine, Ponti	94.97	353	P	P	19 26 23.0	-0.1
	baz=7.8						
E51A	G1948 Merrick	94.97	354	P	P	19 26 23.1	-0.1
	baz=6.4						
E38A	The Farm, Brul	95.15	3	P	P	19 26 23.5	-0.5
	baz=357						
E50A	Wahnapitae	95.17	355	P	P	19 26 24.0	-0.1
	baz=5.4						
E44A	Grand Marais A	95.19	359	P	P	19 26 23.7	-0.4
	baz=1.3						
E41A	Kenton	95.35	1	P	P	19 26 25.0	0.0
	baz=359						
E42A	Champion	95.39	0	P	P	19 26 24.8	-0.3
	baz=360						
E46A	Sault Ste Mari	95.40	358	P	P	19 26 24.6	-0.6
	baz=2.6						
E39A	Mellen	95.41	2	P	P	19 26 24.5	-0.7
	baz=358						
ALFO	Alfred	95.41	351	P	P	19 26 24.9	-0.2
	baz=10.0						
F51A	Arnstein	95.61	355	P	P	19 26 25.7	-0.4
	baz=6.1						
PEMO	Pembroke	95.62	353	P	P	19 26 25.9	-0.2
	baz=8.2						
F52A	Sundridge	95.69	354	P	P	19 26 26.2	-0.3
	baz=6.5						
F38A	Pierce - Schro	95.78	3	P	P	19 26 26.9	0.0
	baz=357						
F39A	Loretta	95.86	2	P	P	19 26 26.8	-0.5
	baz=357						
PLVO	Plevna	96.24	352	P	P	19 26 28.7	-0.3
	baz=8.3						
G53A	Haliburton	96.30	354	P	P	19 26 29.0	-0.3
	baz=7.1						
BANO	Bancroft	96.34	353	P	P	19 26 29.5	+0.1
	baz=7.6						
LONY	Lake Ozonia	96.36	351	P	P	19 26 29.6	0.0
	baz=10						
RSSD	Black Hills	96.39	12	eP	P	19 26 29.8	-0.2
	comp=Z,23nm,1.1s						
RSSD	Black Hills	96.39	12	eP	P	19 26 29.8	-0.2
RSSD				pmax	pmax		
	comp=Z,23nm,1.1s						
RSSD	Black Hills	96.39	12	P	P	19 26 29.9	0.0
	baz=347						
H56A	Elgin	96.59	352	P	P	19 26 30.4	-0.1
	baz=8.9						
BW06	Boulder Array	96.65	16	P	P	19 26 30.2	-1.1
	baz=343						
PDAR	Pinedale Array	96.65	16	P	P	19 26 30.9	-0.3
	comp=Z,1.2nm,0.8s,baz=22,slow=4.5,SNR=9.7						
PDAR				PP	PP	19 30 10.4	-14
	comp=Z,0.7nm,0.8s,baz=90,slow=2.2,SNR=4.2						
PDAR				PKiKP	PKiKP	19 31 08.1	0.0
	comp=Z,0.4nm,0.8s,baz=81,slow=1.2,SNR=2.4						
PDAR				PKKPbc	PKKPdf	19 43 11.8	-1.6
	comp=Z,0.6nm,0.8s,baz=145,slow=3.6,SNR=4.6						
SADO	Sadowa	96.70	354	LR	LR	20 11 03.7	
	comp=Z,54nm,21.4s,baz=54,slow=36						
H38A	Maiden Rock	97.05	3	P	P	19 26 32.6	-0.1
	baz=356						
ELK	Elko	97.16	21	P	P	19 26 33.1	-0.5
	comp=Z,1.3nm,0.9s,baz=334,slow=8.2,SNR=4.3						
H40A	Chili	97.17	2	P	P	19 26 33.0	-0.2
	baz=358						
ECSD	EROS Data Cent	97.69	7	eP	P	19 26 35.3	-0.3
	comp=Z,12nm,1.0s						
ECSD	EROS Data Cent	97.69	7	P	P	19 26 35.2	-0.5
	baz=353						
I41A	Arkdale	97.74	2	P	Pdif	19 26 35.9	0.0
	baz=358						
I39A	Houston	97.90	3	P	P	19 26 35.7	-0.8
	baz=357						
DUG	Dugway, Tooele	98.32	19	P	Pdif	19 26 38.8	+0.1
	baz=340						
NVAR	Mina Array Bea	98.38	24	P	Pdif	19 26 39.4	+0.3
	comp=Z,1.7nm,0.9s,baz=298,slow=3.8,SNR=9.0						
J39A	Decorah	98.41	3	P	P	19 26 38.4	-0.5
	baz=357						
R11A	Troy Canyon, C	99.28	22	Pdiff	Pdif	19 26 42.5	-0.6
	baz=338						
O20A	White River Ci	99.46	16	Pdiff	Pdif	19 26 43.5	-0.3
	baz=344						
MPMC	Manual Prospec	100.81	24	Pdiff	Pdif	19 26 49.8	-0.2
	baz=337						
TXAR	Lajitas Array	110.83	15	PKiKP	PKiKP	19 31 33.7	-0.5
	comp=Z,1.9nm,1.1s,baz=348,slow=1.3,SNR=5.0						
TXAR				PP	PP	19 32 10.0	-0.3
	comp=Z,0.8nm,0.8s,baz=340,slow=5.0,SNR=3.2						
TXAR				PKKPbc	PKKPbc	19 42 31.0	-0.3
	comp=Z,0.1nm,0.4s,baz=157,slow=4.9,SNR=2.4						
NVL	N'lazarevskaya	122.86	203	ePKIKP	PKPdf	19 31 55.3	-0.4
NVL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VNDA	Vanda	123.11	166	PKP	PKPdf	19 31 55.1	-0.9
	comp=Z,4.4nm,1.0s,baz=18,slow=3.2,SNR=4.0						
CMIG	Matias Romero	124.24	8	PKP	PKPdf	19 31 59.5	-0.5
	comp=Z,1.9nm,1.0s,baz=12,slow=9.3,SNR=2.5						
SNAA	Sanae	127.67	203	PKP	PKiKP	19 32 05.1	-0.4
VNA2	Neumayer--Watz	129.03	205	PKP	PKPdf	19 32 07.6	+0.1
	baz=74,slow=2.3						
VNA1	Neumayer--Stat	129.28	205	PKP	PKiKP	19 32 08.7	0.0
VNA3	Neumayer Olymp	129.79	204	PKP	PKiKP	19 32 09.4	-0.3
SDV	Santo Domingo	130.20	338	PKP	PKPdf	19 32 11.3	-0.5
	comp=Z,13nm,0.9s,baz=89,slow=0.8,SNR=11						
SDV				pPKP	pPKPdf	19 32 16.3	-1.1
	comp=Z,14nm,1.0s,baz=333,slow=5.0,SNR=6.8						
SDV				SKPbc	SKPbc	19 35 34.2	-0.1
	comp=Z,1.8nm,0.4s,baz=360,slow=6.8,SNR=4.2						
ROSC	El Rosal	135.08	341	PKP	PKPdf	19 32 21.3	+0.1
	comp=Z,3.7nm,0.4s,baz=36,slow=14,SNR=4.0						
BDFB	Brasilia	138.40	292	PKhKP	PKPpre	19 32 21.8	
	comp=Z,1.7nm,0.5s,baz=127,slow=5.1,SNR=4.5						
CPUP	Villa Florida	151.76	287	PKP	PKPdf	19 32 49.2	0.0
	comp=Z,3.3nm,0.9s,baz=67,slow=3.5,SNR=7.7						
CPUP				PKPbc	pPKPdf	19 32 55.2	+0.3
	comp=Z,36nm,0.8s,baz=57,slow=2.6,SNR=76						
CPUP				pPKPbc	pPKPbc	19 33 00.3	-1.0
	comp=Z,35nm,0.7s,baz=73,slow=2.5,SNR=22						
NNA	Nana	151.83	337	i PKIKP	PKiKP	19 32 56.7	+0.2
LPAZ	La Paz	151.95	317	PKP	PKPdf	19 32 50.5	-0.1
	comp=Z,2.8nm,0.8s,baz=24,slow=4.3,SNR=6.0						
LPAZ				PKPbc	pPKPdf	19 32 56.3	0.0
	comp=Z,8.1nm,0.7s,baz=12,slow=6.1,SNR=15						
LPAZ				pPKPbc	pPKPbc	19 33 01.9	-0.9
	comp=Z,11nm,0.8s,baz=12,slow=7.5,SNR=9.3						

PRU 11 19:19:18.4±0.0, 49°.80N×18°.71E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.37	276	ePG	Pg	19 19 25.7	+0.3
OKC				eSG	Sg	19 19 30.5	+0.3
	comp=Z,13nm,0.6s						
MORC	Moravsky Berou	0.76	269	ePG	Pg	19 19 33.3	+0.4
MORC				eSG	Sg	19 19 41.8	-0.9
KRLC	Kraliky	1.28	283	eSG	Sg	19 19 59.6	+0.2
VRAC	Vranov	1.46	251	ePN	Pn	19 19 45.6	-0.5
VRAC				eSG	Sg	19 20 04.0	-1.4
DPC	Dobruska-Polom	1.63	291	eSG	Sn	19 20 09.8	-0.4
KRUC	Moravsky	1.68	245	ePN	Pn	19 19 49.0	-0.1
KRUC				eSG	Sn	19 20 10.9	-0.4
UPC	Upice	1.87	293	eSG	Sb	19 20 17.0	-0.5
KHC	Kasperske Hory	3.41	261	eSG	Sg	19 21 06.8	-1.2

IDC ***11*** *19:20:34.5±0.8, 25°.59N×125°.36E, h0^{km}, mb3.9/10, mb1 4.0/10, mb1mx3.7/58, mbtmp3.9/10, Error ellipse: s-maj=35.2km s-min=16.4km az=76.0*

NEIC ***11*** *19:20:39.6±0.4, 25°.57N×125°.30E, h35^{km}, mb4.5/1, Error ellipse: s-maj=20.7km s-min=9.4km az=72.0*

ISCJB ***11*** *19:20:44.4±0.3, 25°.57N±0°.06×125°.40E±0°.05, h96^{km}±4^{km}, mb3.8/11, Error ellipse: s-maj=11.8km s-min=3.5km az=146.9*

JMA ***11*** *19:20:45.2±0.1, 25°.64N×125°.33E, h84^{km}±5^{km}, M3.4*

ISC 11 19:20:45.3±0.8, 25°.6N±0°.1×125°.39E±0°.07, h89^{km}±12^{km}, n29, σ0^{s}.65/42, mb3.8/11, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.67	191	P	Pn	19 21 01.6	+0.2
JIKM				eS	Sn	19 21 13.5	+0.1
JMJ	Miyako jima 2	0.77	186	P	Pn	19 21 02.7	+0.2
JMJ				S	Sn	19 21 15.5	+0.3
JIRB	Irabujima	0.78	194	P	Pn	19 21 02.3	-0.2
JIRB				eS	Sn	19 21 14.7	-0.6
JOGS	Gusukube	0.82	179	P	Pn	19 21 03.4	+0.4
JOGS				eS	Sn	19 21 16.6	+0.5
JTJ	Tarama	1.12	214	P	Pn	19 21 06.5	+0.1
JTJ				S	Sn	19 21 22.0	-0.2
JISG	Ishigakijimahi	1.39	225	P	Pn	19 21 09.9	+0.3
JISG				S	Sn	19 21 27.6	-0.4
JKE	Kume jima 2	1.46	59	P	Pn	19 21 10.7	+0.2
JKE				S	Sn	19 21 30.0	+0.4
JIJ	Ishigaki jima	1.66	223	P	Pn	19 21 12.9	-0.1
JIJ				S	Sn	19 21 32.4	-1.6
JKRS	Kuro-shima	1.83	223	P	Pn	19 21 15.4	+0.1
JKRS				eS	Sn	19 21 37.0	-1.1
JAGN	Aguni-jima	1.95	59	P	Pn	19 21 17.2	+0.4
JAGN				eS	Sn	19 21 40.5	-0.3
IRIF	Iriomote-Funau	1.95	231	P	Pn	19 21 17.0	+0.2
IRIF				eS	Sn	19 21 40.8	0.0
HATJ	Hateruma jima	2.09	224	P	Pn	19 21 18.6	-0.1
JJT3	Tamagusuku3	2.23	75	P	Pn	19 21 20.7	+0.1
JJT3				eS	Sn	19 21 47.6	+0.1
YOJ	Yonaguni jima	2.42	243	P	Pn	19 21 23.9	+0.8
YOJ				eS	Sn	19 21 52.3	+0.2
JYNG	Yonagunijimaku	2.48	244	P	Pn	19 21 24.9	+1.0
JYNG				eS	Sn	19 21 53.7	+0.2
JNTH	Nagotoyohara	2.55	68	P	Pn	19 21 25.2	+0.4
JNTH				eS	Sn	19 21 54.1	-0.9
JIH	Iheya	2.73	57	eS	Sn	19 21 57.3	-2.1
JOW	Kunigami	2.88	64	P	Pn	19 21 29.7	+0.5
JOW				S	Sn	19 22 03.0	0.0
SONM	Songino Array	26.79	331	P	P	19 26 16.8	-0.1
	0.7nm,0.6s,baz=144,slow=11,SNR=7.1						
MKAR	Makanchi Array	40.08	313	P	P	19 28 11.7	-0.3
	0.4nm,0.4s,baz=102,slow=9.4,SNR=5.9						
ZALV	Zalesovo Beam	41.24	324	P	P	19 28 20.7	-0.7
	2.1nm,0.4s,baz=115,slow=8.9,SNR=12						
FITZ	Fitzroy Crossi	43.42	180	P	P	19 28 39.0	-0.3
	2.0nm,0.7s,baz=11,slow=8.5,SNR=5.9						
KURK	Kurchatov	43.55	318	eP	P	19 28 39.3	-0.8
	1.7nm,0.2s						
WRA	Warramunga Arr	46.08	168	P	P	19 29 00.3	-0.2
	0.8nm,0.5s,baz=349,slow=8.6,SNR=6.6						
ASAR	Alice Springs	49.65	170	P	P	19 29 28.3	+0.3
	0.6nm,0.5s,baz=353,slow=7.9,SNR=11						
ILAR	Eielson Array	66.21	28	P	P	19 31 24.3	+1.0
	0.3nm,0.5s,baz=291,slow=8.1,SNR=7.5						
INK	Inuvik	70.48	23	P	P	19 31 50.6	+0.8
	2.3nm,1.1s,baz=299,slow=6.1,SNR=5.1						
FINES	FINESS Array B	72.16	330	P	P	19 31 59.6	-0.5
	0.9nm,0.6s,baz=51,slow=11,SNR=6.9						
YKA	Yellowknife Ar	80.17	24	P	P	19 32 45.8	+0.3
	0.3nm,0.4s,baz=305,slow=5.6,SNR=6.2						

IDC 11 19:29:51.3±5.2, 5°.06S×145°.79E, h179^{km}±49^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.1/35, mbtmp3.8/6, Error ellipse: s-maj=54.2km s-min=21.0km az=105.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	5.67	296	P	Pn	19 31 14.1	+0.1
	1.1nm,0.3s,baz=136,slow=7.7,SNR=9.5						
WRA	Warramunga Arr	18.53	216	P	P	19 33 53.4	-1.0
	0.4nm,0.3s,baz=36,slow=10,SNR=25						
ASAR	Alice Springs	21.76	211	P	P	19 34 27.9	-1.1
	0.9nm,0.5s,baz=41,slow=8.4,SNR=23						
FITZ	Fitzroy Crossi	23.58	235	P	P	19 34 47.0	+1.1
	3.1nm,0.5s,baz=49,slow=9.1,SNR=25						
STKA	Stephens Creek	26.97	188	P	P	19 35 16.9	+0.6
	1.3nm,0.6s,baz=12,slow=14,SNR=2.9						
ILAR	Eielson Array	85.09	23	P	P	19 42 06.6	-0.1
	0.3nm,0.5s,baz=243,slow=5.3,SNR=6.5						

SOME ***11*** *19:40:36.1, 41°.17N×76°.52E, h5^{km}*

KRNET ***11*** *19:40:37.4±0.1, 41°.22N×76°.42E, h17^{km}, mb3.5*

NNC ***11*** *19:40:38.0±0.8, 41°.22N×76°.52E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=6.6km s-min=4.0km az=144.0*

KNET ***11*** *19:40:39.4±0.5, 41°.33N×76°.30E, h2^{km}±3^{km}, ml3.0, Error ellipse: s-maj=3.2km s-min=3.1km az=87.0*

ISC 11 19:40:37.0±1.4, 41°.24N±0°.04×76°.48E±0°.02, h0^{km}±11^{km}, n89, σ1^{s}.19/137, 47C-35D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	0.41	298	⇑iP	Pg	19 40 44.9	+0.1
	baz=1.0						
NRN				⇑iS	Sg	19 40 50.9	+0.8
	baz=1.0						
ULHL	Ulahol	1.02	350	⇓P	Pg	19 40 56.7	+0.3
	76nm,0.2s,SNR=13						
ULHL				⇓S	Sb	19 41 11.0	-0.6
	252nm,0.2s						
ULHL	Ulahol	1.02	350	⇓iP	Pg	19 40 56.8	+0.3
	baz=53						
ULHL				⇓iS	Sb	19 41 11.0	-0.6
	baz=53						
KDJ	Kajisay	1.03	30	⇓iP	Pn	19 40 57.9	-1.0
	baz=32						
KDJ				⇓iS	Sn	19 41 12.5	-1.6
	baz=32						
KZA	Kyzart	1.24	313	⇑P	Pn	19 41 00.3	-1.7
	140nm,0.3s,SNR=57						
KZA				⇓S	Sb	19 41 17.2	-1.1
	204nm,0.3s						
KZA	Kyzart	1.24	313	⇓iP	Pn	19 41 00.1	-1.9
	baz=15						
KZA				⇓iS	Sb	19 41 17.2	-1.1
	baz=15						
BOOM	Boomskoye usch	1.31	342	⇓iP	Pn	19 41 01.9	-0.8
	baz=44						
BOOM				⇓iS	Sg	19 41 19.9	+0.8
	baz=44						
ARLS	Aral	1.73	292	⇑iP	Pb	19 41 08.5	-1.2
	baz=93						
ARLS				⇑iS	Sb	19 41 31.5	-0.6
	baz=93						
UCH	Uchtor	1.77	304	⇑P	Pb	19 41 09.7	-0.9
	39nm,0.2s,SNR=111						
UCH				⇓S	Sg	19 41 33.9	0.0
	70nm,0.2s						
UCH	Uchtor	1.77	304	⇑iP	Pb	19 41 09.7	-0.9
	baz=6.0						
UCH				⇑eS	Sb	19 41 33.1	-0.4
	baz=6.0						
IZV	Izvestkoviy	1.80	3	P	Pb	19 41 11.1	+0.3
	63nm,0.3s						
IZV				S	Sg	19 41 36.0	+1.4
	101nm,0.2s						
IZV	Izvestkoviy	1.80	3	eP	Pb	19 41 11.1	+0.3
	63nm,0.3s						
IZV				eS	Sg	19 41 36.0	+1.4
	101nm,0.2s						
TKM2	Tokmak 2	1.80	339	⇓P	Pb	19 41 11.0	0.0
	31nm,0.2s,SNR=17						
TKM2				⇑S	Sg	19 41 35.7	+0.8
	88nm,0.1s						
TKM2	Tokmak 2	1.80	339	⇑Pn	Pb	19 41 10.9	-0.1
	5.6nm,0.3s						
TKM2				⇑Sn	Sg	19 41 35.6	+0.8
	37nm,0.4s						
TKM2	Tokmak 2	1.80	339	⇓iP	Pb	19 41 11.0	0.0
	baz=40						
TKM2				⇓iS	Sg	19 41 35.0	+0.1
	baz=40						
KBK	Karagaybulak	1.82	322	⇑P	Pb	19 41 11.2	-0.1
	60nm,0.1s,SNR=52						
KBK				⇓S	Sg	19 41 35.5	+0.1
	289nm,0.2s						
KBK	Karagaybulak	1.82	322	⇓iP	Pb	19 41 10.9	-0.3
	baz=23						
KBK				⇓iS	Sb	19 41 34.9	+0.3
	baz=23						
TNSS	Tian-Shan	1.83	11	P	Pb	19 41 11.6	+0.1
	53nm,0.2s						
TNSS				S	Sg	19 41 36.4	+0.6
	115nm,0.4s						
TNSS	Tian-Shan	1.83	11	eP	Pb	19 41 11.6	+0.1
	53nm,0.2s						
TNSS				eS	Sg	19 41 36.4	+0.6
	115nm,0.4s						
KST	Kastek	1.84	348	P	Pb	19 41 11.7	+0.2
	25nm,0.1s						
KST				S	Sg	19 41 36.9	+0.8
	100nm,0.2s						
KST	Kastek	1.84	348	⇓iP	Pb	19 41 11.7	+0.2
	25nm,0.1s						
KST				eS	Sg	19 41 36.9	+0.8
	100nm,0.2s						
MTBS	Maitube	1.89	359	Pg	Pb	19 41 12.9	+0.5
	46nm,0.3s						
MTBS				Lg	Lg	19 41 38.5	
	106nm,0.2s						
MTBS	Maitube	1.89	359	eP	Pb	19 41 12.8	+0.5
	46nm,0.3s						
MTBS				eS	Sg	19 41 39.1	+1.5
	106nm,0.2s						
PRZ	Przheval'sk	1.90	49	⇑iP	Pb	19 41 12.6	0.0
	baz=49						
PRZ				⇑iS	Sg	19 41 38.3	+0.4

	baz=49						
MDOK	**Medeo** 15nm,0.2s	1.97	12	⇑Pn	Pb	19 41 13.7	0.0
MDOK	62nm,0.5s			⇓Sn	Sg	19 41 40.9	+0.7
MDOK	**Medeo** 58nm,0.2s	1.97	12	Pg	Pb	19 41 13.9	+0.2
MDOK	192nm,0.5s			Lg	Lg	19 41 41.0	
MDOK	**Medeo** 58nm,0.2s	1.97	12	⇑*i*P	Pb	19 41 13.9	+0.2
MDOK	192nm,0.5s			⇓*i*S	Sg	19 41 41.0	+0.8
AAA	**Alma-Ata** 81nm,0.2s	1.99	9	Pg	Pb	19 41 14.8	+0.7
AAA	156nm,0.4s			Lg	Lg	19 41 42.7	
AAA	**Alma-Ata** 81nm,0.2s	1.99	9	*e*P	Pb	19 41 14.8	+0.7
AAA	156nm,0.4s			*e*S	Sg	19 41 42.7	+1.7
KNDC	**Almaty** 19nm,0.3s	2.01	10	⇑Pn	Pb	19 41 14.9	+0.5
KNDC	41nm,0.3s			⇓Sn	Sg	19 41 43.2	+1.8
AAK	**Ala-Archa** 64nm,0.2s,SNR=88	2.03	314	P	Pb	19 41 14.8	-0.1
AAK	**Ala-Archa** 20nm,0.3s	2.03	314	Pn	Pb	19 41 14.4	-0.5
AAK	28nm,0.4s			⇓Sn	Sg	19 41 43.2	+0.9
AAK	**Ala-Archa** baz=15	2.03	314	⇑*i*P	Pb	19 41 13.3	-1.6
AAK	baz=15			⇑*i*S	Sb	19 41 40.1	-0.7
KOTS	**Kotyrbulak** 54nm,0.2s	2.05	13	Pg	Pb	19 41 15.5	+0.4
KOTS	415nm,0.3s			Lg	Lg	19 41 43.4	
KOTS	**Kotyrbulak** 54nm,0.2s	2.05	13	*e*P	Pb	19 41 15.5	+0.4
KOTS	415nm,0.3s			*e*S	Sg	19 41 43.4	+0.7
DGS	**Degeres** 51nm,0.5s	2.07	346	Pg	Pb	19 41 16.1	+0.7
DGS	120nm,0.3s			Lg	Lg	19 41 44.1	
DGS	**Degeres** 51nm,0.5s	2.07	346	*e*P	Pb	19 41 15.7	+0.3
DGS	120nm,0.3s			*e*S	Sg	19 41 44.1	+0.7
FRU1	**Bishkek** baz=21	2.09	319	⇑*i*P	Pb	19 41 14.1	-1.6
FRU1	baz=21			⇑*i*S	Sb	19 41 41.4	-0.8
CHMS	**Chumysh** 43nm,0.2s,SNR=67	2.18	324	⇓P	Pb	19 41 17.5	+0.3
CHMS	**Chumysh** baz=26	2.18	324	⇑*i*P	Pb	19 41 15.8	-1.4
CHMS	baz=26			⇑*i*S	Sb	19 41 43.9	-0.8
AML	**Almayashu** baz=95	2.27	294	⇓*i*P	Pn	19 41 16.8	+0.8
AML	baz=95			⇓*i*S	Sb	19 41 45.6	-2.1
SATY	**Saty** 61nm,0.4s	2.31	38	Pg	Pb	19 41 20.0	+0.4
SATY	208nm,0.3s			Lg	Lg	19 41 51.4	
SATY	**Saty** 61nm,0.4s	2.31	38	⇑*i*P	Pb	19 41 20.0	+0.4
SATY	208nm,0.3s			*e*S	Sg	19 41 51.4	+0.1
EKS2	**Erkin-Say** 10nm,0.2s,SNR=39	2.46	306	⇑P	Pb	19 41 21.5	-0.7
EKS2	**Erkin-Say** baz=7.0	2.46	306	⇑*i*P	Pn	19 41 19.7	+1.2
EKS2	baz=7.0			⇑*i*S	Sn	19 41 50.2	+0.8
KTBS	**Karatobe** 42nm,0.2s	2.47	3	Pg	Pb	19 41 22.9	+0.6
KTBS	112nm,0.3s			Lg	Lg	19 41 56.2	
KTBS	**Karatobe** 42nm,0.2s	2.47	3	*e*P	Pb	19 41 22.9	+0.6
KTBS	112nm,0.3s			*e*S	Sg	19 41 56.2	-0.2
KURS	**Kuram** 19nm,0.7s	2.57	29	Pg	Pb	19 41 24.2	+0.2
KURS	173nm,0.6s			Lg	Lg	19 41 59.0	
KURS	**Kuram** 19nm,0.7s	2.57	29	*e*P	Pb	19 41 24.2	+0.2
KURS	173nm,0.6s			*e*S	Sg	19 41 59.0	-0.6
SFK	**Sufi-Kurgan** 2.4nm,0.2s	2.58	243	⇑Pn	Pb	19 41 23.5	-0.7
SFK	31nm,0.4s			⇑Lg	Lg	19 41 59.1	
SFK	**Sufi-Kurgan** 6.4nm,0.2s	2.58	243	Pg	Pb	19 41 24.2	0.0
SFK	44nm,0.5s			Lg	Lg	19 41 59.0	
SFK	**Sufi-Kurgan** baz=43	2.58	243	⇑*i*P	Pn	19 41 20.8	+0.7
SFK	baz=43			⇑*i*S	Sn	19 41 52.1	-0.1
SGDS	**Sogindy** 33nm,0.3s	2.60	329	Pg	Pb	19 41 24.9	+0.4
SGDS	66nm,0.4s			Lg	Lg	19 41 59.3	
ARSB	**Arslanbob** baz=74	2.64	273	⇑*e*P	Pn	19 41 21.8	+0.9
ARSB	baz=74			⇑*i*S	Sn	19 41 54.4	+0.8
CHKK	**Chushkaly** 44nm,0.3s	2.64	8	Pg	Pb	19 41 25.4	+0.3
CHKK	106nm,0.2s			Lg	Lg	19 42 01.4	
CHKK	**Chushkaly** 44nm,0.3s	2.64	8	*e*P	Pb	19 41 25.4	+0.3
CHKK	106nm,0.2s			*e*S	Sg	19 42 01.1	-0.6
KUU	**Kurty** 69nm,0.3s	2.65	358	Pg	Pb	19 41 26.2	+0.9
KUU	92nm,0.4s			Lg	Lg	19 42 01.9	
KUU	**Kurty** 69nm,0.3s	2.65	358	⇑*i*P	Pb	19 41 26.2	+0.9
KUU	92nm,0.4s			⇑*i*S	Sg	19 42 01.9	-0.3
UZB	**Uzynbulak** 21nm,0.6s	2.68	44	Pg	Pb	19 41 26.2	+0.2
UZB	99nm,0.3s			Lg	Lg	19 42 01.7	
UZB	**Uzynbulak** 21nm,0.6s	2.68	44	*e*P	Pb	19 41 26.2	+0.2
UZB	99nm,0.3s			*e*S	Sg	19 42 01.7	-1.4
MRKS	**Merke** 52nm,0.3s	2.85	303	Pg	Pb	19 41 29.2	+0.4
MRKS	59nm,0.3s			Lg	Lg	19 42 06.8	
MRKS	**Merke** 52nm,0.3s	2.85	303	*e*P	Pb	19 41 29.0	+0.2
MRKS	59nm,0.3s			⇑*i*S	Sg	19 42 06.8	-1.8
PDGK	**Podgornoye** 6.3nm,0.6s	3.06	46	Pg	Pb	19 41 31.3	-1.0
PDGK	54nm,0.6s			Lg	Lg	19 42 11.4	
PDGK	**Podgornoye** 7.3nm,0.5s	3.06	46	⇓Pg	Pg	19 41 36.3	+0.7
PDGK	105nm,0.7s			⇓Lg	Lg	19 42 14.8	
PDGK	**Podgornoye** baz=46	3.06	46	⇑*e*P	Pn	19 41 28.7	+2.1
PDGK	baz=46			⇑*i*S	Sb	19 42 06.3	-3.9
ARXS	**Arharly** 14nm,0.3s	3.13	18	Pg	Pb	19 41 34.0	+0.5
ARXS	75nm,0.3s			Lg	Lg	19 42 15.4	
ARXS	**Arharly** 14nm,0.3s	3.13	18	*e*P	Pb	19 41 34.0	+0.5
ARXS	75nm,0.3s			*e*S	Sg	19 42 15.4	-2.2
MNBS	**Baschi** 7.4nm,0.4s	3.17	26	Pg	Pb	19 41 34.0	-0.2
MNBS	100nm,0.3s			Lg	Lg	19 42 16.5	
MNBS	**Baschi** 7.4nm,0.4s	3.17	26	*e*P	Pb	19 41 34.5	+0.3
MNBS	100nm,0.3s			*e*S	Sg	19 42 16.5	-2.3
MNAS	**Manas** 13nm,0.6s	3.22	294	⇓Pn	Pb	19 41 34.4	-0.7
MNAS	33nm,0.9s			⇑Lg	Lg	19 42 21.4	
MNAS	**Manas** 8.9nm,0.4s	3.22	294	Pg	Pb	19 41 34.9	-0.2
MNAS	10nm,0.6s			Lg	Lg	19 42 17.2	
MNAS	**Manas** baz=95	3.22	294	⇑*i*P	Pn	19 41 30.0	+1.1
MNAS	baz=95			⇑*i*S	Sn	19 42 08.2	+0.2
KTMS	**Ketmen** 1.5nm,0.1s	3.62	51	Pg	Pb	19 41 42.4	+0.5
KTMS	52nm,0.6s			Lg	Lg	19 42 29.6	
KTMS	**Ketmen** 1.5nm,0.1s	3.62	51	*e*P	Pb	19 41 42.4	+0.5
KTMS	52nm,0.6s			*e*S	Sb	19 42 29.6	+3.3
DJR	**Jarkent** 2.9nm,0.5s	3.93	37	Pg	Pb	19 41 47.3	0.0
DJR	11nm,0.4s			Lg	Lg	19 42 38.5	
DJR	**Jarkent** 2.9nm,0.5s	3.93	37	*e*P	Pb	19 41 47.3	0.0
DJR	11nm,0.4s			*e*S	Sb	19 42 38.5	+3.1
TDK	**Taldyqorghan** 35nm,0.5s	4.01	20	Pg	Pb	19 41 49.6	+1.1
TDK	99nm,0.6s			Lg	Lg	19 42 43.5	
TDK	**Taldyqorghan** 35nm,0.5s	4.01	20	*e*P	Pb	19 41 50.1	+1.6
TDK	99nm,0.6s			*e*S	Sg	19 42 43.1	-2.8
KAPS	**Kapalarasan** 6.1nm,0.6s	4.55	27	Pg	Pb	19 41 59.2	+1.5
KAPS	24nm,0.5s			Lg	Lg	19 42 59.2	
KAPS	**Kapalarasan** 6.1nm,0.6s	4.55	27	*e*P	Pb	19 41 59.2	+1.5
KAPS	24nm,0.5s			⇓*i*S	Sg	19 42 59.2	-4.1
KK31	**Karatay Array** 5.9nm,0.6s,baz=112,slow=16,SNR=69	4.81	295	⇑Pg	Pb	19 42 04.4	+2.4
KK31	3.5nm,0.4s,baz=107,slow=28			⇓Lg	Lg	19 43 12.1	
IUG	**Iuzhnay** 27nm,0.6s	4.91	283	Pg	Pb	19 42 06.9	+3.1
IUG	22nm,0.4s			Lg	Lg	19 43 12.5	
IUG	**Iuzhnay** 27nm,0.6s	4.91	283	*e*P	Pb	19 42 06.9	+3.1
IUG	22nm,0.4s			*e*S	Sg	19 43 12.5	-2.2
MAKZ	**Makanchi** 1.1nm,0.7s	6.83	34	⇑Pg	Pb	19 42 42.2	+5.7
MAKZ	2.1nm,0.8s			⇓Lg	Lg	19 44 17.4	
MK31	**Makanchi Array** 0.4nm,0.6s,baz=199,slow=13,SNR=9.6	6.95	35	⇑Pn	Pn	19 42 26.4	+6.3
MK31	0.7nm,0.6s,baz=211,slow=15,SNR=4.4			⇓Pg	Pg	19 42 47.9	-2.3
MK31	1.0nm,0.5s,baz=90,slow=32,SNR=4.5			⇓Lg	Lg	19 44 17.3	
OTUK	**Ortayu** 7.3nm,1.0s	7.60	339	⇑Lg	Lg	19 44 39.0	
KURBB	**Kurchatov Arra** 7.5nm,1.1s	9.49	8	⇑Lg	Lg	19 45 38.4	
KURK	**Kurchatov** 6.5nm,1.1s	9.59	8	⇑Lg	Lg	19 45 40.4	
BVA0	**Borovoye Array** 9.4nm,1.5s,baz=161,slow=25,SNR=8.0	12.49	343	⇓Lg	Lg	19 47 16.2	

IDC ***11*** *19:48:20.3±0.7, 12°.08N×144°.08E, h0^{km}, mb3.9/12, mb1 4.1/12, mb1mx3.8/42, mbtmp3.9/12, MS3.0/2, Ms1 3.0/2, ms1mx2.7/41, Error ellipse: s-maj=30.5km s-min=15.3km az=105.0*

ISCJB ***11*** *19:48:22.7±0.6, 12°.06N±0°.09×144°.0E±0°.1, h26^{km}, mb3.9/13, MS2.8/1, Error ellipse: s-maj=21.6km s-min=8.8km az=26.1*

NEIC ***11*** *19:48:25.4±4.2, 12°.08N×144°.06E, h35^{km}±30^{km}, mb4.5/1, Error ellipse: s-maj=20.7km s-min=10.0km az=100.0*

ISC 11 19:48:24.3±0.8**, 12°.1N**±0°.1×**144°.1E**±0°.2**, h26^{km}, n17, σ0^{s}.68**/15**, mb3.9**/13**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 57nm,0.3s,baz=3.5,slow=2.7,SNR=38	1.66	27	Pn	Pn	19 48 52.2	+0.4
GUMO	80nm,0.3s,baz=148,slow=23,SNR=15			Sn	Sb	19 49 13.7	-1.0
DAV	**Davao City (W)** comp=Z,47nm,20.8s,baz=54,slow=32	18.93	256	LR	LR	19 58 22.5	
MJAR	**Matsushiro Arr** comp=Z,28nm,18.2s,baz=100,slow=35	24.91	349	LR	LR	20 02 55.6	
WRA	**Warramunga Arr** 0.7nm,0.6s,baz=20,slow=9.6,SNR=11	33.26	197	P	P	19 54 59.6	-0.1
ASAR	**Alice Springs** 0.5nm,0.7s,baz=18,slow=12,SNR=5.5	36.92	196	P	P	19 55 30.8	-0.5
STKA	**Stephens Creek** 1.6nm,0.9s,baz=350,slow=11,SNR=2.9	43.79	183	P	P	19 56 27.8	-0.2
SONM	**Songino Array** 0.3nm,0.5s,baz=146,slow=7.2,SNR=7.1	47.53	326	P	P	19 56 57.9	+0.3
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=96,slow=8.5,SNR=7.4	62.05	317	P	P	19 58 43.1	+0.4
ZALV	**Zalesovo Beam** 0.5nm,0.5s,baz=114,slow=7.2,SNR=4.9	62.40	325	P	P	19 58 44.9	0.0
ILAR	**Eielson Array** 0.4nm,0.4s,baz=253,slow=5.5,SNR=12	70.22	25	P	P	19 59 34.2	-0.7
BRVK	**Borovoye** 2.4nm,0.5s	70.70	322	*e*P	P	19 59 37.2	-0.7
INK	**Inuvik** 1.4nm,0.9s,baz=244,slow=6.1,SNR=3.7	76.02	22	P	P	20 00 10.1	+1.1
YKA	**Yellowknife Ar** 0.3nm,0.4s,baz=286,slow=5.2,SNR=4.4	84.52	27	P	P	20 00 55.5	+0.7
ARCES	**ARCESS Array B** 2.9nm,0.9s,baz=64,slow=8.1,SNR=4.8	88.26	342	P	P	20 01 13.4	+0.2
NVAR	**Mina Array Bea** 0.3nm,0.3s,baz=257,slow=6.2,SNR=4.6	88.43	51	P	P	20 01 15.1	+0.3
FINES	**FINESS Array B** 1.0nm,0.5s,baz=78,slow=4.5,SNR=17	92.19	335	P	P	20 01 30.4	-1.1
DBIC	**Dimbokro** 1.7nm,0.7s,baz=81,slow=3.3,SNR=2.9	143.94	300	PKP	PKPbc	20 07 56.7	+0.4

IDC 11 20:05:15.1±3.5**, 20°.66N**×**146°.18E, h0^{km}, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.4**/36**, mbtmp3.5**/5**, Error ellipse: s-maj=152.2km s-min=26.6km az=82.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=14,slow=8.3,SNR=5.1	41.98	197	P	P	20 13 09.2	+1.1
ASAR	**Alice Springs** 0.6nm,1.0s,baz=11,slow=11,SNR=3.3	45.65	196	P	P	20 13 36.0	-1.7
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=103,slow=6.4,SNR=3.5	56.76	322	P	P	20 15 00.6	-0.1
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=101,slow=7.5,SNR=2.8	57.45	313	P	P	20 15 06.5	+0.6
FINES	**FINESS Array B** 0.7nm,0.6s,baz=56,slow=5.4,SNR=4.5	85.30	335	P	P	20 17 53.2	-0.5

ISCJB ***11*** *20:09:53.9±0.1, 11°.05S±0°.02×165°.54E±0°.02, h14^{km}, mb5.2/179, MS5.5/201, Error ellipse: s-maj=3.4km s-min=3.1km az=172.2*

IDC ***11*** *20:09:53.5±0.4, 11°.09S×165°.58E, h0^{km}, mb4.7/22, mb1 4.9/24, mb1mx4.8/33, mbtmp4.7/24, ML4.9/2, MS5.3/38, Ms1 5.3/38, ms1mx5.3/47, Error ellipse: s-maj=15.6km s-min=12.3km az=85.0*

NEIC ***11*** *20:09:54.0±0.0, 10°.94S×165°.50E, h11^{km}, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.42; M$_{\theta\theta}$5.14; M$_{\phi\phi}$-2.72; M$_{r\theta}$-1.96; M$_{\theta\phi}$-0.44; M$_{\phi r}$-1.99; Best double couple: M$_0$5.30000×10^{17} NP1: φ$_s$58.00000°, δ71.00000°, λ-135.00000°. NP2: φ$_s$310.00000°, δ48.00000°, λ-26.00000°. Principal axes: T 5.6200, Plg13.0000°, Azm179.0000°; N -0.7700, Plg42.0000°, Azm76.0000°; P -4.8500, Plg44.0000°, Azm283.0000°;*

NEIC ***11*** *20:09:54.3±0.1, 11°.00S×165°.57E, h10^{km}, mb5.3/140, ME5.2, MS5.6/127, MW5.7, MW5.7 Error ellipse: s-maj=4.4km s-min=3.6km az=128.0, Moment Tensor Solution. s43 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.28; M$_{\theta\theta}$3.08; M$_{\phi\phi}$-3.37; M$_{r\theta}$-1.76; M$_{\theta\phi}$-0.66; M$_{\phi r}$-1.31; Best double couple: M$_0$4.00000×10^{17} NP1:φ$_s$230.00000°, δ87.00000°, λ146.00000°. NP2:φ$_s$322.00000°, δ56.00000°, λ4.00000°. Principal axes: T 3.9300, Plg26.0000°, Azm180.0000°; N 0.0600, Plg56.0000°, Azm45.0000°; P -3.9900, Plg21.0000°, Azm281.0000°; Broadband fault plane solution: P waves. NP1:φ$_s$240.00000°, δ30.00000°, λ-90.00000°. NP2:φ$_s$60.00000°, δ60.00000°, λ-90.00000°. Principal axes: T Plg15.0000°, Azm150.0000°; N Plg0.0000°, Azm0.0000°; P Plg75.0000°, Azm330.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

BJI ***11*** *20:09:55.4, 10°.94S×165°.05E, h8^{km}, mB5.8/67, mb5.0/40, Ms5.9/82, Ms7 5.6/76*

MOS ***11*** *20:09:56.6±1.2, 11°.03S×165°.47E, h28^{km}, mb5.3/64, MS5.4/26, Error ellipse: s-maj=7.9km s-min=7.1km az=114.8*

GCMT ***11*** *20:09:59.3±0.1, 11°.04S×165°.46E, h12^{km}, MW5.7/131, Moment Tensor Solution. s121,c249; s131,c343; Duration: 1^{s}.8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.51±.04; M$_{\theta\theta}$4.90±.03; M$_{\phi\phi}$-2.39±.04; M$_{r\theta}$-1.21±.10; M$_{\theta\phi}$-0.88±.03; M$_{\phi r}$-1.69±.11; Best double couple: M$_0$4.76100×10^{17} NP1:φ$_s$63.00000°, δ66.00000°, λ-139.00000°. NP2:φ$_s$313.00000°, δ53.00000°, λ-31.00000°. Principal axes: T 5.1440, Plg8.0000°, Azm185.0000°; N -0.7660, Plg43.0000°, Azm87.0000°; P -4.3780, Plg46.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 11 20:09:56.1±0.7**, 11°.09S**±0°.04×**165°.58E**±0°.04**, h16^{km}**±3^{km}**, n601, σ1^{s}.85**/527**, mb5.3**/187**, MS5.6**/201**, 10C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	5.78	286	*e*P	Pn	20 11 23.0	+1.7
HNR				*e*S	Sn	20 12 33.0	+5.6
HNR	**Honiara**	5.78	286	*e*Pn	Pn	20 11 19.2	-2.1
HNR				*e*Sn	Sn	20 12 28.6	+1.2
HNR	**Honiara** 41nm,0.3s,baz=170,slow=4.1,SNR=45	5.78	286	Pn	Pn	20 11 21.5	+0.2
HNR	baz=9.0,slow=19,SNR=2.1			Sn	Sn	20 12 28.5	+1.2
HNR	comp=Z,74µm,21.5s,baz=154,slow=39			LR	LR	20 13 38.6	
MARNC	**Mare, Loyalty**	10.60	167	*e*Pn	Pn	20 12 27.7	+0.3
DZM	**Mont Dzumac** 192nm,0.5s	10.95	176	*e*Pn	Pn	20 12 33.1	+0.8
DZM	comp=Z,73µm,26.6s			*e*LR	LR	20 15 04.4	
DZM	**Mont Dzumac**	10.95	176	*e*Pn	Pn	20 12 31.6	-0.7
DZM				Sn	Sn	20 14 33.7	-0.9
DZM	**Mont Dzumac** 7.0nm,0.3s,baz=320,slow=12,SNR=22	10.95	176	Pn	Pn	20 12 32.0	-0.3
DZM	1.1nm,0.3s,baz=162,slow=20,SNR=1.6			Sn	Sn	20 14 33.7	-0.9
DZM	comp=Z,27µm,19.8s,baz=42,slow=35			LR	LR	20 16 14.5	
OUENC	**Ouen Island, N**	11.33	174	*e*Pn	Pn	20 12 39.1	+1.7
PINNC	**Pines Island,**	11.60	171	*e*Pn	Pn	20 12 41.9	+0.8
FUNA	**Funafuti**	13.66	80	*e*Pn	Pn	20 13 10.4	+1.1
MSVF	**Nonsavu**	13.76	120	*e*Pn	Pn	20 13 13.7	+2.9
MSVF	**Nonsavu**	13.76	120	*i* P	Pn	20 13 13.3	+2.5
TARA	**Tarawa**	14.36	31	*e*Pn	Pn	20 13 18.0	-0.9
RABL	**Rabaul**	14.95	296	*e*Pn	Pn	20 13 25.4	-1.6
PATS	**Pohnpei** baz=19,SNR=4.4	19.22	338	P	Pn	20 14 22.6	+1.9
EIDS	**Eidsvold** baz=20,SNR=9.4	19.75	222	P	P	20 14 26.2	+0.7
EIDS	**Eidsvold** 79nm,1.1s	19.75	222	*e*P	P	20 14 24.8	-0.7
MANU	**Manus Island** 528nm,1.2s	20.18	295	*e*P	P	20 14 30.0	-0.3
CTA	**Charters Tower** 81nm,0.9s,baz=68,slow=13,SNR=32	20.63	242	P	P	20 14 35.6	+0.5
CTAO	**Charters Tower** 159nm,1.2s	20.63	242	*e*P	P	20 14 35.5	+0.4
CTAO	comp=Z,13µm,19.0s			LR	LR		
CTAO	**Charters Tower**	20.63	242	*e*P	P	20 14 35.5	+0.4
CTAO	comp=Z,160nm,1.2s			pmax	pmax		
CTAO	comp=Z,9µm,20.0s			MLR	MLR		
LHI	**Lord Howe Isla** comp=Z,460nm,1.8s	21.20	196	*e*P	P	20 14 43.3	+2.2
MTSU	**Mount Surprise** baz=22,SNR=26	21.72	249	P	P	20 14 48.2	+1.4
RMQ	**Roma** baz=22,SNR=23	22.05	224	P	P	20 14 51.3	+1.0
COEN	**Coen** baz=22,SNR=22	22.05	260	P	P	20 14 50.6	+0.1
COEN	**Coen** comp=Z,117nm,1.2s	22.05	260	*e*P	P	20 14 49.7	-0.8
ARMA	**Armidale** baz=23,SNR=21	23.19	212	P	P	20 15 01.8	-0.7
ARMA	**Armidale** comp=Z,76nm,1.1s	23.19	212	*e*P	P	20 15 01.7	-0.7
RAO	**Raoul Island**	23.75	142	PFAKE		20 15 20.0	+12
RAO	comp=Z,11µm,21.0s			LR	LR		
OUZ	**Omahuta** comp=Z,52nm,0.9s	25.10	164	*e*P	P	20 15 20.7	+0.6
JAY	**Jayapura** comp=Z,17nm,0.9s,baz=153,slow=9.0,SNR=2.4	26.10	287	P	P	20 15 30.2	+0.6
JAY	comp=Z,7µm,20.9s,baz=88,slow=35			LR	LR	20 25 13.8	
QIS	**Mount Isa** baz=27,SNR=26	26.67	246	P	P	20 15 33.8	-0.8
CMSA	**Cobar Meteorol** baz=27,SNR=26	27.42	219	P	P	20 15 41.9	+0.6
HIZ	**Hauiti** comp=Z,241nm,1.5s	28.54	165	*e*P	P	20 15 51.5	+0.4
OMRZ	**Omania**	28.59	162	P	P	20 15 55.6	+4.0
URZ	**Urewera** comp=Z,89nm,1.2s	28.96	161	*e*P	P	20 15 55.5	+0.6
URZ	**Urewera** comp=Z,38nm,0.8s,baz=305,slow=8.5,SNR=13	28.96	161	P	P	20 15 55.6	+0.7
URZ	comp=Z,14µm,18.6s,baz=339,slow=35			LR	LR	20 26 57.1	
URZ	**Urewera**	28.96	161	P	P	20 15 56.0	+1.2
MUGZ	**Murupara**	29.05	162	P	P	20 15 57.1	+1.5
MWZ	**Matawai**	29.16	160	P	P	20 15 58.2	+1.5
TWVZ	**Taurewa**	29.22	164	P	P	20 15 59.9	+2.6
RTZ	**Ruatahuna**	29.24	162	P	P	20 15 57.9	+0.5
MRHZ	**Matea Rd**	29.27	163	P	P	20 15 59.6	+1.9
WTVZ	**West Tongariro**	29.30	164	P	P	20 16 01.0	+3.0
NGZ	**Ngauruhoe**	29.36	164	P	P	20 16 02.0	+3.4
PKVZ	**Pokaka**	29.40	164	P	P	20 16 02.2	+3.3
H11S2	**WAKE ISLAND Hy** baz=181,slow=76,SNR=86	29.41	2	T	T	20 46 39.2	
MTHZ	**Maungataniwha**	29.42	162	P	P	20 16 00.2	+1.3
H11S3	**WAKE ISLAND Hy** baz=181,slow=76,SNR=74	29.42	2	T	T	20 46 41.2	
FWVZ	**Far West T-bar**	29.42	164	P	P	20 16 02.7	+3.5
H11S1	**WAKE ISLAND Hy** baz=181,slow=76,SNR=58	29.43	2	T	T	20 46 37.0	
TRVZ	**Turoa**	29.46	164	P	P	20 16 03.0	+3.4
SNGZ	**Shannon Statio**	29.51	161	P	P	20 16 00.3	+0.6
RAHZ	**Arahi**	29.55	162	P	P	20 16 00.9	+0.8
RIGZ	**Rimuhau**	29.57	160	P	P	20 16 02.2	+1.9
BKZ	**Black Stump Fm** comp=Z,54nm,0.8s	29.60	163	*e*P	P	20 16 00.5	-0.2
BKZ	**Black Stump Fm**	29.60	163	P	P	20 16 00.7	+0.1
MOVZ	**Moawhango**	29.62	164	P	P	20 16 03.0	+2.2
WHHZ	**Waihua**	29.74	162	P	P	20 16 03.0	+1.2
BHHZ	**Black Hill Sta**	29.78	164	P	P	20 16 02.8	+0.6
KWHZ	**Kaweka Forest**	29.82	163	P	P	20 16 03.4	+0.8
ARHZ	**Aropaoanui**	29.84	162	P	P	20 16 03.6	+0.9
MCHZ	**McNeill Hill**	29.92	163	P	P	20 16 05.2	+1.8
WAKE	**Wake Island**	30.20	2	PFAKE		20 16 20.0	+14

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WAKE                              LR     LR
      comp=Z,12µm,20.0s
STKA  Stephens Creek    30.30 223  P      P          20 16 07.2 +0.4
      baz=30,SNR=25
STKA  Stephens Creek    30.30 223 eP      P          20 16 06.3  -0.5
      comp=Z,5.2nm,0.9s
STKA  Stephens Creek    30.30 223  P      P          20 16 06.7  -0.1
      comp=Z,21nm,0.8s,baz=43,slow=9.0,SNR=29
STKA                               LR     LR         20 26 58.8
      comp=Z,10µm,18.6s,baz=46,slow=34
H11N1 WAKE ISLAND Hy    30.64   2  T      T          20 48 12.5
      baz=182,slow=76,SNR=73
H11N3 WAKE ISLAND Hy    30.64   2  T      T          20 48 15.2
      baz=182,slow=76,SNR=49
H11N2 WAKE ISLAND Hy    30.66   2  T      T          20 48 13.8
      baz=182,slow=76,SNR=57
BFZ   Birch Farm        30.94 164 eP      P          20 16 12.2  -0.2
      comp=Z,159nm,1.0s
SNZO  South Karori      31.15 167  PFAKE             20 16 30.0  +16
SNZO                               LR     LR
      comp=Z,9µm,20.0s
THZ   Tophouse          31.22 169 eP      P          20 16 15.7 +0.8
      comp=Z,61nm,0.9s
WRAB  Tennant Creek     31.30 250 eP      P          20 16 14.1  -1.8
      comp=Z,111nm,1.5s
WRAB                               LR     LR
      comp=Z,8µm,22.0s
WRAB  Tennant Creek     31.30 250ceP      P          20 16 14.6  -1.2
WRAB                               pmax   pmax
      comp=Z,74nm,1.4s
WR1   Warramunga Arr    31.31 250 eP      P          20 16 15.0  -1.0
      comp=Z,55nm,0.9s
WR1                               ePcP    PcP        20 19 09.8  -0.3
WRA   Warramunga Arr    31.31 250  P      P          20 16 15.0  -1.0
      comp=Z,41nm,0.9s,baz=80,slow=8.9,SNR=91
WRA                                PcP    PcP        20 19 09.8  -0.3
      comp=Z,3.4nm,1.0s,baz=73,slow=3.2,SNR=4.6
WRA                                LR     LR         20 28 55.3
      comp=Z,10µm,19.1s,baz=65,slow=36
TOO   Toolangi          31.95 211  P      P          20 16 22.1 +0.7
      baz=32,SNR=8.2
TOO   Toolangi          31.95 211 eP      P          20 16 20.8  -0.6
      comp=Z,80nm,1.7s
TOO   Toolangi          31.95 211 eP      P          20 16 20.8  -0.6
TOO                                pmax   pmax
      comp=Z,80nm,1.7s
KHZ   Kahutara          31.97 169 eP      P          20 16 21.0  -0.4
      comp=Z,60nm,1.0s
GUMO  Guam              31.99 320  LR     LR         20 28 43.3
      comp=Z,9µm,18.9s,baz=136,slow=35
LTZ   Lake Taylor       32.11 171 eP      P          20 16 23.1 +0.4
      comp=Z,91nm,0.9s
AS01  Alice Springs     32.58 243 eP      P          20 16 24.7  -2.4
OXZ   Oxford            32.60 171 eP      P          20 16 27.9 +0.9
      comp=Z,66nm,0.8s
AS31  Alice Springs     32.62 243 eP      P          20 16 24.9  -2.6
      comp=Z,6.8nm,1.1s
AS31                              ePcP    PcP        20 19 13.3  -0.3
AS31                              eScP    ScP        20 22 59.0 +1.8
ASAR  Alice Springs     32.62 243  P      P          20 16 26.1  -1.4
      comp=Z,11nm,0.7s,baz=64,slow=10,SNR=87
ASAR                               PcP    PcP        20 19 13.3  -0.3
      comp=Z,3.5nm,0.8s,baz=65,slow=1.9,SNR=6.2
ASAR                               ScP    ScP        20 22 59.0 +1.8
      comp=Z,0.8nm,0.9s,baz=94,slow=3.8,SNR=2.8
ASAR                               LR     LR         20 28 40.6
      comp=Z,4µm,18.2s,baz=74,slow=34
RPZ   Rata Peaks        32.85 173 eP      P          20 16 28.6  -0.5
      comp=Z,47nm,0.9s
RPZ   Rata Peaks        32.85 173  P      P          20 16 28.8  -0.3
      comp=Z,25nm,1.0s,baz=2.1,slow=7.3,SNR=5.0
HTT   Hallett           33.03 223  P      P          20 16 30.6  -0.3
      baz=33,SNR=12
MQZ   McQueen's Vall    33.07 171 eP      P          20 16 30.8  -0.2
      comp=Z,195nm,1.4s
ARPS  Mount Arapiles    33.34 216  P      P          20 16 32.8  -0.7
      baz=33,SNR=4.7
BBOO  Buckleboo         34.68 227  P      P          20 16 44.6  -0.6
      baz=35,SNR=8.7
TAU   Tasmania Unive    35.46 203  PFAKE             20 17 00.0 +8.2
TAU                                LR     LR
      comp=Z,7µm,19.0s
SIJI  Sorong            35.56 284  LR     LR         20 31 13.1
      comp=Z,7µm,20.8s,baz=104,slow=36
BNDI  Bandanaira        35.91 278  P      P          20 16 59.9 +3.9
KNRA  Kununurra         36.07 259  P      P          20 16 56.5  -0.9
      baz=36,SNR=9.1
JOHN  Johnston Islan    37.02  42  PFAKE             20 17 20.0  +15
JOHN                               LR     LR
      comp=Z,495nm,20.0s
WRKA  Warakurna         37.92 243  P      P          20 17 12.4  -0.6
      baz=38,SNR=24
NLAI  Namlea            38.93 279  P      P          20 17 25.6 +4.0
FITZ  Fitzroy Crossi    39.21 255  P      P          20 17 22.6  -1.3
      baz=39,SNR=22
FITZ  Fitzroy Crossi    39.21 255 eP      P          20 17 22.9  -1.0
      comp=Z,17nm,0.9s
SOEI  Soe               40.63 268 eP      P          20 17 35.7  -0.2
      comp=Z,25nm,1.0s
SOEI  Soe               40.63 268  P      P          20 17 38.0 +2.1
BATI  Baumata           41.18 267  P      P          20 17 40.7 +0.3
MIDW  Midway            42.42  23  PFAKE             20 18 00.0  +10
MIDW                               LR     LR
      comp=Z,7µm,20.0s
MMRI  Maumere           42.74 269 eP      P          20 17 52.1  -1.0
      comp=Z,191nm,1.8s
MATI  Mati              43.04 293 eP      P          20 17 55.1  -0.4
DDMP  Don Marcelino,    43.20 291 eP      P          20 18 13.1  +16
LUWI  Luwuk             43.66 280 eP      P          20 18 00.6   0.0
      comp=Z,116nm,1.3s
LUWI  Luwuk             43.66 280  P      P          20 18 04.7 +4.2
DAV   Davao City (W)    43.70 293⇓iP      P          20 17 58.4  -2.5
DAV   Davao City (W)    43.70 293  LR     LR         20 36 39.6
      comp=Z,3µm,18.2s,baz=90,slow=37
PPT   Papeete           43.84 104  LR     LR         20 34 00.8
      comp=Z,3µm,18.9s,baz=265,slow=33
PPT2  Papeete2          43.85 104 eS      S          20 24 43.0  +10
      comp=Z,2µm,26.2s
PPT2                              eLQ     LQ         20 28 36.1
      comp=Z,5µm,23.2s
PPT2                              eLR     LR         20 30 30.0
      comp=Z,6µm,25.2s
KCP   Kidapawan         44.12 292⇑iP      P          20 18 04.1  -0.2
JCJ   Chichijima        44.23 330  LR     LR         20 33 58.3
      comp=Z,4µm,20.9s,baz=141,slow=33
SKMP  Bagumbayan, Su    44.43 291 eP      P          20 18 04.4  -2.3
APSI  Ampana            44.78 280  P      P          20 18 13.7 +4.2
MBWA  Marble Bar        45.03 251 eP      P          20 18 09.9  -1.5
      comp=Z,168nm,1.8s
MBWA                               LR     LR
      comp=Z,7µm,20.0s
BNSI  Bone              45.50 275  P      P          20 18 14.9  -0.3
MSLP  Maasin            45.65 296 eP      P          20 18 16.6 +0.2
KAPI  Kappang           45.73 274  PFAKE             20 18 30.0  +13
KAPI                               LR     LR
      comp=Z,2µm,22.0s
SPSI  Sidrap Palu       45.92 275  P      P          20 18 22.3 +3.8
PAGZ  Pagadian          46.01 292 eP      P          20 18 18.7  -0.5
TTSI  Tana Toraja       46.06 276  P      P          20 18 23.5 +3.9
PCI   Palu              46.53 279  P      P          20 18 26.0 +2.6
MEEK  Meekatharra       46.78 244  P      P          20 18 25.7 +0.5
      baz=47,SNR=13
MPSI  Mapaga            46.79 281  P      P          20 18 24.6  -0.8
PLAI  Plampang          47.10 268  P      P          20 18 26.9  -0.9
GUIM  Jordan            47.87 295 eP      P          20 18 31.4  -2.4
KIP   Kipapa            48.19  48  PFAKE             20 18 50.0  +14
KIP                                LR     LR
      comp=Z,8µm,19.0s
KLBR  Kellerberrin      48.54 238  P      P          20 18 38.9   0.0
      baz=48,SNR=5.8
POHA  Pohakuloa         49.05  52  PFAKE             20 18 50.0 +6.9
POHA                               LR     LR
      comp=Z,3µm,19.0s
NWAO  Narrogin (SRO)    49.30 236  PFAKE             20 19 00.0  +15
NWAO                               LR     LR
      comp=Z,7µm,19.0s
MORW  Morawa            49.46 241  P      P          20 18 45.6  -0.3
      baz=49,SNR=8.4
MORW  Morawa            49.46 241 eP      P          20 18 44.6  -1.2
      comp=Z,82nm,1.6s
JHJ   Hachijo jima 2    50.38 332  LR     LR         20 35 38.7
      comp=Z,2µm,21.4s,baz=147,slow=31
ENPP  El Nido           50.93 294 eP      P          20 18 48.0  -9.2
KKM   Kota Kinabalu     51.99 287 eP      P          20 19 05.0  -0.4
      comp=Z,88nm,1.3s
KKM   Kota Kinabalu     51.99 287  P      P          20 19 08.8 +3.5
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TAOE  Nuku Hiva Isla    53.44  93 eS      S          20 26 55.9 +7.5
      comp=Z,1µm,25.6s
TAOE                              eLR     LR         20 34 47.5
      comp=Z,3µm,23.2s
MJAR  Matsushiro Arr    53.94 333  P      P          20 19 18.6  -0.5
      comp=Z,7.7nm,1.1s,baz=171,slow=8.9,SNR=5.5
MAJO  Matsushiro        53.94 333 eP      P          20 19 20.7 +1.6
      comp=Z,76nm,1.8s
MAJO                               LR     LR
      comp=Z,3µm,20.0s
MAJO  Matsushiro        53.94 333 eP      P          20 19 20.7 +1.6
MAJO                               pmax   pmax
      comp=Z,76nm,1.7s
MAT   Matsushiro        53.94 333  P      P          20 19 19.0  -0.1
MAT                                S      S          20 26 39.8   -14
JNU   Nakatsue          55.02 324 eP      P          20 19 26.2  -0.9
      comp=Z,61nm,1.3s
JNU   Nakatsue          55.02 324  P      P          20 19 27.9 +0.8
      comp=Z,14nm,0.8s,baz=84,slow=4.1,SNR=7.6
JNU                                LR     LR         20 39 10.2
      comp=Z,2µm,19.6s,baz=125,slow=32
TATO  Taipei            55.97 310  PFAKE             20 19 40.0 +6.0
TATO                               LR     LR
      comp=Z,4µm,19.0s
ERM   Erimo             56.72 340  PFAKE             20 19 50.0  +11
ERM                                LR     LR
      comp=Z,4µm,19.0s
CISI  Cisompet, Garu    57.04 268 eP      P          20 19 39.8  -2.2
      comp=Z,120nm,1.3s
YUK   Yuzh-Kuril'sk     57.72 343 eP      P          20 19 42.4  -3.7
YUK                               e                  20 21 55.2
YUK                               eS      S          20 27 46.9 +2.7
YUK                                                  20 29 27.7
YUK                               eSSS    SSS        20 33 48.7
YUK                                MLR    MLR
      comp=Z,2µm,18.0s
RKT   Rikitea           57.73 110 eLQ     LQ         20 34 28.4
      comp=Z,3µm,28.8s
RKT                               eLR     LR         20 36 53.0
      comp=Z,5µm,25.5s
QZH   Quanzhou          58.15 309⇓iP      P          20 19 48.8  -0.7
QZH                                S      S          20 27 51.0 +0.4
QZH                                LR     LR
      comp=Z,2µm,16.2s
QZH                                LR     LR
      comp=Z,2µm,15.4s
QZH                                LR     LR
      comp=Z,2µm,17.6s
KUR   Kuril'sk          58.30 345 eP      P          20 19 49.3  -0.8
KUR                               i                  20 20 40.9
KUR                               eS      S          20 27 53.0 +1.2
KUR                                MLR    MLR
      comp=Z,3µm,15.0s
KUR                                MLR    MLR
      comp=N,6µm,17.0s
KUR                                MLR    MLR
      comp=E,900nm,10.0s
ASAJ  Asahikawa         58.78 341  P      P          20 19 53.2  -0.3
      comp=E,8.5nm,0.7s,baz=219,slow=11,SNR=7.2
ASAJ                               LR     LR         20 41 04.5
      comp=E,5µm,20.9s,baz=169,slow=32
SSE   Sheshan           59.77 316  P      P          20 20 00.2  -0.4
SSE                                S      S          20 28 13.9 +2.5
SSE                                pmax   pmax
      comp=E,12nm,1.4s
SSE                                pmax   pmax
      comp=E,360nm,8.4s
SSE                                LR     LR
      comp=E,2µm,15.0s
SSE                                LR     LR
      comp=E,1µm,16.3s
SSE   Sheshan           59.77 316  PFAKE             20 20 10.0 +9.4
SSE                                LR     LR
      comp=Z,3µm,19.0s
KSRS  Korea Array       59.82 326  P      P          20 20 00.5  -0.3
      comp=Z,2.5nm,0.8s,baz=135,slow=7.9,SNR=12
KS15  Wonju Array Si    59.83 326 eP      P          20 19 58.4  -2.5
      comp=Z,47nm,1.6s
KSAR  Wonju Array Be    59.83 326  P      P          20 20 00.5  -0.4
KSAR  Wonju Array Be    59.83 326  P      P          20 20 00.5  -0.4
KS01  Wonju Array Si    59.85 326 eP      P          20 20 00.0  -1.1
YSS   Yuzh-Sakhalins    61.28 342 eP      P          20 20 07.0  -3.6
      comp=Z,149nm,1.7s
YSS                                LR     LR
      comp=Z,2µm,19.0s
YSS   Yuzh-Sakhalins    61.28 342 eP      P          20 20 11.8 +1.2
YSS                               e*PP    pwP        20 20 21.5 +3.0
YSS                               e*SP    sP         20 20 25.6 +9.2
YSS                               e                  20 22 27.0
YSS                               eS      S          20 28 30.8 +0.7
YSS                               ePS                20 28 46.6
YSS                               eSS     SS         20 32 33.8 +2.8
YSS                                pmax   pmax
      comp=Z,40nm,1.6s
NJ2   Nanjing           61.94 316 eP      P          20 20 15.4 +0.1
NJ2                                S      S          20 28 41.3 +2.3
NJ2                                pmax   pmax
      comp=Z,20nm,0.9s
NJ2                                pmax   pmax
      comp=Z,1µm,5.2s
NJ2                                LR     LR
      comp=Z,4µm,13.0s
NJ2                                LR     LR
      comp=Z,3µm,16.8s
NJ2                                LR     LR
      comp=Z,4µm,17.4s
MSHR  Mys Shultsa       62.02 332c iP     P          20 20 16.9 +1.2
SKR   Severo-Kuril's    62.06 353 eP      P          20 20 10.0  -5.8
SKR                               eS      S          20 28 34.1  -5.8
SKR                               eSSS    SSS        20 32 48.9
SKR                                pmax   pmax
      comp=Z,800nm,6.9s
SKR                                pmax   pmax
      comp=Z,600nm,7.4s
SKR                                MLR    MLR
      comp=Z,2µm,18.0s
SKR                                MLR    MLR
      comp=Z,2µm,16.0s
VLA   Vladivostok       62.11 333 i P     P          20 20 16.4 +0.1
VLA                                pmax   pmax
      comp=Z,66nm,1.7s
PTCN  Pitcairn Islan    62.21 112  PFAKE             20 20 30.0  +13
PTCN                               LR     LR
      comp=Z,4µm,21.0s
QIZ   Qiongzhong        62.56 298  P      P          20 20 19.5  -0.3
QIZ                                S      S          20 28 49.6 +2.3
QIZ                                pmax   pmax
      comp=Z,810nm,6.9s
QIZ                                LR     LR
      comp=Z,2µm,16.7s
QIZ                                LR     LR
      comp=Z,2µm,18.6s
QIZ                                LR     LR
      comp=Z,4µm,22.6s
QIZ   Qiongzhong        62.56 298  PFAKE             20 20 30.0  +10
QIZ                                LR     LR
      comp=Z,486nm,20.0s
MYKOM Kota Tinggi       62.69 278  P      P          20 20 21.2 +0.4
USRK  Ussuriysk Ar.     62.91 333  P      P          20 20 23.3 +1.6
      comp=Z,3.3nm,0.8s,baz=109,slow=6.6,SNR=5.1
USRK                               LR     LR         20 44 32.1
      comp=Z,1µm,21.6s,baz=132,slow=33
KGM   Kluang            63.26 278  P      P          20 20 26.8 +2.2
PET   Petropavlovsk     64.13 355  PFAKE             20 20 40.0  +11
PET                                LR     LR
      comp=Z,6µm,20.0s
PET   Petropavlovsk     64.13 355d iP     P          20 20 29.8 +0.3
PET                               eS      S          20 29 03.4  -2.3
PET                               eSS     SS         20 33 15.1  -0.2
PET                                pmax   pmax
      comp=Z,500nm,8.0s
PET                                pmax   pmax
      comp=Z,900nm,9.4s
KTGM  Kuala Trenggan    64.25 281  P      P          20 20 33.3 +2.3
PETK  Petropavlovsk-    64.30 355  P      P          20 20 30.5  -0.1
      comp=Z,4.9nm,0.8s,baz=153,slow=10.0,SNR=6.3
PETK                               LR     LR         20 42 58.8
      comp=Z,4µm,21.8s,baz=181,slow=31
WHN   Wuhan             64.30 312 ⇓P      P          20 20 34.0 +2.9
WHN                                S      S          20 29 12.9 +4.2
WHN                                LR     LR
      comp=Z,7µm,14.4s
WHN                                LR     LR
      comp=Z,2µm,15.2s
WHN                                LR     LR
      comp=Z,8µm,17.0s
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PEA1  Petropavlovsk-    64.30 355 eP      P          20 20 30.5  -0.1
MDJ   Mudanjiang        64.31 332  P      P          20 20 33.2 +2.3
MDJ                                pP     sP         20 20 37.0 +0.3
MDJ                                sP     pwP        20 20 39.6 +0.9
MDJ                                S      S          20 29 10.8 +2.5
MDJ                                pmax   pmax
      comp=Z,960nm,4.1s
MDJ                                LR     LR
      comp=Z,3µm,14.2s
MDJ                                LR     LR
      comp=Z,5µm,13.7s
MDJ                                LR     LR
      comp=Z,4µm,14.9s
MDJ   Mudanjiang        64.31 332  PFAKE             20 20 40.0 +9.1
MDJ                                LR     LR
      comp=Z,2µm,20.0s
DL2   Dalian            64.42 323 ⇓P      P          20 20 29.0  -2.7
DL2                                S      S          20 29 09.5  -0.3
DL2                                pmax   pmax
      comp=Z,24nm,1.3s
DL2                                pmax   pmax
      comp=Z,790nm,4.3s
DL2                                LR     LR
      comp=Z,4µm,16.1s
DL2                                LR     LR
      comp=Z,2µm,20.0s
DL2                                LR     LR
      comp=Z,3µm,21.5s
ADK   Adak              64.56  12  PFAKE             20 20 40.0 +7.7
ADK                                LR     LR
      comp=Z,7µm,22.0s
TYV   Tymovskoe         64.84 344 eP      P          20 20 34.1  -0.1
TYV                               eS      S          20 29 17.3 +2.7
TYV                                pmax   pmax
      comp=Z,600nm,4.1s
TYV                                pmax   pmax
      comp=Z,25nm,1.7s
TYV                                smax   smax
      comp=N,600nm,6.9s
BKNI  Bangkinang        65.11 276 eP      P          20 20 34.5  -2.2
      comp=N,134nm,1.0s
FRIM  Kepong            65.19 279  P      P          20 20 39.7 +2.5
SNY   Shenyang          65.28 327 ⇑P      P          20 20 37.8 +0.6
SNY                                S      S          20 29 22.7 +2.4
SNY                                pmax   pmax
      comp=N,850nm,4.8s
SNY                                LR     LR
      comp=N,3µm,15.3s
SNY                                LR     LR
      comp=N,2µm,15.5s
SNY                                LR     LR
      comp=N,5µm,17.3s
CN2   Changchun         65.70 329 eP      P          20 20 40.7 +0.8
CN2                                PP     PP         20 23 09.3 +4.5
CN2                               eS      S          20 29 30.2 +4.8
CN2                                SS     SS         20 33 38.3  -1.8
CN2                                pmax   pmax
      comp=N,10.0nm,0.8s
CN2                                pmax   pmax
      comp=N,500nm,4.0s
CN2                                LR     LR
      comp=N,2µm,15.0s
CN2                                LR     LR
      comp=N,2µm,15.0s
CN2                                LR     LR
      comp=N,4µm,17.0s
IPM   Ipoh              66.07 280 eP      P          20 20 41.0  -2.0
      comp=N,70nm,1.2s
IPM   Ipoh              66.07 280  P      P          20 20 44.2 +1.2
CASY  Casey             66.28 201  PFAKE             20 21 00.0  +17
CASY                               LR     LR
      comp=Z,343nm,20.0s
VNDA  Vanda             66.44 181 eP      P          20 20 44.3   0.0
VNDA  Vanda             66.44 181  P      P          20 20 44.8 +0.5
      comp=Z,9.7nm,1.1s,baz=19,slow=5.6,SNR=6.0
VNDA                               LR     LR         20 47 36.2
      comp=Z,2µm,18.1s,baz=47,slow=34
KULM  Kulim             66.63 281  P      P          20 20 49.9 +3.3
GRNR  Gornyy            66.63 340 eP      P          20 20 41.2  -4.6
SBA   Scott Base        66.75 180  PFAKE             20 21 00.0  +14
SBA                                LR     LR
      comp=Z,4µm,19.0s
SKNT  Sakolnakorn       66.96 294  P      P          20 20 51.7 +3.1
      comp=Z,9.2nm,1.9s,comp=Z,621nm
KLR   Kul'dur           67.03 337d iP     P          20 20 47.4  -1.0
KLR   Kul'dur           67.03 337  LR     LR         20 44 46.5
      comp=Z,965nm,21.9s,baz=144,slow=31
COCO  West Island       67.17 261  PFAKE             20 21 00.0  +10
COCO                               LR     LR
      comp=Z,3µm,21.0s
NKL   Nikolayevsk       67.44 344 eP      P          20 20 51.0 +0.2
PSI   Prapat            67.71 278 eP      P          20 20 51.0  -2.6
      comp=Z,29nm,1.0s
PSI   Prapat            67.71 278 eP      P          20 20 51.0  -2.6
PSI                                pmax   pmax
      comp=Z,29nm,1.0s
ENH   Enshi             67.80 309 eP      P          20 20 51.5  -2.2
      comp=Z,42nm,1.3s
ENH                                LR     LR
      comp=Z,2µm,20.0s
NONG  Nongkai           68.08 295  P      P          20 20 58.6 +3.0
      comp=Z,0.4nm,0.9s
GYA   Guiyang           68.31 304  P      P          20 20 56.2  -0.9
GYA                                PP     PP         20 23 31.0 +3.0
GYA                                S      S          20 29 59.2 +1.3
GYA                                SKS    SKSac      20 30 54.8  -1.0
GYA                                pmax   pmax
      comp=Z,50nm,1.0s
GYA                                pmax   pmax
      comp=Z,610nm,8.4s
GYA                                LR     LR
      comp=Z,2µm,17.3s
GYA                                LR     LR
      comp=Z,2µm,21.3s
GYA                                LR     LR
      comp=Z,3µm,19.4s
BJT   Baijiatuau        68.41 321  PFAKE             20 21 10.0  +13
BJT                                LR     LR
      comp=Z,4µm,19.0s
BJI   Beijing           68.41 321  P      P          20 20 56.9  -0.3
BJI                                S      S          20 29 56.8  -1.5
BJI                                pmax   pmax
      comp=Z,17nm,2.9s
BJI                                LR     LR
      comp=Z,3µm,16.7s
BJI                                LR     LR
      comp=Z,3µm,16.2s
BJI                                LR     LR
      comp=Z,3µm,28.4s
TIY   Taiyuan           69.48 317 eP      P          20 21 05.0 +0.9
TIY                                PP     PP         20 23 37.3  -0.6
TIY                                S      S          20 30 15.6 +4.3
TIY                                ScS    SKSac      20 30 59.9  -4.3
TIY                                pmax   pmax
      comp=Z,710nm,5.9s
TIY                                LR     LR
      comp=Z,2µm,13.3s
TIY                                LR     LR
      comp=Z,2µm,15.1s
TIY                                LR     LR
      comp=Z,2µm,15.1s
PBKT  Sadao Pong        69.55 292 eP      P          20 21 04.1  -0.6
      comp=Z,38nm,1.8s
PBKT  Sadao Pong        69.55 292  P      P          20 21 08.7 +4.0
      comp=Z,11nm,1.0s,comp=Z,1µm
XAN   Xi'an             70.03 312  P      P          20 21 07.0  -0.5
XAN                                S      S          20 30 17.9 +0.1
XAN                                SKS    SKSac      20 31 03.0  -5.4
XAN                                pmax   pmax
      comp=Z,13nm,1.1s
XAN                                pmax   pmax
      comp=Z,990nm,8.6s
XAN                                LR     LR
      comp=Z,3µm,18.4s
XAN                                LR     LR
      comp=Z,1µm,22.8s
XAN                                LR     LR
      comp=Z,3µm,17.4s
XAN   Xi'an             70.03 312 eP      P          20 21 05.8  -1.7
      comp=Z,63nm,1.8s
XAN   Xi'an             70.03 312 eP      P          20 21 05.8  -1.7
XAN                                pmax   pmax
      comp=Z,63nm,1.8s
NANT  Nan               70.52 295  P      P          20 21 14.4 +3.7
      comp=Z,2.5nm,0.8s
KMI   Kunming           71.00 301  P      P          20 21 15.2 +1.3
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KMI				pP	pwP	20 21 23.0	+1.6
KMI				sP	sP	20 21 26.8	+6.9
KMI				S	**S**	**20 30 32.9**	**+3.0**
KMI				SKS	**SKSac**	**20 31 14.3**	**-2.2**
KMI				pmax	pmax		
	comp=Z,13nm,2.0s						
KMI				pmax	pmax		
	comp=Z,1µm,7.6s						
KMI				LR	LR		
	comp=Z,2µm,16.4s						
KMI				LR	LR		
	comp=Z,880nm,19.7s						
KMI				LR	LR		
	comp=Z,2µm,20.1s						
KMI	**Kunming**	**71.00**	**301**	*e*P	**P**	**20 21 14.1**	**+0.2**
	comp=Z,111nm,2.0s						
KMI	**Kunming**	**71.00**	**301**	*e*P	**P**	**20 21 14.1**	**+0.2**
KMI				pmax	pmax		
	comp=Z,111nm,2.0s						
MA2	**Magadan**	**71.43**	**352**	*e*P	**P**	**20 21 16.3**	**+0.9**
MA2				pmax	pmax		
	comp=Z,15nm,1.8s						
MA2	**Magadan**	**71.43**	**352**	LR	LR	20 47 07.4	
	comp=Z,6µm,22.0s,baz=172,slow=31						
HHC	**Hu-ho-hao-te**	**71.76**	**320**	*e*P	**P**	**20 21 17.1**	**-0.9**
HHC				S	**S**	**20 30 35.4**	**-2.4**
HHC				ScS	**SKSac**	**20 31 18.6**	**-2.7**
HHC				SS	**SS**	**20 35 14.4**	**+0.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				LR	LR		
	comp=Z,3µm,15.6s						
HHC				LR	LR		
	comp=Z,3µm,15.6s						
HHC				LR	LR		
	comp=Z,4µm,14.7s						
CM01	**Chiang Mai Arr**	**71.95**	**294**	*e*P	**P**	**20 21 18.6**	**-0.8**
CM31	**Chiang Mai Arr**	**71.98**	**294**	*e*P	**P**	**20 21 18.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**71.98**	**294**	P	**P**	**20 21 19.7**	**+0.1**
	comp=Z,6.2nm,1.1s,baz=115,slow=3.9,SNR=21						
CMAR				LR	LR	20 50 38.2	
	comp=Z,1µm,21.5s,baz=108,slow=34						
CMMT	**Chiang Mai**	**72.09**	**294**	P	**P**	**20 21 22.3**	**+2.0**
	comp=Z,16nm,1.6s,comp=Z,916nm						
CHTO	**Chiang Mai**	**72.09**	**294**	*e*P	**P**	**20 21 19.4**	**-0.8**
	comp=Z,31nm,1.5s						
CHTO				LR	LR		
	comp=Z,2µm,22.0s						
CHTO	**Chiang Mai**	**72.09**	**294**	*e*P	**P**	**20 21 19.5**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,31nm,1.5s						
CHTO	**Chiang Mai**	**72.09**	**294**	P	**P**	**20 21 22.4**	**+2.1**
	comp=Z,71nm,2.3s,comp=Z,4µm						
ZEA	**Zeya**	**72.32**	**337**	*e*P	**P**	**20 21 20.0**	**-0.9**
ZEA				*e*		20 21 42.0	
ZEA				*e*S	**S**	**20 30 46.0**	**+2.6**
ZEA				pmax	pmax		
	comp=Z,800nm,8.0s						
ZEA				pmax	pmax		
	comp=E,200nm,7.0s						
ZEA				pmax	pmax		
	comp=N,400nm,8.0s						
ZEA				smax	smax		
	comp=N,700nm,12.0s						
ZEA				smax	smax		
	comp=Z,600nm,12.0s						
ZEA				smax	smax		
	comp=E,1µm,13.0s						
HIA	**Hailar**	**72.33**	**330**	PFAKE		20 21 30.0	+8.9
HIA				LR	LR		
	comp=Z,2µm,21.0s						
CD2	**Chengdu**	**72.50**	**307**	⇓P	**P**	**20 21 22.4**	**-0.1**
CD2				pP	pP	20 21 24.3	-2.6
CD2				PP	**PP**	**20 24 03.3**	**-0.7**
CD2				S	**S**	**20 30 45.4**	**-1.1**
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,1µm,7.6s						
CD2				LR	LR		
	comp=Z,4µm,14.1s						
CD2				LR	LR		
	comp=Z,4µm,15.3s						
CD2				LR	LR		
	comp=Z,2µm,17.7s						
BTO	**Baotou**	**72.62**	**319**	*e*P	**P**	**20 21 22.7**	**-0.4**
BTO				S	**S**	**20 30 47.9**	**+0.3**
SEY	**Seymchan**	**74.50**	**354**	*ce*P	**P**	**20 21 36.4**	**+2.9**
SEY	**Seymchan**	**74.50**	**354**	LR	LR	20 49 32.1	
	comp=Z,7µm,21.8s,baz=152,slow=32						
LZH	**Lanzhou**	**74.67**	**312**	⇑P	**P**	**20 21 37.3**	**+2.0**
LZH				pP	pP	20 21 40.1	+0.4
LZH				sP	pwP	20 21 43.4	+0.4
LZH				PP	**PP**	**20 24 27.0**	**+4.5**
LZH				S	**S**	**20 31 13.7**	**+2.6**
LZH				sS	sS	20 31 23.4	+5.2
LZH				SS	**SS**	**20 35 57.1**	**-1.8**
LZH				pmax	pmax		
	comp=Z,86nm,1.6s						
LZH				pmax	pmax		
	comp=Z,300nm,4.9s						
LZH				LR	LR		
	comp=Z,4µm,13.0s						
LZH				LR	LR		
	comp=Z,3µm,16.4s						
LZH				LR	LR		
	comp=Z,4µm,16.8s						
GAMB	**Gambell**	**76.64**	**10**	*e*P	**P**	**20 21 44.6**	**-1.1**
	comp=Z,72nm,1.5s						
KDAK	**Kodiak Island**	**76.68**	**22**	LR	LR	20 54 06.9	
	comp=Z,2µm,18.1s,baz=226,slow=35						
CIT	**Chita**	**77.12**	**330**	*e*P	**P**	**20 21 49.3**	**+0.5**
YAK	**Yakutsk**	**78.09**	**344**	*e*P	**P**	**20 21 53.8**	**-0.1**
YAK				*e*		20 22 02.1	
YAK				*e*		20 24 56.1	
YAK				*e*S	**S**	**20 31 49.5**	**+2.3**
YAK				e*SS	**ScS**	**20 32 13.0**	**+0.2**
YAK				pmax	pmax		
	comp=Z,27nm,0.8s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,934nm,3.8s						
YAK				pmax	pmax		
	comp=N,521nm,3.0s						
YAK				pmax	pmax		
	comp=E,770nm,3.2s						
YAK				smax	smax		
	comp=N,987nm,9.3s						
YAK				smax	smax		
	comp=E,3µm,11.1s						
YAK				MLR	MLR		
	comp=Z,18µm,19.0s						
YAK				MLR	MLR		
	comp=N,12µm,21.0s						
YAK				MLR	MLR		
	comp=E,8µm,24.0s						
SVW2	**Sparrevohn**	**78.21**	**18**	*e*P	**P**	**20 21 54.3**	**-0.3**
	comp=E,93nm,1.8s						
ANM	**Nome**	**78.57**	**12**	*e*P	**P**	**20 21 56.5**	**-0.1**
	comp=E,45nm,1.5s						
ANM	**Nome**	**78.57**	**12**	*e*P	**P**	**20 21 56.5**	**-0.1**
ANM				pmax	pmax		
	comp=Z,45nm,1.4s						
SONA0	**Songino Array**	**78.61**	**324**	*e*P	**P**	**20 21 57.5**	**+0.2**
SONM	**Songino Array**	**78.61**	**324**	P	**P**	**20 21 57.5**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=138,slow=5.4,SNR=15						
SONM				LR	LR	20 52 32.0	
	comp=Z,2µm,21.8s,baz=116,slow=32						
SONA1	**Songino Array**	**78.61**	**324**	*e*P	**P**	**20 21 56.1**	**-1.2**
BRLK	**Bradley Lake**	**78.74**	**21**	*e*P	**P**	**20 21 57.6**	**0.0**
	comp=Z,176nm,1.9s						
QSPA	**South Pole Qui**	**78.91**	**180**	*e*P	**P**	**20 21 58.3**	**-0.5**
	comp=Z,31nm,1.0s						
QSPA				LR	LR		
	comp=Z,2µm,19.0s						
BILL	**Bilibino**	**78.92**	**0**	*e*P	**P**	**20 21 56.9**	**-1.5**
	comp=Z,28nm,1.1s						
BILL				LR	LR		
	comp=Z,3µm,20.0s						
BILL	**Bilibino**	**78.92**	**0**	*i* P	**P**	**20 21 56.8**	**-1.6**
BILL				*i*		20 24 55.3	
BILL				pmax	pmax		
	comp=Z,50nm,1.6s						
BILL				MLR	MLR		
	comp=Z,2µm,19.0s						
GTA	**Gaotai**	**78.97**	**314**	P	**P**	**20 21 59.5**	**0.0**
GTA				pP	pP	20 22 04.2	+0.3
GTA				sP	pwP	20 22 06.8	-0.4
GTA				S	**S**	**20 31 57.6**	**-0.3**
GTA				sS	sS	20 32 04.7	-0.4
GTA				SKS	**SKSac**	**20 32 08.8**	**-6.1**
GTA				pmax	pmax		
	comp=Z,830nm,7.8s						
GTA				LR	LR		
	comp=Z,3µm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,17.8s						
GTA				LR	LR		
	comp=Z,3µm,18.4s						
SUA	**Susitna One**	**80.02**	**20**	*e*P	**P**	**20 22 03.2**	**-1.5**
	comp=Z,36nm,1.2s						
SHL	**Shillong**	**80.39**	**298**	*e*P	**P**	**20 22 06.5**	**-1.1**
	comp=Z,54nm,1.5s						
SHL	**Shillong**	**80.39**	**298**	*e*P	**P**	**20 22 06.5**	**-1.1**
SHL				pmax	pmax		
	comp=Z,54nm,1.5s						
BOD	**Bodaibo**	**80.50**	**335**	*e*P	**P**	**20 22 07.6**	**+0.4**
BOD				pmax	pmax		
	comp=Z,14nm,1.9s						
RPN	**Rapa Nui**	**80.70**	**116**	LR	LR	20 51 23.2	
	comp=Z,2µm,18.6s,baz=263,slow=31						
CAST	**Castle Rocks**	**81.04**	**18**	*e*P	**P**	**20 22 07.6**	**-2.4**
	comp=Z,14nm,0.7s						
SML	**Sawmill**	**81.08**	**20**	*e*P	**P**	**20 22 09.6**	**-0.7**
	comp=Z,35nm,1.2s						
SML	**Sawmill**	**81.08**	**20**	*e*P	**P**	**20 22 10.1**	**-0.2**
SML				pmax	pmax		
	comp=Z,35nm,1.2s						
DIV	**Divide**	**81.51**	**22**	*e*P	**P**	**20 22 11.3**	**-1.3**
	comp=Z,38nm,1.1s						
TRF	**Thorofare Moun**	**81.61**	**18**	*e*P	**P**	**20 22 12.2**	**-1.0**
	comp=Z,79nm,2.0s						
ZAK	**Zakamensk**	**81.64**	**325**	*e*P	**P**	**20 22 12.3**	**-1.3**
ZAK				*e*		20 25 22.7	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BPAW	**Bear Paw Mtn.**	**81.88**	**18**	*e*P	**P**	**20 22 14.7**	**+0.3**
	comp=Z,34nm,1.7s						
IRK	**Irkutsk**	**82.01**	**327**	*e*P	**P**	**20 22 16.1**	**+0.7**
IRK				pmax	pmax		
	comp=Z,52nm,2.5s						
RND	**Reindeer**	**82.03**	**19**	*e*P	**P**	**20 22 14.8**	**-0.5**
	comp=Z,114nm,1.9s						
RND	**Reindeer**	**82.03**	**19**	*e*P	**P**	**20 22 16.1**	**+0.8**
RND				pmax	pmax		
	comp=Z,110nm,1.9s						
TLY	**Talaya**	**82.07**	**326**	*e*P	**P**	**20 22 13.6**	**-2.1**
	comp=Z,22nm,0.2s						
TLY				LR	LR		
	comp=Z,1µm,20.0s						
TLY	**Talaya**	**82.07**	**326**	*ce*P	**P**	**20 22 16.7**	**+1.0**
RDOG	**Red Dog Mine**	**82.10**	**11**	*e*P	**P**	**20 22 14.8**	**-0.7**
	comp=Z,66nm,1.6s						
LSA	**Lhasa**	**82.24**	**302**	*e*P	**P**	**20 22 16.2**	**-1.5**
	comp=Z,17nm,1.6s						
LSA				LR	LR		
	comp=Z,2µm,22.0s						
LSA	**Lhasa**	**82.24**	**302**	*e*P	**P**	**20 22 16.2**	**-1.5**
LSA				pmax	pmax		
	comp=Z,17nm,1.6s						
LSA				MLR	MLR		
	comp=Z,2µm,22.0s						
MCK	**McKinley**	**82.24**	**19**	*e*P	**P**	**20 22 15.1**	**-1.2**
	comp=Z,86nm,1.6s						
MCK	**McKinley**	**82.24**	**19**	*e*P	**P**	**20 22 15.1**	**-1.2**
MCK				pmax	pmax		
	comp=Z,86nm,1.6s						
DHY	**Denali Highway**	**82.28**	**20**	*e*P	**P**	**20 22 16.1**	**-0.6**
	comp=Z,19nm,1.2s						
IM3	**Indian Mountai**	**82.51**	**16**	*e*P	**P**	**20 22 16.5**	**-1.2**
HARP	**HAARP**	**82.58**	**21**	*e*P	**P**	**20 22 18.3**	**+0.2**
	comp=Z,29nm,0.7s						
MLY	**Manley**	**82.63**	**17**	*e*P	**P**	**20 22 17.8**	**-0.6**
	comp=Z,7.1nm,0.8s						
WRH	**Wood River Hil**	**83.03**	**18**	*e*P	**P**	**20 22 19.3**	**-1.1**
	comp=Z,11nm,0.7s						
MDM	**Murphy Dome**	**83.33**	**18**	*e*P	**P**	**20 22 20.5**	**-1.4**
	comp=Z,15nm,0.9s						
HDA	**Harding Lake**	**83.34**	**19**	*e*P	**P**	**20 22 21.4**	**-0.6**
	comp=Z,39nm,0.7s						
HDA	**Harding Lake**	**83.34**	**19**	P	**P**	**20 22 22.4**	**+0.4**
	baz=227						
TCOL	**CIGO, UAF Yank**	**83.38**	**18**	P	**P**	**20 22 23.2**	**+1.0**
	baz=226						
COLA	**College**	**83.38**	**18**	*e*P	**P**	**20 22 21.9**	**-0.3**
	comp=Z,33nm,0.7s						
COLA				LR	LR		
	comp=Z,3µm,19.0s						
COLA	**College**	**83.38**	**18**	*e*P	**P**	**20 22 22.1**	**-0.1**
COLA				pmax	pmax		
	comp=Z,18nm,0.7s						
MOY	**Mondy**	**83.52**	**326**	*e*P	**P**	**20 22 23.7**	**+0.3**
MOY				pmax	pmax		
	comp=Z,85nm,4.0s						
RIDG	**Independ'e Rid**	**83.57**	**20**	*e*P	**P**	**20 22 23.1**	**-0.2**
	comp=Z,40nm,1.1s						
ILAR	**Eielson Array**	**83.61**	**19**	P	**P**	**20 22 22.6**	**-0.8**
	comp=Z,14nm,0.6s,baz=235,slow=4.9,SNR=64						
ILAR				LR	LR	20 54 11.4	
	comp=Z,2µm,21.0s,baz=237,slow=32						
ILB	**Eielson Array**	**83.61**	**19**	*e*P	**P**	**20 22 21.9**	**-1.5**
	comp=Z,16nm,0.7s						
IL1	**Eielson Array**	**83.61**	**19**	*e*P	**P**	**20 22 21.5**	**-1.9**
POKR	**Poker Plat Res**	**83.68**	**18**	P	**P**	**20 22 22.8**	**-1.0**
	baz=226						
K02D	**Willamette Mer**	**83.72**	**44**	P	**P**	**20 22 25.8**	**+1.2**
	baz=249						
WDC	**Whiskeytown Da**	**83.76**	**47**	*e*P	**P**	**20 22 24.1**	**-0.5**
	comp=Z,38nm,1.7s						
WDC	**Whiskeytown Da**	**83.76**	**47**	*e*P	**P**	**20 22 24.2**	**-0.5**
WDC				pmax	pmax		
	comp=Z,38nm,1.7s						
SCRK	**Sand Creek**	**84.02**	**20**	*e*P	**P**	**20 22 24.6**	**-1.1**
	comp=Z,81nm,1.5s						
YBH	**Yreka Blue Hor**	**84.04**	**46**	*e*P	**P**	**20 22 26.1**	**-0.2**
	comp=Z,20nm,1.4s						
YBH	**Yreka Blue Hor**	**84.04**	**46**	*e*P	**P**	**20 22 25.6**	**-0.7**
YBH				pmax	pmax		
	comp=Z,20nm,1.3s						
YBH	**Yreka Blue Hor**	**84.04**	**46**	LR	LR	20 52 00.8	
	comp=Z,492nm,21.0s,baz=264,slow=30						
ORV	**Oroville**	**84.17**	**48**	*e*P	**P**	**20 22 25.9**	**-0.9**
	comp=Z,6.5nm,0.9s						
ORV	**Oroville**	**84.17**	**48**	*e*P	**P**	**20 22 25.9**	**-0.9**
ORV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HUMO	**Hull Mountain**	**84.18**	**45**	*e*P	**P**	**20 22 26.6**	**-0.3**
	comp=Z,10nm,1.0s						
AFDM	**Forest Hills D**	**84.36**	**49**	*e*P	**P**	**20 22 27.2**	**-0.6**
	comp=Z,22nm,1.1s						
COLD	**Coldfoot**	**84.39**	**16**	*e*P	**P**	**20 22 31.9**	**+4.6**
	comp=Z,23nm,1.8s						
WRAK	**Wrangell Islan**	**84.46**	**30**	PFAKE		20 22 40.0	+12
WRAK				LR	LR		
	comp=Z,4µm,21.0s						
CMB	**Columbia Colle**	**84.50**	**50**	*e*P	**P**	**20 22 27.3**	**-1.3**
	comp=Z,26nm,1.6s						
CMB	**Columbia Colle**	**84.50**	**50**	*e*P	**P**	**20 22 28.2**	**-0.4**
CMB				pmax	pmax		
	comp=Z,26nm,1.6s						
HYT	**Haines Junctio**	**84.50**	**24**	*e*P	**P**	**20 22 28.4**	**+0.3**
	comp=Z,71nm,1.9s						
PRP	**Porcupine Dome**	**84.54**	**18**	*e*P	**P**	**20 22 26.9**	**-1.4**
	comp=Z,40nm,2.0s						
MAW	**Mawson**	**84.62**	**202**	LR	LR	20 58 17.2	
	comp=Z,1µm,18.0s,baz=107,slow=34						
BBB	**Bella Bella**	**84.71**	**34**	LR	LR	20 51 59.4	
	comp=Z,2µm,21.6s,baz=247,slow=30						
I04A	**Tendick Farm,**	**84.97**	**44**	P	**P**	**20 22 31.9**	**+1.1**
	baz=250						
J04D	**Umpqua Nationa**	**84.98**	**44**	P	**P**	**20 22 32.2**	**+1.1**
	baz=250						
MWC	**Mount Wilson**	**85.14**	**54**	*e*P	**P**	**20 22 36.5**	**+4.4**
	comp=Z,54nm,1.8s						
MWC	**Mount Wilson**	**85.14**	**54**	*e*P	**P**	**20 22 36.5**	**+4.4**
MWC				pmax	pmax		
	comp=Z,54nm,1.7s						
ISA	**Isabella, Lake**	**85.23**	**52**	*e*P	**P**	**20 22 30.4**	**-2.0**
	comp=Z,19nm,1.3s						
ISA	**Isabella, Lake**	**85.23**	**52**	*e*P	**P**	**20 22 30.4**	**-2.0**
ISA				pmax	pmax		
	comp=Z,19nm,1.2s						
ISA	**Isabella, Lake**	**85.23**	**52**	P	**P**	**20 22 32.2**	**-0.2**
	baz=253						
NLWA	**Neilton Lookou**	**85.31**	**40**	PFAKE		20 22 40.0	+7.6
NLWA				LR	LR		
	comp=Z,4µm,19.0s						
WAKR	**Walker**	**85.35**	**49**	*e*P	**P**	**20 22 32.0**	**-1.1**
	comp=Z,26nm,1.2s						
MDPB	**Devils Postpil**	**85.36**	**50**	*e*P	**P**	**20 22 30.4**	**-2.8**
	comp=Z,22nm,1.0s						
EDW2	**Edwards Air Fo**	**85.38**	**53**	P	**P**	**20 22 33.1**	**0.0**
	baz=253						
OMMB	**Old Mammoth Mi**	**85.41**	**50**	*e*P	**P**	**20 22 32.3**	**-1.2**
	comp=Z,19nm,1.3s						
PNTR	**Pine Nut**	**85.41**	**49**	*e*P	**P**	**20 22 30.0**	**-3.4**
	comp=Z,62nm,1.9s						
BFSC	**Mount Baldy Ra**	**85.46**	**54**	P	**P**	**20 22 34.0**	**+0.3**
	baz=253						
EGAK	**Eagle**	**85.48**	**20**	PFAKE		20 22 40.0	+7.2
EGAK				LR	LR		
	comp=Z,2µm,21.0s						
TOLK	**Toolik Lake Re**	**85.58**	**15**	*e*P	**P**	**20 22 31.9**	**-1.4**
	comp=Z,55nm,1.9s						
TOLK	**Toolik Lake Re**	**85.58**	**15**	P	**P**	**20 22 34.1**	**+0.8**
	baz=224						
DAWY	**Dawson**	**85.66**	**21**	*e*P	**P**	**20 22 32.4**	**-1.5**
	comp=Z,14nm,1.0s						
PAHR	**Pah Rah Range**	**85.76**	**48**	*e*P	**P**	**20 22 32.7**	**-2.4**
	comp=Z,68nm,1.9s						
CWC	**Cottonwood Cre**	**85.76**	**52**	P	**P**	**20 22 35.0**	**-0.2**
	baz=253						
MOD	**Modoc Plateau**	**85.80**	**46**	*e*P	**P**	**20 22 33.2**	**-1.9**
	comp=Z,28nm,1.6s						
JIRN	**Jiri**	**85.87**	**299**	*e*P	**P**	**20 22 34.9**	**-1.2**
	comp=Z,188nm,1.8s						
RYN	**Ryan**	**86.07**	**50**	*e*P	**P**	**20 22 34.1**	**-2.5**
	comp=Z,49nm,1.8s						
MONP2	**Monument Peak**	**86.08**	**56**	P	**P**	**20 22 36.3**	**-0.6**
	baz=254						
DAC	**Darwin (Calif)**	**86.09**	**52**	*e*P	**P**	**20 22 34.9**	**-1.9**
	comp=Z,27nm,1.4s						
DAC	**Darwin (Calif)**	**86.09**	**52**	*e*P	**P**	**20 22 37.7**	**+0.9**
DAC				pmax	pmax		
	comp=Z,27nm,1.4s						
TIXI	**Tiksi**	**86.10**	**349**	*e*P	**P**	**20 22 33.5**	**-2.2**
	comp=Z,48nm,1.7s						
TIXI				LR	LR		
	comp=Z,2µm,22.0s						
TIXI	**Tiksi**	**86.10**	**349**	*e*P	**P**	**20 22 35.7**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,26nm,1.6s						
MPMC	**Manual Prospec**	**86.11**	**52**	P	**P**	**20 22 36.0**	**-0.9**
	baz=253						
NV01	**Mina Array Sit**	**86.18**	**50**	*e*P	**P**	**20 22 35.2**	**-2.1**
NVAR	**Mina Array Bea**	**86.18**	**50**	P	**P**	**20 22 36.9**	**-0.3**
	comp=Z,6.1nm,1.0s,baz=227,slow=5.4,SNR=16						
NVAR				LR	LR	20 55 11.4	
	comp=Z,3µm,19.6s,baz=264,slow=32						
GUN	**Gumba**	**86.20**	**299**	*e*P	**P**	**20 22 36.2**	**-1.5**
	comp=Z,159nm,1.7s						
PFO	**Pinyon Flats O**	**86.24**	**55**	*e*P	**P**	**20 22 36.0**	**-1.5**
	comp=Z,13nm,1.2s						
PFO				LR	LR		
	comp=Z,3µm,19.0s						
PFO	**Pinyon Flats O**	**86.24**	**55**	*e*P	**P**	**20 22 36.0**	**-1.5**
PFO				pmax	pmax		
	comp=Z,13nm,1.2s						
PFO				MLR	MLR		
	comp=Z,3µm,19.0s						
XPFO	**Pion Flat**	**86.25**	**55**	*e*P	**P**	**20 22 35.0**	**-2.5**
	comp=Z,12nm,1.1s						
NV11	**Mina Array Sit**	**86.29**	**50**	*e*P	**P**	**20 22 35.7**	**-2.0**
	comp=Z,1.6nm,1.1s						
KVN	**Kaiserville**	**86.51**	**49**	*e*P	**P**	**20 22 37.3**	**-1.5**
	comp=Z,41nm,1.8s						
KVN	**Kaiserville**	**86.51**	**49**	*e*P	**P**	**20 22 38.8**	**0.0**
KVN				pmax	pmax		
	comp=Z,41nm,1.8s						
PKI	**Pulchoki**	**86.52**	**299**	*e*P	**P**	**20 22 37.8**	**-1.5**
	comp=Z,66nm,1.6s						
DLBC	**Dease Lake**	**86.53**	**28**	LR	LR	20 53 52.2	
	comp=Z,5µm,20.8s,baz=278,slow=30						
PKIN	**Phulchoki**	**86.53**	**299**	*e*P	**P**	**20 22 37.7**	**-1.5**
	comp=Z,88nm,1.9s						
FURC	**Furnace Creek,**	**86.71**	**52**	P	**P**	**20 22 40.2**	**+0.7**
	baz=254						
DMN	**Daman**	**86.78**	**299**	*e*P	**P**	**20 22 39.3**	**-1.2**
	comp=Z,56nm,1.2s						
BC3	**Big Chuckawall**	**87.06**	**55**	P	**P**	**20 22 41.7**	**+0.2**
	baz=255						
WVOR	**Wild Horse Val**	**87.14**	**46**	*e*P	**P**	**20 22 39.1**	**-2.6**
	comp=Z,12nm,1.1s						
WVOR				LR	LR		
	comp=Z,2µm,19.0s						
WVOR	**Wild Horse Val**	**87.14**	**46**	*e*P	**P**	**20 22 43.3**	**+1.6**
WVOR				pmax	pmax		
	comp=Z,12nm,1.1s						
GMRC	**Granite Mounta**	**87.20**	**54**	P	**P**	**20 22 42.4**	**+0.2**
	baz=255						
LTY	**Liberty**	**87.30**	**41**	*e*P	**P**	**20 22 40.6**	**-1.7**
	comp=Z,26nm,1.5s						
TPNV	**Topopah Spring**	**87.32**	**52**	*e*P	**P**	**20 22 40.2**	**-2.6**
	comp=Z,16nm,1.3s						
TPNV	**Topopah Spring**	**87.32**	**52**	*e*P	**P**	**20 22 40.2**	**-2.6**
TPNV				pmax	pmax		
	comp=Z,17nm,1.3s						
TPNV	**Topopah Spring**	**87.32**	**52**	P	**P**	**20 22 43.5**	**+0.7**
	baz=254						
GLA	**Glamis**	**87.41**	**56**	*e*P	**P**	**20 22 41.5**	**-1.6**
	comp=Z,25nm,1.3s						
GLA	**Glamis**	**87.41**	**56**	*e*P	**P**	**20 22 42.7**	**-0.4**
GLA				pmax	pmax		
	comp=Z,25nm,1.2s						
IRM	**Iron Mountain**	**87.44**	**55**	P	**P**	**20 22 42.8**	**-0.5**
	baz=255						
Y12C	**Blythe**	**87.84**	**55**	*e*P	**P**	**20 22 43.9**	**-1.2**
	comp=Z,71nm,1.9s						
Y12C	**Blythe**	**87.84**	**55**	P	**P**	**20 22 46.3**	**+1.2**
	baz=255						
EPYK	**Eagle Plains**	**87.91**	**20**	*e*P	**P**	**20 22 43.9**	**-0.8**
	comp=Z,100nm,1.9s						
EPYK	**Eagle Plains**	**87.91**	**20**	P	**P**	**20 22 45.2**	**+0.4**
	baz=236						
SHPR	**Sheep Range**	**88.04**	**52**	*e*P	**P**	**20 22 45.7**	**-0.5**
	comp=Z,55nm,2.0s						
DANN	**Dangsing**	**88.12**	**299**	*e*P	**P**	**20 22 46.0**	**-0.9**
	comp=Z,64nm,1.5s						
KOLN	**Koldanda**	**88.12**	**299**	*e*P	**P**	**20 22 45.8**	**-1.1**
	comp=Z,62nm,1.8s						
R11A	**Troy Canyon, C**	**88.20**	**51**	*e*P	**P**	**20 22 45.1**	**-1.9**
	comp=Z,18nm,1.6s						
R11A	**Troy Canyon, C**	**88.20**	**51**	P	**P**	**20 22 47.2**	**+0.2**
	baz=254						
PDMCI	**Parker Dam,Lak**	**88.28**	**55**	P	**P**	**20 22 48.2**	**+1.0**
	baz=256						
W13A	**Hualapai Mount**	**88.69**	**54**	*e*P	**P**	**20 22 48.2**	**-1.2**
	comp=Z,25nm,1.5s						
PYUN	**Piuthan**	**88.72**	**299**	*e*P	**P**	**20 22 48.2**	**-1.5**
	comp=Z,26nm,1.2s						
BMO	**Blue Mountains**	**88.78**	**44**	*e*P	**P**	**20 22 49.0**	**-0.4**
	comp=Z,21nm,1.6s						
BMO	**Blue Mountains**	**88.78**	**44**	*e*P	**P**	**20 22 49.0**	**-0.4**
BMO				pmax	pmax		
	comp=Z,21nm,1.6s						
WMQ	**Urumqi**	**89.01**	**315**	P	**P**	**20 22 49.2**	**-1.3**
WMQ				sP	sP	20 22 57.4	+0.8
WMQ				PP	**PP**	**20 26 15.3**	**-5.2**
WMQ				SKS	**SKSac**	**20 33 19.3**	**-0.5**
WMQ				S	**SKKSac**	**20 33 32.0**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,15nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,880nm,4.3s						
WMQ				LR	LR		
	comp=Z,4µm,17.7s						
WMQ				LR	LR		
	comp=Z,3µm,18.9s						
WMQ				LR	LR		
	comp=Z,3µm,21.3s						
ELK	**Elko**	**89.10**	**48**	*e*P	**P**	**20 22 49.7**	**-1.5**
	comp=Z,43nm,2.0s						
ELK	**Elko**	**89.10**	**48**	*e*P	**P**	**20 22 52.2**	**+1.0**
ELK				pmax	pmax		
	comp=Z,43nm,2.0s						
ELK	**Elko**	**89.10**	**48**	LR	LR	20 59 46.2	
	comp=Z,762nm,18.3s,baz=252,slow=34						

PSUT	Pine Spring	89.57	51	*e*P	P	20 22 52.3	-1.1
	comp=Z,18nm,1.4s						
LCMT	Little Creek M	89.66	52	*e*P	P	20 22 52.5	-1.3
	comp=Z,9.7nm,1.0s						
CCUT	Cedar City	89.70	52	*e*P	P	20 22 55.5	+1.4
NEW	Newport	89.89	41	LR	LR	20 58 12.8	
	comp=Z,919nm,19.2s,baz=260,slow=32						
SZCU	Shurtz Canyon	89.92	52	*e*P	P	20 22 53.5	-1.7
	comp=Z,49nm,1.8s						
KNB	Kanab	89.99	52	*e*P	P	20 22 53.6	-1.8
	comp=Z,26nm,1.3s						
KNB	Kanab	89.99	52	*e*P	P	20 22 55.6	+0.2
KNB				pmax	pmax		
	comp=Z,26nm,1.3s						
INK	Inuvik	90.00	19	LR	LR	20 59 20.9	
	comp=Z,3µm,20.6s,baz=228,slow=33						
U15A	North Rim	90.26	53	*e*P	P	20 22 55.7	-1.1
	comp=Z,10nm,0.8s						
JBP	Jabalpur	90.31	293	*e*P	P	20 23 00.2	+3.3
JBP				*e*S	PP	20 26 24.7	-6.5
HLID	Hailey	90.43	46	*e*P	P	20 22 56.0	-1.3
	comp=Z,29nm,1.7s						
HLID				LR	LR		
	comp=Z,2µm,19.0s						
HLID	Hailey	90.43	46	P	P	20 22 57.1	-0.1
	baz=255						
HYB	Hyderabad	90.47	288	*i* P	P	20 23 00.0	+2.1
HYB				*e*SKS	SKSac	20 33 28.0	-1.4
X16A	Lo Mia Camp, P	90.48	55	*e*P	P	20 22 57.6	-0.2
	comp=Z,33nm,1.8s						
PKCU	Pink Cliffs	90.49	52	*e*P	P	20 22 56.6	-1.3
	comp=Z,70nm,1.5s						
TUC	Tucson	90.55	57	*e*P	P	20 22 57.2	-0.8
	comp=Z,37nm,1.8s						
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	Tucson	90.55	57	*e*P	P	20 22 57.2	-0.8
TUC				pmax	pmax		
	comp=Z,37nm,1.8s						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s						
TCRU	Three Creeks R	90.65	51	*e*P	P	20 22 56.0	-2.6
	comp=Z,18nm,1.1s						
MTPU	Mount Pierson	90.72	51	*e*P	P	20 22 58.1	-0.9
	comp=Z,18nm,1.2s						
DUG	Dugway, Tooele	90.75	49	PFAKE		20 23 10.0	+11
DUG				LR	LR		
	comp=Z,2µm,19.0s						
BGU	Big Grassy Mou	90.77	49	*e*P	P	20 22 58.3	-0.6
	comp=Z,12nm,1.2s						
WUAZ	Wupatki	90.78	54	*e*P	P	20 22 56.1	-3.0
	comp=Z,38nm,1.8s						
WUAZ				LR	LR		
	comp=Z,2µm,19.0s						
WUAZ	Wupatki	90.78	54	P	P	20 22 59.7	+0.6
	baz=257						
DGZ	Jazzator, Alta	90.83	321	*i* P	P	20 22 58.9	-0.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MSU	Marysvale	90.84	51	*e*P	P	20 22 59.2	-0.2
MSU	Marysvale	90.84	51	*e*P	P	20 22 59.2	-0.2
HVU	Hansel Valley	91.16	48	*e*P	P	20 22 59.9	-0.8
	comp=Z,17nm,1.1s						
HVU	Hansel Valley	91.16	48	*e*P	P	20 23 01.2	+0.5
HVU				pmax	pmax		
	comp=Z,17nm,1.1s						
NLU	North Lily Min	91.25	50	*e*P	P	20 23 02.9	+1.7
	comp=Z,883nm,0.9s						
319A	Douglas	91.60	58	*e*P	P	20 23 01.6	-1.4
	comp=Z,62nm,1.8s						
DGAR	Diego Garcia	91.64	262	PFAKE		20 23 10.0	+6.7
DGAR				LR	LR		
	comp=Z,1µm,19.0s						
TMUT	Trail Mountain	91.75	50	*e*P	P	20 23 07.6	+3.8
	comp=Z,7.6nm,0.6s						
MCMT	McKenzie Canyo	91.83	45	*e*P	P	20 23 02.4	-1.5
JLU	Jordanelle	91.86	49	*e*P	P	20 23 08.0	+3.9
	comp=Z,6.7nm,1.0s						
HWUT	Hardware Ranch	92.00	48	PFAKE		20 23 10.0	+5.3
HWUT				LR	LR		
	comp=Z,819nm,19.0s						
DLMT	Dillon	92.13	44	*e*P	P	20 23 03.4	-1.7
	comp=Z,16nm,1.1s						
WALA	Waterton Lakes	92.15	40	*e*P	P	20 23 04.5	-0.6
	comp=Z,9.5nm,0.6s						
LRM	Limekiln Ridge	92.34	44	*e*P	P	20 23 05.8	-0.4
AHID	Auburn Hatcher	92.59	47	PFAKE		20 23 20.0	+13
AHID				LR	LR		
	comp=Z,1µm,19.0s						
FXWY	Fox Creek	92.83	46	*e*P	P	20 23 08.8	+0.3
	comp=Z,4.0nm,0.9s						
BOZ	Bozeman (W)	92.84	44	*e*P	P	20 23 06.1	-2.3
	comp=Z,14nm,1.1s						
BOZ				LR	LR		
	comp=Z,2µm,20.0s						
BOZ	Bozeman (W)	92.84	44	*e*P	P	20 23 06.1	-2.3
BOZ				pmax	pmax		
	comp=Z,14nm,1.1s						
BOZ				MLR	MLR		
	comp=Z,2µm,20.0s						
BOZ	Bozeman (W)	92.84	44	P	P	20 23 09.2	+0.7
	baz=257						
IMW	Indian Meadow	92.95	46	*e*P	P	20 23 06.9	-2.2
	comp=Z,19nm,1.7s						
LOHW	Long Hollow	93.13	46	*e*P	P	20 23 08.6	-1.3
	comp=Z,5.0nm,1.1s						
FLWY	Flagg Ranch	93.16	46	*e*P	P	20 23 13.4	+3.4
	comp=Z,33nm,1.9s						
PV17	East Wray Mesa	93.26	52	*e*P	P	20 23 06.3	-4.3
	comp=Z,8.6nm,0.6s						
H17A	Grant Village	93.31	46	*e*P	P	20 23 08.7	-2.0
	comp=Z,5.4nm,1.1s						
PV04	Paradox Valley	93.32	52	*e*P	P	20 23 08.8	-2.0
	comp=Z,66nm,1.9s						
MVCO	Mesa Verde	93.40	53	PFAKE		20 23 20.0	+8.7
MVCO				LR	LR		
	comp=Z,2µm,20.0s						
MK01	Makanchi Array	93.43	317	*e*P	P	20 23 08.0	-2.9
MK31	Makanchi Array	93.44	317	*e*P	P	20 23 09.2	-1.8
	comp=Z,48nm,1.9s						
MK31	Makanchi Array	93.44	317	*e*P	P	20 23 10.7	-0.3
MK32	Makanchi Array	93.44	317	*e*P	P	20 23 10.1	-0.9
MK32				*e*PKKPdf	PKKPdf	20 40 16.5	-1.6
MKAR	Makanchi Array	93.44	317	*e*P	P	20 23 09.2	-1.8
	comp=Z,177nm,2.0s						
MKAR				PKKPbc	PKKPdf	20 40 16.5	-1.6
MKAR	Makanchi Array	93.44	317	*e*P	P	20 23 10.7	-0.3
MKAR				pmax	pmax		
	comp=Z,180nm,2.0s						
MKAR	Makanchi Array	93.44	317	P	P	20 23 10.0	-0.9
	comp=Z,1.7nm,0.7s,baz=88,slow=6.4,SNR=13						
MKAR				PKKPbc	PKKPdf	20 40 16.5	-1.6
	comp=Z,3.9nm,0.8s,baz=285,slow=2.8,SNR=20						
MKAR				LR	LR	21 04 46.4	
	comp=Z,941nm,22.0s,baz=89,slow=35						
LKWY	Lake	93.47	45	PFAKE		20 23 20.0	+8.5
LKWY				LR	LR		
	comp=Z,3µm,19.0s						
ZAA0	Zalesovo Array	93.50	324	*e*P	P	20 23 09.0	-2.0
	comp=Z,17nm,1.5s						
ZALV	Zalesovo Beam	93.50	324	*e*P	P	20 23 08.1	-2.9
ZALV				PKKPbc	PKKPdf	20 40 18.2	0.0
ZALV	Zalesovo Beam	93.50	324	P	P	20 23 10.3	-0.7
	comp=Z,2.6nm,0.9s,baz=119,slow=5.2,SNR=8.8						
ZALV				PKKPbc	PKKPdf	20 40 18.2	0.0
	comp=Z,0.5nm,0.5s,baz=305,slow=5.1,SNR=3.0						
ZALV				LR	LR	21 05 23.1	
	comp=Z,878nm,18.4s,baz=89,slow=36						
ZAA1	Zalesovo Array	93.50	324	*e*P	P	20 23 10.3	-0.7
ZAA1				*e*PKKPdf	PKKPdf	20 40 18.2	0.0
BW06	Boulder Array	93.70	47	PFAKE		20 23 20.0	+7.4
BW06				LR	LR		
	comp=Z,1µm,21.0s						
PD31	Pinedale Array	93.70	47	*e*P	P	20 23 11.5	-1.1
	comp=Z,8.8nm,1.5s						
PDAR	Pinedale Array	93.70	47	*e*P	P	20 23 10.8	-1.8
PDAR				PP	PP	20 26 58.2	+0.3
PDAR	Pinedale Array	93.70	47	P	P	20 23 12.6	0.0
	comp=Z,1.2nm,0.8s,baz=225,slow=1.9,SNR=9.0						
PDAR				PP	PP	20 26 58.2	+0.3
	comp=Z,0.1nm,0.3s,baz=238,slow=9.5,SNR=2.5						
RLMT	Red Lodge	94.38	45	PFAKE		20 23 30.0	+14
RLMT				LR	LR		
	comp=Z,2µm,19.0s						
NVS	Novosibirsk	94.60	325	*i* P	P	20 23 23.6	+7.6
ANMO	Albuquerque	94.61	55	PFAKE		20 23 30.0	+13
ANMO				LR	LR		
	comp=Z,1µm,20.0s						
EGMT	Eagleton	94.61	42	*e*P	P	20 23 14.8	-1.6
	comp=Z,8.4nm,0.9s						
EGMT				LR	LR		
	comp=Z,1µm,21.0s						
EGMT	Eagleton	94.61	42	P	P	20 23 17.0	+0.6
	baz=259						
MNTX	Cornudas Mount	94.93	59	*e*P	P	20 23 16.1	-2.1
	comp=Z,4.6nm,1.3s						
MNTX				LR	LR		
	comp=Z,2µm,19.0s						
MNTX	Cornudas Mount	94.93	59	P	P	20 23 17.9	-0.2
	baz=260						
YKA	Yellowknife Ar	95.09	27	P	P	20 23 15.5	-2.6
	comp=Z,1.8nm,0.7s,baz=257,slow=4.6,SNR=20						
YKA				LR	LR	20 58 58.3	
	comp=Z,333nm,21.3s,baz=263,slow=31						
YKB5	Yellowknife Ar	95.09	27	*e*P	P	20 23 14.4	-3.7
PMSA	Palmer Station	95.73	161	PFAKE		20 23 30.0	+8.9
PMSA				LR	LR		
	comp=Z,2µm,19.0s						
SDCO	Great Sand Dun	95.85	53	PFAKE		20 23 30.0	+7.4
SDCO				LR	LR		
	comp=Z,2µm,19.0s						
LTX	Lajitas	96.00	61	*e*P	P	20 23 23.2	0.0
LTX				*e*PP	PP	20 27 15.8	-0.2
LTX	Lajitas	96.00	61	*e*P	P	20 23 23.2	0.0
LTX				*e*		20 27 15.8	
TXAR	Lajitas Array	96.00	61	P	P	20 23 23.2	0.0
	comp=Z,0.4nm,0.7s,baz=203,slow=5.4,SNR=4.5						
TXAR				PP	PP	20 27 15.8	-0.2
	comp=Z,1.9nm,1.2s,baz=243,slow=8.0,SNR=4.0						
ISCO	Idaho Springs	96.09	51	PFAKE		20 23 30.0	+6.3
ISCO				LR	LR		
	comp=Z,3µm,19.0s						
NRIK	Noril'sk	96.11	340	LR	LR	21 03 45.4	
	comp=Z,2µm,21.9s,baz=102,slow=34						
Q24A	Divide	96.31	52	*e*P	P	20 23 20.8	-3.9
	comp=Z,7.1nm,0.8s						
NVL	N'lazarevskaya	96.40	188	*e*P	P	20 23 26.3	+2.3
NVL				*e*S	SKSac	20 34 00.1	+0.2
NVL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,3µm,17.0s						
KURK	Kurchatov	96.57	320	PFAKE		20 23 40.0	+15
KURK				LR	LR		
	comp=Z,4µm,21.0s						
KURK	Kurchatov	96.57	320	*i* P	P	20 23 26.4	+1.3
KURK				pmax	pmax		
	comp=Z,13nm,1.8s						
KSH	Kashi	96.66	309	P	P	20 23 28.0	+2.0
KSH				PP	PP	20 27 26.6	+5.8
KSH				SKS	SKSac	20 34 03.7	+1.1
KSH				S	S	20 34 45.9	-1.2
KSH				ScS	ScS	20 34 49.1	+1.6
KSH				SS	SS	20 41 24.7	+2.8
KSH				LR	LR		
	comp=Z,780nm,13.5s						
KSH				LR	LR		
	comp=Z,1µm,12.0s						
KSH				LR	LR		
	comp=Z,2µm,18.9s						
LAO	LASA Array	96.74	44	PFAKE		20 23 40.0	+14
LAO				LR	LR		
	comp=Z,1µm,21.0s						
NIL	Nilore	97.97	303	PFAKE		20 23 40.0	+8.0
NIL				LR	LR		
	comp=Z,738nm,22.0s						
AAK	Ala-Archa	98.20	312	PFAKE		20 23 40.0	+7.0
AAK				LR	LR		
	comp=Z,2µm,20.0s						
AAK	Ala-Archa	98.20	312	*i* P	Pdif	20 23 34.8	+1.8
AAK				pmax	pmax		
	comp=Z,5.0nm,2.0s						
DGMT	Dagmar	98.35	42	PFAKE		20 23 40.0	+6.7
DGMT				LR	LR		
	comp=Z,2µm,19.0s						
OGNE	Ogallala	98.96	50	PFAKE		20 23 50.0	+14
OGNE				LR	LR		
	comp=Z,2µm,20.0s						
JCT	Junction City	99.48	61	PFAKE		20 23 50.0	+11
JCT				LR	LR		
	comp=Z,2µm,19.0s						
FFC	Flin Flon	100.37	36	PFAKE		20 23 50.0	+7.9
FFC				LR	LR		
	comp=Z,4µm,20.0s						
CBKS	Cedar Bluff	100.48	52	PFAKE		20 23 50.0	+6.9
CBKS				LR	LR		
	comp=Z,2µm,19.0s						
WMOK	Wichita Mounta	100.83	57	PFAKE		20 24 00.0	+15
WMOK				LR	LR		
	comp=Z,2µm,19.0s						
BRVK	Borovoye	101.95	322	PFAKE		20 24 00.0	+11
BRVK				LR	LR		
	comp=Z,2µm,22.0s						
KSU1	Kansas State U	102.94	52	PFAKE		20 24 00.0	+6.1
KSU1				LR	LR		
	comp=Z,2µm,20.0s						
ECSD	EROS Data Cent	103.20	48	PFAKE		20 24 10.0	+15
ECSD				LR	LR		
	comp=Z,1µm,19.0s						
PAYG	Puerto Ayora	103.74	93	PFAKE		20 24 10.0	+12
PAYG				LR	LR		
	comp=Z,1µm,20.0s						
NATX	Nacogdoches	104.00	60	PFAKE		20 24 10.0	+11
NATX				LR	LR		
	comp=Z,2µm,19.0s						
MIAR	Mount Ida	105.09	57	PFAKE		20 28 30.0	+12
MIAR				LR	LR		
	comp=Z,3µm,19.0s						
SCIA	State Center	105.64	49	PFAKE		20 28 30.0	+11
SCIA				LR	LR		
	comp=Z,3µm,19.0s						
EYMN	Ely	106.81	43	PFAKE		20 28 30.0	+9.0
EYMN				LR	LR		
	comp=Z,2µm,19.0s						
EFI	East Falkland	107.02	153	PFAKE		20 28 30.0	+8.7
EFI				LR	LR		
	comp=Z,2µm,22.0s						
JFWS	Jewell Farm	107.83	48	PFAKE		20 28 30.0	+6.9
JFWS				LR	LR		
	comp=Z,1µm,20.0s						
COWI	Conover	108.50	45	PFAKE		20 28 30.0	+5.8
COWI				LR	LR		
	comp=Z,2µm,19.0s						
ARU	Arti	108.57	326	PFAKE		20 28 30.0	+6.0
ARU				LR	LR		
	comp=Z,1µm,21.0s						
HDIL	Hopedale	108.60	51	PFAKE		20 28 40.0	+15
HDIL				LR	LR		
	comp=Z,2µm,19.0s						
BRAL	Brewton	110.47	61	PFAKE		20 28 40.0	+12
BRAL				LR	LR		
	comp=Z,2µm,19.0s						
JTS	JuntasAbangare	110.85	83	PFAKE		20 28 40.0	+10
JTS				LR	LR		
	comp=Z,1µm,19.0s						
KBS	Kingsbay	110.95	355	PFAKE		20 28 40.0	+12
KBS				LR	LR		
	comp=Z,2µm,20.0s						
GLMI	Grayling	111.77	46	PFAKE		20 28 40.0	+10
GLMI				LR	LR		
	comp=Z,3µm,19.0s						
HOPE	Hope Point	112.25	166	PFAKE		20 28 40.0	+8.9
HOPE				LR	LR		
	comp=Z,1µm,20.0s						
ABPO	Ambohimpanom	112.28	244	PFAKE		20 28 40.0	+7.6
ABPO				LR	LR		
	comp=Z,863nm,19.0s						
LCO	Las Campanas	112.65	128	PFAKE		20 28 40.0	+7.0
LCO				LR	LR		
	comp=Z,1µm,20.0s						
AAM	Ann Arbor	112.73	49	PFAKE		20 28 40.0	+7.7
AAM				LR	LR		
	comp=Z,2µm,19.0s						
ACSO	Alum Creek Sta	113.43	51	PFAKE		20 28 40.0	+6.3
ACSO				LR	LR		
	comp=Z,2µm,20.0s						
GOGA	Godfrey	113.48	58	PFAKE		20 28 40.0	+6.0
GOGA				LR	LR		
	comp=Z,2µm,19.0s						
NNA	Nana	113.91	108	PFAKE		20 28 50.0	+15
NNA				LR	LR		
	comp=Z,592nm,19.0s						
TRQA	Tornquist	113.93	140	PFAKE		20 28 50.0	+15
TRQA				LR	LR		
	comp=Z,3.0nm,21.0s						
LVZ	Lovozero	114.85	342	PFAKE		20 28 50.0	+14
LVZ				LR	LR		
	comp=Z,2µm,22.0s						
APA	Apatity	115.43	342	⇑*i*PKIKP	PKiKP	20 28 34.9	-1.8
APA				pmax	pmax		
	comp=Z,5µm,1.0s						
OTAV	Otavalo	115.51	95	PFAKE		20 28 50.0	+11
OTAV				LR	LR		
	comp=Z,759nm,20.0s						
BCIP	Isla Barro Col	115.69	85	PFAKE		20 28 50.0	+11
BCIP				LR	LR		
	comp=Z,1µm,22.0s						
BLA	Blacksburg	115.71	54	PFAKE		20 28 50.0	+12
BLA				LR	LR		
	comp=Z,3µm,19.0s						
KEV	Kevo	115.81	345	PFAKE		20 28 50.0	+13
KEV				LR	LR		
	comp=Z,4µm,21.0s						
NHSC	New Hope	116.24	59	PFAKE		20 28 50.0	+11
NHSC				LR	LR		
	comp=Z,2µm,19.0s						
ARA0	ARCESS Array S	116.34	345	*e*PKPdf	PKPdf	20 28 37.5	-1.0
ARCES	ARCESS Array B	116.34	345	PKP	PKPdf	20 28 37.5	-1.0
	comp=Z,1.6nm,0.6s,baz=90,slow=1.4,SNR=11						
LVC	Limon Verde	116.99	122	PFAKE		20 28 50.0	+8.4
LVC				LR	LR		
	comp=Z,2µm,19.0s						
CNNC	Cliffs of the	117.95	56	PFAKE		20 28 50.0	+7.4
CNNC				LR	LR		
	comp=Z,2µm,21.0s						
MAK	Makhachkala	117.96	313	*e*P	Pdif	20 24 58.5	-2.1
MAK				*i*		20 28 39.1	
MAK				*e*		20 29 52.9	
CBN	Corbin Frederi	117.99	53	PFAKE		20 28 50.0	+7.4
CBN				LR	LR		
	comp=Z,3µm,20.0s						
BINY	Binghamton	118.37	48	PFAKE		20 28 50.0	+6.8
BINY				LR	LR		
	comp=Z,1µm,19.0s						
MTDJ	Mount Denham	118.77	75	PFAKE		20 29 00.0	+15
MTDJ				LR	LR		
	comp=Z,827nm,20.0s						
LONY	Lake Ozonia	118.85	45	PFAKE		20 28 50.0	+5.9
LONY				LR	LR		
	comp=Z,2µm,19.0s						
SFJD	Kangerlussuaq	119.15	15	PFAKE		20 28 50.0	+6.1
SFJD				LR	LR		
	comp=Z,3µm,20.0s						
LPAZ	La Paz	120.31	116	*e*PKPdf	PKPdf	20 28 45.2	-3.2
LPAZ	La Paz	120.31	116	PKP	PKPdf	20 28 48.1	-0.3
	comp=Z,1.3nm,0.6s,baz=263,slow=1.6,SNR=5.4						
GNI	Garni	120.56	310	PFAKE		20 29 00.0	+12
GNI				LR	LR		
	comp=Z,2µm,21.0s						
OBN	Obninsk	120.76	329	PFAKE		20 29 00.0	+13
OBN				LR	LR		
	comp=Z,1µm,21.0s						
OBN	Obninsk	120.76	329	*i* PKIKP	PKiKP	20 28 47.8	+0.4
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTBY	Guantanamo Bay	121.12	73	PFAKE		20 29 00.0	+11
GTBY				LR	LR		
	comp=Z,991nm,19.0s						
KIV	Kislovodsk	121.14	315	PFAKE		20 29 00.0	+11
KIV				LR	LR		
	comp=Z,1µm,20.0s						
KIV	Kislovodsk	121.14	315	*i* PKIKP	PKiKP	20 28 50.6	+1.9
KIV				*e*		20 30 20.0	
KIV				*e*PS	PKKPdf	20 40 12.3	+46
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,23.0s						
FIA0	FINESS Array S	121.75	338	*e*PKPdf	PKiKP	20 28 49.3	+0.1
FIA0	FINESS Array S	121.75	338	*e*PKIKP	PKiKP	20 28 49.3	+0.1
FINES	FINESS Array B	121.75	338	PKP	PKiKP	20 28 49.3	+0.1
	comp=Z,1.0nm,0.6s,baz=288,slow=1.3,SNR=4.0						
PKME	Peaks-Kenny Pk	122.29	43	PFAKE		20 29 00.0	+9.2
PKME				LR	LR		
	comp=Z,3µm,20.0s						
SOC	Sochi	123.31	315	*i* PKIKP	PKPdf	20 28 51.9	-0.7
SOC				*e*		20 30 32.9	
SOC				*e*PPP	PPP	20 33 12.9	
SOC				*e*		20 35 48.3	
SOC				*e*PS	PS	20 40 23.1	-7.1
SOC				*e*SS	SS	20 47 13.5	-5.1
SOC				MLR	MLR		
	comp=Z,1µm,18.0s						
CPUP	Villa Florida	124.12	132	*e*PKPdf	PKPdf	20 28 52.9	-1.8
CPUP	Villa Florida	124.12	132	PKP	PKPdf	20 28 54.8	+0.1
	comp=Z,2.0nm,0.8s,baz=241,slow=3.2,SNR=7.1						
ANN	Anapa	124.46	317	*i* PKIKP	PKiKP	20 29 04.7	+10
ANN				*e*SS	SS	20 47 30.9	-2.0
ANN				pmax	pmax		
	comp=Z,48nm,1.3s						
SDV	Santo Domingo	124.66	87	*e*PKPdf	PKPdf	20 28 54.5	-1.8
SDV				LR	LR		
	comp=Z,533nm,20.0s						
SDDR	Presa de Saban	124.72	75	PFAKE		20 29 10.0	+14
SDDR				LR	LR		
	comp=Z,1µm,21.0s						
GRTK	Grand Turk	124.84	72	PFAKE		20 29 10.0	+14
GRTK				LR	LR		
	comp=Z,1µm,20.0s						
BOSA	Boshof	124.97	223	PKP	PKPdf	20 28 56.5	+0.1
	comp=Z,5.8nm,0.8s,baz=94,slow=2.7,SNR=7.9						
SUR	Sutherland	125.21	217	PFAKE		20 29 10.0	+13
SUR				LR	LR		
	comp=Z,3µm,20.0s						
NB2	NORSAR Subarra	126.70	345	PKPdf	PKiKP	20 29 00.0	+0.9
	comp=Z,13nm,1.7s,baz=33,slow=2.0						
NB2	NORSAR Subarra	126.70	345	PKPdf	PKiKP	20 29 00.0	+0.9
	baz=33,slow=2.0						
NB200	NORSAR Array S	126.70	345	*e*PKPdf	PKPdf	20 28 57.7	-0.9
NOA	NORSAR Array B	126.70	345	PKP	PKPdf	20 28 57.7	-0.9
	comp=Z,0.5nm,0.6s,baz=346,slow=1.8,SNR=4.2						
HFS	Hagfors	126.78	343	PKP	PKPdf	20 28 57.7	-1.0
	comp=Z,1.3nm,0.7s,baz=94,slow=5.8,SNR=3.2						
AKASG	Malin Array Be	126.81	327	PKP	PKPdf	20 28 57.8	-1.3
	comp=Z,0.4nm,0.4s,baz=37,slow=2.9,SNR=3.1						
KIEV	Kiev	126.82	327	PFAKE		20 29 10.0	+10
KIEV				LR	LR		
	comp=Z,2µm,22.0s						
KMBO	Kilima Mbogo	127.22	260	PKP	PKPdf	20 29 01.4	+0.1
KMBO				LR	LR		
	comp=Z,1µm,19.0s						
KMBO	Kilima Mbogo	127.22	260	*c* *i*PKIKP	PKiKP	20 29 04.5	+2.7
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KMBO	Kilima Mbogo	127.22	260	PKP	PKPdf	20 29 01.4	+0.1
	comp=Z,1.2nm,0.8s,baz=20,slow=5.0,SNR=4.6						
BR101	Keskin Array S	128.87	313	*e*PKPdf	PKiKP	20 29 04.2	-0.1
BRTR	Keskin Array B	128.87	313	*c* *i*PKIKP	PKiKP	20 29 08.1	+3.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRTR	Keskin Array B	128.87	313	PKP	PKiKP	20 29 04.2	-0.1
	comp=Z,1.1nm,1.0s,baz=339,slow=3.1,SNR=4.9						
KIS	Kishinev	128.96	323	*e*PKP	PKiKP	20 29 41.0	+37
KIS				*e*LR	LR	21 05 50.0	
	comp=Z,1µm,18.0s						
ANTO	Ankara	129.43	313	PFAKE		20 29 20.0	+15
ANTO				LR	LR		
	comp=Z,756nm,20.0s						
SJG	San Juan	129.59	76	PFAKE		20 29 20.0	+14
SJG				LR	LR		
	comp=Z,846nm,20.0s						
LSZ	Lusaka	130.33	239	*e*PKPdf	PKiKP	20 29 10.0	+2.2
LSZ				LR	LR		
	comp=Z,1µm,22.0s						
LSZ	Lusaka	130.33	239	*e*PKIKP	PKiKP	20 29 10.0	+2.2
BUR04	Bucovina Ar. S	130.71	325	*e*PKPdf	PKPdf	20 29 05.7	-1.1
MLR	Muntele Rosu	131.44	323	PKP	PKiKP	20 29 09.0	-0.2
	comp=Z,1.7nm,0.7s,baz=217,slow=5.1						
UZH	Uzhgorod	131.68	328	*e*PKIKP	PKiKP	20 29 16.8	+7.4
UZH				*e*		20 29 20.2	
OKC	Ostrava-Krasne	132.94	332	AMS	AMS	21 24 00.0	
	comp=Z,3µm,22.5s						
PTGA	Pitinga	133.23	102	PFAKE		20 29 20.0	+6.4
PTGA				LR	LR		
	comp=Z,13µm,22.0s						
DPC	Dobruska-Polom	133.41	333	AMS	AMS	21 26 40.0	

	comp=Z,2µm,22.1s						
UPC	Upice	133.43	334	AMS	AMS	21 27 20.0	
	comp=Z,3µm,22.1s						
MBAR	Mbarara	133.64	258	PFAKE		20 29 20.0	+5.4
MBAR				LR	LR		
	comp=Z,646nm,19.0s						
ANWB	Willy Bob	133.75	76	PFAKE		20 29 20.0	+5.5
ANWB				LR	LR		
	comp=Z,1µm,20.0s						
GRGR	Grenville	133.77	84	PFAKE		20 29 20.0	+5.4
GRGR				LR	LR		
	comp=Z,769nm,21.0s						
PVCC	Panska Ves	134.04	335	*e*pPKP	pPKPdf	20 29 16.6	-0.8
PVCC				AMS	AMS	21 27 40.0	
	comp=Z,3µm,22.3s						
PVCC	Panska Ves	134.04	335	*e*PKIKP	pPKPdf	20 29 16.6	-0.8
PVCC				MLR	MLR		
	comp=Z,3µm,22.3s						
CLL	Collm	134.08	336	*e*PKPdf	PKPdf	20 29 13.0	+0.1
CLL				*e*PKSdfmax		20 32 59.0	
CLL				*e*PPPrev		20 45 12.0	
CLL				*e*SS	SS	20 49 30.0	-0.4
CLL				*e*SSS	SSS	20 54 30.0	
CLL				*e*(SSSS)		20 57 42.0	
CLL				LmV		21 26 00.0	
	comp=Z,2µm,22.0s						
CLL				LmH		21 28 00.0	
	comp=N,2µm,19.6s						
CLL				LmH		21 28 00.0	
	comp=E,900nm,19.4s						
CLL				LmH		21 28 00.0	
	comp=Z,2µm,20.6s						
CLL	Collm	134.08	336	*e*PKIKP	PKPdf	20 29 13.0	+0.1
CLL				MLR	MLR		
	comp=Z,2µm,22.0s						
GOPC	GO Pecny, Ondr	134.40	334	AMS	AMS	21 23 40.0	
	comp=Z,2µm,21.4s						
PRU	Pruhonice	134.45	334	AMS	AMS	21 26 40.0	
	comp=Z,3µm,21.1s						
TREC	Trest	134.55	333	AMS	AMS	21 32 20.0	
	comp=Z,2µm,20.6s						
ESK	Eskdalemuir	135.01	351	PFAKE		20 29 30.0	+14
ESK				LR	LR		
	comp=Z,2µm,20.0s						
NKC	Novy Kostel	135.14	336	AMS	AMS	21 27 30.0	
	comp=Z,3µm,19.5s						
KHC	Kasperske Hory	135.51	334	*e*PKPDF	PKiKP	20 29 16.8	-0.4
KHC				AMS	AMS	21 27 30.0	
	comp=Z,3µm,21.9s						
KHC	Kasperske Hory	135.51	334	*e*PKIKP	PKiKP	20 29 16.8	-0.4
KHC				MLR	MLR		
	comp=Z,3µm,21.9s						
GERES	GERESS Array B	135.67	334	PKP	PKPdf	20 29 16.5	+0.4
	comp=Z,0.5nm,0.7s,baz=69,slow=3.3,SNR=3.1						
BBGH	Gun Hill	135.86	83	PFAKE		20 29 30.0	+11
BBGH				LR	LR		
	comp=Z,1µm,19.0s						
TSUM	Tsumeb	136.40	227	PFAKE		20 29 30.0	+10
TSUM				LR	LR		
	comp=Z,3µm,19.0s						
BDFB	Brasilia	137.44	128	*e*PKPdf	PKPdf	20 29 17.6	-2.8
BDFB	Brasilia	137.44	128	PKP	PKiKP	20 29 21.5	-0.7
	comp=Z,4.8nm,0.8s,baz=126,slow=3.2,SNR=6.0						
BFO	Black Forest	138.28	337	PFAKE		20 29 30.0	+7.1
BFO				LR	LR		
	comp=Z,55nm,21.0s						
KEST	Kesra	147.35	323	PKPbc	PKPbc	20 29 40.1	+0.4
	comp=Z,6.7nm,0.8s,baz=30,slow=3.2,SNR=3.5						
ESDC	Sonseca Array	150.06	344	PKPbc	PKiKP	20 29 47.0	-0.4
	comp=Z,0.6nm,0.6s,baz=2.2,slow=2.6,SNR=4.1						
ESDC				PKPab	PKPab	20 29 52.1	-0.1
	comp=Z,2.8nm,0.8s,baz=8.2,slow=3.6,SNR=7.4						
PAB	San Pablo	150.28	344	PFAKE		20 29 50.0	+2.1
PAB				LR	LR		
	comp=Z,3µm,22.0s						
CMLA	Cha da Macela	151.63	19	PFAKE		20 29 50.0	-0.2
CMLA				LR	LR		
	comp=Z,2µm,19.0s						
SHEL	Horse Pasture	151.78	198	PFAKE		20 30 00.0	+0.1
SHEL				LR	LR		
	comp=Z,619nm,21.0s						
ASCN	Ascension	161.10	180	PFAKE		20 30 10.0	+13
ASCN				LR	LR		
	comp=Z,22µm,19.0s						
TOA0	Torodi Ar. Sit	164.11	279	*e*PKPdf	PKPdf	20 29 56.6	-3.3
TORD	Torodi Ar. Bea	164.11	279	PKP	PKPdf	20 29 59.1	-0.7
	comp=Z,1.1nm,0.7s,baz=143,slow=5.2,SNR=8.3						
TORD				PKPab	PKPab	20 30 52.1	-1.2
	comp=Z,5.4nm,1.3s,baz=106,slow=3.9,SNR=3.0						
TOA1	Torodi Ar. Sit	164.11	279	*e*PKPdf	PKPdf	20 29 59.1	-0.7
TOA1				*e*PKPab	PKPab	20 30 52.1	-1.2
KIC	Kosan Boka	169.34	245	*e*P	PKPpre	20 29 58.5	
	comp=Z,104nm,1.8s						
LIC	Lamto	169.53	243	*e*P	PKPpre	20 29 57.9	
	comp=Z,73nm,1.7s						
DBIC	Dimbokro	169.58	246	PKP	PKPdf	20 30 03.7	-0.3
	comp=Z,3.4nm,1.1s,baz=108,slow=3.2,SNR=2.8						
TIC	Toumodi	169.71	245	*e*P	PKPpre	20 29 56.1	
SACV	Santiago Islan	170.25	66	PFAKE		20 30 10.0	+5.6
SACV				LR	LR		
	comp=Z,903nm,20.0s						

GUC ***11*** *20:22:19.5±0.5, 31°.48S×70°.56W, h86^{km}±12^{km}, ML2.9*
SJA ***11*** *20:22:20.2±1.1, 31°.48S×70°.62W, h27^{km}±4^{km}, ML2.8, MW3.1*
ISC 11 20:22:22.8±1.4, **31°.49S**±0°.03×**70°.52W**±0°.04, **h33**^{km}±4^{km}, **n21**, σ**1**^{s}**.64**/34, **6C-8D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	Combarbala	0.51	307	⇑*i*P	Pn	20 22 35.1	+1.2
CMCH				*i* S	Sn	20 22 45.9	+4.3
RTLS	Leoncito	1.09	107	⇓*e*P	Pb	20 22 43.6	+0.2
RTLS				*e*S	Sb	20 23 00.3	+2.8
RTLS				IAML		20 23 01.8	
	comp=Z,180nm,0.3s						
AUSP	Uspallata	1.22	128	⇓*e*P	Pb	20 22 44.9	-0.5
AUSP				*e*S	Sb	20 23 03.0	+2.0
GO04	Tololo Observa	1.33	350	⇑*i*P	Pn	20 22 44.5	-0.8
GO04				*i* S	Sb	20 23 03.0	-1.1
GO04				IAML		20 23 06.6	
	comp=N,348nm,0.2s						
ACCO	Cerro Coronel	1.54	55	*e*P	Pn	20 22 49.5	+1.3
ACCO				*e*S	Sb	20 23 11.3	+1.1
ROCH	El Roble	1.54	195	⇑*i*P	Pn	20 22 46.0	-2.1
ROCH				*i* S	Sn	20 23 06.7	-0.4
ROCH				IAML		20 23 13.2	
	comp=E,254nm,0.3s						
ROC1	El Roble	1.54	196	*e*P	Pn	20 22 47.5	-0.7
AROD	Rodeo	1.59	35	*e*P	Pn	20 22 50.2	+1.2
AROD				*e*S	Sb	20 23 12.6	+0.8
PEL	Peldehue	1.66	185	⇑*i*P	Pn	20 22 48.2	-1.4
PEL				*i* S	Sn	20 23 09.9	0.0
PEL				IAML		20 23 15.3	
	comp=E,106nm,0.2s						
RTCV	Cerro Valdivia	1.73	103	*e*P	Pn	20 22 50.4	-0.3
RTLL	Cerro Villicun	1.76	85	⇓*e*P	Pn	20 22 51.8	+0.7
RTLL				⇓*e*S	Sb	20 23 15.9	-0.3
RTLL				IAML		20 23 16.7	
	comp=Z,77nm,0.4s						
ACDV	Cuesta del Vie	1.78	43	⇓*e*P	Pb	20 22 53.4	-1.6
ASAL	Salagasta	1.81	128	⇓*e*P	Pn	20 22 53.2	+1.4
ASAL				⇓*e*S	Sb	20 23 17.9	+0.2
AMOG	MOGNA	1.82	73	⇓*e*P	Pn	20 22 52.8	+0.8
FCH	Farellones	1.85	174	⇑*i*P	Pn	20 22 52.0	-0.5
FCH				*i* S	Sn	20 23 16.1	+1.2
FCH				IAML		20 23 19.2	
	comp=E,109nm,0.2s						
ARCO	CERRO ARCO	1.91	135	*e*P	Pn	20 22 55.1	+1.9
ARCO				IAML		20 23 26.2	
	comp=Z,62nm,0.4s						
AAGR	Agrelo	2.15	138	*e*P	Pn	20 22 57.6	+1.2
LMEL	Las Melosas	2.37	174	⇑*i*P	Pn	20 22 59.8	+0.3
LMEL				*i* S	Sn	20 23 26.9	-0.6
LMEL				IAML		20 23 34.9	
	comp=E,77nm,0.2s						
AGUA	GUANDACOL	2.65	42	*e*P	Pn	20 23 04.5	+1.2
MRA	San Martin	4.19	104	*e*P	Pn	20 23 23.1	-1.4
MRA				IAML		20 24 16.3	
	comp=Z,11nm,0.7s						
CYA	Choya	5.10	55	*e*P	Pn	20 23 35.7	-1.2
CYA				IAML		20 23 36.4	
	comp=Z,7.1nm,0.5s						
CYA				*e*S	Sn	20 24 30.7	-3.9

ISCJB ***11*** *20:24:14.4±0.2, 24°.35N±0°.02×123°.00E±0°.01, h52^{km}±3^{km}, mb3.4/8, Error ellipse: s-maj=3.4km s-min=2.0km az=169.1*
TAP ***11*** *20:24:14.6, 24°.34N×122°.96E, h45^{km}, ML4.2, C*
JMA ***11*** *20:24:14.5±0.1, 24°.35N×122°.97E, h50^{km}±1^{km}, M3.5*
IDC ***11*** *20:24:15.9±4.2, 24°.37N×123°.00E, h64^{km}±38^{km}, mb3.3/8, mb1 3.4/9, mb1mx3.2/46, mbtmp3.5/9, ML2.4/1, Error ellipse: s-maj=26.4km s-min=19.0km az=74.0*
ISC 11 20:24:14.0±0.8, **24°.31N**±0°.03×**122°.99E**±0°.02, **h46**^{km}±5^{km}, **n118**, σ**1**^{s}**.77**/203, **mb3.4**/8, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.15	343	P	Pn	20 24 22.2	+0.6
JYNG				S	Sn	20 24 27.7	+0.7
YOJ	Yonaguni jima	0.15	6	*i* P	Pn	20 24 22.4	+0.7
	baz=16						
YOJ				*i* S	Sn	20 24 27.7	+0.8
	baz=16						
YOJ	Yonaguni jima	0.15	6	P	Pn	20 24 22.3	+0.7
YOJ				S	Sn	20 24 27.8	+0.8
IRIF	Iriomote-Funau	0.67	88	P	Pn	20 24 28.1	+0.9
IRIF				S	Sn	20 24 38.5	+1.7
HATJ	Hateruma jima	0.78	109	P	Pn	20 24 29.9	+1.2
HATJ				*e*S	Sn	20 24 40.7	+1.3
EOS1	EOS1	0.82	287	P	Pn	20 24 29.4	+0.2
	baz=294						
EOS1				S	Sn	20 24 40.6	+0.4
	baz=294						
JKRS	Kuro-shima	0.93	94	P	Pn	20 24 32.0	+1.3
JKRS				S	Sn	20 24 44.9	+2.0
JIJ	Ishigaki jima	1.05	87	P	Pn	20 24 33.0	+0.7
JIJ				*e*S	Sn	20 24 46.3	+0.5
TWC	Suao	1.08	286	*e*P	Pn	20 24 32.6	-0.2
	baz=285						
TWC				*e*S	Sn	20 24 45.5	-1.1
	baz=285						
NANB	Nanao	1.14	276	*e*P	Pn	20 24 34.2	+0.6
	baz=284						
NANB				*e*S	Sn	20 24 47.5	-0.6
	baz=284						
ENA	Nanau	1.15	276	*e*P	Pn	20 24 34.2	+0.6
	baz=284						
TWB1	Santiao Chiao	1.15	307	P	Pn	20 24 33.9	+0.2
	baz=316						
TWB1				*e*S	Sn	20 24 47.1	-1.1
	baz=316						
NTC	Toucheng	1.19	297	P	Pn	20 24 34.7	+0.5
	baz=297						
NTC				*e*S	Sn	20 24 48.2	-1.0
	baz=297						
ILA	Ilan	1.22	292	*e*S	Sn	20 24 50.1	0.0
	baz=292						
JISG	Ishigakijimahi	1.23	77	P	Pn	20 24 35.5	+0.7
JISG				*e*S	Sn	20 24 50.9	+0.6
TIPB	Shuangxi	1.25	302	P	Pn	20 24 35.4	+0.3
	baz=311						
TIPB				S	Sn	20 24 49.9	-0.9
	baz=311						
TWE	Neicheng	1.28	289	P	Pn	20 24 36.1	+0.7
	baz=288						
TWE				*e*S	Sn	20 24 50.8	-0.5
	baz=288						
NACB	Ninganchiao	1.28	264	P	Pn	20 24 36.1	+0.6
	baz=263						
NACB				S	Sn	20 24 51.7	+0.1
	baz=263						
TWD	Chiawan	1.30	260	*e*P	Pn	20 24 36.0	+0.3
	baz=245						
TWD				*e*S	Sn	20 24 51.8	0.0
	baz=245						
HWA	Hwalien	1.31	256	*e*P	Pn	20 24 36.6	+0.7
	baz=254						
HWA				*e*S	Sn	20 24 53.1	+0.9
	baz=254						
ENLB	Shoufeng	1.33	253	*i* P	Pn	20 24 36.8	+0.6
	baz=239						
ENLB				*i* S	Sn	20 24 53.4	+0.6
	baz=239						
NWF	Wu-fen Shan	1.34	305	*e*P	Pn	20 24 36.9	+0.6
	baz=305						
NWF				*e*S	Sn	20 24 52.7	-0.3
	baz=305						
WFSB	Wu-fen Shan	1.34	305	*e*P	Pn	20 24 36.8	+0.6
	baz=305						
WFSB				S	Sn	20 24 52.5	-0.3
	baz=305						
ENTT	Nioudou	1.34	284	P	Pn	20 24 37.5	+1.2
	baz=291						
NDT	Datong Townshi	1.38	282	*e*P	Pn	20 24 38.4	+1.6
	baz=288						
NDT				*e*S	Sn	20 24 54.6	+0.7
	baz=288						
ETLH	Xiulin Townshi	1.38	266	*e*P	Pn	20 24 37.6	+0.6
	baz=265						
ETLH				*e*S	Sn	20 24 54.5	+0.3
	baz=265						
NWLT	Wulai	1.44	289	P	Pn	20 24 38.9	+1.3
	baz=289						
TWA	Mucha	1.45	298	*e*P	Pn	20 24 39.9	+2.2
	baz=297						
NNSB	Datong	1.47	275	P	Pn	20 24 39.6	+1.4
	baz=274						
NNS	Nan Shan	1.48	275	*e*P	Pn	20 24 39.5	+1.2
	baz=274						
NNS				*e*S	Sn	20 24 57.6	+0.9
	baz=274						
NHDH	Xindian Distri	1.49	296	*e*P	Pn	20 24 40.0	+1.8
	baz=296						
NHDH				*e*S	Sn	20 24 56.5	0.0
	baz=296						
ESL	Shilin	1.51	251	*e*P	Pn	20 24 38.3	-0.3
	baz=249						
ESL				*e*S	Sn	20 24 56.5	-0.6
	baz=249						
YHNB	Yeheng	1.52	284	*e*P	Pn	20 24 40.9	+2.1
	baz=292						
YHNB				S	Sn	20 24 58.0	+0.6
	baz=292						
TATO	Taipei	1.52	296	P	Pn	20 24 39.4	+0.6
	baz=296						
TATO				S	Sn	20 24 57.3	-0.1
	baz=296						
NSK	Sanguang	1.53	284	*e*P	Pn	20 24 41.2	+2.2
	baz=292						
YM01	YM01	1.54	303	P	Pn	20 24 39.7	+0.6
	baz=303						
YM01				*e*S	Sn	20 24 57.4	-0.5
	baz=303						
YM11	YM11	1.55	304	*e*P	Pn	20 24 39.7	+0.5
	baz=303						
YM08	YM08	1.55	305	*e*P	Pn	20 24 40.2	+1.1
	baz=304						
YM10	YM10	1.55	303	*e*P	Pn	20 24 39.8	+0.6
	baz=303						
YM10				*e*S	Sn	20 24 58.1	-0.1
	baz=303						
YM05	YM05	1.55	304	*e*P	Pn	20 24 40.5	+1.3
	baz=303						
PCYT	Pengchaiyu	1.56	328	*e*P	Pn	20 24 40.5	+1.2
	baz=318						
EGFH	Guangfu	1.57	246	*e*P	Pn	20 24 39.3	-0.1
	baz=245						
EGFH				S	Sn	20 24 58.0	-0.5
	baz=245						
YM04	YM04	1.57	303	*e*P	Pn	20 24 40.0	+0.5
	baz=302						
WHF	Hehuan Shan	1.59	264	*i* P	Pn	20 24 40.8	+0.8
	baz=251						
WHF				*e*S	Sn	20 25 00.7	+1.1
	baz=251						
JTJ	Tarama	1.59	78	P	Pn	20 24 41.0	+1.3
JTJ				*e*S	Sn	20 25 00.5	+1.4
TWS1	Kuangyinshan	1.64	299	P	Pn	20 24 41.4	+1.1
	baz=299						
TWS1				*e*S	Sn	20 25 01.9	+1.7
	baz=299						
NTST	Danshui	1.64	302	*e*P	Pn	20 24 41.1	+0.7
	baz=301						
NTST				*e*S	Sn	20 25 00.6	+0.3
	baz=301						
HGSD	Ruisui	1.65	241	*e*P	Pn	20 24 40.1	-0.4
	baz=239						
HGSD				*e*S	Sn	20 24 58.7	-1.8
	baz=239						
TWT	Tachien	1.66	268	*e*P	Pn	20 24 42.9	+2.1
	baz=258						
WLTB	Daxi	1.67	289	*e*P	Pn	20 24 43.2	+2.4
	baz=301						
TDCB	Techi	1.68	268	*e*P	Pn	20 24 42.5	+1.5
	baz=267						
TDCB				*e*S	Sn	20 25 01.8	+0.4
	baz=267						
CHGB	Renai	1.68	262	P	Pn	20 24 42.0	+0.9
	baz=249						
CHGB				*e*S	Sn	20 25 02.0	+0.4
	baz=249						
OWD	Renai	1.70	258	*e*P	Pn	20 24 41.9	+0.6
	baz=257						
OWD				*e*S	Sn	20 25 01.2	-0.8
	baz=257						
EHY	Hungye	1.73	243	*e*P	Pn	20 24 41.5	-0.1
	baz=255						
NCU	National Centr	1.77	292	*e*S	Sn	20 25 07.0	+3.5
	baz=300						
NCUH	Zhongli	1.77	292	*e*S	Sn	20 25 06.8	+3.2
	baz=302						
VWDT	VWDT	1.78	252	*e*P	Pn	20 24 43.1	+0.8
	baz=241						
VWDT				*e*S	Sn	20 25 03.5	-0.2
	baz=241						
YULB	Yu-li	1.80	240	*e*P	Pn	20 24 42.5	-0.2
	baz=238						
YULB				*e*S	Sn	20 25 03.4	-0.9
	baz=238						
TWF1	Yuli	1.82	239	*e*P	Pn	20 24 42.9	0.0
	baz=237						
TWF1				*e*S	Sn	20 25 04.6	-0.3
	baz=237						
LIOB	Emei	1.83	281	*e*P	Pn	20 24 44.9	+1.8
	baz=280						
NSTT	Nanjuang	1.84	280	*e*P	Pn	20 24 45.7	+2.5
	baz=280						
WHP	Taichung City	1.87	269	*e*P	Pn	20 24 45.8	+2.2
	baz=258						
WHP				*e*S	Sn	20 25 07.2	+1.2
	baz=258						
CHKT	Chengkung	1.92	231	*e*P	Pn	20 24 43.5	-0.7
	baz=219						
CHKT				*e*S	Sn	20 25 04.6	-2.5
	baz=219						
SSLB	Suanglung	1.94	255	P	Pn	20 24 45.5	+1.0
	baz=254						
SSLB				*e*S	Sn	20 25 07.6	-0.1
	baz=254						
SMLT	Sun Moon Lake	1.96	258	*e*P	Pn	20 24 46.2	+1.4
	baz=247						
SMLT				*e*S	Sn	20 25 09.5	+1.2
	baz=247						
NMLH	Miaoli	2.02	277	*e*P	Pn	20 24 47.9	+2.3
	baz=276						
NMLH				*e*S	Sn	20 25 12.1	+2.5
	baz=276						
TWQ1	Liyutan	2.03	272	*e*P	Pn	20 24 48.0	+2.4
	baz=271						
TWQ1				*e*S	Sn	20 25 12.7	+2.9
	baz=271						
NSY	Sanyi	2.04	273	*e*P	Pn	20 24 48.2	+2.3
	baz=273						
JIRB	Irabujima	2.05	75	P	Pn	20 24 47.3	+1.3
JIRB				*e*S	Sn	20 25 12.2	+1.8
WHYT	Xinyi Township	2.05	253	*e*P	Pn	20 24 48.5	+2.4
	baz=243						
WHYT				*e*S	Sn	20 25 10.4	-0.1
	baz=243						
TCU	Taichung	2.12	266	*e*P	Pn	20 24 49.5	+2.5
	baz=278						
TCU				*e*S	Sn	20 25 15.8	+3.7
	baz=278						
ELDTW	Lidau	2.13	239	*e*P	Pn	20 24 46.9	-0.3
	baz=237						
ELDTW				*e*S	Sn	20 25 10.6	-1.9
	baz=237						
WJS	Zhushan	2.13	257	*e*P	Pn	20 24 49.6	+2.6
	baz=247						
WJS				*e*S	Sn	20 25 14.8	+2.5
	baz=247						
WDJ	Dajia District	2.15	271	*e*P	Pn	20 24 49.7	+2.4
	baz=271						
WDJ				*e*S	Sn	20 25 14.9	+2.1
	baz=271						
WNT	Mingjian	2.15	259	*e*P	Pn	20 24 50.0	+2.6
	baz=250						
WNT				*e*S	Sn	20 25 15.6	+2.6
	baz=250						
CHN5	Tsauling	2.23	252	P	Pn	20 24 50.9	+2.2
	baz=242						
CHN5				*e*S	Sn	20 25 17.1	+2.0
	baz=242						
WCHH	Zhanghua	2.23	265	*e*P	Pn	20 24 50.6	+2.1
	baz=264						
WCHH				*e*S	Sn	20 25 16.9	+2.0
	baz=264						
TTN	Taitung	2.30	228	*e*S	Sn	20 25 17.1	+0.7
	baz=217						
TWGBT	Beinan	2.30	230	*e*P	Pn	20 24 49.1	-0.4
	baz=240						
TWGBT				*e*S	Sn	20 25 15.0	-1.6
	baz=240						
TWG	Pinlang	2.30	230	*e*P	Pn	20 24 49.1	-0.4
	baz=240						
TWG				*e*S	Sn	20 25 15.0	-1.6
	baz=240						
WGK	Gukeng	2.31	255	P	Pn	20 24 51.9	+2.3
	baz=243						
WGK				*e*S	Sn	20 25 19.6	+2.8
	baz=243						
WDLH	Douliu	2.33	255	*e*P	Pn	20 24 52.1	+2.2
	baz=243						
WDLH				*e*S	Sn	20 25 19.8	+2.6
	baz=243						
STYT	Tauyuan	2.35	241	*e*P	Pn	20 24 51.1	+0.9
	baz=232						
STYT				*e*S	Sn	20 25 18.5	+0.7
	baz=232						
TPUB	Ta-pu	2.39	246	P	Pn	20 24 52.7	+2.0
	baz=244						
TPUB				S	Sn	20 25 20.6	+1.9
	baz=244						
CHN4	Tsaushan	2.40	247	*e*P	Pn	20 24 53.4	+2.6
	baz=246						
CHN4				*e*S	Sn	20 25 21.5	+2.5
	baz=246						
WTP	Ta-pu	2.42	245	P	Pn	20 24 53.2	+2.0
	baz=243						
WTP				*e*S	Sn	20 25 21.6	+1.9
	baz=243						
CHN2	Minshiung	2.43	252	*e*P	Pn	20 24 54.0	+2.8
	baz=251						
CHN2				*e*S	Sn	20 25 23.0	+3.3
	baz=251						
RLNB	Erlin	2.44	261	*e*P	Pn	20 24 53.6	+2.2
	baz=260						
RLNB				*e*S	Sn	20 25 22.9	+2.9
	baz=260						
CHY	Chiayi	2.49	252	*e*P	Pn	20 24 54.5	+2.5
	baz=250						
CHY				*e*S	Sn	20 25 23.8	+2.6
	baz=250						
WTCT	Ta-ch'eng	2.52	260	*e*P	Pn	20 24 54.9	+2.5
	baz=259						
WTCT				*e*S	Sn	20 25 23.9	+2.0
	baz=259						
TWK	Hsinying	2.52	246	*e*P	Pn	20 24 54.8	+2.3
	baz=245						
TWK				*e*S	Sn	20 25 24.1	+2.1
	baz=245						
SLGT	Liugui	2.52	239	*e*P	Pn	20 24 54.1	+1.6
	baz=230						
SLGT				*e*S	Sn	20 25 24.2	+2.2
	baz=230						
CHN1	Nanshi	2.52	244	P	Pn	20 24 54.8	+2.3
	baz=242						
CHN1				*e*S	Sn	20 25 24.4	+2.4
	baz=242						
SGST	Jiashian	2.52	242	*e*P	Pn	20 24 54.5	+2.0
	baz=240						
SGST				*e*S	Sn	20 25 24.8	+2.7
	baz=240						
SNST	Tainan City	2.53	245	*e*P	Pn	20 24 54.9	+2.3
	baz=244						
SNST				*e*S	Sn	20 25 24.7	+2.4
	baz=244						

ECL	**Taimali** baz=236	2.53	228	*e*P	Pn	20 24 51.9	-0.7
ECL	baz=236			*e*S	Sn	20 25 19.5	-2.7
WLGB	**Puzi** baz=251	2.60	252	*e*S	Sn	20 25 27.0	+3.1
LAY	**Lan-yu** baz=210	2.62	211	*e*P	Pn	20 24 52.4	-1.5
WSF	**Szhu** baz=268	2.62	256	P	Pn	20 24 56.2	+2.4
WSF	baz=268			*e*S	Sn	20 25 27.6	+3.1
SSD	**Sandimen** baz=229	2.67	235	*e*P	Pn	20 24 55.9	+1.4
SSD	baz=229			*e*S	Sn	20 25 28.8	+3.1
CHN3	**Shinhua** baz=242	2.70	244	*e*P	Pn	20 24 58.3	+3.3
CHN3	baz=242			*e*S	Sn	20 25 30.9	+4.5
CHN8	**Yiju** baz=248	2.72	250	*e*P	Pn	20 24 57.3	+2.1
CHN8	baz=248			*e*S	Sn	20 25 29.4	+2.4
MASBT	**Mashibuluo** baz=226	2.75	233	P	Pn	20 24 56.5	+0.9
MASBT	baz=226			S	Sn	20 25 30.4	+2.8
EAST	**Anshuo** baz=225	2.75	226	*e*P	Pn	20 24 55.3	-0.4
TWM1	**Shoushan** baz=237	2.79	238	*e*P	Pn	20 24 59.9	+3.8
SGLT	**Jiouru** baz=234	2.79	236	*e*P	Pn	20 25 00.0	+3.9
SGLT	baz=234			*e*S	Sn	20 25 33.7	+5.2
SCLT	**Jiali** baz=245	2.80	247	*e*P	Pn	20 24 58.7	+2.3
SCLT	baz=245			*e*S	Sn	20 25 31.8	+2.9
SSPT	**Xinbi** baz=226	2.88	231	*e*P	Pn	20 24 59.0	+1.7
SSPT	baz=226			*e*S	Sn	20 25 32.8	+2.1
JOW	**Kunigami** 0.3nm,0.3s,baz=90,slow=17,SNR=4.1	5.39	61	P	Pn	20 25 31.6	-0.3
JOW	0.2nm,0.3s,baz=237,slow=27,SNR=1.3			S	Sn	20 26 35.6	+3.0
KSRS	**Korea Array** 0.1nm,0.3s,baz=197,slow=11,SNR=3.0	13.77	17	P	P	20 27 30.4	-3.5
ASAJ	**Asahikawa** 3.9nm,0.9s,baz=292,slow=27,SNR=2.0	25.44	34	P	P	20 29 37.1	-0.3
SONM	**Songino Array** 0.5nm,0.8s,baz=150,slow=9.8,SNR=5.3	26.92	335	P	P	20 29 50.7	-0.2
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=97,slow=9.0,SNR=4.6	39.41	315	P	P	20 31 39.0	-0.3
MKAR	0.3nm,0.7s,baz=76,slow=3.4,SNR=3.5			PcP	PcP	20 33 46.2	-0.5
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=108,slow=8.3,SNR=3.8	41.05	326	P	P	20 31 53.2	+0.5
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=347,slow=8.8,SNR=6.3	45.35	165	P	P	20 32 28.0	+0.1
ASAR	**Alice Springs** 0.1nm,0.4s,baz=357,slow=14,SNR=3.7	48.85	167	P	P	20 32 56.4	+1.3
ILAR	**Eielson Array** 0.2nm,0.4s,baz=270,slow=4.8,SNR=6.9	68.34	27	P	P	20 35 09.4	-0.8
YKA	**Yellowknife Ar** 0.7nm,0.7s,baz=312,slow=4.9,SNR=14	82.21	23	P	P	20 36 29.6	-0.3

*GUC **11** 20:31:28.2±0.6, 34°.16S×72°.36W, h27^{km}±10^{km}, ML3.1*
ISC 11 20:31:29.4±2.2**, 34°.15S**±0°.07×**72°.3W**±0°.1**, h17**^{km}±10^{km}**,**
n18, σ**1^{s}.40**/25**, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHPI	**Pichilemu**	0.32	140	*e*P	Pg	20 31 36.1	-0.1
CHPI				*i* S	Sg	20 31 41.4	+0.6
ROC1	**El Roble**	1.56	42	*e*P	Pn	20 31 55.9	-0.7
ROC1				*e*S	Sg	20 32 23.5	+3.7
ROCH	**El Roble**	1.57	42	⇓*i*P	Pn	20 31 55.6	-1.0
ROCH				*i* S	Sn	20 32 16.6	0.0
ROCH	comp=E,296nm,0.5s			IAML		20 32 29.5	
CLCH	**Cerro Calan**	1.61	63	*e*P	Pn	20 31 56.6	-0.5
CLCH				*i* S	Sn	20 32 18.1	+0.6
CLCH	comp=E,305nm,0.6s			IAML		20 32 30.5	
PEL	**Peldehue**	1.65	53	⇓*i*P	Pn	20 31 56.9	-0.6
PEL				*i* S	Sn	20 32 18.4	+0.1
PEL	comp=N,198nm,0.5s			IAML		20 32 28.8	
LMEL	**Las Melosas**	1.73	81	⇑*i*P	Pn	20 31 58.4	-0.4
LMEL				*i* S	Sn	20 32 21.4	+0.9
LMEL	comp=N,378nm,0.2s			IAML		20 32 29.6	
FCH	**Farellones**	1.83	64	⇓*i*P	Pn	20 31 59.7	-0.6
FCH				*i* S	Sn	20 32 24.9	+1.7
FCH	comp=E,209nm,0.5s			IAML		20 32 30.5	
CCHI	**Chillan** comp=E,139nm,0.4s	2.45	177	IAML		20 32 47.0	
AAGR	**Agrelo**	3.05	71	*e*P	Pb	20 32 23.2	-0.1
ARCO	**CERRO ARCO**	3.07	66	*e*P	Pb	20 32 23.1	-0.5
ARCO	comp=Z,31nm,0.4s			IAML		20 32 28.9	
AUSP	**Uspallata**	3.08	52	*e*P	Pb	20 32 20.9	-2.9
AUSP				*e*S	Sg	20 33 06.4	-1.9
ASAL	**Salagasta**	3.25	62	*e*P	Pb	20 32 25.6	-1.1
ASAL				*e*S	Sg	20 33 13.2	-0.7
ACCO	**Cerro Coronel**	4.46	38	*e*P	Pn	20 32 37.8	+1.4
AMOG	**MOGNA**	4.51	46	*e*P	Pn	20 32 37.6	+0.7
AROD	**Rodeo**	4.62	31	*e*P	Pn	20 32 39.9	+1.3
AGUA	**GUANDACOL**	5.64	36	*e*P	Pn	20 32 53.2	+0.7
MRA	**San Martin**	5.74	74	*e*P	Pn	20 32 55.3	+1.4
MRA	comp=Z,2.5nm,0.4s			IAML		20 33 38.9	
ACLC	**CERRO LA CRUZ**	6.52	45	*e*P	Pn	20 33 12.7	+8.0

*IDC **11** 20:31:29.6±1.7, 38°.45N×142°.36E, h0^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.3/45, mbtmp3.4/6, ML2.5/2, Error ellipse: s-maj=34.8km s-min=26.8km az=102.0*
*ISCJB **11** 20:31:33.1±1.3, 38°.28N±0°.05×142°.16E±0°.08, h30^{km}±6^{km}, mb3.2/4, Error ellipse: s-maj=11.5km s-min=6.9km az=21.5*
*JMA **11** 20:31:34.0±0.1, 38°.30N×142°.12E, h33^{km}±1^{km}, M3.5*
ISC 11 20:31:31.4±2.0**, 38°.34N**±0°.05×**142°.23E**±0°.08**, h14**^{km}±11^{km}**,**
n24, σ**1^{s}.65**/28**, mb3.3**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	0.60	267	P	Pb	20 31 44.6	+0.9
JIKH				S	Sg	20 31 51.6	+0.4
JIO	**Ouri**	0.70	280	P	Pn	20 31 46.4	-0.5
JIO				*e*S	Sg	20 31 54.7	+0.3
JKMT	**Kesennumamotoy**	0.76	309	P	Pn	20 31 47.9	+0.2
JKMT				S	Sn	20 31 57.5	-1.4
OFUJ	**Ofunato**	0.86	329	P	Pn	20 31 49.5	+0.4
OFUJ				*e*S	Sn	20 32 00.6	-0.8
JMK	**Ichinoseki**	1.00	308	P	Pn	20 31 51.5	+0.5
JMK				*e*S	Sn	20 32 04.4	-0.5
JMM	**Marumori**	1.23	248	P	Pn	20 31 53.4	-0.7
JMM				*e*S	Sb	20 32 07.4	-2.7
JOU	**Okura**	1.23	272	P	Pn	20 31 54.6	+0.4
JOU				*e*S	Sb	20 32 09.7	-0.5
JOM	**Ohasama**	1.35	327	P	Pg	20 31 57.1	-0.3
JFK	**Kawauchi**	1.45	228	P	Pn	20 31 56.0	-1.2
JFK				*e*S	Sn	20 32 11.9	-4.1
JYK	**Kaneyama**	1.57	292	P	Pb	20 31 59.9	-0.4
JFT	**Otama**	1.71	242	P	Pn	20 32 01.1	+0.3
JFT				S	Sn	20 32 21.0	-1.4
JYS	**Shirataka**	1.71	267	P	Pn	20 32 01.2	+0.4
MJAR	**Matsushiro Arr** 0.2nm,0.3s,baz=69,slow=11,SNR=9.0	3.67	242	Pn	Pn	20 32 29.9	+2.1
MJAR	0.1nm,0.3s,baz=168,slow=12,SNR=2.5			Sn	Sn	20 33 15.5	+4.7
PETK	**Petropavlovsk-** 0.1nm,0.3s,baz=202,slow=12,SNR=5.2	18.23	31	P	Pn	20 35 42.3	-1.6
SONM	**Songino Array** 0.2nm,0.7s,baz=107,slow=10,SNR=3.7	27.62	302	P	P	20 37 18.4	-0.1
H11N2	**WAKE ISLAND Hy** baz=316,slow=75,SNR=12	28.30	124	T	T	21 07 28.5	
H11N1	**WAKE ISLAND Hy** baz=316,slow=75,SNR=23	28.31	124	T	T	21 07 47.4	
H11N3	**WAKE ISLAND Hy** baz=316,slow=75,SNR=12	28.32	124	T	T	21 07 40.4	
H11S1	**WAKE ISLAND Hy** baz=318,slow=76,SNR=6.7	29.06	126	T	T	21 08 38.6	
H11S3	**WAKE ISLAND Hy** baz=318,slow=76,SNR=7.1	29.06	126	T	T	21 08 40.9	
H11S2	**WAKE ISLAND Hy** baz=318,slow=76,SNR=4.9	29.08	126	T	T	21 08 41.5	
ZALV	**Zalesovo Beam** 0.5nm,0.5s,baz=83,slow=8.5,SNR=3.0	41.53	311	P	P	20 39 18.4	+0.4
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=82,slow=9.8,SNR=6.3	43.99	301	P	P	20 39 39.2	+1.1
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=6.9,slow=7.3,SNR=4.9	58.44	189	P	P	20 41 28.0	+1.2

MEX 11 20:44:43.0±0.5**, 14°.45N**×**92°.74W, h15**^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.65	45	*i* P	Pg	20 44 52.2	-3.5
PCIG		1.33	340	*e*P	Pn	20 45 03.6	-3.5
PCIG				*e*S	Sn	20 45 19.3	-5.2

*ISCJB **11** 20:52:37.4±0.6, 38°.85N±0°.03×42°.43E±0°.05, h14^{km}±6^{km}, Error ellipse: s-maj=7.5km s-min=5.3km az=23.8*
*ISK **11** 20:52:37.1, 38°.83N×42°.45E, h5^{km}, ML1.6/4*
*DDA **11** 20:52:39.3, 38°.90N×42°.71E, h7^{km}±2^{km}, ML2.5*
ISC 11 20:52:37.1±1.3**, 38°.86N**±0°.04×**42°.44E**±0°.05**, h19**^{km}±5^{km}**,**
n8, σ**0^{s}.39**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADCV	**BITLIS_Adilcev**	0.23	102	*i* P	Pg	20 52 42.7	-0.1
ADCV				*i* S	Sg	20 52 46.9	+0.2
ADCV	comp=Z,3μm,0.1s			IAML_P			
MLAZ	**Malazgirt-MUS**	0.30	17	PG	Pg	20 52 43.7	-0.2
MLAZ				SG	Sg	20 52 48.9	+0.4
GURO	**Guroymak-BITLI**	0.44	226	PG	Pg	20 52 45.9	-0.3
GURO				SG	Sb	20 52 52.4	-0.1
TUTA	**Tutak**	0.62	28	*i* P	Pg	20 52 49.0	-0.6
TUTA				*i* S	Sg	20 52 57.7	-0.3
TUTA	comp=Z,773nm,0.2s			IAML_P			
AKDM	**Akdamar-Van**	0.68	141	PG	Pg	20 52 50.2	-0.4
AKDM				SG	Sg	20 52 59.7	0.0
GEVA	**Gevas**	0.73	138	*i* P	Pg	20 52 51.8	+0.3
GEVA	comp=Z,1μm,0.2s			IAML_P			
AGRB	**Hanur-Agry**	0.84	31	PG	Pg	20 52 54.2	+0.6
SVAN	**Silvan-Diyarba**	1.20	234	PN	Pg	20 53 00.6	+0.3

IDC 11 21:01:24.5±3.4**, 5°.29S**×**151°.65E, h0**^{km}**, mb3.9**/2**, mb1 4.2**/2**, mb1mx3.3**/41**, mbtmp4.0**/2**, Error ellipse: s-maj=135.7km s-min=46.6km az=118.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 2.1nm,0.7s,baz=53,slow=10,SNR=21	22.27	228	P	P	21 06 23.4	-0.1
ASAR	**Alice Springs** 3.6nm,0.7s,baz=58,slow=9.0,SNR=36	25.02	221	P	P	21 06 50.4	-0.1
TORD	**Torodi Ar. Bea** 0.3nm,0.4s,baz=88,slow=2.8,SNR=8.5	149.36	287	PKPbc	PKPbc	21 21 16.2	-0.4

NNC 11 21:03:12.1±2.7**, 37°.87N**×**71°.79E, h0**^{km}**, mb3.8, mpv3.4, 4C-4D, Error ellipse: s-maj=22.6km s-min=20.1km az=88.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan** 4.8nm,0.3s	2.52	31	⇑Pn	Pn	21 03 55.2	+0.6
SFK	2.5nm,0.4s			⇑Lg	Lg	21 04 30.7	
MNAS	**Manas** 4.9nm,0.3s	4.64	7	⇓Pn	Pn	21 04 23.5	-0.2
MNAS	0.6nm,0.4s			⇑Sn	Sn	21 05 21.1	+2.8
AAK	**Ala-Archa** 1.2nm,0.3s	5.19	23	⇑Pn	Pn	21 04 30.1	-1.1
AAK	1.1nm,0.5s			⇓Sn	Sn	21 05 32.8	+1.0
KK31	**Karatay Array** 1.2nm,0.3s,baz=174,slow=15,SNR=28	5.32	350	⇓Pn	Pn	21 04 32.2	-0.6
KK31	2.6nm,0.6s,baz=172,slow=22,SNR=6.5			⇓Sn	Sn	21 05 35.2	+0.5

*IDC **11** 21:15:55.1±2.2, 10°.95S×164°.69E, h0^{km}, mb4.0/5, mb1 4.1/8, mb1mx3.8/36, mbtmp4.1/8, ML4.0/3, MS3.7/1, Ms1 3.7/1, ms1mx3.0/30, Error ellipse: s-maj=46.0km s-min=30.0km az=95.0*
*ISCJB **11** 21:15:57.5±1.4, 11°.2S±0°.1×164°.7E±0°.2, h29^{km}, mb3.8/5, MS3.7/1, Error ellipse: s-maj=27.4km s-min=15.8km az=153.0*
ISC 11 21:15:59.3±1.6**, 11°.1S**±0°.1×**164°.7E**±0°.2**, h29**^{km}**, n15,**
σ**0^{s}.72**/8**, mb3.9**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara** 11nm,0.3s,baz=112,slow=19,SNR=3.1	4.95	289	Pn	Pn	21 17 11.0	-0.8
DZM	**Mont Dzumac** 0.5nm,0.3s,baz=59,slow=12,SNR=4.5	11.06	171	Pn	Pn	21 18 35.0	-0.7
CTA	**Charters Tower** 0.4nm,0.3s,baz=56,slow=12,SNR=6.1	19.87	241	P	Pn	21 20 30.5	+0.4
H11S2	**WAKE ISLAND Hy** baz=184,slow=76,SNR=6.6	29.45	4	T	T	21 53 04.0	
H11S3	**WAKE ISLAND Hy** baz=184,slow=76,SNR=5.8	29.45	4	T	T	21 53 08.7	
H11S1	**WAKE ISLAND Hy** baz=184,slow=76,SNR=4.7	29.47	4	T	T	21 53 06.4	
STKA	**Stephens Creek** 2.1nm,0.9s,baz=45,slow=14,SNR=2.2	29.71	222	P	P	21 22 04.1	+1.0
WRA	**Warramunga Arr** 3.9nm,0.8s,baz=75,slow=8.9,SNR=28	30.50	249	P	P	21 22 10.2	0.0
H11N1	**WAKE ISLAND Hy** baz=184	30.68	4	T	T	21 54 39.4	
H11N3	**WAKE ISLAND Hy** baz=184	30.68	4	T	T	21 54 35.5	
H11N2	**WAKE ISLAND Hy** baz=184	30.70	4	T	T	21 54 36.5	
ASAR	**Alice Springs** 1.3nm,0.8s,baz=68,slow=9.6,SNR=13	31.85	243	P	P	21 22 21.8	-0.3
TGY	**Tagaytay City** comp=Z,79nm,21.3s,baz=45,slow=33	50.08	299	LR	LR	21 43 16.6	
SONM	**Songino Array** 0.3nm,0.8s,baz=132,slow=6.0,SNR=2.2	78.08	324	P	P	21 27 55.6	-0.1
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=100,slow=5.4,SNR=5.8	92.84	317	P	P	21 29 09.9	+0.5

IDC 11 21:23:19.1±3.9**, 28°.65S**×**177°.77W, h0**^{km}**, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.4**/22**, mbtmp3.3**/2**, Error ellipse: s-maj=77.3km s-min=20.2km az=80.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island** 180nm,0.3s,baz=98,slow=8.7,SNR=7.0	0.61	193	Pn	Pn	21 23 35.3	+0.3
RAO	133nm,0.3s,baz=180,slow=20,SNR=3.7			Sn	Sn	21 23 45.8	+0.2
ASAR	**Alice Springs** 0.2nm,0.6s,baz=101,slow=7.7,SNR=3.2	43.44	265	P	P	21 31 24.0	0.0
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=110,slow=8.0,SNR=7.2	44.27	270	P	P	21 31 30.5	-0.2
FINES	**FINESS Array B** 0.7nm,0.8s,baz=299,slow=1.4,SNR=4.3	143.57	341	PKP	PKPdf	21 42 53.9	-1.3

WEL 11 21:35:58.0, 39°.7S±1°.0×**17°7E**±°**, h50**^{km}±1^{km}**, ML4.5**/10**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAHZ	**Kahuranaki**	0.09	172	P	Pn	21 36 06.0	+0.2
KAHZ				S	Sn	21 36 12.5	+1.0
CKHZ	**Cape Kidnapper**	0.17	75	P	Pn	21 36 06.3	+0.2
CKHZ				S	Sn	21 36 12.6	+0.6
MCHZ	**McNeill Hill**	0.29	334	P	Pn	21 36 07.2	+0.2
MCHZ				S	Sn	21 36 14.3	+0.8
PXZ	**Pawanui**	0.33	180	P	Pn	21 36 07.7	+0.3
PXZ				S	Sn	21 36 15.1	+1.1
KWHZ	**Kaweka Forest**	0.44	310	P	Pn	21 36 08.5	-0.1
KWHZ				S	Sn	21 36 16.5	+0.3
ARHZ	**Aropaoanui**	0.45	13	P	Pn	21 36 09.2	+0.5
ARHZ				S	Sn	21 36 17.4	+1.1
WPHZ	**Waipukurau**	0.48	222	P	Pn	21 36 09.6	+0.5
WPHZ				S	Sn	21 36 18.2	+1.2
PRHZ	**Porangahau**	0.59	197	P	Pn	21 36 10.9	+0.6
PRHZ				S	Sn	21 36 20.2	+1.0
NMHZ	**Naumai**	0.61	356	P	Pn	21 36 11.2	+0.6
NMHZ				S	Sn	21 36 21.1	+1.3
BKZ	**Black Stump Fm**	0.61	332	P	Pn	21 36 10.8	+0.2
BKZ				S	Sn	21 36 19.8	0.0
BHHZ	**Black Hill Sta**	0.65	289	P	Pn	21 36 11.4	+0.2
BHHZ				S	Sn	21 36 20.5	-0.2
WHHZ	**Waihua**	0.69	25	P	Pn	21 36 12.1	+0.5
WHHZ				S	Sn	21 36 22.9	+1.4
DVHZ	**Dannevirke**	0.80	222	P	Pn	21 36 13.2	+0.1
DVHZ				S	Sn	21 36 24.9	+0.8
RAHZ	**Arahi**	0.81	13	P	Pn	21 36 13.6	+0.4
RAHZ				S	Sn	21 36 25.3	+1.1
ANWZ	**Angora Road**	0.81	201	P	Pn	21 36 13.6	+0.4
MTHZ	**Maungataniwha**	0.85	359	P	Pn	21 36 14.0	+0.2
MOVZ	**Moawhango**	0.91	289	P	Pn	21 36 15.3	+0.8
MOVZ				P	Pn	21 36 15.4	+0.8
MOVZ				S	Sn	21 36 27.1	+0.4
KNZ	**Kokohu**	0.93	43	P	Pn	21 36 14.9	+0.2
MRHZ	**Matea Rd**	0.94	338	P	Pn	21 36 15.5	+0.6
MHGZ	**Mahia Peninsul**	0.98	56	P	Pn	21 36 15.8	+0.4
SNGZ	**Shannon Statio**	0.99	22	P	Pn	21 36 16.0	+0.4
HATZ	**Hinemaiaia**	1.01	324	P	Pn	21 36 16.7	+0.9
TUVZ	**Tukino**	1.03	295	P	Pn	21 36 17.5	+1.3
RITZ	**Rihia Road**	1.06	313	P	Pn	21 36 18.0	+1.4
WHVZ	**Whangaehu Hut**	1.07	293	P	Pn	21 36 18.0	+1.1
BFZ	**Birch Farm**	1.08	206	P	Pn	21 36 16.8	0.0
POWZ	**Post Office Ro**	1.08	230	P	Pn	21 36 17.2	+0.3
PRWZ	**Pori Road**	1.09	218	P	Pn	21 36 17.4	+0.5
DRZ	**Dome Shelter**	1.09	293	P	Pn	21 36 18.3	+1.1
RTZ	**Ruatahuna**	1.09	5	P	Pn	21 36 17.3	+0.3
TRVZ	**Turoa**	1.09	291	P	Pn	21 36 18.2	+1.0
FWVZ	**Far West T-bar**	1.11	294	P	Pn	21 36 18.3	+0.9
NGZ	**Ngauruhoe**	1.11	298	P	Pn	21 36 18.4	+1.0
PRGZ	**Paritu Road**	1.11	46	P	Pn	21 36 17.5	+0.2
MTVZ	**Mangateitei**	1.12	286	P	Pn	21 36 18.6	+1.2
KRVZ	**Karewarewa**	1.12	302	P	Pn	21 36 18.5	+1.0
COVZ	**Chateau Observ**	1.14	296	P	Pn	21 36 18.7	+1.0
WTVZ	**West Tongariro**	1.15	300	P	Pn	21 36 18.9	+1.1
KATZ	**Kakaramea**	1.16	309	P	Pn	21 36 19.1	+1.1
RATZ	**Rangitukua**	1.19	314	P	Pn	21 36 19.2	+0.9
ALRZ	**Allen Road**	1.21	340	P	Pn	21 36 19.2	+0.6
RIGZ	**Rimuhau**	1.22	35	P	Pn	21 36 18.9	+0.2
MUGZ	**Murupara**	1.23	357	P	Pn	21 36 19.0	+0.2
PKVZ	**Pokaka**	1.24	289	P	Pn	21 36 20.1	+1.1
WHTZ	**Whakaora**	1.25	326	P	Pn	21 36 20.2	+1.0
PRRZ	**Plateau Road**	1.26	343	P	Pn	21 36 19.8	+0.6
TWVZ	**Taurewa**	1.27	299	P	Pn	21 36 20.0	+0.5
RAGZ	**Rawiri**	1.28	20	P	Pn	21 36 19.7	+0.1
WPRZ	**Whakapapatarin**	1.30	335	P	Pn	21 36 20.3	+0.5
CPWZ	**Castlepoint**	1.30	202	P	Pn	21 36 20.3	+0.5
TIWZ	**Tintock**	1.30	215	P	Pn	21 36 20.2	+0.4
WATZ	**Wairara**	1.33	318	P	Pn	21 36 20.6	+0.4
MRZ	**Mangatainoka R**	1.37	225	P	Pn	21 36 20.5	-0.2
MRZ				P		21 36 20.6	
HRRZ	**Handcock Road**	1.39	341	P	Pn	21 36 21.6	+0.6
RRRZ	**Republican Roa**	1.39	349	P	Pn	21 36 21.4	+0.4
WAZ	**Wanganui**	1.45	267	P	Pn	21 36 23.8	+2.1
URZ	**Urewera**	1.46	8	P	Pn	21 36 21.8	-0.1
URZ				P	Pn	21 36 21.8	-0.1
KUTZ	**Kaahu Road**	1.46	326	P	Pn	21 36 22.6	+0.7
MWZ	**Matawai**	1.46	21	P	Pn	21 36 21.8	-0.3
HSRZ	**Hossack Road**	1.47	341	P	Pn	21 36 22.8	+0.6
GRRZ	**Galatos Road**	1.47	336	P	Pn	21 36 22.9	+0.7
TKGZ	**Te Karaka**	1.48	32	P	Pn	21 36 22.0	-0.2
TARZ	**Mount Tarawera**	1.49	349	P	Pn	21 36 23.1	+0.6
HLRZ	**Highlands Stat**	1.50	345	P	Pn	21 36 23.6	+1.1
HOWZ	**Holdsworth Sta**	1.57	220	P	Pn	21 36 23.0	-0.5
TMWZ	**Te Maipa**	1.58	208	P	Pn	21 36 23.1	-0.6
TMWZ				P	Pn	21 36 23.1	-0.6
MKRZ	**Makatiti**	1.59	349	P	Pn	21 36 24.7	+0.8
CNGZ	**Carnagh Statio**	1.61	41	P	Pn	21 36 23.8	-0.2
OMRZ	**Omania**	1.64	346	P	Pn	21 36 24.7	+0.2
NGRZ	**Ngongotaha**	1.68	342	P	Pn	21 36 26.6	+1.5
OGWZ	**Otaki Gorge**	1.71	229	P	Pn	21 36 24.9	-0.4
TLZ	**Tolley Road**	1.72	323	P	Pn	21 36 25.7	+0.2
MARZ	**Manawahe**	1.72	355	P	Pn	21 36 26.0	+0.4
VRZ	**Vera Road**	1.73	289	P	Pn	21 36 26.8	+1.2
VRZ				P		21 36 27.1	
KARZ	**Kaharoa**	1.75	344	P	Pn	21 36 25.7	-0.2
TWGZ	**Tauwhareparae**	1.76	30	P	Pn	21 36 26.1	+0.1
MTW	**Mount Morrison**	1.78	215	P	Pn	21 36 25.5	-0.8
WHRZ	**Whale Island**	1.85	3	P	Pn	21 36 27.4	+0.1
RUGZ	**Raukumara Rang**	1.85	20	P	Pn	21 36 27.1	-0.3
OPRZ	**Ohinepanea**	1.87	353	P	Pn	21 36 28.6	+1.1
KIW	**Kapiti Island**	1.89	232	P	Pn	21 36 27.4	-0.4
TRWZ	**Traveller**	1.91	207	P	Pn	21 36 27.2	-0.9
CAW	**Cannon Point**	1.96	224	P	Pn	21 36 27.8	-0.9
PUZ	**Puketiti**	1.96	34	P	Pn	21 36 28.0	-0.8
HIZ	**Hauiti**	1.96	307	P	Pn	21 36 29.4	+0.6
KMRZ	**Kaimai**	1.99	339	P	Pn	21 36 29.5	+0.2
PAWZ	**Paruwai Farm**	2.00	213	P	Pn	21 36 28.3	-1.0
TGRZ	**Tauranga**	2.03	346	P	Pn	21 36 29.6	-0.1
PKGZ	**Pakihiroa**	2.05	28	P	Pn	21 36 29.9	-0.1
HAZ	**Te Kaha**	2.08	21	P	Pn	21 36 29.7	-0.7
MSWZ	**Moikau Station**	2.10	215	P	Pn	21 36 29.3	-1.5
PREZ	**Palmer Road**	2.12	279	P	Pn	21 36 33.2	+2.2
PLWZ	**Palliser**	2.23	213	P	Pn	21 36 30.9	-1.6
TOZ	**Tahuroa Road**	2.24	331	P	Pn	21 36 33.0	+0.4
KHEZ	**Kahui Hut**	2.24	280	P	Pn	21 36 35.3	+2.6
WMGZ	**Waiomatatini S**	2.24	33	P	Pn	21 36 31.8	-0.8
BHW	**Baring Head**	2.28	221	P	Pn	21 36 31.6	-1.5
PKE	**Pukeiti**	2.28	282	P	Pn	21 36 35.5	+2.3
MXZ	**Matakaoa Point**	2.42	28	P	Pn	21 36 34.9	-0.2
TCW	**Tory Channel**	2.48	232	P	Pn	21 36 34.8	-1.1
DUWZ	**D'Urville Isla**	2.50	243	P	Pn	21 36 35.7	-0.5
TUWZ	**Tuamarina**	2.81	231	P	Pn	21 36 38.7	-1.7
MKAZ	**Moumakai**	2.92	332	P	Pn	21 36 43.2	+1.3
MKAZ				P	Pn	21 36 43.2	+1.3
BSWZ	**Blackbirch Sta**	3.03	228	P	Pn	21 36 41.8	-1.6
NNZ	**Nelson**	3.06	239	P	Pn	21 36 43.1	-0.7
AWAZ	**Awhitu Peninsu**	3.16	326	P	Pn	21 36 46.3	+1.1
WIAZ	**Waiheke Island**	3.21	334	P	Pn	21 36 46.8	+0.9
MBAZ	**Motutapu North**	3.31	332	P	Pn	21 36 48.5	+1.1
ABAZ	**Army Bay**	3.49	332	P	Pn	21 36 51.1	+1.4
QRZ	**Quartz Range**	3.50	250	P	Pn	21 36 48.7	-1.1
GRZ	**Great Barrier**	3.62	342	P	Pn	21 36 52.4	+0.8
THZ	**Tophouse**	3.64	234	P	Pn	21 36 50.0	-1.8
KHZ	**Kahutara**	3.69	222	P	Pn	21 36 50.8	-1.7
WCZ	**Waipu Caves**	4.25	331	P	Pn	21 37 01.5	+1.3
LTZ	**Lake Taylor**	4.63	227	P	Pn	21 37 03.4	-2.0
OKCZ	**Okains Bay**	4.92	214	P	Pn	21 37 07.3	-2.0
MQZ	**McQueen's Vall**	5.09	217	P	Pn	21 37 09.4	-2.2
AKCZ	**Akaroa Harbour**	5.10	214	P	Pn	21 37 09.7	-2.2
OXZ	**Oxford**	5.12	223	P	Pn	21 37 09.9	-2.2
OUZ	**Omahuta**	5.17	329	P	Pn	21 37 14.4	+1.5
RPZ	**Rata Peaks**	5.91	225	P	Pn	21 37 21.7	-1.3
CTZ	**Chatham Island**	6.33	132	P	Pn	21 37 28.4	-0.2

*ISCJB **11** 21:37:38.7±1.1, 41°.18N±0°.07×76°.47E±0°.04, h10^{km}, Error ellipse: s-maj=9.8km s-min=4.5km az=0.5*
*KRNET **11** 21:37:38.5±0.1, 41°.20N×76°.42E, h19^{km}, mb2.1*
*SOME **11** 21:38:11.7, 42°.30N×80°.85E, h0^{km}*
ISC 11 21:37:38.7±1.5**, 41°.23N**±0°.08×**76°.43E**±0°.03**, h10**^{km}**, n13,**
σ**1^{s}.66**/25**, 16C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn** baz=4.0	0.39	302	⇑*i*P	Pg	21 37 46.5	0.0
NRN	baz=4.0			⇑*i*S	Sg	21 37 52.5	+0.9
ULHL	**Ulahol** baz=53	1.02	352	⇑*i*P	Pg	21 37 58.4	-0.1
ULHL				⇑*i*S	Sg	21 38 12.5	+0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=53						
KDJ	**Kajisay** baz=32	**1.06**	**32**	⇑*i*P	**Pg**	**21 37 58.9**	**-0.2**
KDJ	baz=32			⇑*i*S	**Sg**	**21 38 13.7**	**+0.8**
TARG	**Taragay, Kyrgy** baz=62	**1.14**	**64**	⇑*i*P	**Pg**	**21 38 00.1**	**-0.7**
TARG	baz=62			⇑*i*S	**Sg**	**21 38 15.8**	**+0.1**
KZA	**Kyzart** baz=15	**1.23**	**314**	⇑*i*P	**Pb**	**21 38 01.7**	**-0.6**
KZA	baz=15			⇑*i*S	**Sb**	**21 38 18.5**	**+0.2**
BOOM	**Boomskoye usch** baz=45	**1.31**	**344**	⇑*i*P	**Pn**	**21 38 03.3**	**0.0**
BOOM	baz=45			⇑*i*S	**Sb**	**21 38 21.3**	**+0.8**
ARLS	**Aral** baz=94	**1.71**	**292**	⇑*e*P	**Pb**	**21 38 09.7**	**-0.6**
ARLS	baz=94			⇑*i*S	**Sb**	**21 38 32.3**	**+0.4**
UCH	**Uchtor** baz=6.0	**1.75**	**305**	⇑*i*P	**Pb**	**21 38 10.7**	**-0.5**
UCH	baz=6.0			⇑*i*S	**Sb**	**21 38 34.2**	**+0.8**
KBK	**Karagaybulak** baz=23	**1.81**	**323**	⇓*i*P	**Pb**	**21 38 11.7**	**-0.3**
KBK	baz=23			⇓*i*S	**Sb**	**21 38 35.6**	**+0.8**
UZB	**Uzynbulak** 0.9nm,0.3s	**2.71**	**44**	*e*P	Pg	21 38 41.5	+11
UZB	1.9nm,0.6s			*e*S	**Sb**	**21 39 03.0**	**+2.1**
KTMS	**Ketmen** 0.6nm,0.1s	**3.65**	**51**	*e*P	**Pn**	**21 38 35.5**	**0.0**
KTMS	2.3nm,0.3s			*e*S	**Pg**	**21 38 52.7**	**+4.0**
DJR	**Jarkent** 0.2nm,0.1s	**3.96**	**37**	*e*P	**Pg**	**21 38 53.1**	**-1.5**
DJR	0.6nm,0.2s			*e*S	**Sn**	**21 39 22.8**	**-3.4**
KAPS	**Kapalarasan** 0.2nm,0.1s	**4.58**	**27**	*e*P	**Pg**	**21 39 10.0**	**+3.5**
KAPS	0.6nm,0.3s			*e*S	**Sb**	**21 39 51.6**	**-2.8**

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*ISCJB **11** 21:40:26.3±0.4, 29°.20N±0°.03×95°.68E±0°.05, h10^{km}, mb3.6/11, Error ellipse: s-maj=6.4km s-min=4.7km az=23.6*

*IDC **11** 21:40:26.1±0.9, 29°.12N×95°.75E, h0^{km}, mb3.5/13, mb1 3.6/14, mb1mx3.5/44, mbtmp3.5/14, ML3.2/1, Error ellipse: s-maj=31.8km s-min=15.5km az=55.0*

*NDI **11** 21:40:28.2±2.1, 29°.14N×95°.88E, h10^{km}, ML3.9*

*BJI **11** 21:40:28.6, 29°.09N×95°.77E, h8^{km}, mb3.8/3, ML3.5/4*

ISC 11 21:40:27.5±0.7**, 29°.07N**±0°.05×**95°.74E**±0°.07**, h10**^{km}**, n34,** σ1^{s}**61**/40**, mb3.7**/11**, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**1.73**	**177**	*e*P	**Pg**	**21 41 00.3**	**-0.4**
LKP				*e*S	**Sg**	**21 41 24.2**	**+1.0**
LKP	comp=N,2µm,0.5s			IAML		21 41 27.7	
LKP	comp=E,1µm,0.2s			IAML		21 41 27.8	
ZIRO	**ZIRO**	**2.27**	**228**	*e*P	**Pb**	**21 41 07.3**	**-1.4**
ZIRO				*e*S	**Sb**	**21 41 38.4**	**+1.5**
MOKO	**MOKOCHONG**	**2.94**	**202**	*e*P	**Pn**	**21 41 16.1**	**+1.5**
MOKO				*e*S	**Sn**	**21 41 52.6**	**+2.6**
MOKO	comp=N,403nm,0.2s			IAML		21 42 03.7	
MOKO	comp=E,530nm,0.5s			IAML		21 42 04.1	
TEZP	**TEZPUR**	**3.57**	**228**	*e*P	**Pn**	**21 41 23.7**	**+0.7**
TEZP				*e*S	**Sn**	**21 42 06.8**	**+1.5**
KOHI	**KOHIMA**	**3.64**	**204**	*e*P	**Pn**	**21 41 25.2**	**+1.2**
KOHI				*e*S	**Sn**	**21 42 05.5**	**-1.7**
KOHI	comp=E,256nm,0.3s			IAML		21 42 27.5	
KOHI	comp=N,207nm,0.5s			IAML		21 42 28.3	
TAWA	**Tawang**	**3.72**	**248**	*e*x	**Pn**	**21 41 22.5**	**-2.9**
TAWA				*e*S	**Sn**	**21 42 11.3**	**+1.9**
TAWA	comp=N,1µm,0.5s			IAML		21 42 29.1	
TAWA	comp=E,1µm,0.2s			IAML		21 42 29.7	
SHL	**Shillong**	**4.89**	**225**	*e*P	**Pn**	**21 41 40.9**	**-0.5**
SHL				*e*S	**Sn**	**21 42 35.9**	**-2.3**
SHL	comp=N,384nm,0.0s			IAML		21 43 02.2	
GTK	**Tadong**	**6.54**	**256**	*e*P	**Pn**	**21 42 06.3**	**+2.4**
GTK				*e*S	**Sn**	**21 43 18.4**	**-0.3**
SAIH	**SAIHA**	**7.00**	**201**	*e*P	**Pn**	**21 42 12.3**	**+2.0**
SAIH				*e*S	**Sn**	**21 43 26.6**	**-3.6**
RAMN	**Ramite** comp=N,10nm,0.3s	**8.35**	**258**	*e*P	**Pn**	**21 42 31.0**	**+2.1**
JIRN	**Jiri** comp=N,18nm,0.3s	**8.53**	**263**	*e*P	**Pn**	**21 42 33.2**	**+1.7**
GUN	**Gumba** comp=N,9.9nm,0.2s	**8.76**	**265**	*e*P	**Pn**	**21 42 35.3**	**+0.7**
PKI	**Pulchoki** comp=N,18nm,0.3s	**9.23**	**263**	*e*P	**Pn**	**21 42 42.0**	**+1.0**
PKIN	**Phulchoki** comp=N,18nm,0.3s	**9.24**	**263**	*e*P	**Pn**	**21 42 41.7**	**+0.6**
DMN	**Daman** comp=N,5.4nm,0.3s	**9.48**	**264**	*e*P	**Pn**	**21 42 45.1**	**+0.6**
LZH	**Lanzhou**	**9.78**	**42**	*e*P	Pn	21 42 51.5	+3.1
LZH				pP		21 42 58.3	
LZH				sP		21 43 01.9	
DANN	**Dangsing** comp=N,5.0nm,0.2s	**10.54**	**269**	*e*P	**Pn**	**21 42 57.1**	**-2.0**
KOLN	**Koldanda** comp=N,3.0nm,0.2s	**10.77**	**266**	*e*P	**Pn**	**21 43 00.2**	**-1.8**
CMAR	**Chiang Mai Arr** comp=N,0.1nm,0.3s,baz=339,slow=12,SNR=2.8	**10.96**	**164**	Pn	**Pn**	**21 43 07.0**	**+2.5**
PYUN	**Piuthan** comp=N,11nm,0.5s	**11.25**	**268**	*e*P	**Pn**	**21 43 05.8**	**-2.8**
WMQ	**Urumqi**	**16.07**	**339**	*e*P	**P**	**21 44 17.8**	**+0.8**
SONM	**Songino Array** comp=N,0.7nm,0.6s,baz=213,slow=12,SNR=7.4	**20.48**	**21**	P	Pn	21 45 05.4	-2.2
MKAR	**Makanchi Array** comp=N,1.0nm,0.5s,baz=144,slow=13,SNR=25	**20.58**	**333**	P	Pn	21 45 06.4	-2.4
AAK	**Ala-Archa** comp=N,0.7nm,0.4s,baz=114,slow=10,SNR=4.0	**21.83**	**314**	P	**P**	**21 45 21.2**	**+1.0**
KURBB	**Kurchatov Arra** comp=N,0.6nm,0.6s,baz=148,slow=9.0,SNR=5.9	**25.14**	**334**	P	**P**	**21 45 52.6**	**-0.1**
ZALV	**Zalesovo Beam** comp=N,2.1nm,0.5s,baz=163,slow=9.2,SNR=13	**26.11**	**345**	P	**P**	**21 46 01.0**	**-0.4**
BVAR	**Borovoye Array** comp=N,0.2nm,0.5s,baz=120,slow=5.3,SNR=4.1	**30.34**	**329**	P	**P**	**21 46 38.9**	**-0.3**
KLR	**Kul'dur** comp=N,0.5nm,0.6s,baz=293,slow=13,SNR=3.6	**33.98**	**44**	P	**P**	**21 47 11.2**	**0.0**
AKTO	**Aktyubinsk** comp=N,0.5nm,0.5s,baz=131,slow=11,SNR=3.0	**35.47**	**318**	P	**P**	**21 47 24.4**	**+0.3**
FINES	**FINESS Array B** comp=N,0.8nm,0.7s,baz=83,slow=7.9,SNR=5.3	**55.24**	**327**	P	**P**	**21 50 00.0**	**-0.5**
WRA	**Warramunga Arr** comp=N,0.5nm,0.6s,baz=326,slow=7.6,SNR=6.1	**61.33**	**138**	P	**P**	**21 50 43.4**	**-0.2**
NOA	**NORSAR Array B** comp=N,0.5nm,0.9s,baz=89,slow=4.5,SNR=2.7	**62.43**	**327**	P	**P**	**21 50 49.5**	**-1.1**
GERES	**GERESS Array B** comp=N,0.4nm,0.5s,baz=69,slow=6.4,SNR=3.2	**63.71**	**313**	P	**P**	**21 50 59.3**	**-0.1**
ASAR	**Alice Springs** comp=N,0.3nm,0.6s,baz=322,slow=6.2,SNR=4.9	**64.01**	**141**	P	**P**	**21 51 01.9**	**+0.4**

DJA 11 21:46:22.2±0.4**, 0°S**±4°×**12°4E**±°**, h89**^{km}±9^{km}**, M3.8**/12**, mB4.5**/1**, MLv3.8**/12**, Mw(mB)3.6**/1**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.69**	**356**	P	Pn	21 46 39.9	+1.3
KMSI				S	Sn	21 46 53.1	+2.4
LUWI	**Luwuk**	**1.56**	**234**	P	Pn	21 46 49.2	+0.6
MRSI	**Marisa**	**2.17**	**286**	P	Pn	21 46 55.4	-1.2
APSI	**Ampana**	**2.51**	**252**	P	Pn	21 47 01.3	+0.2
SANI	**Sanana**	**2.74**	**134**	P	Pn	21 47 03.7	-0.5
TNTI	**Ternate**	**3.45**	**75**	P	Pn	21 47 13.4	-0.4
MPSI	**Mapaga**	**4.16**	**276**	P	Pn	21 47 24.3	+0.9
PCI	**Palu**	**4.26**	**259**	P	Pn	21 47 25.3	+0.4
NLAI	**Namlea**	**4.36**	**135**	P	Pn	21 47 26.1	-0.1
TTSI	**Tana Toraja**	**5.11**	**235**	P	Pn	21 47 36.6	+0.2

IDC 11 21:57:54.6±6.5**, 10°.67S**×**165°.48E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/20**, mbtmp3.7**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.9**/30**, Error ellipse: s-maj=187.1km s-min=51.1km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.8nm,0.6s,baz=80,slow=9.2,SNR=7.3	**31.36**	**249**	P	P	22 04 17.4	0.0
GUMO	**Guam** comp=Z,50nm,18.2s,baz=56,slow=37	**31.61**	**319**	LR	LR	22 17 10.1	
ASAR	**Alice Springs** 0.7nm,0.6s,baz=75,slow=9.8,SNR=7.9	**32.73**	**243**	P	P	22 04 29.2	-0.1
MKAR	**Makanchi Array** 0.2nm,0.8s,baz=112,slow=5.5,SNR=2.0	**93.07**	**317**	P	P	22 11 10.4	-0.1

IDC 11 22:05:59.1±1.7**, 6°.92S**×**128°.43E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/5**, mb1mx3.5**/34**, mbtmp3.6**/5**, ML3.8**/2**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx3.0**/27**, Error ellipse: s-maj=193.9km s-min=28.4km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.7nm,0.3s,baz=334,slow=14,SNR=15	**14.16**	**157**	Pn	Pn	22 09 20.0	-1.1
WRA	0.5nm,0.3s,baz=329,slow=22,SNR=8.7			Sn	Sn	22 11 43.9	-15
ASAR	**Alice Springs** 0.2nm,0.3s,baz=343,slow=11,SNR=9.8	**17.46**	**163**	P	P	22 10 05.1	-0.5
ASAR	0.1nm,0.3s,baz=351,slow=18,SNR=3.3			S	Sn	22 13 03.8	-16
RPZ	**Rata Peaks** comp=Z,122nm,18.7s,baz=209,slow=35	**52.26**	**142**	LR	LR	22 36 14.9	
SONM	**Songino Array** 0.2nm,0.7s,baz=150,slow=6.1,SNR=2.5	**57.88**	**343**	P	P	22 15 53.0	+0.1
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=113,slow=8.2,SNR=17	**67.31**	**328**	P	P	22 16 56.1	+0.3
KURBB	**Kurchatov Arra** 0.4nm,0.5s,baz=131,slow=5.1,SNR=7.7	**71.63**	**329**	P	P	22 17 22.0	-0.4

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*IDC **11** 22:16:39.0±3.8, 37°.22N×72°.33E, h187^{km}±26^{km}, mb3.1/4, mb1 3.2/11, mb1mx2.9/52, mbtmp3.7/11, Error ellipse: s-maj=46.8km s-min=21.7km az=141.0*

*ISCJB **11** 22:16:41.1±0.5, 37°.46N±0°.04×72°.18E±0°.07, h200^{km}, mb3.2/4, Error ellipse: s-maj=7.9km s-min=4.5km az=158.1*

*NNC **11** 22:16:45.9±3.2, 37°.80N×71°.89E, h182^{km}±31^{km}, mb2.6, mpv3.5, Error ellipse: s-maj=30.3km s-min=25.3km az=56.0*

ISC 11 22:16:41.1±0.8**, 37°.45N**±0°.07×**72°.18E**±0°.08**, h200**^{km}**, n36,** σ1^{s}**80**/41**, mb3.3**/4**, 6C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 6.3nm,0.3s	**2.76**	**22**	⇑P	**Pn**	**22 17 29.2**	**+1.2**
SFK	84nm,0.6s			⇓S	**Sn**	**22 18 03.8**	**-1.1**
AML	**Almayashu** SNR=47	**4.82**	**14**	P	**Pn**	**22 17 54.7**	**+1.3**
MNAS	**Manas** 4.0nm,0.3s	**5.03**	**3**	⇓P	**Pn**	**22 17 57.2**	**+1.2**
MNAS	28nm,0.7s			⇑S	**Sn**	**22 18 52.3**	**-2.8**
UCH	**Uchtor** SNR=6.7	**5.09**	**20**	P	**Pn**	**22 17 58.2**	**+1.2**
KZA	**Kyzart** SNR=5.2	**5.19**	**26**	P	**Pn**	**22 17 59.0**	**+0.8**
EKS2	**Erkin-Say** SNR=24	**5.34**	**13**	P	**Pn**	**22 18 01.3**	**+1.4**
AAK	**Ala-Archa** SNR=9.0	**5.47**	**18**	P	**Pn**	**22 18 03.3**	**+1.7**
AAK	**Ala-Archa** 3.5nm,0.4s	**5.47**	**18**	⇓P	**Pn**	**22 18 03.1**	**+1.5**
AAK	14nm,0.7s			⇓S	**Sn**	**22 19 02.5**	**-2.8**
AAK	**Ala-Archa** 2.2nm,0.3s,baz=167,slow=6.5,SNR=41	**5.47**	**18**	P	**Pn**	**22 18 03.1**	**+1.5**
AAK	2.2nm,0.3s,baz=139,slow=19,SNR=16			S	**Sn**	**22 19 04.9**	**-0.4**
KBK	**Karagaybulak** SNR=9.3	**5.61**	**21**	P	**Pn**	**22 18 05.8**	**+2.4**
KK31	**Karatay Array** 1.0nm,0.3s,baz=164,slow=13,SNR=29	**5.79**	**348**	⇓P	**Pn**	**22 18 06.5**	**+1.1**
KK31	14nm,0.4s,baz=174,slow=24,SNR=23			⇑S	**Sn**	**22 19 08.7**	**-3.6**
CHMS	**Chumysh** SNR=5.8	**5.88**	**19**	P	**Pn**	**22 18 08.2**	**+1.6**
TKM2	**Tokmak 2** SNR=6.6	**6.05**	**25**	P	**Pn**	**22 18 10.6**	**+1.4**
TKM2	**Tokmak 2** 5.4nm,0.7s	**6.05**	**25**	⇓P	**Pn**	**22 18 10.1**	**+0.9**
TKM2	4.3nm,0.8s			⇑S	**Sn**	**22 19 18.1**	**-0.7**
USP	**Ospenovka** SNR=5.8	**6.07**	**16**	P	**Pn**	**22 18 10.8**	**+1.6**
GEYT	**Alibeck** 0.3nm,0.3s,baz=104,slow=12,SNR=2.6	**11.16**	**277**	P	**Pn**	**22 19 16.3**	**+1.1**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=214,slow=10,SNR=3.8	**11.97**	**36**	P	**Pn**	**22 19 26.8**	**+1.4**
PYUN	**Piuthan** 6.2nm,0.4s	**13.02**	**133**	*e*P	**P**	**22 19 38.0**	**-4.2**
DANN	**Dangsing** 5.3nm,0.3s	**13.29**	**130**	*e*P	**P**	**22 19 42.7**	**-2.7**
KOLN	**Koldanda** 5.2nm,0.3s	**13.62**	**132**	*e*P	**P**	**22 19 46.2**	**-2.7**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=205,slow=10,SNR=9.0	**13.93**	**17**	P	**Pn**	**22 19 49.9**	**0.0**
DMN	**Daman** 5.6nm,0.4s	**14.65**	**128**	*e*P	**P**	**22 20 00.3**	**-0.1**
AB31	**Akbulak array** 0.9nm,0.5s,baz=26,slow=36,SNR=19	**14.76**	**327**	⇑P	**Pn**	**22 20 00.3**	**+0.3**
AB31	0.9nm,0.4s,baz=148,slow=24,SNR=7.5			⇓S	S	22 22 35.8	-8.0
PKIN	**Phulchoki** 3.9nm,0.4s	**14.86**	**128**	*e*P	P	22 20 03.0	+0.3
PKI	**Pulchoki** 5.1nm,0.4s	**14.87**	**128**	*e*P	P	22 20 03.2	+0.3
GUN	**Gumba** 3.9nm,0.4s	**14.94**	**126**	*e*P	P	22 20 04.4	+0.8
JIRN	**Jiri** 6.1nm,0.3s	**15.31**	**126**	*e*P	**P**	**22 20 09.0**	**+1.2**
BVAR	**Borovoye Array** 0.5nm,0.3s,baz=164,slow=11,SNR=18	**15.62**	**356**	P	**Pn**	**22 20 11.4**	**+0.8**
RAMN	**Ramite** 4.8nm,0.3s	**16.06**	**127**	*e*P	**Pn**	**22 20 17.3**	**+0.9**
AKTO	**Aktyubinsk** 2.9nm,0.6s	**16.47**	**326**	⇑P	**Pn**	**22 20 21.7**	**+0.9**
AKTO	2.6nm,1.1s			⇓S	**S**	**22 23 19.8**	**-2.1**
AKTO	**Aktyubinsk** 0.8nm,0.3s,baz=125,slow=12,SNR=14	**16.47**	**326**	P	**Pn**	**22 20 21.9**	**+1.1**
AKTO	0.2nm,0.3s,baz=144,slow=19,SNR=2.8			S	**S**	**22 23 19.1**	**-2.8**
ZALV	**Zalesovo Beam** 1.1nm,0.3s,baz=222,slow=10,SNR=42	**18.66**	**24**	P	**P**	**22 20 44.6**	**+0.9**
FINES	**FINESS Array B** 1.2nm,1.0s,baz=120,slow=7.5,SNR=4.1	**37.23**	**325**	P	**P**	**22 23 34.4**	**+1.5**
ARCES	**ARCESS Array B** 1.4nm,0.8s,baz=104,slow=7.2,SNR=9.6	**40.63**	**337**	P	**P**	**22 24 02.7**	**+1.6**
NOA	**NORSAR Array B** 0.6nm,0.9s,baz=93,slow=8.7,SNR=3.0	**44.20**	**322**	P	**P**	**22 24 31.4**	**+1.5**
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=50,slow=6.1,SNR=6.9	**66.68**	**269**	P	**P**	**22 27 09.4**	**-1.3**

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*IDC **11** 22:17:51.3±3.9, 37°.96N×92°.38E, h0^{km}, mb3.5/4, mb1 3.7/7, mb1mx3.4/55, mbtmp3.6/7, ML3.2/3, Error ellipse: s-maj=75.6km s-min=47.2km az=18.0*

ISC 11 22:18:01.6±2.9**, 39°.1N**±0°.4×**92°.9E**±0°.2**, h35**^{km}**, n7,** σ0^{s}**62**/8**, mb4.0**/3**, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.5nm,0.3s,baz=130,slow=14,SNR=25	**10.95**	**318**	Pn	**Pn**	**22 20 35.3**	**-0.3**
MKAR	0.2nm,0.3s,baz=133,slow=24,SNR=6.3			Sn	**Sn**	**22 22 36.9**	**+0.1**
SONM	**Songino Array** 0.1nm,0.3s,baz=230,slow=15,SNR=6.6	**13.09**	**44**	Pn	**P**	**22 21 14.5**	**-0.2**
SONM	0.1nm,0.3s,baz=235,slow=28,SNR=6.2			Lg	Lg	22 25 13.6	
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=132,slow=12,SNR=3.6	**15.36**	**323**	Pn	**Pn**	**22 21 35.3**	**-0.2**
BVAR	**Borovoye Array** 0.5nm,0.5s,baz=117,slow=9.8,SNR=5.6	**20.82**	**319**	P	**P**	**22 22 39.9**	**0.0**
FINES	**FINESS Array B** 1.9nm,1.0s,baz=77,slow=8.7,SNR=4.4	**45.75**	**322**	P	**P**	**22 26 18.9**	**-0.2**
ARCES	**ARCESS Array B** 1.9nm,0.9s,baz=88,slow=8.3,SNR=4.0	**46.13**	**333**	P	**P**	**22 26 23.2**	**+1.2**
NOA	**NORSAR Array B** 0.3nm,0.7s,baz=78,slow=6.4,SNR=2.6	**52.90**	**323**	P	**P**	**22 27 13.2**	**-0.5**

UCR 11 22:23:03.8±1.9**, 9°.97N**×**83°.97W, h7**^{km}±5^{km}**, MD3.0, ML3.7, MW3.9**(UPA)**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJS	**Escuela Geolog**	**0.09**	**250**	*e*P	Pg	22 23 07.9	+2.0
SJS				*e*S	Sg	22 23 09.2	+1.8
HDC	**Heredia**	**0.14**	**283**	*e*P	Pg	22 23 07.0	+0.2
CVTR	**Volcan Turrial**	**0.22**	**76**	*e*P	Pg	22 23 09.4	+1.1
CVTR				*e*S	Sg	22 23 12.9	+1.7
LCR2	**La Lucha 2**	**0.23**	**188**	*e*P	Pg	22 23 09.3	+0.9
LCR2				*e*S	Sg	22 23 12.8	+1.3
SRA1	**San Ramn**	**0.51**	**283**	*e*P	Pg	22 23 13.7	-0.1
EDDO	**Dominical**	**0.72**	**171**	*e*P	Pb	22 23 18.2	-0.5
ARE1	**Arenal 1**	**0.88**	**304**	*e*P	Pg	22 23 20.9	+0.1
DRK0	**Durika**	**1.00**	**134**	*e*P	Pg	22 23 22.7	-0.4
DRK0				*e*S	Sg	22 23 36.1	-0.1
JTS	**JuntasAbangare**	**1.02**	**288**	*i* P	Pg	22 23 22.3	-1.0
JTS	comp=Z,4µm,0.1s			AMP		22 23 24.1	
JTS				*e*S	Sg	22 23 35.7	-0.8
CUI	**Cuipilapa**	**1.36**	**300**	*e*P	Pn	22 23 27.9	-1.4
PLVR	**Palo Verde**	**1.41**	**286**	*e*P	Pn	22 23 29.1	-1.0
MESS	**Mesas**	**1.43**	**303**	*e*P	Pn	22 23 28.9	-1.3
GB1A	**Borinquen Arri**	**1.64**	**301**	*e*P	Pn	22 23 33.0	-0.1
BRU2	**Volcan**	**1.72**	**133**	*e*P	Pb	22 23 35.4	-0.5
BRU2	comp=Z,561nm,0.2s			AMP		22 23 37.4	
BRU2				*e*S	Sb	22 23 57.7	-0.2

IDC 11 22:23:55.7±1.5**, 7°.62S**×**158°.03E, h0**^{km}**, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.4**/37**, mbtmp3.6**/4**, ML4.4**/1**, Error ellipse: s-maj=47.0km s-min=31.2km az=47.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.61**	**134**	*e*P	Pn	22 24 40.0	+0.8
HNR				*e*S	Sn	22 25 08.0	-3.7
HNR	**Honiara** 72nm,0.3s,baz=262,slow=2.3,SNR=14	**2.61**	**134**	Pn	Pn	22 24 39.2	0.0
HNR	118nm,0.3s,baz=0.0,slow=20,SNR=20			Sn	Sn	22 25 07.2	-4.4
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=65,slow=10,SNR=4.9	**26.02**	**240**	P	P	22 29 30.7	0.0
H11S3	**WAKE ISLAND Hy** baz=198,slow=76,SNR=65	**27.32**	**18**	T	T	22 58 22.1	
H11S2	**WAKE ISLAND Hy** baz=198,slow=76,SNR=59	**27.32**	**18**	T	T	22 58 22.2	
H11S1	**WAKE ISLAND Hy** baz=198,slow=76,SNR=34	**27.34**	**18**	T	T	22 58 23.4	
H11N1	**WAKE ISLAND Hy** baz=195,slow=76,SNR=9.7	**28.53**	**18**	T	T	23 00 06.9	
H11N3	**WAKE ISLAND Hy** baz=195,slow=76,SNR=14	**28.54**	**18**	T	T	23 00 10.8	
H11N2	**WAKE ISLAND Hy** baz=195,slow=76,SNR=13	**28.55**	**18**	T	T	23 00 10.2	
SONM	**Songino Array** 0.4nm,0.9s,baz=124,slow=6.1,SNR=2.7	**71.51**	**326**	P	P	22 35 18.1	-0.5
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=91,slow=5.6,SNR=8.8	**85.87**	**318**	P	P	22 36 37.9	+0.4

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*ISCJB **11** 22:26:38.5±0.6, 33°.89S±0°.09×14°.5W±0°.1, h10^{km}, mb4.3/17, MS4.2/17, Error ellipse: s-maj=13.1km s-min=12.7km az=161.7*

*IDC **11** 22:26:38.8±0.6, 33°.87S×14°.55W, h0^{km}, mb4.3/13, mb1 4.3/13, mb1mx4.2/31, mbtmp4.3/13, MS4.2/17, Ms1 4.1/17, ms1mx4.0/27, Error ellipse: s-maj=19.6km s-min=16.4km az=173.0*

*NEIC **11** 22:26:40.0±0.5, 33°.90S×14°.54W, h10^{km}, mb4.5/2, Error ellipse: s-maj=14.9km s-min=12.3km az=171.0*

*GCMT **11** 22:26:43.0±0.2, 34°.15S±0°.02×14°.38W±0°.02, h18^{km}±1^{km}, MW5.0/101, Moment Tensor Solution. s30,c33; s101,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61±.16; $M_{\theta\theta}$-1.64±.15; $M_{\phi\phi}$2.25±.14; $M_{r\theta}$-1.10±.32; $M_{\theta\phi}$3.00±.10; $M_{\phi r}$0.02±.27; Best double couple: $M_0$3.76600×10^{16} NP1:ϕ_s72.00000°, δ82.00000°, λ-18.00000°. NP2:ϕ_s165.00000°, δ72.00000°, λ-171.00000°. Principal axes: T 3.9380, Plg7.0000°, Azm119.0000°; N -0.3450, Plg70.0000°, Azm228.0000°; P -3.5940, Plg18.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 22:26:40.1±0.6**, 33°.9S**±0°.1×**14°.5W**±0°.1**, h10**^{km}**, n52,** σ1^{s}**29**/32**, mb4.4**/17**, MS4.2**/17**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09N1	**TRISTAN DA CUN**	**3.65**	**151**	T	T	22 31 02.5	
H09W1	**TRISTAN DA CUN** SNR=87	**3.66**	**152**	T	T	22 31 00.8	
H10N1	**ASCENSION HYDR** baz=189,slow=78,SNR=54	**25.91**	**0**	T	T	22 59 34.1	
H10N3	**ASCENSION HYDR** baz=189,slow=78,SNR=156	**25.92**	**0**	T	T	22 59 34.7	
H10N2	**ASCENSION HYDR** baz=189,slow=78,SNR=55	**25.93**	**0**	T	T	22 59 35.7	
SUR	**Sutherland**	**29.53**	**97**	P	**P**	**22 32 46.2**	**+1.2**
SUR				*e*PP	**PP**	**22 33 48.2**	**-3.4**
SUR	**Sutherland** 3.9nm,0.9s,baz=218,slow=9.9,SNR=3.1	**29.53**	**97**	P	**P**	**22 32 46.2**	**+1.2**
SUR	comp=Z,545nm,20.4s,baz=252,slow=30			LR	LR	22 41 33.8	
TSUM	**Tsumeb** 5.7nm,0.9s	**32.06**	**71**	*e*P	**P**	**22 33 05.7**	**-1.7**
BOSA	**Boshof** 5.3nm,1.0s,baz=268,slow=6.6,SNR=4.3	**34.25**	**92**	P	**P**	**22 33 25.4**	**-1.1**
BOSA	comp=Z,493nm,19.1s,baz=242,slow=32			LR	LR	22 44 53.5	
BDFB	**Brasilia** 4.1nm,0.9s,baz=170,slow=5.6,SNR=5.5	**35.21**	**293**	P	**P**	**22 33 33.5**	**-1.3**
BDFB	comp=Z,434nm,18.5s,baz=98,slow=32			LR	LR	22 45 30.9	
LBTB	**Lobatse** 5.5nm,1.0s,baz=236,slow=3.6,SNR=4.3	**35.84**	**87**	P	**P**	**22 33 39.3**	**-0.9**
CPUP	**Villa Florida** comp=Z,226nm,19.4s,baz=122,slow=32	**37.59**	**270**	LR	LR	22 46 30.6	
SNAA	**Sanae** 2.0nm,0.8s,baz=16,slow=17,SNR=3.8	**38.35**	**174**	P	**P**	**22 34 01.3**	**+0.4**
MATP	**Matopo** 5.2nm,0.5s,baz=257,slow=8.7,SNR=11	**40.27**	**82**	P	**P**	**22 34 16.9**	**-0.6**
LIC	**Lamto** 24nm,0.8s	**40.89**	**14**	*e*P	**P**	**22 34 23.2**	**+0.7**
KIC	**Kosan Boka** 23nm,0.8s	**41.08**	**15**	*e*P	**P**	**22 34 25.5**	**+1.4**
TIC	**Toumodi**	**41.30**	**14**	*e*P	**P**	**22 34 24.4**	**-1.5**
DBIC	**Dimbokro** 5.8nm,1.0s,baz=175,slow=15,SNR=3.9	**41.36**	**15**	P	**P**	**22 34 26.2**	**-0.2**
DBIC	comp=Z,276nm,21.8s,baz=152,slow=30			LR	LR	22 47 11.7	
USHA	**Ushuaia** comp=Z,377nm,18.3s,baz=82,slow=34	**42.60**	**224**	LR	LR	22 51 09.8	
LSZ	**Lusaka** 5.4nm,0.7s,baz=193,slow=5.1,SNR=4.3	**42.66**	**75**	P	**P**	**22 34 37.7**	**+0.5**
PMSA	**Palmer Station** 12nm,0.9s,baz=58,slow=12,SNR=1.9	**42.88**	**209**	P	**P**	**22 34 39.3**	**+1.0**
SIV	**San Ignacio** 3.3nm,0.9s,baz=122,slow=10,SNR=14	**45.41**	**281**	P	**P**	**22 34 58.3**	**-0.9**
TOA0	**Torodi Ar. Sit**	**49.25**	**21**	*e*P	**P**	**22 35 29.2**	**+0.3**
TORD	**Torodi Ar. Bea** 6.7nm,0.9s,baz=223,slow=5.2,SNR=16	**49.25**	**21**	P	**P**	**22 35 29.8**	**+0.8**
TORD	comp=Z,273nm,21.2s,baz=285,slow=31			LR	LR	22 52 09.3	
TOA1	**Torodi Ar. Sit**	**49.26**	**21**	*e*P	**P**	**22 35 29.8**	**+0.8**
LPAZ	**La Paz** comp=Z,171nm,18.4s,baz=117,slow=35	**51.06**	**276**	LR	LR	22 56 36.1	
MAW	**Mawson** comp=Z,220nm,21.5s,baz=275,slow=30	**54.39**	**153**	LR	LR	22 54 07.2	
ROSC	**El Rosal** comp=Z,310nm,20.7s,baz=158,slow=34	**68.26**	**292**	LR	LR	23 05 36.6	

KEST	Kesra	72.76	20	LR	LR	23 06 46.5	
	comp=Z,279nm,21.3s,baz=172,slow=33						
ESDC	Sonseca Array	73.84	8	P	P	22 38 15.2	+0.4
	0.1nm,0.3s,baz=192,slow=5.2,SNR=3.0						
BR101	Keskin Array S	85.71	35	*e*P	P	22 39 19.2	-0.1
BRTR	Keskin Array B	85.71	35	P	P	22 39 19.2	-0.1
	0.6nm,0.8s,baz=245,slow=2.0,SNR=4.3						
GEC2	GERESS Array S	86.12	18	*e*P	P	22 39 23.1	+2.1
	4.2nm,1.1s						
GERES	GERESS Array B	86.12	18	P	P	22 39 23.1	+2.1
	0.3nm,0.4s,baz=210,slow=5.7,SNR=2.0						
KBZ	Khabaz	93.29	38	LR	LR	23 21 42.3	
	comp=Z,47nm,19.7s,baz=208,slow=35						
H01W2	Cape Leeuwin H	96.37	140	T	T	00 27 57.6	
	baz=220,slow=75,SNR=7.3						
H01W3	Cape Leeuwin H	96.38	140	T	T	00 27 58.3	
	baz=220,slow=75,SNR=7.1						
H01W1	Cape Leeuwin H	96.39	140	T	T	00 27 58.8	
	baz=220,slow=75,SNR=6.2						
HFS	Hagfors	96.52	14	LR	LR	23 23 53.9	
	comp=Z,61nm,18.3s,baz=222,slow=36						
NOA	NORSAR Array B	96.89	12	LR	LR	23 23 13.8	
	comp=Z,50nm,18.1s,baz=210,slow=35						
SADO	Sadowa	97.80	319	LR	LR	23 23 57.1	
	comp=Z,28nm,18.3s,baz=143,slow=35						
GEYT	Alibeck	98.24	50	LR	LR	23 25 00.5	
	comp=Z,108nm,19.1s,baz=15,slow=36						
PALK	Pallekele	98.33	87	LR	LR	23 17 51.2	
	comp=Z,168nm,21.7s,baz=294,slow=31						
YKA	Yellowknife Ar	124.00	327	PKP	PKPdf	22 45 36.1	-1.6
	0.1nm,0.4s,baz=104,slow=2.1,SNR=2.6						
YKB5	Yellowknife Ar	124.00	327	*e*PKPdf	PKPdf	22 45 36.1	-1.6
ILAR	Eielson Array	137.88	332	PKP	PKPdf	22 46 04.9	+1.0
	0.2nm,0.5s,baz=178,slow=4.2,SNR=3.0						
ILB	Eielson Array	137.88	332	*e*PKPdf	PKPdf	22 46 02.3	-1.6
ANM	Nome	144.52	339	*e*PKPdf	PKPbc	22 46 15.0	+0.5
KSAR	Wonju Array Be	149.38	72	PKPbc	PKiKP	22 46 31.1	+0.7
KSRS	Korea Array	149.41	72	PKPbc	PKiKP	22 46 31.1	+0.7
	0.6nm,0.9s,baz=234,slow=24,SNR=4.5						
SEY	Seymchan	149.78	12	PKPbc	PKPbc	22 46 29.8	+0.4
	3.5nm,0.8s,baz=342,slow=3.2,SNR=6.7						
KLR	Kul'dur	150.76	48	PKPbc	PKPbc	22 46 32.4	+0.1
	2.2nm,0.8s,baz=301,slow=5.8,SNR=7.6						

IDC 11 22:29:42.6±1.6**, 10°.78S**×**165°.75E, h0^{km}, mb3.6**/5**, mb1 3.8**/6**, mb1mx3.6**/47**, mbtmp3.6**/6**, ML3.6**/1**, Error ellipse: s-maj=49.4km s-min=27.5km az=119.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.24	177	Pn	Pn	22 32 23.9	-0.9
	0.4nm,0.3s,baz=317,slow=18,SNR=3.5						
WRA	Warramunga Arr	31.58	249	P	P	22 36 07.7	+0.4
	1.7nm,0.8s,baz=81,slow=9.3,SNR=12						
ASAR	Alice Springs	32.92	243	P	P	22 36 19.1	+0.1
	0.3nm,0.6s,baz=65,slow=10,SNR=5.1						
SONM	Songino Array	78.46	324	P	P	22 41 44.3	-1.4
	0.2nm,0.5s,baz=108,slow=4.7,SNR=2.7						
ILAR	Eielson Array	83.26	19	P	P	22 42 11.4	+0.6
	0.2nm,0.7s,baz=234,slow=6.2,SNR=3.1						
MKAR	Makanchi Array	93.34	317	P	P	22 43 00.7	+1.0
	0.5nm,0.8s,baz=100,slow=6.2,SNR=4.9						

IDC 11 22:37:20.9±45.0**, 30°.14N**×**65°.38E, h0^{km}, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.2**/50**, mbtmp3.6**/3**, Error ellipse: s-maj=843.9km s-min=63.1km az=172.0, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	21.19	34	P	P	22 42 07.3	-0.6
	0.4nm,0.5s,baz=211,slow=10.0,SNR=9.8						
ZALV	Zalesovo Beam	27.65	25	P	P	22 43 10.7	+0.5
	0.5nm,0.6s,baz=224,slow=10,SNR=3.4						
ARCES	ARCESS Array B	45.45	342	P	P	22 45 41.0	-0.3
	1.4nm,0.8s,baz=138,slow=6.9,SNR=4.2						

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*ISCJB **11** 22:39:57.6±0.8, 35°.57N±0°.05×140°.06E±0°.08, h78^{km}±6^{km}, Error ellipse: s-maj=11.2km s-min=6.5km az=148.7*

*JMA **11** 22:39:58.1±0.2, 35°.67N×140°.09E, h68^{km}±2^{km}, M2.4*

*IDC **11** 22:40:02.2±1.3, 35°.31N×139°.40E, h82^{km}±13^{km}, mb2.7/2, mb1 3.0/3, mb1mx2.8/43, mbtmp3.2/3, Error ellipse: s-maj=34.8km s-min=7.9km az=69.0*

ISC 11 22:39:59.2±0.9**, 35°.56N**±0°.05×**140°.02E**±0°.06**, h67**^{km}±7^{km}**, n15, σ1^{s}26**/22**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	Nagara	0.20	134	P	Pn	22 40 09.2	-0.3
JCN				S	Sn	22 40 17.4	+0.4
JSMT	Sammumatsuo	0.36	76	P	Pn	22 40 09.6	-0.9
JOD2	Odawara 2	0.82	249	P	Pn	22 40 15.4	+0.1
JOD2				S	Sn	22 40 27.6	+0.3
BSO3	Boso 3	0.85	152	P	Pn	22 40 15.1	-0.4
BSO3				S	Sn	22 40 28.5	+1.0
JIM2	Oshima 3	0.97	210	P	Pn	22 40 17.0	-0.2
JIM2				*e*S	Sn	22 40 31.0	+0.4
JAG	Ashikaga	0.98	332	P	Pn	22 40 15.9	-1.4
JRY	Ryogami san	1.02	297	P	Pn	22 40 17.9	+0.1
JYN	Shimob	1.21	267	P	Pn	22 40 20.5	+0.2
MJAR	Matsushiro Arr	1.77	304	P	Pn	22 40 27.4	-0.3
	0.5nm,0.3s,baz=134,slow=14,SNR=16						
MJAR				S	Sn	22 40 47.7	-1.5
	0.3nm,0.3s,baz=148,slow=15,SNR=5.3						
MAT	Matsushiro	1.77	304	P	Pn	22 40 28.0	+0.3
MAT				S	Sn	22 40 48.7	-0.6
JHJ	Hachijo jima 2	2.44	185	P	Pn	22 40 36.2	-0.6
	8.2nm,0.3s,baz=66,slow=19,SNR=2.1						
JHJ				S	Sn	22 41 04.8	-0.8
	13nm,0.3s,baz=73,slow=19,SNR=3.1						
MA2	Magadan	25.03	13	P	P	22 45 20.2	+3.5
	4.2nm,0.3s,baz=174,slow=15,SNR=2.8						
MKAR	Makanchi Array	43.97	303	P	P	22 47 59.8	+0.2
	0.1nm,0.6s,baz=83,slow=12,SNR=1.8						
WRA	Warramunga Arr	55.46	186	P	P	22 49 24.4	-2.6
	0.3nm,0.7s,baz=358,slow=8.5,SNR=4.7						
LPAZ	La Paz	148.40	60	PKPbc	PKPab	22 59 43.6	+1.0
	0.9nm,0.7s,baz=315,slow=2.9,SNR=3.6						

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*ISCJB **11** 22:43:13.1±0.7, 40°.60N±0°.05×112°.21W±0°.07, h0^{km}, Error ellipse: s-maj=9.4km s-min=5.7km az=42.0*

*IDC **11** 22:43:13.6±1.0, 40°.54N×112°.10W, h0^{km}, mb1 3.0/4, mb1mx2.9/44, mbtmp2.6/4, ML3.0/4, Error ellipse: s-maj=15.5km s-min=6.1km az=156.0*

*NEIC **11** 22:43:14.9±0.8, 40°.60N×112°.23W, h0^{km}, ML2.0, Error ellipse: s-maj=13.3km s-min=8.9km az=139.0, Suspected Mining explosion.*

NEIC 10 km [6 miles] NE of Tooele.

ISC 11 22:43:13.2±0.9**, 40°.65N**±0°.06×**112°.14W**±0°.05**, h0^{km}, n7, σ1^{s}91**/12**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUG	Dugway, Tooele	0.69	229	*e*Pg	Pg	22 43 24.8	-1.5
DUG				*e*Sg	Sg	22 43 32.9	-2.3
ELK	Elko	2.36	273	Pn	Pn	22 43 55.1	+1.7
	0.5nm,0.3s,baz=91,slow=10.0,SNR=23						
ELK				Pg	Pg	22 43 57.9	-0.5
	0.5nm,0.3s,baz=94,slow=9.9,SNR=22						
ELK				Lg	Lg	22 44 29.4	
	0.5nm,0.3s,baz=16,slow=15,SNR=4.4						
BW06	Boulder Array	2.87	41	*e*Pn	Pb	22 44 03.0	-2.3
BW06				*e*S	Sn	22 44 35.1	-0.6
PDAR	Pinedale Array	2.87	41	Pn	Pn	22 44 02.3	+2.0
	0.3nm,0.3s,baz=214,slow=17,SNR=9.1						
PDAR				Pg	Pg	22 44 06.8	-1.4
	0.9nm,0.3s,baz=203,slow=14,SNR=12						
PDAR				Lg	Lg	22 44 48.1	
	1.1nm,0.3s,baz=215,slow=29,SNR=7.5						
HLID	Hailey	3.37	331	*e*Pn	Pn	22 44 08.7	+1.4
HLID				*e*S	Sn	22 44 49.2	+1.2
NVAR	Mina Array Bea	5.26	247	Pn	Pn	22 44 34.3	+1.1
	0.2nm,0.3s,baz=68,slow=15,SNR=2.0						
NVAR				Lg	Lg	22 45 55.2	
	0.1nm,0.3s,baz=53,slow=17,SNR=2.2						
TXAR	Lajitas Array	13.24	146	Pn	Pn	22 46 25.0	+2.5
	0.1nm,0.3s,baz=320,slow=14,SNR=2.2						

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*DJA **11** 22:45:31.3±1.2, 7°S±5°×12°4E±1°2, h10^{km}, M4.1/8, mb4.4/2, mB4.9/1, MLv4.0/8, Mw(mB)4.2/1*

*ISCJB **11** 22:45:53.0±0.8, 5°.31S±0°.09×122°.31E±0°.08, h10^{km}, Error ellipse: s-maj=14.5km s-min=9.6km az=42.9*

*IDC **11** 22:46:39.4±2.1, 8°.37S×124°.86E, h0^{km}, mb3.2/1, mb1 3.4/3, mb1mx3.2/28, mbtmp3.2/3, ML2.7/2, Error ellipse: s-maj=194.4km s-min=33.8km az=58.0*

ISC 11 22:45:54.6±1.2**, 5°.33S**±0°.09×**122°.38E**±0°.08**, h10^{km}, n9, σ2^{s}23**/9**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBSI	Bau Bau	0.24	129	P	Pg	22 46 00.6	+1.0
KDI	Kendari	1.39	10	P	Pn	22 46 18.7	-1.4
BKSI	Bulukumba	2.25	270	P	Pn	22 46 29.5	-2.4
BNSI	Bone	2.45	292	P	Pn	22 46 32.1	-2.5
SPSI	Sidrap Palu	2.94	298	P	Pn	22 46 43.3	+1.9
TTSI	Tana Toraja	3.42	312	P	Pn	22 46 50.1	+2.1
LUWI	Luwuk	4.28	5	P	Pn	22 46 58.6	-1.3
WRA	Warramunga Arr	18.61	142	Pn	P	22 50 11.0	-1.4
	0.0nm,0.3s,baz=317,slow=12,SNR=3.3						
ASAR	Alice Springs	21.34	150	P	P	22 50 43.9	+1.7
	0.0nm,0.3s,baz=328,slow=12,SNR=5.4						

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*NEIC **11** 23:01:43.1±0.0, 15°.82N×98°.41W, h10^{km}, MD4.1(MEX), After MEX.*

MEX 11 23:01:43.9±0.5**, 16°.04N**×**98°.38W, h10^{km}, MD4.1, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.43	35	*e*P	Pg	23 01 51.4	-1.0
PNIG				*e*S	Sg	23 01 58.3	+0.3
PNIG	Pinotepa	0.43	35	*e*P	Pg	23 01 51.4	-0.9
PNIG				*e*S	Sg	23 01 58.4	+0.4
VHO	Vista Hermosa	1.88	57	*e*P	Pn	23 02 15.2	-1.2
VHO				*e*S	Sg	23 02 44.6	0.0
VHO	Vista Hermosa	1.88	57	*e*P	Pn	23 02 12.7	-3.7
VHO				*e*S	Sn	23 02 35.8	-4.5
CAIG	El Cayaco	2.07	299	*e*P	Pn	23 02 15.8	-2.9
CAIG				*e*S	Sn	23 02 41.4	-3.2
CAIG	El Cayaco	2.07	299	*e*P	Pn	23 02 15.8	-2.9
CAIG				*e*S	Sn	23 02 41.4	-3.2
HUIG	Huatulco	2.20	97	*e*P	Pn	23 02 16.9	-3.7
HUIG				*e*S	Sn	23 02 42.5	-5.4
HUIG	Huatulco	2.20	97	*e*P	Pn	23 02 16.9	-3.7
HUIG				*e*S	Sn	23 02 42.5	-5.4
LVIG	Laguna Verde	4.11	27	Pn	Pn	23 02 44.4	-2.5

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*ISCJB **11** 23:03:17.6±0.5, 7°.09S±0°.04×105°.14E±0°.03, h61^{km}±4^{km}, mb4.5/55, Error ellipse: s-maj=7.1km s-min=3.2km az=35.4*

*NEIC **11** 23:03:17.6±0.8, 7°.01S×105°.10E, h41^{km}±7^{km}, mb4.6/30, Error ellipse: s-maj=10.4km s-min=5.8km az=46.0*

NEIC Felt [III] at Suaka Margasatwa Ujungkulon.

*IDC **11** 23:03:19.4±3.0, 6°.64S×105°.45E, h43^{km}±26^{km}, mb4.2/25, mb1 4.3/26, mb1mx4.1/42, mbtmp4.4/26, ML5.3/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/44, Error ellipse: s-maj=21.4km s-min=11.2km az=45.0*

*DJA **11** 23:03:19.4±0.4, 7°S±4°×10°5E±°, h56^{km}±5^{km}, M4.6/19, mb4.6/11, mB5.1/6, MLv4.7/19, Mw(mB)4.5/6*

ISC 11 23:03:19.9±1.0**, 7°.03S**±0°.06×**105°.25E**±0°.05**, h62**^{km}±8^{km}**, n155, σ1^{s}70**/165**, mb4.6**/61**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	Sukabumi	1.30	89	P	Pn	23 03 41.7	-0.2
SKJI				S	Sn	23 03 59.0	+0.6
DBJI	Dramaga	1.56	73	P	Pn	23 03 44.9	-0.6
DBJI				S	Sn	23 04 05.3	+0.5
TNG	Tangerang	1.63	59	P	Pn	23 03 45.4	-0.9
TNG				S	Sn	23 04 07.1	+0.8
BLSI	Bandar Lampung	1.65	360	P	Pn	23 03 45.3	-1.4
KASI	Kota Agung	1.67	333	P	Pn	23 03 45.5	-1.4
KASI				S	Sn	23 04 06.5	-0.9
CBJI	Citeko	1.70	69	P	Pn	23 03 47.1	-0.2
CBJI				S	Sn	23 04 12.8	+4.7
KLI	Kotabumi	2.19	350	P	Pn	23 03 53.8	-0.1
KLI				S	Sn	23 04 21.0	+1.1
LWLI	Liwa	2.32	329	P	Pn	23 03 56.5	+0.6
LWLI				S	Sn	23 04 23.1	-0.3
LEM	Lembang	2.36	85	P	Pn	23 03 58.2	+1.8
LEM	Lembang	2.36	85	P	Pn	23 03 57.7	+1.3
	45nm,0.3s,baz=173,slow=19,SNR=17						
LEM				LR	LR	23 05 06.2	
	comp=Z,427nm,19.3s,baz=319,slow=50						
CISI	Cisompet, Garu	2.60	102	*e*Pn	Pn	23 03 59.3	-0.3
CISI				*e*Sn	Sn	23 04 26.3	-3.7
CISI	Cisompet, Garu	2.60	102	P	Pn	23 03 59.2	-0.3
CISI				S	Sn	23 04 30.0	-0.1
MDSI	Maura Dua	2.74	337	P	Pn	23 04 01.4	-0.1
MDSI				S	Sn	23 04 33.9	+0.4
JCJI	Jatiwangi	3.05	80	P	Pn	23 04 15.9	+10
CMJI	Cimerak	3.26	104	P	Pn	23 04 08.7	+0.1
CMJI				S	Sn	23 04 45.4	-0.8
XMIS	Christmas Isla	3.46	173	*e*Pn	Pn	23 04 07.6	-3.7
XMIS				*e*Sn	Sn	23 04 34.9	-16
MNAI	Manna	3.50	319	*e*Pn	Pn	23 04 06.9	-5.0
MNAI				*e*Sn	Sn	23 04 49.5	-2.6
MNAI	Manna	3.50	319	P	Pn	23 04 11.5	-0.3
LHSI	Lahat	3.61	332	P	Pn	23 04 13.9	+0.5
KPJI	Karang Pucung	3.66	95	P	Pn	23 04 16.0	+1.9
PMBI	Palembang	4.10	353	P	Pn	23 04 20.4	+0.3
TPI	Tanjungpandan	4.87	30	P	Pn	23 04 29.9	-0.7
MASI	Maura Aman, Be	4.89	322	P	Pn	23 04 29.3	-1.6
PPBI	Pangkal Pinang	4.91	10	P	Pn	23 04 31.7	+0.5
UGM	Wanagama	5.30	100	*e*Pn	Pn	23 04 39.0	+2.4
UGM				*e*Sn	Sn	23 05 30.9	-5.5
KRJI	Kerinci	6.19	322	P	Pn	23 04 49.1	+0.3
	91nm,1.0s,0.4nm						
PWJI	Pagerwojo	6.57	99	P	Pn	23 04 58.2	+4.3
PPSI	Pulau Pagai	6.72	309	P	Pn	23 04 54.7	-1.3
	84nm,0.6s,2μm0.6nm						
PDSI	Padang	7.73	322	P	Pn	23 05 07.1	-2.7
PPI	Padang Panjang	8.13	323	P	Pn	23 05 16.4	+1.2
	11nm,0.6s						
SISI	Saibi	8.36	312	P	Pn	23 05 17.7	-0.7
MYKOM	Kota Tinggi	8.87	351	*e*Pn	Pn	23 05 26.4	+0.9
JAGI	Jajag, Banyuwa	8.94	100	*e*Pn	Pn	23 05 26.9	+0.6
JAGI				*e*Sn	Sn	23 07 00.4	-5.1
JAGI	Jajag, Banyuwa	8.94	100	P	Pn	23 05 27.6	+1.3
MNSI	Mandailing Nat	9.61	324	P	Pn	23 05 35.2	-0.4
COCO	West Island	9.75	238	*e*Pn	Pn	23 05 29.9	-7.6
COCO				*e*Sn	Sn	23 07 19.7	-5.9
GSI	Gunungsitoli	11.28	317	*e*Pn	Pn	23 05 55.1	-3.2
BKSI	Bulukumba	14.88	84	P	P	23 06 51.3	+0.1
MPSI	Mapaga	16.34	64	P	P	23 07 11.0	+3.6
MMRI	Maumere	16.90	97	*e*Pn	Pn	23 07 10.2	-2.2
	28nm,1.0s						
MMRI	Maumere	16.90	97	P	Pn	23 07 12.2	-0.3
KKM	Kota Kinabalu	16.98	40	*e*Pn	P	23 07 14.7	+0.1
	20nm,1.1s						
GIRL	Giralia	17.77	152	*e*Pn	P	23 07 22.6	-0.5
	57nm,1.1s						
GIRL				*e*Sn	Sn	23 10 26.5	-14
MRSI	Marisa	18.24	67	P	Pn	23 07 31.4	+2.5
BATI	Baumata	18.48	101	P	Pn	23 07 35.9	+4.2
BATI	Baumata	18.48	101	P	Pn	23 07 32.6	+0.9
	11nm,0.3s,baz=230,slow=5.1,SNR=8.2						
BATI				S	Sn	23 10 55.6	-2.1
	2.8nm,0.3s,baz=342,slow=20,SNR=2.5						
SOEI	Soe	19.01	100	*e*P	Pn	23 07 38.4	+0.2
	38nm,0.5s						
SOEI				*e*S	Sn	23 11 09.8	-0.9
SOEI	Soe	19.01	100	P	Pn	23 07 37.6	-0.6
	50nm,0.8s						
MBWA	Marble Bar	19.84	137	*e*P	Pn	23 07 48.6	+0.7
	6.6nm,1.1s						
MBWA				*e*S	S	23 11 14.1	-12
FITZ	Fitzroy Crossi	22.71	121	*e*P	P	23 08 17.6	+0.9
	3.0nm,0.8s						
FITZ	Fitzroy Crossi	22.71	121	P	P	23 08 17.9	+1.2
	2.9nm,0.7s,baz=244,slow=5.1,SNR=10						
CM31	Chiang Mai Arr	26.08	346	*e*P	P	23 08 45.5	-2.3
	5.2nm,0.4s						
CMAR	Chiang Mai Arr	26.08	346	P	P	23 08 45.5	-2.3
	2.3nm,0.7s,baz=180,slow=8.1,SNR=13						
CMAR				LR	LR	23 19 27.9	
	comp=Z,55nm,20.3s,baz=270,slow=38						
MTN	Manton Dam	26.13	105	*e*P	P	23 08 42.4	-5.9
	6.2nm,0.5s						
CHTO	Chiang Mai	26.42	346	P	P	23 08 51.0	+0.1
	21nm,0.9s						
SIJI	Sorong	26.65	78	LR	LR	23 20 50.2	
	comp=Z,259nm,19.4s,baz=31,slow=40						
NWAO	Narrogin (SRO)	28.07	158	P	P	23 09 08.4	+2.8
	4.3nm,0.7s,baz=282,slow=9.3,SNR=3.0						
H01W3	Cape Leeuwin H	28.91	165	T	T	23 39 36.0	
	baz=344,slow=76,SNR=109						
H01W1	Cape Leeuwin H	28.92	165	T	T	23 39 37.3	
	baz=344,slow=76,SNR=148						
H01W2	Cape Leeuwin H	28.92	165	T	T	23 39 37.2	
	baz=344,slow=76,SNR=142						
WR1	Warramunga Arr	30.99	117	*e*P	P	23 09 32.8	+1.0
	4.3nm,0.6s						
WR1				*e*PcP	PcP	23 12 28.1	+1.4
WRA	Warramunga Arr	30.99	117	P	P	23 09 32.8	+1.0
	2.3nm,0.8s,baz=292,slow=10,SNR=36						
WRA				PcP	PcP	23 12 28.1	+1.4
	0.4nm,0.4s,baz=304,slow=2.0,SNR=10.0						
WB2	Warramunga Arr	31.00	117	*e*P	P	23 09 32.6	+0.8
KMI	Kunming	32.05	356	P	P	23 09 44.4	+3.3
KMI				pP	pP	23 09 52.3	-4.1
KMI				sP	sP	23 09 55.9	-7.8
KMI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAR	Alice Springs	32.10	124	P	P	23 09 43.0	+1.6
	comp=Z,0.5nm,0.4s,baz=300,slow=9.0,SNR=7.2						
ASAR				PcP	PcP	23 12 31.5	+1.8
	comp=Z,1.1nm,0.3s,baz=299,slow=2.2,SNR=9.7						
AS31	Alice Springs	32.10	124	*e*P	P	23 09 43.0	+1.6
	comp=Z,0.5nm,0.6s						
AS31				*e*PcP	PcP	23 12 31.5	+1.8
H08S2	Diego Garcia H	32.49	267	T	T	23 43 59.3	
	baz=91,slow=76,SNR=131						
H08S3	Diego Garcia H	32.50	267	T	T	23 44 01.2	
	baz=91,slow=76,SNR=279						
H08S1	Diego Carcia H	32.51	267	T	T	23 44 01.9	
	baz=91,slow=76,SNR=26						
JAY	Jayapura	35.60	85	P	P	23 10 11.1	-0.9
	comp=Z,18nm,0.9s,baz=260,slow=19,SNR=2.5						
ENH	Enshi	37.31	6	*e*P	P	23 10 24.5	-1.7
	comp=Z,3.3nm,1.0s						
CD2	Chengdu	37.75	358	*e*P	P	23 10 32.0	+2.1
COEN	Coen	37.88	104	*e*P	P	23 10 29.8	-1.5
	comp=Z,4.7nm,0.8s						
RAMN	Ramite	38.31	333	*e*P	P	23 10 34.8	-0.1
	comp=Z,9.2nm,0.5s						
LSA	Lhasa	38.95	340	*e*P	P	23 10 39.5	-1.0
	comp=Z,2.6nm,0.6s						
JIRN	Jiri	39.10	333	*e*P	P	23 10 41.1	-0.6
	comp=Z,21nm,0.5s						
PKIN	Phulchoki	39.40	332	*e*P	P	23 10 42.6	-1.5
	comp=Z,4.0nm,0.4s						
GUN	Gumba	39.46	332	*e*P	P	23 10 43.4	-1.3
	comp=Z,12nm,0.3s						
KOLN	Koldanda	40.43	330	*e*P	P	23 10 52.0	-0.6
	comp=Z,13nm,0.5s						
DANN	Dangsing	40.83	330	*e*P	P	23 10 54.2	-1.8
	comp=Z,18nm,0.4s						
NJ2	Nanjing	40.97	18	*e*P	P	23 10 58.2	+1.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
XAN	Xi'an	40.99	5	P	P	23 10 55.5	-1.4
XAN				pP	pP	23 11 02.1	-10
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN	Xi'an	40.99	5	*e*P	P	23 10 54.8	-2.1
	comp=Z,3.5nm,0.6s						
PYUN	Piuthan	41.01	329	*e*P	P	23 10 56.6	-0.8
	comp=Z,11nm,0.4s						
STKA	Stephens Creek	41.92	131	*e*P	P	23 11 05.1	+0.5
	comp=Z,0.8nm,0.9s						
STKA	Stephens Creek	41.92	131	P	P	23 11 07.4	+2.8
	comp=Z,1.9nm,0.4s,baz=297,slow=6.8,SNR=6.6						
LZH	Lanzhou	42.90	358	*e*P	P	23 11 13.6	+1.0
LZH				pP	pP	23 11 25.8	-2.5
LZH				sP	sP	23 11 32.1	-3.3
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA	Gaotai	46.48	354	*e*P	P	23 11 39.8	-1.2
GTA				pP	pP	23 11 52.4	-4.5
GTA				sP	sP	23 11 57.4	-6.6
GTA				PcP	PcP	23 13 15.8	+1.1
GTA				S	S	23 18 25.6	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,76nm,7.3s						
GTA				LR	LR		
	comp=N,91nm,16.5s						
GTA				LR	LR		
	comp=E,130nm,17.5s						
GTA				LR	LR		
	comp=Z,87nm,17.8s						
HHC	Hu-ho-hao-te	47.99	6	*e*P	P	23 11 57.0	+4.3
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
KS15	Wonju Array Si	49.03	24	*e*P	P	23 12 00.2	-0.4
	comp=Z,4.1nm,1.0s						
KSAR	Wonju Array Be	49.03	24	P	P	23 12 00.2	-0.4
KSRS	Korea Array	49.06	24	P	P	23 12 00.2	-0.6
	comp=Z,1.7nm,0.5s,baz=222,slow=7.6,SNR=10						
NIL	Nilore	50.57	325	*e*P	P	23 12 12.0	-0.5
	comp=Z,7.6nm,0.6s						
WMQ	Urumqi	53.05	344	*e*P	P	23 12 33.2	+2.4
WMQ				pP	pP	23 12 45.5	-1.5
WMQ				LR	LR		
	comp=N,61nm,16.1s						
WMQ				LR	LR		
	comp=E,110nm,19.1s						
WMQ				LR	LR		
	comp=Z,110nm,16.1s						
MAJO	Matsushiro	53.23	33	*e*P	P	23 12 29.3	-2.9
MJAR	Matsushiro Arr	53.23	33	P	P	23 12 29.3	-2.9
	comp=Z,0.8nm,0.3s,baz=207,slow=8.2,SNR=5.0						
KSH	Kashi	53.65	332	P	P	23 12 34.2	-1.1
KSH				pP	pP	23 12 50.8	-0.5
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
KSH				pmax	pmax		
	comp=Z,200nm,5.5s						
KBL	Kabul	53.66	323	*e*P	P	23 12 34.5	-1.2
	comp=Z,4.9nm,0.8s						
SONA0	Songino Array	54.63	1	*e*P	P	23 12 41.5	-0.8
SONM	Songino Array	54.63	1	P	P	23 12 41.5	-0.8
	comp=Z,1.7nm,0.5s,baz=182,slow=9.0,SNR=38						
SONM				PcP	PcP	23 13 45.0	+0.4
	comp=Z,2.5nm,0.5s,baz=176,slow=3.6,SNR=16						
SONM				ScP	ScP	23 17 38.2	+0.4
	comp=Z,0.4nm,0.8s,baz=172,slow=2.9,SNR=2.7						
SONA1	Songino Array	54.65	1	*e*P	P	23 12 37.9	-4.6
SONA1				*e*PcP	PcP	23 13 44.9	+0.2
GAR	Garm	56.09	327	*e*P	P	23 12 51.7	-1.2
	comp=Z,9.8nm,0.5s						
USA0B	Ussuriysk Arra	56.42	23	*e*P	P	23 12 53.2	-1.8
	comp=Z,8.1nm,0.6s						
USRK	Ussuriysk Ar.	56.42	23	P	P	23 12 53.4	-1.6
	comp=Z,7.0nm,0.6s,baz=200,slow=5.2,SNR=27						
BTK	Batken	56.60	329	*e*P	P	23 12 58.3	+1.7
	comp=Z,4.2nm,0.4s						
AAK	Ala-Archa	56.81	333	LR	LR	23 41 32.0	
	comp=Z,35nm,18.3s,baz=187,slow=40						
MK01	Makanchi Array	57.32	341	*e*P	P	23 12 59.8	-1.6
MK31	Makanchi Array	57.34	341	*e*P	P	23 13 00.2	-1.3
	comp=Z,1.3nm,0.7s						
MK32	Makanchi Array	57.34	341	*e*P	P	23 13 00.1	-1.5
MKAR	Makanchi Array	57.34	341	*e*P	P	23 13 00.2	-1.3
	comp=Z,18nm,0.4s						
MKAR	Makanchi Array	57.34	341	P	P	23 13 00.1	-1.5
	comp=Z,1.6nm,0.4s,baz=153,slow=8.4,SNR=69						
GEYT	Alibeck	62.64	319	P	P	23 13 38.5	+0.4
	comp=Z,6.5nm,0.7s,baz=152,slow=6.7,SNR=14						
GYA0B	ALIBECK ARRAY	62.64	319	*e*P	P	23 13 38.9	+0.8
	comp=Z,6.9nm,0.8s						
ZAA0	Zalesovo Array	63.14	347	*e*P	P	23 13 39.9	-1.2
	comp=Z,3.3nm,1.0s						
ZALV	Zalesovo Beam	63.14	347	*e*P	P	23 13 39.5	-1.5
ZALV	Zalesovo Beam	63.14	347	P	P	23 13 39.6	-1.4
	comp=Z,4.0nm,0.3s,baz=154,slow=6.0,SNR=20						
ZAA1	Zalesovo Array	63.15	347	*e*P	P	23 13 39.6	-1.4
BRVK	Borovoye	66.79	338	*e*P	P	23 14 04.0	-0.8
	comp=Z,1.9nm,0.4s						
KMBO	Kilima Mbogo	68.03	272	LR	LR	23 40 20.9	

	comp=Z,16nm,18.9s,baz=84,slow=33						
ABKAR	Akbulak array	68.56	330	eP	P	23 14 15.9	0.0
	comp=Z,38nm,0.6s						
ARU	Arti	73.91	335	eP	P	23 14 48.2	+0.1
	comp=Z,19nm,1.1s						
PETK	Petropavlovsk-	74.47	30	P	P	23 14 50.5	-1.0
	comp=Z,3.2nm,0.7s,baz=189,slow=5.8,SNR=6.6						
PEA1	Petropavlovsk-	74.47	30	eP	P	23 14 50.5	-1.0
KBZ	Khabaz	75.51	318	P	P	23 14 58.7	+1.1
	comp=Z,2.3nm,0.8s,baz=84,slow=4.1,SNR=3.7						
NRIK	Noril'sk	77.17	354	P	P	23 15 06.0	-0.5
	comp=Z,6.9nm,0.5s,baz=174,slow=3.8,SNR=17						
SEY	Seymchan	78.41	20	P	P	23 15 13.0	-0.6
	comp=Z,1.3nm,0.3s,baz=225,slow=6.4,SNR=8.9						
BR101	Keskin Array S	80.55	312	eP	P	23 15 26.6	+0.7
BR131	Keskin Array S	80.55	312	eP	P	23 15 25.8	-0.1
	comp=Z,2.7nm,0.6s						
BRTR	Keskin Array B	80.55	312	P	P	23 15 26.6	+0.7
	comp=Z,2.1nm,0.6s,baz=141,slow=7.1,SNR=18						
AKASG	Malin Array Be	86.64	322	P	P	23 15 56.9	+0.2
	comp=Z,0.3nm,0.3s,baz=90,slow=4.5,SNR=2.7						
AKBB	Malin Array Si	86.64	322	eP	P	23 15 56.9	+0.2
	comp=Z,2.7nm,0.6s						
MLR	Muntele Rosu	87.53	316	eP	P	23 16 00.4	-0.8
	comp=Z,8.2nm,1.1s						
BUR04	Bucovina Ar. S	88.47	318	eP	P	23 16 06.7	+1.0
BUR08	Bucovina Ar. S	88.48	318	eP	P	23 16 05.5	-0.2
	comp=Z,5.8nm,0.9s						
FIA0	FINESS Array S	90.97	332	eP	P	23 16 19.0	+2.1
FINES	FINESS Array B	90.97	332	P	P	23 16 19.0	+2.1
	comp=Z,2.0nm,0.4s,baz=101,slow=4.7,SNR=32						
ARA0	ARCESS Array S	92.96	340	eP	P	23 16 26.1	+0.1
ARCES	ARCESS Array B	92.96	340	P	P	23 16 26.1	+0.1
	comp=Z,1.1nm,0.4s,baz=99,slow=6.5,SNR=17						
SPA0	Spitsbergen Ar	96.60	348	eP	P	23 16 41.8	-0.7
	comp=Z,12nm,1.0s						
SPITS	Spitsbergen Ar	96.60	348	P	P	23 16 41.8	-0.7
	comp=Z,1.5nm,0.4s,baz=116,slow=7.5,SNR=15						
HFS	Hagfors	96.82	330	P	P	23 16 46.2	+2.5
	comp=Z,0.7nm,0.4s,baz=116,slow=6.8,SNR=7.9						
NB200	NORSAR Array S	98.06	331	eP	Pdif	23 16 50.4	+1.0
NOA	NORSAR Array B	98.06	331	P	Pdif	23 16 50.4	+1.0
	comp=Z,0.2nm,0.6s,baz=68,slow=5.6,SNR=2.6						
YKA	Yellowknife Ar	117.48	20	PKP	PKiKP	23 21 58.7	+0.4
	comp=Z,0.2nm,0.6s,baz=341,slow=1.7,SNR=4.9						
YKB5	Yellowknife Ar	117.48	20	ePKPdf	PKiKP	23 21 58.7	+0.4
PDAR	Pinedale Array	133.03	35	PKP	PKiKP	23 22 31.1	+1.0
	comp=Z,0.2nm,0.4s,baz=306,slow=2.1,SNR=3.4						
TX31	Lajitas Ar. Si	144.87	47	ePKPdf	PKPdf	23 22 51.0	+0.2
TXAR	Lajitas Array	144.87	47	PKP	PKPdf	23 22 51.3	+0.5
	comp=Z,1.0nm,0.4s,baz=322,slow=1.3,SNR=15						
CCM	Cathedral Cave	145.68	23	ePKPbc	PKPbc	23 22 52.2	+0.1
FVM	French Village	146.06	22	ePKPdf	PKPbc	23 22 53.4	+0.1
SSPA	Standing Stone	146.42	4	ePKPbc	PKPbc	23 22 54.4	+0.1
WCI	Wyandotte Cave	147.22	17	ePKPbc	PKPbc	23 22 56.6	0.0
MIAR	Mount Ida	147.57	30	ePKPbc	PKPbc	23 22 58.6	+0.8
WVT	Waverly	148.66	21	ePKPbc	PKPbc	23 23 01.1	+0.6
CPCT	Cooper Cave	150.32	16	ePKPbc	PKPbc	23 23 05.1	+0.4

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*ISCJB **11** 23:13:49.9±0.7, 5.°11S±0.°04×139.°92E±0.°09, h10^{km}, mb3.8/4, Error ellipse: s-maj=12.8km s-min=5.9km az=177.1*

*IDC **11** 23:13:49.2±1.5, 5.°01S×140.°14E, h0^{km}, mb3.6/2, mb1 4.1/9, mb1mx3.9/29, mbtmp4.0/9, ML4.1/7, Error ellipse: s-maj=40.1km s-min=18.5km az=99.0*

*NEIC **11** 23:13:50.6±0.7, 5.°01S×140.°17E, h10^{km}, mb4.0/8, Error ellipse: s-maj=14.9km s-min=9.1km az=91.0*

ISC 11 23:13:49.9±0.8**, 5.°11S**±0.°06×**140.°00E**±0.°09**, h10^{km}, n26, σ3^{s}36**/35**, mb4.1**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.67	15	Pn	Pn	23 14 30.0	-3.0
	17nm,0.3s,baz=202,slow=13,SNR=52						
JAY				Sn	Sn	23 15 00.3	-5.3
	34nm,0.3s,baz=22,slow=22,SNR=12						
FAKI	Fak Fak	8.03	285	ePn	Pn	23 15 49.6	+2.8
SAUI	Saumlaki	9.10	251	ePn	Pn	23 16 07.9	+6.5
COEN	Coen	9.33	161	ePn	Pn	23 16 08.4	+3.8
SIJI	Sorong	9.69	296	Pn	Pn	23 16 10.8	+1.3
	1.2nm,0.3s,baz=73,slow=19,SNR=3.3						
MTN	Manton Dam	11.65	228	ePn	Pn	23 16 38.9	+2.6
MTN				eSn	Sn	23 18 43.0	-3.5
WRAB	Tennant Creek	15.73	200	ePn	Pn	23 17 33.4	+1.7
	13nm,1.1s						
WB2	Warramunga Arr	15.73	200	ePn	Pn	23 17 33.1	+1.3
	6.0nm,0.6s						
WB2				eSn	Sn	23 20 19.3	-7.1
WR1	Warramunga Arr	15.74	200	ePn	Pn	23 17 32.3	+0.4
	6.9nm,0.6s						
WR1				eSn	Sn	23 20 23.2	-3.2
WRA	Warramunga Arr	15.74	200	Pn	Pn	23 17 32.3	+0.4
	0.5nm,0.3s,baz=14,slow=13,SNR=21						
WRA				Sn	Sn	23 20 23.2	-3.3
	0.8nm,0.3s,baz=13,slow=23,SNR=4.6						
WRA				Lg	Lg	23 22 11.8	
	0.7nm,0.3s,baz=14,slow=28,SNR=4.2						
CTA	Charters Tower	16.08	158	Pn	P	23 17 38.2	-1.5
	0.2nm,0.3s,baz=315,slow=13,SNR=1.9						
CTA				Lg	Lg	23 22 24.3	
	0.3nm,0.3s,baz=57,slow=17,SNR=5.8						
SOEI	Soe	16.27	253	ePn	P	23 17 45.9	+4.1
	48nm,1.0s						
SOEI				eS	S	23 20 54.2	+1.7
BATI	Baumata	16.96	252	P	P	23 17 50.7	+1.2
	3.9nm,0.3s,baz=335,slow=2.2,SNR=4.5						
MMRI	Maumere	17.98	258	ePn	Pn	23 17 57.7	-2.4
	13nm,0.9s						
FITZ	Fitzroy Crossi	19.07	226	P	Pn	23 18 14.4	+0.9
	0.7nm,0.3s,baz=79,slow=3.6,SNR=23						
FITZ				S	Sn	23 21 40.0	-7.3
	0.6nm,0.3s,baz=84,slow=9.2,SNR=3.6						
AS01	Alice Springs	19.35	197	eP	Pn	23 18 20.6	+3.8
AS01				eS	Sn	23 21 50.5	-3.4
AS31	Alice Springs	19.36	197	eP	Pn	23 18 20.9	+4.0
	3.3nm,0.4s						
AS31				eS	Sn	23 21 49.0	-5.3
ASAR	Alice Springs	19.36	197	P	Pn	23 18 18.9	+1.9
	1.0nm,0.3s,baz=29,slow=9.3,SNR=28						
ASAR				S	Sn	23 21 49.0	-5.3
	0.2nm,0.3s,baz=12,slow=28,SNR=4.4						
ASAR				Lg	Lg	23 24 09.4	
	0.2nm,0.3s,baz=14,slow=30,SNR=4.2						
SONA0	Songino Array	60.43	335	eP	P	23 24 01.0	+1.2
SONM	Songino Array	60.43	335	P	P	23 24 01.0	+1.2
	0.2nm,0.5s,baz=159,slow=7.6,SNR=3.1						
MK01	Makanchi Array	72.45	322	eP	P	23 25 17.8	+1.1
MK31	Makanchi Array	72.46	322	eP	P	23 25 20.2	+3.4
	1.2nm,0.9s						
MK32	Makanchi Array	72.46	322	eP	P	23 25 17.9	+1.1
MKAR	Makanchi Array	72.46	322	P	P	23 25 17.9	+1.1
	1.8nm,0.9s,baz=116,slow=7.5,SNR=13						
MAKZ	Makanchi	72.66	322	eP	P	23 25 19.0	+1.1
	1.8nm,0.8s						
DBIC	Dimbokro	145.01	274	PKPbc	PKPdf	23 33 28.7	0.0
	3.8nm,1.0s,baz=26,slow=3.7,SNR=4.4						

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*IDC **11** 23:21:08.7±60.0, 42.°72N×146.°35E, h0^{km}, mb3.3/3, mb1 3.4/3, mb1mx3.2/32, mbtmp3.3/3, Error ellipse: s-maj=1370.0km s-min=81.3km az=157.0*

*SKHL **11** 23:21:15.7±0.9, 42.°83N×146.°27E, h66^{km}±1^{km}, mb4.1/5*

*MOS **11** 23:21:15.3±1.4, 42.°79N×146.°28E, h71^{km}, mb4.2/1, Error ellipse: s-maj=44.5km s-min=13.9km az=102.5*

*JMA **11** 23:21:16.5±0.1, 42.°81N×145.°77E, h46^{km}±2^{km}, M3.2*

ISC 11 23:21:12.2±2.3**, 42.°67N**±0.°09×**146.°09E**±0.°06**, h23^{km}**±13^{km}**, n27, σ1^{s}50**/37**, mb3.1**/3**, 1C-2D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.74	340	P	Pn	23 21 28.2	+0.9
NEM2				eS	Sb	23 21 36.6	+0.4
JKHN	Kushirohamanak	0.80	302	P	Pb	23 21 27.9	+0.5
JKHN				S	Sb	23 21 36.3	-1.5
JAK	Akkeshi	1.08	288	P	Pn	23 21 31.8	0.0
JAK				S	Sn	23 21 43.4	-2.7
GLVR	Golovnino	1.15	339	iP	Pb	23 21 33.7	+0.3
GLVR				AMB	AMB	23 21 33.9	
	60nm,0.2s						
GLVR				AMB	AMB	23 21 33.9	
	20nm,0.2s						
GLVR				A	A	23 21 46.6	
	570nm,0.3s						
GLVR				A	A	23 21 46.6	
	310nm,0.3s						
GLVR				eS	Sn	23 21 46.6	-1.3
GLVR	Golovnino	1.15	339	iPN	Pb	23 21 33.7	+0.3
GLVR				eS	Sn	23 21 46.6	-1.3
GLVR				pmax	pmax		
	comp=N,61nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,217nm,0.4s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
SHO	Shikotan	1.32	24	iP	Pn	23 21 34.4	-0.8
SHO				AMB	AMB	23 21 35.7	
	comp=E,30nm,0.6s						
SHO				AMB	AMB	23 21 35.7	
	comp=E,50nm,0.6s						
SHO				iS	Sn	23 21 48.7	-3.3
SHO				A	A	23 21 54.8	
	comp=E,130nm,0.2s						
SHO				A	A	23 21 54.8	
	comp=E,250nm,0.2s						
SHO	Shikotan	1.32	24	d iPN	Pn	23 21 34.1	-1.1
SHO				iS	Sn	23 21 48.7	-3.3
SHO				pmax	pmax		
	comp=E,14nm,0.3s						
SHO				pmax	pmax		
	comp=Z,21nm,0.3s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.4s						
SHO				smax	smax		
	comp=N,133nm,0.2s						
SHO				smax	smax		
	comp=E,456nm,0.2s						
GRPR	Tuman	1.35	350	iP	Pn	23 21 36.0	+0.4
GRPR				AMB	AMB	23 21 37.0	
	comp=E,180nm,0.2s						
GRPR				AMB	AMB	23 21 37.0	
	comp=E,70nm,0.2s						
GRPR				iS	Sn	23 21 52.0	-0.7
GRPR				A	A	23 21 52.0	
	comp=E,350nm,0.4s						
GRPR				A	A	23 21 52.0	
	comp=E,950nm,0.4s						
GRPR	Tuman	1.35	350	iPN	Pb	23 21 36.7	0.0
GRPR				iS	Sn	23 21 52.0	-0.7
GRPR				pmax	pmax		
	comp=N,176nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,786nm,0.2s						
GRPR				smax	smax		
	comp=N,3µm,0.4s						
GRPR				smax	smax		
	comp=E,946nm,0.4s						
JNK	Nakash	1.36	313	P	Pn	23 21 35.5	-0.3
JNK				eS	Sn	23 21 49.1	-4.0
YUK	Yuzh-Kuril'sk	1.38	353	iP	Pb	23 21 37.4	+0.2
YUK				AMB	AMB	23 21 37.8	
	comp=E,60nm,0.2s						
YUK				AMB	AMB	23 21 37.8	
	comp=E,50nm,0.2s						
YUK				iS	Sn	23 21 53.2	-0.3
YUK				A	A	23 21 55.7	
	comp=E,270nm,0.2s						
YUK				A	A	23 21 55.7	
	comp=E,120nm,0.2s						
YUK	Yuzh-Kuril'sk	1.38	353	c iPN	Pb	23 21 37.6	+0.4
YUK				iS	Sn	23 21 53.2	-0.3
YUK				pmax	pmax		
	comp=N,254nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				pmax	pmax		
	comp=E,79nm,0.1s						
YUK				smax	smax		
	comp=N,982nm,0.4s						
YUK				smax	smax		
	comp=E,914nm,0.2s						
LAGR	Lagunnoye	1.41	351	iP	Pn	23 21 37.0	+0.6
LAGR				AMB	AMB	23 21 39.0	
	comp=E,120nm,0.2s						
LAGR				AMB	AMB	23 21 39.0	
	comp=E,140nm,0.2s						
LAGR				AMB	AMB	23 21 39.0	
	comp=E,50nm,0.2s						
LAGR				iS	Sn	23 21 54.0	-0.2
LAGR				A	A	23 21 54.0	
	comp=E,20nm,0.3s						
LAGR				A	A	23 21 54.0	
	comp=E,850nm,0.3s						
LAGR	Lagunnoye	1.41	351	d iPN	Pb	23 21 37.7	0.0
LAGR				iS	Sn	23 21 54.0	-0.2
LAGR				pmax	pmax		
	comp=Z,442nm,0.3s						
LAGR				pmax	pmax		
	comp=N,123nm,0.1s						
LAGR				pmax	pmax		
	comp=E,140nm,0.1s						
LAGR				smax	smax		
	comp=N,20nm,0.3s						
LAGR				smax	smax		
	comp=E,846nm,0.1s						
JRA	Rausu	1.46	331	P	Pn	23 21 37.9	+0.9
JRA				eS	Sn	23 21 53.2	-2.2
JOB	Onbets	1.68	279	P	Pn	23 21 40.5	+0.4
JAR	Ashorobuto	1.82	291	P	Pn	23 21 42.0	0.0
JAR				eS	Sn	23 22 01.4	-2.9
SONM	Songino Array	28.19	294	P	P	23 27 04.3	+1.3
	comp=E,0.2nm,0.5s,baz=79,slow=7.5,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.82	136	T	T	23 58 05.1	
	baz=328,slow=75,SNR=32						
H11N1	WAKE ISLAND Hy	28.83	136	T	T	23 58 12.9	
	baz=328,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	28.84	136	T	T	23 58 10.7	
	baz=328,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	29.75	138	T	T	23 59 19.9	
	baz=329,slow=76,SNR=53						
H11S3	WAKE ISLAND Hy	29.76	138	T	T	23 59 22.1	
	baz=329,slow=76,SNR=50						
H11S2	WAKE ISLAND Hy	29.77	138	T	T	23 59 21.2	
	baz=329,slow=76,SNR=47						
MKAR	Makanchi Array	44.41	298	P	P	23 29 22.0	+1.1
MKAR	Makanchi Array	44.41	298	P	P	23 29 22.0	+1.1
	comp=E,0.1nm,0.4s,baz=76,slow=8.3,SNR=2.4						
FINES	FINESS Array B	65.49	333	P	P	23 31 53.4	+0.5
	comp=E,0.3nm,0.4s,baz=38,slow=7.0,SNR=4.4						

IDC 11 23:26:14.1±2.2**, 6.°04S**×**130.°15E, h0^{km}, mb3.8**/1**, mb1 3.6**/4**, mb1mx3.3**/39**, mbtmp3.4**/4**, ML3.3**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.8**/30**, Error ellipse: s-maj=98.6km s-min=27.0km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.76	200	Pn	Pn	23 29 18.5	+1.5
	0.2nm,0.3s,baz=40,slow=10,SNR=12						
WRA	Warramunga Arr	14.40	164	Pn	Pn	23 29 38.5	-1.0
	0.1nm,0.3s,baz=344,slow=13,SNR=7.8						
WRA				Sn	Sn	23 32 04.8	-15
	0.2nm,0.3s,baz=43,slow=31,SNR=5.1						
ASAR	Alice Springs	17.89	169	P	Pn	23 30 24.1	-0.5
	0.1nm,0.3s,baz=347,slow=9.3,SNR=3.0						
JHJ	Hachijo jima 2	40.01	13	LR	LR	23 47 59.1	
	comp=Z,71nm,18.4s,baz=126,slow=33						
MKAR	Makanchi Array	67.51	327	P	P	23 37 12.1	0.0
	0.4nm,0.4s,baz=115,slow=8.1,SNR=20						

IDC 11 23:27:51.9±3.6**, 16.°54S**×**173.°54W, h0^{km}, mb3.4**/3**, mb1 3.8**/3**, mb1mx3.5**/28**, mbtmp3.4**/3**, Error ellipse: s-maj=452.2km s-min=30.6km az=157.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.47	258	P	P	23 36 44.0	-0.4
	0.2nm,0.5s,baz=95,slow=7.2,SNR=4.1						
ASAR	Alice Springs	49.64	253	P	P	23 36 46.0	+0.2
	0.5nm,0.7s,baz=90,slow=7.4,SNR=5.8						
TXAR	Lajitas Array	81.35	56	P	P	23 40 11.0	0.0
	0.2nm,0.5s,baz=218,slow=6.8,SNR=2.4						

DJA 11 23:28:07.6±1.1**, 10°S**±10°×**10°8E**±°**, h10^{km}, M4.1**/6**, mb4.3**/1**, MLv4.0**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	2.03	26	P	Pn	23 28 41.8	-0.1
CISI	Cisompet, Garu	2.07	8	P	Pn	23 28 41.8	-0.7
KPJI	Karang Pucung	2.66	31	P	Pn	23 28 51.1	+0.6
SKJI	Sukabumi	2.77	339	P	Pn	23 28 48.0	-4.1
UGM	Wanagama	3.40	60	P	Pn	23 29 00.8	0.0
UGM				S	Sn	23 29 42.5	+1.2
PCJI	Pacitan	3.86	69	P	Pn	23 29 06.8	-0.3
PCJI				S	Sn	23 29 52.7	+0.1
PWJI	Pagerwojo	4.50	70	P	Pn	23 29 15.9	0.0
PWJI				S	Sn	23 30 07.6	-0.8
JAGI	Jajag, Banyuwa	6.63	81	P	Pn	23 29 44.3	-0.9

IDC 11 23:30:28.6±3.1**, 10.°94S**×**165.°75E, h0^{km}, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.6**/37**, mbtmp3.9**/4**, ML4.0**/1**, Error ellipse: s-maj=65.9km s-min=41.9km az=88.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.09	177	Pn	Pn	23 33 08.9	+0.2
	1.1nm,0.3s,baz=339,slow=16,SNR=8.0						
WRA	Warramunga Arr	31.52	250	P	P	23 36 52.9	+0.1
	2.2nm,0.7s,baz=81,slow=9.1,SNR=17						
ASAR	Alice Springs	32.84	243	P	P	23 37 04.0	-0.3
	0.3nm,0.5s,baz=65,slow=10,SNR=5.3						
MKAR	Makanchi Array	93.44	317	P	P	23 43 46.0	-0.1
	0.2nm,0.7s,baz=85,slow=5.5,SNR=2.8						

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*IDC **11** 23:37:10.9±1.5, 11.°38S×165.°81E, h0^{km}, mb4.0/9, mb1 4.2/10, mb1mx3.9/41, mbtmp4.1/10, ML4.2/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/27, Error ellipse: s-maj=43.6km s-min=22.3km az=121.0*

*ISCJB **11** 23:37:14.8±1.1, 11.°5S±0.°1×165.°8E±0.°2, h37^{km}, mb3.9/8, MS3.5/5, Error ellipse: s-maj=24.8km s-min=16.1km az=6.3*

ISC 11 23:37:16.5±1.2**, 11.°4S**±0.°1×**165.°8E**±0.°2**, h37^{km}, n22, σ1^{s}33**/10**, mb3.9**/8**, MS3.4**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	288	LR	LR	23 40 47.4	
	comp=Z,219nm,18.6s,baz=88,slow=36						
DZM	Mont Dzumac	10.61	177	Pn	Pn	23 39 46.4	+0.3
	1.7nm,0.3s,baz=69,slow=22,SNR=12						
DZM				LR	LR	23 43 40.4	
	comp=Z,122nm,18.5s,baz=256,slow=37						
CTA	Charters Tower	20.69	243	P	P	23 41 54.3	+0.7
	6.9nm,0.9s,baz=67,slow=18,SNR=4.5						
H11S2	WAKE ISLAND Hy	29.73	2	T	T	00 15 06.1	
	baz=184,slow=76,SNR=6.8						
H11S3	WAKE ISLAND Hy	29.74	2	T	T	00 15 06.1	
	baz=184,slow=76,SNR=7.3						
H11S1	WAKE ISLAND Hy	29.75	2	T	T	00 15 07.1	
	baz=184,slow=76,SNR=7.5						
STKA	Stephens Creek	30.22	224	P	P	23 43 24.6	+0.8
	1.1nm,0.7s,baz=65,slow=9.5,SNR=4.5						
H11N1	WAKE ISLAND Hy	30.95	2	T	T	00 16 39.1	
	baz=183,slow=74,SNR=4.3						
H11N3	WAKE ISLAND Hy	30.96	2	T	T	00 16 37.3	
	baz=183,slow=74,SNR=3.6						
H11N2	WAKE ISLAND Hy	30.97	2	T	T	00 16 38.8	
	baz=183						
WRA	Warramunga Arr	31.42	250	P	P	23 43 33.5	-1.1
	3.7nm,0.8s,baz=81,slow=9.3,SNR=26						
GUMO	Guam	32.39	320	LR	LR	23 56 38.2	
	comp=Z,78nm,18.4s,baz=108,slow=36						
RPZ	Rata Peaks	32.49	173	LR	LR	23 54 58.5	
	comp=Z,68nm,18.4s,baz=355,slow=33						
ASAR	Alice Springs	32.69	244	P	P	23 43 44.0	-1.6
	1.1nm,0.8s,baz=64,slow=9.8,SNR=8.2						
FITZ	Fitzroy Crossi	39.35	255	P	P	23 44 41.3	-1.4
	3.4nm,0.8s,baz=103,slow=7.5,SNR=12						
JCJ	Chichijima	44.63	329	LR	LR	00 01 44.3	
	comp=Z,79nm,20.9s,baz=120,slow=33						
CMAR	Chiang Mai Arr	72.33	294	P	P	23 48 40.2	+1.2
	0.6nm,0.3s,baz=108,slow=4.3,SNR=4.6						
SONM	Songino Array	79.01	324	P	P	23 49 18.3	+1.5
	0.5nm,0.8s,baz=131,slow=7.0,SNR=3.3						
ILAR	Eielson Array	83.84	18	P	P	23 49 40.5	-1.4
	0.4nm,0.6s,baz=246,slow=4.6,SNR=8.3						
MKAR	Makanchi Array	93.84	317	P	P	23 50 30.0	-0.1
	0.6nm,0.7s,baz=91,slow=6.1,SNR=9.3						
ZALV	Zalesovo Beam	93.90	324	LR	LR	00 30 36.9	
	comp=Z,15nm,20.8s,baz=70,slow=34						
NRIK	Noril'sk	96.50	340	LR	LR	00 36 22.7	
	comp=Z,18nm,18.1s,baz=44,slow=37						

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*SOME **11** 23:38:44.9, 41.°88N×79.°75E, h15^{km}*

*NNC **11** 23:38:44.7±1.4, 41.°90N×79.°71E, h0^{km}±11^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=10.0km s-min=8.2km az=3.0*

ISC 11 23:38:43.9±3.3**, 41.°87N**±0.°10×**79.°74E**±0.°07**, h2^{km}**±16^{km}**, n32, σ0^{s}95**/51**, 3C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	1.38	338	P	Pn	23 39 10.1	-0.2
	2.0nm,0.2s						
UZB				S	Sb	23 39 28.1	-0.6
	3.9nm,0.2s						
UZB	Uzynbulak	1.38	338	eP	Pn	23 39 10.1	-0.2
	2.0nm,0.2s						
UZB				eS	Sb	23 39 28.1	-0.6
	3.9nm,0.2s						
PDGK	Podgornoye	1.47	353	P	Pn	23 39 10.7	-0.8
	1.1nm,0.2s						
PDGK				S	Sn	23 39 29.2	-2.1
	3.3nm,0.5s						
PDGK	Podgornoye	1.47	353	⇑P	Pb	23 39 12.3	+0.3
	0.7nm,0.3s						
PDGK				⇑S	Sg	23 39 31.5	+0.5
	0.9nm,0.4s						
SATY	Saty	1.54	321	P	Pn	23 39 12.8	+0.3
	2.7nm,0.2s						
SATY				S	Sg	23 39 33.9	+0.5
	11nm,0.1s						
SATY	Saty	1.54	321	eP	Pb	23 39 13.5	+0.2
	2.7nm,0.2s						
SATY				eS	Sg	23 39 33.9	+0.5
	11nm,0.1s						
KTMS	Ketmen	1.64	16	P	Pn	23 39 13.8	0.0
	2.7nm,0.1s						
KTMS				S	Sn	23 39 35.0	-0.5
	5.8nm,0.4s						
KTMS	Ketmen	1.64	16	eP	Pn	23 39 13.8	0.0
	2.7nm,0.1s						
KTMS				eS	Sn	23 39 34.7	-0.9
	5.8nm,0.4s						
KURS	Kuram	1.98	325	Pg	Pb	23 39 20.9	+0.2
	1.7nm,0.3s						
KURS				Lg	Lg	23 39 48.2	
	1.7nm,0.4s						
KURS	Kuram	1.98	325	eP	Pb	23 39 20.9	+0.2
	1.7nm,0.3s						
KURS				eS	Sg	23 39 47.1	-0.5
	1.7nm,0.4s						
KOTS	Kotyrbulak	2.37	306	Pg	Pb	23 39 28.1	+0.7
	0.9nm,0.2s						
KOTS				Lg	Lg	23 39 59.1	
	4.2nm,0.4s						
KOTS	Kotyrbulak	2.37	306	eP	Pb	23 39 28.1	+0.7
	0.9nm,0.2s						
KOTS				eS	Sg	23 39 59.1	-0.9
	4.2nm,0.4s						
MDOK	Medeo	2.37	304	Pg	Pn	23 39 25.6	+1.7
	1.4nm,0.8s						
MDOK				Lg	Lg	23 39 59.2	
	4.7nm,0.5s						
MDOK	Medeo	2.37	304	Pg	Pb	23 39 27.2	-0.2
	1.1nm,0.1s						
MDOK				Lg	Lg	23 39 56.9	
	5.8nm,0.5s						
MDOK	Medeo	2.37	304	eP	Pb	23 39 26.8	-0.6
	1.1nm,0.1s						
MDOK				eS	Sb	23 39 56.9	-0.3
	5.8nm,0.5s						
TNSS	Tian-Shan	2.37	300	Pg	Pb	23 39 28.1	+0.6
	0.8nm,0.2s						
TNSS				Lg	Lg	23 39 59.4	
	2.2nm,0.3s						
TNSS	Tian-Shan	2.37	300	eP	Pb	23 39 28.1	+0.6

	0.8nm,0.2s						
TNSS				*e*S	**Sg**	**23 39 59.4**	**-0.7**
	2.2nm,0.3s						
MNBS	**Baschi**	**2.41**	**336**	Pg	**Pb**	**23 39 28.8**	**+0.7**
	0.9nm,0.2s						
MNBS				Lg	Lg	23 40 00.9	
	5.8nm,0.3s						
MNBS	**Baschi**	**2.41**	**336**	*e*P	**Pb**	**23 39 28.8**	**+0.7**
	0.9nm,0.2s						
MNBS				*e*S	**Sg**	**23 40 00.5**	**-0.9**
	5.8nm,0.3s						
DJR	**Jarkent**	**2.46**	**1**	Pg	**Pb**	**23 39 28.8**	**-0.1**
	0.6nm,0.4s						
DJR				Lg	Lg	23 40 00.6	
	1.2nm,0.3s						
DJR	**Jarkent**	**2.46**	**1**	*e*P	**Pb**	**23 39 28.8**	**-0.1**
	0.6nm,0.4s						
DJR				*e*S	**Sb**	**23 40 00.6**	**+1.1**
	1.2nm,0.3s						
IZV	**Izvestkoviy**	**2.59**	**298**	Pg	**Pb**	**23 39 32.3**	**+1.2**
	0.8nm,0.1s						
IZV				Lg	Lg	23 40 05.7	
	4.9nm,0.5s						
IZV	**Izvestkoviy**	**2.59**	**298**	*e*P	**Pb**	**23 39 32.0**	**+0.9**
	0.8nm,0.1s						
IZV				*e*S	**Sg**	**23 40 05.7**	**-1.4**
	4.9nm,0.5s						
ARXS	**Arharly**	**2.73**	**330**	Pg	**Pb**	**23 39 33.8**	**+0.4**
	0.6nm,0.3s						
ARXS				Lg	Lg	23 40 08.7	
	2.2nm,0.4s						
ARXS	**Arharly**	**2.73**	**330**	*e*P	**Pb**	**23 39 33.8**	**+0.4**
	0.6nm,0.3s						
ARXS				*e*S	**Sb**	**23 40 08.7**	**+1.4**
	2.2nm,0.4s						
CHKK	**Chushkaly**	**2.83**	**315**	Pg	**Pb**	**23 39 35.9**	**+0.8**
CHKK				Lg	Lg	23 40 12.6	
	5.5nm,0.5s						
CHKK	**Chushkaly**	**2.83**	**315**	*e*P	**Pb**	**23 39 35.9**	**+0.8**
	1.2nm,0.1s						
CHKK				*e*S	**Sg**	**23 40 12.6**	**-2.2**
	6.6nm,0.4s						
KTBS	**Karatobe**	**2.91**	**310**	Pg	**Pb**	**23 39 36.7**	**+0.3**
	0.7nm,0.2s						
KTBS				Lg	Lg	23 40 15.4	
	5.0nm,0.3s						
KTBS	**Karatobe**	**2.91**	**310**	*e*P	**Pb**	**23 39 37.0**	**+0.6**
	0.7nm,0.2s						
KTBS				*e*S	**Sb**	**23 40 14.7**	**+2.3**
	5.0nm,0.3s						
TKM2	**Tokmak 2**	**3.24**	**290**	⇑Pg	**Pb**	**23 39 40.9**	**-1.4**
	1.0nm,0.7s						
TKM2				⇓Lg	Lg	23 40 25.0	
	0.2nm,0.4s						
KAPS	**Kapalarasan**	**3.42**	**355**	Pg	**Pb**	**23 39 45.8**	**+0.5**
	0.3nm,0.2s						
KAPS				Lg	Lg	23 40 29.5	
	1.4nm,0.4s						
KAPS	**Kapalarasan**	**3.42**	**355**	*e*P	**Pb**	**23 39 45.8**	**+0.5**
	0.3nm,0.2s						
KAPS				*e*S	**Sb**	**23 40 29.5**	**+2.2**
	1.4nm,0.4s						

MEX 11 23:38:49.3±0.4, 16°.02N×97°.09W, h43^{km}±3^{km}, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.98**	**104**	*e*P	Pn	23 39 05.1	-1.5
HUIG				*e*S	Sn	23 39 16.8	-2.5
PNIG	**Pinotepa**	**1.06**	**291**	*i* P	Pn	23 39 06.1	-1.6
PNIG				*e*S	Sn	23 39 19.2	-2.2
VHO	**Vista Hermosa**	**1.10**	**18**	*e*P	Pn	23 39 06.8	-1.8
VHO				*e*S	Sn	23 39 20.5	-2.2

KRSC 11 23:42:21.8±1.1, 55°.07N×161°.53E, h103^{km}±15^{km}, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMD	**Tumrok D**	**0.66**	**282**	*e*P	Pn	23 42 40.5	+1.4
TUMD				*e*S	Sn	23 42 53.2	+1.1
KZV	**Kizimen**	**0.71**	**274**	*e*P	Pn	23 42 41.1	+1.4
KZV				*e*S	Sn	23 42 54.6	+1.5
TUMR	**Tumrok**	**0.82**	**286**	*e*P	Pn	23 42 42.7	+2.1
TUMR				*e*S	Sn	23 42 57.0	+2.1
BZGR	**Bezymyannyi-Gr**	**1.00**	**332**	*e*P	Pn	23 42 44.0	+1.6
ZLN	**Zelenaya**	**1.04**	**337**	*e*P	Pn	23 42 44.7	+1.8
ZLN				*e*S	Sn	23 43 00.4	+1.6
BZMR	**Bezymyannaya**	**1.05**	**326**	*e*P	Pn	23 42 43.8	+0.7
BZWR	**Bezymyannyi-We**	**1.07**	**327**	*e*P	Pn	23 42 44.6	+1.3
LGNR	**Loginova**	**1.12**	**335**	*e*P	Pn	23 42 46.3	+2.3
LGNR				*e*S	Sn	23 43 03.0	+2.2
CIRR	**Tsirk**	**1.14**	**338**	*e*P	Pn	23 42 45.2	+1.2
CIRR				*e*S	Sn	23 43 01.4	+0.5
KLY	**Klyuchi**	**1.34**	**339**	*e*P	Pn	23 42 47.5	+1.3
KLY				*e*S	Sn	23 43 05.6	+0.9
KBTR	**Krutoberegovo**	**1.36**	**32**	*e*P	Pn	23 42 48.0	+1.6
KBTR				*e*S	Sn	23 43 06.5	+1.4
KOZ	**Kozyrevsk**	**1.37**	**317**	*e*P	Pn	23 42 48.1	+1.6
BDR	**Baidarnaya**	**1.52**	**353**	*e*P	Pn	23 42 50.1	+1.7
BDR				*e*S	Sn	23 43 10.2	+1.6
SMKR	**Semkarok**	**1.52**	**359**	*e*P	Pn	23 42 49.9	+1.5
SMKR				*e*S	Sn	23 43 09.6	+0.9
KII	**Karymskiy**	**1.59**	**230**	*e*P	Pn	23 42 51.5	+2.2
KII				*e*S	Sn	23 43 12.4	+2.2
SRKR	**Sorokina**	**1.60**	**353**	*e*P	Pn	23 42 51.2	+1.7
SRKR				*e*S	Sn	23 43 11.9	+1.4
SRDR	**Sredinnyy**	**1.62**	**322**	*e*P	Pn	23 42 51.0	+1.4
SRDR				*e*S	Sn	23 43 11.6	+0.8
ESO	**Esso**	**1.82**	**299**	*e*P	Pn	23 42 53.2	+1.0
ESO				*e*S	Sn	23 43 15.9	+0.6
SPN	**Mys Shipunski**	**2.16**	**205**	*e*P	Pn	23 42 56.6	+0.1
SPN				*e*S	Sn	23 43 22.6	-0.4
NLC	**Nalytchevo**	**2.29**	**215**	*e*P	Pn	23 42 59.7	+1.6
NLC				*e*S	Sn	23 43 27.2	+1.2
KRX	**Arik**	**2.40**	**226**	*e*P	Pn	23 43 02.5	+2.7
KRX				*e*S	Sn	23 43 31.5	+2.6
SMAR	**Somma**	**2.42**	**223**	*e*P	Pn	23 43 01.4	+1.4
AVH	**Avacha**	**2.44**	**223**	*e*P	Pn	23 43 03.3	+3.1
AVH				*e*S	Sn	23 43 32.9	+3.3
UGLR	**Uglovaya**	**2.45**	**222**	*e*P	Pn	23 43 02.9	+2.6
KOK	**Koryaka**	**2.46**	**225**	*e*P	Pn	23 43 03.1	+2.7
GNL	**Ganaly**	**2.51**	**238**	*e*P	Pn	23 43 03.7	+2.6
DALK	**Dalny**	**2.61**	**220**	*e*P	Pn	23 43 04.7	+2.3
DALK				*e*S	Sn	23 43 35.9	+2.3
KRMR	**Karymshinskiy**	**3.01**	**223**	*e*P	Pn	23 43 10.7	+3.1
KRMR				*e*S	Sn	23 43 46.5	+3.6
RUS	**Russkaya**	**3.19**	**215**	*e*P	Pn	23 43 11.5	+1.5
RUS				*e*S	Sn	23 43 46.4	-0.8
MTVR	**Mutnovka**	**3.26**	**219**	*e*P	Pn	23 43 13.5	+2.4
MTVR				*e*S	Sn	23 43 50.6	+1.4
KDTR	**Khodutka, Kamc**	**3.86**	**214**	*e*S	Sn	23 44 02.7	-0.6

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*IDC **11** 23:49:11.2±1.1, 11°.15S×164°.91E, h0^{km}, mb4.1/7, mb1 4.4/9, mb1mx4.0/31, mbtmp4.2/9, ML4.4/2, Error ellipse: s-maj=35.0km s-min=22.2km az=140.0*

*NEIC **11** 23:49:12.9±0.6, 11°.15S×164°.86E, h10^{km}, mb4.4/2, Error ellipse: s-maj=12.8km s-min=11.0km az=80.0*

*ISCJB **11** 23:49:14.4±0.6, 11°.29S±0°.08×164°.78E±0°.09, h31^{km}, mb4.1/8, Error ellipse: s-maj=13.0km s-min=11.2km az=157.4*

ISC 11 23:49:16.1±0.8, 11°.2S±0°.1×164°.8E±0°.1, h31^{km}, n25, σ0^{s}.96/21, mb4.1/8, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.07**	**290**	*e*P	**Pn**	**23 50 31.0**	**+1.0**
HNR				*e*S	Sb	23 52 15.0	+30
HNR	**Honiara**	**5.07**	**290**	Pn	**Pn**	**23 50 30.4**	**+0.4**
HNR				*e*S	**Sn**	**23 51 25.8**	**-1.7**
HNR	**Honiara**	**5.07**	**290**	Pn	**Pn**	**23 50 30.4**	**+0.4**
	47nm,0.3s,baz=196,slow=3.6,SNR=13						
DZM	**Mont Dzumac**	**10.94**	**172**	Pn	**Pn**	**23 51 51.6**	**+0.9**
	0.7nm,0.3s,baz=353,slow=15,SNR=7.3						
OUENC	**Ouen Island, N**	**11.34**	**170**	*e*Pn	**Pn**	**23 51 55.6**	**-0.5**
CTA	**Charters Tower**	**19.90**	**241**	P	**Pn**	**23 53 47.1**	**+0.1**
	6.3nm,0.4s,baz=62,slow=11,SNR=15						
H11S2	**WAKE ISLAND Hy**	**29.55**	**4**	T	T	00 26 23.6	
	baz=184,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.55**	**4**	T	T	00 26 13.4	
	baz=184,slow=76,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**29.57**	**4**	T	T	00 26 23.4	
	baz=184,slow=76,SNR=7.1						
WRAB	**Tennant Creek**	**30.54**	**250**	*e*P	**P**	**23 55 26.4**	**-0.6**
	4.6nm,0.6s						
WRA	**Warramunga Arr**	**30.55**	**250**	P	**P**	**23 55 26.8**	**-0.3**
	5.8nm,0.6s,baz=80,slow=9.0,SNR=45						
WRA				PcP	**PcP**	**23 58 25.7**	**+0.1**
	0.6nm,0.9s,baz=73,slow=3.5,SNR=3.7						
H11N1	**WAKE ISLAND Hy**	**30.77**	**4**	T	T	00 27 56.3	
	baz=183,slow=76,SNR=9.6						
H11N3	**WAKE ISLAND Hy**	**30.78**	**4**	T	T	00 27 55.9	
	baz=183,slow=76,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**30.79**	**4**	T	T	00 27 55.1	
	baz=183,slow=76,SNR=7.9						
AS01	**Alice Springs**	**31.85**	**243**	*e*P	**P**	**23 55 37.4**	**-1.1**
AS31	**Alice Springs**	**31.89**	**243**	*e*P	**P**	**23 55 39.0**	**+0.2**
	2.1nm,0.5s						
ASAR	**Alice Springs**	**31.89**	**243**	P	**P**	**23 55 39.0**	**+0.1**
	4.8nm,0.4s,baz=63,slow=10,SNR=70						
SONA0	**Songino Array**	**78.22**	**324**	*e*P	**P**	**00 01 14.5**	**+1.7**
SONM	**Songino Array**	**78.22**	**324**	P	**P**	**00 01 14.5**	**+1.7**
	0.3nm,0.8s,baz=153,slow=8.2,SNR=4.2						
QSPA	**South Pole Qui**	**78.82**	**180**	*e*P	**P**	**00 01 15.6**	**-0.4**
ILAR	**Eielson Array**	**83.94**	**19**	P	**P**	**00 01 42.3**	**-0.5**
	0.5nm,0.8s,baz=234,slow=5.1,SNR=4.8						
NV01	**Mina Array Sit**	**86.83**	**50**	*e*P	**P**	**00 01 56.9**	**-1.2**
NVAR	**Mina Array Bea**	**86.83**	**50**	P	**P**	**00 01 56.9**	**-1.2**
	0.6nm,0.8s,baz=206,slow=10.0,SNR=3.2						
MK32	**Makanchi Array**	**92.98**	**317**	*e*P	**P**	**00 02 27.0**	**+0.5**
MKAR	**Makanchi Array**	**92.98**	**317**	P	**P**	**00 02 27.0**	**+0.5**
	0.3nm,0.5s,baz=113,slow=3.7,SNR=4.1						

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*ISCJB **11** 23:54:46.5±0.8, 11°.1S±0°.1×165°.9E±0°.2, h10^{km}, mb4.0/10, MS3.3/2, Error ellipse: s-maj=25.9km s-min=17.0km az=35.1*

*IDC **11** 23:54:46.4±0.8, 11°.03S×165°.97E, h0^{km}, mb4.1/10, mb1 4.3/10, mb1mx4.0/29, mbtmp4.0/10, MS3.5/4, Ms1 3.4/4, ms1mx3.0/23, Error ellipse: s-maj=31.1km s-min=20.4km az=127.0*

ISC 11 23:54:48.0±0.8, 11°.0S±0°.2×166°.0E±0°.2, h10^{km}, n17, σ1^{s}.12/12, mb3.9/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.14**	**284**	LR	LR	23 58 57.0	
	comp=Z,755nm,18.3s,baz=130,slow=41						
DZM	**Mont Dzumac**	**11.00**	**178**	LR	LR	00 00 50.5	
	comp=Z,137nm,21.2s,baz=352,slow=33						
URZ	**Urewera**	**28.90**	**162**	LR	LR	00 09 44.8	
	comp=Z,86nm,21.0s,baz=316,slow=31						
H11S2	**WAKE ISLAND Hy**	**29.33**	**1**	T	T	00 31 19.3	
	baz=184,slow=74,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	**29.34**	**1**	T	T	00 31 24.8	
	baz=184						
H11S1	**WAKE ISLAND Hy**	**29.35**	**1**	T	T	00 31 20.6	
	baz=184,slow=74,SNR=4.4						
STKA	**Stephens Creek**	**30.61**	**224**	P	**P**	**00 01 02.3**	**-0.1**
	1.9nm,0.7s,baz=84,slow=10,SNR=2.8						
STKA				LR	LR	00 12 34.9	
	comp=Z,72nm,19.2s,baz=27,slow=35						
WRA	**Warramunga Arr**	**31.70**	**250**	P	**P**	**00 01 11.8**	**-0.3**
	5.5nm,0.8s,baz=80,slow=9.1,SNR=30						
WRA				PcP	**PcP**	**00 04 02.0**	**-2.0**
	0.5nm,0.8s,baz=86,slow=3.4,SNR=3.7						
RPZ	**Rata Peaks**	**32.87**	**173**	P	**P**	**00 01 22.8**	**+0.7**
	14nm,0.9s,baz=248,slow=3.2,SNR=6.7						
ASAR	**Alice Springs**	**33.00**	**243**	P	**P**	**00 01 22.8**	**-0.8**
	1.1nm,0.8s,baz=71,slow=9.6,SNR=9.1						
CMAR	**Chiang Mai Arr**	**72.31**	**293**	P	**P**	**00 06 15.7**	**+1.3**
	0.6nm,0.3s,baz=122,slow=5.2,SNR=7.7						
SONM	**Songino Array**	**78.78**	**324**	P	**P**	**00 06 51.5**	**+0.4**
	0.4nm,0.9s,baz=92,slow=5.1,SNR=2.7						
ILAR	**Eielson Array**	**83.42**	**18**	P	**P**	**00 07 15.7**	**+0.4**
	0.6nm,0.8s,baz=229,slow=5.3,SNR=6.9						
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**00 07 28.9**	**+0.5**
	0.6nm,0.8s,baz=232,slow=8.9,SNR=3.2						
MKAR	**Makanchi Array**	**93.66**	**317**	P	**P**	**00 08 05.0**	**+0.1**
	0.5nm,0.8s,baz=103,slow=5.4,SNR=6.9						
YKA	**Yellowknife Ar**	**94.85**	**27**	P	**P**	**00 08 08.1**	**-1.8**
	0.1nm,0.6s,baz=254,slow=4.5,SNR=3.6						
TORD	**Torodi Ar. Bea**	**164.48**	**279**	PKP	**PKPdf**	**00 14 53.8**	**+0.7**
	0.6nm,1.1s,baz=86,slow=0.5,SNR=2.3						

IDC 12 00:05:19.6±3.5, 11°.14S×165°.98E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.6/24, mbtmp3.6/4, Error ellipse: s-maj=146.7km s-min=31.5km az=136.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.67**	**250**	P	P	00 11 45.1	0.0
	1.6nm,0.9s,baz=82,slow=9.2,SNR=9.4						
ASAR	**Alice Springs**	**32.96**	**244**	P	P	00 11 56.4	0.0
	0.2nm,0.5s,baz=66,slow=10,SNR=3.9						
ILAR	**Eielson Array**	**83.53**	**18**	P	P	00 17 49.1	0.0
	0.3nm,0.6s,baz=241,slow=4.8,SNR=5.8						
MKAR	**Makanchi Array**	**93.75**	**317**	P	P	00 18 38.5	-0.1
	0.2nm,0.6s,baz=103,slow=4.6,SNR=2.9						

IDC 12 00:09:20.5±2.2, 8°.07S×121°.19E, h0^{km}, mb3.5/1, mb1 3.7/3, mb1mx3.4/24, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=254.8km s-min=27.5km az=54.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.36**	**134**	P	P	00 13 26.0	+0.1
	0.1nm,0.3s,baz=307,slow=12,SNR=12						
WRA				S	Sn	00 16 28.8	-10
	0.4nm,0.3s,baz=297,slow=21,SNR=9.3						
ASAR	**Alice Springs**	**19.72**	**143**	P	P	00 13 51.0	-0.8
	0.4nm,0.3s,baz=322,slow=11,SNR=19						
ASAR				S	S	00 17 21.2	-14
	0.1nm,0.3s,baz=312,slow=22,SNR=3.2						
MKAR	**Makanchi Array**	**64.65**	**331**	P	P	00 20 00.1	0.0
	0.4nm,0.6s,baz=131,slow=8.4,SNR=5.7						

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*NNC **12** 00:26:38.8±3.8, 43°.85N×82°.78E, h0^{km}, mb2.7, mpv2.6, Error ellipse: s-maj=31.8km s-min=9.4km az=126.0*

*SOME **12** 00:26:42.3, 43°.92N×82°.52E, h15^{km}*

ISC 12 00:26:39.3±2.3, 43°.88N±0°.08×82°.7E±0°.1, h10^{km}, n19, σ1^{s}.20/32, 4C-8D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.79**	**257**	P	**Pb**	**00 27 12.6**	**+0.3**
	4.3nm,0.1s						
KTMS				S	**Sb**	**00 27 34.9**	**+0.1**
	23nm,0.2s						
KTMS	**Ketmen**	**1.79**	**257**	*e*P	**Pb**	**00 27 11.9**	**-0.4**
	4.3nm,0.1s						
KTMS				*e*S	**Sn**	**00 27 33.0**	**-0.2**
	23nm,0.2s						
DJR	**Jarkent**	**2.17**	**283**	Pg	**Pb**	**00 27 19.1**	**+0.3**
	0.4nm,0.1s						
DJR				Lg	Lg	00 27 45.5	
	7.3nm,0.3s						
DJR	**Jarkent**	**2.17**	**283**	*e*P	**Pb**	**00 27 19.1**	**+0.3**
	0.4nm,0.1s						
DJR				*e*S	**Sb**	**00 27 45.5**	**-0.3**
	7.3nm,0.3s						
PDGK	**Podgornoye**	**2.43**	**258**	⇓Pg	**Pg**	**00 27 26.1**	**+0.2**
	2.3nm,1.0s						
PDGK				⇑Sn	**Sb**	**00 27 52.5**	**-0.6**
	1.7nm,0.4s						
PDGK	**Podgornoye**	**2.43**	**258**	Pg	**Pb**	**00 27 23.1**	**0.0**
	0.2nm,0.2s						
PDGK				Lg	Lg	00 27 52.5	
	1.7nm,0.3s						
PDGK	**Podgornoye**	**2.43**	**258**	⇓Pg	**Pg**	**00 27 26.1**	**+0.2**
	2.3nm,1.0s						
PDGK				⇑Sn	**Sb**	**00 27 52.5**	**-0.6**
	1.7nm,0.4s						
KAPS	**Kapalarasan**	**2.79**	**301**	Pg	**Pb**	**00 27 29.8**	**+0.4**
	0.5nm,0.1s						
KAPS				Lg	Lg	00 28 03.8	
	5.5nm,0.3s						
KAPS	**Kapalarasan**	**2.79**	**301**	*e*P	**Pb**	**00 27 29.8**	**+0.4**
	0.5nm,0.1s						
KAPS				*e*S	**Sb**	**00 28 03.8**	**+0.1**
	5.5nm,0.3s						
UZB	**Uzynbulak**	**2.80**	**256**	Pg	**Pb**	**00 27 29.8**	**+0.2**
	1.1nm,0.4s						
UZB				Lg	Lg	00 28 04.1	
	3.5nm,0.1s						
UZB	**Uzynbulak**	**2.80**	**256**	*e*P	**Pb**	**00 27 29.8**	**+0.2**
	1.1nm,0.4s						
UZB				*e*S	**Sb**	**00 28 04.1**	**+0.1**
	3.5nm,0.1s						
MK31	**Makanchi Array**	**2.93**	**354**	⇓Pg	**Pb**	**00 27 31.1**	**-0.5**
	0.3nm,0.3s,baz=170,slow=16,SNR=29						
MK31				⇓Sn	**Sb**	**00 28 06.3**	**-1.2**
	2.2nm,0.4s,baz=160,slow=27						
MK31				Lg	Lg	00 28 17.0	
	baz=162,slow=27						
MK31	**Makanchi Array**	**2.93**	**354**	⇓Pg	**Pb**	**00 27 31.1**	**-0.5**
	0.3nm,0.3s,baz=170,slow=16,SNR=29						
MK31				⇓Sn	**Sb**	**00 28 06.3**	**-1.2**
	2.2nm,0.4s,baz=160,slow=27						
MK31				Lg	Lg	00 28 17.0	
	baz=162,slow=27						
MAKZ	**Makanchi**	**2.97**	**350**	⇑Pg	**Pb**	**00 27 32.5**	**+0.1**
	1.0nm,0.8s						
MAKZ				⇓Sn	**Sn**	**00 28 04.7**	**+2.4**
	1.2nm,1.0s						
MAKZ				Lg	Lg	00 28 16.7	
MAKZ	**Makanchi**	**2.97**	**350**	⇑Pg	**Pb**	**00 27 32.5**	**+0.1**
	1.0nm,0.8s						
MAKZ				⇓Sn	**Sn**	**00 28 04.7**	**+2.4**
	1.2nm,1.0s						
MAKZ				Lg	Lg	00 28 16.7	
MNBS	**Baschi**	**3.14**	**275**	Pg	**Pb**	**00 27 36.1**	**+0.8**
	0.5nm,0.1s						
MNBS				Lg	Lg	00 28 15.1	
	4.3nm,0.2s						
MNBS	**Baschi**	**3.14**	**275**	*e*P	**Pb**	**00 27 36.1**	**+0.8**
	0.5nm,0.1s						
MNBS				*e*S	**Sb**	**00 28 15.1**	**+1.4**
	4.3nm,0.2s						
SATY	**Saty**	**3.26**	**257**	Pg	**Pb**	**00 27 39.3**	**+1.9**
	0.6nm,0.1s						
SATY				Lg	Lg	00 28 20.3	
	4.7nm,0.1s						
SATY	**Saty**	**3.26**	**257**	*e*P	**Pb**	**00 27 39.3**	**+1.9**
	0.6nm,0.1s						
SATY				*e*S	**Sg**	**00 28 20.3**	**-3.8**
	4.7nm,0.1s						

PRU 12 00:27:39.3±0.0, 49°.78N×18°.49E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.23**	**285**	*e*PG	Pg	00 27 43.8	+0.1
OKC				*e*SG	Sg	00 27 47.6	+0.9
	comp=Z,6.0nm,0.4s						
DPC	**Dobruska-Polom**	**1.51**	**293**	*e*PG	Pn	00 28 07.1	-0.5
DPC				*e*SG	Sg	00 28 27.3	-0.5
UPC	**Upice**	**1.75**	**295**	*e*SG	Sb	00 28 34.7	-0.2

MEX 12 00:36:10.5±0.9, 19°.39N×104°.76W, h40^{km}, MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
R15V		**0.76**	**106**	*e*P	Pn	00 36 23.1	-1.7
R15V				*i* S	Sn	00 36 32.6	-2.6
EZ5V		**1.09**	**85**	*i* P	Pn	00 36 28.1	-1.5
EZ5V				*i* S	Sn	00 36 41.0	-2.7

MEX 12 00:47:58.9±0.6, 19°.18N×104°.77W, h35^{km}±20^{km}, MD3.8, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**0.41**	**321**	*e*P	Pn	00 48 06.8	-1.6
CJM				*i* S	Sn	00 48 12.7	-2.2
R15V		**0.74**	**90**	*e*P	Pn	00 48 10.6	-2.3
R15V				*e*S	Sn	00 48 19.8	-3.2
EZ5V		**1.14**	**75**	*e*P	Pn	00 48 17.0	-1.7

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*SOME **12** 01:01:52.9, 42°.53N×79°.57E, h15^{km}*

*NNC **12** 01:01:52.7±0.8, 42°.55N×79°.58E, h0^{km}, mb3.4, mpv3.2, Error ellipse: s-maj=5.0km s-min=2.7km az=138.0*

KRNET 12 01:01:52.6±0.1, 42°.53N×79°.64E, h10^{km}, mb3.2, 32C-13D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**0.76**	**324**	P	Pg	01 02 07.2	-0.2
	8.6nm,0.2s						
UZB				S	Sg	01 02 17.5	+0.1
	33nm,0.2s						
UZB	**Uzynbulak**	**0.76**	**324**	⇓*e*P	Pg	01 02 07.2	-0.2
	baz=24						
UZB				⇓*e*S	Sg	01 02 17.5	+0.1
	baz=24						
UZB	**Uzynbulak**	**0.76**	**324**	⇓*e*P	Pg	01 02 07.2	-0.2
	8.6nm,0.2s						
UZB				*e*S	Sg	01 02 17.5	+0.1
	33nm,0.2s						
PDGK	**Podgornoye**	**0.80**	**352**	P	Pg	01 02 07.8	-0.3
	10nm,0.2s						
PDGK				S	Sg	01 02 18.8	+0.2
	10nm,0.2s						
PDGK	**Podgornoye**	**0.80**	**352**	⇑P	Pg	01 02 07.8	-0.4
	5.5nm,0.3s						
PDGK				⇓S	Sg	01 02 18.8	+0.2
	7.6nm,0.4s						
PDGK	**Podgornoye**	**0.80**	**352**	⇓*i*P	Pg	01 02 07.9	-0.2
	baz=52						
PDGK				⇓*i*S	Sg	01 02 19.0	+0.4
	baz=52						
PRZ	**Przheval'sk**	**0.92**	**267**	⇑*i*P	Pg	01 02 10.0	-0.3
	baz=67						
PRZ				⇑*i*S	Sg	01 02 22.3	+0.1
	baz=67						
SATY	**Saty**	**1.05**	**301**	P	Pg	01 02 11.9	-0.8
	11nm,0.1s						
SATY				S	Sg	01 02 25.8	-0.6
	36nm,0.2s						
SATY	**Saty**	**1.05**	**301**	*e*P	Pg	01 02 11.9	-0.8
	11nm,0.1s						
SATY				*e*S	Sg	01 02 25.8	-0.6
	36nm,0.2s						
KTMS	**Ketmen**	**1.05**	**30**	P	Pg	01 02 12.7	-0.2
	7.7nm,0.1s						
KTMS				S	Sb	01 02 27.4	+0.5
	7.8nm,0.1s						
KTMS	**Ketmen**	**1.05**	**30**	⇑*e*P	Pg	01 02 12.7	-0.2
	baz=29						
KTMS				⇑*e*S	Sb	01 02 26.9	0.0
	baz=29						
KTMS	**Ketmen**	**1.05**	**30**	⇑*e*P	Pg	01 02 12.7	-0.2
	7.7nm,0.1s						
KTMS				*e*S	Sb	01 02 26.9	0.0
	7.8nm,0.1s						
KURS	**Kuram**	**1.44**	**312**	P	Pn	01 02 19.0	+0.2
	1.5nm,0.2s						
KURS				S	Sb	01 02 38.0	0.0
	6.5nm,0.2s						
KURS	**Kuram**	**1.44**	**312**	*e*P	Pn	01 02 19.0	+0.2
	baz=12						
KURS				*e*S	Sb	01 02 37.9	-0.1
	baz=12						
KURS	**Kuram**	**1.44**	**312**	*e*P	Pn	01 02 19.0	+0.2
	1.5nm,0.2s						
KURS				*e*S	Sb	01 02 38.0	0.0
	6.5nm,0.2s						
MNBS	**Baschi**	**1.79**	**330**	P	Pb	01 02 25.1	-0.5
	5.7nm,0.2s						
MNBS				S	Sb	01 02 48.5	+0.4
	89nm,0.3s						
MNBS	**Baschi**	**1.79**	**330**	⇑*e*P	Pb	01 02 25.6	0.0
	baz=30						
MNBS				⇑*e*S	Sb	01 02 48.6	+0.5
	baz=30						
MNBS	**Baschi**	**1.79**	**330**	⇑*e*P	Pb	01 02 25.6	0.0
	5.7nm,0.2s						
MNBS				*e*S	Sb	01 02 48.5	+0.4
	89nm,0.3s						
DJR	**Jarkent**	**1.80**	**3**	P	Pb	01 02 25.6	-0.1
	1.7nm,0.3s						
DJR				S	Sb	01 02 49.3	+0.8
	5.8nm,0.2s						

DJR	Jarkent	1.80	3	eP	Pb	01 02 25.6	-0.1
	1.7nm,0.3s						
DJR				eS	Sb	01 02 49.2	+0.8
	5.8nm,0.2s						
KDJ	Kajisay	1.87	258	⇓iP	Pb	01 02 27.0	+0.1
	baz=58						
KDJ				⇓iS	Sg	01 02 51.5	-1.1
	baz=58						
KOTS	Kotyrbulak	1.98	292	P	Pb	01 02 28.4	-0.5
	18nm,0.3s						
KOTS				S	Sb	01 02 54.0	+0.3
	43nm,0.3s						
KOTS	Kotyrbulak	1.98	292	eP	Pb	01 02 28.4	-0.5
	baz=91						
KOTS				eS	Sb	01 02 54.0	+0.3
	baz=91						
KOTS	Kotyrbulak	1.98	292	eP	Pb	01 02 28.4	-0.5
	18nm,0.3s						
KOTS				eS	Sb	01 02 54.0	+0.3
	43nm,0.3s						
MDOK	Medeo	2.01	289	⇓Pg	Pb	01 02 28.6	-0.7
	3.5nm,0.3s						
MDOK				Lg	Lg	01 02 54.9	
	13nm,0.5s						
MDOK	Medeo	2.01	289	Pg	Pb	01 02 28.4	-0.9
	9.7nm,0.2s						
MDOK				Lg	Lg	01 02 54.0	
	14nm,0.5s						
MDOK	Medeo	2.01	289	eP	Pb	01 02 28.4	-0.9
	baz=89						
MDOK				eS	Sb	01 02 54.0	-0.3
	baz=89						
MDOK	Medeo	2.01	289	eP	Pb	01 02 28.4	-0.9
	9.7nm,0.2s						
MDOK				eS	Sb	01 02 54.0	-0.3
	14nm,0.5s						
TNSS	Tian-Shan	2.04	285	Pg	Pb	01 02 29.1	-1.0
	12nm,0.3s						
TNSS				Lg	Lg	01 02 55.2	
	12nm,0.2s						
TNSS	Tian-Shan	2.04	285	eP	Pb	01 02 29.1	-0.9
	baz=85						
TNSS				eS	Sb	01 02 55.2	-0.5
	baz=85						
TNSS	Tian-Shan	2.04	285	eP	Pb	01 02 29.1	-1.0
	12nm,0.3s						
TNSS				eS	Sb	01 02 55.2	-0.5
	12nm,0.2s						
ARXS	Arharly	2.14	322	Pg	Pb	01 02 31.2	-0.3
	2.0nm,0.2s						
ARXS				Lg	Lg	01 02 58.6	
	21nm,0.2s						
ARXS	Arharly	2.14	322	eP	Pb	01 02 31.1	-0.3
	2.0nm,0.2s						
ARXS				eS	Sb	01 02 58.6	+0.6
	21nm,0.2s						
IZV	Izvestkoviy	2.28	284	Pg	Pb	01 02 33.4	-0.6
	10nm,0.1s						
IZV				Lg	Lg	01 03 02.9	
	67nm,0.3s						
IZV	Izvestkoviy	2.28	284	eP	Pb	01 02 33.4	-0.6
	baz=84						
IZV				eS	Sb	01 03 03.0	+0.7
	baz=84						
IZV	Izvestkoviy	2.28	284	eP	Pb	01 02 33.4	-0.6
	10nm,0.1s						
IZV				eS	Sb	01 03 02.9	+0.6
	67nm,0.3s						
CHKK	Chushkaly	2.35	305	Pg	Pb	01 02 34.9	0.0
	1.7nm,0.1s						
CHKK				Lg	Lg	01 03 05.1	
	35nm,0.3s						
CHKK	Chushkaly	2.35	305	eP	Pb	01 02 34.9	-0.1
	baz=5.0						
CHKK				eS	Sb	01 03 05.0	+1.0
	baz=5.0						
CHKK	Chushkaly	2.35	305	eP	Pb	01 02 34.9	0.0
	1.7nm,0.1s						
CHKK				eS	Sb	01 03 05.1	+1.1
	35nm,0.3s						
MTBS	Maitube	2.44	285	Pg	Pb	01 02 36.2	-0.3
	9.3nm,0.2s						
MTBS				Lg	Lg	01 03 07.4	
	12nm,0.3s						
MTBS	Maitube	2.44	285	eP	Pb	01 02 36.2	-0.3
	baz=85						
MTBS				eS	Sb	01 03 07.4	+0.8
	baz=85						
MTBS	Maitube	2.44	285	eP	Pb	01 02 36.2	-0.3
	9.3nm,0.2s						
MTBS				eS	Sb	01 03 07.5	+0.8
	12nm,0.3s						
KTBS	Karatobe	2.46	300	Pg	Pb	01 02 36.4	-0.6
	3.2nm,0.1s						
KTBS				Lg	Lg	01 03 07.8	
	30nm,0.5s						
KTBS	Karatobe	2.46	300	eP	Pb	01 02 36.5	-0.5
	baz=99						
KTBS				eS	Sb	01 03 07.9	+0.5
	baz=99						
KTBS	Karatobe	2.46	300	eP	Pb	01 02 36.5	-0.6
	3.2nm,0.1s						
KTBS				eS	Sb	01 03 07.8	+0.4
	30nm,0.5s						
ULHL	Ulahol	2.53	265	⇑iP	Pb	01 02 36.6	-1.6
	baz=65						
ULHL				⇑iS	Sb	01 03 08.9	-0.6
	baz=65						
BOOM	Boomskoye usch	2.73	270	⇑iP	Pb	01 02 39.5	-2.2
	baz=70						
BOOM				⇑iS	Sb	01 03 12.9	-2.4
	baz=70						
KST	Kastek	2.75	282	Pg	Pb	01 02 41.6	-0.4
	6.4nm,0.2s						
KST				Lg	Lg	01 03 16.6	
	12nm,0.5s						
KST	Kastek	2.75	282	eP	Pb	01 02 41.6	-0.4
	baz=82						
KST				eS	Sb	01 03 16.6	+0.8
	baz=82						
KST	Kastek	2.75	282	eP	Pb	01 02 41.6	-0.4
	6.4nm,0.2s						
KST				eS	Sb	01 03 16.6	+0.8
	12nm,0.5s						
KAPS	Kapalarasan	2.76	356	Pg	Pb	01 02 42.0	-0.1
	1.9nm,0.3s						
KAPS				Lg	Lg	01 03 17.3	
	6.2nm,0.1s						
KAPS	Kapalarasan	2.76	356	eP	Pb	01 02 42.0	-0.1
	1.9nm,0.3s						
KAPS				eS	Sb	01 03 17.3	+1.4
	6.2nm,0.1s						
KUU	Kurty	2.77	301	Pg	Pb	01 02 41.8	-0.3
	2.4nm,0.1s						
KUU				Lg	Lg	01 03 17.1	
	23nm,0.4s						
KUU	Kurty	2.77	301	eP	Pb	01 02 41.8	-0.4
	baz=1.0						
KUU				eS	Sb	01 03 17.0	+0.8
	baz=1.0						
KUU	Kurty	2.77	301	eP	Pb	01 02 41.8	-0.3
	2.4nm,0.1s						
KUU				eS	Sb	01 03 17.1	+0.9
	23nm,0.4s						
NRN	Naryn	2.93	249	⇑iP	Pb	01 02 42.5	-2.5
	baz=49						
NRN				⇑iS	Sb	01 03 19.1	-1.9
	baz=49						
DGS	Degeres	2.93	285	Pg	Pb	01 02 44.1	-0.9
	4.9nm,0.4s						
DGS				Lg	Lg	01 03 20.7	
	29nm,0.5s						
DGS	Degeres	2.93	285	eP	Pb	01 02 44.1	-0.8
	baz=85						
DGS				eS	Sb	01 03 20.8	0.0
	baz=85						
DGS	Degeres	2.93	285	eP	Pb	01 02 44.1	-0.9
	4.9nm,0.4s						
DGS				eS	Sb	01 03 20.7	-0.1
	29nm,0.5s						
TKM2	Tokmak 2	3.00	279	⇑Pg	Pb	01 02 44.7	-1.5
	1.3nm,0.5s						
TKM2				⇑Lg	Lg	01 03 25.4	
	5.8nm,0.5s						
TKM2	Tokmak 2	3.00	279	⇑iP	Pn	01 02 43.3	+2.9
	baz=79						
TKM2				⇑iS	Sb	01 03 20.2	-2.9
	baz=79						
KZA	Kyzart	3.29	264	⇑iP	Pn	01 02 47.4	+2.9
	baz=64						
KZA				⇑iS	Sn	01 03 27.3	+3.5
	baz=64						
KBK	Karagaybulak	3.46	274	⇑iP	Pn	01 02 49.8	+3.1
	baz=74						
KBK				⇑iS	Sn	01 03 31.1	+3.2
	baz=74						
AAK	Ala-Archa	3.80	273	⇓Pg	Pb	01 03 00.6	+0.8
	0.6nm,0.2s						
AAK				⇑Lg	Lg	01 03 52.3	
	3.0nm,0.8s						
UCH	Uchtor	3.81	267	⇑iP	Pn	01 02 54.6	+2.9
	baz=67						
UCH				⇑iS	Sn	01 03 39.9	+3.1
	baz=67						
USP	Ospenovka	3.85	283	⇓iP	Pn	01 02 54.7	+2.8
	baz=83						
USP				⇓iS	Sn	01 03 40.2	+3.1
	baz=83						
ARLS	Aral	4.00	262	⇑iP	Pn	01 02 57.1	+2.9
	baz=62						
ARLS				⇑iS	Sn	01 03 43.4	+2.2
	baz=62						
MAKZ	Makanchi	4.59	21	⇑Pn	Pn	01 03 04.4	+2.4
	1.1nm,0.8s						
MAKZ				⇑Lg	Lg	01 04 18.9	
	1.9nm,1.4s						
MK31	Makanchi Array	4.66	23	⇑Pn	Pn	01 03 05.1	+2.1
	0.4nm,0.7s,baz=208,slow=13						
MK31				⇑Sn	Sn	01 04 00.1	+2.9
	0.4nm,0.5s						
MK31				⇓Lg	Lg	01 04 20.6	
	0.4nm,0.5s,baz=208,slow=29						

MOS ***12*** *01:19:47.8±0.8, 51°.89N×158°.83E, h52^{km}, mb4.3/1, Error ellipse: s-maj=15.0km s-min=4.8km az=86.3*

KRSC ***12*** *01:19:47.6±0.9, 51°.96N×158°.75E, h54^{km}±10^{km}, ML4.2, FELT [II] at lighthouse Krugliy.*

ISCJB ***12*** *01:19:48.7±0.6, 51°.96N±0°.04×158°.74E±0°.08, h59^{km}±6^{km}, mb3.5/7, Error ellipse: s-maj=10.4km s-min=3.9km az=37.0*

IDC ***12*** *01:19:52.9±2.1, 52°.20N×158°.39E, h92^{km}±14^{km}, mb3.2/7, mb1 3.6/8, mb1mx3.3/41, mbtmp3.7/8, Error ellipse: s-maj=32.6km s-min=17.4km az=144.0*

ISC 12 01:19:49.0±0.9**, 51°.96N**±0°.04×**158°.75E**±0°.05**, h54**^{km}±7^{km}**, n68,** σ**1^{s}33**/90**, mb3.5**/7**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.44	251	i P	Pn	01 20 00.0	+0.1
KDTR				eS	Sn	01 20 07.7	+0.1
KDTR	Khodutka, Kamc	0.44	251	PN	Pn	01 20 00.0	+0.1
KDTR				S	Sn	01 20 07.7	+0.1
RUS	Russkaya	0.50	343	eP	Pn	01 20 00.3	-0.2
RUS				eS	Sn	01 20 08.3	-0.4
RUS	Russkaya	0.50	343	PN	Pn	01 20 00.3	-0.2
RUS				S	Sn	01 20 08.3	-0.4
MTVR	Mutnovka	0.63	327	eP	Pn	01 20 02.4	+0.2
MTVR				eS	Sn	01 20 11.7	-0.1
MTVR	Mutnovka	0.63	327	PN	Pn	01 20 02.4	+0.2
MTVR				S	Sn	01 20 11.7	-0.1
GRL	Gorelyy	0.73	325	eP	Pn	01 20 04.0	+0.6
GRL				eS	Sn	01 20 14.7	+0.9
GRL	Gorelyy	0.73	325	PN	Pn	01 20 04.0	+0.6
GRL				S	Sn	01 20 14.7	+0.9
KRMR	Karymshinskiy	0.95	337	eP	Pn	01 20 06.4	+0.2
KRMR				eS	Sn	01 20 18.6	-0.3
KRMR	Karymshinskiy	0.95	337	PN	Pn	01 20 06.4	+0.2
KRMR				S	Sn	01 20 18.6	-0.3
PET	Petropavlovsk	1.07	357	i P	Pn	01 20 07.7	-0.1
PET	Petropavlovsk	1.07	357	ePN	Pn	01 20 07.4	-0.4
PET				eS	Sn	01 20 19.7	-1.9
PET				pmax	pmax		
	comp=Z,102nm,0.3s						
PET				smax	smax		
	comp=E,525nm,0.6s						
PET				smax	smax		
	comp=N,611nm,0.4s						
DALK	Dalny	1.08	0	eP	Pn	01 20 07.7	-0.1
DALK				eS	Sn	01 20 21.3	-0.5
DALK	Dalny	1.08	0	PN	Pn	01 20 07.7	-0.1
DALK				S	Sn	01 20 21.3	-0.5
UGLR	Uglovaya	1.25	2	eP	Pn	01 20 10.3	-0.1
UGLR	Uglovaya	1.25	2	PN	Pn	01 20 10.3	-0.1
NLC	Nalytchevo	1.27	16	eP	Pn	01 20 09.1	-1.3
NLC				eS	Sn	01 20 24.0	-2.4
NLC	Nalytchevo	1.27	16	PN	Pn	01 20 09.1	-1.3
NLC				S	Sn	01 20 24.0	-2.4
PAU	Pauzhetka	1.30	249	eP	Pn	01 20 11.2	+0.3
PAU				eS	Sn	01 20 27.7	+0.5
PAU	Pauzhetka	1.30	249	PN	Pn	01 20 11.2	+0.3
PAU				S	Sn	01 20 27.7	+0.5
SMAR	Somma	1.31	1	eP	Pn	01 20 11.8	+0.6
SMAR	Somma	1.31	1	PN	Pn	01 20 11.8	+0.6
AVH	Avacha	1.31	360	eP	Pn	01 20 11.4	+0.3
AVH	Avacha	1.31	360	PN	Pn	01 20 11.4	+0.3
PETK	Petropavlovsk-	1.32	331	P	Pn	01 20 11.5	+0.4
	comp=N,8.5nm,0.3s,baz=118,slow=19,SNR=191						
PETK				S	Sn	01 20 28.4	+0.7
	comp=N,18nm,0.3s,baz=153,slow=16,SNR=13						
KOK	Koryaka	1.34	357	eP	Pn	01 20 12.0	+0.5
KOK				eS	Sn	01 20 28.8	+0.5
KOK	Koryaka	1.34	357	PN	Pn	01 20 12.0	+0.5
KOK				S	Sn	01 20 28.8	+0.5
APC	Apacha	1.38	315	eP	Pn	01 20 12.1	+0.2
APC				eS	Sn	01 20 29.4	+0.4
APC	Apacha	1.38	315	PN	Pn	01 20 12.1	+0.2
APC				S	Sn	01 20 29.4	+0.4
SPN	Mys Shipunski	1.38	34	eP	Pn	01 20 12.1	+0.1
SPN				eS	Sn	01 20 29.4	+0.3
SPN	Mys Shipunski	1.38	34	PN	Pn	01 20 12.1	+0.1
SPN				S	Sn	01 20 29.4	+0.3
KRX	Arik	1.41	358	eP	Pn	01 20 12.5	+0.1
KRX	Arik	1.41	358	PN	Pn	01 20 12.5	+0.1
GNL	Ganaly	1.81	345	eP	Pn	01 20 18.5	+0.6
GNL	Ganaly	1.81	345	PN	Pn	01 20 18.5	+0.6
SKR	Severo-Kuril’s	2.09	233	eP	Pn	01 20 21.7	+0.2
SKR				eS	Sn	01 20 46.1	-0.2
SKR	Severo-Kuril’s	2.09	233	ePN	Pn	01 20 22.0	+0.5
SKR				eS	Sn	01 20 45.5	-0.8
SKR				pmax	pmax		
	comp=Z,155nm,0.4s						
SKR				smax	smax		
	comp=N,474nm,0.3s						
SKR				smax	smax		
	comp=E,435nm,0.2s						
KII	Karymskiy	2.12	11	eP	Pn	01 20 22.8	+0.6
KII	Karymskiy	2.12	11	PN	Pn	01 20 22.8	+0.6
ALID	Alaid	2.28	243	eP	Pn	01 20 25.1	+0.7
ALID				eS	Sn	01 20 51.6	+0.3
KZV	Kizimen	3.29	16	eP	Pn	01 20 40.3	+2.1
KZV	Kizimen	3.29	16	PN	Pn	01 20 40.3	+2.1
TUMD	Tumrok D	3.40	16	eP	Pn	01 20 41.9	+2.4
TUMD				eS	Sn	01 21 20.7	+2.2
TUMR	Tumrok	3.43	13	eP	Pn	01 20 43.0	+2.9
TUMR	Tumrok	3.43	13	PN	Pn	01 20 43.0	+2.9
BDR	Baidarnaya	4.84	16	eP	Pn	01 21 02.4	+3.1
BDR	Baidarnaya	4.84	16	PN	Pn	01 21 02.4	+3.1
KBTR	Krutoberegovo	4.89	28	eP	Pn	01 21 01.2	+1.4
KBTR	Krutoberegovo	4.89	28	PN	Pn	01 21 01.2	+1.4
SMKR	Semkarok	4.90	18	eP	Pn	01 21 03.1	+3.0
SMKR	Semkarok	4.90	18	PN	Pn	01 21 03.1	+3.0
SRKR	Sorokina	4.92	16	eP	Pn	01 21 03.3	+3.0
SRKR	Sorokina	4.92	16	PN	Pn	01 21 03.3	+3.0
ASAJ	Asahikawa	13.34	240	P	Pn	01 22 57.5	+2.0
	comp=E,0.7nm,0.3s,baz=59,slow=11,SNR=8.1						
MJAR	Matsushiro Arr	21.20	231	P	P	01 24 31.4	+1.4
	comp=E,1.7nm,0.3s,baz=18,slow=11,SNR=6.7						
ILAR	Eielson Array	30.20	44	P	P	01 25 52.9	-1.1
	comp=E,0.7nm,0.7s,baz=258,slow=7.1,SNR=11						
H11N2	WAKE ISLAND Hy	32.79	166	T	T	02 01 18.2	
	baz=351,slow=76,SNR=105						
H11N3	WAKE ISLAND Hy	32.80	166	T	T	02 01 23.0	
	baz=351,slow=76,SNR=70						
H11N1	WAKE ISLAND Hy	32.80	166	T	T	02 01 25.5	
	baz=351,slow=76,SNR=97						
H11S1	WAKE ISLAND Hy	33.96	166	T	T	02 02 50.8	
	baz=351,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	33.97	166	T	T	02 02 58.1	
	baz=351,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	33.98	166	T	T	02 02 51.4	
	baz=351,slow=76,SNR=10.0						
INK	Inuvik	35.27	37	P	P	01 26 38.1	+0.1
	comp=E,1.4nm,1.1s,baz=291,slow=7.9,SNR=3.8						
YKA	Yellowknife Ar	44.56	41	P	P	01 27 55.0	0.0
	comp=E,0.3nm,0.7s,baz=302,slow=7.7,SNR=7.1						
MKAR	Makanchi Array	47.91	296	P	P	01 28 19.0	-2.6
MKAR	Makanchi Array	47.91	296	P	P	01 28 19.0	-2.6
	comp=E,0.1nm,0.5s,baz=60,slow=7.3,SNR=2.9						
PDAR	Pinedale Array	58.80	59	P	P	01 29 43.0	+1.2
	comp=E,0.5nm,0.6s,baz=346,slow=3.1,SNR=5.5						
NOA	NORSAR Array B	64.40	343	P	P	01 30 16.6	-2.4
	comp=E,0.3nm,0.6s,baz=15,slow=5.2,SNR=2.7						

ISCJB ***12*** *01:23:53.3±0.5, 18°.24S±0°.02×177°.96W±0°.02, h506^{km}±5^{km}, mb5.3/440, Error ellipse: s-maj=3.6km s-min=2.5km az=152.1*

IDC ***12*** *01:23:53.8±0.9, 18°.16S×177°.84W, h502^{km}±8^{km}, mb5.0/29, mb1 5.1/31, mb1mx5.0/32, mbtmp5.8/31, Error ellipse: s-maj=8.7km s-min=8.0km az=176.0*

BJI ***12*** *01:23:54.7, 17°.84S×177°.38W, h530^{km}, mB5.3/41, mb5.3/66*

NEIC ***12*** *01:23:55.2±0.1, 18°.20S×177°.96W, mb5.1/269, Error ellipse: s-maj=3.8km s-min=2.3km az=142.0*

MOS ***12*** *01:23:56.5±1.1, 17°.99S×178°.03W, h533^{km}, mb5.3/40, Error ellipse: s-maj=7.7km s-min=6.8km az=60.8*

WEL ***12*** *01:23:56.9±1.3, 19°S±12°×17°6W±5°9, h598^{km}±12^{km}*

GCMT ***12*** *01:23:58.2±0.2, 18°.05S±0°.02×177°.85W±0°.02, h535^{km}±1^{km}, MW5.6/110, Moment Tensor Solution. s110,c196; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.71±.04; $M_{\theta\theta}$2.70±.07; $M_{\phi\phi}$-0.99±.07; $M_{r\theta}$-0.46±.07; $M_{\theta\phi}$0.78±.06; $M_{\phi r}$-2.01±.07; Best double couple: $M_0$3.21900×10^{17} NP1:ϕ_s44.00000°, δ67.00000°, λ-132.00000°. NP2:ϕ_s291.00000°, δ46.00000°, λ-33.00000°. Principal axes: T 3.0410, Plg12.0000°, Azm163.0000°; N 0.3540, Plg38.0000°, Azm63.0000°; P -3.3960, Plg50.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 12 01:23:55.4±0.2**, 18°.22S**±0°.03×**177°.85W**±0°.03**, h525**^{km}±2^{km}**, h526**^{km}**:pP-P, n1530,** σ**1^{s}24**/1718**, mb5.3**/440**, 69C-57D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.94	276	eP	P	01 25 16.7	+1.5
MSVF				eS	S	01 26 19.8	-0.3
MSVF	Nonsavu	3.94	276	c iP	P	01 25 16.5	+1.3
NIUE	Niue	7.55	98	eP	P	01 25 47.9	-0.1
NIUE				eS	S	01 27 22.2	+2.0
FUNA	Funafuti	10.06	343	eP	P	01 26 10.0	-3.8
RIZ	Raoul Island	10.97	180	P	P	01 26 21.1	-1.9
RIZ				S	S	01 28 27.8	+3.2
RAO	Raoul Island	10.98	180	eP	P	01 26 20.9	-2.2
RAO	Raoul Island	10.98	180	P	P	01 26 22.4	-0.7
	164nm,0.3s,baz=281,slow=21,SNR=9.0						
RAO				S	S	01 28 24.8	+0.1
	14nm,0.3s,baz=90,slow=20,SNR=3.2						
GLKZ	Green Lake	10.99	180	P	P	01 26 22.1	-1.1
GLKZ				S	S	01 28 24.3	-0.5
MARNC	Mare, Loyalty	13.68	254	eP	P	01 26 49.8	-1.6
MARNC				eS	S	01 29 13.7	-2.9
PINNC	Pines Island,	14.46	250	eP	P	01 26 58.3	-1.4
PINNC				eS	S	01 29 32.4	+0.7
OUENC	Ouen Island, N	14.96	251	eP	P	01 27 03.3	-1.6
DZM	Mont Dzumac	15.24	253	eP	P	01 27 06.3	-1.6
	554nm,0.8s						
DZM	Mont Dzumac	15.24	253	eP	P	01 27 06.4	-1.6
	291nm,0.9s						
DZM				eS	S	01 29 47.2	+0.6
DZM	Mont Dzumac	15.24	253	P	P	01 27 06.3	-1.6
	13nm,0.3s,baz=90,slow=19,SNR=90						
DZM				S	S	01 29 47.2	+0.6
	0.6nm,0.3s,baz=102,slow=20,SNR=2.8						
KNTN	Kanton	16.49	22	eP	P	01 27 18.6	-1.9
	2µm,1.3s						
RAR	Rarotonga	17.27	103	eP	P	01 27 29.1	+1.1
	97nm,1.0s						
RAR	Rarotonga	17.27	103	eP	P	01 27 29.1	+1.1
RAR				pmax	pmax		
	comp=Z,97nm,1.0s						
RAR	Rarotonga	17.27	103	P	P	01 27 27.7	-0.3
	comp=Z,2.6nm,0.3s,baz=243,slow=9.5,SNR=12						
OUZ	Omahuta	18.56	203	eP	P	01 27 42.0	+2.6
	comp=Z,871nm,0.9s						
OUZ	Omahuta	18.56	203	P	P	01 27 41.9	+2.4
GRZ	Great Barrier	18.91	197	P	P	01 27 44.2	+1.5
WCZ	Waipu Caves	18.95	200	P	P	01 27 45.7	+2.6
KUZ	Kuaotunu	19.30	196	P	P	01 27 47.9	+1.7
MXZ	Matakaoa Point	19.56	189	eP	P	01 27 47.5	-1.1
	comp=Z,196nm,0.6s						
MXZ	Matakaoa Point	19.56	189	P	P	01 27 47.3	-1.3
MYRZ	Mayor Island	19.68	194	P	P	01 27 51.9	+2.1
ETAZ	East Tamaki Re	19.71	197	P	P	01 27 52.4	+2.4
MKAZ	Moumakai	19.79	197	P	P	01 27 52.5	+1.8
WMGZ	Waiomatatini S	19.80	189	P	P	01 27 50.4	-0.4
WMGZ				S	S	01 30 58.2	-3.7
HAZ	Te Kaha	19.83	190	P	P	01 27 49.4	-1.7
HAZ				S	S	01 30 56.7	-5.8
PKGZ	Pakihiroa	19.91	190	P	P	01 27 51.3	-0.6
PKGZ				S	S	01 31 02.2	-1.7
RUGZ	Raukumara Rang	20.06	190	P	P	01 27 51.0	-2.2
RUGZ				S	S	01 31 01.4	-4.9
PUZ	Puketiti	20.07	189	P	P	01 27 52.4	-0.8
PUZ				S	S	01 31 03.9	-2.4
WHRZ	Whale Island	20.08	192	P	P	01 27 53.7	+0.4
WHRZ				S	S	01 31 03.9	-2.6
TGRZ	Tauranga	20.11	194	P	P	01 27 55.4	+1.9
OPRZ	Ohinepanea	20.15	193	P	P	01 27 53.5	-0.5
TWGZ	Tauwhareparae	20.21	190	P	P	01 27 53.5	-1.1
TWGZ				S	S	01 31 03.9	-4.8
MARZ	Manawahe	20.27	193	P	P	01 27 55.6	+0.6
TOZ	Tahuroa Road	20.29	195	P	P	01 27 56.9	+1.7
EDRZ	Edgecumbe	20.37	192	P	P	01 27 55.2	-0.8
MWZ	Matawai	20.44	190	P	P	01 27 54.9	-1.8
MWZ				S	S	01 31 08.4	-3.9
URZ	Urewera	20.44	191	eP	P	01 27 54.0	-2.6
	comp=Z,509nm,0.7s						
URZ				eS	S	01 31 06.0	-6.2
URZ	Urewera	20.44	191	P	P	01 27 53.9	-2.6
	comp=Z,416nm,0.5s,baz=19,slow=5.4,SNR=165						
URZ				S	S	01 31 06.0	-6.2
	comp=Z,61nm,0.8s,baz=231,slow=21,SNR=5.6						
URZ	Urewera	20.44	191	P	P	01 27 54.3	-2.3
URZ				S	S	01 31 07.5	-4.7
TKGZ	Te Karaka	20.49	190	P	P	01 27 56.7	-0.3
TARZ	Mount Tarawera	20.54	193	P	P	01 27 57.1	-0.6
RAGZ	Rawiri	20.62	191	P	P	01 27 57.2	-1.1
MUGZ	Murupara	20.72	192	P	P	01 27 56.5	-2.6
RTZ	Ruatahuna	20.81	191	P	P	01 27 58.4	-1.6
SNGZ	Shannon Statio	20.91	191	P	P	01 27 54.5	-6.4
WHTZ	Whakaora	21.07	194	P	P	01 28 04.8	+2.4
HIZ	Hauiti	21.20	196	eP	P	01 28 05.4	+1.9
	comp=Z,512nm,1.2s						
HIZ	Hauiti	21.20	196	P	P	01 28 05.0	+1.6
RATZ	Rangitukua	21.31	194	P	P	01 28 04.1	-0.4
KATZ	Kakaramea	21.43	194	P	P	01 28 07.2	+1.5
ARHZ	Aropaoanui	21.44	191	P	P	01 28 05.6	0.0
BKZ	Black Stump Fm	21.44	192	eP	P	01 28 03.7	-2.0
	comp=Z,91nm,0.8s						
TARA	Tarawa	21.47	334	eP	P	01 28 05.0	-1.2
	comp=Z,1µm,1.4s						
KRVZ	Karewarewa	21.55	194	P	P	01 28 07.0	+0.2
TWVZ	Taurewa	21.58	194	P	P	01 28 06.3	-0.7
WTVZ	West Tongariro	21.59	194	P	P	01 28 05.5	-1.6
NGZ	Ngauruhoe	21.64	194	P	P	01 28 06.6	-1.0
MCHZ	McNeill Hill	21.67	192	P	P	01 28 06.8	-0.9
COVZ	Chateau Observ	21.68	194	P	P	01 28 06.7	-1.2
TUVZ	Tukino	21.72	194	P	P	01 28 06.8	-1.5
FWVZ	Far West T-bar	21.73	194	P	P	01 28 07.2	-1.3
DRZ	Dome Shelter	21.74	194	P	P	01 28 07.8	-0.9
WHVZ	Whangaehu Hut	21.75	194	P	P	01 28 07.4	-1.3
TRVZ	Turoa	21.77	194	P	P	01 28 07.1	-1.8
VRZ	Vera Road	21.80	196	P	P	01 28 10.4	+1.6
CKHZ	Cape Kidnapper	21.81	191	P	P	01 28 08.0	-0.9
PKVZ	Pokaka	21.81	194	P	P	01 28 08.0	-1.1
MOVZ	Moawhango	21.83	193	P	P	01 28 07.3	-2.0
BHHZ	Black Hill Sta	21.84	193	P	P	01 28 06.7	-2.6
MHEZ	Mangahewa	21.87	197	P	P	01 28 13.2	+3.8

MTVZ	Mangateitei	21.87	194	P	P	01 28 08.4	-1.1
KAHZ	Kahuranaki	21.98	191	P	P	01 28 09.6	-0.9
PKE	Pukeiti	22.07	197	P	P	01 28 14.4	+3.1
KHEZ	Kahui Hut	22.15	197	P	P	01 28 14.6	+2.4
NBEZ	Newall Road No	22.17	197	P	P	01 28 15.2	+3.0
PXZ	Pawanui	22.21	191	P	P	01 28 11.7	-0.8
NMEZ	Namu Road	22.30	197	P	P	01 28 16.1	+2.8
WPHZ	Waipukurau	22.32	192	P	P	01 28 13.9	+0.4
WAZ	Wanganui	22.34	195	P	P	01 28 13.0	-0.7
PRHZ	Porangahau	22.48	191	P	P	01 28 13.7	-1.3
DVHZ	Dannevirke	22.60	192	P	P	01 28 14.7	-1.4
OHWZ	Ohakea	22.69	194	P	P	01 28 12.2	-4.6
ANWZ	Angora Road	22.70	191	P	P	01 28 16.0	-0.9
POWZ	Post Office Ro	22.77	193	P	P	01 28 17.1	-0.4
BFZ	Birch Farm	22.95	192	*e*P	P	01 28 17.6	-1.6
	comp=Z,196nm,0.8s						
MRZ	Mangatainoka R	23.07	193	P	P	01 28 18.5	-1.7
HNR	Honiara	23.25	289	*e*P	P	01 28 22.0	-0.1
HNR	Honiara	23.25	289	P	P	01 28 20.9	-1.2
	comp=Z,340nm,0.6s,baz=205,slow=6.3,SNR=29						
SNZO	South Karori	23.88	194	*e*P	P	01 28 26.3	-1.1
	comp=Z,522nm,0.6s						
SNZO				*e*S	S	01 32 06.6	+0.2
LHI	Lord Howe Isla	24.72	233	*e*P	P	01 28 36.2	+1.2
	comp=Z,244nm,0.8s						
THZ	Tophouse	24.76	197	*e*P	P	01 28 34.0	-1.3
	comp=Z,148nm,0.7s						
KHZ	Kahutara	25.21	195	*e*P	P	01 28 37.9	-1.2
	comp=Z,233nm,0.9s						
KHZ				*e*S	S	01 32 27.9	+0.8
KHZ	Kahutara	25.21	195	P	P	01 28 38.0	-1.1
LTZ	Lake Taylor	25.88	197	*e*P	P	01 28 43.7	-1.4
	comp=Z,235nm,0.6s						
LTZ				*e*S	S	01 32 35.4	-2.5
LTZ	Lake Taylor	25.88	197	P	P	01 28 43.8	-1.4
INZ	Inchbonnie	26.06	198	P	P	01 28 45.8	-0.9
AMCZ	Amberley	26.14	196	P	P	01 28 46.4	-1.0
OXZ	Oxford	26.45	197	*e*P	P	01 28 48.9	-1.2
	comp=Z,238nm,0.7s						
OXZ	Oxford	26.45	197	P	P	01 28 48.5	-1.6
CRLZ	Canterbury Las	26.52	196	*e*P	P	01 28 49.7	-1.1
	comp=Z,71nm,0.6s						
CRLZ	Canterbury Las	26.52	196	P	P	01 28 49.9	-0.8
OKCZ	Okains Bay	26.55	195	P	P	01 28 50.7	-0.4
WVZ	Waitaha Valley	26.59	199	P	P	01 28 51.0	-0.4
MQZ	McQueen's Vall	26.64	195	*e*P	P	01 28 50.7	-1.0
	comp=Z,48nm,0.6s						
MQZ				*e*S	S	01 32 49.1	-0.5
MQZ	McQueen's Vall	26.64	195	P	P	01 28 50.6	-1.2
AKCZ	Akaroa Harbour	26.73	195	P	P	01 28 52.6	-0.1
PAE	Paea	26.89	93	*e*P	P	01 28 54.8	+0.5
	comp=Z,18nm,1.2s						
PAE				*e*pP	pP	01 30 13.0	-6.2
PAE				*e*ScP	ScP	01 34 48.7	-1.4
	comp=Z,7.8nm,1.0s						
PPT2	Papeete2	26.90	93	*e*P	P	01 28 55.4	+0.9
	comp=Z,122nm,1.2s						
PPT2				*e*pP	pP	01 30 13.7	-5.7
	comp=Z,103nm,1.3s						
PPT2				*e*ScP	ScP	01 34 48.8	-1.4
	comp=Z,80nm,1.1s						
PPT	Papeete	26.90	93	P	P	01 28 55.2	+0.7
	comp=Z,111nm,1.0s,baz=12,slow=3.9,SNR=9.8						
PPT				ScP	ScP	01 34 54.5	+4.3
	comp=Z,74nm,0.9s,baz=233,slow=20,SNR=8.4						
PPTF	Pamatai, Papee	26.91	93	*e*P	P	01 28 55.9	+1.3
	comp=Z,152nm,1.1s						
PPTF				*e*pP	pwP	01 30 24.9	-1.8
RPZ	Rata Peaks	27.08	198	*e*P	P	01 28 55.0	-0.7
	comp=Z,124nm,0.6s						
RPZ				*e*S	S	01 32 52.2	-4.5
RPZ				*e*ScP	ScP	01 34 52.5	+2.3
RPZ	Rata Peaks	27.08	198	P	P	01 28 55.1	-0.7
	comp=Z,124nm,0.5s,baz=38,slow=2.4,SNR=23						
RPZ				S	S	01 32 52.2	-4.5
	comp=Z,39nm,0.8s,baz=170,slow=23,SNR=3.7						
RPZ				ScP	ScP	01 34 52.5	+2.3
	comp=Z,23nm,0.8s,baz=141,slow=3.2,SNR=3.7						
RPZ				ScS	ScS	01 38 43.5	+1.1
	comp=Z,16nm,0.9s,baz=318,slow=21,SNR=6.2						
TIAR	Tiarei	27.12	93	*e*P	P	01 28 57.0	+0.6
	comp=Z,22nm,0.9s						
TIAR				*e*pP	pP	01 30 15.6	-5.9
	comp=Z,53nm,1.3s						
TIAR				*e*ScP	ScP	01 34 49.5	-1.3
	comp=Z,16nm,0.9s						
TVO	Taravao	27.19	94	*e*P	P	01 28 57.7	+0.7
	comp=Z,34nm,1.1s						
TVO				*e*pP	pP	01 30 16.5	-5.6
	comp=Z,53nm,1.3s						
TVO				*e*ScP	ScP	01 34 49.6	-1.5
	comp=Z,14nm,0.9s						
FOZ	Fox Glacier	27.30	200	*e*P	P	01 28 56.8	-0.8
	comp=Z,375nm,0.8s						
FOZ				*e*S	S	01 32 58.6	-1.3
FOZ	Fox Glacier	27.30	200	P	P	01 28 57.2	-0.3
LBZ	Lake Benmore	27.95	198	*e*P	P	01 29 02.0	-1.3
	comp=Z,141nm,0.7s						
LBZ	Lake Benmore	27.95	198	P	P	01 29 02.1	-1.3
JCZ	Jackson Bay	28.12	201	P	P	01 29 04.5	-0.4
ODZ	Otahua Downs	28.42	197	*e*P	P	01 29 07.2	-0.2
	comp=Z,93nm,1.5s						
ODZ	Otahua Downs	28.42	197	P	P	01 29 06.6	-0.7
XMAS	Kiritimati	28.45	47	*e*P	P	01 29 08.5	+0.5
	comp=Z,122nm,0.9s						
WKZ	Wanaka	28.71	200	*e*P	P	01 29 09.0	-1.0
	comp=Z,166nm,0.6s						
WKZ				*e*S	S	01 33 18.3	-3.7
WKZ	Wanaka	28.71	200	P	P	01 29 09.5	-0.5
PMOR	Pomariorio Ree	28.86	88	*e*P	P	01 29 12.2	+0.6
	comp=Z,148nm,1.2s						
PMOR				*e*pP	pP	01 30 35.9	-1.4
	comp=Z,210nm,1.4s						
PMOR				*e*ScP	ScP	01 34 54.7	-1.6
	comp=Z,114nm,1.1s						
EAZ	Earnscleugh	28.98	199	P	P	01 29 12.3	0.0
VAH	Vaihoa	29.07	89	*e*P	P	01 29 13.7	+0.2
	comp=Z,69nm,0.9s						
VAH				*e*pP	pP	01 30 36.0	-3.2
	comp=Z,108nm,1.2s						
VAH				*e*ScP	ScP	01 34 55.4	-1.5
	comp=Z,56nm,1.2s						
HHSZ	Highcliff Hill	29.20	197	P	P	01 29 11.1	-3.2
MLZ	Mavora Lakes	29.48	200	*e*P	P	01 29 16.9	+0.2
	comp=Z,540nm,0.7s						
TUZ	Tuapeka	29.54	198	P	P	01 29 17.5	+0.4
TUZ				P	P	01 29 17.5	+0.4
EIDS	Eidsvold	29.66	251	*e*P	P	01 29 18.1	-0.4
	comp=Z,452nm,0.8s						
DCZ	Deep Cove	29.90	201	*e*P	P	01 29 21.0	+0.8
	comp=Z,159nm,0.8s						
WHZ	Wether Hill Ro	30.01	200	*e*P	P	01 29 21.2	+0.1
	comp=Z,660nm,0.8s						
WHZ				*e*S	S	01 33 43.8	+1.8
ARMA	Armidale	30.25	241	*e*P	P	01 29 24.5	+0.9
	comp=Z,387nm,0.7s						
PYZ	Puysegur Point	30.67	201	*e*P	P	01 29 27.8	+0.9
	comp=Z,158nm,0.6s						
CTA	Charters Tower	33.92	261	P	P	01 29 54.8	-0.2
	comp=Z,686nm,0.9s,baz=87,slow=10,SNR=454						
CTA				PcP	PcP	01 32 18.9	+0.5
	comp=Z,36nm,0.7s,baz=168,slow=6.3,SNR=4.2						
CTA				ScP	ScP	01 35 16.7	+3.2
	comp=Z,31nm,1.0s,baz=64,slow=3.0,SNR=8.2						
CTAO	Charters Tower	33.92	261	*e*P	P	01 29 54.6	-0.4
	comp=Z,767nm,0.9s						
CTAO	Charters Tower	33.92	261	*e*P	P	01 29 54.6	-0.4
CTAO				pmax	pmax		
	comp=Z,767nm,0.9s						
CAN	Canberra	33.94	233	*e*P	P	01 29 55.7	+0.7
	comp=Z,294nm,0.9s						
CAN	Canberra	33.94	233	*e*P	P	01 29 55.7	+0.7
CAN				pmax	pmax		
	comp=Z,294nm,0.9s						
PATS	Pohnpei	34.26	315	*e*P	P	01 29 58.4	+0.6
	comp=Z,295nm,0.9s						
JOHN	Johnston Islan	35.69	14	*e*P	P	01 30 08.7	-0.9
	comp=Z,265nm,0.8s						
TOO	Toolangi	37.39	231	*e*P	P	01 30 24.2	+0.7
	comp=Z,536nm,0.8s						
TOO	Toolangi	37.39	231	*e*P	P	01 30 24.2	+0.7
TOO				pmax	pmax		
	comp=Z,536nm,0.8s						
COEN	Coen	37.64	271	*e*P	P	01 30 26.1	+0.2
	comp=Z,921nm,0.8s						
MANU	Manus Island	37.71	291	*e*P	P	01 30 27.3	+0.8
	comp=Z,774nm,0.8s						
TAU	Tasmania Unive	38.37	223	*e*P	P	01 30 32.0	+0.7
	comp=Z,229nm,1.2s						
TAU	Tasmania Unive	38.37	223	*e*P	P	01 30 32.0	+0.7
TAU				pmax	pmax		
	comp=Z,229nm,1.2s						
STKA	Stephens Creek	38.95	242	*e*P	P	01 30 37.1	+0.8
	comp=Z,203nm,1.0s						
STKA				*e*PcP	PcP	01 32 34.3	+0.7
STKA				*e*ScP	ScP	01 35 36.1	+4.0
STKA				*e*S	S	01 35 56.6	-0.6
STKA	Stephens Creek	38.95	242	P	P	01 30 37.1	+0.8
	comp=Z,644nm,0.8s,baz=89,slow=9.3,SNR=1014						
STKA				PcP	PcP	01 32 34.3	+0.7
	comp=Z,60nm,0.7s,baz=112,slow=5.8,SNR=3.4						
STKA				ScP	ScP	01 35 36.1	+4.0
	comp=Z,25nm,0.9s,baz=97,slow=5.1,SNR=4.2						
STKA				S	S	01 35 56.6	-0.6
	comp=Z,5.5nm,0.8s,baz=274,slow=19,SNR=2.5						
STKA				ScS	ScS	01 39 49.3	+3.9
	comp=Z,3.6nm,0.8s,baz=248,slow=19,SNR=2.8						
MMPI	Merauke	41.69	278	P	P	01 30 59.1	+0.7
	comp=Z,2µm,0.7s						
KHU	Kahuku	43.16	32	*e*P	P	01 31 10.6	+0.5
	comp=Z,158nm,1.2s						
KHU	Kahuku	43.16	32	*e*P	P	01 31 10.6	+0.5
KHU				pmax	pmax		
	comp=Z,159nm,1.2s						
KHLU	Kahalu`u	43.32	31	*e*P	P	01 31 11.4	+0.2
	comp=Z,150nm,0.9s						
HUH	Hualalai	43.43	31	*e*P	P	01 31 11.9	-0.3
	comp=Z,133nm,1.0s						
MLOA	Mauna Loa Obse	43.43	31	*e*P	P	01 31 12.3	-0.1
	comp=Z,123nm,1.1s						
MLH	Mauna Loa	43.49	32	*e*P	P	01 31 13.4	+0.8
	comp=Z,105nm,1.2s						
MLH	Mauna Loa	43.49	32	*e*P	P	01 31 13.4	+0.8
MLH				pmax	pmax		
	comp=Z,105nm,1.2s						
JAY	Jayapura	43.51	286	P	P	01 31 13.1	+0.4
	comp=Z,8µm,0.9s,comp=Z,70µm						
JAY	Jayapura	43.51	286	P	P	01 31 13.2	+0.5
	comp=Z,722nm,0.7s,baz=114,slow=2.9,SNR=162						
JAY				S	S	01 37 05.7	+2.1
	comp=Z,21nm,0.9s,baz=75,slow=20,SNR=3.6						
HMH	Humu'ula Sheep	43.53	31	*e*P	P	01 31 14.0	+1.0
	comp=Z,124nm,0.7s						
BBOO	Buckleboo	43.72	241	*e*P	P	01 31 14.4	+0.2
	comp=Z,794nm,0.8s						
KEKH	Kekaha	43.72	25	*e*P	P	01 31 14.0	-0.1
	comp=Z,325nm,1.5s						
LPH	Laupahoehoe	43.90	31	*e*P	P	01 31 21.0	+5.5
GENI	Genyem	43.97	286	P	P	01 31 17.0	+0.8
	comp=Z,2µm,0.7s,comp=Z,17µm						
WRAB	Tennant Creek	45.09	260	*e*P	P	01 31 24.0	-0.9
	comp=Z,474nm,0.6s						
WRAB	Tennant Creek	45.09	260	*e*P	P	01 31 24.0	-0.9
WRAB				pmax	pmax		
	comp=Z,474nm,0.6s						
WR1	Warramunga Arr	45.10	260	*e*P	P	01 31 24.4	-0.6
	comp=Z,709nm,0.6s						
WR1				*e*PcP	PcP	01 32 55.2	+0.6
WR1				*e*ScP	ScP	01 35 59.9	+2.7
WR1				*e*S	S	01 37 22.0	-4.0
WRA	Warramunga Arr	45.10	260	P	P	01 31 24.4	-0.6
	comp=Z,422nm,0.7s,baz=96,slow=6.8,SNR=684						
WRA				PcP	PcP	01 32 55.2	+0.6
	comp=Z,56nm,0.4s,baz=91,slow=3.7,SNR=14						
WRA				ScP	ScP	01 35 59.9	+2.7
	comp=Z,15nm,1.1s,baz=96,slow=4.2,SNR=7.5						
WRA				S	S	01 37 22.0	-4.0
	comp=Z,8.0nm,0.8s,baz=97,slow=13,SNR=4.4						
WRA				ScS	ScS	01 40 26.1	+1.8
	comp=Z,2.5nm,0.9s,baz=88,slow=6.6,SNR=5.1						
WRA				P4KPbc		02 09 08.1	
	comp=Z,1.7nm,0.7s,baz=90,slow=4.4,SNR=16						
AS01	Alice Springs	45.18	255	*e*P	P	01 31 23.2	-2.3
AS31	Alice Springs	45.22	255	*e*P	P	01 31 25.4	-0.5
	comp=Z,719nm,0.6s						
AS31				*e*PcP	PcP	01 32 55.5	+0.5
AS31				*e*ScP	ScP	01 36 00.0	+2.4
AS31				*e*S	S	01 37 24.6	-3.1
ASAR	Alice Springs	45.22	255	P	P	01 31 25.8	-0.1
	comp=Z,3µm,0.7s,baz=89,slow=8.5						
ASAR				PcP	PcP	01 32 55.5	+0.5
	comp=Z,129nm,0.5s,baz=104,slow=3.8,SNR=13						
ASAR				ScP	ScP	01 36 00.0	+2.4
	comp=Z,13nm,0.9s,baz=99,slow=5.7,SNR=4.9						
ASAR				S	S	01 37 24.6	-3.1
	comp=Z,32nm,1.0s,baz=90,slow=16,SNR=14						
ASAR				ScS	ScS	01 40 27.4	+2.4
	comp=Z,7.4nm,1.0s,baz=95,slow=7.0,SNR=6.7						
ASAR				P4KPbc		02 09 09.6	
	comp=Z,2.0nm,0.7s,baz=92,slow=4.9,SNR=17						
SRPI	Serui, Papua	47.86	284	P	P	01 31 46.5	+0.6
BAKI	Biak	48.24	285	P	P	01 31 49.6	+0.8
GUMO	Guam	48.49	308	*e*P	P	01 31 51.0	+0.5
	comp=Z,1µm,0.8s						
GUMO	Guam	48.49	308	P	P	01 31 51.0	+0.5
	comp=Z,1µm,0.7s,baz=154,slow=8.3,SNR=35						
ANA2	Anatahan	49.67	312	*e*P	P	01 31 59.7	+0.5
	comp=Z,684nm,0.6s						
SARN	Sarigan	49.86	312	*e*P	P	01 32 01.6	+1.0
	comp=Z,133nm,0.7s						
RKPI	Ransiki, Papua	49.90	284	P	P	01 32 01.5	+0.5
	comp=Z,410nm,0.8s,comp=Z,4µm						
FORT	Forrest	50.36	245	*e*P	P	01 32 03.7	-0.5
	comp=Z,757nm,0.6s						
SAUI	Saumlaki	50.42	275	*e*P	P	01 32 04.3	-0.6
	comp=Z,2µm,1.2s						
SAUI	Saumlaki	50.42	275	P	P	01 32 05.7	+0.8
	comp=Z,1µm,1.1s,comp=Z,11µm						
FAKI	Fak Fak	51.16	281	*e*P	P	01 32 09.5	-0.8
	comp=Z,189nm,0.9s						
FAKI	Fak Fak	51.16	281	P	P	01 32 10.0	-0.3
	comp=Z,276nm,1.4s,comp=Z,4µm						
BNDI	Bandanaira	52.81	278	P	P	01 32 22.0	-0.1
	comp=Z,886nm,0.6s,comp=Z,10µm						
SIJI	Sorong	52.83	283	PcP	PcP	01 33 23.4	+0.2
	baz=117,slow=2.3						
FITZ	Fitzroy Crossi	53.51	261	*e*P	P	01 32 27.0	0.0
	comp=Z,147nm,0.8s						
NLAI	Namlea	55.87	279	P	P	01 32 44.0	+0.3
	comp=Z,1µm,0.7s,comp=Z,9µm						
SOEI	Soe	56.61	270	*e*P	P	01 32 50.2	+1.3
	comp=Z,1µm,0.9s						
SOEI	Soe	56.61	270	P	P	01 32 50.5	+1.6
	comp=Z,2µm,1.1s,comp=Z,14µm						
TNTI	Ternate	57.05	283	*e*P	P	01 32 51.8	0.0
	comp=Z,582nm,0.8s						
BATI	Baumata	57.06	269	P	P	01 32 53.5	+1.6
	comp=Z,312nm,0.9s,comp=Z,3µm						
SANI	Sanana	57.32	280	P	P	01 32 53.3	-0.4
	comp=Z,1µm,0.9s,comp=Z,8µm						
MBWA	Marble Bar	58.52	256	*e*P	P	01 33 01.2	-0.5
	comp=Z,372nm,0.8s						
MMRI	Maumere	58.84	271	*e*P	P	01 33 03.6	-0.4
	comp=Z,446nm,0.8s						
MMRI	Maumere	58.84	271	P	P	01 33 03.5	-0.4
	comp=Z,642nm,0.8s,comp=Z,7µm						
EDFI	Ende, Flores	59.33	271	P	P	01 33 06.8	-0.6
	comp=Z,557nm,1.0s						
BBSI	Bau Bau	59.43	274	P	P	01 33 07.4	-0.5
CBIJ	Chichi jima	59.43	318	*e*P	P	01 33 07.9	+0.3
JCJ	Chichijima	59.43	318	P	P	01 33 07.9	+0.3
	comp=Z,165nm,0.8s,baz=129,slow=0.7,SNR=7.2						
NWAO	Narrogin (SRO)	59.54	242	*e*P	P	01 33 08.3	-0.1
	comp=Z,237nm,0.8s						
NWAO	Narrogin (SRO)	59.54	242	*e*P	P	01 33 08.3	-0.1
NWAO				pmax	pmax		
	comp=Z,237nm,0.8s						
KDI	Kendari	59.86	276	P	P	01 33 10.8	0.0
	comp=Z,276nm,1.2s,comp=Z,3µm						
SGSI	Sangihe	59.87	286	P	P	01 33 10.7	-0.2
	comp=Z,834nm,0.6s,comp=Z,9µm						
BASI	Baing, Sumba	59.99	269	P	P	01 33 12.4	+0.7
	comp=Z,1µm,1.3s,comp=Z,8µm						
KMSI	Cibinong	60.12	282	P	P	01 33 12.4	-0.1
	comp=Z,2µm,0.8s,comp=Z,11µm						
SBA	Scott Base	60.14	184	*e*P	P	01 33 14.8	+3.3
	comp=Z,116nm,1.2s						
VNDA	Vanda	60.18	185	*e*P	P	01 33 14.1	+2.3
	comp=Z,52nm,1.4s						
VNDA	Vanda	60.18	185	P	P	01 33 14.1	+2.3
	comp=Z,17nm,0.6s,baz=357,slow=8.0,SNR=88						
MATI	Mati	60.55	289	*e*P	P	01 33 13.6	-1.7
DDMP	Don Marcelino,	60.69	288	*e*P	P	01 33 15.3	-0.9
LUWI	Luwuk	60.69	279	*e*P	P	01 33 16.9	+0.6
	comp=Z,1µm,1.2s						
LUWI	Luwuk	60.69	279	P	P	01 33 16.8	+0.6
	comp=Z,1µm,1.1s,comp=Z,11µm						
MORW	Morawa	60.85	246	*e*P	P	01 33 16.7	-0.4
	comp=Z,241nm,0.6s						
DAV	Davao City (W)	61.21	289	*e*P	P	01 33 20.2	+0.5
	comp=Z,524nm,0.8s						
DAV	Davao City (W)	61.21	289	P	P	01 33 20.2	+0.5
	comp=Z,444nm,0.7s,baz=90,slow=2.6,SNR=13						
KCP	Kidapawan	61.62	289⇓	*i*P	P	01 33 22.0	-0.5
APSI	Ampana	61.78	279	P	P	01 33 24.4	+0.9
	comp=Z,892nm,1.1s,comp=Z,7µm						
BKSI	Bulukumba	61.80	274	P	P	01 33 22.7	-0.9
	comp=Z,100nm,0.8s,comp=Z,1µm						
SKMP	Bagumbayan, Su	61.91	288	*e*P	P	01 33 24.0	-0.3
BUTP	Butuan	61.99	291	*e*P	P	01 33 25.0	+0.2
MRSI	Marisa	61.99	281	P	P	01 33 24.1	-0.7
	comp=Z,289nm,0.7s,comp=Z,2µm						
BNSI	Bone	62.10	275	P	P	01 33 25.8	+0.3
	comp=Z,489nm,1.1s,comp=Z,5µm						
CTBH	Cotabato--PC H	62.47	289⇓	*i*P	P	01 33 28.0	+0.1
SPSI	Sidrap Palu	62.56	275	P	P	01 33 27.6	-0.9
	comp=Z,198nm,0.9s,comp=Z,2µm						
CGP	Cagayan de Oro	62.59	290⇓	*e*P	P	01 33 29.7	+1.0
TTSI	Tana Toraja	62.80	276	P	P	01 33 29.7	-0.4
	comp=Z,142nm,0.8s,comp=Z,2µm						
PLAI	Plampang	63.02	269	P	P	01 33 31.1	-0.4
	comp=Z,1µm,0.9s,comp=Z,9µm						
MSLP	Maasin	63.17	292	*e*P	P	01 33 32.4	0.0
GIRL	Giralia	63.32	253	*e*P	P	01 33 34.3	+1.0
	comp=Z,1µm,0.8s						
BESP	Borongan	63.32	294	*e*P	P	01 33 34.2	+0.9
PCI	Palu	63.49	278	P	P	01 33 36.2	+1.7
	comp=Z,1µm,1.2s,comp=Z,10µm						
PAGZ	Pagadian	63.51	289	*e*P	P	01 33 35.0	+0.4
PLP	Palo	63.53	293⇓	*i*P	P	01 33 33.8	-0.9
MPSI	Mapaga	63.86	280	P	P	01 33 36.8	0.0
	comp=Z,311nm,1.0s,comp=Z,3µm						
IPIL	Ipil	64.22	288	*e*P	P	01 33 39.3	+0.2
JHJ2	Mitsune	65.12	321	*e*P	P	01 33 44.5	+0.1
	comp=Z,524nm,0.9s						
JHJ	Hachijo jima 2	65.15	321	P	P	01 33 44.5	-0.1
	comp=Z,226nm,0.3s,baz=208,slow=11,SNR=7.8						
PVCP	Virac	65.35	295	*e*P	P	01 33 46.6	+0.4
GUIM	Jordan	65.39	291	*e*P	P	01 33 45.2	-1.3
DNP	Denpasar	65.50	269	P	P	01 33 46.4	-0.9
	comp=Z,1µm,0.8s						
RCP	Roxas	65.66	292⇓	*e*P	P	01 33 48.0	-0.2
SRBI	Singaraja	65.67	269	P	P	01 33 47.9	-0.4
	comp=Z,375nm,1.1s,comp=Z,4µm						
KBKI	Kotabaru	66.18	275	P	P	01 33 51.7	+0.2
	comp=Z,77nm,1.2s						
AUQP	San Andres	66.50	294	*e*P	P	01 33 55.4	+2.0
JAGI	Jajag, Banyuwa	66.57	269	*e*P	P	01 33 52.6	-1.3
	comp=Z,748nm,0.7s						
JAGI	Jajag, Banyuwa	66.57	269	P	P	01 33 52.9	-1.0
	comp=Z,1µm,0.8s,comp=Z,8µm						
OTRP	Odiongan	66.65	293	*e*P	P	01 33 53.9	-0.5
KMMI	Kalianget	67.14	270	P	P	01 33 58.1	+0.7
	comp=Z,270nm,0.8s,comp=Z,3µm						
GMJI	Gumukmas	67.30	268	P	P	01 33 57.7	-0.7
	comp=Z,565nm,0.8s,comp=Z,5µm						
SJMP	San Jose	67.48	292	*e*P	P	01 33 59.7	+0.2
POLP	Polilio Island	67.77	295	*e*P	P	01 34 01.2	0.0
BUSP	Coron	68.10	291	*e*P	P	01 34 03.3	+0.1
MTKI	Muara Teweh, K	68.13	276	P	P	01 34 04.0	+0.5
INU	Inuyama	68.34	321	*e*P	P	01 34 03.8	-0.5
	comp=Z,61nm,1.2s						
TGY	Tagaytay City	68.36	294	P	P	01 34 05.3	+0.5
	comp=Z,403nm,0.6s,baz=214,slow=1.7,SNR=17						
ENPP	El Nido	68.45	290	*e*P	P	01 34 05.8	+0.4
MJAR	Matsushiro Arr	68.48	323	P	P	01 34 04.5	-0.6
	comp=Z,63nm,0.7s,baz=167,slow=6.2,SNR=102						
MAJO	Matsushiro	68.48	323	*e*P	P	01 34 04.8	-0.3
	comp=Z,65nm,0.6s						
MAJO	Matsushiro	68.48	323	*i* P	P	01 34 04.5	-0.6
MAJO				pmax	pmax		
	comp=Z,68nm,0.7s						
MAT	Matsushiro	68.48	323	P	P	01 34 04.6	-0.5
MAT				*e*S	S	01 42 08.6	-17
MJB9	Matsu-Tunnel	68.48	323	*e*P	P	01 34 04.9	-0.3
	comp=Z,67nm,0.6s						
BALP	Baler	68.54	296	*e*P	P	01 34 05.9	+0.1
GRJI	Gresik	68.60	270	P	P	01 34 06.6	+0.3
	comp=Z,346nm,0.7s,comp=Z,3µm						
JOW	Kunigami	68.83	309	*e*P	P	01 34 08.5	+1.0
	comp=Z,202nm,1.2s						
JOW	Kunigami	68.83	309	P	P	01 34 08.9	+1.4
	comp=Z,12nm,0.6s,baz=134,slow=13,SNR=31						
PWJI	Pagerwojo	68.92	268	P	P	01 34 08.3	0.0
	comp=Z,530nm,0.8s,comp=Z,5µm						
BATP	Bataraza	68.94	287	*e*P	P	01 34 08.7	+0.4
TBJI	Tambak Boyo	69.22	270	P	P	01 34 10.8	+0.7
	comp=Z,742nm,1.3s,comp=Z,7µm						
KKM	Kota Kinabalu	69.34	284	*e*P	P	01 34 11.0	+0.1
	comp=Z,280nm,1.0s						
NGJI	Ngawi	69.43	269	P	P	01 34 13.2	+1.8
	comp=Z,420nm,0.9s,comp=Z,4µm						
PCJI	Pacitan	69.47	268	P	P	01 34 12.0	+0.4
	comp=Z,3µm,0.7s,comp=Z,25µm						
SMPP	San Manuel, Pa	69.50	296	*e*P	P	01 34 11.3	-0.4
KIWB	Kanaga Island	69.78	0	*e*P	P	01 34 12.2	-0.3
APYP	Conner	69.80	298	*e*P	P	01 34 13.2	-0.1
WOJI	Wonogiri, Jawa	69.81	268	P	P	01 34 14.1	+0.5
	comp=Z,757nm,1.0s,comp=Z,7µm						
ADK	Adak	69.81	1	*e*P	P	01 34 11.6	-1.1
	comp=Z,89nm,0.6s						
ADK	Adak	69.81	1	*e*P	P	01 34 11.6	-1.1
ADK				pmax	pmax		
	comp=Z,89nm,0.6s						
ABRA	Dolores	70.15	297	*e*P	P	01 34 16.2	+0.7
UGM	Wanagama	70.17	268	*e*P	P	01 34 15.9	+0.1
	comp=Z,1µm,0.6s						
UGM	Wanagama	70.17	268	P	P	01 34 16.0	+0.1
	comp=Z,2µm,0.7s,comp=Z,12µm						
SMRI	Semarang	70.50	269	*e*P	P	01 34 18.3	+0.6
	comp=Z,721nm,0.8s						
SMRI	Semarang	70.50	269	P	P	01 34 18.2	+0.5
	comp=Z,985nm,0.9s,comp=Z,9µm						
JNU	Nakatsue	70.74	316	*e*P	P	01 34 18.8	+0.1
	comp=Z,98nm,1.0s						
JNU	Nakatsue	70.74	316	P	P	01 34 18.7	-0.1
	comp=Z,74nm,0.9s,baz=78,slow=3.6,SNR=24						
NIKH	Nikolski High	71.32	6	*e*P	P	01 34 20.9	-0.7
	comp=Z,92nm,0.7s						
YOJ	Yonaguni jima	71.56	304	*e*P	P	01 34 24.0	+0.3
	comp=Z,950nm,0.6s						
YOJ	Yonaguni jima	71.56	304	*e*P	P	01 34 24.0	+0.3
SBUM	Sibu	71.78	279	*e*P	P	01 34 25.9	+0.7
	comp=Z,67nm,0.8s						
QSPA	South Pole Qui	71.83	180	*e*P	P	01 34 26.4	+1.6
	comp=Z,60nm,0.6s						
KPJI	Karang Pucung	71.85	268	P	P	01 34 25.7	+0.1
	comp=Z,644nm,1.1s,comp=Z,5µm						
CMJI	Cimerak	72.18	268	P	P	01 34 26.5	-1.0
	comp=Z,486nm,1.0s,comp=Z,4µm						
TWG	Pinlang	72.29	302	*e*P	P	01 34 26.3	-1.7
	comp=Z,1µm,0.6s						
SKR	Severo-Kuril's	72.33	343	*e*P	P	01 34 25.8	-1.8
SKR				*e*S	S	01 43 08.1	-0.4
SKR				pmax	pmax		
	comp=Z,88nm,0.8s						
SKR				pmax	pmax		
	comp=Z,300nm,4.0s						
SKR				pmax	pmax		
	comp=Z,1µm,3.6s						
YULB	Yu-li	72.39	303	*e*P	P	01 34 27.1	-1.5
	comp=Z,184nm,0.6s						
UNV	Unalaska Valle	72.44	7	*e*P	P	01 34 26.8	-1.3
	comp=Z,58nm,0.7s						
NACB	Ninganchiao	72.54	304	*e*P	P	01 34 28.9	-0.4
	comp=Z,539nm,0.9s						
JCJI	Jatiwangi	72.72	269	P	P	01 34 30.5	-0.2
	comp=Z,1µm,1.0s,comp=Z,12µm						
CISI	Cisompet, Garu	72.84	268	*e*P	P	01 34 30.7	-0.8
	comp=Z,477nm,0.7s						
CISI	Cisompet, Garu	72.84	268	P	P	01 34 30.5	-1.0
	comp=Z,745nm,1.0s,comp=Z,7µm						
SSLB	Suanglung	72.86	303	*e*P	P	01 34 30.0	-1.3
	comp=Z,330nm,0.5s						
TPUB	Ta-pu	72.88	302	*e*P	P	01 34 30.1	-1.3
	comp=Z,922nm,0.7s						
YHNB	Yeheng	72.95	304	*e*P	P	01 34 31.8	-0.1
	comp=Z,338nm,0.8s						
TATO	Taipei	73.02	304	*e*P	P	01 34 32.0	-0.1
	comp=Z,425nm,0.8s						

LEM	Lembang	73.24	268	P	P	01 34 33.9	0.0
	comp=Z,12µm,0.8s,comp=Z,108µm						
LEM	Lembang	73.24	268	P	P	01 34 34.5	+0.6
	comp=Z,1000nm,0.8s,baz=67,slow=7.7						
KSM	Kuching	73.25	277	eP	P	01 34 34.4	+0.7
	comp=Z,814nm,0.9s						
PET	Petropavlovsk	73.81	345	eP	P	01 34 35.2	-0.8
PET				e*SP	sP	01 37 21.4	+1.5
PET				eS	S	01 43 26.1	+1.3
PET				eSP	SKKSac	01 43 53.1	+0.4
PET				pmax	pmax		
	comp=Z,37nm,0.6s						
PET				pmax	pmax		
	comp=Z,300nm,9.3s						
PET				pmax	pmax		
	comp=Z,100nm,9.6s						
YSS	Yuzh-Sakhalins	73.94	333	eP	P	01 34 37.6	+0.8
	comp=Z,55nm,0.8s						
YSS	Yuzh-Sakhalins	73.94	333κ	iP	P	01 34 37.4	+0.6
YSS				e*SP	sP	01 37 20.7	-0.2
YSS				i S	S	01 43 24.6	-1.8
YSS				e		01 43 53.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.3s						
YSS				smax	smax		
	comp=E,700nm,7.5s						
XMIS	Christmas Isla	74.08	264	eP	P	01 34 39.1	+0.6
	comp=E,191nm,0.8s						
CBJI	Citeko	74.09	268	P	P	01 34 37.3	-1.2
	comp=E,920nm,0.9s,comp=E,10µm						
PEA0B	Petropavlovsk-	74.12	345	eP	P	01 34 37.6	-0.2
	comp=E,52nm,0.8s						
PETK	Petropavlovsk-	74.12	345	P	P	01 34 37.3	-0.4
	comp=E,43nm,0.7s,baz=120,slow=8.4,SNR=81						
PEA1	Petropavlovsk-	74.12	345	eP	P	01 34 37.3	-0.5
DBJI	Dramaga	74.14	268	P	P	01 34 38.8	0.0
	comp=E,633nm,1.0s,comp=E,24µm						
SKJI	Sukabumi	74.20	268	P	P	01 34 38.5	-0.6
	comp=E,1µm,0.8s,comp=E,12µm						
TPI	Tanjungpandan	74.42	272	P	P	01 34 40.4	0.0
	comp=E,265nm,1.2s						
SDPT	Sand Point	74.75	10	eP	P	01 34 40.1	-1.1
	comp=E,103nm,0.7s						
TJN	Taejon	75.01	317d	eP	P	01 34 43.2	+0.1
KSRS	Korea Array	75.29	318	P	P	01 34 45.6	+1.0
	comp=E,20nm,0.7s,baz=132,slow=6.5,SNR=77						
QZH	Quanzhou	75.30	303	⇓iP	P	01 34 45.7	+0.7
QZH				pmax	pmax		
	comp=E,370nm,0.7s						
KS15	Wonju Array Si	75.31	318	eP	P	01 34 45.8	+1.0
KSAR	Wonju Array Be	75.31	318	P	P	01 34 45.6	+0.9
KSAR	Wonju Array Be	75.31	318	P	P	01 34 45.7	+0.9
KS01	Wonju Array Si	75.32	318	eP	P	01 34 44.6	-0.3
SNCC	San Nicolas Is	75.60	47	P	P	01 34 47.7	+1.2
	baz=237						
SCZ2	Santa Cruz Isl	75.94	47	P	P	01 34 49.5	+1.1
	baz=236						
CHGN	Chignik	76.02	11	eP	P	01 34 47.7	-0.6
	comp=E,76nm,0.6s						
SBC	Santa Barbara	76.13	46	P	P	01 34 50.7	+1.3
	baz=236						
SCI2	San Clemente I	76.14	48	P	P	01 34 50.7	+1.1
	baz=237						
SAO	San Andreas Ge	76.28	44	eP	P	01 34 51.5	+1.3
	comp=E,53nm,0.8s						
SAO	San Andreas Ge	76.28	44	eP	P	01 34 51.5	+1.3
SAO				pmax	pmax		
	comp=Z,53nm,0.8s						
PKM	Mcpherson Peak	76.31	46	P	P	01 34 51.9	+1.3
	baz=236						
SSE	Sheshan	76.35	309	P	P	01 34 50.7	0.0
SSE				pmax	pmax		
	comp=Z,41nm,1.0s						
SSE	Sheshan	76.35	309	eP	P	01 34 51.2	+0.5
	comp=Z,146nm,0.8s						
BLG	Laguna Peak, P	76.39	47	P	P	01 34 51.6	+0.7
	baz=237						
SMMC	Simmler	76.42	45	P	P	01 34 52.7	+1.6
	baz=236						
CIS	Catalina Islan	76.46	48	P	P	01 34 52.1	+0.8
	baz=237						
PAGB	Antelope Grade	76.48	45	eP	P	01 34 52.8	+1.4
	comp=Z,21nm,0.7s						
PAGB				epP	pwP	01 36 44.5	-0.2
VLA	Vladivostok	76.52	325	i P	P	01 34 51.7	+0.4
VLA				pmax	pmax		
	comp=Z,53nm,0.8s						
MSHR	Mys Shultsa	76.57	324d	iP	P	01 34 52.6	+1.0
KASI	Kota Agung	76.59	269	P	P	01 34 51.5	-0.9
	comp=Z,844nm,1.0s,comp=Z,7µm						
GDXM	Geysers	76.62	41	eP	P	01 34 54.3	+2.1
	comp=Z,21nm,1.1s						
FMP	Fort Macarthur	76.72	48	P	P	01 34 53.8	+1.2
	baz=237						
OSI	Osito Audit: C	76.91	47	P	P	01 34 54.9	+1.1
	baz=237						
KMRM	Mail Ridge	76.91	40	eP	P	01 34 55.5	+1.8
	comp=Z,141nm,0.7s						
DECC	Green Verdugo	76.98	47	P	P	01 34 54.9	+0.7
	baz=237						
TYV	Tymovskoe	77.04	336	eP	P	01 34 54.1	+0.1
TYV				eS	S	01 43 52.0	-7.6
TYV				pmax	pmax		
	comp=Z,200nm,3.2s						
TYV				pmax	pmax		
	comp=Z,38nm,1.0s						
TYV				smax	smax		
	comp=E,900nm,5.7s						
PASC	Pasadena Art C	77.04	47	eP	P	01 34 55.7	+1.2
	comp=E,38nm,0.8s						
ARVC	Arvin	77.11	46	P	P	01 34 55.8	+0.9
	baz=237,SNR=6.0						
109C	Camp Elliot, M	77.12	49	P	P	01 34 55.8	+0.9
	baz=238						
CPE	Camp Elliot	77.12	49	eP	P	01 34 55.8	+0.9
	comp=E,25nm,0.8s						
LWLI	Liwa	77.15	269	P	P	01 34 55.0	-0.7
	comp=E,202nm,0.6s						
MWC	Mount Wilson	77.16	47	eP	P	01 34 56.2	+0.9
	comp=E,45nm,0.8s						
MWC	Mount Wilson	77.16	47	eP	P	01 34 56.2	+0.9
MWC				pmax	pmax		
	comp=Z,45nm,0.8s						
USA0B	Ussuriysk Arra	77.18	325	eP	P	01 34 56.4	+1.4
	comp=Z,20nm,0.9s						
USRK	Ussuriysk Ar.	77.18	325	P	P	01 34 56.2	+1.3
	comp=Z,10nm,0.6s,baz=113,slow=4.5,SNR=39						
MDSI	Maura Dua	77.20	269	P	P	01 34 54.7	-1.1
	comp=Z,228nm,1.2s,comp=Z,2µm						
KHMM	Horse Mountain	77.30	39	eP	P	01 34 58.1	+2.2
	comp=Z,36nm,0.9s						
BAR	Barrett	77.32	49	eP	P	01 34 57.4	+1.3
	comp=Z,22nm,1.0s						
VES	Vestal, Richgr	77.33	45	P	P	01 34 56.7	+0.7
	baz=236,SNR=14						
VOG	Valley Oaks Go	77.40	45	P	P	01 34 57.0	+0.6
	baz=236						
MURC	Murrieta	77.43	48	P	P	01 34 57.7	+1.1
	baz=238,SNR=11						
BFSC	Mount Baldy Ra	77.44	47	P	P	01 34 57.5	+0.7
	baz=238,SNR=16						
O02D	Mt. Diablo Mer	77.45	40	P	P	01 34 58.2	+1.6
	baz=233,SNR=12						
EDW2	Edwards Air Fo	77.56	47	P	P	01 34 58.5	+1.1
	baz=237,SNR=53						
MONP2	Monument Peak	77.61	49	P	P	01 34 59.2	+1.4
	baz=239,SNR=50						
ISA	Isabella, Lake	77.65	46	eP	P	01 34 59.0	+1.2
	comp=Z,46nm,0.9s						
ISA				epP	pwP	01 36 51.0	-0.8
ISA	Isabella, Lake	77.65	46	P	P	01 34 59.1	+1.2
	baz=237,SNR=41						
CMB	Columbia Colle	77.70	43	eP	P	01 34 58.8	+0.8
	comp=Z,39nm,0.8s						
CMB				epP	pwP	01 36 53.0	-0.1
CMB	Columbia Colle	77.70	43	eP	P	01 34 58.8	+0.8
CMB				e*PP	pwP	01 36 53.0	-0.1
CMB				pmax	pmax		
	comp=Z,39nm,0.8s						
IKP	In-Ko-Pah, Jac	77.71	50	P	P	01 34 59.6	+1.4
	baz=239,SNR=25						
HKC	Hong Kong Obse	77.72	299	⇑P	P	01 35 00.0	+1.7
WDC	Whiskeytown Da	77.84	40	eP	P	01 35 00.0	+1.4
	comp=Z,44nm,1.3s						
WDC				epP	pwP	01 36 54.9	+1.5
AFDM	Forest Hills D	77.85	42	eP	P	01 34 59.6	+0.8
	comp=Z,42nm,1.0s						
AFDM				epP	pwP	01 36 53.9	+0.1
ORV	Oroville	77.87	41	eP	P	01 34 59.3	+0.4
	comp=Z,41nm,1.1s						
ORV				epP	pwP	01 36 54.8	+1.1
ORV	Oroville	77.87	41	eP	P	01 34 59.3	+0.4
ORV				e*PP	pwP	01 36 54.8	+1.1
ORV				pmax	pmax		
	comp=Z,41nm,1.1s						
OHAK	Old Harbor	77.91	13	eP	P	01 34 58.2	-0.4
	comp=Z,93nm,0.6s						
PFO	Pinyon Flats O	77.96	49	eP	P	01 35 00.7	+1.1
	comp=Z,25nm,1.0s						
PFO	Pinyon Flats O	77.96	49	P	P	01 35 00.6	+1.1
	baz=238,SNR=19						
PFO	Pinyon Flats O	77.96	49	P	P	01 35 00.7	+1.1
	comp=Z,20nm,0.9s,baz=266,slow=3.0,SNR=23						
XPFO	Pion Flat	77.96	49	eP	P	01 35 00.7	+1.1
	comp=Z,26nm,1.0s						
N02D	Trinity Center	77.98	39	P	P	01 35 00.9	+1.5
	baz=233,SNR=9.8						
LHSI	Lahat	78.02	270	P	P	01 34 59.7	-0.5
	comp=Z,170nm,1.2s,comp=Z,2µm						
SWSC	Sam W. Stewart	78.09	49	P	P	01 35 01.4	+1.2
	baz=239,SNR=16						
LRMC	Laurel Mtn Rad	78.09	46	P	P	01 35 01.3	+1.0
	baz=237,SNR=11						
O03E	Paynes Creek	78.12	40	P	P	01 35 00.9	+0.6
	baz=234,SNR=11						
M02C	Callahan	78.14	39	P	P	01 35 01.9	+1.6
	baz=233,SNR=11						
L02E	Cave Junction	78.16	38	P	P	01 35 01.8	+1.4
	baz=232						
RRX	Edison Barstow	78.25	47	P	P	01 35 01.9	+1.0
	baz=238						
SLBS	Sierra La Lagu	78.25	60	eP	P	01 35 03.2	+1.8
	comp=Z,38nm,1.0s						
MDPB	Devils Postpil	78.33	44	eP	P	01 35 02.8	+1.1
	comp=Z,50nm,0.8s						
CWC	Cottonwood Cre	78.34	45	P	P	01 35 02.6	+0.9
	baz=237						
OMMB	Old Mammoth Mi	78.37	44	eP	P	01 35 03.0	+1.1
	comp=Z,61nm,1.4s						
OMMB				epP	pwP	01 36 58.1	+1.6
MNAI	Manna	78.40	269	eP	P	01 35 01.6	-0.7
	comp=Z,582nm,0.8s						
MNAI	Manna	78.40	269	P	P	01 35 01.9	-0.4
	comp=Z,824nm,0.8s,comp=Z,11µm						
RUBR	Rubicon Trail	78.43	42	eP	P	01 35 03.6	+1.4
	comp=Z,29nm,0.8s						
YBH	Yreka Blue Hor	78.43	39	eP	P	01 35 03.2	+1.3
	comp=Z,37nm,0.8s						
YBH				epP	pwP	01 36 58.7	+2.2
K02D	Willamette Mer	78.46	38	P	P	01 35 03.1	+1.1
	baz=232,SNR=8.9						
MLAC	Mammoth, Mammo	78.49	44	P	P	01 35 03.7	+1.2
	baz=236,SNR=7.3						
BELC	Belle Mtn. Jos	78.49	48	P	P	01 35 03.6	+1.2
	baz=239,SNR=35						
MPMC	Manual Prospec	78.53	46	P	P	01 35 03.8	+1.0
	baz=237,SNR=30						
TPRI	Tanjung Pinang	78.54	275	P	P	01 35 03.7	+0.7
	comp=Z,334nm,0.8s,comp=Z,16µm						
NJ2	Nanjing	78.55	309	⇓iP	P	01 35 03.5	+0.9
NJ2				pmax	pmax		
	comp=Z,160nm,0.9s						
TIN	Tinemaha, Big	78.57	45	P	P	01 35 04.1	+1.2
	baz=237,SNR=6.0						
KDAK	Kodiak Island	78.58	13	eP	P	01 35 02.1	-0.1
	comp=Z,71nm,0.7s						
KDAK	Kodiak Island	78.58	13c	eP	P	01 35 01.8	-0.4
DAC	Darwin (Calif)	78.58	46	eP	P	01 35 04.0	+1.0
	comp=Z,12nm,0.8s						
DAC	Darwin (Calif)	78.58	46	eP	P	01 35 04.0	+1.0
DAC				pmax	pmax		
	comp=Z,12nm,0.8s						
WAKR	Walker	78.58	43	eP	P	01 35 04.3	+1.4
	comp=Z,54nm,0.8s						
WAKR				epP	pwP	01 36 56.9	-1.1
J01E	Myrtle Point	78.59	37	P	P	01 35 03.6	+1.0
	baz=232,SNR=5.7						
GSC	Goldstone, Bar	78.60	47	eP	P	01 35 04.0	+1.0
	comp=Z,32nm,1.3s						
GSC	Goldstone, Bar	78.60	47	eP	P	01 35 04.0	+1.0
GSC				pmax	pmax		
	comp=Z,32nm,1.3s						
GSC	Goldstone, Bar	78.60	47	P	P	01 35 03.9	+1.0
	baz=238,SNR=12						
HEC	Hector,Ludlow	78.68	48	P	P	01 35 04.3	+0.9
	baz=238,SNR=17						
BC3	Big Chuckawall	78.70	49	P	P	01 35 05.0	+1.4
	baz=239,SNR=18						
MDJ	Mudanjiang	78.75	325	P	P	01 35 03.9	+0.5
MDJ				pmax	pmax		
	comp=Z,73nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,550nm,5.8s						
MDJ	Mudanjiang	78.75	325	eP	P	01 35 04.5	+1.1
	comp=Z,48nm,0.9s						
BEKR	Beckworth	78.77	41	eP	P	01 35 04.8	+1.0
	comp=Z,34nm,0.7s						
BEKR				epP	pwP	01 36 59.4	+0.1
PNTR	Pine Nut	78.81	42	eP	P	01 35 05.4	+1.3
	comp=Z,105nm,0.8s						
PNTR				epP	pwP	01 37 00.7	+1.3
HUMO	Hull Mountain	78.82	38	eP	P	01 35 05.3	+1.5
	comp=Z,32nm,0.8s						
GLA	Glamis	78.85	50	eP	P	01 35 06.0	+1.7
	comp=Z,52nm,0.9s						
GLA	Glamis	78.85	50	eP	P	01 35 06.0	+1.7
GLA				pmax	pmax		
	comp=Z,52nm,0.9s						
GLA	Glamis	78.85	50	P	P	01 35 05.9	+1.7
	baz=240,SNR=18						
VCNR	Virginia City	78.89	42	eP	P	01 35 05.6	+1.0
	comp=Z,34nm,0.8s						
L04D	Klamath Falls	78.97	39	P	P	01 35 05.8	+1.0
	baz=233,SNR=17						
YERR	Yerington	78.98	43	eP	P	01 35 06.1	+1.1
	comp=Z,74nm,0.7s						
YERR				epP	pwP	01 37 00.8	+0.7
M04C	Macdoel	78.98	39	P	P	01 35 06.0	+1.1
	baz=233,SNR=15						
GRAC	Grapevine Rang	79.12	45	P	P	01 35 07.0	+1.4
	baz=237,SNR=14						
GMRC	Granite Mounta	79.13	48	P	P	01 35 06.9	+1.0
	baz=239,SNR=15						
IRM	Iron Mountain	79.18	49	P	P	01 35 07.3	+1.3
	baz=239,SNR=29						
FURC	Furnace Creek,	79.18	46	P	P	01 35 06.9	+1.1
	baz=238,SNR=7.3						
I02D	Swisshome	79.23	36	P	P	01 35 07.0	+1.1
	baz=232						
RYN	Ryan	79.25	43	eP	P	01 35 07.4	+1.0
	comp=Z,32nm,1.0s						
RYN				epP	pwP	01 37 03.0	+1.2
I03D	Drain, OR	79.26	37	P	P	01 35 07.1	+1.0
	baz=232,SNR=5.7						
NV01	Mina Array Sit	79.28	44	eP	P	01 35 07.2	+0.5
NV01				epP	pP	01 36 58.3	-0.1
NVAR	Mina Array Bea	79.28	44	P	P	01 35 07.7	+1.0
	comp=Z,40nm,0.7s,baz=224,slow=8.7,SNR=251						
NVAR				pP	pP	01 36 58.3	-0.1
	comp=Z,10nm,1.1s,baz=226,slow=4.9,SNR=2.6						
NVAR				PKKPbc	PKKPbc	01 53 54.4	+0.6
	comp=Z,1.1nm,0.5s,baz=61,slow=5.1,SNR=9.7						
NVAR				PKPPKP	P'P'df	02 01 55.9	+0.7
	comp=Z,2.3nm,0.9s,baz=79,slow=3.7,SNR=9.6						
SHOC	Shoshone, Teco	79.28	47	P	P	01 35 07.4	+0.9
	baz=238,SNR=8.6						
TUQ	Turquoise Moun	79.29	47	P	P	01 35 07.6	+0.9
	baz=239,SNR=14						
PAHR	Pah Rah Range	79.30	42	eP	P	01 35 07.6	+1.0
	comp=Z,40nm,0.9s						
PAHR				epP	pwP	01 37 02.7	+0.5
NV11	Mina Array Sit	79.38	44	eP	P	01 35 08.2	+1.1
	comp=Z,5.1nm,1.2s						
NV11				epP	pwP	01 37 03.2	+0.6
Y12C	Blythe	79.42	49	eP	P	01 35 08.7	+1.5
	comp=Z,34nm,0.8s						
Y12C	Blythe	79.42	49	P	P	01 35 08.6	+1.4
	baz=240,SNR=20						
MYKOM	Kota Tinggi	79.46	275	eP	P	01 35 08.0	+0.1
	comp=Z,211nm,1.0s						
113A	Mohawk Valley,	79.48	50	eP	P	01 35 09.1	+1.5
	comp=Z,31nm,0.8s						
K04D	Chiloquin, OR	79.54	39	P	P	01 35 08.9	+1.1
	baz=233						
GRNR	Gornyy	79.56	332	eP	P	01 35 08.0	+0.4
GRNR				pmax	pmax		
	comp=Z,23nm,1.0s						
NKL	Nikolayevsk	79.58	336	eP	P	01 35 06.8	-0.8
NKL				pmax	pmax		
	comp=Z,66nm,0.9s						
LDFC	Landfair	79.67	48	eP	P	01 35 10.3	+1.6
	comp=Z,59nm,0.7s						
J04D	Umpqua Nationa	79.70	38	P	P	01 35 09.9	+1.2
	baz=233,SNR=35						
KVN	Kaiserville	79.76	43	eP	P	01 35 10.1	+0.9
	comp=Z,39nm,0.8s						
KVN	Kaiserville	79.76	43	eP	P	01 35 10.1	+0.9
KVN				pmax	pmax		
	comp=Z,39nm,0.8s						
214A	Organ Pipe Nat	79.79	52	P	P	01 35 10.7	+1.4
	baz=241,SNR=14						
HSIG		79.83	55	eP	P	01 35 10.6	+1.1
	comp=Z,17nm,0.8s						
TPNV	Topopah Spring	79.85	46	eP	P	01 35 10.8	+1.1
	comp=Z,61nm,1.4s						
TPNV	Topopah Spring	79.85	46	eP	P	01 35 10.8	+1.1
TPNV				pmax	pmax		
	comp=Z,61nm,1.4s						
TPNV	Topopah Spring	79.85	46	P	P	01 35 10.7	+1.1
	baz=238,SNR=32						
I04A	Tendick Farm,	79.86	37	P	P	01 35 09.9	+0.5
	baz=233,SNR=16						
PDMCI	Parker Dam,Lak	79.97	49	P	P	01 35 11.4	+1.3
	baz=240,SNR=11						
MOD	Modoc Plateau	79.98	40	eP	P	01 35 11.3	+1.1
	comp=Z,60nm,0.6s						
MOD				epP	pwP	01 37 06.1	+0.1
QIZ	Qiongzhong	80.07	294	P	P	01 35 11.5	+0.6
QIZ				pP	pP	01 37 01.5	-1.6
QIZ				sP	sP	01 37 55.7	-1.0
QIZ				S	S	01 44 34.5	+1.9
QIZ				pmax	pmax		
	comp=Z,72nm,0.9s						
QIZ	Qiongzhong	80.07	294	eP	P	01 35 12.2	+1.2
	comp=Z,66nm,1.0s						
H04D	Lebanon	80.11	37	P	P	01 35 11.7	+1.1
	baz=232,SNR=9.9						
DL2	Dalian	80.19	316	⇓iP	P	01 35 11.7	+0.6
DL2				sP	sP	01 38 01.4	+3.6
DL2				S	S	01 44 35.8	+2.9
DL2				SS	SS	01 49 58.7	-0.5
DL2				pmax	pmax		
	comp=Z,100nm,0.8s						
DL2				pmax	pmax		
	comp=Z,510nm,4.2s						
J05D	Fort Rock, OR	80.23	38	P	P	01 35 12.8	+1.3
	baz=234,SNR=86						
G03D	McMinnville, O	80.24	36	P	P	01 35 12.0	+0.7
	baz=232						
SHPR	Sheep Range	80.37	47	eP	P	01 35 13.7	+1.3
	comp=Z,20nm,1.1s						
SHPR				epP	pP	01 37 05.8	+0.9
H04A	Detroit Lake	80.52	37	eP	P	01 35 13.4	+0.6
	comp=Z,54nm,0.7s						
H04A				epP	pwP	01 37 10.4	+2.5
W13A	Hualapai Mount	80.55	48	eP	P	01 35 15.0	+1.6
	comp=Z,9.2nm,0.8s						
W13A				epP	pP	01 37 06.8	+1.1
SNY	Shenyang	80.57	320	⇓P	P	01 35 13.4	+0.4
SNY				S	S	01 44 42.2	+5.5
SNY				pmax	pmax		
	comp=Z,47nm,1.5s						
SNY				pmax	pmax		
	comp=Z,310nm,8.2s						
CN2	Changchun	80.60	322	eP	P	01 35 13.7	+0.6
CN2				epP	pP	01 37 10.4	+4.2
CN2				esP	sP	01 38 01.9	+2.0
CN2				eS	S	01 44 36.7	-0.2
CN2				pmax	pmax		
	comp=Z,90nm,1.3s						
CN2				pmax	pmax		
	comp=Z,500nm,3.0s						
Y14A	Wickenburg	80.61	50	eP	P	01 35 14.8	+1.3
	comp=Z,28nm,1.0s						
KLR	Kul'dur	80.65	329d	iP	P	01 35 13.3	0.0
KLR	Kul'dur	80.65	329	P	P	01 35 13.8	+0.5
	comp=Z,7.0nm,0.6s,baz=107,slow=3.8,SNR=28						
PINE	Pine Mountain	80.71	38	eP	P	01 35 15.0	+1.0
	comp=Z,98nm,0.9s						
PINE				epP	pwP	01 37 10.1	0.0
BRLK	Bradley Lake	80.75	13	eP	P	01 35 13.4	-0.3
	comp=Z,83nm,0.8s						
I05D	Terrebonne, OR	80.80	37	P	P	01 35 15.1	+0.8
	baz=233,SNR=21						
F04D	Rainier, OR	80.92	35	P	P	01 35 16.1	+1.4
	baz=232,SNR=6.4						
R11A	Troy Canyon, C	81.04	45	eP	P	01 35 16.4	+0.5
	comp=Z,19nm,0.9s						
R11A	Troy Canyon, C	81.04	45	P	P	01 35 16.5	+0.7
	baz=238,SNR=38						
SVW2	Sparrevohn	81.05	11	eP	P	01 35 14.5	-0.6
	comp=Z,17nm,0.7s						
BMN	Battle Mountai	81.08	42	eP	P	01 35 17.0	+1.0
	comp=Z,54nm,0.9s						
BMN	Battle Mountai	81.08	42	eP	P	01 35 17.0	+1.0
BMN				pmax	pmax		
	comp=Z,54nm,0.9s						
WHN	Wuhan	81.22	306	⇓P	P	01 35 17.5	+0.8
WHN				sP	sP	01 38 03.3	-0.5
WHN				S	S	01 44 44.0	+0.2
WHN				pmax	pmax		
	comp=Z,950nm,5.2s						
NLWA	Neilton Lookou	81.27	34	eP	P	01 35 17.8	+1.2
	comp=Z,66nm,1.1s						
WVOR	Wild Horse Val	81.30	40	eP	P	01 35 17.9	+0.9
	comp=Z,80nm,1.0s						
WVOR				epP	pwP	01 37 12.7	-0.6
G05D	Wamic, OR	81.35	37	P	P	01 35 17.9	+0.8
	baz=233,SNR=9.9						
SEW	Seward	81.38	14	eP	P	01 35 16.5	-0.3
	comp=Z,37nm,0.8s						
E04D	Cinebar	81.45	35	P	P	01 35 18.7	+1.2
	baz=232,SNR=10						
TUC	Tucson	81.47	52	eP	P	01 35 20.0	+2.0
	comp=Z,54nm,0.9s						
TUC				epP	pwP	01 37 12.4	-1.1
TUC	Tucson	81.47	52	P	P	01 35 20.0	+2.0
	baz=242						
MA2	Magadan	81.64	344	eP	P	01 35 17.1	-1.1
	comp=Z,28nm,0.8s						
MA2	Magadan	81.64	344c	eP	P	01 35 17.1	-1.1
MA2				pmax	pmax		
	comp=Z,33nm,0.9s						
F05D	White Salmon	81.66	36	P	P	01 35 19.3	+0.8
	baz=233,SNR=14						
BKNI	Bangkinang	81.66	273	eP	P	01 35 20.2	+0.9
	comp=Z,476nm,1.1s						
PPSI	Pulau Pagai	81.68	270	P	P	01 35 19.6	+0.1
	comp=Z,493nm,1.6s,comp=Z,5µm						
I07A	Izee	81.72	38	eP	P	01 35 20.3	+1.2
	comp=Z,76nm,0.8s						
I07A				epP	pwP	01 37 16.7	+1.1
D03D	Eldon	81.78	34	P	P	01 35 20.2	+1.1
	baz=232,SNR=6.5						
PDSI	Padang	81.82	272	P	P	01 35 18.9	-1.3
	comp=Z,262nm,0.9s,comp=Z,3µm						
TIA	Tai'an	81.86	312	P	P	01 35 20.2	+0.4
TIA				pmax	pmax		
	comp=Z,30nm,0.9s						
GAMB	Gambell	81.87	3	eP	P	01 35 19.6	+0.4
	comp=Z,47nm,0.6s						
COCO	West Island	81.89	260	eP	P	01 35 21.9	+1.4
	comp=Z,165nm,0.8s						
COCO	West Island	81.89	260c	eP	P	01 35 22.4	+1.9
J08A	Circle Bar Ran	81.92	39	eP	P	01 35 20.7	+0.6
	comp=Z,138nm,1.3s						
J08A				epP	pwP	01 37 16.8	+0.3
LCMT	Little Creek M	81.95	47	eP	P	01 35 21.8	+1.3
	comp=Z,40nm,0.8s						
X16A	Lo Mia Camp, P	81.97	50	eP	P	01 35 22.5	+1.8
	comp=Z,48nm,1.0s						
LON	Longmire	81.98	35	eP	P	01 35 20.5	+0.2
	comp=Z,19nm,0.6s						
LON	Longmire	81.98	35	eP	P	01 35 20.5	+0.2
LON				pmax	pmax		
	comp=Z,19nm,0.6s						
PPI	Padang Panjang	82.03	272	P	P	01 35 20.2	-1.0
	comp=Z,118nm,0.8s						
CCUT	Cedar City	82.14	46	eP	P	01 35 23.1	+1.5
	comp=Z,43nm,0.8s						

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D05A  Enumclaw          82.15  35 eP       P        01 35 22.3 +1.2
      comp=Z,61nm,0.8s
319A  Douglas           82.18  53 eP       P        01 35 23.9 +2.2
      comp=Z,92nm,0.9s
RC01  Rabbit Creek A    82.20  13 eP       P        01 35 20.5 -0.5
      comp=Z,50nm,1.0s
KNB   Kanab             82.25  47 eP       P        01 35 23.6 +1.5
      comp=Z,46nm,0.8s
PGC   Sidney            82.28  33 eP       P        01 35 22.4 +0.8
      comp=Z,49nm,0.7s
PSUT  Pine Spring       82.30  45 eP       P        01 35 23.3 +1.0
      comp=Z,38nm,0.7s
SUA   Susitna One       82.32  13 eP       P        01 35 21.1 -0.7
      comp=Z,94nm,0.6s
U15A  North Rim         82.33  48 eP       P        01 35 24.3 +1.7
      comp=Z,89nm,0.7s
U15A                              epP      pwP      01 37 17.6 -0.8
SZCU  Shurtz Canyon     82.35  46 eP       P        01 35 24.0 +1.4
      comp=Z,35nm,0.9s
ELK   Elko              82.52  43 eP       P        01 35 24.4 +0.9
      comp=Z,37nm,0.8s
ELK                               epP      pwP      01 37 20.9 +1.1
ELK   Elko              82.52  43  PKKPbc  PKKPbc   01 53 46.2 -0.3
      comp=Z,1.3nm,0.8s,baz=304,slow=4.1,SNR=6.3
F07A  Phinny Hill Vi    82.53  37 eP       P        01 35 23.9 +0.9
      comp=Z,54nm,0.8s
WUAZ  Wupatki           82.54  49 eP       P        01 35 25.0 +1.4
      comp=Z,52nm,1.0s
WUAZ  Wupatki           82.54  49  P       P        01 35 24.8 +1.2
      baz=242,SNR=37
A04D  Lummi Island      82.71  33  P       P        01 35 24.9 +1.1
      baz=232,SNR=9.1
G08A  Pilot Rock        82.73  38 eP       P        01 35 25.0 +0.8
      comp=Z,88nm,1.1s
B05A  Bryant            82.75  34  P       P        01 35 24.8 +0.8
      baz=232,SNR=37
KNK   Knik Glacier      82.77  14 eP       P        01 35 23.5 -0.4
      comp=Z,53nm,0.7s
PMR   Palmer            82.78  13 eP       P        01 35 23.2 -0.6
      comp=Z,54nm,0.5s
PMR   Palmer            82.78  13 eP       P        01 35 23.2 -0.6
PMR                                pmax    pmax
      comp=Z,54nm,0.5s
PKCU  Pink Cliffs       82.81  47 eP       P        01 35 27.1 +2.0
      comp=Z,80nm,0.9s
HMT   Hamilton          82.86  16 eP       P        01 35 24.1 -0.3
      comp=Z,67nm,1.0s
IPM   Ipoh              82.99 277 eP       P        01 35 26.9 +0.8
      comp=Z,366nm,0.8s
SISI  Saibi             83.00 271  P       P        01 35 26.7 +0.6
      comp=Z,155nm,0.8s,comp=Z,2µm
HAWA  Hanford           83.04  36 eP       P        01 35 26.6 +1.1
      comp=Z,72nm,0.8s
ANM   Nome              83.08   5 eP       P        01 35 25.6 +0.3
      comp=Z,12nm,0.6s
X18A  Snowflake         83.11  50 eP       P        01 35 28.0 +1.5
      comp=Z,26nm,0.7s
HPIG                    83.13  59 eP       P        01 35 28.4 +1.6
      comp=Z,79nm,1.5s
SML   Sawmill           83.15  14 eP       P        01 35 25.0 -0.8
      comp=Z,24nm,0.7s
SML   Sawmill           83.15  14 eP       P        01 35 25.0 -0.8
SML                                pmax    pmax
      comp=Z,24nm,0.7s
DIV   Divide            83.16  15 eP       P        01 35 25.6 -0.3
      comp=Z,75nm,0.7s
C06D  Leavenworth       83.19  35  P       P        01 35 26.5 +0.2
      baz=233,SNR=8.6
MNSI  Mandailing Nat    83.19 273  P       P        01 35 26.3 -0.8
      comp=Z,164nm,1.0s,comp=Z,2µm
MTPU  Mount Pierson     83.19  46 eP       P        01 35 28.9 +1.9
      comp=Z,49nm,0.8s
B06A  Marblemount       83.23  34 eP       P        01 35 26.8 +0.4
      comp=Z,40nm,1.0s
PPLA  Purkeypile        83.33  12 eP       P        01 35 25.6 -1.2
      comp=Z,23nm,0.7s
E08A  Dider Farm, El    83.36  37 eP       P        01 35 28.1 +0.9
      comp=Z,60nm,0.6s
SCM   Sheep Creek Mo    83.40  14 eP       P        01 35 26.9 -0.2
      comp=Z,134nm,0.6s
SCM   Sheep Creek Mo    83.40  14 eP       P        01 35 26.9 -0.2
SCM                                pmax    pmax
      comp=Z,134nm,0.6s
MSU   Marysvale         83.43  46 eP       P        01 35 29.5 +1.5
KLU   Klutina           83.44  15 eP       P        01 35 27.0 -0.3
      comp=Z,84nm,1.4s
BMO   Blue Mountains    83.45  39 eP       P        01 35 28.4 +0.6
      comp=Z,26nm,0.8s
BMO                               epP      pwP      01 37 24.0 -0.9
BMO   Blue Mountains    83.45  39 eP       P        01 35 28.4 +0.6
BMO                               e*PP     pwP      01 37 24.0 -0.9
BMO                                pmax    pmax
      comp=Z,26nm,0.8s
W18A  Petrified Fore    83.54  50 eP       P        01 35 29.9 +1.2
      comp=Z,60nm,1.4s
W18A  Petrified Fore    83.54  50  P       P        01 35 29.8 +1.2
      baz=243,SNR=18
WRAK  Wrangell Islan    83.58  24 eP       P        01 35 28.7 +0.7
      comp=Z,43nm,0.8s
KULM  Kulim             83.61 278 eP       P        01 35 28.8 -0.4
      comp=Z,390nm,1.4s
MAW   Mawson            83.75 200 eP       P        01 35 30.1 +1.4
      comp=Z,20nm,1.0s
MAW   Mawson            83.75 200  P       P        01 35 30.1 +1.4
      comp=Z,35nm,0.7s,baz=172,slow=2.9,SNR=11
D08A  Wollman Farm,     83.77  36 eP       P        01 35 30.1 +1.0
      comp=Z,58nm,0.8s
CAST  Castle Rocks      83.83  11 eP       P        01 35 27.4 -1.8
      comp=Z,86nm,0.7s
DUG   Dugway, Tooele    83.83  44 eP       P        01 35 30.4 +0.6
      comp=Z,16nm,1.1s
DUG   Dugway, Tooele    83.83  44 eP       P        01 35 30.4 +0.6
DUG                                pmax    pmax
      comp=Z,16nm,1.1s
DUG   Dugway, Tooele    83.83  44  P       P        01 35 30.4 +0.6
      baz=240,SNR=20
121A  Cookes Peak, D    83.83  53  P       P        01 35 31.9 +1.8
      baz=244,SNR=18
E09A  Wood Farm, Sta    83.89  37 eP       P        01 35 30.3 +0.5
      comp=Z,19nm,0.7s
BGU   Big Grassy Mou    84.05  44 eP       P        01 35 31.8 +0.9
      comp=Z,6.0nm,1.0s
ZAIG  Zacatecas         84.07  64 eP       P        01 35 33.7 +2.1
      comp=Z,20nm,1.0s
F10A  Beach Ranch, E    84.12  38 eP       P        01 35 31.5 +0.4
      comp=Z,82nm,0.9s
PBSI  Pulau Batu        84.16 272  P       P        01 35 32.6 +0.7
      comp=Z,99nm,1.4s
NLU   North Lily Min    84.20  45 eP       P        01 35 32.9 +1.1
      comp=Z,5.4nm,0.8s
SEY   Seymchan          84.20 347ceP       P        01 35 30.3 -0.6
SEY                               i *PP    pwP      01 37 26.8 -0.3
TRF   Thorofare Moun    84.20  12 eP       P        01 35 30.2 -1.0
      comp=Z,121nm,0.8s
JIS   Juneau Island     84.22  21 eP       P        01 35 31.9 +0.8
      comp=Z,26nm,0.8s
SKLT  Songkhla          84.24 279  P       P        01 35 33.9 +1.6
B08A  Colville Reser    84.29  35 eP       P        01 35 31.9 +0.1
      comp=Z,49nm,0.8s
LLLB  Lillooet          84.30  32 eP       P        01 35 32.0 +0.3
      comp=Z,58nm,1.2s
Q16A  Castle Valley     84.31  46 eP       P        01 35 33.9 +1.5
      comp=Z,20nm,1.1s
BJT   Baijiatuau        84.38 315 eP       P        01 35 33.1 +0.8
      comp=Z,253nm,1.3s
BJI   Beijing           84.38 315  P       P        01 35 33.1 +0.7
BJI                                S       S        01 45 18.4 +3.7
BJI                                pmax    pmax
      comp=Z,89nm,1.1s
HARP  HAARP             84.41  15 eP       P        01 35 32.2 +0.2
      comp=Z,98nm,0.8s
PSI   Prapat            84.44 275 eP       P        01 35 32.5 -1.0
      comp=Z,309nm,0.8s
PSI   Prapat            84.44 275  P       P        01 35 33.2 -0.3
      comp=Z,277nm,0.8s,baz=178,slow=0.5,SNR=17
RND   Reindeer          84.46  13 eP       P        01 35 31.7 -0.6
      comp=Z,131nm,0.6s
RND   Reindeer          84.46  13 eP       P        01 35 31.7 -0.6
RND                                pmax    pmax
      comp=Z,131nm,0.6s
TMUT  Trail Mountain    84.47  46 eP       P        01 35 34.7 +1.4
      comp=Z,92nm,1.4s
SKNT  Sakolnakorn       84.48 290  P       P        01 35 33.8 +0.5
DHY   Denali Highway    84.48  13 eP       P        01 35 32.0 -0.5
      comp=Z,32nm,0.7s
HLID  Hailey            84.52  41 eP       P        01 35 34.3 +1.1
      comp=Z,33nm,0.8s
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MPU   Maple Canyon      84.53  45 eP       P        01 35 34.7 +1.3
      comp=Z,13nm,1.0s
C09A  Chrisman Ranch    84.55  36 eP       P        01 35 33.6 +0.6
      comp=Z,36nm,0.7s
SPUT  South Promonto    84.62  43 eP       P        01 35 34.9 +1.1
      comp=Z,15nm,0.8s
HVU   Hansel Valley     84.65  43 eP       P        01 35 34.6 +0.8
      comp=Z,22nm,1.1s
BPAW  Bear Paw Mtn.     84.66  11 eP       P        01 35 31.4 -1.8
      comp=Z,23nm,0.6s
MCK   McKinley          84.73  12 eP       P        01 35 32.7 -0.9
      comp=Z,126nm,1.2s
MCK                               epP      pP       01 37 28.1 +0.8
MCK   McKinley          84.73  12 eP       P        01 35 32.7 -0.9
MCK                               e*PP     pP       01 37 28.1 +0.8
MCK                                pmax    pmax
      comp=Z,126nm,1.2s
CTU   Camp Tracy        84.78  44 eP       P        01 35 35.6 +1.1
      comp=Z,14nm,0.8s
SKAG  Skagway           84.81  20 eP       P        01 35 35.0 +1.0
      comp=Z,28nm,0.9s
SRU   San Rafael Swe    84.85  46 eP       P        01 35 35.8 +0.9
      comp=Z,32nm,0.7s
SRU                               epP      pwP      01 37 32.2 +0.5
SRU   San Rafael Swe    84.85  46 eP       P        01 35 35.8 +0.9
SRU                               e*PP     pwP      01 37 32.2 +0.5
SRU                                pmax    pmax
      comp=Z,32nm,0.7s
ENH   Enshi             84.89 304 eP       P        01 35 36.1 +1.0
      comp=Z,561nm,0.8s
JLU   Jordanelle        84.94  44 eP       P        01 35 36.1 +0.7
      comp=Z,11nm,0.8s
LAZ   Ladron            85.13  52 eP       P        01 35 37.6 +1.2
LAZ                               epP      pwP      01 37 31.9 -1.5
LENM  Lemitar           85.15  52 eP       P        01 35 37.7 +1.2
LENM                              epP      pwP      01 37 33.5 -0.1
HYT   Haines Junctio    85.18  19 eP       P        01 35 36.3 +0.3
      comp=Z,35nm,0.8s
SRAK  Srakaew           85.20 286  P       P        01 35 35.5 -1.4
TCUT  Toone Canyon      85.21  44 eP       P        01 35 37.7 +0.9
      comp=Z,52nm,0.8s
TCUT                              epP      pwP      01 37 34.0 -0.4
GSI   Gunungsitoli      85.25 273 eP       P        01 35 38.5 +1.2
      comp=Z,504nm,0.9s
GSI   Gunungsitoli      85.25 273  P       P        01 35 38.2 +0.9
      comp=Z,671nm,1.1s,comp=Z,7µm
MNTX  Cornudas Mount    85.32  55 eP       P        01 35 38.6 +1.4
      comp=Z,33nm,1.0s
MNTX                              epP      pwP      01 37 32.6 -1.5
MNTX  Cornudas Mount    85.32  55  P       P        01 35 38.6 +1.4
      baz=245,SNR=36
TRTT  Trang             85.33 280  P       P        01 35 39.1 +1.5
PV05  Paradox Valley    85.35  48 eP       P        01 35 38.5 +1.0
      comp=Z,25nm,0.7s
PV05                              epP      pP       01 37 32.8 +1.3
MVCO  Mesa Verde        85.38  49 eP       P        01 35 38.2 +0.5
      comp=Z,5.8nm,0.7s
MVCO  Mesa Verde        85.38  49  P       P        01 35 38.1 +0.5
      baz=243,SNR=6.0
BNM   Barren Site       85.41  52 eP       P        01 35 38.9 +1.1
BNM                               epP      pwP      01 37 33.5 -1.5
NEW   Newport           85.45  36 eP       P        01 35 37.5  0.0
      comp=Z,22nm,0.8s
NEW   Newport           85.45  36 eP       P        01 35 37.5  0.0
NEW                                pmax    pmax
      comp=Z,22nm,0.8s
NEW   Newport           85.45  36  P       P        01 35 37.4  0.0
      baz=236,SNR=31
LPM   Los Pinos Moun    85.47  52 eP       P        01 35 39.5 +1.4
PV09  Paradox Valley    85.52  47 eP       P        01 35 39.2 +0.8
PV09                              epP      pP       01 37 33.0 +0.5
PV10  Paradox Valley    85.53  47 eP       P        01 35 39.2 +0.8
      comp=Z,30nm,0.7s
PV19  Morning Glory     85.54  47 eP       P        01 35 39.4 +1.1
      comp=Z,20nm,0.8s
PV19                              epP      pP       01 37 33.3 +0.8
PV14  Lion Creek, Pa    85.54  47 eP       P        01 35 39.1 +0.7
      comp=Z,22nm,0.8s
PV14                              epP      pP       01 37 33.2 +0.8
PV17  East Wray Mesa    85.54  47 eP       P        01 35 39.1 +0.8
      comp=Z,18nm,0.7s
PV17                              epP      pP       01 37 32.7 +0.2
MLY   Manley            85.55  11 eP       P        01 35 36.2 -1.3
      comp=Z,23nm,0.6s
MLY                               epP      pP       01 37 31.9 +0.4
WRH   Wood River Hil    85.56  12 eP       P        01 35 36.8 -0.8
      comp=Z,80nm,0.8s
PV20  West Nyswonger    85.57  47 eP       P        01 35 39.3 +0.9
      comp=Z,20nm,0.9s
PV20                              epP      pP       01 37 33.8 +1.3
PV13  Radium Mtn., P    85.59  48 eP       P        01 35 39.2 +0.7
      comp=Z,9.7nm,0.9s
PV23  Carpenter Ridg    85.59  47 eP       P        01 35 39.5 +0.9
      comp=Z,34nm,0.7s
PV16  Nyswonger Mesa    85.59  47 eP       P        01 35 39.5 +0.9
      comp=Z,18nm,1.0s
NONG  Nongkai           85.61 291  P       P        01 35 39.5 +0.7
PV03  Paradox Valley    85.61  47 eP       P        01 35 39.5 +0.9
      comp=Z,17nm,1.3s
PV03                              epP      pP       01 37 33.5 +0.7
PV11  David Mesa, Pa    85.61  47 eP       P        01 35 39.6 +1.0
      comp=Z,40nm,1.3s
RIDG  Independ'e Rid    85.63  14 eP       P        01 35 37.6 -0.4
      comp=Z,48nm,0.8s
PV04  Paradox Valley    85.63  47 eP       P        01 35 39.7 +0.9
      comp=Z,24nm,0.7s
GYA   Guiyang           85.66 300⇓iP       P        01 35 40.0 +1.0
GYA                                pP      pwP      01 37 35.8 +0.1
GYA                                sP      sP       01 38 28.0 +1.6
GYA                                PP      PP       01 39 10.5 +2.6
GYA                                SKS     SKSac    01 45 13.3 -1.4
GYA                                S       S        01 45 27.6 -0.3
GYA                                sS      sS       01 48 51.4  0.0
GYA                                pmax    pmax
      comp=Z,180nm,1.0s
GYA                                pmax    pmax
      comp=Z,210nm,5.4s
PV21  Cone Mtn., Par    85.66  47 eP       P        01 35 39.9 +0.9
      comp=Z,26nm,0.7s
PV02  Paradox Valley    85.67  48 eP       P        01 35 39.9 +0.9
      comp=Z,13nm,0.8s
PV02                              epP      pwP      01 37 35.4 -0.6
PV12  Saucer Basin,     85.67  47 eP       P        01 35 39.8 +0.8
      comp=Z,27nm,0.6s
PV12                              epP      pP       01 37 34.0 +0.9
LTX   Lajitas           85.71  57 eP       P        01 35 41.4 +2.2
TX31  Lajitas Ar. Si    85.71  57 eP       P        01 35 41.3 +2.1
TXAR  Lajitas Array     85.71  57  P       P        01 35 41.4 +2.2
TXAR                               pmax    pmax
      comp=Z,65nm,0.8s
TXAR  Lajitas Array     85.71  57  P       P        01 35 41.4 +2.2
      comp=Z,63nm,0.8s,baz=224,slow=5.0,SNR=179
TXAR                               PKKPbc  PKKPbc   01 53 39.2 +0.9
      comp=Z,1.0nm,0.5s,baz=128,slow=2.8,SNR=13
TXAR                               PKPPKP           02 01 45.0
      comp=Z,1.2nm,0.9s,baz=93,slow=2.6,SNR=5.8
ZEA   Zeya              85.72 331 eP       P        01 35 38.4 -0.1
ZEA                               e                 01 45 27.0
ZEA                                pmax    pmax
      comp=N,52nm,0.8s
ZEA                                pmax    pmax
      comp=Z,72nm,0.8s
HDA   Harding Lake      85.74  13 eP       P        01 35 37.8 -0.7
      comp=Z,63nm,0.8s
HDA   Harding Lake      85.74  13  P       P        01 35 37.7 -0.7
      baz=209,SNR=69
PV01  Paradox Valley    85.75  48 eP       P        01 35 40.1 +0.7
      comp=Z,20nm,0.8s
PV01                              epP      pP       01 37 34.3 +0.8
KCSI  Kotacane, Aceh    85.76 275  P       P        01 35 39.5 -0.2
      comp=Z,241nm,0.9s,comp=Z,2µm
PV07  Paradox Valley    85.83  47 eP       P        01 35 40.7 +1.0
      comp=Z,13nm,0.8s
WHY   Whitehorse        85.87  20 eP       P        01 35 39.7 +0.5
      comp=Z,29nm,0.7s
ANMO  Albuquerque       85.87  51 eP       P        01 35 40.8 +0.8
      comp=Z,24nm,0.9s
ANMO                              epP      pP       01 37 35.0 +0.9
ANMO  Albuquerque       85.87  51deP       P        01 35 40.8 +0.8
ANMO                               pmax    pmax
      comp=Z,28nm,1.0s
ANMO  Albuquerque       85.87  51  P       P        01 35 40.8 +0.8
      baz=245
TIY   Taiyuan           85.88 312 eP       P        01 35 40.8 +1.0
TIY                                S       S        01 45 33.4 +4.0
TIY                                pmax    pmax
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      comp=Z,140nm,0.7s
CHAI  Chaiyaphum        85.90 288  P       P        01 35 40.8 +0.6
IM3   Indian Mountai    85.90  10 eP       P        01 35 37.8 -1.3
IM3                               epP      pP       01 37 34.3 +1.0
PV15  Paradox Valley    85.91  48 eP       P        01 35 41.0 +0.9
      comp=Z,17nm,0.8s
DLBC  Dease Lake        85.91  23 eP       P        01 35 40.0 +0.6
      comp=Z,23nm,0.8s
PATY  Pattaya           85.91 285  P       P        01 35 42.3 +2.0
TCOL  CIGO, UAF Yank    85.96  12  P       P        01 35 38.5 -0.9
      baz=208,SNR=12
MDM   Murphy Dome       85.96  12 eP       P        01 35 38.3 -1.2
      comp=Z,45nm,0.8s
COLA  College           85.96  12 eP       P        01 35 38.5 -0.9
      comp=Z,61nm,0.7s
COLA  College           85.96  12 eP       P        01 35 38.5 -0.9
COLA                               pmax    pmax
      comp=Z,61nm,0.7s
SCRK  Sand Creek        86.03  14 eP       P        01 35 39.5 -0.4
      comp=Z,25nm,0.8s
IL1   Eielson Array     86.07  13 eP       P        01 35 38.0 -1.9
ILAR  Eielson Array     86.07  13  P       P        01 35 38.9 -1.1
      comp=Z,21nm,0.4s,baz=220,slow=5.2,SNR=541
ILAR                               pP      pP       01 37 34.4 +0.1
      comp=Z,12nm,1.0s,baz=232,slow=6.2,SNR=5.9
ILAR                               PKKPbc  PKKPbc   01 53 35.8 -3.2
      comp=Z,1.6nm,0.6s,baz=352,slow=2.5,SNR=7.2
ILB   Eielson Array     86.07  13 eP       P        01 35 38.9 -1.1
ILB                               epP      pP       01 37 34.4 +0.1
MCMT  McKenzie Canyo    86.13  40 eP       P        01 35 42.1 +1.1
AHID  Auburn Hatcher    86.21  43 eP       P        01 35 42.6 +1.2
      comp=Z,16nm,0.8s
POKR  Poker Plat Res    86.26  12  P       P        01 35 39.7 -1.1
      baz=209,SNR=34
GDL2  Guadalupe Moun    86.31  55 eP       P        01 35 43.6 +1.5
GDL2                              epP      pwP      01 37 40.5 +0.9
MSO   Missoula          86.50  38 eP       P        01 35 42.4 -0.1
      comp=Z,9.8nm,0.7s
MSO   Missoula          86.50  38  P       P        01 35 42.5 -0.1
      baz=239,SNR=15
DLMT  Dillon            86.55  40 eP       P        01 35 44.0 +1.1
      comp=Z,43nm,0.8s
PKDT  Phuket            86.62 279  P       P        01 35 45.3 +1.6
TPAW  Teton Pass        86.66  42 eP       P        01 35 43.6 -0.1
      comp=Z,34nm,1.0s
TPAW                              epP      pP       01 37 37.4 -0.4
REDW  Red Top Meadow    86.66  42 eP       P        01 35 44.0 +0.4
      comp=Z,52nm,1.1s
REDW                              epP      pP       01 37 38.7 +0.9
FXWY  Fox Creek         86.68  42 eP       P        01 35 43.9 +0.2
      comp=Z,19nm,1.0s
FXWY                              epP      pP       01 37 38.9 +1.0
CLNB  Carlsbad          86.72  55 epP      pP       01 37 36.8 -1.6
RDOG  Red Dog Mine      86.72   6 eP       P        01 35 43.1 +0.1
      comp=Z,11nm,0.8s
SNOW  Snow King Moun    86.77  42 eP       P        01 35 45.2 +1.1
      comp=Z,54nm,1.0s
SNSI  Sinabang, Aceh    86.78 274  P       P        01 35 45.8 +1.3
      comp=Z,448nm,1.4s,comp=Z,5µm
BILL  Bilibino          86.80 354 eP       P        01 35 41.5 -1.8
      comp=Z,24nm,0.7s
BILL  Bilibino          86.80 354deP       P        01 35 42.7 -0.6
BILL                               pmax    pmax
      comp=Z,27nm,0.8s
S22A  4UR Ranch, Cre    86.81  49 eP       P        01 35 45.6 +1.1
      comp=Z,24nm,0.9s
S22A                              epP      pP       01 37 40.0 +1.0
S22A  4UR Ranch, Cre    86.81  49  P       P        01 35 45.6 +1.1
      baz=244,SNR=36
IMW   Indian Meadow     86.86  42 eP       P        01 35 45.7 +1.1
      comp=Z,56nm,0.9s
IMW                               epP      pP       01 37 40.0 +1.1
LRM   Limekiln Ridge    86.87  40 eP       P        01 35 45.1 +0.6
XAN   Xi'an             86.88 307  P       P        01 35 45.4 +0.9
XAN                                sP      sP       01 38 35.5 +2.9
XAN                                SKS     SKSac    01 45 20.4 -1.2
XAN                                S       ScS      01 45 44.4 +0.2
XAN                                sS      sS       01 49 05.1 +2.0
XAN                                pmax    pmax
      comp=Z,360nm,1.2s
XAN                                pmax    pmax
      comp=Z,870nm,3.5s
XAN   Xi'an             86.88 307 eP       P        01 35 45.5 +0.9
      comp=Z,351nm,1.0s
O20A  White River Ci    86.88  46 eP       P        01 35 45.4 +0.7
      comp=Z,21nm,0.8s
O20A                              epP      pwP      01 37 43.0 +0.7
O20A  White River Ci    86.88  46  P       P        01 35 45.2 +0.6
      baz=243,SNR=17
MOOW  Moose Ponds       86.91  42 eP       P        01 35 45.4 +0.6
      comp=Z,14nm,0.9s
HIA   Hailar            86.94 324 eP       P        01 35 44.5 +0.1
      comp=Z,76nm,1.5s
HIA   Hailar            86.94 324 i P      P        01 35 44.5 +0.1
HIA                                pmax    pmax
      comp=Z,24nm,1.2s
LOHW  Long Hollow       86.94  42 eP       P        01 35 45.7 +0.8
      comp=Z,17nm,0.8s
LOHW                              epP      pP       01 37 39.9 +0.5
QLMT  Earthquake Lak    87.01  41 eP       P        01 35 46.8 +1.6
QLMT                              epP      pwP      01 37 44.0 +0.6
PRP   Porcupine Dome    87.01  13 eP       P        01 35 43.8 -0.8
      comp=Z,17nm,0.6s
PBKT  Sadao Pong        87.04 288 eP       P        01 35 47.1 +1.5
      comp=Z,139nm,1.0s
PBKT  Sadao Pong        87.04 288  P       P        01 35 46.8 +1.2
PHET  Kaeng Krachan     87.04 285  P       P        01 35 47.7 +2.0
LHMI  Lhok Sumawe       87.08 276 eP       P        01 35 46.9 +1.0
      comp=Z,548nm,1.0s
LHMI  Lhok Sumawe       87.08 276  P       P        01 35 46.9 +1.0
      comp=Z,627nm,1.0s,comp=Z,6µm
FLWY  Flagg Ranch       87.10  42 eP       P        01 35 47.1 +1.5
      comp=Z,56nm,0.9s
FLWY                              epP      pP       01 37 41.5 +1.5
YHB   Horse Butte       87.12  41 eP       P        01 35 47.3 +1.7
      comp=Z,69nm,1.0s
YHB                               epP      pP       01 37 42.0 +1.9
YPP   Pitchstone Pla    87.13  41 eP       P        01 35 47.5 +1.7
      comp=Z,13nm,1.3s
YFT   Old Faithful      87.19  41 eP       P        01 35 48.5 +2.4
      comp=Z,41nm,0.8s
BW06  Boulder Array     87.21  43 eP       P        01 35 46.5 +0.3
      comp=Z,26nm,0.8s
BW06  Boulder Array     87.21  43  P       P        01 35 46.5 +0.3
      baz=242,SNR=37
PD31  Pinedale Array    87.21  43 eP       P        01 35 46.5 +0.3
PD31                              epP      pP       01 37 40.4 -0.4
PDAR  Pinedale Array    87.21  43 eP       P        01 35 45.9 -0.2
PDAR  Pinedale Array    87.21  43  P       P        01 35 46.4 +0.3
      comp=Z,21nm,0.7s,baz=213,slow=2.9,SNR=196
PDAR                               pP      pP       01 37 40.4 -0.4
      comp=Z,2.9nm,0.9s,baz=226,slow=3.9,SNR=4.0
PDAR                               PKKPbc  PKKPbc   01 53 34.5 -1.1
      comp=Z,1.9nm,0.6s,baz=88,slow=4.8,SNR=11
PDAR                               PKPPKP  P'P'df   02 01 41.0 +0.4
      comp=Z,1.2nm,0.8s,baz=89,slow=4.7,SNR=5.8
YMR   Madison River     87.22  41 eP       P        01 35 48.0 +1.8
DAWY  Dawson            87.24  16 eP       P        01 35 45.6 +0.1
      comp=Z,54nm,1.2s
BOZ   Bozeman (W)       87.26  40 eP       P        01 35 47.2 +1.0
      comp=Z,46nm,1.1s
BOZ                               epP      pwP      01 37 45.3 +0.6
BOZ   Bozeman (W)       87.26  40  P       P        01 35 47.2 +1.0
BOZ   Bozeman (W)       87.26  40  P       P        01 35 47.2 +1.0
      baz=241,SNR=35
H17A  Grant Village     87.33  41 eP       P        01 35 49.1 +2.4
      comp=Z,45nm,0.8s
H17A  Grant Village     87.33  41  P       P        01 35 49.0 +2.2
      baz=241,SNR=39
SMCO  Snowmass          87.33  47 eP       P        01 35 47.7 +0.6
      comp=Z,16nm,0.7s
SMCO                              epP      pP       01 37 42.4 +0.7
YHH   Holmes Hill       87.35  41 eP       P        01 35 48.2 +1.4
      comp=Z,24nm,0.9s
YHH                               epP      pwP      01 37 43.9 -1.3
YNR   Norris Junctio    87.42  41 eP       P        01 35 49.3 +2.1
      comp=Z,32nm,1.1s
LNIG  Linares           87.50  63 eP       P        01 35 48.4 +0.7
      comp=Z,37nm,0.7s
LNIG                              epP      pwP      01 37 45.8 +0.6
LKWY  Lake              87.52  41 eP       P        01 35 50.0 +2.4
      comp=Z,42nm,0.8s
LKWY  Lake              87.52  41 eP       P        01 35 50.0 +2.4
LKWY                               pmax    pmax
      comp=Z,42nm,0.8s
COLD  Coldfoot          87.62  10 eP       P        01 35 47.6 +0.3
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             comp=Z,32nm,1.3s
WALA  Waterton Lakes    87.67  36 eP        P        01 35 48.5 +0.5
             comp=Z,25nm,0.8s
HRY   Holter Researc    87.69  39 eP        P        01 35 48.9 +0.8
HRY                               epP       pwP      01 37 46.5 -0.1
SDCO  Great Sand Dun    87.76  49 eP        P        01 35 49.8 +0.9
             comp=Z,10nm,0.8s
SDCO                              epP       pwP      01 37 46.3 -0.5
SDCO  Great Sand Dun    87.76  49  P        P        01 35 49.4 +0.5
             baz=245,SNR=11
UTTA  Uttaradit         87.81 289  P        P        01 35 50.3 +1.1
HHC   Hu-ho-hao-te      87.88 314 eP        P        01 35 50.2 +1.0
HHC                                pmax     pmax
             comp=Z,92nm,1.5s
HHC                                pmax     pmax
             comp=Z,150nm,5.2s
FYU   Fort Yukon        87.98  12 eP        P        01 35 48.0 -0.8
             comp=Z,21nm,0.6s
NANT  Nan               88.04 290  P        P        01 35 51.0 +0.7
UTHA  Uthaitani         88.09 287  P        P        01 35 51.9 +1.4
MSTX  Muleshoe          88.25  53 eP        P        01 35 51.8 +0.7
             comp=Z,40nm,0.6s
MSTX  Muleshoe          88.25  53  P        P        01 35 51.7 +0.7
             baz=247,SNR=20
RWWY  Rawlins           88.28  45 eP        P        01 35 50.8 -0.4
             comp=Z,52nm,1.3s
T25A  Trinidad          88.30  50 eP        P        01 35 52.0 +0.6
             comp=Z,18nm,0.8s
T25A  Trinidad          88.30  50  P        P        01 35 51.6 +0.2
             baz=246,SNR=13
KMI   Kunming           88.45 297  P        P        01 35 54.1 +1.7
KMI                                sP       sP       01 38 42.1 +1.5
KMI                                SKS      SKSac    01 45 30.9 -0.8
KMI                                S        S        01 45 52.7 -1.6
KMI                                sS       sS       01 49 18.0 -1.3
KMI                                SS       SS       01 51 59.2 -1.5
KMI                                pmax     pmax
             comp=Z,180nm,1.3s
KMI                                pmax     pmax
             comp=Z,580nm,3.1s
KMI   Kunming           88.45 297 eP        P        01 35 54.1 +1.7
             comp=Z,122nm,0.9s
RLMT  Red Lodge         88.50  41 eP        P        01 35 53.3 +1.2
             comp=Z,34nm,0.9s
RLMT  Red Lodge         88.50  41  P        P        01 35 53.3 +1.2
             baz=242,SNR=32
Q24A  Divide            88.53  48 eP        P        01 35 54.2 +1.6
             comp=Z,13nm,1.1s
Q24A  Divide            88.53  48  P        P        01 35 53.2 +0.7
             baz=245
ISCO  Idaho Springs     88.55  47 eP        P        01 35 53.7 +1.1
             comp=Z,19nm,1.5s
ISCO  Idaho Springs     88.55  47 eP        P        01 35 53.7 +1.1
ISCO                               pmax     pmax
             comp=Z,19nm,1.5s
ISCO  Idaho Springs     88.55  47  P        P        01 35 53.3 +0.7
             baz=245,SNR=7.2
SUKH  Sukhothai         88.55 289  P        P        01 35 54.0 +1.3
GCMT  Greycliff         88.56  41 eP        P        01 35 53.9 +1.6
BSI   Banda Aceh        88.72 276  P        P        01 35 53.5 -0.1
             comp=Z,309nm,1.1s,comp=Z,40µm
N23A  Red Feather La    88.79  46 eP        P        01 35 55.0 +1.3
             comp=Z,23nm,1.1s
N23A  Red Feather La    88.79  46  P        P        01 35 54.5 +0.9
             baz=245,SNR=13
833A  Chaparral WMA,    88.79  60 eP        P        01 35 55.2 +1.6
             comp=Z,31nm,1.0s
833A  Chaparral WMA,    88.79  60  P        P        01 35 54.8 +1.2
             baz=249
BTO   Baotou            88.83 314 eP        P        01 35 54.5 +0.9
UMPA  Umpang Tak        88.83 287  P        P        01 35 55.3 +1.3
TOLK  Toolik Lake Re    89.00  10 eP        P        01 35 53.1 -0.6
             comp=Z,17nm,0.6s
TOLK  Toolik Lake Re    89.00  10  P        P        01 35 53.5 -0.2
             baz=207
K22A  Casper            89.16  44 eP        P        01 35 55.8 +0.6
             comp=Z,44nm,1.3s
K22A  Casper            89.16  44  P        P        01 35 55.6 +0.4
             baz=244,SNR=10
JCT   Junction City     89.25  58 eP        P        01 35 56.8 +1.1
             comp=Z,27nm,0.8s
JCT   Junction City     89.25  58 eP        P        01 35 56.8 +1.1
JCT                                pmax     pmax
             comp=Z,27nm,0.8s
JCT   Junction City     89.25  58  P        P        01 35 56.5 +0.7
             baz=248
PHWY  Pilot Hill        89.30  46 eP        P        01 35 56.5 +0.5
             comp=Z,9.8nm,0.8s
AMTX  Amarillo          89.43  53 eP        P        01 35 57.1 +0.5
             comp=Z,27nm,0.8s
AMTX                              epP       pwP      01 37 56.9 +1.9
AMTX  Amarillo          89.43  53  P        P        01 35 57.0 +0.5
             baz=247
CM01  Chiang Mai Arr    89.47 289 eP        P        01 35 57.3 +0.3
CM31  Chiang Mai Arr    89.49 290 eP        P        01 35 58.8 +1.7
CM31                              ePP       PP       01 39 40.8 +2.6
CMAR  Chiang Mai Arr    89.49 290  P        P        01 35 58.6 +1.5
             comp=Z,130nm,0.9s,baz=110,slow=2.9,SNR=399
CMAR                               PP       PP       01 39 40.8 +2.6
             comp=Z,11nm,1.0s,baz=131,slow=6.0,SNR=6.8
CMAR                               PKKPbc   PKKPbc   01 53 29.6 +1.0
             comp=Z,1.6nm,0.6s,baz=292,slow=4.6,SNR=6.2
EGMT  Eagleton          89.56  39 eP        P        01 35 57.7 +0.9
             comp=Z,9.5nm,0.9s
EGMT  Eagleton          89.56  39  P        P        01 35 57.4 +0.6
             baz=242
CMMT  Chiang Mai        89.61 290  P        P        01 35 58.4 +0.8
CHTO  Chiang Mai        89.61 290 eP        P        01 35 58.8 +1.2
             comp=Z,169nm,0.8s
CHTO  Chiang Mai        89.61 290 eP        P        01 35 58.8 +1.2
CHTO                               pmax     pmax
             comp=Z,169nm,0.8s
CHTO  Chiang Mai        89.61 290  P        P        01 35 58.5 +0.9
             comp=Z,1µm,1.1s,comp=Z,9µm
CD2   Chengdu           89.69 303  P        P        01 35 58.9 +1.1
CD2                                pP       pP       01 37 55.0 +1.6
CD2                                sP       sP       01 38 48.4 +2.3
CD2                                PP       PP       01 39 40.1 +0.5
CD2                                SKS      SKSac    01 45 38.2 -0.1
CD2                                S        S        01 46 05.6 +0.6
CD2                                SS       SS       01 52 19.3 +1.4
CD2                                pmax     pmax
             comp=Z,110nm,0.8s
CD2                                pmax     pmax
             comp=Z,320nm,5.0s
EPYK  Eagle Plains      89.76  15 eP        P        01 35 57.0 -0.2
             comp=Z,44nm,0.8s
EPYK  Eagle Plains      89.76  15  P        P        01 35 57.0 -0.2
             baz=219,SNR=23
YAK   Yakutsk           90.07 338 eP        P        01 35 56.6 -2.1
YAK                                pmax     pmax
             comp=Z,80nm,0.8s
YAK                                pmax     pmax
             comp=N,16nm,0.9s
YAK                                pmax     pmax
             comp=E,12nm,0.9s
ABTX  Abilene, Hawle    90.16  56 eP        P        01 36 00.8 +0.9
             comp=E,64nm,0.8s
ABTX                              epP       pwP      01 37 59.8 +1.2
ABTX  Abilene, Hawle    90.16  56  P        P        01 36 00.6 +0.7
             baz=248,SNR=30
SNAA  Sanae             90.27 178  P        P        01 36 00.3 +0.6
SNAA  Sanae             90.27 178  PKiKP    PKiKP    01 40 50.7 -0.5
SNAA  Sanae             90.27 178 eP        P        01 36 00.2 +0.5
             comp=E,21nm,0.7s
SNAA  Sanae             90.27 178d iP       P        01 35 59.9 +0.2
KSCO  Kaye Shedlock’    90.34  49 eP        P        01 36 03.0 +2.3
             comp=E,21nm,0.8s
KSCO  Kaye Shedlock’    90.34  49  P        P        01 36 02.1 +1.4
             baz=247
VNA3  Neumayer Olymp    90.39 176  P        P        01 36 00.8 +0.6
VNA2  Neumayer--Watz    90.84 177  P        P        01 36 03.1 +0.8
             baz=191,slow=3.8
VNA2  Neumayer--Watz    90.84 177  PKiKP    PKiKP    01 40 52.1  0.0
NVL   N'lazarevskaya    90.99 183⇑iP        P        01 36 02.7 -0.2
NVL                                pmax     pmax
             comp=Z,39nm,0.7s
CCIG  Comitan           91.05  73 eP        P        01 36 06.4 +1.9
             comp=Z,11nm,0.9s
VNA1  Neumayer--Stat    91.06 177  P        P        01 36 04.3 +1.0
LAO   LASA Array        91.10  41 eP        P        01 36 05.5 +1.5
             comp=Z,65nm,0.8s
LAO   LASA Array        91.10  41  P        P        01 36 05.4 +1.5
             baz=244
435B  Jarrell           91.14  58 eP        P        01 36 05.7 +1.3
             comp=Z,27nm,0.6s
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435B  Jarrell           91.14  58  P        P        01 36 05.5 +1.1
             baz=250
RSSD  Black Hills       91.42  44 eP        P        01 36 06.0 +0.3
             comp=Z,48nm,1.0s
RSSD  Black Hills       91.42  44 eP        P        01 36 06.0 +0.3
RSSD                               pmax     pmax
             comp=Z,48nm,1.0s
RSSD  Black Hills       91.42  44  P        P        01 36 06.0 +0.3
             baz=246
LZH   Lanzhou           91.51 307 eP        P        01 36 07.5 +1.3
LZH                                pP       pP       01 38 06.2 +4.2
LZH                                sP       sP       01 39 00.6 +5.9
LZH                                PP       PP       01 39 56.2 +2.4
LZH                                SKS      SKSac    01 45 44.6 -4.0
LZH                               eS        ScS      01 46 27.0 +4.2
LZH                                sS       sS       01 49 53.3 +5.4
LZH                                SS       SS       01 52 41.3 -2.5
LZH                                pmax     pmax
             comp=Z,590nm,4.3s
WMOK  Wichita Mounta    91.59  54 eP        P        01 36 06.7 +0.2
             comp=Z,11nm,1.1s
WMOK  Wichita Mounta    91.59  54 eP        P        01 36 06.7 +0.2
WMOK                               pmax     pmax
             comp=Z,11nm,1.1s
WMOK  Wichita Mounta    91.59  54  P        P        01 36 06.2 -0.3
             baz=249
WHTX  Lake Whitney,     91.67  57 eP        P        01 36 07.9 +1.1
             comp=Z,20nm,0.8s
WHTX  Lake Whitney,     91.67  57  P        P        01 36 07.2 +0.4
             baz=250,SNR=5.2
U32A  Winter Ranch,     92.02  52 eP        P        01 36 09.6 +1.2
             comp=Z,50nm,0.8s
INK   Inuvik            92.05  15 eP        P        01 36 06.9 -0.8
             comp=Z,42nm,0.8s
INK   Inuvik            92.05  15 eP        P        01 36 06.9 -0.8
INK                                pmax     pmax
             comp=Z,42nm,0.8s
INK   Inuvik            92.05  15  PKKPbc   PKKPbc   01 53 21.1 -3.1
             comp=Z,2.5nm,0.7s,baz=26,slow=5.3,SNR=9.8
CBKS  Cedar Bluff       92.35  50 eP        P        01 36 10.8 +0.9
             comp=Z,33nm,0.8s
CBKS  Cedar Bluff       92.35  50 eP        P        01 36 10.8 +0.9
CBKS                               pmax     pmax
             comp=Z,33nm,0.8s
CBKS  Cedar Bluff       92.35  50  P        P        01 36 10.3 +0.5
             baz=249
DGMT  Dagmar            93.09  40 eP        P        01 36 14.0 +1.0
             comp=Z,97nm,0.8s
DGMT  Dagmar            93.09  40  P        P        01 36 13.9 +1.0
             baz=246
SONA0 Songino Array     94.14 319 eP        P        01 36 17.5 -0.4
SONA0                             ePP       PP       01 40 17.0 +3.2
SONA1 Songino Array     94.14 319 eP        P        01 36 17.2 -0.8
SONM  Songino Array     94.14 319  P        P        01 36 17.5 -0.4
             comp=Z,6.4nm,0.9s,baz=128,slow=4.3,SNR=45
SONM                               PP       PP       01 40 17.0 +3.2
             comp=Z,3.1nm,0.9s,baz=137,slow=5.9,SNR=4.6
SONM                               PKiKP    PKiKP    01 40 58.0 -0.4
             comp=Z,1.5nm,0.7s,baz=25,slow=0.8,SNR=8.3
BOD   Bodaibo           94.20 330 eP        P        01 36 15.6 -2.2
BOD                                pmax     pmax
             comp=Z,7.0nm,1.9s
TUL1  Leonard           94.29  54  P        P        01 36 19.2 +0.5
             baz=251
YKA   Yellowknife Ar    94.39  25  P        P        01 36 18.1 -0.4
             comp=Z,16nm,0.6s,baz=244,slow=4.4,SNR=325
YKA                                PP       PP       01 40 17.3 +2.2
             comp=Z,0.9nm,0.7s,baz=244,slow=7.3,SNR=3.6
YKA                                PKiKP    PKiKP    01 40 57.1 -1.0
             comp=Z,0.4nm,0.6s,baz=263,slow=1.7,SNR=6.3
YKA                                PKKPbc   PKKPdf   01 53 14.1 -2.9
             comp=Z,2.3nm,0.5s,baz=42,slow=2.2,SNR=30
YKA                                PKPPKP            02 01 26.7
             comp=Z,0.7nm,0.8s,baz=47,slow=2.6,SNR=9.6
YKB5  Yellowknife Ar    94.39  25 eP        P        01 36 17.4 -1.1
YKB5                              epP       pP       01 38 13.8 -0.3
YKB5                              ePP       PP       01 40 17.3 +2.2
YKB5                              ePKiKP    PKiKP    01 40 57.1 -1.0
BGNE  Belgrade          94.41  48 eP        P        01 36 20.6 +1.4
             comp=Z,66nm,0.8s
BGNE  Belgrade          94.41  48  P        P        01 36 20.3 +1.1
             baz=250
YKW3  Yellowknife Ar    94.42  25 eP        P        01 36 18.1 -0.6
             comp=Z,17nm,0.6s
KSU1  Kansas State U    94.74  51 eP        P        01 36 22.0 +1.3
             comp=Z,56nm,0.6s
KSU1  Kansas State U    94.74  51  P        P        01 36 21.7 +1.0
             baz=250
W39A  Magazine          95.61  55  P        P        01 36 25.8 +1.0
             baz=252
GTA   Gaotai            95.65 310 ⇓P        P        01 36 25.0  0.0
GTA                                pP       pP       01 38 23.8 +2.7
GTA                                sP       sP       01 39 16.5 +2.8
GTA                                SKS      SKSac    01 46 09.7 -0.9
GTA                                S        S        01 46 50.5 -6.4
GTA                                sS       sS       01 50 23.6 -1.9
GTA                                SS       SS       01 53 38.5 -3.5
GTA                                pmax     pmax
             comp=Z,25nm,1.1s
GTA                                pmax     pmax
             comp=Z,130nm,8.3s
MDND  Maddock           95.70  42  P        P        01 36 24.7 -0.2
             baz=249
X40A  Basin Creek Fa    96.14  56  P        P        01 36 26.7 -0.5
             baz=252
ECSD  EROS Data Cent    96.26  46 eP        P        01 36 27.5  0.0
             comp=Z,11nm,0.6s
ECSD  EROS Data Cent    96.26  46  P        P        01 36 27.4 -0.1
             baz=251
NNA   Nana              96.51 105  PKKPbc   PKKPbc   01 53 11.3 +0.7
             comp=Z,2.3nm,0.4s,baz=202,slow=4.9,SNR=3.8
U40A  Yellville         96.69  54  Pdiff    P        01 36 28.9 -0.7
             baz=252
W41B  Gary Mavity, V    96.81  55  Pdiff    P        01 36 30.0 -0.1
             baz=253
ZAK   Zakamensk         96.97 321 eP        P        01 36 29.4 -1.2
ZAK                                pmax     pmax
             comp=Z,6.0nm,1.2s
V41A  Mountainview      97.06  55  Pdiff    P        01 36 30.8 -0.5
             baz=253
TLY   Talaya            97.20 322ceP        P        01 36 32.0 +0.5
BRDH  Bariadhala        97.30 291  P        P        01 36 33.6 +1.1
             comp=Z,82nm,0.3s,baz=68,slow=9.7,SNR=4.0
U41A  Viola             97.41  54  Pdiff    Pdif     01 36 32.7 -0.1
             baz=253
V42A  Cord              97.66  55  Pdiff    P        01 36 33.9  0.0
             baz=253
T41A  Mountain View     97.73  54  Pdiff    Pdif     01 36 34.0 -0.2
             baz=253
S41A  Jillco Farms,     97.90  53  Pdiff    P        01 36 35.3 +0.3
             baz=253
T42A  Van Buren         98.24  54  Pdiff    P        01 36 37.0 +0.5
             baz=254
R41A  Rosebud           98.38  53  Pdiff    P        01 36 37.5 +0.4
             baz=254
CCM   Cathedral Cave    98.41  53  Pdiff    P        01 36 37.6 +0.3
             baz=254
Q41A  Truxton           98.68  52  Pdiff    P        01 36 39.2 +0.8
             baz=254
S42A  Caledonia         98.68  53  Pdiff    P        01 36 39.1 +0.6
             baz=254
ULM   Lac du Bonnet     98.81  40  P        P        01 36 38.9 +0.2
             comp=Z,2.5nm,0.6s,baz=256,slow=5.0,SNR=9.4
ULM                                PKKPbc   PKKPbc   01 53 04.4 -1.1
             comp=Z,2.5nm,0.6s,baz=100,slow=5.7,SNR=7.5
T43A  Greenville        98.87  54  Pdiff    P        01 36 39.5 +0.1
             baz=254
N40A  Mertquake, Sal    98.96  50  Pdiff    P        01 36 39.7 +0.1
             baz=254
P41A  Barry, Barry      99.00  51  Pdiff    Pdif     01 36 40.4 +0.6
             baz=254
M40A  Post Highland     99.15  49  Pdiff    Pdif     01 36 40.7 +0.3
             baz=254
K39A  Oelwein           99.25  48  Pdiff    Pdif     01 36 41.3 +0.5
             baz=254
O41A  Passleys Farm,    99.26  51  Pdiff    Pdif     01 36 41.3 +0.4
             baz=254
P42A  Winchester        99.51  52  Pdiff    Pdif     01 36 42.2 +0.2
             baz=254
L40A  Anamosa           99.54  49  Pdiff    Pdif     01 36 42.5 +0.4
             baz=254
J39A  Decorah           99.55  48  Pdiff    Pdif     01 36 42.4 +0.2
             baz=254
LSA   Lhasa             99.66 298 ePdif     Pdif     01 36 45.0 +1.5
             comp=Z,6.2nm,0.7s
LSA   Lhasa             99.66 298 eP        Pdif     01 36 45.0 +1.5
LSA                                pmax     pmax
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             comp=Z,6.0nm,0.7s
I39A  Houston           99.82  47  Pdiff    Pdif     01 36 43.2 -0.1
             baz=254
N42A  Yates City       100.07  50  Pdiff    Pdif     01 36 44.8 +0.3
             baz=255
P43A  Skaggs, Pawnee   100.14  52  Pdiff    Pdif     01 36 45.3 +0.5
             baz=255
H39A  Augusta          100.20  46  Pdiff    Pdif     01 36 45.5 +0.5
             baz=255
J40A  Soldiers Grove   100.24  48  Pdiff    Pdif     01 36 45.9 +0.7
             baz=255
K41A  Shullsburg       100.34  49  Pdiff    Pdif     01 36 46.1 +0.5
             baz=255
LRAL  Lakeview Retre   100.40  59  Pdiff    Pdif     01 36 46.5 +0.3
             baz=255
G39A  Holcombe         100.44  46  Pdiff    Pdif     01 36 46.8 +0.8
             baz=255
I40A  Norwalk          100.46  47  Pdiff    Pdif     01 36 46.8 +0.7
             baz=255
JFWS  Jewell Farm      100.46  48  Pdiff    Pdif     01 36 47.0 +0.8
             baz=255
L42A  Oliver, Polo     100.64  49  Pdiff    Pdif     01 36 47.2 +0.2
             baz=255
J41A  Loganville       100.75  48  Pdiff    Pdif     01 36 47.6 +0.1
             baz=255
F39A  Loretta          100.78  45  Pdiff    Pdif     01 36 48.0 +0.4
             baz=255
H40A  Chili            100.80  47  Pdiff    Pdif     01 36 47.9 +0.2
             baz=255
451A  Vernon           100.81  61  Pdiff    Pdif     01 36 48.2 +0.2
             baz=255
W48A  Pulaski          100.98  57  Pdiff    Pdif     01 36 48.6 -0.1
             baz=256
M43A  Waltham Townsh   101.01  50  Pdiff    Pdif     01 36 49.2 +0.5
             baz=256
I41A  Arkdale          101.02  47  Pdiff    Pdif     01 36 49.0 +0.3
             baz=255
K42A  Prairie Point,   101.07  49  Pdiff    Pdif     01 36 49.1 +0.2
             baz=256
E39A  Mellen           101.14  45  Pdiff    Pdif     01 36 49.0 -0.2
             baz=255
H41A  Junction City    101.31  47  Pdiff    Pdif     01 36 50.4 +0.5
             baz=256
F40A  Park Falls       101.32  45  Pdiff    Pdif     01 36 50.1 +0.2
             baz=256
F41A  Three Lakes      101.96  46  Pdiff    Pdif     01 36 53.5 +0.7
             baz=256
LPAZ  La Paz           102.78 112  PKKPbc   PKKPbc   01 52 54.0  0.0
             comp=Z,4.3nm,0.8s,baz=355,slow=4.5,SNR=11
RAMN  Ramite           102.84 294 eP        Pdif     01 36 57.0 -0.5
             comp=Z,12nm,0.5s
RAMN  Ramite           102.84 294 eP        PKiKP    01 41 14.1 -0.6
             comp=Z,14nm,0.4s
058A  Arcadia          103.29  66  Pdiff    Pdif     01 36 59.0 -0.1
             baz=256
JIRN  Jiri             103.36 295 eP        PKiKP    01 41 14.8 -1.0
             comp=Z,15nm,0.4s
GUN   Gumba            103.69 295 eP        Pdif     01 36 59.1 -2.3
             comp=Z,14nm,0.8s
GUN   Gumba            103.69 295 eP        PKiKP    01 41 15.2 -1.2
PKI   Pulchoki         104.02 295 eP        Pdif     01 37 00.8 -2.0
             comp=Z,21nm,0.8s
PKI   Pulchoki         104.02 295 eP        PKiKP    01 41 15.7 -1.3
             comp=Z,19nm,0.7s
PKIN  Phulchoki        104.03 295 eP        Pdif     01 37 00.7 -2.1
             comp=Z,12nm,0.6s
PKIN  Phulchoki        104.03 295 eP        PKiKP    01 41 15.9 -1.0
             comp=Z,11nm,0.5s
DMN   Daman            104.29 295 eP        Pdif     01 37 03.2 -0.7
             comp=Z,49nm,0.9s
DMN   Daman            104.29 295 eP        PKiKP    01 41 15.7 -1.7
ROSC  El Rosal         104.33  90  PKKPbc   PKKPbc   01 52 50.3 +1.4
             comp=Z,6.1nm,0.5s,baz=354,slow=23,SNR=4.2
RES   Resolute Bay     105.58  16  PKKPbc   PKKPbc   01 52 43.5 -2.9
             comp=Z,2.5nm,0.8s,baz=21,slow=5.6,SNR=7.2
DANN  Dangsing         105.61 295 eP        Pdif     01 37 09.0 -0.8
             comp=Z,9.5nm,0.5s
DANN  Dangsing         105.61 295 eP        PKiKP    01 41 19.0 -0.8
             comp=Z,9.4nm,0.4s
KOLN  Koldanda         105.62 295 eP        Pdif     01 37 09.1 -0.7
             comp=Z,17nm,0.8s
KOLN  Koldanda         105.62 295 eP        PKiKP    01 41 18.2 -1.6
             comp=Z,12nm,0.6s
PYUN  Piuthan          106.22 295 eP        Pdif     01 37 11.2 -1.2
             comp=Z,5.9nm,0.6s
PYUN  Piuthan          106.22 295 eP        PKiKP    01 41 19.9 -1.0
             comp=Z,18nm,0.7s
NRIK  Noril'sk         108.52 338  PKiKP    PKiKP    01 41 23.5 -0.2
             comp=Z,3.7nm,0.7s,baz=52,slow=3.2,SNR=4.3
ZAA0  Zalesovo Array   108.81 322 ePdif     Pdif     01 37 23.5 +0.5
ZAA1  Zalesovo Array   108.81 322 ePdif     Pdif     01 37 22.3 -0.7
ZAA1                              ePKiKP    PKiKP    01 41 23.7 -0.9
ZAA1                              ePP       PP       01 42 00.7 -1.4
ZALV  Zalesovo Beam    108.81 322  Pdiff    Pdif     01 37 22.3 -0.7
             comp=Z,0.4nm,0.3s,baz=89,slow=6.7,SNR=6.0
ZALV                               PKiKP    PKiKP    01 41 23.7 -0.9
             comp=Z,4.9nm,0.5s,baz=123,slow=0.4,SNR=22
ZALV                               PP       PP       01 42 00.7 -1.4
             comp=Z,1.4nm,0.7s,baz=119,slow=5.4,SNR=3.6
SDV   Santo Domingo    109.00  87  PKiKP    PKiKP    01 41 25.2 -1.2
             comp=Z,2.6nm,0.9s,baz=191,slow=23,SNR=4.3
SDV                                PKKPab   PKKPab   01 52 49.6 +0.5
             comp=Z,4.4nm,0.6s,baz=142,slow=4.6,SNR=5.3
SIV   San Ignacio      109.07 115  PKKPbc   PKKPbc   01 52 32.9 -1.4
             comp=Z,8.3nm,0.7s,baz=93,slow=5.3,SNR=30
SIV                                PKKPab   PKKPab   01 52 49.0 -0.7
             comp=Z,8.1nm,0.8s,baz=93,slow=6.6,SNR=14
MK01  Makanchi Array   109.73 314 ePdif     Pdif     01 37 27.2 -0.1
MK32  Makanchi Array   109.74 314 ePdif     Pdif     01 37 28.8 +1.4
MK32                              ePKiKP    PKiKP    01 41 25.7 -1.0
MK32                              ePP       PP       01 42 08.4 -0.6
MKAR  Makanchi Array   109.74 314  Pdiff    Pdif     01 37 28.8 +1.4
             comp=Z,1.9nm,0.7s,baz=92,slow=6.0,SNR=15
MKAR                               PKiKP    PKiKP    01 41 25.7 -1.0
             comp=Z,5.4nm,0.5s,baz=210,slow=0.8,SNR=81
MKAR                               PP       PP       01 42 08.4 -0.6
             comp=Z,2.4nm,0.7s,baz=95,slow=7.4,SNR=5.4
MKAR                               PKKPbc   PKKPbc   01 52 32.5 -0.4
             comp=Z,0.9nm,0.6s,baz=276,slow=3.7,SNR=8.2
KURK  Kurchatov        112.42 318 ePdif     Pdif     01 37 38.5 -0.6
KURK                              ePKiKP    PKiKP    01 41 30.7 -0.8
KURK                              ePP       PP       01 42 31.6 +3.8
KURK  Kurchatov        112.42 318c iPKIKP   PKiKP    01 41 30.8 -0.8
KURK                               pmax     pmax
             comp=Z,11nm,1.0s
KURBB Kurchatov Arra   112.47 318  Pdiff    Pdif     01 37 38.5 -0.9
             comp=Z,0.1nm,0.3s,baz=99,slow=4.1,SNR=2.9
KURBB                              PKiKP    PKiKP    01 41 30.7 -1.0
             comp=Z,7.2nm,0.7s,baz=96,slow=1.7,SNR=53
KURBB                              PP       PP       01 42 31.6 +3.5
             comp=Z,4.4nm,0.7s,baz=92,slow=7.9,SNR=9.2
KSH   Kashi            113.70 306  PKP      PKiKP    01 41 35.2 +0.6
KSH                                PKS               01 45 09.0
KSH                                SKS      SKSdf    01 47 53.2 -3.8
KSH                                SKKS     SKKSac   01 48 39.9 -4.1
TKM2  Tokmak 2         114.20 309  P        PKPdf    01 41 35.0 -0.6
             SNR=15
KZA   Kyzart           114.41 309  P        PKiKP    01 41 36.3 +0.1
             SNR=6.5
KBK   Karagaybulak     114.66 309  P        PKPdf    01 41 36.1 -0.3
             SNR=8.2
CHMS  Chumysh          114.82 310  P        PKPdf    01 41 36.0 -0.5
             SNR=11
FRU   Bishkek          114.91 309 ePKIKP    PKPdf    01 41 36.0 -0.7
FRU                               e                  01 42 41.0
UCH   Uchtor           114.97 309  P        PKPdf    01 41 37.2 -0.1
             SNR=16
AAK   Ala-Archa        115.00 309  P        PKPdf    01 41 36.7 -0.3
             SNR=5.4
AAK   Ala-Archa        115.00 309 ePKPdf    PKPdf    01 41 36.5 -0.5
AAK                               ePKPdf    PKiKP    01 41 36.6 -0.4
AAK   Ala-Archa        115.00 309 i PKPdf   PKPdf    01 41 36.4 -0.6
             SNR=8.8
AAK   Ala-Archa        115.00 309c iPKIKP   PKPdf    01 41 36.8 -0.2
AAK                                pmax     pmax
             comp=Z,8.0nm,1.3s
AAK   Ala-Archa        115.00 309  PKiKP    PKPdf    01 41 36.5 -0.5
             comp=Z,4.9nm,0.7s,baz=124,slow=3.9,SNR=14
USP   Ospenovka        115.01 310  P        PKPdf    01 41 36.1 -0.7
             SNR=10
EKS2  Erkin-Say        115.53 309  P        PKPdf    01 41 37.9 -0.1
             SNR=7.4
AML   Almayashu        115.57 309  P        PKPdf    01 41 38.4  0.0
             SNR=14
ARSB  Arslanbob        116.08 308 ePKPdf    PKiKP    01 41 39.2 +0.1
PTGA  Pitinga          116.13 100  PKP      PKPdf    01 41 39.5 -0.4
             comp=Z,3.9nm,0.6s,baz=321,slow=22,SNR=7.4
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PTGA                               PKKPbc     PKKPbc   01 52 10.6 -0.3
      comp=Z,12nm,0.6s,baz=43,slow=5.6,SNR=19
SCHQ  Schefferville     116.79  37 PKP        PKPdf    01 41 38.9 -1.0
      comp=Z,7.2nm,1.1s,baz=333,slow=5.5,SNR=6.1
SCHQ                               PKKPbc     PKKPbc   01 52 07.5 -2.1
      comp=Z,2.9nm,0.5s,baz=77,slow=4.4,SNR=12
BVA0  Borovoye Array    117.43 321 i PKIKP    PKPdf    01 41 40.5 -0.6
BVA0                               pmax       pmax
      comp=Z,12nm,0.6s
BVAR  Borovoye Array    117.43 321 PKP        PKPdf    01 41 40.5 -0.6
      comp=Z,11nm,0.4s,baz=119,slow=2.0,SNR=46
BVAR                               PP         PP       01 42 58.8 -3.6
      comp=Z,3.8nm,0.8s,baz=112,slow=6.6,SNR=4.1
BRVK  Borovoye          117.49 321 ePKPdf     PKPdf    01 41 40.8 -0.5
BRVK  Borovoye          117.49 321 i PKIKP    PKPdf    01 41 40.0 -1.2
BTK   Batken            117.69 306 ePKPdf     PKiKP    01 41 43.4 +1.2
KK31  Karatay Array     117.93 310 ePKPdf     PKPdf    01 41 41.6 -0.9
KK31  Karatay Array     117.93 310 ePKIKP     PKPdf    01 41 41.6 -0.9
KKAR  Karatay Array     117.93 310 ePKPdf     PKPdf    01 41 41.6 -0.9
KKAR  Karatay Array     117.93 310 ePKIKP     PKPdf    01 41 41.6 -0.9
GAR   Garm              118.05 305 ePKPdf     PKiKP    01 41 43.1 +0.1
GAR   Garm              118.05 305 ePKIKP     PKiKP    01 41 43.1 +0.1
KBL   Kabul             118.91 300 ePKPdf     PKiKP    01 41 45.1 +0.1
KBL   Kabul             118.91 300 PKIKP      PKPdf    01 41 44.8 -0.1
SPA0  Spitsbergen Ar    119.61 357 ePKPdf     PKPdf    01 41 44.4 -0.3
SPA0  Spitsbergen Ar    119.61 357 ePKPdf     PKPdf    01 41 44.7  0.0
SPITS Spitsbergen Ar    119.61 357 PKP        PKPdf    01 41 44.4 -0.3
      comp=Z,10nm,0.7s,baz=87,slow=4.3,SNR=14
BDFB  Brasilia          120.22 121 PKP        PKPdf    01 41 47.4 -0.4
      comp=Z,2.4nm,0.5s,baz=181,slow=8.6,SNR=5.3
BDFB                               PKKPbc     PKKPab   01 52 00.3 -0.4
      comp=Z,9.1nm,0.6s,baz=86,slow=5.1,SNR=15
DAG   Danmarks Havn     120.47   5 i P        PKPdf    01 41 45.1 -1.2
      comp=Z,6.1nm,0.6s
DAG   Danmarks Havn     120.47   5 i P        PKKPbc   01 51 54.4 -2.4
      comp=Z,3.4nm,0.9s
DAG   Danmarks Havn     120.47   5 i PKIKP    PKPdf    01 41 45.1 -1.2
DAG                                pmax       pmax
      comp=Z,4.0nm,0.6s
SFJD  Kangerlussuaq     120.78  21 i P        PKPdf    01 41 45.8 -1.3
SFJD  Kangerlussuaq     120.78  21 i P        PKKPbc   01 51 53.8 -1.7
SFJD  Kangerlussuaq     120.78  21 ePKIKP     PKPdf    01 41 45.8 -1.3
SUMG  Summit            120.92  13 ePKPdf     PKPdf    01 41 47.8  0.0
SUMG  Summit            120.92  13 i P        PKPdf    01 41 47.8  0.0
SUMG  Summit            120.92  13 i P        PKKPbc   01 51 54.7 -1.0
      comp=Z,25nm,1.0s
SUMG  Summit            120.92  13 ePKIKP     PKPdf    01 41 47.8  0.0
GBN   Guysborough       121.17  48 ePKPdf     PKiKP    01 41 48.8 +0.1
SVE   Sverdlovsk        122.19 326 ePKIKP     PKPdf    01 41 49.7 -0.5
SVE                                pmax       pmax
      comp=Z,25nm,0.8s
ABPO  Ambohimpanom      122.30 232 ePKPdf     PKiKP    01 41 52.7 +0.7
OPO   Ambohidratompo    122.60 233 PKP        PKiKP    01 41 52.8 +0.2
      comp=Z,33nm,0.7s,baz=126,slow=2.5,SNR=34
ARU   Arti              123.41 326 ePKPdf     PKPdf    01 41 52.0 -0.6
ARU   Arti              123.41 326 i PKIKP    PKPdf    01 41 51.9 -0.6
ARU                                                    01 43 45.6
ARU                                                    01 48 11.9
ARU                                SP         SP       01 52 46.3 -0.4
AB31  Akbulak array     124.53 318 i PKIKP    PKPdf    01 41 54.1 -0.8
AB31                               pmax       pmax
      comp=Z,23nm,1.2s
ABKAR Akbulak array     124.53 318 ePKPdf     PKPdf    01 41 53.9 -1.0
MDP   Montagnes des     124.98  97 PKP        PKiKP    01 41 57.1 -0.1
      comp=Z,16nm,1.0s,baz=211,slow=5.6,SNR=5.0
AKTO  Aktyubinsk        125.45 319 PKP        PKPdf    01 41 56.6 -0.1
      comp=Z,10nm,0.8s,baz=85,slow=3.0,SNR=22
SCO   Scoresbysund      125.76  10 ePKPdf     PKiKP    01 41 57.0  0.0
SCO   Scoresbysund      125.76  10 i P        PKPdf    01 41 56.7 +0.1
      comp=Z,9.7nm,0.8s
SCO   Scoresbysund      125.76  10 i PKIKP    PKPdf    01 41 56.7 +0.1
SCO                                pmax       pmax
      comp=Z,10.0nm,0.8s
HAMF  Hammerfest        126.00 351 ePKPdf     PKPdf    01 41 56.8 -0.3
SUR   Sutherland        126.61 200 PKP        PKiKP    01 42 00.3 +0.1
      comp=Z,42nm,0.7s,baz=103,slow=1.1,SNR=45
ARA0  ARCESS Array S    126.72 350 ePKPdf     PKPdf    01 41 58.2 -0.3
ARCES ARCESS Array B    126.72 350 ePKPdf     PKPdf    01 41 58.1 -0.4
ARCES ARCESS Array B    126.72 350 PKP        PKPdf    01 41 58.2 -0.3
      comp=Z,8.3nm,0.4s,baz=97,slow=1.7,SNR=72
ARE0  ARCESS Array S    126.72 350 ePKPdf     PKPdf    01 41 58.2 -0.3
PRGR  Permogore         127.05 336 ePKIKP     PKPdf    01 41 57.9 -1.4
PRGR                               e                   01 43 55.3
PRGR                               pmax       pmax
      comp=Z,17nm,0.9s
KIRV  Kirov             127.06 331 PKP        PKPdf    01 41 59.3 -0.1
      comp=Z,24nm,0.5s,baz=17,slow=1.9,SNR=17
WSAR  Wadi Sarin        127.21 286 PKP        PKiKP    01 42 01.2 -0.2
      comp=Z,12nm,1.0s,baz=238,slow=0.6,SNR=15
KTK1  Kautokeino        127.55 351 ePKPdf     PKPdf    01 41 59.4 -0.7
MHTO  MHTO              127.57 283 PKiKP      PKPdf    01 42 01.7 +0.1
      SNR=21
TRO   Tromso            127.57 353 ePKPdf     PKPdf    01 41 59.7 -0.4
JMDO  Jabal Madar       127.61 285 PKPdf      PKPdf    01 42 01.4 -0.2
GEYT  Alibeck           127.66 304 PKP        PKPdf    01 42 01.4 +0.1
      comp=Z,28nm,0.8s,baz=270,slow=1.5,SNR=41
GYA0B ALIBECK ARRAY     127.66 304 ePKPdf     PKPdf    01 42 01.5 +0.2
BIDO  Bidbid            127.70 286 PKiKP      PKiKP    01 42 02.7 +0.3
SMDO  Samad             127.73 285 PKiKP      PKiKP    01 42 03.3 +0.7
TMCR  Tamitsa           128.09 341 ePKIKP     PKPdf    01 42 00.6 -0.6
TMCR                               pmax       pmax
      comp=Z,22nm,1.3s
BOSA  Boshof            128.36 206 ePKPdf     PKiKP    01 42 03.9  0.0
BOSA                               ePKPdf     PKiKP    01 42 04.0 +0.2
BOSA  Boshof            128.36 206 PKIKP      PKiKP    01 42 04.0 +0.2
BOSA                               pmax       pmax
      comp=Z,23nm,0.8s
BOSA  Boshof            128.36 206 PKP        PKiKP    01 42 04.0 +0.2
      comp=Z,23nm,0.8s,baz=136,slow=2.1,SNR=27
BSY   Bisya             128.48 285 PKiKP      PKPdf    01 42 03.5 +0.3
      SNR=5.9
SOHO  SOHO              129.21 287 PKPdf      PKPdf    01 42 04.3 -0.3
      SNR=24
MDH   Madha             129.50 288 i PKPdf    PKPdf    01 42 04.9 -0.2
      SNR=5.2
MDH   Madha             129.50 288 PKPdf      PKPdf    01 42 05.1  0.0
UOSS  Minazif           129.56 288 ePKPdf     PKPdf    01 42 04.9 -0.3
UOSS  Minazif           129.56 288 i PKPdf    PKPdf    01 42 03.8 -1.4
      SNR=6.7
UOSS  Minazif           129.56 288 PKPdf      PKPdf    01 42 05.1 -0.1
LOF   Lofoten           129.59 354 ePKPdf     PKPdf    01 42 03.5 -0.5
STEI  Steigen           129.62 354 ePKPdf     PKPdf    01 42 03.8 -0.2
HATD  Hatta, Dubai      129.62 287 i PKPdf    PKPdf    01 42 04.7 -0.6
      SNR=17
HATD  Hatta, Dubai      129.62 287 PKPdf      PKPdf    01 42 05.1 -0.3
      SNR=8.9
MSFE  Esma-Masafi       129.63 288 i PKPdf    PKPdf    01 42 04.8 -0.6
      SNR=12
ASHO  Ashiyiah          129.68 287 i PKPdf    PKPdf    01 42 04.9 -0.7
      SNR=15
ASHO  Ashiyiah          129.68 287 PKPdf      PKPdf    01 42 05.0 -0.5
      SNR=10
KLMR  Klimovskoe        129.85 337 ePKIKP     PKPdf    01 42 02.1 -2.6
KLMR                               pmax       pmax
      comp=Z,22nm,0.9s
KLMR  Klimovskoe        129.85 337 ePKPdf     PKPdf    01 42 02.2 -2.5
KLMR                               AMP                 01 42 05.7
      comp=Z,22nm,0.9s
KLMR                               eSKP                01 44 41.1
ALNE  Al Ain            129.91 286 i PKPdf    PKPdf    01 42 05.5 -0.5
      SNR=7.9
DMTO  DMTO              129.93 278 PKPdf      PKPdf    01 42 05.7 -0.4
      SNR=6.4
NAZ   Nazwa, Dubai      130.06 288 i PKPdf    PKPdf    01 42 05.7 -0.5
      SNR=5.6
NAZ   Nazwa, Dubai      130.06 288 PKPdf      PKPdf    01 42 05.8 -0.3
      SNR=10
UMQ   Umm Al-Quwin      130.09 288 PKiKP      PKiKP    01 42 06.9 -0.2
FAQ   Al Faqa, Dubai    130.10 287 PKiKP      PKPdf    01 42 06.7 +0.4
      SNR=6.0
RBK   Rabkut            130.59 278 PKiKP      PKiKP    01 42 08.4  0.0
AJN   Ajban             130.64 287 i PKiKP    PKiKP    01 42 07.8 -0.5
      SNR=5.0
AJN   Ajban             130.64 287 PKPdf      PKPdf    01 42 06.3 -1.0
      SNR=7.1
KONS  Konsvik           131.22 354 ePKPdf     PKPdf    01 42 07.5 +0.5
LBTB  Lobatse           131.33 209 ePKPdf     PKPdf    01 42 09.2 +0.4
LBTB  Lobatse           131.33 209 PKP        PKPdf    01 42 09.0 +0.2
      comp=Z,16nm,0.6s,baz=166,slow=2.9,SNR=19
LBTB                               SKPbc      SKPab    01 44 47.3 +1.4
      comp=Z,9.9nm,0.7s,baz=131,slow=4.8,SNR=8.5
MOR8  Moi Rana          131.40 353 ePdif      Pdif     01 39 02.1 -1.2
ABTO  Aybut             131.43 277 PKiKP      PKPdf    01 42 09.5 +0.5
FIA1  FINESS Array S    133.63 344 ePKPpre    PKPpre   01 42 02.9
FIA1                               ePKPpre    PKPpre   01 42 06.4
FIA0  FINESS Array S    133.63 344 ePKPpre    PKPpre   01 41 56.4
FIA0                               ePKPdf     PKPdf    01 42 11.1 -0.7
FIA0  FINESS Array S    133.63 344 ePKHKP     PKPpre   01 41 56.4
FIA0                               e                   01 42 11.1
FINES FINESS Array B    133.63 344 PKhKP      PKPpre   01 41 56.4
      comp=Z,0.8nm,0.4s,baz=49,slow=5.3,SNR=13
FINES                              PKP        PKPdf    01 42 11.1 -0.7
      comp=Z,9.2nm,0.8s,baz=64,slow=4.4,SNR=15
FINES                              SKPbc      SKPab    01 44 53.2 -1.4
      comp=Z,4.4nm,0.8s,baz=69,slow=6.9,SNR=4.9
MATP  Matopo            133.71 215 PKhKP      PKPpre   01 41 59.3
      comp=Z,4.9nm,0.5s,baz=144,slow=5.1,SNR=28
MATP                               PKP        PKPdf    01 42 13.8 +0.3
      comp=Z,18nm,0.6s,baz=158,slow=2.1,SNR=11
MATP                               SKPbc      SKPab    01 44 55.6 -0.8
      comp=Z,10nm,0.8s,baz=145,slow=2.4,SNR=5.0
MOS   Moscow            133.96 333 ePKIKP     PKPdf    01 42 11.3 -1.2
MOS                                e                   01 44 55.4
VRH   Novokhopyorsk     134.63 326 ePKIKP     PKPdf    01 42 12.9 -1.1
VRH                                pmax       pmax
      comp=Z,10.0nm,0.6s
OBN   Obninsk           134.82 333 ePKPdf     PKPdf    01 42 14.5 +0.3
OBN   Obninsk           134.82 333dePKIKP     PKPdf    01 42 13.9 -0.3
OBN                                i                   01 44 57.3
OBN                                                    01 48 40.0
OBN                                e                   01 54 19.0
OBN                                eSS        SS       02 02 10.8 +4.3
OBN                                eSSS       SSS      02 07 18.0
OBN                                pmax       pmax
      comp=Z,9.0nm,0.8s
OBN                                pmax       pmax
      comp=Z,14nm,0.7s
LPSR  Galich'ya Gora    135.29 329 ePKIKP     PKPdf    01 42 13.7 -1.4
LPSR                               pmax       pmax
      comp=Z,10.0nm,1.0s
VSU   Vasula            135.95 342c iPKIKP    PKiKP    01 42 17.7 -0.2
VSU                                pmax       pmax
      comp=Z,100nm,2.5s
VSU   Vasula            135.95 342 eP         PKPpre   01 42 09.6
VSU                                IAmb       IAmb     01 42 18.0
      comp=Z,59nm,0.8s
DOMB  Dombas            135.96 355 ePdif      Pdif     01 39 23.3 -0.4
DOMB                               ePKPdf     PKPdf    01 42 16.5 +0.4
AKN   Aaknes            135.96 357 ePKPdf     PKPdf    01 42 16.6 +0.4
VSR   Storozhevoye      135.97 327 ePKIKP     PKPdf    01 42 15.0 -1.5
VSR                                pmax       pmax
      comp=Z,30nm,1.1s
NC303 NORSAR Array S    136.55 354 ePKPpre    PKPpre   01 42 05.1
NC405 NORSAR Array S    136.62 353 ePKPpre    PKPpre   01 42 10.7
NB201 NORSAR Array S    136.73 354 ePKPpre    PKPpre   01 42 08.9
NB2   NORSAR Subarra    136.75 354 PKP        PKPpre   01 42 05.7
      comp=Z,12nm,1.4s,baz=16,slow=3.2
NB2   NORSAR Subarra    136.75 354 PKP        PKPpre   01 42 05.7
      baz=16,slow=3.2
NB200 NORSAR Array S    136.75 354 ePKPpre    PKPpre   01 42 06.8
NB200                              ePKPdf     PKPdf    01 42 17.9 +0.3
NOA   NORSAR Array B    136.75 354 PKhKP      PKPpre   01 42 06.8
      comp=Z,2.1nm,0.6s,baz=22,slow=3.9,SNR=14
NOA                                PKP        PKPdf    01 42 17.9 +0.3
      comp=Z,2.0nm,0.5s,baz=14,slow=3.8,SNR=12
TBLG  Delisi            136.88 312 ePKPpre    PKPpre   01 42 11.1
NC602 NORSAR Array S    137.01 353 ePKPdf     PKPdf    01 42 18.4 +0.3
NCK   Nalchik           137.03 315 i PKIKP    PKPdf    01 42 17.9 -0.8
ZEI   Tsey              137.09 314 i PKHKP    PKPpre   01 42 09.1
ZEI                                pmax       pmax
      comp=Z,7.0nm,0.6s
GNI   Garni             137.39 310 ePKPdf     PKPdf    01 42 19.9 +0.2
GNI                                ePKPdf     sPdif    01 42 20.6 +1.0
GNI   Garni             137.39 310 PKP        PKPdf    01 42 19.9 +0.2
      comp=Z,15nm,0.9s,baz=288,slow=6.7,SNR=10.0
KBZ   Khabaz            137.40 316 PKhKP      PKPpre   01 42 10.5
      comp=Z,2.8nm,0.8s,baz=139,slow=5.6,SNR=3.7
KBZ                                PKP        sPdif    01 42 19.9 +0.4
      comp=Z,3.6nm,0.8s,baz=73,slow=10,SNR=4.7
KIV   Kislovodsk        137.45 316 ePKIKP     PKPdf    01 42 17.0 -2.6
KIV                                pmax       pmax
      comp=Z,13nm,1.1s
NEY   Neytrino          137.71 315 i PKIKP    PKPdf    01 42 20.2  0.0
LSZ   Lusaka            137.97 219 ePKPpre    PKPpre   01 42 10.6
LSZ   Lusaka            137.97 219 PKhKP      PKPpre   01 42 10.9
      comp=Z,7.3nm,0.5s,baz=146,slow=3.6,SNR=19
ODD1  Odda              138.24 357 ePKPdf     PKPdf    01 42 20.2 -0.3
KONO  Kongsberg         138.28 354 ePKPdf     PKPdf    01 42 20.5  0.0
IZAR  Zarasai           138.33 340 eP         PKPpre   01 42 13.6
IZAR                               IAmb       IAmb     01 42 25.8
      comp=Z,5.0nm,0.6s
KARS  Kars              138.44 311 ePKPpre    PKPpre   01 42 14.9
KARS  Kars              138.44 311 ePKHKP     PKPpre   01 42 14.9
ISAL  Salakas           138.51 340 eP         PKPpre   01 42 14.1
ISAL                               IAmb       IAmb     01 42 27.3
      comp=Z,6.1nm,0.9s
IDID  Didziasalis       138.51 339 eP         PKPpre   01 42 14.2
IDID                               IAmb       IAmb     01 42 26.3
      comp=Z,6.2nm,0.9s
IIGN  Ignalina          138.66 339 eP         PKPpre   01 42 15.2
IIGN                               IAmb       IAmb     01 42 25.1
      comp=Z,6.3nm,0.5s
BLS5  Blasjo            138.74 357 ePKPdf     PKPdf    01 42 21.7 +0.4
MICGM Minsk             138.75 337 e          PKPpre   01 42 15.0
MNK   Minsk             138.75 337 ePKHKP     PKPpre   01 42 15.0
NACGM Naroch            138.83 339 e          PKPpre   01 42 14.0
PABE  Paberze           139.26 341 eP         PKPpre   01 42 15.2
PABE                               IAmb       IAmb     01 42 23.2
      comp=Z,25nm,0.6s
PBUR  Paburg            139.41 343 eP         PKPpre   01 42 15.7
PBUR                               IAmb       IAmb     01 42 26.8
      comp=Z,20nm,0.7s
TSUM  Tsumeb            139.84 203 PKhKP      PKPpre   01 42 17.9
      comp=Z,5.0nm,0.4s,baz=141,slow=5.7,SNR=24
SIRT  Sirnak            139.91 307 ePKPpre    PKPpre   01 42 18.1
ATD   Arta Tunnel       140.18 266 ePKPpre    PKPpre   01 42 18.9
ATD                                ePKPpre    PKPpre   01 42 19.4
ATD                                ePKPdf     PKiKP    01 42 27.2 -0.8
ATD   Arta Tunnel       140.18 266 PKhKP      PKPpre   01 42 18.9
      comp=Z,17nm,1.0s,baz=71,slow=5.7,SNR=6.4
ATD                                PKP        PKiKP    01 42 27.2 -0.8
      comp=Z,14nm,0.9s,baz=23,slow=3.6,SNR=4.8
KAC   Achnashellach     140.39   6 eP         PKPpre   01 42 17.8
ANN   Anapa             140.41 320 ePKHKP     PKPpre   01 42 18.8
ANN                                pmax       pmax
      comp=Z,30nm,1.0s
KMBO  Kilima Mbogo      140.48 245 PKhKP      PKPpre   01 42 21.2
      comp=Z,22nm,0.8s,baz=64,slow=4.8,SNR=56
KMBO                               PKP        PKPdf    01 42 27.4 +1.2
      comp=Z,28nm,0.9s,baz=65,slow=3.3,SNR=19
KMBO                               SKPbc      SKiKP    01 45 15.1 -0.2
      comp=Z,16nm,1.1s,baz=23,slow=1.1,SNR=11
KMBO                               PP         PP       01 45 31.1 -0.7
      comp=Z,4.4nm,1.1s,baz=135,slow=5.9,SNR=4.1
KPL   Plockton          140.51   7 eP         PKPpre   01 42 18.1
SUW   Suwalki           140.76 340 ePKP       PKPpre   01 42 19.2
SUW   Suwalki           140.76 340 ePKPpre    PKPpre   01 42 20.3
SUW   Suwalki           140.76 340 ePKHKP     PKPpre   01 42 19.2
AKASG Malin Array Be    141.09 333c iPKHKP    PKPpre   01 42 19.8
AKASG                              pmax       pmax
      comp=Z,8.0nm,0.5s
AKASG Malin Array Be    141.09 333 PKhKP      PKPpre   01 42 19.9
      comp=Z,8.2nm,0.5s,baz=42,slow=4.1,SNR=26
AKASG                              PKP        PKiKP    01 42 28.2 -0.5
      comp=Z,12nm,0.7s,baz=45,slow=3.6,SNR=21
AKBB  Malin Array Si    141.09 333 ePKPpre    PKPpre   01 42 19.5
AKBB                               ePKPdf     PKiKP    01 42 28.2 -0.5
KIEV  Kiev              141.10 333 ePKPpre    PKPpre   01 42 19.4
KIEV  Kiev              141.10 333⇑iP         PKPpre   01 42 19.5
KIEV  Kiev              141.10 333 i PKPdf    PKPpre   01 42 19.8
      SNR=11
KIEV  Kiev              141.10 333 i PKIKP    PKPpre   01 42 23.3
AK11  Malin Array Si    141.13 333 ePKPpre    PKPpre   01 42 19.9
MUD   Monsted U'grnd    141.47 354 i P        PKPpre   01 42 21.8
      comp=Z,16nm,0.6s
MUD   Monsted U'grnd    141.47 354 i PKHKP    PKPpre   01 42 21.8
MUD                                pmax       pmax
      comp=Z,16nm,0.6s
EDU   Dundee            141.54   5 eP         PKPpre   01 42 21.7
INVG  Invergeldie, C    141.57   6 eP         PKPpre   01 42 21.4
EAB   Aberfoyle         141.78   6 eP         PKPpre   01 42 22.1
COP   Copenhagen        141.80 351 i P        PKPpre   01 42 23.7
COP   Copenhagen        141.80 351 i PKHKP    PKPpre   01 42 23.7
BSD   Bornholm Skovb    141.91 348⇑iP         PKPpre   01 42 22.3
      comp=Z,29nm,0.7s
BSD   Bornholm Skovb    141.91 348⇑iPKHKP     PKPpre   01 42 22.3
BSD                                pmax       pmax
      comp=Z,29nm,0.7s
PGBU  Glenifferbraes    142.14   6 eP         PKPpre   01 42 23.5
EAU   Auchinoon         142.20   5 eP         PKPpre   01 42 24.6
SIM   Simferopol'       142.32 322dePKHKP     PKPpre   01 42 24.9
SIM                                pmax       pmax
      comp=Z,43nm,0.8s
IDGL  Inch Island, C    142.48   9 eP         PKPpre   01 42 24.5
ANKE  Ethiopia-Afar     142.59 262 i P        PKPpre   01 42 27.7
ANKE  Ethiopia-Afar     142.59 262 i P        PKPpre   01 42 27.7
BHH   Howats Hill       142.97   5 eP         PKPpre   01 42 26.4
GAL1  Galloway          143.05   7 eP         PKPab    01 42 25.9 -0.7
GKP   Gorka Klasztor    143.10 345 ePKP       PKPab    01 42 26.9  0.0
GKP   Gorka Klasztor    143.10 345 ePKIKP     PKPab    01 42 26.9  0.0
SNOP  Sinop             143.22 317 ePKPdf     PKPdf    01 42 29.0 -0.9
EDMD  Edmundbyers       143.32   4 eP         PKPab    01 42 27.0 -0.7
FURI  Furi              143.37 260 ePKPdf     PKPdf    01 42 32.1 +0.7
BEL   Belsk             143.38 341 ePKP       PKPbc    01 42 28.7 +0.4
BEL   Belsk             143.38 341 ePKIKP     PKPbc    01 42 28.7 +0.4
KESW  Keswick, Cumbr    143.48   5 eP         PKPab    01 42 27.9 -0.4
IGLA  Glengowla, Co     143.75  12 i P        PKPab    01 42 28.4 -0.9
WIM   Isle of Man       143.76   7 eP         PKPab    01 42 28.3 -1.1
KIS   Kishinev          143.90 329⇓ePKP       PKPbc    01 42 28.0 -2.1
      comp=Z,600nm,2.0s
LVV   L'vov             143.91 336 ePKIKP     PKPbc    01 42 30.0  0.0
HPK   Haverah Park      144.22   4 eP         PKPbc    01 42 30.3 -0.5
IAS   Iasi              144.37 330⇑iP         PKPab    01 42 31.9  0.0
IAS   Iasi              144.37 330 ⇑PKIKP     PKPab    01 42 31.9  0.0
DSB   Dublin            144.42   9 i P        PKPbc    01 42 30.6 -0.9
DSB   Dublin            144.42   9 ePKPbc     PKPbc    01 42 31.0 -0.5
SIRC  Yozgat            144.53 313 i P        PKPab    01 42 32.8 -0.2
SIRC                               IAML_P
      comp=Z,3µm,0.6s
WME   Myndd Eilian      144.54   7 eP         PKPdf    01 42 31.2 -0.5
LEOM  Leova             144.55 328⇓iP         PKPbc    01 42 32.3 +0.2
LEOM  Leova             144.55 328 ⇓PKIKP     PKPbc    01 42 32.3 +0.2
KWP   Kalwaria Pacla    144.57 337 ePKP       PKPbc    01 42 32.3 +0.2
KWP   Kalwaria Pacla    144.57 337 ePKPdf     PKPdf    01 42 31.5 -0.5
KWP   Kalwaria Pacla    144.57 337 ePKIKP     PKPbc    01 42 32.3 +0.2
RUE   Ruedersdorf       144.62 348 eP         PKPdf    01 42 31.5 -0.5
RUE                                IAmb       IAmb     01 42 32.8
      comp=Z,126nm,0.7s
WLF1  Llynfaes          144.63   7 eP         PKPdf    01 42 31.7 -0.3
YRC   Rhoscolyn         144.65   7 eP         PKPdf    01 42 31.5 -0.4
ILGA  Ilgaz             144.67 317 ePKPdf     PKPab    01 42 33.9 +0.3
LBWR  Ladybower, Pea    144.76   4 eP         PKPdf    01 42 32.3 +0.1
LMK   Market Rasen      144.78   3 eP         PKPdf    01 42 32.1 -0.1
YLL   Llanberis         144.81   7 eP         PKPdf    01 42 32.2  0.0
PRAR  RASCA             144.88 331⇓iP         PKPdf    01 42 32.8 +0.2
YAHY  KAYSERI_Yahyal    144.93 311 i P        PKPab    01 42 34.5 -0.1
YAHY                               IAML_P
      comp=Z,3µm,0.9s
CDAG  Cicekdag          144.94 314 i P        PKPab    01 42 34.5  0.0
CDAG                               IAML_P
      comp=Z,2µm,0.4s
VAL   Valentia          144.96  13 eP         PKPdf    01 42 32.2 -0.3
BIR   Birlad            145.00 329⇑iP         PKPab    01 42 34.2 -0.1
BIR   Birlad            145.00 329 PKIKP      PKPab    01 42 34.9 +0.6
DELI  KIRIKKALE         145.06 315 i P        PKPdf    01 42 33.1 -0.1
DELI                               IAML_P
      comp=Z,3µm,0.5s
OJC   Ojcow             145.09 340 ePKP       PKPbc    01 42 33.8 +0.1
OJC   Ojcow             145.09 340 ePKPdf     PKPdf    01 42 32.9  0.0
OJC   Ojcow             145.09 340 ePKIKP     PKPdf    01 42 32.9  0.0
BUR08 Bucovina Ar. S    145.13 332 ePKPdf     PKPbc    01 42 33.9 -0.1
TLCR                    145.13 326⇑iP         PKPbc    01 42 34.0 +0.1
TLCR                    145.13 326 ⇑PKIKP     PKPbc    01 42 34.0 +0.1
BUR04 Bucovina Ar. S    145.14 332 ePKPdf     PKPdf    01 42 33.4 +0.2
BURAR Bucovina Array    145.14 332⇑iP         PKPab    01 42 34.9 -0.1
BURAR Bucovina Array    145.14 332 ⇑PKIKP     PKPab    01 42 34.9 -0.1
FOEL  Foel Wylfa        145.15   6 eP         PKPbc    01 42 33.7 -0.1
SHEL  Horse Pasture     145.15 167 ePKPdf     PKPab    01 42 35.8 +0.1
SHEL  Horse Pasture     145.15 167 i PKP2     PKPab    01 42 36.6 +0.9
BIZ   Bicaz             145.25 331⇑iP         PKPab    01 42 34.8 -0.5
BR101 Keskin Array S    145.38 315 ePKPdf     PKPbc    01 42 34.5 -0.5
BR131 Keskin Array S    145.38 315 ePKPdf     PKPdf    01 42 33.5 -0.3
BRTR  Keskin Array B    145.38 315 PKPbc      PKPbc    01 42 34.5 -0.5
      comp=Z,50nm,0.8s,baz=142,slow=2.2,SNR=228
CWF   Charnwood Fore    145.45   4 eP         PKPdf    01 42 33.9 +0.5
CFR   Carcaliu          145.49 327⇓iP         PKPdf    01 42 34.0 +0.3
CFR   Carcaliu          145.49 327 ⇓PKIKP     PKPdf    01 42 34.0 +0.3
UZH   Uzhgorod          145.54 336 ePKHKP     PKPpre   01 42 31.9
UZH                                i                   01 42 34.5
UZH                                e                   01 44 36.1
WACR  West Acre         145.55   2 eP         PKPbc    01 42 34.5 -0.4
KSP   Ksiaz             145.56 344 ePKP       PKPbc    01 42 35.6 +0.6
KSP   Ksiaz             145.56 344 ePKP2      PKPbc    01 42 35.6 +0.6
PETR  Petresti          145.58 328⇓iP         PKPab    01 42 36.5 -0.1
NIE   Niedzica          145.61 339 ePKP       PKPbc    01 42 35.9 +0.7
NIE   Niedzica          145.61 339 PKP2       PKPab    01 42 36.1 -0.6
ODBI  Odobesti          145.64 329⇓iP         PKPab    01 42 36.7 -0.1
GULE  Gulek             145.69 310 i P        PKPab    01 42 37.2 -0.4
GULE                               IAML_P
      comp=Z,10µm,0.6s
VRI   Vrincioaia        145.72 329⇓iP         PKPbc    01 42 35.8 +0.1
VRI   Vrincioaia        145.72 329 ⇓PKP2      PKPbc    01 42 35.9 +0.2
PLOR  Plostina          145.77 329⇑iP         PKPbc    01 42 36.2 +0.4
PLOR  Plostina          145.77 329 ⇑PKP2      PKPbc    01 42 36.2 +0.4
ASF   Jabal al Asfar    145.80 301 PKPbc      PKPbc    01 42 37.1 +0.6
      comp=Z,64nm,0.8s,baz=33,slow=1.8,SNR=76
AKSY  AKSARAY - Alti    145.81 313 i P        PKPbc    01 42 36.2 -0.1
AKSY                               IAML_P
      comp=Z,1µm,0.6s
BBAL  Bala              145.82 315 i P        PKPab    01 42 37.7 -0.3
BBAL                               IAML_P
      comp=Z,2µm,0.5s
TIRR  Tirgusor          145.83 326 ePKPdf     PKPbc    01 42 36.0 +0.1
TIRR  Tirgusor          145.83 326⇑iP         PKPbc    01 42 36.5 +0.5
TIRR  Tirgusor          145.83 326 ⇑PKP2      PKPbc    01 42 36.5 +0.5
LPW   Lampeter          145.83   7 eP         PKPbc    01 42 35.0 -0.7
BMR   Baia Mare         145.83 334⇑iP         PKPbc    01 42 36.6 +0.7
BMR   Baia Mare         145.83 334 ⇑PKP2      PKPbc    01 42 36.6 +0.7
TRPA  Tarpa             145.86 335⇓iP         PKPbc    01 42 36.4 +0.5
TRPA  Tarpa             145.86 335⇓iPKiKP     PKPbc    01 42 35.1 -0.8
ANTO  Ankara            145.88 316 ePKPdf     PKPdf    01 42 34.9 +0.3
ANTO  Ankara            145.88 316⇓iP         PKPdf    01 42 35.4 +0.8
ANTO  Ankara            145.88 316 ⇓PKIKP     PKPdf    01 42 35.4 +0.8
CLL   Collm             145.88 348 ePKPdf     PKPdf    01 42 34.2  0.0
CLL   Collm             145.88 348 ePKPdf     PKPdf    01 42 34.0 -0.2
CLL                               ⇓iPKPbc     PKPbc    01 42 36.0 +0.1
      comp=Z,146nm,0.7s
CLL                                epPKPdf    pPKPdf   01 44 38.0 +0.8
CLL                                e(sPKPdf)           01 45 31.0
CLL                                e                   01 45 39.0
CLL   Collm             145.88 348 ePKIKP     PKPdf    01 42 34.2  0.0
BR231 Keskin MP Arra    145.90 316 ePKPdf     PKPdf    01 42 35.1 +0.3
RSBS  Rosebush, Pemb    145.91   8 eP         PKPbc    01 42 35.1 -0.9
ARCR  ARCALIA           145.92 333⇑iP         PKPbc    01 42 35.6 -0.6
HARR  Harsova           145.93 326⇑iP         PKPbc    01 42 37.1 +0.9
HARR  Harsova           145.93 326 ⇑PKP2      PKPbc    01 42 37.1 +0.9
HWQ   Hawqa             145.93 305 eP         PKPbc    01 42 36.8  0.0
UPC   Upice             145.94 344 ePKP       PKPdf    01 42 34.9 +0.6
UPC                                ex         x        01 42 36.7
UPC                                ex         x        01 42 43.9
UPC                                epPKP      pPKPdf   01 44 37.4  0.0
UPC   Upice             145.94 344 ePKIKP     PKPdf    01 42 34.9 +0.6
UPC                                e                   01 42 36.7
UPC                                e                   01 44 37.4
TLB   Topalu            145.94 326⇑iP         PKPbc    01 42 36.6 +0.3
TLB   Topalu            145.94 326 PKP2       PKPbc    01 42 36.8 +0.5
OKC   Ostrava-Krasne    145.94 341 ePKP       PKPbc    01 42 36.5 +0.4
DPC   Dobruska-Polom    146.00 344 ePKP       PKPdf    01 42 34.7 +0.2
DPC                                ex         x        01 42 37.1
DPC                                epPKP      pPKPdf   01 44 38.0 +0.4
DPC   Dobruska-Polom    146.00 344 ePKIKP     PKPdf    01 42 34.7 +0.2
DPC                                e                   01 42 37.1
DPC                                e                   01 44 38.0
OZUR                    146.01 330⇓iP         PKPbc    01 42 36.6 +0.1
MCH1  Michaelchurch     146.05   6 eP         PKPbc    01 42 35.7 -0.6
BRG   Berggiesshubel    146.10 347 ePKP       PKPdf    01 42 33.1 -1.4
      comp=Z,47nm,2.0s
BRG   Berggiesshubel    146.10 347 i PKP      PKPdf    01 42 35.1 +0.6
      comp=Z,20nm,1.1s
BRG   Berggiesshubel    146.10 347 i PKP      PKPbc    01 42 36.8 +0.2
      comp=Z,77nm,0.8s
BRG                                epPKP      pPKPbc   01 44 38.0 +0.4
      comp=Z,31nm,1.5s
BRG   Berggiesshubel    146.10 347 ePKHKP     PKPpre   01 42 33.1
BRG                                i                   01 42 35.1
BRG                                i                   01 42 36.8
BRG                                e                   01 44 38.0
BRG                                pmax       pmax
      comp=Z,47nm,2.1s
KERG  Konya-Eregli      146.10 311 i P        PKPbc    01 42 37.4 +0.2
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KERG                                 IAML_P
       comp=Z,396nm,0.6s
LANS  Liptovska Anna    146.12 339  ePKP2      PKPab    01 42 37.8 -0.9
LANS  Liptovska Anna    146.12 339  ePKP       PKPab    01 42 37.8 -0.9
LANS                                e                   01 42 39.9
LANS                                e                   01 44 41.3
KRLC  Kraliky           146.13 343  ePKP       PKPbc    01 42 36.8 +0.1
KRLC  Kraliky           146.13 343  ePKP2      PKPbc    01 42 36.8 +0.1
WTSB  Winterswijk       146.13 355  ePKP       PKPbc    01 42 35.9 -0.6
       comp=Z,168nm,0.8s
KKUL  Konya-Kulu        146.14 314  i P        PKPdf    01 42 35.8 +0.6
KKUL                                 IAML_P
       comp=Z,470nm,0.5s
MORC  Moravsky Berou    146.18 342  ePKPdf     PKPdf    01 42 35.3 +0.5
MORC  Moravsky Berou    146.18 342⇑iP          PKPdf    01 42 35.4 +0.6
MORC  Moravsky Berou    146.18 342 ⇑PKIKP      PKPdf    01 42 35.4 +0.6
MORC  Moravsky Berou    146.18 342  ePKP       PKPdf    01 42 34.8  0.0
MORC                                e                   01 42 36.9
MORC                                e                   01 44 39.2
SSW   Stow on the Wo    146.18   4  eP         PKPbc    01 42 36.8 +0.1
MBAR  Mbarara           146.24 239  ePKPdf     PKPdf    01 42 37.1 +0.9
MBAR  Mbarara           146.24 239   PKPbc     PKPab    01 42 39.5 -0.9
       comp=Z,138nm,0.7s,baz=149,slow=0.9,SNR=126
PVCC  Panska Ves        146.28 346  ePKP       PKPdf    01 42 35.5 +0.6
PVCC                                ex         x        01 42 37.8
PVCC                                epPKP      pPKPbc   01 44 42.4 +4.1
PVCC  Panska Ves        146.28 346  ePKIKP     PKPdf    01 42 35.5 +0.6
PVCC                                e                   01 42 37.8
PVCC                                e                   01 44 42.4
BHL   Bhannes           146.28 304  eP         PKPbc    01 42 37.9 +0.2
AMRR  Amara             146.29 327⇑iP          PKPbc    01 42 36.3 -1.0
AMRR  Amara             146.29 327 ⇑PKIKP      PKPbc    01 42 36.3 -1.0
DOPR  Dopca             146.29 330⇓iP          PKPbc    01 42 38.3 +1.0
ISR   Istrita           146.35 328⇑iP          PKPbc    01 42 38.2 +0.7
ISR   Istrita           146.35 328 ⇑PKP2       PKPbc    01 42 38.2 +0.7
STRD  Stroud            146.35   5  eP         PKPbc    01 42 36.6 -0.6
QRWL  Qaraoun           146.37 304  eP         PKPbc    01 42 38.7 +0.7
MLR   Muntele Rosu      146.38 329  ePKPdf     PKPdf    01 42 34.5 -0.9
MLR   Muntele Rosu      146.38 329⇑iP          PKPbc    01 42 37.9 +0.2
MLR   Muntele Rosu      146.38 329  ePKIKP     PKPdf    01 42 34.5 -0.9
ICOR  Ion Corvin        146.38 326⇑iP          PKPbc    01 42 38.4 +0.9
DQRL  Deir Qamar        146.41 304  eP         PKPbc    01 42 38.7 +0.6
CJR   Cluj-Napoca       146.54 333⇑iP          PKPbc    01 42 38.9 +0.9
CJR   Cluj-Napoca       146.54 333 ⇑PKP2       PKPbc    01 42 38.9 +0.9
SWN1  Swindon           146.64   4  eP         PKPbc    01 42 37.7 -0.3
SECR                    146.64 328⇑iP          PKPbc    01 42 38.9 +0.7
LEHL  Lehliu            146.66 327⇑iP          PKPbc    01 42 39.0 +0.8
LTVH  Ltavrtes, Hu      146.71 335⇓iPKiKP      PKPbc    01 42 39.0 +0.7
MOX   Moxa              146.78 349   PKP2      PKPbc    01 42 38.6 +0.2
PRU   Pruhonice         146.79 345  ePKP       PKPdf    01 42 35.7  0.0
PRU                                 ex         x        01 42 38.9
PRU                                 ex         x        01 42 41.4
PRU                                 epPKP      pPKPab   01 44 39.8 +0.1
PRU   Pruhonice         146.79 345  ePKIKP     PKPdf    01 42 35.7  0.0
PRU                                 e                   01 42 41.4
PRU                                 e                   01 44 39.8
SULR                    146.80 328⇑iP          PKPbc    01 42 39.0 +0.4
VOIR                    146.85 330⇑iP          PKPbc    01 42 39.3 +0.4
VOIR                    146.85 330 ⇑PKP2       PKPbc    01 42 39.3 +0.4
DRGR                    146.86 334⇑iP          PKPbc    01 42 38.8 -0.1
DRGR                    146.86 334 ⇑PKP2       PKPbc    01 42 38.9  0.0
VRAC  Vranov            146.87 343⇓iP          PKPbc    01 42 39.2 +0.5
VRAC  Vranov            146.87 343 ⇓PKP2       PKPbc    01 42 39.2 +0.5
VRAC  Vranov            146.87 343  ePKP       PKPdf    01 42 36.2 +0.3
VRAC                                e                   01 42 38.9
VRAC                                e                   01 44 41.0
VYHS  Vyhne             146.90 340  ePKP2      PKPbc    01 42 39.3 +0.5
VYHS  Vyhne             146.90 340  ePKP       PKPbc    01 42 39.3 +0.5
VYHS                                e                   01 44 41.4
KOLL  Kolacno           146.97 340  ePKIKP     PKPdf    01 42 37.2 +1.1
KOLL                                e                   01 42 39.8
KOLL  Kolacno           146.97 340  ePKP       PKPdf    01 42 37.2 +1.1
KOLL                                e                   01 42 39.8
MTUR  Matau             147.00 330⇑iP          PKPab    01 42 42.3 -0.1
MTUR  Matau             147.00 330 ⇑PKP2       PKPab    01 42 42.3 -0.1
BMOL  Mol               147.00 357   PKiKP     PKPbc    01 42 39.5 +0.6
KDHN  Kadinhani         147.00 314  i P        PKPbc    01 42 39.5  0.0
KDHN                                 IAML_P
       comp=Z,2µm,1.1s
NKC   Novy Kostel       147.02 348  ePKP       PKPdf    01 42 36.6 +0.5
NKC                                 ex         x        01 42 39.8
NKC   Novy Kostel       147.02 348  ePKIKP     PKPdf    01 42 36.6 +0.5
NKC                                 e                   01 42 39.8
PSZ   Piszkesteto       147.03 338  ePKPdf     PKPdf    01 42 36.4 +0.1
PSZ   Piszkesteto       147.03 338⇑iP          PKPdf    01 42 37.5 +1.2
PSZ   Piszkesteto       147.03 338⇓iPKiKP      PKPbc    01 42 39.0 -0.2
PSZ   Piszkesteto       147.03 338  ePKIKP     PKPdf    01 42 36.4 +0.1
ARR   Arges             147.09 330⇑iP          PKiKP    01 42 40.9 -0.5
KONT  Konya--Tatoy      147.11 313  i P        PKPbc    01 42 39.7  0.0
KONT                                 IAML_P
       comp=Z,1µm,0.8s
ELSH  Elham, Standar    147.14   1  eP         PKPbc    01 42 39.3  0.0
PHNC  Paralimni         147.15 307   P         PKPbc    01 42 39.7 -0.2
KRUC  Moravsky          147.15 343   PKP2      PKPbc    01 42 39.8 +0.4
KRUC  Moravsky          147.15 343  ePKP       PKPdf    01 42 36.6 +0.2
KRUC                                e                   01 42 39.1
KRUC                                e                   01 44 42.0
TREC  Trest             147.19 344  ex         PKPbc    01 42 40.1 +0.5
TREC                                ex         x        01 42 42.9
TREC  Trest             147.19 344  ePKP2      PKPbc    01 42 40.1 +0.5
KMER  Konya-Meram       147.19 313  i P        PKPbc    01 42 40.8 +0.7
KMER                                 IAML_P
       comp=Z,446nm,0.8s
PRD   Provadia          147.21 325  i P        PKPbc    01 42 40.3 +0.5
SMOL  Smolenice         147.33 341  ePKP2      PKiKP    01 42 41.0 -0.7
SMOL  Smolenice         147.33 341  ePKP       PKiKP    01 42 41.0 -0.7
SMOL                                e                   01 42 44.7
BEBN  Eben Emael        147.38 356   PKiKP     PKPbc    01 42 40.0  0.0
BEBN                                 PKPdf     PKPab    01 42 43.3 -0.3
HGN   Heimansgroeve     147.39 356  ePKP       PKPdf    01 42 38.2 +1.5
       comp=Z,960nm,3.4s
UCC   Uccle             147.45 357  ePKPbc     PKPbc    01 42 40.3 +0.1
UCC   Uccle             147.45 357   PKPbc     PKPbc    01 42 40.2 +0.1
UCC                                  PKPab     PKPab    01 42 43.0 -0.9
UCC   Uccle             147.45 357   PKiKP     PKiKP    01 42 41.8  0.0
MODS  Modra-Piesok      147.50 341  ePKP2      PKPbc    01 42 41.1 +0.7
MODS  Modra-Piesok      147.50 341  ePKP       PKPbc    01 42 41.1 +0.7
MODS                                e                   01 44 44.1
DOGA  KONYA_Doganhis147.51 314  i P        PKPbc    01 42 41.6 +0.7
DOGA                                 IAML_P
       comp=Z,920nm,0.7s
BLCH  La Chartreuse     147.54 356   PKiKP     PKPbc    01 42 40.6 +0.3
MEM   Membach           147.54 355   PKPdf     PKPbc    01 42 39.9 -0.5
MEM   Membach           147.54 355   PKiKP     PKPbc    01 42 40.5 +0.1
HUMR  Humele            147.54 329⇑iP          PKPbc    01 42 39.0 -1.6
BSTI  Sart Tilman       147.60 356   PKPdf     PKPbc    01 42 40.8 +0.3
BSTI                                 PKiKP     PKiKP    01 42 42.6 +0.5
BSKQ  Steenkerk         147.61 358   PKPbc     PKPbc    01 42 40.7 +0.1
BSKQ                                 PKPab     PKPab    01 42 43.9 -0.7
BRQR  Ronquire          147.65 358   PKPbc     PKPbc    01 42 41.0 +0.4
BRQR                                 PKiKP     PKiKP    01 42 42.9 +0.7
BRQR                                 PKPab     PKPab    01 42 44.5 -0.2
SRO   Srobarova         147.66 339  ePKP2      PKPbc    01 42 41.3 +0.5
SRO   Srobarova         147.66 339  ePKP       PKPbc    01 42 41.3 +0.5
CSS   Mathiatis         147.69 307  ePKPdf     PKPbc    01 42 40.4 -0.9
CSS   Mathiatis         147.69 307   P         PKPbc    01 42 41.1 -0.3
CSS   Mathiatis         147.69 307   P         PKPbc    01 42 41.2 -0.2
MAMC  Mammari           147.70 308   P         PKPbc    01 42 41.9 +0.6
BUD   Budapest          147.71 338⇓iPKiKP      PKPbc    01 42 40.1 -0.8
SIRR  Siria             147.71 334⇑iP          PKPbc    01 42 41.7 +0.7
ZST   Bratislava        147.72 341  ePKP2      PKPbc    01 42 40.6 -0.3
ZST   Bratislava        147.72 341  ePKP       PKPbc    01 42 40.6 -0.3
GRA1  Grafenberg Arr    147.77 349  ePKPbc     PKPbc    01 42 41.3 +0.2
GRFO  Grafenberg        147.77 349  ePKPbc     PKPbc    01 42 41.5 +0.5
BHOU  Houvegnez         147.80 355   PKPbc     PKPbc    01 42 41.5 +0.4
KHC   Kasperske Hory    147.81 346  ePKPdf     PKPdf    01 42 37.6 +0.1
KHC   Kasperske Hory    147.81 346  ePKP       PKPdf    01 42 37.9 +0.4
KHC                                 ex         x        01 42 41.9
KHC                                 ex         x        01 42 44.2
KHC                                 epPKP      pPKPdf   01 44 41.3 +0.6
KHC   Kasperske Hory    147.81 346  ePKIKP     PKPdf    01 42 37.6 +0.1
BGES  Gesves            147.83 356   PKPbc     PKPbc    01 42 41.0 -0.2
BGES                                 PKPab     PKPab    01 42 44.7 -0.8
BBOU  Bougnies          147.88 358   PKiKP     PKiKP    01 42 42.1 -0.6
GZR   Gura Zlata        147.93 332⇑iP          PKPbc    01 42 41.0 -0.7
BMRD  Maredsous         147.93 357   PKiKP     PKPbc    01 42 41.5 +0.1
SZH   Strazhica         147.95 326  i P        PKPbc    01 42 41.3 -0.4
EIL   Elat              148.04 297   PKPbc     PKPbc    01 42 42.1 -0.3
       comp=Z,71nm,1.0s,baz=34,slow=3.5,SNR=6.5
LKLB  Kalborn           148.04 355   PKiKP     PKPbc    01 42 42.3 +0.6
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GEC2  GERESS Array S 148.05 346  ePKPdf     PKPdf    01 42 38.2 +0.2
GERES GERESS Array B 148.05 346   PKPbc     PKPbc    01 42 42.2 +0.3
       comp=Z,42nm,0.6s,baz=48,slow=2.0,SNR=224
GERES                                pPKPbc    pPKPdf   01 44 41.4 +0.3
       comp=Z,8.0nm,1.0s,baz=45,slow=2.1,SNR=5.6
GEA0  GERESS Array S 148.06 346  ePKPdf     PKPdf    01 42 37.6 -0.4
SZAC  Souni             148.12 307   P         PKPbc    01 42 42.9 +0.5
DOU   Dourbes           148.14 357   PKiKP     PKPbc    01 42 42.2 +0.2
DOU                                  PKPdf     PKPab    01 42 46.2 -0.5
JMB   Yambol            148.15 325  i P        PKPbc    01 42 42.5 +0.3
ALFC  Alefka            148.17 308   P         PKPbc    01 42 42.6  0.0
LVIA  Vianden           148.20 355   PKiKP     PKiKP    01 42 42.7 -0.6
VLAD  Vladila           148.22 329⇑iP          PKiKP    01 42 43.0 -0.6
BZS   Buzias            148.25 334⇑iP          PKPbc    01 42 42.8 +0.4
BZS   Buzias            148.25 334 ⇑PKP2       PKPbc    01 42 42.8 +0.4
SRE   Strehaia          148.29 331⇑iP          PKiKP    01 42 43.5 -0.3
SRE   Strehaia          148.29 331 ⇑PKP2       PKiKP    01 42 43.5 -0.3
CONA  Conrad Observa    148.33 342  i PKPbc    PKPbc    01 42 42.7 +0.1
       comp=Z,2.8nm,0.3s,SNR=16
CONA                                i pPKPab   pPKPbc   01 44 44.1 -0.1
       comp=Z,41nm,1.2s,SNR=8.9
SOP   Sopron            148.34 341⇓iPKiKP      PKPbc    01 42 42.0 -0.5
EDRB  Edirne            148.47 324   P         PKPbc    01 42 42.9 -0.1
EDRB  Edirne            148.47 324   P         PKPbc    01 42 42.9 -0.1
WLF   Walferdange       148.47 355  ePKPbc     PKiKP    01 42 43.6 -0.3
WLF   Walferdange       148.47 355   PKiKP     PKiKP    01 42 43.6 -0.3
HERR  Herculane         148.49 332⇓iP          PKPbc    01 42 42.9 -0.1
TIH   Tihany            148.60 339  i PKiKP    PKPbc    01 42 42.1 -1.1
BANR  Banloc            148.64 334⇓iP          PKiKP    01 42 44.1 -0.3
MOA   Molln             148.84 344  i PKPbc    PKPbc    01 42 43.0 -0.8
       comp=Z,15nm,0.7s,SNR=7.2
MOA                                 i pPKPbc   pPKPbc   01 44 44.5 -1.0
       comp=Z,16nm,1.0s
MDVR  Moldovita         148.87 333⇓iP          PKPbc    01 42 44.1 +0.1
JSA   Saint Aubin       148.91   5  eP         PKPbc    01 42 43.5 -0.3
MORH  Mrgy, Hungar      148.93 338⇓iPKiKP      PKPbc    01 42 43.1 -0.9
MORH  Mrgy, Hungar      148.93 338  eP         PKPbc    01 42 43.5 -0.5
CMLA  Cha da Macela     148.94  46  ePKPdf     PKPbc    01 42 42.4 -2.0
CMLA  Cha da Macela     148.94  46  i PKP2     PKiKP    01 42 46.3 +1.0
STU   Stuttgart         149.00 351  ePKPdf     PKPdf    01 42 40.0 +0.6
ARSA  Arzberg           149.04 342  i PKPbc    PKPbc    01 42 43.9 -0.5
       comp=Z,21nm,0.8s
KULA  Kula-Manisa       149.32 317   P         PKPbc    01 42 45.4 +0.1
KULA  Kula-Manisa       149.32 317   P         PKPbc    01 42 45.4 +0.1
KDZ   Kurdzhali         149.34 325  i P        PKPab    01 42 49.3 -2.7
FRGS  Fruska Gora       149.37 335⇓iP          PKPbc    01 42 45.0 -0.2
PGB   Panagyurishte     149.38 327  i P        PKPbc    01 42 45.5 +0.2
MANT  Manisa            149.40 317  ePKPdf     PKPdf    01 42 40.6  0.0
ALN   Alexandroupoli    149.48 323  ePKPbc     PKPbc    01 42 45.0 -0.6
ALN   Alexandroupoli    149.48 323   P         PKPbc    01 42 44.7 -0.8
BFO   Black Forest      149.55 352  ePKPdf     PKPdf    01 42 39.2 -1.1
BFO   Black Forest      149.55 352  ePKIKP     PKPdf    01 42 39.2 -1.1
RDO   Rodhopi           149.61 324   P         PKPbc    01 42 45.5 -0.3
RDO   Rodhopi           149.61 324   P         PKPbc    01 42 45.5 -0.3
RZN   Rozhen            149.70 325  i P        PKPbc    01 42 46.0 -0.3
SOKA  Soboth            149.70 342  i PKPbc    PKPbc    01 42 45.7 -0.3
       comp=Z,44nm,1.0s
SOKA                                i pPKPbc   pPKPbc   01 44 46.3 -1.6
       comp=Z,27nm,1.5s
PERS  Pernice           149.71 342  i PKPbc    PKPbc    01 42 45.6 -0.4
KBA   Koelnbreinsper    149.79 345  i PKPbc    PKPbc    01 42 45.6 -0.7
       comp=Z,41nm,0.6s,SNR=9.0
VTS   Vitosha           149.81 328  ePKPdf     PKPdf    01 42 41.8 +0.8
VTS   Vitosha           149.81 328⇑iP          PKiKP    01 42 46.9 -0.2
VTS   Vitosha           149.81 328   P         PKPbc    01 42 46.5 +0.1
VTS   Vitosha           149.81 328  ePKHKP     PKPdf    01 42 41.8 +0.8
VTS   Vitosha           149.81 328  i P        PKPbc    01 42 46.6 +0.1
ECH   Echery            149.81 353  ePKPbc     PKPbc    01 42 46.0 -0.1
WATA  Walderalm         149.95 347  i PKPbc    PKPbc    01 42 46.6 -0.1
       comp=Z,35nm,0.5s,SNR=20
WATA                                i pPKiKP   pPKPbc   01 44 48.9 +0.4
       comp=Z,16nm,1.0s
RETA  Reutte            149.97 348  i PKPbc    PKPbc    01 42 46.5 -0.1
       comp=Z,18nm,0.5s,SNR=8.4
RETA                                i pPKPdf   pPKPdf   01 44 41.9 -2.4
       comp=Z,16nm,1.2s
EZN   Ezine             150.00 321   P         PKPbc    01 42 46.5 -0.3
EZN   Ezine             150.00 321   P         PKPbc    01 42 46.5 -0.3
WTTA  Wattenberg        150.01 347  i PKiKP    PKPbc    01 42 46.9 +0.1
       comp=Z,79nm,0.6s,SNR=15
WTTA                                i pPKiKP   pPKiKP   01 44 49.8 -0.2
       comp=Z,25nm,1.2s
FETY  Fethiye           150.03 313   P         PKPbc    01 42 47.0  0.0
FETY  Fethiye           150.03 313   P         PKPbc    01 42 47.0  0.0
MOTA  Moosalm           150.04 348  i PKPdf    PKPdf    01 42 41.0 -0.3
       comp=Z,6.5nm,0.7s,SNR=8.2
MOTA                                i PKPbc    PKPbc    01 42 46.8 -0.1
       comp=Z,32nm,0.6s,SNR=14
MOTA                                i pPKPab   pPKPbc   01 44 50.3 +1.5
       comp=Z,15nm,0.9s
SMTH  Samothraki Isl    150.06 323   P         PKPbc    01 42 46.2 -0.7
SMTH  Samothraki Isl    150.06 323   P         PKPbc    01 42 46.2 -0.7
MYKA  Terra Mystica     150.13 344  i PKPbc    PKPbc    01 42 46.4 -0.5
       comp=Z,48nm,0.6s,SNR=5.2
MYKA                                i pPKPbc   pPKPbc   01 44 48.0 -0.9
       comp=Z,14nm,1.0s
SQTA  Sankt Quirin      150.14 348  i PKPdf    PKPdf    01 42 41.5 +0.2
       comp=Z,13nm,0.8s,SNR=6.9
SQTA                                i PKiKP    PKPbc    01 42 47.2 +0.2
       comp=Z,68nm,0.6s,SNR=11
SQTA                                i pPKiKP   pPKiKP   01 44 49.6 -0.6
       comp=Z,21nm,1.1s
DIVS  Divibare          150.16 334  ePKPbc     PKPbc    01 42 47.3 +0.2
DIVS  Divibare          150.16 334⇓iP          PKPbc    01 42 47.0 -0.2
CLF   Chambon-Foret     150.28 360  ePKPbc     PKPbc    01 42 47.2 +0.1
KAVA  Kavala            150.28 324   P         PKPbc    01 42 47.0 -0.4
KAVA  Kavala            150.28 324   P         PKPbc    01 42 47.0 -0.4
MMB   Musomiste         150.29 326  i P        PKPbc    01 42 47.2 -0.3
ABTA  Abfaltersbach     150.30 346  i PKPdf    PKPdf    01 42 40.8 -0.8
       comp=Z,26nm,1.0s,SNR=7.9
ABTA                                i PKPbc    PKPbc    01 42 47.2 -0.2
       comp=Z,81nm,0.6s,SNR=9.7
ABTA                                i pPKiKP   pPKPbc   01 44 49.3  0.0
       comp=Z,30nm,1.2s
DAVA  Damuels           150.33 349  i PKiKP    PKPbc    01 42 47.7 +0.1
       comp=Z,93nm,1.1s,SNR=9.0
DAVA                                i pPKiKP   pPKPbc   01 44 49.5 +0.1
       comp=Z,26nm,1.2s
CRES  Cresnjev          150.34 341⇓iP          PKPbc    01 42 47.1 -0.3
DOB   Doboj             150.39 337  eP         PKPab    01 42 55.2 -1.0
NVR   Nevrokopi         150.39 326   P         PKPbc    01 42 47.2 -0.5
NVR   Nevrokopi         150.39 326   P         PKPbc    01 42 47.2 -0.5
PRK   Paraskevi         150.40 320   P         PKiKP    01 42 48.2  0.0
PRK   Paraskevi         150.40 320   P         PKiKP    01 42 48.2  0.0
LJU   Ljubljana         150.42 342⇓iP          PKPbc    01 42 47.4 -0.2
FETA  Feichten          150.43 348  i PKPdf    PKPdf    01 42 42.1 +0.2
       comp=Z,19nm,0.8s,SNR=12
FETA                                i PKiKP    PKiKP    01 42 48.0 -0.3
       comp=Z,60nm,0.9s,SNR=6.3
FETA                                i pPKiKP   pPKPbc   01 44 49.3 -0.4
       comp=Z,33nm,1.2s,SNR=6.9
KKB   Krupnik           150.43 327  i P        PKPbc    01 42 47.7 -0.1
VISS  Visnje            150.55 342  i PKPdf    PKPdf    01 42 42.3 +0.4
VISS                                i PKPbc    PKPbc    01 42 48.0 +0.1
VISS                                i PKPab    PKPab    01 42 56.2 -0.7
VISS                                i pPKPbc   pPKPbc   01 44 51.2 +1.2
BBLS  Lazi&#263;i       150.60 334  eP         PKPbc    01 42 47.9 -0.3
HAPS  Han Pijesak,Bl    150.60 335⇓iP          PKPbc    01 42 47.6 -0.6
LIA   Limnos Island     150.63 322   P         PKPbc    01 42 47.7 -0.5
LIA   Limnos Island     150.63 322   P         PKPbc    01 42 47.7 -0.5
JAVS  Javornik          150.69 343  i PKPbc    PKPbc    01 42 48.0 -0.3
JAVS                                i PKPab    PKPab    01 42 56.6 -1.0
JAVS                                i pPKPbc   pPKPbc   01 44 51.0 +0.7
BOJS  Bojanci           150.69 341  i PKPdf    PKPdf    01 42 42.7 +0.6
BOJS                                i PKPbc    PKiKP    01 42 48.7  0.0
BOJS                                i pPKPbc   pPKPbc   01 44 49.7 -0.6
SRS   Serrai            150.70 326   P         PKPbc    01 42 47.4 -1.0
SRS   Serrai            150.70 326   P         PKPbc    01 42 47.4 -1.0
BLY   Banja Luka        150.71 338  ePKPbc     PKiKP    01 42 48.6 -0.2
BLY   Banja Luka        150.71 338⇑iP          PKiKP    01 42 48.5 -0.2
BLY   Banja Luka        150.71 338⇓iP          PKPbc    01 42 48.1 -0.2
CEY   Cerknica          150.73 342  eP         PKPbc    01 42 47.8 -0.5
FUORN Ofenpass-Fuorn    150.90 348  ePKPdf     PKPdf    01 42 43.2 +0.5
SMG   Samos             150.96 317   P         PKPbc    01 42 48.5 -0.6
SMG   Samos             150.96 317   P         PKPbc    01 42 48.5 -0.6
BODT  Bodrum            151.01 315   P         PKPbc    01 42 48.5 -0.8
BODT  Bodrum            151.01 315   P         PKPbc    01 42 48.5 -0.8
STIP  Stip              151.01 328  i PKP      PKPbc    01 42 47.9 -1.2
CHOS  Chios island      151.06 319   P         PKPbc    01 42 49.1 -0.3
CHOS  Chios island      151.06 319   P         PKPbc    01 42 49.1 -0.3
VAY   Valandovo         151.09 327  i PKP      PKPbc    01 42 48.5 -0.8
TUE   Stuetta           151.21 350  ePKPbc     PKiKP    01 42 50.3 +0.3
PLG   Polygyros         151.30 325   P         PKPbc    01 42 48.6 -1.2
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PLG   Polygyros         151.30 325   P         PKPbc    01 42 48.6 -1.2
SENIN Lac Senin/Sane    151.62 352  ePKPbc     PKiKP    01 42 51.0 +0.2
KRUS  Krusevo           151.72 329  i PKP      PKPbc    01 42 50.4 -0.4
BRY   Bratogost         151.75 334  eP         PKPbc    01 42 50.2 -0.7
PDG   Podgorica         151.83 333⇑iP          PKPbc    01 42 50.3 -0.6
PDG   Podgorica         151.83 333  eP         PKPbc    01 42 50.0 -0.9
KARP  Karpathos         151.93 313  ePKPbc     PKPbc    01 42 51.2 -0.2
BIA   Bitola            151.95 328  i PKP      PKPbc    01 42 51.1 -0.2
TREB  Trebinje          151.98 334  eP         PKPbc    01 42 49.3 -1.9
LIT   Litokhoron        152.01 325  ePKPbc     PKPbc    01 42 50.8 -0.6
DRME  Dracevica, Mon    152.05 332  eP         PKPbc    01 42 50.6 -0.8
XOR   Xorichti          152.13 323   P         PKPbc    01 42 50.5 -1.2
XOR   Xorichti          152.13 323   P         PKPbc    01 42 50.5 -1.2
APE   Apeiranthos       152.18 317⇑iP          PKPbc    01 42 50.8 -1.1
APE   Apeiranthos       152.18 317 ⇑PKIKP      PKPbc    01 42 50.9 -1.0
TIR   Tirane            152.41 330⇑iP          PKPbc    01 42 52.1 -0.1
TIR   Tirane            152.41 330 ⇑PKIKP      PKPbc    01 42 52.1 -0.1
ANAF  Anafi Island      152.43 316   P         PKPbc    01 42 51.2 -1.2
IOSP  Ios island        152.54 317   P         PKPbc    01 42 49.6 -3.0
THR2  Thira island,     152.60 316   P         PKPbc    01 42 51.6 -1.2
THR2  Thira island,     152.60 316   P         PKPbc    01 42 51.6 -1.2
PTL   Penteli           152.61 321   P         PKPbc    01 42 51.6 -1.2
PTL   Penteli           152.61 321   P         PKPbc    01 42 51.6 -1.2
SAP2K Karterados        152.62 316   P         PKPbc    01 42 51.8 -1.0
THR7  Fira-Santorini    152.62 316   P         PKPbc    01 42 52.0 -0.8
SANT  Santorini         152.63 316  ePKPbc     PKPbc    01 42 51.7 -1.2
SANT  Santorini         152.63 316⇓iP          PKPbc    01 42 52.0 -0.9
THR3  Thira Island,     152.65 316   P         PKPbc    01 42 51.8 -1.1
THR3  Thira Island,     152.65 316   P         PKPbc    01 42 51.8 -1.1
THR6  Thira Island,     152.68 316   P         PKPbc    01 42 52.1 -0.8
THR6  Thira Island,     152.68 316   P         PKPbc    01 42 52.1 -0.8
ATAL  Atalanti          152.69 323   P         PKPbc    01 42 51.7 -1.2
ATAL  Atalanti          152.69 323   P         PKPbc    01 42 51.7 -1.2
ATHU  Athens Univers    152.72 321   P         PKPbc    01 42 51.9 -1.1
ATHU  Athens Univers    152.72 321   P         PKPbc    01 42 51.9 -1.1
LKR   Lokris            152.73 323   P         PKPbc    01 42 49.8 -3.2
LKR   Lokris            152.73 323   P         PKPbc    01 42 49.8 -3.2
AGG   Agios Georgios    152.86 324  ePKPdf     PKPdf    01 42 45.2 -0.4
AGG   Agios Georgios    152.86 324  ePKIKP     PKPdf    01 42 45.2 -0.4
VILL  Villia            152.87 321   P         PKPbc    01 42 52.0 -1.4
SSB   Saint Sauveur     152.95 356  ePKPbc     PKiKP    01 42 53.7 +0.3
BNI   Bardonecchia      152.98 353  ePKPdf     PKPdf    01 42 46.2 +0.6
BNI   Bardonecchia      152.98 353  ePKIKP     PKPdf    01 42 46.3 +0.6
DSF   Desfina           153.16 323   P         PKPbc    01 42 53.1 -0.9
DSF   Desfina           153.16 323   P         PKPbc    01 42 53.1 -0.9
DID   Didima            153.34 320   P         PKPbc    01 42 52.8 -1.6
DID   Didima            153.34 320   P         PKPbc    01 42 52.8 -1.6
ANX   Ano Chora         153.38 324   P         PKiKP    01 42 55.2 +0.6
KALE  Kalithea          153.40 323   P         PKPbc    01 42 54.0 -0.5
KALE  Kalithea          153.40 323   P         PKPbc    01 42 54.0 -0.5
SERG  Sergoula          153.43 323   P         PKPbc    01 42 54.2 -0.3
GUR   Goura             153.59 322   P         PKPbc    01 42 54.4 -0.6
GUR   Goura             153.59 322   P         PKPbc    01 42 54.4 -0.6
IDI   Anoyia            153.62 315⇓iP          PKiKP    01 42 56.2 +1.1
IDI   Anoyia            153.62 315   PKP       PKPdf    01 42 46.7 -0.1
       comp=Z,4.3nm,0.6s,baz=27,slow=4.5
IDI                                  PKPbc     PKiKP    01 42 55.9 +0.7
       baz=354,slow=11
ITM   Ithomi            154.34 321  ePKPab     PKPab    01 43 13.5 +0.1
PGAV  Gavieira, Arco    154.72  18  ePKPdf     PKPdf    01 42 48.6 +0.4
PBRG  Braganca          155.30  16  ePKPab     PKPab    01 43 17.5 +0.3
MVO   Moncorvo          155.81  17  ePKPdf     PKPdf    01 42 50.5 +0.9
MVO   Moncorvo          155.81  17  ePKPab     PKPab    01 43 19.9 +0.4
PVIS  Viseu             155.97  19  ePKPab     PKPab    01 43 20.1 -0.1
MTE   Manteigas         156.37  19  ePKPdf     PKPdf    01 42 50.8 +0.4
MTE   Manteigas         156.37  19  ePKPab     PKPab    01 43 21.9  0.0
PCAS  Casmilo, Conde    156.38  21  ePKPab     PKPab    01 43 21.9  0.0
PTOM  Tomar             156.80  21  ePKPab     PKPab    01 43 23.6 -0.1
PCBR  Castelo Branco    156.90  19  ePKPdf     PKPdf    01 42 51.6 +0.6
PCBR  Castelo Branco    156.90  19  ePKPab     PKPab    01 43 24.3 +0.1
PMAFR Mafra             157.07  23  ePKPab     PKPab    01 43 25.1 +0.1
PMST  Lisbon--Monsan    157.30  23  ePKPab     PKPab    01 43 26.2 +0.3
PMRV  Marv??o           157.31  19  ePKPab     PKPab    01 43 25.6 -0.4
PMTG  Montargil         157.35  21  ePKPab     PKPab    01 43 25.6 -0.5
PESTR Estremoz          157.75  20  ePKPab     PKPab    01 43 27.2 -0.7
ES19  SONSECA Array     157.97  13  ePKPdf     PKPdf    01 42 52.9 +0.5
ES19                                ePKPab     PKPab    01 43 28.8 -0.1
ESDC  Sonseca Array     157.98  13   PKP       PKPdf    01 42 52.1 -0.3
       comp=Z,2.9nm,0.9s,baz=344,slow=2.6,SNR=8.5
ESDC                                 PKPab     PKPab    01 43 28.7 -0.2
       comp=Z,7.6nm,0.8s,baz=349,slow=4.6,SNR=17
PNCL  Nicolau / Gran    158.09  23  ePKPab     PKPab    01 43 29.4  0.0
MESJ  Messejana         158.45  23  ePKPdf     PKPdf    01 42 53.8 +0.9
MESJ  Messejana         158.45  23  ePKPdf     PKPdf    01 42 53.9 +1.0
MESJ  Messejana         158.45  23  ePKPab     PKPab    01 43 30.7 -0.2
MORF  Marmelete         158.75  24  ePKPdf     PKPdf    01 42 54.3 +1.0
PVAQ  Vaqueiros         159.02  22  ePKPab     PKPab    01 43 33.7 +0.3
KEST  Kesra             161.43 341   PKP       PKPdf    01 42 57.1 +0.7
       comp=Z,6.8nm,0.9s,baz=278,slow=4.8,SNR=4.3
KEST                                 PKPab     PKPab    01 43 44.2 +0.1
       comp=Z,17nm,0.8s,baz=306,slow=0.9,SNR=16
LIC   Lamto             166.17 149  ePKIKP     PKPdf    01 43 00.4 -0.8
       comp=Z,121nm,1.2s
KIC   Kosan Boka        166.43 149  ePKIKP     PKPdf    01 43 00.7 -0.7
       comp=Z,102nm,1.2s
TIC   Toumodi           166.53 148  ePKIKP     PKPdf    01 43 00.8 -0.7
DBIC  Dimbokro          166.64 148   PKP       PKPdf    01 43 01.1 -0.5
       comp=Z,12nm,0.6s,baz=113,slow=1.2,SNR=28
TAM   Tamanrasset       174.47 326  ePKPdf     PKPdf    01 43 06.2 +0.5
TAM                                 ePKPab     PKPab    01 44 43.0 +0.7
TAM   Tamanrasset       174.47 326  ePKIKP     PKPdf    01 43 06.2 +0.5
TAM                                 e                   01 44 43.0
TOA0  Torodi Ar. Sit    174.93 175  ePKPdf     PKPdf    01 43 05.0 -0.8
TOA0                                ePKPab     PKPab    01 44 43.0 -1.1
TORD  Torodi Ar. Bea    174.93 175   PKP       PKPdf    01 43 03.7 -2.1
       comp=Z,13nm,1.0s,baz=260,slow=0.1,SNR=48
TORD                                 PKPab     PKPab    01 44 42.3 -1.8
       comp=Z,4.5nm,0.6s,baz=125,slow=4.6,SNR=11
TORD                                 PP        PP       01 48 39.5 +4.0
       comp=Z,5.5nm,1.1s,baz=160,slow=6.4,SNR=5.9
TOA1  Torodi Ar. Sit    174.94 175  ePKPdf     PKPdf    01 43 03.7 -2.1
TOA1                                ePKPab     PKPab    01 44 42.3 -1.8
TOA1                                ePP        PP       01 48 39.5 +4.0
```

IDC 12 01:46:36.4±3.8**, 10°.90S**×**165°.93E, h79**^{km}±33^{km}**, mb3.4**/4**, mb1 3.7**/6**, mb1mx3.3**/41**, mbtmp3.8**/6**, Error ellipse: s-maj=31.7km s-min=25.6km az=38.0, Santa Cruz Islands**

```
Code  Station Name          Δ°   AZ°    Phase ID            Time      Res
                                        Op        ISC       h  m  s    ISC
HNR   Honiara             6.07 283      P         Pn        01 48 02.7 -0.9
       16nm,0.3s,baz=93,slow=5.1,SNR=5.3
HNR                                     S         Sn        01 49 12.9 +1.2
       13nm,0.3s,baz=195,slow=15,SNR=1.8
DZM   Mont Dzumac        11.12 178      P         Pn        01 49 12.9 +0.4
       0.8nm,0.3s,baz=73,slow=19,SNR=5.7
WRA   Warramunga Arr     31.71 250      P         P         01 52 52.7 -0.1
       0.6nm,0.8s,baz=82,slow=8.9,SNR=4.7
ASAR  Alice Springs      33.02 243      P         P         01 53 04.3 -0.1
       0.4nm,0.8s,baz=81,slow=11,SNR=3.9
ILAR  Eielson Array      83.32  18      P         P         01 58 54.3 +0.1
       0.4nm,0.5s,baz=235,slow=5.2,SNR=9.8
MKAR  Makanchi Array     93.55 317      P         P         01 59 43.5 -0.1
       0.8nm,1.1s,baz=98,slow=4.4,SNR=3.4
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*IDC **12** 01:58:55.4±1.6, 11°.51S×165°.05E, h0*^{km}*, mb3.8/5, mb1 4.0/6, mb1mx3.7/49, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=47.9km s-min=28.3km az=120.0*

*ISCJB **12** 01:58:58.7±1.2, 11°.7S±0°.1×165°.1E±0°.2, h34*^{km}*, mb3.8/5, Error ellipse: s-maj=31.8km s-min=19.5km az=176.1*

ISC 12 01:59:00.4±1.2**, 11°.6S**±0°.1×**165°.1E**±0°.3**, h34**^{km}**, n6,** σ**0ˢ.65**/6**, mb3.7**/5**, Santa Cruz Islands**

```
Code  Station Name          Δ°   AZ°    Phase ID            Time      Res
                                        Op        ISC       h  m  s    ISC
DZM   Mont Dzumac        10.50 173      Pn        Pn        02 01 28.9 +0.2
       0.7nm,0.3s,baz=207,slow=14,SNR=6.6
WRA   Warramunga Arr     30.69 250      P         P         02 05 12.1 -0.2
       2.2nm,1.0s,baz=81,slow=9.3,SNR=11
ASAR  Alice Springs      31.97 244      P         P         02 05 23.1 -0.4
       1.0nm,0.9s,baz=67,slow=9.4,SNR=8.1
SONM  Songino Array      78.73 324      P         P         02 11 00.3 +0.8
       0.5nm,0.8s,baz=141,slow=5.9,SNR=4.8
ILAR  Eielson Array      84.24  19      P         P         02 11 27.6 -0.6
       0.3nm,0.6s,baz=234,slow=6.2,SNR=6.1
MKAR  Makanchi Array     93.48 317      P         P         02 12 12.8 +0.1
       0.7nm,0.9s,baz=90,slow=5.5,SNR=4.3
```

*IDC **12** 02:01:46.7±1.1, 11°.47S×165°.08E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.8/53, mbtmp3.8/8, ML3.5/1, MS3.2/3, Ms1 3.1/3, ms1mx2.8/25, Error ellipse: s-maj=41.5km s-min=23.9km az=135.0*

*ISCJB **12** 02:01:50.2±0.8, 11°.6S±0°.1×165°.0E±0°.2, h34^{km}, mb3.8/7, MS3.1/2, Error ellipse: s-maj=23.7km s-min=16.6km az=13.0*

ISC 12 02:01:51.8±0.8**, 11°.5S**±0°.1×**165°.1E**±0°.2**, h34^{km}, n13, σ0^s.82**/8**, mb3.7**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.47	292	LR	LR	02 05 08.9	
	comp=Z,159nm,18.7s,baz=186,slow=37						
DZM	Mont Dzumac	10.56	173	Pn	Pn	02 04 21.1	+0.2
	0.4nm,0.3s,baz=311,slow=20,SNR=3.4						
STKA	Stephens Creek	29.64	223	LR	LR	02 18 32.2	
	comp=Z,40nm,19.9s,baz=26,slow=34						
H11S2	WAKE ISLAND Hy	29.87	3	T	T	02 39 23.3	
	baz=181						
H11S3	WAKE ISLAND Hy	29.88	3	T	T	02 39 18.4	
	baz=181						
H11S1	WAKE ISLAND Hy	29.89	3	T	T	02 39 22.4	
	baz=181						
WRA	Warramunga Arr	30.71	250	P	P	02 08 03.7	-0.2
	2.6nm,0.9s,baz=81,slow=9.2,SNR=15						
WRA				LR	LR	02 18 49.9	
	comp=Z,63nm,20.3s,baz=40,slow=33						
ASAR	Alice Springs	32.00	244	P	P	02 08 14.7	-0.5
	0.9nm,0.8s,baz=70,slow=9.8,SNR=7.4						
SONM	Songino Array	78.67	324	P	P	02 13 51.3	+0.6
	0.5nm,0.9s,baz=137,slow=8.2,SNR=6.6						
ILAR	Eielson Array	84.18	19	P	P	02 14 19.1	-0.2
	0.3nm,0.6s,baz=240,slow=4.7,SNR=8.1						
NVAR	Mina Array Bea	86.83	50	P	P	02 14 34.1	+0.7
	0.6nm,0.8s,baz=245,slow=6.4,SNR=3.7						
MKAR	Makanchi Array	93.43	317	P	P	02 15 04.5	+0.6
	0.6nm,0.8s,baz=108,slow=6.0,SNR=5.1						
YKA	Yellowknife Ar	95.70	27	P	P	02 15 12.5	-1.3
	0.3nm,1.0s,baz=250,slow=4.8,SNR=3.0						

IDC 12 02:03:23.9±1.6**, 11°.46S**×**165°.04E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/51**, mbtmp3.6**/5**, ML3.3**/1**, Error ellipse: s-maj=47.9km s-min=28.9km az=119.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.64	173	Pn	Pn	02 05 57.7	-0.1
	0.2nm,0.3s,baz=330,slow=20,SNR=2.4						
WRA	Warramunga Arr	30.69	250	P	P	02 09 40.8	0.0
	1.7nm,0.9s,baz=80,slow=9.0,SNR=7.4						
ASAR	Alice Springs	31.99	243	P	P	02 09 51.9	-0.3
	0.6nm,0.9s,baz=65,slow=10,SNR=4.4						
SONM	Songino Array	78.59	324	P	P	02 15 28.0	+0.3
	0.2nm,0.6s,baz=122,slow=6.0,SNR=3.2						
ILAR	Eielson Array	84.12	19	P	P	02 15 56.3	-0.2
	0.2nm,0.6s,baz=239,slow=5.4,SNR=4.1						

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*IDC **12** 02:05:32.2±2.0, 36°.16N×68°.69E, h0^{km}, mb3.5/6, mb1 3.6/12, mb1mx3.5/57, mbtmp3.6/12, ML3.4/6, MS3.1/2, Ms1 3.1/2, ms1mx2.6/40, Error ellipse: s-maj=37.3km s-min=18.0km az=156.0*

*ISCJB **12** 02:05:36.5±0.9, 36°.66N±0°.07×68°.40E±0°.05, h24^{km}, mb3.5/5, MS3.0/2, Error ellipse: s-maj=10.2km s-min=5.6km az=160.4*

*NNC **12** 02:05:39.7±2.9, 36°.89N×68°.48E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=24.1km s-min=16.4km az=176.0*

ISC 12 02:05:38.3±1.2**, 36°.60N**±0°.10×**68°.46E**±0°.07**, h24^{km}, n21, σ1^s.51**/29**, mb3.5**/5**, 7C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	5.23	48	⇓P	Pn	02 06 56.3	+1.1
	4.0nm,0.4s						
SFK				⇓S	Sn	02 07 57.5	+2.7
	12nm,0.3s						
MNAS	Manas	6.66	27	⇓P	Pn	02 07 16.1	+1.4
	1.6nm,0.3s						
MNAS				⇓S	Sn	02 08 30.3	+0.4
	13nm,0.5s						
KK31	Karatay Array	6.68	13	⇓P	Pn	02 07 17.4	+2.5
	0.4nm,0.2s,baz=186,slow=11,SNR=25						
KK31				⇑S	Sn	02 08 31.7	+1.4
	1.6nm,0.3s,baz=101,slow=51,SNR=5.1						
AAK	Ala-Archa	7.62	36	⇑P	Pn	02 07 28.7	+0.8
	3.6nm,0.5s						
AAK				⇑S	Sn	02 08 54.0	+0.5
	11nm,0.8s						
AAK	Ala-Archa	7.62	36	Pn	Pn	02 07 28.9	+1.0
	1.5nm,0.3s,baz=186,slow=3.6,SNR=24						
AAK				Sn	Sn	02 08 53.9	+0.5
	0.7nm,0.3s,baz=137,slow=18,SNR=8.3						
GEYT	Alibeck	8.35	282	Pn	Pn	02 07 37.2	-0.7
	1.5nm,0.3s,baz=114,slow=11,SNR=12						
GEYT				Sn	Sn	02 09 12.4	+1.0
	1.1nm,0.3s,baz=114,slow=24,SNR=4.4						
TKM2	Tokmak 2	8.37	39	⇓P	Pn	02 07 37.9	-0.3
	2.3nm,0.5s						
TKM2				⇑S	Sn	02 09 10.0	-2.0
	3.5nm,0.7s						
AB31	Akbulak array	14.09	337	⇑P	Pn	02 08 56.3	+0.1
	1.8nm,0.4s,baz=155,slow=14,SNR=71						
AB31				⇓S	Sn	02 11 29.9	-1.7
	0.4nm,0.4s,baz=158,slow=24,SNR=3.6						
MKAR	Makanchi Array	14.48	41	Pn	Pn	02 08 59.8	-2.0
	0.1nm,0.3s,baz=231,slow=15,SNR=11						
AKTO	Aktyubinsk	15.74	335	⇑P	Pn	02 09 19.2	+0.8
	4.1nm,1.4s						
AKTO				⇑S	Sn	02 12 10.4	-1.5
	2.5nm,1.1s						
AKTO	Aktyubinsk	15.74	335	Pn	Pn	02 09 19.1	+0.8
	0.5nm,0.3s,baz=140,slow=14,SNR=13						
AKTO				Sn	Sn	02 12 08.4	-3.5
	0.1nm,0.3s,baz=137,slow=18,SNR=2.8						
KURBB	Kurchatov Arra	15.78	24	Pn	Pn	02 09 17.3	-1.4
	0.0nm,0.3s,baz=214,slow=9.8,SNR=2.9						
BVAR	Borovoye Array	16.48	4	Pn	Pn	02 09 27.1	-0.6
	0.1nm,0.3s,baz=172,slow=14,SNR=3.5						
ZALV	Zalesovo Beam	20.73	28	P	P	02 10 16.2	-0.7
	0.6nm,0.3s,baz=220,slow=10,SNR=4.9						
KBZ	Khabaz	20.74	298	LR	LR	02 21 01.1	
	comp=Z,59nm,19.2s,baz=314,slow=44						
BRTR	Keskin Array B	27.45	287	LR	LR	02 25 27.3	
	comp=Z,35nm,18.7s,baz=280,slow=43						
SONM	Songino Array	29.97	56	P	P	02 11 43.8	-1.1
	0.2nm,0.5s,baz=270,slow=8.7,SNR=3.1						
FINES	FINESS Array B	36.27	327	P	P	02 12 39.7	+0.4
	0.8nm,0.6s,baz=93,slow=7.0,SNR=4.7						
ARCES	ARCESS Array B	40.28	338	P	P	02 13 14.8	+1.8
	1.8nm,0.9s,baz=130,slow=8.4,SNR=3.5						
NOA	NORSAR Array B	43.07	323	P	P	02 13 37.1	+1.1
	0.2nm,0.4s,baz=98,slow=8.0,SNR=3.3						
TORD	Torodi Ar. Bea	63.67	267	P	P	02 16 07.1	-0.8
	0.2nm,0.5s,baz=54,slow=6.3,SNR=4.6						

IDC 12 02:12:16.3±4.3**, 27°.16N**×**127°.04E, h0^{km}, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.2**/54**, mbtmp3.4**/4**, Error ellipse: s-maj=88.7km s-min=44.7km az=179.0, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	Kul'dur	22.33	8	P	P	02 17 15.7	+0.2
	0.6nm,0.6s,baz=214,slow=7.3,SNR=4.9						
SONM	Songino Array	26.20	327	P	P	02 17 52.6	-0.2
	1.0nm,0.8s,baz=143,slow=9.2,SNR=9.8						
MKAR	Makanchi Array	40.12	311	P	P	02 19 53.9	0.0
	0.3nm,0.8s,baz=97,slow=7.6,SNR=3.2						
YKA	Yellowknife Ar	78.13	25	P	P	02 24 17.1	0.0
	0.3nm,0.9s,baz=305,slow=5.5,SNR=4.0						

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*ISCJB **12** 02:13:34.8±1.1, 31°.28N±0°.08×140°.3E±0°.2, h150^{km}, mb3.4/5, Error ellipse: s-maj=27.9km s-min=9.7km az=12.1*

*JMA **12** 02:13:36.8±0.5, 31°.50N×140°.20E, h188^{km}±4^{km}, M3.3*

*IDC **12** 02:13:37.5±3.5, 31°.16N×139°.59E, h147^{km}±32^{km}, mb3.3/5, mb1 3.3/6, mb1mx3.0/48, mbtmp3.6/6, Error ellipse: s-maj=77.3km s-min=21.9km az=78.0*

ISC 12 02:13:36.3±1.3**, 31°.3N**±0°.1×**140°.3E**±0°.2**, h150^{km}, n13, σ0^s.97**/15**, mb3.3**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.80	348	P	Pn	02 14 10.5	+1.3
TK02	Tokai 2	3.37	322	P	Pn	02 14 28.3	+0.1
BSO1	Boso 1	3.39	10	P	Pn	02 14 28.7	+0.6
BSO1				S	Sn	02 15 08.5	+0.1
BSO3	Boso 3	3.49	3	P	Pn	02 14 29.7	0.0
BSO3				S	Sn	02 15 11.1	-0.1
BSO4	Boso 4	3.67	1	P	Pn	02 14 32.4	+0.2
JAG	Ashikaga	5.15	353	P	Pn	02 14 50.1	-1.5
JHO	Hitachi	5.30	3	P	Pn	02 14 52.8	-0.8
MJAR	Matsushiro Arr	5.49	343	P	Pn	02 14 57.2	+1.0
	0.1nm,0.3s,baz=162,slow=15,SNR=3.9						
MKAR	Makanchi Array	46.55	307	P	P	02 21 47.2	-1.7
	0.3nm,0.5s,baz=83,slow=9.3,SNR=9.5						
WRA	Warramunga Arr	51.27	187	P	P	02 22 24.7	-0.3
	0.2nm,0.3s,baz=2.4,slow=7.7,SNR=9.1						
ARCES	ARCESS Array B	69.02	340	P	P	02 24 26.5	+1.3
	1.5nm,0.8s,baz=68,slow=7.9,SNR=3.8						
FINES	FINESS Array B	73.44	333	P	P	02 24 52.2	+0.4
	0.5nm,0.6s,baz=45,slow=6.0,SNR=3.7						
BRTR	Keskin Array B	81.93	312	P	P	02 25 40.0	+0.5
	0.5nm,0.7s,baz=62,slow=6.7,SNR=3.8						

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*ISCJB **12** 02:20:01.8±0.6, 12°.18N±0°.06×87°.30W±0°.04, h79^{km}±5^{km}, mb3.5/7, Error ellipse: s-maj=12.3km s-min=4.1km az=30.8*

*UCR **12** 02:20:02.4±1.2, 12°.14N×87°.38W, h54^{km}, ML3.4*

*IDC **12** 02:20:04.8±1.6, 12°.39N×86°.93W, h89^{km}±29^{km}, mb3.2/7, mb1 3.5/10, mb1mx3.3/34, mbtmp3.5/10, Error ellipse: s-maj=58.6km s-min=14.2km az=38.0*

ISC 12 02:20:02.5±1.1**, 12°.17N**±0°.07×**87°.30W**±0°.05**, h73^{km}**±9^{km}**, n33, σ0^s.94**/39**, mb3.5**/7**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.58	25	*e*P	Pn	02 20 16.4	-0.1
CRIN				*e*S	Sn	02 20 27.1	+0.3
CNGN	Cerro Negro	0.68	61	*e*P	Pn	02 20 17.1	-0.3
CNGN				*e*S	Sn	02 20 28.0	-0.4
COPN	Copaltepe	0.69	89	*e*P	Pn	02 20 17.2	-0.3
MOMN	Momotombo	0.78	72	*e*P	Pn	02 20 18.6	0.0
XAVN	Gruta Xavier	0.95	91	*e*P	Pn	02 20 20.8	+0.2
MGAN	Managua	1.03	91	*e*P	Pn	02 20 21.6	+0.1
CNCH	Conchagua	1.22	335	*e*P	Pn	02 20 23.6	-0.4
CNCH				*e*S	Sn	02 20 39.5	-0.6
CNCH				IAML		02 20 42.8	
	comp=Z,794nm,0.4s						
LCND	La Caada	1.27	333	*e*P	Pn	02 20 24.2	-0.4
LCND				*e*S	Sn	02 20 40.4	-0.8
LCND				IAML		02 20 44.0	
	comp=Z,1μm,0.3s						
ESTN	Estel	1.30	44	*e*P	Pn	02 20 25.8	+0.7
ESTN				*e*S	Sn	02 20 43.1	+1.1
MATN	Matagalpa	1.54	60	*e*P	Pn	02 20 28.8	+0.6
LCY	Lacayo	1.58	322	*e*P	Pn	02 20 28.8	0.0
BOAB	BOACO BROADBAN	1.62	80	*e*P	Pn	02 20 29.2	+0.1
PACA	Pacayal	1.63	323	*e*P	Pn	02 20 29.2	-0.3
PACA				*e*S	Sn	02 20 49.6	-0.3
CONN	Concepcion	1.75	110	*e*P	Pn	02 20 30.7	-0.1
TECA	Tecapa	1.77	319	*e*P	Pn	02 20 30.8	-0.5
SNVI	San Vicente	2.08	314	*e*S	Sn	02 20 59.9	-0.6
ACON	Acoyapa	2.09	95	*e*P	Pn	02 20 35.4	-0.1
VICT	Victoria	2.21	324	*e*P	Pn	02 20 37.6	+0.5
PAVA	Las Pavas	2.21	314	IAML		02 21 08.4	
	comp=Z,164nm,0.3s						
LFRS	El Faro	2.25	310	*e*P	Pn	02 20 37.4	-0.3
LFRS				*e*S	Sn	02 21 03.8	-0.7
LOMA	San Marcos	2.35	309	*e*S	Sn	02 21 06.5	-0.3
LOMA				IAML		02 21 07.7	
	comp=Z,411nm,0.3s						
CEVE	Cerro Verde	2.80	306	*e*S	Sn	02 21 18.4	+0.2
SBLS	San Blas	2.81	307	*e*P	Pn	02 20 45.2	-0.1
JTS	JuntasAbangare	2.96	129	P	Pn	02 20 47.5	+0.2
	comp=Z,2.3nm,0.3s,baz=3.7,slow=19,SNR=13						
JTS				S	Sn	02 21 22.5	+0.7
	comp=Z,3.2nm,0.3s,baz=354,slow=19,SNR=3.5						
APG	El Apazote	4.17	313	P	Pn	02 21 09.4	+5.5
	comp=Z,0.4nm,0.3s,baz=95,slow=11,SNR=4.3						
CMIG	Matias Romero	8.82	305	P	Pn	02 22 10.8	+3.6
	comp=Z,0.2nm,0.3s,baz=154,slow=13,SNR=3.2						
TXAR	Lajitas Array	22.89	321	P	P	02 25 01.0	+0.7
	comp=Z,1.6nm,0.7s,baz=137,slow=11,SNR=16						
PDAR	Pinedale Array	36.09	332	P	P	02 26 58.6	+1.0
	comp=Z,0.4nm,0.5s,baz=127,slow=8.4,SNR=5.3						
NVAR	Mina Array Bea	38.01	319	P	P	02 27 16.5	+2.6
	comp=Z,0.2nm,0.5s,baz=123,slow=6.5,SNR=2.6						
ULM	Lac du Bonnet	38.62	351	P	P	02 27 17.3	-1.3
	comp=Z,0.9nm,0.5s,baz=153,slow=12,SNR=3.4						
SCHQ	Schefferville	45.51	16	P	P	02 28 13.5	-1.0
	comp=Z,1.2nm,0.5s,baz=221,slow=8.9,SNR=7.1						
YKA	Yellowknife Ar	53.92	345	P	P	02 29 17.3	-0.9
	comp=Z,0.3nm,0.7s,baz=138,slow=7.9,SNR=5.8						
ILAR	Eielson Array	66.34	336	P	P	02 30 42.9	-0.3
	comp=Z,0.5nm,1.0s,baz=139,slow=5.8,SNR=3.6						

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*IDC **12** 02:37:25.2±0.6, 11°.00S×165°.66E, h0^{km}, mb4.3/16, mb1 4.6/18, mb1mx4.4/31, mbtmp4.4/18, ML4.8/2, MS3.5/5, Ms1 3.4/5, ms1mx3.1/54, Error ellipse: s-maj=19.5km s-min=14.9km az=104.0*

*NEIC **12** 02:37:26.9±0.2, 11°.03S×165°.64E, h10^{km}, mb4.8/32, Error ellipse: s-maj=6.3km s-min=4.7km az=94.0*

*ISCJB **12** 02:37:28.2±0.3, 11°.13S±0°.03×165°.57E±0°.05, h30^{km}, mb4.6/44, MS3.9/5, Error ellipse: s-maj=6.8km s-min=4.9km az=167.1*

ISC 12 02:37:30.1±0.4**, 11°.05S**±0°.06×**165°.61E**±0°.07**, h30^{km}, n87, σ0^s.87**/87**, mb4.7**/44**, MS3.5**/5**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.80	286	*e*Pn	Pn	02 38 54.5	+0.4
HNR				*e*Sn	Sn	02 39 59.4	-0.4
HNR	Honiara	5.80	286	Pn	Pn	02 38 53.5	-0.6
	25nm,0.3s,baz=176,slow=2.9,SNR=8.0						
HNR				Sn	Sn	02 39 59.3	-0.4
	11nm,0.3s,baz=202,slow=16,SNR=2.5						
HNR				LR	LR	02 41 06.7	
	comp=Z,852nm,19.2s,baz=128,slow=38						
MARNC	Mare, Loyalty	10.63	168	*e*Pn	Pn	02 40 00.1	-0.2
DZM	Mont Dzumac	10.99	176	Pn	Pn	02 40 05.5	+0.1
	6.2nm,0.3s,baz=2.0,slow=11,SNR=47						
DZM				Sn	Sn	02 42 07.7	+0.3
	0.1nm,0.3s,baz=30,slow=20,SNR=2.1						
DZM				LR	LR	02 43 29.3	
	comp=Z,93nm,19.7s,baz=70,slow=33						
OUENC	Ouen Island, N	11.36	174	*e*Pn	Pn	02 40 10.8	+0.4
PINNC	Pines Island,	11.63	172	*e*Pn	Pn	02 40 13.8	-0.3
EIDS	Eidsvold	19.80	222	*e*P	Pn	02 42 00.3	+0.4
	21nm,1.2s						
MANU	Manus Island	20.20	295	*e*P	Pn	02 42 03.7	-0.9
	126nm,1.1s						
CTA	Charters Tower	20.68	242	P	P	02 42 08.8	+1.0
	17nm,0.9s,baz=76,slow=13,SNR=12						
CTAO	Charters Tower	20.68	242	*e*P	P	02 42 06.1	-1.7
	29nm,1.0s						
COEN	Coen	22.09	260	*e*P	P	02 42 23.3	+0.3
	41nm,1.2s						
OUZ	Omahuta	25.13	164	*e*P	P	02 42 52.3	-0.2
	20nm,1.1s						
URZ	Urewera	28.98	161	*e*P	P	02 43 27.2	+0.2
	13nm,1.1s						
URZ	Urewera	28.98	161	P	P	02 43 27.2	+0.2
	6.8nm,0.8s,baz=314,slow=9.0,SNR=4.1						
H11S2	WAKE ISLAND Hy	29.38	2	T	T	03 14 19.7	
	baz=181,slow=74						
H11S3	WAKE ISLAND Hy	29.38	2	T	T	03 14 16.7	
	baz=181						
H11S1	WAKE ISLAND Hy	29.39	2	T	T	03 14 20.3	
	baz=181,slow=74						
BKZ	Black Stump Fm	29.63	163	*e*P	P	02 43 34.3	+1.4
	14nm,0.6s						
STKA	Stephens Creek	30.34	223	*e*P	P	02 43 39.8	+0.6
	1.5nm,0.7s						
STKA	Stephens Creek	30.34	223	P	P	02 43 39.6	+0.4
	7.8nm,0.8s,baz=31,slow=9.7,SNR=13						
STKA				LR	LR	02 55 24.8	
	comp=Z,70nm,18.5s,baz=28,slow=36						
H11N1	WAKE ISLAND Hy	30.60	2	T	T	03 15 49.2	
	baz=182,slow=76,SNR=4.8						
H11N3	WAKE ISLAND Hy	30.60	2	T	T	03 15 50.4	
	baz=182,slow=76,SNR=4.2						
H11N2	WAKE ISLAND Hy	30.61	2	T	T	03 15 49.3	
	baz=182,slow=76,SNR=2.1						
BFZ	Birch Farm	30.97	164	*e*P	P	02 43 42.5	-2.1
	51nm,1.3s						
THZ	Tophouse	31.25	169	*e*P	P	02 43 46.0	-1.3
	22nm,1.1s						
WRAB	Tennant Creek	31.34	250	*e*P	P	02 43 47.8	-0.5
	21nm,1.0s						
WR1	Warramunga Arr	31.36	250	*e*P	P	02 43 47.3	-1.0
	24nm,0.9s						
WR1				*e*PcP	PcP	02 46 42.6	+0.7
WRA	Warramunga Arr	31.36	250	P	P	02 43 47.3	-1.0
	14nm,0.9s,baz=80,slow=9.1,SNR=76						
WRA				PcP	PcP	02 46 42.6	+0.7
	1.7nm,0.7s,baz=76,slow=3.1,SNR=11						
TOO	Toolangi	32.00	211	*e*P	P	02 43 54.0	+0.2
	6.7nm,0.6s						
AS01	Alice Springs	32.63	243	*e*P	P	02 43 57.5	-2.0
AS01				*e*PcP	PcP	02 46 45.0	-0.3
AS31	Alice Springs	32.67	243	*e*P	P	02 43 59.0	-0.9
	1.3nm,0.7s						
AS31				*e*PcP	PcP	02 46 46.0	+0.5
ASAR	Alice Springs	32.67	243	P	P	02 43 58.7	-1.2
	3.1nm,0.8s,baz=64,slow=10,SNR=28						
ASAR				PcP	PcP	02 46 46.0	+0.5
	2.4nm,0.7s,baz=72,slow=2.6,SNR=18						
ASAR				LR	LR	02 56 26.3	
	comp=Z,96nm,19.8s,baz=75,slow=35						
RPZ	Rata Peaks	32.88	173	*e*P	P	02 44 00.7	-0.7
RPZ	Rata Peaks	32.88	173	P	P	02 44 00.5	-0.9
	9.3nm,0.8s,baz=16,slow=18,SNR=3.1						
WKZ	Wanaka	33.78	176	*e*P	P	02 44 08.3	-1.0
	63nm,1.3s						
BBOO	Buckleboo	34.73	227	*e*P	P	02 44 16.3	-1.3
	12nm,0.9s						
FITZ	Fitzroy Crossi	39.25	255	*e*P	P	02 44 55.4	-0.9
	6.6nm,0.8s						
FITZ	Fitzroy Crossi	39.25	255	LR	LR	02 59 27.7	
	comp=Z,57nm,19.2s,baz=92,slow=34						
MBWA	Marble Bar	45.07	251	*e*P	P	02 45 44.4	+0.7
	15nm,0.9s						
MJAR	Matsushiro Arr	53.91	333	P	P	02 46 49.9	-1.0
	0.7nm,0.3s,baz=166,slow=10,SNR=3.7						
MAJO	Matsushiro	53.92	333	*e*P	P	02 46 49.9	-1.0
NJ2	Nanjing	61.93	315	*e*P	P	02 47 47.9	+0.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PETK	Petropavlovsk-	64.26	355	P	P	02 48 02.2	0.0
	comp=Z,3.2nm,0.8s,baz=169,slow=8.9,SNR=4.6						
PEA1	Petropavlovsk-	64.27	355	*e*P	P	02 48 02.2	0.0
CN2	Changchun	65.68	329	*e*P	P	02 48 11.7	0.0
VNDA	Vanda	66.48	181	P	P	02 48 17.1	+0.7
	comp=Z,3.1nm,0.9s,baz=0.7,slow=5.1,SNR=4.5						
HHC	Hu-ho-hao-te	71.75	320	*e*P	P	02 48 52.6	+2.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.5s						
CM31	Chiang Mai Arr	71.99	294	*e*P	P	02 48 52.5	+1.0
CMAR	Chiang Mai Arr	71.99	294	P	P	02 48 52.5	+1.0
	comp=Z,1.2nm,0.4s,baz=129,slow=3.6,SNR=4.1						
LZH	Lanzhou	74.66	312	*e*P	P	02 49 13.6	+6.5
LZH				pP	PcP	02 49 24.8	+3.5
LZH				sP	sP	02 49 29.4	+10
GAMB	Gambell	76.60	10	*e*P	P	02 49 18.1	+0.8
	comp=Z,6.3nm,0.9s						
SONA0	Songino Array	78.59	324	*e*P	P	02 49 29.3	+0.3
SONM	Songino Array	78.59	324	P	P	02 49 29.3	+0.3
	comp=Z,1.1nm,0.9s,baz=148,slow=7.3,SNR=7.7						
BILL	Bilibino	78.89	0	*e*P	P	02 49 30.5	+0.5
	comp=Z,5.2nm,1.0s						
QSPA	South Pole Qui	78.95	180	*e*P	P	02 49 31.3	+0.5
	comp=Z,9.8nm,1.0s						
GTA	Gaotai	78.97	314	⇑P	P	02 49 32.6	+1.3
GTA				pP	pwP	02 49 42.8	+0.2
GTA				sP	sP	02 49 46.7	+3.2
GTA				S	S	02 59 26.9	-1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,92nm,6.8s						
GTA				LR	LR		
	comp=N,170nm,19.0s						
GTA				LR	LR		
	comp=E,150nm,20.3s						
GTA				LR	LR		
	comp=Z,80nm,19.0s						
CAST	Castle Rocks	81.00	18	*e*P	P	02 49 41.2	-0.4
	comp=Z,5.6nm,1.0s						
WRH	Wood River Hil	82.98	18	*e*P	P	02 49 52.9	+1.0
	comp=Z,5.5nm,0.9s						
MDM	Murphy Dome	83.28	18	*e*P	P	02 49 53.4	-0.2
	comp=Z,5.9nm,1.0s						
HDA	Harding Lake	83.29	19	*e*P	P	02 49 53.5	0.0
	comp=Z,10nm,0.8s						
COLA	College	83.33	18	*e*P	P	02 49 53.4	-0.3
	comp=Z,6.9nm,0.8s						
ILAR	Eielson Array	83.56	19	P	P	02 49 54.1	-0.8
	comp=Z,2.5nm,0.7s,baz=232,slow=5.9,SNR=25						
ILB	Eielson Array	83.56	19	*e*P	P	02 49 55.2	+0.2
	comp=Z,2.7nm,0.8s						
IL1	Eielson Array	83.56	19	*e*P	P	02 49 54.0	-0.9
SCRK	Sand Creek	83.97	20	*e*P	P	02 49 57.8	+0.6
	comp=Z,6.6nm,1.0s						
EGAK	Eagle	85.43	20	*e*P	P	02 50 05.2	+0.9
	comp=Z,6.1nm,0.8s						
NV01	Mina Array Sit	86.13	50	*e*P	P	02 50 08.8	0.0
NVAR	Mina Array Bea	86.13	50	P	P	02 50 08.8	0.0
	comp=Z,3.9nm,1.2s,baz=237,slow=6.9,SNR=4.2						
WMQ	Urumqi	89.01	315	*e*P	P	02 50 23.5	+1.2
WMQ				pP	pwP	02 50 37.3	+2.2
WMQ				sP	sP	02 50 42.3	+8.3
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.5s						
WMQ				LR	LR		
	comp=N,230nm,17.9s						
WMQ				LR	LR		
	comp=E,260nm,19.9s						
WMQ				LR	LR		
	comp=Z,260nm,13.3s						
MK01	Makanchi Array	93.42	317	*e*P	P	02 50 42.4	-0.3
MK31	Makanchi Array	93.44	317	*e*P	P	02 50 42.9	+0.1
	comp=Z,4.9nm,1.5s						
MK32	Makanchi Array	93.44	317	*e*P	P	02 50 42.2	-0.5
MKAR	Makanchi Array	93.44	317	*e*P	P	02 50 42.9	+0.1
	comp=Z,7.4nm,0.8s						
MKAR	Makanchi Array	93.44	317	P	P	02 50 42.2	-0.5
	comp=Z,0.9nm,0.8s,baz=93,slow=6.7,SNR=10						
MAKZ	Makanchi	93.65	317	*e*P	P	02 50 43.2	-0.5
	comp=Z,4.1nm,1.3s						
PD31	Pinedale Array	93.66	47	*e*P	P	02 50 43.2	-0.9
PDAR	Pinedale Array	93.66	47	P	P	02 50 43.2	-0.9
	comp=Z,0.3nm,0.7s,baz=259,slow=0.9,SNR=2.9						
YKA	Yellowknife Ar	95.04	27	P	P	02 50 47.8	-1.8
	comp=Z,0.5nm,0.7s,baz=256,slow=4.8,SNR=12						
YKB5	Yellowknife Ar	95.04	27	*e*P	P	02 50 47.9	-1.8
CPUP	Villa Florida	124.12	132	PKP	PKPdf	02 56 25.9	-0.5
	comp=Z,1.3nm,0.8s,baz=180,slow=4.0,SNR=3.9						
BOSA	Boshof	125.02	223	PKP	PKiKP	02 56 28.5	-0.2
	comp=Z,2.9nm,0.7s,baz=137,slow=5.4,SNR=7.6						
MATP	Matopo	127.48	234	PKP	PKiKP	02 56 33.8	+0.1
	comp=Z,2.8nm,0.9s,baz=100,slow=6.1,SNR=3.7						
LSZ	Lusaka	130.38	239	PKP	PKiKP	02 56 39.4	-0.2
	comp=Z,1.3nm,0.6s,baz=135,slow=4.3,SNR=3.2						
KEST	Kesra	147.34	323	PKPbc	PKPbc	02 57 11.5	+0.1
	comp=Z,8.0nm,1.1s,baz=3.4,slow=5.5,SNR=3.3						
TOA0	Torodi Ar. Sit	164.13	279	*e*PKPab	PKPab	02 58 25.2	0.0
TORD	Torodi Ar. Bea	164.13	279	PKPab	PKPab	02 58 24.5	-0.7
	comp=Z,1.6nm,1.0s,baz=63,slow=2.3,SNR=6.6						
TOA1	Torodi Ar. Sit	164.14	279	*e*PKPab	PKPab	02 58 24.5	-0.7

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*NORS **12** 02:46:03.7±0.0, 42°.94N×45°.84E, h5^{km}, MPVA3.7*

*DRS **12** 02:46:04.9±0.0, 43°.07N×45°.69E, h16^{km}*

*MOS **12** 02:46:04.9±0.0, 43°.00N×45°.88E, h12^{km}, MPVA3.7*

*ISCJB **12** 02:46:05.4±0.3, 43°.09N±0°.02×45°.87E±0°.02, h1^{km}±3^{km}, Error ellipse: s-maj=4.4km s-min=2.1km az=22.1*

*MOS **12** 02:46:05.2±1.2, 42°.97N×45°.87E, h6^{km}, mb3.9/1, Error ellipse: s-maj=8.0km s-min=4.9km az=35.0*

ISC 12 02:46:06.4±0.9**, 43°.01N**±0°.02×**45°.83E**±0°.02**, h8^{km}**±7^{km}**, n66, σ0^s.98**/115**, 4C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

GROC	Groznyy	0.20	353	ePG	Pg	02 46 10.5	+0.2
GROC				e		02 46 13.4	
GROC				pmax	pmax		
	comp=Z,292nm,0.2s						
GROC				smax	smax		
	comp=E,1µm,0.4s						
GROC				smax	smax		
	comp=E,2µm,0.4s						
GROC	Groznyy	0.20	353	i Pg	Pg	02 46 10.6	+0.2
GROC				eSg	Sg	02 46 15.1	+2.0
DVE	Vedeno	0.22	103	⇑iPG	Pg	02 46 10.5	-0.4
DVE				eS	Sg	02 46 14.4	+0.5
DVE	Vedeno	0.22	103	i Pg	Pg	02 46 10.4	-0.4
DVE				eSg	Sg	02 46 14.4	+0.5
BTLR	Botlikh	0.45	140	⇑ePG	Pg	02 46 14.7	-0.3
BTLR				e		02 46 21.7	
BTLR				pmax	pmax		
	comp=Z,43nm,0.4s						
BTLR				smax	smax		
	comp=N,259nm,0.3s						
BTLR	Botlikh	0.45	140	ePg	Pg	02 46 14.7	-0.3
BTLR				eSg	Sg	02 46 21.5	+0.6
DBC	Dubki	0.73	89	ePG	Pg	02 46 19.6	-0.9
DBC				eS	Sg	02 46 30.4	+0.4
DBC	Dubki	0.73	89	ePg	Pg	02 46 19.7	-0.7
DBC				eSg	Sg	02 46 30.5	+0.4
UNCR	Uncukul	0.77	112	ePG	Pg	02 46 20.7	-0.4
UNCR				eS	Sg	02 46 31.0	-0.1
UNCR				pmax	pmax		
	comp=Z,57nm,0.2s						
UNCR	Uncukul	0.77	112	ePg	Pg	02 46 20.7	-0.4
UNCR				eSg	Sg	02 46 31.0	-0.1
XNZR	Khunzakh	0.79	126	ePG	Pg	02 46 20.9	-0.7
XNZR				eS	Sg	02 46 32.7	+0.8
XNZR	Khunzakh	0.79	126	ePg	Pg	02 46 21.6	-0.1
XNZR				eSg	Sg	02 46 32.8	+0.8
KRNR	Karanay	0.81	102	ePG	Pg	02 46 21.0	-0.9
KRNR				S	Sg	02 46 33.0	+0.5
KRNR				pmax	pmax		
	comp=Z,34nm,0.3s						
KRNR	Karanay	0.81	102	ePg	Pg	02 46 21.0	-0.9
KRNR				eSg	Sg	02 46 33.0	+0.5
VLKR	Vladikavkaz	0.85	273	ePG	Pb	02 46 23.2	-0.1
VLKR				eS	Sb	02 46 35.4	+0.5
VLKR	Vladikavkaz	0.85	273	ePg	Pb	02 46 23.2	-0.1
VLKR				eSg	Sb	02 46 35.4	+0.5
BTKR	Batakoyurt	1.01	292	ePG	Pb	02 46 26.4	+0.3
BTKR				eS	Sn	02 46 42.8	+1.4
BTKR	Batakoyurt	1.01	292	ePg	Pb	02 46 26.4	+0.3
BTKR				eSg	Sn	02 46 42.8	+1.4
GNBR	Gunib	1.04	126	ePG	Pg	02 46 26.0	-0.3
GNBR				eS	Sb	02 46 41.0	+0.6
GNBR				pmax	pmax		
	comp=Z,27nm,0.1s						
GNBR	Gunib	1.04	126	ePg	Pg	02 46 26.1	-0.3
GNBR				eSg	Sb	02 46 41.0	+0.6
TRKR	Terskaya	1.07	312	ePG	Pn	02 46 27.7	0.0
TRKR				eS	Sn	02 46 45.6	+2.8
TRKR	Terskaya	1.07	312	ePg	Pn	02 46 27.7	0.0
TRKR				eSg	Sn	02 46 44.2	+1.3
LACR	Lac	1.14	261	i PG	Pg	02 46 27.4	-0.8
LACR				pmax	pmax		
	comp=Z,68nm,0.1s						
LACR	Lac	1.14	261	ePg	Pg	02 46 27.5	-0.8
LACR				eSg	Sn	02 46 44.1	-0.5
ARNR	Ardon	1.15	279	ePG	Pn	02 46 28.7	0.0
ARNR				eS	Sn	02 46 46.6	+1.9
ARNR	Ardon	1.15	279	ePg	Pn	02 46 28.7	0.0
ARNR				eSg	Sn	02 46 45.3	+0.6
MAK	Makhachkala	1.23	92	ePG	Pn	02 46 30.1	+0.3
MAK				e		02 46 48.9	
MAK				pmax	pmax		
	comp=Z,84nm,1.0s						
MAK				smax	smax		
	comp=N,136nm,0.3s						
MAK				smax	smax		
	comp=N,172nm,0.8s						
MAK	Makhachkala	1.23	92	ePg	Pn	02 46 30.4	+0.5
MAK				eSg	Sn	02 46 49.2	+2.6
KMKR	Kumukh	1.28	133	PG	Pn	02 46 30.0	-0.8
KMKR				eS	Sb	02 46 48.0	+0.4
KMKR	Kumukh	1.28	133	ePg	Pn	02 46 30.0	-0.8
KMKR				eSg	Sb	02 46 48.0	+0.4
KORR	Kora	1.29	274	ePG	Pg	02 46 31.1	-0.1
KORR				pmax	pmax		
	comp=Z,10.0nm,0.3s						
KORR	Kora	1.29	274	ePg	Pg	02 46 31.2	-0.1
KORR				eSg	Sn	02 46 50.6	+2.3
ZEI	Tsey	1.44	262	ePG	Pn	02 46 31.8	-1.0
ZEI				pmax	pmax		
	comp=Z,22nm,0.2s						
ZEI	Tsey	1.44	262	ePg	Pn	02 46 31.9	-1.0
ZEI				eSg	Sn	02 46 52.1	+0.1
LSNR	Lesken	1.49	281	cePG	Pn	02 46 33.7	+0.2
LSNR	Lesken	1.49	281	ePg	Pn	02 46 33.9	+0.4
LSNR				eSg	Sg	02 46 56.1	+1.8
TBLG	Delisi	1.51	213	P	Pb	02 46 34.8	+0.1
TBLG				S	Sg	02 46 56.9	+2.0
TBLG	Delisi	1.51	213	ePG	Pb	02 46 34.8	+0.1
TBLG				eS	Sg	02 46 56.9	+2.0
TBLG	Delisi	1.51	213	ePg	Pb	02 46 34.8	+0.1
TBLG				eSg	Sg	02 46 56.9	+2.0
DIGR	Digorskoe uzhe	1.66	267	ePN	Pn	02 46 36.0	+0.1
DIGR				eS	Sb	02 46 58.5	+0.2
DIGR	Digorskoe uzhe	1.66	267	ePg	Pn	02 46 36.0	+0.1
DIGR				eSg	Sb	02 46 58.5	+0.2
NCK	Nalchik	1.71	287	i PN	Pn	02 46 36.0	-0.4
NCK	Nalchik	1.71	287	ePg	Pb	02 46 37.8	-0.2
NCK				eSg	Sg	02 47 01.5	+0.4
KZRT	Kazreti	1.94	214	P	Pb	02 46 41.5	-0.5
KZRT				S	Sg	02 47 07.7	-0.9
KBTC	Kuba-Taba	1.94	295	ePN	Pn	02 46 40.0	+0.3
KBTC				eS	Sb	02 47 06.2	-0.3
KBTC	Kuba-Taba	1.94	295	ePg	Pn	02 46 40.0	+0.3
KBTC				eSg	Sb	02 47 06.2	-0.3
TRLG	Trialeti	1.95	222	P	Pb	02 46 41.6	-0.6
TRLG				S	Sg	02 47 08.3	-0.6
AKT	Akhty	2.08	137	⇑ePN	Pb	02 46 43.4	-1.0
AKT				e		02 47 13.7	
AKT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AKT				smax	smax		
	comp=N,22nm,2.7s						
AKT	Akhty	2.08	137	ePg	Pb	02 46 43.6	-0.8
AKT				eSg	Sb	02 47 11.0	+0.6
PYA1	Pyatigorsk	2.25	299	i PN	Pn	02 46 43.7	-0.3
PYA1	Pyatigorsk	2.25	299	ePn	Pn	02 46 41.9	-2.1
PYA1				eSn	Sn	02 47 10.8	-1.1
NEY	Neytrino	2.29	277	ePN	Pn	02 46 45.3	+0.7
NEY	Neytrino	2.29	277	ePn	Pn	02 46 45.5	+0.9
NEY				eSn	Sb	02 47 15.4	-1.1
SHA1	Shidzhatmaz	2.43	289	ePN	Pn	02 46 47.0	+0.4
SHA1				eS	Sb	02 47 20.0	-0.6
SHA1	Shidzhatmaz	2.43	289	ePn	Pn	02 46 45.9	-0.7
SHA1				ePn	Pb	02 46 46.8	-3.6
SHA1				eSn	Sn	02 47 18.4	+1.8
KIV	Kislovodsk	2.48	294	ePN	Pn	02 46 47.0	-0.1
KIV				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KIV	Kislovodsk	2.48	294	ePn	Pn	02 46 48.5	+1.3
KIV				eSn	Sn	02 47 19.4	+1.8
ALER	Alexandrovskoy	2.74	311	ePn	Pn	02 46 51.3	+0.6
ALER				eSn	Sn	02 47 24.0	-0.1
GOF	Gofitskoye	2.87	317	ePn	Pg	02 47 00.5	-0.9
GOF				eSn	Sn	02 47 28.4	+1.2
GNI	Garni	2.97	196	i PN	Pn	02 46 54.2	+0.2
GNI	Garni	2.97	196	ePn	Pn	02 46 54.2	+0.2
VSR	Storozhevoye	9.38	333	i P	Pn	02 48 21.1	-0.7
VSR	Storozhevoye	9.38	333	ePn	Pn	02 48 21.1	-0.7
OBN	Obninsk	13.54	337	⇓eP	Pn	02 49 16.8	-1.7
OBN				S	Sn	02 51 50.0	+1.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU	Arti	15.72	27	i P	Pn	02 49 48.3	+0.4
ARU				pmax	pmax		
	comp=Z,5.0nm,1.6s						
BRVK	Borovoye	19.11	50	i P	Pn	02 50 30.1	-0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.8s						

IDC 12 02:48:30.2±6.6**,11°.47S**×**165°.23E,h0**^{km}**,mb3.6**/4**,**
mb1 3.8/4**,mb1mx3.5**/60**,mbtmp3.6**/4**,Error ellipse:**
s-maj=189.0km s-min=50.5km az=125.0,Santa Cruz
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.87	250	P	P	02 54 48.5	-0.1
	0.7nm,0.8s,baz=82,slow=8.9,SNR=6.1						
ASAR	Alice Springs	32.16	244	P	P	02 54 59.8	-0.2
	0.1nm,0.3s,baz=61,slow=10,SNR=2.9						
FITZ	Fitzroy Crossi	38.79	255	P	P	02 55 57.1	+0.1
	1.3nm,0.8s,baz=63,slow=6.8,SNR=2.7						
MKAR	Makanchi Array	93.48	317	P	P	03 01 47.9	-0.1
	0.2nm,0.5s,baz=110,slow=5.4,SNR=5.7						

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*IDC **12** 02:55:07.9±0.5,32°.76N×94°.78E,h0^{km},mb4.4/36,*
mb1 4.4/39,mb1mx4.3/91,mbtmp4.3/39,ML3.8/3,MS3.8/25,
Ms1 3.8/25,ms1mx3.5/85,Error ellipse: s-maj=15.4km
s-min=12.9km az=60.0
*ISCJB **12** 02:55:09.1±0.2,32°.72N±0°.02×94°.70E±0°.03,h10^{km},*
mb4.5/70,MS3.8/22,Error ellipse: s-maj=3.5km
s-min=3.2km az=36.2
*NDI **12** 02:55:10.4±3.0,33°.13N×95°.07E,h43^{km},mb4.6,*
mb4.5(NEIC)
*BJI **12** 02:55:11.5,32°.86N×94°.75E,h15^{km},mB4.8/15,mb4.5/27,*
ML4.6/1,Ms4.4/44,Ms7 4.4/36
*MOS **12** 02:55:13.1±1.6,32°.80N×94°.77E,h36^{km},mb4.7/39,Error*
ellipse: s-maj=8.3km s-min=4.2km az=121.9
*NEIC **12** 02:55:14.7±0.7,32°.78N×94°.78E,h43^{km}±7^{km},mb4.5/40,*
Error ellipse: s-maj=6.4km s-min=5.5km az=56.0
ISC 12 02:55:11.4±0.3**,32°.79N**±0°.04×**94°.65E**±0°.04**,h10**^{km}**,n313,**
σ**2ˢ.28**/314**,mb4.5**/74**,MS3.8**/22**,16C-7D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.30	225	Pn	Pn	02 56 22.0	+4.7
LSA				Sg	Sg	02 57 35.6	+6.1
LSA				LR	LR		
	comp=N,2µm,7.5s						
LSA				LR	LR		
	comp=E,1µm,6.9s						
LSA	Lhasa	4.30	225	ePn	Pn	02 56 22.0	+4.7
LSA				eSn	Sn	02 57 02.5	-5.2
LSA	Lhasa	4.30	225	eP	Pn	02 56 22.0	+4.7
LSA				e		02 57 02.5	
SHL	Shillong	7.59	199	ePn	Pn	02 57 03.0	+0.7
SHL				eSn	Sn	02 58 25.0	-3.5
SHL	Shillong	7.59	199	eP	Pn	02 57 03.0	+0.7
SHL				e		02 58 25.0	
SHL	Shillong	7.59	199	eP	Pn	02 57 02.9	+0.6
SHL				eS	Sn	02 58 28.1	-0.4
GTA	Gaotai	7.81	31	⇑Pn	Pn	02 57 06.3	+1.1
GTA				Sn	Sn	02 58 39.1	+5.3
GTA				LR	LR		
	comp=N,2µm,9.5s						
GTA				LR	LR		
	comp=E,1µm,12.4s						
GTA				LR	LR		
	comp=Z,2µm,11.7s						
CD2	Chengdu	7.97	101	P	Pn	02 57 09.2	+1.9
CD2				S	Sn	02 58 39.9	+2.3
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,200nm,4.2s						
CD2				LR	LR		
	comp=N,5µm,9.7s						
CD2				LR	LR		
	comp=Z,6µm,8.4s						
LZH	Lanzhou	8.28	64	eP	Pn	02 57 12.0	+0.4
LZH				pP	Pb	02 57 18.6	-16
LZH				sP	Pg	02 57 21.9	-28
LZH				eS	Sn	02 58 53.3	+8.1
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,4.1s						
LZH				LR	LR		
	comp=N,3µm,6.2s						
LZH				LR	LR		
	comp=E,5µm,8.4s						
LZH				LR	LR		
	comp=Z,4µm,9.5s						
ODAN	Odare	8.64	229	eP	Pn	02 57 18.5	+1.8
JIRN	Jiri	8.93	237	eP	Pn	02 57 21.1	+0.4
	31nm,0.4s						
GUN	Gumba	9.00	240	eP	Pn	02 57 22.3	+0.5
	37nm,0.3s						
RAMN	Ramite	9.09	232	eP	Pn	02 57 23.2	+0.3
	38nm,0.4s						
KKN	Kakani	9.51	241	eP	Pn	02 57 28.8	+0.2
	27nm,0.3s						
PKI	Pulchoki	9.54	239	eP	Pn	02 57 29.0	-0.1
	48nm,0.4s						
PKIN	Phulchoki	9.54	239	eP	Pn	02 57 29.4	+0.3
	36nm,0.4s						
DMN	Daman	9.74	240	eP	Pn	02 57 32.0	+0.2
	45nm,0.6s						
DANN	Dangsing	10.38	248	eP	Pn	02 57 40.7	+0.2
	102nm,0.6s						
KMI	Kunming	10.41	135	P	Pn	02 57 44.1	+3.1
KMI				pP		02 57 53.1	
KMI				S	Sn	02 59 48.3	+10
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				pmax	pmax		
	comp=Z,85nm,5.1s						
KMI				LR	LR		
	comp=N,1µm,7.5s						
KMI				LR	LR		
	comp=Z,1µm,8.4s						
KMI	Kunming	10.41	135	ePn	Pn	02 57 44.4	+3.4
KMI	Kunming	10.41	135	eP	Pn	02 57 44.4	+3.4
BRDH	Bariadhala	10.42	196	Pn	Pn	02 57 41.5	+0.6
	23nm,0.3s,baz=62,slow=10,SNR=8.7						
BRDH				Sn	Sn	02 59 35.1	-2.6
	9.2nm,0.3s,baz=252,slow=19,SNR=3.3						
BRDH				LR	LR	03 02 41.0	
	comp=Z,325nm,19.0s,baz=309,slow=44						
KOLN	Koldanda	10.78	245	eP	Pn	02 57 46.0	0.0
	34nm,0.7s						
PYUN	Piuthan	11.09	248	eP	Pn	02 57 49.9	-0.4
	55nm,0.7s						
BOK	Bokaro	11.82	223	eP	Pn	02 57 59.9	-0.2
XAN	Xi'an	11.99	80	P	Pn	02 58 00.4	-2.0
XAN				pP		02 58 09.9	
XAN				sP		02 58 14.0	
XAN				S	Sn	03 00 09.3	-6.9
XAN				pmax	pmax		
	comp=Z,9.0nm,1.9s						
XAN				LR	LR		
	comp=N,1µm,14.7s						
XAN				LR	LR		
	comp=E,1µm,9.3s						
XAN				LR	LR		
	comp=Z,1µm,13.1s						
XAN	Xi'an	11.99	80	ePn	Pn	02 58 01.0	-1.4
XAN	Xi'an	11.99	80	eP	Pn	02 58 01.0	-1.4
GYA	Guiyang	12.20	118	⇑iP	Pn	02 58 02.9	-2.5
GYA				pP		02 58 20.2	
GYA				S	Sn	03 00 31.0	+9.4
GYA				sS		03 00 41.8	
GYA				SS	SnSn	03 00 45.6	+12
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=N,1µm,12.8s						
GYA				LR	LR		
	comp=E,2µm,13.3s						
GYA				LR	LR		
	comp=Z,1µm,12.6s						
WMQ	Urumqi	12.29	336	eP	Pn	02 58 05.5	-0.9
WMQ				pP		02 58 14.7	
WMQ				S	Sn	03 00 28.6	+5.2
WMQ				pmax	pmax		
	comp=Z,41nm,1.5s						
WMQ				LR	LR		
	comp=Z,2µm,8.5s						
WMQ				LR	LR		
	comp=Z,2µm,11.1s						
WMQ				LR	LR		
	comp=Z,2µm,14.3s						
WMQ	Urumqi	12.29	336	ePn	Pn	02 58 06.0	-0.3
WMQ	Urumqi	12.29	336	eP	Pn	02 58 06.1	-0.3
ENH	Enshi	12.90	97	ePn	Pn	02 58 13.9	-1.0
DDI	Dehra Dun	14.36	265	eP	Pn	02 58 34.9	0.0
CM31	Chiang Mai Arr	14.79	164	ePn	Pn	02 58 40.0	-0.6
CMAR	Chiang Mai Arr	14.79	164	eP	P	02 58 46.6	0.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	14.79	164	Pn	Pn	02 58 40.0	-0.6
	baz=341,slow=13,SNR=3.1						
CMAR				LR	LR	03 05 29.9	
	comp=Z,69nm,20.2s,baz=346,slow=42						
SMLA	Simla	14.94	268	eP	Pn	02 58 44.3	+1.7
SMLA				IAmb	IAmb	02 58 45.1	
	comp=Z,94nm,1.8s						
TIY	Taiyuan	15.33	66	eP	P	02 58 50.4	-2.3
TIY				pmax	pmax		
	comp=Z,12nm,0.5s						
TIY				LR	LR		
	comp=Z,770nm,6.0s						
TIY				LR	LR		
	comp=Z,620nm,4.3s						
TIY				LR	LR		
	comp=Z,850nm,6.9s						
DHRM	DHARAMSHALA	15.49	273	eP	Pn	02 58 52.5	+2.3
DHRM				IAmb	IAmb	02 58 58.8	
	comp=Z,2µm,3.2s						
HHC	Hu-ho-hao-te	15.74	54	eP	P	02 58 59.8	+2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,92nm,6.1s						
PDGK	Podgornoye	15.89	316	P	P	02 58 58.2	-0.7
PDGK				pmax	pmax		
	comp=Z,11nm,0.8s						
UTTA	Uttaradit	15.90	159	P	P	02 58 59.2	+0.2
	comp=Z,4.4nm,1.2s						
PRZ	Przheval'sk	16.08	312	ePn	P	02 59 05.7	+4.6
	comp=Z,60nm,1.1s						
PRZ	Przheval'sk	16.08	312	eP	P	02 59 05.7	+4.6
PRZ				pmax	pmax		
	comp=Z,60nm,1.1s						
TARG	Taragay, Kyrgy	16.09	308	ePn	Pn	02 58 53.4	-4.6
	comp=Z,17nm,0.6s						
JBP	Jabalpur	16.10	237	eP	Pn	02 59 00.8	+3.0
JBP				ex	x	03 02 31.6	
KSH	Kashi	16.50	299	P	P	02 59 07.0	+1.3
KSH				pP	sP	02 59 13.9	+2.1
KSH				S	Sn	03 02 06.3	+0.1
KSH				sS	S	03 02 20.8	+2.6
KSH				SS	SnSn	03 02 29.3	+10
KSH				pmax	pmax		
	comp=Z,16nm,0.9s						
KSH				pmax	pmax		
	comp=Z,260nm,5.0s						
KSH				LR	LR		
	comp=Z,260nm,5.5s						
KSH				LR	LR		
	comp=Z,260nm,4.5s						
NONG	Nongkai	16.54	150	P	P	02 59 11.9	+5.8
	comp=Z,0.3nm,1.3s,comp=Z,90nm						
KDJ	Kajisay	16.69	309	ePn	P	02 59 11.5	+3.7
	comp=Z,26nm,0.9s						
MK01	Makanchi Array	16.85	330	ePn	Pn	02 59 08.2	+0.8
MK31	Makanchi Array	16.88	330	ePn	P	02 59 08.9	-0.8
	comp=Z,3.3nm,0.8s						
MK31	Makanchi Array	16.88	330	eP	P	02 59 08.9	-0.8
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK32	Makanchi Array	16.88	330	ePn	Pn	02 59 05.1	-2.5
MKAR	Makanchi Array	16.88	330	ePn	P	02 59 08.9	-0.8
	comp=Z,25nm,0.6s						
MKAR	Makanchi Array	16.88	330	eP	P	02 59 08.7	-1.0
MKAR	Makanchi Array	16.88	330	Pn	Pn	02 59 05.1	-2.5
	comp=Z,0.3nm,0.3s,baz=138,slow=14,SNR=24						
MKAR				LR	LR	03 05 42.9	
	comp=Z,156nm,19.1s,baz=144,slow=37						
UMPA	Umpang Tak	16.95	166	P	P	02 59 17.5	+6.9
	comp=Z,4.0nm,1.5s,comp=Z,1µm						
MAKZ	Makanchi	17.02	329	ePn	P	02 59 10.6	-0.7
	comp=Z,11nm,1.2s						
MAKZ	Makanchi	17.02	329	eP	P	02 59 10.6	-0.7
MAKZ				pmax	pmax		
	comp=Z,11nm,1.2s						
PBKT	Sadao Pong	17.13	159	ePn	P	02 59 15.1	+2.5
	comp=Z,28nm,1.4s						
PBKT				eSn	Sn	03 02 09.2	-12
PBKT	Sadao Pong	17.13	159	P	P	02 59 15.8	+3.2
	comp=Z,15nm,1.6s						
NRN	Naryn	17.17	305	ePn	P	02 59 14.9	+1.6
	comp=Z,25nm,1.0s						
ULHL	Ulahol	17.36	308	P	P	02 59 17.8	+2.5
	SNR=12						
SONA0	Songino Array	17.46	27	ePn	Pn	02 59 14.0	-1.0
SONM	Songino Array	17.46	27	eP	P	02 59 17.2	+0.9
SONM	Songino Array	17.46	27	P	Pn	02 59 14.0	-1.0
	comp=Z,0.3nm,0.3s,baz=214,slow=13,SNR=36						
SONA1	Songino Array	17.47	27	ePn	Pn	02 59 14.1	-1.2
UTHA	Uthaitani	17.70	165	P	P	02 59 23.8	+4.9
	comp=Z,2.3nm,1.0s,comp=Z,91nm						
DGZ	Jazzator, Alta	17.73	344	i P	P	02 59 19.0	-0.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SKNT	Sakolnakorn	17.86	150	P	P	02 59 25.9	+5.2
	comp=Z,5.3nm,1.1s						
BHPL	Bhopal	17.92	242	IAmb	IAmb	02 59 20.8	
	comp=Z,85nm,1.6s						
BHPL				eP	Pn	02 59 21.7	+0.9
NIL	Nilore	17.93	279	ePn	Pn	02 59 19.4	-1.4
	comp=Z,15nm,0.6s						
NIL	Nilore	17.93	279	eP	Pn	02 59 19.4	-1.4
NIL				pmax	pmax		
	comp=Z,15nm,0.6s						
KZA	Kyzart	17.95	307	P	P	02 59 28.2	+6.2
	SNR=8.1						
NGP	Nagpur	18.08	234	eP	Pn	02 59 23.7	+0.9
NGP				IAmb	IAmb	02 59 24.4	
	comp=Z,139nm,2.3s						
TKM2	Tokmak 2	18.09	309	P	P	02 59 27.4	+4.0
	SNR=6.8						
KBK	Karagaybulak	18.40	308	P	Pn	02 59 33.8	+7.1
	SNR=9.2						
SFK	Sufi-Kurgan	18.46	299	P	Pn	02 59 29.1	+1.5
SFK				pmax	pmax		
	comp=Z,29nm,1.2s						
UCH	Uchtor	18.51	306	P	Pn	02 59 31.6	+3.3
	SNR=17						
AAK	Ala-Archa	18.69	307	P	Pn	02 59 34.4	+4.1
	SNR=6.3						
AAK	Ala-Archa	18.69	307	i P	Pn	02 59 31.2	+0.9
AAK				pmax	pmax		
	comp=Z,17nm,1.2s						
AAK	Ala-Archa	18.69	307	P	P	02 59 30.4	+0.5
	comp=Z,0.4nm,0.3s,baz=122,slow=10,SNR=15						
AAK				LR	LR	03 07 58.8	
	comp=Z,514nm,20.3s,baz=102,slow=41						
FRU	Bishkek	18.70	308	eP	Pn	02 59 31.0	+0.8
FRU				pmax	pmax		
	comp=Z,60nm,2.0s						
ZAK	Zakamensk	18.70	17	eP	P	02 59 28.4	-1.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BJT	Baijiatuau	18.74	61	eP	Pn	02 59 31.7	+1.0
	comp=Z,5.8nm,0.7s						
EKS2	Erkin-Say	19.18	307	P	Pn	02 59 39.2	+3.0
	SNR=12						
ARSB	Arslanbob	19.24	302	eP	Pn	02 59 40.2	+3.3
	comp=Z,25nm,1.0s						
QIZ	Qiongzhong	19.32	131	P	Pn	02 59 41.3	+3.5
QIZ				S	S	03 03 18.6	+3.1
MOY	Mondy	19.43	12	eP	Pn	02 59 39.6	+0.6
MNAS	Manas	19.98	305	P	Pn	02 59 45.6	-0.1
MNAS				pmax	pmax		
	comp=Z,23nm,1.3s						
TLY	Talaya	19.99	17	i P	Pn	02 59 44.3	-1.3
PHET	Kaeng Krachan	20.31	166	P	Pn	02 59 54.0	+4.5
	comp=Z,9.7nm,1.0s						
NJ2	Nanjing	20.44	86	eP	Pn	02 59 55.4	+4.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
BTK	Batken	20.47	298	eP	Pn	02 59 51.6	+0.2
	comp=Z,33nm,1.1s						
GAR	Garm	20.63	294	eP	P	02 59 50.4	-0.7
	comp=Z,43nm,1.1s						

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GAR   Garm               20.63 294  eP     P       02 59 50.4  -0.7
GAR                                  pmax   pmax
        comp=Z,43nm,1.1s
HYB   Hyderabad          21.09 227 i P     P       02 59 59.0 +2.9
HYB   Hyderabad          21.09 227  eP     P       02 59 57.2 +1.1
KBL   Kabul              21.37 282  eP     P       02 59 59.3 +0.1
        comp=Z,131nm,1.4s
KBL   Kabul              21.37 282   P     P       02 59 59.3 +0.1
KBL                                  pmax   pmax
        comp=Z,131nm,1.4s
KURBB Kurchatov Arra     21.42 331   P     P       02 59 57.6  -1.7
        comp=Z,18nm,0.6s,baz=138,slow=11,SNR=56
KURBB                                PcP    PcP    03 04 00.5  -2.0
        comp=Z,0.8nm,0.8s,baz=138,slow=1.2,SNR=3.4
KURK  Kurchatov          21.45 331  eP     P       02 59 58.3  -1.4
KURK  Kurchatov          21.45 331d iP     P       02 59 57.7  -2.0
KK31  Karatay Array      21.57 305  eP     P       03 00 01.1   0.0
KK31  Karatay Array      21.57 305  eP     P       03 00 01.1   0.0
KKAR  Karatay Array      21.57 305  eP     P       03 00 01.1   0.0
KKAR  Karatay Array      21.57 305  eP     P       03 00 01.1   0.0
ZAA0  Zalesovo Array     22.28 345  eP     P       03 00 09.2 +0.6
        comp=Z,5.8nm,0.9s
ZALV  Zalesovo Beam      22.28 345  eP     P       03 00 08.2  -0.4
ZALV  Zalesovo Beam      22.28 345  eP     P       03 00 11.5 +3.0
ZALV                                 pmax   pmax
        comp=Z,4.0nm,0.7s
ZALV  Zalesovo Beam      22.28 345   P     P       03 00 08.0  -0.5
        comp=Z,4.2nm,0.7s,baz=159,slow=9.5,SNR=13
ZAA1  Zalesovo Array     22.29 345  eP     P       03 00 08.0  -0.6
OTUK  Ortayu             22.82 319   P     P       03 00 15.8 +1.5
OTUK                                 pmax   pmax
        comp=Z,10.0nm,0.9s
POO   Poona              23.46 238  eP     P       03 00 19.6  -1.6
NVS   Novosibirsk        23.47 343  eP     P       03 00 20.3  -0.6
NVS                                  pmax   pmax
        comp=N,36nm,2.5s
NVS                                  pmax   pmax
        comp=Z,30nm,2.5s
NVS                                  pmax   pmax
        comp=E,10.0nm,1.9s
MDRS  Chennai            23.64 217  eP     P       03 00 21.7  -1.1
GOA   Goa                25.56 233  eP     P       03 00 40.4  -0.2
CMBY  CAMPBELL BAY       25.66 182  eP     P       03 00 40.0  -1.4
BVAR  Borovoye Array     26.70 326   P     P       03 00 49.9  -0.6
BVAR                                 pmax   pmax
        comp=Z,3.0nm,0.8s
BVAR                                 MLR    MLR
        comp=Z,125nm,20.3s
BVAR  Borovoye Array     26.70 326   P     P       03 00 49.9  -0.6
        comp=Z,2.2nm,0.7s,baz=125,slow=9.8,SNR=16
BVAR                                 LR     LR     03 12 23.2
        comp=Z,125nm,20.3s,baz=116,slow=39
BRVK  Borovoye           26.77 326  eP     P       03 00 50.2  -0.9
        comp=Z,4.5nm,0.7s
BRVK  Borovoye           26.77 326 i P     P       03 00 52.8 +1.6
BRVK                                 pmax   pmax
        comp=Z,4.0nm,0.7s
KSRS  Korea Array        27.52  71   LR     LR     03 12 28.0
        comp=Z,187nm,19.0s,baz=266,slow=38
PALK  Pallekele          28.51 210   LR     LR     03 13 21.9
        comp=Z,76nm,19.9s,baz=298,slow=38
TRD   Trivandrum         29.19 218  eP     P       03 01 13.6 +0.5
PSI   Prapat             30.10 171   LR     LR     03 15 23.3
        comp=Z,119nm,18.1s,baz=270,slow=40
GEYT  Alibeck            30.10 290   P     P       03 01 21.9 +0.8
        comp=Z,6.3nm,0.8s,baz=95,slow=4.8,SNR=9.5
GEYT                                 LR     LR     03 15 46.0
        comp=Z,375nm,18.5s,baz=65,slow=41
JNU   Nakatsue           30.31  79   LR     LR     03 12 57.0
        comp=Z,140nm,18.6s,baz=297,slow=35
ABKAR Akbulak array      30.59 313  eP     P       03 01 27.5 +2.3
        comp=Z,2.5nm,1.0s
KLR   Kul'dur            32.07  48   LR     LR     03 15 51.0
        comp=Z,210nm,19.0s,baz=256,slow=39
AKTO  Aktyubinsk         32.15 314   P     P       03 01 38.3  -0.7
        comp=Z,1.1nm,0.7s,baz=106,slow=11,SNR=5.1
AKTO                                 LR     LR     03 16 09.3
        comp=Z,222nm,18.4s,baz=109,slow=39
WSAR  Wadi Sarin         33.06 263   P     P       03 01 46.6  -0.6
        comp=Z,4.0nm,0.9s,baz=72,slow=4.1,SNR=3.6
WSAR                                 LR     LR     03 16 39.9
        comp=Z,90nm,18.8s,baz=98,slow=39
ARU   Arti               34.28 324  eP     P       03 01 59.4 +1.9
        comp=Z,6.1nm,0.9s
ARU   Arti               34.28 324   P     P       03 01 58.9 +1.4
ARU                                                03 03 10.4
ARU                                  S      S      03 07 24.3   0.0
ARU                                  SS     SnSn   03 09 28.1  -5.0
ARU   Arti               34.28 324   P     P       03 01 56.4  -1.0
        comp=Z,1.0nm,0.3s,baz=150,slow=2.1,SNR=11
MJAR  Matsushiro Arr     35.80  72   LR     LR     03 17 46.2
        comp=Z,145nm,18.5s,baz=275,slow=38
NRIK  Noril'sk           36.82 356   P     P       03 02 19.0  -0.1
        comp=Z,2.4nm,0.4s,baz=197,slow=4.4,SNR=3.9
JHJ   Hachijo jima 2     37.65  77   LR     LR     03 17 14.1
        comp=Z,122nm,19.0s,baz=344,slow=35
ASAJ  Asahikawa          38.71  59   LR     LR     03 17 34.2
        comp=Z,60nm,19.5s,baz=214,slow=35
KIRV  Kirov              39.66 324   P     P       03 02 45.0 +1.8
        comp=Z,7.4nm,0.6s,baz=108,slow=3.2,SNR=4.2
LEM   Lembang            41.28 160   LR     LR     03 20 54.5
        comp=Z,114nm,19.2s,baz=272,slow=38
KIV   Kislovodsk         41.61 301  eP     P       03 02 58.5  -1.2
KIV                                  pmax   pmax
        comp=Z,8.0nm,1.1s
KIV                                  MLR    MLR
        comp=Z,61nm,16.0s
TIXI  Tiksi              42.96  15 i P     P       03 03 09.3  -0.8
TIXI                                 pmax   pmax
        comp=Z,3.0nm,1.0s
TIXI  Tiksi              42.96  15   P     P       03 03 07.0  -3.1
        comp=Z,1.6nm,0.5s,baz=212,slow=3.6,SNR=4.3
VSR   Storozhevoye       44.01 312 i P     P       03 03 20.0 +1.1
VSR                                  pmax   pmax
        comp=Z,10.0nm,0.9s
KLMR  Klimovskoe         45.11 325  eP     P       03 03 24.7  -2.8
KLMR                                 pmax   pmax
        comp=Z,8.0nm,0.7s
KLMR  Klimovskoe         45.11 325  eP     P       03 03 24.8  -2.8
KLMR                                 AMP           03 03 30.1
        comp=Z,8.0nm,0.7s
MOS   Moscow             45.27 318  eP     P       03 03 31.2 +2.4
MA2   Magadan            45.34  36 i P     P       03 03 32.9 +3.6
MA2                                  pmax   pmax
        comp=Z,11nm,1.0s
OBN   Obninsk            45.81 317⇓eP     P       03 03 35.6 +2.5
OBN                                  *PP    sP     03 03 44.0 +4.3
OBN                                  *SP    pP     03 03 49.0  +11
OBN                                  pmax   pmax
        comp=Z,5.0nm,1.0s
ASF   Jabal al Asfar     48.18 286   P     P       03 03 51.8  -0.4
        comp=Z,3.8nm,0.8s,baz=38,slow=11,SNR=5.2
BR101 Keskin Array S     48.86 296  eP     P       03 03 56.1  -1.2
BR131 Keskin Array S     48.86 296  eP     P       03 03 58.8 +1.4
        comp=Z,4.4nm,0.9s
BRTR  Keskin Array B     48.86 296  eP     P       03 03 59.3 +2.0
BRTR                                 pmax   pmax
        comp=Z,3.0nm,0.8s
BRTR  Keskin Array B     48.86 296   P     P       03 03 56.1  -1.2
        comp=Z,2.7nm,0.8s,baz=96,slow=8.3,SNR=16
AKASG Malin Array Be     50.30 311  eP     P       03 04 09.2 +1.2
AKASG                                pmax   pmax
        comp=Z,9.0nm,0.9s
AKASG Malin Array Be     50.30 311   P     P       03 04 06.6  -1.3
        comp=Z,9.3nm,0.8s,baz=76,slow=6.7,SNR=13
AKBB  Malin Array Si     50.30 311  eP     P       03 04 09.7 +1.7
        comp=Z,8.2nm,0.9s
KIEV  Kiev               50.31 311  eP     P       03 04 09.4 +1.4
        comp=Z,7.4nm,0.9s
KIEV  Kiev               50.31 311 i P     P       03 04 08.2 +0.2
KIEV                                 pmax   pmax
        comp=Z,8.0nm,1.0s
AK11  Malin Array Si     50.34 311  eP     P       03 04 07.5  -0.8
EIL   Elat               50.56 283   P     P       03 04 09.5  -0.7
        comp=Z,5.5nm,0.7s,baz=21,slow=8.6,SNR=4.8
EIL                                  LR     LR     03 28 10.0
        comp=Z,136nm,19.6s,baz=70,slow=39
VSU   Vasula             51.32 321 i P     P       03 04 17.0 +1.5
VSU                                  pmax   pmax
        comp=Z,24nm,1.0s
VSU   Vasula             51.32 321  eP     P       03 04 14.4  -1.0
VSU                                  IAmb   IAmb   03 04 17.7
        comp=Z,30nm,1.1s
IDID  Didziasalis        51.44 317  eP     P       03 04 17.0 +0.5
IDID                                 IAmb   IAmb   03 04 20.0
        comp=Z,4.1nm,1.1s
SUF   Sumiainen          51.64 327   P     P       03 04 20.2 +2.4
SUF                                  pmax   pmax
        comp=Z,13nm,1.1s
FIA0  FINESS Array S     51.64 325  eP     P       03 04 16.9  -1.0
FIA0  FINESS Array S     51.64 325  eP     P       03 04 16.9  -1.0
FINES FINESS Array B     51.64 325  eP     P       03 04 18.6 +0.7
FINES                                pmax   pmax
        comp=Z,3.0nm,0.9s
FINES FINESS Array B     51.64 325   P     P       03 04 16.9  -1.0
        comp=Z,2.8nm,0.9s,baz=94,slow=7.6,SNR=12
IZAR  Zarasai            51.69 318  eP     P       03 04 18.9 +0.6
IZAR                                 IAmb   IAmb   03 04 25.0
        comp=Z,5.1nm,0.6s
IIGN  Ignalina           51.73 317  eP     P       03 04 19.3 +0.6
IIGN                                 IAmb   IAmb   03 04 22.3
        comp=Z,5.5nm,0.9s
CFR   Carcaliu           51.80 304   P     P       03 04 22.4 +3.1
HARR  Harsova            52.03 304⇑iP     P       03 04 22.8 +1.8
HARR  Harsova            52.03 304 ⇑P     P       03 04 22.8 +1.8
ICOR  Ion Corvin         52.23 303⇑iP     P       03 04 24.8 +2.2
ARA0  ARCESS Array S     52.41 335  eP     P       03 04 22.3  -1.2
ARCES ARCESS Array B     52.41 335  eP     P       03 04 26.2 +2.7
ARCES                                pmax   pmax
        comp=Z,5.0nm,1.0s
ARCES ARCESS Array B     52.41 335   P     P       03 04 22.3  -1.2
        comp=Z,4.7nm,1.0s,baz=95,slow=7.5,SNR=7.8
PLOR  Plostina           52.70 305⇑iP     P       03 04 25.9  -0.1
PLOR  Plostina           52.70 305 ⇑P     P       03 04 25.9  -0.1
BIZ   Bicaz              52.87 307⇑iP     P       03 04 25.9  -1.3
ISR   Istrita            52.91 305   P     P       03 04 31.9 +4.2
ISR                                  pmax   pmax
        comp=Z,36nm,1.0s
PABE  Paberze            53.00 318  eP     P       03 04 25.9  -2.1
PABE                                 IAmb   IAmb   03 04 31.2
        comp=Z,14nm,1.0s
MLR   Muntele Rosu       53.25 305  eP     P       03 04 30.0  -0.3
MLR   Muntele Rosu       53.25 305⇑iP     P       03 04 31.2 +0.9
MLR   Muntele Rosu       53.25 305 ⇑P     P       03 04 31.2 +0.9
MLR   Muntele Rosu       53.25 305   P     P       03 04 29.3  -0.9
        comp=Z,15nm,0.9s,baz=135,slow=5.4,SNR=13
MLR                                  LR     LR     03 31 01.1
        comp=Z,158nm,20.7s,baz=64,slow=40
BURAR Bucovina Array     53.34 308⇓iP     P       03 04 30.4  -0.4
BURAR Bucovina Array     53.34 308 ⇓P     P       03 04 30.4  -0.4
BUR04 Bucovina Ar. S     53.34 308  eP     P       03 04 29.8  -1.0
BUR08 Bucovina Ar. S     53.34 308  eP     P       03 04 30.6  -0.3
SUW   Suwalki            53.62 316  eP     P       03 04 32.9 +0.3
        comp=Z,36nm,0.9s
SUW   Suwalki            53.62 316  eP     P       03 04 32.9 +0.3
SUW                                  pmax   pmax
        comp=Z,36nm,0.9s
VOIR                     53.88 305⇑iP     P       03 04 32.8  -2.0
VOIR                     53.88 305   P     P       03 04 37.0 +2.2
VOIR                                 pmax   pmax
        comp=Z,5.0nm,2.2s
MTUR  Matau              53.92 305⇑iP     P       03 04 38.4 +3.3
MTUR  Matau              53.92 305 ⇑P     P       03 04 38.4 +3.3
ARR   Arges              54.18 305⇓iP     P       03 04 36.6  -0.4
KWP   Kalwaria Pacla     54.60 311  eP     P       03 04 39.5  -0.4
KWP   Kalwaria Pacla     54.60 311  eP     P       03 04 39.4  -0.6
        comp=Z,457nm,1.1s
KWP   Kalwaria Pacla     54.60 311  eP     P       03 04 39.5  -0.4
TRPA  Tarpa              55.01 309⇑iP     P       03 04 42.2  -0.6
UZH   Uzhgorod           55.06 310  eP     P       03 04 44.8 +1.6
UZH                                 e              03 04 55.6
DRGR                     55.18 307⇑iP     P       03 04 42.2  -2.0
DRGR                     55.18 307 ⇑P     P       03 04 42.2  -2.0
SPA0  Spitsbergen Ar     55.76 346  eP     P       03 04 46.6  -1.2
        comp=Z,44nm,1.4s
SPITS Spitsbergen Ar     55.76 346   P     P       03 04 46.6  -1.2
        comp=Z,8.0nm,0.8s,baz=114,slow=9.6,SNR=4.3
VTS   Vitosha            55.82 302  eP     P       03 04 50.7 +1.7
        comp=Z,9.1nm,1.2s
VTS   Vitosha            55.82 302⇓iP     P       03 04 50.0 +1.0
VTS   Vitosha            55.82 302  eP     P       03 04 50.7 +1.7
VTS                                  pmax   pmax
        comp=Z,9.0nm,1.2s
JAY   Jayapura           55.91 120   LR     LR     03 29 16.3
        comp=Z,250nm,21.8s,baz=348,slow=37
NIE   Niedzica           56.18 311   P     P       03 04 54.2 +2.9
NIE                                  pmax   pmax
        comp=Z,5.0nm,0.9s
OJC   Ojcow              56.33 312  eP     P       03 04 52.3   0.0
OJC   Ojcow              56.33 312  eP     P       03 04 51.6  -0.7
        comp=Z,7.6nm,0.7s
OJC   Ojcow              56.33 312  eP     P       03 04 52.3   0.0
IDI   Anoyia             56.74 293  eP     P       03 04 53.9  -1.7
        comp=Z,23nm,1.0s
IDI   Anoyia             56.74 293   P     P       03 04 53.9  -1.7
        comp=Z,9.5nm,1.0s,baz=45,slow=4.3,SNR=3.5
VYHS  Vyhne              57.33 310  eP     P       03 04 58.9  -0.6
VYHS  Vyhne              57.33 310  eP     P       03 04 58.9  -0.6
HFS   Hagfors            57.80 324   P     P       03 05 00.9  -1.7
        comp=Z,2.2nm,0.6s,baz=87,slow=9.1,SNR=9.4
MORC  Moravsky Berou     57.84 312  eP     P       03 05 05.1 +2.0
        comp=Z,6.2nm,0.8s
MORC  Moravsky Berou     57.84 312⇓iP     P       03 05 02.9  -0.2
MORC  Moravsky Berou     57.84 312  eP     P       03 05 05.1 +2.0
MORC                                 pmax   pmax
        comp=Z,6.0nm,0.8s
MORC  Moravsky Berou     57.84 312  eP     P       03 05 05.1 +2.0
DPC   Dobruska-Polom     58.46 313  eP     P       03 05 07.0  -0.4
DPC                                 ex     x       03 05 09.8
DPC                                 ex     x       03 05 13.3
DPC   Dobruska-Polom     58.46 313  eP     P       03 05 07.0  -0.4
DPC                                 e              03 05 13.3
NC405 NORSAR Array S     58.57 326  eP     P       03 05 09.2 +1.3
UPC   Upice              58.62 313  eP     P       03 05 08.6 +0.2
UPC                                 ex     x       03 05 14.9
UPC   Upice              58.62 313  eP     P       03 05 08.6 +0.2
UPC                                 e              03 05 14.9
NORES NORESS Array B     58.73 325   P     P       03 05 11.3 +2.3
KRUC  Moravsky           58.75 311  eP     P       03 05 11.6 +2.2
NB2   NORSAR Subarra     58.82 326   P     P       03 05 07.5  -2.2
        comp=Z,2.7nm,0.7s,baz=77,slow=7.4
NB200 NORSAR Array S     58.82 326  eP     P       03 05 07.6  -2.2
NOA   NORSAR Array B     58.82 326  eP     P       03 05 07.8  -1.9
NOA                                  pmax   pmax
        comp=Z,5.0nm,0.8s
NOA   NORSAR Array B     58.82 326   P     P       03 05 07.6  -2.2
        comp=Z,5.0nm,0.8s,baz=78,slow=7.0,SNR=22
NC204 NORSAR Array S     58.98 326  eP     P       03 05 12.0 +1.1
SOP   Sopron             59.02 310   P     P       03 05 14.0 +2.7
NAO01 NORSAR Array S     59.02 325  eP     P       03 05 12.2 +1.1
PRU   Pruhonice          59.66 313  eP     P       03 05 17.9 +2.2
PRU   Pruhonice          59.66 313  eP     P       03 05 17.9 +2.2
BRG   Berggiesshubel     59.79 314  eP     P       03 05 18.6 +2.0
        comp=Z,5.8nm,0.8s
BRG   Berggiesshubel     59.79 314  eP     P       03 05 18.5 +2.0
BRG                                  pmax   pmax
        comp=Z,6.0nm,0.8s
CLL   Collm              60.24 314  eP     P       03 05 19.0  -0.6
CLL                                 i Pmax         03 05 21.1
        comp=Z,10.0nm,1.1s
CLL   Collm              60.24 314 i P     P       03 05 21.1 +1.5
CLL                                  pmax   pmax
        comp=Z,10.0nm,1.1s
KHC   Kasperske Hory     60.51 312  eP     P       03 05 23.3 +1.7
KHC   Kasperske Hory     60.51 312  eP     P       03 05 23.3 +1.7
GEC2  GERESS Array S     60.52 311  eP     P       03 05 23.8 +2.1
        comp=Z,15nm,1.4s
GEC2  GERESS Array S     60.52 311  eP     P       03 05 23.8 +2.1
GEC2                                 pmax   pmax
        comp=Z,15nm,1.4s
GERES GERESS Array B     60.52 311  eP     P       03 05 23.2 +1.5
GERES                                pmax   pmax
        comp=Z,3.0nm,0.8s
GERES GERESS Array B     60.52 311   P     P       03 05 20.4  -1.3
        comp=Z,3.1nm,0.8s,baz=68,slow=7.4,SNR=11
GEA0  GERESS Array S     60.52 311  eP     P       03 05 20.4  -1.3
DAVOX Davos/Dischmat     63.62 310   P     P       03 05 40.6  -2.1
        comp=Z,10nm,0.8s,baz=44,slow=5.4,SNR=15
KMBO  Kilima Mbogo       63.69 250  eP     P       03 05 41.8  -1.9
        comp=Z,4.3nm,1.4s
KMBO  Kilima Mbogo       63.69 250  eP     P       03 05 46.2 +2.6
KMBO                                 pmax   pmax
        comp=Z,1.0nm,0.6s
KMBO  Kilima Mbogo       63.69 250   P     P       03 05 41.8  -1.9
        comp=Z,2.0nm,0.7s,baz=45,slow=14,SNR=3.9
WR1   Warramunga Arr     64.72 138  eP     P       03 05 47.5  -2.4
        comp=Z,15nm,1.4s
WRA   Warramunga Arr     64.72 138   P     P       03 05 47.5  -2.4
        comp=Z,1.6nm,0.9s,baz=333,slow=7.4,SNR=3.3
AS31  Alice Springs      67.49 141  eP     P       03 06 06.1  -1.6
        comp=Z,1.2nm,1.0s
ASAR  Alice Springs      67.49 141   P     P       03 06 06.1  -1.6
        comp=Z,2.0nm,0.9s,baz=336,slow=6.8,SNR=8.9
AS01  Alice Springs      67.51 141  eP     P       03 06 08.0 +0.2
EKA   Eskdalemuir Ar     67.86 322   P     P       03 06 08.3  -1.3
        comp=Z,4.8nm,0.8s,baz=69,slow=6.5,SNR=6.2
TOLK  Toolik Lake Re     68.45  21  eP     P       03 06 12.0  -1.2
        comp=Z,5.7nm,0.8s
TOLK  Toolik Lake Re     68.45  21   P     P       03 06 12.0  -1.2
        baz=305
MLY   Manley             70.17  24  eP     P       03 06 22.4  -1.6
        comp=Z,3.7nm,0.8s
PPLA  Purkeypile         70.89  26  eP     P       03 06 30.7 +2.2
        comp=Z,8.9nm,0.7s
POKR  Poker Plat Res     71.24  23   P     P       03 06 30.9 +0.5
        baz=308
TCOL  CIGO, UAF Yank     71.25  24   P     P       03 06 30.6 +0.2
        baz=308
COLA  College            71.25  24  eP     P       03 06 28.4  -2.0
        comp=Z,3.9nm,0.8s
COLA  College            71.25  24  eP     P       03 06 28.4  -2.0
COLA                                 pmax   pmax
        comp=Z,4.0nm,0.8s
IL1   Eielson Array      71.64  23  eP     P       03 06 33.0 +0.2
ILAR  Eielson Array      71.64  23  eP     P       03 06 33.4 +0.6
ILAR                                 pmax   pmax
        comp=Z,1.0nm,0.7s
ILAR  Eielson Array      71.64  23   P     P       03 06 30.7  -2.1
        comp=Z,1.4nm,0.7s,baz=312,slow=4.5,SNR=12
ILB   Eielson Array      71.64  23  eP     P       03 06 30.7  -2.1
CTA   Charters Tower     72.08 129   P     P       03 06 34.6  -1.4
        comp=Z,1.7nm,0.5s,baz=333,slow=6.8,SNR=2.8
INK   Inuvik             73.05  17   P     P       03 06 39.2  -1.9
        comp=Z,1.8nm,0.8s,baz=342,slow=6.7,SNR=7.0
SCRK  Sand Creek         73.12  23  eP     P       03 06 40.2  -1.6
        comp=Z,8.3nm,1.1s
EPYK  Eagle Plains       73.66  19   P     P       03 06 45.0 +0.2
        baz=317
ES19  SONSECA Array      75.74 308  eP     P       03 06 59.0 +1.7
ESDC  Sonseca Array      75.80 308   P     P       03 06 56.2  -1.5
        comp=Z,3.0nm,0.9s,baz=50,slow=5.2,SNR=7.1
SFJD  Kangerlussuaq      77.08 347   LR     LR     03 43 12.5
        comp=Z,60nm,21.2s,baz=1.5,slow=37
TAM   Tamanrasset        77.32 289  eP     P       03 07 07.9 +1.2
        comp=Z,4.4nm,1.1s
TAM   Tamanrasset        77.32 289  eP     P       03 07 07.9 +1.2
TAM                                  pmax   pmax
        comp=Z,4.0nm,1.1s
LSZ   Lusaka             79.43 244  eP     P       03 07 16.6  -1.7
        comp=Z,2.6nm,0.9s
LSZ   Lusaka             79.43 244   P     P       03 07 16.6  -1.7
        comp=Z,3.5nm,1.1s,baz=131,slow=6.1,SNR=4.3
MDT   Midelt             79.83 302   LR     LR     03 47 22.7
        comp=Z,19nm,18.7s,baz=358,slow=39
YKA   Yellowknife Ar     82.17  13   P     P       03 07 29.7  -2.4
        comp=Z,1.1nm,0.8s,baz=328,slow=5.0,SNR=14
YKB5  Yellowknife Ar     82.17  13  eP     P       03 07 29.7  -2.4
MATP  Matopo             82.39 240   P     P       03 07 33.0  -1.1
        comp=Z,6.5nm,0.9s,baz=22,slow=6.0,SNR=8.6
MATP                                 LR     LR     03 41 30.9
        comp=Z,74nm,19.2s,baz=40,slow=34
FRB   Frobisher Bay      82.87 353   P     P       03 07 33.7  -2.0
FRB                                  pmax   pmax
        comp=Z,2.0nm,1.0s
FRB   Frobisher Bay      82.87 353   P     P       03 07 33.7  -2.0
        comp=Z,0.7nm,0.7s,baz=333,slow=5.2,SNR=4.3
FRB                                  LR     LR     03 50 34.0
        comp=Z,42nm,19.9s,baz=15,slow=40
TOA1  Torodi Ar. Sit     85.44 283  eP     P       03 07 46.9  -2.8
TOA0  Torodi Ar. Sit     85.44 283  eP     P       03 07 48.3  -1.4
TORD  Torodi Ar. Bea     85.44 283   P     P       03 07 46.9  -2.8
        comp=Z,2.1nm,0.7s,baz=63,slow=4.3,SNR=16
LBTB  Lobatse            87.33 238  eP     P       03 07 58.0  -0.8
        comp=Z,9.1nm,1.1s
LBTB  Lobatse            87.33 238   P     P       03 07 58.0  -0.8
LBTB                                 pmax   pmax
        comp=Z,4.0nm,0.9s
LBTB  Lobatse            87.33 238   P     P       03 07 58.0  -0.8
        comp=Z,4.3nm,0.9s,baz=45,slow=4.3,SNR=5.1
LBTB                                 LR     LR     03 43 50.4
        comp=Z,58nm,20.4s,baz=83,slow=33
FFC   Flin Flon          91.67  10 i P     P       03 08 20.8 +2.1
BOZ   Bozeman (W)        98.42  18   P     Pdif    03 08 50.9 +1.0
        baz=338
O03E  Paynes Creek       99.84  27   Pdiff  Pdif   03 08 56.3   0.0
        baz=330
D48A  Paudash Townsh    100.34 358   Pdiff  Pdif   03 08 58.4 +0.1
        baz=2.9
D52A  ZEK Kipawa Sen    100.35 355   Pdiff  Pdif   03 08 57.2  -1.1
        baz=5.8
E54A  Lac Daplat, Po    100.80 354   Pdiff  Pdif   03 08 58.5  -1.8
        baz=6.9
E53A  Dumoine, Ponti    100.89 355   Pdiff  Pdif   03 08 60.0  -0.7
        baz=6.5
G43A  Wallace           102.29   2   Pdiff  Pdif   03 09 06.8  -0.1
        baz=358
H56A  Elgin             102.54 353   Pdiff  Pdif   03 09 07.8  -0.3
        baz=7.7
K42A  Prairie Point,    104.71   3   Pdiff  Pdif   03 09 17.5  -0.2
        baz=356
L49A  Milan             105.45 359   Pdiff  PKiKP  03 13 36.8 +2.2
        baz=1.3
BLG   Laguna Peak, P    106.29  29   Pdiff  PKiKP  03 13 37.6 +1.2
        baz=331
QSPA  South Pole Qui    122.57 180   PKP    PKPdf  03 14 04.2  -2.1
        comp=Z,2.7nm,1.0s,baz=282,slow=1.5,SNR=4.1
SIV   San Ignacio       152.38 301   PKPbc  PKPbc  03 15 05.8  -2.5
        comp=Z,1.4nm,0.8s,baz=102,slow=6.2,SNR=7.2
SIV                                  PKPab  sPKPbc 03 15 16.6 +1.5
        comp=Z,1.0nm,0.8s,baz=34,slow=7.3,SNR=2.9
CPUP  Villa Florida     154.84 277   PKPab  PKPab  03 15 25.4  -3.0
        comp=Z,1.1nm,0.9s,baz=45,slow=8.6,SNR=2.9
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IDC 12 02:56:43.8±4.3**,7°.18S**×**144°.03E,h0**km**,mb3.8**/3**,**
mb1 3.8/5**,mb1mx3.6**/56**,mbtmp3.7**/5**,ML3.4**/2**,Error**
ellipse: s-maj=131.3km s-min=27.7km az=108.0,Near
south coast of New Guinea

```
Code  Station Name        Δ°   AZ°   Phase ID           Time       Res
                                     Op     ISC       h  m  s      ISC
WRA   Warramunga Arr     15.79 216   Pn     Pn     03 00 25.8  -1.9
        0.1nm,0.3s,baz=34,slow=13,SNR=8.8
WRA                                  Sn     Sn     03 03 16.0  -7.5
        0.1nm,0.3s,baz=37,slow=23,SNR=3.1
WRA                                  Lg     Lg     03 05 03.4
        0.1nm,0.3s,baz=34,slow=29,SNR=4.6
ASAR  Alice Springs      19.06 210   P      Pn     03 01 08.3  -0.2
        0.2nm,0.3s,baz=38,slow=12,SNR=14
ASAR                                 S      Sn     03 04 33.4  -9.4
        0.1nm,0.3s,baz=22,slow=25,SNR=3.4
ASAR                                 Lg     Lg     03 06 49.9
        baz=31,slow=33,SNR=3.3
FITZ  Fitzroy Crossi     20.95 237   P      P      03 01 28.9 +0.4
        2.1nm,0.5s,baz=60,slow=11,SNR=15
FITZ                                 S      S      03 05 12.6   -10
        1.0nm,0.7s,baz=60,slow=20,SNR=3.6
MKAR  Makanchi Array     76.56 322   P      P      03 08 36.3 +0.2
        0.7nm,0.7s,baz=120,slow=5.7,SNR=3.0
ZALV  Zalesovo Beam      78.46 329   P      P      03 08 46.4  -0.2
        0.5nm,0.4s,baz=108,slow=4.7,SNR=3.2
```

ISCJB ***12*** *02:57:49.6±0.1, 41°.30N±0°.02×128°.98E±0°.02, h0km,*
mb5.1/420, MS4.1/41, Error ellipse: s-maj=2.3km
s-min=1.7km az=154.2

MOS ***12*** *02:57:49.2±0.9, 41°.31N×129°.12E, h0km, mb5.2/148,*
MS4.2/20, Error ellipse: s-maj=5.4km s-min=4.2km
az=100.2

IDC ***12*** *02:57:50.8±0.3, 41°.30N×129°.07E, h0km, mb4.9/66,*
mb1 5.0/72, mbmle4.9/90, ML4.5/7, MS3.9/27, Ms1 4.0/27,
msmle3.6/86, Error ellipse: s-maj=8.1km s-min=7.1km
az=107.0

NEIC ***12*** *02:57:51.5±0.1, 41°.30N×129°.00E, h0km, mb5.1/296,*
MS4.0/9, Error ellipse: s-maj=2.4km s-min=1.9km
az=144.0

NEIC Underground nuclear explosion. Felt [III] at Ch'ongjin. Also felt at Hoemul-li, Hwasong, Kilju and Sungjibaegam. Felt at Tumen, China.

ISC 12 02:57:51.0±0.2**,41°.31N**±0°.03×**129°.09E**±0°.03**,h0**km**,n1377,**
σ**1**s**.03**/1475**,mb5.1**/475**,MS4.0**/42**,68C-39D,North Korea**

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Code  Station Name        Δ°   AZ°   Phase ID           Time       Res
                                     Op     ISC       h  m  s      ISC
MSHR  Mys Shultsa         1.99  50c iP      Pn     02 58 24.9  -1.0
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MSHR                              i                02 58 53.6
VLA    Vladivostok        2.75  48c iP     Pn      02 58 35.8 -0.5
VLA                               i                02 59 12.1
MDJ    Mudanjiang         3.32   6  P      Pn      02 58 44.9 +0.7
MDJ                                 S      Sg      02 59 37.7 +0.1
MDJ                                 pmax   pmax
       comp=Z,6µm,0.4s
MDJ                                 pmax   pmax
       comp=Z,5µm,0.5s
MDJ                                 LR     LR
       comp=N,16µm,3.7s
MDJ                                 LR     LR
       comp=E,13µm,3.3s
MDJ                                 LR     LR
       comp=Z,10µm,4.3s
MDJ    Mudanjiang         3.32   6 ePn     Pn      02 58 44.5 +0.4
I45RU  USSURIYSK INFR     3.58  35  Pn     Pn      02 58 48.8 +1.1
I45RU                             i                03 17 35.0
       baz=212,slow=329,SNR=1.3
I45RU  USSURIYSK INFR     3.58  35  Pn     Pn      02 58 48.8 +1.1
I45RU                             i                03 17 35.0
       baz=212,slow=329,SNR=1.3
USA0B  Ussuriysk Arra     3.59  36 ePn     Pn      02 58 47.5 -0.3
USA0B                              eSn     Sn      02 59 27.1 -3.8
USRK   Ussuriysk Ar.      3.59  36  Pn     Pn      02 58 47.5 -0.3
       comp=Z,208nm,0.3s,baz=213,slow=12,SNR=1381
USRK                                Pg     Pb      02 58 55.9 +0.6
       comp=Z,572nm,0.3s,baz=227,slow=16,SNR=89
USRK                                Lg     Lg      02 59 43.9
       comp=Z,173nm,0.3s,baz=206,slow=30,SNR=4.2
USRK                                LR     LR      02 59 59.3
       comp=Z,146nm,18.9s,baz=189,slow=36
USRK   Ussuriysk Ar.      3.59  36  Pn     Pn      02 58 47.5 -0.3
       comp=Z,208nm,0.3s,baz=213,slow=12,SNR=1381
USRK                                Pg     Pb      02 58 55.9 +0.6
       comp=Z,572nm,0.3s,baz=227,slow=16,SNR=89
USRK                                Lg     Lg      02 59 43.9
       comp=Z,173nm,0.3s,baz=206,slow=30,SNR=4.2
USRK                                LR     LR      02 59 59.3
       comp=Z,146nm,18.9s,baz=189,slow=36
CN2    Changchun          3.66 314  Pn     Pn      02 58 48.5 -0.4
CN2                                 Pg     Pb      02 58 58.1 +1.5
CN2                                 smax   smax
       comp=N,3µm,0.8s
CN2                                 smax   smax
       comp=E,2µm,0.8s
KS01   Wonju Array Si     3.94 194 ePn     Pn      02 58 51.7 -1.0
KS01                               eSn     Sn      02 59 39.1 -0.6
KSRS   Korea Array        3.96 194  Pn     Pn      02 58 52.7 -0.2
       comp=E,167nm,0.3s,baz=13,slow=13,SNR=1158
KSRS                                Sn     Sn      02 59 39.4 -0.6
       comp=E,63nm,0.3s,baz=17,slow=24,SNR=4.2
KSRS                                Lg     Lg      02 59 57.8
       comp=E,53nm,0.3s,baz=14,slow=29,SNR=5.8
KSRS                                LR     LR      03 00 26.9
       comp=E,814nm,20.1s,baz=26,slow=39
KSRS   Korea Array        3.96 194  Pn     Pn      02 58 52.7 -0.2
       comp=E,167nm,0.3s,baz=13,slow=13,SNR=1158
KSRS                                Sn     Sn      02 59 39.4 -0.6
       comp=E,63nm,0.3s,baz=17,slow=24,SNR=4.2
KSRS                                Lg     Lg      02 59 57.8
       comp=E,53nm,0.3s,baz=14,slow=29,SNR=5.8
KSRS                                LR     LR      03 00 26.9
       comp=E,814nm,20.1s,baz=26,slow=39
KS15   Wonju Array Si     3.98 194 ePn     Pn      02 58 52.8 -0.4
KS15                               eSn     Sn      02 59 39.4 -1.1
KS15                               eLg     Lg      02 59 57.8
KS15                               e               03 00 26.9
KSAR   Wonju Array Be     3.98 194  Pn     Pn      02 58 52.7 -0.5
KSAR   Wonju Array Be     3.98 194  P      Pn      02 58 52.7 -0.5
SNY    Shenyang           4.17 279 ⇑Pn     Pn      02 58 55.4 -0.4
SNY                                ⇓Pg     Pb      02 59 06.2 +1.0
SNY                                 Sn     Sn      02 59 43.2 -2.0
SNY                                 Sg     Sg      03 00 02.9 -2.0
SNY                                 smax   smax
       comp=N,2µm,0.8s
SNY                                 smax   smax
       comp=E,2µm,0.6s
TJN    Taejon             5.11 196c iP     Pn      02 59 08.6 -0.2
DL2    Dalian             6.21 250⇑iPg     Pn      02 59 23.5 -0.3
DL2                                 Sg     Sn      03 00 36.4 +0.9
DL2                                 pmax   pmax
       comp=Z,750nm,0.6s
DL2                                 smax   smax
       comp=N,2µm,0.8s
DL2                                 smax   smax
       comp=E,2µm,0.8s
DL2                                 LR     LR
       comp=N,5µm,5.9s
DL2                                 LR     LR
       comp=E,3µm,5.6s
DL2                                 LR     LR
       comp=Z,4µm,5.7s
TEY    Ternei             6.63  53⇓eP      Pn      02 59 30.2 +0.6
TEY                                e               03 00 45.5
TEY                                 pmax   pmax
       comp=Z,200nm,0.6s
TEY                                 pmax   pmax
       comp=N,220nm,0.4s
TEY                                 pmax   pmax
       comp=E,260nm,0.4s
TEY                                 pmax   pmax
       comp=Z,290nm,0.4s
TEY                                 MLR    MLR
       comp=E,400nm,4.0s
TEY                                 MLR    MLR
       comp=N,700nm,1.0s
TEY                                 MLR    MLR
       comp=Z,600nm,3.0s
KLR    Kul'dur            8.13  12  Pn     Pn      02 59 51.5 +1.2
       comp=Z,44nm,0.3s,baz=188,slow=13,SNR=777
KLR                                 Lg     Lg      03 02 03.5
       baz=127,slow=20,SNR=3.8
KLR    Kul'dur            8.13  12  Pn     Pn      02 59 51.5 +1.2
       comp=Z,44nm,0.3s,baz=188,slow=13,SNR=777
KLR                                 Lg     Lg      03 02 03.5
       baz=127,slow=20,SNR=3.8
JNU    Nakatsue           8.30 170  Pn     Pn      02 59 52.6  0.0
       comp=Z,14nm,0.3s,baz=302,slow=2.6,SNR=71
JNU                                 Sn     Sn      03 01 24.0 -3.1
       baz=72,slow=20,SNR=2.0
JNU                                 LR     LR      03 02 57.9
       comp=Z,418nm,20.6s,baz=302,slow=37
JNU    Nakatsue           8.30 170 ePn     Pn      02 59 52.8 +0.2
JNU                                eSn     Sn      03 01 27.2 +0.1
JNU    Nakatsue           8.30 170  Pn     Pn      02 59 52.6  0.0
       comp=Z,14nm,0.3s,baz=302,slow=2.6,SNR=71
JNU                                 Sn     Sn      03 01 24.0 -3.1
       baz=72,slow=20,SNR=2.0
JNU                                 LR     LR      03 02 57.9
       comp=Z,418nm,20.6s,baz=302,slow=37
MJB9   Matsu-Tunnel       8.55 121 ePn     Pn      02 59 56.6 +0.6
MJB9                               eSn     Sn      03 01 31.1 -2.0
MAJO   Matsushiro         8.55 121 ePn     Pn      02 59 56.6 +0.6
MAJO                               eSn     Sn      03 01 33.2  0.0
MAJO   Matsushiro         8.55 121d iP     Pn      02 59 56.2 +0.2
MAT    Matsushiro         8.55 121  P      Pn      02 59 55.9 -0.1
MAT                                 S      Sn      03 01 33.1 -0.1
MJAR   Matsushiro Arr     8.55 121  Pn     Pn      02 59 56.8 +0.7
       comp=Z,2.9nm,0.3s,baz=300,slow=16,SNR=105
MJAR                                Sn     Sn      03 01 33.2 -0.1
       comp=Z,0.1nm,0.3s,baz=286,slow=20,SNR=3.0
MJAR                                LR     LR      03 02 52.0
       comp=Z,654nm,20.3s,baz=310,slow=35
MJAR   Matsushiro Arr     8.55 121  Pn     Pn      02 59 56.8 +0.7
       comp=Z,2.9nm,0.3s,baz=300,slow=16,SNR=105
MJAR                                Sn     Sn      03 01 33.2 -0.1
       comp=Z,0.1nm,0.3s,baz=286,slow=20,SNR=3.0
MJAR                                LR     LR      03 02 52.0
       comp=Z,654nm,20.3s,baz=310,slow=35
INU    Inuyama            8.61 131 ePn     Pn      02 59 57.3 +0.4
INU                                eSn     Sn      03 01 35.0 +0.3
BJI    Beijing            9.90 267  P      Pn      03 00 14.8 +0.4
BJI                                 pmax   pmax
       comp=Z,24nm,0.7s
BJI                                 LR     LR
       comp=N,1µm,8.3s
BJI                                 LR     LR
       comp=E,2µm,12.2s
BJI                                 LR     LR
       comp=Z,620nm,14.4s
BJT    Baijiatuau         9.91 267 ePn     Pn      03 00 14.8 +0.2
BJT                                eSn     Sn      03 02 07.4 +0.9
BJT    Baijiatuau         9.91 267 eP      Pn      03 00 14.8 +0.2
BJT                                e               03 02 07.4
HIA    Hailar            10.32 324 ePn     Pn      03 00 20.3 +0.1
HIA                                eSn     Sn      03 02 14.9 -1.6
HIA    Hailar            10.32 324c iP     Pn      03 00 20.3 +0.1
ASAJ   Asahikawa         10.32  70  Pn     Pn      03 00 19.1 -1.1
       comp=Z,1.1nm,0.3s,baz=252,slow=6.4,SNR=3.3
ASAJ   Asahikawa         10.32  70  Pn     Pn      03 00 19.1 -1.1
       comp=Z,1.1nm,0.3s,baz=252,slow=6.4,SNR=3.3
ERM    Erimo             10.55  82 ePn     Pn      03 00 26.1 +2.8
ERM    Erimo             10.55  82 eP      Pn      03 00 24.0 +0.7
TIA    Tai'an            10.64 245  P      Pn      03 00 25.3 +0.6
TIA                                 S      Sn      03 02 26.6 +2.1
TIA                                 pmax   pmax
       comp=Z,70nm,0.6s
TIA                                 LR     LR
       comp=N,570nm,13.0s
TIA                                 LR     LR
       comp=E,280nm,11.6s
TIA                                 LR     LR
       comp=Z,240nm,10.2s
I30JP  ISUMI INFRASON    10.66 121 i                04 00 40.0
       baz=313,slow=318,SNR=0.4
I30JP  ISUMI INFRASON    10.66 121 i                04 00 40.0
       baz=313,slow=318,SNR=0.4
GRNR   Gornyy            10.73  26 eP      Pn      03 00 25.3 -0.6
GRNR                                pmax   pmax
       comp=Z,5.0nm,0.2s
YSS    Yuzh-Sakhalins    11.31  56 ePn     Pn      03 00 33.7 -0.1
YSS    Yuzh-Sakhalins    11.31  56 eP      Pn      03 00 36.0 +2.2
YSS                                eS      Sn      03 02 39.4 -1.5
YSS                                 pmax   pmax
       comp=Z,20nm,0.4s
YSS                                 MLR    MLR
       comp=Z,600nm,10.0s
YSS                                 MLR    MLR
       comp=N,200nm,12.0s
YSS                                 MLR    MLR
       comp=E,600nm,13.0s
JHJ    Hachijo jima 2    11.80 130  LR     LR      03 04 54.3
       comp=E,374nm,18.0s,baz=358,slow=36
JHJ    Hachijo jima 2    11.80 130  LR     LR      03 04 54.3
       comp=E,374nm,18.0s,baz=358,slow=36
JHJ2   Mitsune           11.83 130 ePn     Pn      03 00 42.8 +1.9
UGL    Uglegorsk         11.99  45 eP      Pn      03 00 47.7 +4.7
UGL                                 S      Sn      03 02 54.5 -2.8
UGL                                 pmax   pmax
       comp=Z,89nm,1.0s
UGL                                 MLR    MLR
       comp=Z,900nm,6.0s
UGL                                 MLR    MLR
       comp=E,700nm,5.0s
SSE    Sheshan           12.02 215  P      Pn      03 00 43.0 -0.6
SSE                                 S      Sn      03 02 56.3 -2.1
SSE                                 pmax   pmax
       comp=Z,5.0nm,0.6s
SSE                                 LR     LR
       comp=N,400nm,11.1s
SSE                                 LR     LR
       comp=E,540nm,10.9s
SSE    Sheshan           12.02 215 ePn     Pn      03 00 43.0 -0.6
NJ2    Nanjing           12.36 225 ⇓P      Pn      03 00 51.1 +3.0
NJ2                                 pmax   pmax
       comp=Z,45nm,0.8s
NJ2                                 LR     LR
       comp=N,820nm,13.6s
NJ2                                 LR     LR
       comp=E,670nm,11.0s
NJ2                                 LR     LR
       comp=Z,1µm,13.0s
ZEA    Zeya              12.49 355 eP      Pn      03 00 49.8 -0.1
ZEA                                 pmax   pmax
       comp=N,19nm,0.4s
ZEA                                 pmax   pmax
       comp=Z,44nm,0.4s
ZEA                                 MLR    MLR
       comp=Z,2µm,9.0s
ZEA                                 MLR    MLR
       comp=N,2µm,8.0s
YUK    Yuzh-Kuril'sk     12.64  72 eP      Pn      03 00 51.8 -0.1
HHC    Hu-ho-hao-te      13.24 274 eP      Pn      03 01 02.3 +2.1
HHC                                 PP     P       03 01 12.9 +2.5
HHC                                 S      Sn      03 03 30.0 +1.8
HHC                                 pmax   pmax
       comp=Z,13nm,0.8s
HHC                                 pmax   pmax
       comp=Z,76nm,5.6s
HHC                                 LR     LR
       comp=N,1µm,9.5s
HHC                                 LR     LR
       comp=E,2µm,13.0s
HHC                                 LR     LR
       comp=Z,2µm,11.2s
SHO    Shikotan          13.32  73⇑iP      Pn      03 01 03.2 +2.0
SHO                                 S      Sn      03 03 31.8 +1.9
SHO                                 pmax   pmax
       comp=E,19nm,0.6s
SHO                                 pmax   pmax
       comp=Z,31nm,0.6s
SHO                                 pmax   pmax
       comp=N,5.0nm,0.7s
TYV    Tymovskoe         13.39  40 eP      Pn      03 01 06.4 +4.3
NKL    Nikolayevsk       14.19  30 eP      Pn      03 01 15.2 +2.1
NKL                                 pmax   pmax
       comp=Z,21nm,0.9s
NKL                                 MLR    MLR
       comp=N,1µm,13.0s
NKL                                 MLR    MLR
       comp=E,900nm,13.0s
NKL                                 MLR    MLR
       comp=Z,1µm,13.0s
KUR    Kuril'sk          14.22  68 eP      Pn      03 01 14.6 +1.1
KUR                                 S      Sn      03 03 51.6 -0.4
KUR                                 pmax   pmax
       comp=Z,122nm,1.1s
BTO    Baotou            14.43 273 eP      Pn      03 01 19.3 +2.7
CIT    Chita             15.08 320 eP      P       03 01 32.3 +1.6
CIT                                 pmax   pmax
       comp=Z,59nm,1.1s
OKH    Okha              15.38  33deP      Pn      03 01 25.2 -3.8
OKH                                 MLR    MLR
       comp=Z,700nm,10.0s
WHN    Wuhan             16.04 233 ⇑P      P       03 01 40.4 -1.0
WHN                                 S      Sn      03 04 29.5 -6.9
WHN                                 LR     LR
       comp=N,2µm,8.5s
WHN                                 LR     LR
       comp=E,1µm,8.5s
WHN                                 LR     LR
       comp=Z,2µm,7.3s
SONA1  Songino Array     17.40 300 ePn     Pn      03 01 55.7 +0.5
SONA0  Songino Array     17.40 300 ePn     Pn      03 01 55.7 +0.5
SONA0                              ePcP    PcP     03 06 36.6 -0.2
SONA0                              e               03 07 00.4
SONM   Songino Array     17.40 300  P      Pn      03 01 55.7 +0.5
       comp=Z,0.8nm,0.3s,baz=108,slow=12,SNR=46
SONM                                PcP    PcP     03 06 36.6 -0.2
       comp=Z,0.2nm,0.3s,baz=66,slow=0.5,SNR=5.5
SONM                                Lg     Lg      03 07 00.4
       comp=Z,0.2nm,0.3s,baz=95,slow=27,SNR=3.3
SONM                                LR     LR      03 09 09.7
       comp=Z,834nm,18.1s,baz=152,slow=39
SONM   Songino Array     17.40 300 eP      Pn      03 01 55.9 +0.7
SONM                                pmax   pmax
       comp=Z,1.0nm,0.3s
SONM   Songino Array     17.40 300  P      Pn      03 01 55.7 +0.5
       comp=Z,0.8nm,0.3s,baz=108,slow=12,SNR=46
SONM                                PcP    PcP     03 06 36.6 -0.2
       comp=Z,0.2nm,0.3s,baz=66,slow=0.5,SNR=5.5
SONM                                Lg     Lg      03 07 00.4
       comp=Z,0.2nm,0.3s,baz=95,slow=27,SNR=3.3
SONM                                LR     LR      03 09 09.7
       comp=Z,834nm,18.1s,baz=152,slow=39
TATO   Taipei            17.48 204 ePn     P       03 01 60.0 +2.5
       comp=Z,55nm,0.6s
XAN    Xi'an             17.52 252 ⇑P      P       03 01 58.7 +0.8
XAN                                 pmax   pmax
       comp=Z,16nm,0.8s
XAN                                 LR     LR
       comp=E,500nm,14.1s
XAN                                 LR     LR
       comp=Z,490nm,15.2s
XAN    Xi'an             17.52 252 ePn     P       03 01 58.5 +0.6
       comp=Z,16nm,0.9s
YOJ    Yonaguni jima     17.56 199 ePn     P       03 01 57.6 -0.6
       comp=Z,64nm,0.9s
YOJ    Yonaguni jima     17.56 199 eP      P       03 01 57.7 -0.6
YOJ                                 pmax   pmax
       comp=Z,64nm,0.9s
YHNB   Yeheng            17.80 204 ePn     P       03 02 03.5 +2.4
       comp=Z,51nm,0.6s
JCJ    Chichijima        17.81 139  LR     LR      03 08 24.9
       comp=Z,230nm,18.5s,baz=76,slow=36
JCJ    Chichijima        17.81 139  LR     LR      03 08 24.9
       comp=Z,230nm,18.5s,baz=76,slow=36
NACB   Ninganchiao       18.20 202 ePn     P       03 02 06.8 +1.4
       comp=Z,22nm,0.7s
QZH    Quanzhou          18.52 211⇓iP      Pn      03 02 09.9 +1.0
QZH                                eS      Sn      03 05 30.8 -5.7
QZH                                 LR     LR
       comp=N,680nm,10.5s
QZH                                 LR     LR
       comp=E,640nm,13.7s
QZH                                 LR     LR
       comp=Z,1µm,12.0s
SSLB   Suanglung         18.76 204 eP      Pn      03 02 12.6 +0.7
       comp=Z,38nm,0.7s
YULB   Yu-li             19.03 202 eP      P       03 02 14.0 -0.5
       comp=Z,21nm,0.8s
BOD    Bodaibo           19.12 335⇓iP      Pn      03 02 16.4 +0.3
BOD                                 pmax   pmax
       comp=Z,34nm,1.2s
ENH    Enshi             19.30 241 eP      Pn      03 02 18.5 +0.1
       comp=Z,75nm,0.8s
TPUB   Ta-pu             19.32 204 eP      P       03 02 17.6 -0.1
       comp=Z,32nm,0.8s
TWG    Pinlang           19.64 203 eP      P       03 02 20.4 -0.7
       comp=Z,69nm,0.9s
ZAK    Zakamensk         20.05 306 eP      P       03 02 26.3 +0.6
ZAK                                 pmax   pmax
       comp=Z,13nm,1.2s
IRK    Irkutsk           20.11 311 eP      Pn      03 02 28.2 +0.3
IRK                                 pmax   pmax
       comp=Z,50nm,2.8s
TLY    Talaya            20.26 309  P      Pn      03 02 29.1 -0.5
       comp=Z,8.4nm,0.9s,baz=152,slow=10,SNR=6.9
TLY                                 Lg     Lg      03 08 35.1
       comp=Z,0.4nm,0.4s,baz=201,slow=5.1,SNR=4.2
TLY                                 LR     LR      03 11 28.4
       comp=Z,662nm,19.4s,baz=182,slow=40
TLY    Talaya            20.26 309 eP      P       03 02 28.1 +0.3
       comp=Z,54nm,0.9s
TLY    Talaya            20.26 309⇓iP      Pn      03 02 30.1 +0.4
TLY    Talaya            20.26 309  P      Pn      03 02 30.3 +0.6
       SNR=9.9
TLY    Talaya            20.26 309  P      Pn      03 02 29.1 -0.5
       comp=Z,8.4nm,0.9s,baz=152,slow=10,SNR=6.9
TLY                                 Lg     Lg      03 08 35.1
       comp=Z,0.4nm,0.4s,baz=201,slow=5.1,SNR=4.2
TLY                                 LR     LR      03 11 28.4
       comp=Z,662nm,19.4s,baz=182,slow=40
LZH    Lanzhou           20.36 263 eP      Pn      03 02 30.6 -0.5
LZH                                 PP     PnPn    03 02 48.8 +3.1
LZH                                eS      S       03 06 11.7 -6.4
LZH                                 sS     Sn      03 06 17.4 -3.6
LZH                                 SS             03 06 44.0
LZH                                 pmax   pmax
       comp=Z,110nm,0.9s
LZH                                 pmax   pmax
       comp=Z,350nm,4.9s
LZH                                 LR     LR
       comp=N,1µm,10.7s
LZH                                 LR     LR
       comp=E,1µm,10.8s
LZH                                 LR     LR
       comp=Z,2µm,10.8s
YAK    Yakutsk           20.75   1 eP      P       03 02 32.9 -0.1
YAK                                e               03 02 53.7
YAK                                eS      S       03 06 27.3 +2.1
YAK                                e*SS    Sn      03 06 41.6  +12
YAK                                eSS             03 06 54.3
YAK                                eSSS    SSS     03 07 10.8
YAK                                e               03 13 54.6
YAK                                 pmax   pmax
       comp=Z,350nm,0.9s
YAK                                 pmax   pmax
       comp=N,219nm,1.0s
YAK                                 pmax   pmax
       comp=E,36nm,0.9s
YAK                                 pmax   pmax
       comp=Z,187nm,0.8s
YAK                                 pmax   pmax
       comp=E,80nm,0.6s
YAK                                 pmax   pmax
       comp=N,133nm,0.8s
YAK                                 smax   smax
       comp=N,451nm,2.2s
YAK                                 smax   smax
       comp=E,432nm,2.3s
YAK                                 MLR    MLR
       comp=Z,1µm,16.0s
YAK                                 MLR    MLR
       comp=N,862nm,14.0s
YAK                                 MLR    MLR
       comp=E,726nm,17.0s
SKR    Severo-Kuril’s    20.88  54 eP      P       03 02 32.2 -2.3
SKR                                 pmax   pmax
       comp=Z,82nm,1.1s
SKR                                 MLR    MLR
       comp=Z,400nm,19.0s
MOY    Mondy             21.81 308 eP      P       03 02 46.1 +1.4
MOY                                 pmax   pmax
       comp=Z,17nm,1.4s
GTA    Gaotai            22.35 275 ⇑P      P       03 02 51.8 +1.3
GTA                                 S      S       03 06 57.6 +0.5
GTA                                 pmax   pmax
       comp=Z,18nm,1.5s
GTA                                 pmax   pmax
       comp=Z,160nm,7.1s
GTA                                 LR     LR
       comp=N,410nm,14.0s
GTA                                 LR     LR
       comp=E,860nm,14.3s
GTA                                 LR     LR
       comp=Z,1µm,12.7s
PEA0B  Petropavlovsk-    22.57  49 eP      P       03 02 53.8 +1.2
       comp=Z,30nm,1.0s
PETK   Petropavlovsk-    22.57  49  P      P       03 02 52.4 -0.2
       comp=Z,9.1nm,0.7s,baz=212,slow=7.8,SNR=9.2
PETK                                PcP    PcP     03 06 46.4 +0.5
       comp=Z,2.0nm,0.6s,baz=191,slow=4.6,SNR=3.6
PETK                                LR     LR      03 11 21.5
       comp=Z,106nm,18.5s,baz=248,slow=36
PETK   Petropavlovsk-    22.57  49 eP      P       03 02 52.7 +0.1
PETK   Petropavlovsk-    22.57  49 eP      P       03 02 52.7 +0.1
PETK   Petropavlovsk-    22.57  49  P      P       03 02 52.4 -0.2
       comp=Z,9.1nm,0.7s,baz=212,slow=7.8,SNR=9.2
PETK                                PcP    PcP     03 06 46.4 +0.5
       comp=Z,2.0nm,0.6s,baz=191,slow=4.6,SNR=3.6
PETK                                LR     LR      03 11 21.5
       comp=Z,106nm,18.5s,baz=248,slow=36
PEA1   Petropavlovsk-    22.57  49 eP      P       03 02 52.4 -0.2
PEA1                               ePcP    PcP     03 06 46.4 +0.5
MA2    Magadan           22.72  29  P      P       03 02 53.1 -1.1
       comp=Z,30nm,0.6s,baz=223,slow=11,SNR=38
MA2                                 LR     LR      03 12 25.7
       comp=Z,111nm,18.9s,baz=232,slow=38
MA2    Magadan           22.72  29 eP      P       03 02 53.0 -1.1
       comp=Z,32nm,0.6s
MA2    Magadan           22.72  29ceP      P       03 02 53.9 -0.2
MA2                                 pmax   pmax
       comp=Z,26nm,0.6s
MA2    Magadan           22.72  29  P      P       03 02 53.1 -1.1
       comp=Z,30nm,0.6s,baz=223,slow=11,SNR=38
MA2                                 LR     LR      03 12 25.7
       comp=Z,111nm,18.9s,baz=232,slow=38
CD2    Chengdu           22.88 251 ⇑P      P       03 02 55.7 -0.4
CD2                                 pP             03 02 57.1
CD2                                 S      S       03 07 06.4 -0.4
CD2                                 sS     Sn      03 07 08.9  -12
CD2                                 pmax   pmax
       comp=Z,90nm,0.5s
CD2                                 pmax   pmax
       comp=Z,230nm,6.0s
CD2                                 LR     LR
       comp=N,1µm,7.7s
CD2                                 LR     LR
       comp=E,800nm,7.2s
CD2                                 LR     LR
       comp=Z,600nm,8.1s
PET    Petropavlovsk     23.08  49 eP      P       03 02 58.7 +0.7
       comp=Z,15nm,0.7s
PET    Petropavlovsk     23.08  49 eP      P       03 03 00.3 +2.3
PET                                eS      S       03 07 09.4 -0.5
PET                                 pmax   pmax
       comp=Z,15nm,0.6s
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PET                                MLR    MLR
      comp=Z,200nm,17.0s
KNGR  Kungurtug, Tuv   23.68 304⇑iP     P      03 03 05.0 +0.8
GYA   Guiyang          23.70 238⇑iP     P      03 03 03.2 -1.4
GYA                              PP            03 03 37.8
GYA                              S      S      03 07 17.2 -3.5
GYA                              SS     SnSn   03 08 04.8 +7.3
GYA                              pmax   pmax
      comp=Z,50nm,0.7s
GYA                              pmax   pmax
      comp=Z,130nm,4.9s
GYA                              LR     LR
      comp=N,3µm,16.0s
GYA                              LR     LR
      comp=E,3µm,16.3s
GYA                              LR     LR
      comp=Z,3µm,16.6s
SEY   Seymchan         25.66  25  P     P      03 03 22.0 -0.1
      comp=Z,9.3nm,0.4s,baz=207,slow=5.8,SNR=40
SEY   Seymchan         25.66  25⇓eP     P      03 03 22.6 +0.5
SEY   Seymchan         25.66  25  P     P      03 03 22.0 -0.1
      comp=Z,9.3nm,0.4s,baz=207,slow=5.8,SNR=40
KMI   Kunming          27.18 242  P     P      03 03 35.8 -0.6
KMI                              sP     PP     03 03 37.8  -60
KMI                              S      S      03 08 18.0 +1.7
KMI                              pmax   pmax
      comp=Z,50nm,0.8s
KMI                              LR     LR
      comp=N,260nm,11.4s
KMI                              LR     LR
      comp=E,130nm,12.5s
KMI                              LR     LR
      comp=Z,270nm,10.0s
KMI   Kunming          27.18 242 eP     P      03 03 35.8 -0.6
      comp=Z,35nm,0.8s
KMI                              LR     LR
      comp=Z,200nm,19.0s
KMI   Kunming          27.18 242 eP     P      03 03 35.8 -0.6
KMI                              pmax   pmax
      comp=Z,35nm,0.8s
KMI                              MLR    MLR
      comp=Z,200nm,19.0s
QIZ   Qiongzhong       27.63 222 eP     P      03 03 41.2 +1.0
      comp=Z,14nm,1.0s
DGZ   Jazzator, Alta   30.05 300c iP    P      03 04 03.2 +1.5
DGZ                              pmax   pmax
      comp=Z,4.0nm,0.8s
WMQ   Urumqi           30.37 289 eP     P      03 04 06.4 +1.9
WMQ                              PP     PP     03 04 59.1  -14
WMQ                              pmax   pmax
      comp=Z,19nm,0.9s
WMQ                              pmax   pmax
      comp=Z,310nm,6.3s
WMQ                              LR     LR
      comp=N,260nm,16.9s
WMQ                              LR     LR
      comp=E,180nm,28.3s
WMQ                              LR     LR
      comp=Z,290nm,15.3s
WMQ   Urumqi           30.37 289 eP     P      03 04 04.7 +0.1
      comp=Z,5.8nm,0.7s
WMQ                              LR     LR
      comp=Z,399nm,20.0s
TIXI  Tiksi            30.41 360  P     P      03 04 04.1 -0.4
      comp=Z,33nm,0.6s,baz=154,slow=6.0,SNR=61
TIXI  Tiksi            30.41 360 eP     P      03 04 04.2 -0.2
TIXI                             LR     LR
      comp=Z,100nm,18.0s
TIXI  Tiksi            30.41 360 eP     P      03 04 04.3 -0.2
TIXI                             MLR    MLR
      comp=Z,100nm,18.0s
TIXI  Tiksi            30.41 360  P     P      03 04 04.1 -0.4
      comp=Z,33nm,0.6s,baz=154,slow=6.0,SNR=61
ZAA0  Zalesovo Array   31.86 309 eP     P      03 04 18.1 +0.6
      comp=Z,4.5nm,0.6s
ZAA0                             ePcP   PcP    03 07 07.1 -1.0
ZAA0                             LR     LR
      comp=Z,600nm,18.0s
ZAA1  Zalesovo Array   31.86 309 eP     P      03 04 17.4 -0.1
ZAA1                             ePcP   PcP    03 07 07.2 -0.9
ZALV  Zalesovo Beam    31.86 309  P     P      03 04 17.4 -0.1
      comp=Z,4.8nm,0.6s,baz=101,slow=8.6,SNR=25
ZALV                             PcP    PcP    03 07 07.2 -0.9
      comp=Z,7.1nm,0.6s,baz=73,slow=0.9,SNR=20
ZALV                             LR     LR     03 17 54.4
      comp=Z,455nm,18.3s,baz=70,slow=38
ZALV  Zalesovo Beam    31.86 309 eP     P      03 04 17.9 +0.4
ZALV                             pmax   pmax
      comp=Z,5.0nm,0.6s
ZALV  Zalesovo Beam    31.86 309  P     P      03 04 17.4 -0.1
      comp=Z,4.8nm,0.6s,baz=101,slow=8.6,SNR=25
ZALV                             PcP    PcP    03 07 07.2 -0.9
      comp=Z,7.1nm,0.6s,baz=73,slow=0.9,SNR=20
ZALV                             LR     LR     03 17 54.4
      comp=Z,455nm,18.3s,baz=70,slow=38
NONG  Nongkai          32.10 232  P     P      03 04 20.0 +0.1
      comp=Z,0.9nm,1.3s
SKNT  Sakolnakorn      32.48 229  P     P      03 04 23.9 +0.7
      comp=Z,5.7nm,1.1s
LSA   Lhasa            32.75 262  PFAKE        03 04 40.0  +14
LSA                              LR     LR
      comp=Z,200nm,19.0s
NVS   Novosibirsk      32.87 310⇑iP     P      03 04 26.2  0.0
NVS                             e              03 07 09.4
NVS                              pmax   pmax
      comp=Z,19nm,1.5s
NVS                              pmax   pmax
      comp=E,7.0nm,0.5s
BILL  Bilibino         33.37  24 eP     P      03 04 30.3 -0.2
      comp=E,16nm,0.6s
BILL  Bilibino         33.37  24 eP     P      03 04 30.9 +0.4
      comp=E,16nm,0.6s
BILL                             ePcP   PcP    03 07 11.9 -0.1
BILL  Bilibino         33.37  24 i P    P      03 04 30.8 +0.3
BILL                             pmax   pmax
      comp=Z,16nm,0.7s
BILL  Bilibino         33.37  24d iP    P      03 04 30.2 -0.3
BILL                            i              03 04 32.0
BILL                            e              03 04 32.6
BILL                            i              03 07 12.6
BILL                             S      S      03 09 48.0 -4.1
BILL                             SS     SnSn   03 11 54.0 +1.9
BILL                             pmax   pmax
      comp=Z,16nm,0.7s
MK01  Makanchi Array   33.68 295 eP     P      03 04 33.9 +0.4
MK01                             ePcP   PcP    03 07 12.3 -1.0
MK31  Makanchi Array   33.68 295 eP     P      03 04 33.9 +0.4
MK31                             ePcP   PcP    03 07 12.6 -0.7
MK31  Makanchi Array   33.68 295 eP     P      03 04 33.9 +0.4
MK31                            e              03 07 12.6
MK32  Makanchi Array   33.68 295 eP     P      03 04 33.9 +0.4
MK32                             ePcP   PcP    03 07 12.5 -0.8
MKAR  Makanchi Array   33.68 295  P     P      03 04 33.9 +0.4
      comp=Z,7.2nm,0.6s,baz=87,slow=8.8,SNR=70
MKAR                             PcP    PcP    03 07 12.5 -0.8
      comp=Z,1.8nm,0.6s,baz=68,slow=1.7,SNR=8.2
MKAR                             LR     LR     03 19 13.5
      comp=Z,226nm,19.8s,baz=92,slow=38
MKAR  Makanchi Array   33.68 295 eP     P      03 04 33.9 +0.4
      comp=Z,54nm,0.6s
MKAR                             ePcP   PcP    03 07 13.0 -0.4
MKAR  Makanchi Array   33.68 295  P     P      03 04 33.9 +0.4
      comp=Z,7.3nm,0.6s,baz=87,slow=8.8,SNR=70
MKAR                             PcP    PcP    03 07 12.5 -0.8
      comp=Z,1.8nm,0.6s,baz=68,slow=1.7,SNR=8.2
MKAR                             LR     LR     03 19 13.5
      comp=Z,226nm,19.8s,baz=92,slow=38
MAKZ  Makanchi         33.89 295 eP     P      03 04 35.8 +0.4
      comp=Z,8.9nm,0.7s
MAKZ                             ePcP   PcP    03 07 13.1 -0.9
MAKZ                             LR     LR
      comp=Z,300nm,20.0s
MAKZ  Makanchi         33.89 295 eP     P      03 04 35.8 +0.4
MAKZ                            e              03 07 13.1
MAKZ                             pmax   pmax
      comp=Z,9.0nm,0.7s
MAKZ                             MLR    MLR
      comp=Z,300nm,20.0s
UTTA  Uttaradit        33.91 235  P     P      03 04 35.8 +0.1
      comp=Z,8.8nm,0.9s,comp=Z,76nm
CMMT  Chiang Mai       34.12 238  P     P      03 04 37.1 -0.5
      comp=Z,45nm,0.9s
CHTO  Chiang Mai       34.12 238 eP     P      03 04 36.9 -0.7
      comp=Z,31nm,0.8s
CHTO  Chiang Mai       34.12 238 eP     P      03 04 36.9 -0.7
CHTO                             pmax   pmax
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      comp=Z,31nm,0.8s
CHTO  Chiang Mai       34.12 238  P     P      03 04 37.6  0.0
      SNR=9.1
CHTO  Chiang Mai       34.12 238  P     P      03 04 37.2 -0.4
      comp=Z,202nm,0.9s
CM31  Chiang Mai Arr   34.39 238 eP     P      03 04 39.8  0.0
CM31                             ePcP   PcP    03 07 15.7  0.0
CM31  Chiang Mai Arr   34.39 238  P     P      03 04 40.0 +0.2
      SNR=8.3
CMAR  Chiang Mai Arr   34.39 238  P     P      03 04 39.5 -0.4
      comp=Z,24nm,0.8s,baz=29,slow=8.7,SNR=63
CMAR                             PcP    PcP    03 07 15.7  0.0
      comp=Z,1.9nm,0.5s,baz=31,slow=2.1,SNR=4.2
CMAR                             LR     LR     03 19 56.4
      comp=Z,112nm,19.1s,baz=53,slow=39
CMAR  Chiang Mai Arr   34.39 238 eP     P      03 04 39.8 -0.1
CMAR                             pmax   pmax
      comp=Z,24nm,0.8s
CMAR  Chiang Mai Arr   34.39 238  P     P      03 04 39.5 -0.4
      comp=Z,19nm,0.8s,baz=29,slow=8.7,SNR=63
CMAR                             PcP    PcP    03 07 15.7  0.0
      comp=Z,1.9nm,0.5s,baz=31,slow=2.1,SNR=4.2
CMAR                             LR     LR     03 19 56.4
      comp=Z,112nm,19.1s,baz=53,slow=39
CM01  Chiang Mai Arr   34.40 238 eP     P      03 04 39.2 -0.8
CM01                             ePcP   PcP    03 07 15.3 -0.5
SHL   Shillong         34.50 255 eP     P      03 04 39.7 -1.3
      comp=Z,13nm,0.9s
SHL   Shillong         34.50 255 eP     P      03 04 39.7 -1.3
SHL                              pmax   pmax
      comp=Z,13nm,0.9s
SHL   Shillong         34.50 255 eP     P      03 04 39.5 -1.4
SHL                              IAmb   IAmb   03 04 39.7
      comp=Z,7.2nm,0.4s
PBKT  Sadao Pong       34.56 233  P     P      03 04 40.8 -0.5
      comp=Z,27nm,0.7s
SUKH  Sukhothai        34.68 236  P     P      03 04 42.7 +0.3
      comp=Z,8.0nm,0.8s
NRIK  Noril'sk         35.41 336  P     P      03 04 47.9 -0.3
      comp=Z,5.3nm,0.6s,baz=124,slow=10.0,SNR=4.6
NRIK  Noril'sk         35.41 336  P     P      03 04 47.9 -0.3
      comp=Z,5.3nm,0.6s,baz=124,slow=10.0,SNR=4.6
KURK  Kurchatov        35.66 303 eP     P      03 04 50.9 +0.4
      comp=Z,22nm,0.8s
KURK                             ePcP   PcP    03 07 17.9 -1.1
KURK                             LR     LR
      comp=Z,700nm,18.0s
KURK  Kurchatov        35.66 303ceP     P      03 04 50.9 +0.4
KURK                             pmax   pmax
      comp=Z,22nm,0.9s
KURK  Kurchatov        35.66 303  P     P      03 04 51.2 +0.6
      SNR=9.1
KURBB Kurchatov Arra   35.73 303  P     P      03 04 51.4 +0.2
      comp=Z,15nm,0.8s,baz=87,slow=9.3,SNR=90
KURBB                            PcP    PcP    03 07 17.9 -1.3
      comp=Z,4.6nm,0.7s,baz=90,slow=3.1,SNR=16
KURBB Kurchatov Arra   35.73 303  P     P      03 04 51.4 +0.2
      comp=Z,15nm,0.8s,baz=87,slow=9.3,SNR=90
KURBB                            PcP    PcP    03 07 17.9 -1.3
      comp=Z,4.6nm,0.7s,baz=90,slow=3.1,SNR=16
UMPA  Umpang Tak       36.13 235  P     P      03 04 56.4 +1.5
      comp=Z,22nm,1.0s,comp=Z,762nm
UTHA  Uthaitani        36.27 234  P     P      03 04 56.1 +0.1
      comp=Z,20nm,0.8s,comp=Z,152nm
PDGK  Podgornoye       36.30 290  P     P      03 04 56.1 -0.2
PDGK                             pmax   pmax
      comp=Z,14nm,1.0s
BRDH  Bariadhala       36.44 251  P     P      03 04 57.2 -0.3
      comp=Z,47nm,0.4s,baz=72,slow=20,SNR=3.7
BRDH  Bariadhala       36.44 251  P     P      03 04 57.2 -0.3
      comp=Z,47nm,0.4s,baz=72,slow=20,SNR=3.7
PATY  Pattaya          37.51 229  P     P      03 05 07.3 +0.7
      comp=Z,29nm,0.8s
JIRN  Jiri             37.52 263 eP     P      03 05 06.5 -0.6
      comp=Z,42nm,0.6s
RAMN  Ramite           37.60 261 eP     P      03 05 06.8 -0.8
      comp=Z,13nm,0.6s
GUN   Gumba            37.62 263 eP     P      03 05 07.1 -0.8
      comp=Z,23nm,0.5s
TARG  Taragay, Kyrgy   37.93 288 eP     P      03 05 11.1 +0.6
      comp=Z,9.9nm,0.7s
PKI   Pulchoki         38.15 263 eP     P      03 05 11.3 -1.1
      comp=Z,13nm,0.5s
PKIN  Phulchoki        38.16 263 eP     P      03 05 11.4 -1.0
      comp=Z,13nm,0.6s
PHET  Kaeng Krachan    38.23 231  P     P      03 05 13.3 +0.6
      comp=Z,32nm,0.8s,comp=Z,293nm
KDJ   Kajisay          38.26 289 eP     P      03 05 14.9 +1.9
      comp=Z,21nm,1.1s
KDJ   Kajisay          38.26 289 eP     P      03 05 14.9 +1.9
KDJ                              pmax   pmax
      comp=Z,21nm,1.1s
GSTR  Great Sitkin T   38.26  55 eP     P      03 05 14.0 +1.3
DANN  Dangsing         38.98 265 eP     P      03 05 18.5 -0.8
      comp=Z,40nm,0.6s
TKM2  Tokmak 2         39.16 291  P     P      03 05 21.6 +1.0
      SNR=11
TKM2  Tokmak 2         39.16 291  P     P      03 05 21.3 +0.8
TKM2                             pmax   pmax
      comp=Z,9.0nm,0.7s
NRN   Naryn            39.31 288 eP     P      03 05 22.6 +0.6
      comp=Z,4.9nm,0.6s
NRN                              ePcP   PcP    03 07 30.0 -0.7
NRN   Naryn            39.31 288 eP     P      03 05 22.6 +0.6
NRN                             e              03 07 30.0
NRN                              pmax   pmax
      comp=Z,5.0nm,0.6s
KOLN  Koldanda         39.40 265 eP     P      03 05 22.1 -0.6
      comp=Z,9.3nm,0.6s
KZA   Kyzart           39.65 290  P     P      03 05 26.7 +1.8
      SNR=7.2
PYUN  Piuthan          39.68 266 eP     P      03 05 24.4 -0.7
      comp=Z,51nm,0.7s
KBK   Karagaybulak     39.69 291  P     P      03 05 25.9 +1.0
      SNR=11
USP   Ospenovka        39.83 292  P     P      03 05 26.8 +0.8
      SNR=6.2
FRU1  Bishkek          39.87 291 eP     P      03 05 27.3 +1.0
      comp=Z,25nm,0.6s
FRU1                             LR     LR
      comp=Z,300nm,19.0s
FRU1  Bishkek          39.87 291 eP     P      03 05 27.3 +1.0
FRU1                             pmax   pmax
      comp=Z,25nm,0.6s
FRU1                             MLR    MLR
      comp=Z,300nm,19.0s
BOK   Bokaro           39.93 258 eP     P      03 05 25.5 -1.5
BOK                              IAmb   IAmb   03 05 27.1
      comp=Z,7.5nm,0.5s
KSH   Kashi            39.96 286  P     P      03 05 31.4 +4.2
KSH                              PP     PnPn   03 07 08.3 +6.3
KSH                              S      S      03 11 38.6 +5.1
KSH                              SS     SS     03 14 28.4 -1.3
KSH                              pmax   pmax
      comp=Z,15nm,0.7s
KSH                              pmax   pmax
      comp=Z,490nm,7.1s
KSH                              LR     LR
      comp=N,540nm,9.4s
KSH                              LR     LR
      comp=E,420nm,9.1s
KSH                              LR     LR
      comp=Z,620nm,13.3s
AAK   Ala-Archa        40.02 291  P     P      03 05 28.0 +0.4
      comp=Z,11nm,0.7s,baz=107,slow=6.0,SNR=33
AAK                              PcP    PcP    03 07 32.0 -0.7
      comp=Z,1.6nm,0.6s,baz=72,slow=6.4,SNR=2.8
AAK                              LR     LR     03 23 28.2
      comp=Z,327nm,20.4s,baz=68,slow=38
AAK   Ala-Archa        40.02 291  P     P      03 05 28.2 +0.5
      SNR=12
AAK   Ala-Archa        40.02 291 i P    P      03 05 28.1 +0.4
      SNR=18
AAK   Ala-Archa        40.02 291  P     P      03 05 28.6 +1.0
      SNR=5.0
AAK                              P      P      03 05 28.6 +1.0
      SNR=5.0
AAK   Ala-Archa        40.02 291  P     P      03 05 28.0 +0.4
      comp=Z,11nm,0.7s,baz=107,slow=6.0,SNR=33
AAK                              PcP    PcP    03 07 32.0 -0.7
      comp=Z,1.6nm,0.6s,baz=72,slow=6.4,SNR=2.8
AAK                              LR     LR     03 23 28.2
      comp=Z,327nm,20.4s,baz=68,slow=38
OTUK  Ortayu           40.08 300  P     P      03 05 28.3 +0.4
OTUK                             pmax   pmax
      comp=Z,14nm,1.4s
UCH   Uchtor           40.12 290  P     P      03 05 30.3 +1.4
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      SNR=7.1
TNTI  Ternate          40.39 183 eP     P      03 05 30.6 -0.1
      comp=Z,51nm,0.9s
GAMB  Gambell          40.49  36 eP     P      03 05 31.3 +0.3
      comp=Z,4.3nm,0.8s
BVA0  Borovoye Array   40.49 307 i P    P      03 05 31.1 -0.2
BVA0                             pmax   pmax
      comp=Z,6.0nm,0.9s
BVAR  Borovoye Array   40.49 307  P     P      03 05 31.8 +0.5
      comp=Z,5.0nm,0.6s,baz=88,slow=8.6,SNR=37
BVAR                             PcP    PcP    03 07 33.2 -0.6
      comp=Z,5.6nm,0.6s,baz=91,slow=2.8,SNR=11
BVAR                             LR     LR     03 23 21.6
      comp=Z,326nm,18.9s,baz=94,slow=38
BVAR  Borovoye Array   40.49 307  P     P      03 05 31.8 +0.5
      comp=Z,5.0nm,0.6s,baz=88,slow=8.6,SNR=37
BVAR                             PcP    PcP    03 07 33.2 -0.6
      comp=Z,5.6nm,0.6s,baz=91,slow=2.8,SNR=11
BVAR                             LR     LR     03 23 21.6
      comp=Z,326nm,18.9s,baz=94,slow=38
BRVK  Borovoye         40.55 307 eP     P      03 05 32.3 +0.6
      comp=Z,8.0nm,0.8s
BRVK  Borovoye         40.55 307c iP    P      03 05 32.1 +0.4
BRVK                             pmax   pmax
      comp=Z,10.0nm,0.8s
AML   Almayashu        40.73 290  P     P      03 05 35.2 +1.3
      SNR=9.2
MNAS  Manas            41.46 291  P     P      03 05 40.5 +0.9
MNAS                             pmax   pmax
      comp=Z,10.0nm,0.8s
ARSB  Arslanbob        41.50 289 eP     P      03 05 40.8 +0.9
      comp=Z,14nm,0.8s
SBUM  Sibu             41.57 206 eP     P      03 05 41.3 +0.8
      comp=Z,17nm,0.8s
SFK   Sufi-Kurgan      41.57 287  P     P      03 05 40.9 +0.3
SFK                              pmax   pmax
      comp=Z,11nm,1.2s
DDI   Dehra Dun        42.27 272 eP     P      03 05 45.6 -0.7
DDI                              IAmb   IAmb   03 05 46.4
      comp=Z,114nm,0.1s
TRTT  Trang            42.33 226  P     P      03 05 49.7 +3.0
      comp=Z,8.6nm,0.9s
SMLA  Simla            42.55 273 eP     P      03 05 47.8 -0.6
SMLA                             IAmb   IAmb   03 05 48.7
      comp=Z,10nm,0.7s
KK31  Karatay Array    42.66 293 eP     P      03 05 49.5 +0.4
KK31  Karatay Array    42.66 293 eP     P      03 05 49.6 +0.4
KKAR  Karatay Array    42.66 293 eP     P      03 05 49.5 +0.3
KKAR  Karatay Array    42.66 293 eP     P      03 05 49.5 +0.3
DHRM  DHARAMSHALA      42.67 275 eP     P      03 05 48.3 -1.4
DHRM                             IAmb   IAmb   03 05 49.6
      comp=Z,18nm,0.7s
PATS  Pohnpei          43.06 135 eP     P      03 05 54.4 +1.7
      comp=Z,84nm,1.1s
ANM   Nome             43.29  35 eP     P      03 05 54.7 +0.7
      comp=Z,12nm,0.7s
ANM   Nome             43.29  35 eP     P      03 05 54.7 +0.7
ANM                              pmax   pmax
      comp=Z,12nm,0.7s
PBA   Port Blair       43.42 238 eP     P      03 05 53.7 -1.9
PBA                              IAmb   IAmb   03 05 56.4
      comp=Z,59nm,0.9s
BTK   Batken           43.48 288 eP     P      03 05 57.3 +1.3
      comp=Z,13nm,1.1s
BTK   Batken           43.48 288 eP     P      03 05 57.3 +1.3
BTK                              pmax   pmax
      comp=Z,13nm,1.1s
UNV   Unalaska Valle   43.73  51 eP     P      03 05 58.9 +1.3
      comp=Z,12nm,0.9s
KULM  Kulim            43.96 223 eP     P      03 05 60.0 +0.1
      comp=Z,28nm,0.9s
KULM                             LR     LR
      comp=Z,100nm,20.0s
FAKI  Fak Fak          44.12 175 eP     P      03 06 01.5 +0.4
      comp=Z,24nm,1.0s
GAR   Garm             44.23 287 eP     P      03 06 01.8 -0.3
      comp=Z,12nm,0.8s
GAR   Garm             44.23 287 eP     P      03 06 01.8 -0.3
GAR                              pmax   pmax
      comp=Z,12nm,0.8s
NIL   Nilore           44.31 279 eP     P      03 06 02.9 +0.2
      comp=Z,12nm,0.6s
NIL   Nilore           44.31 279 eP     P      03 06 02.9 +0.2
NIL                              pmax   pmax
      comp=Z,12nm,0.6s
RDOG  Red Dog Mine     44.31  30 eP     P      03 06 02.5 +0.3
      comp=Z,10.0nm,0.6s
IPM   Ipoh             44.46 222 eP     P      03 06 03.1 -0.8
      comp=Z,17nm,0.9s
SVE   Sverdlovsk       45.46 314 eP     P      03 06 11.8 +0.4
SVE                              pmax   pmax
      comp=Z,19nm,0.9s
MANU  Manus Island     46.25 154 eP     P      03 06 18.9 +0.8
      comp=Z,63nm,0.8s
CMBY  CAMPBELL BAY     46.29 232 eP     P      03 06 18.7 +0.3
CMBY                             IAmb   IAmb   03 06 20.3
      comp=Z,134nm,0.4s
BHPL  Bhopal           46.55 264 eP     P      03 06 19.1 -1.4
BHPL                             IAmb   IAmb   03 06 20.1
      comp=Z,6.4nm,0.4s
NGP   Nagpur           46.57 260 eP     P      03 06 18.5 -2.2
NGP                              IAmb   IAmb   03 06 19.5
      comp=Z,6.6nm,0.7s
ARU   Arti             46.66 314  P     P      03 06 21.1 +0.2
      comp=Z,5.9nm,0.6s,baz=71,slow=3.2,SNR=28
ARU                              PcP    PcP    03 07 53.6 -1.0
      comp=Z,1.4nm,0.5s,baz=342,slow=3.2,SNR=3.4
ARU   Arti             46.66 314 eP     P      03 06 21.0 +0.2
      comp=Z,17nm,0.7s
ARU                              ePcP   PcP    03 07 53.6 -1.0
ARU   Arti             46.66 314ceP     P      03 06 21.0 +0.2
ARU                              pmax   pmax
      comp=Z,14nm,0.6s
ARU   Arti             46.66 314  P     P      03 06 21.1 +0.2
      comp=Z,5.9nm,0.6s,baz=71,slow=3.2,SNR=28
ARU                              PcP    PcP    03 07 53.6 -1.0
      comp=Z,1.4nm,0.5s,baz=342,slow=3.2,SNR=3.4
PSI   Prapat           46.97 223  P     P      03 06 23.3 -0.6
      comp=Z,26nm,1.0s,baz=0.0,slow=4.8,SNR=12
PSI   Prapat           46.97 223 eP     P      03 06 23.3 -0.6
      comp=Z,21nm,0.8s
PSI                              ePcP   PcP    03 07 55.2 -1.2
PSI   Prapat           46.97 223  P     P      03 06 23.3 -0.6
      comp=Z,26nm,1.0s,baz=0.0,slow=4.8,SNR=12
KBL   Kabul            47.03 282 eP     P      03 06 23.5 -0.8
      comp=Z,7.4nm,0.6s
AB31  Akbulak array    47.74 304  P     P      03 06 29.9 +0.5
AB31                             pmax   pmax
      comp=Z,8.0nm,0.6s
ABKAR Akbulak array    47.74 304 eP     P      03 06 30.0 +0.6
IM3   Indian Mountai   48.04  32 eP     P      03 06 32.2 +0.7
IM3                              ePcP   PcP    03 08 00.0 +0.6
SVW2  Sparrevohn       48.12  39 eP     P      03 06 33.8 +1.5
      comp=Z,9.2nm,0.6s
SVW2                             ePcP   PcP    03 08 00.9 +1.1
AKTO  Aktyubinsk       48.56 306  P     P      03 06 36.0 +0.3
      comp=Z,8.4nm,0.8s,baz=83,slow=7.5,SNR=20
AKTO                             LR     LR     03 28 36.8
      comp=Z,122nm,18.5s,baz=90,slow=38
AKTO  Aktyubinsk       48.56 306  P     P      03 06 36.3 +0.5
AKTO                             pmax   pmax
      comp=Z,19nm,1.5s
AKTO  Aktyubinsk       48.56 306  P     P      03 06 36.0 +0.3
      comp=Z,8.4nm,0.8s,baz=83,slow=7.5,SNR=20
AKTO                             LR     LR     03 28 36.8
      comp=Z,122nm,18.5s,baz=90,slow=38
GSI   Gunungsitoli     48.94 224 eP     P      03 06 38.8 -0.2
      comp=Z,37nm,0.7s
TOLK  Toolik Lake Re   49.19  29 eP     P      03 06 40.5 +0.1
      comp=Z,9.3nm,0.7s
TOLK                             ePcP   PcP    03 08 04.6 +1.1
TOLK  Toolik Lake Re   49.19  29  P     P      03 06 40.6 +0.1
      baz=280
COLD  Coldfoot         49.22  30 eP     P      03 06 41.2 +0.7
      comp=Z,3.7nm,0.6s
CAST  Castle Rocks     49.23  36 eP     P      03 06 42.0 +1.3
      comp=Z,16nm,0.7s
CAST                             ePcP   PcP    03 08 04.9 +1.2
HYB   Hyderabad        49.25 257 i P    P      03 06 40.5 -1.0
PPLA  Purkeypile       49.30  36 eP     P      03 06 42.7 +1.2
      comp=Z,10nm,0.8s
PPLA                             ePcP   PcP    03 08 03.7 -0.5
MLY   Manley           49.45  33 eP     P      03 06 43.4 +1.0
      comp=Z,10.0nm,0.7s
BPAW  Bear Paw Mtn.    49.55  35 eP     P      03 06 44.0 +0.8
      comp=Z,13nm,0.6s
BPAW                             ePcP   PcP    03 08 05.5 +0.6
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RSO	Redoubt South	49.62	40	eP	P	03 06 44.6	+0.6
RABL	Rabaul	49.95	149	eP	P	03 06 47.8	+1.0
	comp=Z,133nm,0.6s						
TRF	Thorofare Moun	50.01	35	eP	P	03 06 48.2	+1.4
	comp=Z,12nm,0.8s						
OHAK	Old Harbor	50.23	44	eP	P	03 06 48.8	+0.4
	comp=Z,25nm,0.6s						
SUA	Susitna One	50.31	38	eP	P	03 06 49.6	+0.5
	comp=Z,13nm,1.0s						
SUA				ePcP	PcP	03 08 07.0	-0.8
KDAK	Kodiak Island	50.43	43	eP	P	03 06 50.2	+0.3
	comp=Z,27nm,1.0s						
KDAK	Kodiak Island	50.43	43	eP	P	03 06 50.2	+0.3
KDAK				pmax	pmax		
	comp=Z,27nm,1.0s						
MDM	Murphy Dome	50.51	33	eP	P	03 06 51.5	+1.1
	comp=Z,25nm,0.8s						
MDM				ePcP	PcP	03 08 07.8	-0.6
MCK	McKinley	50.52	35	eP	P	03 06 51.4	+0.8
	comp=Z,14nm,0.7s						
MCK				ePcP	PcP	03 08 07.9	-0.5
MCK	McKinley	50.52	35	eP	P	03 06 51.4	+0.8
MCK				e		03 08 07.9	
MCK				pmax	pmax		
	comp=Z,14nm,0.7s						
RND	Reindeer	50.64	35	eP	P	03 06 52.3	+0.8
	comp=Z,9.3nm,0.7s						
RND				ePcP	PcP	03 08 09.5	+0.5
RND	Reindeer	50.64	35	eP	P	03 06 52.3	+0.8
RND				e		03 08 09.5	
RND				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TCOL	CIGO, UAF Yank	50.68	33	P	P	03 06 52.6	+0.9
	baz=285,SNR=19						
COLA	College	50.68	33	eP	P	03 06 52.9	+1.1
	comp=Z,58nm,0.7s						
COLA	College	50.68	33c	iP	P	03 06 52.8	+1.1
COLA				pmax	pmax		
	comp=Z,36nm,0.8s						
WRH	Wood River Hil	50.69	34	eP	P	03 06 52.6	+0.8
	comp=Z,17nm,0.6s						
BRLK	Bradley Lake	50.71	40	eP	P	03 06 52.9	+0.8
	comp=Z,15nm,0.6s						
CCB	Clear Creek Bu	50.76	33	eP	P	03 06 52.7	+0.4
	comp=Z,18nm,0.7s						
POKR	Poker Plat Res	50.79	33	P	P	03 06 53.7	+1.1
	baz=285,SNR=23						
RC01	Rabbit Creek A	50.88	38	eP	P	03 06 53.7	+0.5
	comp=Z,13nm,0.6s						
KIRV	Kirov	50.88	318	P	P	03 06 53.4	+0.1
	comp=Z,21nm,0.6s,baz=106,slow=0.7,SNR=9.9						
KIRV				LR	LR	03 30 17.6	
	comp=Z,150nm,18.4s,baz=186,slow=38						
KIRV	Kirov	50.88	318	P	P	03 06 53.4	+0.1
	comp=Z,21nm,0.6s,baz=106,slow=0.7,SNR=9.9						
KIRV				LR	LR	03 30 17.6	
	comp=Z,150nm,18.4s,baz=186,slow=38						
MDRS	Chennai	50.89	251	eP	P	03 06 52.7	-1.1
MDRS				IAmb	IAmb	03 06 54.5	
	comp=Z,19nm,0.5s						
SOEI	Soe	51.01	186	eP	P	03 06 53.2	-1.6
	comp=Z,44nm,0.6s						
PMR	Palmer	51.01	38	eP	P	03 06 54.6	+0.4
	comp=Z,9.9nm,0.8s						
PMR	Palmer	51.01	38	eP	P	03 06 54.7	+0.4
PMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GHO	Glory Hole Cre	51.06	37	eP	P	03 06 55.8	+1.1
	comp=Z,23nm,0.7s						
IL1	Eielson Array	51.11	33	eP	P	03 06 55.0	0.0
IL1				ePcP	PcP	03 08 09.1	-1.5
ILAR	Eielson Array	51.11	33	P	P	03 06 55.0	+0.1
	comp=Z,17nm,0.6s,baz=285,slow=7.8,SNR=93						
ILAR				PcP	PcP	03 08 09.3	-1.3
	comp=Z,3.1nm,0.7s,baz=287,slow=3.6,SNR=4.4						
ILAR	Eielson Array	51.11	33	P	P	03 06 55.0	+0.1
	comp=Z,16nm,0.6s,baz=285,slow=7.8,SNR=93						
ILAR				PcP	PcP	03 08 09.3	-1.3
	comp=Z,3.1nm,0.7s,baz=287,slow=3.6,SNR=4.4						
ILB	Eielson Array	51.11	33	eP	P	03 06 55.2	+0.3
ILB				ePcP	PcP	03 08 09.3	-1.3
HDA	Harding Lake	51.18	34	eP	P	03 06 55.5	-0.1
	comp=Z,31nm,0.7s						
HDA	Harding Lake	51.18	34	P	P	03 06 55.4	-0.1
	baz=286						
FYU	Fort Yukon	51.28	31	eP	P	03 06 57.5	+1.3
	comp=Z,48nm,0.7s						
SEW	Seward	51.30	39	eP	P	03 06 56.7	+0.3
SML	Sawmill	51.32	37	eP	P	03 06 57.0	+0.4
	comp=Z,17nm,0.8s						
SML	Sawmill	51.32	37	eP	P	03 06 57.0	+0.4
SML				pmax	pmax		
	comp=Z,17nm,0.8s						
KNK	Knik Glacier	51.37	38	eP	P	03 06 58.2	+1.2
	comp=Z,17nm,0.7s						
DHY	Denali Highway	51.38	35	eP	P	03 06 57.3	+0.1
	comp=Z,11nm,0.7s						
DHY				ePcP	PcP	03 08 12.6	+0.8
PRP	Porcupine Dome	51.46	32	eP	P	03 06 59.1	+1.4
	comp=Z,39nm,0.6s						
BATI	Baumata	51.51	187	P	P	03 06 57.0	-1.4
	comp=Z,91nm,0.5s,baz=81,slow=0.3,SNR=13						
BATI	Baumata	51.51	187	P	P	03 06 57.0	-1.4
	comp=Z,91nm,0.5s,baz=81,slow=0.3,SNR=13						
SCM	Sheep Creek Mo	51.76	37	eP	P	03 07 00.9	+0.9
	comp=Z,38nm,0.6s						
SCM	Sheep Creek Mo	51.76	37	eP	P	03 07 00.9	+0.9
SCM				pmax	pmax		
	comp=Z,38nm,0.6s						
PRGR	Permogore	51.77	323	eP	P	03 06 55.6	-4.3
PRGR				e		03 08 54.2	
PRGR				pmax	pmax		
	comp=Z,17nm,0.6s						
POO	Poona	52.03	261	eP	P	03 07 01.3	-1.3
POO				IAmb	IAmb	03 07 01.7	
	comp=Z,16nm,0.5s						
PAX	Paxson	52.24	35	eP	P	03 07 03.5	0.0
	comp=Z,4.2nm,0.7s						
PAX	Paxson	52.24	35	eP	P	03 07 03.5	0.0
PAX				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RIDG	Independ’e Rid	52.26	34	eP	P	03 07 03.6	-0.1
	comp=Z,24nm,0.6s						
BHJ	Bhuj	52.38	269	eP	P	03 07 04.4	-0.5
BHJ				IAmb	IAmb	03 07 04.8	
	comp=Z,23nm,0.4s						
KLU	Klutina	52.51	37	eP	P	03 07 05.2	-0.3
	comp=Z,11nm,0.6s						
SCRK	Sand Creek	52.55	34	eP	P	03 07 05.8	0.0
	comp=Z,20nm,0.7s						
HARP	HAARP	52.55	36	eP	P	03 07 06.6	+0.8
	comp=Z,33nm,0.7s						
BOM	Bombay	52.58	263	ex	P	03 06 58.0	-8.6
DOT	Dot Lake	52.62	34	eP	P	03 07 06.4	+0.1
	comp=Z,28nm,0.6s						
DIV	Divide	52.70	37	eP	P	03 07 07.7	+0.7
	comp=Z,15nm,1.1s						
GEYT	Alibeck	53.36	291	P	P	03 07 12.3	+0.2
	comp=Z,33nm,0.7s,baz=31,slow=3.5,SNR=44						
GEYT				LR	LR	03 32 55.1	
	comp=Z,103nm,19.0s,baz=60,slow=39						
GEYT	Alibeck	53.36	291	P	P	03 07 12.3	+0.2
	comp=Z,34nm,0.7s,baz=31,slow=3.5,SNR=44						
GEYT				LR	LR	03 32 55.1	
	comp=Z,103nm,19.0s,baz=60,slow=39						
GYA0B	ALIBECK ARRAY	53.36	291	eP	P	03 07 12.8	+0.6
	comp=Z,28nm,0.7s						
HMT	Hamilton	53.67	38	eP	P	03 07 15.7	+1.7
	comp=Z,35nm,1.2s						
GOA	Goa	53.96	258	eP	P	03 07 16.0	-0.7
GOA				IAmb	IAmb	03 07 16.4	
	comp=Z,52nm,0.2s						
TMCR	Tamitsa	54.19	327	eP	P	03 07 15.2	-2.5
SPA0	Spitsbergen Ar	54.30	346	eP	P	03 07 18.7	+0.3
SPITS	Spitsbergen Ar	54.30	346	P	P	03 07 17.6	-0.8
	comp=Z,5.3nm,0.7s,baz=72,slow=9.1,SNR=10						
SPITS	Spitsbergen Ar	54.30	346	P	P	03 07 17.6	-0.8
	comp=Z,5.3nm,0.7s,baz=72,slow=9.1,SNR=10						
DAWY	Dawson	54.41	33	eP	P	03 07 20.1	+0.6
	comp=Z,15nm,0.7s						
EPYK	Eagle Plains	54.57	30	eP	P	03 07 21.2	+0.6
	comp=Z,27nm,0.7s						
EPYK	Eagle Plains	54.57	30	P	P	03 07 20.9	+0.3
	baz=293						
APA	Apatity	54.64	332⇓	iP	P	03 07 19.8	-1.2
APA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
APA				MLR	MLR		
	comp=Z,400nm,16.0s						
KLMR	Klimovskoe	54.81	323	eP	P	03 07 20.9	-1.4
KLMR				pmax	pmax		
	comp=Z,13nm,0.8s						
KLMR	Klimovskoe	54.81	323	eP	P	03 07 21.0	-1.4
KLMR				AMP		03 07 26.4	
	comp=Z,13nm,0.8s						
INK	Inuvik	54.93	27	P	P	03 07 23.4	+0.4
	comp=Z,15nm,0.8s,baz=310,slow=5.0,SNR=9.7						
INK				PcP	PcP	03 08 25.1	+0.1
	comp=Z,6.7nm,0.8s,baz=257,slow=3.0,SNR=3.4						
INK	Inuvik	54.93	27	eP	P	03 07 23.7	+0.6
	comp=Z,17nm,1.1s						
INK				ePcP	PcP	03 08 25.1	+0.1
INK	Inuvik	54.93	27	eP	P	03 07 23.7	+0.6
INK				e		03 08 25.1	
INK				pmax	pmax		
	comp=Z,17nm,1.1s						
INK	Inuvik	54.93	27	P	P	03 07 23.4	+0.4
	comp=Z,15nm,0.8s,baz=310,slow=5.0,SNR=9.7						
INK				PcP	PcP	03 08 25.1	+0.1
	comp=Z,6.7nm,0.8s,baz=257,slow=3.0,SNR=3.4						
KEV	Kevo	55.83	336	eP	P	03 07 29.0	-0.5
	comp=Z,12nm,1.0s						
KEV	Kevo	55.83	336	eP	P	03 07 29.0	-0.5
KEV				pmax	pmax		
	comp=Z,12nm,1.0s						
TRD	Trivandrum	56.36	250	eP	P	03 07 33.9	-0.1
ARA0	ARCESS Array S	56.40	336	eP	P	03 07 32.8	-0.9
ARA0				ePcP	PcP	03 08 30.0	-0.6
ARCES	ARCESS Array B	56.40	336	P	P	03 07 32.8	-0.9
	comp=Z,5.2nm,0.6s,baz=64,slow=7.9,SNR=20						
ARCES				PcP	PcP	03 08 30.0	-0.6
	comp=Z,2.9nm,0.7s,baz=66,slow=4.4,SNR=3.9						
ARCES	ARCESS Array B	56.40	336	eP	P	03 07 33.0	-0.7
ARCES	ARCESS Array B	56.40	336	eP	P	03 07 32.9	-0.7
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARCES	ARCESS Array B	56.40	336	P	P	03 07 32.8	-0.9
	comp=Z,5.2nm,0.6s,baz=64,slow=7.9,SNR=20						
ARCES				PcP	PcP	03 08 30.0	-0.6
	comp=Z,2.9nm,0.7s,baz=66,slow=4.4,SNR=3.9						
ARE0	ARCESS Array S	56.40	336	eP	P	03 07 33.1	-0.6
COEN	Coen	56.51	164	eP	P	03 07 35.1	+0.1
	comp=Z,11nm,0.9s						
HYT	Haines Junctio	56.54	36	eP	P	03 07 36.7	+1.8
	comp=Z,12nm,0.8s						
KTK1	Kautokeino	57.36	336	eP	P	03 07 40.1	-0.3
KTK1				IAmb	IAmb	03 07 41.4	
	comp=Z,33nm,1.3s						
WHY	Whitehorse	57.76	35	eP	P	03 07 45.5	+2.0
	comp=Z,7.4nm,1.1s						
VRH	Novokhopyorsk	57.80	312	eP	P	03 07 43.4	-0.3
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
MOS	Moscow	57.89	318	eP	P	03 07 42.7	-1.7
MOS				pmax	pmax		
	comp=Z,45nm,0.7s						
KIF	Kilpisjarvi	58.11	336	eP	P	03 07 44.6	-1.1
TRO	Tromso	58.32	337	eP	P	03 07 46.7	-0.4
OUL	Oulu	58.47	331	P	P	03 07 49.0	+0.8
OUL				pmax	pmax		
	comp=Z,17nm,1.1s						
LPSR	Galich'ya Gora	58.68	314	eP	P	03 07 49.5	-0.4
LPSR				pmax	pmax		
	comp=Z,40nm,0.7s						
OBN	Obninsk	58.72	318	P	P	03 07 49.3	-0.8
	comp=Z,4.6nm,0.4s,baz=80,slow=7.0,SNR=5.5						
OBN				LR	LR	03 35 56.3	
	comp=Z,68nm,18.2s,baz=333,slow=39						
OBN	Obninsk	58.72	318	eP	P	03 07 49.8	-0.3
	comp=Z,24nm,0.8s						
OBN	Obninsk	58.72	318d	iP	P	03 07 49.5	-0.6
OBN				e		03 07 51.6	
OBN				SSS	SSS	03 22 16.0	
OBN				pmax	pmax		
	comp=Z,19nm,0.6s						
OBN	Obninsk	58.72	318	P	P	03 07 49.3	-0.8
	comp=Z,4.6nm,0.4s,baz=80,slow=7.0,SNR=5.5						
OBN				LR	LR	03 35 56.3	
	comp=Z,68nm,18.2s,baz=333,slow=39						
BESE	Bessie Mountai	58.76	38	eP	P	03 07 51.7	+1.2
	comp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	59.20	184	P	P	03 07 53.4	-0.4
	comp=Z,24nm,0.8s,baz=18,slow=3.7,SNR=26						
FITZ	Fitzroy Crossi	59.20	184	eP	P	03 07 53.7	-0.1
	comp=Z,26nm,0.9s						
FITZ	Fitzroy Crossi	59.20	184	P	P	03 07 53.4	-0.4
	comp=Z,24nm,0.8s,baz=18,slow=3.7,SNR=26						
VSR	Storozhevoye	59.21	313c	iP	P	03 07 52.9	-0.7
VSR				pmax	pmax		
	comp=Z,43nm,0.9s						
SIT	Sitka	59.28	39	eP	P	03 07 56.2	+2.3
	comp=Z,45nm,1.0s						
SIT	Sitka	59.28	39	eP	P	03 07 56.3	+2.3
SIT				pmax	pmax		
	comp=Z,45nm,1.0s						
MNCI	Minicoy	59.29	253	eP	P	03 07 53.7	-0.9
	comp=Z,55nm,0.8s						
SUF	Sumiainen	59.60	329	P	P	03 07 55.2	-1.0
SUF				pmax	pmax		
	comp=Z,29nm,0.7s						
FIA1	FINESS Array S	60.31	327	eP	P	03 08 00.5	-0.5
FIA0	FINESS Array S	60.31	327	eP	P	03 08 00.4	-0.6
FIA0	FINESS Array S	60.31	327	eP	P	03 08 00.4	-0.6
FINES	FINESS Array B	60.31	327	P	P	03 08 00.4	-0.6
	comp=Z,26nm,0.6s,baz=77,slow=6.4,SNR=111						
FINES	FINESS Array B	60.31	327	P	P	03 08 00.4	-0.6
	comp=Z,26nm,0.6s,baz=77,slow=6.4,SNR=111						
STEI	Steigen	60.41	337	eP	P	03 08 00.7	-0.9
STEI				IAmb	IAmb	03 08 01.7	
	comp=Z,26nm,0.9s						
DAG	Danmarks Havn	60.44	352⇑	iP	P	03 08 00.9	-0.8
	comp=Z,17nm,0.7s						
DAG	Danmarks Havn	60.44	352⇑	iP	P	03 08 00.9	-0.8
DAG				pmax	pmax		
	comp=Z,12nm,0.7s						
ZEI	Tsey	60.55	303	eP	P	03 08 01.3	-2.0
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TBLG	Delisi	60.55	301	eP	P	03 08 05.6	+2.5
RES	Resolute Bay	60.66	12	P	P	03 08 02.7	-0.5
	comp=Z,26nm,0.6s,baz=303,slow=7.1,SNR=116						
RES				PcP	PcP	03 08 47.5	+0.1
	comp=Z,1.4nm,0.3s,baz=305,slow=3.0,SNR=17						
RES	Resolute Bay	60.66	12	eP	P	03 08 03.0	-0.2
	comp=Z,43nm,1.0s						
RES				ePcP	PcP	03 08 47.5	+0.1
RES	Resolute Bay	60.66	12	eP	P	03 08 03.0	-0.2
RES				e		03 08 47.5	
RES				pmax	pmax		
	comp=Z,43nm,1.0s						
RES	Resolute Bay	60.66	12	P	P	03 08 02.7	-0.5
	comp=Z,26nm,0.6s,baz=303,slow=7.1,SNR=116						
RES				PcP	PcP	03 08 47.5	+0.1
	comp=Z,1.4nm,0.3s,baz=305,slow=3.0,SNR=17						
WSAR	Wadi Sarin	60.68	276	P	P	03 08 04.4	+0.3
	comp=Z,7.8nm,0.9s,baz=47,slow=5.5,SNR=6.4						
WSAR				LR	LR	03 38 42.3	
	comp=Z,70nm,18.1s,baz=66,slow=40						
WSAR	Wadi Sarin	60.68	276	P	P	03 08 05.0	+0.9
WSAR	Wadi Sarin	60.68	276	P	P	03 08 04.4	+0.3
	comp=Z,7.8nm,0.9s,baz=47,slow=5.5,SNR=6.4						
WSAR				LR	LR	03 38 42.3	
	comp=Z,70nm,18.1s,baz=66,slow=40						
KBZ	Khabaz	60.71	304	P	P	03 08 04.1	+0.1
	comp=Z,5.2nm,0.9s,baz=45,slow=14,SNR=6.9						
KBZ	Khabaz	60.71	304	P	P	03 08 04.1	+0.1
	comp=Z,5.2nm,0.9s,baz=45,slow=14,SNR=6.9						
KVAR	Kislovodsk Arr	60.72	304	P	P	03 08 04.8	+0.5
	comp=Z,9.1nm,0.8s,baz=15,slow=12,SNR=12						
KVAR	Kislovodsk Arr	60.72	304	P	P	03 08 04.8	+0.5
	comp=Z,9.1nm,0.8s,baz=15,slow=12,SNR=12						
KIV	Kislovodsk	60.73	304	eP	P	03 08 05.2	+0.9
	comp=Z,26nm,0.7s						
KIV	Kislovodsk	60.73	304	iP	P	03 08 04.9	+0.6
	SNR=9.1						
KIV	Kislovodsk	60.73	304	eP	P	03 08 04.8	+0.5
KIV				pmax	pmax		
	comp=Z,33nm,1.0s						
KIV				MLR	MLR		
	comp=Z,77nm,17.0s						
KIV	Kislovodsk	60.73	304	P	P	03 08 05.4	+1.1
SHME	Shamm	60.93	280	iP	P	03 08 06.3	+0.4
	SNR=8.1						
DLBC	Dease Lake	61.02	36	P	P	03 08 07.1	+1.1
	comp=Z,6.3nm,0.9s,baz=316,slow=6.3,SNR=7.8						
DLBC	Dease Lake	61.02	36	eP	P	03 08 08.2	+2.2
	comp=Z,10nm,1.0s						
DLBC	Dease Lake	61.02	36	P	P	03 08 07.1	+1.1
	comp=Z,6.3nm,0.9s,baz=316,slow=6.3,SNR=7.8						
NEY	Neytrino	61.06	304⇓	iP	P	03 08 07.2	+0.5
NEY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRAB	Tennant Creek	61.13	174	eP	P	03 08 06.3	-0.7
	comp=Z,21nm,0.8s						
WR1	Warramunga Arr	61.14	174	eP	P	03 08 06.3	-0.8
	comp=Z,30nm,0.6s						
WRA	Warramunga Arr	61.14	174	P	P	03 08 06.3	-0.8
	comp=Z,21nm,0.6s,baz=354,slow=7.5,SNR=161						
WRA	Warramunga Arr	61.14	174	P	P	03 08 06.3	-0.8
	comp=Z,22nm,0.5s,baz=354,slow=7.5,SNR=161						
MSFE	Esma-Masafi	61.30	280	P	P	03 08 09.5	+1.1
GNI	Garni	61.37	300	P	P	03 08 09.5	+0.7
	comp=Z,8.6nm,0.8s,baz=77,slow=18,SNR=8.3						
GNI				LR	LR	03 37 21.2	
	comp=Z,230nm,18.1s,baz=66,slow=39						
GNI	Garni	61.37	300	eP	P	03 08 08.9	+0.1
GNI	Garni	61.37	300	eP	P	03 08 11.1	+2.3
GNI	Garni	61.37	300⇓	iP	P	03 08 09.3	+0.5
GNI				pmax	pmax		
	comp=Z,32nm,0.9s						
GNI	Garni	61.37	300	P	P	03 08 09.5	+0.7
	comp=Z,8.6nm,0.8s,baz=77,slow=18,SNR=8.3						
GNI				LR	LR	03 37 21.2	
	comp=Z,230nm,18.1s,baz=66,slow=39						
UOSS	Minazif	61.51	279	eP	P	03 08 11.0	+1.3
	comp=Z,10nm,0.8s						
UOSS	Minazif	61.51	279	P	P	03 08 11.0	+1.3
HATD	Hatta, Dubai	61.63	279	iP	P	03 08 11.6	+1.1
	SNR=5.5						
VSU	Vasula	61.66	324c	eP	P	03 08 10.0	-0.2
VSU				pmax	pmax		
	comp=Z,52nm,0.9s						
VSU	Vasula	61.66	324	eP	P	03 08 09.7	-0.5
VSU				IAmb	IAmb	03 08 11.1	
	comp=Z,88nm,0.5s						
VSU	Vasula	61.66	324	eP	P	03 08 09.9	-0.2
VSU				IAmb	IAmb	03 08 12.5	
	comp=Z,92nm,0.8s						
MOR8	Moi Rana	61.75	335	eP	P	03 08 08.6	-2.1
MOR8				IAmb	IAmb	03 08 09.6	
	comp=Z,18nm,0.7s						
ASHO	Ashiyiah	61.77	279	iP	P	03 08 12.3	+0.8
	SNR=7.9						
TASB	TASBURUN-IGDIR	61.78	300	eP	P	03 08 10.8	-0.7
TULEG	Thule	61.87	5	eP	P	03 08 10.6	-0.8
	comp=Z,36nm,0.7s						
KARS	Kars	62.20	301	eP	P	03 08 15.3	+0.9
KARS	Kars	62.20	301	eP	P	03 08 16.1	+1.7
	comp=Z,24nm,0.6s						
KARS	Kars	62.20	301	eP	P	03 08 16.1	+1.7
KARS				pmax	pmax		
	comp=Z,24nm,0.6s						
CLDR	Caldiran	62.44	299	eP	P	03 08 17.5	+1.4
MHTO	MHTO	62.49	274	P	P	03 08 16.6	+0.2
	SNR=6.9						
BATM	Batumi	62.57	302	eP	P	03 08 27.0	+10
MBWA	Marble Bar	62.76	190	eP	P	03 08 17.2	-0.8
	comp=Z,14nm,0.8s						
AGRB	Hanur-Agry	62.81	300	eP	P	03 08 19.8	+1.2
CTA	Charters Tower	63.13	162	P	P	03 08 20.1	-0.4
	comp=Z,11nm,0.7s,baz=349,slow=7.6,SNR=14						
CTA	Charters Tower	63.13	162	P	P	03 08 20.1	-0.3
	comp=Z,11nm,0.7s,baz=349,slow=7.6,SNR=14						
CTAO	Charters Tower	63.13	162	eP	P	03 08 20.1	-0.4
	comp=Z,14nm,0.8s						
CTAO	Charters Tower	63.13	162	eP	P	03 08 20.2	-0.3
CTAO				pmax	pmax		
	comp=Z,14nm,0.8s						
KOPR	Koprukoy-ERZUR	63.33	301	eP	P	03 08 20.7	-1.3
MICGM	Minsk	63.33	320	e	P	03 08 22.0	+0.5
MNK	Minsk	63.33	320	eP	P	03 08 22.0	+0.5
IZAR	Zarasai	63.40	322	eP	P	03 08 22.2	+0.3
IZAR				IAmb	IAmb	03 08 23.4	
	comp=Z,23nm,0.9s						
IZAR	Zarasai	63.40	322	eP	P	03 08 22.2	+0.3
IZAR				IAmb	IAmb	03 08 23.4	
	comp=Z,22nm,0.8s						
IDID	Didziasalis	63.42	321	eP	P	03 08 22.3	+0.3
IDID				IAmb	IAmb	03 08 23.6	
	comp=Z,24nm,0.8s						
IDID	Didziasalis	63.42	321	eP	P	03 08 22.4	+0.3
IDID				IAmb	IAmb	03 08 23.6	
	comp=Z,26nm,0.9s						
AKDM	Akdamar-Van	63.49	299	eP	P	03 08 23.4	+0.3
ANN	Anapa	63.49	307	eP	P	03 08 22.0	-0.7
ANN				pmax	pmax		
	comp=Z,46nm,1.1s						
ISAL	Salakas	63.56	322	eP	P	03 08 23.3	+0.3
ISAL				IAmb	IAmb	03 08 24.6	
	comp=Z,34nm,0.8s						
ISAL	Salakas	63.56	322	eP	P	03 08 23.4	+0.4
ISAL				IAmb	IAmb	03 08 24.6	
	comp=Z,34nm,0.8s						
NACGM	Naroch	63.63	321	e	P	03 08 23.0	-0.5
IIGN	Ignalina	63.64	322	eP	P	03 08 23.8	+0.3
IIGN				IAmb	IAmb	03 08 25.1	
	comp=Z,28nm,0.6s						
IIGN	Ignalina	63.64	322	eP	P	03 08 23.8	+0.3
IIGN				IAmb	IAmb	03 08 25.1	
	comp=Z,30nm,0.7s						
CUKT	Cukurca	63.66	297	eP	P	03 08 24.4	+0.3
GURO	Guroymak-BITLI	63.99	299	eP	P	03 08 27.5	+1.2
SLIT	Slitere, Latvi	64.07	325	eP	P	03 08 25.1	-1.2
SLIT				IAmb	IAmb	03 08 28.2	
	comp=Z,333nm,0.6s						
SLIT	Slitere, Latvi	64.07	325	eP	P	03 08 25.4	-0.8
SLIT				IAmb	IAmb	03 08 28.3	
	comp=Z,445nm,0.4s						
SIRT	Sirnak	64.30	298	eP	P	03 08 28.6	+0.3
SIRT	Sirnak	64.30	298	eP	P	03 08 28.8	+0.5
	comp=Z,53nm,0.8s						
KULLO	Kullorsuaq	64.32	2⇑	iP	P	03 08 26.7	-1.0
	comp=Z,13nm,0.8s						
KULLO	Kullorsuaq	64.32	2⇑	iP	P	03 08 26.7	-1.0
KULLO				pmax	pmax		
	comp=Z,13nm,0.8s						
PABE	Paberze	64.59	323	eP	P	03 08 29.2	-0.6
PABE				IAmb	IAmb	03 08 30.8	
	comp=Z,72nm,0.7s						
PABE	Paberze	64.59	323	eP	P	03 08 29.7	0.0
PABE				IAmb	IAmb	03 08 30.8	
	comp=Z,77nm,0.8s						
YKW3	Yellowknife Ar	64.64	27	eP	P	03 08 30.0	0.0
	comp=Z,5.5nm,0.6s						
YKA	Yellowknife Ar	64.69	27	P	P	03 08 30.0	-0.2
	comp=Z,3.7nm,0.5s,baz=313,slow=6.2,SNR=92						
YKA	Yellowknife Ar	64.69	27	P	P	03 08 30.0	-0.2
	comp=Z,3.7nm,0.5s,baz=313,slow=6.2,SNR=92						
YKB5	Yellowknife Ar	64.69	27	eP	P	03 08 30.1	-0.2
YKB5				ePcP	PcP	03 09 03.9	-0.1
SVAN	Silvan-Diyarba	64.76	299	eP	P	03 08 31.4	+0.2
AS31	Alice Springs	64.80	175	eP	P	03 08 30.9	-0.5
	comp=Z,3.7nm,0.6s						
ASAR	Alice Springs	64.80	175	P	P	03 08 30.8	-0.7
	comp=Z,13nm,0.8s,baz=360,slow=6.7,SNR=48						
ASAR	Alice Springs	64.80	175	P	P	03 08 30.8	-0.7
	comp=Z,13nm,0.8s,baz=360,slow=6.7,SNR=48						
AS01	Alice Springs	64.80	175	eP	P	03 08 30.8	-0.7
AKASG	Malin Array Be	64.82	316	P	P	03 08 30.6	-0.8
	comp=Z,24nm,0.6s,baz=51,slow=6.8,SNR=42						
AKASG	Malin Array Be	64.82	316	eP	P	03 08 31.2	-0.1
AKASG				pmax	pmax		
	comp=Z,24nm,0.6s						
AKASG	Malin Array Be	64.82	316	P	P	03 08 30.6	-0.8
	comp=Z,24nm,0.6s,baz=51,slow=6.8,SNR=42						
AKBB	Malin Array Si	64.82	316	eP	P	03 08 31.0	-0.4
	comp=Z,30nm,0.8s						
KIEV	Kiev	64.83	316	eP	P	03 08 31.0	-0.4
	comp=Z,29nm,0.8s						
KIEV	Kiev	64.83	316⇓	iP	P	03 08 31.3	-0.1
KIEV	Kiev	64.83	316	iP	P	03 08 31.1	-0.3
	SNR=25						
KIEV	Kiev	64.83	316	iP	P	03 08 31.0	-0.4
KIEV				pmax	pmax		
	comp=Z,33nm,0.8s						
AK11	Malin Array Si	64.86	316	eP	P	03 08 31.0	-0.6
PBUR	Paburg	65.20	324	eP	P	03 08 33.2	-0.5
PBUR				IAmb	IAmb	03 08 34.6	
	comp=Z,86nm,0.7s						

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PBUR  Paburg            65.20 324  eP     P      03 08 33.5 -0.2
PBUR                               IAmb   IAmb   03 08 34.6
      comp=Z,80nm,0.8s
SIM   Simferopol'       65.38 309   P     P      03 08 34.6 -0.5
SIM                                pmax   pmax
      comp=Z,34nm,0.7s
SUW   Suwalki           65.86 322  eP     P      03 08 37.4 -0.6
SUW   Suwalki           65.86 322  eP     P      03 08 37.4 -0.6
      comp=Z,36nm,0.7s
SUW   Suwalki           65.86 322  eP     P      03 08 37.4 -0.6
HFS   Hagfors           65.94 330   P     P      03 08 37.4 -1.1
      comp=Z,13nm,0.5s,baz=66,slow=7.2,SNR=58
HFS   Hagfors           65.94 330   P     P      03 08 37.4 -1.1
      comp=Z,13nm,0.5s,baz=66,slow=7.2,SNR=58
NC405 NORSAR Array S    66.00 332  eP     P      03 08 38.0 -0.8
NC303 NORSAR Array S    66.05 332  eP     P      03 08 38.4 -0.7
SUMG  Summit            66.08 356  eP     P      03 08 39.6 -0.1
      comp=Z,22nm,0.6s
SUMG  Summit            66.08 356⇑iP     P      03 08 39.4 -0.2
      comp=Z,53nm,0.6s
SUMG  Summit            66.08 356⇑iP     P      03 08 39.4 -0.2
SUMG                               pmax   pmax
      comp=Z,53nm,0.6s
NB201 NORSAR Array S    66.19 332  eP     P      03 08 39.4 -0.7
NC204 NORSAR Array S    66.22 332  eP     P      03 08 39.7 -0.7
NB2   NORSAR Subarra    66.23 332   P     P      03 08 39.3 -1.0
      comp=Z,30nm,1.0s,baz=47,slow=6.5
NB2   NORSAR Subarra    66.23 332   P     P      03 08 39.3 -1.0
      baz=47,slow=6.5
NB200 NORSAR Array S    66.23 332  eP     P      03 08 39.4 -1.0
NOA   NORSAR Array B    66.23 332   P     P      03 08 39.4 -1.0
      comp=Z,17nm,0.8s,baz=44,slow=6.3,SNR=72
NOA   NORSAR Array B    66.23 332   P     P      03 08 39.4 -1.0
      comp=Z,17nm,0.8s,baz=44,slow=6.3,SNR=72
DOMB  Dombas            66.27 334  eP     P      03 08 39.8 -0.8
DOMB                               IAmb   IAmb   03 08 40.7
      comp=Z,12nm,0.7s
NC602 NORSAR Array S    66.32 332  eP     P      03 08 39.9 -0.9
NC602 NORSAR Array S    66.32 332  eP     P      03 08 39.8 -1.1
NBO00 NORSAR Array S    66.39 332  eP     P      03 08 40.6 -0.7
MOL   Molde             66.40 334  eP     P      03 08 41.0 -0.3
NAO01 NORSAR Array S    66.48 332  eP     P      03 08 41.0 -1.0
SCO   Scoresbysund      66.55 350  i P    P      03 08 42.2  0.0
SCO   Scoresbysund      66.55 350  i P    P      03 08 42.2  0.0
KLNR  Kaliningrad       66.85 323⇑eP     P      03 08 44.6 +0.3
AKN   Aaknes            66.86 334  eP     P      03 08 44.0 -0.4
AKN                                IAmb   IAmb   03 08 45.1
      comp=Z,23nm,0.8s
OSL   Oslo              67.17 331  eP     P      03 08 46.1 -0.2
KIS   Kishinev          67.20 313  eP     P      03 08 45.0 -1.7
KIS                                eS     S      03 17 16.0  -26
KIS                                LRM    MLR    03 40 04.0
      comp=Z,300nm,15.0s
KIS   Kishinev          67.20 313  eP     P      03 08 45.0 -1.7
KIS                                e             03 17 38.0
KIS                                MLR    MLR
      comp=Z,300nm,15.0s
STRU  Stroemstad        67.63 330  eP     P      03 08 48.4 -0.7
IAS   Iasi              67.77 314⇑iP     P      03 08 50.2 -0.1
IAS   Iasi              67.77 314   P     P      03 08 50.1 -0.2
KONO  Kongsberg         67.78 331ceP     P      03 08 49.5 -0.6
KONO                               pmax   pmax
      comp=Z,18nm,0.9s
KONO  Kongsberg         67.78 331  eP     P      03 08 49.8 -0.4
LEOM  Leova             67.83 313⇑iP     P      03 08 51.0 +0.3
LEOM  Leova             67.83 313   P     P      03 08 50.9 +0.3
ILGA  Ilgaz             67.86 306  eP     P      03 08 51.8 +0.5
      comp=Z,21nm,0.8s
HYA   Hoyanger          67.86 334  eP     P      03 08 50.0 -0.7
HYA                                IAmb   IAmb   03 08 51.2
      comp=Z,25nm,0.9s
LVV   L'vov             68.02 318  eP     P      03 08 51.9  0.0
TLCR                    68.29 311⇑iP     P      03 08 53.8 +0.2
BIR   Birlad            68.30 313⇓iP     P      03 08 54.8 +1.1
BIR   Birlad            68.30 313   P     P      03 08 54.7 +1.1
BEL   Belsk             68.35 321  eP     P      03 08 54.3 +0.4
BEL   Belsk             68.35 321  eP     P      03 08 54.3 +0.4
PRAR  RASCA             68.39 315⇑iP     P      03 08 54.5 +0.3
SUE   Sulen             68.41 334  eP     P      03 08 53.8 -0.3
CFR   Carcaliu          68.67 312⇑iP     P      03 08 55.8 -0.2
CFR   Carcaliu          68.67 312   P     P      03 08 55.8 -0.2
BR101 Keskin Array S    68.69 305  eP     P      03 08 55.9 -0.5
BR101                              ePP    PP     03 11 28.5 +1.0
BR131 Keskin Array S    68.69 305  eP     P      03 08 56.2 -0.2
BR131 Keskin Array S    68.69 305   P     P      03 08 56.3 -0.2
BRTR  Keskin Array B    68.69 305   P     P      03 08 55.9 -0.5
      comp=Z,2.8nm,0.5s,baz=67,slow=4.2,SNR=34
BRTR                               PP     PP     03 11 28.5 +1.0
      comp=Z,1.2nm,0.9s,baz=46,slow=8.3,SNR=3.5
BRTR                               LR     LR     03 42 45.8
      comp=Z,61nm,18.1s,baz=82,slow=39
BRTR  Keskin Array B    68.69 305   P     P      03 08 55.9 -0.5
BRTR                                             03 11 28.5
BRTR                               pmax   pmax
      comp=Z,8.0nm,0.9s
BRTR                               MLR    MLR
      comp=Z,61nm,18.1s
BRTR  Keskin Array B    68.69 305   P     P      03 08 55.9 -0.5
      comp=Z,2.8nm,0.5s,baz=67,slow=4.2,SNR=34
BRTR                               PP     PP     03 11 28.5 +1.0
      comp=Z,1.2nm,0.9s,baz=46,slow=8.3,SNR=3.5
BRTR                               LR     LR     03 42 45.8
      comp=Z,61nm,18.1s,baz=82,slow=39
BIZ   Bicaz             68.72 314⇓iP     P      03 08 56.9 +0.6
BER   Bergen            68.72 334  eP     P      03 08 56.2 +0.2
BUR08 Bucovina Ar. S    68.76 315  eP     P      03 08 56.9 +0.2
BUR04 Bucovina Ar. S    68.77 315  eP     P      03 08 57.0 +0.2
BURAR Bucovina Array    68.77 315⇑iP     P      03 08 57.1 +0.3
BURAR Bucovina Array    68.77 315   P     P      03 08 57.0 +0.3
KWP   Kalwaria Pacla    68.81 318  eP     P      03 08 57.4 +0.6
KWP   Kalwaria Pacla    68.81 318  eP     P      03 08 57.4 +0.6
BSD   Bornholm Skovb    68.84 326  i P    P      03 08 55.9 -0.9
      comp=Z,52nm,0.7s
BSD   Bornholm Skovb    68.84 326  i P    P      03 08 55.9 -0.9
BSD                                pmax   pmax
      comp=Z,52nm,0.7s
ODBI  Odobesti          68.92 313⇓iP     P      03 08 58.9 +1.4
TIRR  Tirgusor          68.96 311  eP     P      03 08 57.4 -0.4
      comp=Z,14nm,0.9s
TIRR  Tirgusor          68.96 311⇓iP     P      03 08 57.9 +0.1
TIRR  Tirgusor          68.96 311  eP     P      03 08 57.4 -0.4
TIRR                               pmax   pmax
      comp=Z,15nm,0.9s
VRI   Vrincioaia        69.04 313⇑iP     P      03 08 58.5 +0.2
VRI   Vrincioaia        69.04 313   P     P      03 08 58.5 +0.2
BLS5  Blasjo            69.05 333  eP     P      03 08 58.1 -0.1
BLS5                               IAmb   IAmb   03 08 58.6
      comp=Z,15nm,0.7s
GKP   Gorka Klasztor    69.06 323  eP     P      03 08 58.1 -0.2
GKP   Gorka Klasztor    69.06 323  eP     P      03 08 58.1 -0.2
HARR  Harsova           69.09 311⇓iP     P      03 08 59.0 +0.4
HARR  Harsova           69.09 311   P     P      03 08 58.9 +0.4
PLOR  Plostina          69.09 313⇓iP     P      03 08 59.3 +0.6
PLOR  Plostina          69.09 313   P     P      03 08 59.2 +0.6
TLB   Topalu            69.09 311⇓iP     P      03 08 58.9 +0.3
TLB   Topalu            69.09 311   P     P      03 08 58.9 +0.3
MFTR  Murfatlar         69.12 311⇓iP     P      03 08 59.2 +0.4
ANTO  Ankara            69.13 305  eP     P      03 08 59.1 +0.1
      comp=Z,17nm,0.8s
ANTO  Ankara            69.13 305⇓iP     P      03 08 59.4 +0.4
ANTO  Ankara            69.13 305  eP     P      03 08 59.1 +0.1
ANTO                               pmax   pmax
      comp=Z,17nm,0.8s
ANTO  Ankara            69.13 305   P     P      03 08 59.4 +0.4
ANTO                                P     P      03 08 59.4 +0.4
BR231 Keskin MP Arra    69.15 305  eP     P      03 08 59.3 +0.1
OZUR                    69.41 314⇓iP     P      03 09 01.6 +0.9
AMRR  Amara             69.47 312⇑iP     P      03 08 53.5 -7.5
COP   Copenhagen        69.47 327  i P    P      03 09 00.7 -0.1
      comp=Z,44nm,0.6s
COP   Copenhagen        69.47 327  eP     P      03 09 00.7 -0.1
COP                                pmax   pmax
      comp=Z,44nm,0.6s
LLLB  Lillooet          69.49  40  eP     P      03 09 01.6 +0.6
      comp=Z,9.3nm,0.7s
ICOR  Ion Corvin        69.51 311⇓iP     P      03 09 02.1 +0.9
ARCR  ARCALIA           69.56 315⇑iP     P      03 09 02.8 +1.3
SNART Snartemo          69.58 331  eP     P      03 09 01.2 -0.2
SNART                              IAmb   IAmb   03 09 01.8
      comp=Z,15nm,0.6s
ISR   Istrita           69.60 312⇓iP     P      03 09 03.0 +1.1
ISR   Istrita           69.60 312   P     P      03 09 02.9 +1.1
KMY   Karmoy            69.62 333  eP     P      03 08 59.7 -1.9
BMR   Baia Mare         69.64 316⇓iP     P      03 09 02.9 +0.9
UZH   Uzhgorod          69.66 317  eP     P      03 09 01.1 -0.9
MLR   Muntele Rosu      69.70 313   P     P      03 09 02.6  0.0
      comp=Z,14nm,0.7s,baz=331,slow=13,SNR=31
MLR   Muntele Rosu      69.70 313  eP     P      03 09 02.7 +0.2
      comp=Z,26nm,1.1s
MLR   Muntele Rosu      69.70 313⇓iP     P      03 09 03.0 +0.4
MLR   Muntele Rosu      69.70 313   P     P      03 09 02.6  0.0
      comp=Z,14nm,0.7s,baz=331,slow=13,SNR=31
DOPR  Dopca             69.71 314⇑iP     P      03 09 03.5 +1.0
ILULI Ilulissat         69.79   0  eP     P      03 09 01.2 -1.3
      comp=Z,30nm,0.7s
ILULI Ilulissat         69.79   0  i P    P      03 09 01.9 -0.6
      comp=Z,30nm,0.6s
ILULI Ilulissat         69.79   0  i P    P      03 09 01.9 -0.6
ILULI                              pmax   pmax
      comp=Z,30nm,0.6s
RASA  Rasa              69.82 311⇓iP     P      03 09 04.0 +0.9
LEHL  Lehliu            69.85 312⇑iP     P      03 09 03.8 +0.5
TRPA  Tarpa             69.85 317⇑iP     P      03 09 04.0 +0.8
OJC   Ojcow             69.87 320  eP     P      03 09 03.6 +0.3
OJC   Ojcow             69.87 320  eP     P      03 09 03.7 +0.3
      comp=Z,71nm,0.6s
OJC   Ojcow             69.87 320  eP     P      03 09 03.7 +0.3
OJC                                pmax   pmax
      comp=Z,71nm,0.6s
SECR                    69.92 313⇑iP     P      03 09 04.9 +1.1
SULR                    70.03 312⇑iP     P      03 09 05.6 +1.2
NIE   Niedzica          70.15 319  eP     P      03 09 05.8 +0.7
NIE   Niedzica          70.15 319  eP     P      03 09 05.8 +0.7
CJR   Cluj-Napoca       70.20 315⇓iP     P      03 09 06.8 +1.3
CJR   Cluj-Napoca       70.20 315   P     P      03 09 06.8 +1.3
MUD   Monsted U'grnd    70.22 329  i P    P      03 09 05.1 -0.2
MUD   Monsted U'grnd    70.22 329  i P    P      03 09 05.1 -0.2
MUD   Monsted U'grnd    70.22 329  eP     P      03 09 05.3  0.0
VOIR                    70.22 313⇑iP     P      03 09 06.4 +0.7
VOIR                    70.22 313   P     P      03 09 06.4 +0.7
MTUR  Matau             70.35 313⇑iP     P      03 09 06.8 +0.3
ARR   Arges             70.50 314⇓iP     P      03 09 08.5 +1.1
NLWA  Neilton Lookou    70.57  44  eP     P      03 09 08.9 +1.2
      comp=Z,20nm,0.8s
DRGR                    70.62 316⇓iP     P      03 09 08.7 +0.6
LANS  Liptovska Anna    70.73 319  eP     P      03 09 09.8 +1.1
LANS  Liptovska Anna    70.73 319  eP     P      03 09 09.8 +1.1
HUMR  Humele            70.84 313⇓iP     P      03 09 09.5 +0.1
D03D  Eldon             70.88  43   P     P      03 09 10.6 +1.0
      baz=311
B05A  Bryant            70.91  42   P     P      03 09 10.7 +1.0
      baz=311
LOT   Lotru             70.91 314⇑iP     P      03 09 00.3  -10
OKC   Ostrava-Krasne    70.92 320  eP     P      03 09 10.3 +0.5
OKC   Ostrava-Krasne    70.92 320  eP     P      03 09 10.3 +0.5
LRW   Lerwick           70.99 336  eP     P      03 09 09.8 -0.2
LRW                                IAmb   IAmb   03 09 11.1
      comp=Z,75nm,1.0s
B06A  Marblemount       71.05  42  eP     P      03 09 11.0 +0.4
      comp=Z,13nm,0.8s
MORW  Morawa            71.06 192  eP     P      03 09 10.6 -0.1
      comp=Z,17nm,0.8s
ASF   Jabal al Asfar    71.09 296   P     P      03 09 11.0 -0.3
      comp=Z,11nm,1.0s,baz=0.0,slow=6.1,SNR=12
ASF   Jabal al Asfar    71.09 296   P     P      03 09 11.0 -0.3
ASF                                pmax   pmax
      comp=Z,9.0nm,0.8s
ASF   Jabal al Asfar    71.09 296   P     P      03 09 11.4 +0.1
ASF   Jabal al Asfar    71.09 296   P     P      03 09 11.3  0.0
ASF   Jabal al Asfar    71.09 296   P     P      03 09 11.0 -0.3
      comp=Z,9.2nm,0.8s,baz=0.0,slow=6.1,SNR=12
KSP   Ksiaz             71.12 322  eP     P      03 09 11.2 +0.2
KSP   Ksiaz             71.12 322  eP     P      03 09 11.2 +0.2
RUE   Ruedersdorf       71.14 324  eP     P      03 09 11.4 +0.4
RUE                                IAmb   IAmb   03 09 12.0
      comp=Z,25nm,0.6s
ZIMR                    71.17 312⇑iP     P      03 09 11.7 +0.3
MORC  Moravsky Berou    71.25 320  eP     P      03 09 12.3 +0.4
      comp=Z,43nm,0.6s
MORC  Moravsky Berou    71.25 320⇑iP     P      03 09 12.3 +0.4
MORC  Moravsky Berou    71.25 320  eP     P      03 09 12.3 +0.4
MORC                               pmax   pmax
      comp=Z,43nm,0.6s
MORC  Moravsky Berou    71.25 320⇑iP     P      03 09 12.1 +0.2
PSZ   Piszkesteto       71.34 318  eP     P      03 09 12.7 +0.2
      comp=Z,22nm,0.7s
PSZ   Piszkesteto       71.34 318⇓iP     P      03 09 13.3 +0.9
PSZ   Piszkesteto       71.34 318  eP     P      03 09 12.7 +0.2
PSZ                                pmax   pmax
      comp=Z,22nm,0.7s
PSZ   Piszkesteto       71.34 318⇓eP     P      03 09 13.0 +0.6
KRLC  Kraliky           71.42 321  eP     P      03 09 13.5 +0.6
KRLC                               ex     x      03 09 19.0
KRLC  Kraliky           71.42 321  eP     P      03 09 13.5 +0.6
DPC   Dobruska-Polom    71.44 321  eP     P      03 09 13.9 +0.9
DPC                                AMS    AMS    03 43 20.0
      comp=Z,300nm,11.8s
DPC   Dobruska-Polom    71.44 321  eP     P      03 09 13.9 +0.9
DPC                                MLR    MLR
      comp=Z,300nm,11.8s
UPC   Upice             71.48 322  eP     P      03 09 13.8 +0.6
UPC                                ex     x      03 09 18.7
UPC   Upice             71.48 322  eP     P      03 09 13.8 +0.6
UPC                                e             03 09 18.7
VYHS  Vyhne             71.48 319  eP     P      03 09 13.7 +0.5
VYHS                               pmax   pmax
      comp=Z,7.0nm,0.8s
VYHS  Vyhne             71.48 319  eP     P      03 09 13.7 +0.5
GZR   Gura Zlata        71.48 315⇓iP     P      03 09 13.9 +0.5
GZR   Gura Zlata        71.48 315   P     P      03 09 13.8 +0.4
VLAD  Vladila           71.49 313⇑iP     P      03 09 12.4 -0.9
SIRR  Siria             71.51 316⇑iP     P      03 09 13.0 -0.5
SHMJ  Saham             71.52 297   P     P      03 09 18.0 +4.3
MMAI  Mount Meron Ar    71.58 298   P     P      03 09 14.1 -0.1
      comp=Z,3.4nm,0.7s,baz=37,slow=7.3,SNR=5.5
MMAI                               LR     LR     03 44 11.6
      comp=Z,117nm,19.1s,baz=10.0,slow=39
MMAI  Mount Meron Ar    71.58 298   P     P      03 09 14.1 -0.1
      comp=Z,1.7nm,0.5s,baz=37,slow=7.3,SNR=5.5
MMAI                               LR     LR     03 44 11.6
      comp=Z,117nm,19.1s,baz=10.0,slow=39
HSUJ  Al Zarqa          71.61 297   P     P      03 09 13.0 -1.3
D05A  Enumclaw          71.68  43  eP     P      03 09 15.4 +1.0
      comp=Z,20nm,0.8s
SRE   Strehaia          71.73 314⇑iP     P      03 09 14.9 +0.1
SRE   Strehaia          71.73 314   P     P      03 09 14.8  0.0
FORT  Forrest           71.74 181  eP     P      03 09 15.0 +0.3
      comp=Z,38nm,0.6s
C06D  Leavenworth       71.74  42   P     P      03 09 15.6 +0.7
      baz=312
BORG  Borgarnes         71.75 347  LR     LR     03 39 56.2
      comp=Z,49nm,18.1s,baz=41,slow=35
BORG  Borgarnes         71.75 347  LR     LR     03 39 56.2
      comp=Z,49nm,18.1s,baz=41,slow=35
CSS   Mathiatis         71.76 301   P     P      03 09 12.0 -3.1
      comp=Z,6.4nm,1.2s
E04D  Cinebar           71.79  44   P     P      03 09 16.4 +1.3
      baz=311
DZM   Mont Dzumac       71.95 144   P     P      03 09 17.8 +1.4
      comp=Z,12nm,0.7s,baz=22,slow=7.1,SNR=9.6
DZM   Mont Dzumac       71.95 144  eP     P      03 09 17.6 +1.3
      comp=Z,14nm,0.8s
DZM   Mont Dzumac       71.95 144   P     P      03 09 17.8 +1.4
      comp=Z,12nm,0.7s,baz=22,slow=7.1,SNR=9.6
BZS   Buzias            71.96 315⇓iP     P      03 09 16.3 +0.2
HERR  Herculane         72.01 314⇑iP     P      03 09 16.2 -0.3
SFJD  Kangerlussuaq     72.02 360   P     P      03 09 15.5 -0.5
      comp=Z,15nm,0.8s,baz=0.6,slow=4.1,SNR=5.7
SFJD  Kangerlussuaq     72.02 360  i P    P      03 09 15.7 -0.4
      comp=Z,33nm,1.0s
SFJD  Kangerlussuaq     72.02 360   P     P      03 09 16.0 -0.1
SFJD                               pmax   pmax
      comp=Z,54nm,3.0s
SFJD  Kangerlussuaq     72.02 360   P     P      03 09 15.5 -0.5
      comp=Z,15nm,0.8s,baz=0.6,slow=4.1,SNR=5.7
VRAC  Vranov            72.03 321   P     P      03 09 17.0 +0.5
      comp=Z,28nm,0.8s,baz=51,slow=7.1,SNR=29
VRAC                               LR     LR     03 44 33.4
      comp=Z,316nm,18.1s,baz=68,slow=39
VRAC  Vranov            72.03 321⇑iP     P      03 09 17.1 +0.6
VRAC  Vranov            72.03 321   P     P      03 09 17.0 +0.5
VRAC                               pmax   pmax
      comp=Z,28nm,0.8s
VRAC                               MLR    MLR
      comp=Z,316nm,18.1s
VRAC  Vranov            72.03 321⇑iP     P      03 09 17.0 +0.5
VRAC  Vranov            72.03 321   P     P      03 09 17.0 +0.5
      comp=Z,28nm,0.8s,baz=51,slow=7.1,SNR=29
VRAC                               LR     LR     03 44 33.4
      comp=Z,316nm,18.1s,baz=68,slow=39
LON   Longmire          72.06  43  eP     P      03 09 17.4 +0.6
      comp=Z,10nm,0.8s
LON   Longmire          72.06  43  eP     P      03 09 17.4 +0.6
LON                                pmax   pmax
      comp=Z,11nm,0.8s
BUD   Budapest          72.06 318   P     P      03 09 17.6 +0.9
BUD   Budapest          72.06 318  eP     P      03 09 17.0 +0.3
PUNG  Punghina          72.12 314⇑iP     P      03 09 17.5 +0.4
PVCC  Panska Ves        72.14 322  eP     P      03 09 17.8 +0.7
PVCC                               ex     x      03 09 24.7
PVCC  Panska Ves        72.14 322  eP     P      03 09 17.8 +0.7
SMOL  Smolenice         72.16 320  eP     P      03 09 18.1 +0.8
SMOL  Smolenice         72.16 320  eP     P      03 09 18.1 +0.8
BRG   Berggiesshubel    72.18 323  i P    P      03 09 17.5 +0.1
      comp=Z,18nm,0.7s
BRG   Berggiesshubel    72.18 323  i P    P      03 09 17.5 +0.1
BRG                                pmax   pmax
      comp=Z,18nm,0.7s
WALJ  Wala              72.20 296   P     P      03 09 18.1 +0.3
WALJ  Wala              72.20 296   P     P      03 09 15.7 -2.1
B08A  Colville Reser    72.22  41  eP     P      03 09 18.1 +0.3
      comp=Z,9.1nm,1.1s
SWQJ  Swaqa             72.22 296   P     P      03 09 17.5 -0.6
KRUC  Moravsky          72.29 320⇑iP     P      03 09 18.4 +0.3
CLL   Collm             72.30 324  eP     P      03 09 17.8 -0.3
      comp=Z,44nm,0.7s
CLL   Collm             72.30 324⇑iP     P      03 09 17.8 -0.3
      comp=Z,49nm,0.7s
CLL                                Lm     MLR    04 29 00.0
      comp=N,100nm,19.6s
CLL                                Lm     MLR    04 29 00.0
      comp=E,100nm,18.3s
CLL                                Lm     MLR    04 29 00.0
      comp=Z,100nm,20.8s
CLL   Collm             72.30 324⇑iP     P      03 09 17.8 -0.3
CLL                                pmax   pmax
      comp=Z,49nm,0.7s
MODS  Modra-Piesok      72.33 319  eP     P      03 09 19.1 +0.7
MODS                               pmax   pmax
      comp=Z,23nm,1.0s
MODS  Modra-Piesok      72.33 319  eP     P      03 09 19.1 +0.7
MDVR  Moldovita         72.45 315⇑iP     P      03 09 18.9 -0.3
GHAJ  Ghor Haditha      72.52 296   P     P      03 09 19.7 +0.1
GHAJ  Ghor Haditha      72.52 296   P     P      03 09 19.8 +0.1
      comp=Z,48nm,1.6s
PRU   Pruhonice         72.53 322  eP     P      03 09 20.0 +0.6
PRU                                ex     x      03 09 24.1
PRU   Pruhonice         72.53 322  eP     P      03 09 20.0 +0.6
PRU                                e             03 09 24.1
TREC  Trest             72.56 321  eP     P      03 09 20.3 +0.6
TREC  Trest             72.56 321  eP     P      03 09 20.3 +0.6
MANT  Manisa            72.57 306  eP     P      03 09 20.1 -0.1
      comp=Z,21nm,0.7s
LISJ  El Lisan          72.62 296   P     P      03 09 21.7 +1.5
LISJ  El Lisan          72.62 296   P     P      03 09 20.1 -0.1
I02D  Swisshome         72.72  46   P     P      03 09 22.0 +1.3
      baz=311
JDRJ  Daraweish         72.81 296   P     P      03 09 22.6 +0.9
JDRJ  Daraweish         72.81 296   P     P      03 09 22.5 +0.9
      comp=Z,66nm,1.0s
F05D  White Salmon      72.81  44   P     P      03 09 21.9 +0.7
      baz=312
AMAZ  Amatzia           72.82 297   P     P      03 09 21.5  0.0
      comp=Z,66nm,1.4s
VTS   Vitosha           73.04 312  eP     P      03 09 23.1 +0.3
      comp=Z,27nm,0.7s
VTS   Vitosha           73.04 312⇑iP     P      03 09 23.3 +0.5
VTS   Vitosha           73.04 312  eP     P      03 09 23.1 +0.3
VTS                                pmax   pmax
      comp=Z,27nm,0.7s
H04D  Lebanon           73.05  45   P     P      03 09 24.0 +1.3
      baz=312
HSNJ  Maan              73.08 295   P     P      03 09 24.1 +0.8
HSNJ  Maan              73.08 295   P     P      03 09 23.7 +0.4
MORH  Mrgy, Hungar      73.11 317  eP     P      03 09 21.6 -1.4
MORH  Mrgy, Hungar      73.11 317  eP     P      03 09 22.1 -0.9
C09A  Chrisman Ranch    73.12  41  eP     P      03 09 24.1 +1.1
      comp=Z,28nm,0.6s
MLA1  Latheron          73.14 336  eP     P      03 09 22.8 -0.1
SOP   Sopron            73.16 319   P     P      03 09 24.1 +0.9
SOP                                pmax   pmax
      comp=Z,56nm,0.8s
SOP   Sopron            73.16 319  eP     P      03 09 24.0 +0.8
FRGS  Fruska Gora       73.22 316  eP     P      03 09 23.2 -0.5
H04A  Detroit Lake      73.24  45  eP     P      03 09 24.9 +1.1
      comp=Z,29nm,0.8s
I03D  Drain, OR         73.27  46   P     P      03 09 25.5 +1.5
      baz=312,SNR=13
J01E  Myrtle Point      73.30  47   P     P      03 09 25.5 +1.4
      baz=311
NKC   Novy Kostel       73.31 323  eP     P      03 09 24.5 +0.4
NKC                                ex     x      03 09 30.6
NKC   Novy Kostel       73.31 323  eP     P      03 09 24.5 +0.4
D08A  Wollman Farm,     73.31  41  eP     P      03 09 25.1 +1.0
      comp=Z,10nm,0.6s
G05D  Wamic, OR         73.32  44   P     P      03 09 25.4 +1.1
      baz=312
CONA  Conrad Observa    73.33 320  i P    P      03 09 25.1 +0.8
      comp=Z,18nm,0.7s,SNR=6.5
NEW   Newport           73.36  40   P     P      03 09 25.4 +0.9
      comp=Z,7.2nm,0.8s,baz=338,slow=3.5,SNR=15
NEW   Newport           73.36  40  eP     P      03 09 25.4 +0.9
      comp=Z,8.9nm,0.9s
NEW   Newport           73.36  40   P     P      03 09 24.9 +0.4
      baz=314
NEW   Newport           73.36  40   P     P      03 09 25.4 +0.9
      comp=Z,7.2nm,0.8s,baz=338,slow=3.5,SNR=15
HAWA  Hanford           73.46  42  eP     P      03 09 26.3 +1.3
      comp=Z,23nm,0.9s
KZIT  Kziot             73.55 297   P     P      03 09 25.6 -0.3
KZIT  Kziot             73.55 297   P     P      03 09 25.6 -0.3
      comp=Z,40nm,0.9s
KHC   Kasperske Hory    73.57 322  eP     P      03 09 26.0 +0.2
      comp=Z,12nm,0.7s
KHC   Kasperske Hory    73.57 322  eP     P      03 09 26.3 +0.6
KHC   Kasperske Hory    73.57 322  eP     P      03 09 26.3 +0.6
F07A  Phinny Hill Vi    73.60  43  eP     P      03 09 26.2 +0.3
      comp=Z,18nm,0.8s
E08A  Dider Farm, El    73.63  42  eP     P      03 09 27.4 +1.4
      comp=Z,15nm,0.9s
HRFI  Mount Harif       73.66 296   P     P      03 09 27.1 +0.6
I04A  Tendick Farm,     73.71  46   P     P      03 09 27.3 +0.7
      baz=312,SNR=15
GEC2  GERESS Array S    73.72 322  eP     P      03 09 26.2 -0.4
      comp=Z,14nm,0.8s
GEC2  GERESS Array S    73.72 322  eP     P      03 09 26.3 -0.4
GEC2                               pmax   pmax
      comp=Z,14nm,0.8s
GERES GERESS Array B    73.72 322   P     P      03 09 26.4 -0.2
      comp=Z,12nm,0.7s,baz=42,slow=6.1,SNR=52
GERES                              LR     LR     03 44 11.7
      comp=Z,134nm,21.9s,baz=93,slow=38
GERES GERESS Array B    73.72 322   P     P      03 09 26.4 -0.2
      comp=Z,12nm,0.7s,baz=42,slow=6.1,SNR=52
GERES                              LR     LR     03 44 11.7
      comp=Z,134nm,21.9s,baz=93,slow=38
GEA0  GERESS Array S    73.72 322  eP     P      03 09 26.2 -0.4
STKA  Stephens Creek    73.74 169   P     P      03 09 26.6 -0.1
      comp=Z,6.4nm,0.6s,baz=349,slow=6.0,SNR=13
STKA  Stephens Creek    73.74 169  eP     P      03 09 27.0 +0.4
      comp=Z,1.4nm,0.6s
STKA  Stephens Creek    73.74 169  eP     P      03 09 27.0 +0.4
STKA                               pmax   pmax
      comp=Z,6.0nm,0.6s
STKA  Stephens Creek    73.74 169   P     P      03 09 26.6 -0.1
      comp=Z,6.4nm,0.6s,baz=349,slow=6.0,SNR=13
K02D  Willamette Mer    73.75  47   P     P      03 09 28.0 +1.0
      baz=312,SNR=5.2
SRS   Serrai            73.81 311   P     P      03 09 27.2 -0.1
SRS                                pmax   pmax
      comp=Z,16nm,1.2s
DIVS  Divibare          73.83 315  eP     P      03 09 26.6 -0.7
      comp=Z,22nm,0.9s
DIVS  Divibare          73.83 315  eP     P      03 09 26.3 -1.1
AQBJ  Aqaba             73.84 295   P     P      03 09 27.9 +0.3
WET   Wettzell          73.89 322   P     P      03 09 28.1 +0.5
WET                                pmax   pmax
      comp=Z,23nm,0.8s
I05D  Terrebonne, OR    73.92  45   P     P      03 09 28.8 +1.0
      baz=312
EIL   Elat              73.95 295   P     P      03 09 27.9 -0.3
      comp=Z,9.5nm,0.9s,baz=358,slow=8.0,SNR=4.9
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EIL   Elat             73.95 295   P     P       03 09 28.3 +0.1
EIL   Elat             73.95 295   P     P       03 09 27.9 -0.3
      comp=Z,9.5nm,0.9s,baz=358,slow=8.0,SNR=4.9
ARSA  Arzberg          73.96 319 i P     P       03 09 28.2 +0.2
      comp=Z,23nm,1.2s
FCC   Fort Churchill   74.03  22 eP      P       03 09 28.2  0.0
      comp=Z,18nm,1.1s
FCC   Fort Churchill   74.03  22 eP      P       03 09 28.2  0.0
FCC                              pmax    pmax
      comp=Z,18nm,1.1s
E09A  Wood Farm, Sta   74.08  41 eP      P       03 09 29.7 +1.0
      comp=Z,13nm,0.8s
L02E  Cave Junction    74.15  48   P     P       03 09 30.2 +1.0
      baz=312
MDO   Dochfour         74.15 336 eP      P       03 09 28.3 -0.6
MOA   Molln            74.15 321 i P     P       03 09 29.3 +0.2
      comp=Z,7.8nm,0.7s
MSVF  Nonsavu          74.20 132 eP      P       03 09 32.4 +2.8
      comp=Z,44nm,1.1s
MSVF  Nonsavu          74.20 132 i P     P       03 09 32.5 +2.8
MSVF                             pmax    pmax
      comp=Z,38nm,1.1s
HUMO  Hull Mountain    74.20  47 eP      P       03 09 30.9 +1.4
      comp=Z,5.5nm,0.6s
STIP  Stip             74.23 312 i P     P       03 09 28.4 -1.2
J04D  Umpqua Nationa   74.24  46   P     P       03 09 30.9 +1.0
      baz=312,SNR=14
GRA1  Grafenberg Arr   74.25 323 eP      P       03 09 30.3 +0.6
      comp=Z,69nm,0.8s
GRF   Grafenberg Arr   74.25 323   P     P       03 09 30.3 +0.6
GRF                              pmax    pmax
      comp=Z,69nm,0.8s
GRFO  Grafenberg       74.25 323 eP      P       03 09 30.4 +0.7
      comp=Z,57nm,0.7s
VAY   Valandovo        74.26 311 i P     P       03 09 30.0 +0.2
BBLS  Lazi&#263;i      74.30 315 eP      P       03 09 29.4 -0.7
FRB   Frobisher Bay    74.35   8   P     P       03 09 29.4 -0.5
      comp=Z,39nm,0.8s,baz=358,slow=6.3,SNR=72
FRB   Frobisher Bay    74.35   8   P     P       03 09 29.4 -0.5
      comp=Z,39nm,0.8s,baz=358,slow=6.3,SNR=72
ARMA  Armidale         74.35 160 eP      P       03 09 31.9 +1.5
      comp=Z,15nm,0.8s
KAC   Achnashellach    74.39 336 eP      P       03 09 29.9 -0.4
HAPS  Han Pijesak,Bl   74.39 315 eP      P       03 09 30.3 -0.4
EDU   Dundee           74.46 335 eP      P       03 09 30.2 -0.5
PINE  Pine Mountain    74.50  45 eP      P       03 09 32.9 +1.4
      comp=Z,48nm,0.7s
G08A  Pilot Rock       74.51  43 eP      P       03 09 32.6 +1.2
      comp=Z,4.1nm,0.8s
PERS  Pernice          74.59 319 i P     P       03 09 31.8 +0.1
SOKA  Soboth           74.60 319 i P     P       03 09 31.9  0.0
      comp=Z,34nm,0.9s
KPL   Plockton         74.63 336 eP      P       03 09 30.7 -0.9
KPL                              IAmb    IAmb    03 09 32.5
      comp=Z,26nm,0.8s
NWAO  Narrogin (SRO)   74.68 190   P     P       03 09 31.4 -0.7
      comp=Z,18nm,0.8s,baz=68,slow=5.4,SNR=7.2
NWAO  Narrogin (SRO)   74.68 190 eP      P       03 09 31.9 -0.2
NWAO  Narrogin (SRO)   74.68 190 eP      P       03 09 31.9 -0.2
NWAO  Narrogin (SRO)   74.68 190   P     P       03 09 31.4 -0.7
      comp=Z,18nm,0.8s,baz=68,slow=5.4,SNR=7.2
J05D  Fort Rock, OR    74.68  45   P     P       03 09 33.8 +1.3
      baz=313,SNR=29
L04D  Klamath Falls    74.82  47   P     P       03 09 34.2 +1.0
      baz=312,SNR=9.3
K04D  Chiloquin, OR    74.85  46   P     P       03 09 34.3 +0.9
      baz=313
BLY   Banja Luka       74.86 317 eP      P       03 09 29.8 -3.5
FFC   Flin Flon        74.86  28 eP      P       03 09 33.1  0.0
      comp=Z,11nm,1.1s
FFC   Flin Flon        74.86  28ceP      P       03 09 33.4 +0.3
INVG  Invergeldie, C   74.89 335 eP      P       03 09 32.3 -0.9
INVG                             IAmb    IAmb    03 09 33.6
      comp=Z,18nm,0.7s
F10A  Beach Ranch, E   74.91  41 eP      P       03 09 34.9 +1.2
      comp=Z,10nm,0.9s
YBH   Yreka Blue Hor   74.92  47   P     P       03 09 34.4 +0.6
      comp=Z,4.0nm,0.6s,baz=11,slow=5.5,SNR=17
YBH   Yreka Blue Hor   74.92  47 eP      P       03 09 33.8  0.0
      comp=Z,5.5nm,0.6s
YBH   Yreka Blue Hor   74.92  47   P     P       03 09 34.4 +0.6
      comp=Z,4.0nm,0.6s,baz=11,slow=5.5,SNR=17
KRUS  Krusevo          74.97 312 i P     P       03 09 34.7 +0.6
CRES  Cresnjev         74.99 318 eP      P       03 09 30.5 -3.5
I07A  Izee             75.06  44 eP      P       03 09 35.9 +1.3
      comp=Z,18nm,0.8s
M02C  Callahan         75.07  48   P     P       03 09 36.1 +1.4
      baz=312
KBA   Koelnbreinsper   75.14 320 i P     P       03 09 35.9 +0.9
      comp=Z,33nm,0.9s
KBA   Koelnbreinsper   75.14 320   P     P       03 09 35.2 +0.1
KBA                              pmax    pmax
      comp=Z,52nm,1.0s
EAU   Auchinoon        75.18 335 eP      P       03 09 34.6 -0.3
EAB   Aberfoyle        75.18 335 eP      P       03 09 34.6 -0.3
LJU   Ljubljana        75.30 319 eP      P       03 09 33.2 -2.6
VISS  Visnje           75.31 319 i P     P       03 09 35.7 -0.2
MYKA  Terra Mystica    75.32 320 i P     P       03 09 34.9 -1.1
      comp=Z,8.0nm,0.6s
BOJS  Bojanci          75.32 318 i P     P       03 09 35.6 -0.3
PDG   Podgorica        75.35 314 eP      P       03 09 35.3 -0.8
M04C  Macdoel          75.37  47   P     P       03 09 37.5 +1.0
      baz=313,SNR=11
OHR   Ohrid            75.40 312 i P     P       03 09 36.6 +0.1
N02D  Trinity Center   75.44  48   P     P       03 09 37.9 +1.2
      baz=312
EKA   Eskdalemuir Ar   75.50 334   P     P       03 09 36.2 -0.6
      comp=Z,15nm,0.7s,baz=41,slow=5.3,SNR=27
EKA   Eskdalemuir Ar   75.50 334   P     P       03 09 36.2 -0.6
      comp=Z,15nm,0.7s,baz=41,slow=5.3,SNR=27
ESK   Eskdalemuir      75.53 334⇑eP      P       03 09 36.3 -0.6
ESK                              eP      P       03 09 36.4 -0.6
ESK                              IAmb    IAmb    03 09 38.4
      comp=Z,59nm,1.0s
ESK   Eskdalemuir      75.53 334ceP      P       03 09 38.4 +1.5
PGBU  Glenifferbraes   75.54 335 eP      P       03 09 36.8 -0.1
PGBU                             IAmb    IAmb    03 09 37.4
      comp=Z,50nm,0.8s
DRME  Dracevica, Mon   75.56 314 eP      P       03 09 36.7 -0.6
CEY   Cerknica         75.56 319 eP      P       03 09 36.2 -1.1
JAVS  Javornik         75.63 319 i P     P       03 09 37.0 -0.8
BMO   Blue Mountains   75.65  42 eP      P       03 09 38.8 +0.8
      comp=Z,12nm,0.6s
BMO   Blue Mountains   75.65  42 eP      P       03 09 38.8 +0.8
BMO                              pmax    pmax
      comp=Z,12nm,0.6s
ABTA  Abfaltersbach    75.78 321 i P     P       03 09 38.1 -0.5
      comp=Z,2.7nm,0.5s
WATA  Walderalm        75.79 322 i P     P       03 09 38.8  0.0
      comp=Z,15nm,0.6s,SNR=13
WDC   Whiskeytown Da   75.80  48 eP      P       03 09 39.7 +1.0
      comp=Z,11nm,0.8s
WDC   Whiskeytown Da   75.80  48 eP      P       03 09 39.7 +1.0
WDC                              pmax    pmax
      comp=Z,11nm,0.8s
BEBN  Eben Emael       75.82 327   P     P       03 09 37.6 -1.0
BEBN                             PcP     PcP     03 09 50.7 -0.5
WTTA  Wattenberg       75.82 321 i P     P       03 09 39.1 +0.1
      comp=Z,18nm,0.7s
MEM   Membach          75.83 327   P     P       03 09 38.0 -0.7
      comp=Z,20nm,0.9s
MEM   Membach          75.83 327 ⇑P      P       03 09 38.0 -0.7
MSO   Missoula         75.90  39 eP      P       03 09 40.2 +0.9
      comp=Z,9.7nm,0.9s
MSO   Missoula         75.90  39   P     P       03 09 40.1 +0.8
      baz=316
O02D  Mt. Diablo Mer   75.93  49   P     P       03 09 40.9 +1.3
      baz=313
MOTA  Moosalm          76.01 322 i P     P       03 09 40.0  0.0
      comp=Z,11nm,0.6s,SNR=8.1
BSTI  Sart Tilman      76.03 327   P     P       03 09 39.8  0.0
SQTA  Sankt Quirin     76.05 322 i P     P       03 09 39.9 -0.3
      comp=Z,16nm,0.9s
RETA  Reutte           76.06 322 i P     P       03 09 40.2 -0.1
      comp=Z,34nm,0.7s,SNR=5.0
KESW  Keswick, Cumbr   76.09 334 eP      P       03 09 39.9 -0.3
KESW                             IAmb    IAmb    03 09 40.4
      comp=Z,45nm,1.2s
J08A  Circle Bar Ran   76.10  44 eP      P       03 09 41.2 +0.7
      comp=Z,25nm,0.8s
HPK   Haverah Park     76.10 333 eP      P       03 09 39.8 -0.4
HPK                              IAmb    IAmb    03 09 40.8
      comp=Z,35nm,0.7s
MOD   Modoc Plateau    76.13  46 eP      P       03 09 41.7 +0.9
      comp=Z,12nm,0.8s
LKLB  Kalborn          76.17 326   P     P       03 09 40.8 +0.1
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LVIA  Vianden          76.25 326   P     P       03 09 41.0 -0.2
GAL1  Galloway         76.39 335 eP      P       03 09 41.1 -0.7
GAL1                             IAmb    IAmb    03 09 42.2
      comp=Z,16nm,0.6s
O03E  Paynes Creek     76.40  48   P     P       03 09 42.6 +0.3
      baz=313
FETA  Feichten         76.42 322 i P     P       03 09 42.1 -0.3
      comp=Z,9.2nm,0.8s
WLF   Walferdange      76.48 326   P     P       03 09 42.4 -0.1
BFO   Black Forest     76.54 324 eP      P       03 09 42.9  0.0
      comp=Z,28nm,0.7s
BFO   Black Forest     76.54 324ceP      P       03 09 42.9  0.0
BRQR  Ronquire         76.56 327   P     P       03 09 42.4 -0.5
      comp=Z,14nm,0.6s
BMRD  Maredsous        76.57 327   P     P       03 09 42.4 -0.5
LBWR  Ladybower, Pea   76.59 332 eP      P       03 09 42.1 -0.9
LBWR                             IAmb    IAmb    03 09 43.5
      comp=Z,54nm,0.8s
DAMY  Dhamar           76.60 278 eP      P       03 09 46.7 +2.7
      comp=Z,27nm,1.1s
DAVA  Damuels          76.62 322 i P     P       03 09 43.4 -0.1
      comp=Z,47nm,0.7s,SNR=11
WVOR  Wild Horse Val   76.66  45 eP      P       03 09 44.9 +1.1
      comp=Z,13nm,0.8s
WVOR  Wild Horse Val   76.66  45 eP      P       03 09 44.9 +1.1
WVOR                             pmax    pmax
      comp=Z,13nm,0.8s
CLGH  Cloghs, Cushen   76.66 335 eP      P       03 09 43.0 -0.4
CLGH                             IAmb    IAmb    03 09 43.5
      comp=Z,68nm,0.8s
DOU   Dourbes          76.80 327 ⇓P      P       03 09 43.6 -0.6
BBOU  Bougnies         76.84 327   P     P       03 09 43.8 -0.6
      comp=Z,32nm,0.6s
GDXM  Geysers          76.85  50 eP      P       03 09 47.0 +2.1
      comp=Z,16nm,0.9s
IDI   Anoyia           76.88 305   P     P       03 09 43.0 -2.0
      comp=Z,20nm,0.8s,baz=37,slow=8.8,SNR=8.0
IDI   Anoyia           76.88 305 eP      P       03 09 43.0 -2.0
      comp=Z,39nm,1.0s
IDI   Anoyia           76.88 305   P     P       03 09 43.0 -2.0
      comp=Z,20nm,0.8s,baz=37,slow=8.8,SNR=8.0
FUORN Ofenpass-Fuorn   76.93 322 eP      P       03 09 45.6 +0.2
      comp=Z,29nm,0.8s
EGMT  Eagleton         76.95  36 eP      P       03 09 46.0 +0.8
      comp=Z,16nm,0.8s
EGMT  Eagleton         76.95  36   P     P       03 09 45.8 +0.5
      baz=319
CDF   Champ du Feu     76.95 324 eP      P       03 09 44.4 -0.8
CDF                              pmax    pmax
      comp=Z,10.0nm,0.7s
HRY   Holter Researc   76.98  38 eP      P       03 09 46.7 +1.2
CWF   Charnwood Fore   76.98 332 eP      P       03 09 44.3 -0.9
CWF                              IAmb    IAmb    03 09 45.1
      comp=Z,20nm,0.7s
BAIF  Baives           76.99 327 eP      P       03 09 44.0 -1.3
BAIF                             pmax    pmax
      comp=Z,17nm,1.2s
DAVOX Davos/Dischmat   76.99 322   P     P       03 09 45.5 -0.2
      comp=Z,26nm,0.6s,baz=33,slow=2.7,SNR=61
DAVOX                            LR      LR      03 47 51.8
      comp=Z,193nm,20.2s,baz=60,slow=39
DAVOX Davos/Dischmat   76.99 322   P     P       03 09 45.5 -0.2
      comp=Z,26nm,0.6s,baz=33,slow=2.7,SNR=61
DAVOX                            LR      LR      03 47 51.8
      comp=Z,193nm,20.2s,baz=60,slow=39
ORV   Oroville         77.08  48 eP      P       03 09 46.2 +0.2
      comp=Z,11nm,0.6s
ORV   Oroville         77.08  48 eP      P       03 09 46.2 +0.2
ORV                              pmax    pmax
      comp=Z,11nm,0.6s
IDGL  Inch Island, C   77.10 336 eP      P       03 09 46.0 +0.2
ECH   Echery           77.15 324 eP      P       03 09 46.0 -0.3
      comp=Z,13nm,0.9s
ECH   Echery           77.15 324 eP      P       03 09 46.0 -0.3
ECH                              pmax    pmax
      comp=Z,13nm,0.9s
GMM   Mts of Mourne    77.32 335 eP      P       03 09 46.4 -0.7
TUE   Stuetta          77.47 322 eP      P       03 09 48.1 -0.3
      comp=Z,24nm,0.6s
WME   Myndd Eilian     77.48 334 eP      P       03 09 47.3 -0.7
BEKR  Beckworth        77.50  48 eP      P       03 09 49.3 +0.7
      comp=Z,18nm,0.8s
FOEL  Foel Wylfa       77.52 333 eP      P       03 09 47.9 -0.4
FOEL                             IAmb    IAmb    03 09 48.8
      comp=Z,49nm,0.7s
WLF1  Llynfaes         77.60 334 eP      P       03 09 47.9 -0.7
WLF1                             IAmb    IAmb    03 09 49.1
      comp=Z,65nm,1.0s
DLMT  Dillon           77.61  39 eP      P       03 09 50.3 +1.2
      comp=Z,31nm,0.8s
YLL   Llanberis        77.65 333 eP      P       03 09 48.4 -0.6
HAU   Haudompre        77.66 325 eP      P       03 09 48.1 -1.1
HAU                              pmax    pmax
      comp=Z,9.0nm,0.6s
YRC   Rhoscolyn        77.69 334 eP      P       03 09 48.8 -0.4
LLW   Llanuwychllyn    77.72 333 eP      P       03 09 48.6 -0.7
AFDM  Forest Hills D   77.79  49 eP      P       03 09 50.9 +0.9
      comp=Z,5.5nm,0.6s
MCMT  McKenzie Canyo   77.88  40 eP      P       03 09 51.6 +0.9
BOZ   Bozeman (W)      77.90  39 eP      P       03 09 51.8 +1.1
      comp=Z,12nm,0.9s
BOZ   Bozeman (W)      77.90  39 eP      P       03 09 51.8 +1.1
BOZ                              pmax    pmax
      comp=Z,12nm,0.9s
BOZ   Bozeman (W)      77.90  39   P     P       03 09 51.3 +0.6
      baz=318
HLID  Hailey           78.03  42 eP      P       03 09 51.0 -0.5
      comp=Z,11nm,0.8s
HLID  Hailey           78.03  42   P     P       03 09 52.7 +1.2
      baz=317
STRD  Stroud           78.07 331 eP      P       03 09 50.5 -0.8
STRD                             IAmb    IAmb    03 09 50.6
      comp=Z,100nm,1.1s
WOL   Wolverton        78.11 331 eP      P       03 09 50.2 -1.3
PAHR  Pah Rah Range    78.15  47 eP      P       03 09 53.0 +0.8
      comp=Z,16nm,0.8s
SWN1  Swindon          78.15 331⇑eP      P       03 09 50.9 -0.8
SWN1                             IAmb    IAmb    03 09 52.5
      comp=Z,47nm,0.5s
MCH1  Michaelchurch    78.19 332 eP      P       03 09 51.1 -0.9
MCH1                             IAmb    IAmb    03 09 52.2
      comp=Z,35nm,0.6s
MONM  Monmouth         78.25 332 eP      P       03 09 51.8 -0.5
MONM                             IAmb    IAmb    03 09 52.1
      comp=Z,51nm,0.8s
DSB   Dublin           78.29 335 eP      P       03 09 52.2 -0.3
VCNR  Virginia City    78.29  48 eP      P       03 09 54.4 +1.3
      comp=Z,15nm,0.7s
CAN   Canberra         78.42 163 eP      P       03 09 53.6 +0.3
      comp=Z,21nm,0.8s
CAN   Canberra         78.42 163 eP      P       03 09 53.6 +0.3
CAN                              pmax    pmax
      comp=Z,21nm,0.8s
PNTR  Pine Nut         78.46  48 eP      P       03 09 55.3 +1.2
      comp=Z,26nm,0.7s
SENIN Lac Senin/Sane   78.49 323 eP      P       03 09 54.0 -0.1
      comp=Z,12nm,0.9s
AQU   L'Aquila         78.50 317 eP      P       03 09 54.6 +0.7
QLMT  Earthquake Lak   78.56  39 eP      P       03 09 55.7 +1.3
GCMT  Greycliff        78.67  38 eP      P       03 09 56.3 +1.3
YHB   Horse Butte      78.73  39 eP      P       03 09 56.9 +1.5
      comp=Z,25nm,0.8s
YERR  Yerington        78.74  48 eP      P       03 09 56.5 +1.0
      comp=Z,19nm,0.7s
CMB   Columbia Colle   78.75  49 eP      P       03 09 56.2 +0.8
      comp=Z,12nm,0.8s
CMB   Columbia Colle   78.75  49 eP      P       03 09 56.2 +0.8
CMB                              pmax    pmax
      comp=Z,12nm,0.8s
BMN   Battle Mountai   78.82  45 eP      P       03 09 57.3 +1.4
      comp=Z,16nm,0.6s
BMN   Battle Mountai   78.82  45 eP      P       03 09 57.3 +1.4
BMN                              pmax    pmax
      comp=Z,16nm,0.6s
RSBS  Rosebush, Pemb   78.83 333 eP      P       03 09 54.3 -1.2
RSBS                             IAmb    IAmb    03 09 54.8
      comp=Z,8.1nm,0.7s
YHH   Holmes Hill      78.87  39 eP      P       03 09 53.9 -2.4
      comp=Z,4.3nm,0.8s
YMR   Madison River    78.90  39 eP      P       03 09 57.9 +1.5
      comp=Z,7.7nm,0.8s
WAKR  Walker           78.96  48 eP      P       03 09 58.3 +1.6
      comp=Z,13nm,0.6s
DGMT  Dagmar           78.98  33 eP      P       03 09 57.0 +0.6
      comp=Z,18nm,0.8s
DGMT  Dagmar           78.98  33   P     P       03 09 57.0 +0.6
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      baz=322
IGLA  Glengowla, Co    79.08 336 eP      P       03 09 55.9 -0.9
YFT   Old Faithful     79.12  39 eP      P       03 10 00.4 +2.8
      comp=Z,9.5nm,0.7s
LKWY  Lake             79.25  39 eP      P       03 09 59.7 +1.4
      comp=Z,13nm,0.9s
LKWY  Lake             79.25  39 eP      P       03 09 59.7 +1.4
LKWY                             pmax    pmax
      comp=Z,13nm,0.9s
YPP   Pitchstone Pla   79.28  39 eP      P       03 10 00.9 +2.4
      comp=Z,6.3nm,0.7s
H17A  Grant Village    79.29  39 eP      P       03 10 01.1 +2.6
      comp=Z,17nm,0.8s
H17A  Grant Village    79.29  39   P     P       03 10 00.9 +2.4
      baz=319
LOR   Lormes           79.30 326 eP      P       03 09 56.9 -1.3
LOR                              pmax    pmax
      comp=Z,17nm,0.9s
KVN   Kaiserville      79.32  47 eP      P       03 09 59.8 +1.1
      comp=Z,21nm,0.7s
KVN   Kaiserville      79.32  47 eP      P       03 09 59.8 +1.1
KVN                              pmax    pmax
      comp=Z,21nm,0.7s
RLMT  Red Lodge        79.36  38 eP      P       03 09 60.0 +1.1
      comp=Z,9.1nm,0.7s
RLMT  Red Lodge        79.36  38   P     P       03 09 59.6 +0.7
      baz=319
RYN   Ryan             79.39  47 eP      P       03 10 00.2 +1.2
      comp=Z,18nm,0.7s
LPL   La Plagne        79.39 323 eP      P       03 09 58.2 -0.8
LPL                              pmax    pmax
      comp=Z,13nm,0.8s
LPG   La Plagne        79.39 323 eP      P       03 09 59.1  0.0
LPG                              pmax    pmax
      comp=Z,14nm,0.7s
FLWY  Flagg Ranch      79.47  39 eP      P       03 10 01.6 +2.2
      comp=Z,7.1nm,0.9s
IMW   Indian Meadow    79.49  40 eP      P       03 10 01.4 +1.7
      comp=Z,8.2nm,0.8s
SSF   Saint Saulge     79.61 326 eP      P       03 09 58.6 -1.3
SSF                              pmax    pmax
      comp=Z,7.0nm,0.7s
FXWY  Fox Creek        79.64  40 eP      P       03 10 02.2 +1.7
      comp=Z,4.7nm,0.7s
NV01  Mina Array Sit   79.65  47 eP      P       03 10 01.4 +0.9
NVAR  Mina Array Bea   79.65  47   P     P       03 10 01.8 +1.2
      comp=Z,24nm,0.6s,baz=298,slow=5.1,SNR=166
NVAR  Mina Array Bea   79.65  47   P     P       03 10 01.8 +1.2
      comp=Z,24nm,0.6s,baz=298,slow=5.1,SNR=166
ELK   Elko             79.65  44   P     P       03 10 01.8 +1.3
      comp=Z,4.5nm,0.7s,baz=313,slow=5.5,SNR=26
ELK   Elko             79.65  44 eP      P       03 10 01.7 +1.2
      comp=Z,4.9nm,0.8s
ELK   Elko             79.65  44   P     P       03 10 01.8 +1.3
      comp=Z,4.5nm,0.7s,baz=313,slow=5.5,SNR=26
ATD   Arta Tunnel      79.69 276   P     P       03 10 01.9 +1.0
      comp=Z,8.9nm,0.8s,baz=346,slow=5.4,SNR=4.2
ATD   Arta Tunnel      79.69 276 eP      P       03 10 02.3 +1.5
      comp=Z,10nm,0.9s
ATD   Arta Tunnel      79.69 276   P     P       03 10 01.9 +1.0
      comp=Z,9.0nm,0.8s,baz=346,slow=5.4,SNR=4.2
MOOW  Moose Ponds      79.69  40 eP      P       03 10 02.2 +1.5
      comp=Z,10nm,0.8s
NV11  Mina Array Sit   79.73  47 eP      P       03 10 01.9 +1.0
      comp=Z,0.8nm,0.7s
TPAW  Teton Pass       79.79  40 eP      P       03 10 01.7 +0.4
      comp=Z,5.5nm,0.8s
SMF   Signal de Mont   79.80 325 eP      P       03 10 00.4 -0.5
SMF                              pmax    pmax
      comp=Z,27nm,1.4s
OMMB  Old Mammoth Mi   79.83  48 eP      P       03 10 01.4 -0.3
      comp=Z,3.4nm,0.8s
LOHW  Long Hollow      79.86  40 eP      P       03 10 02.8 +1.2
      comp=Z,5.3nm,0.9s
FLN   La Foliniere     79.89 329 eP      P       03 10 02.7 +1.4
FLN                              pmax    pmax
      comp=Z,70nm,1.6s
AVF   Avril sur Loir   79.89 325 eP      P       03 10 00.2 -1.2
AVF                              pmax    pmax
      comp=Z,48nm,1.7s
SNOW  Snow King Moun   79.90  40 eP      P       03 10 03.7 +1.8
      comp=Z,5.7nm,0.7s
REDW  Red Top Meadow   79.93  40 eP      P       03 10 03.5 +1.5
      comp=Z,7.2nm,0.8s
HVU   Hansel Valley    80.16  42 eP      P       03 10 04.6 +1.4
      comp=Z,6.5nm,0.7s
HVU   Hansel Valley    80.16  42 eP      P       03 10 04.6 +1.4
HVU                              pmax    pmax
      comp=Z,7.0nm,0.7s
JSA   Saint Aubin      80.19 330 eP      P       03 10 02.3 -0.6
JSA                              IAmb    IAmb    03 10 02.9
      comp=Z,27nm,0.7s
ORIF  Oris-en-Rattie   80.23 323 eP      P       03 10 02.9 -0.5
ORIF                             pmax    pmax
      comp=Z,24nm,1.3s
AHID  Auburn Hatcher   80.26  40 eP      P       03 10 04.9 +1.1
      comp=Z,5.8nm,0.8s
GRR   Gorron           80.34 329 eP      P       03 10 02.2 -1.6
GRR                              pmax    pmax
      comp=Z,80nm,1.7s
PAGB  Antelope Grade   80.44  51 eP      P       03 10 05.9 +1.3
      comp=Z,19nm,0.7s
BGU   Big Grassy Mou   80.66  43 eP      P       03 10 07.3 +1.4
      comp=Z,3.3nm,0.7s
ULM   Lac du Bonnet    80.67  27   P     P       03 10 04.6 -0.9
      comp=Z,9.1nm,0.8s,baz=331,slow=6.5,SNR=17
ULM   Lac du Bonnet    80.67  27 eP      P       03 10 05.0 -0.5
      comp=Z,18nm,1.1s
ULM   Lac du Bonnet    80.67  27 eP      P       03 10 05.0 -0.5
ULM                              pmax    pmax
      comp=Z,9.0nm,0.8s
ULM   Lac du Bonnet    80.67  27   P     P       03 10 04.6 -0.9
      comp=Z,9.1nm,0.8s,baz=331,slow=6.5,SNR=17
SPUT  South Promonto   80.67  42 eP      P       03 10 07.6 +1.6
      comp=Z,4.4nm,0.9s
TCF   Toulx Ste Croi   80.77 326 eP      P       03 10 05.3 -0.9
TCF                              pmax    pmax
      comp=Z,87nm,1.8s
VIVF  Saint-Julien-l   80.82 324 eP      P       03 10 05.5 -1.0
VIVF                             pmax    pmax
      comp=Z,16nm,1.2s
BW06  Boulder Array    81.00  40 eP      P       03 10 08.3 +0.5
      comp=Z,10nm,0.8s
BW06  Boulder Array    81.00  40   P     P       03 10 08.1 +0.3
      baz=320
PD31  Pinedale Array   81.00  40 eP      P       03 10 08.3 +0.5
PDAR  Pinedale Array   81.00  40   P     P       03 10 08.0 +0.2
      comp=Z,9.3nm,0.7s,baz=353,slow=1.3,SNR=103
PDAR  Pinedale Array   81.00  40 eP      P       03 10 07.7  0.0
PDAR  Pinedale Array   81.00  40   P     P       03 10 08.0 +0.2
      comp=Z,9.7nm,0.7s,baz=353,slow=1.3,SNR=103
VES   Vestal, Richgr   81.03  50   P     P       03 10 07.6 -0.1
      baz=315,SNR=7.7
SGMF  Saint Gilles     81.10 330 eP      P       03 10 06.6 -1.3
SGMF                             pmax    pmax
      comp=Z,34nm,1.1s
CWC   Cottonwood Cre   81.18  49   P     P       03 10 09.2 +0.4
      baz=316
GRAC  Grapevine Rang   81.19  48   P     P       03 10 09.9 +1.2
      baz=316
R11A  Troy Canyon, C   81.20  46 eP      P       03 10 08.2 -0.6
      comp=Z,7.1nm,1.1s
R11A  Troy Canyon, C   81.20  46   P     P       03 10 09.3 +0.4
      baz=317
PKM   Mcpherson Peak   81.28  51   P     P       03 10 10.3 +0.9
      baz=315
ROSF  Rostrenen        81.31 330 eP      P       03 10 07.8 -1.2
ROSF                             pmax    pmax
      comp=Z,17nm,0.6s
DUG   Dugway, Tooele   81.31  43 eP      P       03 10 10.5 +1.2
DUG   Dugway, Tooele   81.31  43 eP      P       03 10 10.5 +1.2
DUG   Dugway, Tooele   81.31  43   P     P       03 10 10.3 +1.0
      baz=318
TCUT  Toone Canyon     81.34  42 eP      P       03 10 11.1 +1.4
      comp=Z,29nm,0.6s
VAE   Valguarnera      81.47 313   LR    LR      03 50 59.8
      comp=Z,68nm,18.8s,baz=120,slow=39
VAE   Valguarnera      81.47 313   LR    LR      03 50 59.8
      comp=Z,68nm,18.8s,baz=120,slow=39
MFF   Saint Martin d   81.50 327 eP      P       03 10 09.3 -0.7
ISA   Isabella, Lake   81.51  50 eP      P       03 10 10.5 +0.1
      comp=Z,3.8nm,0.6s
ISA   Isabella, Lake   81.51  50 eP      P       03 10 10.5 +0.1
ISA                              pmax    pmax
      comp=Z,4.0nm,0.6s
ISA   Isabella, Lake   81.51  50   P     P       03 10 10.0 -0.4
      baz=315,SNR=5.9
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DAC	Darwin (Calif)	81.57	49	*e*P	P	03 10 11.9	+1.0
	comp=Z,10nm,0.7s						
DAC	Darwin (Calif)	81.57	49	*e*P	P	03 10 11.9	+1.0
DAC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JLU	Jordanelle	81.70	42	*e*P	P	03 10 12.7	+1.2
	comp=Z,5.4nm,0.7s						
MPMC	Manual Prospec	81.79	49	P	P	03 10 12.6	+0.6
	baz=316,SNR=15						
TPNV	Topopah Spring	81.84	47	*e*P	P	03 10 13.3	+1.0
	comp=Z,18nm,0.6s						
TPNV	Topopah Spring	81.84	47	*e*P	P	03 10 13.3	+1.0
TPNV				pmax	pmax		
	comp=Z,18nm,0.6s						
TPNV	Topopah Spring	81.84	47	P	P	03 10 13.2	+1.0
	baz=316						
FURC	Furnace Creek,	81.85	48	P	P	03 10 13.2	+1.2
	baz=316,SNR=23						
RJF	Les Rejaudoux	81.85	326	*e*P	P	03 10 12.5	+0.6
RJF				pmax	pmax		
	comp=Z,184nm,2.3s						
NLU	North Lily Min	81.87	43	*e*P	P	03 10 13.7	+1.3
	comp=Z,6.7nm,1.0s						
PSUT	Pine Spring	81.99	45	*e*P	P	03 10 14.4	+1.3
	comp=Z,6.6nm,0.9s						
MPU	Maple Canyon	82.05	43	*e*P	P	03 10 14.5	+1.2
	comp=Z,6.1nm,0.8s						
LRMC	Laurel Mtn Rad	82.09	49	P	P	03 10 14.0	+0.5
	baz=316,SNR=10						
AGMN	Agassiz Nation	82.32	28	*e*P	P	03 10 13.6	-0.7
	comp=Z,9.1nm,0.9s						
EDW2	Edwards Air Fo	82.34	50	P	P	03 10 15.3	+0.5
	baz=316,SNR=14						
LFF	La Frestale	82.47	326	*e*P	P	03 10 14.6	-0.6
LFF				pmax	pmax		
	comp=Z,20nm,0.6s						
RSSD	Black Hills	82.49	36	*e*P	P	03 10 16.2	+0.7
	comp=Z,12nm,0.9s						
RSSD	Black Hills	82.49	36	*e*P	P	03 10 16.2	+0.7
RSSD				pmax	pmax		
	comp=Z,12nm,0.9s						
RSSD	Black Hills	82.49	36	P	P	03 10 15.6	+0.1
	baz=323						
K22A	Casper	82.52	38	*e*P	P	03 10 16.0	+0.3
	comp=Z,5.7nm,0.8s						
K22A	Casper	82.52	38	P	P	03 10 15.9	+0.1
	baz=321						
SHOC	Shoshone, Teco	82.59	48	P	P	03 10 16.7	+0.7
	baz=316						
GSC	Goldstone, Bar	82.72	49	*e*P	P	03 10 17.6	+0.8
	comp=Z,9.9nm,0.7s						
GSC	Goldstone, Bar	82.72	49	P	P	03 10 17.5	+0.7
	baz=316,SNR=10						
SHPR	Sheep Range	82.77	47	*e*P	P	03 10 18.4	+1.3
	comp=Z,10nm,0.8s						
MWC	Mount Wilson	82.77	50	*e*P	P	03 10 16.9	-0.3
	comp=Z,9.4nm,0.7s						
MWC	Mount Wilson	82.77	50	*e*P	P	03 10 16.9	-0.3
MWC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TMUT	Trail Mountain	82.80	43	*e*P	P	03 10 18.7	+1.3
	comp=Z,9.8nm,0.7s						
MSU	Marysvale	82.89	44	*e*P	P	03 10 18.0	+0.2
MSU	Marysvale	82.89	44	*e*P	P	03 10 18.0	+0.2
CCUT	Cedar City	82.98	45	*e*P	P	03 10 19.6	+1.4
	comp=Z,3.0nm,0.7s						
BFSC	Mount Baldy Ra	82.99	50	P	P	03 10 19.2	+0.9
	baz=316						
SZCU	Shurtz Canyon	83.09	45	*e*P	P	03 10 20.1	+1.2
	comp=Z,2.7nm,0.9s						
Q16A	Castle Valley	83.11	43	*e*P	P	03 10 20.3	+1.5
	comp=Z,3.7nm,0.9s						
TUQ	Turquoise Moun	83.12	48	P	P	03 10 19.6	+0.7
	baz=317,SNR=5.9						
MTPU	Mount Pierson	83.24	44	*e*P	P	03 10 21.8	+2.1
	comp=Z,6.6nm,0.8s						
SCHQ	Schefferville	83.26	9	P	P	03 10 18.6	-0.5
	comp=Z,6.2nm,0.6s,baz=5.7,slow=5.6,SNR=20						
SCHQ	Schefferville	83.26	9	*e*P	P	03 10 19.0	-0.1
	comp=Z,7.7nm,0.8s						
SCHQ	Schefferville	83.26	9	P	P	03 10 18.6	-0.5
	comp=Z,6.2nm,0.6s,baz=5.7,slow=5.6,SNR=20						
SRU	San Rafael Swe	83.29	43	*e*P	P	03 10 21.2	+1.4
	comp=Z,5.9nm,0.7s						
SRU	San Rafael Swe	83.29	43	*e*P	P	03 10 21.2	+1.4
SRU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HEC	Hector,Ludlow	83.33	49	P	P	03 10 20.7	+0.8
	baz=317						
PKCU	Pink Cliffs	83.61	45	*e*P	P	03 10 23.7	+2.1
	comp=Z,9.4nm,0.8s						
O20A	White River Ci	83.65	40	*e*P	P	03 10 22.2	+0.6
	comp=Z,12nm,0.7s						
O20A	White River Ci	83.65	40	P	P	03 10 22.1	+0.4
	baz=320						
KNB	Kanab	83.66	45	*e*P	P	03 10 23.5	+1.8
	comp=Z,5.5nm,0.7s						
KNB	Kanab	83.66	45	*e*P	P	03 10 23.5	+1.8
KNB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MURC	Murrieta	83.72	50	P	P	03 10 22.1	+0.2
	baz=316						
GMRC	Granite Mounta	83.74	48	P	P	03 10 22.9	+0.8
	baz=317,SNR=14						
LDFC	Landfair	83.83	48	*e*P	P	03 10 23.7	+1.1
	comp=Z,15nm,0.8s						
PHWY	Pilot Hill	84.07	38	*e*P	P	03 10 24.0	+0.1
	comp=Z,7.7nm,0.8s						
BELC	Belle Mtn. Jos	84.12	49	P	P	03 10 24.4	+0.3
	baz=317,SNR=8.5						
EYMN	Ely	84.13	26	*e*P	P	03 10 23.1	-0.5
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	84.13	50	P	P	03 10 24.2	+0.1
	comp=Z,10.0nm,0.8s,baz=337,slow=4.2,SNR=12						
PFO	Pinyon Flats O	84.13	50	*e*P	P	03 10 24.7	+0.6
	comp=Z,9.9nm,0.8s						
PFO	Pinyon Flats O	84.13	50	*e*P	P	03 10 24.7	+0.6
PFO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PFO	Pinyon Flats O	84.13	50	P	P	03 10 24.5	+0.4
	baz=317,SNR=7.1						
PFO	Pinyon Flats O	84.13	50	P	P	03 10 24.2	+0.1
	comp=Z,10.0nm,0.8s,baz=337,slow=4.2,SNR=12						
XPFO	Pion Flat	84.14	50	*e*P	P	03 10 24.7	+0.5
	comp=Z,10nm,0.8s						
N23A	Red Feather La	84.17	39	*e*P	P	03 10 25.6	+1.3
	comp=Z,7.7nm,0.9s						
N23A	Red Feather La	84.17	39	P	P	03 10 24.3	0.0
	baz=322						
109C	Camp Elliot, M	84.28	51	P	P	03 10 25.0	+0.3
	baz=316						
SUSD	Miller	84.36	32	P	P	03 10 24.8	-0.2
	baz=326						
U15A	North Rim	84.38	45	*e*P	P	03 10 24.4	-1.2
	comp=Z,17nm,0.8s						
PV09	Paradox Valley	84.46	42	*e*P	P	03 10 24.1	-1.8
IRM	Iron Mountain	84.49	49	P	P	03 10 26.8	+1.0
	baz=317,SNR=12						
PV21	Cone Mtn., Par	84.50	42	*e*P	P	03 10 27.3	+1.3
	comp=Z,14nm,0.7s						
W13A	Hualapai Mount	84.50	47	*e*P	P	03 10 27.0	+0.9
	comp=Z,6.3nm,0.8s						
PV23	Carpenter Ridg	84.56	42	*e*P	P	03 10 27.6	+1.2
	comp=Z,14nm,0.8s						
PV10	Paradox Valley	84.60	42	*e*P	P	03 10 28.6	+2.0
	comp=Z,18nm,0.8s						
PV14	Lion Creek, Pa	84.61	42	*e*P	P	03 10 27.9	+1.2
	comp=Z,13nm,0.9s						
PV04	Paradox Valley	84.66	42	*e*P	P	03 10 29.2	+2.4
	comp=Z,5.5nm,0.8s						
BC3	Big Chuckawall	84.68	49	P	P	03 10 27.4	+0.5
	baz=317,SNR=7.4						
PV19	Morning Glory	84.68	42	*e*P	P	03 10 28.0	+1.1
	comp=Z,6.0nm,0.9s						
PV16	Nyswonger Mesa	84.72	42	*e*P	P	03 10 28.2	+1.1
	comp=Z,4.4nm,0.7s						
PV17	East Wray Mesa	84.72	42	*e*P	P	03 10 28.3	+1.2
	comp=Z,8.0nm,0.8s						
PV11	David Mesa, Pa	84.75	42	*e*P	P	03 10 28.4	+1.2
	comp=Z,8.9nm,0.7s						
PV07	Paradox Valley	84.75	42	*e*P	P	03 10 28.4	+1.1
	comp=Z,6.3nm,0.8s						
PV12	Saucer Basin,	84.77	42	*e*P	P	03 10 28.6	+1.2
	comp=Z,5.7nm,0.7s						
PV03	Paradox Valley	84.79	42	*e*P	P	03 10 28.6	+1.1
	comp=Z,4.3nm,0.7s						
PV13	Radium Mtn., P	84.88	42	*e*P	P	03 10 29.2	+1.2
	comp=Z,4.8nm,0.9s						
PV02	Paradox Valley	84.89	42	*e*P	P	03 10 29.4	+1.4
	comp=Z,5.5nm,0.7s						
PV15	Paradox Valley	84.91	42	*e*P	P	03 10 29.3	+1.2
	comp=Z,15nm,0.8s						
PDMCI	Parker Dam,Lak	84.94	48	P	P	03 10 28.7	+0.7
	baz=318,SNR=6.9						
SMCO	Snowmass	85.01	40	*e*P	P	03 10 30.1	+1.3
	comp=Z,12nm,0.7s						
PV01	Paradox Valley	85.03	42	*e*P	P	03 10 29.9	+1.2
	comp=Z,6.9nm,0.6s						
IKP	In-Ko-Pah, Jac	85.03	50	P	P	03 10 29.3	+0.7
	baz=317						
Y12C	Blythe	85.14	49	*e*P	P	03 10 30.4	+1.4
	comp=Z,19nm,0.6s						
Y12C	Blythe	85.14	49	P	P	03 10 30.0	+1.0
	baz=318,SNR=7.5						
ISCO	Idaho Springs	85.18	39	*e*P	P	03 10 30.6	+1.1
	comp=Z,7.3nm,0.7s						
ISCO	Idaho Springs	85.18	39	*e*P	P	03 10 30.6	+1.1
ISCO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ISCO	Idaho Springs	85.18	39	P	P	03 10 30.4	+0.9
	baz=322,SNR=13						
GLA	Glamis	85.48	49	*e*P	P	03 10 32.1	+1.3
	comp=Z,12nm,0.8s						
GLA	Glamis	85.48	49	*e*P	P	03 10 32.1	+1.3
GLA				pmax	pmax		
	comp=Z,12nm,0.8s						
GLA	Glamis	85.48	49	P	P	03 10 31.7	+0.9
	baz=317						
KEST	Kesra	85.51	315	P	P	03 10 30.8	-0.1
	comp=Z,7.9nm,1.0s,baz=353,slow=7.4,SNR=3.9						
KEST	Kesra	85.51	315	*e*P	P	03 10 30.8	-0.1
	comp=Z,13nm,1.1s						
KEST	Kesra	85.51	315	P	P	03 10 30.8	-0.1
	comp=Z,7.9nm,1.0s,baz=353,slow=7.4,SNR=3.9						
WUAZ	Wupatki	85.56	45	*e*P	P	03 10 33.0	+1.6
	comp=Z,7.3nm,0.8s						
WUAZ	Wupatki	85.56	45	P	P	03 10 32.6	+1.3
	baz=319,SNR=7.7						
F37A	Hinrichs Farm,	85.67	28	P	P	03 10 31.7	+0.2
	baz=330						
F38A	Pierce - Schro	85.73	27	P	P	03 10 31.7	0.0
	baz=330						
MVCO	Mesa Verde	85.77	43	*e*P	P	03 10 33.6	+1.2
	comp=Z,8.3nm,0.8s						
MVCO	Mesa Verde	85.77	43	P	P	03 10 33.2	+0.8
	baz=320,SNR=8.8						
E39A	Mellen	85.81	26	P	P	03 10 32.0	-0.2
	baz=331						
Y14A	Wickenburg	85.85	47	*e*P	P	03 10 34.0	+1.3
	comp=Z,8.1nm,0.7s						
D41A	Chassel	85.86	25	P	P	03 10 31.5	-0.9
	baz=333						
ECSD	EROS Data Cent	85.89	31	*e*P	P	03 10 32.7	+0.1
	comp=Z,13nm,0.8s						
ECSD	EROS Data Cent	85.89	31	P	P	03 10 32.3	-0.3
	baz=327,SNR=11						
OGNE	Ogallala	85.92	36	*e*P	P	03 10 33.8	+0.9
	comp=Z,34nm,0.7s						
OGNE	Ogallala	85.92	36	P	P	03 10 32.8	-0.1
	baz=324						
SPMN	Marine on St.	86.04	28	*e*P	P	03 10 33.2	-0.1
	comp=Z,11nm,0.8s						
SPMN	Marine on St.	86.04	28	P	P	03 10 32.8	-0.6
	baz=330						
Q24A	Divide	86.06	39	P	P	03 10 34.3	+0.3
	baz=322,SNR=5.0						
F39A	Loretta	86.09	27	P	P	03 10 33.0	-0.6
	baz=331						
S22A	4UR Ranch, Cre	86.20	41	*e*P	P	03 10 36.1	+1.4
	comp=Z,5.1nm,0.8s						
S22A	4UR Ranch, Cre	86.20	41	P	P	03 10 35.5	+0.9
	baz=321,SNR=6.9						
E41A	Kenton	86.26	25	P	P	03 10 33.6	-0.7
	baz=332						
MATQ	Matagami	86.31	17	P	P	03 10 33.9	-0.7
	baz=340						
X16A	Lo Mia Camp, P	86.35	46	*e*P	P	03 10 36.8	+1.5
	comp=Z,6.9nm,0.8s						
F40A	Park Falls	86.36	26	P	P	03 10 34.1	-0.8
	baz=332						
CHGQ	Chibougamau	86.85	15	P	P	03 10 36.1	-1.1
	baz=343						
SDCO	Great Sand Dun	86.85	40	*e*P	P	03 10 38.8	+1.0
	comp=Z,3.6nm,0.8s						
SDCO	Great Sand Dun	86.85	40	P	P	03 10 38.3	+0.4
	baz=322,SNR=6.7						
G40A	Rib Lake	86.91	27	P	P	03 10 37.3	-0.3
	baz=332						
H39A	Augusta	87.05	28	P	P	03 10 37.6	-0.7
	baz=331						
X18A	Snowflake	87.07	45	*e*P	P	03 10 40.4	+1.6
	comp=Z,6.9nm,0.6s						
LSQQ	Lebel-sur-Quev	87.12	17	P	P	03 10 37.3	-1.2
	baz=341						
BGNE	Belgrade	87.21	34	*e*P	P	03 10 39.7	+0.6
	comp=Z,38nm,0.8s						
BGNE	Belgrade	87.21	34	P	P	03 10 39.0	-0.2
	baz=326,SNR=5.2						
D46A	Sault St. Mari	87.36	22	P	P	03 10 38.8	-0.9
	baz=336						
H40A	Chili	87.41	27	P	P	03 10 39.7	-0.3
	baz=332						
214A	Organ Pipe Nat	87.43	49	P	P	03 10 40.2	-0.2
	baz=318						
D47A	Chapleau	87.47	21	P	P	03 10 40.0	-0.3
	baz=336						
H41A	Junction City	87.66	27	P	P	03 10 40.7	-0.5
	baz=332						
I39A	Houston	87.68	28	*e*P	P	03 10 41.2	-0.2
	comp=Z,21nm,0.8s						
I39A	Houston	87.68	28	P	P	03 10 41.0	-0.4
	baz=331						
T25A	Trinidad	87.86	40	*e*P	P	03 10 43.5	+0.9
	comp=Z,14nm,1.1s						
T25A	Trinidad	87.86	40	P	P	03 10 42.9	+0.2
	baz=323						
VLDQ	Val d'Or	87.91	17	*e*P	P	03 10 41.3	-1.0
	comp=Z,14nm,0.9s						
I40A	Norwalk	87.97	28	P	P	03 10 41.8	-0.9
	baz=331						
E47A	Iron Bridge	87.98	22	P	P	03 10 42.3	-0.4
	baz=336						
J39A	Decorah	88.07	28	P	P	03 10 42.6	-0.7
	baz=331						
I41A	Arkdale	88.08	27	P	P	03 10 42.6	-0.7
	baz=332						
H42A	Shiocton	88.13	26	P	P	03 10 43.1	-0.4
	baz=333						
E48A	Lockeyer	88.26	21	P	P	03 10 42.6	-1.4
	baz=337						
TUC	Tucson	88.30	47	P	P	03 10 43.9	-0.7
	baz=320						
J40A	Soldiers Grove	88.36	28	P	P	03 10 43.7	-0.9
	baz=331						
D51A	Lot 18 Range I	88.41	19	P	P	03 10 43.3	-1.4
	baz=339						
H43A	Windswept, Lux	88.42	25	P	P	03 10 43.9	-0.9
	baz=333						
I42A	Draeger Farm,	88.55	26	P	P	03 10 45.6	+0.1
	baz=332						
K39A	Oelwein	88.55	29	P	P	03 10 44.9	-0.7
	baz=330						
G46A	Petoskey	88.56	23	P	P	03 10 44.2	-1.3
	baz=335						
ANMO	Albuquerque	88.57	43	P	P	03 10 47.2	+1.2
	comp=Z,1.0nm,0.6s,baz=268,slow=3.9,SNR=4.8						
ANMO	Albuquerque	88.57	43	*e*P	P	03 10 48.3	+2.3
	comp=Z,2.2nm,1.1s						
ANMO	Albuquerque	88.57	43	P	P	03 10 47.1	+1.2
	baz=322						
ANMO	Albuquerque	88.57	43	P	P	03 10 47.2	+1.2
	comp=Z,1.0nm,0.6s,baz=268,slow=3.9,SNR=4.8						
J41A	Loganville	88.64	27	P	P	03 10 45.7	-0.2
	baz=332						
CBKS	Cedar Bluff	88.67	36	*e*P	P	03 10 46.6	+0.4
	comp=Z,14nm,0.6s						
CBKS	Cedar Bluff	88.67	36	*e*P	P	03 10 46.6	+0.4
CBKS				pmax	pmax		
	comp=Z,14nm,0.6s						
CBKS	Cedar Bluff	88.67	36	P	P	03 10 46.0	-0.2
	baz=326						
ES19	SONSECA Array	88.73	326	*e*P	P	03 10 45.6	-0.9
SCIA	State Center	88.75	30	*e*P	P	03 10 47.5	+1.1
SCIA	State Center	88.75	30	P	P	03 10 47.0	+0.6
	baz=330						
D52A	ZEK Kipawa Sen	88.75	18	P	P	03 10 46.3	-0.1
	baz=340						
ESDC	Sonseca Array	88.78	326	P	P	03 10 45.8	-0.9
	comp=Z,2.5nm,0.7s,baz=24,slow=4.3,SNR=10						
ESDC	Sonseca Array	88.78	326	P	P	03 10 45.8	-0.9
	comp=Z,2.7nm,0.7s,baz=24,slow=4.3,SNR=10						
I43A	Langenfeld Bro	88.81	26	P	P	03 10 46.3	-0.4
	baz=333						
D53A	Lac Vacive, Po	88.82	18	P	P	03 10 46.2	-0.5
	baz=340						
K40A	Colesburg	88.83	28	P	P	03 10 46.4	-0.4
	baz=331						
E51A	G1948 Merrick	88.90	19	P	P	03 10 45.5	-1.6
	baz=339						
JFWS	Jewell Farm	88.96	28	P	P	03 10 46.0	-1.4
	baz=332						
J42A	Columbus	88.99	27	P	P	03 10 47.0	-0.6
	baz=332						
D54A	Lac Fusel, La	88.99	17	P	P	03 10 46.2	-1.3
	baz=341						
L39A	Vinton	89.02	29	P	P	03 10 47.3	-0.4
	baz=330						
J43A	Natural Harves	89.17	26	P	P	03 10 48.0	-0.4
	baz=333						
K41A	Shullsburg	89.21	28	P	P	03 10 48.3	-0.3
	baz=332						
L40A	Anamosa	89.35	29	*e*P	P	03 10 49.2	0.0
	comp=Z,32nm,0.8s						
L40A	Anamosa	89.35	29	P	P	03 10 48.6	-0.7
	baz=331						
K42A	Prairie Point,	89.39	27	P	P	03 10 49.1	-0.3
	baz=332						
E53A	Dumoine, Ponti	89.49	18	P	P	03 10 49.1	-0.7
	baz=340						
M39A	Webster	89.51	30	P	P	03 10 49.3	-0.8
	baz=330						
E54A	Lac Daplat, Po	89.55	18	P	P	03 10 49.0	-1.1
	baz=341						
H48A	Harrisville	89.57	22	P	P	03 10 49.8	-0.4
	baz=336						
LATQ	La Tuque	89.57	15	P	P	03 10 49.7	-0.5
	baz=344						
L41A	Preston	89.60	28	P	P	03 10 49.9	-0.5
	baz=331						
I46A	Reed City	89.62	24	P	P	03 10 50.3	-0.2
	baz=335						
F52A	Sundridge	89.63	19	P	P	03 10 49.7	-0.8
	baz=339						
121A	Cookes Peak, D	89.75	45	P	P	03 10 51.5	0.0
	baz=321						
KSU1	Kansas State U	89.78	34	*e*P	P	03 10 52.0	+0.6
	comp=Z,15nm,0.7s						
KSU1	Kansas State U	89.78	34	P	P	03 10 51.0	-0.4
	baz=328						
ALGO	Algonquin Park	89.80	19	P	P	03 10 50.3	-0.9
	baz=340						
M40A	Post Highland	89.82	29	P	P	03 10 51.2	-0.3
	baz=331						
319A	Douglas	89.83	47	*e*P	P	03 10 53.0	+1.1
	comp=Z,5.8nm,0.8s						
L42A	Oliver, Polo	89.96	28	P	P	03 10 51.2	-0.9
	baz=332						
M41A	Milan	90.20	29	P	P	03 10 52.7	-0.5
	baz=331						
PEMO	Pembroke	90.25	18	P	P	03 10 52.8	-0.6
	baz=341						
N40A	Mertquake, Sal	90.25	30	P	P	03 10 52.9	-0.5
	baz=331						
F55A	Otter Lake	90.31	17	P	P	03 10 53.2	-0.5
	baz=341						
TRQ	Mont Tremblant	90.33	16	*e*P	P	03 10 54.1	+0.2
M42A	Sheffield	90.41	28	P	P	03 10 53.8	-0.4
	baz=332						
J47A	Sunmer	90.45	24	P	P	03 10 54.4	0.0
	baz=335						
N41A	Harden Midland	90.67	29	P	P	03 10 55.3	-0.2
	baz=331						
BANO	Bancroft	90.70	19	P	P	03 10 54.9	-0.6
	baz=340						
M43A	Waltham Townsh	90.71	28	P	P	03 10 54.9	-0.7
	baz=332						
G55A	Calabogie	90.77	18	P	P	03 10 54.6	-1.2
	baz=341						
ALFO	Alfred	90.83	17	P	P	03 10 55.7	-0.3
	baz=342						
N42A	Yates City	90.86	29	P	P	03 10 55.8	-0.6
	baz=332						
AMTX	Amarillo	90.98	40	*e*P	P	03 10 58.4	+1.2
	comp=Z,8.1nm,0.8s						
AMTX	Amarillo	90.98	40	P	P	03 10 57.3	+0.1
	baz=324						
K48A	Perry	91.06	24	P	P	03 10 57.4	+0.1
	baz=336						
O41A	Passleys Farm,	91.18	30	P	P	03 10 57.5	-0.3
	baz=331						
MSTX	Muleshoe	91.19	41	P	P	03 10 58.1	0.0
	baz=324						
HDIL	Hopedale	91.37	28	P	P	03 10 58.7	0.0
	baz=332						
O42A	Bath	91.40	29	P	P	03 10 58.9	+0.1
	baz=332						
L47A	Sherwood	91.48	25	P	P	03 10 58.5	-0.7
	baz=335						
P41A	Barry, Barry	91.50	30	P	P	03 10 59.0	-0.3
	baz=331						
MNTX	Cornudas Mount	91.67	44	P	P	03 11 00.7	+0.4
	baz=322						
L48A	N Adams	91.75	24	P	P	03 11 00.7	+0.2
	baz=336						
L49A	Milan	91.80	24	P	P	03 11 01.1	+0.4
	baz=336						
P42A	Winchester	91.84	29	P	P	03 11 01.1	+0.2
	baz=332						
M47A	Cromwell	91.90	25	P	P	03 11 01.0	-0.1
	baz=335						
Q41A	Truxton	92.06	30	P	P	03 11 02.0	0.0
	baz=331						
P43A	Skaggs, Pawnee	92.10	29	P	P	03 11 02.2	+0.2
	baz=332						
O45A	Potomac	92.19	27	P	P	03 11 03.0	+0.5
	baz=333						
N47A	Urbana	92.31	26	P	P	03 11 02.8	-0.2
	baz=335						
M49A	Liberty Center	92.32	24	P	P	03 11 03.3	+0.3
	baz=336						
Q42A	Golden Eagle	92.36	30	P	P	03 11 03.7	+0.4
	baz=331						
WMOK	Wichita Mounta	92.47	38	*e*P	P	03 11 05.0	+1.1
	comp=Z,7.2nm,0.9s						
WMOK	Wichita Mounta	92.47	38	*e*P	P	03 11 05.0	+1.1
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMOK	Wichita Mounta	92.47	38	P	P	03 11 04.7	+0.8
	baz=326						
N48A	Decatur	92.55	25	P	P	03 11 04.0	-0.1
	baz=335						
R41A	Rosebud	92.58	31	P	P	03 11 04.4	0.0
	baz=331						
Q43A	New Douglas	92.65	29	P	P	03 11 05.0	+0.4
	baz=332						
N49A	Columbus Grove	92.76	25	P	P	03 11 04.6	-0.5
	baz=336						
R42A	Luebbering	92.82	30	P	P	03 11 05.3	-0.1
	baz=331						
K55A	Perry	92.82	20	P	P	03 11 04.7	-0.7
	baz=340						
TUL1	Leonard	92.82	35	P	P	03 11 06.1	+0.5
	baz=328						
P45A	Graceland, Par	92.83	28	P	P	03 11 05.6	+0.1
	baz=333						
CCM	Cathedral Cave	92.84	31	*e*P	P	03 11 06.0	+0.4
	comp=Z,10.0nm,0.9s						
CCM	Cathedral Cave	92.84	31	*e*P	P	03 11 06.0	+0.4
CCM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CCM	Cathedral Cave	92.84	31	P	P	03 11 05.3	-0.2
	baz=331						
M52A	Chesterland	93.04	22	P	P	03 11 06.7	+0.3
	baz=338						
O48A	Farmland	93.05	26	P	P	03 11 06.5	0.0
	baz=335						
S41A	Jillco Farms,	93.05	31	P	P	03 11 06.8	+0.2
	baz=331						
N50A	Nevada	93.21	24	P	P	03 11 07.4	+0.2
	baz=336						
S42A	Caledonia	93.26	31	P	P	03 11 07.4	-0.1
	baz=331						
M53A	WI Miller and	93.33	22	P	P	03 11 08.1	+0.3
	baz=338						

P47A	Martinsville	93.37	27	P	P	03 11 08.1	+0.1
	baz=334						
O49A	Covington	93.38	25	P	P	03 11 08.1	+0.1
	baz=336						
T41A	Mountain View	93.52	32	P	P	03 11 08.5	-0.2
	baz=331						
M54A	Oil Creek Stat	93.54	21	P	P	03 11 08.1	-0.7
	baz=339						
O50A	Cable	93.64	25	P	P	03 11 08.7	-0.5
	baz=336						
U40A	Yellville	93.67	33	P	P	03 11 09.7	+0.2
	baz=330						
P48A	Milroy	93.68	26	P	P	03 11 09.5	+0.1
	baz=335						
ACSO	Alum Creek Sta	93.76	24	P	P	03 11 08.8	-0.9
	baz=336						
T42A	Van Buren	93.79	31	*e*P	P	03 11 10.6	+0.7
	comp=Z,11nm,0.7s						
T42A	Van Buren	93.79	31	P	P	03 11 10.1	+0.1
	baz=331						
Q47A	Bedord North L	93.81	27	P	P	03 11 10.1	+0.1
	baz=334						
M55A	Ridgway	93.82	21	P	P	03 11 09.5	-0.6
	baz=340						
N53A	Lisbon	93.86	22	P	P	03 11 09.7	-0.6
	baz=338						
S44A	Carbondale	93.91	30	P	P	03 11 09.7	-0.7
	baz=332						
O51A	Pataskala	93.95	24	P	P	03 11 10.2	-0.4
	baz=337						
N54A	Moraine State	93.96	22	P	P	03 11 10.2	-0.4
	baz=339						
Q48A	North Vernon	94.06	27	P	P	03 11 09.9	-1.2
	baz=335						
T43A	Greenville	94.06	31	P	P	03 11 10.7	-0.5
	baz=332						
O52A	Adamsville	94.21	23	P	P	03 11 11.4	-0.4
	baz=337						
PBMO	Poplar Bluff	94.27	31	*e*P	P	03 11 12.5	+0.4
	comp=Z,6.3nm,0.8s						
O53A	New Philadelph	94.27	23	P	P	03 11 11.5	-0.6
	baz=338						
U42A	Revenden	94.33	32	P	P	03 11 12.5	+0.1
	baz=331						
R47A	Wooly Knot Far	94.36	27	P	P	03 11 11.9	-0.6
	baz=334						
N55A	Marion Center	94.40	21	P	P	03 11 12.0	-0.7
	baz=339						
LTX	Lajitas	94.44	44	*e*P	P	03 11 13.9	+0.7
LTX	Lajitas	94.44	44	*e*P	P	03 11 13.9	+0.7
TX31	Lajitas Ar. Si	94.44	44	*e*P	P	03 11 14.0	+0.8
TXAR	Lajitas Array	94.44	44	P	P	03 11 13.9	+0.7
	comp=Z,2.2nm,0.7s,baz=289,slow=2.7,SNR=23						
TXAR	Lajitas Array	94.44	44	P	P	03 11 13.9	+0.7
	comp=Z,2.2nm,0.7s,baz=289,slow=2.7,SNR=23						
V41A	Mountainview	94.45	33	P	P	03 11 13.0	0.0
	baz=330						
P52A	Corning	94.56	24	P	P	03 11 12.9	-0.6
	baz=337						
O54A	Avella	94.58	22	P	P	03 11 13.5	0.0
	baz=338						
V42A	Cord	94.74	32	P	P	03 11 14.0	-0.4
	baz=331						
Q51A	Peebles	94.75	25	P	P	03 11 14.0	-0.3
	baz=336						
O55A	Ligonier	94.85	21	P	P	03 11 15.2	+0.4
	baz=339						
P53A	Whipple	94.92	23	P	P	03 11 15.3	+0.2
	baz=338						
MIAR	Mount Ida	94.93	34	P	P	03 11 15.0	-0.2
	baz=329						
W41B	Gary Mavity, V	94.94	33	P	P	03 11 15.4	+0.1
	baz=330						
T46A	Princeton	94.99	29	P	P	03 11 14.8	-0.6
	baz=333						
P54A	Burton	95.08	23	P	P	03 11 15.3	-0.5
	baz=338						
N59A	State Game Lan	95.10	19	P	P	03 11 15.8	-0.1
	baz=342						
S49A	Springfield	95.24	27	P	P	03 11 16.3	-0.3
	baz=335						
PAL	Palisades	95.45	17	P	P	03 11 17.1	-0.3
	baz=343						
T48A	Bowling Green	95.46	28	P	P	03 11 17.8	+0.2
	baz=334						
JCT	Junction City	95.49	41	*e*P	P	03 11 19.0	+1.1
	comp=Z,6.1nm,0.6s						
JCT	Junction City	95.49	41	*e*P	P	03 11 19.0	+1.1
JCT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
U46A	Springville	95.49	29	P	P	03 11 17.5	-0.3
	baz=333						
Q54A	Coxs Mills	95.55	23	P	P	03 11 17.6	-0.3
	baz=338						
T49A	Edmonton	95.77	27	P	P	03 11 18.6	-0.5
	baz=335						
WVT	Waverly	95.82	29	P	P	03 11 18.8	-0.4
	baz=333						
U48A	Cassie Pea, Po	95.95	28	P	P	03 11 19.5	-0.3
	baz=334						
V46A	Holladay	96.01	30	P	P	03 11 20.1	-0.1
	baz=333						
V47A	Nunnelly	96.20	29	P	P	03 11 21.2	+0.2
	baz=333						
U49A	Red Boiling Sp	96.22	28	P	P	03 11 21.0	-0.1
	baz=334						
U50A	Jamestown	96.63	27	P	P	03 11 22.7	-0.3
	baz=335						
W47A	Westpoint	96.69	29	P	P	03 11 23.4	+0.1
	baz=333						
T53A	Wise	96.87	25	P	P	03 11 24.5	+0.4
	baz=337						
W48A	Pulaski	97.03	29	P	P	03 11 24.2	-0.6
	baz=334						
T54A	Tazewell	97.10	24	P	P	03 11 24.5	-0.6
	baz=337						
R58B	Mineral	97.34	21	P	Pdif	03 11 26.9	+0.8
	baz=340						
U53A	Fall Branch	97.42	25	P	P	03 11 25.9	-0.7
	baz=337						
X48A	Hartselle	97.61	29	P	P	03 11 27.0	-0.4
	baz=334						
Z50A	Ashland	99.09	29	Pdiff	Pdif	03 11 33.1	-1.0
	baz=334						
Y52A	Lilburn	99.20	27	Pdiff	Pdif	03 11 34.6	0.0
	baz=336						
Y54A	Tignall	99.68	26	Pdiff	Pdif	03 11 35.9	-0.7
	baz=336						
TOA1	Torodi Ar. Sit	107.28	306	*e*PKiKP	PKiKP	03 16 17.8	-1.9
TOA1				*e*PP	PP	03 16 36.6	-0.6
TORD	Torodi Ar. Bea	107.28	306	PKiKP	PKiKP	03 16 17.8	-1.9
	comp=Z,0.2nm,0.5s,baz=31,slow=1.8,SNR=5.9						
TORD				PP	PP	03 16 36.6	-0.6
	comp=Z,2.0nm,0.9s,baz=26,slow=6.9,SNR=7.8						
TORD	Torodi Ar. Bea	107.28	306	PKiKP	PKiKP	03 16 17.8	-1.9
	comp=Z,0.2nm,0.5s,baz=31,slow=1.8,SNR=5.9						
TORD				PP	PP	03 16 36.6	-0.6
	comp=Z,2.0nm,0.9s,baz=26,slow=6.9,SNR=7.8						
MATP	Matopo	110.98	261	PKiKP	PKiKP	03 16 25.2	-1.4
	comp=Z,1.0nm,0.5s,baz=55,slow=1.8,SNR=2.9						
MATP	Matopo	110.98	261	PKiKP	PKiKP	03 16 25.2	-1.4
	comp=Z,1.0nm,0.5s,baz=55,slow=1.8,SNR=2.9						
DBIC	Dimbokro	116.32	307	PKP	PKPdf	03 16 35.2	-1.7
	comp=Z,1.5nm,0.6s,baz=135,slow=2.9,SNR=3.6						
DBIC	Dimbokro	116.32	307	PKP	PKPdf	03 16 35.2	-1.7
	comp=Z,1.5nm,0.6s,baz=135,slow=2.9,SNR=3.6						
VNDA	Vanda	120.27	172	PKP	PKPdf	03 16 41.3	-1.2
	comp=Z,2.8nm,1.0s,baz=326,slow=5.5,SNR=7.6						
VNDA	Vanda	120.27	172	PKP	PKPdf	03 16 41.3	-1.2
	comp=Z,2.8nm,1.0s,baz=326,slow=5.5,SNR=7.6						
SDV	Santo Domingo	126.85	25	PKP	PKPdf	03 16 56.6	-0.8
	comp=Z,20nm,0.7s,baz=295,slow=3.0,SNR=29						
SDV	Santo Domingo	126.85	25	PKP	PKPdf	03 16 56.6	-0.8
	comp=Z,20nm,0.7s,baz=295,slow=3.0,SNR=29						
ROSC	El Rosal	129.32	31	PKP	PKiKP	03 17 03.2	+0.1
	comp=Z,4.7nm,0.4s,baz=278,slow=8.2,SNR=5.1						
ROSC	El Rosal	129.32	31	PKP	PKiKP	03 17 03.2	+0.1
	comp=Z,4.7nm,0.4s,baz=278,slow=8.2,SNR=5.1						
QSPA	South Pole Qui	131.05	180	PKhKP	PKPpre	03 16 47.9	
	comp=Z,1.1nm,0.8s,baz=263,slow=2.6,SNR=3.9						
QSPA				PKP	PKPdf	03 17 03.2	-0.3
	comp=Z,2.2nm,0.6s,baz=285,slow=0.8,SNR=9.2						
QSPA	South Pole Qui	131.05	180	PKhKP	PKPpre	03 16 47.9	
	comp=Z,1.1nm,0.8s,baz=263,slow=2.6,SNR=3.9						
QSPA				PKP	PKPdf	03 17 03.2	-0.3
	comp=Z,2.2nm,0.6s,baz=285,slow=0.8,SNR=9.2						
OTAV	Otavalo	131.70	38	*e*PKPdf	PKPdf	03 17 06.3	-0.7
OTAV	Otavalo	131.70	38	*e*PKIKP	PKPdf	03 17 06.3	-0.7
ATAH	Atahualpa	138.10	43	PKP	PKPdf	03 17 17.9	-0.9
	comp=Z,4.9nm,0.8s,baz=334,slow=7.7,SNR=3.6						
ATAH	Atahualpa	138.10	43	PKP	PKPdf	03 17 17.9	-0.9
	comp=Z,7.0nm,0.8s,baz=334,slow=7.7,SNR=3.6						
PTGA	Pitinga	138.78	14	PKP	PKPdf	03 17 18.5	-1.1
	comp=Z,0.9nm,0.3s,baz=317,slow=19,SNR=3.1						
PTGA	Pitinga	138.78	14	PKP	PKPdf	03 17 18.5	-1.1
	comp=Z,0.9nm,0.3s,baz=317,slow=19,SNR=3.1						
SNAA	Sanae	141.55	202	PKP	PKPpre	03 17 17.3	
SNAA	Sanae	141.55	202	PKhKP	PKPpre	03 17 16.8	
	comp=Z,2.8nm,0.7s,baz=118,slow=1.4,SNR=9.3						
SNAA	Sanae	141.55	202	PKhKP	PKPpre	03 17 16.8	
	comp=Z,2.8nm,0.7s,baz=118,slow=1.4,SNR=9.3						
NNA	Nana	142.99	45	PKhKP	PKPpre	03 17 23.3	
	comp=Z,6.3nm,0.5s,baz=259,slow=6.5,SNR=4.7						
NNA	Nana	142.99	45	PKhKP	PKPpre	03 17 23.3	
	comp=Z,6.3nm,0.5s,baz=259,slow=6.5,SNR=4.7						
VNA2	Neumayer--Watz	143.20	202	PKP	PKPab	03 17 22.0	+0.5
VNA1	Neumayer--Stat	143.59	202	PKP	PKPab	03 17 23.2	+0.3
VNA3	Neumayer Olymp	143.66	201	PKP	PKPab	03 17 23.0	-0.2
LPAZ	La Paz	150.96	36	PKP	PKPdf	03 17 40.7	-0.4
	comp=Z,1.9nm,0.9s,baz=329,slow=3.2,SNR=3.9						
LPAZ				PKPbc	PKPbc	03 17 46.4	-0.4
	comp=Z,13nm,0.8s,baz=335,slow=3.4,SNR=30						
LPAZ				PKPab	PKPab	03 17 52.8	-1.3
	comp=Z,7.3nm,0.7s,baz=1.2,slow=9.8,SNR=13						
LPAZ	La Paz	150.96	36	*e*PKPdf	PKPdf	03 17 41.2	+0.1
LPAZ				*e*PKPbc	PKPbc	03 17 46.4	-0.4
LPAZ				*e*PKPab	PKPab	03 17 52.8	-1.3
LPAZ	La Paz	150.96	36	*e*PKIKP	PKPdf	03 17 41.2	+0.1
LPAZ				*e*		03 17 52.8	
LPAZ	La Paz	150.96	36	PKP	PKPdf	03 17 40.7	-0.4
	comp=Z,1.9nm,0.9s,baz=329,slow=3.2,SNR=3.9						
LPAZ				PKPbc	PKPbc	03 17 46.4	-0.4
	comp=Z,13nm,0.8s,baz=335,slow=3.4,SNR=30						
LPAZ				PKPab	PKPab	03 17 52.8	-1.3
	comp=Z,7.3nm,0.7s,baz=1.2,slow=9.8,SNR=13						
MNMC	Minye Minye	152.74	41	*e*PKPbc	PKiKP	03 17 50.9	+0.4
PB11	IPOC Station P	153.24	42	*e*PKPbc	PKPbc	03 17 50.7	-0.6
SIV	San Ignacio	153.28	22	PKP	PKPdf	03 17 43.1	-0.7
	comp=Z,1.4nm,0.7s,baz=22,slow=5.4,SNR=8.2						
SIV				PKPbc	PKPbc	03 17 50.6	-0.7
	comp=Z,5.5nm,0.8s,baz=25,slow=2.1,SNR=20						
SIV				PKPab	PKPab	03 18 02.9	-0.1
	comp=Z,15nm,0.8s,baz=310,slow=3.0,SNR=28						
SIV	San Ignacio	153.28	22	PKP	PKPdf	03 17 43.1	-0.7
	comp=Z,1.4nm,0.7s,baz=22,slow=5.4,SNR=8.2						
SIV				PKPbc	PKPbc	03 17 50.6	-0.7
	comp=Z,5.5nm,0.8s,baz=25,slow=2.1,SNR=20						
SIV				PKPab	PKPab	03 18 02.9	-0.1
	comp=Z,15nm,0.8s,baz=310,slow=3.0,SNR=28						
BDFB	Brasilia	154.30	354	PKPbc	PKPbc	03 17 52.8	-0.8
	comp=Z,2.0nm,0.7s,baz=269,slow=5.8,SNR=4.0						
BDFB				PKPab	PKPab	03 18 06.5	-0.8
	comp=Z,3.1nm,0.6s,baz=356,slow=5.2,SNR=7.5						
BDFB	Brasilia	154.30	354	PKPbc	PKPbc	03 17 52.8	-0.8
	comp=Z,2.0nm,0.7s,baz=269,slow=5.8,SNR=4.0						
BDFB				PKPab	PKPab	03 18 06.5	-0.8
	comp=Z,3.1nm,0.6s,baz=356,slow=5.2,SNR=7.5						
LVC	Limon Verde	155.98	45	PKPab	PKPab	03 18 15.2	+0.4
	comp=Z,3.5nm,0.6s,baz=225,slow=2.9,SNR=5.0						
LVC	Limon Verde	155.98	45	PKPab	PKPab	03 18 15.2	+0.4
	comp=Z,3.5nm,0.6s,baz=225,slow=2.9,SNR=5.0						
CPUP	Villa Florida	164.14	22	PKPab	PKPab	03 18 49.1	-0.6
	comp=Z,5.5nm,0.9s,baz=349,slow=5.8,SNR=12						
CPUP	Villa Florida	164.14	22	*e*PKPab	PKPab	03 18 49.5	-0.2
CPUP	Villa Florida	164.14	22	*e*PKP2	PKPab	03 18 49.5	-0.2
CPUP	Villa Florida	164.14	22	PKPab	PKPab	03 18 49.1	-0.6
	comp=Z,5.5nm,0.9s,baz=349,slow=5.8,SNR=12						

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*ISCJB **12** 03:08:08.6±1.0, 36°.6N±0°.2×32°.9W±0°.1, h10^{km}, mb3.6/13, MS3.5/5, Error ellipse: s-maj=29.3km s-min=15.8km az=3.3*

*IDC **12** 03:08:08.9±1.2, 36°.62N×32°.85W, h0^{km}, mb3.6/13, mb1 3.8/13, mb1mx3.6/97, mbtmp3.6/13, MS3.5/5, Ms1 3.5/5, ms1mx2.9/81, Error ellipse: s-maj=35.0km s-min=18.0km az=2.0*

ISC 12 03:08:10.5±1.2, **36°.6N**±0°.2×**32°.9W**±0°.1, **h10**^{km}**, n19,** σ**0**^{s}**62**/14, **mb3.7**/13, **MS3.5**/5, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDT	Midelt	23.50	91	LR	LR	03 21 10.2	
	comp=Z,124nm,18.5s,baz=352,slow=33						
SADO	Sadowa	35.62	298	LR	LR	03 29 11.0	
	comp=Z,59nm,18.4s,baz=114,slow=35						
NB2	NORSAR Subarra	36.88	34	P	P	03 15 19.3	+0.4
	comp=Z,0.8nm,0.8s,baz=250,slow=9.3						
NOA	NORSAR Array B	36.88	34	P	P	03 15 18.2	-0.7
	comp=Z,1.6nm,0.8s,baz=250,slow=8.6,SNR=5.5						
TORD	Torodi Ar. Bea	38.77	118	P	P	03 15 35.4	+0.2
	comp=Z,0.3nm,0.9s,baz=309,slow=9.1,SNR=2.2						
DBIC	Dimbokro	39.27	133	LR	LR	03 30 15.2	
	comp=Z,71nm,20.6s,baz=304,slow=34						
FINES	FINESS Array B	43.94	36	P	P	03 16 17.4	+0.2
	comp=Z,1.5nm,0.8s,baz=270,slow=2.9,SNR=4.1						
AKASG	Malin Array Be	45.76	52	P	P	03 16 31.8	-0.1
	comp=Z,0.8nm,0.5s,baz=273,slow=7.8,SNR=2.4						
ULM	Lac du Bonnet	46.40	308	LR	LR	03 35 36.2	
	comp=Z,68nm,18.2s,baz=66,slow=36						
YKA	Yellowknife Ar	54.59	326	P	P	03 17 37.9	-0.7
	comp=Z,0.3nm,0.8s,baz=77,slow=7.1,SNR=4.9						
PDAR	Pinedale Array	57.45	302	P	P	03 18 00.7	+1.0
	comp=Z,0.3nm,0.7s,baz=64,slow=8.1,SNR=2.8						
CMIG	Matias Romero	57.69	268	LR	LR	03 42 30.7	
	comp=Z,40nm,18.2s,baz=54,slow=36						
TXAR	Lajitas Array	58.64	285	P	P	03 18 07.6	-0.5
	comp=Z,0.4nm,0.9s,baz=116,slow=6.1,SNR=3.1						
AKTO	Aktyubinsk	63.36	46	P	P	03 18 39.8	+0.1
	comp=Z,0.9nm,0.6s,baz=284,slow=8.2,SNR=3.6						
NVAR	Mina Array Bea	65.31	300	P	P	03 18 52.7	-0.3
	comp=Z,0.1nm,0.4s,baz=74,slow=7.0,SNR=2.0						
ILAR	Eielson Array	66.67	335	P	P	03 19 01.9	+0.9
	comp=Z,0.4nm,0.8s,baz=60,slow=4.6,SNR=2.7						
KURBB	Kurchatov Arra	74.30	38	P	P	03 19 48.0	+0.2
	comp=Z,0.9nm,0.8s,baz=314,slow=5.9,SNR=5.7						
ZALV	Zalesovo Beam	75.06	33	P	P	03 19 51.8	-0.4
	comp=Z,0.4nm,0.5s,baz=335,slow=6.4,SNR=3.3						
MKAR	Makanchi Array	78.68	39	P	P	03 20 12.0	-0.8
	comp=Z,0.7nm,0.8s,baz=322,slow=5.1,SNR=7.3						

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*IDC **12** 03:12:25.7±0.4, 11°.25S×165°.80E, h0^{km}, mb4.5/34, mb1 4.6/36, mb1mx4.5/64, mbtmp4.5/36, ML4.8/2, MS4.2/33, Ms1 4.2/33, ms1mx4.1/54, Error ellipse: s-maj=14.2km s-min=11.8km az=122.0*

*BJI **12** 03:12:25.5, 10°.97S×166°.00E, h5^{km}, mB5.0/27, mb4.8/41, Ms4.8/16, Ms7 4.4/20*

*ISCJB **12** 03:12:26.6±3.7, 11°.26S±0°.05×165°.70E±0°.04, h12^{km}±23^{km}, mb4.7/104, MS4.3/41, Error ellipse: s-maj=8.5km s-min=6.4km az=179.8*

*NEIC **12** 03:12:27.8±0.2, 11°.22S×165°.75E, h10^{km}, mb4.9/60, Error ellipse: s-maj=6.2km s-min=4.7km az=114.0*

*MOS **12** 03:12:28.2±1.3, 11°.16S×165°.65E, h20^{km}, mb5.1/29, Error ellipse: s-maj=9.9km s-min=9.0km az=21.3*

*GCMT **12** 03:12:30.8±0.2, 11°.36S±0°.01×165°.60E±0°.01, h15^{km}, MW5.0/81, Moment Tensor Solution. s24,c28; s81,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.24±.09; $M_{\theta\theta}$-0.90±.08; $M_{\phi\phi}$1.14±.09; $M_{r\theta}$-2.82±.27; $M_{\theta\phi}$-2.41±.06; $M_{\phi r}$1.80±.28; Best double couple: $M_0$4.12400×10^{16} NP1:ϕ_s109.00000°, δ88.00000°, λ-128.00000°. NP2: ϕ_s17.00000°, δ38.00000°, λ-2.00000°. Principal axes: T 4.7240, Plg33.0000°, Azm230.0000°; N -1.1990, Plg38.0000°, Azm110.0000°; P -3.5230, Plg35.0000°, Azm347.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 03:12:27.6±0.9, **11°.30S**±0°.05×**165°.76E**±0°.06, **h9**^{km}±5^{km}**, n249,** σ**1**^{s}**77**/248, **mb4.8**/104, **MS4.3**/41, **6C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.02	287	*e*P	Pn	03 13 58.0	+1.2
HNR				*e*S	Sn	03 15 10.0	+4.1
HNR	Honiara	6.02	287	*e*Pn	Pn	03 13 56.3	-0.5
HNR				*e*Sn	Sn	03 15 04.2	-1.7
HNR	Honiara	6.02	287	Pn	Pn	03 13 56.8	0.0
	21nm,0.3s,baz=199,slow=5.8,SNR=11						
HNR				Sn	Sn	03 15 04.2	-1.7
	11nm,0.3s,baz=24,slow=20,SNR=2.6						
HNR				LR	LR	03 16 19.1	
	comp=Z,2μm,19.2s,baz=119,slow=39						
MARNC	Mare, Loyalty	10.36	168	*e*Pn	Pn	03 14 57.4	+1.0
DZM	Mont Dzumac	10.73	177	*e*Pn	Pn	03 15 01.9	+0.2
	90nm,0.7s						
DZM				*e*LR	LR	03 17 35.6	
	comp=Z,666nm,21.9s						
DZM	Mont Dzumac	10.73	177	*e*Pn	Pn	03 15 02.2	+0.5
DZM				*e*Sn	Sn	03 16 57.5	-4.6
DZM	Mont Dzumac	10.73	177	Pn	Pn	03 15 01.9	+0.2
	6.9nm,0.3s,baz=349,slow=11,SNR=26						
DZM				Sn	Sn	03 16 57.5	-4.6
	baz=317,slow=19,SNR=2.2						
PINNC	Pines Island,	11.37	172	*e*Pn	Pn	03 15 11.7	+1.5
MSVF	Nonsavu	13.50	120	*e*Pn	Pn	03 15 44.0	+4.4
MSVF	Nonsavu	13.50	120	*e*P	Pn	03 15 44.0	+4.4
TARA	Tarawa	14.45	30	*e*P	Pn	03 15 43.4	-9.1
EIDS	Eidsvold	19.72	223	P	Pn	03 16 59.3	+0.3
	baz=20,SNR=7.3						
EIDS	Eidsvold	19.72	223	*e*P	Pn	03 16 59.7	+0.7
	40nm,1.0s						
MANU	Manus Island	20.44	295	*e*P	Pn	03 17 08.5	+0.9
	342nm,1.3s						
CTA	Charters Tower	20.70	243	P	P	03 17 09.1	+0.7
	43nm,0.9s,baz=70,slow=12,SNR=30						
CTAO	Charters Tower	20.70	243	*e*P	Pn	03 17 09.7	-1.0
	83nm,1.0s						
CTAO	Charters Tower	20.70	243	*e*P	Pn	03 17 09.7	-0.9
CTAO				pmax	pmax		
	comp=Z,83nm,1.0s						
MTSU	Mount Surprise	21.82	249	P	P	03 17 21.3	+0.9
	baz=22,SNR=41						
RMQ	Roma	22.03	224	P	P	03 17 23.8	+1.2
	baz=22,SNR=7.5						
COEN	Coen	22.20	261	P	P	03 17 25.9	+1.4
	baz=22,SNR=12						
COEN	Coen	22.20	261	*e*P	P	03 17 25.8	+1.4
	comp=Z,89nm,1.3s						
ARMA	Armidale	23.11	213	P	P	03 17 34.7	+0.5
	baz=23,SNR=5.2						
ARMA	Armidale	23.11	213	*e*P	P	03 17 34.9	+0.8
	comp=Z,42nm,1.0s						
OUZ	Omahuta	24.86	165	*e*P	P	03 17 52.2	+1.8
	comp=Z,21nm,1.0s						
QIS	Mount Isa	26.75	247	P	P	03 18 08.1	+0.2
	baz=27,SNR=6.6						
CMSA	Cobar Meteorol	27.38	220	P	P	03 18 13.8	+0.4
	baz=28,SNR=13						
URZ	Urewera	28.70	161	P	P	03 18 26.1	+1.0
	comp=Z,3.6nm,0.5s,baz=310,slow=5.5,SNR=3.8						
URZ				LR	LR	03 28 36.1	
	comp=Z,833nm,19.3s,baz=343,slow=34						
BKZ	Black Stump Fm	29.35	163	*e*P	P	03 18 32.1	+1.2
	comp=Z,32nm,1.3s						
H11S2	WAKE ISLAND Hy	29.61	2	T	T	03 49 02.9	
	baz=181,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	29.62	2	T	T	03 48 58.1	
	baz=181,slow=75,SNR=8.8						
H11S1	WAKE ISLAND Hy	29.63	2	T	T	03 48 59.6	
	baz=181,slow=75,SNR=7.6						
STKA	Stephens Creek	30.27	224	P	P	03 18 39.9	+0.8
	baz=30,SNR=11						
STKA	Stephens Creek	30.27	224	*e*P	P	03 18 40.0	+0.8
	comp=Z,4.1nm,1.0s						
STKA	Stephens Creek	30.27	224	*e*P	P	03 18 40.0	+0.8
STKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	Stephens Creek	30.27	224	P	P	03 18 39.5	+0.3
	comp=Z,11nm,0.8s,baz=39,slow=8.6,SNR=18						
STKA				LR	LR	03 30 18.9	
	comp=Z,952nm,18.1s,baz=32,slow=35						
H11N1	WAKE ISLAND Hy	30.84	2	T	T	03 50 29.1	
	baz=182,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.84	2	T	T	03 50 30.8	
	baz=182,slow=76,SNR=5.2						
H11N2	WAKE ISLAND Hy	30.85	2	T	T	03 50 30.7	
	baz=182,slow=76,SNR=11						
THZ	Tophouse	30.99	170	*e*P	P	03 18 47.9	+2.5
	comp=Z,71nm,1.5s						
WB2	Warramunga Arr	31.40	250	*e*P	P	03 18 48.7	-0.6
	comp=Z,24nm,0.9s						
WRAB	Tennant Creek	31.40	250	*e*P	P	03 18 49.2	-0.1
	comp=Z,21nm,0.9s						
WR1	Warramunga Arr	31.41	250	*e*P	P	03 18 48.3	-1.1
	comp=Z,29nm,0.9s						
WR1				*e*PcP	PcP	03 21 42.9	-0.1
WRA	Warramunga Arr	31.41	250	P	P	03 18 48.3	-1.1
	comp=Z,18nm,0.8s,baz=83,slow=9.1,SNR=89						
WRA				PcP	PcP	03 21 42.9	-0.1
	comp=Z,0.6nm,0.7s,baz=66,slow=4.1,SNR=2.8						
GUMO	Guam	32.27	319	LR	LR	03 31 24.7	
	comp=Z,405nm,19.3s,baz=130,slow=35						
OXZ	Oxford	32.37	171	*e*P	P	03 18 59.6	+2.2
	comp=Z,62nm,1.3s						
RPZ	Rata Peaks	32.62	173	P	P	03 18 58.9	-0.8
	comp=Z,14nm,0.8s,baz=350,slow=7.4,SNR=4.8						
RPZ				LR	LR	03 31 30.7	
	comp=Z,744nm,18.2s,baz=345,slow=35						
AS01	Alice Springs	32.65	244	*e*P	P	03 18 58.8	-1.5
AS31	Alice Springs	32.69	244	*e*P	P	03 18 59.9	-0.8
	comp=Z,1.9nm,0.8s						
AS31				*e*PcP	PcP	03 21 46.2	-0.3
ASAR	Alice Springs	32.70	244	P	P	03 18 59.0	-1.7
	comp=Z,3.6nm,0.8s,baz=72,slow=9.5,SNR=21						
ASAR				PcP	PcP	03 21 46.2	-0.3
	comp=Z,1.2nm,0.9s,baz=72,slow=3.0,SNR=2.7						
ASAR				LR	LR	03 30 53.3	
	comp=Z,532nm,21.8s,baz=76,slow=34						
HTT	Hallett	33.01	224	P	P	03 19 03.2	0.0
	baz=33,SNR=5.6						
RAR	Rarotonga	34.45	111	LR	LR	03 30 39.6	
	comp=Z,208nm,20.6s,baz=262,slow=32						
BBOO	Buckleboo	34.67	227	P	P	03 19 17.8	+0.1
	baz=35,SNR=6.9						
BBOO	Buckleboo	34.67	227	*e*P	P	03 19 17.9	+0.2
	comp=Z,24nm,0.9s						
SIJI	Sorong	35.78	284	P	P	03 19 26.6	-0.9
	comp=Z,5.0nm,0.5s,baz=163,slow=19,SNR=3.0						
SIJI				LR	LR	03 35 45.5	
	comp=Z,426nm,18.5s,baz=114,slow=39						
WRKA	Warakurna	37.99	244	P	P	03 19 45.1	-1.1
	baz=38,SNR=7.0						
FITZ	Fitzroy Crossi	39.33	255	P	P	03 19 56.8	-0.7
	baz=40,SNR=13						
FITZ	Fitzroy Crossi	39.33	255	*e*P	P	03 19 57.0	-0.6
	comp=Z,15nm,0.8s						
FITZ	Fitzroy Crossi	39.33	255	P	P	03 19 56.9	-0.7
	comp=Z,12nm,0.7s,baz=90,slow=6.6,SNR=32						
FITZ				LR	LR	03 34 59.5	
	comp=Z,538nm,20.8s,baz=76,slow=34						
BATI	Baumata	41.35	267	P	P	03 20 13.8	-0.6
	comp=Z,12nm,0.4s,baz=260,slow=6.1,SNR=3.0						
BATI				LR	LR	03 36 48.0	
	comp=Z,565nm,21.5s,baz=128,slow=35						
PPT	Papeete	43.62	104	LR	LR	03 36 25.5	
	comp=Z,289nm,18.6s,baz=278,slow=33						
PPT2	Papeete2	43.62	104	*e*LQ	LQ	03 31 04.4	
	comp=Z,1μm,26.5s						
PPT2				*e*LR	LR	03 33 04.3	
	comp=Z,260nm,24.5s						
TBI	Tubuai	44.22	112	*e*LQ	LQ	03 31 15.8	
	comp=Z,990nm,30.8s						
TBI				*e*LR	LR	03 33 18.9	
	comp=Z,284nm,26.2s						
JCJ	Chichijima	44.50	329	LR	LR	03 36 18.0	
	comp=Z,329nm,21.6s,baz=130,slow=32						
MBWA	Marble Bar	45.13	251	*e*P	P	03 20 32.4	-12
MEEK	Meekatharra	46.85	244	P	P	03 20 58.6	+0.2
	baz=47,SNR=8.0						
NWAO	Narrogin (SRO)	49.34	236	*e*P	P	03 21 17.0	-0.5
NWAO	Narrogin (SRO)	49.34	236	P	P	03 21 17.0	-0.5
	comp=Z,14nm,0.8s,baz=85,slow=4.6,SNR=4.7						
MORW	Morawa	49.52	241	P	P	03 21 18.7	-0.2
	baz=50,SNR=3.4						
MORW	Morawa	49.52	241	*e*P	P	03 21 19.4	+0.5
	comp=Z,20nm,0.9s						
JHJ	Hachijo jima 2	50.65	332	LR	LR	03 39 10.5	
	comp=Z,182nm,20.5s,baz=114,slow=32						
TAOE	Nuku Hiva Isla	53.25	93	*e*LR	LR	03 36 45.0	
	comp=Z,234nm,27.2s						
LEM	Lembang	57.52	269	P	P	03 22 18.2	+0.1
	comp=Z,18nm,0.5s,baz=156,slow=11,SNR=4.6						
LEM				LR	LR	03 48 41.8	
	comp=Z,111nm,20.9s,baz=73,slow=38						
KSRS	Korea Array	60.09	326	P	P	03 22 34.6	-0.7
	comp=Z,0.4nm,0.4s,baz=147,slow=7.2,SNR=3.3						
KSRS				LR	LR	03 44 45.3	
	comp=Z,102nm,21.9s,baz=136,slow=32						

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KS15  Wonju Array Si    60.11 326 eP      P        03 22 34.6 -0.9
KSAR  Wonju Array Be    60.11 326  P      P        03 22 34.6 -0.8
KSAR  Wonju Array Be    60.11 326  P      P        03 22 34.6 -0.8
YSS   Yuzh-Sakhalins    61.53 342 eP      P        03 22 40.6 -4.3
YSS                                MLR    MLR
      comp=Z,200nm,15.0s
NJ2   Nanjing           62.21 315 eP      P        03 22 50.1 +0.3
NJ2                                pmax   pmax
      comp=Z,6.0nm,0.7s
USRK  Ussuriysk Ar.     63.18 333  P      P        03 22 54.7 -1.4
      comp=Z,3.9nm,1.0s,baz=156,slow=5.6,SNR=4.8
USRK                               LR     LR       03 46 52.2
      comp=Z,116nm,22.0s,baz=133,slow=33
PETK  Petropavlovsk-    64.52 355  P      P        03 23 02.9 -1.8
      comp=Z,4.6nm,1.0s,baz=76,slow=7.8,SNR=4.0
PETK                               LR     LR       03 45 42.7
      comp=Z,174nm,20.4s,baz=169,slow=31
PEA1  Petropavlovsk-    64.53 355 eP      P        03 23 02.9 -1.8
CN2   Changchun         65.97 329 eP      P        03 23 14.5 +0.2
CN2                               eS      S        03 32 01.8 -0.2
CN2                                pmax   pmax
      comp=Z,10.0nm,0.8s
CN2                                pmax   pmax
      comp=Z,200nm,4.0s
CN2                                LR     LR
      comp=Z,200nm,15.0s
CN2                                LR     LR
      comp=Z,200nm,15.0s
VNDA  Vanda             66.24 181  P      P        03 23 15.4 -0.1
      comp=Z,2.0nm,0.9s,baz=350,slow=6.1,SNR=3.4
VNDA                               LR     LR       03 47 49.4
      comp=Z,220nm,20.9s,baz=344,slow=32
IPM   Ipoh              66.28 280 eP      P        03 23 18.6 +1.6
      comp=Z,37nm,1.1s
SKNT  Sakolnakorn       67.21 294  P      P        03 23 24.9 +2.1
      comp=Z,7.4nm,1.1s,comp=Z,978nm
KLR   Kul'dur           67.30 337  P      P        03 23 22.1 -0.5
      comp=Z,2.3nm,0.9s,baz=122,slow=14,SNR=4.1
KLR                                LR     LR       03 51 35.0
      comp=Z,105nm,19.2s,baz=180,slow=35
PSI   Prapat            67.92 278 eP      P        03 23 29.5 +2.0
      comp=Z,20nm,1.2s
PSI   Prapat            67.92 278 eP      P        03 23 29.5 +2.0
PSI                                pmax   pmax
      comp=Z,20nm,1.2s
PSI   Prapat            67.92 278  P      P        03 23 27.2 -0.3
      comp=Z,5.1nm,0.8s,baz=180,slow=5.8,SNR=6.6
PSI                                LR     LR       03 56 05.6
      comp=Z,49nm,18.0s,baz=236,slow=39
ENH   Enshi             68.07 309 eP      P        03 23 27.5 -0.5
      comp=Z,20nm,1.0s
NONG  Nongkai           68.33 295  P      P        03 23 31.3 +1.5
      comp=Z,0.5nm,0.8s,comp=Z,126nm
GYA   Guiyang           68.57 304  P      P        03 23 32.8 +1.5
GYA                                PP     PP       03 26 05.8 +2.9
GYA                                S      S        03 32 35.5 +1.1
GYA                                SKS    SKSac    03 33 29.0 -2.3
GYA                                SS     SS       03 37 01.7 +2.8
GYA                                pmax   pmax
      comp=Z,20nm,1.0s
GYA                                pmax   pmax
      comp=Z,120nm,5.9s
GYA                                LR     LR
      comp=Z,500nm,18.0s
PBKT  Sadao Pong        69.79 292  P      P        03 23 42.5 +3.6
      comp=Z,13nm,1.1s,comp=Z,1µm
XAN   Xi'an             70.30 312  P      P        03 23 41.9 +0.1
XAN                                pP     pwP      03 23 50.4 +0.9
XAN                                sP     PcP      03 23 54.7 -8.8
XAN                                PcP    sP       03 24 05.0  +21
XAN                                pmax   pmax
      comp=Z,9.0nm,1.1s
XAN                                pmax   pmax
      comp=Z,140nm,4.7s
XAN                                LR     LR
      comp=Z,140nm,17.3s
XAN                                LR     LR
      comp=Z,210nm,18.4s
XAN                                LR     LR
      comp=Z,220nm,18.4s
XAN   Xi'an             70.30 312 eP      P        03 23 41.9 +0.1
      comp=Z,13nm,1.1s
XAN   Xi'an             70.30 312 eP      P        03 23 41.9 +0.1
XAN                                pmax   pmax
      comp=Z,13nm,1.1s
NANT  Nan               70.77 295  P      P        03 23 47.8 +2.9
      comp=Z,3.5nm,1.0s
UTHA  Uthaitani         70.86 291  P      P        03 23 49.9 +4.4
      comp=Z,4.2nm,1.0s
KMI   Kunming           71.27 301  P      P        03 23 49.7 +1.6
KMI                                pP     pwP      03 23 56.4 +0.6
KMI                                sP     PcP      03 23 59.2 -8.8
KMI                                S      S        03 33 10.0 +3.7
KMI                                pmax   pmax
      comp=Z,11nm,1.2s
KMI                                pmax   pmax
      comp=Z,90nm,6.9s
KMI                                LR     LR
      comp=Z,93nm,16.1s
KMI                                LR     LR
      comp=Z,170nm,18.2s
KMI                                LR     LR
      comp=Z,200nm,20.8s
KMI   Kunming           71.27 301 eP      P        03 23 50.1 +2.0
      comp=Z,39nm,1.3s
KMI   Kunming           71.27 301 eP      P        03 23 50.1 +2.0
KMI                                pmax   pmax
      comp=Z,39nm,1.3s
MA2   Magadan           71.66 352 i P     P        03 23 47.0 -2.4
MA2                                pmax   pmax
      comp=Z,3.0nm,1.0s
HHC   Hu-ho-hao-te      72.03 320 eP      P        03 23 53.5 +1.3
HHC                                pmax   pmax
      comp=Z,4.0nm,0.7s
HHC                                pmax   pmax
      comp=Z,100nm,6.6s
CM01  Chiang Mai Arr    72.20 294 eP      P        03 23 54.7 +1.2
CM31  Chiang Mai Arr    72.23 294 eP      P        03 23 54.4 +0.7
CMAR  Chiang Mai Arr    72.23 294ceP      P        03 23 55.4 +1.7
CMAR                               pmax   pmax
      comp=Z,7.0nm,1.0s
CMAR  Chiang Mai Arr    72.23 294  P      P        03 23 54.4 +0.7
      comp=Z,6.0nm,0.9s,baz=112,slow=4.3,SNR=17
CMMT  Chiang Mai        72.34 294  P      P        03 23 56.7 +2.3
      comp=Z,14nm,1.5s
CHTO  Chiang Mai        72.34 294 eP      P        03 23 56.2 +1.8
      comp=Z,22nm,1.3s
CHTO                              e                03 24 06.9
CHTO  Chiang Mai        72.34 294 eP      P        03 23 56.2 +1.8
CHTO                              e                03 24 06.9
CHTO                               pmax   pmax
      comp=Z,22nm,1.3s
CHTO  Chiang Mai        72.34 294  P      P        03 23 56.8 +2.4
      comp=Z,62nm,1.2s
CHTO  Chiang Mai        72.34 294  P      P        03 23 56.8 +2.4
      comp=Z,62nm,1.2s
ZEA   Zeya              72.58 337 eP      P        03 23 55.8 +0.8
ZEA                                pmax   pmax
      comp=Z,46nm,1.4s
HIA   Hailar            72.60 330 i P     P        03 23 53.6 -1.7
HIA                                pmax   pmax
      comp=Z,4.0nm,1.1s
CD2   Chengdu           72.77 307 eP      P        03 23 56.5 -0.3
SEY   Seymchan          74.73 354ceP      P        03 24 07.1 -0.3
SEY   Seymchan          74.73 354  P      P        03 24 06.7 -0.7
      comp=Z,1.2nm,0.6s,baz=128,slow=8.1,SNR=5.9
LZH   Lanzhou           74.94 312 eP      P        03 24 10.0 +0.5
LZH                                pP     sP       03 24 13.4 +1.7
LZH                                sP     pwP      03 24 15.6 -1.7
LZH                                pmax   pmax
      comp=Z,15nm,1.2s
LZH                                LR     LR
      comp=Z,280nm,16.3s
LZH                                LR     LR
      comp=Z,230nm,18.4s
LZH                                LR     LR
      comp=Z,360nm,19.5s
GAMB  Gambell           76.81  10 eP      P        03 24 18.9 -0.4
      comp=Z,12nm,0.7s
SVW2  Sparrevohn        78.35  18 eP      P        03 24 28.4 +0.4
      comp=Z,16nm,1.2s
QSPA  South Pole Qui    78.71 180  P      P        03 24 29.5 -0.7
      comp=Z,5.9nm,1.0s,baz=352,slow=2.7,SNR=6.6
ANM   Nome              78.73  12 eP      P        03 24 30.8 +0.7
      comp=Z,6.1nm,1.0s
ANM   Nome              78.73  12 eP      P        03 24 30.8 +0.7
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ANM                                pmax   pmax
      comp=Z,6.0nm,1.0s
SONA0 Songino Array     78.88 324 eP      P        03 24 31.7 +0.3
SONM  Songino Array     78.88 324  P      P        03 24 31.7 +0.3
      comp=Z,2.2nm,1.0s,baz=128,slow=5.2,SNR=10
SONM                               LR     LR       03 58 17.5
      comp=Z,88nm,19.6s,baz=5.0,slow=35
SONA1 Songino Array     78.88 324 eP      P        03 24 31.4  0.0
BILL  Bilibino          79.13   0 eP      P        03 24 31.9 -0.3
      comp=Z,14nm,0.8s
BILL  Bilibino          79.13   0c iP     P        03 24 31.7 -0.5
BILL                              i                03 24 39.1
BILL                              e*PP    PcP      03 24 45.0 +4.4
BILL                               SS     SS       03 39 37.0 -1.0
BILL                               pmax   pmax
      comp=Z,24nm,1.7s
GTA   Gaotai            79.25 314 ⇓P      P        03 24 34.5 +0.9
GTA                                pP     pwP      03 24 38.8 -2.6
GTA                                sP     PcP      03 24 41.9  0.0
GTA                                S      S        03 34 34.2  0.0
GTA                                sS     sS       03 34 41.9 +5.5
GTA                                SKS    SKSac    03 34 44.8 -5.5
GTA                                SS     SS       03 39 44.2 +3.0
GTA                                pmax   pmax
      comp=Z,8.0nm,1.2s
GTA                                pmax   pmax
      comp=Z,60nm,6.8s
GTA                                LR     LR
      comp=Z,220nm,20.6s
GTA                                LR     LR
      comp=Z,160nm,21.6s
GTA                                LR     LR
      comp=Z,200nm,20.6s
SHL   Shillong          80.65 298 ex      P        03 24 42.0 +0.4
BOD   Bodaibo           80.77 335 eP      P        03 24 39.3 -1.9
BOD                                pmax   pmax
      comp=Z,8.0nm,1.6s
CAST  Castle Rocks      81.18  18 eP      P        03 24 43.0 -0.4
      comp=Z,8.1nm,0.7s
ZAK   Zakamensk         81.92 325 eP      P        03 24 32.0  -16
ZAK                                pmax   pmax
      comp=Z,6.0nm,1.3s
RND   Reindeer          82.17  19 eP      P        03 24 51.1 +2.4
      comp=Z,12nm,1.0s
TLY   Talaya            82.34 326 i P     P        03 24 49.7 -0.1
TLY   Talaya            82.34 326  P      P        03 24 49.5 -0.3
      comp=Z,0.8nm,0.6s,baz=147,slow=4.7,SNR=4.8
MCK   McKinley          82.38  19 eP      P        03 24 49.0 -0.7
      comp=Z,32nm,1.4s
MCK   McKinley          82.38  19 eP      P        03 24 49.0 -0.7
MCK                                pmax   pmax
      comp=Z,32nm,1.4s
IM3   Indian Mountai    82.66  16 eP      P        03 24 50.7 -0.4
MLY   Manley            82.78  17 eP      P        03 24 51.5 -0.3
      comp=Z,8.9nm,1.3s
WRH   Wood River Hil    83.16  18 eP      P        03 24 52.8 -0.9
      comp=Z,16nm,1.2s
MDM   Murphy Dome       83.47  18 eP      P        03 24 54.4 -0.9
      comp=Z,7.2nm,0.8s
HDA   Harding Lake      83.48  19 eP      P        03 24 54.8 -0.5
      comp=Z,19nm,0.8s
COLA  College           83.52  18 eP      P        03 24 55.8 +0.3
      comp=Z,14nm,0.8s
COLA  College           83.52  18 i P     P        03 24 54.7 -0.8
COLA                               pmax   pmax
      comp=Z,8.0nm,0.9s
RIDG  Independ'e Rid    83.71  20 eP      P        03 24 56.3 -0.4
      comp=Z,21nm,1.1s
IL1   Eielson Array     83.75  18 eP      P        03 24 55.0 -1.7
ILAR  Eielson Array     83.75  18  P      P        03 24 55.2 -1.5
      comp=Z,2.4nm,1.0s,baz=240,slow=4.0,SNR=11
ILAR                               LR     LR       03 55 39.5
      comp=Z,90nm,20.7s,baz=266,slow=31
ILB   Eielson Array     83.75  18 eP      P        03 24 55.7 -1.0
SCRK  Sand Creek        84.15  20 eP      P        03 24 58.2 -0.8
      comp=Z,14nm,1.0s
AFDM  Forest Hills D    84.36  49 eP      P        03 25 03.1 +2.7
      comp=Z,5.9nm,1.1s
MAW   Mawson            84.50 202  LR     LR       03 56 02.5
      comp=Z,107nm,18.4s,baz=208,slow=31
PRP   Porcupine Dome    84.68  18 eP      P        03 25 02.2 +0.6
      comp=Z,7.7nm,1.4s
WAKR  Walker            85.35  49 eP      P        03 25 09.9 +4.2
      comp=Z,12nm,1.3s
PAHR  Pah Rah Range     85.76  48 eP      P        03 25 10.9 +3.3
      comp=Z,8.5nm,1.2s
DAWY  Dawson            85.78  21 eP      P        03 25 08.5 +1.4
      comp=Z,11nm,1.1s
DAC   Darwin (Calif)    86.08  52 eP      P        03 25 12.8 +3.4
      comp=Z,6.9nm,1.3s
DAC   Darwin (Calif)    86.08  52  P      P        03 25 12.8 +3.4
DAC                                pmax   pmax
      comp=Z,7.0nm,1.3s
NV01  Mina Array Sit    86.17  50 eP      P        03 25 09.2 -0.7
NVAR  Mina Array Bea    86.17  50  P      P        03 25 09.2 -0.6
      comp=Z,1.6nm,0.8s,baz=255,slow=7.2,SNR=4.1
NVAR                               LR     LR       03 55 29.3
      comp=Z,294nm,20.9s,baz=286,slow=30
TIXI  Tiksi             86.34 349 eP      P        03 25 09.0 -0.6
TIXI  Tiksi             86.34 349ceP      P        03 25 08.6 -1.0
TIXI                               pmax   pmax
      comp=Z,12nm,2.5s
TIXI  Tiksi             86.34 349  P      P        03 25 08.4 -1.1
      comp=Z,1.2nm,0.3s,baz=146,slow=6.3,SNR=4.5
KVN   Kaiserville       86.51  49 eP      P        03 25 12.0 +0.5
      comp=Z,6.9nm,1.3s
KVN   Kaiserville       86.51  49 eP      P        03 25 12.0 +0.5
KVN                                pmax   pmax
      comp=Z,7.0nm,1.3s
DLBC  Dease Lake        86.62  28  LR     LR       03 58 40.9
      comp=Z,129nm,18.6s,baz=306,slow=32
WVOR  Wild Horse Val    87.15  46 eP      P        03 25 16.6 +2.3
      comp=Z,7.2nm,1.3s
WVOR  Wild Horse Val    87.15  46 eP      P        03 25 16.7 +2.3
WVOR                               pmax   pmax
      comp=Z,7.0nm,1.3s
R11A  Troy Canyon, C    88.20  50 eP      P        03 25 20.1 +0.6
      comp=Z,6.4nm,1.5s
BMO   Blue Mountains    88.80  44 eP      P        03 25 26.8 +4.6
      comp=Z,3.9nm,1.1s
ELK   Elko              89.10  48  P      P        03 25 23.6 -0.3
      comp=Z,1.6nm,1.1s,baz=90,slow=18,SNR=2.5
WMQ   Urumqi            89.29 315 eP      P        03 25 24.1 -0.4
WMQ                                pP     sP       03 25 28.8 +2.1
WMQ                                sP     pwP      03 25 36.7 +5.4
WMQ                                pmax   pmax
      comp=Z,18nm,1.3s
WMQ                                pmax   pmax
      comp=Z,150nm,5.1s
WMQ                                LR     LR
      comp=Z,120nm,23.5s
WMQ                                LR     LR
      comp=Z,170nm,24.9s
WMQ                                LR     LR
      comp=Z,220nm,18.7s
LCMT  Little Creek M    89.64  52 eP      P        03 25 29.6 +3.3
      comp=Z,5.4nm,1.2s
CCUT  Cedar City        89.68  52 eP      P        03 25 28.0 +1.3
      comp=Z,8.2nm,1.4s
SZCU  Shurtz Canyon     89.91  52 eP      P        03 25 31.5 +3.8
      comp=Z,5.3nm,1.3s
NEW   Newport           89.92  41  P      P        03 25 27.5 +0.2
      comp=Z,0.6nm,0.5s,baz=183,slow=3.8,SNR=2.2
NEW                                LR     LR       04 02 22.7
      comp=Z,109nm,18.6s,baz=72,slow=33
KNB   Kanab             89.97  52 eP      P        03 25 32.5 +4.5
      comp=Z,11nm,1.3s
KNB   Kanab             89.97  52  P      P        03 25 32.5 +4.5
KNB                                pmax   pmax
      comp=Z,11nm,1.3s
INK   Inuvik            90.13  19 eP      P        03 25 27.2 -0.5
      comp=Z,2.6nm,1.3s
INK   Inuvik            90.13  19 eP      P        03 25 27.2 -0.5
INK                                pmax   pmax
      comp=Z,3.0nm,1.3s
INK   Inuvik            90.13  19  P      P        03 25 27.2 -0.5
      comp=Z,1.2nm,1.1s,baz=8.7,slow=6.0,SNR=2.9
INK                                LR     LR       03 59 51.4
      comp=Z,242nm,20.7s,baz=318,slow=32
U15A  North Rim         90.24  53 eP      P        03 25 30.4 +1.0
      comp=Z,7.4nm,0.9s
MTPU  Mount Pierson     90.71  51 eP      P        03 25 36.4 +4.7
      comp=Z,3.9nm,0.9s
WUAZ  Wupatki           90.75  54 eP      P        03 25 36.0 +4.3
      comp=Z,4.0nm,1.0s
MSU   Marysvale         90.83  51 eP      P        03 25 36.2 +4.2
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HVU   Hansel Valley     91.16  48 eP      P        03 25 33.5 +0.1
      comp=Z,8.1nm,1.2s
HVU   Hansel Valley     91.16  48 eP      P        03 25 33.5 +0.1
HVU                                pmax   pmax
      comp=Z,8.0nm,1.2s
NLU   North Lily Min    91.24  50 eP      P        03 25 34.0 +0.1
      comp=Z,3.6nm,0.9s
MK01  Makanchi Array    93.71 317 eP      P        03 25 44.0 -0.9
PD31  Pinedale Array    93.71  47 eP      P        03 25 43.7 -1.5
PDAR  Pinedale Array    93.71  47  P      P        03 25 43.7 -1.5
      comp=Z,0.7nm,1.1s,baz=258,slow=4.4,SNR=3.9
PDAR                               LR     LR       04 00 37.2
      comp=Z,82nm,21.3s,baz=279,slow=31
MK31  Makanchi Array    93.72 317 eP      P        03 25 44.5 -0.5
MK32  Makanchi Array    93.72 317 eP      P        03 25 44.2 -0.7
MKAR  Makanchi Array    93.72 317 eP      P        03 25 44.5 -0.4
      comp=Z,25nm,0.9s
MKAR  Makanchi Array    93.72 317ceP      P        03 25 44.5 -0.4
MKAR                               pmax   pmax
      comp=Z,3.0nm,0.9s
MKAR  Makanchi Array    93.72 317  P      P        03 25 44.2 -0.7
      comp=Z,3.3nm,0.9s,baz=104,slow=5.7,SNR=22
MKAR                               PKKPbc PKKPdf   03 42 49.4 -1.0
      comp=Z,0.2nm,0.7s,baz=261,slow=2.8,SNR=3.3
MKAR                               LR     LR       04 06 22.9
      comp=Z,91nm,21.9s,baz=96,slow=34
ZAA0  Zalesovo Array    93.77 324 eP      P        03 25 44.0 -1.0
ZAA0                              epP     pwP      03 25 52.0 +0.2
ZALV  Zalesovo Beam     93.77 324 i P     P        03 25 43.9 -1.0
ZALV                               pmax   pmax
      comp=Z,3.0nm,0.9s
ZALV  Zalesovo Beam     93.77 324  P      P        03 25 43.5 -1.5
      comp=Z,2.7nm,0.9s,baz=117,slow=5.2,SNR=8.1
ZALV                               LR     LR       04 05 20.0
      comp=Z,131nm,22.0s,baz=70,slow=34
ZAA1  Zalesovo Array    93.77 324 eP      P        03 25 43.5 -1.5
MAKZ  Makanchi          93.93 317 eP      P        03 25 45.3 -0.6
      comp=Z,13nm,1.4s
MAKZ  Makanchi          93.93 317 eP      P        03 25 45.3 -0.6
MAKZ                               pmax   pmax
      comp=Z,13nm,1.4s
NVS   Novosibirsk       94.88 325 eP      P        03 25 56.4 +6.5
NVS                                pmax   pmax
      comp=Z,23nm,2.3s
NVS                                pmax   pmax
      comp=E,12nm,2.1s
YKA   Yellowknife Ar    95.19  27  P      P        03 25 48.4 -2.8
      comp=E,0.1nm,0.4s,baz=261,slow=5.0,SNR=5.2
YKA                                LR     LR       04 04 38.9
      comp=E,12nm,19.2s,baz=257,slow=33
YKB5  Yellowknife Ar    95.19  27 eP      P        03 25 48.4 -2.8
YKB5                              ePcP    pwP      03 25 55.9 -2.2
LTX   Lajitas           95.94  61 eP      P        03 25 54.2 -1.4
LTX   Lajitas           95.94  61 eP      P        03 25 54.2 -1.4
TXAR  Lajitas Array     95.94  61  P      P        03 25 54.2 -1.4
      comp=E,0.2nm,0.7s,baz=282,slow=4.2,SNR=2.5
TXAR                               LR     LR       04 03 52.2
      comp=E,205nm,18.8s,baz=0.0,slow=32
NRIK  Noril'sk          96.36 340  LR     LR       04 08 52.9
      comp=E,125nm,20.2s,baz=62,slow=35
KURK  Kurchatov         96.84 320 eP      P        03 25 58.2 -0.8
      comp=E,5.4nm,1.3s
KURK  Kurchatov         96.84 320ceP      P        03 25 57.0 -2.0
KURK                               pmax   pmax
      comp=Z,5.0nm,1.4s
KURBB Kurchatov Arra    96.89 320  P      P        03 25 58.2 -1.0
      comp=Z,0.3nm,0.2s,baz=103,slow=3.3,SNR=3.8
AAK   Ala-Archa         98.48 312 i P     P        03 26 02.6 -4.2
AAK                                pmax   pmax
      comp=Z,4.0nm,1.4s
ARA0  ARCESS Array S   116.58 345 ePKPdf  PKPdf    03 31 10.1 -1.5
ARCES ARCESS Array B   116.58 345  PKP    PKPdf    03 31 10.1 -1.5
      comp=Z,1.3nm,0.7s,baz=81,slow=2.2,SNR=11
OBN   Obninsk          121.03 329 i PKIKP PKPdf    03 31 19.7 -0.8
OBN                                pmax   pmax
      comp=Z,3.0nm,1.0s
KIV   Kislovodsk       121.42 315 i PKIKP PKPdf    03 31 20.3 -1.5
KIV                                pmax   pmax
      comp=Z,7.0nm,1.1s
KIV                                MLR    MLR
      comp=Z,100nm,23.0s
FIA0  FINESS Array S   122.01 338 ePKPdf  PKiKP    03 31 23.1 +0.8
FIA0  FINESS Array S   122.01 338 ePKIKP  PKiKP    03 31 23.2 +0.8
FINES FINESS Array B   122.01 338  PKP    PKiKP    03 31 23.1 +0.8
      comp=Z,1.3nm,0.9s,baz=77,slow=3.0,SNR=3.2
CPUP  Villa Florida    123.84 132  PKP    PKPdf    03 31 25.9 -0.9
      comp=Z,0.6nm,0.4s,baz=266,slow=3.1,SNR=3.2
LMN   Caledonia Moun   125.08  41 ePKPdf  PKPdf    03 31 28.4 -0.2
SIV   San Ignacio      126.30 119  PKP    PKPdf    03 31 30.2 -1.7
      comp=Z,0.6nm,0.9s,baz=105,slow=14,SNR=2.8
NB2   NORSAR Subarra   126.95 345  PKPdf  PKiKP    03 31 38.8 +6.5
      comp=Z,1.5nm,0.7s,baz=30,slow=2.0
NB200 NORSAR Array S   126.95 345 ePKPdf  PKPdf    03 31 31.5 -0.3
NOA   NORSAR Array B   126.95 345  PKP    PKPdf    03 31 31.5 -0.3
      comp=Z,0.7nm,0.9s,baz=43,slow=2.3,SNR=2.5
AKASG Malin Array Be   127.08 327  PKP    PKPdf    03 31 32.0 -0.3
      comp=Z,0.3nm,0.3s,baz=60,slow=2.2,SNR=2.3
AKBB  Malin Array Si   127.08 327 ePKPdf  PKPdf    03 31 32.0 -0.3
AKBB  Malin Array Si   127.08 327 ePKIKP  PKPdf    03 31 32.0 -0.3
KIEV  Kiev             127.10 327 i PKIKP PKPdf    03 31 30.8 -1.5
MATP  Matopo           127.46 233  PKP    PKPdf    03 31 33.4 -0.7
      comp=Z,2.2nm,1.0s,baz=120,slow=2.5,SNR=2.4
BR101 Keskin Array S   129.15 312 ePKPdf  PKiKP    03 31 37.8 +0.3
BRTR  Keskin Array B   129.15 312  PKP    PKiKP    03 31 37.8 +0.3
      comp=Z,0.7nm,1.0s,baz=174,slow=5.4,SNR=3.1
LSZ   Lusaka           130.38 239  PKP    PKiKP    03 31 41.0 +0.5
      comp=Z,0.5nm,0.5s,baz=153,slow=3.6,SNR=2.0
MLR   Muntele Rosu     131.72 323  PKP    PKiKP    03 31 42.3 -0.2
      comp=Z,1.8nm,1.0s,baz=117,slow=2.3,SNR=2.2
CONA  Conrad Observa   135.63 331 i PKiKP PKPdf    03 31 49.0 +0.3
      comp=Z,9.0nm,1.4s
GEC2  GERESS Array S   135.94 334 ePKPdf  PKPdf    03 31 48.5 -0.7
GEC2  GERESS Array S   135.94 334 ePKIKP  PKPdf    03 31 48.5 -0.7
GERES GERESS Array B   135.94 334  PKP    PKPdf    03 31 48.5 -0.7
      comp=Z,0.6nm,0.7s,baz=29,slow=2.2,SNR=3.1
ARSA  Arzberg          136.27 331 i pPKPdf PKiKP   03 31 52.3 +0.8
      comp=Z,12nm,1.6s
WTTA  Wattenberg       138.04 334 ePKiKP  PKiKP    03 31 54.9 -0.4
      comp=Z,0.9nm,0.2s
ABTA  Abfaltersbach    138.04 332 i pPKPdf pPKPdf  03 31 55.0 +0.1
      comp=Z,3.5nm,0.7s
FETA  Feichten         138.62 334 i PKPdf PKPdf    03 31 53.3 -1.1
DAVOX Davos/Dischmat   139.17 335  PKP    PKPdf    03 31 55.4  0.0
      comp=Z,2.8nm,1.0s,baz=345,slow=12
KEST  Kesra            147.63 323  PKPbc  PKPbc    03 32 13.2 +0.1
      comp=Z,9.5nm,1.0s,baz=212,slow=1.3,SNR=3.2
ES19  SONSECA Array    150.26 344 ePKPbc  PKPbc    03 32 19.3 -0.4
ESDC  Sonseca Array    150.30 344  PKPbc  PKPbc    03 32 18.8 -1.0
      comp=Z,1.2nm,0.8s,baz=0.5,slow=6.2,SNR=3.6
TORD  Torodi Ar. Bea   164.32 278  PKP    PKPdf    03 32 32.2 -0.5
      comp=Z,0.7nm,1.0s,baz=5.2,slow=1.7,SNR=3.0
TORD                               PKPab  PKPab    03 33 27.4 +0.5
      comp=Z,1.4nm,1.1s,baz=61,slow=1.8,SNR=2.6
TOA1  Torodi Ar. Sit   164.32 278 ePKPdf  PKPdf    03 32 32.2 -0.5
TOA1                              ePKPab  PKPab    03 33 27.4 +0.5
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*NIED **12** 03:20:00, 38°.60N×141°.90E, h44^{km}, Mw3.7 Best double couple: $M_0$3.71000×10^{14} NP1:ϕ_s157.00000°, δ38.00000°, λ59.00000°. NP2:ϕ_s14.00000°, δ58.00000°, λ112.00000°.*

*ISCJB **12** 03:20:14.6±0.8, 38°.63N±0°.04×141°.98E±0°.08, h54^{km}±5^{km}, mb3.8/7, Error ellipse: s-maj=10.9km s-min=5.4km az=14.3*

*IDC **12** 03:20:15.5±3.4, 38°.57N×142°.21E, h59^{km}±27^{km}, mb3.6/7, mb1 3.6/9, mb1mx3.2/89, mbtmp3.8/9, ML2.9/2, Error ellipse: s-maj=41.8km s-min=20.8km az=88.0*

*JMA **12** 03:20:16.1, 38°.64N×141°.90E, h48^{km}±1^{km}, M3.8*

JMA Felt I J1.

ISC 12 03:20:14.3±1.4**, 38°.63N**±0°.04×**142°.09E**±0°.09**, h44**^{km}±11^{km}**, n28,** σ1^s**.19**/36**, mb3.8**/7**, Near east coast of eastern Honshu**

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Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                    Op      ISC      h  m  s    ISC
JKMT  Kesennumamotoy    0.52 291     P      Pn       03 20 25.9 +0.5
JKMT                                 S      Sn       03 20 32.6 -0.7
OFUJ  Ofunato           0.56 324     P      Pn       03 20 27.0 +1.0
OFUJ                                 S      Sn       03 20 34.6 +0.3
JIKH  Ishinomakikobu    0.59 237     P      Pn       03 20 26.8 +0.5
JIKH                                 S      Sn       03 20 34.3 -0.6
JIO   Ouri              0.61 253     P      Pn       03 20 26.9 +0.3
JIO                                i S      Sn       03 20 34.3 -1.1
JMK   Ichinoseki        0.76 295     P      Pn       03 20 28.9 +0.3
JMK                                  S      Sn       03 20 37.9 -1.0
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JOM	Ohasama	1.05	324	P	Pn	03 20 33.5	+0.9
JOM				S	Sn	03 20 44.7	-1.3
JOU	Okura	1.15	257	P	Pn	03 20 34.0	0.0
JOU				S	Sn	03 20 47.1	-1.5
JMM	Marumori	1.28	234	P	Pn	03 20 35.6	-0.1
JMM				S	Sn	03 20 50.0	-1.6
JRG	Rokugo	1.37	304	P	Pn	03 20 37.3	+0.3
JRG				*e*S	Sn	03 20 54.2	+0.3
JYK	Kaneyama	1.39	282	P	Pn	03 20 37.2	0.0
JYK				*e*S	Sn	03 20 53.1	-1.2
JFK	Kawauchi	1.59	218	P	Pn	03 20 40.4	+0.4
JFK				S	Sn	03 20 58.2	-1.1
JYS	Shirataka	1.65	256	P	Pn	03 20 41.0	+0.3
JYS				*e*S	Sn	03 20 59.7	-1.0
MAT	Matsushiro	3.72	237	P	Pn	03 21 11.3	+2.0
MAT				S	Sn	03 21 52.8	+0.9
MJAR	Matsushiro Arr 0.3nm,0.3s,baz=42,slow=11,SNR=19	3.72	237	P	Pn	03 21 11.3	+2.0
ASAJ	Asahikawa 0.6nm,0.3s,baz=139,slow=14,SNR=2.8	5.50	4	P	Pn	03 21 35.1	+1.5
ASAJ	0.6nm,0.3s,baz=203,slow=7.7,SNR=1.9			S	Sn	03 22 31.5	-3.9
H11N2	WAKE ISLAND Hy baz=317,slow=75,SNR=59	28.55	124	T	T	03 56 32.5	
H11N1	WAKE ISLAND Hy baz=317,slow=75,SNR=82	28.56	124	T	T	03 56 30.8	
H11N3	WAKE ISLAND Hy baz=317,slow=75,SNR=87	28.57	124	T	T	03 56 30.9	
H11S1	WAKE ISLAND Hy baz=318,slow=76,SNR=89	29.32	126	T	T	03 57 22.5	
H11S3	WAKE ISLAND Hy baz=318,slow=76,SNR=80	29.32	126	T	T	03 57 22.6	
H11S2	WAKE ISLAND Hy baz=318,slow=76,SNR=125	29.34	126	T	T	03 57 23.7	
ZALV	Zalesovo Beam 0.8nm,0.4s,baz=82,slow=7.4,SNR=3.6	41.26	311	P	P	03 27 54.8	-0.1
NRIK	Noril'sk 2.2nm,0.4s,baz=135,slow=8.6,SNR=3.1	42.05	334	P	P	03 28 01.7	+0.5
MKAR	Makanchi Array 0.4nm,0.6s,baz=83,slow=9.3,SNR=5.8	43.75	301	P	P	03 28 15.6	+0.3
KURBB	Kurchatov Arra 2.4nm,0.4s,baz=80,slow=7.9,SNR=21	45.46	307	P	P	03 28 29.1	+0.3
BVAR	Borovoye Array 0.3nm,0.4s,baz=69,slow=7.9,SNR=2.8	49.91	311	P	P	03 29 03.7	+0.4
WRA	Warramunga Arr 0.3nm,0.7s,baz=6.7,slow=7.5,SNR=3.0	58.72	189	P	P	03 30 06.5	-1.1
HFS	Hagfors 1.1nm,0.6s,baz=69,slow=7.9,SNR=4.9	72.86	336	P	P	03 31 38.6	+0.4

MEX 12 03:29:23.6±0.5**, 15°.96N×93°.63W, h93^{km}**±7^{km}**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.47	123	*e*P	Pn	03 29 37.2	-1.2
PCIG				*i* S	Sn	03 29 47.6	-1.8
CCIG	Comitan	1.47	77	*e*P	Pn	03 29 49.1	-0.2
CCIG				*e*S	Sn	03 30 06.9	-1.8

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*IDC **12** 03:30:18.4±1.4, 11°.10S×165°.36E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.6/63, mbtmp3.7/7, ML4.1/1, Error ellipse: s-maj=46.4km s-min=25.1km az=128.0*

*ISCJB **12** 03:30:21.1±1.2, 11°.3S±0°.1×165°.4E±0°.2, h30^{km}, mb3.6/6, Error ellipse: s-maj=28.2km s-min=19.8km az=179.9*

ISC 12 03:30:22.9±1.2**, 11°.2S**±0°.1×**165°.4E**±0°.2**, h30^{km}, n8, σ0ˢ.83**/8**, mb3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.4nm,0.3s,baz=350,slow=20,SNR=12	10.87	175	Pn	Pn	03 32 56.5	-0.2
STKA	Stephens Creek 0.5nm,0.2s,baz=66,slow=9.7,SNR=2.8	30.11	223	P	P	03 36 31.2	+1.2
WRA	Warramunga Arr 0.7nm,0.8s,baz=80,slow=9.2	31.12	250	P	P	03 36 38.8	-0.4
ASAR	Alice Springs 0.6nm,0.5s,baz=65,slow=10,SNR=8.1	32.43	243	P	P	03 36 50.0	-0.6
FITZ	Fitzroy Crossi 0.6nm,0.6s,baz=67,slow=7.7,SNR=2.7	39.02	255	P	P	03 37 46.4	-0.7
ILAR	Eielson Array 0.2nm,0.6s,baz=213,slow=6.5,SNR=2.6	83.75	19	P	P	03 42 48.3	-0.5
MKAR	Makanchi Array 0.2nm,0.6s,baz=88,slow=3.5,SNR=2.9	93.39	317	P	P	03 43 36.2	+0.8
ARCES	ARCESS Array B 4.3nm,1.1s,baz=51,slow=2.8,SNR=5.2	116.38	345	PKP	PKiKP	03 49 03.3	+0.2

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*KRNET **12** 03:30:40.6±0.1, 40°.32N×77°.61E, h18^{km}, mb3.4*

*SOME **12** 03:30:41.2, 40°.35N×77°.58E, h10^{km}*

*NNC **12** 03:30:42.0±0.6, 40°.35N×77°.55E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=4.9km s-min=2.7km az=137.0*

ISC 12 03:30:36.3±1.7**, 40°.19N**±0°.07×**77°.65E**±0°.04**, h10^{km}, n72, σ1ˢ.33**/107**, 37C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy baz=6.0	1.54	4	⇑*i*P	Pg	03 31 07.7	+1.8
TARG	baz=6.0			⇑*i*S	Sg	03 31 27.4	+1.5
NRN	Naryn baz=12	1.76	315	⇑*i*P	Pg	03 31 11.8	+1.6
NRN	baz=12			⇑*i*S	Sg	03 31 34.3	+1.3
KDJ	Kajisay baz=50	1.97	350	⇓*i*P	Pg	03 31 15.2	+1.1
KDJ	baz=50			⇓*i*S	Sg	03 31 40.2	+0.6
ULHL	Ulahol SNR=116	2.31	333	P	Pg	03 31 21.7	+1.1
ULHL	Ulahol baz=32	2.31	333	⇑*i*P	Pg	03 31 20.6	0.0
ULHL	baz=32			⇑*i*S	Sg	03 31 49.6	-1.0
PRZ	Przheval'sk baz=15	2.36	14	⇑*i*P	Pg	03 31 21.2	-0.3
PRZ	baz=15			⇑*i*S	Sg	03 31 50.8	-1.3
KZA	Kyzart SNR=40	2.62	317	P	Pg	03 31 27.6	+1.2
KZA	Kyzart baz=15	2.62	317	⇓*i*P	Pg	03 31 24.9	-1.6
KZA	baz=15			⇓*i*S	Sb	03 31 57.2	+1.3
BOOM	Boomskoye usch baz=31	2.63	331	⇑*i*P	Pg	03 31 25.0	-1.8
BOOM	baz=31			⇑*i*S	Sb	03 31 57.4	+1.3
TNSS	Tian-Shan 83nm,0.2s	2.89	350	Pg	Pg	03 31 32.2	+0.5
TNSS	32nm,0.3s			Lg	Lg	03 32 08.8	
TNSS	Tian-Shan 83nm,0.2s	2.89	350	*e*P	Pg	03 31 32.2	+0.5
TNSS	32nm,0.3s			*e*S	Sg	03 32 08.8	-0.4
SATY	Saty 66nm,0.5s	2.92	11	Pg	Pg	03 31 32.8	+0.5
SATY	69nm,0.4s			Lg	Lg	03 32 09.7	
SATY	Saty 66nm,0.5s	2.92	11	*e*P	Pg	03 31 32.8	+0.5
SATY	69nm,0.4s			*e*S	Sg	03 32 09.7	-0.4
IZV	Izvestkoviy 36nm,0.2s	2.95	345	Pg	Pg	03 31 33.1	+0.3
IZV	43nm,0.4s			Lg	Lg	03 32 11.0	
IZV	Izvestkoviy 36nm,0.2s	2.95	345	*e*P	Pg	03 31 33.2	+0.5
IZV	43nm,0.4s			*e*S	Sg	03 32 11.0	0.0
MDOK	Medeo 17nm,0.3s	3.00	352	⇓Pg	Pg	03 31 34.0	+0.1
MDOK	98nm,0.5s			⇑Lg	Lg	03 32 12.6	
MDOK	Medeo 51nm,0.2s	3.00	352	Pg	Pg	03 31 33.9	0.0
MDOK	129nm,0.5s			Lg	Lg	03 32 11.5	
MDOK	Medeo 51nm,0.2s	3.00	352	*e*P	Pg	03 31 33.9	0.0
MDOK	129nm,0.5s			*e*S	Sg	03 32 11.5	-1.3
ARLS	Aral baz=3.0	3.02	305	⇑*e*P	Pb	03 31 30.8	+0.5
ARLS	baz=3.0			⇑*i*S	Sb	03 32 07.1	-0.2
KNDC	Almaty 57nm,0.8s	3.07	351	⇑Pg	Pg	03 31 35.8	+0.7
KNDC	75nm,0.5s			⇑Lg	Lg	03 32 15.2	
KOTS	Kotyrbulak 32nm,0.2s	3.07	353	Pg	Pg	03 31 35.0	-0.1
KOTS	63nm,0.3s			Lg	Lg	03 32 13.4	
KOTS	Kotyrbulak 32nm,0.2s	3.07	353	*e*P	Pg	03 31 35.0	-0.1
KOTS	63nm,0.3s			*e*S	Sg	03 32 13.4	-1.4
MTBS	Maitube 38nm,0.2s	3.08	343	Pg	Pg	03 31 35.0	-0.3
MTBS	24nm,0.2s			Lg	Lg	03 32 13.4	
MTBS	Maitube 38nm,0.2s	3.08	343	*e*P	Pg	03 31 35.0	-0.3
MTBS	24nm,0.2s			*e*S	Sg	03 32 13.4	-1.7
KST	Kastek 24nm,0.3s	3.12	337	Pg	Pg	03 31 36.7	+0.7
KST	24nm,0.4s			Lg	Lg	03 32 16.4	
KST	Kastek 24nm,0.3s	3.12	337	*e*P	Pg	03 31 36.7	+0.7
KST	24nm,0.4s			*e*S	Sg	03 32 16.4	0.0
UCH	Uchtor SNR=14	3.12	312	P	Pg	03 31 37.0	+0.9
UCH	Uchtor baz=10.0	3.12	312	⇑*i*P	Pb	03 31 31.9	-0.3
UCH	baz=10.0			⇑*i*S	Sb	03 32 09.8	-0.6
UZB	Uzynbulak 14nm,0.4s	3.12	19	Pg	Pg	03 31 36.6	+0.4
UZB	37nm,0.4s			Lg	Lg	03 32 16.5	
UZB	Uzynbulak 14nm,0.4s	3.12	19	*e*P	Pg	03 31 36.6	+0.4
UZB	37nm,0.4s			*e*S	Sg	03 32 16.5	-0.2
TKM2	Tokmak 2 SNR=11	3.13	331	P	Pg	03 31 36.6	+0.3
TKM2	Tokmak 2 1.3nm,0.4s	3.13	331	⇓Pn	Pb	03 31 31.9	-0.3
TKM2	13nm,0.6s			⇑Pg	Pg	03 31 36.0	-0.3
TKM2	29nm,0.8s			⇑Lg	Lg	03 32 17.5	
TKM2	Tokmak 2 baz=31	3.13	331	⇑*i*P	Pb	03 31 31.7	-0.5
TKM2	baz=31			⇑*i*S	Sb	03 32 09.4	-1.1
SFK	Sufi-Kurgan 4.2nm,0.3s	3.19	268	⇑Pn	Pb	03 31 32.4	-0.7
SFK	9.6nm,0.4s			⇓Pg	Pg	03 31 38.1	+0.7
SFK	13nm,0.3s			⇑Lg	Lg	03 32 20.0	
SFK	Sufi-Kurgan 13nm,0.2s	3.19	268	Pg	Pg	03 31 38.4	+1.1
SFK	16nm,0.2s			Lg	Lg	03 32 19.4	
KBK	Karagaybulak SNR=21	3.19	321	P	Pg	03 31 37.6	+0.1
KBK	Karagaybulak baz=20	3.19	321	⇑*i*P	Pb	03 31 33.1	-0.1
KBK	baz=20			⇑*i*S	Sb	03 32 10.9	-1.3
KURS	Kuram 11nm,0.3s	3.32	7	Pg	Pg	03 31 39.8	0.0
KURS	26nm,0.5s			Lg	Lg	03 32 21.7	
KURS	Kuram 11nm,0.3s	3.32	7	*e*P	Pg	03 31 39.8	0.0
KURS	26nm,0.5s			*e*S	Sg	03 32 21.7	-1.1
DGS	Degeres 17nm,0.2s	3.36	336	Pg	Pg	03 31 40.8	+0.2
DGS	43nm,0.5s			Lg	Lg	03 32 23.3	
DGS	Degeres 17nm,0.2s	3.36	336	*e*P	Pg	03 31 40.4	-0.2
DGS	43nm,0.5s			*e*S	Sg	03 32 23.3	-0.8
AAK	Ala-Archa SNR=11	3.41	317	P	Pg	03 31 41.5	-0.1
AAK	Ala-Archa 8.4nm,0.5s	3.41	317	⇑Pg	Pg	03 31 41.0	-0.6
AAK	33nm,0.6s			⇓Lg	Lg	03 32 25.9	
PDGK	Podgornoye 4.7nm,0.3s	3.42	23	Pg	Pg	03 31 41.6	-0.3
PDGK	33nm,0.7s			Lg	Lg	03 32 24.9	
PDGK	Podgornoye 8.6nm,0.5s	3.42	23	⇑Pg	Pg	03 31 41.4	-0.4
PDGK	80nm,0.7s			⇑Lg	Lg	03 32 28.4	
PDGK	Podgornoye baz=24	3.42	23	⇑*e*P	Pb	03 31 36.2	-0.9
PDGK	baz=24			⇑*i*S	Sb	03 32 17.0	-1.8
CHMS	Chumysh SNR=12	3.55	323	P	Pg	03 31 43.9	-0.4
AML	Almayashu SNR=8.5	3.56	304	P	Pb	03 31 39.9	+0.2
KTBS	Karatobe 19nm,0.3s	3.59	349	Pg	Pg	03 31 44.4	-0.7
KTBS	30nm,0.4s			Lg	Lg	03 32 29.5	
KTBS	Karatobe 19nm,0.3s	3.59	349	*e*P	Pg	03 31 44.4	-0.7
KTBS	30nm,0.4s			*e*S	Sg	03 32 29.5	-2.1
CHKK	Chushkaly 22nm,0.5s	3.69	353	Pg	Pg	03 31 45.5	-1.6
CHKK	61nm,0.3s			Lg	Lg	03 32 31.2	
CHKK	Chushkaly 22nm,0.5s	3.69	353	*e*P	Pg	03 31 45.5	-1.6
CHKK	61nm,0.3s			*e*S	Sg	03 32 31.2	-3.7
ARSB	Arslanbob baz=88	3.72	289	⇑*i*P	Pb	03 31 40.6	-1.6
ARSB	baz=88			⇑*i*S	Sb	03 32 25.1	-2.4
KUU	Kurty 12nm,0.5s	3.83	346	Pg	Pg	03 31 48.2	-1.4
KUU	22nm,0.6s			Lg	Lg	03 32 36.0	
KUU	Kurty 12nm,0.5s	3.83	346	*e*P	Pg	03 31 48.2	-1.4
KUU	22nm,0.6s			*e*S	Sg	03 32 36.0	-3.1
KTMS	Ketmen 1.6nm,0.1s	3.83	31	Pg	Pg	03 31 49.2	-0.4
KTMS	39nm,0.3s			Lg	Lg	03 32 38.4	
KTMS	Ketmen 1.6nm,0.1s	3.83	31	*e*P	Pg	03 31 49.2	-0.4
KTMS	39nm,0.3s			*e*S	Sg	03 32 38.4	-0.8
USP	Ospenovka SNR=28	3.87	324	P	Pg	03 31 49.5	-1.0
MNBS	Baschi 9.1nm,0.4s	3.92	8	Pg	Pg	03 31 50.7	-0.8
MNBS	29nm,0.5s			Lg	Lg	03 32 40.9	
MNBS	Baschi 9.1nm,0.4s	3.92	8	*e*P	Pg	03 31 50.7	-0.8
MNBS	29nm,0.5s			*e*S	Sg	03 32 40.9	-1.4
ARXS	Arharly 11nm,0.4s	4.02	2	Pg	Pg	03 31 53.0	-0.3
ARXS	34nm,0.5s			Lg	Lg	03 32 44.0	
ARXS	Arharly 11nm,0.4s	4.02	2	*e*P	Pg	03 31 53.0	-0.3
ARXS	34nm,0.5s			*e*S	Sg	03 32 44.0	-1.3
MRKS	Merke 6.0nm,0.3s	4.19	309	Pg	Pg	03 31 56.4	-0.2
MRKS	9.7nm,0.6s			Lg	Lg	03 32 50.1	
MRKS	Merke 6.0nm,0.3s	4.19	309	*e*P	Pg	03 31 56.4	-0.2
MRKS	9.7nm,0.6s			*e*S	Sg	03 32 50.1	-0.7
DJR	Jarkent 1.7nm,0.2s	4.43	20	*e*P	Pg	03 31 59.8	-1.4
DJR	12nm,0.5s			*e*S	Sg	03 32 56.5	-2.0
MNAS	Manas 3.7nm,0.9s	4.50	302	⇓Pg	Pg	03 32 02.3	-0.2
MNAS	15nm,0.9s			⇓Lg	Lg	03 32 59.2	
MNAS	Manas 1.5nm,0.3s	4.50	302	Pg	Pg	03 32 01.1	-1.5
MNAS	5.0nm,0.5s			Lg	Lg	03 32 58.1	
KAPS	Kapalarasan 3.3nm,0.7s	5.24	13	Pg	Pg	03 32 15.6	-1.1
KAPS	2.7nm,0.5s			Lg	Lg	03 33 23.0	
KAPS	Kapalarasan 3.3nm,0.7s	5.24	13	*e*P	Pg	03 32 15.6	-1.1
KAPS	2.7nm,0.5s			*e*S	Sg	03 33 23.0	-1.5
KK31	Karatay Array 1.6nm,0.7s,baz=119,slow=15,SNR=6.7	6.09	301	⇓Pg	Pg	03 32 30.6	-2.3
KK31	2.5nm,0.5s,baz=111,slow=28,SNR=6.3			⇑Lg	Lg	03 33 51.6	
MAKZ	Makanchi 2.4nm,1.4s	7.32	24	⇑Pg	Pg	03 32 54.3	-2.1
MAKZ	3.0nm,0.9s			⇑Lg	Lg	03 34 33.0	
MK31	Makanchi Array 0.5nm,0.6s,baz=202,slow=14,SNR=5.4	7.41	26	⇑Pg	Pg	03 32 58.0	-0.1
MK31	0.6nm,0.5s			⇑Sn	Sn	03 33 56.1	+7.6
MK31	1.6nm,0.7s,baz=213,slow=26,SNR=3.7			⇓Lg	Lg	03 34 34.3	

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*ISCJB **12** 03:56:30.1±0.7, 11°.25S±0°.07×165°.75E±0°.07, h10^{km}, mb4.6/16, MS3.6/5, Error ellipse: s-maj=12.3km s-min=7.1km az=141.4*

*IDC **12** 03:56:30.3±1.2, 11°.18S×165°.84E, h0^{km}, mb4.1/8, mb1 4.3/10, mb1mx3.9/48, mbtmp4.2/10, ML4.2/2, MS3.4/6, Ms1 3.4/6, ms1mx3.1/38, Error ellipse: s-maj=28.4km s-min=23.3km az=46.0*

*NEIC **12** 03:56:31.6±0.6, 11°.12S×165°.80E, h10^{km}, mb4.5/9, Error ellipse: s-maj=13.1km s-min=10.3km az=54.0*

ISC 12 03:56:31.6±0.8**, 11°.15S**±0°.08×**165°.80E**±0°.09**, h10^{km}, n37, σ1ˢ.10**/32**, mb4.5**/16**, MS3.4**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.01	286	*e*Pn	Pn	03 58 01.2	+0.7
HNR				*e*Sn	Sn	03 59 09.1	-0.3
HNR	Honiara 5.2nm,0.3s,baz=211,slow=6.8,SNR=7.7	6.01	286	Pn	Pn	03 58 02.1	+1.6
HNR	9.1nm,0.3s,baz=198,slow=20,SNR=1.8			Sn	Sn	03 59 09.1	-0.3
HNR	comp=Z,671nm,20.5s,baz=110,slow=40			LR	LR	04 00 31.1	
DZM	Mont Dzumac	10.88	177	*e*Pn	Pn	03 59 09.0	+1.6
DZM	Mont Dzumac 2.1nm,0.3s,baz=344,slow=13,SNR=16	10.88	177	Pn	Pn	03 59 08.6	+1.2
DZM	0.5nm,0.3s,baz=0.0,slow=20,SNR=3.6			Sn	Sn	04 01 07.5	-1.9
DZM	comp=Z,146nm,18.9s,baz=18,slow=36			LR	LR	04 03 03.1	
EIDS	Eidsvold 16nm,1.3s	19.85	223	*e*P	P	04 01 02.9	+0.1
MANU	Manus Island 283nm,0.2s	20.41	295	*e*P	P	04 01 06.5	-2.5
CTA	Charters Tower 2.9nm,0.6s,baz=54,slow=14,SNR=2.8	20.80	242	P	Pn	04 01 15.2	-0.4
COEN	Coen 19nm,1.1s	22.26	260	*e*P	P	04 01 29.4	+0.5
RAO	Raoul Island comp=Z,2µm,19.7s,baz=300,slow=33	23.57	142	LR	LR	04 09 20.7	
OUZ	Omahuta 10nm,1.1s	24.99	165	*e*P	P	04 01 55.0	-0.5
URZ	Urewera 5.0nm,0.9s,baz=243,slow=6.8,SNR=3.4	28.83	161	P	P	04 02 30.5	+0.5
H11S2	WAKE ISLAND Hy baz=184,slow=76,SNR=23	29.47	2	T	T	04 32 39.9	
H11S3	WAKE ISLAND Hy baz=184,slow=76,SNR=32	29.47	2	T	T	04 32 38.2	
H11S1	WAKE ISLAND Hy baz=184,slow=76,SNR=26	29.48	2	T	T	04 32 41.2	
H11N1	WAKE ISLAND Hy baz=184,slow=76,SNR=9.3	30.69	2	T	T	04 34 08.2	
H11N3	WAKE ISLAND Hy baz=184,slow=76,SNR=12	30.69	2	T	T	04 34 14.9	
H11N2	WAKE ISLAND Hy baz=184,slow=76,SNR=11	30.71	2	T	T	04 34 12.7	
WB2	Warramunga Arr	31.48	250	*e*P	P	04 02 53.8	-0.1
WR1	Warramunga Arr 8.0nm,0.9s	31.50	250	*e*P	P	04 02 54.1	+0.2
WR1				*e*PcP	PcP	04 05 46.2	-0.8
WRA	Warramunga Arr 4.6nm,1.0s,baz=80,slow=9.1,SNR=21	31.50	250	P	P	04 02 54.1	+0.1
WRA	0.1nm,0.6s,baz=66,slow=2.9,SNR=2.3			PcP	PcP	04 05 46.2	-0.8
WRA	comp=Z,86nm,18.2s,baz=125,slow=36			LR	LR	04 15 36.8	
GUMO	Guam 353nm,1.1s	32.17	319	*e*P	P	04 02 59.7	-0.1
GUMO	Guam comp=Z,61nm,18.1s,baz=94,slow=38	32.17	319	LR	LR	04 17 04.7	
RPZ	Rata Peaks 4.7nm,0.5s,baz=0.0,slow=18,SNR=3.7	32.76	173	P	P	04 03 03.9	-0.8
AS31	Alice Springs 0.7nm,0.8s	32.79	243	*e*P	P	04 03 04.1	-1.2
AS31				*e*PcP	PcP	04 05 50.9	+0.4
ASAR	Alice Springs 0.8nm,0.8s,baz=73,slow=9.8,SNR=7.2	32.79	243	P	P	04 03 04.1	-1.2
ASAR	0.3nm,0.6s,baz=70,slow=3.0,SNR=3.5			PcP	PcP	04 05 50.9	+0.4
FITZ	Fitzroy Crossi 3.9nm,0.9s	39.40	255	*e*P	P	04 04 02.6	+0.7
FITZ	Fitzroy Crossi 3.0nm,0.8s,baz=112,slow=7.1,SNR=8.2	39.40	255	P	P	04 04 02.6	+0.7
LUWI	Luwuk 72nm,0.9s	43.88	280	*e*P	P	04 04 39.0	+0.3
DAV	Davao City (W) 352nm,0.4s	43.93	293	*e*P	P	04 04 36.8	-2.3
JHJ	Hachijo jima 2 comp=Z,29nm,18.4s,baz=78,slow=36	50.53	332	LR	LR	04 26 30.4	
JNU	Nakatsue comp=Z,32nm,21.5s,baz=132,slow=30	55.20	324	LR	LR	04 24 38.1	
YSS	Yuzh-Sakhalins	61.40	342	*e*P	P	04 07 04.8	+17
CM31	Chiang Mai Arr 5.1nm,0.4s	72.20	294	*e*P	P	04 07 59.0	+1.7
CMAR	Chiang Mai Arr 0.5nm,0.3s,baz=123,slow=3.3,SNR=4.4	72.20	294	P	P	04 07 59.0	+1.7
ILAR	Eielson Array 0.3nm,0.7s,baz=233,slow=5.5,SNR=4.5	83.60	18	P	P	04 09 00.2	+0.5
ILB	Eielson Array 1.5nm,0.9s	83.60	18	*e*P	P	04 09 00.2	+0.5
Y14A	Wickenburg 4.7nm,0.3s	88.96	55	*e*P	P	04 09 26.2	-0.8

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*IDC **12** 03:59:25.2±1.4, 1°.23S×120°.78E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.5/38, mbtmp3.6/5, MS3.4/1, Ms1 3.4/1, ms1mx2.5/41, Error ellipse: s-maj=150.9km s-min=19.9km az=63.0*

*ISCJB **12** 03:59:27.8±0.6, 1°.50S±0°.05×119°.98E±0°.06, h33^{km}, mb3.5/5, Error ellipse: s-maj=9.4km s-min=6.0km az=20.4*

*DJA **12** 03:59:27.0±0.3, 1°S±3°×12°0E±°, h10^{km}, M3.9/11, MLv3.9/11*

ISC 12 03:59:29.3±0.9**, 1°.46S**±0°.05×**119°.98E**±0°.05**, h35^{km}, n17, σ1ˢ.49**/18**, mb3.7**/5**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	Palu	0.57	345	P	Pn	03 59 38.4	-2.6
TTSI	Tana Toraja	1.59	186	P	Pn	03 59 53.2	-1.8
APSI	Ampana	1.75	72	P	Pn	03 59 56.0	-1.3
APSI				S	Sn	04 00 18.7	+0.3
MPSI	Mapaga	1.78	357	P	Pn	03 59 57.4	-0.3
SPSI	Sidrap Palu	2.50	185	P	Pn	04 00 07.9	+0.3
MRSI	Marisa	2.74	46	P	Pn	04 00 11.1	+0.2

MRSI				S	Sn	04 00 44.9	+2.0
LUWI	Luwuk	2.82	82	P	Pn	04 00 11.1	-0.9
BNSI	Bone	2.93	178	P	Pn	04 00 14.1	+0.7
SMKI	Samarinda	2.95	290	P	Sn	04 00 48.0	+0.1
KDI	Kendari	3.62	133	P	Pn	04 00 22.1	-0.9
BKSI	Bulukumba	3.84	178	P	Pn	04 00 26.6	+0.6
TGY	Tagaytay City	15.49	3	LR	LR	04 08 28.0	
	comp=Z,151nm,21.0s,baz=311,slow=36						
WRA	Warramunga Arr	23.13	144	P	P	04 04 29.9	-2.7
	2.8nm,0.9s,baz=324,slow=10,SNR=11						
ASAR	Alice Springs	25.88	150	P	P	04 04 57.0	-1.1
	0.5nm,0.6s,baz=328,slow=8.3,SNR=6.4						
STKA	Stephens Creek	36.49	148	P	P	04 06 30.3	-1.1
	1.4nm,0.5s,baz=317,slow=11,SNR=4.9						
SONM	Songino Array	50.50	348	P	P	04 08 25.5	+1.3
	0.1nm,0.5s,baz=170,slow=8.8,SNR=2.4						
MKAR	Makanchi Array	58.32	330	P	P	04 09 22.8	+1.9
	0.4nm,0.6s,baz=137,slow=6.1,SNR=3.7						

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*ISCJB **12** 04:00:31.3±0.4, 60°.33N±0°.03×152°.19W±0°.06, h92^{km}±4^{km}, mb3.4/2, Error ellipse: s-maj=5.1km s-min=4.5km az=37.3*
*NEIC **12** 04:00:33.3±0.0, 60°.31N×152°.22W, h79^{km}, ML3.2(AEIC), After AEIC.*
*IDC **12** 04:00:34.6±1.7, 60°.13N×150°.10W, h0^{km}, mb3.5/3, mb1 3.6/7, mb1mx3.3/48, mbtmp3.3/7, ML2.9/4, Error ellipse: s-maj=27.6km s-min=15.8km az=79.0*
ISC 12 04:00:32.9±0.9**, 60°.33N**±0°.04×**152°.20W**±0°.04**, h83**^{km}±7^{km}**, n69, σ1^{s}03**/79**, mb3.5**/3**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RED	Redoubt Volcan	0.30	288	P	Pn	04 00 45.1	-0.5
RED				S	Sn	04 00 54.6	-0.4
RDN	Redoubt North	0.34	304	P	Pn	04 00 45.3	-0.5
RDWB	Redoubt West	0.36	297	P	Pn	04 00 45.5	-0.5
RDWB				S	Sn	04 00 55.4	-0.4
RDJH	Redoubt Jeurge	0.40	312	P	Pn	04 00 45.7	-0.6
RDJH				S	Sn	04 00 55.8	-0.4
NKA	Nikishka	0.63	48	P	Pn	04 00 49.3	+1.3
BRLK	Bradley Lake	0.87	130	P	Pn	04 00 50.5	-0.1
BRLK				S	Sn	04 01 03.9	+0.2
SPCR	Spurr Chakacha	0.88	360	P	Pn	04 00 50.2	-0.5
SPCR				S	Sn	04 01 03.3	-0.7
SPBG	Spurr Blockage	0.94	355	P	Pn	04 00 51.1	-0.3
SPBG				S	Sn	04 01 04.9	-0.5
SPNN	North Nagishla	1.07	347	P	Pn	04 00 52.7	-0.4
SPNN				S	Sn	04 01 08.4	+0.2
FIB	Fire Island	1.30	49	P	Pn	04 00 56.3	+0.6
FIB				S	Sn	04 01 15.7	+2.8
SUA	Susitna One	1.34	31	P	Pn	04 00 56.5	+0.1
SUA				S	Sn	04 01 14.6	+0.5
SEW	Seward	1.39	98	P	Pn	04 00 56.0	-0.7
RC01	Rabbit Creek A	1.43	57	P	Pn	04 00 57.5	+0.1
PTE	Portage	1.66	70	P	Pn	04 00 59.6	-0.6
SVW2	Sparrevohn	1.83	296	P	Pn	04 01 01.7	-0.9
SVW2				S	Sn	04 01 23.9	-1.4
PMR	Palmer	1.96	48	P	Pn	04 01 03.6	-0.6
PWL	Port Wells	1.98	73	P	Pn	04 01 03.4	-1.1
KNK	Knik Glacier	2.13	58	P	Pn	04 01 05.8	-0.7
KNK				S	Sn	04 01 31.3	-0.9
GHO	Glory Hole Cre	2.15	46	P	Pn	04 01 06.2	-0.7
SML	Sawmill	2.40	50	P	Pn	04 01 09.4	-0.7
KAKN	Katmai Knife C	2.51	217	P	Pn	04 01 11.5	-0.2
PPLA	Purkeypile	2.58	0	P	Pn	04 01 13.2	+0.5
KELA	Mount Kelaz	2.62	225	P	Pn	04 01 13.2	+0.1
CAHL	Cahill	2.79	216	P	Pn	04 01 15.0	-0.4
SCM	Sheep Creek Mo	2.81	55	P	Pn	04 01 14.9	-0.8
JPK	Jack Peak	2.85	73	P	Pn	04 01 14.4	-1.8
HUR	Hurricane	2.93	24	P	Pn	04 01 17.8	+0.6
CAST	Castle Rocks	3.10	1	P	Pn	04 01 19.8	+0.2
OHAK	Old Harbor	3.17	191	P	Pn	04 01 19.1	-1.3
TT01	Tatalina	3.17	326	P	Pn	04 01 20.0	-0.5
DIV	Divide	3.26	73	P	Pn	04 01 20.1	-1.6
TRF	Thorofare Moun	3.26	15	P	Pn	04 01 22.2	+0.3
KLU	Klutina	3.28	66	P	Pn	04 01 20.6	-1.5
PLK4	Peulik 4	3.46	220	P	Pn	04 01 25.8	+1.3
RND	Reindeer	3.47	26	P	Pn	04 01 25.1	+0.4
CHUM	Lake Minchumin	3.57	359	P	Pn	04 01 26.0	+0.1
DHY	Denali Highway	3.59	38	P	Pn	04 01 26.4	+0.1
PS12	TAPS Pump St12	3.63	68	P	Pn	04 01 25.8	-1.0
MCK	McKinley	3.75	23	P	Pn	04 01 28.9	+0.6
BPAW	Bear Paw Mtn.	3.83	8	P	Pn	04 01 29.1	-0.3
SII	Sitkinak Islan	3.92	196	P	Pn	04 01 29.5	-1.2
HMT	Hamilton	3.94	86	P	Pn	04 01 30.1	-0.9
HARP	HAARP	3.98	55	P	Pn	04 01 27.9	-3.6
NICHA	Nichawak Mount	4.10	88	P	Pn	04 01 32.8	-0.3
PAX	Paxson	4.16	48	P	Pn	04 01 34.0	0.0
PS10	TAPS Pump St10	4.35	42	P	Pn	04 01 37.0	+0.5
KHIT	Khitrov Hills	4.44	85	P	Pn	04 01 37.2	-0.6
NEA	Nenana	4.51	17	P	Pn	04 01 38.5	-0.1
WRH	Wood River Hil	4.58	23	P	Pn	04 01 39.1	-0.4
MCARA	McCarthy VSAT	4.61	73	P	Pn	04 01 38.7	-1.3
MLY	Manley	4.77	7	P	Pn	04 01 41.9	-0.4
CCB	Clear Creek Bu	4.79	23	P	Pn	04 01 42.1	-0.3
RIDG	Independ'e Rid	4.87	42	P	Pn	04 01 43.5	-0.1
PS08	TAPS Pump Stn8	4.91	28	P	Pn	04 01 44.1	0.0
GCSA	Galena City Sc	4.94	336	P	Pn	04 01 44.5	+0.1
COLA	College	4.99	22	P	Pn	04 01 45.0	0.0
MDM	Murphy Dome	5.00	20	P	Pn	04 01 45.3	0.0
ILAR	Eielson Array	5.09	27	Pn	Pn	04 01 46.0	-0.5
	1.1nm,0.3s,baz=215,slow=14,SNR=43						
ILAR				Sn	Sn	04 02 40.9	-3.1
	2.3nm,0.3s,baz=173,slow=12,SNR=5.9						
SCRK	Sand Creek	5.31	43	P	Pn	04 01 49.1	-0.6
BCA3	Beaver Creek A	5.66	56	P	Pn	04 01 53.5	-0.9
IM3	Indian Mountai	5.72	354	P	Pn	04 01 55.0	-0.1
PRP	Porcupine Dome	6.03	27	P	Pn	04 01 59.0	-0.5
BM3	Burnt Mountain	7.86	22	P	Pn	04 02 22.4	-2.0
INK	Inuvik	11.34	37	Pn	Pn	04 03 11.7	+0.2
	0.0nm,0.3s,baz=225,slow=9.3,SNR=1.6						
DLBC	Dease Lake	11.45	90	Pn	Pn	04 03 08.1	-5.2
	0.1nm,0.3s,baz=120,slow=17,SNR=2.1						
YKA	Yellowknife Ar	17.95	67	P	P	04 04 33.6	-2.4
	0.0nm,0.3s,baz=281,slow=10,SNR=6.3						
ELK	Elko	30.00	114	P	P	04 06 35.6	+2.0
	0.7nm,0.6s,baz=282,slow=10,SNR=4.9						
TXAR	Lajitas Array	44.72	112	P	P	04 08 39.0	+1.2
	0.4nm,0.6s,baz=306,slow=7.7,SNR=4.1						
SONM	Songino Array	54.92	306	P	P	04 10 14.5	+20
	0.2nm,0.4s,baz=30,slow=8.4,SNR=1.7						

IGQ 12 04:03:27.5±0.5**, 2°S**±3°×**7°7W**±°**, h12**^{km}**, MLv3.6, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUYO	Puyo, Santa Ro	0.74	296	P	Pg	04 03 41.9	0.0
PUYO				S	Sb	04 03 53.2	+0.5
ARDO	Archidona, Ten	0.94	332	P	Pg	04 03 43.9	-1.7
ARDO				S	Sg	04 03 56.9	-0.9
BULB	Ulba Tungurahu	1.12	290	P	Pb	04 03 47.9	-1.1
BULB				S	Sb	04 04 03.7	-0.1
BPAT	Tungurahua Vol	1.12	286	P	Pb	04 03 48.2	-1.0
BPAT				S	Sb	04 04 04.2	+0.3
PAT1	Patacocha	1.13	286	P	Pb	04 03 48.3	-0.9
BRUN	Tungurahua Vol	1.13	291	P	Pb	04 03 48.3	-0.9
BRUN				S	Sg	04 04 04.2	+0.1
RUN5	Runtun	1.14	291	P	Pb	04 03 48.4	-1.0
ARRY	Arrayan	1.14	286	P	Pb	04 03 48.2	-1.2
RETU	Refugio	1.15	289	P	Pb	04 03 48.7	-1.0
BMAS	Trigal station	1.17	286	P	Pb	04 03 48.5	-1.3
BMAS				S	Sb	04 04 04.8	-0.3
JUI6	Juive	1.18	290	P	Pb	04 03 48.8	-1.3
BBIL	Ulba Tungurahu	1.19	288	P	Pb	04 03 49.3	-0.9
BBIL				S	Sb	04 04 05.3	-0.4
BIL2	Estacion Bilba	1.20	288	P	Pb	04 03 48.2	-2.2
PISA	Pisayambo	1.28	306	P	Pn	04 03 50.6	-1.1
IGUA	Igualata	1.32	284	P	Pn	04 03 52.1	-0.3
COV1	Cotopaxi Volc	1.52	319	P	Pn	04 03 55.4	+0.3
ANTM	Antisana-La Mi	1.54	326	P	Pn	04 03 54.1	-1.3
ANTM				S	Sn	04 04 14.7	-0.9
BTAM	Cotopaxi Volca	1.54	318	P	Pn	04 03 54.7	-0.7
BTAM				S	Sn	04 04 14.9	-0.7
BMOR	Cotopaxi Volca	1.55	315	P	Pn	04 03 55.0	-0.4
BMOR				S	Sn	04 04 15.8	+0.1
ANTS	Antisana-Sarah	1.55	328	P	Pn	04 03 54.0	-1.5
ANTS				S	Sn	04 04 15.2	-0.6
BVC2	Cotopaxi Volca	1.57	318	P	Pn	04 03 55.2	-0.5
BVC2				S	Sn	04 04 16.3	+0.1
VC1	Cotopaxi 1	1.57	318	P	Pn	04 03 55.3	-0.5
BREF	Cotopaxi Volca	1.58	317	P	Pb	04 03 56.7	-0.4
BREF				S	Sb	04 04 17.5	+0.3
ANTI	Antisana	1.58	329	P	Pn	04 03 54.7	-1.3
ANTG	Antisana-Guama	1.59	326	P	Pn	04 03 54.7	-1.3
ANTG				S	Sn	04 04 16.4	-0.4
BNAS	Cotopaxi Volca	1.60	316	P	Pn	04 03 55.9	-0.2
BNAS				S	Sg	04 04 19.1	-0.2
NAS2	Nasa	1.61	316	P	Pn	04 03 56.7	+0.4
PITA	Cotopaxi Volc	1.65	319	P	Pn	04 03 56.2	-0.6
PAST	Pastocalle	1.71	311	P	Pb	04 03 58.5	-0.6
CONE	Cono NE Rev Vo	1.77	351	P	Pn	04 03 57.3	-0.9
CAYA	Cayambe	1.99	341	P	Pn	04 04 01.1	-0.3
GGPC	Guagua Pichinc	2.05	323	P	Pn	04 04 01.7	-0.7
MILO	Milagro-Astudi	2.24	258	P	Pb	04 04 06.8	-1.2
YAHU	Yahuarcocha	2.29	342	P	Pn	04 04 06.2	+0.6

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*IDC **12** 04:13:37.9±1.1, 11°.24S×165°.91E, h0^{km}, mb4.1/8, mb1 4.3/10, mb1mx4.0/47, mbtmp4.2/10, ML4.4/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/27, Error ellipse: s-maj=37.6km s-min=20.6km az=130.0*
*ISCJB **12** 04:13:38.0±0.5, 11°.31S±0°.07×165°.85E±0°.07, h10^{km}, mb4.2/16, MS3.6/8, Error ellipse: s-maj=10.5km s-min=8.9km az=26.2*
*NEIC **12** 04:13:39.4±0.4, 11°.24S×165°.92E, h10^{km}, mb4.5/13, Error ellipse: s-maj=11.2km s-min=8.8km az=127.0*
ISC 12 04:13:39.4±0.6**, 11°.33S**±0°.08×**165°.94E**±0°.09**, h10**^{km}**, n37, σ1^{s}57**/34**, mb4.3**/16**, MS3.5**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.20	287	Pn	Pn	04 15 11.6	+0.6
	11nm,0.3s,baz=198,slow=13,SNR=3.4						
HNR				Sn	Sn	04 16 19.8	-2.1
	8.7nm,0.3s,baz=241,slow=22,SNR=4.7						
DZM	Mont Dzumac	10.69	177	Pn	Pn	04 16 15.1	+2.3
	2.4nm,0.3s,baz=354,slow=13,SNR=15						
DZM				Sn	Sn	04 18 07.6	-5.1
	0.1nm,0.3s,baz=188,slow=13,SNR=1.6						
MANU	Manus Island	20.61	295	*e*P	Pn	04 18 21.7	+0.3
	123nm,1.3s						
CTA	Charters Tower	20.84	243	P	P	04 18 22.4	+0.9
	8.7nm,0.8s,baz=84,slow=13,SNR=8.9						
CTAO	Charters Tower	20.84	243	*e*P	P	04 18 21.6	+0.1
	14nm,1.0s						
COEN	Coen	22.37	261	*e*P	P	04 18 39.6	+1.6
	14nm,1.3s						
BKZ	Black Stump Fm	29.27	163	*e*P	P	04 19 43.8	+2.0
	12nm,1.2s						
STKA	Stephens Creek	30.37	224	*e*P	P	04 19 52.4	+0.7
	1.4nm,1.2s						
STKA	Stephens Creek	30.37	224	P	P	04 19 52.4	+0.7
	3.2nm,0.8s,baz=61,slow=12,SNR=4.6						
STKA				LR	LR	04 30 29.1	
	comp=Z,115nm,20.3s,baz=28,slow=33						
WB2	Warramunga Arr	31.56	250	*e*P	P	04 20 01.5	-0.8
WRAB	Tennant Creek	31.56	250	*e*P	P	04 20 01.4	-0.9
	9.9nm,1.3s						
WR1	Warramunga Arr	31.57	250	*e*P	P	04 20 01.8	-0.6
	6.3nm,0.9s						
WRA	Warramunga Arr	31.57	250	P	P	04 20 01.8	-0.6
	4.4nm,0.7s,baz=82,slow=9.2,SNR=30						
WRA				LR	LR	04 32 45.8	
	comp=Z,87nm,19.3s,baz=210,slow=36						
RPZ	Rata Peaks	32.56	173	LR	LR	04 32 25.2	
	comp=Z,97nm,18.8s,baz=338,slow=34						
AS31	Alice Springs	32.84	244	*e*P	P	04 20 12.6	-1.0
	0.8nm,0.6s						
ASAR	Alice Springs	32.84	244	P	P	04 20 12.6	-1.0
	1.5nm,0.9s,baz=68,slow=10.0,SNR=12						
ASAR				LR	LR	04 32 17.5	
	comp=Z,103nm,21.4s,baz=94,slow=34						
LBZ	Lake Benmore	33.14	174	*e*P	P	04 20 17.2	+1.4
	13nm,1.0s						
RAR	Rarotonga	34.27	111	LR	LR	04 30 56.8	
	comp=Z,91nm,19.1s,baz=256,slow=30						
FITZ	Fitzroy Crossi	39.49	255	*e*P	P	04 21 09.9	-0.6
	4.9nm,0.9s						
PPT	Papeete	43.44	104	LR	LR	04 36 59.8	
	comp=Z,48nm,19.1s,baz=106,slow=32						
PETK	Petropavlovsk-	64.57	355	LR	LR	04 45 44.9	
	comp=Z,37nm,20.8s,baz=133,slow=30						
GAMB	Gambell	76.82	10	*e*P	P	04 25 31.9	+0.9
	2.4nm,0.8s						
SONA0	Songino Array	79.01	324	*e*P	P	04 25 43.4	-0.4
SONM	Songino Array	79.01	324	P	P	04 25 43.4	-0.4
	0.5nm,0.8s,baz=143,slow=6.8,SNR=3.0						
ILAR	Eielson Array	83.72	18	P	P	04 26 08.5	+0.2
	0.6nm,0.6s,baz=237,slow=4.5,SNR=12						
ILB	Eielson Array	83.72	18	*e*P	P	04 26 08.5	+0.2
	8.7nm,1.4s						
NVAR	Mina Array Bea	86.06	50	LR	LR	04 57 39.0	
	comp=Z,64nm,19.1s,baz=202,slow=31						
WALA	Waterton Lakes	92.10	40	*e*P	P	04 26 46.4	-2.7
	5.4nm,0.5s						
MK01	Makanchi Array	93.85	317	*e*P	P	04 26 57.4	+0.2
MK31	Makanchi Array	93.86	317	*e*P	P	04 26 57.7	+0.5
MK31				*e*pP	pwP	04 27 06.7	+3.0
MK32	Makanchi Array	93.86	317	*e*P	P	04 26 57.4	+0.2
MKAR	Makanchi Array	93.86	317	P	P	04 26 57.4	+0.2
	1.0nm,0.7s,baz=95,slow=6.2,SNR=11						
YKA	Yellowknife Ar	95.14	27	P	P	04 27 01.0	-1.6
YKA	Yellowknife Ar	95.14	27	P	P	04 27 01.0	-1.6
	0.2nm,0.5s,baz=257,slow=4.4,SNR=5.0						
YKB5	Yellowknife Ar	95.14	27	*e*P	P	04 27 01.0	-1.6
ARA0	ARCESS Array S	116.66	345	*e*PKPdf	PKiKP	04 32 23.5	+0.1
ARCES	ARCESS Array B	116.66	345	PKP	PKiKP	04 32 23.5	+0.1
	5.5nm,1.2s,baz=74,slow=2.2,SNR=5.7						

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*NIED **12** 04:16:00, 40°.30N×142°.40E, h53^{km}, Mw3.7 Best double couple: M$_0$3.64000×10^{14} NP1:φ$_s$275.00000°, δ50.00000°, λ-151.00000°. NP2:φ$_s$165.00000°, δ68.00000°, λ-44.00000°.*
*ISCJB **12** 04:16:41.6±0.9, 40°.25N±0°.04×142°.29E±0°.09, h48^{km}±6^{km}, mb3.5/9, Error ellipse: s-maj=12.1km s-min=6.3km az=178.3*
*JMA **12** 04:16:41.5, 40°.23N×142°.33E, h37^{km}±1^{km}, M3.9*
JMA Felt I J1.
*IDC **12** 04:16:46.5±2.4, 40°.30N×142°.13E, h80^{km}±19^{km}, mb3.2/8, mb1 3.3/11, mb1mx3.1/65, mbtmp3.5/11, MS2.6/1, Ms1 2.6/1, ms1mx2.2/17, Error ellipse: s-maj=28.7km s-min=16.0km az=109.0*
ISC 12 04:16:43.3±1.1**, 40°.23N**±0°.04×**142°.13E**±0°.08**, h41**^{km}±9^{km}**, n32, σ1^{s}73**/34**, mb3.6**/9**, 2C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.32	266	P	Pn	04 16 51.4	-0.5
JKEN				S	Sn	04 16 58.6	+0.8
JTH	Tanohata	0.35	215	P	Pn	04 16 51.5	-0.8
JTH				S	Sn	04 16 58.7	+0.2
JANG	Nango	0.49	288	P	Pn	04 16 53.8	-0.2
JANG				S	Sn	04 17 02.7	+1.2
JKZ	Kuzumaki	0.66	249	P	Pn	04 16 56.6	+0.4
JKZ				S	Sn	04 17 07.3	+1.8
JARK	Aomorirokkasho	0.97	324	P	Pn	04 16 59.9	-0.6
JARK				S	Sn	04 17 13.3	+0.2
JTM	Tenmabayashi	0.98	305	P	Pn	04 17 00.6	0.0
JTM				S	Sn	04 17 14.7	+1.4
JOM	Ohasama	0.99	221	P	Pn	04 17 00.9	+0.2
JAH	Hinai	1.14	269	P	Pn	04 17 03.7	+0.9
JAH				S	Sn	04 17 20.0	+2.8
JOT	Ohata	1.42	325	P	Pn	04 17 05.9	-0.7
JRG	Rokugo	1.42	235	P	Pn	04 17 08.0	+1.4
JMK	Ichinoseki	1.45	209	P	Pn	04 17 07.3	+0.2
JMK				S	Sn	04 17 27.3	+2.4
ASAJ	Asahikawa	3.90	5	P	Pn	04 17 44.2	+3.5
	2.5nm,0.3s,baz=183,slow=20,SNR=5.0						
ASAJ				S	Sn	04 18 27.0	+1.7
	2.1nm,0.3s,baz=83,slow=32,SNR=4.9						
MJAR	Matsushiro Arr	4.79	221	P	Pn	04 17 56.0	+3.0
	0.2nm,0.3s,baz=29,slow=13,SNR=11						
MAT	Matsushiro	4.80	221	P	Pn	04 17 55.8	+2.8
USRK	Ussuriysk Ar.	8.51	301	P	Pn	04 18 48.0	+4.1
	0.2nm,0.3s,baz=103,slow=15,SNR=6.2						
KSRS	Korea Array	11.42	261	LR	LR	04 23 08.1	
	comp=Z,29nm,21.1s,baz=110,slow=33						
SONM	Songino Array	26.61	299	P	P	04 22 17.5	-0.3
	0.2nm,0.5s,baz=92,slow=8.5,SNR=2.5						
H11N2	WAKE ISLAND Hy	29.45	127	T	T	04 53 25.5	
	baz=318,slow=75,SNR=26						
H11N1	WAKE ISLAND Hy	29.46	127	T	T	04 53 26.4	
	baz=318,slow=75,SNR=24						
H11N3	WAKE ISLAND Hy	29.47	127	T	T	04 53 26.8	
	baz=318,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	30.27	128	T	T	04 54 41.6	
	baz=321,slow=76,SNR=7.0						
H11S3	WAKE ISLAND Hy	30.27	129	T	T	04 54 40.2	
	baz=321,slow=76,SNR=7.1						
H11S2	WAKE ISLAND Hy	30.28	128	T	T	04 54 53.1	
	baz=321,slow=76,SNR=5.4						
ZALV	Zalesovo Beam	40.24	310	P	P	04 24 13.1	-2.7
	0.4nm,0.4s,baz=64,slow=6.6,SNR=1.7						
MKAR	Makanchi Array	42.97	299	P	P	04 24 37.1	-1.1
	0.3nm,0.4s,baz=90,slow=9.5,SNR=9.7						
KURK	Kurchatov	44.46	306	⇓Pg	P	04 24 51.2	+1.1
	1.5nm,0.8s						
KURK				⇑Lg	Lg	04 25 22.1	
	2.1nm,1.1s						
KURBB	Kurchatov Arra	44.54	306	⇑Pg	P	04 24 50.7	-0.1
	3.3nm,1.4s,baz=228,slow=15						
KURBB				⇓Lg	Lg	04 25 21.9	
	2.9nm,0.7s						
KURBB	Kurchatov Arra	44.54	306	P	P	04 24 49.5	-1.3
	0.7nm,0.5s,baz=80,slow=8.7,SNR=5.4						
ILAR	Eielson Array	46.52	34	P	P	04 25 04.7	-1.6
	0.1nm,0.5s,baz=102,slow=10.0,SNR=1.7						
BVAR	Borovoye Array	48.88	310	P	P	04 25 23.2	-1.5
	0.3nm,0.4s,baz=74,slow=9.6,SNR=4.3						
WRA	Warramunga Arr	60.30	188	P	P	04 26 47.3	-0.4
	0.2nm,0.6s,baz=5.9,slow=6.8,SNR=1.1						
FINES	FINESS Array B	66.26	332	P	P	04 27 26.5	-0.2
	0.7nm,0.8s,baz=295,slow=38,SNR=1.7						

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*DDA **12** 04:18:32.9, 39°.67N×25°.66E, h6^{km}±4^{km}, ML2.6*
*ISK **12** 04:18:32.6, 39°.74N×25°.59E, h5^{km}, ML2.4/8*
*THE **12** 04:18:33.5, 39°.70N×25°.61E, h11^{km}±1^{km}, ML1.8/8, Error ellipse: s-maj=1.5km s-min=0.8km az=116.0*
*ATH **12** 04:18:33.2, 39°.72N×25°.58E, h27^{km}±1^{km}, ML2.0/5, Error ellipse: s-maj=2.0km s-min=0.8km az=237.0*
*ISCJB **12** 04:18:34.2±0.4, 39°.72N±0°.02×25°.59E±0°.02, h17^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=3.0km az=14.1*
ISC 12 04:18:33.3±1.0**, 39°.72N**±0°.02×**25°.60E**±0°.02**, h12**^{km}±9^{km}**, n45, σ0^{s}44**/70**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.36	299	P	Pb	04 18 41.3	-0.4
LIA				S	Sb	04 18 47.0	-0.4
LIA				AML	AML	04 18 55.2	
	comp=E,379μm,0.5s						
LIA				AML	AML	04 18 55.4	
	comp=N,588μm,0.4s						
LIA	Limnos Island	0.36	299	P	Pb	04 18 41.3	-0.4
LIA				S	Sb	04 18 46.8	-0.6
BOZC	Bozcaada	0.37	71	PG	Pg	04 18 40.4	-0.4
BOZC				SG	Sg	04 18 46.0	+0.3
BOZC	Bozcaada	0.37	71	*i* P	Pg	04 18 40.9	+0.1
BOZC				*i* S	Sg	04 18 46.0	+0.3
BOZC				IAML_P			
	comp=Z,2μm,0.1s						
EFSA	Agios Efstrati	0.50	249	P	Pb	04 18 45.2	+1.1
EFSA				S	Sb	04 18 51.9	+0.5
SIGR	SIGRI	0.55	158	PG	Pg	04 18 44.1	+0.1
SIGR				SG	Sb	04 18 52.4	-0.3
SIGR	SIGRI	0.55	158	P	Pg	04 18 44.1	+0.1
SIGR				S	Sb	04 18 52.5	-0.2
SIGR				AML	AML	04 18 53.1	
	comp=E,626μm,0.4s						
SIGR				AML	AML	04 18 53.1	
	comp=N,718μm,0.5s						
SIGR	SIGRI	0.55	158	P	Pg	04 18 43.7	-0.4
SIGR				S	Sb	04 18 52.1	-0.6
EZN	Ezine	0.57	79	PG	Pg	04 18 44.2	-0.3
EZN				SG	Sb	04 18 52.6	-0.8
EZN	Ezine	0.57	79	P	Pg	04 18 43.8	-0.7
EZN				S	Sg	04 18 52.0	0.0
PRK	Paraskevi	0.71	132	P	Pb	04 18 47.9	+0.3
PRK				S	Sb	04 18 57.9	+0.6
PRK				AML	AML	04 19 04.0	
	comp=E,384μm,0.6s						
PRK				AML	AML	04 19 05.1	
	comp=N,436μm,0.8s						
BAYC	CANAKKALE_Bayr	0.73	88	*i* P	Pb	04 18 48.0	-0.1
BAYC				*i* S	Sg	04 18 57.1	0.0
BAYC				IAML_P			
	comp=Z,953nm,0.1s						
SMTH	Samothraki Isl	0.75	356	P	Pg	04 18 48.0	+0.1
SMTH				S	Sb	04 18 59.5	+1.0
SMTH				AML	AML	04 19 00.8	
	comp=N,151μm,0.3s						
SMTH				AML	AML	04 19 01.0	
	comp=E,208μm,0.4s						
SMTH	Samothraki Isl	0.75	356	P	Pg	04 18 48.0	+0.1
SMTH				S	Sb	04 18 59.2	+0.6
AYVA	Ayvalik	0.94	116	*i* P	Pn	04 18 53.0	+0.6
AYVA				*i* S	Sb	04 19 04.5	+0.4
GELI	Tayfur-Gelibol	0.95	45	PG	Pg	04 18 51.1	-0.6
GELI				SG	Sn	04 19 05.9	-0.2
ENEZ	Enez	1.10	23	PN	Pb	04 18 53.9	-0.4
LPK	Lapseki	1.10	54	PN	Pb	04 18 54.1	-0.3
THAS	Thassos island	1.11	323	P	Pn	04 18 54.8	+0.1
THAS				S	Sg	04 19 09.7	+0.6
THAS	Thassos island	1.11	323	P	Pb	04 18 54.4	-0.1
THAS				S	Sn	04 19 10.0	+0.1
ERIK	Erikli-Kesan	1.18	36	PN	Pb	04 18 55.6	-0.1
ALN	Alexandroupoli	1.22	16	PN	Pn	04 18 56.2	-0.1
ALN	Alexandroupoli	1.22	16	P	Pn	04 18 56.2	-0.1
ALN				S	Sn	04 19 12.8	+0.1
ALN				AML	AML	04 19 13.0	
	comp=E,56μm,0.2s						
ALN				AML	AML	04 19 15.5	
	comp=N,55μm,0.5s						
ALN	Alexandroupoli	1.22	16	P	Pn	04 18 56.3	-0.1
ALN				S	Sn	04 19 12.8	+0.1
KESN	Edirne-Kesan	1.38	37	*i* P	Pb	04 18 59.1	-0.2
KESN				IAML_P			
	comp=Z,98nm,0.2s						
CHOS	Chios island	1.38	165	PN	Pb	04 18 59.2	0.0
CHOS	Chios island	1.38	165	P	Pb	04 18 58.8	-0.3
RDO	Rodhopi	1.42	358	PN	Pn	04 18 59.0	0.0
RDO	Rodhopi	1.42	358	P	Pn	04 18 59.2	+0.1
RDO	Rodhopi	1.42	358	P	Pn	04 18 59.1	0.0
RDO				S	Sg	04 19 19.3	+0.2
AOS	Alonnisos	1.44	248	P	Pn	04 18 59.6	+0.4
AOS	Alonnisos	1.44	248	P	Pn	04 18 58.7	-0.6
AOS				S	Sn	04 19 17.6	-0.5
KRBG	Karabiga-Canak	1.47	62	PN	Pb	04 19 00.2	-0.4
PAIG	Paliouri	1.49	278	P	Pn	04 19 00.0	+0.1
PAIG	Paliouri	1.49	278	P	Pn	04 18 59.2	-0.8
PAIG				S	Sn	04 19 19.2	-0.1
KAVA	Kavala	1.52	327	P	Pn	04 19 00.5	+0.1
RKY	Sarkoy-Tekirda	1.55	51	PN	Pn	04 19 01.3	+0.5
BALY	Balya	1.56	89	*i* P	Pb	04 19 02.3	+0.1
BALY				*i* S	Sb	04 19 22.4	+0.5
BALY				IAML_P			
	comp=Z,374nm,0.2s						
URLA	Izmir	1.57	150	PN	Pb	04 19 01.7	-0.6
KNL	Balıkesir	1.58	69	*i* P	Pb	04 19 02.7	+0.2
KNL				*i* S	Sg	04 19 23.6	-0.6
KNL				IAML_P			
	comp=Z,513nm,0.2s						
GONE	Gonen-Balikesi	1.64	78	PN	Pn	04 19 02.5	+0.5
STEP	BALIKESIR_Sava	1.68	101	*i* P	Pb	04 19 03.9	-0.3
STEP				IAML_P			
	comp=Z,332nm,0.2s						
EDC	Edincik	1.85	70	PN	Pn	04 19 05.5	+0.6
NVR	Nevrokopi	2.10	321	P	Pn	04 19 09.0	+0.7
KCTX	Karacabey (Bur	2.19	75	PN	Pn	04 19 10.4	+0.8

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*IDC **12** 04:20:31.2±1.3, 33°.24N×95°.22E, h0^{km}, mb3.4/7, mb1 3.5/10, mb1mx3.3/62, mbtmp3.3/10, ML3.0/2, MS3.0/3, Ms1 3.0/3, ms1mx2.6/29, Error ellipse: s-maj=51.9km s-min=22.8km az=61.0*
*ISCJB **12** 04:20:32.4±0.8, 32°.98N±0°.09×94°.7E±0°.1, h33^{km}, mb3.4/7, MS3.1/1, Error ellipse: s-maj=17.9km s-min=7.8km az=37.4*
ISC 12 04:20:34.7±0.8**, 33°.0N**±0°.1×**94°.8E**±0°.1**, h35**^{km}**, n20, σ1^{s}50**/18**, mb3.4**/7**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIRN	Jiri	9.13	236	*e*P	Pn	04 22 44.9	+0.5
	8.3nm,0.4s						
GUN	Gumba	9.20	239	*e*P	Pn	04 22 44.9	-0.4
	10nm,0.4s						
RAMN	Ramite	9.31	232	*e*P	Pn	04 22 46.3	-0.4
	5.7nm,0.3s						
PKI	Pulchoki	9.74	239	*e*P	Pn	04 22 52.2	-0.4
	14nm,0.4s						
PKIN	Phulchoki	9.74	239	*e*P	Pn	04 22 51.7	-0.9
	8.7nm,0.3s						
DMN	Daman	9.94	240	*e*P	Pn	04 22 54.5	-0.8
	9.4nm,0.6s						
DANN	Dangsing	10.55	247	*e*P	Pn	04 23 03.5	-0.3
	16nm,0.4s						
PYUN	Piuthan	11.27	247	*e*P	Pn	04 23 11.6	-1.9
	6.9nm,0.4s						
CMAR	Chiang Mai Arr	14.98	164	Pn	P	04 24 08.0	-1.0
	baz=345,slow=10,SNR=1.4						
MKAR	Makanchi Array	16.72	329	Pn	P	04 24 25.9	-2.3
	0.0nm,0.3s,baz=136,slow=14,SNR=2.4						
MKAR				LR	LR	04 30 38.1	
	comp=Z,45nm,18.6s,baz=122,slow=36						
SONM	Songino Array	17.21	27	Pn	Pn	04 24 30.6	-1.8
	0.1nm,0.3s,baz=214,slow=14,SNR=1.2						
AAK	Ala-Archa	18.63	307	LR	LR	04 32 57.7	
	comp=Z,34nm,20.9s,baz=88,slow=40						
KURBB	Kurchatov Arra	21.26	331	P	P	04 25 18.4	+0.6
	1.9nm,0.8s,baz=137,slow=11,SNR=11						
ZALV	Zalesovo Beam	22.08	344	P	P	04 25 25.0	-1.6
	0.4nm,0.4s,baz=132,slow=8.6,SNR=1.4						
BVAR	Borovoye Array	26.55	326	LR	LR	04 36 25.2	
	comp=Z,55nm,21.0s,baz=122,slow=36						
FINES	FINESS Array B	51.51	325	P	P	04 29 37.9	+1.4
	0.6nm,0.4s,baz=257,slow=35,SNR=1.9						
NOA	NORSAR Array B	58.68	326	P	P	04 30 31.8	+3.3
	0.2nm,0.6s,baz=78,slow=6.7,SNR=1.3						
WRA	Warramunga Arr	64.83	139	P	P	04 31 10.8	+0.6
	0.5nm,1.1s,baz=320,slow=8.9,SNR=3.7						
ILAR	Eielson Array	71.39	23	P	P	04 31 50.1	-0.7
	0.3nm,1.0s,baz=297,slow=5.3,SNR=2.8						
YKA	Yellowknife Ar	81.92	13	P	P	04 32 51.6	+1.3
	0.3nm,1.0s,baz=343,slow=3.6,SNR=3.6						

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*IDC **12** 04:34:17.7±1.3, 10°.89S×165°.45E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.8/29, mbtmp3.9/7, ML4.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/37, Error ellipse: s-maj=47.1km s-min=23.8km az=132.0*

*ISCJB **12** 04:34:20.1±1.0, 11°.1S±0°.1×165°.5E±0°.2, h30^{km}, mb3.8/6, Error ellipse: s-maj=26.1km s-min=18.9km az=20.4*

ISC 12 04:34:21.8±1.1**, 11°.0S**±0°.1×**165°.5E**±0°.2**, h30^{km}, n8, σ1^s.09**/7**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.72	285	LR	LR	04 38 06.4	
	comp=Z,73nm,18.3s,baz=110,slow=41						
DZM	Mont Dzumac	11.06	176	Pn	Pn	04 36 57.8	-0.3
	1.7nm,0.3s,baz=351,slow=13,SNR=13						
STKA	Stephens Creek	30.35	223	P	P	04 40 32.5	+1.4
	1.5nm,0.7s,baz=20,slow=15,SNR=1.8						
WRA	Warramunga Arr	31.32	250	P	P	04 40 39.6	-0.1
	2.8nm,1.0s,baz=80,slow=9.3,SNR=12						
ASAR	Alice Springs	32.64	243	P	P	04 40 50.7	-0.7
	1.1nm,1.0s,baz=70,slow=9.6,SNR=5.7						
FITZ	Fitzroy Crossi	39.20	255	P	P	04 41 47.1	-0.5
	1.9nm,1.0s,baz=112,slow=5.4						
ILAR	Eielson Array	83.52	19	P	P	04 46 47.5	+1.0
	0.3nm,0.6s,baz=241,slow=5.1,SNR=12						
YKA	Yellowknife Ar	95.01	27	P	P	04 47 40.3	-1.0
	0.2nm,1.0s,baz=264,slow=4.5,SNR=2.3						

IDC 12 04:43:13.4±1.6**, 10°.94S**×**165°.48E, h0^{km}, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.5**/38**, mbtmp3.7**/4**, ML4.1**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/27**, Error ellipse: s-maj=52.5km s-min=30.8km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.10	175	Pn	Pn	04 45 53.8	+0.2
	1.4nm,0.3s,baz=309,slow=9.9,SNR=16						
URZ	Urewera	29.13	161	LR	LR	04 59 33.2	
	comp=Z,58nm,21.6s,baz=104,slow=34						
WRA	Warramunga Arr	31.27	250	P	P	04 49 35.5	+0.1
	1.0nm,0.8s,baz=82,slow=9.4,SNR=7.2						
ASAR	Alice Springs	32.60	243	P	P	04 49 46.9	-0.2
	0.3nm,0.4s,baz=64,slow=10.0,SNR=7.1						
ILAR	Eielson Array	83.50	19	P	P	04 55 42.8	0.0
	0.2nm,0.7s,baz=224,slow=3.8,SNR=4.8						
ARCES	ARCESS Array B	116.17	345	PKP	PKiKP	05 01 57.9	-0.3
	4.9nm,1.2s,baz=99,slow=1.2,SNR=1.4						

IDC 12 04:51:04.0±1.9**, 12°.37N**×**88°.01W, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/27**, mbtmp3.6**/5**, Error ellipse: s-maj=75.2km s-min=27.0km az=55.0, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	Lajitas Array	22.30	322	P	P	04 56 04.6	+1.3
	0.4nm,0.5s,baz=135,slow=10,SNR=6.0						
SIV	San Ignacio	38.78	136	P	P	04 58 30.8	0.0
	0.9nm,0.9s,baz=276,slow=10,SNR=3.5						
SCHQ	Schefferville	45.52	17	P	P	04 59 26.1	+0.9
	1.8nm,0.6s,baz=247,slow=13,SNR=5.8						
YKA	Yellowknife Ar	53.55	345	P	P	05 00 25.4	-1.0
	0.5nm,0.7s,baz=140,slow=7.6,SNR=17						
INK	Inuvik	63.12	343	P	P	05 01 32.4	-0.8
	0.8nm,1.0s,baz=127,slow=5.6,SNR=1.6						

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*NIED **12** 04:54:00, 37°.80N×144°.10E, h5^{km}, Mw3.7 Best double couple: M$_0$3.45000×10^{14} NP1:φ$_s$68.00000°, δ22.00000°, λ-68.00000°. NP2:φ$_s$225.00000°, δ69.00000°, λ-99.00000°.*

*IDC **12** 04:54:19.4±0.9, 37°.41N×144°.55E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/40, mbtmp3.5/7, ML2.6/1, Error ellipse: s-maj=36.3km s-min=20.5km az=118.0*

*ISCJB **12** 04:54:23.9±0.8, 37°.73N±0°.06×144°.39E±0°.06, h33^{km}, mb3.6/6, Error ellipse: s-maj=8.8km s-min=7.0km az=172.8*

*JMA **12** 04:54:24.0±0.3, 37°.77N×144°.10E, h2^{km}, M4.0*

ISC 12 04:54:25.1±1.0**, 37°.67N**±0°.08×**144°.39E**±0°.08**, h35^{km}, n21, σ1^s.09**/24**, mb3.7**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.40	286	P	Pn	04 55 00.6	-1.2
JIKH				S	Sn	04 55 28.3	-1.7
JIO	Ouri	2.53	289	P	Pn	04 55 03.5	-0.1
JIO				S	Sn	04 55 32.9	-0.2
OFUJ	Ofunato	2.56	304	P	Pn	04 55 04.2	+0.1
OFUJ				*e*S	Sn	04 55 33.6	-0.4
JKMT	Kesennumamotoy	2.56	297	P	Pn	04 55 03.9	-0.2
JKMT				S	Sn	04 55 34.1	0.0
JMK	Ichinoseki	2.80	298	P	Pn	04 55 07.9	+0.5
JOM	Ohasama	3.02	308	P	Pn	04 55 10.7	+0.3
JFT	Otama	3.22	269	P	Pn	04 55 14.0	+0.8
JYK	Kaneyama	3.41	293	P	Pn	04 55 16.8	+1.1
JANG	Nango	3.51	321	P	Pn	04 55 18.1	+1.0
JANG				S	Sn	04 55 56.4	-1.0
MJAR	Matsushiro Arr	5.07	259	Pn	Pn	04 55 38.9	+0.3
	0.2nm,0.3s,baz=91,slow=13,SNR=8.4						
MAT	Matsushiro	5.07	259	P	Pn	04 55 40.3	+1.7
MAT				S	Sn	04 56 37.4	+1.5
ASAJ	Asahikawa	6.58	349	Sn	Sn	04 57 12.6	-0.5
	1.0nm,0.3s,baz=159,slow=29,SNR=2.8						
H11N2	WAKE ISLAND Hy	26.52	126	T	T	05 27 19.8	
	baz=322,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	26.53	126	T	T	05 25 46.6	
	SNR=8.2						
H11N3	WAKE ISLAND Hy	26.54	126	T	T	05 27 22.0	
	baz=312,slow=75,SNR=9.8						
MKAR	Makanchi Array	45.79	302	P	P	05 02 43.8	+0.5
	0.3nm,0.8s,baz=87,slow=8.3,SNR=3.1						
ILAR	Eielson Array	47.68	33	P	P	05 02 58.3	+0.6
	1.0nm,0.8s,baz=257,slow=6.9,SNR=13						
INK	Inuvik	52.73	28	P	P	05 03 37.3	+1.5
	0.4nm,0.5s,baz=319,slow=4.6,SNR=6.1						
WRA	Warramunga Arr	58.08	191	P	P	05 04 12.6	-2.2
	1.0nm,0.8s,baz=11,slow=7.4,SNR=8.9						
ASAR	Alice Springs	61.80	191	P	P	05 04 38.7	-1.7
	0.6nm,0.8s,baz=11,slow=5.8,SNR=5.2						
YKA	Yellowknife Ar	62.05	31	P	P	05 04 42.0	+0.3
	0.1nm,0.6s,baz=294,slow=5.9,SNR=2.0						

IDC 12 04:56:43.2±2.2**, 1°.79N**×**126°.39E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.1**/42**, mbtmp3.2**/3**, Error ellipse: s-maj=180.1km s-min=27.9km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.96	161	P	P	05 01 47.6	-1.8
	0.3nm,0.3s,baz=339,slow=11,SNR=4.7						
ASAR	Alice Springs	26.34	164	P	P	05 02 22.9	+1.9
	0.2nm,0.6s,baz=346,slow=12,SNR=2.8						
MKAR	Makanchi Array	58.96	326	P	P	05 06 44.4	-0.2
	0.1nm,0.4s,baz=122,slow=7.4,SNR=4.0						

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*ISCJB **12** 04:59:52.3±0.8, 21°.30S±0°.07×68°.1W±0°.1, h121^{km}, mb3.5/2, Error ellipse: s-maj=17.8km s-min=8.0km az=18.8*

*IDC **12** 04:59:53.2±0.8, 21°.26S×68°.25W, h121^{km}±11^{km}, mb3.4/2, mb1 3.5/5, mb1mx3.3/20, mbtmp3.9/5, Error ellipse: s-maj=28.6km s-min=11.6km az=104.0*

ISC 12 04:59:53.0±0.9**, 21°.30S**±0°.07×**68°.2W**±0°.1**, h121^{km}, n7, σ0^s.72**/9**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.47	207	P	Pn	05 00 20.8	+0.3
	45nm,0.3s,baz=18,slow=11,SNR=370						
LVC				S	Sn	05 00 41.6	+0.1
	38nm,0.3s,baz=46,slow=9.9,SNR=15						
LVC				LR	LR	05 01 18.5	
	comp=Z,45nm,20.3s,baz=340,slow=58						
LPAZ	La Paz	4.98	1	P	Pn	05 01 06.5	+0.2
	2.4nm,0.3s,baz=214,slow=2.4,SNR=55						
LPAZ				S	Sn	05 02 03.4	+0.1
	baz=83,slow=19,SNR=0.8						
SIV	San Ignacio	8.56	53	P	Pn	05 01 53.4	-0.7
	2.4nm,0.3s,baz=272,slow=8.8,SNR=61						
BDFB	Brasilia	19.93	77	P	P	05 04 16.9	+1.2
	0.4nm,0.3s,baz=267,slow=9.1,SNR=4.5						
TORD	Torodi Ar. Bea	76.65	70	P	P	05 11 31.1	+0.1
	0.7nm,0.8s,baz=251,slow=6.0,SNR=9.3						
YKA	Yellowknife Ar	91.22	340	P	P	05 12 43.1	-0.9
	0.2nm,0.6s,baz=132,slow=4.6,SNR=5.9						
MKAR	Makanchi Array	145.07	36	PKPbc	PKPdf	05 19 16.4	+0.4
	0.7nm,0.7s,baz=336,slow=2.7,SNR=7.9						

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*IDC **12** 05:01:45.5±1.8, 51°.75N×172°.31E, h0^{km}, mb3.7/13, mb1 3.9/15, mb1mx3.7/57, mbtmp3.7/15, ML3.4/2, Error ellipse: s-maj=47.8km s-min=16.5km az=7.0*

*ISCJB **12** 05:01:47.0±0.8, 51°.8N±0°.1×172°.00E±0°.07, h26^{km}, mb3.7/13, Error ellipse: s-maj=20.4km s-min=6.2km az=175.9*

*KRSC **12** 05:01:52.7±2.0, 52°.14N×170°.93E, h7^{km}±43^{km}, ML4.4*

*MOS **12** 05:01:52.7±2.7, 52°.13N×170°.93E, h7^{km}, mb4.6/1, Error ellipse: s-maj=17.9km s-min=8.0km az=38.3*

ISC 12 05:01:49.6±1.0**, 51°.9N**±0°.1×**171°.92E**±0°.06**, h26^{km}, n55, σ2^s.04**/54**, mb3.7**/13**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	4.88	316	*e*P	Pn	05 02 59.9	-1.3
BKI				*e*S	Sn	05 03 51.2	-5.6
BKI	Bering	4.88	316	P	Pn	05 02 59.9	-1.3
BKI				S	Sn	05 03 51.2	-5.6
KBTR	Krutoberegovo	6.91	313	*e*P	Pn	05 03 30.8	+1.7
KBTR	Krutoberegovo	6.91	313	P	Pn	05 03 30.8	+1.7
SPN	Mys Shipunski	7.37	284	*e*P	Pn	05 03 35.8	+0.4
SPN				*e*S	Sn	05 04 52.8	-5.4
SPN	Mys Shipunski	7.37	284	P	Pn	05 03 35.8	+0.4
SPN				S	Sn	05 04 52.8	-5.4
NLC	Nalytchevo	7.79	285	*e*S	Sn	05 05 04.7	-3.6
TUMR	Tumrok	7.80	301	*e*P	Pn	05 03 43.6	+2.1
TUMR	Tumrok	7.80	301	P	Pn	05 03 43.6	+2.1
KII	Karymskiy	7.84	291	*e*P	Pn	05 03 42.9	+0.9
KII				*e*S	Sn	05 05 05.6	-4.3
KII	Karymskiy	7.84	291	P	Pn	05 03 42.9	+0.9
KII				S	Sn	05 05 05.6	-4.3
UGLR	Uglovaya	8.10	285	*e*P	Pn	05 03 47.2	+1.7
UGLR	Uglovaya	8.10	285	P	Pn	05 03 47.2	+1.7
SMAR	Somma	8.12	285	P	Pn	05 03 47.6	+1.7
SMAR	Somma	8.12	285	P	Pn	05 03 47.6	+1.7
AVH	Avacha	8.16	285	*i* P	Pn	05 03 48.0	+1.7
AVH	Avacha	8.16	285	P	Pn	05 03 48.0	+1.7
KRX	Arik	8.22	286	*e*P	Pn	05 03 47.9	+0.7
KRX	Arik	8.22	286	P	Pn	05 03 47.9	+0.7
KOK	Koryaka	8.22	285	*e*P	Pn	05 03 48.2	+1.0
KOK	Koryaka	8.22	285	P	Pn	05 03 48.2	+1.0
RUS	Russkaya	8.27	279	*e*P	Pn	05 03 48.8	+1.1
RUS				*e*S	Sn	05 05 16.4	-3.8
RUS	Russkaya	8.27	279	P	Pn	05 03 48.8	+1.1
RUS				S	Sn	05 05 16.4	-3.8
MTVR	Mutnovka	8.47	280	*e*P	Pn	05 03 52.0	+1.4
MTVR				*e*S	Sn	05 05 19.6	-5.8
MTVR	Mutnovka	8.47	280	P	Pn	05 03 52.0	+1.4
MTVR				S	Sn	05 05 19.6	-5.8
KRMR	Karymshinskiy	8.50	282	*e*P	Pn	05 03 52.4	+1.5
KRMR				*e*S	Sn	05 05 22.3	-3.6
KRMR	Karymshinskiy	8.50	282	P	Pn	05 03 52.4	+1.5
KRMR				S	Sn	05 05 22.3	-3.6
KDTR	Khodutka, Kamc	8.58	275	*e*P	Pn	05 03 52.1	+0.2
KDTR				*e*S	Sn	05 05 21.8	-5.9
KDTR	Khodutka, Kamc	8.58	275	P	Pn	05 03 52.1	+0.2
KDTR				S	Sn	05 05 21.8	-5.9
PETK	Petropavlovsk-	8.77	284	Pn	Pn	05 03 56.7	+2.1
	0.9nm,0.3s,baz=97,slow=19,SNR=15						
PETK				Sn	Sn	05 05 29.3	-3.3
	0.5nm,0.3s,baz=108,slow=17,SNR=3.4						
APC	Apacha	9.09	283	*e*P	Pn	05 04 01.5	+2.5
APC	Apacha	9.09	283	P	Pn	05 04 01.5	+2.5
TILK	Tilichiki	9.19	342	P	Pn	05 04 04.2	+3.9
TILK	Tilichiki	9.19	342	P	Pn	05 04 04.2	+3.9
ALID	Alaid	10.29	271	*e*P	Pn	05 04 16.7	+1.2
SEY	Seymchan	15.22	324	Pn	Pn	05 05 25.8	+3.3
	0.3nm,0.3s,baz=0.0,slow=20,SNR=3.0						
ILAR	Eielson Array	24.67	43	P	P	05 07 06.3	-1.5
	1.7nm,0.6s,baz=250,slow=9.3,SNR=30						
INK	Inuvik	30.47	37	P	P	05 07 58.9	-0.8
	0.4nm,0.3s,baz=261,slow=6.9,SNR=8.5						
H11N2	WAKE ISLAND Hy	32.30	189	T	T	05 44 05.8	
	baz=6.2,slow=76,SNR=3.5						
H11N3	WAKE ISLAND Hy	32.31	189	T	T	05 44 09.1	
	baz=6.2,slow=76,SNR=7.8						
H11N1	WAKE ISLAND Hy	32.32	189	T	T	05 44 07.4	
	baz=6.2,slow=76,SNR=4.5						
H11S1	WAKE ISLAND Hy	33.53	189	T	T	05 45 37.8	
	baz=3.7,slow=74,SNR=6.2						
H11S3	WAKE ISLAND Hy	33.54	189	T	T	05 45 38.9	
	baz=3.7,slow=74,SNR=2.0						
H11S2	WAKE ISLAND Hy	33.54	189	T	T	05 45 37.9	
	baz=3.7						
YKA	Yellowknife Ar	39.05	45	P	P	05 09 13.1	-0.5
	0.4nm,0.3s,baz=287,slow=7.4,SNR=13						
NVAR	Mina Array Bea	49.16	77	P	P	05 10 34.1	-1.3
	0.2nm,0.5s,baz=303,slow=8.2,SNR=2.9						
PDAR	Pinedale Array	51.57	67	P	P	05 10 52.9	-0.6
	0.3nm,0.7s,baz=336,slow=3.3,SNR=3.5						
MKAR	Makanchi Array	55.06	303	P	P	05 11 21.9	+3.0
	0.4nm,0.9s,baz=59,slow=5.6,SNR=2.7						
BVAR	Borovoye Array	56.62	315	P	P	05 11 30.6	+0.8
	0.6nm,0.5s,baz=52,slow=9.6,SNR=4.5						
SCHQ	Schefferville	63.02	34	P	P	05 12 12.9	-0.9
	1.8nm,0.8s,baz=339,slow=8.6,SNR=3.7						
AKTO	Aktyubinsk	63.75	319	P	P	05 12 19.6	+1.0
	1.3nm,0.7s,baz=83,slow=20,SNR=4.2						
TXAR	Lajitas Array	64.21	75	P	P	05 12 20.5	-1.7
	0.5nm,0.7s,baz=286,slow=5.1,SNR=5.1						
NOA	NORSAR Array B	66.40	350	P	P	05 12 36.0	+0.2
	0.5nm,0.9s,baz=354,slow=4.5,SNR=2.7						
AKASG	Malin Array Be	73.04	336	P	P	05 13 17.4	+0.7
	0.7nm,0.4s,baz=28,slow=6.1,SNR=2.4						
BRTR	Keskin Array B	81.82	329	P	P	05 14 07.5	+1.2
	0.6nm,0.8s,baz=34,slow=3.8,SNR=3.8						

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*IDC **12** 05:09:28.8±1.5, 5°.71S×130°.16E, h0^{km}, mb3.8/3, mb1 4.2/7, mb1mx3.8/40, mbtmp4.0/7, ML4.0/4, MS3.0/4, Ms1 3.0/4, ms1mx2.6/40, Error ellipse: s-maj=52.1km s-min=22.5km az=82.0*

*ISCJB **12** 05:09:30.0±0.7, 5°.68S±0°.05×130°.5E±0°.2, h33^{km}, mb3.8/3, MS2.9/2, Error ellipse: s-maj=26.4km s-min=7.3km az=176.6*

ISC 12 05:09:31.7±0.8**, 5°.78S**±0°.06×**130°.5E**±0°.2**, h35^{km}, n10, σ2^s.35**/11**, mb3.8**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.94	9	Pn	Pn	05 10 43.1	-0.3
	3.0nm,0.3s,baz=227,slow=22,SNR=11						
SIJI				Sn	Sn	05 11 36.1	-3.3
	2.3nm,0.3s,baz=139,slow=20,SNR=5.2						
BATI	Baumata	8.06	237	LR	LR	05 14 39.8	
	comp=Z,133nm,19.8s,baz=78,slow=40						
FITZ	Fitzroy Crossi	13.13	201	Pn	Pn	05 12 36.3	+0.5
	0.5nm,0.3s,baz=1.6,slow=8.3,SNR=18						
FITZ				Sn	Sn	05 14 57.0	-3.6
	0.1nm,0.3s,baz=221,slow=11,SNR=1.7						
FITZ				LR	LR	05 17 39.7	
	comp=Z,89nm,19.4s,baz=48,slow=38						
WRA	Warramunga Arr	14.57	165	Pn	Pn	05 12 56.5	+1.1
	0.7nm,0.3s,baz=340,slow=14,SNR=31						
WRA				Sn	Sn	05 15 33.7	-2.1
	0.3nm,0.3s,baz=347,slow=22,SNR=4.6						
ASAR	Alice Springs	18.09	170	P	P	05 13 43.8	+3.3
	1.0nm,0.3s,baz=346,slow=9.3,SNR=42						
ASAR				S	Sn	05 16 59.9	-1.3
	0.1nm,0.3s,baz=354,slow=26,SNR=5.0						
JNU	Nakatsue	38.69	1	LR	LR	05 34 50.5	
	comp=Z,31nm,18.4s,baz=240,slow=39						
CMAR	Chiang Mai Arr	39.34	308	P	P	05 16 58.7	+0.7
	1.4nm,0.4s,baz=142,slow=7.5,SNR=8.2						
KSRS	Korea Array	43.08	357	LR	LR	05 35 24.1	
	comp=Z,7.8nm,20.6s,baz=185,slow=36						
SONM	Songino Array	57.45	341	P	P	05 19 17.2	0.0
	0.3nm,0.5s,baz=160,slow=7.4,SNR=3.0						
MKAR	Makanchi Array	67.48	326	P	P	05 20 25.4	+1.3
	0.4nm,0.5s,baz=117,slow=7.6,SNR=11						

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*ISCJB **12** 05:13:38.6±0.8, 7°.2S±0°.1×122°.09W±0°.08, h10^{km}, mb4.5/108, MS3.8/8, Error ellipse: s-maj=16.3km s-min=11.7km az=11.6*

*IDC **12** 05:13:40.7±1.0, 6°.79S×122°.30W, h0^{km}, mb4.4/15, mb1 4.6/15, mb1mx4.4/37, mbtmp4.4/15, MS3.8/8, Ms1 3.8/8, ms1mx3.5/28, Error ellipse: s-maj=33.0km s-min=19.8km az=48.0*

*NEIC **12** 05:13:42.1±0.3, 6°.87S×122°.37W, h10^{km}, mb4.6/97, Error ellipse: s-maj=8.2km s-min=5.9km az=81.0*

ISC 12 05:13:43.1±0.7**, 6°.7S**±0°.1×**122°.2W**±0°.2**, h10^{km}, n254, σ0^s.97**/248**, mb4.6**/108**, MS3.8**/8**, South Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAOE	Nuku Hiva Isla	17.92	262	*e*LR	LR	05 21 39.6	
	comp=Z,712nm,26.2s						
RKT	Rikitea	20.47	216	*e*LQ	LQ	05 22 11.8	
	439nm,27.5s						
RPN	Rapa Nui	23.74	150	LR	LR	05 25 54.6	
	comp=Z,246nm,19.6s,baz=344,slow=31						
PPT	Papeete	28.84	245	LR	LR	05 28 27.9	
	comp=Z,70nm,18.7s,baz=69,slow=31						
PPT2	Papeete2	28.84	245	*e*LR	LR	05 26 44.5	
	comp=Z,399nm,28.8s						
TBI	Tubuai	31.03	235	*e*LR	LR	05 27 52.3	
	comp=Z,191nm,31.5s						
214A	Organ Pipe Nat	39.43	13	P	P	05 21 14.6	+1.1
	baz=195						
IKP	In-Ko-Pah, Jac	39.52	8	P	P	05 21 16.0	+1.7
	baz=190						
MONP2	Monument Peak	39.72	8	P	P	05 21 17.4	+1.3
	baz=189						
319A	Douglas	39.79	17	*e*P	P	05 21 17.2	+0.6
	6.3nm,0.8s						
LTX	Lajitas	39.98	26	*e*P	P	05 21 19.5	+1.2
LTX				*e*PcP	PcP	05 23 23.3	-0.3
TXAR	Lajitas Array	39.98	26	P	P	05 21 19.5	+1.2
	0.6nm,0.6s,baz=205,slow=10,SNR=8.5						
TXAR				PcP	PcP	05 23 23.3	-0.3
	0.3nm,0.6s,baz=169,slow=5.5,SNR=2.6						
113A	Mohawk Valley,	40.02	11	*e*P	P	05 21 18.9	+0.6
	3.2nm,0.8s						
GLA	Glamis	40.11	10	P	P	05 21 20.7	+1.5
	baz=192						
TUC	Tucson	40.25	15	*e*P	P	05 21 20.5	+0.1
	3.0nm,0.9s						
TUC	Tucson	40.25	15	P	P	05 21 21.5	+1.1
	baz=198						
MURC	Murrieta	40.32	6	P	P	05 21 22.4	+1.5
	baz=188						
PFO	Pinyon Flats O	40.42	7	P	P	05 21 23.2	+1.4
	baz=189						
BC3	Big Chuckawall	40.60	9	P	P	05 21 25.1	+1.8
	baz=190						
BLG	Laguna Peak, P	40.66	4	P	P	05 21 25.7	+2.0
	baz=185						
BELC	Belle Mtn. Jos	40.87	8	P	P	05 21 27.3	+1.8
	baz=190						
BFSC	Mount Baldy Ra	40.90	6	P	P	05 21 27.4	+1.5
	baz=187						
IRM	Iron Mountain	41.14	9	P	P	05 21 29.2	+1.5
	baz=191						
Y14A	Wickenburg	41.31	12	*e*P	P	05 21 29.3	+0.2
	4.3nm,0.6s						
121A	Cookes Peak, D	41.32	19	P	P	05 21 30.3	+1.0
	baz=202						
MNTX	Cornudas Mount	41.39	22	*e*P	P	05 21 30.7	+0.9
	3.6nm,0.9s						
MNTX	Cornudas Mount	41.39	22	P	P	05 21 30.3	+0.5
	baz=206,SNR=10						
PKM	Mcpherson Peak	41.39	3	P	P	05 21 31.5	+1.6
	baz=184						
EDW2	Edwards Air Fo	41.51	5	P	P	05 21 32.1	+1.3
	baz=186,SNR=5.5						
HEC	Hector,Ludlow	41.64	7	P	P	05 21 32.7	+0.9
	baz=189						
GMRC	Granite Mounta	41.68	8	P	P	05 21 33.6	+1.3
	baz=190,SNR=5.5						
GSC	Goldstone, Bar	42.05	7	*e*P	P	05 21 35.9	+0.7
	5.8nm,0.8s						
GSC	Goldstone, Bar	42.05	7	P	P	05 21 36.6	+1.4
	baz=188,SNR=6.5						
LRMC	Laurel Mtn Rad	42.13	5	P	P	05 21 37.5	+1.6
	baz=187						
TUQ	Turquoise Moun	42.29	8	P	P	05 21 38.8	+1.6
	baz=189						
VES	Vestal, Richgr	42.38	4	P	P	05 21 39.4	+1.7
	baz=185						
JCT	Junction City	42.72	29	P	P	05 21 41.4	+0.7
	baz=214						
MPMC	Manual Prospec	42.72	6	P	P	05 21 42.1	+1.3
	baz=187						
CWC	Cottonwood Cre	43.05	5	P	P	05 21 45.0	+1.6
	baz=186						
WUAZ	Wupatki	43.17	13	*e*P	P	05 21 45.3	+0.9
	4.3nm,0.9s						
WUAZ	Wupatki	43.17	13	P	P	05 21 45.3	+0.9
	baz=196						
BNM	Barren Site	43.18	19	*e*P	P	05 21 45.9	+1.3
W18A	Petrified Fore	43.19	15	P	P	05 21 45.5	+1.0
	baz=198						
FURC	Furnace Creek,	43.19	6	P	P	05 21 45.8	+1.5
	baz=188						
LAZ	Ladron	43.25	18	*e*P	P	05 21 45.3	+0.1
SHPR	Sheep Range	43.44	8	*e*P	P	05 21 47.8	+1.2
	4.6nm,0.9s						
TPNV	Topopah Spring	43.74	7	*e*P	P	05 21 50.2	+1.2
	3.4nm,1.0s						
TPNV	Topopah Spring	43.74	7	P	P	05 21 50.4	+1.5
	baz=189						
U15A	North Rim	43.86	12	*e*P	P	05 21 51.3	+1.2
	2.3nm,0.8s						
ANMO	Albuquerque	43.97	19	*e*P	P	05 21 52.0	+1.1
	1.6nm,0.8s						
ANMO	Albuquerque	43.97	19	P	P	05 21 51.5	+0.6
	baz=203						
LCMT	Little Creek M	44.25	10	*e*P	P	05 21 54.7	+1.7
	8.1nm,0.9s						
MSTX	Muleshoe	44.40	23	*e*P	P	05 21 54.8	+0.6
	9.1nm,0.8s						
MSTX	Muleshoe	44.40	23	P	P	05 21 55.0	+0.8
	baz=208,SNR=5.6						

ABTX	Abilene, Hawle	44.58	27	P	P	05 21 55.9	+0.4
	baz=213						
CCUT	Cedar City	44.75	10	*e*P	P	05 21 58.5	+1.3
	2.3nm,0.9s						
NV01	Mina Array Sit	45.01	4	*e*P	P	05 22 00.5	+1.4
NVAR	Mina Array Bea	45.01	4	P	P	05 22 00.8	+1.7
	3.8nm,0.8s,baz=190,slow=12,SNR=17						
NVAR				PcP	PcP	05 23 40.0	-0.2
	0.9nm,0.6s,baz=189,slow=5.4,SNR=4.4						
NVAR				LR	LR	05 36 43.4	
	comp=Z,183nm,18.4s,baz=190,slow=31						
NV11	Mina Array Sit	45.02	4	*e*P	P	05 22 00.5	+1.4
	0.5nm,1.0s						
RYN	Ryan	45.19	4	*e*P	P	05 22 00.7	+0.1
	4.6nm,0.9s						
R11A	Troy Canyon, C	45.20	7	*e*P	P	05 22 01.8	+1.1
	3.0nm,0.9s						
R11A	Troy Canyon, C	45.20	7	P	P	05 22 01.5	+0.8
	baz=189						
MTPU	Mount Pierson	45.44	11	*e*P	P	05 22 04.3	+1.5
	1.3nm,0.8s						
MVCO	Mesa Verde	45.48	15	*e*P	P	05 22 02.7	-0.3
	5.6nm,0.8s						
MVCO	Mesa Verde	45.48	15	P	P	05 22 02.7	-0.3
	baz=199,SNR=6.1						
YERR	Yerington	45.50	3	*e*P	P	05 22 02.9	-0.1
	3.6nm,0.7s						
PSUT	Pine Spring	45.63	9	*e*P	P	05 22 04.8	+0.8
	7.6nm,0.7s						
AMTX	Amarillo	45.63	24	*e*P	P	05 22 04.8	+0.8
	7.6nm,0.8s						
AMTX	Amarillo	45.63	24	P	P	05 22 04.1	+0.1
	baz=209						
TCRU	Three Creeks R	45.94	11	*e*P	P	05 22 08.0	+1.4
	7.1nm,1.1s						
PV05	Paradox Valley	46.15	14	*e*P	P	05 22 09.5	+1.2
	7.1nm,1.1s						
PV13	Radium Mtn., P	46.30	15	*e*P	P	05 22 10.0	+0.7
	5.7nm,1.2s						
PV17	East Wray Mesa	46.38	14	*e*P	P	05 22 10.7	+0.7
	5.2nm,0.9s						
PV03	Paradox Valley	46.38	15	*e*P	P	05 22 10.7	+0.7
	9.2nm,1.2s						
PV11	David Mesa, Pa	46.42	14	*e*P	P	05 22 10.8	+0.5
	4.9nm,0.8s						
PV16	Nyswonger Mesa	46.42	14	*e*P	P	05 22 11.6	+1.3
	4.5nm,0.9s						
S22A	4UR Ranch, Cre	46.45	17	*e*P	P	05 22 11.4	+0.8
	1.4nm,0.9s						
S22A	4UR Ranch, Cre	46.45	17	P	P	05 22 11.3	+0.7
	baz=201						
PV14	Lion Creek, Pa	46.45	14	*e*P	P	05 22 11.2	+0.7
	5.3nm,0.8s						
PV12	Saucer Basin,	46.45	15	*e*P	P	05 22 11.6	+1.0
	6.0nm,0.8s						
Q16A	Castle Valley	46.49	12	*e*P	P	05 22 11.8	+1.0
	3.3nm,0.7s						
PV04	Paradox Valley	46.50	14	*e*P	P	05 22 12.1	+1.1
	12nm,1.2s						
PV23	Carpenter Ridg	46.53	14	*e*P	P	05 22 11.9	+0.7
	12nm,1.2s						
T25A	Trinidad	46.64	20	*e*P	P	05 22 13.0	+0.9
	8.8nm,0.8s						
T25A	Trinidad	46.64	20	P	P	05 22 13.2	+1.2
	baz=205,SNR=8.6						
SDCO	Great Sand Dun	46.84	18	*e*P	P	05 22 14.7	+0.9
	2.6nm,1.0s						
SDCO	Great Sand Dun	46.84	18	P	P	05 22 14.6	+0.9
	baz=203						
NLU	North Lily Min	47.32	11	*e*P	P	05 22 18.8	+1.5
	4.4nm,1.1s						
N02D	Trinity Center	47.40	359	P	P	05 22 19.5	+1.7
	baz=180						
DUG	Dugway, Tooele	47.42	10	*e*P	P	05 22 18.8	+0.7
	5.5nm,1.0s						
DUG	Dugway, Tooele	47.42	10	P	P	05 22 19.2	+1.2
	baz=193,SNR=6.2						
MPU	Maple Canyon	47.46	11	*e*P	P	05 22 19.5	+1.2
	2.4nm,0.8s						
ELK	Elko	47.60	7	*e*P	P	05 22 20.9	+1.3
	4.2nm,0.8s						
M02C	Callahan	47.82	359	P	P	05 22 23.1	+2.1
	baz=179						
JLU	Jordanelle	48.06	11	*e*P	P	05 22 24.4	+1.3
	4.6nm,1.0s						
Q24A	Divide	48.07	18	P	P	05 22 23.9	+0.6
	baz=203						
CTU	Camp Tracy	48.09	11	*e*P	P	05 22 24.7	+1.5
	6.3nm,1.1s						
BGU	Big Grassy Mou	48.10	9	*e*P	P	05 22 23.8	+0.5
	2.9nm,0.9s						
M04C	Macdoel	48.21	0	P	P	05 22 25.7	+1.6
	baz=181						
O20A	White River Ci	48.31	14	*e*P	P	05 22 26.2	+1.2
	8.8nm,1.0s						
O20A	White River Ci	48.31	14	P	P	05 22 26.2	+1.2
	baz=199						
TCUT	Toone Canyon	48.57	11	*e*P	P	05 22 28.2	+1.2
	9.3nm,1.1s						
L04D	Klamath Falls	48.65	360	P	P	05 22 29.2	+1.7
	baz=180						
ISCO	Idaho Springs	48.70	17	*e*P	P	05 22 29.3	+1.2
	4.7nm,0.8s						
ISCO	Idaho Springs	48.70	17	P	P	05 22 29.0	+0.8
	baz=202,SNR=8.8						
WVOR	Wild Horse Val	48.97	3	*e*P	P	05 22 31.2	+1.3
	3.8nm,0.8s						
HVU	Hansel Valley	48.97	9	*e*P	P	05 22 30.5	+0.5
	3.3nm,1.0s						
MIAR	Mount Ida	49.10	32	P	P	05 22 31.3	+0.3
	baz=219						
N23A	Red Feather La	49.63	16	P	P	05 22 35.8	+0.7
	baz=202						
145A	Houston Renfro	49.67	36	P	P	05 22 35.8	+0.5
	baz=224						
J05D	Fort Rock, OR	49.72	1	P	P	05 22 37.2	+1.5
	baz=182						
J08A	Circle Bar Ran	49.90	4	*e*P	P	05 22 37.5	+0.5
	8.9nm,1.0s						
I04A	Tendick Farm,	50.22	360	P	P	05 22 40.8	+1.4
	baz=180						
W41B	Gary Mavity, V	50.28	32	P	P	05 22 40.3	+0.4
	baz=220						
HLID	Hailey	50.48	7	*e*P	P	05 22 42.0	+0.5
	3.0nm,0.8s						
HLID	Hailey	50.48	7	P	P	05 22 42.3	+0.8
	baz=190,SNR=7.0						
BW06	Boulder Array	50.52	12	P	P	05 22 42.4	+0.5
	baz=196						
PD31	Pinedale Array	50.52	12	*e*P	P	05 22 42.0	+0.1
PDAR	Pinedale Array	50.52	12	*e*P	P	05 22 41.5	-0.4
PDAR				PcP	PcP	05 23 59.0	-0.8
PDAR				ScP	ScP	05 27 57.0	+0.8
PDAR	Pinedale Array	50.52	12	P	P	05 22 42.4	+0.5
	1.1nm,0.7s,baz=183,slow=5.8,SNR=12						
PDAR				PcP	PcP	05 23 59.0	-0.8
	0.3nm,0.8s,baz=198,slow=5.6,SNR=3.7						
PDAR				ScP	ScP	05 27 57.0	+0.8
	0.1nm,0.5s,baz=230,slow=4.2,SNR=2.5						
PDAR				LR	LR	05 39 44.6	
	comp=Z,121nm,19.6s,baz=160,slow=31						
I05D	Terrebonne, OR	50.77	1	P	P	05 22 45.0	+1.5
	baz=181						
U40A	Yellville	50.88	31	P	P	05 22 44.9	+0.5
	baz=219						
TPAW	Teton Pass	50.95	11	*e*P	P	05 22 45.1	-0.1
	3.0nm,0.8s						
FXWY	Fox Creek	51.08	10	*e*P	P	05 22 46.5	+0.5
	4.6nm,0.8s						
K22A	Casper	51.11	15	*e*P	P	05 22 46.3	0.0
	5.5nm,0.8s						
K22A	Casper	51.11	15	P	P	05 22 46.9	+0.6
	baz=200						
LOHW	Long Hollow	51.13	11	*e*P	P	05 22 47.0	+0.5
	1.4nm,0.8s						
MOOW	Moose Ponds	51.23	11	*e*P	P	05 22 48.0	+0.7
	3.7nm,0.8s						
KSU1	Kansas State U	51.34	25	P	P	05 22 48.3	+0.5
	baz=213						
IMW	Indian Meadow	51.34	10	*e*P	P	05 22 48.5	+0.3
	12nm,0.8s						
BMO	Blue Mountains	51.47	4	*e*P	P	05 22 49.7	+0.9
	2.3nm,0.9s						
149A	Jones	51.56	39	P	P	05 22 50.0	+0.3
	baz=227						
FLWY	Flagg Ranch	51.57	11	*e*P	P	05 22 50.8	+1.1
	15nm,0.9s						
LRAL	Lakeview Retre	51.73	38	P	P	05 22 51.4	+0.6
	baz=227						
G08A	Pilot Rock	51.80	3	*e*P	P	05 22 52.1	+0.8
	5.2nm,0.9s						
H17A	Grant Village	51.89	11	*e*P	P	05 22 52.8	+0.6
	2.4nm,0.9s						
YFT	Old Faithful	51.90	10	*e*P	P	05 22 53.6	+1.4
	4.5nm,0.8s						
MCMT	McKenzie Canyo	51.94	8	*e*P	P	05 22 54.1	+1.5
T41A	Mountain View	51.96	31	P	P	05 22 52.9	+0.3
	baz=220						
YMR	Madison River	52.09	10	*e*P	P	05 22 54.8	+1.2
	8.7nm,0.9s						
YHB	Horse Butte	52.13	10	*e*P	P	05 22 55.2	+1.3
	6.9nm,0.8s						
YHH	Holmes Hill	52.22	10	*e*P	P	05 22 56.1	+1.4
	7.8nm,0.9s						
S41A	Jillco Farms,	52.39	31	P	P	05 22 55.8	+0.1
	baz=219						
DLMT	Dillon	52.50	9	*e*P	P	05 22 57.4	+0.8
	5.8nm,1.0s						
F10A	Beach Ranch, E	52.59	4	*e*P	P	05 22 57.8	+0.7
	6.0nm,0.8s						
RLMT	Red Lodge	52.84	11	P	P	05 22 59.4	+0.3
	baz=196						
BOZ	Bozeman (W)	52.88	9	P	P	05 22 59.8	+0.4
	baz=193						
PB01	IPOC Station P	52.89	111	*e*P	P	05 23 00.9	+1.0
	16nm,1.0s						
CCM	Cathedral Cave	53.01	31	P	P	05 22 59.9	-0.3
	baz=220						
S42A	Caledonia	53.02	31	P	P	05 23 00.2	-0.1
	baz=220						
E09A	Wood Farm, Sta	53.06	3	*e*P	P	05 23 01.0	+0.5
	3.8nm,0.8s						
254A	Abbeville	53.38	42	P	P	05 23 02.6	-0.5
	baz=231						
D08A	Wollman Farm,	53.56	3	*e*P	P	05 23 05.5	+1.3
	4.4nm,0.9s						
SDV	Santo Domingo	53.66	74	P	P	05 23 06.5	+0.7
	4.8nm,0.7s,baz=258,slow=4.0,SNR=6.8						
LPAZ	La Paz	53.70	105	*e*P	P	05 23 07.1	+0.6
	3.9nm,1.0s						
LPAZ	La Paz	53.70	105	P	P	05 23 07.0	+0.4
	1.3nm,0.6s,baz=314,slow=4.3,SNR=6.7						
MSO	Missoula	53.76	7	*e*P	P	05 23 06.7	+0.9
	11nm,0.9s						
P41A	Barry, Barry	54.34	29	P	P	05 23 09.8	-0.2
	baz=219						
O41A	Passleys Farm,	54.77	29	P	P	05 23 12.7	-0.5
	baz=219						
B08A	Colville Reser	54.84	2	*e*P	P	05 23 14.2	+0.6
	9.3nm,0.7s						
NEW	Newport	54.87	4	P	P	05 23 14.3	+0.5
	baz=186						
ECSD	EROS Data Cent	55.24	22	P	P	05 23 16.4	-0.1
	baz=212						
M40A	Post Highland	55.48	28	P	P	05 23 17.2	-1.0
	baz=218						
EGMT	Eagleton	55.55	10	*e*P	P	05 23 19.3	+0.6
	5.7nm,0.9s						
EGMT	Eagleton	55.55	10	P	P	05 23 19.4	+0.8
	baz=195						
P45A	Graceland, Par	55.91	32	P	P	05 23 21.4	0.0
	baz=223						
WALA	Waterton Lakes	55.96	7	*e*P	P	05 23 22.4	+0.7
	8.4nm,0.9s						
K40A	Colesburg	56.67	27	P	P	05 23 26.4	-0.4
	baz=218						
L42A	Oliver, Polo	56.81	29	P	P	05 23 27.1	-0.6
	baz=220						
DGMT	Dagmar	57.13	14	*e*P	P	05 23 30.0	0.0
	8.2nm,0.8s						
DGMT	Dagmar	57.13	14	P	P	05 23 30.0	0.0
	baz=202						
L43A	Garden Prairie	57.39	29	P	P	05 23 32.2	+0.4
	baz=220						
I39A	Houston	57.42	26	P	P	05 23 31.9	-0.1
	baz=217						
N46A	Monticello	57.44	31	P	P	05 23 32.3	+0.1
	baz=223						
G38A	Ridgeland	58.33	25	P	P	05 23 37.9	-0.5
	baz=216						
J43A	Natural Harves	58.46	28	P	P	05 23 38.8	-0.6
	baz=220						
O50A	Cable	58.58	34	P	P	05 23 39.9	-0.4
	baz=226						
N49A	Columbus Grove	58.81	33	P	P	05 23 41.0	-0.8
	baz=226						
I43A	Langenfeld Bro	58.97	28	P	P	05 23 42.9	0.0
	baz=220						
O52A	Adamsville	59.57	35	P	P	05 23 47.0	-0.1
	baz=228						
H43A	Windswept, Lux	59.59	28	P	P	05 23 47.0	-0.1
	baz=221						
F41A	Three Lakes	59.96	26	P	P	05 23 49.3	-0.5
	baz=219						
E41A	Kenton	60.59	26	P	P	05 23 53.2	-0.8
	baz=219						
F43A	Flat Rock, Esc	60.90	27	P	P	05 23 56.2	+0.1
	baz=221						
ULM	Lac du Bonnet	61.10	19	*e*P	P	05 23 56.4	-0.9
	5.8nm,0.6s						
ULM	Lac du Bonnet	61.10	19	P	P	05 23 56.5	-0.9
	4.4nm,0.6s,baz=216,slow=6.7,SNR=12						
ULM				LR	LR	05 47 42.1	
	comp=Z,56nm,18.7s,baz=155,slow=33						
GLMI	Grayling	61.36	30	P	P	05 23 59.4	+0.2
	baz=224						
M54A	Oil Creek Stat	61.73	35	P	P	05 24 01.9	+0.1
	baz=230						
PTGA	Pitinga	62.34	87	P	P	05 24 05.7	-0.7
	3.5nm,0.6s,baz=319,slow=22,SNR=6.1						
CPUP	Villa Florida	64.57	116	P	P	05 24 20.6	-0.4
	2.4nm,0.9s,baz=299,slow=15,SNR=5.6						
DLBC	Dease Lake	65.19	355	*e*P	P	05 24 25.4	+1.0
	9.8nm,0.8s						
D51A	Lot 18 Range I	65.56	31	P	P	05 24 27.2	+0.2
	baz=228						
E54A	Lac Daplat, Po	66.27	32	P	P	05 24 31.6	0.0
	baz=230						
D53A	Lac Vacive, Po	66.42	32	P	P	05 24 32.9	+0.4
	baz=229						
D54A	Lac Fusel, La	67.01	32	P	P	05 24 36.0	-0.3
	baz=230						
WHY	Whitehorse	67.85	353	*e*P	P	05 24 42.5	+1.0
	10nm,1.0s						
LSQQ	Lebel-sur-Quev	68.07	30	P	P	05 24 42.3	-0.6
	baz=229						
HYT	Haines Junctio	68.35	352	*e*P	P	05 24 45.6	+0.9
	7.2nm,0.8s						
FCC	Fort Churchill	69.01	15	*e*P	P	05 24 48.0	-0.6
	10.0nm,0.9s						
YKA	Yellowknife Ar	69.20	4	P	P	05 24 49.7	0.0
	6.4nm,0.7s,baz=182,slow=6.2,SNR=156						
YKB5	Yellowknife Ar	69.20	4	*e*P	P	05 24 49.0	-0.7
YKW3	Yellowknife Ar	69.27	4	*e*P	P	05 24 49.8	-0.3
	6.0nm,0.8s						
CHGQ	Chibougamau	69.92	31	P	P	05 24 54.2	-0.2
	baz=232						
DAWY	Dawson	71.71	352	*e*P	P	05 25 05.5	+0.4
	8.6nm,1.0s						
SCRK	Sand Creek	72.34	350	*e*P	P	05 25 09.2	+0.2
BDFB	Brasilia	73.04	104	LR	LR	05 53 19.1	
	comp=Z,95nm,20.0s,baz=261,slow=32						
MCK	McKinley	73.05	348	*e*P	P	05 25 12.6	-0.5
	3.8nm,0.8s						
TRF	Thorofare Moun	73.09	347	*e*P	P	05 25 13.4	-0.1
	13nm,0.9s						
HDA	Harding Lake	73.26	349	*e*P	P	05 25 13.7	-0.6
	4.9nm,0.9s						
HDA	Harding Lake	73.26	349	P	P	05 25 14.4	0.0
	baz=154						
CAST	Castle Rocks	73.47	346	*e*P	P	05 25 14.9	-0.7
	5.7nm,0.9s						
WRH	Wood River Hil	73.54	349	*e*P	P	05 25 15.7	-0.2
	13nm,1.0s						
IL1	Eielson Array	73.58	349	*e*P	P	05 25 14.8	-1.3
ILAR	Eielson Array	73.58	349	P	P	05 25 15.2	-0.9
	1.5nm,0.8s,baz=151,slow=3.9,SNR=17						
ILAR				LR	LR	05 52 06.9	
	comp=Z,73nm,19.0s,baz=166,slow=31						
ILB	Eielson Array	73.58	349	*e*P	P	05 25 13.5	-2.7
EPYK	Eagle Plains	73.61	354	*e*P	P	05 25 16.5	+0.1
	12nm,0.9s						
EPYK	Eagle Plains	73.61	354	P	P	05 25 16.7	+0.3
	baz=165						
BPAW	Bear Paw Mtn.	73.81	347	*e*P	P	05 25 16.9	-0.7
	9.1nm,1.0s						
POKR	Poker Plat Res	74.00	349	P	P	05 25 19.2	+0.6
	baz=154						
MDM	Murphy Dome	74.00	349	*e*P	P	05 25 18.6	-0.1
	10nm,0.9s						
PRP	Porcupine Dome	74.02	350	*e*P	P	05 25 19.2	+0.3
	4.7nm,0.8s						
H11S2	WAKE ISLAND Hy	74.39	291	T	T	06 46 39.9	
	baz=102,slow=74,SNR=5.7						
H11S1	WAKE ISLAND Hy	74.40	291	T	T	06 46 40.8	
	baz=102,slow=74,SNR=17						
H11S3	WAKE ISLAND Hy	74.41	291	T	T	06 46 41.6	
	baz=102,slow=74,SNR=18						
H11N3	WAKE ISLAND Hy	74.48	292	T	T	06 46 45.3	
	baz=84						
H11N2	WAKE ISLAND Hy	74.49	293	T	T	06 46 44.9	
	baz=84						
H11N1	WAKE ISLAND Hy	74.49	292	T	T	06 46 46.5	
	baz=84						
MLY	Manley	74.57	348	*e*P	P	05 25 21.9	-0.2
	8.1nm,0.8s						
INK	Inuvik	75.22	356	*e*P	P	05 25 25.7	+0.1
	6.1nm,0.9s						
INK	Inuvik	75.22	356	P	P	05 25 25.2	-0.4
	4.2nm,0.8s,baz=143,slow=2.6,SNR=7.8						
IM3	Indian Mountai	76.04	347	*e*P	P	05 25 29.6	-0.7
SCHQ	Schefferville	76.55	29	*e*P	P	05 25 33.0	-0.6
	8.8nm,0.8s						
SCHQ	Schefferville	76.55	29	P	P	05 25 32.9	-0.7
	8.5nm,0.7s,baz=242,slow=5.6,SNR=23						
TOLK	Toolik Lake Re	77.53	350	P	P	05 25 39.2	+0.4
	baz=152						
ANM	Nome	77.94	342	*e*P	P	05 25 41.8	+0.7
	3.8nm,0.8s						
VNDA	Vanda	80.51	192	*e*P	P	05 25 56.7	+1.7
VNDA	Vanda	80.51	192	P	P	05 25 58.0	+3.0
	2.0nm,1.0s,baz=9.5,slow=7.2,SNR=4.5						
RES	Resolute Bay	82.91	7	P	P	05 26 06.8	-0.8
	3.0nm,0.8s,baz=197,slow=9.4						
PETK	Petropavlovsk-	89.37	324	P	P	05 26 40.1	+0.2
	4.3nm,0.8s,baz=99,slow=9.5,SNR=6.2						
PETK				LR	LR	05 58 00.2	
	comp=Z,33nm,21.7s,baz=106,slow=30						
PEA1	Petropavlovsk-	89.37	324	*e*P	P	05 26 40.1	+0.2
SEY	Seymchan	93.80	333	P	P	05 27 00.4	+0.1
	2.1nm,0.7s,baz=169,slow=5.6,SNR=8.6						
SONA0	Songino Array	121.86	323	*e*PKPdf	PKPdf	05 32 37.1	-0.9
SONM	Songino Array	121.86	323	PKP	PKPdf	05 32 37.1	-0.9
	0.5nm,0.7s,baz=24,slow=1.1,SNR=5.1						
TOA1	Torodi Ar. Sit	124.44	79	*e*PKPdf	PKPdf	05 32 42.3	-1.3
TORD	Torodi Ar. Bea	124.44	79	PKP	PKPdf	05 32 42.3	-1.3
	0.9nm,0.7s,baz=322,slow=3.7,SNR=4.7						
ZAA1	Zalesovo Array	128.03	340	*e*PKPdf	PKPdf	05 32 48.6	-0.8
ZALV	Zalesovo Beam	128.03	340	PKP	PKPdf	05 32 48.6	-0.8
	0.7nm,0.6s,baz=15,slow=3.9,SNR=3.6						
AKASG	Malin Array Be	130.06	23	PKP	PKPdf	05 32 51.0	-2.4
AKASG	Malin Array Be	130.06	23	PKP	PKPdf	05 32 51.0	-2.4
	0.4nm,0.4s,baz=319,slow=2.2,SNR=2.0						
MK32	Makanchi Array	134.82	336	*e*PKPdf	PKPdf	05 33 01.9	-0.6
MKAR	Makanchi Array	134.82	336	PKP	PKPdf	05 33 01.9	-0.6
	1.0nm,0.7s,baz=35,slow=2.2,SNR=13						
BR101	Keskin Array S	140.56	30	*e*PKPdf	PKPdf	05 33 13.2	-0.4
BRTR	Keskin Array B	140.56	30	PKP	PKPdf	05 33 13.2	-0.4
	1.3nm,0.7s,baz=305,slow=0.5,SNR=9.1						
GEYT	Alibeck	148.87	360	PKPbc	PKiKP	05 33 32.2	-0.8
	2.6nm,0.6s,baz=240,slow=5.0,SNR=5.0						

IDC 12 05:15:17.1±1.7**, 11°.96S**×**164°.72E, h0**^{km}**, mb3.6**/5**, mb1 3.9**/5**, mb1mx3.6**/40**, mbtmp3.6**/5**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.5**/22**, Error ellipse: s-maj=74.1km s-min=25.8km az=144.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.32	298	LR	LR	05 18 52.8	
	comp=Z,129nm,21.1s,baz=118,slow=41						
WRA	Warramunga Arr	30.23	251	P	P	05 21 29.8	0.0
	1.6nm,0.7s,baz=82,slow=8.9,SNR=11						
ASAR	Alice Springs	31.48	244	P	P	05 21 40.8	-0.1
	0.3nm,0.5s,baz=66,slow=10.0,SNR=4.1						
SONM	Songino Array	78.81	324	P	P	05 27 22.2	+0.2
	0.3nm,0.8s,baz=133,slow=6.1,SNR=2.8						
ILAR	Eielson Array	84.70	19	P	P	05 27 52.1	-0.4
	0.2nm,0.7s,baz=227,slow=4.8,SNR=3.7						
NVAR	Mina Array Bea	87.38	50	P	P	05 28 07.1	+0.3
	0.2nm,0.4s,baz=219,slow=7.0,SNR=2.9						

ISCJB ***12*** *05:22:06.1±0.5, 15°.72N±0°.08×46°.84W±0°.07, h10*^{km}*, mb4.1/16, MS3.4/9, Error ellipse: s-maj=11.6km s-min=9.4km az=153.9*

IDC ***12*** *05:22:06.4±0.8, 15°.78N×46°.82W, h0*^{km}*, mb3.9/12, mb1 4.2/14, mb1mx3.9/45, mbtmp4.0/14, ML4.2/2, MS3.5/11, Ms1 3.5/11, ms1mx3.2/34, Error ellipse: s-maj=23.4km s-min=17.2km az=109.0*

NEIC ***12*** *05:22:08.0±0.3, 15°.74N×46°.82W, h10*^{km}*, mb4.5/11, Error ellipse: s-maj=7.5km s-min=6.1km az=143.0*

ISC 12 05:22:07.9±0.7**, 15°.8N**±0°.1×**46°.8W**±0°.1**, h10**^{km}**, n44,** σ**0**^{s}**63**/38**, mb4.2**/16**, MS3.5**/9**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	12.02	209	Pn	Pn	05 24 58.1	-1.3
	0.8nm,0.3s,baz=11,slow=16,SNR=25						
MDP				Sn	Sn	05 26 58.9	-15
	0.2nm,0.3s,baz=170,slow=12,SNR=4.3						
MDP				LR	LR	05 28 45.7	
	comp=Z,109nm,21.4s,baz=49,slow=33						
H05S1	Guadeloupe/Mar	13.60	266	T	T	05 39 04.1	
	SNR=25						
GRGR	Grenville	14.84	258	*e*Pn	Pn	05 25 38.1	+0.3
SJG	San Juan	18.64	280	P	Pn	05 26 26.3	+0.2
	1.1nm,0.3s,baz=313,slow=19,SNR=3.3						
SJG				LR	LR	05 32 07.0	
	comp=Z,247nm,21.6s,baz=81,slow=32						
OBIP	Obispado Ponce	19.07	280	*e*P	Pn	05 26 30.4	-0.9
	39nm,1.1s						
PTGA	Pitinga	20.89	220	P	Pn	05 26 50.6	-2.4
	7.4nm,1.1s,baz=315,slow=20,SNR=4.3						
PTGA				LR	LR	05 34 21.0	
	comp=Z,194nm,18.7s,baz=26,slow=35						
SDV	Santo Domingo	24.22	256	*e*P	P	05 27 26.8	+1.5
	16nm,1.3s						
SDV	Santo Domingo	24.22	256	P	P	05 27 26.3	+1.0
	5.0nm,0.9s,baz=51,slow=8.4,SNR=4.5						
SDV				LR	LR	05 38 16.4	
	comp=Z,52nm,18.6s,baz=68,slow=40						
LPAZ	La Paz	38.15	214	*e*P	P	05 29 29.1	+0.8
	2.8nm,0.8s						
LPAZ	La Paz	38.15	214	P	P	05 29 28.6	+0.3
	2.2nm,0.8s,baz=32,slow=17,SNR=7.3						
H10N3	ASCENSION HYDR	39.67	124	T	T	06 11 48.0	
	baz=306,slow=75,SNR=146						
H10N2	ASCENSION HYDR	39.68	124	T	T	06 11 48.2	
	baz=306,slow=75,SNR=142						
H10N1	ASCENSION HYDR	39.70	124	T	T	06 11 49.5	
	baz=306,slow=75,SNR=145						
H10S3	ASCENSION HYDR	40.21	125	T	T	06 12 28.2	
	baz=307,slow=75,SNR=291						
H10S1	ASCENSION HYDR	40.21	125	T	T	06 12 28.6	
	baz=307,slow=75,SNR=308						
H10S2	ASCENSION HYDR	40.23	125	T	T	06 12 29.6	
	baz=307,slow=75,SNR=294						
DBIC	Dimbokro	42.07	98	LR	LR	05 44 04.4	
	comp=Z,63nm,21.1s,baz=267,slow=31						
CPUP	Villa Florida	43.05	194	*e*P	P	05 30 07.8	-0.2
	18nm,1.9s						
CPUP	Villa Florida	43.05	194	P	P	05 30 07.8	-0.2
	1.5nm,0.7s,baz=19,slow=8.1,SNR=7.9						
CPUP				LR	LR	05 47 44.8	
	comp=Z,39nm,19.1s,baz=301,slow=36						
ESDC	Sonseca Array	44.26	49	LR	LR	05 46 51.3	
	comp=Z,62nm,18.2s,baz=235,slow=34						
TOA1	Torodi Ar. Sit	46.98	87	*e*P	P	05 30 40.0	+0.4
TOA0	Torodi Ar. Sit	46.98	87	*e*P	P	05 30 39.7	+0.1
TORD	Torodi Ar. Bea	46.98	87	P	P	05 30 40.0	+0.4
	3.0nm,1.0s,baz=290,slow=8.4,SNR=6.7						
TORD				LR	LR	05 47 24.8	
	comp=Z,81nm,21.5s,baz=315,slow=32						
ULM	Lac du Bonnet	52.27	322	P	P	05 31 18.7	-0.7
	1.6nm,0.8s,baz=113,slow=7.7,SNR=3.1						
KEST	Kesra	53.63	57	LR	LR	05 51 12.5	
	comp=Z,85nm,21.5s,baz=267,slow=33						
LTX	Lajitas	53.75	295	*e*P	P	05 31 30.9	+0.1
LTX				*e*PcP	PcP	05 32 37.5	+0.7

TXAR	Lajitas Array	53.75	295	P	P	05 31 30.9	+0.1
	0.4nm,0.7s,baz=108,slow=8.0,SNR=4.9						
TXAR				PcP	PcP	05 32 37.5	+0.7
	0.4nm,0.7s,baz=66,slow=5.0,SNR=3.7						
TXAR				LR	LR	05 55 13.2	
	comp=Z,25nm,20.2s,baz=0.0,slow=37						
MNTX	Cornudas Mount	55.31	298	eP	P	05 31 41.9	-0.1
	2.3nm,1.0s						
NOA	NORSAR Array B	61.08	28	LR	LR	05 53 57.6	
	comp=Z,23nm,18.4s,baz=290,slow=31						
BGU	Big Grassy Mou	61.94	308	eP	P	05 32 28.9	+0.6
	2.3nm,1.0s						
YKA	Yellowknife Ar	65.93	332	P	P	05 32 52.9	-0.9
	0.3nm,0.7s,baz=101,slow=7.1,SNR=5.2						
YKA				PcP	PcP	05 33 24.0	-0.6
	0.3nm,0.9s,baz=101,slow=5.2,SNR=4.3						
YKB5	Yellowknife Ar	65.93	332	eP	P	05 32 52.9	-0.9
YKB5				ePcP	PcP	05 33 24.1	-0.6
NV01	Mina Array Sit	65.97	305	eP	P	05 32 54.8	-0.1
NV01				ePcP	PcP	05 33 25.6	-0.1
NVAR	Mina Array Bea	65.97	305	P	P	05 32 55.4	+0.5
	0.3nm,0.7s,baz=68,slow=7.2,SNR=3.0						
NVAR				PcP	PcP	05 33 25.6	-0.1
	0.9nm,0.8s,baz=111,slow=4.3,SNR=5.0						
ARA0	ARCESS Array S	69.19	21	eP	P	05 33 14.4	+0.1
ARCES	ARCESS Array B	69.19	21	P	P	05 33 14.4	+0.1
	1.7nm,1.0s,baz=249,slow=4.7,SNR=4.2						
INK	Inuvik	74.28	337	eP	P	05 33 44.5	-0.5
	3.6nm,0.9s						
INK	Inuvik	74.28	337	P	P	05 33 44.5	-0.5
	3.0nm,0.9s,baz=75,slow=5.5,SNR=11						
PRP	Porcupine Dome	79.37	335	eP	P	05 34 14.3	+0.3
	3.9nm,0.9s						
IL1	Eielson Array	80.12	335	eP	P	05 34 17.8	-0.1
ILAR	Eielson Array	80.12	335	P	P	05 34 18.4	+0.6
	3.5nm,0.8s,baz=73,slow=4.7,SNR=44						
ILB	Eielson Array	80.12	335	eP	P	05 34 18.1	+0.2
	5.5nm,0.9s						
WRH	Wood River Hil	80.70	334	eP	P	05 34 21.9	+0.9
	27nm,1.9s						
TRF	Thorofare Moun	81.94	334	eP	P	05 34 28.5	+0.7
	8.8nm,1.1s						

IDC 12 05:48:39.9±1.8, 11°.51S×164°.67E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.6/35, mbtmp3.8/4, ML4.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/22, Error ellipse: s-maj=49.3km s-min=33.7km az=128.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.64	171	Pn	Pn	05 51 12.9	-1.0
	3.8nm,0.3s,baz=29,slow=12,SNR=35						
WRA	Warramunga Arr	30.33	250	P	P	05 54 53.6	0.0
	0.3nm,0.5s,baz=80,slow=8.7,SNR=5.6						
WRA				LR	LR	06 06 09.7	
	comp=Z,72nm,20.6s,baz=115,slow=35						
ASAR	Alice Springs	31.64	243	P	P	05 55 05.2	+0.1
	0.6nm,0.5s,baz=67,slow=10.0,SNR=12						
ILAR	Eielson Array	84.28	19	P	P	06 01 13.4	+0.1
	0.2nm,0.7s,baz=238,slow=5.0,SNR=4.1						

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*ISCJB **12** 05:49:59.1±0.4, 15°.01S±0°.06×72°.36W±0°.07, h82^{km}, mb3.8/10, Error ellipse: s-maj=12.1km s-min=4.4km az=136.2*

*IDC **12** 05:50:00.6±0.7, 14°.95S×72°.19W, h82^{km}±4^{km}, mb3.7/10, mb1 3.9/14, mb1mx3.8/31, mbtmp4.1/14, MS2.9/4, Ms1 2.9/4, ms1mx2.7/28, Error ellipse: s-maj=24.2km s-min=12.6km az=45.0*

*VAO **12** 05:50:05.7±0.9, 15°.17S×72°.13W, h116^{km}±9^{km}, mb4.8*

ISC 12 05:50:00.3±0.5, 15°.03S±0°.07×72°.31W±0°.08, h82^{km}, n67, σ1^{s}.96/70, mb4.0/11, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	4.21	108	P	Pn	05 51 09.2	+6.6
	27nm,0.3s,baz=290,slow=10,SNR=563						
LPAZ				S	Sn	05 51 59.6	+8.6
	3.6nm,0.3s,baz=42,slow=20,SNR=3.6						
NNA	Nana	5.35	304	P	Pn	05 51 18.1	+0.5
	150nm,0.3s,baz=136,slow=11,SNR=285						
NNA				S	Sn	05 52 14.5	-3.4
	51nm,0.3s,baz=49,slow=19,SNR=2.9						
LVC	Limon Verde	8.20	157	P	Pn	05 51 57.1	+0.3
	3.7nm,0.3s,baz=357,slow=9.0,SNR=48						
LVC				S	Sn	05 53 24.8	-3.3
	14nm,0.3s,baz=183,slow=18,SNR=20						
LVC				LR	LR	05 55 35.5	
	comp=Z,40nm,21.2s,baz=328,slow=41						
LVC	Limon Verde	8.20	157	eP	Pn	05 51 58.6	+1.7
ATAH	Atahualpa	9.86	322	P	Pn	05 52 19.3	-0.3
	0.9nm,0.3s,baz=183,slow=7.3,SNR=7.2						
ATAH				S	Sn	05 54 06.8	-1.9
	0.6nm,0.3s,baz=280,slow=18,SNR=2.7						
SIV	San Ignacio	10.87	97	P	Pn	05 52 34.6	+1.5
	3.7nm,0.3s,baz=287,slow=9.5,SNR=98						
SIV				S	Sn	05 54 40.2	+7.2
	0.4nm,0.3s,baz=20,slow=15,SNR=2.3						
SIV				LR	LR	05 56 23.0	
	comp=Z,72nm,20.4s,baz=278,slow=36						
PTLC	Puerto Leguiza	15.30	351	eP	Pn	05 53 27.1	-4.7
PTLC	Puerto Leguiza	15.30	351	eP	Pn	05 53 27.1	-4.7
OTAV	Otavalo	16.34	338	eP	P	05 53 51.3	+4.5
AQDB	Aquidauana	16.72	111	eP	P	05 53 50.6	+0.2
CRUC	La Cruz	17.12	344	eP	P	05 53 58.8	+3.5
CRUC	La Cruz	17.12	344	eP	P	05 53 58.8	+3.5
SOTA	Rioblanco	17.57	346	eP	P	05 54 04.3	+3.9
SOTA	Rioblanco	17.57	346	eP	P	05 54 04.3	+3.9
CPUP	Villa Florida	17.95	131	P	Pn	05 54 04.4	0.0
	1.1nm,0.3s,baz=308,slow=8.9,SNR=24						
CPUP	Villa Florida	17.95	131	eP	Pn	05 54 04.5	0.0
PTGA	Pitinga	18.72	42	P	Pn	05 54 13.3	-0.5
	2.2nm,0.3s,baz=235,slow=15,SNR=26						
PTGA				LR	LR	06 00 30.4	
	comp=Z,33nm,21.8s,baz=225,slow=34						
C2SB	Chapadao do Su	19.00	104	eP	Pn	05 54 17.3	+0.3
YOTC	Yotoco, Valle	19.31	348	eP	Pn	05 54 23.0	+2.1
YOTC	Yotoco, Valle	19.31	348	eP	Pn	05 54 23.0	+2.1
CHIC	Chingaza	19.58	356	eP	Pn	05 54 28.4	+4.0
CHIC	Chingaza	19.58	356	eP	Pn	05 54 28.4	+4.0
ROSC	El Rosal	19.84	354	P	Pn	05 54 28.1	+0.8
	0.6nm,0.3s,baz=113,slow=9.7,SNR=5.3						
TRCB	Terra Rica	20.14	116	eP	Pn	05 54 29.2	-1.4
PLMC	San Jos del P	20.19	348	eP	Pn	05 54 30.9	-0.3
PLMC	San Jos del P	20.19	348	eP	Pn	05 54 30.9	-0.3
RUSC	La Rusia	20.80	358	eP	P	05 54 35.3	-0.3
RUSC	La Rusia	20.80	358	eP	P	05 54 35.3	-0.3
PTGB	Pitanga	21.31	120	eP	P	05 54 41.3	+0.7
HELC	Santa Helena	21.32	351	eP	P	05 54 44.0	+2.9
HELC	Santa Helena	21.32	351	eP	P	05 54 44.0	+2.9
ITRB	Iturama	21.45	106	eP	P	05 54 43.4	+1.3
PTBC	PUERTO BERRIO,	21.53	354	eP	P	05 54 41.2	-1.7
PTBC	PUERTO BERRIO,	21.53	354	eP	P	05 54 41.2	-1.7
ITAB	Concordia	22.36	126	eP	P	05 54 52.7	+1.0
ZARC	Zaragoza, Cauc	22.52	353	eP	P	05 54 54.3	+0.8
ZARC	Zaragoza, Cauc	22.52	353	eP	P	05 54 54.3	+0.8
FRTB	Fartura	22.99	115	eP	P	05 54 59.3	+0.9
CPSB	Cacapava Do Su	23.12	135	eP	P	05 54 59.0	-0.5
IPMB	Ipameri, GO	23.28	101	eP	P	05 55 00.9	-0.4
BB19B	Bebedouro	23.38	108	eP	P	05 55 03.1	+1.0
BDFB	Brasilia	23.43	95	P	P	05 55 02.2	-0.4
	4.2nm,0.5s,baz=266,slow=11,SNR=13						
SMLC	San Martn de	23.74	356	eP	P	05 55 04.7	-0.5
SMLC	San Martn de	23.74	356	eP	P	05 55 04.7	-0.5
SDV	Santo Domingo	23.82	4	P	P	05 55 04.2	-1.9
	6.4nm,0.8s,baz=197,slow=12,SNR=5.4						
PLTB	Pedras Altas	23.86	138	eP	P	05 55 06.5	+0.3
CNLB	Canela	24.37	129	eP	P	05 55 11.0	+0.1
RCLB	Rio Claro- Sao	24.57	111	eP	P	05 55 13.7	+0.9
TRQA	Tornquist	24.69	160	eP	P	05 55 14.6	+0.8
PMNB	Patos De Minas	25.00	102	eP	P	05 55 18.1	+1.3
JANB	Januaria	27.03	94	eP	P	05 55 34.2	-1.0
MCI8	Montes Claros	27.35	97	eP	P	05 55 37.2	-0.7
MCI9	Montes Claros	27.37	97	eP	P	05 55 37.5	-0.7
MDP	Montagnes des	27.92	46	LR	LR	06 07 51.3	
	comp=Z,54nm,18.3s,baz=206,slow=38						
CMIG	Matias Romero	38.92	324	P	P	05 57 19.0	+0.7
	0.8nm,0.7s,baz=121,slow=12,SNR=2.4						
TXAR	Lajitas Array	53.50	326	P	P	05 59 13.3	+0.7
	0.3nm,0.4s,baz=159,slow=7.7,SNR=3.1						
TXAR				pP	pP	05 59 33.8	-0.8
	0.3nm,0.6s,baz=163,slow=6.5,SNR=2.3						
TXAR				sP	sP	05 59 41.6	-2.7
	1.1nm,0.7s,baz=141,slow=8.1,SNR=6.1						
PDAR	Pinedale Array	66.92	331	pP	pP	06 01 06.3	-0.6
	0.3nm,0.6s,baz=79,slow=4.9,SNR=1.8						
ULM	Lac du Bonnet	68.22	344	P	P	06 00 51.2	-0.8
	2.1nm,0.7s,baz=166,slow=4.2,SNR=3.0						
NVAR	Mina Array Bea	68.42	323	P	P	06 00 54.9	+1.2
	0.1nm,0.4s,baz=141,slow=7.4,SNR=2.6						
SNAA	Sanae	69.41	162	P	P	06 00 59.8	+0.5
	1.7nm,0.5s,baz=274,slow=8.8,SNR=12						
DBIC	Dimbokro	70.22	77	P	P	06 01 04.0	-1.1
	1.4nm,0.6s,baz=221,slow=7.2,SNR=5.2						
TORD	Torodi Ar. Bea	78.39	73	P	P	06 01 51.8	-0.8
	2.4nm,0.8s,baz=274,slow=5.3,SNR=11						
TORD				sP	sP	06 02 23.6	-1.5
	1.2nm,0.8s,baz=264,slow=4.5,SNR=3.0						
YKA	Yellowknife Ar	84.05	342	P	P	06 02 21.3	-0.1
	1.2nm,0.7s,baz=134,slow=5.1,SNR=28						
YKA				pP	pP	06 02 43.3	-1.7
	0.5nm,0.8s,baz=138,slow=5.2,SNR=3.9						
YKA				sP	sP	06 02 52.7	-1.6
	1.4nm,0.8s,baz=136,slow=5.5,SNR=8.8						
WRA	Warramunga Arr	136.48	218	PKP	PKPdf	06 09 12.5	-1.2
	0.3nm,0.5s,baz=142,slow=1.9,SNR=2.2						
MBWA	Marble Bar	142.15	198	eP	PKPdf	06 09 25.2	+1.2
MAJO	Matsushiro	145.40	314	eP	PKPab	06 09 30.0	+0.5
SONM	Songino Array	147.27	2	PKPbc	PKPbc	06 09 35.2	+0.6
	0.7nm,0.6s,baz=322,slow=1.3,SNR=5.1						
SONM				sPKPbc	sPKPab	06 10 10.2	+0.5
	1.1nm,0.8s,baz=335,slow=4.3,SNR=5.5						

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*SJA **12** 06:03:12.2±0.5, 34°.38S×72°.90W, h33^{km}, ML3.9, MW3.6*

*ISCJB **12** 06:03:18.8±1.4, 34°.2S±0°.1×72°.4W±0°.1, h25^{km}±18^{km}, Error ellipse: s-maj=26.7km s-min=11.5km az=23.7*

*GUC **12** 06:03:19.7±0.6, 34°.14S×72°.32W, h38^{km}±5^{km}, ML3.7*

ISC 12 06:03:19.3±2.6, 34°.08S±0°.05×72°.31W±0°.09, h11^{km}±16^{km}, n26, σ1^{s}.87/38, 9D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHPI	Pichilemu	0.40	140	eP	Pb	06 03 28.1	-0.3
CHPI				i S	Sb	06 03 33.2	-1.4
ROC1	El Roble	1.55	45	eP	Pb	06 03 47.6	-0.6
ROCH	El Roble	1.55	45	eP	Pb	06 03 47.5	-0.8
ROCH				i S	Sg	06 04 08.9	-0.4
ROCH				IAML		06 04 21.6	
	comp=E,2µm,0.3s						
CLCH	Cerro Calan	1.63	66	eP	Pb	06 03 48.5	-1.0
CLCH				i S	Sb	06 04 09.9	-0.1
CLCH				IAML		06 04 18.4	
	comp=E,2µm,0.5s						
PEL	Peldehue	1.65	56	eP	Pb	06 03 49.1	-0.6
PEL				eS	Sg	06 04 15.4	+3.0
PEL	Peldehue	1.65	56	eP	Pb	06 03 48.7	-1.1
PEL				i S	Sb	06 04 10.8	+0.1
PEL				IAML		06 04 22.4	
	comp=N,1µm,0.5s						
LMEL	Las Melosas	1.77	83	eP	Pn	06 03 50.1	0.0
LMEL				i S	Sn	06 04 13.2	+0.6
LMEL				IAML		06 04 16.7	
	comp=E,1µm,0.3s						
FCH	Farellones	1.84	66	eP	Pb	06 03 51.6	-1.7
FCH				i S	Sb	06 04 16.0	-0.5
FCH				IAML		06 04 23.7	
	comp=N,1µm,0.5s						
AAGR	Agrelo	3.07	72	⇓eP	Pb	06 04 12.3	-1.8
AUSP	Uspallata	3.08	54	eP	Pb	06 04 11.2	-3.1
AUSP				eS	Sg	06 05 00.0	+1.9
ARCO	CERRO ARCO	3.08	67	eP	Pb	06 04 13.9	-0.4
ARCO				IAML		06 04 20.4	
	comp=Z,244nm,0.4s						
ASAL	Salagasta	3.27	64	⇓eP	Pb	06 04 15.8	-1.6
ASAL				eS	Sg	06 05 04.0	-0.4
RTCV	Cerro Valdivia	3.87	56	⇓eP	Pn	06 04 21.0	+2.2
CFA	Coronel Fontan	4.23	55	eP	Pn	06 04 25.1	+1.3
RTLL	Cerro Villicun	4.24	51	⇓eP	Pn	06 04 25.7	+1.7
ACCO	Cerro Coronel	4.44	39	eP	Pn	06 04 29.1	+2.1
ACCO				eS	Sg	06 05 41.8	-0.1
AMOG	MOGNA	4.50	47	⇓eP	Pn	06 04 29.2	+1.7
AROD	Rodeo	4.59	32	eP	Pn	06 04 31.8	+2.8
ACAN	Cantantal	4.66	69	eP	Pn	06 04 31.5	+1.7
ACDV	Cuesta del Vie	4.75	36	⇓eP	Pn	06 04 33.6	+2.6
LCO	Las Campanas	5.24	16	eP	Pn	06 04 37.8	-0.1
LCO				⇓eS	Sg	06 06 06.6	-1.1
AGUA	GUANDACOL	5.62	36	⇓eP	Pn	06 04 44.8	+1.9
AGUA				eS	Sb	06 06 08.4	+3.4
MRA	San Martin	5.77	75	eP	Pn	06 04 46.6	+1.6
MRA				IAML		06 06 38.0	
	comp=Z,22nm,0.5s						
APLL	PUNTA DE LOS L	6.13	55	⇓eP	Pn	06 04 50.0	+0.1
ACLC	CERRO LA CRUZ	6.51	46	eP	Pn	06 04 54.9	-0.4
ACLC				eS	Sb	06 06 25.3	-5.4
CYA	Choya	7.92	46	IAML		06 07 01.6	
	comp=Z,11nm,0.8s						

NNC 12 06:08:22.6±2.3, 54°.36N×86°.15E, h0^{km}, mb3.5, mpv2.9, 5C-4D, Error ellipse: s-maj=35.0km s-min=11.2km az=158.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	0.89	243	⇓P	Pg	06 08 39.4	-0.2
	1.5nm,0.5s						
ZAA0				⇓S	Sb	06 08 52.1	-1.1
	77nm,1.2s						
KURK	Kurchatov	5.87	235	⇑Pn	Pn	06 09 52.3	+1.5
	3.7nm,1.4s						
KURK				⇑Lg	Lg	06 11 27.7	
	4.1nm,1.1s						
KURBB	Kurchatov Arra	5.97	234	⇑Pn	Pn	06 09 53.9	+1.7
	1.7nm,0.5s						
KURBB				⇓Sn	Sn	06 11 02.5	+1.3
	1.7nm,0.5s						
KURBB				⇑Lg	Lg	06 11 31.5	
	2.8nm,0.6s						
MK31	Makanchi Array	7.97	199	Pn	Pn	06 10 21.8	+2.2
	0.2nm,0.3s,baz=25,slow=13,SNR=25						
MK31				⇓Sn	Sn	06 11 50.4	+0.1
	1.2nm,0.9s,baz=28,slow=30,SNR=4.5						
MK31				⇑Lg	Lg	06 12 36.7	
	0.7nm,0.6s						

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*ISCJB **12** 06:08:29.9±0.8, 44°.09N±0°.05×145°.10E±0°.04, h26^{km}±9^{km}, Error ellipse: s-maj=8.8km s-min=5.1km az=167.0*

*JMA **12** 06:08:31.0, 44°.05N×145°.09E, h5^{km}±2^{km}, M3.0*

JMA Felt III J1.

*SKHL **12** 06:08:31.5±0.6, 43°.93N×145°.43E, h54^{km}±2^{km}, mb3.9/4*

ISC 12 06:08:27.9±1.5, 44°.16N±0°.07×145°.15E±0°.04, h15^{km}±8^{km}, n10, σ1^{s}.01/20, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRA	Rausu	0.22	185	P	Pg	06 08 33.4	+0.6
JRA				S	Sg	06 08 35.3	-0.9
LAGR	Lagunnoye	0.47	102	i P	Pn	06 08 40.0	0.0
LAGR				AMB	AMB	06 08 41.0	
	70nm,0.3s						
LAGR				AMB	AMB	06 08 41.0	
	140nm,0.3s						
LAGR				i S	Sn	06 08 48.1	0.0
LAGR				A	A	06 08 49.0	
	3µm,0.5s						
LAGR				A	A	06 08 49.0	
	5µm,0.5s						
GRPR	Tuman	0.48	110	eP	Pn	06 08 40.0	-0.2
GRPR				AMB	AMB	06 08 40.0	
	90nm,0.2s						
GRPR				AMB	AMB	06 08 40.0	
	40nm,0.2s						
GRPR				i S	Sb	06 08 47.0	+2.2
GRPR				A	A	06 08 47.0	
	4µm,0.4s						
GRPR				A	A	06 08 47.0	
	940nm,0.4s						
GLVR	Golovnino	0.50	147	i P	Pn	06 08 40.0	-0.4
GLVR				AMB	AMB	06 08 40.0	
	150nm,0.2s						
GLVR				AMB	AMB	06 08 40.0	
	170nm,0.2s						
GLVR				AMB	AMB	06 08 40.0	
	60nm,0.2s						
GLVR				i S	Sb	06 08 46.0	+0.7
GLVR				A	A	06 08 47.0	
	2µm,0.3s						
GLVR				A	A	06 08 47.0	
	2µm,0.3s						
YUK	Yuzh-Kuril'sk	0.53	103	i P	Pn	06 08 41.6	+0.8
YUK				AMB	AMB	06 08 41.9	
	10.0nm,0.2s						
YUK				AMB	AMB	06 08 41.9	
	100nm,0.2s						
YUK				AMB	AMB	06 08 41.9	
	40nm,0.2s						
YUK				i S	Sn	06 08 49.0	-0.5
YUK				A	A	06 08 50.0	
	3µm,0.4s						
YUK				A	A	06 08 50.0	
	250nm,0.4s						
JNK	Nakash	0.65	209	P	Pb	06 08 41.1	+0.1
JNK				eS	Sg	06 08 48.0	-1.3
NEM2	Nemuro 2	0.90	151	P	Pn	06 08 46.1	+0.1
NEM2				S	Sb	06 08 57.5	+0.5
JTKR	Abashiri--Toko	0.92	259	P	Pn	06 08 46.8	+0.6
JTKR				S	Sn	06 08 58.7	-0.4
JKHN	Kushirohamanak	1.07	180	P	Pg	06 08 48.8	+0.2
JKHN				S	Sb	06 09 02.1	+0.1
KUR	Kuril'sk	2.22	60	i P	Pn	06 09 04.2	+0.1
KUR				eS	Sn	06 09 28.6	-2.6

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*ISCJB **12** 06:15:52.4±0.5, 10°.75S±0°.06×166°.05E±0°.07, h10^{km}, mb4.1/16, MS3.4/6, Error ellipse: s-maj=10.0km s-min=7.5km az=150.1*

*IDC **12** 06:15:52.3±0.8, 10°.77S×166°.09E, h0^{km}, mb4.1/12, mb1 4.3/14, mb1mx4.0/50, mbtmp4.2/14, ML4.9/2, MS3.4/8, Ms1 3.4/8, ms1mx3.2/30, Error ellipse: s-maj=23.8km s-min=17.7km az=134.0*

*NEIC **12** 06:15:54.1±0.4, 10°.65S×166°.03E, h10^{km}, mb4.3/8, Error ellipse: s-maj=10.1km s-min=7.5km az=82.0*

ISC 12 06:15:53.9±0.6, 10°.75S±0°.07×166°.14E±0°.08, h10^{km}, n45, σ1^{s}.30/45, mb4.1/16, MS3.5/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.24	282	eP	Pn	06 17 28.0	+1.9
HNR				eS	Sn	06 18 44.0	+6.4
HNR	Honiara	6.24	282	ePn	Pn	06 17 25.9	-0.2
HNR				ePn	Pn	06 17 27.6	+1.5
HNR				eSn	Sn	06 18 37.9	+0.4
HNR	Honiara	6.24	282	Pn	Pn	06 17 25.9	-0.2
	22nm,0.3s,baz=203,slow=3.6,SNR=5.3						
HNR				Sn	Sn	06 18 37.9	+0.4
	2.6nm,0.3s,baz=38,slow=19,SNR=2.1						
HNR				LR	LR	06 20 06.7	
	comp=Z,387nm,18.8s,baz=128,slow=41						
MARNC	Mare, Loyalty	10.82	171	ePn	Pn	06 18 31.4	+2.4
DZM	Mont Dzumac	11.26	179	ePn	Pn	06 18 36.5	+1.4
	50nm,0.4s						
DZM				eLR	LR	06 21 09.6	
	comp=Z,574nm,23.4s						
DZM	Mont Dzumac	11.26	179	ePn	Pn	06 18 37.0	+2.0
DZM				eSn	Sn	06 20 39.4	-1.8
DZM	Mont Dzumac	11.26	179	Pn	Pn	06 18 35.7	+0.6
	9.2nm,0.3s,baz=337,slow=12,SNR=82						
DZM				Sn	Sn	06 20 39.4	-1.8
	0.4nm,0.3s,baz=26,slow=3.9,SNR=2.4						
DZM				LR	LR	06 22 19.5	
	comp=Z,350nm,21.8s,baz=18,slow=34						
ONTNC	Ouen Toro	11.49	179	ePn	Pn	06 18 40.7	+2.5
OUENC	Ouen Island, N	11.62	177	ePn	Pn	06 18 42.4	+2.5
PINNC	Pines Island,	11.86	174	ePn	Pn	06 18 46.0	+2.8
EIDS	Eidsvold	20.37	222	eP	P	06 20 31.1	+0.2
	14nm,0.8s						
CTA	Charters Tower	21.28	242	P	P	06 20 41.7	+0.9
	5.9nm,0.8s,baz=66,slow=13,SNR=5.0						
CTAO	Charters Tower	21.28	242	eP	P	06 20 40.6	-0.1
	8.2nm,0.8s						
ARMA	Armidale	23.77	212	eP	P	06 21 06.2	-0.7
	9.3nm,0.9s						
H11S2	WAKE ISLAND Hy	29.06	1	T	T	06 52 15.9	
	baz=181,slow=76,SNR=365						
H11S3	WAKE ISLAND Hy	29.07	1	T	T	06 52 19.0	
	baz=181,slow=76,SNR=256						
H11S1	WAKE ISLAND Hy	29.08	1	T	T	06 52 17.0	
	baz=181,slow=76,SNR=256						
BKZ	Black Stump Fm	29.76	164	eP	P	06 22 01.1	+0.4
	8.8nm,0.4s						
H11N1	WAKE ISLAND Hy	30.28	1	T	T	06 53 50.3	
	baz=182,slow=76,SNR=408						
H11N3	WAKE ISLAND Hy	30.29	1	T	T	06 53 47.7	
	baz=182,slow=76,SNR=154						
H11N2	WAKE ISLAND Hy	30.30	1	T	T	06 53 51.6	
	baz=182,slow=76,SNR=178						
STKA	Stephens Creek	30.92	223	P	P	06 22 11.7	+0.6
	1.5nm,0.7s,baz=91,slow=22,SNR=3.2						
STKA				LR	LR	06 34 48.1	
	comp=Z,104nm,18.0s,baz=31,slow=37						
WR1	Warramunga Arr	31.95	250	eP	P	06 22 19.2	-1.1
	7.3nm,1.0s						
WR1				ePcP	PcP	06 25 09.3	-1.3
WRA	Warramunga Arr	31.95	250	P	P	06 22 19.2	-1.1
	3.2nm,0.7s,baz=80,slow=9.1,SNR=25						
WRA				PcP	PcP	06 25 09.3	-1.3
	0.9nm,1.1s,baz=86,slow=2.7,SNR=2.8						
GUMO	Guam	32.10	318	LR	LR	06 34 14.7	
	comp=Z,39nm,21.2s,baz=108,slow=34						
RPZ	Rata Peaks	33.12	173	eP	P	06 22 29.5	-0.7
RPZ				eP	P	06 22 30.4	+0.2
RPZ	Rata Peaks	33.12	173	P	P	06 22 29.5	-0.7
	14nm,0.6s,baz=302,slow=3.4,SNR=9.8						
AS01	Alice Springs	33.23	243	eP	P	06 22 30.2	-1.3
AS31	Alice Springs	33.27	243	eP	P	06 22 30.4	-1.5
	0.9nm,0.9s						
ASAR	Alice Springs	33.27	243	P	P	06 22 30.4	-1.5
	1.9nm,0.7s,baz=71,slow=10.0,SNR=22						
ASAR				PcP	PcP	06 25 14.5	+0.2
	0.4nm,0.8s,baz=132,slow=2.2,SNR=4.2						
ASAR				ScP	ScP	06 28 58.8	-0.1
	0.5nm,0.8s,baz=100,slow=2.8,SNR=3.4						
ASAR				LR	LR	06 33 46.6	
	comp=Z,47nm,19.9s,baz=94,slow=32						
FITZ	Fitzroy Crossi	39.83	255	eP	P	06 23 27.2	-0.6
	4.3nm,0.7s						
FITZ	Fitzroy Crossi	39.83	255	P	P	06 23 27.6	-0.3
	4.0nm,0.7s,baz=97,slow=9.3,SNR=11						
TBI	Tubuai	44.08	112	eLR	LR	06 36 52.0	
	comp=Z,116nm,28.8s						
PETK	Petropavlovsk-	64.01	354	LR	LR	06 48 41.7	
	comp=Z,29nm,20.4s,baz=129,slow=31						
SONA0	Songino Array	78.66	324	eP	P	06 27 57.1	+0.7
SONM	Songino Array	78.66	324	P	P	06 27 57.1	+0.7
	0.3nm,0.7s,baz=116,slow=6.2,SNR=3.4						
ILAR	Eielson Array	83.11	18	P	P	06 28 20.4	+0.8
	0.5nm,0.7s,baz=238,slow=4.9,SNR=8.0						
ILB	Eielson Array	83.11	18	eP	P	06 28 20.4	+0.8
	1.4nm,0.8s						
NVAR	Mina Array Bea	85.54	50	P	P	06 28 34.0	+1.2
	0.1nm,0.4s,baz=224,slow=7.4,SNR=3.2						
MK32	Makanchi Array	93.58	317	eP	P	06 29 09.3	-1.1
MKAR	Makanchi Array	93.58	317	P	P	06 29 09.3	-1.1
	0.6nm,0.7s,baz=82,slow=9.2,SNR=3.7						
MKAR				LR	LR	07 13 05.6	
	comp=Z,22nm,18.1s,baz=32,slow=37						
YKA	Yellowknife Ar	94.53	27	P	P	06 29 13.7	-0.7
	0.2nm,0.8s,baz=251,slow=5.6,SNR=3.1						
TXAR	Lajitas Array	95.35	61	LR	LR	07 04 09.0	
	comp=Z,22nm,21.0s,baz=0.0,slow=30						
CLNB	Carlsbad	95.63	58	eP	P	06 29 18.8	-1.5
AAK	Ala-Archa	98.39	312	P	P	06 29 31.3	-1.3
	1.1nm,0.4s,baz=84,slow=5.1,SNR=2.8						

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*IDC **12** 06:16:14.6±1.1, 25°.35S×70°.88W, h0^{km}, mb3.7/2, mb1 3.8/3, mb1mx3.6/20, mbtmp3.6/3, ML3.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.7/15, Error ellipse: s-maj=72.0km s-min=41.7km az=114.0*

*ISCJB **12** 06:16:18.4±1.1, 25°.20S±0°.04×70°.9W±0°.1, h37^{km}±14^{km}, mb3.5/2, MS4.4/1, Error ellipse: s-maj=15.3km s-min=6.7km az=175.9*

*GUC **12** 06:16:18.3±0.7, 25°.19S×70°.84W, h47^{km}±2^{km}, ML3.6*

ISC 12 06:16:18.8±2.1, 25°.21S±0°.05×70°.9W±0°.1, h28^{km}±14^{km}, n17, σ0^{s}.64/20, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

PB14	**IPOC Station P**	0.73	38	*e*P	Pb	06 16 33.0	-0.2
PB14				*i* S	Sb	06 16 43.2	+0.3
PB14				IAML		06 16 45.0	
	comp=N,4µm,0.2s						
GO02	**Mina Guanaco**	1.18	88	*e*P	Pn	06 16 39.4	-0.4
GO02				*i* S	Sn	06 16 54.6	-0.5
GO02				IAML		06 16 58.4	
	comp=E,3µm,0.5s						
PB10	**IPOC Station P**	1.71	11	*e*P	Pn	06 16 46.4	-0.4
PB10				*i* S	Sn	06 17 07.3	-0.5
PB05	**IPOC Station P**	2.43	15	*e*P	Pn	06 16 56.3	-0.4
PB05				*i* S	Sn	06 17 24.4	-1.1
GO03	**Copiap**	2.45	166	*e*P	Pn	06 16 57.0	0.0
GO03				*i* S	Sn	06 17 26.2	+0.1
PB04	**IPOC Station P**	2.94	14	*e*P	Pn	06 17 03.4	-0.4
PB09	**IPOC Station P**	3.72	24	*e*P	Pn	06 17 15.1	+0.6
LPAZ	**La Paz**	9.24	17	Pn	Pn	06 18 32.4	+1.6
	comp=E,0.2nm,0.3s,baz=210,slow=3.5,SNR=6.1						
LPAZ				LR	LR	06 22 47.5	
	comp=E,38nm,20.6s,baz=242,slow=42						
CPUP	**Villa Florida**	12.28	98	LR	LR	06 24 24.6	
	comp=E,67nm,21.2s,baz=228,slow=40						
RAR	**Rarotonga**	80.28	251	LR	LR	06 53 13.0	
	comp=E,176nm,21.7s,baz=264,slow=28						
TORD	**Torodi Ar. Bea**	80.31	71	P	P	06 28 27.7	-0.1
	comp=E,0.5nm,0.7s,baz=246,slow=5.0,SNR=3.7						
YKA	**Yellowknife Ar**	94.08	341	P	P	06 29 33.9	-0.1
	comp=E,0.2nm,0.8s,baz=131,slow=4.9,SNR=4.2						
ASAR	**Alice Springs**	125.80	208	PKP	PKPdf	06 35 18.9	+0.3
	comp=E,0.4nm,0.6s,baz=135,slow=1.9,SNR=4.3						
WRA	**Warramunga Arr**	128.85	211	PKP	PKPdf	06 35 24.4	-0.1
	comp=E,0.6nm,0.7s,baz=162,slow=1.8,SNR=6.5						
KURBB	**Kurchatov Arra**	145.41	35	PKPbc	PKPab	06 35 55.1	+1.0
	comp=E,0.5nm,0.2s,baz=300,slow=3.9,SNR=3.2						
ZALV	**Zalesovo Beam**	146.07	26	PKPbc	PKPbc	06 35 55.8	+0.1
	comp=E,1.1nm,0.6s,baz=323,slow=3.9,SNR=6.5						
MKAR	**Makanchi Array**	149.68	38	PKPbc	PKPbc	06 36 05.7	-0.1
	comp=E,0.8nm,0.8s,baz=294,slow=2.9,SNR=8.4						

*NEIC **12** 06:18:46.3±0.0, 15°.40N×93°.93W, h20^{km}, MD4.0(MEX), After MEX.*

MEX 12 06:18:45.8±0.5**, 15°.49N×93°.88W, h72**^{km}±8^{km}**, MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.67	71	*e*Pg	Pn	06 18 59.4	-1.2
PCIG				*e*Sn	Sn	06 19 08.6	-2.9
PCIG		0.67	71	*e*P	Pn	06 18 59.4	-1.2
PCIG				*i* S	Sn	06 19 09.6	-1.8
THIG		1.66	110	*e*P	Pn	06 19 05.8	-7.2
THIG				*e*Sn	Sn	06 19 31.8	-1.7
THIG		1.66	110	*e*P	Pn	06 19 11.0	-1.9
THIG				*e*S	Sn	06 19 31.8	-1.7
CCIG	**Comitan**	1.85	64	*e*Pn	Pn	06 19 14.6	-1.1
CCIG				*e*Pn	Pn	06 19 16.0	+0.3
CCIG				*e*Sn	Sn	06 19 36.2	-2.1
CCIG				*e*Sn	Sn	06 19 39.5	+1.2
CCIG	**Comitan**	1.85	64	*e*P	Pn	06 19 14.6	-1.1
CCIG				*e*S	Sn	06 19 36.2	-2.1
TEIG	**Tepich**	7.12	48	*e*Pn	Pn	06 20 25.3	-2.0
TEIG				*e*Sn	Sn	06 21 41.8	-4.9

*IDC **12** 06:20:58.9±2.4, 40°.57N×78°.83E, h0^{km}, mb3.4/3, mb1 3.5/8, mb1mx3.3/64, mbtmp3.4/8, ML2.9/5, Error ellipse: s-maj=30.6km s-min=22.2km az=166.0*

*KRNET **12** 06:21:01.0±0.1, 40°.71N×78°.32E, h19^{km}, mb3.8*

*SOME **12** 06:21:01.7, 40°.80N×78°.32E, h10^{km}*

*BJI **12** 06:21:01.0, 40°.68N×78°.43E, h10^{km}, ML3.4/8*

*NNC **12** 06:21:03.1±0.9, 40°.85N×78°.38E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=6.3km s-min=4.7km az=155.0*

ISC 12 06:21:02.4±1.3**, 40°.85N**±0°.03×**78°.47E**±0°.03**, h4**^{km}±9^{km}**, n97, σ1^{s}.49**/141**, 30C-26D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	1.01	331	⇓*i*P	Pg	06 21 21.8	+0.1
	baz=39						
TARG				⇓*i*S	Sb	06 21 37.2	+0.8
	baz=39						
KDJ	**Kajisay**	1.60	323	⇓*i*P	Pn	06 21 32.2	+0.6
	baz=29						
KDJ				⇓*i*S	Sg	06 21 54.6	+0.7
	baz=29						
PRZ	**Przheval'sk**	1.63	358	⇓*i*P	Pg	06 21 33.9	+0.3
	baz=2.0						
PRZ				⇓*i*S	Sg	06 21 58.0	+3.2
	baz=2.0						
NRN	**Naryn**	1.95	288	⇑*i*P	Pn	06 21 36.4	-0.1
	baz=92						
NRN				⇑*i*S	Sn	06 22 02.4	+0.8
	baz=92						
ULHL	**Ulahol**	2.17	311	P	Pb	06 21 41.4	-1.0
	SNR=197						
ULHL	**Ulahol**	2.17	311	⇑*i*P	Pn	06 21 40.8	+1.3
	baz=15						
ULHL				⇑*i*S	Sb	06 22 09.7	-0.1
	baz=15						
SATY	**Saty**	2.21	359	Pg	Pg	06 21 44.1	-0.6
	224nm,0.5s						
SATY				Lg	Lg	06 22 14.6	
	481nm,0.7s						
SATY	**Saty**	2.21	359	*e*P	Pg	06 21 44.1	-0.6
	224nm,0.5s						
SATY				*e*S	Sg	06 22 14.6	+1.4
	481nm,0.7s						
KSH	**Kashi**	2.33	236	Pn	Pg	06 21 47.1	+0.1
KSH				Sn	Sg	06 22 22.6	+5.4
KSH				smax	smax		
	comp=N,440nm,0.6s						
KSH				smax	smax		
	comp=E,440nm,0.4s						
UZB	**Uzynbulak**	2.33	10	Pg	Pb	06 21 45.6	+0.5
	50nm,0.3s						
UZB				Lg	Lg	06 22 17.3	
	224nm,0.3s						
UZB	**Uzynbulak**	2.33	10	*e*P	Pb	06 21 45.5	+0.5
	50nm,0.3s						
UZB				*e*S	Sg	06 22 17.3	0.0
	224nm,0.3s						
TNSS	**Tian-Shan**	2.46	333	Pg	Pb	06 21 48.0	+0.6
	142nm,0.2s						
TNSS				Lg	Lg	06 22 21.5	
	151nm,0.5s						
TNSS	**Tian-Shan**	2.46	333	*e*P	Pb	06 21 48.0	+0.6
	142nm,0.2s						
TNSS				*e*S	Sg	06 22 21.5	0.0
	151nm,0.5s						
BOOM	**Boomskoye usch**	2.50	312	⇑*i*P	Pn	06 21 45.3	+1.3
	baz=16						
BOOM				⇑*i*S	Sb	06 22 17.8	-1.4
	baz=16						
MDOK	**Medeo**	2.54	336	⇓Pn	Pb	06 21 46.8	-1.8
	101nm,0.6s						
MDOK				⇑Lg	Lg	06 22 24.6	
	166nm,0.4s						
MDOK	**Medeo**	2.54	336	Pg	Pb	06 21 49.4	+0.8
	108nm,0.3s						
MDOK				Lg	Lg	06 22 24.2	
	271nm,0.4s						
MDOK	**Medeo**	2.54	336	*e*P	Pb	06 21 49.4	+0.8
	108nm,0.3s						
MDOK				*e*S	Sg	06 22 24.2	+0.2
	271nm,0.4s						
IZV	**Izvestkoviy**	2.58	328	Pg	Pb	06 21 50.0	+0.6
	62nm,0.4s						
IZV				Lg	Lg	06 22 25.4	
	132nm,0.3s						
IZV	**Izvestkoviy**	2.58	328	*e*P	Pb	06 21 50.0	+0.6
	62nm,0.4s						
IZV				*e*S	Sg	06 22 25.4	0.0
	132nm,0.3s						
KOTS	**Kotyrbulak**	2.59	337	Pg	Pb	06 21 50.1	+0.7
	107nm,0.2s						
KOTS				Lg	Lg	06 22 24.8	
	309nm,0.4s						
KOTS	**Kotyrbulak**	2.59	337	*e*P	Pb	06 21 50.1	+0.7
	107nm,0.2s						
KOTS				*e*S	Sg	06 22 24.8	-0.7
	309nm,0.4s						
PDGK	**Podgornoye**	2.59	17	Pg	Pb	06 21 49.5	+0.1
	19nm,0.4s						
PDGK				Lg	Lg	06 22 24.0	
	273nm,0.4s						
PDGK	**Podgornoye**	2.59	17	⇓Pn	Pb	06 21 48.1	-1.3
	33nm,0.5s						
PDGK				⇑Lg	Lg	06 22 24.4	
	313nm,0.5s						
KNDC	**Almaty**	2.62	335	⇓Pg	Pb	06 21 51.0	+1.2
	85nm,0.5s						
KNDC				⇑Lg	Lg	06 22 26.7	
	217nm,0.5s						
AAA	**Alma-Ata**	2.62	334	Pg	Pg	06 21 51.5	-1.2
	351nm,0.1s						
AAA				Lg	Lg	06 22 27.0	
	389nm,0.3s						
AAA	**Alma-Ata**	2.62	334	*e*P	Pg	06 21 51.5	-1.2
	351nm,0.1s						
AAA				*e*S	Sg	06 22 27.0	+0.3
	389nm,0.3s						
KURS	**Kuram**	2.65	355	Pg	Pg	06 21 52.1	-0.9
	89nm,0.3s						
KURS				Lg	Lg	06 22 28.3	
	164nm,0.6s						
KURS	**Kuram**	2.65	355	*e*P	Pg	06 21 52.1	-0.9
	89nm,0.3s						
KURS				*e*S	Sg	06 22 28.3	+1.0
	164nm,0.6s						
KZA	**Kyzart**	2.71	298	P	Pn	06 21 48.0	+0.9
	SNR=12						
KZA	**Kyzart**	2.71	298	⇑*i*P	Pn	06 21 47.7	+0.7
	baz=2.0						
KZA				⇑*i*S	Sn	06 22 22.0	+1.5
	baz=2.0						
MTBS	**Maitube**	2.74	327	Pg	Pb	06 21 51.7	-0.2
	55nm,0.2s						
MTBS				Lg	Lg	06 22 27.7	
	107nm,0.3s						
MTBS	**Maitube**	2.74	327	*e*P	Pb	06 21 51.7	-0.2
	55nm,0.2s						
MTBS				*e*S	Sb	06 22 27.7	+1.9
	107nm,0.3s						
KST	**Kastek**	2.88	320	Pg	Pb	06 21 54.7	+0.4
	90nm,0.3s						
KST				Lg	Lg	06 22 32.7	
	106nm,0.5s						
KST	**Kastek**	2.88	320	*e*P	Pb	06 21 54.7	+0.4
	90nm,0.3s						
KST				*e*S	Sg	06 22 32.7	-2.2
	106nm,0.5s						
KTMS	**Ketmen**	2.95	28	Pg	Pb	06 21 57.1	+1.6
	12nm,0.2s						
KTMS				Lg	Lg	06 22 37.4	
	208nm,0.5s						
KTMS	**Ketmen**	2.95	28	*e*P	Pb	06 21 57.1	+1.6
	12nm,0.2s						
KTMS				*e*S	Sg	06 22 37.4	+0.4
	208nm,0.5s						
TKM2	**Tokmak 2**	2.98	315	P	Pb	06 21 56.1	0.0
	SNR=112						
TKM2	**Tokmak 2**	2.98	315	⇑Pn	Pn	06 21 52.4	+1.8
	50nm,0.3s						
TKM2				⇑Lg	Lg	06 22 36.4	
	60nm,0.6s						
TKM2	**Tokmak 2**	2.98	315	⇑*i*P	Pn	06 21 52.2	+1.7
	baz=18						
TKM2				⇑*i*S	Sn	06 22 29.5	+2.7
	baz=18						
DGS	**Degeres**	3.12	321	Pg	Pb	06 21 58.4	-0.1
	68nm,0.5s						
DGS				Lg	Lg	06 22 38.9	
	137nm,0.5s						
DGS	**Degeres**	3.12	321	*e*P	Pb	06 21 58.4	-0.1
	68nm,0.5s						
DGS				*e*S	Sb	06 22 38.9	+2.0
	137nm,0.5s						
KTBS	**Karatobe**	3.15	336	Pg	Pb	06 21 59.3	+0.4
	50nm,0.4s						
KTBS				Lg	Lg	06 22 40.6	
	55nm,0.4s						
KTBS	**Karatobe**	3.15	336	*e*P	Pb	06 21 59.3	+0.4
	50nm,0.4s						
KTBS				*e*S	Sb	06 22 40.6	+2.9
	55nm,0.4s						
KBK	**Karagaybulak**	3.19	306	P	Pb	06 21 59.9	+0.2
	SNR=38						
KBK	**Karagaybulak**	3.19	306	⇑*i*P	Pn	06 21 54.8	+1.4
	baz=9.0						
KBK				⇑*i*S	Sn	06 22 33.9	+1.9
	baz=9.0						
CHKK	**Chushkaly**	3.19	340	Pg	Pb	06 22 01.1	+1.4
	42nm,0.2s						
CHKK				Lg	Lg	06 22 43.3	
	286nm,0.4s						
CHKK	**Chushkaly**	3.19	340	*e*P	Pb	06 22 01.1	+1.4
	42nm,0.2s						
CHKK				*e*S	Sg	06 22 43.3	-1.6
	286nm,0.4s						
MNBS	**Baschi**	3.23	359	Pg	Pb	06 22 01.9	+1.7
	38nm,0.4s						
MNBS				Lg	Lg	06 22 45.5	
	128nm,0.4s						
MNBS	**Baschi**	3.23	359	*e*P	Pb	06 22 01.9	+1.7
	38nm,0.4s						
MNBS				*e*S	Sg	06 22 45.5	-0.5
	128nm,0.4s						
UCH	**Uchtor**	3.27	296	P	Pn	06 21 55.3	+0.5
	SNR=20						
UCH	**Uchtor**	3.27	296	⇓*i*P	Pn	06 21 55.5	+0.7
	baz=99						
UCH				⇓*i*S	Sn	06 22 35.1	+0.8
	baz=99						
ARLS	**Aral**	3.28	289	⇑*i*P	Pn	06 21 55.1	+0.5
	baz=92						
ARLS				⇑*i*S	Sn	06 22 34.6	+0.5
	baz=92						
ARXS	**Arharly**	3.39	352	Pg	Pb	06 22 03.5	+0.4
	53nm,0.4s						
ARXS				Lg	Lg	06 22 47.6	
	93nm,0.4s						
ARXS	**Arharly**	3.39	352	*e*P	Pb	06 22 03.5	+0.4
	53nm,0.4s						
ARXS				*e*S	Sb	06 22 47.6	+2.9
	93nm,0.4s						
KUU	**Kurty**	3.42	333	Pg	Pb	06 22 04.3	+0.7
	17nm,0.5s						
KUU				Lg	Lg	06 22 49.0	
	54nm,0.4s						
KUU	**Kurty**	3.42	333	*e*P	Pb	06 22 04.3	+0.7
	17nm,0.5s						
KUU				*e*S	Sg	06 22 49.0	-3.3
	54nm,0.4s						
AAK	**Ala-Archa**	3.47	302	P	Pb	06 22 04.4	+0.1
	SNR=12						
AAK	**Ala-Archa**	3.47	302	⇓Lg	Lg	06 22 51.4	
	113nm,0.7s						
AAK	**Ala-Archa**	3.47	302	⇓*i*P	Pn	06 21 58.3	+1.1
	baz=5.0						
AAK				⇓*i*S	Sn	06 22 40.0	+1.2
	baz=5.0						
AAK	**Ala-Archa**	3.47	302	Pn	Pb	06 22 03.4	-1.0
	0.5nm,0.3s,baz=118,slow=11,SNR=4.3						
AAK				Sn	Sb	06 22 49.6	+2.7
	7.4nm,0.3s,baz=274,slow=19,SNR=33						
FRU1	**Bishkek**	3.47	306	⇓*i*P	Pn	06 21 58.5	+1.3
	baz=8.0						
FRU1				⇓*i*S	Sn	06 22 40.4	+1.6
	baz=8.0						
CHMS	**Chumysh**	3.51	309	P	Pb	06 22 05.4	+0.4
	SNR=17						
CHMS	**Chumysh**	3.51	309	⇓*i*P	Pn	06 21 59.1	+1.5
	baz=12						
CHMS				⇓*i*S	Sn	06 22 41.3	+1.7
	baz=12						
DJR	**Jarkent**	3.61	15	Pg	Pb	06 22 08.7	+1.8
	3.5nm,0.3s						
DJR				Lg	Lg	06 22 56.5	
	28nm,0.4s						
DJR	**Jarkent**	3.61	15	*e*P	Pb	06 22 08.7	+1.8
	3.5nm,0.3s						
DJR				*e*S	Sg	06 22 56.5	-1.9
	28nm,0.4s						
AML	**Almayashu**	3.81	291	P	Pb	06 22 11.3	+1.0
	SNR=8.8						
AML	**Almayashu**	3.81	291	⇑*i*P	Pn	06 22 02.8	+0.7
	baz=94						
AML				⇑*i*S	Sn	06 22 47.7	+0.2
	baz=94						
USP	**Ospenovka**	3.81	311	P	Pb	06 22 10.1	-0.1
	SNR=31						
USP	**Ospenovka**	3.81	311	⇓*i*P	Pn	06 22 03.4	+1.5
	baz=13						
USP				⇓*i*S	Sn	06 22 49.1	+1.9
	baz=13						
SFK	**Sufi-Kurgan**	3.88	259	Pg	Pb	06 22 10.3	-1.1
	5.9nm,0.3s						
SFK				Lg	Lg	06 22 59.8	
	11nm,0.2s						
SFK	**Sufi-Kurgan**	3.88	259	⇑*e*P	Pn	06 22 02.3	-0.7
	baz=61						
SFK				⇑*i*S	Sn	06 22 47.1	-2.0
	baz=61						
EKS2	**Erkin-Say**	3.95	299	P	Pb	06 22 13.5	+1.0
	SNR=12						
EKS2	**Erkin-Say**	3.95	299	⇑*i*P	Pn	06 22 04.7	+0.9
	baz=1.0						
EKS2				⇑*i*S	Sn	06 22 51.4	+0.8
	baz=1.0						
TDK	**Taldyqorghan**	4.15	359	Pg	Pb	06 22 18.8	+2.9
	67nm,0.4s						
TDK				Lg	Lg	06 23 14.3	
	152nm,0.5s						
TDK	**Taldyqorghan**	4.15	359	*e*P	Pb	06 22 18.8	+2.9
	67nm,0.4s						
TDK				*e*S	Sg	06 23 14.3	-1.3
	152nm,0.5s						
ARSB	**Arslanbob**	4.17	278	⇑*i*P	Pn	06 22 07.3	+0.4
	baz=80						
ARSB				⇑*i*S	Sn	06 22 55.5	-0.6
	baz=80						
MRKS	**Merke**	4.35	298	Pg	Pb	06 22 20.3	+0.9
	16nm,0.4s						
MRKS				Lg	Lg	06 23 16.7	
	19nm,0.7s						
MRKS	**Merke**	4.35	298	*e*P	Pb	06 22 20.3	+0.9
	16nm,0.4s						
MRKS				*e*S	Sb	06 23 16.7	+4.5
	19nm,0.7s						
KAPS	**Kapalarasan**	4.48	8	Pg	Pg	06 22 26.2	-1.9
	11nm,0.3s						
KAPS				Lg	Lg	06 23 26.8	
	34nm,0.5s						
KAPS	**Kapalarasan**	4.48	8	*e*P	Pg	06 22 26.2	-1.9
	11nm,0.3s						
KAPS				*e*S	Sg	06 23 26.8	+0.6
	34nm,0.5s						
MNAS	**Manas**	4.76	292	⇑Pg	Pb	06 22 29.5	+3.1
	5.7nm,0.6s						
MNAS				⇓Lg	Lg	06 23 34.0	
	23nm,1.3s						
MNAS	**Manas**	4.76	292	Pg	Pb	06 22 27.4	+1.1
	3.5nm,0.6s						
MNAS				Lg	Lg	06 23 28.8	
	7.7nm,0.7s						
MNAS	**Manas**	4.76	292	⇓*i*P	Pn	06 22 15.7	+0.8
	baz=94						
MNAS				⇓*i*S	Sn	06 23 10.2	-0.3
	baz=94						
KK31	**Karatay Array**	6.34	293	Pg	Pg	06 22 59.0	-4.7
	3.9nm,0.7s,baz=110,slow=16,SNR=23						
KK31				⇑Lg	Lg	06 24 24.2	
	4.6nm,0.6s,baz=114,slow=27,SNR=6.2						
MAKZ	**Makanchi**	6.47	22	⇓Pn	Pn	06 22 39.5	+1.1
	2.0nm,1.0s						
MAKZ				⇓Lg	Lg	06 24 26.8	
	16nm,1.2s						
MK31	**Makanchi Array**	6.55	24	Pn	Pn	06 22 40.7	+1.2
	0.3nm,0.3s,baz=205,slow=12,SNR=55						
MK31				⇑Sn	Sn	06 23 55.8	+1.2
	1.9nm,0.4s						
MK31				⇓Lg	Lg	06 24 28.2	
	5.2nm,0.5s						
MKAR	**Makanchi Array**	6.55	24	Pn	Pn	06 22 40.0	+0.6
	0.4nm,0.3s,baz=203,slow=13,SNR=26						
MKAR				Sn	Sn	06 23 56.6	+2.0
	0.9nm,0.3s,baz=208,slow=22,SNR=4.5						
MKAR				Lg	Lg	06 24 30.3	
	0.9nm,0.3s,baz=203,slow=25,SNR=3.4						
WMQ	**Urumqi**	7.45	63	*e*Pn	Pn	06 22 52.8	+0.9
WMQ				Sn	Sn	06 24 18.2	+1.4
WMQ				smax	smax		
	comp=N,20nm,0.7s						
WMQ				smax	smax		
	comp=E,21nm,0.7s						
CEP	**Cherat**	8.74	219	P	Pn	06 23 07.9	-1.7
THW	**Thamme Wali**	9.68	216	P	Pn	06 23 19.4	-3.0
KURBB	**Kurchatov Arra**	9.77	0	Pn	Pn	06 23 24.8	+1.3
	0.1nm,0.3s,baz=182,slow=14,SNR=4.1						
KURBB				Lg	Lg	06 26 12.9	
	0.1nm,0.3s,baz=187,slow=29,SNR=10						
BVAR	**Borovoye Array**	13.36	338	Pn	Pn	06 24 11.0	-1.6
	0.2nm,0.3s,baz=144,slow=16,SNR=4.4						
BVAR				Lg	Lg	06 28 08.9	
	0.3nm,0.3s,baz=125,slow=20,SNR=4.4						
ZALV	**Zalesovo Beam**	13.78	16	Pn	Pn	06 24 17.7	-0.6
	0.1nm,0.3s,baz=203,slow=9.5,SNR=2.1						
SONM	**Songino Array**	21.08	61	P	P	06 25 45.3	-2.3
	0.5nm,0.8s,baz=261,slow=12,SNR=2.7						
HHC	**Hu-ho-hao-te**	24.96	79	*e*P	P	06 26 29.5	+2.7
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.2s						
ARCES	**ARCESS Array B**	39.59	334	P	P	06 28 33.1	-1.1
	comp=Z,1.9nm,0.9s,baz=107,slow=7.4,SNR=2.5						
YKA	**Yellowknife Ar**	76.47	6	P	P	06 32 51.0	-1.8
	comp=Z,0.3nm,0.7s,baz=345,slow=5.8,SNR=6.7						

*IDC **12** 06:39:16.4±1.2, 24°.26N×121°.14E, h0^{km}, mb3.3/4, mb1 3.6/5, mb1mx3.4/38, mbtmp3.4/5, ML3.1/1, Error ellipse: s-maj=68.4km s-min=20.9km az=68.0*

*ISCJB **12** 06:39:24.8±0.3, 24°.83N±0°.02×121°.84E±0°.02, h86^{km}±2^{km}, mb3.2/4, Error ellipse: s-maj=3.2km s-min=2.5km az=170.3*

*JMA **12** 06:39:24.7±0.2, 24°.77N×121°.82E, h85^{km}±2^{km}, M3.1*

*TAP **12** 06:39:25.6, 24°.78N×121°.85E, h79^{km}, ML3.9, B*

ISC 12 06:39:25.6±0.8**, 24°.82N**±0°.03×**121°.85E**±0°.02**, h84**^{km}±4^{km}**, n123, σ0^{s}.78**/189**, mb3.2**/4**, 31C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NTC	**Toucheng**	0.04	340	*e*P	Pn	06 39 37.4	-0.1
	baz=2.0						
NTC				*e*S	Sn	06 39 45.6	-0.7
	baz=2.0						
ILA	**Ilan**	0.10	240	P	Pn	06 39 37.7	+0.1
	baz=260						
ILA				S	Sn	06 39 46.8	+0.3
	baz=260						
TIPB	**Shuangxi**	0.16	354	⇑*i*P	Pn	06 39 37.5	-0.3
	baz=357						
TIPB				S	Sn	06 39 45.7	-1.1
	baz=357						
TWE	**Neicheng**	0.19	240	⇑*i*P	Pn	06 39 37.9	0.0
	baz=248						
TWE				S	Sn	06 39 46.7	-0.2
	baz=248						
TWC	**Suao**	0.21	179	⇓*i*P	Pn	06 39 37.8	-0.1
	baz=175						
TWC				*e*S	Sn	06 39 46.4	-0.5
	baz=175						
TWB1	**Santiao Chiao**	0.23	34	⇑*i*P	Pn	06 39 37.8	-0.2
	baz=36						
TWB1				S	Sn	06 39 46.0	-1.2
	baz=36						
NWF	**Wu-fen Shan**	0.26	347	⇑*i*P	Pn	06 39 38.1	-0.1
	baz=357						
NWF				S	Sn	06 39 46.5	-1.1
	baz=357						
WFSB	**Wu-fen Shan**	0.26	347	⇑P	Pn	06 39 38.1	-0.1
	baz=357						
WFSB				S	Sn	06 39 46.8	-0.7
	baz=357						
TWA	**Mucha**	0.29	305	⇑*i*P	Pn	06 39 38.3	0.0
	baz=316						
TWA				S	Sn	06 39 47.2	-0.6
	baz=316						
ENTT	**Nioudou**	0.31	235	⇑*i*P	Pn	06 39 38.5	+0.1
	baz=251						
ENTT				S	Sn	06 39 47.7	-0.2
	baz=251						
NWLT	**Wulai**	0.31	263	⇑*i*P	Pn	06 39 38.2	-0.3
	baz=278						
NWLT				S	Sn	06 39 47.2	-0.8
	baz=278						
NHDH	**Xindian Distri**	0.33	297	P	Pn	06 39 38.5	0.0
	baz=307						
NHDH				S	Sn	06 39 48.0	-0.1

	baz=307						
TATO	Taipei baz=306	0.36	296	⇑P	Pn	06 39 38.6	-0.1
TATO	baz=306			S	Sn	06 39 47.8	-0.6
NDT	Datong Townshi baz=250	0.37	235	⇑iP	Pn	06 39 38.9	+0.1
NDT	baz=250			S	Sn	06 39 48.4	-0.2
EOS1	EOS1 baz=126	0.37	136	eP	Pn	06 39 38.8	+0.1
EOS1	baz=126			eS	Sn	06 39 49.1	+0.6
NANB	Nanao baz=190	0.40	193	⇑P	Pn	06 39 39.0	0.0
NANB	baz=190			S	Sn	06 39 49.2	+0.4
ENA	Nanau baz=190	0.40	194	P	Pn	06 39 39.0	+0.1
ENA	baz=190			eS	Sn	06 39 49.7	+0.8
YM01	YM01 baz=333	0.41	323	⇑P	Pn	06 39 39.1	0.0
YM01	baz=333			S	Sn	06 39 49.0	-0.2
YM11	YM11 baz=332	0.43	325	⇑P	Pn	06 39 39.2	-0.1
YM11	baz=332			eS	Sn	06 39 49.7	+0.3
YM05	YM05 baz=331	0.43	324	⇑P	Pn	06 39 39.2	-0.1
YM05	baz=331			S	Sn	06 39 49.0	-0.5
YM08	YM08 baz=335	0.44	328	⇑P	Pn	06 39 39.0	-0.3
YM08	baz=335			eS	Sn	06 39 48.3	-1.1
YM04	YM04 baz=330	0.44	320	⇓P	Pn	06 39 39.0	-0.3
YM04	baz=330			S	Sn	06 39 49.0	-0.5
YHNB	Yeheng baz=256	0.45	251	⇑P	Pn	06 39 39.1	-0.3
YHNB	baz=256			S	Sn	06 39 48.7	-1.0
NSK	Sanguang baz=257	0.46	253	⇑iP	Pn	06 39 39.2	-0.3
NSK	baz=257			i S	Sn	06 39 48.7	-1.2
TWS1	Kuangyinshan baz=299	0.48	306	⇑iP	Pn	06 39 39.8	+0.3
TWS1	baz=299			S	Sn	06 39 50.4	+0.4
NTST	Danshui baz=323	0.50	314	eP	Pn	06 39 39.9	+0.2
NTST	baz=323			eS	Sn	06 39 50.8	+0.5
TWY	Chenhua baz=338	0.51	334	⇑P	Pn	06 39 40.1	+0.3
TWY	baz=338			S	Sn	06 39 50.2	-0.2
WLTB	Daxi baz=278	0.54	274	⇑iP	Pn	06 39 40.3	+0.2
WLTB	baz=278			i S	Sn	06 39 51.1	+0.3
NNS	Nan Shan baz=236	0.57	229	⇑iP	Pn	06 39 40.4	-0.1
NNS	baz=236			S	Sn	06 39 50.8	-0.7
NNSB	Datong baz=235	0.57	228	⇑P	Pn	06 39 40.5	0.0
NNSB	baz=235			S	Sn	06 39 50.9	-0.7
NCU	National Centr baz=280	0.62	285	P	Pn	06 39 40.9	+0.2
NCU	baz=280			S	Sn	06 39 52.3	+0.3
NCUH	Zhongli baz=280	0.62	284	P	Pn	06 39 40.9	+0.1
NCUH	baz=280			eS	Sn	06 39 51.3	-0.8
NACB	Ninganchiao baz=209	0.68	200	eP	Pn	06 39 40.4	-1.0
NACB	baz=209			eS	Sn	06 39 51.9	-1.2
ETLH	Xiulin Townshi baz=204	0.69	209	eP	Pn	06 39 41.1	-0.5
TWD	Chiawan baz=206	0.77	197	eP	Pn	06 39 41.2	-1.0
LIOB	Emei baz=259	0.77	257	⇑iP	Pn	06 39 41.9	-0.5
LIOB	baz=259			S	Sn	06 39 54.0	-0.8
SBCB	Hsinchu baz=271	0.78	268	⇑P	Pn	06 39 42.5	+0.1
SBCB	baz=271			S	Sn	06 39 55.0	0.0
NSTT	Nanjuang baz=258	0.79	257	⇑iP	Pn	06 39 42.4	-0.1
NSTT	baz=258			S	Sn	06 39 54.5	-0.7
HSN	Hsinchu baz=273	0.80	269	P	Pn	06 39 42.2	-0.3
HSN	baz=273			S	Sn	06 39 54.6	-0.7
TWT	Tachien baz=228	0.83	228	P	Pn	06 39 43.8	+0.7
TWT	baz=228			S	Sn	06 39 56.5	+0.3
PCYT	Pengchaiyu baz=8.0	0.83	14	eP	Pn	06 39 42.8	-0.2
TDCB	Techi baz=229	0.84	228	⇑P	Pn	06 39 43.7	+0.5
TDCB	baz=229			S	Sn	06 39 55.9	-0.5
WHF	Hehuan Shan baz=212	0.85	218	⇑P	Pn	06 39 43.6	-0.1
WHF	baz=212			eS	Sn	06 39 56.4	-0.7
HWA	Hwalien baz=204	0.86	195	eP	Pn	06 39 43.0	-0.3
ENLB	Shoufeng baz=202	0.94	194	eP	Pn	06 39 44.4	+0.2
ENLB	baz=202			eS	Sn	06 39 58.6	+0.7
CHGB	Renai baz=212	0.97	219	⇑P	Pn	06 39 45.1	+0.3
CHGB	baz=212			S	Sn	06 39 58.7	-0.4
WHP	Taichung City baz=246	0.98	237	eP	Pn	06 39 45.2	+0.5
WHP	baz=246			eS	Sn	06 39 58.7	-0.4
NMLH	Miaoli baz=255	1.00	254	eP	Pn	06 39 45.0	+0.2
NMLH	baz=255			eS	Sn	06 39 59.2	-0.1
OWD	Renai baz=209	1.05	216	eP	Pn	06 39 45.5	-0.2
NSY	Sanyi baz=257	1.06	248	⇑iP	Pn	06 39 46.0	+0.4
NSY	baz=257			eS	Sn	06 40 00.9	+0.2
JYNG	Yonagunijimaku	1.06	110	P	Pn	06 39 45.3	-0.3
JYNG				S	Sn	06 39 59.7	-1.0
ESL	Shilin baz=201	1.07	201	eP	Pn	06 39 43.9	-1.8
TWQ1	Liyutan baz=245	1.08	245	⇑P	Pn	06 39 45.9	+0.1
TWQ1	baz=245			eS	Sn	06 40 00.1	-0.9
PTSB	Yuanli baz=252	1.10	251	eP	Pn	06 39 45.8	-0.3
YOJ	Yonaguni jima baz=101	1.12	108	P	Pn	06 39 45.8	-0.5
YOJ	baz=101			eS	Sn	06 40 00.6	-1.2
YOJ	Yonaguni jima	1.12	108	P	Pn	06 39 45.8	-0.5
YOJ				eS	Sn	06 40 00.9	-0.9
WDJ	Dajia District baz=254	1.19	247	eP	Pn	06 39 47.4	+0.2
WDJ	baz=254			eS	Sn	06 40 03.3	-0.1
EGFH	Guangfu baz=198	1.20	199	eP	Pn	06 39 46.0	-1.4
VWDT	VWDT baz=204	1.24	211	⇑P	Pn	06 39 48.0	+0.2
VWDT	baz=204			eS	Sn	06 40 03.9	-0.5
TCU	Taichung baz=238	1.26	238	eP	Pn	06 39 47.9	-0.1
SMLT	Sun Moon Lake baz=230	1.27	223	eP	Pn	06 39 48.5	+0.3
SMLT	baz=230			eS	Sn	06 40 05.8	+0.6
TYC	Yuchr baz=224	1.28	225	eP	Pn	06 39 48.3	0.0
TYC	baz=224			eS	Sn	06 40 04.5	-0.8
HGSD	Ruisui baz=203	1.37	196	eP	Pn	06 39 49.6	+0.1
WCHH	Zhanghua baz=247	1.38	238	eP	Pn	06 39 49.4	-0.1
EHY	Hungye baz=194	1.39	200	eP	Pn	06 39 48.0	-1.6
WNT	Mingjian baz=229	1.41	229	eP	Pn	06 39 49.6	-0.3
WJS	Zhushan baz=235	1.42	226	eP	Pn	06 39 49.9	-0.1
WHYT	Xinyi Township baz=228	1.44	219	eP	Pn	06 39 50.5	+0.2
YULB	Yu-li baz=199	1.50	200	eP	Pn	06 39 49.6	-1.5
TWF1	Yuli baz=198	1.54	199	eP	Pn	06 39 50.5	-1.1
ALS	Alishan baz=223	1.61	216	eP	Pn	06 39 53.4	+0.6
ALS	baz=223			eS	Sn	06 40 15.0	+1.6
CHN5	Tsauling baz=228	1.61	222	eP	Pn	06 39 53.0	+0.4
CHN5	baz=228			eS	Sn	06 40 13.5	+0.4
WGK	Gukeng baz=226	1.62	226	eP	Pn	06 39 51.9	-0.8
RLNB	Erlin baz=235	1.64	236	eP	Pn	06 39 52.8	0.0
RLNB	baz=235			eS	Sn	06 40 12.9	-0.5
WDLH	Douliu baz=235	1.64	227	eP	Pn	06 39 52.9	+0.1
CHKT	Chengkung baz=185	1.77	194	eP	Pn	06 39 54.1	-0.4
IRIF	Iriomote-Funau	1.78	105	P	Pn	06 39 54.3	-0.4
IRIF				eS	Sn	06 40 16.0	-0.8
ELDTW	Lidau baz=199	1.79	205	eP	Pn	06 39 54.9	-0.1
CHN2	Minshiung baz=232	1.79	225	eP	Pn	06 39 55.6	+0.8
CHY	Chiayi baz=232	1.85	225	eP	Pn	06 39 55.8	+0.3
CHY	baz=232			eS	Sn	06 40 19.7	+1.4
CHN4	Tsaushan baz=218	1.85	218	eP	Pn	06 39 56.3	+0.6
TPUB	Ta-pu baz=216	1.87	217	eP	Pn	06 39 56.3	+0.4
STYT	Tauyuan baz=219	1.92	211	eP	Pn	06 39 57.5	+0.8
STYT	baz=219			eS	Sn	06 40 22.2	+1.9
WTP	Ta-pu baz=225	1.93	216	eP	Pn	06 39 56.9	+0.2
HATJ	Hateruma jima	1.94	113	P	Pn	06 39 56.9	+0.1
HATJ				S	Sn	06 40 19.8	-0.7
TWK	Hsinying baz=218	1.98	219	eP	Pn	06 39 57.7	+0.3
PTTC	Pingtan baz=290	2.00	290	eP	Pn	06 39 57.1	-0.4
PTTC	baz=290			eS	Sn	06 40 20.1	-1.9
SNST	Tainan City baz=217	2.01	218	eP	Pn	06 39 58.1	+0.3
CHN1	Nanshi baz=226	2.02	217	eP	Pn	06 39 57.8	-0.1
JKRS	Kuro-shima	2.05	106	P	Pn	06 39 58.2	-0.1
JKRS				S	Sn	06 40 23.1	-0.1
SGST	Jiashian baz=223	2.08	214	eP	Pn	06 39 59.7	+1.1
TWG	Pinlang baz=190	2.11	200	eP	Pn	06 39 59.0	0.0
TWGBT	Beinan baz=190	2.11	200	eP	Pn	06 39 59.1	+0.1
SLGT	Liugui baz=211	2.12	211	eP	Pn	06 39 59.9	+0.7
JIJ	Ishigaki jima	2.14	102	P	Pn	06 39 59.5	+0.1
JIJ				S	Sn	06 40 24.2	-1.1
MATB	Ma-tsu baz=307	2.17	308	eP	Pn	06 39 59.6	-0.3
VWUC	VWUC baz=274	2.18	275	P	Pn	06 39 59.5	-0.4
VWUC	baz=274			eS	Sn	06 40 23.9	-2.4
JISG	Ishigakijimahi	2.25	95	eS	Sn	06 40 26.4	-1.6
SSD	Sandimen baz=207	2.34	209	eP	Pn	06 40 02.5	+0.4
ECL	Taimali baz=192	2.35	200	eP	Pn	06 40 03.7	+1.4
PNG	Penghu baz=239	2.43	240	eP	Pn	06 40 02.4	-1.0
PHUB	P'eng-hu baz=236	2.45	238	eP	Pn	06 40 01.9	-1.7
PHUB	baz=236			eS	Sn	06 40 29.8	-2.9
MASBT	Mashibuluo baz=217	2.46	207	eP	Pn	06 40 04.2	+0.5
PTMZ	Houxiangcun baz=275	2.48	276	eP	Pn	06 40 03.7	-0.3
LYJJ	Jianjiangzhen baz=312	2.55	313	eP	Pn	06 40 04.8	-0.2
XPSS	Dashiqiu baz=325	2.58	325	eP	Pn	06 40 05.2	-0.1
SSPT	Xinbi baz=206	2.60	207	eP	Pn	06 40 07.5	+1.9
JTJ	Tarama	2.60	93	eS	Sn	06 40 37.4	+1.0
SCZT	Fangliau baz=215	2.68	205	eP	Pn	06 40 06.3	-0.3
VCHM	Qimei baz=232	2.73	235	eP	Pn	06 40 06.6	-0.7
VCHM	baz=232			eS	Sn	06 40 37.7	-1.7
LAY	Lan-yu baz=179	2.78	186	eP	Pn	06 40 06.9	-1.1
MHZQ	Yeshan baz=296	2.85	297	eP	Pn	06 40 08.5	-0.4
JIKM	Ikemajima	3.09	87	eS	Sn	06 40 49.5	+1.3
KNM	Kinmen baz=262	3.13	263	eP	Pn	06 40 14.2	+1.5
KNMB	Chin-men Tao baz=263	3.17	264	eP	Pn	06 40 12.3	-0.9
AXDP	Jialang baz=270	3.52	272	eP	Pn	06 40 17.7	-0.3
ZPLA	Ao Xicun baz=255	3.84	258	eP	Pn	06 40 21.6	-0.7
ZZJH	Jiuhuzhen baz=265	3.85	266	eP	Pn	06 40 22.6	+0.1
KSRS	Korea Array 0.1nm,0.3s,baz=202,slow=12,SNR=5.4	13.62	21	Pn	P	06 42 42.4	+1.3
SONM	Songino Array 0.4nm,0.9s,baz=147,slow=8.1,SNR=3.3	26.03	336	P	P	06 44 53.0	+2.2
MKAR	Makanchi Array 0.1nm,0.5s,baz=113,slow=9.3,SNR=3.2	38.31	315	P	P	06 46 38.5	+0.6
WRA	Warramunga Arr 0.6nm,0.6s,baz=346,slow=8.7,SNR=8.3	46.12	164	P	P	06 47 39.8	-1.7
ASAR	Alice Springs 0.3nm,0.6s,baz=337,slow=6.8,SNR=4.9	49.59	165	P	P	06 48 06.7	-1.7

IDC 12 06:55:00.8±2.2**,2°.90S**×**135°.99E,h0^{km},mb3.2**/2**, mb1 3.5**/3**,mb1mx3.3**/34**,mbtmp3.2**/3**,ML3.0**/1**,Error ellipse: s-maj=116.7km s-min=34.1km az=102.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=7.4,slow=12,SNR=4.7	17.02	185	P	Pn	06 59 01.0	+0.6
ASAR	Alice Springs 0.4nm,0.6s,baz=7.2,slow=10,SNR=5.7	20.75	185	P	P	06 59 42.9	-0.4
ILAR	Eielson Array 0.2nm,0.6s,baz=241,slow=5.3,SNR=4.1	87.13	25	P	P	07 07 48.5	+0.1

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*DJA **12** 07:07:34.5±1.0,5˚N±5˚×9˚6E±˚,h10^{km},M4.0/6,mb4.1/2, MLv4.0/6*

*IDC **12** 07:07:35.3±2.5,4°.86N×95°.93E,h0^{km},mb3.5/3,mb1 3.7/4, mb1mx3.4/43,mbtmp3.5/4,ML3.1/1,Error ellipse: s-maj=115.3km s-min=18.9km az=48.0*

ISC 12 07:07:39.2±1.4**,4°.82N**±0°.08×**96°.0E**±0°.1**,h29^{km},n12, σ2^{s}.01**/12**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.02	66	P	Pn	07 07 57.6	0.0
TPTI		1.94	143	P	Pb	07 08 12.2	-1.8
TPTI				S	Sb	07 08 40.0	+2.2
KCSI	Kotacane, Aceh	2.18	126	P	Pb	07 08 17.7	-0.4
KCSI				S	Sb	07 08 47.9	+3.2
SNSI	Sinabang, Aceh	2.42	172	P	Pn	07 08 16.4	-0.4
TSI	Tuntungan	2.87	117	P	Pb	07 08 28.4	-1.4
PSI	Prapat 1.4nm,0.3s,baz=0.0,slow=20,SNR=2.9	3.53	124	Pn	Pn	07 08 32.8	+0.4
PSI	2.5nm,0.3s,baz=180,slow=13,SNR=4.3			Sn	Sb	07 09 20.0	-3.7
PSI	2.8nm,0.3s,baz=3.3,slow=0.9,SNR=4.0			Lg	Lg	07 09 33.0	
H08S2	Diego Garcia H baz=61,slow=74	26.53	242	T	T	07 40 18.4	
H08S3	Diego Garcia H baz=61,slow=74	26.53	242	T	T	07 40 18.5	
H08S1	Diego Carcia H baz=61	26.54	242	T	T	07 40 17.8	
MKAR	Makanchi Array 0.3nm,0.8s,baz=154,slow=9.5,SNR=2.5	43.47	346	P	P	07 15 39.8	0.0
WRA	Warramunga Arr 0.8nm,0.9s,baz=305,slow=9.2,SNR=5.6	45.00	124	P	P	07 15 53.1	+0.6
ASAR	Alice Springs 1.0nm,0.6s,baz=299,slow=8.0,SNR=14	46.55	129	P	P	07 16 05.9	+1.2

IDC 12 07:17:08.0±1.4**,1°.78S**×**126°.88E,h0^{km},mb3.7**/3**, mb1 3.8**/5**,mb1mx3.5**/43**,mbtmp3.6**/5**,ML3.5**/2**,MS3.6**/1**, Ms1 3.6**/1**,ms1mx2.5**/35**,Error ellipse: s-maj=102.9km s-min=20.8km az=71.0,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=5.8,slow=14,SNR=3.5	16.26	184	Pn	Pn	07 20 58.0	+0.1
WRA	Warramunga Arr 0.2nm,0.3s,baz=336,slow=12,SNR=10	19.47	158	P	P	07 21 37.0	+0.4
ASAR	Alice Springs 1.9nm,0.8s,baz=346,slow=12,SNR=7.7	22.80	163	P	P	07 22 12.3	-0.2
JHJ	Hachijo jima 2 comp=Z,97nm,21.3s,baz=147,slow=31	36.79	18	LR	LR	07 36 05.5	
SONM	Songino Array 0.3nm,0.3s,baz=159,slow=7.0,SNR=5.0	52.55	343	P	P	07 26 22.5	-0.9
MKAR	Makanchi Array 0.8nm,0.6s,baz=126,slow=8.8,SNR=11	62.18	327	P	P	07 27 31.8	+0.5

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*IDC **12** 07:24:46.7±0.7,31°.38N×140°.11E,h0^{km},mb3.9/19, mb1 4.0/21,mb1mx3.9/48,mbtmp3.9/21,ML3.6/2,MS3.3/10, Ms1 3.3/10,ms1mx3.0/39,Error ellipse: s-maj=20.2km s-min=15.0km az=87.0*

*NEIC **12** 07:24:48.0±0.4,31°.42N×140°.20E,h10^{km},mb4.6/12,Error ellipse: s-maj=8.3km s-min=6.5km az=99.0*

*ISCJB **12** 07:24:49.0±0.3,31°.42N±0°.03×140°.30E±0°.06,h33^{km}, mb4.2/36,MS3.4/5,Error ellipse: s-maj=7.4km s-min=4.5km az=168.0*

*BJI **12** 07:24:59.3,31°.87N×140°.05E,h101^{km},mB4.6/5,mb4.2/11*

ISC 12 07:24:51.6±0.5**,31°.41N**±0°.05×**140°.22E**±0°.08**,h35^{km},n89, σ1^{s}.54**/80**,mb4.2**/36**,MS3.4**/6**,1C,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.73	349	ePn	Pn	07 25 16.9	-2.2
JHJ	Hachijo jima 2 73nm,0.3s,baz=62,slow=23,SNR=5.2	1.74	348	Pn	Pn	07 25 17.1	-2.2
JHJ	43nm,0.3s,baz=52,slow=20,SNR=4.2			Sn	Sn	07 25 36.6	-3.7
JHJ	comp=Z,506nm,21.3s,baz=276,slow=42			LR	LR	07 26 00.2	
CBIJ	Chichi jima	4.63	158	ePn	Pn	07 25 59.0	0.0
CBIJ				eSn	Sn	07 26 49.1	-2.4
JCJ	Chichijima 5.8nm,0.3s,baz=285,slow=22,SNR=8.6	4.63	158	Pn	Pn	07 25 59.0	0.0
JCJ	9.4nm,0.3s,baz=100,slow=21,SNR=3.7			Sn	Sn	07 26 49.1	-2.4
INU	Inuyama	4.75	327	ePn	Pn	07 25 59.4	-1.3
MJAR	Matsushiro Arr 0.5nm,0.3s,baz=167,slow=11,SNR=30	5.38	343	Pn	Pn	07 26 11.3	+2.0
MJAR	comp=Z,383nm,20.1s,baz=160,slow=39			LR	LR	07 28 13.9	
MAJO	Matsushiro	5.38	342	ePn	Pn	07 26 06.9	-2.5
MAT	Matsushiro	5.38	342	P	Pn	07 26 12.8	+3.4
MAT				S	Sn	07 26 27.1	-43
MJB9	Matsu-Tunnel	5.39	342	ePn	Pn	07 26 06.4	-3.1
JNU	Nakatsue	8.09	285	ePn	Pn	07 26 46.6	0.0
JNU	Nakatsue comp=Z,77nm,19.2s,baz=118,slow=37	8.09	285	LR	LR	07 29 43.9	
JOW	Kunigami	11.39	249	ePn	Pn	07 27 30.7	-1.1
KSRS	Korea Array comp=Z,89nm,18.6s,baz=114,slow=38	11.80	304	LR	LR	07 32 09.7	
GUMO	Guam comp=Z,133nm,20.7s,baz=52,slow=30	18.25	165	LR	LR	07 33 46.4	
SSLB	Suanglung 27nm,1.1s	18.67	251	eP	Pn	07 29 08.4	+1.2
KLR	Kul'dur 0.1nm,0.3s,baz=142,slow=12,SNR=3.3	18.91	343	P	Pn	07 29 09.6	-0.3
KLR	comp=Z,162nm,18.4s,baz=156,slow=37			LR	LR	07 36 26.8	
TPUB	Ta-pu 29nm,1.0s	19.16	250	eP	Pn	07 29 12.7	-0.5
TIA	Tai'an	19.76	290	P	Pn	07 29 20.8	+0.6
TIA	comp=Z,4.0nm,1.1s			pmax	pmax		
BJT	Baijiatuau 44nm,1.2s	21.28	300	eP	P	07 29 33.9	-1.0
WHN	Wuhan	22.18	275	⇑P	P	07 29 47.6	+2.9
ENH	Enshi 23nm,1.4s	26.37	276	eP	P	07 30 23.7	-0.9
XAN	Xi'an	26.41	284	P	P	07 30 24.8	-0.1
XAN	comp=Z,7.0nm,1.2s			pmax	pmax		
XAN	comp=N,210nm,14.1s			LR	LR		
XAN	Xi'an 6.9nm,0.9s	26.41	284	eP	P	07 30 23.7	-1.2
H11N2	WAKE ISLAND Hy baz=302,slow=75,SNR=409	26.66	109	T	T	07 58 23.2	
H11N1	WAKE ISLAND Hy baz=302,slow=75,SNR=310	26.66	110	T	T	07 58 23.6	
H11N3	WAKE ISLAND Hy baz=302,slow=75,SNR=310	26.67	109	T	T	07 58 24.6	
H11S3	WAKE ISLAND Hy baz=304,slow=75	27.15	112	T	T	07 58 58.5	
H11S1	WAKE ISLAND Hy baz=304,slow=75,SNR=2159	27.15	112	T	T	07 58 58.6	
H11S2	WAKE ISLAND Hy baz=304,slow=75,SNR=9155	27.16	112	T	T	07 58 59.9	
DAV	Davao City (W) comp=Z,30nm,20.5s,baz=142,slow=32	27.81	213	LR	LR	07 39 45.2	
SONA0	Songino Array	30.48	312	eP	P	07 31 02.6	+1.4
SONM	Songino Array 0.7nm,1.1s,baz=104,slow=6.1,SNR=3.3	30.48	312	P	P	07 31 02.6	+1.5
SEY	Seymchan 0.4nm,0.4s,baz=203,slow=9.1,SNR=3.6	32.49	10	P	P	07 31 19.4	+1.0
JAY	Jayapura comp=Z,68nm,20.8s,baz=328,slow=30	33.74	179	LR	LR	07 41 43.7	
SKNT	Sakolnakorn 11nm,1.1s	35.86	255	P	P	07 31 50.6	+2.4
CHAI	Chaiyaphum 9.8nm,0.9s	38.05	255	P	P	07 32 08.5	+1.7
UTTA	Uttaradit 8.4nm,0.9s,71nm	38.34	259	P	P	07 32 10.7	+1.5
PBKT	Sadao Pong 28nm,1.1s	38.56	257	eP	P	07 32 11.0	-0.1
PBKT	Sadao Pong 26nm,0.9s,1µm	38.56	257	P	P	07 32 12.7	+1.6
SRAK	Srakaew 80nm,1.0s,606nm	38.99	252	P	P	07 32 12.9	-1.9
CMMT	Chiang Mai 14nm,1.1s	39.20	261	P	P	07 32 17.9	+1.4
CHTO	Chiang Mai 21nm,1.3s	39.20	261	eP	P	07 32 16.4	-0.1
CHTO	Chiang Mai 64nm,1.1s	39.20	261	P	P	07 32 17.9	+1.4
SUKH	Sukhothai 4.2nm,0.9s	39.23	259	P	P	07 32 19.8	+3.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	39.36	261	P	P	07 32 17.8	-0.1
	2.5nm,0.5s,baz=39,slow=7.8,SNR=12						
CM01	Chiang Mai Arr	39.37	261	*e*P	P	07 32 18.1	+0.2
BILL	Bilibino	39.70	15	*e*P	P	07 32 20.6	+0.6
	1.6nm,0.8s						
UTHA	Uthaitani	40.33	257	P	P	07 32 28.2	+2.3
	5.1nm,1.1s						
UMPA	Umpang Tak	40.50	258	P	P	07 32 31.0	+3.7
	6.3nm,1.0s,878nm						
ZALV	Zalesovo Beam	45.15	317	*e*P	P	07 33 02.9	-1.6
ZALV	Zalesovo Beam	45.15	317	LR	LR	07 52 58.4	
	comp=Z,44nm,18.4s,baz=70,slow=38						
MK01	Makanchi Array	46.46	307	*e*P	P	07 33 13.9	-1.1
MK31	Makanchi Array	46.47	307	*e*P	P	07 33 14.1	-1.0
MK32	Makanchi Array	46.47	307	*e*P	P	07 33 14.2	-0.9
MKAR	Makanchi Array	46.47	307	*e*P	P	07 33 14.2	-1.0
	7.2nm,0.9s						
MKAR	Makanchi Array	46.47	307	P	P	07 33 14.2	-1.0
	0.8nm,0.8s,baz=96,slow=9.1,SNR=8.7						
MKAR				LR	LR	07 53 30.4	
	comp=Z,37nm,18.2s,baz=56,slow=37						
ANM	Nome	46.95	29	*e*P	P	07 33 17.0	-1.5
	5.5nm,1.2s						
NRIK	Noril'sk	48.02	338	P	P	07 33 26.8	0.0
	1.4nm,0.4s,baz=135,slow=12,SNR=3.8						
NRIK				LR	LR	07 54 41.6	
	comp=Z,82nm,18.1s,baz=60,slow=37						
KURK	Kurchatov	48.78	312	*e*P	P	07 33 32.2	-0.7
KURBB	Kurchatov Arra	48.84	312	P	P	07 33 32.3	-1.2
	0.4nm,0.3s,baz=86,slow=7.5,SNR=5.4						
GSI	Gunungsitoli	50.17	242	*e*P	P	07 33 43.8	-0.1
	52nm,1.3s						
WB2	Warramunga Arr	51.37	187	*e*P	P	07 33 52.0	-0.9
WR1	Warramunga Arr	51.37	187	*e*P	P	07 33 52.0	-0.8
WRA	Warramunga Arr	51.37	187	P	P	07 33 52.0	-0.8
	2.0nm,0.7s,baz=6.1,slow=7.7,SNR=13						
BVAR	Borovoye Array	53.74	315	P	P	07 34 10.2	+0.1
	0.4nm,0.5s,baz=90,slow=10,SNR=2.8						
ILAR	Eielson Array	54.81	30	P	P	07 34 19.0	+1.3
	1.2nm,1.0s,baz=266,slow=6.7,SNR=8.7						
ILB	Eielson Array	54.81	30	*e*P	P	07 34 16.6	-1.1
AS01	Alice Springs	55.09	187	*e*P	P	07 34 19.4	-0.8
ASAR	Alice Springs	55.10	187	P	P	07 34 20.2	-0.1
	0.6nm,0.8s,baz=18,slow=7.0,SNR=7.2						
KKAR	Karatay Array	55.23	303	*e*P	P	07 34 19.6	-1.5
EPYK	Eagle Plains	58.92	28	*e*P	P	07 34 45.7	-1.1
	5.5nm,1.0s						
INK	Inuvik	59.86	25	*e*P	P	07 34 53.4	+0.2
	1.2nm,0.9s						
INK	Inuvik	59.86	25	P	P	07 34 53.8	+0.6
	0.4nm,0.3s,baz=272,slow=4.7,SNR=7.0						
ABKAR	Akbulak array	60.89	312	*e*P	P	07 34 59.4	-1.2
AKTO	Aktyubinsk	61.78	314	P	P	07 35 08.0	+1.4
	0.8nm,0.5s,baz=16,slow=4.8,SNR=4.7						
ARA0	ARCESS Array S	68.91	340	*e*P	P	07 35 53.2	+0.7
ARCES	ARCESS Array B	68.91	340	P	P	07 35 53.2	+0.7
	2.4nm,0.9s,baz=74,slow=8.9,SNR=3.6						
YKA	Yellowknife Ar	69.18	29	P	P	07 35 54.9	+0.7
	0.6nm,0.8s,baz=293,slow=6.1,SNR=8.2						
YKB5	Yellowknife Ar	69.18	29	*e*P	P	07 35 54.2	0.0
FIA1	FINESS Array S	73.33	333	*e*P	P	07 36 18.1	-1.1
FIA0	FINESS Array S	73.33	333	*e*P	P	07 36 19.0	-0.3
FINES	FINESS Array B	73.33	333	P	P	07 36 19.0	-0.3
	0.6nm,0.5s,baz=57,slow=7.0,SNR=5.8						
KBZ	Khabaz	73.84	312	P	P	07 36 24.6	+2.0
	3.8nm,0.8s,baz=172,slow=6.6,SNR=5.5						
AKASG	Malin Array Be	78.14	323	P	P	07 36 45.8	-1.2
	1.2nm,0.6s,baz=50,slow=6.2,SNR=2.5						
BR101	Keskin Array S	81.84	312	*e*P	P	07 37 08.0	+0.6
BRTR	Keskin Array B	81.84	312	P	P	07 37 08.0	+0.6
BRTR	Keskin Array B	81.84	312	P	P	07 37 08.0	+0.6
	0.6nm,0.7s,baz=93,slow=5.9,SNR=4.1						
LTX	Lajitas	94.35	52	*e*P	P	07 38 10.3	+2.3
TXAR	Lajitas Array	94.35	52	P	P	07 38 10.3	+2.3
	0.3nm,0.7s,baz=293,slow=2.7,SNR=3.4						

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*ISCJB **12** 07:34:45.2±1.2, 31°.1N±0°.1×140°.6E±0°.3, h10^{km}, mb3.4/3, Error ellipse: s-maj=33.9km s-min=14.4km az=174.5*

*IDC **12** 07:34:45.6±1.6, 31°.19N×140°.58E, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.3/40, mbtmp3.5/5, ML2.9/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/30, Error ellipse: s-maj=46.0km s-min=26.2km az=92.0*

ISC 12 07:34:47.2±1.4**, 31°.2N**±0°.1×**140°.6E**±0°.3**, h10**^{km}**, n13, σ1^{s}36**/6**, mb3.3**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.06	341	Pn	Pn	07 35 21.1	-0.8
	22nm,0.3s,baz=60,slow=20,SNR=2.2						
MJAR	Matsushiro Arr	5.71	341	Pn	Pn	07 36 11.7	-0.4
	0.2nm,0.3s,baz=170,slow=12,SNR=7.7						
MAT	Matsushiro	5.71	341	P	Pn	07 36 14.2	+2.1
MAT				S	Sn	07 36 34.6	-43
USRK	Ussuriysk Ar.	14.66	335	LR	LR	07 43 34.5	
	comp=Z,40nm,19.7s,baz=85,slow=36						
H11N2	WAKE ISLAND Hy	26.29	109	T	T	08 08 22.6	
	baz=298						
H11N1	WAKE ISLAND Hy	26.30	109	T	T	08 08 23.0	
	baz=298						
H11N3	WAKE ISLAND Hy	26.31	109	T	T	08 08 23.9	
	baz=298						
H11S3	WAKE ISLAND Hy	26.78	112	T	T	08 08 58.0	
	baz=309						
H11S1	WAKE ISLAND Hy	26.78	112	T	T	08 08 58.0	
	baz=309						
H11S2	WAKE ISLAND Hy	26.79	112	T	T	08 08 59.2	
	baz=309						
CMAR	Chiang Mai Arr	39.62	261	P	P	07 42 18.9	-0.3
	1.1nm,0.3s,baz=48,slow=8.7,SNR=2.1						
WRA	Warramunga Arr	51.17	188	P	P	07 43 50.9	+0.3
	0.2nm,0.7s,baz=6.3,slow=7.8,SNR=2.4						
YKA	Yellowknife Ar	69.25	29	P	P	07 45 53.8	-0.3
	0.1nm,0.5s,baz=292,slow=6.6,SNR=2.2						

NNC 12 07:34:56.6±2.2**, 53°.64N**×**88°.13E, h0**^{km}**, mb3.6, mpv3.3, 7C-2D, Error ellipse: s-maj=19.9km s-min=12.8km az=57.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.99	280	⇑Pn	Pn	07 35 31.0	-0.4
	5.4nm,0.5s						
ZAA0				⇓Lg	Lg	07 35 59.8	
	11nm,0.5s						
KURK	Kurchatov	6.54	247	⇑Pn	Pn	07 36 36.1	+2.1
	1.7nm,0.7s						
KURK				⇑Lg	Lg	07 38 25.5	
	3.1nm,1.0s						
KURBB	Kurchatov Arra	6.64	247	⇑Pn	Pn	07 36 35.6	+0.4
	1.8nm,0.3s						
KURBB				⇑Lg	Lg	07 38 28.1	
	3.8nm,0.8s						
MK31	Makanchi Array	7.80	211	⇓Pn	Pn	07 36 51.8	+0.5
	2.0nm,1.4s,baz=30,slow=13,SNR=11						
MK31				⇑Sn	Sn	07 38 20.4	0.0
	0.3nm,0.5s						
MK31				⇑Lg	Lg	07 39 02.5	
	0.7nm,0.7s,baz=32,slow=31,SNR=2.8						

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*IDC **12** 07:35:08.7±0.9, 31°.20N×140°.00E, h0^{km}, mb3.7/13, mb1 3.8/15, mb1mx3.7/40, mbtmp3.7/15, ML2.8/2, Error ellipse: s-maj=24.6km s-min=17.6km az=97.0*

*ISCJB **12** 07:35:11.5±0.7, 31°.23N±0°.09×140°.0E±0°.2, h33^{km}, mb3.7/13, Error ellipse: s-maj=19.8km s-min=13.0km az=2.8*

ISC 12 07:35:13.9±1.0**, 31°.2N**±0°.1×**140°.0E**±0°.2**, h35**^{km}**, n21, σ0^{s}91**/15**, mb3.7**/13**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	5.51	345	Pn	Pn	07 36 33.4	0.0
	0.2nm,0.3s,baz=163,slow=11,SNR=13						
KLR	Kul'dur	19.03	343	P	P	07 39 31.9	-0.9
	0.1nm,0.3s,baz=207,slow=2.3,SNR=3.2						
H11N2	WAKE ISLAND Hy	26.76	109	T	T	08 08 42.6	
	baz=302,slow=75						
H11N1	WAKE ISLAND Hy	26.77	109	T	T	08 08 43.0	
	baz=302,slow=75						
H11N3	WAKE ISLAND Hy	26.78	109	T	T	08 08 43.9	
	baz=302,slow=75						
H11S3	WAKE ISLAND Hy	27.24	111	T	T	08 09 19.1	
	baz=304,slow=75						
H11S1	WAKE ISLAND Hy	27.25	111	T	T	08 09 19.1	
	baz=304,slow=75						
H11S2	WAKE ISLAND Hy	27.26	111	T	T	08 09 20.0	
	baz=304,slow=75						
SONM	Songino Array	30.47	313	P	P	07 41 24.9	+1.5
	0.5nm,0.9s,baz=123,slow=10,SNR=3.3						
SEY	Seymchan	32.70	10	P	P	07 41 43.0	+0.3
	0.3nm,0.3s,baz=179,slow=13,SNR=2.9						
CMAR	Chiang Mai Arr	39.16	261	P	P	07 42 39.4	+0.9
	0.9nm,0.3s,baz=51,slow=7.1,SNR=4.3						
MKAR	Makanchi Array	46.43	307	P	P	07 43 36.0	-1.2
	0.3nm,0.7s,baz=76,slow=6.1,SNR=4.1						
NRIK	Noril'sk	48.12	338	P	P	07 43 49.1	-0.8
	1.1nm,0.3s,baz=126,slow=11,SNR=4.4						
KURBB	Kurchatov Arra	48.83	312	P	P	07 43 54.8	-0.9
	0.5nm,0.5s,baz=85,slow=7.7,SNR=5.3						
WRA	Warramunga Arr	51.17	187	P	P	07 44 12.7	-1.0
	0.5nm,0.7s,baz=3.1,slow=7.6,SNR=5.1						
ASAR	Alice Springs	54.90	187	P	P	07 44 41.3	+0.1
	0.2nm,0.5s,baz=22,slow=10,SNR=2.9						
ILAR	Eielson Array	55.05	30	P	P	07 44 42.0	+0.1
	0.9nm,1.0s,baz=264,slow=6.5,SNR=6.8						
INK	Inuvik	60.10	25	P	P	07 45 18.5	+1.3
	0.9nm,1.0s,baz=341,slow=2.2,SNR=3.5						
GEYT	Alibeck	65.71	301	P	P	07 45 55.5	+0.4
	2.1nm,0.3s,baz=61,slow=12,SNR=4.0						
YKA	Yellowknife Ar	69.43	29	P	P	07 46 18.1	+0.1
	0.3nm,0.8s,baz=293,slow=5.9,SNR=4.5						
AKASG	Malin Array Be	78.18	323	P	P	07 47 09.0	-0.6
	0.2nm,0.4s,baz=46,slow=7.0,SNR=2.4						

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*SOME **12** 07:41:54.8, 42°.78N×76°.95E, h10^{km}*

*NNC **12** 07:41:54.1±0.8, 42°.76N×76°.93E, h0^{km}, mb2.4, mpv2.6, Error ellipse: s-maj=5.1km s-min=2.6km az=142.0*

KRNET 12 07:41:54.2±0.1**, 42°.78N**×**76°.93E, h30**^{km}**, mb2.4, 25C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.26	3	P	Pb	07 42 01.1	-0.5
	24nm,0.1s						
TNSS				S	Sb	07 42 05.8	-0.7
	32nm,0.2s						
TNSS	Tian-Shan	0.26	3	⇓*e*P	Pb	07 42 01.1	-0.5
	baz=3.0						
TNSS				⇓*e*S	Sb	07 42 05.8	-0.7
	baz=3.0						
TNSS	Tian-Shan	0.26	3	⇓*e*P	Pb	07 42 01.1	-0.5
	24nm,0.1s						
TNSS				*e*S	Sb	07 42 05.8	-0.7
	32nm,0.2s						
IZV	Izvestkoviy	0.34	318	P	Pb	07 42 02.4	-0.1
	12nm,0.1s						
IZV				S	Sb	07 42 08.3	+0.2
	43nm,0.1s						
IZV	Izvestkoviy	0.34	318	⇓*e*P	Pb	07 42 02.4	-0.1
	baz=18						
IZV				⇓*e*S	Sb	07 42 08.2	+0.1
	baz=18						
IZV	Izvestkoviy	0.34	318	⇓*e*P	Pb	07 42 02.4	-0.1
	12nm,0.1s						
IZV				*e*S	Sb	07 42 08.3	+0.2
	43nm,0.1s						
MDOK	Medeo	0.39	13	P	Pb	07 42 02.2	-1.0
	3.1nm,0.4s						
MDOK				S	Sb	07 42 08.9	-0.3
	12nm,0.4s						
MDOK	Medeo	0.39	13	Pg	Pb	07 42 02.7	-0.5
	7.4nm,0.1s						
MDOK				Lg	Lg	07 42 08.6	
	60nm,0.2s						
MDOK	Medeo	0.39	13	⇑*e*P	Pb	07 42 02.8	-0.4
	baz=13						
MDOK				⇑*e*S	Sb	07 42 08.6	-0.6
	baz=13						
MDOK	Medeo	0.39	13	⇑*e*P	Pb	07 42 02.8	-0.3
	7.4nm,0.1s						
MDOK				*e*S	Sb	07 42 08.6	-0.6
	60nm,0.2s						
KNDC	Almaty	0.44	3	⇑P	Pb	07 42 02.8	-0.9
	9.9nm,0.4s						
KNDC				⇓S	Sb	07 42 08.7	-1.6
	28nm,0.3s						
KOTS	Kotyrbulak	0.47	16	P	Pb	07 42 04.1	-0.3
	4.3nm,0.3s						
KOTS				S	Sb	07 42 11.0	-0.3
	36nm,0.4s						
KOTS	Kotyrbulak	0.47	16	⇓*e*P	Pb	07 42 04.2	-0.2
	baz=16						
KOTS				⇓*e*S	Sb	07 42 11.0	-0.3
	baz=16						
KOTS	Kotyrbulak	0.47	16	⇓*e*P	Pb	07 42 04.2	-0.1
	4.3nm,0.3s						
KOTS				*e*S	Sb	07 42 11.0	-0.3
	36nm,0.4s						
MTBS	Maitube	0.51	314	P	Pb	07 42 04.8	0.0
	4.5nm,0.1s						
MTBS				S	Sb	07 42 12.3	+0.2
	40nm,0.2s						
MTBS	Maitube	0.51	314	⇑*e*P	Pb	07 42 05.0	+0.1
	baz=14						
MTBS				⇑*e*S	Sb	07 42 12.3	+0.2
	baz=14						
MTBS	Maitube	0.51	314	⇑*e*P	Pb	07 42 05.0	+0.1
	4.5nm,0.1s						
MTBS				*e*S	Sb	07 42 12.3	+0.2
	40nm,0.2s						
KDJ	Kajisay	0.68	164	⇑*i*P	Pn	07 42 08.0	0.0
	baz=63						
KDJ				⇑*i*S	Sb	07 42 16.8	-0.1
	baz=63						
ULHL	Ulahol	0.74	224	⇓*i*P	Pb	07 42 08.5	-0.3
	baz=24						
ULHL				⇓*i*S	Sb	07 42 18.7	+0.1
	baz=24						
KST	Kastek	0.76	291	P	Pn	07 42 09.4	+0.4
	2.0nm,0.1s						
KST				S	Sn	07 42 20.1	+0.6
	2.8nm,0.2s						
KST	Kastek	0.76	291	*e*P	Pn	07 42 09.4	+0.4
	baz=91						
KST				*e*S	Sn	07 42 20.1	+0.6
	baz=91						
KST	Kastek	0.76	291	*e*P	Pn	07 42 09.4	+0.4
	2.0nm,0.1s						
KST				*e*S	Sn	07 42 20.1	+0.6
	2.8nm,0.2s						
BOOM	Boomskoye usch	0.79	249	⇑*i*P	Pb	07 42 09.8	+0.3
	baz=49						
BOOM				⇑*i*S	Sn	07 42 20.3	0.0
	baz=49						
KTBS	Karatobe	0.95	349	P	Pb	07 42 12.2	0.0
	0.8nm,0.1s						
KTBS				S	Sb	07 42 24.9	+0.5
	8.6nm,0.2s						
KTBS	Karatobe	0.95	349	*e*P	Pb	07 42 12.2	0.0
	baz=41						
KTBS				*e*S	Sb	07 42 24.9	+0.5
	baz=41						
KTBS	Karatobe	0.95	349	*e*P	Pb	07 42 12.2	0.0
	0.8nm,0.1s						
KTBS				*e*S	Sb	07 42 24.9	+0.5
	8.6nm,0.2s						
DGS	Degeres	0.97	299	P	Pb	07 42 12.6	+0.1
	0.6nm,0.2s						
DGS				S	Sb	07 42 25.6	+0.6
	7.8nm,0.2s						
DGS	Degeres	0.97	299	*e*P	Pb	07 42 12.6	+0.1
	baz=99						
DGS				*e*S	Sb	07 42 25.6	+0.6
	baz=99						
DGS	Degeres	0.97	299	*e*P	Pb	07 42 12.6	+0.1
	0.6nm,0.2s						
DGS				*e*S	Sb	07 42 25.6	+0.6
	7.8nm,0.2s						
TKM2	Tokmak 2	0.99	279	⇑P	Pb	07 42 13.9	+1.0
	2.3nm,1.0s						
TKM2				⇓S	Sb	07 42 27.0	+1.3
	2.2nm,0.6s						
TKM2	Tokmak 2	0.99	279	⇑*i*P	Pb	07 42 13.9	+0.9
	baz=79						
TKM2				⇑*i*S	Sb	07 42 26.8	+1.0
	baz=79						
CHKK	Chushkaly	1.07	2	P	Pb	07 42 14.3	0.0
	1.3nm,0.1s						
CHKK				S	Sb	07 42 28.5	+0.6
	14nm,0.2s						
CHKK	Chushkaly	1.07	2	*e*P	Pb	07 42 14.3	0.0
	baz=3.0						
CHKK				*e*S	Sb	07 42 28.5	+0.6
	baz=3.0						
CHKK	Chushkaly	1.07	2	*e*P	Pb	07 42 14.3	0.0
	1.3nm,0.1s						
CHKK				*e*S	Sb	07 42 28.5	+0.6
	14nm,0.2s						
SATY	Saty	1.12	75	P	Pb	07 42 15.5	+0.4
	1.4nm,0.1s						
SATY				S	Sb	07 42 30.7	+1.3
	9.5nm,0.1s						
SATY	Saty	1.12	75	*e*P	Pb	07 42 15.5	+0.4
	1.4nm,0.1s						
SATY				*e*S	Sb	07 42 30.6	+1.3
	9.5nm,0.1s						
KUU	Kurty	1.19	339	P	Pb	07 42 16.4	+0.1
	1.1nm,0.1s						
KUU				S	Sb	07 42 32.1	+0.8
	8.5nm,0.2s						
KUU	Kurty	1.19	339	*e*P	Pb	07 42 16.4	+0.1
	baz=39						
KUU				*e*S	Sb	07 42 32.1	+0.8
	baz=39						
KUU	Kurty	1.19	339	*e*P	Pb	07 42 16.4	+0.1
	1.1nm,0.1s						
KUU				*e*S	Sb	07 42 32.1	+0.8
	8.5nm,0.2s						
TARG	Taragay, Kyrgy	1.24	148	⇑*i*P	Pb	07 42 16.8	-0.4
	baz=48						
TARG				⇑*i*S	Sb	07 42 32.6	-0.4
	baz=48						
KZA	Kyzart	1.43	241	⇑*i*P	Pb	07 42 20.2	-0.3
	baz=41						
KZA				⇑*i*S	Sb	07 42 38.5	0.0
	baz=41						
KBK	Karagaybulak	1.47	266	⇑*i*P	Pb	07 42 20.8	-0.2
	baz=66						
KBK				⇑*i*S	Sb	07 42 40.0	+0.7
	baz=66						
ARXS	Arharly	1.57	24	P	Pb	07 42 23.1	+0.4
	0.6nm,0.1s						
ARXS				S	Sb	07 42 43.6	+1.3
	10nm,0.2s						
ARXS	Arharly	1.57	24	*e*P	Pb	07 42 23.1	+0.4
	0.6nm,0.1s						
ARXS				*e*S	Sb	07 42 43.6	+1.3
	10nm,0.2s						
UZB	Uzynbulak	1.58	76	P	Pb	07 42 23.3	+0.5
	0.4nm,0.1s						
UZB				S	Sb	07 42 44.1	+1.6
	2.3nm,0.1s						
UZB	Uzynbulak	1.58	76	*e*P	Pb	07 42 23.3	+0.4
	baz=76						
UZB				*e*S	Sb	07 42 44.1	+1.6
	baz=76						
UZB	Uzynbulak	1.58	76	*e*P	Pb	07 42 23.3	+0.5
	0.4nm,0.1s						
UZB				*e*S	Sb	07 42 44.1	+1.6
	2.3nm,0.1s						
AAK	Ala-Archa	1.80	266	⇓P	Pb	07 42 27.6	+1.0
	1.5nm,0.8s						
AAK				⇑S	Sb	07 42 50.0	+1.1
	2.7nm,0.8s						
PDGK	Podgornoye	1.96	73	⇑*i*P	Pb	07 42 27.9	-1.4
	baz=73						
PDGK				⇑*i*S	Sb	07 42 52.3	-1.0
	baz=73						
ARLS	Aral	2.14	245	⇑*e*P	Pn	07 42 29.9	+1.8
	baz=46						
ARLS				⇑*i*S	Sn	07 42 55.1	+1.4
	baz=46						
KAPS	Kapalarasan	3.05	34	*e*P	Pb	07 42 48.8	+0.9
	0.1nm,0.1s						
KAPS				*e*S	Sb	07 43 27.5	+2.7
	1.6nm,0.3s						

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*KRNET **12** 07:50:24.1±0.1, 43°.53N×77°.03E, h21^{km}, mb2.6*

*NNC **12** 07:50:24.1±0.4, 43°.52N×77°.06E, h0^{km}, mb2.2, mpv2.7, Error ellipse: s-maj=3.1km s-min=2.1km az=102.0*

SOME 12 07:50:24.6, 43°.52N×**77°.07E, h15**^{km}**, 29C-20D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOTS	Kotyrbulak	0.28	173	P	Pg	07 50 30.8	+0.1
	16nm,0.1s						
KOTS				S	Sg	07 50 35.4	+0.5
	16nm,0.1s						
KOTS	Kotyrbulak	0.28	173	⇓*e*P	Pg	07 50 30.9	+0.2
	baz=68						
KOTS				⇓*e*S	Sg	07 50 35.4	+0.5
	baz=68						
KOTS	Kotyrbulak	0.28	173	⇓*e*P	Pg	07 50 30.9	+0.2
	16nm,0.1s						
KOTS				*e*S	Sg	07 50 35.4	+0.5
	16nm,0.1s						
KNDC	Almaty	0.31	194	⇑P	Pg	07 50 30.4	-0.7
	15nm,0.5s						
KNDC				⇑S	Sg	07 50 34.7	-0.9
	17nm,0.5s						
KTBS	Karatobe	0.34	305	P	Pg	07 50 31.6	0.0
	7.6nm,0.1s						
KTBS				S	Sg	07 50 36.7	+0.2
	13nm,0.2s						
KTBS	Karatobe	0.34	305	⇑*e*P	Pg	07 50 31.7	0.0
	baz=98						
KTBS				⇑*e*S	Sg	07 50 36.7	+0.2
	baz=98						
KTBS	Karatobe	0.34	305	⇑*e*P	Pg	07 50 31.6	0.0
	7.6nm,0.1s						
KTBS				*e*S	Sg	07 50 36.7	+0.2
	13nm,0.2s						
CHKK	Chushkaly	0.34	350	P	Pg	07 50 31.7	0.0
	2.2nm,0.1s						
CHKK				S	Sg	07 50 37.0	+0.5
	47nm,0.2s						
CHKK	Chushkaly	0.34	350	⇓*e*P	Pg	07 50 31.8	+0.1
	baz=57						
CHKK				⇓*e*S	Sg	07 50 37.0	+0.5
	baz=57						
CHKK	Chushkaly	0.34	350	⇓*e*P	Pg	07 50 31.8	+0.1
	2.2nm,0.1s						
CHKK				*e*S	Sg	07 50 37.0	+0.5
	47nm,0.2s						
MDOK	Medeo	0.35	182	⇓P	Pg	07 50 31.0	-1.0
	1.4nm,0.2s						
MDOK				⇑S	Sg	07 50 36.5	-0.5
	4.1nm,0.5s						
MDOK	Medeo	0.35	182	Pg	Pg	07 50 31.6	-0.3
	10nm,0.1s						
MDOK				Lg	Lg	07 50 36.9	
	7.2nm,0.1s						
MDOK	Medeo	0.35	182	⇑*e*P	Pg	07 50 31.7	-0.2
	baz=78						
MDOK				⇑*e*S	Sg	07 50 36.9	0.0
	baz=78						
MDOK	Medeo	0.35	182	⇑*e*P	Pg	07 50 31.7	-0.3
	10nm,0.1s						
MDOK				*e*S	Sg	07 50 36.9	0.0
	7.2nm,0.1s						
TNSS	Tian-Shan	0.49	190	P	Pg	07 50 34.0	-0.4
	5.0nm,0.1s						
TNSS				S	Sg	07 50 41.0	0.0
	5.2nm,0.1s						
TNSS	Tian-Shan	0.49	190	⇓*e*P	Pg	07 50 34.1	-0.3
	baz=87						
TNSS				⇓*e*S	Sg	07 50 41.0	0.0
	baz=87						
TNSS	Tian-Shan	0.49	190	⇓*e*P	Pg	07 50 34.1	-0.4
	5.0nm,0.1s						
TNSS				*e*S	Sg	07 50 41.0	0.0
	5.2nm,0.1s						
IZV	Izvestkoviy	0.58	215	P	Pg	07 50 35.5	-0.7
	2.3nm,0.1s						
IZV				S	Sg	07 50 43.5	-0.4
	3.4nm,0.1s						
IZV	Izvestkoviy	0.58	215	⇑*e*P	Pg	07 50 35.6	-0.6
	baz=12						
IZV				⇑*e*S	Sg	07 50 43.6	-0.3
	baz=12						
IZV	Izvestkoviy	0.58	215	⇑*e*P	Pg	07 50 35.6	-0.5
	2.3nm,0.1s						
IZV				*e*S	Sg	07 50 43.6	-0.3
	3.4nm,0.1s						
MTBS	Maitube	0.60	230	⇓*e*P	Pg	07 50 35.9	-0.6

	baz=28						
MTBS				⇓eS	Sg	07 50 44.1	-0.5
	baz=28						
MTBS	**Maitube**	**0.60**	**230**	⇓eP	Pg	07 50 35.9	-0.6
	3.0nm,0.1s						
MTBS				eS	Sg	07 50 44.1	-0.5
	30nm,0.2s						
KUU	**Kurty**	**0.65**	**306**	P	Pg	07 50 36.4	-0.9
	2.3nm,0.1s						
KUU				S	Sg	07 50 45.1	-0.8
	10nm,0.2s						
KUU	**Kurty**	**0.65**	**306**	⇓eP	Pg	07 50 36.4	-0.9
	baz=7.0						
KUU				⇓eS	Sg	07 50 45.1	-0.8
	baz=7.0						
KUU	**Kurty**	**0.65**	**306**	⇓eP	Pg	07 50 36.4	-0.9
	2.5nm,0.1s						
KUU				eS	Sg	07 50 45.1	-0.8
	10nm,0.2s						
KURS	**Kuram**	**0.80**	**92**	eP	Pg	07 50 39.8	-0.4
	baz=92						
KURS				eS	Sg	07 50 50.7	-0.1
	baz=92						
KURS	**Kuram**	**0.80**	**92**	eP	Pg	07 50 39.8	-0.4
	1.2nm,0.1s						
KURS				eS	Sg	07 50 50.7	-0.1
	2.3nm,0.4s						
ARXS	**Arharly**	**0.89**	**38**	P	Pb	07 50 40.8	-0.9
	1.0nm,0.2s						
ARXS				S	Sb	07 50 52.6	-0.8
	13nm,0.2s						
ARXS	**Arharly**	**0.89**	**38**	eP	Pb	07 50 40.8	-0.9
	1.0nm,0.2s						
ARXS				eS	Sb	07 50 52.6	-0.8
	13nm,0.2s						
KST	**Kastek**	**0.94**	**240**	⇓eP	Pb	07 50 41.4	-1.2
	baz=38						
KST				⇓eS	Sb	07 50 53.5	-1.4
	baz=38						
KST	**Kastek**	**0.94**	**240**	⇓eP	Pb	07 50 41.4	-1.2
	4.8nm,0.2s						
KST				eS	Sb	07 50 53.5	-1.3
	8.2nm,0.3s						
SATY	**Saty**	**1.08**	**115**	P	Pb	07 50 44.2	-0.8
	4.5nm,0.2s						
SATY				S	Sb	07 50 58.5	-0.5
	14nm,0.2s						
SATY	**Saty**	**1.08**	**115**	⇑eP	Pb	07 50 44.3	-0.8
	4.5nm,0.2s						
SATY				eS	Sb	07 50 58.5	-0.5
	14nm,0.2s						
MNBS	**Baschi**	**1.12**	**59**	P	Pg	07 50 46.1	-0.1
	6.6nm,0.0s						
MNBS				S	Sn	07 51 01.7	+0.7
	11nm,0.3s						
MNBS	**Baschi**	**1.12**	**59**	eP	Pg	07 50 46.1	-0.1
	baz=67						
MNBS				eS	Sn	07 51 01.7	+0.7
	baz=67						
MNBS	**Baschi**	**1.12**	**59**	eP	Pg	07 50 46.1	-0.1
	6.6nm,0.0s						
MNBS				eS	Sn	07 51 01.7	+0.7
	11nm,0.3s						
TKM2	**Tokmak 2**	**1.23**	**241**	⇑P	Pg	07 50 48.5	+0.2
	1.8nm,1.1s						
TKM2				⇓S	Sb	07 51 02.4	-1.0
	0.8nm,0.2s						
TKM2	**Tokmak 2**	**1.23**	**241**	⇑iP	Pn	07 50 46.7	-0.7
	baz=40						
TKM2				⇑iS	Sb	07 51 02.7	-0.7
	baz=40						
BOOM	**Boomskoye usch**	**1.32**	**219**	⇑iP	Pn	07 50 48.6	0.0
	baz=18						
BOOM				⇑iS	Sb	07 51 05.1	-0.8
	baz=18						
ULHL	**Ulahol**	**1.41**	**206**	⇑iP	Pn	07 50 50.0	+0.1
	baz=5.0						
ULHL				⇑iS	Sn	07 51 08.0	-0.3
	baz=5.0						
UZB	**Uzynbulak**	**1.47**	**104**	P	Pn	07 50 50.7	0.0
	1.9nm,0.2s						
UZB				S	Sb	07 51 10.2	-0.2
	2.2nm,0.2s						
UZB	**Uzynbulak**	**1.47**	**104**	⇑eP	Pn	07 50 50.9	+0.1
	baz=4.0						
UZB				⇑eS	Sn	07 51 10.0	+0.2
	baz=4.0						
UZB	**Uzynbulak**	**1.47**	**104**	⇑eP	Pn	07 50 50.9	+0.1
	1.9nm,0.2s						
UZB				eS	Sn	07 51 09.9	+0.1
	2.5nm,0.1s						
PDGK	**Podgornoye**	**1.77**	**95**	⇑P	Pn	07 50 55.5	+0.6
	2.8nm,1.5s						
PDGK				⇑S	Sb	07 51 19.1	+0.1
	0.6nm,0.3s						
TARG	**Taragay, Kyrgy**	**1.87**	**163**	⇑iP	Pb	07 50 58.5	-0.2
	baz=62						
TARG				⇑iS	Sb	07 51 22.3	+0.3
	baz=62						
USP	**Ospenovka**	**1.89**	**263**	⇑iP	Pb	07 50 57.8	-1.0
	baz=63						
USP				⇑iS	Sb	07 51 21.8	-0.4
	baz=63						
DJR	**Jarkent**	**2.13**	**67**	eP	Pb	07 51 03.2	+0.3
	0.3nm,0.1s						
DJR				eS	Sb	07 51 30.7	+1.5
	0.5nm,0.3s						
KAPS	**Kapalarasan**	**2.41**	**42**	eP	Pb	07 51 07.2	-0.6
	0.1nm,0.1s						
KAPS				eS	Sb	07 51 37.7	+0.4
	1.9nm,0.3s						

NNC ***12*** *08:04:24.7±0.5, 42°.92N×77°.85E, h0km, mb2.9, mpv2.9, Error ellipse: s-maj=4.8km s-min=1.7km az=177.0*

SOME ***12*** *08:04:26.0, 42°.92N×77°.83E, h20km*

KRNET 12 08:04:25.4±0.1**, 42°.92N×77°.83E, h20km, mb2.8, 40C-36D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	**0.45**	**72**	P	Pb	08 04 34.3	-0.4
	29nm,0.1s						
SATY				S	Sb	08 04 40.3	-0.6
	253nm,0.2s						
SATY	**Saty**	**0.45**	**72**	⇓eP	Pb	08 04 34.3	-0.3
	29nm,0.1s						
SATY				eS	Sb	08 04 40.3	-0.6
	253nm,0.2s						
PRZ	**Przheval'sk**	**0.61**	**136**	⇑iP	Pb	08 04 37.4	0.0
	baz=35						
PRZ				⇑iS	Sb	08 04 45.3	-0.3
	baz=35						
KURS	**Kuram**	**0.62**	**24**	P	Pb	08 04 37.7	+0.1
	11nm,0.1s						
KURS				S	Sb	08 04 46.2	+0.3
	32nm,0.3s						
KURS	**Kuram**	**0.62**	**24**	⇓eP	Pb	08 04 37.7	+0.1
	baz=24						
KURS				⇓eS	Sb	08 04 46.2	+0.3
	baz=24						
KURS	**Kuram**	**0.62**	**24**	⇓eP	Pb	08 04 37.7	+0.1
	11nm,0.1s						
KURS				eS	Sb	08 04 46.1	+0.2
	32nm,0.3s						
MDOK	**Medeo**	**0.62**	**293**	⇑P	Pb	08 04 37.0	-0.7
	1.5nm,0.3s						
MDOK				⇓S	Sb	08 04 45.4	-0.6
	16nm,0.5s						
MDOK	**Medeo**	**0.62**	**293**	Pg	Pb	08 04 37.6	-0.1
	2.1nm,0.3s						
MDOK				Lg	Lg	08 04 45.9	
	19nm,0.3s						
MDOK	**Medeo**	**0.62**	**293**	⇓eP	Pb	08 04 37.6	-0.1
	baz=93						
MDOK				⇓eS	Sb	08 04 46.0	0.0
	baz=93						
MDOK	**Medeo**	**0.62**	**293**	⇓eP	Pb	08 04 37.6	-0.1
	2.1nm,0.3s						
MDOK				eS	Sb	08 04 45.9	-0.1
	19nm,0.3s						
TNSS	**Tian-Shan**	**0.66**	**281**	P	Pb	08 04 38.2	-0.2
	2.2nm,0.1s						
TNSS				S	Sb	08 04 47.0	-0.3
	14nm,0.2s						
TNSS	**Tian-Shan**	**0.66**	**281**	eP	Pb	08 04 38.2	-0.2
	baz=81						
TNSS				eS	Sb	08 04 47.0	-0.3
	baz=81						
TNSS	**Tian-Shan**	**0.66**	**281**	eP	Pb	08 04 38.2	-0.2
	2.2nm,0.1s						
TNSS				eS	Sb	08 04 47.0	-0.3
	14nm,0.2s						
IZV	**Izvestkoviy**	**0.90**	**278**	P	Pn	08 04 42.8	-0.2
	3.8nm,0.2s						
IZV				S	Sn	08 04 55.0	-0.6
	34nm,0.2s						
IZV	**Izvestkoviy**	**0.90**	**278**	⇓eP	Pn	08 04 42.8	-0.2
	baz=78						
IZV				⇓eS	Sn	08 04 55.0	-0.6
	baz=78						
IZV	**Izvestkoviy**	**0.90**	**278**	⇓eP	Pn	08 04 42.8	-0.2
	5.7nm,0.1s						
IZV				eS	Sn	08 04 55.0	-0.6
	34nm,0.2s						
UZB	**Uzynbulak**	**0.90**	**75**	P	Pb	08 04 41.9	-0.5
	14nm,0.1s						
UZB				S	Sb	08 04 53.4	-0.7
	67nm,0.2s						
UZB	**Uzynbulak**	**0.90**	**75**	⇑eP	Pb	08 04 42.3	-0.1
	baz=75						
UZB				⇑eS	Sb	08 04 53.8	-0.3
	baz=75						
UZB	**Uzynbulak**	**0.90**	**75**	⇑eP	Pb	08 04 42.3	-0.1
	14nm,0.1s						
UZB				eS	Sb	08 04 53.8	-0.3
	67nm,0.2s						
KDJ	**Kajisay**	**0.92**	**211**	⇑iP	Pn	08 04 43.5	+0.1
	baz=11						
KDJ				⇑iS	Sn	08 04 55.8	-0.3
	baz=11						
MTBS	**Maitube**	**1.05**	**282**	P	Pn	08 04 45.0	0.0
	3.0nm,0.2s						
MTBS				S	Sn	08 04 58.7	-0.3
	11nm,0.2s						
MTBS	**Maitube**	**1.05**	**282**	eP	Pn	08 04 45.0	0.0
	baz=82						
MTBS				eS	Sn	08 04 58.7	-0.4
	baz=82						
MTBS	**Maitube**	**1.05**	**282**	eP	Pn	08 04 45.0	0.0
	3.0nm,0.2s						
MTBS				eS	Sn	08 04 58.8	-0.3
	11nm,0.2s						
CHKK	**Chushkaly**	**1.12**	**327**	P	Pb	08 04 46.6	+0.6
	5.6nm,0.2s						
CHKK				S	Sn	08 05 01.3	+0.7
	75nm,0.3s						
CHKK	**Chushkaly**	**1.12**	**327**	⇓eP	Pb	08 04 46.7	+0.7
	baz=28						
CHKK				⇓eS	Sn	08 05 01.4	+0.7
	baz=28						
CHKK	**Chushkaly**	**1.12**	**327**	⇓eP	Pb	08 04 46.7	+0.7
	7.2nm,0.2s						
CHKK				eS	Sn	08 05 01.4	+0.7
	75nm,0.3s						
KTBS	**Karatobe**	**1.15**	**314**	P	Pb	08 04 47.2	+0.6
	4.6nm,0.1s						
KTBS				S	Sn	08 05 02.7	+1.1
	22nm,0.2s						
KTBS	**Karatobe**	**1.15**	**314**	⇑eP	Pb	08 04 47.5	+0.9
	baz=10.0						
KTBS				⇑eS	Sn	08 05 02.5	+0.9
	baz=10.0						
KTBS	**Karatobe**	**1.15**	**314**	⇑eP	Pb	08 04 47.5	+0.9
	4.6nm,0.1s						
KTBS				eS	Sn	08 05 02.5	+0.9
	22nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.19**	**181**	⇓iP	Pb	08 04 47.4	-0.1
	baz=81						
TARG				⇓iS	Sn	08 05 03.0	0.0
	baz=81						
MNBS	**Baschi**	**1.23**	**20**	P	Pb	08 04 48.6	+0.6
	4.3nm,0.2s						
MNBS				S	Sn	08 05 05.3	+1.6
	62nm,0.4s						
MNBS	**Baschi**	**1.23**	**20**	⇓eP	Pb	08 04 48.6	+0.6
	baz=25						
MNBS				⇓eS	Sn	08 05 05.3	+1.6
	baz=25						
MNBS	**Baschi**	**1.23**	**20**	⇓eP	Pb	08 04 48.6	+0.6
	4.3nm,0.2s						
MNBS				eS	Sn	08 05 05.3	+1.6
	62nm,0.4s						
PDGK	**Podgornoye**	**1.28**	**71**	P	Pn	08 04 48.5	+0.2
	2.0nm,0.2s						
PDGK				S	Sn	08 05 04.6	-0.3
	7.5nm,0.3s						
PDGK	**Podgornoye**	**1.28**	**71**	⇓P	Pn	08 04 48.4	+0.2
	1.3nm,0.3s						
PDGK				⇓S	Sb	08 05 05.2	+0.2
	7.7nm,0.5s						
PDGK	**Podgornoye**	**1.28**	**71**	⇑iP	Pb	08 04 48.6	-0.3
	baz=71						
PDGK				⇑iS	Sb	08 05 05.5	+0.5
	baz=71						
ARXS	**Arharly**	**1.29**	**360**	P	Pb	08 04 49.7	+0.6
	7.4nm,0.2s						
ARXS				S	Sb	08 05 06.6	+1.3
	39nm,0.3s						
ARXS	**Arharly**	**1.29**	**360**	⇓eP	Pb	08 04 49.8	+0.7
	7.4nm,0.2s						
ARXS				eS	Sb	08 05 06.6	+1.3
	58nm,0.2s						
ULHL	**Ulahol**	**1.35**	**241**	⇑iP	Pb	08 04 50.4	+0.3
	baz=41						
ULHL				⇑iS	Sb	08 05 08.4	+1.3
	baz=41						
KST	**Kastek**	**1.38**	**276**	P	Pb	08 04 51.1	+0.7
	6.0nm,0.3s						
KST				S	Sb	08 05 09.2	+1.5
	17nm,0.2s						
KST	**Kastek**	**1.38**	**276**	⇓eP	Pb	08 04 51.0	+0.5
	baz=76						
KST				⇓eS	Sb	08 05 09.0	+1.4
	baz=76						
KST	**Kastek**	**1.38**	**276**	⇓eP	Pb	08 04 51.0	+0.6
	6.0nm,0.3s						
KST				eS	Sb	08 05 09.0	+1.4
	17nm,0.2s						
BOOM	**Boomskoye usch**	**1.46**	**253**	⇓iP	Pb	08 04 52.4	+0.5
	baz=54						
BOOM				⇓iS	Sb	08 05 11.6	+1.6
	baz=54						
KUU	**Kurty**	**1.46**	**312**	P	Pb	08 04 53.2	+1.4
	4.4nm,0.2s						
KUU				S	Sb	08 05 12.7	+2.8
	67nm,0.3s						
KUU	**Kurty**	**1.46**	**312**	eP	Pb	08 04 52.6	+0.8
	baz=12						
KUU				eS	Sb	08 05 11.6	+1.7
	baz=12						
KUU	**Kurty**	**1.46**	**312**	eP	Pb	08 04 52.6	+0.8
	4.4nm,0.2s						
KUU				eS	Sb	08 05 11.6	+1.7
	67nm,0.3s						
DGS	**Degeres**	**1.54**	**283**	P	Pb	08 04 54.3	+1.0
	3.7nm,0.3s						
DGS				S	Sb	08 05 14.5	+2.1
	25nm,0.5s						
DGS	**Degeres**	**1.54**	**283**	⇓eP	Pb	08 04 53.8	+0.5
	baz=83						
DGS				⇓eS	Sb	08 05 13.4	+1.0
	baz=83						
DGS	**Degeres**	**1.54**	**283**	⇓eP	Pb	08 04 53.8	+0.5
	3.4nm,0.2s						
DGS				eS	Sb	08 05 13.3	+0.9
	25nm,0.5s						
TKM2	**Tokmak 2**	**1.64**	**271**	⇑P	Pb	08 04 56.1	+1.1
	1.0nm,0.2s						
TKM2				⇑S	Sb	08 05 18.0	+2.6
	10nm,0.5s						
TKM2	**Tokmak 2**	**1.64**	**271**	⇑iP	Pb	08 04 56.2	+1.2
	baz=71						
TKM2				⇑iS	Sb	08 05 17.9	+2.6
	baz=71						
KTMS	**Ketmen**	**1.92**	**73**	P	Pb	08 05 00.1	+0.4
	5.8nm,0.1s						
KTMS				S	Sb	08 05 24.7	+1.3
	20nm,0.2s						
KTMS	**Ketmen**	**1.92**	**73**	eP	Pb	08 05 00.1	+0.4
	baz=73						
KTMS				eS	Sb	08 05 24.7	+1.4
	baz=73						
KTMS	**Ketmen**	**1.92**	**73**	eP	Pb	08 05 00.1	+0.4
	5.8nm,0.1s						
KTMS				eS	Sb	08 05 24.7	+1.4
	20nm,0.2s						
DJR	**Jarkent**	**2.00**	**45**	P	Pb	08 05 01.2	0.0
	1.6nm,0.3s						
DJR				S	Sb	08 05 26.3	+0.6
	5.0nm,0.3s						
DJR	**Jarkent**	**2.00**	**45**	eP	Pb	08 05 01.2	0.0
	0.9nm,0.2s						
DJR				eS	Sb	08 05 26.3	+0.6
	5.4nm,0.3s						
NRN	**Naryn**	**2.01**	**223**	⇑iP	Pb	08 05 01.6	+0.1
	baz=23						
NRN				⇑iS	Sb	08 05 28.3	+2.1
	baz=23						
KZA	**Kyzart**	**2.08**	**247**	⇑iP	Pb	08 05 03.1	+0.4
	baz=47						
KZA				⇑iS	Sb	08 05 29.9	+1.6
	baz=47						
KBK	**Karagaybulak**	**2.14**	**264**	⇑iP	Pb	08 05 03.7	+0.2
	baz=64						
KBK				⇑iS	Sb	08 05 31.1	+1.5
	baz=64						
CHMS	**Chumysh**	**2.26**	**273**	⇑iP	Pb	08 05 05.3	-0.2
	baz=73						
CHMS				⇑iS	Sb	08 05 33.8	+0.8
	baz=73						
USP	**Ospenovka**	**2.46**	**279**	⇑iP	Pb	08 05 08.3	-0.7
	baz=79						
USP				⇑iS	Sb	08 05 38.9	0.0
	baz=79						
AAK	**Ala-Archa**	**2.47**	**265**	⇑Pg	Pb	08 05 10.5	+1.4
	1.1nm,0.3s						
AAK				⇑Lg	Lg	08 05 43.0	
	9.5nm,0.6s						
AAK	**Ala-Archa**	**2.47**	**265**	⇑iP	Pb	08 05 08.4	-0.8
	baz=65						
AAK				⇑iS	Sb	08 05 39.3	+0.1
	baz=65						
UCH	**Uchtor**	**2.54**	**255**	⇓iP	Pb	08 05 09.4	-1.2
	baz=55						
UCH				⇓iS	Sb	08 05 41.3	-0.3
	baz=55						
KAPS	**Kapalarasan**	**2.61**	**24**	Pg	Pb	08 05 12.1	+0.7
	3.0nm,0.3s						
KAPS				Lg	Lg	08 05 45.1	
	23nm,0.4s						
KAPS	**Kapalarasan**	**2.61**	**24**	eP	Pb	08 05 12.1	+0.7
	3.0nm,0.3s						
KAPS				eS	Sb	08 05 45.1	+2.1
	23nm,0.4s						
ARLS	**Aral**	**2.80**	**249**	⇑iP	Pb	08 05 12.8	-2.0
	baz=49						
ARLS				⇑iS	Sb	08 05 46.5	-2.3
	baz=49						
EKS2	**Erkin-Say**	**2.99**	**266**	⇓iP	Pb	08 05 15.6	-2.4
	baz=66						
EKS2				⇓iS	Sb	08 05 51.7	-2.5
	baz=66						
AML	**Almayashu**	**3.16**	**257**	⇑iP	Pb	08 05 17.9	-3.1
	baz=57						
AML				⇑iS	Sb	08 05 56.0	-3.2
	baz=57						
MAKZ	**Makanchi**	**4.88**	**36**	⇑Sn	Sn	08 06 35.0	+1.5
	1.9nm,1.4s						
MAKZ				⇑Lg	Lg	08 06 53.9	
	1.4nm,1.1s						
MK31	**Makanchi Array**	**5.00**	**38**	⇓Pn	Pn	08 05 42.4	+3.1
	0.9nm,0.9s,baz=214,slow=14						
MK31				⇓Sn	Sn	08 06 38.0	+1.5
	0.3nm,0.4s						
MK31				⇑Lg	Lg	08 07 00.1	
	0.4nm,0.5s,baz=218,slow=28						

ISCJB ***12*** *08:10:15.2±0.4, 56°.88S±0°.07×26°.7W±0°.1, h86km, mb4.3/13, Error ellipse: s-maj=12.1km s-min=7.6km az=135.5*

NEIC ***12*** *08:10:20.0±1.0, 56°.95S×26°.62W, h119km±8km, mb4.6/9, Error ellipse: s-maj=8.3km s-min=6.1km az=223.0*

IDC ***12*** *08:10:19.6±5.6, 56°.93S×26°.58W, h113km±49km, mb3.9/8, mb1 3.9/9, mb1mx3.7/28, mbtmp4.2/9, Error ellipse: s-maj=26.0km s-min=17.4km az=48.0*

ISC 12 08:10:16.5±0.5**, 56°.92S**±0°.10×**26°.57W**±0°.09**, h86km, n45, σ0s98**/40**, mb4.5**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.21**	**291**	ePn	**Pn**	**08 11 49.0**	**+3.6**
HOPE				eSn	**Sn**	**08 12 51.9**	**-3.0**
VNA1	**Neumayer--Stat**	**15.86**	**157**	P	**P**	**08 13 56.7**	**+0.4**
VNA3	**Neumayer Olymp**	**16.05**	**160**	P	**P**	**08 13 58.8**	**+0.3**
VNA2	**Neumayer--Watz**	**16.25**	**157**	P	**Pn**	**08 13 57.4**	**-1.8**
	baz=325,slow=14						
SNAA	**Sanae**	**17.81**	**155**	P	**Pn**	**08 14 18.8**	**+0.5**
SNAA	**Sanae**	**17.81**	**155**	eP	**Pn**	**08 14 18.4**	**+0.2**
	6.3nm,1.1s						
SNAA	**Sanae**	**17.81**	**155**	P	**Pn**	**08 14 18.3**	**0.0**
	0.3nm,0.3s,baz=295,slow=12,SNR=6.6						
EFI	**East Falkland**	**19.00**	**273**	eP	**Pn**	**08 14 31.9**	**-0.8**
	28nm,0.8s						
GO09	**Cerro Castillo**	**27.01**	**262**	eP	**P**	**08 15 50.2**	**+0.1**
	53nm,1.4s						
QSPA	**South Pole Qui**	**33.33**	**180**	eP	**P**	**08 16 46.3**	**+0.5**
	8.0nm,0.6s						
BDFB	**Brasilia**	**44.29**	**330**	eP	**P**	**08 18 18.1**	**+0.5**
	3.2nm,0.8s						
BDFB	**Brasilia**	**44.29**	**330**	P	**P**	**08 18 18.1**	**+0.5**
	1.6nm,0.5s,baz=160,slow=7.1,SNR=4.0						
VNDA	**Vanda**	**45.72**	**183**	eP	**P**	**08 18 28.6**	**+0.4**
VNDA	**Vanda**	**45.72**	**183**	P	**P**	**08 18 28.9**	**+0.7**
	2.2nm,0.6s,baz=189,slow=6.6,SNR=6.6						
BOSA	**Boshof**	**45.86**	**74**	P	**P**	**08 18 30.3**	**+0.2**
	2.8nm,0.8s,baz=249,slow=5.7,SNR=3.8						
LVC	**Limon Verde**	**46.03**	**300**	P	**P**	**08 18 32.6**	**+0.9**
	6.7nm,0.8s,baz=144,slow=7.1,SNR=6.5						
SIV	**San Ignacio**	**48.42**	**313**	P	**P**	**08 18 49.1**	**-0.8**
	1.0nm,0.7s,baz=139,slow=8.3,SNR=3.2						
H10S2	**ASCENSION HYDR**	**48.74**	**16**	T	T	09 11 36.9	
	baz=189,slow=75,SNR=22						
H10S3	**ASCENSION HYDR**	**48.74**	**16**	T	T	09 11 36.4	
	baz=189,slow=75,SNR=17						
H10S1	**ASCENSION HYDR**	**48.76**	**16**	T	T	09 11 38.2	
	baz=189,slow=75,SNR=19						
LBTB	**Lobatse**	**48.94**	**72**	eP	**P**	**08 18 54.0**	**+0.1**
	22nm,1.6s						
MNMC	**Minye Minye**	**49.35**	**302**	eP	**P**	**08 18 57.0**	**-0.3**
	4.7nm,0.8s						
H10N1	**ASCENSION HYDR**	**49.86**	**16**	T	T	09 13 03.4	
	baz=188,slow=75,SNR=8.1						
H10N3	**ASCENSION HYDR**	**49.86**	**16**	T	T	09 12 60.0	
	baz=188,slow=75,SNR=26						
H10N2	**ASCENSION HYDR**	**49.87**	**16**	T	T	09 12 59.1	
	baz=188,slow=75,SNR=17						
LPAZ	**La Paz**	**51.16**	**305**	eP	**P**	**08 19 11.3**	**0.0**
	4.3nm,0.4s						
LPAZ	**La Paz**	**51.16**	**305**	P	**P**	**08 19 11.4**	**+0.1**
	3.3nm,0.4s,baz=153,slow=6.8,SNR=26						
TOA0	**Torodi Ar. Sit**	**73.65**	**29**	eP	**P**	**08 21 41.2**	**+0.8**
TORD	**Torodi Ar. Bea**	**73.65**	**29**	P	**P**	**08 21 41.0**	**+0.6**
	1.2nm,0.7s,baz=204,slow=6.0,SNR=7.2						
TOA1	**Torodi Ar. Sit**	**73.65**	**29**	eP	**P**	**08 21 41.0**	**+0.6**
SDV	**Santo Domingo**	**74.87**	**315**	eP	**P**	**08 21 47.4**	**-0.4**
	4.1nm,0.6s						
ASAR	**Alice Springs**	**98.06**	**162**	P	**P**	**08 23 42.6**	**-0.6**
	0.3nm,0.6s,baz=188,slow=3.2,SNR=4.2						
PDAR	**Pinedale Array**	**121.09**	**301**	PKP	**PKPdf**	**08 28 57.2**	**-1.2**
	0.3nm,0.4s,baz=114,slow=5.3,SNR=8.0						
ULM	**Lac du Bonnet**	**121.11**	**315**	PKP	**PKPdf**	**08 28 56.6**	**-1.3**
	1.1nm,0.5s,baz=149,slow=5.9,SNR=4.3						
NVAR	**Mina Array Bea**	**122.05**	**292**	PKP	**PKiKP**	**08 29 00.7**	**+0.1**
	0.5nm,0.7s,baz=154,slow=2.9,SNR=4.2						
FIA0	**FINESS Array S**	**124.99**	**28**	ePKPdf	**PKPdf**	**08 29 04.4**	**-0.5**
FINES	**FINESS Array B**	**124.99**	**28**	PKP	**PKPdf**	**08 29 04.4**	**-0.5**
	0.9nm,0.7s,baz=163,slow=1.5,SNR=5.2						
ARA0	**ARCESS Array S**	**131.62**	**22**	ePKPdf	**PKPdf**	**08 29 17.1**	**-0.3**
ARCES	**ARCESS Array B**	**131.62**	**22**	PKP	**PKPdf**	**08 29 17.1**	**-0.3**
	3.0nm,1.0s,baz=205,slow=1.9,SNR=7.9						
YKA	**Yellowknife Ar**	**137.05**	**317**	PKP	**PKPdf**	**08 29 27.2**	**-0.5**
	1.7nm,0.5s,baz=129,slow=2.2,SNR=5.4						
YKB5	**Yellowknife Ar**	**137.05**	**317**	ePKPdf	**PKPdf**	**08 29 27.3**	**-0.4**
SONA0	**Songino Array**	**150.43**	**88**	ePKPbc	**PKPbc**	**08 29 56.7**	**-0.3**
SONM	**Songino Array**	**150.43**	**88**	PKPbc	**PKPbc**	**08 29 56.7**	**-0.3**
	1.2nm,0.5s,baz=219,slow=3.1,SNR=15						
ILAR	**Eielson Array**	**150.95**	**310**	PKPbc	**PKPbc**	**08 29 57.2**	**-0.3**
	6.9nm,0.8s,baz=140,slow=2.0,SNR=97						
ILB	**Eielson Array**	**150.95**	**310**	ePKPbc	**PKPbc**	**08 29 57.2**	**-0.3**

*IDC **12** 08:12:42.5±1.0, 34.°21S×72.°13W, h0km, mb4.1/6, mb1 4.2/8, mb1mx3.9/28, mbtmp4.1/8, ML3.7/2, MS3.5/5, Ms1 3.5/5, ms1mx3.2/22, Error ellipse: s-maj=43.8km s-min=20.9km az=103.0*
*SJA **12** 08:12:42.7±0.7, 33.°93S×73.°06W, h33km, ML4.1, MW4.0*
*ISCJB **12** 08:12:44.8±0.9, 34.°21S±0.°04×72.°43W±0.°06, h29km±6km, mb4.2/7, MS3.3/3, Error ellipse: s-maj=8.3km s-min=6.3km az=34.4*
*NEIC **12** 08:12:44.0±0.0, 34.°23S×72.°25W, h42km, mb4.4/5, ML3.8(GUC), After GUC.*
*GUC **12** 08:12:44.9±0.6, 34.°23S×72.°25W, h42km±5km, ML3.8*
ISC 12 08:12:46.8±1.4, **34.°18S**±0.°05×**72.°37W**±0.°07, **h29**km±9km, **n62**, σ**1.s56**/67, **mb4.3**/7, **MS3.5**/3, **3C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.37	125	eP	Pb	08 12 53.4	-1.7
CHPI				eS	Sn	08 12 59.4	-3.0
ROC1	El Roble	1.65	44	ePn	Pn	08 13 12.7	-1.3
ROC1	El Roble	1.65	44	eP	Pn	08 13 13.6	-0.4
ROC1				i S	Sb	08 13 40.4	+3.3
ROCH	El Roble	1.65	44	⇑eP	Pn	08 13 13.5	-0.5
ROCH				eS	Sb	08 13 35.5	-1.7
ROCH				IAML		08 13 44.4	
	comp=N,2µm,0.3s						
CLCH	Cerro Calan	1.71	63	⇑eP	Pn	08 13 13.6	-1.1
CLCH				eS	Sn	08 13 35.4	-0.3
CLCH				IAML		08 13 56.1	
	comp=E,3µm,0.5s						
PEL	Peldehue	1.74	54	ePn	Pn	08 13 14.2	-0.9
PEL	Peldehue	1.74	54	eP	Pn	08 13 14.5	-0.6
PEL				i S	Sb	08 13 45.3	+5.6
PEL	Peldehue	1.74	54	⇑eP	Pn	08 13 14.4	-0.6
PEL				eS	Sn	08 13 36.4	0.0
PEL				IAML		08 13 43.7	
	comp=E,1µm,0.6s						
LMEL	Las Melosas	1.83	80	eP	Pn	08 13 14.4	-2.0
LMEL				eS	Sn	08 13 38.0	-0.6
FCH	Farellones	1.93	64	⇓eP	Pn	08 13 17.3	-0.6
FCH				eS	Sn	08 13 41.8	+0.5
FCH				IAML		08 13 49.1	
	comp=E,2µm,0.4s						
AAGR	Agrelo	3.15	71	eP	Pb	08 13 41.8	-0.4
ARCO	CERRO ARCO	3.17	66	i P	Pb	08 13 39.6	-2.8
ARCO				IAML		08 13 45.7	
	comp=Z,379nm,0.5s						
AVIZ	Vizcacheras	3.28	79	eP	Pb	08 13 42.1	-2.3
ASAL	Salagasta	3.35	63	i P	Pb	08 13 42.3	-3.3
RTCV	Cerro Valdivia	3.96	55	eP	Pn	08 13 46.7	+1.1
SJA	San Juan	4.16	52	eP	Pn	08 13 43.4	-4.8
SJA				IAML		08 14 29.6	
	comp=Z,102nm,0.6s						
GO04	Tololo Observa	4.21	19	ePn	Pn	08 13 48.4	-0.9
GO04	Tololo Observa	4.21	19	eP	Pn	08 13 48.3	-0.9
RTLL	Cerro Villicun	4.34	50	eP	Pn	08 13 51.8	+0.9
RTLL				IAML		08 14 58.1	
	comp=N,455nm,0.6s						
ACCO	Cerro Coronel	4.54	39	eP	Pn	08 13 55.4	+1.6
AMOG	MOGNA	4.60	46	eP	Pn	08 13 55.6	+1.2
AROD	Rodeo	4.69	32	eP	Pn	08 13 57.7	+1.8
ACAN	Cantantal	4.74	68	eP	Pn	08 13 59.1	+2.8
ACDV	Cuesta del Vie	4.85	35	eP	Pn	08 13 59.7	+1.7
LCO	Las Campanas	5.34	16	ePn	Pn	08 14 03.5	-1.4
LCO	Las Campanas	5.34	16	eP	Pn	08 14 03.7	-1.2
GO06	Curarrehue	5.44	173	ePn	Pn	08 14 06.9	+0.9
AGUA	GUANDACOL	5.72	36	eP	Pn	08 14 11.0	+1.1
MRA	San Martin	5.84	74	eP	Pn	08 14 12.5	+1.0
MRA				IAML		08 16 01.1	
	comp=Z,32nm,0.6s						
APLL	PUNTA DE LOS L	6.22	54	eP	Pn	08 14 21.9	+5.2
PLCA	Paso Flores	6.70	168	ePn	Pn	08 14 23.3	+0.1
GO03	Copiap	6.81	16	ePn	Pn	08 14 23.0	-1.8
CYA	Choya	8.02	46	IAML		08 16 26.1	
	comp=Z,19nm,0.8s						
TRQA	Tornquist	9.25	118	ePn	Pn	08 14 56.8	-1.4
GO02	Mina Guanaco	9.30	16	ePn	Pn	08 14 56.8	-2.4
PB10	IPOC Station P	10.74	9	ePn	Pn	08 15 19.5	+0.8
LVC	Limon Verde	11.92	16	Pn	Pn	08 15 34.0	-1.1
	comp=Z,0.2nm,0.3s,baz=201,slow=14,SNR=2.2						
LVC				LR	LR	08 20 32.3	
	comp=Z,228nm,19.1s,baz=208,slow=40						
CPUP	Villa Florida	15.16	63	ePn	Pn	08 16 18.5	-0.3
CPUP	Villa Florida	15.16	63	Pn	Pn	08 16 20.4	+1.5
	comp=Z,0.1nm,0.3s,baz=234,slow=16,SNR=2.9						
CPUP				Sn	Sn	08 19 07.4	+1.6
	comp=Z,0.0nm,0.3s,baz=312,slow=9.0,SNR=1.9						
CPUP				LR	LR	08 22 38.6	
	comp=Z,266nm,19.0s,baz=236,slow=40						
MNMC	Minye Minye	15.19	10	ePn	Pn	08 16 20.5	+1.0
	comp=Z,8.0nm,0.8s						
LPAZ	La Paz	18.22	13	ePn	P	08 16 58.6	+0.4
	comp=Z,8.8nm,0.9s						
LPAZ	La Paz	18.22	13	P	P	08 16 59.2	+1.0
	comp=Z,0.2nm,0.3s,baz=179,slow=5.9,SNR=10						
SIV	San Ignacio	20.77	32	P	P	08 17 24.5	-1.0
	comp=Z,4.9nm,0.8s,baz=232,slow=8.4,SNR=24						
SIV				LR	LR	08 26 59.5	
	comp=Z,197nm,20.5s,baz=270,slow=41						
NNA	Nana	22.46	348	LR	LR	08 24 34.5	
	comp=Z,46nm,18.1s,baz=141,slow=32						
BDFB	Brasilia	28.66	56	P	P	08 18 39.5	-1.8
	comp=Z,1.9nm,0.8s,baz=214,slow=11,SNR=5.0						
BDFB				LR	LR	08 31 26.9	
	comp=Z,115nm,20.2s,baz=256,slow=39						
SNAA	Sanae	51.52	158	eP	P	08 21 49.6	+0.1
	comp=Z,6.4nm,1.1s						
SNAA	Sanae	51.52	158	P	P	08 21 49.6	+0.1
	comp=Z,2.6nm,0.9s,baz=240,slow=8.1,SNR=5.4						
QSPA	South Pole Qui	56.06	180	P	P	08 22 23.6	+0.8
	comp=Z,3.8nm,0.9s,baz=144,slow=3.0,SNR=4.0						
V48A	Smith Brothers	70.86	348	eP	P	08 24 01.2	+0.5
	comp=Z,6.0nm,0.8s						
WVT	Waverly	71.42	347	eP	P	08 24 04.6	+0.5
	comp=Z,8.0nm,0.9s						
NVAR	Mina Array Bea	83.87	325	P	P	08 25 15.5	+1.7
	comp=Z,0.2nm,0.5s,baz=147,slow=5.2,SNR=3.0						
TOA0	Torodi Ar. Sit	84.53	70	eP	P	08 25 16.2	-1.1
TORD	Torodi Ar. Bea	84.53	70	P	P	08 25 16.7	-0.6
	comp=Z,1.8nm,0.9s,baz=244,slow=3.9,SNR=7.5						
TOA1	Torodi Ar. Sit	84.53	70	eP	P	08 25 16.8	-0.6
WR1	Warramunga Arr	120.47	209	ePKPdf	PKPdf	08 31 34.8	-1.2
WRA	Warramunga Arr	120.47	209	PKP	PKPdf	08 31 34.8	-1.2
	comp=Z,0.2nm,0.6s,baz=158,slow=1.8,SNR=4.7						
KURBB	Kurchatov Arra	153.19	43	PKPbc	PKPbc	08 32 41.5	+0.3
	comp=Z,0.8nm,0.5s,baz=304,slow=2.8,SNR=6.0						
KURK	Kurchatov	153.20	43	ePKPbc	PKPbc	08 32 41.5	+0.3
ZAA1	Zalesovo Array	154.52	32	ePKPbc	PKPbc	08 32 43.5	-0.5
ZALV	Zalesovo Beam	154.52	32	PKPbc	PKPbc	08 32 43.5	-0.5
	comp=Z,1.9nm,0.8s,baz=297,slow=2.8,SNR=5.8						
MK32	Makanchi Array	157.09	49	ePKPab	PKPab	08 33 09.2	-0.6
MKAR	Makanchi Array	157.09	49	PKPab	PKPab	08 33 09.3	-0.6
	comp=Z,0.3nm,0.7s,baz=306,slow=3.4,SNR=2.4						

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*ISCJB **12** 08:26:36.2±0.7, 34.°44N±0.°04×28.°11E±0.°09, h48km, Error ellipse: s-maj=11.0km s-min=6.1km az=4.6*
*HLW **12** 08:26:37.6, 34.°46N×27.°97E, h12km±9km, Md3.5, Ml3.2*
ISC 12 08:26:36.4±1.4, **34.°46N**±0.°06×**27.°98E**±0.°08, **h48**km, **n10**, σ**2.s19**/14, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAS	Kas	2.21	37	i P	Pn	08 27 12.1	+1.4
AKAS				i S	Sn	08 27 35.1	-1.7
AKAS				IAML_P			
	comp=Z,643nm,0.2s						
DALY	Dalyan (Mula)	2.41	13	i P	Pn	08 27 12.8	-0.5
DALY				IAML_P			
	comp=Z,228nm,0.2s						
AYDN	Tasoluk	3.19	359	i P	Pn	08 27 26.0	+1.9
AYDN				IAML_P			
	comp=Z,255nm,0.2s						
SLUM	Salum	3.77	219	P	Pn	08 27 33.0	+1.0
	baz=219						
SWA2		5.63	203	P	Pn	08 27 59.6	+2.1
	baz=204						
HSAF	As Saff	5.70	147	P	Pn	08 28 00.4	+1.8
	baz=146						
GLL	Jalalah	5.81	146	P	Pn	08 28 01.4	+1.4
	baz=145						
GLL				S	Sn	08 29 03.4	-2.0
	baz=145						
RSH		5.97	124	P	Pn	08 28 04.7	+2.6
	baz=124						
HNKL	Nakhl	6.80	130	P	Pn	08 28 15.2	+1.5
	baz=129						
HNKL				S	Sn	08 29 27.2	-2.6
	baz=129						
HFRF	Wahat Farafira	7.30	178	P	Pn	08 28 22.4	+2.0
	baz=177						
HFRF				AMP		08 29 00.0	
	baz=177						
HFRF				S	Sn	08 29 38.8	-3.2
	baz=177						

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*ISCJB **12** 08:42:34.1±0.3, 24.°43N±0.°01×122.°02E±0.°01, h0km±3km, Error ellipse: s-maj=2.6km s-min=2.0km az=151.4*
*JMA **12** 08:42:34.6±0.1, 24.°41N×121.°96E, h17km, M3.4*
*TAP **12** 08:42:34.8, 24.°45N×121.°95E, h13km, ML3.7, B*
ISC 12 08:42:34.3±0.9, **24.°43N**±0.°02×**121.°99E**±0.°02, **h11**km±6km, **n101**, σ**0.s70**/149, **13C-17D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.17	46	⇑P	Pb	08 42 39.4	-0.1
	baz=52						
EOS1				S	Sb	08 42 43.0	+2.2
	baz=52						
NANB	Nanao	0.22	270	⇓P	Pg	08 42 39.3	+0.4
	baz=269						
NANB				S	Sg	08 42 42.0	-0.1
	baz=269						
TWC	Suao	0.22	325	⇑iP	Pg	08 42 39.1	+0.2
	baz=337						
TWC				S	Sg	08 42 41.4	-0.7
	baz=337						
ENA	Nanau	0.23	270	⇓iP	Pg	08 42 39.4	+0.3
	baz=268						
ENA				i S	Sg	08 42 42.2	-0.1
	baz=268						
ILA	Ilan	0.40	327	⇑iP	Pb	08 42 42.9	-0.5
	baz=329						
ILA				i S	Sg	08 42 48.0	+0.4
	baz=329						
EGS		0.42	353	⇑iP	Pg	08 42 43.0	+0.4
	baz=350						
EGS				eS	Sb	08 42 49.5	-0.5
	baz=350						
ENTT	Nioudou	0.44	299	⇓iP	Pg	08 42 43.3	+0.3
	baz=297						
ENTT				S	Sg	08 42 48.5	-0.3
	baz=297						
NACB	Ninganchiao	0.44	235	⇑P	Pg	08 42 43.3	+0.4
	baz=230						
NACB				S	Sg	08 42 49.3	+0.5
	baz=230						
NTC	Toucheng	0.45	341	eP	Pg	08 42 43.5	+0.4
	baz=353						
NDT	Datong Townshi	0.47	292	⇓iP	Pg	08 42 43.9	+0.4
	baz=290						
NDT				S	Sg	08 42 49.5	-0.2
	baz=290						
TWD	Chiawan	0.50	226	⇑iP	Pg	08 42 44.5	+0.4
	baz=221						
TWD				S	Sb	08 42 51.6	-0.8
	baz=221						
ETLH	Xiulin Townshi	0.51	245	P	Pg	08 42 44.7	+0.3
	baz=241						
ETLH				S	Sg	08 42 51.6	+0.5
	baz=241						
NNSB	Datong	0.55	270	⇓P	Pg	08 42 45.4	+0.2
	baz=268						
NNSB				eS	Sg	08 42 52.4	0.0
	baz=268						
TIPB	Shuangxi	0.56	345	⇑eP	Pg	08 42 45.6	+0.4
	baz=353						
TIPB				S	Sg	08 42 52.7	0.0
	baz=353						
NNS	Nan Shan	0.56	271	⇓iP	Pg	08 42 45.5	+0.2
	baz=268						
NNS				S	Sg	08 42 52.7	0.0
	baz=268						
NWLT	Wulai	0.56	308	P	Pb	08 42 45.7	-0.5
	baz=300						
NWLT				eS	Sg	08 42 52.4	-0.3
	baz=300						
HWA	Hwalien	0.57	218	eP	Pb	08 42 46.3	0.0
	baz=221						
TWB1	Santiao Chiao	0.58	360	⇑iP	Pg	08 42 45.8	+0.3
	baz=354						
TWB1				S	Sg	08 42 53.6	+0.4
	baz=354						
YHNB	Yeheng	0.61	293	⇓P	Pb	08 42 46.6	-0.3
	baz=297						
YHNB				S	Sg	08 42 53.4	-0.8
	baz=297						
NSK	Sanguang	0.63	293	⇓iP	Pb	08 42 46.8	-0.4
	baz=297						
NSK				eS	Sg	08 42 53.9	-0.8
	baz=297						
ENLB	Shoufeng	0.63	214	eP	Pn	08 42 48.5	-0.7
	baz=220						
TWA	Mucha	0.66	326	eP	Pb	08 42 47.6	-0.2
	baz=327						
TWA				eS	Sg	08 42 55.2	-0.7
	baz=327						
NWF	Wu-fen Shan	0.67	344	⇑P	Pb	08 42 48.3	+0.3
	baz=333						
NWF				S	Sg	08 42 56.3	+0.2
	baz=333						
WFSB	Wu-fen Shan	0.67	344	⇑P	Pb	08 42 47.9	0.0
	baz=333						
WFSB				S	Sg	08 42 56.0	0.0
	baz=333						
NHDH	Xindian Distri	0.68	322	eP	Pb	08 42 48.6	+0.4
	baz=310						
NHDH				eS	Sg	08 42 56.4	-0.1
	baz=310						
TATO	Taipei	0.71	320	eP	Pn	08 42 49.3	-0.9
	baz=309						
TATO				S	Sg	08 42 57.2	-0.2
	baz=309						
WHF	Hehuan Shan	0.72	247	⇓iP	Pg	08 42 48.5	+0.2
	baz=254						
WHF				S	Sb	08 42 58.3	-0.8
	baz=254						
TWT	Tachien	0.76	257	P	Pb	08 42 49.6	-0.1
	baz=255						
TWT				S	Sg	08 42 59.2	+0.1
	baz=255						
TDCB	Techi	0.78	257	⇓P	Pb	08 42 49.7	-0.2
	baz=255						
TDCB				eS	Sg	08 42 59.0	-0.5
	baz=255						
WLTB	Daxi	0.79	302	⇓P	Pn	08 42 51.0	-0.4
	baz=301						
WLTB				S	Sb	08 43 00.8	0.0
	baz=301						
YM01	YM01	0.81	332	⇑P	Pn	08 42 51.1	-0.6
	baz=332						
YM01				S	Sg	08 43 00.6	0.0
	baz=332						
YM11	YM11	0.82	333	⇑eP	Pn	08 42 51.2	-0.7
	baz=343						
YM05	YM05	0.83	332	eP	Pb	08 42 51.1	+0.4
	baz=342						
CHGB	Renai	0.83	244	⇓P	Pb	08 42 50.7	-0.1
	baz=251						
CHGB				S	Sg	08 43 01.5	+0.2
	baz=251						
YM04	YM04	0.83	330	eP	Pg	08 42 50.5	+0.1
	baz=331						
YM08	YM08	0.84	334	P	Pb	08 42 51.3	+0.4
	baz=335						
TWS1	Kuangyinshan	0.85	322	eP	Pn	08 42 52.0	-0.2
	baz=322						
JYNG	Yonagunijimaku	0.87	88	P	Pg	08 42 51.0	-0.1
JYNG				eS	Sg	08 43 02.9	+0.4
OWD	Renai	0.88	238	eP	Pg	08 42 51.4	+0.1
	baz=230						
NTST	Danshui	0.88	326	eP	Pn	08 42 53.0	+0.4
	baz=326						
NCU	National Centr	0.91	307	P	Pn	08 42 53.4	+0.4
	baz=306						
NCU				eS	Sn	08 43 06.3	+0.3
	baz=306						
NCUH	Zhongli	0.91	306	eP	Pn	08 42 53.2	+0.2
	baz=295						
LIOB	Emei	0.91	284	⇓P	Pb	08 42 52.1	-0.1
	baz=283						
EGFH	Guangfu	0.92	214	eP	Pb	08 42 52.2	+0.1
	baz=225						
TWY	Chenhua	0.92	337	eP	Pn	08 42 53.0	0.0
	baz=337						
TWY				eS	Sg	08 43 03.7	-0.2
	baz=337						
NSTT	Nanjuang	0.92	283	⇓iP	Pn	08 42 52.9	-0.3
	baz=281						
YOJ	Yonaguni jima	0.93	88	⇓P	Pb	08 42 52.6	+0.2
	baz=89						
YOJ				eS	Sb	08 43 05.6	+0.8
	baz=89						
YOJ	Yonaguni jima	0.93	88	P	Pb	08 42 52.6	+0.2
YOJ				eS	Sg	08 43 04.8	+0.4
WHP	Taichung City	0.96	261	P	Pn	08 42 53.7	-0.1
	baz=260						
WHP				eS	Sb	08 43 05.9	0.0
	baz=260						
SBCB	Hsinchu	0.98	292	eP	Pn	08 42 54.7	+0.7
	baz=284						
SBCB				eS	Sn	08 43 08.6	+0.7
	baz=284						
HSN	Hsinchu	1.00	292	⇑eP	Pn	08 42 54.7	+0.5
	baz=288						
HSN				eS	Sn	08 43 08.1	-0.2
	baz=288						
VWDT	VWDT	1.03	229	⇓eP	Pg	08 42 54.3	+0.2
	baz=232						
VWDT				eS	Sn	08 43 08.3	-0.7
	baz=232						
HGSD	Ruisui	1.07	209	eP	Pn	08 42 55.6	+0.5
	baz=208						
NMLH	Miaoli	1.10	276	eP	Pn	08 42 57.0	+1.4
	baz=274						
EHY	Hungye	1.10	214	eP	Pb	08 42 55.3	-0.1
	baz=225						
TWQ1	Liyutan	1.11	266	eP	Pg	08 42 56.5	+0.8
	baz=265						
NSY	Sanyi	1.12	270	eP	Pg	08 42 57.2	+1.4
	baz=268						
SMLT	Sun Moon Lake	1.13	242	eP	Pg	08 42 56.4	+0.3
	baz=247						
SMLT				eS	Sg	08 43 10.8	-0.1
	baz=247						
SSLB	Suanglung	1.14	236	⇓P	Pg	08 42 56.3	+0.1
	baz=242						
SSLB				eS	Sb	08 43 09.9	-0.9
	baz=242						
TYC	Yuchr	1.16	243	eP	Pg	08 42 57.0	+0.4
	baz=242						
PTSB	Yuanli	1.17	271	eP	Pg	08 42 58.3	+1.4
	baz=270						
YULB	Yu-li	1.21	212	eP	Pn	08 42 56.7	-0.4
	baz=212						
TCU	Taichung	1.23	257	eP	Pg	08 42 59.9	+2.0
	baz=256						
WDJ	Dajia District	1.23	267	eP	Pg	08 42 59.6	+1.6
	baz=265						
TWF1	Yuli	1.25	211	eP	Pn	08 42 57.4	-0.2
	baz=226						
WHYT	Xinyi Township	1.27	235	eP	Pg	08 42 59.6	+0.9
	baz=234						
WJS	Zhushan	1.30	243	eP	Pg	08 43 01.1	+1.8
	baz=234						
WNT	Mingjian	1.31	246	eP	Pg	08 43 01.1	+1.6
	baz=238						
WCHH	Zhanghua	1.35	255	eP	Pg	08 43 00.4	+0.1
	baz=254						
ALS	Alishan	1.42	230	eP	Pg	08 43 01.8	+0.2
	baz=217						
ALS				eS	Sg	08 43 22.3	+2.3
	baz=217						
CHN5	Tsauling	1.46	236	eP	Pg	08 43 03.5	+1.2
	baz=236						
CHN5				eS	Sg	08 43 23.5	+2.3
	baz=236						
WDLH	Douliu	1.52	241	eP	Pg	08 43 03.9	+0.4
	baz=241						
ELDTW	Lidau	1.52	216	eP	Pg	08 43 03.5	0.0
	baz=203						
RLNB	Erlin	1.58	251	eP	Pg	08 43 05.5	+0.8
	baz=250						
IRIF	Iriomote-Funau	1.59	93	P	Pn	08 43 02.1	-0.2
IRIF				S	Sn	08 43 22.5	-0.4
CHN2	Minshiung	1.65	238	eP	Pg	08 43 06.6	+0.7
	baz=224						
CHN4	Tsaushan	1.67	230	eP	Pg	08 43 07.0	+0.7
	baz=231						
TPUB	Ta-pu	1.68	228	eP	Pg	08 43 06.4	0.0
	baz=229						
STYT	Tauyuan	1.69	222	eP	Pb	08 43 05.8	+0.4
	baz=223						
HATJ	Hateruma jima	1.70	102	P	Pn	08 43 04.6	+0.8
HATJ				eS	Sn	08 43 26.2	+0.7
CHY	Chiayi	1.71	237	eP	Pg	08 43 07.2	+0.2
	baz=224						
WTP	Ta-pu	1.72	227	eP	Pb	08 43 06.6	+0.6
	baz=228						
TWK	Hsinying	1.80	230	eP	Pg	08 43 08.5	-0.3
	baz=231						
TWG	Pinlang	1.81	208	eP	Pn	08 43 06.0	+0.6
	baz=209						
TWGBT	Beinan	1.81	208	eP	Pn	08 43 04.0	-1.3
	baz=209						
SNST	Tainan City	1.82	229	eP	Pb	08 43 08.1	+0.4
	baz=231						
CHN1	Nanshi	1.82	228	eP	Pg	08 43 08.9	-0.4
	baz=229						
JKRS	Kuro-shima	1.85	95	P	Pn	08 43 06.2	+0.3
JKRS				eS	Sn	08 43 29.1	-0.2
SGST	Jiashian	1.86	224	eP	Pb	08 43 09.1	+0.8
	baz=225						
SLGT	Liugui	1.89	221	eP	Pb	08 43 09.3	+0.6
	baz=222						
JIJ	Ishigaki jima	1.96	91	P	Pn	08 43 07.2	-0.3
JIJ				S	Sn	08 43 30.8	-1.3
ECL	Taimali	2.06	208	eP	Pb	08 43 11.1	-0.5
	baz=209						
SSD	Sandimen	2.09	217	eP	Pb	08 43 11.4	-0.7
	baz=229						
JISG	Ishigakijimahi	2.12	85	P	Pn	08 43 09.3	-0.3
JISG				eS	Sn	08 43 34.6	-1.4
MASBT	Mashibuluo	2.20	215	eP	Pb	08 43 13.1	-0.9
	baz=207						
VWUC	VWUC	2.38	284	eP	Pn	08 43 13.5	+0.3
	baz=282						
PHUB	P'eng-hu	2.39	248	eP	Pb	08 43 16.1	-1.2
	baz=249						
SCZT	Fangliau	2.40	212	eP	Pb	08 43 16.4	-1.1
	baz=214						
LAY	Lan-yu	2.41	190	eP	Pn	08 43 12.6	-1.1
	baz=189						
JTJ	Tarama	2.48	85	P	Pn	08 43 15.2	+0.6
JTJ				S	Sn	08 43 44.4	-0.4
JIRB	Irabujima	2.92	82	P	Pn	08 43 21.6	+0.9

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*GUC **12** 08:44:58.5±0.5, 34.°21S×72.°25W, h35km±3km, ML3.0*
ISC 12 08:44:58.7±2.0, **34.°09S**±0.°07×**72.°2W**±0.°1, **h12**km±12km, **n16**, σ**1.s14**/27, **1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.35	150	⇑eP	Pg	08 45 05.5	-0.3
CHPI				eS	Sg	08 45 10.6	+0.2
ROC1	El Roble	1.49	42	eP	Pn	08 45 25.0	-0.5
ROC1				eS	Sn	08 45 44.6	-0.4
ROCH	El Roble	1.50	42	eP	Pn	08 45 24.7	-0.9
ROCH				eS	Sb	08 45 45.4	-0.3
CLCH	Cerro Calan	1.56	64	eP	Pn	08 45 25.8	-0.5
CLCH				eS	Sn	08 45 46.3	-0.1
CLCH				IAML		08 45 59.2	
	comp=E,353nm,0.7s						
PEL	Peldehue	1.58	54	⇓eP	Pn	08 45 26.5	-0.1
PEL				eS	Sb	08 45 47.7	-0.2
PEL				IAML		08 45 59.5	
	comp=N,268nm,0.4s						
LMEL	Las Melosas	1.69	82	⇓eP	Pn	08 45 27.5	-0.6
LMEL				eS	Sn	08 45 49.3	-0.4
FCH	Farellones	1.77	65	eP	Pn	08 45 28.9	-0.5
FCH				eS	Sb	08 45 52.8	-0.8
FCH				IAML		08 46 00.1	
	comp=N,234nm,0.3s						
AAGR	Agrelo	3.00	71	i P	Pb	08 45 52.8	+0.7
ARCO	CERRO ARCO	3.01	67	eP	Pb	08 45 52.2	-0.2
ARCO				IAML		08 45 57.5	

	comp=Z,37nm,0.5s						
ARCO				*i* S	Sg	08 46 36.7	+1.2
AUSP	Uspallata	3.01	53	*e*P	Pb	08 45 51.4	-1.0
AUSP				*e*S	Sg	08 46 37.2	+1.7
ASAL	Salagasta	3.20	63	*e*P	Pb	08 45 54.4	-1.1
ASAL				*e*S	Sg	08 46 39.9	-1.5
ACCO	Cerro Coronel	4.39	38	*e*P	Pn	08 46 06.9	+1.5
AMOG	MOGNA	4.44	46	*e*P	Pn	08 46 06.8	+0.9
ACDV	Cuesta del Vie	4.70	35	*i* P	Pn	08 46 10.8	+1.1
ACDV				*e*P	Pn	08 46 11.0	+1.4
AGUA	GUANDACOL	5.57	36	*e*P	Pn	08 46 22.2	+0.7
MRA	San Martin	5.69	75	*e*P	Pn	08 46 26.4	+3.3
MRA				IAML		08 48 15.1	
	comp=Z,4.0nm,0.5s						

*NEIC **12** 08:51:32.6±0.3, 3°.25S×129°.06E, h10^{km}, mb4.3/16, Error ellipse: s-maj=8.1km s-min=4.4km az=65.0*
*ISCJB **12** 08:51:34.7±0.3, 3°.39S±0°.03×128°.83E±0°.04, h37^{km}, mb4.3/18, MS3.5/8, Error ellipse: s-maj=5.5km s-min=4.3km az=140.3*
*DJA **12** 08:51:36.3±1.5, 3°S±6°×12°9E±°, h29^{km}±15^{km}, M4.7/8, mb5.0/5, mB5.2/3, MLv4.6/8, Mw(mB)4.6/3*
*IDC **12** 08:51:39.5±2.2, 3°.35S×128°.99E, h61^{km}±22^{km}, mb3.8/8, mb1 4.0/11, mb1mx3.8/29, mbtmp4.1/11, ML3.7/3, MS3.5/10, Ms1 3.5/10, ms1mx3.3/33, Error ellipse: s-maj=20.0km s-min=10.9km az=91.0*
ISC 12 08:51:36.8±0.5, **3°.40S**±0°.05×**128°.85E**±0°.05, **h37^{km}, n64, σ1^s.68**/61, **mb4.4**/18, **MS3.4**/8, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.53	137	P	Pn	08 52 01.8	+0.3
NLAI	Namlea	1.76	275	P	Pn	08 52 05.6	+1.0
SANI	Sanana	3.16	295	P	Pn	08 52 21.2	-2.8
SANI				S	Sn	08 52 59.0	-1.4
FAKI	Fak Fak	3.42	82	*e*Pn	Pn	08 52 23.0	-4.6
FAKI	Fak Fak	3.42	82	S	Sn	08 53 10.0	+3.0
SIJI	Sorong	3.48	44	P	Pn	08 52 28.2	-0.3
	12nm,0.3s,baz=262,slow=11,SNR=19						
SIJI				S	Sn	08 53 09.0	+0.5
	9.4nm,0.3s,baz=59,slow=19,SNR=7.8						
SWI	Sorong	3.48	44	P	Pn	08 52 27.7	-0.7
TNTI	Ternate	4.40	340	*e*Pn	Pn	08 52 37.1	-3.9
SAUI	Saumlaki	5.16	152	*e*Pn	Pn	08 52 51.4	-0.2
KMSI	Cibinong	6.27	309	P	Pn	08 53 06.5	-0.2
	144nm,0.7s,2.5nm						
LUWI	Luwuk	6.51	291	*e*Pn	Pn	08 53 11.0	+1.0
LUWI	Luwuk	6.51	291	P	Pn	08 53 09.6	-0.5
	125nm,0.7s,9μm0.9nm						
APSI	Ampana	7.61	289	P	Pn	08 53 26.1	+0.9
	104nm,1.0s,876nm0.5nm						
SOEI	Soe	7.79	216	*e*Pn	Pn	08 53 30.3	+2.6
MRSI	Marisa	7.91	299	P	Pn	08 53 28.7	-0.6
BATI	Baumata	8.50	217	P	Pn	08 53 43.1	+5.7
	2.7nm,0.3s,baz=106,slow=3.3,SNR=7.4						
BATI				LR	LR	08 57 35.6	
	comp=Z,219nm,21.9s,baz=9.0,slow=41						
DAV	Davao City (W)	10.90	343	LR	LR	08 59 00.8	
	comp=Z,230nm,18.1s,baz=118,slow=40						
FITZ	Fitzroy Crossi	14.94	192	*e*Pn	P	08 55 07.1	-3.4
	7.7nm,0.8s						
FITZ	Fitzroy Crossi	14.94	192	P	P	08 55 06.7	-3.8
	0.1nm,0.3s,baz=22,slow=13,SNR=3.7						
WRAB	Tennant Creek	17.29	162	*e*Pn	P	08 55 35.3	-1.2
	39nm,1.6s						
WR1	Warramunga Arr	17.29	162	*e*Pn	P	08 55 34.1	-2.5
	32nm,1.5s						
WRA	Warramunga Arr	17.29	162	P	P	08 55 34.1	-2.5
	0.1nm,0.3s,baz=347,slow=13,SNR=8.5						
WRA				LR	LR	09 02 56.2	
	comp=Z,234nm,18.0s,baz=320,slow=39						
WB2	Warramunga Arr	17.30	162	*e*Pn	P	08 55 34.4	-2.2
	37nm,1.6s						
COEN	Coen	17.61	127	*e*Pn	Pn	08 55 37.2	-2.1
	11nm,1.1s						
SBUM	Sibu	17.61	289	*e*Pn	P	08 55 41.6	+1.5
	11nm,1.6s						
MBWA	Marble Bar	19.76	206	*e*P	Pn	08 56 04.4	-1.0
	24nm,1.1s						
AS31	Alice Springs	20.73	167	*e*P	Pn	08 56 14.4	-2.4
	5.4nm,0.8s						
ASAR	Alice Springs	20.73	167	P	Pn	08 56 15.3	-1.5
	11nm,0.8s,baz=345,slow=10,SNR=57						
ASAR				S	S	09 00 04.2	+0.3
	1.3nm,0.8s,baz=349,slow=21,SNR=4.1						
ASAR				LR	LR	09 04 58.0	
	comp=Z,259nm,18.2s,baz=342,slow=38						
AS01	Alice Springs	20.74	167	*e*P	Pn	08 56 14.2	-2.7
STKA	Stephens Creek	30.76	158	*e*P	P	08 57 48.8	+0.1
	1.8nm,1.1s						
STKA	Stephens Creek	30.76	158	P	P	08 57 49.9	+1.2
	3.8nm,0.8s,baz=337,slow=11,SNR=5.0						
STKA				LR	LR	09 11 42.2	
	comp=Z,196nm,18.8s,baz=12,slow=39						
HNR	Honiara	31.46	102	LR	LR	09 11 05.0	
	comp=Z,57nm,20.8s,baz=284,slow=37						
CM01	Chiang Mai Arr	36.57	307	*e*P	P	08 58 40.0	+0.6
CMAR	Chiang Mai Arr	36.60	307	P	P	08 58 41.1	+1.4
	0.8nm,0.3s,baz=133,slow=7.5,SNR=5.1						
CMAR				LR	LR	09 16 43.0	
	comp=Z,26nm,18.4s,baz=141,slow=41						
CMMT	Chiang Mai	36.79	308	P	P	08 58 47.2	+5.9
	2.3nm,0.9s						
KSRS	Korea Array	40.65	359	LR	LR	09 14 32.1	
	comp=Z,53nm,20.1s,baz=174,slow=34						
MAJO	Matsushiro	40.68	12	*e*P	P	08 59 12.6	-1.1
MJAR	Matsushiro Arr	40.68	12	P	P	08 59 12.6	-1.1
	2.3nm,0.9s,baz=174,slow=9.2,SNR=4.6						
SHL	Shillong	45.97	311	*e*P	P	08 59 57.2	+0.5
	10nm,0.4s						
HHC	Hu-ho-hao-te	46.79	342	*e*P	P	09 00 03.6	+0.8
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,63nm,6.1s						
LSA	Lhasa	48.84	315	*e*P	P	09 00 19.3	-0.1
	comp=Z,6.8nm,1.3s						
GTA	Gaotai	50.29	331	*e*P	P	09 00 31.5	+1.7
GTA				pP	pP	09 00 36.4	-4.5
GTA				sP	sP	09 00 39.0	-6.1
GTA				PcP	PcP	09 01 50.4	+2.0
GTA				S	S	09 07 44.6	+4.5
GTA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,85nm,5.2s						
GTA				LR	LR		
	comp=N,120nm,18.1s						
GTA				LR	LR		
	comp=E,120nm,18.7s						
GTA				LR	LR		
	comp=Z,76nm,18.1s						
SONA0	Songino Array	54.69	342	*e*P	P	09 01 02.6	+0.4
SONM	Songino Array	54.69	342	P	P	09 01 02.6	+0.4
	comp=Z,1.1nm,0.9s,baz=156,slow=7.6,SNR=6.6						
SONM				LR	LR	09 28 28.2	
	comp=Z,34nm,18.2s,baz=328,slow=40						
SONA1	Songino Array	54.70	342	*e*P	P	09 01 01.2	-1.2
BKZ	Black Stump Fm	55.95	136	*e*P	P	09 01 12.4	+1.0
	comp=Z,19nm,1.4s						
WMQ	Urumqi	59.78	327	*e*P	P	09 01 38.5	+0.3
WMQ				pmax	pmax		
	comp=Z,18nm,2.1s						
WMQ	Urumqi	59.78	327	*e*P	P	09 01 38.1	-0.2
	comp=Z,14nm,1.4s						
PETK	Petropavlovsk-	61.30	19	P	P	09 01 49.2	+0.8
	comp=Z,2.3nm,0.8s,baz=244,slow=5.6,SNR=3.5						
PETK				LR	LR	09 29 22.5	
	comp=Z,19nm,19.9s,baz=131,slow=37						
PEA1	Petropavlovsk-	61.31	19	*e*P	P	09 01 49.2	+0.8
MK01	Makanchi Array	64.59	326	*e*P	P	09 02 09.5	-0.9
MK31	Makanchi Array	64.61	326	*e*P	P	09 02 10.2	-0.3
MK32	Makanchi Array	64.61	326	*e*P	P	09 02 10.7	+0.2
MKAR	Makanchi Array	64.61	326	*e*P	P	09 02 09.8	-0.8
	comp=Z,21nm,1.4s						
MKAR	Makanchi Array	64.61	326	P	P	09 02 10.7	+0.2
	comp=Z,1.0nm,0.5s,baz=118,slow=8.3,SNR=14						
MAKZ	Makanchi	64.79	326	*e*P	P	09 02 10.7	-1.0
	comp=Z,3.7nm,1.1s						
AAK	Ala-Archa	67.08	319	*e*P	P	09 02 26.8	+0.1
	comp=Z,2.5nm,0.9s						
ZAA0	Zalesovo Array	67.87	334	*e*P	P	09 02 30.6	-0.6
	comp=Z,6.5nm,1.3s						
ZALV	Zalesovo Beam	67.87	334	*e*P	P	09 02 29.9	-1.3
ZALV	Zalesovo Beam	67.87	334	P	P	09 02 30.7	-0.5
	comp=Z,0.5nm,0.2s,baz=123,slow=5.3,SNR=4.5						
ZAA1	Zalesovo Array	67.87	334	*e*P	P	09 02 30.7	-0.5
KURK	Kurchatov	68.87	328	*e*P	P	09 02 36.8	-0.8
	comp=Z,7.9nm,1.1s						
KK31	Karatay Array	69.90	318	*e*P	P	09 02 43.4	-0.8
ABKAR	Akbulak array	79.00	321	*e*P	P	09 03 35.9	-0.9

*IDC **12** 09:21:57.7±1.8, 26°.69N×143°.50E, h0^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.4/46, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=43.1km s-min=23.6km az=56.0*
*ISCJB **12** 09:22:00.4±1.3, 26°.7N±0°.2×143°.7E±0°.1, h38^{km}, mb3.5/4, Error ellipse: s-maj=27.9km s-min=14.6km az=23.6*
ISC 12 09:22:02.2±1.5, **26°.8N**±0°.2×**143°.6E**±0°.2, **h38^{km}, n12, σ1^s.89**/7, **mb3.6**/4, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.29	282	Pn	Pn	09 22 22.2	-1.6
	8.3nm,0.3s,baz=258,slow=22,SNR=11						
JCJ				Sn	Sn	09 22 40.8	+1.0
	20nm,0.3s,baz=275,slow=22,SNR=6.5						
MJAR	Matsushiro Arr	10.72	336	Pn	Pn	09 24 31.6	-1.5
	0.1nm,0.3s,baz=164,slow=12,SNR=6.3						
H11N2	WAKE ISLAND Hy	22.51	103	T	T	09 50 58.7	
	baz=302,slow=75,SNR=90						
H11N1	WAKE ISLAND Hy	22.51	103	T	T	09 50 58.3	
	baz=302,slow=75,SNR=63						
H11N3	WAKE ISLAND Hy	22.53	103	T	T	09 50 59.3	
	baz=302,slow=75,SNR=79						
H11S3	WAKE ISLAND Hy	22.83	106	T	T	09 51 33.8	
	baz=304,slow=75,SNR=1362						
H11S1	WAKE ISLAND Hy	22.84	106	T	T	09 51 33.8	
	baz=304,slow=75,SNR=1643						
H11S2	WAKE ISLAND Hy	22.85	106	T	T	09 51 33.8	
	baz=304,slow=75,SNR=9.6						
SONM	Songino Array	35.78	316	P	P	09 28 58.2	+0.4
	0.2nm,0.5s,baz=122,slow=7.0,SNR=2.3						
WRA	Warramunga Arr	47.35	192	P	P	09 30 32.0	-0.6
	0.4nm,0.7s,baz=13,slow=8.7,SNR=3.5						
MKAR	Makanchi Array	51.62	310	P	P	09 31 07.1	+2.2
	0.3nm,0.3s,baz=88,slow=7.8,SNR=6.5						
KURBB	Kurchatov Arra	54.13	315	P	P	09 31 25.1	+1.8
	0.3nm,0.4s,baz=91,slow=7.9,SNR=5.2						

IDC 12 09:35:47.4±1.6, **10°.75S**×**164°.46E, h0^{km}, mb3.3**/4, **mb1 3.6**/5, **mb1mx3.5**/32, **mbtmp3.5**/5, **ML3.8**/1, **Error ellipse: s-maj=48.9km s-min=29.4km az=124.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.42	171	Pn	Pn	09 38 32.4	+0.4
	0.6nm,0.3s,baz=41,slow=20,SNR=9.4						
H11S2	WAKE ISLAND Hy	29.14	4	T	T	10 12 14.0	
	baz=184,slow=76,SNR=6.1						
H11S3	WAKE ISLAND Hy	29.14	4	T	T	10 12 12.8	
	baz=184,slow=76,SNR=4.5						
H11S1	WAKE ISLAND Hy	29.15	4	T	T	10 12 12.8	
	baz=184,slow=76,SNR=6.8						
H11N1	WAKE ISLAND Hy	30.36	5	T	T	10 13 47.3	
	baz=184,slow=76,SNR=4.9						
H11N3	WAKE ISLAND Hy	30.37	5	T	T	10 13 46.8	
	baz=184,slow=76,SNR=4.1						
H11N2	WAKE ISLAND Hy	30.38	5	T	T	10 13 45.9	
	baz=184,slow=76,SNR=6.3						
WRA	Warramunga Arr	30.41	249	P	P	09 42 01.4	-0.3
	0.4nm,0.9s,baz=80,slow=9.4,SNR=3.2						
ASAR	Alice Springs	31.81	242	P	P	09 42 14.0	-0.1
	0.1nm,0.5s,baz=64,slow=10,SNR=3.6						
ILAR	Eielson Array	83.64	19	P	P	09 48 17.1	-0.4
	0.3nm,0.8s,baz=230,slow=7.0,SNR=2.7						
MKAR	Makanchi Array	92.44	317	P	P	09 49 01.0	+0.7
	0.2nm,0.7s,baz=105,slow=6.3,SNR=2.8						

*SOME **12** 09:40:34.9, 46°.58N×85°.13E, h0^{km}*
*NNC **12** 09:40:36.3±2.1, 46°.57N×85°.21E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=17.4km s-min=8.7km az=96.0*
ISC 12 09:40:38.4±2.0, **46°.57N**±0°.07×**85°.1E**±0°.1, **h10^{km}, n14, σ2^s.47**/19, **6C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	Zaisan	0.89	352	P	Pn	09 40 55.2	-1.8
	4.0nm,0.1s						
ZSN				S	Sn	09 41 09.5	-0.4
	53nm,0.2s						
ZSN	Zaisan	0.89	352	*e*P	Pn	09 40 55.2	-1.8
	4.0nm,0.1s						
ZSN				*e*S	Sn	09 41 09.5	-0.4
	53nm,0.2s						
MK31	Makanchi Array	1.91	278	⇑Pn	Pn	09 41 11.7	+0.6
	1.5nm,0.3s,baz=98,slow=16,SNR=18						
MK31				⇑Lg	Lg	09 41 41.2	
	4.7nm,0.2s,baz=96,slow=31,SNR=17						
MAKZ	Makanchi	2.13	277	⇓Pn	Pb	09 41 16.0	-1.1
	1.9nm,0.3s						
MAKZ				⇑Lg	Lg	09 41 49.2	
	9.6nm,0.4s						
KAPS	Kapalarasan	4.18	254	Pg	Pb	09 41 54.2	+2.2
	1.6nm,0.3s						
KAPS				Lg	Lg	09 42 50.6	
	12nm,0.4s						
KAPS	Kapalarasan	4.18	254	*e*P	Pb	09 41 53.8	+1.8
	1.6nm,0.3s						
KAPS				*e*S	Sg	09 42 50.1	-2.3
	12nm,0.4s						
DJR	Jarkent	4.33	241	Pg	Pb	09 41 57.1	+2.5
	0.4nm,0.2s						
DJR				Lg	Lg	09 42 55.3	
	8.5nm,0.7s						
DJR	Jarkent	4.33	241	*e*P	Pb	09 41 57.1	+2.5
	0.5nm,0.2s						
DJR				*e*S	Sg	09 42 55.7	-1.6
	8.5nm,0.7s						
PDGK	Podgornoye	5.11	233	Pg	Pb	09 42 09.7	+1.8
	0.4nm,0.2s						
PDGK				Lg	Lg	09 43 16.8	
	5.7nm,0.6s						
PDGK	Podgornoye	5.11	233	⇓Pn	Pn	09 41 52.9	-2.1
	2.6nm,0.8s						
PDGK				⇑Lg	Lg	09 43 16.4	
	13nm,0.7s						
UZB	Uzynbulak	5.49	234	Pg	Pb	09 42 17.4	+3.1
	1.6nm,0.3s						
UZB				Lg	Lg	09 43 30.0	
	7.1nm,0.5s						
UZB	Uzynbulak	5.49	234	*e*P	Pb	09 42 17.2	+2.9
	1.5nm,0.3s						
UZB				*e*S	Sg	09 43 30.3	-4.2
	7.1nm,0.7s						
KURBB	Kurchatov Arra	5.93	316	⇓Pn	Pn	09 42 09.3	+3.2
	2.5nm,0.8s						
KURBB				⇑Lg	Lg	09 43 51.2	
	13nm,0.6s						
KURK	Kurchatov	5.94	317	⇓Pn	Pn	09 42 09.0	+2.6
	4.1nm,1.4s						
KURK				⇑Lg	Lg	09 43 50.9	
	4.2nm,0.5s						

IDC 12 09:42:09.9±93.0, **18°.39S**×**166°.94E, h0^{km}, mb3.6**/3, **mb1 3.8**/3, **mb1mx3.4**/29, **mbtmp3.6**/3, **MS3.7**/2, **Ms1 3.7**/2, **ms1mx2.8**/18, **Error ellipse: s-maj=1555.0km s-min=124.0km az=72.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	Rata Peaks	25.49	173	LR	LR	09 57 07.6	
	comp=Z,166nm,18.0s,baz=148,slow=35						
STKA	Stephens Creek	26.50	235	P	P	09 47 49.0	-0.2
	1.0nm,0.7s,baz=69,slow=8.6,SNR=2.8						
WRA	Warramunga Arr	30.80	262	P	P	09 48 27.6	0.0
	0.3nm,0.8s,baz=91,slow=9.2,SNR=4.8						
ASAR	Alice Springs	31.23	255	P	P	09 48 31.6	+0.1
	0.7nm,0.9s,baz=80,slow=9.3,SNR=5.9						
RAR	Rarotonga	31.42	101	LR	LR	10 01 41.4	
	comp=Z,106nm,18.4s,baz=96,slow=37						

IDC 12 09:50:29.4±11.0, **10°.11S**×**165°.28E, h0^{km}, mb3.5**/3, **mb1 3.8**/5, **mb1mx3.6**/29, **mbtmp3.8**/5, **ML4.4**/2, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.5**/19, **Error ellipse: s-maj=188.8km s-min=36.0km az=41.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.30	277	Pn	Pn	09 51 51.0	+1.0
	19nm,0.3s,baz=175,slow=9.2,SNR=3.0						
HNR				Sn	Sn	09 52 52.8	+0.9
	10.0nm,0.3s,baz=295,slow=11,SNR=2.1						
HNR				LR	LR	09 53 56.7	
	comp=Z,79nm,18.2s,baz=40,slow=39						
DZM	Mont Dzumac	11.95	175	Pn	Pn	09 53 21.2	-0.1
	1.5nm,0.3s,baz=353,slow=11,SNR=37						
H11S2	WAKE ISLAND Hy	28.45	3	T	T	10 26 48.6	
	baz=189						
H11S3	WAKE ISLAND Hy	28.45	3	T	T	10 26 47.5	
	baz=189						
H11S1	WAKE ISLAND Hy	28.47	3	T	T	10 26 48.0	
	baz=189						
H11N1	WAKE ISLAND Hy	29.67	3	T	T	10 28 22.8	
	baz=183						
H11N3	WAKE ISLAND Hy	29.68	3	T	T	10 28 19.4	
	baz=183						
H11N2	WAKE ISLAND Hy	29.69	3	T	T	10 28 20.8	
	baz=183						
STKA	Stephens Creek	30.82	222	P	P	09 56 47.8	+0.6
	0.8nm,0.7s,baz=63,slow=11,SNR=3.9						
WRA	Warramunga Arr	31.39	248	P	P	09 56 52.1	-0.4
	0.2nm,0.5s,baz=80,slow=9.6,SNR=2.9						
ASAR	Alice Springs	32.82	242	P	P	09 57 04.3	-0.7
	0.2nm,0.6s,baz=60,slow=11,SNR=4.5						

*SOME **12** 10:00:00.7, 42°.57N×78°.93E, h5^{km}*
*KRNET **12** 10:00:02.0±0.1, 42°.65N×79°.05E, h35^{km}, mb2.1*
NNC 12 10:00:01.5±1.3, **42°.64N**×**78°.92E, h0^{km}, mb2.4, mpv2.2, 11C-8D, Error ellipse: s-maj=10.1km s-min=3.0km az=158.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.41	248	⇑*i*P	Pb	10 00 13.0	+1.1
	baz=50						
PRZ				⇑*i*S	Sb	10 00 21.3	+2.5
	baz=50						
UZB	Uzynbulak	0.51	9	P	Pg	10 00 11.7	+0.4
	1.0nm,0.1s						
UZB				S	Sb	10 00 19.8	-1.7
	1.6nm,0.1s						
UZB	Uzynbulak	0.51	9	⇓*e*P	Pb	10 00 12.7	-0.8
	baz=58						
UZB				⇓*e*S	Sb	10 00 20.8	-0.7
	baz=58						
UZB	Uzynbulak	0.51	9	⇓*e*P	Pg	10 00 11.8	+0.5
	1.0nm,0.1s						
UZB				*e*S	Sb	10 00 19.8	-1.7
	5.2nm,0.1s						
SATY	Saty	0.56	318	P	Pg	10 00 12.6	+0.3
	1.7nm,0.1s						
SATY				S	Sb	10 00 21.3	-1.7
	11nm,0.1s						
SATY	Saty	0.56	318	*e*P	Pg	10 00 12.6	+0.3
	0.9nm,0.1s						
SATY				*e*S	Sg	10 00 21.1	+1.5
	11nm,0.1s						
PDGK	Podgornoye	0.80	31	P	Pg	10 00 16.6	-0.3
	0.2nm,0.1s						
PDGK				S	Sg	10 00 28.1	+0.7
	1.2nm,0.2s						
PDGK	Podgornoye	0.80	31	⇓P	Pb	10 00 18.1	-0.4
	0.8nm,0.8s						
PDGK				⇑S	Sg	10 00 28.0	+0.6
	1.3nm,0.4s						
PDGK	Podgornoye	0.80	31	⇑*i*P	Pg	10 00 16.9	0.0
	baz=25						
PDGK				⇑*i*S	Sg	10 00 27.9	+0.5
	baz=25						
KDJ	Kajisay	1.39	249	⇑*e*P	Pg	10 00 27.4	-0.7
	baz=50						
KDJ				⇑*i*S	Sg	10 00 45.9	-0.1
	baz=50						
MDOK	Medeo	1.47	291	⇓P	Pn	10 00 28.2	-1.2
	1.4nm,0.4s						
MDOK				⇓S	Sg	10 00 48.8	+0.1
	2.7nm,0.7s						
DJR	Jarkent	1.80	20	*e*P	Pb	10 00 35.0	-0.5
	0.4nm,0.1s						
DJR				*e*S	Sg	10 00 59.7	+0.2
	0.9nm,0.3s						
CHKK	Chushkaly	1.86	311	*e*P	Pb	10 00 35.8	-0.6
	0.7nm,0.1s						
CHKK				*e*S	Sg	10 01 00.9	-0.3
	5.6nm,0.3s						
ULHL	Ulahol	2.02	260	⇑*i*P	Pn	10 00 37.1	0.0
	baz=60						
ULHL				⇑*i*S	Sn	10 01 02.4	-0.7
	baz=60						
BOOM	Boomskoye usch	2.21	267	⇑*i*P	Pn	10 00 39.6	0.0
	baz=67						
BOOM				⇑*i*S	Sn	10 01 06.7	-0.9
	baz=67						
TKM2	Tokmak 2	2.46	278	⇓Pg	Pb	10 00 45.8	-1.0
	1.6nm,1.1s						
TKM2				⇓Lg	Lg	10 01 18.4	
	1.7nm,0.9s						

IDC 12 10:01:54.8±3.1, **11°.18S**×**165°.50E, h0^{km}, mb3.4**/3, **mb1 3.7**/4, **mb1mx3.5**/30, **mbtmp3.6**/4, **ML3.5**/1, **Error ellipse: s-maj=68.9km s-min=40.2km az=90.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.87	175	Pn	Pn	10 04 31.7	0.0
	0.4nm,0.3s,baz=294,slow=20,SNR=3.7						
H11S2	WAKE ISLAND Hy	29.51	2	T	T	10 39 20.7	
	baz=188						
H11S3	WAKE ISLAND Hy	29.51	2	T	T	10 39 07.2	
	baz=188						
H11S1	WAKE ISLAND Hy	29.53	2	T	T	10 39 33.9	
	baz=188						
WRA	Warramunga Arr	31.21	250	P	P	10 08 16.2	0.0
	0.4nm,0.6s,baz=82,slow=8.9,SNR=4.5						
ASAR	Alice Springs	32.52	243	P	P	10 08 27.6	-0.1
	0.5nm,0.8s,baz=66,slow=9.3,SNR=4.6						
SONM	Songino Array	78.63	324	P	P	10 13 58.8	+0.1
	0.3nm,0.9s,baz=116,slow=9.8,SNR=2.1						

*IDC **12** 10:23:57.8±1.4, 11°.34S×165°.09E, h0^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.7/36, mbtmp3.8/7, ML3.7/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/25, Error ellipse: s-maj=47.4km s-min=26.9km az=127.0*
*ISCJB **12** 10:24:01.2±0.9, 11°.5S±0°.1×165°.1E±0°.1, h34^{km}, mb3.7/6, Error ellipse: s-maj=18.6km s-min=11.9km az=33.3*
ISC 12 10:24:02.9±1.0, **11°.4S**±0°.1×**165°.1E**±0°.1, **h34^{km}, n8, σ0^s.88**/8, **mb3.7**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.46	290	Sn	Sn	10 26 24.0	+0.3
	9.7nm,0.3s,baz=122,slow=20,SNR=5.9						
HNR				LR	LR	10 27 42.6	
	comp=Z,134nm,20.5s,baz=95,slow=42						
DZM	Mont Dzumac	10.70	173	Pn	Pn	10 26 34.5	+0.6
	0.5nm,0.3s,baz=270,slow=8.1,SNR=4.1						
WRA	Warramunga Arr	30.81	250	P	P	10 30 15.2	-0.6
	1.8nm,1.0s,baz=80,slow=9.3,SNR=8.3						
ASAR	Alice Springs	32.11	243	P	P	10 30 26.0	-1.2
	1.7nm,1.1s,baz=79,slow=8.7,SNR=5.9						
SONM	Songino Array	78.59	324	P	P	10 36 01.9	+0.7
	0.2nm,0.8s,baz=132,slow=6.9,SNR=2.4						
ILAR	Eielson Array	84.02	19	P	P	10 36 29.3	-0.2
	0.3nm,0.6s,baz=230,slow=5.2,SNR=6.4						
MKAR	Makanchi Array	93.36	317	P	P	10 37 15.3	+0.7
	0.6nm,0.8s,baz=97,slow=6.2,SNR=7.3						
YKA	Yellowknife Ar	95.55	27	P	P	10 37 23.4	-0.8
	0.2nm,0.8s,baz=237,slow=4.3,SNR=3.6						

IDC 12 10:29:08.5±1.8, **11°.28S**×**165°.01E, h0^{km}, mb3.5**/4, **mb1 3.7**/5, **mb1mx3.5**/35, **mbtmp3.6**/5, **ML3.4**/1, **Error ellipse: s-maj=51.6km s-min=33.3km az=120.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.82	173	Pn	Pn	10 31 44.8	-0.1
	0.3nm,0.3s,baz=336,slow=20,SNR=6.1						
WRA	Warramunga Arr	30.73	250	P	P	10 35 26.0	+0.4
	0.5nm,0.9s,baz=83,slow=9.2,SNR=4.8						
ASAR	Alice Springs	32.05	243	P	P	10 35 37.1	-0.1
	0.4nm,0.7s,baz=64,slow=10,SNR=3.9						
ILAR	Eielson Array	83.96	19	P	P	10 41 40.7	+0.5
	0.2nm,0.7s,baz=230,slow=5.6,SNR=3.3						
MKAR	Makanchi Array	93.20	317	P	P	10 42 23.9	-1.0
	0.3nm,0.8s,baz=86,slow=6.2,SNR=3.6						

TIR ***12*** *11:06:37.7, 40°.94N×20°.77E, h6km, Md3.5/5*
ISCJB ***12*** *11:06:38.9±0.3, 40°.97N±0°.01×20°.75E±0°.02, h7km±2km, mb3.6/7, Error ellipse: s-maj=2.3km s-min=1.7km az=141.5*
IDC ***12*** *11:06:38.1±1.1, 40°.90N×20°.67E, h0km, mb3.6/9, mb1 3.8/12, mb1mx3.6/42, mbtmp3.7/12, ML3.6/3, MS2.8/1, Ms1 2.8/1, ms1mx2.2/42, Error ellipse: s-maj=19.5km s-min=13.4km az=133.0*
THE ***12*** *11:06:39.3, 40°.94N×20°.79E, h0km±1km, ML3.3/13, Error ellipse: s-maj=1.8km s-min=0.6km az=269.0*
ATH ***12*** *11:06:39.1, 40°.94N×20°.81E, h14km±1km, ML3.4/10, Error ellipse: s-maj=1.5km s-min=0.8km az=173.0*
BEO ***12*** *11:06:39.7±0.6, 40°.87N×20°.77E, h14km±5km, ML3.3/7*
SKO ***12*** *11:06:39.0, 40°.90N×20°.68E, h4km, M3.0, ML3.4*
PDG ***12*** *11:06:40.0±0.7, 40°.97N×20°.80E, h12km±1km, ML3.6/11, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
ISC 12 11:06:39.3±0.9**, 40°.93N**±0°.01×**20°.77E**±0°.02**, h10**km±6km**, n163, σ1s.22**/226**, mb3.8**/7**, 24C-9D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.19	6	⇓iPg	Pg	11 06 43.2	-0.1
OHR				i Sg	Sg	11 06 47.2	+1.1
OHR				eLg	Lg	11 06 47.4	
	comp=E,5µm,0.3s						
OHR				eLg	Lg	11 06 47.8	
	comp=N,7µm,0.2s						
BIA	Bitola	0.43	77	⇑iPg	Pg	11 06 48.1	+0.3
BIA				i Sg	Sb	11 06 55.9	+0.3
BIA				eLg	Lg	11 06 56.1	
	comp=N,1µm,0.2s						
BIA				eLg	Lg	11 06 57.4	
	comp=E,3µm,0.4s						
NEST	Nestorio	0.55	158	P	Pg	11 06 49.5	-0.5
NEST				S	Sg	11 06 57.9	+0.5
NEST				AML	AML	11 07 00.5	
	comp=E,5872µm,0.4s						
NEST				AML	AML	11 07 01.9	
	comp=N,8105µm,0.6s						
NEST	Nestorio	0.55	158	P	Pg	11 06 49.5	-0.5
NEST				S	Sg	11 06 58.6	+1.3
KRUS	Krusevo	0.57	39	⇑ePg	Pg	11 06 50.0	-0.4
KRUS				i Sg	Sb	11 06 59.5	-0.3
KRUS				eLg	Lg	11 06 59.5	
	comp=E,1µm,0.5s						
KRUS				eLg	Lg	11 06 59.8	
	comp=N,1µm,0.3s						
PENT	Pentalofos	0.78	159	P	Pg	11 06 54.0	-0.4
PENT				S	Sg	11 07 05.2	+0.6
PENT	Pentalofos	0.78	159	P	Pg	11 06 54.1	-0.3
PENT				S	Sb	11 07 06.5	+0.7
PHP	Peshkopia	0.80	342	P	Pg	11 06 53.5	-1.3
PHP				S	Sb	11 07 06.5	+0.2
PHP	Peshkopia	0.80	342	i PG	Pg	11 06 53.3	-1.5
PHP				i SG	Sg	11 07 04.4	-0.7
TIR	Tirane	0.81	302	ePg	Pg	11 06 54.3	-0.6
TIR				eSg	Sb	11 07 07.1	+0.7
TIR	Tirane	0.81	302	P	Pg	11 06 54.9	0.0
TIR				S	Sb	11 07 06.7	+0.3
TIR				AML	AML	11 07 16.6	
	comp=N,5748µm,0.6s						
TIR				AML	AML	11 07 18.4	
	comp=E,6715µm,0.6s						
TIR	Tirane	0.81	302	⇑iP	Pg	11 06 54.2	-0.6
TIR				S	Sg	11 07 04.8	-0.5
TIR	Tirane	0.81	302	i PG	Pg	11 06 54.2	-0.6
TIR				i SG	Sg	11 07 05.4	0.0
TPE	Tepelena	0.86	223	i PG	Pg	11 06 55.0	-0.8
TPE				i SG	Sg	11 07 07.2	+0.2
KZN	Kozani	0.98	129	P	Pg	11 06 57.5	-0.7
KZN				S	Sg	11 07 11.2	+0.3
KZN				AML	AML	11 07 17.0	
	comp=N,7676µm,0.4s						
KZN				AML	AML	11 07 19.0	
	comp=E,8277µm,0.5s						
KZN	Kozani	0.98	129	P	Pg	11 06 57.7	-0.5
KZN				S	Sb	11 07 12.3	+0.8
KPRO	Kipourio	1.07	155	P	Pg	11 06 59.5	-0.3
KPRO				S	Sb	11 07 14.5	+0.5
KPRO				AML	AML	11 07 23.0	
	comp=N,4718µm,0.5s						
KPRO				AML	AML	11 07 25.6	
	comp=E,4640µm,0.6s						
KPRO	Kipourio	1.07	155	P	Pg	11 06 59.4	-0.5
KPRO				S	Sb	11 07 14.9	+0.8
SRN	Sarande	1.20	210	P	Pg	11 07 01.7	-0.7
SRN				S	Sn	11 07 20.9	+2.4
SRN	Sarande	1.20	210	i PN	Pg	11 07 02.0	-0.3
SRN				i SN	Sn	11 07 20.2	+1.7
GRG	Griva	1.23	88	P	Pg	11 07 02.1	-0.9
GRG				S	Sg	11 07 18.9	-0.2
GRG				AML	AML	11 07 24.2	
	comp=E,1651µm,0.4s						
GRG				AML	AML	11 07 28.3	
	comp=N,2620µm,0.5s						
GRG	Griva	1.23	88	P	Pg	11 07 02.1	-0.9
GRG				S	Sn	11 07 19.9	+0.4
JAN	Janina	1.27	177	P	Pn	11 07 03.1	-0.1
JAN				S	Sb	11 07 20.8	+1.0
JAN				AML	AML	11 07 29.1	
	comp=N,5162µm,0.4s						
JAN				AML	AML	11 07 29.2	
	comp=E,6082µm,0.5s						
JAN	Janina	1.27	177	P	Pn	11 07 02.5	-0.7
JAN				S	Sn	11 07 22.5	+2.2
STIP	Stip	1.31	54	i Pg	Pg	11 07 06.9	+2.4
STIP				i Sg	Sn	11 07 29.2	+7.8
STIP				eLg	Lg	11 07 29.7	
	comp=E,299nm,0.4s						
STIP				eLg	Lg	11 07 30.1	
	comp=N,160nm,0.2s						
VAY	Valandovo	1.41	73	i Pg	Pn	11 07 05.2	+0.1
VAY				i Sg	Sg	11 07 25.9	+1.1
VAY				eLg	Lg	11 07 27.9	
	comp=E,216nm,0.5s						
VAY				eLg	Lg	11 07 28.0	
	comp=N,472nm,0.5s						
KEK	Kerkira	1.42	212	P	Pb	11 07 06.4	+0.4
KEK				S	Sg	11 07 26.2	+1.1
KEK				AML	AML	11 07 29.9	
	comp=E,1842µm,0.8s						
KEK				AML	AML	11 07 31.1	
	comp=N,1768µm,0.6s						
BCI	Bajram Curri	1.53	340	i PN	Pn	11 07 07.3	+0.5
BCI				i SN	Sg	11 07 29.7	+1.0
LIT	Litokhoron	1.55	122	P	Pn	11 07 07.8	+0.8
LIT				S	Sg	11 07 29.0	0.0
LIT				AML	AML	11 07 37.2	
	comp=N,2111µm,0.6s						
LIT				AML	AML	11 07 38.5	
	comp=E,2158µm,0.5s						
LIT	Litokhoron	1.55	122	P	Pn	11 07 07.7	+0.7
LIT				S	Sg	11 07 29.1	0.0
ULC	Ulcinj	1.55	313	⇓iPg	Pn	11 07 06.2	-0.8
ULC				i Sg	Sg	11 07 28.7	-0.4
KNT	Kendrikon	1.62	81	P	Pn	11 07 08.8	+0.7
KNT				S	Sg	11 07 30.9	-0.7
KNT				AML	AML	11 07 36.2	
	comp=N,1216µm,0.4s						
KNT				AML	AML	11 07 44.0	
	comp=E,708µm,0.6s						
KNT	Kendrikon	1.62	81	P	Pn	11 07 08.7	+0.7
KNT				S	Sb	11 07 30.6	+0.6
THL	Klokotos Trika	1.66	145	P	Pb	11 07 09.7	-0.3
THL				S	Sg	11 07 32.3	-0.4
THL				AML	AML	11 07 36.5	
	comp=E,1262µm,0.5s						
THL				AML	AML	11 07 38.1	
	comp=N,1605µm,0.6s						
THE	Thessaloniki	1.69	99	P	Pn	11 07 09.9	+0.9
THE	Thessaloniki	1.69	99	P	Pn	11 07 09.0	+0.1
THE				S	Sb	11 07 31.9	0.0
DRME	Dracevica, Mon	1.73	317	⇑iPn	Pn	11 07 10.1	+0.5
DRME				i Sn	Sg	11 07 37.1	+2.0
DRME	Dracevica, Mon	1.73	317	ePn	Pn	11 07 09.6	0.0
PVY	Plav	1.77	340	⇑iPn	Pn	11 07 10.6	+0.3
PVY				i Sn	Sb	11 07 34.4	-0.1
HORT	Hortiatis	1.80	100	P	Pn	11 07 10.9	+0.4
HORT	Hortiatis	1.80	100	P	Pn	11 07 10.5	0.0
HORT				S	Sb	11 07 35.1	0.0
PDG	Podgorica	1.89	323	ePg	Pb	11 07 13.8	0.0
PDG				eSg	Sg	11 07 40.8	+0.9
PDG	Podgorica	1.89	323	⇑iP	Pb	11 07 13.2	-0.6
PDG	Podgorica	1.89	323	S	Sn	11 07 35.6	+0.1
PDG	Podgorica	1.89	323	ePn	Pb	11 07 13.0	-0.8
TTG	Podgorica	1.89	323	⇑iPn	Pn	11 07 12.6	+1.0
TTG				i Sn	Sb	11 07 37.4	-0.1
SOH	Sokhos	1.96	92	P	Pb	11 07 14.2	-1.0
SOH	Sokhos	1.96	92	P	Pn	11 07 13.2	+0.5
SOH				S	Sb	11 07 40.0	+0.3
BUM	Brajici-Budva	1.97	315	⇓iPn	Pn	11 07 14.0	+1.1
BUM				i Sn	Sg	11 07 43.1	+0.5
BARS	Barje	2.04	22	ePn	Pn	11 07 14.7	+0.8
BARS	Barje	2.04	22	ePn	Pg	11 07 30.3	+12
BARS				eSn	Sn	11 07 40.3	+0.9
BARS	Barje	2.04	22	i Pn	Pn	11 07 14.6	+0.8
BARS				i Sg	Sg	11 07 45.8	+0.7
IVA	Berane	2.05	342	⇑iPn	Pn	11 07 15.1	+1.1
IVA				i Sn	Sb	11 07 41.9	-0.5
PLG	Polygyros	2.11	104	P	Pn	11 07 15.3	+0.6
PLG	Polygyros	2.11	104	P	Pn	11 07 15.2	+0.5
PLG				S	Sb	11 07 43.3	-0.6
LKD2	Lefkada island	2.14	182	P	Pb	11 07 17.1	-1.1
KOME	Kolasin	2.14	334	⇑iPn	Pb	11 07 17.7	-0.6
KOME				i Sn	Sg	11 07 48.6	+0.5
SRS	Serrai	2.14	84	ePn	Pn	11 07 15.4	+0.3
SRS				eSn	Sn	11 07 41.0	-0.9
SRS	Serrai	2.14	84	P	Pn	11 07 15.7	+0.5
SRS	Serrai	2.14	84	P	Pn	11 07 15.5	+0.3
SRS				S	Sb	11 07 44.6	-0.3
EVR	Evrytania	2.16	158	P	Pb	11 07 17.9	-0.7
AGG	Agios Georgios	2.25	147	P	Pn	11 07 18.5	+1.8
HCY	Herceg Novi	2.29	312	⇓iPn	Pn	11 07 18.2	+1.0
HCY				i Sn	Sn	11 07 47.1	+1.7
HCY	Herceg Novi	2.29	312	ePn	Pn	11 07 17.6	+0.4
NKME	Niksic	2.29	324	⇑iPn	Pb	11 07 19.0	-1.8
NKME				i Sn	Sn	11 07 47.1	+1.6
SELS	Selova	2.31	6	ePn	Pn	11 07 17.6	+0.1
SELS				eSn	Sn	11 07 46.2	+0.2
NVR	Nevrokopi	2.37	79	P	Pn	11 07 19.8	+1.4
PVO	Paravola	2.38	166	P	Pb	11 07 21.1	-1.2
SJES	Sjenica	2.41	346	ePn	Pn	11 07 19.6	+0.6
SJES				eSg	Sg	11 07 57.8	+1.1
XOR	Xorichti	2.42	129	P	Pn	11 07 20.3	+1.2
PAIG	Paliouri	2.43	113	P	Pn	11 07 20.7	+1.5
VTS	Vitosha	2.47	47	ePn	Pn	11 07 21.0	+1.2
VTS				eSn	Sn	11 07 51.0	+0.9
VTS	Vitosha	2.47	47	⇑iP	Pn	11 07 21.3	+1.5
VTS	Vitosha	2.47	47	i Pn	Pn	11 07 21.5	+1.7
VTS				eSn	Sb	11 07 52.7	-1.7
TREB	Trebinje	2.55	315	ePn	Pn	11 07 21.5	+0.8
TREB	Trebinje	2.55	315	ePn	Pn	11 07 21.2	+0.5
BRY	Bratogost	2.58	321	⇑iPn	Pn	11 07 22.7	+1.3
BRY				i Sn	Sn	11 07 54.3	+1.3
BRY	Bratogost	2.58	321	ePn	Pn	11 07 22.7	+1.3
FASA	Fasano	2.59	269	ePn	Pn	11 07 21.1	-0.3
PLE	Pljevlja	2.61	337	⇑iPn	Pb	11 07 25.7	-0.7
PLE				i Sn	Sn	11 07 56.0	+2.3
IVAS	Ivanjica	2.69	350	ePn	Pn	11 07 22.5	-0.3
SKIA	Skiathos	2.71	129	P	Pn	11 07 24.0	+1.0
ZAPS	Zavoj	2.73	30	ePn	Pn	11 07 24.7	+1.5
VLS	Valsamata	2.75	183	P	Pn	11 07 25.3	+1.8
BOVS	Bovan	2.79	14	ePn	Pn	11 07 24.7	+0.6
BOVS				eSn	Sn	11 07 59.0	+1.1
ATAL	Atalanti	2.82	141	P	Pn	11 07 26.7	+2.1
KAVA	Kavala	2.83	87	P	Pn	11 07 26.5	+1.8
BAI	Bari	2.95	275	ePn	Pn	11 07 28.4	+2.1
GRUS	Gruza	2.96	359	ePn	Pn	11 07 26.8	+0.4
STON	Ston	3.01	311	ePn	Pn	11 07 27.0	0.0
STON				Sn	Sn	11 08 04.2	+1.0
ZAGS	Zajecar	3.08	20	ePn	Pn	11 07 28.9	+0.8
MATE	Matera	3.10	266	⇓iP	Pn	11 07 30.1	+1.8
SG1	Sgolgore (BA)	3.10	270	ePn	Pn	11 07 31.2	+2.8
BBLS	Lazići	3.11	341	ePn	Pn	11 07 29.8	+1.2
BBLS	Lazići	3.11	341	ePn	Pn	11 07 29.7	+1.2
PLD	Plovdiv	3.18	67	ePn	Pn	11 07 29.7	+0.3
PLD				eSn	Sn	11 08 07.1	-0.3
PLD	Plovdiv	3.18	67	i Pn	Pn	11 07 31.2	+1.8
DIVS	Divibare	3.22	350	ePn	Pn	11 07 30.7	+0.6
DIVS	Divibare	3.22	350	i Pn	Pn	11 07 30.6	+0.5
DIVS	Divibare	3.22	350	ePn	Pn	11 07 30.4	+0.3
TRUS	Trudelj	3.31	355	ePn	Pn	11 07 31.4	+0.2
SVIS	Svilajnac	3.35	5	ePn	Pn	11 07 32.7	+0.9
HAPS	Han Pijesak,BI	3.43	338	ePn	Pn	11 07 33.3	+0.3
HAPS	Han Pijesak,BI	3.43	338	ePn	Pn	11 07 33.1	+0.1
TIP	Timpagrande	3.54	242	⇑iP	Pn	11 07 35.4	+0.9
KUBS	Kucevo	3.55	11	ePn	Pn	11 07 34.3	-0.2
TEKS	Tekeris	3.74	346	ePn	Pn	11 07 38.2	+1.1
TEKS	Tekeris	3.74	346	ePn	Pn	11 07 37.2	+0.1
HERR	Herculane	4.13	16	⇓iP	Pn	11 07 42.9	+0.4
FRGS	Fruska Gora	4.29	351	ePn	Pn	11 07 44.8	+0.1
BLY	Banja Luka	4.64	327	⇑iP	Pn	11 07 51.0	+1.5
BLY	Banja Luka	4.64	327	S	Sn	11 08 45.2	+1.7
BLY	Banja Luka	4.64	327	ePn	Pn	11 07 50.4	+0.9
GZR	Gura Zlata	4.70	18	⇑iP	Pn	11 07 51.1	+0.7
GZR	Gura Zlata	4.70	18	S	Sn	11 08 44.5	-0.5
BZS	Buzias	4.73	7	ePn	Pn	11 07 50.8	+0.1
BZS	Buzias	4.73	7	⇑iP	Pn	11 07 50.2	-0.5
BZS	Buzias	4.73	7	S	Sn	11 08 45.0	-0.6
LOT	Lotru	5.02	25	⇑iP	Pn	11 07 49.6	-5.3
LOT	Lotru	5.02	25	S	Sn	11 08 52.3	-0.7
ARR	Arges	5.26	31	⇓iP	Pn	11 07 57.9	-0.2
APE	Apeiranthos	5.34	135	⇑iP	Pn	11 08 00.0	+0.8
VOIR		5.49	33	⇑iP	Pn	11 08 02.0	+0.8
MORH	Mrgy, Hungar	5.51	344	ePn	Pn	11 08 01.3	-0.1
NVLJ	Novalja	5.67	312	ePn	Pn	11 08 03.7	+0.2
NVLJ				Sn	Sn	11 09 07.7	-0.9
MLR	Muntele Rosu	5.92	38	⇓iP	Pn	11 08 07.7	+0.4
MLR	Muntele Rosu	5.92	38	Pn	Pn	11 08 09.9	+2.7
	comp=N,0.9nm,0.3s,baz=240,slow=4.9,SNR=6.0						
MLR				Sn	Sn	11 09 18.6	+3.3
	comp=N,1.2nm,0.3s,baz=166,slow=16,SNR=3.7						
DRGR		6.03	13	⇑iP	Pn	11 08 06.9	-1.8
DRGR		6.03	13	S	Sn	11 09 14.0	-3.8
CRES	Cresnjev	6.24	323	ePn	Pn	11 08 10.9	-0.6
IDI	Anoyia	6.50	149	S	Sn	11 09 19.6	-10
IDI	Anoyia	6.50	149	Sn	Sn	11 09 28.2	-1.1
	comp=N,1.5nm,0.3s,baz=102,slow=21,SNR=6.3						
PLOR	Plostina	6.52	39	⇑iP	Pn	11 08 15.0	-0.4
VRI	Vrincioaia	6.57	39	⇑iP	Pn	11 08 15.5	-0.5
CEY	Cerknica	6.67	318	ePn	Pn	11 08 13.6	-3.9
CFR	Carcaliu	6.87	49	⇓iP	Pn	11 08 20.5	+0.5
SOKA	Soboth	7.09	326	i Pn	Pn	11 08 24.0	+0.8
	comp=N,6.7nm,0.7s,SNR=6.4						
ARSA	Arzberg	7.36	331	i Pn	Pn	11 08 28.6	+1.6
	comp=N,2.4nm,0.3s						
BURAR	Bucovina Array	7.41	24	⇑iP	Pn	11 08 28.5	+0.9
MYKA	Terra Mystica	7.69	320	i Pn	Pn	11 08 31.7	+0.3
	comp=N,2.8nm,0.4s						
CONA	Conrad Observa	7.83	335	i Pn	Pn	11 08 35.5	+2.1
	comp=N,0.8nm,0.4s						
KBA	Koelnbreinsper	8.15	321	i Pn	Pn	11 08 39.5	+1.6
	comp=N,2.3nm,0.3s						
ABTA	Abfaltersbach	8.33	317	i Pn	Pn	11 08 40.9	+0.6
	comp=N,1.9nm,0.3s						
MOA	Molln	8.34	328	i Pn	Pn	11 08 42.0	+1.7
	comp=N,2.3nm,0.5s						
MOA				eSn	Sn	11 10 16.2	+1.7
	comp=N,2.1nm,0.5s						
VRAC	Vranov	8.89	342	LR	LR	11 11 59.5	
	comp=N,52nm,18.6s,baz=79,slow=36						
WTTA	Wattenberg	9.13	317	i Pn	Pn	11 08 53.6	+2.4
	comp=N,2.0nm,0.3s						
WTTA				eSn	Sn	11 10 34.4	+0.3
	comp=N,5.0nm,0.6s						
WATA	Walderalm	9.20	317	i Pn	Pn	11 08 53.8	+1.5
	comp=N,5.2nm,0.4s						
SQTA	Sankt Quirin	9.32	316	i Pn	Pn	11 08 55.0	+1.2
	comp=N,4.1nm,0.4s						
GERES	GERESS Array B	9.37	330	Pn	Pn	11 08 55.6	+1.1
	comp=N,0.2nm,0.3s,baz=150,slow=14,SNR=9.8						
MOTA	Moosalm	9.46	316	i Pn	Pn	11 08 57.1	+1.4
	comp=N,4.8nm,0.6s						
FETA	Feichten	9.46	313	i Pn	Pn	11 08 56.0	+0.3
	comp=N,0.7nm,0.3s						
FETA				Sn	Sn	11 10 42.4	+0.1
	comp=N,1.1nm,0.5s						
KHC	Kasperske Hory	9.65	331	ePN	Pn	11 08 59.3	+1.0
KHC				ex	x	11 09 17.3	
KHC				eSN	Sn	11 10 49.6	+2.8
DAVOX	Davos/Dischmat	9.80	310	Pn	Pn	11 09 01.6	+1.1
	comp=N,0.6nm,0.3s,baz=129,slow=16,SNR=5.4						
DAVOX				Sn	Sn	11 10 47.2	-3.4
	comp=N,0.3nm,0.3s,baz=304,slow=22,SNR=3.5						
FINES	FINESS Array B	20.80	7	P	P	11 11 20.1	-0.4
	comp=N,1.2nm,0.7s,baz=171,slow=14,SNR=5.2						
NB2	NORSAR Subarra	20.98	347	P	P	11 11 21.6	-0.9
	comp=Z,0.2nm,0.4s,baz=159,slow=11						
NOA	NORSAR Array B	20.98	347	P	P	11 11 22.3	-0.2
	comp=Z,0.3nm,0.5s,baz=155,slow=10,SNR=4.6						
EKA	Eskdalemuir Ar	21.36	320	P	P	11 11 26.5	-0.2
	comp=Z,3.5nm,0.9s,baz=110,slow=9.8,SNR=4.5						
ARCES	ARCESS Array B	28.78	3	P	P	11 12 35.7	-1.3
	comp=Z,3.1nm,1.0s,baz=188,slow=9.1,SNR=7.3						
TORD	Torodi Ar. Bea	32.32	217	P	P	11 13 08.7	0.0
	comp=Z,1.0nm,0.8s,baz=28,slow=9.7,SNR=6.2						
DBIC	Dimbokro	41.07	221	P	P	11 14 22.9	-0.3
	comp=Z,4.6nm,0.7s,baz=2.0,slow=6.7,SNR=5.2						
MKAR	Makanchi Array	43.74	61	P	P	11 14 45.4	+0.6
	comp=Z,0.3nm,0.6s,baz=263,slow=5.1,SNR=4.4						
ZALV	Zalesovo Beam	43.75	50	P	P	11 14 45.7	+1.0
	comp=Z,0.8nm,0.4s,baz=277,slow=9.9,SNR=3.9						
YKA	Yellowknife Ar	70.88	340	P	P	11 17 56.0	-0.1
	comp=Z,0.1nm,0.6s,baz=38,slow=5.4,SNR=3.8						

IDC 12 11:09:53.1±4.4**, 12°.17S**×**162°.08E, h0**km**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/27**, mbtmp3.6**/3**, Error ellipse: s-maj=234.0km s-min=32.9km az=140.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.73	250	P	P	11 15 44.2	+0.6
	0.6nm,0.7s,baz=82,slow=9.1,SNR=6.9						
ASAR	Alice Springs	29.09	243	P	P	11 15 55.0	-0.6
	0.6nm,0.8s,baz=67,slow=9.8,SNR=6.4						
ILAR	Eielson Array	85.74	20	P	P	11 22 33.8	0.0
	0.3nm,0.7s,baz=238,slow=4.8,SNR=6.6						

SJA 12 11:11:53.0±1.3**, 31°.95S**×**67°.39W, h15**km±5km**, ML2.2, MW3.6, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACAN	Cantantal	0.37	152	eP	Pb	11 12 01.7	+0.4
RTLL	Cerro Villicun	1.11	304	eP	Pn	11 12 14.2	+0.2
RTLL				IAML		11 12 33.5	
	comp=Z,19nm,0.2s						
AMOG	MOGNA	1.38	317	eP	Pb	11 12 18.9	+0.4
AMOG				eS	Sg	11 12 38.2	+0.7
ASAL	Salagasta	1.38	242	eP	Pb	11 12 18.8	+0.2
ASAL				eS	Sg	11 12 38.8	+1.3
MRA	San Martin	1.50	109	eP	Pg	11 12 21.5	-0.3
MRA				eS	Sg	11 12 41.4	+0.1
MRA				IAML		11 12 42.4	
	comp=Z,66nm,0.4s						
ARCO	CERRO ARCO	1.58	235	eP	Pb	11 12 22.3	+0.4
ARCO				eS	Sg	11 12 45.4	+1.5
ARCO				IAML		11 12 47.3	
	comp=Z,42nm,0.3s						
AAGR	Agrelo	1.66	227	eP	Pb	11 12 23.8	+0.4
AUSP	Uspallata	1.71	260	eP	Pb	11 12 24.3	-0.1
AUSP				eS	Sg	11 12 48.0	-0.3
APLL	PUNTA DE LOS L	1.72	26	eP	Pb	11 12 24.9	+0.6
ACCO	Cerro Coronel	1.97	313	eP	Pb	11 12 29.0	+0.2
ACCO				eS	Sg	11 12 56.1	-0.5
ACLC	CERRO LA CRUZ	2.54	9	eP	Pg	11 12 40.2	-1.6
AGUA	GUANDACOL	2.63	339	eP	Pg	11 12 43.2	-0.3

SJA 12 11:26:15.2±0.8**, 29°.07S**×**67°.51W, h16**km±4km**, ML3.7, MW4.8, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACLC	CERRO LA CRUZ	0.60	126	i P	Pb	11 26 27.7	+0.2
AGUA	GUANDACOL	0.95	244	i P	Pn	11 26 33.9	-0.1
AGUA				i S	Sn	11 26 47.1	-0.3
APLL	PUNTA DE LOS L	1.57	147	i P	Pb	11 26 44.4	+0.3
APLL				IAML		11 27 06.0	
	comp=Z,1µm,0.4s						
APLL				i S	Sg	11 27 06.1	+0.1
CYA	Choya	1.62	68	i P	Pb	11 26 45.4	+0.6
CYA				IAML		11 27 09.5	
	comp=Z,776nm,0.4s						
ACDV	Cuesta del Vie	1.78	231	i P	Pb	11 26 47.7	+0.1
ACCO	Cerro Coronel	2.03	221	i P	Pb	11 26 51.9	-0.1
AROD	Rodeo	2.03	237	i P	Pb	11 26 52.0	+0.1
AMOG	MOGNA	2.05	204	i P	Pb	11 26 51.1	-1.0
RTLL	Cerro Villicun	2.40	200	i P	Pb	11 26 56.3	-1.8
RTLL				i S	Sb	11 27 27.6	0.0
RTCV	Cerro Valdivia	2.92	197	i P	Pn	11 27 03.9	+2.7

IDC 12 11:30:53.5±1.7**, 11°.00S**×**165°.47E, h0**km**, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.5**/27**, mbtmp3.7**/4**, ML3.5**/1**, Error ellipse: s-maj=52.4km s-min=30.4km az=129.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.05	175	Pn	Pn	11 33 32.9	-0.1
	0.4nm,0.3s,baz=313,slow=19,SNR=5.8						
WRA	Warramunga Arr	31.24	250	P	P	11 37 15.6	+0.4
	1.4nm,0.9s,baz=81,slow=9.1,SNR=11						
ASAR	Alice Springs	32.57	243	P	P	11 37 26.4	-0.5
	0.3nm,0.5s,baz=64,slow=10,SNR=13						
ILAR	Eielson Array	83.56	19	P	P	11 43 23.2	0.0
	0.4nm,0.6s,baz=236,slow=5.4,SNR=7.4						

IDC ***12*** *11:43:20.6±3.2, 33°.01S×178°.52W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/19, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=71.8km s-min=36.4km az=114.0*
ISCJB ***12*** *11:43:21.2±1.2, 32°.99S±0°.09×178°.4W±0°.3, h32km, mb3.5/2, Error ellipse: s-maj=35.6km s-min=5.1km az=18.6*
WEL ***12*** *11:43:24.1±0.9, 33°S±17°×17°9W±4°3, h33km, ML4.4/9*
ISC 12 11:43:23.9±1.9**, 32°.9S**±0°.1×**178°.5W**±0°.3**, h32**km**, n15, σ1s.09**/26**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.67	8	P	Pn	11 44 18.1	-0.3
GLKZ				S	Sn	11 44 58.9	-1.7
MXZ	Matakaoa Point	5.33	209	P	Pn	11 44 40.7	-0.5
MXZ				S	Sn	11 45 39.8	-1.7
WMGZ	Waiomatatini S	5.52	207	P	Pn	11 44 44.4	+0.7
PKGZ	Pakihiroa	5.71	209	P	Pn	11 44 46.6	+0.2
PKGZ				S	Sn	11 45 50.8	0.0
HAZ	Te Kaha	5.72	211	P	Pn	11 44 46.6	+0.1
HAZ				S	Sn	11 45 52.3	+1.3
PUZ	Puketiti	5.80	206	P	Pn	11 44 47.0	-0.6
PUZ				S	Sn	11 45 52.3	-0.7
RUGZ	Raukumara Rang	5.94	211	P	Pn	11 44 49.4	-0.3
RUGZ				S	Sn	11 45 57.7	+1.0
TWGZ	Tauwhareparae	5.99	208	P	Pn	11 44 50.2	-0.2
TWGZ				S	Sn	11 45 57.4	-0.5
TKGZ	Te Karaka	6.27	207	P	Pn	11 44 54.5	+0.4
TKGZ				S	Sn	11 46 04.3	-0.4
MWZ	Matawai	6.31	210	P	Pn	11 44 53.3	-1.4
MWZ				S	Sn	11 46 04.6	-1.1
URZ	Urewera	6.43	213	Pn	Pn	11 44 54.8	-1.5
	1.2nm,0.3s,baz=270,slow=3.2,SNR=31						
URZ				Sn	Sn	11 46 07.4	-1.3
	2.2nm,0.3s,baz=202,slow=15,SNR=9.7						
URZ	Urewera	6.43	213	P	Pn	11 44 55.0	-1.3
URZ				S	Sn	11 46 06.9	-1.7
ASAR	Alice Springs	42.63	270	P	P	11 51 18.6	+1.2
	0.3nm,0.6s,baz=108,slow=7.2,SNR=6.8						

WRA	**Warramunga Arr**	43.85	275	P	P	11 51 28.6	+1.2
	0.7nm,0.3s,baz=114,slow=8.1,SNR=33						
FINES	**FINESS Array B**	147.34	338	PKPbc	PKPbc	12 03 04.9	+1.4
	0.3nm,0.4s,baz=358,slow=4.4,SNR=4.3						

IDC 12 11:55:15.2±2.2, 14°.78N×93°.20E, h0^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.2/44, mbtmp3.2/4, ML3.7/1, Error ellipse: s-maj=63.3km s-min=30.9km az=67.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	6.61	56	Pn	Pn	11 56 53.9	+0.1
	0.4nm,0.3s,baz=242,slow=14,SNR=4.1						
MKAR	**Makanchi Array**	33.19	346	P	P	12 01 53.6	-0.1
	0.2nm,0.7s,baz=142,slow=9.3,SNR=2.8						
WRA	**Warramunga Arr**	53.17	129	P	P	12 04 35.0	-0.5
	0.2nm,0.8s,baz=310,slow=8.0,SNR=4.2						
ASAR	**Alice Springs**	55.17	133	P	P	12 04 50.3	+0.3
	0.1nm,0.5s,baz=309,slow=7.0,SNR=5.6						

DJA 12 12:02:50.4±0.9, 6°S±9°×13°0E±°, h118^{km}±48^{km}, M4.5/6, mb4.3/5, mB4.8/2, MLv4.6/6, Mw(mB)4.1/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	2.07	137	P	Pn	12 03 24.8	+0.2
FAKI	**Fak Fak**	4.24	34	P	Pn	12 03 52.6	-0.5
FAKI				S	Sn	12 04 40.6	-1.2
SOEI	**Soe**	6.45	239	P	Pn	12 04 23.2	+0.2
RKPI	**Ransiki, Papua**	6.52	41	P	Pn	12 04 24.2	+0.3
	47nm,0.9s,0.8nm						
BATI	**Baumata**	7.19	238	P	Pn	12 04 32.2	-0.8
KDI	**Kendari**	7.65	289	P	Pn	12 04 39.7	+0.6
BAKI	**Biak**	8.12	50	P	Pn	12 04 46.9	+1.3

*ISCJB **12** 12:02:59.8±0.3, 2°.14S±0°.04×102°.05E±0°.04, h191^{km}±3^{km}, mb4.2/21, Error ellipse: s-maj=8.7km s-min=3.7km az=141.1*

*NEIC **12** 12:03:00.2±0.5, 2°.20S×102°.04E, h182^{km}±4^{km}, mb4.3/12, Error ellipse: s-maj=13.0km s-min=4.4km az=54.0*

*IDC **12** 12:03:00.4±2.1, 2°.22S×101°.97E, h183^{km}±20^{km}, mb3.8/12, mb1 3.9/13, mb1mx3.6/43, mbtmp4.3/13, MS3.6/1, Ms1 3.6/1, ms1mx2.6/49, Error ellipse: s-maj=28.8km s-min=10.7km az=56.0*

*DJA **12** 12:03:00.9±0.2, 2°S±2°×10°2E±°, h180^{km}±2^{km}, M4.2/25, mb4.3/14, mB4.8/6, MLv4.3/25, Mw(mB)4.1/6*

ISC 12 12:03:00.6±0.6, 2°.13S±0°.05×102°.06E±0°.05, h185^{km}±6^{km}, n84, σ1^{s}.44/91, mb4.3/21, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	**Kerinci**	0.60	273	P	Pn	12 03 27.6	+1.1
MASI	**Maura Aman, Be**	1.02	170	P	Pn	12 03 30.1	+1.1
MASI				S	Sn	12 03 52.6	+1.5
SDSI	**Sungai Dareh**	1.35	332	P	Pn	12 03 31.7	+0.2
JMBI	**JAMBI**	1.65	73	P	Pn	12 03 34.8	+0.4
JMBI				S	Sn	12 04 00.7	+0.1
RGRI	**Rengat**	1.79	9	P	Pn	12 03 36.3	+0.5
PDSI	**Padang**	2.00	307	P	Pn	12 03 38.1	0.0
PDSI				S	Sn	12 04 05.6	-1.6
PPSI	**Pulau Pagai**	2.15	253	P	Pn	12 03 40.6	+1.1
LHSI	**Lahat**	2.23	139	P	Pn	12 03 41.5	+1.0
MNAI	**Manna**	2.39	158	*e*Pn	Pn	12 03 42.6	+0.3
MNAI				*e*Sn	Sn	12 04 14.0	-0.9
MNAI	**Manna**	2.39	158	P	Pn	12 03 42.5	+0.2
BKNI	**Bangkinang**	2.64	337	*e*Pn	Pn	12 03 44.9	-0.3
BKNI				*e*Sn	Sn	12 04 19.2	-0.9
BKNI	**Bangkinang**	2.64	337	P	Pn	12 03 45.4	+0.2
SISI	**Saibi**	3.08	285	P	Pn	12 03 51.2	+0.8
MDSI	**Maura Dua**	3.15	138	P	Pn	12 03 51.9	+0.6
LWLI	**Liwa**	3.50	145	P	Pn	12 03 57.2	+1.6
MNSI	**Mandailing Nat**	3.82	319	P	Pn	12 04 00.0	+0.4
KLI	**Kotabumi**	3.89	134	P	Pn	12 04 00.8	+0.3
KASI	**Kota Agung**	4.16	144	P	Pn	12 04 03.3	-0.5
MYKOM	**Kota Tinggi**	4.28	25	*e*Pn	Pn	12 04 05.7	+0.3
MYKOM				*e*Sn	Sn	12 04 48.2	-8.2
PBSI	**Pulau Batu**	4.30	299	P	Pn	12 04 05.9	+0.2
GSI	**Gunungsitoli**	5.63	307	*e*Pn	Pn	12 04 22.8	-0.1
GSI				*e*Sn	Sn	12 05 23.8	-4.0
GSI	**Gunungsitoli**	5.63	307	P	Pn	12 04 22.8	-0.1
	72nm,0.7s,1.0nm						
PSI	**Prapat**	5.81	327	*e*Pn	Pn	12 04 24.1	-1.2
PSI				*e*Sn	Sn	12 05 31.4	-0.9
PSI	**Prapat**	5.81	327	P	Pn	12 04 24.6	-0.7
	2.0nm,0.3s,baz=180,slow=6.7,SNR=14						
PSI				S	Sn	12 05 30.5	-1.7
	0.5nm,0.3s,baz=178,slow=3.9,SNR=2.4						
IPM	**Ipoh**	6.64	351	*e*Pn	Pn	12 04 37.5	+1.4
KCSI	**Kotacane, Aceh**	7.06	323	P	Pn	12 04 39.9	-1.7
	28nm,0.8s,939nm0.3nm						
TPTI		7.24	318	P	Pn	12 04 42.8	-1.2
	46nm,0.6s,809nm0.2nm						
SNSI	**Sinabang, Aceh**	7.29	308	P	Pn	12 04 44.6	0.0
	81nm,0.9s,0.7nm						
KULM	**Kulim**	7.50	349	*e*Pn	Pn	12 04 47.0	-0.4
KULM				*e*Sn	Sn	12 06 03.7	-8.3
CISI	**Cisompet, Garu**	7.87	133	*e*Pn	Pn	12 04 49.8	-2.4
CISI				*e*Sn	Sn	12 06 16.1	-4.7
CISI	**Cisompet, Garu**	7.87	133	P	Pn	12 04 49.6	-2.6
CMJI	**Cimerak**	8.49	132	P	Pn	12 05 02.0	+1.7
LHMI	**Lhok Sumawe**	8.92	325	*e*Pn	Pn	12 05 04.9	-1.0
XMIS	**Christmas Isla**	9.03	157	*e*Pn	Pn	12 05 00.7	-6.7
UGM	**Wanagama**	10.20	125	*e*Pn	Pn	12 05 22.9	+0.2
UGM				*e*Sn	Sn	12 07 11.2	-5.2
JAGI	**Jajag, Banyuwa**	13.58	118	*e*Pn	Pn	12 06 04.6	-1.4
SRAK	**Srakaew**	16.04	360	P	Pn	12 06 37.8	+1.7
	57nm,0.6s,571nm						
MPSI	**Mapaga**	18.00	82	P	Pn	12 06 59.1	-0.5
BNSI	**Bone**	18.16	98	P	Pn	12 07 02.0	+0.6
BKSI	**Bulukumba**	18.30	100	P	Pn	12 07 02.3	-0.8
UTTA	**Uttaradit**	19.80	356	P	P	12 07 18.4	+1.4
	1.6nm,0.6s						
MRSI	**Marisa**	20.04	83	P	P	12 07 20.2	+0.5
NONG	**Nongkai**	20.09	3	P	P	12 07 22.8	+2.7
	0.2nm,0.7s,89nm						
CM01	**Chiang Mai Arr**	20.65	352	*e*P	P	12 07 28.1	+2.1
CM31	**Chiang Mai Arr**	20.68	352	*e*P	P	12 07 28.4	+1.9
	4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	20.68	352	P	P	12 07 27.9	+1.5
	2.4nm,0.5s,baz=185,slow=8.5,SNR=18						
CHTO	**Chiang Mai**	21.04	352	*e*P	P	12 07 31.7	+1.5
	3.2nm,0.9s						
SIJI	**Sorong**	29.22	88	P	P	12 08 46.2	+0.8
	11nm,0.5s,baz=272,slow=17,SNR=7.2						
SAUI	**Saumlaki**	29.69	102	P	P	12 08 47.5	-1.9
FAKI	**Fak Fak**	30.17	92	*e*P	P	12 08 51.1	-2.6
	6.9nm,0.7s						
WRA	**Warramunga Arr**	36.16	122	P	P	12 09 45.3	-0.2
	3.2nm,0.4s,baz=300,slow=11,SNR=10						
WR1	**Warramunga Arr**	36.16	122	*e*P	P	12 09 45.3	-0.2
	7.8nm,1.0s						
WRAB	**Tennant Creek**	36.17	122	*e*P	P	12 09 45.3	-0.3
	8.2nm,0.4s						
WB2	**Warramunga Arr**	36.17	122	*e*P	P	12 09 45.5	-0.2
	7.8nm,0.5s						
AS31	**Alice Springs**	37.52	127	*e*P	P	12 09 55.8	-1.3
	4.4nm,0.6s						
ASAR	**Alice Springs**	37.52	127	P	P	12 09 56.9	-0.2
	8.7nm,0.5s,baz=302,slow=8.0,SNR=97						
ASAR				PcP	PcP	12 12 12.2	+0.8
	0.3nm,0.3s,baz=333,slow=2.4,SNR=4.6						
AS01	**Alice Springs**	37.56	127	*e*P	P	12 09 57.7	+0.4
FORT	**Forrest**	37.64	142	*e*P	P	12 09 59.5	+1.6
	18nm,0.7s						
GTA	**Gaotai**	41.39	357	*e*P	P	12 10 30.1	+1.3
GTA				pP	pP	12 10 34.7	-34
GTA				sP	sP	12 10 37.4	-52
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BBOO	**Buckleboo**	44.14	137	*e*P	P	12 10 50.9	-0.1
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	47.54	133	*e*P	P	12 11 18.1	+0.6
	comp=Z,1.3nm,1.0s						
STKA	**Stephens Creek**	47.54	133	P	P	12 11 18.1	+0.6
	comp=Z,2.8nm,0.3s,baz=313,slow=9.4,SNR=26						
TARG	**Taragay, Kyrgy**	48.89	336	*e*P	P	12 11 25.1	-3.1
	comp=Z,3.6nm,0.9s						
SONA0	**Songino Array**	49.90	4	*e*P	P	12 11 37.4	+1.9
SONM	**Songino Array**	49.90	4	P	P	12 11 37.4	+1.9
	comp=Z,1.5nm,0.5s,baz=187,slow=9.7,SNR=24						
MAJO	**Matsushiro**	51.10	38	*e*P	P	12 11 44.8	+0.3
MJAR	**Matsushiro Arr**	51.10	38	P	P	12 11 44.8	+0.3
	comp=Z,1.5nm,0.6s,baz=218,slow=8.0,SNR=6.4						
MK01	**Makanchi Array**	51.71	343	*e*P	P	12 11 49.2	+0.4
MK31	**Makanchi Array**	51.73	343	*e*P	P	12 11 49.4	+0.4
MK32	**Makanchi Array**	51.73	343	*e*P	P	12 11 49.0	0.0
MKAR	**Makanchi Array**	51.73	343	*e*P	P	12 11 49.2	+0.3
	comp=Z,8.4nm,0.6s						
MKAR	**Makanchi Array**	51.73	343	P	P	12 11 49.0	0.0
	comp=Z,1.9nm,0.8s,baz=147,slow=8.3,SNR=22						
USRK	**Ussuriysk Ar.**	53.32	27	P	P	12 12 02.1	+1.4
	comp=Z,4.6nm,0.7s,baz=218,slow=5.6,SNR=9.2						
ZALV	**Zalesovo Beam**	57.70	348	P	P	12 12 31.6	0.0
	comp=Z,1.0nm,0.3s,baz=166,slow=6.5,SNR=6.3						
ZAA1	**Zalesovo Array**	57.70	348	*e*P	P	12 12 31.6	-0.1
ASAJ	**Asahikawa**	58.57	33	LR	LR	12 39 17.8	
	comp=Z,43nm,18.3s,baz=346,slow=37						
ABKAR	**Akbulak array**	62.75	330	*e*P	P	12 13 06.0	-0.1
PETK	**Petropavlovsk-**	71.90	32	P	P	12 14 03.6	+0.1
	comp=Z,1.3nm,0.8s,baz=251,slow=4.4,SNR=3.4						
PEA1	**Petropavlovsk-**	71.91	32	*e*P	P	12 14 03.6	+0.1
BR101	**Keskin Array S**	74.93	312	*e*P	P	12 14 21.5	-0.2
BRTR	**Keskin Array B**	74.93	312	P	P	12 14 21.5	-0.2
	comp=Z,0.7nm,0.6s,baz=126,slow=6.3,SNR=4.1						
PDAR	**Pinedale Array**	130.66	31	SKPbc	SKPbc	12 24 55.1	-1.7
	comp=Z,0.7nm,0.6s,baz=57,slow=0.4,SNR=9.2						
LTX	**Lajitas**	143.52	40	*e*PKPdf	PKPbc	12 22 12.7	+0.8
TXAR	**Lajitas Array**	143.52	40	PKP	PKPbc	12 22 12.7	+0.8
	comp=Z,0.6nm,0.4s,baz=233,slow=0.9,SNR=41						

JSN 12 12:21:31.3±0.6, 19°.81N×76°.77W, h15^{km}±348^{km}, MD3.8, 5D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STH	**Stony Hill**	1.73	181	⇓*i*P	Pn	12 21 59.3	-1.5
GWJ	**Greenwich**	1.73	179	⇓*i*P	Pn	12 21 59.5	-1.5
HOJ	**Hope**	1.80	179	⇓*i*P	Pn	12 22 00.6	-1.2
MCJ	**Malvern**	2.07	205	*i* P	Pn	12 22 04.3	-1.3
MCJ				⇓*i*S	Sn	12 22 29.3	-1.8
PCJ	**Portland Cotta**	2.09	190	⇓*i*P	Pn	12 22 05.2	-0.7

*ISCJB **12** 12:24:02.2±0.8, 11°.1S±0°.1×165°.8E±0°.1, h10^{km}, mb4.1/11, MS3.3/3, Error ellipse: s-maj=15.6km s-min=14.2km az=162.7*

*IDC **12** 12:24:02.2±1.3, 10°.88S×165°.83E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.8/41, mbtmp4.0/8, ML4.4/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/28, Error ellipse: s-maj=34.5km s-min=23.5km az=137.0*

*NEIC **12** 12:24:04.0±0.9, 10°.92S×165°.75E, h10^{km}, mb4.2/5, Error ellipse: s-maj=20.3km s-min=15.6km az=115.0*

ISC 12 12:24:04.3±0.9, 10°.9S±0°.1×165°.74E±0°.09, h10^{km}, n30, σ1^{s}.96/22, mb4.1/11, MS3.4/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.88	284	*e*P	Pn	12 25 34.0	+2.4
HNR				*e*S	Sb	12 26 54.0	-3.5
HNR	**Honiara**	5.88	284	Pn	Pn	12 25 33.8	+2.2
	24nm,0.3s,baz=119,slow=2.4,SNR=8.1						
HNR				Sn	Sn	12 26 41.9	+2.9
	3.6nm,0.3s,baz=147,slow=6.1,SNR=2.9						
HNR				LR	LR	12 27 58.3	
	comp=Z,365nm,19.7s,baz=178,slow=40						
DZM	**Mont Dzumac**	11.15	177	*e*Pn	Pn	12 26 45.1	+1.1
DZM	**Mont Dzumac**	11.15	177	Pn	Pn	12 26 44.9	+0.9
	0.9nm,0.3s,baz=314,slow=11,SNR=16						
CTA	**Charters Tower**	20.87	242	P	Pn	12 28 48.2	-1.1
	2.2nm,0.6s,baz=80,slow=14,SNR=4.3						
JAY	**Jayapura**	26.19	287	LR	LR	12 39 30.9	
	comp=Z,96nm,19.6s,baz=360,slow=35						
H11S2	**WAKE ISLAND Hy**	29.20	2	T	T	13 00 34.3	
	baz=181,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	29.20	2	T	T	13 00 30.2	
	baz=181,slow=76,SNR=18						
H11S1	**WAKE ISLAND Hy**	29.22	2	T	T	13 00 29.4	
	baz=181,slow=76,SNR=24						
H11N1	**WAKE ISLAND Hy**	30.42	2	T	T	13 02 01.5	
	baz=182,slow=76,SNR=24						
H11N3	**WAKE ISLAND Hy**	30.43	2	T	T	13 01 58.5	
	baz=182,slow=76,SNR=8.9						
H11N2	**WAKE ISLAND Hy**	30.44	2	T	T	13 02 03.6	
	baz=182,slow=76,SNR=16						
STKA	**Stephens Creek**	30.55	223	LR	LR	12 41 11.1	
	comp=Z,89nm,19.0s,baz=29,slow=34						
WB2	**Warramunga Arr**	31.52	250	*e*P	P	12 30 25.4	-1.6
	8.2nm,1.4s						
WRAB	**Tennant Creek**	31.52	250	*e*P	P	12 30 23.9	-3.0
	2.6nm,0.9s						
WR1	**Warramunga Arr**	31.53	250	*e*P	P	12 30 26.2	-0.8
	7.7nm,1.3s						
WRA	**Warramunga Arr**	31.53	250	P	P	12 30 26.2	-0.8
	1.4nm,0.7s,baz=81,slow=9.1,SNR=19						
GUMO	**Guam**	31.93	319	LR	LR	12 41 04.4	
	comp=Z,56nm,21.7s,baz=90,slow=32						
AS01	**Alice Springs**	32.82	243	*e*P	P	12 30 36.8	-1.5
AS31	**Alice Springs**	32.86	243	*e*P	P	12 30 34.8	-3.8
	1.0nm,0.9s						
ASAR	**Alice Springs**	32.86	243	P	P	12 30 38.0	-0.7
	2.3nm,0.8s,baz=64,slow=10,SNR=25						
FITZ	**Fitzroy Crossi**	39.41	255	*e*P	P	12 31 34.0	-0.8
	2.6nm,0.8s						
SONA0	**Songino Array**	78.53	324	*e*P	P	12 36 06.8	+0.7
SONM	**Songino Array**	78.53	324	P	P	12 36 06.8	+0.7
	0.3nm,0.5s,baz=132,slow=6.3,SNR=4.2						
TLY	**Talaya**	81.98	326	*e*P	P	12 36 26.3	+1.8
	23nm,0.7s						
ILAR	**Eielson Array**	83.36	19	P	P	12 36 30.9	-0.4
	0.6nm,0.9s,baz=247,slow=5.6,SNR=8.1						
MK32	**Makanchi Array**	93.39	317	*e*P	P	12 37 19.2	-0.8
MKAR	**Makanchi Array**	93.39	317	P	P	12 37 19.2	-0.8
	0.6nm,0.7s,baz=79,slow=6.4,SNR=5.3						
ARA0	**ARCESS Array S**	116.17	345	*e*PKPdf	PKiKP	12 42 46.2	-1.2
ARCES	**ARCESS Array B**	116.17	345	PKP	PKiKP	12 42 46.2	-1.2
	1.9nm,1.0s,baz=60,slow=3.6,SNR=2.6						

*NNC **12** 12:26:55.6±6.1, 37°.62N×56°.98E, h0^{km}, mb4.5, Error ellipse: s-maj=56.6km s-min=23.2km az=11.0*

*NEIC **12** 12:26:56.2±0.0, 37°.31N×57°.33E, h8^{km}, mb4.2/19, MN4.1(TEH), After TEH.*

NEIC Felt at Bojnurd.

*TEH **12** 12:26:56.8, 37°.33N×57°.35E, h10^{km}, ML4.1*

*IDC **12** 12:26:57.0±0.9, 37°.36N×57°.22E, h0^{km}, mb4.0/15, mb1 4.2/19, mb1mx4.0/47, mbtmp4.1/19, ML4.1/4, MS3.5/17, Ms1 3.5/17, ms1mx3.2/51, Error ellipse: s-maj=15.1km s-min=8.4km az=169.0*

*ISCJB **12** 12:26:58.1±0.2, 37°.33N±0°.02×57°.37E±0°.02, h14^{km}, mb4.1/39, MS3.5/13, Error ellipse: s-maj=3.1km s-min=2.4km az=169.6*

*THR **12** 12:26:58.1, 37°.31N×57°.18E, h25^{km}, ML3.9*

*MOS **12** 12:27:02.8±1.5, 37°.73N×57°.36E, h31^{km}, mb4.3/28, Error ellipse: s-maj=6.1km s-min=4.7km az=132.4*

ISC 12 12:26:59.1±0.4, 37°.35N±0°.03×57°.34E±0°.03, h14^{km}, n219, σ2^{s}.27/201, mb4.2/39, MS3.5/14, 29C-13D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJRD	**Bojnurd**	0.35	9	*e*Pg	Pb	12 27 07.3	+0.1
BJRD	**Bojnurd**	0.35	9	*e*Pg	Pb	12 27 07.3	+0.1
ISFR	**Sfrayin**	0.60	119	*e*Sg	Sg	12 27 17.7	-1.4
ISFR				*e*Pg	Pg	12 27 08.2	-2.8
ISFR				IAMB	IAmb	12 27 20.8	
	comp=Z,46µm,0.2s						
GEYT	**Alibeck**	0.84	47	Pg	Pg	12 27 13.3	-2.2
	comp=Z,125nm,0.3s,baz=223,slow=22,SNR=134						
GEYT				Lg	Lg	12 27 27.3	
	comp=Z,299nm,0.3s,baz=239,slow=14,SNR=23						
GEYT				LR	LR	12 27 40.9	
	comp=Z,1µm,21.7s,baz=210,slow=48						
GYA0	**ALIBECK ARRAY**	0.84	47	P	Pg	12 27 13.6	-1.8
GYA0	**ALIBECK ARRAY**	0.84	47	*e*Pg	Pg	12 27 13.7	-1.8
GYA0B	**ALIBECK ARRAY**	0.84	47	*e*Pg	Pg	12 27 13.6	-1.9
GYA0B				*e*Sn	Sn	12 27 27.1	-1.8
GYA0B	**ALIBECK ARRAY**	0.84	47	S	Sn	12 27 27.3	-1.5
SBZV	**Sabzevar**	0.98	167	*e*Pg	Pb	12 27 15.0	-3.1
SBZV				IAMB	IAmb	12 27 31.1	
	comp=Z,0.0nm,0.3s						
ASHT	**Ashkhabad**	1.02	54	P	Pn	12 27 18.8	-0.2
ASHT	**Ashkhabad**	1.02	54	*e*Pg	Pn	12 27 18.8	-0.2
MRVT	**Maraveh tapeh**	1.04	288	*e*Pg	Pb	12 27 15.6	-3.4
MRVT	**Maraveh tapeh**	1.04	288	*e*Pg	Pb	12 27 15.6	-3.4
IEMG	**Emamgholi**	1.05	86	*e*Pg	Pb	12 27 16.4	-2.8
IEMG				*e*Sg	Sn	12 27 33.3	-0.9
IEMG				IAMB	IAmb	12 27 42.5	
	comp=Z,35µm,0.3s						
IKRD	**Kardeh**	1.10	121	*e*Pn	Pg	12 27 30.3	+10
IKRD				IAMB	IAmb	12 28 04.7	
	comp=Z,11µm,0.3s						
IAKL	**Akhelmad**	1.36	123	*e*Pg	Pn	12 27 22.0	-1.9
IAKL				IAMB	IAmb	12 27 25.9	
	comp=Z,18µm,0.3s						
IMND	**Minoodasht**	1.54	267	*e*Pn	Pn	12 27 25.7	-0.5
IMND				IAMB	IAmb	12 27 55.2	
	comp=Z,21µm,0.7s						
IPAY	**Payeh**	1.60	124	*e*Pn	Pn	12 27 26.1	-1.1
IPAY				IAMB	IAmb	12 27 54.7	
	comp=Z,19µm,0.2s						
SHRO	**Shahrood**	1.73	219	*e*Pn	Pn	12 27 27.0	-1.9
SHRO	**Shahrood**	1.73	219	*e*AML	AML	12 27 59.4	
	comp=E,903nm,0.6s						
SHRO	**Shahrood**	1.73	219	*e*Pg	Pn	12 27 26.9	-1.9
IMYA	**Miami**	2.43	114	*e*Pn	Pn	12 27 40.1	+1.5
IMYA				IAMB	IAmb	12 28 32.3	
	comp=Z,12µm,0.8s						
IANJ	**Anjilo**	3.34	237	*e*Pn	Pn	12 27 51.3	+0.1
IANJ				IAMB	IAmb	12 29 00.8	
	comp=Z,5µm,1.0s						
TNSJ	**Nastanj**	3.43	190	*e*Pn	Pn	12 27 52.3	0.0
TNSJ				IAMB	IAmb	12 28 57.6	
	comp=Z,0.0nm,1.1s						
ISHM	**Shahmirzad**	3.60	246	*e*Pn	Pn	12 27 55.7	+0.9
ISHM				IAMB	IAmb	12 29 03.2	
	comp=Z,7µm,0.9s						
TKDS	**Koohdasht(Taba**	3.73	183	*e*Pn	Pn	12 27 56.5	+0.1
TKDS				IAMB	IAmb	12 29 04.7	
	comp=Z,0.0nm,1.8s						
IALA	**Alasht**	3.85	252	*e*Pn	Pn	12 28 00.3	+2.1
IALA				IAMB	IAmb	12 29 07.3	
	comp=Z,5µm,0.6s						
ILAS	**Lasjerd**	4.05	242	*e*Pn	Pn	12 28 01.0	+0.2
ILAS				IAMB	IAmb	12 29 20.0	
	comp=Z,3µm,0.8s						
IFIR	**Firoozkooh**	4.07	247	IAMB	IAmb	12 28 07.2	
	comp=Z,1µm,0.3s						
IFIR				*e*Pn	Pn	12 28 01.8	+0.6
IPRN	**Peran**	4.17	256	*e*Pn	Pn	12 28 04.0	+1.6
IPRN				IAMB	IAmb	12 29 19.2	
	comp=Z,5µm,0.7s						
TPRV	**Parvadeh(Tabas**	4.35	187	*e*Pn	Pn	12 28 04.9	+0.1
TPRV				IAMB	IAmb	12 29 22.4	
	comp=Z,0.0nm,1.2s						
SHRT	**Shahrakht**	4.41	146	*e*Pn	Pn	12 28 06.2	+0.5
SHRT	**Shahrakht**	4.41	146	*e*Pn	Pn	12 28 06.2	+0.5
IMON	**Monand**	4.56	155	IAMB	IAmb	12 28 11.5	
	comp=Z,1µm,0.2s						
IMON				*e*Pn	Pn	12 28 08.8	+0.8
ITEG	**Tejag**	4.59	165	IAMB	IAmb	12 28 11.1	
	comp=Z,1µm,0.2s						
ITEG				*e*Pn	Pn	12 28 08.4	+0.1
IDMV	**Damavand**	4.63	249	*e*Pn	Pn	12 28 10.9	+2.0
IDMV				IAMB	IAmb	12 29 36.2	
	comp=Z,2µm,0.9s						
IDAH	**Dahanechah**	5.05	155	*e*Pn	Pn	12 28 15.3	+0.7
IDAH				IAMB	IAmb	12 28 20.2	
	comp=N,796nm,0.3s						
ANAR	**Anarak**	5.10	216	*e*Pn	Pn	12 28 14.9	-0.3
IKOO	**Kooshah**	5.10	164	*e*Pn	Pn	12 28 15.5	+0.1
IKOO				IAMB	IAmb	12 30 04.9	
	comp=Z,1µm,1.1s						
ISFB	**Sefidab**	5.11	236	*e*Pn	Pn	12 28 15.5	+0.2
ISFB				IAMB	IAmb	12 28 37.4	
	comp=Z,973nm,0.8s						
KRSH	**Karshahi**	5.42	233	*e*Pn	Pn	12 28 20.1	+0.5
YZKH	**Yazd**	5.44	205	*e*Pn	Pn	12 28 19.0	-0.9
YZKH	**Yazd**	5.44	205	*e*AML	AML	12 29 54.9	
	comp=N,69nm,0.6s						
YZKH				*e*AML	AML	12 30 07.0	
	comp=E,81nm,0.8s						
YZKH	**Yazd**	5.44	205	*e*Pn	Pn	12 28 19.0	-0.9
GHVR	**GHOM**	5.68	242	*e*AML	AML	12 30 24.6	
	comp=N,42nm,0.6s						
IZEF	**Zefreh**	6.05	224	*e*Pn	Pn	12 28 29.2	+0.8
IZEF				IAMB	IAmb	12 30 42.4	
	comp=Z,495nm,0.8s						
IRAZ	**Razeghan**	6.29	254	*e*Pn	Pn	12 28 32.9	+1.3
IRAZ				IAMB	IAmb	12 30 57.9	
	comp=Z,665nm,0.9s						
IRAM	**Ramesheh**	6.88	218	*e*Pn	Pn	12 28 40.4	+0.7
IRAM				IAMB	IAmb	12 31 22.9	
	comp=Z,338nm,0.8s						
KHGB	**Koh Gabri**	7.00	186	*e*Pn	Pn	12 28 42.8	+1.4
ISRB	**Sarab**	7.70	276	*e*Pn	Pn	12 28 51.8	+0.9
IHRS	**Heris**	8.21	280	*e*Pn	Pn	12 28 57.3	-0.7
IHRS				IAMB	IAmb	12 30 35.7	
	comp=Z,594nm,0.7s						
AKT	**Akhty**	8.50	302	⇑*e*P	Pn	12 29 04.0	+2.1
IMRD	**Marand**	9.28	282	*e*Pn	Pn	12 29 13.4	+0.7
IMRD				IAMB	IAmb	12 29 28.9	
	comp=Z,399nm,0.6s						
GNBR	**Gunib**	9.43	305	⇑*e*P	Pn	12 29 16.7	+2.2
KBL	**Kabul**	9.89	103	*e*Pn	Pn	12 29 22.6	+1.5
KBL	**Kabul**	9.89	103	*e*P	Pn	12 29 22.6	+1.5
BTLR	**Botlikh**	10.04	305	*e*P	Pn	12 29 24.7	+1.8
GNI	**Garni**	10.23	290	*e*Pn	Pn	12 29 29.1	+3.5
GNI	**Garni**	10.23	290	⇑*e*P	Pn	12 29 27.1	+1.5
DVE	**Vedeno**	10.24	307	⇑*e*P	Pn	12 29 26.5	+0.8
GAR	**Garm**	10.35	77	*e*Pn	Pn	12 29 28.0	+0.8
GAR	**Garm**	10.35	77	*e*P	Pn	12 29 28.0	+0.8
GROC	**Groznyy**	10.58	307	*e*P	Pn	12 29 30.3	+0.1
GROC				*e*S	Sn	12 31 25.6	-2.8
GROC				pmax	pmax		
	comp=Z,35nm,0.6s						
TBLG	**Delisi**	10.67	298	*e*Pn	Pn	12 29 32.5	+1.0
TBLG	**Delisi**	10.67	298	*e*P	Pn	12 29 32.5	+1.0
KARS	**Kars**	11.57	291	*e*Pn	Pn	12 29 43.1	-0.9
KARS				*e*Sn	Sn	12 31 51.4	-1.6
KARS	**Kars**	11.57	291	*e*P	Pn	12 29 43.1	-0.9
KARS				*e*		12 31 51.4	
KK31	**Karatay Array**	11.59	56	*e*Pn	Pn	12 29 44.6	+0.6
KK31	**Karatay Array**	11.59	56	*e*P	Pn	12 29 44.6	+0.6
KKAR	**Karatay Array**	11.59	56	*e*Pn	Pn	12 29 44.5	+0.4
KKAR	**Karatay Array**	11.59	56	*e*P	Pn	12 29 44.5	+0.4
ZEI	**Tsey**	11.64	302	*e*P	Pn	12 29 46.1	+1.2
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AB31	**Akbulak array**	12.05	8	Pn	Pn	12 29 47.0	-3.2
	comp=Z,8.4nm,1.1s,baz=204,slow=13,SNR=38						
AB31				⇓Sn	Sn	12 31 57.4	-7.0
	comp=Z,6.6nm,0.8s,baz=197,slow=24,SNR=4.8						
AB31	**Akbulak array**	12.05	8	P	Pn	12 29 47.4	-2.9
AB31				S	Sn	12 31 57.4	-7.0
AB31				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AB31				smax	smax		
	comp=N,7.0nm,0.8s						
ABKAR	**Akbulak array**	12.05	8	*e*Pn	Pn	12 29 49.5	-0.7
NCK	**Nalchik**	12.13	305	⇓*e*P	Pn	12 29 50.8	-0.7
NEY	**Neytrino**	12.61	302	⇓*e*P	Pn	12 29 59.0	+0.8
KBZ	**Khabaz**	12.69	305	Pn	Pn	12 29 56.1	-3.0
	comp=N,0.9nm,0.3s,baz=99,slow=6.0,SNR=16						
KBZ				Sn	Sn	12 32 14.3	-5.8
	comp=N,0.2nm,0.3s,baz=314,slow=14,SNR=2.3						
PYA1	**Pyatigorsk**	12.71	306	⇓*i*P	Pn	12 29 57.1	-2.3
SHA1	**Shidzhatmaz**	12.85	304	*i* P	Pn	12 29 59.8	-1.7
KVAR	**Kislovodsk Arr**	12.92	305	Pn	Pn	12 30 00.7	-1.6
	baz=86,slow=19,SNR=7.4						
KVAR				Sn	Sn	12 32 21.4	-4.6
	baz=214,slow=12,SNR=3.9						
KIV	**Kislovodsk**	12.93	305	*e*Pn	Pn	12 29 58.6	-3.8
KIV	**Kislovodsk**	12.93	305	*e*P	Pn	12 30 00.2	-2.2
KIV				*e*S	Sn	12 32 23.8	-2.3
KIV				pmax	pmax		
	comp=Z,45nm,1.0s						
AKTO	**Aktyubinsk**	13.09	2	⇑Pn	Pn	12 30 00.8	-3.8
	comp=Z,13nm,1.1s						
AKTO				⇑Sn	Sn	12 32 24.0	-5.8
	comp=Z,16nm,1.4s						
AKTO	**Aktyubinsk**	13.09	2	Pn	Pn	12 30 03.5	-1.0
	comp=Z,0.8nm,0.3s,baz=183,slow=15,SNR=11						
AKTO				Sn	Sn	12 32 24.4	-5.4
	comp=Z,0.3nm,0.3s,baz=67,slow=22,SNR=4.0						
AKTO				LR	LR	12 36 13.2	

	comp=Z,143nm,20.8s,baz=170,slow=42						
GOF	Gofitskoye	13.22	310	⇓iP	Pn	12 30 04.6	-1.8
GOF				pmax	pmax		
	comp=Z,50nm,1.0s						
DOMR	Dombai	13.37	301	⇓eP	Pn	12 30 10.3	+1.7
NIL	Nilore	13.48	101	ePn	Pn	12 30 09.5	-0.5
NIL	Nilore	13.48	101	eP	Pn	12 30 09.5	-0.5
AAK	Ala-Archa	14.16	63	ePn	Pn	12 30 17.8	-1.6
AAK	Ala-Archa	14.16	63	ceP	Pn	12 30 19.4	0.0
AAK	Ala-Archa	14.16	63	LR	LR	12 36 37.9	
	comp=Z,238nm,19.1s,baz=243,slow=41						
FRU1	Bishkek	14.31	62	ePn	Pn	12 30 21.0	-0.3
FRU1	Bishkek	14.31	62	eP	Pn	12 30 21.0	-0.3
NRN	Naryn	14.99	68	ePn	P	12 30 33.2	-3.1
NRN	Naryn	14.99	68	eP	P	12 30 33.2	-3.1
KDJ	Kajisay	15.98	66	ePn	P	12 30 46.4	-0.8
	comp=Z,13nm,1.1s						
KDJ	Kajisay	15.98	66	eP	P	12 30 46.4	-0.8
KDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
TARG	Taragay, Kyrgy	16.37	68	ePn	P	12 30 54.5	+2.8
	comp=Z,15nm,0.9s						
PRZ	Przheval'sk	16.94	66	ePn	P	12 31 01.3	+3.6
	comp=Z,19nm,0.9s						
PRZ	Przheval'sk	16.94	66	eP	P	12 31 01.3	+3.6
PRZ				pmax	pmax		
	comp=Z,19nm,0.9s						
BRVK	Borovoye	18.11	26	ePn	Pn	12 31 09.6	-0.5
	comp=Z,7.8nm,0.8s						
BRVK	Borovoye	18.11	26	c iP	P	12 31 09.8	-0.6
BVAR	Borovoye Array	18.12	26	P	Pn	12 31 09.6	-0.7
	comp=Z,0.7nm,0.3s,baz=210,slow=12,SNR=15						
BVAR				LR	LR	12 39 05.8	
	comp=Z,126nm,19.3s,baz=215,slow=40						
MMAI	Mount Meron Ar	18.44	263	LR	LR	12 39 01.8	
	comp=Z,44nm,20.9s,baz=260,slow=40						
BR101	Keskin Array S	18.68	285	eP	Pn	12 31 18.2	+0.9
BR131	Keskin Array S	18.68	285	eP	Pn	12 31 20.7	+3.4
	comp=Z,6.6nm,1.1s						
BRTR	Keskin Array B	18.68	285	i P	Pn	12 31 20.7	+3.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	18.68	285	P	Pn	12 31 18.2	+0.9
	comp=Z,0.1nm,0.3s,baz=105,slow=13,SNR=8.5						
VSR	Storozhevoye	18.94	323	eP	P	12 31 18.0	-1.5
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARU	Arti	19.10	2	eP	Pn	12 31 22.6	+0.5
	comp=Z,10nm,0.9s						
ARU	Arti	19.10	2	P	Pn	12 31 22.8	+0.7
ANTO	Ankara	19.33	285	eP	Pn	12 31 26.4	+1.3
	comp=Z,9.8nm,1.1s						
ANTO	Ankara	19.33	285	eP	Pn	12 31 26.4	+1.3
ANTO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SVE	Sverdlovsk	19.61	5	eP	Pn	12 31 33.8	+5.6
LPSR	Galich'ya Gora	19.96	326	eP	Pn	12 31 32.4	0.0
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
KURBB	Kurchatov Arra	20.12	42	P	Pn	12 31 36.0	+1.8
	comp=Z,3.1nm,0.8s,baz=239,slow=11,SNR=11						
KURK	Kurchatov	20.22	42	eP	Pn	12 31 36.0	+0.6
KURK	Kurchatov	20.22	42	⇑eP	Pn	12 31 35.3	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	Makanchi	20.51	55	eP	Pn	12 31 37.8	-1.2
	comp=Z,6.8nm,0.8s						
MAKZ	Makanchi	20.51	55	eP	Pn	12 31 37.8	-1.1
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK01	Makanchi Array	20.71	55	eP	Pn	12 31 40.4	-0.9
MK31	Makanchi Array	20.71	55	eP	Pn	12 31 40.4	-0.9
MK31	Makanchi Array	20.71	55	eP	Pn	12 31 40.4	-0.9
MK32	Makanchi Array	20.71	55	eP	Pn	12 31 40.8	-0.5
MKAR	Makanchi Array	20.71	55	eP	Pn	12 31 40.3	-1.0
	comp=Z,32nm,0.8s						
MKAR	Makanchi Array	20.71	55	P	Pn	12 31 40.8	-0.5
	comp=Z,4.4nm,0.9s,baz=248,slow=6.4,SNR=14						
MKAR				LR	LR	12 41 01.3	
	comp=Z,86nm,21.8s,baz=260,slow=41						
KIRV	Kirov	21.87	349	LR	LR	12 40 54.3	
	comp=Z,46nm,18.7s,baz=181,slow=38						
OBN	Obninsk	22.70	328	⇑eP	P	12 32 01.2	+1.1
OBN				pmax	pmax		
	comp=Z,14nm,1.0s						
MANT	Manisa	22.70	282	eP	P	12 32 01.9	+1.3
	comp=Z,30nm,1.1s						
TIRR	Tirgusor	22.91	297	⇑iP	P	12 32 07.3	+4.9
TIRR	Tirgusor	22.91	297	⇑P	P	12 32 07.3	+4.9
TLB	Topalu	23.19	297	⇓iP	P	12 32 08.3	+3.0
TLB	Topalu	23.19	297	⇓P	P	12 32 08.3	+3.0
CFR	Carcaliu	23.21	299	⇓iP	P	12 32 08.1	+2.6
CFR	Carcaliu	23.21	299	⇓P	P	12 32 08.1	+2.6
ICOR	Ion Corvin	23.30	296	⇑iP	P	12 32 14.8	+8.4
WMQ	Urumqi	23.85	65	eP	P	12 32 14.6	+2.6
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,99nm,3.6s						
WMQ				LR	LR		
	comp=N,140nm,14.1s						
WMQ				LR	LR		
	comp=E,130nm,20.7s						
WMQ				LR	LR		
	comp=Z,100nm,26.9s						
WMQ	Urumqi	23.85	65	eP	P	12 32 16.0	+4.0
	comp=Z,8.4nm,1.0s						
AKASG	Malin Array Be	24.05	313	P	P	12 32 14.7	+1.1
	comp=Z,4.9nm,0.7s,baz=109,slow=8.2,SNR=2.2						
AKBB	Malin Array Si	24.05	313	eP	P	12 32 14.7	+1.1
	comp=Z,19nm,1.1s						
AKBB	Malin Array Si	24.05	313	eP	P	12 32 14.7	+1.1
AKBB				pmax	pmax		
	comp=Z,19nm,1.1s						
KIEV	Kiev	24.06	313	eP	P	12 32 14.9	+1.2
	comp=Z,18nm,1.1s						
KIEV	Kiev	24.06	313	ceP	P	12 32 14.6	+0.9
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VRI	Vrincioaia	24.30	300	⇑iP	P	12 32 22.5	+6.4
VRI	Vrincioaia	24.30	300	⇑P	P	12 32 22.5	+6.4
ISR	Istrita	24.32	298	⇑iP	P	12 32 26.0	+10
ISR	Istrita	24.32	298	P	P	12 32 20.5	+4.2
ISR				pmax	pmax		
	comp=Z,25nm,1.2s						
PLOR	Plostina	24.35	300	⇑iP	P	12 32 20.0	+3.4
PLOR	Plostina	24.35	300	⇑P	P	12 32 20.0	+3.4
MLR	Muntele Rosu	24.79	299	eP	P	12 32 23.1	+2.5
	comp=Z,11nm,1.0s						
MLR	Muntele Rosu	24.79	299	⇑iP	P	12 32 28.5	+7.9
MLR	Muntele Rosu	24.79	299	⇑P	P	12 32 28.5	+7.9
NVS	Novosibirsk	24.84	37	eP	P	12 32 26.3	+5.5
DGZ	Jazzator, Alta	24.89	51	⇓eP	P	12 32 23.6	+2.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZAA0	Zalesovo Array	25.15	40	eP	P	12 32 26.1	+2.5
	comp=Z,5.2nm,0.8s						
ZALV	Zalesovo Beam	25.15	40	eP	P	12 32 23.1	-0.5
ZALV	Zalesovo Beam	25.15	40	P	P	12 32 23.7	+0.1
	comp=Z,4.0nm,0.6s,baz=255,slow=10,SNR=16						
ZALV				LR	LR	12 43 29.5	
	comp=Z,152nm,18.6s,baz=250,slow=39						
ZAA1	Zalesovo Array	25.15	40	eP	P	12 32 23.7	0.0
DOPR	Dopca	25.24	300	⇑iP	P	12 32 27.1	+2.5
VOIR		25.41	299	⇑iP	P	12 32 28.6	+2.5
VOIR		25.41	299	P	P	12 32 28.1	+2.0
VOIR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BURAR	Bucovina Array	25.65	304	⇑iP	P	12 32 30.5	+2.2
BURAR	Bucovina Array	25.65	304	⇑P	P	12 32 30.5	+2.2
BUR04	Bucovina Ar. S	25.65	304	eP	P	12 32 29.7	+1.3
BUR08	Bucovina Ar. S	25.66	304	eP	P	12 32 30.4	+1.9
ARR	Arges	25.69	299	⇑iP	P	12 32 29.9	+1.2
KLMR	Klimovskoe	26.08	340	eP	P	12 32 32.1	+0.1
KLMR				e		12 33 08.3	
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLMR	Klimovskoe	26.08	340	eP	P	12 32 32.2	+0.2
KLMR				AMP		12 32 34.8	
	comp=Z,9.0nm,0.8s						
KLMR				ePP	PnPn	12 33 08.3	-1.8
KLMR				AMP		12 35 26.7	
	comp=N,8.0nm,0.2s						
VTS	Vitosha	26.54	292	⇑iP	P	12 32 37.3	+0.8
VTS	Vitosha	26.54	292	⇑P	P	12 32 37.3	+0.8
DRGR		27.19	301	P	P	12 32 44.4	+2.1
DRGR				pmax	pmax		
	comp=Z,14nm,0.9s						
PSZ	Piszkesteto	29.24	303	eP	P	12 33 02.9	+2.4
	comp=Z,4.4nm,1.0s						
PSZ	Piszkesteto	29.24	303	eP	P	12 33 02.9	+2.4
PSZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OJC	Ojcow	29.67	308	eP	P	12 33 07.0	+2.8
	comp=Z,5.7nm,0.9s						
OJC	Ojcow	29.67	308	eP	P	12 33 07.0	+2.8
OJC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FIA0	FINESS Array S	31.01	331	eP	P	12 33 16.6	+0.8
FIA0	FINESS Array S	31.01	331	eP	P	12 33 16.6	+0.8
FINES	FINESS Array B	31.01	331	P	P	12 33 16.6	+0.8
	comp=Z,0.9nm,0.7s,baz=131,slow=7.6,SNR=2.9						
FINES				LR	LR	12 48 32.2	
	comp=Z,42nm,19.2s,baz=30,slow=42						
GTA	Gaotai	33.14	73	eP	P	12 33 42.2	+7.2
GTA				pP	sP	12 33 45.9	+4.2
GTA				sP	pP	12 33 48.8	+9.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GERES	GERESS Array B	33.44	304	P	P	12 33 39.2	+1.7
	comp=Z,0.4nm,0.5s,baz=115,slow=6.0,SNR=3.7						
SGF	Sodankyl	34.77	340	P	P	12 33 51.5	+2.8
SGF				pmax	pmax		
	comp=Z,7.0nm,2.0s						
MOX	Moxa	34.91	307	P	P	12 33 52.6	+2.5
MOX				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HFS	Hagfors	35.75	324	P	P	12 33 58.8	+1.7
	comp=Z,3.9nm,0.7s,baz=127,slow=9.4,SNR=6.0						
NRIK	Noril'sk	35.98	18	LR	LR	12 51 18.0	
	comp=Z,68nm,19.2s,baz=200,slow=41						
ARA0	ARCESS Array S	36.52	342	eP	P	12 34 05.0	+1.3
ARCES	ARCESS Array B	36.52	342	P	P	12 34 05.0	+1.3
	comp=Z,3.1nm,0.9s,baz=135,slow=9.0,SNR=7.2						
NC405	NORSAR Array S	36.99	325	eP	P	12 34 08.9	+1.1
SONA0	Songino Array	37.03	58	eP	P	12 34 09.2	+0.7
SONM	Songino Array	37.03	58	P	P	12 34 09.2	+0.7
	comp=Z,0.6nm,0.8s,baz=274,slow=8.0,SNR=6.2						
SONM				LR	LR	12 50 47.2	
	comp=Z,59nm,21.8s,baz=166,slow=38						
NB2	NORSAR Subarra	37.20	325	P	P	12 34 10.8	+1.2
	comp=Z,3.9nm,0.8s,baz=109,slow=8.6						
NB200	NORSAR Array S	37.20	325	eP	P	12 34 08.9	-0.8
NOA	NORSAR Array B	37.20	325	P	P	12 34 08.9	-0.8
	comp=Z,2.5nm,0.8s,baz=110,slow=8.1,SNR=9.7						
CHTO	Chiang Mai	40.70	105	P	P	12 34 43.0	+3.6
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
CMAR	Chiang Mai Arr	40.91	106	P	P	12 34 42.1	+0.9
	comp=Z,1.6nm,0.6s,baz=297,slow=8.7,SNR=12						
XAN	Xi'an	41.60	79	P	P	12 34 53.4	+6.7
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
HHC	Hu-ho-hao-te	41.66	68	eP	P	12 34 48.2	+1.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,35nm,6.7s						
BOD	Bodaibo	41.87	42	eP	P	12 34 50.7	+2.2
ESDC	Sonseca Array	47.20	293	P	P	12 35 31.3	-0.2
	comp=Z,1.8nm,0.8s,baz=70,slow=8.3,SNR=9.0						
TIXI	Tiksi	49.23	23	⇓eP	P	12 35 49.1	+2.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	Tiksi	49.23	23	P	P	12 35 47.3	+0.8
	comp=Z,2.0nm,0.6s,baz=321,slow=2.6,SNR=4.9						
KSRS	Korea Array	54.78	67	P	P	12 36 28.3	-0.1
	comp=Z,1.6nm,0.8s,baz=294,slow=5.8,SNR=2.9						
KSRS				LR	LR	13 02 20.8	
	comp=Z,42nm,18.4s,baz=248,slow=39						
TOA1	Torodi Ar. Sit	54.93	259	eP	P	12 36 28.1	-1.6
TORD	Torodi Ar. Bea	54.93	259	P	P	12 36 28.1	-1.6
	comp=Z,1.7nm,0.9s,baz=36,slow=5.8,SNR=8.2						
USRK	Ussuriysk Ar.	55.15	58	LR	LR	13 02 27.8	
	comp=Z,69nm,20.4s,baz=135,slow=39						
LSZ	Lusaka	59.10	213	LR	LR	13 04 03.4	
	comp=Z,113nm,18.6s,baz=49,slow=38						
BILL	Bilibino	62.45	24	⇓eP	P	12 37 24.6	+3.2
BILL				e		12 37 56.1	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MJAR	Matsushiro Arr	62.61	64	LR	LR	13 06 27.8	
	comp=Z,41nm,18.2s,baz=120,slow=38						
DBIC	Dimbokro	63.97	258	LR	LR	13 08 48.4	
	comp=Z,80nm,18.5s,baz=92,slow=39						
PETK	Petropavlovsk-	66.70	40	LR	LR	13 09 32.0	
	comp=Z,84nm,18.9s,baz=225,slow=38						
IM3	Indian Mountai	74.22	13	eP	P	12 38 36.0	+1.0
INK	Inuvik	74.34	4	eP	P	12 38 37.4	+1.7
	comp=Z,2.1nm,1.0s						
INK	Inuvik	74.34	4	eP	P	12 38 37.4	+1.7
INK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
INK	Inuvik	74.34	4	P	P	12 38 37.7	+2.0
	comp=Z,1.0nm,0.8s,baz=27,slow=4.2,SNR=6.4						
COLA	College	76.21	11	⇑eP	P	12 38 47.3	+0.8
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	76.44	10	P	P	12 38 47.6	-0.3
	comp=Z,0.7nm,0.9s,baz=348,slow=5.3,SNR=8.0						
SCHQ	Schefferville	76.48	331	LR	LR	13 14 27.5	
	comp=Z,50nm,18.7s,baz=320,slow=37						
CAST	Castle Rocks	76.86	13	eP	P	12 38 52.6	+2.3
	comp=Z,5.6nm,1.0s						
YKA	Yellowknife Ar	80.29	356	P	P	12 39 08.8	-0.3
	comp=Z,0.8nm,0.8s,baz=2.0,slow=6.1,SNR=21						

KNET ***12*** *12:28:10.5±0.3, 42°.68N×74°.88E, h15*^{km}*±3*^{km}*, ml2.6, Error ellipse: s-maj=2.2km s-min=2.0km az=146.0*

SOME ***12*** *12:28:11.4, 42°.73N×74°.83E, h20*^{km}

KRNET ***12*** *12:28:11.5±0.1, 42°.69N×74°.86E, h18*^{km}*, mb3.4*

NNC ***12*** *12:28:11.2±0.1, 42°.73N×74°.85E, h0*^{km}*, mb3.7, mpv3.6, Error ellipse: s-maj=4.0km s-min=0.7km az=159.0*

ISC 12 12:28:11.9±0.8, **42°.69N**±0°.02×**74°.86E**±0°.01, **h11**^{km}±5^{km}, **n91**, σ**0^{s}.90**/166, **64C-39D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.07	116	P	Pg	12 28 14.3	-0.3
	402nm,0.1s,SNR=2070						
KBK				⇓S	Sg	12 28 16.2	-0.3
	4μm,0.3s						
KBK	Karagaybulak	0.07	116	⇓iP	Pg	12 28 14.2	-0.3
	baz=15						
KBK				⇓iS	Sg	12 28 16.1	-0.3
	baz=15						
FRU1	Bishkek	0.21	306	⇑iP	Pg	12 28 16.5	+0.1
	baz=7.0						
FRU1				⇑iS	Sg	12 28 19.5	0.0
	baz=7.0						
AAK	Ala-Archa	0.27	259	⇑P	Pg	12 28 17.2	-0.4
	399nm,0.2s,SNR=650						
AAK				⇑S	Sg	12 28 21.2	-0.2
	268nm,0.2s						
AAK	Ala-Archa	0.27	259	⇑P	Pg	12 28 17.0	-0.6
	178nm,0.3s						
AAK				⇓S	Sg	12 28 20.6	-0.8
	109nm,0.3s						
AAK	Ala-Archa	0.27	259	⇑iP	Pg	12 28 17.2	-0.4
	baz=60						
AAK				⇑iS	Sg	12 28 21.2	-0.2
	baz=60						
CHMS	Chumysh	0.32	346	⇑P	Pg	12 28 18.0	-0.4
	108nm,0.1s,SNR=249						
CHMS				⇑S	Sg	12 28 22.6	-0.2
	337nm,0.2s						
CHMS	Chumysh	0.32	346	⇓iP	Pg	12 28 18.0	-0.4
	baz=46						
CHMS				⇓iS	Sg	12 28 22.6	-0.2
	baz=46						
UCH	Uchtor	0.53	209	⇓P	Pg	12 28 21.8	-0.5
	80nm,0.2s,SNR=302						
UCH				⇓S	Sg	12 28 28.5	-0.8
	223nm,0.1s						
UCH	Uchtor	0.53	209	⇓iP	Pg	12 28 21.8	-0.5
	baz=9.0						
UCH				⇓iS	Sg	12 28 29.1	-0.2
	baz=9.0						
TKM2	Tokmak 2	0.59	67	P	Pg	12 28 22.7	-0.8
	42nm,0.1s,SNR=236						
TKM2				⇓S	Sg	12 28 30.7	-0.7
	423nm,0.2s						
TKM2	Tokmak 2	0.59	67	⇓P	Pg	12 28 22.4	-1.0
	22nm,0.3s						
TKM2				⇑S	Sg	12 28 30.4	-0.9
	43nm,0.2s						
TKM2	Tokmak 2	0.59	67	⇑iP	Pg	12 28 22.7	-0.8
	baz=67						
TKM2				⇑iS	Sg	12 28 30.6	-0.7
	baz=67						
USP	Ospenovka	0.64	336	⇓P	Pg	12 28 23.6	-0.7
	82nm,0.2s,SNR=308						
USP				⇓S	Sg	12 28 32.2	-0.5
	258nm,0.2s						
USP	Ospenovka	0.64	336	⇓iP	Pg	12 28 23.6	-0.7
	baz=36						
USP				⇓iS	Sg	12 28 32.2	-0.5
	baz=36						
KZA	Kyzart	0.68	154	⇓P	Pg	12 28 24.7	-0.4
	50nm,0.2s,SNR=103						
KZA				⇑S	Sg	12 28 34.0	0.0
	402nm,0.3s						
KZA	Kyzart	0.68	154	⇓iP	Pg	12 28 24.7	-0.4
	baz=54						
KZA				⇓iS	Sg	12 28 34.0	0.0
	baz=54						
SGDS	Sogindy	0.78	348	P	Pg	12 28 26.1	-0.9
	51nm,0.2s						
SGDS				S	Sg	12 28 36.6	-0.6
	95nm,0.2s						
EKS2	Erkin-Say	0.80	268	⇑P	Pg	12 28 27.0	-0.4
	38nm,0.1s,SNR=242						
EKS2				⇑S	Sg	12 28 38.1	+0.3
	48nm,0.1s						
EKS2	Erkin-Say	0.80	268	⇑iP	Pg	12 28 27.0	-0.4
	baz=68						
EKS2				⇑iS	Sg	12 28 37.9	+0.1
	baz=68						
DGS	Degeres	0.87	50	P	Pg	12 28 27.8	-0.8
	9.2nm,0.1s						
DGS				S	Sg	12 28 39.6	-0.5
	262nm,0.5s						
DGS	Degeres	0.87	50	⇓eP	Pg	12 28 27.9	-0.8
	baz=50						
DGS				⇓eS	Sg	12 28 39.6	-0.5
	baz=50						
DGS	Degeres	0.87	50	⇓eP	Pg	12 28 27.9	-0.8
	9.2nm,0.1s						
DGS				eS	Sg	12 28 39.6	-0.5
	262nm,0.5s						
KST	Kastek	0.89	66	P	Pg	12 28 28.2	-0.9
	32nm,0.3s						
KST				S	Sb	12 28 40.6	-0.7
	190nm,0.3s						
KST	Kastek	0.89	66	⇑eP	Pg	12 28 28.2	-0.9
	baz=66						
KST				⇑eS	Sb	12 28 40.6	-0.7
	baz=66						
KST	Kastek	0.89	66	⇑eP	Pg	12 28 28.2	-0.9
	32nm,0.3s						
KST				eS	Sb	12 28 40.6	-0.7
	190nm,0.3s						
ARLS	Aral	0.92	206	⇑iP	Pg	12 28 28.5	-1.1
	baz=6.0						
ARLS				⇑iS	Sg	12 28 41.1	-0.5
	baz=6.0						
AML	Almayashu	1.03	238	⇑P	Pg	12 28 30.8	-0.9
	33nm,0.2s,SNR=62						
AML	Almayashu	1.03	238	⇑iP	Pg	12 28 30.9	-0.9
	baz=38						
AML				⇑iS	Sg	12 28 44.5	-0.6
	baz=38						
ULHL	Ulahol	1.11	113	⇑P	Pb	12 28 32.2	-1.2
	18nm,0.2s,SNR=49						
ULHL				⇑S	Sb	12 28 46.9	-1.0
	41nm,0.2s						
ULHL	Ulahol	1.11	113	⇓iP	Pb	12 28 32.0	-1.3
	baz=13						
ULHL				⇓iS	Sb	12 28 46.9	-1.0
	baz=13						
MRKS	Merke	1.20	273	P	Pn	12 28 33.9	-0.9
	124nm,0.2s						
MRKS				S	Sb	12 28 49.9	-0.6
	100nm,0.2s						
MRKS	Merke	1.20	273	⇑eP	Pn	12 28 33.9	-0.9
	baz=73						
MRKS				⇑eS	Sb	12 28 49.8	-0.6
	baz=73						
MRKS	Merke	1.20	273	⇑eP	Pn	12 28 33.9	-0.9
	124nm,0.2s						
MRKS				eS	Sb	12 28 49.9	-0.6
	100nm,0.2s						
MTBS	Maitube	1.23	69	P	Pn	12 28 34.5	-0.8
	27nm,0.3s						
MTBS				S	Sg	12 28 51.1	-0.6
	79nm,0.4s						
MTBS	Maitube	1.23	69	⇑eP	Pn	12 28 34.5	-0.8
	baz=69						
MTBS				⇑eS	Sg	12 28 51.2	-0.6
	baz=69						
MTBS	Maitube	1.23	69	⇑eP	Pn	12 28 34.5	-0.8
	29nm,0.3s						
MTBS				eS	Sg	12 28 51.1	-0.6
	79nm,0.4s						
IZV	Izvestkoviy	1.34	74	P	Pn	12 28 36.4	-0.3
	55nm,0.2s						
IZV				S	Sg	12 28 54.6	-0.4
	42nm,0.2s						
IZV	Izvestkoviy	1.34	74	⇑eP	Pn	12 28 36.4	-0.3
	baz=74						
IZV				⇑eS	Sg	12 28 54.6	-0.4
	baz=74						
IZV	Izvestkoviy	1.34	74	⇑eP	Pn	12 28 36.4	-0.3
	55nm,0.2s						
IZV				eS	Sg	12 28 54.6	-0.4
	42nm,0.2s						
NRN	Naryn	1.52	145	⇑iP	Pn	12 28 39.6	+0.3
	baz=46						
NRN				⇑iS	Sn	12 28 59.4	+0.2
	baz=46						
TNSS	Tian-Shan	1.57	77	P	Pb	12 28 40.7	-0.7
	18nm,0.2s						
TNSS				S	Sg	12 29 02.3	-0.3
	46nm,0.4s						
TNSS	Tian-Shan	1.57	77	⇑eP	Pb	12 28 40.6	-0.7
	baz=76						
TNSS				⇑eS	Sg	12 29 02.4	-0.3
	baz=76						
TNSS	Tian-Shan	1.57	77	⇑eP	Pb	12 28 40.5	-0.8
	18nm,0.2s						
TNSS				eS	Sg	12 29 02.3	-0.3
	46nm,0.4s						
AAA	Alma-Ata	1.60	70	⇓eP	Pb	12 28 41.6	+0.1
	57nm,0.2s						
AAA				eS	Sg	12 29 03.1	-0.2
	203nm,0.3s						
KUU	Kurty	1.62	41	P	Pb	12 28 41.2	-0.5
	11nm,0.3s						
KUU				S	Sb	12 29 02.3	0.0
	107nm,0.3s						
KUU	Kurty	1.62	41	⇓eP	Pb	12 28 41.3	-0.5
	baz=41						
KUU				⇓eS	Sb	12 29 02.3	0.0
	baz=41						
KUU	Kurty	1.62	41	⇓eP	Pb	12 28 41.3	-0.5
	11nm,0.3s						
KUU				eS	Sb	12 29 02.3	0.0
	107nm,0.3s						
KNDC	Almaty	1.64	70	⇓P	Pb	12 28 41.3	-0.8
	58nm,0.8s						
KNDC				⇓S	Sg	12 29 03.9	-0.6
	74nm,0.3s						
MDOK	Medeo	1.68	73	⇑P	Pb	12 28 42.3	-0.5
	26nm,0.4s						
MDOK				S	Sg	12 29 04.7	-1.2
	33nm,0.4s						
MDOK	Medeo	1.68	73	Pg	Pb	12 28 42.4	-0.5
	46nm,0.4s						
MDOK				Lg	Lg	12 29 05.0	
	49nm,0.4s						
MDOK	Medeo	1.68	73	⇓eP	Pb	12 28 42.4	-0.5
	baz=73						
MDOK				⇓eS	Sg	12 29 05.0	-0.9
	baz=73						
MDOK	Medeo	1.68	73	⇓eP	Pb	12 28 42.4	-0.5
	46nm,0.4s						
MDOK				eS	Sg	12 29 05.0	-0.9
	49nm,0.4s						

KTBS	**Karatobe**	1.68	52	P	**Pb**	**12 28 42.2**	**-0.7**
	11nm,0.3s						
KTBS				S	**Sb**	**12 29 04.4**	**+0.3**
	122nm,0.3s						
KTBS	**Karatobe**	1.68	52	⇑*e*P	**Pb**	**12 28 42.2**	**-0.7**
	11nm,0.3s						
KTBS				*e*S	**Sb**	**12 29 04.4**	**+0.3**
	122nm,0.3s						
KOTS	**Kotyrbulak**	1.74	71	P	**Pb**	**12 28 43.5**	**-0.5**
	23nm,0.3s						
KOTS				S	**Sg**	**12 29 07.0**	**-0.9**
	105nm,0.4s						
KOTS	**Kotyrbulak**	1.74	71	⇑*e*P	**Pb**	**12 28 43.7**	**-0.3**
	baz=71						
KOTS				⇑*e*S	**Sg**	**12 29 07.1**	**-0.9**
	baz=71						
KOTS	**Kotyrbulak**	1.74	71	⇑*e*P	**Pb**	**12 28 43.7**	**-0.3**
	23nm,0.3s						
KOTS				*e*S	**Sg**	**12 29 07.0**	**-0.9**
	105nm,0.4s						
MNAS	**Manas**	1.75	264	⇑Pg	**Pn**	**12 28 42.9**	**+0.5**
	4.3nm,0.2s						
MNAS				⇓Lg	Lg	12 29 06.8	
	6.8nm,0.3s						
MNAS	**Manas**	1.75	264	P	**Pb**	**12 28 43.3**	**-0.9**
	9.0nm,0.2s						
MNAS				S	**Sb**	**12 29 06.7**	**+0.5**
	19nm,0.1s						
MNAS	**Manas**	1.75	264	⇑*i*P	**Pb**	**12 28 43.2**	**-0.9**
	baz=64						
MNAS				⇑*i*S	**Sb**	**12 29 06.6**	**+0.4**
	baz=64						
KDJ	**Kajisay**	1.81	107	⇑*i*P	**Pb**	**12 28 44.4**	**-0.7**
	baz=7.0						
KDJ				⇑*i*S	**Sb**	**12 29 08.1**	**+0.2**
	baz=7.0						
CHKK	**Chushkaly**	1.94	52	Pg	**Pb**	**12 28 46.8**	**-0.6**
	11nm,0.3s						
CHKK				Lg	Lg	12 29 12.6	
	162nm,0.3s						
CHKK	**Chushkaly**	1.94	52	*e*P	**Pb**	**12 28 46.8**	**-0.6**
	baz=53						
CHKK				*e*S	**Sg**	**12 29 12.7**	**-1.7**
	baz=53						
CHKK	**Chushkaly**	1.94	52	*e*P	**Pb**	**12 28 46.8**	**-0.6**
	11nm,0.3s						
CHKK				*e*S	**Sg**	**12 29 12.6**	**-1.7**
	162nm,0.3s						
ARSB	**Arslanbob**	1.95	226	⇑*i*P	**Pb**	**12 28 46.5**	**-1.1**
	baz=26						
ARSB				⇑*i*S	**Sb**	**12 29 12.2**	**+0.2**
	baz=26						
ARK	**Arkit**	2.33	248	⇑*i*P	**Pn**	**12 28 51.6**	**+1.3**
	baz=48						
ARK				⇑*i*S	**Sb**	**12 29 21.1**	**-1.6**
	baz=48						
KURS	**Kuram**	2.55	71	Pg	**Pb**	**12 28 57.7**	**-0.1**
	12nm,0.5s						
KURS				Lg	Lg	12 29 31.3	
	50nm,0.7s						
KURS	**Kuram**	2.55	71	*e*P	**Pb**	**12 28 57.7**	**-0.1**
	12nm,0.5s						
KURS				*e*S	**Sg**	**12 29 31.3**	**-2.6**
	50nm,0.7s						
PRZ	**Przheval'sk**	2.62	93	⇓*i*P	**Pn**	**12 28 55.7**	**+1.3**
	baz=93						
PRZ				⇓*i*S	**Sn**	**12 29 28.0**	**+1.7**
	baz=93						
SATY	**Saty**	2.63	81	Pg	**Pb**	**12 28 59.4**	**+0.2**
	56nm,0.4s						
SATY				Lg	Lg	12 29 34.9	
	39nm,0.3s						
SATY	**Saty**	2.63	81	*e*P	**Pb**	**12 28 59.5**	**+0.3**
	56nm,0.4s						
SATY				*e*S	**Sg**	**12 29 34.9**	**-1.7**
	39nm,0.3s						
ARXS	**Arharly**	2.65	54	Pg	**Pb**	**12 28 58.8**	**-0.6**
	2.2nm,0.2s						
ARXS				Lg	Lg	12 29 33.2	
	105nm,0.3s						
ARXS	**Arharly**	2.65	54	*e*P	**Pb**	**12 28 58.8**	**-0.6**
	2.2nm,0.2s						
ARXS				*e*S	**Sb**	**12 29 33.2**	**+1.4**
	105nm,0.3s						
SFK	**Sufi-Kurgan**	2.86	201	⇓Pn	**Pb**	**12 29 01.7**	**-1.4**
	5.2nm,0.6s						
SFK				⇑Lg	Lg	12 29 42.1	
	16nm,0.6s						
SFK	**Sufi-Kurgan**	2.86	201	Pg	**Pb**	**12 29 04.5**	**+1.4**
SFK				Lg	Lg	12 29 42.0	
SFK	**Sufi-Kurgan**	2.86	201	⇓*i*P	**Pn**	**12 28 58.7**	**+1.0**
	baz=1.0						
SFK				⇓*i*S	**Sn**	**12 29 33.8**	**+1.6**
	baz=1.0						
MNBS	**Baschi**	2.93	61	Pg	**Pb**	**12 29 03.9**	**-0.4**
	2.8nm,0.2s						
MNBS				Lg	Lg	12 29 41.7	
	41nm,0.3s						
MNBS	**Baschi**	2.93	61	*e*P	**Pb**	**12 29 03.9**	**-0.4**
	2.8nm,0.2s						
MNBS				*e*S	**Sb**	**12 29 41.7**	**+1.5**
	41nm,0.3s						
UZB	**Uzynbulak**	3.09	80	Pg	**Pb**	**12 29 06.8**	**-0.2**
UZB				Lg	Lg	12 29 47.2	
UZB	**Uzynbulak**	3.09	80	*e*P	**Pb**	**12 29 06.8**	**-0.2**
	20nm,0.6s						
UZB				*e*S	**Sb**	**12 29 47.2**	**+2.4**
	29nm,0.4s						
KK31	**Karatay Array**	3.22	279	⇑Pg	**Pb**	**12 29 08.6**	**-0.6**
	2.8nm,0.3s,baz=98,slow=14,SNR=87						
KK31				⇑Lg	Lg	12 29 50.0	
	6.7nm,0.4s,baz=93,slow=30,SNR=14						
PDGK	**Podgornoye**	3.46	78	Pg	**Pb**	**12 29 12.5**	**-0.7**
PDGK				Lg	Lg	12 29 56.6	
PDGK	**Podgornoye**	3.46	78	⇑Pg	**Pb**	**12 29 12.7**	**-0.6**
	6.4nm,0.7s						
PDGK				⇑Lg	Lg	12 29 59.4	
	21nm,1.1s						
PDGK	**Podgornoye**	3.46	78	⇑*i*P	**Pn**	**12 29 06.9**	**+1.1**
	baz=78						
PDGK				⇑*i*S	**Sn**	**12 29 47.8**	**+1.0**
	baz=78						
IUG	**Iuzhnay**	3.62	263	*e*P	**Pb**	**12 29 17.9**	**+2.0**
	15nm,0.3s						
IUG				*e*S	**Sg**	**12 30 05.5**	**-2.5**
	24nm,0.6s						
DJR	**Jarkent**	3.94	64	Pg	**Pb**	**12 29 22.7**	**+1.2**
DJR				Lg	Lg	12 30 12.7	
DJR	**Jarkent**	3.94	64	*e*P	**Pb**	**12 29 21.9**	**+0.4**
	1.2nm,0.5s						
DJR				*e*S	**Sb**	**12 30 12.8**	**+3.5**
	4.7nm,0.4s						
KAPS	**Kapalarasan**	4.16	50	Pg	**Pb**	**12 29 25.3**	**+0.2**
KAPS				Lg	Lg	12 30 18.0	
KAPS	**Kapalarasan**	4.16	50	*e*P	**Pb**	**12 29 24.9**	**-0.2**
	2.3nm,0.3s						
KAPS				*e*S	**Sb**	**12 30 18.0**	**+2.7**
	16nm,0.5s						
MK31	**Makanchi Array**	6.70	50	⇑Pn	**Pn**	**12 29 51.5**	**+1.3**
	0.3nm,0.5s,baz=231,slow=14,SNR=17						
MK31				⇑Sn	**Sn**	**12 31 07.2**	**+0.7**
	0.8nm,0.6s,baz=229,slow=25,SNR=5.2						

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*NEIC **12** 12:31:20.4±0.0, 17°.00N×95°.26W, h104^{km}, MD4.2(MEX), After MEX.*

MEX 12 12:31:18.3±1.0**, 16°.98N×95°.16W, h120**^{km}±13^{km}**, MD4.2, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	0.29	67	*i* P	Pn	12 31 34.1	-1.1
CMIG				*i* S	Sn	12 31 45.5	-2.4
HUIG	**Huatulco**	1.51	217	*e*Pn	Pn	12 31 44.2	-1.6
HUIG				*e*Sn	Sn	12 32 05.2	-1.5
HUIG	**Huatulco**	1.51	217	*e*P	Pn	12 31 44.2	-1.6
HUIG				*e*S	Sn	12 32 05.8	-1.0
CCIG	**Comitan**	2.98	103	*e*Pn	Pn	12 32 05.9	+1.3
CCIG				*e*Sn	Sn	12 32 46.4	+6.3
MEIG	**Mezcala**	4.36	283	*e*Pn	Pn	12 32 22.6	-0.1
MEIG				*e*Sn	Sn	12 33 07.2	-5.4
MEIG	**Mezcala**	4.36	283	*e*P	Pn	12 32 22.6	-0.1
MEIG				*e*S	Sn	12 33 11.2	-1.4
TEIG	**Tepich**	7.29	63	*e*Pn	Pn	12 32 59.9	-2.2
TEIG				*e*Sn	Sn	12 34 20.1	-3.2

IDC 12 12:33:32.8±1.9**, 10°.97S×165°.22E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.5**/37**, mbtmp3.7**/4**, ML3.9**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.4**/15**, Error ellipse: s-maj=53.1km s-min=33.6km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.41	286	Pn	Pn	12 34 59.8	+5.0
	9.1nm,0.3s,baz=148,slow=5.0,SNR=4.2						
HNR				LR	LR	12 36 43.9	
	comp=Z,72nm,20.0s,baz=44,slow=35						
DZM	**Mont Dzumac**	11.10	174	Pn	Pn	12 36 12.9	-0.2
	0.9nm,0.3s,baz=353,slow=18,SNR=8.4						
WRA	**Warramunga Arr**	31.02	250	P	P	12 39 52.7	+0.1
	0.6nm,0.9s,baz=79,slow=10.0,SNR=3.2						
ASAR	**Alice Springs**	32.36	243	P	P	12 40 04.2	-0.2
	0.6nm,0.8s,baz=68,slow=9.8,SNR=6.4						
ILAR	**Eielson Array**	83.61	19	P	P	12 46 02.7	0.0
	0.2nm,0.7s,baz=231,slow=5.7,SNR=4.1						

HEL 12 12:34:21.3±0.4**, 63°.09N×39°.94E, h0**^{km}**, ML2.1, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLMR	**Klimovskoe**	2.25	185	*i* P	Pn	12 34 57.9	-1.8
KLMR				*i* S	Sn	12 35 25.3	-2.8
KLMR				*i* S	Sn	12 35 25.3	-2.8
KLMR				*i* S	Sn	12 35 25.3	-2.8
JOF	**Joensuu**	3.94	271	*e*P	Pn	12 35 22.8	-0.1
JOF				*e*PG	Pb	12 35 31.6	+0.1
JOF				*e*S	Sn	12 36 08.6	-1.2
JOF				*e*SG	Sb	12 36 22.4	+2.7
JOF				MSG		12 36 26.1	
	comp=Z,3.0nm,0.3s						
KU6	**Riekki**	5.24	309	*e*P	Pn	12 35 41.1	+0.4
KU6				*e*SG	Sb	12 37 02.3	+5.2
SUF	**Sumiainen**	6.31	273	*e*SG	Sg	12 37 36.9	-7.0
SUF				MSG		12 37 42.4	
	comp=Z,1.3nm,0.3s						
KAF	**Kangasniemi**	6.37	267	*e*P	Pn	12 35 56.7	+0.4
KAF				*e*SG	Sb	12 37 37.1	+7.6
FIA0	**FINESS Array S**	6.68	262	*e*S	Sn	12 37 14.0	-3.2
FIA0				*e*SG	Sg	12 37 48.4	-7.1
FIA0				MSG		12 37 50.6	
	comp=Z,1.5nm,0.4s						

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*SOME **12** 12:52:08.4, 42°.53N×79°.63E, h15^{km}*

*KRNET **12** 12:52:08.9±0.1, 42°.63N×79°.85E, mb2.4*

NNC 12 12:52:09.0±1.2**, 42°.61N×79°.63E, h0**^{km}**, mb2.9, mpv2.6, 10C-10D, Error ellipse: s-maj=7.8km s-min=4.3km az=136.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	0.70	321	P	Pg	12 52 22.4	0.0
	5.9nm,0.2s						
UZB				S	Sg	12 52 32.7	+1.3
	15nm,0.2s						
UZB	**Uzynbulak**	0.70	321	⇓*e*P	Pg	12 52 22.4	+0.1
	5.9nm,0.2s						
UZB				*e*S	Sg	12 52 32.7	+1.3
	15nm,0.2s						
PDGK	**Podgornoye**	0.72	352	P	Pg	12 52 23.1	+0.2
	4.0nm,0.2s						
PDGK				S	Sg	12 52 33.7	+1.4
	3.3nm,0.1s						
PDGK	**Podgornoye**	0.72	352	⇓P	Pg	12 52 22.8	-0.1
	2.7nm,0.3s						
PDGK				⇑S	Sg	12 52 33.3	+1.0
	1.6nm,0.3s						
PDGK	**Podgornoye**	0.72	352	⇓*i*P	Pg	12 52 23.1	+0.2
	baz=39						
PDGK				⇓*i*S	Sb	12 52 34.0	-1.2
	baz=39						
PRZ	**Przheval'sk**	0.92	262	⇑*i*P	Pn	12 52 28.7	-0.6
	baz=63						
PRZ				⇑*i*S	Sn	12 52 43.5	+0.2
	baz=63						
KTMS	**Ketmen**	0.99	32	P	Pg	12 52 27.8	-0.2
KTMS				S	Sg	12 52 41.7	+0.9
KTMS	**Ketmen**	0.99	32	*e*P	Pg	12 52 27.8	-0.2
	10nm,0.1s						
KTMS				*e*S	Sg	12 52 41.7	+0.9
	5.6nm,0.2s						
SATY	**Saty**	1.00	297	P	Pg	12 52 27.9	-0.3
SATY				S	Sg	12 52 41.7	+0.5
SATY	**Saty**	1.00	297	*e*P	Pg	12 52 27.9	-0.3
	1.0nm,0.1s						
SATY				*e*S	Sg	12 52 41.7	+0.5
	21nm,0.1s						
KURS	**Kuram**	1.38	310	P	Pg	12 52 34.3	-1.2
KURS				S	Sg	12 52 52.9	-0.5
KURS	**Kuram**	1.38	310	*e*P	Pg	12 52 34.3	-1.2
	0.9nm,0.3s						
KURS				*e*S	Sg	12 52 52.9	-0.5
	2.2nm,0.5s						
MNBS	**Baschi**	1.72	329	P	Pn	12 52 40.6	+0.3
MNBS				S	Sg	12 53 04.2	0.0
MNBS	**Baschi**	1.72	329	⇓*e*P	Pn	12 52 40.6	+0.3
	4.1nm,0.3s						
MNBS				*e*S	Sg	12 53 04.2	-0.1
	12nm,0.3s						
DJR	**Jarkent**	1.73	4	P	Pn	12 52 40.8	+0.5
	0.9nm,0.2s						
DJR				S	Sg	12 53 05.0	+0.5
	4.2nm,0.2s						
DJR	**Jarkent**	1.73	4	*e*P	Pn	12 52 41.0	+0.6
	1.0nm,0.2s						
DJR				*e*S	Sg	12 53 04.7	+0.2
	3.8nm,0.3s						
KDJ	**Kajisay**	1.88	256	⇓*i*P	Pn	12 52 43.1	+0.6
	baz=57						
KDJ				⇓*i*S	Sn	12 53 07.1	+0.1
	baz=57						
MDOK	**Medeo**	1.97	287	⇑P	Pg	12 52 46.9	+0.1
	1.4nm,0.5s						
MDOK				S	Sb	12 53 10.4	-0.7
	4.0nm,0.7s						
MDOK	**Medeo**	1.97	287	Pg	Pn	12 52 44.7	+0.9
MDOK				Lg	Lg	12 53 10.8	
MDOK	**Medeo**	1.97	287	*e*P	Pn	12 52 44.7	+0.9
	1.5nm,0.2s						
MDOK				*e*S	Sb	12 53 10.8	-0.3
	4.5nm,0.5s						
TNSS	**Tian-Shan**	2.02	283	Pg	Pn	12 52 45.1	+0.4
	1.6nm,0.2s						
TNSS				Lg	Lg	12 53 12.0	
	4.1nm,0.3s						
TNSS	**Tian-Shan**	2.02	283	*e*P	Pn	12 52 45.1	+0.4
	1.6nm,0.2s						
TNSS				*e*S	Sb	12 53 12.0	-0.6
	4.1nm,0.3s						
ARXS	**Arharly**	2.07	321	Pg	Pb	12 52 46.3	-1.2
ARXS				Lg	Lg	12 53 13.4	
ARXS	**Arharly**	2.07	321	*e*P	Pb	12 52 46.4	-1.1
	1.6nm,0.4s						
ARXS				*e*S	Sb	12 53 13.4	-0.4
	6.3nm,0.6s						
IZV	**Izvestkoviy**	2.26	282	Pg	Pb	12 52 49.7	-1.0
IZV				Lg	Lg	12 53 19.5	
IZV	**Izvestkoviy**	2.26	282	*e*P	Pb	12 52 49.7	-1.0
	3.3nm,0.2s						
IZV				*e*S	Sb	12 53 19.5	+0.2
	7.5nm,0.4s						
CHKK	**Chushkaly**	2.29	304	Pg	Pn	12 52 49.4	+1.3
CHKK				Lg	Lg	12 53 18.6	
CHKK	**Chushkaly**	2.29	304	*e*P	Pn	12 52 49.4	+1.3
	0.7nm,0.1s						
CHKK				*e*S	Sb	12 53 18.6	-1.5
	5.4nm,0.2s						
MTBS	**Maitube**	2.41	284	*e*P	Pb	12 52 51.5	-1.7
	2.8nm,0.2s						
MTBS				*e*S	Sb	12 53 22.4	-1.1
	3.8nm,0.2s						
KTBS	**Karatobe**	2.42	298	Pg	Pb	12 52 52.2	-1.2
	0.5nm,0.2s						
KTBS				Lg	Lg	12 53 24.0	
	9.6nm,0.5s						
KTBS	**Karatobe**	2.42	298	*e*P	Pb	12 52 52.2	-1.2
	0.5nm,0.2s						
KTBS				*e*S	Sb	12 53 24.0	+0.2
	9.6nm,0.5s						
ULHL	**Ulahol**	2.53	263	*i* P	Pn	12 52 52.8	+1.2
	baz=63						
ULHL				*i* S	Sn	12 53 24.4	+1.2
	baz=63						
KAPS	**Kapalarasan**	2.68	356	Pg	Pb	12 52 57.1	-0.8
KAPS				Lg	Lg	12 53 30.7	
KAPS	**Kapalarasan**	2.68	356	*e*P	Pb	12 52 57.1	-0.8
	0.5nm,0.1s						
KAPS				*e*S	Sb	12 53 32.1	+0.8
	1.6nm,0.3s						
BOOM	**Boomskoye usch**	2.73	269	⇑*i*P	Pn	12 52 55.5	+1.3
	baz=69						
BOOM				⇑*i*S	Sn	12 53 29.2	+1.2
	baz=69						
KST	**Kastek**	2.73	280	Pg	Pb	12 52 58.3	-0.4
KST				Lg	Lg	12 53 34.1	
KST	**Kastek**	2.73	280	*e*P	Pb	12 52 58.3	-0.4
	1.9nm,0.3s						
KST				*e*S	Sb	12 53 34.0	+1.2
	2.7nm,0.4s						
DGS	**Degeres**	2.90	284	Pg	Pb	12 53 01.1	-0.6
DGS				Lg	Lg	12 53 38.8	
DGS	**Degeres**	2.90	284	*e*P	Pb	12 53 01.1	-0.6
	1.3nm,0.2s						
DGS				*e*S	Sb	12 53 38.8	+1.0
	5.0nm,0.6s						
TKM2	**Tokmak 2**	2.98	277	⇑Pg	Pg	12 53 05.8	-0.4
	3.7nm,1.4s						
TKM2				⇑Lg	Lg	12 53 43.1	
	1.0nm,0.5s						
TKM2	**Tokmak 2**	2.98	277	⇑*e*P	Pn	12 52 59.1	+1.3
	baz=77						
TKM2				⇑*i*S	Sn	12 53 35.3	+0.9
	baz=77						
MK31	**Makanchi Array**	4.59	24	⇓Pn	Pn	12 53 20.8	+1.0
	0.4nm,0.6s,baz=202,slow=13,SNR=8.3						
MK31				⇓Sn	Sn	12 54 14.8	+1.0
	0.3nm,0.5s						
MK31				⇓Lg	Lg	12 54 32.2	
	0.1nm,0.3s,baz=196,slow=27						

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*ISCJB **12** 13:15:23.7±0.6, 7°.84S±0°.05×127°.74E±0°.05, h150^{km}, mb3.5/4, Error ellipse: s-maj=7.6km s-min=7.0km az=6.1*

*IDC **12** 13:15:23.9±1.8, 7°.71S×127°.55E, h180^{km}±20^{km}, mb3.1/3, mb1 3.6/8, mb1mx3.4/28, mbtmp4.0/8, Error ellipse: s-maj=22.2km s-min=19.0km az=120.0*

*NEIC **12** 13:15:24.3±0.9, 7°.80S×127°.75E, h125^{km}±18^{km}, mb4.1/3, Error ellipse: s-maj=14.8km s-min=10.8km az=171.0*

ISC 12 13:15:22.3±0.8**, 7°.83S**±0°.07×**127°.75E**±0°.08**, h150**^{km}**, n19, σ2^{s}.95**/21**, mb3.5**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	3.52	93	*e*Pn	**Pn**	**13 16 18.8**	**+2.5**
SOEI	**Soe**	3.94	241	*e*Pn	**Pn**	**13 16 24.2**	**+2.4**
BATI	**Baumata**	4.68	239	P	**Pn**	**13 16 34.0**	**+2.6**
	27nm,0.3s,baz=124,slow=1.4,SNR=23						
BATI				S	**Sn**	**13 17 25.6**	**+0.2**
	34nm,0.3s,baz=111,slow=3.2,SNR=14						
MMRI	**Maumere**	5.52	261	*e*Pn	**Pn**	**13 16 44.7**	**+2.1**
FAKI	**Fak Fak**	6.62	43	*e*Pn	**Pn**	**13 16 57.5**	**+0.2**
SIJI	**Sorong**	7.75	27	P	**Pn**	**13 17 14.0**	**+1.5**
	5.0nm,0.3s,baz=222,slow=7.5,SNR=14						
FITZ	**Fitzroy Crossi**	10.41	191	*e*Pn	**Pn**	**13 17 48.4**	**+0.7**
FITZ	**Fitzroy Crossi**	10.41	191	P	**Pn**	**13 17 48.8**	**+1.0**
	1.5nm,0.3s,baz=7.9,slow=9.6,SNR=67						
FITZ				S	**Sn**	**13 19 38.7**	**-4.3**
	1.0nm,0.3s,baz=77,slow=21,SNR=7.6						
WRA	**Warramunga Arr**	13.63	153	P	**Pn**	**13 18 31.1**	**+1.5**
	1.2nm,0.3s,baz=331,slow=13,SNR=53						
WRA				S	**Sn**	**13 20 57.3**	**-3.3**
	2.5nm,0.3s,baz=324,slow=24,SNR=11						
COEN	**Coen**	16.32	113	*e*Pn	**P**	**13 19 06.8**	**+3.6**
	6.2nm,0.7s						
AS31	**Alice Springs**	16.81	160	*e*P	**Pn**	**13 19 13.2**	**+4.1**
	3.9nm,0.3s						
ASAR	**Alice Springs**	16.82	160	P	**Pn**	**13 19 12.1**	**+3.0**
	1.3nm,0.3s,baz=341,slow=12,SNR=118						
ASAR				S	**S**	**13 22 12.4**	**-3.7**
	0.2nm,0.3s,baz=322,slow=18,SNR=4.5						
AS01	**Alice Springs**	16.83	160	*e*P	**Pn**	**13 19 13.5**	**+4.3**
KSM	**Kuching**	19.70	297	*e*P	**Pn**	**13 19 44.2**	**+1.0**
	21nm,1.3s						
HHC	**Hu-ho-hao-te**	50.68	344	*e*P	P	13 24 14.2	+7.6
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,75nm,5.7s						
SONM	**Songino Array**	58.56	343	P	**P**	**13 24 59.6**	**-3.6**
	comp=Z,0.2nm,0.7s,baz=150,slow=6.1,SNR=2.6						
WMQ	**Urumqi**	62.90	328	*e*P	P	13 25 39.2	+6.6
MKAR	**Makanchi Array**	67.72	328	P	**P**	**13 26 01.1**	**-2.5**
	comp=Z,0.5nm,0.7s,baz=114,slow=8.0,SNR=8.1						
ZALV	**Zalesovo Beam**	71.36	335	P	**P**	**13 26 23.0**	**-2.7**
	comp=Z,0.4nm,0.4s,baz=130,slow=4.1,SNR=3.0						

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*DDA **12** 13:24:16.7, 39°.07N×29°.48E, h12^{km}±1^{km}, ML2.6*

*ISK **12** 13:24:16.9, 39°.10N×29°.49E, h6^{km}, ML2.1/7*

*ISCJB **12** 13:24:17.6±0.4, 39°.08N±0°.03×29°.48E±0°.03, h9^{km}±3^{km}, Error ellipse: s-maj=4.4km s-min=4.2km az=32.9*

ISC 12 13:24:17.1±0.8**, 39°.07N**±0°.03×**29°.50E**±0°.03**, h13**^{km}±5^{km}**, n17, σ0^{s}.34**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	0.02	318	*i* P	**Pg**	**13 24 19.5**	**0.0**
GDZ				*i* S	**Sg**	**13 24 21.6**	**+0.3**
GDZ				IAML_P			
	comp=Z,50μm,0.1s						
GEDZ	**Gediz**	0.07	246	PG	**Pg**	**13 24 19.7**	**-0.1**
GEDZ				SG	**Sg**	**13 24 21.4**	**-0.4**
SHAP	**Saphane-Kutahy**	0.22	257	PG	**Pg**	**13 24 21.9**	**0.0**
SHAP				SG	**Sg**	**13 24 25.1**	**-0.1**
TVSB	**Tavsanli**	0.38	356	PG	**Pg**	**13 24 24.5**	**-0.2**
TVSB				SG	**Sg**	**13 24 29.6**	**-0.2**
SMAA	**Simav-Kutahya**	0.40	274	PG	**Pg**	**13 24 25.2**	**0.0**
DEMI	**Demirci**	0.61	267	*i* P	**Pb**	**13 24 30.0**	**+0.3**
DEMI				*i* S	**Sb**	**13 24 37.6**	**-0.6**
DEMI				IAML_P			
	comp=Z,1μm,0.1s						
KHAL	**Karahalli**	0.70	180	*i* P	**Pb**	**13 24 31.1**	**-0.2**
KHAL				*i* S	**Sb**	**13 24 41.0**	**0.0**
KHAL				IAML_P			
	comp=Z,499nm,0.2s						
KULA	**Kula-Manisa**	0.86	230	PG	**Pg**	**13 24 33.1**	**-0.6**
MANT	**Manisa**	0.94	232	*i* P	**Pg**	**13 24 34.8**	**-0.4**
MANT				*i* S	**Sb**	**13 24 48.0**	**+0.2**
MANT				IAML_P			
	comp=Z,310nm,0.1s						
DURS	**Dursunbey**	0.95	304	*i* P	**Pb**	**13 24 35.8**	**+0.2**
DURS				*i* S	**Sn**	**13 24 50.5**	**+0.6**
DURS				IAML_P			
	comp=Z,269nm,0.1s						
KZIL	**AFYON_Kizioren**	0.96	148	*i* P	**Pn**	**13 24 36.5**	**+0.1**
KZIL				*i* S	**Sn**	**13 24 50.7**	**+0.8**
KZIL				IAML_P			
	comp=Z,151nm,0.1s						
SHUT	**Suhut-Afyon**	0.97	122	PG	**Pb**	**13 24 36.2**	**+0.3**
SHUT				SG	**Sn**	**13 24 50.5**	**+0.1**
BORA	**Eskisehir**	1.09	42	*i* P	**Pn**	**13 24 38.3**	**0.0**
BORA				*i* S	**Sn**	**13 24 53.0**	**-0.2**
BORA				IAML_P			
	comp=Z,1μm,0.1s						
CAVI	**Cavuskoy**	1.16	13	PN	**Pn**	**13 24 39.2**	**+0.1**
YLV	**Yalova**	1.49	356	PN	**Pb**	**13 24 44.7**	**-0.1**
GULT	**Gulveren**	1.57	30	PN	**Pb**	**13 24 45.9**	**-0.1**
ARMT	**Armutlu**	1.57	342	PN	**Pb**	**13 24 45.9**	**-0.1**

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*NIED **12** 13:29:00, 36°.40N×141°.00E, h26^{km}, Mw3.6 Best double couple: $M_0$3.24000×10^{14} NP1:ϕ_s283.00000°, δ16.00000°, λ152.00000°. NP2:ϕ_s40.00000°, δ83.00000°, λ76.00000°.*

*IDC **12** 13:29:28.8±0.7, 36°.34N×141°.06E, h0^{km}, mb3.7/12, mb1 3.8/16, mb1mx3.7/54, mbtmp3.8/16, ML3.2/3, MS2.6/4, Ms1 2.6/4, ms1mx2.4/41, Error ellipse: s-maj=20.0km s-min=13.7km az=106.0*

*ISCJB **12** 13:29:31.9±0.7, 36°.39N±0°.03×141°.03E±0°.05, h32^{km}±4^{km}, mb3.6/12, Error ellipse: s-maj=6.8km s-min=4.7km az=20.5*

*JMA **12** 13:29:32.9±0.1, 36°.38N×140°.93E, h39^{km}±1^{km}, M3.7*

JMA Felt I J1.

ISC 12 13:29:30.9±1.7**, 36°.36N**±0°.04×**141°.02E**±0°.05**, h13**^{km}±10^{km}**,**

n38,σ1ˢ20/41,**mb3.7**/12,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.35**	**266**	P	**Pn**	**13 29 40.8**	**-0.9**
JHYU				S	**Sb**	**13 29 46.1**	**+1.6**
JHO	**Hitachi**	**0.44**	**304**	P	**Pn**	**13 29 41.6**	**-1.4**
JHO				S	**Sb**	**13 29 47.6**	**+0.5**
JIHU	**Itakohorinouch**	**0.57**	**226**	P	**Pn**	**13 29 44.6**	**0.0**
JYT	**Yasato**	**0.68**	**259**	P	**Pb**	**13 29 45.0**	**+0.3**
JYT				S	**Sb**	**13 29 53.4**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.76**	**346**	P	**Pb**	**13 29 46.3**	**+0.3**
ONAJ				S	**Sg**	**13 29 55.5**	**-0.2**
JSMT	**Sammumatsuo**	**0.86**	**213**	P	**Pn**	**13 29 48.4**	**-0.2**
JSMT				S	**Sn**	**13 29 59.7**	**-1.3**
JFK	**Kawauchi**	**1.01**	**353**	P	**Pb**	**13 29 49.8**	**-0.5**
JAG	**Ashikaga**	**1.27**	**273**	P	**Pn**	**13 29 53.5**	**-0.8**
JAG				S	**Sb**	**13 30 08.2**	**-2.7**
JFT	**Otama**	**1.28**	**335**	P	**Pg**	**13 29 55.0**	**-0.5**
JFT				S	**Sb**	**13 30 10.3**	**-0.9**
JFY	**Yanaizu**	**1.48**	**315**	P	**Pb**	**13 29 57.5**	**-0.9**
JKT	**Katashina**	**1.48**	**286**	P	**Pn**	**13 29 57.4**	**0.0**
JKT				S	**Sn**	**13 30 14.8**	**-1.9**
MJAR	**Matsushiro Arr**	**2.28**	**275**	Pn	**Pn**	**13 30 08.1**	**-0.1**
	1.6nm,0.3s,baz=119,slow=16,SNR=79						
MJAR				Sn	**Sn**	**13 30 36.2**	**+0.1**
	3.6nm,0.3s,baz=161,slow=23,SNR=10						
MJAR				LR	LR	13 31 18.0	
	comp=Z,88nm,18.8s,baz=135,slow=48						
MAT	**Matsushiro**	**2.28**	**275**	P	**Pn**	**13 30 08.6**	**+0.4**
MAT				S	**Sn**	**13 30 34.8**	**-1.3**
JHJ	**Hachijo jima 2**	**3.39**	**198**	Pn	**Pn**	**13 30 24.9**	**+1.3**
	5.4nm,0.3s,baz=34,slow=18,SNR=6.1						
JHJ				Sn	**Sn**	**13 31 04.2**	**+0.6**
	25nm,0.3s,baz=63,slow=17,SNR=4.0						
ASAJ	**Asahikawa**	**7.84**	**8**	Pn	**Pn**	**13 31 24.2**	**-0.3**
	0.6nm,0.3s,baz=227,slow=11,SNR=11						
ASAJ				Sn	**Sn**	**13 32 52.6**	**-0.4**
	0.2nm,0.3s,baz=100,slow=19,SNR=4.6						
JNU	**Nakatsue**	**8.95**	**252**	LR	LR	13 35 04.5	
	comp=Z,32nm,18.4s,baz=113,slow=37						
JCJ	**Chichijima**	**9.29**	**174**	Pn	**Pn**	**13 31 42.6**	**-1.9**
	9.2nm,0.3s,baz=280,slow=23,SNR=7.0						
USRK	**Ussuriysk Ar.**	**10.43**	**321**	Pn	**Pn**	**13 32 03.8**	**+3.8**
	0.2nm,0.3s,baz=139,slow=9.2,SNR=3.8						
KSRS	**Korea Array**	**10.55**	**280**	LR	LR	13 35 44.1	
	comp=Z,34nm,21.4s,baz=55,slow=35						
KLR	**Kul'dur**	**14.53**	**335**	LR	LR	13 38 03.8	
	comp=Z,32nm,18.4s,baz=121,slow=35						
SEY	**Seymchan**	**27.51**	**11**	P	**P**	**13 35 18.2**	**+1.5**
	2.5nm,0.8s,baz=197,slow=7.0,SNR=10						
SONM	**Songino Array**	**27.91**	**305**	P	**P**	**13 35 22.1**	**+1.4**
	0.5nm,0.6s,baz=94,slow=10.0,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**28.09**	**119**	T	T	14 04 43.3	
	baz=312,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**28.09**	**119**	T	T	14 04 51.3	
	baz=312,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**28.10**	**119**	T	T	14 04 52.5	
	baz=312,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**28.77**	**121**	T	T	14 05 33.2	
	baz=314,slow=75,SNR=106						
H11S3	**WAKE ISLAND Hy**	**28.77**	**121**	T	T	14 05 29.4	
	baz=314,slow=75,SNR=64						
H11S2	**WAKE ISLAND Hy**	**28.79**	**121**	T	T	14 05 40.9	
	baz=314,slow=75,SNR=63						
ZALV	**Zalesovo Beam**	**42.14**	**313**	P	**P**	**13 37 22.4**	**-0.3**
	2.1nm,0.6s,baz=108,slow=9.5,SNR=8.8						
MKAR	**Makanchi Array**	**44.21**	**303**	P	**P**	**13 37 39.6**	**0.0**
	0.6nm,0.7s,baz=86,slow=9.0,SNR=8.0						
ILAR	**Eielson Array**	**50.23**	**32**	P	**P**	**13 38 27.0**	**+0.8**
	0.7nm,0.8s,baz=265,slow=5.8,SNR=9.1						
INK	**Inuvik**	**55.12**	**27**	P	**P**	**13 39 03.3**	**+1.0**
	0.6nm,0.6s,baz=307,slow=6.4,SNR=6.3						
WRA	**Warramunga Arr**	**56.36**	**188**	P	**P**	**13 39 11.0**	**-0.7**
	0.5nm,0.7s,baz=5.2,slow=7.5,SNR=9.0						
ASAR	**Alice Springs**	**60.08**	**188**	P	**P**	**13 39 37.7**	**-0.1**
	0.5nm,0.9s,baz=4.3,slow=4.6,SNR=4.9						
RES	**Resolute Bay**	**63.33**	**14**	P	**P**	**13 39 59.0**	**0.0**
	0.4nm,0.5s,baz=343,slow=11,SNR=3.9						
YKA	**Yellowknife Ar**	**64.54**	**30**	P	**P**	**13 40 05.8**	**-1.4**
	0.1nm,0.6s,baz=302,slow=6.5,SNR=5.2						
NOA	**NORSAR Array B**	**74.68**	**337**	P	**P**	**13 41 08.7**	**-1.1**
	0.5nm,0.7s,baz=40,slow=5.8,SNR=3.0						
FRB	**Frobisher Bay**	**77.50**	**13**	P	**P**	**13 41 25.1**	**-0.5**
	1.4nm,0.6s,baz=55,slow=1.8,SNR=5.1						

WEL 12 13:43:50.1±0.5,**33˚S**±9˚×**18˚0W**±2˚3,**h33**^{km},**ML4.3**/12,
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.16**	**22**	P	Pn	13 44 50.7	-0.6
GLKZ				S	Sn	13 45 37.4	-1.3
MXZ	**Matakaoa Point**	**4.70**	**199**	P	Pn	13 44 59.7	+0.9
MXZ				S	Sn	13 45 52.7	+0.6
WMGZ	**Waiomatatini S**	**4.92**	**197**	P	Pn	13 45 04.9	+3.2
WMGZ				S	Sn	13 46 00.9	+3.5
HAZ	**Te Kaha**	**5.04**	**203**	P	Pn	13 45 04.4	+1.0
HAZ				S	Sn	13 46 00.9	+0.5
PKGZ	**Pakihiroa**	**5.07**	**200**	P	Pn	13 45 04.2	+0.3
PKGZ				S	Sn	13 46 01.6	+0.3
KUZ	**Kuaotunu**	**5.19**	**225**	P	Pn	13 45 07.7	+2.2
PUZ	**Puketiti**	**5.19**	**198**	P	Pn	13 45 05.1	-0.4
PUZ				S	Sn	13 46 04.6	+0.3
RUGZ	**Raukumara Rang**	**5.26**	**203**	P	Pn	13 45 07.6	+1.0
RUGZ				S	Sn	13 46 04.2	-2.0
TWGZ	**Tauwhareparae**	**5.37**	**200**	P	Pn	13 45 08.6	+0.7
TWGZ				S	Sn	13 46 10.0	+1.3
OPRZ	**Ohinepanea**	**5.59**	**212**	P	Pn	13 45 12.9	+1.9
CNGZ	**Carnagh Statio**	**5.60**	**197**	P	Pn	13 45 10.8	-0.3
MWZ	**Matawai**	**5.65**	**203**	P	Pn	13 45 11.0	-0.8
MWZ				S	Sn	13 46 13.9	-1.6
TKGZ	**Te Karaka**	**5.65**	**200**	P	Pn	13 45 12.8	+1.1
TKGZ				S	Sn	13 46 15.0	-0.5
URZ	**Urewera**	**5.73**	**206**	P	Pn	13 45 12.2	-0.6
URZ				S	Sn	13 46 15.1	-2.2
RIGZ	**Rimuhau**	**5.92**	**199**	P	Pn	13 45 18.2	+2.7
RIGZ				S	Sn	13 46 21.5	-0.7
MUGZ	**Murupara**	**6.04**	**207**	P	Pn	13 45 16.5	-0.7
RTZ	**Ruatahuna**	**6.09**	**205**	P	Pn	13 45 17.8	-0.1
RTZ				S	Sn	13 46 23.0	-3.4
SNGZ	**Shannon Statio**	**6.12**	**202**	P	Pn	13 45 17.9	-0.3
SNGZ				S	Sn	13 46 25.2	-1.9
KNZ	**Kokohu**	**6.24**	**199**	P	Pn	13 45 20.6	+0.7
RAHZ	**Arahi**	**6.32**	**203**	P	Pn	13 45 22.0	+0.9
MRHZ	**Matea Rd**	**6.49**	**208**	P	Pn	13 45 22.7	-0.7
ARHZ	**Aropaoanui**	**6.67**	**203**	P	Pn	13 45 24.0	-1.8
BKZ	**Black Stump Fm**	**6.75**	**206**	P	Pn	13 45 25.3	-1.7
BHHZ	**Black Hill Sta**	**7.20**	**207**	P	Pn	13 45 32.0	-1.1
FWVZ	**Far West T-bar**	**7.20**	**211**	P	Pn	13 45 32.8	-0.5

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*NEIC **12** 13:53:57.6±0.3, 11˚23S×166˚17E, h10^{km}, mb4.7/12, Error ellipse: s-maj=8.9km s-min=5.9km az=80.0*
*IDC **12** 13:54:02.3±3.3, 11˚37S×166˚26E, h43^{km}±29^{km}, mb4.0/14, mb1 4.1/16, mb1mx4.0/34, mbtmp4.2/16, ML4.4/2, MS3.5/7, Ms1 3.5/7, ms1mx3.1/30, Error ellipse: s-maj=22.5km s-min=17.4km az=90.0*
ISC 12 13:54:00.2±2.9,**11˚29S**±0˚06×**166˚34E**±0˚06,**h32**^{km}±21^{km},
n59,σ1ˢ50/58,**mb4.4**/21,**MS3.5**/5,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.56**	**286**	*e*P	**Pn**	**13 55 36.0**	**+1.5**
HNR				*e*S	**Sn**	**13 56 52.0**	**+3.7**
HNR	**Honiara**	**6.56**	**286**	P	**Pn**	**13 55 36.0**	**+1.5**
	21nm,0.3s,baz=139,slow=5.9,SNR=11						
HNR				S	**Sn**	**13 56 45.0**	**-3.3**
	18nm,0.3s,baz=193,slow=18,SNR=2.8						
HNR				LR	LR	13 58 24.8	
	comp=Z,377nm,19.0s,baz=106,slow=40						
DZM	**Mont Dzumac**	**10.72**	**179**	P	**Pn**	**13 56 32.7**	**+1.0**
	1.1nm,0.3s,baz=321,slow=11,SNR=16						
DZM				S	**Sn**	**13 58 27.0**	**-3.8**
	0.3nm,0.3s,baz=174,slow=19,SNR=3.0						
DZM				LR	LR	14 00 14.1	
	comp=Z,171nm,20.9s,baz=32,slow=35						
ONTNC	**Ouen Toro**	**10.96**	**179**	*e*Pn	**Pn**	**13 56 36.1**	**+1.3**
OUENC	**Ouen Island, N**	**11.08**	**178**	*e*Pn	**Pn**	**13 56 38.1**	**+1.5**
PINNC	**Pines Island,**	**11.31**	**175**	*e*Pn	**Pn**	**13 56 41.9**	**+2.2**
FUNA	**Funafuti**	**12.96**	**79**	*e*Pn	**P**	**13 57 09.0**	**-3.4**
MSVF	**Nonsavu**	**13.02**	**121**	*e*Pn	**Pn**	**13 57 06.0**	**+2.9**
TARA	**Tarawa**	**14.16**	**28**	*e*Pn	**P**	**13 57 23.1**	**-2.7**
RABL	**Rabaul**	**15.71**	**296**	*e*Pn	**Pn**	**13 57 35.8**	**-3.7**
	52nm,0.6s						
PATS	**Pohnpei**	**19.70**	**336**	*e*P	**P**	**13 58 27.6**	**+0.5**
	165nm,1.1s						
EIDS	**Eidsvold**	**20.12**	**224**	*e*P	**P**	**13 58 31.1**	**-0.5**
	86nm,2.0s						
CTA	**Charters Tower**	**21.21**	**243**	P	**P**	**13 58 42.6**	**-0.8**
	3.3nm,0.5s,baz=69,slow=15,SNR=3.7						
H11S2	**WAKE ISLAND Hy**	**29.59**	**1**	T	T	14 30 34.5	
	baz=181,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**29.60**	**1**	T	T	14 30 35.7	
	baz=181,slow=76,SNR=3.0						
H11S1	**WAKE ISLAND Hy**	**29.61**	**1**	T	T	14 30 40.0	
	baz=181,slow=76,SNR=14						
STKA	**Stephens Creek**	**30.67**	**224**	P	**P**	**14 00 11.7**	**-0.4**
	2.1nm,0.6s,baz=55,slow=9.4,SNR=5.6						
STKA				PcP	**PcP**	**14 03 10.4**	**+0.6**
	4.2nm,1.0s,baz=111,slow=6.5,SNR=3.3						
STKA				LR	LR	14 12 26.9	
	comp=Z,101nm,18.0s,baz=25,slow=36						
H11N1	**WAKE ISLAND Hy**	**30.81**	**1**	T	T	14 32 09.5	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**30.82**	**1**	T	T	14 32 05.4	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.83**	**1**	T	T	14 32 07.2	
	baz=182						
WB2	**Warramunga Arr**	**31.94**	**250**	*e*PcP	**PcP**	**14 03 13.8**	**+0.4**
WR1	**Warramunga Arr**	**31.95**	**250**	*e*P	**P**	**14 00 22.4**	**-1.1**
	6.6nm,1.1s						
WR1				*e*PcP	**PcP**	**14 03 14.1**	**+0.6**
WRA	**Warramunga Arr**	**31.95**	**250**	P	**P**	**14 00 22.4**	**-1.1**
	2.8nm,0.8s,baz=84,slow=9.0,SNR=24						
WRA				PcP	**PcP**	**14 03 14.1**	**+0.6**
	1.4nm,0.8s,baz=80,slow=3.5,SNR=9.7						
RPZ	**Rata Peaks**	**32.56**	**174**	P	**P**	**14 00 29.1**	**+0.5**
	6.9nm,0.5s,baz=279,slow=2.1,SNR=5.9						
AS01	**Alice Springs**	**33.17**	**244**	*e*PcP	**PcP**	**14 03 16.6**	**-0.1**
AS31	**Alice Springs**	**33.21**	**244**	*e*P	**P**	**14 00 32.7**	**-1.8**
	1.2nm,0.8s						
AS31				*e*PcP	**PcP**	**14 03 17.0**	**+0.1**
ASAR	**Alice Springs**	**33.21**	**244**	P	**P**	**14 00 33.0**	**-1.5**
	4.2nm,0.7s,baz=69,slow=9.8,SNR=67						
ASAR				PcP	**PcP**	**14 03 17.0**	**+0.1**
	1.6nm,0.8s,baz=78,slow=2.4,SNR=12						
LEM	**Lembang**	**58.09**	**269**	LR	LR	14 30 59.9	
	comp=Z,33nm,18.4s,baz=216,slow=38						
ASAJ	**Asahikawa**	**59.22**	**340**	P	**P**	**14 03 59.6**	**+1.3**
	2.0nm,0.5s,baz=205,slow=7.1,SNR=7.2						
PETK	**Petropavlovsk-**	**64.56**	**354**	LR	LR	14 29 06.7	
	comp=Z,22nm,19.2s,baz=120,slow=33						
VNDA	**Vanda**	**66.26**	**181**	*e*P	**P**	**14 04 44.5**	**-0.4**
VNDA	**Vanda**	**66.26**	**181**	P	**P**	**14 04 45.5**	**+0.7**
	2.9nm,0.9s,baz=9.4,slow=9.0,SNR=4.8						
VNDA				LR	LR	14 30 13.1	
	comp=Z,48nm,19.1s,baz=156,slow=33						
CM01	**Chiang Mai Arr**	**72.72**	**293**	*e*P	**P**	**14 05 26.3**	**+0.5**
CM31	**Chiang Mai Arr**	**72.75**	**293**	*e*P	**P**	**14 05 26.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**72.75**	**293**	P	**P**	**14 05 27.9**	**+2.0**
	2.8nm,0.8s,baz=127,slow=4.7,SNR=21						
QSPA	**South Pole Qui**	**78.72**	**180**	*e*P	**P**	**14 05 58.9**	**-0.5**
	5.0nm,0.9s						
SONA0	**Songino Array**	**79.21**	**324**	*e*P	**P**	**14 06 03.3**	**+1.0**
SONM	**Songino Array**	**79.21**	**324**	P	**P**	**14 06 03.3**	**+1.0**
	0.7nm,0.5s,baz=140,slow=6.1,SNR=6.6						
TLY	**Talaya**	**82.65**	**326**	*e*P	**P**	**14 06 21.3**	**+0.8**
	7.0nm,0.8s						
HDA	**Harding Lake**	**83.28**	**19**	*e*P	**P**	**14 06 23.5**	**+0.1**
	4.7nm,0.6s						
ILAR	**Eielson Array**	**83.56**	**18**	P	**P**	**14 06 25.5**	**+0.7**
	0.6nm,0.6s,baz=257,slow=5.0,SNR=16						
ILB	**Eielson Array**	**83.56**	**18**	*e*P	**P**	**14 06 25.7**	**+0.9**
SCRK	**Sand Creek**	**83.94**	**20**	*e*P	**P**	**14 06 27.7**	**+0.7**
	3.8nm,0.8s						
NVAR	**Mina Array Bea**	**85.73**	**50**	P	**P**	**14 06 38.0**	**+1.3**
	0.2nm,0.6s,baz=242,slow=7.8,SNR=3.5						
MK01	**Makanchi Array**	**94.09**	**317**	*e*P	**P**	**14 07 16.0**	**+0.4**
ZALV	**Zalesovo Beam**	**94.09**	**324**	P	**P**	**14 07 15.8**	**+0.4**
	0.7nm,0.6s,baz=145,slow=5.4,SNR=4.3						
ZAA1	**Zalesovo Array**	**94.10**	**324**	*e*P	**P**	**14 07 15.8**	**+0.4**
MK31	**Makanchi Array**	**94.10**	**317**	*e*P	**P**	**14 07 16.3**	**+0.6**
MK32	**Makanchi Array**	**94.10**	**317**	*e*P	**P**	**14 07 16.2**	**+0.5**
MKAR	**Makanchi Array**	**94.10**	**317**	*e*P	**P**	**14 07 16.4**	**+0.7**
	12nm,0.6s						
MKAR	**Makanchi Array**	**94.10**	**317**	P	**P**	**14 07 16.2**	**+0.5**
	2.6nm,0.7s,baz=90,slow=5.5,SNR=31						
MAKZ	**Makanchi**	**94.31**	**317**	*e*P	**P**	**14 07 16.5**	**-0.2**
	2.6nm,1.0s						
YKA	**Yellowknife Ar**	**94.92**	**27**	P	**P**	**14 07 18.6**	**-0.4**
	0.3nm,0.6s,baz=258,slow=4.7,SNR=6.0						
YKB5	**Yellowknife Ar**	**94.92**	**27**	*e*P	**P**	**14 07 18.8**	**-0.2**
NRIK	**Noril'sk**	**96.55**	**339**	LR	LR	14 53 54.1	
	comp=Z,20nm,18.0s,baz=30,slow=37						
ARA0	**ARCESS Array S**	**116.72**	**346**	*e*PKPdf	**PKPdf**	**14 12 40.6**	**-0.2**
ARCES	**ARCESS Array B**	**116.72**	**346**	PKP	**PKPdf**	**14 12 40.6**	**-0.2**
	4.4nm,1.1s,baz=57,slow=2.0,SNR=17						
FIA0	**FINESS Array S**	**122.21**	**339**	*e*PKPdf	**PKPdf**	**14 12 51.4**	**-0.1**
FINES	**FINESS Array B**	**122.21**	**339**	PKP	**PKPdf**	**14 12 51.4**	**-0.1**
	0.6nm,0.5s,baz=62,slow=3.3,SNR=5.8						

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*ISCJB **12** 13:54:58.9±0.4, 46˚33N±0˚03×12˚56E±0˚03, h10^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=3.6km az=168.4*
*ROM **12** 13:54:58.9±0.1, 46˚314N±0˚005×12˚580E±0˚005, h12^{km}, ML2.1/16*
*VIE **12** 13:55:00.3±0.1, 46˚37N×12˚46E, h4^{km}±3^{km}, mb1.4/3, ml2.0/4, Error ellipse: s-maj=1.4km s-min=1.0km az=29.0*
ISC 12 13:54:59.0±1.0,**46˚34N**±0˚03×**12˚55E**±0˚02,**h12**^{km}±7^{km},
n22,σ0ˢ98/31,**3C-1D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CIMO	**Cimolais**	**0.08**	**249**⇑	*i*Pg	**Pg**	**13 55 01.1**	**-0.5**
CIMO				*i* Sg	**Sg**	**13 55 03.0**	**-0.4**
STAL	**STALIGIAL**	**0.14**	**124**	P	**Pg**	**13 55 01.9**	**-0.5**
STAL				S	**Sg**	**13 55 04.8**	**+0.1**
STAL				AML	AML		
	comp=E,3395µm,0.8s						
STAL				AML	AML		
	comp=N,2945µm,0.3s						
STAL				AML	AML		
	comp=E,3200µm,0.3s						
STAL				AML	AML		
	comp=N,3120µm,1.6s						
STAL				AML	AML		
	comp=E,3400µm,0.8s						
STAL				AML	AML		
	comp=N,2945µm,0.3s						
STAL				AML	AML		
	comp=E,3200µm,0.3s						
STAL				AML	AML		
	comp=N,3120µm,1.6s						
STAL				AML	AML		
	comp=E,3200µm,0.3s						
STAL				AML	AML		
	comp=N,2945µm,0.3s						
STAL				AML	AML		
	comp=N,3120µm,1.6s						
STAL				AML	AML		
	comp=E,3400µm,0.8s						
CSO	**Casso**	**0.17**	**247**⇑	*e*Pg	**Pg**	**13 55 02.3**	**-0.6**
CSO				*e*Sg	**Sg**	**13 55 05.3**	**-0.2**
CSMI	**Casera Mimoias**	**0.19**	**23**⇓	*e*Pg	**Pg**	**13 55 03.4**	**+0.2**
MLNI	**Malnisio**	**0.19**	**167**⇑	*e*Pg	**Pg**	**13 55 02.4**	**-0.9**
MLNI				*e*Sg	**Sg**	**13 55 05.4**	**-0.7**
MLNI	**Malnisio**	**0.19**	**167**	*e*Pg	**Pg**	**13 55 05.9**	**+2.7**
MLNI				*e*Sg	**Sg**	**13 55 09.7**	**+3.6**
FVI	**Forni Avoltri**	**0.30**	**32**	P	**Pg**	**13 55 05.5**	**+0.3**
FVI				S	**Sg**	**13 55 10.4**	**+1.0**
FVI				AML	AML		
	comp=E,1445µm,0.2s						
FVI				AML	AML		
	comp=N,968µm,0.4s						
FVI				AML	AML		
	comp=E,1445µm,0.2s						
FVI				AML	AML		
	comp=N,968µm,0.4s						
FVI				AML	AML		
	comp=E,1445µm,0.2s						
FVI				AML	AML		
	comp=N,968µm,0.4s						
POLC	**Polcenigo**	**0.31**	**186**	P	**Pg**	**13 55 05.0**	**-0.3**
POLC				S	**Sg**	**13 55 10.1**	**+0.5**
POLC				AML	AML		
	comp=E,973µm,0.4s						
POLC				AML	AML		
	comp=N,656µm,1.6s						
POLC				AML	AML		
	comp=E,973µm,0.4s						
POLC				AML	AML		
	comp=N,656µm,1.6s						
POLC				AML	AML		
	comp=N,656µm,1.6s						
POLC				AML	AML		
	comp=E,973µm,0.4s						
ABTA	**Abfaltersbach**	**0.41**	**357**	*e*Pg	**Pg**	**13 55 07.6**	**+0.4**
	comp=E,1.4nm,0.1s,SNR=15						
ABTA				*e*Sg	**Sg**	**13 55 13.0**	**+0.4**
	comp=E,5.7nm,0.1s						
GEPF	**Gemona**	**0.41**	**98**	P	**Pg**	**13 55 06.9**	**-0.2**
GEPF				S	**Sg**	**13 55 12.6**	**-0.1**
GEPF				AML	AML		
	comp=E,130µm,1.2s						
GEPF				AML	AML		
	comp=N,210µm,0.6s						
GEPF				AML	AML		
	comp=E,130µm,1.2s						
GEPF				AML	AML		
	comp=N,210µm,0.6s						
VINO	**Villanova**	**0.52**	**99**	P	**Pg**	**13 55 08.4**	**-0.7**
VINO				S	**Sg**	**13 55 16.0**	**0.0**
PTCC	**Patocco-Chiusa**	**0.56**	**83**	P	**Pg**	**13 55 09.8**	**-0.2**
PTCC				S	**Sg**	**13 55 17.4**	**0.0**
PTCC				AML	AML		
	comp=E,65µm,1.1s						
PTCC				AML	AML		
	comp=N,84µm,0.6s						
PTCC				AML	AML		
	comp=E,65µm,1.1s						
PTCC				AML	AML		
	comp=N,84µm,0.6s						
PTCC				AML	AML		
	comp=N,84µm,0.6s						
PTCC				AML	AML		
	comp=E,65µm,1.1s						
BRES	**Bressanone**	**0.67**	**303**	P	**Pg**	**13 55 12.3**	**+0.4**
BRES				S	**Sb**	**13 55 21.7**	**-0.4**
BRES				AML	AML		
	comp=E,88µm,0.2s						
BRES				AML	AML		
	comp=N,127µm,1.0s						
BRES				AML	AML		
	comp=E,88µm,0.2s						
BRES				AML	AML		
	comp=N,126µm,1.0s						
BRES				AML	AML		
	comp=E,88µm,0.2s						
BRES				AML	AML		
	comp=N,126µm,1.0s						
CTI	**Castel Tesino**	**0.69**	**245**	P	**Pg**	**13 55 12.6**	**+0.3**
CTI				AML	AML		
	comp=E,144µm,1.3s						
CTI				AML	AML		
	comp=N,176µm,0.2s						
CTI				AML	AML		
	comp=N,176µm,0.2s						
CTI				AML	AML		
	comp=E,144µm,1.3s						
RISI	**Rein**	**0.69**	**332**	P	**Pg**	**13 55 12.9**	**+0.5**
RISI				AML	AML		
	comp=E,214µm,0.4s						
RISI				AML	AML		
	comp=N,262µm,0.3s						
RISI				AML	AML		
	comp=E,214µm,0.4s						
RISI				AML	AML		
	comp=N,262µm,0.3s						
RISI				AML	AML		
	comp=N,262µm,0.3s						
RISI				AML	AML		
	comp=E,214µm,0.4s						
SABO	**M.te Sabotino**	**0.81**	**116**	AML	AML		
	comp=E,184µm,0.5s						
SABO				AML	AML		
	comp=E,184µm,0.5s						
SABO				AML	AML		
	comp=N,318µm,0.3s						
SABO				AML	AML		
	comp=N,318µm,0.3s						
KOSI	**Kohlern**	**0.82**	**279**	P	**Pg**	**13 55 14.8**	**0.0**
KOSI				S	**Sg**	**13 55 25.9**	**+0.3**
KOSI				AML	AML		
	comp=E,64µm,0.3s						
KOSI				AML	AML		
	comp=N,63µm,1.3s						
KOSI				AML	AML		
	comp=E,64µm,0.3s						
KOSI				AML	AML		
	comp=N,63µm,1.3s						
KOSI				AML	AML		
	comp=N,63µm,1.3s						
KOSI				AML	AML		
	comp=E,64µm,0.3s						
APPI	**Appiano**	**0.92**	**279**	AML	AML		
	comp=E,52µm,1.5s						
APPI				AML	AML		
	comp=E,52µm,1.5s						
APPI				AML	AML		
	comp=N,74µm,0.3s						
APPI				AML	AML		
	comp=N,74µm,0.3s						
ABSI	**Aberstueckl**	**0.93**	**295**	P	**Pg**	**13 55 17.0**	**+0.1**
ABSI				AML	AML		
	comp=E,78µm,0.4s						
ABSI				AML	AML		
	comp=N,82µm,0.4s						
ABSI				AML	AML		
	comp=E,78µm,0.4s						
ABSI				AML	AML		
	comp=N,82µm,0.4s						
ROSI	**Rosskopf**	**0.98**	**307**	AML	AML		
	comp=E,58µm,1.4s						
ROSI				AML	AML		
	comp=N,74µm,1.6s						
ROSI				AML	AML		
	comp=N,74µm,1.6s						
ROSI				AML	AML		
	comp=E,58µm,1.4s						
ROVR	**Rover Verones**	**1.24**	**237**	P	**Pb**	**13 55 22.0**	**-0.4**
ROVR				AML	AML		
	comp=E,67µm,0.5s						
ROVR				AML	AML		
	comp=N,151µm,1.5s						
ROVR				AML	AML		
	comp=E,67µm,0.5s						
ROVR				AML	AML		
	comp=N,151µm,1.5s						
MOSI	**Grossmontoni**	**1.41**	**282**	AML	AML		
	comp=E,67µm,0.3s						
MOSI				AML	AML		
	comp=N,117µm,0.4s						
MOSI				AML	AML		
	comp=E,67µm,0.3s						
MOSI				AML	AML		
	comp=N,117µm,0.4s						

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*ISCJB **12** 13:56:02.8±0.6, 51˚48N±0˚03×16˚13E±0˚03, h0^{km}, Error ellipse: s-maj=3.7km s-min=2.4km az=19.5*
*BGR **12** 13:56:05.1±0.5, 51˚51N×16˚16E, h1^{km}, ML3.0/15, Error ellipse: s-maj=5.6km s-min=2.2km az=14.0*
ISC 12 13:56:03.0±0.9,**51˚59N**±0˚03×**16˚17E**±0˚02,**h0**^{km},**n41,**
σ0ˢ77/79,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.75**	**174**	*e*Pg	**Pg**	**13 56 17.6**	**+0.3**
KSP				*e*Sg	**Sg**	**13 56 26.9**	**-0.3**
KSP	**Ksiaz**	**0.75**	**174**	*e*Pg	**Pg**	**13 56 17.7**	**+0.3**
KSP				*e*Sg	**Sg**	**13 56 27.2**	**0.0**
UPC	**Upice**	**1.09**	**185**	*e*PG	**Pg**	**13 56 23.8**	**0.0**
UPC				*e*SG	**Sg**	**13 56 37.7**	**-0.2**
	comp=Z,75nm,0.4s						
DPC	**Dobruska-Polom**	**1.25**	**175**	*e*PG	**Pg**	**13 56 26.6**	**-0.3**
DPC				*e*SG	**Sg**	**13 56 42.7**	**-0.3**
	comp=Z,36nm,0.6s						
DPC	**Dobruska-Polom**	**1.25**	**175**	*e*Pg	**Pg**	**13 56 26.6**	**-0.3**
DPC				*e*Sg	**Sg**	**13 56 42.4**	**-0.6**
PVCC	**Panska Ves**	**1.47**	**224**	*e*PG	**Pg**	**13 56 31.1**	**0.0**
PVCC				*e*SG	**Sb**	**13 56 50.5**	**+0.2**
	comp=Z,144nm,0.4s						
KRLC	**Kraliky**	**1.57**	**165**	*e*PG	**Pn**	**13 56 32.4**	**+0.3**
KRLC				*e*SG	**Sn**	**13 56 53.0**	**-0.1**

	comp=Z,6.4nm,0.4s						
BRG	Berggiesshubel	1.57	244	PN	Pn	13 56 31.7	-0.5
BRG				PG	Pg	13 56 33.2	+0.1
BRG				SG	Sb	13 56 53.6	+0.3
	146nm,0.4s						
BRG	Berggiesshubel	1.57	244	*e*Pn	Pb	13 56 33.1	+0.2
BRG				*e*Sg	Sb	13 56 53.6	+0.3
FBE	Freiberg	1.89	250	*e*Pn	Pn	13 56 37.4	+0.9
FBE				*e*Sg	Sg	13 57 04.1	+0.5
GOPC	GO Pecny, Ondr	1.90	208	*e*PG	Pb	13 56 38.2	-0.2
GOPC				*e*SG	Sb	13 57 02.9	+0.3
	comp=Z,28nm,0.4s						
PRU	Pruhonice	1.91	213	*e*PG	Pb	13 56 38.7	+0.1
PRU				*e*SG	Sb	13 57 03.0	0.0
	comp=Z,25nm,0.4s						
CLL	Collm	2.00	263	*e*Pn	Pn	13 56 38.0	0.0
CLL				*e*Pg	Pg	13 56 41.0	-0.3
CLL				*e*Sg	Sg	13 57 07.0	-0.2
	comp=Z,47nm,0.9s						
CLL	Collm	2.00	263	*e*Pn	Pn	13 56 37.7	-0.3
CLL				*e*Sg	Sg	13 57 07.8	+0.6
MORC	Moravsky Berou	2.02	154	*e*PN	Pn	13 56 38.1	-0.2
MORC				*e*SG	Sb	13 57 05.7	-0.5
MORC	Moravsky Berou	2.02	154	*e*Pn	Pn	13 56 38.0	-0.2
MORC				*e*Sg	Sb	13 57 06.1	-0.1
OKC	Ostrava-Krasne	2.16	144	*e*PG	Pg	13 56 44.0	-0.4
OKC				*e*SG	Sg	13 57 12.8	+0.5
	comp=Z,42nm,0.8s						
OKC	Ostrava-Krasne	2.16	144	*e*Sg	Sb	13 57 11.0	+0.8
VRAC	Vranov	2.30	173	*e*PN	Pn	13 56 43.0	+0.8
VRAC				*e*SG	Sb	13 57 13.9	-0.4
TREC	Trest	2.34	191	*e*PG	Pg	13 56 47.4	-0.4
TREC				*e*SG	Sb	13 57 16.9	+1.4
	comp=Z,20nm,0.2s						
KRUC	Moravsky	2.54	177	*e*PN	Pn	13 56 45.6	+0.2
KRUC				*e*SG	Sb	13 57 21.7	+0.6
TANN	Tannenbergstha	2.62	245	*e*Pn	Pn	13 56 46.9	+0.3
TANN				*e*Sg	Sg	13 57 26.1	-1.0
OJC	Ojcow	2.68	119	*e*Pg	Pg	13 56 55.2	+0.9
OJC				*e*Sg	Sg	13 57 30.0	+1.0
OJC	Ojcow	2.68	119	*e*Pg	Pg	13 56 54.2	0.0
OJC				*e*Sg	Sg	13 57 29.6	+0.7
NKC	Novy Kostel	2.72	241	*e*PN	Pn	13 56 48.7	+0.8
NKC				*e*PG	Pg	13 56 54.8	-0.3
NKC				*e*SG	Sg	13 57 31.0	+0.7
	comp=Z,76nm,0.6s						
KHC	Kasperske Hory	2.97	215	*e*PG	Pb	13 56 57.6	+0.8
KHC				*e*SN	Sn	13 57 27.0	-0.7
KHC				*e*SG	Sg	13 57 37.2	-1.1
	comp=Z,20nm,0.5s						
MOX	Moxa	3.02	253	*e*Sg	Sg	13 57 41.0	+1.0
MANZ	Manzenberg	3.04	240	*e*Sg	Sg	13 57 41.6	+1.1
ROTZ	Rotzenmuhle	3.11	236	*e*Sg	Sg	13 57 41.1	-1.8
GEC2	GERESS Array S	3.17	211	*e*Pn	Pn	13 56 55.1	+0.9
GEC2				*e*Sg	Sg	13 57 42.9	-2.0
LANS	Liptovska Anna	3.23	138	*e*PN	Pn	13 56 47.6	-7.4
LANS				*e*PG	Pg	13 57 04.7	-0.2
LANS				*e*SG	Sg	13 57 44.6	-2.1
WET	Wettzell	3.23	222	*e*Pn	Pn	13 56 55.2	+0.2
MODS	Modra-Piesok	3.30	167	*e*PG	Pg	13 57 05.9	-0.3
MODS				*e*SG	Sg	13 57 48.6	-0.3
MODS				*e*LG	Lg	13 57 53.9	
NIE	Niedzica	3.42	128	*e*P	Pg	13 57 08.8	+0.3
NIE				*e*S	Sg	13 57 53.5	+0.7
VYHS	Vyhne	3.55	150	*e*PG	Pg	13 57 11.3	+0.4
VYHS				*e*SG	Sg	13 57 54.4	-2.4
VYHS				*e*LG	Lg	13 58 07.6	
BSD	Bornholm Skovb	3.61	348	*i* P	Pn	13 57 00.5	+0.4
BSD				*i* S	Sn	13 57 41.2	-2.1
CONA	Conrad Observa	3.67	183	*e*Pn	Pn	13 57 00.1	-0.9
	comp=Z,0.2nm,0.2s						
CONA				Sg	Sg	13 58 01.9	+1.0
GRF	Grafenberg Arr	3.68	241	*e*Sg	Sg	13 58 00.5	-0.6
MOA	Molln	3.94	199	*e*Pn	Pn	13 57 05.3	+0.5
	comp=Z,1.9nm,0.3s						
MOA				Pg	Pg	13 57 19.4	+0.9
	comp=Z,4.3nm,0.5s						
MOA				Sg	Sg	13 58 09.4	-0.2
	comp=Z,22nm,0.6s						
ARSA	Arzberg	4.37	186	Sg	Sg	13 58 23.8	+0.6
	comp=Z,7.0nm,0.5s						
SOKA	Soboth	4.97	189	*i* Sg	Sg	13 58 43.1	+0.4
	comp=Z,2.8nm,0.5s						

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*ISCJB **12** 14:17:12.8±0.8, 11°.04S±0°.09×166°.01E±0°.08, h10^{km}, mb3.9/7, MS3.3/1, Error ellipse: s-maj=14.8km s-min=10.0km az=36.2*

*IDC **12** 14:17:12.9±1.3, 10°.93S×165°.99E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.8/47, mbtmp3.9/8, ML4.2/2, MS3.2/2, Ms1 3.1/2, ms1mx2.7/31, Error ellipse: s-maj=36.5km s-min=23.3km az=145.0*

*NEIC **12** 14:17:14.4±0.7, 10°.94S×166°.00E, h10^{km}, mb4.4/2, Error ellipse: s-maj=14.9km s-min=11.0km az=75.0*

ISC 12 14:17:14.4±1.0**, 10°.9S**±0°.1×**166°.1E**±0°.1**, h10^{km}, n21, σ1^{s}.09**/15**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.22	283	*e*P	Pn	14 18 48.0	+1.7
HNR	Honiara	6.22	283	Pn	Pn	14 18 46.5	+0.3
	31nm,0.3s,baz=141,slow=3.6,SNR=19						
HNR				Sn	Sn	14 19 57.9	+0.4
	baz=298,slow=18,SNR=1.6						
HNR				LR	LR	14 20 50.6	
	comp=Z,119nm,19.6s,baz=134,slow=36						
DZM	Mont Dzumac	11.08	178	*e*Pn	Pn	14 19 54.2	+1.2
DZM	Mont Dzumac	11.08	178	Pn	Pn	14 19 54.6	+1.5
	0.4nm,0.3s,baz=3.5,slow=19,SNR=3.7						
ONTNC	Ouen Toro	11.31	178	*e*Pn	Pn	14 19 56.1	-0.1
H11S2	WAKE ISLAND Hy	29.25	1	T	T	14 53 42.7	
	baz=181,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	29.25	1	T	T	14 53 42.3	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.27	1	T	T	14 53 43.7	
	baz=181,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	30.47	2	T	T	14 55 14.0	
	baz=182,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	30.47	2	T	T	14 55 14.2	
	baz=182,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	30.49	2	T	T	14 55 15.2	
	baz=182,slow=76,SNR=14						
STKA	Stephens Creek	30.74	224	LR	LR	14 34 55.6	
	comp=Z,59nm,18.3s,baz=26,slow=35						
WR1	Warramunga Arr	31.82	250	*e*P	P	14 23 38.7	-0.9
	14nm,1.8s						
WRA	Warramunga Arr	31.82	250	P	P	14 23 38.7	-0.9
	1.9nm,0.8s,baz=80,slow=9.2,SNR=14						
ASAR	Alice Springs	33.13	243	P	P	14 23 49.7	-1.4
	0.2nm,0.6s,baz=64,slow=10,SNR=5.7						
FITZ	Fitzroy Crossi	39.72	255	*e*P	P	14 24 46.0	-1.4
	7.1nm,1.4s						
FITZ	Fitzroy Crossi	39.72	255	P	P	14 24 46.5	-0.9
	1.8nm,0.8s,baz=108,slow=5.1,SNR=5.3						
ILAR	Eielson Array	83.31	18	P	P	14 29 41.6	+0.6
	0.5nm,0.6s,baz=232,slow=5.1,SNR=16						
MK32	Makanchi Array	93.67	317	*e*P	P	14 30 31.5	+0.2
MKAR	Makanchi Array	93.67	317	P	P	14 30 31.5	+0.2
	0.9nm,1.0s,baz=113,slow=4.6,SNR=6.5						
YKA	Yellowknife Ar	94.73	27	P	P	14 30 35.2	-0.5
	0.2nm,0.6s,baz=260,slow=3.6,SNR=3.2						

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*IDC **12** 14:19:54.1±1.4, 11°.18N×92°.93E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.3/63, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=51.5km s-min=21.9km az=53.0*

*ISCJB **12** 14:19:59.5±1.0, 11°.3N±0°.1×93°.1E±0°.2, h54^{km}, mb3.4/4, Error ellipse: s-maj=25.4km s-min=12.1km az=141.6*

ISC 12 14:20:01.3±1.3**, 11°.3N**±0°.2×**93°.0E**±0°.2**, h54^{km}, n12, σ1^{s}.05**/12**, mb3.5**/4**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.13	38	Pn	Pn	14 22 11.2	+0.7
	0.3nm,0.3s,baz=234,slow=15,SNR=5.8						
ODAN	Odare	16.37	342	*e*P	P	14 23 49.6	-0.3
	10nm,0.2s						
PKI	Pulchoki	17.70	337	*e*P	P	14 24 05.4	+0.6
	8.3nm,0.3s						
PKIN	Phulchoki	17.71	337	*e*P	P	14 24 05.3	+0.5
	7.5nm,0.4s						
GUN	Gumba	17.84	339	*e*P	Pn	14 24 04.1	-2.1
	7.9nm,0.5s						
KOLN	Koldanda	18.63	333	*e*P	Pn	14 24 16.8	+1.2
	4.7nm,0.2s						
DANN	Dangsing	19.06	334	*e*P	P	14 24 18.8	-0.8
	4.9nm,0.3s						
PYUN	Piuthan	19.18	332	*e*P	Pn	14 24 22.4	+0.1
	5.1nm,0.3s						
MKAR	Makanchi Array	36.53	348	P	P	14 27 00.6	-1.1
	0.1nm,0.3s,baz=170,slow=8.4,SNR=7.8						
GEYT	Alibeck	40.96	316	P	P	14 27 40.0	+1.1
	1.7nm,0.6s,baz=90,slow=4.3,SNR=3.1						
WRA	Warramunga Arr	51.16	127	P	P	14 28 59.1	-0.3
	0.4nm,0.6s,baz=307,slow=8.5,SNR=6.6						
ASAR	Alice Springs	52.96	131	P	P	14 29 12.7	0.0
	0.2nm,0.6s,baz=304,slow=6.7,SNR=6.3						

IDC 12 14:25:24.7±2.7**, 6°.58S**×**129°.87E, h138^{km}**±36^{km}**, mb3.2**/1**, mb1 3.1**/5**, mb1mx2.9**/40**, mbtmp3.6**/5**, Error ellipse: s-maj=67.6km s-min=20.3km az=89.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.84	14	P	Pn	14 26 49.5	+0.2
	2.0nm,0.3s,baz=3.5,slow=23,SNR=29						
SIJI				S	Sn	14 27 49.5	-5.7
	2.9nm,0.3s,baz=85,slow=23,SNR=10						
FITZ	Fitzroy Crossi	12.17	199	P	Pn	14 28 13.8	+0.1
	0.4nm,0.3s,baz=29,slow=12,SNR=15						
FITZ				S	Sn	14 30 22.7	-5.3
	0.4nm,0.3s,baz=173,slow=19,SNR=4.1						
WRA	Warramunga Arr	13.97	162	P	Pn	14 28 35.0	-1.9
	0.2nm,0.3s,baz=346,slow=13,SNR=12						
WRA				S	Sn	14 31 01.1	-10
	0.3nm,0.3s,baz=343,slow=22,SNR=7.8						
ASAR	Alice Springs	17.43	168	P	Pn	14 29 20.1	+0.7
	0.1nm,0.3s,baz=344,slow=10.0,SNR=12						
ASAR				S	S	14 32 26.9	-6.2
	0.1nm,0.3s,baz=348,slow=30,SNR=4.4						
MKAR	Makanchi Array	67.81	327	P	P	14 36 07.7	-0.1
	0.3nm,0.5s,baz=127,slow=7.3,SNR=8.8						

IDC 12 14:28:31.0±13.0**, 14°.97S**×**165°.66E, h0^{km}, mb3.9**/3**, mb1 4.2**/4**, mb1mx3.7**/34**, mbtmp4.0**/4**, ML4.1**/1**, Error ellipse: s-maj=234.9km s-min=36.1km az=55.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.11	174	Pn	Pn	14 30 16.5	+0.2
	3.1nm,0.3s,baz=38,slow=17,SNR=63						
DZM				Sn	Sn	14 31 38.7	+0.7
	1.5nm,0.3s,baz=324,slow=23,SNR=8.6						
STKA	Stephens Creek	27.67	228	P	P	14 34 20.8	0.0
	1.6nm,0.6s,baz=60,slow=10,SNR=5.4						
WRA	Warramunga Arr	30.26	256	P	P	14 34 43.7	-0.2
	0.4nm,0.6s,baz=86,slow=8.5,SNR=5.7						
ASAR	Alice Springs	31.14	249	P	P	14 34 51.8	+0.1
	0.9nm,0.4s,baz=78,slow=9.1,SNR=14						

SJA 12 14:41:50.7±0.7**, 31°.31S**×**65°.27W, h13^{km}**±10^{km}**, ML2.8, MW4.1, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLL	PUNTA DE LOS L	1.42	310	*e*P	Pb	14 42 17.4	+0.4
APLL				*e*S	Sg	14 42 37.2	+0.8
APLL				IAML		14 42 41.9	
	comp=Z,96nm,0.2s						
ACAN	Cantantal	1.90	239	*e*P	Pb	14 42 25.4	+0.2
ACAN				*e*S	Sg	14 42 50.4	-1.3
ACLC	CERRO LA CRUZ	2.38	322	*e*P	Pn	14 42 30.3	+0.7
ACLC				*e*S	Sg	14 43 08.0	+0.8
CFA	Coronel Fontan	2.55	263	*e*P	Pn	14 42 34.0	+2.1
RTLL	Cerro Villicun	2.74	269	*e*P	Pn	14 42 31.2	-3.3
RTLL				*e*S	Sg	14 43 17.1	-1.7
CYA	Choya	2.90	351	*e*P	Pb	14 42 42.8	+0.5
CYA				*e*S	Sb	14 43 20.6	+2.9
CYA				IAML		14 43 23.6	
	comp=Z,36nm,0.3s						
ASAL	Salagasta	3.29	246	*e*P	Pn	14 42 44.7	+2.7
ASAL				*e*S	Sg	14 43 37.1	+0.7
AGUA	GUANDACOL	3.33	302	*e*P	Pn	14 42 45.6	+3.0
AUSP	Uspallata	3.62	254	*e*P	Pn	14 42 48.9	+2.1
AUSP				*e*S	Sb	14 43 42.9	+4.1
AHML	Horco Molle	4.51	359	*e*P	Pn	14 42 59.2	+0.4
AHML				IAML		14 44 23.3	
	comp=Z,11nm,0.4s						

DJA 12 14:52:45.4±0.3**, 2°S**±3°×**12°1E**±°**, h10^{km}, M3.5**/11**, MLv3.5**/11**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.07	219	P	Pg	14 53 05.0	-1.1
TTSI				S	Sg	14 53 19.9	-0.1
PCI	Palu	1.46	333	P	Pb	14 53 12.4	-0.2
APSI	Ampana	1.73	42	P	Pn	14 53 15.8	+0.3
APSI				S	Sn	14 53 38.3	+0.7
SPSI	Sidrap Palu	1.89	203	P	Pn	14 53 18.2	+0.4
SPSI				S	Sb	14 53 43.6	-0.1
BNSI	Bone	2.21	190	P	Pn	14 53 23.4	+1.2
LUWI	Luwuk	2.55	63	P	Pn	14 53 27.4	+0.6
MPSI	Mapaga	2.60	347	P	Pn	14 53 28.1	+0.6
KDI	Kendari	2.74	129	P	Pn	14 53 27.9	-1.5
MRSI	Marisa	3.03	28	P	Pn	14 53 32.3	-1.2
BKSI	Bulukumba	3.11	187	P	Pn	14 53 34.5	-0.1

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*SOME **12** 15:10:59.8, 42°.60N×79°.65E, h10^{km}*

*KRNET **12** 15:11:00.2±0.1, 42°.60N×79°.64E, h14^{km}, mb2.6*

NNC 12 15:10:59.5±0.8**, 42°.59N**×**79°.65E, h0^{km}, mb3.3, mpv3.1, 25C-10D, Error ellipse: s-maj=5.4km s-min=3.2km az=138.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.72	320	P	Pg	15 11 13.9	+0.5
	23nm,0.1s						
UZB				S	Sg	15 11 23.9	+1.1
	81nm,0.2s						
UZB	Uzynbulak	0.72	320	⇑*e*P	Pg	15 11 13.9	+0.5
	23nm,0.1s						
UZB				*e*S	Sg	15 11 23.9	+1.1
	81nm,0.2s						
PDGK	Podgornoye	0.75	351	⇑P	Pg	15 11 14.0	+0.2
	5.1nm,0.2s						
PDGK				⇑S	Sg	15 11 24.6	+1.0
	59nm,0.5s						
PDGK	Podgornoye	0.75	351	⇓*i*P	Pg	15 11 14.1	+0.3
	baz=51						
PDGK				⇓*i*S	Sg	15 11 24.6	+1.1
	baz=51						
PRZ	Przheval'sk	0.93	264	⇑*i*P	Pg	15 11 17.6	+0.3
	baz=63						
PRZ				⇑*i*S	Sg	15 11 30.4	+1.0
	baz=63						
KTMS	Ketmen	1.00	31	P	Pg	15 11 18.6	0.0
KTMS				S	Sg	15 11 31.5	0.0
KTMS	Ketmen	1.00	31	*e*P	Pg	15 11 18.4	-0.2
	33nm,0.1s						
KTMS				*e*S	Sg	15 11 31.5	0.0
	18nm,0.1s						
SATY	Saty	1.03	297	P	Pg	15 11 19.0	-0.2
	7.7nm,0.2s						
SATY				S	Sg	15 11 33.1	+0.5
	71nm,0.1s						
SATY	Saty	1.03	297	⇓*e*P	Pg	15 11 19.0	-0.2
	7.7nm,0.2s						
SATY				*e*S	Sg	15 11 33.1	+0.5
	71nm,0.1s						
KURS	Kuram	1.41	310	P	Pn	15 11 26.3	-0.2
	4.3nm,0.3s						
KURS				S	Sg	15 11 44.9	+0.2
	15nm,0.3s						
KURS	Kuram	1.41	310	⇓*e*P	Pn	15 11 26.2	-0.2
	4.3nm,0.3s						
KURS				*e*S	Sg	15 11 44.9	+0.2
	15nm,0.3s						
DJR	Jarkent	1.74	3	P	Pb	15 11 31.8	-0.6
	8.9nm,0.2s						
DJR				S	Sg	15 11 55.6	+0.1
	14nm,0.3s						
DJR	Jarkent	1.74	3	*e*P	Pn	15 11 31.5	+0.4
	8.9nm,0.2s						
DJR				*e*S	Sb	15 11 54.9	0.0
	14nm,0.3s						
MNBS	Baschi	1.75	329	P	Pb	15 11 32.0	-0.5
	7.7nm,0.1s						
MNBS				S	Sb	15 11 55.3	+0.3
	68nm,0.4s						
MNBS	Baschi	1.75	329	⇓*e*P	Pb	15 11 32.0	-0.5
	7.7nm,0.1s						
MNBS				*e*S	Sg	15 11 55.3	-0.3
	68nm,0.4s						
KDJ	Kajisay	1.89	257	⇓*i*P	Pb	15 11 35.2	+0.3
	baz=56						
KDJ				⇓*i*S	Sg	15 12 00.1	0.0
	baz=56						
KOTS	Kotyrbulak	1.97	290	Pg	Pb	15 11 36.5	+0.1
KOTS				Lg	Lg	15 12 02.6	
KOTS	Kotyrbulak	1.97	290	*e*P	Pb	15 11 36.1	-0.2
	6.9nm,0.2s						
KOTS				*e*S	Sg	15 12 02.5	-0.4
	42nm,0.3s						
MDOK	Medeo	2.00	288	⇓Pg	Pn	15 11 35.5	+0.9
	2.5nm,0.5s						
MDOK				Lg	Lg	15 12 02.2	
	12nm,0.6s						
MDOK	Medeo	2.00	288	Pg	Pb	15 11 36.0	-0.8
	3.7nm,0.2s						
MDOK				Lg	Lg	15 12 02.7	
	12nm,0.2s						
MDOK	Medeo	2.00	288	*e*P	Pn	15 11 35.5	+0.8
	3.7nm,0.2s						
MDOK				*e*S	Sb	15 12 01.7	-0.6
	23nm,0.7s						
TNSS	Tian-Shan	2.04	284	Pg	Pb	15 11 36.9	-0.7
	4.5nm,0.1s						
TNSS				Lg	Lg	15 12 04.7	
	19nm,0.3s						
TNSS	Tian-Shan	2.04	284	*e*P	Pb	15 11 36.8	-0.8
	4.5nm,0.1s						
TNSS				*e*S	Sb	15 12 03.2	-0.5
	19nm,0.3s						
ARXS	Arharly	2.10	321	Pg	Pb	15 11 38.1	-0.4
	6.3nm,0.3s						
ARXS				Lg	Lg	15 12 05.7	
	50nm,0.4s						
ARXS	Arharly	2.10	321	*e*P	Pb	15 11 38.1	-0.4
	6.3nm,0.3s						
ARXS				*e*S	Sb	15 12 05.7	+0.6
	50nm,0.4s						
IZV	Izvestkoviy	2.28	282	Pg	Pb	15 11 40.9	-0.7
	11nm,0.2s						
IZV				Lg	Lg	15 12 10.9	
	30nm,0.2s						
IZV	Izvestkoviy	2.28	282	*e*P	Pb	15 11 40.9	-0.7
	11nm,0.2s						
IZV				*e*S	Sb	15 12 10.9	+0.5
	30nm,0.2s						
CHKK	Chushkaly	2.32	304	*e*P	Pb	15 11 41.8	-0.4
	5.1nm,0.2s						
CHKK				*e*S	Sb	15 12 11.8	+0.4
	46nm,0.3s						
KTBS	Karatobe	2.45	298	Pg	Pb	15 11 44.1	-0.2
	3.0nm,0.2s						
KTBS				Lg	Lg	15 12 15.8	
	22nm,0.3s						
KTBS	Karatobe	2.45	298	*e*P	Pb	15 11 44.1	-0.2
	3.0nm,0.2s						
KTBS				*e*S	Sb	15 12 15.8	+0.8
	22nm,0.3s						
ULHL	Ulahol	2.55	263	⇑*i*P	Pb	15 11 44.5	-1.7
	baz=63						
ULHL				⇑*i*S	Sb	15 12 17.0	-1.2
	baz=63						
TDK	Taldyqorghan	2.58	340	Pg	Pb	15 11 46.5	0.0
TDK				Lg	Lg	15 12 20.0	
TDK	Taldyqorghan	2.58	340	*e*P	Pb	15 11 46.0	-0.5
	30nm,0.4s						
TDK				*e*S	Sb	15 12 19.5	+0.7
	61nm,0.6s						
KAPS	Kapalarasan	2.70	356	Pg	Pb	15 11 47.1	-1.6
KAPS				Lg	Lg	15 12 20.9	
KAPS	Kapalarasan	2.70	356	*e*P	Pb	15 11 48.9	+0.2
	3.0nm,0.5s						
KAPS				*e*S	Sb	15 12 23.8	+1.4
	23nm,0.3s						
BOOM	Boomskoye usch	2.75	269	⇑*i*P	Pn	15 11 47.0	+2.1
	baz=69						
BOOM				⇑*i*S	Sb	15 12 21.4	-2.4
	baz=69						
KUU	Kurty	2.75	299	Pg	Pb	15 11 49.4	-0.1
KUU				Lg	Lg	15 12 25.0	
KUU	Kurty	2.75	299	*e*P	Pb	15 11 49.0	-0.5
	2.9nm,0.6s						
KUU				*e*S	Sb	15 12 24.2	+0.5
	24nm,0.3s						
KST	Kastek	2.75	281	Pg	Pb	15 11 49.2	-0.4
	5.5nm,0.3s						
KST				Lg	Lg	15 12 24.5	
	17nm,0.4s						
KST	Kastek	2.75	281	*e*P	Pb	15 11 49.2	-0.4
	5.5nm,0.3s						
KST				*e*S	Sb	15 12 24.5	+0.6
	17nm,0.4s						
DGS	Degeres	2.92	284	Pg	Pb	15 11 52.1	-0.4
DGS				Lg	Lg	15 12 29.6	
DGS	Degeres	2.92	284	*e*P	Pb	15 11 52.0	-0.6
	7.6nm,0.4s						
DGS				*e*S	Sb	15 12 29.6	+0.7
	40nm,0.4s						
NRN	Naryn	2.96	248	⇑*i*P	Pn	15 11 50.5	+2.5
	baz=48						
NRN				⇑*i*S	Sb	15 12 27.5	-2.5
	baz=48						
TKM2	Tokmak 2	3.00	278	⇑Pg	Pb	15 11 53.7	-0.3
	4.1nm,0.8s						
TKM2				⇑Lg	Lg	15 12 32.8	
	13nm,0.6s						
TKM2	Tokmak 2	3.00	278	⇑*i*P	Pn	15 11 50.7	+2.2
	baz=77						
TKM2				⇑*i*S	Sn	15 12 27.9	+2.5
	baz=77						
KZA	Kyzart	3.30	263	⇑*e*P	Pn	15 11 55.4	+2.6
	baz=62						
KZA				⇑*i*S	Sn	15 12 35.5	+2.5
	baz=62						
AAK	Ala-Archa	3.81	272	⇑Pg	Pb	15 12 09.0	+1.3
	1.1nm,0.5s						
AAK				⇑Lg	Lg	15 12 57.3	
	7.4nm,0.7s						
ARLS	Aral	4.02	261	⇑*i*P	Pn	15 12 05.1	+2.6
	baz=61						
ARLS				⇑*i*S	Sn	15 12 52.0	+1.6
	baz=61						
MAKZ	Makanchi	4.53	21	⇑Pn	Pn	15 12 10.9	+1.6
	0.7nm,0.2s						
MAKZ				⇑Sn	Sn	15 13 02.7	0.0
	0.5nm,0.3s						
MAKZ				⇑Lg	Lg	15 13 23.0	
	1.0nm,0.6s						
MK31	Makanchi Array	4.61	23	⇓Pn	Pn	15 12 11.5	+1.2
	0.1nm,0.2s,baz=207,slow=12,SNR=38						
MK31				⇓Sn	Sn	15 13 04.5	0.0
	0.2nm,0.2s,baz=204,slow=25,SNR=6.3						
MK31				⇑Lg	Lg	15 13 25.6	
	0.2nm,0.2s						

IDC 12 15:18:19.4±2.0**, 11°.68S**×**165°.13E, h0^{km}, mb3.6**/5**, mb1 3.9**/5**, mb1mx3.6**/41**, mbtmp3.6**/5**, Error ellipse: s-maj=106.8km s-min=26.3km az=145.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.70	251	P	P	15 24 36.6	+0.3
	0.4nm,0.6s,baz=84,slow=9.4,SNR=4.5						
ASAR	Alice Springs	31.97	244	P	P	15 24 47.2	-0.4
	0.4nm,0.8s,baz=66,slow=10,SNR=5.2						
ILAR	Eielson Array	84.30	19	P	P	15 30 52.2	-0.6
	0.4nm,0.5s,baz=236,slow=5.0,SNR=11						
NVAR	Mina Array Bea	86.89	50	P	P	15 31 07.2	+0.6
	0.2nm,0.5s,baz=252,slow=5.6,SNR=3.4						
MKAR	Makanchi Array	93.57	317	P	P	15 31 37.6	+0.1
	0.4nm,0.7s,baz=99,slow=6.5,SNR=4.7						

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*ISCJB **12** 15:18:56.9±0.8, 41°.00N±0°.04×30°.59E±0°.05, h5^{km}±5^{km},*

Error ellipse: s-maj=7.5km s-min=5.0km az=36.3

DDA **12** *15:18:56.5, 41°.01N×30°.61E, h7^{km}±3^{km}, ML2.7*

ISK **12** *15:18:56.8, 40°.98N×30°.55E, h7^{km}, ML2.1/14*

ISC 12 15:18:56.4±1.5**, 41°.02N**±0°.05×**30°.60E**±0°.04**, h6**^{km}±11^{km}**,**
n20, σ0^{s}.39/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAHE	Sakarya_HENDEK	0.25	130	*i* P	Pb	15 19 02.7	-0.7
SAHE				*i* S	Sg	15 19 05.5	+0.8
KAND	Kocaeli-Kandir	0.32	285	*i* P	Pb	15 19 04.3	-0.2
KAND				*i* S	Sb	15 19 09.4	-0.5
KAND				IAML_P			
	comp=Z,540nm,0.3s						
SAUV	Serdivan-Sakar	0.34	217	PG	Pg	15 19 02.7	-0.4
SAUV				SG	Sg	15 19 07.6	0.0
SPNC	Sapanca-Adapaz	0.40	214	PG	Pg	15 19 03.9	-0.2
SPNC				SG	Sg	15 19 09.3	0.0
GULT	Gulveren	0.59	186	PG	Pg	15 19 07.7	0.0
GULT				SG	Sg	15 19 15.9	+0.6
MDUB	Mudurnu	0.71	140	PG	Pb	15 19 10.9	-0.3
SILT	Sile	0.74	281	PG	Pb	15 19 11.5	-0.1
CAVI	Cavuskoy	1.00	216	PG	Pb	15 19 16.1	0.0
YLV	Yalova	1.03	245	PG	Pg	15 19 15.9	-0.3
BUY	Buyukada	1.13	262	*i* P	Pb	15 19 18.2	-0.2
BUY				*i* S	Sn	15 19 34.6	-0.1
BUY				IAML_P			
	comp=Z,917nm,0.2s						
BORA	Eskisehir	1.14	186	*i* P	Pn	15 19 19.0	0.0
BORA				*i* S	Sn	15 19 35.7	+0.7
BORA				IAML_P			
	comp=Z,2µm,0.1s						
KAVV	Kandilli-Istan	1.17	273	PN	Pg	15 19 18.7	-0.1
ISK	Istanbul-Kandi	1.17	273	PN	Pg	15 19 18.7	-0.1
KLYT	Kilyos	1.20	282	PN	Pg	15 19 19.4	0.0
SBT5	Esenkoy-Cinarc	1.36	254	PN	Pg	15 19 22.2	-0.3
BGKT	Bogazkoy	1.39	277	PN	Pn	15 19 22.5	+0.1
ARMT	Armutlu	1.39	252	PN	Pb	15 19 22.6	-0.3
CTKS	Kestanelik-??a	1.60	279	PN	Pb	15 19 26.1	-0.2
TVSB	Tavsanli	1.79	209	PN	Pn	15 19 28.1	+0.1
SLVT	Silivri	1.82	278	PN	Pn	15 19 28.9	+0.7

BJI **12** *15:40:04.5, 10°.70S×165°.80E, h10^{km}, mB5.1/20, mb4.6/29, Ms4.8/4, Ms7 4.6/4*

ISCJB **12** *15:40:04.1±0.2, 10°.82S±0°.03×165°.88E±0°.04, h10^{km}, mb4.8/87, MS4.0/21, Error ellipse: s-maj=5.6km s-min=4.9km az=17.2*

NEIC **12** *15:40:05.3±0.2, 10°.68S×165°.83E, h10^{km}, mb5.0/51, Error ellipse: s-maj=7.3km s-min=5.5km az=120.0*

IDC **12** *15:40:05.4±3.2, 10°.71S×166°.10E, h15^{km}±19^{km}, mb4.3/21, mb1 4.4/23, mb1mx4.3/38, mbtmp4.4/23, ML5.1/2, MS3.9/19, Ms1 3.9/19, ms1mx3.7/33, Error ellipse: s-maj=16.8km s-min=14.4km az=114.0*

MOS **12** *15:40:05.8±1.7, 10°.81S×165°.97E, h21^{km}, mb4.9/22, Error ellipse: s-maj=11.8km s-min=10.7km az=148.9*

GCMT **12** *15:40:10.3±0.3, 10°.73S±0°.02×165°.93E±0°.02, h24^{km}±2^{km}, MW4.8/65, Moment Tensor Solution. s29,c34; s65,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.02±.14; $M_{\theta\theta}$0.03±.10; $M_{\phi\phi}$0.00±.11; $M_{r\theta}$-0.50±.14; $M_{\theta\phi}$-2.32±.09; $M_{\phi r}$0.30±.15; Best double couple: $M_0$2.38900×10^{16} NP1:ϕ_s269.00000°, δ84.00000°, λ168.00000°. NP2: ϕ_s1.00000°, δ78.00000°, λ7.00000°. Principal axes: T 2.4590, Plg13.0000°, Azm224.0000°; N -0.1400, Plg77.0000°, Azm61.0000°; P -2.3190, Plg4.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 15:40:05.1±0.4**, 10°.79S**±0°.05×**165°.98E**±0°.06**, h10**^{km}**, n154,**
σ1^{s}.73/143**, mb4.9**/87**, MS3.9**/21**, 6C-5D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.09	282	*e*P	Pn	15 41 40.0	+4.7
HNR				*e*S	Sn	15 42 47.0	+1.8
HNR	Honiara	6.09	282	Pn	Pn	15 41 38.3	+3.1
	67nm,0.3s,baz=139,slow=3.6,SNR=65						
HNR				Sn	Sn	15 42 48.0	+2.9
	32nm,0.3s,baz=74,slow=19,SNR=3.0						
HNR				LR	LR	15 44 02.4	
	comp=Z,1µm,18.3s,baz=318,slow=38						
MARNC	Mare, Loyalty	10.81	170	*e*Pn	Pn	15 42 42.3	+2.3
DZM	Mont Dzumac	11.22	178	*e*Pn	Pn	15 42 48.8	+3.0
	73nm,0.4s						
DZM				*e*Sn	Sn	15 44 46.0	-5.4
	145nm,0.8s						
DZM				*e*LR	LR	15 45 20.9	
	comp=Z,1µm,25.9s						
DZM	Mont Dzumac	11.22	178	*e*Pn	Pn	15 42 48.7	+3.0
DZM				Sn	Sn	15 44 50.3	-1.1
DZM	Mont Dzumac	11.22	178	Pn	Pn	15 42 47.3	+1.5
	11nm,0.3s,baz=340,slow=11,SNR=84						
DZM				Sn	Sn	15 44 50.3	-1.1
	6.1nm,0.3s,baz=132,slow=23,SNR=5.6						
DZM				LR	LR	15 46 43.3	
	comp=Z,924nm,21.1s,baz=16,slow=35						
ONTNC	Ouen Toro	11.46	178	*e*Pn	Pn	15 42 52.0	+3.2
OUENC	Ouen Island, N	11.59	176	*e*Pn	Pn	15 42 53.8	+3.1
PINNC	Pines Island,	11.84	173	*e*Pn	Pn	15 42 57.8	+3.8
MSVF	Nonsavu	13.57	122⇓	*e*P	P	15 43 28.0	+1.0
TARA	Tarawa	13.90	30	*e*Pn	Pn	15 43 21.2	-1.1
RABL	Rabaul	15.19	295	*e*Pn	Pn	15 43 36.7	-3.1
EIDS	Eidsvold	20.24	222	*e*P	Pn	15 44 42.9	+0.4
	125nm,0.8s						
MANU	Manus Island	20.43	294	*e*P	P	15 44 41.5	-1.2
	195nm,1.4s						
CTA	Charters Tower	21.12	242	P	P	15 44 52.3	+2.1
	56nm,0.8s,baz=69,slow=12,SNR=27						
CTAO	Charters Tower	21.12	242	*e*P	P	15 44 50.6	+0.4
	66nm,0.8s						
CTAO	Charters Tower	21.12	242	*e*P	P	15 44 50.6	+0.4
CTAO				pmax	pmax		
	comp=Z,66nm,0.8s						
COEN	Coen	22.50	260	*e*P	P	15 45 01.6	-3.4
	comp=Z,18nm,1.0s						
ARMA	Armidale	23.65	212	*e*P	P	15 45 17.9	+1.0
	comp=Z,135nm,1.5s						
JAY	Jayapura	26.40	286	LR	LR	15 55 53.8	
	comp=Z,318nm,21.5s,baz=34,slow=36						
H11S2	WAKE ISLAND Hy	29.11	1	T	T	16 16 29.2	
	baz=181,slow=76,SNR=562						
URZ	Urewera	29.11	162	P	P	15 46 06.5	+0.5
	comp=Z,5.2nm,0.4s,baz=30,slow=8.1,SNR=5.1						
H11S3	WAKE ISLAND Hy	29.11	1	T	T	16 16 29.5	
	baz=181,slow=76,SNR=402						
H11S1	WAKE ISLAND Hy	29.12	1	T	T	16 16 30.8	
	baz=181,slow=76,SNR=589						
BKZ	Black Stump Fm	29.77	163	*e*P	P	15 46 12.4	+0.4
	comp=Z,16nm,0.6s						
H11N1	WAKE ISLAND Hy	30.33	2	T	T	16 17 59.7	
	baz=182,slow=76,SNR=505						
H11N3	WAKE ISLAND Hy	30.33	2	T	T	16 18 01.1	
	baz=182,slow=76,SNR=278						
H11N2	WAKE ISLAND Hy	30.35	2	T	T	16 18 00.3	
	baz=182,slow=76,SNR=266						
STKA	Stephens Creek	30.78	223	*e*P	P	15 46 19.3	-1.7
	comp=Z,5.1nm,1.4s						
STKA	Stephens Creek	30.78	223	P	P	15 46 21.9	+0.9
	comp=Z,3.4nm,0.5s,baz=50,slow=9.1,SNR=14						
STKA				LR	LR	15 58 32.5	
	comp=Z,390nm,18.3s,baz=31,slow=36						
THZ	Tophouse	31.44	170	*e*P	P	15 46 27.1	+0.4
	comp=Z,66nm,1.5s						
WB2	Warramunga Arr	31.78	250	*e*P	P	15 46 28.6	-1.3
WRA	Warramunga Arr	31.79	250	P	P	15 46 30.3	+0.3
	comp=Z,32nm,0.8s,baz=81,slow=9.2,SNR=158						
WRA				PcP	PcP	15 49 20.0	-1.3
	comp=Z,1.7nm,1.0s,baz=73,slow=3.2,SNR=5.0						
WRA				ScP	ScP	15 53 04.3	-0.7
	comp=Z,1.4nm,0.9s,baz=85,slow=3.6,SNR=6.3						
WRA				LR	LR	15 59 26.5	
	comp=Z,251nm,18.2s,baz=60,slow=36						
GUMO	Guam	32.03	319	LR	LR	15 59 00.4	
	comp=Z,77nm,19.8s,baz=64,slow=35						
LTZ	Lake Taylor	32.34	171	*e*P	P	15 46 34.6	0.0
	comp=Z,27nm,0.8s						
TOO	Toolangi	32.41	211	P	P	15 46 36.7	+1.5
TOO				pmax	pmax		
	comp=Z,32nm,2.9s						
OXZ	Oxford	32.84	172	*e*P	P	15 46 38.6	-0.3
	comp=Z,135nm,1.9s						
AS01	Alice Springs	33.07	243	*e*P	P	15 46 40.4	-0.9
RPZ	Rata Peaks	33.09	173	*e*P	P	15 46 40.2	-0.9
	comp=Z,45nm,0.9s						
RPZ	Rata Peaks	33.09	173	P	P	15 46 41.0	-0.1
	comp=Z,29nm,0.7s,baz=338,slow=2.0,SNR=18						
RPZ				LR	LR	16 00 10.7	
	comp=Z,341nm,18.7s,baz=358,slow=36						
AS31	Alice Springs	33.11	243	*e*P	P	15 46 40.8	-0.9
	comp=Z,9.8nm,0.9s						
ASAR	Alice Springs	33.11	243	P	P	15 46 41.6	0.0
ASAR						15 49 24.1	
ASAR				pmax	pmax		
	comp=Z,33nm,0.9s						
ASAR				MLR	MLR		
	comp=Z,152nm,19.1s						
ASAR	Alice Springs	33.11	243	P	P	15 46 41.6	0.0
	comp=Z,32nm,0.9s,baz=68,slow=9.9,SNR=212						
ASAR				PcP	PcP	15 49 24.1	-0.9
	comp=Z,1.6nm,0.7s,baz=81,slow=3.1,SNR=5.2						
ASAR				ScP	ScP	15 53 08.9	-0.6
	comp=Z,1.5nm,0.9s,baz=78,slow=2.5,SNR=7.7						
ASAR				LR	LR	15 59 01.7	
	comp=Z,152nm,19.1s,baz=74,slow=34						
MQZ	McQueen's Vall	33.30	171	*e*P	P	15 46 43.0	+0.2
	comp=Z,148nm,1.7s						
BBOO	Buckleboo	35.17	227	*e*P	P	15 46 58.2	-1.1
	comp=Z,14nm,0.8s						
SIJI	Sorong	35.87	284	P	P	15 47 05.7	+0.1
	comp=Z,5.4nm,0.7s,baz=304,slow=3.6,SNR=4.1						
FITZ	Fitzroy Crossi	39.67	255	*e*P	P	15 47 37.4	-0.2
	comp=Z,26nm,0.7s						
BATI	Baumata	41.59	267	P	P	15 47 54.7	+1.1
	comp=Z,10nm,0.7s,baz=294,slow=2.1,SNR=4.7						
MMRI	Maumere	43.15	269	*e*P	P	15 48 04.7	-1.6
	comp=Z,39nm,1.0s						
PPT2	Papeete2	43.53	104	*e*LQ	LQ	15 58 33.3	
	comp=Z,785nm,26.5s						
PPT2				*e*LR	LR	16 00 18.6	
	comp=Z,122nm,25.8s						
TBI	Tubuai	44.21	112	*e*LQ	LQ	15 58 50.0	
	comp=Z,821nm,27.2s						
TBI				*e*LR	LR	16 00 41.6	
	comp=Z,185nm,29.0s						
MBWA	Marble Bar	45.50	251	*e*P	P	15 48 25.1	0.0
	comp=Z,26nm,1.0s						
NWAO	Narrogin (SRO)	49.80	236	LR	LR	16 10 23.3	
	comp=Z,451nm,18.1s,baz=320,slow=36						
MORW	Morawa	49.95	241	*e*P	P	15 48 59.7	+0.2
	comp=Z,27nm,0.8s						
MJAR	Matsushiro Arr	53.86	332	P	P	15 49 27.1	-1.3
	comp=Z,1.2nm,0.7s,baz=167,slow=8.9,SNR=3.2						
MAJO	Matsushiro	53.86	332⇑	*e*P	P	15 49 31.0	+2.5
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
JNU	Nakatsue	55.02	324	P	P	15 49 35.9	-1.1
	comp=Z,17nm,1.1s,baz=29,slow=10,SNR=2.2						
ERM	Erimo	56.58	340⇑	*i*P	P	15 49 50.6	+2.6
ERM				pmax	pmax		
	comp=Z,12nm,0.9s						
RKT	Rikitea	57.46	111	*e*LR	LR	16 06 42.7	
	comp=Z,160nm,25.8s						
LEM	Lembang	57.74	269	P	P	15 49 56.8	-0.2
	comp=Z,7.5nm,0.4s,baz=292,slow=5.4,SNR=2.9						
ASAJ	Asahikawa	58.64	340	P	P	15 50 01.4	-1.0
	comp=Z,6.5nm,1.1s,baz=196,slow=7.4,SNR=4.4						
KSRS	Korea Array	59.80	325	LR	LR	16 15 26.3	
	comp=Z,34nm,18.5s,baz=122,slow=36						
YSS	Yuzh-Sakhalins	61.12	342	*e*P	P	15 50 25.6	+6.2
YSS				*e*		15 50 33.1	
YSS				*e*		15 50 38.7	
NJ2	Nanjing	62.01	315	*e*P	P	15 50 24.7	-1.0
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PETK	Petropavlovsk-	64.04	354	P	P	15 50 38.3	-0.6
	comp=Z,1.5nm,0.8s,baz=173,slow=6.3,SNR=2.5						
PETK				LR	LR	16 13 23.7	
	comp=Z,56nm,20.7s,baz=153,slow=31						
CN2	Changchun	65.65	329	*e*P	P	15 50 51.7	+2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR	Gornyy	66.49	340	*e*P	P	15 50 41.8	-13
VNDA	Vanda	66.75	181	LR	LR	16 17 09.0	
	comp=Z,110nm,18.7s,baz=347,slow=33						
KLR	Kul'dur	66.92	336⇓	*e*P	P	15 50 58.9	+1.3
NKL	Nikolayevsk	67.27	344	*e*P	P	15 51 05.0	+5.4
GYA	Guiyang	68.47	304	P	P	15 51 09.2	+1.2
GYA				PP	PP	15 53 42.0	+2.7
GYA				S	S	16 00 09.8	-0.5
GYA				SKS	SKSac	16 01 04.7	-3.0
GYA				SS	SS	16 04 34.2	-0.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.9s						
GYA				LR	LR		
	comp=Z,520nm,18.2s						
XAN	Xi'an	70.13	312	P	P	15 51 17.1	-0.9
XAN				pP	sP	15 51 25.6	+3.2
XAN				sP	PcP	15 51 29.9	-10
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KMI	Kunming	71.19	301	P	P	15 51 28.0	+3.1
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MA2	Magadan	71.19	352	LR	LR	16 17 36.9	
	comp=Z,51nm,20.9s,baz=182,slow=32						
HHC	Hu-ho-hao-te	71.79	319	*e*P	P	15 51 31.7	+3.6
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,170nm,6.2s						
HHC	Hu-ho-hao-te	71.79	319	*e*P	P	15 51 30.1	+2.0
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,5.7s						
CM01	Chiang Mai Arr	72.20	293	*e*P	P	15 51 27.6	-3.3
ZEA	Zeya	72.20	337	*e*P	P	15 51 31.4	+1.3
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
CMAR	Chiang Mai Arr	72.23	293	*i* P	P	15 51 33.2	+2.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	Chiang Mai Arr	72.23	293	P	P	15 51 31.4	+0.4
	comp=Z,1.2nm,0.8s,baz=123,slow=4.6,SNR=8.4						
CMAR				LR	LR	16 22 10.4	
	comp=Z,19nm,19.6s,baz=109,slow=35						
HIA	Hailar	72.27	330⇓	*e*P	P	15 51 34.4	+3.7
HIA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
CD2	Chengdu	72.64	307	*e*P	P	15 51 34.6	+1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.2s						
LZH	Lanzhou	74.76	312	*e*P	P	15 51 47.1	+1.3
LZH				pP	sP	15 51 51.1	+0.9
LZH				sP	PcP	15 51 54.6	-5.3
LZH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YAK	Yakutsk	77.92	343	*e*P	P	15 52 11.8	+8.9
YAK				pmax	pmax		
	comp=Z,30nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.9s						
SONM	Songino Array	78.60	324	P	P	15 52 07.3	0.0
	comp=N,0.6nm,0.7s,baz=134,slow=6.4,SNR=4.9						
SONA1	Songino Array	78.60	324	*e*P	P	15 52 04.2	-3.1
BILL	Bilibino	78.63	0	*e*P	P	15 52 07.2	+0.4
	comp=N,9.5nm,1.2s						
BILL	Bilibino	78.63	0⇑	*e*P	P	15 52 06.8	+0.1
BILL				*e**PP	pP	15 52 09.1	-0.9
BILL				*e*		15 52 16.6	
BILL				*e*		15 55 04.9	
BILL				*e*PPP	PPP	15 56 51.1	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,48nm,17.0s						
GTA	Gaotai	79.05	314	*e*P	P	15 52 11.0	+1.1
GTA				pP	PcP	15 52 16.0	-2.4
GTA				sP	sP	15 52 18.2	+3.9
GTA				S	S	16 02 11.7	+2.3
GTA				sS	SKSac	16 02 19.9	-6.2
GTA				SKS	SKKSac	16 02 22.8	-4.6
GTA				pmax	pmax		
	comp=Z,26nm,6.5s						
GTA				LR	LR		
	comp=Z,100nm,18.1s						
GTA				LR	LR		
	comp=Z,130nm,20.6s						
QSPA	South Pole Qui	79.21	180	*e*P	P	15 52 09.0	-1.3
	comp=Z,12nm,1.0s						
ZAK	Zakamensk	81.63	325	*e*P	P	15 52 33.1	+10
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s						
COLA	College	82.98	18⇑	*e*P	P	15 52 35.2	+5.2
COLA				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ILAR	Eielson Array	83.20	18	P	P	15 52 30.6	-0.6
	comp=Z,1.7nm,0.7s,baz=230,slow=5.1,SNR=22						
IL1	Eielson Array	83.20	18	*e*P	P	15 52 31.0	-0.2
BEKR	Beckworth	84.61	48	*e*P	P	15 52 40.4	+1.1
	comp=Z,23nm,0.5s						
WAKR	Walker	84.86	49	*e*P	P	15 52 41.6	+1.0
	comp=Z,13nm,1.2s						
MDPB	Devils Postpil	84.86	50	*e*P	P	15 52 38.5	-2.2
	comp=Z,9.9nm,1.1s						
MAW	Mawson	85.04	202	LR	LR	16 29 25.2	
	comp=Z,194nm,18.9s,baz=236,slow=35						
KNGR	Kungurtug, Tuv	85.04	323⇑	*e*P	P	15 52 44.7	+3.6
PAHR	Pah Rah Range	85.27	48	*e*P	P	15 52 41.0	-1.6
	comp=Z,12nm,1.1s						
RYN	Ryan	85.58	50	*e*P	P	15 52 45.0	+0.8
	comp=Z,9.7nm,1.1s						
DAC	Darwin (Calif)	85.60	52	*e*P	P	15 52 43.2	-1.1
	comp=Z,6.9nm,1.1s						
DAC	Darwin (Calif)	85.60	52	*e*P	P	15 52 43.2	-1.1
DAC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NV01	Mina Array Sit	85.69	50	*e*P	P	15 52 44.7	0.0
NVAR	Mina Array Bea	85.69	50	P	P	15 52 44.1	-0.6
	comp=Z,0.6nm,0.8s,baz=234,slow=6.2,SNR=3.8						
NVAR				LR	LR	16 26 01.0	
	comp=Z,111nm,18.3s,baz=248,slow=32						
NV11	Mina Array Sit	85.80	50	*e*P	P	15 52 46.9	+1.7
	comp=Z,0.8nm,1.0s						
TIXI	Tiksi	85.89	349⇓	*e*P	P	15 52 45.7	+1.0
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KVN	Kaiserville	86.02	49	*e*P	P	15 52 46.5	+0.2
	comp=Z,7.1nm,1.1s						
KVN	Kaiserville	86.02	49	*e*P	P	15 52 46.5	+0.2
KVN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
I07A	Izee	86.56	44	*e*P	P	15 52 48.8	0.0
	comp=Z,9.2nm,1.0s						
TPNV	Topopah Spring	86.82	52	*e*P	P	15 52 51.5	+1.2
	comp=Z,10.0nm,1.4s						
TPNV	Topopah Spring	86.82	52	*e*P	P	15 52 51.5	+1.2
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
J08A	Circle Bar Ran	87.04	45	*e*P	P	15 52 52.0	+0.9
	comp=Z,9.1nm,1.0s						
G08A	Pilot Rock	87.30	43	*e*P	P	15 52 53.6	+1.2
	comp=Z,6.5nm,0.9s						
E08A	Dider Farm, El	87.61	42	*e*P	P	15 52 55.0	+1.3
	comp=Z,14nm,1.1s						
R11A	Troy Canyon, C	87.71	50	*e*P	P	15 52 55.7	+1.1
	comp=Z,4.9nm,1.1s						
W13A	Hualapai Mount	88.19	54	*e*P	P	15 52 58.6	+1.6
	comp=Z,26nm,1.9s						
BMO	Blue Mountains	88.29	44	*e*P	P	15 52 59.7	+2.6
	comp=Z,7.3nm,1.2s						
BMO	Blue Mountains	88.29	44	*e*P	P	15 52 59.7	+2.6
BMO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
F10A	Beach Ranch, E	88.67	43	*e*P	P	15 53 00.6	+1.8
	comp=Z,7.7nm,1.1s						
WMQ	Urumqi	89.08	315	*e*P	P	15 53 01.2	+0.4
WMQ				pP	sP	15 53 07.1	+1.8
WMQ				sP	pP	15 53 10.2	+6.1
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.7s						
WMQ				LR	LR		
	comp=Z,110nm,18.1s						
WMQ				LR	LR		
	comp=Z,93nm,18.1s						
WMQ				LR	LR		
	comp=Z,93nm,21.9s						
LCMT	Little Creek M	89.17	52	*e*P	P	15 53 02.3	+0.9
	comp=Z,12nm,1.2s						
CCUT	Cedar City	89.20	52	*e*P	P	15 53 02.8	+1.0
	comp=Z,21nm,1.5s						
SZCU	Shurtz Canyon	89.43	52	*e*P	P	15 53 04.6	+1.9
	comp=Z,13nm,1.3s						
KNB	Kanab	89.49	52	*e*P	P	15 53 05.4	+2.3
	comp=Z,20nm,1.3s						
KNB	Kanab	89.49	52	*e*P	P	15 53 05.4	+2.3
KNB				pmax	pmax		
	comp=Z,20nm,1.3s						
U15A	North Rim	89.77	53	*e*P	P	15 53 05.8	+1.4
	comp=Z,18nm,1.1s						
HLID	Hailey	89.94	46	*e*P	P	15 53 06.3	+1.3
	comp=Z,5.4nm,1.1s						
X16A	Lo Mia Camp, P	89.98	55	*e*P	P	15 53 06.9	+1.5
	comp=Z,8.8nm,1.0s						
TUC	Tucson	90.05	57	*e*P	P	15 53 06.6	+1.0
	comp=Z,13nm,1.5s						
TUC	Tucson	90.05	57	*e*P	P	15 53 06.6	+1.0
TUC				pmax	pmax		
	comp=Z,13nm,1.5s						
MTPU	Mount Pierson	90.23	51	*e*P	P	15 53 07.0	+0.3
	comp=Z,11nm,1.1s						
BGU	Big Grassy Mou	90.28	48	*e*P	P	15 53 05.6	-0.9
	comp=Z,12nm,1.4s						
NLU	North Lily Min	90.75	50	*e*P	P	15 53 09.0	+0.1
	comp=Z,10nm,1.0s						
DGZ	Jazzator, Alta	90.85	320⇓	*e*P	P	15 53 11.4	+2.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.4s						
TMUT	Trail Mountain	91.26	50	*e*P	P	15 53 13.7	+2.3
	comp=Z,4.9nm,0.8s						
TCUT	Toone Canyon	91.51	49	*e*P	P	15 53 12.3	-0.1
	comp=Z,22nm,1.3s						
YHB	Horse Butte	92.47	45	*e*P	P	15 53 18.3	+1.5
	comp=Z,7.4nm,1.2s						
MOOW	Moose Ponds	92.57	46	*e*P	P	15 53 19.3	+2.1
	comp=Z,4.1nm,1.3s						
PDAR	Pinedale Array	93.21	47	P	P	15 53 19.1	-1.2
	comp=Z,0.7nm,1.0s,baz=250,slow=1.8,SNR=2.5						
PDAR				LR	LR	16 31 13.4	
	comp=Z,22nm,18.4s,baz=261,slow=33						
ZALV	Zalesovo Beam	93.49	324	P	P	15 53 20.0	-0.9
ZALV	Zalesovo Beam	93.49	324	P	P	15 53 20.0	-0.9
	comp=Z,0.4nm,0.4s,baz=122,slow=2.2,SNR=2.5						
MKAR	Makanchi Array	93.50	317	P	P	15 53 20.2	-1.0
	comp=Z,0.9nm,0.6s,baz=89,slow=5.0,SNR=11						
ANMO	Albuquerque	94.11	55⇑	*e*P	P	15 53 31.1	+6.6
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	94.64	27	P	P	15 53 24.0	-2.0
YKA	Yellowknife Ar	94.64	27	P	P	15 53 24.0	-2.0
	comp=Z,0.3nm,0.8s,baz=255,slow=4.9,SNR=6.1						
TXAR	Lajitas Array	95.50	61	P	P	15 53 29.6	-1.3
	comp=Z,0.2nm,0.7s,baz=268,slow=6.3,SNR=2.6						
TXAR				LR	LR	16 32 06.6	
	comp=Z,86nm,18.0s,baz=0.0,slow=33						
NRIK	Noril'sk	95.97	340	LR	LR	16 38 23.2	
	comp=Z,27nm,18.8s,baz=58,slow=36						
ARCES	ARCESS Array B	116.15	346	PKP	PKiKP	15 58 46.4	-1.7
	comp=Z,1.5nm,0.9s,baz=83,slow=1.9,SNR=8.5						
BOSA	Boshof	125.46	223	PKP	PKPdf	15 59 06.5	-0.9
	comp=Z,2.0nm,0.6s,baz=105,slow=2.4,SNR=6.5						
KHC	Kasperske Hory	135.42	334	*e*PKPDF	PKiKP	15 59 27.8	+0.8
KHC	Kasperske Hory	135.42	334	*e*PKIKP	PKiKP	15 59 27.8	+0.8
ESDC	Sonseca Array	149.88	344	PKPbc	PKPbc	15 59 56.1	+0.1
	comp=Z,0.2nm,0.3s,baz=343,slow=4.0,SNR=3.8						
TORD	Torodi Ar. Bea	164.45	280	PKP	PKPdf	16 00 09.1	-1.1
	comp=Z,0.4nm,0.6s,baz=191,slow=1.1,SNR=2.9						

ISCJB **12** *15:45:28.4±0.3, 10°.92S±0°.04×165°.87E±0°.05, h10^{km}, mb4.3/17, Error ellipse: s-maj=7.4km s-min=6.3km az=162.4*

IDC **12** *15:45:28.3±0.9, 10°.92S×165°.94E, h0^{km}, mb4.1/13, mb1 4.3/15, mb1mx4.1/42, mbtmp4.2/15, ML4.6/2, Error ellipse: s-maj=23.8km s-min=17.4km az=108.0*

NEIC **12** *15:45:30.3±0.3, 10°.86S×165°.84E, h10^{km}, mb4.6/8, Error ellipse: s-maj=7.4km s-min=5.6km az=92.0*

ISC 12 15:45:30.1±0.5, 10°.94S±0°.06×165°.90E±0°.07, h10^{km}, n46, σ1^{s}.22/49, mb4.3/17, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.05	284	*e*P	Pn	15 46 59.0	-0.6
HNR	Honiara	6.05	284	Pn	Pn	15 47 01.2	+1.6
	44nm,0.3s,baz=137,slow=6.5,SNR=17						
HNR				Sn	Sn	15 48 10.7	+1.8
	6.5nm,0.3s,baz=348,slow=19,SNR=2.2						
MARNC	Mare, Loyalty	10.68	169	*e*Pn	Pn	15 48 05.0	+1.9
DZM	Mont Dzumac	11.08	177	*e*Pn	Pn	15 48 10.3	+1.5
DZM				Sn	Sn	15 50 10.1	-2.7
DZM	Mont Dzumac	11.08	177	Pn	Pn	15 48 09.8	+1.0
	1.2nm,0.3s,baz=311,slow=14,SNR=8.5						
DZM				Sn	Sn	15 50 10.1	-2.7
	0.2nm,0.3s,baz=330,slow=20,SNR=2.1						
ONTNC	Ouen Toro	11.31	177	*e*Pn	Pn	15 48 14.0	+2.1
OUENC	Ouen Island, N	11.45	176	*e*Pn	Pn	15 48 17.0	+3.3
PINNC	Pines Island,	11.70	173	*e*Pn	Pn	15 48 19.3	+2.2
FUNA	Funafuti	13.32	81	*e*Pn	Pn	15 48 41.1	+1.7
TARA	Tarawa	14.07	30	*e*Pn	Pn	15 48 50.5	+0.9
RABL	Rabaul	15.17	295	*e*Pn	Pn	15 49 05.1	+0.5
	25nm,0.6s						
KWAJ	Kwajalein Atol	19.69	5	*e*P	Pn	15 49 59.7	-1.3
	314nm,0.9s						
CTA	Charters Tower	20.98	242	P	P	15 50 14.1	+0.4
	3.9nm,0.6s,baz=66,slow=9.6,SNR=5.5						
H11S2	WAKE ISLAND Hy	29.26	2	T	T	16 21 55.3	
	baz=181,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.26	2	T	T	16 21 54.4	
	baz=181,slow=76,SNR=4.2						
H11S1	WAKE ISLAND Hy	29.27	2	T	T	16 21 55.1	
	baz=181,slow=76,SNR=6.2						
STKA	Stephens Creek	30.62	223	*e*P	P	15 51 44.9	+0.4
	3.1nm,1.4s						
STKA	Stephens Creek	30.62	223	P	P	15 51 44.6	+0.1
	1.4nm,0.5s,baz=33,slow=9.3,SNR=6.5						
WB2	Warramunga Arr	31.65	250	*e*P	P	15 51 53.3	-0.5
WR1	Warramunga Arr	31.66	250	*e*P	P	15 51 53.2	-0.7
	12nm,0.9s						
WR1				*e*PcP	PcP	15 54 46.3	+0.3
WRA	Warramunga Arr	31.66	250	P	P	15 51 53.2	-0.7
	8.4nm,0.8s,baz=81,slow=9.1,SNR=34						
WRA				PcP	PcP	15 54 46.3	+0.3
	0.5nm,0.8s,baz=29,slow=1.9,SNR=3.4						
RPZ	Rata Peaks	32.96	173	P	P	15 52 05.4	+0.5
	15nm,1.1s,baz=55,slow=12,SNR=3.8						
AS31	Alice Springs	32.97	243	*e*P	P	15 52 04.7	-0.7
	1.0nm,1.0s						
ASAR	Alice Springs	32.97	243	P	P	15 52 04.6	-0.8
	2.0nm,0.9s,baz=64,slow=10,SNR=19						
ASAR				PcP	PcP	15 54 49.8	+0.2
	0.6nm,0.7s,baz=67,slow=2.1,SNR=4.6						
FITZ	Fitzroy Crossi	39.55	255	*e*P	P	15 53 01.2	-0.5
	6.0nm,0.7s						
TGY	Tagaytay City	51.06	298	P	P	15 54 32.7	-0.4
	163nm,0.4s,baz=38,slow=7.9,SNR=6.7						
MJAR	Matsushiro Arr	53.95	332	P	P	15 54 53.6	-0.5
	1.7nm,1.1s,baz=171,slow=8.7,SNR=3.6						
MAJO	Matsushiro	53.95	332	*e*P	P	15 54 53.6	-0.5
ASAJ	Asahikawa	58.75	341	P	P	15 55 28.4	+0.3
	6.2nm,1.0s,baz=200,slow=12,SNR=3.5						
USRK	Ussuriysk Ar.	62.92	333	P	P	15 55 56.6	0.0
	1.1nm,0.5s,baz=141,slow=5.7,SNR=4.1						
CMAR	Chiang Mai Arr	72.21	293	P	P	15 56 56.2	+0.3
	0.6nm,0.8s,baz=104,slow=5.2,SNR=4.8						
SONA0	Songino Array	78.67	324	*e*P	P	15 57 33.0	+0.4
SONM	Songino Array	78.67	324	P	P	15 57 33.0	+0.4
	0.5nm,0.5s,baz=144,slow=5.5,SNR=5.7						
SONA1	Songino Array	78.67	324	*e*P	P	15 57 32.7	0.0
BILL	Bilibino	78.78	0	*e*P	P	15 57 32.7	+0.2
	4.8nm,1.1s						
ILAR	Eielson Array	83.37	18	P	P	15 57 56.9	-0.2
	0.8nm,0.7s,baz=240,slow=5.2,SNR=11						
ILB	Eielson Array	83.37	18	*e*P	P	15 57 55.9	-1.2
MK01	Makanchi Array	93.54	317	*e*P	P	15 58 45.5	-0.8
MK31	Makanchi Array	93.55	317	*e*P	P	15 58 45.9	-0.5
MK32	Makanchi Array	93.55	317	*e*P	P	15 58 46.2	-0.2
MKAR	Makanchi Array	93.55	317	*e*P	P	15 58 45.9	-0.5
	7.1nm,0.7s						
MKAR	Makanchi Array	93.55	317	P	P	15 58 46.2	-0.2
	1.2nm,0.7s,baz=94,slow=6.4,SNR=12						
GCMT	Greycliff	93.90	44	*e*P	P	15 58 47.8	-0.4
YKA	Yellowknife Ar	94.81	27	P	P	15 58 50.4	-1.4
	0.1nm,0.3s,baz=229,slow=5.5,SNR=2.8						
ARA0	ARCESS Array S	116.27	346	*e*PKPdf	PKiKP	16 04 11.7	-1.6
ARCES	ARCESS Array B	116.27	346	PKP	PKiKP	16 04 11.7	-1.6
	0.7nm,0.7s,baz=56,slow=2.2,SNR=7.9						

IDC 12 15:57:19.1±7.1, 2°.51S×102°.24E, h0^{km}, mb3.5/3, mb1 3.6/3, mb1mx3.3/39, mbtmp3.5/3, Error ellipse: s-maj=387.7km s-min=26.0km az=52.0

ISCJB 12 15:57:35.6±0.7, 2°.4S±0°.1×102°.3E±0°.1, h150^{km}, mb3.2/3, Error ellipse: s-maj=21.1km s-min=8.4km az=40.5

DJA 12 15:57:38.3±0.6, 3°S±6°×10°2E±°, h135^{km}±5^{km}, M3.4/10, MLv3.4/10

ISC 12 15:57:36.4±1.0, 2°.6S±0°.1×102°.2E±0°.1, h150^{km}, n13, σ1^{s}.22/13, mb3.3/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.56	174	P	Pn	15 57 59.3	+1.2
MASI				S	Sn	15 58 15.4	+0.7
KRJI	Kerinci	0.87	304	P	Pn	15 58 02.1	+1.9
LHSI	Lahat	1.82	133	P	Pn	15 58 10.9	+1.4
MNAI	Manna	1.93	157	P	Pn	15 58 11.1	+0.4
PPSI	Pulau Pagai	2.18	265	P	Pn	15 58 14.4	+0.8
PDSI	Padang	2.39	314	P	Pn	15 58 17.0	+0.8
MDSI	Maura Dua	2.75	134	P	Pn	15 58 21.6	+1.0
LWLI	Liwa	3.06	142	P	Pn	15 58 26.0	+1.3
SISI	Saibi	3.33	292	P	Pn	15 58 28.6	+0.6
TNG	Tangerang	5.70	129	P	Pn	15 59 12.3	+13
WRA	Warramunga Arr	35.82	121	P	P	16 04 20.4	-1.4
	0.8nm,1.2s,baz=292,slow=8.2,SNR=5.2						
ASAR	Alice Springs	37.16	127	P	P	16 04 32.0	-1.1
	0.2nm,0.3s,baz=301,slow=7.8,SNR=11						
MKAR	Makanchi Array	52.20	343	P	P	16 06 31.3	-0.5
	0.4nm,0.5s,baz=151,slow=8.7,SNR=13						

ISCJB 12 16:05:01.0±1.2, 11°.26S±0°.08×165°.9E±0°.2, h10^{km}, mb3.6/5, Error ellipse: s-maj=23.2km s-min=10.3km az=162.2

IDC 12 16:05:00.6±1.3, 11°.17S×165°.93E, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.6/38, mbtmp3.8/7, ML4.2/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/28, Error ellipse: s-maj=35.6km s-min=25.9km az=109.0

ISC 12 16:05:02.4±1.2, 11°.2S±0°.1×165°.9E±0°.2, h10^{km}, n13, σ1^{s}.22/10, mb3.8/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.13	286	Pn	Pn	16 06 33.7	+0.6
	12nm,0.3s,baz=101,slow=4.2,SNR=12						
HNR				LR	LR	16 09 01.6	
	comp=Z,257nm,20.0s,baz=128,slow=39						
DZM	Mont Dzumac	10.87	177	Pn	Pn	16 07 39.3	+1.0
	0.9nm,0.3s,baz=350,slow=18,SNR=10						
DZM				Sn	Sn	16 09 39.7	-0.5
	0.2nm,0.3s,baz=323,slow=20,SNR=2.0						
H11S2	WAKE ISLAND Hy	29.46	1	T	T	16 41 37.1	
	baz=184,slow=74,SNR=2.7						
H11S3	WAKE ISLAND Hy	29.46	1	T	T	16 41 35.9	
	baz=184						
H11S1	WAKE ISLAND Hy	29.48	1	T	T	16 41 37.8	
	baz=184,slow=74,SNR=2.3						
STKA	Stephens Creek	30.50	224	P	P	16 11 16.4	+0.7
	0.8nm,0.6s,baz=59,slow=7.0,SNR=3.3						
H11N1	WAKE ISLAND Hy	30.68	2	T	T	16 43 07.4	
	baz=181						
H11N3	WAKE ISLAND Hy	30.68	2	T	T	16 43 08.9	
	baz=181						
H11N2	WAKE ISLAND Hy	30.70	2	T	T	16 43 08.9	
	baz=181						
WRA	Warramunga Arr	31.62	250	P	P	16 11 24.9	-1.0
	1.3nm,0.7s,baz=82,slow=9.0,SNR=13						
WRA				PcP	PcP	16 14 17.5	-0.7
	0.4nm,0.9s,baz=59,slow=3.4,SNR=3.1						
ASAR	Alice Springs	32.91	244	P	P	16 11 35.4	-1.8
	0.4nm,0.9s,baz=64,slow=10,SNR=4.7						
ASAR				PcP	PcP	16 14 20.5	-1.3
	0.3nm,0.8s,baz=105,slow=1.8,SNR=3.3						
ILAR	Eielson Array	83.55	18	P	P	16 17 29.8	-0.6
	0.3nm,0.7s,baz=238,slow=4.5,SNR=5.3						
MKAR	Makanchi Array	93.72	317	P	P	16 18 20.9	+1.3
	0.5nm,1.1s,baz=97,slow=5.1,SNR=2.2						

NIED 12 16:13:00, 38°.90N×142°.50E, h32^{km}, Mw3.5 Best double couple: M$_0$1.95000×10^{14} NP1:φ$_s$357.00000°, δ13.00000°, λ-93.00000°. NP2:φ$_s$181.00000°, δ77.00000°, λ-89.00000°.

ISCJB 12 16:13:27.1±1.3, 38°.88N±0°.04×142°.53E±0°.07, h24^{km}±7^{km}, mb3.5/4, Error ellipse: s-maj=10.5km s-min=5.7km az=26.3

JMA 12 16:13:28.7±0.1, 38°.91N×142°.45E, h35^{km}±2^{km}, M3.8

JMA Felt I J1.

IDC 12 16:13:32.2±3.0, 38°.84N×142°.48E, h64^{km}±27^{km}, mb3.2/4, mb1 3.4/7, mb1mx3.1/57, mbtmp3.5/7, ML2.7/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/23, Error ellipse: s-maj=34.8km s-min=21.3km az=106.0

ISC 12 16:13:28.8±1.8, 38°.92N±0°.04×142°.36E±0°.07, h27^{km}±12^{km}, n26, σ1^{s}.28/30, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.56	287	P	Pn	16 13 41.3	+0.2
OFUJ				*e*S	Sn	16 13 50.0	+0.5
JKMT	Kesennumamotoy	0.70	262	P	Pn	16 13 43.0	+0.1
JKMT				*e*S	Sn	16 13 52.9	0.0
MIYJ	Miyakonagasawa	0.78	328	P	Pn	16 13 43.8	-0.3
MIYJ				S	Sn	16 13 54.4	-0.5
JMK	Ichinoseki	0.89	273	P	Pn	16 13 46.1	+0.5
JMK				S	Sn	16 13 58.4	+0.8
JIO	Ouri	0.92	240	P	Pb	16 13 45.6	-0.5
JIO				S	Sb	16 13 57.5	-0.4
JOM	Ohasama	1.00	304	P	Pn	16 13 47.8	+0.7
JOM				S	Sn	16 14 01.4	+1.1
JTH	Tanohata	1.09	339	P	Pn	16 13 48.1	-0.3
JRG	Rokugo	1.43	290	P	Pb	16 13 54.2	-0.5
JRG				*e*S	Sb	16 14 13.6	+1.1
JOU	Okura	1.44	248	P	Pb	16 13 54.0	-1.0
JOU				*e*S	Sb	16 14 13.0	+0.1
JYK	Kaneyama	1.56	271	P	Pb	16 13 56.2	-0.8
JANG	Nango	1.60	336	P	Pn	16 13 55.8	+0.5
JMM	Marumori	1.62	230	P	Pn	16 13 55.4	-0.2
JMM				*e*S	Sn	16 14 16.7	+1.2
MJAR	Matsushiro Arr	4.06	236	P	Pn	16 14 32.1	+3.0
	0.6nm,0.3s,baz=34,slow=14,SNR=40						
MJAR				LR	LR	16 16 20.1	
	comp=Z,88nm,18.1s,baz=205,slow=41						
MAT	Matsushiro	4.06	236	P	Pn	16 14 32.8	+3.7
MAT				S	Sn	16 15 14.7	-1.1
ASAJ	Asahikawa	5.20	2	P	Pn	16 14 46.7	+1.9
	0.5nm,0.3s,baz=216,slow=12,SNR=8.5						
ASAJ				S	Sn	16 15 45.8	+1.9
	0.3nm,0.3s,baz=171,slow=16,SNR=3.7						
USRK	Ussuriysk Ar.	9.39	308	P	Pn	16 15 48.1	+5.7
	0.1nm,0.3s,baz=117,slow=14,SNR=3.0						
H11N2	WAKE ISLAND Hy	28.54	125	T	T	16 49 44.8	
	baz=318,slow=75,SNR=58						
H11N1	WAKE ISLAND Hy	28.55	125	T	T	16 49 46.8	
	baz=318,slow=75,SNR=68						
H11N3	WAKE ISLAND Hy	28.56	125	T	T	16 49 47.3	
	baz=318,slow=75,SNR=55						
H11S1	WAKE ISLAND Hy	29.32	127	T	T	16 51 01.6	
	baz=319,slow=76,SNR=7.3						
H11S3	WAKE ISLAND Hy	29.32	127	T	T	16 50 48.5	
	baz=319,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	29.34	127	T	T	16 50 49.6	
	baz=319,slow=76,SNR=8.4						
MKAR	Makanchi Array	43.78	301	P	P	16 21 32.3	+0.2
	0.5nm,0.8s,baz=88,slow=9.0,SNR=4.5						
ILAR	Eielson Array	47.51	33	P	P	16 22 01.2	0.0
	0.5nm,0.8s,baz=269,slow=6.6,SNR=7.2						
WRA	Warramunga Arr	59.03	189	P	P	16 23 24.9	-1.4
	0.9nm,0.7s,baz=5.9,slow=7.3,SNR=3.2						
AKASG	Malin Array Be	73.27	322	P	P	16 24 56.6	-0.9
	0.1nm,0.3s,baz=44,slow=5.1,SNR=2.1						

IDC 12 16:14:12.0±3.9, 7°.26S×144°.59E, h0^{km}, mb3.8/3, mb1 3.9/5, mb1mx3.5/32, mbtmp3.8/5, ML3.4/2, Error ellipse: s-maj=109.6km s-min=32.2km az=99.0, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.05	217	Pn	Pn	16 17 57.3	-2.0
	0.1nm,0.3s,baz=41,slow=13,SNR=9.2						
WRA				Sn	Sn	16 20 45.4	-13
	0.1nm,0.3s,baz=39,slow=24,SNR=3.6						
ASAR	Alice Springs	19.27	211	P	Pn	16 18 39.0	-0.4
	0.2nm,0.3s,baz=36,slow=10,SNR=29						
ASAR				S	Sn	16 22 00.7	-15
	0.0nm,0.3s,baz=184,slow=34,SNR=4.2						
CMAR	Chiang Mai Arr	51.77	300	P	P	16 23 22.1	+0.3
	1.1nm,0.7s,baz=118,slow=6.0,SNR=14						
MKAR	Makanchi Array	76.96	321	P	P	16 26 06.8	+0.2
	0.7nm,0.8s,baz=103,slow=6.5,SNR=6.3						
ZALV	Zalesovo Beam	78.81	329	P	P	16 26 16.2	-0.5
	0.4nm,0.4s,baz=131,slow=6.5,SNR=3.5						

NIED 12 16:30:00, 24°.50N×123°.30E, h47^{km}, Mw4.1 Best double couple: M$_0$1.54000×10^{15} NP1:φ$_s$145.00000°, δ48.00000°, λ-2.00000°. NP2:φ$_s$236.00000°, δ88.00000°, λ-138.00000°.

ISCJB 12 16:30:57.6±0.3, 24°.50N±0°.06×123°.24E±0°.03, h68^{km}±3^{km}, mb3.8/20, Error ellipse: s-maj=10.7km s-min=5.1km az=178.3

IDC 12 16:30:57.9±3.1, 24°.59N×123°.32E, h56^{km}±29^{km}, mb3.6/20, mb1 3.8/21, mb1mx3.7/43, mbtmp3.9/21, ML2.9/1, MS2.7/6, Ms1 2.8/6, ms1mx2.6/45, Error ellipse: s-maj=18.7km s-min=11.6km az=67.0

JMA 12 16:30:59.2±0.1, 24°.50N×123°.29E, h58^{km}±1^{km}, M4.1

JMA Felt I J1.

ISC 12 16:30:58.5±0.7, 24°.53N±0°.07×123°.26E±0°.04, h62^{km}±6^{km}, n37, σ0^{s}.68/47, mb3.9/20, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.24	253	P	Pn	16 31 08.9	+0.6
YOJ				S	Sn	16 31 15.4	-0.1
JYNG	Yonagunijimaku	0.30	255	P	Pn	16 31 09.3	+0.6
JYNG				S	Sn	16 31 16.4	+0.2
IRIF	Iriomote-Funau	0.47	114	P	Pn	16 31 10.2	0.0
IRIF				S	Sn	16 31 18.5	-0.3
HATJ	Hateruma jima	0.69	133	P	Pn	16 31 12.5	-0.1
HATJ				S	Sn	16 31 22.5	-0.5
JKRS	Kuro-shima	0.74	113	P	Pn	16 31 13.6	+0.3
JKRS				S	Sn	16 31 23.8	-0.4
JIJ	Ishigaki jima	0.82	101	P	Pn	16 31 14.3	0.0
JIJ				S	Sn	16 31 25.2	-0.7
JISG	Ishigakijimahi	0.96	86	P	Pn	16 31 16.3	+0.3
JISG				S	Sn	16 31 29.2	+0.2
JTJ	Tarama	1.32	85	P	Pn	16 31 21.4	+0.7
JTJ				S	Sn	16 31 38.2	+0.8
JIRB	Irabujima	1.76	80	P	Pn	16 31 27.9	+1.2
JIRB				*e*S	Sn	16 31 48.4	+0.2
JIKM	Ikemajima	1.85	77	P	Pn	16 31 29.3	+1.4
JIKM				*e*S	Sn	16 31 50.9	+0.7
JMJ	Miyako jima 2	1.87	81	P	Pn	16 31 29.5	+1.3
JMJ				*e*S	Sn	16 31 51.7	+0.9
JOW	Kunigami	5.07	62	P	Pn	16 32 11.8	-0.2
	0.9nm,0.3s,baz=216,slow=17,SNR=12						
JOW				S	Sn	16 33 06.8	-2.4
	0.4nm,0.3s,baz=192,slow=14,SNR=2.3						
JNU	Nakatsue	10.85	36	LR	LR	16 38 40.7	
	comp=Z,18nm,18.3s,baz=125,slow=43						
KSRS	Korea Array	13.49	16	LR	LR	16 38 59.5	
	comp=Z,32nm,21.8s,baz=190,slow=36						
MJAR	Matsushiro Arr	17.55	44	LR	LR	16 41 52.4	
	comp=Z,31nm,21.8s,baz=240,slow=37						
CMAR	Chiang Mai Arr	23.40	260	P	P	16 36 02.5	+0.3
	0.6nm,0.8s,baz=62,slow=7.7,SNR=5.3						
CMAR				LR	LR	16 45 50.9	
	comp=Z,11nm,18.8s,baz=120,slow=38						
KLR	Kul'dur	25.54	13	P	P	16 36 20.0	-1.2
	0.3nm,0.3s,baz=209,slow=10,SNR=3.4						
SONM	Songino Array	26.83	334	P	P	16 36 33.0	-0.1
	0.7nm,0.6s,baz=150,slow=8.1,SNR=5.9						
PETK	Petropavlovsk-	38.53	33	LR	LR	16 55 21.4	
	comp=Z,25nm,20.5s,baz=200,slow=38						
MKAR	Makanchi Array	39.42	315	P	P	16 38 22.5	+0.1
	0.2nm,0.3s,baz=105,slow=9.6,SNR=9.2						
MKAR				PcP	PcP	16 40 29.5	+0.1
	0.2nm,0.7s,baz=84,slow=6.1,SNR=3.0						
ZALV	Zalesovo Beam	41.00	326	P	P	16 38 34.4	-0.9
	1.3nm,0.5s,baz=120,slow=8.5,SNR=6.9						
KURBB	Kurchatov Arra	43.08	319	P	P	16 38 51.9	-0.3
	0.7nm,0.7s,baz=112,slow=9.3,SNR=5.5						
WRA	Warramunga Arr	45.50	165	P	P	16 39 11.8	-0.1
	4.8nm,0.7s,baz=347,slow=8.8,SNR=39						
WRA				PcP	PcP	16 40 49.5	-0.5
	0.4nm,0.6s,baz=349,slow=3.7,SNR=5.2						
BVAR	Borovoye Array	48.62	320	P	P	16 39 35.9	0.0
	0.9nm,0.6s,baz=97,slow=5.8,SNR=5.6						
ASAR	Alice Springs	49.01	167	P	P	16 39 39.6	+0.4
	0.9nm,0.4s,baz=350,slow=7.4,SNR=71						
ASAR				PcP	PcP	16 41 02.0	-0.3
	0.8nm,0.6s,baz=348,slow=3.4,SNR=8.5						
NWAO	Narrogin (SRO)	57.42	186	P	P	16 40 41.1	+0.3
	9.5nm,0.9s,baz=37,slow=20,SNR=5.4						
STKA	Stephens Creek	58.76	162	P	P	16 40 50.2	+0.1
	2.2nm,0.6s,baz=334,slow=8.4,SNR=7.0						
KBZ	Khabaz	66.74	309	P	P	16 41 43.5	+0.3
	3.0nm,0.9s,baz=104,slow=4.2,SNR=4.3						
OBN	Obninsk	68.40	322	LR	LR	17 14 27.0	
	comp=Z,12nm,21.2s,baz=184,slow=38						
ARCES	ARCESS Array B	69.92	338	P	P	16 42 02.6	-0.1
	1.3nm,0.9s,baz=60,slow=5.4,SNR=3.1						
FINES	FINESS Array B	72.10	330	P	P	16 42 15.7	-0.2
	0.5nm,0.4s,baz=68,slow=5.2,SNR=7.3						
AKASG	Malin Array Be	73.87	319	P	P	16 42 26.1	-0.5
	1.0nm,0.6s,baz=58,slow=7.1,SNR=2.4						
BRTR	Keskin Array B	74.49	307	P	P	16 42 31.3	+0.6
	1.0nm,0.6s,baz=86,slow=4.4,SNR=6.1						
NOA	NORSAR Array B	78.80	333	P	P	16 42 54.0	-0.4
	0.3nm,0.4s,baz=53,slow=5.6,SNR=3.5						
YKA	Yellowknife Ar	81.91	23	P	P	16 43 10.9	-0.1
	0.7nm,0.5s,baz=309,slow=5.0,SNR=20						
GERES	GERESS Array B	83.77	321	P	P	16 43 21.3	+0.2
	0.9nm,0.6s,baz=48,slow=4.0,SNR=7.1						
NVAR	Mina Array Bea	94.88	44	P	P	16 44 15.0	+0.7
	0.3nm,0.5s,baz=336,slow=2.0,SNR=2.9						

IDC 12 16:37:49.6±3.9, 6°.94S×148°.17E, h0^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.1/27, mbtmp3.1/3, ML3.2/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/17, Error ellipse: s-maj=114.3km s-min=32.7km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.64	225	P	P	16 42 08.3	-0.7
	0.1nm,0.3s,baz=51,slow=11,SNR=5.2						
GUMO	Guam	20.66	351	LR	LR	16 49 08.4	
	comp=Z,100nm,18.4s,baz=72,slow=33						
ASAR	Alice Springs	21.55	218	P	P	16 42 41.2	+0.4
	0.3nm,0.4s,baz=48,slow=8.8,SNR=13						
DZM	Mont Dzumac	23.18	132	LR	LR	16 50 09.9	
	comp=Z,86nm,18.5s,baz=224,slow=32						
RPZ	Rata Peaks	41.77	155	LR	LR	17 01 22.5	
	comp=Z,61nm,20.5s,baz=288,slow=34						
MKAR	Makanchi Array	78.96	320	P	P	16 49 55.4	0.0
	0.1nm,0.4s,baz=103,slow=6.5,SNR=3.4						

ISCJB 12 16:45:53.7±0.4, 47°.27N±0°.02×142°.16E±0°.06, h13^{km}±3^{km}, mb3.4/10, MS3.5/1, Error ellipse: s-maj=6.9km s-min=3.3km az=178.8

JMA 12 16:45:53.3±0.4, 47°.47N×142°.42E, h49^{km}, M3.4

IDC 12 16:45:53.7±0.8, 46°.96N×142°.51E, h0^{km}, mb3.3/7, mb1 3.6/8, mb1mx3.4/50, mbtmp3.3/8, ML1.7/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/29, Error ellipse: s-maj=30.5km s-min=16.9km az=141.0

SKHL 12 16:45:53.6±0.5, 47°.30N×142°.11E, h7^{km}±2^{km}, mb4.1/9

SKHL Felt (III-IV) at Yablochnoye, (II-III) at Kostromskoye, Kholmsk, Bykov.

MOS 12 16:45:54.4±2.3, 47°.26N×142°.09E, h10^{km}, mb4.0/3, Error ellipse: s-maj=20.0km s-min=8.0km az=88.7

MOS Felt (III-IV) at Yablochnyy; (II-III) at Bykov, Kostromskoye, Kholmsk.

ISC 12 16:45:55.2±0.7, 47°.24N±0°.02×142°.23E±0°.04, h10^{km}±4^{km}, n34, σ1^{s}.41/48, mb3.5/10, 4C-4D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHLM	Kholmsk	0.22	213	⇓*i*Pg	Pg	16 45 59.0	-0.8
KHLM				AMB	AMB	16 45 59.1	
	630nm,0.2s						
KHLM				pP	Pb	16 46 00.2	+0.4
KHLM				*e*Sg	Sg	16 46 02.1	-0.7
KHLM				A	A	16 46 02.4	
	7μm,0.4s						
YSS	Yuzh-Sakhalins	0.46	128	⇑*e*Pg	Pg	16 46 04.6	+0.4
YSS				AMB	AMB	16 46 05.1	
	540nm,0.3s						
YSS				*e*Sg	Sb	16 46 12.1	-0.1
YSS				A	A	16 46 13.3	
	3μm,0.3s						
YSS				AMS	AMS	16 46 29.0	
	1μm,5.0s						
YSS				AMS	AMS	16 46 29.0	
	1μm,5.0s						
YSS				AMS	AMS	16 46 29.0	
	1μm,5.0s						
YSS	Yuzh-Sakhalins	0.46	128	⇑*e*PN	Pg	16 46 04.7	+0.5
YSS				*e*		16 46 11.5	
YSS				pmax	pmax		
	comp=Z,540nm,0.3s						
YSS				smax	smax		
	comp=N,3μm,0.6s						
YSS				smax	smax		
	comp=E,3μm,0.3s						
NEVR	Nevel`sk	0.62	204	*e*Pg	Pg	16 46 06.6	-0.6
NEVR				pP	Pb	16 46 08.8	+0.7
NEVR				*e*Sg	Sg	16 46 15.8	+0.5
NEVR				A	A	16 46 16.8	
	comp=E,3μm,0.3s						
NEVR				A	A	16 46 16.8	
	comp=E,2μm,0.3s						
NEVR	Nevel`sk	0.62	204	*i* PN	Pg	16 46 06.6	-0.6
NEVR				*i* SG	Sg	16 46 15.2	-0.1
NEVR				smax	smax		
	comp=N,2μm,0.3s						
NEVR				smax	smax		
	comp=E,2μm,0.3s						
UGL	Uglegorsk	1.84	357	*e*Pg	Pb	16 46 29.1	+0.2
UGL				AMB	AMB	16 46 32.6	
	comp=E,80nm,0.8s						
UGL				*e*Sg	Sg	16 46 54.2	-0.2
UGL				A	A	16 46 56.1	
	comp=E,460nm,0.4s						
UGL	Uglegorsk	1.84	357	PN	Pb	16 46 28.5	-0.4
UGL				*e*S	Sg	16 46 54.2	-0.2
UGL				pmax	pmax		
	comp=Z,32nm,0.5s						
UGL				smax	smax		
	comp=E,486nm,1.1s						
JWK2	Keihoku	1.94	187	P	Pn	16 46 28.0	-0.2
JWK2				*e*S	Sn	16 46 53.6	+1.0
JSE	Soyaes	2.30	174	P	Pn	16 46 32.3	-0.8
JSE				*e*S	Sn	16 47 01.1	-0.3
JKK2	Kamakawa 2	3.39	174	P	Pn	16 46 49.0	+0.9
JKK2				*e*S	Sn	16 47 30.7	+2.3
JTKR	Abashiri--Toko	3.48	160	P	Pn	16 46 48.1	-1.2
JTKR				*e*S	Sn	16 47 29.4	-1.1
TYV	Tymovskoe	3.64	4	*e*Pg	Pg	16 47 04.8	0.0
TYV				AMB	AMB	16 47 08.6	
	comp=E,8.0nm,0.7s						
TYV				*e*Sg	Sg	16 47 54.7	+2.8
TYV	Tymovskoe	3.64	4	*e*PN	Pg	16 47 03.1	-1.7
TYV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
JAR	Ashorobuto	4.09	164	P	Pn	16 46 57.2	-0.6
JAR				*e*S	Sn	16 47 46.0	+0.3
TEY	Ternei	4.49	243	*e*P	Pn	16 47 02.4	-0.8
TEY				AMB	AMB	16 47 07.7	
	comp=Z,10.0nm,0.3s						
TEY				*e*Pg	Pg	16 47 24.4	+3.3
GRNR	Gornyy	5.20	315	*e*P	Pn	16 47 11.8	-1.2
NKL	Nikolayevsk	6.00	351	*e*P	Pn	16 47 23.8	-0.1
NKL				AMB	AMB	16 47 25.0	
	comp=Z,3.0nm,0.5s						
NKL				*e*Pg	Pg	16 47 50.8	+0.8

NKL				AMB	AMB	16 47 51.6	
	comp=Z,4.0nm,0.5s						
NKL	**Nikolayevsk**	6.00	351	*e*PN	Pb	16 47 33.5	-6.2
USRK	**Ussuriysk Ar.**	7.78	251	Pn	Pn	16 47 48.4	0.0
	comp=Z,0.1nm,0.3s,baz=60,slow=14,SNR=2.3						
USRK				Lg	Lg	16 50 05.1	
	comp=Z,0.2nm,0.3s,baz=56,slow=28,SNR=3.3						
EKMR	**Ekimchan**	8.34	318	*e*Sg	Sg	16 50 34.8	+12
EKMR				A	A	16 50 40.0	
	comp=Z,11nm,1.0s						
VLA	**Vladivostok**	8.39	244	⇑*e*PN	Pn	16 47 53.5	-3.2
MAJO	**Matsushiro**	11.10	197	⇓*e*PN	Pn	16 48 30.0	-4.0
SEY	**Seymchan**	16.73	16	⇓*e*P	P	16 49 52.4	+0.7
SONM	**Songino Array**	24.07	285	P	P	16 51 13.5	+2.8
	comp=Z,0.2nm,0.5s,baz=84,slow=8.8,SNR=3.1						
BILL	**Bilibino**	24.18	22	⇓*i*P	P	16 51 11.3	-0.1
BILL				*e*		16 51 12.6	
BILL				*PP	sP	16 51 16.0	+0.2
BILL				PPP	PPP	16 51 49.0	
BILL						16 54 54.0	
BILL				*e*		16 56 36.3	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TIXI	**Tiksi**	25.28	350	⇑*e*P	P	16 51 22.7	+1.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	40.80	38	P	P	16 53 36.7	+0.3
	comp=Z,0.3nm,0.9s,baz=278,slow=8.1,SNR=3.5						
BVAR	**Borovoye Array**	44.64	305	LR	LR	17 16 19.0	
	comp=Z,54nm,18.1s,baz=298,slow=41						
YKA	**Yellowknife Ar**	54.82	34	P	P	16 55 24.8	0.0
	comp=Z,0.3nm,0.6s,baz=304,slow=6.7,SNR=5.5						
KIV	**Kislovodsk**	64.87	308	*e*P	P	16 56 32.8	-1.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	67.25	188	P	P	16 56 47.0	-2.7
	comp=Z,0.3nm,0.9s,baz=7.2,slow=6.9,SNR=3.8						
NVAR	**Mina Array Bea**	68.59	56	P	P	16 56 59.3	+0.9
	comp=Z,0.3nm,0.6s,baz=310,slow=5.7,SNR=3.1						
PDAR	**Pinedale Array**	70.22	48	P	P	16 57 09.3	+0.8
	comp=Z,0.3nm,0.6s,baz=235,slow=3.2,SNR=3.4						
ASAR	**Alice Springs**	70.97	188	P	P	16 57 12.2	-0.6
	comp=Z,0.5nm,0.6s,baz=7.0,slow=5.1,SNR=11						

WEL 12 16:50:15.7±0.5,39°S±2°×17°8E±°,h26^{km}±3^{km},ML3.5/17, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRGZ	**Paritu Road**	0.06	155	P	Pb	16 50 21.4	+1.0
PRGZ				S	Sb	16 50 23.9	+0.5
RIGZ	**Rimuhau**	0.18	337	P	Pn	16 50 22.6	-0.1
RIGZ				S	Sb	16 50 27.9	+2.9
KNZ	**Kokohu**	0.21	222	P	Pn	16 50 22.8	-0.3
KNZ				S	Sb	16 50 28.1	+2.6
MHGZ	**Mahia Peninsul**	0.29	171	P	Pn	16 50 24.2	0.0
MHGZ				S	Sn	16 50 30.1	+0.4
SNGZ	**Shannon Statio**	0.41	282	P	Pn	16 50 25.6	-0.3
SNGZ				S	Sn	16 50 32.7	0.0
TKGZ	**Te Karaka**	0.43	360	P	Pn	16 50 25.9	-0.3
TKGZ				S	Sn	16 50 33.3	+0.2
CNGZ	**Carnagh Statio**	0.47	36	P	Pn	16 50 26.9	+0.1
RAGZ	**Rawiri**	0.51	317	P	Pn	16 50 27.0	-0.3
RAGZ				S	Sn	16 50 35.3	+0.2
WHHZ	**Waihua**	0.52	246	P	Pn	16 50 27.5	0.0
WHHZ				S	Sn	16 50 36.7	+1.2
MWZ	**Matawai**	0.59	334	P	Pn	16 50 28.1	-0.4
MWZ				S	Sn	16 50 37.0	-0.2
RAHZ	**Arahi**	0.60	265	P	Pn	16 50 28.5	0.0
RAHZ				S	Sn	16 50 38.0	+0.6
TWGZ	**Tauwhareparae**	0.70	8	P	Pn	16 50 29.8	-0.1
TWGZ				S	Sn	16 50 40.3	+0.5
RTZ	**Ruatahuna**	0.73	290	P	Pn	16 50 30.1	-0.2
ARHZ	**Aropaoanui**	0.77	239	P	Pn	16 50 31.2	+0.3
MTHZ	**Maungataniwha**	0.79	271	P	Pb	16 50 30.9	+0.1
URZ	**Urewera**	0.84	316	P	Pb	16 50 31.7	+0.1
NMHZ	**Naumai**	0.85	254	P	Pn	16 50 32.1	+0.1
PUZ	**Puketiti**	0.86	22	P	Pb	16 50 31.4	-0.6
RUGZ	**Raukumara Rang**	0.91	351	P	Pn	16 50 32.3	-0.6
MUGZ	**Murupara**	0.93	294	P	Pn	16 50 33.1	0.0
CKHZ	**Cape Kidnapper**	0.99	217	P	Pn	16 50 33.6	-0.3
MCHZ	**McNeill Hill**	1.07	237	P	Pb	16 50 36.0	+0.5
BKZ	**Black Stump Fm**	1.10	254	P	Pn	16 50 35.4	-0.1
HAZ	**Te Kaha**	1.11	357	P	Pn	16 50 35.2	-0.4
MRHZ	**Matea Rd**	1.12	271	P	Pn	16 50 35.9	+0.2
WMGZ	**Waiomatatini S**	1.14	23	P	Pn	16 50 35.3	-0.6
RRRZ	**Republican Roa**	1.17	296	P	Pn	16 50 36.4	0.0
KAHZ	**Kahuranaki**	1.19	219	P	Pn	16 50 36.3	-0.5
WHRZ	**Whale Island**	1.22	325	P	Pn	16 50 37.5	+0.4
TARZ	**Mount Tarawera**	1.23	300	P	Pn	16 50 37.6	+0.3
KWHZ	**Kaweka Forest**	1.24	243	P	Pn	16 50 37.7	+0.3
MARZ	**Manawahe**	1.28	313	P	Pb	16 50 38.7	-0.3
MXZ	**Matakaoa Point**	1.35	16	P	Pn	16 50 38.5	-0.3
HSRZ	**Hossack Road**	1.38	293	P	Pn	16 50 39.3	+0.1
PXZ	**Pawanui**	1.39	213	P	Pn	16 50 38.5	-0.9
OPRZ	**Ohinepanea**	1.44	315	P	Pn	16 50 39.6	-0.5
BHHZ	**Black Hill Sta**	1.52	245	P	Pn	16 50 41.3	0.0
WPHZ	**Waipukurau**	1.62	222	P	Pn	16 50 42.5	0.0
PRHZ	**Porangahau**	1.68	214	P	Pn	16 50 42.0	-1.4
MOVZ	**Moawhango**	1.72	251	P	Pn	16 50 45.0	+1.0
KRVZ	**Karewarewa**	1.74	262	P	Pn	16 50 44.3	0.0
TUVZ	**Tukino**	1.76	256	P	Pn	16 50 45.5	+0.9
NGZ	**Ngauruhoe**	1.78	259	P	Pn	16 50 45.6	+0.7
COVZ	**Chateau Observ**	1.83	259	P	Pn	16 50 46.1	+0.6
TRVZ	**Turoa**	1.84	256	P	Pn	16 50 46.5	+0.6
TSZ	**Takapari Road**	1.89	230	P	Pn	16 50 44.9	-1.3
PKVZ	**Pokaka**	1.99	257	P	Pn	16 50 48.5	+0.8
BFZ	**Birch Farm**	2.19	214	P	Pn	16 50 49.0	-1.4
HIZ	**Hauiti**	2.37	278	P	Pn	16 50 54.1	+1.2
VRZ	**Vera Road**	2.42	263	P	Pn	16 50 54.4	+0.8
TMWZ	**Te Maipa**	2.70	213	P	Pn	16 50 55.3	-2.1
LREZ	**Lake Rotokare**	2.75	256	P	Pn	16 50 59.4	+1.4
OGWZ	**Otaki Gorge**	2.84	226	P	Pn	16 50 57.2	-2.0
OGWZ				P	Pb	16 50 57.3	-8.3
PREZ	**Palmer Road**	2.91	259	P	Pn	16 51 02.0	+1.7
WIAZ	**Waiheke Island**	2.99	313	P	Pn	16 51 01.6	+0.3
PKE	**Pukeiti**	3.03	263	P	Pn	16 51 03.8	+1.8

GUC ***12*** *16:51:41.6±0.5,33°.50S×72°.12W,h52^{km}±6^{km},ML3.3*
SJA ***12*** *16:51:43.9±0.9,33°.05S×72°.17W,h10^{km},ML3.5,MW3.4*

ISC 12 16:51:40.8±1.8,33°.51S±0°.05×72°.09W±0°.07,h3^{km}±12^{km}, n24,σ1^{s}67/34,1C-5D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHPI	**Pichilemu**	0.89	175	*e*P	Pg	16 51 58.2	+0.4
CHPI				*i* S	Sb	16 52 10.8	-0.3
ROC1	**El Roble**	1.05	60	*e*P	Pg	16 52 00.9	0.0
ROC1				*e*S	Sb	16 52 16.7	+0.8
ROCH	**El Roble**	1.05	60	⇓*i*P	Pg	16 52 00.5	-0.5
ROCH				*i* S	Sb	16 52 16.5	+0.4
ROCH				IAML		16 52 21.3	
	comp=N,925nm,0.5s						
PEL	**Peldehue**	1.23	73	*e*P	Pg	16 52 03.8	-0.7
PEL				*e*S	Sn	16 52 22.3	0.0
PEL	**Peldehue**	1.23	73	⇓*i*P	Pg	16 52 03.8	-0.7
PEL				*i* S	Sb	16 52 20.4	-0.7
PEL				IAML		16 52 29.0	
	comp=N,922nm,0.6s						
CLCH	**Cerro Calan**	1.31	86	⇓*i*P	Pg	16 52 04.7	-1.2
CLCH				*i* S	Sn	16 52 22.0	-2.1
CLCH				IAML		16 52 34.0	
	comp=E,994nm,0.5s						
FCH	**Farellones**	1.52	84	⇓*i*P	Pn	16 52 08.2	-1.0
FCH				*i* S	Sn	16 52 28.6	-1.1
FCH				IAML		16 52 34.2	
	comp=N,486nm,0.4s						
LMEL	**Las Melosas**	1.61	103	⇑*i*P	Pn	16 52 08.9	-1.4
LMEL				*i* S	Sn	16 52 30.8	-1.0
LMEL				IAML		16 52 36.2	
	comp=N,840nm,0.2s						
CMCH	**Combarbala**	2.50	22	⇓*i*P	Pn	16 52 20.9	-1.6
AUSP	**Uspallata**	2.61	61	*e*P	Pn	16 52 26.0	+1.8
AUSP				*e*S	Sg	16 53 03.0	-1.7
ARCO	**CERRO ARCO**	2.73	77	*e*P	Pb	16 52 30.3	-0.1
ARCO				IAML		16 52 33.0	
	comp=Z,168nm,0.5s						
ARCO				*e*S	Sg	16 53 09.8	+1.2
AAGR	**Agrelo**	2.77	82	*e*P	Pb	16 52 31.9	+0.9
ASAL	**Salagasta**	2.88	72	*e*P	Pb	16 52 33.0	0.0
RTCV	**Cerro Valdivia**	3.41	62	*e*P	Pn	16 52 38.0	+3.0
GO04	**Tololo Observa**	3.50	19	*e*P	Pn	16 52 34.9	-1.5
RTLL	**Cerro Villicun**	3.75	56	*e*P	Pn	16 52 41.3	+1.7
RTLL				IAML		16 53 41.2	
	comp=Z,84nm,0.6s						
CFA	**Coronel Fontan**	3.77	61	*e*P	Pn	16 52 44.3	+4.5
CFA				IAML		16 53 40.8	
ACCO	**Cerro Coronel**	3.88	42	*e*P	Pn	16 52 44.0	+2.3
AMOG	**MOGNA**	3.98	51	*e*P	Pn	16 52 45.3	+2.4
AROD	**Rodeo**	4.00	35	*e*P	Pn	16 52 45.0	+1.6
ACAN	**Cantantal**	4.30	75	*e*P	Pn	16 52 49.3	+2.1
AGUA	**GUANDACOL**	5.05	38	*e*P	Pn	16 52 58.8	+1.2
APLL	**PUNTA DE LOS L**	5.66	58	*e*P	Pn	16 53 05.0	-0.8
APLL				IAML		16 54 25.4	
	comp=Z,15nm,0.7s						
CYA	**Choya**	7.39	49	*e*P	Pn	16 53 32.0	+2.3
CYA				IAML		16 55 05.7	
	comp=Z,8.1nm,0.7s						

UCR 12 16:58:01.3±1.4,9°.96N×85°.66W,h7^{km}±5^{km},MD3.8,ML3.1, 1C-5D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLVR	**Palo Verde**	0.49	38	⇓*i*P	Pg	16 58 11.2	+0.3
PLVR				*e*S	Sb	16 58 19.0	-1.0
NY14	**Universidad de**	0.70	10	*i* P	Pg	16 58 15.3	+0.5
NY14				*i* S	Sb	16 58 26.1	+0.3
JTS	**JuntasAbangare**	0.77	64	⇓*e*P	Pg	16 58 15.8	-0.4
JTS				*e*S	Sb	16 58 27.7	-0.2
COLC	**Colonia**	0.84	33	*i* P	Pg	16 58 16.9	-0.5
COLC				*i* S	Sb	16 58 29.2	-0.6
LAPC	**Finca la Perla**	0.84	16	*i* P	Pg	16 58 16.9	-0.5
LIM1	**Limonal**	0.84	29	*i* P	Pg	16 58 17.1	-0.4
LIM1				*i* S	Sb	16 58 29.3	-0.5
GPS3	**Bodega del ICE**	0.85	20	*i* P	Pg	16 58 17.3	-0.3
GPS3				*i* S	Sg	16 58 29.2	+0.6
GPS2	**Hotel Rincn d**	0.85	21	*i* P	Pg	16 58 17.3	-0.4
CUI	**Cuipilapa**	0.85	35	⇓*e*P	Pg	16 58 17.3	-0.4
CUI				*i* S	Sb	16 58 29.6	-0.6
GUAB	**Guayabo de Bag**	0.86	30	*i* P	Pg	16 58 17.5	-0.4
GPS1	**Guardaparques**	0.87	21	*i* P	Pg	16 58 17.6	-0.5
BUEV	**Buena Vista**	0.87	17	*i* P	Pg	16 58 17.8	-0.4
BUEV				*e*S	Sb	16 58 30.2	-0.7
GB1A	**Borinquen Arri**	0.90	17	*e*P	Pg	16 58 18.0	-0.5
GB1A				*e*S	Sg	16 58 30.7	+0.5
MESS	**Mesas**	0.91	31	⇓*e*P	Pg	16 58 18.2	-0.5
MESS				*e*S	Sb	16 58 31.4	-0.3
ACAL	**Aguas Claras**	0.91	42	*i* P	Pg	16 58 18.6	-0.3
AMAS	**Alto Masis**	0.93	45	*i* P	Pg	16 58 18.6	-0.6
BUAI	**Buenos Aires**	0.97	20	*i* P	Pg	16 58 19.5	-0.5
PTEN	**Parque Tenorio**	1.00	41	*i* P	Pg	16 58 20.1	-0.5
CASO	**Castillo**	1.03	62	*i* P	Pg	16 58 20.6	-0.5
ARE1	**Arenal 1**	1.05	62	⇑*e*P	Pg	16 58 21.1	-0.5
ARE1				*e*S	Sb	16 58 36.4	+0.3
CEDE	**Laguna Cedeo**	1.08	61	*i* P	Pg	16 58 21.6	-0.4
CEDE				⇓*e*P	Pb	16 58 21.7	-0.7
CEDE				*e*S	Sb	16 58 37.2	+0.4
FORC	**Fortuna**	1.10	62	*i* P	Pg	16 58 21.6	-0.8
SRA1	**San Ramn**	1.17	84	*e*P	Pg	16 58 22.4	-1.5
SRA1				*e*S	Sg	16 58 38.4	-0.7
CONN	**Concepcion**	1.60	1	*e*P	Pn	16 58 28.8	-1.3
CONN				IAML		16 58 36.4	
	comp=Z,228nm,0.5s						
LCR2	**La Lucha 2**	1.65	97	*e*P	Pn	16 58 30.6	-0.3
LCR2				*e*S	Sn	16 58 49.6	-2.9
ACON	**Acoyapa**	2.06	13	*e*P	Pn	16 58 34.7	-1.6
ACON				*e*S	Sb	16 59 05.0	+0.2
MOMN	**Momotombo**	2.58	341	*e*P	Pn	16 58 42.7	-1.0
ESPN	**Las Esperanzas**	2.60	31	*e*P	Pn	16 58 42.4	-1.3
ESPN				IAML		16 59 20.6	
	comp=N,119nm,0.4s						

ISN ***12*** *17:00:09.8±0.8,39°.02N×43°.21E,h0^{km}±38^{km},ML4.4*
MOS ***12*** *17:00:16.6±1.2,38°.51N×43°.15E,h7^{km},mb4.5/35,Error ellipse: s-maj=5.2km s-min=3.6km az=84.4*
NEIC ***12*** *17:00:16.7±0.0,38°.57N×43°.21E,h5^{km},mb4.4/42, ML4.3(ISK),After ISK.*
IDC ***12*** *17:00:17.2±0.6,38°.63N×43°.13E,h0^{km},mb4.0/22, mb1 4.0/29,mb1mx3.9/69,mbtmp3.9/29,ML3.1/6,MS3.2/11, Ms1 3.2/11,ms1mx3.0/43,Error ellipse: s-maj=12.8km s-min=9.5km az=163.0*
THR ***12*** *17:00:17.1,38°.75N×43°.04E,h17^{km},ML3.7*
ISK ***12*** *17:00:17.1,38°.60N×43°.21E,h8^{km},ML4.4/23*
TEH ***12*** *17:00:17.7,38°.59N×43°.15E,h10^{km},ML4.0*
DDA ***12*** *17:00:17.7,38°.59N×43°.22E,h22^{km},ML4.3*
ISCJB ***12*** *17:00:18.3±0.3,38°.55N±0°.01×43°.17E±0°.01,h12^{km}±2^{km}, mb4.2/67,MS3.2/10,Error ellipse: s-maj=2.2km s-min=1.8km az=161.9*
AZER ***12*** *17:00:19.1±0.4,38°.56N×43°.21E,h2^{km},ml4.1/26,ms2.8/1, Error ellipse: s-maj=4.5km s-min=2.9km az=164.0*

ISC 12 17:00:19.4±0.7,38°.60N±0°.02×43°.20E±0°.02,h16^{km}±4^{km}, n399,σ1^{s}78/476,mb4.2/69,MS3.1/10,71C-52D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	0.17	112	⇓*i*P	Pg	17 00 23.0	-1.0
TVAN				*i* S	Sg	17 00 26.5	-0.5
TVAN				IAML_P			
AKDM	**Akdamar-Van**	0.32	213	PG	Pg	17 00 24.9	-1.3
AKDM				SG	Sg	17 00 30.4	-0.4
ADCV	**BITLIS_Adilcev**	0.43	300	⇓*i*P	Pg	17 00 27.1	-1.1
ADCV				*i* S	Sb	17 00 35.0	-0.1
ADCV				IAML_P			
	comp=Z,112μm,0.3s						
ERCV	**ERCIS-VAN**	0.44	14	PG	Pg	17 00 26.6	-1.8
ERCV	**ERCIS-VAN**	0.44	14	*e*Pg	Pg	17 00 26.5	-1.8
VMUR	**Van-Muradiye**	0.49	36	⇓*i*P	Pg	17 00 28.1	-1.2
VMUR				*i* S	Sg	17 00 36.4	+0.5
VMUR				IAML_P			
	comp=Z,64μm,0.2s						
MLAZ	**Malazgirt-MUS**	0.75	317	PG	Pg	17 00 32.2	-1.8
MLAZ				SG	Sb	17 00 44.5	+0.3
CLDR	**Caldiran**	0.78	45	PG	Pg	17 00 33.0	-1.8
CLDR				SG	Sg	17 00 44.9	-0.2
CLDR	**Caldiran**	0.78	45	⇓*i*P	Pg	17 00 33.8	-1.0
CLDR				*i* S	Sb	17 00 45.9	+0.5
CLDR				IAML_P			
	comp=Z,108μm,0.3s						
CLDR	**Caldiran**	0.78	45	*e*Pg	Pg	17 00 33.0	-1.8
BASK	**Baskale_VAN**	0.83	130	⇓*i*P	Pg	17 00 34.4	-1.3
BASK				*i* S	Sn	17 00 47.9	-1.0
BASK				IAML_P			
	comp=Z,95μm,0.1s						
TUTA	**Tutak**	0.86	340	⇓*i*P	Pb	17 00 34.1	-2.1
TUTA				*i* S	Sb	17 00 47.2	-0.5
GURO	**Guroymak-BITLI**	0.92	268	PG	Pb	17 00 34.9	-2.2
AGRB	**Hanur-Agry**	0.99	351	PG	Pb	17 00 36.4	-2.0
AGRB	**Hanur-Agry**	0.99	351	*e*Pg	Pb	17 00 36.4	-2.0
DYDN	**Diyadin**	1.02	22	⇓*i*P	Pb	17 00 37.4	-1.6
DYDN				*i* S	Sn	17 00 58.2	+4.7
DYDN				IAML_P			
	comp=Z,76μm,0.6s						
SRTM	**Siirt_Merkez**	1.17	239	⇑*i*P	Pn	17 00 40.9	-0.5
SRTM				*i* S	Sg	17 00 58.5	+1.1
SRTM				IAML_P			
	comp=Z,33μm,0.3s						
SIRT	**Sirnak**	1.25	209	PN	Pn	17 00 42.0	-0.3
SIRT	**Sirnak**	1.25	209	*e*Pn	Pn	17 00 41.3	-1.1
SIRT	**Sirnak**	1.25	209	*e*Pn	Pn	17 00 41.5	-0.8
SIRN	**Sırnak**	1.26	210	⇓*i*P	Pn	17 00 42.4	-0.1
SIRN				*i* S	Sg	17 01 02.9	+2.7
YOVA	**Hakkari_Yksek**	1.32	139	⇓*i*P	Pn	17 00 42.9	-0.6
YOVA				*i* S	Sg	17 01 05.8	+3.6
EATA	**Eleskirt**	1.38	337	⇓*i*P	Pn	17 00 44.2	-0.2
EATA				*i* S	Sg	17 01 04.4	+0.3
EATA				IAML_P			
	comp=Z,37μm,0.5s						
MAKU	**Maku**	1.38	56	*e*AML	AML	17 01 10.1	
	comp=N,991nm,0.8s						
MAKU	**Maku**	1.38	56	*e*Pg	Pn	17 00 43.2	-1.1
MAKU				*e*Sg	Sn	17 01 02.3	-0.1
CUKT	**Cukurca**	1.38	166	PN	Pn	17 00 44.4	+0.1
CUKT	**Cukurca**	1.38	166	⇓*i*P	Pn	17 00 44.1	-0.1
CUKT				*i* S	Sg	17 01 09.4	+5.3
CUKT				IAML_P			
	comp=Z,25μm,0.5s						
CUKT	**Cukurca**	1.38	166	*e*Pn	Pn	17 00 43.4	-0.9
IGDI	**IGDIR**	1.44	28	⇓*i*P	Pn	17 00 45.1	0.0
IGDI				*i* S	Sg	17 01 06.8	+0.8
IGDI				IAML_P			
	comp=Z,11μm,0.5s						
TASB	**TASBURUN-IGDIR**	1.60	30	PN	Pn	17 00 47.9	+0.7
TASB	**TASBURUN-IGDIR**	1.60	30	*e*Pn	Pn	17 00 47.8	+0.6
SVAN	**Silvan-Diyarba**	1.64	255	PN	Pn	17 00 48.2	+0.6
SVAN	**Silvan-Diyarba**	1.64	255	⇑*i*P	Pb	17 00 49.0	-0.3
SVAN				*i* S	Sg	17 01 11.9	-0.2
SVAN	**Silvan-Diyarba**	1.64	255	*e*Pn	Pn	17 00 48.2	+0.6
BTMN	**Batman**	1.68	246	⇑*i*P	Pb	17 00 49.6	-0.4
BTMN				*i* S	Sg	17 01 13.0	-0.4
BTMN				IAML_P			
	comp=Z,11μm,0.3s						
HYR	**Heyderabad**	1.71	48	*e*Pn	Pn	17 00 49.4	+0.8
HYR	**Heyderabad**	1.71	48	⇑P	Pn	17 00 49.4	+0.8
HYR				⇑S	Sg	17 01 13.9	-0.5
KOPR	**Koprukoy-ERZUR**	1.74	324	PN	Pn	17 00 49.9	+0.6
HOMI	**Horasan**	1.76	326	⇓*i*P	Pb	17 00 50.9	-0.7
HOMI				*i* S	Sg	17 01 17.6	+1.3
HOMI				IAML_P			
	comp=Z,16μm,0.2s						
DIGO	**Kars**	1.82	4	*i* P	Pb	17 00 52.2	-0.4
DIGO				*i* S	Sg	17 01 19.2	+1.0
DIGO				IAML_P			
	comp=Z,52μm,0.5s						
NAX	**Nakhchivan**	1.88	71	P	Pn	17 00 52.1	+1.0
NAX	**Nakhchivan**	1.88	71	*e*Pn	Pn	17 00 52.1	+1.0
NAX	**Nakhchivan**	1.88	71	P	Pn	17 00 52.1	+1.0
	SNR=155						
NAX				⇑S	Sb	17 01 18.2	+1.4
GNI	**Garni**	1.96	37	PN	Pn	17 00 52.8	+0.6
GNI	**Garni**	1.96	37	*d* *i*P	Pn	17 00 52.9	+0.7
GNI				pmax	pmax		
	comp=Z,2μm,0.7s						
GNI	**Garni**	1.96	37	*e*Pn	Pn	17 00 53.0	+0.7
GNI	**Garni**	1.96	37	Pn	Pn	17 00 53.0	+0.8
	comp=Z,69nm,0.3s,baz=245,slow=2.6,SNR=121						
GNI				Lg	Lg	17 01 24.4	
	comp=Z,56nm,0.3s,baz=160,slow=23,SNR=4.2						
IMRD	**Marand**	1.96	86	*e*Pn	Pn	17 00 53.2	+0.9
IMRD				IAMB	IAmb	17 01 08.8	
	comp=Z,23μm,0.5s						
SBZ	**Shahbuz**	2.00	66	*e*Pn	Pn	17 00 54.1	+1.4
SBZ	**Shahbuz**	2.00	66	⇑P	Pn	17 00 54.1	+1.4
SBZ				⇓S	Sb	17 01 20.9	+0.6
ECAT	**Cat-ERZURUM**	2.00	301	⇑*i*P	Pn	17 00 53.6	+0.7
ECAT				*i* S	Sg	17 01 23.2	-0.8
BNGB	**Bingl**	2.01	282	PN	Pn	17 00 53.3	+0.4
BGOL	**Bingol**	2.02	282	⇑*i*P	Pn	17 00 54.0	+1.0
BGOL				*i* S	Sb	17 01 22.5	+1.8
KARS	**Kars**	2.03	357	PN	Pn	17 00 53.7	+0.5
KARS	**Kars**	2.03	357	*e*Pn	Pn	17 00 54.3	+1.1
KARS	**Kars**	2.03	357	P	Pn	17 00 53.7	+0.5
KARS	**Kars**	2.03	357	*e*Pn	Pn	17 00 53.7	+0.5
EAK	**Akyaka**	2.11	8	⇓*i*P	Pb	17 00 56.8	-0.7
EAK				*i* S	Sg	17 01 32.0	+4.6
BINT	**Bingol**	2.14	278	P	Pn	17 00 53.2	-1.5
BINT	**Bingol**	2.14	278	*e*Pn	Pn	17 00 53.2	-1.5
MSL	**Mosul**	2.19	182	*e*Pn	Pn	17 00 55.0	-0.3
MSL				*e*Sn	Sb	17 01 25.0	-0.7
HANI	**Diyarbakir_Han**	2.21	266	⇑*i*P	Pn	17 00 56.2	+0.7
HANI				*i* S	Sb	17 01 28.0	+1.9
ORD	**Ordubad**	2.21	80	*e*Pn	Pn	17 00 56.8	+1.2
ORD	**Ordubad**	2.21	80	⇓P	Pn	17 00 56.8	+1.2
ORD				⇓S	Sb	17 01 25.5	-0.7
MARD	**Mardin**	2.30	237	⇑*i*P	Pn	17 00 57.2	+0.4
MARD				*i* S	Sb	17 01 30.9	+1.9
ITBZ	**Tabriz**	2.34	98	*e*Pn	Pn	17 00 58.9	+1.4
ITBZ				IAMB	IAmb	17 01 54.4	
	comp=E,5μm,0.9s						
IAZR	**Azarshahr**	2.38	112	*e*Pn	Pn	17 01 00.0	+2.0
IAZR				IAMB	IAmb	17 01 12.9	
	comp=Z,8μm,0.4s						
MAZI	**Mazidag**	2.45	243	PN	Pn	17 00 58.9	-0.1
MAZI	**Mazidag**	2.45	243	*e*Pn	Pn	17 00 58.8	-0.2
DIYA	**Diyarbakir**	2.52	256	⇑*i*P	Pn	17 01 00.2	+0.4
DIYA				*i* S	Sg	17 01 39.9	-0.4
KOPT	**Kop Dagi**	2.53	305	⇑*i*P	Pb	17 01 05.4	+0.7
KOPT				*i* S	Sg	17 01 42.2	+1.2
DDEM	**Demirkent**	2.55	334	⇓*i*P	Pb	17 01 05.3	+0.3
DDEM				*i* S	Sg	17 01 43.2	+1.7
DAGI	**Agillar**	2.67	339	*i* P	Pb	17 01 05.3	-1.7
DAGI				*i* S	Sb	17 01 37.2	-2.4
DAGI				IAML_P			
	comp=Z,3μm,0.4s						
BGD	**Bogdanovka**	2.68	6	P	Pn	17 01 03.7	+1.5
BGD				S	Sg	17 01 46.5	+0.8
DBAD	**Bademkaya**	2.68	335	⇓*i*P	Pb	17 01 07.3	+0.1
DBAD				*i* S	Sg	17 01 47.4	+1.7
ARTV	**Artvin**	2.77	340	*i* P	Pn	17 01 04.4	+1.1
ARTV				*i* S	Sg	17 01 48.5	+0.1
BAYB	**BAYBURT**	2.82	307	*i* P	Pb	17 01 10.2	+0.6
BAYB				*i* S	Sg	17 01 50.5	+0.4
GDB	**GEDABAY**	2.90	42	*e*Pn	Pn	17 01 06.6	+1.5
GDB	**GEDABAY**	2.90	42	⇑P	Pn	17 01 06.7	+1.5
	SNR=26						
GDB				⇓S	Sb	17 01 43.7	-2.5
TNCL	**Tunceli-Merkez**	2.90	281	*i* P	Pb	17 01 12.9	+2.0
TNCL				*i* S	Sg	17 01 52.7	-0.1
KZRT	**Kazreti**	2.94	18	P	Pb	17 01 10.8	-0.7
KZRT				S	Sg	17 01 52.5	-1.3
EUZM	**Uzumlu**	2.94	293	*i* P	Pb	17 01 11.5	-0.1
BAYT	**Aydıntepe-Bayb**	2.97	308	PN	Pn	17 01 07.8	+1.7
QZX	**Qazax, Azerbai**	2.97	34	*e*Pn	Pn	17 01 07.4	+1.4
QZX	**Qazax, Azerbai**	2.97	34	⇓P	Pn	17 01 07.5	+1.4
	SNR=45						
QZX				⇓S	Sn	17 01 45.2	+3.8
DBOC	**Borcka**	2.99	337	*i* P	Pb	17 01 12.9	+0.5
PTK	**Pertek**	2.99	277	PN	Pn	17 01 07.9	+1.4
PTK	**Pertek**	2.99	277	*e*Pn	Pn	17 01 07.1	+0.6
TRLG	**Trialeti**	3.02	13	P	Pb	17 01 13.5	+0.5
TRLG				S	Sg	17 01 57.0	+0.5
IHRS	**Heris**	3.03	94	IAMB	IAmb	17 01 23.2	
	comp=Z,6μm,0.8s						
IHRS				*e*Pn	Pn	17 01 08.7	+1.7
IBST	**Bostanabad**	3.04	106	IAMB	IAmb	17 01 26.6	
	comp=N,1μm,0.5s						
IBST				*e*Pn	Pn	17 01 08.2	+1.0
BCA	**Borcka**	3.09	337	PN	Pn	17 01 09.0	+1.3
CHOM	**Cayeli-Rize**	3.13	324	PN	Pn	17 01 09.8	+1.7
GANJ	**Ganja**	3.16	49	P	Pn	17 01 10.3	+1.7
GANJ	**Ganja**	3.16	49	*e*Pn	Pn	17 01 10.3	+1.7
GANJ	**Ganja**	3.16	49	P	Pn	17 01 10.4	+1.7
	SNR=32						
GANJ				⇑S	Sn	17 01 50.0	+3.9
BATM	**Batumi**	3.22	339	PN	Pn	17 01 11.1	+1.7
BATM	**Batumi**	3.22	339	P	Pb	17 01 16.1	-0.2
BATM				S	Sb	17 01 57.8	+2.5
ELZG	**Elazig**	3.31	270	*i* P	Pn	17 01 12.8	+2.1
IKRK	**Kirkuk**	3.32	164	*e*Pn	Pn	17 01 10.0	-0.7
IKRK				*e*Sn	Sn	17 01 52.0	+2.2
TBLG	**Delisi**	3.35	20	PN	Pn	17 01 12.8	+1.6
TBLG	**Delisi**	3.35	20	P	Pb	17 01 18.4	-0.1
TBLG				S	Sg	17 02 03.8	-3.1
TBLG	**Delisi**	3.35	20	*e*Pg	Pb	17 01 18.1	-0.4
TBLG	**Delisi**	3.35	20	*e*P	Pb	17 01 18.4	-0.1
BRDA	**Brd**	3.50	60	*e*Pn	Pn	17 01 14.7	+1.5
BRDA	**Brd**	3.50	60	⇓P	Pn	17 01 14.7	+1.5
	SNR=6.4						
BRDA				⇑S	Sn	17 01 57.8	+3.4
KTUT	**Trabzon**	3.56	313	PN	Pn	17 01 15.7	+1.6
ISRB	**Sarab**	3.60	101	*e*Pn	Pn	17 01 16.5	+1.7
ISRB				IAMB	IAmb	17 01 30.7	
	comp=Z,2μm,0.6s						
URFA	**Urfa**	3.65	253	PN	Pn	17 01 17.4	+2.1
GRMI	**Germi**	3.68	85	*e*Pn	Pn	17 01 16.9	+1.1
GRMI	**Germi**	3.68	85	*e*Pn	Pn	17 01 16.9	+1.1
MNGR	**Mingechevir, A**	3.70	53	P	Pn	17 01 17.5	+1.5
MNGR	**Mingechevir, A**	3.70	53	*e*Pn	Pn	17 01 17.5	+1.5
MNGR	**Mingechevir, A**	3.70	53	⇑P	Pn	17 01 17.5	+1.5
	SNR=17						
MNGR				⇓S	Sn	17 02 02.9	+3.6
ZRD	**Zardab**	3.86	63	*e*Pn	Pn	17 01 19.6	+1.5
ZRD	**Zardab**	3.86	63	⇑P	Pn	17 01 19.6	+1.5
	SNR=7.8						
ZRD				⇑S	Sn	17 02 06.4	+3.3
ZKTA	**Zakatala**	4.01	40	P	Pn	17 01 21.9	+1.6
ZKTA	**Zakatala**	4.01	40	*e*Pn	Pn	17 01 21.9	+1.6
ZKTA	**Zakatala**	4.01	40	⇓P	Pn	17 01 21.9	+1.6
	SNR=9.6						
ZKTA				⇓S	Sn	17 02 11.0	+4.0

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LRK   Lerik             4.03  88 ePn     Pn     17 01 21.7 +1.1
LRK   Lerik             4.03  88 ⇓P      Pn     17 01 21.7 +1.1
      SNR=21
LRK                              ⇓S      Sn     17 02 10.3 +2.7
SEKA  Sheki             4.03  48  P      Pn     17 01 22.8 +2.2
SEKA  Sheki             4.03  48 ePn     Pn     17 01 22.8 +2.2
SEKA  Sheki             4.03  48 ⇑P      Pn     17 01 22.8 +2.2
      SNR=7.3
SEKA                             ⇑S      Sn     17 02 12.8 +5.2
GLBA  Clilabad          4.10  79 ePn     Pn     17 01 22.8 +1.3
GLBA  Clilabad          4.10  79 ⇓P      Pn     17 01 22.8 +1.3
      SNR=12
GLBA                             ⇑S      Sn     17 02 12.4 +3.2
ZEI   Tsey              4.22   7 eP      Pn     17 01 25.1 +1.7
ZEI                               pmax   pmax
      comp=Z,64nm,0.8s
KDMR  Kurdemir          4.25  64 ePn     Pn     17 01 24.9 +1.5
KDMR  Kurdemir          4.25  64 ⇓P      Pn     17 01 25.0 +1.5
      SNR=3.8
KDMR                             ⇓S      Sn     17 02 16.2 +3.5
QBL   Gabala            4.28  55 ePn     Pn     17 01 25.3 +1.4
QBL   Gabala            4.28  55 ⇑P      Pn     17 01 25.3 +1.4
      SNR=7.4
QBL                              ⇑S      Sn     17 02 17.2 +3.7
LKRN  Lenkeran, Azer    4.37  87  P      Pn     17 01 26.5 +1.3
LKRN  Lenkeran, Azer    4.37  87 ePn     Pn     17 01 26.5 +1.3
LKRN  Lenkeran, Azer    4.37  87 ⇓P      Pn     17 01 26.5 +1.3
      SNR=23
ASTR  Astara            4.38  89 ePn     Pn     17 01 26.6 +1.3
ASTR  Astara            4.38  89 ⇑P      Pn     17 01 26.6 +1.3
      SNR=12
ASTR                             ⇓S      Sn     17 02 19.3 +3.2
IML   Ismayilli         4.42  59 ePn     Pn     17 01 27.4 +1.4
IML   Ismayilli         4.42  59 ⇑P      Pn     17 01 27.4 +1.4
      SNR=6.9
IML                              ⇑S      Sn     17 02 20.9 +3.7
DARE  Darende-Malaty    4.48 271  PN     Pn     17 01 29.2 +2.4
AKT   Akhty             4.51  49⇑eP      Pn     17 01 27.7 +0.4
AKT   Akhty             4.51  49 ePn     Pn     17 01 27.7 +0.4
XNQ   Khinaliq          4.59  54 ePn     Pn     17 01 29.8 +1.4
XNQ   Khinaliq          4.59  54 ⇓P      Pn     17 01 29.8 +1.4
      SNR=5.8
XNQ                              ⇓S      Sn     17 02 25.0 +3.5
NEY   Neytrino          4.66 356⇓eP      Pn     17 01 31.5 +2.1
NEY   Neytrino          4.66 356 ePn     Pn     17 01 31.5 +2.1
BTLR  Botlikh           4.67  29⇑eP      Pn     17 01 32.1 +2.7
BTLR  Botlikh           4.67  29 ePn     Pn     17 01 32.1 +2.7
ALIB  &Auml;li-Bayra    4.71  71 ePn     Pn     17 01 31.2 +1.4
ALIB  &Auml;li-Bayra    4.71  71 ⇑P      Pn     17 01 31.2 +1.4
      SNR=8.3
SNGE  Sanandaj          4.82 135 ePn     Pn     17 01 34.0 +2.3
SNGE  Sanandaj          4.82 135 ePn     Pn     17 01 34.0 +2.3
GBS   Qobustan          4.84  65 ePn     Pn     17 01 33.1 +1.4
GBS   Qobustan          4.84  65 ⇓P      Pn     17 01 33.1 +1.4
      SNR=5.1
GBS                              ⇑S      Sn     17 02 30.9 +3.4
QUB   Quba              4.84  53 ePn     Pn     17 01 34.1 +2.3
DOMR  Dombai            4.84 346⇑eP      Pn     17 01 31.5 -0.3
QSAR  Qusar             4.86  52 ePn     Pn     17 01 33.3 +1.4
QSAR  Qusar             4.86  52 ⇑P      Pn     17 01 33.3 +1.4
QSAR                             ⇑S      Sn     17 02 31.5 +3.6
RSDY  Resadiye-TOKAT    4.89 293  PN     Pn     17 01 35.5 +3.2
DVE   Vedeno            4.89  26⇓eP      Pn     17 01 33.0 +0.6
NCK   Nalchik           4.91   3⇑eP      Pn     17 01 35.8 +3.2
QUBA  Quba, Azerbaij    4.91  54 ⇓P      Pn     17 01 34.1 +1.4
QUBA                             ⇓S      Sn     17 02 32.8 +3.6
GAZ   Gaziantep         4.95 255  PN     Pn     17 01 36.1 +2.9
GAZ   Gaziantep         4.95 255 ePn     Pn     17 01 32.4 -0.8
ATGJ  Altiaghaj         4.97  61 ePn     Pn     17 01 34.8 +1.3
ATGJ  Altiaghaj         4.97  61 ⇓P      Pn     17 01 34.8 +1.3
ATGJ                             ⇑S      Sn     17 02 34.1 +3.4
SVSK  Karacayir         4.99 287  PN     Pn     17 01 36.7 +3.0
GROC  Groznyy           5.00  22 eP      Pn     17 01 32.9 -1.0
GROC                             eS      Sn     17 02 34.1 +2.7
GROC                              pmax   pmax
      comp=Z,23nm,0.7s
GROC                              smax   smax
      comp=N,29nm,1.3s
GROC                              smax   smax
      comp=N,60nm,1.2s
IVIS  Veis              5.01 143 ePn     Pn     17 01 36.4 +2.3
IVIS                              IAMB   IAmb   17 03 15.8
      comp=Z,1µm,1.0s
SIZA  Siyzn             5.04  59 ePn     Pn     17 01 35.8 +1.4
SIZA  Siyzn             5.04  59 ⇑P      Pn     17 01 35.8 +1.4
SIZA                             ⇑P      Pn     17 01 35.8 +1.4
SIZA                             ⇑S      Sn     17 02 35.9 +3.5
SIZA                             ⇑S      Sn     17 02 35.9 +3.5
KMRS  Kahramanmaras     5.09 260  PN     Pn     17 01 38.0 +2.9
KBZ   Khabaz            5.13 358  Pn     Pn     17 01 36.3 +0.6
      comp=Z,0.0nm,0.3s,baz=127,slow=12,SNR=2.5
KBZ                               Pg     Pg     17 01 53.9 -3.9
      comp=Z,0.3nm,0.3s,baz=191,slow=9.0,SNR=9.4
KBZ                               LR     LR     17 04 11.8
      comp=Z,219nm,20.9s,baz=144,slow=46
SHA1  Shidzhatmaz       5.16 356⇑eP      Pn     17 01 37.2 +1.0
KIV   Kislovodsk        5.37 356  PN     Pn     17 01 41.8 +2.8
KIV   Kislovodsk        5.37 356 ePn     Pn     17 01 40.6 +1.6
KIV   Kislovodsk        5.37 356 eP      Pn     17 01 42.8 +3.8
KIV                               pmax   pmax
      comp=Z,16nm,1.1s
KIV   Kislovodsk        5.37 356 ePn     Pn     17 01 40.6 +1.6
KVAR  Kislovodsk Arr    5.37 356  Pn     Pn     17 01 40.2 +1.1
      baz=54,slow=19,SNR=2.4
BHD   Baghdad           5.40 169 ePn     Pn     17 01 39.0 -0.3
BHD                              eSn     Sn     17 02 42.0 +0.8
TOKT  Tokat             5.43 291  PN     Pn     17 01 42.9 +3.1
MAK   Makhachkala       5.45  35 eP      Pn     17 01 40.6 +0.6
MAK                              eS      Sn     17 02 42.4 +0.1
MAK                               pmax   pmax
      comp=Z,217nm,1.0s
MAK                               MLR    MLR
      comp=Z,1µm,13.0s
PYA1  Pyatigorsk        5.46 359⇓eP      Pn     17 01 43.7 +3.4
IBDR  Badra             5.90 157 ePn     Pn     17 01 46.0 -0.3
IBDR                             eSn     Sn     17 02 54.0 +0.4
RTB   Rutbah            6.03 204 ePn     Pn     17 01 48.0 -0.1
RTB                              eSn     Sn     17 02 57.0 +0.2
SNOP  Sinop             7.00 302 ePn     Pn     17 02 06.0 +4.7
BR101 Keskin Array S    7.51 282 ePn     Pn     17 02 10.8 +2.3
BR131 Keskin Array S    7.51 282 ePn     Pn     17 02 06.5 -2.0
BRTR  Keskin Array B    7.51 282 i P     Pn     17 02 11.1 +2.6
BRTR                              pmax   pmax
      comp=Z,3.0nm,0.7s
BRTR  Keskin Array B    7.51 282  Pn     Pn     17 02 10.8 +2.3
      comp=Z,0.1nm,0.3s,baz=113,slow=14,SNR=6.0
NSR   Nassriya          7.94 161 ePn     Pn     17 02 15.0 +0.7
NSR                              eSn     Sn     17 03 43.0 -0.8
ASF   Jabal al Asfar    8.22 221  Pn     Pn     17 02 19.7 +1.6
      comp=Z,0.3nm,0.3s,baz=352,slow=14,SNR=2.6
ASF                               Lg     Lg     17 04 41.7
      comp=Z,0.1nm,0.3s,baz=202,slow=19,SNR=2.2
MMAI  Mount Meron Ar    8.43 231  Pn     Pn     17 02 24.4 +3.4
      comp=Z,0.7nm,0.3s,baz=54,slow=15,SNR=3.2
MMAI                              Lg     Lg     17 04 53.7
      comp=Z,0.6nm,0.3s,baz=42,slow=28,SNR=2.7
MMAI                              LR     LR     17 06 08.2
      comp=Z,268nm,20.8s,baz=55,slow=42
EIL   Elat             11.22 220  Lg     Lg     17 06 24.6
      comp=Z,0.3nm,0.3s,baz=349,slow=16,SNR=2.6
EIL                               LR     LR     17 07 53.8
      comp=Z,173nm,20.2s,baz=72,slow=41
BJRD  Bojnurd          11.23  90 eAML    AML    17 03 27.9
      comp=E,1.0nm,0.6s
GEYT  Alibeck          11.75  89  Pn     Pn     17 03 09.6 +3.2
      comp=E,0.2nm,0.3s,baz=297,slow=13,SNR=2.7
TIRR  Tirgusor         12.53 303 ePn     Pn     17 03 15.7 -1.3
TIRR  Tirgusor         12.53 303⇑iP      P      17 03 29.5 +0.9
TIRR  Tirgusor         12.53 303 eP      Pn     17 03 15.7 -1.3
VRH   Novokhopyorsk    12.65 356 eP      Pn     17 03 21.2 +2.6
VRH                               pmax   pmax
      comp=Z,4.0nm,0.9s
VSR   Storozhevoye     12.94 349⇓eP      Pn     17 03 23.6 +1.0
CFR   Carcaliu         13.00 305⇑iP      P      17 03 34.7 +0.8
CFR   Carcaliu         13.00 305 ⇑P      P      17 03 34.7 +0.8
KARP  Karpathos        13.17 262 ePn     Pn     17 03 23.8 -2.0
ALN   Alexandroupoli   13.40 285 ePn     Pn     17 03 30.0 +1.0
ALN   Alexandroupoli   13.40 285 eP      Pn     17 03 30.0 +1.0
VRI   Vrincioaia       14.19 306⇑iP      P      17 03 48.5 +1.4
VRI   Vrincioaia       14.19 306 ⇑P      P      17 03 48.5 +1.4
PLOR  Plostina         14.23 306⇑iP      P      17 03 49.4 +1.8
PLOR  Plostina         14.23 306 ⇑P      P      17 03 49.4 +1.8
LPSR  Galich'ya Gora   14.32 349 eP      Pn     17 03 43.5 +2.1
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LPSR                              pmax   pmax
      comp=Z,10.0nm,0.9s
TESR  Tescani          14.52 308⇑iP      P      17 03 52.7 +1.9
MLR   Muntele Rosu     14.54 304 ePn     Pn     17 03 44.1 -0.6
MLR   Muntele Rosu     14.54 304⇓iP      P      17 03 53.0 +1.8
MLR   Muntele Rosu     14.54 304 eP      Pn     17 03 44.1 -0.6
MLR   Muntele Rosu     14.54 304  Pn     P      17 03 51.9 +0.8
      comp=Z,0.4nm,0.3s,baz=70,slow=3.9,SNR=10
IDI   Anoyia           15.01 263 ePn     Pn     17 03 49.7 -1.3
      comp=Z,35nm,1.3s
IDI   Anoyia           15.01 263  Pn     Pn     17 03 50.8 -0.2
      comp=Z,0.2nm,0.3s,baz=91,slow=12,SNR=2.7
BIZ   Bicaz            15.05 309⇓iP      P      17 03 57.1 +0.4
DOPR  Dopca            15.08 305⇑iP      P      17 03 59.1 +2.0
VOIR                   15.11 303⇑iP      P      17 04 00.3 +2.9
VOIR                   15.11 303 ⇑P      P      17 04 00.3 +2.9
RAYN  Ar Rayn          15.15 172 ePn     Pn     17 03 48.7 -4.2
      comp=Z,10nm,1.1s
RAYN                             eSn     Sn     17 06 33.1 -7.4
RAYN  Ar Rayn          15.15 172 eP      Pn     17 03 48.7 -4.2
RAYN                             e              17 06 33.1
RAYN                              pmax   pmax
      comp=Z,10.0nm,1.1s
ARR   Arges            15.36 302⇑iP      P      17 04 02.6 +2.4
AKASG Malin Array Be   15.63 325  Pn     Pn     17 03 58.9 -0.1
      comp=Z,0.2nm,0.3s,baz=125,slow=13,SNR=3.5
AKBB  Malin Array Si   15.63 325 ePn     Pn     17 03 58.8 -0.2
      comp=Z,9.4nm,0.9s
AKBB  Malin Array Si   15.63 325 eP      Pn     17 03 58.8 -0.2
AKBB                              pmax   pmax
      comp=Z,9.0nm,0.9s
KIEV  Kiev             15.63 325 ePn     Pn     17 03 58.6 -0.4
      comp=Z,9.1nm,0.9s
KIEV  Kiev             15.63 325⇑iP      P      17 04 04.3 +1.2
KIEV  Kiev             15.63 325⇓eP      Pn     17 03 59.4 +0.4
AK11  Malin Array Si   15.64 325 ePn     Pn     17 03 58.3 -0.8
VTS   Vitosha          15.68 291 ePn     Pn     17 04 00.2 +0.3
      comp=Z,41nm,1.9s
VTS   Vitosha          15.68 291⇑iP      P      17 04 03.7 -0.2
VTS   Vitosha          15.68 291 eP      Pn     17 04 00.2 +0.3
VTS                               pmax   pmax
      comp=Z,41nm,1.9s
AKTO  Aktyubinsk       15.83  37  Pn     Pn     17 04 01.0 -0.6
      comp=Z,0.2nm,0.3s,baz=223,slow=14,SNR=6.4
AKTO                              LR     LR     17 11 54.2
      comp=Z,153nm,18.9s,baz=225,slow=44
BURAR Bucovina Array   15.90 310⇑iP      P      17 04 08.4 +2.2
BURAR Bucovina Array   15.90 310 ⇑P      P      17 04 08.4 +2.2
BUR04 Bucovina Ar. S   15.90 310 ePn     Pn     17 04 02.1 -0.6
BUR08 Bucovina Ar. S   15.92 310 ePn     Pn     17 04 03.8 +0.9
ABKAR Akbulak array    16.06  43 ePn     Pn     17 04 04.3 -0.2
ARCR  ARCALIA          16.19 308⇑iP      P      17 04 10.7 +1.4
GZR   Gura Zlata       16.61 301⇑iP      P      17 04 15.1 +1.0
ITM   Ithomi           16.85 272 ePn     Pn     17 04 13.3 -1.4
      comp=Z,110nm,1.5s
DRGR                   17.11 305⇑iP      P      17 04 20.8 +1.2
DRGR                   17.11 305 ⇑P      P      17 04 20.8 +1.2
OBN   Obninsk          17.12 347⇓iP      P      17 04 20.8 +1.3
OBN                               S      Sn     17 07 27.0 -0.8
OBN                               pmax   pmax
      comp=Z,25nm,1.7s
OBN                               MLR    MLR
      comp=Z,79nm,14.0s
BZS   Buzias           17.46 301⇑iP      P      17 04 23.1 -0.2
BZS   Buzias           17.46 301  P      P      17 04 23.1 -0.2
UOSS  Minazif          17.51 137 ePn     Pn     17 04 21.9 -1.0
      comp=Z,13nm,1.0s
MOS   Moscow           17.55 350 eP      Pn     17 04 21.6 -1.7
TRPA  Tarpa            17.74 309⇑iP      Pn     17 04 25.7  0.0
DIVS  Divibare         18.25 295 ePn     P      17 04 33.2 +1.0
      comp=Z,58nm,1.9s
PSZ   Piszkesteto      19.30 306 eP      P      17 04 42.4 -1.3
      comp=Z,27nm,1.6s
PSZ   Piszkesteto      19.30 306⇑iP      P      17 04 43.2 -0.5
PSZ   Piszkesteto      19.30 306 ⇑P      P      17 04 43.2 -0.5
MORH  Mrgy, Hungar     19.62 301 eP      Pn     17 04 48.0 -0.4
NIE   Niedzica         19.63 311 eP      Pn     17 04 49.7 +1.0
NIE   Niedzica         19.63 311 eP      Pn     17 04 49.7 +1.0
VYHS  Vyhne            20.17 307 eP      Pn     17 04 54.5 -0.5
VYHS                              pmax   pmax
      comp=Z,7.0nm,1.1s
VYHS  Vyhne            20.17 307 eP      Pn     17 04 54.5 -0.5
WSAR  Wadi Sarin       20.19 135  P      Pn     17 04 55.4 -0.1
      comp=Z,5.4nm,0.6s,baz=324,slow=8.5,SNR=7.7
WSAR                              LR     LR     17 14 42.5
      comp=Z,89nm,18.3s,baz=320,slow=43
BLY   Banja Luka       20.34 296 eP      P      17 04 55.4 +0.4
      comp=Z,89nm,1.8s
KIRV  Kirov            20.41   9  LR     LR     17 14 03.2
      comp=Z,63nm,18.3s,baz=169,slow=40
ARU   Arti             20.55  25 eP      P      17 04 57.0 -0.2
      comp=Z,44nm,1.6s
ARU   Arti             20.55  25ceP      P      17 04 58.3 +1.1
ARU                               pmax   pmax
      comp=Z,19nm,1.3s
TIP   Timpagrande      20.57 280 eP      P      17 04 58.5 +0.9
      comp=Z,57nm,1.4s
SUW   Suwalki          20.60 325 eP      P      17 04 58.3 +0.6
      comp=Z,41nm,0.8s
SUW   Suwalki          20.60 325 eP      P      17 04 58.3 +0.6
SUW                               pmax   pmax
      comp=Z,41nm,0.8s
KK31  Karatay Array    21.10  69 eP      P      17 05 03.5 +0.2
KK31  Karatay Array    21.10  69 eP      P      17 05 03.5 +0.2
KKAR  Karatay Array    21.10  69 eP      P      17 05 03.9 +0.6
      comp=Z,18nm,0.8s
KKAR  Karatay Array    21.10  69 eP      P      17 05 03.9 +0.6
KKAR                              pmax   pmax
      comp=Z,18nm,0.8s
GAR   Garm             21.11  80 eP      P      17 05 05.0 +1.5
      comp=Z,28nm,1.1s
GAR   Garm             21.11  80 eP      P      17 05 05.0 +1.5
GAR                               pmax   pmax
      comp=Z,28nm,1.1s
BTK   Batken           21.39  77 eP      P      17 05 07.5 +1.1
      comp=Z,6.9nm,0.9s
BTK   Batken           21.39  77 eP      P      17 05 07.5 +1.1
BTK                               pmax   pmax
      comp=Z,7.0nm,0.9s
MORC  Moravsky Berou   21.42 310⇑iP      P      17 05 03.5 -3.2
MORC  Moravsky Berou   21.42 310  P      P      17 05 10.7 +4.0
SVE   Sverdlovsk       21.57  27 eP      P      17 05 10.3 +2.1
SVE                               pmax   pmax
      comp=Z,22nm,1.4s
VRAC  Vranov           21.83 308  P      P      17 05 13.0 +2.0
      comp=Z,2.2nm,0.6s,baz=104,slow=8.4,SNR=4.3
CONA  Conrad Observa   21.89 304 epP     P      17 05 13.6 +1.8
      comp=Z,7.0nm,0.9s
KLMR  Klimovskoe       22.40 355 eP      P      17 05 14.3 -2.7
KLMR                              pmax   pmax
      comp=Z,19nm,1.1s
KLMR  Klimovskoe       22.40 355 eP      P      17 05 14.3 -2.7
KLMR                              AMP           17 05 27.7
      comp=Z,19nm,1.1s
TREC  Trest            22.52 307  P      P      17 05 22.0 +3.6
TREC                              pmax   pmax
      comp=Z,3.0nm,1.6s
MNAS  Manas            22.55  71  P      P      17 05 21.8 +2.8
MNAS                              pmax   pmax
      comp=Z,3.0nm,1.0s
VSU   Vasula           22.56 337⇓iP      P      17 05 20.8 +2.1
VSU                               pmax   pmax
      comp=Z,37nm,1.0s
PRGR  Permogore        23.12   3 eP      P      17 05 23.0 -1.5
PRGR                              pmax   pmax
      comp=Z,8.0nm,0.4s
OTUK  Ortayu           23.14  56  P      P      17 05 26.5 +1.6
OTUK                              pmax   pmax
      comp=Z,8.0nm,1.1s
SFK   Sufi-Kurgan      23.44  77  P      P      17 05 30.2 +1.9
SFK                               pmax   pmax
      comp=Z,5.0nm,1.0s
GEA0  GERESS Array S   23.52 305 eP      P      17 05 28.4 -0.3
GEC2  GERESS Array S   23.52 305 eP      P      17 05 28.1 -0.7
      comp=Z,9.5nm,1.5s
GERES GERESS Array B   23.52 305  P      P      17 05 29.3 +0.5
      comp=Z,0.8nm,0.6s,baz=112,slow=8.9,SNR=8.5
BRVK  Borovoye         23.59  43 eP      P      17 05 27.6 -1.8
      comp=Z,5.2nm,0.8s
BRVK  Borovoye         23.59  43⇑eP      P      17 05 31.5 +2.2
BRVK                              pmax   pmax
      comp=Z,4.0nm,0.9s
BVAR  Borovoye Array   23.63  44  P      P      17 05 31.0 +1.3
      comp=Z,1.0nm,0.6s,baz=236,slow=10,SNR=7.8
BRG   Berggiesshubel   23.96 310 eP      P      17 05 37.4 +4.5
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      comp=Z,5.9nm,1.1s
BRG   Berggiesshubel   23.96 310 eP      P      17 05 37.4 +4.5
BRG                               pmax   pmax
      comp=Z,6.0nm,1.2s
AAK   Ala-Archa        24.02  70 eP      P      17 05 34.5 +0.7
      comp=Z,7.7nm,1.3s
AAK   Ala-Archa        24.02  70⇑eP      P      17 05 35.1 +1.3
AAK                               pmax   pmax
      comp=Z,8.0nm,1.7s
AAK   Ala-Archa        24.02  70  P      P      17 05 34.7 +1.0
      comp=Z,0.7nm,0.5s,baz=277,slow=4.4,SNR=5.3
AAK                               LR     LR     17 17 13.6
      comp=Z,43nm,19.3s,baz=253,slow=42
FRU1  Bishkek          24.12  70 eP      P      17 05 34.2 -0.4
      comp=Z,13nm,0.5s
FRU1  Bishkek          24.12  70 eP      P      17 05 34.2 -0.4
FRU1                              pmax   pmax
      comp=Z,13nm,0.5s
CLL   Collm            24.67 311 eP      P      17 05 39.3 -0.1
      comp=Z,4.9nm,0.8s
CLL   Collm            24.67 311 eP      P      17 05 40.0 +0.6
      comp=Z,5.0nm,0.8s
CLL   Collm            24.67 311 eP      P      17 05 39.3 -0.1
CLL                               pmax   pmax
      comp=Z,5.0nm,0.8s
SQTA  Sankt Quirin     24.83 301  pP     P      17 05 42.1 +1.1
      comp=Z,1.8nm,0.5s
MOTA  Moosalm          24.92 301 eP      P      17 05 42.3 +0.4
      comp=Z,8.4nm,0.8s
FETA  Feichten         25.12 300 eP      P      17 05 43.9 +0.2
      comp=Z,3.5nm,0.9s
NRN   Naryn            25.20  73 eP      P      17 05 46.4 +1.7
      comp=Z,4.4nm,0.9s
NRN   Naryn            25.20  73  P      P      17 05 46.4 +1.7
NRN                               pmax   pmax
      comp=Z,4.0nm,1.0s
FIA0  FINESS Array S   25.22 341 eP      P      17 05 44.4 +0.2
FIA0  FINESS Array S   25.22 341 eP      P      17 05 44.4 +0.2
FINES FINESS Array B   25.22 341  P      P      17 05 44.4 +0.2
      comp=Z,5.6nm,0.9s,baz=133,slow=13,SNR=8.6
FIA1  FINESS Array S   25.22 341 eP      P      17 05 44.5 +0.2
      comp=Z,12nm,1.1s
GRA1  Grafenberg Arr   25.30 306 eP      P      17 05 46.1 +1.0
      comp=Z,22nm,1.1s
GRF   Grafenberg Arr   25.30 306 eP      P      17 05 46.2 +1.0
GRF                               pmax   pmax
      comp=Z,22nm,1.1s
GRFO  Grafenberg       25.30 306 eP      P      17 05 46.3 +1.2
      comp=Z,20nm,1.1s
GRFO  Grafenberg       25.30 306 eP      P      17 05 46.3 +1.2
GRFO                              pmax   pmax
      comp=Z,20nm,1.1s
MOX   Moxa             25.30 309  P      P      17 05 47.7 +2.6
MOX                               pmax   pmax
      comp=Z,3.0nm,2.0s
KSH   Kashi            25.39  78  P      P      17 05 45.4 -0.8
KSH                               sP     sP     17 05 54.3 +0.6
KSH                               PP     PnPn   17 06 24.1 +2.9
KSH                               S      S      17 10 05.9 -6.4
KSH                               sS     pS     17 10 15.5 -2.6
KSH                               SS     SnSn   17 11 09.8 +5.5
KSH                               pmax   pmax
      comp=Z,8.0nm,1.0s
KSH                               pmax   pmax
      comp=Z,280nm,4.2s
KSH                               LR     LR
      comp=N,250nm,5.3s
KSH                               LR     LR
      comp=E,210nm,5.7s
KSH                               LR     LR
      comp=Z,170nm,7.2s
DAVOX Davos/Dischmat   25.67 299  P      P      17 05 48.3 -0.5
      comp=Z,1.6nm,0.6s,baz=178,slow=2.5,SNR=3.7
TMCR  Tamitsa          25.79 355 eP      P      17 05 49.2 -0.2
TMCR                              pmax   pmax
      comp=Z,17nm,1.0s
KDJ   Kajisay          26.03  71 eP      P      17 05 51.0 -1.0
      comp=Z,4.3nm,0.8s
KDJ   Kajisay          26.03  71 eP      P      17 05 51.0 -1.0
KDJ                               pmax   pmax
      comp=Z,4.0nm,0.8s
KURBB Kurchatov Arra   27.61  53  P      P      17 06 07.3 +1.4
      comp=Z,1.9nm,0.9s,baz=264,slow=9.1,SNR=8.2
KURBB                             PcP    PcP    17 09 22.9 -0.2
      comp=Z,0.9nm,0.9s,baz=262,slow=3.4,SNR=6.1
KURK  Kurchatov        27.68  52 eP      P      17 06 06.7 +0.1
      comp=Z,6.2nm,1.2s
KURK  Kurchatov        27.68  52⇓eP      P      17 06 07.7 +1.1
KURK                              pmax   pmax
      comp=Z,10.0nm,2.5s
HFS   Hagfors          28.46 329  P      P      17 06 13.1 -0.3
      comp=Z,6.0nm,0.9s,baz=157,slow=9.0,SNR=5.8
HFS                               LR     LR     17 17 37.7
      comp=Z,49nm,18.1s,baz=154,slow=37
MAKZ  Makanchi         29.41  61 eP      P      17 06 23.0 +0.9
      comp=Z,9.6nm,1.7s
MAKZ  Makanchi         29.41  61 eP      P      17 06 23.0 +0.9
MAKZ                              pmax   pmax
      comp=Z,10.0nm,1.7s
MK31  Makanchi Array   29.62  61 eP      P      17 06 24.9 +0.9
MK31  Makanchi Array   29.62  61 eP      P      17 06 24.9 +0.9
MK32  Makanchi Array   29.62  61 eP      P      17 06 25.2 +1.2
MKAR  Makanchi Array   29.62  61 eP      P      17 06 24.6 +0.7
      comp=Z,8.3nm,0.8s
MKAR  Makanchi Array   29.62  61 eP      P      17 06 24.7 +0.7
MKAR                              pmax   pmax
      comp=Z,8.0nm,0.8s
MKAR  Makanchi Array   29.62  61  P      P      17 06 25.2 +1.2
      comp=Z,1.3nm,0.8s,baz=269,slow=7.1,SNR=12
MK01  Makanchi Array   29.63  61 eP      P      17 06 24.4 +0.4
NB200 NORSAR Array S   29.98 329 eP      P      17 06 25.9 -1.1
NOA   NORSAR Array B   29.98 329  P      P      17 06 25.9 -1.1
      comp=Z,0.7nm,0.8s,baz=126,slow=9.0,SNR=3.3
NOA                               LR     LR     17 18 49.0
      comp=Z,32nm,20.9s,baz=130,slow=37
ZAA0  Zalesovo Array   32.07  48 eP      P      17 06 49.6 +4.2
      comp=Z,2.3nm,1.1s
ZALV  Zalesovo Beam    32.07  48 eP      P      17 06 46.2 +0.8
ZALV  Zalesovo Beam    32.07  48  P      P      17 06 45.9 +0.4
      comp=Z,0.5nm,0.4s,baz=255,slow=8.7,SNR=3.5
ZALV                              LR     LR     17 21 33.8
      comp=Z,31nm,18.9s,baz=252,slow=40
ZAA1  Zalesovo Array   32.07  48 eP      P      17 06 45.9 +0.4
ARA0  ARCESS Array S   32.42 348 eP      P      17 06 47.8 -0.6
ARCES ARCESS Array B   32.42 348 eP      P      17 06 48.7 +0.4
ARCES ARCESS Array B   32.42 348 eP      P      17 06 48.7 +0.4
ARCES ARCESS Array B   32.42 348  P      P      17 06 47.8 -0.6
      comp=Z,4.7nm,1.1s,baz=62,slow=8.4,SNR=5.2
DGZ   Jazzator, Alta   33.17  56⇓iP      P      17 06 56.5 +1.2
DGZ                               pmax   pmax
      comp=Z,1.0nm,1.2s
WMQ   Urumqi           33.57  67 eP      P      17 07 01.2 +2.5
WMQ                               pP     pP     17 07 05.1 +1.1
WMQ                               pmax   pmax
      comp=Z,14nm,1.3s
WMQ                               pmax   pmax
      comp=Z,200nm,3.9s
WMQ                               LR     LR
      comp=N,98nm,15.9s
WMQ                               LR     LR
      comp=E,69nm,18.9s
WMQ                               LR     LR
      comp=Z,76nm,21.1s
WMQ   Urumqi           33.57  67 eP      P      17 06 58.9 +0.2
      comp=Z,6.8nm,0.9s
WMQ   Urumqi           33.57  67 eP      P      17 06 58.9 +0.2
WMQ                               pmax   pmax
      comp=Z,7.0nm,0.9s
ESDC  Sonseca Array    36.27 287  P      P      17 07 21.7 -0.4
      comp=Z,1.1nm,0.6s,baz=54,slow=8.1,SNR=7.9
LSA   Lhasa            40.28  88 eP      P      17 07 56.6 +0.2
      comp=Z,4.6nm,1.1s
LSA   Lhasa            40.28  88 eP      P      17 07 56.6 +0.2
LSA                               pmax   pmax
      comp=Z,5.0nm,1.1s
GTA   Gaotai           43.37  70 eP      P      17 08 22.7 +1.5
GTA                               pP     pP     17 08 27.1 +0.4
GTA                               sP     sP     17 08 29.9 +1.1
GTA                               PcP    PcP    17 10 09.3 -0.4
GTA                               S      S      17 14 49.9 +1.3
GTA                               sS     sS     17 14 57.7 +0.1
GTA                               SS     SS     17 17 57.9 -4.3
GTA                               pmax   pmax
      comp=Z,4.0nm,1.3s
GTA                               pmax   pmax
      comp=Z,110nm,6.4s
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GTA				LR	LR		
	comp=N,100nm,19.0s						
GTA				LR	LR		
	comp=E,130nm,18.7s						
GTA				LR	LR		
	comp=Z,73nm,19.0s						
TOA1	Torodi Ar. Sit	44.59	247	eP	P	17 08 29.3	-1.8
TOA1				ePcP	PcP	17 10 13.4	-0.6
TOA0	Torodi Ar. Sit	44.60	247	eP	P	17 08 28.7	-2.4
TORD	Torodi Ar. Bea	44.60	247	P	P	17 08 29.3	-1.8
	comp=Z,2.4nm,0.9s,baz=2.8,slow=9.1,SNR=9.8						
TORD				PcP	PcP	17 10 13.4	-0.6
	comp=Z,0.5nm,0.7s,baz=62,slow=3.5,SNR=4.2						
BORG	Borgarnes	45.11	327	LR	LR	17 27 29.6	
	comp=Z,29nm,19.3s,baz=123,slow=36						
SONA0	Songino Array	45.80	57	ePcP	PcP	17 10 17.8	0.0
SONM	Songino Array	45.80	57	PcP	PcP	17 10 17.8	0.0
	comp=Z,0.5nm,1.0s,baz=247,slow=2.7,SNR=3.6						
HHC	Hu-ho-hao-te	51.39	64	eP	P	17 09 23.6	0.0
HHC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,95nm,5.8s						
CHTO	Chiang Mai	51.91	96	eP	P	17 09 26.7	-0.9
	comp=Z,3.2nm,0.6s						
CHTO	Chiang Mai	51.91	96	eP	P	17 09 26.7	-0.9
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CM31	Chiang Mai Arr	52.11	96	eP	P	17 09 26.5	-2.5
CMAR	Chiang Mai Arr	52.11	96	ceP	P	17 09 29.0	-0.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	52.11	96	P	P	17 09 29.2	+0.2
	comp=Z,1.9nm,0.6s,baz=298,slow=8.5,SNR=22						
CM01	Chiang Mai Arr	52.14	96	eP	P	17 09 27.7	-1.6
DBIC	Dimbokro	53.70	246	eP	P	17 09 39.5	-1.4
	comp=Z,14nm,1.4s						
DBIC	Dimbokro	53.70	246	P	P	17 09 39.6	-1.2
	comp=Z,1.9nm,0.6s,baz=29,slow=8.9,SNR=4.0						
KIC	Kosan Boka	53.84	246	eP	P	17 09 40.4	-1.4
	comp=Z,18nm,1.0s						
TIC	Toumodi	53.84	247	eP	P	17 09 40.4	-1.5
LIC	Lamto	54.13	246	eP	P	17 09 42.6	-1.4
	comp=Z,54nm,1.7s						
PBKT	Sadao Pong	54.77	97	eP	P	17 09 48.6	0.0
	comp=Z,3.3nm,0.7s						
LSZ	Lusaka	55.40	198	eP	P	17 09 52.7	-0.5
	comp=Z,16nm,1.8s						
LSZ	Lusaka	55.40	198	eP	P	17 09 52.7	-0.5
LSZ				pmax	pmax		
	comp=Z,16nm,1.8s						
KLR	Kul'dur	61.17	48	P	P	17 10 33.2	+0.1
	comp=Z,1.0nm,0.7s,baz=256,slow=5.9,SNR=5.1						
SEY	Seymchan	64.24	29	P	P	17 10 54.7	+1.4
	comp=Z,4.4nm,0.9s,baz=308,slow=5.6,SNR=19						
KS15	Wonju Array Si	64.29	62	eP	P	17 10 52.1	-1.9
	comp=Z,56nm,1.6s						
KSAR	Wonju Array Be	64.29	62	P	P	17 10 54.2	+0.2
KSAR	Wonju Array Be	64.29	62	P	P	17 10 54.3	+0.2
KSRS	Korea Array	64.31	62	P	P	17 10 54.3	+0.1
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSRS	Korea Array	64.31	62	P	P	17 10 54.2	+0.1
	comp=Z,2.5nm,0.8s,baz=290,slow=6.6,SNR=6.1						
BILL	Bilibino	65.49	20	⇓iP	P	17 11 02.3	+0.9
BILL				e*PP	pP	17 11 06.4	-0.6
BILL				e		17 20 16.1	
BILL				SS	SS	17 23 56.0	-1.9
BILL				pmax	pmax		
	comp=Z,10.0nm,2.5s						
BILL				MLR	MLR		
	comp=Z,47nm,17.0s						
YSS	Yuzh-Sakhalins	68.69	46	eP	P	17 11 11.3	-11
INK	Inuvik	73.39	359	eP	P	17 11 48.9	-1.2
	comp=Z,7.4nm,1.5s						
INK	Inuvik	73.39	359	P	P	17 11 49.4	-0.8
	comp=Z,1.7nm,1.0s,baz=25,slow=7.8,SNR=4.3						
ANM	Nome	74.74	12	eP	P	17 11 58.6	+0.4
	comp=Z,2.9nm,0.8s						
ANM	Nome	74.74	12	eP	P	17 11 58.6	+0.4
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MLY	Manley	76.13	6	eP	P	17 12 06.6	+0.4
	comp=Z,17nm,2.0s						
ILAR	Eielson Array	76.67	4	P	P	17 12 08.8	-0.3
	comp=Z,0.3nm,0.6s,baz=322,slow=2.7,SNR=4.8						
ILB	Eielson Array	76.67	4	eP	P	17 12 08.7	-0.5
CAST	Castle Rocks	77.60	7	eP	P	17 12 14.7	+0.2
	comp=Z,9.9nm,1.1s						
SCRK	Sand Creek	77.61	3	eP	P	17 12 15.5	+0.8
	comp=Z,9.4nm,1.4s						
DAWY	Dawson	77.66	1	eP	P	17 12 15.1	+0.2
	comp=Z,4.5nm,1.0s						
YKA	Yellowknife Ar	77.68	350	P	P	17 12 14.7	-0.1
	comp=Z,1.3nm,0.9s,baz=17,slow=6.1,SNR=17						
YKB5	Yellowknife Ar	77.68	350	eP	P	17 12 14.0	-0.9
KDAK	Kodiak Island	83.07	8	i P	P	17 12 44.9	+1.0
WRA	Warramunga Arr	103.02	105	ceP	Pdif	17 14 23.7	+6.2
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						

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*IDC **12** 17:01:39.2±1.0, 36°.28N×142°.84E, h0^{km}, mb3.6/6, mb1 3.7/9, mb1mx3.5/63, mbtmp3.6/9, ML3.4/3, MS2.5/2, Ms1 2.5/2, ms1mx2.2/41, Error ellipse: s-maj=26.0km s-min=20.3km az=78.0*

*JMA **12** 17:01:42.7±0.1, 36°.32N×142°.58E, h62^{km}, M3.2*

ISC 12 17:01:39.7±2.1**, 36°.31N**±0°.05×**142°.54E**±0°.06**, h4**^{km}±12^{km}**, n30,** σ1^{s}.**78**/33**, mb3.6**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.50	246	P	Pg	17 02 08.4	0.0
CHOJ				S	Sb	17 02 27.3	-0.1
JHYU	Hitachinakayam	1.58	272	P	Pg	17 02 09.6	-0.4
JHYU				eS	Sb	17 02 29.2	-0.6
ONAJ	Iwakimizuishiy	1.61	300	P	Pb	17 02 09.9	-0.1
ONAJ				eS	Sb	17 02 29.7	-1.0
JHO	Hitachi	1.62	281	P	Pb	17 02 09.8	-0.4
JHO				S	Sb	17 02 29.9	-1.1
JIHU	Itakohorinouch	1.67	259	S	Sb	17 02 31.8	-0.6
JFK	Kawauchi	1.70	309	P	Pb	17 02 11.1	-0.5
JFK				eS	Sb	17 02 32.2	-1.2
BSO1	Boso 1	2.09	218	P	Pb	17 02 16.2	-1.7
JFT	Otama	2.14	305	P	Pb	17 02 18.2	-0.8
JAG	Ashikaga	2.50	273	P	Pb	17 02 22.4	-2.7
JAG				eS	Sn	17 02 51.8	-0.3
JRY	Ryogami san	2.96	265	P	Pn	17 02 28.7	+1.1
JOD2	Odawara 2	3.00	251	P	Pn	17 02 29.4	+1.3
JOD2				eS	Sn	17 03 04.5	0.0
JYK	Kaneyama	3.12	327	P	Pn	17 02 30.8	+1.0
MJAR	Matsushiro Arr	3.50	275	Pn	Pn	17 02 37.0	+1.9
	0.6nm,0.3s,baz=124,slow=7.6,SNR=26						
MJAR				LR	LR	17 04 18.2	
	comp=Z,73nm,19.2s,baz=130,slow=43						
MAT	Matsushiro	3.50	275	P	Pn	17 02 37.4	+2.4
MAT				S	Sn	17 03 13.8	-3.2
MAT	Matsushiro	3.50	275	P	Pn	17 02 37.6	+2.6
JHJ	Hachijo jima 2	3.92	216	Pn	Pn	17 02 42.7	+2.1
	9.1nm,0.3s,baz=70,slow=15,SNR=2.3						
JHJ				Sn	Sn	17 03 23.4	-3.6
	28nm,0.3s,baz=37,slow=20,SNR=4.8						
ASAJ	Asahikawa	7.79	0	Pn	Pn	17 03 33.8	-0.1
	0.8nm,0.3s,baz=241,slow=7.4,SNR=13						
ASAJ				Sn	Sn	17 04 58.8	-3.8
	0.2nm,0.3s,baz=236,slow=18,SNR=2.9						
KSRS	Korea Array	11.77	280	LR	LR	17 08 28.7	
	comp=Z,22nm,19.3s,baz=130,slow=34						
H11N2	WAKE ISLAND Hy	27.00	121	T	T	17 35 35.3	
	baz=311						
H11N1	WAKE ISLAND Hy	27.01	121	T	T	17 35 32.6	
	baz=311,SNR=3.5						
H11N3	WAKE ISLAND Hy	27.02	121	T	T	17 35 33.2	
	baz=311						
H11S1	WAKE ISLAND Hy	27.71	123	T	T	17 36 32.6	
	baz=314						
H11S3	WAKE ISLAND Hy	27.71	123	T	T	17 36 30.8	
	baz=314						
H11S2	WAKE ISLAND Hy	27.72	123	T	T	17 36 35.7	
	baz=314						
SONM	Songino Array	28.94	305	P	P	17 07 42.9	+2.7
	0.8nm,0.6s,baz=102,slow=9.0,SNR=8.4						
MKAR	Makanchi Array	45.27	303	P	P	17 09 59.9	+1.5
	1.3nm,0.7s,baz=89,slow=10,SNR=14						
KURBB	Kurchatov Arra	47.16	309	P	P	17 10 14.7	+1.6
	0.9nm,0.8s,baz=82,slow=7.5,SNR=6.7						
WRA	Warramunga Arr	56.49	189	P	P	17 11 23.2	+0.3
	0.2nm,0.5s,baz=7.8,slow=7.5,SNR=6.0						
ASAR	Alice Springs	60.21	189	P	P	17 11 48.8	-0.2
	0.3nm,0.8s,baz=360,slow=6.3,SNR=3.3						
NVAR	Mina Array Bea	74.69	54	P	P	17 13 20.1	-0.7
	0.1nm,0.3s,baz=297,slow=7.0,SNR=2.3						

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*IDC **12** 17:02:56.3±4.0, 10°.97N×84°.50W, h0^{km}, mb3.7/3, mb1 4.1/3, mb1mx3.5/42, mbtmp3.7/3, MS3.1/1, Ms1 3.1/1, ms1mx2.4/36, Error ellipse: s-maj=92.2km s-min=10.6km az=110.0*

*UCR **12** 17:02:57.7±1.6, 9°.94N×85°.66W, h10^{km}±8^{km}, MD3.9, ML3.4*

*ISCJB **12** 17:02:58.1±0.8, 9°.92N±0°.05×85°.68W±0°.04, h33^{km}, mb3.5/3, Error ellipse: s-maj=7.7km s-min=6.1km az=8.4*

ISC 12 17:03:00.4±1.3**, 10°.00N**±0°.08×**85°.59W**±0°.06**, h35**^{km}**, n34,** σ1^{s}.**39**/41**, mb3.5**/3**, 4C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLVR	Palo Verde	0.42	34	⇓iP	Pn	17 03 07.6	-2.5
NY14	Universidad de	0.65	5	i P	Pn	17 03 11.5	-1.6
NY14				i S	Sn	17 03 22.4	+0.3
JTS	JuntasAbangare	0.69	65	Pg	Pn	17 03 12.0	-1.7
	178nm,0.3s,baz=321,slow=5.4,SNR=166						
JTS				Lg	Lg	17 03 23.2	
	166nm,0.3s,baz=75,slow=20,SNR=39						
JTS	JuntasAbangare	0.69	65	⇓eP	Pn	17 03 12.0	-1.7
COLC	Colonia	0.76	30	i P	Pn	17 03 13.3	-1.5
LIM1	Limonal	0.77	25	i P	Pn	17 03 13.2	-1.7
CUI	Cuipilapa	0.77	33	i P	Pn	17 03 13.6	-1.4
CUI				eS	Sn	17 03 26.1	+0.7
GPS3	Bodega del ICE	0.78	16	i P	Pn	17 03 13.5	-1.6
GPS2	Hotel Rincn d	0.78	17	i P	Pn	17 03 13.5	-1.5
GUAB	Guayabo de Bag	0.79	27	i P	Pn	17 03 13.6	-1.5
GPS1	Guardaparques	0.80	17	i P	Pn	17 03 13.9	-1.5
BUEV	Buena Vista	0.81	13	⇑eP	Pn	17 03 14.0	-1.5
BUEV				eS	Sn	17 03 26.7	+0.3
MESS	Mesas	0.83	28	i P	Pn	17 03 14.3	-1.4
MESS				i S	Sn	17 03 27.0	+0.1
ACAL	Aguas Claras	0.83	41	i P	Pn	17 03 14.7	-1.0
GB1A	Borinquen Arri	0.83	13	i P	Pn	17 03 14.3	-1.5
GB1A				eS	Sn	17 03 27.0	+0.1
AMAS	Alto Masis	0.84	44	i P	Pn	17 03 14.6	-1.3
BUAI	Buenos Aires	0.91	16	i P	Pn	17 03 15.6	-1.1
CASO	Castillo	0.94	63	i P	Pn	17 03 16.7	-0.6
CASO				i S	Sn	17 03 30.8	+1.2
ARE1	Arenal 1	0.97	62	⇑eP	Pn	17 03 17.3	-0.3
ARE1				eS	Sn	17 03 32.7	+2.6
CEDE	Laguna Cedeo	0.99	61	⇑eP	Pn	17 03 17.7	-0.3
CEDE				eS	Sn	17 03 32.9	+2.0
FORC	Fortuna	1.01	63	i P	Pn	17 03 17.9	-0.3
SRA1	San Ramn	1.09	86	eP	Pn	17 03 18.3	-1.1
CONN	Concepcion	1.55	359	eP	Pn	17 03 26.1	+0.5
CONN				IAML		17 03 32.7	
	comp=Z,486nm,0.5s						
LCR2	La Lucha 2	1.58	99	⇑eP	Pn	17 03 25.4	-0.8
ACON	Acoyapa	2.00	12	eP	Pn	17 03 30.5	-1.2
COPN	Copaltepe	2.38	336	eP	Pn	17 03 36.0	-1.0
ESPN	Las Esperanzas	2.52	30	eP	Pn	17 03 41.1	+2.2
ESPN				IAML		17 04 16.8	
	comp=N,218nm,0.4s						
MOMN	Momotombo	2.57	339	eP	Pn	17 03 38.9	-0.7
CNGN	Cerro Negro	2.71	336	eP	Pn	17 03 43.1	+1.5
MATN	Matagalpa	2.93	354	eP	Pn	17 03 45.8	+1.2
APG	El Apazote	6.88	317	LR	LR	17 07 43.0	
	comp=N,141nm,18.5s,baz=173,slow=41						
TXAR	Lajitas Array	25.62	321	P	P	17 08 27.1	+0.3
	comp=N,1.4nm,0.9s,baz=150,slow=9.2,SNR=4.1						
NVAR	Mina Array Bea	40.74	319	P	P	17 10 39.5	+1.1
	comp=N,1.4nm,0.7s,baz=132,slow=7.5,SNR=9.9						
ILAR	Eielson Array	68.98	336	P	P	17 14 00.2	-1.8
	comp=N,0.2nm,0.6s,baz=120,slow=5.3,SNR=3.8						

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*SOME **12** 17:03:19.8, 42°.92N×77°.92E, h10^{km}*

NNC 12 17:03:18.3±1.6**, 42°.94N×77°.91E, h0**^{km}**, mb1.9, mpv2.1, 5C-1D, Error ellipse: s-maj=23.2km s-min=5.2km az=0.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.39	72	P	Pb	17 03 27.5	-0.6
	3.7nm,0.1s						
SATY				S	Sb	17 03 33.6	-1.1
	8.1nm,0.1s						
SATY	Saty	0.39	72	eP	Pb	17 03 27.5	-0.6
	3.7nm,0.1s						
SATY				eS	Sb	17 03 33.2	-1.5
	16nm,0.1s						
MDOK	Medeo	0.67	290	⇑P	Pg	17 03 32.0	+0.9
	0.6nm,0.5s						
MDOK				⇑S	Sg	17 03 40.2	+0.5
	0.9nm,0.4s						
UZB	Uzynbulak	0.84	76	P	Pb	17 03 35.5	-0.5
	1.5nm,0.2s						
UZB				S	Sb	17 03 46.9	-1.0
	1.6nm,0.1s						
UZB	Uzynbulak	0.84	76	eP	Pg	17 03 35.1	+0.6
	0.7nm,0.1s						
UZB				eS	Sg	17 03 46.1	+0.7
	1.6nm,0.1s						
PDGK	Podgornoye	1.22	71	⇑P	Pn	17 03 42.6	-0.2
	2.7nm,1.4s						
PDGK				⇓S	Sg	17 03 56.3	-1.3
	0.8nm,0.6s						
TKM2	Tokmak 2	1.69	270	⇑P	Pb	17 03 50.6	+0.1
	1.4nm,1.1s						
TKM2				⇑S	Sn	17 04 11.3	-0.5
	0.3nm,0.3s						

IDC 12 17:04:49.3±1.2**, 11°.02N×85°.07W, h0**^{km}**, mb3.3**/3**, mb1 3.7**/3**, mb1mx3.4**/39**, mbtmp3.3**/3**, Error ellipse: s-maj=37.3km s-min=9.4km az=77.0, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	JuntasAbangare	0.73	171	Pg	Pg	17 05 02.9	-0.5
	126nm,0.3s,baz=345,slow=16,SNR=8.2						
JTS				Lg	Lg	17 05 14.1	
	108nm,0.3s,baz=306,slow=10,SNR=6.5						
NVAR	Mina Array Bea	40.31	318	P	P	17 12 30.4	+1.5
	0.6nm,0.6s,baz=125,slow=7.1,SNR=3.9						
YKA	Yellowknife Ar	55.61	344	P	P	17 14 26.1	-0.5
	0.1nm,0.3s,baz=135,slow=8.0,SNR=3.2						
ILAR	Eielson Array	68.27	336	P	P	17 15 51.4	-0.4
	0.1nm,0.4s,baz=111,slow=7.9,SNR=2.6						

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*ISCJB **12** 17:08:29.8±1.4, 3°.70N±0°.03×122°.35E±0°.03, h22^{km}±11^{km}, mb4.5/54, MS3.2/2, Error ellipse: s-maj=6.1km s-min=4.4km az=150.5*

*MAN **12** 17:08:32.8, 4°.11N×122°.43E, h7^{km}, MS3.5*

*DJA **12** 17:08:33.3±0.3, 4°N±2°×12°2E±°, h39^{km}±4^{km}, M4.6/18, mB5.0/3, mb4.4/18, MLv4.7/12, Mw(mB)4.3/3*

*NEIC **12** 17:08:33.8±0.4, 3°.68N×122°.31E, h37^{km}±4^{km}, mb4.6/45, Error ellipse: s-maj=4.8km s-min=3.2km az=63.0*

*IDC **12** 17:08:39.4±2.8, 3°.64N×122°.25E, h87^{km}±26^{km}, mb3.9/16, mb1 4.0/18, mb1mx3.8/47, mbtmp4.2/18, MS3.1/6, Ms1 3.2/6, ms1mx2.9/39, Error ellipse: s-maj=23.8km s-min=10.7km az=80.0*

ISC 12 17:08:34.5±0.6**, 3°.60N**±0°.04×**122°.22E**±0°.05**, h44**^{km}±6^{km}**, n123,** σ1^{s}.**49**/129**, mb4.5**/54**, 2C-1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	3.11	185	P	Pn	17 09 21.3	+0.2
SGSI	Sangihe	3.30	88	P	Pn	17 09 20.3	-3.4
KMSI	Cibinong	3.48	150	P	Pn	17 09 26.4	+0.3
KMSI				S	Sn	17 10 03.6	-2.5
MPSI	Mapaga	3.98	216	P	Pn	17 09 25.4	-7.7
MPSI				S	Sn	17 10 16.3	-2.2
CTBH	Cotabato--PC H	4.13	29	⇑iP	Pn	17 09 29.8	-5.3
KCP	Kidapawan	4.43	40	⇓eP	Pn	17 09 32.4	-7.0
APSI	Ampana	4.51	187	P	Pn	17 09 40.7	+0.3
LUWI	Luwuk	4.64	173	ePn	Pn	17 09 43.1	+1.0
LUWI				eSn	Sn	17 10 41.1	+6.4
LUWI	Luwuk	4.64	173	P	Pn	17 09 41.6	-0.5
DAV	Davao City (W)	4.81	44	ePn	Pn	17 09 41.7	-2.7
DAV				S	Sn	17 10 43.5	+4.7
DAV	Davao City (W)	4.81	44	P	Pn	17 09 49.5	+5.1
	baz=66,slow=20,SNR=2.4						
DAV				S	Sn	17 10 43.5	+4.7
	43nm,0.3s,baz=305,slow=12,SNR=2.6						
DAV				LR	LR	17 11 57.1	
	comp=Z,367nm,18.5s,baz=156,slow=42						
PCI	Palu	5.07	208	P	Pn	17 09 44.9	-3.1
TNTI	Ternate	5.86	118	ePn	Pn	17 09 59.0	+0.1
KKM	Kota Kinabalu	6.46	292	ePn	Pn	17 10 05.3	-1.9
KKM				eSn	Sn	17 11 19.4	-0.3
SANI	Sanana	6.75	146	P	Pn	17 10 09.3	-1.9
TTSI	Tana Toraja	7.02	200	P	Pn	17 10 13.7	-1.1
SPSI	Sidrap Palu	7.90	198	P	Pn	17 10 24.4	-2.5
BNSI	Bone	8.22	195	P	Pn	17 10 32.9	+1.7
MTKI	Muara Teweh, K	8.60	239	P	Pn	17 10 33.9	-2.5
SBUM	Sibu	10.05	264	ePn	Pn	17 10 58.5	+2.1
FAKI	Fak Fak	11.93	123	ePn	Pn	17 11 21.4	-0.7
MMRI	Maumere	12.15	180	ePn	Pn	17 11 25.6	+0.5
PLAI	Plampang	13.11	200	P	P	17 11 48.1	+0.7
SOEI	Soe	13.42	171	ePn	Pn	17 11 46.3	+3.8
SOEI	Soe	13.42	171	P	Pn	17 11 44.2	+1.7
BATI	Baumata	13.79	174	P	Pn	17 11 45.8	-1.7
BATI	Baumata	13.79	174	P	P	17 11 51.8	-3.1
	0.9nm,0.3s,baz=284,slow=1.0,SNR=7.5						
JAGI	Jajag, Banyuwa	14.44	214	ePn	Pn	17 11 57.5	+1.3
GMJI	Gumukmas	14.68	217	P	Pn	17 11 59.2	-0.3
UGM	Wanagama	16.34	226	ePn	P	17 12 25.6	+2.4
	474nm,1.9s						
LEM	Lembang	17.88	235	LR	LR	17 20 11.8	
	comp=Z,123nm,20.4s,baz=44,slow=39						
CISI	Cisompet, Garu	18.15	232	eP	Pn	17 12 44.2	+0.8
	34nm,1.0s						
MYKOM	Kota Tinggi	18.44	265	eP	Pn	17 12 49.9	+2.9
	27nm,1.2s						
MTN	Manton Dam	18.58	152	eP	P	17 12 47.9	-0.1
	27nm,1.1s						
QIZ	Qiongzhong	19.54	323	eP	P	17 12 57.5	-1.0
	48nm,1.4s						
TPUB	Ta-pu	19.65	356	eP	P	17 12 58.7	-1.0
	142nm,1.7s						
YULB	Yu-li	19.70	357	eP	P	17 12 59.8	-0.5
	81nm,1.8s						
MDSI	Maura Dua	19.73	246	P	Pn	17 13 03.7	+1.3
MDSI				pP	sP	17 13 13.4	-1.4
LWLI	Liwa	20.06	245	P	Pn	17 13 06.4	0.0
SSLB	Suanglung	20.11	357	eP	P	17 13 04.2	-0.5
	57nm,1.3s						
YHNB	Yeheng	20.97	358	eP	P	17 13 14.6	+0.5
	314nm,2.0s						
IPM	Ipoh	21.16	273	eP	P	17 13 17.4	+1.2
	16nm,1.1s						
KULM	Kulim	21.57	275	eP	P	17 13 22.1	+1.5
	80nm,1.9s						
XMIS	Christmas Isla	21.63	230	eP	P	17 13 23.1	+1.9
	83nm,1.3s						
FITZ	Fitzroy Crossi	21.82	171	eP	P	17 13 23.7	+0.6
	8.2nm,0.9s						
PDSI	Padang	22.20	259	P	P	17 13 27.6	+0.2
MNSI	Mandailing Nat	22.79	264	P	P	17 13 35.0	+1.4
MNSI				pP	pP	17 13 43.8	+0.8
PSI	Prapat	23.27	269	eP	P	17 13 40.3	+1.7
	7.4nm,0.6s						
PSI	Prapat	23.27	269	LR	LR	17 23 02.7	
	comp=Z,75nm,21.8s,baz=270,slow=37						
NONG	Nongkai	23.57	309	P	P	17 13 41.7	+0.4
	0.3nm,1.0s						
PBKT	Sadao Pong	24.54	303	eP	P	17 13 50.3	+0.1
	4.4nm,0.9s						
MBWA	Marble Bar	24.72	186	eP	P	17 13 50.7	-1.1
	14nm,0.9s						
GSI	Gunungsitoli	24.73	265	eP	P	17 13 53.0	+1.0
	103nm,1.5s						
WRAB	Tennant Creek	26.24	153	eP	P	17 14 06.0	+0.4
	17nm,0.8s						
WR1	Warramunga Arr	26.25	153	eP	P	17 14 06.2	+0.5
	19nm,0.8s						
WR1				ePcP	PcP	17 17 32.6	+0.9
WRA	Warramunga Arr	26.25	153	P	P	17 14 06.2	+0.5
	18nm,0.8s,baz=332,slow=10.0,SNR=94						
WRA				PcP	PcP	17 17 32.6	+0.9
	0.6nm,0.9s,baz=326,slow=1.9,SNR=3.7						
WB2	Warramunga Arr	26.25	153	eP	P	17 14 04.9	-0.9
PAYA	Payao	26.87	307	P	P	17 14 12.7	+1.3
	6μm,0.5s,355μm						
CM01	Chiang Mai Arr	27.11	305	eP	P	17 14 13.1	-0.5
COEN	Coen	27.13	130	eP	P	17 14 12.7	-1.0
	18nm,1.4s						
CMAR	Chiang Mai Arr	27.15	305	P	P	17 14 14.5	+0.7
	0.4nm,0.6s,baz=126,slow=7.0,SNR=5.7						
CMAR				PcP	PcP	17 17 35.0	+1.2
	0.8nm,0.8s,baz=141,slow=1.1,SNR=6.6						
CMAR				LR	LR	17 25 42.9	
	comp=Z,26nm,18.4s,baz=45,slow=38						
CMMT	Chiang Mai	27.32	305	P	P	17 14 25.7	+10
CHTO	Chiang Mai	27.33	305	eP	P	17 14 15.5	0.0
	2.7nm,0.8s						
CHTO	Chiang Mai	27.33	305	P	P	17 14 25.8	+10
AS31	Alice Springs	29.39	158	eP	P	17 14 34.6	+0.8
	1.1nm,0.8s						
ASAR	Alice Springs	29.39	158	P	P	17 14 34.6	+0.8
	1.6nm,0.7s,baz=344,slow=16,SNR=28						
ASAR				PcP	PcP	17 17 37.8	-1.5
	0.6nm,0.8s,baz=355,slow=2.2,SNR=3.5						
AS01	Alice Springs	29.41	158	eP	P	17 14 34.2	+0.2
MORW	Morawa	33.01	190	eP	P	17 15 07.3	+1.7
	27nm,1.4s						
KSRS	Korea Array	34.10	8	LR	LR	17 31 05.0	
	comp=Z,15nm,18.1s,baz=235,slow=40						
FORT	Forrest	34.63	171	eP	P	17 15 21.4	+1.8
	24nm,0.8s						
MJAR	Matsushiro Arr	35.94	22	LR	LR	17 29 52.3	
	comp=Z,24nm,21.2s,baz=180,slow=36						
NWAO	Narrogin (SRO)	36.63	187	P	P	17 15 39.0	+2.2
	12nm,0.8s,baz=241,slow=9.2,SNR=5.4						
HHC	Hu-ho-hao-te	38.31	347	eP	P	17 16 03.2	+12
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.4s						
LSA	Lhasa	39.24	315	eP	P	17 15 58.2	-1.2
	comp=Z,6.9nm,1.5s						
STKA	Stephens Creek	39.80	154	eP	P	17 16 03.1	-0.3
	comp=Z,3.1nm,1.6s						
STKA				ePP	PP	17 17 35.6	0.0
STKA	Stephens Creek	39.80	154	P	P	17 16 03.4	-0.1
	comp=Z,1.8nm,0.6s,baz=338,slow=10,SNR=4.0						
STKA				PP	PP	17 17 34.3	-1.3
	comp=Z,2.7nm,0.7s,baz=318,slow=16,SNR=3.6						
GTA	Gaotai	41.04	333	⇑P	P	17 16 14.2	+0.4
GTA				pP	pP	17 16 23.2	-1.2
GTA				sP	sP	17 16 27.5	-1.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,46nm,6.0s						
GTA				LR	LR		
	comp=N,74nm,18.4s						
GTA				LR	LR		
	comp=E,87nm,17.1s						
GTA				LR	LR		
	comp=Z,73nm,18.7s						
SONA0	Songino Array	46.13	345	eP	P	17 16 54.5	-0.1
SONA0				ePcP	PcP	17 18 29.4	-0.8
SONM	Songino Array	46.13	345	P	P	17 16 54.5	-0.1
	comp=Z,0.6nm,0.6s,baz=160,slow=8.0,SNR=4.4						
SONM				PcP	PcP	17 18 29.4	-0.8
	comp=Z,0.5nm,0.8s,baz=204,slow=3.3,SNR=3.8						
SONA1	Songino Array	46.14	345	eP	P	17 16 53.6	-1.1
CAN	Canberra	46.15	149	eP	P	17 16 55.0	+0.2
	comp=Z,69nm,2.0s						
KLR	Kul'dur	46.19	9	P	P	17 16 53.6	-1.3
	comp=Z,0.8nm,0.7s,baz=176,slow=2.4,SNR=3.6						
MK01	Makanchi Array	55.15	327	eP	P	17 18 02.7	+0.2
MK31	Makanchi Array	55.17	328	eP	P	17 18 02.6	-0.1
	comp=Z,1.9nm,0.9s						
MK32	Makanchi Array	55.17	328	eP	P	17 18 03.0	+0.3
MK32				ePcP	PcP	17 19 02.0	-1.4
MKAR	Makanchi Array	55.17	328	eP	P	17 18 02.9	+0.1
	comp=Z,11nm,0.7s						
MKAR				PcP	PcP	17 19 02.0	-1.4
MKAR	Makanchi Array	55.17	328	P	P	17 18 03.0	+0.3
	comp=Z,1.2nm,0.5s,baz=124,slow=8.9,SNR=35						
MKAR				PcP	PcP	17 19 02.0	-1.4
	comp=Z,0.8nm,0.5s,baz=83,slow=3.9,SNR=5.3						
MAKZ	Makanchi	55.35	327	eP	P	17 18 04.1	+0.1

	comp=Z,3.9nm,1.1s						
KDJ	Kajisay	55.51	320	eP	P	17 18 06.7	+1.3
	comp=Z,3.2nm,0.7s						
AAK	Ala-Archa	57.49	320	eP	P	17 18 20.5	+1.1
	comp=Z,2.3nm,0.9s						
ZAA0	Zalesovo Array	58.74	335	eP	P	17 18 27.0	-0.8
	comp=Z,5.5nm,1.0s						
ZALV	Zalesovo Beam	58.74	335	eP	P	17 18 27.8	0.0
ZALV	Zalesovo Beam	58.74	335	P	P	17 18 27.9	+0.1
	comp=Z,1.9nm,0.7s,baz=120,slow=6.1,SNR=6.9						
GAR	Garm	58.74	314	eP	P	17 18 28.1	-0.2
	comp=Z,27nm,1.6s						
ZAA1	Zalesovo Array	58.74	335	eP	P	17 18 27.9	+0.1
KURBB	Kurchatov Arra	59.49	329	P	P	17 18 33.3	+0.3
	comp=Z,1.7nm,0.7s,baz=123,slow=7.0,SNR=13						
KURK	Kurchatov	59.50	329	eP	P	17 18 33.3	+0.2
KK31	Karatay Array	60.31	319	eP	P	17 18 38.9	0.0
	comp=Z,3.4nm,1.3s						
KKAR	Karatay Array	60.31	319	eP	P	17 18 39.0	+0.2
	comp=Z,3.4nm,1.3s						
SEY	Seymchan	63.25	15	P	P	17 18 58.8	+0.6
	comp=Z,1.4nm,0.9s,baz=211,slow=11,SNR=5.5						
THZ	Tophouse	64.42	140	eP	P	17 19 06.3	-0.1
	comp=Z,122nm,1.9s						
OXZ	Oxford	64.70	142	eP	P	17 19 06.7	-1.4
	comp=Z,113nm,1.8s						
BKZ	Black Stump Fm	65.55	136	eP	P	17 19 14.3	+0.5
	comp=Z,23nm,1.4s						
TIXI	Tiksi	68.09	2	eP	P	17 19 27.6	-1.6
	comp=Z,7.0nm,0.9s						
TIXI	Tiksi	68.09	2	P	P	17 19 28.4	-0.9
	comp=Z,2.5nm,0.5s,baz=150,slow=3.1,SNR=8.0						
NRIK	Noril'sk	69.54	348	P	P	17 19 38.1	-0.2
	comp=Z,4.1nm,0.6s,baz=135,slow=8.5,SNR=3.8						
BILL	Bilibino	70.88	16	eP	P	17 19 45.7	-0.9
	comp=Z,17nm,1.9s						
ARU	Arti	72.67	329	eP	P	17 19 57.0	-0.5
	comp=Z,7.1nm,1.0s						
RAYN	Ar Rayn	76.40	293	eP	P	17 20 19.9	0.0
	comp=Z,5.2nm,1.0s						
IM3	Indian Mountai	84.30	24	eP	P	17 21 00.9	-0.6
MLY	Manley	85.51	25	eP	P	17 21 07.1	-0.6
	comp=Z,10.0nm,1.4s						
BR101	Keskin Array S	86.63	309	eP	P	17 21 13.9	0.0
BRTR	Keskin Array B	86.64	309	P	P	17 21 13.9	0.0
	comp=Z,1.1nm,0.8s,baz=113,slow=5.6,SNR=8.1						
ARA0	ARCESS Array S	89.01	340	eP	P	17 21 24.3	-0.1
ARCES	ARCESS Array B	89.01	340	P	P	17 21 24.3	-0.1
	comp=Z,2.2nm,0.8s,baz=60,slow=5.4,SNR=4.2						
AKASG	Malin Array Be	89.15	321	P	P	17 21 24.7	-0.7
	comp=Z,0.6nm,0.7s,baz=71,slow=4.7,SNR=1.9						
AKBB	Malin Array Si	89.15	321	eP	P	17 21 24.2	-1.2
	comp=Z,17nm,2.0s						
BUR04	Bucovina Ar. S	92.09	318	eP	P	17 21 39.0	-0.3
BUR08	Bucovina Ar. S	92.10	318	eP	P	17 21 39.4	+0.1
	comp=Z,14nm,1.9s						
KWP	Kalwaria Pacla	93.44	320	epP	pP	17 21 56.7	-0.4
NV01	Mina Array Sit	110.31	47	ePdif	Pdif	17 23 00.1	-1.4
MOOW	Moose Ponds	113.12	39	ePdif	Pdif	17 23 14.5	+0.6
LPAZ	La Paz	163.79	142	PKP	PKPdf	17 28 35.9	+1.3
	comp=Z,1.1nm,0.8s,baz=191,slow=5.2,SNR=4.1						

NIED **12** *17:10:00, 41°.30N×142°.90E, h32^{km}, Mw3.8   Best double couple: M₀5.90000×10^{14} NP1:φₛ340.00000°, δ3.00000°, λ-5.00000°.   NP2:φₛ75.00000°, δ90.00000°, λ-93.00000°.*
JMA **12** *17:10:42.2±0.2, 41°.36N×142°.87E, h17^{km}±3^{km}, M3.9*
JMA Felt I J1.
IDC **12** *17:10:46.8±1.9, 41°.39N×142°.74E, h59^{km}±16^{km}, mb3.7/17, mb1 3.8/22, mb1mx3.7/50, mbtmp3.9/22, MS2.9/6, Ms1 2.9/6, ms1mx2.6/44, Error ellipse: s-maj=16.7km s-min=11.6km az=114.0*
ISC 12 17:10:41.5±1.3, **41°.40N**±0°.04×**142°.88E**±0°.04, **h15**^{km}±8^{km}, **n53**, σ**1^{s}19**/67, **mb4.0**/18, **3C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	Erimo	0.65	19	⇑P	Pb	17 10 55.2	+0.6
JEM				S	Sb	17 11 04.4	+0.9
JNBK	Urakawa-nobuka	0.89	354	⇓P	Pn	17 10 59.3	-0.1
JNBK				eS	Sn	17 11 12.0	0.0
JTHR	Tokachihiroo	0.95	19	⇑P	Pn	17 11 00.3	+0.1
JTHR				S	Sn	17 11 13.2	-0.3
JSHD	Hidakashinhida	1.06	343	P	Pn	17 11 02.7	+0.9
JSHD				eS	Sn	17 11 17.9	+1.7
JAHD	Aomorihigashid	1.17	264	P	Pg	17 11 03.3	-0.6
JAHD				eS	Sn	17 11 19.1	+0.2
JCH	Churui	1.27	16	⇓P	Pg	17 11 05.5	-0.4
JCH				eS	Sg	17 11 22.4	0.0
JOT	Ohata	1.38	270	P	Pb	17 11 06.4	-0.5
JOT				eS	Sn	17 11 24.0	-0.1
JIAM	Iburiatsuma	1.42	330	P	Pg	17 11 08.5	-0.2
JIAM				eS	Sg	17 11 27.6	+0.5
JBT2	Biratori 2	1.43	345	P	Pg	17 11 08.4	-0.6
JBT2				eS	Sg	17 11 28.1	+0.5
JKB	Kayabe	1.47	290	P	Pb	17 11 07.5	-0.9
JKB				S	Sb	17 11 26.7	-0.2
JTM	Tenmabayashi	1.50	246	⇑P	Pb	17 11 08.6	-0.4
JTM				eS	Sb	17 11 27.6	-0.2
JOB	Onbets	1.66	25	P	Pb	17 11 11.5	-0.3
JOB				eS	Sg	17 11 34.3	-0.7
JNB	Noboribetsu	1.74	309	P	Pn	17 11 11.5	+0.4
JNB				S	Sn	17 11 33.4	+0.3
JFR	Furan	1.78	353	P	Pb	17 11 12.9	-0.9
JFR				eS	Sb	17 11 35.7	-0.2
JEW	Eniwo	1.79	324	P	Pb	17 11 13.4	-0.6
JEW				eS	Sb	17 11 36.9	+0.7
JSR	Shiriuchi	1.85	275	P	Pb	17 11 14.2	-0.8
JSR				eS	Sb	17 11 37.8	-0.2
JYM2	Yakumo 2	2.01	292	P	Pb	17 11 16.1	-1.6
JAR	Ashorobuto	2.01	19	⇓P	Pn	17 11 15.6	+0.7
JAR				eS	Sn	17 11 40.8	+1.0
JAH	Hinai	2.09	235	P	Pb	17 11 17.2	-1.8
JAH				eS	Sb	17 11 43.0	-1.8
JAK	Akkeshi	2.09	40	P	Pn	17 11 16.3	+0.3
JAK				eS	Sn	17 11 41.0	-0.8
ASAJ	Asahikawa	2.72	356	P	Pn	17 11 26.5	+1.8
ASAJ				S	Sb	17 12 00.8	-2.3
ASAJ	Asahikawa	2.72	356	P	Pn	17 11 26.5	+1.8
	16nm,0.3s,baz=204,slow=14,SNR=143						
ASAJ				S	Sb	17 12 00.8	-2.3
	12nm,0.3s,baz=18,slow=20,SNR=5.1						
ASAJ				LR	LR	17 12 51.4	
	comp=Z,197nm,20.4s,baz=179,slow=46						
MAT	Matsushiro	6.06	218	P	Pn	17 12 13.8	+3.2
MJAR	Matsushiro Arr	6.06	218	P	Pn	17 12 13.4	+2.8
	0.3nm,0.3s,baz=27,slow=13,SNR=28						
MJAR				LR	LR	17 14 58.3	
	comp=Z,89nm,20.5s,baz=40,slow=42						
USRK	Ussuriysk Ar.	8.48	293	P	Pn	17 12 45.9	+2.1
	0.1nm,0.3s,baz=116,slow=13,SNR=4.2						
KLR	Kul'dur	11.07	319	P	Pn	17 13 22.1	+2.9
	0.1nm,0.3s,baz=124,slow=6.1,SNR=2.8						
KLR				LR	LR	17 17 42.2	
	comp=Z,64nm,21.0s,baz=138,slow=38						
PETK	Petropavlovsk-	15.40	35	P	Pn	17 14 20.1	+2.0
	0.2nm,0.3s,baz=252,slow=13,SNR=7.9						
PETK				LR	LR	17 20 20.7	
	comp=Z,34nm,19.3s,baz=303,slow=37						
MA2	Magadan	18.85	12	P	P	17 14 59.6	-1.1
	0.2nm,0.3s,baz=173,slow=8.8,SNR=6.0						
SEY	Seymchan	22.29	11	P	P	17 15 35.4	-2.5
	2.4nm,0.6s,baz=183,slow=7.4,SNR=18						
SONM	Songino Array	26.57	296	P	P	17 16 18.7	-0.3
	0.4nm,0.5s,baz=78,slow=8.3,SNR=7.2						
H11N2	WAKE ISLAND Hy	29.73	129	T	T	17 48 08.7	
	baz=323,slow=75,SNR=117						
H11N1	WAKE ISLAND Hy	29.74	129	T	T	17 48 11.1	
	baz=323,slow=75,SNR=110						
H11N3	WAKE ISLAND Hy	29.74	129	T	T	17 48 10.1	
	baz=323,slow=75,SNR=95						
H11S1	WAKE ISLAND Hy	30.58	131	T	T	17 49 14.4	
	baz=324,slow=76,SNR=134						
H11S3	WAKE ISLAND Hy	30.58	131	T	T	17 49 17.9	
	baz=324,slow=76,SNR=78						
H11S2	WAKE ISLAND Hy	30.60	131	T	T	17 49 12.6	
	baz=324,slow=76,SNR=89						
TIXI	Tiksi	31.12	351	LR	LR	17 30 22.8	
	comp=Z,24nm,19.2s,baz=54,slow=38						
ZALV	Zalesovo Beam	39.95	309	P	P	17 18 14.8	-0.2
	2.4nm,0.7s,baz=91,slow=8.2,SNR=10						
ZALV				LR	LR	17 36 00.0	
	comp=Z,30nm,19.1s,baz=70,slow=38						
MKAR	Makanchi Array	42.90	298	P	P	17 18 39.0	-0.4
	0.7nm,0.6s,baz=72,slow=8.5,SNR=5.3						
KURBB	Kurchatov Arra	44.33	305	P	P	17 18 50.0	-0.8
	1.0nm,0.4s,baz=77,slow=9.0,SNR=6.2						
ILAR	Eielson Array	45.23	35	P	P	17 18 58.0	+0.3
	4.0nm,0.8s,baz=274,slow=6.7,SNR=52						
INK	Inuvik	50.00	29	P	P	17 19 35.6	+0.9
	5.0nm,0.5s,baz=297,slow=6.8,SNR=36						
RES	Resolute Bay	58.10	15	P	P	17 20 33.5	-0.1
	3.0nm,0.6s,baz=316,slow=8.3,SNR=13						
YKA	Yellowknife Ar	59.48	32	P	P	17 20 43.5	+0.1
	0.2nm,0.4s,baz=308,slow=6.9,SNR=6.9						
ARCES	ARCESS Array B	60.33	339	P	P	17 20 47.8	-1.4
	2.9nm,1.1s,baz=52,slow=12,SNR=2.9						
WRA	Warramunga Arr	61.54	189	P	P	17 20 57.0	-0.9
	0.9nm,0.7s,baz=6.8,slow=6.9,SNR=11						
ASAR	Alice Springs	65.27	189	P	P	17 21 22.4	-0.2
	1.0nm,0.8s,baz=8.9,slow=7.9,SNR=13						
FINES	FINESS Array B	65.50	332	P	P	17 21 22.8	-0.9
	1.6nm,0.6s,baz=34,slow=5.3,SNR=8.6						
NOA	NORSAR Array B	70.60	337	P	P	17 21 55.1	-0.8
	0.3nm,0.6s,baz=38,slow=5.9,SNR=2.5						
NVAR	Mina Array Bea	71.51	55	P	P	17 22 02.5	+0.6
	0.6nm,0.6s,baz=302,slow=6.1,SNR=6.0						
AKASG	Malin Array Be	71.55	322	P	P	17 22 00.9	-0.8
	0.6nm,0.3s,baz=43,slow=6.6,SNR=2.8						
PDAR	Pinedale Array	73.83	47	P	P	17 22 16.0	+0.3
	0.3nm,0.5s,baz=228,slow=1.9,SNR=5.2						
TXAR	Lajitas Array	86.58	53	P	P	17 23 24.6	+0.1
	0.4nm,0.7s,baz=286,slow=3.6,SNR=2.4						

SJA **12** *17:11:36.0±0.8, 24°.10S×66°.74W, h223^{km}±16^{km}, ML2.9, MW3.1*
ISCJB **12** *17:11:37.5±0.9, 24°.19S±0°.04×66°.90W±0°.06, h203^{km}±10^{km}, Error ellipse: s-maj=10.5km s-min=4.5km az=144.7*
GUC **12** *17:11:38.3±0.4, 24°.07S×67°.34W, h240^{km}±7^{km}, ML4.0*
ISC 12 17:11:36.0±2.2, **24°.16S**±0°.06×**66°.84W**±0°.08, **h220**^{km}±20^{km}, **n18**, σ**1^{s}57**/32, **6C-2D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.34	115	eP	Pn	17 12 11.1	+0.7
SLA				IAML		17 12 13.2	
	comp=Z,64nm,0.4s						
SLA				eS	S	17 12 36.1	-1.0
LVC	Limon Verde	2.45	309	⇓iP	Pn	17 12 22.4	+1.4
LVC				i S	S	17 12 55.9	-0.1
PB15	IPOC Station P	2.59	291	⇑iP	Pn	17 12 23.9	+1.5
PB15				i S	S	17 12 57.6	-0.8
GO02	Mina Guanaco	2.70	248	⇓iP	Pn	17 12 25.0	+1.4
GO02				i S	S	17 13 01.0	+0.3
GO02				IAML		17 13 05.0	
	comp=E,434nm,0.1s						
PB06	IPOC Station P	2.90	299	⇑iP	Pn	17 12 27.0	+1.3
PB06				i S	S	17 13 03.2	-1.3
PB06				IAML		17 13 05.6	
	comp=N,366nm,0.1s						
AHML	Horco Molle	2.95	153	eP	Pn	17 12 27.2	+1.1
AHML				IAML		17 12 28.2	
	comp=Z,18nm,0.8s						
AHML				eS	S	17 13 05.1	-0.2
PB09	IPOC Station P	3.23	316	eP	Pn	17 12 31.0	+1.4
PB09				i S	S	17 13 10.8	-0.6
PB09				IAML		17 13 13.5	
	comp=N,128nm,0.2s						
PB05	IPOC Station P	3.35	292	⇑iP	Pn	17 12 32.0	+1.1
PB05				i S	S	17 13 11.5	-2.3
PB05				IAML		17 13 16.0	
	comp=E,152nm,0.3s						
PB03	IPOC Station P	3.41	307	⇑iP	Pn	17 12 32.5	+0.9
PB03				i S	S	17 13 13.0	-2.0
PB03				IAML		17 13 16.4	
	comp=E,268nm,0.1s						
PB10	IPOC Station P	3.46	280	⇑iP	Pn	17 12 33.5	+1.4
PB04	IPOC Station P	3.55	300	eP	Pn	17 12 34.0	+0.7
PB04				i S	S	17 13 16.1	-1.9
PB07	IPOC Station P	3.71	310	⇑iP	Pn	17 12 36.0	+0.8
PB07				i S	S	17 13 18.9	-2.6
PB01	IPOC Station P	3.95	321	eP	Pn	17 12 38.6	+0.5
PB02	IPOC Station P	3.99	314	eP	Pn	17 12 38.9	+0.3
PB08	IPOC Station P	4.54	331	eP	Pn	17 12 47.5	+2.0
ACLC	CERRO LA CRUZ	5.25	181	eP	Pn	17 12 55.4	+1.2
ACLC				eS	S	17 13 54.2	-1.8
AGUA	GUANDACOL	5.51	195	eP	Pn	17 12 59.3	+1.9
AGUA				eS	S	17 14 01.2	-0.6
APLL	PUNTA DE LOS L	6.22	178	eP	Pn	17 13 07.0	+0.6
APLL				eS	S	17 14 14.3	-3.9

JSN **12** *17:15:28.3±1.0, 19°.10N×72°.75W, h0^{km}±999^{km}, MD4.7*
IDC **12** *17:15:35.1±1.2, 18°.16N×73°.68W, h0^{km}, mb3.5/3, mb1 4.0/4, mb1mx3.5/40, mbtmp3.7/4, ML3.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/30, Error ellipse: s-maj=43.8km s-min=31.6km az=65.0*
ISCJB **12** *17:15:39.8±1.1, 18°.03N±0°.08×73°.39W±0°.10, h33^{km}, mb3.5/3, Error ellipse: s-maj=15.1km s-min=7.9km az=144.5*
ISC 12 17:15:40.0±0.9, **18°.14N**±0°.08×**73°.4W**±0°.1, **h35**^{km}, **n26**, σ**1^{s}98**/27, **mb3.4**/3, **2D, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GWJ	Greenwich	3.17	269	⇓iP	Pn	17 16 28.4	+0.8
HOJ	Hope	3.19	268	i P	Pn	17 16 28.9	+1.1
STH	Stony Hill	3.25	269	⇓iP	Pn	17 16 29.5	+1.0
PCJ	Portland Cotta	3.60	264	i P	Pn	17 16 35.6	+2.2
MCJ	Malvern	4.09	268	i P	Pn	17 16 41.8	+1.7
MCJ				i S	Sn	17 17 35.9	+9.0
SJG	San Juan	6.89	89	LR	LR	17 20 06.6	
	comp=Z,75nm,20.2s,baz=110,slow=38						
CODC	Agustn Codazz	8.16	180	eP	Pn	17 17 34.4	-1.6
CODC	Agustn Codazz	8.16	180	eP	Pn	17 17 34.4	-1.6
SMLC	San Martn de	9.31	184	eP	Pn	17 17 54.5	+2.8
SMLC				eS	Sn	17 19 34.5	-0.8
SMLC	San Martn de	9.31	184	eP	Pn	17 17 54.5	+2.8
SMLC				eS	Sn	17 19 34.5	-0.8
SDV	Santo Domingo	9.58	163	eP	Pn	17 17 57.3	+1.5
SDV	Santo Domingo	9.58	163	eP	Pn	17 17 57.3	+1.5
SDV	Santo Domingo	9.58	163	Pn	Pn	17 17 56.8	+1.1
	2.2nm,0.3s,baz=35,slow=5.4,SNR=10						
SDV				Sn	Sn	17 19 38.9	-3.4
	1.2nm,0.3s,baz=8.1,slow=19,SNR=5.5						
UREC	San Jos de Ur	10.54	192	eP	Pn	17 18 10.5	+1.9
UREC	San Jos de Ur	10.54	192	eP	Pn	17 18 10.5	+1.9
DBBC	Dabeiba	11.39	194	eP	Pn	17 18 21.2	+0.8
DBBC	Dabeiba	11.39	194	eP	Pn	17 18 21.2	+0.8
PTBC	PUERTO BERRIO,	11.58	185	eP	Pn	17 18 25.5	+2.6
PTBC	PUERTO BERRIO,	11.58	185	eP	Pn	17 18 25.5	+2.6
HELC	Santa Helena	12.06	190	eP	Pn	17 18 32.3	+2.5
HELC	Santa Helena	12.06	190	eP	Pn	17 18 32.3	+2.5
NVAR	Mina Array Bea	43.90	307	P	P	17 23 43.9	+0.2
	0.4nm,0.7s,baz=92,slow=8.5,SNR=2.4						
YKA	Yellowknife Ar	52.68	337	P	P	17 24 48.3	-2.4
	0.4nm,0.9s,baz=129,slow=8.3,SNR=4.6						
GERES	GERESS Array B	74.68	43	P	P	17 27 18.8	+2.6
	0.9nm,0.8s,baz=274,slow=2.6,SNR=4.3						
WRA	Warramunga Arr	153.73	262	PKPbc	PKPbc	17 35 34.7	-1.5
	0.4nm,0.7s,baz=69,slow=1.6,SNR=5.6						
ASAR	Alice Springs	153.94	253	PKPab	PKPab	17 35 49.4	-0.5
	0.2nm,0.5s,baz=103,slow=4.2,SNR=4.6						

ISCJB **12** *17:37:21.9±0.2, 37°.41N±0°.02×57°.43E±0°.03, h14^{km}, mb3.8/18, MS3.2/3, Error ellipse: s-maj=3.5km s-min=3.0km az=164.3*
IDC **12** *17:37:22.6±1.0, 37°.37N×57°.29E, h0^{km}, mb3.6/14, mb1 3.9/19, mb1mx3.8/40, mbtmp3.7/19, ML3.7/5, MS3.1/5, Ms1 3.2/5, ms1mx2.7/42, Error ellipse: s-maj=19.3km s-min=8.7km az=164.0*
TEH **12** *17:37:22.0, 37°.32N×57°.37E, h10^{km}, ML3.8*
NEIC **12** *17:37:22.0±0.0, 37°.32N×57°.37E, h10^{km}, mb3.9/16, MN3.8(TEH), After TEH.*
NEIC Felt at Bojnurd.
THR **12** *17:37:24.2, 37°.42N×57°.25E, h40^{km}, ML3.7*
NNC **12** *17:37:34.2±3.6, 38°.36N×57°.82E, h0^{km}, mb4.1, Error ellipse: s-maj=42.5km s-min=27.4km az=68.0*
ISC 12 17:37:22.9±0.4, **37°.45N**±0°.03×**57°.45E**±0°.03, **h14**^{km}, **n105**, σ**2^{s}28**/112, **mb3.9**/18, **MS3.5**/3, **1C-5D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJRD	Bojnurd	0.25	352	ePg	Pn	17 37 32.6	+0.2
BJRD	Bojnurd	0.25	352	ePg	Pn	17 37 32.6	+0.2
BJRD				eSg	Sn	17 37 39.5	+1.3
ISFR	Sfrayin	0.59	132	ePg	Pg	17 37 33.2	-1.3
ISFR				eSg	Sb	17 37 43.0	-0.4
ISFR				IAMB	IAmb	17 37 44.0	
	comp=Z,63µm,0.2s						
GEYT	Alibeck	0.71	47	Pg	Pn	17 37 38.5	-0.1
	comp=Z,40nm,0.3s,baz=228,slow=21,SNR=107						
GEYT				Lg	Lg	17 37 50.9	
	comp=Z,104nm,0.3s,baz=227,slow=15,SNR=25						
GEYT				LR	LR	17 38 13.1	
	comp=Z,566nm,19.3s,baz=285,slow=59						
GYA0	ALIBECK ARRAY	0.71	47	ePg	Pn	17 37 38.5	-0.1
GYA0B	ALIBECK ARRAY	0.71	47	ePg	Pn	17 37 38.5	-0.1
IEMG	Emamgholi	0.95	92	ePg	Pn	17 37 41.6	-0.6
IEMG				IAMB	IAmb	17 38 04.1	
	comp=Z,11µm,0.3s						
SBZV	Sabzevar	1.07	173	ePg	Pb	17 37 40.0	-3.3
SBZV				IAMB	IAmb	17 37 58.5	
	comp=Z,0.0nm,0.5s						
IKRD	Kardeh	1.08	128	ePn	Pn	17 37 55.0	+11
IKRD				IAMB	IAmb	17 38 29.3	
	comp=Z,10µm,0.7s						
MRVT	Maraveh tapeh	1.10	281	ePg	Pb	17 37 42.6	-1.2
MRVT	Maraveh tapeh	1.10	281	ePg	Pb	17 37 42.6	-1.2
MRVT				eSg	Sb	17 37 55.6	-2.5
IAKL	Akhelmad	1.34	129	ePg	Pn	17 37 46.8	-0.7
IAKL				IAMB	IAmb	17 38 09.9	
	comp=Z,8µm,0.5s						
IPAY	Payeh	1.59	128	ePn	Pn	17 37 50.1	-0.7
IPAY				IAMB	IAmb	17 38 24.9	
	comp=Z,14µm,0.6s						
IMND	Minoodasht	1.64	264	ePn	Pn	17 37 50.4	-0.9
IMND				IAMB	IAmb	17 38 19.8	
	comp=Z,13µm,0.8s						
SHRO	Shahrood	1.86	219	ePn	Pn	17 37 53.5	-1.0
SHRO				ePn	Pn	17 37 53.5	-1.0
SHRO	Shahrood	1.86	219	eAML	AML	17 38 19.0	
	comp=E,758nm,0.6s						
SHRO	Shahrood	1.86	219	ePn	Pn	17 37 53.5	-1.0
SHRO				eSg	Sn	17 38 18.0	+0.1
IMOG	Moghan	2.02	131	ePn	Pb	17 37 59.0	-0.6
IMOG				IAMB	IAmb	17 38 04.1	
	comp=Z,7µm,0.5s						
IMYA	Miami	2.39	117	ePn	Pb	17 38 04.2	-1.7
IMYA				IAMB	IAmb	17 38 57.1	
	comp=Z,5µm,0.8s						
IANJ	Anjilo	3.47	236	ePn	Pn	17 38 17.2	+0.5
IANJ				IAMB	IAmb	17 39 26.3	
	comp=Z,3µm,0.7s						
TNSJ	Nastanj	3.55	191	ePn	Pn	17 38 17.2	-0.4
TNSJ				IAMB	IAmb	17 39 22.5	
	comp=Z,0.0nm,0.7s						
ISHM	Shahmirzad	3.73	245	ePn	Pn	17 38 21.9	+1.6
ISHM				IAMB	IAmb	17 39 28.7	
	comp=Z,3µm,0.6s						
TKDS	Koohdasht(Taba	3.84	184	ePn	Pn	17 38 21.2	-0.5
TKDS				IAMB	IAmb	17 39 29.5	
	comp=Z,0.0nm,1.6s						
IALA	Alasht	3.97	251	ePn	Pn	17 38 25.4	+1.8
IALA				IAMB	IAmb	17 38 43.4	
	comp=Z,2µm,0.5s						
ILAS	Lasjerd	4.17	242	ePn	Pn	17 38 26.6	+0.2
ILAS				IAMB	IAmb	17 39 39.9	
	comp=Z,2µm,0.5s						
IFIR	Firoozkooh	4.19	246	ePn	Pn	17 38 27.0	+0.3
IFIR				IAMB	IAmb	17 38 40.5	
	comp=Z,765nm,0.3s						
IPRN	Peran	4.28	255	ePn	Pn	17 38 28.6	+0.9
IPRN				IAMB	IAmb	17 39 43.4	
	comp=Z,2µm,0.6s						
SHRT	Shahrakht	4.44	148	ePn	Pn	17 38 31.6	+1.6
SHRT	Shahrakht	4.44	148	ePn	Pn	17 38 31.6	+1.6
TPRV	Parvadeh(Tabas	4.46	188	ePn	Pn	17 38 29.7	-0.4
TPRV				IAMB	IAmb	17 39 47.3	
	comp=Z,0.0nm,1.2s						
IMON	Monand	4.62	156	ePn	Pn	17 38 33.6	+1.1
IMON				IAMB	IAmb	17 40 03.2	
	comp=E,1µm,0.5s						
ITEG	Tejag	4.67	166	ePn	Pn	17 38 33.6	+0.5
ITEG				IAMB	IAmb	17 39 49.5	
	comp=Z,651nm,0.8s						
IDMV	Damavand	4.75	248	ePn	Pn	17 38 34.9	+0.5
IDMV				IAMB	IAmb	17 38 58.2	
	comp=Z,626nm,0.5s						
IDAH	Dahanechah	5.10	156	ePn	Pn	17 38 40.0	+0.9
IDAH				IAMB	IAmb	17 40 20.9	
	comp=N,955nm,1.4s						
IKOO	Kooshah	5.17	165	ePn	Pn	17 38 39.4	-0.7
IKOO				IAMB	IAmb	17 39 16.7	
	comp=Z,290nm,0.1s						
ANAR	Anarak	5.23	217	ePn	Pn	17 38 39.8	-1.0
ISFB	Sefidab	5.24	235	ePn	Pn	17 38 39.7	-1.2
ISFB				IAMB	IAmb	17 39 07.5	
	comp=Z,359nm,0.5s						
KRSH	Karshahi	5.55	233	ePn	Pn	17 38 44.9	-0.3
KRSH				IAMB	IAmb	17 40 22.7	
	comp=Z,0.0nm,1.2s						
IZEF	Zefreh	6.18	224	ePn	Pn	17 38 54.0	0.0
IZEF				IAMB	IAmb	17 41 03.0	
	comp=Z,190nm,0.7s						
IKLH	Kolahrood	6.33	231	ePn	Pn	17 38 55.9	-0.1
IKLH				IAMB	IAmb	17 40 52.2	
	comp=Z,326nm,1.0s						
IRAM	Ramesheh	7.01	218	IAMB	IAmb	17 39 08.8	
	comp=Z,143nm,0.4s						
IRAM				ePn	Pn	17 39 04.8	-0.5
KBL	Kabul	9.83	104	ePn	Pn	17 39 43.2	-0.8
GAR	Garm	10.24	77	ePn	Pn	17 39 48.2	-1.3
GNI	Garni	10.28	289	ePn	Pn	17 39 51.4	+1.3
BTK	Batken	10.76	72	ePn	Pn	17 39 55.3	-1.3
KK31	Karatay Array	11.46	56	ePn	Pn	17 40 07.3	+1.2
KKAR	Karatay Array	11.46	56	ePn	Pn	17 40 07.4	+1.4
SIRT	Sirnak	11.93	275	ePn	Pn	17 40 11.2	-1.5
AB31	Akbulak array	11.94	8	⇓P	Pn	17 40 12.1	-0.5
	comp=Z,1.1nm,0.7s,baz=186,slow=14						
AB31				⇓S	Sn	17 42 17.8	-7.7
	comp=Z,1.5nm,0.6s,baz=189,slow=28						
ABKAR	Akbulak array	11.94	8	ePn	Pn	17 40 11.7	-0.8
KBZ	Khabaz	12.71	304	Pn	Pn	17 40 21.9	-1.2
	comp=Z,0.5nm,0.3s,baz=164,slow=5.4,SNR=15						
KBZ				Sn	Sn	17 42 38.1	-6.2
	comp=Z,0.1nm,0.3s,baz=172,slow=15,SNR=2.3						
KVAR	Kislovodsk Arr	12.94	305	Pn	Pn	17 40 25.7	-0.7
	baz=104,slow=12,SNR=8.8						
KVAR				Sn	Sn	17 42 43.5	-6.7
	baz=147,slow=17,SNR=4.0						
KIV	Kislovodsk	12.95	305	ePn	Pn	17 40 23.4	-3.0
AKTO	Aktyubinsk	12.99	2	⇓P	Pn	17 40 27.6	+0.7
	comp=Z,7.9nm,1.2s						
AKTO				⇑S	Sn	17 42 44.2	-6.9
	comp=Z,2.4nm,0.8s						
AKTO	Aktyubinsk	12.99	2	Pn	Pn	17 40 28.6	+1.7
	comp=Z,0.6nm,0.3s,baz=176,slow=15,SNR=6.8						
AKTO				Sn	Sn	17 42 43.1	-8.0
	comp=Z,0.2nm,0.3s,baz=306,slow=19,SNR=2.6						
AKTO				LR	LR	17 46 46.6	
	comp=Z,56nm,19.3s,baz=179,slow=43						
NIL	Nilore	13.41	102	ePn	Pn	17 40 31.8	-1.0
AAK	Ala-Archa	14.04	63	ePn	Pn	17 40 40.5	-1.0
AAK	Ala-Archa	14.04	63	Pn	Pn	17 40 39.9	-1.6
	comp=Z,0.1nm,0.3s,baz=257,slow=11,SNR=4.4						
AAK				Sn	Sn	17 43 10.6	-6.5
	comp=Z,0.0nm,0.3s,baz=22,slow=19,SNR=1.9						
AAK				LR	LR	17 47 02.6	
	comp=Z,66nm,19.7s,baz=240,slow=41						
KSH	Kashi	14.65	76	P	Pn	17 40 45.3	-4.6
KSH				pP	P	17 40 52.7	-3.4
KSH				PP	PnPn	17 40 57.4	-0.3
KSH				S	Sn	17 43 21.5	-11
KSH				sS	S	17 43 30.1	-21
KSH				SS	SnSn	17 43 40.9	-3.6
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,160nm,4.8s						
KSH				LR	LR		
	comp=N,250nm,5.3s						
KSH				LR	LR		
	comp=E,230nm,4.8s						
KSH				LR	LR		
	comp=Z,350nm,6.6s						

KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NRN	Naryn	14.87	69	ePn	Pn	17 40 51.5	-1.4
KDJ	Kajisay	15.86	67	ePn	Pn	17 41 05.0	-0.9
	comp=Z,5.2nm,0.9s						
TARG	Taragay, Kyrgy	16.25	68	ePn	Pn	17 41 09.9	-1.2
	comp=Z,7.5nm,0.9s						
PRZ	Przheval'sk	16.81	66	ePn	Pn	17 41 17.6	-0.5
	comp=Z,14nm,1.3s						
RAYN	Ar Rayn	17.26	220	ePn	Pn	17 41 22.8	-0.9
	comp=Z,4.4nm,1.2s						
BRVK	Borovoye	17.99	26	ePn	Pn	17 41 31.9	-0.5
	comp=Z,3.8nm,0.8s						
BRVK	Borovoye	17.99	26	⇓P	P	17 41 34.3	+1.5
	comp=Z,7.7nm,1.4s						
BVA0	Borovoye Array	18.00	26	⇓P	P	17 41 34.0	+1.0
	comp=Z,6.3nm,0.9s,baz=213,slow=9.1,SNR=4.7						
BVAR	Borovoye Array	18.00	26	P	P	17 41 34.9	+1.9
	comp=Z,0.4nm,0.3s,baz=212,slow=9.8,SNR=10						
BR131	Keskin Array S	18.75	284	eP	P	17 41 40.0	-1.4
	comp=Z,12nm,1.8s						
BRTR	Keskin Array B	18.75	284	P	Pn	17 41 45.5	+3.6
	comp=Z,0.0nm,0.3s,baz=75,slow=9.4,SNR=4.3						
ARU	Arti	19.00	2	eP	Pn	17 41 45.2	+0.5
	comp=Z,5.8nm,1.0s						
KURBB	Kurchatov Arra	19.98	42	P	Pn	17 41 58.6	+2.2
	comp=Z,1.3nm,0.8s,baz=240,slow=10,SNR=7.4						
KURK	Kurchatov	20.08	42	eP	P	17 41 56.3	+0.5
	comp=Z,2.6nm,0.8s						
MAKZ	Makanchi	20.38	55	eP	Pn	17 42 01.2	0.0
	comp=Z,3.2nm,0.8s						
MK01	Makanchi Array	20.58	55	eP	P	17 42 02.2	+0.9
MK31	Makanchi Array	20.58	55	eP	Pn	17 42 02.6	-0.9
	comp=Z,2.4nm,0.9s						
MKAR	Makanchi Array	20.58	55	eP	P	17 42 02.5	+1.2
	comp=Z,15nm,0.9s						
MKAR	Makanchi Array	20.58	55	P	Pn	17 42 04.9	+1.4
	comp=Z,1.2nm,0.6s,baz=247,slow=9.3,SNR=17						
MKAR				LR	LR	17 51 24.1	
	comp=Z,30nm,21.4s,baz=228,slow=41						
TIRR	Tirgusor	22.94	297	eP	P	17 42 27.6	+1.0
	comp=Z,24nm,1.6s						
WMQ	Urumqi	23.73	65	eP	P	17 42 37.6	+3.0
WMQ				pP	sP	17 42 42.0	+0.9
WMQ				sP	pP	17 42 45.9	+6.7
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.9s						
AKASG	Malin Array Be	24.05	312	P	P	17 42 38.1	+0.7
	comp=Z,1.6nm,0.6s,baz=112,slow=8.4,SNR=2.6						
AKBB	Malin Array Si	24.05	312	eP	P	17 42 38.5	+1.1
	comp=Z,5.1nm,0.6s						
KIEV	Kiev	24.06	312	eP	P	17 42 38.8	+1.3
	comp=Z,4.9nm,0.6s						
AK11	Malin Array Si	24.07	312	eP	P	17 42 38.0	+0.4
MLR	Muntele Rosu	24.82	299	eP	P	17 42 46.7	+2.1
	comp=Z,30nm,1.9s						
MLR	Muntele Rosu	24.82	299	P	P	17 42 46.4	+1.7
	comp=Z,1.7nm,0.7s,baz=150,slow=20,SNR=2.1						
ZAA0	Zalesovo Array	25.02	40	eP	P	17 42 47.5	+1.3
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	25.02	40	eP	P	17 42 47.8	+1.6
ZALV	Zalesovo Beam	25.02	40	P	P	17 42 48.9	+2.7
	comp=Z,1.5nm,0.7s,baz=250,slow=9.1,SNR=6.2						
BUR04	Bucovina Ar. S	25.67	304	eP	P	17 42 53.0	+0.6
BUR08	Bucovina Ar. S	25.68	304	eP	P	17 42 53.9	+1.4
FIA1	FINESS Array S	30.96	331	eP	P	17 43 42.1	+2.8
FINES	FINESS Array B	30.96	331	P	P	17 43 41.7	+2.5
	comp=Z,1.3nm,0.9s,baz=139,slow=13,SNR=3.1						
ARCES	ARCESS Array B	36.46	342	P	P	17 44 30.5	+3.6
	comp=Z,2.7nm,1.0s,baz=154,slow=11,SNR=3.7						
SONM	Songino Array	36.91	58	P	P	17 44 34.7	+3.5
	comp=Z,0.1nm,0.3s,baz=266,slow=9.4,SNR=3.1						
NC405	NORSAR Array S	36.96	325	eP	P	17 44 30.8	-0.6
NB2	NORSAR Subarra	37.17	324	P	P	17 44 35.4	+2.2
	comp=Z,6.4nm,1.2s,baz=111,slow=8.6						
NOA	NORSAR Array B	37.17	324	P	P	17 44 35.8	+2.6
	comp=Z,1.1nm,0.8s,baz=110,slow=8.1,SNR=6.2						
CMAR	Chiang Mai Arr	40.85	106	P	P	17 45 06.9	+2.5
	comp=Z,0.8nm,0.7s,baz=302,slow=8.2,SNR=8.2						
HHC	Hu-ho-hao-te	41.55	68	eP	P	17 45 10.4	+0.4
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,69nm,6.4s						
ESDC	Sonseca Array	47.24	293	P	P	17 45 57.6	+2.1
	comp=Z,0.4nm,0.5s,baz=60,slow=6.8,SNR=4.0						
TORD	Torodi Ar. Bea	55.04	259	P	P	17 46 53.6	-0.7
	comp=Z,0.7nm,0.8s,baz=113,slow=3.9,SNR=4.1						
MJAR	Matsushiro Arr	62.49	64	LR	LR	18 16 15.0	
	comp=Z,29nm,18.1s,baz=85,slow=37						
ILAR	Eielson Array	76.33	10	P	P	17 49 14.3	+3.3
	comp=Z,0.4nm,0.8s,baz=340,slow=5.7,SNR=4.8						
ILAR				LR	LR	18 26 07.5	
	comp=Z,25nm,18.1s,baz=294,slow=38						
YKA	Yellowknife Ar	80.19	356	P	P	17 49 35.8	+3.4
	comp=Z,0.4nm,0.7s,baz=1.3,slow=6.2,SNR=10						

IDC 12 17:43:08.7±2.1, 1°.24S×128°.36E, h0^{km}, mb3.1/2, mb1 3.2/3, mb1mx3.1/34, mbtmp3.0/3, ML3.2/1, Error ellipse: s-maj=157.6km s-min=25.6km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.49	163	P	P	17 47 37.5	-0.1
	0.1nm,0.3s,baz=343,slow=12,SNR=4.9						
ASAR	Alice Springs	22.94	167	P	P	17 48 14.8	0.0
	0.5nm,0.5s,baz=346,slow=12,SNR=11						
MKAR	Makanchi Array	62.55	326	P	P	17 53 34.5	0.0
	0.1nm,0.4s,baz=120,slow=8.5,SNR=2.9						

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*ISCJB **12** 17:48:30.2±0.7, 10°.47S±0°.08×165°.2E±0°.1, h10^{km}, mb4.1/13, MS3.5/12, Error ellipse: s-maj=15.7km s-min=9.4km az=152.4*

*IDC **12** 17:48:31.2±1.4, 10°.13S×165°.18E, h0^{km}, mb3.8/7, mb1 3.9/9, mb1mx3.7/38, mbtmp3.8/9, ML3.8/2, MS3.5/14, Ms1 3.5/14, ms1mx3.3/32, Error ellipse: s-maj=38.1km s-min=25.7km az=119.0*

*NEIC **12** 17:48:32.0±0.8, 10°.41S×165°.12E, h10^{km}, mb4.5/6, Error ellipse: s-maj=18.1km s-min=10.8km az=62.0*

ISC 12 17:48:32.1±0.8, 10°.4S±0°.1×165°.04E±0°.10, h10^{km}, n41, σ1^{s}.52/25, mb4.1/13, MS3.4/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.11	281	ePn	Pn	17 49 46.2	-2.7
HNR				eSn	Sn	17 50 46.8	-1.2
HNR	Honiara	5.11	281	Pn	Pn	17 49 50.5	+1.6
	3.7nm,0.3s,baz=194,slow=4.2,SNR=3.6						
HNR				Sn	Sn	17 50 46.8	-1.2
	42nm,0.3s,baz=172,slow=14,SNR=16						
HNR				LR	LR	17 51 56.4	
	comp=Z,476nm,18.5s,baz=182,slow=40						
MARNC	Mare, Loyalty	11.37	166	ePn	Pn	17 51 14.2	-0.5
DZM	Mont Dzumac	11.67	174	ePn	Pn	17 51 25.7	+6.8
	13nm,0.7s						
DZM				eLR	LR	17 53 59.0	
	comp=Z,206nm,22.4s						
DZM	Mont Dzumac	11.67	174	Pn	Pn	17 51 24.8	+5.9
	0.4nm,0.3s,baz=330,slow=20,SNR=6.3						
DZM				LR	LR	17 55 07.7	
	comp=Z,147nm,19.6s,baz=30,slow=33						
OUENC	Ouen Island, N	12.06	172	ePn	Pn	17 51 21.9	-2.3
PINNC	Pines Island,	12.35	170	ePn	Pn	17 51 28.2	+0.2
COEN	Coen	21.66	258	eP	P	17 53 24.3	+1.2
	37nm,1.6s						
RAO	Raoul Island	24.60	142	LR	LR	18 00 31.0	
	comp=Z,712nm,20.1s,baz=274,slow=29						
OUZ	Omahuta	25.89	164	eP	P	17 54 05.3	+1.1
	62nm,1.9s						
H11S2	WAKE ISLAND Hy	28.77	3	T	T	18 24 03.1	
	baz=184,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	28.77	3	T	T	18 24 05.7	
	baz=184,slow=76,SNR=45						
H11S1	WAKE ISLAND Hy	28.79	3	T	T	18 24 03.0	
	baz=184,slow=76,SNR=47						
H11N1	WAKE ISLAND Hy	30.00	3	T	T	18 25 35.3	
	baz=182,slow=76,SNR=42						
H11N3	WAKE ISLAND Hy	30.00	4	T	T	18 25 35.9	
	baz=182,slow=76,SNR=27						
H11N2	WAKE ISLAND Hy	30.01	3	T	T	18 25 36.7	
	baz=182,slow=76,SNR=25						
BKZ	Black Stump Fm	30.40	162	eP	P	17 54 45.0	+0.3
	60nm,2.0s						
STKA	Stephens Creek	30.43	222	eP	P	17 54 43.3	-1.7
	6.0nm,1.9s						
STKA	Stephens Creek	30.43	222	LR	LR	18 06 23.5	
	comp=Z,54nm,18.8s,baz=25,slow=35						
WB2	Warramunga Arr	31.05	249	eP	P	17 54 51.5	+1.0
WR1	Warramunga Arr	31.06	249	eP	P	17 54 52.6	+2.0
	9.1nm,1.4s						
WRA	Warramunga Arr	31.06	249	P	P	17 54 52.6	+2.0
	1.6nm,1.0s,baz=76,slow=9.5,SNR=6.6						
WRA				LR	LR	18 06 55.9	
	comp=Z,222nm,20.9s,baz=70,slow=35						
AS31	Alice Springs	32.46	242	eP	P	17 55 03.7	+0.7
	0.5nm,0.6s						
ASAR	Alice Springs	32.47	242	P	P	17 55 04.5	+1.4
	0.7nm,0.8s,baz=76,slow=10,SNR=7.0						
ASAR				PcP	PcP	17 57 52.1	+1.9
	0.3nm,0.6s,baz=62,slow=2.3,SNR=3.7						
ASAR				LR	LR	18 07 01.4	
	comp=Z,86nm,21.8s,baz=83,slow=34						
RPZ	Rata Peaks	33.58	172	LR	LR	18 06 17.9	
	comp=Z,62nm,21.3s,baz=336,slow=32						
RAR	Rarotonga	35.43	112	LR	LR	18 06 39.3	
	comp=Z,53nm,19.0s,baz=246,slow=31						
PPT	Papeete	44.52	104	LR	LR	18 12 29.2	
	comp=Z,58nm,18.5s,baz=168,slow=32						
PPT2	Papeete2	44.52	104	eLR	LR	18 09 22.9	
	comp=Z,68nm,22.2s						
PETK	Petropavlovsk-	63.58	355	LR	LR	18 21 52.4	
	comp=Z,13nm,19.9s,baz=145,slow=32						
KLR	Kul'dur	66.21	337	P	P	17 59 19.8	-0.3
	1.5nm,1.0s,baz=169,slow=3.1,SNR=4.2						
CM31	Chiang Mai Arr	71.23	294	eP	P	17 59 52.6	+0.6
CMAR	Chiang Mai Arr	71.23	294	P	P	17 59 53.5	+1.4
	0.3nm,0.8s,baz=120,slow=5.3,SNR=2.9						
SONA0	Songino Array	77.75	324	eP	P	18 00 30.8	+1.3
SONM	Songino Array	77.75	324	P	P	18 00 30.8	+1.3
	1.0nm,1.0s,baz=148,slow=7.5,SNR=4.8						
ILAR	Eielson Array	83.14	19	P	P	18 00 55.5	-2.5
	0.5nm,0.8s,baz=222,slow=6.2,SNR=5.7						
NVAR	Mina Array Bea	86.15	50	LR	LR	18 35 22.4	
	comp=Z,32nm,18.0s,baz=232,slow=33						
MK32	Makanchi Array	92.59	317	eP	P	18 01 43.8	-0.3
MKAR	Makanchi Array	92.59	317	P	P	18 01 43.8	-0.3
	0.9nm,0.7s,baz=90,slow=6.7,SNR=12						
ZALV	Zalesovo Beam	92.64	324	LR	LR	18 45 16.1	
	comp=Z,14nm,18.0s,baz=68,slow=37						
NRIK	Noril'sk	95.30	340	LR	LR	18 43 49.2	
	comp=Z,10.0nm,20.6s,baz=49,slow=35						
TXAR	Lajitas Array	96.14	61	LR	LR	18 36 21.1	
	comp=Z,29nm,21.8s,baz=0.0,slow=30						

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*NIED **12** 17:59:00, 33°.70N×134°.20E, h17^{km}, Mw3.4 Best double couple: M$_0$1.67000×10^{14} NP1:ϕ_s329.00000°, δ35.00000°, λ53.00000°. NP2:ϕ_s192.00000°, δ63.00000°, λ113.00000°.*

*IDC **12** 17:59:42.5±1.2, 33°.61N×134°.25E, h0^{km}, mb3.5/4, mb1 3.5/6, mb1mx3.3/50, mbtmp3.3/6, ML2.6/2, MS2.2/3, Ms1 2.2/3, ms1mx2.1/31, Error ellipse: s-maj=32.3km s-min=25.0km az=65.0*

*ISCJB **12** 17:59:44.2±0.5, 33°.64N±0°.04×134°.20E±0°.04, h23^{km}±4^{km}, mb3.4/4, Error ellipse: s-maj=6.7km s-min=4.8km az=137.4*

*JMA **12** 17:59:44.8, 33°.66N×134°.18E, h16^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s150.00000°, δ87.00000°, λ63.00000°. NP2:ϕ_s54.00000°, δ28.00000°, λ173.00000°. Principal axes: T Plg42.0000°, Azm34.0000°; N Plg27.0000°, Azm152.0000°; P Plg36.0000°, Azm264.0000°;*

JMA Felt II J1.

ISC 12 17:59:43.9±1.3, 33°.64N±0°.04×134°.20E±0°.05, h11^{km}±10^{km}, n16, σ0^{s}.92/24, mb3.5/4, 3C-3D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRT2	Murotomisaki 2	0.26	191	⇑P	Pb	17 59 50.4	-0.2
MRT2				S	Sb	17 59 54.5	-0.5
JAI	Aioi	0.26	53	⇓P	Pb	17 59 50.5	-0.1
JAI				S	Sb	17 59 54.3	-0.8
JMN	Monobe	0.28	288	⇓P	Pb	17 59 50.6	-0.5
JMN				S	Sg	17 59 54.8	+1.2
JMAF	Mimaanabuki	0.41	354	⇑P	Pb	17 59 52.6	-0.6
JMAF				S	Sg	17 59 57.7	+0.3
JJS	Sakaide	0.77	343	⇑P	Pg	17 59 58.7	-0.1
JJS				S	Sg	18 00 08.5	-0.3
JAJ2	Tsuna	0.96	36	P	Pn	18 00 03.0	-0.4
JAJ2				S	Sb	18 00 16.0	+0.6
JET	Tanbara	0.97	279	P	Pg	18 00 02.0	-0.6
JET				S	Sg	18 00 14.5	-0.8
JKU	Kubokawa	1.01	251	⇓P	Pg	18 00 03.1	-0.2
JNU	Nakatsue	2.83	260	Pn	Pn	18 00 30.8	+1.7
	2.7nm,0.3s,baz=56,slow=4.4,SNR=28						
JNU				Sn	Sg	18 01 13.2	-1.6
	2.6nm,0.3s,baz=216,slow=19,SNR=2.3						
JNU				LR	LR	18 01 32.2	
	comp=Z,24nm,19.7s,baz=119,slow=38						
MAT	Matsushiro	4.38	47	P	Pn	18 00 52.0	+1.6
MAT				eS	Sn	18 01 40.0	-1.4
MJAR	Matsushiro Arr	4.38	47	Pn	Pn	18 00 51.4	+1.0
	0.1nm,0.3s,baz=236,slow=14,SNR=4.8						
MJAR				LR	LR	18 02 13.0	
	comp=Z,16nm,20.1s,baz=230,slow=34						
KSRS	Korea Array	6.38	308	LR	LR	18 04 03.0	
	comp=Z,47nm,19.3s,baz=115,slow=40						
MKAR	Makanchi Array	41.04	305	P	P	18 07 28.0	+0.7
	0.6nm,0.9s,baz=88,slow=8.3,SNR=5.2						
WRA	Warramunga Arr	53.28	180	P	P	18 09 02.2	-0.6
	1.1nm,0.9s,baz=355,slow=7.8,SNR=9.7						
ASAR	Alice Springs	56.99	180	P	P	18 09 30.1	+0.5
	0.2nm,0.7s,baz=8.4,slow=12,SNR=5.4						
BRTR	Keskin Array B	76.53	309	P	P	18 11 34.4	0.0
	0.4nm,0.8s,baz=65,slow=8.1,SNR=2.8						

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*ISCJB **12** 18:12:24.9±0.2, 46°.30N±0°.01×12°.56E±0°.01, h12^{km}±1^{km}, Error ellipse: s-maj=2.4km s-min=1.7km az=173.6*

*VIE **12** 18:12:24.9±0.1, 46°.30N×12°.55E, h4^{km}±2^{km}, mb2.4/16, ml3.6/20, Error ellipse: s-maj=1.6km s-min=1.0km az=12.0*

*ROM **12** 18:12:25.4±0.1, 46°.312N±0°.006×12°.586E±0°.005, h10^{km}, Md1.5/4*

*BGR **12** 18:12:27.6±0.9, 46°.37N×12°.60E, h10^{km}, ML2.3/1, Error ellipse: s-maj=12.2km s-min=5.6km az=174.0*

*LDG **12** 18:12:27.6±0.5, 46°.22N×12°.45E, h2^{km}, Ml3.3/4, Error ellipse: s-maj=10.8km s-min=4.2km az=83.0*

ISC 12 18:12:25.2±0.8, 46°.28N±0°.02×12°.57E±0°.01, h15^{km}±4^{km}, n129, σ1^{s}.45/163, 23C-10D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CIMO	Cimolais	0.10	288	⇑iPg	Pg	18 12 27.6	-0.9
CIMO				i Sg	Sg	18 12 29.6	-1.0
STAL	STALIGIAL	0.10	102	P	Pg	18 12 28.2	-0.4
STAL				S	Sg	18 12 30.6	-0.1
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				END			
STAL				END			
STAL				END			
STAL				END			
MLNI	Malnisio	0.13	168	⇑ePg	Pg	18 12 28.8	-0.1
MLNI				eSg	Sg	18 12 31.9	+0.5
CSO	Casso	0.17	268	⇑iPg	Pg	18 12 28.8	-0.7
CSO				i Sg	Sg	18 12 31.8	-0.6
CSMI	Casera Mimoias	0.24	14	⇑ePg	Pg	18 12 29.9	-0.7
CSMI				eSg	Sg	18 12 33.7	-0.5
POLC	Polcenigo	0.26	191	P	Pb	18 12 31.3	-0.3
POLC				S	Sb	18 12 36.5	+0.7
POLC				AML	AML		
	comp=E,70650μm,0.5s						
POLC				AML	AML		
	comp=N,54350μm,1.5s						
POLC				AML	AML		
	comp=E,70650μm,0.5s						
POLC				AML	AML		
	comp=N,54350μm,1.5s						
POLC				AML	AML		
	comp=E,70650μm,0.5s						
POLC				AML	AML		
	comp=N,54350μm,1.5s						
POLC				AML	AML		
	comp=E,70650μm,0.5s						
POLC				AML	AML		
	comp=N,54350μm,1.5s						
POLC				END			
POLC				END			
POLC				END			
POLC				END			
CLUD	Cludinico	0.28	51	⇑ePg	Pg	18 12 30.8	-0.4
CLUD				eSg	Sg	18 12 35.2	0.0
CAE	Caneva	0.29	199	⇓ePg	Pg	18 12 31.1	-0.3
CAE				eSg	Sb	18 12 36.5	-0.3
MPRI	Monte Prat	0.29	98	⇓ePg	Pg	18 12 31.0	-0.4
MPRI				eSg	Sb	18 12 36.7	-0.1
FUSE	Fusea	0.33	66	⇑ePg	Pg	18 12 31.6	-0.3
FUSE				eSg	Sb	18 12 37.4	-0.4
FVI	Forni Avoltri	0.35	25	P	Pg	18 12 32.0	-0.3
FVI				S	Sg	18 12 37.0	-0.3
FVI				AML	AML		
	comp=E,85900μm,0.2s						
FVI				AML	AML		
	comp=N,70750μm,0.5s						
FVI				AML	AML		
	comp=E,85900μm,0.2s						
FVI				AML	AML		
	comp=N,70750μm,0.5s						
FVI				AML	AML		
	comp=E,85900μm,0.2s						
FVI				AML	AML		
	comp=N,70750μm,0.5s						
FVI				AML	AML		
	comp=E,85900μm,0.2s						
FVI				AML	AML		
	comp=N,70750μm,0.5s						
FVI				END			
FVI				END			
FVI				END			
FVI				END			
AGOR	Agordo	0.36	271	⇓ePg	Pg	18 12 32.0	-0.7
AGOR				eSg	Sg	18 12 37.8	+0.1
AGOR	Agordo	0.36	271	P	Pg	18 12 32.9	+0.2
AGOR				AML	AML		
	comp=E,20450μm,0.4s						
AGOR				AML	AML		
	comp=N,36550μm,0.4s						
AGOR				AML	AML		
	comp=N,36550μm,0.4s						
AGOR				AML	AML		
	comp=E,20450μm,0.4s						
AGOR				END			
AGOR				END			
AFL	Alpe Faloria	0.37	313	⇓ePg	Pg	18 12 32.6	-0.2
AFL				eSg	Sg	18 12 38.2	+0.2
BOO	Bordano	0.37	84	⇑ePg	Pg	18 12 32.1	-0.6
BUA	Buia	0.39	99	⇑ePg	Pg	18 12 32.9	-0.1
BUA				eSg	Sb	18 12 39.9	+0.4
ZOU	Zoufplan	0.39	45	⇑ePg	Pg	18 12 32.8	-0.4
ZOU				eSg	Sg	18 12 38.8	+0.1
ZOU	Zoufplan	0.39	45	⇑ePg	Pg	18 12 32.8	-0.4
ZOU				eSg	Sg	18 12 38.8	+0.1
GEPF	Gemona	0.39	91	P	Pg	18 12 33.3	+0.2
GEPF				S	Sb	18 12 39.6	0.0
GEPF				AML	AML		
	comp=E,18900μm,0.3s						
GEPF				AML	AML		
	comp=N,14150μm,0.7s						
GEPF				AML	AML		
	comp=E,18900μm,0.3s						
GEPF				AML	AML		
	comp=N,14150μm,0.7s						
GEPF				AML	AML		
	comp=E,18900μm,0.3s						
GEPF				AML	AML		
	comp=N,14150μm,0.7s						
GEPF				AML	AML		
	comp=E,18900μm,0.3s						
GEPF				AML	AML		
	comp=N,14150μm,0.7s						
GEPF				END			
GEPF				END			
GEPF				END			
GEPF				END			
FAU	Forcella Aurin	0.41	263	⇑ePg	Pg	18 12 32.9	-0.7
FAU				eSg	Sg	18 12 39.2	-0.1
VARN	Col Varnada, M	0.43	229	⇑ePg	Pg	18 12 33.1	-0.8
VARN				eSg	Sb	18 12 40.9	-0.1
ABTA	Abfaltersbach	0.47	355	ePg	Pg	18 12 34.1	-0.4
	comp=N,40nm,0.1s,SNR=181						
ABTA				eSg	Sg	18 12 40.3	-0.6
	comp=N,95nm,0.2s						
BAD	Bernadia	0.47	95	⇑ePg	Pg	18 12 34.2	-0.3
BAD				eSg	Sb	18 12 42.4	+0.5
PLRO	Paularo	0.48	56	⇓ePg	Pg	18 12 34.5	-0.3
VINO	Villanova	0.49	93	⇑ePg	Pg	18 12 34.6	-0.4
VINO	Villanova	0.49	93	P	Pg	18 12 34.8	-0.2
VINO				S	Sb	18 12 42.6	0.0
TLI	Talmassons	0.52	134	⇑ePg	Pg	18 12 35.4	0.0
PTCC	Patocco-Chiusa	0.56	77	P	Pg	18 12 36.2	+0.1
PTCC				S	Sb	18 12 44.2	-0.3
PTCC				AML	AML		
	comp=E,3310μm,0.5s						
PTCC				AML	AML		
	comp=N,3870μm,0.5s						
PTCC				AML	AML		
	comp=E,3310μm,0.5s						
PTCC				AML	AML		
	comp=N,3870μm,0.5s						
PTCC				AML	AML		
	comp=E,3310μm,0.5s						
PTCC				AML	AML		
	comp=N,3870μm,0.5s						
PTCC				AML	AML		
	comp=N,3870μm,0.5s						
PTCC				AML	AML		
	comp=E,3310μm,0.5s						
MTLO	Montello	0.57	215	⇑ePg	Pg	18 12 36.5	+0.1
MTLO				eSg	Sb	18 12 46.1	+1.2
COLI	Coloredo	0.58	104	⇑ePg	Pg	18 12 36.5	-0.1
ROBS	Robic	0.65	93	ePg	Pg	18 12 36.8	-1.2
ROBS				i Sg	Sg	18 12 46.4	-0.2
	comp=Z,18nm,0.1s						
CGRP	Cima Grappa	0.67	234	ePg	Pg	18 12 37.6	-0.7
CGRP	Cima Grappa	0.67	234	P	Pb	18 12 38.6	-0.1
CGRP				AML	AML		
	comp=E,10860μm,0.5s						
CGRP				AML	AML		
	comp=N,8595μm,0.4s						
CGRP				AML	AML		
	comp=E,10860μm,0.5s						
CGRP				AML	AML		
	comp=N,8595μm,0.4s						
CGRP				AML	AML		
	comp=E,10860μm,0.5s						
CGRP				AML	AML		
	comp=N,8595μm,0.4s						
CGRP				AML	AML		
	comp=N,8595μm,0.4s						
CGRP				AML	AML		
	comp=E,10860μm,0.5s						
LSR	Lussari	0.69	73	⇓ePg	Pg	18 12 38.2	-0.6
LSR				eSg	Sb	18 12 48.9	+0.5
ZIAN	Ziano	0.70	270	⇑ePg	Pg	18 12 38.2	-0.7
ACOM	Acomizza, Ital	0.70	67	⇓ePg	Pg	18 12 38.9	0.0
ACOM	Acomizza, Ital	0.70	67	P	Pg	18 12 39.0	0.0
ACOM				AML	AML		
	comp=E,10875μm,0.4s						
ACOM				AML	AML		
	comp=N,10225μm,0.5s						
ACOM				AML	AML		
	comp=E,10875μm,0.4s						
ACOM				AML	AML		
	comp=N,10225μm,0.5s						

ACOM				AML	AML		
	comp=N,10225µm,0.5s						
ACOM				AML	AML		
	comp=E,10875µm,0.4s						
PRED	Cave del Predi	0.71	76	⇑*e*Pg	Pg	18 12 38.2	-0.8
BRES	Bressanone	0.71	306	P	Pg	18 12 38.8	-0.4
BRES				AML	AML		
	comp=E,6090µm,0.3s						
BRES				AML	AML		
	comp=N,10750µm,0.2s						
BRES				AML	AML		
	comp=E,6090µm,0.3s						
BRES				AML	AML		
	comp=N,10750µm,0.2s						
BRES				AML	AML		
	comp=E,6090µm,0.3s						
BRES				AML	AML		
	comp=N,10750µm,0.2s						
BRES				AML	AML		
	comp=N,10750µm,0.2s						
BRES				AML	AML		
	comp=E,6090µm,0.3s						
RISI	Rein	0.75	333	P	Pg	18 12 39.4	-0.4
RISI				S	Sg	18 12 49.2	-0.5
RISI				AML	AML		
	comp=E,18950µm,0.3s						
RISI				AML	AML		
	comp=N,23850µm,0.3s						
RISI				AML	AML		
	comp=E,18950µm,0.3s						
RISI				AML	AML		
	comp=N,23850µm,0.3s						
RISI				AML	AML		
	comp=E,18950µm,0.3s						
RISI				AML	AML		
	comp=N,23850µm,0.3s						
RISI				AML	AML		
	comp=N,23850µm,0.3s						
RISI				AML	AML		
	comp=E,18950µm,0.3s						
DRE	Drenchia	0.75	98	⇓*e*Pg	Pg	18 12 39.1	-0.7
SABO	M.te Sabotino	0.78	112	⇑*e*Pg	Pg	18 12 40.1	-0.1
SABO	M.te Sabotino	0.78	112	P	Pb	18 12 40.9	+0.5
SABO				AML	AML		
	comp=E,13550µm,0.5s						
SABO				AML	AML		
	comp=N,17550µm,0.4s						
SABO				AML	AML		
	comp=E,13550µm,0.5s						
SABO				AML	AML		
	comp=N,17550µm,0.4s						
SABO				AML	AML		
	comp=E,13550µm,0.5s						
SABO				AML	AML		
	comp=N,17550µm,0.4s						
CADS	Cadrg	0.81	93	*i* Pg	Pb	18 12 39.8	-1.2
CADS				*i* Sg	Sn	18 12 52.9	-1.0
	comp=Z,67nm,0.2s						
MYKA	Terra Mystica	0.82	64	*e*Pg	Pb	18 12 40.7	-0.5
	comp=Z,3.4nm,0.1s,SNR=20						
KOSI	Kohlern	0.85	283	P	Pb	18 12 41.3	-0.4
KOSI				AML	AML		
	comp=E,6730µm,0.3s						
KOSI				AML	AML		
	comp=N,3925µm,1.1s						
KOSI				AML	AML		
	comp=E,6730µm,0.3s						
KOSI				AML	AML		
	comp=N,3925µm,1.1s						
KOSI				AML	AML		
	comp=N,3925µm,1.1s						
KOSI				AML	AML		
	comp=E,6730µm,0.3s						
PANI	Panarotta	0.89	255	⇑*e*Pg	Pb	18 12 42.3	-0.1
VOJS	Vojsko	0.94	105	*i* Pg	Pb	18 12 42.7	-0.6
VOJS				*i* Sg	Sn	18 12 57.6	+0.4
APPI	Appiano	0.95	282	P	Pb	18 12 43.1	-0.3
APPI				AML	AML		
	comp=E,6250µm,0.5s						
APPI				AML	AML		
	comp=N,5415µm,0.3s						
APPI				AML	AML		
	comp=E,6250µm,0.5s						
APPI				AML	AML		
	comp=N,5410µm,0.3s						
APPI				AML	AML		
	comp=N,5415µm,0.3s						
APPI				AML	AML		
	comp=E,6245µm,0.5s						
KBA	Koelnbreinsper	0.96	33	*i* Pg	Pb	18 12 43.3	-0.3
	comp=E,5.8nm,0.1s,SNR=18						
KBA				*e*Sg	Sb	18 12 55.5	-0.7
	comp=E,44nm,0.2s						
KBA	Koelnbreinsper	0.96	33	*e*Pg	Pb	18 12 43.4	-0.3
KBA				*e*Sg	Sb	18 12 55.7	-0.5
ABSI	Aberstueckl	0.97	298	P	Pb	18 12 43.4	-0.5
ABSI				AML	AML		
	comp=E,9810µm,0.5s						
ABSI				AML	AML		
	comp=N,8190µm,0.4s						
ABSI				AML	AML		
	comp=E,9810µm,0.5s						
ABSI				AML	AML		
	comp=N,8190µm,0.4s						
ABSI				AML	AML		
	comp=E,9810µm,0.5s						
ABSI				AML	AML		
	comp=N,8190µm,0.4s						
TRI	Trieste	1.01	124	*e*Pg	Pn	18 12 45.0	+0.2
TRI	Trieste	1.01	124	P	Pn	18 12 45.1	+0.3
TRI				AML	AML		
	comp=E,6965µm,0.5s						
TRI				AML	AML		
	comp=N,4255µm,0.3s						
TRI				AML	AML		
	comp=E,6965µm,0.5s						
TRI				AML	AML		
	comp=N,4255µm,0.3s						
TRI				AML	AML		
	comp=N,4255µm,0.3s						
TRI				AML	AML		
	comp=E,6965µm,0.5s						
ROSI	Rosskopf	1.03	309	P	Pb	18 12 44.8	0.0
ROSI				AML	AML		
	comp=E,5360µm,0.4s						
ROSI				AML	AML		
	comp=N,7945µm,0.3s						
ROSI				AML	AML		
	comp=E,5360µm,0.4s						
ROSI				AML	AML		
	comp=N,7945µm,0.3s						
ROSI				AML	AML		
	comp=N,7945µm,0.3s						
ROSI				AML	AML		
	comp=E,5360µm,0.4s						
DOSS	Dosso del Somm	1.04	248	⇓*e*Pg	Pb	18 12 45.1	+0.1
OZOL	Ozolo	1.06	277	⇑*e*Pg	Pb	18 12 45.1	-0.2
JAVS	Javornik	1.11	110	*i* Pg	Pb	18 12 45.9	-0.2
JAVS				*i*		18 12 46.8	
TEOL	Teolo	1.12	215	P	Pg	18 12 46.9	+0.2
TEOL				AML	AML		
	comp=E,28150µm,0.4s						
TEOL				AML	AML		
	comp=N,25650µm,0.7s						
TEOL				AML	AML		
	comp=E,28150µm,0.4s						
TEOL				AML	AML		
	comp=N,25650µm,0.7s						
TEOL				AML	AML		
	comp=N,25650µm,0.7s						
TEOL				AML	AML		
	comp=E,28150µm,0.4s						
WTTA	Wattenberg	1.18	327	*e*Pg	Pb	18 12 47.5	+0.2
	comp=E,12nm,0.1s,SNR=36						
WTTA				Sg	Sn	18 13 03.1	0.0
	comp=E,32nm,0.2s						
WTTA	Wattenberg	1.18	327	*e*Pg	Pb	18 12 47.5	+0.2
WTTA				*e*Sg	Sn	18 13 03.1	0.0
WTTA	Wattenberg	1.18	327	P	Pb	18 12 47.5	+0.2
WTTA				AML	AML		
	comp=E,3900µm,1.4s						
WTTA				AML	AML		
	comp=N,3240µm,0.7s						
WTTA				AML	AML		
	comp=E,3900µm,1.4s						
WTTA				AML	AML		
	comp=N,3240µm,0.7s						
WTTA				AML	AML		
	comp=E,3900µm,1.4s						
WTTA				AML	AML		
	comp=N,3240µm,0.7s						
ROVR	Rover Verones	1.22	239	P	Pg	18 12 48.6	-0.2
WATA	Walderalm	1.26	327	Pg	Pb	18 12 49.0	+0.3
	comp=N,16nm,0.1s,SNR=64						
SQTA	Sankt Quirin	1.33	316	*e*Pg	Pb	18 12 50.1	+0.2
	comp=N,8.9nm,0.1s,SNR=48						
LJU	Ljubljana	1.38	99	*i* Pg	Pb	18 12 51.1	+0.4
LJU	Ljubljana	1.38	99	AML	AML		
	comp=N,10265µm,1.0s						
LJU				AML	AML		
	comp=E,12100µm,0.5s						
LJU				AML	AML		
	comp=N,10265µm,1.0s						
LJU				AML	AML		
	comp=E,12100µm,0.5s						
MOSI	Grossmontoni	1.44	284	P	Pb	18 12 52.0	+0.2
MOSI				AML	AML		
	comp=E,7800µm,0.4s						
MOSI				AML	AML		
	comp=N,17400µm,1.2s						
MOSI				AML	AML		
	comp=E,7800µm,0.4s						
MOSI				AML	AML		
	comp=N,17400µm,1.2s						
MOSI				AML	AML		
	comp=E,7800µm,0.4s						
MOSI				AML	AML		
	comp=N,17400µm,1.2s						
MAGA	Magasa	1.45	250	P	Pb	18 12 52.3	+0.5
MAGA				AML	AML		
	comp=E,15850µm,0.5s						
MAGA				AML	AML		
	comp=N,10790µm,0.5s						
MAGA				AML	AML		
	comp=E,15850µm,0.5s						
MAGA				AML	AML		
	comp=N,10790µm,0.5s						
MAGA				AML	AML		
	comp=N,10790µm,0.5s						
MAGA				AML	AML		
	comp=E,15850µm,0.5s						
MABI	Malga Bissina	1.45	262	P	Pb	18 12 52.0	0.0
MABI				AML	AML		
	comp=E,1730µm,0.9s						
MABI				AML	AML		
	comp=N,2540µm,0.3s						
MABI				AML	AML		
	comp=E,1730µm,0.9s						
MABI				AML	AML		
	comp=N,2540µm,0.3s						
MABI				AML	AML		
	comp=N,2540µm,0.3s						
MABI				AML	AML		
	comp=E,1730µm,0.9s						
MOTA	Moosalm	1.47	317	*e*Pg	Pb	18 12 52.6	+0.4
	comp=E,11nm,0.3s,SNR=27						
FETA	Feichten	1.47	301	*e*Pg	Pb	18 12 52.6	+0.3
	comp=E,20nm,0.2s,SNR=92						
BRMO	Bormio	1.53	278	P	Pb	18 12 53.6	+0.2
BRMO				AML	AML		
	comp=E,2090µm,1.2s						
BRMO				AML	AML		
	comp=N,1860µm,1.3s						
BRMO				AML	AML		
	comp=E,2090µm,1.2s						
BRMO				AML	AML		
	comp=N,1860µm,1.3s						
BRMO				AML	AML		
	comp=N,1860µm,1.3s						
BRMO				AML	AML		
	comp=E,2090µm,1.2s						
SALO	Salr	1.57	246	AML	AML		
	comp=E,3235µm,1.1s						
SALO				AML	AML		
	comp=E,3235µm,1.1s						
SALO				AML	AML		
	comp=N,3900µm,0.7s						
SALO				AML	AML		
	comp=N,3900µm,0.7s						
FUORN	Ofenpass-Fuorn	1.63	283	P	Pb	18 12 54.8	-0.3
FUORN				AML	AML		
	comp=E,2155µm,0.5s						
FUORN				AML	AML		
	comp=N,2495µm,0.4s						
FUORN				AML	AML		
	comp=E,2155µm,0.5s						
FUORN				AML	AML		
	comp=N,2495µm,0.5s						
FUORN				AML	AML		
	comp=E,2155µm,0.5s						
FUORN				AML	AML		
	comp=N,2495µm,0.4s						
PDKS	Podkum	1.70	97	*i* Pn	Pb	18 12 55.4	-0.8
RETA	Reutte	1.73	315	Pg	Pg	18 12 58.0	-0.4
	comp=N,5.2nm,0.1s						
SOKA	Soboth	1.75	76	*e*Pn	Pb	18 12 56.4	-0.6
	comp=N,5.8nm,0.3s,SNR=20						
MOA	Molln	1.95	36	Pg	Pb	18 13 00.2	-0.2
	comp=N,6.8nm,0.1s,SNR=26						
MOA	Molln	1.95	36	*e*Pn	Pb	18 13 00.3	-0.2
FUR	Furstenfeldbru	2.08	335	*e*Pn	Pb	18 13 01.9	-0.8
DAVA	Damuels	2.10	300	Pg	Pg	18 13 05.2	-0.4
	comp=N,17nm,0.2s						
ARSA	Arzberg	2.25	63	Pn	Pn	18 13 03.1	+1.2
	comp=N,1.8nm,0.3s						
CPGN	Carpegna, Ital	2.49	184	AML	AML		
	comp=E,784µm,0.7s						
CPGN				AML	AML		
	comp=N,876µm,0.7s						
CPGN				AML	AML		
	comp=E,784µm,0.8s						
CPGN				AML	AML		
	comp=N,876µm,0.7s						
FSSB	Fossombrone	2.59	177	AML	AML		
	comp=N,1955µm,0.4s						
FSSB				AML	AML		
	comp=E,1460µm,0.7s						
FSSB				AML	AML		
	comp=N,1955µm,0.4s						
FSSB				AML	AML		
	comp=E,1460µm,0.7s						
MPAG	Monte Paganucc	2.66	177	AML	AML		
	comp=E,1056µm,0.4s						
MPAG				AML	AML		
	comp=E,1026µm,0.4s						
MPAG				AML	AML		
	comp=N,1400µm,0.4s						
MPAG				AML	AML		
	comp=E,1054µm,0.4s						
MPAG				AML	AML		
	comp=N,1420µm,0.4s						
MPAG				AML	AML		
	comp=N,1415µm,0.4s						
MPAG				AML	AML		
	comp=N,1400µm,0.4s						
MPAG				AML	AML		
	comp=E,1026µm,0.4s						
GEC2	GERESS Array S	2.68	16	*e*Pn	Pn	18 13 08.9	+1.1
CRMI	Carmignano	2.74	205	AML	AML		
	comp=E,148µm,0.8s						
CRMI				AML	AML		
	comp=E,350µm,0.8s						
CRMI				AML	AML		
	comp=N,301µm,1.0s						
CRMI				AML	AML		
	comp=N,112µm,0.9s						
CRMI				AML	AML		
	comp=E,148µm,0.8s						
CRMI				AML	AML		
	comp=E,350µm,0.8s						
CRMI				AML	AML		
	comp=N,112µm,0.9s						
CRMI				AML	AML		
	comp=N,301µm,1.0s						
PIEI	Pieia	2.75	181	AML	AML		
	comp=N,536µm,0.4s						
PIEI				AML	AML		
	comp=E,614µm,0.4s						
PIEI				AML	AML		
	comp=E,614µm,0.4s						
PIEI				AML	AML		
	comp=N,536µm,0.4s						
CONA	Conrad Observa	2.79	53	Pn	Pn	18 13 11.2	+1.8
	comp=N,0.6nm,0.1s						
ATBU	Serra di Buran	2.81	180	AML	AML		
	comp=N,1555µm,0.5s						
ATBU				AML	AML		
	comp=E,1780µm,0.5s						
ATBU				AML	AML		
	comp=N,1550µm,0.5s						
ATBU				AML	AML		
	comp=E,1780µm,0.5s						
WET	Wettzell	2.87	4	*e*Pn	Pn	18 13 11.5	+1.1
ATVO	AVT- Monte Val	2.90	182	AML	AML		
	comp=E,844µm,0.6s						
ATVO				AML	AML		
	comp=N,680µm,0.4s						
ATVO				AML	AML		
	comp=N,680µm,0.4s						
ATVO				AML	AML		
	comp=E,844µm,0.6s						
EL6	Elcito	2.98	173	AML	AML		
	comp=E,948µm,1.3s						
EL6				AML	AML		
	comp=N,1110µm,0.5s						
EL6				AML	AML		
	comp=N,1110µm,0.5s						
EL6				AML	AML		
	comp=E,964µm,1.3s						
CAFI	Castiglion Fio	2.98	189	AML	AML		
	comp=E,332µm,1.0s						
CAFI				AML	AML		
	comp=E,332µm,1.0s						
CAFI				AML	AML		
	comp=N,338µm,1.0s						
CAFI				AML	AML		
	comp=N,338µm,1.0s						
SLE	Schleitheim	3.16	299	*e*Pn	Pn	18 13 17.0	+2.6
FDMO	Fiordimonte	3.27	173	AML	AML		
	comp=E,472µm,0.5s						
FDMO				AML	AML		
	comp=N,422µm,0.3s						
FDMO				AML	AML		
	comp=N,422µm,0.3s						
FDMO				AML	AML		
	comp=E,472µm,0.5s						
BFO	Black Forest	3.54	307	*e*Pn	Pn	18 13 22.0	+2.4
KRUC	Moravsky	3.80	41	*e*PN	Pn	18 13 23.7	+0.6
KRUC				*e*PG	Pg	18 13 37.0	-0.9
LPG	La Plagne	4.14	261	*e*Pn	Pn	18 13 30.5	+2.4
CDF	Champ du Feu	4.18	303	*e*Pn	Pn	18 13 30.3	+1.8
CDF	Champ du Feu	4.18	303	*e*Pg	Pg	18 13 43.6	-1.7
HINF	Hinteralfeld	4.20	294	*e*Pn	Pn	18 13 30.3	+1.6
MBDF	Montbardon	4.36	251	*e*Pn	Pn	18 13 31.8	+0.7
SBF	Sospel	4.37	238	*e*Pn	Pn	18 13 31.8	+0.8
PGF	Pioggiola	4.52	216	*e*Pn	Pn	18 13 33.7	+0.5
HAU	Haudompre	4.58	294	*e*Pn	Pn	18 13 35.7	+1.8
ORIF	Oris-en-Rattie	4.89	256	*e*Sn	Sn	18 14 33.2	-1.4
	comp=E,20nm,0.4s						
FRF	La Foret Royal	5.01	239	*e*Pn	Pn	18 13 40.2	+0.4
CLL	Collm	5.04	3	*e*Pn	Pn	18 13 42.0	+1.8
CLL				*e*Sg	Sg	18 15 08.0	+1.2
LMR	La Mourre	5.22	238	*e*Pn	Pn	18 13 42.6	-0.1
SMRF	Simiane la Rot	5.46	248	*e*Pn	Pn	18 13 46.4	+0.4
SMRF				*e*Sn	Sn	18 14 46.1	-2.5
	comp=E,4.9nm,0.3s						
WLF	Walferdange	5.48	310	P	Pg	18 14 08.1	-2.0
WLF				S	Sb	18 15 09.9	+3.9
VIVF	Saint-Julien-l	5.73	258	*e*Pn	Pn	18 13 50.0	+0.3
LKLB	Kalborn	5.77	314	P	Pg	18 14 11.5	-4.1
LKLB				S	Sb	18 15 15.9	+1.6
SMF	Signal de Mont	6.04	277	*e*Pn	Pn	18 13 54.8	+0.8
SMF				*e*Sn	Sn	18 15 00.5	-2.4
	comp=E,4.5nm,0.3s						
LOR	Lormes	6.07	283	*e*Pn	Pn	18 13 55.2	+0.9
SSF	Saint Saulge	6.29	280	*e*Pn	Pn	18 13 58.8	+1.5
BSTI	Sart Tilman	6.34	315	⇓P	Pb	18 14 19.8	+4.6
BSTI				S	Sb	18 15 30.2	-0.6
BLCH	La Chartreuse	6.36	316	P	Pb	18 14 20.0	+4.4
BLCH				S	Sb	18 15 32.4	+1.0
AVF	Avril sur Loir	6.38	278	*e*Pn	Pn	18 13 59.5	+0.9
BEBN	Eben Emael	6.43	317	P	Pb	18 14 21.1	+4.5
BEBN				S	Sb	18 15 31.0	-2.3
GIVF	Givet	6.44	309	*e*Pn	Pn	18 14 01.7	+2.3
BGES	Gesves	6.46	312	P	Pb	18 14 21.6	+4.3
BGES				S	Sb	18 15 30.4	-3.8
DOU	Dourbes	6.56	308	P	Pb	18 14 22.8	+4.0
DOU				S	Sb	18 15 33.2	-3.7
BMRD	Maredsous	6.58	311	⇑P	Pb	18 14 23.4	+4.1
BMRD				S	Sb	18 15 31.1	-6.5
BGF	Bois d'Agland	6.73	276	*e*Pn	Pn	18 14 04.3	+0.9
BAIF	Baives	6.75	307	*e*Pn	Pn	18 14 06.1	+2.5
BAIF				*e*Sn	Sn	18 15 17.6	-2.6
	comp=E,3.8nm,0.3s						
HYF	Humbligny	6.89	282	*e*Pn	Pn	18 14 05.9	+0.3

IDC ***12*** *18:12:41.6±0.8, 46°.17N×12°.81E, h0^{km}, mb3.5/7, mb1 3.7/13, mb1mx3.5/42, mbtmp3.5/13, ML3.7/6, MS2.4/2, Ms1 2.4/2, ms1mx2.1/42, Error ellipse: s-maj=16.4km s-min=9.5km az=111.0*

VIE ***12*** *18:12:43.7±0.2, 46°.32N×12°.54E, h10^{km}±3^{km}, mb3.7/12, ml4.2/15, Error ellipse: s-maj=1.7km s-min=1.2km az=10.0*

ISCJB ***12*** *18:12:43.8±0.1, 46°.29N±0°.01×12°.57E±0°.01, h20^{km}±1^{km}, mb3.5/7, Error ellipse: s-maj=2.0km s-min=1.4km az=178.5*

ROM ***12*** *18:12:44.0±0.2, 46°.306N±0°.008×12°.586E±0°.009, h10^{km}±1^{km}, ML3.8/113*

PRU ***12*** *18:12:43.6±0.0, 46°.28N×12°.63E, h4^{km}*

BEO ***12*** *18:12:43.2±0.6, 46°.45N×12°.54E, h5^{km}, ML4.0/9*

LDG ***12*** *18:12:45.6±0.1, 46°.26N×12°.66E, h10^{km}, Md3.7/1, Ml3.8/34, Error ellipse: s-maj=3.2km s-min=2.3km az=3.0*

BGR ***12*** *18:12:46.1±0.5, 46°.36N×12°.57E, h10^{km}, ML4.0/12, Error ellipse: s-maj=6.7km s-min=3.3km az=179.0*

BGR Felt in Northern and Eastern Tirol and in Kaernten.

BNS ***12*** *18:12:48.6±0.6, 46°.49N×12°.62E, h10^{km}, ML3.9*

STR ***12*** *18:12:49.3±0.8, 46°N±5°×1°2E±°, h10^{km}, M4.1/6, mB4.5/1, mb4.1/3, MLv4.2/6, Mw(mB)3.7/1*

ISC 12 18:12:43.9±0.7**, 46°.31N**±0°.01×**12°.57E**±0°.01**, h15**^{km}±4^{km}**, n335, σ1^{s}.48**/419**, mb3.5**/7**, 15C-13D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CIMO	Cimolais	0.09	272	⇑*i*Pg	Pg	18 12 46.2	-1.0
CIMO				*i* Sg	Sg	18 12 48.1	-1.2
STAL	STALIGIAL	0.11	115	P	Pg	18 12 46.7	-0.7
STAL				S	Sg	18 12 49.1	-0.5
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
MLNI	Malnisio	0.16	170	⇑*e*Pg	Pg	18 12 47.4	-0.7
MLNI				*e*Sg	Sg	18 12 50.7	-0.1
CSO	Casso	0.17	259	⇑*i*Pg	Pg	18 12 47.4	-0.9
CSO				*i* Sg	Sg	18 12 50.4	-0.9
CSMI	Casera Mimoias	0.21	15	⇓*i*Pg	Pg	18 12 48.5	-0.5
CSMI				*i* Sg	Sg	18 12 52.2	-0.2
CLUD	Cludinico	0.26	55	⇑*e*Pg	Pg	18 12 49.3	-0.4
CLUD				*e*Sg	Sg	18 12 53.5	-0.1
POLC	Polcenigo	0.28	190	P	Pg	18 12 49.7	-0.2
POLC				S	Sb	18 12 55.1	-0.1
POLC				AML	AML		
	comp=E,70650µm,0.5s						
POLC				AML	AML		
	comp=N,54350µm,1.5s						
POLC				AML	AML		
	comp=E,70650µm,0.5s						
POLC				AML	AML		
	comp=N,54350µm,1.5s						
POLC				AML	AML		
	comp=E,70650µm,0.5s						
POLC				AML	AML		
	comp=N,54350µm,1.5s						
POLC				AML	AML		

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      comp=E,70650µm,0.5s
POLC                              AML   AML
      comp=N,54350µm,1.5s
MPRI  Monte Prat        0.30 102⇑ ePg   Pg    18 12 49.7 -0.5
MPRI                              eSg   Sg    18 12 54.7 +0.1
FUSE  Fusea             0.32  70⇑ ePg   Pg    18 12 50.1 -0.4
FUSE                              eSg   Sg    18 12 55.2 +0.1
FVI   Forni Avoltri     0.33  27  P     Pg    18 12 50.4 -0.3
FVI                               S     Sg    18 12 55.4 -0.1
FVI                               AML   AML
      comp=E,85900µm,0.2s
FVI                               AML   AML
      comp=N,70750µm,0.5s
FVI                               AML   AML
      comp=E,85900µm,0.2s
FVI                               AML   AML
      comp=N,70750µm,0.5s
FVI                               AML   AML
      comp=E,85900µm,0.2s
FVI                               AML   AML
      comp=N,70750µm,0.5s
FVI                               AML   AML
      comp=N,70750µm,0.5s
FVI                               AML   AML
      comp=E,85900µm,0.2s
FRE8  Fregona           0.33 207  P     Pg    18 12 50.2 -0.5
FRE8                              S     Sg    18 12 55.6 +0.2
FRE8                              AML   AML
      comp=E,48350µm,0.4s
FRE8                              AML   AML
      comp=N,25700µm,0.3s
FRE8                              AML   AML
      comp=E,48350µm,0.4s
FRE8                              AML   AML
      comp=N,25650µm,0.3s
FRE8                              AML   AML
      comp=E,48350µm,0.4s
FRE8                              AML   AML
      comp=N,25650µm,0.3s
FRE8                              AML   AML
      comp=N,25650µm,0.3s
FRE8                              AML   AML
      comp=E,48350µm,0.4s
AFL   Alpe Faloria      0.35 310⇓ ePg   Pg    18 12 51.2  0.0
AFL                               eSg   Sg    18 12 56.5 +0.2
AGOR  Agordo            0.36 267⇓ ePg   Pg    18 12 50.5 -0.8
AGOR                              eSg   Sg    18 12 56.3 -0.1
AGOR  Agordo            0.36 267  P     Pg    18 12 50.7 -0.7
AGOR                              S     Sg    18 12 56.3 -0.1
AGOR                              AML   AML
      comp=E,20450µm,0.4s
AGOR                              AML   AML
      comp=N,36550µm,0.4s
AGOR                              AML   AML
      comp=N,36550µm,0.4s
AGOR                              AML   AML
      comp=E,20450µm,0.4s
BOO   Bordano           0.37  88⇑ ePg   Pg    18 12 50.6 -0.8
ZOU   Zoufplan          0.38  48⇓ ePg   Pg    18 12 51.5 -0.2
ZOU                               eSg   Sg    18 12 57.2 +0.2
ZOU   Zoufplan          0.38  48⇓ ePg   Pg    18 12 51.5 -0.2
ZOU                               eSg   Sg    18 12 57.2 +0.2
BUA   Buia              0.39 103⇓ ePg   Pg    18 12 51.8 -0.1
BUA                               eSg   Sb    18 12 58.8 +0.4
GEPF  Gemona            0.40  94  P     Pg    18 12 51.5 -0.5
GEPF                              S     Sb    18 12 58.3 -0.1
GEPF                              AML   AML
      comp=E,18900µm,0.3s
GEPF                              AML   AML
      comp=N,14150µm,0.7s
GEPF                              AML   AML
      comp=E,18900µm,0.3s
GEPF                              AML   AML
      comp=N,14150µm,0.7s
GEPF                              AML   AML
      comp=E,18900µm,0.3s
GEPF                              AML   AML
      comp=N,14150µm,0.7s
GEPF                              AML   AML
      comp=E,18900µm,0.3s
GEPF                              AML   AML
      comp=N,14150µm,0.7s
FAU   Forcella Aurin    0.42 260⇓ ePg   Pg    18 12 51.5 -0.9
FAU                               eSg   Sg    18 12 57.9 -0.2
ABTA  Abfaltersbach     0.44 355  ePg   Pg    18 12 52.7 -0.1
      comp=N,156nm,0.1s
ABTA                              eSg   Sg    18 12 58.9  0.0
      comp=N,2µm,0.2s
VARN  Col Varnada, M    0.45 226  ePg   Pg    18 12 52.2 -0.8
PLRO  Paularo           0.47  58⇑ ePg   Pg    18 12 53.2 -0.1
BAD   Bernadia          0.47  98⇓ ePg   Pg    18 12 52.9 -0.4
BAD                               eSg   Sb    18 13 00.7  0.0
VINO  Villanova         0.50  96⇑ ePg   Pg    18 12 53.1 -0.7
VINO                              eSg   Sb    18 13 01.2 -0.2
VINO  Villanova         0.50  96  P     Pg    18 12 53.1 -0.7
VINO                              S     Sb    18 13 01.1 -0.2
TLI   Talmassons        0.53 136  ePg   Pg    18 12 54.6 +0.1
PTCC  Patocco-Chiusa    0.55  79  P     Pg    18 12 54.6 -0.2
PTCC                              AML   AML
      comp=E,3310µm,0.5s
PTCC                              AML   AML
      comp=N,3870µm,0.5s
PTCC                              AML   AML
      comp=E,3310µm,0.5s
PTCC                              AML   AML
      comp=N,3870µm,0.5s
PTCC                              AML   AML
      comp=E,3310µm,0.5s
PTCC                              AML   AML
      comp=N,3870µm,0.5s
PTCC                              AML   AML
      comp=N,3870µm,0.5s
PTCC                              AML   AML
      comp=E,3310µm,0.5s
COLI  Coloredo          0.59 107⇑ ePg   Pg    18 12 55.2 -0.3
MTLO  Montello          0.59 214  ePg   Pg    18 12 55.8 +0.2
ROBS  Robic             0.66  95  i Pg  Pg    18 12 55.4 -1.3
ROBS                              i           18 12 56.2
ROBS                              i Sg  Sg    18 13 05.5 +0.1
      comp=Z,158nm,0.1s
LSR   Lussari           0.68  75  ePg   Pg    18 12 57.0 -0.4
CGRP  Cima Grappa       0.69 232  P     Pb    18 12 57.8 +0.2
CGRP                              AML   AML
      comp=E,10860µm,0.5s
CGRP                              AML   AML
      comp=N,8595µm,0.4s
CGRP                              AML   AML
      comp=E,10860µm,0.5s
CGRP                              AML   AML
      comp=N,8595µm,0.4s
CGRP                              AML   AML
      comp=E,10860µm,0.5s
CGRP                              AML   AML
      comp=N,8595µm,0.4s
ASOL  Asolo             0.69 223  P     Pb    18 12 58.1 +0.6
ASOL                              AML   AML
      comp=E,24050µm,0.2s
ASOL                              AML   AML
      comp=N,20900µm,0.5s
ASOL                              AML   AML
      comp=E,24050µm,0.2s
ASOL                              AML   AML
      comp=N,20900µm,0.5s
ASOL                              AML   AML
      comp=E,24050µm,0.2s
ASOL                              AML   AML
      comp=N,20900µm,0.5s
CTI   Castel Tesino     0.69 248  P     Pg    18 12 56.9 -0.5
CTI                               AML   AML
      comp=E,11800µm,0.5s
CTI                               AML   AML
      comp=N,17600µm,0.3s
CTI                               AML   AML
      comp=E,11800µm,0.5s
CTI                               AML   AML
      comp=N,17600µm,0.3s
CTI                               AML   AML
      comp=E,11800µm,0.5s
CTI                               AML   AML
      comp=N,17600µm,0.3s
CTI                               AML   AML
      comp=E,11800µm,0.5s
CTI                               AML   AML
      comp=N,17600µm,0.3s
ACOM  Acomizza, Ital    0.70  69  ePg   Pg    18 12 57.6  0.0
ACOM  Acomizza, Ital    0.70  69  P     Pg    18 12 57.6  0.0
```

```
ACOM                              AML   AML
      comp=E,10875µm,0.4s
ACOM                              AML   AML
      comp=N,10225µm,0.5s
ACOM                              AML   AML
      comp=E,10875µm,0.4s
ACOM                              AML   AML
      comp=N,10225µm,0.5s
ACOM                              AML   AML
      comp=N,10225µm,0.5s
ACOM                              AML   AML
      comp=E,10875µm,0.4s
BRES  Bressanone        0.70 305  P     Pg    18 12 57.2 -0.5
BRES                              AML   AML
      comp=E,6090µm,0.3s
BRES                              AML   AML
      comp=N,10750µm,0.2s
BRES                              AML   AML
      comp=E,6090µm,0.3s
BRES                              AML   AML
      comp=N,10750µm,0.2s
BRES                              AML   AML
      comp=E,6090µm,0.3s
BRES                              AML   AML
      comp=N,10750µm,0.2s
BRES                              AML   AML
      comp=E,6090µm,0.3s
BRES                              AML   AML
      comp=N,10750µm,0.2s
PRED  Cave del Predi    0.70  78  ePg   Pg    18 12 57.2 -0.5
RISI  Rein              0.73 332  P     Pg    18 12 58.0 -0.1
RISI                              S     Sg    18 13 07.9 +0.2
RISI                              AML   AML
      comp=E,18950µm,0.3s
RISI                              AML   AML
      comp=N,23850µm,0.3s
RISI                              AML   AML
      comp=E,18950µm,0.3s
RISI                              AML   AML
      comp=N,23850µm,0.3s
RISI                              AML   AML
      comp=N,23850µm,0.3s
RISI                              AML   AML
      comp=E,18950µm,0.3s
SABO  M.te Sabotino     0.79 114  P     Pn    18 13 00.5 +0.1
SABO                              AML   AML
      comp=E,13550µm,0.5s
SABO                              AML   AML
      comp=N,17550µm,0.4s
SABO                              AML   AML
      comp=E,13550µm,0.5s
SABO                              AML   AML
      comp=N,17550µm,0.4s
SABO                              AML   AML
      comp=E,13550µm,0.5s
SABO                              AML   AML
      comp=N,17550µm,0.4s
MYKA  Terra Mystica     0.81  66  ePg   Pg    18 12 59.6  0.0
      comp=N,50nm,0.1s,SNR=7.6
MYKA                              Sg    Sb    18 13 11.6 +1.2
      comp=N,280nm,0.3s
CADS  Cadrg             0.81  95  ePg   Pg    18 12 58.9 -0.9
CADS                              i Sg  Sb    18 13 11.4 +0.9
      comp=Z,513nm,0.2s
KOSI  Kohlern           0.84 281  P     Pg    18 12 59.9 -0.4
KOSI                              S     Sg    18 13 10.7 -0.6
KOSI                              AML   AML
      comp=E,6730µm,0.3s
KOSI                              AML   AML
      comp=N,3925µm,1.1s
KOSI                              AML   AML
      comp=E,6730µm,0.3s
KOSI                              AML   AML
      comp=N,3925µm,1.1s
KOSI                              AML   AML
      comp=N,3925µm,1.1s
KOSI                              AML   AML
      comp=E,6730µm,0.3s
BOSI  Bolzano           0.89 283  P     Pb    18 13 00.7 -0.2
BOSI                              AML   AML
      comp=E,11500µm,0.7s
BOSI                              AML   AML
      comp=N,15500µm,0.5s
BOSI                              AML   AML
      comp=E,11500µm,0.7s
BOSI                              AML   AML
      comp=N,15500µm,0.5s
BOSI                              AML   AML
      comp=E,11500µm,0.7s
BOSI                              AML   AML
      comp=N,15500µm,0.5s
PANI  Panarotta         0.90 254  ePg   Pb    18 13 01.0 -0.3
KBA   Koelnbreinsper    0.94  34  ePg   Pb    18 13 01.8 -0.2
      comp=N,165nm,0.2s
KBA                               Sg    Sb    18 13 14.0 -0.2
      comp=N,350nm,0.2s
KBA   Koelnbreinsper    0.94  34  ePg   Pb    18 13 01.9  0.0
KBA                               eSg   Sb    18 13 14.1 -0.2
APPI  Appiano           0.94 281  P     Pb    18 13 01.6 -0.4
APPI                              AML   AML
      comp=E,6250µm,0.5s
APPI                              AML   AML
      comp=N,5415µm,0.3s
APPI                              AML   AML
      comp=E,6250µm,0.5s
APPI                              AML   AML
      comp=N,5410µm,0.3s
APPI                              AML   AML
      comp=N,5415µm,0.3s
APPI                              AML   AML
      comp=E,6245µm,0.5s
VOJS  Vojsko            0.95 106  ePg   Pg    18 13 02.5 +0.1
VOJS                              eSg   Sg    18 13 15.4 +0.5
      comp=Z,1µm,0.2s
ABSI  Aberstueckl       0.96 297  P     Pb    18 13 02.2 -0.2
ABSI                              AML   AML
      comp=E,9810µm,0.5s
ABSI                              AML   AML
      comp=N,8190µm,0.4s
ABSI                              AML   AML
      comp=E,9810µm,0.5s
ABSI                              AML   AML
      comp=N,8190µm,0.4s
ABSI                              AML   AML
      comp=E,9810µm,0.5s
ABSI                              AML   AML
      comp=N,8190µm,0.4s
ROSI  Rosskopf          1.01 308  P     Pb    18 13 03.2  0.0
ROSI                              AML   AML
      comp=E,5360µm,0.4s
ROSI                              AML   AML
      comp=N,7945µm,0.3s
ROSI                              AML   AML
      comp=E,5360µm,0.4s
ROSI                              AML   AML
      comp=N,7945µm,0.3s
ROSI                              AML   AML
      comp=N,7945µm,0.3s
ROSI                              AML   AML
      comp=E,5360µm,0.4s
TRI   Trieste           1.02 125  ePg   Pg    18 13 03.8 +0.1
OZOL  Ozolo             1.06 276⇓ ePg   Pb    18 13 03.9  0.0
JAVS  Javornik          1.12 111  ePg   Pb    18 13 04.0 -1.0
JAVS                              i           18 13 05.5
JAVS                              eSg   Sn    18 13 21.3 +1.1
      comp=Z,904nm,0.2s
TEOL  Teolo             1.14 214  P     Pb    18 13 05.3 +0.1
TEOL                              AML   AML
      comp=E,28150µm,0.4s
TEOL                              AML   AML
      comp=N,25650µm,0.7s
TEOL                              AML   AML
      comp=E,28150µm,0.4s
TEOL                              AML   AML
      comp=N,25650µm,0.7s
TEOL                              AML   AML
      comp=E,28150µm,0.4s
TEOL                              AML   AML
      comp=N,25650µm,0.7s
WTTA  Wattenberg        1.15 327  Pg    Pg    18 13 06.1 -0.1
      comp=N,225nm,0.2s
WTTA                              Sg    Sg    18 13 21.2 -0.1
      comp=N,428nm,0.3s
WTTA  Wattenberg        1.15 327  ePg   Pg    18 13 06.4 +0.2
WTTA                              eSg   Sn    18 13 21.5 +0.2
WTTA  Wattenberg        1.15 327  P     Pn    18 13 05.9 +0.2
WTTA                              AML   AML
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      comp=E,3900µm,1.4s
WTTA                              AML   AML
      comp=N,3240µm,0.7s
WTTA                              AML   AML
      comp=E,3900µm,1.4s
WTTA                              AML   AML
      comp=N,3240µm,0.7s
WTTA                              AML   AML
      comp=N,3240µm,0.7s
WTTA                              AML   AML
      comp=E,3900µm,1.4s
CRNS  Crni Vrh          1.20 100  i Pg  Pb    18 13 06.5 +0.2
CRNS                              eSg   Sg    18 13 23.4 +0.8
      comp=Z,857nm,0.3s
WATA  Walderalm         1.23 327  Pg    Pb    18 13 07.2 +0.2
      comp=Z,147nm,0.1s
WATA                              Sg    Sg    18 13 24.2 +0.3
      comp=Z,507nm,0.2s
SQTA  Sankt Quirin      1.31 315  ePg   Pb    18 13 08.6 +0.4
      comp=Z,249nm,0.2s
SQTA                              Sg    Sn    18 13 25.6 +0.7
      comp=Z,700nm,0.3s
BALD  Monte Baldo       1.37 244  ePg   Pb    18 13 09.5 +0.1
LJU   Ljubljana         1.39 100  ePg   Pb    18 13 09.4 -0.1
LJU                               eSg   Sg    18 13 28.1 -0.5
LJU   Ljubljana         1.39 100  i Pg  Pb    18 13 09.7 +0.2
LJU                               eSg   Sg    18 13 28.5 -0.1
      comp=Z,680nm,0.3s
LJU   Ljubljana         1.39 100  ePn   Pb    18 13 09.6 +0.2
LJU   Ljubljana         1.39 100  P     Pb    18 13 09.6 +0.2
LJU                               AML   AML
      comp=E,12100µm,0.5s
LJU                               AML   AML
      comp=N,10265µm,1.0s
LJU                               AML   AML
      comp=N,10265µm,1.0s
LJU                               AML   AML
      comp=E,12100µm,0.5s
RNI   Roncone           1.39 257⇑ ePg   Pg    18 13 10.3 -0.4
OPPE  Oppeano           1.40 225  P     Pb    18 13 09.9 +0.3
OPPE                              AML   AML
      comp=E,19200µm,0.3s
OPPE                              AML   AML
      comp=N,18050µm,1.2s
OPPE                              AML   AML
      comp=N,18050µm,1.2s
OPPE                              AML   AML
      comp=E,19200µm,0.3s
CEY   Cerknica          1.41 113  ePg   Pb    18 13 09.8 -0.2
CEY                               eSg   Sg    18 13 30.6 +1.1
CEY   Cerknica          1.41 113  ePn   Pn    18 13 09.5 +0.4
MOSI  Grossmontoni      1.43 283  P     Pb    18 13 10.6 +0.2
MOSI                              AML   AML
      comp=E,7800µm,0.4s
MOSI                              AML   AML
      comp=N,17400µm,1.2s
MOSI                              AML   AML
      comp=E,7800µm,0.4s
MOSI                              AML   AML
      comp=N,17400µm,1.2s
MOSI                              AML   AML
      comp=N,17400µm,1.2s
MOSI                              AML   AML
      comp=E,7800µm,0.4s
MOTA  Moosalm           1.45 316  i Pg  Pb    18 13 11.1 +0.5
      comp=E,82nm,0.2s
MABI  Malga Bissina     1.45 261  P     Pb    18 13 10.8 +0.1
MABI                              AML   AML
      comp=E,1730µm,0.9s
MABI                              AML   AML
      comp=N,2540µm,0.3s
MABI                              AML   AML
      comp=E,1730µm,0.9s
MABI                              AML   AML
      comp=N,2540µm,0.3s
MABI                              AML   AML
      comp=E,1730µm,0.9s
MABI                              AML   AML
      comp=N,2540µm,0.3s
MAGA  Magasa            1.45 249  P     Pb    18 13 10.8 +0.1
MAGA                              AML   AML
      comp=E,15850µm,0.5s
MAGA                              AML   AML
      comp=N,10790µm,0.5s
MAGA                              AML   AML
      comp=E,15850µm,0.5s
MAGA                              AML   AML
      comp=N,10790µm,0.5s
MAGA                              AML   AML
      comp=N,10790µm,0.5s
MAGA                              AML   AML
      comp=E,15850µm,0.5s
FETA  Feichten          1.46 300  ePg   Pb    18 13 11.0 +0.3
      comp=E,209nm,0.2s
FETA                              Sn    Sb    18 13 29.4 +0.3
      comp=E,572nm,0.5s
BRMO  Bormio            1.53 277  P     Pb    18 13 12.2 +0.2
BRMO                              AML   AML
      comp=E,2090µm,1.2s
BRMO                              AML   AML
      comp=N,1860µm,1.3s
BRMO                              AML   AML
      comp=E,2090µm,1.2s
BRMO                              AML   AML
      comp=N,1860µm,1.3s
BRMO                              AML   AML
      comp=N,1860µm,1.3s
BRMO                              AML   AML
      comp=E,2090µm,1.2s
BAG8  Bagolino          1.54 252  P     Pb    18 13 12.4 +0.3
SERM  Sermide           1.57 215  P     Pb    18 13 13.1 +0.5
SERM                              AML   AML
      comp=E,3620µm,0.3s
SERM                              AML   AML
      comp=N,3375µm,0.3s
SERM                              AML   AML
      comp=E,4774µm,0.4s
SERM                              AML   AML
      comp=N,5210µm,0.3s
SERM                              AML   AML
      comp=E,3625µm,0.3s
SERM                              AML   AML
      comp=N,3375µm,0.3s
SERM                              AML   AML
      comp=E,4775µm,0.4s
SERM                              AML   AML
      comp=N,5210µm,0.3s
SERM                              AML   AML
      comp=N,3375µm,0.3s
SERM                              AML   AML
      comp=N,5210µm,0.3s
SERM                              AML   AML
      comp=E,4775µm,0.4s
SERM                              AML   AML
      comp=E,3625µm,0.3s
SALO  Salr              1.58 245  P     Pb    18 13 13.3 +0.4
SALO                              AML   AML
      comp=E,3235µm,1.1s
SALO                              AML   AML
      comp=N,3900µm,0.7s
SALO                              AML   AML
      comp=N,3900µm,0.7s
SALO                              AML   AML
      comp=E,3235µm,1.1s
FUORN Ofenpass-Fuorn    1.62 282  P     Pb    18 13 13.7  0.0
FUORN                             AML   AML
      comp=E,2155µm,0.5s
FUORN                             AML   AML
      comp=N,2495µm,0.5s
FUORN                             AML   AML
      comp=E,2155µm,0.5s
FUORN                             AML   AML
      comp=N,2495µm,0.5s
FUORN                             AML   AML
      comp=E,2155µm,0.5s
FUORN                             AML   AML
      comp=N,2495µm,0.4s
PDKS  Podkum            1.71  97  ePn   Pn    18 13 14.0 +0.9
PDKS                              eSn   Sb    18 13 37.1 +0.9
      comp=Z,451nm,0.3s
RETA  Reutte            1.71 314  ePg   Pg    18 13 16.7 -0.1
      comp=Z,104nm,0.2s,SNR=27
RETA                              Sg    Sg    18 13 40.8 +1.7
      comp=Z,840nm,0.4s
SOKA  Soboth            1.74  77  ePn   Pb    18 13 14.9 -0.7
      comp=Z,68nm,0.3s,SNR=16
SOKA                              Sg    Sb    18 13 38.5 +1.2
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	comp=Z,210nm,0.4s						
BERNI	**Berninapass**	**1.77**	**274**	AML	AML		
	comp=N,1069µm,0.8s						
BERNI				AML	AML		
	comp=E,808µm,1.1s						
BERNI				AML	AML		
	comp=N,1069µm,0.8s						
BERNI				AML	AML		
	comp=E,808µm,1.1s						
BERNI				AML	AML		
	comp=N,1069µm,0.8s						
BERNI				AML	AML		
	comp=E,808µm,1.1s						
FIU	**Minerbio Fiu**	**1.83**	**205**	AML	AML		
	comp=E,4085µm,0.3s						
FIU				AML	AML		
	comp=E,4085µm,0.3s						
FIU				AML	AML		
	comp=N,5220µm,1.2s						
FIU				AML	AML		
	comp=N,5220µm,1.2s						
RAVA	**Ravarino**	**1.86**	**214**	AML	AML		
	comp=N,4370µm,0.6s						
RAVA				AML	AML		
	comp=E,4875µm,1.1s						
RAVA				AML	AML		
	comp=N,4370µm,0.6s						
RAVA				AML	AML		
	comp=E,4875µm,1.1s						
DAVOX	**Davos/Dischmat**	**1.92**	**285**	Pn	**Pb**	**18 13 19.0**	**+0.3**
	comp=E,57nm,0.3s,baz=84,slow=20,SNR=66						
DAVOX				Sn	**Sb**	**18 13 44.0**	**+1.6**
	comp=E,33nm,0.3s,baz=347,slow=23,SNR=3.9						
DAVOX	**Davos/Dischmat**	**1.92**	**285**	P	**Pb**	**18 13 19.0**	**+0.3**
DAVOX				AML	AML		
	comp=E,1785µm,0.5s						
DAVOX				AML	AML		
	comp=N,2530µm,0.5s						
DAVOX				AML	AML		
	comp=E,1785µm,0.5s						
DAVOX				AML	AML		
	comp=N,2530µm,0.5s						
MOA	**Molln**	**1.93**	**36**	Pg	**Pb**	**18 13 18.6**	**-0.2**
	comp=N,115nm,0.2s						
MOA				Sg	**Sb**	**18 13 44.4**	**+1.7**
	comp=N,264nm,0.3s						
MOA	**Molln**	**1.93**	**36**	*e*Pn	**Pb**	**18 13 18.7**	**-0.1**
MOA				*e*Sg	**Sg**	**18 13 45.5**	**-0.5**
NOVE	**Novellara**	**1.99**	**221**	AML	AML		
	comp=E,3995µm,1.6s						
NOVE				AML	AML		
	comp=N,3785µm,0.6s						
NOVE				AML	AML		
	comp=E,3995µm,1.6s						
NOVE				AML	AML		
	comp=N,3785µm,0.6s						
IMOL	**Imola, Italy**	**2.03**	**197**	AML	AML		
	comp=N,254µm,1.1s						
IMOL				AML	AML		
	comp=E,1360µm,0.4s						
IMOL				AML	AML		
	comp=N,1805µm,0.4s						
IMOL				AML	AML		
	comp=E,196µm,0.6s						
IMOL				AML	AML		
	comp=N,254µm,1.1s						
IMOL				AML	AML		
	comp=E,1360µm,0.4s						
IMOL				AML	AML		
	comp=N,1805µm,0.4s						
IMOL				AML	AML		
	comp=E,196µm,0.6s						
BOJS	**Bojanci**	**2.04**	**112**	*e*Pn	**Pb**	**18 13 19.5**	**-1.1**
BOJS				*e*Sn	**Sb**	**18 13 47.0**	**+1.3**
BOJS	**Bojanci**	**2.04**	**112**	*e*Pn	**Pn**	**18 13 18.8**	**+1.2**
BOJS				*e*Sn	**Sb**	**18 13 44.7**	**-1.0**
	comp=Z,838nm,0.6s						
BOJS	**Bojanci**	**2.04**	**112**	AML	AML		
	comp=E,2375µm,0.6s						
BOJS				AML	AML		
	comp=N,3370µm,0.8s						
BOJS				AML	AML		
	comp=N,3370µm,0.8s						
BOJS				AML	AML		
	comp=E,2375µm,0.6s						
FUR	**Furstenfeldbru**	**2.06**	**335**	*e*Pn	**Pb**	**18 13 20.5**	**-0.5**
FUR				*e*Pg	**Pg**	**18 13 23.7**	**+0.3**
FUR				*e*Sg	**Sg**	**18 13 48.8**	**-1.3**
CRES	**Cresnjev**	**2.07**	**102**	*e*Pn	**Pn**	**18 13 18.9**	**+0.9**
MTRZ	**Monterenzio**	**2.08**	**202**	AML	AML		
	comp=E,2490µm,0.7s						
MTRZ				AML	AML		
	comp=E,2490µm,0.7s						
MTRZ				AML	AML		
	comp=N,1645µm,1.6s						
MTRZ				AML	AML		
	comp=E,2485µm,0.7s						
MTRZ				AML	AML		
	comp=N,1670µm,1.6s						
MTRZ				AML	AML		
	comp=N,1645µm,1.6s						
MTRZ				AML	AML		
	comp=N,1670µm,1.6s						
MTRZ				AML	AML		
	comp=E,2485µm,0.7s						
DAVA	**Damuels**	**2.09**	**299**	Pg	**Pg**	**18 13 23.1**	**-0.9**
	comp=E,286nm,0.3s						
DAVA				Sg	**Sg**	**18 13 50.7**	**-0.5**
	comp=E,1µm,0.4s						
OZLJ	**Ozalj**	**2.14**	**108**	*e*Pn	**Pn**	**18 13 20.6**	**+1.6**
UBR	**Ueberruh**	**2.17**	**310**	*e*Pn	**Pb**	**18 13 22.4**	**-0.5**
UBR				*e*Sg	**Sg**	**18 13 54.6**	**+0.8**
TUE	**Stuetta**	**2.24**	**275**	AML	AML		
	comp=N,709µm,0.4s						
TUE				AML	AML		
	comp=E,574µm,1.0s						
TUE				AML	AML		
	comp=N,580µm,0.4s						
TUE				AML	AML		
	comp=E,760µm,1.0s						
TUE				AML	AML		
	comp=N,709µm,0.4s						
TUE				AML	AML		
	comp=E,760µm,1.0s						
TUE				AML	AML		
	comp=E,574µm,1.0s						
TUE				AML	AML		
	comp=N,580µm,0.4s						
ARSA	**Arzberg**	**2.24**	**64**	*e*Pn	**Pn**	**18 13 20.8**	**+0.4**
ARSA				*e*Sn	**Sn**	**18 13 48.5**	**+0.7**
ARSA	**Arzberg**	**2.24**	**64**	Pn	**Pn**	**18 13 21.5**	**+1.1**
	comp=N,42nm,0.4s,SNR=13						
ARSA				Sn	**Sn**	**18 13 49.1**	**+1.3**
	comp=N,128nm,0.6s						
ARSA	**Arzberg**	**2.24**	**64**	*e*Pn	**Pn**	**18 13 21.7**	**+1.3**
ARSA				*e*Sg	**Sg**	**18 13 57.1**	**+1.2**
ARSA	**Arzberg**	**2.24**	**64**	P	**Pn**	**18 13 21.6**	**+1.1**
ARSA				AML	AML		
	comp=E,266µm,0.5s						
ARSA				AML	AML		
	comp=N,284µm,0.9s						
ARSA				AML	AML		
	comp=E,266µm,0.5s						
ARSA				AML	AML		
	comp=N,284µm,0.9s						
ZCCA	**Zocca**	**2.25**	**210**	AML	AML		
	comp=E,773µm,0.5s						
ZCCA				AML	AML		
	comp=E,773µm,0.5s						
ZCCA				AML	AML		
	comp=N,830µm,1.1s						
ZCCA				AML	AML		
	comp=E,742µm,1.4s						
ZCCA				AML	AML		
	comp=N,840µm,0.4s						
ZCCA				AML	AML		
	comp=N,840µm,0.4s						
ZCCA				AML	AML		
	comp=E,742µm,1.4s						
ZCCA				AML	AML		
	comp=N,830µm,1.1s						
PLONS	**Plons/SG**	**2.32**	**290**	AML	AML		
	comp=N,672µm,1.5s						
PLONS				AML	AML		
	comp=E,576µm,0.6s						
PLONS				AML	AML		
	comp=E,576µm,0.6s						
PLONS				AML	AML		
	comp=N,672µm,1.5s						
PESA	**Pesaro**	**2.37**	**175**	AML	AML		
	comp=E,1290µm,0.3s						
PESA				AML	AML		
	comp=N,1415µm,0.7s						
PESA				AML	AML		
	comp=N,1415µm,0.7s						
PESA				AML	AML		
	comp=E,1290µm,0.3s						
NVLJ	**Novalja**	**2.38**	**136**	*i* Pn	**Pn**	**18 13 22.9**	**+0.7**
SEI	**Scarperia**	**2.41**	**201**	AML	AML		
	comp=N,1610µm,1.5s						
SEI				AML	AML		
	comp=E,1275µm,0.4s						
SEI				AML	AML		
	comp=N,1610µm,1.5s						
SEI				AML	AML		
	comp=E,1275µm,0.4s						
ERBM	**Eremo**	**2.42**	**220**	AML	AML		
	comp=E,589µm,1.2s						
ERBM				AML	AML		
	comp=N,744µm,1.0s						
ERBM				AML	AML		
	comp=N,744µm,1.0s						
ERBM				AML	AML		
	comp=E,589µm,1.2s						
CPGN	**Carpegna, Ital**	**2.51**	**184**	AML	AML		
	comp=E,784µm,0.7s						
CPGN				AML	AML		
	comp=N,876µm,0.7s						
CPGN				AML	AML		
	comp=N,876µm,0.7s						
CPGN				AML	AML		
	comp=E,784µm,0.8s						
GRAM	**Graiana**	**2.53**	**225**	AML	AML		
	comp=N,1150µm,1.3s						
GRAM				AML	AML		
	comp=E,1265µm,0.9s						
GRAM				AML	AML		
	comp=N,1150µm,1.3s						
GRAM				AML	AML		
	comp=E,1265µm,0.9s						
MTCR	**Monte La Croce**	**2.54**	**207**	AML	AML		
	comp=E,465µm,0.9s						
MTCR				AML	AML		
	comp=E,465µm,0.9s						
MTCR				AML	AML		
	comp=N,486µm,0.5s						
MTCR				AML	AML		
	comp=N,486µm,0.5s						
ASQU	**Asqua**	**2.57**	**193**	AML	AML		
	comp=N,784µm,0.6s						
ASQU				AML	AML		
	comp=E,626µm,1.3s						
ASQU				AML	AML		
	comp=N,784µm,0.6s						
ASQU				AML	AML		
	comp=E,626µm,1.3s						
POPM	**Popiglio**	**2.60**	**210**	AML	AML		
	comp=E,468µm,0.3s						
POPM				AML	AML		
	comp=N,620µm,0.7s						
POPM				AML	AML		
	comp=N,620µm,0.7s						
POPM				AML	AML		
	comp=E,468µm,0.3s						
SARO	**Sassorosso**	**2.62**	**217**	AML	AML		
	comp=E,382µm,1.4s						
SARO				AML	AML		
	comp=E,382µm,1.4s						
SARO				AML	AML		
	comp=N,512µm,0.5s						
SARO				AML	AML		
	comp=N,512µm,0.5s						
FSSB	**Fossombrone**	**2.62**	**177**	AML	AML		
	comp=N,1955µm,0.4s						
FSSB				AML	AML		
	comp=E,1460µm,0.7s						
FSSB				AML	AML		
	comp=N,1955µm,0.4s						
FSSB				AML	AML		
	comp=E,1460µm,0.7s						
GEC2	**GERESS Array S**	**2.65**	**16**	*e*Pn	**Pn**	**18 13 27.3**	**+1.1**
GEC2				*e*Sg	**Sg**	**18 14 07.7**	**-1.5**
GERES	**GERESS Array B**	**2.65**	**16**	Pn	**Pn**	**18 13 27.3**	**+1.1**
	comp=E,11nm,0.3s,baz=193,slow=13,SNR=42						
GERES				Pg	**Pb**	**18 13 32.8**	**+1.6**
	comp=E,37nm,0.3s,baz=194,slow=17,SNR=55						
GERES				Sn	**Sn**	**18 14 00.1**	**+2.1**
	comp=E,44nm,0.3s,baz=191,slow=20,SNR=11						
GERES				Lg	Lg	18 14 07.7	
	comp=E,56nm,0.3s,baz=195,slow=32,SNR=9.4						
GERES				LR	LR	18 14 52.7	
	comp=E,73nm,21.6s,baz=210,slow=48						
PARC	**Parchiule**	**2.67**	**185**	AML	AML		
	comp=E,538µm,0.5s						
PARC				AML	AML		
	comp=N,392µm,1.0s						
PARC				AML	AML		
	comp=N,392µm,1.0s						
PARC				AML	AML		
	comp=E,538µm,0.5s						
BOB	**Bobbio (Coli)**	**2.68**	**236**	AML	AML		
	comp=N,1120µm,1.0s						
BOB				AML	AML		
	comp=E,818µm,1.6s						
BOB				AML	AML		
	comp=N,1120µm,1.0s						
BOB				AML	AML		
	comp=E,818µm,1.6s						
MPAG	**Monte Paganucc**	**2.68**	**177**	AML	AML		
	comp=N,1400µm,0.4s						
MPAG				AML	AML		
	comp=E,1029µm,0.4s						
MPAG				AML	AML		
	comp=E,1054µm,0.4s						
MPAG				AML	AML		
	comp=N,1420µm,0.4s						
MPAG				AML	AML		
	comp=N,1400µm,0.4s						
MPAG				AML	AML		
	comp=N,1415µm,0.4s						
MPAG				AML	AML		
	comp=E,1029µm,0.4s						
MPAG				AML	AML		
	comp=E,1056µm,0.4s						
VARE	**Varese**	**2.68**	**262**	AML	AML		
	comp=E,288µm,1.1s						
VARE				AML	AML		
	comp=N,640µm,0.4s						
VARE				AML	AML		
	comp=N,640µm,0.4s						
VARE				AML	AML		
	comp=E,288µm,1.1s						
CARD	**Cardoso**	**2.72**	**214**	P	**Pn**	**18 13 27.9**	**+0.9**
EQUI	**Equi**	**2.74**	**219**	AML	AML		
	comp=E,275µm,0.3s						
EQUI				AML	AML		
	comp=E,275µm,0.3s						
EQUI				AML	AML		
	comp=N,410µm,0.8s						
EQUI				AML	AML		
	comp=N,410µm,0.8s						
CRMI	**Carmignano**	**2.76**	**205**	AML	AML		
	comp=N,301µm,1.0s						
CRMI				AML	AML		
	comp=E,350µm,0.8s						
CRMI				AML	AML		
	comp=N,301µm,1.0s						
CRMI				AML	AML		
	comp=E,148µm,0.8s						
CRMI				AML	AML		
	comp=N,112µm,0.9s						
CRMI				AML	AML		
	comp=E,148µm,0.8s						
CRMI				AML	AML		
	comp=E,350µm,0.8s						
CRMI				AML	AML		
	comp=N,112µm,0.9s						
PIEI	**Pieia**	**2.77**	**181**	AML	AML		
	comp=E,614µm,0.4s						
PIEI				AML	AML		
	comp=E,614µm,0.4s						
PIEI				AML	AML		
	comp=N,536µm,0.4s						
PIEI				AML	AML		
	comp=N,536µm,0.4s						
CONA	**Conrad Observa**	**2.77**	**53**	Pn	**Pn**	**18 13 29.2**	**+1.4**
	comp=N,25nm,0.4s,SNR=12						
CONA				Sn	**Sb**	**18 14 04.5**	**-2.4**
	comp=N,42nm,0.4s						
FRON	**Frontone**	**2.79**	**178**	AML	AML		
	comp=E,598µm,0.6s						
FRON				AML	AML		
	comp=N,970µm,0.8s						
FRON				AML	AML		
	comp=E,598µm,0.6s						
FRON				AML	AML		
	comp=N,970µm,0.8s						
BADI	**Badiali**	**2.81**	**185**	AML	AML		
	comp=E,778µm,0.7s						
BADI				AML	AML		
	comp=E,778µm,0.7s						
BADI				AML	AML		
	comp=N,649µm,0.7s						
BADI				AML	AML		
	comp=N,649µm,0.7s						
MAIM	**Mastiano**	**2.81**	**212**	AML	AML		
	comp=N,396µm,0.4s						
MAIM				AML	AML		
	comp=E,398µm,1.0s						
MAIM				AML	AML		
	comp=N,396µm,0.4s						
MAIM				AML	AML		
	comp=E,398µm,1.0s						
ARVD	**Arcevia**	**2.82**	**174**	AML	AML		
	comp=N,532µm,0.8s						
ARVD				AML	AML		
	comp=E,393µm,1.0s						
ARVD				AML	AML		
	comp=N,532µm,0.8s						
ARVD				AML	AML		
	comp=E,393µm,1.0s						
ATPC	**Poggio Castell**	**2.83**	**182**	AML	AML		
	comp=E,1078µm,0.4s						
ATPC				AML	AML		
	comp=N,1060µm,0.6s						
ATPC				AML	AML		
	comp=N,1060µm,0.6s						
ATPC				AML	AML		
	comp=E,1078µm,0.4s						
ATBU	**Serra di Buran**	**2.83**	**180**	AML	AML		
	comp=N,1555µm,0.5s						
ATBU				AML	AML		
	comp=E,1780µm,0.5s						
ATBU				AML	AML		
	comp=N,1550µm,0.5s						
ATBU				AML	AML		
	comp=E,1780µm,0.5s						
WET	**Wettzell**	**2.85**	**4**	*e*Pn	**Pn**	**18 13 29.9**	**+1.2**
ATPI	**Pietralunga -**	**2.86**	**182**	AML	AML		
	comp=N,606µm,0.9s						
ATPI				AML	AML		
	comp=E,481µm,0.6s						
ATPI				AML	AML		
	comp=N,606µm,0.9s						
ATPI				AML	AML		
	comp=E,481µm,0.6s						
CDCA	**Citt' di Caste**	**2.86**	**185**	AML	AML		
	comp=E,1782µm,1.3s						
CDCA				AML	AML		
	comp=N,2265µm,0.5s						
CDCA				AML	AML		
	comp=N,2265µm,0.5s						
CDCA				AML	AML		
	comp=E,1782µm,1.3s						
GORR	**Gorreto**	**2.86**	**235**	P	**Pn**	**18 13 30.3**	**+1.2**
GORR	**Gorreto**	**2.86**	**235**	AML	AML		
	comp=N,664µm,1.1s						
GORR				AML	AML		
	comp=E,500µm,0.5s						
GORR				AML	AML		
	comp=N,664µm,1.1s						
GORR				AML	AML		
	comp=E,500µm,0.5s						
ATMC	**Monte Cedrone**	**2.87**	**185**	AML	AML		
	comp=N,786µm,0.4s						
ATMC				AML	AML		
	comp=E,746µm,0.5s						
ATMC				AML	AML		
	comp=E,746µm,0.5s						
ATMC				AML	AML		
	comp=N,786µm,0.4s						
SSFR	**Montelago di S**	**2.87**	**177**	AML	AML		
	comp=N,1180µm,0.2s						
SSFR				AML	AML		
	comp=E,2340µm,0.2s						
SSFR				AML	AML		
	comp=N,1180µm,0.2s						
SSFR				AML	AML		
	comp=E,2340µm,0.2s						
KHC	**Kasperske Hory**	**2.91**	**13**	*e*PN	**Pn**	**18 13 31.0**	**+1.4**
KHC				*e*SN	**Sn**	**18 14 06.6**	**+2.3**
KHC				*e*SG	**Sg**	**18 14 16.6**	**-0.7**
	comp=E,254nm,0.6s						
BEHE	**Becsehely**	**2.92**	**85**	*e*Pn	**Pn**	**18 13 27.9**	**-1.8**
ATVO	**AVT- Monte Val**	**2.93**	**182**	AML	AML		
	comp=N,680µm,0.4s						
ATVO				AML	AML		
	comp=E,844µm,0.6s						
ATVO				AML	AML		
	comp=E,844µm,0.6s						
ATVO				AML	AML		
	comp=N,680µm,0.4s						
MSSA	**Maissana**	**2.93**	**228**	AML	AML		
	comp=N,461µm,0.8s						
MSSA				AML	AML		
	comp=E,438µm,1.1s						
MSSA				AML	AML		
	comp=N,461µm,0.8s						
MSSA				AML	AML		
	comp=E,438µm,1.1s						
CING	**Cingoli**	**2.96**	**171**	AML	AML		
	comp=N,316µm,0.6s						
CING				AML	AML		
	comp=E,402µm,1.3s						
CING				AML	AML		
	comp=N,316µm,0.6s						
CING				AML	AML		
	comp=E,402µm,1.3s						
PLMA	**Palmaria, Port**	**2.96**	**221**	AML	AML		
	comp=E,320µm,0.8s						
PLMA				AML	AML		
	comp=N,430µm,0.4s						
PLMA				AML	AML		
	comp=N,430µm,0.4s						
PLMA				AML	AML		
	comp=E,320µm,0.8s						
CSNT	**Castellina Chi**	**2.98**	**198**	AML	AML		
	comp=E,234µm,0.8s						
CSNT				AML	AML		
	comp=E,234µm,0.8s						
CSNT				AML	AML		
	comp=N,348µm,0.7s						
CSNT				AML	AML		
	comp=N,348µm,0.7s						
EL6	**Elcito**	**3.00**	**173**	AML	AML		
	comp=N,1110µm,0.5s						
EL6				AML	AML		
	comp=E,948µm,1.3s						
EL6				AML	AML		
	comp=N,1110µm,0.5s						
EL6				AML	AML		
	comp=E,964µm,1.3s						
CAFI	**Castiglion Fio**	**3.01**	**188**	AML	AML		
	comp=E,332µm,1.0s						
CAFI				AML	AML		
	comp=E,332µm,1.0s						
CAFI				AML	AML		
	comp=N,338µm,1.0s						
CAFI				AML	AML		
	comp=N,338µm,1.0s						
MURB	**Monte Urbino**	**3.04**	**181**	AML	AML		
	comp=E,2320µm,0.3s						
MURB				AML	AML		
	comp=N,2175µm,0.3s						
MURB				AML	AML		
	comp=N,2175µm,0.3s						
MURB				AML	AML		
	comp=E,2320µm,0.3s						
SOP	**Sopron**	**3.06**	**62**	*e*Pn	**Pn**	**18 13 32.0**	**+0.4**
SOP				Sn	**Sn**	**18 14 08.0**	**+0.1**
SNTG	**Esanatoglia**	**3.06**	**175**	AML	AML		
	comp=E,523µm,0.7s						
SNTG				AML	AML		

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           comp=E,523µm,0.7s
SNTG                                AML     AML
           comp=N,680µm,0.3s
SNTG                                AML     AML
           comp=N,680µm,0.3s
ATTE  AVT- Monte Tez      3.11 183  AML     AML
           comp=E,484µm,0.4s
ATTE                                AML     AML
           comp=E,484µm,0.4s
ATTE                                AML     AML
           comp=N,620µm,0.4s
ATTE                                AML     AML
           comp=N,620µm,0.4s
ATCC  AVT- Casa Cast      3.12 179  AML     AML
           comp=N,1083µm,1.0s
ATCC                                AML     AML
           comp=E,1700µm,0.4s
ATCC                                AML     AML
           comp=N,1083µm,1.0s
ATCC                                AML     AML
           comp=E,1700µm,0.4s
SLE   Schleitheim         3.15 299 ePn      Pn       18 13 35.0 +2.1
SLE                                eSg      Sg       18 14 24.3  -0.6
ASSB  Assisi San Ben      3.26 179  AML     AML
           comp=E,646µm,1.1s
ASSB                                AML     AML
           comp=E,646µm,1.1s
ASSB                                AML     AML
           comp=N,518µm,0.6s
ASSB                                AML     AML
           comp=N,518µm,0.6s
FDMO  Fiordimonte         3.29 173  AML     AML
           comp=E,472µm,0.5s
FDMO                                AML     AML
           comp=E,472µm,0.5s
FDMO                                AML     AML
           comp=N,422µm,0.3s
FDMO                                AML     AML
           comp=N,422µm,0.3s
SULZ  Cheisacher          3.29 293 ePn      Pn       18 13 37.2 +2.4
SULZ                               eSg      Sg       18 14 29.2  -0.4
PCP   Piancastagn         3.34 240  P       Pn       18 13 37.0 +1.4
PCP   Piancastagn         3.34 240  AML     AML
           comp=E,204µm,1.1s
PCP                                 AML     AML
           comp=E,204µm,1.1s
PCP                                 AML     AML
           comp=N,340µm,1.0s
PCP                                 AML     AML
           comp=N,340µm,1.0s
STU   Stuttgart           3.36 318 ePn      Pn       18 13 37.8 +2.0
STU                                eSg      Sg       18 14 32.8 +1.0
GUMA  Gualdo di Mace      3.39 163  AML     AML
           comp=E,2445µm,0.5s
GUMA                                AML     AML
           comp=N,1280µm,0.5s
GUMA                                AML     AML
           comp=N,1280µm,0.5s
GUMA                                AML     AML
           comp=E,2445µm,0.5s
TRIF  Trifonti            3.41 201  AML     AML
           comp=E,163µm,0.8s
TRIF                                AML     AML
           comp=E,163µm,0.8s
TRIF                                AML     AML
           comp=N,182µm,0.8s
TRIF                                AML     AML
           comp=N,182µm,0.8s
MGAB  Montegabbione       3.41 186  AML     AML
           comp=N,790µm,0.4s
MGAB                                AML     AML
           comp=E,712µm,0.5s
MGAB                                AML     AML
           comp=N,790µm,0.4s
MGAB                                AML     AML
           comp=E,792µm,0.4s
MGAB                                AML     AML
           comp=N,666µm,0.6s
MGAB                                AML     AML
           comp=E,712µm,0.5s
MGAB                                AML     AML
           comp=E,792µm,0.4s
MGAB                                AML     AML
           comp=N,666µm,0.6s
ROTZ  Rotzenmuhle         3.47 356 ePn      Pn       18 13 38.8 +1.4
ROTZ                               ePg      Pg       18 13 49.2  -1.2
MONC  Moncucco Torin      3.48 251  AML     AML
           comp=E,474µm,0.6s
MONC                                AML     AML
           comp=N,547µm,0.5s
MONC                                AML     AML
           comp=N,547µm,0.5s
MONC                                AML     AML
           comp=E,474µm,0.6s
NRCA  Norcia              3.49 173  AML     AML
           comp=E,507µm,0.2s
NRCA                                AML     AML
           comp=E,507µm,0.2s
NRCA                                AML     AML
           comp=N,348µm,1.2s
NRCA                                AML     AML
           comp=N,348µm,1.2s
GRF   Grafenberg Arr      3.51 346 ePg      Pg       18 13 50.6  -0.5
GRF                                eSg      Sg       18 14 36.2  -0.3
BFO   Black Forest        3.52 307 ePn      Pn       18 13 40.5 +2.5
BFO                                eSg      Sg       18 14 35.4  -1.6
KIZ   Kirchzarten         3.58 299  Pn      Pn       18 13 40.3 +1.5
KIZ                                 Sg      Sg       18 14 38.1  -0.6
TREC  Trest               3.58  32 ePN      Pn       18 13 40.1 +1.3
TREC                               eSN      Sn       18 14 22.6 +1.8
TREC                               eSG      Sg       18 14 37.4  -1.4
           comp=N,138nm,0.5s
BLY   Banja Luka          3.60 114 ePn      Pn       18 13 40.5 +1.4
BLY                                eSn      Sn       18 14 21.8 +0.6
BLY   Banja Luka          3.60 114⇓iP       Pn       18 13 40.9 +1.8
BLY   Banja Luka          3.60 114  S       Sg       18 14 38.7  -0.7
BLY   Banja Luka          3.60 114 ePn      Pb       18 13 46.8  -0.4
FINB  Finale Ligure       3.68 236  AML     AML
           comp=N,168µm,0.5s
FINB                                AML     AML
           comp=E,142µm,0.4s
FINB                                AML     AML
           comp=N,168µm,0.5s
FINB                                AML     AML
           comp=E,142µm,0.4s
CESX  Cesi                3.70 180  S       Sn       18 14 25.0 +1.3
OPP   Oppenau             3.70 308  Pn      Pn       18 13 42.3 +1.9
TIH   Tihany              3.72  79 ePn      Pn       18 13 41.0 +0.3
TIH                                 Sn      Sn       18 14 25.0 +0.9
LNSS  Leonessa            3.72 175  AML     AML
           comp=E,624µm,0.5s
LNSS                                AML     AML
           comp=E,624µm,0.5s
LNSS                                AML     AML
           comp=N,707µm,0.5s
LNSS                                AML     AML
           comp=N,707µm,0.5s
CASP  Castiglione de      3.72 200  AML     AML
           comp=E,170µm,1.5s
CASP                                AML     AML
           comp=E,170µm,1.5s
CASP                                AML     AML
           comp=N,221µm,0.7s
CASP                                AML     AML
           comp=N,221µm,0.7s
TERO  Teramo              3.76 168  AML     AML
           comp=E,218µm,0.5s
TERO                                AML     AML
           comp=N,124µm,0.6s
TERO                                AML     AML
           comp=E,218µm,0.5s
TERO                                AML     AML
           comp=N,124µm,0.6s
KRUC  Moravsky            3.78  42 ePN      Pn       18 13 42.2 +0.7
KRUC                               ePG      Pg       18 13 55.5  -0.8
KRUC                               eSN      Sn       18 14 26.6 +0.9
KRUC                               eSG      Sg       18 14 45.8 +0.6
MODS  Modra-Piesok        3.81  55 ePN      Pn       18 13 42.8 +0.8
CAMP  Campotosto          3.82 171  AML     AML
           comp=N,293µm,0.5s
CAMP                                AML     AML
           comp=E,270µm,0.7s
CAMP                                AML     AML
           comp=N,293µm,0.5s
CAMP                                AML     AML
           comp=E,270µm,0.7s
RORO  Rocca Rossa         3.87 237  P       Pn       18 13 42.7   0.0
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RORO  Rocca Rossa         3.87 237  AML     AML
           comp=N,112µm,1.4s
RORO                                AML     AML
           comp=E,99µm,0.4s
RORO                                AML     AML
           comp=N,112µm,1.4s
RORO                                AML     AML
           comp=E,99µm,0.4s
RSP   Reno Superiore      3.89 255  P       Pn       18 13 42.0  -1.2
GOPC  GO Pecny, Ondr      3.90  22 ePN      Pn       18 13 44.4 +1.1
GOPC                               eSN      Sn       18 14 29.1 +0.3
GOPC                               eSG      Sg       18 14 48.4  -0.8
           comp=E,176nm,0.6s
PRU   Pruhonice           3.91  19 ePN      Pn       18 13 44.4 +1.0
PRU                                eSN      Sn       18 14 29.6 +0.6
PRU                                eSG      Sg       18 14 48.3  -1.2
           comp=E,200nm,0.6s
NKC   Novy Kostel         3.93 359 ePN      Pn       18 13 45.0 +1.3
NKC                                eSN      Sn       18 14 30.7 +1.2
NKC                                eSG      Sg       18 14 49.6  -0.5
           comp=E,238nm,0.7s
CELB  S.Piero in Cam      3.94 206  AML     AML
           comp=E,199µm,0.3s
CELB                                AML     AML
           comp=E,199µm,0.3s
CELB                                AML     AML
           comp=N,270µm,1.3s
CELB                                AML     AML
           comp=N,270µm,1.3s
SMOL  Smolenice           3.97  54 ePN      Pn       18 13 45.0 +0.8
AQU   L'Aquila            4.00 171 ePn      Pn       18 13 43.3  -1.3
BHB   Bricherasio         4.00 250  P       Pn       18 13 43.6  -1.1
VCEL  Villa Celiera       4.02 166  AML     AML
           comp=E,421µm,1.6s
VCEL                                AML     AML
           comp=E,421µm,1.6s
VCEL                                AML     AML
           comp=N,396µm,1.1s
VCEL                                AML     AML
           comp=N,396µm,1.1s
MOF   Molkenrain          4.02 295  Pn      Pn       18 13 46.6 +1.6
MOF                                 P       Pn       18 13 46.5 +1.6
MOF                                 S       Sn       18 14 34.2 +2.3
VRAC  Vranov              4.05  41⇓iP       Pn       18 13 44.7  -0.5
VRAC  Vranov              4.05  41 ePN      Pn       18 13 45.9 +0.7
VRAC                               ePG      Pg       18 13 59.1  -2.3
VRAC                               eSN      Sn       18 14 34.6 +2.3
VRAC                               eSG      Sg       18 14 50.8  -3.0
VRAC  Vranov              4.05  41  Pn      Pn       18 13 45.7 +0.4
           comp=N,1.6nm,0.3s,baz=244,slow=15,SNR=8.5
VRAC                                Pg      Pb       18 13 54.7  -0.1
           comp=N,3.4nm,0.3s,baz=217,slow=13,SNR=9.2
VRAC                                Sn      Sn       18 14 33.3 +1.0
           comp=N,6.3nm,0.3s,baz=161,slow=21,SNR=5.0
VRAC                                Lg      Lg       18 14 51.4
           comp=N,13nm,0.3s,baz=141,slow=22,SNR=12
MGRO  Montegrosso         4.06 238  P       Pn       18 13 45.5  -0.1
LOMF  Lomont              4.08 287  Pn      Pn       18 13 47.6 +1.8
LOMF                                P       Pn       18 13 47.6 +1.8
LOMF                                S       Sn       18 14 36.1 +2.9
IMI   Imperia             4.09 236  P       Pn       18 13 45.8   0.0
IMI   Imperia             4.09 236  AML     AML
           comp=E,162µm,0.5s
IMI                                 AML     AML
           comp=E,162µm,0.5s
IMI                                 AML     AML
           comp=N,216µm,1.5s
IMI                                 AML     AML
           comp=N,216µm,1.5s
FAGN  Fagnano             4.11 169  AML     AML
           comp=N,684µm,0.5s
FAGN                                AML     AML
           comp=E,788µm,0.4s
FAGN                                AML     AML
           comp=N,684µm,0.5s
FAGN                                AML     AML
           comp=E,788µm,0.4s
WLS   Welschbruch         4.12 303  Pn      Pn       18 13 48.1 +1.7
LPG   La Plagne           4.14 261 ePn      Pn       18 13 48.0 +1.2
LPG   La Plagne           4.14 261 eP       Pn       18 13 50.7 +3.9
LPG                                eSn      Sn       18 14 33.9  -1.2
           comp=E,75nm,0.6s
ECH   Echery              4.15 299  Pn      Pn       18 13 47.9 +1.3
LPL   La Plagne           4.15 261 ePn      Pn       18 13 48.1 +1.2
LPL                                eSn      Sn       18 14 34.1  -1.1
           comp=E,29nm,0.5s
CDF   Champ du Feu        4.17 302 ePn      Pn       18 13 49.2 +2.2
CDF   Champ du Feu        4.17 302 ePg      Pg       18 14 02.8  -0.9
CDF                                eSn      Sn       18 14 34.2  -1.2
           comp=E,53nm,0.4s
CDF                                eSg      Sg       18 14 57.5  -0.2
           comp=E,138nm,0.6s
LANF  Langenberg          4.19 311  P       Pn       18 13 49.6 +2.4
ENR   Entracque           4.19 242  P       Pn       18 13 47.1  -0.1
ENR   Entracque           4.19 242  AML     AML
           comp=E,100µm,0.9s
ENR                                 AML     AML
           comp=E,100µm,0.9s
ENR                                 AML     AML
           comp=N,120µm,0.7s
ENR                                 AML     AML
           comp=N,120µm,0.7s
HINF  Hinteralfeld        4.19 293 ePn      Pn       18 13 48.8 +1.6
HINF                               eSn      Sn       18 14 34.3  -1.6
           comp=N,50nm,0.2s
MORH  Mrgy, Hungar        4.21  89 ePn      Pn       18 13 46.3  -1.2
MORH  Mrgy, Hungar        4.21  89 ePn      Pn       18 13 46.1  -1.4
MORH                                Sn      Sn       18 14 35.1  -1.3
NEGI  Seborga             4.23 236  P       Pn       18 13 48.3 +0.5
NEGI  Seborga             4.23 236  AML     AML
           comp=N,128µm,1.3s
NEGI                                AML     AML
           comp=E,126µm,1.3s
NEGI                                AML     AML
           comp=N,128µm,1.3s
NEGI                                AML     AML
           comp=E,126µm,1.3s
SAOF  Saorge              4.24 239  AML     AML
           comp=N,134µm,0.7s
SAOF                                AML     AML
           comp=E,174µm,0.5s
SAOF                                AML     AML
           comp=N,134µm,0.7s
SAOF                                AML     AML
           comp=E,174µm,0.5s
MBDF  Montbardon          4.37 251 ePn      Pn       18 13 49.5  -0.3
MBDF                               eSn      Sn       18 14 39.2  -1.3
           comp=E,13nm,0.3s
SBF   Sospel              4.38 238 ePn      Pn       18 13 50.6 +0.7
SBF                                eSn      Sn       18 14 38.3  -2.3
           comp=E,62nm,0.4s
MOX   Moxa                4.39 352 ePn      Pn       18 13 50.8 +0.9
INTR  Introdacqua         4.40 167  AML     AML
INTR                                AML     AML
INTR                                AML     AML
INTR                                AML     AML
           comp=E,392µm,0.4s
INTR                                AML     AML
           comp=N,432µm,0.5s
INTR                                AML     AML
           comp=E,392µm,0.4s
INTR                                AML     AML
INTR                                AML     AML
           comp=N,432µm,0.5s
PVCC  Panska Ves          4.43  17 ePN      Pn       18 13 51.3 +0.8
PVCC                               eSN      Sn       18 14 41.9 +0.2
PVCC                               eSG      Sg       18 15 04.8  -1.2
           comp=N,156nm,0.4s
REVF  Revere              4.49 237  P       Pn       18 13 52.5 +1.1
REVF                                S       Sn       18 14 45.3 +1.9
PGF   Pioggiola           4.54 216 ePn      Pn       18 13 52.4 +0.2
PGF                                eSn      Sn       18 14 42.1  -2.6
           comp=N,29nm,0.3s
KOLL  Kolacno             4.56  58 eSN      Sn       18 14 42.8  -2.2
HAU   Haudompre           4.57 294 ePn      Pn       18 13 53.7 +1.2
HAU                                eSn      Sn       18 14 43.9  -1.4
           comp=N,152nm,0.4s
HAU                                eSg      Sg       18 15 09.8  -0.8
           comp=N,117nm,0.5s
BRG   Berggiesshubel      4.66  11  PG      Pg       18 14 10.5  -2.7
BRG                                 SN      Sn       18 14 44.8  -2.7
BRG                                 SG      Sg       18 15 12.1  -1.3
           comp=N,91nm,0.9s
KRLC  Kraliky             4.71  35 ePN      Pn       18 13 55.3 +1.0
KRLC                               eSN      Sn       18 14 48.8 +0.2
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KRLC                               eSG      Sg       18 15 13.6  -1.3
           comp=N,28nm,0.6s
DPC   Dobruska-Polom      4.76  30 ePN      Pn       18 13 55.4 +0.4
DPC                                eSN      Sn       18 14 49.7  -0.2
DPC                                eSG      Sg       18 15 13.9  -2.7
           comp=N,121nm,0.7s
VYHS  Vyhne               4.79  61 ePN      Pn       18 13 55.0  -0.4
VYHS                               eSN      Sn       18 14 48.3  -2.2
UPC   Upice               4.79  27 ePN      Pn       18 13 56.1 +0.7
UPC                                eSN      Sn       18 14 50.0  -0.6
UPC                                eSG      Sg       18 15 14.9  -2.6
           comp=N,140nm,0.6s
TNS   Taunus Mts          4.79 326 ePn      Pn       18 13 57.9 +2.5
MORC  Moravsky Berou      4.81  42⇑iP       Pn       18 13 54.6  -1.2
MORC  Moravsky Berou      4.81  42 ePN      Pn       18 13 56.5 +0.7
MORC                               ePG      Pg       18 14 13.7  -2.4
MORC                               eSG      Sg       18 15 16.1  -2.3
MIDA  Miranda             4.82 165  AML     AML
           comp=N,176µm,1.4s
MIDA                                AML     AML
           comp=E,171µm,1.2s
MIDA                                AML     AML
           comp=N,176µm,1.4s
MIDA                                AML     AML
           comp=E,171µm,1.2s
OGSM  Saint Maurice       4.84 264  Pn      Pn       18 13 58.3 +2.1
OG35  Corcelles           4.87 269  Pn      Pn       18 13 58.4 +1.8
THEF  They Montfort       4.88 296  P       Pn       18 13 57.9 +1.2
THEF                                Pn      Pn       18 13 58.3 +1.7
ORIF  Oris-en-Rattie      4.89 256 ePn      Pn       18 13 58.0 +1.0
ORIF                               eSn      Sn       18 14 51.7  -1.6
           comp=E,24nm,0.3s
CLL   Collm               5.01   3 ePn      Pn       18 13 59.0 +0.5
CLL                                ePg      Pg       18 14 18.0  -1.9
CLL                                eSn      Sn       18 14 55.0  -1.1
CLL                                eSg      Sg       18 15 22.0  -2.8
           comp=Z,102nm,0.7s
FRF   La Foret Royal      5.02 239 ePn      Pn       18 13 58.9 +0.3
FRF                                eSn      Sn       18 14 54.1  -2.2
           comp=Z,12nm,0.2s
HAPS  Han Pijesak,Bl      5.03 114 ePn      Pn       18 13 58.6  -0.2
HAPS  Han Pijesak,Bl      5.03 114 ePn      Pn       18 13 58.6  -0.2
OKC   Ostrava-Krasne      5.14  45 ePN      Pn       18 14 01.5 +1.2
OKC                                eSG      Sg       18 15 25.6  -3.3
           comp=Z,56nm,0.7s
PAGF  Fort de Pagny       5.16 298 ePn      Pn       18 14 02.0 +1.5
PAGF  Fort de Pagny       5.16 298 ePg      Pg       18 14 21.2  -1.5
           baz=120
PAGF                               eSn      Sn       18 14 59.0  -0.8
           comp=Z,80nm,0.4s
PAGF                               eSg      Sg       18 15 28.8  -0.7
FRGS  Fruska Gora         5.20 100 ePn      Pn       18 14 01.3 +0.2
FRGS  Fruska Gora         5.20 100 ePn      Pn       18 14 00.0  -1.1
LMR   La Mourre           5.24 238 ePn      Pn       18 14 01.5  -0.1
LMR                                eSn      Sn       18 14 58.9  -2.7
           comp=Z,11nm,0.2s
BGG   Burgeitz            5.24 320 ePn      Pn       18 14 03.6 +2.0
BGG                                eSn      Sn       18 15 01.4  -0.2
           comp=Z,46nm,0.4s
PSZ   Piszkesteto         5.25  69⇑iP       Pn       18 14 03.1 +1.2
PSZ   Piszkesteto         5.25  69  Sn      Pn       18 14 03.1 +1.2
PSZ                                 Sn      Sn       18 15 02.1  -0.1
BBLS  Lazi&#263;i         5.42 114 ePn      Pn       18 14 05.1 +0.9
BBLS  Lazi&#263;i         5.42 114 ePn      Pn       18 14 04.6 +0.4
SFTF  Sexfontaines        5.47 293 ePn      Pn       18 14 06.9 +2.1
           baz=116
SFTF                               eSn      Sn       18 15 06.1  -1.2
           comp=Z,23nm,0.3s
SFTF                               eSg      Sg       18 15 37.8  -1.5
           comp=Z,36nm,0.5s
SMRF  Simiane la Rot      5.47 247 ePn      Pn       18 14 06.5 +1.7
SMRF                               eSn      Sn       18 15 06.0  -1.4
           comp=Z,7.1nm,0.3s
TREB  Trebinje            5.47 129 ePn      Pn       18 14 05.5 +0.7
TREB                               eSn      Sn       18 15 10.4 +2.9
TREB  Trebinje            5.47 129 ePn      Pn       18 14 01.4  -3.4
MEZF  Maizieres J'vi      5.56 296 ePn      Pn       18 14 08.0 +2.1
           baz=106
MEZF                               eSn      Sn       18 15 08.5  -1.0
           comp=Z,12nm,0.3s
MEZF                               eSg      Sg       18 15 41.0  -1.1
           comp=Z,28nm,0.4s
HILG  Hillesheim          5.60 318 ePn      Pn       18 14 09.1 +2.5
DIVS  Divibare            5.69 110 ePn      Pn       18 14 08.5 +0.6
DIVS  Divibare            5.69 110 ePn      Pn       18 14 08.0 +0.1
VIVF  Saint-Julien-l      5.73 258 ePn      Pn       18 14 09.3 +0.9
VIVF                               eSn      Sn       18 15 11.7  -2.1
           comp=Z,3.0nm,0.2s
STB   Steinbach           5.74 320 ePn      Pn       18 14 11.2 +2.8
HOBG  Hohbusch            5.83 325 ePn      Pn       18 14 12.1 +2.5
TRUS  Trudelj             5.91 108 ePn      Pn       18 14 11.6 +0.8
KLL   Kalltalsperre       6.01 319 ePn      Pn       18 14 14.6 +2.4
IVAS  Ivanjica            6.03 114 ePn      Pn       18 14 13.0 +0.4
SMF   Signal de Mont      6.04 276 ePn      Pn       18 14 13.6 +1.0
SMF                                eSn      Sn       18 15 19.3  -2.1
           comp=Z,12nm,0.3s
LOR   Lormes              6.06 282 ePn      Pn       18 14 14.0 +1.1
           baz=106
LOR                                eSn      Sn       18 15 20.2  -1.7
           comp=Z,11nm,0.2s
LOR   Lormes              6.06 282  Pn      Pn       18 14 14.0 +1.1
DREG  Dreilaegerbach      6.06 318 ePn      Pn       18 14 15.6 +2.7
BAI   Bari                6.06 147 ePn      Sn       18 15 18.4  -3.5
MEM   Membach             6.13 317  P       Pn       18 14 16.7 +2.9
MEM                                 S       Sn       18 15 24.1 +0.5
PDG   Podgorica           6.16 127 ePn      Pn       18 14 15.7 +1.4
PDG   Podgorica           6.16 127 ePn      Pn       18 14 15.0 +0.7
SG1   Sgolgore (BA)       6.22 150 ePn      Sn       18 15 19.9  -6.1
GRUS  Gruza               6.25 110 ePn      Pn       18 14 16.9 +1.4
GRUS  Gruza               6.25 110 ePn      Pn       18 14 17.3 +1.8
SSF   Saint Saulge        6.28 280 ePn      Pn       18 14 17.1 +1.2
SSF                                eSn      Sn       18 15 25.6  -1.8
           comp=Z,6.6nm,0.3s
DRME  Dracevica, Mon      6.29 129 ePn      Pn       18 14 15.6  -0.4
BZS   Buzias              6.34  93 ePn      Pn       18 14 17.0 +0.2
BZS   Buzias              6.34  93⇓iP       Pn       18 14 18.4 +1.6
AVF   Avril sur Loir      6.38 278 ePn      Pn       18 14 18.6 +1.4
AVF                                eSn      Sn       18 15 27.1  -2.6
GIVF  Givet               6.42 309 ePn      Pn       18 14 20.7 +2.9
GIVF                               eSn      Sn       18 15 28.6  -2.1
           comp=Z,16nm,0.2s
LASF  Ste Croix           6.55 253 ePn      Pn       18 14 20.1 +0.5
LASF                               eSn      Sn       18 15 31.1  -2.9
           comp=Z,13nm,0.5s
AGO   Saint Agoulin       6.56 271  Pn      Pn       18 14 20.9 +1.1
AGO                                 P       Pn       18 14 20.2 +0.5
PYM   Petit Puy Mans      6.68 269  P       Pn       18 14 22.6 +1.1
KUBS  Kucevo              6.69 103 ePn      Pn       18 14 21.4  -0.1
BGF   Bois d'Agland       6.73 276 ePn      Pn       18 14 23.0 +1.0
BGF                                eSn      Sn       18 15 35.8  -2.5
           comp=Z,35nm,0.3s
BAIF  Baives              6.73 307 ePn      Pn       18 14 25.3 +3.2
BAIF                               eSn      Sn       18 15 36.2  -2.2
           comp=Z,13nm,0.3s
SELS  Selova              6.82 114 ePn      Pn       18 14 24.3 +0.9
HYF   Humbligny           6.89 282 ePn      Pn       18 14 25.6 +1.4
HYF                                eSn      Sn       18 15 39.3  -3.0
BBOU  Bougnies            7.05 309  P       Pn       18 14 26.4   0.0
BBOU                                S       Sn       18 15 47.7 +1.5
HERR  Herculane           7.05  98⇑iP       Pn       18 14 27.0 +0.5
GZR   Gura Zlata          7.19  94⇑iP       Pn       18 14 28.4   0.0
ZAGS  Zajecar             7.28 107 ePn      Pn       18 14 30.8 +1.1
BARS  Barje               7.47 115 ePn      Pn       18 14 25.5  -6.7
ZAPS  Zavoj               7.77 109 ePn      Pn       18 14 37.8 +1.4
RJF   Les Rejaudoux       7.79 267 ePn      Pn       18 14 37.3 +0.7
RJF                                eSn      Sn       18 16 01.1  -3.4
MTLF  Montolieu           7.93 252 ePn      Pn       18 14 39.0 +0.4
MTLF                               eSn      Sn       18 16 04.5  -3.5
LFF   La Frestale         8.40 265 ePn      Pn       18 14 45.4 +0.4
LFF                                eSn      Sn       18 16 14.8  -4.8
BURAR Bucovina Array      8.75  77⇓iP       Pn       18 14 51.9 +2.0
MFF   Saint Martin d      8.79 277 ePn      Pn       18 14 51.7 +1.4
MFF                                eSn      Sn       18 16 24.2  -4.7
LDF   La Druitiere        8.90 289 ePn      Pn       18 14 54.1 +2.3
LDF                                eSn      Sn       18 16 27.4  -4.3
           comp=Z,3.0nm,0.3s
FLN   La Foliniere        9.17 290 ePn      Pn       18 14 57.1 +1.6
           baz=108
FLN                                eSn      Sn       18 16 33.8  -4.4
           comp=Z,6.6nm,0.4s
GRR   Gorron              9.35 288 ePn      Pn       18 14 58.9 +0.9
GRR                                eSn      Sn       18 16 38.8  -4.0
           comp=Z,1.4nm,0.2s
```

SGMF	**Saint Gilles**	**10.46**	**286**	*e*Pn	**Pn**	**18 15 15.7**	**+2.5**
SGMF				*e*Sn	**Sn**	**18 17 05.5**	**-4.6**
KEST	**Kesra**	**10.84**	**194**	Pn	Pn	18 15 24.1	+5.6
	comp=Z,0.5nm,0.3s,baz=320,slow=2.9,SNR=6.2						
QUIF	**Quistinic**	**10.85**	**284**	*e*Pn	**Pn**	**18 15 20.2**	**+1.7**
QUIF				*e*Sn	**Sn**	**18 17 14.5**	**-5.0**
ROSF	**Rostrenen**	**10.95**	**286**	*e*Pn	**Pn**	**18 15 22.0**	**+2.1**
ROSF				*e*Sn	**Sn**	**18 17 17.1**	**-4.8**
AKASG	**Malin Array Be**	**11.88**	**62**	Pn	**Pn**	**18 15 30.9**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=251,slow=13,SNR=1.9						
EKA	**Eskdalemuir Ar**	**13.41**	**318**	Pn	**Pn**	**18 15 56.3**	**+2.9**
	baz=134,slow=14,SNR=7.1						
HFS	**Hagfors**	**13.87**	**2**	Pn	**Pn**	**18 16 02.9**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=167,slow=13,SNR=2.0						
NB2	**NORSAR Subarra**	**14.78**	**357**	P	**P**	**18 16 19.1**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=176,slow=11						
NOA	**NORSAR Array B**	**14.78**	**357**	Pn	**P**	**18 16 17.3**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=174,slow=11,SNR=5.6						
FINES	**FINESS Array B**	**17.07**	**22**	P	**Pn**	**18 16 41.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=206,slow=8.5,SNR=11						
OBN	**Obninsk**	**17.49**	**51**	LR	LR	18 22 42.6	
	comp=Z,14nm,19.9s,baz=253,slow=34						
ARCES	**ARCESS Array B**	**24.18**	**11**	P	**P**	**18 17 58.6**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=190,slow=10,SNR=7.3						
ARCES				PcP	**PcP**	**18 21 38.5**	**-0.7**
	comp=Z,2.4nm,1.1s,baz=210,slow=2.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**34.30**	**199**	P	**P**	**18 19 29.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=3.5,slow=8.3,SNR=2.8						
ZALV	**Zalesovo Beam**	**45.07**	**53**	P	**P**	**18 20 59.0**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=276,slow=7.3,SNR=2.7						
MKAR	**Makanchi Array**	**46.47**	**63**	P	**P**	**18 21 09.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=299,slow=6.9,SNR=14						
SONM	**Songino Array**	**59.91**	**51**	P	**P**	**18 22 49.2**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=279,slow=9.6,SNR=8.2						
YKA	**Yellowknife Ar**	**63.65**	**336**	P	**P**	**18 23 16.9**	**+3.1**
	comp=Z,0.1nm,0.4s,baz=58,slow=8.1,SNR=3.9						
CMAR	**Chiang Mai Arr**	**74.43**	**80**	P	**P**	**18 24 21.1**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=305,slow=7.3,SNR=10.0						
WRA	**Warramunga Arr**	**126.00**	**81**	PKP	**PKPdf**	**18 31 44.4**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=322,slow=1.9,SNR=8.1						
ASAR	**Alice Springs**	**128.19**	**85**	PKP	**PKPdf**	**18 31 48.7**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=292,slow=1.5,SNR=6.6						

ISCJB ***12*** *18:25:43.4±1.2, 11°.9S±0°.1×165°.1E±0°.1, h10^{km}, mb3.5/4, Error ellipse: s-maj=24.1km s-min=11.7km az=41.5*

IDC ***12*** *18:25:43.2±1.5, 11°.74S×165°.21E, h0^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.6/36, mbtmp3.6/6, ML3.8/2, Error ellipse: s-maj=32.8km s-min=29.8km az=135.0*

ISC 12 18:25:45.0±1.3**, 11°.8S**±0°.1×**165°.2E**±0°.1**, h10^{km}, n6, σ0^{s}.82**/7**, mb3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.68**	**294**	Pn	**Pn**	**18 27 10.5**	**+1.0**
	3.9nm,0.3s,baz=23,slow=18,SNR=3.3						
HNR				Sn	**Sn**	**18 28 14.2**	**-0.5**
	2.9nm,0.3s,baz=182,slow=22,SNR=2.9						
DZM	**Mont Dzumac**	**10.32**	**174**	Pn	**Pn**	**18 28 13.7**	**+0.4**
	0.5nm,0.3s,baz=317,slow=19,SNR=14						
WRA	**Warramunga Arr**	**30.76**	**251**	P	**P**	**18 32 00.6**	**-0.3**
	0.3nm,0.5s,baz=81,slow=8.6,SNR=4.8						
ASAR	**Alice Springs**	**32.02**	**244**	P	**P**	**18 32 10.9**	**-1.0**
	0.3nm,0.7s,baz=68,slow=10,SNR=5.2						
ILAR	**Eielson Array**	**84.35**	**19**	P	**P**	**18 38 16.7**	**-0.3**
	0.4nm,0.6s,baz=241,slow=5.3,SNR=9.7						
MKAR	**Makanchi Array**	**93.69**	**317**	P	**P**	**18 39 02.0**	**0.0**
	0.2nm,0.6s,baz=103,slow=6.2,SNR=2.9						

IDC 12 18:33:42.9±3.6**, 1°.62N×99°.58E, h0^{km}, mb3.2**/4**, mb1 3.4**/4**, mb1mx3.2**/40**, mbtmp3.2**/4**, Error ellipse: s-maj=150.8km s-min=22.9km az=60.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.27**	**124**	P	P	18 41 21.1	-1.0
	0.3nm,0.3s,baz=302,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**41.78**	**129**	P	P	18 41 35.3	+0.8
	0.1nm,0.7s,baz=302,slow=8.1,SNR=3.3						
SONM	**Songino Array**	**46.41**	**6**	P	P	18 42 11.5	+0.1
	0.1nm,0.4s,baz=191,slow=5.9,SNR=2.5						
MKAR	**Makanchi Array**	**47.45**	**344**	P	P	18 42 19.1	-0.3
	0.2nm,0.4s,baz=157,slow=9.4,SNR=7.7						

IDC 12 18:42:19.1±1.7**, 0°.69S×133°.41E, h0^{km}, mb3.3**/2**, mb1 3.6**/5**, mb1mx3.4**/39**, mbtmp3.5**/5**, ML3.5**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.3**/20**, Error ellipse: s-maj=26.7km s-min=18.6km az=13.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.15**	**265**	Pn	Pn	18 42 56.4	+0.2
	33nm,0.3s,baz=241,slow=22,SNR=163						
SIJI				Sn	Sn	18 43 22.9	-0.7
	18nm,0.3s,baz=314,slow=22,SNR=11						
SIJI				Lg	Lg	18 43 28.0	
	22nm,0.3s,baz=211,slow=22,SNR=7.6						
BATI	**Baumata**	**13.54**	**225**	Pn	Pn	18 45 33.4	+0.7
	0.4nm,0.3s,baz=286,slow=4.2,SNR=4.0						
WRA	**Warramunga Arr**	**19.16**	**177**	P	Pn	18 46 45.2	+0.2
	0.1nm,0.3s,baz=355,slow=11,SNR=8.1						
ASAR	**Alice Springs**	**22.85**	**179**	P	P	18 47 23.4	-0.7
	0.6nm,0.5s,baz=359,slow=11,SNR=13						
ASAR				LR	LR	18 57 12.1	
	comp=Z,32nm,18.0s,baz=102,slow=39						
MKAR	**Makanchi Array**	**65.00**	**324**	P	P	18 53 01.0	-0.1
	0.2nm,0.5s,baz=106,slow=8.5,SNR=3.5						

ISCJB ***12*** *18:57:35.1±0.5, 11°.02S±0°.05×166°.06E±0°.06, h10^{km}, mb4.6/22, MS4.3/1, Error ellipse: s-maj=9.2km s-min=6.6km az=141.9*

IDC ***12*** *18:57:35.2±1.6, 10°.89S×165°.97E, h0^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.8/39, mbtmp4.0/7, ML3.9/1, MS3.7/2, Ms1 3.7/2, ms1mx2.8/36, Error ellipse: s-maj=50.6km s-min=25.4km az=117.0*

NEIC ***12*** *18:57:37.0±0.6, 10°.98S×166°.08E, h10^{km}, mb4.9/18, Error ellipse: s-maj=11.4km s-min=7.7km az=49.0*

ISC 12 18:57:36.9±0.6**, 10°.99S**±0°.08×**166°.07E**±0°.08**, h10^{km}, n42, σ1^{s}.17**/35**, mb4.6**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.23**	**284**	Pn	**Pn**	**18 59 10.5**	**+1.5**
	9.6nm,0.3s,baz=148,slow=15,SNR=2.4						
HNR				Sn	**Sn**	**19 00 22.4**	**+2.2**
	6.7nm,0.3s,baz=186,slow=22,SNR=3.9						
HNR				LR	LR	19 01 40.7	
	comp=Z,248nm,20.7s,baz=44,slow=40						
DZM	**Mont Dzumac**	**11.02**	**178**	*e*Pn	**Pn**	**19 00 14.5**	**-0.3**
DZM	**Mont Dzumac**	**11.02**	**178**	Pn	**Pn**	**19 00 16.4**	**+1.6**
	0.9nm,0.3s,baz=132,slow=16,SNR=14						
ONTNC	**Ouen Toro**	**11.26**	**178**	*e*Pn	**Pn**	**19 00 19.3**	**+1.4**
OUENC	**Ouen Island, N**	**11.39**	**176**	*e*Pn	**Pn**	**19 00 21.4**	**+1.6**
PINNC	**Pines Island,**	**11.63**	**174**	*e*Pn	**Pn**	**19 00 25.7**	**+2.6**
RABL	**Rabaul**	**15.35**	**295**	*e*Pn	**Pn**	**19 01 13.3**	**-0.5**
	18nm,0.6s						
PATS	**Pohnpei**	**19.32**	**336**	*e*P	**Pn**	**19 02 03.7**	**+0.2**
	224nm,1.2s						
EIDS	**Eidsvold**	**20.15**	**223**	*e*P	Pn	19 02 13.6	+0.2
	54nm,1.7s						
ARMA	**Armidale**	**23.53**	**213**	*e*P	**P**	**19 02 47.5**	**0.0**
	48nm,1.8s						
H11S2	**WAKE ISLAND Hy**	**29.30**	**1**	T	T	19 34 03.0	
	SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**29.31**	**1**	T	T	19 34 03.5	
H11S1	**WAKE ISLAND Hy**	**29.32**	**1**	T	T	19 34 05.7	
BKZ	**Black Stump Fm**	**29.55**	**163**	*e*P	**P**	**19 03 40.8**	**-1.1**
	32nm,1.6s						
H11N1	**WAKE ISLAND Hy**	**30.52**	**2**	T	T	19 35 35.7	
H11N3	**WAKE ISLAND Hy**	**30.53**	**2**	T	T	19 35 39.5	
	baz=180,slow=74,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**30.54**	**2**	T	T	19 35 40.6	
	baz=94,slow=74						
STKA	**Stephens Creek**	**30.70**	**224**	*e*P	**P**	**19 03 52.5**	**+0.4**
	5.2nm,1.8s						
STKA	**Stephens Creek**	**30.70**	**224**	P	**P**	**19 03 51.5**	**-0.6**
	1.9nm,0.6s,baz=93,slow=7.3,SNR=3.9						
THZ	**Tophouse**	**31.23**	**170**	*e*P	**P**	**19 03 58.0**	**+1.3**
	35nm,1.3s						
WB2	**Warramunga Arr**	**31.79**	**250**	*e*P	**P**	**19 04 01.1**	**-0.8**
WRAB	**Tennant Creek**	**31.79**	**250**	*e*P	**P**	**19 04 01.7**	**-0.2**
	14nm,1.4s						
WR1	**Warramunga Arr**	**31.80**	**250**	*e*P	**P**	**19 04 01.9**	**-0.1**
	4.7nm,0.9s						
WRA	**Warramunga Arr**	**31.80**	**250**	P	**P**	**19 04 01.9**	**-0.1**
	2.5nm,0.5s,baz=81,slow=9.1,SNR=42						
TOO	**Toolangi**	**32.28**	**212**	*e*P	**P**	**19 04 05.0**	**-1.1**
	35nm,1.5s						
FOZ	**Fox Glacier**	**32.58**	**175**	*e*P	**P**	**19 04 07.0**	**-1.5**
	84nm,1.5s						
RPZ	**Rata Peaks**	**32.89**	**173**	*e*P	**P**	**19 04 10.9**	**-0.3**
	36nm,1.3s						
AS31	**Alice Springs**	**33.10**	**243**	*e*P	**P**	**19 04 11.8**	**-1.6**
	0.8nm,0.9s						
ASAR	**Alice Springs**	**33.10**	**243**	P	**P**	**19 04 12.3**	**-1.0**
	1.6nm,0.8s,baz=69,slow=9.7,SNR=19						
MTN	**Manton Dam**	**34.22**	**263**	*e*P	**P**	**19 04 24.3**	**+1.1**
	5.7nm,1.0s						
BBOO	**Buckleboo**	**35.10**	**227**	*e*P	**P**	**19 04 30.6**	**0.0**
	57nm,1.9s						
TAU	**Tasmania Unive**	**35.74**	**204**	*e*P	**P**	**19 04 35.1**	**-0.8**
	79nm,1.5s						
XMAS	**Kiritimati**	**38.53**	**73**	*e*P	**P**	**19 05 00.8**	**+0.8**
	169nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.70**	**255**	*e*P	**P**	**19 05 09.8**	**0.0**
	4.7nm,0.8s						
SOEI	**Soe**	**41.12**	**268**	*e*P	**P**	**19 05 19.6**	**-2.1**
	10.0nm,0.9s						
HATHI	**Halema‘uma‘u T**	**48.63**	**52**	*e*P	**P**	**19 06 22.4**	**+1.0**
	400nm,1.1s						
SONA0	**Songino Array**	**78.81**	**324**	*e*P	**P**	**19 09 39.9**	**-0.3**
SONM	**Songino Array**	**78.81**	**324**	P	**P**	**19 09 39.9**	**-0.3**
	0.9nm,1.1s,baz=95,slow=4.9,SNR=4.3						
ILAR	**Eielson Array**	**83.36**	**18**	P	**P**	**19 10 03.5**	**-0.4**
	0.3nm,0.6s,baz=228,slow=5.4,SNR=4.8						
YBH	**Yreka Blue Hor**	**83.63**	**45**	LR	LR	19 39 55.5	
	comp=Z,128nm,20.4s,baz=104,slow=30						
MK32	**Makanchi Array**	**93.70**	**317**	*e*P	**P**	**19 10 52.8**	**-1.1**
MKAR	**Makanchi Array**	**93.70**	**317**	P	**P**	**19 10 52.8**	**-1.1**
	0.4nm,0.7s,baz=91,slow=6.0,SNR=5.6						

NIED ***12*** *19:12:00, 39°.90N×142°.30E, h35^{km}, Mw3.6 Best double couple: $M_0$3.07000×10^{14} NP1:ϕ_s192.00000°, δ17.00000°, λ81.00000°. NP2:ϕ_s21.00000°, δ73.00000°, λ93.00000°.*

ISCJB ***12*** *19:12:20.4±0.9, 39°.94N±0°.03×142°.3E±0°.1, h49^{km}±6^{km}, mb3.5/6, Error ellipse: s-maj=13.5km s-min=5.6km az=3.2*

JMA ***12*** *19:12:21.1±0.1, 39°.94N×142°.31E, h43^{km}±1^{km}, M3.5*

JMA Felt I J1.

IDC ***12*** *19:12:22.5±2.5, 39°.96N×142°.58E, h68^{km}±22^{km}, mb3.3/6, mb1 3.3/9, mb1mx3.2/49, mbtmp3.5/9, MS2.4/2, Ms1 2.4/2, ms1mx2.1/27, Error ellipse: s-maj=36.0km s-min=16.3km az=95.0*

ISC 12 19:12:21.5±1.4**, 39°.93N**±0°.04×**142°.28E**±0°.09**, h42^{km}**±10^{km}**, n28, σ1^{s}.21**/31**, mb3.6**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.32**	**272**	P	**Pn**	**19 12 30.2**	**0.0**
JTH				S	**Sn**	**19 12 36.6**	**+0.3**
MIYJ	**Miyakonagasawa**	**0.50**	**225**	P	**Pn**	**19 12 32.2**	**-0.1**
MIYJ				S	**Sn**	**19 12 39.8**	**-0.2**
JKEN	**Kujiedanarisaw**	**0.52**	**303**	P	**Pn**	**19 12 32.1**	**-0.5**
JKEN				S	**Sn**	**19 12 39.9**	**-0.5**
JKZ	**Kuzumaki**	**0.73**	**275**	P	**Pn**	**19 12 35.8**	**+0.3**
JKZ				*e*S	**Sn**	**19 12 46.1**	**+0.5**
JANG	**Nango**	**0.73**	**307**	P	**Pn**	**19 12 35.0**	**-0.5**
JANG				*e*S	**Sn**	**19 12 45.2**	**-0.4**
JOM	**Ohasama**	**0.89**	**239**	P	**Pn**	**19 12 37.7**	**+0.1**
JOM				*e*S	**Sn**	**19 12 49.5**	**+0.2**
OFUJ	**Ofunato**	**0.97**	**209**	P	**Pn**	**19 12 38.7**	**0.0**
OFUJ				S	**Sn**	**19 12 50.8**	**-0.5**
JTM	**Tenmabayashi**	**1.26**	**313**	P	**Pn**	**19 12 42.9**	**+0.2**
JTM				*e*S	**Sn**	**19 12 58.8**	**+0.4**
JMK	**Ichinoseki**	**1.27**	**220**	P	**Pn**	**19 12 43.3**	**+0.5**
JMK				*e*S	**Sn**	**19 12 59.3**	**+0.6**
JAH	**Hinai**	**1.29**	**282**	P	**Pn**	**19 12 43.6**	**+0.6**
JRG	**Rokugo**	**1.38**	**248**	P	**Pn**	**19 12 45.3**	**+1.0**
ASAJ	**Asahikawa**	**4.19**	**3**	P	**Pn**	**19 13 23.4**	**+0.6**
	0.8nm,0.3s,baz=215,slow=11,SNR=9.3						
ASAJ				S	**Sn**	**19 14 11.2**	**+0.6**
	0.8nm,0.3s,baz=225,slow=19,SNR=2.2						
MAT	**Matsushiro**	**4.66**	**225**	P	**Pn**	**19 13 32.4**	**+3.0**
MJAR	**Matsushiro Arr**	**4.66**	**225**	P	**Pn**	**19 13 32.5**	**+3.2**
	0.2nm,0.3s,baz=30,slow=13,SNR=14						
MJAR				LR	LR	19 15 48.8	
	comp=Z,32nm,19.4s,baz=230,slow=43						
USRK	**Ussuriysk Ar.**	**8.76**	**302**	P	**Pn**	**19 14 29.1**	**+3.5**
	0.1nm,0.3s,baz=98,slow=14,SNR=5.5						
KSRS	**Korea Array**	**11.49**	**262**	LR	LR	19 19 05.4	
	comp=Z,18nm,18.1s,baz=125,slow=34						
SONM	**Songino Array**	**26.85**	**299**	P	**P**	**19 17 58.6**	**+0.5**
	0.2nm,0.6s,baz=96,slow=7.6,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**29.18**	**126**	T	T	19 49 03.8	
	baz=319,slow=75,SNR=125						
H11N1	**WAKE ISLAND Hy**	**29.19**	**126**	T	T	19 49 04.6	
	baz=319,slow=75,SNR=94						
H11N3	**WAKE ISLAND Hy**	**29.20**	**126**	T	T	19 49 05.2	
	baz=319,slow=75,SNR=90						
H11S1	**WAKE ISLAND Hy**	**29.99**	**128**	T	T	19 50 02.3	
	baz=321,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**29.99**	**128**	T	T	19 50 02.6	
	baz=321,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**30.01**	**128**	T	T	19 50 04.5	
	baz=321,slow=76,SNR=12						
ZALV	**Zalesovo Beam**	**40.52**	**310**	P	**P**	**19 19 55.8**	**-0.4**
	0.4nm,0.3s,baz=70,slow=9.3,SNR=2.7						
MKAR	**Makanchi Array**	**43.22**	**300**	P	**P**	**19 20 18.0**	**-0.4**
	0.3nm,0.6s,baz=85,slow=10.0,SNR=7.5						
KURBB	**Kurchatov Arra**	**44.81**	**306**	P	**P**	**19 20 30.4**	**-0.6**
	0.8nm,0.5s,baz=79,slow=8.7,SNR=10						
BVAR	**Borovoye Array**	**49.17**	**311**	P	**P**	**19 21 04.3**	**-0.7**
	0.4nm,0.5s,baz=65,slow=8.6,SNR=4.3						
WRA	**Warramunga Arr**	**60.02**	**189**	P	**P**	**19 22 22.6**	**-1.3**
	0.6nm,0.7s,baz=6.8,slow=6.9,SNR=7.8						

BJI ***12*** *19:19:09.8, 42°.65N×70°.57E, h28^{km}, mB4.4/9, mb4.2/7, ML4.4/3, Ms3.8/3, Ms7 3.8/2*

IDC ***12*** *19:19:09.4±0.5, 42°.39N×70°.96E, h0^{km}, mb3.8/22, mb1 4.0/30, mb1mx3.9/57, mbtmp3.9/30, ML3.9/7, MS3.1/10, Ms1 3.1/10, ms1mx2.8/62, Error ellipse: s-maj=9.1km s-min=6.3km az=176.0*

MOS ***12*** *19:19:11.1±1.3, 42°.56N×70°.84E, h20^{km}, mb4.3/20, Error ellipse: s-maj=6.3km s-min=4.9km az=99.1*

KRNET ***12*** *19:19:11.1±0.1, 42°.47N×70°.93E, h15^{km}, mb3.8*

NNC ***12*** *19:19:11.8±0.4, 42°.52N×71°.00E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=4.5km s-min=1.1km az=32.0*

SOME ***12*** *19:19:12.1, 42°.40N×70°.97E, h5^{km}, MS3.1*

NEIC ***12*** *19:19:13.7±0.8, 42°.54N×70°.91E, h25^{km}±6^{km}, mb4.4/24, Error ellipse: s-maj=4.7km s-min=3.4km az=197.0*

ISC 12 19:19:10.2±1.1**, 42°.46N**±0°.02×**70°.87E**±0°.02**, h6^{km}**±7^{km}**, n252, σ2^{s}.22**/334**, mb4.2**/42**, MS3.4**/5**, 59C-35D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.70**	**338**	*e*Pb	**Pb**	**19 19 25.4**	**+0.6**
KK31				*e*Sn	**Sb**	**19 19 34.6**	**-0.1**
KK31	**Karatay Array**	**0.70**	**338**	⇓P	**Pb**	**19 19 25.5**	**+0.6**
	240nm,0.3s,baz=124,slow=15						
KK31				⇓S	**Sb**	**19 19 35.0**	**+0.2**
	1µm,0.5s,baz=155,slow=30,SNR=55						
KK31	**Karatay Array**	**0.70**	**338**	*e*PG	**Pb**	**19 19 25.4**	**+0.6**
KK31				*e*		19 19 34.7	
KKAR	**Karatay Array**	**0.70**	**338**	*e*Pb	**Pb**	**19 19 25.4**	**+0.6**
KKAR				*e*Sn	**Sb**	**19 19 35.0**	**+0.2**
KKAR	**Karatay Array**	**0.70**	**338**	*e*PG	**Pb**	**19 19 25.4**	**+0.6**
KKAR				*e*		19 19 35.0	
IUG	**Iuzhnay**	**0.70**	**244**	*e*P	**Pb**	**19 19 25.5**	**+0.6**
	baz=45						
IUG				*e*S	**Sb**	**19 19 35.0**	**+0.2**
	baz=45						
IUG	**Iuzhnay**	**0.70**	**244**	*e*P	**Pb**	**19 19 25.5**	**+0.6**
	522nm,0.3s						
IUG				*e*S	**Sb**	**19 19 35.0**	**+0.2**
	15µm,0.4s						
CHM	**Chimkent**	**0.95**	**262**	*e*P	**Pn**	**19 19 30.8**	**+0.6**
	2µm,0.3s						
CHM				*e*S	**Sn**	**19 19 44.4**	**+0.3**
	7µm,0.5s						
ARK	**Arkit**	**1.04**	**129**	⇓*i*P	**Pg**	**19 19 30.8**	**+0.6**
	baz=31						
ARK				⇓*i*S	**Sg**	**19 19 44.1**	**+0.3**
	baz=31						
MNAS	**Manas**	**1.21**	**88**	⇑P	**Pg**	**19 19 33.1**	**-0.2**
	125nm,0.3s						
MNAS				⇑S	**Sg**	**19 19 48.1**	**-0.9**
	646nm,0.4s						
MNAS	**Manas**	**1.21**	**88**	P	**Pg**	**19 19 33.1**	**-0.2**
	63nm,0.1s						
MNAS				S	**Sg**	**19 19 48.2**	**-0.8**
	686nm,0.2s						
MNAS	**Manas**	**1.21**	**88**	PG	**Pg**	**19 19 33.7**	**+0.4**
MNAS				S	**Sg**	**19 19 48.9**	**-0.1**
MNAS				pmax	pmax		
	comp=Z,125nm,0.3s						
MNAS				smax	smax		
	comp=N,646nm,0.4s						
MNAS	**Manas**	**1.21**	**88**	⇑*i*P	**Pg**	**19 19 33.1**	**-0.2**
	baz=88						
MNAS				⇑*i*S	**Sg**	**19 19 48.8**	**-0.2**
	baz=88						
TAS	**Tashkent**	**1.64**	**227**	⇑*i*P	**Pg**	**19 19 41.8**	**+0.2**
	baz=28						
TAS				⇑*i*S	**Sg**	**19 20 04.4**	**+1.6**
	baz=28						
MRKS	**Merke**	**1.76**	**80**	P	**Pb**	**19 19 43.4**	**+0.4**
	comp=N,803nm,0.3s						
MRKS				S	**Sb**	**19 20 06.0**	**+0.7**
	comp=N,4µm,0.4s						
MRKS	**Merke**	**1.76**	**80**	*e*P	**Pb**	**19 19 43.4**	**+0.4**
	comp=N,803nm,0.3s						
MRKS				*e*S	**Sb**	**19 20 06.0**	**+0.7**
	comp=N,4µm,0.4s						
ARSB	**Arslanbob**	**1.94**	**125**	⇑*i*P	**Pb**	**19 19 46.2**	**+0.1**
	baz=26						
ARSB				⇑*i*S	**Sb**	**19 20 11.2**	**+0.6**
	baz=26						
AML	**Almayashu**	**2.12**	**98**	P	**Pb**	**19 19 49.5**	**+0.3**
	SNR=348						
AML	**Almayashu**	**2.12**	**98**	⇑*i*P	**Pb**	**19 19 48.8**	**-0.5**
	baz=98						
AML				⇑*i*S	**Sb**	**19 20 16.2**	**+0.2**
	baz=98						
EKS2	**Erkin-Say**	**2.15**	**84**	P	**Pb**	**19 19 49.4**	**-0.4**
	SNR=188						
EKS2	**Erkin-Say**	**2.15**	**84**	⇑*i*P	**Pb**	**19 19 49.0**	**-0.7**
	baz=84						
EKS2				⇑*i*S	**Sn**	**19 20 16.1**	**+2.1**
	baz=84						
BTK	**Batken**	**2.40**	**181**	*e*Pn	**Pb**	**19 19 53.6**	**-0.2**
BTK				*e*Sn	**Sb**	**19 20 23.6**	**-0.2**
BTK	**Batken**	**2.40**	**181**	*e*PN	**Pb**	**19 19 53.6**	**-0.2**
BTK				*e*		19 20 23.6	
BTK	**Batken**	**2.40**	**181**	⇑*i*P	**Pb**	**19 19 53.3**	**-0.6**
	baz=82						
BTK				⇑*i*S	**Sb**	**19 20 23.7**	**0.0**
	baz=82						
ARLS	**Aral**	**2.63**	**102**	⇑*i*P	**Pb**	**19 19 56.4**	**-1.5**
	baz=2.0						
ARLS				⇑*i*S	**Sn**	**19 20 28.1**	**+2.3**
	baz=2.0						
AAK	**Ala-Archa**	**2.68**	**85**	P	**Pn**	**19 19 56.6**	**+2.5**
	SNR=19						
AAK	**Ala-Archa**	**2.68**	**85**	*e*Pn	**Pn**	**19 19 56.5**	**+2.3**
AAK				*e*Pb	**Pb**	**19 19 58.7**	**0.0**
AAK				*e*Lg	Lg	19 20 33.8	
AAK				*e*Sn	**Sb**	**19 20 34.5**	**+2.6**
AAK	**Ala-Archa**	**2.68**	**85**	Pn	**Pn**	**19 19 56.3**	**+2.2**
	comp=N,137nm,0.4s						
AAK				Lg	Lg	19 20 34.1	
	comp=N,220nm,0.4s						
AAK	**Ala-Archa**	**2.68**	**85**	*c i*PN	**Pn**	**19 19 56.4**	**+2.3**
AAK				pmax	pmax		
	comp=Z,64nm,0.6s						
AAK	**Ala-Archa**	**2.68**	**85**	⇓*i*P	**Pn**	**19 19 56.4**	**+2.3**
	baz=85						
AAK				⇓*i*S	**Sn**	**19 20 28.7**	**+1.7**
	baz=85						
AAK	**Ala-Archa**	**2.68**	**85**	Pn	**Pn**	**19 19 56.5**	**+2.5**
	comp=Z,26nm,0.3s,baz=278,slow=15,SNR=115						
AAK				Pg	**Pb**	**19 19 58.7**	**0.0**
	comp=Z,54nm,0.3s,baz=247,slow=12,SNR=152						
AAK				Lg	Lg	19 20 33.8	
	comp=Z,147nm,0.3s,baz=148,slow=20,SNR=22						
UCH	**Uchtor**	**2.71**	**94**	P	**Pn**	**19 19 57.6**	**+2.9**
	SNR=121						
UCH	**Uchtor**	**2.71**	**94**	⇑*i*P	**Pn**	**19 19 57.0**	**+2.3**
	baz=94						
UCH				⇑*i*S	**Sn**	**19 20 30.3**	**+2.2**
	baz=94						
USP	**Ospenovka**	**2.79**	**72**	P	**Pn**	**19 19 57.0**	**+1.5**
	SNR=106						
USP	**Ospenovka**	**2.79**	**72**	⇑*i*P	**Pn**	**19 19 56.9**	**+1.5**
	baz=72						
USP				⇑*i*S	**Sn**	**19 20 30.9**	**+1.5**
	baz=72						
FRU	**Bishkek**	**2.79**	**81**	*e*PN	**Pn**	**19 19 57.0**	**+1.6**
FRU				*i*		19 20 07.0	
FRU				*i* S	**Sb**	**19 20 37.0**	**+2.1**
FRU				pmax	pmax		
	comp=Z,400nm,1.4s						
FRU				smax	smax		
	comp=N,2µm,1.6s						
FRU1	**Bishkek**	**2.79**	**82**	*e*Pn	**Pn**	**19 19 57.9**	**+2.3**
FRU1				*e*Sn	**Sb**	**19 20 38.0**	**+2.9**
FRU1	**Bishkek**	**2.79**	**82**	*e*PN	**Pn**	**19 19 57.9**	**+2.3**
FRU1				*e*		19 20 38.0	
FRU1	**Bishkek**	**2.79**	**82**	⇑*i*P	**Pn**	**19 19 57.7**	**+2.1**
	baz=82						
FRU1				⇑*i*S	**Sn**	**19 20 31.8**	**+2.2**
	baz=82						
CHMS	**Chumysh**	**2.91**	**78**	P	**Pn**	**19 19 59.3**	**+2.2**
	SNR=35						
CHMS	**Chumysh**	**2.91**	**78**	⇑*i*P	**Pn**	**19 19 58.8**	**+1.7**
	baz=78						
CHMS				⇑*i*S	**Sn**	**19 20 34.4**	**+2.0**
	baz=78						
SGDS	**Sogindy**	**2.93**	**69**	Pg	**Pb**	**19 20 04.2**	**+1.3**
SGDS				Lg	Lg	19 20 41.2	
KBK	**Karagaybulak**	**3.02**	**85**	P	**Pn**	**19 20 01.3**	**+2.5**
	SNR=27						
KBK	**Karagaybulak**	**3.02**	**85**	⇓*i*P	**Pn**	**19 20 01.1**	**+2.4**
	baz=85						
KBK				⇓*i*S	**Sn**	**19 20 37.1**	**+1.8**
	baz=85						
DRK	**Karamyk**	**3.06**	**166**	⇑*i*P	**Pn**	**19 20 02.5**	**+3.1**
	baz=67						
DRK				⇑*i*S	**Sn**	**19 20 38.4**	**+1.9**
	baz=67						
SFK	**Sufi-Kurgan**	**3.15**	**140**	⇑Pn	**Pn**	**19 20 02.3**	**+1.7**
	comp=N,10.0nm,0.2s						
SFK				⇓Pg	**Pb**	**19 20 07.7**	**+1.0**
	comp=N,80nm,0.4s						
SFK				⇑Lg	Lg	19 20 50.1	
	comp=N,183nm,0.3s						
SFK	**Sufi-Kurgan**	**3.15**	**140**	Pg	**Pb**	**19 20 08.3**	**+1.7**
	comp=N,69nm,0.3s						
SFK				Lg	Lg	19 20 48.5	
	comp=N,254nm,0.3s						
SFK	**Sufi-Kurgan**	**3.15**	**140**	PN	**Pn**	**19 20 02.3**	**+1.7**
SFK				pmax	pmax		
	comp=Z,10.0nm,0.2s						
SFK	**Sufi-Kurgan**	**3.15**	**140**	⇑*i*P	**Pn**	**19 20 02.9**	**+2.3**
	baz=41						
SFK				⇑*i*S	**Sn**	**19 20 41.3**	**+2.7**
	baz=41						
KZA	**Kyzart**	**3.27**	**95**	P	**Pn**	**19 20 05.5**	**+3.1**
	SNR=142						
KZA	**Kyzart**	**3.27**	**95**	⇑*i*P	**Pn**	**19 20 04.8**	**+2.4**
	baz=95						
KZA				⇑*i*S	**Sn**	**19 20 43.9**	**+2.0**
	baz=95						
BTLS	**Baital**	**3.46**	**41**	*e*P	**Pg**	**19 20 15.7**	**-0.7**
	comp=Z,66nm,0.3s						
BTLS				*e*S	**Sg**	**19 21 00.6**	**-0.5**
	comp=Z,473nm,0.6s						
GAR	**Garm**	**3.48**	**187**	*e*Pn	**Pn**	**19 20 08.0**	**+2.9**
GAR				*e*Sn	**Sb**	**19 20 53.3**	**-1.6**
GAR	**Garm**	**3.48**	**187**	*e*PN	**Pn**	**19 20 08.0**	**+2.9**
GAR				*e*		19 20 53.3	
TKM2	**Tokmak 2**	**3.51**	**81**	P	**Pn**	**19 20 08.1**	**+2.5**
	SNR=17						
TKM2	**Tokmak 2**	**3.51**	**81**	⇑Pn	**Pn**	**19 20 06.4**	**+0.8**
	comp=Z,16nm,0.3s						
TKM2				⇓Pg	**Pg**	**19 20 16.5**	**-1.0**
	comp=Z,107nm,0.4s						
TKM2				⇑Lg	Lg	19 20 58.6	

	comp=Z,324nm,0.5s						
TKM2	Tokmak 2	3.51	81	PN	Pg	19 20 16.5	-1.0
TKM2				pmax	pmax		
	comp=Z,107nm,0.4s						
TKM2	Tokmak 2	3.51	81	⇓iP	Pn	19 20 07.2	+1.6
	baz=81						
TKM2				⇓iS	Sn	19 20 48.8	+1.2
	baz=81						
BOOM	Boomskoye usch	3.75	88	⇓iP	Pn	19 20 11.1	+2.3
	baz=88						
BOOM				⇓iS	Sn	19 20 55.3	+2.0
	baz=88						
KST	Kastek	3.79	79	Pg	Pb	19 20 19.9	+2.2
	comp=Z,90nm,0.3s						
KST				Lg	Lg	19 21 08.6	
	comp=Z,401nm,0.4s						
KST	Kastek	3.79	79	eP	Pb	19 20 19.9	+2.2
	comp=Z,90nm,0.3s						
KST				eS	Sg	19 21 08.6	-3.4
	comp=Z,401nm,0.4s						
NRN	Naryn	3.96	103	ePn	Pn	19 20 14.4	+2.6
NRN	Naryn	3.96	103	ePN	Pn	19 20 14.4	+2.6
NRN	Naryn	3.96	103	⇑iP	Pn	19 20 14.2	+2.4
	baz=4.0						
NRN				⇑iS	Sn	19 21 00.1	+1.4
	baz=4.0						
ULHL	Ulahol	3.98	91	P	Pn	19 20 15.6	+3.5
	SNR=40						
ULHL	Ulahol	3.98	91	⇓iP	Pn	19 20 14.4	+2.3
	baz=91						
ULHL				⇓iS	Sn	19 21 00.8	+1.6
	baz=91						
MTBS	Maitube	4.14	79	eP	Pb	19 20 26.3	+2.7
	comp=Z,91nm,0.4s						
MTBS				⇓iS	Sg	19 21 19.5	-3.7
	comp=Z,277nm,0.5s						
KUU	Kurty	4.25	68	Pg	Pb	19 20 28.2	+2.9
	comp=Z,57nm,0.5s						
KUU				Lg	Lg	19 21 21.9	
	comp=Z,512nm,0.5s						
KUU	Kurty	4.25	68	eP	Pb	19 20 28.2	+2.9
	comp=Z,57nm,0.5s						
KUU				eS	Sb	19 21 21.9	+5.0
	comp=Z,512nm,0.5s						
IZV	Izvestkoviy	4.27	80	Pg	Pb	19 20 28.7	+3.0
	comp=Z,101nm,0.4s						
IZV				Lg	Lg	19 21 23.3	
	comp=Z,458nm,0.9s						
IZV	Izvestkoviy	4.27	80	eP	Pb	19 20 28.7	+3.0
	comp=Z,101nm,0.4s						
IZV				eS	Sg	19 21 23.3	-3.9
	comp=Z,458nm,0.9s						
KTBS	Karatobe	4.43	72	Pg	Pg	19 20 32.2	-2.9
KTBS				Lg	Lg	19 21 28.7	
KTBS	Karatobe	4.43	72	eP	Pb	19 20 32.1	+3.6
	comp=Z,45nm,0.4s						
KTBS				eS	Sg	19 21 28.7	-3.8
	comp=Z,621nm,0.7s						
AAA	Alma-Ata	4.51	78	Pg	Pg	19 20 33.7	-2.8
	comp=Z,44nm,0.3s						
AAA				Lg	Lg	19 21 31.6	
	comp=Z,453nm,0.4s						
AAA	Alma-Ata	4.51	78	eP	Pg	19 20 33.7	-2.8
	comp=Z,44nm,0.3s						
AAA				eS	Sg	19 21 31.6	-3.3
	comp=Z,453nm,0.4s						
TNSS	Tian-Shan	4.51	81	Pg	Pb	19 20 33.1	+3.1
TNSS				Lg	Lg	19 21 30.5	
TNSS	Tian-Shan	4.51	81	eP	Pb	19 20 33.1	+3.1
	comp=Z,101nm,0.4s						
TNSS				eS	Sb	19 21 30.5	+5.7
	comp=Z,362nm,0.5s						
KNDC	Almaty	4.54	78	⇑Pg	Pb	19 20 30.5	+0.1
	comp=Z,177nm,0.7s						
KNDC				⇓Lg	Lg	19 21 32.2	
	comp=Z,721nm,0.8s						
MDOK	Medeo	4.60	79	⇓Pn	Pn	19 20 22.1	+1.7
	comp=Z,12nm,0.5s						
MDOK				⇑Pg	Pb	19 20 34.4	+3.0
	comp=Z,68nm,0.6s						
MDOK				⇑Lg	Lg	19 21 33.0	
	comp=Z,633nm,1.1s						
MDOK	Medeo	4.60	79	eP	Pb	19 20 34.9	+3.6
	comp=Z,56nm,0.4s						
MDOK				eS	Sg	19 21 33.5	-4.3
	comp=Z,332nm,0.6s						
KOTS	Kotyrbulak	4.65	78	Pg	Pb	19 20 35.8	+3.5
KOTS				Lg	Lg	19 21 35.4	
KOTS	Kotyrbulak	4.65	78	eP	Pb	19 20 35.8	+3.5
	comp=Z,26nm,0.3s						
KOTS				eS	Sg	19 21 35.4	-4.2
	comp=Z,233nm,0.6s						
CHKK	Chushkaly	4.69	71	Pg	Pb	19 20 36.3	+3.5
	comp=Z,18nm,0.3s						
CHKK				Lg	Lg	19 21 36.3	
	comp=Z,316nm,0.3s						
CHKK	Chushkaly	4.69	71	eP	Pb	19 20 36.3	+3.5
	comp=Z,18nm,0.3s						
CHKK				eS	Sg	19 21 36.3	-4.3
	comp=Z,316nm,0.3s						
KDJ	Kajisay	4.69	92	ePn	Pn	19 20 24.9	+3.2
KDJ	Kajisay	4.69	92	ePN	Pn	19 20 24.9	+3.2
KDJ	Kajisay	4.69	92	⇑iP	Pn	19 20 24.3	+2.6
	baz=92						
KDJ				⇑iS	Sn	19 21 17.3	+0.7
	baz=92						
KSH	Kashi	4.85	126	Pn	Pn	19 20 27.1	+3.2
KSH				Sn	Sn	19 21 21.6	+1.2
KSH				smax	smax		
	comp=Z,2µm,0.5s						
KSH				smax	smax		
	comp=Z,1µm,0.4s						
TARG	Taragay, Kyrgy	5.21	96	ePn	Pn	19 20 32.5	+3.5
ARXS	Arharly	5.37	69	Pg	Pb	19 20 48.7	+4.2
ARXS				Lg	Lg	19 21 57.1	
ARXS	Arharly	5.37	69	eP	Pb	19 20 48.6	+4.2
	comp=Z,50nm,0.5s						
ARXS				eS	Sg	19 21 57.1	-5.4
	comp=Z,318nm,0.5s						
KURS	Kuram	5.45	77	Pg	Pb	19 20 50.4	+4.5
	comp=Z,32nm,0.8s						
KURS				Lg	Lg	19 21 59.9	
	comp=Z,142nm,0.7s						
KURS	Kuram	5.45	77	eP	Pb	19 20 50.4	+4.5
	comp=Z,32nm,0.8s						
KURS				eS	Sg	19 21 59.9	-5.3
	comp=Z,142nm,0.7s						
PRZ	Przheval'sk	5.57	87	ePn	Pn	19 20 37.0	+3.2
PRZ				eSb	Sg	19 22 07.0	-1.9
PRZ	Przheval'sk	5.57	87	ePN	Pn	19 20 37.0	+3.2
SATY	Saty	5.58	81	Pg	Pb	19 20 52.7	+4.7
SATY				Lg	Lg	19 22 04.1	
SATY	Saty	5.58	81	eP	Pb	19 20 52.7	+4.7
	comp=Z,54nm,0.7s						
SATY				eS	Sg	19 22 04.1	-5.2
	comp=Z,208nm,0.6s						
MNBS	Baschi	5.73	71	Pg	Pg	19 20 56.4	-3.5
	comp=Z,52nm,0.7s						
MNBS				Lg	Lg	19 22 09.2	
	comp=Z,120nm,0.4s						
MNBS	Baschi	5.73	71	eP	Pg	19 20 56.4	-3.5
	comp=Z,52nm,0.7s						
MNBS				eS	Sg	19 22 09.2	-4.9
	comp=Z,120nm,0.4s						
OTUK	Ortayu	5.88	10	⇑Pn	Pn	19 20 39.2	+1.4
	comp=Z,16nm,0.5s						
OTUK				⇓Sn	Sn	19 21 44.8	-0.8
	comp=Z,93nm,0.4s						
OTUK				⇓Lg	Lg	19 22 16.9	
	comp=Z,171nm,0.5s						
OTUK	Ortayu	5.88	10	PN	Pn	19 20 39.2	+1.4
OTUK				S	Sn	19 21 44.7	-0.8
OTUK				pmax	pmax		
	comp=Z,16nm,0.5s						
OTUK				smax	smax		
	comp=N,93nm,0.4s						
TDK	Taldyqorghan	6.02	62	Pg	Pb	19 21 00.7	+5.2
TDK				Lg	Lg	19 22 17.5	
TDK	Taldyqorghan	6.02	62	eP	Pg	19 21 01.3	-4.2
	comp=N,120nm,0.5s						
TDK				eS	Sg	19 22 19.2	-4.2
	comp=N,732nm,1.2s						
UZB	Uzynbulak	6.03	81	eP	Pg	19 21 01.5	-4.2
	comp=N,44nm,0.6s						
UZB				eS	Sg	19 22 19.0	-4.9
	comp=N,87nm,0.6s						
PDGK	Podgornoye	6.39	79	⇓Pg	Pg	19 21 08.1	-4.4
	comp=N,26nm,0.7s						
PDGK				⇑Lg	Lg	19 22 28.9	
	comp=N,152nm,0.7s						
PDGK	Podgornoye	6.39	79	PN	Pb	19 21 07.0	+5.1
KAPS	Kapalarasan	6.75	62	eP	Pg	19 21 17.1	-2.3
	comp=N,22nm,0.5s						
KAPS				eS	Sg	19 22 45.8	-1.0
	comp=N,250nm,0.6s						
DJR	Jarkent	6.76	71	eP	Pg	19 21 16.2	-3.4
	comp=N,12nm,0.5s						
DJR				eS	Sg	19 22 44.8	-2.4
	comp=N,61nm,0.8s						
KBL	Kabul	8.04	191	ePn	Pn	19 21 09.4	+1.8
KBL				eSn	Sn	19 22 36.7	-2.3
KBL	Kabul	8.04	191	eP	Pn	19 21 09.5	+1.8
KBL				e		19 22 36.7	
CEP	Cherat	8.66	174	P	Pn	19 21 18.1	+1.9
CEP				S	Sn	19 22 54.0	-0.3
CHCP	Chirah Chowk	8.98	167	P	Pn	19 21 23.5	+2.9
NIL	Nilore	8.99	167	ePn	Pn	19 21 23.1	+2.5
NIL	Nilore	8.99	167	eP	Pn	19 21 23.1	+2.5
MAKZ	Makanchi	9.03	57	ePn	Pn	19 21 21.2	+0.1
MAKZ	Makanchi	9.03	57	⇑Pn	Pn	19 21 21.0	-0.1
	comp=N,3.0nm,0.3s						
MAKZ				⇓Sn	Sn	19 23 01.9	-1.2
	comp=N,15nm,0.8s						
MAKZ				⇑Lg	Lg	19 23 54.2	
	comp=N,47nm,0.8s						
MAKZ	Makanchi	9.03	57	eP	Pn	19 21 21.2	+0.1
MK01	Makanchi Array	9.22	58	ePn	Pn	19 21 23.4	-0.3
MK31	Makanchi Array	9.22	58	ePn	Pn	19 21 23.9	+0.2
MK31	Makanchi Array	9.22	58	⇑Pn	Pn	19 21 23.9	+0.2
	comp=N,7.3nm,0.5s,baz=243,slow=14,SNR=426						
MK31				⇑Sn	Sn	19 23 07.4	-0.4
	comp=N,18nm,0.6s						
MK31				⇓Lg	Lg	19 24 02.4	
	comp=N,21nm,0.6s,baz=243,slow=26,SNR=3.7						
MK31	Makanchi Array	9.22	58	eP	Pn	19 21 23.9	+0.2
MK32	Makanchi Array	9.22	58	ePn	Pn	19 21 24.3	+0.5
MK32				eSn	Sn	19 23 06.0	-1.7
MK32				eLg	Lg	19 23 59.6	
MK32				e		19 25 13.7	
MKAR	Makanchi Array	9.22	58	Pn	Pn	19 21 24.3	+0.5
	comp=N,1.7nm,0.3s,baz=242,slow=13,SNR=63						
MKAR				Sn	Sn	19 23 06.1	-1.7
	comp=N,0.5nm,0.3s,baz=249,slow=20,SNR=3.5						
MKAR				Lg	Lg	19 23 59.6	
	comp=N,2.2nm,0.3s,baz=241,slow=31,SNR=3.6						
MKAR				LR	LR	19 25 13.7	
	comp=N,122nm,20.3s,baz=203,slow=40						
THW	Thamme Wali	9.67	176	P	Pn	19 21 30.8	+0.8
KURBB	Kurchatov Arra	9.72	30	⇑Pn	Pn	19 21 29.3	-1.1
	comp=N,3.5nm,0.3s						
KURBB				⇓Sn	Sn	19 23 23.1	+3.2
	comp=N,43nm,0.6s						
KURBB				⇓Lg	Lg	19 24 18.0	
	comp=N,235nm,0.8s						
KURBB	Kurchatov Arra	9.72	30	Pn	Pn	19 21 30.0	-0.4
	comp=N,0.3nm,0.3s,baz=222,slow=13,SNR=20						
KURBB				Sn	Sn	19 23 17.7	-2.2
	comp=N,0.8nm,0.3s,baz=218,slow=18,SNR=6.4						
KURBB				Lg	Lg	19 24 19.4	
	comp=N,1.1nm,0.3s,baz=214,slow=28,SNR=8.4						
KURK	Kurchatov	9.82	30	ePn	Pn	19 21 30.0	-1.9
KURK				eSn	Sn	19 23 17.7	-4.9
KURK				eLg	Lg	19 24 19.4	
KURK	Kurchatov	9.82	30	⇑Sn	Sn	19 23 23.9	+1.3
	comp=N,15nm,0.6s						
KURK				⇓Lg	Lg	19 24 19.7	
	comp=N,128nm,1.0s						
KURK	Kurchatov	9.82	30	⇓eP	Pn	19 21 30.8	-1.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
AB31	Akbulak array	10.21	315	⇓Pn	Pn	19 21 37.3	+0.1
	comp=Z,36nm,0.8s,baz=126,slow=13,SNR=367						
AB31				⇓Sn	Sn	19 23 35.6	+3.7
	comp=Z,7.3nm,0.5s						
AB31				⇓Lg	Lg	19 24 36.8	
	comp=Z,11nm,0.6s						
AB31	Akbulak array	10.21	315	P	Pn	19 21 37.3	+0.1
AB31				S	Sn	19 23 35.6	+3.7
AB31				pmax	pmax		
	comp=Z,36nm,0.9s						
AB31				smax	smax		
	comp=N,7.0nm,0.5s						
ABKAR	Akbulak array	10.21	315	ePn	Pn	19 21 37.3	+0.1
BVA0	Borovoye Array	10.58	358	⇓Pn	Pn	19 21 41.3	-1.0
	comp=N,3.6nm,0.5s						
BVA0				⇓Sn	Sn	19 23 43.5	+2.5
	comp=N,12nm,0.5s						
BVA0				⇑Lg	Lg	19 24 46.1	
	comp=N,47nm,0.9s						
BVA0	Borovoye Array	10.58	358	P	Pn	19 21 41.3	-1.0
BVA0				S	Sn	19 23 43.5	+2.5
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BVA0				smax	smax		
	comp=N,12nm,0.4s						
BVAR	Borovoye Array	10.58	358	Pn	Pn	19 21 42.0	-0.2
	comp=N,1.5nm,0.3s,baz=178,slow=12,SNR=41						
BVAR				Sn	Sn	19 23 36.6	-4.4
	comp=N,7.4nm,0.3s,baz=168,slow=23,SNR=12						
BVAR				Lg	Lg	19 24 48.0	
	comp=N,1.2nm,0.3s,baz=174,slow=31,SNR=3.4						
BVAR				LR	LR	19 25 53.7	
	comp=N,104nm,18.1s,baz=168,slow=38						
BRVK	Borovoye	10.61	358	ePn	Pn	19 21 42.6	-0.1
BRVK	Borovoye	10.61	358	⇑Pn	Pn	19 21 41.6	-1.2
	comp=N,4.4nm,0.5s						
BRVK				⇑Sn	Sn	19 23 43.5	+1.6
	comp=N,5.9nm,0.3s						
BRVK				⇑Lg	Lg	19 24 49.4	
	comp=N,58nm,0.9s						
BRVK	Borovoye	10.61	358	⇑iP	Pn	19 21 42.4	-0.3
GEYT	Alibeck	10.75	249	Pn	Pn	19 21 45.9	+1.2
	comp=N,1.1nm,0.3s,baz=64,slow=14,SNR=5.5						
GEYT				Sn	Sn	19 23 40.0	-5.5
	comp=N,1.6nm,0.3s,baz=85,slow=16,SNR=3.0						
GEYT				Lg	Lg	19 24 52.3	
	baz=50,slow=21,SNR=2.7						
GEYT				LR	LR	19 25 44.5	
	comp=N,50nm,18.0s,baz=240,slow=37						
GYA0B	ALIBECK ARRAY	10.75	249	ePn	Pn	19 21 47.2	+2.5
AKTO	Aktyubinsk	11.91	316	⇓Pn	Pn	19 22 00.7	+0.2
	comp=N,22nm,0.7s						
AKTO				⇑Sn	Sn	19 24 18.8	+5.0
	comp=N,30nm,0.9s						
AKTO				⇑Lg	Lg	19 25 31.0	
	comp=N,28nm,1.2s						
AKTO	Aktyubinsk	11.91	316	Pn	Pn	19 22 01.2	+0.7
	comp=N,2.1nm,0.3s,baz=128,slow=14,SNR=86						
AKTO				Sn	Sn	19 24 10.1	-3.6
	comp=N,1.6nm,0.3s,baz=226,slow=20,SNR=9.5						
AKTO				LR	LR	19 27 04.6	
	comp=N,86nm,18.7s,baz=137,slow=40						
DGZ	Jazzator, Alta	13.57	52	deP	Pn	19 22 23.0	-0.3
ZAA0	Zalesovo Array	14.75	34	ePn	Pn	19 22 38.8	-0.5
ZALV	Zalesovo Beam	14.75	34	Pn	Pn	19 22 38.1	-1.2
	comp=N,0.6nm,0.3s,baz=224,slow=13,SNR=9.9						
ZALV				Sn	Sn	19 25 12.7	-10
	comp=N,0.3nm,0.3s,baz=228,slow=21,SNR=4.5						
ZALV				Lg	Lg	19 27 02.4	
	baz=221,slow=31,SNR=2.4						
ZALV				LR	LR	19 28 40.1	
	comp=N,45nm,21.4s,baz=86,slow=39						
ZAA1	Zalesovo Array	14.75	34	ePn	Pn	19 22 38.1	-1.2
ZAA1				eSn	Sn	19 25 12.7	-10
ZAA1				e		19 27 02.4	
NVS	Novosibirsk	14.81	29	eP	Pn	19 22 42.5	+2.5
NVS				e		19 25 16.6	
ARU	Arti	16.07	335	ePn	Pn	19 22 54.3	-2.4
	comp=N,15nm,1.0s						
ARU	Arti	16.07	335	c iP	Pn	19 22 54.7	-2.0
ARU				S	Sn	19 25 55.7	+0.6
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PYUN	Piuthan	17.38	142	eP	Pn	19 23 10.2	-3.4
	comp=Z,25nm,0.5s						
DANN	Dangsing	17.53	139	eP	Pn	19 23 12.2	-3.4
	comp=Z,15nm,0.3s						
KOLN	Koldanda	17.94	141	eP	Pn	19 23 17.3	-3.3
	comp=Z,15nm,0.5s						
DMN	Daman	18.81	137	eP	P	19 23 28.0	-2.8
	comp=Z,6.2nm,0.4s						
GUN	Gumba	18.96	135	eP	P	19 23 30.5	-2.0
	comp=Z,9.3nm,0.4s						
PKIN	Phulchoki	18.98	137	eP	P	19 23 30.0	-2.7
	comp=Z,10nm,0.5s						
PKI	Pulchoki	18.99	137	eP	P	19 23 30.7	-2.2
	comp=Z,9.2nm,0.5s						
JIRN	Jiri	19.32	135	eP	P	19 23 34.7	-1.8
	comp=Z,30nm,0.5s						
GNI	Garni	19.75	272	P	P	19 23 41.7	+0.9
	comp=Z,0.1nm,0.3s,baz=53,slow=15,SNR=1.5						
GNI				LR	LR	19 32 31.6	
	comp=Z,27nm,18.9s,baz=72,slow=40						
RAMN	Ramite	20.11	135	eP	P	19 23 45.0	0.0
	comp=Z,24nm,0.6s						
KBZ	Khabaz	20.44	283	P	Pn	19 23 50.0	-0.2
	comp=Z,1.0nm,0.6s,baz=132,slow=12,SNR=2.9						
KBZ				S	S	19 27 28.6	-8.6
	comp=Z,2.6nm,1.0s,baz=90,slow=20,SNR=1.7						
KBZ				LR	LR	19 34 05.4	
	comp=Z,42nm,18.2s,baz=354,slow=44						
KVAR	Kislovodsk Arr	20.56	284	P	Pn	19 23 51.4	-0.5
	comp=Z,1.2nm,0.4s,baz=17,slow=11,SNR=3.9						
KVAR				S	S	19 27 35.4	-4.4
	comp=Z,1.2nm,0.3s,baz=197,slow=11,SNR=2.4						
KIV	Kislovodsk	20.56	284	eP	P	19 23 49.2	-0.4
	comp=Z,10nm,0.9s						
KIV	Kislovodsk	20.56	284	eP	P	19 23 49.3	-0.4
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LSA	Lhasa	20.69	121	eP	Pn	19 23 53.7	-0.1
	comp=Z,7.4nm,0.9s						
LSA	Lhasa	20.69	121	eP	Pn	19 23 53.7	-0.1
LSA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIRV	Kirov	20.98	328	P	Pn	19 23 56.4	-0.1
	comp=Z,9.7nm,0.6s,baz=146,slow=7.3,SNR=2.5						
GTA	Gaotai	22.03	88	eP	P	19 24 06.3	+0.8
GTA				pP	sP	19 24 13.1	+4.3
GTA				sP	pP	19 24 15.7	+8.1
GTA				S	S	19 28 06.2	-2.7
GTA				pmax	pmax		
	comp=Z,59nm,6.2s						
GTA				LR	LR		
	comp=Z,67nm,16.2s						
GTA				LR	LR		
	comp=Z,100nm,15.5s						
MOY	Mondy	22.35	55	eP	P	19 24 13.0	+4.1
VSR	Storozhevoye	23.24	303	⇑eP	P	19 24 21.0	+3.0
VSR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ZAK	Zakamensk	23.56	59	eP	P	19 24 22.5	+1.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SHL	Shillong	24.13	128	eP	P	19 24 26.2	-0.9
	comp=Z,10nm,0.3s						
SHL	Shillong	24.13	128	eP	P	19 24 26.2	-0.9
SHL				pmax	pmax		
	comp=Z,10.0nm,0.3s						
SONA0	Songino Array	25.47	66	eP	P	19 24 39.5	+0.4
SONA0				ePcP	PcP	19 28 10.4	-0.3
SONM	Songino Array	25.47	66	P	P	19 24 39.5	+0.4
	comp=Z,0.2nm,0.5s,baz=278,slow=9.5,SNR=5.2						
SONM				PcP	PcP	19 28 10.4	-0.3
	comp=Z,0.2nm,0.7s,baz=284,slow=1.2,SNR=2.5						
LZH	Lanzhou	26.19	93	eP	P	19 24 54.3	+8.5
LZH				pP	sP	19 25 00.7	+12
LZH				sP	pP	19 25 04.2	+16
LZH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BR101	Keskin Array S	28.05	277	eP	P	19 25 04.0	+1.6
BR131	Keskin Array S	28.05	277	eP	P	19 25 03.8	+1.3
BRTR	Keskin Array B	28.05	277	P	P	19 25 04.0	+1.6
	comp=Z,0.6nm,0.6s,baz=93,slow=8.5,SNR=2.7						
NRIK	Noril'sk	28.31	12	LR	LR	19 36 54.4	
	comp=Z,29nm,18.8s,baz=194,slow=38						
AKASG	Malin Array Be	29.46	301	P	P	19 25 15.3	+0.6
	comp=Z,0.4nm,0.4s,baz=79,slow=8.0,SNR=3.2						
AKBB	Malin Array Si	29.46	301	eP	P	19 25 15.3	+0.7
	comp=Z,2.7nm,0.6s						
AKBB	Malin Array Si	29.46	301	eP	P	19 25 15.3	+0.7
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KIEV	Kiev	29.47	301	eP	P	19 25 15.4	+0.7
	comp=Z,2.8nm,0.5s						
KIEV	Kiev	29.47	301	eP	P	19 25 15.4	+0.7
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AK11	Malin Array Si	29.50	301	eP	P	19 25 15.3	+0.4
HHC	Hu-ho-hao-te	30.24	79	eP	P	19 25 20.2	-1.7
HHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
XAN	Xi'an	30.83	93	eP	P	19 25 26.7	-0.3
	comp=Z,19nm,2.0s						
XAN	Xi'an	30.83	93	eP	P	19 25 26.7	-0.3
XAN				pmax	pmax		
	comp=Z,19nm,2.0s						
KMI	Kunming	31.38	113	eP	P	19 25 33.0	+0.9
	comp=Z,5.5nm,1.0s						
KMI	Kunming	31.38	113	eP	P	19 25 33.0	+0.9
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MLR	Muntele Rosu	32.16	291	eP	P	19 25 39.1	+0.4
	comp=Z,4.9nm,1.1s						
MLR	Muntele Rosu	32.16	291	eP	P	19 25 39.1	+0.4
MLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BUR04	Bucovina Ar. S	32.31	295	eP	P	19 25 40.7	+0.7
BUR08	Bucovina Ar. S	32.31	295	eP	P	19 25 41.3	+1.3
FIA1	FINESS Array S	32.63	321	eP	P	19 25 43.5	+1.1
FIA0	FINESS Array S	32.63	321	eP	P	19 25 43.7	+1.2
FIA0	FINESS Array S	32.63	321	eP	P	19 25 43.7	+1.2
FINES	FINESS Array B	32.63	321	i P	P	19 25 44.0	+1.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	32.63	321	P	P	19 25 43.7	+1.2
	comp=Z,1.2nm,0.5s,baz=111,slow=8.6,SNR=15						
FINES				LR	LR	19 39 24.3	
	comp=Z,73nm,19.1s,baz=32,slow=37						
KWP	Kalwaria Pacla	33.70	299	eP	P	19 25 53.6	+1.6
	comp=Z,53nm,0.7s						
CMAR	Chiang Mai Arr	33.75	126	P	P	19 25 51.5	-1.2
	comp=Z,0.2nm,0.6s,baz=311,slow=8.8,SNR=3.1						
VTS	Vitosha	34.73	287	eP	P	19 26 00.7	-0.5
	comp=Z,7.2nm,1.4s						
VTS	Vitosha	34.73	287	eP	P	19 26 00.7	-0.5
VTS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
OJC	Ojcow	35.50	301	eP	P	19 26 08.6	+1.1
	comp=Z,8.9nm,1.4s						
OJC	Ojcow	35.50	301	eP	P	19 26 08.6	+1.1
OJC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ARA0	ARCESS Array S	35.66	335	eP	P	19 26 09.8	+1.1
ARA0				ePcP	PcP	19 28 37.2	+0.3
ARCES	ARCESS Array B	35.66	335	P	P	19 26 09.9	+1.1
	comp=Z,0.7nm,0.5s,baz=108,slow=8.9,SNR=15						
ARCES				PcP	PcP	19 28 37.2	+0.3
	comp=Z,1.4nm,0.9s,baz=132,slow=3.8,SNR=3.4						
ARE0	ARCESS Array S	35.66	335	eP	P	19 26 09.9	+1.2
	comp=Z,1.8nm,1.5s						
PBA	Port Blair	36.12	142	eP	P	19 26 13.7	+0.6
	comp=Z,322nm,1.7s						
IDI	Anoyia	36.15	274	eP	P	19 26 13.7	+0.4
	comp=Z,38nm,1.5s						
PBKT	Sadao Pong	36.43	126	eP	P	19 26 15.9	+0.2
NC602	NORSAR Array S	39.53	318	eP	P	19 26 42.2	+0.7
NC303	NORSAR Array S	39.62	319	eP	P	19 26 43.2	+0.9
GEC2	GERESS Array S	39.65	300	eP	P	19 26 44.1	+1.3
	comp=Z,9.1nm,1.6s						
GERES	GERESS Array B	39.65	300	P	P	19 26 44.1	+1.3
	comp=Z,0.6nm,0.5s,baz=65,slow=8.7,SNR=8.2						
GEA0	GERESS Array S	39.65	300	eP	P	19 26 44.2	+1.4
NB201	NORSAR Array S	39.65	319	eP	P	19 26 44.6	+2.0
KHC	Kasperske Hory	39.67	300	eP	P	19 26 43.5	+0.6
	comp=Z,2.6nm,1.5s						
KHC	Kasperske Hory	39.67	300	eP	P	19 26 43.5	+0.6
KHC				pmax	pmax		
	comp=Z,3.0nm,1.5s						
NB2	NORSAR Subarra	39.69	319	P	P	19 26 43.1	+0.2
	comp=Z,0.8nm,0.6s,baz=91,slow=8.6						
NB200	NORSAR Array S	39.69	319	eP	P	19 26 43.6	+0.7
NOA	NORSAR Array B	39.69	319	P	P	19 26 43.6	+0.7
	comp=Z,1.3nm,0.7s,baz=91,slow=8.3,SNR=9.4						
NOA				LR	LR	19 43 52.6	
	comp=Z,48nm,18.5s,baz=280,slow=37						
NAO01	NORSAR Array S	39.85	319	eP	P	19 26 44.4	+0.1
NC204	NORSAR Array S	39.91	319	eP	P	19 26 45.5	+0.7
TIXI	Tiksi	40.34	25	eP	P	19 26 47.2	-0.9

	comp=Z,3.4nm,1.1s						
TIXI	Tiksi	40.34	25	iP	P	19 26 47.8	-0.3
KLR	Kul'dur	41.93	59	P	P	19 27 01.8	+0.4
	comp=Z,0.2nm,0.2s,baz=299,slow=15,SNR=2.2						
SSLB	Suanglung	45.19	98	eP	P	19 27 29.7	+1.6
	comp=Z,98nm,1.8s						
MJB9	Matsu-Tunnel	51.06	73	eP	P	19 28 12.8	-0.6
	comp=Z,68nm,1.9s						
MAJO	Matsushiro	51.07	73	eP	P	19 28 12.9	-0.4
	comp=Z,66nm,1.9s						
MAJO	Matsushiro	51.07	73	eP	P	19 28 13.0	-0.4
MAJO				pmax	pmax		
	comp=Z,66nm,1.9s						
MJAR	Matsushiro Arr	51.07	73	P	P	19 28 13.0	-0.4
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR	Matsushiro Arr	51.07	73	P	P	19 28 13.0	-0.4
	comp=Z,2.9nm,0.9s,baz=299,slow=9.3,SNR=5.0						
KMBO	Kilima Mbogo	52.92	224	eP	P	19 28 27.0	-0.6
	comp=Z,1.9nm,0.9s						
KMBO	Kilima Mbogo	52.92	224	P	P	19 28 27.4	-0.2
	comp=Z,1.1nm,0.5s,baz=70,slow=15,SNR=3.2						
ES19	SONSECA Array	54.70	294	eP	P	19 28 39.8	-0.4
ESDC	Sonseca Array	54.76	294	P	P	19 28 41.3	+0.7
	comp=Z,0.4nm,0.6s,baz=68,slow=8.2,SNR=4.1						
TOA1	Torodi Ar. Sit	65.90	266	eP	P	19 29 56.8	-0.4
TORD	Torodi Ar. Bea	65.91	266	P	P	19 29 56.8	-0.4
	comp=Z,0.7nm,0.9s,baz=39,slow=8.0,SNR=4.3						
INK	Inuvik	68.05	10	eP	P	19 30 10.3	+0.4
	comp=Z,13nm,1.8s						
INK	Inuvik	68.05	10	P	P	19 30 10.6	+0.6
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
INK	Inuvik	68.05	10	P	P	19 30 10.6	+0.6
	comp=Z,0.6nm,0.7s,baz=313,slow=4.8,SNR=4.0						
ILAR	Eielson Array	69.09	16	P	P	19 30 16.5	-0.1
	comp=Z,0.4nm,0.8s,baz=322,slow=4.6,SNR=5.8						
YKA	Yellowknife Ar	75.31	3	P	P	19 30 54.1	+0.3
	comp=Z,1.0nm,0.7s,baz=352,slow=6.1,SNR=22						
YKB5	Yellowknife Ar	75.31	3	eP	P	19 30 53.6	-0.1
SCHQ	Schefferville	76.59	336	eP	P	19 31 02.2	+0.9
	comp=Z,27nm,1.7s						
SCHQ	Schefferville	76.59	336	P	P	19 31 01.9	+0.6
	comp=Z,3.7nm,0.8s,baz=49,slow=9.3,SNR=3.3						
WR1	Warramunga Arr	85.24	122	eP	P	19 31 46.8	-1.0
	comp=Z,22nm,1.8s						
WRA	Warramunga Arr	85.24	122	P	P	19 31 46.8	-1.0
	comp=Z,1.0nm,0.5s,baz=328,slow=4.8,SNR=26						
AS31	Alice Springs	87.75	125	eP	P	19 31 58.5	-1.6
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	87.75	125	P	P	19 31 59.2	-0.9
	comp=Z,1.9nm,0.9s,baz=319,slow=4.4,SNR=16						
AS01	Alice Springs	87.78	125	eP	P	19 31 59.1	-1.2

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*ISCJB **12** 19:35:12.3±0.8,27°.5N±0°.2×140°.0E±0°.2,h479^{km},mb3.4/6, Error ellipse: s-maj=32.0km s-min=16.7km az=40.6*

*IDC **12** 19:35:12.9±0.7,27°.52N×139°.98E,h466^{km}±19^{km},mb3.1/6, mb1 3.2/7,mb1mx2.7/57,mbtmp3.9/7,Error ellipse: s-maj=54.3km s-min=18.1km az=76.0*

ISC 12 19:35:13.4±0.9,**27°.5N**±0°.2×**140°.2E**±0°.2,**h479**^{km}**,n7, σ0^{s}77**/8,**mb3.5**/6,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.85	103	P	P	19 36 16.6	+0.8
	18nm,0.3s,baz=287,slow=20,SNR=46						
JCJ				S	S	19 37 05.2	-1.3
	14nm,0.3s,baz=104,slow=24,SNR=9.3						
WRA	Warramunga Arr	47.53	187	P	P	19 43 04.5	+0.1
	0.2nm,0.3s,baz=2.9,slow=7.6,SNR=12						
MKAR	Makanchi Array	48.81	309	P	P	19 43 13.3	-0.5
	0.2nm,0.4s,baz=89,slow=8.6,SNR=5.3						
KURBB	Kurchatov Arra	51.45	314	P	P	19 43 32.8	-0.3
	1.0nm,0.4s,baz=92,slow=7.8,SNR=18						
BVAR	Borovoye Array	56.50	317	P	P	19 44 08.9	0.0
	2.5nm,0.4s,baz=94,slow=7.3,SNR=26						
ARCES	ARCESS Array B	72.54	340	P	P	19 45 51.1	+0.6
	0.9nm,0.8s,baz=73,slow=9.1,SNR=4.4						
FINES	FINESS Array B	76.76	333	P	P	19 46 14.3	-0.1
	0.8nm,0.3s,baz=65,slow=4.7,SNR=15						

IDC 12 19:37:46.0±12.0,**13°.46S**×**167°.60E,h147**^{km}±100^{km}**, mb3.3**/8,**mb1 3.5**/8,**mb1mx3.2**/47,**mbtmp3.7**/8,**Error ellipse: s-maj=64.5km s-min=27.2km az=110.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	30.07	228	P	P	19 43 42.5	+1.0
	2.7nm,0.8s,baz=25,slow=5.8,SNR=4.7						
STKA				PcP	PcP	19 46 39.6	-0.2
	1.3nm,0.8s,baz=118,slow=1.5,SNR=3.0						
WRA	Warramunga Arr	32.46	254	P	P	19 44 01.9	-0.9
	0.4nm,1.0s,baz=85,slow=9.2,SNR=3.6						
WRA				PcP	PcP	19 46 46.8	+0.2
	0.2nm,0.8s,baz=77,slow=3.9,SNR=3.0						
ASAR	Alice Springs	33.44	247	P	P	19 44 10.7	-0.6
	0.4nm,0.6s,baz=72,slow=9.8,SNR=6.6						
ASAR				PcP	PcP	19 46 48.8	-0.5
	0.3nm,0.6s,baz=65,slow=2.7,SNR=4.6						
ASAJ	Asahikawa	61.66	340	P	P	19 47 49.5	+1.2
	1.8nm,0.7s,baz=96,slow=6.1,SNR=4.5						
CMAR	Chiang Mai Arr	74.73	294	P	P	19 49 10.3	0.0
	0.4nm,0.8s,baz=131,slow=4.9,SNR=3.5						
SONM	Songino Array	81.67	323	P	P	19 49 47.9	-0.2
	0.2nm,0.5s,baz=126,slow=4.6,SNR=2.9						
ILAR	Eielson Array	85.22	18	P	P	19 50 05.0	-0.7
	0.3nm,0.6s,baz=230,slow=5.6,SNR=6.0						
MKAR	Makanchi Array	96.51	316	P	P	19 50 58.5	-0.4
	0.3nm,0.5s,baz=84,slow=6.0,SNR=9.6						
ARCES	ARCESS Array B	119.11	346	PKP	PKPdf	19 56 16.4	-0.6
	0.7nm,0.6s,baz=88,slow=1.6,SNR=6.1						

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*NNC **12** 19:47:30.8±1.3,40°.52N×77°.24E,h0^{km},mb3.0,mpv2.7, Error ellipse: s-maj=10.5km s-min=6.1km az=134.0*

*KRNET **12** 19:47:31.6±0.1,40°.62N×77°.24E,h12^{km},mb2.3*

*SOME **12** 19:47:32.6,40°.58N×77°.23E,h10^{km}*

ISC 12 19:47:25.5±2.2,**40°.38N**±0°.08×**77°.31E**±0°.04,**h5**^{km}±21^{km}**, n36,**σ1^{s}**10**/57,**12C-10D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.40	15	⇑iP	Pg	19 47 54.4	+2.0
	baz=21						
TARG				⇑iS	Sg	19 48 10.6	+0.1
	baz=21						
NRN	Naryn	1.45	317	⇑iP	Pg	19 47 55.1	+1.8
	baz=10.0						
NRN				⇑iS	Sg	19 48 13.0	+1.0
	baz=10.0						
KDJ	Kajisay	1.75	357	⇑iP	Pg	19 47 59.9	+0.8
	baz=59						
KDJ				⇑iS	Sg	19 48 21.1	-0.7
	baz=59						
ULHL	Ulahol	2.03	337	⇑iP	Pg	19 48 05.2	+0.8
	baz=35						
ULHL				⇑iS	Sg	19 48 29.9	-0.9
	baz=35						
KZA	Kyzart	2.30	318	⇓iP	Pg	19 48 10.3	+0.7
	baz=15						
KZA				⇓iS	Sg	19 48 38.5	-0.9
	baz=15						
BOOM	Boomskoye usch	2.35	334	⇓iP	Pg	19 48 10.9	+0.4
	baz=33						
BOOM				⇓iS	Sb	19 48 38.2	+0.5
	baz=33						
TNSS	Tian-Shan	2.67	354	Pg	Pg	19 48 17.6	+0.9
	4.8nm,0.4s						
TNSS				Lg	Lg	19 48 49.8	
	6.6nm,0.6s						
TNSS	Tian-Shan	2.67	354	eP	Pg	19 48 17.6	+0.9
	4.8nm,0.4s						
TNSS				eS	Sg	19 48 49.8	-1.5
	8.1nm,0.7s						
ARLS	Aral	2.70	304	⇓iP	Pg	19 48 16.2	-1.0
	baz=1.0						
ARLS				⇓iS	Sb	19 48 48.5	+0.7
	baz=1.0						
MDOK	Medeo	2.79	356	⇑Pg	Pg	19 48 19.0	+0.1
	2.0nm,0.4s						
MDOK				Lg	Lg	19 48 54.4	
	12nm,0.7s						
MDOK	Medeo	2.79	356	Pg	Pg	19 48 19.7	+0.7
	2.9nm,0.5s						
MDOK				Lg	Lg	19 48 53.7	
	7.7nm,0.5s						
MDOK	Medeo	2.79	356	eP	Pg	19 48 19.7	+0.7
	2.9nm,0.5s						
MDOK				eS	Sg	19 48 53.7	-1.4
	11nm,0.5s						
SATY	Saty	2.80	17	Pg	Pg	19 48 20.2	+1.1
SATY				Lg	Lg	19 48 54.7	
SATY	Saty	2.80	17	eP	Pg	19 48 20.2	+1.1
	0.8nm,0.2s						
SATY				eS	Sg	19 48 54.7	-0.7
	9.5nm,0.5s						
MTBS	Maitube	2.83	347	eP	Pg	19 48 21.2	+1.6
	2.5nm,0.2s						
MTBS				eS	Sg	19 48 56.0	-0.3
	8.5nm,0.3s						
TKM2	Tokmak 2	2.84	334	⇑Pg	Pg	19 48 20.4	+0.4
	1.8nm,0.7s						
TKM2				⇓Lg	Lg	19 48 57.5	
	4.3nm,0.8s						
KST	Kastek	2.84	340	Pg	Pg	19 48 21.8	+1.7
KST				Lg	Lg	19 48 56.8	
KST	Kastek	2.84	340	eP	Pg	19 48 21.4	+1.4
	0.8nm,0.2s						
KST				eS	Sg	19 48 56.3	-0.6
	7.0nm,0.3s						
KOTS	Kotyrbulak	2.85	357	Pg	Pg	19 48 20.9	+0.7
	3.9nm,0.4s						
KOTS				Lg	Lg	19 48 55.5	
	22nm,0.6s						
KOTS	Kotyrbulak	2.85	357	eP	Pg	19 48 20.9	+0.7
	3.9nm,0.4s						
KOTS				eS	Sg	19 48 55.5	-1.7
	22nm,0.6s						
SFK	Sufi-Kurgan	2.94	264	⇓Pg	Pg	19 48 22.1	+0.2
	1.6nm,0.8s						
SFK				⇓Lg	Lg	19 49 00.2	
	1.6nm,0.7s						
UZB	Uzynbulak	3.05	24	eP	Pg	19 48 25.7	+1.8
	0.9nm,0.3s						
UZB				eS	Sg	19 49 03.6	+0.2
	3.5nm,0.6s						
DGS	Degeres	3.08	339	Pg	Pg	19 48 25.7	+1.1
	0.8nm,0.6s						
DGS				Lg	Lg	19 49 03.7	
	7.2nm,0.5s						
DGS	Degeres	3.08	339	eP	Pg	19 48 25.7	+1.1
	0.8nm,0.6s						
DGS				eS	Sg	19 49 03.7	-0.8
	7.2nm,0.5s						
KURS	Kuram	3.17	11	Pg	Pg	19 48 27.3	+1.0
KURS				Lg	Lg	19 49 06.3	
KURS	Kuram	3.17	11	eP	Pg	19 48 27.3	+1.0
	1.1nm,0.5s						
KURS				eS	Sg	19 49 06.3	-1.0
	2.8nm,0.6s						
KTBS	Karatobe	3.36	352	Pg	Pg	19 48 30.2	+0.3
KTBS				Lg	Lg	19 49 11.9	
KTBS	Karatobe	3.36	352	eP	Pg	19 48 30.2	+0.3
	2.2nm,0.8s						
KTBS				eS	Sg	19 49 11.9	-1.5
	7.8nm,0.4s						
PDGK	Podgornoye	3.37	28	Pg	Pg	19 48 30.4	+0.3
	0.6nm,0.4s						
PDGK				Lg	Lg	19 49 11.8	
	2.7nm,0.7s						
PDGK	Podgornoye	3.37	28	⇑Pg	Pg	19 48 29.0	-1.0
	2.7nm,1.2s						
PDGK				⇑Lg	Lg	19 49 12.0	
	4.7nm,0.6s						
CHKK	Chushkaly	3.48	356	Pg	Pg	19 48 33.0	+0.8
CHKK				Lg	Lg	19 49 16.0	
CHKK	Chushkaly	3.48	356	eP	Pg	19 48 32.6	+0.4
	0.7nm,0.1s						
CHKK				eS	Sg	19 49 15.5	-1.7
	7.3nm,0.4s						
KUU	Kurty	3.58	349	eP	Pg	19 48 34.2	0.0
	0.3nm,0.1s						
KUU				⇓iS	Sg	19 49 18.5	-2.1
	4.8nm,0.5s						
ARXS	Arharly	3.85	6	Pg	Pg	19 48 39.5	+0.2
ARXS				Lg	Lg	19 49 27.1	
ARXS	Arharly	3.85	6	eP	Pg	19 48 39.5	+0.2
	0.8nm,0.6s						
ARXS				eS	Sg	19 49 27.1	-2.0
	3.2nm,0.5s						
DJR	Jarkent	4.36	24	eP	Pg	19 48 48.9	-0.1
	0.3nm,0.1s						
DJR				eS	Sg	19 49 43.7	-1.7
	1.0nm,0.4s						

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*ISCJB **12** 19:57:47.1±0.6,5°.67S±0°.08×150°.2E±0°.1,h52^{km}, mb3.9/13,MS3.1/1,Error ellipse: s-maj=19.2km s-min=10.8km az=11.3*

*IDC **12** 19:57:53.2±2.4,5°.76S×150°.25E,h96^{km}±21^{km},mb3.7/14, mb1 3.9/15,mb1mx3.7/36,mbtmp4.0/15,MS3.1/1, Ms1 3.1/1,ms1mx2.5/35,Error ellipse: s-maj=25.6km s-min=13.3km az=86.0*

ISC 12 19:57:48.4±0.7,**5°.80S**±0°.09×**150°.1E**±0°.2,**h52**^{km}**,n16, σ2^{s}37**/20,**mb3.9**/13,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	14.69	194	P	P	20 01 19.1	+0.8
	0.3nm,0.3s,baz=18,slow=13,SNR=3.3						
WRA	Warramunga Arr	20.80	226	P	P	20 02 28.2	+2.6
	4.9nm,0.4s,baz=51,slow=11,SNR=133						
WRA				S	S	20 06 14.1	-1.0
	0.9nm,0.9s,baz=51,slow=22,SNR=3.8						
WRA				ScP	ScP	20 10 01.5	-4.2
	1.2nm,0.8s,baz=48,slow=2.6,SNR=11						
DZM	Mont Dzumac	22.61	137	P	P	20 02 46.1	+1.1
	16nm,0.5s,baz=129,slow=22,SNR=26						
ASAR	Alice Springs	23.64	220	P	P	20 02 57.1	+1.9
	3.7nm,0.4s,baz=49,slow=9.0,SNR=139						
ASAR				S	S	20 07 00.7	-5.6
	0.2nm,0.9s,baz=30,slow=20,SNR=2.9						
ASAR				ScP	ScP	20 10 08.5	-4.4
	0.4nm,0.7s,baz=46,slow=3.6,SNR=4.7						
STKA	Stephens Creek	27.14	196	P	P	20 03 28.1	+1.3
	2.4nm,0.7s,baz=36,slow=14,SNR=8.4						
MJAR	Matsushiro Arr	43.57	346	P	P	20 05 48.3	+0.9
	2.0nm,0.8s,baz=176,slow=7.4,SNR=4.2						
KSRS	Korea Array	47.75	336	P	P	20 06 21.3	+1.0
	1.5nm,0.7s,baz=155,slow=8.3,SNR=5.0						
KSRS				LR	LR	20 26 50.8	
	comp=Z,18nm,18.0s,baz=306,slow=36						
KLR	Kul'dur	57.09	346	P	P	20 07 30.5	+1.1
	0.7nm,0.5s,baz=145,slow=8.4,SNR=3.5						
SONM	Songino Array	65.77	329	P	P	20 08 28.8	+0.6
	1.4nm,0.5s,baz=142,slow=5.2,SNR=37						
VNDA	Vanda	71.95	177	P	P	20 09 05.8	-0.1
	2.8nm,1.0s,baz=7.8,slow=8.0,SNR=4.9						
MKAR	Makanchi Array	79.33	320	P	P	20 09 48.9	+0.2
	0.1nm,0.4s,baz=107,slow=5.0,SNR=4.4						
ZALV	Zalesovo Beam	80.51	327	P	P	20 09 53.8	-1.0
	0.6nm,0.4s,baz=105,slow=6.1,SNR=4.6						
KURBB	Kurchatov Arra	82.94	322	P	P	20 10 06.8	-1.0
	0.1nm,0.4s,baz=90,slow=8.7,SNR=4.5						
ILAR	Eielson Array	84.09	23	P	P	20 10 11.8	-1.6
	0.4nm,0.7s,baz=248,slow=5.4,SNR=7.9						
YKA	Yellowknife Ar	97.55	28	P	P	20 11 15.8	-1.0
	0.3nm,0.8s,baz=292,slow=4.7,SNR=2.8						
TORD	Torodi Ar. Bea	148.03	286	PKPbc	PKPdf	20 17 27.5	+1.4
	0.3nm,0.3s,baz=99,slow=3.0,SNR=10						

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*ISCJB **12** 20:08:26.8±0.5,37°.05N±0°.04×71°.75E±0°.06,h100^{km}, mb3.4/2,Error ellipse: s-maj=7.0km s-min=4.7km az=151.9*

*IDC **12** 20:08:30.8±5.1,37°.37N×71°.76E,h119^{km}±31^{km},mb3.2/2, mb1 3.3/6,mb1mx2.9/46,mbtmp3.6/6,Error ellipse: s-maj=61.4km s-min=19.7km az=150.0*

*NNC **12** 20:08:34.8±2.7,37°.86N×71°.47E,h0^{km},mb4.5,mpv4.1, Error ellipse: s-maj=21.5km s-min=15.0km az=170.0*

ISC 12 20:08:28.2±0.9,**37°.18N**±0°.07×**71°.78E**±0°.07,**h100**^{km}**,n32, σ2^{s}25**/41,**8C-6D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.13	25	⇓P	Pn	20 09 19.9	+3.9
	24nm,0.3s						
SFK				⇑S	Sn	20 09 54.1	+1.4
	136nm,0.6s						
AML	Almayashu	5.16	16	P	Pn	20 09 45.8	+2.4
	SNR=69						
MNAS	Manas	5.33	6	⇓P	Pn	20 09 48.0	+2.6
	42nm,0.3s						
MNAS				⇓S	Sn	20 10 43.5	-2.0
	37nm,0.5s						
UCH	Uchtor	5.46	22	P	Pn	20 09 49.9	+2.3
	SNR=49						
KZA	Kyzart	5.57	28	P	Pn	20 09 50.7	+1.6
	SNR=6.0						
EKS2	Erkin-Say	5.68	15	P	Pn	20 09 52.5	+2.3
	SNR=14						
AAK	Ala-Archa	5.83	20	P	Pn	20 09 55.0	+2.6
	SNR=18						
AAK	Ala-Archa	5.83	20	⇑P	Pn	20 09 54.7	+2.3
	10nm,0.5s						
AAK				⇑S	Sn	20 10 56.3	-1.7
	39nm,0.8s						
AAK	Ala-Archa	5.83	20	P	Pn	20 09 54.4	+2.1
	4.0nm,0.3s,baz=187,slow=8.6,SNR=93						
AAK				S	Sn	20 10 55.9	-2.0
	3.5nm,0.3s,baz=310,slow=23,SNR=19						
KBK	Karagaybulak	5.98	23	P	Pn	20 09 57.4	+3.0
	SNR=10						
KK31	Karatay Array	5.99	351	⇑P	Pn	20 09 57.1	+2.8
	14nm,0.3s,baz=178,slow=13,SNR=301						
KK31				⇑S	Sn	20 10 59.5	-2.0
	12nm,0.3s,baz=175,slow=22,SNR=5.3						
CHMS	Chumysh	6.24	20	P	Pn	20 09 59.9	+2.1
	SNR=18						
USP	Ospenovka	6.42	18	P	Pn	20 10 01.9	+1.6
	SNR=13						
TKM2	Tokmak 2	6.43	26	P	Pn	20 10 02.7	+2.1
	SNR=10						
TKM2	Tokmak 2	6.43	26	⇑P	Pn	20 10 03.1	+2.5
	6.7nm,0.8s						
TKM2				⇓S	Sn	20 11 14.5	+1.8
	5.8nm,0.8s						
GEYT	Alibeck	10.87	278	P	Pn	20 11 03.2	+2.4
	0.4nm,0.3s,baz=88,slow=11,SNR=9.6						
GEYT				S	Sn	20 12 59.1	-1.3
	0.4nm,0.3s,baz=92,slow=19,SNR=2.0						
MKAR	Makanchi Array	12.37	36	P	Pn	20 11 21.0	+0.3
	0.1nm,0.3s,baz=223,slow=11,SNR=2.5						
PYUN	Piuthan	13.08	131	eP	Pn	20 11 29.0	-1.3
	20nm,0.5s						
DANN	Dangsing	13.38	128	eP	Pn	20 11 33.0	-1.3
	19nm,0.3s						
KOLN	Koldanda	13.69	130	eP	Pn	20 11 37.3	-1.0
	12nm,0.5s						
KURBB	Kurchatov Arra	14.28	18	P	Pn	20 11 42.1	-3.4
	0.0nm,0.3s,baz=202,slow=10,SNR=5.0						
DMN	Daman	14.75	127	eP	Pn	20 11 50.5	-1.5
	8.4nm,0.3s						
AB31	Akbulak array	14.81	328	⇑P	Pn	20 11 53.8	+1.5
	1.3nm,0.3s,baz=134,slow=15,SNR=65						
AB31				⇑S	Sn	20 14 32.1	-3.5
	1.1nm,0.7s						
PKIN	Phulchoki	14.96	126	eP	Pn	20 11 52.6	-2.0
	14nm,0.5s						
PKI	Pulchoki	14.97	126	eP	Pn	20 11 52.7	-2.2
	16nm,0.5s						
GUN	Gumba	15.05	124	eP	Pn	20 11 53.8	-2.1
	16nm,0.3s						
JIRN	Jiri	15.42	124	eP	Pn	20 11 58.9	-1.7
	36nm,0.4s						
RAMN	Ramite	16.16	125	eP	Pn	20 12 08.4	-1.4
	11nm,0.4s						
AKTO	Aktyubinsk	16.52	328	⇓P	P	20 12 16.7	+2.1
	5.2nm,0.8s						
AKTO				⇓S	Sn	20 15 13.2	-3.6
	1.7nm,0.9s						
ZALV	Zalesovo Beam	19.04	24	P	P	20 12 41.6	-0.6
	0.3nm,0.3s,baz=207,slow=13,SNR=5.8						
ARCES	ARCESS Array B	40.76	337	P	P	20 15 59.4	+0.5
	1.9nm,1.0s,baz=96,slow=8.6,SNR=2.2						
YKA	Yellowknife Ar	80.53	3	P	P	20 20 27.3	-1.7
	0.1nm,0.4s,baz=348,slow=5.2,SNR=2.4						

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*SOME **12** 20:09:44.5,41°.73N×80°.20E,h10^{km}*

*KRNET **12** 20:09:45.4±0.1,41°.83N×80°.27E,h7^{km},mb2.2*

*NNC **12** 20:09:45.8±1.1,41°.77N×80°.15E,h0^{km},mb3.2,mpv2.9, Error ellipse: s-maj=7.2km s-min=5.8km az=134.0*

ISC 12 20:09:46.7±2.2,**41°.81N**±0°.08×**80°.15E**±0°.07,**h10**^{km}**,n30, σ1^{s}20**/50,**6C-5D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.47	298	⇓iP	Pg	20 10 14.2	-0.7
	baz=96						
PRZ				⇓eS	Sg	20 10 35.1	+1.2
	baz=96						
UZB	Uzynbulak	1.58	328	P	Pb	20 10 15.4	-0.6
	4.4nm,0.2s						
UZB				S	Sg	20 10 37.9	+0.4
	7.6nm,0.4s						
UZB	Uzynbulak	1.58	328	eP	Pb	20 10 15.4	-0.6
	4.4nm,0.2s						
UZB				eS	Sg	20 10 37.9	+0.4
	7.6nm,0.4s						
PDGK	Podgornoye	1.60	342	P	Pb	20 10 15.6	-0.8
	1.4nm,0.1s						
PDGK				S	Sg	20 10 38.1	0.0
	5.5nm,0.3s						
PDGK	Podgornoye	1.60	342	⇑P	Pb	20 10 16.4	0.0
	1.6nm,0.6s						
PDGK				⇑S	Sg	20 10 37.9	-0.1
	4.7nm,0.4s						
PDGK	Podgornoye	1.60	342	⇓iP	Pb	20 10 15.6	-0.8
	baz=39						
PDGK				⇓iS	Sg	20 10 38.1	0.0
	baz=39						
KTMS	Ketmen	1.64	5	P	Pb	20 10 16.4	-0.8
KTMS				S	Sg	20 10 39.4	-0.2
KTMS	Ketmen	1.64	5	eP	Pb	20 10 16.4	-0.8
	1.8nm,0.1s						
KTMS				eS	Sg	20 10 39.4	-0.2
	4.7nm,0.2s						
TARG	Taragay, Kyrgy	1.76	268	⇑iP	Pg	20 10 20.1	-0.4
	baz=68						
TARG				⇑iS	Sg	20 10 45.8	+2.5
	baz=68						
SATY	Saty	1.80	315	Pg	Pb	20 10 19.7	-0.1
	4.0nm,0.1s						
SATY				Lg	Lg	20 10 45.2	
	12nm,0.3s						
SATY	Saty	1.80	315	eP	Pb	20 10 19.7	-0.1
	4.0nm,0.1s						
SATY				eS	Sg	20 10 45.2	+0.7
	12nm,0.3s						
KURS	Kuram	2.23	320	Pg	Pb	20 10 27.4	+0.3
	2.6nm,0.3s						
KURS				Lg	Lg	20 10 58.1	
	2.3nm,0.5s						
KURS	Kuram	2.23	320	eP	Pb	20 10 27.4	+0.3
	2.6nm,0.3s						
KURS				eS	Sg	20 10 58.1	-0.2
	2.3nm,0.5s						
KDJ	Kajisay	2.24	279	⇑iP	Pb	20 10 26.5	-0.9
	baz=78						
KDJ				⇑iS	Sg	20 10 57.5	-1.2
	baz=78						
DJR	Jarkent	2.54	354	Pg	Pb	20 10 32.1	-0.3
	0.6nm,0.2s						
DJR				Lg	Lg	20 11 06.1	
	2.8nm,0.3s						
DJR	Jarkent	2.54	354	eP	Pb	20 10 32.0	-0.3
	0.6nm,0.2s						
DJR				eS	Sb	20 11 06.1	+2.4
	2.8nm,0.3s						
MNBS	Baschi	2.61	331	Pg	Pb	20 10 32.7	-0.9
MNBS				Lg	Lg	20 11 08.0	
MNBS	Baschi	2.61	331	eP	Pb	20 10 32.7	-0.9
	1.6nm,0.2s						
MNBS				eS	Sb	20 11 07.9	+2.1
	2.4nm,0.2s						
MDOK	Medeo	2.67	302	⇓Pg	Pb	20 10 34.1	-0.5
	2.9nm,0.4s						
MDOK				Lg	Lg	20 11 11.0	
	4.4nm,0.5s						
MDOK	Medeo	2.67	302	Pg	Pb	20 10 34.3	-0.3
	4.4nm,0.4s						
MDOK				Lg	Lg	20 11 10.5	
	6.5nm,0.4s						
MDOK	Medeo	2.67	302	eP	Pb	20 10 34.3	-0.3

	4.4nm,0.4s						
MDOK				*e*S	**Sg**	**20 11 10.5**	**-1.8**
	6.5nm,0.4s						
TNSS	**Tian-Shan**	**2.67**	**298**	Pg	**Pb**	**20 10 34.6**	**-0.3**
	4.0nm,0.5s						
TNSS				Lg	Lg	20 11 11.1	
	5.5nm,0.5s						
TNSS	**Tian-Shan**	**2.67**	**298**	*e*P	**Pb**	**20 10 34.6**	**-0.3**
	4.0nm,0.5s						
TNSS				*e*S	**Sg**	**20 11 11.1**	**-1.4**
	5.5nm,0.5s						
IZV	**Izvestkoviy**	**2.89**	**296**	Pg	**Pb**	**20 10 38.1**	**-0.4**
IZV				Lg	Lg	20 11 16.6	
IZV	**Izvestkoviy**	**2.89**	**296**	*e*P	**Pb**	**20 10 38.1**	**-0.4**
	2.2nm,0.8s						
IZV				*e*S	**Sg**	**20 11 16.6**	**-3.0**
	9.3nm,0.5s						
ARXS	**Arharly**	**2.95**	**325**	Pg	**Pb**	**20 10 38.9**	**-0.4**
ARXS				Lg	Lg	20 11 17.5	
ARXS	**Arharly**	**2.95**	**325**	*e*P	**Pb**	**20 10 38.9**	**-0.4**
	0.8nm,0.2s						
ARXS				*e*S	**Sb**	**20 11 17.5**	**+2.1**
	2.4nm,0.5s						
CHKK	**Chushkaly**	**3.10**	**312**	*e*P	**Pb**	**20 10 42.1**	**+0.2**
	0.8nm,0.1s						
CHKK				*e*S	**Sg**	**20 11 23.2**	**-2.9**
	5.9nm,0.4s						
KAPS	**Kapalarasan**	**3.52**	**351**	Pg	**Pb**	**20 10 49.9**	**+0.8**
KAPS				Lg	Lg	20 11 36.5	
KAPS	**Kapalarasan**	**3.52**	**351**	*e*P	**Pb**	**20 10 49.7**	**+0.5**
	0.4nm,0.3s						
KAPS				*e*S	**Sg**	**20 11 36.5**	**-3.3**
	2.9nm,0.4s						

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*IDC **12** 20:17:44.2±0.5, 60°.32S×31°.80W, h0^{km}, mb4.6/16, mb1 4.7/18, mb1mx4.6/28, mbtmp4.6/18, ML3.9/2, MS4.0/14, Ms1 4.0/14, ms1mx3.9/17, Error ellipse: s-maj=16.5km s-min=15.5km az=72.0*

*ISCJB **12** 20:17:44.2±0.2, 60°.35S±0°.03×31°.82W±0°.09, h10^{km}, mb5.0/57, MS4.2/15, Error ellipse: s-maj=7.1km s-min=4.2km az=155.9*

*MOS **12** 20:17:45.6±1.5, 60°.33S×32°.05W, h14^{km}, mb5.2/16, Error ellipse: s-maj=25.1km s-min=10.4km az=106.7*

*NEIC **12** 20:17:46.8±0.6, 60°.38S×31°.90W, h15^{km}±3^{km}, mb5.2/44, Error ellipse: s-maj=6.5km s-min=5.0km az=48.0*

*BJI **12** 20:17:49.0, 60°.40S×32°.00W, h33^{km}, mB5.3/8, Ms5.4/4, Ms7 5.1/4*

*GCMT **12** 20:17:49.8±0.3, 60°.60S±0°.02×31°.76W±0°.06, h12^{km}, MW5.0/81, Moment Tensor Solution. s29,c35; s81,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.53±.12; $M_{\theta\theta}$2.25±.10; $M_{\phi\phi}$0.28±.11; $M_{r\theta}$1.68±.36; $M_{\theta\phi}$1.55±.09; $M_{\phi r}$-0.40±.39; Best double couple: $M_0$3.33900×10^{16} NP1:ϕ_s263.00000°, δ61.00000°, λ-65.00000°. NP2: ϕ_s39.00000°, δ37.00000°, λ-127.00000°. Principal axes: T 3.3950, Plg13.0000°, Azm335.0000°; N -0.1110, Plg21.0000°, Azm70.0000°; P -3.2820, Plg65.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 20:17:45.8±0.3, **60°.44S**±0°.05×**31°.72W**±0°.06, **h10^{km}, n258, σ1^{s}80**/267, **mb5.1**/55, **MS4.1**/15, **3C, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.69**	**335**	*e*Pn	**Pn**	**20 19 23.6**	**-0.3**
HOPE				*e*Sn	**Sn**	**20 20 40.8**	**+0.7**
VNA3	**Neumayer Olymp**	**13.98**	**150**	P	**Pn**	**20 21 03.3**	**-0.2**
VNA1	**Neumayer--Stat**	**13.98**	**147**	P	**Pn**	**20 21 04.5**	**+0.9**
VNA2	**Neumayer--Watz**	**14.38**	**147**	P	**Pn**	**20 21 09.4**	**+0.4**
	baz=310,slow=16						
VNA2				S	**Sn**	**20 23 44.1**	**-4.2**
PMSA	**Palmer Station**	**15.38**	**240**	Pn	**Pn**	**20 21 21.8**	**-0.8**
	0.3nm,0.3s,baz=77,slow=3.4,SNR=2.6						
PMSA				LR	LR	20 26 33.4	
	comp=Z,354nm,19.4s,baz=54,slow=34						
PMSA	**Palmer Station**	**15.38**	**240**	*e*P	**Pn**	**20 21 21.7**	**-0.8**
SNAA	**Sanae**	**16.02**	**146**	P	**Pn**	**20 21 31.7**	**+0.8**
SNAA				S	**Sn**	**20 24 21.6**	**-6.6**
SNAA	**Sanae**	**16.02**	**146**	*e*Pn	**Pn**	**20 21 31.6**	**+0.8**
	122nm,1.6s						
SNAA				Sn	**Sn**	**20 24 19.8**	**-8.4**
SNAA	**Sanae**	**16.02**	**146**	*e*P	**Pn**	**20 21 31.6**	**+0.8**
SNAA				pmax	pmax		
	comp=Z,122nm,1.6s						
SNAA	**Sanae**	**16.02**	**146**	Pn	**Pn**	**20 21 31.9**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=265,slow=2.2,SNR=31						
SNAA				Sn	**Sn**	**20 24 19.8**	**-8.4**
	comp=Z,0.0nm,0.3s,baz=210,slow=20,SNR=3.4						
SNAA				LR	LR	20 26 21.7	
	comp=Z,1μm,20.5s,baz=334,slow=32						
EFI	**East Falkland**	**17.02**	**289**	*e*Pn	**Pn**	**20 21 42.0**	**-1.6**
	comp=Z,498nm,1.9s						
EFI	**East Falkland**	**17.02**	**289**	*e*P	**Pn**	**20 21 42.0**	**-1.6**
EFI				pmax	pmax		
	comp=Z,498nm,1.9s						
NVL	**N'lazarevskaya**	**20.21**	**139**	*e*P	Pn	20 22 26.3	+4.1
NVL				pmax	pmax		
	comp=Z,26nm,1.3s						
USHA	**Ushuaia**	**20.24**	**270**	P	**P**	**20 22 20.5**	**-0.2**
	comp=Z,35nm,0.9s,baz=152,slow=11,SNR=5.9						
GO10	**Punta Arenas**	**22.45**	**271**	*e*P	**P**	**20 22 45.9**	**+1.3**
	comp=Z,192nm,1.0s						
GO09	**Cerro Castillo**	**24.20**	**274**	*e*P	**P**	**20 23 02.5**	**+0.3**
	comp=Z,44nm,1.0s						
TRQA	**Tornquist**	**29.40**	**306**	*e*P	**P**	**20 23 45.6**	**-3.4**
	comp=Z,61nm,1.8s						
TRQA	**Tornquist**	**29.40**	**306**	*e*P	**P**	**20 23 45.6**	**-3.4**
TRQA				pmax	pmax		
	comp=Z,61nm,1.8s						
TRQA	**Tornquist**	**29.40**	**306**	*e*P	**P**	**20 23 48.0**	**-1.1**
QSPA	**South Pole Qui**	**29.80**	**180**	P	**P**	**20 23 54.5**	**+2.0**
	comp=Z,9.9nm,1.0s,baz=196,slow=4.6,SNR=12						
QSPA				LR	LR	20 35 36.3	
	comp=Z,704nm,18.2s,baz=190,slow=36						
PLCA	**Paso Flores**	**30.91**	**292**	*e*P	**P**	**20 24 01.7**	**-0.7**
	comp=Z,10nm,1.0s						
PLCA	**Paso Flores**	**30.91**	**292**	*e*P	**P**	**20 24 01.7**	**-0.7**
PLCA				pmax	pmax		
	comp=Z,11nm,1.0s						
PLCA	**Paso Flores**	**30.91**	**292**	*e*P	**P**	**20 24 01.5**	**-0.8**
PLTB	**Pedras Altas**	**32.13**	**323**	*e*P	**P**	**20 24 11.7**	**-1.5**
CPSB	**Cacapava Do Su**	**33.35**	**324**	*e*P	**P**	**20 24 22.6**	**-1.2**
CNLB	**Canela**	**33.68**	**329**	*e*P	**P**	**20 24 25.8**	**-0.9**
TER01	**Tubaro-SC**	**34.01**	**332**	*e*P	**P**	**20 24 28.6**	**-1.0**
TIJ01	**Guaruva-PR**	**37.07**	**334**	*e*P	**P**	**20 24 54.5**	**-1.4**
PEL	**Peldehue**	**37.25**	**299**	*e*P	**P**	**20 24 55.3**	**-2.1**
	comp=Z,85nm,1.4s						
PEL	**Peldehue**	**37.25**	**299**	*e*P	**P**	**20 24 55.3**	**-2.1**
PEL				pmax	pmax		
	comp=Z,85nm,1.4s						
ROC1	**El Roble**	**37.54**	**299**	*e*P	**P**	**20 24 59.1**	**-0.9**
	comp=Z,25nm,1.0s						
MAW	**Mawson**	**38.10**	**142**	LR	LR	20 38 26.4	
	comp=Z,265nm,21.7s,baz=260,slow=32						
CPUP	**Villa Florida**	**38.34**	**321**	*e*P	**P**	**20 25 04.4**	**-2.1**
	comp=Z,20nm,1.2s						
CPUP	**Villa Florida**	**38.34**	**321**	*e*P	**P**	**20 25 04.4**	**-2.1**
CPUP				pmax	pmax		
	comp=Z,20nm,1.2s						
CPUP	**Villa Florida**	**38.34**	**321**	P	**P**	**20 25 05.3**	**-1.2**
	comp=Z,14nm,1.0s,baz=160,slow=7.9,SNR=16						
SPB	**Sao Paulo**	**38.42**	**336**	*e*P	**P**	**20 25 07.8**	**+0.5**
	comp=Z,22nm,1.2s						
ESAR	**Angra dos Reis**	**38.44**	**341**	*e*P	**P**	**20 25 06.5**	**-0.9**
VAS01	**Vassouras-RJ**	**39.01**	**343**	*e*P	**P**	**20 25 11.6**	**-0.7**
FRTB	**Fartura**	**39.11**	**333**	*e*P	**P**	**20 25 11.4**	**-1.6**
CAM01	**Campos-RJ**	**39.21**	**345**	*e*P	**P**	**20 25 13.4**	**-0.4**
RCLB	**Rio Claro- Sao**	**39.58**	**337**	*e*P	**P**	**20 25 16.1**	**-0.9**
GO04	**Tololo Observa**	**39.86**	**302**	*e*P	**P**	**20 25 19.3**	**-0.2**
	comp=Z,29nm,1.2s						
ALF01	**Guarapari-ES**	**40.30**	**347**	*e*P	**P**	**20 25 22.1**	**-0.8**
TRCB	**Terra Rica**	**40.36**	**329**	*e*P	**P**	**20 25 22.6**	**-1.0**
BSCB	**Bom Sucesso**	**40.48**	**341**	*e*P	**P**	**20 25 23.7**	**-0.8**
LCO	**Las Campanas**	**40.84**	**303**	*e*P	**P**	**20 25 27.5**	**-0.1**
	comp=Z,66nm,1.8s						
LCO	**Las Campanas**	**40.84**	**303**	*e*P	**P**	**20 25 27.5**	**-0.1**
LCO				pmax	pmax		
	comp=Z,66nm,1.8s						
LCO	**Las Campanas**	**40.84**	**303**	*e*P	**P**	**20 25 25.7**	**-1.9**
BB19B	**Bebedouro**	**41.09**	**336**	*e*P	**P**	**20 25 28.5**	**-1.0**
RIB01	**Linhares ES**	**41.55**	**348**	*e*P	**P**	**20 25 32.6**	**-0.7**
GO03	**Copiap**	**41.89**	**304**	*e*P	**P**	**20 25 36.8**	**+0.7**
	comp=Z,25nm,1.4s						
VNDA	**Vanda**	**42.03**	**184**	*e*P	**P**	**20 25 39.5**	**+2.8**
VNDA	**Vanda**	**42.03**	**184**	*e*P	**P**	**20 25 39.5**	**+2.8**
VNDA	**Vanda**	**42.03**	**184**	P	**P**	**20 25 38.1**	**+1.5**
	comp=Z,6.6nm,0.9s,baz=196,slow=7.5,SNR=5.1						
VNDA				LR	LR	20 41 10.6	
	comp=Z,59nm,21.8s,baz=165,slow=33						
BSFB	**Barra de Sao F**	**42.07**	**347**	*e*P	**P**	**20 25 36.6**	**-0.9**
SJMB	**Sao Joao De Ma**	**42.24**	**347**	*e*P	**P**	**20 25 38.2**	**-0.7**
ITRB	**Iturama**	**42.80**	**334**	*e*P	**P**	**20 25 42.4**	**-1.1**
PMNB	**Patos De Minas**	**43.16**	**339**	*e*P	**P**	**20 25 45.5**	**-1.0**
AQDB	**Aquidauana**	**43.38**	**326**	*e*P	**P**	**20 25 47.3**	**-0.9**
GO02	**Mina Guanaco**	**43.79**	**306**	*e*P	**P**	**20 25 50.6**	**-1.2**
	comp=Z,22nm,0.8s						
IPMB	**Ipameri, GO**	**44.03**	**337**	*e*P	**P**	**20 25 52.3**	**-1.2**
SUR	**Sutherland**	**44.10**	**75**	*e*P	**P**	**20 25 56.4**	**+2.2**
	comp=Z,78nm,1.8s						
SUR	**Sutherland**	**44.10**	**75**	P	**P**	**20 25 53.1**	**-1.0**
	comp=Z,5.0nm,0.9s,baz=236,slow=7.3,SNR=2.4						
MCI6	**Montes Claros**	**44.45**	**343**	*e*P	**P**	**20 25 56.0**	**-0.9**
MCI7	**Montes Claros**	**44.47**	**343**	*e*P	**P**	**20 25 56.1**	**-0.9**
MCI9	**Montes Claros**	**44.56**	**343**	*e*P	**P**	**20 25 56.8**	**-0.9**
MCI8	**Montes Claros**	**44.60**	**343**	*e*P	**P**	**20 25 56.9**	**-1.2**
LVC	**Limon Verde**	**45.82**	**309**	*e*P	**P**	**20 26 08.6**	**+0.6**
	comp=Z,10nm,0.9s						
LVC	**Limon Verde**	**45.82**	**309**	*e*P	**P**	**20 26 08.6**	**+0.6**
LVC				pmax	pmax		
	comp=Z,11nm,0.9s						
LVC	**Limon Verde**	**45.82**	**309**	*e*P	**P**	**20 26 05.9**	**-2.1**
JANB	**Januaria**	**46.23**	**343**	*e*P	**P**	**20 26 10.0**	**-1.0**
BDFB	**Brasilia**	**46.27**	**338**	P	**P**	**20 26 10.2**	**-1.1**
	comp=Z,7.7nm,1.1s,baz=172,slow=7.1,SNR=2.7						
BDFB				LR	LR	20 42 40.2	
	comp=Z,238nm,21.2s,baz=218,slow=32						
PB04	**IPOC Station P**	**46.55**	**308**	*e*P	**P**	**20 26 12.2**	**-1.4**
	comp=Z,33nm,1.1s						
PB01	**IPOC Station P**	**47.46**	**309**	*e*P	**P**	**20 26 19.4**	**-1.2**
	comp=Z,31nm,0.9s						
SHEL	**Horse Pasture**	**48.23**	**34**	*e*P	**P**	**20 26 28.6**	**+2.0**
	comp=Z,49nm,0.9s						
SHEL	**Horse Pasture**	**48.23**	**34**	*e*P	**P**	**20 26 28.6**	**+2.0**
SHEL				pmax	pmax		
	comp=Z,49nm,0.9s						
PB11	**IPOC Station P**	**48.69**	**310**	*e*P	**P**	**20 26 28.8**	**-1.4**
	comp=Z,48nm,1.2s						
MNMC	**Minye Minye**	**49.24**	**310**	*e*P	**P**	**20 26 34.2**	**-0.3**
	comp=Z,38nm,0.9s						
BOSA	**Boshof**	**49.36**	**76**	P	**P**	**20 26 36.4**	**+1.1**
	comp=Z,5.8nm,1.0s,baz=187,slow=6.2,SNR=7.5						
BOSA				LR	LR	20 44 18.7	
	comp=Z,86nm,18.1s,baz=174,slow=32						
BOSA	**Boshof**	**49.36**	**76**	*e*P	**P**	**20 26 36.3**	**+1.0**
LPAZ	**La Paz**	**51.30**	**313**	*e*P	**P**	**20 26 50.1**	**-0.5**
LPAZ				*e*sP	**P**	**20 26 50.3**	**-0.3**
LPAZ	**La Paz**	**51.30**	**313**	*e*P	**P**	**20 26 50.1**	**-0.5**
LPAZ				*e**SP	**P**	**20 26 50.3**	**-0.3**
LPAZ	**La Paz**	**51.30**	**313**	P	**P**	**20 26 50.4**	**-0.3**
	comp=Z,6.5nm,0.8s,baz=146,slow=6.6,SNR=22						
LPAZ				LR	LR	20 49 52.0	
	comp=Z,98nm,20.7s,baz=156,slow=38						
LPAZ	**La Paz**	**51.30**	**313**	*e*P	**P**	**20 26 49.1**	**-1.5**
LBTB	**Lobatse**	**52.55**	**74**	*e*P	**P**	**20 26 59.7**	**+0.5**
	comp=Z,6.3nm,0.8s						
LBTB	**Lobatse**	**52.55**	**74**	*e*P	**P**	**20 26 59.7**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LBTB	**Lobatse**	**52.55**	**74**	P	**P**	**20 26 59.5**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=189,slow=6.7,SNR=6.1						
H10S2	**ASCENSION HYDR**	**52.94**	**21**	T	T	21 24 27.7	
	baz=189,slow=75						
H10S3	**ASCENSION HYDR**	**52.94**	**21**	T	T	21 24 27.0	
	baz=189,slow=75						
H10S1	**ASCENSION HYDR**	**52.96**	**21**	T	T	21 24 22.9	
	baz=189,slow=75						
NBLI	**Livramento-PB**	**53.11**	**354**	*e*P	**P**	**20 27 02.5**	**-0.8**
TSUM	**Tsumeb**	**53.88**	**62**	P	**P**	**20 27 08.6**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=255,slow=14,SNR=3.6						
H10N1	**ASCENSION HYDR**	**54.06**	**21**	T	T	21 25 41.8	
	baz=190						
H10N3	**ASCENSION HYDR**	**54.06**	**21**	T	T	21 25 53.1	
	baz=190						
H10N2	**ASCENSION HYDR**	**54.08**	**21**	T	T	21 25 48.7	
	baz=190						
RCBR	**Riachuelo**	**54.58**	**355**	*e*P	**P**	**20 27 15.6**	**+1.5**
	comp=Z,37nm,1.1s						
RCBR	**Riachuelo**	**54.58**	**355**	*e*P	**P**	**20 27 15.6**	**+1.5**
RCBR				pmax	pmax		
	comp=Z,37nm,1.1s						
RCBR	**Riachuelo**	**54.58**	**355**	*e*P	**P**	**20 27 13.5**	**-0.6**
NNA	**Nana**	**58.56**	**306**	*e*P	**P**	**20 27 41.2**	**-1.3**
	comp=Z,45nm,1.4s						
NNA	**Nana**	**58.56**	**306**	*e*P	**P**	**20 27 41.2**	**-1.3**
NNA				pmax	pmax		
	comp=Z,45nm,1.4s						
LSZ	**Lusaka**	**62.14**	**71**	*e*P	**P**	**20 28 08.2**	**+1.1**
	comp=Z,28nm,2.0s						
LSZ	**Lusaka**	**62.14**	**71**	*e*P	**P**	**20 28 08.2**	**+1.1**
LSZ				pmax	pmax		
	comp=Z,29nm,2.0s						
PTGA	**Pitinga**	**63.40**	**328**	*e*P	**P**	**20 28 15.1**	**-0.2**
	comp=Z,12nm,1.3s						
PTGA	**Pitinga**	**63.40**	**328**	*e*P	**P**	**20 28 14.2**	**-1.0**
PTLC	**Puerto Leguiza**	**68.92**	**313**	*e*P	**P**	**20 28 47.0**	**-3.8**
PTLC	**Puerto Leguiza**	**68.92**	**313**	*e*P	**P**	**20 28 47.0**	**-3.8**
LIC	**Lamto**	**69.70**	**28**	*e*P	**P**	**20 28 56.3**	**+0.8**
	comp=Z,68nm,1.5s						
KIC	**Kosan Boka**	**69.90**	**29**	*e*P	**P**	**20 28 57.5**	**+0.8**
	comp=Z,28nm,1.0s						
TIC	**Toumodi**	**70.11**	**28**	*e*P	**P**	**20 28 58.1**	**+0.1**
DBIC	**Dimbokro**	**70.17**	**28**	*e*P	**P**	**20 28 59.4**	**+1.0**
	comp=Z,8.3nm,0.8s						
DBIC	**Dimbokro**	**70.17**	**28**	*e*P	**P**	**20 28 59.4**	**+1.0**
DBIC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DBIC	**Dimbokro**	**70.17**	**28**	P	**P**	**20 28 58.4**	**0.0**
	comp=Z,7.1nm,0.8s,baz=166,slow=7.8,SNR=8.3						
DBIC				LR	LR	20 53 53.9	
	comp=Z,46nm,18.3s,baz=182,slow=31						
DBIC	**Dimbokro**	**70.17**	**28**	*e*P	**P**	**20 28 58.7**	**+0.3**
OTAV	**Otavalo**	**70.35**	**309**	*e*P	**P**	**20 29 00.7**	**+0.6**
	comp=Z,45nm,1.5s						
OTAV	**Otavalo**	**70.35**	**309**	*e*P	**P**	**20 29 00.7**	**+0.6**
OTAV				pmax	pmax		
	comp=Z,45nm,1.5s						
OTAV	**Otavalo**	**70.35**	**309**	*e*P	**P**	**20 28 58.9**	**-1.2**
PCON	**Cinco Dias**	**71.50**	**312**	*e*P	**P**	**20 29 08.9**	**+1.7**
PCON	**Cinco Dias**	**71.50**	**312**	*e*P	**P**	**20 29 08.9**	**+1.7**
CHIC	**Chingaza**	**72.69**	**316**	*e*P	**P**	**20 29 16.9**	**+2.8**
CHIC	**Chingaza**	**72.69**	**316**	*e*P	**P**	**20 29 16.9**	**+2.8**
YOTC	**Yotoco, Valle**	**73.02**	**313**	*e*P	**P**	**20 29 18.2**	**+2.5**
YOTC	**Yotoco, Valle**	**73.02**	**313**	*e*P	**P**	**20 29 18.2**	**+2.5**
ROSC	**El Rosal**	**73.09**	**315**	LR	LR	21 03 33.5	
	comp=Z,52nm,19.7s,baz=184,slow=38						
MLZ	**Mavora Lakes**	**73.31**	**194**	*e*P	**P**	**20 29 17.4**	**+0.4**
	comp=Z,93nm,1.5s						
RUSC	**La Rusia**	**73.64**	**317**	*e*P	**P**	**20 29 16.9**	**-2.9**
RUSC	**La Rusia**	**73.64**	**317**	*e*P	**P**	**20 29 16.9**	**-2.9**
WKZ	**Wanaka**	**73.73**	**195**	*e*P	**P**	**20 29 19.6**	**0.0**
	comp=Z,94nm,1.3s						
NORC	**Norcasia**	**73.95**	**315**	*e*P	**P**	**20 29 19.6**	**-1.6**
NORC	**Norcasia**	**73.95**	**315**	*e*P	**P**	**20 29 19.6**	**-1.6**
LBZ	**Lake Benmore**	**74.01**	**196**	*e*P	**P**	**20 29 21.3**	**+0.2**
	comp=Z,84nm,1.6s						
OXZ	**Oxford**	**74.78**	**198**	*e*P	**P**	**20 29 26.6**	**+1.0**
	comp=Z,147nm,1.8s						
FOZ	**Fox Glacier**	**74.90**	**196**	*e*P	**P**	**20 29 27.8**	**+1.6**
	comp=Z,126nm,1.7s						
LTZ	**Lake Taylor**	**75.28**	**198**	*e*P	**P**	**20 29 29.9**	**+1.4**
	comp=Z,82nm,1.6s						
SDV	**Santo Domingo**	**75.64**	**320**	*e*P	**P**	**20 29 30.0**	**-1.0**
	comp=Z,15nm,1.1s						
THZ	**Tophouse**	**76.17**	**199**	*e*P	**P**	**20 29 34.8**	**+1.1**
	comp=Z,45nm,1.3s						
GRGR	**Grenville**	**76.18**	**330**	*e*P	**P**	**20 29 33.5**	**-0.4**
	comp=Z,308nm,1.3s						
BBGH	**Gun Hill**	**76.65**	**332**	*e*P	**P**	**20 29 38.3**	**+1.8**
	comp=Z,2μm,1.4s						
BFZ	**Birch Farm**	**76.65**	**202**	*e*P	**P**	**20 29 37.0**	**+0.7**
	comp=Z,40nm,0.9s						
TAU	**Tasmania Unive**	**77.00**	**179**	*e*P	**P**	**20 29 39.3**	**+1.0**
	comp=Z,52nm,1.4s						
TAU	**Tasmania Unive**	**77.00**	**179**	*e*P	**P**	**20 29 39.3**	**+1.0**
TAU				pmax	pmax		
	comp=Z,52nm,1.4s						
TOA0	**Torodi Ar. Sit**	**78.06**	**33**	*e*P	**P**	**20 29 45.3**	**+1.0**
	comp=Z,15nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.06**	**33**	P	**P**	**20 29 43.9**	**-0.5**
	comp=Z,8.9nm,0.8s,baz=194,slow=6.2,SNR=58						
TORD				LR	LR	20 58 17.2	
	comp=Z,36nm,20.1s,baz=280,slow=31						
TOA1	**Torodi Ar. Sit**	**78.06**	**33**	*e*P	**P**	**20 29 43.9**	**-0.5**
BKZ	**Black Stump Fm**	**78.08**	**202**	*e*P	**P**	**20 29 45.0**	**+0.6**
	comp=Z,69nm,2.0s						
URZ	**Urewera**	**78.84**	**203**	P	**P**	**20 29 49.1**	**+0.5**
	comp=Z,2.9nm,0.4s,baz=32,slow=3.8,SNR=3.2						
TOO	**Toolangi**	**82.31**	**178**	P	**P**	**20 30 07.9**	**+0.6**
TOO				pmax	pmax		
	comp=Z,11nm,1.6s						
OUZ	**Omahuta**	**82.44**	**201**	*e*P	**P**	**20 30 08.1**	**+0.2**
	comp=Z,24nm,1.2s						
PPT	**Papeete**	**87.74**	**238**	LR	LR	21 03 37.0	
	comp=Z,82nm,19.9s,baz=179,slow=31						
STKA	**Stephens Creek**	**87.86**	**174**	*e*P	**P**	**20 30 35.7**	**+0.6**
	comp=Z,5.9nm,1.6s						
STKA	**Stephens Creek**	**87.86**	**174**	*e*P	**P**	**20 30 35.7**	**+0.6**
STKA				pmax	pmax		
	comp=Z,6.0nm,1.6s						
STKA	**Stephens Creek**	**87.86**	**174**	P	**P**	**20 30 35.6**	**+0.4**
	comp=Z,6.7nm,1.1s,baz=134,slow=5.6,SNR=5.4						
STKA				LR	LR	21 08 01.0	
	comp=Z,267nm,19.5s,baz=202,slow=34						
ASAR	**Alice Springs**	**95.38**	**167**	P	**P**	**20 31 09.7**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=180,slow=4.0,SNR=30						
ASAR				PP	**PP**	**20 35 04.0**	**+4.3**
	comp=Z,0.6nm,0.9s,baz=170,slow=8.6,SNR=5.0						
ASAR				LR	LR	21 12 42.6	
	comp=Z,128nm,19.3s,baz=208,slow=34						
AS31	**Alice Springs**	**95.38**	**167**	*e*P	**P**	**20 31 10.1**	**-0.1**
	comp=Z,1.0nm,0.8s						
AS01	**Alice Springs**	**95.39**	**167**	*e*P	**P**	**20 31 10.0**	**-0.3**
WR1	**Warramunga Arr**	**99.11**	**167**	*e*P	**Pdif**	**20 31 26.6**	**-0.4**
	comp=Z,8.0nm,1.4s						
WRA	**Warramunga Arr**	**99.11**	**167**	P	**Pdif**	**20 31 26.6**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=193,slow=4.1,SNR=10						
WB2	**Warramunga Arr**	**99.11**	**167**	*e*P	**Pdif**	**20 31 27.2**	**+0.1**
BOZ	**Bozeman (W)**	**123.88**	**304**	*e*PKPdf	**PKiKP**	**20 36 44.8**	**+1.5**
BOZ	**Bozeman (W)**	**123.88**	**304**	*e*PKIKP	**PKiKP**	**20 36 44.8**	**+1.5**
PBKT	**Sadao Pong**	**124.65**	**121**	*e*PKPdf	**PKiKP**	**20 36 46.3**	**+0.8**
CM01	**Chiang Mai Arr**	**125.42**	**118**	*e*PKPdf	**PKiKP**	**20 36 47.8**	**+0.7**
CM31	**Chiang Mai Arr**	**125.45**	**118**	*e*PKPdf	**PKPdf**	**20 36 47.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**125.45**	**118**	PKP	**PKiKP**	**20 36 47.4**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=224,slow=3.6,SNR=18						
NB2	**NORSAR Subarra**	**125.59**	**24**	PKPdf	**PKPdf**	**20 36 45.4**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=202,slow=1.9						
NB200	**NORSAR Array S**	**125.59**	**24**	*e*PKPdf	**PKPdf**	**20 36 45.1**	**-0.6**
NOA	**NORSAR Array B**	**125.59**	**24**	PKP	**PKPdf**	**20 36 45.1**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=205,slow=1.9,SNR=8.8						
CHTO	**Chiang Mai**	**125.76**	**118**	*e*P	**PKiKP**	**20 36 49.3**	**+1.6**
FIA0	**FINESS Array S**	**129.39**	**32**	*e*PKPdf	**PKPdf**	**20 36 52.3**	**-0.5**
FIA0	**FINESS Array S**	**129.39**	**32**	*e*PKIKP	**PKPdf**	**20 36 52.3**	**-0.5**
FINES	**FINESS Array B**	**129.39**	**32**	PKP	**PKPdf**	**20 36 52.3**	**-0.5**
	comp=Z,5.6nm,0.8s,baz=141,slow=2.9,SNR=15						
FIA1	**FINESS Array S**	**129.39**	**32**	*e*PKPdf	**PKPdf**	**20 36 52.2**	**-0.6**
LSA	**Lhasa**	**131.47**	**103**	*e*PKPdf	**PKiKP**	**20 37 00.1**	**+0.7**
ABKAR	**Akbulak array**	**131.72**	**61**	*e*PKPdf	**PKPdf**	**20 36 57.5**	**-0.2**
AKTO	**Aktyubinsk**	**131.77**	**59**	PKP	**PKPdf**	**20 36 56.9**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=217,slow=10,SNR=4.6						
KSH	**Kashi**	**131.83**	**82**	PKP	**PKPdf**	**20 36 57.2**	**-1.2**
KSH				sPKP		20 37 13.0	
KSH				PP	**PP**	**20 39 22.6**	**+2.9**
KSH				SKS	**SKSdf**	**20 44 03.4**	**-6.1**
KSH				SKKS	**SKKSac**	**20 46 08.0**	**-7.1**
KSH				SS	**SS**	**20 56 50.7**	**-4.6**
KSH				AMB	AMB		
	comp=Z,210nm,6.6s						
KSH				LR	LR		
	comp=Z,150nm,5.4s						
KSH				LR	LR		
	comp=Z,150nm,4.5s						
KSH				LR	LR		
	comp=Z,360nm,6.0s						
KMI	**Kunming**	**132.96**	**118**	PKP	**PKPdf**	**20 36 57.1**	**-4.0**
AAK	**Ala-Archa**	**133.49**	**78**	PKP	**PKPdf**	**20 37 01.4**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=210,slow=7.9,SNR=4.9						
GYA	**Guiyang**	**135.82**	**121**	*e*Pdif	**Pdif**	**20 34 11.0**	**+0.9**
GYA				PKP	**PKPdf**	**20 37 06.9**	**+0.6**
GYA				PP	**PP**	**20 39 50.4**	**+5.6**
GYA				AMB	AMB		
	comp=Z,130nm,7.9s						
ARA0	**ARCESS Array S**	**135.93**	**25**	*e*PKPpre	PKPpre	20 36 58.7	
ARA0				*e*PKPdf	**PKPdf**	**20 37 05.5**	**+0.5**
ARCES	**ARCESS Array B**	**135.93**	**25**	PKhKP	PKPpre	20 36 58.7	
	comp=Z,0.9nm,0.9s,baz=68,slow=11,SNR=2.3						
ARCES				PKP	**PKPdf**	**20 37 05.5**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=172,slow=3.4,SNR=10						
YKA	**Yellowknife Ar**	**137.78**	**317**	PKP	**PKPdf**	**20 37 08.2**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=135,slow=2.2,SNR=5.3						
YKB5	**Yellowknife Ar**	**137.78**	**317**	*e*PKPpre	PKPpre	20 37 01.2	
YKB5				*e*PKPdf	**PKPdf**	**20 37 08.3**	**-0.2**
YKW3	**Yellowknife Ar**	**137.84**	**317**	*e*PKPdf	**PKPdf**	**20 37 07.6**	**-1.0**
CD2	**Chengdu**	**138.39**	**115**	PKP	**PKPdf**	**20 37 11.5**	**+0.7**
TULEG	**Thule**	**138.73**	**348**	*e*PKPpre	PKPpre	20 36 59.4	
TULEG				*e*PKPdf	**PKPdf**	**20 37 09.6**	**-0.4**
BVAR	**Borovoye Array**	**139.02**	**64**	PKhKP	PKPpre	20 37 04.1	
	comp=Z,1.0nm,0.7s,baz=249,slow=33,SNR=5.0						
BVAR				PKP	**PKPdf**	**20 37 11.6**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=90,slow=0.3,SNR=7.0						
MAKZ	**Makanchi**	**140.18**	**79**	*e*PKPpre	PKPpre	20 37 06.8	
MAKZ	**Makanchi**	**140.18**	**79**	*e*PKHKP	PKPpre	20 37 06.8	
MK01	**Makanchi Array**	**140.31**	**79**	*e*PKPpre	PKPpre	20 37 07.7	
MK31	**Makanchi Array**	**140.32**	**79**	*e*PKPpre	PKPpre	20 37 07.2	
MK31	**Makanchi Array**	**140.32**	**79**	*e*PKHKP	PKPpre	20 37 07.2	
MK32	**Makanchi Array**	**140.32**	**79**	*e*PKPpre	PKPpre	20 37 07.5	
MK32				*e*PKPdf	**PKPdf**	**20 37 12.6**	**-1.2**
MKAR	**Makanchi Array**	**140.32**	**79**	*e*PKPpre	PKPpre	20 37 07.0	
MKAR				PKP	**PKPdf**	**20 37 12.6**	**-1.2**
MKAR	**Makanchi Array**	**140.32**	**79**	*e*PKHKP	PKPpre	20 37 07.0	
MKAR						20 37 12.6	
MKAR	**Makanchi Array**	**140.32**	**79**	PKhKP	PKPpre	20 37 07.5	
	comp=Z,0.6nm,0.7s,baz=289,slow=2.1,SNR=5.5						
MKAR				PKP	**PKPdf**	**20 37 12.6**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=246,slow=3.6,SNR=7.6						
WMQ	**Urumqi**	**140.85**	**87**	*e*PKP	**PKiKP**	**20 37 16.9**	**-0.6**
WMQ				sPKP		20 37 32.9	
WMQ				LR	LR		
	comp=Z,180nm,23.3s						
WMQ				LR	LR		
	comp=Z,200nm,32.5s						
WMQ				LR	LR		
	comp=Z,130nm,27.9s						
RES	**Resolute Bay**	**141.05**	**338**	*e*PKPdf	**PKPdf**	**20 37 13.3**	**-0.9**
KURBB	**Kurchatov Arra**	**141.15**	**72**	PKhKP	PKPpre	20 37 08.2	
	comp=Z,0.4nm,0.7s,baz=245,slow=3.2,SNR=5.2						
KURBB				PKP	pPKPdf	20 37 16.6	-1.1
	comp=Z,1.2nm,0.9s,baz=230,slow=3.1,SNR=8.1						
KURK	**Kurchatov**	**141.25**	**72**	*e*PKPpre	PKPpre	20 37 08.2	
KURK				*e*PKPdf	**PKPdf**	**20 37 16.6**	**+1.3**
KURK	**Kurchatov**	**141.25**	**72**	*e*PKHKP	PKPpre	20 37 08.2	
KURK				*e*		20 37 16.6	
LZH	**Lanzhou**	**142.75**	**110**	*e*PKP	**PKPdf**	**20 37 19.9**	**+1.2**
LZH				pPKP	sPKPdf	20 37 29.6	+7.5
LZH				sPKP		20 37 33.9	
LZH				PP	PP	20 40 36.2	+8.5
LZH				SKS	**SKSdf**	**20 44 24.0**	**-4.3**
LZH				SS	**SS**	**20 59 04.7**	**-0.2**
LZH				AMB	AMB		
	comp=Z,350nm,4.6s						
LZH				LR	LR		
	comp=Z,1μm,17.3s						
LZH				LR	LR		
	comp=Z,1μm,17.6s						
LZH				LR	LR		
	comp=Z,1μm,19.5s						
XAN	**Xi'an**	**143.34**	**118**	PKP	PKPbc	20 37 17.7	+0.9
XAN	**Xi'an**	**143.34**	**118**	*e*PKPpre	PKPbc	20 37 17.1	+0.3
XAN	**Xi'an**	**143.34**	**118**	*e*PKIKP	PKPbc	20 37 17.1	+0.3
GTA	**Gaotai**	**143.50**	**103**	⇑PKP	**PKPdf**	**20 37 19.1**	**-0.8**
GTA				pPKP	PKiKP	20 37 27.6	+4.4
GTA				sPKP		20 37 31.4	
GTA				PP	**PP**	**20 40 36.1**	**+3.9**
GTA				SKS	**SKSdf**	**20 44 22.4**	**-6.8**
GTA				SKKS	**SKKSac**	**20 47 19.9**	**-4.5**
GTA				SS	**SS**	**20 59 12.6**	**-0.9**
GTA				AMB	AMB		
	comp=Z,67nm,7.8s						
GTA				LR	LR		
	comp=Z,110nm,21.3s						
GTA				LR	LR		
	comp=Z,140nm,20.0s						

GTA				LR	LR		
	comp=Z,87nm,20.0s						
WHY	Whitehorse	144.23	305	ePKPdf	PKPab	20 37 18.4	+0.1
HYT	Haines Junctio	145.40	304	ePKPbc	PKPbc	20 37 22.3	-0.1
SSE	Sheshan	145.59	136	ePKPdf	PKPab	20 37 25.0	+0.9
NJ2	Nanjing	145.62	132	⇑iPKPbc	PKPab	20 37 26.0	+1.8
NVS	Novosibirsk	146.04	70	ePKP2	PKPab	20 37 25.4	+0.4
NVS				pmax	pmax		
	comp=Z,22nm,1.6s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.2s						
ZAA0	Zalesovo Array	146.24	72	ePKPdf	PKPdf	20 37 24.6	+0.7
ZALV	Zalesovo Beam	146.24	72	ePKPdf	PKPdf	20 37 24.5	+0.6
ZALV	Zalesovo Beam	146.24	72	ePKP2	PKPdf	20 37 24.5	+0.6
ZALV	Zalesovo Beam	146.24	72	PKPbc	PKPdf	20 37 24.4	+0.5
	comp=N,3.8nm,0.8s,baz=241,slow=4.2,SNR=16						
ZAA1	Zalesovo Array	146.25	72	ePKPdf	PKPdf	20 37 24.4	+0.4
INK	Inuvik	147.55	317	ePKPdf	PKPbc	20 37 27.1	-1.3
INK	Inuvik	147.55	317	ePKP2	PKPbc	20 37 27.1	-1.3
INK	Inuvik	147.55	317	PKPbc	PKPbc	20 37 27.6	-0.7
	comp=N,14nm,1.0s,baz=100,slow=4.0,SNR=17						
DAWY	Dawson	147.79	308	ePKPdf	PKPbc	20 37 28.6	-0.7
EPYK	Eagle Plains	147.83	313	ePKPdf	PKPdf	20 37 27.8	+1.5
KLU	Klutina	149.26	301	ePKPbc	PKPbc	20 37 33.1	0.0
SCRK	Sand Creek	149.57	306	ePKPbc	PKPbc	20 37 33.8	-0.1
RIDG	Independ'e Rid	149.81	306	ePKPbc	PKPbc	20 37 34.8	+0.5
HHC	Hu-ho-hao-te	150.15	114	ePKPbc	PKPdf	20 37 29.6	-1.3
DHY	Denali Highway	150.57	303	ePKPbc	PKPbc	20 37 36.3	-0.1
PRP	Porcupine Dome	150.79	309	ePKPbc	PKPbc	20 37 36.6	-0.1
HDA	Harding Lake	150.93	306	ePKPbc	PKPbc	20 37 37.2	+0.3
IL1	Eielson Array	151.04	307	ePKPdf	PKPdf	20 37 32.3	+0.9
IL1				ePKPbc	PKPbc	20 37 37.0	-0.2
ILAR	Eielson Array	151.04	307	PKPbc	PKPbc	20 37 36.8	-0.4
	comp=N,7.6nm,0.8s,baz=138,slow=1.1,SNR=70						
ILAR				PKPab	sPKPbc	20 37 42.5	+1.8
	comp=N,26nm,1.1s,baz=153,slow=1.7,SNR=24						
ILB	Eielson Array	151.04	307	epPKPdf	PKPbc	20 37 36.1	-1.1
FYU	Fort Yukon	151.05	311	ePKPbc	PKPbc	20 37 37.3	+0.2
SUA	Susitna One	151.31	299	ePKPbc	PKPbc	20 37 37.6	-0.5
RND	Reindeer	151.31	303	ePKPbc	PKPbc	20 37 38.0	0.0
RND	Reindeer	151.31	303	PKIKP	PKPbc	20 37 38.0	0.0
WRH	Wood River Hil	151.41	306	ePKPbc	PKPbc	20 37 37.6	-0.5
COLA	College	151.47	307	ePKPbc	PKPbc	20 37 37.8	-0.3
COLA	College	151.47	307	PKIKP	PKPbc	20 37 37.8	-0.3
COLA	College	151.47	307	eP	PKPdf	20 37 32.4	+0.4
MCK	McKinley	151.48	304	ePKPbc	PKPbc	20 37 38.0	-0.3
MCK	McKinley	151.48	304	PKIKP	PKPbc	20 37 38.0	-0.3
BJT	Baijiatuau	151.49	121	epPKPdf	PKPbc	20 37 38.6	-0.4
MDM	Murphy Dome	151.65	307	ePKPbc	PKPbc	20 37 37.8	-0.8
BWN	Browne	151.86	305	ePKPbc	PKPbc	20 37 38.5	-0.6
TRF	Thorofare Moun	151.93	303	ePKPbc	PKPbc	20 37 39.2	-0.3
PPLA	Purkeypile	152.51	301	ePKPbc	PKPbc	20 37 40.6	-0.2
PPLA				ePKPab	PKPab	20 37 50.0	-1.4
CAST	Castle Rocks	152.67	302	ePKPbc	PKPbc	20 37 40.4	-0.6
MLY	Manley	152.67	306	ePKPbc	PKPbc	20 37 41.0	0.0
SONA0	Songino Array	152.93	99	ePKPdf	PKPdf	20 37 35.0	+0.1
SONA0				ePKPbc	PKPbc	20 37 42.4	+0.2
SONM	Songino Array	152.93	99	PKP	PKPdf	20 37 35.0	+0.1
	comp=N,0.4nm,0.7s,baz=209,slow=2.6,SNR=4.7						
SONM				PKPbc	PKPbc	20 37 42.4	+0.2
	comp=N,2.6nm,0.9s,baz=225,slow=2.6,SNR=17						
SONA1	Songino Array	152.94	99	ePKPdf	PKPdf	20 37 35.5	+0.6
SONA1				ePKPbc	PKPbc	20 37 42.3	+0.1
ZAK	Zakamensk	153.07	92	ePKIKP	PKPdf	20 37 33.7	-1.3
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
COLD	Coldfoot	153.12	311	ePKPbc	PKiKP	20 37 42.2	+0.2
TOLK	Toolik Lake Re	153.24	314	ePKPdf	PKPdf	20 37 36.9	+2.3
TOLK				ePKPbc	PKPbc	20 37 42.2	+0.1
IM3	Indian Mountai	154.16	307	ePKPdf	PKPdf	20 37 36.9	+0.9
IM3				ePKPbc	PKiKP	20 37 44.3	+0.2
MAJO	Matsushiro	155.23	160	eP	PKPdf	20 37 39.2	+0.8
TIXI	Tiksi	166.37	27	ePKPdf	PKPdf	20 37 51.4	+2.2
TIXI				epPKPdf	sPKPdf	20 37 58.5	+5.8
TIXI				ePKPab	PKPab	20 38 51.9	+0.8
TIXI	Tiksi	166.37	27	ePKIKP	PKPdf	20 37 51.4	+2.2
TIXI				e		20 37 58.5	
TIXI				e		20 38 51.9	
BILL	Bilibino	169.12	322	⇑ePKP2	PKPab	20 39 03.0	-0.3
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s						

IDC 12 20:20:26.9±7.0**, 16°.34S**×**170°.78W, h0^{km}, mb3.3**/2**,**
mb1 3.6/2**, mb1mx3.3**/37**, mbtmp3.3**/2**, Error ellipse:**
s-maj=335.6km s-min=64.7km az=143.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	52.09	257	P	P	20 29 39.4	+0.2
	0.1nm,0.3s,baz=96,slow=7.7,SNR=14						
ASAR	Alice Springs	52.23	253	P	P	20 29 40.0	-0.3
	0.3nm,0.5s,baz=89,slow=7.6,SNR=7.8						
BRTR	Keskin Array B	148.45	322	PKPbc	PKPbc	20 40 15.2	-0.8
	0.8nm,1.1s,baz=33,slow=5.5,SNR=3.6						

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*DDA **12** 20:20:32.8, 37°.08N×36°.96E, h22^{km}±1^{km}, ML3.7*
*ISK **12** 20:20:32.1, 37°.02N×36°.99E, h10^{km}, ML3.7/19*
*IDC **12** 20:20:34.4±1.8, 37°.10N×36°.80E, h0^{km}, mb3.3/2, mb1 3.1/3, mb1mx3.0/38, mbtmp3.1/3, ML2.6/1, MS2.8/3, Ms1 2.7/3, ms1mx2.4/26, Error ellipse: s-maj=27.4km s-min=19.6km az=39.0*
ISC 12 20:20:33.1±1.1**, 37°.07N**±0°.02×**36°.94E**±0°.02**, h1^{km}**±9^{km}**,**
n96, σ1ˢ.10/129**, 5C-9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.24	65	PG	Pg	20 20 37.4	-0.3
GAZ				SG	Sg	20 20 40.9	+0.2
KUZU	Kuzuini	0.32	160	⇓iP	Pg	20 20 40.4	+1.2
KUZU				iS	Sb	20 20 45.6	-1.7
KUZU				IAML_P			
	comp=Z,265μm,0.1s						
KMRS	Kahramanmaras	0.43	355	PG	Pg	20 20 40.6	-0.8
GZT	Gaziantep	0.57	60	iP	Pg	20 20 44.2	+0.1
GZT				iS	Sg	20 20 52.5	+1.0
GZT				IAML_P			
	comp=Z,7μm,0.3s						
GZT	Gaziantep	0.57	60	⇑iP	Pg	20 20 44.5	+0.5
GZT				iS	Sg	20 20 51.7	+0.2
ANDN	Andirin	0.70	317	iP	Pg	20 20 46.8	+0.3
ANDN				IAML_P			
	comp=Z,17μm,0.1s						
ANDN	Andirin	0.70	317	⇓iP	Pg	20 20 46.5	+0.1
ANDN				iS	Sg	20 20 55.6	+0.1
ANDN				IAML_P			
	comp=Z,18μm,0.2s						
TAHT	Tahtakopru-Hat	0.92	221	PG	Pg	20 20 50.1	-0.7
CEYT	Ceyhan	0.96	267	PG	Pg	20 20 51.5	0.0
KOZT	Kozan	0.98	295	PG	Pb	20 20 52.4	-0.5
YURE	YUREGIR	1.08	257	PN	Pg	20 20 53.9	+0.1
YURE	YUREGIR	1.08	257	iP	Pn	20 20 54.9	-0.5
YURE	YUREGIR	1.08	257	⇓iP	Pn	20 20 54.8	-0.6
YURE				iS	Sn	20 21 11.5	+0.4
SAIM	ADANA	1.13	323	iP	Pg	20 20 54.1	-0.8
SAIM				iS	Sn	20 21 12.2	-0.3
SAIM	ADANA	1.13	323	iP	Pg	20 20 54.3	-0.6
SAIM				iS	Sn	20 21 11.3	-1.2
SAIM				IAML_P			
	comp=Z,22μm,0.2s						
ATAB	Bozova	1.15	69	iP	Pb	20 20 55.1	-0.7
ATAB				iS	Sn	20 21 11.7	-1.2
ATAB				IAML_P			
	comp=Z,85μm,0.3s						
ATAB	Bozova	1.15	69	iP	Pg	20 20 55.3	+0.2
ATAB				iS	Sn	20 21 11.5	-1.3
ATAB				IAML_P			
	comp=Z,85μm,0.3s						
YAYL	Yayladag	1.23	213	iP	Pb	20 20 57.1	-0.2
YAYL				iS	Sb	20 21 12.9	-0.9
YAYL				IAML_P			
	comp=Z,47μm,0.2s						
YAYL	Yayladag	1.23	213	⇓iP	Pn	20 20 56.9	-0.8
YAYL				iS	Sn	20 21 15.2	+0.2
ELBS	KAHRAMANMARAS	1.26	7	iP	Pg	20 20 57.3	0.0
ELBS				iS	Sn	20 21 14.9	-0.7
ELBS				IAML_P			
	comp=Z,9μm,0.3s						
ELBS	KAHRAMANMARAS	1.26	7	⇓iP	Pn	20 20 56.6	-1.4
ELBS				iS	Sn	20 21 16.9	+1.3
ELBS				IAML_P			
	comp=Z,9μm,0.3s						
SURC	SANLIURFA_SURC	1.35	98	⇑iP	Pn	20 20 58.4	-0.8
SURC				iS	Sg	20 21 17.0	+0.5
SURC				IAML_P			
	comp=Z,6μm,0.1s						
AKCD	Akcadag	1.45	32	iP	Pb	20 21 00.1	-0.8
AKCD				iS	Sg	20 21 20.2	+0.5
AKCD				IAML_P			
	comp=Z,10μm,0.3s						
AKCD	Akcadag	1.45	32	⇓iP	Pb	20 21 00.4	-0.6
AKCD				iS	Sg	20 21 20.1	+0.5
AKCD				IAML_P			
	comp=Z,10μm,0.3s						
KARA	Karaisali	1.52	278	PN	Pn	20 21 00.4	-1.1
URFA	Urfa	1.54	76	PN	Pn	20 21 00.4	-1.5
DARE	Darende-Malaty	1.56	16	PN	Pn	20 21 01.3	-0.8
YAHY	KAYSERI_Yahyal	1.62	310	iP	Pb	20 21 02.9	-1.0
YAHY				iS	Sg	20 21 26.0	+0.9
YAHY	KAYSERI_Yahyal	1.62	310	iP	Pb	20 21 03.1	-0.7
YAHY				iS	Sg	20 21 25.4	+0.3
SANL	SANLIURFA_Merk	1.64	86	iP	Pn	20 21 02.1	-1.1
SANL				iS	Sg	20 21 25.8	0.0
SANL				IAML_P			
	comp=Z,19μm,0.3s						
SANL	SANLIURFA_Merk	1.64	86	⇑iP	Pn	20 21 02.3	-0.9
SANL				iS	Sg	20 21 26.9	+1.2
SANL				IAML_P			
	comp=Z,19μm,0.3s						
CUGUR	Gurin_SVAS	1.67	9	iP	Pb	20 21 04.2	-0.5
CUGUR				iS	Sg	20 21 28.8	+2.0
CUGUR	Gurin_SVAS	1.67	9	⇓iP	Pb	20 21 03.9	-0.9
CUGUR				iS	Sg	20 21 29.3	+2.5
GULE	Gulek	1.74	278	iP	Pn	20 21 04.4	-0.3
GULE				iS	Sb	20 21 27.7	-0.8
GULE				IAML_P			
	comp=Z,3μm,0.1s						
GULE	Gulek	1.74	278	⇑iP	Pn	20 21 03.9	-0.8
GULE				iS	Sb	20 21 28.6	+0.1
MERS	Mersin	1.95	265	PN	Pn	20 21 06.8	-0.6
BNN	Bunyan	1.98	334	PN	Pn	20 21 07.7	-0.2
GUNE	Kayseri	2.10	331	iP	Pg	20 21 14.2	+0.7
GUNE	Kayseri	2.10	331	⇑iP	Pg	20 21 13.4	-0.1
GUNE				iS	Sg	20 21 42.9	+2.2
NIG	Nigde	2.12	300	PN	Pn	20 21 09.4	-0.6
ELZG	Elazig	2.15	48	iP	Pn	20 21 10.5	+0.2
ELZG				IAML_P			
	comp=Z,3μm,0.3s						
CUALT	Altinyayla-SIV	2.20	356	iP	Pn	20 21 11.6	+0.6
CUALT				iS	Sg	20 21 43.1	-0.8
CUALT	Altinyayla-SIV	2.20	356	⇓iP	Pn	20 21 11.7	+0.6
CUALT				iS	Sg	20 21 44.9	+1.0
KERG	Konya-Eregli	2.27	279	iP	Pn	20 21 12.8	+0.8
KERG				iS	Sb	20 21 41.5	-2.3
KERG				IAML_P			
	comp=Z,682nm,0.1s						
KERG	Konya-Eregli	2.27	279	⇓iP	Pn	20 21 12.7	+0.7
KERG				iS	Sb	20 21 42.0	-1.8
KERG				IAML_P			
	comp=Z,682nm,0.1s						
CUKAN	kangal_SIVAS	2.28	10	iP	Pn	20 21 12.7	+0.7
CUKAN	kangal_SIVAS	2.28	10	iP	Pb	20 21 13.4	-1.7
KIZK	Mersin	2.32	256	PN	Pn	20 21 11.9	-0.6
KIZK	Mersin	2.32	256	iP	Pn	20 21 12.1	-0.4
KIZK				IAML_P			
	comp=Z,4μm,0.1s						
KIZK	Mersin	2.32	256	iP	Pn	20 21 12.7	+0.2
KIZK				iS	Sn	20 21 41.2	-0.5
KIZK				IAML_P			
	comp=Z,4μm,0.1s						
AVNS	Nevsehir-Avano	2.40	317	iP	Pb	20 21 16.3	-0.8
AVNS				IAML_P			
	comp=Z,1μm,0.2s						
AVNS	Nevsehir-Avano	2.40	317	iP	Pb	20 21 15.2	-2.0
CUSAR	Sarkisla-SIVAS	2.41	347	iP	Pn	20 21 13.9	+0.1
CUSAR				iS	Sg	20 21 50.1	-0.4
CUSAR	Sarkisla-SIVAS	2.41	347	iP	Pn	20 21 13.6	-0.2
KEMA	Kemaliye	2.51	29	iP	Pn	20 21 15.6	+0.4
KEMA				iS	Sg	20 21 53.5	-0.3
KEMA				IAML_P			
	comp=Z,1μm,0.2s						
DIYA	Diyarbakir	2.67	70	iP	Pn	20 21 16.6	-0.7
DIYA				IAML_P			
	comp=Z,2μm,0.3s						
DIYA	Diyarbakir	2.67	70	iP	Pn	20 21 17.0	-0.3
SIRC	Yozgat	2.67	329	iP	Pn	20 21 17.6	+0.2
SIRC				IAML_P			
	comp=Z,186nm,0.2s						
KEBE	Keben-Mersin	2.67	257	PN	Pn	20 21 16.6	-0.7
EREN	Erenkoy	2.72	236	PN	Pn	20 21 16.8	-1.1
EREN	Erenkoy	2.72	236	iP	Pn	20 21 17.3	-0.7
IKL	Isikli	2.75	253	PN	Pn	20 21 17.8	-0.5
YESI	Yesilovacik-Me	2.79	253	PN	Pn	20 21 18.5	-0.5
GULN	MERSIN_Gulnar	2.88	253	iP	Pn	20 21 19.1	-1.0
AKKU	Akkuyu-Mersin	2.88	253	PN	Pn	20 21 19.3	-0.8
TEVE	Tevekalti-Mers	2.88	258	PN	Pn	20 21 19.5	-0.8
AKK2	Akkuyu-Mersin	2.89	252	PN	Pn	20 21 19.5	-0.7
CUZAR	Zara_SIVAS	2.89	13	iP	Pn	20 21 21.8	+1.4
CUZAR				iS	Sg	20 22 12.9	+7.0
TNCL	Tunceli-Merkez	2.89	44	iP	Pb	20 21 23.9	-1.7
TNCL				iS	Sg	20 22 05.8	-0.2
TNCL				IAML_P			
	comp=Z,98nm,0.3s						
HWQ	Hawqa	2.90	197	eP	Pn	20 21 21.2	+0.6
SULT	Sultanhani-AKS	2.94	293	PN	Pn	20 21 21.0	-0.1
HANI	Diyarbakir_Han	3.05	63	iP	Pn	20 21 21.9	-0.7
HANI				IAML_P			
	comp=Z,525nm,0.2s						
HANI	Diyarbakir_Han	3.05	63	iP	Pn	20 21 22.2	-0.4
MARD	Mardin	3.07	84	iP	Pn	20 21 22.1	-0.9
BERE	Bereket-Mersin	3.08	258	PN	Pn	20 21 22.6	-0.4
TEKE	Tekeli-Mersin	3.22	254	PN	Pn	20 21 24.7	-0.1
CDAG	Cicekdag	3.25	322	iP	Pn	20 21 25.5	+0.1
ERMK	Ermenek	3.26	264	iP	Pn	20 21 27.2	+1.6
ERMK	Ermenek	3.26	264	iP	Pn	20 21 26.8	+1.2
SUSE	Susehri	3.28	17	iP	Pn	20 21 26.9	+1.0
SUSE				IAML_P			
	comp=Z,230nm,0.1s						
BHL	Bhannes	3.33	199	eP	Pn	20 21 26.6	+0.1
BTMN	Batman	3.54	75	iP	Pn	20 21 28.8	-0.5
DQRL	Deir Qamar	3.54	199	eP	Pn	20 21 29.4	+0.1
HDMB	Hadim	3.57	270	PN	Pn	20 21 29.8	0.0
CSS	Mathiatis	3.61	235	PN	Pn	20 21 29.5	-0.7
QRWL	Qaraoun	3.66	197	eP	Pn	20 21 31.1	+0.1
AKDN	Akdeniz- Kıbrı	3.67	242	PN	Pn	20 21 30.5	-0.5
RCY	Rachaya	3.68	195	eP	Pn	20 21 31.2	-0.1
BRTR	Keskin Array B	3.71	317	Pn	Pn	20 21 31.9	+0.2
	comp=Z,0.6nm,0.3s,baz=138,slow=33,SNR=18						
BRTR				Pg	Pg	20 21 42.1	-2.1
	comp=Z,0.9nm,0.3s,baz=134,slow=17,SNR=26						
BRTR				Lg	Lg	20 22 31.1	
	comp=Z,0.8nm,0.3s,baz=135,slow=32,SNR=2.6						
LEF	Lefka	3.82	241	PN	Pn	20 21 33.4	+0.4
KBZ	Khabaz	8.05	32	LR	LR	20 25 46.3	
	comp=Z,45nm,19.1s,baz=212,slow=39						
AKASG	Malin Array Be	14.70	340	Pn	P	20 24 08.0	-0.6
	comp=Z,0.6nm,0.3s,baz=17,slow=37,SNR=1.6						
BVAR	Borovoye Array	28.18	45	LR	LR	20 40 23.7	
	comp=Z,22nm,18.5s,baz=261,slow=42						
NOA	NORSAR Array B	28.95	334	LR	LR	20 39 55.6	
	comp=Z,14nm,20.2s,baz=325,slow=40						
MKAR	Makanchi Array	34.68	59	P	P	20 27 26.6	+2.3
	comp=Z,0.2nm,0.7s,baz=267,slow=5.8,SNR=3.8						
TORD	Torodi Ar. Bea	39.47	242	P	P	20 28 06.4	+1.2
	comp=Z,0.4nm,0.9s,baz=65,slow=8.1,SNR=4.4						

IDC 12 20:31:54.7±4.2**, 10°.43S**×**166°.00E, h0^{km}, mb3.5**/2**,**
mb1 3.8/3**, mb1mx3.4**/32**, mbtmp3.7**/3**, ML3.5**/1**, Error**
ellipse: s-maj=83.1km s-min=49.0km az=71.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.58	178	Pn	Pn	20 34 41.6	+0.1
	0.3nm,0.3s,baz=323,slow=20,SNR=3.0						
WRA	Warramunga Arr	31.93	249	P	P	20 38 22.8	+0.3
	0.4nm,0.5s,baz=80,slow=9.0,SNR=9.7						
ASAR	Alice Springs	33.30	243	P	P	20 38 34.0	-0.4
	0.5nm,0.7s,baz=64,slow=10,SNR=8.7						
TORD	Torodi Ar. Bea	164.40	282	PKPab	PKPab	20 52 55.5	-0.4
	0.2nm,0.4s,baz=70,slow=4.4,SNR=3.7						

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*ISCJB **12** 20:52:40.0±0.7, 11°.4N±0°.1×41°.09E±0°.05, h10^{km}, Error ellipse: s-maj=16.2km s-min=4.8km az=160.8*
*ARO **12** 20:52:40.2, 11°N±20°×4°1E±°, h15^{km}±77^{km}, Ml4.1*
*AAE **12** 20:52:42.0±9.8, 11°.81N×41°.09E, h14^{km}±999^{km}*
ISC 12 20:52:38.8±1.2**, 11°.5N**±0°.1×**41°.11E**±0°.04**, h10^{km}, n13,**
σ1ˢ.01/18**, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAOD	Malaho	1.26	59	eP	Pg	20 53 04.2	+1.1
KSDD	Koussour	1.31	86	eP	Pg	20 53 04.1	+0.1
GBR	Grand-Bara	1.36	102	eP	Pb	20 53 04.1	-0.3
LDLD	Lac de Lave	1.36	84	eP	Pg	20 53 05.5	+0.4
DESE	Dese	1.49	257	iP	Pg	20 53 06.6	-0.8
DESE				eS	Sg	20 53 25.4	-1.3
SGH	Sud-Ghoubbet	1.49	90	eP	Pg	20 53 06.8	-0.7
ATD	Arta Tunnel	1.70	87	eP	Pg	20 53 10.3	-1.2
ATD	Arta Tunnel	1.70	87	eP	Pg	20 53 10.3	-1.2
ATD				eS	Sg	20 53 34.5	+0.9
TDD	Tadjoura Ara	1.79	78	eP	Pg	20 53 11.9	-1.4
ATA	Atar	2.05	90	eP	Pb	20 53 15.5	-0.7
ANKE	Ethiopia-Afar	2.29	216	iP	Pn	20 53 17.3	+0.3
ANKE				iS	Sn	20 53 46.0	+0.5
AAE	Adis Abeba	3.33	224	eP	Pb	20 53 39.2	+0.9
AAE				eS	Sb	20 54 17.9	-1.2
FURI	Furi	3.49	224	eP	Pb	20 53 41.8	+0.9
FURI				eS	Sb	20 54 24.9	+1.4

JMA 12 20:56:35.4±0.1**, 37°.57N**×**143°.78E, h41^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.97	293	P	Pn	20 57 07.6	+1.3
JIKH				S	Sn	20 57 31.2	+1.4
JIO	Ouri	2.11	295	P	Pn	20 57 09.5	+1.3
JIO				S	Sn	20 57 35.0	+1.7
JKMT	Kesennumamotoy	2.20	305	P	Pn	20 57 10.6	+1.2
JKMT				S	Sn	20 57 36.6	+1.2
OFUJ	Ofunato	2.24	313	P	Pn	20 57 11.2	+1.2
OFUJ				eS	Sn	20 57 38.0	+1.5
JMK	Ichinoseki	2.44	305	P	Pn	20 57 14.3	+1.6
JMK				S	Sn	20 57 43.8	+2.4
JOU	Okura	2.59	289	P	Pn	20 57 16.6	+1.8
JOM	Ohasama	2.72	315	P	Pn	20 57 18.4	+1.8
JOM				S	Sn	20 57 50.5	+2.2
JFT	Otama	2.74	270	P	Pn	20 57 18.7	+1.9
JFT				eS	Sn	20 57 50.5	+1.8
JYK	Kaneyama	3.01	298	P	Pn	20 57 22.9	+2.3
JYK				eS	Sn	20 57 58.0	+2.6
JRG	Rokugo	3.07	307	eS	Sn	20 58 00.1	+3.3
JANG	Nango	3.31	328	S	Sn	20 58 03.4	+0.6

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*KRNET **12** 20:58:50.9±0.1, 41°.69N×80°.47E, mb2.4*
*SOME **12** 20:58:51.7, 41°.75N×80°.35E, h10^{km}*
*NNC **12** 20:58:52.6±1.4, 41°.69N×80°.18E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=8.9km s-min=6.4km az=137.0*
ISC 12 20:58:52.1±2.9**, 41°.72N**±0°.08×**80°.35E**±0°.07**, h2^{km}**±16^{km}**,**
n31, σ0ˢ.93/51**, 9C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.64	299	⇓iP	Pb	20 59 22.7	-0.5
	baz=98						
PRZ				⇓iS	Sg	20 59 46.0	+1.2
	baz=98						
KTMS	Ketmen	1.73	0	P	Pb	20 59 24.3	-0.5
KTMS				S	Sg	20 59 47.7	+0.1
KTMS	Ketmen	1.73	0	eP	Pn	20 59 23.7	+0.3
	1.1nm,0.1s						
KTMS				eS	Sb	20 59 46.6	-0.4
	2.1nm,0.3s						
PDGK	Podgornoye	1.73	339	P	Pn	20 59 23.8	+0.3
	0.9nm,0.1s						
PDGK				S	Sb	20 59 47.4	+0.3
	5.0nm,0.4s						
PDGK	Podgornoye	1.73	339	⇓P	Pb	20 59 24.2	-0.6
	1.9nm,0.6s						
PDGK				⇓S	Sg	20 59 47.7	-0.1
	4.4nm,0.4s						
PDGK	Podgornoye	1.73	339	⇑iP	Pb	20 59 24.0	-0.8
	baz=36						
PDGK				⇑iS	Sg	20 59 48.2	+0.4
	baz=36						
UZB	Uzynbulak	1.73	326	eP	Pn	20 59 23.4	-0.1
	3.6nm,0.2s						
UZB				eS	Sn	20 59 46.3	+0.1
	1.8nm,0.2s						
TARG	Taragay, Kyrgy	1.90	271	⇑iP	Pb	20 59 27.4	-0.4
	baz=72						
TARG				⇑iS	Sg	20 59 53.7	+0.5
	baz=72						
SATY	Saty	1.97	314	Pg	Pb	20 59 27.8	-1.0
SATY				Lg	Lg	20 59 53.5	
SATY	Saty	1.97	314	eP	Pb	20 59 27.8	-1.0
	2.3nm,0.1s						
SATY				eS	Sb	20 59 53.5	-0.3
	6.6nm,0.1s						
KURS	Kuram	2.39	319	Pg	Pb	20 59 35.2	-0.8
	2.4nm,0.4s						
KURS				Lg	Lg	21 00 06.1	
	2.0nm,0.4s						
KURS	Kuram	2.39	319	eP	Pb	20 59 35.2	-0.8
	2.4nm,0.4s						
KURS				eS	Sb	21 00 06.1	+0.1
	2.0nm,0.4s						
KDJ	Kajisay	2.40	281	⇑eP	Pb	20 59 34.2	-1.9
	baz=81						
KDJ				⇑iS	Sb	21 00 05.8	-0.5
	baz=81						
DJR	Jarkent	2.65	351	Pg	Pb	20 59 39.6	-0.7
DJR				Lg	Lg	21 00 14.1	
DJR	Jarkent	2.65	351	eP	Pb	20 59 39.6	-0.7
	0.3nm,0.1s						
DJR				eS	Sb	21 00 14.1	+0.8
	2.1nm,0.3s						
MNBS	Baschi	2.76	329	Pg	Pb	20 59 40.9	-1.4
MNBS				Lg	Lg	21 00 16.8	
MNBS	Baschi	2.76	329	eP	Pb	20 59 41.0	-1.4
	0.4nm,0.1s						
MNBS				eS	Sb	21 00 16.8	+0.2
	2.6nm,0.1s						
MDOK	Medeo	2.84	302	Pg	Pb	20 59 42.1	-1.5
	2.2nm,0.4s						
MDOK				⇑Lg	Lg	21 00 18.5	
	3.2nm,1.0s						
MDOK	Medeo	2.84	302	Pg	Pb	20 59 42.3	-1.3
	3.8nm,0.5s						
MDOK				Lg	Lg	21 00 19.1	
	5.4nm,0.5s						
MDOK	Medeo	2.84	302	eP	Pb	20 59 42.3	-1.3
	3.8nm,0.5s						
MDOK				eS	Sb	21 00 19.1	+0.3
	5.4nm,0.5s						
TNSS	Tian-Shan	2.84	299	Pg	Pb	20 59 42.9	-1.0
	2.6nm,0.3s						
TNSS				Lg	Lg	21 00 19.2	
	3.7nm,0.4s						
TNSS	Tian-Shan	2.84	299	eP	Pb	20 59 42.9	-1.0
	2.6nm,0.3s						
TNSS				eS	Sb	21 00 19.2	-0.1
	3.7nm,0.4s						
IZV	Izvestkoviy	3.06	297	Pg	Pb	20 59 46.7	-0.8
	0.7nm,0.2s						
IZV				Lg	Lg	21 00 26.4	
	8.8nm,0.3s						
IZV	Izvestkoviy	3.06	297	eP	Pb	20 59 46.7	-0.8
	0.7nm,0.2s						
IZV				eS	Sb	21 00 26.4	+1.0
	8.8nm,0.3s						
ARXS	Arharly	3.11	324	Pg	Pb	20 59 46.7	-1.4
ARXS				Lg	Lg	21 00 26.1	
ARXS	Arharly	3.11	324	eP	Pb	20 59 46.7	-1.4
	0.9nm,0.5s						
ARXS				eS	Sb	21 00 26.1	-0.4
	1.9nm,0.5s						
CHKK	Chushkaly	3.27	312	eP	Pb	20 59 49.6	-1.3
	0.6nm,0.1s						
CHKK				eS	Sb	21 00 30.9	-0.2
	4.3nm,0.3s						
KST	Kastek	3.51	294	Pg	Pb	20 59 54.8	-0.2
KST				Lg	Lg	21 00 40.0	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KST	Kastek	3.51	294	ePb	Pb	20 59 54.5	-0.5
	1.0nm,0.2s						
KST				eS	Sb	21 00 39.7	+1.6
	4.2nm,0.6s						
KAPS	Kapalarasan	3.64	349	eP	Pb	20 59 56.9	-0.3
	0.4nm,0.3s						
KAPS				eS	Sb	21 00 43.9	+2.1
	2.4nm,0.3s						
TKM2	Tokmak 2	3.72	290	⇑Pg	Pb	20 59 59.8	+1.1
	2.0nm,1.2s						
TKM2				⇑Lg	Lg	21 00 49.7	
	0.9nm,0.6s						

IDC **12** *21:11:04.3±0.6, 27.°01N×53.°98E, h0^{km}, mb4.0/26, mb1 4.1/31, mb1mx4.0/51, mbtmp3.9/31, ML3.5/5, MS3.2/4, Ms1 3.2/4, ms1mx2.8/47, Error ellipse: s-maj=15.8km s-min=12.7km az=174.0*

TEH **12** *21:11:06.0, 27.°16N×54.°04E, h10^{km}, ML4.0*

THR **12** *21:11:07.9, 27.°18N×54.°28E, h14^{km}, ML4.0*

NEIC **12** *21:11:07.9±0.0, 27.°18N×54.°28E, h14^{km}, mb3.9/21, ML4.0(THR), MN4.0(TEH), After THR.*

OMAN **12** *21:11:07.6±0.8, 27.°35N×54.°27E, h7^{km}±35^{km}, ml4.0/15, Error ellipse: s-maj=64.7km s-min=3.4km az=321.0*

DSN **12** *21:11:09.4±0.6, 27.°13N×54.°15E, h10^{km}, mb4.2/1, ML3.8/11, Error ellipse: s-maj=6.8km s-min=6.0km az=49.0*

ISC 12 21:11:05.7±1.4**, 27.°16N**±0.°03×**54.°14E**±0.°04**, h5**^{km}±8^{km}**, n176, σ1^{s}97**/194**, mb4.0**/52**, MS3.6**/4**, 1C, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHRM	Jahrom	1.43	340	ePg	Pn	21 11 34.4	+2.0
JHRM				IAMB	IAmb	21 11 59.6	
	comp=Z,0.0nm,0.3s						
GHIR	Ghir-Karzin	1.51	318	eAML	AML	21 12 01.8	
	comp=N,2µm,0.5s						
GHIR				ePg	Pb	21 11 36.7	+2.3
GHIR				eAML	AML	21 12 03.1	
	comp=E,2µm,0.3s						
GENO	Geno	1.83	82	ePn	Pg	21 11 40.4	-0.4
GENO				IAMB	IAmb	21 12 13.8	
	comp=Z,0.0nm,0.3s						
SHME	Shamm	2.11	121	eP	Pb	21 11 43.5	-1.0
	SNR=13						
SHME				S	Sg	21 12 11.8	-1.8
SHME	Shamm	2.11	121	ePn	Pb	21 11 43.3	-1.2
UMQ	Umm Al-Quwin	2.13	140	ePn	Pb	21 11 45.9	+1.2
BANOM	Banah	2.30	122	eP	Pb	21 11 46.2	-1.5
	SNR=32						
BANOM	Banah	2.30	122	P	Pb	21 11 46.0	-1.7
	SNR=32						
NIAN	Nian	2.43	80	ePn	Pb	21 11 48.8	-1.1
NIAN				IAMB	IAmb	21 12 55.0	
	comp=Z,0.0nm,0.6s						
MSFE	Esma-Masafi	2.55	134	eP	Pb	21 11 50.4	-1.6
	SNR=17						
MSFE	Esma-Masafi	2.55	134	ePn	Pb	21 11 50.7	-1.3
NAZ	Nazwa, Dubai	2.56	147	eP	Pb	21 11 51.0	-1.1
	SNR=78						
NAZ	Nazwa, Dubai	2.56	147	P	Pb	21 11 51.1	-1.1
	SNR=78						
NAZ				S	Sb	21 12 24.8	+0.8
NAZ	Nazwa, Dubai	2.56	147	ePn	Pb	21 11 51.2	-1.0
MDH	Madha	2.69	133	eP	Pn	21 11 51.9	+2.3
	SNR=8.3						
MDH	Madha	2.69	133	P	Pn	21 11 52.0	+2.4
	SNR=8.3						
MDH				S	Sb	21 12 26.9	-0.6
MDH	Madha	2.69	133	ePn	Pn	21 11 52.0	+2.4
AJN	Ajban	2.70	163	eP	Pn	21 11 52.6	+2.8
	SNR=10						
AJN	Ajban	2.70	163	P	Pn	21 11 52.5	+2.8
	SNR=10						
FAQ	Al Faqa, Dubai	2.74	151	eP	Pn	21 11 53.2	+2.9
	SNR=30						
FAQ	Al Faqa, Dubai	2.74	151	P	Pn	21 11 53.3	+2.9
	SNR=29						
FAQ				S	Sb	21 12 27.9	-1.2
FAQ	Al Faqa, Dubai	2.74	151	ePn	Pn	21 11 53.0	+2.7
ASUD	Al Ashush, Dub	2.75	157	eP	Pb	21 11 53.8	-1.4
	SNR=111						
ASUD	Al Ashush, Dub	2.75	157	P	Pb	21 11 53.8	-1.4
	SNR=111						
ASUD	Al Ashush, Dub	2.75	157	ePn	Pb	21 11 53.7	-1.6
IPAR	Pars	2.84	340	ePn	Pn	21 11 54.2	+2.3
SHI	Shiraz	2.85	330	ePn	Pn	21 11 53.4	+1.3
SHI				IAMB	IAmb	21 12 45.0	
	comp=Z,3µm,0.7s						
UOSS	Minazif	2.89	139	ePn	Pn	21 11 54.2	+1.9
UOSS				eSn	Sn	21 12 28.7	+1.3
UOSS	Minazif	2.89	139	eP	Pn	21 11 54.5	+2.1
	SNR=13						
UOSS	Minazif	2.89	139	P	Pn	21 11 54.7	+2.4
	SNR=42						
UOSS				S	Sb	21 12 32.6	-0.7
UOSS	Minazif	2.89	139	ePn	Pn	21 11 54.1	+1.8
HATD	Hatta, Dubai	2.94	142	eP	Pn	21 11 55.7	+2.6
	SNR=15						
HATD	Hatta, Dubai	2.94	142	P	Pn	21 11 56.0	+2.9
	SNR=19						
HATD	Hatta, Dubai	2.94	142	ePn	Pn	21 11 55.7	+2.6
ASHO	Ashiyiah	3.01	145	eP	Pn	21 11 56.7	+2.6
	SNR=159						
ASHO	Ashiyiah	3.01	145	P	Pn	21 11 56.8	+2.7
	SNR=159						
ASHO				S	Sb	21 12 34.3	-2.7
ASHO	Ashiyiah	3.01	145	ePn	Pn	21 11 56.9	+2.7
IKAZ	Kazeroun	3.30	323	ePn	Pn	21 11 59.6	+1.3
IKAZ	Kazeroun	3.30	323	ePn	Pn	21 11 59.7	+1.4
IKAZ				IAMB	IAmb	21 13 13.9	
	comp=N,11µm,0.5s						
NGRK	Negar Kerman	3.37	42	ePn	Pn	21 12 02.3	+3.0
NGRK				IAMB	IAmb	21 12 50.1	
	comp=E,0.0nm,0.4s						
ALNE	Al Ain	3.42	154	i P	Pn	21 12 02.5	+2.8
	SNR=81						
ALNE	Al Ain	3.42	154	ePn	Pn	21 12 02.4	+2.8
KRBR	Kerman	3.63	39	ePn	Pn	21 12 05.2	+2.3
KRBR	Kerman	3.63	39	ePn	Pn	21 12 05.2	+2.3
TVBK	TV Kerman	3.64	39	IAMB	IAmb	21 12 10.6	
	comp=Z,0.0nm,0.4s						
TVBK				ePn	Pn	21 12 06.7	+3.7
SOHO	SOHO	3.71	144	P	Pn	21 12 05.6	+1.9
	SNR=51						
SOHO				S	Sb	21 12 52.7	-4.3
KHGB	Koh Gabri	3.80	32	ePn	Pn	21 12 08.9	+3.7
KHGB				IAMB	IAmb	21 13 17.5	
	comp=Z,0.0nm,0.5s						
CHMN	Cheshme madani	4.02	47	ePn	Pb	21 12 13.1	-4.2
CHMN				IAMB	IAmb	21 12 16.2	
	comp=Z,0.0nm,0.4s						
IMEH	Mehriz	4.23	6	ePn	Pn	21 12 13.8	+2.7
IMEH	Mehriz	4.23	6	ePn	Pn	21 12 13.9	+2.8
IMEH				IAMB	IAmb	21 13 09.4	
	comp=Z,2µm,0.6s						
ARQ	Araqi	4.38	150	P	Pn	21 12 15.2	+2.3
	SNR=30						
ARQ				S	Sn	21 13 08.7	+4.4
HOQ	Hoqain	4.58	140	P	Pn	21 12 18.2	+2.6
	SNR=11						
IRAM	Ramesheh	4.88	342	ePn	Pn	21 12 21.4	+1.5
IRAM				IAMB	IAmb	21 13 23.6	
	comp=Z,754nm,0.4s						
BSY	Bisya	5.20	147	P	Pn	21 12 26.9	+2.6
	SNR=39						
YZKH	Yazd	5.22	4	ePn	Pn	21 12 27.2	+2.7
YZKH	Yazd	5.22	4	ePn	Pn	21 12 27.2	+2.7
SMDO	Samad	5.41	138	P	Pn	21 12 29.9	+2.8
	SNR=31						
IGAR	Gharneh	5.53	341	ePn	Pn	21 12 30.3	+1.4
IGAR				IAMB	IAmb	21 12 32.3	
	comp=Z,875nm,0.2s						
WSAR	Wadi Sarin	5.64	133	P	Pn	21 12 32.0	+1.8
	SNR=12						
ROKH	ROKH	5.83	333	ePn	Pn	21 12 34.1	+1.1
ROKH				IAMB	IAmb	21 13 42.9	
	comp=Z,0.0nm,0.5s						
CHBR	Chabahar	5.90	104	ePn	Pn	21 12 35.2	+1.4
CHBR	Chabahar	5.90	104	ePn	Pn	21 12 35.1	+1.4
IZEF	Zefreh	5.92	345	ePn	Pn	21 12 35.1	+0.8
IZEF				IAMB	IAmb	21 12 38.1	
	comp=Z,536nm,0.2s						
JMDO	Jabal Madar	5.98	142	P	Pn	21 12 36.4	+1.5
	SNR=5.7						
ANAR	Anarak	6.02	357	ePn	Pn	21 12 37.3	+1.8
ANAR				IAMB	IAmb	21 13 47.2	
	comp=Z,0.0nm,0.3s						
IPIR	Pirpir	6.18	334	ePn	Pn	21 12 38.6	+0.7
IPIR				IAMB	IAmb	21 13 51.0	
	comp=Z,2µm,0.4s						
TPRV	Parvadeh(Tabas	6.25	20	ePn	Pn	21 12 41.1	+2.5
WBK	Wadi Bani Khal	6.31	135	P	Pn	21 12 41.8	+2.4
	SNR=12						
ZHSF	Zahedan	6.33	66	ePn	Pn	21 12 42.1	+2.2
ZHSF	Zahedan	6.33	66	ePn	Pn	21 12 42.1	+2.2
IKLH	Kolahrood	6.52	341	ePn	Pn	21 12 43.5	+1.0
IKLH	Kolahrood	6.52	341	ePn	Pn	21 12 43.6	+1.0
IKLH				IAMB	IAmb	21 13 59.2	
	comp=Z,552nm,0.6s						
JLN	Jalan Bani Buh	6.92	135	P	Pn	21 12 48.9	+1.0
	SNR=12						
TKDS	Koohdasht(Taba	6.93	21	ePn	Pn	21 12 50.8	+2.8
TABS	Tabas	6.96	21	ePn	Pn	21 12 50.0	+1.6
TABS	Tabas	6.96	21	ePn	Pg	21 13 18.2	-0.8
TABS	Tabas	6.96	21	ePn	Pn	21 12 50.7	+2.3
KRSH	Karshahi	7.00	346	ePn	Pn	21 12 50.0	+1.0
TNSJ	Nastanj	7.11	17	ePn	Pn	21 12 52.3	+1.9
ISFB	Sefidab	7.35	348	ePn	Pn	21 12 54.4	+0.7
ISFB				IAMB	IAmb	21 13 07.0	
	comp=Z,246nm,0.4s						
IANJ	Anjilo	8.28	359	ePn	Pn	21 13 08.5	+1.8
IANJ	Anjilo	8.28	359	IAMB	IAmb	21 13 13.2	
	comp=Z,340nm,0.4s						
IANJ				ePn	Pn	21 13 08.5	+1.8
IKFM	Kafar-mosalman	8.35	321	ePn	Pn	21 13 09.5	+2.1
SHRT	Shahrakht	8.36	38	ePn	Pn	21 13 09.3	+1.7
SHRT	Shahrakht	8.36	38	ePn	Pn	21 13 09.3	+1.7
IDMV	Damavand	8.58	348	ePn	Pn	21 13 12.0	+1.2
IDMV	Damavand	8.58	348	ePn	Pn	21 13 12.1	+1.2
IDMV				IAMB	IAmb	21 13 30.3	
	comp=Z,147nm,0.4s						
RAYN	Ar Rayn	8.61	247	ePn	Pn	21 13 09.1	-1.9
RAYN				eSn	Sn	21 14 37.9	-11
ISHM	Shahmirzad	8.65	355	ePn	Pn	21 13 14.4	+2.7
ISHM				IAMB	IAmb	21 13 20.6	
	comp=Z,304nm,0.4s						
HAGD	Aghdareh	8.76	332	ePn	Pn	21 13 14.2	+1.0
IALA	Alasht	8.96	353	ePn	Pn	21 13 18.1	+2.0
IALA	Alasht	8.96	353	ePn	Pn	21 13 18.2	+2.1
IALA				IAMB	IAmb	21 13 21.6	
	comp=Z,308nm,0.4s						
GEYT	Alibeck	11.25	16	Pn	Pn	21 13 50.4	+3.3
	comp=Z,0.1nm,0.3s,baz=212,slow=14,SNR=2.6						
GEYT				LR	LR	21 19 13.5	
	comp=Z,81nm,18.2s,baz=190,slow=43						
SIRT	Sirnak	14.27	319	ePn	Pn	21 14 26.1	-2.4
SIRT				eSn	Sn	21 16 57.4	-10
KBL	Kabul	14.75	56	ePn	Pn	21 14 35.4	+0.2
GNI	Garni	15.12	331	ePn	Pn	21 14 43.0	+2.9
	comp=Z,17nm,0.8s						
ASF	Jabal al Asfar	15.79	293	Pn	Pn	21 14 49.3	+0.4
	comp=Z,0.3nm,0.3s,baz=82,slow=13,SNR=3.6						
ASF				Sn	Sn	21 17 40.1	-4.3
	comp=Z,0.1nm,0.3s,baz=236,slow=15,SNR=2.5						
EIL	Elat	17.06	283	Pn	Pn	21 15 05.6	+0.5
	comp=Z,0.4nm,0.3s,baz=29,slow=11,SNR=2.9						
MMAI	Mount Meron Ar	17.22	294	P	Pn	21 15 06.5	-0.6
	comp=Z,0.5nm,0.3s,baz=107,slow=14,SNR=3.8						
NIL	Nilore	17.70	64	ePn	P	21 15 15.7	+1.8
	comp=Z,9.0nm,0.9s						
GAR	Garm	17.94	45	ePn	P	21 15 16.4	-0.4
	comp=Z,4.9nm,0.7s						
ATD	Arta Tunnel	18.83	216	LR	LR	21 23 56.3	
	comp=Z,39nm,21.0s,baz=144,slow=42						
KBZ	Khabaz	18.86	334	P	P	21 15 27.9	+1.3
	comp=Z,0.1nm,0.3s,baz=123,slow=12,SNR=5.0						
BTK	Batken	18.89	43	eP	Pn	21 15 27.7	+0.1
	comp=Z,4.4nm,0.6s						
KVAR	Kislovodsk Arr	19.14	334	P	P	21 15 31.0	+1.2
	baz=175,slow=12,SNR=4.8						
KIV	Kislovodsk	19.14	334	eP	P	21 15 31.0	+1.2
	comp=Z,5.1nm,0.8s						
CSS	Mathiatis	19.42	299	eP	P	21 15 29.8	-3.1
	comp=Z,11nm,1.1s						
KK31	Karatay Array	20.73	36	eP	P	21 15 46.5	-0.5
	comp=Z,2.2nm,0.6s						
KKAR	Karatay Array	20.73	36	eP	P	21 15 46.2	-0.8
	comp=Z,2.2nm,0.6s						
BR101	Keskin Array S	21.14	312	eP	P	21 15 52.1	+0.5
BR131	Keskin Array S	21.14	312	eP	P	21 15 51.5	-0.1
	comp=Z,3.5nm,0.7s						
BRTR	Keskin Array B	21.14	312	P	P	21 15 52.1	+0.5
	comp=Z,2.2nm,0.7s,baz=130,slow=12,SNR=21						
KSH	Kashi	21.95	50	P	P	21 15 56.6	-3.7
KSH				pP	pP	21 15 59.9	-2.2
KSH				PP	PnPn	21 16 24.7	+3.0
KSH				S	S	21 19 47.3	-16
KSH				sS	sS	21 19 57.3	-8.9
KSH				SS	SnSn	21 20 23.2	-5.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,190nm,4.4s						
KSH				LR	LR		
	comp=N,240nm,4.1s						
KSH				LR	LR		
	comp=E,170nm,4.7s						
KSH				LR	LR		
	comp=Z,250nm,5.1s						
ABKAR	Akbulak array	22.51	10	eP	P	21 16 04.4	-1.7
	comp=Z,3.3nm,0.9s						
AAK	Ala-Archa	22.65	42	eP	P	21 16 09.0	+1.2
	comp=Z,2.9nm,0.6s						
AAK	Ala-Archa	22.65	42	i P	P	21 16 11.7	+3.8
	SNR=9.4						
AAK	Ala-Archa	22.65	42	P	P	21 16 10.9	+3.1
	comp=Z,1.6nm,0.5s,baz=208,slow=3.2,SNR=12						
FRU1	Bishkek	22.84	42	eP	P	21 16 09.4	-0.3
	comp=Z,2.9nm,0.7s						
NRN	Naryn	22.91	46	eP	P	21 16 08.2	-2.6
	comp=Z,2.7nm,0.8s						
AKTO	Aktyubinsk	23.43	6	P	P	21 16 17.4	+1.7
	comp=Z,3.5nm,0.5s,baz=175,slow=11,SNR=14						
PYUN	Piuthan	25.56	81	eP	P	21 16 37.7	+1.9
	comp=Z,11nm,0.6s						
KOLN	Koldanda	26.12	82	eP	P	21 16 42.9	+1.9
DANN	Dangsing	26.21	80	eP	P	21 16 44.4	+2.5
	comp=Z,23nm,0.6s						
IDI	Anoyia	26.22	295	eP	P	21 16 41.5	-0.2
	comp=Z,11nm,0.9s						
IDI	Anoyia	26.22	295	P	P	21 16 41.5	-0.2
	comp=Z,8.2nm,0.7s,baz=101,slow=5.2,SNR=8.1						
DMN	Daman	27.47	82	eP	P	21 16 54.7	+1.5
	comp=Z,5.2nm,0.7s						
PKIN	Phulchoki	27.73	82	eP	P	21 16 56.9	+1.4
	comp=Z,3.8nm,0.5s						
PKI	Pulchoki	27.74	82	eP	P	21 16 56.8	+1.1
	comp=Z,3.9nm,0.5s						
GUN	Gumba	28.12	81	eP	P	21 17 01.2	+2.1
	comp=Z,14nm,0.7s						
JIRN	Jiri	28.42	82	eP	P	21 17 02.8	+1.0
	comp=Z,12nm,0.5s						
BRVK	Borovoye	28.52	21	eP	P	21 17 02.3	+0.3
	comp=Z,3.0nm,1.1s						
BVAR	Borovoye Array	28.53	21	P	P	21 17 03.4	+1.3
	comp=Z,1.8nm,0.6s,baz=216,slow=7.3,SNR=18						
BVAR				PcP	PcP	21 20 13.2	-0.3
	comp=Z,0.4nm,0.5s,baz=204,slow=2.5,SNR=3.3						
BVAR				LR	LR	21 30 53.7	
	comp=Z,24nm,18.8s,baz=241,slow=41						
RAMN	Ramite	28.87	83	eP	P	21 17 05.8	+0.1
	comp=Z,6.2nm,0.6s						
MLR	Muntele Rosu	28.94	317	P	P	21 17 06.2	+0.3
	comp=Z,2.0nm,0.8s,baz=108,slow=5.9						
LIT	Litokhoron	29.18	304	eP	P	21 17 10.1	+2.1
	comp=Z,1.1nm,0.7s						
MAKZ	Makanchi	29.40	41	eP	P	21 17 10.3	+0.4
	comp=Z,2.3nm,1.0s						
MK01	Makanchi Array	29.57	41	eP	P	21 17 11.8	+0.3
MK31	Makanchi Array	29.58	41	eP	P	21 17 09.0	-2.5
	comp=Z,1.0nm,0.9s						
MK32	Makanchi Array	29.58	41	eP	P	21 17 12.6	+1.1
MKAR	Makanchi Array	29.58	41	eP	P	21 17 10.7	-0.9
	comp=Z,7.8nm,0.6s						
MKAR				PcP	PcP	21 20 15.9	-0.4
MKAR	Makanchi Array	29.58	41	P	P	21 17 12.6	+1.1
	comp=Z,0.5nm,0.4s,baz=226,slow=9.7,SNR=15						
MKAR				PcP	PcP	21 20 15.9	-0.4
	comp=Z,0.2nm,0.5s,baz=245,slow=1.7,SNR=3.9						
KURBB	Kurchatov Arra	29.90	32	P	P	21 17 15.6	+1.4
	comp=Z,0.6nm,0.6s,baz=231,slow=8.7,SNR=10						
KURBB				PcP	PcP	21 20 16.1	-0.9
	comp=Z,0.3nm,0.7s,baz=254,slow=2.5,SNR=3.4						
KURK	Kurchatov	30.00	32	eP	P	21 17 15.6	+0.5
KURK				PcP	PcP	21 20 16.1	-1.2
AKASG	Malin Array Be	30.20	328	P	P	21 17 15.3	-1.6
	comp=Z,0.4nm,0.3s,baz=133,slow=8.1,SNR=2.3						
AKBB	Malin Array Si	30.20	328	eP	P	21 17 15.3	-1.6
	comp=Z,2.6nm,0.4s						
WMQ	Urumqi	31.71	50	eP	P	21 17 32.5	+2.1
WMQ				LR	LR		
	comp=N,180nm,22.7s						
WMQ				LR	LR		
	comp=E,130nm,22.7s						
WMQ				LR	LR		
	comp=Z,83nm,24.1s						
KMBO	Kilima Mbogo	32.49	213	P	P	21 17 38.1	+0.4
	comp=Z,1.7nm,0.9s,baz=39,slow=9.2,SNR=4.8						
CEL	Celeste	33.81	299	eP	P	21 17 49.8	+1.0
ZAA0	Zalesovo Array	34.99	32	eP	P	21 17 58.0	-0.8
	comp=Z,2.9nm,0.5s						
ZALV	Zalesovo Beam	34.99	32	eP	P	21 17 57.8	-1.0
ZALV	Zalesovo Beam	34.99	32	P	P	21 17 59.6	+0.8
	comp=Z,3.0nm,0.5s,baz=241,slow=9.4,SNR=22						
GERES	GERESS Array B	37.92	316	P	P	21 18 22.0	-2.0
	comp=Z,0.2nm,0.4s,baz=93,slow=8.0,SNR=4.7						
WATA	Walderalm	38.81	313	eP	P	21 18 30.6	-0.9
	comp=Z,1.6nm,0.4s						
SQTA	Sankt Quirin	39.02	312	eP	P	21 18 32.4	-0.9
	comp=Z,3.4nm,0.4s						
FINES	FINESS Array B	39.10	339	P	P	21 18 32.9	-0.7
	comp=Z,1.2nm,0.3s,baz=135,slow=9.5,SNR=18						
MOTA	Moosalm	39.12	313	eP	P	21 18 32.9	-1.3
	comp=Z,0.9nm,0.3s						
FETA	Feichten	39.28	312	eP	P	21 18 34.7	-0.8
	comp=Z,1.5nm,0.4s						
GTA	Gaotai	39.70	60	⇑P	P	21 18 41.4	+2.3
GTA				pP	sP	21 18 45.5	+3.5
GTA				sP	pP	21 18 48.4	+7.3
GTA				S	S	21 24 43.7	+0.4
GTA				sS	sS	21 24 51.9	+5.4
GTA				SS	SS	21 27 32.2	-6.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,65nm,7.5s						
GTA				LR	LR		
	comp=N,120nm,17.8s						
GTA				LR	LR		
	comp=E,110nm,18.4s						
GTA				LR	LR		
	comp=Z,70nm,17.5s						
DAVA	Damuels	39.91	312	eP	P	21 18 40.0	-0.8
	comp=Z,13nm,0.4s						
CMAR	Chiang Mai Arr	42.02	92	P	P	21 18 59.9	+1.6
	comp=Z,0.3nm,0.5s,baz=282,slow=10,SNR=4.8						
NB2	NORSAR Subarra	44.42	332	P	P	21 19 16.0	-1.2
	comp=Z,1.8nm,0.8s,baz=121,slow=8.6						
NOA	NORSAR Array B	44.42	332	P	P	21 19 16.1	-1.2
	comp=Z,0.9nm,0.8s,baz=118,slow=7.6,SNR=4.9						
SONM	Songino Array	45.33	49	P	P	21 19 26.0	+1.2
	comp=Z,0.7nm,0.7s,baz=265,slow=9.1,SNR=10.0						
SONM				PcP	PcP	21 21 04.9	+0.6
	comp=Z,0.2nm,0.5s,baz=251,slow=4.4,SNR=2.3						
ARCES	ARCESS Array B	45.56	346	P	P	21 19 25.9	-0.2
	comp=Z,0.9nm,0.5s,baz=149,slow=8.7,SNR=9.9						
HHC	Hu-ho-hao-te	48.72	58	eP	P	21 19 51.0	-0.3
HHC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,6.2s						
ESDC	Sonseca Array	49.30	300	P	P	21 19 54.9	-0.8
	comp=Z,0.7nm,0.5s,baz=67,slow=7.4,SNR=9.7						
TORD	Torodi Ar. Bea	50.83	265	P	P	21 20 05.9	-1.7
	comp=Z,1.8nm,0.8s,baz=87,slow=7.6,SNR=12						
DBIC	Dimbokro	59.45	261	P	P	21 21 08.0	-1.9
	comp=Z,2.9nm,0.6s,baz=44,slow=5.2,SNR=6.2						
BOSA	Boshof	61.99	209	P	P	21 21 25.7	-1.3
	comp=Z,1.4nm,0.6s,baz=4.8,slow=4.0,SNR=6.5						
MA2	Magadan	70.21	32	LR	LR	21 54 56.6	
	comp=Z,94nm,21.3s,baz=56,slow=37						
SCHQ	Schefferville	83.97	330	P	P	21 23 37.0	+0.2
	comp=Z,1.8nm,0.5s,baz=90,slow=2.0,SNR=4.7						
INK	Inuvik	84.65	3	P	P	21 23 40.6	+0.7
	comp=Z,0.5nm,0.6s,baz=285,slow=6.0,SNR=3.9						
ILAR	Eielson Array	86.91	9	P	P	21 23 51.2	-0.1
	comp=Z,0.4nm,0.6s,baz=328,slow=5.1,SNR=8.3						
YKA	Yellowknife Ar	90.20	355	P	P	21 24 06.6	-0.3
	comp=Z,0.8nm,0.6s,baz=5.6,slow=5.0,SNR=22						
WRA	Warramunga Arr	90.65	112	P	P	21 24 09.0	-0.8
	comp=Z,0.7nm,0.7s,baz=315,slow=3.9,SNR=12						
ASAR	Alice Springs	92.07	115	P	P	21 24 15.4	-0.9
	comp=Z,0.8nm,0.7s,baz=302,slow=4.7,SNR=10.0						

ISCJB **12** *21:41:25.7±0.5, 45.°61N±0.°08×142.°7E±0.°1, h337^{km}±5^{km}, mb2.8/7, Error ellipse: s-maj=12.7km s-min=11.6km az=41.7*

IDC **12** *21:41:26.5±0.7, 45.°76N×142.°69E, h322^{km}±10^{km}, mb2.6/7, mb1 2.9/9, mb1mx2.7/36, mbtmp3.4/9, Error ellipse: s-maj=22.2km s-min=16.9km az=154.0*

JMA **12** *21:41:26.8±0.3, 45.°65N×142.°63E, h329^{km}±2^{km}, M3.0*

ISC 12 21:41:26.3±0.7**, 45.°61N**±0.°08×**142.°70E**±0.°08**, h332**^{km}±7^{km}**, n27, σ1^{s}41**/35**, mb3.0**/7**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWK2	Keihoku	0.63	243	P	Pn	21 42 09.3	+0.4
JWK2				eS	S	21 42 42.0	-0.9
JSE	Soyaes	0.65	187	P	Pn	21 42 09.1	+0.1
JSS	Shosan	1.35	207	P	Pn	21 42 12.5	+0.6
JYG	Yagishiri	1.49	218	P	Pn	21 42 13.2	+0.6
ASAJ	Asahikawa	1.49	183	P	Pn	21 42 13.4	+0.7
ASAJ				eS	S	21 42 50.5	+0.7
ASAJ	Asahikawa	1.49	183	P	Pn	21 42 13.1	+0.4
	2.9nm,0.3s,baz=347,slow=6.7,SNR=46						
ASAJ				S	S	21 42 50.1	+0.3
	baz=41,slow=19,SNR=4.2						
JMP	Maruseppu	1.67	163	P	Pn	21 42 14.5	+0.7
JMP				eS	S	21 42 51.8	0.0
JKK2	Kamakawa 2	1.73	179	P	Pn	21 42 15.1	+0.9
JTKR	Abashiri--Toko	1.85	152	P	Pn	21 42 16.0	+1.1
JTKR				eS	S	21 42 54.4	+0.5
JHR	Hokuryu	1.99	201	P	Pn	21 42 16.7	+0.7
JAR	Ashorobuto	2.44	161	P	Pn	21 42 20.6	+1.2
JAR				eS	S	21 43 02.4	+0.4
JAK	Akkeshi	2.98	151	eS	S	21 43 09.0	-1.6
JCH	Churui	3.03	171	P	Pn	21 42 24.3	-0.4
JCH				eS	S	21 43 07.7	-3.8
NEM2	Nemuro 2	3.13	135	eS	S	21 43 09.9	-3.2
JNBK	Urakawa-nobuka	3.33	179	P	Pn	21 42 28.4	+0.9
JNBK				eS	S	21 43 15.3	-1.4
JKB	Kayabe	3.91	199	eS	S	21 43 24.9	-2.4
JOSM	Okushiri--Mats	4.22	215	P	Pn	21 42 36.7	0.0
USRK	Ussuriysk Ar.	7.73	263	P	Pn	21 43 16.5	-0.4
	0.4nm,0.3s,baz=72,slow=12,SNR=12						
SEY	Seymchan	18.22	14	P	P	21 45 15.0	-1.1
	0.2nm,0.3s,baz=237,slow=11,SNR=5.2						
SONM	Songino Array	24.84	288	P	P	21 46 19.0	-0.5
	0.3nm,0.4s,baz=88,slow=9.1,SNR=5.3						
MKAR	Makanchi Array	40.92	294	P	P	21 48 39.0	+2.0
	0.2nm,0.8s,baz=66,slow=6.1,SNR=3.1						
ILAR	Eielson Array	41.90	37	P	P	21 48 44.4	-0.3
	0.3nm,0.6s,baz=277,slow=8.9,SNR=7.2						
KBS	Kingsbay	52.40	349	eP	P	21 50 01.9	-2.8
YKA	Yellowknife Ar	56.00	33	P	P	21 50 30.9	+0.2
	0.3nm,0.5s,baz=306,slow=6.8,SNR=5.4						
FINES	FINESS Array B	61.74	331	P	P	21 51 10.1	+0.4
	0.3nm,0.4s,baz=48,slow=10,SNR=3.1						
WRA	Warramunga Arr	65.68	189	P	P	21 51 37.7	+1.9
	0.1nm,0.4s,baz=7.7,slow=6.7,SNR=4.1						
PDAR	Pinedale Array	71.08	48	P	P	21 52 09.9	+0.8
	0.2nm,0.5s,baz=285,slow=5.2,SNR=2.6						

IDC **12** *21:42:27.8±1.1, 19.°49N×64.°60W, h0^{km}, mb3.5/6, mb1 3.7/8, mb1mx3.5/42, mbtmp3.5/8, ML2.8/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/38, Error ellipse: s-maj=28.8km s-min=19.9km az=134.0*

ISCJB **12** *21:42:30.8±0.6, 19.°65N±0.°04×64.°74W±0.°05, h27^{km}, mb3.5/6, Error ellipse: s-maj=6.2km s-min=5.2km az=0.8*

NEIC **12** *21:42:31.5±0.0, 19.°72N×64.°70W, h49^{km}, MD3.4(RSPR), After RSPR.*

*RSPR **12** 21:42:31.5, 19°.72N×64°.70W, h49^{km}±7^{km}, MD3.4/8*

ISC 12 21:42:32.2±0.7**, 19°.59N**±0°.05×**64°.76W**±0°.05**, h27**^{km}**, n39, σ1^{s}.33**/51**, mb3.5**/6**, 19C-2D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.94	155	⇑eP	Pb	21 42 48.8	-1.1
ABV	Anegada	0.94	155	eS	Sn	21 43 02.4	+0.2
ABVI	Anegada Island	0.94	155	⇑eP	Pb	21 42 48.8	-1.1
ABVI				eS	Sn	21 43 02.4	+0.2
TBVI	Tortola	1.17	174	⇑eP	Pn	21 42 52.4	-0.4
TBVI	Tortola	1.17	174	⇑eP	Pn	21 42 52.4	-0.4
STVI	Saint Thomas	1.24	189	⇑eP	Pn	21 42 53.6	-0.2
STVI	Saint Thomas	1.24	189	eS	Sb	21 43 10.6	0.0
STVI	Saint Thomas	1.24	189	⇑eP	Pn	21 42 53.6	-0.2
STVI				eS	Sb	21 43 10.6	0.0
CUPR	Culebra, Puert	1.37	201	⇑eP	Pn	21 42 55.4	-0.1
CUPR	Culebra, Puert	1.37	201	eS	Sn	21 43 13.9	+1.2
CUPR	Culebra, Puert	1.37	201	⇑eP	Pn	21 42 55.4	-0.1
CUPR				eS	Sn	21 43 13.9	+1.2
MTP	Monte Pirata	1.66	207	⇑eP	Pn	21 42 59.3	-0.2
MTP	Monte Pirata	1.66	207	eS	Sn	21 43 21.1	+1.0
MTP	Monte Pirata	1.66	207	⇑eP	Pn	21 42 59.3	-0.2
MTP				eS	Sn	21 43 21.1	+1.0
CBYP	Canovanas	1.67	219	⇑eP	Pn	21 42 59.5	-0.3
CBYP	Canovanas	1.67	219	⇑eP	Pn	21 42 59.5	-0.3
HUMP	Col San Antoni	1.77	216	⇑eP	Pn	21 43 01.2	+0.1
HUMP	Col San Antoni	1.77	216	eS	Sn	21 43 23.7	+1.0
HUMP	Col San Antoni	1.77	216	⇑eP	Pn	21 43 01.2	+0.1
HUMP				eS	Sn	21 43 23.7	+1.0
SJG	San Juan	1.97	222	eS	Sn	21 43 29.0	+1.3
SJG	San Juan	1.97	222	⇑eP	Pn	21 43 03.5	-0.3
SJG	San Juan	1.97	222	ePn	Pn	21 43 03.3	-0.6
SJG				eSn	Sn	21 43 28.0	+0.3
SJG	San Juan	1.97	222	Pn	Pn	21 43 03.0	-0.9
	12nm,0.3s,baz=43,slow=14,SNR=13						
SJG				Sn	Sn	21 43 29.1	+1.4
	13nm,0.3s,baz=341,slow=8.8,SNR=6.4						
CELP	Cerrillos	2.29	229	⇓eP	Pn	21 43 08.1	-0.1
CELP				eS	Sn	21 43 36.3	+0.7
CELP	Cerrillos	2.29	229	⇓eP	Pn	21 43 08.1	-0.1
CELP				eS	Sn	21 43 36.3	+0.7
OBIP	Obispado Ponce	2.33	229	⇑eP	Pn	21 43 08.4	-0.3
OBIP	Obispado Ponce	2.33	229	⇑eP	Pn	21 43 08.4	-0.3
CRPR	Cabo Rojo, PR	2.73	235	⇑eP	Pn	21 43 13.8	-0.5
CRPR	Cabo Rojo, PR	2.73	235	eS	Sn	21 43 47.1	+0.8
CRPR	Cabo Rojo, PR	2.73	235	⇑eP	Pn	21 43 13.8	-0.5
CRPR				eS	Sn	21 43 47.1	+0.8
SDDR	Presa de Saban	6.20	266	ePn	Pn	21 44 03.9	+1.8
	25nm,0.4s						
SDDR				eS	Sn	21 45 04.8	-7.2
SDV	Santo Domingo	12.06	209	Pn	Pn	21 45 20.9	-1.7
	0.2nm,0.3s,baz=14,slow=19,SNR=2.2						
SDV				LR	LR	21 49 42.5	
	comp=Z,43nm,21.6s,baz=240,slow=36						
TXAR	Lajitas Array	36.58	293	P	P	21 49 38.5	+2.4
	0.4nm,0.7s,baz=114,slow=11,SNR=2.8						
PDAR	Pinedale Array	44.10	312	P	P	21 50 39.4	+0.9
	0.3nm,0.6s,baz=98,slow=10,SNR=3.0						
YKA	Yellowknife Ar	54.73	334	P	P	21 51 58.8	-0.1
	0.2nm,0.6s,baz=122,slow=8.1,SNR=3.9						
TORD	Torodi Ar. Bea	63.75	85	P	P	21 53 01.4	-0.8
	0.3nm,0.6s,baz=281,slow=4.8,SNR=3.9						
ILAR	Eielson Array	69.12	333	P	P	21 53 36.4	+0.7
	0.3nm,0.6s,baz=99,slow=4.3,SNR=6.4						
ARCES	ARCESS Array B	71.91	22	P	P	21 53 52.9	+0.3
	0.9nm,0.6s,baz=289,slow=5.6,SNR=7.9						
WRA	Warramunga Arr	162.02	266	PKP	PKPdf	22 02 32.0	+0.1
	0.3nm,0.8s,baz=59,slow=1.8,SNR=4.1						
WRA				PKPab	PKPab	22 03 17.5	-0.8
	0.2nm,0.9s,baz=81,slow=5.1,SNR=3.6						

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*SJA **12** 21:47:27.9±1.4, 31°.56S×67°.44W, h16^{km}±6^{km}, ML3.9, MW4.1*

*IDC **12** 21:47:28.4±1.0, 31°.78S×67°.19W, h30^{km}±6^{km}, mb4.0/2, mb1 3.9/5, mb1mx3.6/31, mbtmp3.9/5, ML3.8/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/29, Error ellipse: s-maj=35.7km s-min=24.9km az=111.0*

*GUC **12** 21:47:28.9±0.6, 31°.55S×67°.37W, h153^{km}±17^{km}, ML4.1*

*NEIC **12** 21:47:30.5±0.7, 31°.59S×67°.28W, h52^{km}±7^{km}, mb4.1/2, MD4.1(SJA), ML4.1(GUC), Error ellipse: s-maj=9.1km s-min=8.7km az=93.0*

ISC 12 21:47:25.8±0.8**, 31°.56S**±0°.03×**67°.25W**±0°.03**, h11**^{km}±5^{km}**, n60, σ1^{s}.70**/87**, 3C-12D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACAN	Cantantal	0.71	176	⇓eP	Pn	21 47 42.8	+0.8
ACAN	Cantantal	0.71	176	eP	Pn	21 47 42.7	+0.8
ACAN				eS	Sn	21 47 51.8	-1.1
CFA	Coronel Fontan	0.84	267	eP	Pg	21 47 41.5	-0.6
CFA				eS	Sg	21 47 51.4	-1.7
RTLL	Cerro Villicun	1.07	282	eP	Pg	21 47 45.6	-0.8
SJA	San Juan	1.12	271	eP	Pb	21 47 46.6	-0.6
SJA				⇓eS	Sg	21 48 00.1	-1.8
SJA				IAML		21 48 00.8	
	comp=Z,6μm,0.3s						
RTCV	Cerro Valdivia	1.14	254	eP	Pb	21 47 46.4	-1.1
RTCV				eS	Sg	21 47 59.2	-3.4
ZON	Zonda	1.22	270	eP	Pb	21 47 47.9	-1.0
ZON				⇓eS	Sb	21 48 02.6	-2.1
ZON				IAML		21 48 03.9	
	comp=Z,2μm,0.5s						
AMOG	MOGNA	1.23	300	⇓eP	Pg	21 47 49.3	-0.2
AMOG				⇓eS	Sb	21 48 04.5	-0.5
AMOG	MOGNA	1.23	300	eP	Pg	21 47 49.2	-0.2
AMOG				eS	Sb	21 48 04.4	-0.5
ASAL	Salagasta	1.69	232	eP	Pb	21 47 56.7	-0.3
ASAL	Salagasta	1.69	232	eP	Pb	21 47 56.6	-0.4
ASAL				eS	Sn	21 48 16.1	-0.9
ACCO	Cerro Coronel	1.83	301	⇓eP	Pb	21 47 59.6	+0.1
ACCO	Cerro Coronel	1.83	301	eP	Pb	21 47 59.5	-0.1
ACCO				eS	Sb	21 48 22.7	+0.1
ARCO	CERRO ARCO	1.91	228	⇓eP	Pb	21 48 00.8	-0.1
ARCO				IAML		21 48 26.1	
	comp=Z,2μm,0.4s						
ARCO	CERRO ARCO	1.91	228	eP	Pb	21 48 00.7	-0.1
ARCO				eS	Sb	21 48 25.5	+0.7
ARCO				IAML		21 48 26.2	
	comp=Z,2μm,0.4s						
AUSP	Uspallata	1.93	249	eP	Pn	21 48 00.1	+1.2
AUSP	Uspallata	1.93	249	eP	Pn	21 48 00.1	+1.2
AUSP				eS	Sn	21 48 23.4	+0.1
AAGR	Agrelo	2.02	221	⇓eP	Pb	21 48 03.0	+0.4
AAGR	Agrelo	2.02	221	eP	Pb	21 48 01.5	-1.2
AAGR				eS	Sb	21 48 27.6	-0.3
ACDV	Cuesta del Vie	2.12	310	⇓eP	Pb	21 48 04.5	+0.1
ACDV	Cuesta del Vie	2.12	310	eP	Pb	21 48 03.8	-0.6
ACDV				eS	Sb	21 48 31.2	+0.5
AVIZ	Vizcacheras	2.19	209	eP	Pg	21 48 07.6	-0.2
AVIZ				eS	Sb	21 48 34.3	+1.7
AGUA	GUANDACOL	2.33	332	eS	Sg	21 48 39.4	-1.3
AROD	Rodeo	2.36	305	⇓eP	Pb	21 48 08.6	0.0
AROD	Rodeo	2.36	305	eP	Pb	21 48 08.6	0.0
AROD				eS	Sb	21 48 37.9	+0.1
FCH	Farellones	3.11	235	⇑iP	Pn	21 48 17.7	+2.5
FCH				i S	Sn	21 48 55.3	+2.8
FCH				IAML		21 49 02.3	
	comp=N,256nm,0.5s						
CMCH	Combarbala	3.23	276	⇑iP	Pn	21 48 18.7	+2.2
CMCH				i S	Sn	21 48 56.4	+1.4
PEL	Peldehue	3.31	241	ePn	Pn	21 48 19.7	+2.1
PEL				eSn	Sn	21 48 47.7	-9.1
PEL	Peldehue	3.31	241	⇓iP	Pn	21 48 19.7	+2.1
PEL				i S	Sn	21 48 57.8	+0.9
PEL				IAML		21 49 08.0	
	comp=N,153nm,0.5s						
CLCH	Cerro Calan	3.32	236	⇑iP	Pn	21 48 21.1	+3.3
CLCH				i S	Sn	21 48 59.0	+1.6
CLCH				IAML		21 49 13.6	
	comp=N,463nm,0.6s						
GO04	Tololo Observa	3.35	293	ePn	Pn	21 48 20.7	+2.4
GO04	Tololo Observa	3.35	293	eP	Pn	21 48 20.8	+2.5
GO04	Tololo Observa	3.35	293	eP	Pn	21 48 21.7	+3.4
GO04	Tololo Observa	3.35	293	⇓iP	Pn	21 48 20.5	+2.2
GO04				i S	Sn	21 48 59.7	+1.5
CYA	Choya	3.35	22	eP	Pb	21 48 22.4	-2.9
CYA				IAML		21 49 25.6	
	comp=Z,183nm,0.3s						
CYA	Choya	3.35	22	eP	Pb	21 48 22.4	-2.9
CYA				IAML		21 49 25.7	
	comp=Z,183nm,0.3s						
CYA	Choya	3.35	22	eP	Pn	21 48 21.6	+3.4
CYA				i S	Sn	21 49 01.5	+3.5
LMEL	Las Melosas	3.37	227	eP	Pb	21 48 23.8	-1.9
LMEL				i S	Sn	21 49 00.3	+1.6
LMEL				IAML		21 49 12.6	
	comp=N,184nm,0.3s						
ROC1	El Roble	3.48	245	ePn	Pn	21 48 21.5	+1.3
ROC1				eSn	Sn	21 49 01.9	+0.3
LCO	Las Campanas	3.92	310	ePn	Pn	21 48 28.1	+1.9
LCO				eSn	Sn	21 49 12.7	+0.4
LCO	Las Campanas	3.92	310	eP	Pn	21 48 29.4	+3.3
LCO	Las Campanas	3.92	310	eP	Pn	21 48 28.8	+2.6
AHML	Horco Molle	5.05	20	eP	Pn	21 48 44.0	+2.5
AHML				IAML		21 50 21.5	
	comp=Z,64nm,0.5s						
GO02	Mina Guanaco	6.70	342	ePn	Pb	21 49 17.5	-5.0
TRQA	Tornquist	7.80	148	ePn	Pn	21 49 21.6	+2.4
TRQA				eSn	Sn	21 50 49.1	+1.6
GO06	Curarrehue	8.71	202	ePn	Pn	21 49 42.6	+11
LVC	Limon Verde	9.04	350	Pn	Pn	21 49 40.9	+4.3
	comp=Z,0.3nm,0.3s,baz=175,slow=12,SNR=2.1						
LVC				LR	LR	21 53 42.5	
	comp=Z,85nm,18.8s,baz=226,slow=40						
CPUP	Villa Florida	10.13	62	Pn	Pn	21 49 53.3	+2.0
	comp=Z,0.2nm,0.3s,baz=236,slow=13,SNR=3.4						
CPUP				Lg	Lg	21 52 52.4	
	comp=Z,0.9nm,0.3s,baz=234,slow=13,SNR=3.3						
LPAZ	La Paz	15.22	357	ePn	Pn	21 51 01.4	0.0
	comp=Z,1.7nm,0.6s						
LPAZ	La Paz	15.22	357	Pn	P	21 51 06.6	+0.2
	comp=Z,0.3nm,0.3s,baz=180,slow=10,SNR=6.1						
SNAA	Sanae	52.36	159	P	P	21 56 36.6	-0.9
	comp=Z,1.9nm,1.0s,baz=287,slow=11,SNR=7.4						
GLA	Glamis	78.41	321	eP	P	21 59 25.4	-1.1
	comp=Z,8.0nm,0.8s						
TORD	Torodi Ar. Bea	79.57	68	P	P	21 59 32.1	-1.2
	comp=Z,2.6nm,0.6s,baz=236,slow=4.7,SNR=28						
TOA1	Torodi Ar. Sit	79.57	68	eP	P	21 59 32.1	-1.2
WR1	Warramunga Arr	124.76	205	ePKPdf	PKPdf	22 06 24.4	-1.8
WRA	Warramunga Arr	124.76	205	PKP	PKPdf	22 06 24.4	-1.8
	comp=Z,0.4nm,0.4s,baz=161,slow=1.7,SNR=22						
WRA				pPKP	sPKPdf	22 06 34.0	+2.3
	comp=Z,0.3nm,0.7s,baz=158,slow=1.5,SNR=2.7						
ZAA1	Zalesovo Array	149.99	34	ePKPbc	PKPbc	22 07 15.3	-0.5
ZALV	Zalesovo Beam	149.99	34	PKPbc	PKPbc	22 07 15.3	-0.5
	comp=Z,1.6nm,0.4s,baz=324,slow=3.6,SNR=8.5						
ZALV				pPKPbc	pPKPab	22 07 25.3	-0.2
	comp=Z,0.6nm,0.4s,baz=318,slow=3.9,SNR=2.4						
MK32	Makanchi Array	152.13	48	ePKPbc	PKPbc	22 07 20.9	-0.2
MK32				ePKPab	PKPab	22 07 31.0	+0.2
MKAR	Makanchi Array	152.13	48	PKPbc	PKPbc	22 07 20.9	-0.2
	comp=Z,1.0nm,0.6s,baz=284,slow=1.9,SNR=16						
MKAR				pPKPbc	PKPab	22 07 31.0	+0.2
	comp=Z,0.5nm,0.6s,baz=306,slow=2.6,SNR=3.3						

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*SJA **12** 21:52:05.7±0.8, 28°.35S×69°.25W, h131^{km}±11^{km}, ML3.5, MW4.0*

*ISCJB **12** 21:52:07.0±0.6, 28°.30S±0°.04×69°.17W±0°.08, h111^{km}, mb3.2/1, Error ellipse: s-maj=10.0km s-min=5.7km az=6.1*

*IDC **12** 21:52:09.2±9.2, 28°.24S×68°.60W, h97^{km}±67^{km}, mb3.2/1, mb1 3.2/2, mb1mx3.0/36, mbtmp3.6/2, ML3.4/1, Error ellipse: s-maj=99.2km s-min=64.2km az=68.0*

ISC 12 21:52:08.1±1.0**, 28°.32S**±0°.05×**69°.22W**±0°.07**, h111**^{km}**, n12, σ0^{s}.89**/17**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGUA	GUANDACOL	1.32	151	i P	Pn	21 52 33.0	-0.1
LCO	Las Campanas	1.47	242	i P	Pn	21 52 34.3	-0.6
LCO				i S	Sn	21 52 55.2	0.0
ACDV	Cuesta del Vie	1.84	177	i P	Pn	21 52 38.9	-0.4
ACDV				i S	Sn	21 53 03.6	+0.4
AROD	Rodeo	1.85	187	i P	Pn	21 52 40.1	+0.5
AROD				i S	Sn	21 53 04.0	+0.5
ACCO	Cerro Coronel	2.26	177	i P	Pn	21 52 44.7	-0.1
GO04	Tololo Observa	2.30	217	i P	Pn	21 52 44.1	-1.2
CYA	Choya	3.01	93	i P	Pn	21 52 53.6	-0.7
CYA				IAML		21 52 54.4	
	comp=Z,63nm,0.3s						
RTLL	Cerro Villicun	3.06	168	i P	Pn	21 52 54.0	-1.0
RTLL				IAML		21 53 29.5	
	comp=N,198nm,0.4s						
RTLL				i S	Sn	21 53 29.6	-1.6
LVC	Limon Verde	5.70	3	P	Pn	21 53 30.5	-0.2
	comp=N,1.2nm,0.3s,baz=185,slow=7.7,SNR=15						
LVC				S	Sn	21 54 34.3	-0.7
	comp=N,1.1nm,0.3s,baz=217,slow=20,SNR=3.6						
TORD	Torodi Ar. Bea	79.97	69	P	P	22 04 05.3	-0.2
	comp=N,0.3nm,0.7s,baz=251,slow=4.4,SNR=3.1						
ZALV	Zalesovo Beam	148.13	29	PKPbc	PKPbc	22 11 42.0	+1.6
	comp=N,0.7nm,0.5s,baz=312,slow=4.6,SNR=3.9						
MKAR	Makanchi Array	151.08	43	PKPbc	PKPbc	22 11 49.2	+1.2
	comp=N,0.4nm,0.4s,baz=302,slow=1.6,SNR=10						

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*NNC **12** 21:53:08.1±2.1, 40°.34N×77°.08E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=18.4km s-min=8.0km az=138.0*

*KRNET **12** 21:53:09.6±0.1, 40°.47N×77°.12E, h16^{km}, mb2.4*

*SOME **12** 21:53:11.2, 40°.35N×77°.12E, h25^{km}*

ISC 12 21:53:08.3±1.9**, 40°.42N**±0°.07×**77°.11E**±0°.04**, h5**^{km}±13^{km}**, n31, σ1^{s}.21**/51**, 23C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.31	321	⇑iP	Pn	21 53 34.0	+0.4
	baz=18						
NRN				⇑iS	Sn	21 53 52.2	+0.5
	baz=18						
TARG	Taragay, Kyrgy	1.41	22	⇑iP	Pb	21 53 35.5	+0.2
	baz=22						
TARG				⇑iS	Sg	21 53 54.6	+1.1
	baz=22						
KDJ	Kajisay	1.71	2	⇓iP	Pg	21 53 41.0	0.0
	baz=2.0						
KDJ				⇓iS	Sg	21 54 03.4	+0.3
	baz=2.0						
ULHL	Ulahol	1.93	341	⇓iP	Pb	21 53 45.0	+0.8
	baz=40						
ULHL				⇓iS	Sg	21 54 10.7	+0.3
	baz=40						
KZA	Kyzart	2.17	320	⇓iP	Pb	21 53 48.9	+0.6
	baz=19						
KZA				⇓iS	Sg	21 54 17.6	-0.3
	baz=19						
BOOM	Boomskoye usch	2.24	337	⇑iP	Pb	21 53 49.6	+0.2
	baz=37						
BOOM				⇑iS	Sb	21 54 18.5	+0.9
	baz=37						
ARLS	Aral	2.55	305	⇑iP	Pb	21 53 53.7	-0.9
	baz=5.0						
ARLS				⇑iS	Sb	21 54 26.4	+0.1
	baz=5.0						
TNSS	Tian-Shan	2.61	357	Pg	Pg	21 53 58.9	+0.5
TNSS				Lg	Lg	21 54 33.4	
TNSS	Tian-Shan	2.61	357	eP	Pg	21 53 58.9	+0.5
TNSS				eS	Sg	21 54 33.4	+1.1
	3.6nm,0.4s						
UCH	Uchtor	2.66	314	⇓iP	Pb	21 53 55.8	-0.9
	baz=13						
UCH				⇓iS	Sb	21 54 29.4	-0.4
	baz=13						
MDOK	Medeo	2.74	359	⇑Pg	Pg	21 54 01.1	+0.4
	3.1nm,1.0s						
MDOK				Lg	Lg	21 54 37.0	
	3.9nm,0.7s						
MDOK	Medeo	2.74	359	Pg	Pg	21 54 01.1	+0.4
MDOK				Lg	Lg	21 54 37.4	
MDOK	Medeo	2.74	359	eP	Pg	21 54 01.1	+0.4
	0.6nm,0.2s						
MDOK				eS	Sg	21 54 36.9	+0.7
	4.3nm,0.5s						
TKM2	Tokmak 2	2.74	336	⇓Pg	Pb	21 53 57.4	-0.5
	1.3nm,0.7s						
TKM2				⇑Lg	Lg	21 54 37.6	
	2.0nm,0.6s						
TKM2	Tokmak 2	2.74	336	⇑iP	Pb	21 53 56.5	-1.4
	baz=36						
TKM2				⇑iS	Sb	21 54 30.8	-1.1
	baz=36						
KST	Kastek	2.75	342	eP	Pg	21 54 01.8	+0.8
	0.4nm,0.1s						
KST				eS	Sg	21 54 38.2	+1.4
	1.5nm,0.3s						
KBK	Karagaybulak	2.76	325	⇑iP	Pb	21 53 56.9	-1.3
	baz=24						
KBK				⇑iS	Sb	21 54 31.4	-1.0
	baz=24						
SFK	Sufi-Kurgan	2.79	263	⇓Pg	Pb	21 53 58.5	-0.3
	0.9nm,0.8s						
SFK				⇑Lg	Lg	21 54 33.4	
	1.3nm,0.6s						
SFK	Sufi-Kurgan	2.79	263	Pg	Pb	21 53 58.7	-0.1
SFK				Lg	Lg	21 54 33.4	
SATY	Saty	2.81	20	Pg	Pg	21 54 02.1	0.0
	4.7nm,0.9s						
SATY				Lg	Lg	21 54 38.6	
	3.1nm,0.5s						
SATY	Saty	2.81	20	eP	Pg	21 54 02.1	0.0
	0.6nm,0.1s						
SATY				eS	Sg	21 54 38.6	+0.2
	3.1nm,0.5s						
AAK	Ala-Archa	2.96	319	⇓Pg	Pg	21 54 04.8	-0.2
	2.9nm,0.9s						
AAK				⇓Lg	Lg	21 54 44.1	
	3.3nm,0.6s						
AAK	Ala-Archa	2.96	319	⇑iP	Pb	21 53 59.8	-1.8
	baz=19						
AAK				⇑iS	Sb	21 54 36.3	-1.8
	baz=19						
UZB	Uzynbulak	3.08	27	eP	Pg	21 54 06.8	-0.4
	0.7nm,0.5s						
UZB				eS	Sg	21 54 46.7	-0.3
	1.7nm,0.7s						
AML	Almayashu	3.09	305	⇑iP	Pb	21 54 01.9	-2.0
	baz=4.0						
AML				⇑iS	Sb	21 54 39.8	-2.3
	baz=4.0						
PDGK	Podgornoye	3.41	31	Pg	Pg	21 54 12.8	-0.7
	0.9nm,1.2s						
PDGK				Lg	Lg	21 54 57.0	
	0.9nm,0.4s						
PDGK	Podgornoye	3.41	31	⇑Pg	Pb	21 54 07.6	-1.6
	3.2nm,1.2s						
PDGK				⇑Lg	Lg	21 54 55.6	
	2.6nm,0.7s						
PDGK	Podgornoye	3.41	31	⇑eP	Pn	21 54 05.6	+3.4
	baz=31						
PDGK				⇑iS	Sb	21 54 46.5	-4.4
	baz=31						
CHKK	Chushkaly	3.43	359	eP	Pg	21 54 13.2	-0.7
	0.5nm,0.1s						
CHKK				eS	Sg	21 54 58.0	-0.5
	2.8nm,0.3s						
KUU	Kurty	3.51	351	Pg	Pg	21 54 15.1	-0.5
KUU				Lg	Lg	21 55 00.9	
KUU	Kurty	3.51	351	eP	Pg	21 54 15.1	-0.5
	0.5nm,0.4s						
KUU				eS	Sg	21 55 00.9	-0.2
	2.6nm,0.5s						

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*ISCJB **12** 22:04:09.4±0.5, 43°.88N±0°.04×105°.30W±0°.05, h0^{km}, mb3.8/1, Error ellipse: s-maj=6.1km s-min=5.0km az=155.9*

*NEIC **12** 22:04:10.8±0.4, 43°.81N×105°.22W, h0^{km}, MN3.1, Error ellipse: s-maj=6.7km s-min=5.3km az=165.0, Suspected Mining explosion.*

NEIC 58 km [36 miles] SSE of Gillette.

*IDC **12** 22:04:10.8±1.5, 43°.87N×105°.52W, h0^{km}, mb3.8/1, mb1 3.6/6, mb1mx3.4/39, mbtmp3.4/6, ML3.2/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/43, Error ellipse: s-maj=42.3km s-min=8.2km az=147.0*

ISC 12 22:04:11.1±0.6**, 43°.85N**±0°.04×**105°.34W**±0°.03**, h0**^{km}**, n23, σ2^{s}.23**/41**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.98	74	ePg	Pb	22 04 29.5	-1.6
RSSD				eSg	Sn	22 04 45.3	-1.7
LAO	LASA Array	2.90	348	ePn	Pn	22 04 59.0	+0.4
LAO				ePg	Pg	22 05 05.6	-1.2
LAO				eS	Sn	22 05 32.2	-2.1
RLMT	Red Lodge	3.09	296	ePn	Pn	22 05 01.0	-0.3
RLMT				eS	Sn	22 05 41.8	+2.8
BW06	Boulder Array	3.27	252	ePn	Pn	22 05 04.0	+0.2
BW06				eS	Sb	22 05 49.6	-0.9
PDAR	Pinedale Array	3.27	252	Pn	Pn	22 05 04.0	+0.2
	3.2nm,0.3s,baz=75,slow=14,SNR=27						
PDAR				Pg	Pb	22 05 09.9	-0.2
	9.1nm,0.3s,baz=74,slow=18,SNR=42						
PDAR				Lg	Lg	22 05 50.3	
	17nm,0.3s,baz=71,slow=33,SNR=8.3						
LKWY	Lake	3.71	283	ePn	Pn	22 05 11.6	+1.7
OGNE	Ogallala	3.80	139	ePn	Pn	22 05 10.5	-0.4
OGNE				eS	Sg	22 06 11.4	-1.7
ISCO	Idaho Springs	4.05	183	ePn	Pn	22 05 13.9	-0.8
ISCO				eS	Sg	22 06 17.2	-4.2
AHID	Auburn Hatcher	4.34	258	ePn	Pn	22 05 19.1	+0.6
AHID				ePg	Pb	22 05 30.5	+2.0
AHID				eS	Sn	22 06 08.5	-1.5
DGMT	Dagmar	4.69	9	ePn	Pn	22 05 22.5	-0.6
DGMT				eS	Sb	22 06 32.3	+1.2
BOZ	Bozeman (W)	4.81	293	ePn	Pn	22 05 26.9	+2.0
BOZ				ePg	Pb	22 05 38.6	+2.3
BOZ				eS	Sb	22 06 37.2	+2.4
EGMT	Eagleton	5.19	325	ePn	Pn	22 05 29.8	-0.3
	23nm,0.8s						
EGMT				ePg	Pb	22 05 44.3	+1.6
EGMT				eS	Sb	22 06 42.5	-3.0
ECSD	EROS Data Cent	6.32	88	ePn	Pn	22 05 44.9	-0.6
	7.1nm,0.5s						
ECSD				eS	Sn	22 07 03.4	+5.1
CBKS	Cedar Bluff	6.56	138	ePn	Pn	22 05 44.4	-4.6
	18nm,0.6s						
CBKS				ePg	Pb	22 06 09.4	+3.3
CBKS				eS	Sb	22 07 31.2	+6.1
HLID	Hailey	6.58	271	ePn	Pn	22 05 49.5	+0.2
MVCO	Mesa Verde	7.06	201	ePn	Pn	22 05 54.9	-1.0
	4.2nm,0.5s						
MVCO				eS	Sg	22 07 55.2	-2.6
AGMN	Agassiz Nation	7.95	53	ePn	Pn	22 06 07.4	-0.4
ELK	Elko	7.97	250	Pn	Pn	22 06 09.6	+1.2
	0.3nm,0.3s,baz=57,slow=12,SNR=7.4						
ULM	Lac du Bonnet	9.09	42	Pn	Pn	22 06 22.1	-1.3
	0.9nm,0.3s,baz=237,slow=12,SNR=6.5						
ULM				Lg	Lg	22 08 54.0	
	0.6nm,0.3s,baz=143,slow=20,SNR=2.9						
NEW	Newport	9.30	302	LR	LR	22 10 27.9	
	comp=Z,92nm,19.1s,baz=220,slow=41						
NVAR	Mina Array Bea	11.17	245	Pn	Pn	22 06 54.2	+1.9
	0.1nm,0.3s,baz=60,slow=13,SNR=3.7						
YKA	Yellowknife Ar	19.44	347	P	P	22 08 38.8	-0.1
	0.0nm,0.3s,baz=158,slow=13,SNR=6.1						
MKAR	Makanchi Array	89.49	355	P	P	22 17 09.4	-0.6
	0.4nm,0.6s,baz=12,slow=3.9,SNR=5.8						

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*IDC **12** 22:04:37.7±1.2, 11°.43S×165°.25E, h0^{km}, mb4.1/8, mb1 4.2/10, mb1mx4.0/38, mbtmp4.1/10, ML4.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/37, Error ellipse: s-maj=35.1km s-min=25.7km az=124.0*

*ISCJB **12** 22:04:41.9±0.8, 11°.5S±0°.1×165°.0E±0°.1, h34^{km}, mb4.0/8, Error ellipse: s-maj=18.9km s-min=11.0km az=37.7*

ISC 12 22:04:43.4±1.0**, 11°.4S**±0°.1×**165°.1E**±0°.1**, h34**^{km}**, n16, σ0^{s}.94**/13**, mb4.1**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.47	291	Pn	Pn	22 06 03.3	+0.8
	16nm,0.3s,baz=117,slow=11,SNR=3.7						
HNR				Sn	Sn	22 07 02.9	-1.4
	22nm,0.3s,baz=192,slow=20,SNR=3.5						
HNR				LR	LR	22 08 09.9	
	comp=Z,148nm,18.5s,baz=147,slow=38						
DZM	Mont Dzumac	10.66	173	Pn	Pn	22 07 13.8	0.0
	0.3nm,0.3s,baz=297,slow=4.9,SNR=7.8						
H11S2	WAKE ISLAND Hy	29.77	3	T	T	22 42 11.1	
	baz=184,slow=76,SNR=2.8						
H11S3	WAKE ISLAND Hy	29.77	3	T	T	22 42 05.7	
	baz=184,slow=76,SNR=3.8						
H11S1	WAKE ISLAND Hy	29.79	3	T	T	22 42 10.6	
	baz=184,slow=76,SNR=4.4						
WRA	Warramunga Arr	30.79	250	P	P	22 10 55.8	-0.3
	1.9nm,0.5s,baz=82,slow=8.7,SNR=29						
WRA				PcP	PcP	22 13 52.9	-0.3
	0.3nm,0.6s,baz=80,slow=3.4,SNR=5.3						

H11N1	WAKE ISLAND Hy	30.99	3	T	T	22 43 49.4	
	baz=176						
H11N3	WAKE ISLAND Hy	31.00	3	T	T	22 43 45.5	
	baz=176						
H11N2	WAKE ISLAND Hy	31.01	3	T	T	22 43 40.6	
	baz=176						
ASAR	Alice Springs	32.08	244	P	P	22 11 06.2	-1.3
	1.1nm,0.7s,baz=75,slow=9.6,SNR=12						
ASAR				PcP	PcP	22 13 56.5	-0.2
	0.5nm,0.7s,baz=73,slow=1.6,SNR=4.9						
BATI	Baumata	40.73	268	P	P	22 12 22.9	+1.5
	6.2nm,0.4s,baz=68,slow=3.6,SNR=3.7						
CMAR	Chiang Mai Arr	71.71	294	P	P	22 16 03.0	+0.4
	0.8nm,0.3s,baz=112,slow=4.2,SNR=4.5						
SONM	Songino Array	78.62	324	P	P	22 16 42.0	+0.1
	0.3nm,0.6s,baz=112,slow=6.4,SNR=3.1						
ILAR	Eielson Array	84.07	19	P	P	22 17 09.3	-0.9
	0.3nm,0.7s,baz=231,slow=5.0,SNR=7.3						
MKAR	Makanchi Array	93.39	317	P	P	22 17 54.8	-0.5
	1.0nm,0.8s,baz=94,slow=6.1,SNR=9.5						
ZALV	Zalesovo Beam	93.51	324	P	P	22 17 56.4	+0.9
	0.4nm,0.5s,baz=96,slow=4.3,SNR=2.3						

TIF ***12*** *22:08:08.5, 42°.32N×40°.99E, h26^{km}±1^{km}*
ISK ***12*** *22:08:08.8, 42°.26N×40°.94E, h6^{km}, ML2.7/3*
DDA ***12*** *22:08:09.8, 41°.99N×40°.66E, h6^{km}±6^{km}, ML2.9*
MOS ***12*** *22:08:09.6±0.0, 42°.47N×41°.09E, h8^{km}, MPVA3.5*
NORS ***12*** *22:08:10.3±0.0, 42°.48N×41°.35E, h10^{km}, MPVA3.3*
ISC 12 22:08:09.4±1.4, **42°.37N**±0°.02×**41°.09E**±0°.03, **h21**^{km}±4^{km}, **n27, σ0^{s}.83**/49, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.89	150	PG	Pb	22 08 26.1	0.0
BATM	Batumi	0.89	150	P	Pb	22 08 26.2	+0.1
BATM				S	Sn	22 08 39.1	+0.2
DOMR	Dombai	1.00	23	*i* Pg	Pb	22 08 26.8	-1.3
DOMR				*i* Sg	Sb	22 08 39.6	-1.3
BCA	Borcka	1.01	157	PG	Pn	22 08 27.5	-0.8
BCA				SG	Sb	22 08 41.3	+0.3
DBOC	Borcka	1.11	157	*i* P	Pn	22 08 29.4	-0.3
DBOC				*i* S	Sb	22 08 44.5	+0.5
ARXR	Arkhyz	1.20	6	*i* Pg	Pn	22 08 30.4	-0.7
ARXR				*e*Sg	Sn	22 08 46.1	-0.7
CHOM	Cayeli-Rize	1.30	191	PN	Pn	22 08 31.4	-0.9
CHOM				SN	Sn	22 08 47.8	-1.2
ARTV	Artvin	1.34	152	*i* P	Pn	22 08 33.5	+0.4
ARTV				*i* S	Sn	22 08 50.1	-0.3
ARTV				IAML_P			
	comp=Z,3µm,0.1s						
DBAD	Bademkaya	1.43	161	*i* P	Pn	22 08 34.7	+0.5
DBAD				IAML_P			
	comp=Z,1µm,0.1s						
DAGI	Agillar	1.43	154	*i* P	Pn	22 08 34.0	-0.2
DAGI				*i* S	Sn	22 08 53.2	+0.7
DAGI				IAML_P			
	comp=Z,405nm,0.1s						
RPOR	Krasnaya Polya	1.46	336	*e*Pg	Pn	22 08 34.8	+0.2
RPOR				*i* Sg	Sb	22 08 54.3	+0.3
NEY	Neytrino	1.48	53	*e*Pg	Pb	22 08 35.9	-0.5
NEY				*e*Sg	Sn	22 08 54.4	+0.5
DDEM	Demirkent	1.56	161	*i* P	Pn	22 08 36.2	+0.2
DDEM				*i* S	Sb	22 08 56.7	-0.3
SOC	Sochi	1.58	321	*e*Pg	Pb	22 08 37.1	-0.8
SOC				*e*Sg	Sb	22 08 57.8	+0.5
SHA1	Shidzhatmaz	1.78	39	*e*Pg	Pb	22 08 41.5	-0.1
SHA1				*e*Sg	Sb	22 09 04.2	+0.7
DIGR	Digorskoe uzhe	1.91	73	*e*Pg	Pb	22 08 42.8	-0.9
DIGR				*e*Sg	Sb	22 09 07.4	+0.3
KIV	Kislovodsk	1.96	36	PN	Pb	22 08 45.7	+1.1
KIV	Kislovodsk	1.96	36	*e*Pg	Pb	22 08 45.0	+0.5
KIV				*e*Sg	Sb	22 09 10.0	+1.4
KIV0	Kislovodsk Arr	1.97	36	*e*Pg	Pn	22 08 42.8	+1.1
KIV0				*e*Sg	Sb	22 09 08.9	+0.2
LZRR	Lazarevskoye	2.00	322	*e*Pg	Pb	22 08 44.6	-0.5
LZRR				*e*Sg	Sb	22 09 08.4	-1.2
BEYR	Belyy Ugol+	2.07	37	*i* Pg	Pb	22 08 46.0	-0.3
BEYR				*e*Sg	Sb	22 09 12.2	+0.6
BAYT	Aydıntepe-Bayb	2.10	200	PN	Pn	22 08 43.9	+0.4
ZEI	Tsey	2.12	78	*e*Pg	Pb	22 08 46.0	-1.2
ZEI				*e*Sg	Sb	22 09 14.1	+1.0
BAYB	BAYBURT	2.20	197	*i* P	Pn	22 08 46.3	+1.4
BAYB				IAML_P			
	comp=Z,83nm,0.1s						
KORR	Kora	2.30	71	*e*Pn	Pb	22 08 49.5	-0.8
KORR				*e*Sn	Sb	22 09 18.2	-0.1
LACR	Lac	2.41	78	*e*Pn	Pb	22 08 51.2	-1.0
LACR				*e*Sn	Sb	22 09 23.1	+1.6
VOZR	Vozrozhdenie	3.02	317	*e*Pn	Pb	22 09 04.2	+1.7
VOZR				*e*Sn	Sb	22 09 39.4	+0.6

IDC ***12*** *22:17:29.4±0.8, 55°.88S×27°.60W, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.0/29, mbtmp4.2/7, Error ellipse: s-maj=30.3km s-min=25.2km az=166.0*
ISCJB ***12*** *22:17:41.6±0.5, 55°.93S±0°.08×27°.6W±0°.1, h112^{km}, mb4.2/8, Error ellipse: s-maj=11.7km s-min=9.0km az=36.7*
NEIC ***12*** *22:17:44.3±1.0, 55°.94S×27°.45W, h120^{km}±8^{km}, mb4.3/2, Error ellipse: s-maj=9.0km s-min=7.7km az=45.0*
ISC 12 22:17:43.5±0.6, **55°.9S**±0°.1×**27°.55W**±0°.09, **h112**^{km}, **n44, σ1^{s}.38**/39, **mb4.2**/8, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.38	284	*e*Pn	Pn	22 19 03.1	+1.9
HOPE				*e*Sn	Sn	22 19 59.6	-2.2
VNA1	Neumayer--Stat	17.03	158	P	P	22 21 39.1	+4.8
VNA1	Neumayer--Stat	17.03	158	P	P	22 21 39.0	+4.6
VNA3	Neumayer Olymp	17.22	160	P	P	22 21 35.3	-1.2
VNA3	Neumayer Olymp	17.22	160	P	P	22 21 35.2	-1.2
VNA2	Neumayer--Watz	17.43	158	P	P	22 21 38.2	-0.5
SNAA	Sanae	18.98	156	P	P	22 21 54.8	-1.0
SNAA	Sanae	18.98	156	P	P	22 21 54.7	-1.0
SNAA	Sanae	18.98	156	*e*P	P	22 21 54.8	-1.0
	12nm,0.8s						
QSPA	South Pole Qui	34.37	180	*e*P	P	22 24 18.9	-0.4
	3.2nm,0.6s						
BOSA	Boshof	46.13	76	P	P	22 25 55.2	-1.4
	0.8nm,0.7s,baz=133,slow=19,SNR=3.1						
VNDA	Vanda	46.73	183	P	P	22 26 00.4	-0.1
	3.3nm,0.7s,baz=190,slow=7.3,SNR=5.7						
H10S2	ASCENSION HYDR	47.90	17	T	T	23 16 57.9	
	baz=191,slow=75,SNR=6.8						
H10S3	ASCENSION HYDR	47.90	17	T	T	23 17 02.2	
	baz=191,slow=75,SNR=7.5						
H10S1	ASCENSION HYDR	47.91	17	T	T	23 17 00.9	
	baz=191,slow=75,SNR=7.1						
H10N1	ASCENSION HYDR	49.02	17	T	T	23 18 23.2	
	baz=196						
H10N3	ASCENSION HYDR	49.02	17	T	T	23 18 20.7	
	baz=196,slow=74						
H10N2	ASCENSION HYDR	49.03	17	T	T	23 18 17.3	
	baz=196,slow=74						
LBTB	Lobatse	49.15	74	P	P	22 26 20.5	+0.6
	2.9nm,0.8s,baz=189,slow=6.5,SNR=4.1						
LPAZ	La Paz	50.11	305	P	P	22 26 28.6	+0.8
	0.7nm,0.4s,baz=135,slow=2.9,SNR=5.5						
MATP	Matopo	54.42	73	P	P	22 26 59.4	+0.3
	2.0nm,0.6s,baz=208,slow=5.4,SNR=8.6						
DBIC	Dimbokro	65.10	25	P	P	22 28 12.7	+0.7
	4.8nm,1.0s,baz=149,slow=8.0,SNR=3.7						
TOA0	Torodi Ar. Sit	73.01	30	*e*P	P	22 29 00.8	0.0
TORD	Torodi Ar. Bea	73.01	30	P	P	22 29 00.6	-0.2
	3.8nm,0.5s,baz=200,slow=5.8,SNR=63						
TOA1	Torodi Ar. Sit	73.01	30	*e*P	P	22 29 00.6	-0.2
TBLG	Delisi	114.80	52	*e*Pdif	Pdif	22 32 19.2	-1.8
FIA0	FINESS Array S	124.33	28	*e*PKPdf	PKPdf	22 36 27.1	-0.5
FINES	FINESS Array B	124.33	28	PKP	PKPdf	22 36 27.1	-0.5
	0.7nm,0.5s,baz=258,slow=2.6,SNR=6.3						
ARA0	ARCESS Array S	130.86	22	*e*PKPdf	PKPdf	22 36 39.8	-0.1
ARCES	ARCESS Array B	130.86	22	PKP	PKPdf	22 36 39.8	-0.1
	1.3nm,0.9s,baz=212,slow=3.2,SNR=7.3						
YKA	Yellowknife Ar	135.91	318	PKP	PKPdf	22 36 49.0	-0.5
YKA	Yellowknife Ar	135.91	318	PKP	PKPdf	22 36 49.0	-0.5
	0.6nm,0.5s,baz=130,slow=2.0,SNR=9.9						
YKB5	Yellowknife Ar	135.91	318	*e*PKPdf	PKPdf	22 36 49.0	-0.5
INK	Inuvik	145.54	321	*e*PKPdf	PKPab	22 37 07.3	-0.1
EPYK	Eagle Plains	146.16	317	*e*PKPdf	PKPbc	22 37 08.8	-0.2
RIDG	Independ'e Rid	148.74	310	*e*PKPbc	PKPbc	22 37 16.6	+0.4
PRP	Porcupine Dome	149.44	314	*e*PKPbc	PKPbc	22 37 17.9	-0.1
IL1	Eielson Array	149.85	312	*e*PKPbc	PKPbc	22 37 18.4	-0.4
ILAR	Eielson Array	149.85	312	PKPbc	PKPbc	22 37 18.6	-0.3
	5.1nm,0.7s,baz=126,slow=3.4,SNR=58						
ILB	Eielson Array	149.85	312	*e*PKPbc	PKPbc	22 37 18.8	-0.1
WRH	Wood River Hil	150.30	311	*e*PKPbc	PKPbc	22 37 19.7	-0.2
SONA0	Songino Array	150.92	86	*e*PKPbc	PKPbc	22 37 21.8	-0.2
SONM	Songino Array	150.92	86	PKPbc	PKPbc	22 37 21.8	-0.2
	4.2nm,0.4s,baz=222,slow=3.3,SNR=14						
TOLK	Toolik Lake Re	151.42	320	*e*PKPbc	PKiKP	22 37 22.6	-0.4

ISCJB ***12*** *22:22:44.3±0.5, 32°.35N±0°.06×101°.55E±0°.06, h10^{km}, mb3.6/9, MS3.5/1, Error ellipse: s-maj=9.1km s-min=5.4km az=37.1*
IDC ***12*** *22:22:44.2±1.6, 32°.29N×101°.37E, h0^{km}, mb3.7/10, mb1 3.8/12, mb1mx3.6/66, mbtmp3.7/12, ML3.3/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/49, Error ellipse: s-maj=35.5km s-min=24.8km az=11.0*
BJI ***12*** *22:22:47.0, 32°.28N×101°.46E, h6^{km}, mb3.9/1, ML3.5/19, Ms3.5/10, Ms7 3.4/7*
ISC 12 22:22:46.9±0.7, **32°.32N**±0°.05×**101°.44E**±0°.06, **h10**^{km}, **n20, σ2^{s}.66**/25, **mb3.8**/9, **1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	2.42	125	Pg	Pb	22 23 29.8	-0.8
CD2				Sg	Sg	22 24 02.6	-2.2
CD2				smax	smax		
	comp=N,2µm,0.6s						
CD2				smax	smax		
	comp=E,890nm,0.6s						
LZH	Lanzhou	4.25	27	*e*Pn	Pn	22 23 52.5	+0.6
LZH				Pg	Pb	22 24 03.8	+1.9
LZH				Sn	Sn	22 24 46.6	+4.9
LZH				Sg	Sb	22 24 57.7	+4.3
LZH				smax	smax		
	comp=N,180nm,1.1s						
LZH				smax	smax		
	comp=E,120nm,1.1s						
LZH				LR	LR		
	comp=N,1µm,7.0s						
LZH				LR	LR		
	comp=E,660nm,5.7s						
LZH				LR	LR		
	comp=Z,790nm,7.0s						
XAN	Xi'an	6.50	73	Pn	Pn	22 24 21.7	-1.0
XAN				Pg	Pb	22 24 45.7	+5.5
XAN				Sn	Sn	22 25 34.2	-2.8
XAN				Sg	Sg	22 26 12.2	-3.5
XAN				smax	smax		
	comp=N,24nm,1.2s						
XAN				smax	smax		
	comp=E,26nm,1.3s						
GTA	Gaotai	7.20	350	*e*P	Pn	22 24 41.0	+8.6
GTA				pP	Pb	22 24 45.9	-6.2
GTA				sP	Pg	22 24 48.3	-16
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				smax	smax		
	comp=N,7.0nm,1.7s						
GTA				smax	smax		
	comp=E,10.0nm,2.0s						
KMI	Kunming	7.26	171	Pn	Pn	22 24 36.5	+3.3
KMI				Sn	Sn	22 26 02.6	+6.8
KMI				smax	smax		
	comp=E,12nm,1.5s						
KMI				smax	smax		
	comp=E,14nm,1.2s						
KMI				LR	LR		
	comp=E,150nm,10.6s						
KMI				LR	LR		
	comp=E,320nm,9.9s						
KMI				LR	LR		
	comp=E,200nm,10.8s						
CMAR	Chiang Mai Arr	13.98	190	Pn	Pn	22 26 04.9	-0.3
	comp=E,0.1nm,0.3s,baz=6.6,slow=11,SNR=2.2						
WMQ	Urumqi	15.76	321	*e*P	Pn	22 26 27.9	-1.0
SONM	Songino Array	15.95	12	Pn	Pn	22 26 31.0	-0.5
	comp=E,0.1nm,0.3s,baz=197,slow=13,SNR=8.1						
MKAR	Makanchi Array	20.59	320	P	P	22 27 25.7	-0.3
	comp=E,1.7nm,0.8s,baz=124,slow=11,SNR=12						
KSRS	Korea Array	22.29	69	P	P	22 27 43.8	-0.5
	comp=E,0.9nm,0.6s,baz=253,slow=10,SNR=3.2						
AAK	Ala-Archa	23.65	304	P	P	22 27 58.3	-0.2
	comp=E,0.9nm,0.6s,baz=84,slow=7.9,SNR=4.7						
ZALV	Zalesovo Beam	24.67	336	P	P	22 28 06.8	-0.9
	comp=E,1.5nm,0.6s,baz=152,slow=9.8,SNR=8.4						
KURBB	Kurchatov Arra	24.92	324	P	P	22 28 09.3	-0.7
	comp=E,2.3nm,0.7s,baz=129,slow=9.7,SNR=23						
BVAR	Borovoye Array	30.44	322	P	P	22 28 58.3	-1.1
	comp=E,0.3nm,0.5s,baz=114,slow=8.5,SNR=2.8						
DCPH	Dipolog City	31.16	134	⇓*e*P	P	22 29 08.5	+2.4
KVAR	Kislovodsk Arr	46.74	302	LR	LR	22 52 54.0	
	comp=E,59nm,19.9s,baz=85,slow=39						
BRTR	Keskin Array B	54.17	298	P	P	22 32 09.8	-2.8
	comp=E,1.1nm,0.8s,baz=106,slow=5.8,SNR=6.7						
ARCES	ARCESS Array B	55.22	335	P	P	22 32 17.9	-1.7
	comp=E,2.8nm,1.1s,baz=94,slow=8.5,SNR=5.6						
FINES	FINESS Array B	55.29	326	P	P	22 32 17.8	-2.4
	comp=E,1.1nm,0.8s,baz=104,slow=5.0,SNR=2.3						
YKA	Yellowknife Ar	81.18	16	P	P	22 35 01.4	-1.0
	comp=E,0.3nm,0.7s,baz=328,slow=5.2,SNR=5.4						

AZER ***12*** *22:24:38.9±0.1, 38°.42N×46°.72E, h10^{km}, ml4.3/26, Error ellipse: s-maj=5.7km s-min=0.7km az=18.0*
NSSP ***12*** *22:24:39.9, 38°.50N×46°.83E, h15^{km}, Ms4.2*
TEH ***12*** *22:24:41.5, 38°.47N×46°.71E, h10^{km}, ML4.1*
NEIC ***12*** *22:24:41.0±0.0, 38°.47N×46°.71E, h10^{km}, mb4.2/2, ML4.1(THR), MN4.1(TEH), After TEH.*
IDC ***12*** *22:24:42.2±1.1, 38°.23N×46°.60E, h0^{km}, mb3.8/13, mb1 3.9/19, mb1mx3.8/55, mbtmp3.8/19, ML3.3/5, MS3.0/7, Ms1 3.0/7, ms1mx2.7/53, Error ellipse: s-maj=20.5km s-min=11.0km az=5.0*
THR ***12*** *22:24:43.2, 38°.50N×46°.76E, h14^{km}, ML4.1*
MOS ***12*** *22:24:45.6±1.5, 38°.66N×46°.72E, h15^{km}, mb4.2/5, Error ellipse: s-maj=8.5km s-min=4.4km az=105.8*
NNC ***12*** *22:24:46.6±3.9, 38°.89N×47°.16E, h0^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=35.3km s-min=17.3km az=59.0*
ISC 12 22:24:41.9±1.1, **38°.49N**±0°.02×**46°.73E**±0°.02, **h3**^{km}±7^{km}, **n201, σ1^{s}.94**/233, **mb3.9**/14, **MS3.1**/3, **45C-31D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHRS	Heris	0.30	125	Pg	Pg	22 24 47.6	-0.1
IHRS	Heris	0.30	125	*e*Pg	Pg	22 24 47.6	-0.1
IHRS				*e*Sg	Sg	22 24 52.1	+0.5
IHRS				IAMB	IAmb	22 24 53.4	
	comp=Z,1820µm,0.2s						
ITBZ	Tabriz	0.53	241	*e*Pg	Pg	22 24 51.3	-0.7
ITBZ				IAMB	IAmb	22 25 11.4	
	comp=Z,79µm,0.5s						
ORD	Ordubad	0.72	307	*e*Pg	Pg	22 24 55.9	+0.2
ORD	Ordubad	0.72	307	⇑S	Sb	22 25 06.1	-1.4
IBST	Bostanabad	0.80	171	Pg	Pg	22 24 54.9	-2.3
IBST	Bostanabad	0.80	171	*e*Pg	Pg	22 24 54.9	-2.3
IBST				IAMB	IAmb	22 25 09.7	
	comp=Z,85µm,0.5s						
IMRD	Marand	0.83	286	*e*Pg	Pg	22 24 57.4	-0.5
IMRD				IAMB	IAmb	22 25 01.1	
	comp=Z,96µm,0.2s						
GRMI	Germi	0.96	71	Pg	Pg	22 25 00.0	-0.3
GRMI				Sg	Sg	22 25 13.0	+0.2
GRMI	Germi	0.96	71	*e*Pg	Pg	22 25 00.8	+0.5
GRMI	Germi	0.96	71	*e*AML	AML	22 25 15.3	
	comp=E,7µm,0.2s						
GRMI				*e*AML	AML	22 25 15.3	
	comp=N,6µm,0.2s						
GRMI	Germi	0.96	71	*e*Pg	Pg	22 25 00.8	+0.5
GRMI				*e*Sg	Sb	22 25 14.0	-0.5
ISRB	Sarab	0.99	132	*e*Pg	Pg	22 24 59.6	-1.3
ISRB				IAMB	IAmb	22 25 16.2	
	comp=Z,4µm,0.2s						
IAZR	Azarshahr	1.01	216	Pg	Pg	22 24 59.7	-1.5
IAZR	Azarshahr	1.01	216	*e*Pg	Pg	22 24 59.7	-1.5
IAZR				IAMB	IAmb	22 25 03.2	
	comp=Z,66µm,0.2s						
GRS	Goris	1.05	343	⇑*i*P	Pn	22 25 08.0	+4.3
GRS				⇓*i*S	Sn	22 25 23.0	+4.0
NAX	Nakhchivan	1.18	306	PG	Pb	22 25 04.1	-0.9
NAX	Nakhchivan	1.18	306	*e*Pg	Pb	22 25 04.1	-0.9
NAX	Nakhchivan	1.18	306	⇑P	Pb	22 25 04.1	-0.9
	SNR=259						
NAX				⇓S	Sn	22 25 21.2	-0.9
LRK	Lerik	1.27	83	*e*Pg	Pn	22 25 05.6	-1.1
LRK	Lerik	1.27	83	⇑P	Pn	22 25 05.7	-1.1
	SNR=4303						
LRK				⇑S	Sn	22 25 23.8	-0.5
SBZ	Shahbuz	1.29	315	*e*Pg	Pn	22 25 05.7	-1.2
SBZ	Shahbuz	1.29	315	⇓P	Pn	22 25 05.8	-1.2
SBZ				⇓S	Sn	22 25 25.9	+1.2
STKZ		1.32	1	⇑*i*P	Pg	22 25 12.7	+5.6
STKZ				⇓*i*S	Sg	22 25 31.2	+6.9
GLBA	Clilabad	1.50	60	*e*Pn	Pg	22 25 10.8	+0.2
GLBA	Clilabad	1.50	60	⇑P	Pn	22 25 09.4	-0.3
GLBA				⇓S	Sg	22 25 32.1	+2.1
ASTR	Astara	1.62	87	*e*Pn	Pb	22 25 11.7	-0.7
ASTR	Astara	1.62	87	⇓P	Pn	22 25 11.0	-0.3
	SNR=160						
ASTR				⇑S	Sg	22 25 34.8	+1.0
LKRN	Lenkeran, Azer	1.62	82	PG	Pb	22 25 11.8	-0.6
LKRN	Lenkeran, Azer	1.62	82	*e*Pn	Pb	22 25 11.8	-0.6
LKRN	Lenkeran, Azer	1.62	82	P	Pb	22 25 11.8	-0.6
	SNR=905						
BRDA	Brd	1.80	11	*e*Pn	Pn	22 25 14.0	+0.2
BRDA	Brd	1.80	11	⇑P	Pb	22 25 15.0	-0.5
BRDA				⇑S	Sg	22 25 41.3	+1.5
SAAT	Saatly	1.90	43	*e*Pn	Pn	22 25 13.8	-1.3
SAAT	Saatly	1.90	43	⇑P	Pn	22 25 15.6	+0.5
HYR	Heyderabad	1.91	311	*e*Pn	Pn	22 25 15.7	+0.4
HYR	Heyderabad	1.91	311	⇓P	Pn	22 25 15.7	+0.4
HYR				⇑S	Sg	22 25 43.5	+0.4
ZRD	Zardab	1.93	22	*e*Pn	Pn	22 25 15.3	-0.3
ZRD	Zardab	1.93	22	⇑P	Pn	22 25 15.3	-0.3
ZRD				⇑S	Sg	22 25 45.3	+1.4
GANJ	Ganja	2.17	352	PN	Pb	22 25 20.7	-1.2
GANJ	Ganja	2.17	352	*e*Pn	Pb	22 25 20.7	-1.2
GANJ	Ganja	2.17	352	⇑P	Pb	22 25 20.0	-1.9
GANJ				⇓S	Sg	22 25 49.8	-1.9
KDMR	Kurdemir	2.19	30	*e*Pn	Pb	22 25 20.4	-1.7
KDMR	Kurdemir	2.19	30	⇓P	Pb	22 25 20.2	-2.0
KDMR				⇓S	Sg	22 25 51.6	-0.7
GNI	Garni	2.26	318	P	Pg	22 25 24.4	-0.8
GNI				S	Sb	22 25 50.4	-1.5
GNI	Garni	2.26	318	*e*Pn	Pb	22 25 23.0	-0.5
GNI				*e*S	Sb	22 25 50.5	-1.5
GNI	Garni	2.26	318	*d i*PN	Pb	22 25 23.4	-0.1
GNI	Garni	2.26	318	⇓*i*P	Pb	22 25 22.7	-0.7
GNI				⇓*i*S	Sg	22 25 54.3	-0.2
GNI	Garni	2.26	318	*e*Pn	Pb	22 25 23.4	-0.1
CLDR	Caldiran	2.29	287	P	Pb	22 25 24.8	+0.7
CLDR	Caldiran	2.29	287	*e*Pn	Pb	22 25 24.7	+0.7
MNGR	Mingechevir, A	2.29	7	PN	Pn	22 25 21.3	+0.7
MNGR	Mingechevir, A	2.29	7	*e*Pn	Pn	22 25 21.3	+0.7
MNGR	Mingechevir, A	2.29	7	⇑P	Pn	22 25 21.3	+0.7
ALIB	Äli-Bayra	2.29	50	⇑P	Pn	22 25 21.4	+0.8
ALIB				⇑S	Sb	22 25 52.9	+0.2
GDB	GEDABAY	2.35	342	*e*Pn	Pn	22 25 22.1	+0.6
GDB	GEDABAY	2.35	342	⇑P	Pn	22 25 22.2	+0.6
GDB				⇓S	Sb	22 25 54.9	+0.5
ZNJK	Zanjan	2.39	139	Pn	Pn	22 25 24.0	+1.9
ZNJK				Sg	Sg	22 25 58.0	-0.7
ZNJK	Zanjan	2.39	139	*e*Pn	Pn	22 25 24.1	+1.9
ZNJK	Zanjan	2.39	139	*e*Pn	Pn	22 25 24.1	+1.9
ZNJK				*e*Sg	Sg	22 25 58.1	-0.6
TASB	TASBURUN-IGDIR	2.44	308	P	Pb	22 25 26.9	+0.4
TASB				S	Sb	22 25 55.1	-1.9
TASB	TASBURUN-IGDIR	2.44	308	*e*Pn	Pb	22 25 26.9	+0.4
IML	Ismayilli	2.56	26	*e*Pn	Pn	22 25 24.9	+0.6
IML	Ismayilli	2.56	26	⇑P	Pn	22 25 24.9	+0.6
IML				⇓S	Sb	22 25 58.8	-1.5
QBL	Gabala	2.59	19	⇓P	Pn	22 25 25.7	+0.9
QBL				⇓S	Sb	22 26 00.7	-0.7
SEKA	Sheki	2.74	7	⇑P	Pn	22 25 27.3	+0.5
SEKA				⇑S	Sb	22 26 04.9	-0.6
CUKT	Cukurca	2.77	244	P	Pg	22 25 35.8	+0.9
QZX	Qazax, Azerbai	2.77	338	*e*Pn	Pn	22 25 28.6	+1.4
QZX	Qazax, Azerbai	2.77	338	⇓P	Pn	22 25 27.5	+0.3
QZX				⇑S	Sb	22 26 03.9	-2.5
XNQ	Khinaliq	2.89	22	⇓P	Pn	22 25 29.7	+0.7
XNQ				⇑S	Sb	22 26 06.4	-3.6
ATGJ	Altiaghaj	2.91	35	⇓P	Pn	22 25 30.2	+0.9
ATGJ				⇓S	Sb	22 26 10.0	-0.6
AKDM	Akdamar-Van	2.95	268	P	Pb	22 25 36.9	+1.7
SIZA	Siyzn	3.07	32	⇓P	Pn	22 25 32.1	+0.7
SIZA				⇑S	Sb	22 26 12.1	-3.1
AKT	Akhty	3.08	14	*i* PN	Pb	22 25 34.3	-3.1
AKT	Akhty	3.08	14	*e*Pn	Pb	22 25 34.3	-3.1
AGRB	Hanur-Agry	3.11	292	P	Pb	22 25 37.4	-0.5
AGRB	Hanur-Agry	3.11	292	*e*Pn	Pb	22 25 37.3	-0.6
ZKTA	Zakatala	3.14	359	⇑P	Pn	22 25 33.5	+1.2
ZKTA				⇑S	Sb	22 26 13.0	-4.2
QUBA	Quba, Azerbaij	3.16	25	⇑P	Pn	22 25 33.1	+0.5
QUBA				⇑S	Sb	22 26 14.2	-3.5
QSAR	Qusar	3.24	21	⇑P	Pn	22 25 34.6	+0.9
QSAR				⇑S	Sb	22 26 16.8	-3.1
MLAZ	Malazgirt-MUS	3.33	283	P	Pb	22 25 41.6	-0.1
LGD	Lagodekhi	3.36	354	P	Pb	22 25 38.5	-3.6
LGD				S	Sg	22 26 28.7	-1.0
LGD	Lagodekhi	3.36	354	*e*PN	Pb	22 25 38.5	-3.6
LGD				*e*S	Sg	22 26 28.7	-1.0
KZRT	Kazreti	3.40	329	P	Pb	22 25 44.2	+1.4
KZRT				S	Sg	22 26 29.0	-2.1
SNGE	Sanandaj	3.43	172	Pn	Pn	22 25 38.0	+1.6
SNGE	Sanandaj	3.43	172	*e*Pn	Pn	22 25 38.5	+2.1
SNGE	Sanandaj	3.43	172	*e*Pn	Pn	22 25 38.5	+2.1
HSRG	Sareghieh	3.47	159	*e*Pn	Pn	22 25 37.8	+0.7
HSRG				IAMB	IAmb	22 26 40.0	
	comp=N,0.0nm,0.9s						
SIRT	Sirnak	3.53	255	P	Pb	22 25 46.7	+1.6
KARS	Kars	3.54	308	P	Pb	22 25 42.8	-2.5
KARS	Kars	3.54	308	PN	Pb	22 25 42.7	-2.5
KARS	Kars	3.54	308	*e*Pn	Pb	22 25 42.7	-2.5
TBLG	Delisi	3.58	335	P	Pb	22 25 42.3	-3.5
TBLG	Delisi	3.58	335	P	Pb	22 25 47.8	+2.0
TBLG				S	Sg	22 26 35.2	-1.5
TBLG	Delisi	3.58	335	*e*PN	Pb	22 25 47.8	+2.0
TBLG				*e*S	Sg	22 26 35.2	-1.5
SEAG	Tbilisi Sea	3.59	336	P	Pb	22 25 46.8	+0.8
SEAG				S	Sg	22 26 36.1	-0.9
TRLG	Trialeti	3.65	327	P	Pb	22 25 48.7	+1.6
TRLG				S	Sg	22 26 37.5	-1.6
BGD	Bogdanovka	3.67	320	P	Pb	22 25 49.5	+2.0
GURO	Guroymak-BITLI	3.69	272	P	Pb	22 25 46.9	-0.8
DRN	Derbent	3.74	19	*i* PN	Pn	22 25 42.1	+1.7
IVIS	Veis	3.96	179	*e*Pn	Pn	22 25 43.6	0.0
IVIS				IAMB	IAmb	22 26 55.8	
	comp=Z,2µm,1.2s						
IRAZ	Razeghan	4.01	139	*e*Pn	Pn	22 25 45.1	+0.7
IRAZ				IAMB	IAmb	22 25 57.6	
	comp=Z,4µm,0.5s						
KOPR	Koprukoy-ERZUR	4.07	293	P	Pb	22 25 51.3	-3.0
HAGD	Aghdareh	4.14	151	*e*Pn	Pn	22 25 47.0	+0.7
HAGD				IAMB	IAmb	22 26 12.8	
	comp=Z,0.0nm,1.1s						
BTLR	Botlikh	4.18	355	⇓*e*PN	Pn	22 25 47.7	+1.0
THKV	Tehran--Karaj	4.19	127	Pn	Pn	22 25 48.0	+1.1
THKV	Tehran--Karaj	4.19	127	*e*Pn	Pn	22 25 48.9	+2.0
THKV	Tehran--Karaj	4.19	127	*e*AML	AML	22 27 00.8	
	comp=N,133nm,0.5s						
THKV	Tehran--Karaj	4.19	127	*e*Pn	Pn	22 25 48.9	+2.0
CHTH	Charan	4.36	125	Pn	Pn	22 25 51.0	+1.8
CHTH	Charan	4.36	125	*e*Pn	Pn	22 25 51.0	+1.8
CHTH	Charan	4.36	125	*e*Pn	Pn	22 25 51.0	+1.8
IKOM	Komasi	4.36	171	*e*Pn	Pn	22 25 51.1	+2.0
IKOM				IAMB	IAmb	22 27 25.6	
	comp=Z,0.0nm,2.1s						
SVAN	Silvan-Diyarba	4.36	267	P	Pb	22 25 56.9	-2.3
MAK	Makhachkala	4.50	7	*e*PN	Pn	22 25 49.7	-1.2
MAK				*e*		22 26 02.6	
MAK				*e*S	Sn	22 26 41.2	-2.6
MAK				pmax	pmax		
	comp=Z,54nm,1.1s						
MAK				smax	smax		
	comp=N,204nm,0.6s						
MAK				smax	smax		
	comp=N,235nm,0.6s						
MAK				MLR	MLR		
	comp=Z,589nm,11.0s						
DBC	Dubki	4.52	1	*i* PN	Pn	22 25 52.8	+1.5

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HSAM   Samen               4.53 160  ePn     Pn      22 25 53.5 +1.9
LACR   Lac                 4.71 338  ePN     Pn      22 25 58.5 +4.6
LACR                                  pmax   pmax
       comp=Z,70nm,0.6s
BNGB   Bingl               4.76 278   P      Pb      22 26 01.8 -4.2
GROC   Groznyy             4.76 352  ePN     Pn      22 25 54.5  0.0
GROC                                 e               22 26 09.2
GROC                                 eS      Sn      22 26 50.5 +0.4
GROC                                 e               22 27 18.5
GROC                                  pmax   pmax
       comp=Z,72nm,0.9s
GROC                                  smax   smax
       comp=E,94nm,1.7s
GROC                                  smax   smax
       comp=E,261nm,1.4s
ZEI    Tsey                4.80 334  ePN     Pb      22 26 02.0 -4.7
ZEI                                   pmax   pmax
       comp=Z,25nm,0.6s
BINT   Bingol              4.90 276   PN     Pn      22 26 01.7 +5.1
BCA    Borcka              4.91 309  eP      Pn      22 26 02.0 +5.4
IPRN   Peran               5.00 115  ePn     Pn      22 25 59.0 +1.1
DIGR   Digorskoe uzhe      5.01 332  ePN     Pn      22 26 02.9 +4.8
DIGR                                  pmax   pmax
       comp=Z,30nm,0.6s
MAZI   Mazidag             5.07 260  eP      Pb      22 26 07.6 -3.7
IALA   Alasht              5.41 115   Pn     Pn      22 26 05.1 +1.4
IALA   Alasht              5.41 115  ePn     Pn      22 26 05.2 +1.5
NCK    Nalchik             5.53 336⇓ ePN     Pn      22 26 06.9 +1.8
NEY    Neytrino            5.64 329⇑ eP      Pn      22 26 07.2 +0.4
PTK    Pertek              5.75 276  eP      Pb      22 26 16.4 -6.6
ISHM   Shahmirzad          5.89 115  ePn     Pn      22 26 13.1 +2.8
ISHM                                  IAMB   IAmb    22 26 23.1
       comp=Z,1µm,0.4s
KBZ    Khabaz              5.98 332   Pn     Pn      22 26 17.6 +6.4
       comp=Z,0.1nm,0.3s,baz=157,slow=12,SNR=3.3
KBZ                                   Pg     Pg      22 26 32.2 -4.1
       comp=Z,0.5nm,0.3s,baz=156,slow=10,SNR=17
KBZ                                   Lg     Lg      22 27 50.3
       comp=Z,0.5nm,0.3s,baz=266,slow=10,SNR=2.8
KBZ                                   LR     LR      22 29 04.5
       comp=Z,106nm,19.3s,baz=152,slow=42
ISFB   Sefidab             6.07 131  ePn     Pn      22 26 13.6 +1.0
ISFB                                  IAMB   IAmb    22 26 34.4
       comp=N,708nm,0.4s
SHA1   Shidzhatmaz         6.08 331⇑ eP      Pn      22 26 16.0 +3.2
DOMR   Dombai              6.16 323⇑ eP      Pn      22 26 14.5 +0.6
KVAR   Kislovodsk Arr      6.25 332   Pn     Pn      22 26 21.8 +6.8
       baz=90,slow=20,SNR=5.6
KIV    Kislovodsk          6.25 332  ePn     Pn      22 26 15.5 +0.5
       comp=N,9.2nm,0.8s
KIV                                  eS      Sn      22 27 25.7 -1.4
KIV    Kislovodsk          6.25 332  eP      Pn      22 26 14.3 -0.8
KIV                                  eS      Sn      22 27 25.2 -1.9
KIV                                   pmax   pmax
       comp=Z,8.0nm,1.0s
KRSH   Karshahi            6.28 134  ePn     Pn      22 26 16.5 +0.9
IKLH   Kolahrood           6.49 141  ePn     Pn      22 26 21.0 +2.5
IKLH                                  IAMB   IAmb    22 26 45.3
       comp=Z,584nm,0.7s
IANJ   Anjilo              6.49 116   Pn     Pn      22 26 21.2 +2.7
IANJ   Anjilo              6.49 116  ePn     Pn      22 26 21.3 +2.7
IZEF   Zefreh              7.21 139  ePn     Pn      22 26 30.2 +1.8
ANAR   Anarak              7.76 131  ePn     Pn      22 26 36.1 +0.2
SBZV   Sabzevar            8.90 100  ePn     Pn      22 26 52.9 +1.3
GEYT   Alibeck             8.98  90   Pn     Pn      22 26 52.7 +0.2
       comp=Z,1.8nm,0.3s,baz=315,slow=7.5,SNR=15
GEYT                                  Sn     Sn      22 28 36.5 +2.3
       comp=Z,1.4nm,0.3s,baz=268,slow=32,SNR=5.2
GEYT                                  LR     LR      22 31 54.0
       comp=Z,100nm,19.5s,baz=275,slow=48
GYA0B  ALIBECK ARRAY       8.98  90 ⇓P       Pn      22 26 52.9 +0.4
       comp=Z,12nm,0.6s
GYA0B                               ⇓S       Sn      22 28 33.0 -1.2
       comp=Z,27nm,0.8s
ISFR   Sfrayin             9.04  96  ePn     Pn      22 26 54.6 +1.1
IEMG   Emamgholi           9.48  93   Pn     Pn      22 27 01.0 +1.5
IEMG   Emamgholi           9.48  93  ePn     Pn      22 27 01.1 +1.5
IKRD   Kardeh              9.50  97  ePn     Pn      22 27 11.0  +11
IAKL   Akhelmad            9.73  97   Pn     Pn      22 27 03.8 +0.7
IAKL   Akhelmad            9.73  97  ePn     Pn      22 27 03.9 +0.8
IPAY   Payeh               9.96  98  ePn     Pn      22 27 07.3 +1.2
BRTR   Keskin Array B     10.25 281  i P     Pn      22 27 14.8 +4.8
BRTR                                  pmax   pmax
       comp=Z,2.0nm,0.8s
BRTR   Keskin Array B     10.25 281   Pn     Pn      22 27 14.5 +4.5
       comp=Z,0.1nm,0.3s,baz=105,slow=14,SNR=14
IMYA   Miami              10.85  97  ePn     Pn      22 27 18.7 +0.5
VSR    Storozhevoye       13.79 340  eP      Pn      22 27 59.0 +0.8
AB31   Akbulak array      14.35  37 ⇑P       Pn      22 28 04.1 -1.7
       comp=Z,6.2nm,0.5s,baz=224,slow=13,SNR=7.1
AB31                                ⇑S       Sn      22 30 40.2 -5.2
       comp=Z,1.7nm,0.5s,baz=232,slow=27,SNR=5.0
AB31   Akbulak array      14.35  37   P      Pn      22 28 04.1 -1.7
AB31                                  S      Sn      22 30 40.2 -5.2
AB31                                  pmax   pmax
       comp=Z,6.0nm,0.5s
AB31                                  smax   smax
       comp=N,2.0nm,0.5s
AKTO   Aktyubinsk         14.38  30 ⇓P       Pn      22 28 04.3 -2.0
       comp=N,12nm,0.9s
AKTO                                ⇓S       Sn      22 30 38.8 -7.4
       comp=N,7.6nm,1.1s
AKTO   Aktyubinsk         14.38  30   Pn     Pn      22 28 04.4 -1.9
       comp=N,0.6nm,0.3s,baz=200,slow=10.0,SNR=14
AKTO                                  LR     LR      22 35 25.5
       comp=N,38nm,18.4s,baz=248,slow=44
PLOR   Plostina           16.58 303⇓ iP      P       22 28 39.4 +1.5
MLR    Muntele Rosu       16.93 301⇑ iP      P       22 28 44.2 +2.2
MLR    Muntele Rosu       16.93 301   Pn     P       22 28 43.5 +1.6
       comp=N,0.1nm,0.3s,baz=122,slow=15,SNR=2.9
MLR                                   LR     LR      22 36 00.8
       comp=N,36nm,18.9s,baz=128,slow=40
AKASG  Malin Array Be     17.39 320   Pn     Pn      22 28 45.1 -0.3
       baz=120,slow=13,SNR=5.7
KIEV   Kiev               17.40 320⇓ eP      Pn      22 28 45.4 -0.1
KIEV                                  pmax   pmax
       comp=Z,9.0nm,2.1s
VOIR                      17.52 300⇑ iP      P       22 28 50.2 +1.8
ARR    Arges              17.79 300⇑ iP      P       22 28 53.4 +2.1
OBN    Obninsk            17.99 341⇑ eP      P       22 28 55.2 +1.9
OBN                                   S      Sn      22 32 14.0 +0.3
OBN                                   pmax   pmax
       comp=Z,4.0nm,0.9s
OBN                                   MLR    MLR
       comp=Z,95nm,19.0s
BURAR  Bucovina Array     18.13 307⇑ iP      P       22 28 56.2 +1.1
DRGR                      19.46 303⇑ iP      Pn      22 29 15.5 +4.6
ARU    Arti               19.59  20  eP      P       22 29 10.6 -0.4
       comp=Z,8.6nm,0.5s
ARU    Arti               19.59  20c iP      Pn      22 29 13.3 +1.0
ARU                                   S      Sn      22 32 54.5 +2.0
ARU                                   pmax   pmax
       comp=Z,13nm,0.9s
KIRV   Kirov              20.18   4   P      Pn      22 29 20.1 +0.9
       comp=Z,6.5nm,0.7s,baz=196,slow=13,SNR=6.4
KIRV                                  LR     LR      22 38 30.9
       comp=Z,78nm,19.7s,baz=150,slow=40
SVE    Sverdlovsk         20.52  22⇑ eP      Pn      22 29 25.3 +2.1
SVE                                   pmax   pmax
       comp=Z,19nm,1.0s
AAK    Ala-Archa          21.45  70  eP      P       22 29 34.1 +2.7
       comp=Z,12nm,1.1s
AAK    Ala-Archa          21.45  70  i P     P       22 29 35.1 +3.7
AAK                                   pmax   pmax
       comp=Z,3.0nm,1.4s
AAK    Ala-Archa          21.45  70   P      P       22 29 35.8 +4.4
       comp=Z,7.3nm,0.8s,baz=246,slow=8.4,SNR=19
BRVK   Borovoye           21.81  40  eP      P       22 29 38.1 +3.0
BRVK   Borovoye           21.81  40  i P     P       22 29 37.4 +2.4
BRVK                                  pmax   pmax
       comp=Z,3.0nm,0.9s
BVAR   Borovoye Array     21.85  41   P      P       22 29 37.2 +1.8
BVAR                                  pmax   pmax
       comp=Z,2.0nm,0.7s
BVAR   Borovoye Array     21.85  41   P      P       22 29 37.2 +1.8
       comp=Z,6.0nm,0.7s,baz=245,slow=12,SNR=23
VYHS   Vyhne              22.46 305  eP      P       22 29 45.7 +3.7
VYHS   Vyhne              22.46 305  eP      P       22 29 45.7 +3.7
KURBB  Kurchatov Arra     25.49  51   P      P       22 30 12.8 +1.6
       comp=Z,4.5nm,0.8s,baz=261,slow=9.4,SNR=17
KURK   Kurchatov          25.57  51   P      P       22 30 12.8 +0.9
KURK   Kurchatov          25.57  51⇑ iP      P       22 30 15.7 +3.8
KURK                                  pmax   pmax
       comp=Z,4.0nm,0.7s
GERES  GERESS Array B     25.85 304   P      P       22 30 14.7 +0.2
       comp=Z,3.3nm,0.7s,baz=104,slow=9.0,SNR=13
FINES  FINESS Array B     26.31 338   P      P       22 30 20.6 +2.1
       comp=Z,1.6nm,1.0s,baz=134,slow=16,SNR=2.6
CLL    Collm              26.85 309  e(P)    P       22 30 25.0 +1.5
CLL    Collm              26.85 309  eP      P       22 30 25.0 +1.5
MKAR   Makanchi Array     27.25  61   P      P       22 30 30.7 +3.4
       comp=Z,2.2nm,0.7s,baz=261,slow=7.4,SNR=16
DAVOX  Davos/Dischmat     28.14 299   P      P       22 30 35.6 +0.2
       comp=Z,1.9nm,0.6s,baz=21,slow=7.1,SNR=6.2
HFS    Hagfors            30.02 327   LR     LR      22 44 37.5
       comp=Z,44nm,18.8s,baz=68,slow=40
ZALV   Zalesovo Beam      30.11  47   P      P       22 30 56.1 +3.6
       comp=Z,0.6nm,0.4s,baz=257,slow=8.7,SNR=3.7
NOA    NORSAR Array B     31.53 327   P      P       22 31 08.1 +3.0
       comp=Z,0.6nm,0.9s,baz=118,slow=8.6,SNR=3.0
NOA                                   LR     LR      22 43 46.1
       comp=Z,27nm,18.2s,baz=110,slow=36
ARCES  ARCESS Array B     33.12 347   P      P       22 31 22.7 +3.9
       comp=Z,1.4nm,0.9s,baz=123,slow=4.5,SNR=6.4
SONM   Songino Array      43.52  58   P      P       22 32 51.1 +4.4
       comp=Z,0.2nm,0.7s,baz=265,slow=8.2,SNR=2.8
TORD   Torodi Ar. Bea     47.13 250   P      P       22 33 13.3 -2.3
       comp=Z,0.5nm,0.8s,baz=51,slow=7.8,SNR=4.3
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BJI **12** *22:24:59.7, 7°.02S×131°.54E, h48^{km}, mB5.5/32, mb5.7/78, Ms4.8/47, Ms7 4.5/34*

MOS **12** *22:25:01.4±1.0, 6°.83S×131°.37E, h44^{km}, mb5.8/73, MS4.0/18, Error ellipse: s-maj=8.0km s-min=4.3km az=118.1*

ISCJB **12** *22:25:02.4±0.4, 6°.89S±0°.02×131°.44E±0°.02, h58^{km}±3^{km}, mb5.5/225, MS4.1/30, Error ellipse: s-maj=3.5km s-min=3.1km az=151.8*

NEIC **12** *22:25:03.7±0.6, 6°.91S×131°.35E, h54^{km}±5^{km}, mb5.6/111, Error ellipse: s-maj=4.6km s-min=3.7km az=55.0*

IDC **12** *22:25:04.6±1.5, 6°.86S×131°.38E, h56^{km}±12^{km}, mb5.1/41, mb1 5.1/45, mb1mx5.1/46, mbtmp5.4/45, MS4.0/22, Ms1 4.0/22, ms1mx3.9/30, Error ellipse: s-maj=11.5km s-min=8.2km az=59.0*

DJA **12** *22:25:05.0±0.2, 7°S±2°×13°1E±°, h64^{km}±2^{km}, M5.5/96, mB5.8/66, mb5.7/96, MLv6.3/12, Mw(mB)5.4/66*

GCMT **12** *22:25:05.7±0.1, 6°.90S±0°.01×131°.30E±0°.01, h82^{km}±1^{km}, MW5.3/96, Moment Tensor Solution. s83,c119; s96,c165; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.20±.02; M$_{\theta\theta}$-1.03±.02; M$_{\phi\phi}$0.82±.02; M$_{r\theta}$0.31±.02; M$_{\theta\phi}$0.68±.02; M$_{\phi r}$0.27±.02; Best double couple: M$_0$1.23000×10^{17} NP1:φ$_s$65.00000°, δ82.00000°, λ21.00000°. NP2:φ$_s$332.00000°, δ70.00000°, λ171.00000°. Principal axes: T 1.1790, Plg20.0000°, Azm290.0000°; N 0.1020, Plg68.0000°, Azm85.0000°; P -1.2810, Plg9.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 12 22:25:03.8±0.4**, 6°.87S**±0°.03×**131°.41E**±0°.03**, h58**^{km}±3^{km}**, n689, σ1^{s}78**/781**, mb5.5**/229**, MS4.1**/35**, 56C-28D, Tanimbar Islands region**

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Code   Station Name        Δ°   AZ°     Phase ID        Time      Res
                                     Op      ISC     h  m  s     ISC
SAUI   Saumlaki            1.11 186  ePn     Pn      22 25 25.5 +2.2
SAUI                                 eSn     Sn      22 25 36.9 -0.8
SAUI   Saumlaki            1.11 186   P      Pn      22 25 25.6 +2.3
SAUI                                  S      Sn      22 25 41.9 +4.2
BNDI   Bandanaira          2.77 327   P      Pn      22 25 48.2 +2.4
BNDI                                  S      Sn      22 26 20.8 +2.8
FAKI   Fak Fak             4.01  12  ePn     Pn      22 26 03.4 +0.7
FAKI                                 eSn     Sn      22 26 45.0 -3.5
FAKI   Fak Fak             4.01  12   P      Pn      22 26 03.2 +0.5
FAKI                                  S      Sn      22 26 46.7 -1.8
NLAI   Namlea              5.61 310   P      Pn      22 26 27.8 +3.2
       3µm,0.8s,27µm11nm
KDU    Kakadu              5.88 170   P      Pn      22 26 27.1 -1.2
       baz=5.9,SNR=1000
MTN    Manton Dam          5.95 183  ePn     Pn      22 26 28.8 -0.5
MTN                                  eSn     Sn      22 27 30.9 -5.1
SIJI   Sorong              5.96 359   P      Pn      22 26 29.0 -0.5
       165nm,0.3s,baz=199,slow=10,SNR=164
SIJI                                  S      Sn      22 27 32.3 -4.1
       418nm,0.3s,baz=77,slow=22,SNR=21
SWI    Sorong              5.97 359   P      Pn      22 26 29.4 -0.2
SWI                                   pmax   pmax
       comp=Z,1µm,0.6s
SWI    Sorong              5.97 359   P      Pn      22 26 28.1 -1.5
       comp=Z,1µm,0.6s,comp=Z,15µmcomp=Z,29nm
RKPI   Ransiki, Papua      5.99  27   P      Pn      22 26 31.2 +1.3
       comp=Z,15µm,0.8s,comp=Z,106µmcomp=Z,50nm
SRPI   Serui, Papua        6.91  44   P      Pn      22 26 43.0 +0.5
       comp=Z,2µm,0.8s,comp=Z,15µmcomp=Z,24nm
SANI   Sanana              7.22 311   P      Pn      22 26 48.5 +1.7
       comp=Z,1µm,1.0s,comp=Z,15µmcomp=Z,5.1nm
SOEI   Soe                 7.63 247  ePn     Pn      22 26 53.0 +0.5
SOEI                                 eSn     Sn      22 28 17.7  0.0
SOEI   Soe                 7.63 247   P      Pn      22 26 53.0 +0.5
       comp=Z,3µm,0.9s,comp=Z,19µmcomp=Z,42nm
BATI   Baumata             8.35 246   P      Pn      22 27 02.7 +0.4
       comp=Z,500nm,0.6s,comp=Z,7µmcomp=Z,8.1nm
BATI   Baumata             8.35 246   P      Pn      22 27 02.9 +0.6
       comp=Z,229nm,0.3s,baz=144,slow=1.5,SNR=136
BATI                                  S      Sn      22 28 32.0 -3.3
       comp=Z,193nm,0.3s,baz=118,slow=13,SNR=3.8
TNTI   Ternate             8.60 332  ePn     Pn      22 27 06.0 +0.4
TNTI                                 eSn     Sn      22 28 27.7  -13
TNTI   Ternate             8.60 332   P      Pn      22 27 07.6 +2.0
       comp=Z,185nm,0.8s,comp=Z,2µmcomp=Z,0.7nm
BBSI   Bau Bau             8.90 278   P      Pn      22 27 14.9 +5.1
       comp=Z,259nm,1.0s,comp=Z,5µmcomp=Z,1.1nm
MMPI   Merauke             9.03 101   P      Pn      22 27 11.4 -0.1
       comp=Z,8µm,0.6s,comp=Z,91µm
KNRA   Kununurra           9.13 196   P      Pn      22 27 11.2 -1.8
       baz=9.2,SNR=1000
KDI    Kendari             9.22 288   P      Pn      22 27 19.0 +4.9
       comp=Z,1µm,1.1s,comp=Z,13µm
MMRI   Maumere             9.26 258  ePn     Pn      22 27 15.2 +0.4
MMRI                                 eSn     Sn      22 28 55.5 -2.1
MMRI   Maumere             9.26 258   P      Pn      22 27 15.4 +0.7
       comp=Z,670nm,0.9s,comp=Z,7µm
GENI   Genyem              9.70  64   P      Pn      22 27 21.7 +1.0
       comp=Z,536nm,0.7s,comp=Z,5µm
EDFI   Ende, Flores        9.81 258   P      Pn      22 27 24.0 +1.6
       comp=Z,266nm,1.1s,comp=Z,3µm
JAY    Jayapura           10.22  65   P      Pn      22 27 28.5 +0.7
       comp=Z,2µm,1.0s,comp=Z,12µm
JAY    Jayapura           10.22  65   P      Pn      22 27 27.5 -0.3
       comp=Z,5.3nm,0.3s,baz=246,slow=4.9,SNR=19
JAY                                   S      Sn      22 29 16.4 -4.6
       comp=Z,7.8nm,0.3s,baz=292,slow=23,SNR=8.6
LUWI   Luwuk              10.38 304  ePn     Pn      22 27 33.2 +3.2
LUWI   Luwuk              10.38 304   P      Pn      22 27 33.7 +3.7
       comp=Z,908nm,1.0s,comp=Z,9µm
KMSI   Cibinong           10.47 315   P      Pn      22 27 32.9 +1.6
       comp=Z,1µm,0.8s,comp=Z,9µm
MNI    Manado             10.55 321   P      Pn      22 27 32.9 +0.6
MNI                                   pmax   pmax
       comp=Z,842nm,0.8s
BASI   Baing, Sumba       11.22 252   P      Pn      22 27 41.0 -0.5
       comp=Z,1µm,0.5s,comp=Z,13µm
BKSI   Bulukumba          11.33 277   P      Pn      22 27 45.7 +2.7
       comp=Z,236nm,1.2s,comp=Z,2µm
WSI    Waingapu           11.35 255   P      Pn      22 27 42.6 -0.6
       comp=Z,2µm,0.6s,comp=Z,30µm
APSI   Ampana             11.39 301   P      Pn      22 27 48.2 +4.3
       comp=Z,593nm,1.0s,comp=Z,5µm
BNSI   Bone               11.52 282   P      Pn      22 27 50.2 +4.6
       comp=Z,672nm,0.8s,comp=Z,5µm
MRSI   Marisa             11.94 307   P      Pn      22 27 53.5 +2.2
       comp=Z,255nm,1.0s,comp=Z,2µm
SPSI   Sidrap Palu        11.95 283   P      Pn      22 27 54.2 +2.8
       comp=Z,256nm,0.7s,comp=Z,3µm
SGSI   Sangihe            12.02 331   P      P       22 28 00.4 -3.1
TTSI   Tana Toraja        12.16 288   P      Pn      22 27 57.6 +3.3
FITZ   Fitzroy Crossi     12.50 206  ePn     Pn      22 27 55.5 -3.4
FITZ                                 eSn     Sn      22 30 04.5  -12
PCI    Palu               12.98 297   P      Pn      22 28 10.0 +4.5
PCI                                   pmax   pmax
       comp=Z,1µm,1.3s
PCI    Palu               12.98 297   P      Pn      22 28 08.2 +2.7
WRAB   Tennant Creek      13.30 168  ePn     Pn      22 28 04.0 -5.9
WRAB                                 eSn     Sn      22 30 21.9  -14
WRAB   Tennant Creek      13.30 168  eP      Pn      22 28 04.0 -5.9
WR1    Warramunga Arr     13.30 168  ePn     Pn      22 28 04.2 -5.8
WR1                                  eSn     Sn      22 30 20.9  -15
WRA    Warramunga Arr     13.30 168   P      Pn      22 28 04.2 -5.8
       comp=Z,4.0nm,0.3s,baz=350,slow=13,SNR=253
WRA                                   S      Sn      22 30 20.9  -15
       comp=Z,106nm,0.3s,baz=343,slow=23,SNR=7.0
WRA                                   LR     LR      22 33 59.4
       comp=Z,1µm,19.1s,baz=340,slow=40
WRA                                   P3KPbc         23 04 18.0
       comp=Z,0.0nm,0.3s,baz=168,slow=3.7,SNR=9.3
WB2    Warramunga Arr     13.31 168  ePn     Pn      22 28 04.0 -5.9
WB2                                  eSn     Sn      22 30 24.2  -12
MPSI   Mapaga             13.54 301   P      Pn      22 28 16.1 +3.0
       comp=Z,110nm,0.8s,comp=Z,1µm
COEN   Coen               13.54 122  ePn     Pn      22 28 08.3 -4.8
COEN                                 eSn     Sn      22 30 27.0  -15
PLAI   Plampang           13.65 261   P      Pn      22 28 11.6 -3.1
PALU   Palau              14.44  12   P      Pn      22 28 24.7 -0.5
       baz=14,SNR=19
DAV    Davao City (W)     15.02 337  ePn     Pn      22 28 32.6 -0.1
DAV                                  eSn     Sn      22 31 19.2 +1.2
DAV    Davao City (W)     15.02 337   P      Pn      22 28 33.2 +0.5
       comp=Z,68nm,0.3s,baz=352,slow=1.1,SNR=3.9
DAV                                   S      S       22 31 33.6 +0.8
       baz=5.7,slow=19,SNR=3.9
DAV                                   LR     LR      22 35 34.7
       comp=Z,938nm,21.8s,baz=133,slow=42
SGKI   Sangatta, Kali     15.14 294   P      P       22 28 45.5 +7.2
KCP    Kidapawan          15.16 335⇑ eP      Pn      22 28 33.8 -0.8
BKB    Balikpapan         15.51 290   P      P       22 28 43.5 +1.1
SMKI   Samarinda          15.54 294   P      P       22 28 43.4 +0.7
KBKI   Kotabaru           15.59 282   P      P       22 28 42.8 -0.5
       comp=Z,109nm,0.8s,comp=Z,1µm
CTBH   Cotabato--PC H     15.71 333⇑ eP      Pn      22 28 40.7 -1.0
SRBI   Singaraja          16.11 265   P      Pn      22 28 47.9 +1.2
       comp=Z,86nm,0.8s,comp=Z,1µm
DNP    Denpasar           16.16 263   P      P       22 28 49.3 -0.2
DNP                                   pmax   pmax
       comp=Z,360nm,0.7s
DNP    Denpasar           16.16 263   P      P       22 28 49.3 -0.2
       comp=Z,374nm,0.7s
MANU   Manus Island       16.61  74  ePn     Pn      22 28 53.7 +0.8
       comp=Z,251nm,1.0s
AS31   Alice Springs      16.87 172  ePn     Pn      22 28 51.5 -4.8
       comp=Z,126nm,0.6s
AS31                                 eSn     Sn      22 31 48.6  -14
ASAR   Alice Springs      16.87 172   P      Pn      22 28 52.1 -4.2
       comp=Z,34nm,0.3s,baz=353,slow=13,SNR=549
ASAR                                  S      Sn      22 31 46.0  -17
       comp=Z,16nm,0.3s,baz=350,slow=27,SNR=5.8
ASAR                                  LR     LR      22 36 09.1
       comp=Z,1µm,18.5s,baz=350,slow=39
AS01   Alice Springs      16.88 172  ePn     Pn      22 28 52.1 -4.2
AS01                                 eSn     Sn      22 31 43.4  -20
JAGI   Jajag, Banyuwa     17.18 264  ePn     Pn      22 28 57.5 -2.6
       comp=Z,262nm,1.3s
JAGI                                 eSn     Sn      22 31 50.8  -20
JAGI   Jajag, Banyuwa     17.18 264   P      Pn      22 29 00.0 -0.1
       comp=Z,131nm,0.7s,comp=Z,2µm
KMMI   Kalianget          17.32 268   P      P       22 29 02.6 +0.1
TSM    Tawau              17.48 309   P      P       22 29 04.4 +0.1
MTKI   Muara Teweh, K     17.49 289   P      P       22 29 05.6 +1.2
       comp=Z,724nm,1.0s,comp=Z,9µm
MBWA   Marble Bar         18.16 217  eP      P       22 29 08.9 -2.7
       comp=Z,214nm,0.8s
MBWA                                 eSn     Sn      22 32 14.5  -20
GRJI   Gresik             18.80 269   P      Pn      22 29 21.7 +1.9
       comp=Z,364nm,0.7s,comp=Z,3µm
SDKM   Sandakan           18.86 311   P      Pn      22 29 21.4 +0.8
TBJI   Tambak Boyo        19.43 269   P      Pn      22 29 30.2 +2.9
       comp=Z,344nm,1.1s,comp=Z,3µm
PWJI   Pagerwojo          19.48 265   P      P       22 29 25.4 -0.8
       comp=Z,134nm,0.7s,comp=Z,2µm
CTA    Charters Tower     19.49 134   P      Pn      22 29 27.7 -0.2
       comp=Z,3.9nm,0.3s,baz=309,slow=16,SNR=58
CTA                                   S      S       22 33 04.0 +0.3
       comp=Z,2.6nm,0.3s,baz=246,slow=20,SNR=3.7
CTA                                   LR     LR      22 38 01.6
       comp=Z,513nm,18.3s,baz=313,slow=40
CTAO   Charters Tower     19.49 134  eP      Pn      22 29 27.8 -0.2
CTAO                                 ePn     P       22 29 28.1 +1.7
CTAO   Charters Tower     19.49 134  eP      Pn      22 29 27.8 -0.2
NGJI   Ngawi              19.81 267   P      Pn      22 29 33.0 +1.3
       comp=Z,211nm,1.0s,comp=Z,3µm
KKM    Kota Kinabalu      19.86 310  eP      P       22 29 30.2 -0.3
       comp=Z,496nm,0.8s
KKM    Kota Kinabalu      19.86 310   P      Pn      22 29 31.6 -0.9
KDM    Kudat              19.98 313   P      Pn      22 29 33.3 -0.4
PBKI   Pangkalan Bun      20.10 281   P      Pn      22 29 36.5 +1.3
       comp=Z,2µm,1.0s,comp=Z,16µm
PCJI   Pacitan            20.11 265   P      P       22 29 32.5 -0.5
       comp=Z,396nm,0.9s,comp=Z,4µm
RCP    Roxas              20.24 335⇓ eP      P       22 29 35.6 +1.2
WOJI   Wonogiri, Jawa     20.34 266   P      P       22 29 36.7 +1.1
       comp=Z,216nm,0.9s
UGM    Wanagama           20.74 266  eP      P       22 29 37.5 -2.4
       comp=Z,143nm,0.8s
UGM                                  eS      S       22 33 17.3  -11
UGM    Wanagama           20.74 266   P      Pn      22 29 43.8 +0.9
       comp=Z,162nm,0.8s
SMRI   Semarang           20.82 268  eP      P       22 29 39.0 -1.8
       comp=Z,175nm,0.9s
SMRI   Semarang           20.82 268   P      Pn      22 29 43.7 -0.1
       comp=Z,252nm,0.9s
RABL   Rabaul             20.82  84  eP      P       22 29 42.2 +1.4
       comp=Z,250nm,1.0s
BTM    Bintulu            20.85 298   P      P       22 29 42.4 +1.3
SBUM   Sibu               21.28 295  eP      P       22 29 45.8 +0.2
       comp=Z,155nm,0.9s
SBUM   Sibu               21.28 295   P      P       22 29 46.8 +1.1
KPJI   Karang Pucung      22.32 267   P      P       22 29 55.0 -1.8
       comp=Z,135nm,0.8s,comp=Z,1µm
KSM    Kuching            22.64 291  eP      P       22 29 58.9 -1.3
       comp=Z,121nm,1.1s
KSM    Kuching            22.64 291   P      P       22 30 00.2  0.0
CMJI   Cimerak            22.80 266   P      P       22 29 59.3 -2.6
GIRL   Giralia            22.80 225   P      P       22 30 02.5 +0.6
       baz=23,SNR=19
GIRL   Giralia            22.80 225  eP      P       22 30 02.1 +0.2
       comp=Z,457nm,1.0s
JCJI   Jatiwangi          22.99 270   P      P       22 30 07.7 +3.8
       comp=Z,340nm,1.1s
MEEK   Meekatharra        23.13 210   P      P       22 30 04.6 -0.6
       baz=23,SNR=35
TGY    Tagaytay City      23.28 333   P      P       22 30 07.6 +0.8
       comp=Z,847nm,0.6s,baz=179,slow=3.4,SNR=21
CISI   Cisompet, Garu     23.42 267  eP      P       22 30 05.0 -3.1
       comp=Z,332nm,0.7s
CISI                                 eS      S       22 34 09.8 -7.6
CISI   Cisompet, Garu     23.42 267   P      P       22 30 07.9 -0.2
       comp=Z,471nm,0.7s,comp=Z,3µm
LEM    Lembang            23.63 269   P      P       22 30 10.1 -0.1
       comp=Z,291nm,0.8s,baz=74,slow=8.8,SNR=25
FORT   Forrest            24.00 187   P      P       22 30 13.2 +0.1
       baz=24,SNR=405
FORT   Forrest            24.00 187  eP      P       22 30 13.2 +0.1
       comp=Z,1µm,0.8s
TPI    Tanjungpandan      24.02 279   P      P       22 30 16.0 +2.4
       comp=Z,71nm,1.0s,comp=Z,13µm
GUMO   Guam               24.32  33   P      P       22 30 17.2 +0.9
       comp=Z,187nm,1.0s,baz=30,slow=20,SNR=3.5
GUMO                                  LR     LR      22 40 01.3
       comp=Z,101nm,20.9s,baz=157,slow=37
CBJI   Citeko             24.40 270   P      P       22 30 16.3 -0.7
       comp=Z,429nm,0.9s
DBJI   Dramaga            24.50 269   P      P       22 30 18.8 +0.9
       comp=Z,80nm,0.9s,comp=Z,4µm
SKJI   Sukabumi           24.68 268   P      P       22 30 20.2 +0.6
       comp=Z,292nm,1.0s
RMQ    Roma               25.56 142   P      P       22 30 28.2 +0.7
       baz=26,SNR=17
PPBI   Pangkal Pinang     25.62 279   P      P       22 30 29.4 +1.2
       comp=Z,80nm,0.9s,comp=Z,2µm
XMIS   Christmas Isla     25.71 260  eP      P       22 30 25.8 -3.2
       comp=Z,83nm,0.8s
BBOO   Buckleboo          26.17 171   P      P       22 30 32.5 -0.4
       baz=26,SNR=62
BBOO   Buckleboo          26.17 171  eP      P       22 30 32.7 -0.2
       comp=Z,170nm,0.8s
EIDS   Eidsvold           26.30 137   P      P       22 30 33.1 -1.1
       baz=26,SNR=4.1
EIDS   Eidsvold           26.30 137  eP      P       22 30 34.6 +0.5
       comp=Z,93nm,0.9s
MORW   Morawa             26.42 211   P      P       22 30 35.4 +0.2
       baz=27,SNR=24
MORW   Morawa             26.42 211  eP      P       22 30 35.5 +0.2
       comp=Z,404nm,1.6s
KLI    Kotabumi           26.49 273   P      P       22 30 43.9 +7.9
STKA   Stephens Creek     26.64 160   P      P       22 30 37.2 +0.1
       baz=27,SNR=41
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STKA	Stephens Creek	26.64	160	P	P	22 30 37.2	+0.1
	comp=Z,26nm,0.7s,baz=336,slow=8.0,SNR=30						
STKA				S	S	22 35 28.8	+21
	comp=Z,50nm,0.8s,baz=293,slow=11,SNR=4.8						
STKA				LR	LR	22 41 56.7	
	comp=Z,288nm,19.2s,baz=327,slow=38						
KASI	Kota Agung	26.79	271	P	P	22 30 38.8	+0.1
	comp=Z,89nm,1.2s,comp=Z,1µm						
PMBI	Palembang	26.83	277	P	P	22 30 46.8	+7.8
MDSI	Maura Dua	27.20	274	P	P	22 30 44.9	+2.5
	comp=Z,39nm,1.0s,comp=Z,444nm						
LWLI	Liwa	27.27	272	P	P	22 30 49.7	+6.6
HTT	Hallett	27.33	166	P	P	22 30 43.5	+0.1
	baz=27,SNR=25						
BLDU	Ballidu	27.36	208	P	P	22 30 44.3	+0.7
	baz=28,SNR=21						
KLBR	Kellerberrin	27.71	206	P	P	22 30 47.4	+0.6
	baz=28,SNR=25						
TPRI	Tanjung Pinang	27.92	285	P	P	22 30 51.5	+2.6
	comp=Z,91nm,1.1s						
LHSI	Lahat	27.93	275	P	P	22 30 53.0	+4.1
	comp=Z,91nm,1.1s						
CMSA	Cobar Meteorol	27.94	153	P	P	22 30 49.1	+0.3
	baz=28,SNR=38						
JMBI	JAMBI	28.17	279	P	P	22 30 55.0	+3.9
	comp=Z,252nm,1.0s						
HNR	Honiara	28.36	97	*e*P	P	22 30 51.9	-0.8
	comp=Z,213nm,0.9s						
HNR				*e*PcP	PcP	22 34 02.9	-1.5
HNR	Honiara	28.36	97	P	P	22 30 53.8	+1.1
	comp=Z,52nm,0.3s,baz=211,slow=6.8,SNR=4.3						
HNR				LR	LR	22 42 49.0	
	comp=Z,554nm,21.2s,baz=260,slow=38						
MUN	Mundaring	28.73	208	P	P	22 30 56.2	+0.4
	baz=29,SNR=7.8						
MYKOM	Kota Tinggi	28.82	286	*e*P	P	22 30 55.8	-1.1
	comp=Z,62nm,0.9s						
MYKOM				*e*PP	PnPn	22 31 56.6	+6.1
MYKOM	Kota Tinggi	28.82	286	P	P	22 30 57.7	+0.9
NWAO	Narrogin (SRO)	29.09	205	P	P	22 30 59.4	+0.4
	baz=29,SNR=33						
NWAO	Narrogin (SRO)	29.09	205	*e*P	P	22 30 59.0	0.0
NWAO				*e*PcP	PcP	22 33 59.9	-6.1
NWAO	Narrogin (SRO)	29.09	205	P	P	22 30 59.4	+0.4
	comp=Z,41nm,0.7s,baz=265,slow=8.9,SNR=44						
NWAO				LR	LR	22 43 38.4	
	comp=Z,983nm,18.5s,baz=238,slow=38						
ARMA	Armidale	30.15	144	P	P	22 31 07.9	-0.7
	baz=30,SNR=6.5						
ARMA	Armidale	30.15	144	*e*P	P	22 31 06.9	-1.7
	comp=Z,39nm,0.7s						
KRJI	Kerinci	30.23	278	P	P	22 31 11.1	+1.7
	comp=Z,139nm,0.9s						
SDSI	Sungai Dareh	30.48	280	P	P	22 31 14.2	+2.7
	comp=Z,78nm,1.1s,comp=Z,3µm						
RKGY	Rocky Gully	30.65	204	P	P	22 31 13.8	+1.0
	baz=31,SNR=49						
BKNI	Bangkinang	31.14	282	*e*P	P	22 31 18.1	+0.8
	comp=Z,260nm,1.1s						
BKNI	Bangkinang	31.14	282	P	P	22 31 19.2	+1.9
	comp=Z,243nm,1.1s,comp=Z,2µm						
ARPS	Mount Arapiles	31.25	164	P	P	22 31 19.1	+1.1
	baz=31,SNR=12						
PDSI	Padang	31.43	280	P	P	22 31 20.0	0.0
	comp=Z,68nm,1.1s,comp=Z,1µm						
YNG	Young	31.48	152	P	P	22 31 21.2	+1.0
	baz=32,SNR=34						
YULB	Yu-li	31.66	342	*e*P	P	22 31 20.4	-1.4
	comp=Z,65nm,1.3s						
TPUB	Ta-pu	31.78	341	*e*P	P	22 31 21.1	-1.8
	comp=Z,248nm,1.9s						
SSLB	Suanglung	32.13	342	*e*P	P	22 31 24.8	-1.2
	comp=Z,166nm,1.5s						
NACB	Ninganchiao	32.30	343	*e*P	P	22 31 25.7	-1.7
	comp=Z,159nm,1.7s						
IPM	Ipoh	32.36	290	*e*P	P	22 31 26.2	-1.9
	comp=Z,20nm,0.6s						
MNSI	Mandailing Nat	32.66	282	P	P	22 31 31.0	+0.2
SISI	Saibi	32.70	278	P	P	22 31 32.7	+1.7
CNB	Canberra Magne	32.77	152	P	P	22 31 32.5	+1.0
	baz=33,SNR=10						
YHNB	Yeheng	32.84	343	*e*P	P	22 31 31.2	-1.0
	comp=Z,161nm,1.3s						
KULM	Kulim	32.99	291	*e*P	P	22 31 32.1	-1.5
	comp=Z,39nm,0.7s						
TOO	Toolangi	33.14	159	P	P	22 31 36.5	+1.8
	baz=33,SNR=26						
TOO	Toolangi	33.14	159	*e*P	P	22 31 34.9	+0.2
	comp=Z,68nm,1.0s						
TOO	Toolangi	33.14	159	*e*P	P	22 31 34.9	+0.2
TOO				pmax	pmax		
	comp=Z,68nm,1.0s						
QIZ	Qiongzhong	33.38	321	P	P	22 31 38.1	+1.2
QIZ				S	S	22 36 58.3	+4.2
QIZ				pmax	pmax		
	comp=Z,290nm,2.5s						
QIZ				LR	LR		
	comp=Z,340nm,22.6s						
QIZ				LR	LR		
	comp=Z,270nm,16.2s						
QIZ	Qiongzhong	33.38	321	*e*P	P	22 31 36.5	-0.4
	comp=Z,80nm,1.0s						
JOW	Kunigami	33.64	355	*e*P	P	22 31 39.5	+0.5
	comp=Z,336nm,2.0s						
JOW	Kunigami	33.64	355	P	P	22 31 39.5	+0.5
	comp=Z,3.0nm,0.6s,baz=169,slow=13,SNR=4.7						
PSI	Prapat	33.82	285	*e*P	P	22 31 38.6	-2.5
	comp=Z,127nm,1.0s						
PSI	Prapat	33.82	285	P	P	22 31 41.3	+0.3
	comp=Z,102nm,1.1s,baz=180,slow=3.9,SNR=31						
QZH	Quanzhou	33.99	339	⇑*i*P	P	22 31 42.2	+0.1
QZH				pmax	pmax		
	comp=Z,51nm,0.7s						
GSI	Gunungsitoli	34.73	282	*e*P	P	22 31 46.2	-2.5
	comp=Z,163nm,1.0s						
GSI	Gunungsitoli	34.73	282	P	P	22 31 49.0	+0.2
	comp=Z,180nm,1.1s						
TRTT	Trang	34.84	294	P	P	22 31 49.5	-0.2
	comp=Z,18nm,0.8s						
KCSI	Kotacane, Aceh	35.13	286	P	P	22 31 52.7	+0.5
	comp=Z,28nm,0.8s						
JCJ	Chichijima	35.34	17	P	P	22 31 54.2	+0.5
	comp=Z,59nm,0.8s,baz=270,slow=20,SNR=3.2						
CBIJ	Chichi jima	35.34	17	*e*P	P	22 31 54.2	+0.5
SKNT	Sakolnakorn	36.01	311	P	P	22 31 59.6	-0.1
	comp=Z,70nm,0.8s,comp=Z,614nm						
PATY	Pattaya	36.16	303	P	P	22 32 01.0	0.0
	comp=Z,23nm,0.9s,comp=Z,1µm						
LHMI	Lhok Sumawe	36.44	288	*e*P	P	22 32 02.1	-1.3
	comp=Z,319nm,1.2s						
LHMI	Lhok Sumawe	36.44	288	P	P	22 32 06.2	+2.8
	comp=Z,255nm,1.0s						
CHAI	Chaiyaphum	36.89	308	P	P	22 32 06.8	-0.4
	comp=Z,119nm,0.8s,comp=Z,1µm						
DZM	Mont Dzumac	37.01	118	*e*P	P	22 32 13.0	+4.8
	comp=Z,67nm,1.0s						
DZM				*e*LR	LR	22 42 10.6	
	comp=Z,915nm,33.5s						
DZM	Mont Dzumac	37.01	118	*e*P	P	22 32 07.1	-1.1
	comp=Z,35nm,1.0s						
DZM	Mont Dzumac	37.01	118	P	P	22 32 09.4	+1.2
	comp=Z,3.1nm,0.5s,baz=310,slow=19,SNR=3.2						
PHET	Kaeng Krachan	37.19	302	P	P	22 32 09.5	-0.3
	comp=Z,56nm,0.8s,comp=Z,471nm						
NONG	Nongkai	37.31	312	P	P	22 32 10.4	-0.3
	comp=Z,3.4nm,0.8s						
PBKT	Sadao Pong	38.07	308	*e*P	P	22 32 16.9	-0.2
	comp=Z,41nm,0.6s						
PBKT				*e*PcP	PcP	22 34 33.2	+1.7
PBKT	Sadao Pong	38.07	308	P	P	22 32 16.8	-0.3
	comp=Z,70nm,1.1s,comp=Z,1µm						
MOO	Moorlands	38.08	161	P	P	22 32 18.6	+1.7
	baz=38,SNR=8.5						
BSI	Banda Aceh	38.08	288	P	P	22 32 17.7	+0.4
	comp=Z,82nm,1.0s						
SRDT	SRDT	38.35	303	P	P	22 32 20.0	+0.5
	comp=Z,250nm,0.9s						
TAU	Tasmania Unive	38.54	161	*e*P	P	22 32 19.5	-1.3
	comp=Z,166nm,2.0s						
TAU	Tasmania Unive	38.54	161	*e*P	P	22 32 19.5	-1.3
TAU				pmax	pmax		
	comp=Z,166nm,2.0s						
UTHA	Uthaitani	38.72	305	P	P	22 32 22.5	-0.1
	comp=Z,81nm,0.9s,comp=Z,521nm						
SSE	Sheshan	39.00	346	P	P	22 32 25.3	+0.6
SSE				pmax	pmax		
	comp=Z,34nm,1.2s						
SSE	Sheshan	39.00	346	*e*P	P	22 32 25.2	+0.6
	comp=Z,189nm,0.9s						
UTTA	Uttaradit	39.08	309	P	P	22 32 25.7	+0.2
	comp=Z,107nm,0.8s,comp=Z,752nm						
UMPA	Umpang Tak	39.54	306	P	P	22 32 29.0	-0.5
	comp=Z,47nm,1.1s,comp=Z,414nm						
JNU	Nakatsue	39.77	359	*e*P	P	22 32 31.9	+0.7
	comp=Z,61nm,1.0s						
JNU	Nakatsue	39.77	359	P	P	22 32 32.0	+0.9
	comp=Z,42nm,0.9s,baz=143,slow=2.3,SNR=9.3						
CMBY	CAMPBELL BAY	39.86	290	*e*P	P	22 32 32.0	-0.2
NJ2	Nanjing	40.51	343	⇑*i*P	P	22 32 38.5	+1.2
NJ2				pmax	pmax		
	comp=Z,110nm,1.0s						
WHN	Wuhan	40.64	337	⇑P	P	22 32 39.7	+1.4
WHN				S	S	22 38 39.0	-5.2
WHN				LR	LR		
	comp=Z,770nm,23.0s						
CM01	Chiang Mai Arr	40.70	309	*e*P	P	22 32 38.7	-0.4
CM01				*e*PcP	PcP	22 34 41.8	+1.9
CM31	Chiang Mai Arr	40.73	309	*e*P	P	22 32 39.9	+0.5
	comp=Z,136nm,0.9s						
CM31	Chiang Mai Arr	40.73	309	P	P	22 32 39.9	+0.5
	SNR=50						
CMAR	Chiang Mai Arr	40.73	309	*ce*P	P	22 32 39.7	+0.4
CMAR				pmax	pmax		
	comp=Z,78nm,0.9s						
CMAR	Chiang Mai Arr	40.73	309	P	P	22 32 40.3	+1.0
	comp=Z,75nm,0.9s,baz=138,slow=7.4,SNR=369						
CMAR				PcP	PcP	22 34 42.3	+2.3
	comp=Z,12nm,0.8s,baz=165,slow=2.8,SNR=6.4						
CMAR				ScP	ScP	22 38 25.6	+0.8
	comp=Z,5.7nm,1.0s,baz=161,slow=3.5,SNR=9.2						
CMAR				LR	LR	22 51 34.2	
	comp=Z,126nm,21.6s,baz=126,slow=39						
GYA	Guiyang	40.91	325	⇑*i*P	P	22 32 41.1	+0.3
GYA				pP	pP	22 32 55.0	+0.5
GYA				sP	pwP	22 32 59.4	+0.1
GYA				PP	PnPn	22 34 22.8	+2.0
GYA				PcP	PcP	22 34 41.4	+0.8
GYA				S	S	22 38 53.6	+4.9
GYA				sS	sS	22 39 12.0	-0.7
GYA				SS	SS	22 41 49.7	-2.6
GYA				pmax	pmax		
	comp=Z,80nm,0.8s						
GYA				LR	LR		
	comp=Z,790nm,17.4s						
GYA				LR	LR		
	comp=Z,750nm,17.6s						
GYA				LR	LR		
	comp=Z,820nm,17.2s						
CMMT	Chiang Mai	40.94	309	P	P	22 32 41.0	0.0
	comp=Z,217nm,1.0s,comp=Z,2µm						
CHTO	Chiang Mai	40.94	309	*e*P	P	22 32 41.4	+0.3
	comp=Z,170nm,0.9s						
CHTO	Chiang Mai	40.94	309	*e*P	P	22 32 41.4	+0.3
CHTO				pmax	pmax		
	comp=Z,171nm,0.9s						
CHTO	Chiang Mai	40.94	309	P	P	22 32 41.3	+0.3
	SNR=64						
CHTO	Chiang Mai	40.94	309	P	P	22 32 41.0	0.0
	comp=Z,958nm,1.0s,comp=Z,8µm						
KMI	Kunming	42.31	320	P	P	22 32 53.3	+0.9
KMI				pP	pP	22 33 03.4	-2.6
KMI				sP	pwP	22 33 07.8	-3.4
KMI				PP	PP	22 34 32.2	+0.8
KMI				S	S	22 39 12.8	+3.2
KMI				sS	sS	22 39 31.0	-2.7
KMI				pmax	pmax		
	comp=Z,85nm,0.8s						
KMI				pmax	pmax		
	comp=Z,230nm,3.1s						
KMI				LR	LR		
	comp=Z,220nm,11.1s						
KMI				LR	LR		
	comp=Z,190nm,10.2s						
KMI	Kunming	42.31	320	*e*P	P	22 32 53.4	+1.0
	comp=Z,75nm,0.9s						
KMI	Kunming	42.31	320	*e*P	P	22 32 53.4	+1.0
KMI				pmax	pmax		
	comp=Z,75nm,0.9s						
ENH	Enshi	42.50	331	*e*P	P	22 32 53.8	+0.1
	comp=Z,122nm,0.6s						
PBA	Port Blair	42.64	295	*e*P	P	22 32 54.8	-0.2
TJN	Taejon	43.18	355	⇓*i*P	P	22 33 00.4	+1.4
MJAR	Matsushiro Arr	43.65	8	P	P	22 33 02.8	0.0
	comp=Z,42nm,1.0s,baz=196,slow=11,SNR=49						
MAJO	Matsushiro	43.65	8	*e*P	P	22 33 02.7	0.0
	comp=Z,71nm,0.8s						
MAJO	Matsushiro	43.65	8	*d i*P	P	22 33 02.8	0.0
MAT	Matsushiro	43.65	8	P	P	22 33 02.9	+0.1
MAT				S	S	22 39 25.0	-3.5
MJB9	Matsu-Tunnel	43.65	8	*e*P	P	22 33 02.7	-0.1
	comp=Z,75nm,0.9s						
KS15	Wonju Array Si	44.20	356	*e*P	P	22 33 07.8	+0.6
	comp=Z,186nm,2.0s						
KSAR	Wonju Array Be	44.20	356	P	P	22 33 08.4	+1.2
KSAR				PcP	PP	22 34 52.4	+1.2
KSAR	Wonju Array Be	44.20	356	P	P	22 33 08.4	+1.2
KSAR						22 34 52.4	
KSRS	Korea Array	44.21	356	P	P	22 33 08.4	+1.2
	comp=Z,13nm,0.9s,baz=182,slow=9.6,SNR=26						
KSRS				PcP	PP	22 34 52.4	+1.1
	comp=Z,3.4nm,0.8s,baz=170,slow=2.7,SNR=3.4						
KS01	Wonju Array Si	44.23	356	*e*P	P	22 33 07.9	+0.4
TIA	Tai'an	44.90	344	P	P	22 33 13.1	+0.3
TIA				pmax	pmax		
	comp=Z,22nm,1.0s						
XAN	Xi'an	45.92	334	P	P	22 33 20.5	-0.5
XAN				PcS	PcS	22 38 45.3	-6.4
XAN				S	S	22 39 55.4	-6.2
XAN				pmax	pmax		
	comp=Z,120nm,1.2s						
XAN				pmax	pmax		
	comp=Z,300nm,3.5s						
XAN	Xi'an	45.92	334	*e*P	P	22 33 20.9	-0.1
	comp=Z,90nm,0.8s						
XAN	Xi'an	45.92	334	*e*P	P	22 33 20.9	-0.1
XAN				pmax	pmax		
	comp=Z,90nm,0.8s						
CD2	Chengdu	45.96	326	⇑*i*P	P	22 33 21.7	+0.4
CD2				S	S	22 40 05.0	+2.8
CD2				pmax	pmax		
	comp=Z,180nm,0.5s						
CD2				pmax	pmax		
	comp=Z,510nm,5.5s						
CD2				LR	LR		
	comp=Z,750nm,11.8s						
CD2				LR	LR		
	comp=Z,350nm,15.7s						
DL2	Dalian	46.44	349	P	P	22 33 25.6	+0.7
DL2				S	S	22 40 09.0	+0.4
DL2				pmax	pmax		
	comp=Z,58nm,1.3s						
DL2				LR	LR		
	comp=Z,290nm,20.2s						
DL2				LR	LR		
	comp=Z,240nm,20.9s						
DL2				LR	LR		
	comp=Z,310nm,21.8s						
MSVF	Nonsavu	46.71	108	*e*P	P	22 33 28.9	+1.4
	comp=Z,32nm,0.9s						
MSVF	Nonsavu	46.71	108	*e*P	P	22 33 28.9	+1.4
MSVF				pmax	pmax		
	comp=Z,31nm,0.9s						
FUNA	Funafuti	47.36	95	*e*P	P	22 33 32.0	-0.5
	comp=Z,92nm,1.1s						
TIY	Taiyuan	47.76	340	*e*P	P	22 33 35.8	+0.5
TIY				pmax	pmax		
	comp=Z,110nm,0.9s						
OUZ	Omahuta	47.88	132	*e*P	P	22 33 38.4	+2.1
	comp=Z,56nm,1.4s						
BJT	Baijiatuau	48.73	344	*e*P	P	22 33 42.8	+0.1
	comp=Z,122nm,0.8s						
BJT	Baijiatuau	48.73	344	*e*P	P	22 33 42.8	+0.1
BJT				pmax	pmax		
	comp=Z,122nm,0.8s						
BJI	Beijing	48.75	344	P	P	22 33 43.4	+0.6
BJI				S	S	22 40 38.6	-2.8
BJI				pmax	pmax		
	comp=Z,61nm,0.9s						
BJI				LR	LR		
	comp=Z,130nm,10.8s						
BJI				LR	LR		
	comp=Z,160nm,8.6s						
BRDH	Bariadhala	48.75	308	P	P	22 33 44.2	+1.1
	comp=Z,93nm,0.4s,baz=91,slow=8.1,SNR=16						
SNY	Shenyang	48.99	352	⇑P	P	22 33 45.1	+0.6
SNY				S	S	22 40 40.0	-4.7
SNY				pmax	pmax		
	comp=Z,48nm,0.9s						
SNY				LR	LR		
	comp=Z,300nm,27.5s						
MSHR	Mys Shultsa	49.21	360	*ce*P	P	22 33 47.5	+1.3
VLA	Vladivostok	49.75	0	*c i*P	P	22 33 51.6	+1.3
VLA				pmax	pmax		
	comp=Z,73nm,0.9s						
LZH	Lanzhou	49.96	331	*e*P	P	22 33 53.7	+1.4
LZH				pP	pP	22 34 07.0	+0.8
LZH				sP	sP	22 34 14.8	+2.5
LZH				PcP	PcP	22 35 12.7	+0.9
LZH				PP	PP	22 35 53.5	+5.7
LZH				ScP	ScP	22 39 02.8	0.0
LZH				*e*S	S	22 40 56.4	-2.6
LZH				sS	sS	22 41 17.3	-6.3
LZH				ScS	ScS	22 43 37.2	-1.7
LZH				pmax	pmax		
	comp=Z,120nm,1.2s						
LZH				pmax	pmax		
	comp=Z,700nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,17.3s						
LZH				LR	LR		
	comp=Z,1µm,19.5s						
SHL	Shillong	50.16	312	*e*P	P	22 33 53.7	-0.3
	comp=Z,130nm,1.0s						
SHL				*e*PcP	PcP	22 35 13.5	+0.7
SHL	Shillong	50.16	312	*e*P	P	22 33 53.7	-0.3
SHL				*e*		22 35 13.5	
SHL				pmax	pmax		
	comp=Z,130nm,1.0s						
SHL	Shillong	50.16	312	*e*P	P	22 33 53.3	-0.7
LBZ	Lake Benmore	50.37	144	*e*P	P	22 33 55.6	+0.5
	comp=Z,50nm,0.9s						
RPZ	Rata Peaks	50.49	143	*e*P	P	22 33 57.1	+1.1
	comp=Z,100nm,0.9s						
RPZ	Rata Peaks	50.49	143	P	P	22 33 57.4	+1.3
	comp=Z,39nm,0.8s,baz=349,slow=3.2,SNR=9.2						
RPZ				LR	LR	22 56 05.1	
	comp=Z,243nm,18.8s,baz=305,slow=37						
THZ	Tophouse	50.56	140	*e*P	P	22 33 57.6	+0.8
	comp=Z,54nm,0.7s						
LTZ	Lake Taylor	50.71	142	*e*P	P	22 33 57.0	-0.8
	comp=Z,153nm,1.6s						
CN2	Changchun	50.72	354	*e*P	P	22 33 58.1	+0.4
CN2				*e*sP	pP	22 34 14.1	+2.3
CN2				pmax	pmax		
	comp=Z,40nm,0.6s						
USRK	Ussuriysk Ar.	50.83	1	P	P	22 33 59.6	+1.1
	comp=Z,30nm,0.7s,baz=183,slow=7.4,SNR=77						
USRK				LR	LR	22 54 51.7	
	comp=Z,84nm,20.7s,baz=167,slow=35						
USA0B	Ussuriysk Arra	50.83	1	*e*P	P	22 33 59.8	+1.2
	comp=Z,36nm,0.8s						
OXZ	Oxford	50.86	142	*e*P	P	22 33 59.7	+0.8
	comp=Z,82nm,0.7s						
HHC	Hu-ho-hao-te	50.87	341	*e*P	P	22 34 00.2	+1.2
HHC				pmax	pmax		
	comp=Z,78nm,1.4s						
BTO	Baotou	51.18	339	*e*P	P	22 34 02.5	+1.1
MDJ	Mudanjiang	51.27	358	P	P	22 34 03.0	+1.2
MDJ				pmax	pmax		
	comp=Z,71nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.3s						
MDJ	Mudanjiang	51.27	358	*e*P	P	22 34 03.0	+1.2
	comp=Z,51nm,0.9s						
MDJ				*e*PcP	PcP	22 35 17.0	+0.7
KHZ	Kahutara	51.31	140	*e*P	P	22 34 02.7	+0.6
	comp=Z,78nm,0.7s						
BKZ	Black Stump Fm	51.70	135	*e*P	P	22 34 05.3	0.0
	comp=Z,41nm,0.8s						
URZ	Urewera	51.74	134	*e*P	P	22 34 05.9	+0.3
URZ	Urewera	51.74	134	P	P	22 34 05.6	0.0
	comp=Z,6.8nm,0.5s,baz=246,slow=12,SNR=4.1						
URZ				LR	LR	22 55 14.2	
	comp=Z,198nm,21.3s,baz=310,slow=35						
PALK	Pallekele	52.50	285	*e*P	P	22 34 12.8	+1.2
	comp=Z,39nm,0.9s						
PALK	Pallekele	52.50	285	*i* P	P	22 34 14.1	+2.5
PALK	Pallekele	52.50	285	P	P	22 34 13.3	+1.7
	comp=Z,25nm,0.8s,baz=116,slow=8.0,SNR=10						
RAO	Raoul Island	52.58	122	P	P	22 34 12.9	+1.0
	comp=Z,186nm,0.3s,baz=60,slow=20,SNR=2.5						
LSA	Lhasa	53.08	315	*e*P	P	22 34 17.2	+1.1
	comp=Z,53nm,0.8s						
LSA	Lhasa	53.08	315	P	P	22 34 16.8	+0.7
LSA	Lhasa	53.08	315	*e*P	P	22 34 17.2	+1.1
LSA				pmax	pmax		
	comp=Z,53nm,0.8s						
BOK	Bokaro	53.88	306	*e*P	P	22 34 21.4	-0.1
BOK				IAmb	IAmb	22 34 23.3	
	comp=Z,46nm,1.2s						
YSS	Yuzh-Sakhalins	54.52	10	*e*P	P	22 34 26.8	+1.1
	comp=Z,32nm,0.6s						
YSS	Yuzh-Sakhalins	54.52	10	*e*P	P	22 34 26.5	+0.8
YSS				*e**SP	pwP	22 34 42.7	-0.4
YSS				*e*		22 35 30.5	
YSS				*e*S	S	22 42 00.7	+0.1
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				pmax	pmax		
	comp=N,20nm,0.7s						
YSS				MLR	MLR		
	comp=N,100nm,15.0s						
GTA	Gaotai	54.55	330	⇑P	P	22 34 26.9	+0.7
GTA				pP	pP	22 34 38.9	-1.3
GTA				sP	pwP	22 34 44.3	-1.6
GTA				PcP	PcP	22 35 30.5	+1.6
GTA				ScP	ScP	22 39 22.0	-0.6
GTA				S	S	22 42 00.2	-1.3
GTA				sS	pS	22 42 21.4	+4.1
GTA				ScS	ScS	22 44 09.4	-1.3
GTA				SS	SS	22 45 42.6	-2.5
GTA				pmax	pmax		
	comp=N,79nm,1.5s						
GTA				pmax	pmax		
	comp=N,290nm,9.2s						
GTA				LR	LR		
	comp=N,98nm,18.4s						
GTA				LR	LR		
	comp=N,180nm,16.8s						
GTA				LR	LR		
	comp=N,260nm,19.0s						
MDRS	Chennai	54.55	291	*e*P	P	22 34 26.6	+0.1
RAMN	Ramite	54.89	310	⇑*i*P	P	22 34 29.7	+0.6
	comp=N,562nm,0.7s						
JIRN	Jiri	55.56	310	⇑*i*P	P	22 34 34.4	+0.3
	comp=N,336nm,0.7s						
KLR	Kul'dur	55.86	0	*c i*P	P	22 34 36.3	+0.9
KLR	Kul'dur	55.86	0	P	P	22 34 36.9	+1.5
	comp=N,29nm,1.0s,baz=194,slow=5.0,SNR=63						
GUN	Gumba	55.93	310	⇑*i*P	P	22 34 36.9	+0.2
	comp=N,433nm,0.7s						
PKI	Pulchoki	56.11	310	⇑*i*P	P	22 34 38.0	0.0
	comp=N,128nm,0.7s						
PKIN	Phulchoki	56.13	310	⇑*i*P	P	22 34 37.9	-0.1
	comp=N,97nm,0.7s						
DMN	Daman	56.37	310	⇑*i*P	P	22 34 40.1	+0.4
	comp=N,306nm,0.9s						
TRD	Trivandrum	56.39	285	*e*P	P	22 34 40.1	+0.3
HIA	Hailar	56.82	351	*e*P	P	22 34 42.8	+0.6
	comp=N,18nm,0.7s						
HIA	Hailar	56.82	351	*c i*P	P	22 34 43.0	+0.7
HIA				pmax	pmax		
	comp=Z,17nm,0.8s						
HYB	Hyderabad	57.52	296	⇑*i*P	P	22 34 47.0	-0.8
	comp=Z,77nm,0.8s						
HYB				*e*pP	pP	22 35 02.5	+0.2
HYB	Hyderabad	57.52	296	*e*P	P	22 34 46.8	-1.0
HYB				IAmb	IAmb	22 34 47.3	
	comp=Z,232nm,0.2s						
GRNR	Gornyy	57.56	4	*e*P	P	22 34 48.1	+0.7
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
KOLN	Koldanda	57.60	309	⇑*i*P	P	22 34 48.9	+0.5
	comp=Z,416nm,0.9s						
DANN	Dangsing	57.77	310	⇑*i*P	P	22 34 49.9	+0.3
	comp=Z,199nm,0.7s						
PYUN	Piuthan	58.23	309	⇑*i*P	P	22 34 53.3	+0.5

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        comp=Z,777nm,0.9s
NGP    Nagpur             58.44 300  eP      P        22 34 53.7  -0.5
DGAR   Diego Garcia       58.47 266  eP      P        22 34 54.5   0.0
        comp=Z,287nm,0.8s
DGAR   Diego Garcia       58.47 266  eP      P        22 34 54.5   0.0
DGAR                                  pmax   pmax
        comp=Z,287nm,0.8s
SONA0  Songino Array      58.77 341  eP      P        22 34 57.6  +1.5
SONM   Songino Array      58.77 341   P      P        22 34 57.6  +1.5
        comp=Z,54nm,0.9s,baz=166,slow=5.4,SNR=307
SONM                                  LR     LR       23 03 03.4
        comp=Z,61nm,18.2s,baz=165,slow=39
SONM                                  PKP2ab          23 04 57.6
        comp=Z,0.9nm,0.8s,baz=297,slow=3.8,SNR=5.9
SONA1  Songino Array      58.78 341  eP      P        22 34 56.8  +0.6
SONA1                                eS      S        22 42 58.6  +1.4
NKL    Nikolayevsk        60.30   6  i P     P        22 35 08.0  +1.7
NKL                                  e                22 35 21.5
NKL                                   pmax   pmax
        comp=N,27nm,1.0s
NKL                                   pmax   pmax
        comp=Z,240nm,1.0s
ZEA    Zeya               60.48 357  eP      P        22 35 07.8  +0.3
ZEA                                   pmax   pmax
        comp=E,21nm,0.8s
ZEA                                   pmax   pmax
        comp=N,59nm,1.0s
ZEA                                   pmax   pmax
        comp=Z,93nm,1.0s
BHPL   Bhopal             60.64 301  eP      P        22 35 08.4  -0.9
BHPL                                  IAmb   IAmb     22 35 09.4
        comp=Z,194nm,0.2s
GOA    Goa                61.21 292  eP      P        22 35 12.7  -0.5
GOA                                   IAmb   IAmb     22 35 14.2
        comp=Z,60nm,0.7s
ZAK    Zakamensk          62.01 340  eP      P        22 35 18.8  +0.7
ZAK                                   pmax   pmax
        comp=Z,42nm,1.1s
POO    Poona              62.11 295  eP      P        22 35 18.2  -1.1
POO                                   IAmb   IAmb     22 35 20.0
        comp=Z,91nm,1.2s
POO    Poona              62.11 295  eP      P        22 35 16.0  -3.3
TLY    Talaya             63.00 341  eP      P        22 35 26.1  +1.6
TLY    Talaya             63.00 341c iP      P        22 35 26.0  +1.4
TLY    Talaya             63.00 341   P      P        22 35 26.3  +1.8
        SNR=22
DDI    Dehra Dun          63.08 309  eP      P        22 35 25.6   0.0
DDI                                   IAmb   IAmb     22 35 26.1
        comp=Z,70nm,1.0s
BOM    Bombay             63.16 295  ex      P        22 35 19.1  -7.1
IRK    Irkutsk            63.28 342  eP      P        22 35 27.0  +0.6
IRK                                   pmax   pmax
        comp=Z,158nm,1.1s
PEA0B  Petropavlovsk-     63.77  17  eP      P        22 35 31.4  +1.8
        comp=Z,71nm,1.0s
PETK   Petropavlovsk-     63.77  17   P      P        22 35 31.2  +1.6
        comp=Z,17nm,0.8s,baz=185,slow=5.8,SNR=11
PETK                                  LR     LR       23 01 00.5
        comp=Z,33nm,21.8s,baz=204,slow=34
PEA1   Petropavlovsk-     63.77  17  eP      P        22 35 31.2  +1.6
MOY    Mondy              63.88 339  eP      P        22 35 32.4  +1.9
MOY                                   pmax   pmax
        comp=Z,121nm,1.6s
PET    Petropavlovsk      63.98  18  eP      P        22 35 32.3  +1.4
        comp=Z,41nm,1.0s
PET    Petropavlovsk      63.98  18  eP      P        22 35 32.4  +1.4
PET                                  eS      S        22 44 00.7  -2.0
PET                                   pmax   pmax
        comp=Z,35nm,1.1s
PET                                   MLR    MLR
        comp=Z,100nm,20.0s
WMQ    Urumqi             64.06 326⇑iP      P        22 35 33.4  +1.6
WMQ                                  sP      pwP      22 35 50.0  -0.5
WMQ                                  S       S        22 44 00.7  -3.5
WMQ                                  sS      sS       22 44 26.5  -0.3
WMQ                                  ScS     SKSac    22 45 16.8  -4.0
WMQ                                   pmax   pmax
        comp=Z,350nm,3.7s
WMQ                                   LR     LR
        comp=Z,660nm,28.1s
WMQ                                   LR     LR
        comp=Z,340nm,31.5s
WMQ                                   LR     LR
        comp=Z,380nm,33.1s
WMQ    Urumqi             64.06 326  eP      P        22 35 33.3  +1.6
        comp=Z,182nm,0.8s
WMQ    Urumqi             64.06 326  eP      P        22 35 33.3  +1.5
WMQ                                   pmax   pmax
        comp=Z,182nm,0.8s
SMLA   Simla              64.13 309  eP      P        22 35 33.2  +0.8
KNGR   Kungurtug, Tuv     64.30 337c iP      P        22 35 34.3  +1.0
DHRM   DHARAMSHALA        65.28 310  eP      P        22 35 40.5  +0.3
BOD    Bodaibo            66.00 350  i P     P        22 35 44.8  +0.8
BOD                                   pmax   pmax
        comp=Z,66nm,0.9s
BHJ    Bhuj               67.33 299  eP      P        22 35 52.7  -0.4
RAR    Rarotonga          67.82 110  eP      P        22 35 58.4  +2.1
        comp=Z,303nm,1.9s
RAR    Rarotonga          67.82 110   P      P        22 35 58.4  +2.1
        comp=Z,9.6nm,0.5s,baz=174,slow=19,SNR=4.5
ZSN    Zaisan             67.90 328c iP      P        22 35 56.1  -0.2
ZSN                                  eS      S        22 44 49.5  -1.1
ZSN                                   pmax   pmax
        comp=Z,249nm,1.1s
ZSN    Zaisan             67.90 328⇑iP      P        22 35 56.1  -0.2
        comp=Z,249nm,1.1s
ZSN                                  eS      S        22 44 49.6  -1.1
MA2    Magadan            68.00  10  eP      P        22 35 58.2  +1.5
        comp=Z,31nm,1.0s
MA2    Magadan            68.00  10c iP      P        22 35 58.0  +1.3
MA2                                   pmax   pmax
        comp=Z,29nm,0.8s
DGZ    Jazzator, Alta     68.06 331c iP      P        22 35 58.7  +1.2
DGZ                                   pmax   pmax
        comp=Z,45nm,1.0s
NIL    Nilore             68.20 310  eP      P        22 35 59.3  +0.8
        comp=Z,60nm,0.8s
NIL    Nilore             68.20 310  eP      P        22 35 59.3  +0.8
NIL                                   pmax   pmax
        comp=Z,59nm,0.8s
PDGK   Podgornoye         68.55 322  i P     P        22 36 01.5  +0.8
PDGK                                  pmax   pmax
        comp=Z,86nm,0.7s
YAK    Yakutsk            68.71 359c iP      P        22 36 01.9  +0.9
YAK                                  i                22 36 21.3
YAK                                  e*PP    PcP      22 36 28.1  +2.7
YAK                                  e                22 38 33.2
YAK                                  ePPP    PPP      22 40 07.6
YAK                                  eS      S        22 45 03.7  +4.1
YAK                                  e*SS    SKiKP    22 45 45.8  -2.6
YAK                                  e                22 45 52.6
YAK                                   pmax   pmax
        comp=N,179nm,0.8s
YAK                                   pmax   pmax
        comp=E,44nm,0.9s
YAK                                   smax   smax
        comp=N,212nm,1.5s
YAK                                   smax   smax
        comp=E,120nm,1.5s
UZB    Uzynbulak          68.74 322deP      P        22 36 01.0  -0.9
UZB                                  eS      S        22 45 00.1  -1.0
UZB                                   smax   smax
        comp=E,124nm,2.6s
UZB    Uzynbulak          68.74 322⇓eP      P        22 36 01.0  -0.9
        comp=E,1µm,1.0s
UZB                                  eS      S        22 45 00.1  -1.0
        comp=E,124nm,2.6s
TARG   Taragay, Kyrgy     68.77 320  eP      P        22 36 04.0  +1.7
        comp=E,52nm,1.1s
PRZ    Przheval'sk        68.78 321  eP      P        22 36 04.5  +2.3
        comp=E,108nm,0.9s
MK01   Makanchi Array     68.87 326  eP      P        22 36 03.8  +1.3
KSH    Kashi              68.88 317⇑iP      P        22 36 04.6  +1.9
KSH                                   pP     pP       22 36 18.1  +0.6
KSH                                   PP     PP       22 38 38.0  +2.4
KSH                                   S      S        22 45 04.6  +1.8
KSH                                   sS     sS       22 45 29.3  +3.0
KSH                                   ScS    ScS      22 45 58.6  +0.1
KSH                                   SS     SS       22 49 35.9  +6.6
KSH                                   pmax   pmax
        comp=E,170nm,0.9s
KSH                                   LR     LR
        comp=E,260nm,4.5s
KSH                                   LR     LR
        comp=E,260nm,4.5s
KSH                                   LR     LR
        comp=E,400nm,5.8s
MK31   Makanchi Array     68.89 326  eP      P        22 36 03.9  +1.4
MK31                                 eS      S        22 45 04.8  +2.4
MK31   Makanchi Array     68.89 326  eP      P        22 36 03.9  +1.4
MK31                                 eS      S        22 45 04.9  +2.4
MK32   Makanchi Array     68.89 326  eP      P        22 36 04.1  +1.5
MKAR   Makanchi Array     68.89 326  eP      P        22 36 03.9  +1.4
        comp=E,769nm,0.7s
MKAR                                 eS      S        22 45 04.8  +2.4
MKAR   Makanchi Array     68.89 326ceP      P        22 36 03.9  +1.4
MKAR                                  pmax   pmax
        comp=Z,141nm,0.7s
MKAR   Makanchi Array     68.89 326   P      P        22 36 04.1  +1.5
        comp=Z,141nm,0.7s,baz=114,slow=8.1,SNR=1300
MAKZ   Makanchi           69.07 326  eP      P        22 36 04.9  +1.2
        comp=Z,143nm,0.9s
MAKZ   Makanchi           69.07 326  eP      P        22 36 04.9  +1.2
MAKZ                                  pmax   pmax
        comp=Z,143nm,0.9s
SATY   Saty               69.08 321d iP      P        22 36 03.6  -0.3
SATY                                 eS      S        22 45 05.1   0.0
SATY                                  smax   smax
        comp=E,164nm,2.1s
SATY   Saty               69.08 321⇓iP      P        22 36 03.6  -0.3
        comp=E,3µm,1.0s
SATY                                 eS      S        22 45 05.1   0.0
        comp=E,164nm,2.1s
ZHN    Zhinishke          69.12 321c iP      P        22 36 03.5  -0.6
ZHN                                   pmax   pmax
        comp=Z,721nm,1.0s
ZHN    Zhinishke          69.12 321⇑iP      P        22 36 03.6  -0.6
        comp=Z,721nm,1.0s
KDJ    Kajisay            69.37 320  eP      P        22 36 08.6  +2.8
        comp=Z,70nm,0.6s
KDJ    Kajisay            69.37 320  eP      P        22 36 08.6  +2.8
KDJ                                   pmax   pmax
        comp=Z,70nm,0.6s
NRN    Naryn              69.79 319  eP      P        22 36 09.7  +1.1
        comp=Z,48nm,0.8s
NRN    Naryn              69.79 319  eP      P        22 36 09.7  +1.1
NRN                                   pmax   pmax
        comp=Z,48nm,0.8s
MDOK   Medeo              69.98 321deP      P        22 36 08.0  -1.5
MDOK                                 eS      S        22 45 15.6  -0.1
MDOK                                  pmax   pmax
        comp=Z,550nm,1.3s
MDOK                                  smax   smax
        comp=E,182nm,2.8s
MDOK   Medeo              69.98 321⇓eP      P        22 36 08.1  -1.5
        comp=E,550nm,1.3s
MDOK                                 eS      S        22 45 15.7  -0.1
        comp=E,182nm,2.8s
TNSS   Tian-Shan          69.98 321⇓iP      P        22 36 10.6  +0.8
TNSS   Tian-Shan          69.98 321⇓iP      P        22 36 10.7  +0.8
        comp=E,1µm,0.9s
ULHL   Ulahol             70.03 320   P      P        22 36 11.3  +1.3
        SNR=6.7
AAA    Alma-Ata           70.09 321c iP      P        22 36 09.9  -0.1
AAA                                   pmax   pmax
        comp=Z,295nm,1.2s
AAA    Alma-Ata           70.09 321⇑iP      P        22 36 10.0  -0.1
        comp=Z,295nm,1.2s
TDK    Taldyqorghan       70.11 323d iP      P        22 36 09.7  -0.4
TDK                                  eS      S        22 45 15.5  -1.4
TDK                                   smax   smax
        comp=E,272nm,4.2s
TDK    Taldyqorghan       70.11 323⇓iP      P        22 36 09.7  -0.4
        comp=E,1µm,1.3s
TDK                                  eS      S        22 45 15.5  -1.4
        comp=E,272nm,4.2s
MTBS   Maitube            70.36 320⇓eP      P        22 36 11.8  +0.1
MTBS                                  pmax   pmax
        comp=Z,289nm,0.7s
MTBS   Maitube            70.36 320⇓eP      P        22 36 11.8  +0.1
        comp=Z,289nm,0.7s
CHKK   Chushkaly          70.37 321⇓iP      P        22 36 11.4  -0.3
CHKK                                 i S     S        22 45 18.8  -1.2
CHKK                                  pmax   pmax
        comp=Z,528nm,1.0s
CHKK                                  smax   smax
        comp=N,105nm,2.5s
CHKK   Chushkaly          70.37 321⇓iP      P        22 36 11.5  -0.3
        comp=N,528nm,1.0s
CHKK                                ⇓iS      S        22 45 18.9  -1.2
        comp=N,105nm,2.5s
KZA    Kyzart             70.59 319   P      P        22 36 15.7  +2.1
        SNR=71
TKM2   Tokmak 2           70.78 320   P      P        22 36 15.9  +1.4
        SNR=52
TKM2   Tokmak 2           70.78 320  i P     P        22 36 15.1  +0.6
TKM2                                  pmax   pmax
        comp=Z,54nm,0.8s
SFK    Sufi-Kurgan        70.79 316  i P     P        22 36 15.4  +0.8
SFK                                   pmax   pmax
        comp=Z,47nm,0.8s
KUU    Kurty              70.80 321c iP      P        22 36 13.9  -0.4
KUU                                  eS      S        22 45 24.0  -1.0
KUU                                   smax   smax
        comp=E,201nm,3.4s
KUU    Kurty              70.80 321⇑iP      P        22 36 13.9  -0.4
        comp=E,847nm,0.9s
KUU                                 ⇓eS      S        22 45 24.0  -1.0
        comp=E,201nm,3.4s
KBK    Karagaybulak       71.07 319   P      P        22 36 17.9  +1.7
        SNR=33
UCH    Uchtor             71.14 319   P      P        22 36 18.9  +1.8
        SNR=60
FRU1   Bishkek            71.35 319  eP      P        22 36 18.6  +0.8
        comp=E,21nm,0.7s
FRU1   Bishkek            71.35 319  eP      P        22 36 18.6  +0.8
FRU1                                  pmax   pmax
        comp=Z,21nm,0.7s
AAK    Ala-Archa          71.35 319   P      P        22 36 19.6  +1.6
        SNR=20
AAK    Ala-Archa          71.35 319  eP      P        22 36 19.2  +1.3
        comp=Z,65nm,1.1s
AAK    Ala-Archa          71.35 319  i P     P        22 36 19.5  +1.6
        SNR=14
AAK    Ala-Archa          71.35 319  i P     P        22 36 18.9  +1.0
AAK                                   pmax   pmax
        comp=Z,62nm,1.0s
AAK    Ala-Archa          71.35 319   P      P        22 36 19.5  +1.6
        SNR=20
AAK    Ala-Archa          71.35 319   P      P        22 36 19.5  +1.6
        comp=Z,16nm,0.4s,baz=123,slow=4.5,SNR=51
CHMS   Chumysh            71.36 320   P      P        22 36 18.7  +1.0
        SNR=15
FRU    Bishkek            71.37 319  eP      P        22 36 18.0  +0.2
FRU                                  e                22 36 42.0
FRU                                   pmax   pmax
        comp=Z,80nm,2.0s
SEY    Seymchan           71.43  10⇑eP      P        22 36 19.3  +1.6
AML    Almayashu          71.64 318   P      P        22 36 21.8  +1.9
        SNR=57
USP    Ospenovka          71.65 320   P      P        22 36 20.9  +1.4
        SNR=53
KBL    Kabul              71.76 310  eP      P        22 36 21.3  +0.7
        comp=Z,186nm,1.3s
KBL    Kabul              71.76 310  eP      P        22 36 21.3  +0.7
KBL                                   pmax   pmax
        comp=Z,186nm,1.3s
EKS2   Erkin-Say          71.83 319   P      P        22 36 22.6  +1.9
        SNR=26
ZAA0   Zalesovo Array     72.09 333  eP      P        22 36 22.1  +0.2
        comp=Z,101nm,0.8s
ZALV   Zalesovo Beam      72.09 333  eP      P        22 36 21.7  -0.2
ZALV                                 eS      S        22 45 36.7  -2.7
ZALV   Zalesovo Beam      72.09 333   P      P        22 36 22.5  +0.7
        comp=Z,80nm,0.7s,baz=117,slow=4.8,SNR=379
ZALV                                  LR     LR       23 11 34.4
        comp=Z,53nm,18.6s,baz=70,slow=39
ZAA1   Zalesovo Array     72.09 333  eP      P        22 36 22.5  +0.7
VNDA   Vanda              72.41 173   P      P        22 36 24.4  +1.0
        comp=Z,16nm,0.8s,baz=321,slow=6.9,SNR=30
VNDA                                  LR     LR       23 08 24.6
        comp=Z,210nm,18.7s,baz=343,slow=36
GAR    Garm               72.57 314  eP      P        22 36 26.1  +0.9
        comp=Z,193nm,0.8s
GAR    Garm               72.57 314  eP      P        22 36 26.1  +0.9
GAR                                   pmax   pmax
        comp=Z,193nm,0.8s
MNAS   Manas              72.58 318  i P     P        22 36 27.0  +1.7
MNAS                                  pmax   pmax
        comp=Z,55nm,0.9s
MRIV   Mauritius Mete     72.59 251  eP      P        22 36 26.8  +1.1
        comp=Z,24nm,0.7s
BTK    Batken             72.66 316  eP      P        22 36 28.6  +3.0
        comp=Z,286nm,1.8s
BTK    Batken             72.66 316  eP      P        22 36 28.7  +3.0
BTK                                   pmax   pmax
        comp=Z,286nm,1.8s
BTLS   Baital             72.79 321c iP      P        22 36 25.5  -0.7
BTLS                                  pmax   pmax
        comp=Z,394nm,1.5s
BTLS   Baital             72.79 321⇑iP      P        22 36 25.6  -0.7
        comp=Z,394nm,1.5s
KURBB  Kurchatov Arra     73.14 328   P      P        22 36 29.1  +0.9
        comp=Z,84nm,0.7s,baz=128,slow=4.9,SNR=421
KURK   Kurchatov          73.14 328  eP      P        22 36 29.1  +0.9
KURK   Kurchatov          73.14 328c iP      P        22 36 28.7  +0.6
KURK                                  pmax   pmax
        comp=Z,173nm,1.3s
KURK   Kurchatov          73.14 328   P      P        22 36 29.0  +0.9
        SNR=45
KURK                                  P      P        22 36 29.0  +0.9
        SNR=45
NVS    Novosibirsk        73.38 333  eP      P        22 36 30.0  +0.6
NVS                                  eS      S        22 45 51.9  -2.1
NVS                                   pmax   pmax
        comp=E,50nm,1.0s
NVS                                   pmax   pmax
        comp=Z,91nm,1.0s
NVS                                   pmax   pmax
        comp=N,50nm,1.1s
NVS                                   pmax   pmax
        comp=E,50nm,1.0s
NVS                                   smax   smax
        comp=N,14nm,2.4s
NVS                                   smax   smax
        comp=E,24nm,2.0s
DZA    Taraz              73.54 318ceP      P        22 36 30.5  -0.2
DZA                                   pmax   pmax
        comp=Z,333nm,1.4s
DZA    Taraz              73.54 318⇑eP      P        22 36 30.6  -0.2
        comp=Z,333nm,1.4s
IUG    Iuzhnay            74.08 317c iP      P        22 36 33.5  -0.5
IUG                                  i S     S        22 46 02.6  -0.1
IUG                                   pmax   pmax
        comp=Z,482nm,1.2s
IUG                                   smax   smax
        comp=E,424nm,2.1s
IUG    Iuzhnay            74.08 317⇑iP      P        22 36 33.5  -0.5
        comp=E,482nm,1.2s
IUG                                 ⇑iS      S        22 46 02.6  -0.1
        comp=E,424nm,2.1s
KK31   Karatay Array      74.17 318  eP      P        22 36 35.1  +0.7
KK31   Karatay Array      74.17 318  eP      P        22 36 35.1  +0.7
KKAR   Karatay Array      74.17 318  eP      P        22 36 35.1  +0.7
KKAR   Karatay Array      74.17 318  eP      P        22 36 35.1  +0.7
CHM    Chimkent           74.44 317  eP      P        22 36 36.4  +0.4
CHM    Chimkent           74.44 317  eP      P        22 36 36.5  +0.4
        comp=E,997nm,0.8s
OTUK   Ortayu             75.36 324  i P     P        22 36 41.9  +0.7
OTUK                                  pmax   pmax
        comp=Z,71nm,0.7s
MAW    Mawson             75.59 202  eP      P        22 36 43.0  +0.9
        comp=Z,47nm,1.5s
MAW    Mawson             75.59 202   P      P        22 36 43.7  +1.6
        comp=Z,26nm,0.9s,baz=68,slow=17,SNR=2.6
MAW                                   LR     LR       23 08 11.2
        comp=Z,193nm,19.2s,baz=48,slow=34
JLN    Jalan Bani Buh     76.12 295   P      P        22 36 46.6  +0.6
        SNR=8.4
WSAR   Wadi Sarin         77.07 296   P      P        22 36 52.4  +1.0
        SNR=12
MHTO   MHTO               77.17 293   P      P        22 36 52.3  +0.4
        SNR=14
MHTO                                  P      P        22 36 52.3  +0.4
        SNR=14
DQM    DQM                77.34 292   P      P        22 36 53.5  +0.6
DQM                                   P      P        22 36 53.5  +0.6
TBI    Tubuai             77.35 112  eLR     LR       23 00 48.4
        comp=Z,266nm,38.8s
PPT2   Papeete2           77.51 106  eLR     LR       23 01 08.7
        comp=Z,228nm,25.8s
PPT    Papeete            77.51 106   P      P        22 36 56.0  +2.0
        comp=Z,31nm,0.8s,baz=227,slow=19,SNR=3.1
PPT                                   LR     LR       23 08 29.3
        comp=Z,59nm,18.9s,baz=258,slow=34
BIDO   Bidbid             77.59 296   P      P        22 36 55.7  +1.4
        SNR=18
TIXI   Tiksi              78.37 359  eP      P        22 36 57.2  -0.3
        comp=Z,35nm,0.7s
TIXI   Tiksi              78.37 359c iP      P        22 36 57.3  -0.3
TIXI                                  pmax   pmax
        comp=Z,51nm,1.0s
BILL   Bilibino           78.67  13⇓iP      P        22 37 00.3  +1.0
BILL                                 e                22 37 08.6
BILL                                  *PP    pP       22 37 12.0  -3.1
BILL                                 i                22 37 20.7
BILL                                                  22 39 57.0
BILL                                 eS      S        22 46 48.6  -3.2
BILL                                  SSS    SSS      22 55 21.0
BILL                                  pmax   pmax
        comp=Z,2.0nm,0.9s
BILL                                  MLR    MLR
        comp=Z,91nm,20.0s
BVAR   Borovoye Array     78.70 327   P      P        22 37 00.5  +0.7
        comp=Z,64nm,0.8s,baz=116,slow=6.8,SNR=176
BRVK   Borovoye           78.78 327  eP      P        22 37 00.8  +0.6
        comp=Z,99nm,0.8s
BRVK                                 eS      S        22 46 52.0  -1.4
BRVK   Borovoye           78.78 327c iP      P        22 37 00.8  +0.6
BRVK                                  pmax   pmax
        comp=Z,94nm,0.9s
BRVK   Borovoye           78.78 327   P      P        22 37 01.0  +0.8
        SNR=25
BRVK                                  P      P        22 37 01.0  +0.8
        SNR=25
SOHO   SOHO               79.15 296   P      P        22 37 03.4  +0.5
        SNR=15
DMTO   DMTO               79.31 289   P      P        22 37 04.4  +0.5
DMTO                                  P      P        22 37 04.4  +0.5
MDH    Madha              79.61 297   P      P        22 37 05.4  +0.1
UOSS   Minazif            79.61 297  eP      P        22 37 03.1  -2.3
        comp=Z,31nm,0.9s
UOSS   Minazif            79.61 297  i P     P        22 37 05.5  +0.1
        SNR=10
UOSS   Minazif            79.61 297   P      P        22 37 05.8  +0.4
        SNR=5.5
HATD   Hatta, Dubai       79.65 297  i P     P        22 37 06.6  +1.0
        SNR=13
HATD   Hatta, Dubai       79.65 297   P      P        22 37 06.7  +1.0
        SNR=8.0
ASHO   Ashiyiah           79.69 297  i P     P        22 37 06.4  +0.6
        SNR=13
ASHO   Ashiyiah           79.69 297   P      P        22 37 06.5  +0.6
        SNR=8.9
BANOM  Banah              79.74 298  i P     P        22 37 07.2  +1.1
        SNR=12
BANOM  Banah              79.74 298   P      P        22 37 08.7  +2.5
        SNR=5.1
MSFE   Esma-Masafi        79.74 297  i P     P        22 37 07.3  +1.2
        SNR=15
ALNE   Al Ain             79.83 296  i P     P        22 37 07.1  +0.5
        SNR=16
SHME   Shamm              79.91 298  i P     P        22 37 08.1  +1.1
        SNR=22
NAZ    Nazwa, Dubai       80.10 297  i P     P        22 37 08.7  +0.7
        SNR=10
NAZ    Nazwa, Dubai       80.10 297   P      P        22 37 08.5  +0.4
        SNR=10
FAQ    Al Faqa, Dubai     80.11 297  i P     P        22 37 08.6  +0.5
        SNR=21
FAQ    Al Faqa, Dubai     80.11 297   P      P        22 37 08.7  +0.5
        SNR=10
ASUD   Al Ashush, Dub     80.32 296  i P     P        22 37 09.8  +0.5
        SNR=9.6
ASUD   Al Ashush, Dub     80.32 296   P      P        22 37 10.3  +1.1
        SNR=7.3
WHFO   Wadi Hawf          80.45 289   P      P        22 37 10.5  +0.4
        SNR=14
AJN    Ajban              80.61 296  i P     P        22 37 12.7  +1.9
        SNR=5.3
AJN    Ajban              80.61 296   P      P        22 37 11.2  +0.4
        SNR=5.8
ABTO   Aybut              80.79 289   P      P        22 37 12.6  +0.6
        SNR=7.1
GEYT   Alibeck            81.20 310   P      P        22 37 14.8  +1.1
        comp=Z,36nm,0.7s,baz=147,slow=3.5,SNR=66
GEYT                                  LR     LR       23 19 34.5
        comp=Z,60nm,20.8s,baz=80,slow=40
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GYA0B ALIBECK ARRAY   81.20 310  eP       P        22 37 14.9 +1.1
      comp=Z,44nm,0.8s
NRIK  Noril'sk        81.78 346   P       P        22 37 17.1 +1.1
      comp=Z,52nm,0.8s,baz=125,slow=5.7,SNR=82
NRIK                              LR      LR       23 19 57.3
      comp=Z,82nm,18.7s,baz=129,slow=40
GAMB  Gambell         82.26  22  eP       P        22 37 20.1 +1.5
      comp=Z,17nm,1.1s
QSPA  South Pole Qui  83.11 180  eP       P        22 37 23.6 +0.3
      comp=Z,33nm,0.8s
AKTO  Aktyubinsk      84.83 322   P       P        22 37 32.8 +0.6
      comp=Z,32nm,0.8s,baz=104,slow=5.9,SNR=57
ANM   Nome            85.06  23  eP       P        22 37 34.3 +1.4
      comp=Z,22nm,1.1s
ANM   Nome            85.06  23  eP       P        22 37 34.3 +1.4
ANM                               pmax    pmax
      comp=Z,22nm,1.1s
SVE   Sverdlovsk      85.38 329d iP       P        22 37 34.4 -0.3
SVE                              eS       S        22 47 56.6 -4.5
SVE                               pmax    pmax
      comp=Z,76nm,1.1s
ARU   Arti            86.34 328  eP       P        22 37 38.8 -0.7
      comp=Z,62nm,1.0s
ARU                              ePP      PP       22 40 59.4 -1.9
ARU   Arti            86.34 328c iP       P        22 37 38.8 -0.7
ARU                               pmax    pmax
      comp=Z,77nm,1.3s
DAMY  Dhamar          88.84 285  eP       P        22 37 53.1 +0.4
      comp=Z,86nm,1.4s
RAYN  Ar Rayn         88.98 294  eP       P        22 37 53.6 +0.6
      comp=Z,81nm,1.0s
RAYN  Ar Rayn         88.98 294  eP       P        22 37 53.6 +0.6
RAYN                              pmax    pmax
      comp=Z,81nm,1.0s
ATD   Arta Tunnel     89.96 282   P       P        22 37 59.0 +1.2
      comp=Z,23nm,1.0s,baz=74,slow=2.6,SNR=8.4
IM3   Indian Mountai  90.12  23  eP       P        22 37 59.6 +2.4
MLY   Manley          91.08  25  eP       P        22 38 02.4 +0.6
      comp=Z,6.7nm,0.9s
RND   Reindeer        91.51  26  eP       P        22 38 03.9  0.0
      comp=Z,15nm,1.0s
RND   Reindeer        91.51  26  eP       P        22 38 03.9  0.0
RND                               pmax    pmax
      comp=Z,15nm,1.0s
KIRV  Kirov           91.65 329   P       P        22 38 04.0 -0.5
      comp=Z,16nm,0.7s,baz=15,slow=0.2,SNR=11
COLD  Coldfoot        91.81  22  eP       P        22 38 05.7 +0.6
      comp=Z,3.6nm,0.9s
GNI   Garni           91.84 310  eP       P        22 38 06.4 +0.3
      comp=Z,48nm,1.0s
GNI   Garni           91.84 310⇓eP       P        22 38 06.7 +0.6
GNI                               pmax    pmax
      comp=Z,53nm,1.1s
WRH   Wood River Hil  92.06  25  eP       P        22 38 06.1 -0.2
      comp=Z,13nm,1.0s
CCB   Clear Creek Bu  92.22  25  eP       P        22 38 06.5 -0.5
      comp=Z,15nm,1.0s
COLA  College         92.24  25⇑eP       P        22 38 07.5 +0.4
COLA                              pmax    pmax
      comp=Z,2.0nm,0.9s
TOLK  Toolik Lake Re  92.36  21  eP       P        22 38 07.8 +0.2
      comp=Z,7.7nm,0.8s
TOLK  Toolik Lake Re  92.36  21   P       P        22 38 08.3 +0.6
      baz=257
HDA   Harding Lake    92.54  25  eP       P        22 38 09.0 +0.4
      comp=Z,10nm,1.1s
ILAR  Eielson Array   92.63  25   P       P        22 38 08.2 -0.8
      comp=Z,2.2nm,0.7s,baz=281,slow=4.0,SNR=9.2
ILAR                              PKKPbc  PKKPdf   22 55 22.1 +0.4
      comp=Z,0.6nm,0.9s,baz=243,slow=0.2,SNR=4.2
ILAR                              LR      LR       23 15 10.5
      comp=Z,50nm,19.9s,baz=276,slow=32
ILB   Eielson Array   92.63  25  eP       P        22 38 08.2 -0.8
IL1   Eielson Array   92.63  25  eP       P        22 38 07.6 -1.3
ZEI   Tsey            92.79 313  eP       P        22 38 10.3 -0.2
ZEI                               pmax    pmax
      comp=Z,7.0nm,0.8s
NVL   N'lazarevskaya  92.89 197  eP       P        22 38 05.0 -5.1
NVL                               pmax    pmax
      comp=Z,5.0nm,0.9s
NCK   Nalchik         93.09 313⇓eP       P        22 38 12.0 +0.4
NCK                               pmax    pmax
      comp=Z,12nm,1.2s
SIRT  Sirnak          93.32 307  eP       P        22 38 12.8 -0.1
      comp=Z,119nm,0.9s
KBZ   Khabaz          93.62 313   P       P        22 38 13.8 -0.1
      comp=Z,3.6nm,0.9s,baz=141,slow=14,SNR=5.4
GOF   Gofitskoye      93.66 315  eP       P        22 38 13.9 -0.2
NEY   Neytrino        93.70 313⇑eP       P        22 38 14.5 -0.1
NEY                               pmax    pmax
      comp=Z,2.0nm,1.7s
KIV   Kislovodsk      93.80 314  eP       P        22 38 14.9  0.0
KIV                               pmax    pmax
      comp=Z,7.0nm,1.1s
KIV                               MLR     MLR
      comp=Z,49nm,20.0s
PRGR  Permogore       93.99 331  eP       P        22 38 11.8 -3.4
PRGR                              pmax    pmax
      comp=Z,27nm,0.9s
KMBO  Kilima Mbogo    94.00 268   P       P        22 38 17.8 +1.1
      comp=Z,9.5nm,1.1s,baz=56,slow=5.8,SNR=18
KMBO                              LR      LR       23 15 22.9
      comp=Z,75nm,21.6s,baz=88,slow=32
VRH   Novokhopyorsk   95.11 321  eP       P        22 38 19.1 -1.5
VRH                               pmax    pmax
      comp=Z,10.0nm,0.6s
DAWY  Dawson          95.77  26  eP       P        22 38 21.5 -2.0
      comp=Z,6.5nm,0.9s
SNAA  Sanae           96.12 193   P       P        22 38 26.2 +1.2
SNAA  Sanae           96.12 193  eP       P        22 38 24.4 -0.6
      comp=Z,14nm,1.1s
SNAA  Sanae           96.12 193deP       P        22 38 26.9 +1.9
VSR   Storozhevoye    96.71 321c iP       P        22 38 25.7 -2.2
VSR                               pmax    pmax
      comp=Z,16nm,0.9s
KLMR  Klimovskoe      96.87 330  eP       P        22 38 25.5 -2.9
KLMR                             e                 22 42 19.5
KLMR                              pmax    pmax
      comp=Z,29nm,0.9s
KLMR  Klimovskoe      96.87 330  eP       P        22 38 25.5 -2.9
KLMR                              AMP              22 38 27.9
      comp=Z,29nm,0.9s
KLMR                             ePP      PP       22 42 19.6 -4.6
LPSR  Galich'ya Gora  96.92 322  eP       P        22 38 27.6 -1.2
LPSR                              pmax    pmax
      comp=Z,20nm,1.0s
ASF   Jabal al Asfar  97.43 302   P       Pdif     22 38 32.8 +1.0
      comp=Z,8.2nm,0.9s,baz=57,slow=0.5,SNR=10
TMCR  Tamitsa         97.61 334  eP       P        22 38 30.2 -1.4
TMCR                              pmax    pmax
      comp=Z,12nm,1.0s
VNA2  Neumayer--Watz  97.67 193   P       Pdif     22 38 38.1 +6.2
MOS   Moscow          97.76 325  eP       P        22 38 30.1 -2.4
MOS                              e                 22 42 28.1
MOS                               pmax    pmax
      comp=Z,31nm,1.0s
INK   Inuvik          98.21  22  eP       P        22 38 34.2  0.0
      comp=Z,8.3nm,1.1s
INK                               PKKPbc  PKKPbc   22 55 07.9 -1.2
INK   Inuvik          98.21  22  eP       P        22 38 34.3  0.0
INK                               pmax    pmax
      comp=Z,8.0nm,1.1s
INK   Inuvik          98.21  22   PKKPbc  PKKPbc   22 55 07.9 -1.2
      comp=Z,1.1nm,0.6s,baz=88,slow=1.9,SNR=5.3
OBN   Obninsk         98.36 325  eP       P        22 38 33.9 -1.3
      comp=Z,22nm,0.9s
OBN   Obninsk         98.36 325c iP       P        22 38 34.1 -1.1
OBN                              e*SP     pP       22 38 46.0 -4.5
OBN                                                22 42 38.0
OBN                              eS       SKSac    22 49 10.8 +2.7
OBN                              e                 22 49 59.7
OBN                              eSS      SS       22 56 50.8 +7.2
OBN                               pmax    pmax
      comp=Z,24nm,0.9s
OBN                               MLR     MLR
      comp=Z,62nm,19.0s
OBN   Obninsk         98.36 325   P       P        22 38 34.2 -1.1
      comp=Z,2.8nm,0.5s,baz=273,slow=2.3,SNR=8.5
MMAI  Mount Meron Ar  98.73 302   P       P        22 38 37.4 -0.1
      comp=Z,5.6nm,0.9s,baz=72,slow=9.3,SNR=5.7
LVZ   Lovozero        98.87 338⇓eP       P        22 38 37.3  0.0
LVZ                               pmax    pmax
      comp=Z,8.0nm,0.9s
EIL   Elat            98.96 299   P       P        22 38 37.7 -0.9
      comp=Z,8.4nm,1.0s,baz=54,slow=6.9,SNR=4.4
APA   Apatity         99.37 337⇓iP       Pdif     22 38 36.4 -3.1
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```
APA                               i                22 49 21.0
APA                               i S     S        22 49 58.0 -8.8
APA                                pmax   pmax
       comp=Z,5.0nm,0.9s
BR131  Keskin Array S  100.32 309 ePdif   Pdif     22 38 43.7 -0.9
BR131                             ePP     PP       22 42 49.7 -1.7
BRTR   Keskin Array B  100.32 309  P      Pdif     22 38 44.1 -0.5
       comp=Z,3.2nm,0.9s,baz=121,slow=4.3,SNR=13
BRTR                               PP     PP       22 42 46.6 -4.9
       comp=Z,1.9nm,0.9s,baz=98,slow=8.9,SNR=4.6
MBAR   Mbarara         100.53 268⇓iP     Pdif     22 38 46.8 +0.7
MBAR                               pmax   pmax
       comp=Z,5.0nm,1.1s
BOSA   Boshof          100.74 239  P      Pdif     22 38 47.0 +0.3
       comp=Z,31nm,1.5s,baz=152,slow=5.5,SNR=6.5
LBTB   Lobatse         101.28 243 ePdif   Pdif     22 38 48.7 -0.4
LBTB   Lobatse         101.28 243 eP      Pdif     22 38 48.7 -0.4
ARCES  ARCESS Array B  101.94 340  P      Pdif     22 38 50.8 -0.2
       comp=Z,4.6nm,0.7s,baz=72,slow=4.3,SNR=14
ARCES                              PKiKP  PKiKP    22 43 14.3 +0.9
       comp=Z,2.1nm,0.9s,baz=99,slow=1.1,SNR=9.0
AKASG  Malin Array Be  103.00 320  Pdiff  Pdif     22 38 53.4 -2.6
       comp=Z,0.6nm,0.3s,baz=71,slow=4.6,SNR=4.4
FINES  FINESS Array B  103.32 332  Pdiff  Pdif     22 38 56.3 -0.8
       comp=Z,3.5nm,0.7s,baz=50,slow=3.0,SNR=11
FINES                              PP     PP       22 43 12.8 -0.2
       comp=Z,3.3nm,0.9s,baz=69,slow=10,SNR=5.3
MLR    Muntele Rosu    105.71 315  Pdiff  Pdif     22 39 07.9 -0.5
       baz=132,slow=14
BUR04  Bucovina Ar. S  105.96 317 ePdif   Pdif     22 39 09.7 +0.3
BUR08  Bucovina Ar. S  105.96 318 ePdif   Pdif     22 39 09.7 +0.3
SUW    Suwalki         106.22 324 ePdiff  Pdif     22 39 09.6 -0.6
SUW    Suwalki         106.22 324 eP      Pdif     22 39 09.6 -0.6
YKA    Yellowknife Ar  107.01  26  Pdiff  Pdif     22 39 24.7 +11
       comp=Z,0.3nm,0.7s,baz=290,slow=4.8,SNR=5.3
YKA                                PKiKP  PKiKP    22 43 23.5 +0.6
       comp=Z,0.5nm,0.7s,baz=294,slow=1.8,SNR=7.1
YKA                                PKKPbc PKKPbc   22 54 40.9 -2.0
       comp=Z,0.4nm,0.8s,baz=104,slow=3.3,SNR=5.1
UZH    Uzhgorod        107.74 319 eP      Pdif     22 39 17.4 +0.3
NIE    Niedzica        108.88 320 ePdiff  Pdif     22 39 22.7 +0.5
NIE    Niedzica        108.88 320 eP      Pdif     22 39 22.7 +0.5
OJC    Ojcow           109.03 321 ePdiff  Pdif     22 39 23.0 +0.1
OJC    Ojcow           109.03 321 eP      Pdif     22 39 23.0 +0.1
HFS    Hagfors         109.51 332  Pdiff  Pdif     22 39 24.3 -0.5
       comp=Z,6.3nm,1.1s,baz=27,slow=6.6,SNR=4.1
HFS                                PKiKP  PKiKP    22 43 27.7 +0.1
       comp=Z,3.5nm,0.8s,baz=88,slow=15,SNR=5.5
VYHS   Vyhne           110.02 319 ePP     PP       22 43 57.0 -5.6
NB2    NORSAR Subarra110.29 333    P      Pdif     22 39 27.4 -0.9
       comp=Z,2.3nm,0.8s,baz=71,slow=4.4
NB2    NORSAR Subarra110.29 333    P      Pdif     22 39 27.4 -0.9
       baz=71,slow=4.4
NOA    NORSAR Array B 110.29 333   Pdiff  Pdif     22 39 27.5 -0.9
       comp=Z,1.2nm,0.7s,baz=77,slow=4.3,SNR=7.4
NOA                                PKiKP  PKiKP    22 43 30.0 +0.8
       comp=Z,1.0nm,0.9s,baz=56,slow=2.1,SNR=3.6
DPC    Dobruska-Polom  111.16 322 ePKP    PKiKP    22 43 32.2 +1.1
DPC    Dobruska-Polom  111.16 322 ePKIKP  PKiKP    22 43 32.2 +1.1
UPC    Upice           111.31 322 ePKP    PKiKP    22 43 32.4 +1.1
UPC    Upice           111.31 322 ePKIKP  PKiKP    22 43 32.4 +1.1
GOPC   GO Pecny, Ondr  112.23 321 ePKP    PKiKP    22 43 34.4 +1.3
GOPC   GO Pecny, Ondr  112.23 321 ePKIKP  PKiKP    22 43 34.4 +1.3
PRU    Pruhonice       112.36 321 ePKP    PKiKP    22 43 34.4 +1.1
PRU    Pruhonice       112.36 321 ePKIKP  PKiKP    22 43 34.4 +1.1
BRG    Berggiesshubel  112.46 323 ePKP    PKiKP    22 43 34.1 +0.6
       comp=Z,5.1nm,1.0s
BRG    Berggiesshubel  112.46 323 ePKIKP  PKiKP    22 43 34.1 +0.6
BRG                                pmax   pmax
       comp=Z,5.0nm,1.0s
ARSA   Arzberg         112.48 318 ePKiKP  PKiKP    22 43 33.8 +0.2
       comp=Z,2.4nm,0.7s
GMRC   Granite Mounta  112.69  55  P      PKiKP    22 43 36.7 +2.1
       baz=278
CLL    Collm           112.89 323 i PKiKP PKiKP    22 43 34.8 +0.5
       comp=Z,7.0nm,1.2s
CLL                               e(sPKiKP)        22 43 59.0
CLL                               ePP     PP       22 44 25.0 +1.9
CLL                                Lm     MLR      23 38 00.0
       comp=Z,100nm,19.7s
CLL    Collm           112.89 323 i PKIKP PKiKP    22 43 34.8 +0.5
CLL                               e                22 44 25.0
CLL                                pmax   pmax
       comp=Z,7.0nm,1.2s
KHC    Kasperske Hory  113.21 321 ePKP    PKiKP    22 43 35.7 +0.7
KHC    Kasperske Hory  113.21 321 ePKIKP  PKiKP    22 43 35.7 +0.7
GERES  GERESS Array B  113.22 320  PKiKP  PKiKP    22 43 35.8 +0.7
       comp=Z,3.2nm,0.6s,baz=58,slow=2.0,SNR=30
KBA    Koelnbreinsper  113.95 319 ePKPdf  PKiKP    22 43 36.3 -0.4
       comp=Z,2.8nm,0.6s
EGMT   Eagleton        114.17  40  P      PKiKP    22 43 38.3 +1.4
       baz=288
ABTA   Abfaltersbach   114.60 319 ePKiKP  PKiKP    22 43 37.6 -0.2
       comp=Z,6.9nm,0.7s,SNR=8.1
WTTA   Wattenberg      115.01 319 ePKiKP  PKPdf    22 43 39.4 +0.7
       comp=Z,12nm,0.6s,SNR=6.5
WATA   Walderalm       115.03 319 ePKiKP  PKPdf    22 43 39.4 +0.7
       comp=Z,4.8nm,0.7s
SQTA   Sankt Quirin    115.30 319 ePKiKP  PKPdf    22 43 39.7 +0.5
       comp=Z,9.6nm,1.1s
MOTA   Moosalm         115.33 319 ePKiKP  PKPdf    22 43 39.5 +0.2
       comp=Z,3.2nm,0.5s,SNR=9.5
RETA   Reutte          115.51 320 ePKiKP  PKPdf    22 43 40.0 +0.5
       comp=Z,3.1nm,0.7s
FETA   Feichten        115.68 319 ePKiKP  PKPdf    22 43 40.5 +0.5
       comp=Z,1.8nm,0.6s
PD31   Pinedale Array  115.80  46 ePKPdf  PKiKP    22 43 39.9 -0.6
PDAR   Pinedale Array  115.80  46  PKP    PKPdf    22 43 41.9 +1.5
       comp=Z,0.5nm,0.7s,baz=162,slow=0.5,SNR=3.8
PDAR                               PKKPbc PKKPbc   22 54 10.7 -2.9
       comp=Z,0.5nm,0.8s,baz=253,slow=10,SNR=4.2
FUORN  Ofenpass-Fuorn  116.11 319 ePKPdf  PKPdf    22 43 39.7 -1.2
DAVA   Damuels         116.14 320 ePKiKP  PKiKP    22 43 41.3 +0.5
       comp=Z,7.2nm,0.7s,SNR=6.2
DAVOX  Davos/Dischmat  116.31 319  PKIKP  PKiKP    22 43 42.0 +0.7
DAVOX                              pmax   pmax
       comp=Z,7.0nm,0.7s
DAVOX  Davos/Dischmat  116.31 319  PKP    PKiKP    22 43 42.0 +0.7
       comp=Z,6.5nm,0.7s,baz=226,slow=2.1,SNR=17
MVCO   Mesa Verde      117.96  51  P      PKiKP    22 43 45.7 +0.9
       baz=284
S22A   4UR Ranch, Cre  119.12  50  P      PKiKP    22 43 49.0 +1.8
       baz=285
RSSD   Black Hills     119.21  43 ePKPdf  PKPdf    22 43 46.2 -0.7
RSSD   Black Hills     119.21  43 ePKIKP  PKPdf    22 43 46.3 -0.7
RSSD   Black Hills     119.21  43  P      PKiKP    22 43 47.4 +0.4
       baz=291
KEST   Kesra           119.87 307 ePKPdf  PKiKP    22 43 48.4  0.0
KEST                               PP     PP       22 45 09.4 -3.1
KEST   Kesra           119.87 307  PKP    PKiKP    22 43 49.6 +1.2
       comp=Z,7.0nm,0.9s,baz=288,slow=6.1,SNR=3.6
KEST                               PP     PP       22 45 09.4 -3.1
       comp=Z,9.2nm,0.8s,baz=172,slow=3.3,SNR=5.7
ANMO   Albuquerque     120.10  54 ePKPdf  PKPdf    22 43 47.7 -1.2
ANMO   Albuquerque     120.10  54⇓iPKIKP PKiKP    22 43 51.3 +2.3
ANMO                               pmax   pmax
       comp=Z,4.0nm,1.3s
ANMO   Albuquerque     120.10  54  P      PKiKP    22 43 50.5 +1.4
       baz=284
ANMO   Albuquerque     120.10  54  PKP    PKiKP    22 43 50.6 +1.6
       comp=Z,2.9nm,0.9s,baz=220,slow=2.1,SNR=4.2
ULM    Lac du Bonnet   121.56  34  PKP    PKiKP    22 43 51.1  0.0
       comp=Z,2.4nm,0.6s,baz=331,slow=2.8,SNR=6.2
MNTX   Cornudas Mount  121.71  57 ePKPdf  PKiKP    22 43 53.5 +1.5
MNTX   Cornudas Mount  121.71  57  P      PKiKP    22 43 53.5 +1.5
       baz=282
MSTX   Muleshoe        123.29  54 ePKPdf  PKPdf    22 43 53.7 -1.3
MSTX   Muleshoe        123.29  54  P      PKiKP    22 43 56.3 +1.0
       baz=286
TX31   Lajitas Ar. Si  123.65  59 ePKPpre PKPpre   22 43 51.1
TX31                              ePKPdf  PKPdf    22 43 52.6 -3.2
LTX    Lajitas         123.65  59 ePKPdf  PKiKP    22 43 57.1 +1.1
LTX    Lajitas         123.65  59 ePKIKP  PKiKP    22 43 57.1 +1.1
TXAR   Lajitas Array   123.65  59  PKP    PKiKP    22 43 57.1 +1.1
       comp=Z,1.6nm,0.8s,baz=341,slow=2.7,SNR=6.9
TXAR                               PKKPbc PKKPbc   22 53 44.3 +0.3
       comp=Z,1.0nm,0.7s,baz=73,slow=7.6,SNR=6.1
ECSD   EROS Data Cent  124.27  41 ePKPdf  PKPdf    22 43 55.6 -0.9
ECSD   EROS Data Cent  124.27  41  P      PKiKP    22 43 57.0 +0.3
       baz=297
TAM    Tamanrasset     125.66 293 ePKPdf  PKiKP    22 44 00.5 +0.3
TAM    Tamanrasset     125.66 293 ePKIKP  PKiKP    22 44 00.5 +0.3
F38A   Pierce - Schro  126.10  36  P      PKiKP    22 44 00.9 +0.6
       baz=303
WMOK   Wichita Mounta  126.22  52  P      PKiKP    22 44 01.6 +0.7
       baz=289
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E39A  Mellen          126.64  35  P       PKiKP    22 44 01.7 +0.3
      baz=304
JCT   Junction City   126.65  57 ePKPdf   PKiKP    22 44 02.6 +0.7
JCT   Junction City   126.65  57 ePKIKP   PKiKP    22 44 02.6 +0.7
JCT   Junction City   126.65  57  P       PKiKP    22 44 02.9 +1.0
      baz=285
F39A  Loretta         126.69  36  P       PKiKP    22 44 01.9 +0.4
      baz=304
E40A  Wakefield       126.98  35  P       PKiKP    22 44 03.1 +1.1
      baz=305
F41A  Three Lakes     127.84  35  P       PKiKP    22 44 04.5 +0.7
      baz=305
K40A  Colesburg       128.28  39  P       PKiKP    22 44 04.7 -0.1
      baz=301
ES19  SONSECA Array   128.33 316 ePKPdf   PKPdf    22 44 04.4  0.0
ES19                             ePP      PP       22 46 02.0 -7.0
ESDC  Sonseca Array   128.39 316  PKP     PKiKP    22 44 05.7 +0.6
      comp=Z,0.9nm,0.7s,baz=334,slow=1.9,SNR=6.5
ESDC                              PP      PP       22 46 07.4 -1.9
      comp=Z,2.6nm,0.9s,baz=61,slow=7.0,SNR=6.9
SCHQ  Schefferville   129.97  14  PKP     PKiKP    22 44 08.3 +0.5
      comp=Z,3.8nm,1.0s,baz=278,slow=15,SNR=2.8
POLO  Lamas de Olo    130.09 320 ePKPdf   PKiKP    22 44 10.1 +1.6
U40A  Yellville       130.09  47  P       PKiKP    22 44 09.1 +0.5
      baz=295
TOA0  Torodi Ar. Sit  130.16 281 ePKPdf   PKiKP    22 44 09.2  0.0
TORD  Torodi Ar. Bea  130.16 281  PKP     PKiKP    22 44 09.7 +0.4
      comp=Z,8.4nm,0.8s,baz=39,slow=2.9,SNR=46
TORD                              SKPbc   SKPab    22 47 24.7 -1.8
      comp=Z,5.3nm,0.9s,baz=102,slow=4.0,SNR=9.9
TOA1  Torodi Ar. Sit  130.16 281 ePKPdf   PKiKP    22 44 09.7 +0.4
R41A  Rosebud         130.28  44  P       PKiKP    22 44 09.2 +0.3
      baz=298
P42A  Winchester      130.37  42 ePKPdf   PKPdf    22 44 08.0 -0.2
P42A  Winchester      130.37  42  P       PKiKP    22 44 08.8 -0.2
      baz=300
MTE   Manteigas       130.44 319 ePKPdf   PKiKP    22 44 10.6 +1.4
T41A  Mountain View   130.59  46  P       PKiKP    22 44 10.0 +0.4
      baz=297
PCBR  Castelo Branco  130.68 318 ePKPdf   PKiKP    22 44 11.1 +1.5
U41A  Viola           130.78  47  P       PKiKP    22 44 11.0 +1.0
      baz=296
D48A  Paudash Townsh130.81  30    P       PKiKP    22 44 10.2 +0.5
      baz=314
PMRV  Marv??o         130.83 318 ePKPdf   PKiKP    22 44 11.1 +1.1
P44A  Sand Creek, Wi  131.58  42  P       PKiKP    22 44 12.5 +1.0
      baz=302
CHGQ  Chibougamau     131.96  22  P       PKiKP    22 44 11.9  0.0
      baz=325
PVAQ  Vaqueiros       132.05 315 ePKPdf   PKPdf    22 44 11.7 +0.3
Q45A  Warren Harvey,  132.19  42  P       PKiKP    22 44 13.3 +0.6
      baz=302
L48A  N Adams         132.81  37  P       PKiKP    22 44 14.5 +0.6
      baz=308
PFVI  Vila Bisbo      132.95 316 ePKPdf   PKPdf    22 44 09.9 -3.2
M54A  Oil Creek Stat  135.82  34  P       PKiKP    22 44 20.5 +0.5
      baz=313
KIC   Kosan Boka      136.46 272 eP       PKPpre   22 44 11.2
      comp=Z,21nm,0.8s
Z50A  Ashland         136.58  48  P       PKiKP    22 44 22.4 +0.6
      baz=299
DBIC  Dimbokro        136.59 272  PKhKP   PKPpre   22 44 14.2
      comp=Z,5.9nm,0.7s,baz=80,slow=1.5,SNR=10
DBIC                              SKPbc   SKPbc    22 47 45.6 -2.8
      comp=Z,2.3nm,0.6s,baz=137,slow=3.0,SNR=3.1
LIC   Lamto           136.73 272 eP       PKPpre   22 44 09.7
      comp=Z,63nm,1.5s
TIC   Toumodi         136.75 272 eP       PKPpre   22 44 09.7
GO02  Mina Guanaco    142.16 148 ePKPdf   PKPdf    22 44 29.1 -1.8
PB04  IPOC Station P  144.11 145 ePKPdf   PKPbc    22 44 33.2 +1.0
LVC   Limon Verde     144.59 146 ePKPdf   PKPdf    22 44 34.8 -0.5
LVC   Limon Verde     144.59 146 ePKIKP   PKPdf    22 44 34.8 -0.5
PB01  IPOC Station P  145.49 144 ePKPdf   PKPab    22 44 38.2 +1.4
CPUP  Villa Florida   145.93 166 ePKPdf   PKPab    22 44 38.3 +0.2
CPUP  Villa Florida   145.93 166  PKPbc   PKPab    22 44 39.2 +1.1
      comp=Z,10nm,0.6s,baz=208,slow=2.0,SNR=32
AZU   Azuero          148.56  86 eP       PKPab    22 44 58.4 +9.4
AZU   Azuero          148.56  86 eP       PKPab    22 44 58.4 +9.4
OTAV  Otavalo         149.49 101 ePKPdf   PKPdf    22 44 42.6 -1.2
OTAV                             ePKPbc   PKPbc    22 44 44.5 -3.8
OTAV  Otavalo         149.49 101 ePKIKP   PKPdf    22 44 42.6 -1.2
OTAV                             e                 22 44 44.5
LPAZ  La Paz          149.94 140 ePKPdf   PKPdf    22 44 45.9 +1.2
LPAZ  La Paz          149.94 140  PKPbc   PKiKP    22 44 50.7 +0.3
      comp=Z,11nm,0.9s,baz=75,slow=1.5,SNR=16
YOTC  Yotoco, Valle   152.22  94 eP       PKiKP    22 44 55.7 +1.1
YOTC  Yotoco, Valle   152.22  94 eP       PKiKP    22 44 55.7 +1.1
PTLC  Puerto Leguiza  153.02 103 eP       PKiKP    22 45 00.0 +3.9
PTLC  Puerto Leguiza  153.02 103 eP       PKiKP    22 45 00.0 +3.9
HELC  Santa Helena    153.22  90 eP       PKPab    22 45 23.6  +15
HELC  Santa Helena    153.22  90 eP       PKPab    22 45 23.6  +15
ROSC  El Rosal        154.32  93  PKPbc   PKiKP    22 45 02.8 +3.5
      comp=Z,5.2nm,0.3s,baz=107,slow=19,SNR=2.7
BDFB  Brasilia        157.63 181  PKP     PKPdf    22 44 56.3 +1.4
      comp=Z,4.4nm,1.0s,baz=140,slow=6.6,SNR=4.2
SDV   Santo Domingo   158.07  83 ePKPdf   PKPdf    22 44 51.5 -4.1
SDV   Santo Domingo   158.07  83  PKP     PKPdf    22 44 56.0 +0.4
      comp=Z,6.0nm,0.7s,baz=10,slow=3.5,SNR=5.8
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AZER ***12*** *22:31:10.2±0.1, 38°.44N×46°.72E, h10^{km}, ml3.9/23, Error ellipse: s-maj=3.7km s-min=0.9km az=21.0*
NSSP ***12*** *22:31:11.8, 38°.50N×46°.73E, h12^{km}, Ms3.8*
IDC ***12*** *22:31:11.5±1.7, 38°.04N×46°.74E, h0^{km}, mb3.6/4, mb1 3.7/8, mb1mx3.5/55, mbtmp3.6/8, ML3.4/4, Error ellipse: s-maj=29.6km s-min=16.8km az=161.0*
TEH ***12*** *22:31:12.5, 38°.48N×46°.72E, h9^{km}, ML3.8*
THR ***12*** *22:31:13.2, 38°.51N×46°.73E, h15^{km}, ML3.7*
ISC 12 22:31:12.3±1.1**, 38°.48N**±0°.02×**46°.71E**±0°.02**, h2**^{km}±9^{km}**, n115,** σ1^{s}59/144**, mb3.6**/4**, 21C-27D,**
Iran-Armenia-Azerbaijan border region

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Code  Station Name       Δ°  AZ°   Phase ID            Time      Res
                                   Op       ISC        h  m  s   ISC
IHRS  Heris            0.31 121  ePg      Pg       22 31 18.8 +0.5
IHRS                              IAMB    IAmb     22 31 19.0
      comp=Z,31µm,0.2s
IHRS                             eSg      Sg       22 31 23.2 +0.9
ITBZ  Tabriz           0.50 241  ePg      Pg       22 31 22.4 +0.5
ITBZ                              IAMB    IAmb     22 31 30.4
      comp=Z,75µm,0.2s
ORD   Ordubad          0.72 309  ePg      Pg       22 31 26.8 +0.8
ORD   Ordubad          0.72 309  ⇓P       Pg       22 31 26.8 +0.8
ORD                              ⇑S       Sb       22 31 37.0 -0.9
IBST  Bostanabad       0.79 169  ePg      Pg       22 31 26.0 -1.4
IBST                              IAMB    IAmb     22 31 40.3
      comp=Z,63µm,0.6s
IMRD  Marand           0.82 287  ePg      Pg       22 31 28.5 +0.5
IMRD                              IAMB    IAmb     22 31 44.3
      comp=Z,91µm,0.4s
IAZR  Azarshahr        0.98 216  ePg      Pg       22 31 30.8 -0.3
IAZR                              IAMB    IAmb     22 31 34.1
      comp=Z,75µm,0.2s
GRMI  Germi            0.99  70  eAML     AML      22 31 45.9
      comp=E,3µm,0.3s
GRMI                             ePg      Pg       22 31 31.3 +0.1
GRMI                             eSg      Sb       22 31 44.8 -1.0
GRMI                             eAML     AML      22 31 46.1
      comp=N,2µm,0.3s
ISRB  Sarab            1.00 130  ePg      Pg       22 31 30.6 -0.9
ISRB                              IAMB    IAmb     22 31 47.1
      comp=Z,20µm,0.2s
NAX   Nakhchivan       1.17 307  ePg      Pb       22 31 35.0 -0.3
NAX   Nakhchivan       1.17 307  ⇓P       Pb       22 31 35.1 -0.3
NAX                              ⇓S       Sn       22 31 52.1 -0.4
SBZ   Shahbuz          1.28 316  ePg      Pn       22 31 36.7 -0.7
SBZ   Shahbuz          1.28 316  ⇑P       Pn       22 31 36.7 -0.7
SBZ                              ⇑S       Sn       22 31 56.0 +0.7
LRK   Lerik            1.29  82  ePg      Pn       22 31 36.5 -1.0
LRK   Lerik            1.29  82  ⇑P       Pn       22 31 36.5 -1.0
LRK                              ⇑S       Sn       22 31 54.8 -0.7
GLBA  Clilabad         1.52  59  ePn      Pb       22 31 41.0 -0.2
GLBA  Clilabad         1.52  59  ⇑P       Pb       22 31 41.1 -0.2
GLBA                             ⇑S       Sg       22 32 02.9 +1.6
ASTR  Astara           1.64  86  ePn      Pb       22 31 42.9 -0.3
ASTR  Astara           1.64  86  ⇑P       Pb       22 31 43.0 -0.3
ASTR                             ⇑S       Sg       22 32 05.8 +0.9
LKRN  Lenkeran, Azer   1.64  81  ePn      Pb       22 31 42.7 -0.6
LKRN  Lenkeran, Azer   1.64  81  ⇓P       Pn       22 31 41.6 -0.6
LKRN                             ⇓S       Sg       22 32 05.6 +0.6
BRDA  Brd              1.82  11  ePn      Pb       22 31 46.0 -0.3
BRDA  Brd              1.82  11  ⇓P       Pb       22 31 46.0 -0.3
BRDA                             ⇓S       Sg       22 32 11.9 +1.1
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HYR	Heyderabad	1.90	311	ePn	Pb	22 31 47.3	-0.5
HYR	Heyderabad	1.90	311	⇓P	Pb	22 31 47.3	-0.5
HYR				⇑S	Sg	22 32 14.4	+1.0
ZRD	Zardab	1.95	23	ePn	Pb	22 31 47.8	-0.8
ZRD	Zardab	1.95	23	⇑P	Pb	22 31 47.8	-0.8
ZRD				⇑S	Sg	22 32 16.4	+1.3
YOVA	Hakkari_Yksek	2.10	246	i P	Pb	22 31 50.9	-0.4
YOVA				IAML_P			
	comp=Z,1μm,0.3s						
GANJ	Ganja	2.19	352	ePn	Pb	22 31 50.7	-1.9
GANJ	Ganja	2.19	352	⇓P	Pb	22 31 50.8	-1.9
GANJ				⇓S	Sb	22 32 20.4	+0.2
GNI	Garni	2.26	318	P	Pb	22 31 54.6	+0.6
GNI	Garni	2.26	318	⇓iP	Pb	22 31 53.9	-0.1
GNI				⇓iS	Sg	22 32 27.2	+2.2
GNI	Garni	2.26	318	ePn	Pb	22 31 54.6	+0.6
CLDR	Caldiran	2.28	288	P	Pb	22 31 54.8	+0.5
CLDR	Caldiran	2.28	288	i P	Pb	22 31 53.6	-0.6
CLDR				IAML_P			
	comp=Z,1μm,0.1s						
CLDR	Caldiran	2.28	288	ePn	Pb	22 31 54.8	+0.5
MNGR	Mingechevir, A	2.31	7	ePn	Pn	22 31 52.3	+0.9
MNGR	Mingechevir, A	2.31	7	⇓P	Pn	22 31 52.4	+0.9
MNGR				⇑S	Sg	22 32 25.3	-1.3
GDB	GEDABAY	2.36	342	ePn	Pn	22 31 52.8	+0.6
GDB	GEDABAY	2.36	342	⇑P	Pn	22 31 52.8	+0.6
GDB				⇓S	Sb	22 32 26.1	+0.9
ZNJK	Zanjan	2.39	138	ePn	Pb	22 31 54.2	-2.1
ZNJK	Zanjan	2.39	138	ePn	Pb	22 31 54.2	-2.1
ZNJK				eSg	Sg	22 32 28.8	-0.4
TASB	TASBURUN-IGDIR	2.44	309	P	Pb	22 31 56.3	-0.6
TASB	TASBURUN-IGDIR	2.44	309	ePn	Pb	22 31 56.3	-0.6
IGDI	IGDIR	2.47	305	i P	Pb	22 31 56.2	-1.3
IGDI				IAML_P			
	comp=Z,839nm,0.3s						
VMUR	Van-Muradiye	2.50	283	i P	Pb	22 31 57.3	-0.8
VMUR				IAML_P			
	comp=Z,1μm,0.4s						
IML	Ismayilli	2.58	26	ePn	Pn	22 31 56.2	+1.1
IML	Ismayilli	2.58	26	⇓P	Pn	22 31 56.2	+1.1
IML				⇑S	Sb	22 32 29.9	-1.6
DYDN	Diyadin	2.58	295	i P	Pb	22 32 00.5	+1.1
DYDN				IAML_P			
	comp=Z,437nm,0.1s						
TVAN	Van	2.59	272	i P	Pn	22 31 56.5	+1.1
TVAN				IAML_P			
	comp=Z,278nm,0.3s						
QBL	Gabala	2.62	19	ePn	Pn	22 31 56.3	+0.7
QBL	Gabala	2.62	19	⇓P	Pn	22 31 56.4	+0.7
QBL				⇓S	Sb	22 32 32.3	-0.2
GBS	Qobustan	2.69	39	ePn	Pn	22 31 57.1	+0.5
GBS	Qobustan	2.69	39	⇓P	Pn	22 31 57.1	+0.5
GBS				⇓S	Sb	22 32 33.9	-0.7
CUKT	Cukurca	2.74	244	P	Pb	22 32 01.8	-0.3
CUKT	Cukurca	2.74	244	i P	Pb	22 32 00.3	-1.8
CUKT				IAML_P			
	comp=Z,257nm,0.3s						
CUKT	Cukurca	2.74	244	ePn	Pb	22 32 01.8	-0.3
QZX	Qazax, Azerbai	2.77	339	ePn	Pn	22 31 57.7	-0.1
QZX	Qazax, Azerbai	2.77	339	⇑P	Pn	22 31 57.8	-0.1
QZX				⇓S	Sb	22 32 35.3	-1.8
GEVA	Gevas	2.87	268	i P	Pb	22 32 01.8	-2.6
GEVA				IAML_P			
	comp=Z,329nm,0.3s						
XNQ	Khinaliq	2.91	22	ePn	Pn	22 32 00.8	+1.0
XNQ	Khinaliq	2.91	22	⇑P	Pn	22 32 00.9	+1.0
XNQ				⇓S	Sb	22 32 38.3	-2.8
AKDM	Akdamar-Van	2.93	268	P	Pb	22 32 04.8	-0.6
ATGJ	Altiaghaj	2.94	35	ePn	Pn	22 32 00.9	+0.8
ATGJ	Altiaghaj	2.94	35	⇓P	Pn	22 32 00.9	+0.8
ATGJ				⇓S	Sb	22 32 41.2	-0.7
STEZ	Stepenevan	3.08	326	eP	Pb	22 32 06.0	-2.0
STEZ				eS	Sg	22 32 51.0	-0.4
AGRB	Hanur-Agry	3.09	292	P	Pb	22 32 07.1	-1.1
AGRB	Hanur-Agry	3.09	292	ePn	Pb	22 32 07.0	-1.1
SIZA	Siyzn	3.10	32	ePn	Pn	22 32 02.7	+0.4
SIZA	Siyzn	3.10	32	⇓P	Pn	22 32 02.8	+0.4
SIZA				⇑S	Sb	22 32 44.7	-1.8
ZKTA	Zakatala	3.16	359	ePn	Pn	22 32 04.1	+1.0
ZKTA	Zakatala	3.16	359	⇓P	Pn	22 32 04.1	+1.0
ZKTA				⇓S	Sb	22 32 44.1	-4.0
QUB	Quba	3.17	23	ePn	Pn	22 32 04.9	+1.7
TUTA	Tutak	3.17	288	i P	Pg	22 32 11.7	-1.4
TUTA				IAML_P			
	comp=Z,3μm,0.4s						
QUBA	Quba, Azerbaij	3.19	25	⇑P	Pn	22 32 05.0	+1.5
QUBA				⇓S	Sb	22 32 47.5	-1.5
EAK	Akyaka	3.26	314	i P	Pb	22 32 11.9	+1.0
EAK				IAML_P			
	comp=Z,1μm,0.3s						
QSAR	Qusar	3.26	21	ePn	Pn	22 32 05.3	+0.8
QSAR	Qusar	3.26	21	⇑P	Pn	22 32 05.3	+0.8
QSAR				⇑S	Sb	22 32 50.9	-0.2
MLAZ	Malazgirt-MUS	3.31	283	P	Pb	22 32 10.3	-1.6
LGD	Lagodekhi	3.37	354	P	Pb	22 32 09.4	-3.5
LGD				S	Sg	22 32 58.2	-2.4
KZRT	Kazreti	3.41	329	P	Pb	22 32 15.2	+1.9
KZRT				S	Sg	22 33 00.6	-1.1
SNGE	Sanandaj	3.42	171	ePn	Pn	22 32 08.8	+2.0
SNGE	Sanandaj	3.42	171	ePn	Pn	22 32 08.8	+2.0
SIRT	Sirnak	3.51	255	P	Pb	22 32 13.1	-2.1
SIRT	Sirnak	3.51	255	ePn	Pb	22 32 13.0	-2.1
SIRN	Sırnak	3.53	255	i P	Pb	22 32 13.8	-1.8
SIRN				IAML_P			
	comp=Z,162nm,0.3s						
KARS	Kars	3.53	309	eP	Pb	22 32 12.8	-2.8
KARS	Kars	3.53	309	ePn	Pb	22 32 12.8	-2.8
TBLG	Delisi	3.58	336	P	Pb	22 32 13.0	-3.4
TBLG	Delisi	3.58	336	P	Pb	22 32 18.5	+2.0
TBLG				S	Sg	22 33 06.1	-1.3
SEAG	Tbilisi Sea	3.59	337	P	Pg	22 32 21.7	+0.5
SEAG				S	Sg	22 33 06.8	-0.9
BGD	Bogdanovka	3.67	320	P	Pb	22 32 20.3	+2.3
SRTM	Siirt_Merkez	3.80	264	i P	Pn	22 32 15.2	+3.3
SRTM				IAML_P			
	comp=Z,178nm,0.2s						
IVIS	Veis	3.94	178	ePn	Pn	22 32 17.0	+3.0
IVIS				IAMB	IAmb	22 33 26.7	
	comp=Z,1μm,1.3s						
HOMI	Horasan	4.04	294	i P	Pb	22 32 27.1	+2.8
HOMI				IAML_P			
	comp=Z,402nm,0.6s						
KOPR	Koprukoy-ERZUR	4.06	293	eP	Pb	22 32 20.8	-3.8
IKOM	Komasi	4.34	171	ePn	Pn	22 32 21.6	+2.1
SVAN	Silvan-Diyarba	4.34	267	eP	Pb	22 32 24.9	-4.5
SVAN	Silvan-Diyarba	4.34	267	ePn	Pb	22 32 24.9	-4.5
CHTH	Charan	4.36	125	ePn	Pn	22 32 21.4	+1.6
CHTH	Charan	4.36	125	ePn	Pn	22 32 21.4	+1.6
DAGI	Agillar	4.51	307	i P	Pb	22 32 35.0	+2.7
DAGI				IAML_P			
	comp=Z,54nm,0.6s						
ECAT	Cat-ERZURUM	4.60	286	i P	Pb	22 32 36.4	+2.5
BNGB	Bingl	4.74	278	eP	Pb	22 32 30.6	-5.6
ASAO	Ashtian	4.75	145	ePn	Pn	22 32 26.8	+1.7
ASAO	Ashtian	4.75	145	ePn	Pn	22 32 26.8	+1.7
KBZ	Khabaz	5.98	332	Pg	Pg	22 33 05.5	-1.4
	comp=Z,0.3nm,0.3s,baz=153,slow=12,SNR=9.1						
KBZ				Lg	Lg	22 34 21.6	
	comp=Z,0.1nm,0.3s,baz=284,slow=4.2,SNR=2.5						
GEYT	Alibeck	9.00	90	Pn	Pn	22 33 23.3	0.0
	comp=Z,0.5nm,0.3s,baz=279,slow=13,SNR=5.5						
BRTR	Keskin Array B	10.23	281	Pn	Pn	22 33 45.9	+5.6
	comp=Z,0.1nm,0.3s,baz=104,slow=15,SNR=4.1						
AKTO	Aktyubinsk	14.41	30	Pn	Pn	22 34 38.2	+1.1
	comp=Z,0.4nm,0.3s,baz=218,slow=13,SNR=4.8						
AKASG	Malin Array Be	17.39	320	Pn	P	22 35 17.5	+0.1
	comp=Z,0.2nm,0.3s,baz=130,slow=12,SNR=2.0						
BVAR	Borovoye Array	21.88	41	P	P	22 36 10.8	+4.5
	comp=Z,2.0nm,0.7s,baz=236,slow=14,SNR=9.7						
GERES	GERESS Array B	25.84	304	P	P	22 36 45.3	+0.2
	comp=Z,1.0nm,0.8s,baz=110,slow=10,SNR=7.2						
ARCES	ARCESS Array B	33.13	347	P	P	22 37 53.9	+4.4
	comp=Z,1.8nm,1.0s,baz=144,slow=11,SNR=3.8						
TORD	Torodi Ar. Bea	47.11	250	P	P	22 39 43.7	-2.3
	comp=Z,0.3nm,1.0s,baz=53,slow=7.7,SNR=2.4						

WEL 12 22:39:33.6, 45°S±3°×16°7E±°, h22^{km}±3^{km}, ML3.7/4, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.16	95	P	Pb	22 39 39.4	+0.6
DCZ				S	Sb	22 39 43.5	+1.0
PYZ	Puysegur Point	0.74	194	P	Pb	22 39 48.0	+0.3
PYZ				S	Sn	22 39 59.6	+0.4
WHZ	Wether Hill Ro	0.84	122	P	Pn	22 39 50.4	+0.3
WHZ				S	Sn	22 40 02.6	+0.8
MLZ	Mavora Lakes	0.84	85	P	Pb	22 39 49.6	+0.1
MLZ				S	Sn	22 40 01.3	-0.6
MSZ	Milford Sound	1.05	43	P	Pn	22 39 50.5	-2.5
APZ	The Paps	1.56	152	P	Pb	22 40 05.7	+3.8
APZ				S	Sb	22 40 26.7	+5.4
WKZ	Wanaka	1.60	68	P	Pn	22 40 01.5	+0.9
WKZ				S	Sn	22 40 21.4	+0.8
EAZ	Earnscleugh	1.69	83	P	Pb	22 40 03.1	-0.9
EAZ				S	Sb	22 40 24.5	-0.3
SYZ	Scrubby Hill	1.88	126	P	Pb	22 40 06.0	-1.3
SYZ				S	Sb	22 40 29.3	-1.0
JCZ	Jackson Bay	1.91	44	P	Pn	22 40 05.2	+0.3
TUZ	Tuapeka	1.96	106	P	Pn	22 40 07.0	+1.5
TUZ				S	Sb	22 40 31.1	-1.4
LBZ	Lake Benmore	2.54	66	P	Pn	22 40 13.5	-0.1
HHSZ	Highcliff Hill	2.61	101	P	Pn	22 40 15.8	+1.4
ODZ	Otahua Downs	2.66	82	P	Pn	22 40 15.1	+0.1
FOZ	Fox Glacier	2.82	48	P	Pn	22 40 17.7	+0.4
RPZ	Rata Peaks	3.42	61	P	Pn	22 40 26.1	+0.5
WVZ	Waitaha Valley	3.62	50	P	Pn	22 40 28.5	+0.2
MQZ	McQueen's Vall	4.45	69	P	Pn	22 40 39.7	0.0
LTZ	Lake Taylor	4.68	57	P	Pn	22 40 42.8	-0.2
THZ	Tophouse	5.69	52	P	Pn	22 40 57.7	+0.8

IDC 12 22:44:59.2±1.7, 8°.73S×126°.79E, h0^{km}, mb3.7/1, mb1 3.8/4, mb1mx3.5/32, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=35.2km s-min=30.6km az=75.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.42	244	Pn	Pn	22 45 55.1	+1.2
	4.1nm,0.3s,baz=88,slow=3.5,SNR=6.1						
BATI				Sn	Sn	22 46 34.4	-0.8
	12nm,0.3s,baz=7.2,slow=18,SNR=15						
WRA	Warramunga Arr	13.32	148	Pn	Pn	22 48 09.4	-0.4
	0.6nm,0.3s,baz=320,slow=13,SNR=26						
WRA				Sn	Sn	22 50 32.1	-6.7
	1.0nm,0.3s,baz=320,slow=25,SNR=12						
ASAR	Alice Springs	16.34	156	Pn	Pn	22 48 50.3	+0.1
	0.4nm,0.3s,baz=332,slow=12,SNR=12						
ASAR				Sn	Sn	22 51 45.7	-6.6
	0.3nm,0.3s,baz=344,slow=22,SNR=5.0						
MKAR	Makanchi Array	67.98	329	P	P	22 56 00.2	-0.1
	0.3nm,0.4s,baz=127,slow=7.5,SNR=19						

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*ISCJB **12** 22:55:10.4±0.9, 23°.62S±0°.06×67°.2W±0°.2, h237^{km}±19^{km}, mb3.2/1, Error ellipse: s-maj=28.7km s-min=10.0km az=4.4*

*GUC **12** 22:55:10.8±0.5, 23°.67S×67°.33W, h222^{km}±7^{km}, ML4.1*

*IDC **12** 22:55:16.1±10.0, 23°.18S×66°.61W, h236^{km}±68^{km}, mb3.0/1, mb1 3.3/3, mb1mx3.0/19, mbtmp3.9/3, Error ellipse: s-maj=109.9km s-min=28.1km az=24.0*

ISC 12 22:55:10.2±1.3, 23°.63S±0°.07×67°.1W±0°.2, h224^{km}±18^{km}, n17, $\sigma 0^{s}.85$/25, 8C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.93	301	⇓iP	Pn	22 55 50.9	+0.6
LVC				i S	S	22 56 21.2	-0.3
PB15	IPOC Station P	2.20	281	⇑iP	Pn	22 55 53.6	+0.8
PB15				i S	S	22 56 25.7	-0.1
PB06	IPOC Station P	2.43	292	⇑iP	Pn	22 55 56.0	+0.9
PB06				i S	S	22 56 29.7	-0.4
PB06				IAML		22 56 31.8	
	comp=E,508nm,0.1s						
PB09	IPOC Station P	2.67	313	⇑iP	Pn	22 55 59.0	+1.3
GO02	Mina Guanaco	2.72	235	⇑iP	Pn	22 55 58.6	+0.2
GO02				i S	S	22 56 35.5	-0.4
GO02				IAML		22 56 37.5	
	comp=E,328nm,0.3s						
PB03	IPOC Station P	2.89	302	⇑iP	Pn	22 56 00.9	+0.8
PB03				i S	S	22 56 38.4	-0.7
PB03				IAML		22 56 40.7	
	comp=E,386nm,0.2s						
PB05	IPOC Station P	2.94	285	⇑iP	Pn	22 56 01.2	+0.7
PB05				i S	S	22 56 39.1	-0.8
PB05				IAML		22 56 43.2	
	comp=E,143nm,0.2s						
PB04	IPOC Station P	3.07	294	eP	Pn	22 56 03.1	+0.9
PB10	IPOC Station P	3.15	271	⇑iP	Pn	22 56 03.8	+0.9
PB14	IPOC Station P	3.16	251	eP	Pn	22 56 03.6	+0.3
PB07	IPOC Station P	3.18	306	⇑iP	Pn	22 56 04.1	+0.7
PB07				i S	S	22 56 43.8	-1.2
PB07				IAML		22 56 46.5	
	comp=N,231nm,0.2s						
PB01	IPOC Station P	3.38	319	eP	Pn	22 56 06.1	+0.5
PB02	IPOC Station P	3.44	311	eP	Pn	22 56 06.9	+0.5
LPAZ	La Paz	7.36	352	P	Pn	22 56 57.3	+1.3
	comp=N,0.4nm,0.3s,baz=174,slow=9.2,SNR=8.8						
LPAZ				S	S	22 58 18.7	-1.6
	comp=N,0.1nm,0.3s,baz=321,slow=14,SNR=3.1						
BDFB	Brasilia	19.66	70	P	P	22 59 21.8	-0.8
	comp=N,0.8nm,0.3s,baz=236,slow=13,SNR=18						
TORD	Torodi Ar. Bea	76.54	69	P	P	23 06 36.5	+0.3
	comp=N,0.5nm,0.8s,baz=240,slow=5.5,SNR=5.1						
MKAR	Makanchi Array	146.31	39	PKPbc	PKiKP	23 14 27.1	-0.1
	comp=N,0.2nm,0.5s,baz=306,slow=2.8,SNR=6.3						

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*NEIC **12** 23:09:57.4±0.0, 17°.18N×93°.78W, h153^{km}, MD4.0(MEX), After MEX.*

MEX 12 23:10:00.5±0.7, 16°.76N×93°.90W, h173^{km}±10^{km}, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.00	290	eP	Pn	23 10 26.5	-1.0
CMIG				eS	Sn	23 10 40.5	-7.7
CMIG	Matias Romero	1.00	290	eP	Pn	23 10 26.4	-1.0
CMIG				i S	Sn	23 10 45.9	-2.3
PCIG		1.23	148	eP	Pn	23 10 26.5	-2.9
PCIG				eS	Sn	23 10 49.4	-2.4
PCIG		1.23	148	eP	Pn	23 10 28.2	-1.2
PCIG				eS	Sn	23 10 49.4	-2.4
CCIG	Comitan	1.76	105	eP	Pn	23 10 29.4	-5.3
CCIG				eS	Sn	23 10 54.4	-6.7
VHO	Vista Hermosa	2.73	277	i P	Pn	23 10 43.8	-1.9
VHO				i S	Sn	23 11 19.0	-1.8
PNIG	Pinotepa	4.07	266	eP	Pn	23 11 00.7	-1.6
PNIG				eS	Sn	23 11 47.3	-3.2
PNIG	Pinotepa	4.07	266	eP	Pn	23 11 00.7	-1.6
PNIG				eS	Sn	23 11 48.3	-2.2

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*IDC **12** 23:18:48.0±0.9, 11°.73S×165°.13E, h0^{km}, mb4.3/14, mb1 4.5/17, mb1mx4.3/38, mbtmp4.3/17, ML4.2/3, MS3.8/3, Ms1 3.8/3, ms1mx3.3/35, Error ellipse: s-maj=28.1km s-min=17.1km az=126.0*

*NEIC **12** 23:18:50.4±2.7, 11°.79S×165°.10E, h16^{km}±16^{km}, mb4.6/21, Error ellipse: s-maj=6.7km s-min=4.8km az=151.0*

*ISCJB **12** 23:18:51.4±0.3, 11°.81S±0°.06×165°.01E±0°.05, h33^{km}, mb4.5/34, MS4.6/1, Error ellipse: s-maj=8.3km s-min=6.6km az=152.4*

ISC 12 23:18:53.1±0.5, 11°.79S±0°.07×165°.10E±0°.07, h35^{km}, n74, $\sigma 0^{s}.75$/66, mb4.5/34, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.58	294	Pn	Pn	23 20 13.1	-0.5
	29nm,0.3s,baz=273,slow=14,SNR=4.1						
HNR				Sn	Sn	23 21 15.0	-1.6
	baz=248,slow=19,SNR=3.4						
HNR				LR	LR	23 22 13.3	
	comp=Z,389nm,21.1s,baz=130,slow=37						
DZM	Mont Dzumac	10.31	173	ePn	Pn	23 21 19.1	+0.5
	9.9nm,0.4s						
DZM				eLR	LR	23 23 54.4	
	comp=Z,227nm,23.4s						
DZM	Mont Dzumac	10.31	173	ePn	Pn	23 21 18.7	+0.1
DZM	Mont Dzumac	10.31	173	Pn	Pn	23 21 18.8	+0.2
	1.8nm,0.3s,baz=29,slow=8.7,SNR=12						
DZM				LR	LR	23 24 57.6	
	comp=Z,194nm,19.2s,baz=29,slow=36						
FUNA	Funafuti	14.25	78	ePn	Pn	23 22 11.4	-1.1
CTA	Charters Tower	19.90	243	P	P	23 23 22.2	+0.5
	0.2nm,0.3s,baz=68,slow=14,SNR=4.9						
RAO	Raoul Island	23.50	140	LR	LR	23 31 28.3	
	comp=Z,2μm,19.4s,baz=134,slow=32						
STKA	Stephens Creek	29.47	224	eP	P	23 24 54.1	+0.2
	1.0nm,1.0s						
STKA	Stephens Creek	29.47	224	P	P	23 24 54.5	+0.6
	2.1nm,0.7s,baz=12,slow=4.9,SNR=4.0						
H11S2	WAKE ISLAND Hy	30.13	3	T	T	23 56 35.3	
	baz=184,slow=77,SNR=4.8						
H11S3	WAKE ISLAND Hy	30.13	3	T	T	23 56 36.5	
	baz=184,slow=77,SNR=4.8						
H11S1	WAKE ISLAND Hy	30.14	3	T	T	23 56 32.7	
	baz=184,slow=77,SNR=5.9						
SNZO	South Karori	30.59	166	eP	P	23 25 01.8	-1.9
WB2	Warramunga Arr	30.63	251	eP	P	23 25 03.9	-0.4
WRAB	Tennant Creek	30.63	251	eP	P	23 25 03.8	-0.5
	4.2nm,0.9s						
WR1	Warramunga Arr	30.64	251	eP	P	23 25 04.2	-0.2
	10nm,0.9s						
WRA	Warramunga Arr	30.64	251	P	P	23 25 04.2	-0.2
	6.7nm,0.9s,baz=79,slow=9.5,SNR=35						
H11N1	WAKE ISLAND Hy	31.35	3	T	T	23 58 13.5	
	baz=182						
H11N3	WAKE ISLAND Hy	31.36	3	T	T	23 58 11.3	
	baz=182						
H11N2	WAKE ISLAND Hy	31.37	3	T	T	23 58 13.6	
	baz=182						
AS01	Alice Springs	31.86	244	eP	P	23 25 13.9	-1.2
AS31	Alice Springs	31.90	244	eP	P	23 25 14.9	-0.6
	1.1nm,0.6s						
ASAR	Alice Springs	31.90	244	P	P	23 25 14.9	-0.6
	3.2nm,0.8s,baz=75,slow=9.4,SNR=31						
FITZ	Fitzroy Crossi	38.58	256	eP	P	23 26 13.2	+0.2
	6.6nm,0.8s						
FORT	Forrest	39.10	235	eP	P	23 26 17.5	+0.3
	20nm,1.0s						
PPT2	Papeete2	44.14	103	eLR	LR	23 39 22.6	
	comp=Z,140nm,22.2s						
MBWA	Marble Bar	44.36	252	eP	P	23 27 00.9	+0.5
TBI	Tubuai	44.65	111	eLR	LR	23 39 36.2	
	comp=Z,169nm,28.8s						
NWAO	Narrogin (SRO)	48.53	236	eP	P	23 27 32.2	-0.7
MORW	Morawa	48.72	242	eP	P	23 27 34.5	+0.1
	10nm,0.9s						
MJAR	Matsushiro Arr	54.34	333	P	P	23 28 15.2	-1.1
	1.8nm,0.6s,baz=167,slow=6.7,SNR=4.9						
MAJO	Matsushiro	54.34	333	eP	P	23 28 15.2	-1.1
ASAJ	Asahikawa	59.28	341	P	P	23 28 51.6	+0.4
	7.3nm,0.8s,baz=159,slow=18						
KS01	Wonju Array Si	60.17	326	eP	P	23 28 58.0	+0.6
USRK	Ussuriysk Ar.	63.33	334	P	P	23 29 16.8	-1.8
	2.6nm,0.7s,baz=100,slow=8.2,SNR=6.3						
PETK	Petropavlovsk-	64.94	355	P	P	23 29 29.2	+0.2
	3.5nm,0.9s,baz=178,slow=6.8,SNR=4.3						
PEA1	Petropavlovsk-	64.95	355	eP	P	23 29 29.2	+0.1
ENH	Enshi	67.88	310	eP	P	23 29 48.0	-0.3
XAN	Xi'an	70.16	313	eP	P	23 30 02.4	0.0
	3.8nm,0.8s						
CM01	Chiang Mai Arr	71.81	294	eP	P	23 30 13.2	+0.6
CMAR	Chiang Mai Arr	71.83	294	P	P	23 30 14.8	+2.0
	1.9nm,0.8s,baz=122,slow=4.4,SNR=12						
GAMB	Gambell	77.41	10	eP	P	23 30 45.1	+0.9
	3.2nm,0.9s						
QSPA	South Pole Qui	78.22	180	eP	P	23 30 49.6	+0.6
SONA0	Songino Array	78.89	324	eP	P	23 30 54.0	+1.1
SONM	Songino Array	78.89	324	P	P	23 30 54.0	+1.1
	1.3nm,0.8s,baz=139,slow=6.1,SNR=9.9						
SONA1	Songino Array	78.89	324	eP	P	23 30 53.4	+0.4
BILL	Bilibino	79.62	0	eP	P	23 30 56.5	+0.1
	6.0nm,0.9s						
WRH	Wood River Hil	83.83	19	eP	P	23 31 19.0	+0.4
	5.2nm,1.0s						
MDM	Murphy Dome	84.13	18	eP	P	23 31 20.6	+0.4
	6.6nm,1.0s						
HDA	Harding Lake	84.14	19	eP	P	23 31 20.6	+0.4
	10nm,0.6s						
COLA	College	84.18	18	eP	P	23 31 20.8	+0.5
	8.0nm,0.9s						
IL1	Eielson Array	84.41	19	eP	P	23 31 21.4	-0.1
ILAR	Eielson Array	84.41	19	P	P	23 31 21.8	+0.2
	2.5nm,0.8s,baz=234,slow=5.0,SNR=28						
ILB	Eielson Array	84.41	19	eP	P	23 31 22.0	+0.5
	28nm,1.8s						
SCRK	Sand Creek	84.83	20	eP	P	23 31 24.3	+0.5
	9.3nm,1.1s						
CMB	Columbia Colle	85.30	50	eP	P	23 31 26.7	0.0
MDPB	Devils Postpil	86.16	50	eP	P	23 31 31.5	+0.3
	4.1nm,0.8s						
EGAK	Eagle	86.29	20	eP	P	23 31 32.5	+1.6
	2.8nm,0.7s						
DAWY	Dawson	86.47	21	eP	P	23 31 32.2	+0.3
	2.4nm,0.8s						
DAC	Darwin (Calif)	86.89	52	eP	P	23 31 34.0	-0.8
	1.3nm,0.6s						
NV01	Mina Array Sit	86.98	50	eP	P	23 31 35.9	+0.6
NVAR	Mina Array Bea	86.98	50	P	P	23 31 35.7	+0.5
	1.3nm,0.8s,baz=227,slow=8.2,SNR=6.3						
U15A	North Rim	91.05	53	eP	P	23 31 55.5	+0.9
	3.0nm,1.0s						
MK01	Makanchi Array	93.62	317	eP	P	23 32 06.4	+0.5
MK31	Makanchi Array	93.63	317	eP	P	23 32 06.3	+0.4
MK32	Makanchi Array	93.63	317	eP	P	23 32 06.2	+0.3
MKAR	Makanchi Array	93.63	317	P	P	23 32 06.2	+0.3
	1.4nm,0.8s,baz=101,slow=6.3,SNR=11						
ZALV	Zalesovo Beam	93.78	324	P	P	23 32 05.8	-0.5
	1.3nm,0.8s,baz=90,slow=4.4,SNR=3.5						
ZAA1	Zalesovo Array	93.79	324	eP	P	23 32 05.8	-0.5
MAKZ	Makanchi	93.84	317	eP	P	23 32 07.1	+0.3
	2.6nm,1.0s						
YKA	Yellowknife Ar	95.92	27	P	P	23 32 15.3	-0.6
	1.2nm,0.8s,baz=257,slow=4.8,SNR=12						
YKB5	Yellowknife Ar	95.92	27	eP	P	23 32 14.6	-1.3
SDV	Santo Domingo	125.17	87	ePKPdf	PKPdf	23 37 51.6	+0.4
ESDC	Sonseca Array	150.58	343	PKPbc	PKPbc	23 38 42.2	+0.5
	0.7nm,0.8s,baz=358,slow=2.8,SNR=4.8						

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*KRNET **12** 23:18:58.9±0.1, 42°.49N×78°.63E, h19^{km}, mb2.0*

*SOME **12** 23:19:05.0, 42°.75N×78°.55E, h10^{km}*

NNC 12 23:19:02.1±1.6, 42°.69N×78°.50E, h0^{km}, mb2.2, mpv2.0, 16C-4D, Error ellipse: s-maj=14.2km s-min=4.2km az=170.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.22	200	⇑iP	Pg	23 19 02.8	-3.5
	baz=69						
PRZ				⇑iS	Sg	23 19 05.4	-3.8
	baz=69						
SATY	Saty	0.37	349	P	Pb	23 19 11.5	-0.2
	1.2nm,0.1s						
SATY				S	Sb	23 19 16.2	-2.0
	5.8nm,0.2s						
SATY	Saty	0.37	349	eP	Pb	23 19 11.5	-0.2
	1.2nm,0.1s						
SATY				eS	Sb	23 19 16.2	-2.0
	5.8nm,0.2s						
UZB	Uzynbulak	0.59	40	P	Pb	23 19 15.2	-0.2
	0.4nm,0.1s						
UZB				S	Sg	23 19 22.4	+1.2
	4.2nm,0.1s						
UZB	Uzynbulak	0.59	40	eP	Pb	23 19 15.2	-0.2
	0.4nm,0.1s						
UZB				eS	Sg	23 19 22.4	+1.2
	4.2nm,0.1s						
PDGK	Podgornoye	0.96	48	P	Pb	23 19 21.2	-0.5
	0.3nm,0.2s						
PDGK				S	Sg	23 19 32.8	-0.2
	0.5nm,0.1s						
PDGK	Podgornoye	0.96	48	⇓P	Pb	23 19 21.4	-0.3
	1.5nm,0.9s						
PDGK				⇑S	Sg	23 19 32.6	-0.4
	0.9nm,0.6s						
PDGK	Podgornoye	0.96	48	⇑iP	Pg	23 19 18.7	-1.8
	baz=36						
PDGK				⇑iS	Sg	23 19 32.6	-0.4
	baz=36						
TARG	Taragay, Kyrgy	1.09	209	⇑iP	Pg	23 19 17.3	-5.7
	baz=20						
TARG				⇑iS	Sg	23 19 30.2	-7.0
	baz=20						
KDJ	Kajisay	1.13	241	⇑iP	Pg	23 19 20.2	-3.5
	baz=52						
KDJ				⇑iS	Sg	23 19 35.4	-3.0
	baz=52						

MDOK	**Medeo**	**1.17**	**294**	⇑P	Pb	23 19 24.9	-0.3
	2.5nm,1.0s						
MDOK				⇑S	Sg	23 19 39.2	-0.5
	1.0nm,0.4s						
TNSS	**Tian-Shan**	**1.20**	**287**	P	Pb	23 19 25.6	-0.3
TNSS				S	Sg	23 19 40.3	-0.2
TNSS	**Tian-Shan**	**1.20**	**287**	*e*P	Pb	23 19 25.9	+0.1
	0.2nm,0.1s						
TNSS				*e*S	Sg	23 19 40.9	+0.4
	1.5nm,0.2s						
KTMS	**Ketmen**	**1.55**	**60**	P	Pg	23 19 32.1	+0.3
KTMS				S	Sg	23 19 51.3	-0.6
KTMS	**Ketmen**	**1.55**	**60**	*e*P	Pg	23 19 32.1	+0.3
	0.6nm,0.1s						
KTMS				*e*S	Sg	23 19 51.3	-0.6
	1.5nm,0.1s						
ARXS	**Arharly**	**1.60**	**342**	P	Pg	23 19 34.5	+1.8
ARXS				S	Sg	23 19 55.4	+1.9
ARXS	**Arharly**	**1.60**	**342**	*e*P	Pg	23 19 33.6	+0.9
	0.3nm,0.1s						
ARXS				*e*S	Sg	23 19 54.2	+0.7
	2.3nm,0.2s						
ULHL	**Ulahol**	**1.73**	**256**	⇑*i*P	Pn	23 19 31.4	-2.3
	baz=63						
ULHL				⇑*i*S	Sn	23 19 55.1	-1.5
	baz=63						
DJR	**Jarkent**	**1.89**	**29**	P	Pg	23 19 38.7	+0.5
	0.8nm,0.3s						
DJR				S	Sg	23 20 02.6	-0.1
	1.2nm,0.3s						
DJR	**Jarkent**	**1.89**	**29**	*e*P	Pg	23 19 38.7	+0.5
	0.8nm,0.3s						
DJR				*e*S	Sg	23 20 02.6	-0.1
	1.2nm,0.3s						
BOOM	**Boomskoye usch**	**1.90**	**265**	⇑*i*P	Pn	23 19 34.6	-1.4
	baz=71						
BOOM				⇑*i*S	Sn	23 20 00.3	-0.5
	baz=71						
DGS	**Degeres**	**2.08**	**286**	Pg	Pg	23 19 41.8	-0.1
DGS				Lg	Lg	23 20 07.9	
DGS	**Degeres**	**2.08**	**286**	*e*P	Pg	23 19 41.8	-0.1
	0.6nm,0.5s						
DGS				*e*S	Sb	23 20 07.9	+0.7
	2.9nm,0.4s						
TKM2	**Tokmak 2**	**2.15**	**277**	⇑Pg	Pn	23 19 39.2	-0.2
	0.5nm,0.7s						
TKM2				⇓Lg	Lg	23 20 09.3	
	0.7nm,0.4s						
TKM2	**Tokmak 2**	**2.15**	**277**	⇓*i*P	Pn	23 19 38.7	-0.7
	baz=82						
TKM2				⇓*i*S	Sn	23 20 07.3	+0.4
	baz=82						
KAPS	**Kapalarasan**	**2.66**	**13**	Pg	Pg	23 19 52.9	-0.2
KAPS				Lg	Lg	23 20 27.0	
KAPS	**Kapalarasan**	**2.66**	**13**	*e*P	Pg	23 19 52.9	-0.2
	0.1nm,0.1s						
KAPS				*e*S	Sg	23 20 27.0	-0.6
	0.6nm,0.2s						

KRSC 12 23:20:06.6±1.2**, 52°.38N×160°.66E, h40**^{km}±16^{km}**, ML3.5,**
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.82**	**332**	*i* P	Pn	23 20 22.0	+0.3
SPN				*e*S	Sn	23 20 32.9	+0.3
NLC	**Nalytchevo**	**1.13**	**315**	*e*P	Pn	23 20 27.1	+1.2
NLC				*e*S	Sn	23 20 41.5	+1.3
RUS	**Russkaya**	**1.31**	**273**	*e*P	Pn	23 20 29.8	+1.3
RUS				*e*S	Sn	23 20 46.6	+1.8
DALK	**Dalny**	**1.33**	**300**	*e*P	Pn	23 20 30.3	+1.6
DALK				*e*S	Sn	23 20 47.5	+2.3
PET	**Petropavlovsk**	**1.38**	**299**	*e*P	Pn	23 20 31.2	+1.8
PET				*e*S	Sn	23 20 48.9	+2.5
SMAR	**Somma**	**1.44**	**309**	*e*P	Pn	23 20 32.1	+1.8
AVH	**Avacha**	**1.47**	**308**	*e*P	Pn	23 20 32.7	+2.1
MTVR	**Mutnovka**	**1.52**	**275**	*e*P	Pn	23 20 33.4	+2.0
MTVR				*e*S	Sn	23 20 52.3	+2.3
KOK	**Koryaka**	**1.53**	**308**	*e*P	Pn	23 20 33.9	+2.3
KRX	**Arik**	**1.57**	**310**	*e*P	Pn	23 20 34.1	+2.0
GRL	**Gorelyy**	**1.59**	**277**	*e*P	Pn	23 20 35.1	+2.7
KRMR	**Karymshinskiy**	**1.61**	**287**	*e*P	Pn	23 20 34.1	+1.6
KRMR				*e*S	Sn	23 20 53.2	+1.2
KDTR	**Khodutka, Kamc**	**1.69**	**251**	*e*P	Pn	23 20 34.7	+1.1
KDTR				*e*S	Sn	23 20 54.6	+0.6
KII	**Karymskiy**	**1.81**	**337**	*e*P	Pn	23 20 37.8	+2.4
GNL	**Ganaly**	**2.11**	**310**	*e*P	Pn	23 20 42.8	+3.3
APC	**Apacha**	**2.20**	**286**	*e*P	Pn	23 20 43.7	+3.1
APC				*e*S	Sn	23 21 10.4	+3.8
KZV	**Kizimen**	**2.75**	**356**	*e*P	Pn	23 20 52.0	+3.7
KBTR	**Krutoberegovo**	**4.04**	**17**	*e*P	Pn	23 21 09.1	+3.2

IDC ***12*** *23:20:30.5±2.6, 1°.81S×99°.37E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.7/47, mbtmp3.8/7, ML3.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.8/42, Error ellipse: s-maj=104.9km s-min=18.7km az=59.0*

ISCJB ***12*** *23:20:37.7±0.6, 1°.38S±0°.05×99°.54E±0°.05, h30^{km}, mb3.9/5, Error ellipse: s-maj=8.0km s-min=6.7km az=142.4*

DJA ***12*** *23:20:37.4±0.4, 1°S±3°×10°0E±°, h11^{km}±8^{km}, M3.8/7, MLv3.8/7*

ISC 12 23:20:37.1±0.8**, 1°.40S**±0°.05×**99°.59E**±0°.05**, h30**^{km}**, n20,**
σ**1^s.29**/18**, mb3.7**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.50**	**278**	P	**Pb**	**23 20 47.5**	**0.0**
SISI				S	**Sn**	**23 20 56.5**	**+0.7**
PDSI	**Padang**	**1.00**	**61**	P	**Pb**	**23 20 56.7**	**+0.8**
PPI	**Padang Panjang**	**1.24**	**41**	P	**Pb**	**23 21 01.0**	**+1.1**
PPSI	**Pulau Pagai**	**1.42**	**163**	P	**Pn**	**23 21 01.5**	**+0.6**
PPSI				S	**Sb**	**23 21 21.0**	**+0.3**
SDSI	**Sungai Dareh**	**1.90**	**76**	P	**Pb**	**23 21 10.6**	**-0.5**
KRJI	**Kerinci**	**2.00**	**110**	P	**Pn**	**23 21 10.2**	**+1.3**
MNSI	**Mandailing Nat**	**2.18**	**360**	P	**Pb**	**23 21 14.4**	**-1.5**
BKNI	**Bangkinang**	**2.25**	**40**	P	**Pb**	**23 21 15.4**	**-1.6**
PSI	**Prapat**	**4.22**	**351**	Pn	**Pn**	**23 21 40.1**	**+0.6**
	1.2nm,0.3s,baz=180,slow=11,SNR=9.2						
PSI				LR	LR	23 23 43.2	
	comp=Z,198nm,18.4s,baz=267,slow=43						
MDSI	**Maura Dua**	**5.52**	**124**	P	Pb	23 22 05.8	-7.0
CMAR	**Chiang Mai Arr**	**19.74**	**358**	P	**Pn**	**23 25 06.9**	**+0.7**
	0.6nm,0.3s,baz=189,slow=9.6,SNR=6.1						
H01W3	**Cape Leeuwin H**	**35.97**	**159**	T	T	00 05 22.8	
	baz=334,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**35.99**	**159**	T	T	00 05 23.4	
	baz=334,slow=76,SNR=12						
H01W1	**Cape Leeuwin H**	**35.99**	**159**	T	T	00 05 23.4	
	baz=334,slow=76,SNR=12						
WRA	**Warramunga Arr**	**38.66**	**121**	P	**P**	**23 27 55.9**	**-2.4**
	1.1nm,0.8s,baz=302,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**39.94**	**126**	P	**P**	**23 28 06.3**	**-2.7**
	1.1nm,0.8s,baz=306,slow=7.9,SNR=8.0						
SONM	**Songino Array**	**49.39**	**6**	P	**P**	**23 29 25.0**	**+0.9**
	0.6nm,0.8s,baz=190,slow=8.1,SNR=5.8						
MKAR	**Makanchi Array**	**50.34**	**345**	P	**P**	**23 29 32.2**	**+0.9**
	1.2nm,0.6s,baz=161,slow=8.3,SNR=20						
ZALV	**Zalesovo Beam**	**56.50**	**350**	P	**P**	**23 30 16.4**	**+0.1**
	2.0nm,0.4s,baz=159,slow=5.6,SNR=12						
TXAR	**Lajitas Array**	**144.47**	**36**	PKP	**PKPab**	**23 40 10.0**	**+0.3**
	0.6nm,0.4s,baz=259,slow=0.5,SNR=11						

IDC 12 23:25:36.5±2.9**, 8°.11S×160°.15E, h0**^{km}**, mb3.4**/3**,**
mb1 3.9/5**, mb1mx3.6**/33**, mbtmp3.8**/5**, ML4.3**/2**, Error ellipse: s-maj=60.8km s-min=44.4km az=98.0,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.15**	**157**	Pn	Pn	23 29 13.8	+1.8
	3.7nm,0.3s,baz=114,slow=14,SNR=48						
CTA	**Charters Tower**	**17.96**	**227**	P	P	23 29 49.8	+1.3
	0.3nm,0.3s,baz=49,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**27.61**	**242**	P	P	23 31 26.4	+0.5
	0.3nm,0.8s,baz=79,slow=9.1,SNR=2.9						
ASAR	**Alice Springs**	**29.52**	**235**	P	P	23 31 41.5	-1.4
	0.6nm,0.9s,baz=70,slow=9.4,SNR=4.5						
MKAR	**Makanchi Array**	**87.63**	**318**	P	P	23 38 26.8	-0.1
	0.2nm,0.7s,baz=102,slow=6.1,SNR=2.9						

MEX 12 23:28:04.2±0.7**, 14°.72N×92°.72W, h92**^{km}±9^{km}**, MD3.8,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.48**	**67**	*e*P	Pn	23 28 17.9	-1.0
THIG				*i* S	Sn	23 28 28.5	-1.4
PCIG		**1.09**	**334**	*e*P	Pn	23 28 24.5	-0.6
PCIG				*e*S	Sn	23 28 38.6	-2.2
CCIG	**Comitan**	**1.65**	**20**	*e*P	Pn	23 28 31.6	-0.6
CCIG				*e*S	Sn	23 28 51.6	-1.7

SOME ***12*** *23:30:58.4, 40°.75N×78°.53E, h15^{km}*

NNC ***12*** *23:30:58.6±0.9, 40°.73N×78°.43E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=6.5km s-min=4.3km az=140.0*

KRNET ***12*** *23:30:59.1±0.1, 40°.72N×78°.33E, h18^{km}, mb3.0*

ISCJB ***12*** *23:31:02.4±0.8, 40°.64N±0°.05×78°.23E±0°.04, h10^{km}, Error ellipse: s-maj=7.1km s-min=4.2km az=155.8*

ISC 12 23:31:00.9±1.3**, 40°.77N**±0°.05×**78°.29E**±0°.04**, h10**^{km}**, n64,**
σ**1^s.95**/102**, 32C-19D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.03**	**339**	⇓*i*P	**Pg**	**23 31 19.8**	**-1.0**
	baz=39						
TARG				⇓*i*S	**Sn**	**23 31 35.5**	**-1.0**
	baz=39						
KDJ	**Kajisay**	**1.60**	**329**	⇑*i*P	**Pb**	**23 31 30.2**	**-0.5**
	baz=29						
KDJ				⇑*i*S	**Sg**	**23 31 52.9**	**+0.5**
	baz=29						
PRZ	**Przheval'sk**	**1.72**	**3**	⇑*i*P	**Pb**	**23 31 31.9**	**-0.8**
	baz=2.0						
PRZ				⇑*i*S	**Sg**	**23 31 56.0**	**-0.1**
	baz=2.0						
NRN	**Naryn**	**1.86**	**292**	⇓*i*P	**Pb**	**23 31 34.7**	**-0.5**
	baz=92						
NRN				⇓*i*S	**Sg**	**23 32 00.5**	**-0.1**
	baz=92						
ULHL	**Ulahol**	**2.13**	**314**	⇓*i*P	**Pb**	**23 31 38.9**	**-0.9**
	baz=15						
ULHL				⇓*i*S	**Sg**	**23 32 07.9**	**-1.6**
	baz=15						
SATY	**Saty**	**2.29**	**2**	Pg	**Pb**	**23 31 42.1**	**-0.3**
	23nm,0.5s						
SATY				Lg	Lg	23 32 14.2	
	54nm,0.5s						
SATY	**Saty**	**2.29**	**2**	*e*P	**Pb**	**23 31 42.1**	**-0.3**
	23nm,0.5s						
SATY				*e*S	**Sg**	**23 32 13.7**	**-0.9**
	54nm,0.5s						
BOOM	**Boomskoye usch**	**2.46**	**315**	⇓*i*P	**Pb**	**23 31 43.3**	**-2.1**
	baz=16						
BOOM				⇓*i*S	**Sb**	**23 32 15.8**	**-0.1**
	baz=16						
TNSS	**Tian-Shan**	**2.48**	**337**	Pg	**Pb**	**23 31 46.0**	**+0.1**
	18nm,0.2s						
TNSS				Lg	Lg	23 32 20.6	
	17nm,0.6s						
TNSS	**Tian-Shan**	**2.48**	**337**	*e*P	**Pb**	**23 31 45.9**	**+0.1**
	18nm,0.2s						
TNSS				*e*S	**Sg**	**23 32 20.0**	**-0.6**
	17nm,0.6s						
MDOK	**Medeo**	**2.57**	**339**	⇑Pg	**Pb**	**23 31 47.1**	**-0.1**
	11nm,0.6s						
MDOK				⇓Lg	Lg	23 32 22.7	
	20nm,0.4s						
MDOK	**Medeo**	**2.57**	**339**	Pg	**Pb**	**23 31 47.3**	**+0.1**
	15nm,0.3s						
MDOK				Lg	Lg	23 32 22.9	
	20nm,0.6s						
MDOK	**Medeo**	**2.57**	**339**	*e*P	**Pb**	**23 31 47.3**	**+0.1**
	15nm,0.3s						
MDOK				*e*S	**Sg**	**23 32 22.9**	**-0.6**
	20nm,0.6s						
IZV	**Izvestkoviy**	**2.59**	**332**	Pg	**Pb**	**23 31 47.8**	**+0.2**
	8.0nm,0.3s						
IZV				Lg	Lg	23 32 23.7	
	20nm,0.5s						
IZV	**Izvestkoviy**	**2.59**	**332**	*e*P	**Pb**	**23 31 47.8**	**+0.2**
	8.0nm,0.3s						
IZV				*e*S	**Sg**	**23 32 23.7**	**-0.4**
	20nm,0.5s						
KOTS	**Kotyrbulak**	**2.62**	**341**	Pg	**Pb**	**23 31 48.1**	**+0.1**
	16nm,0.3s						
KOTS				Lg	Lg	23 32 24.5	
	39nm,0.4s						
KOTS	**Kotyrbulak**	**2.62**	**341**	*e*P	**Pb**	**23 31 48.1**	**+0.1**
	16nm,0.3s						
KOTS				*e*S	**Sg**	**23 32 24.5**	**-0.5**
	39nm,0.4s						
KZA	**Kyzart**	**2.64**	**301**	⇑*i*P	**Pb**	**23 31 45.9**	**-2.6**
	baz=1.0						
KZA				⇑*i*S	**Sb**	**23 32 20.0**	**-1.1**
	baz=1.0						
KNDC	**Almaty**	**2.64**	**338**	⇑Pg	**Pb**	**23 31 48.4**	**0.0**
	10nm,0.4s						
KNDC				⇓Lg	Lg	23 32 24.8	
	36nm,0.8s						
PDGK	**Podgornoye**	**2.71**	**19**	Pg	**Pb**	**23 31 46.4**	**-3.1**
	2.3nm,0.2s						
PDGK				Lg	Lg	23 32 21.5	
	32nm,0.4s						
PDGK	**Podgornoye**	**2.71**	**19**	⇓Pg	**Pb**	**23 31 46.2**	**-3.4**
	2.4nm,0.4s						
PDGK				⇓Lg	Lg	23 32 21.8	
	36nm,0.5s						
PDGK	**Podgornoye**	**2.71**	**19**	⇓*i*P	**Pb**	**23 31 46.5**	**-3.1**
	baz=18						
PDGK				⇓*i*S	**Sb**	**23 32 21.4**	**-1.5**
	baz=18						
KURS	**Kuram**	**2.72**	**358**	Pg	**Pb**	**23 31 49.6**	**-0.1**
	11nm,0.6s						
KURS				Lg	Lg	23 32 26.5	
	18nm,0.6s						
KURS	**Kuram**	**2.72**	**358**	*e*P	**Pb**	**23 31 49.6**	**-0.1**
	11nm,0.6s						
KURS				*e*S	**Sg**	**23 32 26.5**	**-1.8**
	18nm,0.6s						
MTBS	**Maitube**	**2.74**	**330**	Pg	**Pb**	**23 31 50.3**	**+0.2**
	7.6nm,0.2s						
MTBS				Lg	Lg	23 32 27.8	
	8.2nm,0.3s						
MTBS	**Maitube**	**2.74**	**330**	*e*P	**Pb**	**23 31 50.3**	**+0.2**
	7.6nm,0.2s						
MTBS				*e*S	**Sg**	**23 32 27.8**	**-1.1**
	8.2nm,0.3s						
KST	**Kastek**	**2.86**	**323**	Pg	**Pb**	**23 31 52.6**	**+0.4**
	11nm,0.4s						
KST				Lg	Lg	23 32 31.9	
	14nm,0.4s						
KST	**Kastek**	**2.86**	**323**	*e*P	**Pb**	**23 31 52.6**	**+0.4**
	11nm,0.4s						
KST				*e*S	**Sg**	**23 32 31.9**	**-1.0**
	14nm,0.4s						
TKM2	**Tokmak 2**	**2.95**	**318**	⇑Pg	**Pb**	**23 31 54.3**	**+0.6**
	5.9nm,0.3s						
TKM2				⇑Lg	Lg	23 32 34.1	
	13nm,0.6s						
TKM2	**Tokmak 2**	**2.95**	**318**	⇓*i*P	**Pb**	**23 31 50.3**	**-3.4**
	baz=18						
TKM2				⇓*i*S	**Sb**	**23 32 27.5**	**-2.3**
	baz=18						
KTMS	**Ketmen**	**3.08**	**29**	Pg	**Pb**	**23 31 54.8**	**-1.2**
KTMS				Lg	Lg	23 32 35.5	
KTMS	**Ketmen**	**3.08**	**29**	*e*P	**Pb**	**23 31 54.8**	**-1.2**
	0.7nm,0.1s						
KTMS				*e*S	**Sb**	**23 32 35.5**	**+1.8**
	27nm,0.4s						
DGS	**Degeres**	**3.10**	**324**	Pg	**Pb**	**23 31 57.2**	**+0.8**
	4.2nm,0.5s						
DGS				Lg	Lg	23 32 39.4	
	15nm,0.5s						
DGS	**Degeres**	**3.10**	**324**	*e*P	**Pb**	**23 31 57.1**	**+0.8**
	4.2nm,0.5s						
DGS				*e*S	**Sg**	**23 32 39.4**	**-1.2**
	15nm,0.5s						
KBK	**Karagaybulak**	**3.14**	**308**	⇑*i*P	**Pb**	**23 31 52.8**	**-4.1**
	baz=9.0						
KBK				⇑*i*S	**Sb**	**23 32 32.0**	**-3.2**
	baz=9.0						
KTBS	**Karatobe**	**3.18**	**338**	Pg	**Pb**	**23 31 57.7**	**+0.2**
	6.0nm,0.4s						
KTBS				Lg	Lg	23 32 40.8	
	15nm,0.5s						
KTBS	**Karatobe**	**3.18**	**338**	*e*P	**Pb**	**23 31 57.7**	**+0.2**
	6.0nm,0.4s						
KTBS				*e*S	**Sg**	**23 32 40.9**	**-2.1**
	15nm,0.5s						
ARLS	**Aral**	**3.18**	**291**	⇑*i*P	**Pn**	**23 31 53.0**	**+1.8**
	baz=92						
ARLS				⇑*i*S	**Sb**	**23 32 32.5**	**-4.1**
	baz=92						
UCH	**Uchtor**	**3.19**	**298**	⇑*i*P	**Pn**	**23 31 53.7**	**+2.1**
	baz=99						
UCH				⇑*i*S	**Sb**	**23 32 33.4**	**-3.7**
	baz=99						
CHKK	**Chushkaly**	**3.23**	**343**	Pg	**Pb**	**23 31 59.2**	**+0.8**
	3.5nm,0.2s						
CHKK				Lg	Lg	23 32 43.1	
	16nm,0.5s						
CHKK	**Chushkaly**	**3.23**	**343**	*e*P	**Pb**	**23 31 59.4**	**+1.0**
	3.5nm,0.2s						
CHKK				*e*S	**Sg**	**23 32 43.1**	**-1.7**
	16nm,0.5s						
MNBS	**Baschi**	**3.31**	**1**	Pg	**Pb**	**23 31 59.8**	**0.0**
	4.6nm,0.4s						
MNBS				Lg	Lg	23 32 44.3	
	18nm,0.4s						
MNBS	**Baschi**	**3.31**	**1**	*e*P	**Pb**	**23 31 59.8**	**0.0**
	4.6nm,0.4s						
MNBS				*e*S	**Sg**	**23 32 44.3**	**-2.9**
	18nm,0.4s						
AAK	**Ala-Archa**	**3.40**	**305**	⇑Pg	**Pb**	**23 32 01.9**	**+0.5**
	3.8nm,0.9s						
AAK				⇑Lg	Lg	23 32 47.7	
	15nm,0.7s						
AAK	**Ala-Archa**	**3.40**	**305**	⇑*i*P	**Pn**	**23 31 56.5**	**+2.3**
	baz=5.0						
AAK				⇑*i*S	**Sn**	**23 32 38.2**	**+3.5**
	baz=5.0						
KUU	**Kurty**	**3.44**	**336**	*e*P	**Pb**	**23 32 02.1**	**+0.1**
	2.6nm,0.4s						
KUU				⇑*i*S	**Sg**	**23 32 47.7**	**-3.8**
	6.2nm,0.4s						
CHMS	**Chumysh**	**3.46**	**311**	⇑*i*P	**Pn**	**23 31 57.2**	**+2.3**
	baz=12						
CHMS				⇑*i*S	**Sn**	**23 32 39.5**	**+3.6**
	baz=12						
ARXS	**Arharly**	**3.46**	**354**	Pg	**Pb**	**23 32 03.0**	**+0.7**
ARXS				Lg	Lg	23 32 49.5	
ARXS	**Arharly**	**3.46**	**354**	*e*P	**Pb**	**23 32 03.0**	**+0.7**
	6.3nm,0.4s						
ARXS				*e*S	**Sg**	**23 32 49.5**	**-2.6**
	16nm,0.5s						
DJR	**Jarkent**	**3.73**	**17**	*e*P	**Pb**	**23 32 06.4**	**-0.5**
	0.8nm,0.3s						
DJR				*e*S	**Sb**	**23 32 55.1**	**+2.9**
	3.0nm,0.4s						
SFK	**Sufi-Kurgan**	**3.73**	**260**	⇑Pg	**Pg**	**23 32 09.1**	**-3.4**
	1.5nm,0.6s						
SFK				⇓Lg	Lg	23 33 01.6	
	2.8nm,0.7s						
SFK	**Sufi-Kurgan**	**3.73**	**260**	Pg	**Pb**	**23 32 07.5**	**+0.4**
SFK				Lg	Lg	23 32 57.0	
SFK	**Sufi-Kurgan**	**3.73**	**260**	⇑*i*P	**Pn**	**23 32 00.7**	**+1.8**
	baz=61						
SFK				⇑*i*S	**Sn**	**23 32 45.7**	**+2.7**
	baz=61						
USP	**Ospenovka**	**3.77**	**313**	⇑*i*P	**Pn**	**23 32 01.5**	**+2.3**
	baz=13						
USP				⇑*i*S	**Sn**	**23 32 46.9**	**+3.3**
	baz=13						
EKS2	**Erkin-Say**	**3.87**	**301**	⇑*e*P	**Pn**	**23 32 02.9**	**+2.2**
	baz=1.0						
EKS2				⇑*i*S	**Sn**	**23 32 49.5**	**+3.2**
	baz=1.0						
ARSB	**Arslanbob**	**4.05**	**280**	⇑*i*P	**Pn**	**23 32 05.4**	**+2.2**
	baz=80						
ARSB				⇑*i*S	**Sn**	**23 32 54.0**	**+3.2**
	baz=80						
TDK	**Taldyqorghan**	**4.23**	**1**	Pg	**Pb**	**23 32 16.9**	**+1.4**
TDK				Lg	Lg	23 33 12.9	
TDK	**Taldyqorghan**	**4.23**	**1**	*e*P	**Pb**	**23 32 16.7**	**+1.2**
	16nm,0.4s						
TDK				*e*S	**Sg**	**23 33 12.9**	**-3.9**
	13nm,0.7s						
MRKS	**Merke**	**4.27**	**299**	Pg	**Pb**	**23 32 18.2**	**+2.0**
MRKS				Lg	Lg	23 33 15.4	
MRKS	**Merke**	**4.27**	**299**	*e*P	**Pb**	**23 32 18.2**	**+2.0**
	2.4nm,0.4s						
MRKS				*e*S	**Sg**	**23 33 15.4**	**-2.8**
	3.0nm,0.9s						
KAPS	**Kapalarasan**	**4.58**	**9**	Pg	**Pb**	**23 32 23.6**	**+2.2**
KAPS				Lg	Lg	23 33 24.7	
KAPS	**Kapalarasan**	**4.58**	**9**	*e*P	**Pb**	**23 32 23.6**	**+2.2**
	1.3nm,0.4s						
KAPS				*e*S	**Sg**	**23 33 24.7**	**-3.3**
	3.5nm,0.4s						
MNAS	**Manas**	**4.67**	**293**	Pg	**Pb**	**23 32 25.5**	**+2.5**
MNAS				Lg	Lg	23 33 27.9	
MNAS	**Manas**	**4.67**	**293**	⇓*i*P	**Pn**	**23 32 13.9**	**+2.3**
	baz=94						
MNAS				⇓*i*S	**Sn**	**23 33 08.2**	**+2.3**
	baz=94						

BJI ***12*** *23:32:29.0, 11°.22S×164°.85E, h6^{km}, mB5.4/45, mb4.9/42, Ms5.4/59, Ms7 5.2/58*

IDC ***12*** *23:32:33.2±0.6, 10°.87S×164°.34E, h0^{km}, mb4.6/25, mb1 4.8/28, mb1mx4.7/38, mbtmp4.7/28, ML5.0/3, MS5.0/36, Ms1 5.0/36, ms1mx5.0/42, Error ellipse: s-maj=19.0km s-min=13.9km az=114.0*

GCMT ***12*** *23:32:33.0±0.1, 11°.01S±0°.01×164°.31E±0°.01, h12^{km}, MW5.6/100, Moment Tensor Solution. s94,c169; s100,c202; Duration: 1^s.5 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.29±.03; $M_{\theta\theta}$0.15±.03; $M_{\phi\phi}$2.14±.03; $M_{r\theta}$-1.24±.09; $M_{\theta\phi}$0.39±.03; $M_{\phi r}$-1.21±.09; Best double couple: $M_0$2.82600×10^{17} NP1:ϕ_s30.00000°, δ64.00000°, λ-74.00000°. NP2:ϕ_s176.00000°, δ31.00000°, λ-120.00000°. Principal axes: T 2.6540, Plg17.0000°, Azm108.0000°; N 0.3450, Plg15.0000°, Azm202.0000°; P -2.9980, Plg67.0000°, Azm331.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***12*** *23:32:35.0±2.1, 10°.90S×164°.26E, h9^{km}±13^{km}, mb5.3/78, MS5.5/128, MW5.5 Error ellipse: s-maj=4.7km s-min=4.0km az=165.0*

ISCJB ***12*** *23:32:34.6±0.2, 10°.94S±0°.03×164°.23E±0°.03, h16^{km}, mb5.0/119, MS5.4/181, Error ellipse: s-maj=4.8km s-min=4.2km az=39.2*

MOS ***12*** *23:32:35.7±1.0, 10°.92S×164°.22E, h25^{km}, mb5.0/32, MS5.2/17, Error ellipse: s-maj=8.9km s-min=7.3km az=115.4*

NEIC ***12*** *23:32:36.0±0.0, 10°.80S×164°.01E, h11^{km}, Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.09; $M_{\theta\theta}$0.00; $M_{\phi\phi}$1.09; $M_{r\theta}$-1.69; $M_{\theta\phi}$1.39; $M_{\phi r}$-0.69; Best double couple: $M_0$2.50000×10^{17} NP1:ϕ_s64.00000°, δ74.00000°, λ-59.00000°. NP2:ϕ_s179.00000°, δ34.00000°, λ-150.00000°. Principal axes: T 2.7000, Plg23.0000°, Azm131.0000°; N -0.3500, Plg28.0000°, Azm234.0000°; P -2.3500, Plg51.0000°, Azm8.0000°;*

ISC 12 23:32:35.7±0.5**, 10°.95S**±0°.05×**164°.31E**±0°.05**, h10**^{km}±2^{km}**,**
h10^{km}**:pP-P, n426,** σ**1^s.98**/323**, mb5.1**/123**, MS5.4**/183**,**
7C-11D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.55**	**289**	*i* P	**Pn**	**23 33 46.0**	**+1.3**
HNR				*i* S	**Sb**	**23 34 45.0**	**-5.8**
HNR	**Honiara**	**4.55**	**289**	Pn	**Pn**	**23 33 43.4**	**-1.3**
	231nm,0.3s,baz=162,slow=2.2,SNR=36						
HNR				Sn	**Sn**	**23 34 43.1**	**+5.3**
	180nm,0.3s,baz=143,slow=20,SNR=6.3						
MARNC	**Mare, Loyalty**	**11.06**	**162**	*e*Pn	**Pn**	**23 35 13.7**	**-0.3**
DZM	**Mont Dzumac**	**11.24**	**170**	*e*Pn	**Pn**	**23 35 17.7**	**+1.1**
	515nm,1.3s						
DZM				*e*LR	LR	23 37 52.9	
	comp=Z,13μm,24.8s						
DZM	**Mont Dzumac**	**11.24**	**170**	Pn	**Pn**	**23 35 17.1**	**+0.5**
	7.9nm,0.3s,baz=303,slow=22,SNR=51						
OUENC	**Ouen Island, N**	**11.66**	**168**	*e*Pn	**Pn**	**23 35 22.5**	**+0.3**
PINNC	**Pines Island,**	**11.98**	**166**	*e*Pn	**Pn**	**23 35 27.7**	**+1.2**
MSVF	**Nonsavu**	**14.91**	**118**	*e*Pn	**Pn**	**23 36 06.0**	**-0.8**
MSVF	**Nonsavu**	**14.91**	**118**	⇑*e*P	**Pn**	**23 36 06.1**	**-0.8**
TARA	**Tarawa**	**14.93**	**36**	*e*Pn	**Pn**	**23 36 03.3**	**-3.6**
MANU	**Manus Island**	**19.01**	**297**	*e*P	**P**	**23 36 58.0**	**+0.2**
	1μm,1.8s						

EIDS	**Eidsvold**	19.05	219	P	Pn	23 37 00.6	+1.7
	baz=19,SNR=11						
EIDS	**Eidsvold**	19.05	219	*e*P	P	23 36 57.7	-0.5
	168nm,1.4s						
CTA	**Charters Tower**	19.61	240	P	Pn	23 37 05.4	-0.4
	1.4nm,0.3s,baz=65,slow=13,SNR=47						
CTA				LR	LR	23 43 56.1	
	comp=Z,8µm,21.2s,baz=52,slow=35						
CTAO	**Charters Tower**	19.61	240	*e*P	P	23 37 03.6	-0.8
CTAO	**Charters Tower**	19.61	240	*e*P	P	23 37 03.6	-0.8
KWAJ	**Kwajalein Atol**	19.90	10	*e*P	P	23 37 07.2	-0.3
KWAJ	**Kwajalein Atol**	19.90	10	*e*P	P	23 37 07.2	-0.3
MTSU	**Mount Surprise**	20.62	247	P	Pn	23 37 17.3	-0.3
	baz=21,SNR=11						
COEN	**Coen**	20.85	260	P	P	23 37 18.6	+0.6
	baz=21,SNR=28						
COEN	**Coen**	20.85	260	*e*P	P	23 37 17.6	-0.3
	85nm,1.1s						
RMQ	**Roma**	21.31	221	P	P	23 37 25.7	+2.9
	baz=22,SNR=39						
ARMA	**Armidale**	22.68	209	P	P	23 37 40.0	+2.5
	baz=23,SNR=5.0						
ARMA	**Armidale**	22.68	209	*e*P	P	23 37 37.7	+0.2
	68nm,1.0s						
RAO	**Raoul Island**	24.63	140	PFAKE		23 38 10.0	+14
RAO				LR	LR		
	comp=Z,1µm,21.0s						
RAO	**Raoul Island**	24.63	140	LR	LR	23 44 49.1	
	comp=Z,2µm,20.9s,baz=288,slow=30						
JAY	**Jayapura**	24.88	288	P	P	23 37 59.5	+0.6
	comp=Z,15nm,0.7s,baz=21,slow=8.6,SNR=2.9						
QIS	**Mount Isa**	25.59	245	P	P	23 38 04.7	-0.6
	baz=26,SNR=6.7						
OUZ	**Omahuta**	25.59	162	*e*P	P	23 38 04.9	-0.1
	comp=Z,227nm,1.9s						
CMSA	**Cobar Meteorol**	26.76	217	P	P	23 38 16.8	+1.1
	baz=27,SNR=14						
H11S2	**WAKE ISLAND Hy**	29.35	5	T	T	00 09 12.6	
	baz=184,slow=76,SNR=49						
H11S3	**WAKE ISLAND Hy**	29.35	5	T	T	00 09 29.2	
	baz=184,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	29.37	5	T	T	00 09 40.4	
	baz=184,slow=76,SNR=33						
URZ	**Urewera**	29.51	159	*e*P	P	23 38 41.2	+1.0
	comp=Z,202nm,2.0s						
URZ	**Urewera**	29.51	159	P	P	23 38 42.9	+2.7
	comp=Z,1.7nm,0.4s,baz=320,slow=7.9,SNR=2.7						
URZ				LR	LR	23 47 39.1	
	comp=Z,4µm,21.2s,baz=338,slow=31						
STKA	**Stephens Creek**	29.56	222	P	P	23 38 42.2	+1.5
	baz=30,SNR=13						
STKA	**Stephens Creek**	29.56	222	*e*P	P	23 38 40.6	-0.1
	comp=Z,7.5nm,0.9s						
STKA	**Stephens Creek**	29.56	222	*e*P	P	23 38 40.6	-0.1
STKA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STKA	**Stephens Creek**	29.56	222	P	P	23 38 41.5	+0.8
	comp=Z,13nm,0.9s,baz=36,slow=13,SNR=15						
STKA				LR	LR	23 49 58.8	
	comp=Z,6µm,20.5s,baz=40,slow=35						
WAKE	**Wake Island**	30.13	4	PFAKE		23 39 00.0	+14
WAKE				LR	LR		
	comp=Z,3µm,19.0s						
WRAB	**Tennant Creek**	30.18	249	*e*P	P	23 38 44.0	-2.5
	comp=Z,9.0nm,0.8s						
WRAB				LR	LR		
	comp=Z,6µm,20.0s						
WRAB	**Tennant Creek**	30.18	249⇓	*i*P	P	23 38 44.7	-1.8
WRAB				pmax	pmax		
	comp=Z,31nm,1.5s						
WB2	**Warramunga Arr**	30.19	249	*e*P	P	23 38 44.6	-1.9
WRA	**Warramunga Arr**	30.20	249	*i* P	P	23 38 45.2	-1.4
WRA				pmax	pmax		
	comp=Z,14nm,1.0s						
WRA	**Warramunga Arr**	30.20	249	P	P	23 38 44.3	-2.2
	comp=Z,14nm,1.0s,baz=75,slow=8.9,SNR=52						
WRA				LR	LR	23 50 39.5	
	comp=Z,7µm,21.3s,baz=75,slow=36						
H11N1	**WAKE ISLAND Hy**	30.58	5	T	T	00 10 55.7	
	baz=184,slow=76,SNR=52						
H11N3	**WAKE ISLAND Hy**	30.58	5	T	T	00 10 53.3	
	baz=184,slow=76,SNR=37						
H11N2	**WAKE ISLAND Hy**	30.60	5	T	T	00 11 16.8	
	baz=184,slow=76,SNR=49						
GUMO	**Guam**	31.09	321	PFAKE		23 39 10.0	+16
GUMO				LR	LR		
	comp=Z,6µm,19.0s						
GUMO	**Guam**	31.09	321	LR	LR	23 51 06.9	
	comp=Z,5µm,19.9s,baz=152,slow=36						
TOO	**Toolangi**	31.44	209	P	P	23 38 59.2	+1.9
	baz=32,SNR=4.9						
TOO	**Toolangi**	31.44	209	*e*P	P	23 38 58.0	+0.7
	comp=Z,26nm,1.0s						
TOO	**Toolangi**	31.44	209	P	P	23 38 58.0	+0.7
TOO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AS01	**Alice Springs**	31.54	242	*e*P	P	23 38 57.0	-1.4
AS31	**Alice Springs**	31.58	242	*e*P	P	23 38 57.1	-1.7
	comp=Z,3.4nm,0.9s						
ASAR	**Alice Springs**	31.58	242	P	P	23 38 57.0	-1.8
	comp=Z,8.9nm,0.9s,baz=72,slow=9.7,SNR=54						
ASAR				LR	LR	23 51 10.0	
	comp=Z,7µm,19.4s,baz=70,slow=35						
SNZO	**South Karori**	31.59	165	PFAKE		23 39 10.0	+11
SNZO				LR	LR		
	comp=Z,3µm,22.0s						
HTT	**Hallett**	32.28	222	P	P	23 39 06.0	+1.2
	baz=32,SNR=9.7						
RPZ	**Rata Peaks**	33.16	171	P	P	23 39 12.3	0.0
	comp=Z,12nm,0.8s,baz=14,slow=12,SNR=3.4						
BBOO	**Buckleboo**	33.88	226	P	P	23 39 19.4	+0.7
	baz=34,SNR=24						
BBOO	**Buckleboo**	33.88	226	*e*P	P	23 39 18.3	-0.4
	comp=Z,61nm,0.9s						
SIJI	**Sorong**	34.32	285	P	P	23 39 23.3	+0.5
	comp=Z,13nm,0.9s,baz=93,slow=6.1,SNR=4.8						
BNDI	**Bandanaira**	34.66	278	P	P	23 39 23.5	-2.3
KNRA	**Kununurra**	34.88	258	P	P	23 39 26.5	-1.1
	baz=35,SNR=5.1						
TAU	**Tasmania Unive**	35.11	202	PFAKE		23 39 40.0	+11
TAU				LR	LR		
	comp=Z,3µm,19.0s						
WRKA	**Warakurna**	36.87	243	P	P	23 39 43.5	-1.2
	baz=37,SNR=12						
FITZ	**Fitzroy Crossi**	38.05	255	P	P	23 39 52.5	-2.1
	baz=38,SNR=39						
FITZ	**Fitzroy Crossi**	38.05	255	*e*P	P	23 39 52.6	-2.1
	comp=Z,28nm,0.8s						
FORT	**Forrest**	38.95	234	P	P	23 40 02.3	+0.2
	baz=39,SNR=15						
FORT	**Forrest**	38.95	234	*e*P	P	23 40 01.1	-1.0
	comp=Z,110nm,0.8s						
SANI	**Sanana**	39.05	280	P	P	23 40 00.8	-2.3
SOEI	**Soe**	39.39	268	*e*P	P	23 40 06.0	-0.1
	comp=Z,95nm,1.5s						
BATI	**Baumata**	39.94	267	P	P	23 40 12.2	+1.6
BATI	**Baumata**	39.94	267	LR	LR	23 56 49.4	
	comp=Z,4µm,21.8s,baz=111,slow=36						
MMRI	**Maumere**	41.50	269	*e*P	P	23 40 23.1	-0.4
	comp=Z,104nm,1.1s						
MMRI	**Maumere**	41.50	269	P	P	23 40 22.9	-0.6
EDFI	**Ende, Flores**	42.03	269	P	P	23 40 20.0	-7.9
LUWI	**Luwuk**	42.41	281	*e*P	P	23 40 29.3	-1.6
	comp=Z,86nm,1.1s						
DAV	**Davao City (W)**	42.51	293	PFAKE		23 40 40.0	+8.3
DAV				LR	LR		
	comp=Z,2µm,22.0s						
DAV	**Davao City (W)**	42.51	293	LR	LR	23 57 56.2	
	comp=Z,749nm,18.2s,baz=108,slow=36						
MIDW	**Midway**	42.78	24	PFAKE		23 40 40.0	+6.4
MIDW				LR	LR		
	comp=Z,4µm,19.0s						
JCJ	**Chichijima**	43.49	331	LR	LR	00 00 23.3	
	comp=Z,1µm,18.0s,baz=128,slow=38						
MBWA	**Marble Bar**	43.90	251	*e*P	P	23 40 41.7	-1.1
MBWA				LR	LR		
	comp=Z,5µm,19.0s						
BNSI	**Bone**	44.25	275	P	P	23 40 43.3	-2.5
KAPI	**Kappang**	44.48	274	PFAKE		23 41 00.0	+12
KAPI				LR	LR		
	comp=Z,2µm,21.0s						
PPT	**Papeete**	45.09	104	LR	LR	23 55 38.8	
	comp=Z,4µm,21.3s,baz=274,slow=31						
PPT2	**Papeete2**	45.09	104	*e*S	S	23 47 38.5	+6.6
	comp=Z,1µm,25.8s						
PPT2				*e*LQ	LQ	23 51 40.7	
	comp=Z,9µm,28.2s						
PPT2				*e*LR	LR	23 53 39.2	
	comp=Z,8µm,23.5s						
PCI	**Palu**	45.28	280	P	P	23 40 45.8	-8.2
MPSI	**Mapaga**	45.55	281	P	P	23 40 55.1	-1.0
TBI	**Tubuai**	45.67	112	*e*S	S	23 47 47.0	+6.9
	comp=Z,1µm,26.8s						
TBI				*e*LQ	LQ	23 52 00.1	
	comp=Z,12µm,28.5s						
TBI				*e*LR	LR	23 53 54.8	
	comp=Z,8µm,29.5s						
PLAI	**Plampang**	45.86	268	P	P	23 40 59.5	+0.9
BLDU	**Ballidu**	48.20	239	P	P	23 41 17.3	+0.6
	baz=48,SNR=4.4						
NWAO	**Narrogin (SRO)**	48.35	236	PFAKE		23 41 30.0	+12
NWAO				LR	LR		
	comp=Z,11µm,19.0s						
NWAO	**Narrogin (SRO)**	48.35	236	LR	LR	00 01 54.9	
	comp=Z,8µm,19.3s,baz=324,slow=36						
MORW	**Morawa**	48.44	241	P	P	23 41 17.7	-0.8
	baz=49,SNR=6.8						
MORW	**Morawa**	48.44	241	*e*P	P	23 41 17.8	-0.8
	comp=Z,51nm,1.3s						
KIP	**Kipapa**	49.03	49	PFAKE		23 41 30.0	+6.9
KIP				LR	LR		
	comp=Z,7µm,19.0s						
TGY	**Tagaytay City**	49.70	299	LR	LR	00 00 33.5	
	comp=Z,2µm,20.9s,baz=108,slow=34						
POHA	**Pohakuloa**	49.95	53	PFAKE		23 41 40.0	+10
POHA				LR	LR		
	comp=Z,4µm,20.0s						
MJAR	**Matsushiro Arr**	53.25	334	P	P	23 41 52.3	-2.3
	comp=Z,6.7nm,1.0s,baz=161,slow=6.9,SNR=6.0						
MAJO	**Matsushiro**	53.26	334	*e*P	P	23 41 54.1	-0.5
	comp=Z,17nm,1.0s						
MAJO				LR	LR		
	comp=Z,2µm,19.0s						
MAJO	**Matsushiro**	53.26	334	*e*P	P	23 41 54.2	-0.5
MAJO				pmax	pmax		
	comp=Z,17nm,1.0s						
MAJO				MLR	MLR		
	comp=Z,2µm,19.0s						
MAT	**Matsushiro**	53.26	334	P	P	23 41 53.6	-1.0
MAT				S	S	23 49 21.0	-5.0
MJB9	**Matsu-Tunnel**	53.26	334	*e*P	P	23 41 55.2	+0.5
	comp=Z,49nm,1.1s						
JNU	**Nakatsue**	54.19	325	P	P	23 41 59.7	-1.9
	comp=Z,13nm,0.9s,baz=124,slow=6.0						
JNU				LR	LR	00 01 06.6	
	comp=Z,485nm,20.7s,baz=101,slow=32						
TAOE	**Nuku Hiva Isla**	54.69	93	*e*LR	LR	23 58 13.9	
	comp=Z,4µm,26.1s						
KPJI	**Karang Pucung**	54.74	269	P	P	23 42 18.6	+13
TATO	**Taipei**	54.94	311	PFAKE		23 42 20.0	+13
TATO				LR	LR		
	comp=Z,3µm,22.0s						
LEM	**Lembang**	56.10	269	LR	LR	00 09 36.5	
	comp=Z,1µm,18.4s,baz=97,slow=40						
ERM	**Erimo**	56.18	341	PFAKE		23 42 30.0	+14
ERM				LR	LR		
	comp=Z,1µm,19.0s						
QZH	**Quanzhou**	57.10	309	*e*P	P	23 42 24.8	+2.2
QZH				S	S	23 50 26.6	+8.8
QZH				LR	LR		
	comp=Z,1µm,15.2s						
YUK	**Yuzh-Kuril'sk**	57.24	344*d*	*i*P	P	23 42 23.5	+0.3
YUK				*e*		23 43 13.6	
YUK				*e*S	S	23 50 18.9	-0.1
YUK				*e*SS	SS	23 54 07.5	-1.1
YUK				MLR	MLR		
	comp=Z,1µm,21.0s						
YUK				MLR	MLR		
	comp=E,881nm,20.0s						
YUK				MLR	MLR		
	comp=N,1µm,15.0s						
KUR	**Kuril'sk**	57.86	346⇓	*e*P	P	23 42 28.2	+0.7
ASAJ	**Asahikawa**	58.25	342	P	P	23 42 29.4	-0.9
	comp=N,11nm,0.9s,baz=210,slow=8.4,SNR=8.4						
SSE	**Sheshan**	58.81	317	P	P	23 42 34.1	-0.4
SSE				S	S	23 50 44.1	+4.0
SSE				pmax	pmax		
	comp=N,130nm,4.3s						
SSE				LR	LR		
	comp=N,460nm,19.3s						
SSE				LR	LR		
	comp=N,500nm,17.6s						
SSE	**Sheshan**	58.81	317	*e*P	P	23 42 33.7	-0.8
	comp=N,9.9nm,0.6s						
SSE				*e*PcP	PcP	23 43 24.8	+0.8
SSE				LR	LR		
	comp=Z,1µm,22.0s						
RKT	**Rikitea**	58.94	110	*e*S	S	23 50 47.5	+5.4
	comp=Z,440nm,29.5s						
RKT				*e*LQ	LQ	23 57 34.5	
	comp=Z,3µm,29.0s						
RKT				*e*LR	LR	00 00 00.4	
	comp=Z,4µm,27.8s						
KSRS	**Korea Array**	59.02	327	P	P	23 42 35.0	-0.8
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSRS	**Korea Array**	59.02	327	P	P	23 42 35.0	-0.8
	comp=Z,2.6nm,0.9s,baz=138,slow=8.4,SNR=7.1						
KSRS				LR	LR	00 05 07.9	
	comp=Z,611nm,21.6s,baz=140,slow=33						
KSAR	**Wonju Array Be**	59.03	327	P	P	23 42 35.0	-0.9
KSAR	**Wonju Array Be**	59.03	327	P	P	23 42 35.0	-0.9
KS01	**Wonju Array Si**	59.05	327	*e*P	P	23 42 35.4	-0.7
YSS	**Yuzh-Sakhalins**	60.78	343	*e*P	P	23 42 47.3	-0.4
YSS				LR	LR		
	comp=Z,744nm,19.0s						
YSS	**Yuzh-Sakhalins**	60.78	343	*e*P	P	23 42 48.6	+0.9
YSS				*e**SP	pwP	23 42 56.0	-0.6
YSS				*e*		23 43 28.0	
YSS				*e*S	S	23 51 06.2	+1.4
YSS				*e*PPS	PPS	23 51 34.7	
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				MLR	MLR		
	comp=Z,1µm,16.0s						
YSS				MLR	MLR		
	comp=N,900nm,15.0s						
NJ2	**Nanjing**	60.97	316	*e*P	P	23 42 48.9	-0.4
NJ2				pmax	pmax		
	comp=N,6.0nm,0.6s						
NJ2				LR	LR		
	comp=N,880nm,14.1s						
NJ2				LR	LR		
	comp=N,840nm,11.4s						
NJ2				LR	LR		
	comp=N,850nm,15.2s						
MSHR	**Mys Shultsa**	61.32	333⇓	*i*P	P	23 42 50.9	-0.5
QIZ	**Qiongzhong**	61.40	299	P	P	23 42 52.2	-0.3
QIZ				sP	sP	23 42 58.0	+3.3
QIZ				S	S	23 51 15.4	+1.6
QIZ				SS	SS	23 55 16.2	+1.4
QIZ				LR	LR		
	comp=N,840nm,18.1s						
QIZ				LR	LR		
	comp=N,980nm,19.1s						
QIZ				LR	LR		
	comp=N,2µm,25.0s						
SKR	**Severo-Kuril's**	61.79	354	*e*P	P	23 43 04.2	+10
SKR				*e*S	S	23 51 23.5	+6.0
SKR				pmax	pmax		
	comp=Z,600nm,10.1s						
SKR				pmax	pmax		
	comp=Z,75nm,1.4s						
SKR				pmax	pmax		
	comp=Z,400nm,10.1s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,2µm,18.0s						
USA0B	**Ussuriysk Arra**	62.24	334	*e*P	P	23 42 57.0	-0.6
	comp=Z,206nm,1.9s						
USRK	**Ussuriysk Ar.**	62.24	334	P	P	23 42 57.7	0.0
	comp=Z,5.4nm,0.9s,baz=140,slow=9.2,SNR=10.0						
USRK				LR	LR	00 09 19.5	
	comp=Z,465nm,20.1s,baz=134,slow=36						
DL2	**Dalian**	63.57	324	P	P	23 43 02.6	-4.0
DL2				S	S	23 51 39.7	-0.6
DL2				SS	SS	23 55 57.1	+9.1
DL2				pmax	pmax		
	comp=Z,32nm,1.0s						
DL2				pmax	pmax		
	comp=Z,670nm,7.6s						
DL2				LR	LR		
	comp=Z,1µm,18.2s						
DL2				LR	LR		
	comp=Z,1µm,15.5s						
DL2				LR	LR		
	comp=Z,2µm,17.3s						
MDJ	**Mudanjiang**	63.62	333	P	P	23 43 07.8	+1.0
MDJ				pmax	pmax		
	comp=Z,210nm,3.2s						
MDJ	**Mudanjiang**	63.62	333	*e*P	P	23 43 05.5	-1.3
MDJ				LR	LR		
	comp=Z,1µm,20.0s						
PET	**Petropavlovsk**	63.90	356	PFAKE		23 43 20.0	+12
PET				LR	LR		
	comp=Z,1µm,21.0s						
PET	**Petropavlovsk**	63.90	356	*e*P	P	23 43 15.6	+7.1
PET				*e*S	S	23 51 44.5	+0.5
PET				*e*SS	SS	23 55 53.8	+1.0
PET				pmax	pmax		
	comp=Z,22nm,1.1s						
PET				pmax	pmax		
	comp=Z,400nm,15.3s						
PEA0B	**Petropavlovsk-**	64.06	356	*e*P	P	23 43 10.1	+0.5
	comp=Z,69nm,1.3s						
PETK	**Petropavlovsk-**	64.06	356	*e*P	P	23 43 09.2	-0.3
PETK	**Petropavlovsk-**	64.06	356	P	P	23 43 08.3	-1.2
	comp=Z,4.2nm,0.7s,baz=146,slow=9.0,SNR=4.9						
PETK				LR	LR	00 08 46.9	
	comp=Z,312nm,18.9s,baz=165,slow=34						
TIA	**Tai'an**	64.61	319	P	P	23 43 22.4	+8.8
TIA				S	S	23 52 04.5	+11
TIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIA				pmax	pmax		
	comp=Z,100nm,5.5s						
TIA				LR	LR		
	comp=N,430nm,17.7s						
TIA				LR	LR		
	comp=E,610nm,14.8s						
TIA				LR	LR		
	comp=Z,980nm,18.0s						
ADK	**Adak**	64.70	13	PFAKE		23 43 30.0	+16
ADK				LR	LR		
	comp=Z,2µm,19.0s						
IPM	**Ipoh**	64.82	280	*e*P	P	23 43 14.8	-0.6
	comp=Z,15nm,0.9s						
CN2	**Changchun**	64.95	330	*e*P	P	23 43 14.8	-0.8
CN2				*e*S	S	23 51 55.6	-1.7
CN2				pmax	pmax		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=Z,1µm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,16.0s						
CN2				LR	LR		
	comp=Z,980nm,19.0s						
MNSI	**Mandailing Nat**	65.38	276	P	P	23 43 18.6	-0.4
	comp=Z,17nm,0.9s						
SKNT	**Sakolnakorn**	65.77	294	P	P	23 43 22.3	+0.9
	comp=Z,8.3nm,0.9s,comp=Z,530nm						
CASY	**Casey**	65.96	201	PFAKE		23 43 30.0	+8.2
CASY				LR	LR		
	comp=Z,274nm,20.0s						
COCO	**West Island**	65.96	261	PFAKE		23 43 30.0	+7.3
COCO				LR	LR		
	comp=Z,3µm,19.0s						
GRNR	**Gornyy**	66.09	341	*e*P	P	23 43 24.1	+1.3
KLR	**Kul'dur**	66.42	337⇑	*e*P	P	23 43 23.8	-1.2
KLR	**Kul'dur**	66.42	337	P	P	23 43 24.6	-0.3
	comp=Z,5.1nm,1.0s,baz=130,slow=3.3,SNR=16						
PSI	**Prapat**	66.46	278	LR	LR	00 15 31.4	
	comp=Z,608nm,21.0s,baz=91,slow=39						
VNDA	**Vanda**	66.57	181	LR	LR	00 10 09.6	
	comp=Z,788nm,18.1s,baz=7.5,slow=34						
ENH	**Enshi**	66.75	310	*e*P	P	23 43 25.1	-2.5
ENH				LR	LR		
	comp=Z,889nm,21.0s						
NONG	**Nongkai**	66.90	295	P	P	23 43 26.5	-2.1
SBA	**Scott Base**	66.90	179	PFAKE		23 43 40.0	+12
SBA				LR	LR		
	comp=Z,1µm,20.0s						
NKL	**Nikolayevsk**	66.97	345	*e*P	P	23 43 22.0	-6.4
NKL				pmax	pmax		
	comp=Z,26nm,1.0s						
BJT	**Baijiatuau**	67.52	322	*e*P	P	23 43 31.2	-1.0
BJT				LR	LR		
	comp=Z,2µm,20.0s						
BJT	**Baijiatuau**	67.52	322	*e*P	P	23 43 31.2	-1.0
BJT				MLR	MLR		
	comp=Z,2µm,20.0s						
PBKT	**Sadao Pong**	68.34	293	*e*P	P	23 43 37.7	-0.1
XAN	**Xi'an**	69.02	313	P	P	23 43 41.7	-0.1
XAN				pP	sP	23 43 46.5	+2.5
XAN				LR	LR		
	comp=Z,490nm,13.3s						
XAN				LR	LR		
	comp=Z,990nm,16.3s						
XAN				LR	LR		
	comp=Z,1µm,17.3s						
XAN	**Xi'an**	69.02	313	*e*P	P	23 43 39.8	-2.0
XAN	**Xi'an**	69.02	313	*e*P	P	23 43 39.8	-2.0
UTTA	**Uttaradit**	69.11	294	P	P	23 43 43.9	+1.4
	comp=Z,2.9nm,1.0s,comp=Z,51nm						
SUKH	**Sukhothai**	69.85	293	P	P	23 43 48.8	+1.6
	comp=Z,2.7nm,0.8s						
KMI	**Kunming**	69.88	302	P	P	23 43 49.1	+1.6
KMI				pP	pwP	23 43 54.3	-2.2
KMI				sP	sP	23 43 58.6	+9.0
KMI				S	S	23 52 59.9	+2.1
KMI				sS	sS	23 53 11.3	+11
KMI				SKS	SKSac	23 53 47.4	-1.7
KMI				SS	SS	23 57 29.7	+2.7
KMI				pmax	pmax		
	comp=Z,11nm,1.3s						
KMI				pmax	pmax		
	comp=Z,300nm,6.2s						
KMI				LR	LR		
	comp=Z,490nm,20.8s						
KMI				LR	LR		
	comp=Z,1µm,20.8s						
KMI				LR	LR		
	comp=Z,2µm,21.5s						
CM01	**Chiang Mai Arr**	70.76	294	*e*P	P	23 43 52.1	-0.7
CM31	**Chiang Mai Arr**	70.79	294	*e*P	P	23 43 52.5	-0.5
CMAR	**Chiang Mai Arr**	70.79	294	P	P	23 43 52.7	-0.2
	comp=Z,5.8nm,0.8s,baz=120,slow=4.3,SNR=30						
CMAR				LR	LR	00 17 33.0	
	comp=Z,306nm,18.2s,baz=104,slow=38						
HHC	**Hu-ho-hao-te**	70.86	320	*e*P	P	23 43 55.8	+2.8
HHC				PP	PP	23 46 35.4	+5.2
HHC				S	S	23 53 10.9	+2.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,5.5s						
HHC				LR	LR		
	comp=Z,1µm,15.6s						
HHC				LR	LR		
	comp=Z,810nm,15.6s						
HHC				LR	LR		
	comp=Z,2µm,15.6s						
CHTO	**Chiang Mai**	70.90	294	*e*P	P	23 43 52.8	-0.8
	comp=Z,37nm,1.7s						
CHTO				LR	LR		
	comp=Z,746nm,19.0s						
CHTO	**Chiang Mai**	70.90	294	P	P	23 43 52.8	-0.8
CHTO				pmax	pmax		
	comp=Z,37nm,1.7s						
CHTO	**Chiang Mai**	70.90	294	P	P	23 43 54.6	+1.0
	comp=Z,30nm,1.0s,comp=Z,2µm						
MA2	**Magadan**	71.13	353	*e*P	P	23 43 52.7	-1.4
	comp=Z,21nm,0.6s						
MA2				LR	LR		
	comp=Z,2µm,21.0s						
MA2	**Magadan**	71.13	353⇓	*e*P	P	23 43 52.8	-1.3
MA2				pmax	pmax		
	comp=Z,18nm,2.5s						
MA2	**Magadan**	71.13	353	P	P	23 43 52.5	-1.6
	comp=Z,2.7nm,0.3s,baz=160,slow=8.4,SNR=7.1						
CD2	**Chengdu**	71.43	308	P	P	23 43 55.9	-0.7
CD2				pP	sP	23 44 00.8	+2.0
CD2				PP	PP	23 46 34.4	-0.9
CD2				S	S	23 53 14.9	-0.4
CD2				SKS	SKSac	23 53 58.4	-1.9
CD2				SS	SS	23 57 50.8	+0.4
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						

CD2				pmax	pmax		
	comp=Z,590nm,5.9s						
CD2				LR	LR		
	comp=Z,2µm,24.0s						
CD2				LR	LR		
	comp=Z,2µm,17.2s						
HIA	**Hailar**	**71.60**	**331**	*e*P	**P**	**23 43 56.1**	**-1.1**
	comp=Z,9.3nm,0.8s						
HIA				LR	LR		
	comp=Z,1µm,19.0s						
HIA	**Hailar**	**71.60**	**331**	*e*P	**P**	**23 43 56.1**	**-1.1**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HIA				MLR	MLR		
	comp=Z,1µm,19.0s						
BTO	**Baotou**	**71.70**	**319**	*e*P	**P**	**23 43 59.6**	**+1.5**
ZEA	**Zeya**	**71.72**	**338**	*e*P	**P**	**23 43 58.6**	**+0.8**
ZEA				*e*S	SKiKP	23 53 49.0	+12
ZEA				pmax	pmax		
	comp=Z,46nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,400nm,8.0s						
LZH	**Lanzhou**	**73.66**	**313**	*e*P	**P**	**23 44 11.6**	**+1.7**
LZH				pP	sP	23 44 15.7	+3.6
LZH				sP	pwP	23 44 19.0	+0.1
LZH				PP	**PP**	**23 46 58.2**	**+3.8**
LZH				*e*S	**S**	**23 53 46.9**	**+6.1**
LZH				sS	sS	23 53 57.3	+14
LZH				SS	**SS**	**23 58 32.7**	**+8.2**
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,6.0s						
LZH				LR	LR		
	comp=Z,1µm,15.4s						
LZH				LR	LR		
	comp=Z,2µm,17.4s						
LZH				LR	LR		
	comp=Z,3µm,18.7s						
SEY	**Seymchan**	**74.24**	**354⇑**	*e*P	**P**	**23 44 12.4**	**-0.1**
SEY	**Seymchan**	**74.24**	**354**	P	**P**	**23 44 10.7**	**-1.8**
	comp=Z,2.7nm,0.7s,baz=158,slow=4.9,SNR=12						
GAMB	**Gambell**	**76.73**	**11**	*e*P	**P**	**23 44 26.5**	**-0.2**
	comp=Z,54nm,1.2s						
KDAK	**Kodiak Island**	**77.02**	**22**	PFAKE		23 44 40.0	+11
KDAK				LR	LR		
	comp=Z,785nm,20.0s						
YAK	**Yakutsk**	**77.61**	**344**	*e*P	**P**	**23 44 30.7**	**-1.1**
YAK				*e**PP	**sP**	**23 44 35.1**	**+1.1**
YAK				*e*		23 44 42.6	
YAK				*e*		23 47 31.6	
YAK				*e*PPP	PPP	23 49 13.8	
YAK				*e*S	**S**	**23 54 22.2**	**-1.0**
YAK				*e**SS	sS	23 54 35.0	+9.4
YAK				*e*		23 54 51.2	
YAK				*e*SS	**SS**	**23 59 23.3**	**+0.2**
YAK				pmax	pmax		
	comp=Z,85nm,0.8s						
YAK				pmax	pmax		
	comp=N,15nm,0.7s						
YAK				pmax	pmax		
	comp=E,23nm,0.8s						
YAK				pmax	pmax		
	comp=Z,644nm,3.5s						
YAK				pmax	pmax		
	comp=N,415nm,3.3s						
YAK				pmax	pmax		
	comp=E,213nm,3.3s						
YAK				smax	smax		
	comp=N,297nm,3.0s						
YAK				smax	smax		
	comp=E,191nm,3.6s						
SONM	**Songino Array**	**77.76**	**324**	P	**P**	**23 44 32.0**	**-1.2**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,894nm,18.0s						
SONM	**Songino Array**	**77.76**	**324**	P	**P**	**23 44 32.0**	**-1.2**
	comp=Z,3.7nm,0.8s,baz=141,slow=6.9,SNR=24						
SONM				LR	LR	00 21 07.1	
	comp=Z,894nm,18.0s,baz=128,slow=38						
SONA1	**Songino Array**	**77.77**	**324**	*e*P	**P**	**23 44 32.0**	**-1.2**
GTA	**Gaotai**	**77.98**	**314**	⇓P	**P**	**23 44 33.8**	**-0.8**
GTA				pP	sP	23 44 38.2	+1.4
GTA				sP	pwP	23 44 41.0	-2.6
GTA				S	**S**	**23 54 28.4**	**-0.1**
GTA				sS	sS	23 54 35.1	+4.3
GTA				SKS	**SKSac**	**23 54 42.1**	**-6.9**
GTA				SS	**SS**	**23 59 34.6**	**+4.7**
GTA				pmax	pmax		
	comp=Z,66nm,8.1s						
GTA				LR	LR		
	comp=Z,540nm,18.7s						
GTA				LR	LR		
	comp=Z,1µm,20.6s						
GTA				LR	LR		
	comp=Z,1µm,21.0s						
ANM	**Nome**	**78.71**	**13**	*e*P	**P**	**23 44 38.0**	**+0.2**
	comp=Z,106nm,1.9s						
ANM	**Nome**	**78.71**	**13**	P	**P**	**23 44 38.0**	**+0.2**
ANM				pmax	pmax		
	comp=Z,106nm,1.9s						
BILL	**Bilibino**	**78.80**	**1**	*e*P	**P**	**23 44 36.7**	**-1.5**
	comp=Z,154nm,2.0s						
BILL				LR	LR		
	comp=Z,656nm,21.0s						
BILL	**Bilibino**	**78.80**	**1⇓**	*i*P	**P**	**23 44 37.1**	**-1.2**
BILL				*e**PP	**sP**	**23 44 42.6**	**+2.1**
BILL				*e*		23 44 46.0	
BILL				*e**SP	**pwP**	**23 44 48.1**	**+0.8**
BILL				pmax	pmax		
	comp=Z,20nm,1.3s						
BILL				MLR	MLR		
	comp=Z,746nm,18.0s						
QSPA	**South Pole Qui**	**79.05**	**180**	*e*P	**P**	**23 44 39.8**	**-0.2**
QSPA				LR	LR		
	comp=Z,2µm,19.0s						
SHL	**Shillong**	**79.24**	**299**	*e*P	**P**	**23 44 41.4**	**-0.4**
	comp=Z,61nm,1.5s						
SHL	**Shillong**	**79.24**	**299**	*e*P	**P**	**23 44 41.4**	**-0.4**
SHL				pmax	pmax		
	comp=Z,61nm,1.5s						
SHL	**Shillong**	**79.24**	**299**	*e*P	**P**	**23 44 43.0**	**+1.2**
BOD	**Bodaibo**	**79.85**	**335**	*e*P	**P**	**23 44 41.4**	**-2.8**
BOD				pmax	pmax		
	comp=Z,22nm,2.0s						
SUA	**Susitna One**	**80.32**	**20**	*e*P	**P**	**23 44 47.2**	**+0.4**
	comp=Z,73nm,1.4s						
LSA	**Lhasa**	**81.11**	**303**	*e*P	**P**	**23 44 50.3**	**-2.0**
	comp=Z,2.1nm,0.4s						
LSA				LR	LR		
	comp=Z,1µm,22.0s						
LSA	**Lhasa**	**81.11**	**303**	*e*P	**P**	**23 44 50.3**	**-2.0**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
LSA				MLR	MLR		
	comp=Z,1µm,22.0s						
TLY	**Talaya**	**81.27**	**327**	*e*P	**P**	**23 44 51.2**	**-0.8**
	comp=Z,46nm,1.3s						
TLY				LR	LR		
	comp=Z,669nm,20.0s						
TLY	**Talaya**	**81.27**	**327⇓**	*e*P	**P**	**23 44 51.1**	**-0.9**
CAST	**Castle Rocks**	**81.30**	**18**	*e*P	**P**	**23 44 50.3**	**-1.6**
	comp=Z,37nm,1.0s						
DIV	**Divide**	**81.85**	**22**	*e*P	**P**	**23 44 55.3**	**+0.4**
	comp=Z,44nm,1.4s						
RPN	**Rapa Nui**	**81.88**	**116**	PFAKE		23 45 10.0	+14
RPN				LR	LR		
	comp=Z,1µm,20.0s						
TRF	**Thorofare Moun**	**81.88**	**19**	*e*P	**P**	**23 44 53.9**	**-1.3**
	comp=Z,80nm,1.7s						
KLU	**Klutina**	**82.03**	**22**	*e*P	**P**	**23 44 56.3**	**+0.4**
	comp=Z,29nm,1.2s						
RDOG	**Red Dog Mine**	**82.22**	**12**	*e*P	**P**	**23 44 56.6**	**-0.1**
	comp=Z,34nm,0.9s						
RND	**Reindeer**	**82.31**	**19**	*e*P	**P**	**23 44 56.7**	**-0.6**
	comp=Z,54nm,1.4s						
RND	**Reindeer**	**82.31**	**19**	*e*P	**P**	**23 44 56.7**	**-0.6**
RND				pmax	pmax		
	comp=Z,54nm,1.4s						
MCK	**McKinley**	**82.51**	**19**	*e*P	**P**	**23 44 57.8**	**-0.5**
	comp=Z,87nm,1.5s						
MCK	**McKinley**	**82.51**	**19**	*e*P	**P**	**23 44 57.8**	**-0.5**
MCK				pmax	pmax		
	comp=Z,87nm,1.5s						
IM3	**Indian Mountai**	**82.72**	**16**	*e*P	**P**	**23 44 57.2**	**-2.1**
MLY	**Manley**	**82.87**	**18**	*e*P	**P**	**23 44 59.3**	**-0.9**
	comp=Z,99nm,2.0s						
WRH	**Wood River Hil**	**83.29**	**19**	*e*P	**P**	**23 45 02.0**	**-0.2**
	comp=Z,33nm,1.2s						
MDM	**Murphy Dome**	**83.58**	**18**	*e*P	**P**	**23 45 02.2**	**-1.7**
	comp=Z,62nm,1.4s						
HDA	**Harding Lake**	**83.61**	**19**	*e*P	**P**	**23 45 02.9**	**-1.1**
	comp=Z,56nm,1.0s						
COLA	**College**	**83.64**	**19**	*e*P	**P**	**23 45 03.5**	**-0.5**
	comp=Z,43nm,1.1s						
COLA				LR	LR		
	comp=Z,2µm,19.0s						
COLA	**College**	**83.64**	**19⇑**	*i*P	**P**	**23 45 03.2**	**-0.8**
RIDG	**Independ'e Rid**	**83.87**	**20**	*e*P	**P**	**23 45 05.2**	**-0.2**
	comp=Z,57nm,1.0s						
IL1	**Eielson Array**	**83.88**	**19**	*e*P	**P**	**23 45 03.7**	**-1.6**
ILAR	**Eielson Array**	**83.88**	**19**	P	**P**	**23 45 02.8**	**-2.5**
	comp=Z,6.9nm,0.8s,baz=232,slow=5.7,SNR=51						
ILAR				LR	LR	00 16 45.8	
	comp=Z,899nm,21.4s,baz=262,slow=32						
ILB	**Eielson Array**	**83.88**	**19**	*e*P	**P**	**23 45 04.2**	**-1.1**
SAO	**San Andreas Ge**	**84.16**	**51**	*e*P	**P**	**23 45 07.6**	**+0.2**
	comp=Z,7.1nm,0.9s						
SAO	**San Andreas Ge**	**84.16**	**51**	*e*P	**P**	**23 45 07.6**	**+0.2**
SAO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAMN	**Ramite**	**84.18**	**299**	*e*P	**P**	**23 45 06.5**	**-1.5**
KNGR	**Kungurtug, Tuv**	**84.20**	**324⇓**	*e*P	**P**	**23 45 06.1**	**-1.3**
MAW	**Mawson**	**84.28**	**202**	LR	LR	00 18 55.3	
	comp=Z,565nm,20.9s,baz=91,slow=33						
SCRK	**Sand Creek**	**84.31**	**20**	*e*P	**P**	**23 45 06.6**	**-1.1**
	comp=Z,28nm,1.0s						
YBH	**Yreka Blue Hor**	**84.84**	**46**	LR	LR	00 14 11.2	
	comp=Z,4µm,21.9s,baz=176,slow=30						
HUMO	**Hull Mountain**	**84.96**	**45**	*e*P	**P**	**23 45 10.8**	**-0.6**
WRAK	**Wrangell Islan**	**84.96**	**30**	PFAKE		23 45 20.0	+9.1
WRAK				LR	LR		
	comp=Z,3µm,19.0s						
GUN	**Gumba**	**85.05**	**300**	*e*P	**P**	**23 45 11.1**	**-1.4**
	comp=Z,25nm,1.0s						
AFDM	**Forest Hills D**	**85.20**	**49**	*e*P	**P**	**23 45 12.3**	**-0.3**
	comp=Z,14nm,1.2s						
BBB	**Bella Bella**	**85.30**	**35**	LR	LR	00 19 56.5	
	comp=Z,1µm,18.1s,baz=167,slow=33						
PKI	**Pulchoki**	**85.36**	**299**	*e*P	**P**	**23 45 12.4**	**-1.7**
PKIN	**Phulchoki**	**85.37**	**299**	*e*P	**P**	**23 45 12.1**	**-2.0**
DMN	**Daman**	**85.63**	**299**	*e*P	**P**	**23 45 13.8**	**-1.5**
	comp=Z,121nm,1.4s						
TIXI	**Tiksi**	**85.74**	**349**	*e*P	**P**	**23 45 13.0**	**-1.6**
	comp=Z,34nm,1.3s						
TIXI				LR	LR		
	comp=Z,708nm,19.0s						
TIXI	**Tiksi**	**85.74**	**349⇓**	*e*P	**P**	**23 45 12.9**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,20nm,1.7s						
TIXI	**Tiksi**	**85.74**	**349**	P	**P**	**23 45 12.7**	**-1.8**
	comp=Z,1.8nm,0.4s,baz=124,slow=6.9,SNR=11						
TOLK	**Toolik Lake Re**	**85.77**	**15**	*e*P	**P**	**23 45 14.9**	**0.0**
	comp=Z,68nm,1.6s						
EGAK	**Eagle**	**85.78**	**20**	PFAKE		23 45 30.0	+15
EGAK				LR	LR		
	comp=Z,601nm,19.0s						
DAWY	**Dawson**	**85.98**	**22**	*e*P	**P**	**23 45 15.9**	**-0.1**
	comp=Z,85nm,1.7s						
NLWA	**Neilton Lookou**	**86.00**	**40**	PFAKE		23 45 30.0	+14
NLWA				LR	LR		
	comp=Z,7µm,21.0s						
WAKR	**Walker**	**86.21**	**50**	*e*P	**P**	**23 45 17.7**	**-0.2**
	comp=Z,36nm,1.5s						
MDPB	**Devils Postpil**	**86.23**	**51**	*e*P	**P**	**23 45 18.4**	**+0.3**
	comp=Z,14nm,1.2s						
MOD	**Modoc Plateau**	**86.60**	**46**	*e*P	**P**	**23 45 20.0**	**+0.3**
	comp=Z,18nm,1.6s						
PINE	**Pine Mountain**	**86.74**	**44**	*e*P	**P**	**23 45 20.4**	**+0.1**
	comp=Z,28nm,1.5s						
KOLN	**Koldanda**	**86.96**	**299**	*e*P	**P**	**23 45 20.2**	**-1.6**
	comp=Z,11nm,0.9s						
DANN	**Dangsing**	**86.97**	**299**	*e*P	**P**	**23 45 20.4**	**-1.5**
DAC	**Darwin (Calif)**	**86.99**	**52**	*e*P	**P**	**23 45 21.2**	**-0.6**
DAC	**Darwin (Calif)**	**86.99**	**52**	*e*P	**P**	**23 45 21.2**	**-0.6**
DLBC	**Dease Lake**	**87.00**	**29**	LR	LR	00 22 46.3	
	comp=Z,2µm,18.1s,baz=286,slow=35						
NV01	**Mina Array Sit**	**87.04**	**50**	*e*P	**P**	**23 45 21.8**	**-0.2**
NVAR	**Mina Array Bea**	**87.04**	**50**	P	**P**	**23 45 22.7**	**+0.7**
	comp=Z,2.5nm,1.0s,baz=238,slow=8.3,SNR=9.4						
NVAR				LR	LR	00 15 35.1	
	comp=Z,3µm,21.5s,baz=1.0,slow=30						
NV11	**Mina Array Sit**	**87.15**	**50**	*e*P	**P**	**23 45 22.5**	**0.0**
	comp=Z,2.2nm,1.4s						
PFO	**Pinyon Flats O**	**87.18**	**55**	PFAKE		23 45 30.0	+7.3
PFO				LR	LR		
	comp=Z,2µm,19.0s						
PFO	**Pinyon Flats O**	**87.18**	**55**	LR	LR	00 16 40.0	
	comp=Z,1µm,18.9s,baz=349,slow=30						
PYUN	**Piuthan**	**87.57**	**299**	*e*P	**P**	**23 45 22.7**	**-2.1**
	comp=Z,20nm,1.0s						
WVOR	**Wild Horse Val**	**87.94**	**46**	*e*P	**P**	**23 45 24.4**	**-1.6**
	comp=Z,14nm,1.5s						
WVOR				LR	LR		
	comp=Z,3µm,19.0s						
WVOR	**Wild Horse Val**	**87.94**	**46**	*e*P	**P**	**23 45 24.5**	**-1.6**
WVOR				pmax	pmax		
	comp=Z,14nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,3µm,19.0s						
WMQ	**Urumqi**	**88.04**	**315**	P	**P**	**23 45 27.0**	**+0.5**
WMQ				pP	pwP	23 45 32.9	-2.6
WMQ				PP	**PP**	**23 48 49.4**	**-3.8**
WMQ				SKS	**SKSac**	**23 55 53.8**	**-1.4**
WMQ				S	**S**	**23 56 12.1**	**+1.7**
WMQ				SS	**SS**	**00 02 01.0**	**+2.3**
WMQ				pmax	pmax		
	comp=Z,19nm,1.9s						
WMQ				LR	LR		
	comp=Z,2µm,18.7s						
WMQ				LR	LR		
	comp=Z,2µm,17.1s						
WMQ				LR	LR		
	comp=Z,1µm,18.7s						
EPYK	**Eagle Plains**	**88.21**	**20**	*e*P	**P**	**23 45 26.8**	**+0.1**
	comp=Z,74nm,1.4s						
HAWA	**Hanford**	**88.49**	**42**	*e*P	**P**	**23 45 27.5**	**-0.9**
	comp=Z,2.0nm,0.4s						
HAWA				LR	LR		
	comp=Z,2µm,22.0s						
G08A	**Pilot Rock**	**88.54**	**43**	*e*P	**P**	**23 45 29.1**	**+0.2**
	comp=Z,49nm,1.9s						
SHPR	**Sheep Range**	**88.95**	**53**	*e*P	**P**	**23 45 31.3**	**+0.3**
	comp=Z,38nm,1.8s						
R11A	**Troy Canyon, C**	**89.08**	**51**	*e*P	**P**	**23 45 31.6**	**-0.1**
	comp=Z,15nm,1.4s						
W13A	**Hualapai Mount**	**89.61**	**54**	*e*P	**P**	**23 45 33.6**	**-0.7**
	comp=Z,33nm,1.8s						
DGZ	**Jazzator, Alta**	**89.93**	**321⇓**	*i*P	**P**	**23 45 33.7**	**-1.6**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LPIG	**La Paz**	**90.25**	**66**	LR	LR	00 19 09.0	
	comp=Z,1µm,18.2s,baz=320,slow=31						
INK	**Inuvik**	**90.27**	**19**	*e*P	**P**	**23 45 36.1**	**-0.2**
	comp=Z,36nm,1.6s						
INK	**Inuvik**	**90.27**	**19**	P	**P**	**23 45 35.7**	**-0.5**
	comp=Z,2.5nm,1.1s,baz=218,slow=4.5,SNR=4.6						
DGAR	**Diego Garcia**	**90.42**	**262**	PFAKE		23 45 50.0	+12
DGAR				LR	LR		
	comp=Z,797nm,19.0s						
PSUT	**Pine Spring**	**90.44**	**51**	*e*P	**P**	**23 45 38.0**	**-0.1**
CCUT	**Cedar City**	**90.59**	**52**	*e*P	**P**	**23 45 38.7**	**-0.2**
	comp=Z,12nm,1.3s						
NEW	**Newport**	**90.59**	**41**	PFAKE		23 45 50.0	+12
NEW				LR	LR		
	comp=Z,2µm,19.0s						
NEW	**Newport**	**90.59**	**41**	LR	LR	00 15 55.1	
	comp=Z,2µm,21.7s,baz=180,slow=29						
SZCU	**Shurtz Canyon**	**90.81**	**52**	*e*P	**P**	**23 45 39.7**	**-0.1**
	comp=Z,19nm,1.4s						
KNB	**Kanab**	**90.89**	**53**	*e*P	**P**	**23 45 40.0**	**-0.2**
	comp=Z,22nm,1.3s						
KNB	**Kanab**	**90.89**	**53**	*e*P	**P**	**23 45 40.0**	**-0.2**
KNB				pmax	pmax		
	comp=Z,22nm,1.3s						
U15A	**North Rim**	**91.18**	**53**	*e*P	**P**	**23 45 40.5**	**-1.1**
	comp=Z,10nm,1.0s						
HLID	**Hailey**	**91.22**	**46**	*e*P	**P**	**23 45 41.5**	**0.0**
	comp=Z,10.0nm,1.2s						
HLID				LR	LR		
	comp=Z,9µm,21.0s						
X16A	**Lo Mia Camp, P**	**91.42**	**55**	*e*P	**P**	**23 45 42.5**	**-0.2**
	comp=Z,8.2nm,1.1s						
TUC	**Tucson**	**91.52**	**58**	PFAKE		23 45 50.0	+6.9
TUC				LR	LR		
	comp=Z,3µm,19.0s						
DUG	**Dugway, Tooele**	**91.61**	**49**	*e*P	**P**	**23 45 42.6**	**-0.7**
DUG				LR	LR		
	comp=Z,3µm,20.0s						
DUG	**Dugway, Tooele**	**91.61**	**49**	*e*P	**P**	**23 45 42.6**	**-0.7**
DUG				MLR	MLR		
	comp=Z,3µm,20.0s						
BGU	**Big Grassy Mou**	**91.61**	**49**	*e*P	**P**	**23 45 43.4**	**0.0**
	comp=Z,26nm,1.7s						
MTPU	**Mount Pierson**	**91.61**	**52**	*e*P	**P**	**23 45 43.6**	**-0.1**
	comp=Z,34nm,1.8s						
WUAZ	**Wupatki**	**91.71**	**54**	*e*P	**P**	**23 45 42.8**	**-1.2**
	comp=Z,10nm,1.1s						
WUAZ				LR	LR		
	comp=Z,5µm,21.0s						
HVU	**Hansel Valley**	**91.99**	**48**	*e*P	**P**	**23 45 45.0**	**-0.1**
	comp=Z,29nm,1.5s						
NLU	**North Lily Min**	**92.11**	**50**	*e*P	**P**	**23 45 45.5**	**-0.3**
	comp=Z,28nm,1.9s						
MK01	**Makanchi Array**	**92.48**	**317**	*e*P	**P**	**23 45 44.6**	**-2.5**
MK31	**Makanchi Array**	**92.49**	**317**	*e*P	**P**	**23 45 45.1**	**-2.1**
MKAR	**Makanchi Array**	**92.49**	**317**	*e*P	**P**	**23 45 45.1**	**-2.1**
	comp=Z,65nm,1.2s						
MKAR	**Makanchi Array**	**92.49**	**317**	P	**P**	**23 45 45.1**	**-2.1**
	comp=Z,5.8nm,0.8s,baz=99,slow=5.6,SNR=44						
MKAR				LR	LR	00 26 18.6	
	comp=Z,567nm,22.0s,baz=95,slow=35						
ZAA0	**Zalesovo Array**	**92.66**	**324**	*e*P	**P**	**23 45 45.3**	**-2.4**
	comp=Z,14nm,1.3s						
ZALV	**Zalesovo Beam**	**92.66**	**324**	*e*P	**P**	**23 45 44.6**	**-3.1**
ZALV	**Zalesovo Beam**	**92.66**	**324**	P	**P**	**23 45 45.1**	**-2.6**
	comp=Z,3.4nm,0.9s,baz=107,slow=4.3,SNR=11						
MAKZ	**Makanchi**	**92.71**	**317**	*e*P	**P**	**23 45 46.6**	**-1.5**
	comp=Z,20nm,1.2s						
MAKZ	**Makanchi**	**92.71**	**317**	*e*P	**P**	**23 45 46.6**	**-1.5**
MAKZ				pmax	pmax		
	comp=Z,20nm,1.2s						
AHID	**Auburn Hatcher**	**93.41**	**47**	*e*P	**P**	**23 45 51.2**	**-0.5**
	comp=Z,4.3nm,0.6s						
AHID				LR	LR		
	comp=Z,12µm,22.0s						
BOZ	**Bozeman (W)**	**93.61**	**44**	PFAKE		23 46 00.0	+7.5
BOZ				LR	LR		
	comp=Z,5µm,19.0s						
NVS	**Novosibirsk**	**93.78**	**325**	*e*P	**P**	**23 45 52.7**	**-0.1**
NVS				*e*		23 56 17.9	
NVS				pmax	pmax		
	comp=Z,50nm,2.3s						
NVS				pmax	pmax		
	comp=E,17nm,1.8s						
LKWY	**Lake**	**94.26**	**46**	PFAKE		23 46 10.0	+14
LKWY				LR	LR		
	comp=Z,6µm,19.0s						
MVCO	**Mesa Verde**	**94.31**	**53**	PFAKE		23 46 10.0	+14
MVCO				LR	LR		
	comp=Z,4µm,21.0s						
BW06	**Boulder Array**	**94.53**	**47**	PFAKE		23 46 10.0	+13
BW06				LR	LR		
	comp=Z,2µm,19.0s						
RLMT	**Red Lodge**	**95.16**	**45**	PFAKE		23 46 10.0	+10
RLMT				LR	LR		
	comp=Z,3µm,21.0s						
EGMT	**Eagleton**	**95.34**	**42**	PFAKE		23 46 10.0	+10
EGMT				LR	LR		
	comp=Z,2µm,20.0s						
YKA	**Yellowknife Ar**	**95.54**	**27**	P	**P**	**23 45 59.7**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=256,slow=4.5,SNR=4.5						
YKA				LR	LR	00 21 56.0	
	comp=Z,136nm,21.7s,baz=195,slow=31						
NRIK	**Noril'sk**	**95.55**	**340**	P	**P**	**23 45 59.0**	**-1.6**
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NRIK	**Noril'sk**	**95.55**	**340**	P	**P**	**23 45 59.0**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=123,slow=2.5,SNR=5.2						
NRIK				LR	LR	00 32 51.3	
	comp=Z,653nm,18.0s,baz=96,slow=38						
ANMO	**Albuquerque**	**95.56**	**56**	*e*P	**P**	**23 46 01.4**	**-0.4**
ANMO				LR	LR		
	comp=Z,3µm,21.0s						
ANMO	**Albuquerque**	**95.56**	**56⇑**	*e*P	**P**	**23 46 02.1**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ANMO	**Albuquerque**	**95.56**	**56**	LR	LR	00 19 47.4	
	comp=Z,964nm,22.0s,baz=290,slow=30						
KSH	**Kashi**	**95.60**	**309**	P	**P**	**23 46 03.2**	**+1.5**
KSH				sP	pwP	23 46 10.0	-0.9
KSH				PP	**PP**	**23 49 56.2**	**+3.1**
KSH				SKS	**SKSac**	**23 56 36.6**	**-1.7**
KSH				S	**S**	**23 57 15.5**	**-3.6**
KSH				sS	sS	23 57 25.8	+3.9
KSH				SS	**SS**	**00 03 50.7**	**+2.7**
KSH				LR	LR		
	comp=Z,400nm,7.6s						
KSH				LR	LR		
	comp=Z,540nm,12.9s						
KSH				LR	LR		
	comp=Z,1µm,14.9s						
KURK	**Kurchatov**	**95.67**	**320**	*e*P	**P**	**23 46 00.3**	**-1.2**
KURK				LR	LR		
	comp=Z,2µm,19.0s						
KURK	**Kurchatov**	**95.67**	**320⇑**	*e*P	**P**	**23 46 00.4**	**-1.2**
KURK				pmax	pmax		
	comp=Z,11nm,2.5s						
MNTX	**Cornudas Mount**	**95.92**	**59**	PFAKE		23 46 10.0	+6.8
MNTX				LR	LR		
	comp=Z,7µm,22.0s						
PMSA	**Palmer Station**	**96.26**	**161**	PFAKE		23 46 20.0	+16
PMSA				LR	LR		
	comp=Z,747nm,19.0s						
SDCO	**Great Sand Dun**	**96.75**	**53**	PFAKE		23 46 20.0	+13
SDCO				LR	LR		
	comp=Z,3µm,20.0s						
NIL	**Nilore**	**96.85**	**303**	PFAKE		23 46 20.0	+13
NIL				LR	LR		
	comp=Z,225nm,21.0s						
ISCO	**Idaho Springs**	**96.97**	**51**	PFAKE		23 46 20.0	+12
ISCO				LR	LR		
	comp=Z,4µm,22.0s						
TXAR	**Lajitas Array**	**97.02**	**62**	LR	LR	00 21 08.0	
	comp=Z,1µm,21.0s,baz=0.0,slow=30						
SNAA	**Sanae**	**97.11**	**184**	P	**P**	**23 46 06.2**	**-1.8**
AAK	**Ala-Archa**	**97.19**	**312**	PFAKE		23 46 20.0	+11
AAK				LR	LR		
	comp=Z,742nm,20.0s						
LAO	**LASA Array**	**97.50**	**44**	PFAKE		23 46 20.0	+10
LAO				LR	LR		
	comp=Z,3µm,22.0s						
DGMT	**Dagmar**	**99.09**	**42**	PFAKE		23 46 30.0	+13
DGMT				LR	LR		
	comp=Z,2µm,22.0s						
OGNE	**Ogallala**	**99.83**	**50**	PFAKE		23 46 30.0	+9.3
OGNE				LR	LR		
	comp=Z,3µm,19.0s						
JCT	**Junction City**	**100.50**	**61**	PFAKE		23 46 30.0	+6.1
JCT				LR	LR		
	comp=Z,7µm,19.0s						
FFC	**Flin Flon**	**100.99**	**36**	PFAKE		23 46 40.0	+15
FFC				LR	LR		
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**101.08**	**322**	PFAKE		23 46 40.0	+14
BRVK				LR	LR		
	comp=Z,686nm,22.0s						
CBKS	**Cedar Bluff**	**101.38**	**52**	PFAKE		23 46 40.0	+12
CBKS				LR	LR		
	comp=Z,3µm,22.0s						
WMOK	**Wichita Mounta**	**101.79**	**57**	PFAKE		23 46 40.0	+11
WMOK				LR	LR		
	comp=Z,3µm,19.0s						
KVTX	**Kingsville**	**101.83**	**64**	PFAKE		23 46 40.0	+10
KVTX				LR	LR		
	comp=Z,3µm,19.0s						
KSU1	**Kansas State U**	**103.84**	**52**	PFAKE		23 46 50.0	+12
KSU1				LR	LR		
	comp=Z,2µm,19.0s						
ECSD	**EROS Data Cent**	**104.02**	**48**	PFAKE		23 46 50.0	+11
ECSD				LR	LR		
	comp=Z,3µm,20.0s						
AGMN	**Agassiz Nation**	**104.62**	**43**	PFAKE		23 46 50.0	+8.3
AGMN				LR	LR		
	comp=Z,702nm,19.0s						
PAYG	**Puerto Ayora**	**104.99**	**94**	PFAKE		23 51 10.0	+11
PAYG				LR	LR		
	comp=Z,1µm,19.0s						

NATX	**Nacogdoches**	**105.00**	**60**	PFAKE		23 51 10.0	+11
NATX				LR	LR		
	comp=Z,7µm,21.0s						
MIAR	**Mount Ida**	**106.06**	**57**	PFAKE		23 51 10.0	+9.4
MIAR				LR	LR		
	comp=Z,3µm,22.0s						
SCIA	**State Center**	**106.50**	**49**	PFAKE		23 51 10.0	+8.8
SCIA				LR	LR		
	comp=Z,3µm,22.0s						
EYMN	**Ely**	**107.56**	**43**	PFAKE		23 51 10.0	+7.0
EYMN				LR	LR		
	comp=Z,2µm,20.0s						
ARU	**Arti**	**107.76**	**326**	PFAKE		23 51 10.0	+6.9
ARU				LR	LR		
	comp=Z,508nm,19.0s						
JFWS	**Jewell Farm**	**108.67**	**48**	PFAKE		23 51 20.0	+15
JFWS				LR	LR		
	comp=Z,1µm,19.0s						
COWI	**Conover**	**109.28**	**45**	PFAKE		23 51 20.0	+14
COWI				LR	LR		
	comp=Z,2µm,21.0s						
HDIL	**Hopedale**	**109.48**	**51**	PFAKE		23 51 20.0	+13
HDIL				LR	LR		
	comp=Z,3µm,20.0s						
KBS	**Kingsbay**	**110.70**	**354**	PFAKE		23 51 20.0	+12
KBS				LR	LR		
	comp=Z,998nm,22.0s						
ABPO	**Ambohimpanom**	**111.22**	**245**	PFAKE		23 51 20.0	+9.1
ABPO				LR	LR		
	comp=Z,369nm,20.0s						
BRAL	**Brewton**	**111.48**	**61**	PFAKE		23 51 20.0	+9.2
BRAL				LR	LR		
	comp=Z,3µm,19.0s						
JTS	**JuntasAbangare**	**112.07**	**83**	PFAKE		23 51 20.0	+7.6
JTS				LR	LR		
	comp=Z,1µm,19.0s						
GLMI	**Grayling**	**112.57**	**46**	PFAKE		23 51 20.0	+7.5
GLMI				LR	LR		
	comp=Z,2µm,20.0s						
AAM	**Ann Arbor**	**113.57**	**49**	PFAKE		23 51 30.0	+16
AAM				LR	LR		
	comp=Z,4µm,22.0s						
LCO	**Las Campanas**	**113.71**	**128**	PFAKE		23 51 30.0	+14
LCO				LR	LR		
	comp=Z,875nm,20.0s						
ACSO	**Alum Creek Sta**	**114.31**	**51**	PFAKE		23 51 30.0	+14
ACSO				LR	LR		
	comp=Z,3µm,22.0s						
LVZ	**Lovozero**	**114.33**	**341**	PFAKE		23 51 30.0	+15
LVZ				LR	LR		
	comp=Z,439nm,22.0s						
GOGA	**Godfrey**	**114.46**	**58**	PFAKE		23 51 30.0	+14
GOGA				LR	LR		
	comp=Z,2µm,19.0s						
NNA	**Nana**	**115.13**	**109**	PFAKE		23 51 30.0	+12
NNA				LR	LR		
	comp=Z,459nm,21.0s						
KEV	**Kevo**	**115.35**	**345**	PFAKE		23 51 30.0	+13
KEV				LR	LR		
	comp=Z,1µm,22.0s						
ARCES	**ARCESS Array B**	**115.89**	**345**	PKP	**PKiKP**	**23 51 15.2**	**-2.9**
	comp=Z,1.4nm,0.8s,baz=80,slow=1.4,SNR=12						
BLA	**Blacksburg**	**116.64**	**54**	PFAKE		23 51 30.0	+9.4
BLA				LR	LR		
	comp=Z,2µm,21.0s						
OTAV	**Otavalo**	**116.76**	**95**	PFAKE		23 51 30.0	+7.9
OTAV				LR	LR		
	comp=Z,1µm,19.0s						
BCIP	**Isla Barro Col**	**116.92**	**85**	PFAKE		23 51 30.0	+8.3
BCIP				LR	LR		
	comp=Z,1µm,19.0s						
MAK	**Makhachkala**	**116.95**	**313**	*e*P	**Pdif**	**23 47 30.8**	**-5.9**
NHSC	**New Hope**	**117.23**	**58**	PFAKE		23 51 30.0	+8.2
NHSC				LR	LR		
	comp=Z,2µm,21.0s						
LVC	**Limon Verde**	**118.11**	**123**	PFAKE		23 51 40.0	+16
LVC				LR	LR		
	comp=Z,500nm,19.0s						
CBN	**Corbin Frederi**	**118.90**	**52**	PFAKE		23 51 40.0	+15
CBN				LR	LR		
	comp=Z,2µm,21.0s						
CNNC	**Cliffs of the**	**118.90**	**56**	PFAKE		23 51 40.0	+15
CNNC				LR	LR		
	comp=Z,2µm,19.0s						
BINY	**Binghamton**	**119.20**	**48**	PFAKE		23 51 40.0	+15
BINY				LR	LR		
	comp=Z,3µm,22.0s						
SFJD	**Kangerlussuaq**	**119.34**	**15**	PFAKE		23 51 40.0	+15
SFJD				LR	LR		
	comp=Z,877nm,21.0s						
GNI	**Garni**	**119.52**	**310**	PFAKE		23 51 40.0	+14
GNI				LR	LR		
	comp=Z,505nm,20.0s						
LONY	**Lake Ozonia**	**119.63**	**45**	PFAKE		23 51 40.0	+14
LONY				LR	LR		
	comp=Z,2µm,21.0s						
MTDJ	**Mount Denham**	**119.94**	**75**	PFAKE		23 51 40.0	+12
MTDJ				LR	LR		
	comp=Z,974nm,21.0s						
OBN	**Obninsk**	**119.99**	**328**	PFAKE		23 51 40.0	+14
OBN				LR	LR		
	comp=Z,380nm,21.0s						
OBN	**Obninsk**	**119.99**	**328**	⇑*i*PKIKP	**PKiKP**	**23 51 27.4**	**+0.9**
OBN				*e*		23 55 22.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,522nm,20.0s						
KIV	**Kislovodsk**	**120.16**	**315**	PFAKE		23 51 40.0	+13
KIV				LR	LR		
	comp=Z,627nm,20.0s						
KIV	**Kislovodsk**	**120.16**	**315**	*i* PKIKP	**PKiKP**	**23 51 30.9**	**+3.6**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,591nm,23.0s						
RAYN	**Ar Rayn**	**120.62**	**291**	PFAKE		23 51 40.0	+11
RAYN				LR	LR		
	comp=Z,703nm,22.0s						
PKME	**Peaks-Kenny Pk**	**123.03**	**43**	PFAKE		23 51 40.0	+7.2
PKME				LR	LR		
	comp=Z,3µm,21.0s						
SUR	**Sutherland**	**124.56**	**218**	PFAKE		23 51 50.0	+13
SUR				LR	LR		
	comp=Z,2µm,20.0s						
SDDR	**Presa de Saban**	**125.88**	**74**	PFAKE		23 51 50.0	+11
SDDR				LR	LR		
	comp=Z,2µm,19.0s						
SDV	**Santo Domingo**	**125.90**	**87**	PFAKE		23 51 50.0	+10
SDV				LR	LR		
	comp=Z,908nm,22.0s						
GRTK	**Grand Turk**	**125.98**	**71**	PFAKE		23 51 50.0	+11
GRTK				LR	LR		
	comp=Z,1µm,20.0s						
KMBO	**Kilima Mbogo**	**126.02**	**261**	PFAKE		23 51 50.0	+10
KMBO				LR	LR		
	comp=Z,1µm,21.0s						
KIEV	**Kiev**	**126.02**	**326**	*e*PKPdf	**PKPdf**	**23 51 37.2**	**-0.9**
KIEV				LR	LR		
	comp=Z,840nm,19.0s						
KIEV	**Kiev**	**126.02**	**326**	*e*PKIKP	**PKPdf**	**23 51 37.3**	**-0.9**
KIEV				MLR	MLR		
	comp=Z,840nm,19.0s						
NB2	**NORSAR Subarra**	**126.24**	**344**	PKPdf	**PKPdf**	**23 51 37.2**	**-1.1**
	comp=Z,5.3nm,1.2s,baz=28,slow=2.0						
NB2	**NORSAR Subarra**	**126.24**	**344**	PKPdf	**PKPdf**	**23 51 37.2**	**-1.1**
	baz=28,slow=2.0						
NOA	**NORSAR Array B**	**126.24**	**344**	PKP	**PKPdf**	**23 51 37.3**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=32,slow=2.0,SNR=2.7						
BRTR	**Keskin Array B**	**127.86**	**312**	PKP	**PKPdf**	**23 51 40.9**	**-1.4**
	comp=Z,0.9nm,1.0s,baz=10,slow=1.4,SNR=3.8						
KIS	**Kishinev**	**128.10**	**322**	*e*PP	PP	23 54 08.0	+23
KIS				*e*SKS	SKSdf	23 58 06.0	-48
ANTO	**Ankara**	**128.43**	**313**	PFAKE		23 51 50.0	+6.2
ANTO				LR	LR		
	comp=Z,453nm,19.0s						
LSZ	**Lusaka**	**129.33**	**240**	PFAKE		23 52 00.0	+14
LSZ				LR	LR		
	comp=Z,963nm,19.0s						
SJG	**San Juan**	**130.76**	**76**	PFAKE		23 52 00.0	+11
SJG				LR	LR		
	comp=Z,1µm,19.0s						
UZH	**Uzhgorod**	**130.90**	**327**	*e*PKIKP	**PKiKP**	**23 51 54.0**	**+5.6**
UZH				*e*		23 52 03.9	
OKC	**Ostrava-Krasne**	**132.22**	**331**	AMS	AMS	00 56 50.0	
	comp=Z,700nm,23.3s						
MBAR	**Mbarara**	**132.45**	**259**	PFAKE		23 52 00.0	+7.2
MBAR				LR	LR		
	comp=Z,1µm,22.0s						
DPC	**Dobruska-Polom**	**132.72**	**332**	AMS	AMS	00 55 40.0	
	comp=Z,900nm,21.0s						
UPC	**Upice**	**132.75**	**333**	AMS	AMS	01 02 20.0	
	comp=Z,900nm,18.5s						
PVCC	**Panska Ves**	**133.37**	**334**	AMS	AMS	00 59 10.0	
	comp=Z,700nm,18.2s						
CLL	**Collm**	**133.45**	**335**	*e*PKPdf	**PKPdf**	**23 51 50.0**	**-2.2**
CLL				*e*		23 52 03.0	
CLL				*e*		23 54 57.0	
CLL				*e*PKSdfmax		23 55 54.0	
CLL				*e*(PPS)		00 06 48.0	
CLL				*e*SS	SS	00 12 24.0	+20
CLL				*e*		00 16 18.0	
CLL				*e*SSS	SSS	00 17 00.0	
CLL				*e*SSSS		00 20 30.0	
CLL				Lm	MLR	00 58 00.0	
	comp=N,600nm,19.4s						
CLL				Lm	MLR	00 58 00.0	
	comp=E,400nm,18.9s						
CLL				Lm	MLR	00 58 00.0	
	comp=Z,700nm,19.5s						
CLL	**Collm**	**133.45**	**335**	*e*PKIKP	**PKPdf**	**23 51 50.0**	**-2.2**
CLL				*e*		23 52 03.0	
PRU	**Pruhonice**	**133.78**	**333**	AMS	AMS	01 01 40.0	
	comp=Z,900nm,19.9s						
TREC	**Trest**	**133.85**	**332**	AMS	AMS	00 57 00.0	
	comp=Z,900nm,23.9s						
NKC	**Novy Kostel**	**134.49**	**335**	AMS	AMS	00 59 40.0	
	comp=Z,2µm,17.0s						
ESK	**Eskdalemuir**	**134.66**	**350**	PFAKE		23 52 10.0	+14
ESK				LR	LR		
	comp=Z,1µm,22.0s						
KHC	**Kasperske Hory**	**134.83**	**333**	AMS	AMS	01 02 00.0	
	comp=Z,1µm,18.9s						
ANWB	**Willy Bob**	**134.93**	**76**	PFAKE		23 52 10.0	+13
ANWB				LR	LR		
	comp=Z,2µm,22.0s						
GERES	**GERESS Array B**	**134.99**	**333**	PKP	**PKPdf**	**23 51 55.2**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=114,slow=1.6,SNR=4.9						
GRGR	**Grenville**	**134.99**	**84**	PFAKE		23 52 10.0	+12
GRGR				LR	LR		
	comp=Z,766nm,20.0s						
TSUM	**Tsumeb**	**135.58**	**228**	PFAKE		23 52 10.0	+11
TSUM				LR	LR		
	comp=Z,3µm,22.0s						
BBGH	**Gun Hill**	**137.08**	**82**	PFAKE		23 52 10.0	+8.1
BBGH				LR	LR		
	comp=Z,2µm,20.0s						
KEST	**Kesra**	**146.48**	**321**	*e*PKPdf	**PKPbc**	**23 52 17.7**	**-0.1**
KEST	**Kesra**	**146.48**	**321**	PKPbc	**PKPbc**	**23 52 17.1**	**-0.7**
	comp=Z,23nm,1.1s,baz=303,slow=6.9,SNR=7.6						
POLO	**Lamas de Olo**	**148.91**	**348**	*e*PKPab	**PKPab**	**23 52 32.7**	**+4.6**
PVRL	**Vila Real**	**148.99**	**348**	*e*PKPab	**PKPab**	**23 52 35.0**	**+6.7**
ES19	**SONSECA Array**	**149.51**	**342**	*e*PKPbc	**PKPbc**	**23 52 25.3**	**-0.4**
ESDC	**Sonseca Array**	**149.56**	**342**	PKPbc	**PKPbc**	**23 52 24.9**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=37,slow=2.7,SNR=8.3						
PAB	**San Pablo**	**149.79**	**342**	PFAKE		23 52 30.0	-1.7
PAB				LR	LR		
	comp=Z,835nm,20.0s						
PMRV	**Marv??o**	**150.69**	**347**	*e*PKPab	**PKPab**	**23 52 38.0**	**+2.7**
SHEL	**Horse Pasture**	**151.51**	**200**	PFAKE		23 52 40.0	+0.7
SHEL				LR	LR		
	comp=Z,489nm,21.0s						
MESJ	**Messejana**	**152.40**	**347**	*e*PKPab	**PKPab**	**23 52 41.5**	**-0.9**
TOA0	**Torodi Ar. Sit**	**162.86**	**279**	*e*PKPdf	**PKPdf**	**23 52 37.8**	**-1.5**
TORD	**Torodi Ar. Bea**	**162.86**	**279**	PKP	**PKPdf**	**23 52 37.0**	**-2.2**
	comp=Z,1.4nm,1.0s,baz=7.6,slow=3.1,SNR=5.7						
SACV	**Santiago Islan**	**171.31**	**62**	PFAKE		23 53 00.0	+15
SACV				LR	LR		
	comp=Z,835nm,21.0s						

MEX 12 23:40:13.7±0.5**, 18°.15N**×**99°.65W, h5^{km}, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.23**	**172**	*e*P	Pg	23 40 17.4	-0.7
MEIG				*e*S	Sg	23 40 21.3	+0.1
PLIG	**Platanillo**	**0.28**	**31**	*e*P	Pg	23 40 18.5	-0.7
PLIG				*e*S	Sg	23 40 23.0	+0.1
ARIG	**Puente Sto Nin**	**0.67**	**281**	*e*P	Pg	23 40 25.9	-0.7
ARIG				*e*S	Sg	23 40 34.9	-0.5
YAIG	**Yautepec**	**0.90**	**38**	*e*P	Pn	23 40 32.9	-0.3
CAIG	**El Cayaco**	**1.25**	**208**	*e*P	Pg	23 40 34.6	-3.0
CAIG				*e*S	Sg	23 40 51.2	-2.5

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*IDC **12** 23:47:18.5±1.4, 10°.82S×164°.39E, h0^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.9/37, mbtmp4.0/9, ML3.9/3, Error ellipse: s-maj=38.3km s-min=24.8km az=124.0*

*ISCJB **12** 23:47:21.2±0.9, 10°.9S±0°.1×164°.3E±0°.1, h29^{km}, mb3.8/6, Error ellipse: s-maj=19.5km s-min=15.6km az=162.5*

ISC 12 23:47:23.6±1.0**, 10°.8S**±0°.1×**164°.2E**±0°.1**, h29^{km}, n15, σ1^{s}.74**/10**, mb3.9**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.40**	**288**	Pn	**Pn**	**23 48 30.9**	**+2.4**
	10nm,0.3s,baz=144,slow=12,SNR=2.4						
HNR				Sn	**Sb**	**23 49 30.2**	**-2.6**
	26nm,0.3s,baz=187,slow=17,SNR=3.2						
DZM	**Mont Dzumac**	**11.39**	**169**	Pn	**Pn**	**23 50 04.1**	**-0.4**
	0.5nm,0.3s,baz=156,slow=20,SNR=4.2						
CTA	**Charters Tower**	**19.56**	**240**	P	**Pn**	**23 51 51.6**	**+0.8**
	0.2nm,0.3s,baz=51,slow=12,SNR=2.7						
H11S2	**WAKE ISLAND Hy**	**29.24**	**5**	T	T	00 23 57.4	
	baz=184						
H11S3	**WAKE ISLAND Hy**	**29.24**	**5**	T	T	00 24 00.2	
	baz=184						
H11S1	**WAKE ISLAND Hy**	**29.25**	**5**	T	T	00 23 56.7	
	baz=184						
WRA	**Warramunga Arr**	**30.12**	**249**	P	**P**	**23 53 31.7**	**+0.5**
	1.7nm,0.9s,baz=74,slow=9.1,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**30.46**	**5**	T	T	00 25 27.3	
	baz=185						
H11N3	**WAKE ISLAND Hy**	**30.47**	**5**	T	T	00 25 25.2	
	baz=185						
H11N2	**WAKE ISLAND Hy**	**30.48**	**5**	T	T	00 25 25.9	
	baz=185						
ASAR	**Alice Springs**	**31.53**	**242**	P	**P**	**23 53 42.8**	**-0.8**
	0.5nm,0.7s,baz=74,slow=9.8,SNR=4.8						
SONM	**Songino Array**	**77.59**	**324**	P	**P**	**23 59 18.8**	**+1.6**
	0.2nm,0.5s,baz=140,slow=7.0,SNR=2.8						
ILAR	**Eielson Array**	**83.80**	**19**	P	**P**	**23 59 49.1**	**-0.8**
	1.6nm,1.0s,baz=221,slow=5.9,SNR=7.7						
MKAR	**Makanchi Array**	**92.32**	**317**	P	**P**	**00 00 29.6**	**-1.7**
	0.6nm,0.8s,baz=95,slow=5.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**92.48**	**324**	P	**P**	**00 00 31.0**	**-0.8**
	0.2nm,0.4s,baz=99,slow=6.7,SNR=2.1						

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*DJA **12** 23:54:19.0±0.5, 8°S±8°×12°0E±°, h178^{km}±6^{km}, M3.7/8, MLv3.7/8*

*IDC **12** 23:54:20.8±2.3, 7°.81S×120°.79E, h214^{km}±18^{km}, mb3.2/3, mb1 3.3/5, mb1mx3.0/39, mbtmp3.7/5, Error ellipse: s-maj=94.4km s-min=15.2km az=51.0*

ISC 12 23:54:17.4±1.4**, 8°.4S**±0°.1×**120°.01E**±0°.05**, h150^{km}, n13, σ4^{s}.14**/16**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.29**	**167**	P	Pn	23 54 40.2	-4.7
EDFI	**Ende, Flores**	**1.70**	**102**	P	**Pn**	**23 54 53.4**	**+4.1**
BASI	**Baing, Sumba**	**1.89**	**163**	P	**Pn**	**23 54 55.2**	**+3.9**
BASI				S	**Sn**	**23 55 23.1**	**+5.7**
MMRI	**Maumere**	**2.22**	**96**	P	**Pn**	**23 54 59.3**	**+4.1**
PLAI	**Plampang**	**2.25**	**259**	P	**Pn**	**23 54 58.2**	**+2.7**
PLAI				S	**Sn**	**23 55 28.2**	**+3.5**
BATI	**Baumata**	**4.03**	**117**	P	**Pn**	**23 55 21.8**	**+3.7**
BATI	**Baumata**	**4.03**	**117**	P	**Pn**	**23 55 21.2**	**+3.1**
	5.6nm,0.3s,baz=113,slow=3.9,SNR=4.6						
BATI				S	**Sn**	**23 56 05.2**	**-0.1**
	10nm,0.3s,baz=333,slow=2.8,SNR=5.0						
SOEI	**Soe**	**4.42**	**108**	P	**Pn**	**23 55 26.1**	**+2.8**
SRBI	**Singaraja**	**4.76**	**273**	P	**Pn**	**23 55 25.3**	**-2.4**
WRA	**Warramunga Arr**	**18.00**	**131**	P	**P**	**23 58 15.0**	**-1.8**
	0.5nm,0.3s,baz=314,slow=9.7,SNR=36						
WRA				S	**S**	**00 01 28.8**	**-6.8**
	0.1nm,0.3s,baz=310,slow=22,SNR=4.0						
ASAR	**Alice Springs**	**20.19**	**140**	P	**P**	**23 58 38.9**	**-1.7**
	1.7nm,0.4s,baz=314,slow=8.7,SNR=21						
ASAR				S	**S**	**00 02 13.8**	**-5.2**
	0.4nm,0.6s,baz=324,slow=25,SNR=3.9						
STKA	**Stephens Creek**	**30.79**	**142**	P	**P**	**00 00 16.9**	**-2.1**
	1.8nm,0.5s,baz=331,slow=10,SNR=5.9						
MKAR	**Makanchi Array**	**64.39**	**332**	P	P	00 04 32.4	-5.0
	0.2nm,0.6s,baz=136,slow=5.4,SNR=2.9						

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*IDC **12** 23:56:59.3±1.5, 10°.86S×164°.25E, h0^{km}, mb3.7/6, mb1 4.0/9, mb1mx3.8/46, mbtmp3.8/9, ML3.9/3, Error ellipse: s-maj=37.9km s-min=27.4km az=123.0*

*ISCJB **12** 23:57:02.2±1.0, 11°.0S±0°.1×164°.1E±0°.1, h29^{km}, mb3.6/6, Error ellipse: s-maj=20.8km s-min=15.9km az=156.9*

ISC 12 23:57:04.0±1.0**, 10°.9S**±0°.1×**164°.2E**±0°.1**, h29^{km}, n9, σ1^{s}.13**/10**, mb3.7**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.39**	**289**	Pn	**Pn**	**23 58 07.9**	**-0.8**
	9.1nm,0.3s,baz=157,slow=6.7,SNR=2.4						
HNR				Sn	**Sb**	**23 59 13.1**	**+0.2**
	19nm,0.3s,baz=328,slow=19,SNR=3.7						
DZM	**Mont Dzumac**	**11.33**	**169**	Pn	**Pn**	**23 59 44.4**	**+0.3**
	0.7nm,0.3s,baz=128,slow=21,SNR=12						
CTA	**Charters Tower**	**19.50**	**240**	P	**Pn**	**00 01 30.5**	**+0.1**
	0.2nm,0.3s,baz=67,slow=14,SNR=2.5						
WRA	**Warramunga Arr**	**30.07**	**249**	P	**P**	**00 03 10.9**	**-0.2**
	0.3nm,0.6s,baz=79,slow=9.1,SNR=2.7						
ASAR	**Alice Springs**	**31.47**	**242**	P	**P**	**00 03 22.0**	**-1.4**
	0.4nm,0.6s,baz=73,slow=9.8,SNR=3.2						
CMAR	**Chiang Mai Arr**	**70.62**	**294**	P	**P**	**00 08 18.9**	**+1.6**
	0.4nm,0.4s,baz=106,slow=4.9,SNR=2.8						
SONM	**Songino Array**	**77.63**	**324**	P	**P**	**00 08 59.1**	**+1.3**
	0.2nm,0.6s,baz=131,slow=5.9,SNR=2.4						
ILAR	**Eielson Array**	**83.87**	**19**	P	**P**	**00 09 29.2**	**-1.4**
	0.8nm,0.9s,baz=226,slow=5.5,SNR=7.4						
MKAR	**Makanchi Array**	**92.34**	**317**	P	**P**	**00 10 11.6**	**-0.2**
	0.6nm,0.9s,baz=114,slow=6.2,SNR=4.7						

IDC 12 23:59:04.3±1.7**, 10°.79S**×**164°.49E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/46**, mbtmp3.7**/5**, ML3.9**/1**, Error ellipse: s-maj=49.5km s-min=30.8km az=122.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.38**	**171**	Pn	Pn	00 01 48.5	+0.3
	0.8nm,0.3s,baz=47,slow=19,SNR=5.1						
WRA	**Warramunga Arr**	**30.41**	**249**	P	P	00 05 17.1	-1.5
	0.6nm,0.8s,baz=79,slow=8.7,SNR=3.8						
ASAR	**Alice Springs**	**31.81**	**242**	P	P	00 05 31.9	+0.9
	0.3nm,0.6s,baz=79,slow=9.7,SNR=2.4						
ILAR	**Eielson Array**	**83.67**	**19**	P	P	00 11 33.9	-0.6
	0.6nm,0.9s,baz=237,slow=5.2,SNR=4.5						
MKAR	**Makanchi Array**	**92.49**	**317**	P	P	00 12 18.4	+1.0
	0.3nm,0.7s,baz=92,slow=7.4,SNR=4.0						

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*SOME **13** 00:04:22.7, 42°.58N×79°.62E, h10^{km}*

*KRNET **13** 00:04:22.6±0.1, 42°.57N×79°.68E, h10^{km}, mb2.7*

NNC 13 00:04:22.8±1.1**, 42°.59N**×**79°.64E, h0^{km}, mb3.0, mpv2.8, 10C-12D, Error ellipse: s-maj=6.9km s-min=3.9km az=136.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.72**	**321**	*e*P	Pg	00 04 36.7	+0.1
	baz=20						
UZB				*e*S	Sg	00 04 46.9	+1.0
	baz=20						
UZB	**Uzynbulak**	**0.72**	**321**	*e*P	Pg	00 04 36.7	+0.1
	1.3nm,0.1s						
UZB				*e*S	Sg	00 04 46.9	+1.0
	15nm,0.2s						
PDGK	**Podgornoye**	**0.74**	**352**	⇑P	Pg	00 04 37.1	-0.1
	1.0nm,0.4s						
PDGK				⇑S	Sg	00 04 47.7	+0.9
	2.1nm,0.3s						
PDGK	**Podgornoye**	**0.74**	**352**	⇓*i*P	Pg	00 04 37.1	0.0
	baz=49						
PDGK				⇓*i*S	Sg	00 04 47.9	+1.1
	baz=49						
PRZ	**Przheval'sk**	**0.92**	**264**	⇓*i*P	Pg	00 04 40.8	+0.3
	baz=65						
PRZ				⇓*i*S	Sg	00 04 53.3	+0.8
	baz=65						
KTMS	**Ketmen**	**1.00**	**31**	P	Pg	00 04 41.8	-0.3
	1.9nm,0.1s						
KTMS				S	Sg	00 04 55.0	0.0
	4.0nm,0.2s						
KTMS	**Ketmen**	**1.00**	**31**	*e*P	Pg	00 04 41.8	-0.2
	baz=28						
KTMS				*e*S	Sg	00 04 55.4	+0.4
	baz=28						
KTMS	**Ketmen**	**1.00**	**31**	*e*P	Pg	00 04 41.8	-0.3
	1.9nm,0.1s						
KTMS				*e*S	Sg	00 04 55.4	+0.3
	4.0nm,0.2s						
SATY	**Saty**	**1.02**	**298**	P	Pg	00 04 42.5	+0.1
	2.5nm,0.1s						
SATY				S	Sg	00 04 56.1	+0.5
	17nm,0.1s						
SATY	**Saty**	**1.02**	**298**	*e*P	Pg	00 04 42.0	-0.4
	1.5nm,0.1s						
SATY				*e*S	Sg	00 04 56.1	+0.5
	10nm,0.1s						
KURS	**Kuram**	**1.40**	**310**	P	Pg	00 04 49.4	-0.3
	1.1nm,0.6s						
KURS				S	Sb	00 05 08.2	-0.2
	5.1nm,0.3s						
KURS	**Kuram**	**1.40**	**310**	*e*P	Pg	00 04 49.2	-0.5
	baz=10.0						
KURS				⇓*i*S	Sb	00 05 08.2	-0.2
	baz=10.0						
KURS	**Kuram**	**1.40**	**310**	*e*P	Pg	00 04 49.2	-0.5
	0.7nm,0.2s						
KURS				⇓*i*S	Sb	00 05 08.2	-0.2
	2.4nm,0.2s						
MNBS	**Baschi**	**1.74**	**329**	P	Pb	00 04 55.6	-0.2
	1.2nm,0.2s						
MNBS				S	Sb	00 05 18.5	+0.3
	17nm,0.2s						
MNBS	**Baschi**	**1.74**	**329**	*e*P	Pb	00 04 55.1	-0.6
	baz=29						
MNBS				*e*S	Sg	00 05 18.5	-0.3
	baz=29						
MNBS	**Baschi**	**1.74**	**329**	*e*P	Pb	00 04 55.1	-0.6
	1.2nm,0.2s						
MNBS				*e*S	Sb	00 05 18.5	+0.3
	17nm,0.2s						
DJR	**Jarkent**	**1.74**	**4**	P	Pb	00 04 55.9	+0.1
	0.7nm,0.1s						
DJR				S	Sg	00 05 19.1	+0.2
	3.8nm,0.3s						
DJR	**Jarkent**	**1.74**	**4**	*e*P	Pn	00 04 55.1	+0.6
	1.4nm,0.2s						
DJR				*e*S	Sg	00 05 18.7	-0.2
	3.8nm,0.3s						
KDJ	**Kajisay**	**1.88**	**257**	⇑*i*P	Pb	00 04 57.6	-0.6
	baz=57						
KDJ				⇑*i*S	Sn	00 05 21.3	+0.3
	baz=57						
KOTS	**Kotyrbulak**	**1.96**	**290**	Pg	Pg	00 05 00.1	-0.4
	5.3nm,0.2s						
KOTS				Lg	Lg	00 05 26.8	
	19nm,0.4s						
KOTS	**Kotyrbulak**	**1.96**	**290**	*e*P	Pb	00 04 59.4	-0.2
	baz=90						
KOTS				*e*S	Sg	00 05 26.0	0.0
	baz=90						
KOTS	**Kotyrbulak**	**1.96**	**290**	*e*P	Pb	00 04 59.4	-0.2
	5.3nm,0.2s						
KOTS				*e*S	Sg	00 05 25.9	0.0
	19nm,0.4s						
MDOK	**Medeo**	**1.99**	**288**	⇑Pg	Pn	00 04 58.3	+0.5
	1.9nm,0.4s						
MDOK				⇓Lg	Lg	00 05 24.8	
	6.0nm,0.5s						
MDOK	**Medeo**	**1.99**	**288**	Pg	Pb	00 04 59.8	-0.2
	4.4nm,0.3s						
MDOK				Lg	Lg	00 05 26.2	
	7.2nm,0.5s						
MDOK	**Medeo**	**1.99**	**288**	*e*P	Pn	00 04 58.4	+0.5
	baz=88						
MDOK				*e*S	Sn	00 05 24.4	+0.8
	baz=88						

MDOK	**Medeo** 4.4nm,0.3s	**1.99**	**288**	*e*P	Pn	00 04 58.4	+0.5
MDOK	8.6nm,0.5s			*e*S	Sn	00 05 24.4	+0.8
TNSS	**Tian-Shan** 4.0nm,0.2s	**2.03**	**284**	Pg	Pb	00 05 00.2	-0.6
TNSS	6.5nm,0.5s			Lg	Lg	00 05 26.5	
TNSS	**Tian-Shan** baz=84	**2.03**	**284**	*e*P	Pn	00 04 59.2	+0.5
TNSS	baz=84			*e*S	Sn	00 05 25.5	+0.5
TNSS	**Tian-Shan** 2.8nm,0.2s	**2.03**	**284**	*e*P	Pn	00 04 59.2	+0.5
TNSS	2.9nm,0.3s			*e*S	Sn	00 05 25.4	+0.4
ARXS	**Arharly** 1.5nm,0.2s	**2.09**	**321**	Pg	Pb	00 05 01.5	-0.2
ARXS	9.8nm,0.4s			Lg	Lg	00 05 28.6	
ARXS	**Arharly** 1.5nm,0.2s	**2.09**	**321**	*e*P	Pb	00 05 01.2	-0.5
ARXS	9.8nm,0.4s			*e*S	Sb	00 05 28.6	+0.4
IZV	**Izvestkoviy** 3.5nm,0.2s	**2.27**	**282**	Pg	Pb	00 05 04.4	-0.4
IZV	6.1nm,0.2s			Lg	Lg	00 05 33.7	
IZV	**Izvestkoviy** baz=83	**2.27**	**282**	*e*P	Pb	00 05 04.0	-0.8
IZV	baz=83			*e*S	Sb	00 05 33.8	+0.3
IZV	**Izvestkoviy** 3.9nm,0.2s	**2.27**	**282**	*e*P	Pb	00 05 04.0	-0.9
IZV	6.1nm,0.2s			*e*S	Sb	00 05 33.7	+0.2
CHKK	**Chushkaly** 1.3nm,0.1s	**2.31**	**304**	Pg	Pb	00 05 05.2	-0.3
CHKK	9.5nm,0.2s			Lg	Lg	00 05 35.0	
CHKK	**Chushkaly** baz=4.0	**2.31**	**304**	*e*P	Pb	00 05 04.9	-0.5
CHKK	baz=4.0			*e*S	Sb	00 05 35.1	+0.5
CHKK	**Chushkaly** 0.8nm,0.1s	**2.31**	**304**	*e*P	Pb	00 05 04.9	-0.6
CHKK	9.5nm,0.2s			*e*S	Sb	00 05 35.0	+0.5
ULHL	**Ulahol** baz=64	**2.54**	**263**	⇑*i*P	Pn	00 05 06.1	+0.6
ULHL	baz=64			⇑*i*S	Sn	00 05 38.4	+1.1
KAPS	**Kapalarasan** 0.8nm,0.5s	**2.70**	**356**	Pg	Pb	00 05 12.0	-0.1
KAPS	2.5nm,0.3s			Lg	Lg	00 05 46.9	
KAPS	**Kapalarasan** 0.8nm,0.5s	**2.70**	**356**	*e*P	Pb	00 05 12.0	-0.1
KAPS	2.5nm,0.3s			*e*S	Sb	00 05 46.9	+1.2
BOOM	**Boomskoye usch** baz=70	**2.74**	**269**	⇑*e*P	Pn	00 05 08.8	+0.6
BOOM	baz=70			⇑*i*S	Sn	00 05 42.0	-0.1
KST	**Kastek** 2.5nm,0.3s	**2.74**	**281**	Pg	Pb	00 05 12.2	-0.6
KST	3.9nm,0.6s			Lg	Lg	00 05 47.1	
KST	**Kastek** baz=81	**2.74**	**281**	*e*P	Pb	00 05 11.6	-1.2
KST	baz=81			*e*S	Sb	00 05 46.7	-0.4
KST	**Kastek** 2.7nm,0.2s	**2.74**	**281**	*e*P	Pb	00 05 11.6	-1.3
KST	3.5nm,0.5s			*e*S	Sb	00 05 46.7	-0.4
DGS	**Degeres** 1.1nm,0.3s	**2.92**	**284**	Pg	Pb	00 05 15.3	-0.5
DGS	6.0nm,0.3s			Lg	Lg	00 05 52.4	
DGS	**Degeres** baz=84	**2.92**	**284**	*e*P	Pb	00 05 14.1	-1.7
DGS	baz=84			*e*S	Sb	00 05 50.8	-1.2
DGS	**Degeres** 1.9nm,0.2s	**2.92**	**284**	*e*P	Pb	00 05 14.1	-1.6
DGS	6.0nm,0.3s			*e*S	Sb	00 05 50.8	-1.2
TKM2	**Tokmak 2** 0.5nm,0.5s	**3.00**	**278**	⇓Pg	Pb	00 05 16.2	-1.0
TKM2	1.4nm,0.5s			⇓Lg	Lg	00 05 55.9	
MAKZ	**Makanchi** 0.9nm,0.8s	**4.53**	**21**	⇓Pn	Pn	00 05 33.6	+0.8
MAKZ	0.7nm,0.9s			⇑Lg	Lg	00 06 47.2	
MK31	**Makanchi Array** baz=207,slow=15,SNR=5.1	**4.61**	**23**	⇓Pn	Pn	00 05 34.8	+1.0
MK31	0.3nm,0.6s,baz=200,slow=24			⇓Lg	Lg	00 06 49.4	

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*ISCJB **13** 00:04:53.0±0.4, 11°.24S±0°.05×165°.92E±0°.06, h10^{km}, mb4.5/25, MS4.2/2, Error ellipse: s-maj=9.1km s-min=6.8km az=160.6*

*IDC **13** 00:04:53.6±0.9, 11°.14S×165°.91E, h0^{km}, mb4.5/13, mb1 4.6/15, mb1mx4.3/49, mbtmp4.5/15, ML4.8/2, MS4.2/2, Ms1 4.2/2, ms1mx3.4/31, Error ellipse: s-maj=22.9km s-min=19.2km az=57.0*

*NEIC **13** 00:04:55.9±4.2, 11°.16S×165°.87E, h16^{km}±26^{km}, mb4.7/13, Error ellipse: s-maj=8.1km s-min=7.8km az=142.0*

ISC 13 00:04:55.0±0.5**, 11°.18S**±0°.07×**165°.93E**±0°.08**, h10**^{km}**, n58, σ1s.17**/59**, mb4.7**/25**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 415nm,0.8s	**6.14**	**286**	*e*Pn	**Pn**	**00 06 22.5**	**-3.4**
HNR				*e*Sn	**Sn**	**00 07 38.2**	**+2.0**
HNR	**Honiara** 22nm,0.3s,baz=217,slow=4.1,SNR=7.9	**6.14**	**286**	Pn	**Pn**	**00 06 26.6**	**+0.7**
HNR	6.1nm,0.3s,baz=338,slow=19,SNR=1.3			Sn	**Sn**	**00 07 38.2**	**+2.0**
DZM	**Mont Dzumac**	**10.85**	**177**	*e*Pn	**Pn**	**00 07 31.4**	**+0.9**
DZM				*e*Sn	**Sn**	**00 09 31.1**	**-1.0**
DZM	**Mont Dzumac** 6.2nm,0.3s,baz=340,slow=11,SNR=55	**10.85**	**177**	Pn	**Pn**	**00 07 32.4**	**+1.9**
DZM	1.0nm,0.3s,baz=159,slow=20,SNR=3.6			Sn	**Sn**	**00 09 31.1**	**-1.0**
KWAJ	**Kwajalein Atol**	**19.92**	**5**	*e*P	**P**	**00 09 27.1**	**+0.1**
CTA	**Charters Tower** 11nm,1.0s,baz=62,slow=14,SNR=5.2	**20.90**	**243**	P	**P**	**00 09 38.9**	**+1.1**
CTAO	**Charters Tower**	**20.90**	**243**	*e*P	**P**	**00 09 36.7**	**-1.1**
COEN	**Coen** 45nm,1.1s	**22.38**	**261**	*e*P	**P**	**00 09 54.0**	**+0.2**
URZ	**Urewera** 4.0nm,0.5s,baz=125,slow=17,SNR=2.4	**28.77**	**162**	P	**P**	**00 10 52.8**	**-0.1**
BKZ	**Black Stump Fm** 24nm,1.2s	**29.42**	**163**	*e*P	**P**	**00 10 59.4**	**+0.6**
H11S2	**WAKE ISLAND Hy** baz=181,slow=76,SNR=6.3	**29.49**	**1**	T	T	00 41 29.5	
H11S3	**WAKE ISLAND Hy** baz=181,slow=76,SNR=4.2	**29.49**	**1**	T	T	00 41 26.0	
H11S1	**WAKE ISLAND Hy** baz=181,slow=76,SNR=4.3	**29.50**	**1**	T	T	00 41 25.5	
STKA	**Stephens Creek** 5.8nm,1.9s	**30.48**	**224**	*e*P	**P**	**00 11 07.9**	**-0.3**
STKA	**Stephens Creek** 0.9nm,0.4s,baz=80,slow=12,SNR=2.6	**30.48**	**224**	P	**P**	**00 11 07.9**	**-0.3**
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=6.3	**30.71**	**2**	T	T	00 43 01.0	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=7.5	**30.71**	**2**	T	T	00 43 01.4	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=5.6	**30.73**	**2**	T	T	00 43 02.4	
WRAB	**Tennant Creek** 13nm,1.1s	**31.60**	**250**	*e*P	**P**	**00 11 18.1**	**-0.2**
WB2	**Warramunga Arr**	**31.60**	**250**	*e*P	**P**	**00 11 17.4**	**-0.9**
WR1	**Warramunga Arr** 24nm,0.9s	**31.61**	**250**	*e*P	**P**	**00 11 18.0**	**-0.4**
WR1				*e*PcP	**PcP**	**00 14 11.3**	**+0.5**
WRA	**Warramunga Arr** 10.0nm,1.0s,baz=80,slow=9.2,SNR=39	**31.61**	**250**	P	**P**	**00 11 18.0**	**-0.4**
WRA	0.4nm,0.8s,baz=75,slow=3.2,SNR=4.0			PcP	**PcP**	**00 14 11.3**	**+0.5**
GUMO	**Guam** comp=Z,293nm,18.1s,baz=128,slow=37	**32.28**	**319**	LR	LR	00 24 47.2	
RPZ	**Rata Peaks** 19nm,0.8s,baz=318,slow=4.2,SNR=5.9	**32.72**	**173**	P	**P**	**00 11 28.9**	**+1.0**
RPZ	comp=Z,586nm,20.1s,baz=345,slow=32			LR	LR	00 22 09.2	
AS01	**Alice Springs**	**32.86**	**244**	*e*P	**P**	**00 11 28.2**	**-1.1**
AS31	**Alice Springs** 1.0nm,0.6s	**32.90**	**244**	*e*P	**P**	**00 11 28.9**	**-0.8**
AS31				*e*PcP	**PcP**	**00 14 14.2**	**-0.1**
ASAR	**Alice Springs** 1.7nm,0.8s,baz=71,slow=9.1,SNR=12	**32.90**	**244**	P	**P**	**00 11 28.9**	**-0.9**
ASAR	0.5nm,0.6s,baz=108,slow=2.1,SNR=4.5			PcP	**PcP**	**00 14 14.2**	**-0.1**
FITZ	**Fitzroy Crossi** 8.1nm,0.9s	**39.52**	**255**	*e*P	**P**	**00 12 25.8**	**-0.6**
FORT	**Forrest** 21nm,1.0s	**40.12**	**235**	*e*P	**P**	**00 12 29.1**	**-2.1**
BATI	**Baumata** 7.5nm,0.3s,baz=119,slow=10,SNR=3.2	**41.52**	**267**	P	**P**	**00 12 41.8**	**-1.2**
MBWA	**Marble Bar**	**45.33**	**251**	*e*P	**P**	**00 13 13.7**	**0.0**
LEM	**Lembang** 7.3nm,0.4s,baz=319,slow=19,SNR=3.2	**57.69**	**269**	P	**P**	**00 14 46.6**	**0.0**
PSI	**Prapat** 6.6nm,0.8s	**68.07**	**278**	*e*P	**P**	**00 15 54.8**	**-0.9**
PSI	**Prapat** 4.8nm,0.8s,baz=180,slow=6.0,SNR=3.3	**68.07**	**278**	P	**P**	**00 15 54.8**	**-0.9**
BJT	**Baijiatuau** 3.5nm,0.6s	**68.69**	**321**	*e*P	**P**	**00 15 57.7**	**-1.2**
XAN	**Xi'an**	**70.34**	**312**	*e*P	**P**	**00 16 08.4**	**-0.9**
CMAR	**Chiang Mai Arr** 1.6nm,0.4s,baz=122,slow=4.4,SNR=12	**72.33**	**294**	P	**P**	**00 16 22.0**	**+0.4**
CMMT	**Chiang Mai** 5.6nm,1.2s	**72.44**	**294**	P	**P**	**00 16 24.1**	**+1.9**
CHTO	**Chiang Mai** 1.9nm,0.4s	**72.45**	**294**	*e*P	**P**	**00 16 21.5**	**-0.8**
CHTO	**Chiang Mai** 24nm,1.2s	**72.45**	**294**	P	**P**	**00 16 24.2**	**+2.0**
SONA0	**Songino Array**	**78.88**	**324**	*e*P	**P**	**00 16 59.5**	**+0.9**
SONM	**Songino Array** 0.4nm,0.8s,baz=143,slow=5.4,SNR=3.4	**78.88**	**324**	P	**P**	**00 16 59.6**	**+0.9**
BILL	**Bilibino** 3.5nm,0.9s	**79.01**	**0**	*e*P	**P**	**00 16 58.3**	**-0.4**
SAO	**San Andreas Ge** 4.9nm,0.8s	**83.07**	**51**	*e*P	**P**	**00 17 20.7**	**-0.4**
ILAR	**Eielson Array** 1.6nm,1.0s,baz=230,slow=6.1,SNR=4.1	**83.58**	**18**	P	**P**	**00 17 22.7**	**-0.4**
ILB	**Eielson Array**	**83.58**	**18**	*e*P	**P**	**00 17 22.7**	**-0.4**
MK01	**Makanchi Array**	**93.73**	**317**	*e*P	**P**	**00 18 12.2**	**0.0**
MK32	**Makanchi Array**	**93.74**	**317**	*e*P	**P**	**00 18 12.6**	**+0.3**
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=96,slow=5.4,SNR=6.3	**93.74**	**317**	P	**P**	**00 18 12.6**	**+0.3**
ZALV	**Zalesovo Beam** 0.6nm,0.6s,baz=121,slow=10,SNR=2.9	**93.77**	**324**	P	**P**	**00 18 11.0**	**-1.1**
ZAA1	**Zalesovo Array**	**93.77**	**324**	*e*P	**P**	**00 18 11.0**	**-1.2**
GNI	**Garni**	**120.88**	**310**	*e*PKPdf	**PKPdf**	**00 23 47.8**	**-0.4**
KBZ	**Khabaz**	**121.36**	**315**	P	**PKiKP**	**00 23 51.7**	**+2.8**
KBZ	comp=Z,2.0nm,0.8s			pmax	pmax		
KBZ	**Khabaz** comp=Z,2.1nm,0.8s,baz=356,slow=15,SNR=6.9	**121.36**	**315**	PKP	**PKiKP**	**00 23 51.7**	**+2.8**
CPUP	**Villa Florida** comp=Z,0.8nm,0.6s,baz=202,slow=5.4,SNR=2.1	**123.80**	**132**	PKP	**PKPdf**	**00 23 53.9**	**-0.1**
BOSA	**Boshof** comp=Z,2.1nm,1.0s,baz=129,slow=13,SNR=2.9	**125.15**	**223**	PKP	**PKPdf**	**00 23 57.6**	**+0.9**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.9s,baz=46,slow=4.2,SNR=3.4	**164.47**	**279**	PKPab	**PKPab**	**00 25 55.5**	**+0.8**
TOA1	**Torodi Ar. Sit**	**164.47**	**279**	*e*PKPab	**PKPab**	**00 25 55.5**	**+0.8**

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*ISCJB **13** 00:10:08.2±0.5, 10°.85S±0°.06×166°.12E±0°.06, h10^{km}, mb4.6/17, MS4.3/1, Error ellipse: s-maj=9.4km s-min=8.4km az=140.7*

*IDC **13** 00:10:08.7±1.0, 10°.80S×166°.10E, h0^{km}, mb4.5/12, mb1 4.6/13, mb1mx4.3/44, mbtmp4.5/13, ML4.5/1, MS4.4/1, Ms1 4.4/1, ms1mx3.3/27, Error ellipse: s-maj=27.7km s-min=19.3km az=113.0*

*NEIC **13** 00:10:09.4±2.6, 10°.81S×166°.12E, h7^{km}±16^{km}, mb5.0/6, Error ellipse: s-maj=8.2km s-min=5.7km az=124.0*

ISC 13 00:10:09.8±0.6**, 10°.86S**±0°.07×**166°.17E**±0°.08**, h10**^{km}**, n48, σ0s.79**/43**, mb4.9**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 450nm,0.9s	**6.29**	**282**	*e*Pn	**Pn**	**00 11 41.5**	**-1.2**
HNR				*e*Sn	**Sn**	**00 12 54.1**	**-0.5**
HNR	**Honiara** 35nm,0.3s,baz=191,slow=5.2,SNR=3.7	**6.29**	**282**	Pn	**Pn**	**00 11 44.5**	**+1.9**
HNR	15nm,0.3s,baz=190,slow=12,SNR=1.7			Sn	**Sn**	**00 12 54.1**	**-0.5**
DZM	**Mont Dzumac**	**11.15**	**179**	*e*Pn	**Pn**	**00 12 50.4**	**+0.8**
DZM	**Mont Dzumac** 3.1nm,0.3s,baz=0.9,slow=12,SNR=17	**11.15**	**179**	Pn	**Pn**	**00 12 50.8**	**+1.2**
DZM	0.2nm,0.3s,baz=325,slow=19,SNR=2.0			Sn	**Sn**	**00 14 52.2**	**-2.3**
TARA	**Tarawa**	**13.87**	**29**	*e*Pn	**Pn**	**00 13 26.1**	**-0.5**
EIDS	**Eidsvold** 38nm,0.9s	**20.32**	**223**	*e*P	Pn	00 14 47.1	-1.1
CTA	**Charters Tower** 4.5nm,0.6s,baz=51,slow=12,SNR=8.6	**21.25**	**242**	P	**P**	**00 14 57.4**	**+0.9**
CTAO	**Charters Tower**	**21.25**	**242**	*e*P	**P**	**00 14 57.2**	**+0.8**
RAO	**Raoul Island** comp=Z,945nm,19.4s,baz=178,slow=30	**23.58**	**143**	LR	LR	00 22 05.8	
ARMA	**Armidale** 129nm,1.9s	**23.70**	**213**	*e*P	**P**	**00 15 22.3**	**+0.2**
H11S2	**WAKE ISLAND Hy** baz=181,slow=76,SNR=99	**29.16**	**1**	T	T	00 46 20.5	
H11S3	**WAKE ISLAND Hy** baz=181,slow=76,SNR=70	**29.17**	**1**	T	T	00 45 58.7	
H11S1	**WAKE ISLAND Hy** baz=181,slow=76,SNR=76	**29.18**	**1**	T	T	00 46 18.6	
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=86	**30.39**	**1**	T	T	00 47 43.5	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=42	**30.39**	**1**	T	T	00 48 09.5	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=56	**30.40**	**1**	T	T	00 48 10.9	
STKA	**Stephens Creek** 1.4nm,0.8s	**30.86**	**224**	*e*P	**P**	**00 16 26.1**	**-0.4**
STKA	**Stephens Creek** 5.1nm,0.8s,baz=34,slow=12,SNR=11	**30.86**	**224**	P	**P**	**00 16 27.2**	**+0.8**
WRAB	**Tennant Creek** 14nm,0.8s	**31.93**	**250**	*e*P	**P**	**00 16 35.5**	**-0.5**
WB2	**Warramunga Arr** 14nm,0.8s	**31.93**	**250**	*e*P	**P**	**00 16 35.6**	**-0.4**
WR1	**Warramunga Arr** 16nm,0.8s	**31.94**	**250**	*e*P	**P**	**00 16 35.6**	**-0.5**
WRA	**Warramunga Arr** 14nm,0.7s,baz=81,slow=9.1,SNR=62	**31.94**	**250**	P	**P**	**00 16 35.6**	**-0.5**
RPZ	**Rata Peaks** 14nm,0.8s,baz=108,slow=3.2,SNR=3.0	**33.01**	**173**	P	**P**	**00 16 46.1**	**+0.9**
AS01	**Alice Springs**	**33.21**	**243**	*e*P	**P**	**00 16 46.5**	**-0.7**
ASAR	**Alice Springs** 5.5nm,0.6s,baz=70,slow=9.8,SNR=52	**33.25**	**243**	P	**P**	**00 16 46.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**39.83**	**255**	*e*P	**P**	**00 17 43.7**	**0.0**
BATI	**Baumata** 13nm,0.4s,baz=96,slow=9.2,SNR=3.3	**41.77**	**267**	P	**P**	**00 17 58.5**	**-1.4**
MBWA	**Marble Bar**	**45.65**	**251**	*e*P	**P**	**00 18 31.4**	**+0.4**
POHA	**Pohakuloa**	**48.45**	**51**	*e*P	**P**	**00 18 53.5**	**+0.4**
LEM	**Lembang** 22nm,0.6s,baz=324,slow=19,SNR=3.9	**57.93**	**269**	P	**P**	**00 20 04.1**	**+1.1**
BJT	**Baijiatuau**	**68.59**	**321**	*e*P	**P**	**00 21 12.4**	**-0.6**
XAN	**Xi'an** 9.0nm,0.5s	**70.30**	**312**	*e*P	**P**	**00 21 23.6**	**-0.2**
CMAR	**Chiang Mai Arr** 1.0nm,0.3s,baz=116,slow=2.1,SNR=3.6	**72.42**	**293**	P	**P**	**00 21 37.3**	**+0.3**
SONA0	**Songino Array**	**78.76**	**324**	*e*P	**P**	**00 22 13.3**	**+0.4**
SONM	**Songino Array** 0.4nm,0.6s,baz=134,slow=4.1,SNR=3.4	**78.76**	**324**	P	**P**	**00 22 13.3**	**+0.4**
QSPA	**South Pole Qui**	**79.15**	**180**	*e*P	**P**	**00 22 13.8**	**-0.9**
ILAR	**Eielson Array** 0.5nm,0.8s,baz=234,slow=4.9,SNR=9.0	**83.20**	**18**	P	**P**	**00 22 35.4**	**-0.6**
ZALV	**Zalesovo Beam** 1.2nm,0.7s,baz=38,slow=5.7,SNR=4.2	**93.65**	**324**	P	**P**	**00 23 26.6**	**+0.2**
ZAA1	**Zalesovo Array**	**93.65**	**324**	*e*P	**P**	**00 23 26.6**	**+0.2**
MK01	**Makanchi Array**	**93.66**	**317**	*e*P	**P**	**00 23 26.1**	**-0.6**
MK31	**Makanchi Array**	**93.67**	**317**	*e*P	**P**	**00 23 26.9**	**+0.2**
MK31	**Makanchi Array**	**93.67**	**317**	*e*P	**P**	**00 23 26.9**	**+0.2**
MK32	**Makanchi Array**	**93.67**	**317**	*e*P	**P**	**00 23 26.6**	**-0.2**
MKAR	**Makanchi Array**	**93.67**	**317**	P	**P**	**00 23 26.6**	**-0.1**
MKAR	**Makanchi Array** 1.1nm,0.6s,baz=91,slow=6.9,SNR=11	**93.67**	**317**	P	**P**	**00 23 26.6**	**-0.2**
ARA0	**ARCESS Array S**	**116.26**	**346**	*e*PKPdf	**PKPdf**	**00 28 52.8**	**-0.2**
ARCES	**ARCESS Array B** 1.4nm,0.8s,baz=12,slow=4.6,SNR=5.9	**116.26**	**346**	PKP	**PKPdf**	**00 28 52.8**	**-0.2**
ESDC	**Sonseca Array** 0.3nm,0.5s,baz=11,slow=3.0,SNR=2.7	**149.99**	**345**	PKPbc	**PKiKP**	**00 30 02.4**	**+0.4**

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*BJI **13** 00:10:12.5, 38°.00N×118°.10W, h5^{km}, mB5.5/6, mb5.0/18, Ms5.2/5, Ms7 5.1/5*

*ISCJB **13** 00:10:13.6±0.1, 38°.10N±0°.01×117°.96W±0°.01, h10^{km}, mb4.7/107, MS4.7/16, Error ellipse: s-maj=1.6km s-min=1.5km az=178.3*

*NEIC **13** 00:10:13.0±0.0, 38°.03N×118°.04W, h11^{km}, Moment Tensor Solution. s72 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.81; M$_{θθ}$-0.32; M$_{φφ}$1.13; M$_{rθ}$1.19; M$_{θφ}$7.00; M$_{φr}$-3.98; Best double couple: M$_0$8.20000×10^{16} NP1:φ$_s$359.00000°, δ83.00000°, λ-150.00000°. NP2:φ$_s$265.00000°, δ60.00000°, λ-8.00000°. Principal axes: T 8.0200, Plg15.0000°, Azm128.0000°; N 0.3400, Plg59.0000°, Azm11.0000°; P -8.3700, Plg25.0000°, Azm225.0000°;*

*MOS **13** 00:10:13.6±1.1, 38°.08N×118°.00W, h16^{km}, mb5.0/28 Error ellipse: s-maj=6.0km s-min=4.8km az=101.3*

*REN **13** 00:10:14.3, 38°.03N×118°.05W, h12^{km}, MB4.8(NEIC), MW5.2(USGS), MW5.2(GCMT)*

*NEIC **13** 00:10:14.3±0.0, 38°.03N×118°.05W, h12^{km}, mb4.8/96, MW5.1, MW5.2, Moment Tensor Solution. s43 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.48; M$_{θθ}$-1.13; M$_{φφ}$1.61; M$_{rθ}$1.27; M$_{θφ}$4.58; M$_{φr}$-1.69; Best double couple: M$_0$5.20000×10^{16} NP1:φ$_s$259.00000°, δ69.00000°, λ-12.00000°. NP2:φ$_s$354.00000°, δ79.00000°, λ-159.00000°. Principal axes: T 5.0900, Plg7.0000°, Azm125.0000°; N 0.2900, Plg66.0000°, Azm20.0000°; P -5.3800, Plg23.0000°, Azm218.0000°; After REN.*

NEIC Felt [IV] at Silverpeak and [III] at Goldfield and Tonopah. Felt from Amargosa Valley to Reno and as far as Las Vegas and Winnemucca. Felt [III] at Big Pine, Bishop, Camino, Groveland, Hanford, Mammoth Lakes, Mi-Wuk Village, Modesto, Sacramento, Stockton and Sutter Creek, California. Felt from Nevada City to Bakersfield and Ridgecrest and as far west as the San Francisco Bay area.

*IDC **13** 00:10:15.7±0.4, 38°.02N×118°.08W, h0^{km}, mb4.4/27, mb1 4.5/33, mb1mx4.4/53, mbtmp4.4/33, ML4.0/6, MS4.6/14, Ms1 4.6/14, ms1mx4.3/40 Error ellipse: s-maj=7.0km s-min=4.3km az=64.0*

*ANF **13** 00:10:16.7±1.4, 38°.00N×118°.14W, h21^{km}±11^{km}, ML5.4/49, Error ellipse: s-maj=6.7km s-min=4.3km az=118.0*

*GCMT **13** 00:10:19.3±0.2, 38°.06N±0°.01×118°.04W±0°.01, h16^{km}, MW5.3/107, Moment Tensor Solution. s62,c89; s107,c200; Duration: 1s.0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$-0.51±.18; M$_{θθ}$-1.14±.17; M$_{φφ}$1.65±.18; M$_{rθ}$1.22±.46; M$_{θφ}$8.51±.17; M$_{φr}$-4.53±.57; Best double couple: M$_0$9.82200×10^{16} NP1:φ$_s$356.00000°, δ85.00000°, λ-152.00000°. NP2:φ$_s$264.00000°, δ62.00000°, λ-5.00000°. Principal axes: T 9.6390, Plg16.0000°, Azm127.0000°; N 0.3640, Plg62.0000°, Azm5.0000°; P -10.0050, Plg23.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 00:10:15.6±0.3**, 38°.02N**±0°.02×**117°.99W**±0°.02**, h10**^{km}**, n733, σ1s.72**/730**, mb4.8**/113**, MS4.7**/16**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NV11	**Mina Array Sit**	**0.43**	**342**	*e*Pg	**Pg**	**00 10 22.4**	**-1.8**
NV01	**Mina Array Sit**	**0.48**	**329**	*e*Pg	**Pg**	**00 10 22.3**	**-2.8**
NVAR	**Mina Array Bea** 10μm,0.3s,baz=169,slow=19	**0.48**	**329**	Pg	**Pg**	**00 10 23.2**	**-1.9**
NVAR	11μm,0.3s,baz=153,slow=17,SNR=33			Lg	Lg	00 10 29.6	
RYN	**Ryan**	**0.74**	**325**	*e*Pg	**Pg**	**00 10 27.8**	**-2.2**
MLAC	**Mammoth, Mammo** baz=57	**0.78**	**240**	P	**Pg**	**00 10 28.6**	**-2.0**
MLAC	baz=57			S	**Sg**	**00 10 39.4**	**-1.4**
OMMB	**Old Mammoth Mi**	**0.90**	**243**	*e*Pg	**Pg**	**00 10 29.8**	**-3.2**
MDPB	**Devils Postpil**	**0.95**	**246**	*e*Pg	**Pg**	**00 10 31.2**	**-2.6**
TIN	**Tinemaha, Big** baz=8.2	**0.98**	**191**	P	**Pg**	**00 10 33.2**	**-1.3**
TIN	baz=8.2			S	**Sb**	**00 10 47.3**	**-0.6**
KVN	**Kaiserville**	**1.03**	**355**	*e*Pg	**Pg**	**00 10 33.7**	**-1.8**
KVN	**Kaiserville**	**1.03**	**355**	*e*P	**Pg**	**00 10 33.7**	**-1.8**
GRAC	**Grapevine Rang** baz=332	**1.14**	**154**	P	**Pb**	**00 10 36.6**	**-0.8**
WAKR	**Walker**	**1.24**	**293**	*e*Pn	**Pn**	**00 10 36.6**	**-2.6**
YERR	**Yerington**	**1.38**	**315**	*e*Pn	**Pn**	**00 10 39.0**	**-2.1**
CWC	**Cottonwood Cre** baz=0.8	**1.58**	**183**	P	**Pn**	**00 10 43.1**	**-0.8**
CWC	baz=0.8			S	**Sb**	**00 11 04.4**	**-0.7**
PNTR	**Pine Nut**	**1.65**	**311**	*e*Pn	**Pn**	**00 10 42.9**	**-2.0**
TPNV	**Topopah Spring**	**1.75**	**127**	*e*Pn	**Pn**	**00 10 45.6**	**-0.6**
TPNV	**Topopah Spring**	**1.75**	**127**	*e*P	**Pn**	**00 10 45.6**	**-0.6**
TPNV	**Topopah Spring** baz=308	**1.75**	**127**	P	**Pn**	**00 10 45.6**	**-0.6**
DAC	**Darwin (Calif)**	**1.77**	**170**	*e*Pn	**Pn**	**00 10 45.9**	**-0.6**
DAC	**Darwin (Calif)**	**1.77**	**170**	*e*P	**Pn**	**00 10 45.9**	**-0.6**
FURC	**Furnace Creek,** baz=329	**1.79**	**150**	P	**Pn**	**00 10 46.2**	**-0.4**
VCNR	**Virginia City**	**1.82**	**315**	*e*Pn	**Pn**	**00 10 45.3**	**-1.9**
CMB	**Columbia Colle**	**1.89**	**271**	*e*Pn	**Pn**	**00 10 46.1**	**-2.0**
CMB	**Columbia Colle**	**1.89**	**271**	*e*P	**Pn**	**00 10 46.1**	**-2.0**
R11A	**Troy Canyon, C**	**1.92**	**79**	*e*Pn	**Pn**	**00 10 47.1**	**-1.4**
R11A	**Troy Canyon, C** baz=261	**1.92**	**79**	P	**Pn**	**00 10 47.2**	**-1.4**
RUBR	**Rubicon Trail**	**1.99**	**302**	*e*Pn	**Pn**	**00 10 48.3**	**-1.2**
MPMC	**Manual Prospec** baz=347	**2.00**	**168**	P	**Pn**	**00 10 48.8**	**-0.8**
PAHR	**Pah Rah Range**	**2.01**	**328**	*e*Pn	**Pn**	**00 10 47.3**	**-2.5**
VOG	**Valley Oaks Go** baz=31	**2.03**	**214**	P	**Pn**	**00 10 49.3**	**-0.5**
VOG	baz=31			Sb	**Sg**	**00 11 18.7**	**-2.1**
VES	**Vestal, Richgr** baz=20	**2.35**	**202**	P	**Pn**	**00 10 54.6**	**+0.3**
VES	baz=20			Sb	**Sg**	**00 11 28.5**	**-2.5**
ISA	**Isabella, Lake**	**2.38**	**190**	*e*Pn	**Pn**	**00 10 53.2**	**-1.6**
ISA	**Isabella, Lake**	**2.38**	**190**	*e*P	**Pn**	**00 10 53.2**	**-1.6**
ISA	**Isabella, Lake** baz=8.0	**2.38**	**190**	P	**Pn**	**00 10 54.4**	**-0.5**
ISA	baz=8.0			Sb	**Sg**	**00 11 29.8**	**-2.5**
AFDM	**Forest Hills D**	**2.52**	**293**	*e*Pn	**Pn**	**00 10 54.3**	**-2.3**
SHOC	**Shoshone, Teco** baz=327	**2.52**	**147**	P	**Pn**	**00 10 56.0**	**-0.7**
LRMC	**Laurel Mtn Rad** baz=354	**2.55**	**174**	P	**Pn**	**00 10 57.0**	**-0.2**
BEKR	**Beckworth**	**2.61**	**316**	*e*Pn	**Pn**	**00 10 55.9**	**-2.1**
SHPR	**Sheep Range**	**2.71**	**123**	*e*Pn	**Pn**	**00 10 58.1**	**-1.4**
GSC	**Goldstone, Bar**	**2.87**	**160**	*e*Pn	**Pn**	**00 11 00.3**	**-1.3**
GSC	**Goldstone, Bar**	**2.87**	**160**	*e*P	**Pn**	**00 11 00.3**	**-1.3**
GSC	**Goldstone, Bar** baz=340	**2.87**	**160**	P	**Pn**	**00 11 00.5**	**-1.1**
PAGB	**Antelope Grade**	**2.92**	**219**	*e*Pn	**Pn**	**00 11 00.0**	**-2.1**
ARVC	**Arvin** baz=12	**2.97**	**193**	P	**Pn**	**00 11 02.8**	**0.0**
ARVC	baz=12			Sb	**Sg**	**00 11 47.6**	**-3.3**
SAO	**San Andreas Ge**	**3.03**	**247**	*e*Pn	**Pn**	**00 11 01.3**	**-2.3**
SAO	**San Andreas Ge**	**3.03**	**247**	*e*P	**Pn**	**00 11 01.3**	**-2.3**
TUQ	**Turquoise Moun** baz=327	**3.07**	**147**	P	**Pn**	**00 11 03.8**	**-0.5**
EDW2	**Edwards Air Fo** baz=359	**3.13**	**180**	P	**Pn**	**00 11 04.5**	**-0.6**
ORV	**Oroville**	**3.14**	**300**	*e*Pn	**Pn**	**00 11 03.8**	**-1.4**
ORV	**Oroville**	**3.14**	**300**	*e*P	**Pn**	**00 11 03.8**	**-1.4**
SMMC	**Simmler** baz=29	**3.15**	**211**	P	**Pn**	**00 11 04.8**	**-0.5**
RRX	**Edison Barstow** baz=345	**3.24**	**165**	P	**Pn**	**00 11 06.3**	**-0.2**
PSUT	**Pine Spring**	**3.29**	**80**	*e*Pn	**Pn**	**00 11 06.0**	**-1.4**
OSI	**Osito Audit: C**	**3.45**	**190**	*e*Pn	**Pn**	**00 11 07.4**	**-2.1**
OSI	**Osito Audit: C** baz=8.8	**3.45**	**190**	P	**Pn**	**00 11 09.7**	**+0.2**
OSI	baz=8.8			Sb	**Sb**	**00 12 01.8**	**+3.0**
HEC	**Hector,Ludlow** baz=337	**3.45**	**157**	P	**Pn**	**00 11 08.8**	**-0.7**
PKM	**Mcpherson Peak** baz=24	**3.45**	**206**	P	**Pn**	**00 11 09.7**	**0.0**

PKM				Sb	Sb	00 12 01.1	+1.9
	baz=24						
ELK	Elko	3.46	37	Pn	Pn	00 11 08.8	-0.9
	10nm,0.3s,baz=234,slow=12,SNR=145						
ELK				Pg	Pb	00 11 18.4	+1.3
	152nm,0.3s,baz=248,slow=14,SNR=54						
ELK				Lg	Lg	00 12 03.4	
	482nm,0.3s,baz=282,slow=12,SNR=15						
CCUT	Cedar City	3.69	96	ePn	Pn	00 11 12.4	-0.6
GMRC	Granite Mounta	3.73	149	P	Pn	00 11 12.4	-1.1
	baz=330						
O03E	Paynes Creek	3.73	309	P	Pn	00 11 12.5	-0.9
	baz=127,SNR=153						
LDFC	Landfair	3.74	141	ePn	Pn	00 11 13.9	+0.3
DECC	Green Verdugo	3.77	184	P	Pn	00 11 12.8	-1.0
	baz=3.4						
BFSC	Mount Baldy Ra	3.78	176	P	Pn	00 11 14.0	-0.1
	baz=355						
MWC	Mount Wilson	3.79	181	ePn	Pn	00 11 15.4	+1.1
MWC	Mount Wilson	3.79	181	eP	Pn	00 11 15.4	+1.1
SBC	Santa Barbara	3.83	202	Sb	Sb	00 12 12.9	+3.1
	baz=20						
PASC	Pasadena Art C	3.84	182	ePn	Pn	00 11 15.6	+0.7
BBRC	Big Bear Solar	3.85	167	P	Pn	00 11 13.4	-1.7
	baz=347						
MCCM	Marconi Confer	3.86	273	ePn	Pn	00 11 13.0	-2.0
LCMT	Little Creek M	3.90	103	ePn	Pn	00 11 15.2	-0.6
SZCU	Shurtz Canyon	3.90	95	ePn	Pn	00 11 15.5	-0.4
BLG	Laguna Peak, P	4.00	193	P	Pn	00 11 17.8	+0.8
	baz=12						
BLG				Sb	Sb	00 12 17.0	+2.3
	baz=12						
HOPS	Hopland Field	4.11	285	ePn	Pn	00 11 16.2	-2.2
KNB	Kanab	4.23	102	ePn	Pn	00 11 19.9	-0.4
KNB	Kanab	4.23	102	eP	Pn	00 11 19.9	-0.4
SCZ2	Santa Cruz Isl	4.23	199	P	Pn	00 11 20.0	-0.2
	baz=17						
NEE2	Needles Airpor	4.23	139	P	Pn	00 11 19.5	-0.6
	baz=321						
MOD	Modoc Plateau	4.27	336	ePn	Pn	00 11 18.6	-2.2
FMP	Fort Macarthur	4.30	183	Pg	Pg	00 11 35.2	-2.9
	baz=2.5						
O02D	Mt. Diablo Mer	4.31	301	P	Pn	00 11 20.1	-1.2
	baz=119,SNR=25						
BELC	Belle Mtn. Jos	4.32	158	P	Pn	00 11 21.3	-0.3
	baz=338						
WDC	Whiskeytown Da	4.36	307	ePn	Pn	00 11 21.0	-0.9
WDC	Whiskeytown Da	4.36	307	eP	Pn	00 11 21.0	-0.9
W13A	Hualapai Mount	4.41	130	ePn	Pn	00 11 23.1	+0.3
WVOR	Wild Horse Val	4.44	354	ePn	Pn	00 11 22.8	-0.3
WVOR	Wild Horse Val	4.44	354	eP	Pn	00 11 22.8	-0.3
MURC	Murrieta	4.46	171	P	Pn	00 11 23.8	+0.4
	baz=351						
IRM	Iron Mountain	4.49	148	P	Pn	00 11 23.9	+0.2
	baz=330						
PKCU	Pink Cliffs	4.54	96	ePn	Pn	00 11 25.3	+0.6
PFO	Pinyon Flats O	4.57	164	ePn	Pn	00 11 25.1	+0.2
PFO				Pg	Pg	00 11 40.7	-2.5
PFO				Lg	Lg	00 12 42.5	
PFO	Pinyon Flats O	4.57	164	P	Pn	00 11 24.5	-0.4
	baz=344						
PFO	Pinyon Flats O	4.57	164	Pn	Pn	00 11 25.4	+0.5
	7.8nm,0.3s,baz=2.3,slow=14,SNR=61						
PFO				Pg	Pg	00 11 40.7	-2.5
	47nm,0.3s,baz=339,slow=11,SNR=44						
PFO				Lg	Lg	00 12 42.5	
	25nm,0.3s,baz=258,slow=20,SNR=2.7						
XPFO	Pion Flat	4.57	164	ePn	Pn	00 11 25.1	+0.2
DUG	Dugway, Tooele	4.57	60	ePn	Pn	00 11 24.4	-0.5
DUG	Dugway, Tooele	4.57	60	eP	Pn	00 11 24.5	-0.5
DUG	Dugway, Tooele	4.57	60	P	Pn	00 11 25.2	+0.2
	baz=244						
I57US	PINON FLAT INF	4.58	164	Pn	Pn	00 11 25.9	+0.8
I57US				i		00 38 20.0	
	baz=347,slow=307,SNR=0.5						
MTPU	Mount Pierson	4.58	88	ePn	Pn	00 11 25.7	+0.3
MSU	Marysvale	4.60	82	ePn	Pn	00 11 27.1	+1.7
MSU				ePg	Pg	00 11 42.1	-1.6
MSU	Marysvale	4.60	82	eP	Pn	00 11 27.1	+1.7
CIS	Catalina Islan	4.62	184	P	Pn	00 11 26.5	+0.9
	baz=3.5						
KCPM	Cahto Peak	4.67	293	ePg	Pb	00 11 34.9	-2.9
N02D	Trinity Center	4.69	310	P	Pn	00 11 25.3	-1.3
	baz=128,SNR=18						
M04C	Macdoel	4.78	323	P	Pn	00 11 27.8	-0.1
	baz=141,SNR=102						
BGU	Big Grassy Mou	4.81	51	ePn	Pn	00 11 28.4	+0.1
BGU				ePg	Pg	00 11 45.5	-2.3
BGU				eSg	Sg	00 12 47.4	-2.7
U15A	North Rim	4.82	108	ePn	Pn	00 11 28.9	+0.4
U15A				ePg	Pg	00 11 44.5	-3.4
U15A				eSg	Sg	00 12 52.9	+2.7
BC3	Big Chuckawall	4.82	154	P	Pn	00 11 27.6	-0.7
	baz=335						
PDMCI	Parker Dam,Lak	4.84	139	P	Pn	00 11 28.8	+0.3
	baz=321						
SNCC	San Nicolas Is	4.92	195	ePn	Pn	00 11 27.2	-2.4
SNCC	San Nicolas Is	4.92	195	P	Pn	00 11 29.7	0.0
	baz=14						
KMRM	Mail Ridge	4.96	298	ePn	Pn	00 11 27.9	-2.4
KMRM				ePg	Pb	00 11 45.5	+2.9
NLU	North Lily Min	5.00	65	ePn	Pn	00 11 29.2	-1.7
NLU				ePg	Pg	00 11 49.1	-2.2
M02C	Callahan	5.04	313	P	Pn	00 11 31.3	-0.1
	baz=131,SNR=34						
Y12C	Blythe	5.10	146	ePn	Pn	00 11 31.3	-0.9
Y12C				ePg	Pg	00 11 50.4	-3.0
Y12C				eSg	Sg	00 12 59.0	-0.5
Y12C	Blythe	5.10	146	P	Pn	00 11 33.0	+0.9
	baz=327						
109C	Camp Elliot, M	5.17	172	P	Pn	00 11 34.3	+1.2
	baz=352						
CPE	Camp Elliot	5.17	172	ePn	Pn	00 11 31.2	-1.8
CPE				ePg	Pg	00 11 50.7	-4.0
YBH	Yreka Blue Hor	5.19	317	ePn	Pn	00 11 31.1	-2.3
YBH				Lg	Lg	00 12 59.4	
YBH	Yreka Blue Hor	5.19	317	eP	Pn	00 11 31.1	-2.3
YBH	Yreka Blue Hor	5.19	317	Pn	Pn	00 11 34.6	+1.2
	4.8nm,0.3s,baz=141,slow=8.8,SNR=50						
YBH				Lg	Lg	00 12 59.4	
	baz=207,slow=18,SNR=1.6						
MONP2	Monument Peak	5.27	166	P	Pn	00 11 34.4	-0.3
	baz=346						
KHMM	Horse Mountain	5.28	304	ePn	Pn	00 11 33.0	-1.7
KHMM				ePg	Pb	00 11 48.4	+0.3
MPU	Maple Canyon	5.33	66	ePn	Pn	00 11 34.7	-0.8
MPU				ePg	Pg	00 11 56.7	-1.1
L04D	Klamath Falls	5.34	323	P	Pn	00 11 37.3	+1.7
	baz=141,SNR=66						
J08A	Circle Bar Ran	5.34	356	ePn	Pn	00 11 34.1	-1.5
J08A				ePg	Pg	00 11 53.7	-4.3
J08A				eSg	Sg	00 13 05.9	-1.3
SWSC	Sam W. Stewart	5.37	160	P	Pn	00 11 35.1	-0.7
	baz=341						
SPUT	South Promonto	5.39	51	ePn	Pn	00 11 38.6	+2.4
K04D	Chiloquin, OR	5.42	329	P	Pn	00 11 38.9	+2.2
	baz=147,SNR=44						
BAR	Barrett	5.43	168	ePn	Pn	00 11 38.6	+1.8
JCC	Jacoby Creek,	5.45	303	ePg	Pb	00 11 47.0	-3.8
HVU	Hansel Valley	5.49	45	ePn	Pn	00 11 39.4	+1.8
HVU	Hansel Valley	5.49	45	eP	Pn	00 11 39.4	+1.8
CTU	Camp Tracy	5.52	59	ePn	Pn	00 11 43.8	+5.7
IKP	In-Ko-Pah, Jac	5.57	163	P	Pn	00 11 39.5	+0.8
	baz=344						
GLA	Glamis	5.59	152	ePn	Pn	00 11 41.5	+2.7
GLA	Glamis	5.59	152	eP	Pn	00 11 41.5	+2.7
GLA	Glamis	5.59	152	P	Pn	00 11 38.8	-0.1
	baz=333						
JLU	Jordanelle	5.69	61	ePn	Pn	00 11 39.2	-1.2
JLU				ePg	Pg	00 12 03.5	-1.0
JLU				eSg	Sg	00 13 19.5	+1.2
Y14A	Wickenburg	5.74	134	ePn	Pn	00 11 40.0	-0.9
Y14A				ePg	Pg	00 12 01.9	-3.6
Y14A				eSg	Sg	00 13 18.2	-1.6
J05D	Fort Rock, OR	5.81	336	P	Pn	00 11 44.5	+2.6
	baz=154,SNR=98						
P17A	Butcher Ranch,	5.85	73	ePn	Pn	00 11 41.5	-1.1
P17A				ePg	Pg	00 12 05.6	-2.0
P17A				eSg	Sg	00 13 20.4	-2.9
WUAZ	Wupatki	5.87	113	ePn	Pn	00 11 41.8	-1.0
WUAZ				ePg	Pg	00 12 05.5	-2.5
WUAZ				eSg	Sg	00 13 21.1	-2.9
WUAZ	Wupatki	5.87	113	P	Pn	00 11 43.7	+0.9
	baz=297						
HUMO	Hull Mountain	5.95	322	ePn	Pn	00 11 41.5	-2.3
SRU	San Rafael Swe	5.95	77	ePn	Pn	00 11 42.9	-1.1
SRU				ePg	Pg	00 12 07.5	-2.0
SRU				eSg	Sg	00 13 21.4	-5.3
SRU	San Rafael Swe	5.95	77	eP	Pn	00 11 42.9	-1.1
TCUT	Toone Canyon	5.95	57	ePn	Pn	00 11 42.8	-1.3
TCUT				ePg	Pg	00 12 07.1	-2.5
TCUT				eSg	Sg	00 13 21.4	-5.2
L02E	Cave Junction	5.97	316	P	Pn	00 11 46.7	+2.7
	baz=132,SNR=22						
J04D	Umpqua Nationa	6.08	330	P	Pn	00 11 48.0	+2.2
	baz=148,SNR=55						
I07A	Izee	6.16	350	ePn	Pn	00 11 44.9	-1.9
I07A				eLg	Lg	00 13 33.5	
HLID	Hailey	6.17	25	ePn	Pn	00 11 44.5	-2.3
HLID				eSg	Sg	00 13 26.3	-7.2
HLID	Hailey	6.17	25	P	Pn	00 11 49.3	+2.4
	baz=208						
PINE	Pine Mountain	6.18	340	ePn	Pn	00 11 45.1	-2.1
P18A	Preston Nutter	6.25	73	ePn	Pn	00 11 45.7	-2.5
P18A				ePg	Pg	00 12 12.7	-2.7
113A	Mohawk Valley,	6.27	145	ePn	Pn	00 11 47.1	-1.1
113A				ePg	Pg	00 12 11.9	-3.8
K02D	Willamette Mer	6.37	319	P	Pn	00 11 52.2	+2.6
	baz=136,SNR=25						
K02D				Sb	Sb	00 13 25.7	+2.8
	baz=136						
X16A	Lo Mia Camp, P	6.40	122	ePn	Pn	00 11 48.5	-1.6
X16A				ePg	Pg	00 12 14.0	-4.1
I04A	Tendick Farm,	6.67	331	P	Pn	00 11 56.6	+2.9
	baz=149,SNR=122						
I05D	Terrebonne, OR	6.80	339	P	Pn	00 11 58.7	+3.3
	baz=158,SNR=6.3						
J01E	Myrtle Point	6.84	321	P	Pn	00 11 58.6	+2.6
	baz=137,SNR=17						
BMO	Blue Mountains	6.85	4	ePn	Pn	00 11 54.5	-1.7
BMO	Blue Mountains	6.85	4	eP	Pn	00 11 54.5	-1.7
KEBM	Edson Butte	6.85	317	ePn	Pn	00 11 54.3	-1.8
I03D	Drain, OR	6.97	326	P	Pn	00 12 00.5	+2.7
	baz=143,SNR=49						
PV09	Paradox Valley	6.98	83	ePn	Pn	00 11 57.1	-1.2
PV05	Paradox Valley	7.01	87	ePn	Pn	00 11 58.8	+0.1
PV10	Paradox Valley	7.06	84	ePn	Pn	00 11 57.9	-1.3
PV14	Lion Creek, Pa	7.07	84	ePn	Pn	00 11 58.4	-0.9
AHID	Auburn Hatcher	7.08	46	ePn	Pn	00 11 58.1	-1.3
PV23	Carpenter Ridg	7.08	84	ePn	Pn	00 11 58.4	-1.1
PV19	Morning Glory	7.10	85	ePn	Pn	00 11 58.7	-1.1
PV21	Cone Mtn., Par	7.11	83	ePn	Pn	00 11 58.5	-1.4
PV20	West Nyswonger	7.11	85	ePn	Pn	00 11 58.9	-1.1
PV17	East Wray Mesa	7.12	85	ePn	Pn	00 11 59.0	-1.1
PV16	Nyswonger Mesa	7.15	85	ePn	Pn	00 11 59.3	-1.2
PV04	Paradox Valley	7.16	84	ePn	Pn	00 11 59.7	-0.9
PV11	David Mesa, Pa	7.19	85	ePn	Pn	00 11 59.6	-1.4
PV03	Paradox Valley	7.21	85	ePn	Pn	00 11 59.9	-1.4
PV13	Radium Mtn., P	7.23	86	ePn	Pn	00 12 00.3	-1.3
PV12	Saucer Basin,	7.24	85	ePn	Pn	00 12 00.2	-1.6
W18A	Petrified Fore	7.24	111	ePn	Pn	00 12 01.7	-0.1
W18A	Petrified Fore	7.24	111	P	Pn	00 12 03.1	+1.4
	baz=296						
PV02	Paradox Valley	7.30	86	ePn	Pn	00 12 01.4	-1.1
G08A	Pilot Rock	7.30	355	ePn	Pn	00 12 00.8	-1.7
PV07	Paradox Valley	7.37	84	ePn	Pn	00 12 02.2	-1.2
X18A	Snowflake	7.37	116	ePn	Pn	00 12 02.0	-1.4
H04A	Detroit Lake	7.37	336	ePn	Pn	00 12 01.3	-2.0
214A	Organ Pipe Nat	7.39	143	P	Pn	00 12 06.0	+2.4
	baz=326						
H04D	Lebanon	7.42	333	P	Pn	00 12 05.6	+1.7
	baz=150,SNR=29						
PV01	Paradox Valley	7.43	86	ePn	Pn	00 12 02.5	-1.8
PV15	Paradox Valley	7.50	85	ePn	Pn	00 12 04.0	-1.3
MVCO	Mesa Verde	7.58	93	ePn	Pn	00 12 05.2	-1.1
MVCO	Mesa Verde	7.58	93	P	Pn	00 12 08.4	+2.1
	baz=279						
REDW	Red Top Meadow	7.61	43	ePn	Pn	00 12 05.0	-1.7
G05D	Wamic, OR	7.63	342	P	Pn	00 12 11.1	+4.2
	baz=160,SNR=44						
TPAW	Teton Pass	7.64	42	ePn	Pn	00 12 05.2	-2.1
COR	Corvallis	7.68	330	ePn	Pn	00 12 04.4	-3.1
COR	Corvallis	7.68	330	eP	Pn	00 12 04.4	-3.1
FXWY	Fox Creek	7.70	41	ePn	Pn	00 12 06.7	-1.4
SNOW	Snow King Moun	7.72	43	ePn	Pn	00 12 07.3	-1.1
MCMT	McKenzie Canyo	7.82	28	ePn	Pn	00 12 07.8	-1.9
O20A	White River Ci	7.87	71	ePn	Pn	00 12 08.7	-1.6
O20A	White River Ci	7.87	71	P	Pn	00 12 13.8	+3.4
	baz=258						
LOHW	Long Hollow	7.91	43	ePn	Pn	00 12 09.0	-1.8
MOOW	Moose Ponds	7.92	42	ePn	Pn	00 12 09.4	-1.7
IMW	Indian Meadow	7.93	40	ePn	Pn	00 12 09.6	-1.6
BW06	Boulder Array	7.99	51	P	Pn	00 12 14.5	+2.6
	baz=237						
BW06				Sb	Sb	00 14 14.9	+5.4
	baz=237						
PD31	Pinedale Array	7.99	51	ePn	Pn	00 12 10.0	-1.9
PDAR	Pinedale Array	7.99	51	ePn	Pn	00 12 10.8	-1.1
PDAR				Lg	Lg	00 14 23.4	
PDAR	Pinedale Array	7.99	51	Pn	Pn	00 12 17.0	+5.0
	0.6nm,0.3s,baz=233,slow=12,SNR=48						
PDAR				Lg	Lg	00 14 23.4	
	1.1nm,0.3s,baz=230,slow=23,SNR=2.8						
PDAR				LR	LR	00 15 23.2	
	comp=Z,4µm,21.0s,baz=245,slow=38						
FLWY	Flagg Ranch	8.18	40	ePn	Pn	00 12 13.1	-1.5
TUC	Tucson	8.20	132	ePn	Pn	00 12 13.2	-1.5
TUC	Tucson	8.20	132	eP	Pn	00 12 13.2	-1.5
TUC	Tucson	8.20	132	P	Pn	00 12 16.7	+2.0
	baz=316						
TUC				Sb	Sb	00 14 20.3	+4.9
	baz=316						
G03D	McMinnville, O	8.20	333	P	Pn	00 12 18.0	+3.4
	baz=150,SNR=52						
F05D	White Salmon	8.27	343	P	Pn	00 12 18.4	+2.8
	baz=161,SNR=34						
DLMT	Dillon	8.37	27	ePn	Pn	00 12 15.7	-1.5
YHB	Horse Butte	8.44	35	ePn	Pn	00 12 18.0	-0.2
HAWA	Hanford	8.45	353	ePn	Pn	00 12 22.6	+4.6
H17A	Grant Village	8.47	39	ePn	Pn	00 12 18.4	-0.1
YNR	Norris Junctio	8.65	37	ePn	Pn	00 12 19.8	-1.3
SMCO	Snowmass	8.70	79	ePn	Pn	00 12 20.7	-1.3
S22A	4UR Ranch, Cre	8.83	88	ePn	Pn	00 12 22.3	-1.3
S22A	4UR Ranch, Cre	8.83	88	P	Pn	00 12 24.2	+0.6
	baz=275						
F03A	Seaside	8.93	334	ePn	Pn	00 12 23.0	-1.6
BOZ	Bozeman (W)	8.93	30	ePn	Pn	00 12 24.0	-0.8
BOZ	Bozeman (W)	8.93	30	eP	Pn	00 12 24.0	-0.8
BOZ	Bozeman (W)	8.93	30	P	Pn	00 12 26.2	+1.4
	baz=214						
D08A	Wollman Farm,	9.06	356	ePn	Pn	00 12 24.7	-1.7
RWWY	Rawlins	9.06	63	ePn	Pn	00 12 25.3	-1.4
LON	Longmire	9.17	343	ePn	Pn	00 12 25.8	-2.2
LON	Longmire	9.17	343	eP	Pn	00 12 25.8	-2.2
E04D	Cinebar	9.18	340	P	Pn	00 12 25.7	-2.3
	baz=157,SNR=27						
MSO	Missoula	9.30	17	ePn	Pn	00 12 28.4	-1.4
MSO	Missoula	9.30	17	P	Pn	00 12 28.3	-1.5
	baz=200						
LAZ	Ladron	9.48	109	ePn	Pn	00 12 33.1	+0.7
D05A	Enumclaw	9.62	343	ePn	Pn	00 12 32.5	-1.7
RLMT	Red Lodge	9.64	40	ePn	Pn	00 12 32.9	-1.7
RLMT	Red Lodge	9.64	40	P	Pn	00 12 34.9	+0.3
	baz=226						
LENM	Lemitar	9.71	110	ePn	Pn	00 12 35.3	-0.2
N23A	Red Feather La	9.75	69	ePn	Pn	00 12 34.4	-1.7
N23A	Red Feather La	9.75	69	P	Pn	00 12 39.0	+2.8
	baz=257						
319A	Douglas	9.76	130	ePn	Pn	00 12 35.1	-1.1
ANMO	Albuquerque	9.78	105	ePn	Pn	00 12 35.3	-1.2
ANMO				Pg		00 13 19.7	
ANMO				Lg	Lg	00 15 23.5	
ANMO	Albuquerque	9.78	105	eP	Pn	00 12 35.3	-1.2
ANMO	Albuquerque	9.78	105	P	Pn	00 12 39.7	+3.2
	baz=292						
ANMO	Albuquerque	9.78	105	Pn	Pn	00 12 41.6	+5.1
	0.2nm,0.3s,baz=299,slow=12,SNR=7.3						
ANMO				Pg		00 13 19.7	
	2.7nm,0.3s,baz=282,slow=12,SNR=26						
ANMO				Lg	Lg	00 15 23.5	
	1.5nm,0.3s,baz=29,slow=18,SNR=2.9						
C09A	Chrisman Ranch	9.78	359	ePn	Pn	00 12 34.3	-2.0
HRY	Holter Researc	9.80	26	ePn	Pn	00 12 35.5	-1.3
ISCO	Idaho Springs	9.81	76	ePn	Pn	00 12 35.3	-1.7
ISCO	Idaho Springs	9.81	76	eP	Pn	00 12 35.3	-1.7
ISCO	Idaho Springs	9.81	76	P	Pn	00 12 36.3	-0.7
	baz=264						
SDCO	Great Sand Dun	9.88	88	ePn	Pn	00 12 36.3	-1.6
SDCO	Great Sand Dun	9.88	88	P	Pn	00 12 38.8	+0.8
	baz=276						
K22A	Casper	9.90	59	ePn	Pn	00 12 36.4	-1.6
K22A	Casper	9.90	59	P	Pn	00 12 37.3	-0.7
	baz=246						
LPM	Los Pinos Moun	9.90	109	ePn	Pn	00 12 37.2	-0.9
GCMT	Greycliff	9.93	36	ePn	Pn	00 12 37.7	-0.9
BNM	Barren Site	9.97	109	ePn	Pn	00 12 37.4	-1.7
121A	Cookes Peak, D	9.97	120	P	Pn	00 12 41.6	+2.5
	baz=306						
Q24A	Divide	10.11	81	ePn	Pn	00 12 40.3	-0.8
C06D	Leavenworth	10.12	349	P	Pn	00 12 45.3	+4.3
	baz=167,SNR=12						
PHWY	Pilot Hill	10.20	67	ePn	Pn	00 12 40.7	-1.7
D03D	Eldon	10.22	340	P	Pn	00 12 37.3	-5.0
	baz=157,SNR=9.9						
NEW	Newport	10.26	3	ePn	Pn	00 12 40.9	-2.0
NEW				Lg	Lg	00 15 29.6	
NEW	Newport	10.26	3	eP	Pn	00 12 40.9	-2.0
NEW	Newport	10.26	3	P	Pn	00 12 44.6	+1.7
	baz=184						
NEW	Newport	10.26	3	Pn	Pn	00 12 46.9	+4.0
	0.5nm,0.3s,baz=179,slow=12,SNR=21						
NEW				Lg	Lg	00 15 29.6	
	0.2nm,0.3s,baz=321,slow=17,SNR=2.3						
NLWA	Neilton Lookou	10.31	337	ePn	Pn	00 12 41.0	-2.6
B08A	Colville Reser	10.38	355	ePn	Pn	00 12 42.5	-2.0
B05A	Bryant	10.67	345	P	Pn	00 12 52.8	+4.4
	baz=162,SNR=10						
B06A	Marblemount	10.80	347	ePn	Pn	00 12 47.6	-2.5
T25A	Trinidad	10.81	91	ePn	Pn	00 12 49.1	-1.5
EGMT	Eagleton	11.66	28	ePn	Pn	00 13 00.7	-1.5
EGMT	Eagleton	11.66	28	P	Pn	00 13 05.8	+3.7
	baz=214						
MNTX	Cornudas Mount	12.12	118	ePn	Pn	00 13 07.4	-0.9
MNTX	Cornudas Mount	12.12	118	P	Pn	00 13 12.1	+3.8
	baz=305						
RSSD	Black Hills	12.16	56	ePn	Pn	00 13 07.2	-1.9
RSSD	Black Hills	12.16	56	eP	Pn	00 13 07.2	-1.9
RSSD	Black Hills	12.16	56	P	Pn	00 13 07.5	-1.6
	baz=245						
LAO	LASA Array	12.27	41	ePn	Pn	00 13 08.8	-1.5
LAO	LASA Array	12.27	41	P	Pn	00 13 11.7	+1.4
	baz=229						
CPRX	Cap Rock	12.53	109	ePn	Pn	00 13 13.3	-0.8
GDL2	Guadalupe Moun	12.57	113	ePn	Pn	00 13 13.3	-1.3
LLLB	Lillooet	12.89	349	ePn	Pn	00 13 17.2	-1.6
MSTX	Muleshoe	12.97	104	ePn	Pn	00 13 18.6	-1.5
MSTX	Muleshoe	12.97	104	P	Pn	00 13 19.2	-0.9
	baz=293						
AMTX	Amarillo	13.50	98	ePn	Pn	00 13 26.3	-0.9
AMTX	Amarillo	13.50	98	P	Pn	00 13 27.9	+0.7
	baz=288						
CBKS	Cedar Bluff	14.34	81	ePn	Pn	00 13 37.7	-0.9
CBKS	Cedar Bluff	14.34	81	eP	Pn	00 13 37.7	-0.9
CBKS	Cedar Bluff	14.34	81	P	Pn	00 13 40.2	+1.5
	baz=273						
DGMT	Dagmar	14.47	39	ePn	Pn	00 13 40.4	-0.1
DGMT	Dagmar	14.47	39	P	Pn	00 13 41.5	+1.1
	baz=229						
TXAR	Lajitas Array	14.72	122	Pn	P	00 13 48.5	-1.7
	0.1nm,0.3s,baz=314,slow=12,SNR=44						
TXAR				Lg	Lg	00 18 02.3	
	0.0nm,0.3s,baz=315,slow=36,SNR=3.1						
U32A	Winter Ranch,	15.22	90	ePn	Pn	00 13 49.9	-0.8
	34nm,0.9s						
LPIG	La Paz	15.35	153	Lg	Lg	00 18 27.1	
	0.6nm,0.3s,baz=45,slow=11,SNR=2.4						
BGNE	Belgrade	15.63	71	ePn	Pn	00 13 55.0	-1.0
	34nm,0.9s						
SUSD	Miller	15.68	60	P	Pn	00 13 56.9	+0.4
	baz=252						
WMOK	Wichita Mounta	15.81	96	ePn	Pn	00 13 57.7	-0.6
	28nm,1.4s						
WMOK	Wichita Mounta	15.81	96	eP	Pn	00 13 57.7	-0.6
WMOK				pmax	pmax		
	comp=Z,28nm,1.4s						
WMOK	Wichita Mounta	15.81	96	P	P	00 14 00.7	-1.5
	baz=288						
ABTX	Abilene, Hawle	15.90	104	ePn	Pn	00 13 58.5	-1.1
	comp=Z,152nm,1.2s						
ABTX	Abilene, Hawle	15.90	104	P	Pn	00 14 00.7	+1.1
	baz=295						
MDND	Maddock	16.63	48	ePn	Pn	00 14 07.6	-1.1
	comp=Z,137nm,1.3s						
MDND	Maddock	16.63	48	P	Pn	00 14 07.4	-1.3
	baz=241						
KSU1	Kansas State U	16.76	80	ePn	Pn	00 14 09.9	-0.5
	comp=Z,50nm,0.9s						
KSU1	Kansas State U	16.76	80	P	Pn	00 14 10.3	-0.1
	baz=273						
JCT	Junction City	16.80	111	ePn	Pn	00 14 10.0	-1.0
	comp=Z,109nm,1.4s						
JCT	Junction City	16.80	111	eP	Pn	00 14 10.0	-1.0
JCT				pmax	pmax		
	comp=Z,109nm,1.4s						
JCT	Junction City	16.80	111	P	Pn	00 14 11.0	0.0
	baz=302						
ECSD	EROS Data Cent	17.12	64	ePn	Pn	00 14 14.8	-0.2
	comp=Z,14nm,0.9s						
ECSD	EROS Data Cent	17.12	64	P	Pn	00 14 14.0	-1.0
	baz=258						
WHTX	Lake Whitney,	17.85	104	ePn	Pn	00 14 23.1	-1.0
	comp=Z,148nm,1.1s						
WHTX	Lake Whitney,	17.85	104	P	P	00 14 24.5	-0.2
	baz=295						
TUL1	Leonard	17.86	90	ePn	Pn	00 14 22.2	-1.9
	comp=Z,61nm,1.2s						
TUL1	Leonard	17.86	90	P	Pn	00 14 23.6	-0.6
	baz=283						
833A	Chaparral WMA,	18.30	116	P	P	00 14 33.6	+3.9
	baz=307						
435B	Jarrell	18.30	107	ePn	P	00 14 29.4	-0.3
	comp=Z,58nm,1.0s						
435B	Jarrell	18.30	107	P	P	00 14 30.3	+0.6
	baz=299						
HHAR	Hobbs	19.24	88	eP	P	00 14 39.0	-1.1
	comp=Z,25nm,1.2s						
SCIA	State Center	19.36	71	eP	P	00 14 39.6	-1.7
	comp=Z,58nm,0.8s						
SCIA	State Center	19.36	71	P	Pn	00 14 42.6	+0.2
	baz=267						
W39A	Magazine	19.62	91	eP	P	00 14 43.5	-0.7
	comp=Z,38nm,1.1s						
W39A	Magazine	19.62	91	P	P	00 14 44.5	+0.2
	baz=286						
ULM	Lac du Bonnet	19.95	45	eP	P	00 14 46.6	-1.0
	comp=Z,33nm,0.8s						
ULM				Lg	Lg	00 20 37.5	
ULM	Lac du Bonnet	19.95	45	P	Pn	00 14 48.8	-0.5
	comp=Z,1.6nm,0.3s,baz=229,slow=11,SNR=19						
ULM				Lg	Lg	00 20 37.5	
	comp=Z,0.1nm,0.3s,baz=177,slow=19,SNR=2.0						
ULM				LR	LR	00 22 51.6	
	comp=Z,2µm,21.8s,baz=241,slow=38						
FFC	Flin Flon	19.95	28	eP	P	00 14 46.6	-1.0
	comp=Z,14nm,0.7s						
MIAR	Mount Ida	19.97	93	eP	P	00 14 46.6	-1.4
	comp=Z,125nm,1.4s						
MIAR	Mount Ida	19.97	93	eP	P	00 14 46.6	-1.4
MIAR				pmax	pmax		
	comp=Z,125nm,1.4s						
MIAR	Mount Ida	19.97	93	P	Pn	00 14 48.5	-1.1
	baz=287						
HKT	Hockley	20.03	107	eP	P	00 14 47.6	-1.0
	comp=Z,60nm,1.4s						
HKT	Hockley	20.03	107	eP	P	00 14 47.6	-1.0
HKT				pmax	pmax		
	comp=Z,59nm,1.4s						
U40A	Yellville	20.08	87	P	Pn	00 14 49.9	-1.1
	baz=282						
NATX	Nacogdoches	20.10	101	eP	P	00 14 48.0	-1.5
NATX	Nacogdoches	20.10	101	P	Pn	00 14 50.7	-0.6
	baz=295						
SPMN	Marine on St.	20.11	61	eP	P	00 14 48.0	-1.4
	comp=Z,26nm,0.6s						
SPMN	Marine on St.	20.11	61	P	P	00 14 49.9	+0.5
	baz=258						
M39A	Webster	20.12	72	P	P	00 14 49.6	0.0
	baz=269						
ZAIG	Zacatecas	20.16	135	eP	P	00 14 49.0	-1.4
	comp=Z,50nm,1.4s						
L39A	Vinton	20.28	70	P	Pn	00 14 52.1	-1.1
	baz=267						
F37A	Hinrichs Farm,	20.34	60	P	P	00 14 52.3	+0.4
	baz=257						

H38A	Maiden Rock	20.36	63	P	P	00 14 52.8	+0.6
	baz=260						
K39A	Oelwein	20.40	69	P	P	00 14 52.9	+0.3
	baz=266						
LNIG	Linares	20.46	124	*e*P	P	00 14 52.3	-1.2
	comp=Z,95nm,1.5s						
N40A	Mertquake, Sal	20.56	74	P	P	00 14 54.2	-0.2
	baz=271						
X40A	Basin Creek Fa	20.57	92	*e*P	P	00 14 54.1	-0.4
	comp=Z,11nm,0.9s						
X40A	Basin Creek Fa	20.57	92	P	P	00 14 55.2	+0.6
	baz=287						
J39A	Decorah	20.59	67	P	P	00 14 55.0	+0.4
	baz=264						
M40A	Post Highland	20.62	72	P	Pn	00 14 55.8	-1.4
	baz=269						
S41A	Jillco Farms,	20.72	83	P	P	00 14 56.5	+0.3
	baz=279						
G38A	Ridgeland	20.75	62	P	P	00 14 56.6	+0.1
	baz=259						
V41A	Mountainview	20.76	88	P	Pn	00 14 58.3	-0.7
	baz=284						
WHAR	Wooly Hollow	20.78	90	*e*P	P	00 14 55.4	-1.4
	comp=Z,88nm,1.5s						
I39A	Houston	20.78	65	*e*P	P	00 14 55.5	-1.3
	comp=Z,24nm,0.8s						
I39A	Houston	20.78	65	P	P	00 14 57.6	+0.9
	baz=263						
T41A	Mountain View	20.80	85	P	Pn	00 14 59.5	+0.1
	baz=281						
U41A	Viola	20.82	87	P	Pn	00 14 58.2	-1.4
	baz=282						
W41B	Gary Mavity, V	20.84	90	*e*P	P	00 14 56.7	-0.7
	comp=Z,88nm,1.6s						
W41B	Gary Mavity, V	20.84	90	P	P	00 14 58.0	+0.5
	baz=286						
L40A	Anamosa	20.85	70	*e*P	P	00 14 56.8	-0.7
	comp=Z,58nm,0.8s						
L40A	Anamosa	20.85	70	P	Pn	00 14 58.5	-1.5
	baz=268						
F38A	Pierce - Schro	20.90	59	P	P	00 14 58.9	+0.8
	baz=257						
R41A	Rosebud	20.91	81	P	P	00 14 59.0	+0.9
	baz=278						
Y41A	Eaglette Beard	20.93	94	P	Pn	00 14 60.0	-1.0
	baz=289						
Q41A	Truxton	20.94	79	P	Pn	00 14 59.5	-1.6
	baz=276						
K40A	Colesburg	20.95	69	P	P	00 14 59.5	+0.9
	baz=266						
P41A	Barry, Barry	21.01	77	P	P	00 15 00.5	+1.2
	baz=274						
CCM	Cathedral Cave	21.04	82	*e*P	P	00 14 58.7	-0.9
	comp=Z,45nm,1.1s						
CCM	Cathedral Cave	21.04	82	*e*P	P	00 14 58.7	-0.9
CCM				pmax	pmax		
	comp=Z,45nm,1.1s						
CCM	Cathedral Cave	21.04	82	P	P	00 15 01.4	+1.7
	baz=278						
H39A	Augusta	21.07	63	P	P	00 14 59.6	-0.3
	baz=261						
N41A	Harden Midland	21.12	74	*e*P	P	00 14 59.4	-1.1
	comp=Z,45nm,0.8s						
N41A	Harden Midland	21.12	74	P	P	00 15 00.7	+0.2
	baz=272						
O41A	Passleys Farm,	21.12	76	P	P	00 15 00.7	+0.2
	baz=273						
G39A	Holcombe	21.25	61	P	P	00 15 02.1	+0.3
	baz=260						
E38A	The Farm, Brul	21.27	58	*e*P	P	00 15 01.1	-0.9
	comp=Z,53nm,0.6s						
E38A	The Farm, Brul	21.27	58	P	P	00 15 03.2	+1.2
	baz=256						
J40A	Soldiers Grove	21.29	67	P	P	00 15 03.4	+1.1
	baz=265						
T42A	Van Buren	21.33	84	*e*P	P	00 15 01.9	-0.9
	comp=Z,43nm,0.9s						
T42A	Van Buren	21.33	84	P	P	00 15 04.2	+1.5
	baz=281						
M41A	Milan	21.35	72	P	P	00 15 04.5	+1.7
	baz=270						
U42A	Revenden	21.36	86	P	P	00 15 05.1	+2.1
	baz=283						
V42A	Cord	21.36	88	P	P	00 15 05.4	+2.3
	baz=284						
R42A	Luebbering	21.36	81	P	P	00 15 05.0	+1.9
	baz=278						
W42A	Bald Knob	21.39	89	P	P	00 15 06.2	+2.9
	baz=285						
L41A	Preston	21.39	70	P	P	00 15 06.0	+2.7
	baz=268						
I40A	Norwalk	21.43	65	P	P	00 15 05.9	+2.1
	baz=264						
S42A	Caledonia	21.44	82	P	P	00 15 05.5	+1.6
	baz=279						
Q42A	Golden Eagle	21.49	79	P	P	00 15 06.7	+2.2
	baz=276						
X42A	Stuttgart	21.50	91	P	P	00 15 06.7	+2.1
	baz=287						
F39A	Loretta	21.54	60	P	P	00 15 05.2	+0.2
	baz=258						
K41A	Shullsburg	21.56	69	P	P	00 15 04.8	-0.3
	baz=267						
P42A	Winchester	21.57	77	*e*P	P	00 15 04.1	-1.2
	comp=Z,44nm,0.9s						
P42A	Winchester	21.57	77	P	P	00 15 05.6	+0.3
	baz=275						
Y42A	Garnett, Star	21.60	93	P	P	00 15 07.6	+2.0
	baz=289						
JFWS	Jewell Farm	21.61	68	*e*P	P	00 15 04.7	-1.1
	comp=Z,31nm,0.8s						
JFWS	Jewell Farm	21.61	68	*e*P	P	00 15 04.7	-1.1
JFWS				pmax	pmax		
	comp=Z,31nm,0.8s						
JFWS	Jewell Farm	21.61	68	P	P	00 15 07.0	+1.2
	baz=266						
EYMN	Ely	21.68	54	*e*P	P	00 15 05.4	-1.0
	comp=Z,32nm,1.3s						
EYMN	Ely	21.68	54	P	P	00 15 08.5	+2.1
	baz=253						
H40A	Chili	21.69	64	P	P	00 15 08.2	+1.7
	baz=262						
FVM	French Village	21.69	82	*e*P	P	00 15 05.7	-0.9
	comp=Z,23nm,0.9s						
FVM	French Village	21.69	82	*e*P	P	00 15 05.7	-0.9
FVM				pmax	pmax		
	comp=Z,23nm,0.9s						
N42A	Yates City	21.74	74	P	P	00 15 09.5	+2.4
	baz=272						
DLBC	Dease Lake	21.88	343	*e*P	P	00 15 06.7	-1.9
	comp=Z,25nm,1.0s						
DLBC	Dease Lake	21.88	343	P	P	00 15 10.8	+2.2
	comp=Z,7.4nm,1.1s,baz=206,slow=6.7,SNR=5.8						
E39A	Mellen	21.89	59	P	P	00 15 10.0	+1.4
	baz=258						
PBMO	Poplar Bluff	21.90	85	*e*P	P	00 15 07.6	-1.2
	comp=Z,27nm,1.2s						
G40A	Rib Lake	21.92	62	*e*P	P	00 15 07.6	-1.4
	comp=Z,28nm,1.0s						
G40A	Rib Lake	21.92	62	P	P	00 15 10.4	+1.4
	baz=261						
M42A	Sheffield	21.94	72	P	P	00 15 12.4	+3.2
	baz=270						
T43A	Greenville	21.95	84	P	P	00 15 11.6	+2.2
	baz=281						
I41A	Arkdale	21.99	65	*e*P	P	00 15 08.7	-1.1
	comp=Z,32nm,0.9s						
I41A	Arkdale	21.99	65	P	P	00 15 10.2	+0.4
	baz=264						
U43A	Rector	22.01	86	P	P	00 15 10.7	+0.7
	baz=283						
L42A	Oliver, Polo	22.01	71	*e*P	P	00 15 08.6	-1.4
	comp=Z,66nm,0.9s						
L42A	Oliver, Polo	22.01	71	P	P	00 15 10.2	+0.3
	baz=269						
R43A	Red Bud	22.04	81	P	P	00 15 11.5	+1.2
	baz=278						
F40A	Park Falls	22.09	60	P	P	00 15 11.7	+0.8
	baz=259						
Q43A	New Douglas	22.13	79	P	P	00 15 11.8	+0.4
	baz=277						
P43A	Skaggs, Pawnee	22.20	77	P	P	00 15 13.1	+1.0
	baz=275						
H41A	Junction City	22.21	64	*e*P	P	00 15 11.2	-1.0
	comp=Z,26nm,0.9s						
H41A	Junction City	22.21	64	P	P	00 15 12.9	+0.8
	baz=263						
K42A	Prairie Point,	22.27	69	P	P	00 15 13.9	+1.2
	baz=267						
HDIL	Hopedale	22.31	74	*e*P	P	00 15 11.8	-1.4
	comp=Z,137nm,1.5s						
HDIL	Hopedale	22.31	74	P	P	00 15 12.4	-0.8
	baz=273						
O43A	Sugar Creek Fa	22.31	75	P	P	00 15 11.9	-1.4
	baz=274						
E40A	Wakefield	22.35	59	P	P	00 15 12.9	-0.7
	baz=258						
N43A	Stutzman Famil	22.39	73	P	P	00 15 13.1	-0.9
	baz=272						
J42A	Columbus	22.46	67	P	P	00 15 13.9	-1.0
	baz=266						
M43A	Waltham Townsh	22.54	72	P	P	00 15 17.3	+1.6
	baz=271						
G41A	Antigo	22.62	62	P	P	00 15 14.7	-1.8
	baz=262						
S44A	Carbondale	22.66	82	P	P	00 15 15.2	-1.8
	baz=280						
I42A	Draeger Farm,	22.66	66	*e*P	P	00 15 15.8	-1.1
	comp=Z,27nm,0.9s						
I42A	Draeger Farm,	22.66	66	P	P	00 15 15.2	-1.7
	baz=265						
Q44A	Meyer Farm, Va	22.67	79	*e*P	P	00 15 15.4	-1.6
	comp=Z,42nm,0.9s						
Q44A	Meyer Farm, Va	22.67	79	P	P	00 15 15.0	-2.0
	baz=277						
SIUC	Southern Illin	22.68	82	*e*P	P	00 15 15.8	-1.4
	comp=Z,31nm,1.0s						
L43A	Garden Prairie	22.70	70	P	P	00 15 17.3	-0.1
	baz=269						
R44A	Waltonville	22.70	80	P	P	00 15 16.9	-0.5
	baz=278						
F41A	Three Lakes	22.76	61	*e*P	P	00 15 16.6	-1.3
	comp=Z,40nm,0.9s						
F41A	Three Lakes	22.76	61	P	P	00 15 15.9	-2.1
	baz=260						
COWI	Conover	22.80	60	*e*P	P	00 15 16.9	-1.5
	comp=Z,31nm,0.8s						
P44A	Sand Creek, Wi	22.91	77	P	P	00 15 20.4	+0.8
	baz=276						
O44A	Mansfield	22.97	75	P	P	00 15 19.9	-0.2
	baz=274						
J43A	Natural Harves	22.98	67	P	P	00 15 21.5	+1.2
	baz=267						
E41A	Kenton	22.98	59	P	P	00 15 20.8	+0.5
	baz=259						
H42A	Shiocton	22.99	64	P	P	00 15 21.4	+1.0
	baz=264						
K43A	Burlington	23.01	69	P	P	00 15 21.4	+0.8
	baz=268						
G42A	Mountain	23.15	62	*e*P	P	00 15 21.3	-0.7
	comp=Z,29nm,0.9s						
G42A	Mountain	23.15	62	P	P	00 15 23.1	+1.0
	baz=262						
N44A	Piper City	23.18	74	P	P	00 15 22.6	+0.2
	baz=273						
S45A	Carrier Mills	23.18	82	P	P	00 15 23.6	+1.2
	baz=280						
I43A	Langenfeld Bro	23.21	66	P	P	00 15 24.6	+1.9
	baz=266						
M44A	Midewin, Midew	23.23	72	P	P	00 15 24.6	+1.7
	baz=272						
W45A	Hickory Valley	23.26	88	P	P	00 15 23.9	+0.6
	baz=286						
OXF	Oxford	23.27	90	*e*P	P	00 15 22.3	-1.0
	comp=Z,107nm,1.1s						
OXF	Oxford	23.27	90	*e*P	P	00 15 22.3	-1.0
OXF				pmax	pmax		
	comp=Z,107nm,1.1s						
OXF	Oxford	23.27	90	P	P	00 15 25.0	+1.7
	baz=287						
BESE	Bessie Mountai	23.30	337	*e*P	P	00 15 22.0	-1.5
	comp=Z,44nm,1.2s						
R45A	Skylar, Fairfi	23.32	80	P	P	00 15 24.1	+0.3
	baz=279						
D41A	Chassel	23.37	58	*e*P	P	00 15 23.1	-1.1
	comp=Z,66nm,1.0s						
OLIL	Olney	23.40	79	*e*P	P	00 15 23.6	-0.9
	comp=Z,33nm,1.1s						
F42A	Maple Grove Fa	23.43	61	P	P	00 15 26.2	+1.3
	baz=261						
O45A	Potomac	23.53	75	P	P	00 15 27.3	+1.5
	baz=274						
H43A	Windswept, Lux	23.53	64	*e*P	P	00 15 24.4	-1.4
	comp=Z,66nm,1.1s						
P45A	Graceland, Par	23.58	77	*e*P	P	00 15 25.2	-1.1
	comp=Z,34nm,0.8s						
G43A	Wallace	23.68	63	*e*P	P	00 15 25.9	-1.4
	comp=Z,33nm,0.8s						
G43A	Wallace	23.68	63	P	P	00 15 27.2	-0.1
	baz=263						
E42A	Champion	23.69	60	P	P	00 15 26.9	-0.6
	baz=260						
U46A	Springville	23.76	85	P	P	00 15 28.4	+0.2
	baz=283						
R46A	Gibon Southern	23.93	80	P	P	00 15 30.5	+0.7
	baz=279						
V46A	Holladay	23.94	86	P	P	00 15 31.3	+1.4
	baz=284						
P46A	Rosedale	23.98	77	P	P	00 15 32.0	+1.8
	baz=276						
WVT	Waverly	24.09	85	*e*P	P	00 15 29.6	-1.7
	comp=Z,21nm,1.0s						
WVT	Waverly	24.09	85	*e*P	P	00 15 29.6	-1.7
WVT				pmax	pmax		
	comp=Z,21nm,1.0s						
WVT	Waverly	24.09	85	P	P	00 15 32.0	+0.7
	baz=284						
F43A	Flat Rock, Esc	24.11	61	P	P	00 15 32.4	+1.0
	baz=262						
N46A	Monticello	24.24	73	P	P	00 15 31.5	-1.1
	baz=274						
E43A	Lone Tree Farm	24.31	60	*e*P	P	00 15 31.8	-1.4
	comp=Z,38nm,1.0s						
E43A	Lone Tree Farm	24.31	60	P	P	00 15 32.7	-0.5
	baz=261						
U47A	Clarksville	24.44	84	P	P	00 15 33.3	-1.2
	baz=283						
W47A	Westpoint	24.49	87	P	P	00 15 34.5	-0.6
	baz=286						
M46A	Old House Fiel	24.50	72	*e*P	P	00 15 33.8	-1.2
	comp=Z,43nm,1.0s						
M46A	Old House Fiel	24.50	72	P	P	00 15 34.3	-0.7
	baz=273						
S47A	Hartford	24.53	81	P	P	00 15 35.3	0.0
	baz=281						
YKA	Yellowknife Ar	24.59	4	P	P	00 15 35.5	-0.1
	comp=Z,4.7nm,0.8s,baz=181,slow=8.8,SNR=18						
YKA				Lg	Lg	00 23 15.3	
	comp=Z,0.2nm,0.6s,baz=172,slow=28,SNR=3.7						
YKB5	Yellowknife Ar	24.59	4	*e*P	P	00 15 33.8	-1.8
F44A	Big Bay de Noc	24.65	61	P	P	00 15 34.3	-2.0
	baz=262						
YKW3	Yellowknife Ar	24.66	4	*e*P	P	00 15 34.9	-1.3
	comp=Z,11nm,1.0s						
Q47A	Bedord North L	24.67	78	P	P	00 15 34.8	-1.7
	baz=278						
R47A	Wooly Knot Far	24.68	80	P	P	00 15 35.4	-1.3
	baz=279						
O47A	Sheridan	24.71	75	P	P	00 15 35.0	-2.0
	baz=275						
P47A	Martinsville	24.72	77	P	P	00 15 35.3	-1.7
	baz=277						
J46A	Howard City	25.00	67	P	P	00 15 38.2	-1.3
	baz=269						
T48A	Bowling Green	25.00	82	P	P	00 15 38.1	-1.4
	baz=282						
N47A	Urbana	25.02	73	P	P	00 15 37.8	-1.9
	baz=274						
WHY	Whitehorse	25.04	340	*e*P	P	00 15 37.9	-1.9
	comp=Z,21nm,1.3s						
W48A	Pulaski	25.05	87	P	P	00 15 39.0	-1.0
	baz=286						
L47A	Sherwood	25.34	71	P	P	00 15 41.9	-0.7
	baz=272						
P48A	Milroy	25.37	77	P	P	00 15 41.8	-1.1
	baz=277						
K47A	Vermontville	25.47	69	P	P	00 15 41.0	-2.8
	baz=271						
O48A	Farmland	25.49	75	P	P	00 15 41.2	-2.8
	baz=276						
N48A	Decatur	25.53	73	P	P	00 15 42.4	-1.9
	baz=274						
W49A	Belvidere	25.58	87	P	P	00 15 44.3	-0.5
	baz=286						
J47A	Sunmer	25.60	68	P	P	00 15 43.4	-1.5
	baz=270						
U49A	Red Boiling Sp	25.61	83	P	P	00 15 42.8	-2.3
	baz=283						
LRAL	Lakeview Retre	25.64	92	P	P	00 15 46.4	+1.0
	baz=290						
G46A	Petoskey	25.66	63	P	P	00 15 46.8	+1.3
	baz=265						
T49A	Edmonton	25.68	82	P	P	00 15 46.4	+0.7
	baz=282						
V49A	McMinnville	25.69	85	P	P	00 15 46.3	+0.4
	baz=285						
X49A	Woodville	25.70	88	P	P	00 15 45.8	-0.1
	baz=287						
M48A	Edgerton	25.72	72	P	P	00 15 46.3	+0.2
	baz=273						
R49A	Shelbyville	25.74	79	P	P	00 15 46.7	+0.4
	baz=280						
F46A	Macinaw City C	25.78	62	P	P	00 15 47.3	+0.8
	baz=264						
GLMI	Grayling	25.80	64	P	P	00 15 47.0	+0.2
	baz=266						
Y49A	Blount Mountai	25.83	90	P	P	00 15 45.4	-1.8
	baz=288						
I47A	Gladwin	25.84	66	P	P	00 15 49.2	+2.1
	baz=268						
FCC	Fort Churchill	25.87	29	*e*P	P	00 15 45.8	-1.4
	comp=Z,21nm,0.8s						
FCC	Fort Churchill	25.87	29	*e*P	P	00 15 45.8	-1.4
FCC				pmax	pmax		
	comp=Z,21nm,0.8s						
P49A	Miami Univ. Ec	25.90	76	P	P	00 15 46.4	-1.3
	baz=277						
L48A	N Adams	25.91	71	P	P	00 15 47.5	-0.3
	baz=273						
HYT	Haines Junctio	25.91	338	*e*P	P	00 15 46.1	-1.6
	comp=Z,9.9nm,1.0s						
Z49A	Columbiana	25.95	91	P	P	00 15 47.1	-1.2
	baz=290						
K48A	Perry	26.12	69	P	P	00 15 49.9	+0.2
	baz=271						
O49A	Covington	26.12	75	*e*P	P	00 15 49.5	-0.2
	comp=Z,23nm,0.9s						
O49A	Covington	26.12	75	P	P	00 15 47.2	-2.5
	baz=276						
E46A	Sault Ste Mari	26.15	61	P	P	00 15 52.9	+2.9
	baz=264						
N49A	Columbus Grove	26.16	73	*e*P	P	00 15 48.2	-1.9
	comp=Z,51nm,1.5s						
N49A	Columbus Grove	26.16	73	P	P	00 15 48.2	-1.9
	baz=275						
M49A	Liberty Center	26.28	72	P	P	00 15 51.4	+0.3
	baz=274						
W50A	Signal Mountai	26.31	86	P	P	00 15 51.8	+0.3
	baz=286						
J48A	Bridge Port	26.36	68	P	P	00 15 55.3	+3.5
	baz=271						
Y50A	Piedmont	26.36	89	P	P	00 15 51.2	-0.7
	baz=288						
U50A	Jamestown	26.37	83	P	P	00 15 52.3	+0.3
	baz=284						
R50A	Paris	26.39	79	P	P	00 15 53.0	+0.8
	baz=280						
L49A	Milan	26.40	70	P	P	00 15 53.0	+0.8
	baz=273						
D46A	Sault St. Mari	26.40	59	P	P	00 15 51.3	-0.9
	baz=263						
Z50A	Ashland	26.41	91	*e*P	P	00 15 51.0	-1.4
	comp=Z,13nm,1.0s						
Z50A	Ashland	26.41	91	P	P	00 15 52.9	+0.4
	baz=290						
S50A	Richmond	26.45	80	P	P	00 15 54.1	+1.4
	baz=281						
P50A	Jamestown	26.60	76	P	P	00 15 53.7	-0.3
	baz=278						
O50A	Cable	26.67	75	P	P	00 15 56.0	+1.3
	baz=277						
W51A	Cleveland	26.75	86	P	P	00 15 56.4	+0.9
	baz=286						
J49A	Marlette	26.83	67	P	P	00 15 56.8	+0.8
	baz=271						
V51A	Loudon	26.91	84	P	P	00 15 57.2	+0.3
	baz=285						
T51A	Gray	26.95	82	P	P	00 15 59.7	+2.5
	baz=283						
N50A	Nevada	26.96	73	P	P	00 15 57.5	+0.2
	baz=276						
R51A	Hillsboro	26.96	79	P	P	00 15 56.0	-1.3
	baz=280						
S51A	Beattyville	27.08	80	*e*P	P	00 15 57.0	-1.4
	comp=Z,19nm,1.1s						
S51A	Beattyville	27.08	80	P	P	00 15 58.7	+0.3
	baz=282						
L50A	Kingsville	27.11	70	P	P	00 15 58.9	+0.2
	baz=273						
ACSO	Alum Creek Sta	27.14	74	*e*P	P	00 15 57.6	-1.4
	comp=Z,33nm,0.8s						
ACSO	Alum Creek Sta	27.14	74	P	P	00 15 59.7	+0.8
	baz=277						
P51A	Williamsport	27.18	76	*e*P	P	00 15 57.9	-1.4
	comp=Z,13nm,0.8s						
P51A	Williamsport	27.18	76	P	P	00 16 00.1	+0.8
	baz=278						
251A	Midway	27.23	93	P	P	00 16 00.8	+1.0
	baz=292						
TKL	Tuckaleechee C	27.40	84	*e*P	P	00 15 57.9	-3.3
	comp=Z,49nm,1.6s						
TKL				Lg	Lg	00 24 43.4	
TKL	Tuckaleechee C	27.40	84	*e*P	P	00 15 57.9	-3.3
TKL				pmax	pmax		
	comp=Z,49nm,1.6s						
TKL	Tuckaleechee C	27.40	84	P	P	00 16 03.7	+2.4
	comp=Z,3.7nm,0.9s,baz=210,slow=2.9,SNR=7.4						
TKL				Lg	Lg	00 24 43.4	
	comp=Z,1.6nm,0.7s,baz=37,slow=20,SNR=2.0						
W52A	Murphy	27.43	86	P	P	00 15 59.7	-1.9
	baz=286						
O51A	Pataskala	27.44	74	P	P	00 16 01.8	+0.2
	baz=277						
F49A	Sandfield	27.67	62	P	P	00 16 03.8	+0.2
	baz=267						
252A	Lumpkin	27.79	92	P	P	00 16 02.6	-2.3
	baz=292						
P52A	Corning	27.87	75	P	P	00 16 02.4	-3.0
	baz=278						
Q52A	Bidwell	27.87	77	P	P	00 16 04.1	-1.4
	baz=280						
D48A	Paudash Townsh	27.95	59	P	P	00 16 04.6	-1.5
	baz=264						
O52A	Adamsville	28.03	74	*e*P	P	00 16 05.2	-1.7
	comp=Z,51nm,1.4s						
O52A	Adamsville	28.03	74	P	P	00 16 07.6	+0.8
	baz=278						
V53A	Saluda	28.15	84	P	P	00 16 06.1	-1.9
	baz=285						
U53A	Fall Branch	28.16	82	P	P	00 16 06.7	-1.4
	baz=284						
P53A	Whipple	28.46	76	*e*P	P	00 16 09.7	-1.0
	comp=Z,36nm,1.3s						
P53A	Whipple	28.46	76	P	P	00 16 07.7	-3.0
	baz=279						
O53A	New Philadelph	28.48	74	P	P	00 16 11.1	+0.2
	baz=278						
E50A	Wahnapitae	28.62	61	P	P	00 16 11.1	-0.9
	baz=266						
T54A	Tazewell	28.77	81	P	P	00 16 11.1	-2.5
	baz=283						
TIGA	Tifton	28.91	93	P	P	00 16 10.3	-4.4
	baz=293						
Q54A	Coxs Mills	28.97	76	P	P	00 16 15.4	+0.2
	baz=280						
R54A	Victor	28.99	78	P	P	00 16 15.2	-0.3
	baz=281						
L53A	Girard	29.02	70	P	P	00 16 13.6	-2.0
	baz=275						
DAWY	Dawson	29.05	341	*e*P	P	00 16 14.2	-1.5
	comp=Z,26nm,1.6s						
CMIG	Matias Romero	29.08	129	P	P	00 16 19.3	+2.9
	comp=Z,4.0nm,1.0s,baz=302,slow=9.1,SNR=5.3						
CMIG				Lg	Lg	00 25 39.4	
	comp=Z,1.6nm,0.4s,baz=264,slow=4.7,SNR=3.8						
P54A	Burton	29.14	75	P	P	00 16 15.3	-1.5
	baz=279						
S55A	Lewisburg	29.45	79	P	P	00 16 18.7	-0.9
	baz=282						
KMSC	Kings Mountain	29.45	84	P	P	00 16 16.1	-3.5
	baz=287						
E51A	G1948 Merrick	29.48	61	P	P	00 16 20.4	+0.7
	baz=267						
Q55A	Buckhannon	29.54	76	P	P	00 16 20.0	-0.4

	baz=280						
D51A	Lot 18 Range I	29.60	60	P	P	00 16 20.9	+0.1
	baz=266						
BLA	Blacksburg	29.64	80	P	P	00 16 19.8	-1.4
	baz=283						
R55A	Marlinton	29.64	78	P	P	00 16 21.5	+0.1
	baz=282						
P55A	Reedsville	29.65	75	P	P	00 16 20.4	-0.9
	baz=280						
SADO	Sadowa	29.70	64	eP	P	00 16 20.1	-1.5
	comp=Z,30nm,1.0s						
SADO	Sadowa	29.70	64	P	P	00 16 22.1	+0.4
	comp=Z,8.0nm,0.7s,baz=285,slow=10,SNR=3.3						
SADO				LR	LR	00 27 45.0	
	comp=Z,1µm,19.1s,baz=290,slow=35						
X56A	White Oak	29.88	85	P	P	00 16 22.6	-0.8
	baz=288						
O55A	Ligonier	29.94	74	P	P	00 16 23.4	-0.4
	baz=278						
KDAK	Kodiak Island	29.98	323	LR	LR	00 26 43.1	
	comp=Z,2µm,20.5s,baz=130,slow=33						
N55A	Marion Center	30.10	72	P	P	00 16 23.2	-2.1
	baz=278						
D52A	ZEK Kipawa Sen	30.25	60	P	P	00 16 24.4	-2.1
	baz=267						
SCRK	Sand Creek	30.28	337	eP	P	00 16 25.9	-0.8
	comp=Z,11nm,1.0s						
EPYK	Eagle Plains	30.36	345	P	P	00 16 25.7	-1.7
	baz=150						
BANO	Bancroft	30.56	64	P	P	00 16 30.4	+1.2
	baz=271						
K55A	Perry	30.57	68	P	P	00 16 30.0	+0.6
	baz=275						
D53A	Lac Vacive, Po	30.74	60	P	P	00 16 25.5	-5.4
	baz=268						
457A	Yulee	30.84	93	P	P	00 16 31.2	-0.6
	baz=294						
VLDQ	Val d'Or	30.96	58	eP	P	00 16 29.0	-3.7
	comp=Z,25nm,1.4s						
MATQ	Matagami	30.99	55	P	P	00 16 32.6	-0.5
	baz=263						
E54A	Lac Daplat, Po	31.07	61	P	P	00 16 31.7	-2.1
	baz=269						
PLVO	Plevna	31.16	64	P	P	00 16 35.7	+1.2
	baz=272						
LSQQ	Lebel-sur-Quev	31.35	56	P	P	00 16 35.1	-1.0
	baz=265						
R58B	Mineral	31.44	77	P	P	00 16 36.7	-0.4
	baz=283						
D54A	Lac Fusel, La	31.45	60	P	P	00 16 35.0	-2.1
	baz=268						
HDA	Harding Lake	31.50	336	P	P	00 16 40.5	+3.1
	baz=133						
INK	Inuvik	31.54	349	eP	P	00 16 35.8	-1.8
	comp=Z,17nm,1.3s						
INK	Inuvik	31.54	349	eP	P	00 16 35.8	-1.8
INK				pmax	pmax		
	comp=Z,17nm,1.3s						
INK	Inuvik	31.54	349	P	P	00 16 38.2	+0.6
	comp=Z,6.3nm,1.1s,baz=154,slow=5.2,SNR=8.3						
F55A	Otter Lake	31.65	62	P	P	00 16 40.6	+1.7
	baz=271						
MCK	McKinley	31.71	334	eP	P	00 16 37.6	-1.7
	comp=Z,12nm,1.0s						
MCK	McKinley	31.71	334	eP	P	00 16 37.6	-1.7
MCK				pmax	pmax		
	comp=Z,12nm,1.0s						
IL1	Eielson Array	31.73	337	eP	P	00 16 37.8	-1.6
ILAR	Eielson Array	31.73	337	P	P	00 16 41.4	+2.0
	comp=Z,5.6nm,0.8s,baz=151,slow=7.7,SNR=27						
ILAR				PcP	PcP	00 19 34.9	+4.3
	comp=Z,0.7nm,0.7s,baz=155,slow=1.6,SNR=6.4						
ILAR				LR	LR	00 28 30.6	
	comp=Z,2µm,20.4s,baz=140,slow=34						
ILB	Eielson Array	31.73	337	eP	P	00 16 37.5	-1.9
PRP	Porcupine Dome	31.85	339	eP	P	00 16 39.0	-1.6
	comp=Z,20nm,1.6s						
WRH	Wood River Hil	31.91	336	eP	P	00 16 39.5	-1.4
	comp=Z,9.4nm,0.9s						
POKR	Poker Plat Res	32.14	337	P	P	00 16 42.8	-0.2
	baz=133						
BINY	Binghamton	32.16	69	P	P	00 16 44.5	+1.1
	baz=277						
MDM	Murphy Dome	32.28	336	eP	P	00 16 42.5	-1.8
	comp=Z,4.9nm,0.8s						
BPAW	Bear Paw Mtn.	32.65	334	eP	P	00 16 46.0	-1.5
TRQ	Mont Tremblant	32.90	61	eP	P	00 16 48.2	-1.7
MLY	Manley	33.14	335	eP	P	00 16 50.5	-1.3
	comp=Z,7.1nm,0.8s						
ACCN	Adirondack Com	33.72	67	eP	P	00 16 55.6	-1.4
	comp=Z,29nm,1.1s						
LATQ	La Tuque	34.09	59	P	P	00 16 58.5	-1.7
	baz=271						
IM3	Indian Mountai	34.72	335	eP	P	00 17 04.0	-1.4
LBNH	Lisbon	34.88	65	P	P	00 17 07.5	+0.5
	baz=276						
TOLK	Toolik Lake Re	35.19	341	P	P	00 17 09.8	+0.2
	baz=134						
SCHQ	Schefferville	38.10	47	P	P	00 17 37.2	+2.8
	comp=Z,9.5nm,0.8s,baz=287,slow=9.5,SNR=8.5						
SCHQ				LR	LR	00 34 39.2	
	comp=Z,2µm,21.0s,baz=290,slow=38						
ANM	Nome	38.36	329	eP	P	00 17 35.0	-1.4
	comp=Z,7.5nm,1.0s						
ANM	Nome	38.36	329	eP	P	00 17 35.0	-1.4
ANM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TULEG	Thule	44.17	15	eP	P	00 18 22.6	-1.4
	comp=Z,10nm,1.2s						
BILL	Bilibino	50.10	332	eP	P	00 19 08.0	-2.4
BILL	Bilibino	50.10	332	eP	P	00 19 14.1	+3.7
BILL				e		00 19 19.2	
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TAOE	Nuku Hiva Isla	51.02	209	eLR	LR	00 33 44.7	
	comp=Z,769nm,27.6s						
SUMG	Summit	51.09	22	eP	P	00 19 17.2	-1.1
	comp=Z,8.0nm,0.8s						
SUMG	Summit	51.09	22	eP	P	00 19 17.2	-1.1
SUMG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ROSC	El Rosal	51.63	119	P	P	00 19 24.7	+1.6
	comp=Z,5.1nm,0.4s,baz=2.8,slow=6.0,SNR=6.2						
OTAV	Otavalo	52.29	126	eP	P	00 19 26.6	-1.5
	comp=Z,50nm,1.8s						
OTAV	Otavalo	52.29	126	eP	P	00 19 26.6	-1.5
OTAV				pmax	pmax		
	comp=Z,50nm,1.8s						
SEY	Seymchan	56.79	327	P	P	00 20 02.0	+2.5
	comp=Z,2.9nm,0.6s,baz=79,slow=8.8,SNR=13						
PETK	Petropavlovsk-	57.55	315	P	P	00 20 10.1	+5.0
	comp=Z,3.3nm,0.6s,baz=82,slow=12,SNR=4.1						
PETK				LR	LR	00 41 51.7	
	comp=Z,166nm,21.7s,baz=72,slow=33						
ATAH	Atahualpa	58.11	132	Lg	Lg	00 20 12.8	
	comp=Z,8.9nm,0.7s,baz=322,slow=4.8,SNR=4.9						
MA2	Magadan	58.72	323	P	P	00 20 15.0	+1.8
	comp=Z,2.4nm,0.4s,baz=162,slow=20,SNR=2.5						
TIXI	Tiksi	61.09	341	eP	P	00 20 27.7	-1.5
	comp=Z,6.4nm,1.1s						
TIXI	Tiksi	61.09	341	eP	P	00 20 27.7	-1.5
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PPT	Papeete	62.76	214	LR	LR	00 42 44.1	
	comp=Z,163nm,20.2s,baz=2.5,slow=31						
PPT2	Papeete2	62.77	214	eLQ	LQ	00 36 19.8	
	comp=Z,2µm,29.5s						
PPT2				eLR	LR	00 39 16.8	
	comp=Z,1µm,29.5s,baz=38						
RKT	Rikitea	62.88	198	eLR	LR	00 39 17.6	
	comp=Z,697nm,32.8s						
NNA	Nana	62.91	134	P	P	00 20 43.2	+0.9
	comp=Z,3.8nm,0.4s,baz=257,slow=4.1,SNR=2.8						
PTGA	Pitinga	65.77	112	P	P	00 21 03.0	+1.9
	comp=Z,9.5nm,0.8s,baz=301,slow=7.2,SNR=7.3						
TBI	Tubuai	67.83	211	eLR	LR	00 41 30.6	
	comp=Z,581nm,27.8s						
YSS	Yuzh-Sakhalins	68.91	314	eP	P	00 21 27.7	+7.2
YSS				e		00 21 32.5	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
ARCES	ARCESS Array B	69.46	13	LR	LR	00 52 25.0	
	comp=E,737nm,20.0s,baz=14,slow=36						
NRIK	Noril'sk	71.31	351	P	P	00 21 35.3	+0.5
	comp=E,3.9nm,0.7s,baz=50,slow=3.4,SNR=9.3						
NRIK				LR	LR	00 54 42.2	
	comp=E,374nm,20.5s,baz=43,slow=37						
ZEA	Zeya	72.73	326	eP	P	00 21 46.8	+3.1
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
MNMC	Minye Minye	72.78	132	eP	P	00 21 43.0	-1.7
	comp=Z,12nm,0.7s						
NB2	NORSAR Subarra	72.97	23	P	P	00 21 46.4	+1.4
	comp=Z,4.3nm,0.9s,baz=320,slow=6.2						
NOA	NORSAR Array B	72.97	23	P	P	00 21 46.9	+1.8
	comp=Z,1.7nm,0.7s,baz=319,slow=5.9,SNR=12						
PB11	IPOC Station P	73.24	133	eP	P	00 21 45.4	-1.9
	comp=Z,27nm,1.1s						
PB01	IPOC Station P	74.34	133	eP	P	00 21 51.7	-1.9
	comp=Z,12nm,1.0s						
BOD	Bodaibo	75.06	334	eP	P	00 21 56.5	-0.7
BOD				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LVC	Limon Verde	75.90	134	P	P	00 22 05.8	+2.9
	comp=Z,3.7nm,0.7s,baz=279,slow=4.8,SNR=3.9						
USRK	Ussuriysk Ar.	76.61	316	P	P	00 22 07.3	+1.0
	comp=Z,5.2nm,0.8s,baz=54,slow=4.9,SNR=6.2						
FINES	FINESS Array B	76.67	17	P	P	00 22 07.8	+1.5
	comp=Z,2.1nm,0.6s,baz=346,slow=17,SNR=10.0						
MJAR	Matsushiro Arr	77.77	307	P	P	00 22 15.7	+2.6
	comp=Z,1.5nm,0.4s,baz=52,slow=4.3,SNR=3.6						
CLL	Collm	81.24	29	eP	P	00 22 30.0	-1.6
CLL				e		00 22 40.0	
CLL	Collm	81.24	29	eP	P	00 22 30.0	-1.6
CLL				e		00 22 40.0	
ESDC	Sonseca Array	81.84	45	P	P	00 22 39.0	+3.9
	comp=Z,0.5nm,0.6s,baz=298,slow=4.5,SNR=3.9						
BRG	Berggiesshubel	81.94	28	eP	P	00 22 42.2	+6.9
	comp=Z,7.8nm,1.7s						
	comp=N,849nm,22.2s						
	comp=E,798nm,19.2s						
	comp=Z,926nm,19.5s						
BRG	Berggiesshubel	81.94	28	eP	P	00 22 42.2	+6.9
BRG				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BRG				MLR	MLR		
	comp=N,849nm,22.2s						
BRG				MLR	MLR		
	comp=E,798nm,19.2s						
BRG				MLR	MLR		
	comp=Z,926nm,19.5s						
PRU	Pruhonice	82.88	29	eP	P	00 22 47.2	+6.9
PRU	Pruhonice	82.88	29	eP	P	00 22 47.2	+6.9
DPC	Dobruska-Polom	83.25	27	eP	P	00 22 49.6	+7.4
DPC				ex	x	00 22 54.8	
DPC	Dobruska-Polom	83.25	27	eP	P	00 22 49.6	+7.4
DPC				e		00 22 54.8	
KSRS	Korea Array	83.40	313	P	P	00 22 44.8	+1.6
	comp=Z,3.2nm,0.9s,baz=64,slow=6.0,SNR=6.7						
GERES	GERESS Array B	83.48	30	P	P	00 22 47.2	+3.7
	comp=Z,0.6nm,0.7s,baz=339,slow=5.2,SNR=2.5						
MOTA	Moosalm	83.62	32	ePcP	P	00 22 52.5	+8.2
	comp=Z,1.8nm,0.7s						
FETA	Feichten	83.72	32	i pP	P	00 22 54.7	+10
	comp=Z,3.4nm,1.0s						
SQTA	Sankt Quirin	83.77	32	epP	P	00 22 53.4	+8.3
	comp=Z,2.9nm,0.9s						
ABTA	Abfaltersbach	84.69	32	i pP	P	00 22 55.5	+5.8
	comp=Z,4.0nm,1.0s						
KBA	Koelnbreinsper	84.76	31	epP	P	00 22 56.7	+6.5
	comp=Z,1.5nm,0.7s						
ZAK	Zakamensk	84.77	335	eP	P	00 22 56.7	+6.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CONA	Conrad Observa	85.07	29	epP	P	00 22 57.7	+6.1
	comp=Z,3.1nm,0.8s						
ARSA	Arzberg	85.49	30	epP	P	00 22 58.5	+4.8
	comp=Z,0.9nm,0.3s						
CPUP	Villa Florida	85.60	128	P	P	00 22 57.0	+2.7
	comp=Z,3.3nm,1.1s,baz=334,slow=7.6,SNR=3.7						
CPUP				LR	LR	01 01 34.7	
	comp=Z,212nm,19.3s,baz=342,slow=36						
NVS	Novosibirsk	85.73	348	eP	P	00 22 57.0	+2.4
SOKA	Soboth	85.77	30	epP	P	00 23 01.4	+6.3
SONM	Songino Array	85.82	332	P	P	00 22 56.6	+1.2
	comp=Z,0.7nm,0.7s,baz=19,slow=3.4,SNR=3.2						
SONM				LR	LR	01 02 31.6	
	comp=Z,542nm,19.6s,baz=20,slow=37						
ARU	Arti	85.87	2	eP	P	00 22 53.3	-2.0
	comp=Z,28nm,1.8s						
ARU	Arti	85.87	2	P	P	00 22 57.5	+2.2
ZAA0	Zalesovo Array	86.31	347	eP	P	00 22 55.0	-2.5
	comp=Z,14nm,1.8s						
ZALV	Zalesovo Beam	86.31	347	eP	P	00 22 55.7	-1.8
ZALV	Zalesovo Beam	86.31	347	eP	P	00 22 55.7	-1.8
ZALV	Zalesovo Beam	86.31	347	P	P	00 22 57.5	+0.1
	comp=Z,0.8nm,0.7s,baz=34,slow=10,SNR=3.6						
ZALV				LR	LR	01 04 25.9	
	comp=Z,310nm,21.8s,baz=308,slow=38						
AKASG	Malin Array Be	87.07	20	P	P	00 23 02.8	+1.6
	comp=Z,4.1nm,0.7s,baz=333,slow=3.9,SNR=3.6						
AKBB	Malin Array Si	87.07	20	eP	P	00 22 59.5	-1.8
	comp=Z,10nm,1.2s						
AKBB	Malin Array Si	87.07	20	eP	P	00 22 59.5	-1.8
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KIEV	Kiev	87.07	20	eP	P	00 22 58.5	-2.7
	comp=Z,10nm,1.2s						
KIEV	Kiev	87.07	20	eP	P	00 22 58.6	-2.7
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPSR	Galich'ya Gora	87.54	14	eP	P	00 23 05.9	+2.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BUR04	Bucovina Ar. S	88.63	24	eP	P	00 23 06.9	-2.1
VSR	Storozhevoye	88.91	14	eP	P	00 23 12.1	+2.1
VSR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BRVK	Borovoye	89.01	355	eP	P	00 23 09.0	-1.5
	comp=Z,11nm,1.0s						
BRVK	Borovoye	89.01	355	eP	P	00 23 09.0	-1.5
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	Hu-ho-hao-te	89.37	325	eP	P	00 23 09.6	-3.0
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,4.8s						
KURK	Kurchatov	90.44	350	eP	P	00 23 16.0	-1.2
	comp=Z,8.8nm,1.1s						
KURK	Kurchatov	90.44	350	eP	P	00 23 16.0	-1.2
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NJ2	Nanjing	92.46	315	eP	P	00 23 25.6	-1.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DZM	Mont Dzumac	92.67	244	eLR	LR	00 52 50.0	
	comp=Z,409nm,22.8s						
ABKAR	Akbulak array	93.08	1	eP	P	00 23 27.8	-1.7
MKAR	Makanchi Array	93.63	346	LR	LR	01 08 53.2	
	comp=Z,300nm,21.6s,baz=358,slow=38						
MAKZ	Makanchi	93.68	346	eP	P	00 23 30.6	-1.7
	comp=Z,3.3nm,0.9s						
MAKZ	Makanchi	93.68	346	eP	P	00 23 30.6	-1.7
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMQ	Urumqi	95.28	342	eP	P	00 23 39.1	-0.7
WMQ				pP	sP	00 23 44.5	-0.5
WMQ				sP	pP	00 23 47.6	+4.0
WMQ				pmax	pmax		
	comp=Z,11nm,1.9s						
WMQ				LR	LR		
	comp=Z,760nm,22.1s						
WMQ				LR	LR		
	comp=Z,810nm,23.1s						
WMQ				LR	LR		
	comp=Z,720nm,20.9s						
GTA	Gaotai	95.49	332	eP	P	00 23 49.5	+8.6
GTA				pP	sP	00 23 56.3	+10
GTA				sP	pP	00 23 59.3	+15
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LZH	Lanzhou	96.72	327	eP	P	00 23 41.3	-5.3
LZH				pP	PcP	00 23 46.6	-0.1
LZH				sP	pP	00 23 50.2	-0.3
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.2s						
LZH				LR	LR		
	comp=Z,970nm,17.3s						
LZH				LR	LR		
	comp=Z,470nm,16.5s						
LZH				LR	LR		
	comp=Z,1µm,20.1s						
BRTR	Keskin Array B	98.37	22	P	Pdif	00 23 57.5	+3.6
	comp=Z,0.9nm,0.8s,baz=346,slow=4.5,SNR=7.4						
CD2	Chengdu	101.12	324	eP	Pdif	00 24 03.0	-3.3
TORD	Torodi Ar. Bea	104.03	61	PKiKP	PKiKP	00 28 39.4	+2.6
	comp=Z,0.5nm,1.0s,baz=344,slow=4.8,SNR=2.5						
KMI	Kunming	106.47	322	PKP	PKiKP	00 28 37.1	-4.3
WRA	Warramunga Arr	115.69	264	PKP	PKiKP	00 29 00.8	+2.3
	comp=Z,0.9nm,0.9s,baz=50,slow=2.0,SNR=5.1						
ASAR	Alice Springs	118.03	261	PKP	PKiKP	00 29 02.6	-0.4
	comp=Z,0.6nm,0.7s,baz=52,slow=1.5,SNR=3.4						
NVL	N'lazarevskaya	138.27	158	ePKIKP	PKPpre	00 29 31.8	
NVL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOSA	Boshof	148.06	84	PKPbc	PKiKP	00 30 03.0	-0.5
	comp=Z,2.7nm,0.8s,baz=280,slow=3.7,SNR=5.9						

IDC **13** *00:15:13.7±0.9, 10°.89S×164°.45E, h0^{km}, mb4.4/14, mb1 4.5/17, mb1mx4.4/40, mbtmp4.4/17, ML4.5/3, MS4.0/6, Ms1 4.0/6, ms1mx3.6/25, Error ellipse: s-maj=25.4km s-min=17.4km az=126.0*

ISCJB **13** *00:15:16.8±0.4, 10°.87S±0°.06×164°.23E±0°.07, h29^{km}, mb4.6/43, MS3.9/5, Error ellipse: s-maj=11.7km s-min=6.9km az=39.2*

NEIC **13** *00:15:16.2±2.8, 10°.84S×164°.30E, h14^{km}±17^{km}, mb4.8/33, Error ellipse: s-maj=7.1km s-min=5.2km az=124.0*

ISC 13 00:15:18.1±0.5**, 10°.93S**±0°.06×**164°.41E**±0°.06**, h29^{km}, n86, σ1^{s}09**/83**, mb4.8**/43**, MS3.9**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.64	288	eP	Pn	00 16 29.0	+2.8
HNR				eS	Sb	00 17 31.0	-3.2
HNR	Honiara	4.64	288	ePn	Pn	00 16 23.6	-2.6
HNR				eSn	Sn	00 17 22.8	+3.7
HNR	Honiara	4.64	288	Pn	Pn	00 16 27.1	+0.8
	82nm,0.3s,baz=119,slow=6.4,SNR=6.3						
HNR				Sn	Sn	00 17 22.8	+3.7
	26nm,0.3s,baz=190,slow=18,SNR=1.9						
DZM	Mont Dzumac	11.25	170	ePn	Pn	00 17 58.1	+1.1
DZM				eSn	Sn	00 20 00.1	-1.8
DZM	Mont Dzumac	11.25	170	Pn	Pn	00 17 58.5	+1.5
	2.4nm,0.3s,baz=31,slow=22,SNR=13						
DZM				Sn	Sn	00 20 00.1	-1.8
	0.3nm,0.3s,baz=150,slow=19,SNR=2.1						
CTA	Charters Tower	19.70	240	P	Pn	00 19 46.9	0.0
	0.4nm,0.3s,baz=69,slow=13,SNR=13						
CTA				LR	LR	00 26 28.9	
	comp=Z,347nm,19.5s,baz=6.5,slow=34						
CTAO	Charters Tower	19.70	240	eP	P	00 19 45.1	-0.2
KWAJ	Kwajalein Atol	19.86	9	eP	P	00 19 46.4	-0.6
	296nm,0.6s						
COEN	Coen	20.95	260	eP	P	00 19 56.4	-2.5
	21nm,1.1s						
JAY	Jayapura	24.96	288	LR	LR	00 30 23.5	
	comp=Z,395nm,19.7s,baz=35,slow=36						
H11S2	WAKE ISLAND Hy	29.32	4	T	T	00 52 01.4	
	baz=191						
H11S3	WAKE ISLAND Hy	29.33	4	T	T	00 51 55.3	
	baz=191						
H11S1	WAKE ISLAND Hy	29.34	4	T	T	00 51 57.2	
	baz=191						
URZ	Urewera	29.50	159	LR	LR	00 29 56.4	
	comp=Z,132nm,20.5s,baz=8.0,slow=30						
STKA	Stephens Creek	29.63	222	eP	P	00 21 22.3	+1.2
	10nm,1.9s						
STKA	Stephens Creek	29.63	222	P	P	00 21 22.3	+1.2
	2.5nm,0.7s,baz=32,slow=12,SNR=4.7						
STKA				LR	LR	00 31 36.3	
	comp=Z,372nm,19.4s,baz=16,slow=33						
WRAB	Tennant Creek	30.28	249	eP	P	00 21 26.1	-0.9
	3.8nm,0.9s						
WB2	Warramunga Arr	30.28	249	eP	P	00 21 26.3	-0.7
	8.8nm,1.0s						
WR1	Warramunga Arr	30.29	249	eP	P	00 21 26.4	-0.7
	17nm,1.3s						
WRA	Warramunga Arr	30.29	249	P	P	00 21 26.4	-0.7
	9.3nm,1.2s,baz=76,slow=9.1,SNR=16						
WRA				LR	LR	00 32 51.6	
	comp=Z,390nm,18.1s,baz=75,slow=35						
H11N1	WAKE ISLAND Hy	30.55	5	T	T	00 53 28.2	
	baz=187						
H11N3	WAKE ISLAND Hy	30.56	5	T	T	00 53 21.1	
	baz=187						
H11N2	WAKE ISLAND Hy	30.57	5	T	T	00 53 29.4	
	baz=187						
AS01	Alice Springs	31.63	242	eP	P	00 21 38.7	-0.2
ASAR	Alice Springs	31.67	242	P	P	00 21 38.2	-1.1
	1.5nm,0.8s,baz=76,slow=9.7,SNR=11						
ASAR				LR	LR	00 33 52.0	
	comp=Z,176nm,18.6s,baz=66,slow=35						
BBOO	Buckleboo	33.95	226	eP	P	00 21 59.9	+0.8
	21nm,0.8s						
FITZ	Fitzroy Crossi	38.14	255	eP	P	00 22 34.2	-0.9
	8.7nm,0.9s						
FORT	Forrest	39.04	234	eP	P	00 22 42.8	+0.3
	33nm,0.9s						
JNU	Nakatsue	54.23	325	P	P	00 24 41.9	+0.5
	15nm,1.0s,baz=217,slow=1.6,SNR=3.5						
SSE	Sheshan	58.86	317	eP	P	00 25 13.9	-0.4
	4.7nm,0.4s						
KSRS	Korea Array	59.05	327	P	P	00 25 14.8	-0.8
	3.7nm,1.0s,baz=122,slow=6.3,SNR=5.6						
KSAR	Wonju Array Be	59.06	326	P	P	00 25 14.8	-0.9
USRK	Ussuriysk Ar.	62.27	334	P	P	00 25 38.1	+0.8
	0.9nm,0.3s,baz=157,slow=16,SNR=9.8						
MDJ	Mudanjiang	63.64	333	eP	P	00 25 45.7	-0.8
	2.9nm,0.3s						
PETK	Petropavlovsk-	64.04	356	P	P	00 25 49.0	0.0
	3.6nm,0.8s,baz=167,slow=8.9,SNR=4.4						
PEA1	Petropavlovsk-	64.05	356	eP	P	00 25 49.0	-0.1
ENH	Enshi	66.81	310	eP	P	00 26 06.5	-0.9
XAN	Xi'an	69.08	313	eP	P	00 26 21.1	-0.5
	7.6nm,0.4s						
CMAR	Chiang Mai Arr	70.86	294	P	P	00 26 33.2	+0.4
	1.2nm,0.3s,baz=120,slow=4.8,SNR=6.7						
GAMB	Gambell	76.70	11	eP	P	00 27 06.6	+0.5
	18nm,1.5s						
SONA0	Songino Array	77.80	324	eP	P	00 27 13.5	+0.7
SONM	Songino Array	77.80	324	P	P	00 27 13.5	+0.7
	2.4nm,0.9s,baz=146,slow=6.4,SNR=14						
SONA1	Songino Array	77.81	324	eP	P	00 27 12.4	-0.4
ANM	Nome	78.67	13	eP	P	00 27 17.1	0.0
	5.8nm,1.2s						
BILL	Bilibino	78.78	1	eP	P	00 27 17.8	+0.2
	10nm,1.0s						
QSPA	South Pole Qui	79.07	180	eP	P	00 27 21.4	+1.8
LSA	Lhasa	81.18	303	eP	P	00 27 31.7	-0.4
	2.2nm,0.6s						
RDOG	Red Dog Mine	82.18	12	eP	P	00 27 36.5	+0.7
	11nm,0.9s						
MCK	McKinley	82.46	19	eP	P	00 27 38.1	+0.6
	13nm,1.0s						
IM3	Indian Mountai	82.67	16	eP	P	00 27 38.5	0.0
MLY	Manley	82.83	18	eP	P	00 27 39.3	-0.1
	16nm,1.5s						
MDM	Murphy Dome	83.53	18	eP	P	00 27 42.7	-0.3
	9.8nm,1.0s						
HDA	Harding Lake	83.56	19	eP	P	00 27 43.0	-0.1
	18nm,1.0s						
COLA	College	83.59	19	eP	P	00 27 42.9	-0.3
	12nm,0.9s						
RIDG	Independ'e Rid	83.82	20	eP	P	00 27 44.6	+0.1
	13nm,1.2s						
IL1	Eielson Array	83.83	19	eP	P	00 27 43.2	-1.2
ILAR	Eielson Array	83.83	19	P	P	00 27 43.8	-0.7
	5.1nm,0.9s,baz=229,slow=5.5,SNR=35						
ILB	Eielson Array	83.83	19	eP	P	00 27 44.6	+0.2
	7.7nm,1.0s						
SCRK	Sand Creek	84.26	20	eP	P	00 27 47.4	+0.5
	31nm,1.9s						
TIXI	Tiksi	85.73	349	eP	P	00 27 53.6	-0.3
	2.6nm,0.6s						
DAWY	Dawson	85.93	21	eP	P	00 27 55.6	+0.4
	1.2nm,0.5s						
INK	Inuvik	90.22	19	eP	P	00 28 15.5	+0.1
	2.0nm,0.9s						
HLID	Hailey	91.14	46	eP	P	00 28 21.2	+0.7
	4.9nm,1.5s						

HVU	Hansel Valley	91.91	48	eP	P	00 28 24.7	+0.5
	22nm,1.8s						
MK01	Makanchi Array	92.53	317	eP	P	00 28 26.6	-0.2
MK31	Makanchi Array	92.54	317	eP	P	00 28 26.6	-0.2
	3.8nm,0.9s						
MK32	Makanchi Array	92.54	317	eP	P	00 28 26.7	-0.1
MKAR	Makanchi Array	92.54	317	P	P	00 28 26.7	-0.1
	5.0nm,0.9s,baz=99,slow=5.9,SNR=28						
ZAA0	Zalesovo Array	92.70	324	eP	P	00 28 26.9	-0.4
	7.4nm,1.5s						
ZALV	Zalesovo Beam	92.70	324	P	P	00 28 26.3	-1.0
	2.7nm,0.9s,baz=102,slow=6.2,SNR=9.6						
ZAA1	Zalesovo Array	92.70	324	eP	P	00 28 26.3	-1.0
MAKZ	Makanchi	92.76	317	eP	P	00 28 27.9	+0.1
	5.1nm,0.9s						
PDAR	Pinedale Array	94.44	47	P	P	00 28 35.9	-0.1
	0.1nm,0.4s,baz=260,slow=5.4,SNR=3.4						
YKA	Yellowknife Ar	95.48	27	P	P	00 28 40.4	+0.6
	0.2nm,0.7s,baz=245,slow=4.3,SNR=3.7						
YKB5	Yellowknife Ar	95.48	27	eP	P	00 28 40.4	+0.6
ARA0	ARCESS Array S	115.89	345	ePKPdf	PKiKP	00 33 57.2	-0.3
ARCES	ARCESS Array B	115.89	345	PKP	PKiKP	00 33 57.2	-0.3
	2.5nm,0.9s,baz=15,slow=3.9,SNR=3.8						
GEC2	GERESS Array S	135.01	333	ePKPdf	PKiKP	00 34 35.8	-0.5
GERES	GERESS Array B	135.01	333	PKP	PKiKP	00 34 35.8	-0.5
	0.4nm,0.9s,baz=29,slow=2.2,SNR=3.8						
KEST	Kesra	146.52	322	ePKPdf	PKPbc	00 34 57.0	-0.2
KEST	Kesra	146.52	322	PKPbc	PKPbc	00 34 56.5	-0.7
	11nm,1.0s,baz=347,slow=3.9,SNR=5.1						
ES19	SONSECA Array	149.52	342	ePKPbc	PKiKP	00 35 06.2	0.0
ESDC	Sonseca Array	149.57	342	PKPbc	PKiKP	00 35 05.9	-0.4
	1.5nm,0.8s,baz=335,slow=3.9,SNR=4.9						
TOA0	Torodi Ar. Sit	162.95	279	ePKPdf	PKPdf	00 35 18.6	0.0
TORD	Torodi Ar. Bea	162.95	279	PKP	PKPdf	00 35 18.0	-0.7
	1.1nm,1.0s,baz=359,slow=1.8,SNR=5.1						
TOA1	Torodi Ar. Sit	162.95	279	ePKPdf	PKPdf	00 35 18.0	-0.7

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*SOME **13** 00:37:42.7, 42°.50N×79°.70E, h20^{km}*

*KRNET **13** 00:37:42.4±0.1, 42°.56N×79°.65E, h11^{km}, mb2.6*

NNC 13 00:37:43.0±0.6**, 42°.59N×79°.63E, h0^{km}, mb2.7, mpv2.5, 12C-8D, Error ellipse: s-maj=4.1km s-min=2.3km az=139.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.71	321	P	Pg	00 37 56.8	+0.1
	1.7nm,0.2s						
UZB				S	Sg	00 38 07.0	+1.1
	5.5nm,0.1s						
UZB	Uzynbulak	0.71	321	eP	Pg	00 37 56.8	+0.1
	baz=22						
UZB				eS	Sg	00 38 07.1	+1.2
	baz=22						
UZB	Uzynbulak	0.71	321	eP	Pg	00 37 56.8	+0.1
	1.7nm,0.2s						
UZB				eS	Sg	00 38 07.0	+1.1
	5.5nm,0.1s						
PDGK	Podgornoye	0.75	352	P	Pg	00 37 57.4	+0.1
	0.8nm,0.1s						
PDGK				S	Sg	00 38 08.2	+1.3
	4.3nm,0.2s						
PDGK	Podgornoye	0.75	352	⇑P	Pg	00 37 57.4	+0.1
	0.3nm,0.2s						
PDGK				⇑S	Sg	00 38 08.1	+1.1
	3.0nm,0.3s						
PDGK	Podgornoye	0.75	352	⇑iP	Pg	00 37 57.4	+0.1
	baz=51						
PDGK				⇑iS	Sg	00 38 08.0	+1.0
	baz=51						
PRZ	Przheval'sk	0.92	264	⇑iP	Pg	00 37 59.7	-0.8
	baz=66						
PRZ				⇑iS	Sg	00 38 12.1	-0.3
	baz=66						
KTMS	Ketmen	1.01	31	P	Pg	00 38 02.1	-0.2
	1.5nm,0.1s						
KTMS				S	Sg	00 38 16.0	+0.7
	2.6nm,0.1s						
KTMS	Ketmen	1.01	31	eP	Pg	00 38 02.1	-0.1
	baz=29						
KTMS				eS	Sg	00 38 16.0	+0.7
	baz=29						
KTMS	Ketmen	1.01	31	eP	Pg	00 38 02.1	-0.2
	1.5nm,0.1s						
KTMS				eS	Sg	00 38 16.0	+0.7
	2.6nm,0.1s						
SATY	Saty	1.02	298	P	Pg	00 38 02.0	-0.4
	1.2nm,0.1s						
SATY				S	Sg	00 38 16.1	+0.5
	9.6nm,0.1s						
SATY	Saty	1.02	298	eP	Pg	00 38 02.0	-0.4
	1.2nm,0.1s						
SATY				eS	Sg	00 38 16.1	+0.5
	9.6nm,0.1s						
DJR	Jarkent	1.75	4	P	Pb	00 38 16.1	+0.2
	0.5nm,0.2s						
DJR				S	Sg	00 38 40.1	+1.1
	2.7nm,0.2s						
DJR	Jarkent	1.75	4	eP	Pb	00 38 16.1	+0.2
	0.3nm,0.1s						
DJR				eS	Sg	00 38 40.1	+1.1
	2.4nm,0.3s						
KDJ	Kajisay	1.87	257	⇑iP	Pb	00 38 17.7	-0.5
	baz=58						
KDJ				⇑iS	Sb	00 38 41.9	-0.3
	baz=58						
KOTS	Kotyrbulak	1.96	290	Pg	Pb	00 38 19.5	-0.1
	1.8nm,0.2s						
KOTS				Lg	Lg	00 38 46.0	
	9.5nm,0.3s						
KOTS	Kotyrbulak	1.96	290	eP	Pb	00 38 19.5	-0.1
	baz=91						
KOTS				eS	Sg	00 38 46.0	+0.1
	baz=91						
KOTS	Kotyrbulak	1.96	290	eP	Pb	00 38 19.5	-0.1
	1.8nm,0.2s						
KOTS				eS	Sg	00 38 46.0	+0.1
	9.5nm,0.3s						
MDOK	Medeo	1.98	288	⇓Pg	Pb	00 38 20.3	+0.2
	1.6nm,0.8s						
MDOK				Lg	Lg	00 38 45.6	
	2.6nm,0.7s						
MDOK	Medeo	1.98	288	Pg	Pb	00 38 19.7	-0.3
	1.1nm,0.1s						
MDOK				Lg	Lg	00 38 46.5	
	2.9nm,0.4s						
MDOK	Medeo	1.98	288	eP	Pb	00 38 19.7	-0.3
	baz=88						
MDOK				eS	Sg	00 38 46.5	-0.2
	baz=88						
MDOK	Medeo	1.98	288	eP	Pb	00 38 19.7	-0.3
	0.9nm,0.2s						
MDOK				eS	Sg	00 38 46.5	-0.2
	2.5nm,0.4s						
TNSS	Tian-Shan	2.02	284	Pg	Pn	00 38 19.8	+1.1
	1.8nm,0.2s						
TNSS				Lg	Lg	00 38 46.7	
	4.7nm,0.3s						
TNSS	Tian-Shan	2.02	284	eP	Pn	00 38 19.8	+1.1
	baz=84						
TNSS				⇓iS	Sb	00 38 46.7	-0.1
	baz=84						
TNSS	Tian-Shan	2.02	284	eP	Pn	00 38 19.8	+1.1
	1.8nm,0.2s						
TNSS				⇓iS	Sb	00 38 46.7	-0.1
	4.7nm,0.3s						
ARXS	Arharly	2.09	322	Pg	Pb	00 38 21.3	-0.5
	1.1nm,0.2s						
ARXS				Lg	Lg	00 38 49.3	
	3.6nm,0.4s						
ARXS	Arharly	2.09	322	eP	Pb	00 38 21.3	-0.5
	1.1nm,0.2s						
ARXS				eS	Sg	00 38 49.3	-0.8
	3.6nm,0.4s						
IZV	Izvestkoviy	2.27	282	Pg	Pb	00 38 24.4	-0.5
	2.3nm,0.2s						
IZV				Lg	Lg	00 38 54.4	
	7.4nm,0.3s						
IZV	Izvestkoviy	2.27	282	eP	Pb	00 38 24.4	-0.4
	baz=83						
IZV				eS	Sb	00 38 54.4	+0.9
	baz=83						
IZV	Izvestkoviy	2.27	282	eP	Pb	00 38 24.4	-0.5
	2.3nm,0.2s						
IZV				eS	Sb	00 38 54.4	+0.9
	7.4nm,0.3s						
CHKK	Chushkaly	2.31	304	Pg	Pb	00 38 25.1	-0.4
	0.6nm,0.1s						
CHKK				Lg	Lg	00 38 55.6	
	4.3nm,0.3s						
CHKK	Chushkaly	2.31	304	eP	Pb	00 38 25.1	-0.4
	baz=5.0						
CHKK				eS	Sb	00 38 55.7	+1.1
	baz=5.0						
CHKK	Chushkaly	2.31	304	eP	Pb	00 38 25.1	-0.4
	0.5nm,0.1s						
CHKK				eS	Sb	00 38 55.6	+1.1
	4.3nm,0.3s						
MTBS	Maitube	2.42	284	eP	Pb	00 38 27.0	-0.3
	baz=85						
MTBS				eS	Sb	00 38 58.7	+1.0
	baz=85						
MTBS	Maitube	2.42	284	eP	Pb	00 38 27.0	-0.3
	3.7nm,0.1s						
MTBS				eS	Sb	00 38 58.7	+1.0
	6.4nm,0.3s						
KTBS	Karatobe	2.43	298	Pg	Pb	00 38 27.5	-0.1
	0.7nm,0.1s						
KTBS				Lg	Lg	00 38 59.6	
	6.3nm,0.3s						
KTBS	Karatobe	2.43	298	eP	Pb	00 38 27.5	-0.1
	baz=98						
KTBS				eS	Sb	00 38 59.6	+1.4
	baz=98						
KTBS	Karatobe	2.43	298	eP	Pb	00 38 27.5	-0.1
	0.7nm,0.1s						
KTBS				eS	Sb	00 38 59.6	+1.4
	6.3nm,0.3s						
ULHL	Ulahol	2.53	263	⇑iP	Pn	00 38 27.3	+1.8
	baz=64						
ULHL				⇑iS	Sn	00 38 58.7	+1.5
	baz=64						
KAPS	Kapalarasan	2.70	356	Pg	Pb	00 38 32.3	+0.1
	0.3nm,0.1s						
KAPS				Lg	Lg	00 39 07.7	
	2.0nm,0.3s						
KAPS	Kapalarasan	2.70	356	eP	Pb	00 38 32.3	+0.1
	0.3nm,0.1s						
KAPS				eS	Sb	00 39 07.7	+1.8
	2.0nm,0.3s						
BOOM	Boomskoye usch	2.73	269	⇓iP	Pn	00 38 30.3	+2.1
	baz=70						
BOOM				⇓iS	Sn	00 39 03.8	+1.8
	baz=70						
KUU	Kurty	2.74	300	Pg	Pb	00 38 32.0	-0.7
	0.7nm,0.1s						
KUU				Lg	Lg	00 39 07.7	
	5.3nm,0.4s						
KUU	Kurty	2.74	300	eP	Pb	00 38 32.0	-0.8
	baz=0.0						
KUU				eS	Sb	00 39 07.6	+0.7
	baz=0.0						
KUU	Kurty	2.74	300	eP	Pb	00 38 32.0	-0.7
	0.7nm,0.1s						
KUU				eS	Sb	00 39 07.7	+0.8
	5.3nm,0.4s						
DGS	Degeres	2.91	284	Pg	Pb	00 38 35.8	+0.1
	1.7nm,0.4s						
DGS				Lg	Lg	00 39 14.2	
	7.7nm,0.3s						
DGS	Degeres	2.91	284	eP	Pb	00 38 35.8	0.0
	baz=85						
DGS				eS	Sg	00 39 14.2	-2.2
	baz=85						
DGS	Degeres	2.91	284	eP	Pb	00 38 35.8	+0.1
	1.7nm,0.4s						
DGS				eS	Sg	00 39 14.2	-2.2
	7.7nm,0.3s						
TKM2	Tokmak 2	2.99	278	⇓Pg	Pb	00 38 37.8	+0.6
	2.3nm,1.1s						
TKM2				⇓Lg	Lg	00 39 15.8	
	1.9nm,0.5s						
MK31	Makanchi Array	4.61	23	⇑Pn	Pn	00 38 54.0	0.0
	0.2nm,0.6s,baz=193,slow=12,SNR=4.3						
MK31				⇓Sn	Sn	00 39 48.0	-0.2
	0.2nm,0.5s						
MK31				⇑Lg	Lg	00 40 08.7	
	0.1nm,0.5s						

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*IDC **13** 00:40:06.2±1.2, 10°.81S×164°.20E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.9/30, mbtmp3.8/9, ML3.9/2, MS3.5/1, Ms1 3.5/1, ms1mx3.0/34, Error ellipse: s-maj=42.8km s-min=21.6km az=124.0*

*ISCJB **13** 00:40:09.0±0.6, 10°.98S±0°.08×164°.20E±0°.10, h29^{km}, mb3.9/11, Error ellipse: s-maj=14.6km s-min=11.1km az=31.9*

*NEIC **13** 00:40:08.1±4.4, 10°.86S×164°.24E, h12^{km}±27^{km}, mb4.0/3, Error ellipse: s-maj=9.9km s-min=9.6km az=90.0*

ISC 13 00:40:11.0±0.8**, 10°.9S**±0°.1×**164°.08E**±0°.09**, h29^{km}, n29, σ1^{s}19**/24**, mb3.8**/11**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.32	289	ePn	Pn	00 41 15.4	+0.6
HNR	Honiara	4.32	289	Pn	Pn	00 41 17.8	+3.1
	35nm,0.3s,baz=109,slow=1.0,SNR=3.9						
HNR				Sn	Sb	00 42 14.8	-3.2
	14nm,0.3s,baz=342,slow=20,SNR=1.8						
DZM	Mont Dzumac	11.35	169	ePn	Pn	00 42 50.0	-1.5
DZM	Mont Dzumac	11.35	169	Pn	Pn	00 42 50.7	-0.7
	1.2nm,0.3s,baz=312,slow=20,SNR=14						
DZM				LR	LR	00 46 12.1	
	comp=Z,259nm,21.8s,baz=20,slow=32						
CTA	Charters Tower	19.45	240	P	Pn	00 44 37.6	+0.7
	0.1nm,0.3s,baz=52,slow=12,SNR=2.9						
CTAO	Charters Tower	19.45	240	eP	Pn	00 44 37.0	+0.2
H11S2	WAKE ISLAND Hy	29.30	5	T	T	01 16 55.7	
	baz=181						
H11S3	WAKE ISLAND Hy	29.30	5	T	T	01 16 34.9	
	baz=181						
H11S1	WAKE ISLAND Hy	29.32	5	T	T	01 16 49.9	
	baz=181						
STKA	Stephens Creek	29.46	221	P	P	00 46 12.7	+0.2
	0.6nm,0.4s,baz=4.4,slow=13,SNR=1.5						
WRAB	Tennant Creek	30.00	249	eP	P	00 46 18.9	+1.5
	1.0nm,0.7s						
WR1	Warramunga Arr	30.01	249	eP	P	00 46 18.1	+0.6
	9.0nm,1.4s						
WRA	Warramunga Arr	30.01	249	P	P	00 46 18.2	+0.6
	1.4nm,0.9s,baz=77,slow=9.3,SNR=6.5						
H11N1	WAKE ISLAND Hy	30.53	5	T	T	01 18 22.2	
	baz=184,slow=76,SNR=3.9						
H11N3	WAKE ISLAND Hy	30.53	5	T	T	01 18 16.8	
	baz=184,slow=76,SNR=4.1						
H11N2	WAKE ISLAND Hy	30.55	5	T	T	01 18 27.9	
	baz=184,slow=76,SNR=3.8						
AS31	Alice Springs	31.41	242	eP	P	00 46 30.0	+0.1
	3.3nm,1.9s						
ASAR	Alice Springs	31.42	242	P	P	00 46 30.0	+0.1
	0.4nm,0.6s,baz=74,slow=10.0,SNR=4.1						
SONA0	Songino Array	77.58	324	eP	P	00 52 04.2	-0.3
SONM	Songino Array	77.58	324	P	P	00 52 04.2	-0.3
	0.3nm,0.6s,baz=123,slow=7.1,SNR=4.1						
QSPA	South Pole Qui	79.12	180	eP	P	00 52 12.9	+0.1
IM3	Indian Mountai	82.71	16	eP	P	00 52 31.5	-0.1
HDA	Harding Lake	83.62	19	eP	P	00 52 36.3	0.0
	7.2nm,1.0s						
ILAR	Eielson Array	83.88	19	P	P	00 52 36.5	-1.1
	1.2nm,0.8s,baz=225,slow=5.6,SNR=7.9						
ILB	Eielson Array	83.88	19	eP	P	00 52 36.5	-1.1
	12nm,1.6s						
IL1	Eielson Array	83.88	19	eP	P	00 52 36.9	-0.8
MK32	Makanchi Array	92.29	317	eP	P	00 53 18.8	+0.2
MKAR	Makanchi Array	92.29	317	P	P	00 53 18.8	+0.2
	0.6nm,0.8s,baz=99,slow=6.3,SNR=5.6						
YKA	Yellowknife Ar	95.58	27	P	P	00 53 33.2	0.0
	0.1nm,0.4s,baz=253,slow=4.2,SNR=3.0						

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*ISCJB **13** 00:49:06.1±0.2, 38°.06N±0°.01×118°.02W±0°.02, h10^{km}, mb3.1/1, Error ellipse: s-maj=2.4km s-min=2.1km az=161.0*

*REN **13** 00:49:06.6, 38°.04N×118°.10W, h4^{km}, ML3.7*

*ANF **13** 00:49:06.2±0.4, 38°.04N×118°.09W, h8^{km}±2^{km}, ML3.7/15, Error ellipse: s-maj=3.0km s-min=1.8km az=142.0*

*NEIC **13** 00:49:06.6±0.0, 38°.04N×118°.10W, h4^{km}, ML3.7(REN), After REN.*

NEIC Felt at Carson City, Luning and Wellington. Also felt at Bridgeport, California.

*IDC **13** 00:49:13.2±1.3, 38°.50N×118°.33W, h0^{km}, mb2.9/1, mb1 3.2/2, mb1mx3.1/34, mbtmp2.8/2, ML3.6/1, Error ellipse: s-maj=10.3km s-min=2.1km az=159.0*

ISC 13 00:49:06.8±0.7**, 38°.02N**±0°.02×**118°.07W**±0°.02**, h10^{km}, n80, σ1^{s}71**/126**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NV11	Mina Array Sit	0.42	350	ePg	Pg	00 49 14.2	-1.0
NV11				eSg	Sg	00 49 18.9	-1.8
NV01	Mina Array Sit	0.45	336	ePg	Pg	00 49 13.8	-1.9
NV01				eSg	Sg	00 49 20.8	-0.9
NVAR	Mina Array Bea	0.45	336	Pg	Pg	00 49 14.5	-1.2
	1µm,0.3s,baz=339,slow=32,SNR=345						
NVAR				Lg	Lg	00 49 19.7	
	2µm,0.3s,baz=259,slow=24,SNR=41						
RYN	Ryan	0.71	330	ePg	Pg	00 49 19.4	-1.1
MLAC	Mammoth, Mammo	0.72	238	P	Pg	00 49 20.4	-0.4
	baz=55						
MLAC				S	Sb	00 49 30.7	-1.0
	baz=55						
OMMB	Old Mammoth Mi	0.84	242	ePg	Pg	00 49 22.1	-1.0
OMMB				eSn	Sg	00 49 33.2	-0.9
MDPB	Devils Postpil	0.89	245	ePg	Pg	00 49 23.0	-1.0
MDPB				eSg	Sg	00 49 33.6	-2.0
TIN	Tinemaha, Big	0.97	188	P	Pg	00 49 25.5	-0.1
	baz=5.8						
TIN				S	Sb	00 49 38.8	0.0
	baz=5.8						
KVN	Kaiserville	1.03	359	ePg	Pg	00 49 25.4	-1.3
KVN				eSg	Sg	00 49 38.8	-1.3
GRAC	Grapevine Rang	1.16	151	P	Pb	00 49 28.9	-0.1
	baz=331						
GRAC				S	Sn	00 49 46.0	+0.9
	baz=331						
WAKR	Walker	1.18	295	ePg	Pb	00 49 27.7	-1.8
WAKR				eSg	Sg	00 49 43.9	-1.1
YERR	Yerington	1.33	317	ePn	Pn	00 49 30.4	-1.3
CWC	Cottonwood Cre	1.58	180	P	Pn	00 49 35.0	+0.1
	baz=359						
CWC				S	Sg	00 49 56.8	-0.7
	baz=359						
PNTR	Pine Nut	1.61	312	ePn	Pn	00 49 34.8	-0.7
PNTR				eSn	Sb	00 49 57.0	-0.2
VCNR	Virginia City	1.78	316	ePn	Pn	00 49 38.3	+0.5
DAC	Darwin (Calif)	1.78	168	ePn	Pn	00 49 37.2	-0.6
TPNV	Topopah Spring	1.80	126	ePn	Pn	00 49 37.8	-0.3
TPNV	Topopah Spring	1.80	126	P	Pn	00 49 38.0	-0.1
	baz=307						
CMB	Columbia Colle	1.83	271	ePn	Pn	00 49 37.7	-0.7
CMB				eSn	Sn	00 50 01.7	+0.1
RUBR	Rubicon Trail	1.94	303	ePn	Pb	00 49 41.4	-0.9
PAHR	Pah Rah Range	1.97	329	ePn	Pn	00 49 41.0	+0.6
R11A	Troy Canyon, C	1.98	80	ePn	Pn	00 49 41.6	+1.0
R11A	Troy Canyon, C	1.98	80	Pb	Pb	00 49 42.5	-0.6
	baz=262						
R11A				Sb	Sg	00 50 09.7	-0.9
	baz=262						
VOG	Valley Oaks Go	1.99	212	Sb	Sg	00 50 09.5	-1.4
	baz=30						
MPMC	Manual Prospec	2.01	167	P	Pn	00 49 41.0	0.0
	baz=346						
MPMC				Sb	Sg	00 50 11.5	0.0
	baz=346						
VES	Vestal, Richgr	2.32	201	Sb	Sg	00 50 19.6	-1.8
	baz=19						
ISA	Isabella, Lake	2.37	188	ePn	Pn	00 49 45.9	0.0
ISA				ePg	Pb	00 49 50.3	+0.6
ISA				eSn	Sg	00 50 21.0	-2.1
ISA	Isabella, Lake	2.37	188	Pb	Pb	00 49 50.5	+0.8
	baz=7.0						
ISA				Sb	Sg	00 50 21.2	-1.9
	baz=7.0						
AFDM	Forest Hills D	2.46	293	ePn	Pn	00 49 47.9	+0.8
BMN	Battle Mountai	2.50	15	ePn	Pn	00 49 49.2	+1.5
LRMC	Laurel Mtn Rad	2.55	173	Pb	Pg	00 49 54.3	-1.4
	baz=353						
BEKR	Beckworth	2.57	317	ePn	Pn	00 49 50.5	+1.8
SHPR	Sheep Range	2.77	122	ePn	Pn	00 49 51.2	-0.2
PAGB	Antelope Grade	2.88	218	ePn	Pn	00 49 52.9	+0.1
GSC	Goldstone, Bar	2.90	159	ePn	Pn	00 49 52.5	-0.5
GSC				ePg	Pg	00 50 00.9	-1.4
GSC	Goldstone, Bar	2.90	159	P	Pn	00 49 53.1	0.0
	baz=340						
ARVC	Arvin	2.95	192	Sb	Sg	00 50 38.9	-2.7
	baz=11						
SAO	San Andreas Ge	2.97	246	ePn	Pn	00 49 55.0	+1.0
ORV	Oroville	3.09	301	ePn	Pn	00 49 56.9	+1.3
TUQ	Turquoise Moun	3.10	146	P	Pn	00 49 55.8	-0.2
	baz=327						
EDW2	Edwards Air Fo	3.13	179	Sb	Sg	00 50 46.3	-1.1
	baz=358						
PSUT	Pine Spring	3.35	80	ePn	Pn	00 50 00.1	+0.6
PSUT				ePg	Pg	00 50 08.9	-2.2
ELK	Elko	3.50	38	ePn	Pn	00 50 02.8	+1.3
CCUT	Cedar City	3.76	96	ePn	Pn	00 50 04.6	-0.4
CCUT				ePg	Pg	00 50 17.7	-1.1
LDFC	Landfair	3.78	140	ePn	Pn	00 50 03.9	-1.4
LDFC				ePg	Pb	00 50 15.7	+2.0
MWC	Mount Wilson	3.79	180	ePn	Pn	00 50 05.1	-0.3
LCMT	Little Creek M	3.96	103	ePn	Pn	00 50 07.1	-0.7
LCMT				ePg	Pg	00 50 20.5	-2.3
SZCU	Shurtz Canyon	3.97	95	ePn	Pn	00 50 07.2	-0.7
MOD	Modoc Plateau	4.24	337	ePn	Pn	00 50 12.9	+1.2
KNB	Kanab	4.29	102	ePn	Pn	00 50 12.0	-0.3
KNB				ePg	Pg	00 50 26.4	-2.6
WDC	Whiskeytown Da	4.31	308	ePn	Pn	00 50 14.2	+1.8
WVOR	Wild Horse Val	4.43	355	ePn	Pn	00 50 15.5	+1.3
W13A	Hualapai Mount	4.45	130	ePn	Pn	00 50 15.1	+0.5
W13A				ePg	Pb	00 50 28.3	+3.1
PFO	Pinyon Flats O	4.59	163	ePn	Pn	00 50 16.0	-0.4
PFO				ePg	Pg	00 50 31.8	-2.9
XPFO	Pion Flat	4.59	163	ePn	Pn	00 50 15.7	-0.7
XPFO				ePg	Pb	00 50 30.9	+3.3
PKCU	Pink Cliffs	4.60	95	ePn	Pn	00 50 17.0	+0.3
PKCU				ePg	Pg	00 50 33.0	-1.9
DUG	Dugway, Tooele	4.63	60	ePn	Pn	00 50 17.9	+0.9
DUG				ePg	Pg	00 50 33.7	-1.7
MTPU	Mount Pierson	4.64	88	ePn	Pn	00 50 17.9	+0.5
MTPU				ePg	Pg	00 50 32.8	-3.0
MTPU				eSn	Sn	00 51 11.5	-0.1
MTPU				eSg	Sg	00 51 34.4	-1.6
MSU	Marysvale	4.66	82	ePn	Pn	00 50 18.2	+0.7
MSU				ePg	Pg	00 50 33.1	-3.0
BGU	Big Grassy Mou	4.86	52	ePn	Pn	00 50 20.5	+0.4
U15A	North Rim	4.88	107	ePn	Pn	00 50 20.7	+0.2
U15A				ePg	Pg	00 50 36.6	-3.7
NLU	North Lily Min	5.05	66	ePn	Pn	00 50 24.3	+1.5
NLU				ePg	Pg	00 50 42.8	-0.8
Y12C	Blythe	5.14	145	ePn	Pn	00 50 24.0	+0.2
Y12C				ePg	Pg	00 50 41.0	-4.3
J08A	Circle Bar Ran	5.34	357	ePn	Pn	00 50 28.3	+1.6
J08A				ePg	Pg	00 50 48.4	-0.7
MPU	Maple Canyon	5.39	66	ePn	Pn	00 50 27.8	+0.3
MPU				ePg	Pg	00 50 47.8	-2.4
SPUT	South Promonto	5.44	51	ePn	Pn	00 50 28.7	+0.6
SPUT				ePg	Pg	00 50 48.3	-2.7
HVU	Hansel Valley	5.54	46	ePn	Pn	00 50 30.8	+1.3
HVU				ePg	Pg	00 50 49.5	-3.3
P17A	Butcher Ranch,	5.91	74	ePn	Pn	00 50 35.5	+0.9
P17A				ePg	Pg	00 50 57.5	-2.5
WUAZ	Wupatki	5.92	113	ePn	Pn	00 50 35.4	+0.6
WUAZ				ePg	Pg	00 50 56.8	-3.5
TCUT	Toone Canyon	6.00	57	ePn	Pn	00 50 36.8	+0.9
TCUT				ePg	Pg	00 51 05.3	+3.5
SRU	San Rafael Swe	6.01	77	ePn	Pn	00 50 36.2	+0.2
SRU				ePg	Pg	00 50 58.4	-3.6
I07A	Izee	6.15	350	ePn	Pn	00 50 40.3	+2.5
I07A				ePg	Pg	00 51 05.8	+1.2
PINE	Pine Mountain	6.17	340	ePn	Pn	00 50 39.7	+1.6
HLID	Hailey	6.19	25	ePn	Pn	00 50 40.0	+1.5
	4.2nm,0.6s						
PV09	Paradox Valley	7.05	83	ePn	Pn	00 50 49.2	-1.1
PV09				ePg	Pg	00 51 18.1	-3.7
PV05	Paradox Valley	7.08	87	ePn	Pn	00 50 51.4	+0.8
PV05				ePg	Pg	00 51 18.9	-3.5
PV14	Lion Creek, Pa	7.13	84	ePn	Pn	00 50 50.4	-1.1
PV14				ePg	Pg	00 51 18.9	-4.4
PV23	Carpenter Ridg	7.14	84	ePn	Pn	00 50 52.1	+0.5
PV23				ePg	Pg	00 51 18.6	-5.0
PV23				eLg	Lg	00 52 52.9	
PDAR	Pinedale Array	8.04	51	Pn	Pn	00 51 10.8	+6.9
	0.1nm,0.3s,baz=236,slow=17,SNR=3.7						
PDAR				Lg	Lg	00 53 19.9	
	0.3nm,0.3s,baz=235,slow=23,SNR=4.4						

YKA	**Yellowknife Ar** 0.4nm,0.7s,baz=178,slow=9.0,SNR=7.4	**24.60**	**4**	P	**P**	**00 54 31.9**	**+5.1**

*KRNET **13** 00:49:48.0±0.1, 43°.26N×77°.92E, h25^{km}, mb2.2*
*SOME **13** 00:49:48.3, 43°.20N×77°.92E, h15^{km}*
NNC 13 00:49:47.8±0.2, 43°.23N×77°.94E, h6^{km}±2^{km}, mb2.5, mpv2.4, 12C-6D, Error ellipse: s-maj=3.2km s-min=1.4km az=5.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURS	**Kuram** 1.7nm,0.1s	**0.31**	**33**	P	Pb	00 49 55.3	-0.4
KURS	8.0nm,0.1s			S	Sb	00 50 00.3	-0.8
KURS	**Kuram** baz=38	**0.31**	**33**	⇑*e*P	Pb	00 49 55.3	-0.4
KURS	baz=38			⇑*e*S	Sb	00 50 00.3	-0.8
KURS	**Kuram** 1.7nm,0.1s	**0.31**	**33**	⇑*e*P	Pb	00 49 55.3	-0.4
KURS	8.0nm,0.1s			*e*S	Sb	00 50 00.3	-0.8
SATY	**Saty** 4.2nm,0.1s	**0.38**	**116**	P	Pb	00 49 56.3	-0.6
SATY	35nm,0.1s			S	Sb	00 50 02.1	-1.0
SATY	**Saty** 4.2nm,0.1s	**0.38**	**116**	⇑*e*P	Pb	00 49 56.3	-0.6
SATY	39nm,0.1s			*e*S	Sb	00 50 02.1	-1.0
KOTS	**Kotyrbulak** 4.5nm,0.1s	**0.60**	**271**	P	Pg	00 50 00.0	+0.6
KOTS	7.5nm,0.2s			S	Sb	00 50 08.5	-1.1
KOTS	**Kotyrbulak** baz=68	**0.60**	**271**	*e*P	Pg	00 49 59.7	+0.3
KOTS	baz=68			*e*S	Sg	00 50 08.0	+0.6
KOTS	**Kotyrbulak** 4.5nm,0.1s	**0.60**	**271**	*e*P	Pg	00 49 59.7	+0.2
KOTS	7.5nm,0.2s			*e*S	Sg	00 50 07.9	+0.6
TNSS	**Tian-Shan** 1.9nm,0.1s	**0.75**	**256**	P	Pg	00 50 02.4	+0.2
TNSS	2.6nm,0.2s			S	Sg	00 50 12.9	+0.8
TNSS	**Tian-Shan** baz=53	**0.75**	**256**	*e*P	Pg	00 50 02.2	0.0
TNSS	baz=53			*e*S	Sg	00 50 12.3	+0.3
TNSS	**Tian-Shan** 1.9nm,0.1s	**0.75**	**256**	*e*P	Pg	00 50 02.2	-0.1
TNSS	2.0nm,0.1s			*e*S	Sg	00 50 12.2	+0.2
UZB	**Uzynbulak** 1.4nm,0.1s	**0.80**	**95**	P	Pg	00 50 03.3	+0.3
UZB	7.4nm,0.1s			S	Sg	00 50 14.0	+0.6
UZB	**Uzynbulak** baz=97	**0.80**	**95**	*e*P	Pg	00 50 03.3	+0.3
UZB	baz=97			*e*S	Sg	00 50 14.0	+0.6
UZB	**Uzynbulak** 1.4nm,0.1s	**0.80**	**95**	*e*P	Pg	00 50 03.3	+0.3
UZB	7.4nm,0.1s			*e*S	Sg	00 50 14.0	+0.6
CHKK	**Chushkaly** 0.5nm,0.1s	**0.93**	**312**	P	Pg	00 50 05.6	-0.1
CHKK	5.2nm,0.3s			S	Sg	00 50 18.1	+0.3
CHKK	**Chushkaly** baz=12	**0.93**	**312**	*e*P	Pg	00 50 05.6	-0.1
CHKK	baz=12			*e*S	Sg	00 50 18.1	+0.3
CHKK	**Chushkaly** 0.3nm,0.1s	**0.93**	**312**	*e*P	Pg	00 50 05.6	-0.1
CHKK	5.2nm,0.3s			*e*S	Sg	00 50 18.1	+0.3
ARXS	**Arharly** 0.4nm,0.1s	**0.99**	**355**	P	Pg	00 50 06.9	+0.2
ARXS	11nm,0.2s			S	Sb	00 50 20.3	-0.3
ARXS	**Arharly** 0.4nm,0.1s	**0.99**	**355**	*e*P	Pg	00 50 06.9	+0.2
ARXS	11nm,0.2s			*e*S	Sb	00 50 20.3	-0.3
KTBS	**Karatobe** 0.3nm,0.1s	**1.04**	**298**	P	Pg	00 50 07.6	-0.1
KTBS	5.1nm,0.2s			S	Sg	00 50 21.4	+0.4
KTBS	**Karatobe** baz=95	**1.04**	**298**	*e*P	Pg	00 50 07.6	0.0
KTBS	baz=95			*e*S	Sg	00 50 21.5	+0.4
KTBS	**Karatobe** 0.3nm,0.1s	**1.04**	**298**	*e*P	Pg	00 50 07.6	-0.1
KTBS	5.1nm,0.2s			*e*S	Sg	00 50 21.4	+0.4
PDGK	**Podgornoye**	**1.14**	**84**	P	Pg	00 50 09.3	-0.3
PDGK	1.2nm,0.3s			S	Sg	00 50 24.6	+0.3
PDGK	**Podgornoye** 0.4nm,0.2s	**1.14**	**84**	⇑P	Pg	00 50 08.9	-0.7
PDGK	1.4nm,0.5s			⇑S	Sb	00 50 25.1	+0.2
PDGK	**Podgornoye** baz=86	**1.14**	**84**	⇑*i*P	Pg	00 50 08.9	-0.7
PDGK	baz=86			⇑*i*S	Sg	00 50 24.2	-0.1
KDJ	**Kajisay** baz=6.0	**1.23**	**207**	⇑*i*P	Pn	00 50 11.6	0.0
KDJ	baz=6.0			⇑*i*S	Sb	00 50 27.6	-0.1
KUU	**Kurty** 0.3nm,0.2s	**1.34**	**300**	P	Pn	00 50 12.6	-0.4
KUU	2.5nm,0.2s			S	Sb	00 50 30.3	-0.3
KUU	**Kurty** baz=0.0	**1.34**	**300**	*e*P	Pn	00 50 12.6	-0.4
KUU	baz=0.0			*e*S	Sb	00 50 30.4	-0.3
KUU	**Kurty** 0.3nm,0.2s	**1.34**	**300**	*e*P	Pn	00 50 12.6	-0.4
KUU	2.3nm,0.2s			*e*S	Sb	00 50 30.3	-0.3
TARG	**Taragay, Kyrgy** baz=83	**1.50**	**184**	⇓*i*P	Pb	00 50 15.9	-0.3
TARG	baz=83			⇓*i*S	Sn	00 50 35.5	-0.1
DGS	**Degeres** 0.9nm,0.3s	**1.58**	**271**	P	Pn	00 50 16.7	+0.2
DGS	2.8nm,0.4s			S	Sb	00 50 37.6	-0.2
ULHL	**Ulahol** baz=31	**1.59**	**232**	⇓*i*P	Pn	00 50 16.7	+0.1
ULHL	baz=31			⇓*i*S	Sb	00 50 37.8	-0.3
BOOM	**Boomskoye usch** baz=43	**1.65**	**244**	⇑*i*P	Pb	00 50 18.1	-0.5
BOOM	baz=43			⇑*i*S	Sb	00 50 39.8	+0.2
TKM2	**Tokmak 2** 1.1nm,0.8s	**1.75**	**261**	⇓P	Pb	00 50 19.9	-0.4
TKM2	1.1nm,0.7s			⇓S	Sb	00 50 42.7	+0.2

*IDC **13** 00:50:23.9±1.4, 11°.23S×164°.66E, h0^{km}, mb4.1/7, mb1 4.2/8, mb1mx4.0/34, mbtmp4.1/8, ML5.0/1, MS3.8/3, Ms1 3.8/3, ms1mx3.2/41, Error ellipse: s-maj=53.7km s-min=25.5km az=145.0*
*ISCJB **13** 00:50:28.6±0.4, 10°.96S±0°.07×164°.41E±0°.06, h29^{km}, mb4.2/15, MS3.7/2, Error ellipse: s-maj=11.0km s-min=8.5km az=158.2*
*NEIC **13** 00:50:29.8±4.8, 10°.89S×164°.37E, h27^{km}±31^{km}, mb4.5/6, Error ellipse: s-maj=21.3km s-min=8.4km az=127.0*
ISC 13 00:50:29.8±0.7**, 11°.0S**±0°.1×**164°.52E**±0°.09**, h29^{km}, n50, σ1^{s}.04**/43**, mb4.2**/15**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.75**	**288**	*e*P	**Pn**	**00 51 42.0**	**+2.5**
HNR				*e*S	**Sn**	**00 52 33.0**	**-0.7**
HNR	**Honiara**	**4.75**	**288**	*e*Pn	**Pn**	**00 51 36.7**	**-2.8**
HNR	**Honiara** 53nm,0.3s,baz=118,slow=4.8,SNR=5.5	**4.75**	**288**	Pn	**Pn**	**00 51 40.3**	**+0.8**
HNR	11nm,0.3s,baz=16,slow=18,SNR=2.5			Sn	**Sn**	**00 52 34.7**	**+1.0**
HNR	comp=Z,823nm,19.9s,baz=132,slow=39			LR	LR	00 53 37.4	
DZM	**Mont Dzumac**	**11.19**	**171**	*e*Pn	Pn	00 53 12.6	+4.6
DZM	**Mont Dzumac** 0.9nm,0.3s,baz=309,slow=22,SNR=11	**11.19**	**171**	Pn	Pn	00 53 11.1	+3.2
CTA	**Charters Tower** 0.2nm,0.3s,baz=78,slow=14,SNR=4.6	**19.78**	**241**	P	**Pn**	**00 54 59.6**	**+0.1**
KWAJ	**Kwajalein Atol**	**19.89**	**9**	*e*P	**P**	**00 54 58.0**	**-1.0**
H11S2	**WAKE ISLAND Hy** baz=184,slow=76,SNR=6.1	**29.36**	**4**	T	T	01 26 55.7	
H11S3	**WAKE ISLAND Hy** baz=184,slow=76,SNR=5.1	**29.36**	**4**	T	T	01 26 57.9	
H11S1	**WAKE ISLAND Hy** baz=184,slow=76,SNR=5.7	**29.37**	**4**	T	T	01 26 59.7	
WRAB	**Tennant Creek** 1.5nm,0.6s	**30.37**	**249**	*e*P	**P**	**00 56 39.3**	**-0.2**
WB2	**Warramunga Arr**	**30.37**	**249**	*e*P	**P**	**00 56 39.3**	**-0.2**
WR1	**Warramunga Arr**	**30.38**	**249**	*e*P	**P**	**00 56 38.0**	**-1.6**
WRA	**Warramunga Arr** 2.4nm,0.8s,baz=81,slow=9.0,SNR=12	**30.38**	**249**	P	**P**	**00 56 38.0**	**-1.6**
WRA	comp=Z,185nm,18.3s,baz=35,slow=35			LR	LR	01 08 13.4	
H11N1	**WAKE ISLAND Hy** baz=184,slow=76,SNR=8.9	**30.58**	**4**	T	T	01 28 26.3	
H11N3	**WAKE ISLAND Hy** baz=184,slow=76,SNR=7.6	**30.59**	**4**	T	T	01 28 38.8	
H11N2	**WAKE ISLAND Hy** baz=184,slow=76,SNR=9.3	**30.60**	**4**	T	T	01 28 29.0	
GUMO	**Guam** comp=Z,123nm,18.9s,baz=94,slow=37	**31.23**	**321**	LR	LR	01 09 40.1	
ASAR	**Alice Springs** 0.5nm,0.7s,baz=80,slow=10,SNR=5.1	**31.75**	**243**	P	**P**	**00 56 49.9**	**-1.8**
FITZ	**Fitzroy Crossi** 8.1nm,1.0s	**38.23**	**255**	*e*P	**P**	**00 57 46.4**	**-1.2**
SONA0	**Songino Array**	**77.90**	**324**	*e*P	**P**	**01 02 25.8**	**+0.7**
SONM	**Songino Array** 0.9nm,0.7s,baz=149,slow=7.4,SNR=5.9	**77.90**	**324**	P	**P**	**01 02 25.8**	**+0.7**
GTA	**Gaotai**	**78.14**	**314**	*e*P	**P**	**01 02 28.3**	**+1.7**
GTA				pP	pwP	01 02 51.0	+8.5
GTA				sP	sP	01 03 02.4	+26
GTA	comp=Z,2.0nm,1.1s			pmax	pmax		
ANM	**Nome** comp=Z,8.7nm,1.6s	**78.68**	**13**	*e*P	**P**	**01 02 28.0**	**-0.8**
BILL	**Bilibino** comp=Z,4.7nm,0.9s	**78.82**	**1**	*e*P	**P**	**01 02 29.6**	**+0.1**
QSPA	**South Pole Qui**	**79.03**	**180**	*e*P	**P**	**01 02 32.3**	**+1.2**
CAST	**Castle Rocks** comp=Z,12nm,1.3s	**81.25**	**18**	*e*P	**P**	**01 02 44.2**	**+1.3**
IM3	**Indian Mountai**	**82.68**	**16**	*e*P	**P**	**01 02 50.6**	**+0.4**
COLA	**College**	**83.60**	**19**	*e*P	**P**	**01 02 55.1**	**+0.1**
IL1	**Eielson Array**	**83.83**	**19**	*e*P	**P**	**01 02 56.4**	**+0.2**
ILAR	**Eielson Array** comp=Z,5.6nm,1.0s,baz=241,slow=5.0,SNR=22	**83.83**	**19**	P	**P**	**01 02 55.9**	**-0.4**
ILB	**Eielson Array** comp=Z,5.5nm,0.9s	**83.83**	**19**	*e*P	**P**	**01 02 56.4**	**+0.2**
EGAK	**Eagle**	**85.73**	**20**	*e*P	**P**	**01 03 06.3**	**+0.6**
DAWY	**Dawson** comp=Z,7.8nm,1.2s	**85.93**	**21**	*e*P	**P**	**01 03 07.9**	**+1.0**
INK	**Inuvik** comp=Z,1.1nm,0.7s	**90.23**	**19**	*e*P	**P**	**01 03 28.9**	**+1.7**
MK01	**Makanchi Array**	**92.63**	**317**	*e*P	**P**	**01 03 38.6**	**-0.3**
MK31	**Makanchi Array**	**92.65**	**317**	*e*P	**P**	**01 03 39.1**	**+0.1**
MK32	**Makanchi Array**	**92.65**	**317**	*e*P	**P**	**01 03 39.0**	**+0.1**
MKAR	**Makanchi Array** comp=Z,1.3nm,0.8s,baz=101,slow=5.6,SNR=13	**92.65**	**317**	P	**P**	**01 03 39.0**	**+0.1**
ZALV	**Zalesovo Beam**	**92.80**	**324**	*e*P	**P**	**01 03 38.6**	**-0.8**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.5s,baz=64,slow=3.4,SNR=4.3	**92.80**	**324**	P	**P**	**01 03 38.7**	**-0.7**
ZAA1	**Zalesovo Array**	**92.80**	**324**	*e*P	**P**	**01 03 38.7**	**-0.7**
YKA	**Yellowknife Ar** comp=Z,0.1nm,0.5s,baz=257,slow=2.0,SNR=3.8	**95.46**	**27**	P	**P**	**01 03 50.7**	**-0.8**
YKB5	**Yellowknife Ar**	**95.46**	**27**	*e*P	**P**	**01 03 51.5**	**0.0**
ARA0	**ARCESS Array S**	**115.96**	**345**	*e*PKPdf	**PKiKP**	**01 09 08.7**	**-0.6**
ARCES	**ARCESS Array B** comp=Z,4.1nm,1.2s,baz=54,slow=2.3,SNR=3.9	**115.96**	**345**	PKP	**PKiKP**	**01 09 08.7**	**-0.6**
BR101	**Keskin Array S**	**128.03**	**312**	*e*PKPdf	**PKPdf**	**01 09 33.3**	**-0.3**
BRTR	**Keskin Array B** comp=Z,0.2nm,0.6s,baz=103,slow=1.9,SNR=2.2	**128.03**	**312**	PKP	**PKPdf**	**01 09 33.3**	**-0.3**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,1.1s,baz=330,slow=5.0,SNR=2.9	**163.06**	**279**	PKP	**PKPdf**	**01 10 29.8**	**-0.6**
TOA1	**Torodi Ar. Sit**	**163.06**	**279**	*e*PKPdf	**PKPdf**	**01 10 29.8**	**-0.7**

*ISN **13** 00:53:32.0±0.9, 36°.69N×42°.48E, h0^{km}±4^{km}, ML2.5*
*DDA **13** 00:53:32.8, 36°.69N×42°.37E, h7^{km}±2^{km}, ML2.5*
*ISK **13** 00:53:34.1, 36°.69N×42°.46E, h5^{km}, ML2.5/7*
ISC 13 00:53:32.5±1.4**, 36°.65N**±0°.05×**42°.40E**±0°.04**, h5^{km}**±12^{km}**, n16, σ1^{s}.23**/24**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSL	**Mosul** baz=299	**0.62**	**114**	*e*Pg	**Pg**	**00 53 45.0**	**+0.5**
MSL				AML	AML	00 53 45.3	
MSL				*e*Sg	**Sb**	**00 53 54.0**	**-0.9**
SIRN	**Sırnak**	**0.84**	**1**	*i* P	**Pb**	**00 53 50.1**	**+0.5**
SIRN				*i* S	**Sn**	**00 54 04.5**	**+0.6**
SIRT	**Sirnak**	**0.85**	**2**	PG	**Pn**	**00 53 50.6**	**-0.6**
SIRT				SG	**Sn**	**00 54 03.5**	**-0.5**
CUKT	**Cukurca**	**1.14**	**58**	PG	**Pn**	**00 53 55.9**	**+0.8**
CUKT	**Cukurca**	**1.14**	**58**	*i* P	**Pn**	**00 53 55.1**	**0.0**
CUKT				*i* S	**Sn**	**00 54 13.2**	**+2.1**
CUKT	comp=Z,487nm,0.2s			IAML_P			
SRTM	**Siirt_Merkez**	**1.39**	**344**	*i* P	**Pn**	**00 53 58.7**	**+0.1**
SRTM				*i* S	**Sn**	**00 54 19.7**	**+2.3**
SRTM	comp=Z,246nm,0.2s			IAML_P			
MARD	**Mardin**	**1.46**	**297**	*i* P	**Pn**	**00 54 00.2**	**+0.6**
MARD				*i* S	**Sn**	**00 54 19.2**	**+0.1**
MARD	comp=Z,643nm,0.2s			IAML_P			
BTMN	**Batman**	**1.53**	**324**	*i* P	**Pn**	**00 54 01.1**	**+0.5**
BTMN				*i* S	**Sg**	**00 54 22.9**	**+1.2**
BTMN	comp=Z,97nm,0.1s			IAML_P			
MAZI	**Mazidag**	**1.76**	**298**	PN	**Pg**	**00 54 07.3**	**+1.1**
SVAN	**Silvan-Diyarba**	**1.78**	**328**	PN	**Pg**	**00 54 07.1**	**+0.6**
SVAN	**Silvan-Diyarba**	**1.78**	**328**	*i* P	**Pg**	**00 54 06.5**	**0.0**
SVAN	comp=Z,111nm,0.1s			IAML_P			
GURO	**Guroymak-BITLI**	**1.92**	**351**	PN	**Pg**	**00 54 08.9**	**-0.4**
IKRK	**Kirkuk**	**2.01**	**128**	*e*Pn	**Pn**	**00 54 07.0**	**0.0**
IKRK				*e*Sn	**Sn**	**00 54 33.0**	**+0.5**
AGRB	**Hanur-Agry**	**2.96**	**9**	PN	**Pb**	**00 54 23.3**	**-2.4**
URFA	**Urfa**	**2.97**	**286**	PN	**Pb**	**00 54 24.7**	**-1.2**
PTK	**Pertek**	**3.27**	**314**	PN	**Pb**	**00 54 28.5**	**-2.6**

*NEIC **13** 01:02:57.9±0.0, 17°.55N×102°.84W, h38^{km}, mb4.2/3, MD4.2(MEX), After MEX.*
MEX 13 01:02:58.1±0.7**, 17°.58N×102°.81W, h25^{km}**±18^{km}**, MD4.2, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**1.28**	**89**	*e*Pn	Pn	01 03 17.9	-2.4
ZIIG				*e*Sn	Sn	01 03 34.0	-2.8
ZIIG	**Zihuatanejo**	**1.28**	**89**	*e*P	Pn	01 03 17.9	-2.4
ZIIG				*i* S	Sn	01 03 32.6	-4.2
R15V		**1.94**	**325**	*e*P	Pn	01 03 27.0	-2.5
ARIG	**Puente Sto Nin**	**2.44**	**73**	*e*P	Pn	01 03 34.2	-2.3
ARIG				*e*S	Sn	01 04 03.5	-2.1
ARIG	**Puente Sto Nin**	**2.44**	**73**	*e*P	Pn	01 03 34.2	-2.3
ARIG				*e*S	Sn	01 04 02.9	-2.6
MOIG	**Morelia**	**2.59**	**36**	*e*Pn	Pn	01 03 36.2	-2.4
MOIG				*e*Sn	Sn	01 04 07.0	-2.4
MOIG	**Morelia**	**2.59**	**36**	*e*P	Pn	01 03 36.0	-2.6
MOIG				*i* S	Sn	01 04 07.0	-2.4
CJM	**Chamela**	**2.85**	**312**	*e*Pn	Pn	01 03 39.2	-2.9
CJM				*e*Sn	Sn	01 04 12.3	-3.4
CJM	**Chamela**	**2.85**	**312**	*e*P	Pn	01 03 44.0	+1.9
CJM				*e*S	Sn	01 04 12.3	-3.4
ZAIG	**Zacatecas**	**5.17**	**2**	*e*Pn	Pn	01 04 13.3	-0.9
ZAIG				*e*Sn	Sn	01 05 11.7	-1.5
WHTX	**Lake Whitney,** 10nm,0.8s	**15.14**	**18**	*e*Pn	Pn	01 06 28.7	-1.7
ESTN	**Estel** 11nm,0.6s	**16.46**	**103**	*e*Pn	Pn	01 06 40.2	-7.4
Z41A	**Richland Creek** 50nm,1.9s	**18.02**	**28**	*e*Pn	Pn	01 07 01.9	-5.0
152A	**Waverly Hall** 26nm,0.2s	**22.17**	**44**	*e*P	P	01 07 52.4	0.0
MCMT	**McKenzie Canyo**	**28.44**	**345**	*e*P	P	01 08 52.5	+1.3

*ISCJB **13** 01:05:33.9±0.3, 10°.95S±0°.05×166°.01E±0°.06, h10^{km}, mb4.5/28, MS3.8/6, Error ellipse: s-maj=8.3km s-min=6.9km az=7.2*
*NEIC **13** 01:05:35.4±0.3, 10°.89S×165°.96E, h10^{km}, mb4.5/18, Error ellipse: s-maj=9.5km s-min=7.3km az=126.0*
*IDC **13** 01:05:43.0±3.3, 10°.85S×165°.94E, h67^{km}±28^{km}, mb4.0/12, mb1 4.2/14, mb1mx3.9/43, mbtmp4.3/14, ML4.7/2, MS3.8/8, Ms1 3.8/8, ms1mx3.4/43, Error ellipse: s-maj=22.8km s-min=18.4km az=99.0*
ISC 13 01:05:35.3±0.5**, 10°.86S**±0°.07×**166°.06E**±0°.08**, h10^{km}, n61, σ1^{s}.34**/57**, mb4.4**/28**, MS3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.19**	**283**	*e*P	Pn	01 07 11.0	+4.2
HNR				*e*S	**Sn**	**01 08 21.0**	**+3.4**
HNR	**Honiara**	**6.19**	**283**	*e*Pn	**Pn**	**01 07 05.2**	**-1.5**
HNR				*e*Sn	**Sn**	**01 08 20.1**	**+2.4**
HNR	**Honiara** 54nm,0.3s,baz=150,slow=4.1,SNR=10	**6.19**	**283**	P	Pn	01 07 10.9	+4.1
HNR	2.0nm,0.3s,baz=168,slow=13,SNR=1.4			S	**Sn**	**01 08 20.1**	**+2.4**
HNR	comp=Z,766nm,19.6s,baz=128,slow=40			LR	LR	01 09 45.8	
DZM	**Mont Dzumac**	**11.15**	**178**	*e*Pn	**Pn**	**01 08 12.8**	**-2.1**
DZM				*e*Sn	**Sn**	**01 10 19.4**	**-0.4**
DZM	**Mont Dzumac** 1.7nm,0.3s,baz=352,slow=9.3,SNR=16	**11.15**	**178**	P	**Pn**	**01 08 19.6**	**+4.6**
DZM	0.3nm,0.3s,baz=175,slow=20,SNR=3.4			S	**Sn**	**01 10 19.4**	**-0.4**
DZM	comp=Z,311nm,18.7s,baz=54,slow=32			LR	LR	01 11 45.5	
EIDS	**Eidsvold** 21nm,1.0s	**20.24**	**223**	*e*P	Pn	01 10 13.7	+1.0
CTA	**Charters Tower** 4.5nm,0.7s,baz=69,slow=14,SNR=3.4	**21.16**	**242**	P	**P**	**01 10 22.1**	**+1.2**
RAO	**Raoul Island** comp=Z,702nm,21.4s,baz=256,slow=29	**23.63**	**143**	LR	LR	01 17 15.0	
ARMA	**Armidale** 14nm,1.1s	**23.64**	**212**	*e*P	**P**	**01 10 44.7**	**-2.2**
H11S2	**WAKE ISLAND Hy** baz=181,slow=76,SNR=69	**29.18**	**1**	T	T	01 42 04.2	
H11S3	**WAKE ISLAND Hy** baz=181,slow=76,SNR=59	**29.18**	**1**	T	T	01 42 04.5	
H11S1	**WAKE ISLAND Hy** baz=181,slow=76,SNR=52	**29.19**	**1**	T	T	01 42 06.0	
BKZ	**Black Stump Fm** 9.2nm,0.8s	**29.68**	**163**	*e*P	**P**	**01 11 42.6**	**+1.3**
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=40	**30.39**	**2**	T	T	01 43 35.8	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=22	**30.40**	**2**	T	T	01 43 37.4	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=23	**30.41**	**2**	T	T	01 43 38.4	
STKA	**Stephens Creek** 0.7nm,0.3s,baz=27,slow=6.8,SNR=4.2	**30.79**	**224**	P	**P**	**01 11 52.2**	**+1.0**
STKA	comp=Z,179nm,19.1s,baz=27,slow=33			LR	LR	01 22 44.0	
SNZO	**South Karori** 55nm,1.3s	**31.27**	**167**	*e*P	**P**	**01 11 55.1**	**-0.1**
WRAB	**Tennant Creek** 4.9nm,0.8s	**31.83**	**250**	*e*P	**P**	**01 11 58.9**	**-1.6**
WR1	**Warramunga Arr**	**31.84**	**250**	*e*P	**P**	**01 12 00.7**	**+0.1**
WR1				*e*PcP	**PcP**	**01 14 51.2**	**-0.5**
WRA	**Warramunga Arr** 4.9nm,0.7s,baz=81,slow=9.3,SNR=40	**31.84**	**250**	P	**P**	**01 12 00.7**	**+0.1**
WRA	0.5nm,0.7s,baz=77,slow=3.5,SNR=4.8			PcP	**PcP**	**01 14 51.2**	**-0.5**
RPZ	**Rata Peaks** 30nm,0.9s,baz=316,slow=4.9,SNR=5.6	**33.02**	**173**	P	**P**	**01 12 11.8**	**+1.2**
AS31	**Alice Springs** 0.9nm,0.7s	**33.15**	**243**	*e*P	**P**	**01 12 11.9**	**-0.2**
AS31				*e*PcP	**PcP**	**01 14 55.0**	**-0.2**
ASAR	**Alice Springs** 2.6nm,0.7s,baz=64,slow=10,SNR=26	**33.15**	**243**	P	**P**	**01 12 11.7**	**-0.5**
ASAR	0.7nm,0.7s,baz=58,slow=2.3,SNR=6.0			PcP	**PcP**	**01 14 55.0**	**-0.2**
ASAR	comp=Z,167nm,20.0s,baz=80,slow=34			LR	LR	01 24 17.3	
MTN	**Manton Dam** 9.4nm,1.1s	**34.23**	**263**	*e*P	**P**	**01 12 21.1**	**-0.4**
RAR	**Rarotonga** comp=Z,100nm,21.0s,baz=284,slow=30	**34.34**	**112**	LR	LR	01 23 07.9	
FITZ	**Fitzroy Crossi** 5.8nm,0.8s	**39.73**	**255**	*e*P	**P**	**01 13 08.9**	**+0.5**
SOEI	**Soe** 21nm,1.4s	**41.11**	**268**	*e*P	**P**	**01 13 17.3**	**-2.7**
JHJ	**Hachijo jima 2** 247nm,0.7s,baz=72,slow=19,SNR=3.4	**50.41**	**331**	P	**P**	**01 14 33.2**	**+0.2**
MJAR	**Matsushiro Arr** comp=Z,27nm,21.4s,baz=60,slow=33	**53.95**	**332**	LR	LR	01 35 10.7	
USRK	**Ussuriysk Ar.** 1.7nm,0.7s,baz=133,slow=6.3,SNR=5.8	**62.93**	**333**	P	**P**	**01 16 01.6**	**-0.2**
CM31	**Chiang Mai Arr** 4.4nm,0.5s	**72.33**	**293**	*e*P	**P**	**01 17 00.6**	**-1.3**
CMAR	**Chiang Mai Arr** 0.9nm,0.3s,baz=121,slow=5.1,SNR=7.5	**72.33**	**293**	P	**P**	**01 17 00.6**	**-1.3**
GAMB	**Gambell** 3.2nm,0.9s	**76.34**	**10**	*e*P	**P**	**01 17 25.7**	**+1.6**
SONA0	**Songino Array**	**78.71**	**324**	*e*P	**P**	**01 17 38.3**	**+0.3**
SONM	**Songino Array** 0.7nm,1.0s,baz=162,slow=5.9,SNR=4.8	**78.71**	**324**	P	**P**	**01 17 38.3**	**+0.3**
HDA	**Harding Lake** 7.7nm,0.8s	**82.97**	**19**	*e*P	**P**	**01 18 01.3**	**+1.1**
IL1	**Eielson Array**	**83.24**	**18**	*e*P	**P**	**01 18 01.9**	**+0.2**
ILAR	**Eielson Array** 2.3nm,0.8s,baz=234,slow=4.6,SNR=18	**83.24**	**18**	P	**P**	**01 18 01.4**	**-0.2**
ILB	**Eielson Array** 3.7nm,0.8s	**83.24**	**18**	*e*P	**P**	**01 18 02.6**	**+0.9**
EGAK	**Eagle** 6.1nm,0.9s	**85.10**	**20**	*e*P	**P**	**01 18 12.1**	**+1.0**
NV01	**Mina Array Sit**	**85.67**	**50**	*e*P	**P**	**01 18 15.7**	**+0.8**
NVAR	**Mina Array Bea** 0.8nm,0.7s,baz=226,slow=8.5,SNR=3.9	**85.67**	**50**	P	**P**	**01 18 15.7**	**+0.8**
INK	**Inuvik** 2.6nm,1.4s	**89.63**	**19**	*e*P	**P**	**01 18 33.6**	**+0.8**
INK	**Inuvik** comp=Z,260nm,21.8s,baz=60,slow=30	**89.63**	**19**	LR	LR	01 50 55.6	
U15A	**North Rim** 2.8nm,1.0s	**89.75**	**53**	*e*P	**P**	**01 18 36.5**	**+1.9**
MK01	**Makanchi Array**	**93.59**	**317**	*e*P	**P**	**01 18 51.5**	**-0.3**
MK31	**Makanchi Array** 1.4nm,0.8s	**93.60**	**317**	*e*P	**P**	**01 18 51.9**	**0.0**
MK32	**Makanchi Array**	**93.60**	**317**	*e*P	**P**	**01 18 52.0**	**+0.1**
MKAR	**Makanchi Array** 1.7nm,0.7s,baz=98,slow=6.2,SNR=20	**93.60**	**317**	P	**P**	**01 18 52.0**	**+0.1**
YKA	**Yellowknife Ar** 0.4nm,0.6s,baz=255,slow=4.8,SNR=7.1	**94.67**	**27**	P	**P**	**01 18 55.8**	**-0.5**
YKB5	**Yellowknife Ar**	**94.67**	**27**	*e*P	**P**	**01 18 55.8**	**-0.5**
ARA0	**ARCESS Array S**	**116.24**	**346**	*e*PKPdf	**PKiKP**	**01 24 17.8**	**-0.7**
ARCES	**ARCESS Array B** 0.6nm,0.5s,baz=60,slow=1.8,SNR=11	**116.24**	**346**	PKP	**PKiKP**	**01 24 17.8**	**-0.7**
BOSA	**Boshof** 1.4nm,0.8s,baz=157,slow=15,SNR=1.9	**125.46**	**223**	PKP	**PKPdf**	**01 24 36.7**	**-0.9**
NB200	**NORSAR Array S**	**126.61**	**345**	*e*PKPdf	**PKPdf**	**01 24 38.2**	**-0.4**
NOA	**NORSAR Array B** 0.5nm,0.7s,baz=40,slow=2.0,SNR=3.5	**126.61**	**345**	PKP	**PKPdf**	**01 24 38.2**	**-0.4**
KEST	**Kesra** 3.8nm,0.6s,baz=232,slow=2.0,SNR=5.1	**147.46**	**323**	PKPbc	**PKPbc**	**01 25 19.6**	**-0.6**
ESDC	**Sonseca Array** 0.7nm,0.6s,baz=36,slow=2.1,SNR=6.3	**149.97**	**345**	PKPbc	**PKPbc**	**01 25 26.2**	**-0.3**
TORD	**Torodi Ar. Bea** 0.6nm,1.0s,baz=76,slow=7.6,SNR=4.7	**164.54**	**280**	PKPab	**PKPab**	**01 26 33.7**	**-1.6**
TOA1	**Torodi Ar. Sit**	**164.54**	**280**	*e*PKPab	**PKPab**	**01 26 33.7**	**-1.6**

*BJI **13** 01:08:04.6, 57°.92S×25°.56W, h144^{km}, mB5.1/11*
*IDC **13** 01:08:06.7±0.4, 58°.54S×26°.42W, h147^{km}±3^{km}, mb4.6/16, mb1 4.6/17, mb1mx4.5/24, mbtmp5.0/17, MS4.1/4, Ms1 4.1/4, ms1mx3.7/18, Error ellipse: s-maj=12.4km s-min=10.7km az=65.0*
*ISCJB **13** 01:08:07.4±1.2, 58°.52S±0°.04×26°.32W±0°.09, h168^{km}±12^{km}, mb4.9/51, Error ellipse: s-maj=8.5km s-min=4.8km az=145.4*
*NEIC **13** 01:08:08.3±1.9, 58°.55S×26°.37W, h161^{km}±4^{km}, mb4.9/45, Error ellipse: s-maj=12.2km s-min=9.8km az=96.0*
*GCMT **13** 01:08:10.3±0.2, 58°.85S±0°.02×26°.01W±0°.02, h151^{km}±1^{km},*

MW5.3/106, Moment Tensor Solution. s67,c84; s106,c176; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.13±.02; $M_{\theta\theta}$0.66±.03; $M_{\phi\phi}$-0.78±.03; $M_{r\theta}$-0.28±.02; $M_{\theta\phi}$-0.30±.03; $M_{\phi r}$0.80±.02; Best double couple: $M_0$1.14200×10^{17} NP1:ϕ_s331.00000°,δ87.00000°, λ48.00000°. NP2:ϕ_s238.00000°,δ42.00000°,λ176.00000°. Principal axes: T 1.0230, Plg34.0000°, Azm207.0000°; N 0.2390, Plg42.0000°, Azm334.0000°; P -1.2610, Plg29.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 13 01:08:06.9±0.3**,58°.68S**±0°.05×**26°.29W**±0°.05**,h151**^{km}±2^{km}**, h151**^{km}**:pP-P,n245,**σ**1**^{s}**35**/297**,mb4.9**/51**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.16	304	ePn	Pn	01 09 49.5	+0.7
HOPE				eSn	Sn	01 11 13.2	+4.3
VNA1	Neumayer--Stat	14.18	155	P	P	01 11 26.4	+3.0
VNA1				S	Sn	01 13 55.6	-2.0
VNA3	Neumayer Olymp	14.35	158	P	P	01 11 28.0	+2.6
VNA3				S	Sn	01 13 57.1	-4.6
VNA3	Neumayer Olymp	14.35	158	P	ScP	01 19 49.1	+2.6
VNA2	Neumayer--Watz	14.58	155	P	P	01 11 30.5	+2.5
	baz=318,slow=13						
VNA2				S	Sn	01 14 04.8	-2.3
	baz=318,slow=22						
VNA2	Neumayer--Watz	14.58	155	P	ScP	01 19 48.5	+1.7
SNAA	Sanae	16.15	153	P	P	01 11 47.3	+2.0
SNAA				S	S	01 14 39.9	-4.3
SNAA	Sanae	16.15	153	P	ScP	01 19 51.4	+1.6
SNAA	Sanae	16.15	153	ePn	P	01 11 47.4	+2.0
	81nm,1.2s						
SNAA				eS	S	01 14 40.1	-4.1
SNAA	Sanae	16.15	153	P	P	01 11 47.3	+2.0
	3.1nm,0.3s,baz=298,slow=12,SNR=72						
SNAA				S	S	01 14 40.2	-4.1
	0.1nm,0.3s,baz=339,slow=17,SNR=2.5						
PMSA	Palmer Station	18.66	235	eP	Pn	01 12 15.6	+0.7
	147nm,0.8s						
PMSA				eP	Pn	01 12 15.7	+0.8
PMSA				eS	S	01 15 29.0	-8.0
PMSA	Palmer Station	18.66	235	P	Pn	01 12 15.7	+0.8
	14nm,0.3s,baz=71,slow=6.6,SNR=44						
EFI	East Falkland	19.31	277	eP	P	01 12 20.9	+1.0
	227nm,1.2s						
USHA	Ushuaia	23.13	261	P	P	01 12 59.9	+0.6
	52nm,0.5s,baz=111,slow=12,SNR=55						
GO10	Punta Arenas	25.30	263	eP	P	01 13 19.2	+0.2
	226nm,1.5s						
GO09	Cerro Castillo	26.97	266	eP	P	01 13 33.3	-0.8
	96nm,1.4s						
TRQA	Tornquist	30.86	296	eP	P	01 14 09.3	+0.7
	12nm,0.6s						
TRQA	Tornquist	30.86	296	epP	pP	01 14 39.9	+0.3
QSPA	South Pole Qui	31.57	180	eP	P	01 14 16.8	+2.1
	65nm,0.6s						
PLCA	Paso Flores	33.01	283	eP	P	01 14 27.5	+0.1
	43nm,0.9s						
PLCA	Paso Flores	33.01	283	eP	P	01 14 27.1	-0.2
PLCA				epP	pwP	01 15 02.5	-0.4
CPSB	Cacapava Do Su	33.80	315	eP	P	01 14 33.4	-0.8
CPSB				epP	pwP	01 15 07.7	-2.0
CNLB	Canela	33.87	319	eP	P	01 14 34.2	-0.7
CNLB				epP	pwP	01 15 08.3	-2.2
TER01	Tubaro-SC	34.02	322	eP	P	01 14 35.5	-0.7
TER01				epP	pP	01 15 06.3	-1.1
GO06	Curarrehue	34.34	284	eP	P	01 14 38.2	-0.7
	16nm,0.6s						
ITAB	Concordia	36.22	319	eP	P	01 14 53.7	-1.2
TIJ01	Guaruva-PR	36.98	324	eP	P	01 15 00.4	-1.2
MAW	Mawson	37.76	141	eP	P	01 15 09.5	+2.0
	24nm,1.4s						
MAW	Mawson	37.76	141	P	P	01 15 09.4	+2.0
	27nm,0.7s,baz=238,slow=13,SNR=4.9						
MAW				LR	LR	01 28 53.0	
	comp=Z,215nm,20.4s,baz=244,slow=33						
ESAR	Angra dos Reis	37.92	332	epP	pP	01 15 42.5	+1.3
DUB01	Friburgo-RJ	38.35	336	epP	pP	01 15 44.7	-0.3
VAS01	Vassouras-RJ	38.39	334	epP	pP	01 15 45.3	0.0
PTGB	Pitanga	38.52	321	eP	P	01 15 13.0	-1.4
PTGB				epP	pP	01 15 46.5	+0.2
CPUP	Villa Florida	38.93	313	eP	P	01 15 16.2	-1.5
	14nm,1.4s						
CPUP	Villa Florida	38.93	313	P	P	01 15 16.2	-1.5
	3.1nm,0.7s,baz=151,slow=5.8,SNR=6.9						
CPUP				ScP	ScP	01 20 57.3	-1.6
	3.3nm,1.0s,baz=161,slow=3.2,SNR=6.0						
CPUP				LR	LR	01 31 08.8	
	comp=Z,152nm,19.3s,baz=13,slow=36						
CPUP	Villa Florida	38.93	313	eP	P	01 15 16.1	-1.6
CPUP				epP	pP	01 15 50.2	+0.6
PEL	Peldehue	39.00	291	eP	P	01 15 18.6	+0.3
	204nm,1.2s						
FRTB	Fartura	39.01	325	eP	P	01 15 17.2	-1.3
ROC1	El Roble	39.29	291	eP	P	01 15 21.6	+0.5
	34nm,0.7s						
RCLB	Rio Claro- Sao	39.30	328	eP	P	01 15 19.9	-1.0
RCLB				epP	pP	01 15 52.5	-0.4
ALF01	Guarapari-ES	39.43	338	eP	P	01 15 21.5	-0.4
BSCB	Bom Sucesso	39.94	333	eP	P	01 15 25.1	-1.1
TRCB	Terra Rica	40.49	321	eP	P	01 15 29.0	-1.7
TRCB				epP	pwP	01 16 06.4	-0.6
RIB01	Linhares ES	40.64	339	eP	P	01 15 30.3	-1.6
RIB01				epP	pP	01 16 04.6	+0.3
BB19B	Bebedouro	40.86	327	eP	P	01 15 33.3	-0.4
BB19B				epP	pP	01 16 06.2	+0.2
SUR	Sutherland	40.94	71	eP	P	01 15 36.4	+1.8
	33nm,1.0s						
SUR	Sutherland	40.94	71	P	P	01 15 36.0	+1.4
	19nm,0.7s,baz=212,slow=8.2,SNR=23						
BSFB	Barra de Sao F	41.19	339	eP	P	01 15 36.7	+0.3
BSFB				epP	pP	01 16 10.3	+1.4
SJMB	Sao Joao De Ma	41.38	338	eP	P	01 15 38.1	+0.1
GO04	Tololo Observa	41.49	294	eP	P	01 15 39.7	+0.6
	80nm,1.4s						
LCO	Las Campanas	42.41	295	eP	P	01 15 45.8	-0.8
	53nm,1.4s						
LCO	Las Campanas	42.41	295	eP	P	01 15 45.5	-1.1
ITRB	Iturama	42.68	325	eP	P	01 15 47.9	-0.6
PMNB	Patos De Minas	42.71	331	eP	P	01 15 48.1	-0.8
SBA	Scott Base	43.49	184	eP	P	01 15 55.8	+1.5
	90nm,1.1s						
AQDB	Aquidauana	43.68	318	eP	P	01 15 54.8	-1.7
AQDB				epP	pP	01 16 29.2	+0.1
IPMB	Ipameri, GO	43.70	329	eP	P	01 15 56.1	-0.6
IPMB				epP	pP	01 16 28.6	-0.8
MCI6	Montes Claros	43.78	335	eP	P	01 15 56.1	-1.3
MCI7	Montes Claros	43.79	335	eP	P	01 15 56.4	-1.1
MCI9	Montes Claros	43.89	335	eP	P	01 15 57.5	-0.7
VNDA	Vanda	43.96	183	eP	P	01 16 01.1	+3.0
	31nm,0.6s						
VNDA	Vanda	43.96	183	P	P	01 16 00.9	+2.8
	33nm,0.7s,baz=184,slow=7.7,SNR=68						
GO02	Mina Guanaco	45.16	299	eP	P	01 16 08.2	-0.3
	14nm,0.6s						
JANB	Januaria	45.57	335	eP	P	01 16 11.3	-0.2
BDFB	Brasilia	45.89	330	eP	P	01 16 14.0	-0.1
BDFB				eP	P	01 16 14.6	+0.4
BDFB	Brasilia	45.89	330	P	P	01 16 14.0	-0.1
	8.6nm,0.5s,baz=148,slow=8.2,SNR=30						
BOSA	Boshof	46.22	72	eP	P	01 16 16.6	-0.1
	53nm,0.8s						
BOSA				eP	P	01 16 16.6	-0.1
BOSA	Boshof	46.22	72	P	P	01 16 16.6	-0.1
	50nm,0.7s,baz=212,slow=6.7,SNR=109						
BOSA	Boshof	46.22	72	eP	P	01 16 16.5	-0.1
PB10	IPOC Station P	47.02	299	eP	P	01 16 20.5	-2.3
	25nm,1.0s						
LVC	Limon Verde	47.06	301	eP	P	01 16 23.7	+0.2
	4.3nm,0.6s						
LVC	Limon Verde	47.06	301	eP	P	01 16 22.8	-0.7
PB04	IPOC Station P	47.86	300	eP	P	01 16 29.2	-0.3
	15nm,0.7s						
PB04				epP	pwP	01 17 08.4	+1.5
SALV	Santo Antonio	47.93	320	eP	P	01 16 27.7	-2.1
SALV				epP	pP	01 17 04.2	+1.2
PB01	IPOC Station P	48.69	302	eP	P	01 16 35.5	-0.2
	8.5nm,0.5s						
LBTB	Lobatse	49.37	70	eP	P	01 16 41.5	+0.5
	44nm,0.8s						
PB11	IPOC Station P	49.89	302	eP	P	01 16 43.3	-1.6
	28nm,1.3s						
H10S2	ASCENSION HYDR	50.40	15	T	T	02 11 45.1	
	baz=188,slow=75,SNR=27						
H10S3	ASCENSION HYDR	50.41	15	T	T	02 11 45.4	
	baz=188,slow=75,SNR=24						
MNMC	Minye Minye	50.42	303	eP	P	01 16 48.8	-0.2
	14nm,0.6s						
H10S1	ASCENSION HYDR	50.42	15	T	T	02 11 46.4	
	baz=188,slow=75,SNR=31						
TSUM	Tsumeb	50.60	58	eP	P	01 16 51.2	+1.0
	28nm,0.9s						
H10N1	ASCENSION HYDR	51.52	15	T	T	02 13 17.4	
	baz=181,slow=73,SNR=3.1						
H10N3	ASCENSION HYDR	51.52	15	T	T	02 13 09.7	
	baz=181,slow=73,SNR=20						
H10N2	ASCENSION HYDR	51.53	15	T	T	02 13 12.0	
	baz=181,slow=73,SNR=15						
NBLI	Livramento-PB	51.84	347	eP	P	01 16 58.6	-0.8
NBLI				epP	pP	01 17 31.3	-2.1
LPAZ	La Paz	52.31	306	eP	P	01 17 03.2	-0.4
	4.9nm,0.6s						
LPAZ	La Paz	52.31	306	P	P	01 17 03.1	-0.4
	3.6nm,0.5s,baz=123,slow=5.2,SNR=25						
LPAZ	La Paz	52.31	306	eP	P	01 17 02.7	-0.8
RCBR	Riachuelo	53.24	348	eP	P	01 17 07.7	-1.9
	25nm,1.3s						
RCBR	Riachuelo	53.24	348	eP	P	01 17 08.6	-1.0
RCBR				epP	pP	01 17 44.9	+1.0
MATP	Matopo	54.67	70	i P	P	01 17 20.5	+0.4
MATP	Matopo	54.67	70	i P	P	01 17 18.2	-1.9
BLWY	Bulawayo	54.96	70	i P	P	01 17 22.2	-0.1
BLWY	Bulawayo	54.96	70	i P	P	01 17 19.9	-2.4
LSZ	Lusaka	58.92	67	eP	P	01 17 50.5	+0.4
	27nm,0.8s						
LSZ				epP	pP	01 18 24.0	-0.8
ABPO	Ambohimpanom	65.39	86	eP	P	01 18 33.2	-0.1
	24nm,1.4s						
OPO	Ambohidratompo	65.74	86	LR	LR	01 42 41.8	
	comp=Z,509nm,21.7s,baz=283,slow=32						
LIC	Lamto	66.91	23	eP	P	01 18 42.5	-0.1
	54nm,0.8s						
KIC	Kosan Boka	67.10	23	eP	P	01 18 44.1	+0.2
	15nm,0.7s						
TIC	Toumodi	67.32	23	eP	P	01 18 45.5	+0.3
DBIC	Dimbokro	67.38	23	eP	P	01 18 46.5	+0.9
	7.7nm,0.8s						
DBIC				epP	pP	01 19 20.6	-0.3
DBIC	Dimbokro	67.38	23	P	P	01 18 46.3	+0.7
	6.8nm,0.6s,baz=166,slow=6.9,SNR=19						
DBIC				pP	pP	01 19 20.6	-0.3
	6.7nm,0.6s,baz=168,slow=7.7,SNR=4.2						
DBIC	Dimbokro	67.38	23	eP	P	01 18 45.2	-0.3
DBIC				epP	pP	01 19 21.4	+0.5
OTAV	Otavalo	71.52	304	eP	P	01 19 13.0	+1.3
	23nm,1.4s						
OTAV	Otavalo	71.52	304	eP	P	01 19 11.4	-0.3
OTAV				epP	pP	01 19 48.1	+0.7
MBAR	Mbarara	72.95	61	epP	pP	01 19 54.9	-0.9
TOA0	Torodi Ar. Sit	75.13	28	eP	P	01 19 31.5	-0.6
TOA0				epP	pP	01 20 06.2	-1.9
TORD	Torodi Ar. Bea	75.13	28	P	P	01 19 31.8	-0.3
	9.7nm,0.5s,baz=205,slow=5.2,SNR=136						
TORD				pP	pP	01 20 07.8	-0.3
	12nm,0.8s,baz=196,slow=5.9,SNR=5.2						
TORD				LR	LR	01 45 36.6	
	comp=Z,104nm,21.6s,baz=280,slow=30						
TOA1	Torodi Ar. Sit	75.13	28	eP	P	01 19 31.8	-0.3
TOA1				epP	pP	01 20 07.8	-0.4
KMBO	Kilima Mbogo	75.56	68	P	P	01 19 40.3	+5.3
	0.9nm,0.4s,baz=234,slow=9.5,SNR=6.0						
SDV	Santo Domingo	76.21	315	eP	P	01 19 38.1	-0.4
SDV				epP	pP	01 20 15.3	+0.6
RPZ	Rata Peaks	76.96	193	P	P	01 19 43.3	+1.1
	24nm,0.8s,baz=146,slow=2.4,SNR=5.2						
THZ	Tophouse	78.66	195	eP	P	01 19 54.0	+2.3
	55nm,0.6s						
THZ				epP	pP	01 20 31.6	+3.1
SNZO	South Karori	78.85	196	eP	P	01 19 54.1	+1.5
	54nm,0.6s						
SNZO	South Karori	78.85	196	eP	P	01 19 53.3	+0.7
BKZ	Black Stump Fm	80.68	198	eP	P	01 20 04.5	+1.9
	16nm,0.6s						
URZ	Urewera	81.47	198	P	P	01 20 07.8	+1.1
	13nm,0.7s,baz=344,slow=6.3,SNR=8.0						
HIZ	Hauiti	81.57	197	eP	P	01 20 08.2	+0.9
	53nm,0.5s						
OUZ	Omahuta	84.99	196	eP	P	01 20 25.4	+0.6
	16nm,0.8s						
TAM	Tamanrasset	85.34	29	eP	P	01 20 29.4	+2.7
	3.6nm,1.0s						
FORT	Forrest	88.34	158	eP	P	01 20 42.7	+1.5
	33nm,1.0s						
STKA	Stephens Creek	89.22	170	eP	P	01 20 45.9	+0.6
	0.9nm,0.8s						
STKA	Stephens Creek	89.22	170	P	P	01 20 46.3	+1.0
	4.6nm,0.7s,baz=154,slow=4.8,SNR=9.3						
APG	El Apazote	89.97	300	P	P	01 20 48.6	-0.4
	1.7nm,0.6s,baz=317,slow=11,SNR=3.4						
CMIG	Matias Romero	93.83	297	P	P	01 21 06.4	-0.2
	1.2nm,0.5s,baz=143,slow=5.9,SNR=4.3						
MBWA	Marble Bar	95.64	148	epP	pP	01 21 52.2	-0.4
ASAR	Alice Springs	96.33	162	P	P	01 21 18.2	0.0
	2.9nm,0.5s,baz=189,slow=3.8,SNR=43						
ASAR				pP	pP	01 21 54.5	-1.3
	2.9nm,0.8s,baz=190,slow=4.1,SNR=4.7						
ASAR				PP	PP	01 25 13.8	+1.2
	1.0nm,0.9s,baz=192,slow=6.2,SNR=5.3						
AS31	Alice Springs	96.33	162	eP	P	01 21 18.4	+0.2
	2.6nm,1.3s						
AS31				epP	pP	01 21 54.5	-1.3
AS31				ePP	PP	01 25 13.8	+1.2
AS01	Alice Springs	96.34	162	eP	P	01 21 18.0	-0.2
AS01				epP	pP	01 21 53.3	-2.6
WRA	Warramunga Arr	100.05	162	P	Pdif	01 21 34.6	-0.3
	0.5nm,0.7s,baz=195,slow=4.1,SNR=9.4						
WRA				pP	pPdif	01 22 13.9	+1.2
	0.4nm,0.7s,baz=205,slow=4.4,SNR=2.6						
WRA				PP	PP	01 25 39.5	-1.6
	1.3nm,1.0s,baz=190,slow=6.6,SNR=7.0						
CTA	Charters Tower	101.29	173	P	Pdif	01 21 39.7	-0.7
	5.0nm,0.8s,baz=296,slow=1.4,SNR=3.8						
BR101	Keskin Array S	109.93	45	ePP	PP	01 26 52.3	-3.0
BRTR	Keskin Array B	109.93	45	PP	PP	01 26 52.3	-3.0
	0.3nm,0.7s,baz=202,slow=7.4,SNR=3.9						
GERES	GERESS Array B	112.07	27	PP	PP	01 27 08.6	-1.9
	0.2nm,0.2s,baz=200,slow=5.1,SNR=3.6						
KBZ	Khabaz	116.92	49	SKP	SKPdf	01 29 52.5	-0.7
	1.4nm,0.9s,baz=153,slow=4.5,SNR=2.7						
SCHQ	Schefferville	117.76	335	PKP	PKPdf	01 26 33.3	-0.4
	3.4nm,0.5s,baz=218,slow=2.3,SNR=25						
SCHQ				SKP		01 29 53.8	
	3.2nm,0.9s,baz=310,slow=1.0,SNR=6.0						
PD31	Pinedale Array	122.13	300	ePKPdf	PKPdf	01 26 42.2	-0.6
PDAR	Pinedale Array	122.13	300	ePKPdf	PKPdf	01 26 42.1	-0.6
PDAR	Pinedale Array	122.13	300	PKP	PKPdf	01 26 42.3	-0.6
	0.7nm,0.4s,baz=118,slow=5.0,SNR=14						
ULM	Lac du Bonnet	122.47	315	PKP	PKPdf	01 26 41.9	-0.9
	2.5nm,0.5s,baz=135,slow=1.8,SNR=9.9						
NV01	Mina Array Sit	122.83	291	ePKPdf	PKPdf	01 26 44.3	+0.1
NVAR	Mina Array Bea	122.83	291	PKP	PKPdf	01 26 44.3	+0.1
	0.5nm,0.5s,baz=117,slow=3.1,SNR=2.5						
NB2	NORSAR Subarra	122.90	21	PKPdf	PKPdf	01 26 43.2	-0.2
	comp=Z,1.8nm,0.9s,baz=202,slow=1.9						
NB200	NORSAR Array S	122.90	21	ePKPdf	PKPdf	01 26 43.5	+0.1
NOA	NORSAR Array B	122.90	21	PKP	PKPdf	01 26 43.5	+0.1
	comp=Z,0.3nm,0.5s,baz=207,slow=2.0,SNR=13						
NOA				SKP		01 30 03.4	
	comp=Z,1.5nm,1.0s,baz=187,slow=1.8,SNR=3.4						
LOHW	Long Hollow	123.26	300	ePKPdf	PKiKP	01 26 45.3	+0.1
MOOW	Moose Ponds	123.43	300	ePKPdf	PKiKP	01 26 46.1	+0.6
FXWY	Fox Creek	123.48	300	ePKPdf	PKiKP	01 26 45.7	0.0
CM31	Chiang Mai Arr	123.67	111	ePKPdf	PKPdf	01 26 45.7	-0.5
CMAR	Chiang Mai Arr	123.67	111	PKP	PKPdf	01 26 45.7	-0.5
	comp=Z,6.4nm,0.4s,baz=236,slow=3.1,SNR=8.9						
CMAR				pPKP	pPKPdf	01 27 23.8	-1.7
	comp=Z,5.5nm,0.6s,baz=205,slow=3.0,SNR=3.0						
GAR	Garm	125.54	72	ePKPdf	PKiKP	01 26 50.6	+0.9
FIA0	FINESS Array S	126.48	28	ePKPdf	PKPdf	01 26 50.2	0.0
FINES	FINESS Array B	126.48	28	PKP	PKPdf	01 26 50.2	0.0
	comp=Z,2.1nm,0.4s,baz=160,slow=1.2,SNR=33						
FINES				SKPbc	SKPbc	01 29 50.5	
	comp=Z,1.1nm,0.4s,baz=194,slow=2.5,SNR=8.0						
FINES				SKP		01 30 10.0	
	comp=Z,1.1nm,0.6s,baz=229,slow=1.5,SNR=3.6						
SFJD	Kangerlussuaq	126.66	348	ePKPdf	PKPdf	01 26 50.5	+0.2
MSO	Missoula	127.25	300	ePKPdf	PKiKP	01 26 54.2	+1.4
G08A	Pilot Rock	128.40	296	ePKPdf	PKiKP	01 26 56.0	+0.8
ABKAR	Akbulak array	128.44	57	ePKPdf	PKPdf	01 26 54.4	+0.1
FCC	Fort Churchill	128.67	322	ePKPdf	PKPdf	01 26 53.6	-0.8
KSH	Kashi	128.77	76	PKP	PKPdf	01 26 55.0	-0.5
KSH				PP	PP	01 29 05.6	+1.0
KSH				SKKS		01 35 39.1	
KSH				AMB	AMB		
	comp=Z,77nm,4.5s						
KSH				LR	LR		
	comp=Z,56nm,4.1s						
KSH				LR	LR		
	comp=Z,87nm,4.0s						
KSH				LR	LR		
	comp=Z,320nm,5.6s						
KMI	Kunming	131.17	111	PKP	PKiKP	01 27 02.3	+0.7
KMI				AMB	AMB		
	comp=Z,110nm,4.0s						
SUMG	Summit	131.24	355	ePKPdf	PKiKP	01 27 00.5	0.0
SUMG	Summit	131.24	355	i P	SKPbc	01 30 09.3	-0.7
	comp=Z,288nm,0.7s						
ARA0	ARCESS Array S	133.20	22	ePKPpre	PKPpre	01 26 46.1	
ARA0				ePKPdf	PKPdf	01 27 02.4	-0.4
ARA0				eSKPbc	SKPbc	01 30 14.1	-2.3
ARCES	ARCESS Array B	133.20	22	PKhKP	PKPpre	01 26 46.1	
	comp=Z,1.3nm,0.8s,baz=233,slow=2.7,SNR=6.8						
ARCES				PKP	PKPdf	01 27 02.4	-0.4
	comp=Z,2.0nm,0.4s,baz=214,slow=2.6,SNR=23						
ARCES				SKPbc	SKPbc	01 30 14.1	-2.3
	comp=Z,6.3nm,0.8s,baz=205,slow=2.6,SNR=14						
GYA	Guiyang	134.19	114	ePdif	Pdif	01 24 06.9	+0.4
GYA				PKP	PKiKP	01 27 07.8	+0.3
GYA				sPKP		01 28 02.6	
GYA				PP	PP	01 29 44.0	+4.8
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
DAG	Danmarks Havn	135.28	2	i P	SKPbc	01 30 22.6	-0.3
	comp=Z,21nm,1.3s						
CD2	Chengdu	136.45	107	PKP	PKiKP	01 27 11.0	-0.9
MK01	Makanchi Array	137.21	74	ePKPpre	PKPpre	01 26 59.9	
MK31	Makanchi Array	137.22	74	ePKPpre	PKPpre	01 27 03.9	
MK32	Makanchi Array	137.22	74	ePKPpre	PKPpre	01 26 60.0	
MK32				ePKPdf	PKiKP	01 27 13.0	+0.1
MK32				ePP	PP	01 29 57.9	-0.3
MK32				eSKPbc	SKPbc	01 30 29.5	-0.3
MKAR	Makanchi Array	137.22	74	ePKPpre	PKPpre	01 27 03.9	
MKAR	Makanchi Array	137.22	74	PKhKP	PKPpre	01 26 60.0	
	comp=Z,0.6nm,0.6s,baz=226,slow=5.0,SNR=5.8						
MKAR				PKP	PKiKP	01 27 13.0	+0.1
	comp=Z,0.7nm,0.5s,baz=216,slow=2.8,SNR=11						
MKAR				PP	PP	01 29 57.9	-0.3
	comp=Z,0.8nm,0.9s,baz=215,slow=4.7,SNR=4.2						
MKAR				SKPbc	SKPbc	01 30 29.5	-0.3
	comp=Z,1.9nm,0.6s,baz=237,slow=3.3,SNR=16						
TULEG	Thule	137.63	346	ePKPdf	PKPdf	01 27 11.4	+0.6
WMQ	Urumqi	137.91	81	ePKP	PKiKP	01 27 13.7	-0.7
WMQ				sPKP		01 28 06.6	
YKA	Yellowknife Ar	138.43	316	PKhKP	PKPpre	01 27 03.4	
	comp=Z,0.5nm,0.5s,baz=126,slow=3.4,SNR=9.6						
YKA				PKP	PKPdf	01 27 12.7	+0.1
	comp=Z,5.3nm,0.7s,baz=127,slow=2.4,SNR=42						
YKA				pPKP	pPKPdf	01 27 51.1	-1.1
	comp=Z,3.1nm,0.7s,baz=127,slow=2.4,SNR=4.7						
YKA				SKPbc	SKPbc	01 30 30.9	-1.7
	comp=Z,2.1nm,0.7s,baz=127,slow=2.5,SNR=10						
YKB5	Yellowknife Ar	138.43	316	ePKPpre	PKPpre	01 27 04.4	
YKB5				ePKPdf	PKPdf	01 27 12.7	+0.1
YKB5				eSKPbc	SKPbc	01 30 30.4	-2.2
YKW3	Yellowknife Ar	138.47	316	ePKPdf	PKPdf	01 27 12.4	-0.3
RES	Resolute Bay	140.48	337	ePKPpre	PKPpre	01 27 12.1	
GTA	Gaotai	141.05	95	ePKP	PKPdf	01 27 18.1	-0.3
GTA				sPKP		01 28 14.4	
XAN	Xi'an	141.53	110	PKP	PKiKP	01 27 22.8	+0.6
ZAA0	Zalesovo Array	143.03	66	ePKPpre	PKPpre	01 27 18.5	
ZALV	Zalesovo Beam	143.03	66	ePKPpre	PKPpre	01 27 17.8	
ZALV	Zalesovo Beam	143.03	66	PKhKP	PKPpre	01 27 18.0	
	comp=Z,4.2nm,0.5s,baz=246,slow=3.5,SNR=27						
ZALV				pPKP	pPKPdf	01 27 59.0	-1.6
	comp=Z,1.6nm,0.5s,baz=224,slow=3.9,SNR=1.8						
ZALV				SKPbc	SKPbc	01 30 42.9	-2.0
	comp=Z,3.1nm,0.6s,baz=237,slow=4.1,SNR=10						
ZAA1	Zalesovo Array	143.04	66	ePKPpre	PKPpre	01 27 18.0	
ZAA1				eSKPbc	SKPbc	01 30 42.9	-2.0
NJ2	Nanjing	144.52	123	ePKP	PKPdf	01 27 24.1	-0.4
SSE	Sheshan	144.69	127	ePKPbc	PKPdf	01 27 25.0	+0.2
SKAG	Skagway	145.10	302	ePKPbc	PKPab	01 27 25.0	+0.3
WHY	Whitehorse	145.50	304	ePKPdf	PKPbc	01 27 25.7	-0.2
TIY	Taiyuan	146.18	110	ePKPbc	PKPbc	01 27 29.1	+0.5
HYT	Haines Junctio	146.72	304	ePKPdf	PKPdf	01 27 28.2	+0.7
BTO	Baotou	147.19	104	ePKPbc	PKPbc	01 27 31.9	+0.5
TIA	Tai'an	147.22	117	PKPbc	PKPbc	01 27 32.1	+0.6
CBIJ	Chichi jima	147.42	161	ePKPbc	PKPbc	01 27 32.1	-0.2
JCJ	Chichijima	147.42	161	PKPbc	PKPbc	01 27 32.1	-0.3
	comp=Z,80nm,0.9s,baz=288,slow=20,SNR=4.2						
PCA	Pinnacle	147.59	301	ePKPbc	PKPbc	01 27 32.6	+0.7
INK	Inuvik	148.11	318	ePKPdf	PKPdf	01 27 28.5	-0.9
INK				eSKPbc	SKPbc	01 30 55.1	-0.9
INK	Inuvik	148.11	318	PKPbc	PKPbc	01 27 32.3	-0.6
	comp=Z,9.5nm,0.5s,baz=36,slow=1.4,SNR=72						
INK				SKPbc	SKPbc	01 30 55.1	-0.9
	comp=Z,1.9nm,0.8s,baz=119,slow=4.9,SNR=3.3						
HHC	Hu-ho-hao-te	148.15	105	ePKPbc	PKPdf	01 27 30.6	+0.1
EPYK	Eagle Plains	148.63	313	ePKPbc	PKPbc	01 27 33.9	-0.5
DAWY	Dawson	148.87	309	ePKPbc	PKPbc	01 27 34.4	-0.6
BJT	Baijiatuau	149.80	112	ePKPbc	PKiKP	01 27 39.0	+0.1
EYAK	Cordova Ski Ar	150.26	300	ePKPbc	PKiKP	01 27 39.8	+0.7
SONA0	Songino Array	150.31	90	ePKPbc	PKPbc	01 27 39.4	+0.3
SONA0				epPKPdf	pPKPbc	01 28 16.9	-1.3
SONM	Songino Array	150.31	90	PKPbc	PKPbc	01 27 39.4	+0.3
	comp=Z,7.2nm,0.6s,baz=222,slow=3.0,SNR=56						
SONM				pPKPbc	pPKPbc	01 28 16.9	-1.3
	comp=Z,26nm,1.0s,baz=232,slow=2.8,SNR=13						
SONA1	Songino Array	150.32	90	ePKPbc	PKPbc	01 27 39.4	+0.2
DIV	Divide	150.50	301	ePKPbc	PKiKP	01 27 40.3	+0.5
ULN	Ulaanbaatar	150.68	91	ePKPbc	PKPbc	01 27 40.3	+0.3
KLU	Klutina	150.70	302	ePKPbc	PKiKP	01 27 40.4	+0.2
NRIK	Noril'sk	150.71	42	PKP	PKPdf	01 27 31.0	-2.6
	comp=Z,1.1nm,0.4s,baz=77,slow=9.6,SNR=3.6						
NRIK				PKPbc	PKiKP	01 27 39.6	-0.3
	comp=Z,1.8nm,0.4s,baz=130,slow=1.8,SNR=5.3						
NRIK				pPKPbc	pPKPbc	01 28 18.1	-0.4
	comp=Z,5.5nm,0.8s,baz=189,slow=3.5,SNR=2.4						
SCRK	Sand Creek	150.73	307	ePKPdf	PKPdf	01 27 32.4	-1.6
RIDG	Independ'e Rid	151.02	306	ePKPbc	PKiKP	01 27 40.7	0.0
TLY	Talaya	151.17	82	ePKPbc	PKiKP	01 27 42.1	+0.7
SCM	Sheep Creek Mo	151.45	302	ePKPbc	PKiKP	01 27 41.9	+0.2
PRP	Porcupine Dome	151.82	310	ePKPbc	PKiKP	01 27 42.3	-0.1
DHY	Denali Highway	151.88	304	ePKPbc	PKiKP	01 27 43.3	+0.6
SML	Sawmill	151.89	301	ePKPbc	PKiKP	01 27 42.4	-0.1
FYU	Fort Yukon	151.96	312	ePKPdf	PKPdf	01 27 34.6	-0.9
HDA	Harding Lake	152.10	307	ePKPbc	PKiKP	01 27 43.2	+0.3
IL1	Eielson Array	152.17	308	ePKPdf	PKPdf	01 27 34.5	-1.4
IL1				ePKPbc	PKPbc	01 27 41.7	-1.0
ILAR	Eielson Array	152.18	308	PKP	PKPdf	01 27 33.8	-2.2
	comp=Z,1.0nm,1.1s,baz=213,slow=5.1,SNR=5.1						
ILAR				PKPbc	PKPbc	01 27 42.3	-0.4
	comp=Z,7.0nm,0.4s,baz=146,slow=5.0,SNR=101						
ILAR				pPKPbc	pPKPbc	01 28 21.6	-0.6
	comp=Z,1.9nm,0.5s,baz=149,slow=3.6,SNR=2.2						
ILB	Eielson Array	152.18	308	ePKPdf	PKPdf	01 27 33.8	-2.2
ILB				ePKPbc	PKPbc	01 27 42.4	-0.4
ILB				epPKPdf	pPKPbc	01 28 21.6	-0.6
RC01	Rabbit Creek A	152.27	299	ePKPbc	PKiKP	01 27 43.9	+0.6
KDAK	Kodiak Island	152.34	292	PKPbc	PKPbc	01 27 42.7	-0.6
	comp=Z,12nm,0.5s,baz=318,slow=0.7,SNR=21						
WRH	Wood River Hil	152.59	307	ePKPbc	PKPbc	01 27 43.3	-0.4
COLA	College	152.60	308	ePKPbc	PKiKP	01 27 43.9	+0.1
COLA	College	152.60	308	eP	PKPdf	01 27 37.6	+1.1
RND	Reindeer	152.62	304	ePKPbc	PKiKP	01 27 44.4	+0.3
MCK	McKinley	152.75	305	ePKPbc	PKiKP	01 27 44.3	+0.1
MDM	Murphy Dome	152.78	308	ePKPbc	PKPbc	01 27 43.5	-0.6
KS15	Wonju Array Si	152.93	130	ePKPbc	PKiKP	01 27 46.2	+0.8
KS15				ePKPab	PKPab	01 27 58.1	+1.0
KSRS	Korea Array	152.96	130	PKPbc	PKiKP	01 27 46.2	+0.8
	comp=Z,0.6nm,0.5s,baz=212,slow=3.9,SNR=3.1						
KSRS				PKPab	PKPab	01 27 58.1	+0.9
	comp=Z,4.7nm,0.9s,baz=215,slow=4.9,SNR=9.4						
KSRS				pPKPbc	pPKPbc	01 28 24.9	+0.4
	comp=Z,1.4nm,0.7s,baz=236,slow=1.3,SNR=2.5						
KS01	Wonju Array Si	152.97	130	ePKPab	PKPab	01 27 58.1	+0.8
BWN	Browne	153.09	306	ePKPbc	PKiKP	01 27 45.0	+0.1
TRF	Thorofare Moun	153.25	304	ePKPbc	PKiKP	01 27 45.4	-0.1
RSO	Redoubt South	153.44	297	ePKPab	PKPab	01 27 59.4	+0.4
BPAW	Bear Paw Mtn.	153.72	305	ePKPbc	PKPbc	01 27 46.1	-0.1

MLY	Manley	153.83	307	ePKPbc	PKiKP	01 27 47.7	+1.2
TOLK	Toolik Lake Re	153.95	316	ePKPbc	PKiKP	01 27 47.0	+0.3
CAST	Castle Rocks	154.03	304	ePKPbc	PKiKP	01 27 47.1	+0.2
IM3	Indian Mountai	155.24	309	ePKPdf	PKPdf	01 27 40.6	+0.4
USRK	Ussuriysk Ar.	160.30	128	PKPab	PKPab	01 28 28.9	+0.2
	comp=Z,0.5nm,0.5s,baz=153,slow=9.8,SNR=4.4						
KLR	Kul'dur	164.06	117	PKPab	PKPab	01 28 45.1	0.0
	comp=Z,4.3nm,0.9s,baz=202,slow=2.5,SNR=7.4						
PETK	Petropavlovsk-	173.98	204	PKPab	PKPab	01 29 29.0	+0.1
	comp=Z,4.9nm,0.6s,baz=148,slow=7.8,SNR=7.9						
PEA1	Petropavlovsk-	173.99	204	ePKPab	PKPab	01 29 29.0	+0.1

IDC ***13*** *01:17:55.9±4.0, 25.°15N×123.°27E, h130km±39km, mb3.2/6, mb1 3.3/7, mb1mx3.1/43, mbtmp3.6/7, Error ellipse: s-maj=33.2km s-min=16.6km az=77.0*

ISCJB ***13*** *01:17:56.5±0.5, 25.°08N±0.°07×123.°21E±0.°06, h149km±5km, mb3.3/5, Error ellipse: s-maj=12.6km s-min=7.4km az=155.9*

JMA ***13*** *01:17:57.8±0.2, 24.°98N×123.°21E, h148km±3km, M3.7*

ISC 13 01:17:57.4±0.8**, 25.°12N**±0.°09×**123.°22E**±0.°07**, h146**km±8km**, n21, σ1.s00**/35**, mb3.4**/5**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.69	196	P	Pn	01 18 19.5	+0.2
YOJ				eS	Sn	01 18 35.7	-0.3
JYNG	Yonagunijimaku	0.71	200	P	Pn	01 18 19.6	+0.1
JYNG				S	Sn	01 18 36.0	-0.4
IRIF	Iriomote-Funau	0.91	149	P	Pn	01 18 20.8	-0.2
IRIF				S	Sn	01 18 37.6	-1.4
JISG	Ishigakijimahi	1.13	118	P	Pn	01 18 23.0	+0.1
JISG				S	Sn	01 18 41.6	-0.7
JIJ	Ishigaki jima	1.13	132	P	Pn	01 18 22.9	0.0
JIJ				S	Sn	01 18 40.8	-1.6
JKRS	Kuro-shima	1.14	141	P	Pn	01 18 23.3	+0.3
JKRS				S	Sn	01 18 41.8	-0.7
HATJ	Hateruma jima	1.19	153	P	Pn	01 18 23.6	+0.1
HATJ				eS	Sn	01 18 42.8	-0.6
JTJ	Tarama	1.43	109	P	Pn	01 18 26.3	+0.4
JTJ				S	Sn	01 18 47.9	+0.3
JIRB	Irabujima	1.80	99	P	Pn	01 18 30.4	+0.5
JIRB				S	Sn	01 18 54.3	-0.5
JIKM	Ikemajima	1.85	96	P	Pn	01 18 31.4	+0.9
JIKM				S	Sn	01 18 56.0	+0.1
JMJ	Miyako jima 2	1.91	99	P	Pn	01 18 31.9	+0.8
JMJ				S	Sn	01 18 57.0	-0.1
JOGS	Gusukube	2.02	100	P	Pn	01 18 33.2	+0.8
JOGS				S	Sn	01 18 59.4	0.0
JKE	Kume jima 2	3.43	69	P	Pn	01 18 50.4	+0.3
JKE				S	Sn	01 19 31.5	+0.5
JOW	Kunigami	4.86	68	P	Pn	01 19 08.2	-0.6
	1.1nm,0.3s,baz=86,slow=20,SNR=12						
JOW				S	Sn	01 20 00.2	-4.3
	0.9nm,0.3s,baz=78,slow=19,SNR=2.4						
KSRS	Korea Array	12.93	17	P	Pn	01 20 57.1	+1.4
	0.2nm,0.3s,baz=193,slow=12,SNR=3.3						
USRK	Ussuriysk Ar.	20.33	18	P	P	01 22 21.7	-0.3
	1.1nm,0.7s,baz=201,slow=14,SNR=4.4						
KLR	Kul'dur	24.97	13	P	P	01 23 07.6	+0.4
	0.6nm,0.5s,baz=234,slow=7.2,SNR=5.4						
MKAR	Makanchi Array	38.98	314	P	P	01 25 08.7	-0.6
	0.4nm,0.4s,baz=100,slow=9.3,SNR=11						
WRA	Warramunga Arr	46.08	165	P	P	01 26 06.7	-0.1
	0.7nm,0.5s,baz=349,slow=9.3,SNR=17						
ASAR	Alice Springs	49.59	167	P	P	01 26 34.4	+0.5
	0.5nm,0.6s,baz=344,slow=9.7,SNR=5.6						
YKA	Yellowknife Ar	81.38	23	P	P	01 29 57.3	-0.1
	0.2nm,0.6s,baz=311,slow=4.7,SNR=4.8						

IDC ***13*** *01:29:57.7±1.4, 10.°77S×164.°62E, h0km, mb4.1/3, mb1 4.3/6, mb1mx3.8/47, mbtmp4.2/6, ML4.2/3, Error ellipse: s-maj=33.9km s-min=31.3km az=151.0*

ISCJB ***13*** *01:30:00.2±1.0, 10.°9S±0.°1×164.°56E±0.°10, h29km, mb4.1/3, Error ellipse: s-maj=19.5km s-min=11.2km az=32.3*

ISC 13 01:30:01.9±1.1**, 10.°8S**±0.°1×**164.°6E**±0.°1**, h29**km**, n12, σ1.s00**/7**, mb4.3**/3**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.80	286	Pn	Pn	01 31 12.2	-0.1
	50nm,0.3s,baz=138,slow=7.9,SNR=5.7						
HNR				Sn	Sn	01 32 07.5	+0.4
	27nm,0.3s,baz=165,slow=19,SNR=1.8						
DZM	Mont Dzumac	11.32	171	Pn	Pn	01 32 42.1	+0.2
	0.7nm,0.3s,baz=347,slow=21,SNR=10.0						
CTA	Charters Tower	19.93	240	P	P	01 34 31.6	-0.1
	0.3nm,0.3s,baz=71,slow=12,SNR=4.9						
H11S2	WAKE ISLAND Hy	29.20	4	T	T	02 06 39.1	
	baz=184,slow=74						
H11S3	WAKE ISLAND Hy	29.21	4	T	T	02 06 40.2	
	baz=184,slow=74						
H11S1	WAKE ISLAND Hy	29.22	4	T	T	02 06 40.5	
	baz=184						
H11N1	WAKE ISLAND Hy	30.43	4	T	T	02 08 11.7	
	baz=186						
H11N3	WAKE ISLAND Hy	30.43	4	T	T	02 08 10.3	
	baz=186						
H11N2	WAKE ISLAND Hy	30.45	4	T	T	02 08 19.2	
	baz=186						
SONM	Songino Array	77.84	324	P	P	01 41 58.1	+1.2
	0.7nm,0.6s,baz=134,slow=4.2,SNR=7.0						
ILAR	Eielson Array	83.66	19	P	P	01 42 27.8	+0.3
	1.7nm,0.8s,baz=237,slow=5.7,SNR=16						
MKAR	Makanchi Array	92.61	317	P	P	01 43 09.4	-1.6
	0.8nm,0.7s,baz=95,slow=6.5,SNR=6.0						

IDC 13 01:30:32.9±1.6**, 10.°74S**×**164.°64E, h0**km**, mb4.0**/3**, mb1 4.3**/5**, mb1mx3.8**/46**, mbtmp4.2**/5**, ML4.5**/2**, Error ellipse: s-maj=44.5km s-min=34.2km az=31.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.80	285	eP	Pn	01 31 47.0	+0.6
HNR				eS	Sb	01 32 57.0	+0.8
HNR	Honiara	4.80	285	Pn	Pn	01 31 47.0	+0.6
	60nm,0.3s,baz=158,slow=4.3,SNR=5.3						
HNR				Sn	Sn	01 32 44.2	+1.4
	30nm,0.3s,baz=320,slow=22,SNR=3.1						
DZM	Mont Dzumac	11.40	171	Pn	Pn	01 33 17.4	+0.2
	0.9nm,0.3s,baz=48,slow=4.6,SNR=4.6						
SONM	Songino Array	77.78	324	P	P	01 42 32.3	+0.2
	0.7nm,0.7s,baz=140,slow=5.8,SNR=4.5						
ILAR	Eielson Array	83.57	19	P	P	01 43 03.0	+0.4
	1.0nm,0.7s,baz=235,slow=5.7,SNR=5.5						
MKAR	Makanchi Array	92.55	317	P	P	01 43 45.1	-1.2
	0.6nm,0.7s,baz=93,slow=6.3,SNR=3.8						

ISCJB ***13*** *01:33:20.2±0.5, 36.°15N±0.°04×140.°07E±0.°06, h66km±3km, mb4.2/9, Error ellipse: s-maj=8.3km s-min=6.2km az=25.4*

IDC ***13*** *01:33:20.5±1.2, 35.°34N×138.°16E, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.6/45, mbtmp3.9/8, ML3.8/2, MS3.4/4, Ms1 3.4/4, ms1mx2.9/46, Error ellipse: s-maj=29.4km s-min=12.1km az=98.0*

JMA ***13*** *01:33:22.1±0.1, 36.°20N×139.°98E, h52km±1km, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s40.00000°, δ80.00000°, λ79.00000°. NP2: ϕ_s269.00000°, δ15.00000°, λ137.00000°. Principal axes: T Plg54.0000°, Azm297.0000°; N Plg11.0000°, Azm42.0000°; P Plg34.0000°, Azm140.0000°;*

JMA Felt II J1.

NEIC ***13*** *01:33:25.8±0.9, 35.°33N×138.°29E, h45km±10km, mb4.4/2 Error ellipse: s-maj=13.9km s-min=8.2km az=74.0*

NEIC Recorded [2 JMA] in Ibaraki and Tochigi.

ISC 13 01:33:21.4±0.8**, 36.°18N**±0.°05×**139.°96E**±0.°05**, h58**km±7km**, n43, σ1.s42**/40**, mb3.9**/10**, 1C-7D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.19	77	⇑P	Pn	01 33 30.6	0.0
JYT				S	Sn	01 33 36.6	-0.6
JAG	Ashikaga	0.47	301	⇓P	Pn	01 33 33.4	+0.5
JAG				S	Sn	01 33 41.3	0.0
JKT	Katashina	0.82	316	⇓P	Pn	01 33 37.4	+0.3
JKT				S	Sn	01 33 49.0	+0.4
JRY	Ryogami san	0.87	259	⇓P	Pn	01 33 38.5	+0.8
JRY				S	Sn	01 33 50.5	+0.7
JOD2	Odawara 2	1.16	218	P	Pn	01 33 42.7	+1.2
JOD2				S	Sn	01 33 57.9	+1.4
JFY	Yanaizu	1.24	351	⇓P	Pn	01 33 43.1	+0.5
JFY				S	Sn	01 33 58.9	+0.6
JHK	Hiroka	1.31	325	⇓P	Pn	01 33 44.2	+0.8
JYN	Shimob	1.34	240	P	Pn	01 33 46.3	+2.4
JFT	Otama	1.37	13	⇓P	Pn	01 33 44.9	+0.6
JFK	Kawauchi	1.39	32	⇓P	Pn	01 33 44.6	0.0
JFK				S	Sn	01 34 01.3	-0.7
MJAR	Matsushiro Arr	1.46	285	Pg	Pn	01 33 45.4	-0.1
	3.8nm,0.3s,baz=173,slow=17,SNR=110						
MJAR				Lg	Lg	01 33 58.4	
	4.2nm,0.3s,baz=94,slow=16,SNR=12						
MAJO	Matsushiro	1.46	285	ePn	Pn	01 33 47.0	+1.5
MAJO				eSn	Sn	01 34 00.0	-3.6
MAT	Matsushiro	1.46	285	P	Pn	01 33 46.8	+1.3
MAT				S	Sn	01 34 00.1	-3.5
MJB9	Matsu-Tunnel	1.46	285	ePn	Pn	01 33 47.0	+1.5
MJB9				eSn	Sn	01 34 00.2	-3.5
CBIJ	Chichi jima	9.26	168	ePn	Pn	01 35 30.0	-2.2
JCJ	Chichijima	9.26	168	Pn	Pn	01 35 30.0	-2.2
	4.7nm,0.3s,baz=270,slow=13,SNR=2.5						
JCJ				LR	LR	01 38 04.7	
	comp=Z,130nm,21.4s,baz=102,slow=32						
KSRS	Korea Array	9.74	281	LR	LR	01 38 28.0	
	comp=Z,28nm,18.2s,baz=290,slow=36						
USRK	Ussuriysk Ar.	10.06	325	Pn	Pn	01 35 49.0	+6.0
	0.0nm,0.3s,baz=140,slow=14,SNR=4.9						
KLR	Kul'dur	14.36	338	Pn	P	01 36 47.2	+0.4
	0.1nm,0.3s,baz=141,slow=12,SNR=3.7						
PETK	Petropavlovsk-	21.01	31	P	P	01 38 20.9	+21
	1.4nm,0.6s,baz=234,slow=12,SNR=1.7						
PEA1	Petropavlovsk-	21.02	31	eP	P	01 38 20.9	+21
SONA0	Songino Array	27.31	306	eP	P	01 39 01.5	+0.9
SONM	Songino Array	27.31	306	P	P	01 39 01.5	+0.9
	0.3nm,0.6s,baz=104,slow=10.0,SNR=2.9						
H11N2	WAKE ISLAND Hy	28.76	117	T	T	02 09 18.9	
	baz=312,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	28.76	118	T	T	02 09 27.3	
	baz=312,slow=75,SNR=7.8						
H11N3	WAKE ISLAND Hy	28.77	118	T	T	02 09 28.2	
	baz=312,slow=75,SNR=9.2						
H11S3	WAKE ISLAND Hy	29.42	120	T	T	02 10 12.0	
	baz=132,slow=74,SNR=4.4						
H11S1	WAKE ISLAND Hy	29.42	120	T	T	02 10 10.3	
	baz=314,slow=74,SNR=3.0						
CM31	Chiang Mai Arr	40.15	255	eP	P	01 40 45.3	-6.6
	2µm,1.1s						
CMAR	Chiang Mai Arr	40.15	255	P	P	01 40 45.3	-6.6
	1.3nm,0.3s,baz=66,slow=32,SNR=5.9						
ZAA1	Zalesovo Array	41.63	313	eP	P	01 41 04.4	+0.7
ZALV	Zalesovo Beam	41.63	313	eP	P	01 41 02.4	-1.3
ZALV	Zalesovo Beam	41.63	313	P	P	01 41 04.4	+0.7
	0.6nm,0.5s,baz=88,slow=6.1,SNR=3.6						
MK01	Makanchi Array	43.58	303	eP	P	01 41 18.7	-1.0
MK32	Makanchi Array	43.59	303	eP	P	01 41 19.9	+0.2
MKAR	Makanchi Array	43.59	303	P	P	01 41 19.9	+0.2
	0.9nm,0.7s,baz=92,slow=9.5,SNR=13						
KURK	Kurchatov	45.54	309	eP	P	01 41 35.9	+0.7
	2.3nm,0.8s						
WR1	Warramunga Arr	56.07	186	eP	P	01 42 54.3	-0.3
	13nm,1.5s						
WRA	Warramunga Arr	56.07	186	P	P	01 42 54.3	-0.3
	0.9nm,0.5s,baz=2.0,slow=7.6,SNR=7.9						
GEYT	Alibeck	63.22	299	LR	LR	02 12 32.9	
	comp=Z,121nm,19.6s,baz=330,slow=38						
NB200	NORSAR Array S	74.51	337	eP	P	01 44 53.5	0.0
NOA	NORSAR Array B	74.51	337	P	P	01 44 53.5	0.0
	0.3nm,0.5s,baz=52,slow=5.7,SNR=2.1						
RAR	Rarotonga	80.62	125	LR	LR	02 17 33.7	
	comp=Z,94nm,19.1s,baz=4.5,slow=33						

SOME ***13*** *01:43:28.4, 42.°55N×79.°65E, h5km*

KRNET ***13*** *01:43:28.2±0.1, 42.°56N×79.°64E, h9km, mb2.3*

NNC ***13*** *01:43:29.1±1.0, 42.°61N×79.°64E, h0km, mb2.4, mpv2.5, Error ellipse: s-maj=6.8km s-min=3.3km az=160.0*

ISC 13 01:43:26.8±1.9**, 42.°49N**±0.°06×**79.°68E**±0.°05**, h6**km±15km**, n21, σ0.s65**/39**, 8C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.82	324	P	Pg	01 43 42.6	0.0
	1.8nm,0.2s						
UZB				S	Sg	01 43 52.8	-0.3
	4.7nm,0.1s						
UZB	Uzynbulak	0.82	324	eP	Pg	01 43 42.6	0.0
	baz=22						
UZB				eS	Sg	01 43 52.9	-0.3
	baz=22						
UZB	Uzynbulak	0.82	324	eP	Pg	01 43 42.6	0.0
	1.7nm,0.2s						
UZB				eS	Sg	01 43 52.8	-0.3
	4.9nm,0.2s						
PDGK	Podgornoye	0.85	351	P	Pg	01 43 43.3	+0.1
	1.1nm,0.1s						
PDGK				S	Sg	01 43 53.9	-0.4
	0.7nm,0.3s						
PDGK	Podgornoye	0.85	351	⇑iP	Pg	01 43 43.1	-0.1
	baz=52						
PDGK				⇑iS	Sg	01 43 53.5	-0.8
	baz=52						
PRZ	Przheval'sk	0.95	270	⇑iP	Pb	01 43 46.0	+0.2
	baz=65						
PRZ				⇑iS	Sg	01 43 57.3	0.0
	baz=65						
KTMS	Ketmen	1.08	27	P	Pb	01 43 48.2	+0.2
	0.6nm,0.1s						
KTMS				S	Sb	01 44 02.4	0.0
	1.2nm,0.1s						
KTMS	Ketmen	1.08	27	eP	Pb	01 43 48.2	+0.2
	baz=30						
KTMS				eS	Sb	01 44 02.4	0.0
	baz=30						
KTMS	Ketmen	1.08	27	eP	Pb	01 43 48.2	+0.2
	0.6nm,0.1s						
KTMS				eS	Sb	01 44 02.4	0.0
	1.2nm,0.1s						
SATY	Saty	1.10	302	P	Pg	01 43 47.9	0.0
	2.6nm,0.4s						
SATY				S	Sg	01 44 02.1	-0.1
	7.0nm,0.1s						
SATY	Saty	1.10	302	eP	Pg	01 43 47.9	0.0
	2.6nm,0.4s						
SATY				eS	Sg	01 44 02.1	-0.1
	7.0nm,0.1s						
KDJ	Kajisay	1.89	260	⇑iP	Pg	01 44 03.5	+0.5
	baz=57						
KDJ				⇑iS	Sg	01 44 28.1	+0.6
	baz=57						
KOTS	Kotyrbulak	2.03	292	Pg	Pg	01 44 05.7	0.0
	0.7nm,0.2s						
KOTS				Lg	Lg	01 44 32.7	
	4.6nm,0.4s						
KOTS	Kotyrbulak	2.03	292	eP	Pg	01 44 05.7	0.0
	baz=91						
KOTS				eS	Sg	01 44 32.8	+0.7
	baz=91						
KOTS	Kotyrbulak	2.03	292	eP	Pg	01 44 05.7	0.0
	0.7nm,0.2s						
KOTS				eS	Sg	01 44 32.7	+0.7
	4.6nm,0.4s						
CHKK	Chushkaly	2.40	306	Pg	Pb	01 44 11.0	+0.6
	0.7nm,0.1s						
CHKK				Lg	Lg	01 44 41.5	
	4.0nm,0.3s						
CHKK	Chushkaly	2.40	306	eP	Pb	01 44 11.0	+0.6
	baz=5.0						
CHKK				eS	Sb	01 44 41.5	+1.2
	baz=5.0						
CHKK	Chushkaly	2.40	306	eP	Pb	01 44 11.0	+0.6
	0.7nm,0.1s						
CHKK				eS	Sb	01 44 41.5	+1.2
	4.0nm,0.3s						
ULHL	Ulahol	2.56	266	⇓iP	Pb	01 44 12.7	-0.6
	baz=64						
ULHL				⇓iS	Sb	01 44 45.2	+0.1
	baz=64						
BOOM	Boomskoye usch	2.77	271	⇑iP	Pb	01 44 15.6	-1.2
	baz=70						
BOOM				⇑iS	Sb	01 44 49.8	-1.2
	baz=70						
KUU	Kurty	2.82	301	S	Sb	01 44 50.3	-2.1
	12nm,0.1s						

IDC ***13*** *01:48:29.4±2.1, 52.°43N×132.°11W, h0km, mb3.5/1, mb1 3.5/4, mb1mx3.2/41, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=36.8km s-min=12.4km az=20.0*

PGC ***13*** *01:48:32.2±0.1, 52.°66N×132.°11W, h21km, ML3.6/14*

PGC 68km Ssw of Sandspit, Bc Haida Gwaii Region Felt (I) at Skidegate, British Columbia.

ISC 13 01:48:31.8±1.2**, 52.°61N**±0.°05×**132.°06W**±0.°05**, h15**km±7km**, n24, σ1.s98**/38**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNB	Barry Inlet	0.19	100	P	Pb	01 48 37.7	+0.7
BNB				S	Sg	01 48 41.1	+1.8
HG1B	Mitchell Dam	0.33	352	P	Pg	01 48 38.3	-0.2
HG1B				S	Sg	01 48 42.4	-0.8
HG3B	Hotspring	0.38	95	P	Pb	01 48 40.4	+0.3
HG3B				S	Sb	01 48 46.0	+0.3
MOBC	Moresby Island	0.54	6	P	Pg	01 48 42.0	-0.4
MOBC				S	Sg	01 48 48.5	-1.1
HG4B	Hotspring	0.61	121	P	Pb	01 48 44.5	+0.3
HG4B				S	Sb	01 48 53.5	+0.9
DIB	Dawson Inlet,	0.65	337	P	Pg	01 48 43.3	-1.2
DIB				S	Sg	01 48 51.1	-1.9
H02S1	DAWSON INLET T	0.65	337	Pg	Pg	01 48 43.5	-0.9
H02S1				Lg	Lg	01 48 50.9	
MASB	Masset	1.41	1	P	Pn	01 48 55.3	-1.5
NDB	Naden	1.45	339	Pn	Pn	01 48 56.2	-1.3
NDB				Sg	Sn	01 49 14.8	-1.3
BBB	Bella Bella	2.45	98	Pn	Pn	01 49 10.6	-0.6
BBB				Sn	Sn	01 49 40.8	0.0
BBB	Bella Bella	2.45	98	Pn	Pn	01 49 10.7	-0.4
	2.8nm,0.3s,baz=296,slow=8.2,SNR=19						
BBB				Pg	Pb	01 49 14.3	-1.2
	12nm,0.3s,baz=276,slow=17,SNR=37						
BBB				Sn	Sn	01 49 40.0	-0.8
	14nm,0.3s,baz=131,slow=20,SNR=5.1						
BBB				Lg	Lg	01 49 47.2	
	52nm,0.3s,baz=187,slow=23,SNR=15						
PHC	Port Hardy	3.45	122	Pn	Pn	01 49 24.1	-0.8
PHC				Sn	Sn	01 50 04.3	-1.2
PACB	Port Alice, BC	3.59	126	Pn	Pn	01 49 27.0	+0.2
PACB				Sn	Sn	01 50 10.0	+1.3
TLCB	Telegraph Cove	3.86	120	Pn	Pn	01 49 30.6	+0.1
TLCB				Sn	Sn	01 50 14.9	-0.5
CBB	Campbell River	4.92	119	Sn	Sn	01 50 40.6	-1.3
FSB	Fort Saint Jam	4.97	65	Pg	Pb	01 50 01.6	+3.1
FSB				Sg	Sg	01 51 09.0	-2.3
DLBC	Dease Lake	5.95	10	Pn	Pn	01 50 00.5	+1.1
DLBC				Sg	Sb	01 51 33.8	+7.6
BMBC	Bull Mountain	6.75	55	Sg	Sg	01 52 02.8	-5.3
FNBB	Fort Nelson	8.10	35	Sg		01 52 41.5	
WHY	Whitehorse	8.22	350	Pn	Pn	01 50 28.9	-1.5
YKA	Yellowknife Ar	13.58	36	Pn	Pn	01 51 42.5	-1.0
	0.1nm,0.3s,baz=224,slow=12,SNR=11						
ILAR	Eielson Array	14.37	334	Pn	P	01 52 02.5	+1.2
	0.0nm,0.3s,baz=149,slow=11,SNR=4.0						
PDAR	Pinedale Array	18.00	114	P	P	01 52 41.6	-0.3
	0.0nm,0.3s,baz=292,slow=9.6,SNR=1.4						
MKAR	Makanchi Array	76.71	337	P	P	02 00 22.6	+0.7
	0.3nm,0.6s,baz=25,slow=6.0,SNR=4.3						

IDC 13 01:51:16.9±2.0**, 7.°11S**×**129.°36E, h0**km**, mb3.4**/1**, mb1 3.5**/4**, mb1mx3.3**/37**, mbtmp3.4**/4**, ML3.4**/3**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.8**/23**, Error ellipse: s-maj=84.9km s-min=29.1km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.48	17	Pn	Pn	01 52 53.6	-0.2
	1.0nm,0.3s,baz=229,slow=19,SNR=1.2						
SIJI				Sn	Sn	01 54 00.4	-8.1
	1.1nm,0.3s,baz=72,slow=19,SNR=1.5						
WRA	Warramunga Arr	13.64	160	Pn	Pn	01 54 30.4	-1.4
	0.2nm,0.3s,baz=342,slow=14,SNR=19						
WRA				Sn	Sn	01 56 53.6	-11
	0.3nm,0.3s,baz=335,slow=22,SNR=9.3						
ASAR	Alice Springs	17.03	166	P	P	01 55 18.1	-0.6
	0.1nm,0.3s,baz=339,slow=10.0,SNR=4.3						
ASAR				S	Sn	01 58 18.0	-8.9
	0.1nm,0.3s,baz=338,slow=25,SNR=2.8						
RPZ	Rata Peaks	51.54	142	LR	LR	02 22 01.1	
	comp=Z,70nm,20.3s,baz=246,slow=36						
SONM	Songino Array	58.35	342	P	P	02 01 14.0	0.0
	0.5nm,1.0s,baz=139,slow=6.8,SNR=3.8						

IDC 13 01:58:22.6±1.6**, 10.°82S**×**165.°63E, h0**km**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/34**, mbtmp3.8**/5**, ML4.0**/1**, Error ellipse: s-maj=51.1km s-min=28.9km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.21	176	Pn	Pn	02 01 05.3	+1.0
	1.0nm,0.3s,baz=343,slow=4.1,SNR=9.5						
H11S2	WAKE ISLAND Hy	29.15	2	T	T	02 34 34.3	
	baz=181,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.15	2	T	T	02 34 50.1	
	baz=181,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	29.16	2	T	T	02 34 47.0	
	baz=181,slow=76,SNR=21						
H11N1	WAKE ISLAND Hy	30.37	2	T	T	02 36 06.4	
	baz=182,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	30.37	2	T	T	02 36 06.8	
	baz=182,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	30.39	2	T	T	02 36 07.8	
	baz=182,slow=76,SNR=19						
WRA	Warramunga Arr	31.45	249	P	P	02 04 46.1	0.0
	0.7nm,0.6s,baz=82,slow=8.9,SNR=11						
ASAR	Alice Springs	32.79	243	P	P	02 04 57.6	-0.2
	1.5nm,0.8s,baz=72,slow=9.3,SNR=13						
ILAR	Eielson Array	83.34	19	P	P	02 10 51.2	+0.1
	0.3nm,0.9s,baz=229,slow=6.7,SNR=2.8						
MKAR	Makanchi Array	93.28	317	P	P	02 11 39.0	-0.3
	0.3nm,0.6s,baz=123,slow=5.3,SNR=3.6						

NNC ***13*** *02:01:21.0±1.2, 43.°40N×77.°86E, h0km, mpv2.1, Error ellipse: s-maj=15.4km s-min=6.1km az=168.0*

SOME 13 02:01:19.7, 43.°30N×**77.°92E, h20**km**, 2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURS	Kuram	0.26	44	P	Pb	02 01 25.7	-0.2
	0.9nm,0.3s						
KURS				S	Sb	02 01 30.0	0.0
	2.7nm,0.2s						
KURS	Kuram	0.26	44	⇓iP	Pb	02 01 25.7	-0.2
	0.9nm,0.3s						
KURS				⇓iS	Sb	02 01 30.0	0.0
	2.7nm,0.2s						
SATY	Saty	0.43	124	P	Pn	02 01 30.6	-0.3
	1.0nm,0.2s						
SATY				S	Sn	02 01 38.5	+0.3
	11nm,0.1s						
KOTS	Kotyrbulak	0.59	264	P	Pb	02 01 31.0	-0.5
	3.6nm,0.1s						
KOTS				S	Sb	02 01 39.2	-0.3
	2.7nm,0.2s						
KOTS	Kotyrbulak	0.59	264	eP	Pb	02 01 31.0	-0.5
	3.6nm,0.1s						
KOTS				eS	Sb	02 01 39.2	-0.3
	2.7nm,0.2s						

MAN 13 02:04:57.0, 9.°21N×**123.°26E, h26**km**, mb4.0, ML2.7, MS2.3, 1C-1D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	Sibulan	0.13	350	⇓iP	Pn	02 05 03.6	+0.1
SNPH				i S	Sb	02 05 08.4	+2.8
DCPH	Dipolog City	0.63	172	⇑eP	Pb	02 05 08.3	-1.1
DCPH				eS	Sb	02 05 15.8	-2.0
TBP	Tagbilaran	0.76	51	eP	Pb	02 05 11.7	+0.1
TBP				i S	Sn	02 05 23.2	+0.5
LLP	Lapu-Lapu	1.30	32	eP	Pn	02 05 19.9	+0.4
LLP				eS	Sb	02 05 37.2	+0.1
PAGZ	Pagadian	1.36	175	eP	Pn	02 05 18.6	-1.7
PAGZ				eS	Sn	02 05 36.5	-0.9
GUIM	Jordan	1.55	335	eP	Sb	02 05 50.5	+6.1
IPIL	Ipil	1.57	206	eP	Pn	02 05 23.6	+0.4

IPIL				*e*S	Sb	02 05 44.1	-0.7

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*TIR **13** 02:07:15.0, 42°.38N×19°.84E, h6^{km}, Md3.4/4*
*BEO **13** 02:07:16.6±0.2, 42°.41N×19°.94E, h28^{km}±2^{km}, ML2.1/12*
*SAR **13** 02:07:18.1±0.7, 42°.63N×19°.78E, h6^{km}, ML2.2/6*
ISC 13 02:07:16.9±1.0**, 42°.56N**±0°.03×**19°.85E**±0°.02**, h12**^{km}±9^{km}**,**
n33, σ2^{s}10/52**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCI	**Bajram Curri**	**0.25**	**140**	*i* PG	**Pb**	**02 07 26.2**	**+2.8**
BCI				*i* SG	**Sb**	**02 07 34.5**	**+6.7**
PDG	**Podgorica**	**0.46**	**254**	*e*Pg	**Pb**	**02 07 27.4**	**+0.4**
PDG				*e*Sg	**Sb**	**02 07 37.0**	**+3.3**
PDG	**Podgorica**	**0.46**	**254**	*e*Pg	**Pg**	**02 07 26.9**	**+0.9**
PDG				*e*Sg	**Sg**	**02 07 32.5**	**+0.4**
PUK	**Puka**	**0.52**	**177**	*i* PG	**Pg**	**02 07 27.0**	**-0.1**
PUK				*i* SG	**Sg**	**02 07 36.4**	**+2.4**
DRME	**Dracevica, Mon**	**0.62**	**233**	*e*Pg	**Pg**	**02 07 28.8**	**-0.2**
DRME				*e*Sg	**Sg**	**02 07 38.9**	**+1.7**
SJES	**Sjenica**	**0.71**	**7**	*e*Pg	**Pn**	**02 07 34.1**	**+1.2**
SJES				*e*Sg	**Sn**	**02 07 46.1**	**+2.4**
PHP	**Peshkopia**	**0.98**	**153**	*i* PG	Pg	02 07 33.2	-2.6
PHP				*i* SG	**Sg**	**02 07 45.2**	**-3.4**
HCY	**Herceg Novi**	**1.01**	**264**	*e*Pg	**Pg**	**02 07 35.4**	**-1.0**
HCY				*e*Sg	**Sg**	**02 07 48.9**	**-0.7**
IVAS	**Ivanjica**	**1.04**	**12**	*e*Pg	**Pg**	**02 07 37.0**	**0.0**
IVAS				*e*Sg	**Sn**	**02 07 53.6**	**+1.7**
TREB	**Trebinje**	**1.12**	**279**	*e*Pg	**Pn**	**02 07 39.4**	**+1.0**
TREB				*e*Sg	**Sb**	**02 07 53.4**	**+0.7**
TREB	**Trebinje**	**1.12**	**279**	*e*Pg	**Pg**	**02 07 36.6**	**-1.9**
TREB				*e*Sg	**Sg**	**02 07 52.3**	**-0.8**
SELS	**Selova**	**1.14**	**54**	*e*Pg	**Pg**	**02 07 37.8**	**-1.1**
TIR	**Tirane**	**1.21**	**180**	*e*Pg	Pn	02 07 35.3	-4.4
TIR				*e*Sg	**Sg**	**02 07 50.9**	**-5.1**
TIR	**Tirane**	**1.21**	**180**	*i* PG	Pn	02 07 35.7	-4.0
TIR				*i* SG	Sg	02 07 50.1	-5.9
BBLS	**Lazići**	**1.34**	**346**	*e*Sn	**Sn**	**02 08 01.5**	**+2.1**
BBLS	**Lazići**	**1.34**	**346**	*e*Sg	**Sg**	**02 07 58.7**	**-1.6**
BARS	**Barje**	**1.47**	**79**	*e*Pg	**Pn**	**02 07 42.0**	**-1.2**
BARS				*e*Sg	**Sn**	**02 08 01.5**	**-0.9**
BARS				*e*Sn	Sg	02 08 19.3	+15
GRUS	**Gruza**	**1.47**	**25**	*e*Pn	**Pn**	**02 07 43.1**	**-0.1**
GRUS				*e*Sn	**Sb**	**02 08 03.4**	**+0.6**
DIVS	**Divibare**	**1.54**	**4**	*e*Pn	**Pn**	**02 07 44.6**	**+0.3**
DIVS				*e*Sn	**Sg**	**02 08 05.4**	**-1.1**
DIVS	**Divibare**	**1.54**	**4**	*e*Pg	**Pn**	**02 07 44.4**	**+0.1**
DIVS				*e*Sg	**Sn**	**02 08 04.9**	**+0.6**
KRUS	**Krusevo**	**1.58**	**138**	*i* Pn	Pn	02 07 41.2	-3.6
STON	**Ston**	**1.62**	**282**	*e*Pn	**Pn**	**02 07 42.8**	**-2.5**
STON				Sn	**Sn**	**02 08 02.5**	**-3.4**
HAPS	**Han Pijesak,BI**	**1.66**	**337**	*e*Pn	**Pn**	**02 07 46.5**	**+0.5**
HAPS				*e*Sn	**Sn**	**02 08 07.4**	**+0.1**
HAPS	**Han Pijesak,BI**	**1.66**	**337**	*e*Pg	**Pn**	**02 07 46.7**	**+0.7**
HAPS				*e*Sg	**Sn**	**02 08 07.4**	**+0.1**
TRUS	**Trudelj**	**1.71**	**13**	*e*Pn	**Pn**	**02 07 46.3**	**-0.3**
TRUS				*e*Sn	**Sn**	**02 08 08.3**	**0.0**
BOVS	**Bovan**	**1.73**	**51**	*e*Pn	**Pn**	**02 07 46.2**	**-0.6**
BOVS				*e*Sn	**Sn**	**02 08 08.0**	**-0.8**
ZAGS	**Zajecar**	**2.14**	**53**	*e*Sn	**Sn**	**02 08 16.7**	**-2.3**
ZAPS	**Zavoj**	**2.16**	**70**	*e*Pn	**Pn**	**02 07 51.3**	**-1.5**
KUBS	**Kucevo**	**2.28**	**35**	*e*Sn	**Pn**	**02 07 53.0**	**-1.3**
KUBS	**Kucevo**	**2.28**	**35**	*e*Pn	**Sn**	**02 08 21.2**	**-1.1**
VTS	**Vitosha**	**2.50**	**88**	*e*Pn	**Pn**	**02 07 55.6**	**-1.9**
VTS				*e*Sn	**Sn**	**02 08 24.0**	**-4.0**
BZS	**Buzias**	**3.31**	**22**	*e*Pn	**Pn**	**02 08 08.0**	**-0.5**
NVLJ	**Novalja**	**4.14**	**301**	*e*Pn	**Pn**	**02 08 17.3**	**-2.6**
NVLJ				Sn	**Sn**	**02 09 04.4**	**-3.7**

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*NIED **13** 02:21:00, 38°.40N×141°.90E, h56^{km}, Mw4.6 Best double couple: $M_0$8.34000×10^{15} NP1:ϕ_s180.00000°, δ43.00000°, λ56.00000°. NP2:ϕ_s42.00000°, δ55.00000°, λ117.00000°.*
*JMA **13** 02:21:35.8, 38°.43N×141°.90E, h56^{km}±1^{km}, M4.7*
JMA Felt IV J1.
*ISCJB **13** 02:21:36.3±0.3, 38°.50N±0°.02×141°.74E±0°.02, h65^{km}±1^{km}, mb4.6/281, Error ellipse: s-maj=4.0km s-min=2.7km az=145.7*
*BJI **13** 02:21:36.6, 38°.50N×141°.80E, h63^{km}, mB4.9/35, mb4.7/64, Ms4.5/20, Ms7 4.3/16*
*IDC **13** 02:21:37.2±1.5, 38°.43N×141°.83E, h67^{km}±13^{km}, mb4.4/26, mb1 4.5/32, mb1mx4.5/35, mbtmp4.7/32, MS3.6/22, Ms1 3.6/22, ms1mx3.4/45, Error ellipse: s-maj=11.7km s-min=10.6km az=123.0*
*MOS **13** 02:21:38.0±0.8, 38°.80N×141°.66E, h70^{km}, mb5.1/118, Error ellipse: s-maj=6.1km s-min=3.7km az=108.7*
*NEIC **13** 02:21:39.8±1.5, 38°.49N×141°.75E, h84^{km}±5^{km}, mb4.7/198, Error ellipse: s-maj=15.1km s-min=10.6km az=122.0*
NEIC Felt [III] at Sendai. Also felt at Fukushima, Hachinohe, Ichinoseki, Ishinomaki, Kesennuma, Kitakami, Koriyama, Morioka, Osaki, Yokote and Yonezawa. Recorded [4 JMA] in Miyagi.
ISC 13 02:21:36.0±0.4**, 38°.47N**±0°.03×**141°.94E**±0°.04**, h56**^{km}±3^{km}**,**
h55^{km}:pP-P, n593, σ1^{s}32/652**, mb4.8**/294**, MS3.8**/23**,**
47C-15D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.40**	**247**	P	**Pn**	**02 21 46.0**	**-0.5**
JIKH				S	**Sn**	**02 21 53.4**	**-0.8**
JIO	**Ouri**	**0.46**	**268**	P	**Pn**	**02 21 46.8**	**-0.3**
JIO				S	**Sn**	**02 21 54.5**	**-0.7**
JKMT	**Kesennumamotoy**	**0.50**	**313**	P	**Pn**	**02 21 47.6**	**+0.1**
JKMT				S	**Sn**	**02 21 55.9**	**0.0**
OFUJ	**Ofunato**	**0.64**	**341**	P	**Pn**	**02 21 49.6**	**+0.3**
OFUJ				*e*S	**Sn**	**02 21 59.6**	**+0.6**
JMK	**Ichinoseki**	**0.74**	**311**	P	**Pn**	**02 21 50.7**	**+0.3**
JMK				S	**Sn**	**02 22 01.3**	**+0.3**
JOU	**Okura**	**1.00**	**264**	P	**Pn**	**02 21 53.4**	**-0.5**
JOU				S	**Sn**	**02 22 06.6**	**-0.6**
JMM	**Marumori**	**1.08**	**237**	P	**Pn**	**02 21 54.0**	**-0.9**
JMM				S	**Sn**	**02 22 07.1**	**-1.9**
JOM	**Ohasama**	**1.12**	**334**	P	**Pn**	**02 21 56.0**	**+0.6**
JOM				S	**Sn**	**02 22 11.1**	**+1.2**
JYK	**Kaneyama**	**1.31**	**290**	P	**Pn**	**02 21 58.1**	**+0.1**
JYK				*e*S	**Sn**	**02 22 14.6**	**+0.1**
JRG	**Rokugo**	**1.37**	**313**	P	**Pn**	**02 21 59.1**	**+0.3**
JRG				*e*S	**Sn**	**02 22 16.5**	**+0.5**
JFK	**Kawauchi**	**1.39**	**218**	P	**Pn**	**02 21 58.1**	**-0.9**
JFK				S	**Sn**	**02 22 14.2**	**-2.1**
JYS	**Shirataka**	**1.49**	**261**	P	**Pn**	**02 22 00.2**	**-0.2**
JYS				S	**Sn**	**02 22 19.0**	**+0.2**
JFT	**Otama**	**1.58**	**234**	P	**Pn**	**02 22 01.4**	**-0.3**
JFT				*e*S	**Sn**	**02 22 19.8**	**-1.2**
MJAR	**Matsushiro Arr**	**3.53**	**238**	P	**Pn**	**02 22 29.6**	**+1.3**
	7.5nm,0.3s,baz=38,slow=12,SNR=202						
MJAR				S	**Sn**	**02 23 15.7**	**+6.8**
	baz=38,slow=14,SNR=2.6						
MJAR				LR	LR	02 24 09.3	
	comp=Z,724nm,20.2s,baz=60,slow=44						
MAJO	**Matsushiro**	**3.53**	**238**	*e*Pn	**Pn**	**02 22 29.7**	**+1.4**
MAJO				*e*Sn	**Sn**	**02 23 07.0**	**-2.0**
MAJO	**Matsushiro**	**3.53**	**238**	*d i*P	**Pn**	**02 22 28.9**	**+0.5**
MAT	**Matsushiro**	**3.53**	**238**	P	**Pn**	**02 22 29.6**	**+1.2**
MAT				*e*S	**Sn**	**02 23 09.9**	**+1.0**
MJB9	**Matsu-Tunnel**	**3.53**	**238**	*e*Pn	**Pn**	**02 22 29.8**	**+1.4**
ERM	**Erimo**	**3.66**	**14**	*e*Pn	**Pn**	**02 22 30.0**	**0.0**
ERM				*e*Sn	**Sn**	**02 23 12.7**	**+0.8**
ERM	**Erimo**	**3.66**	**14**	⇑*i*P	**Pn**	**02 22 29.6**	**-0.5**
JHJ	**Hachijo jima 2**	**5.62**	**199**	P	**Pn**	**02 22 55.7**	**-1.2**
	49nm,0.3s,baz=81,slow=19,SNR=4.4						
JHJ				S	**Sn**	**02 23 55.3**	**-4.8**
	18nm,0.3s,baz=351,slow=9.3,SNR=3.6						
ASAJ	**Asahikawa**	**5.66**	**5**	P	**Pn**	**02 22 57.5**	**0.0**
	19nm,0.3s,baz=222,slow=11,SNR=46						
ASAJ				S	**Sn**	**02 23 59.2**	**-1.9**
	11nm,0.3s,baz=270,slow=20,SNR=3.2						
YUK	**Yuzh-Kuril'sk**	**6.30**	**27**	*d i*P	**Pn**	**02 23 04.8**	**-1.3**
YUK				*i* S	**Sn**	**02 24 11.8**	**-4.8**
YUK				pmax	pmax		
	comp=N,85nm,0.2s						
YUK				pmax	pmax		
	comp=E,55nm,0.2s						
YUK				pmax	pmax		
	comp=Z,216nm,0.2s						
YUK				smax	smax		
	comp=N,1µm,0.4s						
YUK				smax	smax		
	comp=E,635nm,0.4s						
YUK				MLR	MLR		
	comp=Z,206nm,14.0s						
YUK				MLR	MLR		
	comp=E,191nm,10.0s						
SHO	**Shikotan**	**6.54**	**33**	*d i*P	**Pn**	**02 23 07.2**	**-2.2**
SHO				*i* S	**Sn**	**02 24 15.1**	**-7.4**
SHO				pmax	pmax		
	comp=N,5.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,12nm,0.2s						
SHO				pmax	pmax		
	comp=Z,23nm,0.2s						
SHO				smax	smax		
	comp=E,384nm,0.5s						
SHO				smax	smax		
	comp=N,612nm,0.4s						
TEY	**Ternei**	**7.67**	**330**	⇓*e*P	**Pn**	**02 23 29.4**	**+4.4**
TEY				pmax	pmax		
	comp=N,290nm,0.7s						
TEY				pmax	pmax		
	comp=E,160nm,0.7s						
TEY				pmax	pmax		
	comp=Z,260nm,0.7s						
KUR	**Kuril'sk**	**8.08**	**31**	*d i*P	**Pn**	**02 23 29.7**	**-0.8**
KUR				*e*S	**Sn**	**02 24 54.6**	**-5.7**
KUR				pmax	pmax		
	comp=Z,57nm,0.4s						
KUR				pmax	pmax		
	comp=N,22nm,0.3s						
KUR				pmax	pmax		
	comp=E,14nm,0.1s						
YSS	**Yuzh-Sakhalins**	**8.50**	**4**	*e*Pn	**Pn**	**02 23 36.2**	**-0.1**
YSS	**Yuzh-Sakhalins**	**8.50**	**4**	⇑*e*P	**Pn**	**02 23 35.8**	**-0.5**
YSS				*e*S	**Sn**	**02 25 11.3**	**+0.6**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				pmax	pmax		
	comp=N,40nm,1.2s						
YSS				pmax	pmax		
	comp=E,40nm,0.6s						
YSS				pmax	pmax		
	comp=Z,100nm,3.5s						
YSS				pmax	pmax		
	comp=N,200nm,3.2s						
YSS				smax	smax		
	comp=N,50nm,1.5s						
YSS				smax	smax		
	comp=E,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS				MLR	MLR		
	comp=E,300nm,12.0s						
VLA	**Vladivostok**	**8.92**	**305**	*c e*P	**Pn**	**02 23 40.5**	**-1.6**
MSHR	**Mys Shultsa**	**9.18**	**300**	*d i*P	**Pn**	**02 23 46.1**	**+0.6**
USA0B	**Ussuriysk Arra**	**9.42**	**311**	*e*Pn	**Pn**	**02 23 50.3**	**+1.4**
USRK	**Ussuriysk Ar.**	**9.42**	**311**	P	**Pn**	**02 23 49.8**	**+1.0**
	comp=E,4.6nm,0.3s,baz=123,slow=13,SNR=62						
USRK				LR	LR	02 27 14.4	
	comp=E,318nm,20.2s,baz=108,slow=36						
JNU	**Nakatsue**	**10.44**	**243**	P	**Pn**	**02 24 04.1**	**+1.1**
	comp=E,1.0nm,0.3s,baz=110,slow=6.8,SNR=7.6						
JNU				LR	LR	02 28 31.5	
	comp=E,367nm,21.0s,baz=14,slow=40						
MDJ	**Mudanjiang**	**11.10**	**308**	P	**Pn**	**02 24 13.9**	**+2.1**
MDJ				sP		02 24 32.3	
MDJ				S	**Sn**	**02 26 13.7**	**-0.6**
MDJ				pmax	pmax		
	comp=E,21nm,1.2s						
MDJ				pmax	pmax		
	comp=E,230nm,3.8s						
MDJ				LR	LR		
	comp=E,270nm,3.7s						
MDJ				LR	LR		
	comp=E,180nm,6.0s						
MDJ	**Mudanjiang**	**11.10**	**308**	*e*Pn	**Pn**	**02 24 14.3**	**+2.5**
MDJ				*e*Sn	**Sn**	**02 26 12.7**	**-1.6**
KSRS	**Korea Array**	**11.11**	**269**	P	**Pn**	**02 24 15.3**	**+3.3**
	comp=E,3.8nm,0.3s,baz=80,slow=14,SNR=24						
KSRS				LR	LR	02 28 15.3	
	comp=E,176nm,19.6s,baz=45,slow=36						
KS01	**Wonju Array Si**	**11.13**	**269**	*e*Pn	**Pn**	**02 24 14.9**	**+2.6**
KS01				*e*Sn	**Sn**	**02 26 15.1**	**-0.1**
KS15	**Wonju Array Si**	**11.14**	**269**	*e*Pn	**Pn**	**02 24 15.4**	**+2.9**
CBIJ	**Chichi jima**	**11.35**	**179**	*e*Pn	**Pn**	**02 24 13.0**	**-2.3**
CBIJ				*e*Sn	Sn	02 26 08.2	-12
JCJ	**Chichijima**	**11.35**	**179**	P	**Pn**	**02 24 13.0**	**-2.3**
	comp=E,6.7nm,0.3s,baz=288,slow=19,SNR=4.0						
JCJ				S	Sn	02 26 08.2	-12
	comp=E,5.8nm,0.3s,baz=283,slow=19,SNR=2.6						
TJN	**Taejon**	**11.77**	**264**	⇑*e*P	**Pn**	**02 24 20.4**	**-0.7**
TYV	**Tymovskoe**	**12.40**	**2**	*e*P	**Pn**	**02 24 28.2**	**-1.4**
TYV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KLR	**Kul'dur**	**13.01**	**329**	P	**Pn**	**02 24 36.7**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=164,slow=11,SNR=7.4						
KLR				LR	LR	02 29 43.4	
	comp=Z,283nm,19.4s,baz=138,slow=37						
CN2	**Changchun**	**13.51**	**298**	*e*P	**Pn**	**02 24 47.9**	**+3.1**
CN2				*e*sP	P	02 25 06.6	+14
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
NKL	**Nikolayevsk**	**14.71**	**357**	*e*P	**Pn**	**02 24 57.0**	**-3.5**
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
SKR	**Severo-Kuril's**	**15.81**	**35**	*e*P	**P**	**02 25 19.0**	**+1.3**
SKR				pmax	pmax		
	comp=Z,98nm,0.9s						
SKR				MLR	MLR		
	comp=Z,200nm,13.0s						
DL2	**Dalian**	**15.87**	**278**	P	**P**	**02 25 19.2**	**+0.8**
DL2				pP	**pP**	**02 25 31.8**	**+1.3**
DL2				*e*S	**S**	**02 28 17.0**	**-5.0**
DL2				pmax	pmax		
	comp=Z,67nm,0.8s						
DL2				LR	LR		
	comp=Z,220nm,15.7s						
DL2				LR	LR		
	comp=Z,230nm,14.3s						
PETK	**Petropavlovsk-**	**18.24**	**32**	P	**Pn**	**02 25 46.4**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=217,slow=9.5,SNR=8.4						
PETK				LR	LR	02 33 38.6	
	comp=Z,94nm,18.8s,baz=212,slow=39						
PEA1	**Petropavlovsk-**	**18.25**	**32**	*e*P	**Pn**	**02 25 46.4**	**+1.4**
ZEA	**Zeya**	**18.29**	**331**	*e*P	**P**	**02 25 44.2**	**-0.9**
ZEA				pmax	pmax		
	comp=Z,29nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,500nm,15.0s						
ZEA				MLR	MLR		
	comp=E,200nm,14.0s						
SSE	**Sheshan**	**18.54**	**253**	P	**Pn**	**02 25 50.5**	**+1.8**
SSE				pmax	pmax		
	comp=E,24nm,0.9s						
SSE				pmax	pmax		
	comp=E,120nm,3.5s						
SSE	**Sheshan**	**18.54**	**253**	*e*P	**Pn**	**02 25 50.8**	**+2.1**
	comp=E,145nm,1.1s						
PET	**Petropavlovsk**	**18.58**	**33**	*e*P	**Pn**	**02 25 49.4**	**+0.3**
	comp=E,27nm,0.9s						
PET	**Petropavlovsk**	**18.58**	**33**	*e*P	**Pn**	**02 25 50.0**	**+1.0**
PET				*e*S	**Sn**	**02 29 14.3**	**-1.6**
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
HIA	**Hailar**	**19.23**	**311**	⇑*i*P	**P**	**02 25 54.0**	**-1.4**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIA	**Tai'an**	**19.84**	**271**	P	**P**	**02 26 02.4**	**+0.2**
TIA				pmax	pmax		
	comp=Z,16nm,1.1s						
NJ2	**Nanjing**	**19.88**	**258**	*e*P	**P**	**02 26 03.1**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
BJI	**Beijing**	**19.99**	**283**	P	**P**	**02 26 03.9**	**+0.2**
BJI				pmax	pmax		
	comp=Z,13nm,1.1s						
BJI	**Beijing**	**19.99**	**283**	P	**P**	**02 26 02.9**	**-0.8**
BJI				pmax	pmax		
	comp=Z,20nm,0.8s						
BJT	**Baijiatuau**	**20.00**	**283**	*e*P	**P**	**02 26 02.9**	**-1.0**
	comp=Z,20nm,0.8s						
BJT	**Baijiatuau**	**20.00**	**283**	*e*P	**P**	**02 26 02.9**	**-1.0**
BJT				pmax	pmax		
	comp=Z,20nm,0.8s						
MA2	**Magadan**	**21.86**	**12**	*e*P	**P**	**02 26 23.7**	**0.0**
	comp=Z,48nm,0.7s						
MA2	**Magadan**	**21.86**	**12**	*c i*P	**P**	**02 26 23.8**	**0.0**
MA2				pmax	pmax		
	comp=Z,71nm,1.0s						
MA2	**Magadan**	**21.86**	**12**	P	**P**	**02 26 23.9**	**+0.2**
	comp=Z,45nm,0.7s,baz=196,slow=9.7,SNR=39						
MA2				LR	LR	02 35 37.7	
	comp=Z,74nm,18.0s,baz=196,slow=38						
YULB	**Yu-li**	**23.15**	**235**	*e*P	**P**	**02 26 34.3**	**-3.2**
	comp=Z,29nm,1.2s						
TIY	**Taiyuan**	**23.19**	**277**	*e*P	**P**	**02 26 38.8**	**+0.9**
TIY				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC	**Hu-ho-hao-te**	**23.45**	**285**	*e*P	**P**	**02 26 40.1**	**-0.3**
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.6s						
YAK	**Yakutsk**	**24.77**	**346**	*e*P	**P**	**02 26 51.1**	**-1.0**
YAK				*e**PP	**pP**	**02 27 04.0**	**-1.9**
YAK				*e*		02 27 23.6	
YAK				*e*		02 30 26.1	
YAK				*e*S	**S**	**02 31 10.1**	**-0.1**
YAK				*e**SS	**sS**	**02 31 33.2**	**-0.3**
YAK				*e*SS	**SnSn**	**02 32 00.6**	**-0.9**
YAK				*e*		02 37 44.3	
YAK				pmax	pmax		
	comp=Z,85nm,0.8s						
YAK				pmax	pmax		
	comp=N,29nm,0.9s						
YAK				pmax	pmax		
	comp=E,49nm,1.2s						
YAK				pmax	pmax		
	comp=Z,123nm,1.1s						
YAK				pmax	pmax		
	comp=N,116nm,1.3s						
YAK				pmax	pmax		
	comp=E,165nm,1.3s						
YAK				smax	smax		
	comp=N,211nm,1.5s						
YAK				smax	smax		
	comp=E,95nm,1.3s						
SEY	**Seymchan**	**25.30**	**11**	⇑*e*P	**P**	**02 26 58.2**	**+1.3**
SEY	**Seymchan**	**25.30**	**11**	P	**P**	**02 26 58.5**	**+1.6**
	comp=E,21nm,1.0s,baz=203,slow=6.9,SNR=47						
BOD	**Bodaibo**	**26.55**	**326**	*e*P	**P**	**02 27 07.3**	**-1.0**
BOD				pmax	pmax		
	comp=Z,16nm,0.9s						
XAN	**Xi'an**	**26.90**	**271**	P	**P**	**02 27 10.7**	**-1.1**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.4s						
XAN	**Xi'an**	**26.90**	**271**	*e*P	**P**	**02 27 10.7**	**-1.1**
	comp=Z,14nm,0.6s						
XAN	**Xi'an**	**26.90**	**271**	*e*P	**P**	**02 27 10.7**	**-1.1**
XAN				pmax	pmax		
	comp=Z,14nm,0.6s						
ULN	**Ulaanbaatar**	**26.92**	**302**	*e*P	**P**	**02 27 12.2**	**+0.3**
	comp=Z,4.1nm,0.8s						
ULN	**Ulaanbaatar**	**26.92**	**302**	*d i*P	**P**	**02 27 12.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
SONA1	**Songino Array**	**27.35**	**302**	*e*P	**P**	**02 27 15.2**	**-0.6**
SONA0	**Songino Array**	**27.36**	**302**	*e*P	**P**	**02 27 15.2**	**-0.6**
SONA0				*e*PcP	**PcP**	**02 30 33.6**	**-0.1**
SONM	**Songino Array**	**27.36**	**302**	P	**P**	**02 27 15.2**	**-0.6**
	comp=Z,3.7nm,0.7s,baz=107,slow=9.0,SNR=19						
SONM				PcP	**PcP**	**02 30 33.6**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=136,slow=2.4,SNR=5.9						
SONM				LR	LR	02 37 47.3	
	comp=Z,146nm,19.6s,baz=161,slow=36						
ENH	**Enshi**	**27.89**	**263**	*e*P	**P**	**02 27 19.6**	**-1.1**
	comp=Z,50nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.56**	**124**	T	T	02 57 46.8	
	baz=316,slow=75,SNR=1428						
H11N1	**WAKE ISLAND Hy**	**28.57**	**124**	T	T	02 57 47.5	
	baz=316,slow=75,SNR=2412						
H11N3	**WAKE ISLAND Hy**	**28.58**	**124**	T	T	02 57 48.2	
	baz=316,slow=75,SNR=1981						
H11S1	**WAKE ISLAND Hy**	**29.33**	**126**	T	T	02 58 41.0	
	baz=318,slow=76,SNR=873						
H11S3	**WAKE ISLAND Hy**	**29.33**	**126**	T	T	02 58 41.0	
	baz=318,slow=76,SNR=1426						
H11S2	**WAKE ISLAND Hy**	**29.34**	**126**	T	T	02 58 42.2	
	baz=318,slow=76,SNR=774						
TLY	**Talaya**	**29.73**	**309**	*c e*P	**P**	**02 27 36.5**	**-0.2**
ZAK	**Zakamensk**	**29.73**	**306**	*e*P	**P**	**02 27 35.3**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZH	**Lanzhou**	**30.26**	**277**	*e*P	**P**	**02 27 41.7**	**-0.1**
LZH				pP	pP	02 27 54.5	-1.3
LZH				sP	sP	02 28 01.7	-0.6
LZH				PcP	**PcP**	**02 30 42.7**	**+1.5**
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				LR	LR		
	comp=Z,290nm,11.4s						
LZH				LR	LR		
	comp=Z,340nm,11.4s						
LZH				LR	LR		
	comp=Z,350nm,12.2s						
ADK	**Adak**	**31.65**	**51**	*e*P	**P**	**02 27 53.5**	**-0.1**
	comp=Z,71nm,1.4s						
ADK	**Adak**	**31.65**	**51**	*e*P	**P**	**02 27 53.5**	**-0.1**
ADK				pmax	pmax		
	comp=Z,71nm,1.4s						
GYA	**Guiyang**	**31.89**	**258**	⇑*i*P	**P**	**02 27 56.0**	**-0.2**
GYA				pP	pP	02 28 12.8	+2.6
GYA				sP	sP	02 28 21.7	+4.9
GYA				PP	**PnPn**	**02 29 05.0**	**+2.4**
GYA				S	**S**	**02 33 02.5**	**-0.8**
GYA				sS	sS	02 33 29.2	+2.3
GYA				SS	SS	02 34 56.6	-25
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,490nm,17.4s						
GYA				LR	LR		
	comp=Z,520nm,17.6s						
GYA				LR	LR		
	comp=Z,540nm,17.2s						
CD2	**Chengdu**	**32.11**	**268**	*e*P	**P**	**02 27 57.0**	**-0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
BILL	**Bilibino**	**32.53**	**17**	*e*P	**P**	**02 28 01.5**	**+0.3**
	comp=Z,7.6nm,0.9s						
BILL	**Bilibino**	**32.53**	**17**	*e*P	**P**	**02 28 01.3**	**+0.1**
BILL				*e*		02 29 06.5	
BILL				*e*		02 30 46.4	
BILL				pmax	pmax		
	comp=Z,14nm,1.3s						
BILL				MLR	MLR		
	comp=Z,118nm,24.0s						
GTA	**Gaotai**	**32.56**	**285**	⇑P	**P**	**02 28 01.8**	**-0.1**
GTA				pP	pP	02 28 15.6	-0.4
GTA				sP	sP	02 28 20.6	-2.0
GTA				PcP	**PcP**	**02 30 47.2**	**-0.1**
GTA				S	**S**	**02 33 12.3**	**-1.2**
GTA				sS	sS	02 33 39.6	+2.4
GTA				ScP	**ScP**	**02 34 30.2**	**+3.8**
GTA				PcS	**PcS**	**02 34 33.1**	**+0.6**
GTA				SS	**SnSn**	**02 35 12.6**	**+0.8**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,67nm,7.6s						
GTA				LR	LR		
	comp=Z,140nm,19.0s						
GTA				LR	LR		
	comp=Z,200nm,18.7s						
GTA				LR	LR		
	comp=Z,230nm,20.6s						
KNGR	**Kungurtug, Tuv**	**33.41**	**306**	⇓*i*P	**P**	**02 28 08.5**	**-0.7**
TIXI	**Tiksi**	**33.92**	**353**	*e*P	**P**	**02 28 12.4**	**-0.8**
	comp=Z,6.0nm,0.9s						
TIXI	**Tiksi**	**33.92**	**353**	⇑*e*P	**P**	**02 28 12.2**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KMI	**Kunming**	**35.60**	**260**	P	**P**	**02 28 30.8**	**+2.3**
KMI				pP	sP	02 28 47.2	-2.0
KMI				sP	pP	02 28 55.4	+13

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KMI                                pmax      pmax
      comp=Z,14nm,0.9s
KMI                                LR        LR
      comp=Z,190nm,7.9s
KMI                                LR        LR
      comp=Z,130nm,7.3s
KMI                                LR        LR
      comp=Z,170nm,10.3s
KMI   Kunming            35.60 260 eP        P         02 28 31.4 +2.9
      comp=Z,20nm,0.8s
KMI   Kunming            35.60 260 eP        P         02 28 31.4 +2.9
KMI                                pmax      pmax
      comp=Z,20nm,0.8s
SPIA  Saint Paul Isl     36.23  43 eP        P         02 28 34.4 +1.1
      comp=Z,165nm,1.3s
DGZ   Jazzator, Alta     39.90 305c iP       P         02 29 05.0 +0.5
DGZ                                pmax      pmax
      comp=Z,16nm,0.9s
ANM   Nome               40.16  32 eP        P         02 29 08.3 +2.1
      comp=Z,6.0nm,0.7s
ANM   Nome               40.16  32 eP        P         02 29 08.3 +2.1
ANM                                pmax      pmax
      comp=Z,6.0nm,0.7s
WMQ   Urumqi             40.58 295 P         P         02 29 10.7 +0.7
WMQ                                pP        pP        02 29 24.5 +0.1
WMQ                                sP        sP        02 29 34.7 +3.9
WMQ                                pmax      pmax
      comp=Z,56nm,0.9s
WMQ                                pmax      pmax
      comp=Z,190nm,4.7s
WMQ                                LR        LR
      comp=Z,120nm,25.9s
WMQ                                LR        LR
      comp=Z,150nm,22.9s
WMQ   Urumqi             40.58 295 eP        P         02 29 10.8 +0.8
      comp=Z,24nm,0.8s
WMQ   Urumqi             40.58 295 eP        P         02 29 10.9 +0.8
WMQ                                pmax      pmax
      comp=Z,24nm,0.8s
ZAA0  Zalesovo Array     41.27 311 eP        P         02 29 15.3 -0.2
      comp=Z,13nm,0.6s
ZAA0                               ePcP      PcP       02 31 09.5 -3.7
ZAA1  Zalesovo Array     41.27 311 eP        P         02 29 15.4  0.0
ZAA1                               ePcP      PcP       02 31 13.1 -0.1
ZALV  Zalesovo Beam      41.27 311 eP        P         02 29 14.7 -0.8
ZALV                               ePcP      PcP       02 31 10.9 -2.2
ZALV  Zalesovo Beam      41.27 311 P         P         02 29 15.4  0.0
      comp=Z,12nm,0.4s,baz=85,slow=7.3,SNR=52
ZALV                               PcP       PcP       02 31 13.1 -0.1
      comp=Z,4.6nm,0.4s,baz=92,slow=3.2,SNR=6.1
ZALV                               LR        LR        02 47 05.9
      comp=Z,68nm,19.2s,baz=70,slow=37
PBKT  Sadao Pong         41.92 250 eP        P         02 29 21.5 +0.3
      comp=Z,5.4nm,0.9s
PBKT  Sadao Pong         41.92 250 P         P         02 29 22.0 +0.8
      comp=Z,5.6nm,0.8s,comp=Z,954nm
CMMT  Chiang Mai         42.05 255 P         P         02 29 31.8 +9.5
CHTO  Chiang Mai         42.06 255 P         P         02 29 31.9  +10
NRIK  Noril'sk           42.14 335 P         P         02 29 21.7 -0.7
      comp=Z,2.9nm,0.3s,baz=82,slow=7.9,SNR=5.6
NRIK                               LR        LR        02 47 58.6
      comp=Z,136nm,18.6s,baz=54,slow=38
NVS   Novosibirsk        42.16 313 eP        P         02 29 22.5 -0.2
NVS                                pmax      pmax
      comp=Z,14nm,1.0s
NVS                                pmax      pmax
      comp=E,13nm,1.1s
CM31  Chiang Mai Arr     42.27 254 eP        P         02 29 23.3 -0.8
CM31                               ePcP      PcP       02 31 17.7 +0.6
CMAR  Chiang Mai Arr     42.27 254ceP        P         02 29 24.2 +0.1
CMAR                               pmax      pmax
      comp=Z,1.0nm,0.4s
CMAR  Chiang Mai Arr     42.27 254 P         P         02 29 23.3 -0.8
      comp=Z,1.1nm,0.5s,baz=45,slow=7.0,SNR=6.0
CMAR                               PcP       PcP       02 31 17.7 +0.6
      comp=Z,1.5nm,0.3s,baz=19,slow=2.0,SNR=4.4
CMAR                               LR        LR        02 47 39.6
      comp=Z,35nm,19.3s,baz=310,slow=37
SUKH  Sukhothai          42.35 252 P         P         02 29 25.8 +1.1
      comp=Z,2.8nm,0.9s
LSA   Lhasa              42.51 274 eP        P         02 29 27.6 +1.2
      comp=Z,7.8nm,0.7s
LSA   Lhasa              42.51 274 eP        P         02 29 27.6 +1.2
LSA                                pmax      pmax
      comp=Z,8.0nm,0.7s
MK01  Makanchi Array     43.72 301 eP        P         02 29 35.0 -0.5
UMPA  Umpang Tak         43.72 252 P         P         02 29 38.3 +2.5
      comp=Z,2.9nm,0.9s
MK31  Makanchi Array     43.72 301 eP        P         02 29 35.2 -0.3
      comp=Z,8.4nm,0.6s
MK31  Makanchi Array     43.72 301 eP        P         02 29 35.2 -0.3
MK31                               pmax      pmax
      comp=Z,8.0nm,0.6s
MK32  Makanchi Array     43.72 301 eP        P         02 29 35.1 -0.4
MK32                               ePP       PcP       02 31 21.1 -0.4
MKAR  Makanchi Array     43.72 301 eP        P         02 29 35.2 -0.3
      comp=Z,71nm,0.6s
MKAR  Makanchi Array     43.72 301 P         P         02 29 35.2 -0.3
MKAR                                                   02 31 21.1
MKAR                               S         S         02 36 00.0 -1.6
MKAR                               pmax      pmax
      comp=Z,9.0nm,0.7s
MKAR                               pmax      pmax
      comp=Z,2.0nm,0.7s
MKAR                               MLR       MLR
      comp=Z,45nm,19.4s
MKAR  Makanchi Array     43.72 301 P         P         02 29 35.1 -0.3
      comp=Z,9.6nm,0.7s,baz=85,slow=11,SNR=62
MKAR                               PcP       PcP       02 31 21.1 -0.4
      comp=Z,1.5nm,0.7s,baz=64,slow=5.0,SNR=2.6
MKAR                               S         S         02 36 00.0 -1.6
      comp=Z,0.2nm,0.7s,baz=86,slow=5.9,SNR=2.5
MKAR                               LR        LR        02 48 18.9
      comp=Z,44nm,19.4s,baz=60,slow=37
SHL   Shillong           43.85 268 eP        P         02 29 38.8 +1.8
      comp=Z,11nm,0.4s
SHL   Shillong           43.85 268 eP        P         02 29 37.0  0.0
MAKZ  Makanchi           43.93 301 eP        P         02 29 36.8 -0.4
      comp=Z,8.2nm,0.8s
MAKZ  Makanchi           43.93 301 eP        P         02 29 36.8 -0.4
MAKZ                               pmax      pmax
      comp=Z,8.0nm,0.8s
IM3   Indian Mountai     45.21  31 eP        P         02 29 47.3 +0.3
IM3                                ePcP      PcP       02 31 27.6 +1.3
PHET  Kaeng Krachan      45.28 247 P         P         02 29 50.8 +2.5
      comp=Z,5.3nm,0.8s
KURK  Kurchatov          45.38 307 eP        P         02 29 48.1 -0.5
      comp=Z,41nm,0.8s
KURK  Kurchatov          45.38 307c iP       P         02 29 48.0 -0.7
KURK                               pmax      pmax
      comp=Z,47nm,0.8s
KDAK  Kodiak Island      45.76  43 i P       P         02 29 52.3 +0.8
CAST  Castle Rocks       45.81  35 eP        P         02 29 54.2 +2.3
      comp=Z,7.1nm,1.0s
MLY   Manley             46.42  33 eP        P         02 29 58.8 +2.1
      comp=Z,9.3nm,1.0s
MLY                                ePcP      PcP       02 31 32.1 +1.5
SUA   Susitna One        46.47  38 eP        P         02 29 59.6 +2.5
      comp=Z,13nm,0.9s
PDGK  Podgornoye         46.48 297 P         P         02 29 56.6 -1.0
PDGK                               pmax      pmax
      comp=Z,4.0nm,0.5s
BWN   Browne             46.97  34 eP        P         02 30 03.4 +2.5
      comp=Z,35nm,1.0s
TOLK  Toolik Lake Re     47.01  28 eP        P         02 30 03.1 +1.9
      comp=Z,9.7nm,0.9s
RND   Reindeer           47.26  35 eP        P         02 30 04.3 +1.0
      comp=Z,10nm,0.8s
RND   Reindeer           47.26  35 eP        P         02 30 04.3 +1.0
RND                                pmax      pmax
      comp=Z,10.0nm,0.8s
JIRN  Jiri               47.31 274 eP        P         02 30 04.5  0.0
      comp=Z,30nm,0.6s
RAMN  Ramite             47.33 273 eP        P         02 30 04.2 -0.3
GUN   Gumba              47.44 275 eP        P         02 30 05.2 -0.3
      comp=Z,36nm,0.5s
MDM   Murphy Dome        47.48  33 eP        P         02 30 06.5 +1.5
      comp=Z,15nm,1.2s
WRH   Wood River Hil     47.56  33 ePcP      PcP       02 31 35.2 +0.6
COLA  College            47.65  33⇑iP        P         02 30 07.4 +1.3
COLA                               pmax      pmax
      comp=Z,6.0nm,0.9s
DHY   Denali Highway     47.95  35 eP        P         02 30 09.8 +1.1
      comp=Z,16nm,1.4s
PKI   Pulchoki           47.97 274 eP        P         02 30 08.9 -0.7
      comp=Z,13nm,0.5s
PKIN  Phulchoki          47.97 274 eP        P         02 30 08.9 -0.6
      comp=Z,13nm,0.5s
HDA   Harding Lake       48.06  34 eP        P         02 30 10.1 +0.7
      comp=Z,8.1nm,0.8s
IL1   Eielson Array      48.06  33 eP        P         02 30 08.4 -1.0
ILAR  Eielson Array      48.06  33 P         P         02 30 10.2 +0.8
      comp=Z,6.0nm,0.7s,baz=266,slow=6.2,SNR=98
ILB   Eielson Array      48.06  33 eP        P         02 30 10.2 +0.8
      comp=Z,8.3nm,0.8s
TARG  Taragay, Kyrgy     48.15 295 eP        P         02 30 11.4 +0.5
      comp=Z,7.6nm,0.7s
DMN   Daman              48.19 275 eP        P         02 30 10.8 -0.4
      comp=Z,14nm,0.5s
PRP   Porcupine Dome     48.60  32 eP        P         02 30 15.1 +1.4
      comp=Z,8.6nm,0.9s
FYU   Fort Yukon         48.66  31 eP        P         02 30 16.5 +2.5
      comp=Z,29nm,1.4s
DANN  Dangsing           48.89 276 eP        P         02 30 16.6  0.0
      comp=Z,70nm,0.5s
KOLN  Koldanda           49.29 276 eP        P         02 30 19.4 -0.2
      comp=Z,16nm,0.5s
SCRK  Sand Creek         49.38  34 eP        P         02 30 20.4 +0.7
      comp=Z,9.7nm,0.8s
NRN   Naryn              49.52 296 eP        P         02 30 22.1 +0.7
      comp=Z,2.7nm,0.6s
NRN   Naryn              49.52 296 eP        P         02 30 22.1 +0.7
NRN                                pmax      pmax
      comp=Z,3.0nm,0.6s
PYUN  Piuthan            49.61 276 eP        P         02 30 21.7 -0.3
      comp=Z,82nm,1.0s
BVA0  Borovoye Array     49.92 312 P         P         02 30 22.9 -0.9
BVA0                               pmax      pmax
      comp=Z,5.0nm,0.7s
OTUK  Ortayu             49.93 305 P         P         02 30 22.5 -1.5
OTUK                               pmax      pmax
      comp=Z,6.0nm,0.7s
BRVK  Borovoye           49.98 312 eP        P         02 30 24.0 -0.2
      comp=Z,6.6nm,0.9s
BRVK  Borovoye           49.98 312c iP       P         02 30 23.7 -0.5
BRVK                               pmax      pmax
      comp=Z,6.0nm,0.9s
AAK   Ala-Archa          50.18 297 eP        P         02 30 25.8 -0.3
      comp=Z,6.8nm,1.4s
AAK   Ala-Archa          50.18 297 eP        P         02 30 25.8 -0.3
AAK                                pmax      pmax
      comp=Z,7.0nm,1.4s
KSH   Kashi              50.21 293 P         P         02 30 29.8 +3.5
KSH                                pP        sP        02 30 46.1 -1.4
KSH                                PP        PP        02 32 28.7 +6.9
KSH                                S         S         02 37 34.9 +0.4
KSH                                sS        sS        02 38 07.3 +8.2
KSH                                SS        SS        02 41 09.5 +1.4
KSH                                pmax      pmax
      comp=Z,6.0nm,0.6s
KSH                                pmax      pmax
      comp=Z,110nm,5.6s
KSH                                LR        LR
      comp=Z,120nm,5.0s
KSH                                LR        LR
      comp=Z,91nm,5.2s
KSH                                LR        LR
      comp=Z,360nm,4.5s
MNAS  Manas              51.62 298 P         P         02 30 35.9 -1.0
MNAS                               pmax      pmax
      comp=Z,5.0nm,0.7s
ARSB  Arslanbob          51.69 296 eP        P         02 30 38.0 +0.5
      comp=Z,8.3nm,0.7s
SFK   Sufi-Kurgan        51.80 295 P         P         02 30 38.9 +0.5
SFK                                pmax      pmax
      comp=Z,6.0nm,1.0s
COEN  Coen               52.16 178 eP        P         02 30 41.7 +0.8
COEN                               epP       pP        02 30 56.6 +0.9
KK31  Karatay Array      52.77 299 eP        P         02 30 45.0 -0.3
KK31  Karatay Array      52.77 299 eP        P         02 30 45.0 -0.3
KKAR  Karatay Array      52.77 299 eP        P         02 30 45.0 -0.3
      comp=Z,5.2nm,0.8s
KKAR  Karatay Array      52.77 299 eP        P         02 30 45.0 -0.3
KKAR                               pmax      pmax
      comp=Z,5.0nm,0.8s
HYT   Haines Junctio     52.90  37 eP        P         02 30 48.8 +2.7
      comp=Z,15nm,1.0s
HYT                                epP       sP        02 31 10.5 +3.3
INK   Inuvik             52.92  28 eP        P         02 30 47.0 +1.1
      comp=Z,13nm,1.1s
INK   Inuvik             52.92  28 eP        P         02 30 47.0 +1.1
INK                                pmax      pmax
      comp=Z,13nm,1.1s
SVE   Sverdlovsk         54.35 318⇓eP        P         02 30 56.5 -0.1
SVE                                pmax      pmax
      comp=Z,24nm,1.1s
GAR   Garm               54.47 295 eP        P         02 30 57.6 -0.3
      comp=Z,7.3nm,0.5s
GAR   Garm               54.47 295 eP        P         02 30 57.6 -0.3
GAR                                pmax      pmax
      comp=Z,7.0nm,0.5s
NIL   Nilore             54.57 288 eP        P         02 30 58.9 +0.3
      comp=Z,15nm,0.9s
NIL   Nilore             54.57 288 eP        P         02 30 58.9 +0.3
NIL                                pmax      pmax
      comp=Z,15nm,0.9s
GSI   Gunungsitoli       54.90 239 eP        P         02 31 00.9 -0.2
      comp=Z,22nm,0.9s
ARU   Arti               55.56 318 eP        P         02 31 05.0 -0.4
      comp=Z,40nm,1.4s
ARU   Arti               55.56 318d iP       P         02 31 03.7 -1.7
ARU                                *PP       pP        02 31 20.9 +0.6
ARU                                                    02 32 03.3
ARU                                                    02 33 05.7
ARU                                S         S         02 38 44.5 -2.1
ARU                                SS        SS        02 42 28.8 -2.8
ARU                                pmax      pmax
      comp=Z,30nm,1.4s
KBL   Kabul              57.30 290 eP        P         02 31 17.7 -0.6
      comp=Z,20nm,1.3s
KBL   Kabul              57.30 290 eP        P         02 31 17.7 -0.6
KBL                                pmax      pmax
      comp=Z,20nm,1.3s
ABKAR Akbulak array      57.34 310 eP        P         02 31 17.5 -0.6
      comp=Z,8.2nm,0.6s
AKTO  Aktyubinsk         58.03 311 P         P         02 31 22.0 -0.9
AKTO                               pmax      pmax
      comp=Z,9.0nm,0.9s
FITZ  Fitzroy Crossi     58.31 198 eP        P         02 31 25.1  0.0
FITZ                               epP       pP        02 31 41.0 +0.9
WRAB  Tennant Creek      58.53 188 eP        P         02 31 26.0 -0.6
      comp=Z,9.8nm,0.8s
WRAB  Tennant Creek      58.53 188deP        P         02 31 25.8 -0.8
WRAB                               pmax      pmax
      comp=Z,6.0nm,0.8s
WB2   Warramunga Arr     58.54 188 eP        P         02 31 25.1 -1.6
WB2                                eP        P         02 31 26.1 -0.6
WR1   Warramunga Arr     58.54 188 eP        P         02 31 25.7 -1.0
      comp=Z,12nm,0.6s
WRA   Warramunga Arr     58.54 188 P         P         02 31 25.7 -1.0
      comp=Z,11nm,0.6s,baz=6.0,slow=7.1,SNR=96
HYB   Hyderabad          58.66 268 i P       P         02 31 28.0 +0.2
HOPEN Hopen              58.75 346 eP        P         02 31 29.0 +1.5
SPA0  Spitsbergen Ar     59.20 349 eP        P         02 31 31.6 +0.9
PRGR  Permogore          59.79 327 eP        P         02 31 32.0 -2.9
PRGR                               pmax      pmax
      comp=Z,13nm,0.9s
HSPB  Hornsund (broa     60.13 348 eP        P         02 31 37.9 +0.9
RES   Resolute Bay       61.11  15 eP        P         02 31 43.8 +0.1
      comp=Z,18nm,1.2s
RES   Resolute Bay       61.11  15 eP        P         02 31 43.8 +0.1
RES                                pmax      pmax
      comp=Z,18nm,1.2s
TMCR  Tamitsa            61.69 331 eP        P         02 31 46.4 -1.3
TMCR                               pmax      pmax
      comp=Z,22nm,1.2s
AS01  Alice Springs      62.26 188 eP        P         02 31 51.2 -0.8
AS31  Alice Springs      62.27 188 eP        P         02 31 51.8 -0.3
      comp=Z,1.4nm,0.8s
ASAR  Alice Springs      62.27 188 P         P         02 31 51.5 -0.6
      comp=Z,4.9nm,0.7s,baz=11,slow=6.1,SNR=58
ASAR                               PKP2bc              03 01 05.8
      comp=Z,0.7nm,1.0s,baz=197,slow=2.9,SNR=6.0
YKW3  Yellowknife Ar     62.32  31 eP        P         02 31 52.5 +0.4
      comp=Z,5.4nm,0.7s
YKA   Yellowknife Ar     62.36  31 P         P         02 31 52.8 +0.5
      comp=Z,3.9nm,0.6s,baz=302,slow=6.5,SNR=92
YKB5  Yellowknife Ar     62.36  31 eP        P         02 31 51.7 -0.6
HAMF  Hammerfest         62.60 341 eP        P         02 31 54.7 +0.9
KLMR  Klimovskoe         62.77 327 eP        P         02 31 53.3 -1.7
KLMR                               pmax      pmax
      comp=Z,5.0nm,0.8s
KLMR  Klimovskoe         62.77 327 eP        P         02 31 53.3 -1.7
KLMR                               AMP                 02 32 07.3
      comp=Z,5.0nm,0.8s
ARA0  ARCESS Array S     62.80 339 eP        P         02 31 55.1  0.0
ARCES ARCESS Array B     62.80 339 P         P         02 31 55.1  0.0
      comp=Z,4.8nm,0.8s,baz=55,slow=7.7,SNR=30
ARE0  ARCESS Array S     62.80 339 eP        P         02 31 55.8 +0.7
GEYT  Alibeck            63.51 299 P         P         02 32 00.2 -0.2
      comp=Z,1.8nm,0.6s,baz=332,slow=2.2,SNR=7.9
GEYT                               LR        LR        03 01 06.0
      comp=Z,64nm,19.7s,baz=325,slow=37
TULEG Thule              63.62   8 eP        P         02 32 00.1 -0.3
      comp=Z,16nm,0.8s
KTK1  Kautokeino         63.76 339 eP        P         02 32 01.5  0.0
SGF   Sodankyl           63.79 337 P         P         02 32 01.9 +0.2
SGF                                pmax      pmax
      comp=Z,29nm,0.9s
MSF   Maaselka           63.92 335 P         P         02 32 02.8 +0.2
MSF                                pmax      pmax
      comp=Z,22nm,0.8s
DAG   Danmarks Havn      64.38 355⇑iP        P         02 32 05.2 -0.2
      comp=Z,12nm,1.0s
DAG   Danmarks Havn      64.38 355⇑iP        P         02 32 05.2 -0.2
DAG                                pmax      pmax
      comp=Z,12nm,1.0s
TRO   Tromso             64.49 341 eP        P         02 32 06.3  0.0
OUL   Oulu               65.47 335 P         P         02 32 12.6  0.0
OUL                                pmax      pmax
      comp=Z,27nm,0.9s
MOS   Moscow             66.35 323 eP        P         02 32 17.6 -0.8
MOS                                e                   02 32 38.9
MOS                                e                   02 32 47.3
MOS                                pmax      pmax
      comp=Z,17nm,0.6s
STEI  Steigen            66.65 341 eP        P         02 32 20.9 +0.7
VRH   Novokhopyorsk      66.80 318 eP        P         02 32 19.8 -1.6
VRH                                pmax      pmax
      comp=Z,10.0nm,0.8s
SUF   Sumiainen          66.89 333 P         P         02 32 22.0 +0.2
SUF                                pmax      pmax
      comp=Z,15nm,0.8s
LOF   Lofoten            66.93 341 eP        P         02 32 22.8 +0.8
OBN   Obninsk            67.20 323 eP        P         02 32 23.8 -0.1
OBN                                e                   02 32 51.4
OBN                                e                   02 34 51.1
OBN                                ePPP      PPP       02 36 27.2
OBN                                pmax      pmax
      comp=Z,42nm,2.5s
OBN                                MLR       MLR
      comp=Z,43nm,15.0s
LPSR  Galich'ya Gora     67.47 320 eP        P         02 32 24.8 -0.8
LPSR                               pmax      pmax
      comp=Z,20nm,1.1s
B08A  Colville Reser     67.53  46 eP        P         02 32 27.4 +1.2
      comp=Z,14nm,1.4s
FIA1  FINESS Array S     67.74 332 eP        P         02 32 26.9 -0.3
FIA1                               eP        P         02 32 27.2  0.0
FIA0  FINESS Array S     67.74 332 eP        P         02 32 26.9 -0.3
FIA0  FINESS Array S     67.74 332 eP        P         02 32 26.9 -0.3
FINES FINESS Array B     67.74 332 i P       P         02 32 27.1 -0.1
FINES                              pmax      pmax
      comp=Z,10.0nm,0.6s
FINES FINESS Array B     67.74 332 P         P         02 32 26.9 -0.3
      comp=Z,9.7nm,0.6s,baz=53,slow=9.8,SNR=40
FINES                              LR        LR        03 03 05.7
      comp=Z,51nm,21.5s,baz=32,slow=37
VSR   Storozhevoye       68.13 319c iP       P         02 32 28.6 -1.2
VSR                                pmax      pmax
      comp=Z,12nm,0.8s
MOR8  Moi Rana           68.16 340 eP        P         02 32 28.4 -1.4
KONS  Konsvik            68.27 340 eP        P         02 32 31.2 +0.8
C09A  Chrisman Ranch     68.43  46 eP        P         02 32 33.1 +1.2
      comp=Z,9.5nm,0.6s
D08A  Wollman Farm,      68.48  47 eP        P         02 32 33.6 +1.4
      comp=Z,6.6nm,0.9s
E08A  Dider Farm, El     68.72  47 eP        P         02 32 35.2 +1.6
      comp=Z,10.0nm,1.3s
NEW   Newport            68.81  45 eP        P         02 32 35.7 +1.4
      comp=Z,7.7nm,0.8s
NEW   Newport            68.81  45 eP        P         02 32 35.7 +1.4
NEW                                pmax      pmax
      comp=Z,8.0nm,0.8s
PINE  Pine Mountain      69.10  50 eP        P         02 32 38.2 +1.9
      comp=Z,24nm,1.3s
E09A  Wood Farm, Sta     69.23  47 eP        P         02 32 38.5 +1.7
      comp=Z,15nm,1.3s
SUMG  Summit             69.25   0 eP        P         02 32 37.1 +0.1
      comp=Z,19nm,0.9s
SUMG  Summit             69.25   0⇑iP        P         02 32 37.8 +0.8
      comp=Z,38nm,0.6s
SUMG  Summit             69.25   0⇑iP        P         02 32 37.8 +0.8
SUMG                               pmax      pmax
      comp=Z,38nm,0.6s
VSU   Vasula             69.43 329ceP        P         02 32 37.0 -0.7
VSU                                pmax      pmax
      comp=Z,30nm,1.7s
VSU   Vasula             69.43 329 eP        P         02 32 37.0 -0.7
VSU                                IAmb      IAmb      02 32 38.1
      comp=Z,35nm,0.9s
GOF   Gofitskoye         69.45 312 eP        P         02 32 37.6 -0.6
GOF                                pmax      pmax
      comp=Z,20nm,0.8s
STKA  Stephens Creek     69.99 180 eP        P         02 32 40.4 -1.0
      comp=Z,0.6nm,0.8s
STKA  Stephens Creek     69.99 180 P         P         02 32 40.4 -1.0
      comp=Z,1.6nm,0.7s,baz=330,slow=11,SNR=3.1
NCK   Nalchik            70.00 310⇓eP        P         02 32 41.6  0.0
NCK                                pmax      pmax
      comp=Z,7.0nm,1.0s
NSS   Namsos             70.09 339 eP        P         02 32 42.3 +0.6
ZEI   Tsey               70.21 309 eP        P         02 32 39.6 -3.6
ZEI                                pmax      pmax
      comp=Z,2.0nm,0.5s
KIV   Kislovodsk         70.28 311 eP        P         02 32 43.5 +0.1
      comp=Z,31nm,1.0s
KIV   Kislovodsk         70.28 311⇑iP        P         02 32 44.3 +0.9
KIV   Kislovodsk         70.28 311 eP        P         02 32 43.1 -0.3
KIV                                pmax      pmax
      comp=Z,36nm,1.1s
KBZ   Khabaz             70.28 310 P         P         02 32 43.3 +0.1
      comp=Z,8.2nm,0.9s,baz=57,slow=3.9,SNR=15
KBZ                                LR        LR        03 07 21.9
      comp=Z,29nm,18.4s,baz=44,slow=39
MOD   Modoc Plateau      70.54  52 eP        P         02 32 46.5 +1.4
      comp=Z,4.2nm,0.7s
BMO   Blue Mountains     70.66  48 eP        P         02 32 46.8 +1.1
      comp=Z,7.6nm,1.3s
BMO   Blue Mountains     70.66  48 eP        P         02 32 46.8 +1.1
BMO                                pmax      pmax
      comp=Z,8.0nm,1.3s
NEY   Neytrino           70.66 310⇑eP        P         02 32 45.4 -0.5
NEY                                pmax      pmax
      comp=Z,2.0nm,1.2s
SCO   Scoresbysund       70.73 354 i P       P         02 32 46.2 +0.7
      comp=Z,6.5nm,0.8s
SCO   Scoresbysund       70.73 354 i P       P         02 32 46.2 +0.7
SCO                                pmax      pmax
      comp=Z,7.0nm,0.8s
J08A  Circle Bar Ran     70.83  50 eP        P         02 32 48.7 +1.9
      comp=Z,5.2nm,0.8s
GNI   Garni              71.18 307⇓eP        P         02 32 49.7 +0.6
GNI                                pmax      pmax
      comp=Z,17nm,1.3s
MSO   Missoula           71.40  45 eP        P         02 32 51.4 +1.2
      comp=Z,6.9nm,1.0s
IZAR  Zarasai            71.42 327 eP        P         02 32 50.0  0.0
IZAR                               IAmb      IAmb      02 32 50.5
      comp=Z,4.6nm,0.8s
IDID  Didziasalis        71.50 327 eP        P         02 32 50.5 +0.1
IDID                               IAmb      IAmb      02 32 51.9
      comp=Z,9.5nm,0.9s
ISAL  Salakas            71.59 327 eP        P         02 32 51.1 +0.1
ISAL                               IAmb      IAmb      02 32 52.7
      comp=Z,17nm,1.2s
BEKR  Beckworth          71.67  53 eP        P         02 32 53.4 +1.4
      comp=Z,5.8nm,0.9s
IIGN  Ignalina           71.70 327 eP        P         02 32 51.9 +0.2
IIGN                               IAmb      IAmb      02 32 52.4
      comp=Z,6.1nm,0.6s
FFC   Flin Flon          72.28  33 eP        P         02 32 55.9 +0.8
      comp=Z,9.8nm,0.8s
FFC   Flin Flon          72.28  33 i P       P         02 32 55.7 +0.6
FCC   Fort Churchill     72.53  27 eP        P         02 32 56.7 +0.1
      comp=Z,20nm,1.3s
FCC   Fort Churchill     72.53  27 eP        P         02 32 56.7 +0.1
FCC                                pmax      pmax
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           comp=Z,20nm,1.3s
HRY   Holter Researc   72.63  44 eP     P      02 32 59.1 +1.5
CMB   Columbia Colle   72.70  55 eP     P      02 32 59.6 +1.5
           comp=Z,3.0nm,0.8s
CMB   Columbia Colle   72.70  55 eP     P      02 32 59.6 +1.5
CMB                              pmax   pmax
           comp=Z,3.0nm,0.8s
NC405 NORSAR Array S   72.81 337 eP     P      02 32 58.4 +0.1
           comp=Z,37nm,1.3s
NC303 NORSAR Array S   72.83 337 eP     P      02 32 58.2  -0.2
           comp=Z,30nm,1.3s
DOMB  Dombas           72.86 339 eP     P      02 32 58.6 +0.1
YERR  Yerington        72.88  54 eP     P      02 33 01.1 +1.8
           comp=Z,9.3nm,1.1s
EGMT  Eagleton         72.92  42 eP     P      02 33 00.2 +1.0
           comp=Z,16nm,0.8s
NC204 NORSAR Array S   72.97 338 eP     P      02 32 59.5 +0.2
           comp=Z,30nm,0.8s
NB201 NORSAR Array S   72.99 337 eP     P      02 32 59.3   0.0
           comp=Z,19nm,0.8s
NB2   NORSAR Subarra   73.02 337  P     P      02 32 59.1  -0.4
           comp=Z,14nm,0.7s,baz=38,slow=6.2
NB2   NORSAR Subarra   73.02 337  P     P      02 32 59.1  -0.4
           baz=38,slow=6.2
NB200 NORSAR Array S   73.02 337 eP     P      02 32 59.4  -0.2
NOA   NORSAR Array B   73.02 337  P     P      02 32 59.4  -0.2
           comp=Z,12nm,0.8s,baz=38,slow=5.9,SNR=61
NOA                              LR     LR     03 07 50.5
           comp=Z,59nm,20.7s,baz=45,slow=38
DLMT  Dillon           73.03  45 eP     P      02 33 01.7 +1.7
           comp=Z,7.4nm,0.7s
HLID  Hailey           73.09  48 eP     P      02 33 01.9 +1.5
           comp=Z,5.0nm,1.0s
NBO00 NORSAR Array S   73.16 337 eP     P      02 33 00.6 +0.3
           comp=Z,20nm,0.8s
NC602 NORSAR Array S   73.16 337 eP     P      02 33 00.0  -0.3
NORES NORESS Array B   73.16 337  P     P      02 32 59.8  -0.5
NORES                            pmax   pmax
           comp=Z,1.0nm,0.4s
NAO01 NORSAR Array S   73.28 337 eP     P      02 33 01.0   0.0
AKASG Malin Array Be   73.42 322  P     P      02 33 01.5  -0.5
AKASG                            pmax   pmax
           comp=Z,5.0nm,0.4s
AKASG                            MLR    MLR
           comp=Z,43nm,18.3s
AKASG Malin Array Be   73.42 322  P     P      02 33 01.5  -0.5
           comp=Z,9.6nm,0.6s,baz=45,slow=6.2,SNR=12
AKASG                            LR     LR     03 08 01.5
           comp=Z,43nm,18.3s,baz=50,slow=38
AKBB  Malin Array Si   73.42 322 eP     P      02 33 01.6  -0.4
           comp=Z,16nm,0.8s
AKBB  Malin Array Si   73.42 322 eP     P      02 33 01.6  -0.4
AKBB                             pmax   pmax
           comp=Z,16nm,0.8s
BOZ   Bozeman (W)      73.43  45 eP     P      02 33 03.5 +1.2
BOZ   Bozeman (W)      73.43  45 eP     P      02 33 03.5 +1.2
KIEV  Kiev             73.43 322 eP     P      02 33 00.9  -1.1
           comp=Z,16nm,0.9s
KIEV  Kiev             73.43 322c iP    P      02 33 01.2  -0.8
KIEV                             pmax   pmax
           comp=Z,13nm,0.9s
AK11  Malin Array Si   73.46 322 eP     P      02 33 01.7  -0.5
NV01  Mina Array Sit   73.80  54 eP     P      02 33 06.1 +1.4
NVAR  Mina Array Bea   73.80  54  P     P      02 33 05.7 +0.9
           comp=Z,3.8nm,0.8s,baz=285,slow=6.0,SNR=5.8
PAGB  Antelope Grade   74.14  57 eP     P      02 33 08.4 +1.9
           comp=Z,12nm,0.9s
SIRT  Sirnak           74.18 305 eP     P      02 33 06.5  -0.3
           comp=Z,28nm,1.1s
YHB   Horse Butte      74.19  45 eP     P      02 33 08.6 +1.7
           comp=Z,7.7nm,0.9s
ELK   Elko             74.31  50 eP     P      02 33 09.6 +1.9
           comp=Z,3.7nm,1.0s
ELK   Elko             74.31  50 eP     P      02 33 09.6 +1.9
ELK                              pmax   pmax
           comp=Z,4.0nm,1.0s
YHH   Holmes Hill      74.36  45 eP     P      02 33 09.7 +1.6
           comp=Z,5.6nm,1.2s
YMR   Madison River    74.37  45 eP     P      02 33 10.0 +2.0
           comp=Z,4.9nm,0.8s
HYA   Hoyanger         74.38 339 eP     P      02 33 08.0 +0.7
YFT   Old Faithful     74.58  45 eP     P      02 33 12.4 +3.2
           comp=Z,6.3nm,0.9s
KONO  Kongsberg        74.62 337 eP     P      02 33 09.5 +0.7
YPP   Pitchstone Pla   74.71  45 eP     P      02 33 12.8 +2.8
           comp=Z,3.7nm,0.8s
LKWY  Lake             74.75  45 eP     P      02 33 13.4 +3.2
           comp=Z,8.9nm,1.1s
LKWY  Lake             74.75  45 eP     P      02 33 13.4 +3.2
LKWY                             pmax   pmax
           comp=Z,9.0nm,1.1s
H17A  Grant Village    74.76  45 eP     P      02 33 13.3 +3.0
           comp=Z,11nm,0.8s
SUE   Sulen            74.86 340 eP     P      02 33 10.9 +0.8
IMW   Indian Meadow    74.87  46 eP     P      02 33 13.0 +2.0
           comp=Z,8.7nm,0.8s
FLWY  Flagg Ranch      74.89  45 eP     P      02 33 13.5 +2.6
           comp=Z,3.7nm,0.8s
FXWY  Fox Creek        74.99  46 eP     P      02 33 13.7 +2.1
           comp=Z,5.2nm,0.8s
RLMT  Red Lodge        75.02  44 eP     P      02 33 13.2 +1.5
           comp=Z,5.4nm,0.8s
MOOW  Moose Ponds      75.08  46 eP     P      02 33 13.9 +1.8
           comp=Z,5.7nm,1.0s
TPAW  Teton Pass       75.12  46 eP     P      02 33 13.6 +1.2
           comp=Z,7.1nm,0.8s
HVU   Hansel Valley    75.14  48 eP     P      02 33 13.9 +1.5
           comp=Z,6.6nm,0.8s
HVU   Hansel Valley    75.14  48 eP     P      02 33 13.9 +1.5
HVU                              pmax   pmax
           comp=Z,7.0nm,0.8s
ASK   Askoy            75.22 339 eP     P      02 33 13.0 +0.8
REDW  Red Top Meadow   75.26  46 eP     P      02 33 14.7 +1.5
           comp=Z,4.1nm,0.8s
ODD1  Odda             75.29 339 eP     P      02 33 13.3 +0.6
BGU   Big Grassy Mou   75.52  49 eP     P      02 33 16.4 +1.8
           comp=Z,7.7nm,1.4s
R11A  Troy Canyon, C   75.56  52 eP     P      02 33 16.1 +1.2
           comp=Z,8.3nm,1.3s
LAO   LASA Array       75.62  41 eP     P      02 33 16.5 +1.6
           comp=Z,16nm,0.9s
SPUT  South Promonto   75.63  49 eP     P      02 33 17.0 +1.8
           comp=Z,6.0nm,1.2s
BLS5  Blasjo           75.74 338 eP     P      02 33 16.0 +0.7
TPNV  Topopah Spring   75.99  54 eP     P      02 33 18.9 +1.5
           comp=Z,9.7nm,1.2s
TPNV  Topopah Spring   75.99  54 eP     P      02 33 18.9 +1.5
TPNV                             pmax   pmax
           comp=Z,10.0nm,1.2s
DUG   Dugway, Tooele   76.11  50 eP     P      02 33 19.6 +1.7
           comp=Z,19nm,1.4s
DUG   Dugway, Tooele   76.11  50 eP     P      02 33 19.6 +1.7
DUG                              pmax   pmax
           comp=Z,19nm,1.4s
KMY   Karmoy           76.26 339 eP     P      02 33 18.9 +0.7
TCUT  Toone Canyon     76.36  48 eP     P      02 33 21.3 +1.8
           comp=Z,14nm,0.7s
BW06  Boulder Array    76.37  46 eP     P      02 33 20.3 +0.8
           comp=Z,7.4nm,0.6s
PD31  Pinedale Array   76.37  46 eP     P      02 33 20.3 +0.8
PDAR  Pinedale Array   76.37  46 eP     P      02 33 19.9 +0.5
PDAR  Pinedale Array   76.37  46  P     P      02 33 20.2 +0.8
           comp=Z,7.0nm,0.5s,baz=264,slow=1.5,SNR=99
BSD   Bornholm Skovb   76.38 332 i P    P      02 33 18.7  -0.2
           comp=Z,19nm,0.9s
BSD   Bornholm Skovb   76.38 332 i P    P      02 33 18.7  -0.2
BSD                              pmax   pmax
           comp=Z,19nm,0.9s
SNART Snartemo         76.41 337 eP     P      02 33 19.7 +0.6
LVV   L'vov            76.46 324 eP     P      02 33 19.5  -0.1
BEL   Belsk            76.47 327 eP     P      02 33 20.5 +1.0
BEL   Belsk            76.47 327 eP     P      02 33 20.5 +1.0
PSUT  Pine Spring      76.51  51 eP     P      02 33 21.9 +1.6
           comp=Z,4.7nm,1.0s
GSC   Goldstone, Bar   76.64  56 eP     P      02 33 22.2 +1.3
           comp=Z,7.1nm,1.3s
GSC   Goldstone, Bar   76.64  56 eP     P      02 33 22.2 +1.3
GSC                              pmax   pmax
           comp=Z,7.0nm,1.3s
JLU   Jordanelle       76.66  49 eP     P      02 33 22.8 +1.6
           comp=Z,6.1nm,1.1s
NLU   North Lily Min   76.70  49 eP     P      02 33 23.1 +1.7
           comp=Z,6.6nm,1.1s
COP   Copenhagen       76.83 333 i P    P      02 33 21.8 +0.3
           comp=Z,18nm,0.6s
COP   Copenhagen       76.83 333 i P    P      02 33 21.8 +0.3
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COP                              pmax   pmax
           comp=Z,18nm,0.6s
GKP   Gorka Klasztor   76.88 330 eP     P      02 33 21.9 +0.1
GKP   Gorka Klasztor   76.88 330 eP     P      02 33 21.9 +0.1
MPU   Maple Canyon     76.92  49 eP     P      02 33 24.4 +1.8
           comp=Z,11nm,1.1s
SHPR  Sheep Range      76.95  54 eP     P      02 33 24.6 +1.8
           comp=Z,6.0nm,1.1s
KWP   Kalwaria Pacla   77.20 324 eP     P      02 33 24.2 +0.4
KWP   Kalwaria Pacla   77.20 324 eP     P      02 33 24.1 +0.4
           comp=Z,219nm,1.0s
KWP   Kalwaria Pacla   77.20 324 eP     P      02 33 24.2 +0.4
BUR08 Bucovina Ar. S   77.43 322 eP     P      02 33 25.3 +0.1
           comp=Z,8.3nm,0.8s
CCUT  Cedar City       77.43  52 eP     P      02 33 27.4 +1.9
           comp=Z,12nm,1.5s
BUR04 Bucovina Ar. S   77.44 322 eP     P      02 33 25.3   0.0
BURAR Bucovina Array   77.44 322  P     P      02 33 25.4 +0.2
BIZ   Bicaz            77.47 321⇑iP     P      02 33 25.6 +0.3
TESR  Tescani          77.50 320⇑iP     P      02 33 25.4   0.0
MSU   Marysvale        77.55  51 eP     P      02 33 24.1  -2.1
MSU   Marysvale        77.55  51 eP     P      02 33 24.1  -2.1
TMUT  Trail Mountain   77.63  49 eP     P      02 33 28.4 +1.7
           comp=Z,3.7nm,0.7s
CFR   Carcaliu         77.65 319⇑iP     P      02 33 26.1  -0.2
CFR   Carcaliu         77.65 319  P     P      02 33 26.1  -0.2
PETR  Petresti         77.74 319⇑iP     P      02 33 28.1 +1.3
P17A  Butcher Ranch,   77.80  49 eP     P      02 33 29.0 +1.5
           comp=Z,10nm,0.7s
LCMT  Little Creek M   77.84  52 eP     P      02 33 29.6 +1.9
           comp=Z,8.6nm,1.2s
MTPU  Mount Pierson    77.84  51 eP     P      02 33 30.3 +2.3
           comp=Z,6.0nm,0.9s
Q16A  Castle Valley    77.90  50 eP     P      02 33 30.0 +1.9
           comp=Z,6.5nm,1.1s
VRI   Vrincioaia       77.90 320⇑iP     P      02 33 28.0 +0.2
VRI   Vrincioaia       77.90 320  P     P      02 33 27.9 +0.2
PLOR  Plostina         77.95 320⇑iP     P      02 33 28.2 +0.2
PLOR  Plostina         77.95 320  P     P      02 33 28.2 +0.2
OJC   Ojcow            78.08 326 eP     P      02 33 28.9 +0.3
OJC   Ojcow            78.08 326 eP     P      02 33 28.9 +0.3
           comp=Z,28nm,1.1s
OJC   Ojcow            78.08 326 eP     P      02 33 28.9 +0.3
ULM   Lac du Bonnet    78.08  34 eP     P      02 33 28.9 +0.3
           comp=Z,15nm,1.5s
ULM   Lac du Bonnet    78.08  34 eP     P      02 33 28.9 +0.3
ULM                              pmax   pmax
           comp=Z,15nm,1.5s
ULM   Lac du Bonnet    78.08  34  P     P      02 33 28.1  -0.5
           comp=Z,3.9nm,0.8s,baz=311,slow=5.3,SNR=6.3
KNB   Kanab            78.10  52 eP     P      02 33 31.3 +2.1
           comp=Z,9.0nm,1.4s
KNB   Kanab            78.10  52  P     P      02 33 31.3 +2.1
KNB                              pmax   pmax
           comp=Z,9.0nm,1.4s
UZH   Uzhgorod         78.11 324 eP     P      02 33 29.7 +0.9
UZH                              i             02 33 36.6
K22A  Casper           78.14  45 eP     P      02 33 30.4 +1.1
           comp=Z,15nm,1.4s
SRU   San Rafael Swe   78.16  49 eP     P      02 33 31.1 +1.6
           comp=Z,13nm,0.6s
SRU   San Rafael Swe   78.16  49 eP     P      02 33 31.1 +1.6
SRU                              pmax   pmax
           comp=Z,13nm,0.6s
BR101 Keskin Array S   78.21 312 eP     P      02 33 29.6  -0.2
BR131 Keskin Array S   78.21 312 eP     P      02 33 29.9 +0.1
           comp=Z,3.8nm,0.8s
BRTR  Keskin Array B   78.21 312  P     P      02 33 29.6  -0.2
           comp=Z,2.4nm,0.6s,baz=110,slow=3.1,SNR=28
BRTR                             LR     LR     03 11 14.0
           comp=Z,22nm,19.1s,baz=86,slow=38
TRPA  Tarpa            78.35 323⇑iP     P      02 33 30.8 +0.7
TRPA  Tarpa            78.35 323⇑eP     P      02 33 30.1  -0.1
RWWY  Rawlins          78.39  46 eP     P      02 33 31.0 +0.2
           comp=Z,11nm,0.8s
NIE   Niedzica         78.44 325 eP     P      02 33 31.5 +0.8
NIE   Niedzica         78.44 325 eP     P      02 33 31.5 +0.8
RSSD  Black Hills      78.48  42 eP     P      02 33 32.5 +1.2
           comp=Z,5.0nm,0.8s
RSSD  Black Hills      78.48  42 eP     P      02 33 32.5 +1.2
RSSD                             pmax   pmax
           comp=Z,5.0nm,0.8s
DOPR  Dopca            78.50 320⇑iP     P      02 33 32.2 +1.1
MLR   Muntele Rosu     78.56 320 eP     P      02 33 31.8 +0.3
           comp=Z,6.7nm,1.1s
MLR   Muntele Rosu     78.56 320⇑iP     P      02 33 31.8 +0.3
MLR   Muntele Rosu     78.56 320 eP     P      02 33 31.8 +0.3
MLR                              pmax   pmax
           comp=Z,7.0nm,1.1s
U15A  North Rim        78.80  52 eP     P      02 33 34.9 +1.6
           comp=Z,4.9nm,0.8s
O20A  White River Ci   78.83  47 eP     P      02 33 34.2 +1.0
           comp=Z,5.7nm,0.8s
LANS  Liptovska Anna   79.01 326 eP     P      02 33 34.9 +1.1
LANS  Liptovska Anna   79.01 326 eP     P      02 33 34.9 +1.1
VOIR                   79.05 320⇑iP     P      02 33 35.0 +0.9
Y12C  Blythe           79.08  56 eP     P      02 33 35.5 +1.1
           comp=Z,6.0nm,0.8s
KSP   Ksiaz            79.10 328 eP     P      02 33 34.6 +0.4
KSP   Ksiaz            79.10 328 eP     P      02 33 34.6 +0.4
DRGR                   79.23 322  P     P      02 33 35.4 +0.3
MORC  Moravsky Berou   79.38 327 eP     P      02 33 36.3 +0.5
           comp=Z,11nm,0.9s
MORC  Moravsky Berou   79.38 327⇑iP     P      02 33 36.3 +0.5
MORC  Moravsky Berou   79.38 327 eP     P      02 33 36.3 +0.5
MORC                             pmax   pmax
           comp=Z,11nm,0.9s
MORC  Moravsky Berou   79.38 327 eP     P      02 33 36.1 +0.3
PV09  Paradox Valley   79.38  49 eP     P      02 33 38.0 +1.6
PV21  Cone Mtn., Par   79.44  49 eP     P      02 33 38.2 +1.6
           comp=Z,12nm,0.7s
DPC   Dobruska-Polom   79.46 328 eP     P      02 33 37.0 +0.7
DPC   Dobruska-Polom   79.46 328 eP     P      02 33 37.0 +0.7
UPC   Upice            79.47 328 eP     P      02 33 36.7 +0.5
UPC                              ePCP   PcP    02 33 43.3  -0.8
UPC   Upice            79.47 328 eP     P      02 33 36.7 +0.5
UPC                              e             02 33 43.3
KRLC  Kraliky          79.48 328 eP     P      02 33 37.0 +0.6
KRLC  Kraliky          79.48 328 eP     P      02 33 37.0 +0.6
PV23  Carpenter Ridg   79.49  49 eP     P      02 33 38.6 +1.7
           comp=Z,25nm,1.4s
PV10  Paradox Valley   79.52  49 eP     P      02 33 39.1 +2.1
           comp=Z,23nm,0.8s
PV14  Lion Creek, Pa   79.53  49 eP     P      02 33 38.7 +1.6
           comp=Z,11nm,0.6s
PV20  West Nyswonger   79.58  49 eP     P      02 33 39.1 +1.7
           comp=Z,15nm,0.7s
PV04  Paradox Valley   79.59  49 eP     P      02 33 39.0 +1.7
           comp=Z,7.5nm,0.8s
PV19  Morning Glory    79.60  49 eP     P      02 33 39.0 +1.5
           comp=Z,11nm,0.8s
PV17  East Wray Mesa   79.63  49 eP     P      02 33 39.2 +1.6
           comp=Z,13nm,0.8s
N23A  Red Feather La   79.63  46 eP     P      02 33 39.4 +1.7
           comp=Z,12nm,1.3s
PV16  Nyswonger Mesa   79.63  49 eP     P      02 33 39.3 +1.6
           comp=Z,7.7nm,0.7s
PV11  David Mesa, Pa   79.67  49 eP     P      02 33 39.5 +1.7
           comp=Z,9.6nm,0.6s
PV05  Paradox Valley   79.68  49 eP     P      02 33 39.7 +1.8
           comp=Z,14nm,0.8s
PV12  Saucer Basin,    79.70  49 eP     P      02 33 39.6 +1.7
           comp=Z,5.7nm,0.9s
PV03  Paradox Valley   79.71  49 eP     P      02 33 39.5 +1.5
           comp=Z,5.9nm,0.8s
PSZ   Piszkesteto      79.73 325 eP     P      02 33 37.9 +0.1
           comp=Z,15nm,1.1s
PSZ   Piszkesteto      79.73 325⇑iP     P      02 33 38.3 +0.5
PSZ   Piszkesteto      79.73 325⇑eP     P      02 33 38.0 +0.2
PSZ   Piszkesteto      79.73 325 eP     P      02 33 37.9 +0.1
PSZ                              pmax   pmax
           comp=Z,15nm,1.1s
VYHS  Vyhne            79.78 326 eP     P      02 33 38.4 +0.4
VYHS                             pmax   pmax
           comp=Z,7.0nm,1.4s
VYHS  Vyhne            79.78 326 eP     P      02 33 38.4 +0.4
PV13  Radium Mtn., P   79.79  49 eP     P      02 33 40.0 +1.5
           comp=Z,12nm,1.0s
Y14A  Wickenburg       79.94  55 eP     P      02 33 40.6 +1.5
           comp=Z,5.7nm,0.7s
PV01  Paradox Valley   79.96  49 eP     P      02 33 41.0 +1.6
           comp=Z,5.7nm,1.0s
WUAZ  Wupatki          79.96  53 eP     P      02 33 41.2 +1.8
           comp=Z,7.6nm,1.0s
BRG   Berggiesshubel   80.03 330 i P    P      02 33 38.9  -0.3
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BRG                              pmax   pmax
           comp=Z,7.0nm,0.7s
PVCC  Panska Ves       80.04 329 eP     P      02 33 39.9 +0.6
PVCC  Panska Ves       80.04 329 eP     P      02 33 39.9 +0.6
CLL   Collm            80.06 330 eP     P      02 33 38.3  -1.1
           comp=Z,15nm,0.7s
CLL   Collm            80.06 330⇑iP     P      02 33 39.0  -0.4
           comp=Z,16nm,0.8s
CLL                              epP    sP     02 34 00.0  -1.2
CLL   Collm            80.06 330⇑iP     P      02 33 39.0  -0.4
CLL                              pmax   pmax
           comp=Z,16nm,0.8s
VRAC  Vranov           80.14 327 eP     P      02 33 40.4 +0.5
SMCO  Snowmass         80.20  47 eP     P      02 33 42.2 +1.3
           comp=Z,3.0nm,0.9s
GZR   Gura Zlata       80.20 321⇓iP     P      02 33 40.5 +0.1
KRUC  Moravsky         80.41 327 eP     P      02 33 41.7 +0.3
PRU   Pruhonice        80.47 329 eP     P      02 33 42.2 +0.6
PRU   Pruhonice        80.47 329 eP     P      02 33 42.2 +0.6
RAYN  Ar Rayn          80.49 292 eP     P      02 33 41.8  -0.5
           comp=Z,8.1nm,1.1s
RAYN  Ar Rayn          80.49 292 eP     P      02 33 41.8  -0.5
RAYN                             pmax   pmax
           comp=Z,8.0nm,1.1s
MODS  Modra-Piesok     80.56 326 eP     P      02 33 41.1  -1.1
MODS                             pmax   pmax
           comp=Z,21nm,1.4s
MODS  Modra-Piesok     80.56 326 eP     P      02 33 41.1  -1.1
ISCO  Idaho Springs    80.56  46 eP     P      02 33 44.4 +1.7
           comp=Z,2.7nm,0.8s
ISCO  Idaho Springs    80.56  46 eP     P      02 33 44.4 +1.7
ISCO                             pmax   pmax
           comp=Z,3.0nm,0.8s
BZS   Buzias           80.61 322⇑iP     P      02 33 42.2  -0.2
BZS   Buzias           80.61 322  P     P      02 33 42.1  -0.3
MVCO  Mesa Verde       80.61  50 eP     P      02 33 44.4 +1.4
           comp=Z,9.5nm,1.3s
TREC  Trest            80.62 328 eP     P      02 33 42.9 +0.4
TREC  Trest            80.62 328 eP     P      02 33 42.9 +0.4
X16A  Lo Mia Camp, P   80.62  53 eP     P      02 33 45.0 +1.9
           comp=Z,5.0nm,0.9s
S22A  4UR Ranch, Cre   81.24  48 eP     P      02 33 48.0 +1.6
           comp=Z,3.5nm,0.9s
SOP   Sopron           81.39 326⇑eP     P      02 33 47.0 +0.4
SOP   Sopron           81.39 326  P     P      02 33 47.6 +1.0
CONA  Conrad Observa   81.51 327 eP     P      02 33 48.2 +0.8
           comp=Z,10nm,0.8s
KHC   Kasperske Hory   81.53 329 eP     P      02 33 47.7 +0.3
           comp=Z,4.9nm,0.9s
KHC   Kasperske Hory   81.53 329 eP     P      02 33 47.6 +0.2
KHC                              ePCP   PcP    02 33 53.1  -0.1
KHC   Kasperske Hory   81.53 329 eP     P      02 33 47.7 +0.3
KHC                              pmax   pmax
           comp=Z,5.0nm,0.9s
GEC2  GERESS Array S   81.71 328 eP     P      02 33 48.6 +0.2
           comp=Z,9.1nm,1.1s
GEC2  GERESS Array S   81.71 328 eP     P      02 33 48.6 +0.2
GEC2                             pmax   pmax
           comp=Z,9.0nm,1.1s
GERES GERESS Array B   81.71 328  P     P      02 33 48.2  -0.1
           comp=Z,3.7nm,0.7s,baz=36,slow=5.6,SNR=35
GERES                            LR     LR     03 12 12.1
           comp=Z,61nm,19.1s,baz=42,slow=37
GEA0  GERESS Array S   81.72 328 eP     P      02 33 48.1  -0.2
EKA   Eskdalemuir Ar   81.92 341  P     P      02 33 49.1  -0.1
EKA                              pmax   pmax
           comp=Z,2.0nm,0.4s
VTS   Vitosha          81.97 319 eP     P      02 33 50.3 +0.4
           comp=Z,11nm,0.7s
VTS   Vitosha          81.97 319⇑iP     P      02 33 50.1 +0.2
VTS   Vitosha          81.97 319 eP     P      02 33 50.3 +0.4
VTS                              pmax   pmax
           comp=Z,11nm,0.7s
GRA1  Grafenberg Arr   82.03 330 eP     P      02 33 50.6 +0.6
           comp=Z,18nm,0.8s
GRF   Grafenberg Arr   82.03 330  P     P      02 33 50.6 +0.6
GRF                              pmax   pmax
           comp=Z,18nm,0.8s
GRFO  Grafenberg       82.03 330 eP     P      02 33 50.7 +0.8
           comp=Z,18nm,0.9s
GRFO  Grafenberg       82.03 330 eP     P      02 33 50.7 +0.8
GRFO                             pmax   pmax
           comp=Z,18nm,0.9s
ARSA  Arzberg          82.18 326 eP     P      02 33 51.1 +0.3
           comp=Z,4.5nm,0.6s
MOA   Molln            82.25 327 ePcP   P      02 33 52.4 +1.3
           comp=Z,7.5nm,0.9s
ECSD  EROS Data Cent   82.54  39 eP     P      02 33 52.8 +0.1
           comp=Z,7.6nm,0.8s
SOKA  Soboth           82.83 326 eP     P      02 33 54.4 +0.2
           comp=Z,15nm,0.9s,SNR=5.0
T25A  Trinidad         83.06  48 eP     P      02 33 57.2 +1.3
           comp=Z,5.8nm,0.8s
BEBN  Eben Emael       83.17 334 ⇑P     P      02 33 55.5  -0.3
MEM   Membach          83.21 333 ⇑P     P      02 33 55.6  -0.4
           comp=Z,8.2nm,0.8s
KBA   Koelnbreinsper   83.24 327 eP     P      02 33 56.5   0.0
           comp=Z,6.0nm,0.7s
ANMO  Albuquerque      83.35  50 eP     P      02 33 58.6 +1.3
           comp=Z,6.0nm,1.1s
ANMO  Albuquerque      83.35  50⇑eP     P      02 33 58.6 +1.3
ANMO                             pmax   pmax
           comp=Z,7.0nm,1.3s
MYKA  Terra Mystica    83.47 327 eP     P      02 33 56.9  -0.7
           comp=Z,7.7nm,0.5s
WATA  Walderalm        83.78 329 eP     P      02 33 59.0  -0.2
           comp=Z,3.2nm,0.6s
SCHQ  Schefferville    83.84  16 eP     P      02 33 58.9  -0.4
           comp=Z,4.5nm,0.8s
SCHQ  Schefferville    83.84  16  P     P      02 33 58.9  -0.4
           comp=Z,3.5nm,0.7s,baz=3.7,slow=8.2,SNR=8.6
ABTA  Abfaltersbach    83.86 328 eP     P      02 33 59.0  -0.5
           comp=Z,2.8nm,0.6s
MOTA  Moosalm          83.96 329 eP     P      02 34 00.1  -0.1
           comp=Z,5.8nm,0.8s,SNR=5.3
RETA  Reutte           83.98 329 eP     P      02 34 00.3 +0.1
           comp=Z,14nm,0.7s,SNR=6.6
SQTA  Sankt Quirin     84.02 329 eP     P      02 34 00.2  -0.2
           comp=Z,4.4nm,0.6s
DOU   Dourbes          84.14 334 ⇓P     P      02 33 59.6  -1.1
LIT   Litokhoron       84.17 318 eP     P      02 34 01.2   0.0
           comp=Z,15nm,0.8s
LIT   Litokhoron       84.17 318 eP     P      02 34 01.2   0.0
LIT                              pmax   pmax
           comp=Z,15nm,0.8s
BFO   Black Forest     84.25 331 eP     P      02 34 01.3  -0.2
           comp=Z,16nm,0.9s
BFO   Black Forest     84.25 331 i P    P      02 34 01.7 +0.3
FETA  Feichten         84.37 329 eP     P      02 34 02.1  -0.2
           comp=Z,8.5nm,0.7s
F41A  Three Lakes      84.46  33 eP     P      02 34 02.7 +0.1
           comp=Z,25nm,1.4s
DAVA  Damuels          84.50 329 eP     P      02 34 02.9   0.0
           comp=Z,16nm,0.8s,SNR=7.9
CDF   Champ du Feu     84.58 332 eP     P      02 34 02.5  -0.7
CDF                              pmax   pmax
           comp=Z,11nm,0.8s
ECH   Echery           84.79 332 eP     P      02 34 03.9  -0.2
           comp=Z,12nm,0.8s
ECH   Echery           84.79 332 eP     P      02 34 03.9  -0.2
ECH                              pmax   pmax
           comp=Z,12nm,0.8s
I39A  Houston          84.86  36 eP     P      02 34 04.7 +0.1
           comp=Z,9.9nm,0.6s
FUORN Ofenpass-Fuorn   84.89 329 eP     P      02 34 05.2 +0.2
           comp=Z,27nm,0.7s
PPT   Papeete          84.91 117 LR     LR     03 07 11.7
           comp=Z,50nm,20.8s,baz=259,slow=32
HINF  Hinteralfeld     85.23 331 eP     P      02 34 05.2  -1.2
HINF                             pmax   pmax
           comp=Z,7.0nm,1.0s
HAU   Haudompre        85.27 332 eP     P      02 34 05.5  -1.0
HAU                              pmax   pmax
           comp=Z,12nm,0.7s
KSU1  Kansas State U   85.96  42 eP     P      02 34 10.5 +0.3
           comp=Z,8.8nm,0.8s
AMTX  Amarillo         86.22  48 eP     P      02 34 12.7 +1.1
           comp=Z,6.6nm,0.7s
MNTX  Cornudas Mount   86.22  52 eP     P      02 34 12.7 +1.1
           comp=Z,3.0nm,0.8s
SENIN Lac Senin/Sane   86.27 330 eP     P      02 34 12.1 +0.3
           comp=Z,7.6nm,0.8s
LOR   Lormes           86.79 333 eP     P      02 34 13.2  -0.9
LOR                              pmax   pmax
           comp=Z,9.0nm,0.8s
FLN   La Foliniere     86.97 336 eP     P      02 34 14.0  -0.9
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FLN				pmax	pmax		
	comp=Z,46nm,1.6s						
LDF	**La Druitiere**	**87.00**	**336**	*e*P	**P**	**02 34 14.1**	**-0.9**
LDF				pmax	pmax		
	comp=Z,26nm,1.5s						
SSF	**Saint Saulge**	**87.10**	**333**	*e*P	**P**	**02 34 14.9**	**-0.6**
SSF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LPL	**La Plagne**	**87.20**	**330**	*e*P	**P**	**02 34 16.4**	**+0.1**
LPL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPG	**La Plagne**	**87.20**	**330**	*e*P	**P**	**02 34 15.9**	**-0.6**
LPG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SMF	**Signal de Mont**	**87.33**	**333**	*e*P	**P**	**02 34 16.2**	**-0.5**
SMF				pmax	pmax		
	comp=Z,11nm,1.1s						
AVF	**Avril sur Loir**	**87.38**	**333**	*e*P	**P**	**02 34 16.2**	**-0.7**
AVF				pmax	pmax		
	comp=Z,16nm,0.8s						
GRR	**Gorron**	**87.42**	**336**	*e*P	**P**	**02 34 16.5**	**-0.5**
GRR				pmax	pmax		
	comp=Z,52nm,1.5s						
MBDF	**Montbardon**	**87.84**	**330**	*e*P	**P**	**02 34 18.4**	**-0.9**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WMOK	**Wichita Mounta**	**87.98**	**46**	*e*P	**P**	**02 34 21.4**	**+1.3**
	comp=Z,11nm,1.4s						
WMOK	**Wichita Mounta**	**87.98**	**46**	*e*P	**P**	**02 34 21.4**	**+1.3**
WMOK				pmax	pmax		
	comp=Z,11nm,1.4s						
ORIF	**Oris-en-Rattie**	**88.03**	**330**	*e*P	**P**	**02 34 20.2**	**0.0**
ORIF				pmax	pmax		
	comp=Z,45nm,1.8s						
SGMF	**Saint Gilles**	**88.06**	**337**	*e*P	**P**	**02 34 20.0**	**-0.1**
SGMF				pmax	pmax		
	comp=Z,93nm,1.8s						
VIVF	**Saint-Julien-l**	**88.54**	**331**	*e*P	**P**	**02 34 22.0**	**-0.5**
VIVF				pmax	pmax		
	comp=Z,37nm,1.8s						
MFF	**Saint Martin d**	**88.75**	**335**	*e*P	**P**	**02 34 23.1**	**-0.3**
LTX	**Lajitas**	**88.92**	**53**	*e*P	**P**	**02 34 25.2**	**+0.5**
LTX	**Lajitas**	**88.92**	**53**	*e*P	**P**	**02 34 25.2**	**+0.5**
TX31	**Lajitas Ar. Si**	**88.92**	**53**	*e*P	**P**	**02 34 25.2**	**+0.5**
TX31				*e*P	**P**	**02 34 25.7**	**+1.0**
TXAR	**Lajitas Array**	**88.92**	**53**	P	**P**	**02 34 25.2**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=297,slow=3.2,SNR=35						
SADO	**Sadowa**	**89.23**	**28**	LR	LR	03 16 42.0	
	comp=Z,21nm,19.6s,baz=340,slow=37						
CCM	**Cathedral Cave**	**89.49**	**39**	*e*P	**P**	**02 34 27.7**	**+0.6**
	comp=Z,8.7nm,0.8s						
CCM	**Cathedral Cave**	**89.49**	**39**	*e*P	**P**	**02 34 27.7**	**+0.6**
CCM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LFF	**La Frestale**	**89.90**	**334**	*e*P	**P**	**02 34 28.5**	**-0.3**
LFF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PBMO	**Poplar Bluff**	**90.89**	**39**	*e*P	**P**	**02 34 34.8**	**+1.3**
	comp=Z,9.6nm,1.0s						
MIAR	**Mount Ida**	**90.98**	**43**	*e*P	**P**	**02 34 35.0**	**+0.9**
	comp=Z,8.2nm,0.8s						
MIAR	**Mount Ida**	**90.98**	**43**	*e*P	**P**	**02 34 35.0**	**+0.9**
MIAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WHAR	**Wooly Hollow**	**91.09**	**42**	*e*P	**P**	**02 34 35.1**	**+0.5**
	comp=Z,9.9nm,0.8s						
TKL	**Tuckaleechee C**	**94.98**	**36**	LR	LR	03 21 23.4	
	comp=Z,27nm,18.8s,baz=322,slow=38						
ESDC	**Sonseca Array**	**96.18**	**334**	P	**P**	**02 34 57.3**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=16,slow=4.2,SNR=4.1						
TOA1	**Torodi Ar. Sit**	**116.60**	**316**	*e*PKPdf	**PKPdf**	**02 40 12.8**	**-1.5**
TORD	**Torodi Ar. Bea**	**116.60**	**316**	PKP	**PKPdf**	**02 40 12.8**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=32,slow=1.9,SNR=7.2						
LPAZ	**La Paz**	**145.60**	**58**	PKPbc	**PKPbc**	**02 41 09.5**	**+0.1**
	comp=Z,11nm,0.8s,baz=352,slow=2.2,SNR=37						
LVC	**Limon Verde**	**149.27**	**68**	PKPbc	**PKPbc**	**02 41 19.0**	**-0.1**
	comp=Z,3.7nm,0.6s,baz=57,slow=1.7,SNR=6.3						
BDFB	**Brasilia**	**155.63**	**24**	PKPab	**PKPab**	**02 41 50.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=280,slow=9.4,SNR=4.6						
CPUP	**Villa Florida**	**159.77**	**59**	PKPab	**PKPab**	**02 42 07.2**	**-0.6**
	comp=Z,2.3nm,1.1s,baz=347,slow=8.8,SNR=3.8						

RSNC 13 02:25:50.0±1.6, 6°.14N×77°.52W, h0^{km}±6^{km}, ML3.1, Mw3.6,
1C-1D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.13**	**52**	⇓*i*P	Pg	02 25 52.2	-0.4
SOLC				*e*S	Sg	02 25 55.0	+0.6
SOLC				*i*		02 25 55.5	
	comp=Z,21μm,0.3s						
DBBC	**Dabeiba**	**1.56**	**56**	⇑*i*P	Pn	02 26 17.0	-2.1
DBBC				*e*S	Sg	02 26 40.2	0.0
DBBC				*i*		02 26 41.3	
	comp=Z,231nm,0.5s						
PLMC	**San Jos del P**	**1.74**	**135**	*e*P	Pn	02 26 19.1	-2.4
PLMC				*e*S	Sn	02 26 43.8	-0.7
HELC	**Santa Helena**	**1.98**	**89**	*e*P	Pn	02 26 24.0	-1.1
HELC				*e*S	Sn	02 26 51.1	+0.4
HELC				*i*		02 26 58.8	
	comp=N,79nm,0.6s						
UPD2	**Meteti**	**2.44**	**348**	*e*P	Pn	02 26 29.4	-1.8
UPD2				*e*S	Sn	02 27 01.8	+0.1
UPD2				*i*		02 27 15.1	
	comp=Z,133nm,0.5s						
RREF	**El Recreo**	**2.49**	**120**	*e*P	Pn	02 26 34.0	+1.7
RREF				*e*S	Sb	02 27 07.0	-0.3
UREC	**San Jos de Ur**	**2.54**	**51**	*e*P	Pn	02 26 31.6	-0.8
UREC				*i*		02 27 10.9	
	comp=Z,31nm,0.5s						
ZARC	**Zaragoza, Cauc**	**2.96**	**63**	*e*P	Pn	02 26 38.0	-0.3
ZARC				*e*S	Sn	02 27 15.8	+1.2
PTBC	**PUERTO BERRIO,**	**3.07**	**82**	*e*P	Pn	02 26 40.5	+0.7
PTBC				*e*S	Sn	02 27 19.2	+2.0
AZU	**Azuero**	**3.19**	**301**	*e*P	Pn	02 26 36.5	-5.0
AZU				*e*S	Sn	02 27 11.1	-9.2

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*ISCJB **13** 02:44:38.8±0.6, 11°.14S±0°.07×164°.81E±0°.08, h10^{km}, mb4.5/20, MS3.4/2, Error ellipse: s-maj=11.2km s-min=9.6km az=173.8*
*IDC **13** 02:44:38.5±1.2, 11°.16S×164°.97E, h0^{km}, mb4.2/9, mb1 4.3/10, mb1mx4.1/39, mbtmp4.2/10, ML3.8/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/28, Error ellipse: s-maj=39.2km s-min=18.7km az=113.0*
*NEIC **13** 02:44:40.8±0.5, 11°.06S×164°.77E, h10^{km}, mb4.5/12, Error ellipse: s-maj=12.3km s-min=9.4km az=107.0*
ISC 13 02:44:40.6±0.6**, 11°.09S**±0°.09×**164°.84E**±0°.10**, h10^{km}, n40,**
σ**1.^{s}16**/38**, mb4.5**/20**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.09**	**288**	Pn	**Pn**	**02 45 54.3**	**-2.8**
	44nm,0.3s,baz=213,slow=12,SNR=5.2						
HNR				Sn	**Sn**	**02 46 58.8**	**+2.9**
	19nm,0.3s,baz=240,slow=16,SNR=2.4						
HNR				LR	LR	02 48 23.7	
	comp=Z,446nm,18.7s,baz=121,slow=43						
DZM	**Mont Dzumac**	**11.02**	**172**	*e*Pn	**Pn**	**02 47 19.9**	**+1.3**
DZM	**Mont Dzumac**	**11.02**	**172**	Pn	**Pn**	**02 47 17.1**	**-1.4**
	0.7nm,0.3s,baz=60,slow=20,SNR=7.1						
DZM				LR	LR	02 50 17.1	
	comp=Z,117nm,19.2s,baz=30,slow=31						
CTA	**Charters Tower**	**20.00**	**241**	P	Pn	02 49 15.6	+0.3
	2.3nm,0.3s,baz=68,slow=13,SNR=3.5						
COEN	**Coen**	**21.34**	**260**	*e*P	**P**	**02 49 27.4**	**-0.8**
	5.8nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.45**	**4**	T	T	03 21 48.4	
	baz=184,slow=76,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**29.46**	**4**	T	T	03 21 45.6	
	baz=184,slow=76,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**29.47**	**4**	T	T	03 21 42.3	
	baz=184,slow=76,SNR=9.4						
STKA	**Stephens Creek**	**29.80**	**223**	*e*P	**P**	**02 50 48.4**	**+0.5**
	1.1nm,1.1s						
STKA	**Stephens Creek**	**29.80**	**223**	P	**P**	**02 50 48.4**	**+0.5**
	3.8nm,1.0s,baz=51,slow=13,SNR=4.7						
BKZ	**Black Stump Fm**	**29.82**	**162**	*e*P	**P**	**02 50 48.9**	**+1.0**
	22nm,1.4s						
WC3	**Warramunga Arr**	**30.61**	**250**	*e*P	**P**	**02 50 53.7**	**-1.5**
	7.0nm,0.9s						
WB2	**Warramunga Arr**	**30.62**	**250**	*e*P	**P**	**02 50 54.7**	**-0.6**
	8.8nm,0.9s						
WB2				*e*PcP	**PcP**	**02 53 53.5**	**-0.2**
WB2				*e*PcP	PcP	02 53 53.8	0.0
WRAB	**Tennant Creek**	**30.62**	**250**	*e*P	**P**	**02 50 54.7**	**-0.5**
	7.8nm,0.9s						
WR1	**Warramunga Arr**	**30.64**	**250**	*e*P	**P**	**02 50 54.5**	**-0.9**
	12nm,1.0s						
WR1				*e*PcP	**PcP**	**02 53 53.6**	**-0.2**
WRA	**Warramunga Arr**	**30.64**	**250**	P	**P**	**02 50 54.5**	**-0.9**
	8.1nm,0.9s,baz=81,slow=8.8,SNR=34						
WRA				PcP	**PcP**	**02 53 53.6**	**-0.2**
	0.9nm,0.8s,baz=78,slow=2.9,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**30.68**	**4**	T	T	03 23 08.7	
	baz=184,slow=76,SNR=6.4						
H11N3	**WAKE ISLAND Hy**	**30.68**	**4**	T	T	03 23 14.7	
	baz=184,slow=76,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**30.70**	**4**	T	T	03 23 19.7	
	baz=184,slow=76,SNR=4.0						
GUMO	**Guam**	**31.53**	**321**	P	**P**	**02 51 04.6**	**+1.4**
	144nm,0.9s,baz=264,slow=1.7,SNR=4.6						
AS01	**Alice Springs**	**31.94**	**243**	*e*P	**P**	**02 51 06.1**	**-0.8**
AS01				*e*PcP	**PcP**	**02 53 56.6**	**-0.6**
AS31	**Alice Springs**	**31.98**	**243**	*e*P	**P**	**02 51 08.7**	**+1.4**
	1.6nm,1.0s						
AS31				*e*PcP	**PcP**	**02 53 57.6**	**+0.3**
ASAR	**Alice Springs**	**31.98**	**243**	P	**P**	**02 51 06.2**	**-1.1**
	3.3nm,0.7s,baz=64,slow=10.0,SNR=28						
ASAR				PcP	**PcP**	**02 53 57.6**	**+0.3**
	0.9nm,0.7s,baz=63,slow=3.5,SNR=7.5						
ANA2	**Anatahan**	**33.19**	**325**	*e*P	**P**	**02 51 18.5**	**+0.8**
	188nm,0.5s						
SIJI	**Sorong**	**34.86**	**285**	LR	LR	03 06 30.7	
	comp=Z,65nm,18.7s,baz=180,slow=38						
FITZ	**Fitzroy Crossi**	**38.51**	**255**	*e*P	**P**	**02 52 02.8**	**-0.7**
	9.5nm,0.8s						
HUH	**Hualalai**	**49.35**	**52**	*e*PcP	**PcP**	**02 54 53.0**	**-0.5**
ASAJ	**Asahikawa**	**58.55**	**341**	P	**P**	**02 54 38.5**	**+1.1**
	2.5nm,0.3s,baz=219,slow=13,SNR=4.0						
PETK	**Petropavlovsk-**	**64.24**	**355**	P	**P**	**02 55 15.8**	**+0.1**
	2.8nm,0.9s,baz=194,slow=12,SNR=2.5						
PEA1	**Petropavlovsk-**	**64.24**	**355**	*e*P	**P**	**02 55 15.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**71.32**	**294**	LR	LR	03 28 21.3	
	comp=Z,21nm,18.2s,baz=162,slow=37						
ULN	**Ulaanbaatar**	**77.82**	**324**	*e*P	**P**	**02 56 40.6**	**+2.2**
	3.6nm,1.0s						
SONA0	**Songino Array**	**78.18**	**324**	*e*P	**P**	**02 56 40.4**	**-0.1**
SONM	**Songino Array**	**78.18**	**324**	P	**P**	**02 56 40.3**	**-0.1**
	1.7nm,1.1s,baz=144,slow=7.1,SNR=6.7						
QSPA	**South Pole Qui**	**78.91**	**180**	*e*P	**P**	**02 56 44.9**	**+0.7**
	16nm,1.4s						
ILAR	**Eielson Array**	**83.84**	**19**	P	**P**	**02 57 08.5**	**-1.6**
	0.4nm,0.7s,baz=227,slow=5.4,SNR=4.7						
ILB	**Eielson Array**	**83.84**	**19**	*e*P	**P**	**02 57 08.5**	**-1.6**
	1.4nm,1.0s						
MK32	**Makanchi Array**	**92.95**	**317**	*e*P	**P**	**02 57 53.6**	**-0.6**
MKAR	**Makanchi Array**	**92.95**	**317**	P	**P**	**02 57 53.6**	**-0.6**
	0.4nm,0.7s,baz=81,slow=4.9,SNR=4.5						
SCO	**Scoresbysund**	**120.50**	**3**	*e*Pdif	**Pdif**	**02 59 57.6**	**+0.8**

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*ISCJB **13** 02:59:08.5±0.2, 38°.16N±0°.02×117°.95W±0°.03, h10^{km}, mb2.8/1, Error ellipse: s-maj=3.0km s-min=2.3km az=3.2*
*REN **13** 02:59:09.8, 38°.03N×118°.03W, h8^{km}, ML3.7, MW3.6(SLM)*
*ANF **13** 02:59:09.6±0.3, 38°.03N×118°.03W, h6^{km}±2^{km}, ML3.9/16, Error ellipse: s-maj=2.3km s-min=1.7km az=159.0*
*NEIC **13** 02:59:09.8±0.0, 38°.03N×118°.03W, h8^{km}, ML3.7(REN), MW3.6(SLM), After REN.*
*IDC **13** 02:59:12.7±0.8, 38°.17N×118°.01W, h0^{km}, mb2.9/1, mb1 3.3/5, mb1mx3.2/44, mbtmp3.1/5, ML3.2/4, MS2.7/1, Ms1 2.7/1, ms1mx2.2/14, Error ellipse: s-maj=9.0km s-min=5.6km az=38.0*
ISC 13 02:59:09.6±0.7**, 38°.08N**±0°.02×**118°.00W**±0°.02**, h10^{km}, n75,**
σ**1.^{s}89**/102**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NV01	**Mina Array Sit**	**0.43**	**326**	*e*Pg	**Pb**	**02 59 18.8**	**-0.6**
NV01				*e*Sg	**Sg**	**02 59 23.5**	**-0.2**
NVAR	**Mina Array Bea**	**0.43**	**326**	Pg	**Pb**	**02 59 18.8**	**-0.6**
	753nm,0.3s,baz=162,slow=20,SNR=217						
NVAR				Lg	Lg	02 59 23.5	
	3μm,0.3s,baz=136,slow=17,SNR=82						
NVAR				LR	LR	02 59 41.8	
	comp=Z,199nm,18.8s,baz=171,slow=104						
MLAC	**Mammoth, Mammo**	**0.80**	**236**	P	**Pg**	**02 59 24.2**	**-0.8**
	baz=58						
MLAC				S	**Sg**	**02 59 34.7**	**-0.7**
	baz=58						
TIN	**Tinemaha, Big**	**1.04**	**190**	P	**Pg**	**02 59 28.8**	**-0.7**
	baz=9.0						
TIN				S	**Sb**	**02 59 42.6**	**-0.7**
	baz=9.0						
GRAC	**Grapevine Rang**	**1.19**	**155**	P	**Pg**	**02 59 32.1**	**-0.3**
	baz=333						
GRAC				S	**Sn**	**02 59 48.1**	**-0.5**
	baz=333						
CWC	**Cottonwood Cre**	**1.63**	**182**	P	**Pb**	**02 59 38.6**	**-1.3**
	baz=1.3						
TPNV	**Topopah Spring**	**1.79**	**128**	P	**Pb**	**02 59 41.1**	**-1.4**
	baz=308						
DAC	**Darwin (Calif)**	**1.82**	**170**	*e*Pn	**Pn**	**02 59 41.3**	**+0.1**
FURC	**Furnace Creek,**	**1.84**	**150**	Pb	**Pg**	**02 59 43.3**	**-1.6**
	baz=330						
R11A	**Troy Canyon, C**	**1.92**	**81**	Pb	**Pg**	**02 59 45.5**	**-0.9**
	baz=261						
R11A				Sb	**Sg**	**03 00 11.9**	**+0.6**
	baz=261						
RUBR	**Rubicon Trail**	**1.95**	**301**	*e*Pn	**Pb**	**02 59 45.5**	**+0.1**
RUBR				*e*Sn	**Sn**	**03 00 05.5**	**-2.2**
MPMC	**Manual Prospec**	**2.05**	**168**	P	**Pn**	**02 59 44.6**	**+0.2**
	baz=348						
MPMC				Sb	**Sg**	**03 00 14.5**	**-1.2**
	baz=348						
VOG	**Valley Oaks Go**	**2.07**	**213**	Pb	**Pb**	**02 59 46.9**	**-0.3**
	baz=32						
VOG				Sb	**Sb**	**03 00 13.5**	**+0.5**
	baz=32						
VES	**Vestal, Richgr**	**2.39**	**202**	Sb	**Sb**	**03 00 23.7**	**+1.4**
	baz=21						
ISA	**Isabella, Lake**	**2.44**	**189**	Pb	**Pb**	**02 59 53.6**	**0.0**
	baz=8.3						
ISA				Sb	**Sb**	**03 00 24.9**	**+1.3**
	baz=8.3						
BEKR	**Beckworth**	**2.57**	**315**	*e*Pn	**Pn**	**02 59 49.2**	**-2.2**
SHOC	**Shoshone, Teco**	**2.57**	**147**	Sb	**Sg**	**03 00 30.9**	**-1.3**
	baz=327						
SHPR	**Sheep Range**	**2.75**	**124**	*e*Pn	**Pn**	**02 59 54.7**	**+0.8**
GSC	**Goldstone, Bar**	**2.93**	**161**	*e*Pn	**Pn**	**02 59 56.9**	**+0.6**
PAGB	**Antelope Grade**	**2.96**	**218**	*e*Pn	**Pn**	**02 59 57.3**	**+0.7**
ARVC	**Arvin**	**3.02**	**193**	Pb	**Pb**	**03 00 03.8**	**+0.4**
	baz=12						
ARVC				Sb	**Sg**	**03 00 42.9**	**-3.6**
	baz=12						
TUQ	**Turquoise Moun**	**3.12**	**147**	P	**Pn**	**02 59 59.2**	**+0.2**
	baz=328						
TUQ				S	**Sn**	**03 00 36.7**	**+0.4**
	baz=328						
EDW2	**Edwards Air Fo**	**3.19**	**180**	Pb	**Pb**	**03 00 07.7**	**+1.4**
	baz=359						
PSUT	**Pine Spring**	**3.29**	**81**	*e*Pg	**Pb**	**03 00 09.4**	**+1.2**
ELK	**Elko**	**3.42**	**38**	Pn	**Pn**	**03 00 04.8**	**+1.7**
	1.7nm,0.3s,baz=237,slow=13,SNR=21						
ELK				Pg	**Pg**	**03 00 13.4**	**-1.7**
	11nm,0.3s,baz=244,slow=14,SNR=36						
ELK				Sn	**Sn**	**03 00 43.8**	**0.0**
	4.3nm,0.3s,baz=275,slow=10,SNR=4.0						
ELK				Lg	Lg	03 00 58.6	
	34nm,0.3s,baz=159,slow=8.5,SNR=21						
ELK				LR	LR	03 01 33.0	
	comp=Z,115nm,19.2s,baz=224,slow=42						
O03E	**Paynes Creek**	**3.69**	**308**	Pb	**Pb**	**03 00 16.2**	**+1.2**
	baz=127						
CCUT	**Cedar City**	**3.71**	**97**	*e*Pn	**Pn**	**03 00 08.2**	**+1.0**
GDXM	**Geysers**	**3.84**	**282**	*e*Pg	**Pb**	**03 00 17.2**	**-0.2**
SZCU	**Shurtz Canyon**	**3.92**	**96**	*e*Pn	**Pn**	**03 00 11.6**	**+1.6**
LCMT	**Little Creek M**	**3.92**	**104**	*e*Pn	**Pn**	**03 00 11.0**	**+1.0**
WVOR	**Wild Horse Val**	**4.38**	**354**	*e*Pn	**Pn**	**03 00 12.9**	**-3.4**
WVOR				*e*Sn	**Sn**	**03 01 07.7**	**+0.2**
WVOR				*e*Sg	**Sg**	**03 01 29.6**	**-0.7**
TCRU	**Three Creeks R**	**4.40**	**81**	*e*Pg	**Pg**	**03 00 32.6**	**-1.2**
W13A	**Hualapai Mount**	**4.45**	**131**	*e*Pn	**Pn**	**03 00 18.9**	**+1.6**
PKCU	**Pink Cliffs**	**4.55**	**96**	*e*Pn	**Pn**	**03 00 21.6**	**+2.8**
DUG	**Dugway, Tooele**	**4.55**	**61**	*e*Pn	**Pn**	**03 00 20.1**	**+1.5**
MTPU	**Mount Pierson**	**4.59**	**89**	*e*Pn	**Pn**	**03 00 21.9**	**+2.5**
PFO	**Pinyon Flats O**	**4.63**	**164**	*e*Pn	**Pn**	**03 00 18.7**	**-1.0**
PFO				*e*Pg	**Pg**	**03 00 35.8**	**-2.4**
PFO				*e*Sn	**Sn**	**03 01 17.0**	**+3.5**
PFO				*e*Lg	Lg	03 01 35.9	
PFO	**Pinyon Flats O**	**4.63**	**164**	Pn	Pb	03 00 24.9	-6.0
	0.4nm,0.3s,baz=86,slow=10.0,SNR=4.3						
PFO				Pg	**Pg**	**03 00 35.3**	**-2.9**
	0.7nm,0.3s,baz=339,slow=11,SNR=6.8						
PFO				Sn	**Sn**	**03 01 17.0**	**+3.5**
	0.3nm,0.3s,baz=285,slow=12,SNR=2.1						
PFO				Lg	Lg	03 01 35.9	
	0.6nm,0.3s,baz=72,slow=20,SNR=5.5						
XPFO	**Pion Flat**	**4.63**	**164**	*e*Pg	**Pg**	**03 00 35.8**	**-2.5**
U15A	**North Rim**	**4.84**	**108**	*e*Pn	**Pn**	**03 00 24.0**	**+1.3**
YBH	**Yreka Blue Hor**	**5.14**	**317**	*e*Pn	**Pn**	**03 00 25.5**	**-1.3**
YBH				Lg	Lg	03 01 51.5	
YBH	**Yreka Blue Hor**	**5.14**	**317**	Pn	Pn	03 00 31.5	+4.7
	0.4nm,0.3s,baz=154,slow=7.4,SNR=8.3						
YBH				Lg	Lg	03 01 51.5	
	0.3nm,0.3s,baz=126,slow=8.7,SNR=2.4						
J08A	**Circle Bar Ran**	**5.29**	**356**	*e*Pn	**Pn**	**03 00 29.0**	**+0.3**
J08A				*e*Sn	**Sn**	**03 01 30.2**	**+0.4**
MPU	**Maple Canyon**	**5.32**	**67**	*e*Pn	**Pn**	**03 00 27.6**	**-1.6**
SPUT	**South Promonto**	**5.36**	**51**	*e*Pg	**Pb**	**03 00 45.4**	**+2.0**
GLA	**Glamis**	**5.64**	**152**	*e*Pn	**Pn**	**03 00 32.5**	**-1.0**
JLU	**Jordanelle**	**5.67**	**62**	*e*Pn	**Pn**	**03 00 33.6**	**-0.5**
JLU				*e*Pg	**Pg**	**03 01 00.6**	**+2.5**
Y14A	**Wickenburg**	**5.78**	**134**	*e*Pn	**Pn**	**03 00 36.2**	**+0.7**
WUAZ	**Wupatki**	**5.90**	**114**	*e*Pg	**Pb**	**03 00 56.0**	**+3.4**
HUMO	**Hull Mountain**	**5.90**	**322**	*e*Pn	**Pn**	**03 00 37.6**	**+0.5**
HLID	**Hailey**	**6.12**	**25**	*e*Pn	**Pn**	**03 00 39.7**	**-0.5**
PINE	**Pine Mountain**	**6.13**	**340**	*e*Pn	**Pn**	**03 00 39.6**	**-0.8**
X16A	**Lo Mia Camp, P**	**6.43**	**123**	*e*Pn	**Pn**	**03 00 44.4**	**-0.2**
PV09	**Paradox Valley**	**6.99**	**84**	*e*Pn	**Pn**	**03 00 50.3**	**-2.0**
PV05	**Paradox Valley**	**7.02**	**87**	*e*Pn	**Pn**	**03 00 53.5**	**+0.8**
PV05				*e*Pg	**Pg**	**03 01 23.2**	**-0.8**
PV14	**Lion Creek, Pa**	**7.07**	**85**	*e*Pn	**Pn**	**03 00 51.8**	**-1.6**
PV14				*e*Pg	**Pg**	**03 01 21.5**	**-3.5**
PV23	**Carpenter Ridg**	**7.08**	**84**	*e*Pn	**Pn**	**03 00 56.0**	**+2.5**
PV19	**Morning Glory**	**7.11**	**85**	*e*Pn	**Pn**	**03 00 53.5**	**-0.3**
PV19				*e*Pg	**Pg**	**03 01 23.7**	**-1.9**
PV19				*e*Lg	Lg	03 02 56.7	
PV21	**Cone Mtn., Par**	**7.11**	**83**	*e*Pn	**Pn**	**03 00 54.5**	**+0.5**
PV21				*e*Pg	**Pg**	**03 01 22.7**	**-3.0**
PV20	**West Nyswonger**	**7.12**	**85**	*e*Pn	**Pn**	**03 00 54.3**	**+0.4**
PV20				*e*Pg	**Pg**	**03 01 24.5**	**-1.3**
PV17	**East Wray Mesa**	**7.12**	**86**	*e*Pn	**Pn**	**03 00 56.5**	**+2.5**
PV17				*e*Pg	**Pg**	**03 01 22.3**	**-3.7**
PV17				*e*Sg	**Sg**	**03 02 55.4**	**-2.8**
PV16	**Nyswonger Mesa**	**7.16**	**85**	*e*Pn	**Pn**	**03 00 58.4**	**+3.9**
PV16				*e*Lg	Lg	03 02 59.1	
PV04	**Paradox Valley**	**7.17**	**85**	*e*Pn	**Pn**	**03 00 54.6**	**0.0**
PV04				*e*Pg	**Pg**	**03 01 23.7**	**-3.0**
PV11	**David Mesa, Pa**	**7.19**	**85**	*e*Pn	**Pn**	**03 00 53.3**	**-1.7**
PV11				*e*Pg	**Pg**	**03 01 25.6**	**-1.6**
PV03	**Paradox Valley**	**7.21**	**86**	*e*Pn	**Pn**	**03 00 56.8**	**+1.6**
PV03				*e*Pg	**Pg**	**03 01 24.1**	**-3.5**
PV03				*e*Sg	**Sg**	**03 02 57.5**	**-3.6**
PV13	**Radium Mtn., P**	**7.24**	**87**	*e*Pn	**Pn**	**03 00 55.5**	**-0.1**
PV13				*e*Pg	**Pg**	**03 01 25.1**	**-3.1**
PV12	**Saucer Basin,**	**7.25**	**85**	*e*Pn	Pn	03 01 00.1	+4.3
X18A	**Snowflake**	**7.40**	**116**	*e*Pn	**Pn**	**03 00 54.7**	**-3.1**
X18A				*e*Pg	Pg	03 01 25.9	-5.4
PV01	**Paradox Valley**	**7.43**	**87**	*e*Pn	**Pn**	**03 00 56.7**	**-1.6**
MOOW	**Moose Ponds**	**7.89**	**42**	*e*Pn	**Pn**	**03 01 03.9**	**-0.6**
PDAR	**Pinedale Array**	**7.96**	**51**	Pn	Pn	03 01 12.0	+6.5
	0.1nm,0.3s,baz=244,slow=18,SNR=4.8						
PDAR				Pg	**Pb**	**03 01 23.3**	**-4.4**
	0.1nm,0.3s,baz=222,slow=13,SNR=3.5						
PDAR				Lg	Lg	03 03 16.2	
	0.0nm,0.3s,baz=257,slow=30,SNR=2.0						
FLWY	**Flagg Ranch**	**8.15**	**40**	*e*Pg	Pg	03 01 38.9	-6.6
LRM	**Limekiln Ridge**	**8.77**	**26**	*e*Sn	Sn	03 03 17.3	+22
ANMO	**Albuquerque**	**9.80**	**105**	Pg	Pn	03 02 13.7	+43
	0.1nm,0.3s,baz=299,slow=12,SNR=12						
YKA	**Yellowknife Ar**	**24.54**	**4**	P	**P**	**03 04 33.4**	**+4.4**
	0.2nm,0.6s,baz=179,slow=9.0,SNR=8.0						

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*ISCJB **13** 03:07:31.9±0.2, 38°.12N±0°.02×118°.01W±0°.03, h10^{km}, mb2.7/1, Error ellipse: s-maj=3.0km s-min=2.1km az=158.5*
*REN **13** 03:07:32.8, 38°.03N×118°.04W, h8^{km}, ML3.5*
*ANF **13** 03:07:32.5±0.4, 38°.04N×118°.03W, h7^{km}±2^{km}, ML3.8/14, Error ellipse: s-maj=2.9km s-min=1.8km az=149.0*
*NEIC **13** 03:07:32.8±0.0, 38°.03N×118°.04W, h8^{km}, ML3.5(REN), After REN.*
*IDC **13** 03:07:38.6±0.5, 38°.54N×118°.10W, h0^{km}, mb2.7/1, mb1 3.2/5, mb1mx3.1/39, mbtmp3.0/5, ML3.2/4, Error ellipse: s-maj=12.1km s-min=3.7km az=141.0*
ISC 13 03:07:31.5±0.7**, 38°.05N**±0°.02×**118°.08W**±0°.02**, h10^{km}, n75,**
σ**1.^{s}59**/98**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NV11	**Mina Array Sit**	**0.39**	**351**	*e*Pg	**Pb**	**03 07 40.8**	**+0.2**
NV01	**Mina Array Sit**	**0.42**	**335**	*e*Pg	**Pb**	**03 07 40.8**	**-0.4**
NV01				*e*Sg	**Sb**	**03 07 46.5**	**-1.3**
NVAR	**Mina Array Bea**	**0.42**	**335**	Pg	**Pb**	**03 07 41.5**	**+0.3**
	287nm,0.3s,baz=165,slow=20,SNR=834						
NVAR				Lg	Lg	03 07 46.0	
	1μm,0.3s,baz=48,slow=35,SNR=127						
RYN	**Ryan**	**0.68**	**329**	*e*Pg	**Pb**	**03 07 45.7**	**+0.2**
MLAC	**Mammoth, Mammo**	**0.73**	**236**	P	**Pn**	**03 07 47.2**	**-0.9**
	baz=58						
MLAC				S	**Sn**	**03 07 57.7**	**-1.7**
	baz=58						
OMMB	**Old Mammoth Mi**	**0.85**	**240**	*e*Pg	**Pn**	**03 07 49.2**	**-0.6**
MDPB	**Devils Postpil**	**0.90**	**243**	*e*Pg	**Pn**	**03 07 50.1**	**-0.2**
TIN	**Tinemaha, Big**	**1.00**	**187**	P	**Pn**	**03 07 51.8**	**+0.1**
	baz=8.9						
TIN				S	**Sn**	**03 08 05.5**	**-0.3**
	baz=8.9						
KVN	**Kaiserville**	**1.00**	**359**	*e*Pg	**Pn**	**03 07 51.9**	**0.0**
GRAC	**Grapevine Rang**	**1.19**	**152**	P	**Pg**	**03 07 55.1**	**+0.8**
	baz=333						
GRAC				S	**Sn**	**03 08 11.3**	**+0.8**
	baz=333						
PNTR	**Pine Nut**	**1.58**	**312**	*e*Pn	**Pg**	**03 08 01.5**	**-0.4**
PNTR				*e*Sn	**Sg**	**03 08 21.8**	**-0.7**
CWC	**Cottonwood Cre**	**1.60**	**180**	P	**Pg**	**03 08 01.7**	**-0.5**
	baz=1.2						
CWC				S	**Sg**	**03 08 23.0**	**0.0**
	baz=1.2						
VCNR	**Virginia City**	**1.75**	**316**	*e*Pn	**Pb**	**03 08 03.2**	**-0.7**
VCNR				*e*Sn	**Sn**	**03 08 24.9**	**+0.3**
TPNV	**Topopah Spring**	**1.82**	**126**	*e*Pn	**Pb**	**03 08 04.2**	**-0.8**
TPNV	**Topopah Spring**	**1.82**	**126**	P	**Pb**	**03 08 04.1**	**-0.9**
	baz=308						
CMB	**Columbia Colle**	**1.82**	**270**	*e*Pn	**Pb**	**03 08 04.6**	**-0.3**
CMB				*e*Sn	**Sb**	**03 08 27.5**	**-0.4**
FURC	**Furnace Creek,**	**1.85**	**148**	Pb	**Pg**	**03 08 06.3**	**-0.6**
	baz=329						
RUBR	**Rubicon Trail**	**1.92**	**302**	*e*Pn	**Pg**	**03 08 08.5**	**+0.3**
RUBR				*e*Sn	**Sb**	**03 08 29.4**	**-1.2**
PAHR	**Pah Rah Range**	**1.95**	**329**	*e*Pn	**Pb**	**03 08 07.5**	**+0.4**
R11A	**Troy Canyon, C**	**1.98**	**80**	*e*Pn	**Pn**	**03 08 05.7**	**+0.4**
R11A	**Troy Canyon, C**	**1.98**	**80**	P	**Pn**	**03 08 05.7**	**+0.4**
	baz=261						
R11A				Sb	**Sg**	**03 08 35.0**	**-0.3**
	baz=261						
VOG	**Valley Oaks Go**	**2.01**	**212**	Pb	**Pg**	**03 08 09.8**	**-0.3**
	baz=32						
VOG				Sb	**Sg**	**03 08 36.7**	**+0.5**
	baz=32						
MPMC	**Manual Prospec**	**2.04**	**167**	P	**Pb**	**03 08 07.8**	**-0.9**
	baz=348						
MPMC				Sb	**Sg**	**03 08 37.1**	**+0.1**
	baz=348						
VES	**Vestal, Richgr**	**2.34**	**200**	Pb	**Pg**	**03 08 15.7**	**-0.7**
	baz=21						
VES				Sb	**Sg**	**03 08 47.1**	**+0.3**
	baz=21						
ISA	**Isabella, Lake**	**2.40**	**188**	*e*Pn	**Pb**	**03 08 13.0**	**-1.7**
ISA	**Isabella, Lake**	**2.40**	**188**	Pb	**Pg**	**03 08 16.6**	**-0.8**
	baz=8.3						
ISA				Sb	**Sg**	**03 08 47.8**	**-0.8**
	baz=8.3						
AFDM	**Forest Hills D**	**2.44**	**293**	*e*Pn	**Pb**	**03 08 14.2**	**-1.4**
AFDM				*e*Sn	**Sn**	**03 08 42.4**	**+1.0**
BMN	**Battle Mountai**	**2.47**	**15**	*e*Pn	**Pn**	**03 08 09.3**	**-2.6**
BEKR	**Beckworth**	**2.54**	**316**	*e*Pn	**Pb**	**03 08 17.6**	**+0.3**
BEKR				*e*Sn	**Sn**	**03 08 44.5**	**+0.4**
SHOC	**Shoshone, Teco**	**2.58**	**146**	Sb	**Sg**	**03 08 53.5**	**-0.9**
	baz=327						

PAGB	Antelope Grade	2.90	218	*e*Pn	Pb	03 08 20.3	-2.9
PAGB				*e*Sn	Sn	03 08 52.6	+0.1
GSC	Goldstone, Bar	2.92	159	*e*Pn	Pn	03 08 19.7	+1.6
SAO	San Andreas Ge	2.97	246	*e*Pn	Pg	03 08 26.5	-2.0
SAO				*e*Sn	Sn	03 08 52.4	-2.0
ORV	Oroville	3.07	300	*e*Pn	Pn	03 08 21.1	+1.1
ORV				*e*Sn	Sn	03 08 58.0	+1.2
TUQ	Turquoise Moun	3.13	146	P	Pn	03 08 22.2	+1.3
	baz=327						
EDW2	Edwards Air Fo	3.16	179	Pb	Pg	03 08 30.7	-1.3
	baz=359						
PSUT	Pine Spring	3.36	80	*e*Pn	Pb	03 08 27.6	-3.6
OSI	Osito Audit: C	3.46	189	*e*Pn	Pn	03 08 26.3	+0.8
ELK	Elko	3.48	38	Pn	Pn	03 08 27.7	+1.8
	1.5nm,0.3s,baz=232,slow=12,SNR=33						
ELK				Pg	Pg	03 08 36.8	-1.3
	10nm,0.3s,baz=221,slow=17,SNR=41						
ELK				Lg	Lg	03 09 17.9	
	5.8nm,0.3s,baz=231,slow=5.9,SNR=4.2						
GDXM	Geysers	3.78	283	*e*Pn	Pn	03 08 31.6	+1.7
LDFC	Landfair	3.80	140	*e*Pg	Pb	03 08 40.6	+1.8
MWC	Mount Wilson	3.81	180	*e*Pg	Pg	03 08 43.0	-1.5
PASC	Pasadena Art C	3.87	181	*e*Pn	Pn	03 08 33.4	+2.4
MOD	Modoc Plateau	4.21	337	*e*Pg	Pb	03 08 44.1	-1.7
MOD				*e*Sn	Sn	03 09 26.0	+0.7
WDC	Whiskeytown Da	4.29	308	*e*Pn	Pn	03 08 36.2	-0.6
WDC				*e*Sn	Sn	03 09 28.6	+1.7
WVOR	Wild Horse Val	4.40	355	*e*Pn	Pn	03 08 39.4	+0.9
WVOR				*e*Sn	Sn	03 09 29.6	-0.2
W13A	Hualapai Mount	4.47	130	*e*Pn	Pn	03 08 41.5	+2.0
PKCU	Pink Cliffs	4.61	96	*e*Pg	Pb	03 08 54.9	+2.3
PFO	Pinyon Flats O	4.62	163	*e*Pn	Pn	03 08 41.2	-0.2
PFO				*e*Pg	Pn	03 08 42.1	+0.8
PFO				*e*Sn	Sn	03 09 33.6	-1.5
PFO				*e*Sg	Sn	03 09 34.8	-0.3
PFO	Pinyon Flats O	4.62	163	Pn	Pg	03 08 57.9	-1.9
	0.7nm,0.3s,baz=352,slow=12,SNR=4.0						
PFO				Sn	Sg	03 09 57.4	-2.2
	0.7nm,0.3s,baz=252,slow=20,SNR=3.6						
XPFO	Pion Flat	4.62	163	*e*Pn	Pn	03 08 42.2	+0.8
MSU	Marysvale	4.66	82	*e*Pg	Pg	03 08 58.8	-2.0
BGU	Big Grassy Mou	4.85	52	*e*Pn	Pb	03 08 51.2	-5.3
U15A	North Rim	4.89	108	*e*Pn	Pn	03 08 47.7	+2.4
NLU	North Lily Min	5.05	66	*e*Pg	Pg	03 09 05.9	-2.3
YBH	Yreka Blue Hor	5.12	317	Pn	Pn	03 08 54.3	+6.0
	0.3nm,0.3s,baz=132,slow=3.7,SNR=9.4						
J08A	Circle Bar Ran	5.32	357	*e*Pn	Pn	03 08 52.6	+1.6
TMUT	Trail Mountain	5.52	75	*e*Pn	Pn	03 08 55.0	+1.0
HVU	Hansel Valley	5.52	46	*e*Pn	Pn	03 08 59.7	+5.8
Y14A	Wickenburg	5.80	133	*e*Pn	Pn	03 09 00.1	+2.5
P17A	Butcher Ranch,	5.91	74	*e*Pn	Pn	03 08 55.9	-3.3
WUAZ	Wupatki	5.94	113	*e*Pg	Pb	03 09 19.1	+3.9
TCUT	Toone Canyon	5.99	57	*e*Pn	Pn	03 09 01.3	+0.8
TCUT				*e*Pg	Pb	03 09 12.6	-3.6
TCUT				*e*Lg	Lg	03 10 45.6	
SRU	San Rafael Swe	6.01	77	*e*Pn	Pn	03 09 06.1	+5.5
X16A	Lo Mia Camp, P	6.47	122	*e*Pn	Pn	03 09 08.0	+1.1
X16A				*e*Lg	Lg	03 11 04.3	
BMO	Blue Mountains	6.83	5	*e*Pn	Pn	03 09 13.6	+1.9
PV23	Carpenter Ridg	7.14	84	*e*Pn	Pn	03 09 16.3	0.0
PV21	Cone Mtn., Par	7.17	83	*e*Pn	Pn	03 09 16.9	+0.3
PV17	East Wray Mesa	7.19	85	*e*Pn	Pn	03 09 10.7	-6.1
PV13	Radium Mtn., P	7.30	86	*e*Pn	Pn	03 09 14.8	-3.5
MCMT	McKenzie Canyo	7.83	28	*e*Pg	Pg	03 09 58.0	-3.3
PD31	Pinedale Array	8.03	51	*e*Pn	Pn	03 09 27.6	-0.7
PD31				*e*Sn	Sn	03 11 00.1	+0.9
PD31				*e*Lg	Lg	03 11 39.7	
PDAR	Pinedale Array	8.03	51	Pn	Pn	03 09 34.3	+5.9
	0.1nm,0.3s,baz=228,slow=13,SNR=3.4						
PDAR				Sn	Sn	03 11 00.2	+0.9
	0.0nm,0.3s,baz=236,slow=18,SNR=1.9						
PDAR				Lg	Lg	03 11 39.7	
	0.1nm,0.3s,baz=225,slow=24,SNR=2.3						
ANMO	Albuquerque	9.85	105	Pg	Pn	03 10 36.7	+43
	0.1nm,0.3s,baz=299,slow=15,SNR=9.1						
YKA	Yellowknife Ar	24.57	4	P	P	03 12 56.6	+5.4
	0.2nm,0.6s,baz=178,slow=9.0,SNR=5.0						

LJU 13 03:10:28.9, 45°.90N×14°.73E, h8^{km}, ML0.3, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	Visnje	0.12	140	*i* Pg	Pg	03 10 31.7	+0.1
VISS				*i* Sg	Sg	03 10 33.7	+0.2
GBAS	Gorenja Brezov	0.20	281	*i* Pg	Pg	03 10 33.1	0.0
VNDS	Vrh nad Dolski	0.21	355	*i* Pg	Pg	03 10 33.3	+0.1
PDKS	Podkum	0.25	49	*i* Pg	Pg	03 10 34.1	+0.2
PDKS				*i* Sg	Sg	03 10 37.6	+0.3
	comp=Z,1.0nm,0.1s						
CEY	Cerknica	0.26	233	*i* Pg	Pg	03 10 34.2	0.0
GBRS	Gornja Briga	0.37	171	*i* Pg	Pg	03 10 35.5	-0.6
GBRS				*i* Sg	Sg	03 10 39.4	-1.6
	comp=Z,38nm,0.1s						
KNDS	Knezji Dol	0.44	214	⇑*i*Pg	Pg	03 10 32.7	-4.8
KNDS				*i* Sg	Sg	03 10 34.5	-8.8
	comp=Z,11nm,0.1s						
OZLJ	Ozalj	0.59	118	*e*Pg	Pg	03 10 40.4	+0.1
OZLJ				Sg	Sg	03 10 48.3	+0.3
SKDS	Skadanscina	0.61	235	*i* Pg	Pg	03 10 36.3	-4.4
SKDS				*i* Sg	Sg	03 10 41.2	-7.4
	comp=Z,6.0nm,0.1s						
NVLJ	Novalja	1.34	176	Sg	Sb	03 11 03.5	-7.9

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*IDC **13** 03:11:26.4±1.7, 11°.78S×164°.96E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.6/25, mbtmp3.6/6, ML3.8/2, Error ellipse: s-maj=49.6km s-min=30.6km az=126.0*

*ISCJB **13** 03:11:29.4±1.3, 12°.0S±0°.1×165°.0E±0°.2, h33^{km}, mb3.4/4, Error ellipse: s-maj=26.7km s-min=21.0km az=0.0*

ISC 13 03:11:31.3±1.3, 11°.9S±0°.2×165°.0E±0°.2, h35^{km}, n6, σ0^{s}54/6, mb3.4/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.17	173	Pn	Pn	03 13 54.9	0.0
	0.3nm,0.3s,baz=311,slow=19,SNR=5.2						
CTA	Charters Tower	19.77	243	P	P	03 15 58.1	-0.4
	0.3nm,0.3s,baz=45,slow=13,SNR=1.7						
WRA	Warramunga Arr	30.52	251	P	P	03 17 42.3	+0.7
	0.2nm,0.4s,baz=77,slow=8.7,SNR=3.3						
ASAR	Alice Springs	31.77	244	P	P	03 17 52.5	0.0
	0.3nm,0.8s,baz=73,slow=9.4,SNR=3.2						
ILAR	Eielson Array	84.58	19	P	P	03 24 00.8	+0.2
	0.3nm,0.7s,baz=237,slow=5.7,SNR=4.6						
MKAR	Makanchi Array	93.69	317	P	P	03 24 44.0	-0.4
	0.3nm,0.8s,baz=86,slow=5.5,SNR=3.2						

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*IDC **13** 03:15:00.5±1.3, 11°.87S×165°.27E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/28, mbtmp3.6/6, ML3.2/1, Error ellipse: s-maj=48.5km s-min=26.1km az=131.0*

*ISCJB **13** 03:15:03.9±1.0, 12°.0S±0°.1×165°.3E±0°.2, h33^{km}, mb3.5/5, Error ellipse: s-maj=28.9km s-min=19.6km az=8.1*

ISC 13 03:15:05.8±1.0, 11°.9S±0°.1×165°.3E±0°.2, h35^{km}, n6, σ1^{s}13/6, mb3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.15	174	Pn	Pn	03 17 29.5	+0.3
	0.2nm,0.3s,baz=79,slow=14,SNR=3.8						
WRA	Warramunga Arr	30.77	251	P	P	03 21 18.4	+0.2
	0.2nm,0.6s,baz=83,slow=8.9,SNR=4.7						
ASAR	Alice Springs	32.00	244	P	P	03 21 28.0	-1.1
	0.4nm,0.8s,baz=78,slow=8.6,SNR=3.8						
ILAR	Eielson Array	84.48	19	P	P	03 27 35.1	+0.5
	0.5nm,0.6s,baz=231,slow=5.7,SNR=12						
MKAR	Makanchi Array	93.85	317	P	P	03 28 20.6	+1.0
	0.3nm,0.7s,baz=90,slow=6.1,SNR=3.7						
YKA	Yellowknife Ar	95.95	27	P	P	03 28 27.6	-1.2
	0.2nm,0.7s,baz=259,slow=4.8,SNR=2.8						

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*IDC **13** 03:19:47.0±1.5, 10°.85S×164°.56E, h0^{km}, mb3.7/4, mb1 3.9/7, mb1mx3.7/38, mbtmp3.8/7, ML3.9/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/41, Error ellipse: s-maj=34.0km s-min=26.6km az=140.0*

*ISCJB **13** 03:19:49.5±1.1, 11°.1S±0°.1×164°.6E±0°.1, h29^{km}, mb3.5/4, MS3.2/1, Error ellipse: s-maj=20.4km s-min=11.2km az=35.8*

ISC 13 03:19:51.3±1.3, 10°.9S±0°.1×164°.6E±0°.1, h29^{km}, n13, σ1^{s}55/8, mb3.6/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.80	288	Pn	Pn	03 20 59.6	-2.2
	15nm,0.3s,baz=156,slow=20,SNR=2.4						
HNR				Sn	Sn	03 21 58.4	+1.9
	10.0nm,0.3s,baz=287,slow=17,SNR=1.7						
HNR				LR	LR	03 22 59.8	
	comp=Z,570nm,19.4s,baz=125,slow=40						
DZM	Mont Dzumac	11.21	171	Pn	Pn	03 22 29.9	+0.1
	0.2nm,0.3s,baz=202,slow=18,SNR=2.4						
CTA	Charters Tower	19.85	241	P	P	03 24 20.4	+0.3
	0.2nm,0.3s,baz=81,slow=11,SNR=2.6						
H11S2	WAKE ISLAND Hy	29.32	4	T	T	03 56 17.4	
	baz=184,slow=76,SNR=6.9						
H11S3	WAKE ISLAND Hy	29.32	4	T	T	03 56 16.4	
	baz=184,slow=76,SNR=6.1						
H11S1	WAKE ISLAND Hy	29.34	4	T	T	03 56 20.8	
	baz=184,slow=76,SNR=5.2						
WRA	Warramunga Arr	30.45	249	P	P	03 26 01.3	-0.5
	0.5nm,0.9s,baz=74,slow=8.8,SNR=4.4						
WRA				LR	LR	03 37 30.2	
	comp=Z,53nm,21.2s,baz=255,slow=35						
H11N1	WAKE ISLAND Hy	30.55	4	T	T	03 57 49.7	
	baz=184,slow=76,SNR=6.5						
H11N3	WAKE ISLAND Hy	30.55	4	T	T	03 57 49.9	
	baz=184,slow=76,SNR=9.0						
H11N2	WAKE ISLAND Hy	30.56	4	T	T	03 57 51.1	
	baz=184,slow=76,SNR=8.8						
ASAR	Alice Springs	31.83	243	P	P	03 26 13.8	0.0
	0.2nm,0.7s,baz=73,slow=7.2,SNR=3.7						
ILAR	Eielson Array	83.78	19	P	P	03 32 16.9	-0.5
	0.9nm,0.8s,baz=239,slow=5.1,SNR=8.6						
MKAR	Makanchi Array	92.67	317	P	P	03 33 02.3	+1.7
	0.3nm,0.7s,baz=114,slow=5.6,SNR=3.9						

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*IDC **13** 03:26:29.1±0.8, 1°.11N×125°.21E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.7/47, mbtmp3.8/8, Error ellipse: s-maj=65.0km s-min=16.0km az=69.0*

*DJA **13** 03:26:34.3±0.4, 1°N±4°×12°5E±°, h10^{km}, M4.5/3, MLv4.5/3*

*ISCJB **13** 03:26:37.3±0.6, 1°.08N±0°.04×125°.37E±0°.04, h88^{km}±6^{km}, mb3.9/14, Error ellipse: s-maj=7.1km s-min=6.1km az=6.4*

*NEIC **13** 03:26:38.3±1.0, 1°.02N×125°.37E, h78^{km}±10^{km}, mb4.0/9, Error ellipse: s-maj=12.5km s-min=6.8km az=78.0*

ISC 13 03:26:37.9±1.0, 1°.07N±0°.05×125°.41E±0°.04, h72^{km}±10^{km}, n41, σ1^{s}38/52, mb4.0/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.51	251	P	Pn	03 27 01.9	-1.1
KMSI				S	Sn	03 27 23.2	+1.2
TNTI	Ternate	1.98	98	*e*Pn	Pn	03 27 08.9	-0.5
TNTI				*e*Sn	Sn	03 27 35.3	+1.9
TNTI	Ternate	1.98	98	P	Pn	03 27 09.0	-0.4
TNTI				S	Sn	03 27 34.9	+1.5
SANI	Sanana	3.15	169	P	Pn	03 27 25.3	+0.1
LUWI	Luwuk	3.36	232	*e*Pn	Pn	03 27 28.5	+0.4
LUWI				*e*Sn	Sn	03 28 08.0	+1.0
LUWI	Luwuk	3.36	232	P	Pn	03 27 28.7	+0.5
LUWI				S	Sn	03 28 09.8	+2.8
MRSI	Marisa	3.51	260	P	Pn	03 27 29.1	-1.1
MRSI				S	Sn	03 28 12.3	+1.7
APSI	Ampana	4.24	242	P	Pn	03 27 39.7	-0.4
MPSI	Mapaga	5.55	263	P	Pn	03 27 57.9	-0.2
DAV	Davao City (W)	5.97	2	*e*Sn	Sn	03 29 14.4	+3.6
TTSI	Tana Toraja	6.92	234	P	Pn	03 28 17.1	+0.4
SPSI	Sidrap Palu	7.53	228	P	Pn	03 28 25.4	+0.3
BNSI	Bone	7.58	224	P	Pn	03 28 27.1	+1.3
KSM	Kuching	15.10	272	*e*Pn	Pn	03 30 04.8	-2.6
	18nm,0.8s						
SMRI	Semarang	16.97	241	*e*Sn	Sn	03 33 24.5	-15
FITZ	Fitzroy Crossi	19.04	179	*e*P	P	03 30 55.2	+0.7
	2.0nm,0.9s						
WRAB	Tennant Creek	22.64	158	*e*P	P	03 31 33.6	+0.4
	5.8nm,0.9s						
WR1	Warramunga Arr	22.64	158	*e*P	P	03 31 32.6	-0.7
	10nm,1.1s						
WRA	Warramunga Arr	22.64	158	P	P	03 31 32.6	-0.7
	3.4nm,0.6s,baz=337,slow=10,SNR=49						
WRA				S	S	03 35 36.5	+0.3
	0.3nm,0.6s,baz=335,slow=21,SNR=3.8						
WB2	Warramunga Arr	22.65	158	*e*P	P	03 31 32.2	-1.1
COEN	Coen	23.08	131	*e*P	P	03 31 34.7	-3.1
	7.5nm,1.3s						
AS31	Alice Springs	25.93	162	*e*P	P	03 32 02.5	-1.2
	2.7nm,1.1s						
AS31				*e*PcP	PcP	03 35 33.3	+2.3
ASAR	Alice Springs	25.93	162	P	P	03 32 04.9	+1.2
	4.5nm,0.6s,baz=352,slow=14,SNR=44						
ASAR				PcP	PcP	03 35 33.3	+2.3
	0.2nm,0.4s,baz=341,slow=2.0,SNR=4.9						
AS01	Alice Springs	25.95	162	*e*P	P	03 32 05.4	+1.6
AS01				*e*PcP	PcP	03 35 32.6	+1.6
FORT	Forrest	31.77	176	*e*P	P	03 32 56.3	+0.9
	13nm,0.9s						
NWAO	Narrogin (SRO)	34.68	192	*e*P	P	03 33 19.3	-1.5
	15nm,1.2s						
STKA	Stephens Creek	36.18	156	*e*P	P	03 33 34.1	+0.4
	1.2nm,1.2s						
STKA	Stephens Creek	36.18	156	P	P	03 33 34.1	+0.4
	3.3nm,0.8s,baz=322,slow=6.6,SNR=5.9						
MAJO	Matsushiro	37.24	17	*e*P	P	03 33 42.1	-0.6
MJAR	Matsushiro Arr	37.24	17	P	P	03 33 42.1	-0.6
	0.6nm,0.4s,baz=198,slow=9.1,SNR=2.5						
SONA0	Songino Array	49.42	343	*e*P	P	03 35 21.5	+0.8
SONM	Songino Array	49.42	343	P	P	03 35 21.5	+0.8
	0.5nm,1.1s,baz=130,slow=4.5,SNR=3.0						
MK31	Makanchi Array	59.01	327	*e*PcP	PcP	03 37 19.6	+1.0
MK32	Makanchi Array	59.01	327	*e*P	P	03 36 30.1	-0.2
MK32				*e*PcP	PcP	03 37 19.6	+1.0
MKAR	Makanchi Array	59.01	327	P	P	03 36 30.1	-0.2
	0.3nm,0.5s,baz=119,slow=7.9,SNR=7.4						
MKAR				PcP	PcP	03 37 19.6	+0.9
	1.0nm,0.7s,baz=118,slow=4.7,SNR=10.0						
ZALV	Zalesovo Beam	62.37	334	P	P	03 36 51.7	-1.3
	0.5nm,0.5s,baz=120,slow=8.5,SNR=2.3						
ZAA1	Zalesovo Array	62.38	334	*e*P	P	03 36 51.7	-1.3
KURBB	Kurchatov Arra	63.28	329	P	P	03 36 57.7	-1.4
	0.3nm,0.4s,baz=133,slow=5.4,SNR=4.3						
KURK	Kurchatov	63.29	329	*e*P	P	03 36 57.7	-1.4
TORD	Torodi Ar. Bea	122.44	286	PKP	PKPdf	03 45 25.7	-0.4
	0.8nm,0.9s,baz=29,slow=3.4,SNR=4.8						
TOA1	Torodi Ar. Sit	122.44	286	*e*PKPdf	PKPdf	03 45 25.7	-0.4

IDC 13 03:33:50.5±16.0, 16°.15S×173°.81W, h0^{km}, mb3.2/3, mb1 3.5/3, mb1mx3.3/43, mbtmp3.2/3, Error ellipse: s-maj=725.9km s-min=38.3km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.29	257	P	P	03 42 41.5	-0.3
	0.2nm,0.9s,baz=88,slow=7.8,SNR=2.4						
ASAR	Alice Springs	49.51	253	P	P	03 42 43.3	0.0
	0.3nm,0.9s,baz=92,slow=8.3,SNR=3.7						
ILAR	Eielson Array	83.25	11	P	P	03 46 18.6	0.0
	0.4nm,1.0s,baz=221,slow=6.8,SNR=4.3						

WEL 13 03:39:26.7±0.4, 44°S±3°×17°2E±°, h5^{km}, ML3.7/6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLZ	Canterbury Las	0.14	87	P	Pg	03 39 30.1	+0.6
EYCZ	Eyrewell	0.17	340	P	Pg	03 39 30.8	+0.7
MQZ	McQueen's Vall	0.20	128	P	Pg	03 39 31.0	+0.4
RACZ	Rakaia	0.26	236	P	Pg	03 39 32.4	+0.6
OXZ	Oxford	0.39	311	P	Pg	03 39 34.4	+0.2
AMCZ	Amberley	0.43	21	P	Pb	03 39 36.3	-0.6
AKCZ	Akaroa Harbour	0.45	130	P	Pg	03 39 35.7	+0.3
OKCZ	Okains Bay	0.47	107	P	Pg	03 39 36.4	+0.6
LTZ	Lake Taylor	0.81	351	P	Pb	03 39 42.8	-0.5
RPZ	Rata Peaks	1.01	262	P	Pg	03 39 45.8	-0.4
INZ	Inchbonnie	1.12	319	P	Pg	03 39 48.1	-0.2
WVZ	Waitaha Valley	1.34	292	P	Pn	03 39 51.9	-0.2
KHZ	Kahutara	1.42	35	P	Pn	03 39 51.1	-2.0
LBZ	Lake Benmore	1.81	243	P	Pn	03 39 57.2	-1.4
THZ	Tophouse	1.85	11	P	Pn	03 39 57.5	-1.7
DSZ	Denniston Nort	1.90	346	P	Pn	03 39 58.2	-1.6
FOZ	Fox Glacier	1.91	271	P	Pn	03 40 00.0	+0.2
ODZ	Otahua Downs	1.95	221	P	Pn	03 39 58.4	-2.0
BSWZ	Blackbirch Sta	2.15	30	P	Pn	03 40 02.0	-1.2
NNZ	Nelson	2.46	17	P	Pn	03 40 06.8	-0.8
JCZ	Jackson Bay	2.69	258	P	Pn	03 40 10.4	-0.3
QRZ	Quartz Range	2.76	1	P	Pn	03 40 11.9	+0.3
WKZ	Wanaka	2.76	242	P	Pn	03 40 10.3	-1.3
EAZ	Earnscleugh	2.78	233	P	Pn	03 40 10.1	-1.9
BHW	Baring Head	2.82	40	P	Pn	03 40 10.8	-1.6
TUZ	Tuapeka	3.10	219	P	Pn	03 40 14.4	-1.9
CAW	Cannon Point	3.15	39	P	Pn	03 40 14.8	-2.2
OGWZ	Otaki Gorge	3.43	37	P	Pn	03 40 19.4	-1.4
MLZ	Mavora Lakes	3.57	239	P	Pn	03 40 20.8	-2.0
MRZ	Mangatainoka R	3.74	40	P	Pn	03 40 23.0	-2.1
SYZ	Scrubby Hill	3.77	217	P	Pn	03 40 24.0	-1.4

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*ISCJB **13** 03:48:52.7±0.7, 11°.03S±0°.07×166°.09E±0°.08, h35^{km}, mb4.0/9, Error ellipse: s-maj=11.7km s-min=8.9km az=142.2*

*IDC **13** 03:48:58.9±3.5, 10°.90S×165°.93E, h74^{km}±31^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.6/49, mbtmp4.0/10, MS3.4/2, Ms1 3.4/2, ms1mx3.1/40, Error ellipse: s-maj=25.3km s-min=23.2km az=112.0*

ISC 13 03:48:54.8±0.7, 10°.86S±0°.08×166°.14E±0°.10, h35^{km}, n19, σ1^{s}89/17, mb3.9/9, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.26	283	P	Pn	03 50 25.9	+1.2
	43nm,0.3s,baz=138,slow=3.1,SNR=5.5						
HNR				S	Sn	03 51 36.0	+1.0
	18nm,0.3s,baz=40,slow=22,SNR=2.0						
HNR				LR	LR	03 52 59.5	
	comp=Z,345nm,21.5s,baz=106,slow=40						
DZM	Mont Dzumac	11.15	179	P	Pn	03 51 35.3	+3.4
	1.7nm,0.3s,baz=232,slow=14,SNR=9.8						
DZM				S	Sn	03 53 32.9	-2.6
	0.5nm,0.3s,baz=0.0,slow=20,SNR=3.3						
DZM				LR	LR	03 55 24.7	
	comp=Z,178nm,19.1s,baz=13,slow=35						
CTA	Charters Tower	21.22	242	P	P	03 53 37.1	-0.7
	4.1nm,0.8s,baz=56,slow=15,SNR=2.5						
H11S2	WAKE ISLAND Hy	29.17	1	T	T	04 25 18.6	
	baz=182						
H11S3	WAKE ISLAND Hy	29.17	1	T	T	04 25 18.9	
	baz=182						
H11S1	WAKE ISLAND Hy	29.19	1	T	T	04 25 19.9	
	baz=182						
H11N1	WAKE ISLAND Hy	30.39	1	T	T	04 26 50.1	
	baz=182						
H11N3	WAKE ISLAND Hy	30.39	1	T	T	04 26 50.5	
	baz=182						
H11N2	WAKE ISLAND Hy	30.41	1	T	T	04 26 51.5	
	baz=182						
WRA	Warramunga Arr	31.91	250	P	P	03 55 15.7	-1.6
	1.5nm,0.8s,baz=81,slow=9.1,SNR=16						
WRA				PcP	PcP	03 58 05.7	-1.8
	0.4nm,0.8s,baz=76,slow=3.2,SNR=4.9						
RPZ	Rata Peaks	33.01	173	P	P	03 55 27.0	+0.4
	22nm,0.8s,baz=45,slow=1.4,SNR=5.6						
ASAR	Alice Springs	33.22	243	P	P	03 55 26.6	-2.1
	0.8nm,0.7s,baz=74,slow=9.8,SNR=10						
ASAR				PcP	PcP	03 58 10.1	-0.9
	0.5nm,0.7s,baz=55,slow=2.4,SNR=5.4						
SONM	Songino Array	78.74	324	P	P	04 00 53.6	-0.3
	0.7nm,0.8s,baz=127,slow=4.1,SNR=4.4						
ILAR	Eielson Array	83.22	18	P	P	04 01 17.8	+0.6
	0.7nm,0.5s,baz=238,slow=5.1,SNR=7.2						
NVAR	Mina Array Bea	85.61	50	P	P	04 01 30.2	0.0
	0.5nm,0.6s,baz=234,slow=5.5,SNR=3.7						
MKAR	Makanchi Array	93.65	317	P	P	04 02 07.2	-0.5
	1.1nm,0.7s,baz=94,slow=7.3,SNR=4.4						
YKA	Yellowknife Ar	94.63	27	P	P	04 02 10.7	-1.1
	0.1nm,0.5s,baz=256,slow=4.9,SNR=4.0						
ARCES	ARCESS Array B	116.25	346	PKP	PKPdf	04 07 32.4	-1.6
	2.1nm,0.9s,baz=46,slow=3.5,SNR=4.8						
ESDC	Sonseca Array	149.98	345	PKPbc	PKPdf	04 08 40.8	+3.7
	0.7nm,0.8s,baz=22,slow=3.1,SNR=5.2						

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*MAN **13** 03:51:25.1, 19°.27N×121°.93E, h7^{km}, mb4.6, ML3.4, MS3.5*

*ISCJB **13** 03:51:27.6±0.5, 19°.28N±0°.07×122°.3E±0°.1, h52^{km}, mb4.0/21, MS3.8/2, Error ellipse: s-maj=16.2km s-min=10.0km az=4.6*

*IDC **13** 03:51:31.7±3.0, 19°.21N×122°.29E, h77^{km}±29^{km}, mb3.7/19, mb1 3.8/20, mb1mx3.6/53, mbtmp4.0/20, MS3.7/2, Ms1 3.7/2, ms1mx3.0/56, Error ellipse: s-maj=18.5km s-min=13.9km az=77.0*

ISC 13 03:51:29.6±0.7, 19°.29N±0°.09×122°.5E±0°.1, h52^{km}, n32, σ1^{s}64/27, mb4.0/21, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	5.36	196	P	Pn	03 52 47.2	+0.1
	baz=34,slow=18,SNR=2.9						
KSRS	Korea Array	18.72	14	P	Pn	03 55 45.5	+0.8
	0.2nm,0.3s,baz=200,slow=11,SNR=7.7						
CMMT	Chiang Mai	22.23	273	P	P	03 56 26.2	+4.1
	12nm,1.2s						
CHTO	Chiang Mai	22.23	273	P	P	03 56 26.3	+4.2
	55nm,1.2s						
CMAR	Chiang Mai Arr	22.27	272	P	P	03 56 22.6	0.0
	2.5nm,0.7s,baz=76,slow=8.6,SNR=14						
USRK	Ussuriysk Ar.	26.09	16	P	P	03 56 59.2	+0.8
	1.6nm,0.8s,baz=191,slow=6.8,SNR=3.3						
KLR	Kul'dur	30.80	12	P	P	03 57 40.2	0.0
	0.7nm,0.5s,baz=212,slow=4.5,SNR=3.6						
SONM	Songino Array	31.33	339	P	P	03 57 44.2	-1.0
	0.5nm,0.5s,baz=155,slow=10.0,SNR=5.3						
WRA	Warramunga Arr	40.69	163	P	P	03 59 04.6	-0.6
	0.6nm,0.7s,baz=344,slow=9.1,SNR=9.0						
H11S3	WAKE ISLAND Hy	41.77	84	T	T	04 44 32.5	
	baz=278,slow=75,SNR=8.7						
H11S1	WAKE ISLAND Hy	41.78	84	T	T	04 44 35.9	
	baz=278,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	41.78	84	T	T	04 44 38.1	
	baz=278,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	41.79	82	T	T	04 44 31.0	
	baz=277,slow=75,SNR=43						
H11N2	WAKE ISLAND Hy	41.80	82	T	T	04 44 34.8	
	baz=277,slow=75,SNR=87						
H11N3	WAKE ISLAND Hy	41.81	82	T	T	04 44 29.8	
	baz=277,slow=75,SNR=31						
MKAR	Makanchi Array	42.74	319	P	P	03 59 21.1	-0.6
	2.4nm,0.6s,baz=114,slow=9.4,SNR=38						
MKAR				PcP	PcP	04 01 11.9	-0.6
	0.7nm,0.6s,baz=101,slow=2.5,SNR=4.2						
PETK	Petropavlovsk-	43.36	30	P	P	03 59 27.5	+0.8
	3.5nm,0.9s,baz=228,slow=5.6,SNR=2.9						
ASAR	Alice Springs	44.13	165	P	P	03 59 32.0	-1.1
	0.5nm,0.5s,baz=347,slow=7.7,SNR=7.6						
ZALV	Zalesovo Beam	45.02	329	P	P	03 59 39.0	-0.8
	1.8nm,0.6s,baz=114,slow=8.1,SNR=10						
AAK	Ala-Archa	46.51	311	P	P	03 59 50.8	-1.3
	1.6nm,0.8s,baz=127,slow=6.1,SNR=4.8						
KURBB	Kurchatov Arra	46.66	323	P	P	03 59 51.9	-0.9
	2.7nm,0.6s,baz=124,slow=7.3,SNR=16						
SEY	Seymchan	48.21	18	P	P	04 00 05.2	+0.5
	0.4nm,0.3s,baz=232,slow=12,SNR=3.3						
BVAR	Borovoye Array	52.24	323	P	P	04 00 34.8	-0.6
	0.7nm,0.6s,baz=125,slow=13,SNR=4.7						
BVAR				PcP	PcP	04 01 45.0	-1.3
	1.5nm,0.6s,baz=92,slow=3.6,SNR=6.5						
WSAR	Wadi Sarin	59.20	286	LR	LR	04 28 50.4	
	comp=Z,105nm,20.6s,baz=86,slow=38						
ILAR	Eielson Array	73.02	27	P	P	04 02 54.2	+0.5
	0.8nm,0.6s,baz=268,slow=4.6,SNR=8.9						
ARCES	ARCESS Array B	74.51	339	P	P	04 03 01.0	-1.3
	1.4nm,0.7s,baz=72,slow=7.9,SNR=6.1						
FINES	FINESS Array B	76.26	331	P	P	04 03 10.6	-1.8
	1.7nm,0.7s,baz=91,slow=7.8,SNR=6.2						
INK	Inuvik	77.31	22	P	P	04 03 18.8	+0.5
	1.5nm,0.7s,baz=312,slow=5.0,SNR=5.5						
NB2	NORSAR Subarra	83.10	333	P	P	04 03 47.9	-1.7
	comp=Z,2.8nm,1.2s,baz=62,slow=5.3						
NOA	NORSAR Array B	83.10	333	P	P	04 03 47.7	-2.0
	comp=Z,0.5nm,0.6s,baz=58,slow=5.4,SNR=4.4						
YKA	Yellowknife Ar	87.00	23	P	P	04 04 10.1	+1.1
	comp=Z,2.7nm,0.7s,baz=309,slow=4.6,SNR=67						
YKA				LR	LR	04 46 37.6	
	comp=Z,25nm,18.6s,baz=308,slow=38						
SDV	Santo Domingo	149.17	26	PKPbc	PKPdf	04 11 11.7	+2.4
	comp=Z,1.4nm,0.5s,baz=135,slow=4.3,SNR=1.7						

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*ISCJB **13** 03:57:39.9±0.6, 30°.24N±0°.01×131°.42E±0°.01, h3^{km}±3^{km}, mb5.5/472, MS5.2/252, Error ellipse: s-maj=2.3km*

s-min=2.0km az=137.3

*NEIC **13** 03:57:42.5±0.1, 30.°25N×131.°41E, h10^{km}, mb5.5/297, MS5.1/183, MW5.2, Error ellipse: s-maj=2.6km s-min=2.2km az=134.0, Moment Tensor Solution. s68 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.24; $M_{\theta\theta}$-1.21; $M_{\phi\phi}$6.45; $M_{r\theta}$3.05; $M_{\theta\phi}$-0.65; $M_{\phi r}$4.34; Best double couple: $M_0$8.00000×10^{16} NP1:ϕ_s331.00000°, δ33.00000°, λ-134.00000°. NP2:ϕ_s200.00000°, δ67.00000°, λ-66.00000°. Principal axes: T 7.9000, Plg19.0000°, Azm272.0000°; N 0.1800, Plg22.0000°, Azm10.0000°; P -8.0800, Plg60.0000°, Azm146.0000°;*

NEIC Felt on Tanega-shima, Ryukyu Islands. Recorded [2 JMA] on Take-shima and Tanega-shima. Also recorded [2 JMA] in Kagoshima and Miyazaki, Kyushu.

*MOS **13** 03:57:42.3±1.1, 30.°28N×131.°38E, h23^{km}, mb5.6/161, MS5.3/50 Error ellipse: s-maj=5.1km s-min=3.2km az=107.5*

*IDC **13** 03:57:43.4±1.7, 30.°29N×131.°40E, h19^{km}±10^{km}, mb5.1/51, mb1 5.2/57, mb1mx5.2/63, mbtmp5.2/57, ML3.2/4, MS5.0/36, Ms1 5.0/36, ms1mx4.9/51, Error ellipse: s-maj=9.4km s-min=6.4km az=93.0*

*BJI **13** 03:57:43.9, 30.°19N×131.°55E, h45^{km}, mB5.3/61, mb5.2/81, Ms5.2/91, Ms7 5.1/88*

*GCMT **13** 03:57:44.5±0.1, 30.°30N±0.°01×131.°58E±0.°01, h12^{km}, MW5.4/109, Moment Tensor Solution. s100,c168; s109,c219; Duration: 1.s2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.89±.01; $M_{\theta\theta}$-0.25±.01; $M_{\phi\phi}$1.14±.01; $M_{r\theta}$0.76±.04; $M_{\theta\phi}$0.21±.01; $M_{\phi r}$1.02±.03; Best double couple: $M_0$1.65100×10^{17} NP1:ϕ_s211.00000°, δ72.00000°, λ-71.00000°. NP2:ϕ_s343.00000°, δ26.00000°, λ-134.00000°. Principal axes: T 1.6920, Plg25.0000°, Azm286.0000°; N -0.0780, Plg18.0000°, Azm25.0000°; P -1.6100, Plg59.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*JMA **13** 03:57:44.0±0.1, 30.°24N×131.°61E, h48^{km}±2^{km}, M5.1*

JMA Felt II J1.

ISC 13 03:57:46.5±0.2, **30.°28N**±0.°03×**131.°46E**±0.°03, **h39**^{km}±2^{km}, **h40**^{km}**:pP-P, n1420,** σ**1.s28**/1597, **mb5.5**/476, **MS5.2**/257, **109C-37D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.50**	**284**	⇑P	**Pn**	**03 57 56.6**	**-0.6**
JMTN				S	**Sn**	**03 58 06.9**	**+2.2**
JTN	**Tanegashima 3**	**0.56**	**312**	⇑P	**Pn**	**03 57 57.4**	**-0.6**
JTN				S	**Sn**	**03 58 07.4**	**+1.2**
JYAK	**Yakushimahirau**	**0.83**	**267**	⇑P	**Pn**	**03 58 01.2**	**-0.4**
JYAK				S	**Sn**	**03 58 12.8**	**+0.2**
JTSR	**Tashiro 2**	**1.00**	**332**	⇑P	**Pn**	**03 58 03.3**	**-0.7**
JTSR				*e*S	**Sn**	**03 58 17.1**	**+0.2**
JKC	**Kuchinoerabu**	**1.11**	**280**	⇑P	**Pn**	**03 58 05.3**	**-0.2**
JKC				*e*S	**Sn**	**03 58 21.5**	**+1.9**
JNAR	**Kushima--Naru**	**1.25**	**353**	⇑P	**Pn**	**03 58 06.7**	**-0.8**
JNAR				S	**Sn**	**03 58 22.1**	**-1.0**
JNN	**Nakanoshima**	**1.45**	**253**	⇑P	**Pn**	**03 58 09.9**	**-0.2**
JNN				*e*S	**Sn**	**03 58 29.0**	**+1.1**
JSU	**Suzuyama**	**1.50**	**325**	⇑P	**Pn**	**03 58 10.1**	**-0.8**
JSU				S	**Sn**	**03 58 29.4**	**+0.2**
JTZ	**Takazaki**	**1.65**	**349**	⇑P	**Pn**	**03 58 12.6**	**-0.3**
JTZ				S	**Sn**	**03 58 33.1**	**+0.2**
JTSN	**Tsuno**	**1.96**	**1**	⇑P	**Pn**	**03 58 15.8**	**-1.4**
JTSN				S	**Sn**	**03 58 39.2**	**-1.3**
JZO	**Okuchi**	**2.00**	**338**	⇑P	**Pn**	**03 58 17.3**	**-0.4**
JZO				S	**Sn**	**03 58 41.5**	**0.0**
JSJ	**Shimokoshiki**	**2.05**	**313**	⇑P	**Pn**	**03 58 17.2**	**-1.2**
JSJ				S	**Sn**	**03 58 42.4**	**-0.3**
JKIT	**Kitakata**	**2.34**	**360**	⇑P	**Pn**	**03 58 21.5**	**-0.9**
JHD	**Hondo**	**2.46**	**333**	⇑P	**Pn**	**03 58 23.4**	**-0.6**
JSKE	**Saikikamae**	**2.54**	**8**	⇑P	**Pn**	**03 58 23.4**	**-1.7**
JSKE				S	**Sn**	**03 58 51.6**	**-3.2**
NGSJ	**Nagasakinomoza**	**2.74**	**329**	⇑P	**Pn**	**03 58 27.3**	**-0.6**
NGSJ				S	**Sn**	**03 58 59.9**	**+0.1**
JTA	**Tamana**	**2.79**	**344**	⇑P	**Pn**	**03 58 28.2**	**-0.4**
JNU	**Nakatsue**	**2.88**	**350**	*e*Pn	**Pn**	**03 58 29.4**	**-0.4**
JNU				*e*Sn	**Sn**	**03 59 01.4**	**-1.8**
JNU	**Nakatsue**	**2.88**	**350**	⇑P	**Pn**	**03 58 29.4**	**-0.4**
JNU	**Nakatsue**	**2.88**	**350**	Pn	**Pn**	**03 58 29.4**	**-0.4**
	3.4nm,0.3s,baz=179,slow=23,SNR=7.9						
JUR	**Ureshino**	**3.09**	**336**	⇑P	**Pn**	**03 58 32.5**	**-0.2**
JFI	**Itaya**	**3.27**	**344**	P	**Pn**	**03 58 34.8**	**-0.4**
JFU	**Fukue jima 2**	**3.31**	**316**	⇑P	**Pn**	**03 58 35.2**	**-0.6**
JFU				S	**Sn**	**03 59 13.0**	**-0.9**
JFA	**Akaike**	**3.47**	**351**	⇑P	**Pn**	**03 58 37.1**	**-0.8**
JOW	**Kunigami**	**4.43**	**220**	*e*Pn	**Pn**	**03 58 50.1**	**-1.1**
JOW				*e*Sn	**Sn**	**03 59 39.4**	**-2.2**
JOW	**Kunigami**	**4.43**	**220**	Pn	**Pn**	**03 58 50.2**	**-1.1**
	3.7nm,0.3s,baz=102,slow=16,SNR=35						
JOW				Sn	**Sn**	**03 59 38.2**	**-3.4**
	8.1nm,0.3s,baz=64,slow=29,SNR=3.9						
JMMH	**Miemihama**	**5.24**	**46**	P	**Pn**	**03 59 00.1**	**-2.1**
JKN2	**Miekihoku**	**5.67**	**45**	P	**Pn**	**03 59 06.9**	**-1.3**
JKSM	**Kasumi**	**5.94**	**26**	P	**Pn**	**03 59 11.6**	**-0.2**
JWT	**Wachi**	**5.99**	**33**	P	**Pn**	**03 59 11.7**	**-0.8**
JIE	**Ise**	**6.04**	**46**	P	**Pn**	**03 59 12.3**	**-0.9**
JKY	**Yasaka**	**6.15**	**29**	P	**Pn**	**03 59 14.3**	**-0.4**
JFM	**Mihama**	**6.47**	**35**	P	**Pn**	**03 59 18.5**	**-0.6**
JAA	**Atsumi**	**6.47**	**46**	P	**Pn**	**03 59 17.9**	**-1.2**
JYTA	**Yamagatataniai**	**6.91**	**39**	P	**Pn**	**03 59 24.6**	**-0.5**
TJN	**Taejon**	**6.98**	**332**	*ce*P	**Pn**	**03 59 26.2**	**+0.1**
JGF	**Kuroka**	**7.26**	**41**	P	**Pn**	**03 59 28.6**	**-1.4**
JNY	**Yasuok**	**7.39**	**45**	P	**Pn**	**03 59 30.8**	**-1.1**
JHJ	**Hachijo jima 2**	**7.63**	**66**	Pn	**Pn**	**03 59 35.0**	**-0.2**
	189nm,0.3s,baz=90,slow=12,SNR=11						
JHJ				Sn	**Sn**	**04 00 56.4**	**-4.0**
	43nm,0.3s,baz=109,slow=21,SNR=5.1						
JHJ				LR	LR	04 02 30.5	
	comp=Z,11µm,18.0s,baz=176,slow=37						
JGN	**Niukaw**	**7.69**	**38**	P	**Pn**	**03 59 35.1**	**-0.8**
KSRS	**Korea Array**	**7.74**	**339**	Pn	**Pn**	**03 59 36.6**	**+0.2**
	5.2nm,0.3s,baz=160,slow=14,SNR=53						
KSRS				Lg	Lg	04 01 38.9	
	0.5nm,0.3s,baz=171,slow=26,SNR=3.6						
KSRS				PcP	**PcP**	**04 06 15.1**	**+0.3**
	baz=156,slow=0.7,SNR=4.3						
KS15	**Wonju Array Si**	**7.74**	**338**	*e*Pn	**Pn**	**03 59 37.8**	**+1.2**
KS15				*e*Sn	**Sn**	**04 00 58.6**	**-4.2**
KS15				*e*PcP	**PcP**	**04 06 15.1**	**+0.3**
KSAR	**Wonju Array Be**	**7.74**	**338**	Pn	**Pn**	**03 59 36.6**	**+0.2**
KSAR	**Wonju Array Be**	**7.74**	**338**	P	**Pn**	**03 59 36.7**	**+0.2**
KS01	**Wonju Array Si**	**7.77**	**338**	*e*Pn	**Pn**	**03 59 38.5**	**+1.6**
KS01				*e*Sn	**Sn**	**04 01 04.2**	**+0.7**
JHTM	**Izuhatsuma**	**7.89**	**52**	P	**Pn**	**03 59 38.0**	**-0.6**
JNT	**Takato**	**7.90**	**43**	P	**Pn**	**03 59 38.0**	**-0.9**
JYN	**Shimob**	**7.91**	**47**	P	**Pn**	**03 59 38.5**	**-0.4**
JOD2	**Odawara 2**	**8.12**	**50**	P	**Pn**	**03 59 40.7**	**-1.1**
JNG	**Nsakai**	**8.25**	**41**	P	**Pn**	**03 59 43.5**	**-0.2**
MAJO	**Matsushiro**	**8.41**	**40**	*e*Pn	**Pn**	**03 59 45.3**	**-0.4**
MAJO				*e*Sn	**Sn**	**04 01 20.5**	**+1.0**
MAJO	**Matsushiro**	**8.41**	**40**	*c i*P	**Pn**	**03 59 45.4**	**-0.4**
MAT	**Matsushiro**	**8.41**	**40**	P	**Pn**	**03 59 44.9**	**-0.9**
MAT				*e*S	**Sn**	**04 01 18.7**	**-0.8**
MJAR	**Matsushiro Arr**	**8.41**	**40**	Pn	**Pn**	**03 59 44.8**	**-1.0**
	5.6nm,0.3s,baz=236,slow=15,SNR=211						
MJB9	**Matsu-Tunnel**	**8.41**	**40**	*e*Pn	**Pn**	**03 59 45.3**	**-0.5**
JRY	**Ryogami san**	**8.46**	**46**	P	**Pn**	**03 59 46.2**	**-0.3**
SSE	**Sheshan**	**8.89**	**278**	P	**Pn**	**03 59 52.9**	**+0.6**
SSE				S	**Sn**	**04 01 30.1**	**-1.0**
SSE				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,720nm,4.6s						
SSE				LR	LR		
	comp=N,5µm,16.0s						
SSE				LR	LR		
	comp=E,5µm,18.1s						
SSE	**Sheshan**	**8.89**	**278**	*e*Pn	**Pn**	**03 59 53.2**	**+0.9**
SSE				*e*Sn	**Sn**	**04 01 29.9**	**-1.2**
CBIJ	**Chichi jima**	**9.94**	**106**	*e*Pn	**Pn**	**04 00 02.8**	**-3.9**
CBIJ				*e*Sn	Sn	04 01 47.7	-9.2
JCJ	**Chichijima**	**9.94**	**106**	Pn	**Pn**	**04 00 02.8**	**-3.9**
	47nm,0.3s,baz=276,slow=21,SNR=20						
JCJ				Sn	Sn	04 01 47.7	-9.2
	5.3nm,0.3s,baz=238,slow=19,SNR=2.9						
JNS	**Sasagawa**	**9.95**	**39**	P	**Pn**	**04 00 07.0**	**+0.2**
NJ2	**Nanjing**	**10.95**	**282**	*e*P	**Pn**	**04 00 21.0**	**+0.5**
NJ2				S	**Sn**	**04 02 23.6**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,45nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,1µm,8.7s						
NJ2				LR	LR		
	comp=N,8µm,15.7s						
NJ2				LR	LR		
	comp=E,11µm,17.9s						
NJ2				LR	LR		
	comp=Z,12µm,18.4s						
SSLB	**Suanglung**	**11.38**	**238**	*e*Pn	**Pn**	**04 00 22.6**	**-4.0**
SSLB				*e*Sn	**Sn**	**04 02 27.5**	**-4.9**
DL2	**Dalian**	**11.81**	**319**	⇑*i*P	**Pn**	**04 00 33.1**	**+0.8**
DL2				pP		04 00 42.8	
DL2				S	**Sn**	**04 02 47.4**	**+4.6**
DL2				pmax	pmax		
	comp=Z,76nm,0.9s						
DL2				pmax	pmax		
	comp=Z,840nm,6.7s						
DL2				LR	LR		
	comp=N,7µm,17.3s						
DL2				LR	LR		
	comp=E,5µm,17.9s						
DL2				LR	LR		
	comp=Z,9µm,20.0s						
MSHR	**Mys Shultsa**	**12.28**	**359**	⇑*i*P	**Pn**	**04 00 38.0**	**-0.6**
QZH	**Quanzhou**	**12.59**	**248**	⇑P	**Pn**	**04 00 43.6**	**+0.6**
QZH				*e*S	**Sn**	**04 03 02.3**	**+0.4**
QZH				LR	LR		
	comp=N,4µm,20.4s						
QZH				LR	LR		
	comp=E,6µm,18.5s						
QZH				LR	LR		
	comp=Z,8µm,17.5s						
VLA	**Vladivostok**	**12.82**	**1**	⇓*e*P	**Pn**	**04 00 47.2**	**+1.2**
SNY	**Shenyang**	**13.16**	**333**	⇑P	**Pn**	**04 00 52.0**	**+1.3**
SNY				S	Sn	04 03 24.8	+9.1
SNY				pmax	pmax		
	comp=Z,59nm,1.6s						
SNY				pmax	pmax		
	comp=Z,1µm,5.3s						
SNY				LR	LR		
	comp=N,7µm,20.1s						
SNY				LR	LR		
	comp=E,8µm,17.7s						
SNY				LR	LR		
	comp=Z,15µm,18.5s						
TIA	**Tai'an**	**13.37**	**300**	P	**Pn**	**04 00 54.8**	**+1.1**
TIA				S	**Sn**	**04 03 29.0**	**+8.0**
TIA				pmax	pmax		
	comp=Z,20nm,1.2s						
TIA				pmax	pmax		
	comp=Z,670nm,8.7s						
TIA				LR	LR		
	comp=N,3µm,20.1s						
TIA				LR	LR		
	comp=E,3µm,17.5s						
TIA				LR	LR		
	comp=Z,5µm,18.0s						
USA0B	**Ussuriysk Arra**	**13.90**	**2**	*e*Pn	**Pn**	**04 01 01.9**	**+1.1**
USRK	**Ussuriysk Ar.**	**13.90**	**2**	Pn	**Pn**	**04 01 00.8**	**0.0**
	0.1nm,0.3s,baz=186,slow=13,SNR=17						
CN2	**Changchun**	**14.32**	**342**	*e*P	**Pn**	**04 01 09.3**	**+2.8**
CN2				*e*sP	P	04 01 24.4	+11
CN2				*e*S	**Sn**	**04 03 47.3**	**+3.4**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,1µm,10.0s						
CN2				LR	LR		
	comp=N,10µm,16.0s						
CN2				LR	LR		
	comp=E,9µm,16.0s						
CN2				LR	LR		
	comp=Z,12µm,18.0s						
MDJ	**Mudanjiang**	**14.39**	**355**	P	**Pn**	**04 01 07.5**	**+0.1**
MDJ				pP	P	04 01 22.3	+8.6
MDJ				S	**Sn**	**04 03 50.3**	**+4.7**
MDJ				pmax	pmax		
	comp=Z,16nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,300nm,4.1s						
MDJ				LR	LR		
	comp=N,4µm,20.3s						
MDJ				LR	LR		
	comp=E,3µm,19.6s						
MDJ				LR	LR		
	comp=Z,6µm,19.8s						
MDJ	**Mudanjiang**	**14.39**	**355**	*e*Pn	**Pn**	**04 01 08.9**	**+1.5**
WHN	**Wuhan**	**14.77**	**275**	⇓P	**Pn**	**04 01 10.3**	**-2.3**
WHN				LR	LR		
	comp=N,5µm,12.8s						
WHN				LR	LR		
	comp=E,20µm,19.3s						
WHN				LR	LR		
	comp=Z,21µm,20.6s						
ERM	**Erimo**	**15.03**	**36**	*e*Pn	**Pn**	**04 01 15.2**	**-0.8**
	118nm,1.3s						
ERM	**Erimo**	**15.03**	**36**	*e*P	**Pn**	**04 01 15.2**	**-0.8**
ERM				pmax	pmax		
	comp=Z,118nm,1.3s						
TEY	**Ternei**	**15.28**	**14**	⇑*e*P	**P**	**04 01 21.5**	**-2.0**
TEY				*e*S	**S**	**04 04 16.8**	**-5.7**
TEY				pmax	pmax		
	comp=N,70nm,1.3s						
TEY				pmax	pmax		
	comp=E,30nm,1.3s						
TEY				pmax	pmax		
	comp=Z,80nm,1.4s						
TEY				MLR	MLR		
	comp=N,2µm,19.0s						
TEY				MLR	MLR		
	comp=Z,3µm,16.0s						
BJT	**Baijiatuau**	**15.82**	**312**	*e*Pn	**Pn**	**04 01 26.7**	**+0.4**
BJT	**Baijiatuau**	**15.82**	**312**	*e*P	**Pn**	**04 01 26.7**	**+0.4**
BJI	**Beijing**	**15.83**	**312**	P	**Pn**	**04 01 25.8**	**-0.6**
BJI				LR	LR		
	comp=Z,6µm,18.5s						
BJI				LR	LR		
	comp=Z,5µm,21.2s						
BJI				LR	LR		
	comp=Z,6µm,22.1s						
ASAJ	**Asahikawa**	**16.39**	**30**	Pn	**Pn**	**04 01 31.1**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=201,slow=15,SNR=7.2						
TIY	**Taiyuan**	**17.42**	**300**	*e*P	**Pn**	**04 01 46.1**	**-0.4**
TIY				pP	**P**	**04 01 50.9**	**+3.5**
TIY				sP	**sP**	**04 02 03.3**	**+1.1**
TIY				S	**Sn**	**04 04 52.6**	**-6.8**
TIY				pmax	pmax		
	comp=Z,26nm,0.9s						
TIY				LR	LR		
	comp=Z,5µm,15.6s						
TIY				LR	LR		
	comp=Z,3µm,13.0s						
TIY				LR	LR		
	comp=Z,7µm,21.0s						
GLVR	**Golovnino**	**17.47**	**36**	P	**P**	**04 01 47.9**	**+0.1**
GLVR				S	**Sn**	**04 05 01.9**	**+1.5**
GLVR				pmax	pmax		
	comp=Z,264nm,0.6s						
GLVR				pmax	pmax		
	comp=N,159nm,0.7s						
GLVR				pmax	pmax		
	comp=E,81nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,2µm,2.6s						
GRPR	**Tuman**	**17.78**	**36**	*e*P	**P**	**04 01 51.9**	**+0.6**
GRPR				S	**Sn**	**04 05 09.0**	**+1.1**
GRPR				pmax	pmax		
	comp=Z,78nm,0.8s						
GRPR				pmax	pmax		
	comp=N,60nm,0.5s						
GRPR				pmax	pmax		
	comp=E,50nm,0.5s						
GRPR				pmax	pmax		
	comp=Z,965nm,1.6s						
LAGR	**Lagunnoye**	**17.83**	**36**	*e*P	**P**	**04 01 52.0**	**+0.2**
LAGR				*e*S	**Sn**	**04 05 10.9**	**+1.7**
LAGR				pmax	pmax		
	comp=Z,217nm,0.8s						
LAGR				pmax	pmax		
	comp=N,133nm,0.6s						
LAGR				pmax	pmax		
	comp=E,142nm,0.9s						
LAGR				pmax	pmax		
	comp=Z,2µm,2.0s						
YUK	**Yuzh-Kuril'sk**	**17.86**	**36**	*d i*P	**P**	**04 01 52.8**	**+0.7**
YUK				*e*S	**Sn**	**04 05 10.5**	**+0.8**
YUK				pmax	pmax		
	comp=Z,122nm,1.3s						
YUK				pmax	pmax		
	comp=E,88nm,0.7s						
YUK				pmax	pmax		
	comp=N,44nm,0.5s						
YUK				pmax	pmax		
	comp=Z,2µm,1.6s						
YUK				MLR	MLR		
	comp=Z,5µm,19.0s						
YUK				MLR	MLR		
	comp=N,3µm,18.0s						
YUK				MLR	MLR		
	comp=E,3µm,17.0s						
SHO	**Shikotan**	**18.24**	**38**	*e*P	**Pn**	**04 01 57.5**	**+1.0**
SHO				*e*S	**Sn**	**04 05 19.1**	**0.0**
SHO				pmax	pmax		
	comp=Z,568nm,2.6s						
SHO				pmax	pmax		
	comp=Z,35nm,0.8s						
SHO				pmax	pmax		
	comp=E,11nm,0.9s						
SHO				pmax	pmax		
	comp=N,18nm,0.6s						
SHO				MLR	MLR		
	comp=N,4µm,20.0s						
SHO				MLR	MLR		
	comp=Z,4µm,20.0s						
SHO				MLR	MLR		
	comp=E,3µm,19.0s						
TGY	**Tagaytay City**	**18.80**	**213**	P	**P**	**04 02 01.1**	**-1.7**
	comp=E,67nm,0.3s,baz=301,slow=12,SNR=2.3						
YSS	**Yuzh-Sakhalins**	**18.81**	**25**	*e*P	**Pn**	**04 02 06.3**	**+3.0**
	comp=E,182nm,1.4s						
YSS	**Yuzh-Sakhalins**	**18.81**	**25**	⇓*e*P	**Pn**	**04 02 03.1**	**-0.2**
YSS				*e*S	**Sn**	**04 05 30.8**	**-1.9**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				pmax	pmax		
	comp=N,20nm,0.6s						
YSS				pmax	pmax		
	comp=E,20nm,0.7s						
YSS				pmax	pmax		
	comp=Z,1µm,4.0s						
YSS				pmax	pmax		
	comp=N,800nm,3.6s						
YSS				pmax	pmax		
	comp=E,700nm,4.6s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=N,2µm,15.0s						
YSS				MLR	MLR		
	comp=E,2µm,16.0s						
YSS				MLR	MLR		
	comp=E,2µm,16.0s						
KLR	**Kul'dur**	**18.93**	**1**	*c i*P	**P**	**04 02 03.6**	**-0.3**
KLR	**Kul'dur**	**18.93**	**1**	P	**P**	**04 02 02.6**	**-1.3**
	comp=E,2.7nm,0.3s,baz=175,slow=7.9,SNR=150						
KLR				S	**Sn**	**04 05 36.1**	**+0.5**
	baz=197,slow=22,SNR=7.5						
KLR				PcP	**PcP**	**04 06 27.1**	**-1.5**
	comp=E,0.1nm,0.3s,baz=255,slow=4.1,SNR=3.3						
ENH	**Enshi**	**18.98**	**276**	*e*P	**P**	**04 02 04.5**	**-0.2**
	comp=E,134nm,1.0s						
HHC	**Hu-ho-hao-te**	**19.28**	**309**	*e*P	**P**	**04 02 08.4**	**+0.5**
HHC				pP	pP	04 02 19.1	+1.6
HHC				S	**S**	**04 05 41.8**	**-2.3**
HHC				pmax	pmax		
	comp=E,120nm,1.3s						
HHC				pmax	pmax		
	comp=E,1µm,7.7s						
HHC				LR	LR		
	comp=E,6µm,16.2s						
HHC				LR	LR		
	comp=E,6µm,18.3s						
HHC				LR	LR		
	comp=E,8µm,16.0s						
XAN	**Xi'an**	**19.44**	**287**	P	**P**	**04 02 08.6**	**-1.1**
XAN				pP	pP	04 02 19.3	0.0
XAN				PP	**PnPn**	**04 02 28.9**	**+4.0**
XAN				S	**S**	**04 05 47.5**	**+0.1**
XAN				SS	**SnSn**	**04 06 09.6**	**+7.0**
XAN				pmax	pmax		
	comp=E,23nm,1.7s						
XAN				pmax	pmax		
	comp=E,710nm,8.8s						
XAN				LR	LR		
	comp=E,3µm,16.8s						
XAN				LR	LR		
	comp=E,8µm,17.3s						
XAN				LR	LR		
	comp=E,7µm,16.3s						
XAN	**Xi'an**	**19.44**	**287**	*e*P	**P**	**04 02 08.7**	**-1.0**
	comp=E,70nm,0.9s						
XAN	**Xi'an**	**19.44**	**287**	*e*P	**P**	**04 02 08.7**	**-1.0**
XAN				pmax	pmax		
	comp=Z,70nm,0.9s						
KUR	**Kuril'sk**	**19.72**	**36**	*e*P	**P**	**04 02 13.3**	**+0.8**
KUR				*e*S	**Sn**	**04 05 56.1**	**+1.5**
KUR				pmax	pmax		
	comp=Z,68nm,0.8s						
KUR				pmax	pmax		
	comp=E,41nm,1.2s						
KUR				pmax	pmax		
	comp=N,57nm,0.6s						
KUR				pmax	pmax		
	comp=Z,520nm,1.4s						
KUR				MLR	MLR		
	comp=Z,3µm,15.0s						
KUR				MLR	MLR		
	comp=N,4µm,20.0s						
KUR				MLR	MLR		
	comp=E,726nm,18.0s						
BTO	**Baotou**	**20.23**	**306**	*e*P	**P**	**04 02 12.9**	**-5.4**
BTO				S	**S**	**04 06 00.3**	**-2.9**
BTO				LR	LR		
	comp=N,6006µm,15.1s						
BTO				LR	LR		
	comp=E,8656µm,15.4s						
RCP	**Roxas**	**20.31**	**205**	⇑*e*P	**P**	**04 02 20.3**	**+1.1**
GUMO	**Guam**	**20.72**	**140**	*e*P	Pn	04 02 25.7	-0.4
GUMO				LR	LR		
	comp=Z,4µm,18.0s						
GUMO	**Guam**	**20.72**	**140**	P	**P**	**04 02 23.3**	**-0.3**
	comp=Z,266nm,0.7s,baz=186,slow=23,SNR=10.0						
GUMO				LR	LR	04 10 10.7	
	comp=Z,3µm,18.1s,baz=336,slow=36						
GRNR	**Gornyy**	**20.80**	**9**	*e*P	**P**	**04 02 22.2**	**-2.1**
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
HIA	**Hailar**	**20.95**	**338**	*e*P	**P**	**04 02 25.1**	**-0.7**
	comp=Z,116nm,1.1s						
HIA				LR	LR		
	comp=Z,10µm,18.0s						
HIA	**Hailar**	**20.95**	**338**	*c i*P	**P**	**04 02 24.8**	**-1.1**
HIA				pmax	pmax		
	comp=Z,28nm,1.0s						
GYA	**Guiyang**	**22.14**	**266**	⇓*i*P	**P**	**04 02 38.9**	**0.0**
GYA				pP	pP	04 02 50.3	+1.7
GYA				sP	sP	04 02 55.0	+1.2
GYA				PP		04 03 07.8	
GYA				S	**S**	**04 06 39.6**	**-1.2**
GYA				sS	Sn	04 06 53.4	+0.1
GYA				SS	**SnSn**	**04 07 15.5**	**+6.5**
GYA				pmax	pmax		
	comp=Z,140nm,0.6s						
GYA				pmax	pmax		
	comp=Z,360nm,4.9s						
GYA				LR	LR		
	comp=Z,5µm,19.8s						
GYA				LR	LR		
	comp=Z,3µm,20.7s						
GYA				LR	LR		
	comp=Z,6µm,19.4s						
TYV	**Tymovskoe**	**22.20**	**19**	*e*P	**P**	**04 02 40.0**	**+0.8**
TYV				*e*		04 06 44.8	
TYV				pmax	pmax		
	comp=Z,200nm,2.3s						
TYV				pmax	pmax		
	comp=Z,31nm,0.9s						
TYV				MLR	MLR		
	comp=Z,2µm,16.0s						
QIZ	**Qiongzhong**	**22.57**	**245**	P	**P**	**04 02 43.1**	**-0.5**

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QIZ                                  sP     sP      04 02 58.3 +0.1
QIZ                                  S      S       04 06 48.4 -0.1
QIZ                                  sS     sS      04 07 05.8 +1.3
QIZ                                  pmax   pmax
       comp=Z,45nm,1.3s
QIZ                                  LR     LR
       comp=Z,3µm,24.0s
QIZ                                  LR     LR
       comp=Z,5µm,16.2s
QIZ                                  LR     LR
       comp=Z,5µm,15.7s
QIZ    Qiongzhong         22.57 245  eP     P       04 02 44.3 +0.8
       comp=Z,50nm,0.9s
QIZ                                  LR     LR
       comp=Z,5µm,21.0s
ZEA    Zeya               23.64 354  eP     P       04 02 51.0 -2.9
ZEA                                  e              04 06 32.0
ZEA                                  eS     S       04 07 06.0 +0.3
ZEA                                  eSS    SnSn    04 07 51.0 +5.7
ZEA                                  pmax   pmax
       comp=N,59nm,1.0s
ZEA                                  pmax   pmax
       comp=Z,64nm,1.0s
ZEA                                  pmax   pmax
       comp=Z,600nm,6.0s
ZEA                                  pmax   pmax
       comp=N,400nm,5.0s
ZEA                                  smax   smax
       comp=N,1µm,11.0s
ZEA                                  MLR    MLR
       comp=N,2µm,15.0s
ZEA                                  MLR    MLR
       comp=Z,2µm,15.0s
DAV    Davao City (W)     23.74 195  PFAKE          04 03 10.0  +15
DAV                                  LR     LR
       comp=Z,2µm,19.0s
DAV    Davao City (W)     23.74 195  LR     LR      04 12 27.7
       comp=Z,2µm,19.8s,baz=34,slow=37
LZH    Lanzhou            23.79 291  eP     P       04 02 54.1 -1.6
LZH                                  pP     pP      04 03 06.1 +0.2
LZH                                  sP     sP      04 03 12.9 +1.7
LZH                                  eS     S       04 07 01.6 -7.1
LZH                                  SS     Sn      04 07 55.8  +23
LZH                                  pmax   pmax
       comp=Z,350nm,1.1s
LZH                                  pmax   pmax
       comp=Z,1µm,5.2s
LZH                                  LR     LR
       comp=Z,5µm,14.6s
LZH                                  LR     LR
       comp=Z,15µm,17.4s
LZH                                  LR     LR
       comp=Z,22µm,17.3s
NKL    Nikolayevsk        23.82  14  eP     P       04 02 55.0 -0.6
NKL                                  e              04 03 07.0
NKL                                  eS     S       04 07 16.0 +7.4
NKL                                  pmax   pmax
       comp=Z,280nm,1.0s
NKL                                  smax   smax
       comp=N,1µm,14.0s
NKL                                  MLR    MLR
       comp=N,2µm,16.0s
NKL                                  MLR    MLR
       comp=Z,3µm,16.0s
CD2    Chengdu            23.84 279  ⇑P     P       04 02 54.4 -1.7
CD2                                  pP     pP      04 03 05.5 -0.7
CD2                                  sP     sP      04 03 10.9 -0.7
CD2                                  S      S       04 07 07.6 -1.8
CD2                                  sS     sS      04 07 26.8 +1.0
CD2                                  pmax   pmax
       comp=Z,300nm,0.6s
CD2                                  pmax   pmax
       comp=Z,3µm,3.7s
CD2                                  LR     LR
       comp=Z,10µm,15.3s
CD2                                  LR     LR
       comp=Z,12µm,17.3s
CD2                                  LR     LR
       comp=Z,18µm,18.6s
CTBH   Cotabato--PC H     23.92 198⇑ eP     P       04 02 57.5 +0.7
ULN    Ulaanbaatar        25.67 320  eP     P       04 03 10.9 -1.8
       comp=Z,70nm,1.0s
ULN                                  LR     LR
       comp=Z,6µm,21.0s
ULN    Ulaanbaatar        25.67 320c iP     P       04 03 11.7 -1.0
ULN                                  pmax   pmax
       comp=Z,127nm,1.7s
ULN    Ulaanbaatar        25.67 320  P      P       04 03 11.9 -0.8
       SNR=42
ULN                                  P      P       04 03 11.9 -0.8
       SNR=42
KMI    Kunming            25.91 266  P      P       04 03 14.4 -0.8
KMI                                  pP     pwP     04 03 26.9 -0.8
KMI                                  sP     sP      04 03 31.8 +1.1
KMI                                  PP     pP      04 03 57.8  +32
KMI                                  S      S       04 07 35.4 -7.5
KMI                                  sS     sS      04 07 56.6 -2.9
KMI                                  pmax   pmax
       comp=Z,65nm,0.8s
KMI                                  pmax   pmax
       comp=Z,360nm,4.3s
KMI                                  LR     LR
       comp=Z,2µm,18.4s
KMI                                  LR     LR
       comp=Z,3µm,20.2s
KMI                                  LR     LR
       comp=Z,5µm,19.0s
KMI    Kunming            25.91 266  eP     P       04 03 14.4 -0.8
       comp=Z,49nm,0.8s
KMI                                  LR     LR
       comp=Z,5µm,20.0s
KMI    Kunming            25.91 266  eP     P       04 03 14.4 -0.8
KMI                                  pmax   pmax
       comp=Z,49nm,0.8s
KMI                                  MLR    MLR
       comp=Z,5µm,20.0s
SONA0  Songino Array      26.02 319  eP     P       04 03 14.8 -1.0
SONA0                                eScP   ScP     04 10 20.7 +1.0
SONM   Songino Array      26.02 319  P      P       04 03 14.8 -1.0
       comp=Z,32nm,0.6s,baz=140,slow=9.8,SNR=155
SONM                                 ScP    ScP     04 10 20.7 +1.0
       comp=Z,0.6nm,0.9s,baz=129,slow=3.9,SNR=2.7
SONM                                 PKiKP  PKiKP   04 14 21.8 -0.7
       comp=Z,0.7nm,0.7s,baz=201,slow=1.3,SNR=4.7
SONM                                 LR     LR      04 15 03.0
       comp=Z,6µm,19.6s,baz=130,slow=40
SONA1  Songino Array      26.02 319  eP     P       04 03 14.2 -1.7
KDM    Kudat              27.00 214  P      P       04 03 29.3 +4.4
GTA    Gaotai             27.41 298  ⇑P     P       04 03 27.1 -1.4
GTA                                  pP     pP      04 03 39.8 +0.8
GTA                                  sP     sP      04 03 44.4 +0.3
GTA                                  PcP    PcP     04 06 47.3 +0.7
GTA                                  S      S       04 08 01.1 -5.1
GTA                                  sS     sS      04 08 21.8 -0.6
GTA                                  SS     SnSn    04 09 19.4 +1.6
GTA                                  ScP    ScP     04 10 24.0  0.0
GTA                                  PcS    PcS     04 10 28.8 +0.4
GTA                                  ScS    ScS     04 14 16.6 +0.9
GTA                                  pmax   pmax
       comp=Z,15nm,1.5s
GTA                                  pmax   pmax
       comp=Z,270nm,8.6s
GTA                                  LR     LR
       comp=Z,2µm,18.4s
GTA                                  LR     LR
       comp=Z,3µm,18.7s
GTA                                  LR     LR
       comp=Z,5µm,17.8s
SKR    Severo-Kuril's     27.47  35⇑ eP     P       04 03 29.4 +0.7
SDKM   Sandakan           27.95 212  P      P       04 03 35.0 +1.6
KKM    Kota Kinabalu      28.06 214  PFAKE          04 03 50.0  +16
KKM                                  LR     LR
       comp=Z,2µm,20.0s
KKM    Kota Kinabalu      28.06 214  P      P       04 03 37.2 +2.8
TSM    Tawau              28.86 209  P      P       04 03 42.6 +1.2
ZAK    Zakamensk          29.12 322  eP     P       04 03 42.0 -1.6
ZAK                                  pmax   pmax
       comp=Z,23nm,1.1s
TNTI   Ternate            29.60 188  eP     P       04 03 47.2 -0.8
       comp=Z,225nm,1.2s
TNTI                                 LR     LR
       comp=Z,800nm,21.0s
TNTI   Ternate            29.60 188  P      P       04 03 47.9 -0.1
       comp=Z,165nm,1.2s,comp=Z,2µm
TLY    Talaya             29.66 324  eP     P       04 03 48.1 -0.2
       comp=Z,11nm,0.8s
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TLY                                  LR     LR
       comp=Z,5µm,18.0s
TLY    Talaya             29.66 324c iP     P       04 03 47.6 -0.7
TLY    Talaya             29.66 324  P      P       04 03 47.6 -0.7
       SNR=12
TLY                                  P      P       04 03 47.6 -0.7
       SNR=12
IRK    Irkutsk            29.68 325  eP     P       04 03 47.3 -1.1
IRK                                  e              04 06 52.5
IRK                                  pmax   pmax
       comp=Z,74nm,2.8s
PEA0B  Petropavlovsk-     29.77  32  eP     P       04 03 49.9 +0.8
       comp=Z,83nm,1.2s
PEA0B                                LR     LR
       comp=Z,3µm,19.0s
PETK   Petropavlovsk-     29.77  32  eP     P       04 03 49.4 +0.3
PETK   Petropavlovsk-     29.77  32  P      P       04 03 48.3 -0.9
       comp=Z,31nm,1.0s,baz=208,slow=5.9,SNR=21
PETK                                 PcP    PcP     04 06 52.3 +0.3
       comp=Z,0.6nm,0.3s,baz=242,slow=2.8,SNR=5.1
PETK                                 LR     LR      04 17 55.1
       comp=Z,3µm,18.4s,baz=222,slow=41
PEA1   Petropavlovsk-     29.77  32  eP     P       04 03 48.3 -0.9
PEA1                                 ePcP   PcP     04 06 52.3 +0.3
BOD    Bodaibo            30.07 341  eP     P       04 03 49.4 -2.3
BOD                                  e              04 06 47.1
BOD                                  pmax   pmax
       comp=Z,22nm,1.8s
PET    Petropavlovsk      30.16  33  eP     P       04 03 52.9 +0.3
       comp=Z,162nm,1.5s
PET                                  LR     LR
       comp=Z,2µm,20.0s
PET    Petropavlovsk      30.16  33⇓ iP     P       04 03 53.1 +0.5
PET                                  eS     S       04 08 48.3 -0.5
PET                                  pmax   pmax
       comp=Z,16nm,0.7s
PET                                  pmax   pmax
       comp=Z,200nm,16.5s
PET                                  MLR    MLR
       comp=Z,2µm,20.0s
SIJI   Sorong             30.98 180  P      P       04 03 58.9 -1.3
       comp=Z,13nm,0.8s,baz=359,slow=15,SNR=11
SIJI                                 PcP    PcP     04 06 56.0 +0.2
       comp=Z,23nm,0.8s,baz=44,slow=3.2,SNR=8.1
MRSI   Marisa             30.99 199  P      P       04 03 59.9 -0.4
       comp=Z,17nm,1.1s
MOY    Mondy              31.03 322  eP     P       04 03 59.5 -1.0
MOY                                  pmax   pmax
       comp=Z,53nm,2.7s
CHTO   Chiang Mai         31.60 256  eP     P       04 04 05.3 -0.4
       comp=Z,57nm,0.7s
CHTO                                 ePcP   PcP     04 06 58.9 +1.4
CHTO                                 LR     LR
       comp=Z,3µm,20.0s
CHTO   Chiang Mai         31.60 256  eP     P       04 04 05.3 -0.4
CHTO                                 e              04 06 58.9
CHTO                                 pmax   pmax
       comp=Z,57nm,0.7s
CHTO   Chiang Mai         31.60 256  P      P       04 04 05.2 -0.4
       SNR=20
CHTO                                 P      P       04 04 05.2 -0.4
       SNR=20
MPSI   Mapaga             31.75 202  P      P       04 04 07.1 +0.2
       comp=Z,18nm,1.4s
CM31   Chiang Mai Arr     31.76 256  eP     P       04 04 07.3 +0.1
CM31                                 ePcP   PcP     04 06 57.2 -0.7
CM31   Chiang Mai Arr     31.76 256  P      P       04 04 07.1  0.0
       SNR=9.8
CMAR   Chiang Mai Arr     31.76 256  i P    P       04 04 06.9 -0.2
CMAR                                 pmax   pmax
       comp=Z,13nm,0.7s
CMAR   Chiang Mai Arr     31.76 256  P      P       04 04 06.2 -0.9
       comp=Z,11nm,0.6s,baz=54,slow=6.5,SNR=64
CMAR                                 PcP    PcP     04 06 57.2 -0.7
       comp=Z,10nm,0.8s,baz=40,slow=1.7,SNR=14
CMAR                                 LR     LR      04 18 57.8
       comp=Z,3µm,19.1s,baz=68,slow=40
CM01   Chiang Mai Arr     31.77 256  eP     P       04 04 06.5 -0.7
CM01                                 ePcP   PcP     04 06 59.5 +1.6
YAK    Yakutsk            31.78 358  eP     P       04 04 06.2 -0.5
YAK                                  e*PP   pP      04 04 16.2 -1.0
YAK                                  e              04 05 08.9
YAK                                  ePPP   PPP     04 05 20.9
YAK                                  e              04 06 56.7
YAK                                  eS     S       04 09 14.5 +0.6
YAK                                  e*SS   sS      04 09 29.7 -0.9
YAK                                  eSS    SnSn    04 11 02.0 -1.4
YAK                                  e              04 14 32.4
YAK                                  pmax   pmax
       comp=Z,200nm,0.8s
YAK                                  pmax   pmax
       comp=N,92nm,0.9s
YAK                                  pmax   pmax
       comp=E,19nm,0.9s
YAK                                  pmax   pmax
       comp=Z,284nm,2.3s
YAK                                  pmax   pmax
       comp=N,388nm,2.0s
YAK                                  pmax   pmax
       comp=E,408nm,2.9s
YAK                                  smax   smax
       comp=N,726nm,2.2s
YAK                                  smax   smax
       comp=E,452nm,1.8s
YAK                                  MLR    MLR
       comp=Z,7µm,14.0s
YAK                                  MLR    MLR
       comp=N,7µm,16.0s
YAK                                  MLR    MLR
       comp=E,2µm,14.0s
BTM    Bintulu            32.06 216  P      P       04 04 11.9 +2.1
LUWI   Luwuk              32.23 196  PFAKE          04 04 20.0 +8.8
LUWI                                 LR     LR
       comp=Z,500nm,22.0s
APSI   Ampana             32.40 199  P      P       04 04 11.3 -1.3
       comp=Z,47nm,1.1s
KNGR   Kungurtug, Tuv     32.44 318d iP     P       04 04 11.3 -1.6
SANI   Sanana             32.57 190  P      P       04 04 12.8 -1.3
       comp=Z,96nm,1.1s,comp=Z,1µm
FAKI   Fak Fak            33.02 179  eP     P       04 04 17.6 -0.5
       comp=Z,207nm,0.9s
FAKI                                 ePcP   PcP     04 07 02.0 +0.7
FAKI                                 LR     LR
       comp=Z,2µm,20.0s
FAKI   Fak Fak            33.02 179  P      P       04 04 18.1  0.0
       comp=Z,295nm,1.1s,comp=Z,3µm
SBUM   Sibu               33.15 217  eP     P       04 04 19.5 +0.3
       comp=Z,10nm,1.0s
SBUM                                 LR     LR
       comp=Z,1µm,20.0s
SBUM   Sibu               33.15 217  P      P       04 04 21.0 +1.8
NLAI   Namlea             33.59 188  P      P       04 04 23.6 +0.6
       comp=Z,193nm,1.0s,comp=Z,2µm
H11N2  WAKE ISLAND Hy     33.66 100  T      T       04 40 26.3
       baz=296,slow=75,SNR=46
H11N1  WAKE ISLAND Hy     33.66 100  T      T       04 40 26.5
       baz=296,slow=75,SNR=66
H11N3  WAKE ISLAND Hy     33.68 100  T      T       04 40 28.4
       baz=296,slow=75,SNR=75
GENI   Genyem             33.73 164  P      P       04 04 24.8 +0.5
       comp=Z,185nm,1.2s,comp=Z,3µm
JAY    Jayapura           33.78 163  P      P       04 04 25.9 +1.1
       comp=Z,554nm,1.2s,comp=Z,7µm
JAY    Jayapura           33.78 163  P      P       04 04 24.5 -0.3
       comp=Z,46nm,1.0s,baz=305,slow=5.8,SNR=9.5
JAY                                  PcP    PcP     04 07 03.7 +0.1
       comp=Z,17nm,0.8s,baz=38,slow=19,SNR=3.0
LSA    Lhasa              34.79 279  P      P       04 04 34.6 +0.6
LSA                                  S      S       04 09 58.9 -3.5
LSA                                  pmax   pmax
       comp=Z,13nm,0.6s
LSA                                  LR     LR
       comp=Z,5µm,20.0s
LSA    Lhasa              34.79 279  eP     P       04 04 34.3 +0.3
       comp=Z,17nm,0.9s
LSA                                  LR     LR
       comp=Z,5µm,20.0s
LSA    Lhasa              34.79 279  eP     P       04 04 34.3 +0.3
LSA                                  pmax   pmax
       comp=Z,17nm,0.9s
LSA                                  MLR    MLR
       comp=Z,5µm,20.0s
KSM    Kuching            34.99 219  eP     P       04 04 37.1 +1.9
       comp=Z,31nm,0.8s
KSM    Kuching            34.99 219  P      P       04 04 38.1 +2.9
SHL    Shillong           35.16 272  eP     P       04 04 35.7 -1.2
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       comp=Z,77nm,0.9s
SHL                                  LR     LR
       comp=Z,3µm,22.0s
SHL    Shillong           35.16 272  eP     P       04 04 35.7 -1.2
SHL                                  pmax   pmax
       comp=Z,77nm,0.9s
SEY    Seymchan           35.34  16⇑ eP     P       04 04 38.8 +1.1
SEY    Seymchan           35.34  16  P      P       04 04 37.4 -0.3
       comp=Z,12nm,1.1s,baz=210,slow=7.0,SNR=20
SEY                                  PcP    PcP     04 07 07.2 +0.1
       comp=Z,5.2nm,0.8s,baz=199,slow=3.7,SNR=3.7
MANU   Manus Island       35.55 152  PFAKE          04 04 50.0  +10
MANU                                 LR     LR
       comp=Z,2µm,21.0s
SPSI   Sidrap Palu        35.84 200  P      P       04 04 38.7 -3.8
       comp=Z,7.3nm,0.8s
BNSI   Bone               36.16 199  P      P       04 04 43.5 -1.7
       comp=Z,27nm,1.1s,comp=Z,2µm
BRDH   Bariadhala         36.30 268  P      P       04 04 45.2 -1.2
       comp=Z,130nm,0.4s,baz=240,slow=23,SNR=5.1
BRDH                                 LR     LR      04 23 05.3
       comp=Z,2µm,18.3s,baz=133,slow=42
KTGM   Kuala Trenggan     36.44 233  P      P       04 04 53.2 +5.5
KAPI   Kappang            36.84 200  PFAKE          04 05 00.0 +9.0
KAPI                                 LR     LR
       comp=Z,500nm,20.0s
WMQ    Urumqi             37.03 304  P      P       04 04 52.1 -0.4
WMQ                                  pP     pwP     04 05 04.5 -1.2
WMQ                                  sP     sP      04 05 12.9 +4.9
WMQ                                  PP     PnPn    04 06 20.1 +2.3
WMQ                                  S      S       04 10 32.6 -3.0
WMQ                                  PcS    PcS     04 11 01.3 +0.4
WMQ                                  ScS    ScS     04 15 00.3 -3.8
WMQ                                  pmax   pmax
       comp=Z,130nm,1.5s
WMQ                                  pmax   pmax
       comp=Z,410nm,3.8s
WMQ                                  LR     LR
       comp=Z,4µm,16.5s
WMQ                                  LR     LR
       comp=Z,7µm,18.5s
WMQ                                  LR     LR
       comp=Z,6µm,18.5s
WMQ    Urumqi             37.03 304  eP     P       04 04 52.2 -0.3
       comp=Z,113nm,1.3s
WMQ                                  ePcP   PcP     04 07 13.2 +0.5
WMQ                                  LR     LR
       comp=Z,5µm,19.0s
WMQ    Urumqi             37.03 304  eP     P       04 04 52.2 -0.3
WMQ                                  e              04 07 13.2
WMQ                                  pmax   pmax
       comp=Z,113nm,1.3s
WMQ                                  MLR    MLR
       comp=Z,5µm,19.0s
BKSI   Bulukumba          37.03 199  P      P       04 04 50.9 -1.7
       comp=Z,21nm,1.0s,comp=Z,348nm
BKSI                                 pP     pP      04 04 59.5 -3.4
       comp=Z,21nm,1.0s,comp=Z,348nm
SAUI   Saumlaki           38.04 180  eP     P       04 05 01.9 +0.7
       comp=Z,287nm,1.4s
KULM   Kulim              38.21 236  eP     P       04 05 04.0 +1.3
       comp=Z,48nm,0.9s
KULM                                 LR     LR
       comp=Z,900nm,21.0s
KULM   Kulim              38.21 236  P      P       04 05 05.0 +2.3
DGZ    Jazzator, Alta     38.24 313c iP     P       04 05 01.8 -1.0
IPM    Ipoh               38.51 234  eP     P       04 05 05.9 +0.6
       comp=Z,56nm,0.7s
IPM    Ipoh               38.51 234  P      P       04 05 07.0 +1.7
MYKOM  Kota Tinggi        38.58 228  PFAKE          04 05 20.0  +14
MYKOM                                LR     LR
       comp=Z,600nm,20.0s
ODAN   Odare              38.68 276  eP     P       04 05 06.0 -0.8
       comp=Z,94nm,0.6s
KGM    Kluang             38.76 229  P      P       04 05 09.7 +2.4
FRIM   Kepong             38.98 232  P      P       04 05 11.0 +1.8
RAMN   Ramite             39.33 277  eP     P       04 05 11.2 -1.1
       comp=Z,25nm,0.3s
ZSN    Zaisan             39.48 309  eP     P       04 05 11.2 -1.8
ZSN                                  pmax   pmax
       comp=Z,43nm,0.9s
ZSN                                  MLR    MLR
       comp=Z,1µm,19.0s
ZSN    Zaisan             39.48 309  eP     P       04 05 11.3 -1.8
       comp=Z,43nm,0.9s
ZSN                                  eLR    LR      04 22 11.5
       comp=Z,1µm,18.5s
JIRN   Jiri               39.50 278  eP     P       04 05 13.3 -0.5
       comp=Z,101nm,0.6s
RABL   Rabaul             39.59 146  eP     P       04 05 14.7 +0.5
       comp=Z,115nm,0.7s
RABL                                 LR     LR
       comp=Z,1µm,18.0s
MMRI   Maumere            39.70 194  eP     P       04 05 14.6 -0.5
       comp=Z,182nm,1.3s
MMRI                                 LR     LR
       comp=Z,600nm,22.0s
MMRI   Maumere            39.70 194  P      P       04 05 15.8 +0.8
       comp=Z,67nm,1.2s
GUN    Gumba              39.70 278  eP     P       04 05 15.2 -0.3
       comp=Z,233nm,0.4s
EDFI   Ende, Flores       39.93 195  P      P       04 05 16.0 -1.1
       comp=Z,46nm,1.5s
PKI    Pulchoki           40.19 278  eP     P       04 05 18.7 -0.8
PKIN   Phulchoki          40.20 278  eP     P       04 05 18.5 -1.1
KKN    Kakani             40.24 278  eP     P       04 05 19.2 -0.7
       comp=Z,60nm,0.5s
PPBI   Pangkal Pinang     40.31 221  P      P       04 05 19.3 -0.9
SOEI   Soe                40.40 191  eP     P       04 05 19.0 -2.1
       comp=Z,178nm,0.9s
SOEI                                 LR     LR
       comp=Z,900nm,21.0s
SOEI   Soe                40.40 191  P      P       04 05 19.8 -1.2
       comp=Z,223nm,1.0s,comp=Z,2µm
DMN    Daman              40.44 278  eP     P       04 05 20.6 -0.9
       comp=Z,31nm,0.4s
ZAA0   Zalesovo Array     40.91 319  eP     P       04 05 23.5 -1.3
       comp=Z,58nm,1.3s
ZAA0                                 LR     LR
       comp=Z,5µm,19.0s
ZALV   Zalesovo Beam      40.91 319  eP     P       04 05 23.0 -1.7
ZALV   Zalesovo Beam      40.91 319  eP     P       04 05 23.0 -1.7
ZALV   Zalesovo Beam      40.91 319  P      P       04 05 23.5 -1.3
       comp=Z,17nm,0.8s,baz=101,slow=7.7,SNR=71
ZALV                                 PcP    PcP     04 07 24.8 +0.2
       comp=Z,18nm,0.8s,baz=110,slow=3.7,SNR=9.8
ZALV                                 ScP    ScP     04 11 13.0 +1.8
       comp=Z,2.6nm,0.9s,baz=149,slow=3.1,SNR=5.5
ZALV                                 LR     LR      04 24 14.9
       comp=Z,5µm,19.1s,baz=90,slow=39
ZAA1   Zalesovo Array     40.91 319  eP     P       04 05 23.5 -1.3
ZAA1                                 ePcP   PcP     04 07 24.8 +0.2
ZAA1                                 eScP   ScP     04 11 13.0 +1.8
BATI   Baumata            40.95 192  P      P       04 05 24.1 -1.3
       comp=Z,132nm,1.1s,comp=Z,1µm
BATI   Baumata            40.95 192  P      P       04 05 23.9 -1.6
       comp=Z,211nm,0.7s,baz=166,slow=0.3,SNR=50
BATI                                 PcP    PcP     04 07 26.1 +0.8
       comp=Z,14nm,0.5s,baz=347,slow=2.2,SNR=4.1
LHMI   Lhok Sumawe        40.95 239  PFAKE          04 05 40.0  +14
LHMI                                 LR     LR
       comp=Z,1µm,18.0s
PLAI   Plampang           41.05 201  P      P       04 05 25.7 -0.5
       comp=Z,71nm,1.3s,comp=Z,1µm
MK01   Makanchi Array     41.13 308  eP     P       04 05 25.2 -1.5
MK31   Makanchi Array     41.14 308  eP     P       04 05 25.7 -1.1
MK31                                 ePP    PP      04 07 02.6 +0.6
MK31   Makanchi Array     41.14 308  i P    P       04 05 25.3 -1.5
MK31                                 pmax   pmax
       comp=Z,36nm,0.9s
MK32   Makanchi Array     41.14 308  eP     P       04 05 25.8 -1.0
MK32                                 ePcP   PcP     04 07 26.2 +0.6
MK32                                 eScP   ScP     04 11 14.7 +2.3
MKAR   Makanchi Array     41.14 308  eP     P       04 05 25.7 -1.0
       comp=Z,138nm,0.8s
MKAR                                 ePP    PP      04 07 04.0 +1.9
MKAR                                 LR     LR
       comp=Z,700nm,18.0s
MKAR   Makanchi Array     41.14 308  P      P       04 05 25.8 -1.0
       comp=Z,24nm,0.8s,baz=95,slow=10,SNR=214
MKAR                                 PcP    PcP     04 07 26.2 +0.6
       comp=Z,13nm,0.8s,baz=84,slow=3.3,SNR=6.7
MKAR                                 ScP    ScP     04 11 14.7 +2.3
       comp=Z,3.4nm,1.1s,baz=88,slow=3.8,SNR=5.8
MKAR                                 PKiKP  PKiKP   04 14 31.4 -2.1
       comp=Z,0.3nm,0.5s,baz=160,slow=2.0,SNR=4.9
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MKAR				LR	LR	04 24 27.5	
	comp=Z,3µm,19.2s,baz=92,slow=39						
PSI	Prapat	41.17	235	eP	P	04 05 28.4	+0.9
	comp=Z,30nm,0.7s						
PSI				ePcP	PcP	04 07 27.5	+1.2
PSI				LR	LR		
	comp=Z,1µm,20.0s						
PSI	Prapat	41.17	235	P	P	04 05 27.7	+0.3
	comp=Z,14nm,0.7s,baz=0.1,slow=5.5,SNR=12						
PSI				PcP	PcP	04 07 26.0	-0.3
	comp=Z,12nm,0.7s,baz=359,slow=0.7,SNR=6.1						
SRBI	Singaraja	41.22	205	P	P	04 05 27.9	+0.3
	comp=Z,14nm,0.6s						
GRJI	Gresik	41.23	209	P	P	04 05 29.3	+1.6
	comp=Z,107nm,1.1s,comp=Z,1µm						
MAKZ	Makanchi	41.36	308	eP	P	04 05 27.6	-1.0
	comp=Z,35nm,1.0s						
MAKZ				ePP	PP	04 07 01.3	-3.1
MAKZ				LR	LR		
	comp=Z,3µm,20.0s						
MAKZ	Makanchi	41.36	308	P	P	04 05 27.4	-1.1
MAKZ				pmax	pmax		
	comp=Z,24nm,0.8s						
DANN	Dangsing	41.40	280	eP	P	04 05 29.0	-0.5
TBJI	Tambak Boyo	41.41	210	P	P	04 05 30.5	+1.3
	comp=Z,204nm,1.0s						
TIXI	Tiksi	41.45	359	eP	P	04 05 28.4	-0.4
	comp=Z,1.7nm,0.8s						
TIXI				LR	LR		
	comp=Z,3µm,20.0s						
TIXI	Tiksi	41.45	359	⇑eP	P	04 05 28.0	-0.9
TIXI				pmax	pmax		
	comp=Z,28nm,1.3s						
TIXI	Tiksi	41.45	359	P	P	04 05 28.4	-0.4
	comp=Z,9.3nm,0.6s,baz=214,slow=2.5,SNR=14						
KCSI	Kotacane, Aceh	41.49	237	P	P	04 05 31.3	+1.3
	comp=Z,47nm,0.9s,comp=Z,668nm						
BKNI	Bangkinang	41.52	230	eP	P	04 05 31.1	+1.0
	comp=Z,141nm,1.2s						
BKNI				LR	LR		
	comp=Z,1µm,20.0s						
KOLN	Koldanda	41.69	279	eP	P	04 05 31.1	-0.6
JAGI	Jajag, Banyuwa	41.97	206	PFAKE		04 05 40.0	+6.2
JAGI				LR	LR		
	comp=Z,600nm,22.0s						
JAGI	Jajag, Banyuwa	41.97	206	P	P	04 05 36.4	+2.6
BSI	Banda Aceh	42.02	241	P	P	04 05 35.2	+0.9
	comp=Z,48nm,0.9s						
NVS	Novosibirsk	42.05	320	eP	P	04 05 33.7	-0.3
NVS				e		04 07 17.1	
NVS				eS	S	04 11 50.0	-0.3
NVS				pmax	pmax		
	comp=Z,40nm,1.1s						
NVS				pmax	pmax		
	comp=N,14nm,1.2s						
NVS				pmax	pmax		
	comp=E,26nm,1.2s						
NVS				smax	smax		
	comp=E,30nm,2.3s						
NGJI	Ngawi	42.07	210	P	P	04 05 36.9	+2.3
	comp=E,66nm,1.1s						
PYUN	Piuthan	42.12	280	eP	P	04 05 34.7	-0.6
MNSI	Mandailing Nat	42.15	232	P	P	04 05 36.9	+1.6
	comp=E,27nm,0.7s,comp=E,8µm						
PWJI	Pagerwojo	42.51	210	P	P	04 05 37.1	-1.1
	comp=E,49nm,0.8s						
PDSI	Padang	42.82	229	P	P	04 05 41.1	+0.3
	comp=E,24nm,0.9s,comp=E,4µm						
MTN	Manton Dam	42.88	180	eP	P	04 05 39.8	-1.3
	comp=E,154nm,1.3s						
MTN				LR	LR		
	comp=Z,500nm,22.0s						
BILL	Bilibino	42.94	18	eP	P	04 05 41.8	+0.6
	comp=Z,36nm,0.9s						
BILL	Bilibino	42.94	18	d iP	P	04 05 41.6	+0.5
BILL				e		04 05 54.4	
BILL				e		04 07 20.6	
BILL				e		04 07 31.0	
BILL				ePPP	PPP	04 07 51.5	
BILL				pmax	pmax		
	comp=Z,53nm,1.3s						
BILL				MLR	MLR		
	comp=Z,1µm,20.0s						
PDGK	Podgornoye	42.95	302	P	P	04 05 40.1	-1.7
PDGK				pmax	pmax		
	comp=Z,37nm,0.9s						
UGM	Wanagama	42.97	211	eP	P	04 05 42.5	+0.5
	comp=Z,269nm,1.3s						
UGM	Wanagama	42.97	211	P	P	04 05 41.9	-0.1
	comp=Z,162nm,1.1s						
GSI	Gunungsitoli	43.18	235	eP	P	04 05 44.3	+0.6
	comp=Z,116nm,1.2s						
GSI				LR	LR		
	comp=Z,1µm,19.0s						
GSI	Gunungsitoli	43.18	235	P	P	04 05 44.3	+0.6
	comp=Z,92nm,1.2s						
KPJI	Karang Pucung	43.20	214	P	P	04 05 44.7	+0.9
	comp=Z,113nm,1.2s,comp=Z,2µm						
KLI	Kotabumi	43.24	221	P	P	04 05 44.3	+0.1
	comp=Z,119nm,0.8s						
KIWB	Kanaga Island	43.25	45	eP	P	04 05 43.4	-0.4
UZB	Uzynbulak	43.30	302	eP	P	04 05 41.6	-3.0
UZB				e*SP	pP	04 05 56.1	+1.0
UZB				pmax	pmax		
	comp=Z,325nm,1.4s						
UZB				MLR	MLR		
	comp=Z,531nm,18.0s						
UZB	Uzynbulak	43.30	302	eP	P	04 05 41.6	-3.0
	comp=Z,325nm,1.4s						
UZB				esP	pP	04 05 56.2	+1.0
UZB				eLR	LR	04 25 00.5	
	comp=Z,531nm,18.1s						
SNSI	Sinabang, Aceh	43.30	237	P	P	04 05 45.1	+0.4
	comp=Z,138nm,0.9s,comp=Z,4µm						
MDSI	Maura Dua	43.32	222	P	P	04 05 46.4	+1.6
	comp=Z,76nm,0.9s,comp=Z,2µm						
LEM	Lembang	43.41	216	P	P	04 05 45.8	+0.1
	comp=Z,101nm,0.8s,baz=56,slow=7.8,SNR=15						
ADK	Adak	43.54	45	eP	P	04 05 45.8	-0.3
	comp=Z,63nm,0.8s						
ADK	Adak	43.54	45	eP	P	04 05 45.8	-0.3
ADK				pmax	pmax		
	comp=Z,63nm,0.9s						
DBJI	Dramaga	43.63	217	P	P	04 05 47.6	+0.3
	comp=Z,60nm,0.7s,comp=Z,26µm						
TDK	Taldyqorghan	43.74	305	eP	P	04 05 46.1	-1.8
TDK				e*SP	pP	04 05 59.7	+1.1
TDK				pmax	pmax		
	comp=Z,886nm,0.8s						
TDK				MLR	MLR		
	comp=Z,3µm,23.0s						
TDK	Taldyqorghan	43.74	305	eP	P	04 05 46.2	-1.8
	comp=Z,886nm,0.8s						
TDK				esP	pP	04 05 59.8	+1.1
TDK				eLR	LR	04 24 34.2	
	comp=Z,3µm,22.5s						
SATY	Saty	43.75	302	c iP	P	04 05 45.8	-2.4
SATY				i *SP	pP	04 05 59.8	+1.0
SATY				pmax	pmax		
	comp=Z,591nm,1.5s						
SATY	Saty	43.75	302	⇑iP	P	04 05 45.9	-2.4
	comp=Z,591nm,1.5s						
SATY				⇓isP	pP	04 05 59.8	+1.0
PRZ	Przheval'sk	43.77	301	eP	P	04 05 49.1	+0.8
	comp=Z,112nm,1.1s						
PRZ				LR	LR		
	comp=Z,3µm,19.0s						
PRZ	Przheval'sk	43.77	301	eP	P	04 05 49.2	+0.8
PRZ				pmax	pmax		
	comp=Z,110nm,1.1s						
CISI	Cisompet, Garu	43.94	215	eP	P	04 05 48.8	-1.0
	comp=Z,44nm,1.0s						
CISI				LR	LR		
	comp=Z,1µm,21.0s						
CISI	Cisompet, Garu	43.94	215	P	P	04 05 48.7	-1.1
	comp=Z,51nm,1.1s,comp=Z,3µm						
KURK	Kurchatov	43.99	313	eP	P	04 05 49.2	-0.6
KURK				ePP	PcP	04 07 34.2	-0.7
KURK				LR	LR		
	comp=Z,4µm,20.0s						
KURK	Kurchatov	43.99	313	c iP	P	04 05 48.7	-1.1
KURK				pmax	pmax		
	comp=Z,39nm,0.9s						
KURK	Kurchatov	43.99	313	P	P	04 05 48.9	-0.9
	SNR=26						
KURK				P	P	04 05 48.9	-0.9
	SNR=26						
KURBB	Kurchatov Arra	44.04	313	P	P	04 05 49.2	-0.9
	comp=Z,24nm,0.8s,baz=98,slow=8.9,SNR=109						
KURBB				PcP	PcP	04 07 34.2	-0.9
	comp=Z,6.8nm,1.0s,baz=98,slow=4.1,SNR=4.5						
TARG	Taragay, Kyrgy	44.24	300	eP	P	04 05 52.2	-0.2
	comp=Z,50nm,0.9s						
TARG				LR	LR		
	comp=Z,2µm,19.0s						
KDJ	Kajisay	44.69	301	eP	P	04 05 55.0	-0.8
	comp=Z,14nm,0.8s						
KDJ				LR	LR		
	comp=Z,3µm,19.0s						
KDJ	Kajisay	44.69	301	eP	P	04 05 55.0	-0.8
KDJ				pmax	pmax		
	comp=Z,14nm,0.8s						
KDJ				MLR	MLR		
	comp=Z,3µm,19.0s						
MDOK	Medeo	44.74	302	d eP	P	04 05 54.6	-1.5
MDOK				e*SP	pP	04 06 07.7	+1.0
MDOK				pmax	pmax		
	comp=Z,410nm,0.8s						
MDOK				MLR	MLR		
	comp=Z,1µm,21.0s						
MDOK	Medeo	44.74	302	⇓eP	P	04 05 54.6	-1.5
	comp=Z,410nm,0.8s						
MDOK				⇑esP	pP	04 06 07.8	+1.0
MDOK				eLR	LR	04 25 34.4	
	comp=Z,1µm,21.4s						
CHKK	Chushkaly	44.77	303	⇑iP	P	04 05 53.6	-2.6
CHKK				e*SP	pP	04 06 07.7	+0.9
CHKK				pmax	pmax		
	comp=Z,390nm,0.9s						
CHKK	Chushkaly	44.77	303	⇑iP	P	04 05 53.7	-2.5
	comp=Z,390nm,0.9s						
CHKK				esP	pP	04 06 07.8	+0.9
TNSS	Tian-Shan	44.82	302	eP	P	04 05 55.8	-1.2
TNSS				e*SP	pwP	04 06 09.7	-0.5
TNSS				pmax	pmax		
	comp=Z,369nm,0.8s						
TNSS	Tian-Shan	44.82	302	eP	P	04 05 55.9	-1.2
	comp=Z,370nm,0.8s						
TNSS				esP	pwP	04 06 09.8	-0.5
AAA	Alma-Ata	44.84	302	c iP	P	04 05 55.6	-1.2
AAA				pmax	pmax		
	comp=Z,343nm,0.8s						
AAA				MLR	MLR		
	comp=Z,643nm,20.0s						
AAA	Alma-Ata	44.84	302	⇑iP	P	04 05 55.6	-1.2
	comp=Z,343nm,0.8s						
AAA				eLR	LR	04 25 44.4	
	comp=Z,643nm,19.6s						
KUU	Kurty	45.23	303	d iP	P	04 05 56.9	-2.9
KUU				pmax	pmax		
	comp=Z,255nm,1.3s						
KUU				MLR	MLR		
	comp=Z,588nm,17.0s						
KUU	Kurty	45.23	303	⇓iP	P	04 05 57.0	-2.9
	comp=Z,255nm,1.3s						
KUU				⇑isP	pwP	04 06 12.2	-0.9
KUU				eLR	LR	04 25 55.4	
	comp=Z,588nm,16.6s						
COEN	Coen	45.41	164	eP	P	04 06 01.8	+0.4
	comp=Z,40nm,0.9s						
COEN				LR	LR		
	comp=Z,900nm,22.0s						
NRN	Naryn	45.61	300	eP	P	04 06 03.1	-0.2
	comp=Z,87nm,1.4s						
NRN				LR	LR		
	comp=Z,2µm,20.0s						
NRN	Naryn	45.61	300	eP	P	04 06 03.1	-0.2
NRN				pmax	pmax		
	comp=Z,87nm,1.3s						
KSH	Kashi	45.81	297	P	P	04 06 08.0	+3.4
KSH				pP	sP	04 06 19.8	-0.6
KSH				PP	PP	04 07 53.4	+1.1
KSH				S	S	04 12 47.4	+1.5
KSH				sS	sS	04 13 11.4	+8.5
KSH				pmax	pmax		
	comp=Z,70nm,0.6s						
KSH				LR	LR		
	comp=Z,2µm,13.7s						
KSH				LR	LR		
	comp=Z,2µm,12.0s						
KSH				LR	LR		
	comp=Z,3µm,14.7s						
TKM2	Tokmak 2	45.81	302	P	P	04 06 04.8	0.0
	SNR=62						
TKM2	Tokmak 2	45.81	302	P	P	04 06 04.6	-0.1
TKM2				pmax	pmax		
	comp=Z,106nm,1.1s						
KZA	Kyzart	46.12	301	P	P	04 06 07.9	+0.5
	SNR=19						
JBP	Jabalpur	46.21	274	eP	P	04 06 07.7	-0.1
JBP				eS	PP	04 08 00.5	+3.9
KBK	Karagaybulak	46.31	302	P	P	04 06 08.5	-0.1
	SNR=20						
NRIK	Noril'sk	46.35	340	P	P	04 06 06.8	-1.5
	comp=Z,15nm,0.6s,baz=119,slow=9.0,SNR=15						
NRIK				ScP	ScP	04 11 32.6	-0.4
	comp=Z,3.3nm,0.4s,baz=116,slow=4.0,SNR=5.1						
NRIK				LR	LR	04 28 07.2	
	comp=Z,5µm,18.0s,baz=127,slow=39						
CHMS	Chumysh	46.43	302	P	P	04 06 09.2	-0.1
	SNR=19						
FRU1	Bishkek	46.53	302	eP	P	04 06 08.7	-1.5
	comp=Z,84nm,1.0s						
FRU1				epP	pwP	04 06 23.0	-0.4
FRU1				LR	LR		
	comp=Z,3µm,20.0s						
FRU1	Bishkek	46.53	302	eP	P	04 06 08.7	-1.5
FRU1				e*PP	pwP	04 06 23.0	-0.4
FRU1				pmax	pmax		
	comp=Z,84nm,1.0s						
FRU1				MLR	MLR		
	comp=Z,3µm,20.0s						
FRU	Bishkek	46.54	302	⇑eP	P	04 06 09.0	-1.2
FRU				i		04 06 22.0	
FRU				eS	S	04 13 00.0	+3.9
FRU				pmax	pmax		
	comp=Z,135nm,2.0s						
FRU				pmax	pmax		
	comp=Z,225nm,2.0s						
USP	Ospenovka	46.60	303	P	P	04 06 10.3	-0.3
	SNR=16						
AAK	Ala-Archa	46.64	302	P	P	04 06 10.9	-0.2
	SNR=11						
AAK	Ala-Archa	46.64	302	eP	P	04 06 10.9	-0.2
	comp=Z,31nm,1.0s						
AAK				LR	LR		
	comp=Z,3µm,19.0s						
AAK	Ala-Archa	46.64	302	P	P	04 06 10.4	-0.8
AAK				pmax	pmax		
	comp=Z,21nm,0.9s						
AAK	Ala-Archa	46.64	302	P	P	04 06 10.7	-0.5
	SNR=14						
AAK				P	P	04 06 10.7	-0.5
	SNR=14						
AAK	Ala-Archa	46.64	302	P	P	04 06 10.2	-1.0
	comp=Z,10nm,0.6s,baz=112,slow=5.4,SNR=34						
AAK				LR	LR	04 28 50.4	
	comp=Z,3µm,18.5s,baz=66,slow=40						
UCH	Uchtor	46.66	301	P	P	04 06 11.9	+0.2
	SNR=52						
BTLS	Baital	46.84	305	c iP	P	04 06 10.2	-2.2
BTLS				i *SP	pP	04 06 24.1	+1.0
BTLS				pmax	pmax		
	comp=Z,394nm,0.9s						
BTLS				MLR	MLR		
	comp=Z,778nm,20.0s						
BTLS	Baital	46.84	305	⇑iP	P	04 06 10.3	-2.2
	comp=Z,394nm,0.9s						
BTLS				⇓isP	pP	04 06 24.2	+1.0
BTLS				eLR	LR	04 26 10.9	
	comp=Z,778nm,19.9s						
EKS2	Erkin-Say	47.17	302	P	P	04 06 15.0	-0.3
	SNR=9.4						
AML	Almayashu	47.27	301	P	P	04 06 16.8	+0.4
	SNR=21						
SFK	Sufi-Kurgan	47.64	298	P	P	04 06 18.2	-0.9
SFK				pmax	pmax		
	comp=Z,46nm,1.1s						
NGP	Nagpur	47.74	272	⇑iP	P	04 06 18.2	-1.6
OTUK	Ortayu	47.94	309	P	P	04 06 20.0	-1.0
OTUK				pmax	pmax		
	comp=Z,39nm,0.8s						
HNR	Honiara	48.05	141	PFAKE		04 06 30.0	+7.9
HNR				LR	LR		
	comp=Z,1µm,19.0s						
HNR	Honiara	48.05	141	LR	LR	04 25 30.9	
	comp=Z,978nm,20.1s,baz=324,slow=35						
MNAS	Manas	48.12	302	P	P	04 06 21.9	-0.8
MNAS				pmax	pmax		
	comp=Z,22nm,0.8s						
NIKH	Nikolski High	48.42	44	PFAKE		04 06 40.0	+15
NIKH				LR	LR		
	comp=Z,2µm,20.0s						
FITZ	Fitzroy Crossi	48.42	187	eP	P	04 06 25.1	+0.2
	comp=Z,27nm,0.8s						
GAMB	Gambell	48.72	30	eP	P	04 06 27.5	+0.8
	comp=Z,61nm,1.4s						
GAMB				LR	LR		
	comp=Z,600nm,20.0s						
NIL	Nilore	48.94	290	eP	P	04 06 30.0	+1.0
	comp=Z,36nm,0.7s						
NIL				LR	LR		
	comp=Z,1µm,20.0s						
NIL	Nilore	48.94	290	eP	P	04 06 30.0	+1.0
NIL				pmax	pmax		
	comp=Z,36nm,0.7s						
NIL				MLR	MLR		
	comp=Z,1µm,20.0s						
BVA0	Borovoye Array	49.27	316	P	P	04 06 30.0	-1.1
BVA0				pmax	pmax		
	comp=Z,27nm,1.0s						
BVAR	Borovoye Array	49.27	316	P	P	04 06 30.4	-0.7
	comp=Z,19nm,0.4s,baz=100,slow=9.6,SNR=121						
BVAR				PcP	PcP	04 07 53.6	+0.1
	comp=Z,14nm,0.7s,baz=79,slow=3.2,SNR=7.1						
BVAR				LR	LR	04 29 37.4	
	comp=Z,3µm,18.4s,baz=102,slow=39						
BRVK	Borovoye	49.33	316	eP	P	04 06 31.0	-0.6
	comp=Z,43nm,0.8s						
BRVK				LR	LR		
	comp=Z,4µm,20.0s						
BRVK	Borovoye	49.33	316	c iP	P	04 06 30.9	-0.6
BRVK				pmax	pmax		
	comp=Z,30nm,0.9s						
BRVK	Borovoye	49.33	316	P	P	04 06 30.9	-0.7
	SNR=24						
BRVK				P	P	04 06 30.9	-0.7
	SNR=24						
KK31	Karatay Array	49.52	303	eP	P	04 06 32.7	-0.5
KK31	Karatay Array	49.52	303	i P	P	04 06 32.5	-0.7
KK31				pmax	pmax		
	comp=Z,67nm,1.1s						
KKAR	Karatay Array	49.52	303	eP	P	04 06 32.7	-0.5
KKAR	Karatay Array	49.52	303	eP	P	04 06 32.7	-0.5
HYB	Hyderabad	49.66	268	i P	P	04 06 33.5	-1.1
	comp=Z,35nm,0.8s						
HYB				esP	pwP	04 06 47.0	-1.2
BTK	Batken	49.68	299	eP	P	04 06 36.1	+1.5
	comp=Z,113nm,1.5s						
BTK				LR	LR		
	comp=Z,2µm,19.0s						
BTK	Batken	49.68	299	eP	P	04 06 36.1	+1.5
BTK				pmax	pmax		
	comp=Z,110nm,1.5s						
WB8	Warramunga Arr	49.88	176	PFAKE		04 06 50.0	+14
WB8				LR	LR		
	comp=Z,400nm,20.0s						
WB4	Warramunga Arr	49.97	176	PFAKE		04 06 50.0	+13
WB4				LR	LR		
	comp=Z,600nm,21.0s						
IUG	Iuzhnay	49.98	301	c iP	P	04 06 36.4	-0.4
IUG				i *SP	pP	04 06 48.5	+0.9
IUG				pmax	pmax		
	comp=Z,870nm,1.9s						
IUG				MLR	MLR		
	comp=Z,499nm,19.0s						
IUG	Iuzhnay	49.98	301	⇑iP	P	04 06 36.5	-0.4
	comp=Z,870nm,1.9s						
IUG				⇑isP	pP	04 06 48.5	+0.9
IUG				eLR	LR	04 29 40.4	
	comp=Z,499nm,18.8s						
WB3	Warramunga Arr	49.99	176	PFAKE		04 06 50.0	+13
WB3				LR	LR		
	comp=Z,600nm,22.0s						
WC1	Warramunga Arr	49.99	176	PFAKE		04 06 50.0	+13
WC1				LR	LR		
	comp=Z,500nm,22.0s						
WC2	Warramunga Arr	49.99	176	PFAKE		04 06 50.0	+13
WC2				LR	LR		
	comp=Z,700nm,18.0s						
WRAB	Tennant Creek	50.00	176	eP	P	04 06 36.7	-0.2
	comp=Z,90nm,0.9s						
WRAB				LR	LR		
	comp=Z,700nm,22.0s						
WRAB	Tennant Creek	50.00	176	d iP	P	04 06 36.6	-0.4
WRAB				pmax	pmax		
	comp=Z,133nm,1.3s						
WR1	Warramunga Arr	50.01	176	eP	P	04 06 36.1	-0.9
	comp=Z,107nm,0.9s						
WR1				ePcP	PcP	04 07 57.2	+0.6
WRA	Warramunga Arr	50.01	176	P	P	04 06 36.1	-1.0
	comp=Z,72nm,0.9s,baz=352,slow=8.2,SNR=191						
WRA				PcP	PcP	04 07 57.2	+0.6
	comp=Z,14nm,0.9s,baz=355,slow=4.1,SNR=6.6						
WRA				LR	LR	04 27 01.8	
	comp=Z,256nm,21.1s,baz=15,slow=35						
WB2	Warramunga Arr	50.01	176	eP	P	04 06 36.9	-0.2
	comp=Z,96nm,0.8s						
WB2				LR	LR		
	comp=Z,700nm,22.0s						
WR2	Warramunga Arr	50.02	176	PFAKE		04 06 50.0	+13
WR2				LR	LR		
	comp=Z,600nm,21.0s						
WR3	Warramunga Arr	50.02	176	PFAKE		04 06 50.0	+13
WR3				LR	LR		
	comp=Z,600nm,22.0s						
WR4	Warramunga Arr	50.02	176	PFAKE		04 06 50.0	+13
WR4				LR	LR		
	comp=Z,600nm,22.0s						
WR5	Warramunga Arr	50.02	176	PFAKE		04 06 50.0	+13
WR5				LR	LR		
	comp=Z,500nm,21.0s						
WC3	Warramunga Arr	50.03	176	PFAKE		04 06 50.0	+13
WC3				LR	LR		
	comp=Z,700nm,22.0s						
WC4	Warramunga Arr	50.03	176	PFAKE		04 06 50.0	+13
WC4				LR	LR		
	comp=Z,600nm,21.0s						
WR0	Warramunga Arr	50.04	176	PFAKE		04 06 50.0	+13
WR0				LR	LR		
	comp=Z,500nm,22.0s						
GAR	Garm	50.23	297	eP	P	04 06 38.5	-0.3
	comp=Z,327nm,1.5s						
GAR				LR	LR		
	comp=Z,6µm,20.0s						
GAR	Garm	50.23	297	eP	P	04 06 38.5	-0.3
GAR				pmax	pmax		
	comp=Z,330nm,1.4s						
CHM	Chimkent	50.27	302	eP	P	04 06 36.8	-2.2
CHM				e*SP	pwP	04 06 51.4	-0.8
CHM	Chimkent	50.27	302	eP	P	04 06 36.8	-2.2
	comp=Z,663nm,0.6s						
CHM				esP	pwP	04 06 51.4	-0.8
ANM	Nome	51.60	29	eP	P	04 06 50.0	+1.5
	comp=Z,76nm,1.3s						
ANM	Nome	51.60	29	eP	P	04 06 50.0	+1.5
ANM				pmax	pmax		
	comp=Z,76nm,1.2s						
CTA	Charters Tower	52.06	162	P	P	04 06 52.2	-0.2
	comp=Z,39nm,1.1s,baz=344,slow=9.5,SNR=15						
CTA				PcP	PcP	04 08 04.2	0.0
	comp=Z,9.2nm,0.9s,baz=340,slow=4.6,SNR=4.1						
CTAO	Charters Tower	52.06	162	eP	P	04 06 52.7	+0.2
	comp=Z,45nm,1.0s						
CTAO				LR	LR		
	comp=Z,600nm,20.0s						
CTAO	Charters Tower	52.06	162	eP	P	04 06 52.7	+0.2
CTAO				pmax	pmax		
	comp=Z,45nm,1.0s						
KBL	Kabul	52.14	292	eP	P	04 06 53.6	+0.3
	comp=Z,54nm,0.8s						
KBL				LR	LR		
	comp=Z,1µm,20.0s						
KBL	Kabul	52.14	292	eP	P	04 06 53.6	+0.3
KBL				pmax	pmax		
	comp=Z,55nm,0.9s						
MBWA	Marble Bar	52.37	194	eP	P	04 06 54.9	+0.2
	comp=Z,124nm,1.4s						
MBWA				LR	LR		

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       comp=Z,400nm,18.0s
MBWA   Marble Bar        52.37 194   P        P       04 06 54.8 +0.2
       SNR=13
PALK   Pallekele         52.70 255  eP        P       04 06 57.2 -0.3
       comp=Z,95nm,1.5s
PALK                                 LR       LR
       comp=Z,2µm,21.0s
PALK   Pallekele         52.70 255   P        P       04 06 57.2 -0.3
       comp=Z,18nm,0.7s,baz=112,slow=2.2,SNR=6.5
PALK                                 LR       LR      04 31 19.4
       comp=Z,2µm,21.1s,baz=115,slow=38
RDOG   Red Dog Mine      53.20  25  eP        P       04 07 01.4 +1.0
       comp=Z,28nm,1.0s
RDOG                                 LR       LR
       comp=Z,1µm,20.0s
AS31   Alice Springs     53.69 177  eP        P       04 07 04.6 +0.1
       comp=Z,18nm,0.8s
AS31                                ePcP      PcP     04 08 11.3 +1.0
AS31                                eScP      ScP     04 12 06.5 +1.4
AS01   Alice Springs     53.69 177  eP        P       04 07 03.1 -1.4
ASAR   Alice Springs     53.69 177   P        P       04 07 04.5 +0.1
       comp=Z,58nm,0.8s,baz=9.4,slow=9.8,SNR=421
ASAR                                 PcP      PcP     04 08 11.3 +1.0
       comp=Z,15nm,0.7s,baz=355,slow=3.6,SNR=6.2
ASAR                                 ScP      ScP     04 12 06.5 +1.4
       comp=Z,1.0nm,0.9s,baz=328,slow=3.3,SNR=4.4
ASAR                                 LR       LR      04 29 06.9
       comp=Z,607nm,21.2s,baz=358,slow=35
ASAR                                 PKP2bc           04 37 35.5
       comp=Z,1.3nm,0.8s,baz=180,slow=2.7,SNR=7.2
SVE    Sverdlovsk        54.88 321⇑eP       P       04 07 12.3 -0.5
SVE                                  pmax     pmax
       comp=Z,66nm,1.4s
SVE                                  MLR      MLR
       comp=Z,2µm,21.0s
GIRL   Giralia           55.16 199  eP        P       04 07 16.8 +1.7
       comp=Z,251nm,1.3s
SVW2   Sparrevohn        55.83  34  eP        P       04 07 20.8 +1.2
       comp=Z,56nm,1.2s
AB31   Akbulak array     56.04 311  i P       P       04 07 19.9 -1.3
AB31                                 pmax     pmax
       comp=Z,16nm,0.6s
ABKAR  Akbulak array     56.04 311  eP        P       04 07 20.6 -0.6
ARU    Arti              56.05 320  eP        P       04 07 20.3 -0.9
       comp=Z,35nm,0.6s
ARU                                  LR       LR
       comp=Z,5µm,18.0s
ARU    Arti              56.05 320c iP        P       04 07 20.2 -0.9
ARU                                  *PP      pP      04 07 31.6 -0.4
ARU                                                   04 08 17.5
ARU                                                   04 09 26.5
ARU                                  S        S       04 15 07.1 +0.3
ARU                                                   04 17 04.9
ARU                                  pmax     pmax
       comp=Z,82nm,1.6s
ARU                                  MLR      MLR
       comp=Z,4µm,17.0s
IM3    Indian Mountai    56.59  28  eP        P       04 07 24.8 -0.1
AKTO   Aktyubinsk        57.09 313   P        P       04 07 27.7 -1.0
       comp=Z,10nm,0.8s,baz=88,slow=9.4,SNR=27
AKTO                                 LR       LR      04 34 21.6
       comp=Z,6µm,18.2s,baz=87,slow=38
RSO    Redoubt South     57.24  35  eP        P       04 07 30.6 +0.7
PPLA   Purkeypile        57.35  32  eP        P       04 07 31.8 +1.3
       comp=Z,142nm,1.4s
CAST   Castle Rocks      57.37  31  eP        P       04 07 31.7 +1.2
       comp=Z,64nm,1.1s
KDAK   Kodiak Island     57.58  38  eP        P       04 07 32.2 +0.2
       comp=Z,227nm,1.4s
KDAK   Kodiak Island     57.58  38  i P       P       04 07 31.7 -0.3
KDAK   Kodiak Island     57.58  38   P        P       04 07 32.0  0.0
       comp=Z,45nm,0.6s,baz=278,slow=4.3,SNR=59
BPAW   Bear Paw Mtn.     57.82  30  eP        P       04 07 34.6 +1.0
       comp=Z,54nm,1.2s
MLY    Manley            57.87  29  eP        P       04 07 34.6 +0.6
       comp=Z,78nm,1.3s
COLD   Coldfoot          57.98  27  eP        P       04 07 36.0 +1.4
       comp=Z,15nm,1.4s
SUA    Susitna One       58.14  34  eP        P       04 07 36.2 +0.2
       comp=Z,84nm,0.9s
TOLK   Toolik Lake Re    58.16  25  eP        P       04 07 37.0 +0.9
       comp=Z,32nm,1.1s
TOLK                                 LR       LR
       comp=Z,800nm,18.0s
TOLK   Toolik Lake Re    58.16  25   P        P       04 07 36.7 +0.7
       baz=272
TRF    Thorofare Moun    58.17  31  eP        P       04 07 37.0 +0.7
       comp=Z,33nm,1.2s
BRLK   Bradley Lake      58.24  36  eP        P       04 07 38.0 +1.3
       comp=Z,66nm,1.0s
BRLK                                epP       pP      04 07 46.5 -1.0
EIDS   Eidsvold          58.44 159  eP        P       04 07 38.0 -0.4
       comp=Z,37nm,0.8s
EIDS                                 LR       LR
       comp=Z,700nm,20.0s
BWN    Browne            58.48  30  eP        P       04 07 39.6 +1.4
       comp=Z,94nm,0.9s
MCK    McKinley          58.75  31  eP        P       04 07 40.3 +0.2
       comp=Z,120nm,1.4s
MCK    McKinley          58.75  31  eP        P       04 07 40.3 +0.2
MCK                                  pmax     pmax
       comp=Z,120nm,1.3s
RND    Reindeer          58.82  31  eP        P       04 07 40.7  0.0
       comp=Z,100nm,1.0s
RND    Reindeer          58.82  31  eP        P       04 07 40.7  0.0
RND                                  pmax     pmax
       comp=Z,100nm,1.0s
PMR    Palmer            58.89  33  eP        P       04 07 40.9 -0.2
       comp=Z,79nm,1.0s
PMR    Palmer            58.89  33  eP        P       04 07 40.9 -0.2
PMR                                  pmax     pmax
       comp=Z,79nm,1.0s
SEW    Seward            58.92  35  eP        P       04 07 41.6 +0.3
       comp=Z,148nm,1.2s
MDM    Murphy Dome       58.94  29  eP        P       04 07 42.2 +0.8
       comp=Z,118nm,1.1s
WRH    Wood River Hil    59.05  30  eP        P       04 07 42.5 +0.4
       comp=Z,45nm,1.2s
TCOL   CIGO, UAF Yank    59.10  29   P        P       04 07 43.1 +0.6
       baz=276
COLA   College           59.11  29  eP        P       04 07 43.4 +0.9
       comp=Z,19nm,0.9s
COLA   College           59.11  29ceP        P       04 07 43.3 +0.8
COLA                                 pmax     pmax
       comp=Z,10.0nm,0.9s
KNK    Knik Glacier      59.23  33  eP        P       04 07 43.8 +0.3
       comp=Z,96nm,1.1s
SML    Sawmill           59.24  33  eP        P       04 07 43.8 +0.2
       comp=Z,115nm,1.4s
SML    Sawmill           59.24  33  eP        P       04 07 43.8 +0.2
SML                                  pmax     pmax
       comp=Z,110nm,1.4s
POKR   Poker Plat Res    59.26  29   P        P       04 07 44.3 +0.7
       baz=276,SNR=47
DHY    Denali Highway    59.52  31  eP        P       04 07 46.3 +0.7
       comp=Z,17nm,0.8s
IL1    Eielson Array     59.53  29  eP        P       04 07 44.0 -1.4
ILAR   Eielson Array     59.53  29   P        P       04 07 45.0 -0.5
       comp=Z,7.1nm,0.7s,baz=271,slow=5.6,SNR=55
ILAR                                 PcP      PcP     04 08 31.9 -0.7
       comp=Z,5.9nm,0.7s,baz=281,slow=3.6,SNR=6.7
ILAR                                 PKP2bc           04 37 20.2
       comp=Z,2.1nm,1.1s,baz=129,slow=1.5,SNR=7.4
ILAR                                 PKP2ab           04 37 34.8
       comp=Z,2.1nm,1.1s,baz=64,slow=2.1,SNR=5.9
ILB    Eielson Array     59.53  29  eP        P       04 07 45.0 -0.5
ILB                                 ePcP      PcP     04 08 31.9 -0.7
HDA    Harding Lake      59.54  30  eP        P       04 07 45.2 -0.4
       comp=Z,53nm,1.0s
HDA    Harding Lake      59.54  30   P        P       04 07 45.1 -0.5
       baz=277,SNR=31
SCM    Sheep Creek Mo    59.71  33  eP        P       04 07 47.5 +0.6
       comp=Z,199nm,1.4s
SCM    Sheep Creek Mo    59.71  33  eP        P       04 07 47.5 +0.6
SCM                                  pmax     pmax
       comp=Z,200nm,1.4s
GEYT   Alibeck           59.79 299   P        P       04 07 47.1 -0.7
       comp=Z,12nm,0.6s,baz=72,slow=4.8,SNR=20
GEYT                                 LR       LR      04 37 56.2
       comp=Z,2µm,19.3s,baz=55,slow=40
GYA0B  ALIBECK ARRAY     59.79 299  eP        P       04 07 49.3 +1.5
       comp=Z,18nm,0.7s
GYA0B                                LR       LR
       comp=Z,2µm,20.0s
FYU    Fort Yukon        59.99  27  eP        P       04 07 50.1 +1.6
       comp=Z,138nm,1.4s
PRP    Porcupine Dome    60.01  29  eP        P       04 07 49.2 +0.2
       comp=Z,26nm,1.0s
KLU    Klutina           60.43  33  eP        P       04 07 52.7 +0.9
       comp=Z,48nm,1.3s
RIDG   Independ'e Rid    60.55  31  eP        P       04 07 52.7 +0.1
       comp=Z,39nm,1.4s
DIV    Divide            60.56  34  eP        P       04 07 53.7 +1.0
       comp=Z,51nm,0.9s
HARP   HAARP             60.63  32  eP        P       04 07 54.5 +1.4
       comp=Z,64nm,0.9s
KIRV   Kirov             60.66 323   P        P       04 07 53.1 -0.1
       comp=Z,21nm,0.5s,baz=111,slow=1.5,SNR=12
KIRV                                 LR       LR      04 37 18.9
       comp=Z,1µm,19.3s,baz=146,slow=39
FORT   Forrest           60.81 183  eP        P       04 07 54.9 +0.3
       comp=Z,155nm,0.8s
FORT                                 LR       LR
       comp=Z,500nm,20.0s
MORW   Morawa            60.82 195  eP        P       04 07 54.5 -0.2
       comp=Z,98nm,1.2s
MORW                                ePcP      PcP     04 08 38.4 +0.2
SCRK   Sand Creek        60.89  30  eP        P       04 07 54.9 -0.1
       comp=Z,95nm,1.4s
HMT    Hamilton          61.44  34  eP        P       04 07 59.8 +1.2
       comp=Z,121nm,1.3s
PRGR   Permogore         61.91 327  eP        P       04 07 59.6 -2.1
PRGR                                e*PP      pP      04 08 11.4 -1.3
PRGR                                e                 04 10 15.4
PRGR                                 pmax     pmax
       comp=Z,48nm,0.8s
DZM    Mont Dzumac       61.97 143  eP        P       04 08 03.1 +0.5
       comp=Z,176nm,1.2s
DZM                                 epP       pwP     04 08 15.7 -1.1
       comp=Z,123nm,1.0s
DZM                                 eS        S       04 16 27.3 +3.0
       comp=Z,250nm,30.1s
DZM    Mont Dzumac       61.97 143  eLR       LR      04 26 52.5
       comp=Z,693nm,23.1s
DZM    Mont Dzumac       61.97 143  eP        P       04 08 03.2 +0.5
       comp=Z,63nm,0.9s
DZM    Mont Dzumac       61.97 143   LR       LR      04 34 39.6
       comp=Z,485nm,18.1s,baz=355,slow=36
STKA   Stephens Creek    62.56 170  eP        P       04 08 06.6 +0.2
       comp=Z,18nm,0.8s
STKA                                 LR       LR
       comp=Z,200nm,22.0s
STKA   Stephens Creek    62.56 170   P        P       04 08 06.3  0.0
       comp=Z,76nm,0.7s,baz=346,slow=7.0,SNR=113
STKA                                 LR       LR      04 33 52.4
       comp=Z,849nm,21.9s,baz=353,slow=35
DAWY   Dawson            62.85  30  eP        P       04 08 08.6 +0.5
       comp=Z,12nm,0.8s
BBOO   Buckleboo         62.90 176  eP        P       04 08 08.4 -0.2
       comp=Z,47nm,0.8s
ARMA   Armidale          63.34 161  eP        P       04 08 11.9 +0.3
       comp=Z,54nm,1.1s
ARMA                                 LR       LR
       comp=Z,600nm,19.0s
PCA    Pinnacle          63.44  34  eP        P       04 08 12.4 +0.4
       comp=Z,81nm,0.9s
INK    Inuvik            64.05  24  eP        P       04 08 16.2 +0.4
       comp=Z,50nm,1.3s
INK                                  LR       LR
       comp=Z,1µm,20.0s
INK    Inuvik            64.05  24   P        P       04 08 15.8  0.0
       comp=Z,14nm,0.8s,baz=295,slow=6.4,SNR=51
INK                                  LR       LR      04 39 22.5
       comp=Z,675nm,19.5s,baz=294,slow=39
JLN    Jalan Bani Buh    64.20 282   P        P       04 08 17.5 -0.1
       SNR=12
NWAO   Narrogin (SRO)    64.29 193  eP        P       04 08 17.9 +0.2
NWAO                                epP       sP      04 08 33.9 +0.8
NWAO   Narrogin (SRO)    64.29 193   P        P       04 08 17.7  0.0
       SNR=5.4
NWAO                                 P        P       04 08 17.7  0.0
       SNR=5.4
NWAO   Narrogin (SRO)    64.29 193   P        P       04 08 17.4 -0.3
       comp=Z,82nm,1.1s,baz=255,slow=7.7,SNR=20
NWAO                                 LR       LR      04 38 18.4
       comp=Z,156nm,19.8s,baz=258,slow=38
WSAR   Wadi Sarin        64.42 283   P        P       04 08 19.2 +0.2
       SNR=13
HYT    Haines Junctio    64.55  33  eP        P       04 08 20.7 +1.3
       comp=Z,65nm,1.1s
TMCR   Tamitsa           64.64 331  eP        P       04 08 19.0 -0.7
TMCR                                 pmax     pmax
       comp=Z,79nm,1.4s
DHAK   Deception Hill    64.71  35  eP        P       04 08 22.5 +2.1
       comp=Z,64nm,1.0s
BIDO   Bidbid            64.74 284   P        P       04 08 22.2 +1.2
       SNR=15
BIDO                                 P        P       04 08 22.2 +1.2
       SNR=15
LVZ    Lovozero          64.81 335   PFAKE            04 08 30.0 +9.1
LVZ                                  LR       LR
       comp=Z,1µm,18.0s
KLMR   Klimovskoe        64.97 327  eP        P       04 08 20.3 -1.6
KLMR                                 pmax     pmax
       comp=Z,58nm,1.1s
KLMR   Klimovskoe        64.97 327  eP        P       04 08 20.3 -1.6
KLMR                                 AMP              04 08 34.9
       comp=Z,58nm,1.1s
APA    Apatity           65.37 335⇓iP       P       04 08 24.7 +0.3
APA                                 i                 04 08 34.5
APA                                  pmax     pmax
       comp=Z,5.0nm,0.9s
SPA0   Spitsbergen Ar    65.46 348  eP        P       04 08 26.7 +1.8
SPA0   Spitsbergen Ar    65.46 348  eP        P       04 08 25.7 +0.8
SPITS  Spitsbergen Ar    65.46 348   P        P       04 08 24.5 -0.4
SPITS                                pmax     pmax
       comp=Z,7.0nm,0.4s
MSVF   Nonsavu           65.50 130  eP        P       04 08 27.6 +1.6
       comp=Z,92nm,1.1s
MSVF   Nonsavu           65.50 130d iP        P       04 08 27.4 +1.4
MSVF                                 pmax     pmax
       comp=Z,74nm,1.1s
UOSS   Minazif           65.78 286  eP        P       04 08 29.3 +1.5
       comp=Z,48nm,1.5s
UOSS   Minazif           65.78 286   P        P       04 08 26.9 -0.9
UOSS                                 P        P       04 08 26.9 -0.9
KBS    Kingsbay          65.81 349   PFAKE            04 08 40.0  +13
KBS                                  LR       LR
       comp=Z,900nm,20.0s
KBS    Kingsbay          65.81 349  eP        P       04 08 26.9 -0.2
SOHO   SOHO              65.83 285   P        P       04 08 27.6 -0.5
SOHO                                 P        P       04 08 27.6 -0.5
WHY    Whitehorse        65.83  33  eP        P       04 08 28.8 +1.1
       comp=Z,90nm,1.3s
WHY                                  LR       LR
       comp=Z,600nm,20.0s
BSY    Bisya             65.83 283   P        P       04 08 29.7 +1.5
       SNR=6.6
HATD   Hatta, Dubai      65.89 286   P        P       04 08 28.9 +0.4
       SNR=14
HATD                                 P        P       04 08 28.9 +0.4
       SNR=14
MHTO   MHTO              65.90 281   P        P       04 08 28.0 -0.7
       SNR=23
MHTO                                 P        P       04 08 28.0 -0.7
       SNR=23
MAK    Makhachkala       65.95 307  eP        P       04 08 26.8 -1.8
MAK                                 eS        S       04 17 12.1 -1.2
MAK                                 eSS       SS      04 21 27.5 -0.8
MAK                                  pmax     pmax
       comp=Z,30nm,0.4s
ASHO   Ashiyiah          66.00 286   P        P       04 08 29.7 +0.4
       SNR=16
ASHO                                 P        P       04 08 29.7 +0.4
       SNR=16
SKAG   Skagway           66.01  34  eP        P       04 08 30.3 +1.6
       comp=Z,74nm,1.0s
HMH    Humu'ula Sheep    66.11  81   PFAKE            04 08 40.0  +10
HMH                                  LR       LR
       comp=Z,4µm,19.0s
NAZ    Nazwa, Dubai      66.21 286   P        P       04 08 30.7 +0.1
       SNR=9.6
NAZ                                  P        P       04 08 30.7 +0.1
       SNR=9.6
HSPB   Hornsund (broa    66.23 347  eP        P       04 08 29.4 -0.5
SDHHI  Sand Hill         66.36  81   PFAKE            04 08 40.0 +8.3
SDHHI                                LR       LR
       comp=Z,2µm,20.0s
NPH    North Pit         66.36  81   PFAKE            04 08 40.0 +8.3
NPH                                  LR       LR
       comp=Z,2µm,20.0s
FAQ    Al Faqa, Dubai    66.37 286   P        P       04 08 31.7 +0.1
       SNR=11
FAQ                                  P        P       04 08 31.7 +0.1
       SNR=11
BESE   Bessie Mountai    66.53  35  eP        P       04 08 33.5 +1.4
       comp=Z,44nm,1.1s
ASUD   Al Ashush, Dub    66.64 286   P        P       04 08 34.6 +1.3
       SNR=6.5
ASUD                                 P        P       04 08 34.6 +1.3
       SNR=6.5
DQM    DQM               66.71 280   P        P       04 08 34.8 +1.0
DQM                                  P        P       04 08 34.8 +1.0
KEV    Kevo              66.72 338  eP        P       04 08 34.4 +1.3
       comp=Z,24nm,0.9s
KEV                                  LR       LR
       comp=Z,4µm,19.0s
KEV    Kevo              66.72 338  eP        P       04 08 34.4 +1.3
KEV                                  pmax     pmax
       comp=Z,24nm,0.9s
JIS    Juneau Island     66.87  35  eP        P       04 08 35.8 +1.7
       comp=Z,83nm,1.1s
VRH    Novokhopyorsk     66.89 317  eP        P       04 08 33.5 -1.0
VRH                                 e*SP      pP      04 08 45.0 -0.5
VRH                                 eS        S       04 17 22.2 -2.2
VRH                                  pmax     pmax
       comp=Z,20nm,0.5s
VRH                                  smax     smax
       comp=N,30nm,1.2s
VRH                                  MLR      MLR
       comp=Z,3µm,19.0s
AJN    Ajban             66.95 286   P        P       04 08 36.8 +1.5
       SNR=7.5
AJN                                  P        P       04 08 36.8 +1.5
       SNR=7.5
GROC   Groznyy           67.04 308  eP        P       04 08 34.8 -0.8
GROC                                e                 04 09 04.0
GROC                                eS        S       04 17 27.1 +0.6
GROC                                 pmax     pmax
       comp=Z,62nm,1.2s
ARA0   ARCESS Array S    67.29 338  eP        P       04 08 36.3 -0.5
ARCES  ARCESS Array B    67.29 338   P        P       04 08 36.3 -0.5
       comp=Z,3.6nm,0.5s,baz=62,slow=7.4,SNR=32
ARCES                                LR       LR      04 44 05.2
       comp=Z,4µm,18.9s,baz=58,slow=41
ARE0   ARCESS Array S    67.29 338  eP        P       04 08 36.3 -0.4
HAMF   Hammerfest        67.36 340  eP        P       04 08 38.2 +1.1
MOS    Moscow            67.60 322  eP        P       04 08 38.7 -0.2
MOS                                 e                 04 08 48.7
MOS                                 e                 04 09 06.6
MOS                                 eS        S       04 17 29.3 -3.5
MOS                                 e                 04 18 30.7
MOS                                  pmax     pmax
       comp=Z,79nm,0.9s
LPSR   Galich'ya Gora    68.02 319  eP        P       04 08 41.3 -0.3
LPSR                                e*SP      pP      04 08 52.8 +0.1
LPSR                                eS        S       04 17 35.5 -2.4
LPSR                                 pmax     pmax
       comp=Z,30nm,0.8s
LPSR                                 smax     smax
       comp=N,30nm,1.0s
LPSR                                 MLR      MLR
       comp=Z,2µm,17.0s
VORR   Voronezh          68.20 318  eP        P       04 08 41.0 -1.7
VORR                                 pmax     pmax
       comp=Z,250nm,1.2s
GOF    Gofitskoye        68.23 310⇓iP       P       04 08 44.0 +0.9
GOF                                  pmax     pmax
       comp=Z,110nm,1.1s
KTK1   Kautokeino        68.25 338  eP        P       04 08 42.3 -0.5
VSR    Storozhevoye      68.39 317  eP        P       04 08 42.7 -1.2
VSR                                 e*SP      pP      04 08 54.6 -0.4
VSR                                 eS        S       04 17 40.2 -2.2
VSR                                  pmax     pmax
       comp=Z,20nm,0.6s
VSR                                  smax     smax
       comp=N,20nm,1.1s
VSR                                  MLR      MLR
       comp=Z,3µm,18.0s
OBN    Obninsk           68.39 322  epP       pP      04 08 55.2 +0.3
OBN                                  LR       LR
       comp=Z,2µm,18.0s
OBN    Obninsk           68.39 322ceP        P       04 08 43.7 -0.1
OBN                                 i                 04 08 54.9
OBN                                 e                 04 09 06.9
OBN                                 ePPP      PPP     04 12 48.5
OBN                                  pmax     pmax
       comp=Z,84nm,1.7s
OBN                                  MLR      MLR
       comp=Z,2µm,17.0s
NCK    Nalchik           68.44 309⇓eP       P       04 08 44.9 +0.5
ZEI    Tsey              68.49 308  eP        P       04 08 43.7 -1.3
ZEI                                  pmax     pmax
       comp=Z,47nm,0.7s
WRAK   Wrangell Islan    68.58  36  eP        P       04 08 46.3 +1.3
       comp=Z,93nm,1.5s
KZRT   Kazreti           68.67 306   P        P       04 08 46.7 +0.7
TOO    Toolangi          68.76 168  eP        P       04 08 47.5 +1.2
       comp=Z,104nm,1.0s
TOO    Toolangi          68.76 168  eP        P       04 08 47.5 +1.2
TOO                                  pmax     pmax
       comp=Z,100nm,1.0s
KBZ    Khabaz            68.82 309   P        P       04 08 47.0 +0.3
KBZ                                  pmax     pmax
       comp=Z,60nm,0.9s
KBZ                                  MLR      MLR
       comp=Z,2µm,18.3s
KBZ    Khabaz            68.82 309   P        P       04 08 47.0 +0.3
       comp=Z,60nm,0.9s,baz=75,slow=3.3,SNR=82
KBZ                                  LR       LR      04 43 02.7
       comp=Z,2µm,18.3s,baz=68,slow=40
MZR    Muzera            68.85 285   P        P       04 08 48.2 +0.9
       SNR=6.5
KIV    Kislovodsk        68.88 309  eP        P       04 08 47.6 +0.3
       comp=Z,140nm,1.0s
KIV                                  LR       LR
       comp=Z,1µm,19.0s
KIV    Kislovodsk        68.88 309⇑iP       P       04 08 47.8 +0.6
KIV    Kislovodsk        68.88 309  eP        P       04 08 47.0 -0.2
KIV                                 eS        S       04 17 48.3 -0.4
KIV                                  pmax     pmax
       comp=Z,113nm,1.1s
KIV                                  pmax     pmax
       comp=Z,56nm,4.6s
KIV                                  MLR      MLR
       comp=Z,1µm,17.0s
KIV    Kislovodsk        68.88 309   P        P       04 08 48.7 +1.5
       SNR=35
KIV                                  P        P       04 08 48.7 +1.5
       SNR=35
GNI    Garni             68.89 305  eP        P       04 08 48.7 +1.2
       comp=Z,100nm,1.2s
GNI                                  LR       LR
       comp=Z,700nm,22.0s
GNI    Garni             68.89 305c iP        P       04 08 48.6 +1.2
GNI                                  pmax     pmax
       comp=Z,121nm,1.0s
GNI    Garni             68.89 305   P        P       04 08 49.7 +2.2
       SNR=19
GNI                                  P        P       04 08 49.7 +2.2
       SNR=19
DLBC   Dease Lake        68.94  34  eP        P       04 08 48.6 +1.3
       comp=Z,78nm,1.3s
DLBC   Dease Lake        68.94  34   P        P       04 08 47.8 +0.5
       comp=Z,33nm,1.0s,baz=297,slow=6.1,SNR=34
NEY    Neytrino          69.12 309⇓eP       P       04 08 49.9 +1.0
NEY                                  pmax     pmax
       comp=Z,11nm,1.0s
BGD    Bogdanovka        69.27 306   P        P       04 08 51.7 +1.8
TRO    Tromso            69.28 340  eP        P       04 08 49.9 +0.8
PUL    Pulkovo           69.63 328⇓eP       P       04 08 51.2 -0.2
PUL                                  pmax     pmax
       comp=Z,85nm,0.9s
KARS   Kars              69.88 306  eP        P       04 08 55.6 +2.0
       comp=Z,226nm,1.0s
KARS                                 LR       LR
       comp=Z,3µm,20.0s
KARS   Kars              69.88 306  eP        P       04 08 55.6 +2.0
KARS                                 pmax     pmax
       comp=Z,227nm,1.0s
KARS                                 MLR      MLR
       comp=Z,3µm,20.0s
ARTV   Artvin            70.46 307  i P       P       04 08 58.4 +1.2
DAGI   Agillar           70.52 307  i P       P       04 08 58.2 +0.8
RBK    Rabkut            70.61 279   P        P       04 08 59.3 +1.1
DBAD   Bademkaya         70.69 307  i P       P       04 08 57.4 -1.1
FIA1   FINESS Array S    70.75 331  eP        P       04 08 57.2 -1.0
FIA0   FINESS Array S    70.75 331  eP        P       04 08 58.0 -0.2
FIA0   FINESS Array S    70.75 331  eP        P       04 08 58.0 -0.2
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FINES	FINESS Array B	70.75	331	P	P	04 08 58.0	-0.2
	comp=Z,23nm,0.4s,baz=70,slow=5.7,SNR=157						
SOC	Sochi	71.00	310	eP	P	04 08 59.9	-0.3
SOC				e*PP	pP	04 09 08.6	-2.7
SOC				e*SP	pwP	04 09 11.7	-2.3
SOC				e		04 11 33.8	
SOC				ePPP	PPP	04 13 14.9	
SOC				eS	S	04 18 08.1	-5.3
SOC				e*SS	sS	04 18 35.3	+2.3
SOC				eSS	SS	04 22 42.6	-3.7
SOC				pmax	pmax		
	comp=Z,78nm,0.7s						
SOC				MLR	MLR		
	comp=Z,1µm,17.0s						
RES	Resolute Bay	71.03	12	eP	P	04 09 00.0	+0.2
	comp=Z,34nm,0.8s						
RES				LR	LR		
	comp=Z,600nm,22.0s						
RES	Resolute Bay	71.03	12	eP	P	04 09 00.0	+0.2
RES				pmax	pmax		
	comp=Z,34nm,0.8s						
RES				MLR	MLR		
	comp=Z,600nm,22.0s						
STEI	Steigen	71.33	339	eP	P	04 09 00.9	-0.7
SIRT	Sirnak	71.59	303	eP	P	04 09 04.1	+0.1
	comp=Z,158nm,0.8s						
SIRT				LR	LR		
	comp=Z,2µm,20.0s						
DAG	Danmarks Havn	71.61	353	i P	P	04 09 03.1	-0.1
	comp=Z,33nm,1.1s						
DAG				i		04 09 15.3	
DAG	Danmarks Havn	71.61	353	i P	P	04 09 03.1	-0.1
DAG				i		04 09 15.3	
DAG				pmax	pmax		
	comp=Z,42nm,1.1s						
VSU	Vasula	71.87	328d	iP	P	04 09 05.9	+0.8
VSU				pmax	pmax		
	comp=Z,92nm,1.0s						
VSU	Vasula	71.87	328	eP	P	04 09 05.9	+0.8
VSU				IAmb	IAmb	04 09 18.6	
	comp=Z,271nm,1.3s						
KOPT	Kop Dagi	71.93	306	i P	P	04 09 07.2	+1.0
ANN	Anapa	72.00	312	eP	P	04 09 05.1	-1.0
ANN				eS	S	04 18 22.7	-2.0
ANN				pmax	pmax		
	comp=Z,130nm,0.9s						
ANN				MLR	MLR		
	comp=Z,2µm,21.0s						
BAYB	BAYBURT	72.00	306	i P	P	04 09 07.1	+0.6
MOR8	Moi Rana	72.62	338	eP	P	04 09 08.4	-1.1
TULEG	Thule	72.68	5	PFAKE		04 09 20.0	+10
TULEG				LR	LR		
	comp=Z,2µm,20.0s						
IDID	Didziasalis	73.38	325	eP	P	04 09 15.4	+1.3
IDID				IAmb	IAmb	04 09 29.7	
	comp=Z,39nm,0.9s						
IZAR	Zarasai	73.42	325	eP	P	04 09 15.7	+1.3
IZAR				IAmb	IAmb	04 09 29.4	
	comp=Z,34nm,0.8s						
ISAL	Salakas	73.56	325	eP	P	04 09 16.6	+1.4
ISAL				IAmb	IAmb	04 09 30.3	
	comp=Z,29nm,0.9s						
NACGM	Naroch	73.56	324	e	P	04 09 17.0	+1.8
NACGM				eLQ	LQ	04 37 42.0	
NACGM				eLR	LR	04 45 38.0	
NACGM				LRM	MLR	04 47 26.0	
	comp=Z,4.5nm,15.0s						
YKW3	Yellowknife Ar	73.61	26	eP	P	04 09 15.7	+0.3
	comp=Z,27nm,1.1s						
YKA	Yellowknife Ar	73.65	26	P	P	04 09 15.8	+0.2
	comp=Z,12nm,0.8s,baz=300,slow=5.8,SNR=146						
YKA				PKiKP	PKiKP	04 15 10.6	-1.0
	comp=Z,0.2nm,0.5s,baz=310,slow=1.3,SNR=5.7						
YKB5	Yellowknife Ar	73.65	26	eP	P	04 09 14.3	-1.3
SIM	Simferopol'	74.06	313d	iP	P	04 09 17.7	-0.6
SIM				e		04 09 30.0	
SIM				eS	SKiKP	04 18 45.3	+2.1
SIM				pmax	pmax		
	comp=Z,44nm,0.9s						
SIM				MLR	MLR		
	comp=Z,1µm,16.0s						
AKASG	Malin Array Be	74.30	320	i P	P	04 09 17.5	-2.1
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.4s						
AKASG	Malin Array Be	74.30	320	P	P	04 09 18.7	-0.9
	comp=Z,8.7nm,0.4s,baz=52,slow=6.2,SNR=16						
AKASG				LR	LR	04 45 30.3	
	comp=Z,2µm,18.9s,baz=55,slow=39						
AKBB	Malin Array Si	74.30	320	eP	P	04 09 18.2	-1.4
	comp=Z,66nm,1.1s						
AKBB				LR	LR		
	comp=Z,2µm,18.0s						
AKBB	Malin Array Si	74.30	320	eP	P	04 09 18.2	-1.4
AKBB				pmax	pmax		
	comp=Z,66nm,1.1s						
KIEV	Kiev	74.31	320	eP	P	04 09 18.2	-1.5
	comp=Z,65nm,1.1s						
KIEV				LR	LR		
	comp=Z,2µm,18.0s						
KIEV	Kiev	74.31	320⇑	iP	P	04 09 19.1	-0.6
KIEV	Kiev	74.31	320d	eP	P	04 09 18.8	-0.9
KIEV				pmax	pmax		
	comp=Z,19nm,0.9s						
SLIT	Slitere, Latvi	74.33	328	eP	P	04 09 19.5	-0.1
SLIT				IAmb	IAmb	04 09 33.8	
	comp=Z,205nm,0.8s						
AK11	Malin Array Si	74.34	320	eP	P	04 09 20.1	+0.3
NSS	Namsos	74.44	337	eP	P	04 09 20.5	+0.3
SNOP	Sinop	74.67	310	PFAKE		04 09 30.0	+8.1
SNOP				LR	LR		
	comp=Z,1µm,22.0s						
RAYN	Ar Rayn	75.22	289	eP	P	04 09 25.5	0.0
	comp=Z,129nm,1.0s						
RAYN	Ar Rayn	75.22	289	eP	P	04 09 25.5	0.0
RAYN				pmax	pmax		
	comp=Z,129nm,1.0s						
KULLO	Kullorsuaq	75.25	2	i P	P	04 09 24.3	-0.4
	comp=Z,43nm,1.2s						
	comp=Z,1µm,17.0s						
KULLO	Kullorsuaq	75.25	2	i P	P	04 09 24.3	-0.4
KULLO				pmax	pmax		
	comp=Z,43nm,1.2s						
KULLO				MLR	MLR		
	comp=Z,1µm,17.0s						
SUW	Suwalki	75.83	325	eP	P	04 09 29.4	+1.0
SUW				epP	PcP	04 09 40.3	-0.5
SUW				LMZ	LR	04 48 43.4	
	comp=Z,3µm,17.9s						
SUW	Suwalki	75.83	325	eP	P	04 09 28.0	-0.3
	comp=Z,105nm,0.9s						
SUW				LR	LR		
	comp=Z,3µm,18.0s						
SUW	Suwalki	75.83	325	eP	P	04 09 28.0	-0.3
SUW				pmax	pmax		
	comp=Z,100nm,0.9s						
ILGA	Ilgaz	76.11	309	eP	P	04 09 31.1	+0.5
	comp=Z,72nm,1.0s						
ILGA				LR	LR		
	comp=Z,1µm,20.0s						
KIS	Kishinev	76.34	317	eP	P	04 09 30.0	-1.4
	comp=Z,110nm,1.6s						
KIS	Kishinev	76.34	317	ePcP	PcP	04 09 40.5	-2.7
KIS				eS	S	04 19 12.0	-1.4
KIS	Kishinev	76.34	317	ePS		04 20 05.0	
KIS				eSSS	SSS	04 28 05.0	
KIS				eLQ	LQ	04 36 48.0	
KIS				eLR	LR	04 40 20.0	
	comp=Z,3µm,20.0s						
KIS	Kishinev	76.34	317	eP	P	04 09 30.0	-1.4
KIS				e		04 09 40.5	
KIS				eS	S	04 19 12.0	-1.4
KIS				ePS		04 20 05.0	
KIS				pmax	pmax		
	comp=Z,110nm,1.6s						
KIS				MLR	MLR		
	comp=Z,3µm,20.0s						
RAO	Raoul Island	76.37	136	PFAKE		04 09 40.0	+8.4
RAO				LR	LR		
	comp=Z,5µm,20.0s						
NC405	NORSAR Array S	76.69	334	eP	P	04 09 32.4	-0.8
NC303	NORSAR Array S	76.75	335	eP	P	04 09 34.4	+0.9
LLLB	Lillooet	76.78	39	eP	P	04 09 34.5	+0.6
	comp=Z,40nm,0.9s						
BR101	Keskin Array S	76.79	308	eP	P	04 09 33.7	-0.6
BR131	Keskin Array S	76.79	308	eP	P	04 09 34.1	-0.1
BR131	Keskin Array S	76.79	308	P	P	04 09 34.3	+0.1
	SNR=62						
BRTR	Keskin Array B	76.79	308	P	P	04 09 33.7	-0.6
	comp=Z,54nm,0.8s,baz=101,slow=3.2,SNR=214						
BRTR				LR	LR	04 49 46.3	
	comp=Z,467nm,19.2s,baz=70,slow=41						
NB201	NORSAR Array S	76.89	334	eP	P	04 09 33.7	-0.6
NB2	NORSAR Subarra	76.93	334	P	P	04 09 33.2	-1.3
	comp=Z,12nm,0.8s,baz=49,slow=5.6						
NB2	NORSAR Subarra	76.93	334	P	P	04 09 31.2	-3.3
NB2				pmax	pmax		
	comp=Z,12nm,0.8s						
NB2	NORSAR Subarra	76.93	334	P	P	04 09 33.2	-1.3
	baz=49,slow=5.6						
NB200	NORSAR Array S	76.93	334	eP	P	04 09 33.1	-1.3
NOA	NORSAR Array B	76.93	334	P	P	04 09 33.1	-1.3
	comp=Z,8.9nm,0.6s,baz=50,slow=5.6,SNR=54						
NOA				LR	LR	04 47 11.3	
	comp=Z,994nm,18.6s,baz=55,slow=39						
NC204	NORSAR Array S	76.94	335	eP	P	04 09 34.7	+0.1
LEOM	Leova	76.94	316⇓	iP	P	04 09 35.5	+0.7
NC602	NORSAR Array S	77.00	334	eP	P	04 09 35.5	+0.7
NBO00	NORSAR Array S	77.09	335	eP	P	04 09 35.8	+0.3
NAO01	NORSAR Array S	77.18	334	eP	P	04 09 35.9	0.0
SUMG	Summit	77.18	357	eP	P	04 09 36.8	+0.6
	comp=Z,105nm,1.2s						
SUMG	Summit	77.18	357	i P	P	04 09 36.7	+0.5
	comp=Z,83nm,1.1s						
SUMG	Summit	77.18	357	i P	P	04 09 36.7	+0.5
SUMG				pmax	pmax		
	comp=Z,83nm,1.1s						
TLCR		77.25	315⇓	iP	P	04 09 37.5	+1.0
ANTO	Ankara	77.29	309	eP	P	04 09 38.4	+1.4
	comp=Z,99nm,1.1s						
ANTO				LR	LR		
	comp=Z,1µm,20.0s						
ANTO	Ankara	77.29	309⇑	iP	P	04 09 38.2	+1.2
ANTO	Ankara	77.29	309	eP	P	04 09 38.4	+1.4
ANTO				pmax	pmax		
	comp=Z,99nm,1.1s						
ANTO	Ankara	77.29	309	P	P	04 09 38.5	+1.4
	SNR=22						
ANTO				P	P	04 09 38.5	+1.4
	SNR=22						
BR231	Keskin MP Arra	77.32	309	eP	P	04 09 38.8	+1.6
BCAM	Yenicaga	77.32	310	i P	P	04 09 37.0	-0.2
BCAM				IAML_P			
	comp=Z,593nm,0.7s						
NLWA	Neilton Lookou	77.33	42	eP	P	04 09 38.7	+1.6
	comp=Z,36nm,1.1s						
LVV	L'vov	77.62	321	eP	P	04 09 38.7	+0.1
LVV				e		04 09 51.7	
LVV				MLR	MLR		
	comp=N,500nm,18.0s						
LVV				MLR	MLR		
	comp=E,1µm,18.0s						
LVV				MLR	MLR		
	comp=Z,1µm,18.0s						
KIBS	BOLU	77.66	310	i P	P	04 09 39.6	+0.5
KIBS				IAML_P			
	comp=Z,488nm,0.6s						
YIGI	Dzce	77.66	310	i P	P	04 09 38.7	-0.3
YIGI				IAML_P			
	comp=Z,703nm,0.8s						
CFR	Carcaliu	77.66	315⇓	iP	P	04 09 39.7	+0.8
CFR	Carcaliu	77.66	315	P	P	04 09 39.7	+0.8
PRAR	RASCA	77.68	318⇑	iP	P	04 09 40.1	+1.1
D03D	Eldon	77.71	42	P	P	04 09 40.1	+1.0
	baz=302,SNR=8.6						
SCO	Scoresbysund	77.73	351	eP	P	04 09 40.0	+1.2
	comp=Z,59nm,1.2s						
SCO	Scoresbysund	77.73	351	i P	P	04 09 39.7	+0.9
	comp=Z,46nm,1.2s						
SCO	Scoresbysund	77.73	351	i P	P	04 09 39.7	+0.9
SCO				pmax	pmax		
	comp=Z,46nm,1.2s						
TIRR	Tirgusor	77.86	314	eP	P	04 09 41.1	+1.1
	comp=Z,26nm,0.9s						
TIRR				epP	pP	04 09 51.4	+0.1
TIRR				LR	LR		
	comp=Z,2µm,20.0s						
TIRR	Tirgusor	77.86	314	eP	P	04 09 41.1	+1.1
TIRR				e*PP	pP	04 09 51.4	+0.1
TESR	Tescani	77.87	317⇓	iP	P	04 09 40.7	+0.7
B05A	Bryant	77.90	41	P	P	04 09 40.7	+0.6
	baz=302,SNR=6.2						
PETR	Petresti	77.93	316⇑	iP	P	04 09 41.0	+0.6
BIZ	Bicaz	77.97	318⇑	iP	P	04 09 41.0	+0.4
ODBI	Odobesti	78.02	316⇑	iP	P	04 09 41.5	+0.7
TLB	Topalu	78.02	315⇑	iP	P	04 09 41.2	+0.3
TLB	Topalu	78.02	315	P	P	04 09 41.2	+0.3
D04E	Lakebay	78.08	42	P	P	04 09 41.6	+0.5
	baz=302						
B06A	Marblemount	78.11	41	eP	P	04 09 41.7	+0.5
	comp=Z,44nm,1.0s						
BURAR	Bucovina Array	78.13	318⇑	iP	P	04 09 41.9	+0.3
BUR04	Bucovina Ar. S	78.13	318	eP	P	04 09 41.1	-0.5
VRI	Vrincioaia	78.16	316⇑	iP	P	04 09 42.5	+0.8
VRI	Vrincioaia	78.16	316	P	P	04 09 42.4	+0.8
PLOR	Plostina	78.22	316⇑	iP	P	04 09 43.1	+1.0
PLOR	Plostina	78.22	316	P	P	04 09 43.0	+1.0
BEL	Belsk	78.23	324	eP	P	04 09 43.9	+2.0
BEL				epP	pP	04 09 54.6	+1.4
BEL				LMZ	LR	04 50 13.2	
	comp=Z,3µm,16.3s						
BEL	Belsk	78.23	324	eP	P	04 09 43.9	+2.0
BEL				e*PP	pP	04 09 54.6	+1.4
KDHN	Kadinhani	78.41	308	i P	P	04 09 42.4	-0.9
ICOR	Ion Corvin	78.41	314⇑	iP	P	04 09 43.8	+0.8
KWP	Kalwaria Pacla	78.44	321	eP	P	04 09 44.9	+1.7
KWP				epP	pwP	04 09 56.2	-0.9
KWP				LMZ	LR	04 47 34.8	
	comp=Z,2µm,18.7s						
KWP	Kalwaria Pacla	78.44	321	eP	P	04 09 43.3	+0.2
	comp=Z,801nm,0.9s						
KWP				LR	LR		
	comp=Z,19µm,19.0s						
KWP	Kalwaria Pacla	78.44	321	eP	P	04 09 43.3	+0.2
KWP				MLR	MLR		
	comp=Z,19µm,19.0s						
KONO	Kongsberg	78.45	334	PFAKE		04 09 50.0	+7.1
KONO				LR	LR		
	comp=Z,2µm,19.0s						
PGOR	Pogoanele	78.50	315⇑	iP	P	04 09 45.3	+1.8
F04D	Rainier, OR	78.52	43	P	P	04 09 44.5	+0.9
	baz=302						
E04D	Cinebar	78.53	43	P	P	04 09 44.4	+0.7
	baz=302,SNR=6.2						
D05A	Enumclaw	78.53	42	eP	P	04 09 44.9	+1.2
	comp=Z,28nm,0.8s						
OZUR		78.60	317⇑	iP	P	04 09 44.3	+0.2
C06D	Leavenworth	78.76	41	P	P	04 09 45.4	+0.4
	baz=303						
G03D	McMinnville, O	78.83	44	P	P	04 09 46.0	+0.7
	baz=302						
MLR	Muntele Rosu	78.83	316	eP	P	04 09 44.7	-0.8
	comp=Z,52nm,1.4s						
MLR				LR	LR		
	comp=Z,3µm,20.0s						
MLR	Muntele Rosu	78.83	316⇑	iP	P	04 09 45.5	0.0
MLR	Muntele Rosu	78.83	316	eP	P	04 09 44.7	-0.8
MLR				pmax	pmax		
	comp=Z,52nm,1.4s						
BORA	Eskisehir	78.86	310	i P	P	04 09 45.4	-0.3
BORA				IAML_P			
	comp=Z,2µm,0.7s						
LON	Longmire	78.87	42	eP	P	04 09 45.8	+0.2
	comp=Z,11nm,1.0s						
LON	Longmire	78.87	42	eP	P	04 09 45.8	+0.2
LON				pmax	pmax		
	comp=Z,11nm,1.0s						
DOPR	Dopca	78.90	317⇑	iP	P	04 09 45.8	0.0
SECR		78.99	316⇑	iP	P	04 09 46.9	+0.6
I02D	Swisshome	79.05	45	P	P	04 09 47.4	+0.9
	baz=302						
COR	Corvallis	79.13	45	eP	P	04 09 48.8	+1.8
	comp=Z,77nm,1.0s						
COR	Corvallis	79.13	45	eP	P	04 09 48.8	+1.8
COR				pmax	pmax		
	comp=Z,77nm,1.0s						
BSD	Bornholm Skovb	79.13	328	i P	P	04 09 47.4	+0.6
	comp=Z,58nm,0.7s						
BSD				i		04 09 58.8	
	comp=Z,3µm,18.0s						
BSD	Bornholm Skovb	79.13	328	i P	P	04 09 47.4	+0.6
BSD				i		04 09 58.8	
BSD				pmax	pmax		
	comp=Z,58nm,0.7s						
BSD				MLR	MLR		
	comp=Z,3µm,18.0s						
GKP	Gorka Klasztor	79.17	326	eP	P	04 09 48.6	+1.6
GKP				LMZ	LR	04 50 16.6	
	comp=Z,3µm,19.4s						
GKP	Gorka Klasztor	79.17	326	eP	P	04 09 48.6	+1.6
UZH	Uzhgorod	79.22	320	eP	P	04 09 48.2	+0.8
UZH				i		04 09 53.0	
UZH				i		04 09 58.8	
UZH				e		04 12 49.0	
UZH				e		04 14 39.0	
UZH				eS	S	04 19 42.6	-1.9
UZH				i		04 20 31.5	
UZH				e		04 24 50.5	
UZH				e		04 28 16.8	
UZH				MLR	MLR		
	comp=N,130nm,16.0s						
UZH				MLR	MLR		
	comp=E,180nm,16.0s						
UZH				MLR	MLR		
	comp=Z,110nm,16.0s						
CSS	Mathiatis	79.30	304	eP	P	04 09 48.0	-0.1
	comp=Z,58nm,1.0s						
CSS				LR	LR		
	comp=Z,900nm,21.0s						
TRPA	Tarpa	79.36	320⇑	iP	P	04 09 48.4	+0.2
TRPA	Tarpa	79.36	320	eP	P	04 09 49.1	+0.9
VOIR		79.39	317⇑	iP	P	04 09 48.5	-0.1
VOIR		79.39	317	P	P	04 09 48.4	-0.1
KEBM	Edson Butte	79.39	46	eP	P	04 09 50.2	+1.6
	comp=Z,133nm,1.0s						
KEBM				epP	pP	04 10 00.8	+0.9
B08A	Colville Reser	79.39	40	eP	P	04 09 48.7	+0.2
	comp=Z,71nm,1.4s						
J01E	Myrtle Point	79.49	46	P	P	04 09 49.7	+0.7
	baz=302						
H04D	Lebanon	79.51	44	P	P	04 09 49.8	+0.8
	baz=302						
HIZ	Hauiti	79.51	147	PFAKE		04 10 00.0	+11
HIZ				LR	LR		
	comp=Z,800nm,22.0s						
F05D	White Salmon	79.54	43	P	P	04 09 49.9	+0.7
	baz=303						
I03D	Drain, OR	79.57	45	P	P	04 09 50.4	+1.0
	baz=302,SNR=12						
BAGO	Egridir - ISPA	79.58	308	i P	P	04 09 45.3	-4.4
BAGO				IAML_P			
	comp=Z,76nm,0.7s						
OJC	Ojcow	79.67	323	eP	P	04 09 49.7	-0.2
OJC				epP	pwP	04 10 02.7	-1.1
OJC				LMZ	LR	04 51 53.2	
	comp=Z,2µm,18.3s						
OJC	Ojcow	79.67	323	eP	P	04 09 49.5	-0.4
	comp=Z,72nm,0.7s						
OJC	Ojcow	79.67	323	eP	P	04 09 49.5	-0.4
OJC				pmax	pmax		
	comp=Z,72nm,0.7s						
ARR	Arges	79.67	317⇓	iP	P	04 09 50.7	+0.7
H04A	Detroit Lake	79.75	44	eP	P	04 09 50.8	+0.4
	comp=Z,63nm,1.4s						
ISP	Isparta	79.84	308	PFAKE		04 10 00.0	+8.8
ISP				LR	LR		
	comp=Z,800nm,20.0s						
NIE	Niedzica	79.86	322	eP	P	04 09 51.6	+0.6
NIE				epP	pwP	04 10 04.2	-0.7
NIE				LMZ	LR	04 48 37.3	
	comp=Z,900nm,18.9s						
NIE	Niedzica	79.86	322	eP	P	04 09 51.6	+0.6
NIE				e*PP	pwP	04 10 04.2	-0.7
NIE				MLR	MLR		
	comp=Z,900nm,18.9s						
COP	Copenhagen	79.88	330	i P	P	04 09 52.2	+1.4
	comp=Z,26nm,0.7s						
COP				e		04 10 03.3	
	comp=Z,2µm,18.0s						
COP	Copenhagen	79.88	330	eP	P	04 09 52.2	+1.4
COP				e		04 10 03.3	
COP				pmax	pmax		
	comp=Z,26nm,0.7s						
COP				MLR	MLR		
	comp=Z,2µm,18.0s						
KZIL	AFYON_Kizioren	79.88	308	i P	P	04 09 52.4	+1.0
KZIL				IAML_P			
	comp=Z,33nm,0.3s						
GDZ	Gediz	79.90	309	i P	P	04 09 51.4	-0.1
GDZ				IAML_P			
	comp=Z,1µm,0.7s						
K02D	Willamette Mer	79.90	46	P	P	04 09 51.9	+0.5
	baz=302,SNR=9.0						
HUMR	Humele	79.92	316⇑	iP	P	04 09 50.6	-0.7
G05D	Wamic, OR	79.97	43	P	P	04 09 52.3	+0.7
	baz=303						
DRGR		80.01	319⇓	iP	P	04 09 53.0	+1.1
DRGR		80.01	319	P	P	04 09 43.0	-8.9
SZH	Strazhica	80.01	314	eP	P	04 09 53.4	+1.6
JMB	Yambol	80.03	313	eP	P	04 09 53.9	+2.0
I04A	Tendick Farm,	80.09	45	P	P	04 09 52.8	+0.4
	baz=303						
LOT	Lotru	80.14	317⇑	iP	P	04 09 53.1	+0.5
LTVH	Ltavrtes, Hu	80.14	319	eP	P	04 09 55.0	+2.6
ZIMR		80.15	315⇑	iP	P	04 09 53.7	+1.2
RGN	Rugen	80.21	329	PFAKE		04 10 00.0	+7.4
RGN				LR	LR		
	comp=Z,3µm,20.0s						
L02E	Cave Junction	80.23	47	P	P	04 09 53.8	+0.8
	baz=302,SNR=5.5						
KHAL	Karahalli	80.26	309	i P	P	04 09 54.5	+1.1
KHAL				IAML_P			
	comp=Z,5.8nm,0.1s						
C09A	Chrisman Ranch	80.30	40	eP	P	04 09 53.8	+0.5
	comp=Z,23nm,0.7s						
DURS	Dursunbey	80.31	310	i P	P	04 09 53.5	-0.2
DURS				IAML_P			
	comp=Z,698nm,0.7s						
DAMY	Dhamar	80.31	281	eP	P	04 09 56.6	+2.3
	comp=Z,184nm,1.3s						
DAMY				LR	LR		
	comp=Z,700nm,20.0s						
D08A	Wollman Farm,	80.35	41	eP	P	04 09 54.0	+0.4
	comp=Z,23nm,0.8s						
KORT	Korkueli	80.38	307	i P	P	04 09 53.1	-0.9
KORT				IAML_P			
	comp=Z,2µm,0.7s						
HAWA	Hanford	80.38	42	eP	P	04 09 54.4	+0.7
	comp=Z,24nm,1.0s						
HUMO	Hull Mountain	80.39	46	eP	P	04 09 54.8	+0.9
	comp=Z,28nm,1.1s						
URZ	Urewera	80.41	145	eP	P	04 09 52.8	-1.0
	comp=Z,39nm,1.0s						
F07A	Phinny Hill Vi	80.43	42	eP	P	04 09 55.2	+1.2
	comp=Z,36nm,1.0s						
F07A				epP	pwP	04 10 07.3	-0.8
DEMI	Demirci	80.44	310	i P	P	04 09 54.2	-0.1
DEMI				IAML_P			
	comp=Z,896nm,0.7s						
I05D	Terrebonne, OR	80.45	44	P	P	04 09 54.7	+0.5
	baz=303,SNR=6.7						
LANS	Liptovska Anna	80.46	322	eP	P	04 09 56.0	+1.8
LANS				e		04 10 06.6	
LANS	Liptovska Anna	80.46	322	eP	P	04 09 56.0	+1.8
LANS				ePCP	pP	04 10 06.6	+1.1
VLAD	Vladila	80.55	316⇑	iP	P	04 09 54.4	-0.3
J04D	Umpqua Nationa	80.58	45	P	P	04 09 55.9	+0.7
	baz=303,SNR=29						
E08A	Dider Farm, El	80.59	41	eP	P	04 09 55.4	+0.5
	comp=Z,19nm,0.8s						
NEW	Newport	80.66	39	eP	P	04 09 55.0	-0.3
	comp=Z,33nm,1.0s						
NEW	Newport	80.66	39	eP	P	04 09 55.0	-0.3
NEW				pmax	pmax		
	comp=Z,33nm,1.0s						
NEW	Newport	80.66	39	P	P	04 09 55.7	+0.4
	baz=305						
NEW	Newport	80.66	39	P	P	04 09 55.3	0.0
	comp=Z,24nm,1.0s,baz=305,slow=4.6,SNR=30						
EIL	Elat	80.69	299	P	P	04 09 57.0	+1.3
MUD	Monsted U'grnd	80.75	332	i P	P	04 09 56.6	+1.1
MUD	Monsted U'grnd	80.75	332	i P	P	04 09 56.6	+1.1
GZR	Gura Zlata	80.75	317⇑	iP	P	04 09 56.2	+0.4
GZR	Gura Zlata	80.75	317	P	P	04 09 56.2	+0.4
OKC	Ostrava-Krasne	80.75	323	eP	P	04 09 56.4	+0.7
OKC				ex	x	04 10 07.0	

OKC				eS	S	04 20 02.2	+1.6
OKC				AMS	AMS	04 52 50.0	
	comp=Z,2µm,18.0s						
OKC	Ostrava-Krasne	80.75	323	eP	P	04 09 56.4	+0.7
OKC				e		04 10 07.0	
OKC				eS	S	04 20 02.2	+1.6
OKC				MLR	MLR		
	comp=Z,2µm,18.0s						
BKZ	Black Stump Fm	80.81	146	eP	P	04 09 55.4	-0.6
	comp=Z,36nm,0.9s						
KHMM	Horse Mountain	80.83	48	eP	P	04 09 57.9	+1.4
	comp=Z,76nm,1.3s						
MANT	Manisa	80.83	309	eP	P	04 09 57.7	+1.1
	comp=Z,136nm,1.0s						
MANT				LR	LR		
	comp=Z,4µm,20.0s						
DIM	Dimitrovgrad	80.91	314	eP	P	04 09 58.4	+1.7
STEP	BALIKESIR_Sava	80.93	310	i P	P	04 09 57.4	+0.5
STEP				IAML_P			
	comp=Z,3µm,0.7s						
PSZ	Piszkesteto	80.95	321	eP	P	04 09 58.8	+1.9
	comp=Z,36nm,1.2s						
PSZ				LR	LR		
	comp=Z,2µm,18.0s						
PSZ	Piszkesteto	80.95	321	⇑iP	P	04 09 57.4	+0.5
PSZ	Piszkesteto	80.95	321	eP	P	04 09 58.8	+1.9
PSZ				pmax	pmax		
	comp=Z,36nm,1.2s						
PSZ	Piszkesteto	80.95	321	eP	P	04 09 58.0	+1.1
PINE	Pine Mountain	80.99	44	eP	P	04 09 58.4	+1.0
	comp=Z,78nm,1.2s						
L04D	Klamath Falls	81.01	46	P	P	04 09 57.9	+0.6
	baz=303,SNR=18						
YBH	Yreka Blue Hor	81.02	47	eP	P	04 09 58.2	+0.8
	comp=Z,36nm,1.0s						
YBH	Yreka Blue Hor	81.02	47	P	P	04 09 57.7	+0.3
	comp=Z,23nm,1.0s,baz=20,slow=1.7,SNR=26						
J05D	Fort Rock, OR	81.09	45	P	P	04 09 58.6	+0.8
	baz=303,SNR=25						
KSP	Ksiaz	81.10	324	eP	P	04 09 59.0	+1.5
KSP				epP	pP	04 10 10.1	+1.2
KSP				LMZ	LR	04 52 09.3	
	comp=Z,2µm,18.9s						
KSP	Ksiaz	81.10	324	eP	P	04 09 59.0	+1.5
KSP				e*PP	pP	04 10 10.1	+1.2
E09A	Wood Farm, Sta	81.10	41	eP	P	04 09 55.6	-1.9
	comp=Z,42nm,1.1s						
E09A				epP	pwP	04 10 12.0	+0.3
MORC	Moravsky Berou	81.11	323	eP	P	04 09 57.5	-0.2
	comp=Z,35nm,1.0s						
MORC				LR	LR		
	comp=Z,2µm,18.0s						
MORC	Moravsky Berou	81.11	323	⇑iP	P	04 09 58.0	+0.4
MORC	Moravsky Berou	81.11	323	eP	P	04 09 57.5	-0.2
MORC				pmax	pmax		
	comp=Z,35nm,1.0s						
MORC	Moravsky Berou	81.11	323	eP	P	04 09 57.4	-0.2
M02C	Callahan	81.11	47	P	P	04 09 58.8	+1.0
	baz=303,SNR=16						
K04D	Chiloquin, OR	81.13	46	P	P	04 09 58.7	+0.7
	baz=303,SNR=10.0						
VYHS	Vyhne	81.19	322	eP	P	04 09 58.6	+0.6
VYHS				e		04 10 09.0	
VYHS				pmax	pmax		
	comp=Z,23nm,1.2s						
VYHS	Vyhne	81.19	322	eP	P	04 09 58.6	+0.6
VYHS				epP	PcP	04 10 00.0	-4.2
VYHS				e		04 10 09.0	
ALN	Alexandroupoli	81.21	312	PFAKE		04 10 10.0	+12
ALN				LR	LR		
	comp=Z,800nm,21.0s						
HERR	Herculane	81.25	317	⇑iP	P	04 09 59.5	+1.1
PUNG	Punghina	81.28	316	⇑iP	P	04 09 58.6	0.0
AKAS	Kas	81.28	307	i P	P	04 09 58.3	-0.7
AKAS				IAML_P			
	comp=Z,1µm,0.8s						
BZS	Buzias	81.30	318	⇑iP	P	04 09 59.5	+0.8
BZS	Buzias	81.30	318	P	P	04 09 59.5	+0.8
KRLC	Kraliky	81.32	324	eP	P	04 09 59.2	+0.5
KRLC				ex	x	04 10 09.8	
KRLC	Kraliky	81.32	324	eP	P	04 09 59.2	+0.5
KRLC				e		04 10 09.8	
G08A	Pilot Rock	81.33	42	eP	P	04 09 59.6	+0.6
	comp=Z,32nm,1.4s						
KOLL	Kolacno	81.37	322	eP	P	04 09 59.9	+0.9
KOLL				e		04 10 12.2	
KOLL	Kolacno	81.37	322	eP	P	04 09 59.9	+0.9
KOLL				epP	PcP	04 10 01.3	-3.7
KOLL				e		04 10 12.2	
DPC	Dobruska-Polom	81.39	324	eP	P	04 09 59.8	+0.7
DPC				ex	x	04 10 10.4	
DPC				AMS	AMS	04 52 20.0	
	comp=Z,3µm,18.1s						
DPC	Dobruska-Polom	81.39	324	eP	P	04 09 59.8	+0.7
DPC				e		04 10 10.4	
DPC				MLR	MLR		
	comp=Z,3µm,18.1s						
N02D	Trinity Center	81.43	47	P	P	04 10 00.2	+0.6
	baz=303,SNR=13						
FETY	Fethiye	81.44	307	i P	P	04 10 00.8	+1.2
FETY				IAML_P			
	comp=Z,1µm,0.9s						
UPC	Upice	81.44	324	eP	P	04 09 59.8	+0.4
UPC				AMS	AMS	04 53 10.0	
	comp=Z,3µm,17.8s						
UPC	Upice	81.44	324	eP	P	04 09 59.8	+0.4
UPC				MLR	MLR		
	comp=Z,3µm,17.8s						
M04C	Macdoel	81.54	46	P	P	04 10 00.6	+0.4
	baz=303,SNR=23						
RZN	Rozhen	81.62	314	eP	P	04 10 02.4	+1.7
AYVA	Ayvalik	81.64	311	i P	P	04 10 02.0	+1.4
AYVA				IAML_P			
	comp=Z,494nm,0.8s						
I07A	Izee	81.69	44	eP	P	04 10 01.6	+0.7
	comp=Z,26nm,1.3s						
AYDN	Tasoluk	81.72	309	i P	P	04 10 02.0	+0.9
AYDN				IAML_P			
	comp=Z,954nm,0.7s						
WDC	Whiskeytown Da	81.75	48	eP	P	04 10 01.5	+0.4
	comp=Z,41nm,1.1s						
WDC	Whiskeytown Da	81.75	48	eP	P	04 10 01.5	+0.4
WDC				pmax	pmax		
	comp=Z,41nm,1.1s						
O02D	Mt. Diablo Mer	81.81	48	P	P	04 10 02.4	+0.8
	baz=303,SNR=14						
VRAC	Vranov	81.88	323	⇑iP	P	04 10 02.6	+0.9
VRAC	Vranov	81.88	323	P	P	04 10 05.2	+3.5
VRAC	Vranov	81.88	323	eP	P	04 10 02.4	+0.7
VRAC				e		04 10 14.3	
SMOL	Smolenice	81.92	322	P	P	04 10 05.0	+3.1
F10A	Beach Ranch, E	81.93	41	eP	P	04 10 02.6	+0.5
	comp=Z,13nm,0.8s						
VTS	Vitosha	82.03	315	eP	P	04 10 03.1	+0.4
	comp=Z,23nm,1.0s						
VTS				LR	LR		
	comp=Z,2µm,20.0s						
VTS	Vitosha	82.03	315	⇑iP	P	04 10 02.8	0.0
VTS	Vitosha	82.03	315	eP	P	04 10 03.1	+0.4
VTS				pmax	pmax		
	comp=Z,23nm,1.0s						
VTS	Vitosha	82.03	315	eP	P	04 10 15.9	+13
RPZ	Rata Peaks	82.08	152	eP	P	04 10 02.0	-0.5
RPZ	Rata Peaks	82.08	152	P	P	04 10 01.9	-0.6
	comp=Z,48nm,0.9s,baz=341,slow=2.2,SNR=8.8						
MODS	Modra-Piesok	82.09	322	eP	P	04 10 04.5	+1.6
MODS				e		04 10 16.2	
MODS				pmax	pmax		
	comp=Z,79nm,1.3s						
MODS	Modra-Piesok	82.09	322	eP	P	04 10 04.4	+1.6
MODS				e		04 10 16.2	
GCAM	G?zelcaml?	82.13	309	i P	P	04 10 05.0	+1.8
GCAM				IAML_P			
	comp=Z,2µm,0.7s						
KRUC	Moravsky	82.14	323	eP	P	04 10 03.2	+0.2
KRUC				e		04 10 15.8	
PVCC	Panska Ves	82.16	325	eP	P	04 10 03.9	+0.8
PVCC				ex	x	04 10 14.0	
PVCC				AMS	AMS	04 51 20.0	
	comp=Z,2µm,17.3s						
PVCC	Panska Ves	82.16	325	eP	P	04 10 03.9	+0.8
PVCC				e		04 10 14.0	
PVCC				MLR	MLR		
	comp=Z,2µm,17.3s						
OXZ	Oxford	82.16	151	eP	P	04 10 02.6	-0.4
	comp=Z,26nm,0.8s						
OXZ				LR	LR		
	comp=Z,2µm,20.0s						
URLA	Izmir	82.21	310	i P	P	04 10 01.6	-2.1
URLA				IAML_P			
	comp=Z,36nm,0.1s						
BRG	Berggiesshubel	82.25	325	i P	P	04 10 05.0	+1.5
	comp=Z,18nm,0.8s						
BRG				i pP	pP	04 10 16.2	+1.3
	comp=Z,43nm,1.7s						
BRG				i sP	sP	04 10 22.4	+2.7
	comp=Z,15nm,0.9s						
BRG				PP	PP	04 13 13.0	+1.3
BRG				S	S	04 20 19.0	+3.0
BRG				SS	SS	04 25 35.0	-0.5
BRG				ePKKP	PKKPdf	04 28 24.4	+4.0
	comp=Z,7.3nm,1.4s						
	comp=N,2µm,15.7s						
	comp=E,2µm,14.5s						
	comp=Z,3µm,15.6s						
BRG	Berggiesshubel	82.25	325	i P	P	04 10 05.0	+1.5
BRG				i *PP	pP	04 10 16.2	+1.3
BRG						04 13 13.0	
BRG				S	S	04 20 19.0	+3.0
BRG				SS	SS	04 25 35.0	-0.5
BRG				pmax	pmax		
	comp=Z,18nm,0.9s						
BRG				MLR	MLR		
	comp=N,2µm,15.7s						
BRG				MLR	MLR		
	comp=E,2µm,14.5s						
BRG				MLR	MLR		
	comp=Z,3µm,15.6s						
BDRM	Kayabasi	82.33	308	i P	P	04 10 05.2	+0.9
BDRM				IAML_P			
	comp=Z,518nm,0.6s						
O03E	Paynes Creek	82.38	48	P	P	04 10 04.3	-0.2
	baz=303,SNR=10						
DAT	Datca	82.42	308	i P	P	04 10 04.1	-0.8
DAT				IAML_P			
	comp=Z,541nm,0.7s						
CLL	Collm	82.43	326	eP	P	04 10 04.4	-0.1
	comp=Z,57nm,0.7s						
CLL				LR	LR		
	comp=Z,4µm,18.0s						
CLL	Collm	82.43	326	⇑iP	P	04 10 04.2	-0.3
	comp=Z,13nm,0.9s						
CLL				⇑iP(2)		04 10 05.9	
	comp=Z,65nm,0.8s						
CLL				i pP	pP	04 10 17.1	+1.2
CLL				i pP(2)		04 10 19.2	
CLL				i sP	sP	04 10 21.6	+1.0
CLL				ePP	PP	04 13 13.0	-0.1
CLL				eS	S	04 20 20.0	+2.2
CLL				e(PS)		04 21 04.0	
CLL				ePPS	PPS	04 21 36.0	
CLL				eSS	SS	04 25 42.0	+3.9
CLL				e		04 30 30.0	
CLL				LmV		04 51 00.0	
	comp=Z,3µm,18.6s						
CLL	Collm	82.43	326	⇑iP	P	04 10 04.2	-0.3
CLL				i *PP	pP	04 10 17.1	+1.2
CLL				eS	S	04 20 20.0	+2.2
CLL				pmax	pmax		
	comp=Z,13nm,0.9s						
CLL				MLR	MLR		
	comp=Z,3µm,18.6s						
MOD	Modoc Plateau	82.43	46	eP	P	04 10 05.3	+0.4
	comp=Z,38nm,1.0s						
TREC	Trest	82.46	324	eP	P	04 10 05.2	+0.5
TREC				ex	x	04 10 18.2	
TREC				AMS	AMS	04 52 50.0	
	comp=Z,4µm,16.8s						
TREC	Trest	82.46	324	eP	P	04 10 05.2	+0.5
TREC				e		04 10 18.2	
TREC				MLR	MLR		
	comp=Z,4µm,16.8s						
PRU	Pruhonice	82.51	325	eP	P	04 10 05.2	+0.3
PRU				ex	x	04 10 17.2	
PRU				eS	S	04 20 22.1	+3.4
PRU				AMS	AMS	04 54 00.0	
	comp=Z,2µm,14.9s						
PRU	Pruhonice	82.51	325	eP	P	04 10 05.2	+0.3
PRU				e		04 10 17.2	
PRU				eS	S	04 20 22.1	+3.4
PRU				MLR	MLR		
	comp=Z,2µm,14.9s						
BMO	Blue Mountains	82.54	42	eP	P	04 10 05.8	+0.4
	comp=Z,19nm,0.8s						
BMO	Blue Mountains	82.54	42	eP	P	04 10 05.8	+0.4
BMO				pmax	pmax		
	comp=Z,19nm,0.8s						
GDXM	Geysers	82.54	49	eP	P	04 10 06.6	+1.1
	comp=Z,49nm,1.2s						
GDXM				epP	pP	04 10 17.0	+0.2
FRGS	Fruska Gora	82.61	318	eP	P	04 10 06.7	+1.1
SRS	Serrai	82.64	314	P	P	04 10 06.5	+0.7
MORH	Mrgy, Hungar	82.64	320	eP	P	04 10 07.1	+1.4
MORH	Mrgy, Hungar	82.64	320	eP	P	04 10 05.2	-0.5
J08A	Circle Bar Ran	82.72	44	eP	P	04 10 07.2	+0.9
	comp=Z,46nm,1.1s						
SOP	Sopron	82.89	322	P	P	04 10 09.2	+2.2
ORV	Oroville	82.98	48	eP	P	04 10 07.3	-0.3
	comp=Z,38nm,1.1s						
ORV	Oroville	82.98	48	eP	P	04 10 07.3	-0.3
ORV				pmax	pmax		
	comp=Z,38nm,1.1s						
SFJD	Kangerlussuaq	83.02	1	eP	P	04 10 07.4	+0.2
	comp=Z,22nm,0.8s						
SFJD				epP	pwP	04 10 20.6	-0.8
SFJD	Kangerlussuaq	83.02	1	i P	P	04 10 08.5	+1.3
	comp=Z,14nm,0.8s						
SFJD	Kangerlussuaq	83.02	1	eP	P	04 10 07.4	+0.2
SFJD				e*PP	pwP	04 10 20.6	-0.8
ATD	Arta Tunnel	83.10	279	PFAKE		04 10 20.0	+11
ATD				LR	LR		
	comp=Z,500nm,22.0s						
CONA	Conrad Observa	83.11	322	epP	P	04 10 08.9	+0.7
	comp=Z,33nm,0.8s,SNR=17						
DIVS	Divibare	83.12	318	eP	P	04 10 09.4	+1.0
	comp=Z,35nm,1.0s						
DIVS				LR	LR		
	comp=Z,2µm,20.0s						
DIVS	Divibare	83.12	318	eP	P	04 10 07.7	-0.6
WVOR	Wild Horse Val	83.15	45	eP	P	04 10 09.1	+0.5
	comp=Z,21nm,0.9s						
WVOR	Wild Horse Val	83.15	45	eP	P	04 10 09.1	+0.5
WVOR				pmax	pmax		
	comp=Z,21nm,1.0s						
VAY	Valandovo	83.16	314	i P	P	04 10 09.2	+0.8
MSO	Missoula	83.25	39	eP	P	04 10 08.9	-0.1
	comp=Z,37nm,1.4s						
MSO	Missoula	83.25	39	P	P	04 10 08.9	-0.1
	baz=308,SNR=11						
KARP	Karpathos	83.33	307	eP	P	04 10 10.1	+0.6
	comp=Z,95nm,0.8s						
NKC	Novy Kostel	83.39	326	eP	P	04 10 10.3	+0.8
NKC				ex	x	04 10 23.2	
NKC				AMS	AMS	04 52 00.0	
	comp=Z,3µm,14.7s						
NKC	Novy Kostel	83.39	326	eP	P	04 10 10.3	+0.8
NKC				e		04 10 23.2	
NKC				MLR	MLR		
	comp=Z,3µm,14.7s						
BEKR	Beckworth	83.53	47	eP	P	04 10 10.7	+0.1
	comp=Z,39nm,0.9s						
KHC	Kasperske Hory	83.54	324	eP	P	04 10 10.7	+0.4
	comp=Z,6.5nm,0.9s						
KHC				LR	LR		
	comp=Z,700nm,19.0s						
KHC	Kasperske Hory	83.54	324	eP	P	04 10 10.9	+0.6
KHC				ex	x	04 10 24.0	
KHC				eS	S	04 20 33.5	+4.2
KHC				AMS	AMS	04 55 10.0	
	comp=Z,2µm,17.8s						
KHC	Kasperske Hory	83.54	324	eP	P	04 10 10.9	+0.6
KHC				e		04 10 24.0	
KHC				eS	S	04 20 33.5	+4.2
KHC				MLR	MLR		
	comp=Z,2µm,17.8s						
FCC	Fort Churchill	83.54	22	eP	P	04 10 10.2	+0.2
	comp=Z,51nm,0.9s						
FCC				LR	LR		
	comp=Z,700nm,19.0s						
FCC	Fort Churchill	83.54	22	eP	P	04 10 10.3	+0.2
FCC				pmax	pmax		
	comp=Z,51nm,0.9s						
RAR	Rarotonga	83.58	119	LR	LR	04 39 21.4	
	comp=Z,298nm,21.6s,baz=278,slow=30						
BBLS	Lazići	83.60	318	eP	P	04 10 11.4	+0.6
AFDM	Forest Hills D	83.65	48	eP	P	04 10 11.2	0.0
	comp=Z,24nm,1.1s						
GEC2	GERESS Array S	83.66	324	eP	P	04 10 11.2	+0.2
	comp=Z,15nm,0.8s						
GEC2				LR	LR		
	comp=Z,3µm,18.0s						
GEC2	GERESS Array S	83.66	324	eP	P	04 10 11.3	+0.2
GEC2				pmax	pmax		
	comp=Z,15nm,0.8s						
GERES	GERESS Array B	83.66	324	P	P	04 10 11.1	0.0
	comp=Z,5.9nm,0.6s,baz=52,slow=5.2,SNR=43						
GERES				PKKPbc	PKKPbc	04 28 26.8	-1.3
	comp=Z,1.1nm,0.7s,baz=211,slow=1.6,SNR=12						
GERES				LR	LR	04 51 55.1	
	comp=Z,1µm,18.2s,baz=54,slow=39						
GEA0	GERESS Array S	83.66	324	eP	P	04 10 10.7	-0.3
FFC	Flin Flon	83.70	28	eP	P	04 10 10.5	-0.5
	comp=Z,51nm,1.0s						
FFC	Flin Flon	83.70	28	eP	P	04 10 10.5	-0.5
FFC				pmax	pmax		
	comp=Z,51nm,1.0s						
ARSA	Arzberg	83.71	322	eP	P	04 10 11.4	+0.2
	comp=Z,29nm,1.4s,SNR=7.1						
HAPS	Han Pijesak,Bl	83.73	318	eP	P	04 10 11.0	-0.5
LIT	Litokhoron	83.91	313	eP	P	04 10 12.9	+0.5
	comp=Z,45nm,1.2s						
LIT	Litokhoron	83.91	313	eP	P	04 10 12.9	+0.5
LIT				pmax	pmax		
	comp=Z,45nm,1.1s						
KRUS	Krusevo	83.95	315	i P	P	04 10 11.0	-1.7
MOA	Molln	84.00	323	i P	P	04 10 13.0	+0.3
	comp=Z,37nm,1.4s,SNR=8.1						
PAHR	Pah Rah Range	84.24	47	eP	P	04 10 14.7	+0.4
	comp=Z,53nm,1.1s						
VCNR	Virginia City	84.31	48	eP	P	04 10 15.2	+0.5
	comp=Z,22nm,0.9s						
PERS	Pernice	84.31	322	i P	P	04 10 14.4	0.0
SOKA	Soboth	84.33	322	eP	P	04 10 14.9	+0.4
	comp=Z,74nm,1.0s,SNR=20						
GRA1	Grafenberg Arr	84.34	326	eP	P	04 10 14.8	+0.4
	comp=Z,126nm,1.0s						
GRA1				LR	LR		
	comp=Z,3µm,20.0s						
GRF	Grafenberg Arr	84.34	326	eP	P	04 10 14.8	+0.4
GRF				pmax	pmax		
	comp=Z,130nm,1.0s						
BLY	Banja Luka	84.34	319	eP	P	04 10 15.8	+1.4
	comp=Z,26nm,1.0s						
BLY				epP	pwP	04 10 28.8	+0.3
BLY				LR	LR		
	comp=Z,2µm,19.0s						
BLY	Banja Luka	84.34	319	⇑iP	P	04 10 15.2	+0.7
BLY	Banja Luka	84.34	319	eP	P	04 10 15.6	+1.1
GRFO	Grafenberg	84.34	326	eP	P	04 10 14.8	+0.4
	comp=Z,113nm,1.0s						
GRFO				LR	LR		
	comp=Z,3µm,19.0s						
GRFO	Grafenberg	84.34	326	eP	P	04 10 14.8	+0.4
GRFO				pmax	pmax		
	comp=Z,110nm,1.0s						
PNTR	Pine Nut	84.46	48	eP	P	04 10 16.1	+0.7
	comp=Z,33nm,0.9s						
HRY	Holter Researc	84.46	38	eP	P	04 10 15.9	+0.7
PDG	Podgorica	84.54	316	⇓iP	P	04 10 15.1	-0.4
PDG	Podgorica	84.54	316	eP	P	04 10 16.0	+0.5
TTG	Podgorica	84.54	316	PFAKE		04 10 30.0	+15
TTG				LR	LR		
	comp=Z,3µm,21.0s						
CMB	Columbia Colle	84.55	49	eP	P	04 10 15.8	+0.1
	comp=Z,60nm,1.3s						
CMB	Columbia Colle	84.55	49	eP	P	04 10 15.8	+0.1
CMB				pmax	pmax		
	comp=Z,60nm,1.2s						
SAO	San Andreas Ge	84.56	50	eP	P	04 10 16.1	+0.4
	comp=Z,25nm,1.1s						
SAO	San Andreas Ge	84.56	50	eP	P	04 10 16.1	+0.4
SAO				pmax	pmax		
	comp=Z,25nm,1.1s						
AGG	Agios Georgios	84.62	312	eP	P	04 10 15.4	-0.6
	comp=Z,39nm,1.1s						
AGG	Agios Georgios	84.62	312	eP	P	04 10 15.4	-0.6
AGG				pmax	pmax		
	comp=Z,39nm,1.1s						
CRES	Cresnjev	84.64	321	eP	P	04 10 15.6	-0.4
LRM	Limekiln Ridge	84.68	39	eP	P	04 10 17.2	+0.7
EGMT	Eagleton	84.71	36	eP	P	04 10 16.8	+0.4
	comp=Z,80nm,1.0s						
EGMT	Eagleton	84.71	36	P	P	04 10 16.6	+0.3
	baz=310,SNR=19						
DRME	Dracevica, Mon	84.72	316	eP	P	04 10 16.7	+0.2
YERR	Yerington	84.75	48	eP	P	04 10 16.9	+0.1
	comp=Z,60nm,1.1s						
DLMT	Dillon	84.89	40	eP	P	04 10 18.1	+0.6
	comp=Z,58nm,1.0s						
WAKR	Walker	84.89	48	eP	P	04 10 18.3	+0.7
	comp=Z,29nm,0.8s						
FRB	Frobisher Bay	84.96	9	P	P	04 10 16.9	-0.2
KBA	Koelnbreinsper	84.97	323	ePcP	P	04 10 18.3	+0.5
	comp=Z,24nm,0.8s,SNR=8.0						
KBA	Koelnbreinsper	84.97	323	P	P	04 10 19.7	+1.9
HLID	Hailey	84.98	42	eP	P	04 10 19.0	+1.1
	comp=Z,49nm,1.3s						
LJU	Ljubljana	85.00	321	eP	P	04 10 17.0	-0.8
LJU				epP	pP	04 10 30.4	+1.1
LJU	Ljubljana	85.00	321	eP	P	04 10 16.8	-1.0
IDI	Anoyia	85.03	308	eP	P	04 10 18.9	+0.7
	comp=Z,48nm,1.0s						
IDI	Anoyia	85.03	308	⇑iP	P	04 10 17.5	-0.7
MCMT	McKenzie Canyo	85.08	40	eP	P	04 10 19.1	+0.6
MYKA	Terra Mystica	85.11	322	eP	P	04 10 18.2	-0.1
	comp=Z,24nm,0.6s,SNR=8.6						
BMN	Battle Mountai	85.18	46	eP	P	04 10 19.8	+0.8
	comp=Z,77nm,1.4s						
BMN	Battle Mountai	85.18	46	eP	P	04 10 19.8	+0.8
BMN				pmax	pmax		
	comp=Z,77nm,1.4s						
GBRS	Gornja Briga	85.18	321	i P	P	04 10 20.2	+1.5
CEY	Cerknica	85.25	321	eP	P	04 10 18.5	-0.6
BOZ	Bozeman (W)	85.27	39	eP	P	04 10 19.8	+0.5
	comp=Z,20nm,0.9s						
BOZ	Bozeman (W)	85.27	39	eP	P	04 10 19.8	+0.5
BOZ				pmax	pmax		
	comp=Z,20nm,1.0s						
BOZ	Bozeman (W)	85.27	39	P	P	04 10 19.8	+0.5
	baz=309,SNR=11						
RYN	Ryan	85.41	48	eP	P	04 10 20.8	+0.6
	comp=Z,46nm,1.0s						
KVN	Kaiserville	85.43	47	eP	P	04 10 20.9	+0.6
	comp=Z,66nm,0.9s						
KVN	Kaiserville	85.43	47	eP	P	04 10 20.9	+0.6
KVN				pmax	pmax		
	comp=Z,66nm,0.9s						
ABTA	Abfaltersbach	85.62	323	eP	P	04 10 20.8	-0.1
	comp=Z,37nm,0.8s,SNR=10						
MDPB	Devils Postpil	85.62	49	eP	P	04 10 22.1	+0.7
	comp=Z,35nm,1.1s						
NV01	Mina Array Sit	85.67	48	eP	P	04 10 21.2	-0.3
NVAR	Mina Array Bea	85.67	48	P	P	04 10 21.7	+0.1
	comp=Z,34nm,0.7s,baz=296,slow=5.1,SNR=180						
OMMB	Old Mammoth Mi	85.69	49	eP	P	04 10 22.2	+0.4
	comp=Z,32nm,1.0s						
WATA	Walderalm	85.72	324	ePcP	P	04 10 23.4	+1.9
	comp=Z,17nm,1.0s						
WTTA	Wattenberg	85.74	324	epP	P	04 10 24.1	+2.4
	comp=Z,28nm,1.1s						
NV11	Mina Array Sit	85.76	48	eP	P	04 10 22.4	+0.5
	comp=Z,1.8nm,0.8s						
MLAC	Mammoth, Mammo	85.78	49	P	P	04 10 22.8	+0.6
	baz=305,SNR=11						
QLMT	Earthquake Lak	85.87	39	eP	P	04 10 23.4	+1.0
ITM	Ithomi	85.94	311	eP	P	04 10 23.3	+0.7
	comp=Z,102nm,0.8s						
PAGB	Antelope Grade	85.94	51	eP	P	04 10 23.3	+0.7
	comp=Z,64nm,1.0s						
STU	Stuttgart	85.95	326	eP	P	04 10 24.5	+2.1
	comp=Z,76nm,0.9s						
STU				epP	pP	04 10 34.7	+0.8
STU				LR	LR		
	comp=Z,4µm,20.0s						
STU	Stuttgart	85.95	326	eP	P	04 10 24.5	+2.1

STU				*e**PP	pP	04 10 34.7	+0.8
MOTA	Moosalm	85.96	324	*e*P	P	04 10 22.7	0.0
	comp=Z,12nm,0.7s,SNR=11						
SQTA	Sankt Quirin	85.98	324	*e*PcP	P	04 10 23.7	+0.9
	comp=Z,16nm,0.9s,SNR=6.1						
RETA	Reutte	86.03	324	*e*pP	P	04 10 25.5	+2.5
	comp=Z,26nm,1.1s,SNR=5.6						
YHB	Horse Butte	86.05	39	*e*P	P	04 10 24.6	+1.3
	comp=Z,37nm,0.9s						
MEM	Membach	86.16	329	⇓P	P	04 10 23.1	-0.3
MEM				⇓PcP	PcP	04 10 24.9	-1.1
	comp=Z,28nm,1.1s						
MEM				⇑pP	pwP	04 10 38.2	+0.8
MEM				⇑sP	sP	04 10 41.1	+1.8
BEBN	Eben Emael	86.17	329	⇑P	P	04 10 23.7	+0.3
BEBN				⇓PcP	PcP	04 10 25.3	-0.7
BEBN				⇑pP	pwP	04 10 38.4	+0.9
BEBN				⇑sP	sP	04 10 42.4	+3.1
VOG	Valley Oaks Go	86.18	50	P	P	04 10 23.4	-0.4
	baz=305						
ELK	Elko	86.20	44	*e*P	P	04 10 25.1	+0.9
	comp=Z,51nm,1.5s						
ELK	Elko	86.20	44	P	P	04 10 24.8	+0.7
	comp=Z,12nm,0.9s,baz=314,slow=4.9,SNR=45						
YHH	Holmes Hill	86.21	39	*e*P	P	04 10 25.2	+1.0
	comp=Z,34nm,1.4s						
YMR	Madison River	86.23	39	*e*P	P	04 10 26.0	+1.8
	comp=Z,41nm,1.1s						
EKA	Eskdalemuir Ar	86.30	336	P	P	04 10 22.5	-1.5
EKA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ESK	Eskdalemuir	86.33	336	*e*P	P	04 10 25.7	+1.5
	comp=Z,50nm,1.0s						
ESK	Eskdalemuir	86.33	336	*e*P	P	04 10 25.7	+1.5
ESK				pmax	pmax		
	comp=Z,50nm,1.0s						
SMMC	Simmler	86.34	51	P	P	04 10 25.1	+0.4
	baz=305,SNR=6.1						
YNR	Norris Junctio	86.35	39	*e*P	P	04 10 27.0	+2.2
	comp=Z,70nm,1.5s						
FETA	Feichten	86.36	324	*e*P	P	04 10 24.1	-0.6
	comp=Z,16nm,0.9s,SNR=5.1						
YFT	Old Faithful	86.44	39	*e*P	P	04 10 27.9	+2.6
	comp=Z,58nm,1.3s						
TIN	Tinemaha, Big	86.51	49	P	P	04 10 26.2	+0.6
	baz=306,SNR=5.5						
YPP	Pitchstone Pla	86.57	40	*e*P	P	04 10 28.4	+2.4
	comp=Z,24nm,1.2s						
LKWY	Lake	86.60	39	*e*P	P	04 10 28.7	+2.6
	comp=Z,46nm,1.0s						
DAVA	Damuels	86.61	324	*e*P	P	04 10 25.7	-0.3
	comp=Z,22nm,1.1s,SNR=6.4						
H17A	Grant Village	86.62	39	*e*P	P	04 10 28.8	+2.6
	comp=Z,96nm,1.3s						
H17A	Grant Village	86.62	39	P	P	04 10 28.7	+2.5
	baz=310,SNR=24						
VES	Vestal, Richgr	86.65	50	P	P	04 10 25.4	-0.8
	baz=305,SNR=9.9						
BFO	Black Forest	86.67	326	*e*P	P	04 10 25.5	-0.5
	comp=Z,40nm,1.0s						
BFO				LR	LR		
	comp=Z,4µm,19.0s						
BFO	Black Forest	86.67	326	*i* P	P	04 10 25.9	-0.1
PKM	Mcpherson Peak	86.71	51	P	P	04 10 27.0	+0.3
	baz=305,SNR=13						
IMW	Indian Meadow	86.73	40	*e*P	P	04 10 28.1	+1.3
	comp=Z,22nm,0.8s						
FLWY	Flagg Ranch	86.75	40	*e*P	P	04 10 28.4	+1.6
	comp=Z,36nm,0.8s						
UCC	Uccle	86.76	330	*e*P	P	04 10 28.4	+2.1
	comp=Z,22nm,0.8s						
UCC				LR	LR		
	comp=Z,4µm,18.0s						
UCC	Uccle	86.76	330	*e*P	P	04 10 28.4	+2.1
UCC				pmax	pmax		
	comp=Z,22nm,0.8s						
UCC	Uccle	86.76	330	⇓PcP	P	04 10 28.0	+1.6
	comp=Z,11nm,0.7s						
UCC				⇑pP	pP	04 10 36.3	-1.5
WLF	Walferdange	86.76	328	*e*P	P	04 10 26.9	+0.5
	comp=Z,294nm,0.9s						
WLF				LR	LR		
	comp=Z,9µm,18.0s						
WLF	Walferdange	86.76	328	*e*P	P	04 10 26.9	+0.5
WLF				pmax	pmax		
	comp=Z,290nm,0.9s						
WLF	Walferdange	86.76	328	⇓P	P	04 10 26.5	+0.1
WLF				⇑PcP	PcP	04 10 28.7	0.0
WLF				⇑pP	sP	04 10 41.4	-0.8
	comp=Z,60nm,1.1s						
FXWY	Fox Creek	86.85	40	*e*P	P	04 10 28.3	+1.0
	comp=Z,25nm,1.2s						
RLMT	Red Lodge	86.85	38	*e*P	P	04 10 28.1	+0.8
	comp=Z,86nm,1.4s						
RLMT	Red Lodge	86.85	38	P	P	04 10 28.1	+0.8
	baz=311,SNR=32						
FUORN	Ofenpass-Fuorn	86.87	324	*e*P	P	04 10 27.5	+0.2
	comp=Z,39nm,0.9s						
FUORN				LR	LR		
	comp=Z,5µm,18.0s						
MOOW	Moose Ponds	86.94	40	*e*P	P	04 10 28.8	+1.0
	comp=Z,12nm,0.9s						
CWC	Cottonwood Cre	86.97	49	P	P	04 10 27.7	-0.2
	baz=306						
TPAW	Teton Pass	86.99	40	*e*P	P	04 10 28.2	+0.2
	comp=Z,25nm,0.9s						
HVU	Hansel Valley	87.03	42	*e*P	P	04 10 29.1	+1.0
	comp=Z,22nm,0.8s						
HVU	Hansel Valley	87.03	42	*e*P	P	04 10 29.1	+1.0
HVU				pmax	pmax		
	comp=Z,22nm,0.8s						
GIVF	Givet	87.05	329	*e*P	P	04 10 28.8	+1.0
GIVF				pmax	pmax		
	comp=Z,42nm,1.1s						
LOHW	Long Hollow	87.10	40	*e*P	P	04 10 29.4	+0.9
	comp=Z,10nm,0.9s						
GRAC	Grapevine Rang	87.11	48	P	P	04 10 28.8	+0.4
	baz=306,SNR=7.6						
SNOW	Snow King Moun	87.12	40	*e*P	P	04 10 29.9	+1.2
	comp=Z,18nm,0.8s						
SNOW				*e*pP	pP	04 10 40.5	+0.5
REDW	Red Top Meadow	87.13	40	*e*P	P	04 10 29.6	+0.9
	comp=Z,19nm,1.0s						
DGMT	Dagmar	87.15	33	*e*P	P	04 10 29.3	+0.9
	comp=Z,97nm,1.1s						
DGMT				*e*pP	pP	04 10 40.2	+0.4
DGMT	Dagmar	87.15	33	P	P	04 10 28.7	+0.3
	baz=314						
ISA	Isabella, Lake	87.16	50	*e*P	P	04 10 27.9	-0.8
	comp=Z,20nm,1.3s						
ISA	Isabella, Lake	87.16	50	*e*P	P	04 10 27.9	-0.8
ISA				pmax	pmax		
	comp=Z,20nm,1.2s						
ISA	Isabella, Lake	87.16	50	P	P	04 10 27.8	-0.9
	baz=306,SNR=9.2						
DOU	Dourbes	87.16	329	⇑P	P	04 10 27.5	-0.8
DOU				⇓PcP	PcP	04 10 30.0	-0.5
	comp=Z,15nm,1.4s						
DOU				⇑pP	pP	04 10 39.9	+0.1
DOU				⇑sP	sP	04 10 45.1	+0.9
ARVC	Arvin	87.23	51	P	P	04 10 28.7	-0.3
	baz=306						
ECH	Echery	87.31	326	*e*P	P	04 10 28.9	-0.2
	comp=Z,34nm,1.1s						
ECH				LR	LR		
	comp=Z,2µm,18.0s						
ECH	Echery	87.31	326	*e*P	P	04 10 28.9	-0.2
ECH				pmax	pmax		
	comp=Z,34nm,1.1s						
ECH				MLR	MLR		
	comp=Z,2µm,18.0s						
SCZ2	Santa Cruz Isl	87.34	52	P	P	04 10 29.7	+0.1
	baz=305						
BAIF	Baives	87.36	329	*e*P	P	04 10 30.2	+0.9
AHID	Auburn Hatcher	87.37	41	*e*P	P	04 10 30.9	+1.1
	comp=Z,14nm,0.8s						
DAC	Darwin (Calif)	87.38	49	*e*P	P	04 10 30.2	+0.3
	comp=Z,10nm,0.8s						
DAC	Darwin (Calif)	87.38	49	*e*P	P	04 10 30.2	+0.3
DAC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LAO	LASA Array	87.39	36	*e*P	P	04 10 30.4	+0.8
	comp=Z,91nm,1.0s						
LAO	LASA Array	87.39	36	P	P	04 10 30.3	+0.6
	baz=313						
BGU	Big Grassy Mou	87.41	43	*e*P	P	04 10 30.9	+0.9
	comp=Z,23nm,1.2s						
R11A	Troy Canyon, C	87.43	46	*e*P	P	04 10 30.6	+0.4
	comp=Z,16nm,1.1s						
R11A	Troy Canyon, C	87.43	46	P	P	04 10 30.5	+0.4
	baz=307,SNR=18						
TUE	Stuetta	87.44	324	PFAKE		04 10 40.0	+10
TUE				LR	LR		
	comp=Z,3µm,19.0s						
SPUT	South Promonto	87.52	43	*e*P	P	04 10 31.4	+0.9
	comp=Z,16nm,1.1s						
MPMC	Manual Prospec	87.58	49	P	P	04 10 30.7	-0.2
	baz=306,SNR=20						
OSI	Osito Audit: C	87.60	51	P	P	04 10 30.7	-0.2
	baz=306						
BLG	Laguna Peak, P	87.66	52	P	P	04 10 30.9	-0.2
	baz=305						
HINF	Hinteralfeld	87.74	326	*e*P	P	04 10 29.9	-1.3
HINF				pmax	pmax		
	comp=Z,62nm,1.6s						
FURC	Furnace Creek,	87.74	49	P	P	04 10 31.5	+0.1
	baz=307,SNR=13						
LRMC	Laurel Mtn Rad	87.79	50	P	P	04 10 31.8	-0.1
	baz=306,SNR=8.7						
HAU	Haudompre	87.84	327	*e*P	P	04 10 30.5	-1.2
TPNV	Topopah Spring	87.85	48	*e*P	P	04 10 32.7	+0.5
	comp=Z,32nm,1.0s						
TPNV	Topopah Spring	87.85	48	*e*P	P	04 10 32.7	+0.5
TPNV				pmax	pmax		
	comp=Z,32nm,1.0s						
TPNV	Topopah Spring	87.85	48	P	P	04 10 32.4	+0.2
	baz=307,SNR=32						
EDW2	Edwards Air Fo	87.93	50	P	P	04 10 32.7	+0.2
	baz=306,SNR=9.4						
FURI	Furi	87.96	279	PFAKE		04 10 40.0	+6.8
FURI				LR	LR		
	comp=Z,500nm,20.0s						
AQU	L'Aquila	87.99	319	*e*P	P	04 10 33.7	+1.1
	comp=Z,63nm,1.0s						
AQU				LR	LR		
	comp=Z,2µm,20.0s						
AQU	L'Aquila	87.99	319	*e*P	P	04 10 33.7	+1.1
AQU				pmax	pmax		
	comp=Z,63nm,1.0s						
AQU	L'Aquila	87.99	319	*e*P	P	04 10 30.6	-1.9
DUG	Dugway, Tooele	88.00	44	*e*P	P	04 10 33.6	+0.9
	comp=Z,54nm,1.3s						
DUG	Dugway, Tooele	88.00	44	*e*P	P	04 10 33.6	+0.9
DUG				pmax	pmax		
	comp=Z,54nm,1.3s						
DUG	Dugway, Tooele	88.00	44	P	P	04 10 33.7	+0.9
	baz=309,SNR=32						
TIP	Timpagrande	88.01	315	PFAKE		04 10 40.0	+7.2
TIP				LR	LR		
	comp=Z,2µm,21.0s						
DECC	Green Verdugo	88.07	51	P	P	04 10 32.9	-0.2
	baz=306						
BW06	Boulder Array	88.23	40	*e*P	P	04 10 34.0	+0.1
	comp=Z,18nm,0.9s						
BW06	Boulder Array	88.23	40	P	P	04 10 34.0	+0.1
	baz=311,SNR=30						
PD31	Pinedale Array	88.23	40	*e*P	P	04 10 33.5	-0.5
PD31				*e*PP	PP	04 13 58.7	-2.1
PDAR	Pinedale Array	88.23	40	*e*P	P	04 10 32.8	-1.2
PDAR	Pinedale Array	88.23	40	P	P	04 10 34.0	0.0
	comp=Z,9.9nm,0.7s,baz=288,slow=1.4,SNR=98						
PDAR				PP	PP	04 13 58.7	-2.1
	comp=Z,0.6nm,0.9s,baz=299,slow=9.2,SNR=2.5						
PDAR				PKKPbc	PKKPdf	04 28 13.8	+3.1
	comp=Z,0.5nm,0.8s,baz=95,slow=1.8,SNR=4.0						
TCUT	Toone Canyon	88.24	42	*e*P	P	04 10 35.0	+1.0
	comp=Z,36nm,0.8s						
CTU	Camp Tracy	88.31	43	*e*P	P	04 10 35.2	+0.9
	comp=Z,20nm,1.1s						
PSUT	Pine Spring	88.40	45	*e*P	P	04 10 35.7	+0.9
	comp=Z,26nm,1.2s						
VLC	Villacollemand	88.46	322	PFAKE		04 10 50.0	+15
VLC				LR	LR		
	comp=Z,2µm,18.0s						
SHOC	Shoshone, Teco	88.46	49	P	P	04 10 34.9	0.0
	baz=307						
GSC	Goldstone, Bar	88.47	49	*e*P	P	04 10 35.0	0.0
	comp=Z,39nm,1.4s						
GSC	Goldstone, Bar	88.47	49	*e*P	P	04 10 35.0	0.0
GSC				pmax	pmax		
	comp=Z,39nm,1.4s						
GSC	Goldstone, Bar	88.47	49	P	P	04 10 35.2	+0.2
	baz=307,SNR=9.5						
BFSC	Mount Baldy Ra	88.53	51	P	P	04 10 34.8	-0.6
	baz=306						
SENIN	Lac Senin/Sane	88.54	325	*e*P	P	04 10 37.2	+1.9
	comp=Z,10nm,0.9s						
SENIN				*e*pP	pP	04 10 48.2	+1.4
SENIN				LR	LR		
	comp=Z,3µm,18.0s						
JLU	Jordanelle	88.55	43	*e*P	P	04 10 36.3	+0.8
	comp=Z,16nm,0.9s						
NLU	North Lily Min	88.59	43	*e*P	P	04 10 36.6	+0.9
	comp=Z,23nm,0.9s						
RRX	Edison Barstow	88.60	50	P	P	04 10 35.7	+0.1
	baz=306						
SCI2	San Clemente I	88.67	52	P	P	04 10 35.7	-0.1
	baz=306						
MPU	Maple Canyon	88.81	43	*e*P	P	04 10 37.7	+1.0
	comp=Z,23nm,0.9s						
SHPR	Sheep Range	88.82	48	*e*P	P	04 10 37.8	+1.0
	comp=Z,29nm,1.4s						
TUQ	Turquoise Moun	88.97	49	P	P	04 10 37.3	-0.1
	baz=307,SNR=12						
BBRC	Big Bear Solar	89.01	50	P	P	04 10 36.8	-0.9
	baz=307						
HEC	Hector,Ludlow	89.06	50	P	P	04 10 37.6	-0.2
	baz=307						
CEL	Celeste	89.11	315	PFAKE		04 10 50.0	+12
CEL				LR	LR		
	comp=Z,2µm,21.0s						
CCUT	Cedar City	89.31	46	*e*P	P	04 10 40.2	+1.1
	comp=Z,7.4nm,1.1s						
LPL	La Plagne	89.41	325	*e*P	P	04 10 39.4	0.0
LPL				pmax	pmax		
	comp=Z,13nm,0.9s						
LPG	La Plagne	89.42	325	*e*P	P	04 10 38.5	-1.0
LPG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MSU	Marysvale	89.44	45	*e*P	P	04 10 41.0	+1.3
MSU	Marysvale	89.44	45	*e*P	P	04 10 41.0	+1.3
SZCU	Shurtz Canyon	89.45	46	*e*P	P	04 10 40.7	+0.9
	comp=Z,9.9nm,1.2s						
ULM	Lac du Bonnet	89.52	28	*e*P	P	04 10 39.7	+0.2
	comp=Z,78nm,1.0s						
ULM	Lac du Bonnet	89.52	28	*e*P	P	04 10 39.7	+0.2
ULM				pmax	pmax		
	comp=Z,78nm,1.0s						
ULM	Lac du Bonnet	89.52	28	P	P	04 10 39.8	+0.2
	comp=Z,47nm,1.0s,baz=320,slow=5.4,SNR=66						
ULM				LR	LR	04 56 04.3	
	comp=Z,275nm,18.6s,baz=326,slow=39						
TMUT	Trail Mountain	89.52	44	*e*P	P	04 10 41.4	+1.3
	comp=Z,11nm,0.9s						
GMRC	Granite Mounta	89.53	49	P	P	04 10 40.3	+0.2
	baz=307,SNR=6.2						
LOR	Lormes	89.55	327	*e*P	P	04 10 39.6	-0.1
LOR				pmax	pmax		
	comp=Z,17nm,1.2s						
PPT	Papeete	89.57	111	LR	LR	04 48 05.9	
	comp=Z,478nm,18.3s,baz=274,slow=34						
PPT2	Papeete2	89.58	111	*e*S	S	04 21 30.8	+2.0
	comp=Z,209nm,27.5s						
PPT2	Papeete2	89.58	111	*e*LR	LR	04 39 20.8	
	comp=Z,589nm,21.0s,baz=294						
PMOR	Pomariorio Ree	89.61	108	*e*P	P	04 10 41.5	+1.1
	comp=Z,43nm,1.1s						
PMOR				*e*pP	pP	04 10 50.7	-1.1
	comp=Z,77nm,1.4s						
P17A	Butcher Ranch,	89.69	43	*e*P	P	04 10 41.9	+1.1
	comp=Z,43nm,0.9s						
109C	Camp Elliot, M	89.70	52	P	P	04 10 40.2	-0.6
	baz=306						
PFO	Pinyon Flats O	89.71	51	*e*P	P	04 10 41.2	+0.3
	comp=Z,13nm,0.9s						
PFO	Pinyon Flats O	89.71	51	P	P	04 10 40.9	0.0
	baz=307						
PFO	Pinyon Flats O	89.71	51	P	P	04 10 40.6	-0.3
	comp=Z,7.5nm,0.9s,baz=330,slow=4.9,SNR=7.5						
XPFO	Pion Flat	89.71	51	*e*P	P	04 10 41.2	+0.3
	comp=Z,14nm,0.9s						
CLF	Chambon-Foret	89.72	329	*e*P	P	04 10 40.0	-0.4
	comp=Z,27nm,0.7s						
CLF				LR	LR		
	comp=Z,2µm,19.0s						
MTPU	Mount Pierson	89.73	45	*e*P	P	04 10 42.7	+1.4
	comp=Z,16nm,1.0s						
MDND	Maddock	89.73	32	P	P	04 10 41.4	+0.8
	baz=318						
TIAR	Tiarei	89.75	110	*e*P	P	04 10 42.4	+1.3
	comp=Z,9.3nm,0.9s						
BNI	Bardonecchia	89.77	324	PFAKE		04 10 50.0	+9.0
BNI				LR	LR		
	comp=Z,4µm,20.0s						
BELC	Belle Mtn. Jos	89.78	50	P	P	04 10 41.1	-0.1
	baz=307						
Q16A	Castle Valley	89.79	44	*e*P	P	04 10 42.4	+1.2
	comp=Z,26nm,1.1s						
P18A	Preston Nutter	89.88	43	*e*P	P	04 10 43.4	+1.5
TVO	Taravao	89.95	111	*e*P	P	04 10 43.4	+1.4
	comp=Z,18nm,1.1s						
MBDF	Montbardon	89.95	324	*e*P	P	04 10 41.1	-0.7
MBDF				pmax	pmax		
	comp=Z,11nm,0.9s						
VAH	Vaihoa	89.95	108	*e*P	P	04 10 43.0	+1.0
	comp=Z,36nm,1.2s						
K22A	Casper	89.98	39	*e*P	P	04 10 42.4	+0.4
	comp=Z,30nm,1.0s						
K22A	Casper	89.98	39	P	P	04 10 42.1	0.0
	baz=313						
KNB	Kanab	89.98	46	*e*P	P	04 10 43.5	+1.3
	comp=Z,30nm,1.0s						
KNB	Kanab	89.98	46	*e*P	P	04 10 43.5	+1.3
KNB				pmax	pmax		
	comp=Z,30nm,1.0s						
PKCU	Pink Cliffs	90.03	46	*e*P	P	04 10 44.4	+1.8
	comp=Z,16nm,1.1s						
SRU	San Rafael Swe	90.05	43	*e*P	P	04 10 43.2	+0.7
	comp=Z,24nm,0.8s						
SRU	San Rafael Swe	90.05	43	*e*P	P	04 10 43.2	+0.7
SRU				pmax	pmax		
	comp=Z,24nm,0.8s						
AVF	Avril sur Loir	90.13	327	*e*P	P	04 10 41.4	-1.0
MONP2	Monument Peak	90.16	51	P	P	04 10 43.3	+0.2
	baz=307						
IRM	Iron Mountain	90.25	50	P	P	04 10 43.6	+0.3
	baz=308,SNR=6.9						
RWWY	Rawlins	90.25	40	*e*P	P	04 10 43.3	-0.2
	comp=Z,68nm,1.4s						
ORIF	Oris-en-Rattie	90.26	325	*e*P	P	04 10 43.9	+0.7
RSSD	Black Hills	90.28	36	*e*P	P	04 10 44.0	+0.5
	comp=Z,57nm,1.0s						
RSSD	Black Hills	90.28	36	*e*P	P	04 10 44.0	+0.5
RSSD				pmax	pmax		
	comp=Z,57nm,1.0s						
RSSD	Black Hills	90.28	36	P	P	04 10 43.9	+0.4
	baz=315						
BC3	Big Chuckawall	90.35	50	P	P	04 10 44.5	+0.6
	baz=307,SNR=7.0						
FLN	La Foliniere	90.37	331	*e*P	P	04 10 45.2	+1.7
W13A	Hualapai Mount	90.50	48	*e*P	P	04 10 45.5	+0.8
	comp=Z,11nm,1.3s						
W13A				*e*pP	pwP	04 10 58.6	-0.2
IKP	In-Ko-Pah, Jac	90.52	51	P	P	04 10 44.8	+0.1
	baz=307						
SWSC	Sam W. Stewart	90.55	51	P	P	04 10 44.6	-0.1
	baz=307						
SSB	Saint Sauveur	90.66	326	PFAKE		04 11 00.0	+15
SSB				LR	LR		
	comp=Z,2µm,19.0s						
U15A	North Rim	90.68	46	*e*P	P	04 10 46.5	+1.0
	comp=Z,21nm,1.0s						
O20A	White River Ci	90.71	41	*e*P	P	04 10 46.2	+0.7
	comp=Z,73nm,1.4s						
O20A				LR	LR		
	comp=Z,400nm,18.0s						
O20A	White River Ci	90.71	41	P	P	04 10 45.9	+0.3
	baz=312						
GRR	Gorron	90.81	330	*e*P	P	04 10 46.6	+1.0
GRR				pmax	pmax		
	comp=Z,29nm,1.2s						
PDMCI	Parker Dam,Lak	90.82	49	P	P	04 10 46.3	+0.4
	baz=308						
VIVF	Saint-Julien-l	90.91	325	*e*P	P	04 10 46.9	+0.8
VIVF				pmax	pmax		
	comp=Z,12nm,1.1s						
Y12C	Blythe	90.91	50	*e*P	P	04 10 47.2	+0.9
	comp=Z,9.6nm,1.0s						
Y12C				*e*pP	pwP	04 11 00.6	+0.1
Y12C				LR	LR		
	comp=Z,700nm,20.0s						
Y12C	Blythe	90.91	50	P	P	04 10 46.5	+0.2
	baz=308						
GLA	Glamis	91.13	50	P	P	04 10 48.0	+0.5
	baz=308						
PV09	Paradox Valley	91.27	43	*e*P	P	04 10 49.4	+1.1
PV21	Cone Mtn., Par	91.33	43	*e*P	P	04 10 49.6	+1.1
	comp=Z,44nm,1.0s						
PV23	Carpenter Ridg	91.38	43	*e*P	P	04 10 49.9	+1.1
	comp=Z,80nm,1.0s						
PV10	Paradox Valley	91.41	43	*e*P	P	04 10 50.4	+1.5
	comp=Z,102nm,0.9s						
PV14	Lion Creek, Pa	91.42	43	*e*P	P	04 10 49.9	+1.0
	comp=Z,67nm,0.9s						
PV20	West Nyswonger	91.47	43	*e*P	P	04 10 50.4	+1.2
	comp=Z,65nm,1.0s						
PV04	Paradox Valley	91.48	43	*e*P	P	04 10 50.3	+1.2
	comp=Z,96nm,1.4s						
PHWY	Pilot Hill	91.48	39	*e*P	P	04 10 49.8	+0.6
	comp=Z,45nm,1.3s						
PHWY				*e*pP	pP	04 11 00.1	-0.6
PV19	Morning Glory	91.49	43	*e*P	P	04 10 50.3	+1.1
	comp=Z,51nm,1.0s						
N23A	Red Feather La	91.49	40	*e*P	P	04 10 50.5	+1.2
	comp=Z,61nm,1.1s						
N23A	Red Feather La	91.49	40	P	P	04 10 50.2	+1.0
	baz=313						
PV17	East Wray Mesa	91.52	43	*e*P	P	04 10 50.4	+1.0
	comp=Z,82nm,1.0s						
PV16	Nyswonger Mesa	91.53	43	*e*P	P	04 10 50.4	+1.0
	comp=Z,47nm,1.1s						
PV11	David Mesa, Pa	91.56	43	*e*P	P	04 10 50.5	+1.0
	comp=Z,63nm,0.9s						
PV11				LR	LR		
	comp=Z,600nm,22.0s						
PV05	Paradox Valley	91.57	43	*e*P	P	04 10 50.7	+1.1
	comp=Z,66nm,0.9s						
PV12	Saucer Basin,	91.59	43	*e*P	P	04 10 50.8	+1.1
	comp=Z,69nm,1.2s						
PV07	Paradox Valley	91.60	43	*e*P	P	04 10 51.0	+1.3
	comp=Z,24nm,1.1s						
PV03	Paradox Valley	91.60	43	*e*P	P	04 10 50.6	+0.9
	comp=Z,54nm,1.1s						
PV13	Radium Mtn., P	91.68	43	*e*P	P	04 10 51.1	+1.0
	comp=Z,41nm,0.9s						
PV02	Paradox Valley	91.70	43	*e*P	P	04 10 51.3	+1.1
	comp=Z,35nm,0.9s						
PV15	Paradox Valley	91.76	43	*e*P	P	04 10 51.9	+1.4
	comp=Z,59nm,1.3s						
Y14A	Wickenburg	91.79	49	*e*P	P	04 10 51.0	+0.6
	comp=Z,10nm,0.8s						
WUAZ	Wupatki	91.83	47	*e*P	P	04 10 51.7	+0.9
	comp=Z,40nm,1.3s						
WUAZ	Wupatki	91.83	47	P	P	04 10 51.7	+0.9
	baz=310,SNR=17						
PV01	Paradox Valley	91.85	43	*e*P	P	04 10 51.9	+1.0
	comp=Z,51nm,1.0s						
ROSF	Rostrenen	91.87	332	*e*P	P	04 10 50.6	+0.1
ROSF				pmax	pmax		
	comp=Z,46nm,1.0s						
MFF	Saint Martin d	91.87	329	*e*P	P	04 10 50.0	-0.5
MFF				pmax	pmax		
	comp=Z,48nm,1.0s						
113A	Mohawk Valley,	92.01	50	*e*P	P	04 10 51.9	+0.5
	comp=Z,8.1nm,0.8s						
113A				*e*pP	pwP	04 11 05.2	-0.4
SMCO	Snowmass	92.08	42	*e*P	P	04 10 53.3	+1.1
	comp=Z,39nm,1.1s						
RJF	Les Rejaudoux	92.09	327	*e*P	P	04 10 51.0	-0.6
QUIF	Quistinic	92.15	331	*e*P	P	04 10 53.3	+1.5
QUIF				pmax	pmax		
	comp=Z,34nm,1.3s						
ISCO	Idaho Springs	92.43	40	*e*P	P	04 10 54.5	+0.9
	comp=Z,19nm,1.1s						
ISCO	Idaho Springs	92.43	40	*e*P	P	04 10 54.5	+0.9
ISCO				pmax	pmax		
	comp=Z,19nm,1.1s						
ISCO	Idaho Springs	92.43	40	P	P	04 10 54.5	+0.9
	baz=314,SNR=13						
X16A	Lo Mia Camp, P	92.49	47	*e*P	P	04 10 54.9	+1.0
	comp=Z,22nm,1.1s						

MVCO	Mesa Verde	92.50	44	*e*P	P	04 10 55.1	+1.2
	comp=Z,58nm,1.5s						
MVCO	Mesa Verde	92.50	44	P	P	04 10 54.6	+0.7
	baz=312,SNR=11						
SUSD	Miller	92.56	34	P	P	04 10 53.9	+0.1
	baz=318						
TBI	Tubuai	92.70	115	*e*LR	LR	04 40 32.6	
	comp=Z,856nm,32.5s,baz=305						
TAOE	Nuku Hiva Isla	93.02	98	*e*S	S	04 22 00.8	+0.5
	comp=Z,206nm,24.5s						
TAOE	Nuku Hiva Isla	93.02	98	*e*LQ	LQ	04 36 50.7	
	comp=Z,234nm,27.2s						
TAOE				*e*LR	LR	04 40 54.7	
	comp=Z,704nm,22.2s,baz=298						
EYMN	Ely	93.11	27	*e*P	P	04 10 56.7	+0.5
	comp=Z,44nm,0.9s						
EYMN	Ely	93.11	27	P	P	04 10 56.5	+0.2
	baz=324,SNR=11						
W18A	Petrified Fore	93.11	46	P	P	04 10 57.2	+0.4
	baz=311						
S22A	4UR Ranch, Cre	93.13	42	*e*P	P	04 10 57.8	+0.8
	comp=Z,34nm,1.5s						
S22A	4UR Ranch, Cre	93.13	42	P	P	04 10 58.0	+1.1
	baz=313,SNR=21						
214A	Organ Pipe Nat	93.15	50	P	P	04 10 57.4	+0.7
	baz=309						
Q24A	Divide	93.26	41	*e*P	P	04 10 58.0	+0.5
	comp=Z,15nm,1.0s						
Q24A	Divide	93.26	41	P	P	04 10 58.0	+0.5
	baz=314,SNR=11						
X18A	Snowflake	93.36	47	*e*P	P	04 10 58.8	+0.9
	comp=Z,15nm,1.0s						
X18A				*e*pP	pP	04 11 08.2	-1.3
OGNE	Ogallala	93.57	38	*e*P	P	04 10 59.3	+0.7
	comp=Z,39nm,0.9s						
OGNE	Ogallala	93.57	38	P	P	04 10 58.7	+0.1
	baz=316						
SCHQ	Schefferville	93.78	10	*e*P	P	04 10 58.9	-0.3
	comp=Z,30nm,1.5s						
SCHQ	Schefferville	93.78	10	P	P	04 10 58.9	-0.3
	comp=Z,4.4nm,1.0s,baz=351,slow=5.6,SNR=7.6						
SCHQ				PKKP	PKKPdf	04 27 57.8	-2.9
	comp=Z,2.2nm,0.9s,baz=247,slow=2.8,SNR=3.9						
SCHQ				LR	LR	04 57 59.4	
	comp=Z,1µm,18.1s,baz=332,slow=39						
SDCO	Great Sand Dun	93.90	42	*e*P	P	04 11 01.2	+0.8
	comp=Z,12nm,1.3s						
SDCO	Great Sand Dun	93.90	42	P	P	04 11 01.2	+0.8
	baz=314,SNR=8.9						
E38A	The Farm, Brul	94.17	28	*e*P	P	04 11 01.4	+0.3
	comp=Z,64nm,1.2s						
E38A	The Farm, Brul	94.17	28	P	P	04 11 01.2	+0.1
	baz=324,SNR=8.1						
KMBO	Kilima Mbogo	94.20	271	*e*P	P	04 11 01.4	-0.8
	comp=Z,2.3nm,1.2s						
KMBO	Kilima Mbogo	94.20	271	P	P	04 11 01.4	-0.8
	comp=Z,0.7nm,0.3s,baz=42,slow=3.5,SNR=5.2						
KMBO				LR	LR	04 55 34.3	
	comp=Z,175nm,19.5s,baz=68,slow=37						
ECSD	EROS Data Cent	94.20	33	*e*P	P	04 11 01.5	+0.1
ECSD	EROS Data Cent	94.20	33	P	P	04 11 01.2	-0.1
	baz=320,SNR=13						
TUC	Tucson	94.26	49	*e*P	P	04 11 02.7	+0.8
	comp=Z,20nm,1.0s						
TUC	Tucson	94.26	49	*e*P	P	04 11 02.7	+0.8
TUC				pmax	pmax		
	comp=Z,20nm,1.0s						
TUC	Tucson	94.26	49	P	P	04 11 02.7	+0.8
	baz=310						
F37A	Hinrichs Farm,	94.43	29	P	P	04 11 02.5	+0.1
	baz=323						
F38A	Pierce - Schro	94.55	29	P	P	04 11 03.3	+0.4
	baz=324,SNR=21						
ABPO	Ambohimpanom	94.61	251	*i* P	P	04 11 05.6	+1.9
KSCO	Kaye Shedlock'	94.63	39	*e*P	P	04 11 04.2	+0.6
	comp=Z,39nm,1.4s						
KSCO	Kaye Shedlock'	94.63	39	P	P	04 11 03.7	+0.1
	baz=316						
KEST	Kesra	94.73	316	*e*P	P	04 11 03.2	-0.8
	comp=Z,30nm,1.3s						
KEST	Kesra	94.73	316	P	P	04 11 03.2	-0.8
	comp=Z,6.2nm,0.9s,baz=280,slow=11,SNR=3.2						
KEST				LR	LR	04 59 53.7	
	comp=Z,989nm,19.4s,baz=338,slow=39						
SPMN	Marine on St.	94.75	30	*e*P	P	04 11 04.2	+0.4
	comp=Z,25nm,1.0s						
SPMN	Marine on St.	94.75	30	P	P	04 11 03.7	-0.1
	baz=323,SNR=7.3						
E39A	Mellen	94.75	28	P	P	04 11 03.9	0.0
	baz=325,SNR=11						
T25A	Trinidad	94.94	42	*e*P	P	04 11 06.0	+0.9
	comp=Z,23nm,1.4s						
T25A	Trinidad	94.94	42	P	P	04 11 05.4	+0.2
	baz=314,SNR=5.3						
D41A	Chassel	94.97	26	P	P	04 11 04.7	-0.1
	baz=326						
F39A	Loretta	94.98	28	P	P	04 11 05.1	+0.2
	baz=324,SNR=8.9						
LAZ	Ladron	95.19	45	*e*P	P	04 11 07.5	+1.2
LAZ				*e*pP	pP	04 11 17.8	0.0
G38A	Ridgeland	95.20	29	P	P	04 11 05.7	-0.2
	baz=324,SNR=6.1						
BGNE	Belgrade	95.22	35	*e*P	P	04 11 06.3	+0.2
	comp=Z,61nm,1.1s						
BGNE	Belgrade	95.22	35	P	P	04 11 05.6	-0.5
	baz=319						
ANMO	Albuquerque	95.24	44	*e*P	P	04 11 07.3	+0.8
	comp=Z,4.9nm,0.9s						
ANMO	Albuquerque	95.24	44	*e*P	P	04 11 07.3	+0.8
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANMO	Albuquerque	95.24	44	P	P	04 11 07.1	+0.6
	baz=313						
F40A	Park Falls	95.30	28	P	P	04 11 06.4	0.0
	baz=325,SNR=13						
E41A	Kenton	95.31	27	P	P	04 11 06.4	0.0
	baz=326,SNR=7.6						
G39A	Holcombe	95.39	29	P	P	04 11 06.6	-0.1
	baz=324,SNR=7.2						
H38A	Maiden Rock	95.41	30	P	P	04 11 06.9	+0.1
	baz=323,SNR=7.7						
Y22D	IRIS PASSCAL I	95.54	45	P	P	04 11 08.1	+0.3
	baz=312						
COWI	Conover	95.55	27	*e*P	P	04 11 08.0	+0.5
	comp=Z,23nm,1.1s						
BNM	Barren Site	95.67	45	*e*P	P	04 11 09.7	+1.1
BNM				*e*pP	pP	04 11 20.1	+0.1
E42A	Champion	95.75	26	P	P	04 11 07.8	-0.5
	baz=327						
G40A	Rib Lake	95.80	28	*e*P	P	04 11 09.0	+0.3
	comp=Z,27nm,0.9s						
G40A	Rib Lake	95.80	28	P	P	04 11 09.0	+0.3
	baz=325,SNR=12						
H39A	Augusta	95.83	29	P	P	04 11 08.6	-0.1
	baz=324,SNR=5.3						
319A	Douglas	95.83	49	*e*P	P	04 11 10.3	+1.1
	comp=Z,26nm,1.2s						
319A				*e*pP	pP	04 11 20.0	-0.7
F41A	Three Lakes	95.86	27	*e*P	P	04 11 09.8	+0.9
	comp=Z,31nm,1.0s						
F41A	Three Lakes	95.86	27	P	P	04 11 09.2	+0.3
	baz=326,SNR=9.4						
121A	Cookes Peak, D	96.03	47	P	P	04 11 11.0	+0.8
	baz=312						
E43A	Lone Tree Farm	96.14	26	P	P	04 11 09.9	-0.2
	baz=327						
MATQ	Matagami	96.22	18	P	P	04 11 09.6	-0.8
	baz=335						
F42A	Maple Grove Fa	96.22	27	P	P	04 11 10.2	-0.3
	baz=326						
H40A	Chili	96.25	29	P	P	04 11 10.9	+0.2
	baz=325						
G41A	Antigo	96.26	28	P	P	04 11 11.1	+0.3
	baz=326						
CBKS	Cedar Bluff	96.33	38	PFAKE		04 11 20.0	+8.8
CBKS				LR	LR		
	comp=Z,300nm,18.0s						
CBKS	Cedar Bluff	96.33	38	P	P	04 11 10.6	-0.7
	baz=317						
E44A	Grand Marais A	96.33	25	P	P	04 11 10.9	-0.1
	baz=328						
I39A	Houston	96.40	30	P	P	04 11 10.8	-0.5
	baz=324						
F43A	Flat Rock, Esc	96.53	26	P	P	04 11 12.1	+0.2
	baz=327						
G42A	Mountain	96.54	27	*e*P	P	04 11 12.7	+0.7
	comp=Z,33nm,0.9s						
G42A				LR	LR		
	comp=Z,700nm,19.0s						
G42A	Mountain	96.54	27	P	P	04 11 12.2	+0.3
	baz=326,SNR=5.1						
H41A	Junction City	96.56	28	P	P	04 11 11.9	-0.2
	baz=325						
F44A	Big Bay de Noc	96.69	26	P	P	04 11 13.0	+0.4
	baz=328						
J39A	Decorah	96.73	30	P	P	04 11 12.0	-0.9
	baz=324						
I40A	Norwalk	96.75	29	P	P	04 11 12.8	-0.2
	baz=324						
D46A	Sault St. Mari	96.77	24	P	P	04 11 12.6	-0.4
	baz=330						
G43A	Wallace	96.81	27	P	P	04 11 13.6	+0.4
	baz=327						
E45A	Wooded Hills,	96.83	25	P	P	04 11 13.3	+0.1
	baz=329						
CHGQ	Chibougamau	96.93	16	P	P	04 11 13.2	-0.4
	baz=338						
I41A	Arkdale	96.93	29	*e*P	P	04 11 13.9	+0.2
	comp=Z,14nm,0.9s						
I41A	Arkdale	96.93	29	P	P	04 11 13.3	-0.5
	baz=325						
D47A	Chapleau	96.95	23	P	P	04 11 13.1	-0.7
	baz=330						
LSQQ	Lebel-sur-Quev	97.03	18	P	P	04 11 13.1	-1.0
	baz=336						
J40A	Soldiers Grove	97.10	30	P	P	04 11 14.4	-0.2
	baz=324						
H42A	Shiocton	97.10	28	*e*P	Pdif	04 11 15.4	+0.8
	comp=Z,47nm,1.4s						
H42A	Shiocton	97.10	28	P	P	04 11 14.4	-0.1
	baz=326						
E46A	Sault Ste Mari	97.13	24	P	Pdif	04 11 15.5	+0.8
	baz=330						
K39A	Oelwein	97.16	31	P	P	04 11 14.5	-0.4
	baz=323						
SCIA	State Center	97.20	32	*e*P	Pdif	04 11 16.4	+1.4
	comp=Z,24nm,1.0s						
SCIA	State Center	97.20	32	P	Pdif	04 11 15.2	+0.1
	baz=322						
E47A	Iron Bridge	97.41	23	P	P	04 11 15.6	-0.2
	baz=330						
J41A	Loganville	97.43	29	P	P	04 11 16.0	-0.1
	baz=325						
I42A	Draeger Farm,	97.46	28	P	P	04 11 15.8	-0.4
	baz=326						
K40A	Colesburg	97.49	30	P	P	04 11 16.1	-0.2
	baz=324						
L39A	Vinton	97.58	31	P	P	04 11 16.4	-0.3
	baz=323,SNR=5.2						
E48A	Lockeyer	97.76	23	P	P	04 11 16.6	-0.9
	baz=331						
I43A	Langenfeld Bro	97.78	28	P	P	04 11 17.2	-0.3
	baz=326						
G46A	Petoskey	97.83	25	P	P	04 11 17.7	-0.1
	baz=329						
K41A	Shullsburg	97.93	30	P	P	04 11 17.8	-0.5
	baz=325						
L40A	Anamosa	97.97	31	*e*P	Pdif	04 11 18.5	0.0
	comp=Z,19nm,1.1s						
L40A	Anamosa	97.97	31	P	P	04 11 18.0	-0.5
	baz=324						
M39A	Webster	98.01	32	P	P	04 11 18.6	-0.1
	baz=323,SNR=5.2						
J43A	Natural Harves	98.08	28	P	P	04 11 18.8	-0.2
	baz=326						
AMTX	Amarillo	98.10	42	*e*P	Pdif	04 11 20.1	+0.7
	comp=Z,24nm,1.5s						
AMTX	Amarillo	98.10	42	P	Pdif	04 11 19.5	+0.1
	baz=316						
MNTX	Cornudas Mount	98.10	46	*e*P	Pdif	04 11 20.2	+0.9
	comp=Z,3.9nm,1.1s						
MNTX				*e*pP	pwP	04 11 33.6	+0.1
MNTX	Cornudas Mount	98.10	46	P	Pdif	04 11 19.4	0.0
	baz=313						
MSTX	Muleshoe	98.11	43	P	P	04 11 19.0	-0.5
	baz=315						
K42A	Prairie Point,	98.19	29	P	P	04 11 19.3	-0.2
	baz=325						
L41A	Preston	98.28	30	P	P	04 11 19.1	-0.8
	baz=324						
E50A	Wahnapitae	98.28	22	P	P	04 11 19.1	-0.7
	baz=332						
G47A	Hillman	98.32	24	P	P	04 11 19.8	-0.2
	baz=330						
GLMI	Grayling	98.34	25	P	Pdif	04 11 20.3	+0.2
	baz=329						
H46A	Fife Lake	98.37	26	P	P	04 11 20.0	-0.3
	baz=329						
M40A	Post Highland	98.37	31	P	P	04 11 19.7	-0.5
	baz=324						
I46A	Reed City	98.78	26	Pdiff	P	04 11 21.0	-1.1
	baz=328						
M41A	Milan	98.82	31	Pdiff	P	04 11 21.9	-0.4
	baz=324						
ES19	SONSECA Array	98.96	327	*e*P	P	04 11 22.5	-0.6
ESDC	Sonseca Array	99.01	327	P	Pdif	04 11 22.4	-0.9
	comp=Z,1.5nm,0.7s,baz=27,slow=4.5,SNR=10						
ESDC				PP	PP	04 15 23.8	-0.9
	comp=Z,0.2nm,0.5s,baz=28,slow=7.5,SNR=3.2						
ESDC				PKKPbc	PKKPbc	04 27 48.4	-0.8
	comp=Z,1.2nm,0.8s,baz=225,slow=3.1,SNR=5.1						
ESDC				LR	LR	05 02 13.4	
	comp=Z,718nm,18.2s,baz=55,slow=39						
ESLA	Sonseca Array	99.01	327	PFAKE		04 11 30.0	+6.7
ESLA				LR	LR		
	comp=Z,2µm,19.0s						
CART	Cartagena	99.16	324	PFAKE		04 11 40.0	+16
CART				LR	LR		
	comp=Z,1µm,19.0s						
N41A	Harden Midland	99.22	31	Pdiff	Pdif	04 11 23.4	-0.7
	baz=324						
PAB	San Pablo	99.29	327	PFAKE		04 11 40.0	+15
PAB				LR	LR		
	comp=Z,2µm,20.0s						
M43A	Waltham Townsh	99.46	30	Pdiff	Pdif	04 11 24.6	-0.6
	baz=326						
MBAR	Mbarara	99.57	275	PFAKE		04 11 40.0	+14
MBAR				LR	LR		
	comp=Z,500nm,22.0s						
BUKO	Buck Lake	99.58	21	Pdiff	Pdif	04 11 24.9	-0.7
	baz=333						
J47A	Sunmer	99.62	26	Pdiff	Pdif	04 11 25.5	-0.3
	baz=329						
LATQ	La Tuque	99.67	16	Pdiff	Pdif	04 11 25.3	-0.7
	baz=339						
O41A	Passleys Farm,	99.69	32	Pdiff	Pdif	04 11 25.8	-0.4
	baz=324						
WMOK	Wichita Mounta	99.85	40	Pdiff	Pdif	04 11 26.7	-0.3
	baz=318						
M44A	Midewin, Midew	99.89	29	Pdiff	Pdif	04 11 26.8	-0.3
	baz=326						
P41A	Barry, Barry	99.96	32	Pdiff	Pdif	04 11 27.3	-0.1
	baz=324						
MTE	Manteigas	100.06	329	PFAKE		04 11 40.0	+12
MTE				LR	LR		
	comp=Z,2µm,20.0s						
P42A	Winchester	100.36	32	Pdiff	Pdif	04 11 28.9	-0.4
	baz=324						
LTX	Lajitas	100.80	47	*e*Pdif	Pdif	04 11 31.3	-0.2
LTX				*e*PP	PP	04 15 37.5	-1.2
LTX	Lajitas	100.80	47	*e*P	Pdif	04 11 31.3	-0.2
LTX				*e*		04 15 37.5	
TX31	Lajitas Ar. Si	100.80	47	*e*Pdif	Pdif	04 11 31.6	+0.1
TXAR	Lajitas Array	100.80	47	P	Pdif	04 11 31.3	-0.2
	comp=Z,1.1nm,0.7s,baz=291,slow=2.7,SNR=13						
TXAR				PP	PP	04 15 37.5	-1.2
	comp=Z,0.5nm,0.7s,baz=308,slow=8.7,SNR=3.5						
TXAR				PKiKP	PKiKP	04 15 55.6	-1.6
	comp=Z,1.1nm,1.0s,baz=316,slow=2.5,SNR=3.7						
TXAR				PKKP	PKKPbc	04 27 44.6	+0.7
	comp=Z,0.4nm,0.7s,baz=131,slow=6.8,SNR=5.4						
ELFO	Elginfield	100.94	24	Pdiff	Pdif	04 11 31.7	-0.1
	baz=332						
O45A	Potomac	100.97	30	Pdiff	Pdif	04 11 31.6	-0.3
	baz=326						
M48A	Edgerton	101.16	27	PFAKE		04 11 40.0	+7.3
M48A				LR	LR		
	comp=Z,500nm,18.0s						
CCM	Cathedral Cave	101.17	33	*e*Pdif	Pdif	04 11 33.2	+0.3
CCM	Cathedral Cave	101.17	33	*e*P	Pdif	04 11 33.2	+0.3
CCM	Cathedral Cave	101.17	33	Pdiff	Pdif	04 11 32.7	-0.2
	baz=323						
P44A	Sand Creek, Wi	101.23	31	Pdiff	Pdif	04 11 33.1	+0.1
	baz=326						
S41A	Jillco Farms,	101.31	34	Pdiff	Pdif	04 11 33.1	-0.4
	baz=323						
PESTR	Estremoz	101.33	329	PFAKE		04 11 50.0	+16
PESTR				LR	LR		
	comp=Z,1µm,19.0s						
S42A	Caledonia	101.62	33	Pdiff	Pdif	04 11 34.6	-0.2
	baz=324						
T41A	Mountain View	101.73	34	Pdiff	Pdif	04 11 34.9	-0.5
	baz=323						
U40A	Yellville	101.74	35	Pdiff	Pdif	04 11 34.7	-0.8
	baz=322						
OLIL	Olney	102.06	31	PFAKE		04 11 50.0	+13
OLIL				LR	LR		
	comp=Z,600nm,19.0s						
T42A	Van Buren	102.07	34	*e*Pdif	Pdif	04 11 37.2	+0.4
T42A	Van Buren	102.07	34	Pdiff	Pdif	04 11 36.8	-0.1
	baz=323						
ERPA	Erie	102.34	23	PFAKE		04 11 50.0	+12
ERPA				LR	LR		
	comp=Z,1µm,18.0s						
S44A	Carbondale	102.39	32	Pdiff	Pdif	04 11 38.1	-0.2
	baz=325						
L53A	Girard	102.40	24	Pdiff	Pdif	04 11 37.8	-0.4
	baz=332						
ALLY	Alegheny Colle	102.71	24	PFAKE		04 11 50.0	+10
ALLY				LR	LR		
	comp=Z,1µm,20.0s						
PFVI	Vila Bisbo	103.31	328	PFAKE		04 11 50.0	+7.6
PFVI				LR	LR		
	comp=Z,3µm,20.0s						
P51A	Williamsport	103.52	27	PFAKE		04 12 00.0	+17
P51A				LR	LR		
	comp=Z,500nm,20.0s						
S49A	Springfield	104.07	29	Pdiff	Pdif	04 11 45.7	0.0
	baz=328						
RKT	Rikitea	104.20	109	*e*LR	LR	04 45 52.0	
	comp=Z,331nm,29.0s						
WVT	Waverly	104.33	32	PFAKE		04 12 00.0	+13
WVT				LR	LR		
	comp=Z,400nm,20.0s						
WVT	Waverly	104.33	32	Pdiff	Pdif	04 11 47.1	+0.1
	baz=326						
MCWV	Mont Chateau	104.57	24	PFAKE		04 12 00.0	+12
MCWV				LR	LR		
	comp=Z,500nm,19.0s						
YLE	Yale	105.28	19	PFAKE		04 16 20.0	+15
YLE				LR	LR		
	comp=Z,900nm,22.0s						
W48A	Pulaski	105.56	32	PKiKP	PKiKP	04 16 05.3	-0.3
	baz=326						
SWET	Sewanee	105.94	31	PFAKE		04 16 20.0	+14
SWET				LR	LR		
	comp=Z,600nm,19.0s						
TAM	Tamanrasset	105.98	309	PFAKE		04 16 20.0	+13
TAM				LR	LR		
	comp=Z,600nm,20.0s						
W50A	Signal Mountai	106.23	31	PFAKE		04 16 20.0	+13
W50A				LR	LR		
	comp=Z,500nm,20.0s						
V52A	Sevierville	106.43	29	PKiKP	PKiKP	04 16 07.3	+0.1
	baz=329						
R58B	Mineral	106.78	24	PFAKE		04 16 20.0	+12
R58B				LR	LR		
	comp=Z,700nm,19.0s						
V53A	Saluda	106.91	29	PFAKE		04 16 20.0	+12
V53A				LR	LR		
	comp=Z,700nm,18.0s						
W53A	Cullowhee	107.19	29	PKiKP	PKiKP	04 16 08.7	-0.1
	baz=329						
BG3	Lake Jocassee	107.44	29	PFAKE		04 16 20.0	+11
BG3				LR	LR		
	comp=Z,600nm,18.0s						
HODGE	Hodges	108.37	29	PFAKE		04 16 20.0	+9.1
HODGE				LR	LR		
	comp=Z,600nm,18.0s						
LSZ	Lusaka	108.85	263	PFAKE		04 16 20.0	+7.7
LSZ				LR	LR		
	comp=Z,800nm,20.0s						
DWPF	Disney Wildern	113.98	32	PFAKE		04 16 30.0	+8.4
DWPF				LR	LR		
	comp=Z,800nm,18.0s						
TOC2	Torodi Ar. Sit	115.17	304	PFAKE		04 16 40.0	+16
TOC2				LR	LR		
	comp=Z,500nm,20.0s						
TOC1	Torodi Ar. Sit	115.17	304	PFAKE		04 16 40.0	+16
TOC1				LR	LR		
	comp=Z,600nm,21.0s						
TOB2	Torodi Ar. Sit	115.18	304	PFAKE		04 16 40.0	+16
TOB2				LR	LR		
	comp=Z,600nm,22.0s						
TOC3	Torodi Ar. Sit	115.18	304	PFAKE		04 16 40.0	+16
TOC3				LR	LR		
	comp=Z,600nm,21.0s						
TOA1	Torodi Ar. Sit	115.19	304	*e*PKiKP	PKiKP	04 16 22.1	-2.1
TOA1				*e*PP	PP	04 17 23.9	-0.2
TOA1				LR	LR		
	comp=Z,500nm,21.0s						
TOA0	Torodi Ar. Sit	115.19	304	PFAKE		04 16 40.0	+16
TOA0				LR	LR		
	comp=Z,600nm,22.0s						
TORD	Torodi Ar. Bea	115.19	304	PKP	PKiKP	04 16 22.1	-2.1
	comp=Z,2.2nm,0.8s,baz=360,slow=3.2,SNR=23						
TORD				PP	PP	04 17 23.9	-0.3
	comp=Z,2.0nm,1.0s,baz=60,slow=4.3,SNR=3.3						
TORD				PKKPbc	PKKPbc	04 26 58.4	0.0
	comp=Z,4.2nm,0.9s,baz=215,slow=2.6,SNR=24						
TOC7	Torodi Ar. Sit	115.19	304	PFAKE		04 16 40.0	+16
TOC7				LR	LR		
	comp=Z,600nm,19.0s						
TOA3	Torodi Ar. Sit	115.20	304	PFAKE		04 16 40.0	+16
TOA3				LR	LR		
	comp=Z,600nm,22.0s						
TOB4	Torodi Ar. Sit	115.20	304	PFAKE		04 16 40.0	+16
TOB4				LR	LR		
	comp=Z,600nm,22.0s						
TOC4	Torodi Ar. Sit	115.20	304	PFAKE		04 16 40.0	+16
TOC4				LR	LR		
	comp=Z,600nm,21.0s						
TOC5	Torodi Ar. Sit	115.22	304	PFAKE		04 16 40.0	+16
TOC5				LR	LR		
	comp=Z,700nm,22.0s						
BOSA	Boshof	116.83	251	PKP	PKPdf	04 16 26.8	-0.3
	comp=Z,2.8nm,0.6s,baz=115,slow=1.9,SNR=7.6						
ESTN	Estel	123.55	46	PFAKE		04 16 50.0	+9.3
ESTN				LR	LR		
	comp=Z,200nm,19.0s						
DBIC	Dimbokro	124.30	304	*e*PKPdf	PKiKP	04 16 42.1	0.0
DBIC	Dimbokro	124.30	304	PKP	PKPdf	04 16 41.7	-0.1
	comp=Z,12nm,0.8s,baz=31,slow=2.1,SNR=15						
KIC	Kosan Boka	124.43	303	*e*PKIKP	PKPdf	04 16 41.5	-0.6
	comp=Z,32nm,0.9s						
TIC	Toumodi	124.44	304	*e*PKIKP	PKPdf	04 16 41.4	-0.7
LIC	Lamto	124.73	304	*e*PKIKP	PKPdf	04 16 41.5	-1.2
	comp=Z,47nm,1.0s						
NVL	N'lazarevskaya	127.96	201	*e*PKIKP	PKiKP	04 16 47.9	+0.3
NVL				pmax	pmax		
	comp=Z,19nm,1.0s						
SACV	Santiago Islan	129.00	328	PFAKE		04 17 00.0	+8.5
SACV				LR	LR		
	comp=Z,601nm,20.0s						
MTP	Monte Pirata	129.19	21	PFAKE		04 17 00.0	+8.2
MTP				LR	LR		
	comp=Z,700nm,20.0s						
SEUS	St. Eustatius	130.51	18	PFAKE		04 17 10.0	+16
SEUS				LR	LR		
	comp=Z,700nm,22.0s						
SNAA	Sanae	131.84	198	*e*PKPdf	PKiKP	04 16 55.5	0.0
SNAA	Sanae	131.84	198	*e*PKIKP	PKiKP	04 16 55.5	0.0
VNA2	Neumayer--Watz	133.47	197	PKP	PKiKP	04 16 58.2	-0.6
VNA3	Neumayer Olymp	133.84	196	PKP	PKPdf	04 16 58.3	+0.1
VNA1	Neumayer--Stat	133.87	197	PKP	PKiKP	04 16 59.1	-0.5
ZARC	Zaragoza, Cauc	134.74	38	*e*P	PKPdf	04 17 00.6	-1.1
ZARC	Zaragoza, Cauc	134.74	38	*e*P	PKPdf	04 17 00.6	-1.1
OCAC	Ocana	134.91	36	*e*P	PKiKP	04 17 03.3	-0.3
OCAC	Ocana	134.91	36	*e*P	PKiKP	04 17 03.3	-0.3
SDV	Santo Domingo	135.64	32	PKP	PKPdf	04 17 03.4	-0.2
	comp=Z,34nm,0.8s,baz=349,slow=1.7,SNR=32						
SDV				SKPbc	SKPbc	04 20 34.0	+2.1
	comp=Z,6.2nm,1.0s,baz=225,slow=19,SNR=9.6						
PTBC	PUERTO BERRIO,	135.75	38	*e*P	PKPdf	04 17 02.7	-0.9
PTBC	PUERTO BERRIO,	135.75	38	*e*P	PKPdf	04 17 02.7	-0.9
PAMC	Pamplona, Colo	135.99	36	*e*P	PKPdf	04 17 05.1	+0.5
PAMC	Pamplona, Colo	135.99	36	*e*P	PKPdf	04 17 05.1	+0.5
BARC	Barichara	136.38	37	*e*P	PKPdf	04 17 05.2	+0.2
BARC	Barichara	136.38	37	*e*P	PKPdf	04 17 05.2	+0.2
RREF	El Recreo	136.61	41	*e*P	PKPdf	04 17 06.3	+0.4
RREF	El Recreo	136.61	41	*e*P	PKPdf	04 17 06.3	+0.4

YOTC	**Yotoco, Valle**	**136.78**	**43**	*e*P	**PKPdf**	**04 17 05.2**	**-0.4**
YOTC	**Yotoco, Valle**	**136.78**	**43**	*e*P	**PKPdf**	**04 17 05.2**	**-0.4**
ROSC	**El Rosal**	**137.23**	**40**	*e*PKPdf	**PKiKP**	**04 17 08.0**	**-0.7**
ROSC	**El Rosal**	**137.23**	**40**	*e*P	**PKPdf**	**04 17 07.3**	**+0.5**
ROSC	**El Rosal**	**137.23**	**40**	*e*P	**PKPdf**	**04 17 07.3**	**+0.5**
ROSC	**El Rosal**	**137.23**	**40**	PKP	**PKPdf**	**04 17 06.6**	**-0.2**
	comp=Z,12nm,0.9s,baz=137,slow=2.3,SNR=8.5						
CMBC	**Cumbal**	**138.26**	**47**	*e*P	**PKiKP**	**04 17 10.2**	**-0.7**
CMBC	**Cumbal**	**138.26**	**47**	*e*P	**PKiKP**	**04 17 10.2**	**-0.7**
CRUC	**La Cruz**	**138.32**	**46**	*e*P	**PKPdf**	**04 17 09.0**	**+0.2**
CRUC	**La Cruz**	**138.32**	**46**	*e*P	**PKPdf**	**04 17 09.0**	**+0.2**
BETC	**Betania**	**138.35**	**43**	*e*P	**PKPdf**	**04 17 09.3**	**+0.8**
BETC	**Betania**	**138.35**	**43**	*e*P	**PKPdf**	**04 17 09.3**	**+0.8**
OTAV	**Otavalo**	**138.39**	**49**	*e*PKPdf	**PKPdf**	**04 17 08.1**	**-0.9**
OTAV	**Otavalo**	**138.39**	**49**	*e*PKIKP	**PKPdf**	**04 17 08.1**	**-0.9**
PTLC	**Puerto Leguiza**	**140.74**	**44**	*e*P	PKPpre	04 17 06.8	
PTLC	**Puerto Leguiza**	**140.74**	**44**	*e*P	PKPpre	04 17 06.8	
ATAH	**Atahualpa**	**143.75**	**57**	PKP	PKPbc	04 17 16.6	+0.5
	comp=Z,19nm,0.8s,baz=326,slow=5.1,SNR=18						
NNA	**Nana**	**148.08**	**61**	*e*PKPdf	**PKPdf**	**04 17 25.9**	**+0.4**
NNA				*e*PKPdf	**PKPdf**	**04 17 26.2**	**+0.8**
NNA	**Nana**	**148.08**	**61**	*i* PKIKP	**PKPdf**	**04 17 26.0**	**+0.6**
NNA	**Nana**	**148.08**	**61**	PKPbc	**PKPdf**	**04 17 26.2**	**+0.8**
	comp=Z,39nm,0.8s,baz=336,slow=6.4,SNR=20						
PTGA	**Pitinga**	**148.67**	**22**	*e*PKPdf	**PKPdf**	**04 17 27.1**	**+0.7**
GO10	**Punta Arenas**	**151.86**	**151**	*e*PKPbc	**PKiKP**	**04 17 38.5**	**+1.5**
GO09	**Cerro Castillo**	**152.57**	**147**	*e*PKPbc	**PKiKP**	**04 17 39.6**	**+1.1**
RCBR	**Riachuelo**	**152.92**	**331**	PFAKE		04 17 40.0	-0.2
RCBR				LR	LR		
	comp=Z,30µm,19.0s						
LPAZ	**La Paz**	**157.29**	**57**	*e*PKPdf	**PKPdf**	**04 17 40.9**	**+1.4**
LPAZ	**La Paz**	**157.29**	**57**	PKP	**PKPdf**	**04 17 40.1**	**+0.5**
	comp=Z,12nm,1.3s,baz=1.4,slow=2.6,SNR=13						
MNMC	**Minye Minye**	**157.92**	**65**	*e*PKPdf	**PKPdf**	**04 17 40.3**	**+0.5**
PB11	**IPOC Station P**	**158.22**	**66**	*e*PKPdf	**PKPdf**	**04 17 40.6**	**+0.6**
PLCA	**Paso Flores**	**159.32**	**126**	*e*PKPab	**PKPab**	**04 18 19.6**	**+1.4**
LVC	**Limon Verde**	**160.24**	**72**	*e*PKPdf	**PKPdf**	**04 17 44.5**	**+1.9**
LVC	**Limon Verde**	**160.24**	**72**	*e*PKIKP	**PKPdf**	**04 17 44.5**	**+1.9**
GO02	**Mina Guanaco**	**160.69**	**80**	*e*PKPdf	**PKPdf**	**04 17 42.3**	**-0.6**
BDFB	**Brasilia**	**165.42**	**358**	*e*PKPdf	**PKPdf**	**04 17 47.6**	**+0.1**
BDFB				*e*PKPdf	**PKPdf**	**04 17 48.2**	**+0.7**
BDFB				*e*PKPab	**PKPab**	**04 18 45.2**	**-0.1**
BDFB				*e*PKPab	**PKPab**	**04 18 45.7**	**+0.4**
BDFB	**Brasilia**	**165.42**	**358**	PKP	**PKPdf**	**04 17 47.6**	**+0.1**
	comp=Z,6.4nm,0.8s,baz=253,slow=4.0,SNR=10						
BDFB				PKPab	**PKPab**	**04 18 45.2**	**-0.1**
	comp=Z,6.4nm,0.9s,baz=9.8,slow=9.7,SNR=5.6						
CPUP	**Villa Florida**	**171.31**	**65**	*e*PKPdf	**PKPdf**	**04 17 52.2**	**+1.2**
CPUP				*e*PKPab	**PKPab**	**04 19 11.0**	**-0.4**
CPUP	**Villa Florida**	**171.31**	**65**	PKP	**PKPdf**	**04 17 51.1**	**+0.1**
	comp=Z,15nm,1.2s,baz=41,slow=2.3,SNR=14						
CPUP				PKPab	**PKPab**	**04 19 11.0**	**-0.4**
	comp=Z,4.6nm,0.9s,baz=317,slow=5.4,SNR=6.2						

KRNET ***13*** *04:09:58.9±0.1, 43.°70N×76.°63E, h17^{km}, mb2.2*

NNC ***13*** *04:09:59.2±0.6, 43.°70N×76.°70E, h0^{km}, mb2.1, mpv2.4, Error ellipse: s-maj=4.6km s-min=3.8km az=1.0*

SOME 13 04:09:58.5, 43.°77N×76.°68E, h15^{km}, 11C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTBS	**Karatobe**	**0.06**	**181**	P	Pg	04 10 00.1	-1.3
	17nm,0.1s						
KTBS				S	Sg	04 10 01.3	-2.0
	571nm,0.2s						
KTBS	**Karatobe**	**0.06**	**181**	*e*P	Pg	04 10 00.1	-1.3
	17nm,0.1s						
KTBS				*e*S	Sg	04 10 01.3	-2.0
	571nm,0.2s						
CHKK	**Chushkaly**	**0.24**	**68**	P	Pg	04 10 03.8	0.0
CHKK				S	Sg	04 10 07.6	+0.3
CHKK	**Chushkaly**	**0.24**	**68**	*e*P	Pg	04 10 03.8	0.0
	4.0nm,0.0s						
CHKK				*e*S	Sg	04 10 07.6	+0.3
	25nm,0.2s						
KUU	**Kurty**	**0.28**	**297**	P	Pg	04 10 04.7	+0.2
	2.3nm,0.0s						
KUU				S	Sg	04 10 09.1	+0.6
	25nm,0.1s						
KUU	**Kurty**	**0.28**	**297**	*e*P	Pg	04 10 04.7	+0.2
	2.3nm,0.0s						
KUU				*e*S	Sg	04 10 09.1	+0.6
	25nm,0.1s						
MDOK	**Medeo**	**0.66**	**156**	Pg	Pg	04 10 11.1	-0.3
	3.4nm,0.2s						
MDOK				Lg	Lg	04 10 20.1	
	4.6nm,0.2s						
DGS	**Degeres**	**0.84**	**232**	P	Pg	04 10 14.7	-0.2
	1.9nm,0.2s						
DGS				S	Sb	04 10 26.3	+0.1
	3.0nm,0.2s						
TKM2	**Tokmak 2**	**1.16**	**224**	⇓P	Pg	04 10 21.2	+0.3
	1.6nm,0.9s						
TKM2				⇑S	Sg	04 10 36.0	0.0
	0.7nm,0.3s						
TKM2	**Tokmak 2**	**1.16**	**224**	⇑*i*P	Pb	04 10 18.9	-1.5
	baz=25						
TKM2				⇑*i*S	Sb	04 10 33.7	-1.6
	baz=25						
BOOM	**Boomskoye usch**	**1.39**	**203**	⇑*i*P	Pn	04 10 22.9	-0.6
	baz=3.0						
BOOM				⇑*i*S	Sn	04 10 40.6	-1.0
	baz=3.0						
ULHL	**Ulahol**	**1.56**	**192**	⇑*i*P	Pn	04 10 26.1	+0.3
	baz=91						
ULHL				⇑*i*S	Sn	04 10 45.3	-0.5
	baz=91						
USP	**Ospenovka**	**1.67**	**253**	⇑*i*P	Pb	04 10 28.1	-0.8
	baz=55						
USP				⇑*i*S	Sb	04 10 49.6	-0.1
	baz=55						
KBK	**Karagaybulak**	**1.69**	**229**	⇑*i*P	Pb	04 10 28.7	-0.6
	baz=30						
KBK				⇑*i*S	Sb	04 10 49.9	-0.5
	baz=30						
UZB	**Uzynbulak**	**1.81**	**109**	P	Pg	04 10 32.9	-0.4
	1.1nm,0.3s						
UZB				S	Sg	04 10 57.3	+0.5
	1.9nm,0.1s						

IDC ***13*** *04:12:57.5±2.2, 12.°83N×89.°55W, h80^{km}±18^{km}, mb2.8/3, mb1 3.2/6, mb1mx3.0/40, mbtmp3.1/6, MS3.4/1, Ms1 3.4/1, ms1mx2.5/8, Error ellipse: s-maj=45.3km s-min=10.1km az=45.0*

ISC 13 04:12:56.4±1.1, 12.°9N±0.°2×89.°5W±0.°2, h43^{km}, n7, σ2^{s}.65/9, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APG	**El Apazote**	**2.29**	**336**	P	**Pn**	**04 13 32.5**	**+0.6**
	2.0nm,0.3s,baz=128,slow=12,SNR=18						
APG				S	**Sn**	**04 14 03.0**	**+4.0**
	3.7nm,0.3s,baz=85,slow=9.9,SNR=6.4						
JTS	**JuntasAbangare**	**5.16**	**120**	P	**Pn**	**04 14 11.4**	**+0.3**
	0.2nm,0.3s,baz=293,slow=13,SNR=1.8						
JTS				S	**Sn**	**04 15 12.0**	**+2.6**
	0.6nm,0.3s,baz=350,slow=22,SNR=2.9						
CMIG	**Matias Romero**	**6.66**	**309**	P	**Pn**	**04 14 33.9**	**+2.1**
	0.2nm,0.3s,baz=110,slow=15,SNR=5.3						
CMIG				S	**Sn**	**04 15 47.5**	**+1.0**
	0.2nm,0.3s,baz=98,slow=19,SNR=2.9						
TXAR	**Lajitas Array**	**20.99**	**323**	P	**P**	**04 17 36.2**	**-0.1**
	0.2nm,0.4s,baz=135,slow=11,SNR=5.4						
LPIG	**La Paz**	**22.62**	**302**	LR	LR	04 26 33.4	
	comp=Z,101nm,21.2s,baz=24,slow=36						
PDAR	**Pinedale Array**	**34.45**	**333**	P	**P**	**04 19 38.0**	**-2.3**
	0.3nm,0.7s,baz=123,slow=6.6,SNR=2.9						
YKA	**Yellowknife Ar**	**52.67**	**346**	P	**P**	**04 22 03.2**	**-2.9**
	0.2nm,0.4s,baz=149,slow=6.2,SNR=7.8						

IDC 13 04:16:20.6±49.0, 16.°31S×176.°69W, h0^{km}, mb4.4/3, mb1 4.5/3, mb1mx3.8/36, mbtmp4.4/3, Error ellipse: s-maj=913.6km s-min=158.6km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.84**	**240**	P	P	04 24 04.3	0.0
	1.7nm,0.4s,baz=76,slow=12,SNR=5.9						
WRA	**Warramunga Arr**	**46.56**	**258**	P	P	04 24 50.5	0.0
	1.0nm,0.5s,baz=93,slow=7.4,SNR=38						
ASAR	**Alice Springs**	**46.82**	**253**	P	P	04 24 52.2	-0.4
	6.9nm,0.4s,baz=88,slow=8.4,SNR=110						

ISCJB ***13*** *04:20:44.2±0.6, 35.°18N±0.°06×70.°99E±0.°09, h60^{km}, mb3.5/7, Error ellipse: s-maj=11.5km s-min=6.1km az=146.5*

IDC ***13*** *04:20:48.8±3.7, 35.°37N×71.°03E, h83^{km}±29^{km}, mb3.2/7, mb1 3.3/12, mb1mx3.1/56, mbtmp3.6/12, Error ellipse: s-maj=28.3km s-min=22.0km az=177.0*

NNC ***13*** *04:20:51.2±4.7, 35.°83N×70.°29E, h11^{km}±126^{km}, mb3.8, mpv3.7, Error ellipse: s-maj=127.7km s-min=25.6km az=6.0*

ISC 13 04:20:46.0±0.9, 35.°23N±0.°08×70.°98E±0.°09, h60^{km}, n27, σ1^{s}.84/31, mb3.6/7, 4C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**5.18**	**22**	⇑P	**Pn**	**04 22 05.2**	**+4.1**
	2.3nm,0.2s						
SFK				⇓S	**Sn**	**04 23 03.5**	**+3.9**
	7.3nm,0.3s						
MNAS	**Manas**	**7.34**	**9**	⇓P	**Pn**	**04 22 32.3**	**+1.7**
	4.0nm,0.8s						
MNAS				⇑S	**Sn**	**04 23 49.4**	**-3.2**
	12nm,0.6s						
KK31	**Karatay Array**	**7.87**	**358**	P	**Pn**	**04 22 39.0**	**+1.3**
	0.9nm,0.3s,baz=174,slow=11,SNR=24						
KK31				S	**Sn**	**04 24 01.1**	**-4.2**
	2.4nm,0.3s,baz=188,slow=27,SNR=7.6						
AAK	**Ala-Archa**	**7.89**	**19**	⇑P	**Pn**	**04 22 40.0**	**+1.9**
	2.6nm,0.5s						
AAK	**Ala-Archa**	**7.89**	**19**	P	**Pn**	**04 22 40.4**	**+2.3**
	0.9nm,0.3s,baz=177,slow=7.3,SNR=13						
AAK				S	**Sn**	**04 24 04.2**	**-1.7**
	0.3nm,0.3s,baz=326,slow=22,SNR=5.5						
TKM2	**Tokmak 2**	**8.48**	**24**	⇓P	**Pn**	**04 22 48.4**	**+2.2**
	3.0nm,0.6s						
GEYT	**Alibeck**	**10.69**	**288**	P	**Pn**	**04 23 18.1**	**+1.8**
	2.3nm,0.3s,baz=115,slow=16,SNR=4.4						
PYUN	**Piuthan**	**12.45**	**121**	*e*P	**Pn**	**04 23 40.1**	**-0.5**
	7.5nm,0.3s						
DANN	**Dangsing**	**12.85**	**119**	*e*P	**Pn**	**04 23 45.4**	**-0.7**
	6.0nm,0.3s						
KOLN	**Koldanda**	**13.08**	**121**	*e*P	**Pn**	**04 23 48.4**	**-0.8**
	4.0nm,0.3s						
DMN	**Daman**	**14.25**	**118**	*e*P	**Pn**	**04 24 04.4**	**-0.5**
MK31	**Makanchi Array**	**14.35**	**33**	⇑P	**P**	**04 24 10.6**	**-0.7**
	0.1nm,0.3s,baz=202,slow=11,SNR=14						
MKAR	**Makanchi Array**	**14.35**	**33**	P	**Pn**	**04 24 04.8**	**-1.0**
	0.1nm,0.3s,baz=215,slow=14,SNR=6.2						
PKI	**Pulchoki**	**14.49**	**118**	*e*P	**Pn**	**04 24 07.2**	**-0.9**
	9.4nm,0.4s						
GUN	**Gumba**	**14.64**	**116**	*e*P	**Pn**	**04 24 09.0**	**-1.1**
	4.1nm,0.3s						
JIRN	**Jiri**	**15.01**	**116**	*e*P	**Pn**	**04 24 13.4**	**-1.5**
	14nm,0.4s						
AB31	**Akbulak array**	**16.20**	**333**	⇓P	**Pn**	**04 24 29.5**	**0.0**
	0.5nm,0.3s,baz=159,slow=12,SNR=29						
AB31				⇓S	Sn	04 27 18.3	-10
	1.2nm,0.6s,baz=156,slow=23,SNR=5.2						
KURBB	**Kurchatov Arra**	**16.33**	**17**	P	**Pn**	**04 24 31.1**	**-0.1**
	0.0nm,0.3s,baz=204,slow=10,SNR=3.4						
BVAR	**Borovoye Array**	**17.80**	**359**	P	**Pn**	**04 24 50.0**	**+0.7**
	0.3nm,0.3s,baz=160,slow=40,SNR=3.4						
ZALV	**Zalesovo Beam**	**21.08**	**23**	P	**P**	**04 25 24.4**	**-0.7**
	1.1nm,0.4s,baz=222,slow=10,SNR=9.6						
SONM	**Songino Array**	**29.09**	**53**	P	**P**	**04 26 41.0**	**+0.2**
	0.6nm,0.7s,baz=256,slow=9.4,SNR=5.2						
FINES	**FINESS Array B**	**38.53**	**327**	P	**P**	**04 28 02.3**	**0.0**
	1.2nm,0.9s,baz=331,slow=37,SNR=3.5						
NB2	**NORSAR Subarra**	**45.38**	**324**	P	**P**	**04 28 57.8**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**45.38**	**324**	P	**P**	**04 28 58.0**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=97,slow=7.8,SNR=3.2						
INK	**Inuvik**	**75.16**	**9**	P	**P**	**04 32 20.7**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=352,slow=6.7,SNR=2.5						
WRA	**Warramunga Arr**	**81.34**	**122**	P	**P**	**04 32 56.5**	**+0.3**
	comp=Z,0.2nm,0.9s,baz=326,slow=5.1,SNR=3.0						
YKA	**Yellowknife Ar**	**82.51**	**3**	P	**P**	**04 33 00.8**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=353,slow=5.5,SNR=5.9						

DJA 13 04:24:54.1±0.3, 8°S±2°×11°6E±°, h10^{km}, M3.6/6, MLv3.6/6, Bali region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.41**	**291**	P	Pg	04 25 02.2	0.0
SRBI				S	Sg	04 25 08.4	+0.8
DNP	**Denpasar**	**0.59**	**221**	P	Pg	04 25 05.9	+0.4
DNP				S	Sb	04 25 15.0	+0.1
JAGI	**Jajag, Banyuwa**	**1.45**	**260**	P	Pn	04 25 20.3	-0.1
JAGI				S	Sg	04 25 40.5	-0.4
KMMI	**Kalianget**	**2.00**	**306**	P	Pn	04 25 28.7	+0.7
GMJI	**Gumukmas**	**2.13**	**269**	P	Pn	04 25 29.6	-0.2
PLAI	**Plampang**	**2.23**	**106**	P	Pn	04 25 31.5	+0.3
GRJI	**Gresik**	**3.36**	**293**	P	Pn	04 25 45.9	-0.8
PWJI	**Pagerwojo**	**3.76**	**273**	P	Pn	04 25 52.4	+0.1
NGJI	**Ngawi**	**4.19**	**282**	P	Pn	04 25 58.2	+0.1
PCJI	**Pacitan**	**4.38**	**270**	P	Pn	04 26 00.8	+0.1
UGM	**Wanagama**	**5.04**	**273**	P	Pn	04 26 10.0	+0.2

IDC 13 04:31:25.4±28.0, 66.°95N×132.°15E, h0^{km}, mb4.4/2, mb1 4.6/3, mb1mx3.4/47, mbtmp4.3/3, ML3.6/1, Error ellipse: s-maj=1226.0km s-min=51.9km az=44.0, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRIK	**Noril'sk**	**16.49**	**299**	Pn	Pn	04 35 17.7	+0.1
	0.2nm,0.3s,baz=122,slow=3.6,SNR=3.5						
WRA	**Warramunga Arr**	**86.64**	**178**	P	P	04 44 10.9	+0.6
	2.3nm,0.7s,baz=354,slow=5.2,SNR=38						
ASAR	**Alice Springs**	**90.34**	**178**	P	P	04 44 27.1	-0.7
	1.7nm,0.8s,baz=357,slow=4.7,SNR=19						

IDC 13 04:31:49.7±12.0, 20.°71S×172.°98W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.8/35, mbtmp4.1/4, Error ellipse: s-maj=307.6km s-min=56.1km az=124.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.15**	**264**	P	P	04 39 11.9	+0.9
	2.5nm,0.4s,baz=94,slow=9.9,SNR=5.0						
ASAR	**Alice Springs**	**49.04**	**256**	P	P	04 40 37.6	-1.2
	0.3nm,0.3s,baz=94,slow=7.7,SNR=6.3						
WRA	**Warramunga Arr**	**49.22**	**261**	P	P	04 40 40.4	+0.1
	1.0nm,0.3s,baz=97,slow=8.4,SNR=62						
MJAR	**Matsushiro Arr**	**73.26**	**321**	P	P	04 43 22.8	-0.1
	1.4nm,0.3s,baz=121,slow=6.4,SNR=3.5						

NNC 13 04:36:29.2±9.2, 37.°00N×70.°45E, h6^{km}±351^{km}, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=379.0km s-min=29.7km az=19.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.85**	**38**	⇑P	Pn	04 37 29.8	+0.7
	1.3nm,0.2s						
SFK				⇓S	Sn	04 38 16.2	+1.5
	5.4nm,0.2s						
MNAS	**Manas**	**5.71**	**15**	⇑P	Pn	04 37 55.1	+0.6
	1.6nm,0.5s						
MNAS				⇑S	Sn	04 39 01.2	+0.8
	11nm,1.0s						
KK31	**Karatay Array**	**6.10**	**0**	P	Pn	04 38 01.0	+1.1
	0.3nm,0.3s,baz=183,slow=13,SNR=4.6						
KK31				⇑S	Sn	04 39 10.6	+0.7
	1.5nm,0.3s,baz=181,slow=14,SNR=3.7						
TKM2	**Tokmak 2**	**7.11**	**32**	⇓P	Pn	04 38 11.5	-2.4
	2.9nm,0.5s						
MK31	**Makanchi Array**	**13.16**	**38**	P	Pn	04 39 31.6	-4.9
	0.3nm,0.3s,baz=216,slow=9.4,SNR=5.1						

IDC 13 04:37:39.7±29.0, 25.°09S×174.°91W, h0^{km}, mb4.3/4, mb1 4.5/4, mb1mx4.0/28, mbtmp4.3/4, Error ellipse: s-maj=523.6km s-min=143.8km az=81.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**36.12**	**270**	P	P	04 44 44.1	+0.5
	3.3nm,0.3s,baz=102,slow=10,SNR=5.0						
STKA	**Stephens Creek**	**38.63**	**250**	P	P	04 45 04.0	-0.9
	1.0nm,0.4s,baz=75,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**46.42**	**260**	P	P	04 46 08.0	-0.4
	1.9nm,0.4s,baz=97,slow=7.3,SNR=46						
WRA	**Warramunga Arr**	**46.95**	**266**	P	P	04 46 12.8	+0.3
	1.9nm,0.5s,baz=104,slow=8.4,SNR=42						

ISCJB ***13*** *04:45:04.7±0.6, 34.°62N±0.°04×138.°26E±0.°05, h29^{km}±4^{km}, mb3.2/2, Error ellipse: s-maj=7.4km s-min=6.0km az=151.9*

JMA ***13*** *04:45:04.9, 34.°66N×138.°24E, h31^{km}±1^{km}, M3.1 Broadband fault plane solution: P waves. NP1: ϕ_s85.00000°, δ77.00000°, λ60.00000°. NP2: ϕ_s334.00000°, δ33.00000°, λ155.00000°. Principal axes: T Plg49.0000°, Azm322.0000°; N Plg29.0000°, Azm92.0000°; P Plg26.0000°, Azm198.0000°;*

JMA Felt II J1.

IDC ***13*** *04:45:10.4±1.4, 35.°45N×137.°13E, h0^{km}, mb3.3/2, mb1 3.5/2, mb1mx3.1/40, mbtmp3.3/2 Error ellipse: s-maj=39.5km s-min=21.3km az=124.0*

ISC 13 04:45:04.8±1.0, 34.°66N±0.°04×138.°25E±0.°04, h31^{km}±6^{km}, n15, σ1^{s}.00/20, 1C-4D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSG	**Sagara**	**0.05**	**290**	⇑P	**Pb**	**04 45 10.0**	**-0.2**
JSG				S	**Sb**	**04 45 13.8**	**0.0**
JKKS	**Kakegawashinom**	**0.23**	**294**	P	**Pb**	**04 45 11.4**	**-0.2**
JKKS				S	**Sb**	**04 45 16.3**	**+0.1**
JKKG	**Kakegawa**	**0.26**	**300**	P	**Pb**	**04 45 11.4**	**-0.4**
JKKG				S	**Sb**	**04 45 15.9**	**-0.7**
TK04	**Tokai 4**	**0.41**	**229**	⇓P	**Pn**	**04 45 14.3**	**-0.2**
JIZS	**Izushimoda**	**0.53**	**83**	P	**Pb**	**04 45 15.3**	**-0.4**
JIZS				*e*S	**Sb**	**04 45 22.7**	**-0.5**
TK03	**Tokai 3**	**0.54**	**205**	P	**Pb**	**04 45 16.1**	**+0.2**
TTO5	**TONANKAI O.B.S**	**0.59**	**227**	⇓P	**Pb**	**04 45 16.4**	**-0.4**
JFNN	**Fujinakano**	**0.65**	**34**	S	**Sb**	**04 45 26.7**	**+0.1**
TK02	**Tokai 2**	**0.81**	**210**	⇓P	**Pn**	**04 45 19.1**	**-0.9**
JYN	**Shimob**	**0.87**	**16**	⇓P	**Pn**	**04 45 20.8**	**-0.3**
JOD2	**Odawara 2**	**0.92**	**49**	P	**Pn**	**04 45 21.8**	**+0.2**
MJAR	**Matsushiro Arr**	**1.88**	**359**	Pn	**Pn**	**04 45 36.7**	**+1.8**
	1.0nm,0.3s,baz=188,slow=15,SNR=23						
MJAR				Sn	**Sn**	**04 45 59.4**	**+1.8**
	2.2nm,0.3s,baz=189,slow=22,SNR=14						
MAT	**Matsushiro**	**1.88**	**359**	P	**Pb**	**04 45 36.8**	**-1.8**
MAT				S	**Sb**	**04 45 59.8**	**-1.9**
MKAR	**Makanchi Array**	**43.25**	**304**	P	**P**	**04 53 03.5**	**+0.3**
	0.3nm,0.7s,baz=93,slow=9.7,SNR=4.6						
WRA	**Warramunga Arr**	**54.42**	**185**	P	P	04 54 44.8	+16
	0.2nm,0.6s,baz=12,slow=7.3,SNR=3.7						

DDA ***13*** *04:45:14.2, 35.°26N×28.°16E, h22^{km}±2^{km}, ML3.0*

ATH ***13*** *04:45:18.3, 35.°40N×28.°37E, h42^{km}±6^{km}, ML3.2/2, Error ellipse: s-maj=8.2km s-min=1.5km az=34.0*

ISK ***13*** *04:45:19.4, 35.°49N×28.°25E, h21^{km}, ML2.9/15*

THE ***13*** *04:45:21.2, 35.°46N×28.°30E, h22^{km}±3^{km}, ML3.0/3, Error ellipse: s-maj=3.2km s-min=0.6km az=141.0*

HLW ***13*** *04:45:21.1, 35.°23N×28.°37E, h10^{km}±18^{km}, Md3.3, Ml3.5*

ISC 13 04:45:18.4±1.1, 35.°36N±0.°03×28.°31E±0.°03, h22^{km}±6^{km}, n64, σ1^{s}.41/80, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.87**	**350**	PG	**Pb**	**04 45 34.3**	**-0.5**
ARG				SG	**Sb**	**04 45 45.2**	**-0.8**
ARG	**Arkhangelos**	**0.87**	**350**	P	**Pb**	**04 45 35.0**	**+0.2**
ARG				S	**Sn**	**04 45 46.8**	**-0.6**
ARG				AML	AML	04 45 51.0	
	comp=E,1893µm,0.6s						
ARG				AML	AML	04 45 52.0	
	comp=N,1509µm,0.7s						
ARG	**Arkhangelos**	**0.87**	**350**	P	**Pb**	**04 45 35.0**	**+0.2**
ARG				S	**Sb**	**04 45 46.0**	**0.0**
KARP	**Karpathos**	**0.96**	**282**	PG	**Pb**	**04 45 37.2**	**+0.8**
KARP				SG	**Sn**	**04 45 50.0**	**+0.4**
KARP	**Karpathos**	**0.96**	**282**	P	**Pb**	**04 45 37.2**	**+0.8**
KARP				S	**Sn**	**04 45 51.0**	**+1.4**
KARP				AML	AML	04 45 51.6	
	comp=N,6233µm,0.7s						
KARP				AML	AML	04 45 52.9	
	comp=E,4347µm,0.5s						
KARP	**Karpathos**	**0.96**	**282**	P	**Pb**	**04 45 37.1**	**+0.8**
KARP				S	**Sn**	**04 45 50.2**	**+0.6**
KSL	**Kastellorizon**	**1.30**	**52**	P	**Pn**	**04 45 40.4**	**-0.9**
KSL	**Kastellorizon**	**1.30**	**52**	P	**Pn**	**04 45 42.1**	**+0.8**
MRSB	**Marmaris-Mugla**	**1.36**	**356**	PN	**Pn**	**04 45 41.8**	**-0.3**
AKAS	**Kas**	**1.37**	**50**	PN	**Pn**	**04 45 43.5**	**+1.2**
AKAS	**Kas**	**1.37**	**50**	*i* P	**Pb**	**04 45 44.0**	**+0.6**
AKAS				*i* S	**Sn**	**04 45 59.7**	**-0.1**
AKAS				IAML_P			
	comp=Z,4µm,0.2s						
AKAS				IAML_P			
	comp=Z,4µm,0.2s						
FETY	**Fethiye**	**1.42**	**26**	P	**Pn**	**04 45 42.7**	**-0.3**
FETY				S	**Sn**	**04 46 00.1**	**-0.9**
FETY	**Fethiye**	**1.42**	**26**	*i* P	**Pn**	**04 45 43.0**	**+0.1**
FETY				IAML_P			
	comp=Z,2µm,0.4s						
DALY	**Dalyan (Mula)**	**1.48**	**11**	PN	**Pn**	**04 45 43.7**	**-0.1**
DALY	**Dalyan (Mula)**	**1.48**	**11**	*i* P	**Pn**	**04 45 44.1**	**+0.4**
DALY				IAML_P			
	comp=Z,795nm,0.3s						
DAT	**Datca**	**1.49**	**337**	PN	**Pn**	**04 45 43.8**	**-0.2**
DAT	**Datca**	**1.49**	**337**	*i* P	**Pn**	**04 45 43.7**	**-0.4**
DAT				IAML_P			
	comp=Z,497nm,0.3s						
DATC	**Datca-Mugla**	**1.49**	**340**	PN	**Pn**	**04 45 43.8**	**-0.1**
TURN	**Turunc**	**1.53**	**9**	PN	**Pn**	**04 45 42.8**	**-1.6**
TURN	**Turunc**	**1.53**	**9**	*i* P	**Pn**	**04 45 43.9**	**-0.5**
TURN				IAML_P			
	comp=Z,1µm,0.2s						
NISR	**Nisiros**	**1.57**	**323**	P	**Pn**	**04 45 45.8**	**+0.8**
NISR	**Nisiros**	**1.57**	**323**	P	**Pn**	**04 45 45.8**	**+0.8**
ZKR	**Zakros**	**1.73**	**262**	P	**Pn**	**04 45 47.9**	**+0.7**
ZKR	**Zakros**	**1.73**	**262**	P	**Pn**	**04 45 48.4**	**+1.2**
ZKR				S	**Sn**	**04 46 10.1**	**+1.4**
STIA	**Sitia Lasithi**	**1.82**	**266**	P	**Pn**	**04 45 50.3**	**+1.8**
BDRM	**Kayabasi**	**1.84**	**338**	*i* P	**Pn**	**04 45 48.3**	**-0.5**
BDRM				IAML_P			
	comp=Z,437nm,0.2s						
BODT	**Bodrum**	**1.88**	**335**	PN	**Pn**	**04 45 49.3**	**0.0**
ELL	**Elmali**	**1.90**	**43**	PN	**Pn**	**04 45 50.3**	**+0.7**
MLSB	**Milas**	**1.98**	**348**	PN	**Pn**	**04 45 50.6**	**-0.1**
TAVA	**DENIZLI_Tavas**	**2.16**	**13**	*i* P	**Pn**	**04 45 54.0**	**+0.9**
TAVA				IAML_P			
	comp=Z,943nm,0.2s						
NPS	**Neapolis**	**2.21**	**268**	P	**Pn**	**04 45 55.0**	**+1.2**
NPS	**Neapolis**	**2.21**	**268**	P	**Pn**	**04 45 55.4**	**+1.6**
ANAF	**Anafi Island**	**2.29**	**296**	P	**Pn**	**04 45 55.8**	**+0.9**
ANAF	**Anafi Island**	**2.29**	**296**	P	**Pn**	**04 45 55.9**	**+1.0**
AYDN	**Tasoluk**	**2.32**	**352**	*i* P	**Pn**	**04 45 55.9**	**+0.5**
AYDN				IAML_P			
	comp=Z,374nm,0.1s						
KORT	**Korkueli**	**2.33**	**45**	PN	**Pn**	**04 45 56.9**	**+1.4**
KORT	**Korkueli**	**2.33**	**45**	*i* P	**Pn**	**04 45 57.2**	**+1.7**
KORT				IAML_P			
	comp=Z,788nm,0.2s						
LAST	**Lasithi**	**2.33**	**266**	P	**Pn**	**04 45 57.1**	**+1.6**
ANTB	**Antalya**	**2.44**	**50**	PN	**Pn**	**04 45 58.8**	**+1.8**
GCAM	**G?zelcaml?**	**2.49**	**340**	PN	**Pn**	**04 45 58.1**	**+0.4**
GCAM	**G?zelcaml?**	**2.49**	**340**	*i* P	**Pn**	**04 45 57.2**	**-0.4**
GCAM				IAML_P			
	comp=Z,230nm,0.3s						
SANT	**Santorini**	**2.53**	**294**	P	**Pn**	**04 45 58.7**	**+0.5**
SMG	**Samos**	**2.63**	**334**	P	**Pn**	**04 45 59.6**	**0.0**
SMG				S	**Sn**	**04 46 28.6**	**-2.2**
APE	**Apeiranthos**	**2.82**	**308**	P	**Pn**	**04 46 01.8**	**-0.5**
SUTC	**Sutluce-Ispart**	**3.03**	**45**	PN	**Pn**	**04 46 06.7**	**+1.5**
KEPZ	**Antalya-Kepez**	**3.08**	**59**	*i* P	**Pn**	**04 46 07.8**	**+2.1**
KEPZ				*i* S	**Sn**	**04 46 40.9**	**-1.1**
KHAL	**Karahalli**	**3.15**	**17**	*i* P	**Pn**	**04 46 06.3**	**-0.5**
KHAL				IAML_P			
	comp=Z,100nm,0.2s						
KULA	**Kula-Manisa**	**3.16**	**5**	PN	**Pn**	**04 46 07.8**	**+0.8**

URLA	Izmir	3.30	336	PN	Pn	04 46 09.8	+1.0
SHUT	Suhut-Afyon	3.66	29	PN	Pn	04 46 15.1	+1.3
DOGA	KONYA_Doganhis	3.84	44	*i* P	Pn	04 46 18.3	+1.9
DOGA				*i* S	Sn	04 47 00.6	-0.5
DOGA				IAML_P			
	comp=Z,330nm,0.3s						
ERMK	Ermenek	3.94	70	*i* P	Pn	04 46 20.8	+2.9
MATC	Matruh	4.10	193	P	Pn	04 46 20.8	+1.0
	baz=195						
MATC				AMP		04 47 00.0	
	baz=195						
MATC				S	Sn	04 47 03.7	-3.5
	baz=195						
KONT	Konya--Tatoy	4.16	50	*i* P	Pn	04 46 23.3	+2.8
GULN	MERSIN_Gulnar	4.33	78	*i* P	Pn	04 46 24.5	+1.5
GULN				*i* S	Sn	04 47 12.9	+0.1
KDHN	Kadinhani	4.39	43	*i* P	Pn	04 46 25.3	+1.4
SLUM	Salum	4.65	215	P	Pn	04 46 28.2	+0.9
	baz=217						
SLUM				AMP		04 47 00.0	
	baz=217						
SLUM				S	Sn	04 47 16.4	-4.1
	baz=217						
KIZK	Mersin	4.86	75	*i* P	Pn	04 46 30.3	+0.1
KERG	Konya-Eregli	5.12	65	*i* P	Pn	04 46 35.4	+1.5
HNAT	Natroun	6.03	161	P	Pn	04 46 46.1	-0.3
	baz=160						
KOT	Kottamia	6.17	150	P	Pn	04 46 48.5	+0.1
	baz=150						
HHAG	Hagoal	6.27	148	P	Pn	04 46 51.3	+1.7
	baz=148						
HHAG				AMP		04 48 00.0	
	baz=148						
GLL	Jalalah	6.44	153	P	Pn	04 46 52.0	0.0
	baz=152						
SWA2		6.56	202	P	Pn	04 46 54.4	+0.8
	baz=204						
SWA2				AMP		04 48 00.0	
	baz=204						
SWA2				S	Sn	04 48 02.0	-5.7
	baz=204						

MEX 13 04:56:33.3±0.7, 15°.63N×93°.61W, h80^{km}±8^{km}, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.38	79	*e*P	Pn	04 56 44.6	-1.6
PCIG				*e*S	Sn	04 56 54.1	-1.6
CCIG	Comitan	1.56	65	*e*P	Pn	04 56 58.5	-1.1
CCIG				*e*S	Sn	04 57 17.3	-2.1
CMIG	Matias Romero	1.90	320	*e*P	Pn	04 57 03.0	-0.9
CMIG				*e*S	Sn	04 57 25.7	-1.5

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*IDC **13** 04:56:47.5±1.2, 11°.57S×165°.05E, h0^{km}, mb3.6/5, mb1 4.0/6, mb1mx3.7/35, mbtmp3.7/6, ML4.0/1, Error ellipse: s-maj=44.8km s-min=25.5km az=137.0*

*ISCJB **13** 04:56:51.0±1.0, 11°.7S±0°.1×165°.0E±0°.2, h34^{km}, mb3.6/5, Error ellipse: s-maj=26.9km s-min=19.9km az=11.1*

ISC 13 04:56:52.6±1.0, 11°.6S±0°.1×165°.0E±0°.2, h34^{km}, n6, σ0^{s}.60/6, mb3.6/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.47	173	Pn	Pn	04 59 20.6	0.0
	1.2nm,0.3s,baz=300,slow=14,SNR=9.8						
WRA	Warramunga Arr	30.64	250	P	P	05 03 04.2	+0.1
	0.8nm,0.7s,baz=84,slow=9.1,SNR=8.5						
ASAR	Alice Springs	31.92	244	P	P	05 03 14.9	-0.4
	0.8nm,0.9s,baz=75,slow=9.1,SNR=6.9						
ILAR	Eielson Array	84.28	19	P	P	05 09 19.9	-0.7
	0.2nm,0.5s,baz=235,slow=5.3,SNR=7.4						
NVAR	Mina Array Bea	86.92	50	P	P	05 09 35.0	+0.3
	0.2nm,0.4s,baz=221,slow=8.0,SNR=1.8						
MKAR	Makanchi Array	93.47	317	P	P	05 10 05.4	+0.5
	0.2nm,0.7s,baz=108,slow=4.7,SNR=3.1						

IDC 13 05:02:06.8±1.8, 3°.57S×131°.14E, h0^{km}, mb3.1/2, mb1 3.4/4, mb1mx3.3/34, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=99.2km s-min=24.8km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	2.68	3	Pn	Pn	05 02 50.3	-1.1
	2.3nm,0.3s,baz=246,slow=23,SNR=12						
SIJI				Sn	Sn	05 03 22.4	-2.2
	5.2nm,0.3s,baz=243,slow=23,SNR=7.2						
WRA	Warramunga Arr	16.57	169	Pn	Pn	05 05 59.1	-1.7
	0.1nm,0.3s,baz=348,slow=14,SNR=8.2						
WRA				Sn	Sn	05 08 57.1	-8.5
	0.2nm,0.3s,baz=356,slow=23,SNR=5.8						
ASAR	Alice Springs	20.16	173	P	P	05 06 43.4	+0.4
	0.3nm,0.4s,baz=351,slow=12,SNR=4.1						
MKAR	Makanchi Array	66.02	326	P	P	05 12 56.0	+0.5
	0.2nm,0.5s,baz=125,slow=7.3,SNR=4.5						

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*IDC **13** 05:04:37.6±1.1, 10°.79S×165°.40E, h0^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.8/32, mbtmp3.7/9, ML3.8/1, MS3.9/3, Ms1 4.0/3, ms1mx3.4/34, Error ellipse: s-maj=40.0km s-min=21.7km az=138.0*

*ISCJB **13** 05:04:40.6±0.7, 11°.0S±0°.1×165°.4E±0°.1, h30^{km}, mb3.6/7, MS4.6/1, Error ellipse: s-maj=21.6km s-min=15.2km az=28.6*

ISC 13 05:04:42.3±0.9, 10°.8S±0°.1×165°.4E±0°.2, h30^{km}, n17, σ0^{s}.81/9, mb3.7/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.55	284	LR	LR	05 08 20.0	
	comp=Z,598nm,19.8s,baz=112,slow=40						
DZM	Mont Dzumac	11.21	175	Pn	Pn	05 07 20.9	+0.2
	0.7nm,0.3s,baz=29,slow=19,SNR=8.1						
DZM				LR	LR	05 10 55.3	
	comp=Z,206nm,18.9s,baz=22,slow=34						
CTA	Charters Tower	20.60	241	P	P	05 09 19.6	+0.5
	2.4nm,0.7s,baz=53,slow=10,SNR=2.5						
H11S2	WAKE ISLAND Hy	29.17	3	T	T	05 40 56.4	
	baz=181,slow=76,SNR=46						
H11S3	WAKE ISLAND Hy	29.18	3	T	T	05 40 57.8	
	baz=181,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	29.19	3	T	T	05 40 57.1	
	baz=181,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.40	3	T	T	05 42 36.9	
	baz=182,slow=76,SNR=20						
H11N3	WAKE ISLAND Hy	30.40	3	T	T	05 42 38.4	
	baz=182,slow=76,SNR=27						
H11N2	WAKE ISLAND Hy	30.41	3	T	T	05 42 37.3	
	baz=182,slow=76,SNR=21						
WRA	Warramunga Arr	31.23	249	P	P	05 10 59.0	-0.5
	1.0nm,0.9s,baz=81,slow=8.6,SNR=4.7						
ASAR	Alice Springs	32.58	243	P	P	05 11 10.4	-0.9
	0.6nm,0.8s,baz=77,slow=8.1,SNR=4.6						
CMAR	Chiang Mai Arr	71.72	294	LR	LR	05 48 34.8	
	comp=Z,332nm,19.0s,baz=110,slow=37						
SONM	Songino Array	78.30	324	P	P	05 16 39.6	0.0
	0.4nm,1.0s,baz=103,slow=6.4,SNR=3.5						
ILAR	Eielson Array	83.43	19	P	P	05 17 06.0	-0.5
	0.5nm,0.6s,baz=247,slow=4.7,SNR=8.0						
NVAR	Mina Array Bea	86.15	50	P	P	05 17 20.3	-0.8
	0.6nm,0.8s,baz=238,slow=5.2,SNR=3.3						
MKAR	Makanchi Array	93.14	317	P	P	05 17 54.6	+1.0
	0.1nm,0.4s,baz=104,slow=3.7,SNR=3.4						
PDAR	Pinedale Array	93.67	47	P	P	05 17 57.2	+0.8
	0.2nm,0.5s,baz=305,slow=3.2,SNR=2.2						

DJA 13 05:10:53.5±0.9, 4°N±11°×10°1E±°, h10^{km}, M5.0/2, mb5.1/2, mB6.0/2, MLv5.0/2, Mw(mB)5.6/2, Malay Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSI	Tuntungan	2.24	252	P	Pn	05 11 31.1	+0.4
KCSI	Kotacane, Aceh	3.00	257	P	Pn	05 11 38.7	-2.4
MNSI	Mandailing Nat	3.56	198	P	Pn	05 11 48.9	0.0
TPTI		3.63	255	P	Pn	05 11 48.9	-1.0
GSI	Gunungsitoli	4.24	227	P	Pn	05 11 58.5	+0.2
SNSI	Sinabang, Aceh	4.71	248	P	Pn	05 12 04.7	0.0
PPBI	Pangkal Pinang	8.33	139	P	Pn	05 12 53.9	-0.6
	70nm,0.4s,55µm2.3nm						
KDI	Kendari	23.35	110	P	P	05 16 02.9	+0.5

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*BJI **13** 05:21:12.9, 3°.18S×130°.46E, h27^{km}, mB5.4/48, mb5.6/81, Ms5.0/82, Ms7 4.8/78*

*ISCJB **13** 05:21:15.2±0.6, 2°.96S±0°.02×130°.25E±0°.02, h25^{km}±4^{km}, mb5.6/247, MS4.9/148, Error ellipse: s-maj=3.0km s-min=2.8km az=168.1*

*GCMT **13** 05:21:16.6±0.1, 2°.90S±0°.01×130°.21E±0°.01, h15^{km}, MW5.4/119, Moment Tensor Solution. s108,c176; s119,c222; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.75±.02; M$_{\theta\theta}$-0.54±.02; M$_{\phi\phi}$-0.21±.02; M$_{r\theta}$-0.23±.03; M$_{\theta\phi}$1.01±.01; M$_{\phi r}$0.89±.05; Best double couple: M$_0$1.49900×10^{17} NP1:φ$_s$340.00000°, δ71.00000°, λ125.00000°. NP2:φ$_s$95.00000°, δ39.00000°, λ31.00000°. Principal axes: T 1.3500, Plg51.0000°, Azm290.0000°; N 0.2970, Plg33.0000°, Azm147.0000°; P -1.6470, Plg18.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*MOS **13** 05:21:16.7±1.1, 2°.89S×130°.16E, h33^{km}, mb5.8/78, MS4.6/24 Error ellipse: s-maj=7.5km s-min=4.1km az=114.4*

*DJA **13** 05:21:17.6±0.5, 3°S±1°×13°0E±°, h27^{km}±4^{km}, M5.7/91, mb5.7/91, mB6.0/66, MLv5.8/9, Mw(mB)5.6/66, Mwp5.6/2*

*NEIC **13** 05:21:18.6±0.1, 2°.98S×130°.21E, h35^{km}, mb5.6/133, MS5.1/94, Error ellipse: s-maj=3.7km s-min=3.0km az=54.0*

NEIC Felt [II] at Bula.

*IDC **13** 05:21:18.2±2.2, 2°.91S×130°.39E, h33^{km}±16^{km}, mb5.0/22, mb1 5.1/27, mb1mx5.1/29, mbtmp5.3/27, ML5.3/4, MS4.7/31, Ms1 4.7/31, ms1mx4.6/42, Error ellipse: s-maj=16.2km s-min=9.7km az=82.0*

*KLM **13** 05:21:20.3, 3°.26S×129°.94E, h25^{km}, mb5.8*

ISC 13 05:21:17.5±0.5, 2°.98S±0°.03×130°.29E±0°.03, h31^{km}±3^{km}, n861, σ1^{s}.63/915, mb5.6/248, MS4.9/149, 52C-25D, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.58	194	P	Pb	05 21 46.0	-0.1
BNDI				S	Sb	05 22 06.1	+0.4
FAKI	Fak Fak	1.96	88	*e*Pn	Pn	05 21 49.6	+1.1
FAKI	Fak Fak	1.96	88	P	Pn	05 21 49.3	+0.8
FAKI				S	Sb	05 22 14.2	-2.2
SIJI	Sorong	2.31	25	Pn	Pn	05 21 53.0	-0.5
	103nm,0.3s,baz=190,slow=18,SNR=154						
SIJI				Sn	Sn	05 22 19.3	-1.6
	270nm,0.3s,baz=217,slow=20,SNR=7.9						
SWI	Sorong	2.31	25	P	Pn	05 21 52.9	-0.6
SWI	Sorong	2.31	25	P	Pn	05 21 53.6	+0.1
SWI				S	Sn	05 22 20.3	-0.6
NLAI	Namlea	3.20	265	P	Pn	05 22 06.5	+0.8
RKPI	Ransiki, Papua	4.15	70	P	Pn	05 22 19.3	+0.6
RKPI				S	Sn	05 23 07.5	+1.3
SANI	Sanana	4.40	282	P	Pn	05 22 22.4	+0.2
SANI				S	Sn	05 23 08.9	-3.5
TNTI	Ternate	4.74	322	*e*Pn	Pn	05 22 26.2	-0.7
TNTI	Ternate	4.74	322	P	Pn	05 22 26.4	-0.4
SAUI	Saumlaki	5.07	169	*e*Pn	Pn	05 22 32.5	+1.1
SAUI	Saumlaki	5.07	169	P	Pn	05 22 31.7	+0.3
	2µm,1.3s,21µm7.1nm						
SAUI				S	Sn	05 23 33.2	+4.2
	2µm,1.3s,21µm7.1nm						
SRPI	Serui, Papua	6.04	80	P	Pn	05 22 45.1	+0.3
	1µm,0.7s,12µm8.4nm						
BAKI	Biak	6.08	73	P	Pn	05 22 46.1	+0.9
MNI	Manado	7.00	309	P	Pn	05 22 59.0	+1.0
MNI				pmax	pmax		
	comp=Z,673nm,0.7s						
KMSI	Cibinong	7.23	299	P	Pn	05 22 59.6	-1.5
	comp=Z,1µm,0.7s,comp=Z,18µmcomp=Z,9.3nm						
KDI	Kendari	7.72	263	P	Pn	05 23 08.4	+0.5
	comp=Z,603nm,0.9s,comp=Z,6µmcomp=Z,1.9nm						
LUWI	Luwuk	7.76	284	*e*Pn	Pn	05 23 06.4	-2.0
LUWI	Luwuk	7.76	284	P	Pn	05 23 08.7	+0.3
BBSI	Bau Bau	8.09	252	P	Pn	05 23 14.7	+1.7
SGSI	Sangihe	8.15	324	P	Pn	05 23 14.7	+0.9
APSI	Ampana	8.88	283	P	Pn	05 23 22.9	-0.8
SOEI	Soe	9.01	221	*e*Pn	Pn	05 23 29.0	+3.4
SOEI	Soe	9.01	221	P	Pn	05 23 26.7	+1.1
MRSI	Marisa	9.03	292	P	Pn	05 23 24.6	-1.2
BATI	Baumata	9.74	222	P	Pn	05 23 35.7	+0.1
BATI	Baumata	9.74	222	Pn	Pn	05 23 39.0	+3.4
	comp=Z,23nm,0.3s,baz=141,slow=1.3,SNR=39						
BATI				Sn	Sn	05 25 30.0	+5.9
	baz=137,slow=10,SNR=1.2						
BATI				LR	LR	05 27 43.0	
	comp=Z,15µm,19.0s,baz=54,slow=39						
MMRI	Maumere	9.79	235	*e*Pn	Pn	05 23 39.7	+3.5
MMRI	Maumere	9.79	235	P	Pn	05 23 37.0	+0.8
MTN	Manton Dam	9.84	175	*e*Pn	Pn	05 23 36.5	-0.3
GENI	Genyem	9.87	88	P	Pn	05 23 38.3	+0.9
KDU	Kakadu	9.88	168	P	Pn	05 23 34.8	-2.8
	baz=9.8,SNR=103						
BNSI	Bone	10.26	262	P	Pn	05 23 43.0	+0.3
EDFI	Ende, Flores	10.30	236	P	Pn	05 23 43.5	+0.2
BKSI	Bulukumba	10.41	257	P	Pn	05 23 46.7	+2.0
	comp=Z,560nm,1.4s,comp=Z,7µm						
JAY	Jayapura	10.41	88	P	Pn	05 23 43.9	-0.9
JAY	Jayapura	10.41	88	Pn	Pn	05 23 43.4	-1.4
	comp=Z,1.0nm,0.3s,baz=258,slow=6.7,SNR=10						
JAY				Sn	Sn	05 25 34.8	-5.7
	baz=197,slow=21,SNR=1.1						
JAY				LR	LR	05 29 12.3	
	comp=Z,3µm,18.2s,baz=284,slow=46						
TTSI	Tana Toraja	10.46	269	P	Pn	05 23 46.7	+1.3
	comp=Z,227nm,0.8s,comp=Z,4µm						
SPSI	Sidrap Palu	10.55	264	P	Pn	05 23 48.5	+1.8
	comp=Z,383nm,1.4s,comp=Z,4µm						
PCI	Palu	10.65	281	P	Pn	05 23 49.0	+0.9
PCI				pmax	pmax		
	comp=Z,920nm,1.1s						
PCI	Palu	10.65	281	P	Pn	05 23 49.0	+0.9
	comp=Z,922nm,1.1s,comp=Z,8µm						
MPSI	Mapaga	10.90	287	P	Pn	05 23 50.8	-0.7
	comp=Z,132nm,0.9s,comp=Z,1µm						
DAV	Davao City (W)	11.04	335	*e*Pn	Pn	05 23 53.7	+0.4
DAV				*e*		05 23 54.6	
DAV	Davao City (W)	11.04	335	P	Pn	05 23 55.9	+2.6
	SNR=9.8						
DAV	Davao City (W)	11.04	335	Pn	Pn	05 23 54.6	+1.3
	comp=Z,39nm,0.3s,baz=168,slow=2.8,SNR=7.8						
DAV				LR	LR	05 29 06.5	
	comp=Z,8µm,21.4s,baz=106,slow=42						
PALU	Palau	11.07	22	P	Pn	05 23 56.7	+2.9
	baz=11,SNR=3.9						
KCP	Kidapawan	11.20	332 ⇑	*i*P	Pn	05 23 57.2	+1.6
KCP				*i* S		05 24 12.1	
CTBH	Cotabato--PC H	11.79	329 ⇓	*i*P	Pn	05 24 04.3	+0.6
WSI	Waingapu	11.95	236	P	Pn	05 24 09.5	+3.7
	comp=Z,1µm,1.0s						
BASI	Baing, Sumba	12.03	233	P	Pn	05 24 10.2	+3.2
	comp=Z,1µm,1.3s,comp=Z,14µm						
CGP	Cagayan de Oro	12.65	334	*e*P	Pn	05 24 17.4	+2.0
KNRA	Kununurra	12.71	187	P	Pn	05 24 13.0	-3.2
	baz=13,SNR=24						
SGKI	Sangatta, Kali	12.91	281	P	Pn	05 24 21.0	+2.0
	comp=Z,421nm,1.1s,comp=Z,4µm						
SMKI	Samarinda	13.32	281	P	Pn	05 24 26.7	+2.2
	comp=Z,188nm,1.0s,comp=Z,12µm						
DCPH	Dipolog City	13.41	329 ⇓	*e*P	Pn	05 24 28.1	+2.4
BKB	Balikpapan	13.49	277	P	Pn	05 24 28.6	+1.6
	comp=Z,640nm,1.1s,comp=Z,6µm						
PLAI	Plampang	13.73	244	P	Pn	05 24 30.9	+0.7
	comp=Z,823nm,1.6s,comp=Z,12µm						
KBKI	Kotabaru	14.11	268	P	Pn	05 24 37.0	+1.7
	comp=Z,65nm,1.2s,comp=Z,930nm						
MTKI	Muara Teweh, K	15.52	277	P	Pn	05 24 55.7	+1.4
	comp=Z,337nm,1.4s,comp=Z,9µm						
SDKM	Sandakan	15.63	303	P	Pn	05 24 54.3	-1.5
FITZ	Fitzroy Crossi	15.70	197	P	Pn	05 24 53.4	-3.2
	baz=16,SNR=264						
FITZ	Fitzroy Crossi	15.70	197	*e*Pn	Pn	05 24 52.2	-4.4
	comp=Z,460nm,1.3s						
SRBI	Singaraja	15.84	251	P	Pn	05 24 58.3	-0.1
	comp=Z,216nm,1.7s,comp=Z,4µm						
DNP	Denpasar	16.03	249	P	P	05 25 02.6	-1.4
	comp=Z,507nm,0.9s						
RCP	Roxas	16.28	333 ⇓	*e*P	Pn	05 25 04.9	+0.9
KDM	Kudat	16.65	306	P	P	05 25 15.2	+4.4
KKM	Kota Kinabalu	16.67	303	*e*Pn	Pn	05 25 07.4	-1.7
	comp=Z,141nm,1.0s						
KKM	Kota Kinabalu	16.67	303	P	Pn	05 25 08.8	-0.3
KMMI	Kalianget	16.76	255	P	P	05 25 11.1	-0.9
	comp=Z,212nm,1.0s,comp=Z,2µm						
COEN	Coen	16.76	131	P	Pn	05 25 07.8	-2.4
	baz=17,SNR=39						
COEN	Coen	16.76	131	*e*Pn	Pn	05 25 07.7	-2.4
	comp=Z,347nm,1.0s						
JAGI	Jajag, Banyuwa	16.96	251	*e*Pn	Pn	05 25 12.1	-0.5
	comp=Z,509nm,1.3s						
JAGI				*e*S	S	05 28 26.1	-3.7
JAGI	Jajag, Banyuwa	16.96	251	P	Pn	05 25 12.7	+0.1
	comp=Z,220nm,0.9s,comp=Z,5µm						
MANU	Manus Island	17.08	87	*e*Pn	P	05 25 15.9	+0.2
	comp=Z,671nm,1.4s						
WRAB	Tennant Creek	17.31	167	*e*Pn	Pn	05 25 13.5	-3.5
	comp=Z,811nm,1.4s						
WRAB	Tennant Creek	17.31	167	*c* *i*P	Pn	05 25 12.4	-4.6
WRAB				pmax	pmax		
	comp=Z,97nm,1.3s						
WR1	Warramunga Arr	17.32	167	*e*Pn	Pn	05 25 10.1	-7.0
	comp=Z,862nm,1.4s						
WR1				*e*Sn	Sn	05 28 25.3	-3.7
WRA	Warramunga Arr	17.32	167	P	Pn	05 25 10.1	-7.0
	comp=Z,1.3nm,0.3s,baz=350,slow=13,SNR=53						
WRA				S	Sn	05 28 25.3	-3.7
	comp=Z,2.7nm,0.3s,baz=358,slow=23,SNR=4.2						
WB2	Warramunga Arr	17.32	167	*e*Pn	Pn	05 25 12.2	-4.9
WB2				*e*Pn	P	05 25 13.0	-5.3
GMJI	Gumukmas	17.57	252	P	Pn	05 25 19.5	-0.7
	comp=Z,281nm,1.0s,comp=Z,4µm						
GRJI	Gresik	18.17	257	P	Pn	05 25 27.3	-0.3
	comp=Z,265nm,1.1s,comp=Z,3µm						
BTM	Bintulu	18.26	289	P	P	05 25 31.2	+2.4
PBKI	Pangkalan Bun	18.60	270	P	Pn	05 25 33.3	+0.4
	comp=Z,742nm,1.2s,comp=Z,9µm						
TBJI	Tambak Boyo	18.77	258	P	P	05 25 33.6	-0.6
	comp=Z,365nm,1.0s,comp=Z,4µm						
SBUM	Sibu	18.85	286	*e*P	Pn	05 25 36.5	+0.5
	comp=Z,246nm,1.3s						
SBUM	Sibu	18.85	286	P	Pn	05 25 37.0	+1.0
PWJI	Pagerwojo	19.07	254	P	P	05 25 36.6	-1.0
	comp=Z,231nm,1.1s,comp=Z,3µm						
NGJI	Ngawi	19.25	256	P	Pn	05 25 41.3	+0.6
	comp=Z,587nm,1.2s,comp=Z,10µm						
TGY	Tagaytay City	19.34	332	P	P	05 25 39.5	-1.1
TGY				pmax	pmax		
	comp=Z,31nm,0.3s						
TGY				MLR	MLR		
	comp=Z,2µm,22.0s						
TGY	Tagaytay City	19.34	332	P	P	05 25 39.5	-1.1
	comp=Z,31nm,0.3s,baz=208,slow=3.7,SNR=14						
TGY				LR	LR	05 33 29.3	
	comp=Z,3µm,22.0s,baz=130,slow=38						
PCJI	Pacitan	19.71	254	P	P	05 25 42.2	-2.4
	comp=Z,399nm,1.2s,comp=Z,3µm						
WOJI	Wonogiri, Jawa	19.87	255	P	Pn	05 25 48.0	-0.1
	comp=Z,357nm,1.1s,comp=Z,6µm						
SMRI	Semarang	20.18	258	*e*P	P	05 25 47.1	-2.6
	comp=Z,584nm,1.1s						
SMRI	Semarang	20.18	258	P	P	05 25 49.6	-0.2
	comp=Z,389nm,0.9s,comp=Z,8µm						
UGM	Wanagama	20.28	255	*e*P	Pn	05 25 52.4	-0.6
	comp=Z,914nm,1.4s						
UGM	Wanagama	20.28	255	P	Pn	05 25 52.4	-0.5
	comp=Z,430nm,1.3s,comp=Z,6µm						
MTSU	Mount Surprise	20.39	139	P	Pn	05 25 54.2	-0.1
	baz=20,SNR=71						
KSM	Kuching	20.46	282	*e*P	P	05 25 53.4	+0.6
	comp=Z,536nm,1.0s						
MBWA	Marble Bar	20.79	209	*e*P	P	05 25 53.8	-2.5
	comp=Z,227nm,1.4s						
MBWA				LR	LR		
	comp=Z,3µm,20.0s						
MBWA	Marble Bar	20.79	209	P	P	05 25 57.1	+0.9
	SNR=29						
AS31	Alice Springs	20.86	171	*e*P	P	05 25 56.8	-0.3
	comp=Z,169nm,0.8s						
AS31				*e*S	S	05 29 43.5	-4.7
ASAR	Alice Springs	20.86	171	P	P	05 25 57.1	+0.1
	comp=Z,533nm,0.8s,baz=349,slow=10,SNR=1320						
ASAR				S	S	05 29 43.5	-4.7
	comp=Z,41nm,1.0s,baz=350,slow=20,SNR=5.9						
AS01	Alice Springs	20.87	171	*e*P	P	05 25 56.9	-0.3
KPJI	Karang Pucung	21.71	258	P	P	05 26 04.0	-2.2
	comp=Z,325nm,1.1s,comp=Z,4µm						
RABL	Rabaul	21.86	94	*e*P	P	05 26 08.7	+0.8
	comp=Z,484nm,1.1s						
GUMO	Guam	21.91	41	*e*P	P	05 26 07.6	-0.8
GUMO				*e*P	P	05 26 09.1	+0.8
GUMO				*e*P	pP	05 26 15.6	-0.8
GUMO				LR	LR		
	comp=Z,2µm,19.0s						
GUMO	Guam	21.91	41	P	P	05 26 07.6	-0.8
	comp=Z,95nm,0.7s,baz=125,slow=10,SNR=2.2						
WRKA	Warakurna	22.02	185	P	P	05 26 08.1	-1.4
	baz=22,SNR=293						
JCJI	Jatiwangi	22.22	260	P	P	05 26 13.7	+2.0
	comp=Z,308nm,0.8s						
CMJI	Cimerak	22.26	257	P	P	05 26 08.5	-3.7
TPI	Tanjungpandan	22.61	270	P	P	05 26 16.7	+0.8
	comp=Z,356nm,1.2s						
CISI	Cisompet, Garu	22.83	258	*e*P	P	05 26 13.8	-4.5
	comp=Z,278nm,0.8s						
CISI				*e*S	S	05 30 24.1	-1.9
CISI	Cisompet, Garu	22.83	258	P	P	05 26 14.2	-4.1
LEM	Lembang	22.91	260	P	P	05 26 16.0	-3.2
LEM				pmax	pmax		
	comp=Z,143nm,0.8s						
LEM				MLR	MLR		
	comp=Z,8µm,20.9s						
LEM	Lembang	22.91	260	P	P	05 26 16.0	-3.2
	comp=Z,143nm,0.8s,baz=94,slow=10,SNR=20						
LEM				LR	LR	05 36 43.3	
	comp=Z,8µm,20.9s,baz=85,slow=40						
CTA	Charters Tower	23.06	139	P	P	05 26 21.5	+0.9
	comp=Z,64nm,0.8s,baz=314,slow=12,SNR=43						
CTA				S	S	05 30 31.9	+2.2
	comp=Z,11nm,1.0s,baz=59,slow=16,SNR=2.3						
CTA				LR	LR	05 37 01.1	
	comp=Z,2µm,20.4s,baz=320,slow=41						
CTAO	Charters Tower	23.06	139	*e*P	P	05 26 21.3	+0.7
	comp=Z,401nm,1.3s						
CTAO				LR	LR		
	comp=Z,3µm,21.0s						
CTAO	Charters Tower	23.06	139	*e*P	P	05 26 21.3	+0.7
CTAO				pmax	pmax		
	comp=Z,401nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,3µm,21.0s						
CBJI	Citeko	23.61	261	P	P	05 26 24.7	-1.3
	comp=Z,212nm,0.8s,comp=Z,12µm						
SKJI	Sukabumi	23.98	259	P	P	05 26 29.9	+0.4
	comp=Z,184nm,0.7s,comp=Z,3µm						
PPBI	Pangkal Pinang	24.14	271	P	P	05 26 32.3	+1.2
	comp=Z,196nm,1.5s,comp=Z,12µm						
GIRL	Giralia	24.99	217	P	P	05 26 38.4	-0.2
	baz=25,SNR=7.8						
GIRL	Giralia	24.99	217	*e*P	P	05 26 38.3	-0.4
	comp=Z,1µm,1.9s						
KLI	Kotabumi	25.44	265	P	P	05 26 45.0	+2.1
	comp=Z,276nm,1.0s,comp=Z,4µm						
PMBI	Palembang	25.49	269	P	P	05 26 46.5	+3.2
	comp=Z,1µm,1.1s						
XMIS	Christmas Isla	25.56	252	*e*P	P	05 26 41.6	-2.3
	comp=Z,142nm,1.0s						
DSRI	Dabo	25.82	275	P	P	05 26 47.7	+1.4
	comp=Z,408nm,1.3s,comp=Z,7µm						
KASI	Kota Agung	25.85	264	P	P	05 26 43.9	-2.6
	comp=Z,153nm,0.9s,comp=Z,1µm						
TPRI	Tanjung Pinang	26.05	278	P	P	05 26 50.0	+1.6
	comp=Z,545nm,1.1s,comp=Z,29µm						
MEEK	Meekatharra	26.05	204	P	P	05 26 45.5	-2.8
	baz=26,SNR=13						
MDSI	Maura Dua	26.10	266	P	P	05 26 47.9	-0.9
	comp=Z,84nm,1.1s,comp=Z,1µm						
LWLI	Liwa	26.25	265	P	P	05 26 50.8	+0.5
	comp=Z,73nm,0.9s						
JMBI	JAMBI	26.66	272	P	P	05 26 57.2	+3.3
	comp=Z,3µm,1.2s,comp=Z,25µm						
LHSI	Lahat	26.73	267	P	P	05 26 55.1	+0.5
	comp=Z,379nm,1.1s,comp=Z,11µm						
MYKOM	Kota Tinggi	26.85	280	*e*P	P	05 26 56.9	+1.3
	comp=Z,408nm,1.1s						
MYKOM	Kota Tinggi	26.85	280	P	P	05 26 57.3	+1.7
KGM	Kluang	27.42	280	P	P	05 27 01.8	+1.0
FORT	Forrest	27.73	184	*e*P	P	05 27 02.1	-1.2
	comp=Z,111nm,0.6s						
TPUB	Ta-pu	27.77	341	*e*P	P	05 27 02.7	-1.0

	comp=Z,88nm,1.2s						
MASI	**Maura Aman, Be**	**28.01**	**269**	P	**P**	**05 27 06.8**	**+0.7**
	comp=Z,704nm,1.1s,comp=Z,7µm						
SSLB	**Suanglung**	**28.12**	**342**	*e*P	**P**	**05 27 05.2**	**-1.7**
	comp=Z,43nm,1.1s						
NACB	**Ninganchiao**	**28.28**	**343**	*e*P	**P**	**05 27 07.3**	**-1.0**
	comp=Z,66nm,1.2s						
KRJI	**Kerinci**	**28.82**	**271**	P	**P**	**05 27 14.1**	**+0.8**
	comp=Z,750nm,1.0s,comp=Z,9µm						
YHNB	**Yeheng**	**28.82**	**343**	*e*P	**P**	**05 27 12.3**	**-0.8**
	comp=Z,256nm,1.8s						
SDSI	**Sungai Dareh**	**28.92**	**273**	P	**P**	**05 27 15.5**	**+1.4**
	comp=Z,127nm,1.5s,comp=Z,4µm						
MORW	**Morawa**	**29.27**	**206**	*e*P	**P**	**05 27 15.0**	**-2.1**
	comp=Z,105nm,1.5s						
FRIM	**Kepong**	**29.31**	**282**	P	**P**	**05 27 18.6**	**+1.0**
BKNI	**Bangkinang**	**29.43**	**276**	*e*P	**P**	**05 27 19.0**	**+0.4**
	comp=Z,705nm,1.0s						
BKNI	**Bangkinang**	**29.43**	**276**	P	**P**	**05 27 19.6**	**+1.0**
	comp=Z,703nm,1.0s,comp=Z,10µm						
JOW	**Kunigami**	**29.70**	**356**	*e*P	**P**	**05 27 20.8**	**-0.1**
	comp=Z,64nm,1.2s						
JOW	**Kunigami**	**29.70**	**356**	P	**P**	**05 27 19.3**	**-1.5**
	comp=Z,4.9nm,0.9s,baz=165,slow=12,SNR=4.2						
QIZ	**Qiongzhong**	**29.71**	**318**	P	**P**	**05 27 21.3**	**+0.2**
QIZ				S	**S**	**05 32 18.4**	**+3.0**
QIZ				sS	**sS**	**05 32 27.8**	**-2.0**
QIZ				pmax	pmax		
	comp=Z,380nm,2.8s						
QIZ				LR	LR		
	comp=Z,1µm,13.1s						
QIZ				LR	LR		
	comp=Z,1µm,17.5s						
QIZ				LR	LR		
	comp=Z,1µm,13.5s						
QIZ	**Qiongzhong**	**29.71**	**318**	*e*P	**P**	**05 27 20.9**	**-0.1**
	comp=Z,35nm,0.9s						
PDSI	**Padang**	**29.88**	**273**	P	**P**	**05 27 22.0**	**-0.7**
	comp=Z,256nm,1.1s,comp=Z,5µm						
EIDS	**Eidsvold**	**29.93**	**140**	*e*P	**P**	**05 27 23.7**	**+0.7**
	comp=Z,112nm,1.4s						
QZH	**Quanzhou**	**29.99**	**338**	*e*P	**P**	**05 27 26.0**	**+2.6**
QZH				S	**S**	**05 32 16.8**	**-2.7**
QZH				LR	LR		
	comp=Z,2µm,25.6s						
HNR	**Honiara**	**30.15**	**104**	PFAKE		05 27 40.0	+15
HNR				LR	LR		
	comp=Z,2µm,21.0s						
BBOO	**Buckleboo**	**30.17**	**170**	*e*P	**P**	**05 27 24.7**	**-0.3**
	comp=Z,108nm,1.3s						
IPM	**Ipoh**	**30.17**	**284**	*e*P	**P**	**05 27 25.9**	**+0.6**
	comp=Z,490nm,1.2s						
IPM	**Ipoh**	**30.17**	**284**	P	**P**	**05 27 26.3**	**+1.1**
PPSI	**Pulau Pagai**	**30.25**	**270**	P	**P**	**05 27 25.4**	**-0.5**
	comp=Z,213nm,1.2s,comp=Z,3µm						
STKA	**Stephens Creek**	**30.65**	**161**	*e*P	**P**	**05 27 29.4**	**+0.2**
	comp=Z,24nm,1.2s						
STKA	**Stephens Creek**	**30.65**	**161**	P	**P**	**05 27 29.4**	**+0.2**
	comp=Z,38nm,1.0s,baz=335,slow=9.4,SNR=39						
STKA				LR	LR	05 41 30.5	
	comp=Z,5µm,20.1s,baz=335,slow=40						
KULM	**Kulim**	**30.73**	**285**	*e*P	**P**	**05 27 29.3**	**-0.9**
	comp=Z,145nm,1.1s						
KULM	**Kulim**	**30.73**	**285**	P	**P**	**05 27 30.7**	**+0.6**
MNSI	**Mandailing Nat**	**30.93**	**276**	P	**P**	**05 27 31.4**	**-0.5**
	comp=Z,132nm,0.9s						
SISI	**Saibi**	**31.22**	**272**	P	**P**	**05 27 33.8**	**-0.7**
	comp=Z,302nm,1.1s,comp=Z,3µm						
SKLT	**Songkhla**	**31.28**	**289**	P	**P**	**05 27 36.7**	**+1.7**
	comp=Z,96nm,1.2s,comp=Z,1µm						
PSI	**Prapat**	**31.88**	**280**	*e*P	**P**	**05 27 39.7**	**-0.7**
	comp=Z,314nm,1.1s						
PSI	**Prapat**	**31.88**	**280**	*e*P	**P**	**05 27 39.7**	**-0.7**
PSI				pmax	pmax		
	comp=Z,314nm,1.1s						
JCJ	**Chichijima**	**32.03**	**20**	LR	LR	05 38 43.1	
	comp=Z,2µm,20.8s,baz=140,slow=33						
PBSI	**Pulau Batu**	**32.13**	**275**	P	**P**	**05 27 45.9**	**+3.4**
	comp=Z,77nm,0.9s						
NWAO	**Narrogin (SRO)**	**32.21**	**201**	*e*P	**P**	**05 27 42.0**	**-1.0**
	comp=Z,52nm,0.9s						
NWAO				LR	LR		
	comp=Z,2µm,21.0s						
NWAO	**Narrogin (SRO)**	**32.21**	**201**	*e*P	**P**	**05 27 42.0**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,52nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,2µm,21.0s						
TSI	**Tuntungan**	**32.36**	**281**	P	**P**	**05 27 45.3**	**+0.8**
	comp=Z,299nm,1.0s						
TRTT	**Trang**	**32.36**	**290**	P	**P**	**05 27 45.3**	**+0.8**
	comp=Z,86nm,1.1s,comp=Z,1µm						
SKNT	**Sakolnakorn**	**32.68**	**308**	P	**P**	**05 27 47.7**	**+0.5**
	comp=Z,62nm,1.4s						
SRAK	**Srakaew**	**32.71**	**302**	P	**P**	**05 27 43.4**	**-4.1**
	comp=Z,280nm,0.9s,comp=Z,2µm						
GSI	**Gunungsitoli**	**32.98**	**277**	*e*P	**P**	**05 27 48.7**	**-1.4**
	comp=Z,293nm,1.0s						
GSI				*e*PcP	**PcP**	**05 30 36.0**	**+2.2**
GSI	**Gunungsitoli**	**32.98**	**277**	P	**P**	**05 27 48.6**	**-1.4**
	comp=Z,329nm,1.1s,comp=Z,3µm						
KCSI	**Kotacane, Aceh**	**33.14**	**281**	P	**P**	**05 27 50.0**	**-1.4**
	comp=Z,135nm,1.3s,comp=Z,1µm						
PATY	**Pattaya**	**33.22**	**299**	P	**P**	**05 27 53.3**	**+1.3**
	comp=Z,22nm,1.0s,comp=Z,3µm						
PKDT	**Phuket**	**33.66**	**289**	P	**P**	**05 27 56.6**	**+0.7**
	comp=Z,54nm,1.3s						
CHAI	**Chaiyaphum**	**33.70**	**305**	P	**P**	**05 27 56.5**	**+0.3**
	comp=Z,123nm,0.9s,comp=Z,827nm						
ARMA	**Armidale**	**33.95**	**146**	*e*P	**P**	**05 27 59.3**	**+1.0**
	comp=Z,141nm,1.4s						
NONG	**Nongkai**	**33.95**	**309**	P	**P**	**05 27 58.5**	**+0.1**
	comp=Z,6.5nm,1.2s						
LHMI	**Lhok Sumawe**	**34.29**	**284**	P	**P**	**05 28 03.3**	**+1.9**
	comp=Z,327nm,1.0s						
PHET	**Kaeng Krachan**	**34.30**	**298**	P	**P**	**05 28 02.3**	**+0.9**
	comp=Z,38nm,1.1s,comp=Z,309nm						
COCO	**West Island**	**34.36**	**253**	PFAKE		05 28 10.0	+8.0
COCO				LR	LR		
	comp=Z,3µm,21.0s						
SNSI	**Sinabang, Aceh**	**34.37**	**279**	P	**P**	**05 28 03.2**	**+1.1**
	comp=Z,112nm,1.6s						
PBKT	**Sadao Pong**	**34.88**	**305**	*e*P	**P**	**05 28 07.0**	**+0.6**
	comp=Z,136nm,1.2s						
PBKT	**Sadao Pong**	**34.88**	**305**	P	**P**	**05 28 06.8**	**+0.5**
	comp=Z,95nm,1.2s,comp=Z,1µm						
SSE	**Sheshan**	**34.98**	**346**	P	**P**	**05 28 07.3**	**+0.3**
SSE				S	**S**	**05 33 36.3**	**-0.7**
SSE				pmax	pmax		
	comp=Z,27nm,0.9s						
SSE				LR	LR		
	comp=Z,330nm,21.6s						
SSE				LR	LR		
	comp=Z,830nm,24.6s						
SSE	**Sheshan**	**34.98**	**346**	*e*P	**P**	**05 28 07.1**	**+0.1**
	comp=Z,81nm,0.8s						
SRDT	**SRDT**	**35.37**	**300**	P	**P**	**05 28 11.8**	**+1.2**
	comp=Z,179nm,1.3s,comp=Z,2µm						
UTHA	**Uthaitani**	**35.65**	**302**	P	**P**	**05 28 13.6**	**+0.6**
	comp=Z,54nm,1.0s,comp=Z,506nm						
UTTA	**Uttaradit**	**35.83**	**306**	P	**P**	**05 28 15.3**	**+0.8**
	comp=Z,64nm,1.0s,comp=Z,508nm						
JNU	**Nakatsue**	**35.91**	**1**	*e*P	**P**	**05 28 14.0**	**-1.0**
	comp=Z,461nm,1.8s						
BSI	**Banda Aceh**	**35.95**	**284**	P	**P**	**05 28 14.9**	**-0.8**
	comp=Z,139nm,1.1s						
UMPA	**Umpang Tak**	**36.45**	**303**	P	**P**	**05 28 20.3**	**+0.4**
	comp=Z,48nm,1.1s,comp=Z,1µm						
NJ2	**Nanjing**	**36.49**	**344**	*e*P	**P**	**05 28 20.8**	**+0.8**
NJ2				S	**S**	**05 33 59.9**	**-0.3**
NJ2				PcS	**PcS**	**05 34 32.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,35nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,400nm,3.8s						
NJ2				LR	LR		
	comp=Z,830nm,15.2s						
NJ2				LR	LR		
	comp=Z,1µm,21.7s						
NJ2				LR	LR		
	comp=Z,830nm,18.4s						
WHN	**Wuhan**	**36.65**	**337**	⇑P	**P**	**05 28 21.3**	**0.0**
WHN				S	**S**	**05 34 04.8**	**+2.2**
WHN				LR	LR		
	comp=Z,2µm,15.7s						
WHN				LR	LR		
	comp=Z,2µm,13.1s						
WHN				LR	LR		
	comp=Z,2µm,18.8s						
JHJ	**Hachijo jima 2**	**37.01**	**13**	LR	LR	05 42 16.9	
	comp=Z,3µm,19.1s,baz=330,slow=34						
TOO	**Toolangi**	**37.15**	**160**	*e*P	**P**	**05 28 27.6**	**+2.0**
	comp=Z,207nm,1.4s						
TOO	**Toolangi**	**37.15**	**160**	*e*P	**P**	**05 28 27.6**	**+2.0**
TOO				pmax	pmax		
	comp=Z,207nm,1.4s						
CM01	**Chiang Mai Arr**	**37.47**	**306**	*e*P	**P**	**05 28 29.7**	**+1.1**
CM31	**Chiang Mai Arr**	**37.51**	**306**	*e*P	**P**	**05 28 29.9**	**+1.1**
CM31	**Chiang Mai Arr**	**37.51**	**306**	P	**P**	**05 28 30.0**	**+1.1**
	SNR=83						
CMAR	**Chiang Mai Arr**	**37.51**	**306**	*ce*P	**P**	**05 28 30.0**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,106nm,1.0s						
CMAR	**Chiang Mai Arr**	**37.51**	**306**	P	**P**	**05 28 29.4**	**+0.6**
	comp=Z,106nm,1.0s,baz=132,slow=7.0,SNR=343						
CMAR				PcP	**PcP**	**05 30 47.9**	**+1.0**
	comp=Z,8.8nm,0.8s,baz=156,slow=2.4,SNR=5.9						
CMAR				ScP	**ScP**	**05 34 32.6**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=157,slow=2.5,SNR=4.5						
CMBY	**CAMPBELL BAY**	**37.63**	**285**	*e*P	**P**	**05 28 29.4**	**-0.6**
CMMT	**Chiang Mai**	**37.69**	**306**	P	**P**	**05 28 31.0**	**+0.6**
	comp=Z,291nm,1.4s,comp=Z,3µm						
CHTO	**Chiang Mai**	**37.69**	**306**	*e*P	**P**	**05 28 31.4**	**+1.0**
	comp=Z,327nm,1.1s						
CHTO				LR	LR		
	comp=Z,1µm,19.0s						
CHTO	**Chiang Mai**	**37.69**	**306**	*e*P	**P**	**05 28 31.4**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,327nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,1µm,19.0s						
CHTO	**Chiang Mai**	**37.69**	**306**	P	**P**	**05 28 31.4**	**+1.0**
	SNR=84						
CHTO				P	**P**	**05 28 31.4**	**+1.0**
	SNR=84						
CHTO	**Chiang Mai**	**37.69**	**306**	P	**P**	**05 28 31.1**	**+0.7**
	comp=Z,1µm,1.1s,comp=Z,13µm						
ENH	**Enshi**	**38.58**	**330**	*e*P	**P**	**05 28 37.5**	**-0.3**
	comp=Z,68nm,0.9s						
ENH				LR	LR		
	comp=Z,914nm,21.0s						
KMI	**Kunming**	**38.66**	**318**	P	**P**	**05 28 40.1**	**+1.3**
KMI				pP	pP	05 28 46.9	-0.9
KMI				sP	sP	05 28 53.6	+2.1
KMI				PP	**PnPn**	**05 30 13.9**	**+4.0**
KMI				S	**S**	**05 34 33.8**	**-0.1**
KMI				sS	sS	05 34 53.3	+4.9
KMI				SS	**SnSn**	**05 37 22.0**	**-1.6**
KMI				pmax	pmax		
	comp=Z,190nm,1.1s						
KMI				pmax	pmax		
	comp=Z,460nm,4.1s						
KMI				LR	LR		
	comp=Z,970nm,20.6s						
KMI				LR	LR		
	comp=Z,730nm,18.5s						
KMI				LR	LR		
	comp=Z,910nm,19.9s						
KMI	**Kunming**	**38.66**	**318**	*e*P	**P**	**05 28 39.2**	**+0.4**
	comp=Z,241nm,1.1s						
KMI	**Kunming**	**38.66**	**318**	*e*P	**P**	**05 28 39.2**	**+0.4**
KMI				pmax	pmax		
	comp=Z,241nm,1.1s						
TJN	**Taejon**	**39.25**	**356**	*de*P	**P**	**05 28 43.7**	**+0.5**
DZM	**Mont Dzumac**	**39.89**	**121**	*e*P	**P**	**05 28 50.3**	**+1.4**
	comp=Z,120nm,1.6s						
DZM				*e*S	**S**	**05 34 54.9**	**+2.7**
	comp=Z,503nm,30.6s						
DZM				*e*LR	LR	05 39 59.5	
	comp=Z,3µm,27.7s						
DZM	**Mont Dzumac**	**39.89**	**121**	*e*P	**P**	**05 28 50.3**	**+1.4**
	comp=Z,110nm,1.6s						
MJAR	**Matsushiro Arr**	**40.00**	**10**	P	**P**	**05 28 48.3**	**-1.3**
	comp=Z,14nm,0.8s,baz=191,slow=9.6,SNR=23						
MJAR				PcP	**PcP**	**05 30 53.6**	**-0.8**
	comp=Z,3.2nm,0.6s,baz=178,slow=2.6,SNR=3.4						
MJAR				LR	LR	05 44 24.5	
	comp=Z,1µm,21.1s,baz=195,slow=35						
MAJO	**Matsushiro**	**40.01**	**10**	*e*P	**P**	**05 28 48.3**	**-1.2**
	comp=Z,29nm,0.9s						
MAJO				*e*PcP	**PcP**	**05 30 53.6**	**-0.8**
MAJO	**Matsushiro**	**40.01**	**10**	⇑*i*P	**P**	**05 28 48.6**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,18nm,0.8s						
MAT	**Matsushiro**	**40.01**	**10**	P	**P**	**05 28 47.4**	**-2.2**
MAT				S	**S**	**05 34 48.6**	**-4.7**
MJB9	**Matsu-Tunnel**	**40.01**	**10**	*e*P	**P**	**05 28 48.4**	**-1.2**
	comp=Z,28nm,0.8s						
PBA	**Port Blair**	**40.07**	**292**	*e*P	P	05 28 49.2	-1.2
KS15	**Wonju Array Si**	**40.28**	**357**	*e*P	**P**	**05 28 52.5**	**+0.7**
KSAR	**Wonju Array Be**	**40.28**	**357**	P	**P**	**05 28 52.2**	**+0.5**
KSAR	**Wonju Array Be**	**40.28**	**357**	P	**P**	**05 28 52.3**	**+0.5**
KSRS	**Korea Array**	**40.29**	**357**	P	**P**	**05 28 52.2**	**+0.4**
	comp=Z,26nm,0.7s,baz=173,slow=9.4,SNR=96						
KSRS				LR	LR	05 44 51.6	
	comp=Z,637nm,21.5s,baz=172,slow=35						
KS01	**Wonju Array Si**	**40.31**	**357**	*e*P	**P**	**05 28 52.2**	**+0.1**
TIA	**Tai'an**	**40.88**	**344**	P	**P**	**05 28 56.1**	**-0.7**
TIA				S	**S**	**05 35 05.3**	**-1.1**
TIA				pmax	pmax		
	comp=Z,23nm,0.9s						
TIA				pmax	pmax		
	comp=Z,100nm,5.3s						
TIA				LR	LR		
	comp=Z,280nm,24.7s						
TIA				LR	LR		
	comp=Z,500nm,21.8s						
TIA				LR	LR		
	comp=Z,390nm,21.5s						
MARNC	**Mare, Loyalty**	**41.03**	**120**	*e*P	**P**	**05 28 58.9**	**+0.6**
	comp=Z,518nm,1.6s						
XAN	**Xi'an**	**41.97**	**333**	P	**P**	**05 29 05.3**	**-0.5**
XAN				pP	pP	05 29 11.9	-3.0
XAN				PP	**PnPn**	**05 30 48.8**	**+0.2**
XAN				S	**S**	**05 35 20.6**	**-2.1**
XAN				pmax	pmax		
	comp=Z,80nm,0.9s						
XAN				pmax	pmax		
	comp=Z,74nm,3.6s						
XAN				LR	LR		
	comp=Z,530nm,24.9s						
XAN				LR	LR		
	comp=Z,880nm,24.7s						
XAN				LR	LR		
	comp=Z,750nm,25.0s						
XAN	**Xi'an**	**41.97**	**333**	*e*P	**P**	**05 29 04.7**	**-1.1**
	comp=Z,85nm,0.9s						
XAN	**Xi'an**	**41.97**	**333**	*e*P	**P**	**05 29 04.7**	**-1.1**
XAN				pmax	pmax		
	comp=Z,85nm,0.9s						
CD2	**Chengdu**	**42.14**	**325**	P	**P**	**05 29 06.8**	**-0.5**
CD2				pP	pP	05 29 14.1	-2.2
CD2				PP	**PP**	**05 30 44.9**	**-0.3**
CD2				PcS	**PcS**	**05 34 52.3**	**-1.1**
CD2				S	**S**	**05 35 26.5**	**+1.2**
CD2				pmax	pmax		
	comp=Z,170nm,0.9s						
CD2				pmax	pmax		
	comp=Z,500nm,4.5s						
CD2				LR	LR		
	comp=Z,3µm,25.5s						
CD2				LR	LR		
	comp=Z,4µm,19.6s						
CD2				LR	LR		
	comp=Z,3µm,23.5s						
DL2	**Dalian**	**42.44**	**350**	P	**P**	**05 29 09.3**	**-0.2**
DL2				S	**S**	**05 35 27.6**	**-1.7**
DL2				pmax	pmax		
	comp=Z,45nm,1.3s						
DL2				pmax	pmax		
	comp=Z,330nm,8.5s						
DL2				LR	LR		
	comp=Z,1µm,20.4s						
DL2				LR	LR		
	comp=Z,1µm,19.3s						
DL2				LR	LR		
	comp=Z,1µm,21.8s						
TAU	**Tasmania Unive**	**42.56**	**161**	PFAKE		05 29 20.0	+10
TAU				LR	LR		
	comp=Z,4µm,20.0s						
TAU	**Tasmania Unive**	**42.56**	**161**	P	**P**	**05 29 12.2**	**+1.8**
TIY	**Taiyuan**	**43.75**	**339**	*e*P	**P**	**05 29 20.3**	**+0.1**
TIY				pmax	pmax		
	comp=Z,110nm,0.8s						
BJT	**Baijiatuau**	**44.71**	**345**	*e*P	**P**	**05 29 27.4**	**-0.4**
	comp=Z,100nm,0.9s						
BJT				LR	LR		
	comp=Z,884nm,20.0s						
BJT	**Baijiatuau**	**44.71**	**345**	*e*P	**P**	**05 29 27.4**	**-0.4**
BJT				pmax	pmax		
	comp=Z,100nm,0.9s						
BJT				MLR	MLR		
	comp=Z,884nm,20.0s						
BJI	**Beijing**	**44.73**	**345**	P	**P**	**05 29 27.3**	**-0.6**
BJI				S	**S**	**05 36 01.0**	**-1.7**
BJI				pmax	pmax		
	comp=Z,53nm,1.2s						
BJI				LR	LR		
	comp=Z,480nm,21.6s						
BJI				LR	LR		
	comp=Z,850nm,26.7s						
BJI				LR	LR		
	comp=Z,400nm,29.9s						
SNY	**Shenyang**	**45.01**	**353**	⇑P	**P**	**05 29 30.1**	**0.0**
SNY				PP	**PP**	**05 31 14.3**	**-1.5**
SNY				S	**S**	**05 36 09.4**	**+2.6**
SNY				SS	**ScS**	**05 39 20.0**	**-5.2**
SNY				pmax	pmax		
	comp=Z,75nm,0.8s						
SNY				pmax	pmax		
	comp=Z,320nm,4.8s						
SNY				LR	LR		
	comp=Z,570nm,19.6s						
SNY				LR	LR		
	comp=Z,2µm,21.2s						
SNY				LR	LR		
	comp=Z,1µm,23.9s						
MSHR	**Mys Shultsa**	**45.35**	**1**	⇑*e*P	**P**	**05 29 33.4**	**+0.6**
VLA	**Vladivostok**	**45.91**	**2**	⇑*e*P	**P**	**05 29 38.1**	**+0.9**
VLA				pmax	pmax		
	comp=Z,50nm,0.8s						
LZH	**Lanzhou**	**46.05**	**330**	*e*P	**P**	**05 29 39.4**	**+0.7**
LZH				pP	pP	05 29 46.8	-1.1
LZH				sP	sP	05 29 50.4	-1.1
LZH				PcP	**PcP**	**05 31 14.8**	**-0.1**
LZH				PP	**PP**	**05 31 26.8**	**-0.3**
LZH				*e*S	**S**	**05 36 22.0**	**-0.4**
LZH				sS	sS	05 36 33.9	-3.2
LZH				SS	**ScS**	**05 39 35.6**	**+3.0**
LZH				pmax	pmax		
	comp=Z,150nm,1.0s						
LZH				pmax	pmax		
	comp=Z,750nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,3µm,18.7s						
ERM	**Erimo**	**46.28**	**13**	PFAKE		05 29 50.0	+10
ERM				LR	LR		
	comp=Z,682nm,20.0s						
CN2	**Changchun**	**46.77**	**355**	*e*P	**P**	**05 29 43.8**	**-0.2**
CN2				*e*S	**S**	**05 36 33.8**	**+1.7**
CN2				pmax	pmax		
	comp=Z,50nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,950nm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
CN2				LR	LR		
	comp=Z,840nm,20.0s						
SHL	**Shillong**	**46.79**	**310**	*e*P	**P**	**05 29 44.4**	**-0.3**
	comp=Z,92nm,0.9s						
SHL	**Shillong**	**46.79**	**310**	*e*P	**P**	**05 29 44.4**	**-0.3**
SHL				pmax	pmax		
	comp=Z,92nm,0.9s						
SHL	**Shillong**	**46.79**	**310**	⇑*i*P	**P**	**05 29 44.0**	**-0.7**
	comp=Z,17nm,0.8s						
SHL				IAmb	IAmb	05 29 46.0	
	comp=Z,86nm,1.0s						
SHL				*i* x	x	05 35 10.0	
HHC	**Hu-ho-hao-te**	**46.85**	**340**	*e*P	**P**	**05 29 45.3**	**+0.4**
HHC				pP	pP	05 29 51.5	-2.6
HHC				sP	sP	05 29 59.6	+1.9
HHC				S	**S**	**05 36 32.4**	**-1.2**
HHC				SS	**SS**	**05 39 53.6**	**-7.1**
HHC				pmax	pmax		
	comp=Z,80nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.5s						
HHC				LR	LR		
	comp=Z,630nm,20.6s						
HHC				LR	LR		
	comp=Z,1µm,20.2s						
HHC				LR	LR		
	comp=Z,1µm,22.6s						
USA0B	**Ussuriysk Arra**	**46.99**	**2**	*e*P	**P**	**05 29 46.2**	**+0.5**
	comp=Z,72nm,1.1s						
USRK	**Ussuriysk Ar.**	**46.99**	**2**	P	**P**	**05 29 46.2**	**+0.5**
	comp=Z,36nm,0.7s,baz=185,slow=6.9,SNR=88						
USRK				LR	LR	05 47 58.0	
	comp=Z,609nm,21.8s,baz=165,slow=34						
BTO	**Baotou**	**47.17**	**339**	*e*P	**P**	**05 29 47.0**	**-0.3**
MDJ	**Mudanjiang**	**47.39**	**359**	P	**P**	**05 29 49.3**	**+0.5**
MDJ				pP	pP	05 29 55.5	-2.5
MDJ				S	**S**	**05 36 41.9**	**+1.0**
MDJ				sS	sS	05 36 55.9	+0.7
MDJ				ScS	**ScS**	**05 39 41.1**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,82nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,190nm,2.9s						
MDJ				LR	LR		
	comp=Z,910nm,19.3s						
MDJ				LR	LR		
	comp=Z,560nm,17.0s						
MDJ				LR	LR		
	comp=Z,1µm,20.3s						
MDJ	**Mudanjiang**	**47.39**	**359**	*e*P	**P**	**05 29 49.4**	**+0.5**
	comp=Z,52nm,0.8s						
MDJ				LR	LR		
	comp=Z,920nm,20.0s						
TEY	**Ternei**	**48.13**	**6**	⇑*e*P	**P**	**05 29 55.1**	**+0.6**
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**48.84**	**15**	P	**P**	**05 30 03.8**	**+3.8**
YUK						05 31 58.2	
YUK				S	**S**	**05 37 04.9**	**+3.4**
MSVF	**Nonsavu**	**49.04**	**111**	*e*P	**P**	**05 30 03.9**	**+1.7**
	comp=Z,96nm,1.6s						
MSVF				LR	LR		
	comp=Z,400nm,21.0s						
MSVF	**Nonsavu**	**49.04**	**111**	*e*P	**P**	**05 30 03.9**	**+1.7**
MSVF				pmax	pmax		
	comp=Z,96nm,1.6s						
MSVF				MLR	MLR		
	comp=Z,400nm,21.0s						
BWNR	**Bhubaneshwar**	**49.38**	**300**	*e*x	**P**	**05 30 01.4**	**-3.2**
LSA	**Lhasa**	**49.57**	**314**	*e*P	**P**	**05 30 07.3**	**+0.8**
	comp=Z,247nm,1.8s						
LSA				LR	LR		
	comp=Z,391nm,20.0s						
LSA	**Lhasa**	**49.57**	**314**	*i* P	**P**	**05 30 07.2**	**+0.7**
	SNR=16						
LSA	**Lhasa**	**49.57**	**314**	*e*P	**P**	**05 30 07.3**	**+0.8**
LSA				pmax	pmax		
	comp=Z,247nm,1.8s						
LSA				MLR	MLR		
	comp=Z,391nm,20.0s						
KUR	**Kuril'sk**	**50.49**	**16**	⇑*e*P	**P**	**05 30 13.6**	**+1.0**
PALK	**Pallekele**	**50.52**	**282**	*e*P	**P**	**05 30 13.1**	**-0.4**
	comp=Z,122nm,1.4s						
PALK	**Pallekele**	**50.52**	**282**	*ce*P	**P**	**05 30 14.0**	**+0.5**
GTA	**Gaotai**	**50.64**	**329**	⇑P	**P**	**05 30 14.3**	**+0.2**
GTA				pP	pP	05 30 22.8	-0.5
GTA				sP	sP	05 30 26.5	-0.4
GTA				PcP	**PcP**	**05 31 32.1**	**+0.8**
GTA				ScP	**ScP**	**05 35 27.3**	**+1.9**
GTA				S	**S**	**05 37 27.4**	**+0.3**
GTA				sS	sS	05 37 39.5	-2.4
GTA				ScS	**ScS**	**05 40 04.6**	**+1.6**
GTA				pmax	pmax		
	comp=Z,72nm,1.1s						
GTA				pmax	pmax		

Sta	Name	Dist	Az	Phase	ISC phase	Time	Res
	comp=Z,310nm,7.8s						
GTA				LR	LR		
	comp=Z,700nm,19.4s						
GTA				LR	LR		
	comp=Z,550nm,21.9s						
GTA				LR	LR		
	comp=Z,870nm,22.2s						
BOK	Bokaro	50.74	304	eP	P	05 30 15.0	+0.1
BOK				IAmb	IAmb	05 30 16.6	
	comp=Z,28nm,0.9s						
TAPN	Taplejung	50.92	309	eP	P	05 30 16.2	-0.3
YSS	Yuzh-Sakhalins	50.92	11⇑	eP	P	05 30 16.0	+0.2
YSS				e		05 30 21.7	
YSS				e		05 31 33.6	
YSS				e		05 32 08.5	
YSS				ePPP	PPP	05 33 12.6	
YSS				eS	S	05 37 29.3	-1.1
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.5s						
YSS				pmax	pmax		
	comp=Z,200nm,5.5s						
YSS				pmax	pmax		
	comp=N,200nm,4.3s						
YSS				pmax	pmax		
	comp=E,100nm,3.9s						
YSS				smax	smax		
	comp=N,200nm,5.9s						
YSS				smax	smax		
	comp=E,300nm,6.7s						
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
YSS				MLR	MLR		
	comp=N,600nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,14.0s						
ODAN	Odare	50.93	308	eP	P	05 30 16.8	+0.3
	comp=E,132nm,0.8s						
RAMN	Ramite	51.59	308	eP	P	05 30 21.7	+0.2
	comp=E,178nm,0.7s						
KLR	Kul'dur	52.01	1c	iP	P	05 30 24.3	+0.4
KLR	Kul'dur	52.01	1	LR	LR	05 52 28.1	
	comp=E,697nm,19.6s,baz=190,slow=36						
MDRS	Chennai	52.17	289	eP	P	05 30 24.5	-1.2
MDRS				IAmb	IAmb	05 30 27.6	
	comp=Z,148nm,1.2s						
JIRN	Jiri	52.25	309	eP	P	05 30 26.4	-0.2
GUN	Gumba	52.61	309	eP	P	05 30 28.9	-0.3
	comp=Z,151nm,0.8s						
PKI	Pulchoki	52.82	308	eP	P	05 30 30.2	-0.5
PKIN	Phulchoki	52.83	308	eP	P	05 30 30.2	-0.5
	comp=Z,60nm,1.0s						
HIA	Hailar	52.83	351	PFAKE		05 30 40.0	+10
HIA				LR	LR		
	comp=Z,858nm,22.0s						
HIA	Hailar	52.83	351⇑	eP	P	05 30 30.1	0.0
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KKN	Kakani	53.02	308	eP	P	05 30 31.8	-0.3
	comp=Z,124nm,0.9s						
DMN	Daman	53.07	308	eP	P	05 30 32.4	-0.1
	comp=Z,201nm,1.0s						
GRNR	Gornyy	53.80	5	eP	P	05 30 37.1	0.0
GRNR				pmax	pmax		
	comp=Z,23nm,1.0s						
THZ	Tophouse	54.26	141	eP	P	05 30 42.2	+1.5
	comp=Z,112nm,1.7s						
RPZ	Rata Peaks	54.27	144	eP	P	05 30 41.8	+1.1
	comp=Z,136nm,1.5s						
RPZ	Rata Peaks	54.27	144	LR	LR	05 55 02.2	
	comp=Z,1µm,19.0s,baz=310,slow=37						
KOLN	Koldanda	54.33	307	eP	P	05 30 41.8	+0.1
	comp=Z,458nm,1.0s						
TRD	Trivandrum	54.39	283	eP	P	05 30 40.9	-1.2
DANN	Dangsing	54.47	308	eP	P	05 30 42.5	-0.3
	comp=Z,300nm,0.9s						
ULN	Ulaanbaatar	54.57	341	eP	P	05 30 42.9	-0.1
	comp=Z,113nm,1.0s						
ULN	Ulaanbaatar	54.57	341c	iP	P	05 30 43.6	+0.6
ULN				pmax	pmax		
	comp=Z,128nm,1.0s						
ULN	Ulaanbaatar	54.57	341	P	P	05 30 43.9	+0.9
	SNR=44						
ULN				P	P	05 30 43.9	+0.9
	SNR=44						
TYV	Tymovskoe	54.67	10	eP	P	05 30 44.4	+1.0
TYV				eS	S	05 38 24.9	+3.5
TYV				pmax	pmax		
	comp=Z,300nm,3.5s						
TYV				pmax	pmax		
	comp=Z,12nm,0.9s						
TYV				smax	smax		
	comp=E,700nm,8.4s						
SONA0	Songino Array	54.76	340	eP	P	05 30 44.9	+0.5
SONA0				ePcP	PcP	05 31 47.8	+1.2
SONM	Songino Array	54.76	340	P	P	05 30 44.9	+0.5
	comp=E,49nm,0.9s,baz=157,slow=6.4,SNR=199						
SONM				PcP	PcP	05 31 47.8	+1.2
	comp=E,4.5nm,0.8s,baz=151,slow=3.3,SNR=3.2						
SONM				ScP	ScP	05 35 41.0	-2.1
	comp=E,1.8nm,1.2s,baz=145,slow=5.3,SNR=1.9						
SONM				PKPPKP	P'P'df	06 00 52.2	-1.4
	comp=E,0.5nm,1.0s,baz=270,slow=1.4,SNR=3.2						
SONM				PKP2bc		06 01 08.2	
	comp=E,1.1nm,1.1s,baz=318,slow=2.0,SNR=3.9						
SONM				PKP2ab		06 01 30.8	
	comp=E,0.9nm,1.1s,baz=237,slow=2.5,SNR=3.8						
SONA1	Songino Array	54.77	340	eP	P	05 30 44.9	+0.5
HYB	Hyderabad	54.90	294⇑	iP	P	05 30 45.0	-0.7
	comp=E,150nm,1.0s						
HYB				eS	S	05 38 26.0	+0.3
HYB	Hyderabad	54.90	294	eP	P	05 30 45.1	-0.7
PYUN	Piuthan	54.96	308	eP	P	05 30 46.3	0.0
	comp=E,602nm,1.1s						
URZ	Urewera	55.26	136	eP	P	05 30 49.4	+1.4
	comp=E,76nm,1.4s						
URZ	Urewera	55.26	136	LR	LR	05 54 58.4	
	comp=E,786nm,19.3s,baz=318,slow=37						
BKZ	Black Stump Fm	55.26	137	eP	P	05 30 49.0	+0.9
	comp=E,24nm,0.8s						
JBP	Jabalpur	55.47	301	eP	P	05 30 50.1	+0.4
JBP				ex	x	05 35 31.9	
NGP	Nagpur	55.59	298	eP	P	05 30 49.9	-0.8
NGP				IAmb	IAmb	05 30 50.4	
	comp=Z,55nm,0.6s						
RAO	Raoul Island	55.60	124	LR	LR	05 55 11.1	
	comp=Z,533nm,18.3s,baz=269,slow=37						
ZEA	Zeya	56.57	358	eP	P	05 30 56.8	-0.2
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,46nm,1.0s						
NKL	Nikolayevsk	56.60	7	i P	P	05 30 58.3	+1.1
NKL				e		05 31 04.0	
NKL				pmax	pmax		
	comp=N,22nm,1.0s						
NKL				pmax	pmax		
	comp=Z,120nm,1.0s						
NKL				MLR	MLR		
	comp=N,700nm,16.0s						
NKL				MLR	MLR		
	comp=Z,1µm,16.0s						
CIT	Chita	56.61	348	eP	P	05 30 58.2	+0.8
CIT				e		05 31 04.5	
CIT				e		05 31 14.7	
BHPL	Bhopal	57.71	300	eP	P	05 31 04.9	-0.8
BHPL				IAmb	IAmb	05 31 06.5	
	comp=Z,84nm,0.9s						
DGAR	Diego Garcia	57.74	263	PFAKE		05 31 20.0	+14
DGAR				LR	LR		
	comp=Z,738nm,19.0s						
ZAK	Zakamensk	58.00	340	eP	P	05 31 07.0	-0.3
ZAK				pmax	pmax		
	comp=Z,23nm,1.0s						
MNCI	Minicoy	58.16	282	eP	P	05 31 09.6	+0.6
	comp=Z,224nm,1.1s						
MNCY	Minicoy	58.18	282	eP	P	05 31 07.9	-1.2
GOA	Goa	58.79	290	eP	P	05 31 12.7	-0.6
TLY	Talaya	58.98	341	eP	P	05 31 14.1	0.0
	comp=Z,87nm,1.4s						
TLY				LR	LR		
	comp=Z,314nm,20.0s						
TLY	Talaya	58.98	341	eP	P	05 31 14.6	+0.5
TLY	Talaya	58.98	341	P	P	05 31 14.9	+0.8
	SNR=11						
TLY				P	P	05 31 14.9	+0.8
	SNR=11						
IRK	Irkutsk	59.26	342	eP	P	05 31 16.3	+0.3
IRK				pmax	pmax		
	comp=Z,86nm,2.7s						
POO	Poona	59.51	293	eP	P	05 31 17.5	-0.9
DDI	Dehra Dun	59.81	308	eP	P	05 31 19.7	-0.5
NDI	New Delhi	59.83	306	eP	P	05 31 20.0	-0.4
MOY	Mondy	59.87	339	eP	P	05 31 21.2	+0.9
MOY				pmax	pmax		
	comp=Z,101nm,2.1s						
WMQ	Urumqi	60.23	326	P	P	05 31 23.4	+0.5
WMQ				pP	pP	05 31 30.0	-2.3
WMQ				PcP	PcP	05 32 09.5	+1.4
WMQ				ScP	ScP	05 36 04.4	-2.9
WMQ				S	S	05 39 36.0	+1.0
WMQ				ScS	SKKSac	05 41 10.3	-1.0
WMQ				pmax	pmax		
	comp=Z,110nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,490nm,4.5s						
WMQ				LR	LR		
	comp=Z,2µm,18.7s						
WMQ				LR	LR		
	comp=Z,1µm,17.5s						
WMQ				LR	LR		
	comp=Z,2µm,26.9s						
WMQ	Urumqi	60.23	326	eP	P	05 31 23.6	+0.7
	comp=Z,102nm,1.2s						
WMQ	Urumqi	60.23	326	eP	P	05 31 23.6	+0.7
WMQ				pmax	pmax		
	comp=Z,102nm,1.2s						
KNGR	Kungurtug, Tuv	60.31	337⇑	eP	P	05 31 23.5	+0.1
PEA0B	Petropavlovsk-	60.44	19	eP	P	05 31 25.3	+1.2
	comp=Z,80nm,1.1s						
PETK	Petropavlovsk-	60.44	19	eP	P	05 31 24.8	+0.7
PETK	Petropavlovsk-	60.44	19	eP	P	05 31 24.8	+0.7
PETK	Petropavlovsk-	60.44	19	P	P	05 31 24.4	+0.4
	comp=Z,26nm,0.7s,baz=192,slow=6.7,SNR=42						
PETK				LR	LR	05 56 05.1	
	comp=Z,387nm,21.8s,baz=208,slow=35						
PEA1	Petropavlovsk-	60.44	19	eP	P	05 31 24.4	+0.4
BOM	Bombay	60.55	294	ex	P	05 31 16.3	-9.1
PET	Petropavlovsk	60.68	19	eP	P	05 31 26.7	+1.1
	comp=Z,73nm,1.2s						
PET				LR	LR		
	comp=Z,558nm,21.0s						
PET	Petropavlovsk	60.68	19	eP	P	05 31 26.1	+0.5
PET				eS	S	05 39 38.9	-1.2
PET				eSS	SS	05 43 42.5	+3.3
PET				pmax	pmax		
	comp=Z,60nm,1.2s						
PET				pmax	pmax		
	comp=Z,100nm,16.8s						
PET				MLR	MLR		
	comp=Z,500nm,19.0s						
SMLA	Simla	60.83	308	eP	P	05 31 27.4	+0.2
DHRM	DHARAMSHALA	61.96	309	eP	P	05 31 34.6	-0.5
BOD	Bodaibo	62.01	350	eP	P	05 31 34.3	-0.2
BOD				pmax	pmax		
	comp=Z,55nm,1.4s						
ZSN	Zaisan	64.04	327d	iP	P	05 31 46.6	-1.7
ZSN				pmax	pmax		
	comp=Z,129nm,1.4s						
ZSN	Zaisan	64.04	327⇓	iP	P	05 31 46.7	-1.7
	comp=Z,129nm,1.4s						
DGZ	Jazzator, Alta	64.15	331c	iP	P	05 31 49.4	+0.2
DGZ				pmax	pmax		
	comp=Z,42nm,1.1s						
MA2	Magadan	64.42	11	eP	P	05 31 51.6	+1.1
	comp=Z,70nm,1.3s						
MA2	Magadan	64.42	11c	eP	P	05 31 51.9	+1.4
MA2				pmax	pmax		
	comp=Z,65nm,2.5s						
BHJ	Bhuj	64.53	297	eP	P	05 31 51.3	-0.6
BHJ				IAmb	IAmb	05 31 52.7	
	comp=Z,36nm,0.4s						
CASY	Casey	64.70	189	eP	P	05 31 52.7	+0.5
	comp=Z,125nm,1.4s						
CASY				LR	LR		
	comp=Z,313nm,20.0s						
YAK	Yakutsk	64.83	360c	iP	P	05 31 53.9	+0.8
YAK				e		05 32 23.3	
YAK				e		05 34 16.3	
YAK				ePPP	PPP	05 35 46.8	
YAK				eS	S	05 40 27.9	-4.0
YAK				e*SS	sS	05 41 00.9	+13
YAK				e		05 41 45.7	
YAK				pmax	pmax		
	comp=N,193nm,0.9s						
YAK				pmax	pmax		
	comp=E,56nm,0.9s						
YAK				pmax	pmax		
	comp=Z,242nm,3.2s						
YAK				pmax	pmax		
	comp=N,279nm,2.9s						
YAK				pmax	pmax		
	comp=E,304nm,3.1s						
YAK				smax	smax		
	comp=N,130nm,2.0s						
YAK				smax	smax		
	comp=E,179nm,2.7s						
PDGK	Podgornoye	64.83	321	P	P	05 31 53.1	-0.6
PDGK				pmax	pmax		
	comp=Z,99nm,1.3s						
NIL	Nilore	64.87	309	eP	P	05 31 53.8	-0.3
	comp=Z,46nm,0.8s						
NIL				LR	LR		
	comp=Z,231nm,20.0s						
NIL	Nilore	64.87	309	eP	P	05 31 53.8	-0.3
NIL				pmax	pmax		
	comp=Z,47nm,0.8s						
NIL				MLR	MLR		
	comp=Z,231nm,20.0s						
UZB	Uzynbulak	65.03	321d	iP	P	05 31 52.9	-2.2
UZB				eS	S	05 40 35.0	-0.5
UZB				pmax	pmax		
	comp=Z,648nm,1.2s						
UZB				smax	smax		
	comp=N,159nm,4.8s						
UZB				MLR	MLR		
	comp=Z,54nm,12.0s						
UZB	Uzynbulak	65.03	321⇓	iP	P	05 31 52.9	-2.2
	comp=Z,648nm,1.2s						
UZB				eS	S	05 40 35.0	-0.5
	comp=Z,159nm,4.8s						
UZB				eLR	LR	06 01 02.3	
	comp=Z,54nm,11.5s						
MK01	Makanchi Array	65.05	326	eP	P	05 31 54.3	-0.7
MK31	Makanchi Array	65.06	326	eP	P	05 31 55.3	+0.3
MK31	Makanchi Array	65.06	326	eP	P	05 31 55.3	+0.3
MK32	Makanchi Array	65.06	326	eP	P	05 31 55.4	+0.4
MK32				ePcP	PcP	05 32 29.0	+1.3
MKAR	Makanchi Array	65.06	326	eP	P	05 31 55.3	+0.3
	comp=Z,292nm,0.8s						
MKAR				PcP	PcP	05 32 29.0	+1.3
MKAR	Makanchi Array	65.06	326	P	P	05 31 55.4	+0.3
	comp=Z,43nm,0.8s,baz=121,slow=8.0,SNR=430						
MKAR				PcP	PcP	05 32 29.0	+1.3
	comp=Z,14nm,0.7s,baz=125,slow=5.0,SNR=4.5						
MKAR				PKPPKP		06 00 38.6	
	comp=Z,0.1nm,0.3s,baz=318,slow=1.6,SNR=4.4						
MKAR				LR	LR	06 02 55.4	
	comp=Z,366nm,19.1s,baz=124,slow=38						
PRZ	Przheval'sk	65.09	320	eP	P	05 31 56.6	+1.1
	comp=Z,115nm,1.1s						
PRZ	Przheval'sk	65.09	320	eP	P	05 31 56.6	+1.1
PRZ				pmax	pmax		
	comp=Z,115nm,1.1s						
TARG	Taragay, Kyrgy	65.10	319	eP	P	05 31 56.4	+0.5
	comp=Z,58nm,1.1s						
MAKZ	Makanchi	65.25	326	eP	P	05 31 56.6	+0.3
	comp=Z,124nm,1.3s						
MAKZ	Makanchi	65.25	326	eP	P	05 31 56.6	+0.3
MAKZ				pmax	pmax		
	comp=Z,124nm,1.3s						
KSH	Kashi	65.30	316⇑	iP	P	05 31 58.0	+1.1
KSH				sP	sP	05 32 12.8	+3.0
KSH				PP	PP	05 34 27.4	+6.6
KSH				S	S	05 40 35.6	-3.3
KSH				sS	sS	05 40 53.0	-1.3
KSH	Kashi	65.30	316	SS	SS	05 44 57.3	+5.0
KSH				pmax	pmax		
	comp=Z,140nm,0.9s						
KSH				LR	LR		
	comp=N,310nm,5.9s						
KSH				LR	LR		
	comp=E,210nm,4.1s						
KSH				LR	LR		
	comp=Z,350nm,8.0s						
KSH	Kashi	65.30	316⇑	iP	P	05 31 57.9	+1.1
KSH				pP	sP	05 32 07.5	-2.3
KSH				S	S	05 40 38.1	-0.8
KSH				SS	SS	05 44 58.0	+5.7
KSH				pmax	pmax		
	comp=Z,140nm,0.9s						
KSH				LR	LR		
	comp=Z,240nm,5.6s						
KSH				LR	LR		
	comp=Z,330nm,6.3s						
KSH				LR	LR		
	comp=Z,790nm,14.4s						
SATY	Saty	65.38	321d	iP	P	05 31 55.4	-1.9
SATY				eS	S	05 40 36.4	-3.3
SATY				smax	smax		
	comp=N,169nm,5.5s						
SATY				MLR	MLR		
	comp=Z,318nm,25.0s						
SATY	Saty	65.38	321⇓	iP	P	05 31 55.4	-1.9
	comp=Z,2µm,1.1s						
SATY				eS	S	05 40 36.4	-3.3
	comp=Z,170nm,5.5s						
SATY				eLR	LR	06 01 22.5	
	comp=Z,318nm,25.3s						
KDJ	Kajisay	65.71	319	eP	P	05 32 00.7	+1.2
	comp=Z,64nm,0.9s						
KDJ	Kajisay	65.71	319	eP	P	05 32 00.7	+1.2
KDJ				pmax	pmax		
	comp=Z,64nm,0.9s						
NRN	Naryn	66.16	318	eP	P	05 32 02.8	+0.2
	comp=Z,39nm,0.8s						
NRN	Naryn	66.16	318	eP	P	05 32 02.8	+0.2
NRN				pmax	pmax		
	comp=Z,39nm,0.8s						
MDOK	Medeo	66.29	320d	eP	P	05 32 00.8	-2.4
MDOK				i S	S	05 40 48.4	-2.4
MDOK				pmax	pmax		
	comp=Z,581nm,1.2s						
MDOK				smax	smax		
	comp=N,317nm,8.3s						
MDOK				MLR	MLR		
	comp=Z,174nm,23.0s						
MDOK	Medeo	66.29	320⇓	eP	P	05 32 00.8	-2.4
	comp=Z,581nm,1.2s						
MDOK			⇓	iS	S	05 40 48.5	-2.4
	comp=Z,317nm,8.3s						
MDOK				eLR	LR	06 01 03.0	
	comp=Z,174nm,23.3s						
TNSS	Tian-Shan	66.30	320	eP	P	05 32 02.6	-0.9
TNSS	Tian-Shan	66.30	320	eP	P	05 32 02.6	-0.9
	comp=Z,1µm,1.0s						
TDK	Taldyqorghan	66.36	322	eP	P	05 32 01.7	-1.8
TDK				eS	S	05 40 51.1	-0.3
TDK				smax	smax		
	comp=N,550nm,6.3s						
TDK				MLR	MLR		
	comp=Z,279nm,20.0s						
TDK	Taldyqorghan	66.36	322	eP	P	05 32 01.7	-1.8
	comp=Z,1µm,1.1s						
TDK				eS	S	05 40 51.1	-0.3
	comp=Z,550nm,6.3s						
TDK				eLR	LR	06 01 52.8	
	comp=Z,279nm,20.1s						
AAA	Alma-Ata	66.40	320	eP	P	05 32 03.3	-0.5
AAA				eS	S	05 40 51.0	-1.0
AAA				pmax	pmax		
	comp=Z,343nm,0.7s						
AAA				smax	smax		
	comp=N,262nm,7.3s						
AAA				MLR	MLR		
	comp=Z,82nm,26.0s						
AAA	Alma-Ata	66.40	320	eP	P	05 32 03.3	-0.5
	comp=Z,343nm,0.7s						
AAA				eS	S	05 40 51.0	-1.0
	comp=Z,262nm,7.3s						
AAA				eLR	LR	06 01 09.2	
	comp=Z,82nm,26.2s						
CHKK	Chushkaly	66.67	321⇑	eP	P	05 32 03.7	-1.7
CHKK				pmax	pmax		
	comp=Z,825nm,1.3s						
CHKK	Chushkaly	66.67	321⇑	eP	P	05 32 03.7	-1.7
	comp=Z,825nm,1.3s						
MTBS	Maitube	66.67	320	eP	P	05 32 04.5	-1.0
MTBS				pmax	pmax		
	comp=Z,286nm,1.0s						
MTBS	Maitube	66.67	320	eP	P	05 32 04.6	-1.0
	comp=Z,286nm,1.1s						
KZA	Kyzart	66.95	318	P	P	05 32 09.0	+1.2
	SNR=48						
KUU	Kurty	67.09	321c	eP	P	05 32 05.2	-2.9
KUU				i S	S	05 40 59.3	-1.0
KUU				pmax	pmax		
	comp=Z,945nm,1.2s						
KUU				smax	smax		
	comp=N,246nm,4.1s						
KUU	Kurty	67.09	321	eP	P	05 32 05.3	-2.9
	comp=N,945nm,1.2s						
KUU			⇓	iS	S	05 40 59.3	-1.0
	comp=N,246nm,4.1s						
TKM2	Tokmak 2	67.11	319	P	P	05 32 08.9	+0.4
	SNR=54						
TKM2	Tokmak 2	67.11	319	P	P	05 32 08.2	-0.3
TKM2				pmax	pmax		
	comp=Z,60nm,0.9s						
SFK	Sufi-Kurgan	67.23	316	P	P	05 32 09.3	-0.1
SFK				pmax	pmax		
	comp=Z,68nm,1.2s						
KBK	Karagaybulak	67.41	319	P	P	05 32 11.1	+0.7
	SNR=22						
UCH	Uchtor	67.51	318	P	P	05 32 12.2	+0.9
	SNR=74						
CHMS	Chumysh	67.70	319	P	P	05 32 12.3	+0.3
	SNR=13						
AAK	Ala-Archa	67.70	319	P	P	05 32 12.9	+0.8
	SNR=27						
AAK	Ala-Archa	67.70	319	eP	P	05 32 12.9	+0.8
	comp=Z,56nm,1.1s						
AAK	Ala-Archa	67.70	319	i P	P	05 32 12.7	+0.5
	SNR=43						
AAK	Ala-Archa	67.70	319c	iP	P	05 32 12.8	+0.6
AAK				pmax	pmax		
	comp=Z,90nm,1.7s						
AAK	Ala-Archa	67.70	319	P	P	05 32 13.0	+0.8
	SNR=22						
AAK				P	P	05 32 13.0	+0.8
	SNR=22						
AAK	Ala-Archa	67.70	319	PKPPKP	P'P'df	06 00 31.4	-3.2
	comp=Z,0.7nm,0.4s,baz=264,slow=4.7,SNR=2.8						
AAK				LR	LR	06 05 07.0	
	comp=Z,352nm,21.9s,baz=93,slow=39						
FRU	Bishkek	67.71	319	eP	P	05 32 12.0	-0.1
FRU				i		05 32 41.0	
FRU				pmax	pmax		
	comp=Z,90nm,2.0s						
SEY	Seymchan	67.83	11⇑	eP	P	05 32 14.1	+1.8
SEY	Seymchan	67.83	11	PKPPKP	P'P'df	06 00 31.5	-0.9
	comp=Z,0.4nm,0.3s,baz=348,slow=2.2,SNR=3.9						
USP	Ospenovka	67.98	319	P	P	05 32 14.2	+0.4
	SNR=61						
AML	Almayashu	68.01	318	P	P	05 32 15.3	+0.9
	SNR=98						
ZAA0	Zalesovo Array	68.14	333	eP	P	05 32 14.1	-0.4
	comp=Z,58nm,1.0s						
ZALV	Zalesovo Beam	68.14	333	eP	P	05 32 13.9	-0.6
ZALV	Zalesovo Beam	68.14	333	P	P	05 32 14.1	-0.4
	comp=Z,28nm,0.8s,baz=107,slow=5.0,SNR=126						
ZALV				PKPPKP		06 00 29.5	
	comp=Z,0.3nm,0.4s,baz=318,slow=3.9,SNR=2.2						
ZALV				PKP2ab		06 00 34.4	
	comp=Z,0.5nm,0.6s,baz=243,slow=0.3,SNR=4.7						
ZALV				LR	LR	06 05 30.3	
	comp=Z,173nm,18.1s,baz=124,slow=39						
ZAA1	Zalesovo Array	68.14	333	eP	P	05 32 14.1	-0.4
EKS2	Erkin-Say	68.19	318	P	P	05 32 16.1	+0.9
	SNR=43						
KBL	Kabul	68.44	309	eP	P	05 32 16.8	-0.3
	comp=Z,47nm,0.8s						
KBL	Kabul	68.44	309	eP	P	05 32 16.8	-0.3
KBL				pmax	pmax		
	comp=Z,47nm,0.8s						
MNAS	Manas	68.96	318	P	P	05 32 20.1	0.0
MNAS				pmax	pmax		

	comp=Z,116nm,1.2s						
GAR	Garm	69.08	314	eP	P	05 32 20.8	-0.1
	comp=Z,124nm,1.0s						
GAR	Garm	69.08	314	eP	P	05 32 20.8	-0.1
GAR				pmax	pmax		
	comp=Z,124nm,1.0s						
BTLS	Baital	69.08	321	deP	P	05 32 18.2	-2.3
BTLS				pmax	pmax		
	comp=Z,382nm,1.1s						
BTLS	Baital	69.08	321	⇓eP	P	05 32 18.3	-2.3
	comp=Z,382nm,1.1s						
BTK	Batken	69.13	315	eP	P	05 32 22.2	+1.1
KURBB	Kurchatov Arra	69.27	328	PKP2bc	P'P'bc	06 00 27.2	-3.5
	comp=Z,0.4nm,0.4s,baz=285,slow=3.7,SNR=4.5						
KURK	Kurchatov	69.28	328	eP	P	05 32 21.9	+0.2
	comp=Z,167nm,0.8s						
KURK				LR	LR		
	comp=Z,607nm,20.0s						
KURK	Kurchatov	69.28	328	c iP	P	05 32 21.8	+0.2
KURK				pmax	pmax		
	comp=Z,187nm,0.8s						
KURK	Kurchatov	69.28	328	P	P	05 32 22.1	+0.4
	SNR=66						
KURK				P	P	05 32 22.1	+0.4
	SNR=66						
NVS	Novosibirsk	69.42	333	⇑iP	P	05 32 22.4	0.0
NVS				eS	S	05 41 25.2	-2.3
NVS				ePS	PnS	05 41 51.6	-4.3
NVS				pmax	pmax		
	comp=Z,69nm,1.5s						
NVS				pmax	pmax		
	comp=N,42nm,1.4s						
NVS				pmax	pmax		
	comp=E,51nm,1.6s						
NVS				smax	smax		
	comp=E,28nm,2.2s						
IUG	Iuzhnay	70.50	317	deP	P	05 32 27.3	-2.2
IUG	Iuzhnay	70.50	317	⇓eP	P	05 32 27.4	-2.2
	comp=E,1µm,1.0s						
KK31	Karatay Array	70.55	318	eP	P	05 32 29.8	+0.1
KK31	Karatay Array	70.55	318	eP	P	05 32 29.8	+0.1
KKAR	Karatay Array	70.55	318	eP	P	05 32 29.8	+0.1
KKAR	Karatay Array	70.55	318	eP	P	05 32 29.8	+0.1
ADK	Adak	70.62	32	PFAKE		05 32 40.0	+10
ADK				LR	LR		
	comp=Z,808nm,19.0s						
CHM	Chimkent	70.85	317	d iP	P	05 32 30.9	-0.6
CHM				eS	S	05 41 43.9	-1.0
CHM	Chimkent	70.85	317	⇓iP	P	05 32 31.0	-0.6
	comp=Z,1µm,0.8s						
CHM				eS	S	05 41 43.9	-1.0
OTUK	Ortayu	71.59	323	P	P	05 32 36.0	+0.1
OTUK				pmax	pmax		
	comp=Z,119nm,1.0s						
MRIV	Mauritius Mete	72.84	250	eP	P	05 32 44.3	+0.4
	comp=Z,101nm,1.2s						
JLN	Jalan Bani Buh	73.51	294	P	P	05 32 47.8	0.0
	SNR=15						
WBK	Wadi Bani Khal	73.99	294	P	P	05 32 51.4	+0.8
	SNR=7.0						
WSAR	Wadi Sarin	74.41	295	P	P	05 32 53.5	+0.5
	SNR=21						
TIXI	Tiksi	74.50	360	eP	P	05 32 52.0	-0.5
	comp=Z,50nm,0.8s						
TIXI	Tiksi	74.50	360	c iP	P	05 32 52.1	-0.5
TIXI				pmax	pmax		
	comp=Z,58nm,0.8s						
TIXI	Tiksi	74.50	360	LR	LR	06 06 27.5	
	comp=Z,612nm,20.3s,baz=186,slow=36						
RER	Riviere de l'E	74.52	249	eP	P	05 32 54.4	+0.5
	comp=Z,195nm,1.0s						
MHTO	MHTO	74.64	293	P	P	05 32 55.0	+0.6
	SNR=17						
MHTO				P	P	05 32 55.0	+0.6
	SNR=17						
JMDO	Jabal Madar	74.74	294	P	P	05 32 57.2	+2.2
	SNR=6.7						
DQM	DQM	74.86	291	P	P	05 32 56.0	+0.2
	SNR=6.2						
DQM				P	P	05 32 56.0	+0.2
	SNR=6.2						
SMDO	Samad	74.91	295	P	P	05 32 57.4	+1.3
	SNR=10						
BIDO	Bidbid	74.91	295	P	P	05 32 56.8	+0.8
	SNR=34						
BRVK	Borovoye	74.92	327	eP	P	05 32 56.0	+0.5
	comp=Z,81nm,1.0s						
BRVK				LR	LR		
	comp=Z,418nm,22.0s						
BRVK	Borovoye	74.92	327	c iP	P	05 32 55.4	0.0
BRVK				pmax	pmax		
	comp=Z,80nm,1.1s						
BRVK	Borovoye	74.92	327	P	P	05 32 55.9	+0.5
	SNR=37						
BRVK				P	P	05 32 55.9	+0.5
	SNR=37						
BILL	Bilibino	75.16	13	eP	P	05 32 56.8	+0.3
	comp=Z,28nm,1.4s						
BILL				LR	LR		
	comp=Z,676nm,21.0s						
BILL	Bilibino	75.16	13	ceP	P	05 32 56.6	+0.1
BILL				e		05 33 05.4	
BILL				e		05 33 09.7	
BILL				e		05 35 43.3	
BILL				ePPP	PPP	05 37 27.9	
BILL				pmax	pmax		
	comp=Z,27nm,2.5s						
BSY	Bisya	75.62	294	P	P	05 33 01.4	+1.3
	SNR=8.9						
HOQ	Hoqain	75.66	295	P	P	05 33 01.3	+1.0
	SNR=7.0						
ARQ	Araqi	76.34	295	P	P	05 33 06.9	+2.7
VNDA	Vanda	76.38	173	P	P	05 33 04.1	+0.8
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VNDA				MLR	MLR		
	comp=Z,569nm,18.4s						
VNDA	Vanda	76.38	173	P	P	05 33 04.1	+0.8
	comp=Z,7.4nm,0.9s,baz=323,slow=6.7,SNR=10.0						
VNDA				LR	LR	06 08 41.9	
	comp=Z,568nm,18.4s,baz=336,slow=37						
SOHO	SOHO	76.46	296	P	P	05 33 05.2	+0.4
	SNR=21						
UOSS	Minazif	76.89	296	eP	P	05 33 07.4	+0.2
	comp=Z,53nm,1.0s						
UOSS	Minazif	76.89	296	iP	P	05 33 07.0	-0.2
	SNR=5.5						
UOSS	Minazif	76.89	296	P	P	05 33 07.7	+0.5
	SNR=7.0						
UOSS				P	P	05 33 07.7	+0.5
	SNR=7.0						
HATD	Hatta, Dubai	76.93	296	iP	P	05 33 07.9	+0.4
	SNR=11						
HATD	Hatta, Dubai	76.93	296	P	P	05 33 08.3	+0.8
	SNR=12						
HATD				P	P	05 33 08.3	+0.8
	SNR=12						
BANOM	Banah	76.96	297	iP	P	05 33 08.4	+0.7
	SNR=9.4						
BANOM	Banah	76.96	297	P	P	05 33 09.7	+2.0
	SNR=7.2						
ASHO	Ashiyiah	76.97	296	iP	P	05 33 08.0	+0.3
	SNR=12						
ASHO	Ashiyiah	76.97	296	P	P	05 33 08.3	+0.5
	SNR=13						
DMTO	DMTO	76.98	289	P	P	05 33 07.9	+0.1
DMTO				P	P	05 33 07.9	+0.1
MSFE	Esma-Masafi	76.99	297	iP	P	05 33 08.1	+0.2
	SNR=13						
SHME	Shamm	77.13	297	iP	P	05 33 09.2	+0.6
	SNR=12						
ALNE	Al Ain	77.15	295	iP	P	05 33 09.3	+0.6
	SNR=11						
NAZ	Nazwa, Dubai	77.38	296	iP	P	05 33 10.3	+0.3
	SNR=6.5						
NAZ	Nazwa, Dubai	77.38	296	P	P	05 33 10.3	+0.3
	SNR=10						
NAZ				P	P	05 33 10.3	+0.3
	SNR=10						
FAQ	Al Faqa, Dubai	77.40	296	iP	P	05 33 10.4	+0.3
	SNR=15						
FAQ	Al Faqa, Dubai	77.40	296	P	P	05 33 10.5	+0.4
	SNR=10						
FAQ				P	P	05 33 10.5	+0.4
	SNR=10						
ASUD	Al Ashush, Dub	77.62	296	iP	P	05 33 12.2	+0.9
	SNR=11						
ASUD	Al Ashush, Dub	77.62	296	P	P	05 33 12.3	+1.0
	SNR=6.7						
ASUD				P	P	05 33 12.3	+1.0
	SNR=6.7						
NRIK	Noril'sk	77.76	346	P	P	05 33 11.7	+0.6
	comp=Z,19nm,0.7s,baz=131,slow=5.6,SNR=34						
NRIK				LR	LR	06 15 44.9	
	comp=Z,382nm,18.1s,baz=140,slow=42						
GEYT	Alibeck	77.87	310	P	P	05 33 13.4	+0.9
	comp=Z,49nm,0.9s,baz=139,slow=3.2,SNR=57						
GYA0B	ALIBECK ARRAY	77.87	310	eP	P	05 33 13.5	+1.0
	comp=Z,64nm,0.9s						
AJN	Ajban	77.92	296	iP	P	05 33 13.2	+0.3
	SNR=7.8						
AJN	Ajban	77.92	296	P	P	05 33 13.3	+0.3
	SNR=8.0						
AJN				P	P	05 33 13.3	+0.3
	SNR=8.0						
WHFO	Wadi Hawf	78.12	289	P	P	05 33 13.4	-0.9
ABTO	Aybut	78.50	288	P	P	05 33 17.1	+0.7
	SNR=7.6						
MAW	Mawson	78.78	201	eP	P	05 33 17.8	+0.9
	comp=Z,37nm,1.3s						
MAW	Mawson	78.78	201	P	P	05 33 17.8	+0.9
	comp=Z,41nm,0.7s,baz=64,slow=6.3,SNR=12						
MAW				LR	LR	06 07 25.8	
	comp=Z,464nm,18.5s,baz=66,slow=35						
MZR	Muzera	79.06	294	iP	P	05 33 20.0	+0.7
	SNR=6.6						
MZR	Muzera	79.06	294	P	P	05 33 20.0	+0.7
	SNR=7.4						
GAMB	Gambell	79.11	23	eP	P	05 33 20.3	+1.6
	comp=Z,49nm,1.3s						
AB31	Akbulak array	79.57	321	iP	P	05 33 21.4	-0.1
AB31				pmax	pmax		
	comp=Z,65nm,0.9s						
ABKAR	Akbulak array	79.57	321	eP	P	05 33 21.8	+0.3
PPT	Papeete	79.70	107	LR	LR	06 07 06.6	
	comp=Z,113nm,21.4s,baz=260,slow=34						
PPT2	Papeete2	79.70	107	eS	S	05 43 27.0	+2.9
	comp=Z,656nm,23.5s						
PPT2	Papeete2	79.70	107	eLQ	LQ	05 54 55.7	
	comp=Z,2µm,37.5s						
PPT2				eLR	LR	05 58 28.0	
	comp=Z,742nm,25.8s						
TBI	Tubuai	79.87	113	eS	S	05 43 26.0	+0.5
	comp=Z,481nm,28.8s						
TBI	Tubuai	79.87	113	eLR	LR	05 58 29.7	
	comp=Z,1µm,29.2s						
SDPT	Sand Point	80.80	33	eP	P	05 33 29.0	+1.0
	comp=Z,652nm,2.0s						
AKTO	Aktyubinsk	81.10	322	P	P	05 33 29.6	-0.2
AKTO				pmax	pmax		
	comp=Z,106nm,1.3s						
PMOR	Pomariorio Ree	81.33	105	eP	P	05 33 33.4	+1.7
	comp=Z,72nm,1.2s						
SVE	Sverdlovsk	81.50	329	d iP	P	05 33 32.0	+0.2
SVE				eS	S	05 43 34.2	-7.1
SVE				pmax	pmax		
	comp=Z,102nm,1.1s						
VAH	Vaihoa	81.59	105	eP	P	05 33 34.6	+1.6
	comp=Z,43nm,1.3s						
ANM	Nome	81.94	23	eP	P	05 33 35.9	+2.0
	comp=Z,39nm,1.8s						
ANM	Nome	81.94	23	eP	P	05 33 35.9	+2.0
ANM				pmax	pmax		
	comp=Z,39nm,1.8s						
ARU	Arti	82.47	328	eP	P	05 33 37.0	+0.1
	comp=Z,51nm,0.9s						
ARU				LR	LR		
	comp=Z,160nm,19.0s						
ARU	Arti	82.47	328	c iP	P	05 33 36.8	-0.1
ARU						05 36 44.9	
ARU				S	S	05 43 53.7	+2.4
ARU				SS	SS	05 49 16.8	+4.0
ARU				pmax	pmax		
	comp=Z,56nm,0.9s						
ABPO	Ambohimpanom	82.48	251	eP	P	05 33 38.5	+0.5
	comp=Z,79nm,1.3s						
ABPO				LR	LR		
	comp=Z,213nm,19.0s						
SVW2	Sparrevohn	84.97	28	eP	P	05 33 51.7	+2.1
	comp=Z,38nm,1.0s						
OHAK	Old Harbor	85.17	32	eP	P	05 33 51.7	+1.1
	comp=Z,174nm,1.8s						
KDAK	Kodiak Island	85.66	32	PFAKE		05 34 00.0	+6.9
KDAK				LR	LR		
	comp=Z,517nm,22.0s						
KDAK	Kodiak Island	85.66	32	ceP	P	05 33 54.4	+1.3
RSO	Redoubt South	86.17	29	eP	P	05 33 56.6	+0.8
RAYN	Ar Rayn	86.40	294	eP	P	05 33 58.4	+0.8
	comp=Z,164nm,0.9s						
RAYN				LR	LR		
	comp=Z,1µm,22.0s						
RAYN	Ar Rayn	86.40	294	eP	P	05 33 58.4	+0.8
RAYN				pmax	pmax		
	comp=Z,164nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,1µm,22.0s						
DAMY	Dhamar	86.78	285	eP	P	05 34 01.7	+1.8
	comp=Z,64nm,0.9s						
BRLK	Bradley Lake	86.94	30	eP	P	05 34 00.6	+1.2
	comp=Z,120nm,1.2s						
PPLA	Purkeypile	86.96	27	eP	P	05 34 00.1	+0.6
	comp=Z,58nm,1.4s						
IM3	Indian Mountai	87.02	23	eP	P	05 33 59.9	+0.3
CAST	Castle Rocks	87.12	26	eP	P	05 34 01.6	+1.4
	comp=Z,18nm,1.0s						
SUA	Susitna One	87.33	28	eP	P	05 34 01.8	+0.5
	comp=Z,79nm,1.2s						
SYO	Syowa Base	87.49	201	⇑iP	P	05 34 01.0	-0.8
SEW	Seward	87.71	30	eP	P	05 34 04.5	+1.5
	comp=Z,79nm,1.1s						
BPAW	Bear Paw Mtn.	87.74	26	eP	P	05 34 04.9	+1.7
	comp=Z,74nm,2.0s						
RC01	Rabbit Creek A	87.74	29	eP	P	05 34 04.0	+0.9
	comp=Z,55nm,1.1s						
TRF	Thorofare Moun	87.92	26	eP	P	05 34 05.1	+0.9
	comp=Z,56nm,1.6s						
GROC	Groznyy	88.00	313	eP	P	05 34 04.1	-0.7
GROC				eS	SKSac	05 44 31.1	-0.2
GROC				pmax	pmax		
	comp=Z,131nm,1.4s						
MLY	Manley	88.03	25	eP	P	05 34 05.3	+0.7
	comp=Z,14nm,0.9s						
ATD	Arta Tunnel	88.09	282	eP	P	05 34 08.0	+2.1
	comp=Z,47nm,1.0s						
PMR	Palmer	88.12	28	eP	P	05 34 05.9	+1.0
	comp=Z,55nm,1.3s						
PMR	Palmer	88.12	28	eP	P	05 34 05.9	+1.0
PMR				pmax	pmax		
	comp=Z,55nm,1.3s						
KNK	Knik Glacier	88.41	28	eP	P	05 34 08.1	+1.7
	comp=Z,76nm,1.2s						
BWN	Browne	88.41	26	eP	P	05 34 07.8	+1.5
	comp=Z,40nm,1.0s						
GNI	Garni	88.50	310	PFAKE		05 34 20.0	+13
GNI				LR	LR		
	comp=Z,375nm,22.0s						
GNI	Garni	88.50	310	P	P	05 34 09.3	+1.8
SML	Sawmill	88.53	28	eP	P	05 34 08.1	+1.2
	comp=Z,39nm,0.8s						
SML	Sawmill	88.53	28	P	P	05 34 08.1	+1.2
RND	Reindeer	88.55	26	eP	P	05 34 07.0	0.0
	comp=Z,20nm,0.8s						
RND	Reindeer	88.55	26	eP	P	05 34 07.0	0.0
RND				pmax	pmax		
	comp=Z,20nm,0.8s						
MCK	McKinley	88.56	26	eP	P	05 34 07.1	0.0
	comp=Z,38nm,1.1s						
MCK	McKinley	88.56	26	eP	P	05 34 07.1	0.0
MCK				pmax	pmax		
	comp=Z,38nm,1.1s						
TBLG	Delisi	88.64	312	eP	P	05 34 07.7	-0.2
	comp=Z,38nm,1.0s						
COLD	Coldfoot	88.67	23	eP	P	05 34 08.2	+0.8
	comp=Z,5.5nm,0.9s						
SCM	Sheep Creek Mo	89.00	28	eP	P	05 34 10.1	+0.9
	comp=Z,41nm,1.0s						
SCM	Sheep Creek Mo	89.00	28	eP	P	05 34 10.1	+0.9
SCM				pmax	pmax		
	comp=Z,41nm,1.0s						
MDM	Murphy Dome	89.07	25	eP	P	05 34 09.5	+0.1
	comp=Z,6.9nm,0.9s						
TAOE	Nuku Hiva Isla	89.11	99	eS	S	05 44 55.3	-3.0
	comp=Z,145nm,24.3s						
TAOE	Nuku Hiva Isla	89.11	99	eLR	LR	06 02 36.0	
	comp=Z,500nm,21.8s						
DHY	Denali Highway	89.16	27	eP	P	05 34 10.8	+0.8
	comp=Z,16nm,1.0s						
TOLK	Toolik Lake Re	89.16	21	eP	P	05 34 10.8	+1.0
	comp=Z,10.0nm,0.9s						
TOLK	Toolik Lake Re	89.16	21	P	P	05 34 10.8	+1.0
	baz=260						
COLA	College	89.21	25	PFAKE		05 34 20.0	+10
COLA				LR	LR		
	comp=Z,467nm,20.0s						
COLA	College	89.21	25	⇑eP	P	05 34 10.4	+0.4
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZEI	Tsey	89.35	313	eP	P	05 34 10.6	-0.9
ZEI				pmax	pmax		
	comp=Z,28nm,0.7s						
POKR	Poker Plat Res	89.42	25	P	P	05 34 12.0	+0.9
	baz=262						
HDA	Harding Lake	89.53	26	eP	P	05 34 11.0	-0.5
	comp=Z,12nm,1.0s						
HDA	Harding Lake	89.53	26	P	P	05 34 11.5	-0.1
	baz=262						
IL1	Eielson Array	89.61	25	eP	P	05 34 10.5	-1.4
ILAR	Eielson Array	89.61	25	P	P	05 34 10.9	-1.0
	comp=Z,2.3nm,0.7s,baz=287,slow=4.7,SNR=25						
ILAR				PKKPbc	PKKPbc	05 51 46.8	-2.0
	comp=Z,0.8nm,0.7s,baz=52,slow=1.2,SNR=9.1						
ILAR				LR	LR	06 11 52.8	
	comp=Z,274nm,20.1s,baz=261,slow=34						
ILB	Eielson Array	89.61	25	eP	P	05 34 11.3	-0.6
KLU	Klutina	89.62	28	eP	P	05 34 13.4	+1.2
	comp=Z,21nm,1.0s						
DIV	Divide	89.65	29	eP	P	05 34 13.1	+0.9
	comp=Z,24nm,0.8s						
PRGR	Permogore	90.06	332	eP	P	05 34 12.1	-1.9
PRGR				pmax	pmax		
	comp=Z,13nm,0.9s						
SIRT	Sirnak	90.09	307	eP	P	05 34 16.4	+1.5
	comp=Z,336nm,0.9s						
GOF	Gofitskoye	90.14	315	eP	P	05 34 15.3	+0.5
GOF				pmax	pmax		
	comp=Z,60nm,1.3s						
KBZ	Khabaz	90.15	314	P	P	05 34 15.0	+0.1
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	Khabaz	90.15	314	P	P	05 34 15.0	+0.1
	comp=Z,4.5nm,0.7s,baz=96,slow=2.2,SNR=11						
KBZ				LR	LR	06 19 10.4	
	comp=Z,175nm,21.8s,baz=78,slow=38						
NEY	Neytrino	90.25	313	⇑eP	P	05 34 17.1	+1.5
NEY				pmax	pmax		
	comp=Z,16nm,1.8s						
KIV	Kislovodsk	90.32	314	PFAKE		05 34 30.0	+14
KIV				LR	LR		
	comp=Z,232nm,20.0s						
KIV	Kislovodsk	90.32	314	iP	P	05 34 16.5	+0.7
	SNR=5.4						
KIV	Kislovodsk	90.32	314	eP	P	05 34 16.2	+0.4
KIV				e		05 44 44.1	
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KIV				pmax	pmax		
	comp=Z,36nm,4.8s						
KIV	Kislovodsk	90.32	314	P	P	05 34 13.9	-1.9
	SNR=7.0						
KIV				P	P	05 34 13.9	-1.9
	SNR=7.0						
RIDG	Independ'e Rid	90.37	26	eP	P	05 34 16.0	+0.4
	comp=Z,18nm,1.0s						
SCRK	Sand Creek	90.77	26	eP	P	05 34 19.7	+2.2
	comp=Z,11nm,1.2s						
VRH	Novokhopyorsk	91.40	321	eP	P	05 34 19.4	-1.1
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
EGAK	Eagle	92.05	25	eP	P	05 34 23.8	+0.5
	comp=Z,138nm,0.6s						
EGAK				LR	LR		
	comp=Z,452nm,21.0s						
SOC	Sochi	92.45	313	eP	P	05 34 22.1	-3.5
SOC				e		05 38 14.1	
SOC				eS	SKSac	05 44 52.2	-4.8
SOC				e*SS	SKKSac	05 45 15.2	+0.6
SOC				eSS	SS	05 51 32.6	-6.6
SOC				MLR	MLR		
	comp=Z,145nm,18.0s						
DAWY	Dawson	92.80	26	eP	P	05 34 27.6	+0.8
	comp=Z,20nm,1.0s						
KLMR	Klimovskoe	92.96	331	eP	P	05 34 24.7	-2.8
KLMR				e		05 38 07.2	
KLMR				pmax	pmax		
	comp=Z,21nm,1.0s						
KLMR	Klimovskoe	92.96	331	eP	P	05 34 24.7	-2.8
KLMR				AMP		05 34 27.6	
	comp=Z,21nm,1.1s						
KLMR				ePP	PP	05 38 07.3	-3.0
KMBO	Kilima Mbogo	92.98	269	P	P	05 34 30.1	+1.1
	comp=Z,19nm,0.9s,baz=63,slow=5.8,SNR=36						
KMBO				LR	LR	06 13 52.4	
	comp=Z,1µm,20.3s,baz=94,slow=34						
VSR	Storozhevoye	93.01	321	⇓iP	P	05 34 26.1	-1.9
VSR				pmax	pmax		
	comp=Z,15nm,1.1s						
LPSR	Galich'ya Gora	93.18	322	eP	P	05 34 27.4	-1.3
LPSR				pmax	pmax		
	comp=Z,30nm,1.3s						
RKT	Rikitea	93.19	113	eLR	LR	06 04 39.9	
	comp=Z,519nm,26.5s						
TMCR	Tamitsa	93.65	334	eP	P	05 34 29.2	-1.4
TMCR				pmax	pmax		
	comp=Z,13nm,0.8s						
HYT	Haines Junctio	93.66	29	eP	P	05 34 31.1	+0.2
	comp=Z,19nm,1.3s						
MOS	Moscow	93.95	326	eP	P	05 34 30.2	-2.0
MOS				e		05 38 18.1	
MOS				pmax	pmax		
	comp=Z,31nm,0.6s						
ANN	Anapa	94.11	315	eP	P	05 34 32.3	-0.9
ANN				pmax	pmax		
	comp=Z,25nm,0.8s						
OBN	Obninsk	94.56	325	PFAKE		05 34 50.0	+15
OBN				LR	LR		
	comp=Z,257nm,21.0s						
OBN	Obninsk	94.56	325	eP	P	05 34 34.1	-0.9
OBN				e		05 38 21.8	
OBN				ePPP	PPP	05 40 23.4	
OBN				pmax	pmax		
	comp=Z,20nm,1.0s						
OBN				MLR	MLR		
	comp=Z,578nm,24.0s						
SKAG	Skagway	94.78	31	eP	P	05 34 37.6	+1.7
	comp=Z,15nm,1.2s						
LVZ	Lovozero	94.87	338	PFAKE		05 34 50.0	+14
LVZ				LR	LR		
	comp=Z,273nm,21.0s						
INK	Inuvik	95.04	22	eP	P	05 34 36.7	-0.2
	comp=Z,59nm,1.8s						
INK	Inuvik	95.04	22	eP	P	05 34 36.7	-0.2
INK				pmax	pmax		
	comp=Z,59nm,1.8s						
NVL	N'lazarevskaya	96.26	197	eP	P	05 34 47.4	+4.9
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BR101	Keskin Array S	97.01	309	eP	P	05 34 45.8	-1.0
BR101				ePP	PP	05 38 36.5	-6.1
BR131	Keskin Array S	97.01	309	eP	P	05 34 46.4	-0.4
BRTR	Keskin Array B	97.01	309	P	P	05 34 45.8	-1.0
	comp=Z,2.5nm,0.9s,baz=111,slow=5.3,SNR=14						
BRTR				PP	PP	05 38 36.5	-6.1
	comp=Z,2.2nm,1.1s,baz=122,slow=5.4,SNR=3.7						
BRTR				LR	LR	06 26 09.1	
	comp=Z,197nm,20.4s,baz=86,slow=40						
KEV	Kevo	97.37	340	PFAKE		05 35 00.0	+12
KEV				LR	LR		
	comp=Z,824nm,20.0s						
CSS	Mathiatis	97.40	305	eP	P	05 34 48.1	-0.3
	comp=Z,14nm,0.8s						
ANTO	Ankara	97.66	310	PFAKE		05 35 00.0	+10
ANTO				LR	LR		
	comp=Z,250nm,21.0s						
ARA0	ARCESS Array S	97.93	340	eP	Pdif	05 34 50.0	0.0
ARCES	ARCESS Array B	97.93	340	eP	P	05 34 49.8	-0.3
ARCES	ARCESS Array B	97.93	340	P	Pdif	05 34 50.1	0.0
	comp=Z,8.7nm,0.8s,baz=69,slow=6.6,SNR=21						
ARCES				PKKPbc	PKKPbc	05 51 24.2	-2.7
	comp=Z,1.3nm,0.8s,baz=291,slow=3.8,SNR=5.8						
KBS	Kingsbay	98.18	350	PFAKE		05 35 00.0	+9.0

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KBS                                 LR        LR
       comp=Z,323nm,19.0s
AKASG  Malin Array Be     99.31 321  P        Pdif      05 34 54.9  -1.7
       comp=Z,0.8nm,0.7s,baz=74,slow=4.3,SNR=2.6
AKASG                               LR        LR        06 26 17.6
       comp=Z,138nm,18.1s,baz=70,slow=39
KIEV   Kiev               99.32 321  PFAKE              05 35 10.0  +13
KIEV                                LR        LR
       comp=Z,438nm,22.0s
KIEV   Kiev               99.32 321⇑eP        Pdif      05 34 54.7  -1.9
KIEV                                pmax      pmax
       comp=Z,2.0nm,1.1s
FIA0   FINESS Array S     99.39 332 eP        Pdif      05 34 56.2  -0.5
FIA0                                ePKiKP    PKiKP     05 39 27.0  +0.9
FIA0   FINESS Array S     99.39 332 eP        Pdif      05 34 56.2  -0.5
FINES  FINESS Array B     99.39 332  P        Pdif      05 34 56.2  -0.5
       comp=Z,2.2nm,0.9s,baz=270,slow=3.8,SNR=5.8
FINES                               PKiKP     PKiKP     05 39 27.0  +0.9
       comp=Z,0.8nm,0.7s,baz=183,slow=29,SNR=3.2
FINES                               LR        LR        06 27 04.6
       comp=Z,313nm,18.4s,baz=78,slow=40
MBAR   Mbarara            99.51 269  PFAKE              05 35 10.0  +11
MBAR                                LR        LR
       comp=Z,627nm,21.0s
SNAA   Sanae              99.62 194  P        Pdif      05 34 58.4  +0.8
SNAA   Sanae              99.62 194 eP        Pdif      05 34 58.8  +1.1
       comp=Z,20nm,1.2s
SNAA   Sanae              99.62 194deP        Pdif      05 34 58.5  +0.8
CFR    Carcaliu          100.67 315⇑iP        Pdif      05 35 02.3  -0.5
CFR    Carcaliu          100.67 315 ⇑P        Pdif      05 35 02.3  -0.5
LSZ    Lusaka            100.87 254 ePdif     Pdif      05 35 03.6  -0.9
LSZ                                 LR        LR
       comp=Z,519nm,20.0s
LSZ    Lusaka            100.87 254 eP        Pdif      05 35 03.6  -0.9
LSZ                                 MLR       MLR
       comp=Z,519nm,20.0s
VNA2   Neumayer--Watz    101.19 193  P        Pdif      05 35 03.6  -1.0
TESR   Tescani           101.54 317⇑iP        Pdif      05 35 06.6  -0.1
VRI    Vrincioaia        101.57 316⇑iP        Pdif      05 35 07.7  +0.9
VRI    Vrincioaia        101.57 316 ⇑P        Pdif      05 35 07.7  +0.9
VNA1   Neumayer--Stat    101.59 193  P        Pdif      05 35 04.7  -1.7
PLOR   Plostina          101.63 316⇓iP        Pdif      05 35 07.7  +0.6
PLOR   Plostina          101.63 316 ⇓P        Pdif      05 35 07.7  +0.6
BOSA   Boshof            101.72 240  P        Pdif      05 35 08.8  +0.7
       comp=Z,22nm,1.0s,baz=104,slow=4.3,SNR=23
LBTB   Lobatse           102.01 244 ePdif     Pdif      05 35 10.0  +0.6
LBTB   Lobatse           102.01 244 eP        Pdif      05 35 10.0  +0.6
MLR    Muntele Rosu      102.17 316⇑iP        Pdif      05 35 10.1  +0.5
MLR    Muntele Rosu      102.17 316 ⇑P        Pdif      05 35 10.1  +0.5
BURAR  Bucovina Array    102.34 318⇑iP        Pdif      05 35 11.2  +0.9
BURAR  Bucovina Array    102.34 318 ⇑P        Pdif      05 35 11.2  +0.9
BUR08  Bucovina Ar. S    102.35 318 ePdif     Pdif      05 35 11.1  +0.7
VOIR                     102.80 316⇑iP        Pdif      05 35 13.4  +1.0
VOIR                     102.80 316 ⇑P        Pdif      05 35 13.4  +1.0
NLWA   Neilton Lookou    102.89  42  PFAKE              05 35 20.0  +7.3
NLWA                                LR        LR
       comp=Z,764nm,19.0s
RES    Resolute Bay      103.70  11 ePdif     Pdif      05 35 16.5  +0.9
RES    Resolute Bay      103.70  11 eP        Pdif      05 35 16.5  +0.9
YKA    Yellowknife Ar    104.03  26  Pdiff    Pdif      05 35 16.6  -0.7
       comp=Z,0.4nm,0.8s,baz=294,slow=4.7,SNR=8.1
YKA                                 PKiKP     PKiKP     05 39 33.7  -0.8
       comp=Z,0.4nm,0.6s,baz=302,slow=1.7,SNR=8.7
YKA                                 PKKPbc    PKKPbc    05 51 06.6  -2.4
       comp=Z,0.9nm,0.8s,baz=106,slow=3.0,SNR=11
YKA                                 PKKP      PKKPdf    05 51 17.9   0.0
       comp=Z,0.3nm,0.5s,baz=104,slow=2.6,SNR=5.6
UZH    Uzhgorod          104.08 319 eP        Pdif      05 35 19.0  +1.1
SUR    Sutherland        104.73 236  PFAKE              05 35 30.0  +8.5
SUR                                 LR        LR
       comp=Z,1μm,20.0s
HAWA   Hanford           106.00  43  PFAKE              05 39 50.0  +11
HAWA                                LR        LR
       comp=Z,634nm,19.0s
NB2    NORSAR Subarra106.34 334      P        Pdif      05 35 26.4  -1.3
       comp=Z,7.2nm,1.1s,baz=66,slow=4.6
NB200  NORSAR Array S 106.34 334    ePdif     Pdif      05 35 27.1  -0.7
NB200                               ePKiKP    PKiKP     05 39 38.8  -0.1
NOA    NORSAR Array B 106.34 334     Pdiff    Pdif      05 35 27.1  -0.7
       comp=Z,2.3nm,0.9s,baz=66,slow=4.6,SNR=7.5
NOA                                 PKiKP     PKiKP     05 39 38.8  -0.1
       comp=Z,0.8nm,0.9s,baz=69,slow=5.9,SNR=3.5
NOA                                 PKKPbc    PKKPbc    05 51 01.1  -0.9
       comp=Z,0.6nm,0.7s,baz=249,slow=2.3,SNR=4.7
NEW    Newport           107.14  40  PFAKE              05 39 50.0  +9.2
NEW                                 LR        LR
       comp=Z,607nm,22.0s
DPC    Dobruska-Polom    107.43 322  AMS      AMS       06 28 50.0
       comp=Z,400nm,20.5s
TREC   Trest             108.26 321  AMS      AMS       06 29 40.0
NV01   Mina Array Sit    108.55  50 ePdif     Pdif      05 35 35.8  -2.6
NVAR   Mina Array Bea    108.55  50  Pdiff    Pdif      05 35 34.9  -3.4
       comp=Z,0.1nm,0.4s,baz=267,slow=5.3,SNR=3.0
NVAR                                PKKP      PKKPab    05 51 07.2  +0.3
       comp=Z,3.4nm,0.9s,baz=132,slow=4.4,SNR=3.8
PRU    Pruhonice         108.63 322  AMS      AMS       06 29 20.0
       comp=Z,400nm,17.0s
BRG    Berggiesshubel    108.71 323 eP        PP        05 40 11.3  +1.7
       comp=Z,14nm,1.4s
       comp=N,322nm,21.3s
       comp=E,623nm,24.9s
       comp=Z,471nm,22.5s
CLL    Collm             109.12 324 ePKiKP    PKiKP     05 39 44.0  -0.3
CLL                                 ePP       PP        05 40 14.0  +1.4
CLL                                 eSdif     Sdif      05 47 52.0  +3.6
CLL                                 eSS       SS        05 55 34.0  +3.7
CLL                                 e                   05 56 37.0
CLL                                 eSSS      SSS       05 59 54.0
CLL                                 e                   06 00 54.0
CLL                                 eSSSS               06 02 54.0
CLL                                 e                   06 05 54.0
CLL                                  LmV                06 35 00.0
       comp=Z,400nm,20.2s
KHC    Kasperske Hory    109.50 322  AMS      AMS       06 26 10.0
       comp=Z,400nm,24.5s
GERES  GERESS Array B 109.52 321     PKiKP    PKiKP     05 39 46.1  +0.9
       comp=Z,1.1nm,0.6s,baz=74,slow=2.0,SNR=8.4
GERES                                PP       PP        05 40 17.6  +1.9
       comp=Z,0.4nm,0.3s,baz=79,slow=6.9,SNR=3.6
HLID   Hailey            110.22  44  PFAKE              05 40 00.0  +13
HLID                                 LR       LR
       comp=Z,592nm,20.0s
PFO    Pinyon Flats O    110.94  55  PFAKE              05 40 00.0  +12
PFO                                  LR       LR
       comp=Z,782nm,19.0s
BOZ    Bozeman (W)       111.52  42  PFAKE              05 40 00.0  +11
BOZ                                  LR       LR
       comp=Z,584nm,21.0s
EGMT   Eagleton          111.90  39  PFAKE              05 40 00.0  +10
EGMT                                 LR       LR
       comp=Z,452nm,19.0s
DUG    Dugway, Tooele    112.28  48  PFAKE              05 40 00.0  +9.2
DUG                                  LR       LR
       comp=Z,707nm,22.0s
LKWY   Lake              112.68  42  PFAKE              05 40 00.0  +8.4
LKWY                                 LR       LR
       comp=Z,669nm,19.0s
AHID   Auburn Hatcher    112.77  45  PFAKE              05 40 00.0  +8.2
AHID                                 LR       LR
       comp=Z,703nm,20.0s
RLMT   Red Lodge         113.25  42  PFAKE              05 40 00.0  +7.4
RLMT                                 LR       LR
       comp=Z,631nm,19.0s
FFC    Flin Flon         113.36  30  PFAKE              05 40 00.0  +7.8
FFC                                  LR       LR
       comp=Z,532nm,22.0s
BW06   Boulder Array     113.85  44  PFAKE              05 40 10.0  +16
BW06                                 LR       LR
       comp=Z,592nm,19.0s
PD31   Pinedale Array    113.85  44 ePKiKP    PKiKP     05 39 53.3  -0.5
PDAR   Pinedale Array    113.85  44  PKiKP    PKiKP     05 39 53.3  -0.5
       comp=Z,0.6nm,0.9s,baz=219,slow=1.9,SNR=4.3
PDAR                                 PKKPbc   PKKPbc    05 50 36.5  -1.0
       comp=Z,1.4nm,0.8s,baz=106,slow=3.9,SNR=11
PDAR                                 PKKPab   PKKPab    05 50 42.7  -0.7
       comp=Z,3.9nm,0.9s,baz=106,slow=5.3,SNR=18
PDAR                                 PKKP     PKKPdf    05 50 56.7  -2.7
       comp=Z,0.6nm,0.7s,baz=114,slow=3.7,SNR=3.5
LAO    LASA Array        114.63  39  PFAKE              05 40 10.0  +15
LAO                                  LR       LR
       comp=Z,618nm,20.0s
DGMT   Dagmar            115.12  37  PFAKE              05 40 10.0  +14
DGMT                                 LR       LR
       comp=Z,430nm,20.0s
PV14   Lion Creek, Pa    115.62  49 ePKPdf    PKPdf     05 39 58.1  +0.6
O20A   White River Ci    115.64  46 ePKPdf    PKPdf     05 39 59.1  +1.7
PV13   Radium Mtn., P    115.84  49 ePKPdf    PKPdf     05 39 59.5  +1.7
MVCO   Mesa Verde        116.37  50 ePKPdf    PKiKP     05 39 59.5  +0.6
MVCO                                 LR       LR
       comp=Z,471nm,20.0s
KEST   Kesra             116.61 309  PKP      PKPdf     05 39 57.6  -1.6
       comp=Z,5.1nm,1.0s,baz=294,slow=14,SNR=2.2
RSSD   Black Hills       117.08  41 ePKPdf    PKiKP     05 40 00.7  +0.6
RSSD   Black Hills       117.08  41 ePKIKP    PKiKP     05 40 00.7  +0.6
RSSD   Black Hills       117.08  41  P        PKiKP     05 40 00.7  +0.6
       baz=294
S22A   4UR Ranch, Cre    117.47  49  P        PKiKP     05 40 03.4  +2.3
       baz=289
ISCO   Idaho Springs     117.66  46  PFAKE              05 40 10.0  +8.6
ISCO                                 LR       LR
       comp=Z,521nm,20.0s
121A   Cookes Peak, D    118.27  54  P        PKiKP     05 40 04.7  +2.1
       baz=286
SDCO   Great Sand Dun    118.46  48 ePKPdf    PKiKP     05 40 03.6  +0.6
SDCO                                 LR       LR
       comp=Z,654nm,20.0s
SDCO   Great Sand Dun    118.46  48  P        PKiKP     05 40 04.6  +1.6
       baz=290
ANMO   Albuquerque       118.64  52  PFAKE              05 40 20.0  +17
ANMO                                 LR       LR
       comp=Z,617nm,20.0s
ANMO   Albuquerque       118.64  52  P        PKiKP     05 40 05.4  +2.1
       baz=288
ULM    Lac du Bonnet     118.92  32  PKP      PKiKP     05 40 03.2  +0.1
       comp=Z,1.5nm,0.9s,baz=32,slow=22,SNR=2.6
ULM                                  PKKPbc   PKKPbc    05 50 19.9  +0.4
       comp=Z,7.6nm,1.0s,baz=112,slow=4.1,SNR=10
T25A   Trinidad          119.48  49  P        PKiKP     05 40 06.3  +1.4
       baz=291
OGNE   Ogallala          119.74  44  PFAKE              05 40 20.0  +15
OGNE                                 LR       LR
       comp=Z,584nm,22.0s
AGMN   Agassiz Nation    120.02  34  PFAKE              05 40 20.0  +15
AGMN                                 LR       LR
       comp=Z,648nm,21.0s
MNTX   Cornudas Mount    120.47  55 ePKPdf    PKiKP     05 40 08.3  +1.6
MNTX                                 LR       LR
       comp=Z,521nm,20.0s
MNTX   Cornudas Mount    120.47  55  P        PKiKP     05 40 08.1  +1.4
       baz=287
MSTX   Muleshoe          121.83  51 ePKPdf    PKiKP     05 40 10.6  +1.1
MSTX   Muleshoe          121.83  51  P        PKiKP     05 40 10.5  +1.1
       baz=290
HOPE   Hope Point        121.89 189  PFAKE              05 40 20.0  +11
HOPE                                 LR       LR
       comp=Z,721nm,19.0s
ECSD   EROS Data Cent    122.01  39 ePKPdf    PKiKP     05 40 09.8  +0.4
ECSD                                 LR       LR
       comp=Z,590nm,20.0s
ECSD   EROS Data Cent    122.01  39  P        PKiKP     05 40 09.8  +0.4
       baz=301
BGNE   Belgrade          122.16  42 ePKPdf    PKiKP     05 40 10.5  +0.7
BGNE   Belgrade          122.16  42  P        PKiKP     05 40 10.2  +0.4
       baz=298
CBKS   Cedar Bluff       122.24  45  PFAKE              05 40 20.0  +10
CBKS                                 LR       LR
       comp=Z,490nm,20.0s
TX31   Lajitas Ar. Si    122.56  57 ePKPdf    PKiKP     05 40 11.7  +0.7
TX31                                ePKPdf    PKPdf     05 40 12.2  +1.3
LTX    Lajitas           122.56  57 ePKPdf    PKiKP     05 40 11.3  +0.3
LTX    Lajitas           122.56  57 ePKIKP    PKiKP     05 40 11.3  +0.3
TXAR   Lajitas Array     122.56  57  PKP      PKiKP     05 40 11.3  +0.3
       comp=Z,1.2nm,0.8s,baz=238,slow=1.1,SNR=14
TXAR                                 PKKPbc   PKKPbc    05 50 05.5  +0.1
       comp=Z,3.6nm,1.0s,baz=121,slow=4.8,SNR=18
EYMN   Ely               122.60  32  PFAKE              05 40 20.0  +10
EYMN                                 LR       LR
       comp=Z,596nm,22.0s
TAM    Tamanrasset       123.06 295 ePKPdf    PKiKP     05 40 13.3  +1.1
TAM    Tamanrasset       123.06 295 ePKIKP    PKiKP     05 40 13.3  +1.1
SPMN   Marine on St.     123.50  35  P        PKiKP     05 40 12.6  +0.4
       baz=305
F39A   Loretta           124.16  34  P        PKiKP     05 40 14.0  +0.4
       baz=308
KSU1   Kansas State U    124.29  43 ePKPdf    PKiKP     05 40 14.6  +0.6
KSU1                                 LR       LR
       comp=Z,601nm,21.0s
KSU1   Kansas State U    124.29  43  P        PKiKP     05 40 14.6  +0.6
       baz=298
G39A   Holcombe          124.39  35  P        PKiKP     05 40 14.1  +0.1
       baz=307
WMOK   Wichita Mounta    124.61  49 ePKPdf    PKiKP     05 40 15.1  +0.3
WMOK   Wichita Mounta    124.61  49 ePKIKP    PKiKP     05 40 15.1  +0.3
WMOK   Wichita Mounta    124.61  49  P        PKiKP     05 40 15.4  +0.6
       baz=294
H39A   Augusta           124.69  35  P        PKiKP     05 40 15.1  +0.5
       baz=306
ES19   SONSECA Array     124.74 318 ePKPdf    PKiKP     05 40 15.3  +0.3
ESDC   Sonseca Array     124.80 318  PKP      PKiKP     05 40 15.9  +0.8
       comp=Z,0.9nm,0.7s,baz=31,slow=3.1,SNR=6.0
ESDC                                 PP       PP        05 42 06.5  +4.3
       comp=Z,2.9nm,0.9s,baz=65,slow=6.8,SNR=8.1
COWI   Conover           125.02  33  PFAKE              05 40 30.0  +15
COWI                                 LR       LR
       comp=Z,662nm,22.0s
I39A   Houston           125.03  36 ePKPdf    PKPdf     05 40 15.0   0.0
I39A   Houston           125.03  36  P        PKPdf     05 40 15.1   0.0
       baz=306
ZAIG   Zacatecas         125.20  64 ePKPdf    PKiKP     05 40 18.5  +1.9
J39A   Decorah           125.23  37  P        PKPdf     05 40 15.0  -0.4
       baz=305
JCT    Junction City     125.39  54 ePKPdf    PKiKP     05 40 17.4  +0.9
JCT                                  LR       LR
       comp=Z,558nm,21.0s
JCT    Junction City     125.39  54 ePKIKP    PKiKP     05 40 17.4  +0.9
JCT                                  MLR      MLR
       comp=Z,558nm,21.0s
JCT    Junction City     125.39  54  P        PKiKP     05 40 17.5  +0.9
       baz=290
K40A   Colesburg         125.93  37  P        PKiKP     05 40 17.2   0.0
       baz=306
L40A   Anamosa           126.25  38  P        PKPdf     05 40 17.6  +0.2
       baz=305
TUL1   Leonard           126.33  47 ePKPdf    PKiKP     05 40 18.2   0.0
TUL1   Leonard           126.33  47  P        PKiKP     05 40 19.2  +1.0
       baz=297
JFWS   Jewell Farm       126.34  36  PFAKE              05 40 30.0  +12
JFWS                                 LR       LR
       comp=Z,591nm,19.0s
POLO   Lamas de Olo      126.39 321 ePKPdf    PKiKP     05 40 19.4  +1.1
SCHQ   Schefferville     126.46  12  PKP      PKPdf     05 40 17.6  +0.2
       comp=Z,3.3nm,0.9s,baz=245,slow=13,SNR=3.5
MTE    Manteigas         126.77 320 ePKPdf    PKiKP     05 40 19.9  +0.9
PCBR   Castelo Branco    127.03 320 ePKPdf    PKiKP     05 40 20.6  +1.1
PMRV   Marv??o           127.20 319 ePKPdf    PKiKP     05 40 21.0  +1.2
HHAR   Hobbs             127.49  45 ePKPdf    PKiKP     05 40 20.6  +0.1
PMTG   Montargil         127.94 319 ePKPdf    PKiKP     05 40 22.3  +1.0
W39A   Magazine          128.11  46 ePKPdf    PKiKP     05 40 22.6  +0.8
W39A   Magazine          128.11  46  P        PKiKP     05 40 22.5  +0.8
       baz=298
P42A   Winchester        128.20  40  P        PKiKP     05 40 22.9  +1.1
       baz=304
TOA0   Torodi Ar. Sit    128.21 284 ePKPdf    PKPdf     05 40 21.1  -0.8
TOA0                                ePKPdf    PKiKP     05 40 22.3  -0.2
TORD   Torodi Ar. Bea    128.21 284  PKP      PKPdf     05 40 21.9  +0.1
       comp=Z,5.8nm,0.9s,baz=112,slow=2.9,SNR=26
TOA1   Torodi Ar. Sit    128.21 284 ePKPdf    PKPdf     05 40 21.9  +0.1
U40A   Yellville         128.22  45  P        PKiKP     05 40 22.3  +0.4
       baz=300
R41A   Rosebud           128.23  42  P        PKiKP     05 40 22.5  +0.6
       baz=302
GLMI   Grayling          128.25  31  PFAKE              05 40 30.0  +8.2
GLMI                                 LR       LR
       comp=Z,483nm,20.0s
HDIL   Hopedale          128.30  38  PFAKE              05 40 30.0  +8.0
HDIL                                 LR       LR
       comp=Z,505nm,21.0s
S41A   Jillco Farms,     128.36  43  P        PKiKP     05 40 22.9  +0.7
       baz=302
CCM    Cathedral Cave    128.45  42 ePKPdf    PKiKP     05 40 23.1  +0.8
CCM    Cathedral Cave    128.45  42 ePKIKP    PKiKP     05 40 23.1  +0.8
CCM    Cathedral Cave    128.45  42  P        PKiKP     05 40 23.2  +0.8
       baz=302
Q42A   Golden Eagle      128.45  41  P        PKiKP     05 40 23.1  +0.8
       baz=304
MIAR   Mount Ida         128.57  47 ePKPdf    PKiKP     05 40 23.5  +0.8
MIAR                                 LR       LR
       comp=Z,845nm,20.0s
MIAR   Mount Ida         128.57  47  P        PKiKP     05 40 23.5  +0.8
       baz=298
T41A   Mountain View     128.63  43  P        PKiKP     05 40 22.6  -0.2
       baz=301
CHGQ   Chibougamau       128.76  20  P        PKiKP     05 40 22.5  -0.1
       baz=328
U41A   Viola             128.88  44  P        PKiKP     05 40 23.5  +0.2
       baz=301
S42A   Caledonia         128.90  42  P        PKiKP     05 40 23.6  +0.3
       baz=303
Q43A   New Douglas       128.97  40  P        PKiKP     05 40 24.4  +1.0
       baz=305
NATX   Nacogdoches       128.98  51  PFAKE              05 40 40.0  +16
NATX                                 LR       LR
       comp=Z,535nm,19.0s
FVM    French Village    129.03  42 ePKPdf    PKiKP     05 40 23.4  -0.2
FVM    French Village    129.03  42 ePKIKP    PKiKP     05 40 23.4  -0.2
T42A   Van Buren         129.09  43 ePKPdf    PKiKP     05 40 24.4  +0.7
T42A   Van Buren         129.09  43  P        PKiKP     05 40 24.3  +0.7
       baz=302
P44A   Sand Creek, Wi    129.36  39  P        PKiKP     05 40 24.9  +0.7
       baz=306
X41A   Kaden, Bauxite    129.36  47  P        PKiKP     05 40 25.4  +1.1
       baz=299
T43A   Greenville        129.61  42  P        PKiKP     05 40 24.5  -0.1
       baz=303
Q45A   Warren Harvey,    129.99  39  P        PKiKP     05 40 26.5  +1.1
       baz=306
OLIL   Olney             130.12  39 ePKPdf    PKiKP     05 40 26.7  +1.1
L48A   N Adams           130.29  34  P        PKiKP     05 40 26.8  +0.8
       baz=312
AAM    Ann Arbor         130.48  33  PFAKE              05 40 40.0  +14
AAM                                  LR       LR
       comp=Z,573nm,22.0s
LATQ   La Tuque          131.47  21  P        PKiKP     05 40 29.0  +0.9
       baz=329
U47A   Clarksville       131.97  41  P        PKiKP     05 40 29.9  +0.5
       baz=305
ACSO   Alum Creek Sta    132.25  35  PFAKE              05 40 40.0  +10
ACSO                                 LR       LR
       comp=Z,674nm,22.0s
U48A   Cassie Pea, Po    132.42  41  P        PKiKP     05 40 31.0  +0.6
       baz=306
W47A   Westpoint         132.43  43  P        PKiKP     05 40 30.8  +0.3
       baz=304
PLCA   Paso Flores       132.51 158 ePKPdf    PKiKP     05 40 32.2  +1.6
U49A   Red Boiling Sp    132.91  40  P        PKiKP     05 40 31.4   0.0
       baz=307
LONY   Lake Ozonia       133.09  24  PFAKE              05 40 40.0  +8.5
LONY                                 LR       LR
       comp=Z,620nm,19.0s
U50A   Jamestown         133.57  40  P        PKiKP     05 40 32.7  -0.1
       baz=308
LRAL   Lakeview Retre    134.06  45 ePKPdf    PKiKP     05 40 33.2  -0.5
LRAL   Lakeview Retre    134.06  45  P        PKiKP     05 40 33.5  -0.3
       baz=303
Z49A   Columbiana        134.30  45  P        PKiKP     05 40 33.8  -0.5
       baz=304
W51A   Cleveland         134.38  41  P        PKiKP     05 40 35.0  +0.6
       baz=307
BINY   Binghamton        134.42  27  PFAKE              05 40 50.0  +16
BINY                                 LR       LR
       comp=Z,550nm,20.0s
149A   Jones             134.44  45  P        PKiKP     05 40 35.0  +0.4
       baz=303
PKME   Peaks-Kenny Pk    134.51  19  PFAKE              05 40 50.0  +16
PKME                                 LR       LR
       comp=Z,567nm,20.0s
Z50A   Ashland           134.69  44 ePKPdf    PKiKP     05 40 34.7  -0.4
BRAL   Brewton           135.00  47  PFAKE              05 40 50.0  +14
BRAL                                 LR       LR
       comp=Z,567nm,19.0s
KIC    Kosan Boka        135.07 276 eP        PKPpre    05 40 27.2
       comp=Z,55nm,1.3s
DBIC   Dimbokro          135.17 276  PKhKP    PKPpre    05 40 27.6
       comp=Z,3.8nm,0.6s,baz=347,slow=1.6,SNR=7.9
DBIC                                 PKP      PKiKP     05 40 36.1  -0.4
       comp=Z,7.1nm,0.8s,baz=49,slow=3.6,SNR=6.9
DBIC                                 PKP2ab             05 55 54.4
       comp=Z,3.3nm,0.8s,baz=138,slow=5.6,SNR=3.2
TIC    Toumodi           135.34 276 eP        PKPpre    05 40 27.9
LIC    Lamto             135.36 276 eP        PKPpre    05 40 28.8
       comp=Z,32nm,0.9s
Y52A   Lilburn           135.61  42  P        PKiKP     05 40 38.3  +1.3
       baz=307
Z52A   Williamson        135.77  43  P        PKiKP     05 40 38.0  +0.7
       baz=306
BLA    Blacksburg        135.77  36  PFAKE              05 40 50.0  +13
BLA                                  LR       LR
       comp=Z,505nm,21.0s
CCIG   Comitan           136.25  70 ePKPdf    PKiKP     05 40 38.8  -0.1
GOGA   Godfrey           136.28  42  PFAKE              05 40 50.0  +12
GOGA                                 LR       LR
       comp=Z,620nm,20.0s
CBN    Corbin Frederi    136.77  32  PFAKE              05 40 50.0  +11
CBN                                  LR       LR
       comp=Z,688nm,20.0s
CNNC   Cliffs of the     138.61  36  PFAKE              05 40 50.0  +7.0
CNNC                                 LR       LR
       comp=Z,668nm,20.0s
NHSC   New Hope          138.63  40  PFAKE              05 40 50.0  +6.9
NHSC                                 LR       LR
       comp=Z,632nm,21.0s
GO03   Copiap            143.74 148 ePKPdf    PKPdf     05 40 49.6  -0.8
JTS    JuntasAbangare    144.27  77 ePKPdf    PKPdf     05 40 52.4  +0.8
JTS                                  LR       LR
       comp=Z,382nm,21.0s
JTS    JuntasAbangare    144.27  77 ePKIKP    PKPdf     05 40 52.4  +0.8
JTS                                  MLR      MLR
       comp=Z,382nm,21.0s
HDC    Heredia           145.13  77 ePKPbc    PKPdf     05 40 55.0  +1.7
GO02   Mina Guanaco      146.02 147 ePKPdf    PKPab     05 40 57.1  +1.1
LVC    Limon Verde       148.40 145  PFAKE              05 41 10.0  +4.5
LVC                                  LR       LR
       comp=Z,493nm,20.0s
MTDJ   Mount Denham      148.81  59  PFAKE              05 41 10.0  +3.0
MTDJ                                 LR       LR
       comp=Z,477nm,20.0s
NNA    Nana              149.20 119 ePKPbc    PKiKP     05 41 05.0  -0.4
NNA                                  LR       LR
       comp=Z,250nm,20.0s
NNA    Nana              149.20 119c iPKP2    PKiKP     05 41 06.0  +0.6
PB01   IPOC Station P    149.25 142 ePKPdf    PKPdf     05 41 02.1  +2.2
BCIP   Isla Barro Col    149.43  77  PFAKE              05 41 10.0  +0.5
BCIP                                 LR       LR
       comp=Z,543nm,20.0s
CPUP   Villa Florida     149.94 166 ePKPdf    PKPdf     05 41 02.4  +1.6
CPUP   Villa Florida     149.94 166 ePKIKP    PKPdf     05 41 02.4  +1.6
CPUP   Villa Florida     149.94 166  PKPbc    PKiKP     05 41 06.6  +0.1
       comp=Z,15nm,0.6s,baz=173,slow=1.3,SNR=58
GTBY   Guantanamo Bay150.03  54      PFAKE              05 41 10.0  -1.7
GTBY                                 LR       LR
       comp=Z,472nm,22.0s
PB11   IPOC Station P    150.09 140 ePKPdf    PKPdf     05 41 03.1  +1.8
MNMC   Minye Minye       150.58 139 ePKPdf    PKPdf     05 41 03.9  +1.6
TUMC   Tumaco            150.98  92 eP        PKPab     05 41 12.8  -3.2
TUMC   Tumaco            150.98  92 eP        PKPab     05 41 12.8  -3.2
OTAV   Otavalo           151.14  95 ePKPdf    PKPdf     05 41 05.9  +2.3
OTAV                                 LR       LR
       comp=Z,291nm,20.0s
OTAV   Otavalo           151.14  95 eP        PKPpre    05 40 54.5
OTAV   Otavalo           151.14  95 ePKIKP    PKPdf     05 41 05.9  +2.3
OTAV                                 MLR      MLR
       comp=Z,291nm,20.0s
OTAV   Otavalo           151.14  95 eP        PKPpre    05 40 54.5
SACV   Santiago Islan    151.65 296  PFAKE              05 41 20.0  +1.4
SACV                                 LR       LR
       comp=Z,356nm,21.0s
CMBC   Cumbal            151.83  94 eP        PKPdf     05 41 05.8  +1.3
CMBC   Cumbal            151.83  94 eP        PKPdf     05 41 05.8  +1.3
CRUC   La Cruz           152.74  92 eP        PKPbc     05 41 13.0  +0.1
CRUC   La Cruz           152.74  92 eP        PKPbc     05 41 13.0  +0.1
POPC   Popayan, Colom    153.06  90 eP        PKPpre    05 40 52.5
POPC   Popayan, Colom    153.06  90 eP        PKPpre    05 40 52.5
YOTC   Yotoco, Valle     153.39  87 eP        PKPdf     05 41 03.1  -3.3
YOTC   Yotoco, Valle     153.39  87 eP        PKPdf     05 41 03.1  -3.3
LPAZ   La Paz            153.58 137 ePKPdf    PKPdf     05 41 08.9  +1.6
LPAZ                                ePKPbc    pPKPdf    05 41 16.2  -1.1
LPAZ                                 PKPab    pPKPbc    05 41 25.3  +0.2
LPAZ   La Paz            153.58 137  PKP      PKPdf     05 41 08.6  +1.3
       comp=Z,2.7nm,0.9s,baz=214,slow=2.4,SNR=8.6
LPAZ                                 PKPbc    pPKPdf    05 41 16.3  -1.1
       comp=Z,7.9nm,0.8s,baz=257,slow=2.9,SNR=22
LPAZ                                 PKPab    pPKPbc    05 41 25.3  +0.2
       comp=Z,11nm,0.8s,baz=113,slow=1.8,SNR=10
ANIL   Santa Ana         154.32  86 eP        PKPdf     05 41 08.7  +0.7
ANIL   Santa Ana         154.32  86 eP        PKPdf     05 41 08.7  +0.7
RREF   El Recreo         154.35  85 eP        PKPdf     05 41 11.5  +3.1
```

RREF	El Recreo	154.35	85	*e*P	PKPdf	05 41 11.5	+3.1
ZARC	Zaragoza, Cauc	154.56	79	*e*P	PKPpre	05 41 01.1	
ZARC	Zaragoza, Cauc	154.56	79	*e*P	PKPpre	05 41 01.1	
BRRC	Barranca, Sant	155.74	79	*e*P	PKPdf	05 41 16.5	+7.0
BRRC	Barranca, Sant	155.74	79	*e*P	PKPdf	05 41 16.5	+7.0
OCAC	Ocana	155.94	76	*e*P	PKPdf	05 41 12.4	+2.5
OCAC	Ocana	155.94	76	*e*P	PKPdf	05 41 12.4	+2.5
CHIC	Chingaza	155.97	85	*e*P	PKPdf	05 41 11.2	+0.8
CHIC	Chingaza	155.97	85	*e*P	PKPdf	05 41 11.2	+0.8
RUSC	La Rusia	156.52	82	*e*P	PKPdf	05 41 11.8	+0.7
RUSC	La Rusia	156.52	82	*e*P	PKPdf	05 41 11.8	+0.7
PAMC	Pamplona, Colo	156.70	78	*e*P	PKPpre	05 41 03.8	
PAMC	Pamplona, Colo	156.70	78	*e*P	PKPpre	05 41 03.8	
SDV	Santo Domingo	158.38	73	*e*PKPdf	PKPdf	05 41 13.7	+0.6
SDV	Santo Domingo	158.38	73	*e*P	PKPdf	05 41 13.1	-0.1
SDV	Santo Domingo	158.38	73	*e*P	PKPdf	05 41 13.1	-0.1
BDFB	Brasilia	161.42	185	*e*PKPdf	PKPdf	05 41 16.7	+0.3
BDFB				*e*PKPdf	PKPdf	05 41 17.3	+0.9
BDFB				*e*PKPab	PKPab	05 41 59.5	-0.9
BDFB	Brasilia	161.42	185	*e*PKIKP	PKPdf	05 41 16.7	+0.3
BDFB				*e*		05 41 59.5	
BDFB	Brasilia	161.42	185	PKP	PKPdf	05 41 17.3	+0.9
	comp=Z,8.1nm,1.0s,baz=43,slow=7.7,SNR=8.6						
BDFB				PKPab	PKPab	05 41 59.5	-0.9
	comp=Z,6.8nm,1.0s,baz=131,slow=3.9,SNR=4.9						
PTGA	Pitinga	169.10	110	*e*PKPdf	PKPdf	05 41 23.0	+0.2

ISCJB ***13*** *05:33:16.8±0.6, 50°.39N±0°.03×18°.82E±0°.03, h0km, Error ellipse: s-maj=4.5km s-min=2.4km az=20.4*

IPEC ***13*** *05:33:18.2±0.2, 50°.38N×18°.91E, h0km, ML2.2/3, Error ellipse: s-maj=2.5km s-min=1.1km az=171.0*

PRU ***13*** *05:33:18.5±0.0, 50°.35N×18°.84E, h0km*

VIE ***13*** *05:33:20.1±1.8, 50°.42N×18°.57E, h0km, mb2.2/2, ml2.6/6, Error ellipse: s-maj=15.2km s-min=8.5km az=117.0, Suspected Mining induced.*

ISC 13 05:33:18.1±0.9**, 50°.38N**±0°.04×**18°.87E**±0°.02**, h0km, n30, σ1§29**/52**, 1C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.12	137	*i* Pg	Pg	05 33 20.6	+0.2
CHZP				*e*Sg	Sg	05 33 22.1	+0.1
OJC	Ojcow	0.62	105	*e*Pg	Pg	05 33 29.7	-0.3
OJC				*e*Sg	Sg	05 33 38.4	+0.3
OKC	Ostrava-Krasne	0.71	221	*e*PG	Pg	05 33 32.5	+0.7
OKC				*e*SG	Sb	05 33 42.7	-1.0
	comp=Z,40nm,0.4s						
MORC	Moravsky Berou	1.04	235	*e*PG	Pg	05 33 38.6	+0.5
MORC				*e*SG	Sg	05 33 51.5	-0.2
MORC	Moravsky Berou	1.04	235	*e*Pg	Pg	05 33 38.6	+0.5
	baz=55						
MORC				*e*Sg	Sg	05 33 51.4	-0.2
	57nm,0.4s,baz=55						
LANS	Liptovska Anna	1.29	162	*e*PG	Pg	05 33 42.3	-0.6
LANS				*e*SG	Sb	05 34 00.3	-0.1
NIE	Niedzica	1.34	135	*e*Pg	Pg	05 33 43.0	-0.7
NIE				*e*Sg	Sg	05 34 01.6	+0.6
KRLC	Kraliky	1.37	258	*e*PG	Pg	05 33 43.7	-0.7
KRLC				*e*SG	Sg	05 34 01.9	-0.3
	comp=Z,16nm,0.3s						
DPC	Dobruska-Polom	1.63	270	*e*PG	Pn	05 33 48.2	+0.1
DPC				*e*SG	Sg	05 34 10.8	+0.4
	comp=Z,24nm,0.4s						
KSP	Ksiaz	1.70	287	*e*Pg	Pg	05 33 51.0	+0.3
KSP				*e*Sb	Sn	05 34 11.8	+0.3
KSP				*e*Sg	Sg	05 34 13.7	+0.9
VRAC	Vranov	1.82	235	*e*PN	Pn	05 33 50.9	+0.2
VRAC				*e*SG	Sb	05 34 15.7	+0.1
VRAC	Vranov	1.82	235	*e*Pn	Pn	05 33 50.8	+0.1
	baz=54						
VRAC				*e*Sg	Sb	05 34 15.7	+0.1
	18nm,0.3s,baz=54						
KOLL	Kolacno	1.83	190	*e*SG	Sg	05 34 17.6	+0.8
UPC	Upice	1.83	275	*e*PG	Pg	05 33 53.1	-0.1
UPC				*e*SG	Sb	05 34 16.0	+0.1
	comp=Z,20nm,0.4s						
VYHS	Vyhne	1.89	181	*e*PG	Pn	05 33 50.6	-1.0
VYHS				*e*SG	Sn	05 34 14.9	-1.2
VYHS				*e*LG	Lg	05 34 19.8	
KRUC	Moravsky	2.08	231	*e*PN	Pn	05 33 54.7	+0.5
KRUC				*e*SN	Sb	05 34 22.7	-0.3
KRUC	Moravsky	2.08	231	*e*Pn	Pn	05 33 54.6	+0.4
	baz=50						
KRUC				*e*Sn	Sb	05 34 22.7	-0.3
	11nm,0.5s,baz=50						
TREC	Trest	2.44	245	*e*PG	Pb	05 34 02.5	-0.4
TREC				*e*SG	Sb	05 34 33.9	+0.4
	comp=Z,15nm,0.5s						
KWP	Kalwaria Pacla	2.59	105	*e*PX		05 34 06.7	
PVCC	Panska Ves	2.75	275	*e*SG	Sg	05 34 46.6	+0.2
	comp=Z,26nm,0.3s						
PRU	Pruhonice	2.81	264	*e*SG	Sg	05 34 46.6	-1.6
	comp=Z,8.8nm,0.4s						
CONA	Conrad Observa	3.15	220	Pg	Pg	05 34 17.5	-0.9
	1.2nm,0.5s						
CONA				*e*Sn	Sn	05 34 45.3	-2.0
	2.6nm,0.4s						
CONA				*i* Sg	Sg	05 35 01.4	+2.2
	3.2nm,0.4s						
BRG	Berggiesshubel	3.17	281	PG	Pg	05 34 19.2	+0.3
BRG				SG	Sg	05 34 59.5	-0.6
	8.5nm,0.3s						
KHC	Kasperske Hory	3.65	252	*e*PN	Pn	05 34 16.7	+0.8
KHC				*e*x	x	05 34 23.2	
KHC				*e*SG	Sb	05 35 11.7	+3.4
	comp=Z,10nm,0.4s						
CLL	Collm	3.83	286	*e*Sg	Sg	05 35 21.0	-0.1
	comp=Z,10.0nm,0.7s						
ARSA	Arzberg	3.83	216	Sg	Sg	05 35 25.0	+3.9
	comp=Z,0.8nm,0.3s						
MOA	Molln	3.94	232	Pg	Pg	05 34 31.6	-2.0
	comp=Z,1.1nm,0.4s						
MOA				Sg	Sg	05 35 21.7	-3.0
	comp=Z,7.5nm,0.7s						
NKC	Novy Kostel	4.12	270	*e*SG	Sg	05 35 28.2	-2.1
	comp=Z,7.8nm,0.5s						
KBA	Koelnbreinsper	4.92	230	Sg	Sg	05 35 59.9	+3.7
	comp=Z,2.3nm,0.5s						
ARR	Arges	6.34	140	⇑*i*P	Pb	05 35 10.5	+1.2

ANF ***13*** *05:38:00.8±0.3, 38°.04N×118°.06W, h6km±2km, ML3.7/14, Error ellipse: s-maj=2.2km s-min=1.3km az=145.0*

REN ***13*** *05:38:00.9, 38°.02N×118°.06W, h8km, ML3.6, MW3.6(SLM)*

NEIC ***13*** *05:38:00.9±0.0, 38°.02N×118°.06W, h8km, ML3.6(REN), MW3.6(SLM), After REN.*

NEIC Felt at Tonopah. Also felt at Bishop, Long Barn and Sloughhouse, California.

ISC 13 05:38:00.6±1.1**, 38°.03N**±0°.02×**118°.04W**±0°.02**, h3km**±10km**, n87, σ1§13**/115**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NV11	Mina Array Sit	0.42	348	*e*Pg	Pg	05 38 09.1	+0.5
NV11				*e*Sg	Sg	05 38 14.5	+0.4
NV01	Mina Array Sit	0.45	333	*e*Pg	Pg	05 38 09.1	-0.2
NV01				*e*Sg	Sg	05 38 15.0	-0.3
RYN	Ryan	0.71	328	*e*Pg	Pg	05 38 14.4	+0.2
RYN				*e*Sg	Sg	05 38 23.9	+0.4
MLAC	Mammoth, Mammo	0.74	238	P	Pg	05 38 15.1	+0.2
	baz=57						
MLAC				S	Sg	05 38 25.4	+1.0
	baz=57						
OMMB	Old Mammoth Mi	0.86	242	*e*Pg	Pg	05 38 17.1	-0.1
OMMB				*e*Sg	Sg	05 38 28.3	-0.1
MDPB	Devils Postpil	0.91	245	*e*Pg	Pg	05 38 17.9	-0.1
MDPB				*e*Sg	Sg	05 38 29.6	-0.3
TIN	Tinemaha, Big	0.98	189	P	Pg	05 38 19.9	+0.5
	baz=8.1						
TIN				S	Sb	05 38 33.6	-0.1
	baz=8.1						
KVN	Kaiserville	1.02	357	*e*Pg	Pg	05 38 20.2	-0.1
KVN				*e*Sg	Sg	05 38 34.2	+0.6
GRAC	Grapevine Rang	1.16	152	P	Pn	05 38 23.6	-0.3
	baz=332						
GRAC				S	Sn	05 38 40.2	-0.1
	baz=332						
WAKR	Walker	1.20	294	*e*Pg	Pg	05 38 23.2	-0.4
WAKR				*e*Sg	Sg	05 38 39.2	0.0
YERR	Yerington	1.34	316	*e*Pn	Pn	05 38 25.7	-0.9
YERR				*e*Sn	Sb	05 38 43.5	-0.8
CWC	Cottonwood Cre	1.58	181	P	Pb	05 38 30.1	-0.5
	baz=0.7						
CWC				S	Sb	05 38 51.1	0.0
	baz=0.7						
PNTR	Pine Nut	1.62	311	*e*Pn	Pn	05 38 30.1	-0.2
PNTR				*e*Sn	Sb	05 38 51.9	-0.4
DAC	Darwin (Calif)	1.78	168	*e*Pn	Pn	05 38 32.4	-0.1
DAC				*e*Sn	Sb	05 38 56.2	-0.6
TPNV	Topopah Spring	1.79	126	*e*Pn	Pn	05 38 32.6	0.0
TPNV				*e*Sn	Sg	05 38 59.6	+1.7
TPNV	Topopah Spring	1.79	126	P	Pn	05 38 32.6	0.0
	baz=307						
VCNR	Virginia City	1.79	316	*e*Pn	Pn	05 38 32.8	+0.2
VCNR				*e*Sn	Sb	05 38 57.4	+0.3
CMB	Columbia Colle	1.85	271	*e*Pn	Pn	05 38 32.7	-0.7
CMB				*e*Sn	Sn	05 38 56.5	-0.9
RUBR	Rubicon Trail	1.95	302	*e*Pn	Pb	05 38 36.8	-0.2
RUBR				*e*Sn	Sb	05 39 01.4	-0.4
R11A	Troy Canyon, C	1.96	80	*e*Pn	Pn	05 38 34.6	-0.4
R11A				*e*Sn	Sn	05 39 00.6	+0.3
R11A	Troy Canyon, C	1.96	80	Pb	Pb	05 38 37.1	0.0
	baz=261						
R11A				Sb	Sg	05 39 04.1	+0.5
	baz=261						
PAHR	Pah Rah Range	1.98	328	*e*Pn	Pn	05 38 34.9	-0.4
PAHR				*e*Sn	Sb	05 39 01.2	-1.4
VOG	Valley Oaks Go	2.01	213	Pb	Pb	05 38 38.0	+0.2
	baz=32						
VOG				Sb	Sg	05 39 04.6	-0.6
	baz=32						
MPMC	Manual Prospec	2.01	167	P	Pn	05 38 35.8	+0.1
	baz=347						
MPMC				Sb	Sg	05 39 05.7	+0.5
	baz=347						
VES	Vestal, Richgr	2.33	201	Pb	Pb	05 38 44.0	+0.6
	baz=20						
VES				Sb	Sg	05 39 15.0	-0.6
	baz=20						
ISA	Isabella, Lake	2.38	189	*e*Pn	Pn	05 38 41.5	+0.8
ISA				*e*Sn	Sn	05 39 10.9	+0.4
ISA	Isabella, Lake	2.38	189	Pb	Pb	05 38 44.8	+0.5
	baz=8.0						
ISA				Sb	Sg	05 39 16.2	-1.0
	baz=8.0						
AFDM	Forest Hills D	2.48	293	*e*Pn	Pn	05 38 42.4	+0.4
AFDM				*e*Sn	Sn	05 39 13.1	+0.3
LRMC	Laurel Mtn Rad	2.56	173	P	Pn	05 38 43.5	+0.4
	baz=353						
BEKR	Beckworth	2.58	316	*e*Pn	Pn	05 38 44.0	+0.5
SHPR	Sheep Range	2.75	123	*e*Pn	Pn	05 38 46.3	+0.4
GSC	Goldstone, Bar	2.89	160	*e*Pn	Pn	05 38 47.8	0.0
GSC	Goldstone, Bar	2.89	160	P	Pn	05 38 48.0	+0.2
	baz=340						
PAGB	Antelope Grade	2.90	218	*e*Pn	Pn	05 38 47.9	+0.2
ARVC	Arvin	2.96	193	Pb	Pb	05 38 54.7	+0.6
	baz=12						
ARVC				Sb	Sg	05 39 34.1	-1.7
	baz=12						
SAO	San Andreas Ge	2.99	246	*e*Pn	Pn	05 38 49.5	+0.6
TUQ	Turquoise Moun	3.09	146	P	Pn	05 38 50.5	0.0
	baz=327						
ORV	Oroville	3.10	301	*e*Pn	Pn	05 38 51.2	+0.7
PSUT	Pine Spring	3.33	80	*e*Pn	Pn	05 38 54.9	+1.0
OSI	Osito Audit: C	3.45	189	*e*Pn	Pn	05 38 56.7	+1.3
ELK	Elko	3.48	38	*e*Pn	Pn	05 38 56.0	+0.1
CCUT	Cedar City	3.74	96	*e*Pn	Pn	05 38 59.8	+0.3
LDFC	Landfair	3.77	140	*e*Pn	Pn	05 38 59.8	-0.1
MWC	Mount Wilson	3.79	180	*e*Pn	Pn	05 38 59.8	-0.4
GDXM	Geysers	3.81	283	*e*Pn	Pn	05 39 00.5	+0.1
LCMT	Little Creek M	3.94	103	*e*Pn	Pn	05 39 02.2	0.0
SZCU	Shurtz Canyon	3.95	95	*e*Pn	Pn	05 39 02.8	+0.4
HOPS	Hopland Field	4.06	285	*e*Pn	Pn	05 39 04.0	+0.3
MOD	Modoc Plateau	4.25	337	*e*Pn	Pn	05 39 06.6	+0.2
KNB	Kanab	4.27	102	*e*Pn	Pn	05 39 07.2	+0.5
WDC	Whiskeytown Da	4.32	308	*e*Pn	Pn	05 39 07.6	+0.3
WVOR	Wild Horse Val	4.43	354	*e*Pn	Pn	05 39 10.5	+1.6
W13A	Hualapai Mount	4.44	130	*e*Pn	Pn	05 39 10.0	+0.9
PKCU	Pink Cliffs	4.58	96	*e*Pn	Pn	05 39 10.4	-0.8
PFO	Pinyon Flats O	4.59	163	*e*Pn	Pn	05 39 10.9	-0.2
XPFO	Pion Flat	4.59	163	*e*Pn	Pn	05 39 10.9	-0.2
DUG	Dugway, Tooele	4.61	60	*e*Pn	Pn	05 39 14.2	+2.9
MTPU	Mount Pierson	4.62	88	*e*Pn	Pn	05 39 13.3	+1.6
MSU	Marysvale	4.64	82	*e*Pn	Pn	05 39 13.2	+1.3
BGU	Big Grassy Mou	4.84	52	*e*Pn	Pn	05 39 16.9	+2.4
U15A	North Rim	4.86	107	*e*Pn	Pn	05 39 15.7	+0.8
NLU	North Lily Min	5.03	66	*e*Pn	Pn	05 39 18.5	+1.3
Y12C	Blythe	5.13	145	*e*Pn	Pn	05 39 18.9	+0.5
YBH	Yreka Blue Hor	5.16	317	*e*Pn	Pn	05 39 18.4	-0.5
J08A	Circle Bar Ran	5.34	357	*e*Pn	Pn	05 39 21.8	+0.5
MPU	Maple Canyon	5.37	66	*e*Pn	Pn	05 39 22.0	+0.2
SPUT	South Promonto	5.42	51	*e*Pn	Pn	05 39 24.6	+2.1
Q16A	Castle Valley	5.46	78	*e*Pn	Pn	05 39 21.5	-1.7
HVU	Hansel Valley	5.52	46	*e*Pn	Pn	05 39 25.7	+1.9
CTU	Camp Tracy	5.55	59	*e*Pn	Pn	05 39 24.1	-0.2
GLA	Glamis	5.61	151	*e*Pn	Pn	05 39 25.4	+0.3
Y14A	Wickenburg	5.77	133	*e*Pn	Pn	05 39 28.8	+1.6
WUAZ	Wupatki	5.91	113	*e*Pn	Pn	05 39 31.4	+2.1
HUMO	Hull Mountain	5.92	322	*e*Pn	Pn	05 39 30.2	+0.9
SRU	San Rafael Swe	5.99	77	*e*Pn	Pn	05 39 31.4	+1.0
I07A	Izee	6.15	350	*e*Pn	Pn	05 39 33.0	+0.4
PINE	Pine Mountain	6.17	340	*e*Pn	Pn	05 39 33.3	+0.5
HLID	Hailey	6.18	25	*e*Pn	Pn	05 39 35.5	+2.6
113A	Mohawk Valley,	6.30	145	*e*Pn	Pn	05 39 34.4	0.0
X16A	Lo Mia Camp, P	6.43	122	*e*Pn	Pn	05 39 37.1	+0.6
PV09	Paradox Valley	7.03	83	*e*Pn	Pn	05 39 45.0	+0.3
PV17	East Wray Mesa	7.16	85	*e*Sg	Sg	05 41 46.9	-3.7
PV11	David Mesa, Pa	7.23	85	*e*Pn	Pn	05 39 52.0	+4.5
PV03	Paradox Valley	7.25	85	*e*Sg	Sg	05 41 49.4	-4.0
PV12	Saucer Basin,	7.28	85	*e*Pn	Pn	05 39 51.5	+3.3
REDW	Red Top Meadow	7.63	43	*e*Pn	Pn	05 39 51.6	-1.4
FXWY	Fox Creek	7.72	41	*e*Pn	Pn	05 39 53.1	-1.1

SJA 13 05:40:03.6±0.6**, 31°.26S×68°.71W, h100km**±2km**, ML3.5, MW3.5, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.21	109	*e*P	Pn	05 40 18.5	+0.6
RTLL				*e*S	Sn	05 40 29.8	+1.1
RTLL				IAML		05 40 30.3	
	comp=Z,2μm,0.3s						
ZON	Zonda	0.28	175	IAML		05 40 19.3	
	comp=Z,2μm,0.2s						
SJA	San Juan	0.29	154	*e*P	Pn	05 40 19.2	+0.9
SJA				IAML		05 40 19.4	
	comp=Z,1μm,0.2s						
SJA				*e*S	Sn	05 40 30.5	+1.2
CFA	Coronel Fontan	0.53	130	*e*P	Pn	05 40 20.3	+0.6
CFA				*e*S	Sn	05 40 32.6	+0.8
RTCV	Cerro Valdivia	0.62	166	*e*P	Pn	05 40 21.2	+0.8
RTCV				*e*S	Sn	05 40 33.6	+0.6
ACCO	Cerro Coronel	0.74	335	*e*P	Pn	05 40 23.1	+1.3
AUSP	Uspallata	1.12	211	*e*P	Pn	05 40 27.0	+1.3
AUSP				*e*S	Sn	05 40 44.3	+1.9
AROD	Rodeo	1.27	329	*e*P	Pn	05 40 28.9	+1.4
AROD				*e*S	Sn	05 40 47.5	+1.9
ASAL	Salagasta	1.33	185	*e*P	Pn	05 40 29.1	+1.1
ASAL				*e*S	Sn	05 40 48.0	+1.7
ARCO	CERRO ARCO	1.59	187	*e*P	Pn	05 40 32.3	+1.2
ARCO				IAML		05 40 32.4	
	comp=Z,479nm,0.3s						
ACAN	Cantantal	1.64	128	*e*P	Pn	05 40 32.7	+1.0
AGUA	GUANDACOL	1.78	6	*e*P	Pn	05 40 34.8	+1.3
AGUA				*e*S	Sn	05 40 57.6	+1.4
AAGR	Agrelo	1.82	183	*e*P	Pn	05 40 35.1	+1.1
AAGR				*e*S	Sn	05 40 58.6	+1.4

IDC 13 05:57:30.0±2.0**, 7°.91S×129°.73E, h0km, mb3.3**/1**, mb1 3.5**/3**, mb1mx3.3**/36**, mbtmp3.3**/3**, ML3.4**/2**, Error ellipse: s-maj=101.7km s-min=31.7km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.77	160	Pn	Pn	06 00 32.4	-0.6
	0.2nm,0.3s,baz=339,slow=13,SNR=13						
WRA				Sn	Sn	06 02 48.2	-7.9
	0.2nm,0.3s,baz=329,slow=22,SNR=6.8						
ASAR	Alice Springs	16.17	166	Pn	Pn	06 01 19.6	+0.7
	0.2nm,0.3s,baz=344,slow=8.6,SNR=6.1						
ASAR				Sn	Sn	06 04 11.0	-8.1
	0.1nm,0.3s,baz=352,slow=26,SNR=5.5						
MKAR	Makanchi Array	68.83	327	P	P	06 08 36.4	0.0
	0.1nm,0.4s,baz=126,slow=7.3,SNR=2.6						

IDC 13 05:59:59.6±1.6**, 2°.91S×130°.24E, h0km, mb3.5**/2**, mb1 3.7**/4**, mb1mx3.4**/38**, mbtmp3.5**/4**, ML3.2**/2**, Error ellipse: s-maj=50.5km s-min=22.7km az=95.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.27	27	Pn	Pn	06 00 38.7	+0.3
	3.2nm,0.3s,baz=248,slow=19,SNR=4.4						
SIJI				Sn	Sn	06 01 07.3	+0.1
	8.3nm,0.3s,baz=219,slow=23,SNR=10						
WRA	Warramunga Arr	17.39	167	P	P	06 04 04.9	-0.4
	0.1nm,0.3s,baz=349,slow=13,SNR=2.9						
ASAR	Alice Springs	20.94	171	P	P	06 04 43.5	-0.6
	2.1nm,0.6s,baz=351,slow=11,SNR=4.0						
MKAR	Makanchi Array	64.98	326	P	P	06 10 41.4	0.0
	0.2nm,0.4s,baz=119,slow=8.1,SNR=4.2						

IDC 13 06:09:04.6±4.3**, 5°.88S×146°.69E, h0km, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.4**/19**, mbtmp3.3**/4**, ML3.1**/1**, Error ellipse: s-maj=109.0km s-min=33.6km az=99.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.43	220	P	P	06 13 22.5	+0.8
	0.1nm,0.3s,baz=45,slow=12,SNR=5.9						
ASAR	Alice Springs	21.54	214	P	P	06 13 55.1	-0.7
	0.2nm,0.5s,baz=54,slow=9.3,SNR=3.3						
CMAR	Chiang Mai Arr	52.92	298	P	P	06 18 21.7	-1.4
	1.3nm,0.5s,baz=98,slow=6.5,SNR=4.6						
MKAR	Makanchi Array	77.21	321	P	P	06 21 01.8	+1.2
	0.3nm,0.8s,baz=94,slow=5.8,SNR=3.5						

MEX 13 06:12:14.4±0.5**, 17°.98N×103°.40W, h15km, MD4.1, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		1.31	335	*e*P	Pn	06 12 34.5	-3.7
EZ5V		1.50	353	*e*P	Pn	06 12 37.5	-3.6
EZ5V				*e*S	Sn	06 12 56.0	-4.6
ZIIG	Zihuatanejo	1.88	101	*e*P	Pn	06 12 43.0	-3.1
URUA	Uruapan	1.91	41	*e*P	Pn	06 12 41.9	-4.7
URUA				*i* S	Sn	06 13 03.5	-7.1
CJM	Chamela	2.17	314	*i* P	Pn	06 12 46.7	-3.3
CJM				*e*S	Sn	06 13 12.1	-4.6
MOIG	Morelia	2.69	51	*e*P	Pn	06 12 55.0	-2.4
MOIG				*e*S	Sn	06 13 25.6	-4.4
ARIG	Puente Sto Nin	2.92	84	*i* P	Pn	06 12 57.4	-3.0
ARIG				*i* S	Sn	06 13 31.4	-3.9
CAIG	El Cayaco	3.13	107	*e*P	Pn	06 13 01.1	-2.2

IDC ***13*** *06:24:46.0±1.1, 3°.02S×130°.16E, h0km, mb3.9/5, mb1 4.2/7, mb1mx3.9/37, mbtmp4.0/7, ML4.1/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/33, Error ellipse: s-maj=35.0km s-min=18.0km az=80.0*

ISCJB ***13*** *06:24:48.9±0.5, 2°.90S±0°.05×129°.93E±0°.04, h25km, mb3.9/5, Error ellipse: s-maj=7.5km s-min=4.8km az=160.6*

DJA ***13*** *06:24:49.1±0.2, 3°S±2°×13°0E±°, h10km, M4.3/6, MLv4.3/6*

ISC 13 06:24:50.1±0.7**, 2°.95S**±0°.05×**130°.05E**±0°.06**, h25km, n22, σ1§20**/25**, mb4.0**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.57	185	P	Pb	06 25 18.1	-0.4
BNDI				S	Sb	06 25 40.2	+2.3
FAKI	Fak Fak	2.20	89	P	Pn	06 25 26.5	+1.4
FAKI				S	Sb	06 25 55.8	-0.2
SIJI	Sorong	2.40	30	Pn	Pn	06 25 27.8	0.0
	25nm,0.3s,baz=224,slow=12,SNR=12						
SIJI				Sn	Sn	06 25 56.2	-0.3
	43nm,0.3s,baz=215,slow=23,SNR=8.7						
SWI	Sorong	2.40	30	P	Pn	06 25 27.8	-0.1
SWI				S	Sn	06 25 57.8	+1.3
NLAI	Namlea	2.96	264	P	Pn	06 25 35.2	-0.3
SANI	Sanana	4.16	282	P	Pn	06 25 50.9	-1.1
RKPI	Ransiki, Papua	4.37	71	P	Pn	06 25 55.5	+0.6
TNTI	Ternate	4.57	324	P	Pn	06 25 56.9	-0.8
SRPI	Serui, Papua	6.28	80	P	Pn	06 26 22.9	+1.7
LUWI	Luwuk	7.52	284	P	Pn	06 26 37.9	-0.3
APSI	Ampana	8.64	283	P	Pn	06 26 53.1	-0.5
MRSI	Marisa	8.79	293	P	Pn	06 26 55.2	-0.5
SOEI	Soe	8.87	220	P	Pn	06 26 58.2	+1.3
BATI	Baumata	9.60	221	LR	LR	06 30 43.7	
	comp=Z,346nm,19.7s,baz=116,slow=37						
BNSI	Bone	10.03	261	P	Pn	06 27 12.9	+0.2
MPSI	Mapaga	10.66	288	P	Pn	06 27 21.5	+0.1
WRA	Warramunga Arr	17.40	166	P	Pn	06 28 48.1	-3.3
	0.8nm,0.3s,baz=349,slow=12,SNR=18						
ASAR	Alice Springs	20.93	170	P	P	06 29 29.9	-1.2
	7.6nm,0.5s,baz=346,slow=9.7,SNR=59						
STKA	Stephens Creek	30.76	161	P	P	06 31 02.5	-1.1
	0.9nm,0.3s,baz=332,slow=11,SNR=3.2						
CMAR	Chiang Mai Arr	37.29	306	P	P	06 32 01.7	+1.2
	0.8nm,0.3s,baz=143,slow=8.3,SNR=6.3						
SONM	Songino Array	54.65	341	P	P	06 34 17.0	0.0
	0.4nm,0.9s,baz=148,slow=8.5,SNR=3.1						
MKAR	Makanchi Array	64.91	326	P	P	06 35 27.7	+0.2
	0.4nm,0.4s,baz=112,slow=8.2,SNR=16						

BEO ***13*** *06:26:32.9±1.0, 40°.33N×20°.78E, h5km, ML3.0/4*

ATH ***13*** *06:26:39.8, 40°.93N×20°.76E, h19km±2km, ML2.5/2, Error ellipse: s-maj=3.3km s-min=1.4km az=226.0*

SKO ***13*** *06:26:40.2, 40°.92N×20°.74E, h15km, M1.8, ML2.2*

THE ***13*** *06:26:40.2, 40°.92N×20°.71E, h0km±3km, ML2.3/5, Error ellipse: s-maj=3.0km s-min=0.7km az=290.0*

TIR ***13*** *06:26:41.0, 40°.95N×20°.68E, h5km, Md2.7/6*

ISC 13 06:26:40.6±1.1**, 40°.90N**±0°.02×**20°.73E**±0°.02**, h4km**±10km**, n43, σ1§41**/69**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.22	14	*i* Pg	Pg	06 26 44.7	-0.1
OHR				*i* Sg	Sg	06 26 48.6	+0.9
OHR				*e*Lg	Lg	06 26 49.0	
	comp=E,397nm,0.4s						
OHR				*e*Lg	Lg	06 26 49.1	
	comp=N,494nm,0.2s						
BIA	Bitola	0.47	75	*i* Pg	Pg	06 26 49.7	+0.2
BIA				*i* Sg	Sb	06 26 57.5	-1.2
BIA				*e*Lg	Lg	06 26 57.6	
	comp=N,164nm,0.2s						
BIA				*e*Lg	Lg	06 26 58.8	
	comp=E,180nm,0.2s						
NEST	Nestorio	0.54	153	P	Pg	06 26 50.7	-0.2
NEST				S	Sg	06 26 59.1	+1.2
NEST				AML	AML	06 27 02.7	
	comp=E,675μm,0.2s						
NEST				AML	AML	06 27 06.0	
	comp=N,773μm,0.2s						
NEST	Nestorio	0.54	153	P	Pg	06 26 50.7	-0.2
NEST				S	Sg	06 26 59.1	+1.2
KRUS	Krusevo	0.61	40	*i* Pg	Pg	06 26 51.6	-0.8
KRUS				*i* Sg	Sb	06 27 00.8	-2.1
KRUS				*e*Lg	Lg	06 27 01.2	
	comp=N,68nm,0.4s						
KRUS				*e*Lg	Lg	06 27 01.5	
	comp=E,120nm,0.2s						
PENT	Pentalofos	0.77	156	P	Pg	06 26 54.7	-0.6
PENT	Pentalofos	0.77	156	P	Pg	06 26 55.2	-0.1
PENT				S	Sb	06 27 07.3	-0.1
TIR	Tirane	0.79	305	*e*Pg	Pg	06 26 55.1	-0.8
TIR				*e*Sg	Sn	06 27 11.5	+0.6
TIR	Tirane	0.79	305	P	Pg	06 26 55.0	-0.8
TIR				S	Sb	06 27 07.2	-0.9
TIR	Tirane	0.79	305	P	Pg	06 26 55.0	-0.8
TIR	Tirane	0.79	305	*i* PG	Pb	06 26 56.0	-0.9
TIR				*i* SG	Sb	06 27 07.0	-1.1
TPE	Tepelena	0.81	223	P	Pg	06 26 55.0	-1.2
TPE	Tepelena	0.81	223	*i* PG	Pg	06 26 56.6	+0.5
TPE				*i* SG	Sn	06 27 11.0	-0.4
PHP	Peshkopia	0.81	345	P	Pg	06 26 54.6	-1.6
PHP				S	Sb	06 27 07.3	-1.5

PHP	Peshkopia	0.81	345	*i* PG	Pg	06 26 55.5	-0.7
PHP				*i* SG	Sb	06 27 07.6	-1.2
KZN	Kozani	0.99	126	P	Pg	06 26 58.6	-0.8
KZN				S	Sb	06 27 13.8	+0.1
KZN				AML	AML	06 27 18.3	
	comp=N,692µm,0.3s						
KZN				AML	AML	06 27 20.3	
	comp=E,826µm,0.4s						
KZN	Kozani	0.99	126	P	Pg	06 26 58.7	-0.8
KZN				S	Sn	06 27 14.8	-1.0
KPRO	Kipourio	1.06	153	P	Pg	06 27 00.5	-0.4
KPRO				S	Sb	06 27 16.1	+0.3
KPRO	Kipourio	1.06	153	P	Pg	06 27 00.9	0.0
KPRO				S	Sn	06 27 17.3	-0.3
SRN	Sarande	1.16	209	P	Pg	06 27 02.1	-0.7
SRN				S	Sn	06 27 19.4	-0.5
SRN	Sarande	1.16	209	*i* PN	Pn	06 27 05.9	+2.3
SRN				*i* SN	Sn	06 27 22.6	+2.7
GRG	Griva	1.27	87	P	Pg	06 27 03.5	-1.4
GRG	Griva	1.27	87	P	Pg	06 27 03.5	-1.4
GRG				S	Sn	06 27 23.2	+0.5
PUK	Puka	1.30	331	*i* PN	Pg	06 27 04.8	-0.8
PUK				*i* SN	Sn	06 27 25.4	+1.8
STIP	Stip	1.35	54	*i* Pn	Pg	06 27 09.6	+3.0
STIP				*i* Sn	Sn	06 27 30.6	+5.8
STIP				*e*Lg	Lg	06 27 30.6	
	comp=E,13nm,0.5s						
STIP				*e*Lg	Lg	06 27 31.2	
	comp=N,10.0nm,0.3s						
VAY	Valandovo	1.45	73	*i* Pg	Pb	06 27 07.3	-0.9
VAY				*i* Sg	Sg	06 27 27.0	-0.3
VAY				*e*Lg	Lg	06 27 27.1	
	comp=N,23nm,0.5s						
VAY				*e*Lg	Lg	06 27 27.4	
	comp=E,11nm,0.4s						
ULC	Ulcinj	1.54	314	*i* Pn	Pn	06 27 08.6	-0.4
BCI	Bajram Curri	1.55	342	*i* PN	Pg	06 27 11.3	+1.0
BCI				*i* SN	Sg	06 27 35.6	+5.2
LIT	Litokhoron	1.56	120	P	Pb	06 27 09.4	-0.7
THL	Klokotos Trika	1.66	143	P	Pn	06 27 10.7	+0.3
THL	Klokotos Trika	1.66	143	P	Pb	06 27 10.9	-0.7
PDG	Podgorica	1.89	325	*e*Pn	Pn	06 27 13.5	-0.1
PDG				*e*Sn	Sg	06 27 42.9	+1.7
BARS	Barje	2.08	23	*e*Pn	Pn	06 27 16.0	-0.3
BARS				*e*Sn	Sg	06 27 48.2	+0.8
AGG	Agios Georgios	2.24	146	P	Pn	06 27 18.1	-0.4
AGG	Agios Georgios	2.24	146	P	Pn	06 27 18.1	-0.4
SELS	Selova	2.34	7	*e*Pn	Pn	06 27 19.1	-0.8
SJES	Sjenica	2.43	347	*e*Pn	Pn	06 27 21.4	+0.2
SJES				*e*Sn	Sg	06 27 57.2	-1.4
IVAS	Ivanjica	2.71	351	*e*Pn	Pn	06 27 25.3	+0.3
ZAPS	Zavoj	2.76	30	*e*Pn	Pn	06 27 24.4	-1.3
BOVS	Bovan	2.83	15	*e*Pn	Pn	06 27 26.2	-0.4
GRUS	Gruza	2.99	360	*e*Pn	Pn	06 27 28.4	-0.4
DIVS	Divibare	3.24	351	*e*Pn	Pn	06 27 31.9	-0.5
TRUS	Trudelj	3.33	356	*e*Pn	Pn	06 27 33.2	-0.3

IDC 13 06:28:31.6±1.2,2°.98S×130°.26E,h0^{km},mb3.7/4, mb1 3.9/6,mb1mx3.7/37,mbtmp3.7/6,ML3.7/2,Error ellipse: s-maj=55.4km s-min=20.3km az=81.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.32	26	Pn	Pn	06 29 10.7	-0.5
	3.3nm,0.3s,baz=221,slow=19,SNR=16						
SIJI				Sn	Sn	06 29 36.1	-4.4
	8.0nm,0.3s,baz=233,slow=20,SNR=3.9						
WRA	Warramunga Arr	17.33	167	P	P	06 32 36.9	+0.3
	0.5nm,0.3s,baz=330,slow=13,SNR=4.2						
ASAR	Alice Springs	20.87	171	P	P	06 33 15.5	+0.1
	2.7nm,0.4s,baz=350,slow=11,SNR=8.6						
ASAR				S	S	06 37 02.6	-6.6
	0.5nm,0.8s,baz=350,slow=20,SNR=2.9						
STKA	Stephens Creek	30.66	161	P	P	06 34 47.1	-0.9
	0.8nm,0.3s,baz=5.2,slow=11,SNR=3.6						
SONM	Songino Array	54.75	341	P	P	06 38 03.4	+0.3
	0.5nm,1.1s,baz=142,slow=7.3,SNR=2.5						
MKAR	Makanchi Array	65.05	326	P	P	06 39 13.9	0.0
	0.3nm,0.6s,baz=113,slow=8.3,SNR=4.5						

IDC 13 06:46:31.5±1.8,7°.83S×130°.43E,h0^{km},mb3.5/1, mb1 3.5/3,mb1mx3.3/28,mbtmp3.3/3,ML3.2/2,Error ellipse: s-maj=78.4km s-min=27.1km az=74.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.62	163	Pn	Pn	06 49 33.5	+0.9
	0.2nm,0.3s,baz=344,slow=12,SNR=6.6						
WRA				Sn	Sn	06 51 53.9	-0.1
	0.4nm,0.3s,baz=336,slow=19,SNR=9.2						
ASAR	Alice Springs	16.10	168	Pn	Pn	06 50 18.9	-0.5
	0.1nm,0.3s,baz=343,slow=9.7,SNR=5.1						
ASAR				Sn	Sn	06 53 14.1	-4.6
	0.0nm,0.3s,baz=320,slow=16,SNR=2.9						
SONM	Songino Array	59.36	341	P	P	06 56 35.6	-0.1
	0.2nm,0.4s,baz=134,slow=8.3,SNR=2.8						

IDC 13 06:58:10.9±1.5,5°.99S×146°.64E,h0^{km},mb3.6/5, mb1 3.8/6,mb1mx3.6/33,mbtmp3.6/6,ML3.3/1,MS2.9/1, Ms1 2.9/1,ms1mx2.5/33,Error ellipse: s-maj=63.3km s-min=16.0km az=114.0

ISCJB 13 06:58:18.8±1.7,6°.1S±0°.2×146°.6E±0°.4,h78^{km},mb3.4/5, Error ellipse: s-maj=65.1km s-min=17.7km az=20.4

ISC 13 06:58:21.0±1.6,6°.0S±0°.2×146°.7E±0°.4,h78^{km},n7,σ1^{s}.96/9, mb3.5/5,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.35	220	P	P	07 02 26.6	-2.9
	0.1nm,0.3s,baz=44,slow=12,SNR=7.9						
WRA				PcP	PcP	07 07 00.4	+2.3
	0.1nm,0.3s,baz=34,slow=2.0,SNR=8.0						
WRA				LR	LR	07 09 05.8	
	comp=Z,39nm,18.5s,baz=45,slow=36						
ASAR	Alice Springs	21.46	214	P	P	07 03 01.9	-1.2
	0.2nm,0.5s,baz=52,slow=9.3,SNR=5.7						
ASAR				S	S	07 06 59.5	+2.4
	0.4nm,0.8s,baz=38,slow=23,SNR=4.1						
SONM	Songino Array	64.26	331	P	P	07 08 49.1	+1.0
	0.6nm,1.0s,baz=150,slow=6.1,SNR=3.1						
MKAR	Makanchi Array	77.31	321	P	P	07 10 07.0	-0.2
	0.3nm,0.7s,baz=99,slow=8.2,SNR=4.5						
ZALV	Zalesovo Beam	78.86	328	P	P	07 10 14.7	-0.8
	0.4nm,0.4s,baz=99,slow=8.9,SNR=2.4						
ILAR	Eielson Array	85.59	23	P	P	07 10 49.9	-0.6
	1.0nm,0.6s,baz=252,slow=5.1,SNR=13						
TORD	Torodi Ar. Bea	144.81	284	PKP	PKPdf	07 17 50.0	-0.1
	1.6nm,0.6s,baz=85,slow=3.7,SNR=14						

IDC 13 06:58:41.2±1.1,36°.75N×141°.29E,h0^{km},mb3.5/6, mb1 3.7/7,mb1mx3.5/39,mbtmp3.5/7,ML2.3/1,MS3.1/1, Ms1 3.1/1,ms1mx2.2/41,Error ellipse: s-maj=27.1km s-min=22.1km az=59.0

ISCJB 13 06:58:42.4±1.2,36°.74N±0°.04×141°.40E±0°.07,h20^{km}±7^{km}, mb3.5/6,MS2.9/1,Error ellipse: s-maj=10.0km s-min=5.8km az=17.8

JMA 13 06:58:44.6±0.1,36°.77N×141°.24E,h37^{km}±1^{km},M3.4

ISC 13 06:58:42.2±2.0,36°.75N±0°.04×141°.37E±0°.08,h8^{km}±10^{km}, n23,σ0^{s}.78/26,mb3.5/6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.58	308	P	Pb	06 58 54.7	+0.1
ONAJ				S	Sg	06 59 01.9	+0.9
JHO	Hitachi	0.66	258	P	Pb	06 58 56.0	+0.1
JHO				S	Sg	06 59 03.9	+0.4
JFFD	Fukushimafurud	0.73	298	P	Pg	06 58 56.8	+0.5
JFFD				*e*S	Sg	06 59 05.9	0.0
JFK	Kawauchi	0.73	328	P	Pb	06 58 57.4	+0.1
JFK				S	Sg	06 59 06.3	+0.3
JHYU	Hitachinakayam	0.75	237	P	Pb	06 58 57.6	+0.1
JHYU				S	Sg	06 59 06.6	+0.2
JYT	Yasato	1.08	242	P	Pg	06 59 02.4	-0.5
JYT				*e*S	Sg	06 59 15.6	-1.3
JFT	Otama	1.13	313	P	Pb	06 59 03.8	-0.2
JFT				S	Sb	06 59 17.5	-1.3
JMM	Marumori	1.21	338	P	Pn	06 59 04.9	-0.5
JMM				S	Sb	06 59 19.6	-1.4
MJAR	Matsushiro Arr	2.55	266	Pn	Pn	06 59 23.3	-0.5
	0.6nm,0.3s,baz=91,slow=14,SNR=19						
MJAR				Sn	Sn	06 59 55.3	+0.3
	1.1nm,0.3s,baz=86,slow=14,SNR=5.8						
MAT	Matsushiro	2.55	266	P	Pn	06 59 25.3	+1.4
MAT				*e*S	Sn	06 59 56.3	+1.2
MA2	Magadan	23.64	12	LR	LR	07 14 42.7	
	comp=Z,41nm,18.8s,baz=168,slow=41						
SONM	Songino Array	27.91	304	P	P	07 04 31.7	-1.1
	0.3nm,0.5s,baz=87,slow=7.8,SNR=3.2						
H11N2	WAKE ISLAND Hy	28.03	120	T	T	07 34 03.1	
	baz=313,slow=75,SNR=82						
H11N1	WAKE ISLAND Hy	28.04	120	T	T	07 34 02.5	
	baz=313,slow=75,SNR=79						
H11N3	WAKE ISLAND Hy	28.05	120	T	T	07 34 02.5	
	baz=313,slow=75,SNR=78						
H11S1	WAKE ISLAND Hy	28.74	122	T	T	07 34 52.1	
	baz=315,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	28.74	122	T	T	07 34 52.4	
	baz=315,slow=76,SNR=39						
H11S2	WAKE ISLAND Hy	28.75	122	T	T	07 34 54.8	
	baz=315,slow=76,SNR=24						
ZALV	Zalesovo Beam	42.08	313	P	P	07 06 34.3	0.0
	0.6nm,0.5s,baz=93,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	44.24	302	P	P	07 06 51.8	-0.1
	0.5nm,0.7s,baz=89,slow=9.8,SNR=8.6						
ILAR	Eielson Array	49.76	32	P	P	07 07 35.6	+0.8
	0.5nm,0.9s,baz=264,slow=6.2,SNR=4.4						
WRA	Warramunga Arr	56.77	188	P	P	07 08 27.1	+0.3
	0.5nm,0.5s,baz=5.5,slow=7.4,SNR=7.7						
ASAR	Alice Springs	60.50	188	P	P	07 08 52.8	+0.1
	0.4nm,0.8s,baz=17,slow=4.8,SNR=3.8						

NNC 13 07:06:51.6±1.6,41°.75N×78°.17E,h0^{km},mb3.3,mpv2.9, 2C,Error ellipse: s-maj=10.7km s-min=7.1km az=6.0, Suspected Mining explosion.,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOTS	Kotyrbulak	1.68	333	P	Pn	07 07 21.9	-0.4
	1.4nm,0.1s						
KOTS				S	Sb	07 07 45.0	-0.2
	4.3nm,0.2s						
PDGK	Podgornoye	1.86	31	Pg	Pb	07 07 25.7	-0.8
	1.0nm,0.2s						
PDGK				Lg	Lg	07 07 51.5	
	1.6nm,0.8s						
TKM2	Tokmak 2	2.24	302	⇑Pg	Pb	07 07 33.4	+0.3
	0.9nm,0.3s						
TKM2				⇑Lg	Lg	07 08 03.5	
	3.1nm,0.6s						
KTBS	Karatobe	2.25	331	Pg	Pb	07 07 33.3	+0.2
	3.0nm,0.2s						
KTBS				Lg	Lg	07 08 04.5	
	9.3nm,0.2s						
CHKK	Chushkaly	2.28	338	Pg	Pb	07 07 34.0	+0.4
	7.6nm,0.3s						
CHKK				Lg	Lg	07 08 05.8	
	6.0nm,0.4s						
ARXS	Arharly	2.48	354	Pg	Pb	07 07 36.0	-1.0
	5.7nm,0.5s						
ARXS				Lg	Lg	07 08 09.1	
	5.2nm,0.4s						
KUU	Kurty	2.53	328	Pg	Pb	07 07 37.6	-0.3
	2.7nm,0.3s						
KUU				Lg	Lg	07 08 12.0	
	4.5nm,1.0s						
KAPS	Kapalarasan	3.64	13	Pg	Pb	07 07 58.4	+1.7
	0.9nm,0.3s						
KAPS				Lg	Lg	07 08 47.5	
	0.7nm,0.3s						

IDC 13 07:14:14.8±1.2,0°.09N×122°.91E,h0^{km},mb3.5/4, mb1 3.7/4,mb1mx3.5/37,mbtmp3.5/4,Error ellipse: s-maj=149.8km s-min=21.1km az=65.0

ISCJB 13 07:14:16.6±0.5,0°.10S±0°.04×122°.48E±0°.04,h10^{km}, mb3.5/4,Error ellipse: s-maj=6.1km s-min=5.2km az=21.0

DJA 13 07:14:17.7±0.2,0°S±2°×12°2E±°,h10^{km},M4.5/6,mb5.3/1, mB5.5/1,MLv4.2/6,Mw(mB)4.9/1

ISC 13 07:14:17.1±0.8,0°.08S±0°.04×122°.46E±0°.04,h10^{km},n16, σ0^{s}.98/20,mb3.6/4,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.76	317	P	Pb	07 14 33.0	+0.6
MRSI				S	Sb	07 14 43.3	+0.5
LUWI	Luwuk	1.01	162	P	Pg	07 14 36.0	-0.5
LUWI				S	Sb	07 14 51.0	+1.0
APSI	Ampana	1.16	224	P	Pb	07 14 39.2	-0.1
KMSI	Cibinong	1.65	67	P	Pn	07 14 47.2	+1.0
KMSI				S	Sn	07 15 08.5	+0.9
MPSI	Mapaga	2.59	279	P	Pn	07 14 58.6	-0.6
PCI	Palu	2.75	253	P	Pn	07 15 02.1	+0.8
PCI				S	Sn	07 15 36.4	+1.8
KDI	Kendari	3.85	178	P	Pn	07 15 16.9	+0.3
TTSI	Tana Toraja	3.96	222	P	Pn	07 15 18.5	+0.6
SANI	Sanana	4.03	119	P	Pn	07 15 19.2	+0.2
SPSI	Sidrap Palu	4.70	215	P	Pn	07 15 28.5	+0.3
BNSI	Bone	4.89	209	P	Pn	07 15 32.1	+1.3
NLAI	Namlea	5.60	124	P	Pn	07 15 41.3	+0.8
WRA	Warramunga Arr	22.91	150	P	P	07 19 20.6	-0.8
	1.0nm,0.6s,baz=330,slow=10,SNR=19						
ASAR	Alice Springs	25.95	155	P	P	07 19 47.9	-2.1
	0.7nm,0.7s,baz=331,slow=7.4,SNR=8.6						
SONM	Songino Array	49.73	346	P	P	07 23 08.9	-0.8
	0.6nm,0.8s,baz=160,slow=9.2,SNR=4.9						
MKAR	Makanchi Array	58.40	329	P	P	07 24 12.7	-0.2
	0.5nm,0.6s,baz=130,slow=8.7,SNR=6.4						

IDC 13 07:14:47.9±1.5,10°.87S×164°.44E,h0^{km},mb3.7/5, mb1 3.9/6,mb1mx3.7/38,mbtmp3.8/6,ML3.8/1,MS3.2/3, Ms1 3.2/3,ms1mx2.8/34,Error ellipse: s-maj=47.2km s-min=29.2km az=115.0

ISCJB 13 07:14:50.3±1.0,11°.0S±0°.1×164°.5E±0°.1,h29^{km},mb3.7/5, MS3.1/2,Error ellipse: s-maj=20.6km s-min=12.0km az=34.1

ISC 13 07:14:52.1±1.1,10°.9S±0°.1×164°.6E±0°.1,h29^{km},n8, σ1^{s}.38/7,mb3.5/5,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.79	287	Sn	Sn	07 16 58.2	+1.1
	7.4nm,0.3s,baz=90,slow=20,SNR=2.2						
HNR				LR	LR	07 17 50.1	
	comp=Z,252nm,21.1s,baz=154,slow=39						
DZM	Mont Dzumac	11.24	171	Pn	Pn	07 17 32.0	+1.0
	0.6nm,0.3s,baz=320,slow=15,SNR=12						
STKA	Stephens Creek	29.77	222	LR	LR	07 31 58.9	
	comp=Z,42nm,18.6s,baz=22,slow=35						
WRA	Warramunga Arr	30.46	249	P	P	07 21 02.1	-0.6
	0.8nm,0.9s,baz=79,slow=9.5,SNR=4.2						
WRA				LR	LR	07 33 30.1	
	comp=Z,52nm,18.3s,baz=320,slow=37						
ASAR	Alice Springs	31.84	242	P	P	07 21 12.7	-2.1
	0.3nm,0.6s,baz=83,slow=9.4,SNR=3.4						
SONM	Songino Array	77.88	324	P	P	07 26 48.1	+0.7
	0.4nm,0.7s,baz=134,slow=6.2,SNR=3.3						
ILAR	Eielson Array	83.75	19	P	P	07 27 18.0	-0.2
	1.9nm,1.0s,baz=232,slow=5.2,SNR=7.0						
MKAR	Makanchi Array	92.64	317	P	P	07 28 00.9	-0.4
	0.6nm,0.9s,baz=86,slow=5.9,SNR=3.3						

ISCJB 13 07:33:07.6±0.8,11°.2S±0°.1×165°.5E±0°.1,h30^{km},mb3.7/7, MS3.5/3,Error ellipse: s-maj=16.8km s-min=15.4km az=29.6

IDC 13 07:33:11.4±4.0,11°.24S×165°.53E,h50^{km}±37^{km},mb3.5/8, mb1 3.9/10,mb1mx3.7/39,mbtmp3.9/10,ML4.4/2,MS3.3/5, Ms1 3.3/5,ms1mx2.9/23,Error ellipse: s-maj=35.4km s-min=25.6km az=150.0

ISC 13 07:33:09.3±0.9,11°.1S±0°.1×165°.6E±0°.1,h30^{km},n13, σ1^{s}.26/10,mb3.8/7,MS3.3/3,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.81	286	P	Pn	07 34 34.1	+0.6
	19nm,0.3s,baz=113,slow=3.2,SNR=2.8						
HNR				LR	LR	07 36 15.0	
	comp=Z,53nm,19.9s,baz=90,slow=32						
DZM	Mont Dzumac	10.90	176	P	Pn	07 35 44.0	+0.6
	1.9nm,0.3s,baz=11,slow=12,SNR=15						
DZM				LR	LR	07 39 25.9	
	comp=Z,160nm,18.1s,baz=30,slow=35						
CTA	Charters Tower	20.62	242	P	P	07 37 46.8	+0.4
	5.5nm,0.8s,baz=94,slow=9.5,SNR=3.8						
STKA	Stephens Creek	30.27	223	LR	LR	07 50 19.8	
	comp=Z,56nm,19.2s,baz=31,slow=34						
WRA	Warramunga Arr	31.31	250	P	P	07 39 25.2	-2.0
	1.4nm,0.8s,baz=82,slow=8.9,SNR=9.9						
ASAR	Alice Springs	32.62	243	P	P	07 39 38.1	-0.6
	1.5nm,0.8s,baz=74,slow=9.4,SNR=12						
RPZ	Rata Peaks	32.80	173	LR	LR	07 53 19.0	
	comp=Z,58nm,18.3s,baz=2.5,slow=37						
MA2	Magadan	71.48	352	LR	LR	08 11 12.7	
	comp=Z,58nm,21.8s,baz=59,slow=32						
SONM	Songino Array	78.65	324	P	P	07 45 10.4	+1.7
	0.2nm,0.6s,baz=144,slow=5.2,SNR=2.3						
ILAR	Eielson Array	83.65	19	P	P	07 45 34.8	+0.2
	0.6nm,0.7s,baz=243,slow=4.5,SNR=8.7						
NVAR	Mina Array Bea	86.20	50	P	P	07 45 48.9	+0.5
	0.6nm,0.8s,baz=246,slow=8.8,SNR=4.0						
MKAR	Makanchi Array	93.49	317	P	P	07 46 21.5	-0.7
	0.3nm,0.7s,baz=99,slow=4.5,SNR=3.0						
YKA	Yellowknife Ar	95.12	27	P	P	07 46 27.9	-1.4
	0.1nm,0.5s,baz=256,slow=4.3,SNR=2.7						

IDC 13 07:39:37.4±1.6,10°.59S×165°.45E,h0^{km},mb3.5/4, mb1 3.7/5,mb1mx3.5/45,mbtmp3.5/5,ML3.8/1,Error ellipse: s-maj=53.0km s-min=29.5km az=124.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.46	175	Pn	Pn	07 42 22.5	0.0
	0.6nm,0.3s,baz=234,slow=10,SNR=6.5						
WRA	Warramunga Arr	31.37	249	P	P	07 46 00.2	+0.1
	0.5nm,0.8s,baz=81,slow=8.7,SNR=4.6						
ASAR	Alice Springs	32.74	242	P	P	07 46 12.1	-0.1
	0.2nm,0.7s,baz=62,slow=10,SNR=2.4						
ILAR	Eielson Array	83.17	19	P	P	07 52 05.0	0.0
	0.3nm,0.6s,baz=238,slow=5.0,SNR=8.3						
MKAR	Makanchi Array	92.99	317	P	P	07 52 52.8	0.0
	0.2nm,0.7s,baz=108,slow=4.7,SNR=2.2						

IDC 13 07:40:22.7±7.1,5°.26S×144°.92E,h0^{km},mb3.3/2, mb1 3.7/3,mb1mx3.4/38,mbtmp3.4/3,ML3.4/1,Error ellipse: s-maj=236.1km s-min=34.3km az=100.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.86	214	P	Pn	07 44 32.5	-0.4
	0.1nm,0.3s,baz=40,slow=12,SNR=8.2						
ASAR	Alice Springs	21.16	209	P	P	07 45 09.7	0.0
	1.3nm,0.8s,baz=34,slow=12,SNR=5.3						
MKAR	Makanchi Array	75.62	321	P	P	07 52 09.9	+0.2
	0.1nm,0.3s,baz=104,slow=6.1,SNR=4.5						

IDC 13 07:41:50.1±1.6,30°.17S×177°.76W,h0^{km},mb4.5/4, mb1 4.6/4,mb1mx4.1/36,mbtmp4.5/4,Error ellipse: s-maj=36.7km s-min=18.9km az=103.0

NEIC 13 07:41:51.0±0.6,30°.29S×177°.73W,h10^{km},mb4.1/5,Error ellipse: s-maj=13.7km s-min=7.0km az=103.0

ISCJB 13 07:41:52.4±1.2,30°.39S±0°.06×177°.7W±0°.2,h35^{km}, mb4.2/8,Error ellipse: s-maj=24.4km s-min=7.3km az=11.4

ISC 13 07:41:54.3±1.0,30°.25S±0°.07×177°.7W±0°.2,h35^{km},n21, σ1^{s}.22/26,mb4.3/8,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.00	351	*e*Pg	Pn	07 42 10.9	-1.0
RAO				*e*Pn	Pn	07 42 12.7	+0.8
RAO				*e*Sg	Sn	07 42 23.2	-1.6
RAO				*e*Sn	Sn	07 42 24.0	-0.8
RAO	Raoul Island	1.00	351	Pn	Pn	07 42 10.9	-1.0
	212nm,0.3s,baz=198,slow=23,SNR=14						
RAO				Sn	Sn	07 42 24.0	-0.8
	2µm,0.3s,baz=104,slow=22,SNR=23						
OUZ	Omahuta	8.82	234	*e*Pn	Pn	07 43 58.3	-0.9
URZ	Urewera	9.05	207	*e*Pn	Pn	07 43 60.0	-2.4
URZ				*e*Pn	Pn	07 44 01.0	-1.4
URZ				*e*Sn	Sn	07 45 42.3	-0.7
URZ	Urewera	9.05	207	Pn	Pn	07 43 60.0	-2.4
	0.4nm,0.3s,baz=90,slow=20,SNR=5.4						
URZ				Sn	Sn	07 45 42.3	-0.7
	1.8nm,0.3s,baz=206,slow=21,SNR=18						
BKZ	Black Stump Fm	10.08	206	*e*Pn	Pn	07 44 15.0	-1.5
THZ	Tophouse	13.75	211	*e*Pn	Pn	07 45 05.9	-0.7
CTA	Charters Tower	33.99	279	P	P	07 48 36.4	+1.6
	1.9nm,0.3s,baz=96,slow=7.3,SNR=3.6						
STKA	Stephens Creek	34.73	257	*e*P	P	07 48 41.6	+0.5
	0.8nm,0.9s						
STKA	Stephens Creek	34.73	257	P	P	07 48 41.6	+0.5
	2.7nm,0.7s,baz=99,slow=9.6,SNR=9.7						
AS31	Alice Springs	43.34	267	*e*P	P	07 49 53.9	+0.7
	0.5nm,0.8s						
ASAR	Alice Springs	43.34	267	P	P	07 49 53.9	+0.7
	1.0nm,0.4s,baz=104,slow=7.0,SNR=19						
WB2	Warramunga Arr	44.30	272	*e*P	P	07 50 01.5	+0.5
	3.7nm,0.8s						
WB2				*e*P	P	07 50 01.9	+0.9
WR1	Warramunga Arr	44.31	272	*e*P	P	07 50 01.5	+0.4
	4.3nm,0.8s						
WRA	Warramunga Arr	44.31	272	P	P	07 50 01.5	+0.4
	1.9nm,0.4s,baz=110,slow=8.1,SNR=35						
TCRU	Three Creeks R	91.61	45	*e*P	P	07 54 58.4	+0.5
	3.4nm,0.5s						
FIA0	FINESS Array S	145.08	340	*e*PKPbc	PKPab	08 01 26.8	0.0
FINES	FINESS Array B	145.08	340	PKPbc	PKPab	08 01 26.8	0.0
	3.4nm,0.5s,baz=63,slow=3.0,SNR=29						
AKASG	Malin Array Be	151.31	323	PKPbc	PKiKP	08 01 44.1	-0.1
	0.9nm,0.3s,baz=45,slow=3.4,SNR=4.1						
TORD	Torodi Ar. Bea	162.97	178	PKPab	PKPab	08 02 44.7	+1.9
	0.3nm,0.5s,baz=182,slow=3.5,SNR=4.0						
TOA1	Torodi Ar. Sit	162.98	178	*e*PKPab	PKPab	08 02 44.7	+1.8

IDC 13 07:49:29.1±1.8,51°.97N×171°.39W,h0^{km},mb3.2/3, mb1 3.6/5,mb1mx3.3/39,mbtmp3.5/5,ML3.1/2,Error ellipse: s-maj=54.3km s-min=22.7km az=157.0

ISCJB 13 07:49:35.2±1.3,52°.0N±0°.2×171°.5W±0°.1,h44^{km},mb3.4/4, Error ellipse: s-maj=31.6km s-min=5.2km az=165.5

NEIC 13 07:49:37.4±0.0,52°.21N×171°.65W,h42^{km},ML2.9(AEIC), After AEIC.

ISC 13 07:49:36.1±1.4,52°.0N±0°.3×171°.51W±0°.08,h44^{km},n12, σ1^{s}.19/15,mb3.4/4,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.62	281	P	Pn	07 50 03.2	+1.1
NIKH	Nikolski High	1.89	58	P	Pn	07 50 06.8	+1.0
NIKH				S	Sn	07 50 29.3	+0.9
OKSP	Okmok Steeple	2.33	56	P	Pn	07 50 13.7	+1.9
OKAK	Okmok	2.48	49	P	Pn	07 50 15.3	+1.4
GSTD	Great Sitkin T	2.86	273	P	Pn	07 50 20.6	+1.3
GSTD				S	Sn	07 50 52.7	+0.3
ADK	Adak	3.20	270	P	Pn	07 50 25.6	+1.8
ADK				S	Sn	07 51 00.4	-0.3
KDAK	Kodiak Island	12.31	55	Pn	Pn	07 52 27.0	-1.5
	0.2nm,0.3s,baz=213,slow=7.2,SNR=4.5						
PETK	Petropavlovsk-	18.69	286	P	P	07 53 50.6	+0.3
	0.2nm,0.3s,baz=88,slow=12,SNR=5.3						
INK	Inuvik	24.38	34	P	P	07 54 49.6	0.0
	0.3nm,0.3s,baz=252,slow=6.4,SNR=4.2						
YKA	Yellowknife Ar	31.47	48	P	P	07 55 52.9	-0.1
	0.1nm,0.4s,baz=274,slow=7.0,SNR=4.7						
MKAR	Makanchi Array	63.08	312	P	P	07 59 57.5	-1.1
	0.2nm,0.4s,baz=40,slow=5.9,SNR=7.0						
ASAR	Alice Springs	89.16	228	P	P	08 02 26.6	-0.2
	0.4nm,0.7s,baz=26,slow=4.6,SNR=5.5						

IDC 13 08:11:21.3±3.8,2°.70S×130°.81E,h0^{km},mb3.4/3, mb1 3.6/4,mb1mx3.4/39,mbtmp3.5/4,ML3.5/1,Error ellipse: s-maj=297.8km s-min=26.0km az=72.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.48	169	P	Pn	08 15 26.1	-0.6
	0.2nm,0.3s,baz=348,slow=12,SNR=6.3						

ASAR	**Alice Springs**	**21.06**	**172**	P	P	08 16 07.1	0.0
	1.6nm,0.5s,baz=348,slow=9.8,SNR=23						
MKAR	**Makanchi Array**	**65.13**	**325**	P	P	08 22 04.6	+0.5
	0.2nm,0.7s,baz=124,slow=7.5,SNR=3.0						
KURBB	**Kurchatov Arra**	**69.32**	**327**	P	P	08 22 30.1	-0.4
	0.3nm,0.6s,baz=126,slow=5.7,SNR=3.2						

IDC 13 08:23:03.3±1.7**, 11°.10S**×**165°.91E, h0**^{km}**, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.6**/4**, ML3.7**/1**, Error ellipse: s-maj=54.7km s-min=30.6km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.92**	**177**	Pn	Pn	08 25 40.8	-0.3
	0.5nm,0.3s,baz=328,slow=17,SNR=5.9						
WRA	**Warramunga Arr**	**31.61**	**250**	P	P	08 29 28.9	+0.7
	0.5nm,0.6s,baz=81,slow=9.1,SNR=7.5						
ASAR	**Alice Springs**	**32.91**	**243**	P	P	08 29 39.0	-0.7
	0.4nm,0.8s,baz=61,slow=9.6,SNR=3.7						
ILAR	**Eielson Array**	**83.51**	**18**	P	P	08 35 32.8	0.0
	0.1nm,0.5s,baz=231,slow=5.7,SNR=3.4						

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*IDC **13** 08:27:25.3±1.0, 51°.47N×16°.01E, h0^{km}, mb1 3.6/4, mb1mx3.2/43, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=18.9km s-min=8.3km az=128.0*

ISC 13 08:27:23.3±1.4**, 51°.56N**±0°.04×**16°.14E**±0°.03**, h4**^{km}±11^{km}**, n34,** σ1^{s}.**12**/64**, 9C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**172**	*i* Pg	**Pg**	**08 27 37.3**	**+0.2**
KSP				*e*Sg	**Sg**	**08 27 45.8**	**-0.7**
UPC	**Upice**	**1.05**	**184**	⇑*e*PG	**Pg**	**08 27 43.3**	**-0.2**
UPC				*e*SG	**Sg**	**08 27 56.5**	**-0.6**
	comp=Z,125nm,0.5s						
DPC	**Dobruska-Polom**	**1.21**	**174**	⇑*i*PG	**Pb**	**08 27 46.3**	**-0.5**
DPC				*e*SG	**Sg**	**08 28 00.7**	**-1.5**
	comp=Z,31nm,0.3s						
PVCC	**Panska Ves**	**1.43**	**224**	⇑*e*PG	**Pn**	**08 27 50.6**	**+0.7**
PVCC				*e*SG	**Sn**	**08 28 09.0**	**-0.1**
	comp=Z,191nm,0.2s						
KRLC	**Kraliky**	**1.54**	**164**	⇑*e*PG	**Pn**	**08 27 51.6**	**+0.1**
KRLC				*e*SG	**Sb**	**08 28 11.5**	**-0.6**
	comp=Z,15nm,0.5s						
PRU	**Pruhonice**	**1.87**	**213**	⇑*e*PG	**Pn**	**08 27 57.3**	**+1.3**
PRU				*e*SG	**Sb**	**08 28 21.2**	**-0.4**
	comp=Z,33nm,0.4s						
CLL	**Collm**	**1.98**	**264**	*e*Pn	**Pn**	**08 27 58.0**	**+0.5**
CLL				*e*Pg	**Pb**	**08 28 00.0**	**+0.2**
CLL				*e*		08 28 04.0	
CLL				*e*		08 28 16.0	
CLL				*i* Sg	**Sb**	**08 28 26.6**	**+1.9**
	comp=Z,38nm,0.5s						
MORC	**Moravsky Berou**	**1.99**	**153**	*e*PN	**Pn**	**08 27 57.8**	**+0.1**
MORC				*e*SG	**Sb**	**08 28 24.5**	**-0.7**
OKC	**Ostrava-Krasne**	**2.14**	**143**	⇑*e*PN	**Pn**	**08 27 59.9**	**+0.2**
OKC				*e*PG	**Pb**	**08 28 03.8**	**+1.2**
OKC				*e*SG	**Sb**	**08 28 29.9**	**+0.4**
	comp=Z,24nm,0.3s						
VRAC	**Vranov**	**2.27**	**172**	*e*PN	**Pn**	**08 28 02.5**	**+1.0**
VRAC				*e*SG	**Sb**	**08 28 33.9**	**+0.7**
TREC	**Trest**	**2.30**	**191**	⇑*e*PN	**Pn**	**08 28 03.7**	**+1.7**
TREC				*e*PG	**Pb**	**08 28 06.2**	**+0.9**
KRUC	**Moravsky**	**2.50**	**176**	*e*PN	**Pn**	**08 28 06.3**	**+1.6**
KRUC				*e*SG	**Sg**	**08 28 42.0**	**-1.6**
OJC	**Ojcow**	**2.68**	**119**	*e*Pg	**Pg**	**08 28 15.1**	**+0.5**
OJC				*e*Sg	**Sg**	**08 28 50.1**	**+0.9**
NKC	**Novy Kostel**	**2.69**	**242**	⇑*e*PN	**Pn**	**08 28 08.3**	**+1.1**
NKC				*e*PG	**Pb**	**08 28 12.7**	**+0.8**
NKC				*e*SG	**Sg**	**08 28 49.2**	**-0.3**
	comp=Z,61nm,0.4s						
KHC	**Kasperske Hory**	**2.93**	**215**	⇑*e*PN	**Pn**	**08 28 11.4**	**+0.8**
KHC				*e*PG	**Pb**	**08 28 17.4**	**+1.4**
KHC				*e*SN	**Sn**	**08 28 45.6**	**-0.6**
KHC				*e*SG	**Sg**	**08 28 55.2**	**-2.1**
	comp=Z,17nm,0.4s						
GERES	**GERESS Array B**	**3.13**	**211**	Pn	**Pn**	**08 28 14.5**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=28,slow=12,SNR=21						
GERES				Pg	**Pb**	**08 28 20.6**	**+1.0**
	comp=Z,2.2nm,0.3s,baz=27,slow=17,SNR=20						
GERES				Sn	**Sn**	**08 28 50.7**	**-0.6**
	comp=Z,2.3nm,0.3s,baz=28,slow=24,SNR=6.4						
GERES				Lg	Lg	08 28 58.5	
	comp=Z,5.1nm,0.3s,baz=27,slow=29,SNR=11						
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PG	**Pg**	**08 28 23.5**	**-1.4**
LANS				*e*SG	**Sg**	**08 29 05.7**	**-0.9**
MODS	**Modra-Piesok**	**3.27**	**167**	*e*PG	**Pg**	**08 28 26.2**	**+0.3**
MODS				*e*SG	**Sg**	**08 29 06.4**	**-1.9**
MODS	**Modra-Piesok**	**3.27**	**167**	*e*SG	**Sg**	**08 29 12.6**	**+4.3**
NIE	**Niedzica**	**3.41**	**127**	*e*P	**Pg**	**08 28 28.4**	**-0.3**
NIE				*e*S	**Sg**	**08 29 13.1**	**+0.3**
CONA	**Conrad Observa**	**3.64**	**183**	*e*Pn	**Pn**	**08 28 21.5**	**+1.1**
	comp=Z,0.7nm,0.2s						
CONA				Sg	**Sg**	**08 29 19.9**	**-0.1**
	comp=Z,12nm,0.4s						
MOA	**Molln**	**3.91**	**199**	*e*Pn	**Pn**	**08 28 24.7**	**+0.8**
	comp=Z,0.9nm,0.2s						
MOA				Sg	**Sb**	**08 29 20.9**	**+0.6**
	comp=Z,7.4nm,0.4s						
ARSA	**Arzberg**	**4.33**	**186**	*i* Pn	**Pn**	**08 28 31.3**	**+1.5**
	comp=Z,0.7nm,0.2s						
ARSA				Sg	**Sg**	**08 29 41.5**	**-0.7**
	comp=Z,3.7nm,0.4s						
KBA	**Koelnbreinsper**	**4.84**	**203**	*e*Pn	**Pn**	**08 28 37.0**	**+0.1**
	comp=Z,0.6nm,0.1s						
KBA				Sg	**Sg**	**08 29 57.6**	**-1.1**
	comp=Z,1.3nm,0.2s						
SOKA	**Soboth**	**4.94**	**189**	Sg	**Sg**	**08 30 03.3**	**+1.6**
	comp=Z,0.8nm,0.2s						
MYKA	**Terra Mystica**	**5.20**	**199**	Sg	**Sg**	**08 30 10.2**	**+0.1**
	comp=Z,0.7nm,0.2s						
WTTA	**Wattenberg**	**5.20**	**216**	Sg	**Sb**	**08 29 58.0**	**+0.2**
	comp=Z,4.0nm,0.5s						
RETA	**Reutte**	**5.37**	**223**	Sg	**Sg**	**08 30 14.8**	**-0.8**
	comp=Z,2.8nm,0.4s						
SQTA	**Sankt Quirin**	**5.40**	**218**	*e*Pn	**Pn**	**08 28 44.9**	**+0.3**
	comp=Z,2.0nm,0.3s						
SQTA				Sg	**Sb**	**08 30 02.8**	**-0.6**
	comp=Z,2.3nm,0.3s						
FETA	**Feichten**	**5.75**	**220**	*e*Pn	**Pn**	**08 28 50.3**	**+0.7**
	comp=Z,1.0nm,0.5s						
FETA				Sg	**Sb**	**08 30 12.4**	**-1.1**
	comp=Z,0.8nm,0.4s						
DAVOX	**Davos/Dischmat**	**6.30**	**223**	Lg	Lg	08 30 40.7	
	comp=Z,0.3nm,0.3s,baz=341,slow=1.6,SNR=1.7						
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	**Pn**	**08 29 23.3**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=280,slow=12,SNR=2.1						
FINES	**FINESS Array B**	**11.31**	**25**	Pn	**Pn**	**08 30 05.3**	**-0.2**
	baz=219,slow=11,SNR=2.2						
ARCES	**ARCESS Array B**	**18.57**	**10**	Pn	**P**	**08 31 39.3**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=6.7						

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*SOME **13** 08:33:17.4, 43°.40N×82°.17E, h5^{km}*

*NNC **13** 08:33:19.4±0.8, 43°.50N×82°.07E, h15^{km}±5^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=6.4km s-min=3.2km az=139.0*

ISC 13 08:33:20.3±1.4**, 43°.61N**±0°.06×**82°.08E**±0°.06**, h10**^{km}**, n43,** σ1^{s}.**48**/62**, 6C-10D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.80**	**294**	Pg	**Pb**	**08 33 52.6**	**-0.8**
	6.2nm,0.2s						
DJR				Lg	Lg	08 34 18.8	
	63nm,0.3s						
DJR	**Jarkent**	**1.80**	**294**	*e*P	**Pb**	**08 33 52.6**	**-0.8**
	4.1nm,0.2s						
DJR				*e*S	**Sg**	**08 34 18.8**	**+0.6**
	63nm,0.3s						
PDGK	**Podgornoye**	**1.90**	**262**	Pg	**Pn**	**08 33 53.2**	**+0.3**
	14nm,0.2s						
PDGK				Lg	Lg	08 34 19.9	
	54nm,0.2s						
PDGK	**Podgornoye**	**1.90**	**262**	⇑Pg	**Pn**	**08 33 53.3**	**+0.3**
	5.2nm,0.2s						
PDGK				⇓Lg	Lg	08 34 19.9	
	38nm,0.3s						
UZB	**Uzynbulak**	**2.27**	**259**	Pg	**Pb**	**08 33 59.9**	**-1.6**
	9.4nm,0.2s						
UZB				Lg	Lg	08 34 31.1	
	47nm,0.4s						
UZB	**Uzynbulak**	**2.27**	**259**	*e*P	**Pb**	**08 33 59.9**	**-1.6**
	9.4nm,0.2s						
UZB				*e*S	**Sb**	**08 34 31.1**	**+1.4**
	47nm,0.4s						
KAPS	**Kapalarasan**	**2.57**	**312**	Pg	**Pb**	**08 34 06.6**	**+0.1**
	12nm,0.6s						
KAPS				Lg	Lg	08 34 42.5	
	36nm,0.3s						
KAPS	**Kapalarasan**	**2.57**	**312**	*e*P	**Pb**	**08 34 06.6**	**+0.1**
	12nm,0.6s						
KAPS				⇓*i*S	**Sg**	**08 34 42.5**	**-0.3**
	36nm,0.3s						
SATY	**Saty**	**2.73**	**260**	Pg	**Pb**	**08 34 10.2**	**+0.9**
	19nm,0.2s						
SATY				Lg	Lg	08 34 49.0	
	58nm,0.2s						
SATY	**Saty**	**2.73**	**260**	*e*P	**Pb**	**08 34 10.2**	**+0.9**
	19nm,0.2s						
SATY				*e*S	**Sg**	**08 34 49.0**	**+1.0**
	58nm,0.2s						
KURS	**Kuram**	**2.84**	**269**	Pg	**Pb**	**08 34 11.3**	**+0.2**
	6.0nm,0.3s						
KURS				Lg	Lg	08 34 50.9	
	11nm,0.5s						
KURS	**Kuram**	**2.84**	**269**	*e*P	**Pb**	**08 34 11.3**	**+0.2**
	6.0nm,0.3s						
KURS				*e*S	**Sg**	**08 34 50.9**	**-0.6**
	11nm,0.5s						
TDK	**Taldyqorghan**	**2.98**	**299**	Pg	**Pb**	**08 34 14.0**	**+0.6**
	41nm,0.3s						
TDK				Lg	Lg	08 34 55.5	
	64nm,0.3s						
TDK	**Taldyqorghan**	**2.98**	**299**	*e*P	**Pb**	**08 34 14.0**	**+0.6**
	41nm,0.3s						
TDK				*e*S	**Sg**	**08 34 55.5**	**-0.4**
	64nm,0.3s						
ARXS	**Arharly**	**3.13**	**283**	Pg	**Pb**	**08 34 17.2**	**+1.2**
	10nm,0.2s						
ARXS				Lg	Lg	08 35 01.2	
	41nm,0.3s						
ARXS	**Arharly**	**3.13**	**283**	*e*P	**Pb**	**08 34 17.2**	**+1.2**
	10nm,0.2s						
ARXS				*e*S	**Sg**	**08 35 01.2**	**+0.5**
	41nm,0.3s						
MK31	**Makanchi Array**	**3.19**	**3**	⇑Pn	**Pn**	**08 34 11.3**	**+0.8**
	0.1nm,0.1s,baz=187,slow=12,SNR=62						
MK31				⇓Pg	**Pg**	**08 34 20.7**	**-0.6**
	1.8nm,0.3s,baz=180,slow=16,SNR=40						
MK31				⇓Lg	Lg	08 35 05.2	
	8.0nm,0.6s,baz=187,slow=28,SNR=8.9						
MAKZ	**Makanchi**	**3.20**	**359**	⇓Pn	**Pn**	**08 34 11.1**	**+0.4**
	0.9nm,0.3s						
MAKZ				⇑Pg	**Pg**	**08 34 20.5**	**-1.1**
	1.5nm,0.3s						
MAKZ				⇑Sn	**Sn**	**08 34 50.0**	**+1.2**
	2.5nm,0.3s						
MAKZ				⇓Lg	Lg	08 35 05.0	
	5.4nm,0.5s						
KOTS	**Kotyrbulak**	**3.64**	**266**	Pg	**Pb**	**08 34 26.2**	**+1.5**
	12nm,0.4s						
KOTS				Lg	Lg	08 35 16.2	
	24nm,0.4s						
KOTS	**Kotyrbulak**	**3.64**	**266**	*e*P	**Pb**	**08 34 26.2**	**+1.5**
	12nm,0.4s						
KOTS				*e*S	**Sg**	**08 35 16.2**	**-0.8**
	24nm,0.4s						
MDOK	**Medeo**	**3.69**	**265**	Lg	Lg	08 35 16.5	
	5.9nm,0.5s						
MDOK	**Medeo**	**3.69**	**265**	Pg	**Pb**	**08 34 26.4**	**+0.7**
	2.7nm,0.4s						
MDOK				Lg	Lg	08 35 16.7	
	9.6nm,0.4s						
MDOK	**Medeo**	**3.69**	**265**	*e*P	**Pb**	**08 34 26.4**	**+0.7**
	2.7nm,0.4s						
MDOK				*e*S	**Sg**	**08 35 16.6**	**-2.2**
	9.6nm,0.4s						
CHKK	**Chushkaly**	**3.70**	**276**	Pg	**Pb**	**08 34 26.8**	**+1.2**
	3.8nm,0.1s						
CHKK				Lg	Lg	08 35 17.6	
	31nm,0.1s						
CHKK	**Chushkaly**	**3.70**	**276**	*e*P	**Pb**	**08 34 26.8**	**+1.2**
	3.8nm,0.1s						
CHKK				*e*S	**Sg**	**08 35 17.6**	**-1.3**
	31nm,0.1s						
TNSS	**Tian-Shan**	**3.79**	**263**	Pg	**Pb**	**08 34 28.3**	**+0.9**
	4.3nm,0.3s						
TNSS				Lg	Lg	08 35 20.0	
	10nm,0.4s						
TNSS	**Tian-Shan**	**3.79**	**263**	*e*P	**Pb**	**08 34 28.3**	**+0.9**
	4.3nm,0.3s						
TNSS				*e*S	**Sg**	**08 35 20.0**	**-1.8**
	10nm,0.4s						
KTBS	**Karatobe**	**3.92**	**273**	Pg	**Pb**	**08 34 30.6**	**+1.2**
	1.8nm,0.5s						
KTBS				Lg	Lg	08 35 23.9	
	17nm,0.2s						
KTBS	**Karatobe**	**3.92**	**273**	*e*P	**Pb**	**08 34 30.6**	**+1.2**
	1.8nm,0.5s						
KTBS				*e*S	**Sg**	**08 35 23.9**	**-2.1**
	17nm,0.2s						
IZV	**Izvestkoviy**	**4.03**	**264**	Pg	**Pb**	**08 34 33.3**	**+1.9**
	4.8nm,0.3s						
IZV				Lg	Lg	08 35 28.7	
	18nm,0.2s						
IZV	**Izvestkoviy**	**4.03**	**264**	*e*P	**Pb**	**08 34 33.3**	**+1.9**
	4.8nm,0.3s						
IZV				*e*S	**Sg**	**08 35 28.7**	**-0.8**
	18nm,0.2s						
MTBS	**Maitube**	**4.14**	**265**	Pg	**Pb**	**08 34 34.9**	**+1.6**
	6.3nm,0.3s						
MTBS				Lg	Lg	08 35 31.2	
	12nm,0.3s						
MTBS	**Maitube**	**4.14**	**265**	*e*P	**Pb**	**08 34 34.9**	**+1.6**
	6.3nm,0.3s						
MTBS				*e*S	**Sg**	**08 35 31.2**	**-2.2**
	12nm,0.3s						
KUU	**Kurty**	**4.17**	**276**	Pg	**Pb**	**08 34 34.7**	**+1.1**
	1.2nm,0.1s						
KUU				Lg	Lg	08 35 31.2	
	14nm,0.2s						
KUU	**Kurty**	**4.17**	**276**	*e*P	**Pb**	**08 34 34.7**	**+1.1**
	1.2nm,0.1s						
KUU				*e*S	**Sg**	**08 35 31.2**	**-2.8**
	14nm,0.2s						
ZSN	**Zaisan**	**4.31**	**26**	Pg	**Pb**	**08 34 37.1**	**+1.0**
	1.3nm,0.5s						
ZSN				Lg	Lg	08 35 35.5	
	2.9nm,0.5s						
ZSN	**Zaisan**	**4.31**	**26**	⇓*i*P	**Pb**	**08 34 37.1**	**+1.0**
	1.3nm,0.5s						
ZSN				⇓*i*S	**Sg**	**08 35 35.5**	**-3.1**
	2.9nm,0.5s						
KST	**Kastek**	**4.50**	**265**	Pg	**Pb**	**08 34 40.2**	**+0.9**
	7.1nm,2.4s						
KST				Lg	Lg	08 35 40.4	
	11nm,0.7s						
KST	**Kastek**	**4.50**	**265**	*e*P	**Pb**	**08 34 40.2**	**+0.9**
	7.1nm,2.4s						
KST				⇓*i*S	**Sg**	**08 35 40.4**	**-4.2**
	11nm,0.7s						
DGS	**Degeres**	**4.61**	**268**	Pg	**Pb**	**08 34 42.6**	**+1.4**
	3.6nm,0.7s						
DGS				Lg	Lg	08 35 44.5	
	13nm,0.5s						
DGS	**Degeres**	**4.61**	**268**	*e*P	**Pb**	**08 34 42.6**	**+1.4**
	3.6nm,0.7s						
DGS				*e*S	**Sg**	**08 35 44.5**	**-3.7**
	13nm,0.5s						
TKM2	**Tokmak 2**	**4.78**	**264**	⇑Pg	**Pb**	**08 34 46.7**	**+2.4**
	1.6nm,0.8s						
TKM2				⇓Lg	Lg	08 35 50.5	
	8.1nm,0.8s						
AAK	**Ala-Archa**	**5.63**	**263**	⇑Lg	Lg	08 36 19.6	
	5.7nm,1.0s						

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*IDC **13** 08:36:20.8±1.4, 10°.84S×164°.33E, h0^{km}, mb3.8/5, mb1 4.0/8, mb1mx3.8/31, mbtmp3.9/8, ML4.1/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/31, Error ellipse: s-maj=38.1km s-min=25.4km az=126.0*

*ISCJB **13** 08:36:23.5±1.0, 11°.0S±0°.1×164°.3E±0°.1, h29^{km}, mb3.6/5, MS2.9/1, Error ellipse: s-maj=20.3km s-min=15.8km az=156.3*

ISC 13 08:36:25.9±1.1**, 10°.9S**±0°.1×**164°.1E**±0°.1**, h29**^{km}**, n12,** σ1^{s}.**58**/9**, mb3.5**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.37**	**289**	Pn	**Pn**	**08 37 32.3**	**+2.0**
	13nm,0.3s,baz=187,slow=8.1,SNR=2.6						
HNR				Sn	**Sb**	**08 38 31.5**	**-2.7**
	26nm,0.3s,baz=206,slow=14,SNR=2.4						
HNR				LR	LR	08 39 17.6	
	comp=Z,94nm,18.7s,baz=120,slow=39						
DZM	**Mont Dzumac**	**11.36**	**169**	Pn	**Pn**	**08 39 05.5**	**-0.8**
	1.1nm,0.3s,baz=348,slow=19,SNR=13						
CTA	**Charters Tower**	**19.50**	**240**	P	**Pn**	**08 40 53.4**	**+1.1**
	0.3nm,0.3s,baz=72,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**29.50**	**221**	LR	LR	08 53 46.4	
	comp=Z,33nm,20.8s,baz=27,slow=35						
WRA	**Warramunga Arr**	**30.07**	**249**	P	**P**	**08 42 32.7**	**-0.2**
	0.4nm,0.7s,baz=78,slow=8.8,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**30.51**	**5**	T	T	09 14 29.0	
	baz=185						
H11N3	**WAKE ISLAND Hy**	**30.52**	**5**	T	T	09 14 27.6	
	baz=185						
H11N2	**WAKE ISLAND Hy**	**30.53**	**5**	T	T	09 14 28.1	
	baz=185						
ASAR	**Alice Springs**	**31.47**	**242**	P	**P**	**08 42 45.2**	**-0.1**
	0.4nm,0.7s,baz=67,slow=10,SNR=7.6						
SONM	**Songino Array**	**77.60**	**324**	P	**P**	**08 48 20.0**	**+0.6**
	0.3nm,0.5s,baz=126,slow=4.0,SNR=3.6						
ILAR	**Eielson Array**	**83.86**	**19**	P	**P**	**08 48 51.2**	**-1.2**
	0.8nm,0.7s,baz=231,slow=6.0,SNR=12						
MKAR	**Makanchi Array**	**92.32**	**317**	P	**P**	**08 49 33.8**	**+0.3**
	0.9nm,0.7s,baz=103,slow=6.3,SNR=7.9						

NNC 13 08:48:08.9±3.0**, 53°.55N**×**87°.78E, h0**^{km}**, mb3.6, mpv3.3, 6C-4D, Error ellipse: s-maj=23.9km s-min=10.8km az=59.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.80**	**284**	⇑Pg	Pn	08 48 40.6	-0.7
	6.6nm,0.5s						
ZAA0				⇑Lg	Lg	08 49 07.8	
	22nm,0.6s						
KURBB	**Kurchatov Arra**	**6.41**	**246**	⇑Pn	Pn	08 49 45.1	+0.5
	3.2nm,0.4s						
KURBB				⇓Sn	Sn	08 50 59.0	+0.6
	3.3nm,0.5s						
KURBB				⇑Lg	Lg	08 51 30.6	
	8.0nm,0.6s						
MK31	**Makanchi Array**	**7.63**	**210**	Pn	Pn	08 50 02.7	+1.4
	0.5nm,0.5s,baz=26,slow=11,SNR=15						
MK31				⇑Sn	Sn	08 51 28.8	+0.4
	0.5nm,0.5s,baz=32,slow=28,SNR=4.1						
MK31				⇓Lg	Lg	08 52 12.0	
	0.9nm,0.6s,baz=99,slow=6.7,SNR=4.9						
MAKZ	**Makanchi**	**7.71**	**211**	⇓Pn	Pn	08 50 03.9	+1.5
MAKZ				⇑Sn	Sn	08 51 30.9	+0.6
	1.0nm,0.6s						
MAKZ				⇓Lg	Lg	08 52 15.3	
	4.0nm,0.9s						

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*IDC **13** 09:06:13.3±1.3, 11°.50S×165°.92E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.7/36, mbtmp3.6/7, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/22, Error ellipse: s-maj=45.4km s-min=25.2km az=127.0*

*ISCJB **13** 09:06:16.6±0.9, 11°.79S±0°.08×166°.0E±0°.2, h37^{km}, mb3.5/6, MS3.3/1, Error ellipse: s-maj=27.4km s-min=10.9km az=176.5*

ISC 13 09:06:18.5±0.9**, 11°.64S**±0°.09×**166°.0E**±0°.2**, h37**^{km}**, n9,** σ1^{s}.**51**/9**, mb3.5**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.38**	**178**	Pn	**Pn**	**09 08 47.1**	**+2.1**
	1.0nm,0.3s,baz=290,slow=18,SNR=16						
DZM				Sn	**Sn**	**09 10 38.0**	**-2.2**
	0.2nm,0.3s,baz=288,slow=20,SNR=1.7						
WRA	**Warramunga Arr**	**31.50**	**251**	P	**P**	**09 12 36.4**	**-0.8**
	0.4nm,0.4s,baz=79,slow=9.0,SNR=6.5						
GUMO	**Guam**	**32.66**	**320**	LR	LR	09 24 18.3	
	comp=Z,62nm,21.6s,baz=88,slow=33						
ASAR	**Alice Springs**	**32.73**	**244**	P	**P**	**09 12 48.0**	**-0.1**
	0.8nm,0.7s,baz=69,slow=9.8,SNR=13						
SONM	**Songino Array**	**79.28**	**324**	P	**P**	**09 18 20.7**	**+0.4**
	0.2nm,0.5s,baz=131,slow=4.4,SNR=2.4						
ILAR	**Eielson Array**	**84.00**	**18**	P	**P**	**09 18 45.4**	**+0.7**
	0.1nm,0.5s,baz=232,slow=5.0,SNR=2.7						
MKAR	**Makanchi Array**	**94.11**	**317**	P	**P**	**09 19 33.7**	**+0.4**
	0.2nm,0.6s,baz=94,slow=6.2,SNR=3.4						
YKA	**Yellowknife Ar**	**95.40**	**27**	P	**P**	**09 19 37.0**	**-1.7**
	0.1nm,0.5s,baz=262,slow=4.5,SNR=3.1						
ARCES	**ARCESS Array B**	**116.97**	**345**	PKP	**PKPdf**	**09 24 58.6**	**-0.3**
	2.1nm,0.8s,baz=67,slow=1.3,SNR=5.6						

IDC 13 09:12:15.4±13.0**, 18°.30S**×**167°.38E, h0**^{km}**, mb4.0**/3**, mb1 4.2**/4**, mb1mx3.7**/32**, mbtmp4.0**/4**, ML3.8**/1**, Error ellipse: s-maj=233.5km s-min=38.6km az=73.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.86**	**193**	Pn	Pn	09 13 16.7	+0.6
	6.8nm,0.3s,baz=66,slow=8.4,SNR=183						
DZM				Sn	Sn	09 14 01.7	-0.5
	44nm,0.3s,baz=323,slow=20,SNR=12						
STKA	**Stephens Creek**	**26.90**	**235**	P	P	09 17 57.8	-0.4
	0.8nm,0.6s,baz=59,slow=7.6,SNR=4.5						
WRA	**Warramunga Arr**	**31.23**	**262**	P	P	09 18 36.6	-0.4
	0.4nm,0.4s,baz=90,slow=8.7,SNR=16						
ASAR	**Alice Springs**	**31.66**	**254**	P	P	09 18 41.2	+0.5
	3.6nm,0.4s,baz=82,slow=8.5,SNR=84						

IDC 13 09:26:35.8±15.0**, 21°.56S**×**177°.60W, h549**^{km}±89^{km}**, mb3.3**/4**, mb1 3.4**/6**, mb1mx3.0**/25**, mbtmp4.3**/6**, Error ellipse: s-maj=231.0km s-min=37.0km az=54.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.83**	**265**	P	P	09 29 43.3	-0.3
	0.4nm,0.3s,baz=78,slow=18,SNR=5.3						
URZ	**Urewera**	**17.26**	**194**	P	P	09 30 06.9	+0.2
	0.5nm,0.3s,baz=342,slow=6.1,SNR=6.4						
CTA	**Charters Tower**	**33.77**	**266**	P	P	09 32 32.9	+0.3
	5.0nm,0.5s,baz=88,slow=10,SNR=11						
STKA	**Stephens Creek**	**37.68**	**245**	P	P	09 33 03.9	-0.9
	1.6nm,0.5s,baz=92,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**44.65**	**258**	P	P	09 34 00.1	-0.1
	3.2nm,0.7s,baz=100,slow=7.4,SNR=38						
WRA	**Warramunga Arr**	**44.83**	**263**	P	P	09 34 01.4	-0.1
	0.9nm,0.4s,baz=95,slow=8.2,SNR=72						

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*IDC **13** 09:30:23.6±2.3, 19°.85S×177°.66W, h522^{km}±25^{km}, mb3.6/15, mb1 3.8/17, mb1mx3.7/25, mbtmp4.4/17, Error ellipse: s-maj=16.5km s-min=13.9km az=119.0*

*ISCJB **13** 09:30:26.5±0.2, 19°.95S±0°.04×177°.83W±0°.06, h569^{km}, mb4.1/46, Error ellipse: s-maj=7.8km s-min=4.4km az=24.7*

*WEL **13** 09:30:27.0, 19°.86S×177°.91W, h574^{km}*

*NEIC **13** 09:30:27.9±0.7, 19°.86S×177°.91W, h574^{km}±8^{km}, mb4.2/26, Error ellipse: s-maj=10.5km s-min=6.4km az=113.0*

ISC 13 09:30:27.5±0.5**, 19°.90S**±0°.09×**177°.79W**±0°.09**, h569**^{km}**, n142,** σ1^{s}.**15**/151**, mb4.1**/46**, 23C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.49**	**298**	*e*P	**P**	**09 31 54.7**	**+0.2**
MSVF				*e*S	**S**	**09 33 06.9**	**+1.4**
MARNC	**Mare, Loyalty**	**13.36**	**261**	*e*P	**P**	**09 33 19.5**	**-0.7**
PINNC	**Pines Island,**	**14.03**	**256**	*e*P	**P**	**09 33 26.6**	**-0.3**
DZM	**Mont Dzumac**	**14.88**	**259**	P	**P**	**09 33 33.8**	**-1.7**
	0.1nm,0.3s,baz=96,slow=19,SNR=1.9						
OUZ	**Omahuta**	**17.05**	**205**	*e*P	**P**	**09 33 57.0**	**+1.3**
	36nm,0.7s						
MXZ	**Matakaoa Point**	**17.93**	**190**	*e*P	**P**	**09 34 04.8**	**+1.2**
	61nm,1.1s						
MXZ	**Matakaoa Point**	**17.93**	**190**	P	**P**	**09 34 02.4**	**-1.2**
WMGZ	**Waiomatatini S**	**18.16**	**190**	P	**P**	**09 34 05.7**	**0.0**
HAZ	**Te Kaha**	**18.21**	**191**	P	**P**	**09 34 05.2**	**-0.9**
RUGZ	**Raukumara Rang**	**18.43**	**191**	P	**P**	**09 34 07.7**	**-0.7**
PUZ	**Puketiti**	**18.43**	**190**	P	**P**	**09 34 08.4**	**+0.1**
TGRZ	**Tauranga**	**18.51**	**195**	P	**P**	**09 34 10.1**	**+1.1**
TWGZ	**Tauwhareparae**	**18.58**	**191**	P	**P**	**09 34 10.0**	**+0.3**
TOZ	**Tahuroa Road**	**18.70**	**197**	P	**P**	**09 34 11.7**	**+1.0**

MWZ	**Matawai**	**18.82**	**191**	P	**P**	**09 34 09.6**	**-2.2**
URZ	**Urewera**	**18.82**	**193**	*e*P	**P**	**09 34 10.7**	**-1.1**
	25nm,0.8s						
URZ	**Urewera**	**18.82**	**193**	P	**P**	**09 34 08.9**	**-2.9**
	7.3nm,0.3s,baz=286,slow=2.5,SNR=46						
URZ	**Urewera**	**18.82**	**193**	P	**P**	**09 34 09.0**	**-2.8**
TKGZ	**Te Karaka**	**18.86**	**191**	P	**P**	**09 34 11.7**	**-0.4**
RAGZ	**Rawiri**	**18.99**	**192**	P	**P**	**09 34 12.7**	**-0.8**
MUGZ	**Murupara**	**19.11**	**193**	P	**P**	**09 34 12.5**	**-1.8**
RIGZ	**Rimuhau**	**19.13**	**191**	P	**P**	**09 34 14.3**	**-0.3**
PRRZ	**Plateau Road**	**19.21**	**194**	P	**P**	**09 34 14.2**	**-1.1**
SNGZ	**Shannon Statio**	**19.28**	**192**	P	**P**	**09 34 14.8**	**-1.2**
MRHZ	**Matea Rd**	**19.52**	**194**	P	**P**	**09 34 16.0**	**-2.2**
HIZ	**Hauiti**	**19.61**	**197**	*e*P	**P**	**09 34 18.3**	**-0.7**
	124nm,1.5s						
NMHZ	**Naumai**	**19.69**	**193**	P	**P**	**09 34 18.6**	**-1.2**
RATZ	**Rangitukua**	**19.70**	**195**	P	**P**	**09 34 19.7**	**-0.1**
BKZ	**Black Stump Fm**	**19.82**	**193**	P	**P**	**09 34 18.5**	**-2.5**
BFZ	**Birch Farm**	**21.33**	**193**	*e*P	**P**	**09 34 33.6**	**-0.9**
	115nm,1.6s						
THZ	**Tophouse**	**23.18**	**198**	*e*P	**P**	**09 34 51.0**	**-0.1**
	50nm,1.3s						
RPZ	**Rata Peaks**	**25.52**	**199**	P	**P**	**09 35 10.3**	**-1.4**
	14nm,0.7s,baz=18,slow=1.0,SNR=9.8						
WHZ	**Wether Hill Ro**	**28.46**	**201**	*e*P	**P**	**09 35 38.4**	**+1.0**
	62nm,0.6s						
STKA	**Stephens Creek**	**38.23**	**244**	P	**P**	**09 37 00.6**	**+0.9**
	2.7nm,0.5s,baz=92,slow=9.9,SNR=11						
JAY	**Jayapura**	**44.04**	**288**	P	**P**	**09 37 45.2**	**-0.7**
	18nm,0.9s,baz=158,slow=8.8,SNR=4.1						
AS01	**Alice Springs**	**44.81**	**256**	*e*P	**P**	**09 37 50.0**	**-1.7**
AS31	**Alice Springs**	**44.85**	**256**	*e*P	**P**	**09 37 51.2**	**-0.9**
	0.5nm,0.8s						
ASAR	**Alice Springs**	**44.85**	**256**	P	**P**	**09 37 52.6**	**+0.6**
	1.1nm,0.5s,baz=89,slow=7.5,SNR=26						
ASAR				PcP	**PcP**	**09 39 21.6**	**+0.1**
	1.1nm,0.5s,baz=108,slow=3.4,SNR=11						
ASAR				ScP	**ScP**	**09 42 25.2**	**+5.1**
	0.3nm,0.7s,baz=91,slow=6.9,SNR=3.0						
ASAR				S	**S**	**09 43 48.3**	**-0.6**
	1.7nm,0.8s,baz=94,slow=16,SNR=14						
WB2	**Warramunga Arr**	**44.87**	**261**	*e*P	**P**	**09 37 51.1**	**-1.1**
WRA	**Warramunga Arr**	**44.88**	**261**	P	**P**	**09 37 52.2**	**-0.1**
	1.5nm,0.5s,baz=97,slow=8.4,SNR=35						
WRA				PcP	**PcP**	**09 39 21.8**	**+0.1**
	0.6nm,0.6s,baz=93,slow=3.5,SNR=6.8						
WRA				S	**S**	**09 43 47.8**	**-1.6**
	0.8nm,0.8s,baz=96,slow=14,SNR=7.4						
VNDA	**Vanda**	**58.52**	**185**	P	**P**	**09 39 30.6**	**+1.3**
	7.9nm,1.1s,baz=18,slow=7.8,SNR=2.7						
MJAR	**Matsushiro Arr**	**69.84**	**323**	P	**P**	**09 40 41.6**	**-0.1**
	4.3nm,0.6s,baz=166,slow=6.1,SNR=14						
MAT	**Matsushiro**	**69.85**	**323**	P	**P**	**09 40 41.6**	**-0.1**
QSPA	**South Pole Qui**	**70.17**	**180**	*e*P	**P**	**09 40 44.4**	**+1.1**
	14nm,1.4s						
PETK	**Petropavlovsk-**	**75.74**	**345**	P	**P**	**09 41 14.8**	**-0.3**
	4.6nm,0.8s,baz=139,slow=9.2,SNR=7.4						
USRK	**Ussuriysk Ar.**	**78.58**	**326**	P	**P**	**09 41 32.1**	**+1.4**
	4.0nm,0.8s,baz=123,slow=2.9,SNR=10.0						
MDPB	**Devils Postpil**	**79.50**	**44**	*e*P	**P**	**09 41 35.9**	**-0.1**
	6.6nm,1.2s						
PNTR	**Pine Nut**	**80.01**	**42**	*e*P	**P**	**09 41 39.1**	**+0.5**
	7.8nm,0.8s						
YERR	**Yerington**	**80.17**	**42**	*e*P	**P**	**09 41 39.2**	**-0.3**
	3.3nm,0.7s						
NV01	**Mina Array Sit**	**80.45**	**43**	*e*P	**P**	**09 41 41.2**	**+0.2**
NVAR	**Mina Array Bea**	**80.45**	**43**	P	**P**	**09 41 41.4**	**+0.4**
	3.0nm,0.9s,baz=226,slow=9.1,SNR=8.3						
NV11	**Mina Array Sit**	**80.55**	**43**	*e*P	**P**	**09 41 41.5**	**+0.1**
	1.4nm,1.8s						
KVN	**Kaiserville**	**80.94**	**43**	*e*P	**P**	**09 41 43.4**	**-0.1**
	3.0nm,0.9s						
Y14A	**Wickenburg**	**81.65**	**49**	*e*P	**P**	**09 41 46.1**	**-0.9**
	2.9nm,0.8s						
PINE	**Pine Mountain**	**81.99**	**38**	*e*P	**P**	**09 41 49.4**	**+0.7**
	14nm,1.1s						
WVOR	**Wild Horse Val**	**82.55**	**40**	*e*P	**P**	**09 41 51.5**	**+0.1**
I07A	**Izee**	**83.00**	**38**	*e*P	**P**	**09 41 54.4**	**+0.8**
	4.4nm,0.8s						
X16A	**Lo Mia Camp, P**	**83.01**	**50**	*e*P	**P**	**09 41 55.4**	**+1.4**
	6.0nm,1.1s						
J08A	**Circle Bar Ran**	**83.18**	**39**	*e*P	**P**	**09 41 54.0**	**-0.6**
	24nm,1.9s						
CCUT	**Cedar City**	**83.25**	**46**	*e*P	**P**	**09 41 55.8**	**+0.5**
	2.9nm,0.9s						
U15A	**North Rim**	**83.41**	**48**	*e*P	**P**	**09 41 56.5**	**+0.3**
	6.0nm,0.8s						
GAMB	**Gambell**	**83.53**	**3**	*e*P	**P**	**09 41 56.1**	**+0.5**
	6.8nm,0.7s						
GAMB				*e*pP	**pP**	**09 43 56.3**	**-0.6**
G08A	**Pilot Rock**	**84.02**	**37**	*e*P	**P**	**09 41 58.8**	**+0.1**
	3.8nm,0.8s						
MTPU	**Mount Pierson**	**84.31**	**46**	*e*P	**P**	**09 42 01.9**	**+1.3**
	3.3nm,0.9s						
BMO	**Blue Mountains**	**84.72**	**38**	*e*P	**P**	**09 42 02.4**	**+0.2**
	2.1nm,0.8s						
TRF	**Thorofare Moun**	**85.82**	**12**	*e*P	**P**	**09 42 05.6**	**-1.5**
	38nm,1.8s						
RND	**Reindeer**	**86.07**	**13**	*e*P	**P**	**09 42 07.8**	**-0.3**
	13nm,1.0s						
MNTX	**Cornudas Mount**	**86.24**	**55**	*e*P	**P**	**09 42 10.5**	**+0.8**
	4.1nm,1.0s						
TX31	**Lajitas Ar. Si**	**86.57**	**57**	*e*P	**P**	**09 42 11.2**	**-0.1**
TXAR	**Lajitas Array**	**86.57**	**57**	P	**P**	**09 42 12.1**	**+0.8**
	1.2nm,0.6s,baz=217,slow=6.6,SNR=21						
HDA	**Harding Lake**	**87.36**	**13**	*e*P	**P**	**09 42 13.6**	**-0.4**
	5.8nm,0.6s						
IM3	**Indian Mountai**	**87.53**	**10**	*e*P	**P**	**09 42 14.6**	**-0.3**
MDM	**Murphy Dome**	**87.58**	**12**	*e*P	**P**	**09 42 14.1**	**-1.0**
	6.7nm,1.0s						
IL1	**Eielson Array**	**87.69**	**13**	*e*P	**P**	**09 42 14.5**	**-1.1**
ILAR	**Eielson Array**	**87.69**	**13**	P	**P**	**09 42 14.6**	**-1.1**
	2.2nm,0.8s,baz=216,slow=6.0,SNR=28						
S22A	**4UR Ranch, Cre**	**87.88**	**49**	*e*P	**P**	**09 42 18.1**	**+0.5**
	4.6nm,1.3s						
XAN	**Xi'an**	**87.93**	**307**	P	**P**	**09 42 18.8**	**+1.3**
XAN				pP	PcP	09 42 26.4	+7.7
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SNOW	**Snow King Moun**	**87.97**	**42**	*e*P	**P**	**09 42 18.4**	**+0.7**
	comp=Z,23nm,2.0s						
IMW	**Indian Meadow**	**88.07**	**42**	*e*P	**P**	**09 42 18.8**	**+0.5**
	comp=Z,2.5nm,0.8s						
PDAR	**Pinedale Array**	**88.39**	**43**	*e*P	**P**	**09 42 18.6**	**-1.1**
PDAR	**Pinedale Array**	**88.39**	**43**	P	**P**	**09 42 19.8**	**0.0**
	comp=Z,1.1nm,0.6s,baz=205,slow=3.7,SNR=14						
HHC	**Hu-ho-hao-te**	**89.08**	**314**	*e*P	**P**	**09 42 26.0**	**+3.2**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,60nm,5.6s						
CMAR	**Chiang Mai Arr**	**90.10**	**289**	P	**P**	**09 42 29.7**	**+1.8**
	comp=Z,1.3nm,0.4s,baz=102,slow=2.6,SNR=7.8						
YKA	**Yellowknife Ar**	**95.89**	**25**	P	**P**	**09 42 52.4**	**-0.9**
	comp=Z,0.3nm,0.9s,baz=248,slow=5.0,SNR=3.7						
KK06	**Karatay Array**	**119.01**	**309**	⇓P	**Pdif**	**09 44 35.0**	**-1.7**
KK05	**Karatay Array**	**119.02**	**309**	⇑P	**Pdif**	**09 44 35.2**	**-1.5**
KK02	**Karatay Array**	**119.02**	**309**	⇑P	**Pdif**	**09 44 35.3**	**-1.4**
KK31	**Karatay Array**	**119.02**	**309**	*e*Pdif	**Pdif**	**09 44 35.6**	**-1.2**
KK31				*e*PKPdf	**PKPdf**	**09 48 09.2**	**-3.0**
KK31	**Karatay Array**	**119.02**	**309**	⇓P	**Pdif**	**09 44 35.2**	**-1.5**
	comp=Z,0.6nm,0.4s,baz=215,slow=25,SNR=5.6						
KKAR	**Karatay Array**	**119.02**	**309**	*e*Pdif	**Pdif**	**09 44 35.6**	**-1.2**
KKAR				*e*PKPdf	**PKPdf**	**09 48 09.0**	**-3.1**
KK01	**Karatay Array**	**119.03**	**309**	⇑P	**Pdif**	**09 44 35.3**	**-1.4**
KK04	**Karatay Array**	**119.03**	**309**	⇑P	**Pdif**	**09 44 35.4**	**-1.4**
KK03	**Karatay Array**	**119.03**	**309**	⇑P	**Pdif**	**09 44 35.3**	**-1.5**
KK07	**Karatay Array**	**119.03**	**309**	⇑P	**Pdif**	**09 44 35.3**	**-1.4**
KK08	**Karatay Array**	**119.04**	**309**	⇑P	**Pdif**	**09 44 35.5**	**-1.3**
ARCES	**ARCESS Array B**	**128.37**	**350**	PKP	**PKPdf**	**09 48 28.6**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=45,slow=1.9,SNR=8.4						
FINES	**FINESS Array B**	**135.25**	**344**	PKP	**PKPdf**	**09 48 42.2**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=107,slow=2.0,SNR=5.5						
AKASG	**Malin Array Be**	**142.58**	**332**	PKhKP	PKPpre	09 48 52.1	
	comp=Z,3.1nm,0.5s,baz=44,slow=4.5,SNR=7.0						
AKBB	**Malin Array Si**	**142.58**	**332**	*e*PKPpre	PKPpre	09 48 52.6	
KIEV	**Kiev**	**142.59**	**332**	*e*PKPpre	PKPpre	09 48 52.4	
KIEV	**Kiev**	**142.59**	**332**	⇑*i*P	**PKPdf**	**09 48 52.7**	**-3.4**
AK11	**Malin Array Si**	**142.62**	**332**	*e*PKPpre	PKPpre	09 48 52.6	
BR131	**Keskin Array S**	**146.58**	**313**	*e*PKPbc	**PKPbc**	**09 49 05.7**	**-0.4**
BRTR	**Keskin Array B**	**146.58**	**313**	PKPbc	**PKPbc**	**09 49 05.8**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=136,slow=5.1,SNR=11						
BUR08	**Bucovina Ar. S**	**146.62**	**331**	*e*PKPbc	**PKPbc**	**09 49 06.2**	**+0.3**
BUR04	**Bucovina Ar. S**	**146.63**	**331**	*e*PKPbc	**PKPbc**	**09 49 06.4**	**+0.5**
BURAR	**Bucovina Array**	**146.63**	**331**	⇑*i*P	**PKPbc**	**09 49 06.7**	**+0.7**
CFR	**Carcaliu**	**146.91**	**326**	⇓*i*P	**PKPbc**	**09 49 06.8**	**+0.2**
VRI	**Vrincioaia**	**147.17**	**328**	⇑*i*P	**PKPbc**	**09 49 07.5**	**+0.2**
PLOR	**Plostina**	**147.22**	**328**	⇑*i*P	**PKPbc**	**09 49 07.4**	**-0.1**
TRPA	**Tarpa**	**147.39**	**334**	⇑*i*P	**PKPbc**	**09 49 08.1**	**+0.4**
CLL	**Collm**	**147.52**	**347**	*e*PKPbc	**PKPbc**	**09 49 08.2**	**+0.2**
CLL	**Collm**	**147.52**	**347**	⇓*i*PKPbc	**PKPbc**	**09 49 08.0**	**0.0**
	comp=Z,10.0nm,0.7s						
CLL				*e*PKPab	**PKPab**	**09 49 12.0**	**-0.1**
DPC	**Dobruska-Polom**	**147.61**	**343**	⇑*e*PKP	**PKPbc**	**09 49 09.1**	**+0.7**
DPC				*e*PKPAB	**PKPab**	**09 49 13.5**	**+0.9**
LANS	**Liptovska Anna**	**147.70**	**339**	*e*PKP	**PKiKP**	**09 49 09.6**	**-0.5**
BRG	**Berggiesshubel**	**147.73**	**346**	*i* PKP	**PKPbc**	**09 49 08.8**	**+0.2**
	comp=Z,6.1nm,0.6s						
BRG				*i*		09 49 12.6	
	comp=Z,5.9nm,0.8s						
MORC	**Moravsky Berou**	**147.78**	**341**	*e*PKP	**PKPbc**	**09 49 08.9**	**+0.1**
MLR	**Muntele Rosu**	**147.82**	**328**	⇓*i*P	**PKPbc**	**09 49 09.7**	**+0.5**
VOIR		**148.31**	**329**	⇑*i*P	**PKPbc**	**09 49 10.4**	**+0.1**
DRGR		**148.37**	**333**	⇑*i*P	**PKiKP**	**09 49 11.3**	**-0.3**
PRU	**Pruhonice**	**148.41**	**345**	⇑*e*PKP	**PKPbc**	**09 49 10.7**	**+0.4**
VYHS	**Vyhne**	**148.48**	**339**	*e*PKP	**PKPbc**	**09 49 11.1**	**+0.6**
ARR	**Arges**	**148.56**	**329**	⇑*i*P	**PKiKP**	**09 49 11.8**	**-0.2**
NKC	**Novy Kostel**	**148.66**	**347**	⇑*e*PKP	**PKPbc**	**09 49 11.5**	**+0.6**
KRUC	**Moravsky**	**148.75**	**342**	*e*PKP	**PKPbc**	**09 49 11.5**	**+0.3**
KRUC				*e*		09 49 17.3	
MODS	**Modra-Piesok**	**149.09**	**340**	*e*PKP	**PKPbc**	**09 49 12.2**	**+0.1**
MEM	**Membach**	**149.21**	**355**	⇓PKP	**PKPbc**	**09 49 12.1**	**-0.1**
GZR	**Gura Zlata**	**149.42**	**331**	⇑*i*P	**PKPbc**	**09 49 12.8**	**-0.2**
KHC	**Kasperske Hory**	**149.44**	**345**	*e*PKPbc	**PKPbc**	**09 49 13.2**	**+0.3**
KHC	**Kasperske Hory**	**149.44**	**345**	⇑*e*PKP	**PKiKP**	**09 49 13.4**	**-0.3**
KHC				*e*PKPAB	**PKPab**	**09 49 21.1**	**+1.0**
GEC2	**GERESS Array S**	**149.68**	**345**	*e*PKPbc	**PKPbc**	**09 49 13.7**	**+0.1**
GERES	**GERESS Array B**	**149.68**	**345**	PKPbc	**PKPbc**	**09 49 13.3**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=29,slow=3.0,SNR=24						
GEA0	**GERESS Array S**	**149.68**	**345**	*e*PKPbc	**PKPbc**	**09 49 13.6**	**0.0**
GEA0				*e*PKPab	**PKPab**	**09 49 21.3**	**+0.1**
BZS	**Buzias**	**149.76**	**332**	⇑*i*P	**PKPbc**	**09 49 13.8**	**+0.1**
DOU	**Dourbes**	**149.81**	**357**	⇑PKP	**PKPbc**	**09 49 13.3**	**-0.4**
CONA	**Conrad Observa**	**149.93**	**342**	*i* PKiKP	**PKPbc**	**09 49 13.9**	**-0.3**
	comp=Z,4.5nm,0.6s						
HERR	**Herculane**	**149.97**	**331**	⇑*i*P	**PKPbc**	**09 49 14.2**	**0.0**
WLF	**Walferdange**	**150.13**	**355**	⇓PKP	**PKiKP**	**09 49 15.2**	**+0.2**
MOA	**Molln**	**150.45**	**343**	*e*PKiKP	**PKPbc**	**09 49 15.1**	**-0.2**
	comp=Z,3.7nm,0.8s						
KBA	**Koelnbreinsper**	**151.41**	**344**	*e*PKPbc	**PKPbc**	**09 49 16.4**	**-1.3**
	comp=Z,15nm,1.6s						
SQTA	**Sankt Quirin**	**151.78**	**347**	*e*PKiKP	**PKPbc**	**09 49 18.2**	**-0.2**
	comp=Z,3.2nm,0.6s						
ABTA	**Abfaltersbach**	**151.92**	**345**	*e*PKPbc	**PKPbc**	**09 49 18.0**	**-0.7**
	comp=Z,4.0nm,0.5s						

KRNET ***13*** *09:49:34.8±0.1, 40°.91N×69°.23E, mb2.9*
SOME ***13*** *09:49:36.0, 40°.92N×69°.82E, h15^{km}*
NNC ***13*** *09:49:37.4±1.6, 41°.06N×69°.88E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=10.7km s-min=7.7km az=26.0*
ISC 13 09:49:37.8±1.7**, 41°.03N**±0°.04×**69°.88E**±0°.07**, h19**^{km}±14^{km}**, n20,** σ**2^{s}.68**/31**, 14C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.12**	**6**	*e*P	**Pn**	**09 49 58.4**	**-0.1**
	38nm,0.1s						
IUG				*e*S	**Sb**	**09 50 14.0**	**+1.2**
	53nm,0.5s						
BTK	**Batken**	**1.21**	**143**	⇑*i*P	**Pg**	**09 50 01.4**	**+0.2**
	baz=25						
BTK				⇑*i*S	**Sg**	**09 50 20.8**	**+3.8**
	baz=25						
ARK	**Arkit**	**1.74**	**63**	⇓*i*P	**Pg**	**09 50 11.6**	**+0.3**
	baz=66						
ARK				⇓*i*S	**Sg**	**09 50 39.2**	**+5.2**
	baz=66						
KK31	**Karatay Array**	**2.12**	**13**	Pg	**Pb**	**09 50 15.2**	**-0.4**
	4.2nm,0.5s,baz=200,slow=18,SNR=59						
KK31				Lg	Lg	09 50 44.7	
	11nm,0.5s,baz=177,slow=12,SNR=23						
DRK	**Karamyk**	**2.14**	**136**	⇑*e*P	**Pb**	**09 50 14.9**	**-1.1**
	baz=25						
DRK				⇑*i*S	**Sg**	**09 50 43.8**	**-2.8**
	baz=25						
MNAS	**Manas**	**2.44**	**53**	⇑Pg	**Pb**	**09 50 21.8**	**+0.7**
	3.5nm,0.6s						
MNAS				⇓Lg	Lg	09 50 56.1	
	6.9nm,0.6s						
MNAS	**Manas**	**2.44**	**53**	Pg	**Pb**	**09 50 21.7**	**+0.5**
	2.0nm,0.6s						
MNAS				Lg	Lg	09 50 53.7	
	3.8nm,0.7s						
MNAS	**Manas**	**2.44**	**53**	⇑*i*P	**Pb**	**09 50 21.4**	**+0.3**
	baz=56						
MNAS				⇑*i*S	**Sg**	**09 50 55.6**	**-0.7**
	baz=56						
MRKS	**Merke**	**3.03**	**54**	Pg	**Pb**	**09 50 32.7**	**+1.6**
	4.7nm,0.3s						
MRKS				Lg	Lg	09 51 12.3	
	6.0nm,0.5s						
MRKS	**Merke**	**3.03**	**54**	*e*P	**Pb**	**09 50 32.2**	**+1.1**
	4.7nm,0.3s						
MRKS				*e*S	**Sb**	**09 51 12.3**	**+4.6**
	6.0nm,0.5s						
AML	**Almayashu**	**3.06**	**68**	⇑*i*P	**Pb**	**09 50 31.3**	**-0.6**
	baz=69						
AML				⇑*i*S	**Sb**	**09 51 11.0**	**+2.0**
	baz=69						
EKS2	**Erkin-Say**	**3.33**	**60**	⇓*i*P	**Pb**	**09 50 33.4**	**-2.9**
	baz=61						
EKS2				⇓*i*S	**Sb**	**09 51 17.4**	**+0.8**
	baz=61						
ARLS	**Aral**	**3.44**	**75**	⇑*i*P	**Pb**	**09 50 35.4**	**-2.8**
	baz=74						
ARLS				⇑*i*S	**Sb**	**09 51 20.6**	**+1.0**
	baz=74						
UCH	**Uchtor**	**3.67**	**70**	⇑*i*P	**Pb**	**09 50 39.7**	**-2.6**
	baz=70						
UCH				⇑*i*S	**Sb**	**09 51 26.0**	**-0.6**
	baz=70						
TKM2	**Tokmak 2**	**4.66**	**64**	⇓Pg	**Pb**	**09 51 02.0**	**+3.0**
	1.7nm,0.6s						
TKM2				⇑Lg	Lg	09 52 04.6	
	5.0nm,0.7s						
DGS	**Degeres**	**4.91**	**61**	Pg	**Pb**	**09 51 05.5**	**+2.4**
	3.0nm,0.6s						
DGS				Lg	Lg	09 52 10.4	
	7.0nm,0.7s						
KST	**Kastek**	**4.95**	**64**	Pg	**Pb**	**09 51 07.5**	**+3.6**
	4.4nm,0.6s						
KST				Lg	Lg	09 52 13.6	
	3.8nm,0.7s						
KST	**Kastek**	**4.95**	**64**	*e*P	**Pb**	**09 51 07.8**	**+3.8**
	4.4nm,0.6s						
KST				*e*S	**Sg**	**09 52 13.6**	**-3.2**
	3.8nm,0.7s						
KUU	**Kurty**	**5.57**	**57**	Pg	**Pg**	**09 51 20.2**	**-4.1**
	2.3nm,0.6s						
KUU				Lg	Lg	09 52 35.0	
	4.6nm,0.8s						
KTBS	**Karatobe**	**5.70**	**60**	Pg	**Pg**	**09 51 22.8**	**-4.2**
	0.9nm,0.5s						
KTBS				Lg	Lg	09 52 38.1	
	2.2nm,0.8s						

IDC ***13*** *09:53:35.8±0.7, 38°.02N×118°.10W, h0^{km}, mb3.1/1, mb1 3.5/7, mb1mx3.3/52, mbtmp3.2/7, ML3.2/6, MS3.0/5, Ms1 3.0/5, ms1mx2.7/14, Error ellipse: s-maj=8.4km s-min=5.2km az=64.0*
ANF ***13*** *09:53:35.2±0.3, 38°.07N×118°.03W, h6^{km}±2^{km}, ML4.2/18, Error ellipse: s-maj=2.7km s-min=1.7km az=155.0*
REN ***13*** *09:53:35.9, 38°.03N×118°.05W, h5^{km}, ML4.0, MW3.9(USGS)*
NEIC ***13*** *09:53:35.9±0.0, 38°.03N×118°.05W, h5^{km}, MW3.9, ML4.0(REN), Moment Tensor Solution. s61 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.96; $M_{\theta\theta}$-5.03; $M_{\phi\phi}$5.99; $M_{r\theta}$3.38; $M_{\theta\phi}$4.12; $M_{\phi r}$-0.78; Best double couple: $M_0$7.80000×10^{14} NP1:ϕ_s240.00000°, δ74.00000°, λ-21.00000°. NP2:ϕ_s337.00000°, δ70.00000°, λ-163.00000°. Principal axes: T 7.3800, Plg3.0000°, Azm289.0000°; N 0.7000, Plg64.0000°, Azm24.0000°; P -8.0800, Plg26.0000°, Azm198.0000°; After REN.*
ISC 13 09:53:36.0±1.2**, 38°.02N**±0°.03×**118°.06W**±0°.03**, h3**^{km}±10^{km}**, n39,** σ**1^{s}.13**/54**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**0.46**	**335**	LR	LR	09 53 34.5	
	comp=Z,56nm,20.0s,baz=143,slow=3.2						
NVAR				Pg	**Pg**	**09 53 44.0**	**-0.7**
	572nm,0.3s,baz=163,slow=19,SNR=1986						
NVAR				Lg	Lg	09 53 49.2	
	4µm,0.3s,baz=158,slow=33,SNR=121						
RYN	**Ryan**	**0.71**	**329**	Pg	**Pg**	**09 53 49.3**	**-0.3**
MLAC	**Mammoth, Mammo**	**0.73**	**238**	P	**Pg**	**09 53 50.2**	**+0.3**
	baz=57						
MLAC				S	**Sb**	**09 54 00.9**	**-1.1**
	baz=57						
OMMB	**Old Mammoth Mi**	**0.85**	**242**	Pg	**Pg**	**09 53 52.4**	**+0.1**
OMMB				Sg	**Sg**	**09 54 03.7**	**+0.5**
MDPB	**Devils Postpil**	**0.90**	**245**	Pg	**Pg**	**09 53 53.3**	**+0.1**
MDPB				Sg	**Sg**	**09 54 05.2**	**+0.5**
TIN	**Tinemaha, Big**	**0.97**	**188**	P	**Pg**	**09 53 54.8**	**+0.2**
	baz=9.3						
KVN	**Kaiserville**	**1.03**	**358**	Pg	**Pg**	**09 53 55.4**	**-0.4**
GRAC	**Grapevine Rang**	**1.16**	**151**	P	**Pg**	**09 53 58.0**	**-0.2**
	baz=334						
GRAC				S	**Sb**	**09 54 14.3**	**+0.2**
	baz=334						
WAKR	**Walker**	**1.19**	**295**	Pg	**Pg**	**09 53 58.8**	**0.0**
YERR	**Yerington**	**1.34**	**317**	Pn	**Pg**	**09 54 00.7**	**-1.0**
CWC	**Cottonwood Cre**	**1.57**	**181**	P	**Pn**	**09 54 04.6**	**-0.4**
	baz=1.6						
CWC				S	**Sn**	**09 54 26.1**	**+0.1**
	baz=1.6						
PNTR	**Pine Nut**	**1.61**	**312**	Pn	**Pn**	**09 54 05.6**	**0.0**
DAC	**Darwin (Calif)**	**1.78**	**168**	*e*Pn	**Pn**	**09 54 07.0**	**-0.8**
DAC				*e*Sn	**Sb**	**09 54 32.5**	**+0.5**
TPNV	**Topopah Spring**	**1.79**	**126**	Pn	**Pn**	**09 54 05.4**	**-2.6**
TPNV				Sn	**Sg**	**09 54 36.0**	**+2.4**
TPNV	**Topopah Spring**	**1.79**	**126**	P	**Pn**	**09 54 07.0**	**-1.0**
	baz=308						
FURC	**Furnace Creek,**	**1.82**	**148**	Sb	**Sg**	**09 54 34.6**	**+0.2**
	baz=330						
CMB	**Columbia Colle**	**1.84**	**271**	*e*Pn	**Pn**	**09 54 07.5**	**-1.0**
CMB				*e*Sn	**Sn**	**09 54 31.8**	**-0.6**
R11A	**Troy Canyon, C**	**1.98**	**80**	P	**Pn**	**09 54 08.5**	**-2.1**
	baz=262						
R11A				Sb	**Sb**	**09 54 37.8**	**-0.1**
	baz=262						
VOG	**Valley Oaks Go**	**2.00**	**212**	Pb	**Pb**	**09 54 13.0**	**+0.1**
	baz=32						
VOG				Sb	**Sg**	**09 54 39.7**	**-0.4**
	baz=32						
MPMC	**Manual Prospec**	**2.01**	**167**	P	**Pn**	**09 54 10.3**	**-0.7**
	baz=348						
MPMC				Sb	**Sg**	**09 54 40.6**	**+0.1**
	baz=348						
VES	**Vestal, Richgr**	**2.32**	**201**	Pb	**Pb**	**09 54 18.8**	**+0.2**
	baz=21						
VES				Sb	**Sg**	**09 54 50.2**	**-0.4**
	baz=21						
ISA	**Isabella, Lake**	**2.37**	**188**	P	**Pn**	**09 54 16.0**	**+0.1**
	baz=8.5						
ISA				Sb	**Sg**	**09 54 51.4**	**-0.9**
	baz=8.5						
LRMC	**Laurel Mtn Rad**	**2.55**	**173**	P	**Pn**	**09 54 17.9**	**-0.5**
	baz=354						
SHOC	**Shoshone, Teco**	**2.55**	**145**	P	**Pn**	**09 54 17.6**	**-0.7**
	baz=328						
SHOC				Sb	**Sg**	**09 54 57.1**	**-0.9**
	baz=328						
GSC	**Goldstone, Bar**	**2.89**	**159**	P	**Pn**	**09 54 22.4**	**-0.6**
	baz=341						
GSC				Sb	**Sg**	**09 55 08.3**	**-0.6**
	baz=341						
ARVC	**Arvin**	**2.95**	**192**	Pb	**Pb**	**09 54 29.8**	**+0.6**
	baz=12						
ARVC				Sb	**Sg**	**09 55 09.1**	**-1.7**
	baz=12						
TUQ	**Turquoise Moun**	**3.10**	**146**	P	**Pn**	**09 54 25.0**	**-0.9**
	baz=328						
SMMC	**Simmler**	**3.12**	**211**	P	**Pn**	**09 54 26.3**	**+0.3**
	baz=30						
EDW2	**Edwards Air Fo**	**3.13**	**179**	Pb	**Pb**	**09 54 33.8**	**+1.5**
	baz=360						
ELK	**Elko**	**3.49**	**38**	Pn	**Pn**	**09 54 30.6**	**-0.8**
	2.8nm,0.3s,baz=229,slow=11,SNR=34						
ELK				Lg	Lg	09 55 24.4	
	66nm,0.3s,baz=176,slow=5.9,SNR=23						
ELK				LR	LR	09 56 15.6	
	comp=Z,128nm,18.9s,baz=214,slow=46						
PFO	**Pinyon Flats O**	**4.58**	**163**	Pn	**Pn**	**09 54 45.5**	**-0.9**
	0.2nm,0.3s,baz=351,slow=11,SNR=4.0						
PFO				Pg	**Pb**	**09 54 57.1**	**-0.1**
	0.5nm,0.3s,baz=16,slow=16,SNR=5.6						
PFO				Lg	Lg	09 55 58.0	
	0.7nm,0.3s,baz=68,slow=19,SNR=2.0						
YBH	**Yreka Blue Hor**	**5.15**	**317**	Pn	**Pn**	**09 54 54.6**	**+0.5**
	0.3nm,0.3s,baz=216,slow=19,SNR=8.8						
YBH				Lg	Lg	09 56 17.6	
	0.3nm,0.3s,baz=201,slow=17,SNR=1.9						
YBH				LR	LR	09 57 09.4	
	comp=Z,138nm,20.0s,baz=146,slow=42						
WUAZ	**Wupatki**	**5.92**	**113**	*e*Pn	**Pn**	**09 55 05.9**	**+1.1**
PDAR	**Pinedale Array**	**8.04**	**51**	Pn	**Pn**	**09 55 37.8**	**+3.9**
	0.0nm,0.3s,baz=221,slow=11,SNR=8.4						
PDAR				Lg	Lg	09 57 43.5	
	0.2nm,0.3s,baz=224,slow=15,SNR=3.5						
ANMO	**Albuquerque**	**9.83**	**105**	Pg	Pn	09 56 30.1	+32
	0.1nm,0.3s,baz=282,slow=9.6,SNR=4.9						
ANMO				Lg	Lg	09 58 45.8	
	0.0nm,0.3s,baz=338,slow=19,SNR=2.8						
NEW	**Newport**	**10.27**	**4**	Pn	**Pn**	**09 56 05.9**	**+1.7**
	0.1nm,0.3s,baz=86,slow=15,SNR=2.1						
NEW				LR	LR	09 59 55.4	
	comp=Z,91nm,18.2s,baz=242,slow=37						
TXAR	**Lajitas Array**	**14.77**	**122**	Pn	**P**	**09 57 09.9**	**-2.2**
	0.0nm,0.3s,baz=332,slow=7.5,SNR=2.8						
TXAR				LR	LR	10 02 04.8	
	comp=Z,43nm,21.4s,baz=0.0,slow=34						
YKA	**Yellowknife Ar**	**24.60**	**4**	P	**P**	**09 58 59.0**	**+1.9**
	0.3nm,0.7s,baz=179,slow=9.0,SNR=9.9						
TKL	**Tuckaleechee C**	**27.45**	**84**	LR	LR	10 10 47.8	
	comp=Z,62nm,20.2s,baz=320,slow=38						

ISCJB ***13*** *10:02:06.2±0.6, 6°.54S±0°.05×129°.92E±0°.07, h146^{km}, mb3.9/6, Error ellipse: s-maj=10.3km s-min=6.5km az=5.6*
IDC ***13*** *10:02:06.4±1.7, 6°.54S×129°.92E, h123^{km}±17^{km}, mb3.7/7, mb1 3.7/11, mb1mx3.5/48, mbtmp4.1/11, Error ellipse: s-maj=18.0km s-min=12.1km az=86.0*
ISC 13 10:02:07.3±0.7**, 6°.60S**±0°.07×**129°.97E**±0°.10**, h146**^{km}**, n12,** σ**2^{s}.19**/15**, mb3.9**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.84**	**13**	P	**Pn**	**10 03 30.4**	**-1.4**
	0.5nm,0.3s,baz=211,slow=19,SNR=1.9						
SIJI				S	**Sn**	**10 04 35.3**	**-2.6**
	4.0nm,0.3s,baz=205,slow=7.3,SNR=4.6						
BATI	**Baumata**	**7.20**	**240**	P	**Pn**	**10 03 50.0**	**0.0**
BATI	**Baumata**	**7.20**	**240**	P	**Pn**	**10 03 50.7**	**+0.7**
	6.8nm,0.3s,baz=112,slow=19,SNR=4.3						
BATI				S	**Sn**	**10 05 08.8**	**-1.9**
	10nm,0.3s,baz=127,slow=3.6,SNR=7.8						
WRA	**Warramunga Arr**	**13.93**	**163**	P	**Pn**	**10 05 17.6**	**-0.9**
	0.4nm,0.3s,baz=346,slow=10,SNR=21						
WRA				S	Sn	10 07 45.8	-7.0
	0.9nm,0.3s,baz=336,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**17.39**	**168**	P	**Pn**	**10 06 03.5**	**+2.3**
	0.6nm,0.3s,baz=336,slow=8.3,SNR=34						
ASAR				S	**S**	**10 09 08.9**	**-5.0**
	0.1nm,0.3s,baz=355,slow=27,SNR=4.8						
CTA	**Charters Tower**	**20.73**	**132**	P	**P**	**10 06 38.5**	**+2.1**
	2.2nm,0.5s,baz=328,slow=9.5,SNR=3.2						
STKA	**Stephens Creek**	**27.39**	**158**	P	**P**	**10 07 40.2**	**+1.1**
	1.2nm,0.3s,baz=342,slow=7.5,SNR=8.9						
CMAR	**Chiang Mai Arr**	**39.45**	**310**	P	**P**	**10 09 23.0**	**-0.5**
	0.4nm,0.3s,baz=128,slow=8.1,SNR=2.9						
SONM	**Songino Array**	**58.05**	**341**	P	**P**	**10 11 46.7**	**+1.5**
	0.3nm,0.7s,baz=148,slow=6.2,SNR=3.3						
MKAR	**Makanchi Array**	**67.88**	**327**	P	**P**	**10 12 51.3**	**+1.3**
	3.3nm,0.4s,baz=115,slow=8.4,SNR=83						
AAK	**Ala-Archa**	**70.22**	**320**	P	**P**	**10 13 06.3**	**+1.6**
	0.8nm,0.4s,baz=148,slow=9.2,SNR=3.8						
KURBB	**Kurchatov Arra**	**72.16**	**328**	P	**P**	**10 13 17.0**	**+1.0**
	2.3nm,0.2s,baz=120,slow=5.5,SNR=6.0						

IDC ***13*** *10:08:47.0±0.5, 10°.79S×164°.32E, h0^{km}, mb4.8/20,* *mb1 5.0/23,mb1mx4.9/31,mbtmp4.8/23,ML4.9/3,MS4.9/25, Ms1 4.9/25,ms1mx4.8/33,Error ellipse: s-maj=17.3km s-min=13.1km az=91.0*

BJI ***13*** *10:08:48.4,10°.43S×164°.32E,h11^{km},mB5.5/50,mb4.9/61, Ms5.3/62,Ms7 5.0/58*

NEIC ***13*** *10:08:50.8±2.8,10°.79S×164°.26E,h20^{km}±17^{km}, mb5.2/106,MS5.2/82,MW5.4,Error ellipse: s-maj=5.9km s-min=5.0km az=130.0,Moment Tensor Solution. s55 Moment tensor: Scale 10^{17}Nm; M_{rr}1.42; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-0.32; $M_{r\theta}$0.58; $M_{\theta\phi}$0.40; $M_{\phi r}$-0.42; Best double couple: $M_0$1.50000×10^{17} NP1:ϕ_s118.00000°,δ59.00000°, λ95.00000°. NP2:ϕ_s288.00000°,δ31.00000°,λ81.00000°. Principal axes: T 1.6000, Plg75.0000°, Azm44.0000°; N -0.1600, Plg5.0000°, Azm296.0000°; P -1.4400, Plg14.0000°, Azm205.0000°;*

ISCJB ***13*** *10:08:50.7±0.2,10°.74S±0°.03×164°.18E±0°.03,h29^{km}, mb5.1/157,MS5.1/130 Error ellipse: s-maj=5.0km s-min=3.9km az=136.4*

GCMT ***13*** *10:08:52.8±0.1,10°.92S±0°.01×164°.42E±0°.01,h12^{km}, MW5.6/133,Moment Tensor Solution. s114,c202; s133,c251; Duration: 1^s.5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.23±.03; $M_{\theta\theta}$-1.27±.03; $M_{\phi\phi}$-0.95±.03; $M_{r\theta}$1.28±.07; $M_{\theta\phi}$1.40±.02; $M_{\phi r}$-0.75±.07; Best double couple: $M_0$2.80300×10^{17} NP1:ϕ_s125.00000°,δ61.00000°, λ83.00000°. NP2:ϕ_s320.00000°,δ30.00000°,λ103.00000°. Principal axes: T 2.6730, Plg73.0000°, Azm18.0000°; N 0.2620, Plg6.0000°, Azm129.0000°; P -2.9330, Plg16.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***13*** *10:08:53.3±1.1,10°.69S×164°.07E,h20^{km},mb5.4/37, MS5.0/14 Error ellipse: s-maj=9.2km s-min=7.2km az=102.9*

ISC 13 10:08:52.0±0.3**,10°.83S**±0°.04×**164°.39E**±0°.04**,h29**^{km}**,n423,** σ**1^s.94**/367**,mb5.2**/157**,MS5.1**/131**,7C-3D,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.59	287	iP	Pn	10 10 01.0	+1.5
HNR				iS	Sn	10 10 55.0	+3.1
HNR	Honiara	4.59	287	ePn	Pn	10 10 00.1	+0.6
HNR				Sn	Sn	10 10 56.3	+4.3
HNR				eSn	Sb	10 11 01.9	-4.9
HNR	Honiara	4.59	287	Pn	Pn	10 09 58.7	-0.8
	151nm,0.3s,baz=188,slow=2.9,SNR=19						
HNR				Sn	Sn	10 10 56.3	+4.3
	51nm,0.3s,baz=137,slow=19,SNR=4.0						
MARNC	Mare, Loyalty	11.15	162	ePn	Pn	10 11 28.8	-0.8
DZM	Mont Dzumac	11.35	170	ePn	Pn	10 11 29.8	-2.5
	94nm,0.7s						
DZM	Mont Dzumac	11.35	170	Pn	Pn	10 11 29.6	-2.7
	4.3nm,0.3s,baz=339,slow=12,SNR=46						
DZM				Sn	Sn	10 13 33.0	-5.2
	1.1nm,0.3s,baz=353,slow=19,SNR=1.6						
DZM				LR	LR	10 15 07.6	
	comp=Z,11µm,19.0s,baz=14,slow=33						
PINNC	Pines Island,	12.07	166	ePn	Pn	10 11 41.4	-0.8
TARA	Tarawa	14.79	36	ePn	Pn	10 12 18.3	-1.0
TARA				eSn	Sn	10 14 59.9	-2.4
PATS	Pohnpei	18.57	341	eP	Pn	10 13 07.4	+0.2
	205nm,1.1s						
MANU	Manus Island	19.02	296	eP	Pn	10 13 13.0	+0.3
	835nm,1.5s						
EIDS	Eidsvold	19.18	219	P	Pn	10 13 16.2	+1.7
	baz=20,SNR=10						
EIDS	Eidsvold	19.18	219	eP	Pn	10 13 16.3	+1.8
	120nm,1.0s						
CTA	Charters Tower	19.74	240	P	P	10 13 19.0	-0.6
	1.7nm,0.3s,baz=67,slow=13,SNR=36						
CTA				LR	LR	10 19 34.2	
	comp=Z,6µm,21.6s,baz=60,slow=33						
CTAO	Charters Tower	19.74	240	eP	P	10 13 18.3	-1.3
	176nm,1.0s						
CTAO				eS	Sn	10 17 02.1	-0.2
CTAO	Charters Tower	19.74	240	eP	P	10 13 18.3	-1.3
CTAO				pmax	pmax		
	comp=Z,175nm,1.0s						
MTSU	Mount Surprise	20.73	247	P	P	10 13 30.3	-0.1
	baz=21,SNR=17						
COEN	Coen	20.95	259	P	P	10 13 32.2	-0.6
	baz=21,SNR=21						
COEN	Coen	20.95	259	eP	P	10 13 32.0	-0.8
	comp=Z,69nm,1.0s						
RMQ	Roma	21.45	221	P	P	10 13 39.7	+1.6
	baz=22,SNR=24						
ARMA	Armidale	22.82	209	P	P	10 13 54.1	+1.3
	baz=23,SNR=6.8						
ARMA	Armidale	22.82	209	eP	P	10 13 53.7	+0.9
	comp=Z,53nm,1.0s						
JAY	Jayapura	24.91	288	LR	LR	10 23 46.8	
	comp=Z,4µm,21.4s,baz=65,slow=36						
MGCD	Mangrove Creek	25.39	207	P	P	10 14 19.5	+2.5
	baz=26,SNR=4.2						
OUZ	Omahuta	25.68	162	eP	P	10 14 24.4	+4.8
	comp=Z,178nm,1.6s						
QIS	Mount Isa	25.71	245	P	P	10 14 18.7	-1.3
	baz=26,SNR=7.2						
CMSA	Cobar Meteorol	26.90	217	P	P	10 14 30.3	-0.4
	baz=27,SNR=9.3						
YNG	Young	27.55	210	P	P	10 14 37.5	+1.0
	baz=28,SNR=5.3						
CNB	Canberra Magne	27.94	207	P	P	10 14 41.7	+1.7
	baz=28,SNR=5.1						
H11S2	WAKE ISLAND Hy	29.23	5	T	T	10 45 22.0	
	baz=191,slow=74,SNR=32						
H11S3	WAKE ISLAND Hy	29.23	4	T	T	10 45 25.3	
	baz=191						
H11S1	WAKE ISLAND Hy	29.25	4	T	T	10 45 20.3	
	baz=191,slow=74,SNR=21						
URZ	Urewera	29.59	159	P	P	10 14 54.2	-0.4
	comp=Z,3.8nm,0.9s,baz=0.1,slow=19,SNR=2.5						
URZ				LR	LR	10 26 20.8	
	comp=Z,3µm,18.8s,baz=339,slow=36						
STKA	Stephens Creek	29.70	222	P	P	10 14 56.6	+1.1
	baz=30,SNR=7.1						
STKA	Stephens Creek	29.70	222	eP	P	10 14 56.7	+1.1
	comp=Z,20nm,1.3s						
STKA	Stephens Creek	29.70	222	P	P	10 14 55.6	0.0
	comp=Z,24nm,1.0s,baz=24,slow=7.6,SNR=22						
STKA				LR	LR	10 25 36.6	
	comp=Z,5µm,21.5s,baz=42,slow=34						
BKZ	Black Stump Fm	30.21	161	eP	P	10 15 06.4	+6.3
	comp=Z,32nm,0.8s						
WRAB	Tennant Creek	30.30	249	eP	P	10 14 59.6	-1.5
	comp=Z,65nm,1.1s						
WRAB				LR	LR		
	comp=Z,5µm,22.0s						
WRAB	Tennant Creek	30.30	249	ceP	P	10 14 59.3	-1.8
WRAB				pmax	pmax		
	comp=Z,46nm,1.3s						
WB2	Warramunga Arr	30.30	249	eP	P	10 14 59.5	-1.6
	comp=Z,73nm,1.1s						
WRA	Warramunga Arr	30.31	249	iP	P	10 14 59.0	-2.2
WRA				pmax	pmax		
	comp=Z,27nm,1.0s						
WRA	Warramunga Arr	30.31	249	P	P	10 14 58.4	-2.9
	comp=Z,27nm,1.0s,baz=77,slow=9.0,SNR=38						
WRA				LR	LR	10 26 04.3	
	comp=Z,4µm,21.6s,baz=75,slow=34						
H11N1	WAKE ISLAND Hy	30.45	5	T	T	10 46 59.3	
	baz=184,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	30.46	5	T	T	10 46 56.5	
	baz=184,slow=76,SNR=42						
H11N2	WAKE ISLAND Hy	30.47	5	T	T	10 46 55.3	
	baz=184,slow=76,SNR=30						
GUMO	Guam	31.05	321	PFAKE		10 15 20.0	+12
GUMO				LR	LR		
	comp=Z,6µm,19.0s						
GUMO	Guam	31.05	321	LR	LR	10 27 03.5	
	comp=Z,2µm,19.2s,baz=142,slow=35						
KDU	Kakadu	31.29	263	P	P	10 15 07.6	-2.3
	baz=31,SNR=11						
TOO	Toolangi	31.58	209	P	P	10 15 12.8	+0.6
	baz=32,SNR=4.6						
TOO	Toolangi	31.58	209	eP	P	10 15 13.2	+0.9
	comp=Z,61nm,1.4s						
TOO	Toolangi	31.58	209	P	P	10 15 15.2	+3.0
TOO				pmax	pmax		
	comp=Z,32nm,1.3s						
AS01	Alice Springs	31.66	242	eP	P	10 15 11.2	-1.9
AS31	Alice Springs	31.70	242	eP	P	10 15 10.9	-2.5
	comp=Z,5.4nm,1.0s						
ASAR	Alice Springs	31.70	242	P	P	10 15 10.9	-2.6
	comp=Z,7.9nm,0.9s,baz=72,slow=9.4,SNR=38						
ASAR				LR	LR	10 26 38.9	
	comp=Z,4µm,21.0s,baz=70,slow=34						
HTT	Hallett	32.42	222	P	P	10 15 20.3	+0.7
	baz=33,SNR=9.9						
RPZ	Rata Peaks	33.27	171	eP	P	10 15 31.5	+4.6
	comp=Z,97nm,1.2s						
RPZ	Rata Peaks	33.27	171	P	P	10 15 27.4	+0.5
	comp=Z,22nm,0.8s,baz=255,slow=4.4,SNR=6.0						
MQZ	McQueen's Vall	33.53	169	eP	P	10 15 31.4	+2.3
	comp=Z,104nm,1.3s						
BBOO	Buckleboo	34.01	226	P	P	10 15 32.9	-0.6
	baz=34,SNR=21						
BBOO	Buckleboo	34.01	226	eP	P	10 15 33.1	-0.4
	comp=Z,94nm,0.9s						
SIJI	Sorong	34.36	285	LR	LR	10 30 23.2	
	comp=Z,2µm,19.8s,baz=120,slow=38						
BNDI	Bandanaira	34.72	278	P	P	10 15 41.5	+1.6
KNRA	Kununurra	34.98	258	P	P	10 15 39.2	-2.8
	baz=35,SNR=18						
TAU	Tasmania Unive	35.25	202	eP	P	10 15 45.1	+1.2
	comp=Z,83nm,1.5s						
TAU				LR	LR		
	comp=Z,2µm,19.0s						
TAU	Tasmania Unive	35.25	202	eP	P	10 15 45.2	+1.2
TAU				pmax	pmax		
	comp=Z,83nm,1.5s						
TAU				MLR	MLR		
	comp=Z,2µm,19.0s						
WRKA	Warakurna	36.99	243	P	P	10 15 56.9	-2.4
	baz=37,SNR=24						
NLAI	Namlea	37.74	279	P	P	10 16 08.6	+2.9
	comp=Z,45nm,1.3s						
FITZ	Fitzroy Crossi	38.15	255	P	P	10 16 06.0	-3.1
	baz=38,SNR=65						
FITZ	Fitzroy Crossi	38.15	255	eP	P	10 16 06.6	-2.5
	comp=Z,42nm,0.8s						
FORT	Forrest	39.08	234	P	P	10 16 16.6	-0.1
	baz=39,SNR=9.0						
FORT	Forrest	39.08	234	eP	P	10 16 16.1	-0.7
	comp=Z,94nm,0.8s						
SANI	Sanana	39.10	280	P	P	10 16 17.5	+0.4
	comp=Z,40nm,1.2s,comp=Z,888nm						
BATI	Baumata	40.03	267	P	P	10 16 28.2	+3.3
	comp=Z,19nm,1.2s,comp=Z,383nm						
BATI	Baumata	40.03	267	LR	LR	10 32 37.9	
	comp=Z,3µm,21.7s,baz=116,slow=36						
EDFI	Ende, Flores	42.10	269	P	P	10 16 43.4	+1.3
	comp=Z,18nm,1.5s						
LUWI	Luwuk	42.47	280	P	P	10 16 59.1	+14
DAV	Davao City (W)	42.53	293	PFAKE		10 17 00.0	+15
DAV				LR	LR		
	comp=Z,686nm,19.0s						
DAV	Davao City (W)	42.53	293	LR	LR	10 36 25.3	
	comp=Z,632nm,18.1s,baz=110,slow=39						
MBWA	Marble Bar	44.01	251	eP	P	10 16 56.8	-0.5
	comp=Z,17nm,0.9s						
BNSI	Bone	44.32	275	P	P	10 17 14.0	+14
KAPI	Kappang	44.55	274	PFAKE		10 17 10.0	+8.3
KAPI				LR	LR		
	comp=Z,612nm,22.0s						
PPT	Papeete	45.04	104	LR	LR	10 33 41.9	
	comp=Z,2µm,18.5s,baz=274,slow=33						
PPT2	Papeete2	45.04	104	eP	P	10 17 06.1	+0.4
	comp=Z,47nm,1.2s						
PPT2				eS	S	10 23 46.5	+3.4
	comp=Z,732nm,26.5s						
PPT2				eLQ	LQ	10 27 55.0	
	comp=Z,5µm,27.8s						
PPT2				eLR	LR	10 29 47.4	
	comp=Z,4µm,24.0s,baz=278						
TVO	Taravao	45.36	104	eP	P	10 17 08.4	+0.2
	comp=Z,18nm,1.3s						
MPSI	Mapaga	45.60	281	P	P	10 17 22.6	+13
TBI	Tubuai	45.64	112	eS	S	10 23 54.6	+3.1
	comp=Z,601nm,28.0s						
TBI				eLQ	LQ	10 28 07.7	
	comp=Z,5µm,29.8s						
TBI				eLR	LR	10 30 06.0	
	comp=Z,3µm,28.8s,baz=285						
MEEK	Meekatharra	45.85	243	P	P	10 17 10.1	-1.8
	baz=46,SNR=8.3						
PMOR	Pomariorio Ree	46.62	100	eP	P	10 17 18.4	+0.3
	comp=Z,56nm,1.1s						
VAH	Vaihoa	46.88	101	eP	P	10 17 20.7	+0.6
	comp=Z,27nm,1.0s						
KLBR	Kellerberrin	47.70	237	P	P	10 17 25.5	-0.8
	baz=48,SNR=4.6						
NWAO	Narrogin (SRO)	48.48	235	eP	P	10 17 33.0	+0.6
	comp=Z,60nm,1.1s						
NWAO	Narrogin (SRO)	48.48	235	eP	P	10 17 33.0	+0.6
NWAO				pmax	pmax		
	comp=Z,60nm,1.1s						
MORW	Morawa	48.56	241	P	P	10 17 32.2	-0.8
	baz=49,SNR=4.2						
MORW	Morawa	48.56	241	eP	P	10 17 32.7	-0.3
	comp=Z,26nm,1.0s						
MJAR	Matsushiro Arr	53.18	334	P	P	10 18 06.7	-0.9
	comp=Z,10nm,1.0s,baz=170,slow=8.8,SNR=10						
MJAR				LR	LR	10 37 59.2	
	comp=Z,582nm,21.8s,baz=155,slow=33						
MAJO	Matsushiro	53.18	334	eP	P	10 18 06.3	-1.2
	comp=Z,37nm,1.2s						
MAJO				LR	LR		
	comp=Z,1µm,20.0s						
MAJO	Matsushiro	53.18	334	iP	P	10 18 06.4	-1.2
MAJO				pmax	pmax		
	comp=Z,17nm,0.9s						
MAT	Matsushiro	53.18	334	P	P	10 18 05.7	-1.9
MAT				S	S	10 25 34.4	-2.3
MJB9	Matsu-Tunnel	53.19	334	eP	P	10 18 07.1	-0.5
	comp=Z,38nm,1.2s						
JNU	Nakatsue	54.14	325	eP	P	10 18 13.7	-1.0
	comp=Z,54nm,1.1s						
ERM	Erimo	56.09	341	PFAKE		10 18 40.0	+11
ERM				LR	LR		
	comp=Z,622nm,20.0s						
QZH	Quanzhou	57.08	309	eP	P	10 18 43.1	+7.2
QZH				S	S	10 26 33.6	+4.3
QZH				LR	LR		
	comp=Z,1µm,17.5s						
YUK	Yuzh-Kuril'sk	57.15	344	eP	P	10 18 38.6	+2.6
YUK				e		10 20 43.8	
YUK				ePPP	PPP	10 22 01.1	
YUK				eS	S	10 26 35.7	+6.3
YUK				eSSS	SSS	10 32 26.3	
YUK				pmax	pmax		
	comp=Z,266nm,0.9s						
YUK				pmax	pmax		
	comp=E,110nm,0.8s						
YUK				pmax	pmax		
	comp=N,145nm,0.9s						
YUK				pmax	pmax		
	comp=Z,252nm,1.5s						
KUR	Kuril'sk	57.77	346	P	P	10 18 41.0	+0.7
KUR				S	S	10 26 59.5	+22
TJN	Taejon	58.49	325	iP	P	10 18 45.4	-0.2
SSE	Sheshan	58.78	317	P	P	10 18 46.9	-0.8
SSE				S	S	10 26 42.8	-8.5
SSE				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,100nm,4.4s						
SSE				LR	LR		
	comp=Z,290nm,17.7s						
SSE				LR	LR		
	comp=Z,380nm,17.3s						
SSE	Sheshan	58.78	317	eP	P	10 18 46.8	-1.0
	comp=Z,27nm,1.0s						
RKT	Rikitea	58.91	110	eLQ	LQ	10 33 43.4	
	comp=Z,1µm,29.2s						
RKT				eLR	LR	10 36 14.5	
	comp=Z,4µm,26.2s						
KSRS	Korea Array	58.96	326	P	P	10 18 48.2	-0.7
KSRS				pmax	pmax		
	comp=Z,16nm,0.9s						
KSRS	Korea Array	58.96	326	P	P	10 18 48.2	-0.7
	comp=Z,7.8nm,0.9s,baz=134,slow=7.4,SNR=14						
KSRS				LR	LR	10 42 31.6	
	comp=Z,526nm,18.9s,baz=134,slow=34						
KSAR	Wonju Array Be	58.97	326	P	P	10 18 48.2	-0.8
KSAR	Wonju Array Be	58.97	326	P	P	10 18 48.2	-0.8
YSS	Yuzh-Sakhalins	60.69	343⇓	eP	P	10 18 59.0	-1.6
YSS				e		10 19 41.8	
YSS				eS	S	10 27 11.4	-3.9
YSS				ePS		10 27 21.0	
YSS				eSSS	SSS	10 33 51.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				pmax	pmax		
	comp=Z,500nm,4.4s						
YSS				pmax	pmax		
	comp=N,200nm,4.3s						
YSS				pmax	pmax		
	comp=E,200nm,5.2s						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
NJ2	Nanjing	60.94	316	eP	P	10 19 00.8	-1.8
NJ2				pP	pP	10 19 04.9	-4.9
NJ2				S	S	10 27 15.8	-3.3
NJ2				sS	pS	10 27 27.8	-1.1
NJ2				pmax	pmax		
	comp=N,11nm,0.5s						
NJ2				pmax	pmax		
	comp=N,390nm,8.1s						
NJ2				LR	LR		
	comp=N,730nm,13.4s						
NJ2				LR	LR		
	comp=N,560nm,14.6s						
NJ2				LR	LR		
	comp=N,1µm,16.3s						
TEY	Ternei	61.02	338⇓	eP	P	10 19 04.7	+1.9
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
QIZ	Qiongzhong	61.41	299	P	P	10 19 06.4	+0.4
QIZ				S	S	10 27 27.1	+1.6
QIZ				sS	pS	10 27 32.8	-2.7
QIZ				LR	LR		
	comp=Z,440nm,11.3s						
QIZ				LR	LR		
	comp=Z,630nm,17.1s						
QIZ				LR	LR		
	comp=Z,740nm,16.2s						
SKR	Severo-Kuril's	61.68	354	eP	P	10 18 59.5	-7.7
SKR				eS	S	10 27 28.7	+0.9
SKR				pmax	pmax		
	comp=Z,200nm,8.9s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
USA0B	Ussuriysk Arra	62.17	334	eP	P	10 19 10.6	-0.1
	comp=Z,53nm,1.4s						
USRK	Ussuriysk Ar.	62.17	334	P	P	10 19 10.3	-0.4
	comp=Z,11nm,0.9s,baz=141,slow=6.6,SNR=9.7						
USRK				LR	LR	10 47 55.8	
	comp=Z,347nm,18.2s,baz=133,slow=38						
DL2	Dalian	63.52	324	eP	P	10 19 25.9	+6.2
DL2				S	S	10 28 01.3	+10
DL2				pmax	pmax		
	comp=Z,16nm,1.4s						
DL2				pmax	pmax		
	comp=Z,180nm,4.3s						
DL2				LR	LR		
	comp=N,800nm,12.9s						
DL2				LR	LR		
	comp=E,680nm,17.4s						
DL2				LR	LR		
	comp=Z,2µm,15.7s						
MDJ	Mudanjiang	63.55	333	P	P	10 19 20.8	+1.0
MDJ				pP	pP	10 19 24.6	-2.8
MDJ				S	S	10 27 57.0	+5.5
MDJ				pmax	pmax		
	comp=Z,28nm,2.5s						
MDJ				pmax	pmax		
	comp=Z,480nm,3.8s						
MDJ				LR	LR		
	comp=Z,1µm,15.5s						
MDJ				LR	LR		
	comp=Z,890nm,11.0s						
MDJ				LR	LR		
	comp=Z,610nm,14.7s						
MDJ	Mudanjiang	63.55	333	eP	P	10 19 19.0	-0.8
	comp=Z,179nm,2.0s						
PET	Petropavlovsk	63.79	356	eP	P	10 19 22.0	+0.8
	comp=Z,16nm,0.8s						
PET	Petropavlovsk	63.79	356	eP	P	10 19 22.1	+0.8
PET				eS	S	10 27 53.4	-0.8
PET				pmax	pmax		
	comp=Z,23nm,1.1s						
PET				pmax	pmax		
	comp=Z,300nm,10.0s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET				MLR	MLR		
	comp=Z,1µm,14.0s						
PETK	Petropavlovsk-	63.94	356	eP	P	10 19 23.9	+1.7
PETK	Petropavlovsk-	63.94	356	P	P	10 19 22.1	-0.1
	comp=Z,11nm,0.8s,baz=161,slow=9.8,SNR=14						
PETK				LR	LR	10 41 33.5	
	comp=Z,554nm,22.0s,baz=171,slow=31						
TYV	Tymovskoe	64.29	345	eP	P	10 19 23.8	-0.7
TYV				e		10 28 03.3	
TYV				pmax	pmax		
	comp=Z,8.0nm,2.0s						
TYV				pmax	pmax		
	comp=Z,400nm,4.7s						
TYV				MLR	MLR		
	comp=Z,800nm,16.0s						
ADK	Adak	64.57	13	PFAKE		10 19 40.0	+14
ADK				LR	LR		
	comp=Z,2µm,22.0s						
TIA	Tai'an	64.58	319	P	P	10 19 22.9	-3.9
TIA				S	S	10 28 09.3	+4.7
TIA				pmax	pmax		
	comp=Z,120nm,4.7s						
TIA				LR	LR		
	comp=Z,500nm,15.8s						
TIA				LR	LR		
	comp=Z,440nm,16.6s						
CN2	Changchun	64.88	330	eP	P	10 19 28.0	-0.6
CN2				eS	S	10 28 06.9	-1.2
CN2				SS	SS	10 32 20.3	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,880nm,15.0s						
CN2				LR	LR		
	comp=Z,680nm,15.0s						
CN2				LR	LR		
	comp=Z,550nm,15.0s						
GRNR	Gornyy	66.00	341	eP	P	10 19 36.0	+0.3
GRNR				pmax	pmax		
	comp=Z,23nm,1.0s						
CASY	Casey	66.10	201	eP	P	10 19 35.8	-0.3
	comp=Z,49nm,1.1s						
CASY				LR	LR		
	comp=Z,173nm,20.0s						
KLR	Kul'dur	66.34	337	iP	P	10 19 36.9	-1.0
KLR	Kul'dur	66.34	337	P	P	10 19 37.1	-0.8
	comp=Z,8.5nm,0.9s,baz=127,slow=4.9,SNR=12						
VNDA	Vanda	66.69	181	P	P	10 19 41.1	+1.3
	comp=Z,19nm,1.1s,baz=357,slow=6.3,SNR=5.6						
VNDA				LR	LR	10 45 49.8	
	comp=Z,693nm,18.0s,baz=11,slow=33						
ENH	Enshi	66.73	310	eP	P	10 19 39.2	-1.7
	comp=Z,58nm,1.1s						
ENH				LR	LR		
	comp=Z,463nm,20.0s						
NKL	Nikolayevsk	66.88	345	eP	P	10 19 40.0	-1.2
NKL				e		10 28 48.0	
NKL				pmax	pmax		
	comp=Z,500nm,4.0s						
NKL				pmax	pmax		
	comp=Z,79nm,1.5s						
GYA	Guiyang	67.20	305⇑	iP	P	10 19 37.5	-6.5
GYA				PP	PP	10 22 15.4	+2.9
GYA				S	S	10 28 43.0	+5.7
GYA	Guiyang	67.20	305	SS	SS	10 32 59.6	+2.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.8s						
GYA				pmax	pmax		
	comp=Z,150nm,5.9s						
GYA				LR	LR		
	comp=N,700nm,18.4s						
GYA				LR	LR		
	comp=E,680nm,18.6s						
GYA				LR	LR		
	comp=Z,660nm,18.2s						

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BJT   Baijiatuau      67.48 322  PFAKE            10 20 00.0  +15
BJT                              LR       LR
      comp=Z,1µm,19.0s
BJI   Beijing         67.49 322  P        P       10 19 44.3  -1.1
BJI                              S        S       10 28 41.8  +1.9
BJI                              pmax     pmax
      comp=Z,5.0nm,1.8s
BJI                              LR       LR
      comp=Z,750nm,18.5s
BJI                              LR       LR
      comp=Z,390nm,16.2s
BJI                              LR       LR
      comp=Z,570nm,17.8s
GSI   Gunungsitoli    67.51 276 eP        P       10 19 42.9  -3.2
      comp=Z,31nm,1.0s
GSI   Gunungsitoli    67.51 276  P        P       10 19 47.9  +1.8
      comp=Z,35nm,1.1s
KCSI  Kotacane, Aceh  67.81 278  P        P       10 19 50.0  +2.0
      comp=Z,19nm,0.8s
PBKT  Sadao Pong      68.37 293 eP        P       10 19 53.4  +2.1
      comp=Z,19nm,1.1s
PBKT  Sadao Pong      68.37 293  P        P       10 19 55.1  +3.7
      comp=Z,16nm,1.4s
XAN   Xi'an           69.00 313  P        P       10 19 54.3  -0.9
XAN                              pP       sP      10 20 04.3  -1.1
XAN                              PP       PP      10 22 27.8  -0.1
XAN                              pmax     pmax
      comp=Z,6.0nm,1.0s
XAN                              pmax     pmax
      comp=Z,130nm,3.5s
XAN                              LR       LR
      comp=Z,420nm,14.3s
XAN                              LR       LR
      comp=Z,930nm,16.7s
XAN                              LR       LR
      comp=Z,1µm,17.2s
XAN   Xi'an           69.00 313 eP        P       10 19 54.2  -0.9
      comp=Z,205nm,1.3s
XAN   Xi'an           69.00 313 eP        P       10 19 54.2  -0.9
XAN                              pmax     pmax
      comp=Z,205nm,1.3s
KMI   Kunming         69.88 302  P        P       10 19 58.9  -2.0
KMI                              pP       pP      10 20 04.8  -3.6
KMI                              sP       sP      10 20 08.8  -2.5
KMI                              PP       PP      10 22 39.8  +3.9
KMI                              S        S       10 29 02.1  -7.3
KMI                              sS       pS      10 29 14.1  -5.3
KMI                              pmax     pmax
      comp=Z,25nm,1.3s
KMI                              pmax     pmax
      comp=Z,250nm,3.8s
KMI                              LR       LR
      comp=Z,400nm,19.3s
KMI                              LR       LR
      comp=Z,450nm,15.9s
KMI                              LR       LR
      comp=Z,620nm,18.7s
CM01  Chiang Mai Arr  70.78 294 eP        P       10 20 05.6  -0.7
CMAR  Chiang Mai Arr  70.81 294ceP        P       10 20 06.1  -0.4
CMAR                             pmax     pmax
      comp=Z,5.0nm,1.0s
CMAR  Chiang Mai Arr  70.81 294  P        P       10 20 06.2  -0.3
      comp=Z,4.5nm,0.9s,baz=111,slow=4.1,SNR=13
HHC   Hu-ho-hao-te    70.81 320 eP        P       10 20 06.6  +0.4
HHC                              sP       sP      10 20 15.9  +0.1
HHC                              S        S       10 29 22.1  +2.6
HHC                              sS       pS      10 29 28.3  -0.4
HHC                              SS       SS      10 33 52.5   0.0
HHC                              pmax     pmax
      comp=Z,7.0nm,1.1s
HHC                              pmax     pmax
      comp=Z,280nm,5.9s
HHC                              LR       LR
      comp=Z,850nm,17.9s
HHC                              LR       LR
      comp=Z,750nm,17.1s
HHC                              LR       LR
      comp=Z,1µm,18.2s
CMMT  Chiang Mai      70.92 294  P        P       10 20 09.4  +2.3
CHTO  Chiang Mai      70.92 294 eP        P       10 20 06.6  -0.5
      comp=Z,18nm,1.5s
CHTO                             LR       LR
      comp=Z,436nm,21.0s
CHTO  Chiang Mai      70.92 294  P        P       10 20 04.6  -2.5
CHTO  Chiang Mai      70.92 294  P        P       10 20 09.5  +2.4
      comp=Z,48nm,1.3s
MA2   Magadan         71.03 353 eP        P       10 20 05.9  -1.0
      comp=Z,6.3nm,0.8s
MA2   Magadan         71.03 353 i P       P       10 20 05.2  -1.7
MA2                              pmax     pmax
      comp=Z,5.0nm,0.9s
CD2   Chengdu         71.42 308  P        P       10 20 09.5  -0.5
CD2                              pP       pP      10 20 12.8  -4.6
CD2                              PP       PP      10 22 47.6  -1.2
CD2                              S        S       10 29 28.5  +1.7
CD2                              SKS      ScS     10 30 12.4  -0.8
CD2                              SS       SS      10 34 04.1  +2.0
CD2                              pmax     pmax
      comp=Z,40nm,0.8s
CD2                              pmax     pmax
      comp=Z,380nm,5.3s
CD2                              LR       LR
      comp=Z,1µm,15.2s
CD2                              LR       LR
      comp=Z,1µm,18.1s
CD2                              LR       LR
      comp=Z,2µm,17.7s
HIA   Hailar          71.53 331 eP        P       10 20 09.5  -0.7
      comp=Z,25nm,1.0s
HIA                              LR       LR
      comp=Z,608nm,19.0s
HIA   Hailar          71.53 331 eP        P       10 20 09.5  -0.7
HIA                              pmax     pmax
      comp=Z,25nm,1.0s
HIA                              MLR      MLR
      comp=Z,608nm,19.0s
ZEA   Zeya            71.64 338 i P       P       10 20 09.8  -0.9
ZEA                              pmax     pmax
      comp=N,64nm,1.8s
ZEA                              pmax     pmax
      comp=Z,96nm,1.8s
ZEA                              pmax     pmax
      comp=Z,600nm,15.0s
BTO   Baotou          71.66 319 eP        P       10 20 11.9  +0.6
LZH   Lanzhou         73.63 313 eP        P       10 20 22.8  -0.4
LZH                              pP       pP      10 20 27.3  -3.4
LZH                              sP       sP      10 20 29.8  -3.8
LZH                              PP       PP      10 23 05.8  -2.0
LZH                             eS        S       10 29 53.5  +1.4
LZH                              sS       pS      10 30 02.3  +0.1
LZH                              SS       SS      10 34 34.5  -1.5
LZH                              pmax     pmax
      comp=Z,19nm,1.1s
LZH                              pmax     pmax
      comp=Z,120nm,5.4s
LZH                              LR       LR
      comp=Z,690nm,15.7s
LZH                              LR       LR
      comp=Z,1µm,16.3s
LZH                              LR       LR
      comp=Z,1µm,16.3s
SEY   Seymchan        74.13 354 i P       P       10 20 23.9  -1.4
GAMB  Gambell         76.60  11 eP        P       10 20 39.1  -0.3
      comp=Z,55nm,1.3s
KDAK  Kodiak Island   76.88  22  PFAKE            10 20 50.0  +8.9
KDAK                             LR       LR
      comp=Z,401nm,21.0s
ULN   Ulaanbaatar     77.35 324 eP        P       10 20 44.2  -0.1
      comp=Z,44nm,1.2s
ULN   Ulaanbaatar     77.35 324c iP       P       10 20 43.9  -0.4
ULN                              pmax     pmax
      comp=Z,13nm,1.1s
YAK   Yakutsk         77.52 344 eP        P       10 20 43.9  -0.8
YAK                             e                 10 20 53.8
YAK                             e*PP      pwP     10 21 06.9  +6.5
YAK                             e                 10 23 43.1
YAK                             ePPP      PPP     10 25 21.9
YAK                             eS        S       10 30 25.6  -8.1
YAK                             e                 10 30 49.0
YAK                             e*SS      ScS     10 31 07.0  +6.3
YAK                             eSSS      SSS     10 38 41.4
YAK                              pmax     pmax
      comp=Z,95nm,1.0s
YAK                              pmax     pmax
      comp=N,46nm,1.1s
YAK                              pmax     pmax
      comp=E,50nm,1.4s
YAK                              pmax     pmax
      comp=Z,556nm,3.5s
YAK                              pmax     pmax
      comp=N,299nm,3.0s
YAK                              pmax     pmax
      comp=E,697nm,3.1s
YAK                              smax     smax
      comp=N,303nm,4.2s
YAK                              smax     smax
      comp=E,457nm,5.1s
SONM  Songino Array   77.71 324  P        P       10 20 45.7  -0.6
      comp=E,4.5nm,0.8s,baz=139,slow=6.5,SNR=16
SONA1 Songino Array   77.72 324 eP        P       10 20 45.5  -0.8
GTA   Gaotai          77.96 314 ⇑P        P       10 20 47.4  -0.4
GTA                              pP       pP      10 20 51.9  -3.5
GTA                              sP       PcP     10 20 54.4  -3.1
GTA                              S        S       10 30 42.9  +3.2
GTA                              sS       pS      10 30 49.8  +0.4
GTA                              SKS      SKSac   10 30 57.8  -2.3
GTA                              pmax     pmax
      comp=E,8.0nm,1.4s
GTA                              pmax     pmax
      comp=E,210nm,7.3s
GTA                              LR       LR
      comp=E,470nm,20.6s
GTA                              LR       LR
      comp=E,460nm,20.9s
GTA                              LR       LR
      comp=E,360nm,20.3s
SVW2  Sparrevohn      78.33  19 eP        P       10 20 48.8  -0.4
      comp=E,113nm,1.4s
ANM   Nome            78.58  13 eP        P       10 20 50.3  -0.2
      comp=E,35nm,1.4s
BILL  Bilibino        78.68   1 eP        P       10 20 50.2  -0.8
      comp=E,56nm,1.2s
BILL                             LR       LR
      comp=Z,567nm,19.0s
BILL  Bilibino        78.68   1c iP       P       10 20 49.5  -1.5
BILL                            e                 10 20 59.7
BILL                            e                 10 23 50.1
BILL                            ePPP      PPP     10 25 39.3
BILL                             pmax     pmax
      comp=Z,32nm,1.0s
RSO   Redoubt South   78.78  20 eP        P       10 20 53.0  +1.1
QSPA  South Pole Qui  79.17 180 eP        P       10 20 54.0  -0.1
      comp=Z,168nm,1.6s
SHL   Shillong        79.25 299 eP        P       10 20 57.5  +2.2
      comp=Z,32nm,1.0s
SHL   Shillong        79.25 299 eP        P       10 20 57.5  +2.2
SHL                              pmax     pmax
      comp=Z,32nm,1.0s
BOD   Bodaibo         79.78 335 eP        P       10 20 53.9  -3.3
BOD                              pmax     pmax
      comp=Z,22nm,1.5s
SUA   Susitna One     80.18  20 eP        P       10 20 58.6  -0.9
      comp=Z,36nm,1.0s
ZAK   Zakamensk       80.77 325 eP        P       10 21 01.2  -1.7
ZAK                              pmax     pmax
      comp=Z,8.0nm,1.3s
PMR   Palmer          80.82  21 eP        P       10 21 06.6  +3.9
      comp=Z,37nm,1.3s
LSA   Lhasa           81.12 303 eP        P       10 21 05.5  -0.2
      comp=Z,22nm,1.3s
LSA                              LR       LR
      comp=Z,351nm,20.0s
IRK   Irkutsk         81.16 327 eP        P       10 20 57.0  -7.8
IRK                              pmax     pmax
      comp=Z,52nm,3.0s
CAST  Castle Rocks    81.16  18 eP        P       10 21 02.8  -1.7
      comp=Z,26nm,1.0s
TLY   Talaya          81.21 327 eP        P       10 21 04.1  -1.0
      comp=Z,39nm,1.1s
TLY                              LR       LR
      comp=Z,439nm,19.0s
TLY   Talaya          81.21 327c iP       P       10 21 03.1  -2.0
TRF   Thorofare Moun  81.75  19 eP        P       10 21 08.7  +0.9
      comp=Z,35nm,1.3s
KLU   Klutina         81.89  22 eP        P       10 21 12.2  +3.6
      comp=Z,48nm,1.3s
BPAW  Bear Paw Mtn.   81.99  18 eP        P       10 21 11.3  +2.4
      comp=Z,47nm,1.7s
RND   Reindeer        82.17  19 eP        P       10 21 09.2  -0.8
      comp=Z,74nm,1.4s
RND   Reindeer        82.17  19 eP        P       10 21 09.2  -0.8
RND                              pmax     pmax
      comp=Z,74nm,1.4s
MCK   McKinley        82.38  19 eP        P       10 21 09.4  -1.6
      comp=Z,55nm,1.2s
MCK   McKinley        82.38  19 eP        P       10 21 09.4  -1.6
MCK                              pmax     pmax
      comp=Z,55nm,1.2s
DHY   Denali Highway  82.44  20 eP        P       10 21 12.4  +0.9
      comp=Z,35nm,1.3s
IM3   Indian Mountai  82.58  16 eP        P       10 21 10.6  -1.4
MOY   Mondy           82.65 326 eP        P       10 21 11.8  -1.0
MOY                              pmax     pmax
      comp=Z,45nm,4.0s
MLY   Manley          82.74  18 eP        P       10 21 11.8  -1.1
      comp=Z,48nm,1.4s
WRH   Wood River Hil  83.16  19 eP        P       10 21 13.9  -1.0
      comp=Z,37nm,1.1s
MDM   Murphy Dome     83.45  18 eP        P       10 21 14.7  -1.8
      comp=Z,55nm,1.2s
HDA   Harding Lake    83.48  19 eP        P       10 21 15.3  -1.3
      comp=Z,81nm,1.0s
HDA   Harding Lake    83.48  19  P        P       10 21 15.0  -1.6
      baz=228
TCOL  CIGO, UAF Yank  83.50  19  P        P       10 21 14.8  -1.9
      baz=227
COLA  College         83.51  19 eP        P       10 21 14.6  -2.1
      comp=Z,36nm,0.8s
COLA                             LR       LR
      comp=Z,629nm,21.0s
COLA  College         83.51  19 eP        P       10 21 14.6  -2.1
COLA                             pmax     pmax
      comp=Z,36nm,0.8s
COLA                             MLR      MLR
      comp=Z,629nm,21.0s
RIDG  Independ'e Rid  83.73  20 eP        P       10 21 17.3  -0.7
      comp=Z,51nm,1.0s
IL1   Eielson Array   83.74  19 eP        P       10 21 15.1  -2.8
ILAR  Eielson Array   83.74  19  P        P       10 21 16.8  -1.2
      comp=Z,11nm,0.8s,baz=229,slow=4.5,SNR=36
ILAR                             LR       LR      10 52 47.5
      comp=Z,536nm,21.6s,baz=248,slow=32
ILB   Eielson Array   83.74  19 eP        P       10 21 16.4  -1.6
POKR  Poker Plat Res  83.80  18  P        P       10 21 16.1  -2.2
      baz=228
KNGR  Kungurtug, Tuv  84.15 324 eP        P       10 21 18.7  -1.8
SCRK  Sand Creek      84.18  20 eP        P       10 21 19.7  -0.7
      comp=Z,61nm,1.2s
K02D  Willamette Mer  84.36  45  P        P       10 21 23.2  +1.5
      baz=250
MAW   Mawson          84.42 202  LR       LR      10 57 41.9
      comp=Z,356nm,18.5s,baz=92,slow=35
COLD  Coldfoot        84.46  16 eP        P       10 21 22.3  +0.7
      comp=Z,8.1nm,1.0s
M02C  Callahan        84.48  46  P        P       10 21 23.3  +0.9
      baz=251
YBH   Yreka Blue Hor  84.70  46 eP        P       10 21 25.2  +1.7
      comp=Z,13nm,1.0s
YBH   Yreka Blue Hor  84.70  46 eP        P       10 21 25.2  +1.7
YBH                              pmax     pmax
      comp=Z,13nm,1.0s
HYT   Haines Junctio  84.75  25 eP        P       10 21 25.4  +2.1
      comp=Z,23nm,1.4s
JIS   Juneau Island   84.76  28 eP        P       10 21 28.2  +5.0
      comp=Z,22nm,1.2s
HUMO  Hull Mountain   84.82  45 eP        P       10 21 26.1  +2.1
      comp=Z,25nm,1.3s
SKAG  Skagway         84.94  26 eP        P       10 21 24.1   0.0
      comp=Z,54nm,1.4s
AFDM  Forest Hills D  85.06  49 eP        P       10 21 26.0  +0.7
      comp=Z,11nm,1.0s
PALK  Pallekele       85.20 278  LR       LR      11 02 03.9
      comp=Z,316nm,20.3s,baz=116,slow=38
FYU   Fort Yukon      85.45  18 eP        P       10 21 27.0  +0.5
      comp=Z,45nm,1.4s
J04D  Umpqua Nationa  85.62  45  P        P       10 21 27.3  -0.9
      baz=251
TOLK  Toolik Lake Re  85.64  15 eP        P       10 21 27.4  -0.2
      comp=Z,41nm,1.3s
TOLK  Toolik Lake Re  85.64  15  P        P       10 21 28.1  +0.6
      baz=225
EGAK  Eagle           85.64  20  PFAKE            10 21 40.0  +12
EGAK                             LR       LR
      comp=Z,573nm,22.0s
DAWY  Dawson          85.84  21 eP        P       10 21 28.1  -0.5
      comp=Z,34nm,1.2s
WAKR  Walker          86.08  50 eP        P       10 21 34.2  +3.7
      comp=Z,26nm,1.4s
MDPB  Devils Postpil  86.09  51 eP        P       10 21 32.5  +1.7
      comp=Z,12nm,1.0s
J05D  Fort Rock, OR   86.24  45  P        P       10 21 32.4  +1.2
      baz=252
CWC   Cottonwood Cre  86.53  52  P        P       10 21 33.0  +0.2
      baz=254
LRMC  Laurel Mtn Rad  86.57  53  P        P       10 21 33.6  +0.6
      baz=254
PINE  Pine Mountain   86.60  44 eP        P       10 21 33.9  +0.8
      comp=Z,13nm,0.9s
G05D  Wamic, OR       86.81  43  P        P       10 21 34.5  +0.7
      baz=251
NV01  Mina Array Sit  86.91  50 eP        P       10 21 35.0  +0.3
NVAR  Mina Array Bea  86.91  50  P        P       10 21 33.7  -1.0
      comp=Z,4.6nm,0.9s,baz=236,slow=7.3,SNR=4.9
NVAR                             LR       LR      10 57 26.2
      comp=Z,1µm,18.1s,baz=254,slow=34
NV11  Mina Array Sit  87.02  50 eP        P       10 21 36.0  +0.8
      comp=Z,1.1nm,1.2s
PFO   Pinyon Flats O  87.05  55  PFAKE            10 21 50.0  +15
PFO                              LR       LR
      comp=Z,2µm,19.0s
GRAC  Grapevine Rang  87.23  52  P        P       10 21 37.5  +1.4
      baz=254
KVN   Kaiserville     87.23  50 eP        P       10 21 37.5  +1.3
      comp=Z,8.4nm,1.1s
KVN   Kaiserville     87.23  50 eP        P       10 21 37.5  +1.3
KVN                              pmax     pmax
      comp=Z,8.0nm,1.1s
I07A  Izee            87.68  44 eP        P       10 21 39.1  +1.0
      comp=Z,12nm,1.1s
WVOR  Wild Horse Val  87.80  46 eP        P       10 21 37.8  -1.0
      comp=Z,16nm,1.3s
WVOR  Wild Horse Val  87.80  46 eP        P       10 21 37.8  -1.0
WVOR                             pmax     pmax
      comp=Z,15nm,1.3s
WMQ   Urumqi          88.01 315 eP        P       10 21 39.0  -0.7
WMQ                              pP       pP      10 21 44.8  -2.1
WMQ                              SKS      SKSac   10 32 06.5  +0.2
WMQ                              S        S       10 32 20.1  -1.4
WMQ                              pmax     pmax
      comp=Z,42nm,0.9s
WMQ                              pmax     pmax
      comp=Z,220nm,4.5s
WMQ                              LR       LR
      comp=Z,980nm,13.1s
WMQ                              LR       LR
      comp=Z,1µm,17.5s
WMQ                              LR       LR
      comp=Z,1µm,17.5s
J08A  Circle Bar Ran  88.18  45 eP        P       10 21 39.3  -1.2
      comp=Z,14nm,1.1s
HAWA  Hanford         88.35  42  PFAKE            10 21 50.0  +8.9
HAWA                             LR       LR
      comp=Z,1µm,19.0s
G08A  Pilot Rock      88.41  43 eP        P       10 21 42.3  +0.7
      comp=Z,8.2nm,0.9s
Y12C  Blythe          88.65  55 eP        P       10 21 42.5  -0.3
      comp=Z,12nm,1.1s
Y12C  Blythe          88.65  55  P        P       10 21 42.1  -0.8
      baz=256
E08A  Dider Farm, El  88.69  42 eP        P       10 21 45.3  +2.6
      comp=Z,11nm,1.0s
113A  Mohawk Valley,  89.03  57 eP        P       10 21 45.9  +1.2
      comp=Z,22nm,1.4s
DGZ   Jazzator, Alta  89.89 321d iP       P       10 21 47.1  -1.4
DGZ                              pmax     pmax
      comp=Z,4.0nm,0.9s
INK   Inuvik          90.14  19 eP        P       10 21 49.6  +0.6
      comp=Z,12nm,1.1s
INK   Inuvik          90.14  19 eP        P       10 21 49.6  +0.6
INK                              pmax     pmax
      comp=Z,12nm,1.1s
LCMT  Little Creek M  90.43  53 eP        P       10 21 51.0  -0.3
      comp=Z,17nm,1.4s
CCUT  Cedar City      90.46  52 eP        P       10 21 53.1  +1.6
      comp=Z,20nm,1.5s
SZCU  Shurtz Canyon   90.68  52 eP        P       10 21 54.4  +1.9
      comp=Z,10nm,1.1s
HLID  Hailey          91.09  46 eP        P       10 21 53.4  -0.8
      comp=Z,9.5nm,1.1s
HLID                             LR       LR
      comp=Z,1µm,22.0s
HLID  Hailey          91.09  46  P        P       10 21 53.6  -0.6
      baz=256
X16A  Lo Mia Camp, P  91.29  55 eP        P       10 21 56.8  +1.4
      comp=Z,12nm,1.4s
DUG   Dugway, Tooele  91.47  49  PFAKE            10 22 10.0  +14
DUG                              LR       LR
      comp=Z,759nm,19.0s
BGU   Big Grassy Mou  91.47  49 eP        P       10 21 57.5  +1.4
      comp=Z,9.0nm,1.1s
MTPU  Mount Pierson   91.48  52 eP        P       10 21 58.4  +1.9
      comp=Z,9.1nm,1.1s
WUAZ  Wupatki         91.58  54 eP        P       10 21 57.8  +1.1
      comp=Z,9.1nm,1.0s
WUAZ  Wupatki         91.58  54  P        P       10 21 57.6  +0.9
      baz=258
MSU   Marysvale       91.58  51 eP        P       10 21 58.6  +1.8
HVU   Hansel Valley   91.85  48 eP        P       10 21 56.9  -0.9
      comp=Z,12nm,1.0s
HVU   Hansel Valley   91.85  48 eP        P       10 21 56.9  -0.9
HVU                              pmax     pmax
      comp=Z,12nm,1.0s
NLU   North Lily Min  91.97  50 eP        P       10 21 58.1  -0.4
      comp=Z,6.6nm,1.0s
SPUT  South Promonto  91.99  48 eP        P       10 22 00.1  +1.6
      comp=Z,19nm,1.6s
MPU   Maple Canyon    92.32  50 eP        P       10 22 03.0  +2.9
      comp=Z,16nm,1.5s
CTU   Camp Tracy      92.37  49 eP        P       10 22 01.2  +0.9
      comp=Z,5.5nm,0.8s
MK01  Makanchi Array  92.45 317 eP        P       10 21 58.8  -1.5
MK31  Makanchi Array  92.46 317 eP        P       10 21 59.2  -1.1
MK31  Makanchi Array  92.46 317 eP        P       10 21 59.2  -1.1
MKAR  Makanchi Array  92.46 317 eP        P       10 21 59.2  -1.1
      comp=Z,109nm,1.2s
MKAR  Makanchi Array  92.46 317 i P       P       10 21 59.2  -1.1
MKAR                             pmax     pmax
      comp=Z,12nm,0.9s
MKAR  Makanchi Array  92.46 317  P        P       10 21 58.8  -1.5
      comp=Z,12nm,0.9s,baz=101,slow=6.3,SNR=18
MKAR                             PKKPbc   PKKPdf  10 39 13.3  -0.4
      comp=Z,0.2nm,0.7s,baz=290,slow=3.6,SNR=4.0
MCMT  McKenzie Canyo  92.47  45 eP        P       10 22 01.9  +1.2
X18A  Snowflake       92.52  55 eP        P       10 22 05.9  +4.8
JLU   Jordanelle      92.58  49 eP        P       10 22 02.3  +1.0
      comp=Z,6.7nm,1.2s
ZALV  Zalesovo Beam   92.61 324 i P       P       10 21 58.9  -1.9
ZALV                             pmax     pmax
      comp=Z,10.0nm,1.0s
ZALV  Zalesovo Beam   92.61 324  P        P       10 21 59.2  -1.6
      comp=Z,9.9nm,1.0s,baz=108,slow=4.8,SNR=11
MAKZ  Makanchi        92.67 317 eP        P       10 22 00.2  -1.1
      comp=Z,40nm,1.3s
MAKZ  Makanchi        92.67 317 eP        P       10 22 00.2  -1.1
MAKZ                             pmax     pmax
      comp=Z,40nm,1.3s
TCUT  Toone Canyon    92.71  49 eP        P       10 22 04.4  +2.5
      comp=Z,17nm,1.3s
DLMT  Dillon          92.76  44 eP        P       10 22 01.5  -0.5
AHID  Auburn Hatcher  93.28  47  PFAKE            10 22 20.0  +16
AHID                             LR       LR
      comp=Z,921nm,19.0s
BOZ   Bozeman (W)     93.48  44 eP        P       10 22 06.3  +1.1
      comp=Z,17nm,1.6s
BOZ                              LR       LR
      comp=Z,1µm,20.0s
BOZ   Bozeman (W)     93.48  44 eP        P       10 22 06.3  +1.1
BOZ                              pmax     pmax
      comp=Z,17nm,1.6s
BOZ                              MLR      MLR
      comp=Z,1µm,20.0s
FXWY  Fox Creek       93.50  46 eP        P       10 22 06.4  +0.9
      comp=Z,4.2nm,0.9s
IMW   Indian Meadow   93.62  46 eP        P       10 22 07.7  +1.6
      comp=Z,4.3nm,1.0s
SNOW  Snow King Moun  93.66  47 eP        P       10 22 07.1  +0.8
      comp=Z,7.4nm,1.2s
NVS   Novosibirsk     93.72 325 eP        P       10 22 04.5  -1.4
NVS                             e                 10 25 50.0
```

NVS				pmax	pmax		
	comp=Z,52nm,2.0s						
NVS				pmax	pmax		
	comp=N,16nm,1.9s						
NVS				pmax	pmax		
	comp=E,26nm,1.9s						
LKWY	**Lake**	**94.13**	**46**	PFAKE		10 22 20.0	+12
LKWY				LR	LR		
	comp=Z,2µm,19.0s						
PV12	**Saucer Basin,**	**94.14**	**52**	*e*P	**P**	**10 22 10.9**	**+2.4**
	comp=Z,17nm,1.4s						
BW06	**Boulder Array**	**94.39**	**47**	*e*P	**P**	**10 22 11.2**	**+1.6**
	comp=Z,3.5nm,1.0s						
BW06				LR	LR		
	comp=Z,659nm,20.0s						
PD31	**Pinedale Array**	**94.39**	**47**	*e*P	**P**	**10 22 11.2**	**+1.6**
PDAR	**Pinedale Array**	**94.39**	**47**	*e*P	**P**	**10 22 08.2**	**-1.4**
PDAR	**Pinedale Array**	**94.39**	**47**	P	**P**	**10 22 09.2**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=256,slow=3.5,SNR=11						
PDAR				LR	LR	10 58 25.2	
	comp=Z,457nm,20.0s,baz=262,slow=32						
TARG	**Taragay, Kyrgy**	**94.59**	**311**	*e*P	**P**	**10 22 12.0**	**+1.2**
	comp=Z,15nm,1.2s						
RLMT	**Red Lodge**	**95.02**	**45**	PFAKE		10 22 20.0	+7.6
RLMT				LR	LR		
	comp=Z,1µm,20.0s						
EGMT	**Eagleton**	**95.21**	**42**	PFAKE		10 22 20.0	+7.0
EGMT				LR	LR		
	comp=Z,654nm,19.0s						
YKA	**Yellowknife Ar**	**95.40**	**27**	P	**P**	**10 22 13.2**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=254,slow=4.5,SNR=16						
YKA				LR	LR	10 57 47.0	
	comp=Z,94nm,21.7s,baz=258,slow=31						
ANMO	**Albuquerque**	**95.43**	**56**	PFAKE		10 22 30.0	+16
ANMO				LR	LR		
	comp=Z,759nm,19.0s						
ANMO	**Albuquerque**	**95.43**	**56**	*i* P	P	10 22 06.1	-8.4
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
NRIK	**Noril'sk**	**95.46**	**340**	LR	LR	11 09 13.7	
	comp=Z,549nm,18.0s,baz=102,slow=38						
KSH	**Kashi**	**95.59**	**309**	P	**P**	**10 22 16.3**	**+1.3**
KSH				pP	pP	10 22 22.8	+0.5
KSH				SKS	**SKSac**	**10 32 51.3**	**+1.8**
KSH				S	**ScS**	**10 33 32.3**	**+1.2**
KSH				pmax	pmax		
	comp=Z,240nm,5.3s						
KSH				LR	LR		
	comp=Z,170nm,5.8s						
KSH				LR	LR		
	comp=Z,220nm,4.6s						
KSH				LR	LR		
	comp=Z,350nm,5.5s						
KURK	**Kurchatov**	**95.63**	**320**	*e*P	**P**	**10 22 15.0**	**+0.3**
	comp=Z,16nm,1.3s						
KURK				LR	LR		
	comp=Z,1µm,19.0s						
KURK	**Kurchatov**	**95.63**	**320**	*e*P	**P**	**10 22 15.0**	**+0.3**
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
KURK				MLR	MLR		
	comp=Z,1µm,19.0s						
MNTX	**Cornudas Mount**	**95.80**	**59**	PFAKE		10 22 30.0	+14
MNTX				LR	LR		
	comp=Z,956nm,21.0s						
NRN	**Naryn**	**95.88**	**311**	*e*P	**P**	**10 22 18.9**	**+2.3**
	comp=Z,6.5nm,1.3s						
NRN	**Naryn**	**95.88**	**311**	*e*P	**P**	**10 22 18.9**	**+2.3**
NRN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SDCO	**Great Sand Dun**	**96.62**	**53**	PFAKE		10 22 30.0	+10
SDCO				LR	LR		
	comp=Z,976nm,22.0s						
ISCO	**Idaho Springs**	**96.84**	**51**	PFAKE		10 22 30.0	+9.1
ISCO				LR	LR		
	comp=Z,2µm,22.0s						
NIL	**Nilore**	**96.85**	**303**	PFAKE		10 22 30.0	+9.2
NIL				LR	LR		
	comp=Z,168nm,20.0s						
TXAR	**Lajitas Array**	**96.90**	**62**	P	**P**	**10 22 21.8**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=225,slow=6.9,SNR=4.8						
TXAR				LR	LR	10 56 55.1	
	comp=Z,910nm,21.9s,baz=0.0,slow=30						
FRU	**Bishkek**	**97.10**	**312**	*e*P	**P**	**10 22 18.0**	**-3.7**
AAK	**Ala-Archa**	**97.16**	**312**	PFAKE		10 22 30.0	+7.8
AAK				LR	LR		
	comp=Z,657nm,19.0s						
AAK	**Ala-Archa**	**97.16**	**312**	*i* P	**P**	**10 22 19.9**	**-2.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SNAA	**Sanae**	**97.24**	**184**	P	**P**	**10 22 21.6**	**-0.2**
SNAA	**Sanae**	**97.24**	**184**	*e*P	Pdif	10 22 22.2	+0.3
	comp=Z,8.1nm,1.0s						
SNAA	**Sanae**	**97.24**	**184**	*e*P	Pdif	10 22 22.2	+0.3
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LAO	**LASA Array**	**97.37**	**44**	PFAKE		10 22 30.0	+7.1
LAO				LR	LR		
	comp=Z,1µm,21.0s						
VNA2	**Neumayer--Watz**	**98.24**	**183**	P	**P**	**10 22 26.0**	**-0.3**
	baz=166,slow=6.5						
DGMT	**Dagmar**	**98.95**	**42**	PFAKE		10 22 40.0	+10
DGMT				LR	LR		
	comp=Z,731nm,19.0s						
JCT	**Junction City**	**100.37**	**61**	PFAKE		10 22 50.0	+13
JCT				LR	LR		
	comp=Z,1µm,20.0s						
FFC	**Flin Flon**	**100.85**	**36**	PFAKE		10 22 50.0	+12
FFC				LR	LR		
	comp=Z,1µm,21.0s						
BRVK	**Borovoye**	**101.03**	**322**	PFAKE		10 22 50.0	+11
BRVK				LR	LR		
	comp=Z,332nm,20.0s						
CBKS	**Cedar Bluff**	**101.25**	**52**	PFAKE		10 22 50.0	+10
CBKS				LR	LR		
	comp=Z,1µm,21.0s						
KVTX	**Kingsville**	**101.72**	**64**	PFAKE		10 22 50.0	+7.4
KVTX				LR	LR		
	comp=Z,644nm,19.0s						
KSU1	**Kansas State U**	**103.70**	**52**	PFAKE		10 23 00.0	+8.8
KSU1				LR	LR		
	comp=Z,966nm,19.0s						
ECSD	**EROS Data Cent**	**103.89**	**48**	PFAKE		10 23 00.0	+8.1
ECSD				LR	LR		
	comp=Z,997nm,19.0s						
AGMN	**Agassiz Nation**	**104.48**	**43**	PFAKE		10 23 10.0	+16
AGMN				LR	LR		
	comp=Z,596nm,19.0s						
EYMN	**Ely**	**107.42**	**43**	PFAKE		10 27 30.0	+14
EYMN				LR	LR		
	comp=Z,586nm,19.0s						
ARU	**Arti**	**107.71**	**326**	PFAKE		10 27 30.0	+14
ARU				LR	LR		
	comp=Z,307nm,19.0s						
JFWS	**Jewell Farm**	**108.54**	**48**	PFAKE		10 27 30.0	+12
JFWS				LR	LR		
	comp=Z,682nm,19.0s						
COWI	**Conover**	**109.14**	**45**	PFAKE		10 27 30.0	+11
COWI				LR	LR		
	comp=Z,779nm,19.0s						
HDIL	**Hopedale**	**109.34**	**51**	PFAKE		10 27 30.0	+10
HDIL				LR	LR		
	comp=Z,2µm,22.0s						
KBS	**Kingsbay**	**110.59**	**355**	PFAKE		10 27 30.0	+8.9
KBS				LR	LR		
	comp=Z,452nm,19.0s						
ABPO	**Ambohimpanom**	**111.33**	**245**	PFAKE		10 27 40.0	+16
ABPO				LR	LR		
	comp=Z,445nm,20.0s						
BRAL	**Brewton**	**111.36**	**61**	PFAKE		10 27 40.0	+16
BRAL				LR	LR		
	comp=Z,602nm,20.0s						
JTS	**JuntasAbangare**	**111.98**	**83**	PFAKE		10 27 40.0	+14
JTS				LR	LR		
	comp=Z,626nm,20.0s						
GLMI	**Grayling**	**112.44**	**46**	PFAKE		10 27 40.0	+14
GLMI				LR	LR		
	comp=Z,1µm,21.0s						
AAM	**Ann Arbor**	**113.43**	**49**	PFAKE		10 27 40.0	+13
AAM				LR	LR		
	comp=Z,980nm,19.0s						
ACSO	**Alum Creek Sta**	**114.17**	**51**	PFAKE		10 27 40.0	+11
ACSO				LR	LR		
	comp=Z,987nm,20.0s						
LVZ	**Lovozero**	**114.24**	**341**	PFAKE		10 27 40.0	+12
LVZ				LR	LR		
	comp=Z,244nm,22.0s						
GOGA	**Godfrey**	**114.34**	**58**	PFAKE		10 27 40.0	+11
GOGA				LR	LR		
	comp=Z,959nm,21.0s						
NNA	**Nana**	**115.09**	**109**	PFAKE		10 27 40.0	+8.5
NNA				LR	LR		
	comp=Z,257nm,20.0s						
KEV	**Kevo**	**115.26**	**345**	PFAKE		10 27 40.0	+10
KEV				LR	LR		
	comp=Z,869nm,19.0s						
ARCES	**ARCESS Array B**	**115.79**	**345**	PKP	**PKiKP**	**10 27 28.6**	**-2.6**
	comp=Z,5.4nm,1.1s,baz=77,slow=1.9,SNR=4.8						
BLA	**Blacksburg**	**116.50**	**54**	PFAKE		10 27 50.0	+16
BLA				LR	LR		
	comp=Z,1µm,22.0s						
BCIP	**Isla Barro Col**	**116.83**	**85**	PFAKE		10 27 50.0	+15
BCIP				LR	LR		
	comp=Z,550nm,20.0s						
NHSC	**New Hope**	**117.11**	**58**	PFAKE		10 27 50.0	+15
NHSC				LR	LR		
	comp=Z,1µm,20.0s						
CBN	**Corbin Frederi**	**118.76**	**52**	PFAKE		10 27 50.0	+12
CBN				LR	LR		
	comp=Z,969nm,20.0s						
CNNC	**Cliffs of the**	**118.77**	**56**	PFAKE		10 27 50.0	+12
CNNC				LR	LR		
	comp=Z,815nm,20.0s						
BINY	**Binghamton**	**119.07**	**48**	PFAKE		10 27 50.0	+12
BINY				LR	LR		
	comp=Z,2µm,22.0s						
LONY	**Lake Ozonia**	**119.50**	**45**	PFAKE		10 27 50.0	+11
LONY				LR	LR		
	comp=Z,835nm,22.0s						
GNI	**Garni**	**119.50**	**310**	PFAKE		10 27 50.0	+10
GNI				LR	LR		
	comp=Z,590nm,19.0s						
OBN	**Obninsk**	**119.93**	**328**	PFAKE		10 27 50.0	+10
OBN				LR	LR		
	comp=Z,245nm,20.0s						
OBN	**Obninsk**	**119.93**	**328**	*e*PKIKP	PKPpre	10 27 33.5	
OBN				*e*		10 29 01.8	
OBN				*e*PPP	PPP	10 31 38.2	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIV	**Kislovodsk**	**120.14**	**315**	PFAKE		10 27 50.0	+9.5
KIV				LR	LR		
	comp=Z,469nm,20.0s						
KIV	**Kislovodsk**	**120.14**	**315**	*i* PKIKP	**PKPdf**	**10 27 37.7**	**-2.8**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RAYN	**Ar Rayn**	**120.64**	**291**	PFAKE		10 27 50.0	+7.9
RAYN				LR	LR		
	comp=Z,436nm,20.0s						
FINES	**FINESS Array B**	**121.08**	**338**	PKP	**PKiKP**	**10 27 41.8**	**0.0**
	comp=Z,1.8nm,0.8s,baz=357,slow=2.8,SNR=4.8						
LPAZ	**La Paz**	**121.47**	**117**	PKP	**PKiKP**	**10 27 45.6**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=241,slow=2.4,SNR=4.4						
GTBY	**Guantanamo Bay**	**122.17**	**73**	PFAKE		10 28 00.0	+15
GTBY				LR	LR		
	comp=Z,378nm,19.0s						
SOC	**Sochi**	**122.31**	**315**	*i* PKIKP	**PKiKP**	**10 27 45.1**	**+0.4**
SOC				*e*		10 29 18.5	
SOC				*e*PPP	PPP	10 32 02.3	
SOC				*e*SSS	SSS	10 50 27.8	
SOC				MLR	MLR		
	comp=Z,135nm,16.0s						
SUR	**Sutherland**	**124.70**	**218**	PFAKE		10 28 00.0	+10
SUR				LR	LR		
	comp=Z,1µm,20.0s						
CPUP	**Villa Florida**	**125.15**	**133**	PKP	**PKPdf**	**10 27 49.4**	**-1.1**
	comp=Z,4.5nm,1.1s,baz=222,slow=1.7,SNR=5.5						
SDV	**Santo Domingo**	**125.81**	**87**	*e*PKPdf	**PKiKP**	**10 27 52.6**	**-0.1**
GRTK	**Grand Turk**	**125.87**	**71**	PFAKE		10 28 00.0	+7.6
GRTK				LR	LR		
	comp=Z,615nm,20.0s						
KIEV	**Kiev**	**125.97**	**326**	PFAKE		10 28 00.0	+8.3
KIEV				LR	LR		
	comp=Z,563nm,19.0s						
KMBO	**Kilima Mbogo**	**126.11**	**261**	PFAKE		10 28 00.0	+6.6
KMBO				LR	LR		
	comp=Z,708nm,21.0s						
NB2	**NORSAR Subarra**	**126.14**	**344**	PKPdf	**PKiKP**	**10 27 52.1**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=30,slow=1.8						
NOA	**NORSAR Array B**	**126.14**	**344**	PKIKP	**PKiKP**	**10 27 52.0**	**+0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**126.14**	**344**	PKP	**PKiKP**	**10 27 52.0**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=40,slow=2.0,SNR=4.1						
BRTR	**Keskin Array B**	**127.84**	**312**	PKP	**PKPdf**	**10 27 55.2**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=85,slow=2.6,SNR=3.8						
ANTO	**Ankara**	**128.40**	**313**	PFAKE		10 28 10.0	+13
ANTO				LR	LR		
	comp=Z,335nm,20.0s						
LSZ	**Lusaka**	**129.45**	**240**	PFAKE		10 28 10.0	+10
LSZ				LR	LR		
	comp=Z,686nm,20.0s						
UZH	**Uzhgorod**	**130.84**	**327**	*e*PKIKP	**PKiKP**	**10 28 01.1**	**-0.4**
UZH				*e*		10 28 13.6	
UZH				*i*		10 28 20.2	
OKC	**Ostrava-Krasne**	**132.16**	**331**	AMS	AMS	11 19 30.0	
	comp=Z,400nm,25.7s						
MBAR	**Mbarara**	**132.54**	**259**	PFAKE		10 28 20.0	+14
MBAR				LR	LR		
	comp=Z,1µm,22.0s						
PVCC	**Panska Ves**	**133.30**	**334**	AMS	AMS	11 22 00.0	
	comp=Z,500nm,22.0s						
CLL	**Collm**	**133.37**	**336**	*e*PKPdf	**PKiKP**	**10 28 07.0**	**+0.4**
CLL				*e*PP	**PP**	**10 30 35.0**	**+2.7**
CLL				*e*		10 30 55.0	
CLL				*e*PKSdf	**PKSdf**	**10 31 41.0**	**-0.5**
CLL				*e*		10 35 48.0	
CLL				*e*PPS	PPS	10 42 35.0	
CLL				*e*		10 49 42.0	
CLL				*e*		10 52 06.0	
CLL				*e*SSS	SSS	10 53 13.0	
CLL				*e*SSSS		10 56 42.0	
CLL	**Collm**	**133.37**	**336**	*e*PKIKP	**PKiKP**	**10 28 07.0**	**+0.4**
CLL				MLR	MLR		
	comp=Z,700nm,17.7s						
GOPC	**GO Pecny, Ondr**	**133.65**	**333**	AMS	AMS	11 23 10.0	
	comp=Z,400nm,23.3s						
PRU	**Pruhonice**	**133.71**	**333**	AMS	AMS	11 23 30.0	
	comp=Z,500nm,20.6s						
KHC	**Kasperske Hory**	**134.76**	**333**	AMS	AMS	11 22 40.0	
	comp=Z,500nm,22.1s						
GERES	**GERESS Array B**	**134.92**	**333**	PKIKP	**PKPdf**	**10 28 06.8**	**-1.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**134.92**	**333**	PKP	**PKPdf**	**10 28 06.8**	**-1.7**
	comp=Z,1.8nm,1.1s,baz=134,slow=2.8,SNR=4.6						
KEST	**Kesra**	**146.43**	**322**	PKPbc	**PKPdf**	**10 28 29.9**	**+0.3**
	comp=Z,31nm,1.0s,baz=30,slow=1.5,SNR=8.3						
PBRG	**Braganca**	**148.18**	**347**	*e*PKPdf	**PKPab**	**10 28 37.6**	**-0.8**
PGAV	**Gavieira, Arco**	**148.33**	**350**	*e*PKPdf	**PKPab**	**10 28 42.0**	**+3.0**
PCAB	**Cabril**	**148.53**	**349**	*e*PKPdf	**PKPab**	**10 28 42.1**	**+2.3**
POLO	**Lamas de Olo**	**148.81**	**349**	*e*PKPdf	**PKPab**	**10 28 41.8**	**+0.8**
MVO	**Moncorvo**	**148.86**	**347**	*e*PKPdf	**PKPbc**	**10 28 37.4**	**+0.1**
PVIS	**Viseu**	**149.47**	**348**	*e*PKPdf	**PKPab**	**10 28 44.2**	**+0.6**
ESDC	**Sonseca Array**	**149.47**	**342**	PKPbc	**PKPbc**	**10 28 36.7**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=328,slow=28,SNR=4.0						
MTE	**Manteigas**	**149.70**	**348**	*e*PKPdf	**PKPdf**	**10 28 35.7**	**+0.9**
PAB	**San Pablo**	**149.70**	**343**	*e*PKPab	**PKPab**	**10 28 45.2**	**+0.5**
PAB	**San Pablo**	**149.70**	**343**	*e*PKP2	**PKPab**	**10 28 45.2**	**+0.5**
PCBR	**Castelo Branco**	**150.22**	**347**	*e*PKPdf	**PKPbc**	**10 28 39.8**	**-0.8**
PCAS	**Casmilo, Conde**	**150.22**	**349**	*e*PKPdf	**PKPab**	**10 28 49.8**	**+3.1**
PMRV	**Marv??o**	**150.60**	**347**	*e*PKPdf	**PKiKP**	**10 28 42.3**	**0.0**
PTOM	**Tomar**	**150.63**	**349**	*e*PKPdf	**PKiKP**	**10 28 42.7**	**+0.4**
PMTG	**Montargil**	**151.12**	**348**	*e*PKPdf	**PKiKP**	**10 28 44.3**	**+1.0**
SHEL	**Horse Pasture**	**151.65**	**200**	PFAKE		10 28 50.0	-3.2
SHEL				LR	LR		
	comp=Z,314nm,20.0s						
PBEJ	**Beja**	**152.05**	**347**	*e*PKPdf	**PKiKP**	**10 28 47.0**	**+1.7**
MESJ	**Messejana**	**152.30**	**347**	*e*PKPdf	**PKPdf**	**10 28 40.0**	**+1.2**
PBDV	**Barranco-do-Ve**	**152.81**	**347**	*e*PKPdf	**PKiKP**	**10 28 48.8**	**+1.9**
ASCN	**Ascension**	**161.31**	**184**	PFAKE		10 29 00.0	+9.0
ASCN				LR	LR		
	comp=Z,44µm,21.0s						
TORD	**Torodi Ar. Bea**	**162.92**	**279**	PKP	**PKPdf**	**10 28 50.5**	**-2.1**
	comp=Z,2.7nm,1.0s,baz=85,slow=2.0,SNR=8.9						
DBIC	**Dimbokro**	**168.60**	**250**	PKP	**PKPdf**	**10 28 58.1**	**+0.9**
	comp=Z,3.4nm,0.9s,baz=65,slow=2.6,SNR=3.2						
SACV	**Santiago Islan**	**171.19**	**61**	PFAKE		10 29 10.0	+11
SACV				LR	LR		
	comp=Z,548nm,19.0s						

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*IDC **13** 10:18:40.7±1.2, 10°93S×164°56E, h0^{km}, mb3.8/7, mb1 4.0/10, mb1mx3.9/32, mbtmp3.9/10, ML4.2/3, Error ellipse: s-maj=29.6km s-min=21.8km az=110.0*

*NEIC **13** 10:18:42.8±0.5, 10°82S×164°56E, h10^{km}, mb4.2/7, Error ellipse: s-maj=11.4km s-min=8.3km az=93.0*

*ISCJB **13** 10:18:43.6±0.6, 11°02S±0°06×164°52E±0°08, h29^{km}, mb4.0/13, Error ellipse: s-maj=11.6km s-min=7.1km az=149.4*

ISC 13 10:18:45.0±0.9**, 10°95S**±0°08×**164°6E**±0°1**, h29^{km}, n26, σ1^{s}46**/29**, mb4.1**/13**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.78**	**288**	Pn	**Pn**	**10 19 55.3**	**+0.2**
	36nm,0.3s,baz=156,slow=8.5,SNR=6.6						
HNR				Sn	**Sn**	**10 20 51.5**	**+2.0**
	15nm,0.3s,baz=197,slow=14,SNR=3.1						
DZM	**Mont Dzumac**	**11.21**	**171**	*e*Pn	**Pn**	**10 21 25.2**	**+1.8**
DZM				*e*Sn	**Sn**	**10 23 28.3**	**+0.4**
DZM	**Mont Dzumac**	**11.21**	**171**	Pn	**Pn**	**10 21 24.5**	**+1.1**
	1.7nm,0.3s,baz=332,slow=14,SNR=11						
DZM				Sn	**Sn**	**10 23 28.3**	**+0.4**
	0.3nm,0.3s,baz=330,slow=20,SNR=2.8						
PINNC	**Pines Island,**	**11.93**	**167**	*e*Pn	**Pn**	**10 21 35.6**	**+2.5**
CTA	**Charters Tower**	**19.82**	**241**	P	**Pn**	**10 23 15.2**	**0.0**
	0.2nm,0.3s,baz=62,slow=13,SNR=4.3						
CTAO	**Charters Tower**	**19.82**	**241**	*e*P	**Pn**	**10 23 15.6**	**+0.4**
	9.1nm,0.9s						
COEN	**Coen**	**21.08**	**260**	*e*P	**P**	**10 23 23.2**	**-4.1**
	8.0nm,1.0s						
ARMA	**Armidale**	**22.80**	**210**	*e*P	**P**	**10 23 46.4**	**+0.8**
	24nm,1.4s						
STKA	**Stephens Creek**	**29.72**	**222**	*e*P	**P**	**10 24 49.7**	**+0.9**
	0.4nm,0.8s						
STKA	**Stephens Creek**	**29.72**	**222**	P	**P**	**10 24 49.7**	**+0.9**
	1.0nm,0.6s,baz=79,slow=11,SNR=3.5						
WRAB	**Tennant Creek**	**30.41**	**249**	*e*P	**P**	**10 24 55.7**	**+0.6**
	2.8nm,0.9s						
WB2	**Warramunga Arr**	**30.41**	**249**	*e*P	**P**	**10 24 55.5**	**+0.4**
WR1	**Warramunga Arr**	**30.42**	**249**	*e*P	**P**	**10 24 53.6**	**-1.6**
	8.3nm,1.5s						
WRA	**Warramunga Arr**	**30.42**	**249**	P	**P**	**10 24 53.6**	**-1.6**
	0.7nm,0.8s,baz=79,slow=8.8,SNR=4.4						
SNZO	**South Karori**	**31.54**	**165**	*e*P	**P**	**10 25 01.7**	**-2.9**
	174nm,1.4s						
AS31	**Alice Springs**	**31.79**	**243**	*e*P	**P**	**10 25 05.6**	**-1.7**
	1.2nm,1.4s						
ASAR	**Alice Springs**	**31.79**	**243**	P	**P**	**10 25 06.4**	**-0.8**
	0.3nm,0.6s,baz=65,slow=10,SNR=6.4						
SONA0	**Songino Array**	**77.90**	**324**	*e*P	**P**	**10 30 41.6**	**+1.3**
SONM	**Songino Array**	**77.90**	**324**	P	**P**	**10 30 41.6**	**+1.3**
	0.3nm,0.6s,baz=125,slow=7.2,SNR=2.8						
IL1	**Eielson Array**	**83.80**	**19**	*e*P	**P**	**10 31 11.4**	**+0.1**
ILAR	**Eielson Array**	**83.80**	**19**	P	**P**	**10 31 10.9**	**-0.3**
	0.7nm,0.7s,baz=246,slow=5.7,SNR=7.8						
ILB	**Eielson Array**	**83.80**	**19**	*e*P	**P**	**10 31 10.9**	**-0.3**
	11nm,1.6s						
MK32	**Makanchi Array**	**92.65**	**317**	*e*P	**P**	**10 31 54.3**	**+0.1**
MKAR	**Makanchi Array**	**92.65**	**317**	P	**P**	**10 31 54.3**	**+0.1**
	0.4nm,0.7s,baz=100,slow=5.8,SNR=4.4						
ZALV	**Zalesovo Beam**	**92.79**	**324**	P	**P**	**10 31 54.7**	**+0.1**
	0.3nm,0.3s,baz=107,slow=5.0,SNR=2.4						
ZAA1	**Zalesovo Array**	**92.80**	**324**	*e*P	**P**	**10 31 54.7**	**+0.1**

IDC 13 10:20:53.8±2.5**, 7°04S×150°96E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/32**, mbtmp3.8**/4**, Error ellipse: s-maj=79.6km s-min=29.8km az=102.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.60**	**230**	P	P	10 25 33.8	-0.9
	1.0nm,0.6s,baz=55,slow=12,SNR=12						
ASAR	**Alice Springs**	**23.27**	**223**	P	P	10 26 03.1	-0.1
	0.9nm,0.4s,baz=56,slow=9.1,SNR=7.9						
STKA	**Stephens Creek**	**26.21**	**198**	P	P	10 26 30.7	+0.3
	5.8nm,1.0s,baz=9.5,slow=6.1,SNR=4.5						
MKAR	**Makanchi Array**	**80.81**	**320**	P	P	10 33 09.9	+0.4
	0.4nm,0.7s,baz=98,slow=5.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**149.15**	**284**	PKPbc	PKPbc	10 40 44.5	-0.8
	0.8nm,0.6s,baz=76,slow=3.2,SNR=5.6						

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*ISCJB **13** 10:21:14.1±1.2, 11°24S±0°10×164°5E±0°1, h29^{km}, mb3.6/4, Error ellipse: s-maj=19.7km s-min=9.2km az=142.8*

*IDC **13** 10:21:20.4±3.6, 11°06S×164°41E, h64^{km}±30^{km}, mb3.4/4, mb1 3.7/6, mb1mx3.5/33, mbtmp3.9/6, ML4.5/2, Error ellipse: s-maj=31.2km s-min=22.6km az=46.0*

ISC 13 10:21:15.7±1.3**, 11°1S**±0°1×**164°6E**±0°1**, h29^{km}, n6, σ0^{s}35**/7**, mb3.7**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.87**	**290**	P	**Pn**	**10 22 27.2**	**+0.2**
	33nm,0.3s,baz=155,slow=9.7,SNR=5.1						
HNR				S	**Sn**	**10 23 22.7**	**+0.2**
	7.9nm,0.3s,baz=180,slow=20,SNR=2.3						
DZM	**Mont Dzumac**	**11.01**	**171**	P	Pn	10 23 57.1	+5.7
	2.0nm,0.3s,baz=318,slow=16,SNR=8.1						
DZM				S	**Sn**	**10 25 54.0**	**+0.2**
	0.1nm,0.3s,baz=19,slow=18,SNR=1.7						
WRA	**Warramunga Arr**	**30.38**	**250**	P	**P**	**10 27 25.2**	**-0.3**
	0.6nm,0.9s,baz=79,slow=9.1,SNR=3.7						
ASAR	**Alice Springs**	**31.73**	**243**	P	**P**	**10 27 37.3**	**-0.1**
	0.4nm,0.8s,baz=67,slow=10,SNR=2.2						
ILAR	**Eielson Array**	**83.97**	**19**	P	**P**	**10 33 43.1**	**+0.3**
	0.6nm,0.7s,baz=229,slow=5.5,SNR=8.7						
MKAR	**Makanchi Array**	**92.81**	**317**	P	**P**	**10 34 25.3**	**-0.4**
	0.3nm,0.6s,baz=88,slow=5.6,SNR=3.7						

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*DRS **13** 10:23:44.2±0.0, 43°32N×44°52E, h16^{km}*

*MOS **13** 10:23:44.8±0.0, 43°31N×44°72E, h12^{km}, MPVA3.6*

*NORS **13** 10:23:45.1±0.0, 43°30N×44°79E, h17^{km}, MPVA3.6*

*MOS **13** 10:23:46.2±0.7, 43°29N×44°69E, h15^{km}, mb3.9/2, Error ellipse: s-maj=7.5km s-min=5.4km az=44.0*

ISC 13 10:23:44.3±0.9**, 43°35N**±0°02×**44°77E**±0°02**, h18^{km}**±3^{km}**, n73, σ1^{s}71**/126**, 1C-1D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTKR	**Batakoyurt**	**0.17**	**276**	*e*PG	**Pg**	**10 23 49.8**	**+0.9**
BTKR				*e*S	**Sg**	**10 23 54.2**	**+2.2**
BTKR	**Batakoyurt**	**0.17**	**276**	*e*Pg	**Pg**	**10 23 49.8**	**+0.9**
BTKR				*e*Sg	**Sg**	**10 23 54.2**	**+2.2**
KMGR	**Komgaron**	**0.30**	**167**	*e*PG	**Pb**	**10 23 51.9**	**+0.6**
KMGR				*e*S	**Sb**	**10 23 58.2**	**+2.3**
KMGR	**Komgaron**	**0.30**	**167**	*e*Pg	**Pb**	**10 23 51.9**	**+0.6**
KMGR				*e*Sg	**Sb**	**10 23 58.1**	**+2.3**
VLKR	**Vladikavkaz**	**0.32**	**193**	*e*PG	**Pb**	**10 23 52.3**	**+0.8**
VLKR				*e*S	**Sb**	**10 23 56.9**	**+0.7**
VLKR	**Vladikavkaz**	**0.32**	**193**	*e*Pg	**Pb**	**10 23 52.3**	**+0.8**
VLKR				*e*Pg	**Pb**	**10 23 52.3**	**+0.8**
VLKR				*e*Sg	**Sb**	**10 23 56.9**	**+0.7**
VLKR				*e*Sg	**Sb**	**10 23 56.9**	**+0.7**
TRKR	**Terskaya**	**0.37**	**356**	*e*PG	**Pn**	**10 23 55.7**	**+0.9**
TRKR				*e*S	**Sn**	**10 24 03.2**	**+1.6**
TRKR	**Terskaya**	**0.37**	**356**	*e*Pg	**Pn**	**10 23 55.7**	**+0.9**
TRKR				*e*Sg	**Sn**	**10 24 03.2**	**+1.6**
ARNR	**Ardon**	**0.40**	**244**	*e*PG	**Pn**	**10 23 55.8**	**+0.6**
ARNR				*e*S	**Sn**	**10 24 04.5**	**+2.3**
ARNR	**Ardon**	**0.40**	**244**	*e*Pg	**Pn**	**10 23 55.8**	**+0.6**
ARNR				*e*Sg	**Sn**	**10 24 02.9**	**+0.7**
STDR	**Stavd-Durt**	**0.52**	**272**	⇑*i*PG	**Pn**	**10 23 57.8**	**+1.0**
STDR				*e*S	**Sn**	**10 24 08.2**	**+3.0**
STDR	**Stavd-Durt**	**0.52**	**272**	*i* Pg	**Pn**	**10 23 57.8**	**+1.0**
STDR				*e*Sg	**Sn**	**10 24 08.2**	**+3.0**
PRTR	**Priterechnaya**	**0.53**	**318**	*e*PG	**Pn**	**10 23 58.2**	**+1.2**
PRTR				*e*S	**Sn**	**10 24 08.3**	**+2.8**
PRTR	**Priterechnaya**	**0.53**	**318**	*e*Pg	**Pn**	**10 23 58.2**	**+1.2**
PRTR				*e*Sg	**Sn**	**10 24 08.3**	**+2.8**
KORR	**Kora**	**0.58**	**243**	*e*PG	**Pn**	**10 23 57.8**	**+0.1**
KORR				*e*S	**Sn**	**10 24 08.3**	**+1.5**
KORR	**Kora**	**0.58**	**243**	*e*Pg	**Pn**	**10 23 57.8**	**+0.1**
KORR				*e*Sg	**Sn**	**10 24 05.7**	**-1.1**
LACR	**Lac**	**0.63**	**214**	*e*PG	**Pn**	**10 23 57.9**	**-0.6**
LACR				*i* S	**Sn**	**10 24 11.9**	**+3.8**
LACR				pmax	pmax		
	comp=Z,122nm,0.3s						
LACR	**Lac**	**0.63**	**214**	*e*Pg	**Pn**	**10 23 58.0**	**-0.6**

LACR				eSg	Sn	10 24 09.6	+1.5
GROC	Groznyy	0.76	101	i PG	Pb	10 23 58.2	-0.9
GROC	Groznyy	0.76	101	ePg	Pn	10 24 02.2	+2.0
GROC				eSg	Sn	10 24 12.2	+0.9
ZEI	Tsey	0.85	229	ePG	Pn	10 24 02.4	+0.8
ZEI				pmax	pmax		
	comp=Z,138nm,0.2s						
ZEI	Tsey	0.85	229	ePg	Pn	10 24 02.1	+0.5
ZEI				eSg	Sn	10 24 15.2	+1.4
NCK	Nalchik	0.87	280	i PG	Pg	10 24 01.4	+0.1
NCK	Nalchik	0.87	280	ePg	Pn	10 24 02.0	+0.3
NCK				eSg	Sn	10 24 17.3	+3.4
DIGR	Digorskoe uzhe	0.98	243	ePG	Pg	10 24 04.3	+0.8
DIGR				eS	Sn	10 24 18.8	+1.8
DIGR	Digorskoe uzhe	0.98	243	ePg	Pg	10 24 04.3	+0.8
DIGR				eSg	Sn	10 24 18.5	+1.5
KBTC	Kuba-Taba	1.09	296	ePG	Pg	10 24 06.8	+1.2
KBTC				eS	Sg	10 24 23.7	+3.8
KBTC	Kuba-Taba	1.09	296	ePg	Pg	10 24 06.8	+1.2
KBTC				eSg	Sg	10 24 23.7	+3.8
BTLR	Botlikh	1.27	122	⇓iPG	Pb	10 24 09.0	+1.3
BTLR				eS	Sg	10 24 27.1	+1.7
BTLR				pmax	pmax		
	comp=Z,37nm,0.4s						
BTLR	Botlikh	1.27	122	ePg	Pg	10 24 09.1	+0.2
BTLR				eSg	Sg	10 24 27.1	+1.7
DLMR	Dylym	1.39	101	PG	Pg	10 24 11.5	+0.4
DLMR				eS	Sg	10 24 33.0	+3.7
DLMR	Dylym	1.39	101	ePg	Pg	10 24 11.5	+0.4
DLMR				eSg	Sg	10 24 33.0	+3.7
PYA1	Pyatigorsk	1.41	301	i PG	Pb	10 24 09.9	-0.2
PYA1				i S	Sg	10 24 30.0	+0.2
PYA1	Pyatigorsk	1.41	301	ePg	Pg	10 24 11.1	-0.3
PYA1				eSg	Sg	10 24 31.0	+1.2
NEY	Neytrino	1.50	267	i PG	Pb	10 24 12.0	+0.3
NEY				i S	Sg	10 24 32.7	-0.1
NEY	Neytrino	1.50	267	ePg	Pb	10 24 12.4	+0.7
NEY				eSg	Sg	10 24 33.0	+0.2
DBC	Dubki	1.54	102	ePG	Pg	10 24 14.5	+0.4
DBC				eS	Sg	10 24 36.2	+2.0
DBC	Dubki	1.54	102	ePg	Pg	10 24 14.5	+0.4
DBC				eSg	Sg	10 24 36.2	+2.0
SHA1	Shidzhatmaz	1.58	285	ePG	Pb	10 24 13.7	+0.5
SHA1				eS	Sg	10 24 36.8	+1.3
SHA1	Shidzhatmaz	1.58	285	ePg	Pb	10 24 13.2	0.0
SHA1				eSg	Sg	10 24 35.9	+0.4
UNCR	Uncukul	1.62	113	PN	Pg	10 24 15.5	0.0
UNCR				eS	Sg	10 24 38.0	+1.5
UNCR				pmax	pmax		
	comp=Z,34nm,0.3s						
UNCR	Uncukul	1.62	113	ePg	Pg	10 24 15.5	0.0
UNCR				eSg	Sg	10 24 38.0	+1.5
KIV0	Kislovodsk Arr	1.62	292	ePg	Pb	10 24 14.1	+0.3
KIV0				eSg	Sg	10 24 36.5	-0.2
TBLG	Delisi	1.62	181	P	Pb	10 24 13.2	-0.5
TBLG				S	Sg	10 24 37.5	+0.8
TBLG	Delisi	1.62	181	ePG	Pb	10 24 13.2	-0.5
TBLG				eS	Sg	10 24 37.5	+0.8
TBLG	Delisi	1.62	181	ePg	Pb	10 24 13.2	-0.5
KIV	Kislovodsk	1.63	292	i PG	Pb	10 24 14.4	+0.5
KIV	Kislovodsk	1.63	292	ePg	Pb	10 24 14.3	+0.4
XNZR	Khunzakh	1.64	119	ePN	Pg	10 24 16.3	+0.4
XNZR				eS	Sg	10 24 37.7	+0.5
XNZR	Khunzakh	1.64	119	ePg	Pb	10 24 15.5	+1.4
XNZR				eSg	Sg	10 24 38.5	+1.3
KRNR	Karanay	1.65	108	ePN	Pb	10 24 16.0	+1.7
KRNR				eS	Sg	10 24 39.0	+1.4
KRNR				pmax	pmax		
	comp=Z,10.0nm,0.2s						
KRNR	Karanay	1.65	108	ePg	Pb	10 24 16.0	+1.7
KRNR				eSg	Sg	10 24 39.0	+1.4
BUJR	Buynaksk	1.79	106	PN	Pg	10 24 27.5	+8.7
ARKR	Arakani	1.80	114	PN	Pg	10 24 19.0	+0.1
ARKR				eS	Sg	10 24 44.0	+1.7
ARKR	Arakani	1.80	114	ePg	Pg	10 24 19.0	+0.1
ARKR				eSg	Sg	10 24 44.0	+1.7
LGD	Lagodekhi	1.87	144	P	Pb	10 24 19.4	+1.5
LGD	Lagodekhi	1.87	144	ePN	Pb	10 24 19.4	+1.5
LGD	Lagodekhi	1.87	144	ePg	Pb	10 24 19.4	+1.5
GNBR	Gunib	1.88	120	ePN	Pb	10 24 19.5	+1.4
GNBR				pmax	pmax		
	comp=Z,21nm,0.5s						
GNBR	Gunib	1.88	120	ePg	Pb	10 24 18.9	+0.8
GNBR				eSg	Sg	10 24 44.9	0.0
TRLG	Trialeti	1.88	195	P	Pb	10 24 19.2	+1.0
TRLG				S	Sg	10 24 45.1	+0.1
KZRT	Kazreti	1.98	188	P	Pb	10 24 20.1	+0.2
KZRT				S	Sb	10 24 45.4	+1.1
KMKR	Kumukh	2.11	125	PN	Pb	10 24 23.5	+1.4
KMKR				i S	Sg	10 24 52.0	-0.2
KMKR	Kumukh	2.11	125	ePg	Pb	10 24 23.5	+1.4
KMKR				i Sg	Sg	10 24 52.0	-0.2
GOF	Gofitskoye	2.11	324	ePN	Pg	10 24 38.1	+13
DOMR	Dombai	2.30	270	i PN	Pn	10 24 23.5	+2.0
DOMR	Dombai	2.30	270	ePn	Pn	10 24 23.5	+2.0
GNI	Garni	3.20	180	i PN	Pn	10 24 35.9	+2.0
GNI	Garni	3.20	180	ePn	Pn	10 24 35.9	+2.0
OBN	Obninsk	12.92	338	eP	Pn	10 26 46.2	-0.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ARU	Arti	15.78	29	P	Pn	10 27 19.6	-5.8
AAK	Ala-Archa	21.70	82	i P	P	10 28 29.6	-4.8
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURK	Kurchatov	24.05	60	i P	P	10 28 52.4	-5.9
KURK				pmax	pmax		
	comp=Z,2.0nm,1.4s						

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*IDC **13** 10:24:54.9±1.7, 10°.58S×164°.47E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.6/34, mbtmp3.7/6, ML3.7/2, Error ellipse: s-maj=41.1km s-min=33.7km az=124.0*

*ISCJB **13** 10:24:56.9±1.2, 10°.7S±0°.1×164°.4E±0°.2, h24^{km}, mb3.4/4, Error ellipse: s-maj=25.2km s-min=17.7km az=145.2*

ISC 13 10:24:59.0±1.2**, 10°.6S**±0°.2×**164°.3E**±0°.1**, h24**^{km}**, n6, σ1^{s}.42**/7**, mb3.5**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.45	285	Pn	Pn	10 26 06.2	+1.1
	5.2nm,0.3s,baz=60,slow=2.3,SNR=1.8						
HNR				Sn	Sb	10 27 08.0	-1.9
	6.6nm,0.3s,baz=353,slow=23,SNR=2.4						
DZM	Mont Dzumac	11.56	170	Pn	Pn	10 27 42.1	-0.7
	0.3nm,0.3s,baz=314,slow=19,SNR=9.2						
WRA	Warramunga Arr	30.31	249	P	P	10 31 10.3	+1.4
	0.4nm,0.8s,baz=78,slow=7.8,SNR=3.6						
ASAR	Alice Springs	31.73	242	P	P	10 31 21.6	+0.3
	0.3nm,0.8s,baz=62,slow=10,SNR=3.9						
ILAR	Eielson Array	83.57	19	P	P	10 37 24.1	-0.8
	0.5nm,0.9s,baz=238,slow=6.3,SNR=2.5						
MKAR	Makanchi Array	92.25	317	P	P	10 38 07.4	+0.3
	0.2nm,0.6s,baz=98,slow=5.0,SNR=2.4						

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*IDC **13** 10:35:39.0±8.2, 37°.34N×72°.18E, h257^{km}±50^{km}, mb2.5/1, mb1 2.7/6, mb1mx2.6/37, mbtmp3.4/6, Error ellipse: s-maj=91.6km s-min=77.1km az=113.0*

*NNC **13** 10:35:39.2±1.9, 37°.38N×71°.85E, h223^{km}±18^{km}, mb2.3, mpv3.5, Error ellipse: s-maj=23.9km s-min=15.4km az=60.0*

ISC 13 10:35:38.5±2.4**, 37°.4N**±0°.2×**72°.0E**±0°.2**, h250**^{km}**, n12, σ0^{s}.85**/17**, 3C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	2.90	24	⇑P	Pn	10 36 29.5	-0.6
	4.3nm,0.4s						
SFK				⇓S	S	10 37 09.4	-1.6
	30nm,0.4s						
MNAS	Manas	5.13	4	⇓P	Pn	10 36 56.3	+0.4
	5.6nm,0.5s						
MNAS				⇓S	S	10 37 57.2	-0.5
	6.1nm,0.5s						
AAK	Ala-Archa	5.61	19	⇓P	Pn	10 37 02.3	+0.5
	2.6nm,0.5s						
AAK				⇓S	S	10 38 09.4	+1.0
	3.5nm,0.7s						
AAK	Ala-Archa	5.61	19	P	Pn	10 37 02.3	+0.5
	1.1nm,0.3s,baz=175,slow=7.9,SNR=17						
AAK				S	S	10 38 08.4	0.0
	0.3nm,0.3s,baz=293,slow=13,SNR=3.4						
KK31	Karatay Array	5.84	349	⇑P	Pn	10 37 04.8	+0.3
	0.6nm,0.2s						
KK31				⇑S	S	10 38 11.7	-1.6
	9.8nm,0.8s						
TKM2	Tokmak 2	6.20	25	⇓P	Pn	10 37 09.7	+0.4
	6.2nm,0.7s						
MK31	Makanchi Array	12.13	36	P	Pn	10 38 23.6	0.0
	0.6nm,0.7s,baz=211,slow=13,SNR=4.3						
MKAR	Makanchi Array	12.13	36	P	Pn	10 38 23.6	0.0
	0.1nm,0.3s,baz=207,slow=13,SNR=5.2						
KURBB	Kurchatov Arra	14.06	17	P	Pn	10 38 46.6	-0.5
	0.1nm,0.3s,baz=203,slow=12,SNR=4.2						
BVAR	Borovoye Array	15.70	356	P	P	10 39 07.1	+1.3
	0.2nm,0.3s,baz=165,slow=11,SNR=4.1						
ZALV	Zalesovo Beam	18.80	24	P	P	10 39 40.0	+0.5
	0.2nm,0.3s,baz=211,slow=10,SNR=3.2						
YKA	Yellowknife Ar	80.34	3	P	P	10 47 20.9	-0.5
	0.1nm,0.5s,baz=345,slow=5.0,SNR=3.7						

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*ANF **13** 10:35:43.4±0.5, 32°.24N×115°.26W, h24^{km}±3^{km}, ML2.8/12, Error ellipse: s-maj=3.7km s-min=2.2km az=8.0*

*ISCJB **13** 10:35:43.8±0.4, 32°.23N±0°.02×115°.27W±0°.03, h24^{km}±3^{km}, Error ellipse: s-maj=4.0km s-min=3.6km az=161.8*

*ECX **13** 10:35:44.8±0.6, 32°.20N×115°.30W, h5^{km}, MD3.1, ML3.3, Fault plane solution: NP1:ϕ_s276.67000°, δ90.00000°, λ30.00000°.*

*PAS **13** 10:35:44.1±0.0, 32°.22N×115°.28W, h10^{km}*

*MEX **13** 10:35:44.6±0.5, 32°.34N×115°.09W, h16^{km}±58^{km}, MD3.8*

*NEIC **13** 10:35:44.8±0.0, 32°.20N×115°.30W, h31^{km}, MD3.3(ECX), ML3.1(PAS), After ECX.*

ISC 13 10:35:43.0±1.0**, 32°.21N**±0°.02×**115°.29W**±0°.02**, h15**^{km}±9^{km}**, n56, σ0^{s}.86**/78**, 5C-12D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.21	357	⇑eP	Pb	10 35 48.5	-0.1
CPBX				eS	Sg	10 35 52.3	+1.2
CPBX				e		10 35 55.0	
CPBX				IAML		10 35 55.0	
	comp=E,23μm,0.2s						
UABX	UABC, Campus M	0.44	343	⇓eP	Pb	10 35 53.2	+0.6
UABX				eS	Sb	10 36 00.8	+1.8
DREC	Desert Rsrch C	0.61	348	⇓eP	Pb	10 35 56.2	+0.7
WESC	Westside Schoo	0.66	326	⇓iP	Pb	10 35 56.8	+0.4
YUH	Yuha Desert	0.69	310	⇓iP	Pb	10 35 56.8	0.0
YMD	Yuma Desert	0.72	61	⇑iP	Pb	10 35 57.1	-0.2
RMX	La Rumorosa	0.77	301	⇓eP	Pg	10 35 57.3	-0.7
RMX				eS	Sg	10 36 07.0	-1.3
RMX				IAML		10 36 08.8	
	comp=E,1μm,0.2s						
IKP	In-Ko-Pah, Jac	0.82	303	P	Pb	10 35 59.2	+0.1
	baz=123,SNR=92						
IKP				S	Sb	10 36 10.2	+0.2
	baz=123						
IKP	In-Ko-Pah, Jac	0.82	303	⇓eP	Pb	10 35 59.2	+0.1
IKP				eS	Sb	10 36 10.1	+0.2
SWSC	Sam W. Stewart	0.85	330	P	Pg	10 35 59.0	-0.6
	baz=150,SNR=55						
SWSC				S	Sb	10 36 11.3	+0.5
	baz=150						
GLA	Glamis	0.93	25	ePg	Pg	10 36 00.0	-1.0
GLA				eSg	Sb	10 36 13.0	-0.1
GLA	Glamis	0.93	25	P	Pg	10 36 00.0	-1.0
	baz=205,SNR=101						
GLA				S	Sb	10 36 13.0	-0.1
	baz=205						
ZAX	El Zacaton	1.08	231	⇑eP	Pb	10 36 03.8	+0.3
CBX	Cerro Bola	1.17	276	eP	Pb	10 36 05.1	+0.1
CBX				eS	Sg	10 36 20.7	0.0
CBX	Cerro Bola	1.17	276	eP	Pb	10 36 05.1	+0.1
CBX				eS	Sg	10 36 20.7	0.0
CBX	Cerro Bola	1.17	276	⇓eP	Pb	10 36 05.1	+0.1
CBX				eS	Sg	10 36 20.9	+0.2
CBX				IAML		10 36 22.1	
	comp=N,1μm,0.4s						
SPIG	San Pedro Mart	1.17	187	eP	Pb	10 36 04.9	-0.2
SPIG				eS	Sb	10 36 20.9	+0.8
SPIG	San Pedro Mart	1.17	187	eP	Pb	10 36 04.9	-0.2
SPIG				eS	Sb	10 36 20.9	+0.8
SPIG	San Pedro Mart	1.17	187	⇓eP	Pb	10 36 04.9	-0.2
SPX	San Pedro Mart	1.17	187	eP	Pb	10 36 04.9	-0.2
SPX				eS	Sg	10 36 21.4	+0.6
SPX	San Pedro Mart	1.17	187	eP	Pb	10 36 04.9	-0.2
SPX				eS	Sg	10 36 21.4	+0.6
SPX	San Pedro Mart	1.17	187	⇓eP	Pb	10 36 04.9	-0.2
MONP2	Monument Peak	1.17	306	P	Pb	10 36 04.6	-0.6
	baz=126,SNR=101						
MONP2				S	Sg	10 36 20.6	-0.4
	baz=126						
MONP2	Monument Peak	1.17	306	⇓eP	Pb	10 36 04.6	-0.6
TJIG	Tijuana	1.19	281	eP	Pb	10 36 05.2	-0.1
TJIG				eS	Sb	10 36 21.0	+0.4
TJIG	Tijuana	1.19	281	⇓eP	Pb	10 36 05.2	-0.1
ECNX	Esteban Cantu	1.24	244	eP	Pb	10 36 06.3	+0.1
ECNX				⇑eP	Pn	10 36 05.4	-0.6
BAR	Barrett	1.26	292	ePn	Pn	10 36 06.4	+0.3
BAR				eSg	Sb	10 36 23.0	+0.4
BAR	Barrett	1.26	292	⇓eP	Pn	10 36 06.1	0.0
PBX	Punta Banda	1.30	250	⇑eP	Pn	10 36 07.4	+0.7
113A	Mohawk Valley,	1.41	66	ePn	Pn	10 36 07.4	-0.7
BC3	Big Chuckawall	1.45	355	P	Pn	10 36 07.9	-1.0
	baz=175,SNR=21						
BC3				S	Sn	10 36 25.9	-1.8
	baz=175						
Y12C	Blythe	1.67	23	ePn	Pb	10 36 13.1	-0.4
Y12C	Blythe	1.67	23	Pb	Pb	10 36 12.9	-0.5
	baz=203,SNR=48						
109C	Camp Elliot, M	1.68	294	P	Pn	10 36 12.0	+0.1
	baz=114,SNR=28						
109C				Sb	Sb	10 36 35.6	+1.1
	baz=114						
CPE	Camp Elliot	1.68	294	ePn	Pn	10 36 12.2	+0.4
CPE				eSn	Sb	10 36 35.1	+0.6
XPFO	Pion Flat	1.71	325	ePn	Pn	10 36 11.4	-1.0
PFO	Pinyon Flats O	1.71	325	ePn	Pn	10 36 11.5	-1.0
PFO	Pinyon Flats O	1.71	325	P	Pn	10 36 11.7	-0.8
	baz=145,SNR=14						
IRM	Iron Mountain	1.95	4	P	Pn	10 36 15.2	-0.5
	baz=184,SNR=59						
MURC	Murrieta	2.12	311	P	Pn	10 36 17.8	-0.2
	baz=131,SNR=16						
214A	Organ Pipe Nat	2.12	96	P	Pn	10 36 16.9	-1.1
	baz=277						
Y14A	Wickenburg	2.58	47	ePn	Pn	10 36 24.9	+0.5
BFSC	Mount Baldy Ra	2.83	316	P	Pn	10 36 28.2	+0.3
	baz=135						
MWC	Mount Wilson	3.07	312	ePn	Pn	10 36 33.2	+2.0
W13A	Hualapai Mount	3.11	22	ePn	Pn	10 36 33.4	+1.6
GSC	Goldstone, Bar	3.33	338	ePn	Pn	10 36 36.3	+1.6
TUC	Tucson	3.82	87	ePn	Pn	10 36 42.6	+1.2
X16A	Lo Mia Camp, P	3.91	55	ePn	Pn	10 36 43.6	+0.9
DAC	Darwin (Calif)	4.49	335	ePn	Pn	10 36 51.7	+1.0
WUAZ	Wupatki	4.64	44	ePn	Pn	10 36 53.7	+0.9
U15A	North Rim	4.89	30	ePn	Pn	10 36 58.5	+2.3
X18A	Snowflake	5.03	61	ePn	Pn	10 36 59.5	+1.3
LCMT	Little Creek M	5.08	19	ePn	Pn	10 37 00.4	+1.6
KNB	Kanab	5.21	22	ePn	Pn	10 37 02.6	+2.0
PSUT	Pine Spring	6.42	10	ePn	Pn	10 37 18.4	+1.1

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*BJI **13** 11:00:22.3, 3°.04S×101°.25E, h56^{km}, mB5.4/50, mb5.5/86, Ms5.0/80, Ms7 4.9/76*

*MOS **13** 11:00:23.3±1.0, 2°.82S×101°.34E, h50^{km}, mb6.0/87, MS4.6/16, Error ellipse: s-maj=7.1km s-min=3.6km az=116.5*

*ISCJB **13** 11:00:24.6±0.3, 3°.00S±0°.02×101°.27E±0°.02, h66^{km}±2^{km}, mb5.6/203, Error ellipse: s-maj=3.8km s-min=2.1km az=36.8*

*NEIC **13** 11:00:24.9±0.5, 2°.99S×101°.30E, h55^{km}±4^{km}, mb5.5/55, Error ellipse: s-maj=5.2km s-min=2.8km az=48.0*

NEIC Felt [IV] at Mukomuko; [III] at Bengkulu, Kapahiang and Painan; [II] at Padang.

*DJA **13** 11:00:25.3±0.2, 3°S±2°×10°1E±°, h58^{km}±2^{km}, M5.2/84, mb5.5/84, mB5.7/61, MLv5.7/24, Mw(mB)5.2/61, Mwp5.5/2*

*GCMT **13** 11:00:25.9±0.2, 3°.22S±0°.01×101°.07E±0°.01, h48^{km}, MW5.3/99, Moment Tensor Solution. s84,c145; s99,c166; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.98±.03; $M_{\theta\theta}$-0.49±.02; $M_{\phi\phi}$-0.48±.02; $M_{r\theta}$0.62±.02; $M_{\theta\phi}$0.50±.01; $M_{\phi r}$-0.41±.02; Best double couple: $M_0$1.23500×10^{17} NP1:ϕ_s128.00000°, δ64.00000°, λ84.00000°. NP2:ϕ_s321.00000°, δ27.00000°, λ102.00000°. Principal axes: T 1.2360, Plg71.0000°, Azm25.0000°; N -0.0010, Plg5.0000°, Azm131.0000°; P -1.2340, Plg18.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **13** 11:00:25.1±1.1, 2°.97S×101°.29E, h56^{km}±9^{km}, mb5.3/36, mb1 5.3/38, mb1mx5.2/46, mbtmp5.5/38, MS4.5/22, Ms1 4.5/22, ms1mx4.3/44 Error ellipse: s-maj=11.6km s-min=8.0km az=53.0*

*KLM **13** 11:00:26.4, 3°.02S×101°.11E, h21^{km}, mb5.6*

ISC 13 11:00:24.2±0.4**, 3°.06S**±0°.03×**101°.21E**±0°.03**, h54**^{km}±2^{km}**, h54**^{km}**:pP-P, n1361, σ1^{s}.28**/1460**, mb5.7**/225**, MS4.7**/49**, 85C-33D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	1.00	15	P	Pn	11 00 44.1	+2.0
KRJI				S	Sn	11 00 57.2	+1.9
MASI	Maura Aman, Be	1.03	94	P	Pn	11 00 44.1	+1.6
MASI				S	Sn	11 00 58.4	+2.4
PPSI	Pulau Pagai	1.23	284	P	Pn	11 00 44.7	-0.4
PPSI				S	Sn	11 01 01.4	+0.6
SDSI	Sungai Dareh	2.13	6	P	Pn	11 00 59.0	+1.7
MNAI	Manna	2.17	127	ePn	Pn	11 00 58.0	+0.1
MNAI	Manna	2.17	127	P	Pn	11 00 59.6	+1.7
MNAI				S	Sn	11 01 25.9	+2.3
PDSI	Padang	2.26	341	P	Pn	11 01 01.4	+2.2
PDSI				S	Sn	11 01 27.1	+1.1
LHSI	Lahat	2.43	108	P	Pn	11 01 02.0	+0.5
SISI	Saibi	2.73	309	P	Pn	11 01 07.4	+1.8
JMBI	JAMBI	2.81	60	P	Pn	11 01 08.6	+1.9
RGRI	Rengat	2.92	23	P	Pn	11 01 09.2	+1.0
MDSI	Maura Dua	3.28	116	P	Pn	11 01 14.0	+0.8
BKNI	Bangkinang	3.37	357	ePg	Pn	11 01 17.0	+2.7
BKNI	Bangkinang	3.37	357	P	Pn	11 01 15.8	+1.4
LWLI	Liwa	3.44	124	P	Pn	11 01 16.4	+0.9
PMBI	Palembang	3.56	88	P	Pn	11 01 18.8	+1.8
KLI	Kotabumi	4.06	116	P	Pn	11 01 25.9	+2.2
KASI	Kota Agung	4.09	127	P	Pn	11 01 25.9	+1.7
MNSI	Mandailing Nat	4.16	337	P	Pn	11 01 26.2	+1.0
PBSI	Pulau Batu	4.18	316	P	Pn	11 01 26.4	+0.9
DSRI	Dabo	4.23	53	P	Pn	11 01 27.6	+1.4
BLSI	Bandar Lampung	4.63	120	P	Pn	11 01 35.9	+4.2
PPBI	Pangkal Pinang	5.00	80	P	Pn	11 01 38.2	+1.4
	268nm,0.6s,2.1nm						
TPRI	Tanjung Pinang	5.16	40	P	Pn	11 01 40.8	+1.9
	4μm,0.6s,48μm25μm15nm						
KGM	Kluang	5.47	23	P	Pn	11 01 45.7	+2.6
MYKOM	Kota Tinggi	5.50	29	P	Pn	11 01 46.1	+2.6
GSI	Gunungsitoli	5.66	320	ePn	Pn	11 01 44.8	-0.9
GSI				eSn	Sn	11 02 51.3	+1.9
GSI	Gunungsitoli	5.66	320	P	Pn	11 01 45.7	0.0
	991nm,0.8s,11μm7.6nm						
PSI	Prapat	6.26	339	eP	Pn	11 01 53.4	-0.7
PSI	Prapat	6.26	339	P	Pn	11 01 53.1	-0.9
	9.5nm,0.3s,baz=180,slow=8.9,SNR=43						
PSI				S	Sn	11 03 00.5	-3.8
	9.5nm,0.3s,baz=180,slow=14,SNR=3.6						
PSI				LR	LR	11 04 42.3	
	comp=Z,13μm,20.3s,baz=91,slow=42						
FRIM	Kepong	6.27	4	P	Pn	11 01 56.8	+2.6
TPI	Tanjungpandan	6.44	87	P	Pn	11 01 58.6	+2.1
	165nm,0.7s,1.6nm						
DBJI	Dramaga	6.52	122	P	Pn	11 02 01.2	+3.6
	359nm,1.1s,8μm2.2nm						
SKJI	Sukabumi	6.61	127	P	Pn	11 02 13.1	+14
TSI	Tuntungan	7.03	338	P	Pn	11 02 07.4	+2.8
	992nm,1.0s,9μm4.0nm						
SNSI	Sinabang, Aceh	7.30	318	P	Pn	11 02 10.1	+1.8
	363nm,0.9s,6μm3.0nm						
KCSI	Kotacane, Aceh	7.39	332	P	Pn	11 02 10.3	+0.8
	189nm,1.4s,3μm3.1nm						
LEM	Lembang	7.40	121	P	Pn	11 02 11.8	+2.1
	13nm,0.3s,baz=214,slow=8.7,SNR=9.2						
LEM				S	Sn	11 03 50.6	+18
	19nm,0.3s,baz=150,slow=20,SNR=2.3						
TPTI		7.46	327	P	Pn	11 02 11.8	+1.4
	130nm,0.7s,2μm1.8nm						
IPM	Ipoh	7.49	359	P	Pn	11 02 14.6	+3.7
CISI	Cisompet, Garu	7.95	124	ePn	Pn	11 02 16.8	-0.5
CISI	Cisompet, Garu	7.95	124	P	Pn	11 02 16.5	-0.7
KULM	Kulim	8.31	356	P	Pn	11 02 24.5	+2.4
KTGM	Kuala Trenggan	8.55	13	P	Pn	11 02 28.6	+3.2
XMIS	Christmas Isla	8.59	149	ePn	Pn	11 02 19.7	-6.2
XMIS				eSn	Sn	11 03 50.3	-11
CMJI	Cimerak	8.60	123	P	Pn	11 02 25.7	-0.3
	155nm,0.6s,4μm1.0nm						
KPJI	Karang Pucung	8.78	119	P	Pn	11 02 30.7	+2.1
	196nm,0.6s,2μm0.8nm						
LHMI	Lhok Sumawe	9.27	333	ePn	Pn	11 02 35.6	+0.3
SMRI	Semarang	10.01	114	ePn	Pn	11 02 48.1	+2.6
SMRI	Semarang	10.01	114	P	Pn	11 02 48.2	+2.8
	403nm,0.7s						
COCO	West Island	10.05	205	ePn	Pn	11 02 43.6	-2.3
	2μm,0.8s						
COCO				eSn	Sn	11 04 32.6	-4.6
COCO	West Island	10.05	205	eP	Pn	11 02 43.6	-2.3
COCO				pmax	pmax		
	comp=Z,2μm,0.8s						
KSM	Kuching	10.15	64	P	Pn	11 02 48.5	+1.1
SKLT	Songkhla	10.18	357	P	Pn	11 02 49.4	+1.7
	comp=Z,250nm,1.3s,comp=Z,3μm						
BSI	Banda Aceh	10.35	325	P	Pn	11 02 50.7	+0.6
	comp=Z,242nm,0.9s,comp=Z,215μm						
UGM	Wanagama	10.45	118	ePn	Pn	11 02 50.9	-0.5
UGM	Wanagama	10.45	118	P	Pn	11 02 52.7	+1.3
	comp=Z,331nm,1.0s,comp=Z,4μm						
WOJI	Wonogiri, Jawa	10.77	117	P	Pn	11 02 56.0	+0.2
	comp=Z,76nm,0.9s						
TRTT	Trang	10.93	352	P	Pn	11 02 58.7	+0.7
	comp=Z,51nm,0.6s,comp=Z,896nm						
NGJI	Ngawi	11.07	113	P	Pn	11 03 02.0	+2.1
	comp=Z,124nm,0.6s,comp=Z,3μm						
PCJI	Pacitan	11.15	118	P	Pn	11 03 02.8	+1.8
	comp=Z,173nm,0.7s,comp=Z,2μm						
PKDT	Phuket	11.25	345	P	Pn	11 03 05.3	+2.9
PWJI	Pagerwojo	11.64	115	P	Pn	11 03 10.6	+3.0
	comp=Z,192nm,0.9s,comp=Z,2μm						
GRJI	Gresik	11.86	109	P	Pn	11 03 13.3	+2.6
	comp=Z,141nm,0.7s,comp=Z,1μm						
SBUM	Sibu	12.29	64	P	P	11 03 22.3	-5.0
GMJI	Gumukmas	13.23	114	P	Pn	11 03 32.0	+2.6
	comp=Z,97nm,0.9s,comp=Z,1μm						
KMMI	Kalianget	13.31	108	P	Pn	11 03 33.3	+2.8
	comp=Z,115nm,0.9s,comp=Z,1μm						
BTM	Bintulu	13.40	62	P	P	11 03 37.7	-1.9
MTKI	Muara Teweh, K	13.84	82	P	Pn	11 03 40.7	+3.0
	comp=Z,549nm,0.8s,comp=Z,7μm						
JAGI	Jajag, Banyuwa	13.95	113	ePn	Pn	11 03 37.4	-1.8
JAGI	Jajag, Banyuwa	13.95	113	P	Pn	11 03 37.7	-1.5
	comp=Z,307nm,0.7s,comp=Z,4μm						
SRBI	Singaraja	14.80	110	P	Pn	11 03 50.9	+0.5
	comp=Z,147nm,0.8s,comp=Z,1μm						
KBKI	Kotabaru	14.94	91	P	P	11 03 54.6	-2.0
	comp=Z,51nm,0.9s,comp=Z,536nm						
DNP	Denpasar	15.00	112	P	P	11 03 57.5	+0.2
DNP	Denpasar	15.00	112	P	P	11 03 57.6	+0.2
	comp=Z,298nm,0.5s						
BKB	Balikpapan	15.78	84	P	P	11 04 08.5	+2.5
	comp=Z,458nm,0.9s,comp=Z,4μm						
PATY	Pattaya	15.88	359	P	Pn	11 04 04.0	-0.3
	comp=Z,30nm,0.8s,comp=Z,2μm						
PHET	Kaeng Krachan	15.95	354	P	Pn	11 04 06.3	+1.2
	comp=Z,51nm,0.8s,comp=Z,335nm						
SMKI	Samarinda	16.20	81	P	P	11 04 11.6	+0.9
	comp=Z,253nm,1.1s,comp=Z,5μm						
PBA	Port Blair	16.87	330	ePn	Pn	11 04 15.4	-1.4
	comp=Z,168nm,0.9s						
PBA	Port Blair	16.87	330	eP	Pn	11 04 16.7	-0.1
SRAK	Srakaew	16.98	3	P	Pn	11 04 18.2	+0.1
	comp=Z,439nm,0.8s,comp=Z,6μm						
SRDT	SRDT	17.42	353	P	Pn	11 04 23.3	-0.3
	comp=Z,39nm,1.0s						
PLAI	Plampang	17.44	110	P	Pn	11 04 22.1	-1.7
	comp=Z,462nm,0.7s,comp=Z,4μm						
SPSI	Sidrap Palu	18.55	93	P	Pn	11 04 37.5	+0.2
	comp=Z,111nm,1.1s,comp=Z,1μm						
UTHA	Uthaitani	18.58	355	P	P	11 04 35.3	-1.6
	comp=Z,22nm,0.8s,comp=Z,192nm						

TTSI	**Tana Toraja**	**18.58**	**90**	P	**Pn**	**11 04 39.0**	**+1.2**
	comp=Z,264nm,1.1s,comp=Z,2µm						
PCI	**Palu**	**18.74**	**84**	P	**Pn**	**11 04 41.2**	**+1.5**
	comp=Z,539nm,1.5s,comp=Z,6µm						
BNSI	**Bone**	**18.91**	**95**	P	**Pn**	**11 04 42.8**	**+1.2**
	comp=Z,481nm,1.1s,comp=Z,4µm						
MPSI	**Mapaga**	**18.98**	**80**	P	**Pn**	**11 04 43.6**	**+1.0**
	comp=Z,195nm,0.8s,comp=Z,3µm						
BKSI	**Bulukumba**	**19.00**	**97**	P	**Pn**	**11 04 42.8**	**+0.1**
	comp=Z,287nm,0.8s,comp=Z,3µm						
UMPA	**Umpang Tak**	**19.29**	**353**	P	**P**	**11 04 42.2**	**-2.5**
	comp=Z,27nm,0.8s,comp=Z,1µm						
PBKT	**Sadao Pong**	**19.51**	**359**	P	**P**	**11 04 45.6**	**-1.5**
	comp=Z,60nm,0.8s,comp=Z,2µm						
WSI	**Waingapu**	**20.07**	**110**	P	Pn	11 04 54.7	-0.7
	comp=Z,1µm,0.6s						
BATP	**Bataraza**	**20.31**	**54**	*e*P	**P**	**11 04 56.1**	**+0.3**
SUKH	**Sukhothai**	**20.47**	**356**	P	**P**	**11 04 56.5**	**-1.0**
	comp=Z,29nm,0.8s						
BASI	**Baing, Sumba**	**20.50**	**111**	P	**P**	**11 04 56.9**	**-1.0**
	comp=Z,960nm,0.7s,comp=Z,9µm						
APSI	**Ampana**	**20.54**	**84**	P	Pn	11 05 00.1	-0.9
	comp=Z,562nm,1.0s,comp=Z,5µm						
MRSI	**Marisa**	**21.02**	**81**	P	**P**	**11 05 04.6**	**+1.1**
	comp=Z,209nm,0.8s,comp=Z,2µm						
EDFI	**Ende, Flores**	**21.13**	**106**	P	**P**	**11 05 03.5**	**-1.4**
	comp=Z,69nm,0.6s,comp=Z,867nm						
KDI	**Kendari**	**21.39**	**93**	P	**P**	**11 05 10.3**	**+2.8**
	comp=Z,193nm,1.1s,comp=Z,2µm						
BBSI	**Bau Bau**	**21.44**	**97**	P	**P**	**11 05 09.4**	**+1.4**
	comp=Z,40nm,0.9s						
CM01	**Chiang Mai Arr**	**21.46**	**354**	*e*P	**P**	**11 05 04.8**	**-3.4**
CM01				*e*S	Sn	11 09 11.2	-2.9
CM31	**Chiang Mai Arr**	**21.50**	**354**	*e*P	**P**	**11 05 06.6**	**-2.1**
CM31	**Chiang Mai Arr**	**21.50**	**354**	P	**P**	**11 05 06.5**	**-2.1**
	SNR=33						
CMAR	**Chiang Mai Arr**	**21.50**	**354**	P	**P**	**11 05 06.0**	**-2.7**
	comp=Z,76nm,0.8s,baz=184,slow=10,SNR=79						
CMAR				PcP	**PcP**	**11 09 11.3**	**+1.4**
	comp=Z,14nm,0.7s,baz=210,slow=3.1,SNR=16						
CMAR				ScP	**ScP**	**11 12 43.0**	**+0.4**
	comp=Z,5.2nm,0.8s,baz=207,slow=3.9,SNR=12						
CMAR				LR	LR	11 14 00.4	
	comp=Z,1µm,19.0s,baz=176,slow=38						
MMRI	**Maumere**	**21.63**	**106**	*e*P	**P**	**11 05 08.6**	**-1.5**
	comp=Z,91nm,0.9s						
MMRI	**Maumere**	**21.63**	**106**	P	**P**	**11 05 11.4**	**+1.3**
	comp=Z,84nm,0.6s						
LUWI	**Luwuk**	**21.64**	**85**	*e*P	**P**	**11 05 11.7**	**+1.5**
	comp=Z,548nm,1.0s						
LUWI	**Luwuk**	**21.64**	**85**	P	**P**	**11 05 10.9**	**+0.7**
CMMT	**Chiang Mai**	**21.85**	**354**	P	**P**	**11 05 10.5**	**-1.9**
	comp=Z,63nm,0.8s,comp=Z,731nm						
CHTO	**Chiang Mai**	**21.85**	**354**	*e*P	**P**	**11 05 09.9**	**-2.5**
	comp=Z,47nm,0.8s						
CHTO				*e*S	**S**	**11 09 11.9**	**+0.8**
CHTO	**Chiang Mai**	**21.85**	**354**	*e*P	**P**	**11 05 09.9**	**-2.5**
CHTO				*e*S	**S**	**11 09 11.9**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,47nm,0.8s						
CHTO	**Chiang Mai**	**21.85**	**354**	P	**P**	**11 05 10.7**	**-1.7**
	SNR=13						
CHTO	**Chiang Mai**	**21.85**	**354**	P	**P**	**11 05 10.6**	**-1.8**
	comp=Z,282nm,0.9s,comp=Z,3µm						
PALK	**Pallekele**	**22.89**	**297**	P	**P**	**11 05 23.0**	**-0.6**
	comp=Z,8.8nm,1.0s						
PALK	**Pallekele**	**22.89**	**297**	P	**P**	**11 05 23.0**	**-0.6**
	comp=Z,23nm,1.0s,baz=116,slow=12,SNR=4.2						
KMSI	**Cibinong**	**23.05**	**81**	P	**P**	**11 05 26.3**	**+1.2**
	comp=Z,535nm,0.8s,comp=Z,6µm						
BATI	**Baumata**	**23.39**	**109**	P	**P**	**11 05 27.3**	**-1.2**
	comp=Z,99nm,0.7s,comp=Z,828nm						
BATI	**Baumata**	**23.39**	**109**	P	**P**	**11 05 25.4**	**-3.1**
	comp=Z,76nm,0.5s,baz=38,slow=1.2,SNR=14						
BATI				S	S	11 09 25.9	-12
	comp=Z,86nm,0.6s,baz=162,slow=20,SNR=4.2						
QIZ	**Qiongzhong**	**23.54**	**21**	P	**P**	**11 05 28.1**	**-1.6**
QIZ				S	**S**	**11 09 39.3**	**-0.6**
QIZ				pmax	pmax		
	comp=Z,29nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,770nm,4.0s						
QIZ				LR	LR		
	comp=Z,2µm,21.6s						
QIZ				LR	LR		
	comp=Z,1µm,16.7s						
QIZ				LR	LR		
	comp=Z,2µm,24.0s						
QIZ	**Qiongzhong**	**23.54**	**21**	*e*P	**P**	**11 05 30.0**	**+0.3**
	comp=Z,158nm,1.4s						
SOEI	**Soe**	**23.85**	**107**	*e*P	**P**	**11 05 29.6**	**-3.2**
	comp=Z,104nm,0.8s						
SOEI	**Soe**	**23.85**	**107**	P	**P**	**11 05 30.8**	**-2.0**
	comp=Z,135nm,0.8s,comp=Z,1µm						
CUYO	**Cuyo Island**	**24.08**	**55**	*e*P	**P**	**11 05 34.3**	**-0.5**
BUSP	**Coron**	**24.09**	**51**	*e*P	**P**	**11 05 36.4**	**+1.5**
PAGZ	**Pagadian**	**24.63**	**64**	*e*P	**P**	**11 05 41.4**	**+1.6**
SANI	**Sanana**	**24.77**	**88**	P	**P**	**11 05 40.6**	**-0.6**
	comp=Z,85nm,1.2s,comp=Z,1µm						
JAP	**San Jose, Anti**	**24.78**	**56**	⇑*e*P	**P**	**11 05 43.7**	**+2.5**
SJMP	**San Jose**	**25.08**	**52**	*e*P	**P**	**11 05 44.7**	**+0.8**
CTBH	**Cotabato--PC H**	**25.16**	**66**	⇑*e*P	**P**	**11 05 43.6**	**-1.0**
GUIM	**Jordan**	**25.26**	**57**	*e*P	**P**	**11 05 46.5**	**+1.0**
MBWA	**Marble Bar**	**25.47**	**136**	*e*P	**P**	**11 05 45.1**	**-2.2**
	comp=Z,42nm,0.8s						
OTRP	**Odiongan**	**25.74**	**53**	*e*P	**P**	**11 05 52.0**	**+2.2**
NLAI	**Namlea**	**25.85**	**91**	P	**P**	**11 05 53.0**	**+2.1**
	comp=Z,104nm,0.6s,comp=Z,1µm						
RCP	**Roxas**	**25.88**	**56**	⇑*e*P	**P**	**11 05 52.2**	**+1.1**
TGY	**Tagaytay City**	**25.95**	**48**	P	**P**	**11 05 53.0**	**+1.2**
	comp=Z,2µm,0.8s,baz=228,slow=2.3,SNR=42						
BOAC	**Boac**	**26.25**	**51**	*e*P	**P**	**11 05 54.2**	**-0.2**
MDRS	**Chennai**	**26.27**	**308**	*e*P	**P**	**11 05 55.4**	**+0.8**
MDRS				IAmb	IAmb	11 05 58.6	
	comp=Z,82nm,0.7s						
LLP	**Lapu-Lapu**	**26.27**	**59**	*e*P	**P**	**11 05 54.3**	**-0.4**
DAV	**Davao City (W)**	**26.32**	**67**	*e*P	**P**	**11 05 57.8**	**+2.6**
	comp=Z,302nm,0.5s						
DAV	**Davao City (W)**	**26.32**	**67**	LR	LR	11 17 09.2	
	comp=Z,2µm,21.7s,baz=263,slow=38						
TNTI	**Ternate**	**26.42**	**82**	*e*P	**P**	**11 05 55.6**	**-0.5**
	comp=Z,43nm,0.6s						
TNTI	**Ternate**	**26.42**	**82**	P	**P**	**11 05 56.1**	**0.0**
	comp=Z,62nm,1.2s						
BOLP	**Bolinao**	**26.74**	**43**	*e*P	**P**	**11 05 53.6**	**-5.2**
TRD	**Trivandrum**	**26.77**	**296**	*e*P	**P**	**11 05 59.3**	**+0.1**
POLP	**Polilio Island**	**27.10**	**49**	*e*P	**P**	**11 06 04.4**	**+2.3**
BRDH	**Bariadhala**	**27.23**	**340**	P	**P**	**11 06 04.5**	**+1.3**
	comp=Z,110nm,0.4s,baz=112,slow=5.8,SNR=14						
BWNR	**Bhubaneshwar**	**27.70**	**328**	*e*P	**P**	**11 06 06.0**	**-1.4**
BWNR				IAmb	IAmb	11 06 08.9	
	comp=Z,522nm,1.5s						
KMI	**Kunming**	**28.06**	**3**	P	**P**	**11 06 08.3**	**-2.5**
KMI				S	**S**	**11 10 43.3**	**-8.7**
KMI				sS	sS	11 11 17.3	+2.2
KMI				pmax	pmax		
	comp=Z,42nm,0.7s						
KMI				pmax	pmax		
	comp=Z,200nm,4.5s						
KMI				LR	LR		
	comp=Z,2µm,20.1s						
KMI				LR	LR		
	comp=Z,1µm,18.7s						
KMI				LR	LR		
	comp=Z,2µm,19.5s						
FITZ	**Fitzroy Crossi**	**28.22**	**124**	P	**P**	**11 06 12.1**	**-0.1**
	baz=28,SNR=115						
FITZ	**Fitzroy Crossi**	**28.22**	**124**	*e*P	**P**	**11 06 12.1**	**-0.1**
	comp=Z,60nm,0.8s						
CAUP	**Cauayan**	**28.45**	**45**	*e*P	**P**	**11 06 16.5**	**+2.3**
GZH	**Guangzhou**	**28.56**	**24**	P	P	11 06 20.8	+5.7
APYP	**Conner**	**28.68**	**43**	*e*P	**P**	**11 06 15.2**	**-1.0**
MEEK	**Meekatharra**	**28.77**	**146**	P	**P**	**11 06 18.2**	**+1.2**
	baz=29,SNR=8.1						
GYA	**Guiyang**	**29.82**	**10**	⇑*i*P	**P**	**11 06 26.4**	**+0.1**
GYA				pP	pP	11 06 37.8	-2.3
GYA				PcP	**PcP**	**11 09 29.3**	**+0.4**
GYA				sS	sS	11 11 37.0	-5.6
GYA				SS	**ScP**	**11 12 58.8**	**-7.7**
GYA				pmax	pmax		
	comp=Z,80nm,0.8s						
GYA				pmax	pmax		
	comp=Z,100nm,5.0s						
GYA				LR	LR		
	comp=Z,1µm,20.5s						
GYA				LR	LR		
	comp=Z,1µm,20.8s						
GYA				LR	LR		
	comp=Z,1µm,20.1s						
SHL	**Shillong**	**29.86**	**343**	*e*P	**P**	**11 06 26.0**	**-0.8**
	comp=Z,70nm,0.5s						
SHL	**Shillong**	**29.86**	**343**	*e*P	**P**	**11 06 26.0**	**-0.8**
SHL				pmax	pmax		
	comp=Z,70nm,0.5s						
SHL	**Shillong**	**29.86**	**343**	*e*P	**P**	**11 06 26.2**	**-0.6**
SHL				IAmb	IAmb	11 06 27.0	
	comp=Z,43nm,0.9s						
SHL				*e*x	x	11 11 15.0	
KNRA	**Kununurra**	**29.88**	**117**	P	**P**	**11 06 25.7**	**-1.2**
	baz=30,SNR=28						
SWI	**Sorong**	**30.11**	**86**	P	**P**	**11 06 26.5**	**-2.5**
	comp=Z,102nm,0.7s						
SIJI	**Sorong**	**30.12**	**86**	P	**P**	**11 06 28.7**	**-0.4**
	comp=Z,44nm,0.6s,baz=267,slow=7.8,SNR=27						
HYB	**Hyderabad**	**30.23**	**313**	*i* P	**P**	**11 06 31.5**	**+1.5**
HYB				*e*pP	**pP**	**11 06 45.0**	**+1.5**
HYB	**Hyderabad**	**30.23**	**313**	*e*P	**P**	**11 06 30.2**	**+0.2**
HYB				IAmb	IAmb	11 06 31.6	
	comp=Z,15nm,0.7s						
BOK	**Bokaro**	**30.58**	**332**	*e*P	**P**	**11 06 35.4**	**+2.3**
FAKI	**Fak Fak**	**31.00**	**91**	*e*P	**P**	**11 06 36.3**	**-0.6**
	comp=Z,82nm,0.8s						
FAKI	**Fak Fak**	**31.00**	**91**	P	**P**	**11 06 36.2**	**-0.6**
	comp=Z,106nm,0.9s,comp=Z,888nm						
MUN	**Mundaring**	**32.04**	**156**	P	**P**	**11 06 46.7**	**+1.0**
	baz=32,SNR=4.4						
TPUB	**Ta-pu**	**32.33**	**35**	*e*P	**P**	**11 06 48.5**	**+0.1**
	comp=Z,101nm,1.0s						
NGP	**Nagpur**	**32.41**	**319**	*e*P	**P**	**11 06 50.3**	**+1.2**
NGP				IAmb	IAmb	11 06 51.9	
	comp=Z,104nm,1.4s						
QZH	**Quanzhou**	**32.56**	**30**	⇑*i*P	**P**	**11 06 51.0**	**+0.7**
QZH				*e*S	**S**	**11 11 58.6**	**-3.5**
QZH				pmax	pmax		
	comp=Z,70nm,0.7s						
QZH				LR	LR		
	comp=Z,780nm,17.1s						
QZH				LR	LR		
	comp=Z,860nm,15.2s						
QZH				LR	LR		
	comp=Z,1µm,23.2s						
ODAN	**Odare**	**32.60**	**337**	*e*P	**P**	**11 06 52.1**	**+1.1**
	comp=Z,819nm,0.8s						
GOA	**Goa**	**32.77**	**305**	*e*P	**P**	**11 06 52.5**	**+0.1**
YULB	**Yu-li**	**32.78**	**36**	*e*P	**P**	**11 06 52.6**	**+0.3**
	comp=Z,69nm,0.8s						
SSLB	**Suanglung**	**32.89**	**35**	*e*P	**P**	**11 06 53.6**	**+0.2**
	comp=Z,62nm,0.7s						
RAMN	**Ramite**	**33.00**	**336**	*e*P	**P**	**11 06 56.1**	**+1.6**
	comp=Z,385nm,0.7s						
JBP	**Jabalpur**	**33.29**	**323**	*e*P	**P**	**11 06 57.8**	**+1.1**
JBP				*e*x	x	11 10 47.4	
NWAO	**Narrogin (SRO)**	**33.29**	**155**	P	**P**	**11 06 57.8**	**+1.1**
NWAO				*e*pP	pP	11 07 02.9	-7.5
NWAO	**Narrogin (SRO)**	**33.29**	**155**	P	**P**	**11 06 57.8**	**+1.1**
NWAO				pmax	pmax		
	comp=Z,19nm,1.0s						
NWAO	**Narrogin (SRO)**	**33.29**	**155**	P	**P**	**11 06 57.8**	**+1.1**
	comp=Z,17nm,1.0s,baz=163,slow=5.7,SNR=6.2						
NWAO				LR	LR	11 18 48.2	
	comp=Z,1µm,21.7s,baz=208,slow=33						
NACB	**Ninganchiao**	**33.56**	**35**	*e*P	**P**	**11 06 59.5**	**+0.4**
NACB				*e*pP	**P**	**11 07 00.1**	**+0.9**
JIRN	**Jiri**	**33.80**	**336**	*e*P	**P**	**11 07 03.1**	**+1.5**
	comp=Z,2µm,0.8s						
YHNB	**Yeheng**	**33.82**	**34**	*e*P	**P**	**11 07 02.6**	**+1.1**
	comp=Z,69nm,0.9s						
CD2	**Chengdu**	**33.87**	**4**	P	**P**	**11 07 00.8**	**-1.0**
CD2				pP	pP	11 07 14.4	-1.2
CD2				sP	sP	11 07 20.9	-1.2
CD2				S	**S**	**11 12 22.8**	**+0.3**
CD2				sS	sS	11 12 46.4	+0.6
CD2				pmax	pmax		
	comp=Z,170nm,0.6s						
CD2				pmax	pmax		
	comp=Z,520nm,5.9s						
CD2				LR	LR		
	comp=Z,5µm,23.5s						
CD2				LR	LR		
	comp=Z,4µm,16.7s						
CD2				LR	LR		
	comp=Z,6µm,20.6s						
LSA	**Lhasa**	**33.97**	**344**	P	**P**	**11 07 03.9**	**+0.7**
LSA				pmax	pmax		
	comp=Z,55nm,0.9s						
LSA	**Lhasa**	**33.97**	**344**	*e*P	**P**	**11 07 03.4**	**+0.2**
	comp=Z,57nm,0.8s						
LSA				*e*PcP	**PcP**	**11 09 41.9**	**+1.3**
LSA	**Lhasa**	**33.97**	**344**	P	**P**	**11 07 03.8**	**+0.7**
LSA	**Lhasa**	**33.97**	**344**	*e*P	**P**	**11 07 03.4**	**+0.2**
LSA				*e*		11 09 41.9	
LSA				pmax	pmax		
	comp=Z,57nm,0.8s						
WRKA	**Warakurna**	**34.02**	**132**	P	**P**	**11 07 04.3**	**+1.0**
	baz=34,SNR=10						
PKI	**Pulchoki**	**34.05**	**334**	*e*P	**P**	**11 07 04.8**	**+1.1**
	comp=Z,326nm,0.8s						
PKIN	**Phulchoki**	**34.06**	**334**	*e*P	**P**	**11 07 04.8**	**+1.0**
	comp=Z,267nm,0.8s						
ENH	**Enshi**	**34.08**	**13**	*e*P	**P**	**11 07 02.7**	**-0.9**
	comp=Z,134nm,0.7s						
GUN	**Gumba**	**34.15**	**335**	*e*P	**P**	**11 07 06.1**	**+1.5**
	comp=Z,1µm,0.6s						
DMN	**Daman**	**34.22**	**334**	*e*P	**P**	**11 07 06.3**	**+1.2**
	comp=Z,516nm,0.8s						
KKN	**Kakani**	**34.30**	**334**	*e*P	**P**	**11 07 07.0**	**+1.3**
	comp=Z,943nm,0.8s						
POO	**Poona**	**34.44**	**310**	*e*P	**P**	**11 07 07.7**	**+0.8**
BHPL	**Bhopal**	**34.95**	**320**	*e*P	**P**	**11 07 11.6**	**+0.4**
BHPL				IAmb	IAmb	11 07 13.8	
	comp=Z,30nm,0.7s						
KOLN	**Koldanda**	**35.03**	**332**	*e*P	**P**	**11 07 13.7**	**+1.6**
	comp=Z,706nm,0.7s						
BOM	**Bombay**	**35.45**	**309**	*e*x	**P**	**11 07 12.0**	**-3.5**
DANN	**Dangsing**	**35.45**	**333**	*e*P	**P**	**11 07 17.2**	**+1.4**
	comp=Z,926nm,0.5s						
PYUN	**Piuthan**	**35.60**	**332**	*e*P	**P**	**11 07 18.4**	**+1.4**
	comp=Z,477nm,0.7s						
WHN	**Wuhan**	**35.70**	**20**	⇑P	**P**	**11 07 18.1**	**+0.6**
WHN				LR	LR		
	comp=Z,2µm,14.4s						
WHN				LR	LR		
	comp=Z,1µm,10.6s						
WHN				LR	LR		
	comp=Z,3µm,29.5s						
WRA	**Warramunga Arr**	**36.42**	**120**	*i* P	**P**	**11 07 23.3**	**-0.6**
WRA				pmax	pmax		
	comp=Z,116nm,0.5s						
WRA	**Warramunga Arr**	**36.42**	**120**	P	**P**	**11 07 23.1**	**-0.8**
	comp=Z,116nm,0.5s,baz=304,slow=8.9,SNR=1392						
WRA				PcP	**PcP**	**11 09 47.4**	**0.0**
	comp=Z,17nm,0.7s,baz=302,slow=2.3,SNR=5.6						
WRA				S	**S**	**11 12 56.0**	**-6.0**
	comp=Z,13nm,0.9s,baz=297,slow=16,SNR=11						
WRAB	**Tennant Creek**	**36.42**	**120**	*e*P	**P**	**11 07 23.6**	**-0.3**
	comp=Z,192nm,0.7s						
WRAB				*e*S	**S**	**11 12 59.0**	**-3.0**
WRAB	**Tennant Creek**	**36.42**	**120**	*ce*P	**P**	**11 07 23.5**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,215nm,0.8s						
WB2	**Warramunga Arr**	**36.43**	**120**	*e*P	**P**	**11 07 23.4**	**-0.6**
FORT	**Forrest**	**37.46**	**140**	*e*P	**P**	**11 07 33.9**	**+1.4**
	comp=Z,78nm,0.6s						
XAN	**Xi'an**	**37.61**	**11**	P	**P**	**11 07 33.3**	**-0.5**
XAN				PP	**PnPn**	**11 09 05.1**	**+3.1**
XAN				S	**S**	**11 13 22.8**	**+3.1**
XAN				pmax	pmax		
	comp=Z,210nm,0.8s						
XAN				pmax	pmax		
	comp=Z,340nm,3.8s						
XAN				LR	LR		
	comp=Z,760nm,22.5s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,16.3s						
XAN	**Xi'an**	**37.61**	**11**	*e*P	**P**	**11 07 33.1**	**-0.7**
	comp=Z,1µm,0.7s						
XAN	**Xi'an**	**37.61**	**11**	*e*P	**P**	**11 07 33.1**	**-0.7**
XAN				pmax	pmax		
	comp=Z,1µm,0.7s						
AS31	**Alice Springs**	**37.66**	**126**	*e*P	**P**	**11 07 34.6**	**+0.3**
	comp=Z,29nm,0.6s						
ASAR	**Alice Springs**	**37.66**	**126**	P	**P**	**11 07 34.6**	**+0.2**
	comp=Z,99nm,0.8s,baz=299,slow=8.3,SNR=1246						
ASAR				PcP	**PcP**	**11 09 51.5**	**+0.4**
	comp=Z,21nm,0.8s,baz=309,slow=2.2,SNR=11						
ASAR				S	**S**	**11 13 17.2**	**-3.5**
	comp=Z,18nm,0.7s,baz=298,slow=15,SNR=19						
AS01	**Alice Springs**	**37.69**	**126**	*e*P	**P**	**11 07 33.6**	**-1.1**
NJ2	**Nanjing**	**38.73**	**24**	*e*P	**P**	**11 07 43.6**	**+0.4**
NJ2				S	**S**	**11 13 35.3**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,27nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,460nm,5.2s						
NJ2				LR	LR		
	comp=Z,2µm,16.3s						
NJ2				LR	LR		
	comp=Z,1µm,15.7s						
NJ2				LR	LR		
	comp=Z,2µm,15.7s						
GENI	**Genyem**	**38.91**	**90**	P	**P**	**11 07 44.5**	**-0.5**
	comp=Z,83nm,0.7s						
SSE	**Sheshan**	**38.94**	**28**	⇑P	**P**	**11 07 45.3**	**+0.4**
SSE				S	**S**	**11 13 43.5**	**+3.8**
SSE				pmax	pmax		
	comp=Z,25nm,1.7s						
SSE				pmax	pmax		
	comp=Z,110nm,6.9s						
SSE				LR	LR		
	comp=Z,360nm,20.6s						
SSE				LR	LR		
	comp=Z,310nm,18.7s						
SSE	**Sheshan**	**38.94**	**28**	*e*P	**P**	**11 07 45.1**	**+0.2**
	comp=Z,49nm,0.8s						
LZH	**Lanzhou**	**39.02**	**3**	*e*P	**P**	**11 07 46.0**	**+0.2**
LZH				pP	pP	11 07 57.4	-2.4
LZH				sP	sP	11 08 01.8	-4.4
LZH				PP	**PP**	**11 09 15.8**	**-0.4**
LZH				PcP	**PcP**	**11 09 56.0**	**+0.8**
LZH				ScP	**ScP**	**11 13 38.8**	**-0.3**
LZH				*e*S	**S**	**11 13 43.5**	**+2.3**
LZH				PcS	**PcS**	**11 13 45.3**	**+0.4**
LZH				ScS	**ScS**	**11 17 49.6**	**-1.0**
LZH				pmax	pmax		
	comp=Z,190nm,1.1s						
LZH				pmax	pmax		
	comp=Z,530nm,5.4s						
LZH				LR	LR		
	comp=Z,4µm,17.9s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,5µm,19.2s						
NDI	**New Delhi**	**39.08**	**325**	*e*P	**P**	**11 07 47.0**	**+0.8**
NDI				*e*x	x	11 13 36.0	
JAY	**Jayapura**	**39.45**	**90**	P	**P**	**11 07 50.3**	**+0.7**
	comp=Z,387nm,0.7s						
JOW	**Kunigami**	**39.58**	**40**	*e*P	**P**	**11 07 51.7**	**+1.3**
	comp=Z,57nm,1.0s						
DDI	**Dehra Dun**	**39.89**	**328**	*e*P	**P**	**11 07 54.1**	**+1.1**
DDI				*e*x	x	11 08 25.3	
BHJ	**Bhuj**	**40.38**	**312**	*e*P	**P**	**11 07 57.8**	**+0.8**
SMLA	**Simla**	**41.00**	**328**	*e*P	**P**	**11 08 02.7**	**+0.7**
QIS	**Mount Isa**	**41.24**	**118**	P	**P**	**11 08 04.2**	**-0.1**
	baz=41,SNR=106						
TIA	**Tai'an**	**41.80**	**19**	P	**P**	**11 08 08.1**	**-0.5**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TIA				pmax	pmax		
	comp=Z,110nm,5.1s						
TIA				LR	LR		
	comp=Z,440nm,15.6s						
TIA				LR	LR		
	comp=Z,340nm,15.7s						
TIA				LR	LR		
	comp=Z,690nm,15.4s						
TIY	**Taiyuan**	**41.89**	**13**	*e*P	**P**	**11 08 09.8**	**+0.5**
TIY				pP	**pP**	**11 08 22.8**	**-0.7**
TIY				S	**S**	**11 14 17.4**	**-6.3**
TIY				pmax	pmax		
	comp=Z,44nm,0.6s						
TIY				LR	LR		
	comp=Z,960nm,16.3s						
TIY				LR	LR		
	comp=Z,230nm,10.9s						
TIY				LR	LR		
	comp=Z,2µm,20.4s						
GTA	**Gaotai**	**42.28**	**358**	⇑P	**P**	**11 08 12.3**	**-0.3**
GTA				PcP	**PcP**	**11 10 06.3**	**+0.7**
GTA				ScP	**ScP**	**11 13 51.3**	**-0.5**
GTA				ScS	**ScS**	**11 18 08.0**	**-1.9**
GTA				pmax	pmax		
	comp=Z,18nm,1.1s						
GTA				pmax	pmax		
	comp=Z,230nm,8.6s						
GTA				LR	LR		
	comp=Z,1µm,18.7s						
GTA				LR	LR		
	comp=Z,780nm,16.8s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						
DHRM	**DHARAMSHALA**	**42.33**	**328**	*e*P	**P**	**11 08 13.6**	**+0.4**
DHRM				IAmb	IAmb	11 08 15.2	
COEN	**Coen**	**42.81**	**107**	P	**P**	**11 08 15.3**	**-1.8**
	baz=43,SNR=11						
COEN	**Coen**	**42.81**	**107**	*e*P	**P**	**11 08 15.3**	**-1.8**
	comp=Z,15nm,0.9s						
BBOO	**Buckleboo**	**44.05**	**136**	P	**P**	**11 08 27.6**	**+0.7**
	baz=44,SNR=20						
BBOO	**Buckleboo**	**44.05**	**136**	*e*P	**P**	**11 08 27.4**	**+0.5**
	comp=Z,41nm,0.8s						
BTO	**Baotou**	**44.20**	**10**	*e*P	**P**	**11 08 28.3**	**+0.3**
HHC	**Hu-ho-hao-te**	**44.72**	**11**	*e*P	**P**	**11 08 33.0**	**+0.9**
HHC				pP	pP	11 08 41.6	-4.8
HHC				sP	sP	11 08 48.0	-4.7
HHC				S	**S**	**11 15 11.6**	**+6.5**
HHC				pmax	pmax		
	comp=Z,69nm,0.9s						
HHC				pmax	pmax		
	comp=Z,310nm,4.7s						
HHC				LR	LR		
	comp=Z,990nm,17.9s						
HHC				LR	LR		
	comp=Z,760nm,16.5s						
HHC				LR	LR		
	comp=Z,750nm,18.4s						
MTSU	**Mount Surprise**	**44.79**	**113**	P	**P**	**11 08 32.8**	**-0.2**
	baz=45,SNR=67						
BJT	**Baijiatuau**	**45.02**	**16**	*e*P	**P**	**11 08 35.0**	**+0.6**
	comp=Z,56nm,0.6s						
BJT	**Baijiatuau**	**45.02**	**16**	*e*P	**P**	**11 08 35.0**	**+0.6**
BJT				pmax	pmax		
	comp=Z,56nm,0.6s						
BJI	**Beijing**	**45.04**	**16**	P	**P**	**11 08 34.6**	**+0.1**
BJI				S	**S**	**11 15 12.1**	**+2.6**
BJI				pmax	pmax		
	comp=Z,38nm,0.6s						
BJI				LR	LR		
	comp=Z,1µm,18.1s						
BJI				LR	LR		
	comp=Z,950nm,19.3s						
BJI				LR	LR		
	comp=Z,860nm,19.9s						
NIL	**Nilore**	**45.05**	**326**	*e*P	**P**	**11 08 35.6**	**+0.8**
	comp=Z,1µm,0.8s						
NIL	**Nilore**	**45.05**	**326**	*e*P	**P**	**11 08 35.6**	**+0.8**
NIL				pmax	pmax		
	comp=Z,1µm,0.8s						
JNU	**Nakatsue**	**45.63**	**36**	*e*P	**P**	**11 08 40.1**	**+0.6**
	comp=Z,141nm,0.9s						
JNU	**Nakatsue**	**45.63**	**36**	LR	LR	11 26 32.2	
	comp=Z,454nm,21.5s,baz=245,slow=34						
DL2	**Dalian**	**45.81**	**22**	P	**P**	**11 08 41.8**	**+1.1**
DL2				S	**S**	**11 15 24.6**	**+3.9**
DL2				pmax	pmax		
	comp=Z,42nm,0.6s						
DL2				pmax	pmax		
	comp=Z,430nm,8.8s						
DL2				LR	LR		
	comp=Z,890nm,22.7s						
DL2				LR	LR		
	comp=Z,640nm,10.4s						
DL2				LR	LR		
	comp=Z,990nm,16.9s						
MANU	**Manus Island**	**46.12**	**90**	*e*P	**P**	**11 08 43.0**	**-0.6**
	comp=Z,75nm,0.9s						

TJN	**Taejon**	46.21	30	*ce*P	P	11 08 44.1	+0.2
HTT	**Hallett**	46.39	135	P	P	11 08 46.6	+1.1
	baz=46,SNR=17						
CTA	**Charters Tower**	47.06	115	P	P	11 08 50.8	-0.1
	comp=Z,112nm,0.8s,baz=283,slow=12,SNR=31						
CTAO	**Charters Tower**	47.06	115	*e*P	P	11 08 50.9	+0.1
	comp=Z,125nm,0.8s						
CTAO	**Charters Tower**	47.06	115	*e*P	P	11 08 50.9	+0.1
CTAO				pmax	pmax		
	comp=Z,130nm,0.8s						
KS15	**Wonju Array Si**	47.31	29	*e*P	P	11 08 53.2	+0.8
KSAR	**Wonju Array Be**	47.31	29	P	P	11 08 52.9	+0.5
KSAR				PcP	PcP	11 10 22.2	-0.6
KSAR	**Wonju Array Be**	47.31	29	P	P	11 08 52.9	+0.5
KSAR						11 10 22.2	
KSRS	**Korea Array**	47.33	29	P	P	11 08 52.9	+0.3
	comp=Z,42nm,0.8s,baz=228,slow=8.0,SNR=79						
KSRS				PcP	PcP	11 10 22.2	-0.7
	comp=Z,6.3nm,0.9s,baz=224,slow=3.4,SNR=4.2						
KSRS				LR	LR	11 30 58.4	
	comp=Z,384nm,18.3s,baz=238,slow=39						
KS01	**Wonju Array Si**	47.34	29	*e*P	P	11 08 53.0	+0.3
STKA	**Stephens Creek**	47.55	132	P	P	11 08 55.3	+0.8
	baz=48,SNR=74						
STKA	**Stephens Creek**	47.55	132	*e*P	P	11 08 55.2	+0.7
	comp=Z,16nm,0.7s						
STKA	**Stephens Creek**	47.55	132	P	P	11 08 55.3	+0.8
	comp=Z,46nm,0.6s,baz=308,slow=7.7,SNR=96						
JLN	**Jalan Bani Buh**	47.91	304	P	P	11 09 00.0	+2.6
	SNR=6.6						
KBL	**Kabul**	48.10	324	*e*P	P	11 08 59.4	+0.5
	comp=Z,43nm,0.8s						
KBL	**Kabul**	48.10	324	*e*P	P	11 08 59.4	+0.5
KBL				pmax	pmax		
	comp=Z,43nm,0.9s						
WMQ	**Urumqi**	48.23	347	⇑*i*P	P	11 09 00.8	+1.3
WMQ				LR	LR		
	comp=Z,850nm,39.2s						
WMQ				LR	LR		
	comp=Z,910nm,21.9s						
WMQ				LR	LR		
	comp=Z,950nm,27.1s						
WMQ	**Urumqi**	48.23	347	*e*P	P	11 09 00.8	+1.3
	comp=Z,719nm,0.8s						
WMQ	**Urumqi**	48.23	347	*e*P	P	11 09 00.9	+1.3
WMQ				pmax	pmax		
	comp=Z,719nm,0.8s						
KSH	**Kashi**	48.31	334	P	P	11 09 00.3	-0.1
KSH				PP	PP	11 10 53.4	+0.1
KSH				S	S	11 15 53.0	-3.6
KSH				sS	sS	11 16 15.3	-5.5
KSH				pmax	pmax		
	comp=Z,350nm,0.9s						
KSH				LR	LR		
	comp=Z,530nm,7.6s						
KSH				LR	LR		
	comp=Z,510nm,6.2s						
KSH				LR	LR		
	comp=Z,430nm,10.3s						
WBK	**Wadi Bani Khal**	48.48	304	P	P	11 09 03.6	+1.8
	SNR=5.2						
DQM	**DQM**	48.58	300	P	P	11 09 04.6	+2.0
DQM				P	P	11 09 04.6	+2.0
MHTO	**MHTO**	48.63	301	P	P	11 09 03.9	+0.9
	SNR=10.0						
MHTO				P	P	11 09 03.9	+0.9
	SNR=10.0						
WSAR	**Wadi Sarin**	49.04	304	P	P	11 09 07.9	+1.8
	SNR=7.7						
SNY	**Shenyang**	49.09	22	⇑P	P	11 09 02.8	-3.3
SNY				pmax	pmax		
	comp=Z,29nm,1.6s						
SMDO	**Samad**	49.44	304	P	P	11 09 11.8	+2.6
	SNR=5.2						
BIDO	**Bidbid**	49.58	305	P	P	11 09 12.3	+2.1
	SNR=11						
BSY	**Bisya**	50.01	303	P	P	11 09 17.1	+3.6
	SNR=6.7						
DMTO	**DMTO**	50.06	296	P	P	11 09 15.5	+1.6
DMTO				P	P	11 09 15.5	+1.6
UZB	**Uzynbulak**	50.16	339	*e*P	P	11 09 14.5	+0.1
UZB				*e*S	S	11 16 21.2	-1.3
UZB				pmax	pmax		
	comp=Z,1µm,0.6s						
UZB				smax	smax		
	comp=E,145nm,3.3s						
UZB	**Uzynbulak**	50.16	339	*e*P	P	11 09 14.6	+0.1
	comp=E,1µm,0.6s						
UZB				⇑*e*S	S	11 16 21.3	-1.3
	comp=E,145nm,3.3s						
ARPS	**Mount Arapiles**	50.20	137	P	P	11 09 16.3	+1.6
	baz=50,SNR=13						
CMSA	**Cobar Meteorol**	50.51	129	P	P	11 09 18.1	+1.0
	baz=51,SNR=77						
GAR	**Garm**	50.62	329	*e*P	P	11 09 14.5	-3.5
	comp=E,209nm,0.9s						
GAR	**Garm**	50.62	329	*e*P	P	11 09 14.5	-3.5
GAR				pmax	pmax		
	comp=Z,210nm,0.9s						
RBK	**Rabkut**	50.66	296	P	P	11 09 20.6	+2.1
	SNR=6.8						
SONM	**Songino Array**	50.89	5	P	P	11 09 20.5	+0.7
	comp=Z,96nm,0.6s,baz=186,slow=9.4,SNR=637						
SONM				PcP	PcP	11 10 35.5	-0.2
	comp=Z,14nm,0.5s,baz=186,slow=3.8,SNR=9.5						
SONM				ScP	ScP	11 14 27.1	-0.5
	comp=Z,3.8nm,1.0s,baz=194,slow=2.3,SNR=4.8						
SONM				LR	LR	11 33 50.0	
	comp=Z,1µm,18.2s,baz=184,slow=40						
SONA1	**Songino Array**	50.90	5	*e*P	P	11 09 19.8	-0.1
MDOK	**Medeo**	50.91	337	*e*P	P	11 09 20.8	+0.7
MDOK				*e*S	S	11 16 31.3	-1.6
MDOK				pmax	pmax		
	comp=Z,744nm,0.5s						
MDOK				smax	smax		
	comp=N,544nm,4.4s						
MDOK	**Medeo**	50.91	337	*e*P	P	11 09 20.8	+0.7
	comp=N,744nm,0.5s						
MDOK				*e*S	S	11 16 31.3	-1.6
	comp=N,544nm,4.4s						
ULN	**Ulaanbaatar**	50.97	5	*e*P	P	11 09 21.1	+0.6
	comp=N,109nm,1.2s						
ULN	**Ulaanbaatar**	50.97	5	*e*P	P	11 09 21.1	+0.6
ULN				pmax	pmax		
	comp=Z,110nm,1.2s						
ULN	**Ulaanbaatar**	50.97	5	P	P	11 09 21.4	+0.9
	SNR=26						
ULN				P	P	11 09 21.4	+0.9
	SNR=26						
RMQ	**Roma**	51.13	122	P	P	11 09 23.4	+1.5
	baz=51,SNR=11						
SOHO	**SOHO**	51.16	304	P	P	11 09 23.7	+1.6
	SNR=9.6						
SOHO				P	P	11 09 23.7	+1.6
	SNR=9.6						
WHFO	**Wadi Hawf**	51.18	296	P	P	11 09 24.2	+1.8
ABTO	**Aybut**	51.43	295	P	P	11 09 26.5	+2.2
	SNR=5.4						
CN2	**Changchun**	51.49	22	*e*P	P	11 09 23.8	-0.4
CN2				*e*pP	pP	11 09 33.8	-5.0
CN2				PcP	PcP	11 10 37.3	-0.6
CN2				*e*S	S	11 16 39.8	-0.7
CN2				pmax	pmax		
	comp=Z,110nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,870nm,15.0s						
CN2				LR	LR		
	comp=Z,420nm,15.0s						
CN2				LR	LR		
	comp=Z,930nm,16.0s						
AAK	**Ala-Archa**	51.51	335	*i* P	P	11 09 26.0	+1.3
	SNR=14						
AAK	**Ala-Archa**	51.51	335	*ce*P	P	11 09 25.0	+0.4
AAK				pmax	pmax		
	comp=Z,74nm,0.8s						
AAK	**Ala-Archa**	51.51	335	S	S	11 16 46.3	+5.1
	comp=Z,1.1nm,0.6s,baz=185,slow=20,SNR=2.6						
AAK				LR	LR	11 34 16.2	
	comp=Z,352nm,20.9s,baz=138,slow=40						
CHKK	**Chushkaly**	51.52	338	*e*P	P	11 09 23.9	-0.6
CHKK				*i* S	S	11 16 39.6	-1.5
CHKK				pmax	pmax		
	comp=Z,646nm,0.8s						
CHKK				smax	smax		
	comp=N,103nm,1.9s						
CHKK	**Chushkaly**	51.52	338	*e*P	P	11 09 24.0	-0.6
	comp=N,646nm,0.8s						
CHKK				⇑*i*S	S	11 16 39.6	-1.5
	comp=N,103nm,1.9s						
FRU	**Bishkek**	51.62	335	*i* P	P	11 09 26.0	+0.7
FRU				*i*		11 09 39.0	
FRU				pmax	pmax		
	comp=Z,200nm,2.0s						
ALNE	**Al Ain**	51.77	304	*i* P	P	11 09 28.6	+1.9
	SNR=25						
UOSS	**Minazif**	51.78	305	*e*P	P	11 09 28.7	+1.9
	comp=Z,28nm,1.0s						
UOSS	**Minazif**	51.78	305	P	P	11 09 28.3	+1.6
UOSS	**Minazif**	51.78	305	P	P	11 09 27.6	+0.8
UOSS				P	P	11 09 27.6	+0.8
ASHO	**Ashiyiah**	51.78	305	*i* P	P	11 09 28.5	+1.7
	SNR=16						
ASHO	**Ashiyiah**	51.78	305	P	P	11 09 28.6	+1.7
	SNR=7.5						
ASHO				P	P	11 09 28.6	+1.7
	SNR=7.5						
HATD	**Hatta, Dubai**	51.79	305	*i* P	P	11 09 28.9	+2.1
	SNR=10						
HATD	**Hatta, Dubai**	51.79	305	P	P	11 09 28.6	+1.8
	SNR=6.6						
HATD				P	P	11 09 28.6	+1.8
	SNR=6.6						
KUU	**Kurty**	51.80	337	*ce*P	P	11 09 25.2	-1.4
KUU				*e*S	S	11 16 43.7	-1.3
KUU				pmax	pmax		
	comp=Z,1µm,0.8s						
KUU				smax	smax		
	comp=E,221nm,3.3s						
KUU	**Kurty**	51.80	337	⇑*e*P	P	11 09 25.2	-1.4
	comp=E,1µm,0.8s						
KUU				⇑*e*S	S	11 16 43.7	-1.3
	comp=E,221nm,3.3s						
MDH	**Madha**	51.86	306	*i* P	P	11 09 29.0	+1.6
	SNR=6.7						
MDH	**Madha**	51.86	306	P	P	11 09 27.8	+0.4
MDH				P	P	11 09 27.8	+0.4
MSFE	**Esma-Masafi**	52.00	306	*i* P	P	11 09 30.4	+2.0
	SNR=7.9						
TDK	**Taldyqorghan**	52.00	340	*ce*P	P	11 09 26.8	-1.2
TDK				*e*S	S	11 16 46.4	-1.2
TDK				pmax	pmax		
	comp=Z,3µm,1.0s						
TDK				smax	smax		
	comp=N,484nm,2.7s						
TDK	**Taldyqorghan**	52.00	340	*e*P	P	11 09 26.9	-1.2
	comp=N,3µm,1.1s						
TDK				⇓*e*S	S	11 16 46.4	-1.2
	comp=N,484nm,2.7s						
FAQ	**Al Faqa, Dubai**	52.19	305	*i* P	P	11 09 32.0	+2.1
	SNR=25						
FAQ	**Al Faqa, Dubai**	52.19	305	P	P	11 09 31.5	+1.6
	SNR=9.0						
FAQ				P	P	11 09 31.5	+1.6
	SNR=9.0						
NAZ	**Nazwa, Dubai**	52.24	305	*i* P	P	11 09 32.4	+2.2
	SNR=6.3						
MNAS	**Manas**	52.25	333	P	P	11 09 30.5	+0.3
MNAS				pmax	pmax		
	comp=Z,243nm,0.9s						
MK01	**Makanchi Array**	52.35	344	*e*P	P	11 09 29.9	-0.7
MAJO	**Matsushiro**	52.35	38	*e*P	P	11 09 30.3	-0.5
	comp=Z,25nm,0.8s						
MAJO	**Matsushiro**	52.35	38	*e*P	P	11 09 30.3	-0.5
MAJO				pmax	pmax		
	comp=Z,25nm,0.8s						
MAT	**Matsushiro**	52.35	38	P	P	11 09 29.8	-1.0
MAT				S	S	11 17 06.6	+14
MJB9	**Matsu-Tunnel**	52.35	38	*e*P	P	11 09 30.4	-0.5
	comp=Z,26nm,0.8s						
MJAR	**Matsushiro Arr**	52.35	38	P	P	11 09 30.2	-0.7
	comp=Z,23nm,0.6s,baz=210,slow=7.4,SNR=56						
MJAR				ScP	ScP	11 14 33.2	-0.8
	comp=Z,7.5nm,1.0s,baz=217,slow=4.5,SNR=7.7						
MJAR				LR	LR	11 31 29.9	
	comp=Z,349nm,21.6s,baz=190,slow=36						
ASUD	**Al Ashush, Dub**	52.36	304	*i* P	P	11 09 33.5	+2.5
	SNR=11						
ASUD	**Al Ashush, Dub**	52.36	304	P	P	11 09 33.1	+2.0
ASUD				P	P	11 09 33.1	+2.0
MK31	**Makanchi Array**	52.38	344	*i* P	P	11 09 30.9	+0.1
MK31				pmax	pmax		
	comp=Z,247nm,0.8s						
MKAR	**Makanchi Array**	52.38	344	P	P	11 09 31.0	+0.2
	comp=Z,252nm,0.8s,baz=148,slow=8.0,SNR=1315						
MKAR				S	S	11 16 50.3	-2.4
	comp=Z,1.2nm,1.0s,baz=165,slow=15,SNR=3.1						
MKAR				LR	LR	11 36 53.5	
	comp=Z,489nm,19.6s,baz=142,slow=42						
MAKZ	**Makanchi**	52.48	343	*e*P	P	11 09 31.8	+0.2
	comp=Z,165nm,0.9s						
MAKZ	**Makanchi**	52.48	343	*e*P	P	11 09 31.8	+0.2
MAKZ				pmax	pmax		
	comp=Z,170nm,1.0s						
EIDS	**Eidsvold**	52.78	120	P	P	11 09 34.6	+0.4
	baz=53,SNR=24						
EIDS	**Eidsvold**	52.78	120	*e*P	P	11 09 34.6	+0.4
	comp=Z,93nm,0.8s						
MSHR	**Mys Shultsa**	52.89	28	*i* P	P	11 09 35.4	+0.7
JBG	**Jabagly**	53.11	332	*ce*P	P	11 09 35.5	-1.0
JBG				pmax	pmax		
	comp=Z,2µm,1.0s						
TOO	**Toolangi**	53.11	136	P	P	11 09 37.4	+0.9
	baz=53,SNR=6.1						
TOO	**Toolangi**	53.11	136	*e*P	P	11 09 39.0	+2.5
	comp=Z,22nm,1.0s						
TOO	**Toolangi**	53.11	136	*e*P	P	11 09 39.0	+2.5
TOO				pmax	pmax		
	comp=Z,23nm,1.0s						
IUG	**Iuzhnay**	53.14	331	*ce*P	P	11 09 35.6	-1.0
IUG				*e*S	S	11 17 02.6	-0.8
IUG	**Iuzhnay**	53.14	331	⇑*e*P	P	11 09 35.7	-1.0
	comp=Z,2µm,1.0s						
IUG				*e*S	S	11 17 02.6	-0.8
MZR	**Muzera**	53.25	302	*i* P	P	11 09 40.0	+2.3
	SNR=6.6						
MZR	**Muzera**	53.25	302	P	P	11 09 40.0	+2.3
	SNR=5.2						
ZAK	**Zakamensk**	53.26	2	*e*P	P	11 09 36.9	-0.5
ZAK				*e*		11 10 44.3	
ZAK				pmax	pmax		
	comp=Z,40nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,102nm,0.8s						
CHM	**Chimkent**	53.48	331	*de*P	P	11 09 38.6	-0.4
CHM				*i* S	S	11 17 07.5	-0.3
CHM				smax	smax		
	comp=N,1µm,4.9s						
CHM	**Chimkent**	53.48	331	⇓*e*P	P	11 09 38.6	-0.4
	comp=N,1µm,0.4s						
CHM				⇑*i*S	S	11 17 07.6	-0.3
	comp=N,1µm,4.9s						
KNGR	**Kungurtug, Tuv**	53.55	357	*c i*P	P	11 09 39.7	+0.2
KK31	**Karatay Array**	53.65	332	*e*P	P	11 09 38.9	-1.3
KK31	**Karatay Array**	53.65	332	*i* P	P	11 09 38.9	-1.3
KK31				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KKAR	**Karatay Array**	53.65	332	*e*P	P	11 09 38.9	-1.3
KKAR	**Karatay Array**	53.65	332	*e*P	P	11 09 38.9	-1.3
VLA	**Vladivostok**	53.65	28	*e*P	P	11 09 40.3	+0.1
VLA				pmax	pmax		
	comp=Z,59nm,0.7s						
BTLS	**Baital**	53.67	336	*e*P	P	11 09 38.4	-1.9
BTLS				pmax	pmax		
	comp=Z,663nm,0.9s						
BTLS	**Baital**	53.67	336	*e*P	P	11 09 38.5	-1.9
	comp=Z,663nm,0.9s						
YNG	**Young**	53.73	131	P	P	11 09 42.2	+1.1
	baz=54,SNR=18						
MDJ	**Mudanjiang**	53.82	25	P	P	11 09 41.8	+0.3
MDJ				pmax	pmax		
	comp=Z,27nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,180nm,3.3s						
MDJ				LR	LR		
	comp=Z,840nm,18.1s						
MDJ				LR	LR		
	comp=Z,710nm,19.1s						
MDJ				LR	LR		
	comp=Z,1µm,23.9s						
MDJ	**Mudanjiang**	53.82	25	*e*P	P	11 09 41.4	0.0
	comp=Z,24nm,0.8s						
DGZ	**Jazzator, Alta**	53.89	349	*c i*P	P	11 09 43.1	+1.1
DGZ				pmax	pmax		
	comp=Z,380nm,0.8s						
MOY	**Mondy**	54.52	360	*e*P	P	11 09 46.9	+0.3
MOY				pmax	pmax		
	comp=Z,66nm,2.1s						
USA0B	**Ussuriysk Arra**	54.54	27	*e*P	P	11 09 47.2	+0.5
	comp=Z,139nm,0.6s						
USRK	**Ussuriysk Ar.**	54.54	27	P	P	11 09 47.0	+0.4
	comp=Z,127nm,0.5s,baz=215,slow=4.7,SNR=457						
USRK				LR	LR	11 35 55.4	
	comp=Z,636nm,18.3s,baz=212,slow=39						
HIA	**Hailar**	54.54	15	*e*P	P	11 09 46.6	-0.1
	comp=Z,13nm,0.6s						
HIA				*e*PcP	PcP	11 10 49.4	+0.1
HIA	**Hailar**	54.54	15	*e*P	P	11 09 46.6	-0.1
HIA				*e*		11 10 49.4	
HIA				pmax	pmax		
	comp=Z,13nm,0.6s						
TLY	**Talaya**	54.57	2	*e*P	P	11 09 48.0	+1.2
	comp=Z,223nm,0.9s						
TLY	**Talaya**	54.57	2	*e*P	P	11 09 48.0	+1.2
TLY				pmax	pmax		
	comp=Z,220nm,0.9s						
TLY	**Talaya**	54.57	2	P	P	11 09 48.1	+1.3
	SNR=39						
TLY				P	P	11 09 48.1	+1.3
	SNR=39						
ARMA	**Armidale**	54.81	125	P	P	11 09 51.1	+2.1
	baz=55,SNR=17						
ARMA	**Armidale**	54.81	125	*e*P	P	11 09 51.2	+2.1
	comp=Z,56nm,1.2s						
CNB	**Canberra Magne**	54.88	132	P	P	11 09 50.6	+1.2
	baz=55,SNR=5.7						
IRK	**Irkutsk**	55.16	2	*e*P	P	11 09 51.5	+0.5
IRK				pmax	pmax		
	comp=Z,122nm,3.8s						
MGCD	**Mangrove Creek**	55.38	129	P	P	11 09 54.5	+1.5
	baz=55,SNR=9.1						
MOO	**Moorlands**	56.68	140	P	P	11 10 04.4	+2.2
	baz=57,SNR=3.7						
KURBB	**Kurchatov Arra**	56.91	343	P	P	11 10 03.7	+0.1
	comp=Z,89nm,0.8s,baz=160,slow=6.8,SNR=9.8						
KURBB				S	S	11 17 53.6	+0.3
	comp=Z,1.5nm,0.8s,baz=150,slow=13,SNR=5.3						
KURK	**Kurchatov**	56.96	343	*e*P	P	11 10 04.3	+0.4
	comp=Z,138nm,0.7s						
KURK				S	S	11 17 53.6	-0.4
KURK	**Kurchatov**	56.96	343	*e*P	P	11 10 04.3	+0.4
KURK				pmax	pmax		
	comp=Z,140nm,0.7s						
KURK	**Kurchatov**	56.96	343	P	P	11 10 04.2	+0.2
	SNR=62						
OTUK	**Ortayu**	56.97	337	P	P	11 10 03.8	-0.3
OTUK				pmax	pmax		
	comp=Z,140nm,0.9s						
GEYT	**Alibeck**	57.03	320	P	P	11 10 05.1	+0.4
	comp=Z,42nm,0.8s,baz=146,slow=8.2,SNR=59						
GEYT				PcP	PcP	11 11 00.1	+0.8
	comp=Z,20nm,1.0s,baz=174,slow=2.9,SNR=3.7						
GEYT				LR	LR	11 36 33.4	
	comp=Z,575nm,20.6s,baz=115,slow=38						
GYA0B	**ALIBECK ARRAY**	57.03	320	*e*P	P	11 10 05.5	+0.8
	comp=Z,53nm,0.9s						
TEY	**Ternei**	57.33	29	⇑*i*P	P	11 10 06.4	-0.2
TEY				*e*		11 10 19.1	
TEY				pmax	pmax		
	comp=N,40nm,0.5s						
TEY				pmax	pmax		
	comp=E,30nm,0.5s						
TEY				pmax	pmax		
	comp=Z,90nm,0.6s						
KLR	**Kul'dur**	58.42	23	*c i*P	P	11 10 14.3	+0.1
KLR	**Kul'dur**	58.42	23	P	P	11 10 14.4	+0.2
	comp=Z,102nm,0.7s,baz=239,slow=5.6,SNR=348						
ZALV	**Zalesovo Beam**	58.43	349	P	P	11 10 14.3	+0.1
	comp=Z,770nm,0.8s,baz=171,slow=5.3,SNR=1702						
ZALV				S	S	11 18 10.9	-2.3
	comp=Z,5.0nm,0.9s,baz=155,slow=11,SNR=10						
ZALV				ScS	ScS	11 19 56.1	-2.9
	comp=Z,0.7nm,0.5s,baz=270,slow=5.9,SNR=3.7						
ZALV				LR	LR	11 37 09.2	
	comp=Z,540nm,20.5s,baz=84,slow=38						
ZALV				PKPPKP	P'P'df	11 39 53.5	+2.0
	comp=Z,0.4nm,0.3s,baz=320,slow=3.8,SNR=3.7						
NVS	**Novosibirsk**	59.59	348	⇓*i*P	P	11 10 22.3	+0.1
NVS				*e*		11 10 35.7	
NVS				*e*S	S	11 18 25.9	-2.3
NVS				*e*PS	PnS	11 18 46.1	-1.5
NVS				pmax	pmax		
	comp=Z,185nm,0.9s						
NVS				pmax	pmax		
	comp=N,94nm,0.8s						
NVS				pmax	pmax		
	comp=E,65nm,0.7s						
NVS				smax	smax		
	comp=E,26nm,1.4s						
ASAJ	**Asahikawa**	59.81	33	P	P	11 10 24.3	+0.3
	comp=E,50nm,0.4s,baz=234,slow=8.4,SNR=116						
RAYN	**Ar Rayn**	60.30	299	*e*P	P	11 10 28.6	+0.8
	comp=E,22nm,0.8s						
RAYN	**Ar Rayn**	60.30	299	*e*P	P	11 10 28.6	+0.8
RAYN				pmax	pmax		
	comp=Z,22nm,0.8s						
ZEA	**Zeya**	60.64	17	*e*P	P	11 10 29.6	+0.2
ZEA				pmax	pmax		
	comp=N,59nm,1.0s						
ZEA				pmax	pmax		
	comp=E,52nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,0.8s						
GRNR	**Gornyy**	61.51	25	⇑*i*P	P	11 10 37.0	+1.6
GRNR				pmax	pmax		
	comp=N,42nm,1.0s						
GRNR				pmax	pmax		
	comp=E,42nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,91nm,1.0s						
BOD	**Bodaibo**	61.55	8	⇓*i*P	P	11 10 35.3	-0.2
BOD				pmax	pmax		
	comp=Z,125nm,1.0s						
BVA0	**Borovoye Array**	61.59	339	P	P	11 10 35.1	-0.8
BVA0				pmax	pmax		
	comp=Z,92nm,0.8s						
BVAR	**Borovoye Array**	61.59	339	P	P	11 10 35.5	-0.4
	comp=Z,87nm,0.7s,baz=134,slow=8.3,SNR=9.6						
BVAR				PKP2bc		11 39 57.2	
	comp=Z,0.6nm,0.8s,baz=347,slow=3.3,SNR=4.5						
BVAR				LR	LR	11 42 41.0	
	comp=Z,140nm,18.0s,baz=138,slow=41						
YUK	**Yuzh-Kuril'sk**	61.60	35	P	P	11 10 35.8	-0.3
YUK						11 12 51.0	
YUK				*e*S	S	11 18 54.7	+0.5
YUK				MLR	MLR		
	comp=Z,729nm,16.0s						
BRVK	**Borovoye**	61.66	339	*e*P	P	11 10 35.9	-0.4
	comp=Z,86nm,0.8s						
BRVK	**Borovoye**	61.66	339	*e*P	P	11 10 35.9	-0.4
BRVK				pmax	pmax		
	comp=Z,86nm,0.9s						
BRVK	**Borovoye**	61.66	339	P	P	11 10 36.0	-0.3
	SNR=28						
BRVK				P	P	11 10 36.0	-0.3
	SNR=28						
YSS	**Yuzh-Sakhalins**	61.75	31	*e*P	P	11 10 37.4	+0.4
	comp=Z,286nm,0.8s						
YSS	**Yuzh-Sakhalins**	61.75	31	⇑*e*P	P	11 10 37.3	+0.3
YSS				*e*S	S	11 18 54.7	-1.3
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				pmax	pmax		
	comp=N,90nm,0.6s						
YSS				pmax	pmax		
	comp=E,90nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=N,300nm,13.0s						
YSS				MLR	MLR		
	comp=E,300nm,14.0s						
AB31	**Akbulak array**	63.15	331	*i* P	P	11 10 46.1	-0.2
AB31				pmax	pmax		
	comp=Z,284nm,1.0s						
ABKAR	**Akbulak array**	63.15	331	*e*P	P	11 10 46.4	+0.1
KUR	**Kuril'sk**	63.47	35	*ce*P	P	11 10 48.8	+0.3
KMBO	**Kilima Mbogo**	63.94	270	P	P	11 10 54.8	+2.2

	comp=Z,5.9nm,0.8s,baz=56,slow=10,SNR=15						
TYV	Tymovskoe	64.32	28	eP	P	11 10 54.8	+0.8
TYV				pmax	pmax		
	comp=Z,100nm,1.4s						
TYV				pmax	pmax		
	comp=Z,51nm,1.2s						
AKTO	Aktyubinsk	64.86	331	P	P	11 10 56.6	-1.0
AKTO				pmax	pmax		
	comp=Z,97nm,1.1s						
AKTO	Aktyubinsk	64.86	331	LR	LR	11 43 02.1	
	comp=Z,356nm,19.7s,baz=134,slow=39						
NKL	Nikolayevsk	65.04	25	i P	P	11 10 59.0	+0.3
NKL				pmax	pmax		
	comp=N,22nm,1.0s						
NKL				pmax	pmax		
	comp=E,22nm,1.0s						
NKL				pmax	pmax		
	comp=Z,110nm,1.0s						
SEKA	Sheki	65.92	318	P	P	11 11 05.7	+0.9
DZM	Mont Dzumac	65.93	113	eP	P	11 11 04.9	-0.3
	comp=Z,117nm,1.1s						
DZM	Mont Dzumac	65.93	113	eLR	LR	11 30 41.4	
	comp=Z,535nm,25.0s						
NAX	Nakhchivan	66.18	315	P	P	11 11 07.6	+1.2
GANJ	Ganja	66.26	317	P	P	11 11 08.2	+1.3
OUENC	Ouen Island, N	66.34	113	eP	P	11 11 08.5	+0.9
	comp=Z,92nm,0.8s						
ZKTA	Zakatala	66.51	318	P	P	11 11 09.8	+1.4
MAK	Makhachkala	66.55	320	eP	P	11 11 07.7	-0.9
MAK				e		11 13 33.4	
MAK				eS	S	11 19 57.1	+1.5
MAK				pmax	pmax		
	comp=Z,46nm,0.6s						
CUKT	Cukurca	66.73	313	eP	P	11 11 10.2	+0.1
GNI	Garni	67.12	316	eP	P	11 11 11.1	-1.4
GNI	Garni	67.12	316	eP	P	11 11 13.9	+1.3
	comp=Z,63nm,0.9s						
GNI	Garni	67.12	316	i P	P	11 11 13.9	+1.3
	SNR=11						
GNI	Garni	67.12	316	ceP	P	11 11 13.6	+1.1
GNI				pmax	pmax		
	comp=Z,165nm,0.8s						
GNI	Garni	67.12	316	P	P	11 11 13.8	+1.3
	SNR=8.7						
CLDR	Caldiran	67.28	315	eP	P	11 11 14.8	+1.2
MARNC	Mare, Loyalty	67.33	112	eP	P	11 11 14.9	+0.9
	comp=Z,184nm,1.0s						
AKDM	Akdamar-Van	67.62	314	eP	P	11 11 16.7	+1.0
SIRT	Sirnak	67.69	313	eP	P	11 11 16.4	+0.3
GROC	Groznyy	67.77	319	eP	P	11 11 15.1	-1.2
GROC				e		11 11 42.0	
GROC				e		11 13 47.1	
GROC				pmax	pmax		
	comp=Z,123nm,1.0s						
TBLG	Delisi	67.81	318	eP	P	11 11 17.9	+1.2
TBLG	Delisi	67.81	318	eP	P	11 11 18.1	+1.5
TBLG	Delisi	67.81	318	eP	P	11 11 18.2	+1.5
AGRB	Hanur-Agry	68.11	315	eP	P	11 11 20.1	+1.3
SVE	Sverdlovsk	68.12	337	d iP	P	11 11 18.7	+0.5
SVE				pmax	pmax		
	comp=Z,194nm,1.0s						
GURO	Guroymak-BITLI	68.39	314	eP	P	11 11 21.8	+1.3
YAK	Yakutsk	68.47	14	c iP	P	11 11 19.6	-0.7
YAK				e*PP	pP	11 11 32.1	-3.3
YAK				e		11 11 42.5	
YAK				ePPP	PPP	11 15 29.8	
YAK				eS	S	11 20 18.3	+0.5
YAK				e*SS	sS	11 20 42.6	-0.9
YAK				e		11 21 18.1	
YAK				pmax	pmax		
	comp=Z,1μm,0.7s						
YAK				pmax	pmax		
	comp=N,253nm,0.7s						
YAK				pmax	pmax		
	comp=E,229nm,0.8s						
YAK				pmax	pmax		
	comp=Z,800nm,4.7s						
YAK				pmax	pmax		
	comp=N,808nm,4.7s						
YAK				pmax	pmax		
	comp=E,425nm,4.1s						
YAK				smax	smax		
	comp=N,421nm,3.5s						
YAK				smax	smax		
	comp=E,273nm,4.3s						
KARS	Kars	68.48	316	eP	P	11 11 22.6	+1.6
ARU	Arti	68.66	336	eP	P	11 11 21.6	-0.1
	comp=E,110nm,1.0s						
ARU	Arti	68.66	336	ceP	P	11 11 21.4	-0.2
ARU				pmax	pmax		
	comp=Z,101nm,0.8s						
ZEI	Tsey	68.83	318	eP	P	11 11 22.3	-1.0
ZEI				pmax	pmax		
	comp=Z,61nm,0.7s						
SVAN	Silvan-Diyarba	68.85	313	eP	P	11 11 24.1	+0.8
KOPR	Koprukoy-ERZUR	69.08	315	eP	P	11 11 26.3	+1.5
MAZI	Mazidag	69.14	312	eP	P	11 11 26.1	+0.9
NCK	Nalchik	69.34	319	i P	P	11 11 26.9	+0.7
NCK				pmax	pmax		
	comp=Z,59nm,0.8s						
BNGB	Bingl	69.54	314	eP	P	11 11 28.7	+1.1
MAW	Mawson	69.56	195	LR	LR	11 35 40.4	
	comp=Z,764nm,20.5s,baz=34,slow=30						
NEY	Neytrino	69.81	318	c iP	P	11 11 30.8	+1.5
NEY				pmax	pmax		
	comp=Z,11nm,0.9s						
BCA	Borcka	69.81	316	eP	P	11 11 29.1	-0.1
KBZ	Khabaz	69.90	319	P	P	11 11 30.6	+1.0
	comp=Z,59nm,0.8s,baz=121,slow=6.3,SNR=158						
KIV	Kislovodsk	70.13	319	eP	P	11 11 32.0	+0.8
KIV	Kislovodsk	70.13	319	eP	P	11 11 31.8	+0.7
KIV	Kislovodsk	70.13	319	⇓iP	P	11 11 32.4	+1.3
KIV	Kislovodsk	70.13	319	i P	P	11 11 32.3	+1.2
	SNR=8.3						
KIV	Kislovodsk	70.13	319	eP	P	11 11 31.9	+0.8
KIV				pmax	pmax		
	comp=Z,84nm,1.1s						
KIV	Kislovodsk	70.13	319	P	P	11 11 31.9	+0.8
	SNR=17						
KIV				P	P	11 11 31.9	+0.8
	SNR=17						
ASF	Jabal al Asfar	70.19	306	LR	LR	11 44 02.6	
	comp=Z,178nm,19.7s,baz=54,slow=37						
CHOM	Cayeli-Rize	70.28	316	eP	P	11 11 32.9	+0.9
URFA	Urfa	70.35	312	eP	P	11 11 34.1	+1.5
GOF	Gofitskoye	70.37	320	⇑iP	P	11 11 33.2	+0.7
GOF				pmax	pmax		
	comp=Z,110nm,1.2s						
PTK	Pertek	70.44	313	eP	P	11 11 34.0	+0.8
MBAR	Mbarara	70.47	270	eP	P	11 11 36.7	+2.8
	comp=Z,23nm,1.3s						
MBAR	Mbarara	70.47	270	eP	P	11 11 36.7	+2.8
MBAR				pmax	pmax		
	comp=Z,23nm,1.2s						
GHAJ	Ghor Haditha	71.03	304	P	P	11 11 38.4	+1.7
	comp=Z,94nm,1.0s						
SKR	Severo-Kuril's	71.08	33	eP	P	11 11 33.4	-3.2
SKR				pmax	pmax		
	comp=Z,526nm,1.0s						
SKR				pmax	pmax		
	comp=Z,600nm,3.0s						
SKR				MLR	MLR		
	comp=Z,700nm,16.0s						
EIL	Elat	71.11	303	eP	P	11 11 38.9	+1.6
EIL	Elat	71.11	303	P	P	11 11 39.1	+1.8
	comp=Z,93nm,0.8s						
HRFI	Mount Harif	71.13	303	eP	P	11 11 39.2	+1.8
HRFI	Mount Harif	71.13	303	P	P	11 11 39.3	+1.8
GAZ	Gaziantep	71.47	311	eP	P	11 11 40.8	+1.4
DARE	Darende-Malaty	71.73	312	eP	P	11 11 42.2	+1.3
KMRS	Kahramanmaras	71.81	311	eP	P	11 11 42.2	+0.8
KZIT	Kziot	71.89	304	eP	P	11 11 43.6	+1.7
SOC	Sochi	71.95	318	eP	P	11 11 41.1	-0.9
SOC				e*SP	pP	11 11 55.8	-1.2
SOC				e		11 14 24.3	
SOC				eS	S	11 21 03.2	+4.0
SOC				pmax	pmax		
	comp=Z,92nm,0.7s						
TAHT	Tahtakopru-Hat	72.00	310	eP	P	11 11 43.9	+1.4
SVSK	Karacayir	72.53	313	eP	P	11 11 46.9	+1.4
CEYT	Ceyhan	72.53	310	eP	P	11 11 47.0	+1.4
KOZT	Kozan	72.62	311	eP	P	11 11 46.9	+0.7
LSZ	Lusaka	72.82	255	eP	P	11 11 50.2	+2.3
LSZ				epP	pP	11 11 56.7	-6.2
LSZ	Lusaka	72.82	255	eP	P	11 11 50.2	+2.3
NRIK	Noril'sk	72.86	355	P	P	11 11 46.5	-0.4
	comp=Z,51nm,0.5s,baz=158,slow=5.5,SNR=84						
NRIK				LR	LR	11 47 35.9	
	comp=Z,655nm,18.3s,baz=164,slow=39						
TOKT	Tokat	72.99	314	eP	P	11 11 49.2	+0.8
BNN	Bunyan	73.03	312	eP	P	11 11 49.1	+0.4
KARA	Karaisali	73.14	310	eP	P	11 11 50.2	+1.0
PEA0B	Petropavlovsk-	73.14	32	eP	P	11 11 48.8	-0.1
PETK	Petropavlovsk-	73.14	32	P	P	11 11 48.6	-0.3
	comp=Z,78nm,0.7s,baz=269,slow=1.0,SNR=162						
RPZ	Rata Peaks	73.38	135	P	P	11 11 51.5	+0.9
	comp=Z,28nm,0.6s,baz=286,slow=4.2,SNR=29						
MERS	Mersin	73.43	310	eP	P	11 11 51.8	+0.8
MA2	Magadan	73.50	24	eP	P	11 11 50.0	-0.9
MA2	Magadan	73.50	24	ceP	P	11 11 51.4	+0.5
MA2				pmax	pmax		
	comp=Z,264nm,1.0s						
MA2	Magadan	73.50	24	P	P	11 11 51.6	+0.7
	comp=Z,175nm,0.7s,baz=233,slow=5.5,SNR=437						
KVT	Kavak	73.60	314	eP	P	11 11 52.8	+0.9
PET	Petropavlovsk	73.60	32	eP	P	11 11 50.0	-1.6
PET	Petropavlovsk	73.60	32	⇑iP	P	11 11 51.5	-0.1
PET				pmax	pmax		
	comp=Z,405nm,0.7s						
CSS	Mathiatis	73.82	308	eP	P	11 11 54.5	+1.2
CSS	Mathiatis	73.82	308	eP	P	11 11 54.2	+0.8
CSS	Mathiatis	73.82	308	P	P	11 11 54.6	+1.2
VRH	Novokhopyorsk	73.88	326	eP	P	11 11 53.1	-0.1
VRH				e		11 12 07.4	
VRH				eS	SKiKP	11 21 18.1	+0.5
VRH				pmax	pmax		
	comp=Z,310nm,0.7s						
VRH				pmax	pmax		
	comp=Z,270nm,0.6s						
VRH				smax	smax		
	comp=E,70nm,1.2s						
IKL	Isikli	73.89	309	eP	P	11 11 53.9	+0.2
ANN	Anapa	73.92	318	eP	P	11 11 52.8	-0.9
ANN				eS	SKiKP	11 21 18.3	+0.5
ANN				pmax	pmax		
	comp=Z,13nm,0.6s						
KEBE	Keben-Mersin	73.93	309	eP	P	11 11 54.7	+0.7
AKKU	Akkuyu-Mersin	73.98	309	eP	P	11 11 54.6	+0.4
OXZ	Oxford	74.00	134	eP	P	11 11 54.9	+0.7
TEVE	Tevekalti-Mers	74.14	309	eP	P	11 11 56.2	+1.0
LEF	Lefka	74.21	308	eP	P	11 11 56.6	+1.0
BERE	Bereket-Mersin	74.28	309	eP	P	11 11 57.2	+1.0
TEKE	Tekeli-Mersin	74.31	309	eP	P	11 11 56.9	+0.8
YAYX	Yaylak	74.57	312	eP	P	11 11 57.9	+0.2
SULT	Sultanhani-AKS	74.58	311	eP	P	11 11 58.8	+1.0
SERE	Sereflikochisa	74.75	312	eP	P	11 11 59.0	+0.2
KHZ	Kahutara	74.92	133	eP	P	11 12 00.5	+1.0
BR131	Keskin Array S	74.92	312	eP	P	11 11 59.8	0.0
BR131	Keskin Array S	74.92	312	P	P	11 11 59.8	0.0
	SNR=61						
BRTR	Keskin Array B	74.92	312	P	P	11 11 59.7	-0.1
	comp=Z,38nm,0.7s,baz=134,slow=7.1,SNR=237						
BRTR				LR	LR	11 47 10.9	
	comp=Z,235nm,18.1s,baz=96,slow=37						
HDMB	Hadim	75.02	309	eP	P	11 12 01.2	+0.7
ILGA	Ilgaz	75.26	314	eP	P	11 12 02.9	+1.0
AFSR	Afar-Bala (An	75.27	312	eP	P	11 12 01.5	-0.2
BZK	Bozkurt	75.33	315	eP	P	11 12 02.8	+0.9
VSR	Storozhevoye	75.33	325	eP	P	11 12 00.8	-0.9
VSR				e		11 12 14.9	
VSR				eS	S	11 21 34.0	-3.1
VSR				pmax	pmax		
	comp=Z,250nm,0.9s						
VSR				pmax	pmax		
	comp=Z,170nm,0.6s						
VSR				smax	smax		
	comp=N,40nm,1.0s						
VORR	Voronezh	75.50	325	P	P	11 12 03.0	+0.4
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
ANTO	Ankara	75.59	312	eP	P	11 12 03.8	+0.3
ANTO	Ankara	75.59	312	eP	P	11 12 03.4	-0.2
ANTO	Ankara	75.59	312	⇑iP	P	11 12 03.9	+0.4
ANTO	Ankara	75.59	312	eP	P	11 12 03.4	-0.2
ANTO	Ankara	75.59	312	P	P	11 12 03.9	+0.4
	SNR=9.7						
ANTO				P	P	11 12 03.9	+0.4
	SNR=9.7						
LOD	Lodumlu	75.62	312	eP	P	11 12 03.9	+0.2
LPSR	Galich'ya Gora	76.04	326	eP	P	11 12 05.6	-0.1
LPSR				eS	S	11 21 41.9	-3.0
LPSR				pmax	pmax		
	comp=Z,140nm,1.0s						
LPSR				pmax	pmax		
	comp=Z,160nm,1.0s						
LPSR				smax	smax		
	comp=N,20nm,1.7s						
SEY	Seymchan	76.16	22	ceP	P	11 12 06.5	+0.3
SEY	Seymchan	76.16	22	P	P	11 12 06.8	+0.6
	comp=N,123nm,0.9s,baz=230,slow=4.8,SNR=452						
BOSA	Boshof	76.21	241	P	P	11 12 09.4	+2.0
	comp=N,11nm,1.1s,baz=96,slow=5.9,SNR=12						
BOSA				LR	LR	11 40 13.1	
	comp=N,188nm,19.8s,baz=47,slow=31						
AUSIV	SIVRIHISAR	76.40	312	eP	P	11 12 08.5	+0.3
SVRH	Sivrihisar-ESK	76.42	312	eP	P	11 12 08.7	+0.4
MSVF	Nonsavu	76.54	107	eP	P	11 12 10.4	+1.0
MSVF	Nonsavu	76.54	107	eP	P	11 12 10.4	+1.0
AUMIH	MIHALICIK	76.56	312	eP	P	11 12 09.3	+0.2
BKZ	Black Stump Fm	76.67	129	eP	P	11 12 09.9	+0.2
BFZ	Birch Farm	76.67	131	eP	P	11 12 10.7	+1.1
KORT	Korkueli	76.68	309	eP	P	11 12 10.1	+0.2
ISP	Isparta	76.75	310	i P	P	11 12 12.0	+1.8
ISP				pmax	pmax		
	comp=Z,13nm,0.9s						
SHUT	Suhut-Afyon	76.92	311	eP	P	11 12 11.1	0.0
MDUB	Mudurnu	76.93	313	eP	P	11 12 11.4	+0.2
URZ	Urewera	77.04	128	P	P	11 12 11.2	-0.6
	comp=Z,11nm,0.8s,baz=265,slow=3.2,SNR=6.7						
PRGR	Permogore	77.12	336	⇑iP	P	11 12 12.0	+0.4
PRGR				e*SP	pP	11 12 26.4	-0.4
PRGR				pmax	pmax		
	comp=Z,147nm,0.8s						
SYO	Syowa Base	77.26	199	⇑eP	P	11 12 23.4	+11
GULT	Gulveren	77.42	312	eP	P	11 12 14.0	+0.1
CAVI	Cavuskoy	77.86	312	eP	P	11 12 16.3	0.0
MOS	Moscow	78.02	329	eP	P	11 12 16.5	-0.3
MOS				e		11 12 30.4	
MOS				eS	S	11 22 03.7	-2.6
MOS				e		11 22 26.1	
MOS				pmax	pmax		
	comp=Z,200nm,0.7s						
MOS				pmax	pmax		
	comp=Z,182nm,0.9s						
YLV	Yalova	78.30	312	eP	P	11 12 18.9	+0.1
OBN	Obninsk	78.33	328	eP	P	11 12 19.5	+1.1
OBN	Obninsk	78.33	328	⇓iP	P	11 12 19.3	+0.9
OBN	Obninsk	78.33	328	ceP	P	11 12 19.1	+0.7
OBN				e		11 12 26.9	
OBN				e		11 15 16.1	
OBN				ePPP	PPP	11 17 04.3	
OBN				pmax	pmax		
	comp=Z,242nm,1.3s						
OBN				MLR	MLR		
	comp=Z,188nm,19.0s						
KULA	Kula-Manisa	78.34	310	eP	P	11 12 19.8	+0.7
MANT	Manisa	78.42	310	eP	P	11 12 20.7	+1.0
KAVV	Kandilli-Istan	78.65	313	eP	P	11 12 21.1	+0.5
ISK	Istanbul-Kandi	78.65	313	eP	P	11 12 21.0	+0.4
ARMT	Armutlu	78.68	312	eP	P	11 12 20.9	+0.1
KLYT	Kilyos	78.71	313	eP	P	11 12 21.3	+0.4
KARP	Karpathos	78.87	307	eP	P	11 12 23.1	+1.2
KCTX	Karacabey (Bur	78.98	312	eP	P	11 12 22.9	+0.4
CTKS	Kestanelik-??a	79.10	313	eP	P	11 12 23.2	+0.2
KLMR	Klimovskoe	79.31	334	eP	P	11 12 22.7	-1.0
KLMR				e		11 15 24.3	
KLMR				pmax	pmax		
	comp=Z,124nm,1.3s						
KLMR	Klimovskoe	79.31	334	eP	P	11 12 22.8	-1.0
KLMR				AMP		11 12 26.5	
	comp=Z,124nm,1.2s						
KLMR				ePP	PP	11 15 24.4	+0.2
CTYL	Yalikoy Yolu	79.32	313	eP	P	11 12 24.7	+0.5
MRMT	Marmara Adasi	79.62	312	eP	P	11 12 26.1	+0.1
TLCR		79.86	317	⇑iP	P	11 12 28.3	+1.2
TIRR	Tirgusor	79.95	316	eP	P	11 12 27.7	+0.1
TIRR	Tirgusor	79.95	316	⇑iP	P	11 12 28.6	+1.0
TIRR	Tirgusor	79.95	316	eP	P	11 12 27.7	+0.1
LPK	Lapseki	80.19	312	eP	P	11 12 29.7	+0.7
TLB	Topalu	80.24	316	⇑iP	P	11 12 30.0	+0.9
TLB	Topalu	80.24	316	P	P	11 12 30.0	+0.9
CFR	Carcaliu	80.32	317	⇓iP	P	11 12 30.6	+1.0
CFR	Carcaliu	80.32	317	P	P	11 12 30.5	+1.0
KIS	Kishinev	80.32	319	⇑iP	P	11 12 29.0	-0.5
	comp=Z,200nm,0.8s						
KIS	Kishinev	80.32	319	⇑iP	P	11 12 29.0	-0.5
KIS				i		11 12 44.0	
KIS				pmax	pmax		
	comp=Z,200nm,0.8s						
HARR	Harsova	80.34	316	⇓iP	P	11 12 31.0	+1.3
HARR	Harsova	80.34	316	P	P	11 12 31.0	+1.3
PRD	Provadia	80.36	315	eP	P	11 12 30.9	+1.1
LEOM	Leova	80.57	318	⇑iP	P	11 12 31.9	+1.1
LEOM	Leova	80.57	318	P	P	11 12 31.9	+1.1
IDI	Anoyia	80.64	306	eP	P	11 12 32.8	+1.2
IDI	Anoyia	80.64	306	⇑iP	P	11 12 33.2	+1.6
ALN	Alexandroupoli	80.84	312	eP	P	11 12 33.5	+1.1
ALN				epP	PcP	11 12 43.3	+4.4
ALN	Alexandroupoli	80.84	312	eP	P	11 12 33.5	+1.1
ALN				e*PP	PcP	11 12 43.3	+4.4
VNDA	Vanda	80.89	169	P	P	11 12 33.4	+1.3
	comp=Z,12nm,1.1s,baz=314,slow=4.1,SNR=4.8						
AKASG	Malin Array Be	81.06	322	P	P	11 12 33.2	-0.2
	comp=Z,22nm,0.8s,baz=88,slow=4.8,SNR=50						
AKASG				PP	PP	11 15 37.4	-1.6
	comp=Z,3.3nm,0.6s,baz=81,slow=7.6,SNR=5.7						
AKASG				LR	LR	11 52 27.8	
	comp=Z,135nm,19.2s,baz=60,slow=38						
KIEV	Kiev	81.06	322	eP	P	11 12 33.4	+0.1
KIEV	Kiev	81.06	322	⇓iP	P	11 12 33.8	+0.4
KIEV	Kiev	81.06	322	i P	P	11 12 33.5	+0.1
	SNR=13						
KIEV	Kiev	81.06	322	c iP	P	11 12 33.2	-0.2
KIEV				pmax	pmax		
	comp=Z,37nm,0.9s						
TMCR	Tamitsa	81.39	337	eP	P	11 12 35.4	+0.6
TMCR				pmax	pmax		
	comp=Z,137nm,1.0s						
ISR	Istrita	81.40	316	⇑iP	P	11 12 37.8	+2.4
ISR	Istrita	81.40	316	P	P	11 12 37.8	+2.4
VRI	Vrincioaia	81.45	317	eP	P	11 12 36.4	+0.8
VRI	Vrincioaia	81.45	317	⇓iP	P	11 12 37.5	+1.9
VRI	Vrincioaia	81.45	317	P	P	11 12 37.5	+1.9
PLOR	Plostina	81.50	317	⇓iP	P	11 12 37.7	+1.8
PLOR	Plostina	81.50	317	P	P	11 12 37.6	+1.7
TESR	Tescani	81.65	318	⇓iP	P	11 12 38.2	+1.6
SECR		81.71	316	⇓iP	P	11 12 38.7	+1.7
MLR	Muntele Rosu	81.90	317	eP	P	11 12 39.3	+1.2
MLR	Muntele Rosu	81.90	317	⇓iP	P	11 12 39.8	+1.7
MLR	Muntele Rosu	81.90	317	eP	P	11 12 39.3	+1.2
BIZ	Bicaz	82.11	318	⇓iP	P	11 12 40.7	+1.6
PRAR	RASCA	82.12	318	⇓iP	P	11 12 40.4	+1.3
DOPR	Dopca	82.38	317	⇓iP	P	11 12 42.0	+1.5
VOIR		82.50	316	⇓iP	P	11 12 41.8	+0.5
VOIR		82.50	316	P	P	11 12 41.7	+0.5
SRS	Serrai	82.70	312	P	P	11 12 42.6	+0.3
ARR	Arges	82.77	316	⇓iP	P	11 12 43.5	+0.9
BURAR	Bucovina Array	82.85	319	⇑iP	P	11 12 45.1	+2.1
BURAR	Bucovina Array	82.85	319	P	P	11 12 45.1	+2.1
BUR04	Bucovina Ar. S	82.85	319	eP	P	11 12 43.9	+0.9
BUR08	Bucovina Ar. S	82.87	319	eP	P	11 12 45.0	+1.9
MICGM	Minsk	82.88	326	⇓eP	P	11 12 42.0	-0.8
MICGM				PM		11 12 43.0	
	comp=Z,0.7nm,0.8s						
MNK	Minsk	82.88	326	⇓eP	P	11 12 42.0	-0.8
MNK				pmax	pmax		
	comp=Z,660nm,0.8s						
TSUM	Tsumeb	82.98	251	eP	P	11 12 46.4	+2.1
PUL	Pulkovo	83.13	331	ceP	P	11 12 44.8	+0.8
PUL				pmax	pmax		
	comp=Z,127nm,0.5s						
KKB	Krupnik	83.21	313	eP	P	11 12 45.8	+0.9
VTS	Vitosha	83.23	313	eP	P	11 12 46.0	+0.8
VTS	Vitosha	83.23	313	⇓iP	P	11 12 46.3	+1.1
VTS	Vitosha	83.23	313	eP	P	11 12 46.0	+0.8
VTS	Vitosha	83.23	313	eP	P	11 12 46.0	+0.8
AGG	Agios Georgios	83.29	310	eP	P	11 12 45.4	0.0
AGG	Agios Georgios	83.29	310	eP	P	11 12 45.4	0.0
ARCR	ARCALIA	83.31	318	⇓iP	P	11 12 47.5	+2.2
LIT	Litokhoron	83.35	311	eP	P	11 12 46.2	+0.5
LIT	Litokhoron	83.35	311	eP	P	11 12 46.2	+0.5
LOT	Lotru	83.39	316	⇓iP	P	11 12 46.6	+0.7
VAY	Valandovo	83.50	312	i P	P	11 12 46.5	+0.2
NACGM	Naroch	83.60	326	e	P	11 12 46.0	-0.5
NACGM				eLR	LR	11 27 06.0	
IDID	Didziasalis	83.72	326	eP	P	11 12 48.5	+1.3
IDID				IAmb	IAmb	11 12 49.8	
	comp=Z,67nm,0.9s						
BILL	Bilibino	83.73	20	eP	P	11 12 46.6	-0.3
BILL	Bilibino	83.73	20	ceP	P	11 12 46.5	-0.5
BILL				e		11 16 04.3	
BILL				pmax	pmax		
	comp=Z,34nm,1.0s						
CJR	Cluj-Napoca	83.75	317	⇓iP	P	11 12 49.9	+2.3
CJR	Cluj-Napoca	83.75	317	P	P	11 12 49.8	+2.2
PUNG	Punghina	83.75	315	⇑iP	P	11 12 48.8	+1.2
BMR	Baia Mare	84.00	318	⇓iP	P	11 12 50.9	+2.1
IIGN	Ignalina	84.02	326	eP	P	11 12 50.2	+1.5
IIGN				IAmb	IAmb	11 12 51.3	
	comp=Z,70nm,0.7s						
GZR	Gura Zlata	84.06	316	⇑iP	P	11 12 50.5	+1.2
DEV	Deva	84.06	317	⇑iP	P	11 12 51.7	+2.5
DEV	Deva	84.06	317	P	P	11 12 51.6	+2.5
LVV	L'vov	84.08	321	eP	P	11 12 49.5	+0.3
IZAR	Zarasai	84.10	327	eP	P	11 12 49.7	+0.6
IZAR				IAmb	IAmb	11 12 51.6	
	comp=Z,37nm,0.9s						
ISAL	Salakas	84.13	327	eP	P	11 12 50.4	+1.2
ISAL				IAmb	IAmb	11 12 51.8	
	comp=Z,47nm,0.9s						
LVZ	Lovozero	84.19	340	eP	P	11 12 49.2	-0.2
LVZ	Lovozero	84.19	340	ceP	P	11 12 49.4	0.0
LVZ				pmax	pmax		
	comp=Z,29nm,0.6s						
HERR	Herculane	84.22	315	⇓iP	P	11 12 51.4	+1.4
DRGR		84.36	317	⇑iP	P	11 12 52.2	+1.5
DRGR		84.36	317	P	P	11 12 52.1	+1.4
KRUS	Krusevo	84.48	312	i P	P	11 12 51.4	-0.1
APA	Apatity	84.50	339	⇓iP	P	11 12 50.2	-0.7
APA				pmax	pmax		
	comp=Z,32nm,0.9s						
VSU	Vasula	84.53	329	ceP	P	11 12 51.9	+0.7
VSU				pmax	pmax		
	comp=Z,304nm,1.3s						
VSU	Vasula	84.53	329	eP	P	11 12 51.9	+0.7
VSU				IAmb	IAmb	11 12 52.6	
	comp=Z,173nm,0.8s						
TRPA	Tarpa	84.72	319	⇓iP	P	11 12 54.0	+1.6
TRPA	Tarpa	84.72	319	⇑eP	P	11 12 53.0	+0.6
OHR	Ohrid	84.78	312	i P	P	11 12 52.5	-0.4
KWP	Kalwaria Pacla	84.89	320	eP	P	11 12 54.4	+1.1
KWP	Kalwaria Pacla	84.89	320	eP	P	11 12 54.4	+1.1
BZS	Buzias	84.90	316	⇑iP	P	11 12 54.8	+1.3
BZS	Buzias	84.90	316	P	P	11 12 54.7	+1.3
UZH	Uzhgorod	84.97	319	⇑eP	P	11 12 54.5	+0.8
UZH				e		11 16 17.3	
UZH				e		11 18 04.5	
UZH				eS	S	11 23 19.2	+0.7
UZH				e		11 24 21.9	
UZH				e		11 28 53.3	
UZH				e		11 32 25.3	
SIRR	Siria	84.98	317	⇓iP	P	11 12 55.5	+1.7
LTVH	Ltavrtes, Hu	85.01	318	⇑eP	P	11 12 55.1	+1.2
FIA1	FINESS Array S	85.61	332	eP	P	11 12 57.2	+0.6
FINES	FINESS Array B	85.61	332	i P	P	11 12 57.2	+0.7
FINES				pmax	pmax		
	comp=Z,50nm,1.1s						
FINES	FINESS Array B	85.61	332	P	P	11 12 57.0	+0.5
	comp=Z,51nm,1.1s,baz=100,slow=6.6,SNR=44						
FINES				PP	PP	11 16 18.3	+2.4
	comp=Z,7.1nm,0.7s,baz=99,slow=8.6,SNR=5.6						
FINES				PKKPbc	PKKPbc	11 30 59.8	-2.3
	comp=Z,0.7nm,0.6s,baz=268,slow=4.2,SNR=4.1						
DIVS	Divibare	85.81	314	eP	P	11 12 58.9	+0.9
DIVS	Divibare	85.81	314	eP	P	11 12 59.0	+0.9
FRGS	Fruska Gora	86.09	315	eP	P	11 12 59.9	+0.5
PDG	Podgorica	86.11	313	⇑iP	P	11 13 00.0	+0.5
PDG	Podgorica	86.11	313	eP	P	11 13 00.0	+0.5
DRME	Dracevica, Mon	86.13	312	⇑iP	P	11 13 00.0	+0.4

BBLS	**Lazići**	**86.20**	**314**	*e*P	**P**	**11 13 00.5**	**+0.5**
NIE	**Niedzica**	**86.40**	**320**	*e*P	**P**	**11 13 02.1**	**+1.3**
NIE	**Niedzica**	**86.40**	**320**	*e*P	**P**	**11 13 02.1**	**+1.3**
PSZ	**Piszkesteto**	**86.44**	**318**	*e*P	**P**	**11 13 01.8**	**+0.7**
PSZ	**Piszkesteto**	**86.44**	**318**	⇑*i*P	**P**	**11 13 02.2**	**+1.1**
PSZ	**Piszkesteto**	**86.44**	**318**	*e*P	**P**	**11 13 01.8**	**+0.7**
PSZ	**Piszkesteto**	**86.44**	**318**	⇑*e*P	**P**	**11 13 01.0**	**0.0**
BEL	**Belsk**	**86.47**	**322**	*e*P	**P**	**11 13 02.4**	**+1.4**
BEL	**Belsk**	**86.47**	**322**	*e*P	**P**	**11 13 02.4**	**+1.4**
PBUR	**Paburg**	**86.54**	**326**	*e*P	**P**	**11 13 02.2**	**+1.0**
PBUR				IAmb	IAmb	11 13 03.5	
	comp=Z,306nm,0.7s						
HAPS	**Han Pijesak,Bl**	**86.55**	**314**	*e*P	**P**	**11 13 02.2**	**+0.4**
SLIT	**Slitere, Latvi**	**86.64**	**328**	*e*P	**P**	**11 13 01.8**	**+0.1**
SLIT				IAmb	IAmb	11 13 02.4	
	comp=Z,230nm,0.8s						
OJC	**Ojcow**	**86.84**	**320**	*e*P	**P**	**11 13 04.0**	**+1.1**
OJC	**Ojcow**	**86.84**	**320**	*e*P	**P**	**11 13 04.0**	**+1.1**
LANS	**Liptovska Anna**	**86.89**	**319**	*e*P	**P**	**11 13 04.4**	**+1.2**
LANS	**Liptovska Anna**	**86.89**	**319**	*e*P	**P**	**11 13 04.4**	**+1.2**
QSPA	**South Pole Qui**	**86.91**	**180**	*e*P	**P**	**11 13 04.9**	**+1.9**
MORH	**Mrgy, Hungar**	**87.05**	**316**	*e*P	**P**	**11 13 04.8**	**+0.8**
MORH	**Mrgy, Hungar**	**87.05**	**316**	⇑*e*P	**P**	**11 13 04.0**	**+0.1**
VYHS	**Vyhne**	**87.22**	**319**	*e*P	**P**	**11 13 05.7**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,21nm,1.2s						
VYHS	**Vyhne**	**87.22**	**319**	*e*P	**P**	**11 13 05.7**	**+0.9**
KIWB	**Kanaga Island**	**87.22**	**38**	*e*P	**P**	**11 13 04.8**	**+0.1**
KLNR	**Kaliningrad**	**87.26**	**325**	*c* *i*P	**P**	**11 13 05.7**	**+0.9**
KLNR				pmax	pmax		
	comp=Z,295nm,0.9s						
KEV	**Kevo**	**87.43**	**340**	*e*P	**P**	**11 13 06.0**	**+0.7**
KEV	**Kevo**	**87.43**	**340**	*e*P	**P**	**11 13 06.0**	**+0.7**
KOLL	**Kolacno**	**87.51**	**319**	*e*P	**P**	**11 13 07.3**	**+1.1**
KOLL	**Kolacno**	**87.51**	**319**	*e*P	**P**	**11 13 07.3**	**+1.1**
TIP	**Timpagrande**	**87.61**	**309**	*e*P	**P**	**11 13 08.0**	**+1.1**
TIP	**Timpagrande**	**87.61**	**309**	⇑*i*P	**P**	**11 13 09.4**	**+2.4**
TIH	**Tihany**	**87.64**	**317**	*e*P	**P**	**11 13 07.1**	**+0.2**
OKC	**Ostrava-Krasne**	**87.84**	**320**	*e*P	**P**	**11 13 09.2**	**+1.5**
OKC				AMS	AMS	11 57 40.0	
	comp=Z,300nm,15.7s						
OKC	**Ostrava-Krasne**	**87.84**	**320**	*e*P	**P**	**11 13 09.2**	**+1.5**
OKC				MLR	MLR		
	comp=Z,300nm,15.7s						
ARCES	**ARCESS Array B**	**87.88**	**340**	P	**P**	**11 13 07.9**	**+0.4**
	comp=Z,48nm,0.9s,baz=100,slow=5.0,SNR=70						
ARCES				PP	**PP**	**11 16 35.6**	**+1.6**
	comp=Z,16nm,1.0s,baz=115,slow=6.4,SNR=6.7						
ARE0	**ARCESS Array S**	**87.88**	**340**	*e*P	**P**	**11 13 08.3**	**+0.8**
BLY	**Banja Luka**	**87.89**	**315**	*e*P	**P**	**11 13 09.5**	**+1.5**
BLY	**Banja Luka**	**87.89**	**315**	⇑*i*P	**P**	**11 13 09.6**	**+1.5**
BLY	**Banja Luka**	**87.89**	**315**	⇑*i*P	**P**	**11 13 09.2**	**+1.1**
SMOL	**Smolenice**	**88.15**	**319**	*e*P	**P**	**11 13 10.8**	**+1.6**
SMOL	**Smolenice**	**88.15**	**319**	*e*P	**P**	**11 13 10.8**	**+1.6**
MORC	**Moravsky Berou**	**88.22**	**320**	*e*P	**P**	**11 13 10.2**	**+0.6**
MORC	**Moravsky Berou**	**88.22**	**320**	⇓*i*P	**P**	**11 13 11.5**	**+1.9**
MORC	**Moravsky Berou**	**88.22**	**320**	*e*P	**P**	**11 13 10.2**	**+0.6**
MORC	**Moravsky Berou**	**88.22**	**320**	*e*P	**P**	**11 13 11.0**	**+1.4**
MODS	**Modra-Piesok**	**88.23**	**318**	*e*P	**P**	**11 13 11.1**	**+1.5**
MODS				pmax	pmax		
	comp=Z,68nm,1.2s						
MODS	**Modra-Piesok**	**88.23**	**318**	*e*P	**P**	**11 13 11.1**	**+1.5**
ZST	**Bratislava**	**88.33**	**318**	*e*P	**P**	**11 13 10.0**	**-0.1**
ZST				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZST	**Bratislava**	**88.33**	**318**	*e*P	**P**	**11 13 10.0**	**-0.1**
BEHE	**Becsehely**	**88.36**	**317**	⇑*e*P	**P**	**11 13 11.1**	**+0.8**
BEHE	**Becsehely**	**88.36**	**317**	*e*P	**P**	**11 13 12.2**	**+1.9**
KTK1	**Kautokeino**	**88.54**	**339**	*e*P	**P**	**11 13 11.2**	**+0.6**
SOP	**Sopron**	**88.64**	**318**	P	**P**	**11 13 12.8**	**+1.3**
SOP	**Sopron**	**88.64**	**318**	*e*P	**P**	**11 13 10.1**	**-1.4**
KOGS	**Kog**	**88.72**	**316**	*i* P	**P**	**11 13 13.4**	**+1.4**
HAMF	**Hammerfest**	**88.75**	**341**	*e*P	**P**	**11 13 11.8**	**+0.2**
KRLC	**Kraliky**	**88.75**	**320**	*e*P	**P**	**11 13 13.9**	**+1.8**
KRLC	**Kraliky**	**88.75**	**320**	*e*P	**P**	**11 13 13.9**	**+1.8**
VRAC	**Vranov**	**88.78**	**319**	⇑*i*P	**P**	**11 13 13.8**	**+1.6**
VRAC	**Vranov**	**88.78**	**319**	P	**P**	**11 13 13.8**	**+1.6**
VRAC	**Vranov**	**88.78**	**319**	*e*P	**P**	**11 13 13.4**	**+1.2**
GKP	**Gorka Klasztor**	**88.82**	**323**	*e*P	**P**	**11 13 13.2**	**+1.0**
GKP	**Gorka Klasztor**	**88.82**	**323**	*e*P	**P**	**11 13 13.3**	**+1.0**
KRUC	**Moravsky**	**88.89**	**319**	P	**P**	**11 13 13.9**	**+1.2**
KRUC	**Moravsky**	**88.89**	**319**	*e*P	**P**	**11 13 13.8**	**+1.1**
DPC	**Dobruska-Polom**	**89.07**	**320**	*e*P	**P**	**11 13 15.5**	**+1.9**
DPC	**Dobruska-Polom**	**89.07**	**320**	*e*P	**P**	**11 13 15.5**	**+1.9**
CONA	**Conrad Observa**	**89.13**	**318**	*i* P	**P**	**11 13 14.6**	**+0.7**
	comp=Z,20nm,0.9s,SNR=5.2						
CONA				PP	**PP**	**11 16 44.5**	**-0.2**
	comp=Z,10nm,1.1s						
KSP	**Ksiaz**	**89.14**	**321**	*e*P	**P**	**11 13 15.5**	**+1.7**
KSP	**Ksiaz**	**89.14**	**321**	*e*P	**P**	**11 13 15.5**	**+1.7**
CRES	**Cresnjev**	**89.21**	**316**	⇑*i*P	**P**	**11 13 15.6**	**+1.3**
UPC	**Upice**	**89.28**	**320**	*e*P	**P**	**11 13 16.1**	**+1.6**
UPC				*e*x	x	11 13 20.7	
UPC	**Upice**	**89.28**	**320**	*e*P	**P**	**11 13 16.1**	**+1.6**
ARSA	**Arzberg**	**89.29**	**317**	*i* PcP	**P**	**11 13 16.2**	**+1.5**
	comp=Z,46nm,0.9s,SNR=11						
ARSA				PP	**PP**	**11 16 45.8**	**-0.2**
	comp=Z,9.1nm,1.1s						
BOJS	**Bojanci**	**89.32**	**315**	*i* P	**P**	**11 13 16.2**	**+1.4**
TREC	**Trest**	**89.50**	**319**	*e*P	**P**	**11 13 17.0**	**+1.4**
TREC	**Trest**	**89.50**	**319**	*e*P	**P**	**11 13 17.0**	**+1.4**
SOKA	**Soboth**	**89.58**	**317**	*i* PcP	**P**	**11 13 17.7**	**+1.7**
	comp=Z,80nm,1.0s,SNR=13						
HOPEN	**Hopen**	**89.75**	**347**	*e*P	**P**	**11 13 16.5**	**+0.4**
LJU	**Ljubljana**	**89.87**	**316**	*i* P	**P**	**11 13 19.0**	**+1.5**
LJU	**Ljubljana**	**89.87**	**316**	⇑*i*P	**P**	**11 13 18.9**	**+1.5**
CEY	**Cerknica**	**89.92**	**316**	⇑*i*P	**P**	**11 13 18.6**	**+1.0**
GOPC	**GO Pecny, Ondr**	**90.01**	**320**	*e*P	**P**	**11 13 19.7**	**+1.7**
GOPC				AMS	AMS	12 02 40.0	
	comp=Z,400nm,21.8s						
GOPC	**GO Pecny, Ondr**	**90.01**	**320**	*e*P	**P**	**11 13 19.7**	**+1.7**
GOPC				MLR	MLR		
	comp=Z,400nm,21.8s						
TRO	**Tromso**	**90.16**	**340**	*e*P	**P**	**11 13 18.5**	**+0.3**
PRU	**Pruhonice**	**90.17**	**320**	*e*P	**P**	**11 13 20.2**	**+1.5**
PRU	**Pruhonice**	**90.17**	**320**	*e*P	**P**	**11 13 20.2**	**+1.5**
MOA	**Molln**	**90.19**	**318**	*i* P	**P**	**11 13 19.8**	**+0.9**
	comp=Z,24nm,0.8s						
MOA				PP	**PP**	**11 16 53.6**	**+0.5**
	comp=Z,12nm,1.2s						
PVCC	**Panska Ves**	**90.20**	**320**	*e*P	**P**	**11 13 20.7**	**+1.9**
PVCC	**Panska Ves**	**90.20**	**320**	*e*P	**P**	**11 13 20.7**	**+1.9**
AQU	**L'Aquila**	**90.42**	**312**	*e*P	**P**	**11 13 21.9**	**+1.8**
AQU	**L'Aquila**	**90.42**	**312**	*e*P	**P**	**11 13 21.9**	**+1.8**
AQU	**L'Aquila**	**90.42**	**312**	*e*P	**P**	**11 13 21.5**	**+1.4**
MYKA	**Terra Mystica**	**90.53**	**316**	*i* PcP	**P**	**11 13 21.6**	**+1.1**
	comp=Z,19nm,0.7s						
BRG	**Berggiesshubel**	**90.62**	**321**	⇑*i*P	**P**	**11 13 22.3**	**+1.6**
	comp=Z,45nm,0.9s						
BRG				*i*		11 13 36.9	
	comp=Z,34nm,1.6s						
BRG				*e*PP	**PP**	**11 16 49.1**	**-7.3**
	comp=Z,4.3nm,1.0s						
	comp=N,632nm,18.2s						
	comp=E,404nm,17.7s						
	comp=Z,862nm,19.5s						
BRG	**Berggiesshubel**	**90.62**	**321**	⇑*i*P	**P**	**11 13 22.3**	**+1.6**
BRG				*i*		11 13 36.9	
BRG				pmax	pmax		
	comp=Z,45nm,0.9s						
BRG				MLR	MLR		
	comp=N,632nm,18.2s						
BRG				MLR	MLR		
	comp=E,404nm,17.7s						
BRG				MLR	MLR		
	comp=Z,862nm,19.5s						
GERES	**GERESS Array B**	**90.64**	**319**	P	**P**	**11 13 22.0**	**+1.0**
	comp=Z,21nm,0.7s,baz=76,slow=5.6,SNR=147						
GERES				PP	**PP**	**11 16 59.6**	**+2.9**
	comp=Z,2.6nm,0.8s,baz=81,slow=6.1,SNR=5.3						
KHC	**Kasperske Hory**	**90.74**	**319**	*e*P	**P**	**11 13 22.6**	**+1.2**
KHC	**Kasperske Hory**	**90.74**	**319**	*e*P	**P**	**11 13 22.9**	**+1.5**
KHC	**Kasperske Hory**	**90.74**	**319**	*e*P	**P**	**11 13 22.9**	**+1.5**
KBA	**Koelnbreinsper**	**90.76**	**317**	*i* P	**P**	**11 13 22.2**	**+0.5**
	comp=Z,28nm,0.9s						
KBA	**Koelnbreinsper**	**90.76**	**317**	P	**P**	**11 13 23.2**	**+1.5**
RUE	**Ruedersdorf**	**90.83**	**322**	*e*P	**P**	**11 13 22.6**	**+0.9**
RUE				IAmb	IAmb	11 13 24.5	
	comp=Z,116nm,1.1s						
WET	**Wettzell**	**91.20**	**319**	P	**P**	**11 13 25.2**	**+1.7**
CLL	**Collm**	**91.24**	**321**	⇑*i*P	**P**	**11 13 24.4**	**+0.8**
	comp=Z,28nm,1.0s						
CLL				*e*pP	**pP**	**11 13 42.0**	**+2.9**
CLL	**Collm**	**91.24**	**321**	⇑*i*P	**P**	**11 13 24.4**	**+0.8**
CLL				*e*		11 13 42.0	
CLL				pmax	pmax		
	comp=Z,28nm,1.0s						
CLL				MLR	MLR		
	comp=Z,400nm,18.1s						
STEI	**Steigen**	**91.29**	**338**	*e*P	**P**	**11 13 24.2**	**+0.8**
ABTA	**Abfaltersbach**	**91.31**	**317**	*i* P	**P**	**11 13 24.7**	**+0.6**
	comp=Z,24nm,0.9s						
MOR8	**Moi Rana**	**91.47**	**336**	*e*P	**P**	**11 13 24.7**	**+0.3**
NKC	**Novy Kostel**	**91.54**	**320**	P	**P**	**11 13 26.9**	**+1.9**
SPA0	**Spitsbergen Ar**	**91.91**	**348**	*e*P	**P**	**11 13 25.8**	**-0.4**
SPITS	**Spitsbergen Ar**	**91.91**	**348**	P	**P**	**11 13 25.6**	**-0.7**
	comp=Z,4.3nm,0.4s,baz=108,slow=8.0,SNR=26						
WTTA	**Wattenberg**	**91.94**	**317**	*i* PcP	**P**	**11 13 27.8**	**+0.6**
	comp=Z,39nm,0.8s,SNR=7.7						
LOF	**Lofoten**	**91.95**	**338**	*e*P	**P**	**11 13 27.2**	**+0.7**
WATA	**Walderalm**	**91.98**	**317**	*i* P	**P**	**11 13 27.3**	**0.0**
	comp=Z,31nm,0.9s,SNR=8.7						
HSPB	**Hornsund (broa**	**91.98**	**347**	*e*P	**P**	**11 13 26.6**	**+0.1**
KONS	**Konsvik**	**92.02**	**336**	*e*P	**P**	**11 13 27.4**	**+0.5**
MOX	**Moxa**	**92.09**	**320**	P	**P**	**11 13 28.9**	**+1.3**
SQTA	**Sankt Quirin**	**92.22**	**317**	*i* PcP	**P**	**11 13 29.0**	**+0.6**
	comp=Z,38nm,0.6s,SNR=13						
MOTA	**Moosalm**	**92.30**	**317**	*i* PcP	**P**	**11 13 29.4**	**+0.5**
	comp=Z,38nm,0.8s,SNR=23						
GRFO	**Grafenberg**	**92.31**	**319**	*e*P	**P**	**11 13 30.0**	**+1.4**
GRFO	**Grafenberg**	**92.31**	**319**	*e*P	**P**	**11 13 30.0**	**+1.4**
NIKH	**Nikolski High**	**92.38**	**37**	*e*P	**P**	**11 13 28.7**	**-0.1**
NSS	**Namsos**	**92.41**	**334**	*e*P	**P**	**11 13 29.5**	**+0.8**
NC602	**NORSAR Array S**	**92.48**	**331**	*e*P	**P**	**11 13 29.3**	**+0.2**
NORES	**NORESS Array B**	**92.48**	**331**	P	**P**	**11 13 29.6**	**+0.4**
NORES				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RETA	**Reutte**	**92.54**	**317**	*i* PcP	**P**	**11 13 30.5**	**+0.7**
	comp=Z,42nm,0.7s,SNR=16						
FETA	**Feichten**	**92.55**	**317**	*i* PcP	**P**	**11 13 30.9**	**+0.9**
	comp=Z,28nm,0.8s,SNR=8.9						
NB2	**NORSAR Subarra**	**92.65**	**331**	P	**P**	**11 13 29.8**	**-0.2**
	comp=Z,22nm,0.9s,baz=94,slow=5.3						
NB2	**NORSAR Subarra**	**92.65**	**331**	P	**P**	**11 13 28.7**	**-1.3**
NB2	**NORSAR Subarra**	**92.65**	**331**	P	**P**	**11 13 29.8**	**-0.2**
	baz=94,slow=5.3						
NOA	**NORSAR Array B**	**92.65**	**331**	P	**P**	**11 13 29.9**	**-0.1**
	comp=Z,11nm,0.8s,baz=93,slow=4.6,SNR=29						
NOA				PP	**PP**	**11 17 12.8**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=90,slow=7.6,SNR=7.6						
NOA				LR	LR	11 59 00.6	
	comp=Z,272nm,21.7s,baz=80,slow=38						
KBS	**Kingsbay**	**92.84**	**349**	*e*P	**P**	**11 13 28.7**	**-1.7**
DAVA	**Damuels**	**93.13**	**317**	*i* PcP	**P**	**11 13 33.7**	**+1.1**
	comp=Z,57nm,0.8s,SNR=12						
KEST	**Kesra**	**93.28**	**305**	*e*P	**P**	**11 13 35.7**	**+2.2**
KEST	**Kesra**	**93.28**	**305**	P	**P**	**11 13 35.9**	**+2.4**
	comp=Z,31nm,1.0s,baz=172,slow=1.8,SNR=12						
KONO	**Kongsberg**	**93.44**	**329**	*e*P	**P**	**11 13 34.5**	**+0.9**
KONO	**Kongsberg**	**93.44**	**329**	*e*P	**P**	**11 13 34.5**	**+0.9**
KONO	**Kongsberg**	**93.44**	**329**	*e*P	**P**	**11 13 34.1**	**+0.6**
DOMB	**Dombas**	**93.69**	**332**	*e*P	**P**	**11 13 32.4**	**-2.4**
BFO	**Black Forest**	**94.19**	**318**	*e*P	**P**	**11 13 37.9**	**+0.5**
BFO	**Black Forest**	**94.19**	**318**	*i* P	**P**	**11 13 38.2**	**+0.9**
SNART	**Snartemo**	**94.69**	**328**	*e*P	**P**	**11 13 39.9**	**+0.6**
LPG	**La Plagne**	**95.30**	**315**	*e*P	**P**	**11 13 43.0**	**+0.2**
LPG				pmax	pmax		
	comp=Z,12nm,0.8s						
LPL	**La Plagne**	**95.31**	**315**	*e*P	**P**	**11 13 43.0**	**+0.2**
LPL				pmax	pmax		
	comp=Z,7.0nm,0.4s						
HAU	**Haudompre**	**95.52**	**318**	*e*P	**P**	**11 13 43.4**	**0.0**
WLF	**Walferdange**	**95.60**	**319**	⇑P	**P**	**11 13 43.2**	**-0.5**
MEM	**Membach**	**95.66**	**320**	⇑P	**P**	**11 13 44.6**	**+0.6**
ORIF	**Oris-en-Rattie**	**95.92**	**315**	*e*P	**P**	**11 13 46.6**	**+1.2**
ORIF				pmax	pmax		
	comp=Z,14nm,1.2s						
GIVF	**Givet**	**96.44**	**320**	*e*P	**P**	**11 13 47.7**	**+0.2**
GIVF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DOU	**Dourbes**	**96.58**	**320**	⇑P	**P**	**11 13 48.8**	**+0.7**
VIVF	**Saint-Julien-l**	**96.78**	**315**	*e*P	**P**	**11 13 49.5**	**+0.2**
BAIF	**Baives**	**96.83**	**320**	*e*P	**P**	**11 13 49.7**	**+0.4**
BAIF				pmax	pmax		
	comp=Z,11nm,0.8s						
LOR	**Lormes**	**97.23**	**317**	*e*P	**P**	**11 13 51.3**	**+0.1**
LOR				pmax	pmax		
	comp=Z,13nm,0.8s						
SMF	**Signal de Mont**	**97.28**	**316**	*e*P	Pdif	11 13 52.5	+1.0
SMF				pmax	pmax		
	comp=Z,20nm,1.0s						
SSF	**Saint Saulge**	**97.48**	**317**	*e*P	**P**	**11 13 51.7**	**-0.6**
SSF				pmax	pmax		
	comp=Z,29nm,1.6s						
BGF	**Bois d'Agland**	**97.97**	**316**	*e*P	Pdif	11 13 55.0	+0.4
BGF				pmax	pmax		
	comp=Z,20nm,1.0s						
TOLK	**Toolik Lake Re**	**99.78**	**21**	P	**Pdif**	**11 14 02.4**	**+0.2**
	baz=287						
TORD	**Torodi Ar. Bea**	**99.95**	**283**	PKiKP	**PKiKP**	**11 18 32.5**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=74,slow=1.4,SNR=5.1						
TORD				PKKPbc	**PKKPbc**	**11 30 23.0**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=328,slow=2.8,SNR=6.1						
KDAK	**Kodiak Island**	**101.19**	**32**	P	**Pdif**	**11 14 07.5**	**-1.1**
	comp=Z,4.4nm,0.7s,baz=207,slow=4.5,SNR=3.9						
ILAR	**Eielson Array**	**101.98**	**24**	P	**Pdif**	**11 14 10.2**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=282,slow=3.9,SNR=13						
ILAR				PKKPbc	**PKKPbc**	**11 30 17.4**	**-1.7**
	comp=Z,1.1nm,0.9s,baz=123,slow=1.8,SNR=7.4						
ESDC	**Sonseca Array**	**103.62**	**310**	PKiKP	**PKiKP**	**11 18 37.4**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=57,slow=4.7,SNR=4.1						
INK	**Inuvik**	**105.29**	**18**	Pdiff	**Pdif**	**11 14 26.3**	**-0.2**
	comp=Z,2.8nm,1.0s,baz=323,slow=4.4,SNR=2.4						
INK				PKiKP	**PKiKP**	**11 18 39.9**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=338,slow=1.9,SNR=11						
INK				PKKPbc	**PKKPbc**	**11 30 06.4**	**-2.8**
	comp=Z,1.4nm,1.0s,baz=215,slow=2.8,SNR=3.5						
TBI	**Tubuai**	**106.43**	**115**	*e*LQ	LQ	11 44 35.4	
	comp=Z,1µm,38.0s						
TBI				*e*LR	LR	11 49 28.4	
	comp=Z,314nm,25.8s						
PPT2	**Papeete2**	**107.31**	**109**	*e*S	**Sdif**	**11 26 32.0**	**-4.4**
	comp=Z,791nm,25.2s						
PPT2	**Papeete2**	**107.31**	**109**	*e*LR	LR	11 49 51.2	
	comp=Z,274nm,22.8s						
RES	**Resolute Bay**	**107.83**	**4**	PKiKP	**PKiKP**	**11 18 44.9**	**0.0**
	comp=Z,2.7nm,0.8s,baz=302,slow=2.8,SNR=10						
DLBC	**Dease Lake**	**111.96**	**26**	PKiKP	**PKiKP**	**11 18 53.0**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=250,slow=2.3,SNR=11						
YKA	**Yellowknife Ar**	**115.02**	**17**	PKP	**PKiKP**	**11 18 57.7**	**-1.1**
	comp=Z,3.5nm,0.8s,baz=320,slow=1.9,SNR=43						
YKA				PKKPbc	**PKKPbc**	**11 29 34.5**	**-2.9**
	comp=Z,0.9nm,1.2s,baz=151,slow=2.8,SNR=3.6						
TAOE	**Nuku Hiva Isla**	**117.71**	**102**	*e*LR	LR	11 54 38.7	
	comp=Z,263nm,25.2s						
RKT	**Rikitea**	**119.40**	**119**	*e*LR	LR	11 55 30.9	
	comp=Z,177nm,25.0s						
D03D	**Eldon**	**121.56**	**34**	P	**PKiKP**	**11 19 12.3**	**+0.3**
	baz=305						
B05A	**Bryant**	**121.67**	**33**	P	**PKiKP**	**11 19 12.6**	**+0.4**
	baz=306,SNR=10						
E04D	**Cinebar**	**122.41**	**34**	P	**PKiKP**	**11 19 13.9**	**+0.1**
	baz=305						
G03D	**McMinnville, O**	**122.77**	**36**	P	**PKiKP**	**11 19 14.7**	**+0.2**
	baz=304						
I02D	**Swisshome**	**123.02**	**37**	P	**PKiKP**	**11 19 15.4**	**+0.4**
	baz=303						
FCC	**Fort Churchill**	**123.18**	**9**	*e*PKPdf	**PKPdf**	**11 19 13.9**	**-0.7**
FCC	**Fort Churchill**	**123.18**	**9**	*e*PKIKP	**PKPdf**	**11 19 13.9**	**-0.7**
F05D	**White Salmon**	**123.43**	**35**	P	**PKPdf**	**11 19 15.7**	**+0.1**
	baz=306						
H04D	**Lebanon**	**123.46**	**37**	P	**PKiKP**	**11 19 16.6**	**+0.7**
	baz=304,SNR=8.8						
J01E	**Myrtle Point**	**123.47**	**38**	P	**PKiKP**	**11 19 16.4**	**+0.5**
	baz=302,SNR=6.8						
I03D	**Drain, OR**	**123.55**	**38**	P	**PKiKP**	**11 19 16.6**	**+0.5**
	baz=303,SNR=8.2						
G05D	**Wamic, OR**	**123.88**	**35**	P	**PKiKP**	**11 19 16.8**	**0.0**
	baz=306						
K02D	**Willamette Mer**	**123.89**	**39**	P	**PKiKP**	**11 19 17.1**	**+0.2**
	baz=302,SNR=5.4						
I04A	**Tendick Farm,**	**124.06**	**37**	P	**PKPdf**	**11 19 17.0**	**+0.1**
	baz=304,SNR=10						
HAWA	**Hanford**	**124.19**	**33**	*e*PKPdf	**PKiKP**	**11 19 17.6**	**+0.4**
L02E	**Cave Junction**	**124.21**	**39**	P	**PKiKP**	**11 19 17.4**	**-0.1**
	baz=302						
NEW	**Newport**	**124.26**	**30**	*e*PKPdf	**PKPdf**	**11 19 17.1**	**0.0**
NEW	**Newport**	**124.26**	**30**	*e*PKIKP	**PKPdf**	**11 19 17.1**	**0.0**
NEW	**Newport**	**124.26**	**30**	P	**PKPdf**	**11 19 17.2**	**+0.1**
	baz=312,SNR=7.6						
HUMO	**Hull Mountain**	**124.38**	**39**	*e*PKPdf	**PKiKP**	**11 19 18.2**	**+0.4**
I05D	**Terrebonne, OR**	**124.39**	**36**	P	**PKiKP**	**11 19 18.3**	**+0.4**
	baz=305,SNR=5.3						
J04D	**Umpqua Nationa**	**124.55**	**37**	P	**PKiKP**	**11 19 18.5**	**+0.2**
	baz=304,SNR=34						
L04D	**Klamath Falls**	**124.99**	**39**	P	**PKiKP**	**11 19 19.1**	**-0.1**
	baz=303,SNR=11						
J05D	**Fort Rock, OR**	**125.06**	**37**	P	**PKiKP**	**11 19 19.7**	**+0.4**
	baz=305,SNR=17						
M02C	**Callahan**	**125.09**	**40**	P	**PKiKP**	**11 19 19.9**	**+0.5**
	baz=302,SNR=6.3						
K04D	**Chiloquin, OR**	**125.11**	**38**	P	**PKiKP**	**11 19 19.6**	**+0.2**
	baz=304,SNR=5.2						
FFC	**Flin Flon**	**125.15**	**16**	*e*PKPdf	**PKPdf**	**11 19 18.1**	**-0.4**
FFC	**Flin Flon**	**125.15**	**16**	*i* PKIKP	**PKPdf**	**11 19 18.4**	**-0.2**
N02D	**Trinity Center**	**125.41**	**40**	P	**PKiKP**	**11 19 20.4**	**+0.4**
	baz=302,SNR=7.6						
M04C	**Macdoel**	**125.52**	**39**	P	**PKiKP**	**11 19 20.2**	**0.0**
	baz=303,SNR=11						
O02D	**Mt. Diablo Mer**	**125.77**	**41**	P	**PKiKP**	**11 19 21.0**	**+0.3**
	baz=301,SNR=6.9						
O03E	**Paynes Creek**	**126.35**	**40**	P	**PKPdf**	**11 19 21.4**	**-0.1**
	baz=302,SNR=11						
BMO	**Blue Mountains**	**126.38**	**33**	*e*PKPdf	**PKPdf**	**11 19 21.0**	**-0.4**
BMO	**Blue Mountains**	**126.38**	**33**	*e*PKIKP	**PKPdf**	**11 19 21.0**	**-0.4**
MOD	**Modoc Plateau**	**126.41**	**38**	*e*PKPdf	**PKiKP**	**11 19 22.4**	**+0.4**
MSO	**Missoula**	**126.81**	**30**	P	**PKPdf**	**11 19 21.9**	**-0.2**
	baz=314,SNR=22						
WVOR	**Wild Horse Val**	**127.10**	**36**	*e*PKPdf	**PKiKP**	**11 19 23.4**	**0.0**
WVOR	**Wild Horse Val**	**127.10**	**36**	*e*PKIKP	**PKiKP**	**11 19 23.4**	**0.0**
SCHQ	**Schefferville**	**127.48**	**351**	PKP	**PKiKP**	**11 19 23.4**	**-0.2**
	comp=Z,18nm,0.9s,baz=44,slow=3.9,SNR=16						
SCHQ				PP	**PP**	**11 21 21.8**	**-1.2**
	comp=Z,11nm,1.0s,baz=3.9,slow=6.7,SNR=5.2						
EGMT	**Eagleton**	**127.89**	**26**	*e*PKPdf	**PKPdf**	**11 19 24.3**	**+0.1**
EGMT				*e*PP	**PP**	**11 21 26.0**	**-0.2**
EGMT	**Eagleton**	**127.89**	**26**	P	**PKPdf**	**11 19 23.7**	**-0.5**
	baz=319						
CMB	**Columbia Colle**	**128.48**	**42**	*e*PKPdf	**PKiKP**	**11 19 25.9**	**-0.3**
CMB	**Columbia Colle**	**128.48**	**42**	*e*PKIKP	**PKiKP**	**11 19 25.9**	**-0.3**
HLID	**Hailey**	**128.79**	**33**	*e*PKPdf	**PKiKP**	**11 19 26.8**	**0.0**
HLID	**Hailey**	**128.79**	**33**	P	**PKiKP**	**11 19 26.9**	**+0.1**
	baz=312						
BOZ	**Bozeman (W)**	**128.82**	**29**	P	**PKiKP**	**11 19 26.6**	**-0.1**
	baz=316,SNR=11						
NVAR	**Mina Array Bea**	**129.64**	**40**	PKP	**PKiKP**	**11 19 29.1**	**+0.4**
	comp=Z,8.4nm,0.7s,baz=295,slow=2.2,SNR=42						
NVAR				SKPbc	SKPbc	11 22 45.4	-0.3
	comp=Z,7.6nm,0.8s,baz=272,slow=3.5,SNR=9.8						
DGMT	**Dagmar**	**129.78**	**22**	P	**PKiKP**	**11 19 28.3**	**-0.1**
	baz=326						
SMMC	**Simmler**	**130.16**	**45**	P	**PKiKP**	**11 19 30.5**	**+0.9**
	baz=301						
H17A	**Grant Village**	**130.20**	**30**	P	**PKiKP**	**11 19 30.0**	**+0.3**
	baz=316						
LAO	**LASA Array**	**130.44**	**25**	P	**PKiKP**	**11 19 30.2**	**+0.4**
	baz=323						
ULM	**Lac du Bonnet**	**130.80**	**14**	PKP	**PKPdf**	**11 19 29.6**	**+0.1**
	comp=Z,26nm,0.6s,baz=343,slow=2.1,SNR=58						
ULM				PP	**PP**	**11 21 40.1**	**-4.6**
	comp=Z,3.6nm,0.8s,baz=332,slow=5.9,SNR=3.0						
ULM				SKPbc	**SKPbc**	**11 22 47.3**	**-1.8**
	comp=Z,8.0nm,1.0s,baz=286,slow=4.1,SNR=4.5						
CWC	**Cottonwood Cre**	**130.89**	**42**	P	**PKiKP**	**11 19 31.2**	**0.0**
	baz=303						
ISA	**Isabella, Lake**	**131.04**	**44**	P	**PKiKP**	**11 19 31.7**	**+0.3**
	baz=302						
R11A	**Troy Canyon, C**	**131.42**	**39**	P	**PKiKP**	**11 19 31.8**	**-0.4**
	baz=307,SNR=29						
MPMC	**Manual Prospec**	**131.50**	**43**	P	**PKiKP**	**11 19 32.2**	**-0.3**
	baz=304,SNR=14						
LRMC	**Laurel Mtn Rad**	**131.68**	**43**	P	**PKiKP**	**11 19 32.6**	**-0.2**
	baz=303,SNR=6.8						
FURC	**Furnace Creek,**	**131.69**	**42**	P	**PKiKP**	**11 19 32.9**	**+0.3**
	baz=304						
EDW2	**Edwards Air Fo**	**131.79**	**44**	P	**PKiKP**	**11 19 32.8**	**-0.1**
	baz=302,SNR=8.0						
TPNV	**Topopah Spring**	**131.82**	**41**	P	**PKiKP**	**11 19 32.6**	**-0.4**
	baz=306,SNR=5.8						
BW06	**Boulder Array**	**131.89**	**30**	*e*PKPdf	**PKPdf**	**11 19 31.9**	**-0.2**
BW06	**Boulder Array**	**131.89**	**30**	P	**PKPdf**	**11 19 32.5**	**+0.4**
	baz=317						
PDAR	**Pinedale Array**	**131.90**	**30**	PKP	**PKPdf**	**11 19 31.9**	**-0.2**
	comp=Z,3.6nm,0.6s,baz=200,slow=1.6,SNR=15						
PDAR				PP	**PP**	**11 21 47.1**	**-5.4**
	comp=Z,1.9nm,0.9s,baz=318,slow=2.0,SNR=3.9						
PDAR				SKPbc	**SKPbc**	**11 22 52.5**	**-1.1**
	comp=Z,7.2nm,1.0s,baz=14,slow=1.9,SNR=10						
DUG	**Dugway, Tooele**	**131.92**	**35**	*e*PKPdf	**PKPdf**	**11 19 32.4**	**+0.3**
DUG	**Dugway, Tooele**	**131.92**	**35**	*e*PKIKP	**PKPdf**	**11 19 32.4**	**+0.3**
DUG	**Dugway, Tooele**	**131.92**	**35**	P	**PKiKP**	**11 19 32.8**	**-0.4**
	baz=311,SNR=18						
GSC	**Goldstone, Bar**	**132.38**	**43**	P	**PKiKP**	**11 19 34.0**	**-0.2**
	baz=304,SNR=10						
SHOC	**Shoshone, Teco**	**132.40**	**42**	P	**PKiKP**	**11 19 34.1**	**0.0**
	baz=305						
TUQ	**Turquoise Moun**	**132.90**	**42**	P	**PKiKP**	**11 19 35.1**	**-0.1**
	baz=305						
HEC	**Hector,Ludlow**	**132.96**	**43**	P	**PKiKP**	**11 19 35.1**	**-0.2**
	baz=304,SNR=7.4						
MURC	**Murrieta**	**133.03**	**45**	P	**PKiKP**	**11 19 34.9**	**-0.5**
	baz=302						
CHGQ	**Chibougamau**	**133.17**	**356**	P	**PKPdf**	**11 19 34.3**	**+0.3**
	baz=5.9,SNR=5.6						
RSSD	**Black Hills**	**133.42**	**25**	P	**PKPdf**	**11 19 35.1**	**+0.2**
	baz=324						
GMRC	**Granite Mounta**	**133.45**	**43**	P	**PKiKP**	**11 19 36.4**	**0.0**
	baz=304,SNR=17						
MATQ	**Matagami**	**133.46**	**359**	P	**PKPdf**	**11 19 35.1**	**+0.6**
	baz=1.5,SNR=8.8						
K22A	**Casper**	**133.47**	**28**	P	**PKPdf**	**11 19 35.3**	**+0.3**
	baz=320						
PFO	**Pinyon Flats O**	**133.54**	**45**	*e*PKIKP	**PKiKP**	**11 19 36.2**	**-0.4**
PFO	**Pinyon Flats O**	**133.54**	**45**	P	**PKPdf**	**11 19 35.7**	**+0.4**
	baz=303,SNR=6.0						
PFO	**Pinyon Flats O**	**133.54**	**45**	PKP	**PKPdf**	**11 19 35.9**	**+0.6**
	comp=Z,11nm,0.8s,baz=312,slow=2.7,SNR=11						
PFO				SKPbc	**SKPbc**	**11 23 00.1**	**+0.6**
	comp=Z,23nm,1.0s,baz=301,slow=2.9,SNR=13						
BELC	**Belle Mtn. Jos**	**133.65**	**44**	P	**PKiKP**	**11 19 36.3**	**-0.6**
	baz=304,SNR=6.5						
MONP2	**Monument Peak**	**133.95**	**46**	P	**PKiKP**	**11 19 37.0**	**-0.6**
	baz=302						
EYMN	**Ely**	**133.96**	**12**	*e*PKPdf	**PKPdf**	**11 19 35.8**	**+0.3**
EYMN	**Ely**	**133.96**	**12**	P	**PKiKP**	**11 19 36.6**	**-0.3**
	baz=342						
LSQQ	**Lebel-sur-Quev**	**134.15**	**358**	P	**PKPdf**	**11 19 36.3**	**+0.5**
	baz=2.4						
IRM	**Iron Mountain**	**134.15**	**43**	P	**PKiKP**	**11 19 37.4**	**-0.3**
	baz=304,SNR=7.7						
BC3	**Big Chuckawall**	**134.22**	**44**	P	**PKiKP**	**11 19 37.5**	**-0.5**
	baz=304,SNR=7.3						
IKP	**In-Ko-Pah, Jac**	**134.30**	**46**	P	**PKPdf**	**11 19 37.2**	**+0.5**
	baz=302						
SWSC	**Sam W. Stewart**	**134.37**	**45**	P	**PKPdf**	**11 19 37.0**	**+0.3**
	baz=303						
O20A	**White River Ci**	**134.49**	**32**	P	**PKPdf**	**11 19 37.3**	**+0.2**
	baz=317						
PDMCI	**Parker Dam,Lak**	**134.75**	**42**	P	**PKiKP**	**11 19 38.6**	**-0.3**
	baz=306						
Y12C	**Blythe**	**134.81**	**43**	P	**PKPdf**	**11 19 38.1**	**+0.5**
	baz=305,SNR=5.7						
GLA	**Glamis**	**134.99**	**44**	P	**PKPdf**	**11 19 38.7**	**+0.7**
	baz=304,SNR=5.6						
N23A	**Red Feather La**	**135.09**	**29**	P	**PKPdf**	**11 19 39.0**	**+0.8**
	baz=320						
SUSD	**Miller**	**135.11**	**20**	P	**PKiKP**	**11 19 38.8**	**-0.5**
	baz=331						
E38A	**The Farm, Brul**	**135.23**	**12**	P	**PKPdf**	**11 19 38.4**	**+0.5**
	baz=342,SNR=7.0						
D41A	**Chassel**	**135.36**	**10**	P	**PKPdf**	**11 19 38.7**	**+0.5**
	baz=346						
LATQ	**La Tuque**	**135.54**	**354**	P	**PKiKP**	**11 19 39.5**	**-0.5**
	baz=8.4						
E39A	**Mellen**	**135.65**	**12**	P	**PKPdf**	**11 19 39.2**	**+0.4**
	baz=343,SNR=16						
F38A	**Pierce - Schro**	**135.77**	**13**	P	**PKiKP**	**11 19 40.1**	**-0.5**
	baz=341						
F37A	**Hinrichs Farm,**	**135.81**	**14**	P	**PKPdf**	**11 19 39.8**	**+0.8**
	baz=340,SNR=9.5						
WUAZ	**Wupatki**	**135.82**	**39**	*e*PKPdf	**PKiKP**	**11 19 41.0**	**-0.2**
WUAZ	**Wupatki**	**135.82**	**39**	P	**PKPdf**	**11 19 40.1**	**+0.5**
	baz=310,SNR=8.0						
E41A	**Kenton**	**135.87**	**10**	P	**PKPdf**	**11 19 39.7**	**+0.6**
	baz=345,SNR=7.1						
D48A	**Paudash Townsh**	**135.98**	**3**	P	**PKPdf**	**11 19 39.8**	**+0.4**

	baz=356,SNR=5.1						
D47A	**Chapleau** baz=354	**136.02**	**4**	P	**PKPdf**	**11 19 40.0**	**+0.6**
F39A	**Loretta** baz=342,SNR=10	**136.02**	**12**	P	**PKPdf**	**11 19 40.3**	**+0.8**
D54A	**Lac Fusel, La** baz=2.9	**136.04**	**358**	P	**PKPdf**	**11 19 40.0**	**+0.5**
D50A	**G1974 Best Tow** baz=358,SNR=5.6	**136.06**	**1**	P	**PKPdf**	**11 19 39.7**	**+0.2**
E42A	**Champion** baz=347	**136.08**	**9**	P	**PKPdf**	**11 19 40.3**	**+0.7**
D46A	**Sault St. Mari** baz=352,SNR=8.7	**136.10**	**5**	P	**PKPdf**	**11 19 39.8**	**+0.2**
D51A	**Lot 18 Range I** baz=359	**136.14**	**1**	P	**PKPdf**	**11 19 40.0**	**+0.3**
D53A	**Lac Vacive, Po** baz=1.4	**136.14**	**359**	P	**PKPdf**	**11 19 40.0**	**+0.3**
E44A	**Grand Marais A** baz=350	**136.17**	**7**	P	**PKPdf**	**11 19 40.2**	**+0.5**
F40A	**Park Falls** baz=344,SNR=13	**136.18**	**11**	P	**PKPdf**	**11 19 39.7**	**0.0**
COWI	**Conover**	**136.19**	**10**	*e*PKPdf	**PKPdf**	**11 19 39.9**	**+0.1**
COWI				*e*PP	**PP**	**11 22 16.4**	**-2.6**
SPMN	**Marine on St.** baz=340,SNR=5.5	**136.24**	**14**	P	**PKPdf**	**11 19 40.6**	**+0.8**
D52A	**ZEK Kipawa Sen** baz=0.4	**136.26**	**360**	P	**PKPdf**	**11 19 40.2**	**+0.4**
E43A	**Lone Tree Farm** baz=348	**136.27**	**8**	P	**PKPdf**	**11 19 40.6**	**+0.7**
MVCO	**Mesa Verde**	**136.42**	**35**	*e*PKPdf	**PKiKP**	**11 19 41.8**	**-0.7**
MVCO	**Mesa Verde** baz=314,SNR=8.3	**136.42**	**35**	P	**PKPdf**	**11 19 40.9**	**+0.1**
E45A	**Wooded Hills,** baz=351	**136.52**	**6**	P	**PKPdf**	**11 19 40.9**	**+0.6**
G38A	**Ridgeland** baz=341,SNR=5.8	**136.52**	**13**	P	**PKPdf**	**11 19 40.7**	**+0.3**
ECSD	**EROS Data Cent**	**136.53**	**19**	*e*PKPdf	**PKPdf**	**11 19 40.3**	**-0.2**
ECSD	**EROS Data Cent** baz=334,SNR=9.3	**136.53**	**19**	P	**PKiKP**	**11 19 41.5**	**-0.7**
F41A	**Three Lakes** baz=345,SNR=6.7	**136.55**	**11**	P	**PKPdf**	**11 19 41.2**	**+0.7**
G39A	**Holcombe** baz=342,SNR=6.4	**136.56**	**13**	P	**PKPdf**	**11 19 40.6**	**+0.2**
E46A	**Sault Ste Mari** baz=352,SNR=13	**136.60**	**6**	P	**PKPdf**	**11 19 40.9**	**+0.4**
E47A	**Iron Bridge** baz=353	**136.60**	**5**	P	**PKPdf**	**11 19 41.1**	**+0.6**
E48A	**Lockeyer** baz=355,SNR=6.7	**136.65**	**3**	P	**PKPdf**	**11 19 40.9**	**+0.3**
E51A	**G1948 Merrick** baz=359	**136.70**	**1**	P	**PKPdf**	**11 19 41.5**	**+0.8**
F43A	**Flat Rock, Esc** baz=348	**136.78**	**9**	P	**PKPdf**	**11 19 41.5**	**+0.7**
E50A	**Wahnapitae** baz=357	**136.78**	**2**	P	**PKPdf**	**11 19 41.5**	**+0.7**
E54A	**Lac Daplat, Po** baz=2.2	**136.78**	**358**	P	**PKPdf**	**11 19 41.5**	**+0.7**
G40A	**Rib Lake** baz=343,SNR=8.7	**136.79**	**12**	P	**PKPdf**	**11 19 41.6**	**+0.6**
E53A	**Dumoine, Ponti** baz=1.5	**136.84**	**359**	P	**PKPdf**	**11 19 41.3**	**+0.4**
H38A	**Maiden Rock** baz=340	**136.88**	**14**	P	**PKPdf**	**11 19 41.2**	**+0.1**
E52A	**Mattawa** baz=0.1	**136.95**	**360**	P	**PKPdf**	**11 19 41.6**	**+0.5**
S22A	**4UR Ranch, Cre** baz=317,SNR=11	**136.97**	**33**	P	**PKPdf**	**11 19 41.9**	**+0.1**
G41A	**Antigo** baz=345	**137.04**	**11**	P	**PKiKP**	**11 19 42.6**	**-0.7**
W18A	**Petrified Fore** baz=311,SNR=18	**137.10**	**38**	P	**PKPdf**	**11 19 42.7**	**+0.7**
F45A	**CMU Biological** baz=350	**137.14**	**7**	P	**PKiKP**	**11 19 42.9**	**-0.5**
G42A	**Mountain** baz=346	**137.15**	**10**	P	**PKiKP**	**11 19 42.7**	**-0.6**
F51A	**Arnstein** baz=358	**137.29**	**1**	P	**PKPdf**	**11 19 42.6**	**+0.8**
F55A	**Otter Lake** baz=3.5	**137.35**	**357**	P	**PKiKP**	**11 19 42.9**	**-0.9**
H40A	**Chili** baz=343	**137.37**	**12**	P	**PKiKP**	**11 19 43.1**	**-0.8**
H41A	**Junction City** baz=344	**137.52**	**11**	P	**PKPdf**	**11 19 43.2**	**+0.9**
G46A	**Petoskey** baz=351,SNR=7.7	**137.58**	**6**	P	**PKiKP**	**11 19 43.6**	**-0.7**
SDCO	**Great Sand Dun** baz=318	**137.69**	**32**	P	**PKPdf**	**11 19 43.6**	**+0.5**
G47A	**Hillman** baz=352,SNR=8.1	**137.82**	**5**	P	**PKPdf**	**11 19 43.4**	**+0.6**
H42A	**Shiocton** baz=345	**137.84**	**10**	P	**PKiKP**	**11 19 44.4**	**-0.5**
I39A	**Houston** baz=341,SNR=11	**137.84**	**14**	P	**PKPdf**	**11 19 43.8**	**+0.9**
KLBO	**Killbear Provi** baz=358	**137.86**	**1**	P	**PKiKP**	**11 19 44.1**	**-0.7**
H43A	**Windswept, Lux** baz=346	**138.01**	**10**	P	**PKiKP**	**11 19 44.6**	**-0.6**
I40A	**Norwalk** baz=342	**138.01**	**13**	P	**PKiKP**	**11 19 44.3**	**-1.0**
I41A	**Arkdale** baz=343	**138.01**	**12**	P	**PKiKP**	**11 19 44.3**	**-0.9**
BGNE	**Belgrade** baz=330	**138.04**	**22**	P	**PKiKP**	**11 19 45.0**	**-0.4**
G53A	**Haliburton** baz=0.1	**138.11**	**360**	P	**PKiKP**	**11 19 44.7**	**-0.7**
PLVO	**Plevna** baz=2.4	**138.17**	**358**	P	**PKiKP**	**11 19 45.0**	**-0.5**
TUC	**Tucson**	**138.19**	**42**	*e*PKPdf	**PKiKP**	**11 19 45.5**	**-0.6**
TUC	**Tucson** baz=308	**138.19**	**42**	P	**PKiKP**	**11 19 45.1**	**-0.9**
BANO	**Bancroft** baz=1.2	**138.21**	**359**	P	**PKiKP**	**11 19 45.0**	**-0.6**
J39A	**Decorah** baz=340	**138.29**	**14**	P	**PKPdf**	**11 19 44.6**	**+0.9**
I42A	**Draeger Farm,** baz=345	**138.37**	**11**	P	**PKiKP**	**11 19 45.1**	**-0.8**
J40A	**Soldiers Grove** baz=342	**138.46**	**13**	P	**PKPdf**	**11 19 45.0**	**+1.0**
SADO	**Sadowa**	**138.46**	**0**	*e*PKPdf	**PKPdf**	**11 19 43.7**	**-0.3**
J41A	**Loganville** baz=343	**138.65**	**12**	P	**PKPdf**	**11 19 45.3**	**+1.0**
T25A	**Trinidad** baz=319	**138.72**	**32**	P	**PKPdf**	**11 19 45.9**	**+0.9**
I48A	**Sherman Twp** baz=352	**138.82**	**5**	P	**PKPdf**	**11 19 45.7**	**+1.1**
I46A	**Reed City** baz=350	**138.87**	**7**	P	**PKiKP**	**11 19 46.3**	**-0.7**
J42A	**Columbus** baz=344,SNR=5.9	**138.88**	**11**	P	**PKiKP**	**11 19 46.2**	**-0.8**
J43A	**Natural Harves** baz=345	**138.95**	**11**	P	**PKiKP**	**11 19 46.3**	**-0.8**
K40A	**Colesburg** baz=341	**139.02**	**14**	P	**PKiKP**	**11 19 46.7**	**-0.6**
JFWS	**Jewell Farm**	**139.03**	**13**	PKPdf	**PKPdf**	**11 19 44.7**	**-0.4**
JFWS	**Jewell Farm**	**139.03**	**13**	PKIKP	**PKPdf**	**11 19 44.7**	**-0.4**
JFWS	**Jewell Farm** baz=342,SNR=7.2	**139.03**	**13**	P	**PKPdf**	**11 19 46.1**	**+1.0**
BWLO	**Walkerton** baz=356	**139.06**	**3**	P	**PKiKP**	**11 19 47.1**	**-0.2**
I49A	**Point Hope** baz=354	**139.14**	**4**	P	**PKiKP**	**11 19 46.8**	**-0.7**
ANMO	**Albuquerque**	**139.18**	**36**	*e*PKPdf	**PKiKP**	**11 19 47.2**	**-0.9**
ANMO	**Albuquerque**	**139.18**	**36**	*e*PKIKP	**PKiKP**	**11 19 47.2**	**-0.9**
ANMO	**Albuquerque** baz=315	**139.18**	**36**	P	**PKiKP**	**11 19 47.2**	**-0.9**
SCIA	**State Center**	**139.22**	**17**	*e*PKPdf	**PKPdf**	**11 19 45.5**	**+0.1**
SCIA	**State Center** baz=338	**139.22**	**17**	P	**PKiKP**	**11 19 47.1**	**-0.6**
K41A	**Shullsburg** baz=342	**139.31**	**13**	P	**PKiKP**	**11 19 47.0**	**-0.9**
WLVO	**Wesleyville** baz=0.5	**139.31**	**360**	P	**PKiKP**	**11 19 47.2**	**-0.6**
K42A	**Prairie Point,** baz=344	**139.35**	**12**	P	**PKiKP**	**11 19 47.0**	**-1.0**
L39A	**Vinton** baz=340	**139.35**	**15**	P	**PKiKP**	**11 19 47.2**	**-0.8**
L40A	**Anamosa** baz=341	**139.60**	**14**	P	**PKiKP**	**11 19 47.6**	**-0.9**
ACTO	**Acton** baz=358	**139.61**	**1**	P	**PKiKP**	**11 19 48.1**	**-0.4**
CBKS	**Cedar Bluff** baz=327	**139.62**	**26**	P	**PKiKP**	**11 19 48.0**	**-0.8**
TORO	**Toronto--Lesli** baz=359	**139.62**	**1**	P	**PKiKP**	**11 19 47.7**	**-0.8**
K43A	**Burlington** baz=345	**139.62**	**11**	P	**PKiKP**	**11 19 47.9**	**-0.7**
J47A	**Sunmer** baz=351	**139.64**	**7**	P	**PKiKP**	**11 19 48.4**	**-0.1**
J49A	**Marlette** baz=353	**139.69**	**5**	P	**PKiKP**	**11 19 48.1**	**-0.6**
J48A	**Bridge Port** baz=352	**139.69**	**6**	P	**PKiKP**	**11 19 48.1**	**-0.5**
L41A	**Preston** baz=342	**139.77**	**14**	P	**PKiKP**	**11 19 48.5**	**-0.4**
M39A	**Webster** baz=339	**139.91**	**16**	P	**PKiKP**	**11 19 48.6**	**-0.6**
J55A	**Hilton** baz=1.4	**139.96**	**359**	P	**PKiKP**	**11 19 48.6**	**-0.6**
J52A	**Paris** baz=357	**139.97**	**2**	P	**PKiKP**	**11 19 48.7**	**-0.5**
ELFO	**Elginfield** baz=356	**139.98**	**3**	P	**PKiKP**	**11 19 48.8**	**-0.4**
121A	**Cookes Peak, D** baz=311	**140.01**	**40**	P	**PKiKP**	**11 19 49.1**	**-0.8**
L42A	**Oliver, Polo** baz=343	**140.02**	**13**	P	**PKiKP**	**11 19 48.6**	**-0.8**
STCO	**Saint Catharin** baz=359	**140.02**	**0**	P	**PKiKP**	**11 19 48.8**	**-0.5**
L43A	**Garden Prairie** baz=344	**140.04**	**12**	P	**PKiKP**	**11 19 48.7**	**-0.7**
K46A	**Dorr** baz=349	**140.06**	**8**	P	**PKiKP**	**11 19 48.8**	**-0.6**
MEDO	**Medina** baz=0.4	**140.07**	**360**	P	**PKiKP**	**11 19 49.0**	**-0.4**
TYNO	**Tyneside** baz=358	**140.13**	**1**	P	**PKiKP**	**11 19 49.2**	**-0.3**
K48A	**Perry** baz=352	**140.15**	**6**	P	**PKiKP**	**11 19 49.2**	**-0.4**
M40A	**Post Highland** baz=340	**140.15**	**15**	P	**PKiKP**	**11 19 49.0**	**-0.7**
K47A	**Vermontville** baz=350	**140.18**	**7**	P	**PKiKP**	**11 19 49.4**	**-0.3**
L44A	**Lake County Fo** baz=346	**140.21**	**11**	P	**PKiKP**	**11 19 49.3**	**-0.5**
K52A	**Tillsonburg** baz=357	**140.42**	**2**	P	**PKiKP**	**11 19 49.5**	**-0.6**
M41A	**Milan** baz=341	**140.42**	**14**	P	**PKiKP**	**11 19 49.4**	**-0.8**
K51A	**Iona Station** baz=356	**140.44**	**3**	P	**PKiKP**	**11 19 49.8**	**-0.4**
K55A	**Perry** baz=1.0	**140.50**	**359**	P	**PKiKP**	**11 19 50.0**	**-0.4**
M42A	**Sheffield** baz=343	**140.53**	**13**	P	**PKiKP**	**11 19 49.5**	**-0.9**
N40A	**Mertquake, Sal** baz=340	**140.62**	**15**	P	**PKiKP**	**11 19 49.8**	**-0.8**
KSU1	**Kansas State U**	**140.63**	**22**	*e*PKPdf	**PKPdf**	**11 19 48.3**	**+0.2**
KSU1	**Kansas State U** baz=331	**140.63**	**22**	P	**PKiKP**	**11 19 49.8**	**-0.9**
M43A	**Waltham Townsh** baz=344	**140.72**	**12**	P	**PKiKP**	**11 19 50.3**	**-0.5**
L47A	**Sherwood** baz=350	**140.83**	**8**	P	**PKiKP**	**11 19 50.5**	**-0.6**
L49A	**Milan** baz=352	**140.87**	**6**	P	**PKiKP**	**11 19 50.7**	**-0.3**
M44A	**Midewin, Midew** baz=345	**140.95**	**11**	P	**PKiKP**	**11 19 50.9**	**-0.4**
BINY	**Binghamton**	**140.95**	**357**	*e*PKPdf	**PKPdf**	**11 19 48.4**	**-0.3**
BINY	**Binghamton** baz=4.3	**140.95**	**357**	P	**PKiKP**	**11 19 51.1**	**-0.2**
L48A	**N Adams** baz=351	**140.96**	**7**	P	**PKiKP**	**11 19 50.8**	**-0.5**
N41A	**Harden Midland** baz=341	**140.97**	**15**	P	**PKiKP**	**11 19 50.6**	**-0.8**
L55A	**Hinsdale** baz=0.4	**141.05**	**360**	P	**PKiKP**	**11 19 51.0**	**-0.5**
N42A	**Yates City** baz=342	**141.06**	**14**	P	**PKiKP**	**11 19 50.8**	**-0.7**
M45A	**Boilermakers S** baz=346	**141.09**	**10**	P	**PKiKP**	**11 19 51.2**	**-0.4**
ERPA	**Erie** baz=358	**141.10**	**1**	P	**PKiKP**	**11 19 51.2**	**-0.3**
N43A	**Stutzman Famil** baz=343	**141.15**	**13**	P	**PKiKP**	**11 19 51.1**	**-0.6**
M46A	**Old House Fiel** baz=348	**141.22**	**9**	P	**PKiKP**	**11 19 51.4**	**-0.4**
L53A	**Girard** baz=358	**141.26**	**2**	P	**PKiKP**	**11 19 51.6**	**-0.3**
M48A	**Edgerton** baz=350	**141.38**	**7**	P	**PKiKP**	**11 19 51.5**	**-0.6**
M47A	**Cromwell** baz=349	**141.38**	**8**	P	**PKiKP**	**11 19 51.6**	**-0.6**
M49A	**Liberty Center** baz=352	**141.47**	**6**	P	**PKiKP**	**11 19 51.6**	**-0.7**
HDIL	**Hopedale** baz=343	**141.49**	**13**	P	**PKiKP**	**11 19 51.6**	**-0.8**
N44A	**Piper City** baz=345	**141.50**	**11**	P	**PKiKP**	**11 19 51.8**	**-0.6**
O41A	**Passleys Farm,** baz=340	**141.52**	**15**	P	**PKiKP**	**11 19 51.6**	**-0.9**
N45A	**Kentland** baz=346	**141.57**	**11**	P	**PKiKP**	**11 19 52.3**	**-0.2**
M52A	**Chesterland** baz=356	**141.62**	**3**	P	**PKiKP**	**11 19 52.4**	**-0.3**
M50A	**Fremont** baz=353	**141.64**	**5**	P	**PKiKP**	**11 19 51.9**	**-0.8**
O42A	**Bath** baz=342	**141.65**	**14**	P	**PKiKP**	**11 19 52.3**	**-0.4**
N46A	**Monticello** baz=347	**141.66**	**10**	P	**PKiKP**	**11 19 52.4**	**-0.3**
M54A	**Oil Creek Stat** baz=358	**141.72**	**1**	P	**PKiKP**	**11 19 52.5**	**-0.4**
O43A	**Sugar Creek Fa** baz=343	**141.74**	**13**	P	**PKiKP**	**11 19 52.2**	**-0.8**
M53A	**WI Miller and** baz=357	**141.76**	**2**	P	**PKiKP**	**11 19 52.3**	**-0.7**
M55A	**Ridgway** baz=360	**141.76**	**360**	P	**PKiKP**	**11 19 52.5**	**-0.5**
AMTX	**Amarillo**	**141.86**	**31**	*e*PKPdf	**PKPdf**	**11 19 50.6**	**0.0**
P41A	**Barry, Barry** baz=340	**141.89**	**15**	P	**PKiKP**	**11 19 52.6**	**-0.7**
N48A	**Decatur** baz=350	**141.95**	**8**	P	**PKiKP**	**11 19 52.6**	**-0.8**
MSTX	**Muleshoe** baz=319,SNR=9.1	**141.98**	**33**	P	**PKiKP**	**11 19 52.8**	**-0.9**
N49A	**Columbus Grove** baz=351	**142.00**	**7**	P	**PKiKP**	**11 19 52.7**	**-0.7**
MNTX	**Cornudas Mount** baz=313,SNR=36	**142.08**	**38**	P	**PKiKP**	**11 19 53.3**	**-0.7**
SFIN	**Lafayette** baz=346	**142.10**	**10**	P	**PKiKP**	**11 19 53.3**	**-0.4**
P42A	**Winchester** baz=341	**142.16**	**15**	P	**PKiKP**	**11 19 53.0**	**-0.8**
N50A	**Nevada** baz=353	**142.25**	**5**	P	**PKiKP**	**11 19 53.4**	**-0.6**
P43A	**Skaggs, Pawnee** baz=342,SNR=11	**142.31**	**14**	P	**PKiKP**	**11 19 53.4**	**-0.7**
N52A	**McGinn’s Farm,** baz=355	**142.33**	**4**	P	**PKiKP**	**11 19 53.5**	**-0.6**
N53A	**Lisbon** baz=356	**142.38**	**3**	P	**PKiKP**	**11 19 53.6**	**-0.6**
O47A	**Sheridan** baz=348	**142.40**	**9**	P	**PKiKP**	**11 19 53.6**	**-0.7**
Q41A	**Truxton** baz=339	**142.52**	**16**	P	**PKiKP**	**11 19 53.9**	**-0.7**
O48A	**Farmland** baz=349	**142.53**	**8**	P	**PKiKP**	**11 19 53.8**	**-0.7**
O49A	**Covington** baz=351	**142.70**	**7**	P	**PKiKP**	**11 19 54.3**	**-0.7**
Q42A	**Golden Eagle** baz=340	**142.75**	**15**	P	**PKiKP**	**11 19 54.5**	**-0.5**
P45A	**Graceland, Par** baz=345	**142.80**	**11**	P	**PKiKP**	**11 19 54.7**	**-0.4**
ACSO	**Alum Creek Sta** baz=353	**142.81**	**5**	P	**PKiKP**	**11 19 54.6**	**-0.5**
P46A	**Rosedale** baz=346	**142.82**	**11**	P	**PKiKP**	**11 19 54.7**	**-0.5**
O50A	**Cable** baz=352,SNR=14	**142.83**	**6**	P	**PKiKP**	**11 19 54.8**	**-0.4**
O53A	**New Philadelph** baz=356	**142.92**	**3**	P	**PKiKP**	**11 19 55.0**	**-0.4**
O51A	**Pataskala** baz=354,SNR=7.9	**142.92**	**5**	P	**PKiKP**	**11 19 55.1**	**-0.3**
Q43A	**New Douglas** baz=342	**142.93**	**14**	P	**PKiKP**	**11 19 55.3**	**-0.1**
O56A	**Blue Knob Stat** baz=0.2	**142.96**	**360**	P	**PKiKP**	**11 19 55.3**	**-0.2**
O52A	**Adamsville** baz=355	**143.01**	**4**	P	**PKiKP**	**11 19 55.1**	**-0.5**
O54A	**Avella** baz=357	**143.02**	**2**	P	**PKiKP**	**11 19 55.4**	**-0.2**
R41A	**Rosebud** baz=339,SNR=13	**143.09**	**17**	P	PKPab	11 19 48.7	+0.8
P47A	**Martinsville** baz=347	**143.11**	**10**	P	PKPab	11 19 48.3	+0.3
Q44A	**Meyer Farm, Va** baz=343	**143.13**	**13**	P	PKPab	11 19 48.5	+0.4
R42A	**Luebbering** baz=340,SNR=8.5	**143.27**	**16**	P	PKPab	11 19 48.6	0.0
P48A	**Milroy** baz=349	**143.27**	**9**	P	PKPab	11 19 48.6	-0.1
P49A	**Miami Univ. Ec** baz=350	**143.30**	**8**	P	PKPab	11 19 49.0	+0.3
Q45A	**Warren Harvey,** baz=344,SNR=11	**143.33**	**12**	P	PKPab	11 19 48.9	0.0
P50A	**Jamestown** baz=352,SNR=12	**143.34**	**6**	P	PKPab	11 19 49.0	+0.1
CCM	**Cathedral Cave**	**143.35**	**17**	*e*PKPdf	PKPab	11 19 48.9	-0.1
CCM	**Cathedral Cave** baz=339	**143.35**	**17**	P	PKPab	11 19 49.4	+0.4
WMOK	**Wichita Mounta**	**143.41**	**28**	*e*PKPdf	PKPab	11 19 49.4	0.0
WMOK	**Wichita Mounta**	**143.41**	**28**	*e*PKIKP	PKPab	11 19 49.4	0.0
WMOK	**Wichita Mounta** baz=325,SNR=34	**143.41**	**28**	P	PKPab	11 19 49.6	+0.2
P52A	**Corning** baz=354	**143.47**	**4**	P	PKPab	11 19 49.5	+0.1
R43A	**Red Bud** baz=341,SNR=17	**143.50**	**15**	P	PKPab	11 19 49.4	-0.1
MCWV	**Mont Chateau** baz=358	**143.56**	**1**	P	PKPab	11 19 50.1	+0.3
P54A	**Burton** baz=357	**143.60**	**2**	P	PKPab	11 19 50.0	+0.1
Q47A	**Bedord North L** baz=347,SNR=6.6	**143.62**	**10**	P	PKPab	11 19 50.2	+0.2
S41A	**Jillco Farms,** baz=338,SNR=29	**143.64**	**17**	P	PKPab	11 19 49.9	-0.2
P53A	**Whipple** baz=356,SNR=8.2	**143.67**	**3**	P	PKPab	11 19 50.1	-0.1
P55A	**Reedsville** baz=358	**143.71**	**1**	P	PKPab	11 19 50.4	0.0
TUL1	**Leonard** baz=330,SNR=17	**143.73**	**24**	P	PKPab	11 19 50.6	+0.1
R44A	**Waltonville** baz=342	**143.74**	**14**	P	PKPab	11 19 50.7	+0.2
Q48A	**North Vernon** baz=348,SNR=14	**143.74**	**9**	P	PKPab	11 19 50.4	-0.1
S42A	**Caledonia** baz=339,SNR=24	**143.75**	**16**	P	PKPab	11 19 49.9	-0.6
Q49A	**Aurora** baz=350,SNR=6.5	**143.79**	**8**	P	PKPab	11 19 50.4	-0.3
R45A	**Skylar, Fairfi** baz=344	**143.88**	**13**	P	PKPab	11 19 50.7	-0.3
Q51A	**Peebles** baz=352,SNR=15	**143.96**	**6**	P	PKPab	11 19 50.8	-0.5
Q50A	**Georgetown** baz=351,SNR=7.9	**144.07**	**7**	P	**PKPab**	**11 19 51.0**	**-0.8**
R46A	**Gibon Southern** baz=345,SNR=5.7	**144.12**	**12**	P	**PKPab**	**11 19 51.4**	**-0.5**
Q52A	**Bidwell** baz=354,SNR=9.4	**144.13**	**5**	P	**PKPab**	**11 19 51.4**	**-0.5**
S43A	**Fulton Ridge,** baz=340,SNR=9.4	**144.13**	**15**	P	**PKPab**	**11 19 51.3**	**-0.7**
T41A	**Mountain View** baz=338,SNR=59	**144.14**	**18**	P	**PKPab**	**11 19 51.7**	**-0.4**
CPUP	**Villa Florida** comp=Z,17nm,0.8s,baz=126,slow=3.2,SNR=38	**144.16**	**214**	PKP	**PKPdf**	**11 19 54.2**	**-0.5**
Q54A	**Coxs Mills** baz=356,SNR=11	**144.20**	**3**	P	**PKPab**	**11 19 51.8**	**-0.4**
Q55A	**Buckhannon** baz=358,SNR=17	**144.22**	**2**	P	**PKPab**	**11 19 52.1**	**-0.3**
S44A	**Carbondale** baz=342,SNR=13	**144.22**	**14**	P	**PKPab**	**11 19 52.1**	**-0.3**
R47A	**Wooly Knot Far** baz=347,SNR=13	**144.23**	**10**	P	**PKPab**	**11 19 51.8**	**-0.5**
R48A	**Northridge Ran** baz=348,SNR=16	**144.24**	**10**	P	**PKPab**	**11 19 52.3**	**-0.1**
BDFB	**Brasilia** comp=Z,17nm,0.8s,baz=128,slow=2.8,SNR=21	**144.33**	**238**	PKP	**PKPdf**	**11 19 55.5**	**+0.1**
WCI	**Wyandotte Cave**	**144.33**	**10**	*e*PKPdf	**PKPab**	**11 19 52.7**	**0.0**
WCI	**Wyandotte Cave**	**144.33**	**10**	*e*PKIKP	**PKPab**	**11 19 52.7**	**0.0**
WCI	**Wyandotte Cave** baz=347	**144.33**	**10**	P	**PKPab**	**11 19 52.4**	**-0.3**
T42A	**Van Buren** baz=339,SNR=46	**144.35**	**17**	P	**PKPab**	**11 19 52.4**	**-0.4**
S45A	**Carrier Mills** baz=343,SNR=18	**144.40**	**13**	P	**PKPab**	**11 19 52.8**	**-0.2**
U40A	**Yellville** baz=335,SNR=38	**144.42**	**20**	P	**PKPab**	**11 19 52.6**	**-0.5**
R49A	**Shelbyville** baz=349,SNR=38	**144.46**	**9**	P	**PKPab**	**11 19 52.8**	**-0.4**
T43A	**Greenville** baz=340,SNR=27	**144.53**	**16**	P	**PKPab**	**11 19 52.7**	**-0.8**
R50A	**Paris** baz=350,SNR=24	**144.58**	**8**	P	**PKPab**	**11 19 52.9**	**-0.7**
S46A	**Don Dixon Farm** baz=344,SNR=8.2	**144.58**	**12**	P	**PKPab**	**11 19 52.9**	**-0.7**
R51A	**Hillsboro** baz=352,SNR=13	**144.66**	**7**	P	**PKPab**	**11 19 53.1**	**-0.8**
ABTX	**Abilene, Hawle** baz=322,SNR=21	**144.68**	**31**	P	**PKPab**	**11 19 54.1**	**-0.2**
R52A	**Catlettsburg** baz=353,SNR=20	**144.72**	**5**	P	**PKPab**	**11 19 53.2**	**-0.9**
U41A	**Viola** baz=337,SNR=39	**144.73**	**19**	P	**PKPab**	**11 19 54.1**	**-0.2**
TXAR	**Lajitas Array** comp=Z,80nm,0.7s,baz=294,slow=1.3,SNR=851	**144.78**	**40**	PKP	**PKPdf**	**11 19 55.5**	**-0.4**
TXAR	comp=Z,2.3nm,0.8s,baz=345,slow=1.0,SNR=5.0			SKPbc	**SKPbc**	**11 23 29.9**	**-1.0**
R53A	**Hurricane** baz=354,SNR=29	**144.78**	**4**	P	**PKPab**	**11 19 54.1**	**-0.2**
S47A	**Hartford** baz=346,SNR=15	**144.84**	**11**	P	**PKPab**	**11 19 53.8**	**-0.9**
R55A	**Marlinton** baz=358,SNR=15	**144.93**	**2**	P	**PKPab**	**11 19 54.5**	**-0.5**
S48A	**Wiedeman Farm,** baz=347,SNR=64	**144.93**	**10**	P	**PKPab**	**11 19 54.5**	**-0.5**
S49A	**Springfield** baz=349,SNR=26	**144.93**	**9**	P	**PKPab**	**11 19 54.0**	**-1.0**
U42A	**Revenden** baz=338,SNR=110	**144.94**	**18**	P	**PKPab**	**11 19 54.4**	**-0.6**
R54A	**Victor** baz=356,SNR=12	**144.99**	**3**	P	**PKPab**	**11 19 54.5**	**-0.7**
CBN	**Corbin Frederi**	**145.00**	**358**	*e*PKPdf	**PKPab**	**11 19 55.0**	**-0.2**
CBN				*e*SKPdf	**pPKPdf**	**11 20 10.0**	**-2.0**
CBN	**Corbin Frederi** baz=2.3,SNR=11	**145.00**	**358**	P	**PKPab**	**11 19 54.8**	**-0.3**
T45A	**Paducah** baz=343,SNR=7.0	**145.01**	**14**	P	**PKPbc**	**11 19 54.7**	**-0.5**
W39A	**Magazine** baz=333,SNR=25	**145.13**	**22**	P	**PKPbc**	**11 19 55.2**	**-0.5**
T46A	**Princeton** baz=344,SNR=41	**145.16**	**13**	P	**PKPbc**	**11 19 55.6**	**-0.2**
U43A	**Rector** baz=339,SNR=14	**145.16**	**17**	P	**PKPbc**	**11 19 55.0**	**-0.7**
S50A	**Richmond** baz=350,SNR=29	**145.17**	**8**	P	**PKPbc**	**11 19 54.9**	**-0.9**
V41A	**Mountainview** baz=336,SNR=172	**145.17**	**19**	P	**PKPbc**	**11 19 55.2**	**-0.7**
U44A	**Portageville** baz=341	**145.24**	**15**	P	**PKPbc**	**11 19 55.7**	**-0.3**
R58B	**Mineral** baz=1.4,SNR=40	**145.25**	**359**	P	**PKPbc**	**11 19 55.7**	**-0.3**
S51A	**Beattyville** baz=351,SNR=64	**145.31**	**7**	P	**PKPbc**	**11 19 55.6**	**-0.6**
S52A	**Salyersville** baz=352,SNR=9.2	**145.32**	**6**	P	**PKPbc**	**11 19 55.6**	**-0.7**
T47A	**Sharon Grove** baz=345,SNR=8.6	**145.38**	**12**	P	**PKPbc**	**11 19 56.1**	**-0.4**
V42A	**Cord** baz=337,SNR=110	**145.39**	**18**	P	**PKPbc**	**11 19 56.0**	**-0.5**
T48A	**Bowling Green** baz=346,SNR=96	**145.40**	**11**	P	**PKPbc**	**11 19 56.1**	**-0.4**
S53A	**Williamson** baz=354	**145.41**	**5**	P	**PKPbc**	**11 19 56.3**	**-0.3**
S55A	**Lewisburg** baz=357,SNR=13	**145.42**	**2**	P	**PKPbc**	**11 19 55.9**	**-0.7**
U44B	**Burton Farm, H** baz=341	**145.48**	**15**	P	**PKPdf**	**11 19 56.8**	**0.0**
T49A	**Edmonton** baz=348,SNR=37	**145.56**	**10**	P	**PKPdf**	**11 19 56.1**	**-0.7**
U45A	**Rockin P Farm,** baz=342,SNR=22	**145.62**	**14**	P	**PKPdf**	**11 19 56.9**	**-0.1**
V43A	**Jonesboro** baz=339,SNR=7.5	**145.67**	**17**	P	**PKPdf**	**11 19 57.1**	**+0.1**
W41B	**Gary Mavity, V** baz=336,SNR=18	**145.69**	**20**	P	**PKPdf**	**11 19 56.9**	**-0.2**
T50A	**Nancy** baz=349,SNR=24	**145.75**	**9**	P	**PKPdf**	**11 19 56.5**	**-0.7**
U46A	**Springville** baz=343,SNR=15	**145.75**	**14**	P	**PKPdf**	**11 19 57.3**	**+0.1**
MIAR	**Mount Ida**	**145.79**	**22**	*e*PKPdf	**PKPbc**	**11 19 57.7**	**-0.1**
MIAR	**Mount Ida** baz=333,SNR=86	**145.79**	**22**	P	**PKPbc**	**11 19 57.8**	**-0.1**
V44A	**Blytheville**	**145.81**	**16**	P	**PKPdf**	**11 19 57.6**	**+0.3**

	baz=340,SNR=6.7						
W42A	Bald Knob baz=337,SNR=10.0	145.84	19	P	PKPbc	11 19 57.7	-0.2
U47A	Clarksville baz=345,SNR=46	145.87	12	P	PKPdf	11 19 57.4	0.0
T52A	Hallie baz=352,SNR=14	145.90	6	P	PKPdf	11 19 57.6	+0.2
T51A	Gray baz=351,SNR=49	145.93	7	P	PKPdf	11 19 57.5	0.0
U48A	Cassie Pea, Po baz=346,SNR=49	145.96	11	P	PKPdf	11 19 57.8	+0.3
BLA	Blacksburg	145.98	2	ePKPdf	PKPdf	11 19 57.5	-0.2
BLA				eSKPdf	pPKPdf	11 20 10.9	-2.9
BLA	Blacksburg	145.98	2	ePKP2	PKPdf	11 19 57.5	-0.2
BLA	Blacksburg baz=357,SNR=6.7	145.98	2	P	PKPdf	11 19 57.7	+0.1
WVT	Waverly baz=344	146.05	13	P	PKPbc	11 19 58.3	-0.2
T53A	Wise baz=353,SNR=18	146.07	5	P	PKPdf	11 19 57.9	+0.1
T54A	Tazewell baz=355,SNR=11	146.07	4	P	PKPdf	11 19 58.0	+0.2
U49A	Red Boiling Sp baz=347,SNR=42	146.09	10	P	PKPdf	11 19 57.8	0.0
X40A	Basin Creek Fa baz=334,SNR=40	146.11	21	P	PKPbc	11 19 58.4	-0.4
V45A	Humboldt baz=342,SNR=15	146.15	15	P	PKPdf	11 19 58.3	+0.4
X41A	Kaden, Bauxite baz=335,SNR=33	146.22	21	P	PKPbc	11 19 58.7	-0.4
JCT	Junction City	146.26	34	ePKPdf	PKPdf	11 19 58.8	+0.5
JCT	Junction City	146.26	34	ePKP2	PKPdf	11 19 58.8	+0.5
JCT	Junction City baz=320,SNR=76	146.26	34	P	PKPdf	11 19 58.9	+0.5
W43A	Forest City baz=338	146.27	18	P	PKPbc	11 19 59.0	-0.3
WHTX	Lake Whitney, baz=325	146.29	29	P	PKPbc	11 19 59.2	-0.3
V46A	Holladay baz=343,SNR=29	146.30	14	P	PKPdf	11 19 58.6	+0.5
U50A	Jamestown baz=349,SNR=46	146.34	9	P	PKPdf	11 19 58.9	+0.6
TZTN	Tazewell	146.39	7	ePKPdf	PKPdf	11 19 58.6	+0.3
TZTN	Tazewell baz=351,SNR=13	146.39	7	P	PKPbc	11 19 59.1	-0.6
V47A	Nunnelly baz=344,SNR=30	146.41	13	P	PKPdf	11 19 58.9	+0.6
X42A	Stuttgart baz=336,SNR=11	146.47	19	P	PKPbc	11 19 59.3	-0.5
W44A	Shelby Farms P baz=340	146.48	16	P	PKPdf	11 19 59.2	+0.7
U51A	La Follette baz=350,SNR=8.1	146.50	8	P	PKPdf	11 19 59.1	+0.5
U52A	Thorn Hill baz=352,SNR=15	146.56	7	P	PKPdf	11 19 59.3	+0.7
W45A	Hickory Valley baz=341,SNR=35	146.64	16	P	PKPbc	11 19 59.8	-0.6
V48A	Smith Brothers baz=345,SNR=58	146.64	12	P	PKPbc	11 19 59.8	-0.6
U53A	Fall Branch baz=353,SNR=12	146.68	6	P	PKPdf	11 19 59.5	+0.6
Y41A	Eaglette Beard baz=334,SNR=26	146.74	21	P	PKPbc	11 20 00.5	-0.1
X43A	Marvell baz=338,SNR=7.6	146.74	18	P	PKPbc	11 20 00.4	-0.2
V49A	McMinnville baz=347,SNR=34	146.80	11	P	PKPdf	11 19 59.9	+0.9
W46A	Michie baz=342,SNR=18	146.87	14	P	PKPbc	11 20 00.2	-0.8
W47A	Westpoint baz=344,SNR=60	146.95	13	P	PKPbc	11 20 00.6	-0.6
V51A	Loudon baz=350,SNR=11	147.02	8	P	PKPbc	11 20 01.0	-0.4
V50A	Pikevile baz=348,SNR=40	147.03	9	P	PKPbc	11 20 00.8	-0.7
Y42A	Garnett, Star baz=336,SNR=14	147.07	20	P	PKPbc	11 20 01.5	0.0
V52A	Sevierville baz=351,SNR=21	147.08	7	P	PKPbc	11 20 01.1	-0.5
LCO	Las Campanas	147.18	193	ePKPdf	PKPbc	11 20 01.6	-0.8
LCO				ePKPbc	PKPab	11 20 03.7	-0.3
LCO	Las Campanas	147.18	193	ePKIKP	PKPbc	11 20 01.6	-0.8
LCO				e		11 20 03.7	
OXF	Oxford	147.19	16	ePKPbc	PKPbc	11 20 01.9	0.0
OXF	Oxford baz=340,SNR=8.0	147.19	16	P	PKPbc	11 20 01.3	-0.6
W48A	Pulaski baz=345,SNR=56	147.20	12	P	PKPbc	11 20 01.4	-0.6
435B	Jarrell baz=324,SNR=17	147.21	31	P	PKPbc	11 20 02.3	+0.2
Z41A	Richland Creek baz=334,SNR=9.4	147.22	22	P	PKPbc	11 20 02.0	0.0
Y43A	Makayla and Ka baz=337,SNR=12	147.28	19	P	PKPbc	11 20 02.5	+0.3
V53A	Saluda baz=352,SNR=35	147.34	6	P	PKPbc	11 20 02.0	-0.4
W49A	Belvidere baz=346,SNR=71	147.36	11	P	PKPbc	11 20 01.6	-0.8
X46A	Booneville baz=342,SNR=27	147.37	15	P	PKPbc	11 20 01.8	-0.6
W50A	Signal Mountai baz=348,SNR=15	147.46	10	P	PKPbc	11 20 01.9	-0.8
W51A	Cleveland baz=349,SNR=30	147.59	9	P	PKPbc	11 20 02.6	-0.4
X47A	Russelville baz=343,SNR=31	147.59	14	P	PKPbc	11 20 02.0	-1.0
W52A	Murphy baz=350,SNR=30	147.77	8	P	PKPbc	11 20 03.1	-0.4
NATX	Nacogdoches	147.78	26	ePKPdf	PKPdf	11 20 01.4	+0.6
NATX				ePKPbc	PKPbc	11 20 04.1	+0.5
NATX				ePKPab	PKPab	11 20 06.3	+0.3
NATX	Nacogdoches baz=329,SNR=11	147.78	26	P	PKPbc	11 20 03.9	+0.3
W53A	Cullowhee baz=352,SNR=38	147.80	7	P	PKPbc	11 20 03.6	-0.2
Z43A	Armstrong Fami baz=336	147.82	20	P	PKPbc	11 20 03.7	0.0
X48A	Hartselle baz=344,SNR=42	147.84	13	P	PKPbc	11 20 02.8	-0.9
X49A	Woodville baz=346,SNR=31	147.93	12	P	PKPbc	11 20 03.5	-0.4
CNNC	Cliffs of the	147.97	359	ePKPdf	PKPdf	11 20 01.7	+0.8
CNNC				ePKPbc	PKPbc	11 20 04.3	+0.3
CNNC	Cliffs of the baz=1.5,SNR=12	147.97	359	P	PKPbc	11 20 04.3	+0.3
X50B	Fort Payne baz=347,SNR=17	148.11	11	P	PKPbc	11 20 03.8	-0.7
X51A	Calhoun baz=348,SNR=11	148.15	10	P	PKPbc	11 20 04.1	-0.4
Y48A	Jasper baz=344,SNR=24	148.33	13	P	PKPbc	11 20 04.1	-0.9
X53A	Estanollee baz=351,SNR=28	148.44	7	P	PKPbc	11 20 05.2	0.0
Y49A	Blount Mountai baz=345,SNR=83	148.55	12	P	PKPbc	11 20 05.1	-0.5
X55A	Gracelyn & Ava baz=354,SNR=18	148.64	5	P	PKPbc	11 20 05.4	-0.4
Y50A	Piedmont baz=346,SNR=17	148.65	11	P	PKPbc	11 20 05.3	-0.6
X56A	White Oak baz=356,SNR=18	148.66	4	P	PKPbc	11 20 05.6	-0.2
X58A	Rowland baz=359,SNR=6.0	148.66	1	P	PKPbc	11 20 05.5	-0.3
HKT	Hockley	148.76	29	ePKPdf	PKPdf	11 20 03.0	+0.7
HKT				ePKPbc	PKiKP	11 20 07.0	-0.6
HKT	Hockley	148.76	29	ePKIKP	PKPdf	11 20 03.0	+0.7
HKT				e		11 20 07.0	
Y51A	Rockmart baz=348,SNR=15	148.77	10	P	PKPbc	11 20 05.7	-0.5
145A	Houston Renfro baz=338,SNR=9.8	148.81	18	P	PKPbc	11 20 06.6	+0.3
Y52A	Lilburn baz=350,SNR=19	148.96	9	P	PKPbc	11 20 06.9	+0.2
VBMS	Vicksburg baz=337,SNR=8.6	148.97	20	P	PKPbc	11 20 07.0	+0.3
Y53A	Monroe baz=351,SNR=20	149.04	8	P	PKPbc	11 20 06.9	0.0
Y54A	Tignall baz=352,SNR=14	149.14	6	P	PKPbc	11 20 07.0	-0.1
Z49A	Columbiana baz=345,SNR=11	149.16	13	P	PKPbc	11 20 06.7	-0.5
LRAL	Lakeview Retre	149.21	14	ePKPdf	PKPdf	11 20 03.1	+0.1
LRAL				ePKPbc	PKPbc	11 20 06.9	-0.4
LRAL				ePKPab	PKPab	11 20 11.5	-0.2
LRAL	Lakeview Retre baz=344,SNR=11	149.21	14	P	PKPbc	11 20 06.6	-0.6
147A	Livingston baz=341,SNR=22	149.23	16	P	PKPbc	11 20 07.2	-0.2
Z50A	Ashland baz=346,SNR=20	149.23	12	P	PKPbc	11 20 06.9	-0.5
Z51A	Franklin baz=347,SNR=18	149.31	11	P	PKPbc	11 20 07.1	-0.4
GOGA	Godfrey	149.49	8	ePKPdf	PKPdf	11 20 03.5	0.0
GOGA				ePKPbc	PKPbc	11 20 08.0	0.0
GOGA				ePKPab	PKPab	11 20 12.6	-0.2
GOGA	Godfrey baz=351,SNR=16	149.49	8	P	PKPbc	11 20 07.9	0.0
Z52A	Williamson baz=349,SNR=43	149.57	9	P	PKPbc	11 20 08.3	+0.2
Z53A	Monticello baz=350,SNR=19	149.61	8	P	PKPbc	11 20 08.2	-0.1
149A	Jones baz=344,SNR=21	149.67	13	P	PKPbc	11 20 08.2	-0.3
Z54A	Sparta baz=352,SNR=25	149.74	7	P	PKPbc	11 20 08.8	+0.2
Z55A	Blythe baz=353,SNR=8.5	149.83	6	P	PKPbc	11 20 09.1	+0.3
150A	Eclectic baz=345,SNR=11	149.84	12	P	PKPbc	11 20 08.7	-0.2
152A	Waverly Hall baz=348,SNR=25	150.03	10	P	PKPbc	11 20 09.5	+0.1
151A	Opelika baz=347,SNR=12	150.05	11	P	PKPbc	11 20 09.4	0.0
NHSC	New Hope	150.08	2	ePKPdf	PKPdf	11 20 05.2	+0.8
NHSC				ePKPbc	PKiKP	11 20 09.9	-0.3
NHSC	New Hope baz=357	150.08	2	P	PKPbc	11 20 09.6	+0.2
153A	Fort Valley baz=350,SNR=6.8	150.19	9	P	PKPbc	11 20 09.7	-0.1
154A	Montrose baz=351,SNR=9.0	150.32	7	P	PKPbc	11 20 10.1	+0.1
250A	Grady baz=345,SNR=13	150.39	13	P	PKPbc	11 20 10.4	+0.2
155A	Kite baz=352,SNR=11	150.39	6	P	PKiKP	11 20 10.6	-0.3
156A	Sylvania baz=354,SNR=6.4	150.45	5	P	PKiKP	11 20 11.0	-0.1
251A	Midway baz=346,SNR=66	150.46	11	P	PKiKP	11 20 10.8	-0.3
252A	Lumpkin baz=348,SNR=41	150.68	10	P	PKPbc	11 20 11.2	+0.3
253A	Americus baz=349,SNR=14	150.72	9	P	PKiKP	11 20 11.4	-0.3
349A	Repton baz=343,SNR=11	150.77	15	P	PKiKP	11 20 11.8	0.0
350A	Dozier baz=344,SNR=20	150.91	13	P	PKiKP	11 20 12.1	0.0
254A	Abbeville baz=351,SNR=8.1	150.96	8	P	PKPbc	11 20 11.7	+0.2
BRAL	Brewton baz=343,SNR=9.2	150.98	15	P	PKiKP	11 20 12.5	+0.3
448A	Bay Minette baz=341	150.99	16	P	PKiKP	11 20 12.4	+0.2
255A	Hazlehurst baz=352,SNR=7.8	151.08	6	P	PKiKP	11 20 12.2	-0.2
256A	Glennville baz=354,SNR=6.4	151.09	5	P	PKiKP	11 20 12.3	-0.1
352A	Blakely baz=347,SNR=20	151.15	11	P	PKiKP	11 20 12.3	-0.2
257A	Skidaway Islan baz=355	151.16	4	P	PKiKP	11 20 12.3	-0.2
351A	Pinckard baz=346,SNR=20	151.21	12	P	PKiKP	11 20 12.4	-0.2
449A	Pace baz=342	151.32	15	P	PKiKP	11 20 13.3	+0.3
353A	Camilla baz=348,SNR=15	151.40	10	P	PKiKP	11 20 13.1	+0.1
TIGA	Tifton baz=350,SNR=16	151.41	9	P	PKiKP	11 20 13.0	-0.1
450A	Crestview baz=344	151.44	14	P	PKiKP	11 20 13.4	+0.3
355A	Pearson baz=351,SNR=6.1	151.61	7	P	PKPbc	11 20 13.3	+0.2
357A	Townsend baz=354	151.68	5	P	PKiKP	11 20 13.6	0.0
452A	Marianna baz=346,SNR=6.2	151.71	12	P	PKiKP	11 20 13.8	+0.1
356A	Blackshear baz=353,SNR=11	151.71	6	P	PKiKP	11 20 13.8	+0.1
451A	Vernon baz=345	151.82	13	P	PKiKP	11 20 14.4	+0.4
453A	Whigham baz=348,SNR=12	151.87	10	P	PKiKP	11 20 14.4	+0.4
454A	Quitman baz=350	152.12	9	P	PKiKP	11 20 14.5	-0.1
455A	Stateville baz=351,SNR=12	152.18	8	P	PKiKP	11 20 14.7	0.0
456A	Hilliard baz=353,SNR=9.2	152.32	6	P	PKiKP	11 20 15.5	+0.5
552A	Lynn Haven baz=346	152.38	12	P	PKiKP	11 20 15.5	+0.4
457A	Yulee baz=354	152.47	5	P	PKiKP	11 20 15.6	+0.3
553A	Crawfordville baz=348	152.50	11	P	PKiKP	11 20 15.4	0.0
LVC	Limon Verde comp=Z,24nm,0.8s,baz=194,slow=4.2,SNR=18	152.72	200	PKPbc	PKiKP	11 20 18.3	+1.8
554A	Perry baz=349	152.73	9	P	PKPbc	11 20 15.7	+0.1
555A	McAlpin baz=351,SNR=10	152.80	8	P	PKiKP	11 20 16.3	+0.3
556A	Lake Butler baz=352,SNR=7.9	152.99	7	P	PKiKP	11 20 16.6	+0.3
557A	Orange Park baz=353,SNR=13	153.05	6	P	PKiKP	11 20 16.7	+0.2
655A	Horseshoe Beac baz=350	153.36	9	P	PKiKP	11 20 17.2	+0.1
657A	Interlachen baz=353	153.46	6	P	PKiKP	11 20 17.4	0.0
656A	Willston baz=351	153.60	7	P	PKPbc	11 20 17.5	-0.1
658A	Bunnell baz=354	153.68	5	P	PKPbc	11 20 17.7	0.0
MDP	Montagnes des comp=Z,18nm,1.1s,baz=222,slow=3.0,SNR=4.4	153.84	275	PKPbc	PKiKP	11 20 19.7	+1.1
757A	Oxford baz=352	154.07	7	P	PKPbc	11 20 18.0	-0.6
758A	Lake Helen baz=354	154.14	5	P	PKPbc	11 20 18.0	-0.7
857A	Zephyrhills baz=352	154.72	7	P	PKPbc	11 20 19.7	-0.2
DWPF	Disney Wildern baz=354	154.96	6	P	PKPbc	11 20 20.0	-0.5
859A	Kempfer Cattle baz=355	155.06	4	P	PKPbc	11 20 20.2	
958A	Wauchula baz=353	155.45	6	P	PKPbc	11 20 21.0	
959A	Okeechobee baz=355	155.59	4	P	PKPbc	11 20 21.9	
LPAZ	La Paz comp=Z,5.9nm,0.9s,baz=67,slow=4.4,SNR=12	158.07	208	PKP	PKPdf	11 20 18.1	+1.2
CMIG	Matias Romero comp=Z,8.9nm,0.8s,baz=326,slow=1.9,SNR=17	158.93	48	PKP	PKPdf	11 20 17.4	+0.4
CMIG	 comp=Z,5.2nm,0.8s,baz=282,slow=2.7,SNR=5.4			PKPab	PKPab	11 20 53.7	+0.4
PTGA	Pitinga comp=Z,4.7nm,0.8s,baz=304,slow=6.4,SNR=7.2	160.81	259	PKP	PKPdf	11 20 19.9	+0.6
PTGA	 comp=Z,9.8nm,0.9s,baz=102,slow=7.8,SNR=9.4			PKPab	PKPab	11 21 03.4	+1.6
APG	El Apazote comp=Z,11nm,0.9s,baz=315,slow=7.1,SNR=8.6	163.47	43	PKP	PKPdf	11 20 21.6	-0.7
NNA	Nana comp=Z,5.9nm,0.5s,baz=226,slow=1.7,SNR=4.3	164.92	187	PKP	PKPdf	11 20 24.4	+1.0
ATAH	Atahualpa comp=Z,13nm,1.2s,baz=163,slow=14,SNR=6.9	169.86	182	PKP	PKPdf	11 20 28.9	+1.5
SDV	Santo Domingo	170.04	306	ePKPdf	PKPpre	11 20 21.6	
SDV				ePKPab	PKPab	11 21 43.0	+0.4
SDV	Santo Domingo comp=Z,4.0nm,0.9s,baz=353,slow=13,SNR=4.5	170.04	306	PKP	PKPdf	11 20 26.2	-1.0
SDV	 comp=Z,7.5nm,0.8s,baz=49,slow=2.6,SNR=6.0			PKPab	PKPab	11 21 41.0	-1.5
OTAV	Otavalo	177.17	187	ePKPdf	PKPdf	11 20 30.7	+0.5
OTAV				ePKPab	PKPab	11 22 15.8	+1.6
OTAV	Otavalo	177.17	187	ePKIKP	PKPdf	11 20 30.7	+0.5
OTAV				e		11 22 15.8	

HEL 13 11:04:25.6±0.1,62°.28N×25°.84E,h0km,ML1.1,
Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAF	Kangasniemi	0.28	128	PG	Pg	11 04 30.7	-0.2
KAF				SG	Sg	11 04 34.5	0.0
SUF	Sumiainen	0.46	18	PG	Pg	11 04 33.9	-0.5
SUF				SG	Sg	11 04 40.4	0.0
KEF	Keuruu	0.47	256	PG	Pg	11 04 34.1	-0.5
KEF				SG	Sg	11 04 40.2	-0.4
FIA0	FINESS Array S baz=354	0.85	172	PB	Pg	11 04 41.3	-0.5
FIA0				SB	Sb	11 04 54.1	-1.0
VAF	Ylistaro baz=123	1.65	299	PG	Pn	11 04 55.5	-0.3
VAF	 comp=Z,1.1nm,0.2s			MSG		11 05 15.1	

KOLA ***13*** *11:05:50.8,68°.08N×33°.21E,M1.7,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

HEL 13 11:05:49.5±0.3,68°.35N×33°.30E,h0km,ML1.8,
Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRF	Varrio baz=69	1.51	248	PG	Pn	11 06 16.7	-1.1
VRF	 comp=Z,7.7nm,0.2s			MSG		11 06 34.9	
VRF				SG	Sg	11 06 35.8	-2.2
KEV	Kevo	2.67	305	PG	Pb	11 06 37.6	-0.4
KEV	 comp=Z,3.7nm,0.2s			MSG		11 07 08.0	
KU6	Riekki	2.69	211	SG	Pn	11 06 33.3	-0.6
KU6	Riekki	2.69	211	PN	Pn	11 06 33.3	-0.6
KU6				SN	Sn	11 07 06.5	-0.5
KU6	 comp=Z,3.0nm,0.2s			MSG		11 07 08.5	
SGF	Sodankyl baz=63	2.72	254	PN	Pn	11 06 34.4	+0.1
SGF				SB	Sb	11 07 11.1	-1.7
MSF	Maaselka	2.96	216	PB	Pn	11 06 39.4	+1.7
ARE0	ARCESS Array S baz=112	3.06	297	PB	Pn	11 06 41.8	+2.8
ARE0				SG	Sb	11 07 22.6	+0.1
RNF	Rovaniemi	3.30	241	SG	Pn	11 06 42.4	0.0
RNF	Rovaniemi	3.30	241	PN	Pn	11 06 42.4	0.0
HEF	Hetta baz=82	3.57	275	PN	Pn	11 06 47.4	+1.3
LANU	Lannavaara	4.23	271	PN	Pn	11 06 57.4	+2.2
KIF	Kilpisjarvi baz=96	4.61	284	PN	Pn	11 07 02.4	+2.2
ERTU	Ertsjaerv	4.64	252	PN	Pn	11 07 00.8	0.0
ERTU				SN	Sn	11 07 53.0	-2.2

SOME ***13*** *11:07:35.3,40°.47N×78°.43E,h20km*
KRNET ***13*** *11:07:37.8±0.1,40°.49N×77°.99E,h8km,mb3.5*
NNC ***13*** *11:07:43.2±2.7,40°.87N×78°.38E,h0km,mb4.1,mpv3.8,*
Error ellipse: s-maj=20.6km s-min=19.4km az=25.0

ISC 13 11:07:39.5±1.6,40°.64N±0°.05×78°.32E±0°.06,h12km±10km,
n55,σ1s.49/78,13C-19D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy baz=53	1.15	340	⇓iP	Pb	11 08 01.0	-0.6
TARG	 baz=53			⇓iS	Sn	11 08 18.8	+1.0
KDJ	Kajisay baz=40	1.72	330	⇓eP	Pb	11 08 10.7	-0.4
KDJ	 baz=40			⇓iS	Sg	11 08 34.0	-0.7
PRZ	Przheval'sk baz=9.0	1.84	2	⇑iP	Pg	11 08 14.6	-0.2
PRZ	 baz=9.0			⇑iS	Sg	11 08 41.7	+3.0
NRN	Naryn baz=2.0	1.92	295	⇑iP	Pn	11 08 11.1	-1.3
NRN	 baz=2.0			⇑iS	Sn	11 08 35.0	-1.6
KSH	Kashi	2.12	239	Pn	Pg	11 08 20.6	+0.4
KSH				Sn	Sg	11 08 52.8	+5.1
KSH	 comp=N,230nm,0.8s			smax	smax		
KSH	 comp=E,150nm,0.8s			smax	smax		
ULHL	Ulahol SNR=120	2.24	316	P	Pb	11 08 19.0	-1.0
ULHL	Ulahol baz=24	2.24	316	⇓eP	Pn	11 08 17.8	+1.2
ULHL	 baz=24			⇓iS	Sb	11 08 46.6	-1.1
UZB	Uzynbulak comp=E,8.8nm,0.3s	2.56	12	Pg	Pb	11 08 24.3	-1.1
UZB	 comp=E,34nm,0.3s			Lg	Lg	11 08 59.7	
UZB	Uzynbulak comp=E,8.8nm,0.3s	2.56	12	eP	Pb	11 08 24.3	-1.1
UZB	 comp=E,34nm,0.3s			eS	Sg	11 08 59.7	-2.0
BOOM	Boomskoye usch baz=23	2.57	317	⇓iP	Pn	11 08 22.4	+1.3
BOOM	 baz=23			⇓iS	Sn	11 08 54.7	+2.4
TNSS	Tian-Shan comp=E,102nm,0.4s	2.60	337	Pg	Pb	11 08 26.7	+0.3
TNSS	 comp=E,28nm,0.4s			Lg	Lg	11 09 03.8	
TNSS	Tian-Shan comp=E,102nm,0.4s	2.60	337	eP	Pb	11 08 26.7	+0.3
TNSS	 comp=E,28nm,0.4s			eS	Sg	11 09 03.8	+0.6
MDOK	Medeo comp=E,38nm,0.6s	2.69	340	⇓Pn	Pb	11 08 27.9	+0.2
MDOK	 comp=E,52nm,0.6s			⇑Lg	Lg	11 09 07.0	
MDOK	Medeo comp=E,51nm,0.4s	2.69	340	Pg	Pb	11 08 27.9	+0.2
MDOK	 comp=E,64nm,0.5s			Lg	Lg	11 09 06.1	
MDOK	Medeo comp=E,51nm,0.4s	2.69	340	eP	Pb	11 08 27.9	+0.2
MDOK	 comp=E,64nm,0.5s			eS	Sg	11 09 06.1	+0.1
IZV	Izvestkoviy comp=E,38nm,0.2s	2.71	333	Pg	Pb	11 08 27.9	-0.1
IZV	 comp=E,67nm,0.5s			Lg	Lg	11 09 05.8	
IZV	Izvestkoviy comp=E,38nm,0.2s	2.71	333	eP	Pb	11 08 27.9	-0.1
IZV	 comp=E,67nm,0.5s			eS	Sg	11 09 05.8	-0.8
KZA	Kyzart SNR=42	2.72	303	P	Pn	11 08 23.9	+0.5
KZA	Kyzart baz=8.0	2.72	303	⇑eP	Pn	11 08 23.5	+0.1
KZA	 baz=8.0			⇑iS	Sn	11 08 56.7	+0.3
KOTS	Kotyrbulak comp=E,32nm,0.6s	2.74	341	Pg	Pb	11 08 29.2	+0.7
KOTS	 comp=E,74nm,0.5s			Lg	Lg	11 09 08.0	
KOTS	Kotyrbulak comp=E,32nm,0.6s	2.74	341	eP	Pb	11 08 29.2	+0.7
KOTS	 comp=E,74nm,0.5s			eS	Sg	11 09 08.0	+0.4
AAA	Alma-Ata comp=E,35nm,0.1s	2.77	338	P	Pb	11 08 29.8	+0.8
AAA	Alma-Ata comp=E,35nm,0.1s	2.77	338	eP	Pb	11 08 29.8	+0.8
PDGK	Podgornoye comp=E,5.5nm,0.4s	2.82	18	Pg	Pb	11 08 27.8	-2.1
PDGK	 comp=E,18nm,0.8s			Lg	Lg	11 09 06.0	
PDGK	Podgornoye comp=E,6.1nm,0.6s	2.82	18	⇓Pn	Pb	11 08 28.6	-1.4
MTBS	Maitube comp=E,41nm,0.2s	2.86	331	Pg	Pb	11 08 30.1	-0.4
MTBS	 comp=E,52nm,0.4s			Lg	Lg	11 09 09.8	
MTBS	Maitube comp=E,41nm,0.2s	2.86	331	eP	Pb	11 08 30.1	-0.4
MTBS	 comp=E,52nm,0.4s			eS	Sg	11 09 09.8	-1.5
KST	Kastek comp=E,30nm,0.6s	2.98	325	Pg	Pb	11 08 31.9	-0.6
KST	 comp=E,44nm,0.7s			Lg	Lg	11 09 12.9	
KST	Kastek comp=E,30nm,0.6s	2.98	325	eP	Pb	11 08 31.9	-0.6

KST				⇓*i*S	Sg	11 09 12.9	-2.2
	comp=E,44nm,0.7s						
TKM2	Tokmak 2	3.05	319	P	Pb	11 08 34.1	+0.2
	SNR=12						
TKM2	Tokmak 2	3.05	319	⇑Pg	Pb	11 08 33.5	-0.4
	comp=E,5.5nm,0.2s						
TKM2				⇓Lg	Lg	11 09 14.6	
	comp=E,30nm,0.7s						
TKM2	Tokmak 2	3.05	319	⇓*i*P	Pn	11 08 29.2	+1.4
	baz=24						
TKM2				⇓*i*S	Sn	11 09 06.3	+1.9
	baz=24						
DGS	Degeres	3.22	325	Pg	Pb	11 08 36.3	-0.3
	comp=E,20nm,0.5s						
DGS				Lg	Lg	11 09 20.4	
	comp=E,101nm,0.8s						
DGS	Degeres	3.22	325	*e*P	Pb	11 08 36.3	-0.3
	comp=E,20nm,0.5s						
DGS				*e*S	Sg	11 09 20.4	-2.5
	comp=E,101nm,0.8s						
KBK	Karagaybulak	3.23	310	P	Pb	11 08 36.4	-0.4
	SNR=20						
ARLS	Aral	3.25	293	⇓*i*P	Pn	11 08 29.3	-1.1
	baz=98						
ARLS				⇓*i*S	Sn	11 09 06.9	-2.2
	baz=98						
UCH	Uchtor	3.27	300	P	Pn	11 08 31.3	+0.4
	SNR=14						
UCH	Uchtor	3.27	300	⇑*e*P	Pn	11 08 30.9	-0.1
	baz=5.0						
UCH				⇑*i*S	Sn	11 09 09.6	-0.4
	baz=5.0						
CHKK	Chushkaly	3.36	343	Pg	Pb	11 08 39.6	+0.7
	comp=E,16nm,0.4s						
CHKK				Lg	Lg	11 09 25.9	
	comp=E,66nm,0.5s						
CHKK	Chushkaly	3.36	343	*e*P	Pb	11 08 39.6	+0.7
	comp=E,16nm,0.4s						
CHKK				*e*S	Sg	11 09 25.9	-1.4
	comp=E,66nm,0.5s						
AAK	Ala-Archa	3.49	306	P	Pb	11 08 40.5	-0.8
	SNR=9.2						
AAK	Ala-Archa	3.49	306	⇓Pn	Pb	11 08 39.5	-1.8
	comp=E,14nm,0.8s						
CHMS	Chumysh	3.56	313	P	Pb	11 08 42.0	-0.3
	SNR=12						
CHMS	Chumysh	3.56	313	⇑*i*P	Pn	11 08 35.4	+0.9
	baz=17						
CHMS				⇑*i*S	Sn	11 09 17.0	+0.5
	baz=17						
KUU	Kurty	3.57	336	Pg	Pb	11 08 40.3	-2.3
	comp=E,7.1nm,0.3s						
KUU				Lg	Lg	11 09 27.1	
	comp=E,47nm,0.4s						
KUU	Kurty	3.57	336	*e*P	Pb	11 08 40.2	-2.3
	comp=E,7.1nm,0.3s						
KUU				*e*S	Sb	11 09 26.9	+1.2
	comp=E,47nm,0.4s						
ARXS	Arharly	3.59	354	Pg	Pb	11 08 41.9	-1.0
	comp=E,9.0nm,0.5s						
ARXS				Lg	Lg	11 09 29.8	
	comp=E,33nm,0.6s						
ARXS	Arharly	3.59	354	*e*P	Pb	11 08 41.9	-1.0
	comp=E,9.0nm,0.5s						
ARXS				*e*S	Sb	11 09 29.7	+3.3
	comp=E,33nm,0.6s						
SFK	Sufi-Kurgan	3.73	262	⇓*i*P	Pn	11 08 34.9	-2.3
	baz=64						
SFK				⇓*i*S	Sn	11 09 16.7	-4.5
	baz=64						
AML	Almayashu	3.78	295	P	Sn	11 09 25.7	+3.1
	SNR=24						
USP	Ospenovka	3.87	314	P	Pb	11 08 46.9	-0.8
	SNR=14						
SGDS	Sogindy	3.93	317	Pg	Pb	11 08 48.6	-0.1
	comp=E,14nm,0.7s						
SGDS				Lg	Lg	11 09 41.2	
	comp=E,20nm,0.8s						
EKS2	Erkin-Say	3.96	302	P	Pb	11 08 49.6	+0.4
	SNR=9.5						
MRKS	Merke	4.35	301	P	Pb	11 08 56.2	+0.2
	comp=E,7.1nm,0.4s						
MNAS	Manas	4.74	295	⇑Pn	Pn	11 08 56.1	+5.2
	comp=E,2.3nm,0.5s						

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*BJI **13** 11:08:50.7, 11°.14S×164°.95E, h14^{km}, mb4.7/43, mB5.4/29, Ms5.1/18, Ms7 4.8/18*

*IDC **13** 11:08:51.8±0.9, 10°.91S×164°.58E, h0^{km}, mb4.4/19, mb1 4.5/22, mb1mx4.4/51, mbtmp4.4/22, ML4.8/3, MS4.4/17, Ms1 4.4/17, ms1mx4.2/31, Error ellipse: s-maj=25.6km s-min=16.2km az=123.0*

*NEIC **13** 11:08:53.7±0.2, 10°.79S×164°.57E, h10^{km}, mb5.2/44, Error ellipse: s-maj=6.5km s-min=4.5km az=111.0*

*ISCJB **13** 11:08:54.8±0.2, 10°.89S±0°.04×164°.58E±0°.04, h29^{km}, mb4.8/70, MS4.5/19, Error ellipse: s-maj=6.5km s-min=5.4km az=20.8*

*GCMT **13** 11:08:56.7±0.2, 10°.83S±0°.01×164°.40E±0°.02, h17^{km}, MW5.2/103, Moment Tensor Solution. s61,c85; s103,c167; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.66±.03; $M_{\theta\theta}$-0.62±.02; $M_{\phi\phi}$-0.04±.02; $M_{r\theta}$0.31±.04; $M_{\theta\phi}$0.25±.01; $M_{\phi r}$-0.25±.06; Best double couple: $M_0$0.79500×10^{17} NP1:ϕ_s120.00000°, δ60.00000°, λ100.00000°. NP2:ϕ_s280.00000°, δ31.00000°, λ73.00000°. Principal axes: T 0.7790, Plg73.0000°, Azm55.0000°; N 0.0330, Plg9.0000°, Azm295.0000°; P -0.8110, Plg14.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 11:08:56.4±0.4**, 10°.89S**±0°.05×**164°.62E**±0°.05**, h29^{km}, n118, σ1^{s}47**/114**, mb5.0**/70**, MS4.5**/20**, 1C-1D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.82	287	*e*P	Pn	11 10 07.0	-0.1
HNR				*e*S	Sb	11 11 15.0	-2.8
HNR	Honiara	4.82	287	*e*Pn	Pn	11 10 06.1	-1.0
HNR				*e*Sn	Sn	11 11 01.1	-0.9
HNR	Honiara	4.82	287	Pn	Pn	11 10 07.0	-0.1
	73nm,0.3s,baz=132,slow=7.8,SNR=14						
HNR				Sn	Sn	11 11 04.4	+2.4
	60nm,0.3s,baz=248,slow=7.6,SNR=4.7						
DZM	Mont Dzumac	11.25	171	*e*Pn	Pn	11 11 34.3	-1.2
	51nm,0.5s						
DZM				*e*LQ	LQ	11 13 42.6	
	4µm,24.9s						
DZM				*e*LR	LR	11 14 11.7	
	comp=Z,5µm,24.9s						
DZM	Mont Dzumac	11.25	171	Pn	Pn	11 11 35.9	+0.4
	10nm,0.3s,baz=308,slow=16,SNR=19						
DZM				Sn	Sn	11 13 34.6	-5.8
	0.3nm,0.3s,baz=273,slow=18,SNR=1.6						
DZM				LR	LR	11 15 11.3	
	comp=Z,4µm,20.3s,baz=24,slow=34						
ONTNC	Ouen Toro	11.49	171	*e*Pn	Pn	11 11 40.4	+1.8
OUENC	Ouen Island, N	11.66	170	*e*Pn	Pn	11 11 42.6	+1.6
PINNC	Pines Island,	11.97	167	*e*Pn	Pn	11 11 46.3	+1.2
TARA	Tarawa	14.71	35	*e*Pn	Pn	11 12 20.9	-1.7
TARA				*e*Sn	Sn	11 15 02.6	-2.1
MANU	Manus Island	19.25	296	*e*P	P	11 13 16.1	-2.6
	281nm,1.6s						
EIDS	Eidsvold	19.28	220	*e*P	Pn	11 13 21.4	+1.2
	85nm,1.6s						
CTA	Charters Tower	19.90	240	P	P	11 13 26.6	+0.7
	0.8nm,0.3s,baz=70,slow=12,SNR=6.3						
CTA				LR	LR	11 20 52.1	
	comp=Z,1µm,18.6s,baz=72,slow=36						
CTAO	Charters Tower	19.90	240	*e*P	P	11 13 26.2	+0.4
	31nm,0.9s						
COEN	Coen	21.16	260	*e*P	P	11 13 39.8	+0.3
	27nm,0.9s						
LHI	Lord Howe Isla	21.16	193	*e*P	P	11 13 41.1	+1.7
	131nm,1.3s						
ARMA	Armidale	22.88	210	*e*P	P	11 13 59.6	+1.7
	48nm,1.6s						
KNTN	Kanton	24.82	73	*e*P	P	11 14 13.7	-2.8
	163nm,1.2s						
JAY	Jayapura	25.14	288	LR	LR	11 24 06.8	
	comp=Z,714nm,20.1s,baz=300,slow=36						
HIZ	Hauiti	28.99	163	*e*P	P	11 14 53.1	-0.6
	86nm,1.3s						
H11S2	WAKE ISLAND Hy	29.27	4	T	T	11 45 35.5	
	baz=184,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	29.27	4	T	T	11 45 36.0	
	baz=184,slow=76,SNR=10.0						
H11S1	WAKE ISLAND Hy	29.29	4	T	T	11 45 33.3	
	baz=184,slow=76,SNR=10						
URZ	Urewera	29.46	160	LR	LR	11 25 05.8	
	comp=Z,613nm,18.5s,baz=0.5,slow=33						
STKA	Stephens Creek	29.80	222	P	P	11 15 01.3	+0.4
	4.3nm,0.6s,baz=58,slow=12,SNR=5.6						
STKA				LR	LR	11 27 13.3	
	comp=Z,3µm,18.4s,baz=352,slow=37						
WB2	Warramunga Arr	30.49	249	*e*P	P	11 15 06.7	-0.5
	13nm,1.0s						
H11N1	WAKE ISLAND Hy	30.49	4	T	T	11 46 57.2	
	baz=184,slow=76,SNR=10						
WRA	Warramunga Arr	30.50	249	P	P	11 15 05.3	-1.9
	3.9nm,0.9s,baz=81,slow=9.3,SNR=4.4						
H11N3	WAKE ISLAND Hy	30.50	4	T	T	11 46 55.5	
	baz=184,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.51	4	T	T	11 46 59.4	
	baz=184,slow=76,SNR=11						
ASAR	Alice Springs	31.88	242	P	P	11 15 17.1	-2.4
	1.5nm,0.6s,baz=64,slow=9.9,SNR=3.7						
RPZ	Rata Peaks	33.18	171	LR	LR	11 28 15.2	
	comp=Z,964nm,19.4s,baz=348,slow=35						
BBOO	Buckleboo	34.13	226	*e*P	P	11 15 39.7	+0.7
	20nm,0.8s						
RAR	Rarotonga	35.65	111	LR	LR	11 29 28.3	
	comp=Z,326nm,18.4s,baz=278,slow=35						
FITZ	Fitzroy Crossi	38.35	255	*e*P	P	11 16 13.1	-2.1
	8.2nm,0.7s						
FORT	Forrest	39.23	234	*e*P	P	11 16 21.4	-1.0
	36nm,0.8s						
PPT	Papeete	44.81	104	LR	LR	11 33 00.3	
	comp=Z,571nm,18.4s,baz=280,slow=32						
PPT2	Papeete2	44.81	104	*e*S	S	11 23 47.3	+3.1
	136nm,24.5s						
PPT2				*e*LQ	LQ	11 27 43.9	
	791nm,25.2s						
PPT2				*e*LR	LR	11 29 33.8	
	comp=Z,431nm,28.0s						
TBI	Tubuai	45.42	112	*e*LQ	LQ	11 28 01.6	
	1µm,26.8s						
TBI				*e*LR	LR	11 29 58.0	
	comp=Z,397nm,27.2s						
MJAR	Matsushiro Arr	53.33	333	P	P	11 18 13.4	+0.3
	5.4nm,0.9s,baz=172,slow=9.7,SNR=6.5						
JNU	Nakatsue	54.31	325	P	P	11 18 20.0	-0.4
	10nm,0.9s,baz=319,slow=6.4,SNR=4.7						
TAOE	Nuku Hiva Isla	54.40	93	*e*S	S	11 26 00.1	+1.6
	173nm,23.2s						
TAOE				*e*LQ	LQ	11 31 43.4	
	281nm,24.3s						
TAOE				*e*LR	LR	11 34 00.0	
	comp=Z,173nm,28.7s						
ASAJ	Asahikawa	58.29	341	P	P	11 18 48.8	+0.3
	10nm,0.8s,baz=0.0,slow=14,SNR=6.3						
RKT	Rikitea	58.68	110	*e*S	S	11 26 58.3	+3.5
	138nm,29.2s						
RKT				*e*LR	LR	11 36 03.3	
	comp=Z,506nm,24.5s						
KSRS	Korea Array	59.13	326	LR	LR	11 42 26.7	
	comp=Z,182nm,19.2s,baz=140,slow=34						
NJ2	Nanjing	61.14	316	*e*P	P	11 19 08.8	+0.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
USA0B	Ussuriysk Arra	62.32	334	*e*P	P	11 19 16.7	+0.6
	48nm,1.5s						
USRK	Ussuriysk Ar.	62.32	334	P	P	11 19 16.1	0.0
	3.7nm,0.9s,baz=123,slow=5.3,SNR=6.1						
PETK	Petropavlovsk-	64.02	355	P	P	11 19 27.0	-0.1
	5.0nm,0.9s,baz=191,slow=7.7,SNR=6.1						
CN2	Changchun	65.05	330	*e*P	P	11 19 36.0	+1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	Kul'dur	66.48	337	P	P	11 19 43.3	+0.1
	3.2nm,0.9s,baz=137,slow=8.3,SNR=7.7						
KLR				LR	LR	11 46 30.0	
	comp=Z,173nm,18.5s,baz=154,slow=34						
ENH	Enshi	66.94	310	*e*P	P	11 19 46.6	0.0
	12nm,1.2s						
GYA	Guiyang	67.42	305	⇑*i*P	P	11 19 52.0	+2.2
GYA				PP	PP	11 22 22.5	+3.7
GYA				S	S	11 28 46.4	+2.1
GYA				SKS	SKSac	11 29 45.3	-0.7
GYA				SS	SS	11 33 08.0	+3.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.8s						
GYA				LR	LR		
	comp=N,540nm,18.2s						
GYA				LR	LR		
	comp=E,500nm,18.0s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
BJI	Beijing	67.67	322	P	P	11 19 52.4	+1.5
BJI				pmax	pmax		
	comp=Z,3.0nm,1.9s						
KMI	Kunming	70.10	302	P	P	11 20 09.3	+2.6
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,740nm,12.9s						
HHC	Hu-ho-hao-te	71.00	320	*e*P	P	11 20 12.8	+1.1
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,5.5s						
CM01	Chiang Mai Arr	71.01	294	*e*P	P	11 20 15.0	+2.9
CMAR	Chiang Mai Arr	71.04	294	P	P	11 20 11.9	-0.4
	0.4nm,0.3s,baz=121,slow=4.5,SNR=3.8						
CMAR				LR	LR	11 52 24.0	
	comp=Z,79nm,18.6s,baz=65,slow=37						
MA2	Magadan	71.11	353	P	P	11 20 10.8	-1.0
	1.7nm,0.5s,baz=138,slow=4.0,SNR=5.4						
CD2	Chengdu	71.63	308	*e*P	P	11 20 15.5	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
LZH	Lanzhou	73.84	313	*e*P	P	11 20 28.1	-0.7
LZH				pP	pP	11 20 31.6	-4.5
LZH				sP	sP	11 20 34.8	-3.7
LZH				PP	PP	11 23 14.8	+0.8
LZH				*e*S	S	11 29 57.8	-1.0
LZH				sS	sS	11 30 09.8	-0.7
LZH				pmax	pmax		
	comp=Z,78nm,1.1s						
LZH				pmax	pmax		
	comp=Z,290nm,4.9s						
LZH				LR	LR		
	comp=N,1µm,11.9s						
LZH				LR	LR		
	comp=E,1µm,13.3s						
LZH				LR	LR		
	comp=Z,1µm,15.5s						
SEY	Seymchan	74.20	354	P	P	11 20 29.8	-0.3
	1.5nm,0.5s,baz=162,slow=3.6,SNR=9.0						
GAMB	Gambell	76.62	11	*e*P	P	11 20 44.9	+1.0
	48nm,1.2s						
ULN	Ulaanbaatar	77.53	324	*e*P	P	11 20 49.5	-0.2
	12nm,1.1s						
SONM	Songino Array	77.89	324	P	P	11 20 52.2	+0.6
	1.8nm,1.0s,baz=143,slow=5.3,SNR=7.1						
SONA1	Songino Array	77.89	324	*e*P	P	11 20 51.6	-0.1
GTA	Gaotai	78.16	314	⇓P	P	11 20 54.3	+1.0
GTA				pP	pP	11 20 59.3	-1.4
GTA				sP	PcP	11 21 01.8	-1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,240nm,6.8s						
GTA				LR	LR		
	comp=N,200nm,18.4s						
GTA				LR	LR		
	comp=E,200nm,19.7s						
GTA				LR	LR		
	comp=Z,240nm,18.4s						
SVW2	Sparrevohn	78.32	19	*e*P	P	11 20 53.4	-0.2
	54nm,1.3s						
ANM	Nome	78.58	13	*e*P	P	11 20 55.8	+0.9
	45nm,1.4s						
BILL	Bilibino	78.73	1	*e*P	P	11 20 55.8	+0.1
	61nm,1.5s						
QSPA	South Pole Qui	79.11	180	*e*P	P	11 20 59.0	+0.9
CAST	Castle Rocks	81.15	18	*e*P	P	11 21 08.3	-0.6
	26nm,1.2s						
TLY	Talaya	81.38	327	*e*P	P	11 21 10.3	-0.1
	18nm,1.3s						
RDOG	Red Dog Mine	82.10	12	*e*P	P	11 21 14.7	+0.8
	41nm,1.1s						
MCK	McKinley	82.36	19	*e*P	P	11 21 15.2	-0.1
	47nm,1.4s						
IM3	Indian Mountai	82.58	16	*e*P	P	11 21 16.6	+0.2
MLY	Manley	82.72	17	*e*P	P	11 21 17.2	0.0
	29nm,1.4s						
WRH	Wood River Hil	83.14	19	*e*P	P	11 21 18.8	-0.5
	24nm,1.3s						
MDM	Murphy Dome	83.43	18	*e*P	P	11 21 20.3	-0.5
	42nm,1.2s						
HDA	Harding Lake	83.46	19	*e*P	P	11 21 20.9	-0.1
	46nm,1.1s						
COLA	College	83.49	18	*e*P	P	11 21 20.5	-0.5
	31nm,1.0s						
RIDG	Independ'e Rid	83.71	20	*e*P	P	11 21 22.3	0.0
	30nm,1.3s						
IL1	Eielson Array	83.72	19	*e*P	P	11 21 21.6	-0.7
ILAR	Eielson Array	83.72	19	P	P	11 21 22.3	0.0
	3.9nm,0.6s,baz=245,slow=5.5,SNR=27						
ILAR				LR	LR	11 52 26.7	
	comp=Z,220nm,21.8s,baz=294,slow=31						
ILB	Eielson Array	83.72	19	*e*P	P	11 21 21.8	-0.5
SCRK	Sand Creek	84.15	20	*e*P	P	11 21 24.7	0.0
	16nm,1.1s						
TOLK	Toolik Lake Re	85.63	15	*e*P	P	11 21 32.4	+0.5
	39nm,1.5s						
DAWY	Dawson	85.82	21	*e*P	P	11 21 33.6	+0.7
	19nm,1.3s						
PNTR	Pine Nut	86.00	49	*e*P	P	11 21 34.6	0.0
	16nm,1.3s						
YERR	Yerington	86.23	49	*e*P	P	11 21 31.3	-4.5
	11nm,1.2s						
NVAR	Mina Array Bea	86.77	50	LR	LR	11 57 20.6	
	comp=Z,393nm,18.2s,baz=311,slow=34						
NV11	Mina Array Sit	86.89	50	*e*P	P	11 21 38.5	-0.5
	0.7nm,1.1s						
WMQ	Urumqi	88.20	315	P	P	11 21 44.3	-0.7
WMQ				pP	PcP	11 21 49.1	+2.4
WMQ				sP	sP	11 21 55.1	+0.3
WMQ				pmax	pmax		
	comp=Z,15nm,1.7s						
WMQ				LR	LR		
	comp=N,220nm,16.1s						
WMQ				LR	LR		
	comp=E,190nm,23.9s						
WMQ				LR	LR		
	comp=Z,330nm,19.3s						
SHPR	Sheep Range	88.67	53	*e*P	P	11 21 47.4	-0.1
	13nm,1.4s						
R11A	Troy Canyon, C	88.81	51	*e*P	P	11 21 47.5	-0.6
	4.9nm,1.1s						
INK	Inuvik	90.12	19	P	P	11 21 55.1	+1.8
	2.0nm,1.0s,baz=262,slow=6.6,SNR=3.4						
LCMT	Little Creek M	90.29	52	*e*P	P	11 21 55.3	+0.2
	14nm,1.5s						
KNB	Kanab	90.62	53	*e*P	P	11 21 56.5	-0.1
	21nm,1.5s						
MTPU	Mount Pierson	91.34	52	*e*P	P	11 21 59.6	-0.6
	12nm,1.3s						
MSU	Marysvale	91.45	51	*e*P	P	11 22 01.5	+0.9
MK01	Makanchi Array	92.64	317	*e*P	P	11 22 05.1	-0.5
MK31	Makanchi Array	92.65	317	*e*P	P	11 22 05.0	-0.7
MKAR	Makanchi Array	92.65	317	*e*P	P	11 22 05.1	-0.5
	67nm,1.4s						
MKAR	Makanchi Array	92.65	317	P	P	11 22 05.2	-0.5
	1.8nm,0.6s,baz=93,slow=5.4,SNR=11						
MKAR				LR	LR	12 05 57.3	
	comp=Z,103nm,18.7s,baz=68,slow=37						
P17A	Butcher Ranch,	92.75	50	*e*P	P	11 22 04.5	-2.0
	7.6nm,1.1s						
ZALV	Zalesovo Beam	92.78	324	*e*P	P	11 22 05.0	-1.0
ZALV	Zalesovo Beam	92.78	324	P	P	11 22 05.7	-0.3
	0.7nm,0.3s,baz=116,slow=3.4,SNR=5.9						
ZALV				LR	LR	12 05 13.8	
	comp=Z,86nm,18.0s,baz=70,slow=36						
MAKZ	Makanchi	92.87	317	*e*P	P	11 22 06.2	-0.4
	10nm,1.1s						
YKA	Yellowknife Ar	95.35	27	P	P	11 22 17.2	-0.4
	0.3nm,0.8s,baz=252,slow=3.6,SNR=2.7						
YKA				LR	LR	12 01 32.1	
	comp=Z,26nm,18.0s,baz=301,slow=33						
SMCO	Snowmass	95.56	51	*e*P	P	11 22 20.5	+0.8
	8.3nm,1.0s						
NRIK	Noril'sk	95.59	340	LR	LR	12 06 56.6	
	comp=Z,162nm,18.9s,baz=152,slow=36						
KURK	Kurchatov	95.81	320	P	P	11 22 19.2	-0.8
KURBB	Kurchatov Arra	95.86	320	P	P	11 22 19.2	-1.0
	0.4nm,0.6s,baz=103,slow=4.2,SNR=3.4						
N23A	Red Feather La	96.61	50	*e*P	P	11 22 22.7	-1.5
	23nm,1.5s						
BVAR	Borovoye Array	101.15	322	P	Pdif	11 22 43.0	-1.0
	0.4nm,0.5s,baz=48,slow=4.3,SNR=3.2						
ARCES	ARCESS Array B	115.91	345	PKP	PKiKP	11 27 34.0	-1.9
	1.3nm,0.6s,baz=54,slow=1.6,SNR=4.4						
CLL	Collm	133.51	336	*e*PKPdf	PKiKP	11 28 11.0	-0.3
CLL				L	L	12 24 00.0	
	comp=Z,300nm,20.6s						
ESDC	Sonseca Array	149.59	342	PKPbc	PKiKP	11 28 45.0	+0.3
	comp=Z,0.2nm,0.3s,baz=53,slow=2.7,SNR=4.9						
TORD	Torodi Ar. Bea	163.15	279	PKP	PKPdf	11 28 55.8	-1.4
	comp=Z,0.5nm,1.0s,baz=18,slow=1.8,SNR=3.7						

MAN 13 11:12:00.1, 6°.11N×124°.07E, h30^{km}, mb4.2, ML3.0, MS2.7, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKMP	Bagumbayan, Su	0.62	49	*e*P	Pb	11 12 12.0	-0.6
SKMP				*e*S	Sb	11 12 20.6	-0.5
CTBH	Cotabato--PC H	1.12	9	⇑*e*P	Pn	11 12 20.1	+0.3
CTBH				*i* S	Sb	11 12 34.9	-0.3
KCP	Kidapawan	1.35	49	⇓*i*P	Pn	11 12 23.3	+0.2
DDMP	Don Marcelino,	1.63	90	*e*P	Pn	11 12 27.3	+0.4
DDMP				*e*S	Sn	11 12 48.1	+1.2
DMPH	Davao City--Mi	1.73	56	⇓*e*P	Pb	11 12 33.4	+2.2
DMPH				*e*S	Sn	11 12 39.4	-10
PAGZ	Pagadian	1.86	338	*e*P	Pn	11 12 30.0	+0.1
PAGZ				*e*S	Pb	11 12 36.9	+3.4
BUKP	Musuan	2.02	29	*e*P	Pn	11 12 32.7	+0.5
BUKP				*e*S	Sn	11 12 56.9	+0.5
IPIL	Ipil	2.23	318	*e*P	Pn	11 12 35.9	+0.8
IPIL				*e*S	Sn	11 13 01.9	+0.1
DCPH	Dipolog City	2.56	344	⇑*e*P	Pn	11 12 42.3	+2.7

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*SOME **13** 11:25:37.4, 40°.45N×76°.93E, h0^{km}*

*KRNET **13** 11:25:38.4±0.1, 40°.45N×76°.97E, h17^{km}, mb3.4*

*NNC **13** 11:25:38.5±1.2, 40°.44N×76°.91E, h8^{km}±25^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=9.8km s-min=5.7km az=143.0*

ISC 13 11:25:42.0±2.1**, 40°.59N**±0°.08×**76°.98E**±0°.03**, h6^{km}**±11^{km}**, n64, σ1^{s}25**/95**, 28C-20D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn	1.12	319	⇑*i*P	Pb	11 26 01.3	-2.7
	baz=22						
NRN				⇑*i*S	Sg	11 26 18.8	+0.6
	baz=22						
TARG	Taragay, Kyrgy	1.30	28	⇓*i*P	Pn	11 26 04.8	-2.2
	baz=26						
TARG				⇓*i*S	Sn	11 26 24.4	-0.5
	baz=26						
KDJ	Kajisay	1.55	6	⇑*i*P	Pn	11 26 09.8	-0.5
	baz=6.0						
KDJ				⇑*i*S	Sg	11 26 32.6	+0.8
	baz=6.0						
ULHL	Ulahol	1.75	342	P	Pn	11 26 12.9	-0.1
	SNR=118						
ULHL	Ulahol	1.75	342	⇓*i*P	Pn	11 26 12.8	-0.2
	baz=43						
ULHL				⇓*i*S	Sg	11 26 38.6	+0.4
	baz=43						
KZA	Kyzart	1.98	319	P	Pn	11 26 16.6	+0.3
	SNR=44						
KZA	Kyzart	1.98	319	⇓*i*P	Pn	11 26 16.7	+0.3
	baz=22						
KZA				⇓*i*S	Sb	11 26 44.4	+0.7
	baz=22						
BOOM	Boomskoye usch	2.06	338	⇑*i*P	Pb	11 26 17.9	-1.9
	baz=39						
BOOM				⇑*i*S	Sb	11 26 45.9	+0.2
	baz=39						
ARLS	Aral	2.37	303	⇓*i*P	Pn	11 26 21.1	-0.5

	baz=6.0						
ARLS				⇓*i*S	**Sb**	**11 26 52.8**	**-2.0**
	baz=6.0						
TNSS	**Tian-Shan**	**2.45**	**359**	Pg	**Pb**	**11 26 26.1**	**-0.5**
	32nm,0.4s						
TNSS				Lg	Lg	11 27 01.2	
	54nm,0.4s						
TNSS	**Tian-Shan**	**2.45**	**359**	⇑*i*P	**Pb**	**11 26 26.1**	**-0.5**
	26nm,0.2s						
TNSS				*e*S	**Sg**	**11 27 01.2**	**+0.5**
	54nm,0.3s						
IZV	**Izvestkoviy**	**2.46**	**354**	Pg	**Pb**	**11 26 25.8**	**-0.9**
	13nm,0.5s						
IZV				Lg	Lg	11 27 00.7	
	52nm,0.5s						
IZV	**Izvestkoviy**	**2.46**	**354**	*e*P	**Pb**	**11 26 25.8**	**-0.9**
	13nm,0.5s						
IZV				*e*S	**Sg**	**11 27 00.7**	**-0.4**
	52nm,0.5s						
UCH	**Uchtor**	**2.48**	**312**	P	**Pb**	**11 26 25.5**	**-1.6**
	SNR=8.3						
UCH	**Uchtor**	**2.48**	**312**	⇑*i*P	**Pn**	**11 26 23.3**	**+0.1**
	baz=15						
UCH				⇑*i*S	**Sb**	**11 26 55.6**	**-2.4**
	baz=15						
TKM2	**Tokmak 2**	**2.55**	**337**	P	**Pb**	**11 26 27.4**	**-0.9**
	SNR=17						
TKM2	**Tokmak 2**	**2.55**	**337**	⇑Pg	**Pb**	**11 26 27.2**	**-1.1**
	5.1nm,0.3s						
TKM2				⇓Lg	Lg	11 27 03.3	
	25nm,0.5s						
TKM2	**Tokmak 2**	**2.55**	**337**	⇓*i*P	**Pn**	**11 26 24.6**	**+0.5**
	baz=38						
TKM2				⇓*i*S	**Sb**	**11 26 58.1**	**-1.9**
	baz=38						
KBK	**Karagaybulak**	**2.57**	**324**	P	**Pb**	**11 26 27.2**	**-1.3**
	SNR=22						
KBK	**Karagaybulak**	**2.57**	**324**	⇑*i*P	**Pn**	**11 26 24.6**	**+0.3**
	baz=26						
KBK				⇑*i*S	**Sb**	**11 26 58.1**	**-2.3**
	baz=26						
KST	**Kastek**	**2.57**	**343**	Pg	**Pb**	**11 26 28.0**	**-0.6**
	16nm,0.4s						
KST				Lg	Lg	11 27 04.3	
	34nm,0.5s						
KST	**Kastek**	**2.57**	**343**	*e*P	**Pb**	**11 26 28.0**	**-0.6**
	16nm,0.4s						
KST				*e*S	**Sg**	**11 27 04.3**	**-0.2**
	31nm,0.4s						
MDOK	**Medeo**	**2.58**	**1**	⇑Pg	**Pb**	**11 26 27.4**	**-1.2**
	9.5nm,0.7s						
MDOK				Lg	Lg	11 27 04.7	
	86nm,0.8s						
MTBS	**Maitube**	**2.58**	**351**	Pg	**Pb**	**11 26 28.2**	**-0.4**
	12nm,0.4s						
MTBS				Lg	Lg	11 27 04.9	
	36nm,0.2s						
MTBS	**Maitube**	**2.58**	**351**	⇑*i*P	**Pb**	**11 26 28.2**	**-0.4**
	9.3nm,0.3s						
MTBS				⇓*i*S	**Sg**	**11 27 04.9**	**+0.3**
	36nm,0.3s						
AAA	**Alma-Ata**	**2.62**	**359**	Pg	**Pb**	**11 26 30.1**	**+0.8**
	35nm,0.2s						
AAA				Lg	Lg	11 27 07.9	
	171nm,0.2s						
AAA	**Alma-Ata**	**2.62**	**359**	*e*P	**Pb**	**11 26 30.1**	**+0.8**
	35nm,0.2s						
AAA				*e*S	**Sg**	**11 27 07.9**	**+1.7**
	171nm,0.2s						
KOTS	**Kotyrbulak**	**2.65**	**2**	Pg	**Pb**	**11 26 28.9**	**-0.9**
	17nm,0.2s						
KOTS				Lg	Lg	11 27 06.0	
	62nm,0.3s						
KOTS	**Kotyrbulak**	**2.65**	**2**	*e*P	**Pb**	**11 26 28.9**	**-0.9**
	17nm,0.2s						
KOTS				*e*S	**Sg**	**11 27 06.0**	**-1.1**
	62nm,0.3s						
SATY	**Saty**	**2.69**	**23**	Pg	**Pg**	**11 26 35.7**	**+2.1**
	7.7nm,0.3s						
SATY				Lg	Lg	11 27 17.2	
	78nm,0.4s						
SFK	**Sufi-Kurgan**	**2.72**	**259**	⇓Pg	**Pn**	**11 26 26.4**	**0.0**
	8.8nm,0.4s						
SFK				⇑Lg	Lg	11 27 02.0	
	31nm,0.5s						
AAK	**Ala-Archa**	**2.77**	**319**	P	**Pb**	**11 26 30.9**	**-1.1**
	SNR=12						
AAK	**Ala-Archa**	**2.77**	**319**	⇓Pg	**Pb**	**11 26 30.8**	**-1.1**
	6.3nm,0.6s						
AAK				⇑Lg	Lg	11 27 10.1	
	49nm,0.6s						
AAK	**Ala-Archa**	**2.77**	**319**	⇓*i*P	**Pn**	**11 26 27.5**	**+0.5**
	baz=20						
AAK				⇓*i*S	**Sn**	**11 27 02.5**	**+1.7**
	baz=20						
DGS	**Degeres**	**2.80**	**342**	Pg	**Pb**	**11 26 32.1**	**-0.3**
	22nm,0.6s						
DGS				Lg	Lg	11 27 11.7	
	36nm,0.5s						
DGS	**Degeres**	**2.80**	**342**	*e*P	**Pb**	**11 26 32.1**	**-0.3**
	22nm,0.6s						
DGS				*e*S	**Sg**	**11 27 11.7**	**-0.2**
	36nm,0.5s						
CHMS	**Chumysh**	**2.93**	**326**	⇑*i*P	**Pn**	**11 26 29.2**	**+0.1**
	baz=28						
CHMS				⇑*i*S	**Sn**	**11 27 06.5**	**+1.9**
	baz=28						
UZB	**Uzynbulak**	**2.98**	**30**	Pg	**Pb**	**11 26 34.9**	**-0.6**
	2.7nm,0.3s						
UZB				Lg	Lg	11 27 16.2	
	33nm,0.6s						
UZB	**Uzynbulak**	**2.98**	**30**	*e*P	**Pb**	**11 26 34.9**	**-0.6**
	2.7nm,0.3s						
UZB				*e*S	**Sg**	**11 27 16.2**	**-1.5**
	33nm,0.6s						
KURS	**Kuram**	**3.03**	**17**	Pg	**Pb**	**11 26 36.3**	**-0.1**
	11nm,0.6s						
KURS				Lg	Lg	11 27 18.8	
	42nm,0.6s						
KURS	**Kuram**	**3.03**	**17**	*e*P	**Pb**	**11 26 36.3**	**-0.1**
	11nm,0.6s						
KURS				*e*S	**Sg**	**11 27 18.8**	**-0.5**
	42nm,0.7s						
KTBS	**Karatobe**	**3.13**	**356**	Pg	**Pb**	**11 26 37.2**	**-0.8**
	11nm,0.3s						
KTBS				Lg	Lg	11 27 20.5	
	24nm,0.3s						
KTBS	**Karatobe**	**3.13**	**356**	*e*P	**Pb**	**11 26 37.2**	**-0.8**
	11nm,0.3s						
KTBS				*e*S	**Sg**	**11 27 20.5**	**-2.1**
	24nm,0.3s						
EKS2	**Erkin-Say**	**3.17**	**312**	⇑*i*P	**Pn**	**11 26 32.6**	**+0.1**
	baz=14						
EKS2				⇑*i*S	**Sn**	**11 27 12.0**	**+1.3**
	baz=14						
USP	**Ospenovka**	**3.25**	**326**	P	**Pb**	**11 26 39.2**	**-1.0**
	SNR=10						
USP	**Ospenovka**	**3.25**	**326**	⇑*i*P	**Pn**	**11 26 34.1**	**+0.5**
	baz=27						
USP				⇑*i*S	**Sn**	**11 27 14.8**	**+2.2**
	baz=27						
CHKK	**Chushkaly**	**3.27**	**0**	Pg	**Pb**	**11 26 40.7**	**+0.4**
	12nm,0.4s						
CHKK				Lg	Lg	11 27 26.3	
	69nm,0.3s						
CHKK	**Chushkaly**	**3.27**	**0**	⇓*i*P	**Pb**	**11 26 40.7**	**+0.4**
	12nm,0.4s						
CHKK				*e*S	**Sg**	**11 27 26.3**	**-0.6**
	69nm,0.3s						
PDGK	**Podgornoye**	**3.32**	**34**	Pg	**Pb**	**11 26 40.7**	**-0.6**
	3.6nm,0.6s						
PDGK				Lg	Lg	11 27 26.3	
	27nm,0.9s						
PDGK	**Podgornoye**	**3.32**	**34**	⇑Pg	**Pb**	**11 26 40.3**	**-1.0**
	6.7nm,0.5s						
PDGK	**Podgornoye**	**3.32**	**34**	⇑*i*P	**Pn**	**11 26 34.8**	**+0.3**
	baz=32						
PDGK				⇑*i*S	**Sn**	**11 27 16.5**	**+2.2**
	baz=32						
KUU	**Kurty**	**3.34**	**352**	Pg	**Pb**	**11 26 41.1**	**-0.4**
	6.0nm,0.1s						
KUU				Lg	Lg	11 27 27.2	
	22nm,0.5s						
KUU	**Kurty**	**3.34**	**352**	*e*P	**Pb**	**11 26 41.1**	**-0.4**
	6.0nm,0.1s						
KUU				⇓*i*S	**Sg**	**11 27 27.2**	**-1.9**
	22nm,0.5s						
MRKS	**Merke**	**3.54**	**309**	Pg	**Pb**	**11 26 44.5**	**-0.6**
	6.8nm,0.5s						
MRKS				Lg	Lg	11 27 32.6	
	8.7nm,0.3s						
MRKS	**Merke**	**3.54**	**309**	*e*P	**Pb**	**11 26 44.5**	**-0.6**
	6.8nm,0.5s						
MRKS				*e*S	**Sg**	**11 27 32.6**	**-3.2**
	8.7nm,0.3s						
ARXS	**Arharly**	**3.68**	**10**	Pg	**Pb**	**11 26 48.0**	**+0.6**
	6.7nm,0.6s						
ARXS				Lg	Lg	11 27 38.5	
	39nm,0.6s						
ARXS	**Arharly**	**3.68**	**10**	*e*P	**Pb**	**11 26 48.0**	**+0.6**
	6.7nm,0.6s						
ARXS				*e*S	**Sg**	**11 27 38.5**	**-1.6**
	39nm,0.6s						
MNAS	**Manas**	**3.86**	**301**	⇑Pg	**Pb**	**11 26 51.0**	**+0.5**
	4.7nm,0.9s						
MNAS				⇑Lg	Lg	11 27 40.9	
	8.6nm,0.7s						
DJR	**Jarkent**	**4.28**	**28**	Pg	**Pb**	**11 26 58.4**	**+0.7**
	1.8nm,0.5s						
DJR				Lg	Lg	11 27 56.4	
	7.7nm,0.6s						
DJR	**Jarkent**	**4.28**	**28**	*e*P	**Pb**	**11 26 58.4**	**+0.7**
	1.8nm,0.5s						
DJR				*e*S	**Sg**	**11 27 56.4**	**-3.0**
	7.7nm,0.6s						
KAPS	**Kapalarasan**	**5.01**	**20**	Pg	**Pb**	**11 27 11.5**	**+1.4**
	3.6nm,0.4s						
KAPS				Lg	Lg	11 28 19.1	
	7.8nm,0.3s						
KAPS	**Kapalarasan**	**5.01**	**20**	*e*P	**Pb**	**11 27 11.5**	**+1.4**
	3.6nm,0.4s						
KAPS				⇓*i*S	**Sg**	**11 28 19.1**	**-3.6**
	7.8nm,0.3s						
KK31	**Karatay Array**	**5.45**	**300**	Pg	**Pb**	**11 27 18.5**	**+1.1**
	1.2nm,0.6s,baz=123,slow=16,SNR=12						
KK31				⇓Lg	Lg	11 28 33.4	
	1.3nm,0.5s,baz=116,slow=27,SNR=4.4						
MK31	**Makanchi Array**	**7.30**	**30**	⇑Pn	**Pn**	**11 27 27.6**	**-1.5**
	0.3nm,0.6s,baz=198,slow=14,SNR=5.1						

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*SOME **13** 11:28:27.0,39°.38N×71°.10E,h0^{km}*
*KRNET **13** 11:28:36.5±0.1,39°.32N×71°.71E,mb2.9*
*NNC **13** 11:28:38.7±1.6,39°.54N×71°.67E,h0^{km},mb3.5,mpv3.2,*
Error ellipse: s-maj=12.7km s-min=6.3km az=24.0

ISC 13 11:28:38.6±1.6,**39°.48N**±0°.10×**71°.71E**±0°.05,**h4**^{km}±11^{km},
n22,σ**2**^{s}**.24**/34,**20C-9D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.07**	**89**	⇑*i*P	**Pg**	**11 28 39.7**	**-0.6**
	baz=24						
DRK				⇑*i*S	**Sg**	**11 28 42.8**	**+1.2**
	baz=24						
BTK	**Batken**	**0.90**	**311**	⇑*i*P	**Pb**	**11 28 56.0**	**-0.8**
	baz=17						
BTK				⇑*i*S	**Sn**	**11 29 10.1**	**-1.5**
	baz=17						
SFK	**Sufi-Kurgan**	**1.49**	**68**	⇑P	**Pb**	**11 29 06.1**	**-0.9**
	2.3nm,0.3s						
SFK				⇓S	**Sg**	**11 29 27.4**	**+1.0**
	10nm,0.2s						
SFK	**Sufi-Kurgan**	**1.49**	**68**	Pg	**Pn**	**11 29 05.8**	**-0.6**
	6.4nm,0.1s						
SFK				Lg	Lg	11 29 27.6	
	24nm,0.2s						
SFK	**Sufi-Kurgan**	**1.49**	**68**	⇓*i*P	**Pn**	**11 29 05.7**	**-0.6**
	baz=63						
SFK				⇓*i*S	**Sg**	**11 29 27.2**	**+0.8**
	baz=63						
ARK	**Arkit**	**2.33**	**5**	⇑*i*P	**Pb**	**11 29 19.8**	**-1.4**
	baz=5.0						
ARK				⇑*i*S	**Sb**	**11 29 51.2**	**+0.8**
	baz=5.0						
IUG	**Iuzhnay**	**2.95**	**335**	Pg	**Pb**	**11 29 33.0**	**+1.1**
	18nm,0.2s						
IUG				Lg	Lg	11 30 14.5	
	48nm,0.4s						
AML	**Almayashu**	**3.05**	**29**	⇑*i*P	**Pb**	**11 29 30.3**	**-3.4**
	baz=28						
AML				⇑*i*S	**Sb**	**11 30 09.4**	**-2.1**
	baz=28						
MNAS	**Manas**	**3.07**	**11**	⇓Pg	**Pb**	**11 29 32.8**	**-1.1**
	1.6nm,0.4s						
MNAS				⇓Lg	Lg	11 30 14.3	
	4.5nm,0.4s						
MNAS	**Manas**	**3.07**	**11**	Pg	**Pb**	**11 29 33.1**	**-0.7**
	1.1nm,0.2s						
MNAS				Lg	Lg	11 30 14.4	
	4.0nm,0.3s						
MNAS	**Manas**	**3.07**	**11**	⇑*i*P	**Pb**	**11 29 30.9**	**-3.0**
	baz=11						
MNAS				⇑*i*S	**Sb**	**11 30 10.4**	**-1.3**
	baz=11						
ARLS	**Aral**	**3.10**	**39**	⇑*i*P	**Pb**	**11 29 31.4**	**-3.1**
	baz=37						
ARLS				⇑*i*S	**Sb**	**11 30 10.3**	**-2.5**
	baz=37						
MRKS	**Merke**	**3.46**	**19**	Pg	**Pb**	**11 29 39.3**	**-1.3**
	4.1nm,0.4s						
MRKS				Lg	Lg	11 30 25.5	
	7.5nm,0.5s						
MRKS	**Merke**	**3.46**	**19**	*e*P	**Pb**	**11 29 38.1**	**-2.4**
	4.1nm,0.4s						
MRKS				*e*S	**Sb**	**11 30 25.8**	**+2.8**
	7.5nm,0.5s						
UCH	**Uchtor**	**3.48**	**37**	⇓*i*P	**Pn**	**11 29 36.1**	**+2.2**
	baz=35						
UCH				⇓*i*S	**Sb**	**11 30 19.7**	**-4.1**
	baz=35						
EKS2	**Erkin-Say**	**3.54**	**26**	⇑*i*P	**Pn**	**11 29 36.8**	**+2.2**
	baz=24						
EKS2				⇑*i*S	**Sb**	**11 30 21.5**	**-3.9**
	baz=24						
KK31	**Karatay Array**	**3.73**	**346**	Pn	**Pn**	**11 29 37.8**	**+0.7**
	1.1nm,0.3s,baz=161,slow=11,SNR=16						
KK31				⇑Lg	Lg	11 30 33.0	
	1.1nm,0.3s,baz=168,slow=22,SNR=4.6						
KZA	**Kyzart**	**3.74**	**45**	⇑*i*P	**Pn**	**11 29 39.5**	**+2.0**
	baz=43						
KZA				⇑*i*S	**Sn**	**11 30 25.5**	**+3.3**
	baz=43						
AAK	**Ala-Archa**	**3.80**	**33**	⇓Pg	**Pb**	**11 29 44.9**	**-1.3**
	2.9nm,0.5s						
AAK				⇑Lg	Lg	11 30 37.5	
	6.0nm,0.6s						
TKM2	**Tokmak 2**	**4.52**	**39**	⇑Pg	**Pb**	**11 29 59.0**	**+0.4**
	1.2nm,0.4s						
TKM2				⇓Lg	Lg	11 31 00.9	
	1.8nm,0.3s						
KST	**Kastek**	**4.79**	**41**	Pg	**Pb**	**11 30 06.6**	**+3.3**
	3.2nm,0.4s						
KST				Lg	Lg	11 31 13.5	
	3.9nm,0.9s						
DGS	**Degeres**	**4.85**	**38**	Pg	**Pb**	**11 30 07.3**	**+3.2**
	3.2nm,0.6s						
DGS				Lg	Lg	11 31 15.1	
	6.4nm,0.4s						

TAP 13 11:28:53.5,23°.98N×121°.60E,h8^{km},ML1.8,2C-1D,B,
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.01**	**98**	*i* P	Pg	11 28 55.4	+0.5
	baz=100						
HWA				S	Sg	11 28 57.0	+1.1
	baz=100						
ENLB	**Shoufeng**	**0.07**	**177**	*e*P	Pg	11 28 56.1	+0.6
	baz=177						
ENLB				*e*S	Sg	11 28 58.6	+1.7
	baz=177						
TWD	**Chiawan**	**0.10**	**359**	⇑*i*P	Pg	11 28 56.3	+0.4
	baz=4.0						
TWD				*i* S	Sg	11 28 58.2	+0.6
	baz=4.0						
NACB	**Ninganchiao**	**0.20**	**359**	⇑P	Pg	11 28 57.7	+0.3
	baz=5.0						
NACB				S	Sg	11 29 00.6	+0.4
	baz=5.0						
ESL	**Shilin**	**0.22**	**223**	⇓*i*P	Pg	11 28 58.2	+0.2
	baz=228						
ESL				*i* S	Sg	11 29 01.4	+0.4
	baz=228						
ETLH	**Xiulin Townshi**	**0.25**	**335**	*e*P	Pg	11 28 59.0	+0.4
	baz=335						
ETLH				*e*S	Sg	11 29 02.7	+0.7
	baz=335						
EGFH	**Guangfu**	**0.34**	**207**	*e*S	Sg	11 29 05.8	+1.0
	baz=217						
WHF	**Hehuan Shan**	**0.35**	**299**	P	Pg	11 29 00.9	+0.4
	baz=299						
WHF				*e*S	Sg	11 29 06.3	+1.2
	baz=299						
OWD	**Renai**	**0.39**	**267**	P	Pg	11 29 01.8	+0.7
	baz=278						
OWD				*e*S	Sg	11 29 07.0	+0.8
	baz=278						
CHGB	**Renai**	**0.40**	**282**	*e*P	Pb	11 29 02.1	-0.7
	baz=283						
CHGB				*e*S	Sb	11 29 07.9	-1.2
	baz=283						
ENA	**Nanau**	**0.47**	**16**	*e*P	Pg	11 29 02.8	+0.2
	baz=16						
ENA				*e*S	Sg	11 29 09.0	+0.3
	baz=16						
NANB	**Nanao**	**0.47**	**17**	*e*P	Pg	11 29 02.6	+0.1
	baz=16						
NANB				S	Sg	11 29 09.4	+0.6
	baz=16						
VWDT	**VWDT**	**0.47**	**242**	P	Pb	11 29 03.5	-0.5
	baz=244						
VWDT				*e*S	Sb	11 29 10.2	-0.9
	baz=244						
NNSB	**Datong**	**0.49**	**336**	*e*P	Pg	11 29 03.7	+0.7
	baz=336						
NNSB				S	Sg	11 29 10.2	+0.7
	baz=336						
NNS	**Nan Shan**	**0.50**	**336**	*e*P	Pb	11 29 04.0	-0.7
	baz=336						
NNS				*e*S	Sg	11 29 10.7	+0.8
	baz=336						
HGSD	**Ruisui**	**0.51**	**198**	*e*P	Pb	11 29 05.0	+0.4
	baz=208						
EHY	**Hungye**	**0.53**	**208**	*e*P	Pg	11 29 04.4	+0.6
	baz=219						
EHY				*e*S	Sg	11 29 11.1	+0.3
	baz=219						
SSLB	**Suanglung**	**0.62**	**252**	*e*P	Pb	11 29 06.2	-0.3
	baz=265						
SSLB				*e*S	Sg	11 29 13.7	+0.2
	baz=265						
NDT	**Datong Townshi**	**0.63**	**353**	*e*P	Pb	11 29 06.5	-0.1
	baz=352						
NDT				*e*S	Sg	11 29 14.7	+0.9
	baz=352						
YULB	**Yu-li**	**0.64**	**205**	*e*P	Pg	11 29 06.1	+0.2
	baz=216						
YULB				*e*S	Sg	11 29 14.2	-0.1
	baz=216						
SMLT	**Sun Moon Lake**	**0.65**	**262**	*e*P	Pg	11 29 06.4	+0.5
	baz=263						
ENTT	**Nioudou**	**0.66**	**358**	*e*P	Pg	11 29 06.7	+0.4
	baz=357						
ENTT				*e*S	Sb	11 29 16.1	-0.4
	baz=357						
WHP	**Taichung City**	**0.67**	**297**	P	Pb	11 29 07.4	+0.1
	baz=288						
WHP				*e*S	Sb	11 29 16.5	-0.3
	baz=288						
TWF1	**Yuli**	**0.68**	**204**	*e*P	Pb	11 29 07.6	+0.1
	baz=216						
YHNB	**Yeheng**	**0.72**	**344**	*e*P	Pb	11 29 08.2	0.0
	baz=343						
YHNB				*e*S	Sg	11 29 17.2	+0.5
	baz=343						
WHYT	**Xinyi Township**	**0.74**	**248**	*e*P	Pb	11 29 08.7	+0.1
	baz=250						
TWE	**Neicheng**	**0.74**	**5**	*e*P	Pg	11 29 08.0	+0.3
	baz=5.0						
TWE				*e*S	Sb	11 29 18.7	-0.2
	baz=5.0						
NWLT	**Wulai**	**0.80**	**354**	*e*P	Pn	11 29 10.5	-0.6
	baz=353						
NWLT				*e*S	Sg	11 29 19.8	+0.5
	baz=353						
NSTT	**Nanjuang**	**0.85**	**320**	*e*S	Sb	11 29 22.9	+1.0
	baz=320						
LIOB	**Emei**	**0.85**	**322**	*e*P	Pb	11 29 10.6	+0.1
	baz=321						
LIOB				*e*S	Sb	11 29 23.0	+1.0
	baz=321						

TAP 13 11:29:00.7,23°.14N×120°.97E,h9^{km}±1^{km}**,ML1.4,3C,B,**
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.07**	**42**	⇑*i*P	Pg	11 29 03.7	+0.8
	baz=47						
ELDTW				*i* S	Sg	11 29 04.9	+0.4
	baz=47						
STYT	**Tauyuan**	**0.20**	**278**	⇑*i*P	Pg	11 29 05.3	+0.5
	baz=277						
STYT				S	Sg	11 29 07.8	+0.2
	baz=277						
SLGT	**Liugui**	**0.33**	**244**	⇑*i*P	Pb	11 29 08.4	-0.3
	baz=244						
SLGT				*i* S	Sg	11 29 12.8	+1.3
	baz=244						
TWG	**Pinlang**	**0.33**	**163**	*e*P	Pb	11 29 09.1	+0.3
	baz=161						
TWG				S	Sb	11 29 13.9	-0.2
	baz=161						
TWGBT	**Beinan**	**0.34**	**162**	*e*P	Pb	11 29 09.3	+0.4
	baz=161						
TWGBT				S	Sb	11 29 13.7	-0.6
	baz=161						
WTP	**Ta-pu**	**0.34**	**289**	P	Pb	11 29 08.8	-0.2
	baz=288						
WTP				S	Sb	11 29 14.1	-0.5
	baz=288						
TPUB	**Ta-pu**	**0.35**	**298**	P	Pb	11 29 08.9	-0.3
	baz=297						
TPUB				S	Sb	11 29 13.9	-0.9
	baz=297						
SGST	**Jiashian**	**0.36**	**261**	*e*P	Pb	11 29 09.2	-0.1
	baz=260						
SGST				*e*S	Sb	11 29 14.7	-0.4
	baz=260						
TWF1	**Yuli**	**0.37**	**55**	P	Pb	11 29 09.2	-0.3
	baz=55						
TWF1				*e*S	Sb	11 29 15.0	-0.4
	baz=55						
TWF1	**Yuli**	**0.37**	**55**	*e*S	Sb	11 29 15.0	-0.4
	baz=216						
YULB	**Yu-li**	**0.40**	**50**	*e*P	Pb	11 29 09.4	-0.6
	baz=50						
ALS	**Alishan**	**0.40**	**338**	*e*P	Pb	11 29 09.4	-0.7
	baz=339						
CHN4	**Tsaushan**	**0.41**	**302**	P	Pb	11 29 10.2	+0.1
	baz=301						
CHN4				*e*S	Sb	11 29 16.1	-0.3
	baz=301						
CHN1	**Nanshi**	**0.41**	**277**	*e*P	Pb	11 29 10.5	+0.4
	baz=276						
CHN1				*e*S	Sb	11 29 16.5	+0.1
	baz=276						
SSD	**Sandimen**	**0.50**	**218**	*e*P	Pb	11 29 11.2	-0.5
	baz=217						
CHN5	**Tsauling**	**0.53**	**330**	*e*P	Pb	11 29 12.4	+0.1
	baz=249						
CHN5	**Tsauling**	**0.53**	**330**	*e*P	Pb	11 29 12.0	-0.2
	baz=329						
CHN5				*e*S	Sb	11 29 19.7	-0.4
	baz=329						
ECL	**Taimali**	**0.54**	**181**	*e*S	Sb	11 29 19.8	-0.4
	baz=180						
WHYT	**Xinyi Township**	**0.57**	**349**	*e*P	Pb	11 29 12.5	-0.3
	baz=349						
MASBT	**Mashibuluo**	**0.61**	**211**	*e*P	Pb	11 29 13.5	0.0
	baz=210						

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*MOS **13** 11:37:58.6±1.7,41°.19N×73°.00E,h33^{km},mb4.1/3,Error*
ellipse: s-maj=12.7km s-min=7.5km az=84.3
MOS Felt (III) at Oogan-Talaa, Charbak; (II-III) at Ushbulak,
Kyzyl-Unkur.
*IDC **13** 11:37:59.8±1.3,41°.10N×73°.27E,h0^{km},mb3.7/1,*
mb1 3.8/4,mb1mx3.3/44,mbtmp3.6/4,ML3.0/3,Error
ellipse: s-maj=22.8km s-min=13.4km az=116.0
*NNC **13** 11:38:01.9±0.4,41°.29N×73°.10E,h0^{km},mb4.2,mpv4.0,*

Error ellipse: s-maj=4.1km s-min=2.2km az=78.0
SOME ***13*** *11:38:02.4, 41°.30N×73°.15E, h10^{km}*
KRNET ***13*** *11:38:03.4±0.1, 41°.29N×73°.17E, h17^{km}, mb3.7*
ISC 13 11:38:02.1±0.8**, 41°.28N**±0°.02×**73°.11E**±0°.02**, h15**^{km}±5^{km}**,**
n97, σ1^{s}95/136**, mb3.7**/3**, 34C-25D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob baz=82	0.10	295	⇑iP	Pg	11 38 06.8	+1.1
ARSB	baz=82			⇑eS	Sg	11 38 10.1	+2.1
AML	Almayashu SNR=171	0.96	27	P	Pb	11 38 20.4	-0.3
AML	Almayashu baz=25	0.96	27	i P	Pb	11 38 20.4	-0.3
AML	baz=25			i S	Sb	11 38 32.7	-0.7
ARK	Arkit baz=99	1.00	301	⇓iP	Pn	11 38 22.1	+0.3
ARK	baz=99			⇓iS	Sn	11 38 35.6	-0.2
MNAS	Manas 41nm,0.4s	1.29	340	⇓P	Pg	11 38 26.4	-0.6
MNAS	326nm,0.6s			⇑S	Sg	11 38 43.6	-0.2
MNAS	Manas 40nm,0.4s	1.29	340	P	Pg	11 38 26.5	-0.5
MNAS	217nm,0.5s			S	Sg	11 38 43.8	0.0
MNAS	Manas	1.29	340	PG	Pg	11 38 26.3	-0.6
MNAS				S	Sg	11 38 43.6	-0.2
MNAS	comp=Z,41nm,0.4s			pmax	pmax		
MNAS	comp=N,326nm,0.6s			smax	smax		
MNAS	Manas baz=38	1.29	340	i P	Pg	11 38 26.4	-0.6
MNAS	baz=38			i S	Sg	11 38 44.0	+0.2
SFK	Sufi-Kurgan comp=N,50nm,0.3s	1.30	167	⇓P	Pn	11 38 26.2	+0.2
SFK	comp=N,300nm,0.4s			⇑S	Sn	11 38 44.3	+1.1
SFK	Sufi-Kurgan comp=N,87nm,0.1s	1.30	167	Pg	Pb	11 38 27.3	+0.9
SFK	comp=N,354nm,0.3s			Lg	Lg	11 38 45.2	
SFK	Sufi-Kurgan	1.30	167	PG	Pn	11 38 25.7	-0.3
SFK				S	Sn	11 38 44.3	+1.1
SFK	comp=Z,50nm,0.3s			pmax	pmax		
SFK	comp=N,300nm,0.4s			smax	smax		
SFK	Sufi-Kurgan baz=69	1.30	167	⇑iP	Pn	11 38 26.5	+0.5
SFK	baz=69			⇑iS	Sn	11 38 44.3	+1.1
UCH	Uchtor SNR=122	1.42	48	P	Pn	11 38 28.3	+0.5
UCH	Uchtor baz=47	1.42	48	⇑iP	Pn	11 38 28.3	+0.5
UCH	baz=47			⇑iS	Sn	11 38 46.7	+0.3
MRKS	Merke comp=N,226nm,0.3s	1.47	3	eP	Pb	11 38 29.5	+0.3
MRKS	comp=N,445nm,0.4s			eS	Sg	11 38 48.6	-0.9
EKS2	Erkin-Say SNR=45	1.47	20	P	Pb	11 38 29.4	+0.1
EKS2	Erkin-Say baz=18	1.47	20	⇑iP	Pb	11 38 29.3	+0.1
EKS2	baz=18			⇑iS	Sb	11 38 48.6	+0.8
AAK	Ala-Archa SNR=95	1.71	37	P	Pb	11 38 33.8	+0.4
AAK	Ala-Archa comp=N,46nm,0.5s	1.71	37	⇓P	Pb	11 38 33.7	+0.4
AAK	comp=N,201nm,0.5s			⇓S	Sb	11 38 55.6	+0.9
AAK	Ala-Archa	1.71	37	PN	Pb	11 38 33.7	+0.4
AAK				S	Sb	11 38 55.6	+0.9
AAK	comp=Z,46nm,0.5s			pmax	pmax		
AAK	comp=N,201nm,0.5s			smax	smax		
AAK	Ala-Archa baz=36	1.71	37	⇑iP	Pb	11 38 33.6	+0.3
AAK	baz=36			⇑iS	Sb	11 38 55.8	+1.1
AAK	Ala-Archa comp=N,23nm,0.3s,baz=189,slow=6.2,SNR=220	1.71	37	Pg	Pb	11 38 33.9	+0.6
AAK	comp=N,102nm,0.3s,baz=348,slow=18,SNR=40			Lg	Lg	11 38 56.3	
KZA	Kyzart SNR=193	1.79	63	P	Pb	11 38 34.7	-0.2
KZA	Kyzart baz=63	1.79	63	⇓iP	Pb	11 38 34.9	0.0
KZA	baz=63			⇓iS	Sb	11 38 58.2	+0.8
FRU1	Bishkek baz=35	1.90	36	⇑iP	Pb	11 38 37.0	+0.4
FRU1	baz=35			⇑iS	Sb	11 39 02.0	+1.7
KBK	Karagaybulak SNR=62	1.94	44	P	Pb	11 38 38.1	+0.7
KBK	Karagaybulak baz=44	1.94	44	⇓iP	Pb	11 38 37.8	+0.4
KBK	baz=44			⇓iS	Sb	11 39 02.7	+1.2
DRK	Karamyk baz=10.0	2.06	209	⇑iP	Pg	11 38 40.4	-1.2
DRK	baz=10.0			⇑iS	Sg	11 39 07.7	-0.6
CHMS	Chumysh SNR=39	2.11	35	P	Pb	11 38 40.1	0.0
CHMS	Chumysh baz=34	2.11	35	⇑iP	Pb	11 38 39.9	-0.2
CHMS	baz=34			⇑iS	Sb	11 39 07.0	+0.9
BTK	Batken baz=36	2.13	236	⇑iP	Pb	11 38 41.1	+0.7
BTK	baz=36			⇑iS	Sg	11 39 09.1	-1.4
NRN	Naryn	2.18	85	ePN	Pb	11 38 40.7	-0.8
NRN	Naryn baz=86	2.18	85	⇑iP	Pb	11 38 40.7	-0.8
NRN	baz=86			⇑iS	Sn	11 39 07.3	+2.2
USP	Ospenovka SNR=39	2.24	27	P	Pb	11 38 41.9	-0.4
USP	Ospenovka baz=26	2.24	27	⇓iP	Pb	11 38 41.8	-0.5
USP	baz=26			⇓iS	Sb	11 39 10.4	+0.5
BOOM	Boomskoye usch baz=59	2.44	59	⇓iP	Pb	11 38 44.4	-1.4
BOOM	baz=59			⇓iS	Sb	11 39 15.0	-0.7
IUG	Iuzhnay comp=N,128nm,0.5s	2.46	292	Pg	Pg	11 38 48.3	-1.0
IUG	comp=N,318nm,0.4s			Lg	Lg	11 39 21.2	
IUG	Iuzhnay comp=N,128nm,0.5s	2.46	292	eP	Pg	11 38 48.4	-1.0
IUG	comp=N,318nm,0.4s			eS	Sg	11 39 21.2	-0.1
TKM2	Tokmak 2 SNR=207	2.47	48	P	Pb	11 38 45.4	-1.1
TKM2	Tokmak 2 comp=N,68nm,0.6s	2.47	48	⇓Pn	Pb	11 38 44.9	-1.5
TKM2	comp=N,366nm,0.6s			⇓Lg	Lg	11 39 19.0	
TKM2	Tokmak 2	2.47	48	PN	Pb	11 38 45.2	-1.2
TKM2	comp=Z,68nm,0.6s			pmax	pmax		
TKM2	Tokmak 2 baz=47	2.47	48	⇓iP	Pb	11 38 45.2	-1.2
TKM2	baz=47			⇓iS	Sb	11 39 16.0	-0.8
ULHL	Ulahol SNR=51	2.54	67	P	Pn	11 38 45.2	+2.3
ULHL	Ulahol baz=67	2.54	67	⇑iP	Pb	11 38 45.9	-1.6
ULHL	baz=67			⇑iS	Sb	11 39 17.4	-1.2
KK31	Karatay Array comp=Z,1.1nm,0.2s,baz=129,slow=16,SNR=6.0	2.65	314	⇓Pn	Pb	11 38 46.7	-2.7
KK31	comp=Z,26nm,0.4s,baz=127,slow=12,SNR=276			⇓Pg	Pb	11 38 50.2	+0.8
KK31	comp=Z,81nm,0.5s,baz=132,slow=27,SNR=11			⇓Lg	Lg	11 39 25.7	
KK31	Karatay Array	2.65	314	PN	Pb	11 38 50.2	+0.8
KK31	comp=Z,26nm,0.4s			pmax	pmax		
KST	Kastek comp=Z,57nm,0.4s	2.76	49	Pg	Pb	11 38 52.2	+0.9
KST	comp=Z,138nm,0.5s			Lg	Lg	11 39 27.4	
KST	Kastek comp=Z,57nm,0.4s	2.76	49	eP	Pb	11 38 52.2	+0.9
KST	comp=Z,138nm,0.5s			eS	Sb	11 39 27.4	+2.5
DGS	Degeres comp=Z,42nm,0.5s	2.79	44	Pg	Pb	11 38 52.7	+1.0
DGS	comp=Z,257nm,0.5s			Lg	Lg	11 39 28.8	
DGS	Degeres comp=Z,42nm,0.5s	2.79	44	eP	Pb	11 38 52.7	+1.0
DGS	comp=Z,257nm,0.5s			eS	Sb	11 39 28.8	+3.1
KSH	Kashi	2.81	128	Pn	Pn	11 38 49.0	+2.4
KSH				Sn	Sb	11 39 27.8	+1.5
KSH	comp=N,620nm,0.6s			smax	smax		
KSH	comp=E,280nm,0.5s			smax	smax		
CHM	Chimkent comp=E,245nm,0.5s	2.82	293	eP	Pg	11 38 55.5	-0.7
CHM	comp=E,524nm,0.4s			eS	Sg	11 39 33.3	+0.6
KDJ	Kajisay baz=73	3.17	73	⇓eP	Pn	11 38 54.3	+2.7
KDJ	baz=73			⇓iS	Sn	11 39 32.3	+3.1
AAA	Alma-Ata comp=E,32nm,0.3s	3.42	54	Pg	Pb	11 39 05.1	+2.6
AAA	comp=E,197nm,0.5s			Lg	Lg	11 39 50.1	
AAA	Alma-Ata comp=E,32nm,0.3s	3.42	54	eP	Pb	11 39 05.1	+2.6
AAA	comp=E,197nm,0.5s			eS	Sg	11 39 50.1	-1.9
KNDC	Almaty comp=E,26nm,0.4s	3.46	55	⇑Pg	Pb	11 39 05.3	+2.2
KNDC	comp=E,357nm,0.7s			⇑Lg	Lg	11 39 51.5	
MDOK	Medeo comp=E,10.0nm,0.6s	3.48	56	⇓Pn	Pn	11 38 59.1	+3.2
MDOK	comp=E,104nm,0.9s			⇑Lg	Lg	11 39 52.1	
MDOK	Medeo comp=E,9.9nm,0.3s	3.48	56	Pg	Pb	11 39 05.1	+1.5
MDOK	comp=E,78nm,0.8s			Lg	Lg	11 39 50.1	
MDOK	Medeo comp=E,9.9nm,0.3s	3.48	56	eP	Pb	11 39 05.1	+1.5
MDOK	comp=E,78nm,0.8s			eS	Sb	11 39 50.1	+4.4
KUU	Kurty comp=E,12nm,0.5s	3.54	41	Pg	Pb	11 39 06.3	+1.9
KUU	comp=E,92nm,0.6s			Lg	Lg	11 39 51.8	
KUU	Kurty comp=E,12nm,0.5s	3.54	41	eP	Pb	11 39 06.3	+1.9
KUU	comp=E,92nm,0.6s			eS	Sb	11 39 51.8	+4.6
KOTS	Kotyrbulak comp=E,20nm,0.3s	3.56	55	Pg	Pb	11 39 07.1	+2.2
KOTS	comp=E,116nm,0.6s			Lg	Lg	11 39 53.9	
KOTS	Kotyrbulak comp=E,20nm,0.3s	3.56	55	eP	Pb	11 39 07.1	+2.2
KOTS	comp=E,116nm,0.6s			eS	Sg	11 39 53.9	-2.5
KTBS	Karatobe comp=E,7.9nm,0.4s	3.59	46	Pg	Pb	11 39 07.1	+1.7
KTBS	comp=E,99nm,0.5s			Lg	Lg	11 39 53.5	
KTBS	Karatobe comp=E,7.9nm,0.4s	3.59	46	eP	Pb	11 39 07.1	+1.7
KTBS	comp=E,99nm,0.5s			eS	Sb	11 39 53.5	+4.8
BTLS	Baital comp=E,14nm,0.4s	3.82	10	Pg	Pg	11 39 12.6	-2.8
BTLS	comp=E,60nm,0.5s			Lg	Lg	11 40 02.6	
BTLS	Baital comp=E,14nm,0.4s	3.82	10	eP	Pg	11 39 12.6	-2.8
BTLS	comp=E,60nm,0.5s			eS	Sg	11 40 02.6	-2.3
CHKK	Chushkaly comp=E,15nm,0.6s	3.85	47	Pg	Pb	11 39 11.9	+2.1
CHKK	comp=E,78nm,0.6s			Lg	Lg	11 40 01.8	
CHKK	Chushkaly comp=E,15nm,0.6s	3.85	47	eP	Pb	11 39 11.9	+2.1
CHKK	comp=E,78nm,0.6s			eS	Sb	11 40 01.8	+5.5
ARXS	Arharly comp=E,13nm,0.5s	4.55	48	Pg	Pb	11 39 25.2	+3.5
ARXS	comp=E,62nm,0.8s			Lg	Lg	11 40 24.6	
ARXS	Arharly comp=E,13nm,0.5s	4.55	48	eP	Pb	11 39 25.2	+3.5
ARXS	comp=E,62nm,0.8s			eS	Sg	11 40 24.6	-3.5
PDGK	Podgornoye comp=E,3.1nm,0.5s	5.16	64	⇑Pg	Pb	11 39 34.5	+2.4
PDGK	comp=E,65nm,0.9s			⇑Lg	Lg	11 40 45.2	
PDGK	Podgornoye	5.16	64	PN	Pb	11 39 34.1	+2.0
PDGK	comp=Z,3.0nm,0.5s			pmax	pmax		
TDK	Taldyqorghan comp=Z,25nm,0.1s	5.37	44	Pg	Pb	11 39 40.4	+4.7
TDK	comp=Z,64nm,0.5s			Lg	Lg	11 40 51.0	
TDK	Taldyqorghan comp=Z,25nm,0.1s	5.37	44	eP	Pb	11 39 40.4	+4.7
TDK	comp=Z,64nm,0.5s			eS	Sg	11 40 51.0	-3.5
OTUK	Ortayu comp=Z,3.9nm,0.9s	6.99	356	⇓Pn	Pn	11 39 45.5	+1.5
OTUK	comp=Z,44nm,1.0s			⇑Lg	Lg	11 41 44.0	
OTUK	Ortayu	6.99	356	PN	Pb	11 39 56.6	-6.6
OTUK	comp=Z,4.0nm,0.9s			pmax	pmax		
MAKZ	Makanchi comp=Z,2.0nm,0.8s	8.44	46	⇑Pn	Pn	11 40 06.1	+2.1
MAKZ	comp=Z,5.9nm,0.8s			⇑Lg	Lg	11 42 30.1	
MAKZ	Makanchi	8.44	46	P	Pn	11 40 06.5	+2.6
MAKZ	comp=Z,2.0nm,0.9s			pmax	pmax		
MK31	Makanchi Array comp=Z,1.6nm,0.6s,baz=227,slow=12,SNR=19	8.61	47	⇑Pn	Pn	11 40 07.6	+1.5
MK31	comp=Z,2.3nm,0.6s			⇑Lg	Lg	11 42 36.9	
MK31	Makanchi Array	8.61	47	eP	Pn	11 40 07.6	+1.5
MK31	comp=Z,2.0nm,0.6s			pmax	pmax		
MKAR	Makanchi Array	8.61	47	i P	Pn	11 40 02.2	-4.0
MKAR	comp=Z,1.0nm,0.9s			pmax	pmax		
MKAR	Makanchi Array comp=Z,0.4nm,0.3s,baz=231,slow=14,SNR=21	8.61	47	Pn	Pn	11 40 08.4	+2.2
MKAR	comp=Z,0.2nm,0.3s,baz=235,slow=28,SNR=4.5			Lg	Lg	11 42 28.0	
KURBB	Kurchatov Arra comp=Z,0.1nm,0.3s,baz=214,slow=30,SNR=6.4	10.07	20	Lg	Lg	11 43 16.8	
BVA0	Borovoye Array comp=Z,1.9nm,0.9s,baz=160,slow=10,SNR=4.0	11.89	352	Pn	Pn	11 40 51.8	+0.7
BVA0	Borovoye Array	11.89	352	P	Pn	11 40 51.8	+0.7
BVA0	comp=Z,2.0nm,0.9s			pmax	pmax		
BVAR	Borovoye Array comp=Z,0.3nm,0.3s,baz=158,slow=12,SNR=5.4	11.89	352	Pn	Pn	11 40 58.1	+7.0
BVAR	comp=Z,0.2nm,0.3s,baz=157,slow=23,SNR=2.7			Sn	Sn	11 43 10.8	+7.3
BVAR	comp=Z,0.2nm,0.3s,baz=162,slow=24,SNR=3.8			Lg	Lg	11 44 13.0	
AKTO	Aktyubinsk comp=Z,0.1nm,0.3s,baz=124,slow=16,SNR=2.6	13.92	316	Pn	Pn	11 41 19.7	+1.0
ZALV	Zalesovo Beam comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=3.8	14.91	28	Pn	Pn	11 41 33.7	+1.5
ARU	Arti	17.87	333	i P	Pn	11 42 05.8	-4.2
ARU	comp=Z,2.0nm,1.2s			pmax	pmax		
GTA	Gaotai	20.42	86	eP	P	11 42 39.8	+1.0
GTA				pP	pP	11 42 43.1	-0.4
GTA				sP	sP	11 42 45.8	+0.1
GTA	comp=Z,5.0nm,1.3s			pmax	pmax		
GNI	Garni	21.50	276	i P	P	11 42 46.1	-4.4
GNI	comp=Z,9.0nm,0.9s			pmax	pmax		
ULN	Ulaanbaatar	24.92	63	eP	P	11 43 24.2	-0.5
ULN	comp=Z,1.0nm,0.9s			pmax	pmax		
WRA	Warramunga Arr	83.20	124	i P	P	11 50 28.2	+0.3
WRA	Warramunga Arr comp=Z,0.4nm,0.7s,baz=328,slow=5.0,SNR=5.3	83.20	124	P	P	11 50 26.3	-1.6
ASAR	Alice Springs	85.71	127	P	P	11 50 39.1	-1.4
ASAR	comp=Z,1.0nm,0.7s			pmax	pmax		
ASAR	Alice Springs comp=Z,12nm,0.4s,baz=316,slow=4.9,SNR=11	85.71	127	P	P	11 50 39.1	-1.4

WEL 13 11:42:37.2, 40°.3S±0°.6×**176°.5E**±0°.9**, h16**^{km}±1^{km}**, ML3.5**/12**,**
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRHZ	Porangahau	0.13	73	P	Pb	11 42 41.5	+0.1
PRHZ				S	Sb	11 42 45.4	+1.4
ANWZ	Angora Road	0.15	178	P	Pb	11 42 42.3	+0.6
ANWZ				S	Sb	11 42 46.2	+1.5
DVHZ	Dannevirke	0.23	272	P	Pb	11 42 43.3	+0.2
DVHZ				S	Sb	11 42 47.8	+0.9
WPHZ	Waipukurau	0.24	355	P	Pb	11 42 43.4	+0.2
WPHZ				S	Sb	11 42 48.4	+1.2
PXZ	Pawanui	0.41	48	P	Pb	11 42 46.3	+0.3
PXZ				S	Sn	11 42 54.1	-1.5
BFZ	Birch Farm	0.41	204	P	Pb	11 42 46.5	+0.4
BFZ				S	Sb	11 42 53.5	+1.4
PRWZ	Pori Road	0.45	237	P	Pb	11 42 47.7	+0.9
PRWZ				S	Sn	11 42 56.1	-0.7
TSZ	Takapari Road	0.46	302	P	Pb	11 42 47.1	+0.1
TSZ				S	Sb	11 42 54.7	+1.1
POWZ	Post Office Ro	0.54	261	P	Pb	11 42 49.0	+0.7
POWZ				S	Sn	11 42 57.8	-1.2
KAHZ	Kahuranaki	0.60	32	P	Pb	11 42 49.7	+0.4
KAHZ				S	Sn	11 43 00.2	-0.3
CPWZ	Castlepoint	0.64	199	P	Pb	11 42 50.6	+0.7
TIWZ	Tintock	0.65	223	P	Pb	11 42 50.7	+0.6
TIWZ				S	Sn	11 43 01.2	-0.4
MRZ	Mangatainoka R	0.77	242	P	Pg	11 42 52.2	+0.1
MRZ				S	Sn	11 43 04.0	-0.5
CKHZ	Cape Kidnapper	0.80	36	P	Pg	11 42 52.3	-0.5
CKHZ				P	Pb	11 42 52.2	-0.5
BHHZ	Black Hill Sta	0.87	339	P	Pb	11 42 54.1	+0.1
BHHZ				S	Sn	11 43 06.8	-0.4
MCHZ	McNeill Hill	0.88	12	P	Pg	11 42 54.2	0.0
MCHZ				S	Sn	11 43 08.1	+0.8
KWHZ	Kaweka Forest	0.88	358	P	Pg	11 42 54.3	0.0
KWHZ				S	Sn	11 43 08.0	+0.5
OHWZ	Ohakea	0.89	276	P	Pn	11 42 55.6	+0.7
TMWZ	Te Maipa	0.91	209	P	Pb	11 42 53.7	-0.9
HOWZ	Holdsworth Sta	0.94	231	P	Pb	11 42 54.5	-0.6
HOWZ				S	Sb	11 43 07.1	-0.1
MOVZ	Moawhango	1.05	328	P	Pn	11 42 57.2	-0.1
MOVZ				S	Sn	11 43 11.9	+0.1
OGWZ	Otaki Gorge	1.11	242	P	Pb	11 42 57.2	-0.9
OGWZ				S	Sb	11 43 12.5	+0.2
ARHZ	Aropaoanui	1.12	21	P	Pb	11 42 57.2	-0.9
ARHZ				S	Sg	11 43 13.4	0.0
MTW	Mount Morrison	1.12	221	P	Pb	11 42 56.5	-1.7
MTW				S	Sb	11 43 11.6	-1.0
BKZ	Black Stump Fm	1.14	1	P	Pn	11 42 57.6	-0.9
BKZ				S	Sb	11 43 13.0	-0.1
MTVZ	Mangateitei	1.20	320	P	Pb	11 42 59.8	+0.3
TUVZ	Tukino	1.21	329	P	Pg	11 43 00.3	-0.4
WHVZ	Whangaehu Hut	1.23	326	P	Pb	11 43 00.3	+0.2
TRVZ	Turoa	1.23	325	P	Pb	11 43 00.3	+0.2
NMHZ	Naumai	1.23	12	P	Pn	11 42 59.4	-0.4
TRWZ	Traveller	1.24	208	P	Pn	11 42 57.7	-2.2
DRZ	Dome Shelter	1.24	326	P	Pb	11 43 00.6	+0.1
FWVZ	Far West T-bar	1.27	326	P	Pb	11 43 00.8	0.0
WAZ	Wanganui	1.27	295	P	Pg	11 43 01.2	-0.4
KIW	Kapiti Island	1.31	244	P	Pn	11 43 00.0	-0.8
NGZ	Ngauruhoe	1.31	329	P	Pb	11 43 01.3	-0.2
COVZ	Chateau Observ	1.31	327	P	Pb	11 43 01.8	+0.2
CAW	Cannon Point	1.33	233	P	Pn	11 42 59.6	-1.5
PAWZ	Paruwai Farm	1.33	216	P	Pn	11 42 59.3	-1.8
PKVZ	Pokaka	1.33	319	P	Pb	11 43 02.1	+0.3
KRVZ	Karewarewa	1.37	332	P	Pn	11 43 00.8	-0.9
WTVZ	West Tongariro	1.37	330	P	Pb	11 43 02.7	+0.2
RITZ	Rihia Road	1.41	340	P	Pb	11 43 03.6	+0.5
MSWZ	Moikau Station	1.44	219	P	Pn	11 43 00.5	-2.2
KATZ	Kakaramea	1.46	336	P	Pn	11 43 02.7	-0.3
RAHZ	Arahi	1.47	19	P	Pn	11 43 01.9	-1.1
TWVZ	Taurewa	1.47	327	P	Pb	11 43 03.9	-0.2
MRHZ	Matea Rd	1.47	358	P	Pn	11 43 03.1	0.0
MTHZ	Maungataniwha	1.48	11	P	Pn	11 43 02.3	-0.9
RATZ	Rangitukua	1.54	339	P	Pb	11 43 05.8	+0.5
PLWZ	Palliser	1.56	216	P	Pn	11 43 02.0	-2.3
KNZ	Kokohu	1.58	36	P	Pn	11 43 02.4	-2.1
MHGZ	Mahia Peninsul	1.60	44	P	Pn	11 43 01.8	-3.0
SNGZ	Shannon Statio	1.67	24	P	Pn	11 43 04.3	-1.4
PRGZ	Paritu Road	1.76	39	P	Pn	11 43 04.7	-2.3
VRZ	Vera Road	1.77	311	P	Pb	11 43 08.6	-0.7
LREZ	Lake Rotokare	1.80	297	P	Pb	11 43 09.9	+0.2
PRRZ	Plateau Road	1.81	358	P	Pb	11 43 10.4	+0.5
MUGZ	Murupara	1.84	7	P	Pn	11 43 07.9	-0.2
TCW	Tory Channel	1.90	241	P	Pn	11 43 07.3	-1.5
DUWZ	D'Urville Isla	2.00	255	P	Pn	11 43 10.1	-0.3
PREZ	Palmer Road	2.02	298	P	Pb	11 43 12.5	-1.1
URZ	Urewera	2.10	14	P	Pn	11 43 09.8	-1.9
MWZ	Matawai	2.13	23	P	Pn	11 43 10.0	-2.2
TKGZ	Te Karaka	2.15	30	P	Pn	11 43 09.9	-2.4
HIZ	Hauiti	2.18	325	P	Pb	11 43 16.0	-0.3
TUWZ	Tuamarina	2.22	239	P	Pn	11 43 11.2	-2.1
NNZ	Nelson	2.52	248	P	Pn	11 43 16.4	-1.0
RUGZ	Raukumara Rang	2.52	22	P	Pn	11 43 15.6	-2.0
WMGZ	Waiomatatini S	2.91	32	P	Pn	11 43 19.7	-3.0
QRZ	Quartz Range	3.05	259	P	Pn	11 43 23.7	-1.0
THZ	Tophouse	3.06	240	P	Pn	11 43 22.6	-2.3

IDC 13 11:48:47.8±1.7**, 15°.31S**×**173°.50W, h0**^{km}**, mb3.8**/5**,**
mb1 4.2/5**, mb1mx3.8**/28**, mbtmp3.8**/5**, Error ellipse:**
s-maj=138.7km s-min=20.5km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	WAKE ISLAND Hy baz=146,slow=76,SNR=8.1	38.84	329	T	T	12 36 58.2	
H11S3	WAKE ISLAND Hy baz=146,slow=76,SNR=8.7	38.85	329	T	T	12 37 00.7	
H11S1	WAKE ISLAND Hy baz=146,slow=76,SNR=6.8	38.86	329	T	T	12 37 03.2	
STKA	Stephens Creek 1.6nm,0.5s,baz=72,slow=8.6,SNR=6.0	44.00	240	P	P	11 56 57.6	+0.4
WRA	Warramunga Arr 0.7nm,0.5s,baz=92,slow=6.9,SNR=48	49.77	257	P	P	11 57 42.4	-0.2
ASAR	Alice Springs 1.8nm,0.4s,baz=88,slow=7.8,SNR=41	50.05	252	P	P	11 57 44.0	-0.7
NVAR	Mina Array Bea 0.8nm,0.7s,baz=226,slow=10,SNR=8.0	74.33	42	P	P	12 00 27.6	0.0
TXAR	Lajitas Array 0.4nm,0.8s,baz=207,slow=8.1,SNR=4.0	80.64	56	P	P	12 01 03.0	0.0
PDAR	Pinedale Array 0.5nm,0.7s,baz=224,slow=2.5,SNR=4.8	82.26	42	P	P	12 01 11.2	-0.2
BRTR	Keskin Array B 1.2nm,0.8s,baz=69,slow=2.9,SNR=4.9	146.03	321	PKPbc	PKPbc	12 08 30.0	-0.2

ISK ***13*** *11:58:58.8, 37°.17N×37°.25E, h5^{km}, ML1.5/2*
DDA ***13*** *11:59:00.8, 37°.14N×37°.26E, h7^{km}±2^{km}, ML2.6*
ISC 13 11:58:59.0±1.1**, 37°.15N**±0°.04×**37°.21E**±0°.04**, h1**^{km}±8^{km}**, n9,**
σ**1^{s}11**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.02	358	PG	Pg	11 58 59.8	+0.2

GAZ				SG	Sg	11 59 00.1	+0.2
GZT	Gaziantep	0.35	54	*i* P	Pb	11 59 06.8	-1.2
GZT				*i* S	Sb	11 59 12.9	-1.2
KUZU	Kuzuini	0.40	196	*i* P	Pb	11 59 09.0	+0.2
KUZU				*i* S	Sb	11 59 15.6	+0.2
KUZU				IAML_P			
	comp=Z,2μm,0.2s						
KMRS	Kahramanmaras	0.43	325	PG	Pb	11 59 08.5	-1.0
KMRS				SG	Sb	11 59 15.9	-0.6
ANDN	Andirin	0.81	302	*i* P	Pn	11 59 17.2	-0.5
ANDN				*i* S	Sn	11 59 29.2	-1.2
ANDN				IAML_P			
	comp=Z,733nm,0.2s						
KOZT	Kozan	1.15	287	PN	Pn	11 59 22.6	+0.3
SURC	SANLIURFA_SURC	1.15	103	*e*P	Pn	11 59 21.9	-0.4
SURC				*i* S	Sn	11 59 38.7	-0.1
ELBS	KAHRAMANMARAS	1.17	357	*e*P	Pn	11 59 23.9	+1.3
ELBS				*i* S	Sn	11 59 41.4	+2.0
ELBS				IAML_P			
	comp=Z,223nm,0.2s						
AKCD	Akcadag	1.27	26	*e*P	Pn	11 59 25.5	+1.4
AKCD				*i* S	Sn	11 59 43.2	+1.4
AKCD				IAML_P			
	comp=Z,470nm,0.2s						

IDC 13 12:33:03.2±3.8, 1°.83S×140°.57E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.2/33, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=137.4km s-min=28.1km az=87.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.01	198	P	P	12 37 25.4	-1.3
	0.2nm,0.3s,baz=21,slow=11,SNR=16						
ASAR	Alice Springs	22.65	196	P	P	12 38 06.6	+0.5
	0.6nm,0.6s,baz=24,slow=9.9,SNR=11						
MKAR	Makanchi Array	70.24	322	P	P	12 44 18.5	+0.2
	0.1nm,0.6s,baz=106,slow=5.2,SNR=2.1						

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*DDA **13** 12:34:14.6, 39°.83N×30°.06E, h7km±5km, ML2.6*

*ISK **13** 12:34:14.2, 39°.87N×30°.04E, h5km, ML1.9/9*

ISC 13 12:34:14.8±1.2, **39°.87N**±0°.03×**30°.05E**±0°.03, **h4**km±11km, **n17**, σ**1s.19**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORA	Eskisehir	0.31	88	PG	Pg	12 34 20.9	+0.1
BORA	Eskisehir	0.31	88	*i* P	Pg	12 34 21.0	+0.1
BORA				*i* S	Sb	12 34 26.9	-1.5
BORA				IAML_P			
	comp=Z,10μm,0.1s						
CAVI	Cavuskoy	0.37	334	PG	Pg	12 34 21.9	-0.1
CAVI				SG	Sg	12 34 27.3	+0.4
TVSB	Tavsanli	0.62	228	PG	Pg	12 34 26.7	0.0
GEYV	SAKARYA_Geyve	0.64	17	*i* P	Pg	12 34 26.0	-1.2
GEYV				*i* S	Sb	12 34 38.6	+0.6
GEYV				IAML_P			
	comp=Z,1μm,0.2s						
GULT	Gulveren	0.67	32	PG	Pg	12 34 27.9	+0.3
YLV	Yalova	0.87	324	PG	Pg	12 34 31.5	0.0
YLV				SG	Sb	12 34 44.1	-0.5
GDZ	Gediz	0.89	210	*i* P	Pn	12 34 33.0	-1.3
GDZ				*i* S	Sn	12 34 49.2	+1.5
GDZ				IAML_P			
	comp=Z,782nm,0.2s						
AUMIH	MIHALICIK	1.10	90	PN	Pn	12 34 36.2	-1.0
ARMT	Armutlu	1.15	308	PN	Pb	12 34 36.3	-0.9
SAHE	Sakarya_HENDEK	1.16	32	*i* P	Pg	12 34 37.7	+0.7
SAHE				*i* S	Sn	12 34 55.9	+1.7
SAHE				IAML_P			
	comp=Z,191nm,0.2s						
KAND	Kocaeli-Kandir	1.23	5	*i* P	Pg	12 34 38.3	-0.1
KAND				*i* S	Sn	12 34 58.3	+2.5
KAND				IAML_P			
	comp=Z,191nm,0.2s						
DURS	Dursunbey	1.25	258	*i* P	Pg	12 34 38.4	-0.3
DURS				*i* S	Sn	12 34 57.1	+0.8
DURS				IAML_P			
	comp=Z,501nm,0.2s						
SILT	Sile	1.32	346	PN	Pg	12 34 40.2	0.0
DEMI	Demirci	1.32	232	*i* P	Pg	12 34 39.8	-0.4
DEMI				*i* S	Sg	12 35 00.4	+3.1
DEMI				IAML_P			
	comp=Z,1μm,0.2s						
KCTX	Karacabey (Bur	1.36	288	PN	Pg	12 34 40.7	-0.2
KLYT	Kilyos	1.58	331	PN	Pb	12 34 43.7	-0.9

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*NIED **13** 12:41:00, 36°.00N×141°.30E, h11km, Mw3.6 Best double couple: M0 2.87000×10^14 NP1:φs192.00000°, δ42.00000°, λ-91.00000°. NP2:φs13.00000°, δ48.00000°, λ-89.00000°.*

*ISCJB **13** 12:41:22.7±1.3, 35°.96N±0°.04×141°.40E±0°.06, h10km±8km, mb3.5/7, MS3.7/1, Error ellipse: s-maj=8.4km s-min=6.7km az=6.5*

*IDC **13** 12:41:23.3±0.8, 35°.94N×141°.23E, h0km, mb3.4/7, mb1 3.7/11, mb1mx3.5/43, mbtmp3.6/11, ML3.2/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/42, Error ellipse: s-maj=24.2km s-min=16.2km az=89.0*

*JMA **13** 12:41:25.5±0.2, 35°.94N×141°.22E, h23km±3km, M4.0*

JMA Felt I J1.

ISC 13 12:41:24.1±2.6, **36°.01N**±0°.04×**141°.15E**±0°.07, **h6**km±16km, **n28**, σ**0s.96**/26, **mb3.5**/7, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.39	218	P	Pb	12 41 33.5	+0.1
CHOJ				S	Sb	12 41 39.2	-0.4
JIHU	Itakohorinouch	0.51	266	P	Pn	12 41 37.2	-0.8
JIHU				S	Sn	12 41 45.8	-1.2
JHYU	Hitachinakayam	0.57	306	P	Pn	12 41 38.4	-0.3
JHYU				S	Sn	12 41 47.4	-1.0
JSMT	Sammumatsuo	0.68	238	P	Pn	12 41 39.5	-0.8
JHO	Hitachi	0.77	322	P	Pn	12 41 41.0	-0.5
JYT	Yasato	0.81	286	P	Pb	12 41 41.2	+0.6
ONAJ	Iwakimizuishiy	1.13	345	P	Pb	12 41 46.2	+0.1
JFK	Kawauchi	1.38	351	P	Pn	12 41 49.5	-0.4
MJAR	Matsushiro Arr	2.44	284	Pn	Pn	12 42 04.9	+0.4
	1.2nm,0.3s,baz=94,slow=15,SNR=122						
MJAR				Sn	Sg	12 42 42.4	-0.1
	2.1nm,0.3s,baz=93,slow=30,SNR=4.8						
MAT	Matsushiro	2.44	284	P	Pn	12 42 05.7	+1.2
MAT				*e*S	Sn	12 42 33.6	-1.1
JHJ	Hachijo jima 2	3.09	202	Pn	Pn	12 42 14.6	+1.1
	26nm,0.3s,baz=6.8,slow=23,SNR=8.2						
JHJ				Sn	Sn	12 42 51.9	+1.1
	27nm,0.3s,baz=72,slow=20,SNR=5.4						
ASAJ	Asahikawa	8.18	7	Pn	Pn	12 43 24.0	+0.7
	0.4nm,0.3s,baz=206,slow=12,SNR=5.2						
ASAJ				Sn	Sb	12 45 11.4	-12
	0.5nm,0.3s,baz=252,slow=20,SNR=3.5						
JCJ	Chichijima	8.93	174	Pn	Pn	12 43 31.4	-2.3
	6.1nm,0.3s,baz=259,slow=16,SNR=5.8						
JNU	Nakatsue	8.95	254	LR	LR	12 46 32.6	
	comp=Z,35nm,21.8s,baz=358,slow=34						
H11N2	WAKE ISLAND Hy	27.82	119	T	T	13 16 11.2	
	baz=311,slow=75,SNR=39						
H11N1	WAKE ISLAND Hy	27.83	119	T	T	13 16 07.7	
	baz=311,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	27.84	119	T	T	13 16 14.3	
	baz=311,slow=75,SNR=40						
SONM	Songino Array	28.20	306	P	P	12 47 17.1	-0.5
	0.2nm,0.6s,baz=108,slow=9.0,SNR=2.4						
H11S1	WAKE ISLAND Hy	28.50	121	T	T	13 16 57.8	
	baz=313,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	28.50	121	T	T	13 16 58.7	
	baz=313,slow=75,SNR=42						
H11S2	WAKE ISLAND Hy	28.51	121	T	T	13 17 08.0	
	baz=313,slow=75,SNR=35						
ZALV	Zalesovo Beam	42.46	313	P	P	12 49 20.6	+1.0
	0.3nm,0.3s,baz=101,slow=7.5,SNR=2.2						
MKAR	Makanchi Array	44.49	303	P	P	12 49 37.8	+1.5
	0.4nm,0.6s,baz=89,slow=9.5,SNR=6.4						
ILAR	Eielson Array	50.47	32	P	P	12 50 23.3	+0.9
	0.3nm,0.9s,baz=272,slow=7.0,SNR=3.0						
WRA	Warramunga Arr	56.02	188	P	P	12 51 03.0	-0.7
	1.3nm,0.9s,baz=4.9,slow=7.4,SNR=13						
ASAR	Alice Springs	59.74	188	P	P	12 51 29.6	-0.3
	0.5nm,0.7s,baz=17,slow=9.7,SNR=14						
KIRV	Kirov	60.94	323	LR	LR	13 19 53.5	
	comp=Z,54nm,18.3s,baz=112,slow=38						
YKA	Yellowknife Ar	64.80	30	P	P	12 52 03.3	0.0
	0.1nm,0.3s,baz=301,slow=6.1,SNR=3.3						

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*IDC **13** 12:41:43.5±1.4, 11°.45S×164°.97E, h0km, mb3.9/6, mb1 4.1/8, mb1mx3.9/30, mbtmp4.0/8, ML4.1/2, Error ellipse: s-maj=37.9km s-min=27.6km az=125.0*

*ISCJB **13** 12:41:44.9±1.0, 11°.4S±0°.2×164°.7E±0°.1, h10km, mb4.0/10, Error ellipse: s-maj=28.1km s-min=14.2km az=145.2*

*NEIC **13** 12:41:46.6±0.8, 11°.33S×164°.72E, h10km, mb4.2/3, Error ellipse: s-maj=21.5km s-min=10.5km az=142.0*

ISC 13 12:41:46.1±1.0, **11°.4S**±0°.1×**164°.7E**±0°.1, **h10**km, **n20**, σ**1s.66**/20, **mb4.2**/10, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.11	292	Pn	Pn	12 43 02.4	-0.3
	18nm,0.3s,baz=12,slow=4.8,SNR=3.9						
HNR				Sn	Sn	12 43 57.7	-4.1
	7.3nm,0.3s,baz=63,slow=23,SNR=3.6						
DZM	Mont Dzumac	10.74	172	*e*Pn	Pn	12 44 17.5	-2.7
DZM	Mont Dzumac	10.74	172	Pn	Pn	12 44 16.7	-3.5
	0.4nm,0.3s,baz=131,slow=22,SNR=7.9						
CTA	Charters Tower	19.77	242	Pn	Pn	12 46 21.9	+3.9
	0.2nm,0.3s,baz=63,slow=15,SNR=5.7						
COEN	Coen	21.20	261	*e*P	P	12 46 33.2	+1.2
	7.6nm,0.9s						
WB2	Warramunga Arr	30.43	250	*e*P	P	12 47 58.7	-0.4
	10nm,1.5s						
WR1	Warramunga Arr	30.44	250	*e*P	P	12 48 00.0	+0.9
	5.0nm,1.0s						
WRA	Warramunga Arr	30.44	250	P	P	12 48 00.0	+0.9
	1.0nm,0.7s,baz=81,slow=9.1,SNR=12						
ASAR	Alice Springs	31.76	243	P	P	12 48 11.2	+0.5
	1.3nm,1.1s,baz=62,slow=10,SNR=5.8						
FITZ	Fitzroy Crossi	38.34	255	*e*P	P	12 49 07.4	-0.1
	4.5nm,0.8s						
CM31	Chiang Mai Arr	71.35	294	*e*P	P	12 53 07.6	+0.8
CMAR	Chiang Mai Arr	71.35	294	P	P	12 53 07.6	+0.8
	0.4nm,0.4s,baz=115,slow=4.3,SNR=3.5						
SONA0	Songino Array	78.37	324	*e*P	P	12 53 47.1	+0.2
SONM	Songino Array	78.37	324	P	P	12 53 47.1	+0.2
	0.4nm,0.7s,baz=121,slow=5.6,SNR=3.2						
IM3	Indian Mountai	83.02	16	*e*P	P	12 54 12.4	+1.2
ILAR	Eielson Array	84.15	19	P	P	12 54 16.0	-1.1
	1.6nm,0.9s,baz=242,slow=5.7,SNR=13						
IL1	Eielson Array	84.16	19	*e*P	P	12 54 16.9	-0.3
MK01	Makanchi Array	93.09	317	*e*P	P	12 55 00.3	0.0
MK32	Makanchi Array	93.10	317	*e*P	P	12 55 00.2	-0.2
MKAR	Makanchi Array	93.10	317	P	P	12 55 00.2	-0.2
	1.1nm,0.9s,baz=102,slow=5.1,SNR=9.4						

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*KRNET **13** 12:44:01.7±0.1, 40°.85N×69°.32E, mb2.6*

*SOME **13** 12:44:03.4, 40°.82N×69°.52E, h25km*

*NNC **13** 12:44:08.9±5.7, 41°.00N×69°.75E, h0km, mb2.7, mpv2.3, Error ellipse: s-maj=53.3km s-min=18.7km az=64.0*

ISC 13 12:44:04.4±1.8, **40°.89N**±0°.05×**69°.56E**±0°.09, **h10**km, **n12**, σ**2s.29**/24, **11C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	1.27	131	⇑*i*P	Pn	12 44 27.3	-1.0
	baz=24						
BTK				⇑*i*S	Sb	12 44 46.1	+1.3
	baz=24						
IUG	Iuzhnay	1.30	15	*e*P	Pg	12 44 29.9	+0.4
	79nm,0.2s						
IUG				*e*S	Sn	12 44 48.7	+2.3
	19nm,0.4s						
ARK	Arkit	2.02	63	⇑*i*P	Pb	12 44 40.3	-1.0
	baz=64						
ARK				⇑*i*S	Sg	12 45 08.9	-0.5
	baz=64						
KK31	Karatay Array	2.32	17	⇑P	Pb	12 44 45.3	-1.1
	0.8nm,0.2s,baz=339,slow=39,SNR=25						
KK31				⇑S	Sg	12 45 16.1	-2.9
	2.2nm,0.3s,baz=202,slow=25,SNR=14						
ARSB	Arslanbob	2.62	79	⇑*i*P	Pb	12 44 49.3	-2.2
	baz=79						
ARSB				⇑*i*S	Sb	12 45 22.9	-0.9
	baz=79						
MNAS	Manas	2.72	53	⇓P	Pb	12 44 52.0	-1.2
	0.3nm,0.2s						
MNAS				⇓S	Sn	12 45 22.2	+0.9
	1.5nm,0.4s						
MNAS	Manas	2.72	53	⇓*i*P	Pb	12 44 50.7	-2.5
	baz=54						
MNAS				⇓*i*S	Sb	12 45 25.4	-1.3
	baz=54						
SFK	Sufi-Kurgan	3.13	105	⇑P	Pb	12 44 57.4	-2.9
	0.6nm,0.3s						
SFK				⇓S	Sb	12 45 37.5	-1.1
	0.9nm,0.3s						
SFK	Sufi-Kurgan	3.13	105	⇓*i*P	Pn	12 44 56.4	+2.4
	baz=3.0						
SFK				⇓*i*S	Sn	12 45 34.8	+3.2
	baz=3.0						
MRKS	Merke	3.31	55	*e*P	Pb	12 45 02.9	-0.3
	2.2nm,0.2s						
MRKS				*e*S	Sb	12 45 45.5	+2.0
	2.7nm,0.8s						
AML	Almayashu	3.34	67	⇑*e*P	Pb	12 45 00.8	-3.2
	baz=67						
AML				⇑*i*S	Sb	12 45 41.5	-3.3
	baz=67						
ARLS	Aral	3.71	73	⇓*i*P	Pn	12 45 03.7	+1.8
	baz=73						
ARLS				⇓*i*S	Sn	12 45 50.4	+4.6
	baz=73						

MEX 13 12:46:24.5±0.4, **14°.22N×92°.72W, h30**km±25km, **MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	2.12	15	*e*P	Pn	12 46 56.2	-1.9

NNC 13 12:46:55.6±1.5, **36°.85N×71°.15E, h132**km±37km, **mb2.8, mpv3.5, 5C-5D, Error ellipse: s-maj=19.2km s-min=11.4km az=70.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.66	30	⇓P	Pn	12 47 51.2	+0.2
	16nm,0.3s						
SFK				⇓S	Sn	12 48 34.6	+0.7
	5.1nm,0.2s						
MNAS	Manas	5.72	10	⇑P	Pn	12 48 17.7	-0.7
	1.5nm,0.5s						
MNAS				⇑S	Sn	12 49 23.7	+0.6
	7.1nm,0.6s						
KK31	Karatay Array	6.26	356	P	Pn	12 48 25.6	0.0
	1.1nm,0.2s,baz=182,slow=13,SNR=27						
KK31				⇓S	Sn	12 49 36.9	+0.9
	1.3nm,0.3s,baz=183,slow=19,SNR=7.3						
AAK	Ala-Archa	6.33	23	⇑P	Pn	12 48 25.8	-0.7
	2.1nm,0.8s						
AAK				⇓S	Sn	12 49 37.7	+0.1
	4.5nm,0.6s						
TKM2	Tokmak 2	6.96	28	⇓P	Pn	12 48 36.1	+1.1
	1.5nm,0.6s						
AB31	Akbulak array	14.84	330	⇑P	Pn	12 50 18.8	+0.2
	1.2nm,0.7s,baz=148,slow=12,SNR=15						
AB31				⇑S	Sn	12 53 03.6	+0.9
	0.4nm,0.6s						

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*BJI **13** 12:50:28.8, 11°.00S×164°.60E, h10km, mB5.4/50, mb5.0/63, Ms5.2/55, Ms7 4.9/53*

*IDC **13** 12:50:30.2±0.6, 10°.93S×164°.57E, h0km, mb4.9/23, mb1 4.9/26, mb1mx4.8/41, mbtmp4.9/26, ML4.8/3, MS4.5/35, Ms1 4.5/35, ms1mx4.5/45, Error ellipse: s-maj=18.0km s-min=13.2km az=113.0*

*NEIC **13** 12:50:32.0±0.2, 10°.92S×164°.57E, h10km, mb5.2/101, Error ellipse: s-maj=5.8km s-min=3.7km az=142.0*

*MOS **13** 12:50:32.3±0.8, 10°.87S×164°.46E, h21km, mb5.1/50, MS4.6/9, Error ellipse: s-maj=9.1km s-min=7.5km az=120.4*

*ISCJB **13** 12:50:33.2±0.2, 10°.94S±0°.04×164°.51E±0°.03, h29km, mb5.0/145, MS4.8/57, Error ellipse: s-maj=5.3km s-min=3.8km az=155.8*

*GCMT **13** 12:50:36.0±0.1, 10°.89S±0°.01×164°.45E±0°.01, h12km, MW5.3/117, Moment Tensor Solution. s101,c182; s117,c212; Duration: 1s.1 Moment tensor: Scale 10^17 Nm; Mrr0.87±.01; Mθθ-0.98±.01; Mφφ0.10±.01; Mrθ0.52±.03; Mθφ0.25±.01; Mφr-0.20±.03; Best double couple: M0 1.10400×10^17 NP1:φs108.00000°, δ60.00000°, λ96.00000°. NP2:φs276.00000°, δ30.00000°, λ80.00000°. Principal axes: T 1.0280, Plg74.0000°, Azm33.0000°; N 0.1520, Plg5.0000°, Azm285.0000°; P -1.1800, Plg15.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 12:50:34.1±0.3, **11°.07S**±0°.05×**164°.73E**±0°.04, **h29**km, **n349**, σ**1s.64**/357, **mb5.1**/145, **MS4.8**/60, **14C-2D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.98	289	*e*P	Pn	12 51 46.0	-1.0
HNR				*e*S	Sn	12 52 39.0	-4.7
HNR	Honiara	4.98	289	*e*Pn	Pn	12 51 45.7	-1.3
HNR				*e*Sn	Sn	12 52 43.1	-0.7
HNR	Honiara	4.98	289	*e*P	Pn	12 51 45.7	-1.3
HNR				*e*		12 52 43.1	
HNR	Honiara	4.98	289	Pn	Pn	12 51 45.4	-1.6
	60nm,0.3s,baz=25,slow=0.8,SNR=21						
HNR				Sn	Sn	12 52 40.9	-2.8
	43nm,0.3s,baz=346,slow=19,SNR=3.4						
HNR				LR	LR	12 53 48.1	
	comp=Z,12μm,18.9s,baz=138,slow=41						
MARNC	Mare, Loyalty	10.83	163	*e*Pn	Pn	12 53 05.8	-1.4
DZM	Mont Dzumac	11.06	172	*e*Pn	Pn	12 53 12.5	+1.9
	107nm,0.8s						
DZM				*e*LQ	LQ	12 55 15.5	
	4μm,23.4s						
DZM				*e*LR	LR	12 55 44.0	
	comp=Z,13μm,26.6s						
DZM	Mont Dzumac	11.06	172	Pn	Pn	12 53 13.3	+2.7
	4.7nm,0.3s,baz=360,slow=14,SNR=19						
DZM				LR	LR	12 56 46.9	
	comp=Z,8μm,20.6s,baz=18,slow=34						
PINNC	Pines Island,	11.77	168	*e*Pn	Pn	12 53 08.5	-12
RABL	Rabaul	14.20	298	*e*Pn	P	12 53 56.1	-4.5
FUNA	Funafuti	14.48	81	*e*Pn	Pn	12 53 55.5	-1.7
MSVF	Nonsavu	14.50	119	*e*Pn	Pn	12 53 56.3	-1.2
MSVF				*e*Sn	Sn	12 56 24.4	-13
MSVF	Nonsavu	14.50	119	*e*P	Pn	12 53 56.3	-1.2
TARA	Tarawa	14.79	34	*e*Pn	Pn	12 53 59.9	-1.5
EIDS	Eidsvold	19.22	220	P	Pn	12 54 57.2	+0.1
	baz=19,SNR=6.4						
EIDS	Eidsvold	19.22	220	*e*P	Pn	12 54 56.5	-0.6
	104nm,1.3s						
MANU	Manus Island	19.43	296	*e*P	Pn	12 54 58.8	-0.9
	673nm,1.3s						
CTA	Charters Tower	19.91	241	P	Pn	12 55 04.8	-0.6
	1.5nm,0.3s,baz=68,slow=12,SNR=57						
CTA				LR	LR	13 02 22.6	
	comp=Z,1μm,19.4s,baz=55,slow=36						
CTAO	Charters Tower	19.91	241	*e*P	Pn	12 55 04.0	-1.5
	128nm,1.0s						
CTAO	Charters Tower	19.91	241	*e*P	Pn	12 55 04.0	-1.5
CTAO				pmax	pmax		
	comp=Z,128nm,1.0s						
MTSU	Mount Surprise	20.96	248	P	P	12 55 15.0	0.0
	baz=21,SNR=47						
COEN	Coen	21.24	260	P	P	12 55 18.3	+0.3
	baz=21,SNR=21						
COEN	Coen	21.24	260	*e*P	P	12 55 18.1	0.0
	comp=Z,50nm,0.9s						
RMQ	Roma	21.50	222	P	P	12 55 22.6	+1.8
	baz=22,SNR=23						
ARMA	Armidale	22.78	210	*e*P	P	12 55 34.2	-0.3
	comp=Z,60nm,1.3s						
JAY	Jayapura	25.31	288	P	P	12 55 56.3	-2.2
	comp=Z,20nm,0.8s,baz=104,slow=4.2,SNR=3.1						
JAY				LR	LR	13 05 36.8	
	comp=Z,2μm,19.8s,baz=60,slow=36						
QIS	Mount Isa	25.92	246	P	P	12 56 04.5	+0.5
	baz=26,SNR=9.6						
CMSA	Cobar Meteorol	26.93	218	P	P	12 56 13.7	+0.7
	baz=27,SNR=6.7						
URZ	Urewera	29.26	160	*e*P	P	12 56 31.9	-1.8
	comp=Z,29nm,1.4s						
URZ	Urewera	29.26	160	LR	LR	13 06 09.8	
	comp=Z,846nm,20.6s,baz=18,slow=32						
H11S2	WAKE ISLAND Hy	29.43	4	T	T	13 27 11.7	
	baz=184,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	29.44	4	T	T	13 27 21.3	
	baz=184,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.45	4	T	T	13 27 12.5	
	baz=184,slow=76,SNR=13						
STKA	Stephens Creek	29.75	222	P	P	12 56 38.8	+0.7
	baz=30,SNR=12						
STKA	Stephens Creek	29.75	222	*e*P	P	12 56 38.0	-0.1
	comp=Z,12nm,1.4s						
STKA	Stephens Creek	29.75	222	*e*P	P	12 56 38.0	-0.1
STKA				pmax	pmax		
	comp=Z,12nm,1.4s						
STKA	Stephens Creek	29.75	222	P	P	12 56 37.8	-0.3
	comp=Z,14nm,0.8s,baz=56,slow=9.6,SNR=17						
STKA				LR	LR	13 07 08.8	
	comp=Z,2μm,21.2s,baz=42,slow=34						
WRAB	Tennant Creek	30.53	250	*e*P	P	12 56 44.4	-0.8
	comp=Z,40nm,1.2s						
WRAB	Tennant Creek	30.53	250	*ce*P	P	12 56 44.5	-0.8
WRAB				pmax	pmax		
	comp=Z,54nm,1.7s						
WB2	Warramunga Arr	30.53	249	*e*P	P	12 56 44.5	-0.8
	comp=Z,45nm,1.1s						
WB2				*e*pP	P	12 56 44.6	-0.6
WRA	Warramunga Arr	30.54	249	*i* P	P	12 56 44.5	-0.9
WRA				pmax	pmax		
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	30.54	249	P	P	12 56 43.8	-1.6
	comp=Z,16nm,0.9s,baz=75,slow=9.1,SNR=88						
WRA				LR	LR	13 09 14.1	
	comp=Z,1μm,18.5s,baz=75,slow=37						
H11N1	WAKE ISLAND Hy	30.66	4	T	T	13 28 42.4	
	baz=184,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.67	4	T	T	13 28 42.8	
	baz=184,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.68	4	T	T	13 28 43.7	
	baz=184,slow=76,SNR=13						
GUMO	Guam	31.44	321	LR	LR	13 09 05.3	
	comp=Z,2μm,18.2s,baz=142,slow=36						
TOO	Toolangi	31.55	210	P	P	12 56 54.7	+0.7
	baz=32,SNR=4.4						
KDU	Kakadu	31.60	264	P	P	12 56 52.7	-1.9
	baz=32,SNR=4.6						
AS01	Alice Springs	31.85	243	*e*P	P	12 56 56.6	-0.3
AS01				*e*pP	P	12 56 56.9	0.0
AS31	Alice Springs	31.89	243	*e*P	P	12 56 57.0	-0.3
AS31				*e*pP	P	12 56 57.2	0.0
ASAR	Alice Springs	31.89	243	P	P	12 56 55.5	-1.7
	comp=Z,15nm,1.0s,baz=73,slow=9.3,SNR=78						
ASAR				LR	LR	13 08 09.7	
	comp=Z,952nm,21.1s,baz=69,slow=33						
HTT	Hallett	32.48	223	P	P	12 57 02.8	+0.5
	baz=33,SNR=13						
BBOO	Buckleboo	34.09	226	P	P	12 57 17.6	+1.3
	baz=34,SNR=32						
BBOO	Buckleboo	34.09	226	*e*P	P	12 57 17.2	+0.9
	comp=Z,84nm,0.9s						
SIJI	Sorong	34.75	285	LR	LR	13 11 33.3	
	comp=Z,852nm,20.1s,baz=108,slow=37						
PALU	Palau	35.23	300	P	P	12 57 26.3	-0.1
	baz=35,SNR=3.3						
KNRA	Kununurra	35.26	259	P	P	12 57 24.9	-1.7
	baz=35,SNR=8.5						
RAR	Rarotonga	35.48	111	LR	LR	13 11 04.8	
	comp=Z,531nm,18.2s,baz=278,slow=35						
WRKA	Warakurna	37.19	243	P	P	12 57 42.2	-0.9
	baz=37,SNR=16						
FITZ	Fitzroy Crossi	38.41	255	P	P	12 57 51.6	-1.8
	baz=38,SNR=54						
FITZ	Fitzroy Crossi	38.41	255	*e*P	P	12 57 51.8	-1.6
	comp=Z,33nm,0.8s						
FITZ	Fitzroy Crossi	38.41	255	P	P	12 57 51.6	-1.8
	comp=Z,35nm,0.8s,baz=92,slow=6.9,SNR=60						
FITZ				LR	LR	13 13 56.9	
	comp=Z,648nm,18.2s,baz=82,slow=37						
FORT	Forrest	39.22	234	P	P	12 58 00.4	+0.4
	baz=39,SNR=32						
FORT	Forrest	39.22	234	*e*P	P	12 58 01.8	+1.8

	comp=Z,171nm,0.9s						
BATI	**Baumata**	**40.35**	**267**	LR	LR	13 15 23.4	
	comp=Z,464nm,18.1s,baz=116,slow=37						
MBWA	**Marble Bar**	**44.25**	**251**	*e*P	**P**	**12 58 41.9**	**+0.5**
PPT	**Papeete**	**44.66**	**104**	LR	LR	13 15 47.6	
	comp=Z,910nm,18.1s,baz=274,slow=34						
PPT2	**Papeete2**	**44.66**	**104**	*e*S	**S**	**13 05 19.8**	**+0.2**
	comp=Z,209nm,24.5s						
PPT2				*e*LQ	LQ	13 09 26.3	
	comp=Z,1µm,24.5s						
PPT2				*e*LR	LR	13 11 10.4	
	comp=Z,939nm,28.0s						
TBI	**Tubuai**	**45.24**	**112**	*e*S	**S**	**13 05 29.5**	**+1.6**
	comp=Z,158nm,26.8s						
TBI				*e*LQ	LQ	13 09 39.4	
	comp=Z,2µm,27.2s						
TBI				*e*LR	LR	13 11 35.4	
	comp=Z,717nm,28.2s,baz=299						
MEEK	**Meekatharra**	**46.05**	**244**	P	**P**	**12 58 55.1**	**-0.5**
	baz=46,SNR=5.2						
PMOR	**Pomariorio Ree**	**46.25**	**100**	*e*P	**P**	**12 58 59.3**	**+2.0**
	comp=Z,39nm,1.3s						
NWAO	**Narrogin (SRO)**	**48.63**	**236**	P	**P**	**12 59 15.0**	**-0.5**
	baz=49,SNR=3.7						
NWAO	**Narrogin (SRO)**	**48.63**	**236**	*e*P	**P**	**12 59 16.3**	**+0.8**
	comp=Z,63nm,1.3s						
NWAO	**Narrogin (SRO)**	**48.63**	**236**	P	**P**	**12 59 17.4**	**+1.8**
	comp=Z,18nm,1.0s,baz=322,slow=7.3,SNR=4.8						
NWAO				LR	LR	13 18 32.4	
	comp=Z,1µm,21.9s,baz=320,slow=35						
MORW	**Morawa**	**48.74**	**241**	P	**P**	**12 59 16.2**	**-0.3**
	baz=49,SNR=5.1						
MORW	**Morawa**	**48.74**	**241**	*e*P	**P**	**12 59 17.5**	**+1.0**
	comp=Z,26nm,1.0s						
JHJ	**Hachijo jima 2**	**49.97**	**332**	LR	LR	13 16 01.6	
	comp=Z,577nm,21.8s,baz=110,slow=31						
MJAR	**Matsushiro Arr**	**53.54**	**333**	P	**P**	**12 59 51.0**	**-1.3**
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJAR	**Matsushiro Arr**	**53.54**	**333**	P	**P**	**12 59 51.0**	**-1.3**
	comp=Z,7.9nm,0.8s,baz=173,slow=9.2,SNR=16						
MJAR				LR	LR	13 19 10.4	
	comp=Z,399nm,21.9s,baz=150,slow=32						
MAJO	**Matsushiro**	**53.54**	**333**	*e*P	**P**	**12 59 51.8**	**-0.6**
	comp=Z,36nm,1.3s						
MAJO	**Matsushiro**	**53.54**	**333**	*e*P	**P**	**12 59 51.8**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,36nm,1.3s						
MAT	**Matsushiro**	**53.54**	**333**	P	**P**	**12 59 50.7**	**-1.6**
MAT				S	**S**	**13 07 17.4**	**-6.3**
MJB9	**Matsu-Tunnel**	**53.55**	**333**	*e*P	**P**	**12 59 51.8**	**-0.6**
	comp=Z,36nm,1.3s						
TAOE	**Nuku Hiva Isla**	**54.27**	**93**	*e*S	**S**	**13 07 32.9**	**-1.6**
	comp=Z,246nm,24.4s						
TAOE				*e*LQ	LQ	13 13 24.9	
	comp=Z,539nm,23.3s						
TAOE				*e*LR	LR	13 15 27.9	
	comp=Z,250nm,26.0s						
JNU	**Nakatsue**	**54.52**	**325**	*e*P	**P**	**12 59 59.0**	**-0.6**
	comp=Z,42nm,1.0s						
JNU	**Nakatsue**	**54.52**	**325**	P	**P**	**12 59 59.0**	**-0.6**
	comp=Z,26nm,0.8s,baz=54,slow=22,SNR=16						
JNU				LR	LR	13 19 32.8	
	comp=Z,364nm,21.1s,baz=125,slow=32						
YULB	**Yu-li**	**54.58**	**309**	*e*P	**P**	**12 59 58.2**	**-1.9**
	comp=Z,23nm,0.9s						
TPUB	**Ta-pu**	**55.03**	**309**	*e*P	**P**	**13 00 02.1**	**-1.4**
	comp=Z,58nm,1.1s						
LEM	**Lembang**	**56.51**	**269**	P	**P**	**13 00 13.9**	**-0.6**
	comp=Z,43nm,0.8s,baz=20,slow=20,SNR=3.7						
YUK	**Yuzh-Kuril'sk**	**57.46**	**344**	*c* *i*P	**P**	**13 00 17.9**	**-2.4**
YUK				*e*		13 02 25.6	
YUK				*e*S	**S**	**13 08 12.3**	**-3.4**
YUK				MLR	MLR		
	comp=Z,682nm,20.0s						
YUK				MLR	MLR		
	comp=N,820nm,16.0s						
ASAJ	**Asahikawa**	**58.49**	**341**	P	**P**	**13 00 27.5**	**-0.1**
	comp=N,19nm,0.8s,baz=206,slow=10,SNR=16						
ASAJ				LR	LR	13 21 05.8	
	comp=N,789nm,21.5s,baz=190,slow=32						
RKT	**Rikitea**	**58.51**	**110**	*e*LQ	LQ	13 15 13.4	
	comp=N,375nm,29.0s						
RKT				*e*LR	LR	13 17 40.4	
	comp=N,595nm,21.2s						
TJN	**Taejon**	**58.87**	**325**	*i* P	**P**	**13 00 29.4**	**-1.0**
SSE	**Sheshan**	**59.18**	**317**	P	**P**	**13 00 32.0**	**-0.6**
SSE				S	**S**	**13 08 41.0**	**+2.4**
SSE				pmax	pmax		
	comp=N,9.0nm,1.0s						
SSE				pmax	pmax		
	comp=N,66nm,4.4s						
SSE				LR	LR		
	comp=N,180nm,13.9s						
SSE				LR	LR		
	comp=N,280nm,16.1s						
SSE	**Sheshan**	**59.18**	**317**	*e*P	**P**	**13 00 32.1**	**-0.5**
	comp=N,25nm,0.9s						
KSRS	**Korea Array**	**59.34**	**326**	P	**P**	**13 00 33.2**	**-0.3**
	comp=N,6.2nm,0.9s,baz=136,slow=7.3,SNR=20						
KSRS				LR	LR	13 23 55.8	
	comp=N,375nm,19.4s,baz=135,slow=34						
KS15	**Wonju Array Si**	**59.35**	**326**	*e*P	**P**	**13 00 33.5**	**-0.2**
KSAR	**Wonju Array Be**	**59.35**	**326**	P	**P**	**13 00 33.2**	**-0.4**
KSAR	**Wonju Array Be**	**59.35**	**326**	P	**P**	**13 00 33.3**	**-0.4**
KS01	**Wonju Array Si**	**59.37**	**326**	*e*P	**P**	**13 00 32.6**	**-1.2**
YSS	**Yuzh-Sakhalins**	**61.01**	**343**	*e*P	**P**	**13 00 43.8**	**-1.1**
	comp=N,8.6nm,0.4s						
YSS	**Yuzh-Sakhalins**	**61.01**	**343**	⇓*e*P	**P**	**13 00 44.9**	**0.0**
YSS				*e*		13 00 56.9	
YSS				*e*		13 03 01.4	
YSS				*e*S	**S**	**13 09 04.8**	**+3.3**
YSS				*e*PPS	PPS	13 09 15.2	
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				pmax	pmax		
	comp=Z,400nm,4.7s						
NJ2	**Nanjing**	**61.34**	**316**	*e*P	**P**	**13 00 47.8**	**+0.4**
NJ2				S	**S**	**13 09 09.4**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,18nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,360nm,5.2s						
NJ2				LR	LR		
	comp=Z,540nm,11.1s						
NJ2				LR	LR		
	comp=Z,600nm,16.5s						
NJ2				LR	LR		
	comp=Z,750nm,16.8s						
TEY	**Ternei**	**61.36**	**338**	⇓*e*P	P	13 00 51.9	+4.7
TEY				pmax	pmax		
	comp=Z,10.0nm,2.3s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
VLA	**Vladivostok**	**61.71**	**333**	*i* P	**P**	**13 00 48.2**	**-1.5**
VLA				pmax	pmax		
	comp=Z,19nm,1.2s						
QIZ	**Qiongzhong**	**61.82**	**299**	P	**P**	**13 00 52.1**	**+1.2**
QIZ				S	**S**	**13 09 17.3**	**+4.5**
QIZ				pmax	pmax		
	comp=Z,28nm,1.2s						
QIZ				LR	LR		
	comp=Z,260nm,7.5s						
QIZ				LR	LR		
	comp=Z,450nm,20.6s						
QIZ				LR	LR		
	comp=Z,500nm,17.2s						
SKR	**Severo-Kuril's**	**61.95**	**354**	*e*P	P	13 00 36.3	-15
SKR				MLR	MLR		
	comp=Z,700nm,19.0s						
SKR				MLR	MLR		
	comp=Z,800nm,16.0s						
USA0B	**Ussuriysk Arra**	**62.53**	**334**	*e*P	**P**	**13 00 54.4**	**-0.7**
	comp=Z,64nm,1.6s						
USRK	**Ussuriysk Ar.**	**62.53**	**334**	P	**P**	**13 00 55.0**	**-0.1**
	comp=Z,5.9nm,0.8s,baz=124,slow=6.1,SNR=12						
USRK				LR	LR	13 29 47.6	
	comp=Z,218nm,18.1s,baz=136,slow=38						
DL2	**Dalian**	**63.90**	**324**	*e*P	**P**	**13 01 00.9**	**-3.5**
DL2				S	**S**	**13 09 40.3**	**+2.1**
DL2				SS	**SS**	**13 13 47.4**	**+0.1**
DL2				pmax	pmax		
	comp=Z,39nm,1.1s						
DL2				pmax	pmax		
	comp=Z,190nm,7.4s						
DL2				LR	LR		
	comp=Z,710nm,15.9s						
DL2				LR	LR		
	comp=Z,560nm,16.5s						
DL2				LR	LR		
	comp=Z,930nm,17.0s						
MDJ	**Mudanjiang**	**63.91**	**333**	P	**P**	**13 01 04.5**	**+0.2**
MDJ				pP	pP	13 01 10.1	-1.4
MDJ				S	**S**	**13 09 41.3**	**+3.2**
MDJ				sS	sS	13 09 49.1	-0.6
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,460nm,3.8s						
MDJ				LR	LR		
	comp=Z,730nm,10.0s						
MDJ				LR	LR		
	comp=Z,340nm,5.4s						
MDJ				LR	LR		
	comp=Z,550nm,11.7s						
MDJ	**Mudanjiang**	**63.91**	**333**	*e*P	**P**	**13 01 04.5**	**+0.2**
	comp=Z,159nm,2.0s						
PET	**Petropavlovsk**	**64.05**	**356**	*e*P	**P**	**13 01 04.0**	**-1.0**
	comp=Z,55nm,1.4s						
PET	**Petropavlovsk**	**64.05**	**356**	*e*P	**P**	**13 01 06.2**	**+1.2**
PET				*e*S	**S**	**13 09 40.6**	**+1.1**
PET				*e*SS	**SS**	**13 13 52.6**	**+3.6**
PET				pmax	pmax		
	comp=Z,29nm,1.4s						
PET				pmax	pmax		
	comp=Z,300nm,10.2s						
PET				MLR	MLR		
	comp=Z,500nm,14.0s						
PET				MLR	MLR		
	comp=Z,500nm,15.0s						
PETK	**Petropavlovsk-**	**64.20**	**355**	*e*P	**P**	**13 01 05.0**	**-1.1**
PETK	**Petropavlovsk-**	**64.20**	**355**	P	**P**	**13 01 05.6**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=153,slow=10.0,SNR=7.7						
PETK				LR	LR	13 23 25.7	
	comp=Z,628nm,21.2s,baz=176,slow=31						
TYV	**Tymovskoe**	**64.60**	**345**	*e*P	**P**	**13 01 09.0**	**+0.3**
TYV				pmax	pmax		
	comp=Z,12nm,1.8s						
CN2	**Changchun**	**65.25**	**330**	*e*P	**P**	**13 01 12.8**	**-0.3**
CN2				*e*S	**S**	**13 09 55.5**	**+0.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,650nm,16.0s						
CN2				LR	LR		
	comp=Z,590nm,16.0s						
CN2				LR	LR		
	comp=Z,570nm,17.0s						
SKNT	**Sakolnakorn**	**66.19**	**294**	P	**P**	**13 01 21.0**	**+1.3**
	comp=Z,12nm,2.7s						
GRNR	**Gornyy**	**66.33**	**341**	*e*P	**P**	**13 01 20.1**	**+0.2**
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
VNDA	**Vanda**	**66.46**	**181**	*e*P	**P**	**13 01 20.6**	**+0.2**
	comp=Z,76nm,1.5s						
VNDA	**Vanda**	**66.46**	**181**	P	**P**	**13 01 22.5**	**+2.1**
	comp=Z,4.8nm,0.9s,baz=329,slow=3.3,SNR=3.8						
VNDA				LR	LR	13 26 42.0	
	comp=Z,303nm,19.5s,baz=17,slow=33						
KLR	**Kul'dur**	**66.69**	**337**	*c* *i*P	**P**	**13 01 20.8**	**-1.4**
PSI	**Prapat**	**66.89**	**278**	*e*P	**P**	**13 01 23.6**	**-0.7**
	comp=Z,42nm,1.6s						
PSI	**Prapat**	**66.89**	**278**	*e*P	**P**	**13 01 23.7**	**-0.7**
PSI				pmax	pmax		
	comp=Z,42nm,1.6s						
PSI	**Prapat**	**66.89**	**278**	P	**P**	**13 01 23.1**	**-1.3**
	comp=Z,6.4nm,0.8s,baz=180,slow=4.8,SNR=8.7						
ENH	**Enshi**	**67.14**	**310**	*e*P	**P**	**13 01 24.3**	**-1.2**
	comp=Z,36nm,1.1s						
NKL	**Nikolayevsk**	**67.19**	**345**	*e*P	**P**	**13 01 25.0**	**-0.3**
NKL				*e*		13 01 34.5	
NKL				pmax	pmax		
	comp=Z,150nm,2.0s						
GYA	**Guiyang**	**67.61**	**305**	P	**P**	**13 01 28.5**	**-0.2**
GYA				PP	**PP**	**13 04 02.0**	**+3.8**
GYA				S	**S**	**13 10 27.8**	**+3.5**
GYA				SKS	**ScS**	**13 11 24.3**	**-1.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.8s						
GYA				LR	LR		
	comp=Z,540nm,18.2s						
GYA				LR	LR		
	comp=Z,500nm,18.0s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
GSI	**Gunungsitoli**	**67.87**	**276**	*e*P	**P**	**13 01 29.7**	**-0.8**
	comp=Z,25nm,0.9s						
BJI	**Beijing**	**67.88**	**322**	P	**P**	**13 01 30.0**	**+0.1**
BJI				S	**S**	**13 10 29.9**	**+3.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BJI				LR	LR		
	comp=Z,280nm,4.9s						
BJI				LR	LR		
	comp=Z,590nm,29.2s						
PBKT	**Sadao Pong**	**68.77**	**293**	*e*P	**P**	**13 01 35.6**	**-0.4**
	comp=Z,7.6nm,0.8s						
XAN	**Xi'an**	**69.40**	**313**	P	**P**	**13 01 39.3**	**-0.4**
XAN				pP	pP	13 01 42.0	-5.5
XAN				S	**S**	**13 10 48.6**	**+3.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,160nm,3.9s						
XAN				LR	LR		
	comp=Z,220nm,6.9s						
XAN				LR	LR		
	comp=Z,570nm,16.3s						
XAN				LR	LR		
	comp=Z,690nm,18.2s						
XAN	**Xi'an**	**69.40**	**313**	*e*P	**P**	**13 01 39.1**	**-0.6**
	comp=Z,80nm,0.9s						
XAN	**Xi'an**	**69.40**	**313**	*e*P	**P**	**13 01 39.1**	**-0.6**
XAN				pmax	pmax		
	comp=Z,80nm,0.9s						
UTHA	**Uthaitani**	**69.84**	**291**	P	P	13 01 49.8	+7.2
KMI	**Kunming**	**70.29**	**302**	P	**P**	**13 01 46.8**	**+1.3**
KMI				pP	pP	13 01 48.3	-5.0
KMI				sP	sP	13 01 51.3	-4.8
KMI				PP	**PP**	**13 04 21.4**	**-0.1**
KMI				S	**S**	**13 10 56.6**	**+0.4**
KMI				sS	pS	13 11 01.8	-3.4
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI				pmax	pmax		
	comp=Z,240nm,4.5s						
KMI				LR	LR		
	comp=Z,310nm,12.8s						
KMI				LR	LR		
	comp=Z,330nm,18.0s						
KMI				LR	LR		
	comp=Z,380nm,23.7s						
CM01	**Chiang Mai Arr**	**71.19**	**294**	*e*P	**P**	**13 01 51.1**	**+0.2**
HHC	**Hu-ho-hao-te**	**71.21**	**320**	*e*P	**P**	**13 01 50.9**	**+0.2**
HHC				sP	pP	13 01 57.9	0.0
HHC				S	**S**	**13 11 10.6**	**+4.4**
HHC				sS	sS	13 11 15.6	-2.7
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,7.8s						
HHC				LR	LR		
	comp=Z,430nm,16.9s						
HHC				LR	LR		
	comp=Z,620nm,18.0s						
HHC				LR	LR		
	comp=Z,890nm,18.3s						
CM31	**Chiang Mai Arr**	**71.21**	**294**	*e*P	**P**	**13 01 52.9**	**+1.9**
CMAR	**Chiang Mai Arr**	**71.21**	**294**	*i* P	**P**	**13 01 51.7**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**71.21**	**294**	P	**P**	**13 01 51.4**	**+0.4**
	comp=Z,6.0nm,0.8s,baz=122,slow=4.3,SNR=34						
CMAR				LR	LR	13 32 11.0	
	comp=Z,141nm,20.0s,baz=90,slow=35						
MA2	**Magadan**	**71.30**	**353**	*e*P	**P**	**13 01 49.8**	**-0.9**
	comp=Z,10nm,1.1s						
MA2	**Magadan**	**71.30**	**353**	*c* *e*P	**P**	**13 01 50.1**	**-0.5**
MA2				pmax	pmax		
	comp=Z,16nm,1.7s						
MA2	**Magadan**	**71.30**	**353**	P	**P**	**13 01 49.6**	**-1.1**
	comp=Z,4.8nm,0.8s,baz=150,slow=8.7,SNR=12						
CMMT	**Chiang Mai**	**71.32**	**294**	P	**P**	**13 01 52.8**	**+1.1**
	comp=Z,14nm,1.4s						
CHTO	**Chiang Mai**	**71.33**	**294**	*e*P	**P**	**13 01 51.0**	**-0.7**
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**71.33**	**294**	P	**P**	**13 01 52.9**	**+1.2**
	comp=Z,64nm,1.4s						
CD2	**Chengdu**	**71.83**	**308**	P	**P**	**13 01 54.8**	**+0.2**
CD2				pP	pP	13 01 58.0	-4.3
CD2				PP	**PP**	**13 04 33.9**	**-0.5**
CD2				S	**S**	**13 11 15.9**	**+2.3**
CD2				SS	**SS**	**13 15 52.9**	**+2.4**
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
CD2				pmax	pmax		
	comp=Z,540nm,5.5s						
CD2				LR	LR		
	comp=Z,700nm,16.2s						
CD2				LR	LR		
	comp=Z,830nm,14.7s						
CD2				LR	LR		
	comp=Z,820nm,18.1s						
HIA	**Hailar**	**71.90**	**331**	*e*P	**P**	**13 01 54.4**	**-0.1**
	comp=Z,38nm,1.4s						
HIA	**Hailar**	**71.90**	**331**	*e*P	**P**	**13 01 54.4**	**-0.1**
HIA				pmax	pmax		
	comp=Z,38nm,1.4s						
ZEA	**Zeya**	**71.98**	**338**	*e*P	**P**	**13 01 54.0**	**-0.9**
ZEA				pmax	pmax		
	comp=Z,80nm,1.8s						
BTO	**Baotou**	**72.06**	**319**	*e*P	**P**	**13 01 52.6**	**-3.2**
LZH	**Lanzhou**	**74.04**	**313**	*e*P	**P**	**13 02 08.3**	**+0.6**
LZH				pP	pP	13 02 12.8	-2.7
LZH				sP	sP	13 02 15.8	-2.5
LZH				PP	**PP**	**13 04 51.5**	**-1.9**
LZH				*e*S	**S**	**13 11 39.3**	**+0.5**
LZH				sS	sS	13 11 50.9	0.0
LZH				SS	**SS**	**13 16 23.8**	**-0.5**
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.6s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
SEY	**Seymchan**	**74.39**	**354**	*c* *e*P	**P**	**13 02 09.3**	**+0.4**
GAMB	**Gambell**	**76.77**	**11**	*e*P	**P**	**13 02 23.5**	**+1.1**
	comp=Z,42nm,1.1s						
ULN	**Ulaanbaatar**	**77.74**	**324**	*e*P	**P**	**13 02 28.8**	**+0.3**
	comp=Z,24nm,0.9s						
ULN	**Ulaanbaatar**	**77.74**	**324**	*c* *e*P	**P**	**13 02 29.3**	**+0.8**
ULN				pmax	pmax		
	comp=Z,37nm,1.7s						
YAK	**Yakutsk**	**77.84**	**344**	*c* *i*P	**P**	**13 02 28.4**	**-0.1**
YAK				*e**PP	**pP**	**13 02 34.2**	**-1.7**
YAK				*e*		13 02 39.2	
YAK				*e*		13 05 24.5	
YAK				*e*PPP	PPP	13 07 12.4	
YAK				*e*S	**S**	**13 12 20.9**	**+1.7**
YAK				*e**SS	**pS**	**13 12 28.5**	**0.0**
YAK				*e*		13 12 47.2	
YAK				*e*SSS	SSS	13 20 31.3	
YAK				pmax	pmax		
	comp=Z,72nm,0.7s						
YAK				pmax	pmax		
	comp=N,25nm,0.9s						
YAK				pmax	pmax		
	comp=E,20nm,1.3s						
YAK				pmax	pmax		
	comp=Z,434nm,3.4s						
YAK				pmax	pmax		
	comp=N,632nm,3.3s						
YAK				pmax	pmax		
	comp=E,158nm,2.8s						
YAK				smax	smax		
	comp=N,403nm,3.5s						
YAK				smax	smax		
	comp=E,671nm,4.4s						
YAK				MLR	MLR		
	comp=Z,2µm,19.0s						
YAK				MLR	MLR		
	comp=N,773nm,19.0s						
YAK				MLR	MLR		
	comp=E,1µm,17.0s						
SONM	**Songino Array**	**78.10**	**324**	P	**P**	**13 02 30.6**	**+0.1**
	comp=E,5.9nm,0.9s,baz=138,slow=4.2,SNR=31						
SONM				LR	LR	13 36 10.4	
	comp=E,228nm,20.0s,baz=144,slow=35						
SONA1	**Songino Array**	**78.10**	**324**	*e*P	**P**	**13 02 30.5**	**0.0**
GTA	**Gaotai**	**78.36**	**314**	⇑P	**P**	**13 02 32.9**	**+0.7**
GTA				pP	pP	13 02 37.5	-2.5
GTA				S	**S**	**13 12 28.3**	**+2.2**
GTA				sS	sS	13 12 35.6	-2.7
GTA				SKS	**SKSac**	**13 12 42.8**	**-2.3**
GTA				SS	**SS**	**13 17 33.6**	**+4.1**
GTA				pmax	pmax		
	comp=E,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=E,130nm,6.8s						
GTA				LR	LR		
	comp=E,310nm,18.7s						
GTA				LR	LR		
	comp=E,300nm,18.7s						
GTA				LR	LR		
	comp=E,290nm,19.0s						
SVW2	**Sparrevohn**	**78.45**	**18**	*e*P	**P**	**13 02 32.4**	**+0.5**
	comp=E,41nm,1.1s						
ANM	**Nome**	**78.73**	**13**	*e*P	**P**	**13 02 34.7**	**+1.2**
	comp=E,29nm,1.2s						
BILL	**Bilibino**	**78.91**	**1**	*e*P	**P**	**13 02 34.2**	**-0.2**
	comp=E,58nm,1.2s						
BILL	**Bilibino**	**78.91**	**1**	*c* *e*P	**P**	**13 02 34.4**	**0.0**
BILL				*i*		13 02 44.0	
BILL				*i*		13 05 33.4	
BILL				*i* PPP	PPP	13 07 17.0	
BILL				pmax	pmax		
	comp=Z,51nm,1.3s						
QSPA	**South Pole Qui**	**78.94**	**180**	*e*P	**P**	**13 02 37.7**	**+2.9**
	comp=Z,66nm,1.2s						
SHL	**Shillong**	**79.65**	**299**	*e*P	**P**	**13 02 40.0**	**+0.4**
BOD	**Bodaibo**	**80.13**	**335**	*e*P	**P**	**13 02 39.4**	**-1.8**
BOD				pmax	pmax		
	comp=Z,20nm,1.7s						
SUA	**Susitna One**	**80.28**	**20**	*e*P	**P**	**13 02 43.3**	**+1.1**
	comp=Z,24nm,1.2s						
ZAK	**Zakamensk**	**81.15**	**325**	*e*P	**P**	**13 02 46.3**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,12nm,1.4s						
CAST	**Castle Rocks**	**81.28**	**18**	*e*P	**P**	**13 02 46.4**	**-0.9**
	comp=Z,18nm,1.0s						
LSA	**Lhasa**	**81.53**	**302**	*e*P	**P**	**13 02 49.7**	**-0.2**
	comp=Z,11nm,1.1s						
TLY	**Talaya**	**81.59**	**327**	*e*P	**P**	**13 02 49.5**	**+0.3**
	comp=Z,21nm,0.9s						
TLY	**Talaya**	**81.59**	**327**	*c* *i*P	**P**	**13 02 48.9**	**-0.3**
TRF	**Thorofare Moun**	**81.86**	**19**	*e*P	P	13 02 54.5	+4.0
	comp=Z,19nm,1.2s						
RDOG	**Red Dog Mine**	**82.25**	**12**	*e*P	**P**	**13 02 53.1**	**+0.8**
	comp=Z,35nm,0.8s						
MCK	**McKinley**	**82.49**	**19**	*e*P	**P**	**13 02 53.1**	**-0.5**
	comp=Z,32nm,1.1s						
MCK	**McKinley**	**82.49**	**19**	*e*P	**P**	**13 02 53.1**	**-0.5**
MCK				pmax	pmax		
	comp=Z,32nm,1.1s						
DHY	**Denali Highway**	**82.54**	**20**	*e*P	**P**	**13 02 55.1**	**+1.0**
	comp=Z,24nm,1.4s						
IM3	**Indian Mountai**	**82.72**	**16**	*e*P	**P**	**13 02 54.3**	**-0.5**
MLY	**Manley**	**82.86**	**17**	*e*P	**P**	**13 02 56.0**	**+0.4**
	comp=Z,26nm,1.3s						
MOY	**Mondy**	**83.03**	**326**	*e*P	**P**	**13 02 56.8**	**-0.1**
MOY				pmax	pmax		
	comp=Z,37nm,2.4s						
WRH	**Wood River Hil**	**83.27**	**19**	*e*P	**P**	**13 02 57.0**	**-0.7**
	comp=Z,23nm,1.1s						
MDM	**Murphy Dome**	**83.56**	**18**	*e*P	**P**	**13 02 58.4**	**-0.8**
	comp=Z,37nm,1.1s						
HDA	**Harding Lake**	**83.59**	**19**	*e*P	**P**	**13 02 59.0**	**-0.3**
	comp=Z,33nm,0.9s						
HDA	**Harding Lake**	**83.59**	**19**	P	**P**	**13 02 58.5**	**-0.9**
	baz=228						
TCOL	**CIGO, UAF Yank**	**83.62**	**18**	P	**P**	**13 02 58.4**	**-1.0**

	baz=227						
COLA	**College**	**83.62**	**18**	*e*P	**P**	**13 02 59.4**	**0.0**
	comp=Z,32nm,0.9s						
COLA	**College**	**83.62**	**18***c*	*i*P	**P**	**13 02 58.8**	**-0.6**
COLA				pmax	pmax		
	comp=Z,23nm,1.1s						
RIDG	**Independ'e Rid**	**83.84**	**20**	*e*P	**P**	**13 03 00.6**	**-0.1**
	comp=Z,45nm,1.2s						
ILAR	**Eielson Array**	**83.85**	**19**	P	**P**	**13 02 59.5**	**-1.1**
	comp=Z,11nm,0.9s,baz=241,slow=4.1,SNR=44						
ILAR				LR	LR	13 33 33.4	
	comp=Z,430nm,21.8s,baz=260,slow=31						
ILB	**Eielson Array**	**83.85**	**19**	*e*P	**P**	**13 03 00.0**	**-0.6**
IL1	**Eielson Array**	**83.85**	**19**	*e*P	**P**	**13 02 59.3**	**-1.3**
POKR	**Poker Plat Res**	**83.92**	**18**	P	**P**	**13 02 59.9**	**-1.1**
	baz=227						
O02D	**Mt. Diablo Mer**	**84.04**	**47**	P	**P**	**13 03 03.0**	**+0.8**
	baz=250						
SCRK	**Sand Creek**	**84.28**	**20**	*e*P	**P**	**13 03 02.3**	**-0.7**
	comp=Z,35nm,1.3s						
K02D	**Willamette Mer**	**84.29**	**45**	P	**P**	**13 03 03.9**	**+0.5**
	baz=250						
MAW	**Mawson**	**84.33**	**202**	LR	LR	13 33 47.8	
	comp=Z,235nm,19.3s,baz=96,slow=31						
KNGR	**Kungurtug, Tuv**	**84.53**	**324**	*i* P	**P**	**13 03 04.3**	**-0.3**
COLD	**Coldfoot**	**84.59**	**16**	*e*P	**P**	**13 03 06.4**	**+2.0**
	comp=Z,5.8nm,0.8s						
YBH	**Yreka Blue Hor**	**84.62**	**46**	*e*P	**P**	**13 03 07.5**	**+2.3**
	comp=Z,19nm,1.4s						
YBH	**Yreka Blue Hor**	**84.62**	**46**	*e*P	**P**	**13 03 07.5**	**+2.3**
YBH				pmax	pmax		
	comp=Z,19nm,1.4s						
YBH	**Yreka Blue Hor**	**84.62**	**46**	LR	LR	13 39 51.8	
	comp=Z,90nm,18.1s,baz=259,slow=35						
HUMO	**Hull Mountain**	**84.75**	**45**	*e*P	**P**	**13 03 07.4**	**+1.7**
	comp=Z,11nm,1.2s						
HYT	**Haines Junctio**	**84.82**	**25**	*e*P	**P**	**13 03 07.3**	**+1.5**
	comp=Z,10.0nm,1.1s						
AFDM	**Forest Hills D**	**84.96**	**49**	*e*P	**P**	**13 03 08.3**	**+1.4**
	comp=Z,14nm,1.2s						
CMB	**Columbia Colle**	**85.12**	**50**	*e*P	**P**	**13 03 09.0**	**+1.3**
CMB	**Columbia Colle**	**85.12**	**50**	*e*P	**P**	**13 03 09.0**	**+1.3**
M04C	**Macdoel**	**85.25**	**46**	P	**P**	**13 03 10.0**	**+1.6**
	baz=251						
J04D	**Umpqua Nationa**	**85.55**	**45**	P	**P**	**13 03 11.2**	**+1.2**
	baz=251						
FYU	**Fort Yukon**	**85.56**	**18**	*e*P	**P**	**13 03 09.3**	**+0.1**
	comp=Z,32nm,1.6s						
BEKR	**Beckworth**	**85.70**	**48**	*e*P	**P**	**13 03 08.1**	**-2.7**
	comp=Z,11nm,1.2s						
TOLK	**Toolik Lake Re**	**85.77**	**15**	*e*P	**P**	**13 03 12.4**	**+2.1**
	comp=Z,18nm,1.3s						
TOLK	**Toolik Lake Re**	**85.77**	**15**	P	**P**	**13 03 09.5**	**-0.8**
	baz=225						
ISA	**Isabella, Lake**	**85.88**	**53**	*e*P	**P**	**13 03 13.0**	**+1.4**
	comp=Z,12nm,1.3s						
ISA	**Isabella, Lake**	**85.88**	**53**	*e*P	**P**	**13 03 13.0**	**+1.4**
ISA				pmax	pmax		
	comp=Z,12nm,1.3s						
ISA	**Isabella, Lake**	**85.88**	**53**	P	**P**	**13 03 12.7**	**+1.1**
	baz=254						
DAWY	**Dawson**	**85.94**	**21**	*e*P	**P**	**13 03 11.5**	**+0.3**
	comp=Z,16nm,1.1s						
WAKR	**Walker**	**85.97**	**50**	*e*P	**P**	**13 03 09.7**	**-2.5**
	comp=Z,20nm,1.3s						
MDPB	**Devils Postpil**	**85.98**	**51**	*e*P	**P**	**13 03 08.1**	**-4.2**
	comp=Z,60nm,0.7s						
EDW2	**Edwards Air Fo**	**86.03**	**54**	P	**P**	**13 03 13.8**	**+1.4**
	baz=254						
BFSC	**Mount Baldy Ra**	**86.12**	**54**	P	**P**	**13 03 13.5**	**+0.6**
	baz=254						
J05D	**Fort Rock, OR**	**86.17**	**45**	P	**P**	**13 03 14.3**	**+1.4**
	baz=251						
PAHR	**Pah Rah Range**	**86.37**	**49**	*e*P	**P**	**13 03 15.9**	**+1.9**
	comp=Z,16nm,1.3s						
MOD	**Modoc Plateau**	**86.38**	**46**	*e*P	**P**	**13 03 15.3**	**+1.2**
	comp=Z,8.9nm,1.2s						
CWC	**Cottonwood Cre**	**86.40**	**52**	P	**P**	**13 03 11.2**	**-3.1**
	baz=254						
PINE	**Pine Mountain**	**86.53**	**44**	*e*P	**P**	**13 03 17.0**	**+2.2**
	comp=Z,19nm,1.4s						
RYN	**Ryan**	**86.69**	**50**	*e*P	**P**	**13 03 12.9**	**-2.8**
	comp=Z,11nm,1.2s						
MPMC	**Manual Prospec**	**86.75**	**52**	P	**P**	**13 03 17.5**	**+1.5**
	baz=254						
NVAR	**Mina Array Bea**	**86.80**	**50**	P	**P**	**13 03 13.2**	**-3.0**
	comp=Z,4.0nm,1.0s,baz=251,slow=5.6,SNR=4.8						
NVAR				LR	LR	13 38 50.3	
	comp=Z,558nm,18.0s,baz=266,slow=33						
NV11	**Mina Array Sit**	**86.91**	**50**	*e*P	**P**	**13 03 18.0**	**+1.3**
	comp=Z,1.0nm,1.1s						
IKP	**In-Ko-Pah, Jac**	**86.94**	**56**	P	**P**	**13 03 19.9**	**+3.0**
	baz=255						
GSC	**Goldstone, Bar**	**87.08**	**53**	P	**P**	**13 03 19.1**	**+1.6**
	baz=254						
KVN	**Kaiserville**	**87.13**	**49**	*e*P	**P**	**13 03 19.1**	**+1.2**
	comp=Z,7.1nm,1.1s						
SWSC	**Sam W. Stewart**	**87.27**	**56**	P	**P**	**13 03 20.1**	**+1.7**
	baz=255						
FURC	**Furnace Creek,**	**87.35**	**52**	P	**P**	**13 03 20.2**	**+1.5**
	baz=254						
BELC	**Belle Mtn. Jos**	**87.38**	**55**	P	**P**	**13 03 20.3**	**+1.2**
	baz=255						
I07A	**Izee**	**87.61**	**44**	*e*P	**P**	**13 03 21.0**	**+1.1**
	comp=Z,12nm,1.3s						
WVOR	**Wild Horse Val**	**87.72**	**46**	P	**P**	**13 03 17.7**	**-2.8**
	comp=Z,15nm,1.2s						
WVOR	**Wild Horse Val**	**87.72**	**46**	P	**P**	**13 03 17.7**	**-2.8**
WVOR				pmax	pmax		
	comp=Z,15nm,1.2s						
BC3	**Big Chuckawall**	**87.73**	**55**	P	**P**	**13 03 22.4**	**+1.7**
	baz=255						
GMRC	**Granite Mounta**	**87.86**	**54**	P	**P**	**13 03 22.6**	**+1.3**
	baz=255						
TPNV	**Topopah Spring**	**87.96**	**52**	*e*P	**P**	**13 03 19.9**	**-1.8**
	comp=Z,6.6nm,1.1s						
TPNV	**Topopah Spring**	**87.96**	**52**	*e*P	**P**	**13 03 20.0**	**-1.8**
TPNV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GLA	**Glamis**	**88.09**	**56**	P	**P**	**13 03 24.2**	**+1.8**
	baz=256						
J08A	**Circle Bar Ran**	**88.10**	**45**	*e*P	**P**	**13 03 23.3**	**+1.0**
	comp=Z,15nm,1.1s						
IRM	**Iron Mountain**	**88.11**	**55**	P	**P**	**13 03 24.4**	**+1.9**
	baz=256						
G08A	**Pilot Rock**	**88.34**	**43**	*e*P	**P**	**13 03 21.2**	**-2.2**
	comp=Z,9.2nm,1.1s						
WMQ	**Urumqi**	**88.41**	**315**	P	**P**	**13 03 23.9**	**+0.2**
WMQ				sP	sP	13 03 34.3	-0.1
WMQ				PP	**PP**	**13 06 54.9**	**+3.1**
WMQ				SKS	**SKSac**	**13 13 51.3**	**+0.5**
WMQ				S	**ScS**	**13 14 14.3**	**+1.1**
WMQ				SS	**SS**	**13 20 02.3**	**+4.2**
WMQ				pmax	pmax		
	comp=Z,35nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,490nm,4.3s						
WMQ				LR	LR		
	comp=Z,840nm,16.5s						
WMQ				LR	LR		
	comp=Z,960nm,16.5s						
WMQ				LR	LR		
	comp=Z,770nm,24.9s						
WMQ	**Urumqi**	**88.41**	**315**	*e*P	**P**	**13 03 22.8**	**-0.9**
	comp=Z,72nm,1.6s						
WMQ	**Urumqi**	**88.41**	**315**	*e*P	**P**	**13 03 22.8**	**-0.9**
WMQ				pmax	pmax		
	comp=Z,72nm,1.6s						
Y12C	**Blythe**	**88.51**	**55**	*e*P	**P**	**13 03 26.4**	**+2.2**
	comp=Z,14nm,1.2s						
Y12C	**Blythe**	**88.51**	**55**	P	**P**	**13 03 26.2**	**+1.9**
	baz=256						
SHPR	**Sheep Range**	**88.69**	**53**	*e*P	**P**	**13 03 22.9**	**-2.4**
	comp=Z,7.2nm,1.3s						
R11A	**Troy Canyon, C**	**88.83**	**51**	*e*P	**P**	**13 03 27.4**	**+1.5**
	comp=Z,9.3nm,1.4s						
R11A	**Troy Canyon, C**	**88.83**	**51**	P	**P**	**13 03 27.5**	**+1.5**
	baz=255						
PDMCI	**Parker Dam,Lak**	**88.95**	**55**	P	**P**	**13 03 28.1**	**+1.8**
	baz=256						
W13A	**Hualapai Mount**	**89.34**	**54**	*e*P	**P**	**13 03 30.3**	**+1.8**
214A	**Organ Pipe Nat**	**89.48**	**57**	P	**P**	**13 03 31.4**	**+2.5**
	baz=257						
ELK	**Elko**	**89.71**	**48**	*e*P	**P**	**13 03 31.6**	**+1.5**
	comp=Z,7.0nm,1.3s						
ELK	**Elko**	**89.71**	**48**	*e*P	**P**	**13 03 31.6**	**+1.5**
ELK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PSUT	**Pine Spring**	**90.19**	**51**	*e*P	**P**	**13 03 32.8**	**+0.4**
	comp=Z,10nm,1.3s						
INK	**Inuvik**	**90.25**	**19**	*e*P	**P**	**13 03 31.7**	**+0.1**
	comp=Z,11nm,1.2s						
INK	**Inuvik**	**90.25**	**19**	*e*P	**P**	**13 03 31.7**	**+0.1**
INK				pmax	pmax		
	comp=Z,11nm,1.2s						
DGZ	**Jazzator, Alta**	**90.28**	**321***c*	*i*P	**P**	**13 03 32.1**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LCMT	**Little Creek M**	**90.30**	**52**	*e*P	**P**	**13 03 30.5**	**-2.3**
	comp=Z,5.8nm,1.0s						
CCUT	**Cedar City**	**90.34**	**52**	*e*P	**P**	**13 03 31.3**	**-1.8**
	comp=Z,12nm,1.3s						
NEW	**Newport**	**90.41**	**41**	P	**P**	**13 03 35.1**	**+2.1**
	baz=254						
SZCU	**Shurtz Canyon**	**90.56**	**52**	*e*P	**P**	**13 03 31.9**	**-2.2**
	comp=Z,7.0nm,1.0s						
KNB	**Kanab**	**90.63**	**53**	*e*P	**P**	**13 03 36.6**	**+2.2**
	comp=Z,14nm,1.2s						
HLID	**Hailey**	**91.01**	**46**	*e*P	**P**	**13 03 34.0**	**-2.0**
	comp=Z,7.4nm,1.0s						
HLID	**Hailey**	**91.01**	**46**	P	**P**	**13 03 37.3**	**+1.3**
	baz=256						
TUC	**Tucson**	**91.23**	**57**	P	**P**	**13 03 39.0**	**+1.8**
	baz=258						
MTPU	**Mount Pierson**	**91.36**	**52**	*e*P	**P**	**13 03 36.2**	**-1.8**
	comp=Z,11nm,1.1s						
DUG	**Dugway, Tooele**	**91.37**	**49**	*e*P	**P**	**13 03 38.5**	**+0.8**
BGU	**Big Grassy Mou**	**91.38**	**49**	*e*P	**P**	**13 03 38.2**	**+0.5**
	comp=Z,10nm,1.3s						
WUAZ	**Wupatki**	**91.44**	**54**	*e*P	**P**	**13 03 40.8**	**+2.6**
	comp=Z,12nm,1.4s						
WUAZ	**Wupatki**	**91.44**	**54**	P	**P**	**13 03 40.0**	**+1.8**
	baz=258						
MSU	**Marysvale**	**91.47**	**51**	*e*P	**P**	**13 03 36.5**	**-1.8**
MSU	**Marysvale**	**91.47**	**51**	*e*P	**P**	**13 03 36.5**	**-1.8**
HVU	**Hansel Valley**	**91.76**	**48**	*e*P	**P**	**13 03 37.4**	**-2.1**
	comp=Z,16nm,1.1s						
HVU	**Hansel Valley**	**91.76**	**48**	*e*P	**P**	**13 03 37.4**	**-2.1**
HVU				pmax	pmax		
	comp=Z,16nm,1.1s						
NLU	**North Lily Min**	**91.87**	**50**	*e*P	**P**	**13 03 41.9**	**+1.8**
	comp=Z,12nm,1.3s						
SPUT	**South Promonto**	**91.89**	**48**	*e*P	**P**	**13 03 41.7**	**+1.6**
	comp=Z,5.5nm,1.0s						
MPU	**Maple Canyon**	**92.21**	**50**	*e*P	**P**	**13 03 44.1**	**+2.4**
	comp=Z,13nm,1.3s						
Q16A	**Castle Valley**	**92.33**	**51**	*e*P	**P**	**13 03 45.0**	**+2.8**
	comp=Z,15nm,1.3s						
DLMT	**Dillon**	**92.69**	**44**	*e*P	**P**	**13 03 45.9**	**+2.1**
	comp=Z,19nm,1.2s						
MK01	**Makanchi Array**	**92.85**	**317**	*e*P	**P**	**13 03 43.5**	**-0.8**
MK31	**Makanchi Array**	**92.86**	**317**	*e*P	**P**	**13 03 43.8**	**-0.5**
MKAR	**Makanchi Array**	**92.86**	**317**	*e*P	**P**	**13 03 43.8**	**-0.5**
	comp=Z,85nm,0.8s						
MKAR	**Makanchi Array**	**92.86**	**317**	P	**P**	**13 03 43.8**	**-0.5**
	comp=Z,16nm,0.8s,baz=100,slow=5.0,SNR=96						
MKAR				LR	LR	13 47 35.8	
	comp=Z,168nm,18.2s,baz=86,slow=37						
ZALV	**Zalesovo Beam**	**92.99**	**324**	P	**P**	**13 03 43.5**	**-1.2**
	comp=Z,7.6nm,0.9s,baz=116,slow=4.8,SNR=25						
ZALV				LR	LR	13 42 24.2	
	comp=Z,173nm,21.9s,baz=70,slow=34						
MAKZ	**Makanchi**	**93.07**	**317**	*e*P	**P**	**13 03 45.2**	**-0.1**
	comp=Z,28nm,1.1s						
MAKZ	**Makanchi**	**93.07**	**317**	*e*P	**P**	**13 03 45.2**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,28nm,1.1s						
BOZ	**Bozeman (W)**	**93.41**	**44**	P	**P**	**13 03 49.0**	**+2.0**
	baz=258						
FXWY	**Fox Creek**	**93.42**	**46**	*e*P	**P**	**13 03 48.2**	**+0.9**
	comp=Z,5.9nm,1.3s						
NVS	**Novosibirsk**	**94.11**	**325**	*e*P	**P**	**13 03 49.3**	**-0.5**
NVS				*e*		13 14 25.7	
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,13nm,1.4s						
BW06	**Boulder Array**	**94.30**	**47**	*e*P	**P**	**13 03 52.6**	**+1.2**
	comp=Z,7.4nm,1.3s						
BW06	**Boulder Array**	**94.30**	**47**	P	**P**	**13 03 52.5**	**+1.2**
	baz=259						
PD31	**Pinedale Array**	**94.30**	**47**	*e*P	**P**	**13 03 52.6**	**+1.3**
PDAR	**Pinedale Array**	**94.30**	**47**	*e*P	**P**	**13 03 52.0**	**+0.7**
PDAR	**Pinedale Array**	**94.30**	**47**	P	**P**	**13 03 49.4**	**-1.9**
	comp=Z,1.4nm,0.8s,baz=219,slow=2.7,SNR=11						
PDAR				LR	LR	13 40 08.3	
	comp=Z,187nm,20.3s,baz=278,slow=32						
LAZ	**Ladron**	**94.63**	**56**	*e*P	**P**	**13 03 48.9**	**-4.1**
ANMO	**Albuquerque**	**95.28**	**56***c*	*e*P	**P**	**13 03 56.6**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**95.45**	**27**	P	**P**	**13 03 52.7**	**-3.1**
	comp=Z,0.7nm,0.8s,baz=254,slow=4.6,SNR=10						
YKA				LR	LR	13 39 51.6	
	comp=Z,53nm,21.3s,baz=274,slow=31						
NRIK	**Noril'sk**	**95.80**	**340**	P	**P**	**13 03 56.8**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=126,slow=7.2,SNR=5.5						
NRIK				LR	LR	13 44 18.1	
	comp=Z,375nm,21.7s,baz=89,slow=34						
KSH	**Kashi**	**96.00**	**309**	P	**P**	**13 04 01.6**	**+2.6**
KSH				PP	**PP**	**13 07 58.0**	**+6.2**
KSH				pmax	pmax		
	comp=Z,140nm,5.0s						
KURK	**Kurchatov**	**96.02**	**320**	*e*P	**P**	**13 03 57.9**	**-0.7**
	comp=Z,11nm,1.3s						
KURK	**Kurchatov**	**96.02**	**320***c*	*e*P	**P**	**13 03 57.1**	**-1.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TXAR	**Lajitas Array**	**96.71**	**62**	P	**P**	**13 04 04.1**	**+1.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**96.71**	**62**	P	**P**	**13 04 04.1**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=245,slow=5.4,SNR=4.9						
TXAR				LR	LR	13 38 57.4	
	comp=Z,165nm,21.9s,baz=0.0,slow=30						
SNAA	**Sanae**	**97.03**	**184**	P	Pdif	13 04 05.4	+2.3
SNAA	**Sanae**	**97.03**	**184**	*i* P	Pdif	13 04 04.8	+1.7
FRU	**Bishkek**	**97.51**	**312**	*e*P	Pdif	13 04 15.0	+9.3
AAK	**Ala-Archa**	**97.57**	**312**	*i* P	Pdif	13 04 05.1	-1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNA3	**Neumayer Olymp**	**97.79**	**182**	P	Pdif	13 04 07.0	+0.5
VNA2	**Neumayer--Watz**	**98.02**	**183**	P	Pdif	13 04 09.8	+2.4
BRVK	**Borovoye**	**101.42**	**322**	*e*Pdif	**Pdif**	**13 04 22.8**	**0.0**
BRVK	**Borovoye**	**101.42**	**322**	*e*P	**Pdif**	**13 04 22.8**	**0.0**
ARCES	**ARCESS Array B**	**116.10**	**345**	PKP	**PKPdf**	**13 09 14.8**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=85,slow=2.0,SNR=7.0						
VRH	**Novokhopyorsk**	**118.99**	**323**	*e*PKIKP	**PKPdf**	**13 09 18.7**	**-1.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GNI	**Garni**	**119.91**	**310**	*i* PKIKP	**PKPdf**	**13 09 21.1**	**-1.2**
OBN	**Obninsk**	**120.31**	**328**	*e*PKIKP	**PKiKP**	**13 09 21.9**	**-0.5**
OBN				*e*		13 10 47.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,163nm,17.0s						
VSR	**Storozhevoye**	**120.49**	**324**	*e*PKIKP	**PKiKP**	**13 09 22.4**	**-0.6**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	**120.54**	**315**	*i* PKIKP	**PKPdf**	**13 09 21.5**	**-1.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	**FINESS Array B**	**121.43**	**338**	PKP	**PKiKP**	**13 09 23.4**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=94,slow=2.0,SNR=3.7						
BOSA	**Boshof**	**124.42**	**224**	PKP	**PKiKP**	**13 09 32.3**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=79,slow=4.5,SNR=5.9						
CPUP	**Villa Florida**	**124.74**	**133**	PKP	**PKiKP**	**13 09 32.8**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=304,slow=0.4,SNR=6.2						
NB2	**NORSAR Subarra**	**126.46**	**344**	PKPdf	**PKiKP**	**13 09 33.8**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=32,slow=1.8						
NOA	**NORSAR Array B**	**126.46**	**344**	PKP	**PKiKP**	**13 09 33.9**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=32,slow=2.1,SNR=4.9						
UZH	**Uzhgorod**	**131.22**	**327**	*e*PKHKP	PKPpre	13 09 21.5	
OKC	**Ostrava-Krasne**	**132.52**	**331**	AMS	AMS	14 03 20.0	
	comp=Z,500nm,23.3s						
DPC	**Dobruska-Polom**	**133.01**	**333**	AMS	AMS	14 07 20.0	
	comp=Z,300nm,14.5s						
UPC	**Upice**	**133.04**	**333**	AMS	AMS	14 16 10.0	
	comp=Z,400nm,16.0s						
PVCC	**Panska Ves**	**133.66**	**334**	AMS	AMS	14 09 30.0	
	comp=Z,400nm,14.9s						
CLL	**Collm**	**133.72**	**336**	*e*PP	PP	13 12 21.0	+4.3
CLL				*e*PKSdf	**PKSdf**	**13 13 24.0**	**-0.3**
CLL				*e*SS	SS	13 29 51.0	-10
CLL				*e*SSS	SSS	13 34 56.0	
CLL				Lm	MLR	14 18 00.0	
	comp=Z,400nm,18.1s						
GOPC	**GO Pecny, Ondr**	**134.01**	**333**	AMS	AMS	14 05 20.0	
	comp=Z,500nm,26.0s						
PRU	**Pruhonice**	**134.06**	**333**	AMS	AMS	14 05 20.0	
	comp=Z,500nm,17.0s						
KHC	**Kasperske Hory**	**135.12**	**333**	AMS	AMS	14 06 10.0	
	comp=Z,500nm,19.4s						
KEST	**Kesra**	**146.82**	**322**	PKPbc	**PKPab**	**13 10 15.1**	**-0.3**
	comp=Z,21nm,1.0s,baz=2.9,slow=3.4,SNR=8.7						
PBRG	**Braganca**	**148.48**	**348**	*e*PKPdf	**PKPab**	**13 10 22.6**	**+0.9**
PGAV	**Gavieira, Arco**	**148.62**	**350**	*e*PKPdf	**PKPbc**	**13 10 17.1**	**-1.7**
POLO	**Lamas de Olo**	**149.10**	**349**	*e*PKPdf	**PKPab**	**13 10 25.9**	**+1.6**
MVO	**Moncorvo**	**149.16**	**348**	*e*PKPdf	**PKPab**	**13 10 22.2**	**-2.3**
ESDC	**Sonseca Array**	**149.79**	**343**	PKPbc	**PKiKP**	**13 10 22.4**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=17,slow=3.2,SNR=7.2						
MTE	**Manteigas**	**150.00**	**348**	*e*PKPdf	**PKPab**	**13 10 30.1**	**+2.2**
PMRV	**Marv??o**	**150.90**	**347**	*e*PKPdf	**PKiKP**	**13 10 25.3**	**+0.3**
MORF	**Marmelete**	**153.21**	**348**	*e*PKPdf	**PKPdf**	**13 10 20.4**	**-1.9**
TORD	**Torodi Ar. Bea**	**163.29**	**279**	PKP	**PKPdf**	**13 10 34.9**	**-0.1**
	comp=Z,2.2nm,0.9s,baz=55,slow=1.4,SNR=10						

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*ISCJB **13** 13:03:06.9±0.8, 7°.58S±0°.06×128°.70E±0°.07, h151^{km}, mb3.3/2, Error ellipse: s-maj=10.6km s-min=8.4km az=160.5*

*IDC **13** 13:03:09.2±1.9, 7°.55S×128°.59E, h167^{km}±22^{km}, mb3.2/2, mb1 3.1/6, mb1mx2.9/52, mbtmp3.6/6, Error ellipse: s-maj=23.7km s-min=19.3km az=119.0*

ISC 13 13:03:07.8±1.0**, 7°.72S**±0°.07×**128°.75E**±0°.10**, h151**^{km}**, n7, σ2ˢ.67**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.59**	**243**	P	**Pn**	**13 04 29.9**	**+0.7**
	21nm,0.3s,baz=92,slow=4.2,SNR=26						
BATI				S	**Sn**	**13 05 33.7**	**+0.8**
	3.7nm,0.3s,baz=66,slow=20,SNR=4.2						
SIJI	**Sorong**	**7.25**	**20**	P	**Pn**	**13 04 51.2**	**-0.1**
	1.0nm,0.3s,baz=233,slow=20,SNR=6.1						
FITZ	**Fitzroy Crossi**	**10.75**	**196**	P	**Pn**	**13 05 39.3**	**+1.6**
	0.2nm,0.3s,baz=16,slow=12,SNR=8.5						
FITZ				S	**Sn**	**13 07 32.7**	**-4.0**
	baz=105,slow=20						
WRA	**Warramunga Arr**	**13.31**	**157**	P	**Pn**	**13 06 13.6**	**+2.6**
	0.1nm,0.3s,baz=337,slow=12,SNR=5.7						
WRA				S	**Sn**	**13 08 37.4**	**-1.0**
	0.3nm,0.3s,baz=325,slow=21,SNR=5.6						
ASAR	**Alice Springs**	**16.61**	**163**	P	**Pn**	**13 06 56.2**	**+4.2**
	0.3nm,0.3s,baz=339,slow=10,SNR=32						
ASAR				S	**S**	**13 09 54.1**	**-2.6**
	0.0nm,0.3s,baz=318,slow=16,SNR=3.1						
MKAR	**Makanchi Array**	**68.15**	**328**	P	**P**	**13 13 50.3**	**-1.4**
	0.3nm,0.6s,baz=116,slow=8.3,SNR=5.3						
KURBB	**Kurchatov Arra**	**72.48**	**329**	P	**P**	**13 14 16.0**	**-1.8**
	0.3nm,0.4s,baz=128,slow=5.0,SNR=3.5						

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*IDC **13** 13:07:24.0±1.4, 10°.92S×164°.65E, h0^{km}, mb3.9/5, mb1 4.0/8, mb1mx3.7/51, mbtmp4.0/8, ML4.1/3, Error ellipse: s-maj=32.9km s-min=24.1km az=126.0*

*ISCJB **13** 13:07:26.7±0.7, 11°.02S±0°.08×164°.60E±0°.08, h29^{km}, Error ellipse: s-maj=14.2km s-min=8.5km az=137.8*

*NEIC **13** 13:07:26.0±0.8, 10°.89S×164°.55E, h10^{km}, mb4.2/3, Error ellipse: s-maj=17.9km s-min=10.7km az=63.0*

ISC 13 13:07:28.5±1.0**, 11°.0S**±0°.1×**164°.7E**±0°.1**, h29**^{km}**, n18, σ1ˢ.11**/19**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.87**	**288**	*e*Pn	**Pn**	**13 08 40.7**	**+0.9**
HNR	**Honiara**	**4.87**	**288**	Pn	**Pn**	**13 08 40.4**	**+0.6**
	12nm,0.3s,baz=63,slow=4.5,SNR=3.8						
HNR				Sn	**Sn**	**13 09 36.9**	**+1.6**
	10.0nm,0.3s,baz=312,slow=21,SNR=3.6						
DZM	**Mont Dzumac**	**11.19**	**171**	*e*Pn	**Pn**	**13 10 07.4**	**+0.7**
DZM	**Mont Dzumac**	**11.19**	**171**	Pn	**Pn**	**13 10 07.8**	**+1.0**
	1.0nm,0.3s,baz=300,slow=10,SNR=8.3						
OUENC	**Ouen Island, N**	**11.60**	**170**	*e*Pn	**Pn**	**13 10 13.8**	**+1.6**
PINNC	**Pines Island,**	**11.90**	**167**	*e*Pn	**Pn**	**13 10 17.7**	**+1.4**
CTA	**Charters Tower**	**19.90**	**241**	P	**Pn**	**13 11 59.0**	**-0.7**
	0.3nm,0.3s,baz=56,slow=11,SNR=3.6						
CTAO	**Charters Tower**	**19.90**	**241**	*e*P	**P**	**13 11 57.0**	**-0.9**
	21nm,1.3s						
WR1	**Warramunga Arr**	**30.50**	**249**	*e*P	**P**	**13 13 38.2**	**-1.2**
	17nm,1.9s						
WRA	**Warramunga Arr**	**30.51**	**249**	P	**P**	**13 13 38.2**	**-1.2**
	1.0nm,1.0s,baz=80,slow=8.7,SNR=5.0						
AS31	**Alice Springs**	**31.87**	**243**	*e*P	**P**	**13 13 49.6**	**-1.9**
	1.2nm,1.4s						
ASAR	**Alice Springs**	**31.88**	**243**	P	**P**	**13 13 50.2**	**-1.3**
	0.5nm,0.8s,baz=63,slow=10.0,SNR=5.6						
ASAJ	**Asahikawa**	**58.35**	**341**	P	**P**	**13 17 21.2**	**+0.1**
	5.3nm,1.1s,baz=168,slow=14,SNR=4.9						
ILAR	**Eielson Array**	**83.77**	**19**	P	**P**	**13 19 54.3**	**-0.4**
	0.7nm,0.7s,baz=239,slow=5.7,SNR=6.9						
MK01	**Makanchi Array**	**92.70**	**317**	*e*P	**P**	**13 20 38.0**	**0.0**
MK31	**Makanchi Array**	**92.72**	**317**	*e*P	**P**	**13 20 38.1**	**+0.1**
MK32	**Makanchi Array**	**92.72**	**317**	*e*P	**P**	**13 20 38.0**	**0.0**
MKAR	**Makanchi Array**	**92.72**	**317**	P	**P**	**13 20 38.0**	**0.0**
	0.9nm,0.7s,baz=96,slow=5.9,SNR=8.6						

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*IDC **13** 13:09:23.5±0.9, 10°.89S×165°.60E, h0^{km}, mb4.1/11, mb1 4.3/12, mb1mx4.0/49, mbtmp4.1/12, ML4.6/1, Error ellipse: s-maj=35.2km s-min=18.6km az=135.0*

*NEIC **13** 13:09:25.0±0.3, 10°.94S×165°.65E, h10^{km}, mb4.6/15, Error ellipse: s-maj=7.4km s-min=5.7km az=107.0*

*ISCJB **13** 13:09:26.1±0.4, 11°.08S±0°.05×165°.62E±0°.07, h30^{km}, mb4.3/22, Error ellipse: s-maj=9.6km s-min=7.5km az=13.5*

ISC 13 13:09:28.0±0.6**, 10°.98S**±0°.09×**165°.7E**±0°.1**, h30**^{km}**, n40, σ0ˢ.71**/43**, mb4.5**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.84**	**285**	*e*Pn	**Pn**	**13 10 53.3**	**+0.8**
MARNC	**Mare, Loyalty**	**10.68**	**168**	*e*Pn	**Pn**	**13 11 59.8**	**+0.8**
DZM	**Mont Dzumac**	**11.05**	**176**	*e*Pn	**Pn**	**13 12 03.7**	**-0.4**
DZM	**Mont Dzumac**	**11.05**	**176**	Pn	**Pn**	**13 12 04.1**	**0.0**
	4.5nm,0.3s,baz=345,slow=12,SNR=20						
OUENC	**Ouen Island, N**	**11.43**	**174**	*e*Pn	**Pn**	**13 12 09.6**	**+0.4**
PINNC	**Pines Island,**	**11.69**	**172**	*e*Pn	**Pn**	**13 12 12.7**	**0.0**
EIDS	**Eidsvold**	**19.89**	**222**	*e*P	**P**	**13 13 56.2**	**-0.8**
	32nm,1.4s						
CTA	**Charters Tower**	**20.76**	**242**	P	**P**	**13 14 06.8**	**+0.2**
	5.9nm,0.8s,baz=70,slow=14,SNR=4.2						
COEN	**Coen**	**22.16**	**260**	*e*P	**P**	**13 14 21.9**	**+0.3**
	19nm,1.1s						
BKZ	**Black Stump Fm**	**29.68**	**163**	*e*P	**P**	**13 15 31.7**	**+0.5**
	64nm,1.8s						
STKA	**Stephens Creek**	**30.43**	**223**	*e*P	**P**	**13 15 38.1**	**+0.2**
	1.0nm,0.9s						
STKA	**Stephens Creek**	**30.43**	**223**	P	**P**	**13 15 38.2**	**+0.2**
	3.7nm,0.9s,baz=39,slow=8.4,SNR=4.0						
WRAB	**Tennant Creek**	**31.42**	**250**	*e*P	**P**	**13 15 46.6**	**-0.1**
	7.0nm,0.9s						
WB2	**Warramunga Arr**	**31.42**	**250**	*e*P	**P**	**13 15 46.2**	**-0.6**
	8.8nm,0.9s						
WR1	**Warramunga Arr**	**31.43**	**250**	*e*P	**P**	**13 15 46.2**	**-0.7**
	10nm,0.9s						
WR1				*e*PcP	**PcP**	**13 18 40.4**	**+0.4**
WRA	**Warramunga Arr**	**31.43**	**250**	P	**P**	**13 15 46.2**	**-0.7**
	6.7nm,0.9s,baz=80,slow=9.1,SNR=32						
WRA				PcP	**PcP**	**13 18 40.4**	**+0.4**
	1.5nm,0.9s,baz=75,slow=2.8,SNR=7.7						
AS01	**Alice Springs**	**32.71**	**243**	*e*PcP	**PcP**	**13 18 44.0**	**+0.5**
AS31	**Alice Springs**	**32.75**	**243**	*e*P	**P**	**13 15 57.1**	**-1.3**
	0.6nm,0.6s						
ASAR	**Alice Springs**	**32.75**	**243**	P	**P**	**13 15 57.5**	**-1.0**
	1.2nm,0.8s,baz=65,slow=9.8,SNR=12						
ASAR				PcP	**PcP**	**13 18 43.9**	**+0.3**
	1.3nm,0.8s,baz=72,slow=2.7,SNR=12						
FITZ	**Fitzroy Crossi**	**39.32**	**255**	*e*P	**P**	**13 16 53.3**	**-1.4**
	12nm,1.6s						
FITZ	**Fitzroy Crossi**	**39.32**	**255**	P	**P**	**13 16 53.9**	**-0.8**
	3.4nm,0.9s,baz=94,slow=7.9,SNR=5.4						
CMAR	**Chiang Mai Arr**	**72.02**	**294**	P	**P**	**13 20 49.6**	**+0.1**
	0.3nm,0.5s,baz=116,slow=4.1,SNR=3.7						
GAMB	**Gambell**	**76.52**	**10**	*e*P	**P**	**13 21 15.6**	**+0.8**
	5.1nm,1.0s						

SONA0	Songino Array	78.57	324	eP	P	13 21 26.5	-0.3
SONM	Songino Array	78.57	324	P	P	13 21 26.5	-0.3
	0.4nm,0.9s,baz=137,slow=6.2,SNR=3.6						
BILL	Bilibino	78.82	0	eP	P	13 21 28.3	+0.7
	6.6nm,1.2s						
MDM	Murphy Dome	83.20	18	eP	P	13 21 51.3	+0.3
	29nm,1.9s						
COLA	College	83.25	18	eP	P	13 21 51.9	+0.7
	8.0nm,0.8s						
ILAR	Eielson Array	83.48	19	P	P	13 21 52.6	+0.2
	2.5nm,0.6s,baz=236,slow=5.1,SNR=45						
ILB	Eielson Array	83.48	19	eP	P	13 21 52.7	+0.3
IL1	Eielson Array	83.48	19	eP	P	13 21 52.8	+0.3
SCRK	Sand Creek	83.89	20	eP	P	13 21 55.3	+0.6
	9.4nm,1.3s						
NV01	Mina Array Sit	86.05	50	eP	P	13 22 06.3	0.0
NVAR	Mina Array Bea	86.05	50	P	P	13 22 06.6	+0.3
	1.5nm,1.1s,baz=221,slow=7.1,SNR=5.3						
BOZ	Bozeman (W)	92.71	44	eP	P	13 22 35.3	-2.2
	5.0nm,0.8s						
MK32	Makanchi Array	93.42	317	eP	P	13 22 40.4	-0.2
MKAR	Makanchi Array	93.42	317	P	P	13 22 40.4	-0.2
	0.8nm,1.0s,baz=99,slow=6.3,SNR=3.7						
YKA	Yellowknife Ar	94.96	27	P	P	13 22 46.2	-1.0
	0.5nm,0.6s,baz=259,slow=4.6,SNR=8.7						
YKB5	Yellowknife Ar	94.96	27	eP	P	13 22 45.9	-1.2
BOSA	Boshof	125.11	223	PKP	PKiKP	13 28 27.1	+0.4
	2.6nm,0.9s,baz=159,slow=2.8,SNR=3.8						

MEX 13 13:10:00.3±0.6, 16°.29N×98°.13W, h19^{km}±6^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.10	1	eP	Pg	13 10 03.1	-1.1
PNIG				i S	Sg	13 10 05.8	-1.0

IDC 13 13:12:50.9±1.4, 11°.38S×165°.29E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.0/44, mbtmp4.1/11, ML4.5/1, Error ellipse: s-maj=44.6km s-min=20.7km az=135.0

NEIC 13 13:12:53.3±0.3, 11°.22S×165°.15E, h10^{km}, mb4.4/5, Error ellipse: s-maj=8.7km s-min=6.2km az=84.0

ISCJB 13 13:12:55.0±0.4, 11°.35S±0°.06×165°.09E±0°.06, h34^{km}, mb4.3/14, Error ellipse: s-maj=9.7km s-min=7.3km az=147.5

ISC 13 13:12:56.8±0.6, 11°.27S±0°.09×165°.14E±0°.09, h34^{km}, n32, σ0^{s}.69/37, mb4.2/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.42	289	eP	Pn	13 14 15.0	-0.3
HNR				eS	Sn	13 15 16.0	-0.6
HNR	Honiara	5.42	289	Pn	Pn	13 14 16.1	+0.8
	13nm,0.3s,baz=160,slow=17,SNR=4.2						
HNR				Sn	Sn	13 15 16.5	-0.1
	33nm,0.3s,baz=199,slow=22,SNR=12						
MARNC	Mare, Loyalty	10.52	165	ePn	Pn	13 15 25.2	0.0
DZM	Mont Dzumac	10.81	174	ePn	Pn	13 15 29.9	+0.6
OUENC	Ouen Island, N	11.20	172	ePn	Pn	13 15 35.7	+1.1
PINNC	Pines Island,	11.49	169	ePn	Pn	13 15 38.7	+0.2
EIDS	Eidsvold	19.33	222	eP	P	13 17 17.6	-1.7
	24nm,1.3s						
COEN	Coen	21.59	261	eP	P	13 17 44.7	+0.7
	8.6nm,0.8s						
WB2	Warramunga Arr	30.83	250	eP	P	13 19 09.4	-0.6
WR1	Warramunga Arr	30.84	250	eP	P	13 19 09.8	-0.2
	5.6nm,1.0s						
WR1				ePcP	PcP	13 22 07.9	+1.2
WRA	Warramunga Arr	30.84	250	P	P	13 19 09.8	-0.2
	2.9nm,0.8s,baz=82,slow=9.0,SNR=16						
WRA				PcP	PcP	13 22 07.9	+1.2
	0.4nm,0.8s,baz=75,slow=3.6,SNR=4.8						
AS31	Alice Springs	32.15	243	eP	P	13 19 20.9	-0.7
	2.9nm,1.6s						
ASAR	Alice Springs	32.16	243	P	P	13 19 20.9	-0.6
	2.0nm,0.7s,baz=66,slow=9.8,SNR=19						
ASAR				PcP	PcP	13 22 09.8	-0.5
	0.4nm,0.7s,baz=61,slow=2.7,SNR=5.0						
FITZ	Fitzroy Crossi	38.74	255	eP	P	13 20 17.8	-0.4
	17nm,2.0s						
FITZ	Fitzroy Crossi	38.74	255	P	P	13 20 17.5	-0.7
	1.1nm,0.5s,baz=81,slow=8.9,SNR=7.8						
ASAJ	Asahikawa	58.81	341	P	P	13 22 52.2	+0.4
	3.2nm,0.8s,baz=225,slow=20,SNR=3.3						
PETK	Petropavlovsk-	64.44	355	P	P	13 23 29.5	-0.1
	2.4nm,0.8s,baz=167,slow=10.0,SNR=3.9						
PEA1	Petropavlovsk-	64.44	355	eP	P	13 23 29.5	-0.1
CM31	Chiang Mai Arr	71.66	294	eP	P	13 24 15.8	+0.1
CMAR	Chiang Mai Arr	71.66	294	P	P	13 24 16.2	+0.6
	0.8nm,0.5s,baz=122,slow=4.4,SNR=7.2						
SONA0	Songino Array	78.50	324	eP	P	13 24 55.1	+0.4
SONM	Songino Array	78.50	324	P	P	13 24 55.1	+0.4
	0.8nm,0.9s,baz=150,slow=5.3,SNR=5.1						
ILAR	Eielson Array	83.92	19	P	P	13 25 22.4	-0.6
	1.2nm,0.7s,baz=236,slow=5.0,SNR=12						
ILB	Eielson Array	83.92	19	eP	P	13 25 22.3	-0.6
F10A	Beach Ranch, E	89.58	43	eP	P	13 25 51.3	+0.2
	27nm,1.4s						
MK01	Makanchi Array	93.27	317	eP	P	13 26 08.7	+0.6
MK31	Makanchi Array	93.28	317	eP	P	13 26 08.6	+0.4
MK32	Makanchi Array	93.28	317	eP	P	13 26 08.8	+0.6
MKAR	Makanchi Array	93.28	317	eP	P	13 26 08.6	+0.4
	33nm,0.2s						
MKAR	Makanchi Array	93.28	317	P	P	13 26 08.8	+0.6
	1.4nm,0.9s,baz=99,slow=6.3,SNR=12						
YKA	Yellowknife Ar	95.45	27	P	P	13 26 16.6	-1.1
	0.3nm,0.7s,baz=260,slow=4.8,SNR=6.4						
YKB5	Yellowknife Ar	95.45	27	eP	P	13 26 16.8	-0.9

ISCJB 13 13:15:17.6±0.5, 30°.15N±0°.04×138°.94E±0°.09, h400^{km}, mb3.1/6, Error ellipse: s-maj=10.8km s-min=5.0km az=169.7

IDC 13 13:15:18.5±0.9, 30°.14N×139°.01E, h400^{km}±21^{km}, mb2.9/6, mb1 3.0/10, mb1mx2.8/52, mbtmp3.8/10, Error ellipse: s-maj=56.2km s-min=10.3km az=67.0

JMA 13 13:15:18.6±0.2, 30°.33N×139°.56E, h430^{km}, M3.6

ISC 13 13:15:18.2±0.7, 30°.20N±0°.06×139°.1E±0°.1, h400^{km}, n23, σ1^{s}.32/30, mb3.2/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	2.93	11	P	Pn	13 16 22.8	+2.1
JHJ2	Mitsune	2.97	11	P	Pn	13 16 23.0	+1.9
JHJ	Hachijo jima 2	2.97	11	P	Pn	13 16 23.2	+2.1
	14nm,0.3s,baz=244,slow=22,SNR=9.1						
CBIJ	Chichi jima	4.10	138	P	Pn	13 16 32.2	+0.8
CBIJ				eS	S	13 17 29.7	-0.9
JCJ	Chichijima	4.10	138	P	Pn	13 16 32.3	+0.9
	9.0nm,0.3s,baz=12,slow=22,SNR=11						
JCJ				S	S	13 17 30.5	-0.1
	18nm,0.3s,baz=293,slow=23,SNR=9.3						
BSO1	Boso 1	4.71	19	P	Pn	13 16 38.5	+1.9
BSO1				S	S	13 17 40.1	-0.4
BSO3	Boso 3	4.74	14	P	Pn	13 16 39.1	+1.9
BSO3				S	S	13 17 41.4	-0.1
BSO4	Boso 4	4.89	12	S	S	13 17 43.6	-0.9
JOD2	Odawara 2	5.05	360	P	Pn	13 16 42.0	+1.3
JOD2				eS	S	13 17 47.3	-0.5
JNY	Yasuok	5.25	349	P	Pn	13 16 44.9	+2.0
JHU	Hanno	5.64	1	P	Pn	13 16 47.3	+0.4
JHU				eS	S	13 17 57.3	-1.8
JRY	Ryogami san	5.81	358	P	Pn	13 16 50.0	+1.3
JYT	Yasato	6.08	8	P	Pn	13 16 51.9	+0.3
JYT				eS	S	13 18 04.5	-3.3
JAG	Ashikaga	6.22	3	P	Pn	13 16 53.1	0.0
JHO	Hitachi	6.51	10	P	Pn	13 16 57.1	+0.8
KSRS	Korea Array	11.78	311	P	Pn	13 17 56.4	-0.4
	0.2nm,0.3s,baz=125,slow=10,SNR=7.2						
KLR	Kul'dur	19.82	346	P	P	13 19 21.4	+0.7
	0.1nm,0.3s,baz=171,slow=5.0,SNR=6.3						
SONM	Songino Array	30.62	314	P	P	13 20 56.8	-0.6
	0.2nm,0.5s,baz=117,slow=8.6,SNR=4.3						
MKAR	Makanchi Array	46.44	307	P	P	13 23 06.5	-0.4
	0.1nm,0.3s,baz=76,slow=6.1,SNR=3.6						
KURBB	Kurchatov Arra	48.96	313	P	P	13 23 25.6	-0.2
	0.7nm,0.2s,baz=94,slow=6.8,SNR=3.3						
WRA	Warramunga Arr	50.06	186	P	P	13 23 34.2	-0.2
	0.6nm,0.3s,baz=0.6,slow=7.6,SNR=34						
ASAR	Alice Springs	53.79	186	P	P	13 24 01.4	-0.1
	0.3nm,0.5s,baz=360,slow=5.3,SNR=14						
STKA	Stephens Creek	61.78	178	P	P	13 24 56.3	+0.2
	0.8nm,0.6s,baz=354,slow=9.2,SNR=2.8						

IDC 13 13:19:08.8±1.2, 0°.36S×132°.41E, h0^{km}, mb3.6/4, mb1 3.8/7, mb1mx3.6/37, mbtmp3.7/7, ML3.9/3, Error ellipse: s-maj=21.7km s-min=15.6km az=132.0

ISCJB 13 13:19:12.7±0.8, 0°.29S±0°.08×132°.18E±0°.09, h31^{km}, mb3.6/4, Error ellipse: s-maj=13.2km s-min=11.4km az=175.9

DJA 13 13:19:13.4±0.8, 0°S±7°×13°2E±°, h10^{km}, M4.2/6, MLv4.2/6

ISC 13 13:19:14.3±1.0, 0°.46S±0°.08×132°.21E±0°.05, h31^{km}, n12, σ3^{s}.04/16, mb3.8/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	1.03	247	Pn	Pn	13 19 32.0	-0.6
	38nm,0.3s,baz=54,slow=17,SNR=142						
SIJI				Lg	Lg	13 19 50.2	
	252nm,0.3s,baz=126,slow=19,SNR=34						
SWI	Sorong	1.03	247	P	Pn	13 19 33.1	+0.5
SWI				S	Sb	13 19 50.6	+3.8
RKPI	Ransiki, Papua	2.23	118	P	Pn	13 19 51.4	+2.3
RKPI				S	Sb	13 20 22.3	+1.2
FAKI	Fak Fak	2.44	179	P	Pn	13 19 53.9	+1.8
FAKI				S	Sb	13 20 28.3	+1.1
BNDI	Bandanaira	4.64	210	P	Pn	13 20 24.6	+2.2
BATI	Baumata	12.88	221	Pn	Pn	13 22 18.2	+2.7
	2.0nm,0.3s,baz=28,slow=18,SNR=3.2						
FITZ	Fitzroy Crossi	18.68	200	P	P	13 23 28.7	-1.4
	0.2nm,0.3s,baz=36,slow=10.0,SNR=8.0						
FITZ				S	Sn	13 26 47.3	-11
	0.0nm,0.3s,baz=59,slow=19,SNR=1.9						
WRA	Warramunga Arr	19.47	174	P	P	13 23 39.0	+0.2
	0.2nm,0.3s,baz=352,slow=12,SNR=11						
WRA				S	S	13 27 08.4	-8.8
	0.1nm,0.3s,baz=354,slow=23,SNR=6.0						
ASAR	Alice Springs	23.12	176	P	P	13 24 18.1	+0.1
	3.6nm,0.9s,baz=352,slow=11,SNR=21						
SONM	Songino Array	53.09	338	P	P	13 28 27.9	-1.1
	0.2nm,0.7s,baz=152,slow=6.5,SNR=2.3						
MKAR	Makanchi Array	64.12	324	P	P	13 29 45.4	-0.3
	0.3nm,0.5s,baz=116,slow=8.1,SNR=5.4						
KURBB	Kurchatov Arra	68.22	326	P	P	13 30 11.5	-0.3
	0.5nm,0.6s,baz=124,slow=5.8,SNR=5.3						

DDA 13 13:25:52.8, 37°.52N×36°.06E, h7^{km}±1^{km}, ML2.5

ISK 13 13:25:55.1, 37°.43N×35°.82E, h5^{km}, ML1.7/5

ISC 13 13:25:53.7±1.1, 37°.47N±0°.03×35°.95E±0°.03, h6^{km}±10^{km}, n14, σ1^{s}.53/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	Kozan	0.10	276	PG	Pg	13 25 56.6	+0.8
ANDN	Andirin	0.34	71	i P	Pg	13 25 58.8	-1.4
ANDN				i S	Sg	13 26 02.6	-2.0
ANDN				IAML_P			
	comp=Z,6μm,0.2s						
CEYT	Ceyhan	0.49	199	PG	Pg	13 26 03.8	+0.8
CEYT				SG	Sb	13 26 10.5	-1.4
SAIM	ADANA	0.52	12	i P	Pg	13 26 03.0	-0.7
SAIM				i S	Sg	13 26 10.3	-0.1
SAIM				IAML_P			
	comp=Z,2μm,0.1s						
YURE	YUREGIR	0.69	201	PG	Pg	13 26 07.6	+0.7
YURE	YUREGIR	0.69	201	i P	Pb	13 26 08.2	0.0
KARA	Karaisali	0.74	254	PG	Pb	13 26 07.9	-1.1
YAHY	KAYSERI_Yahyal	0.78	324	i P	Pg	13 26 08.8	+0.2
YAHY				i S	Sb	13 26 20.8	+0.3
YAHY				IAML_P			
	comp=Z,375nm,0.1s						
GULE	Gulek	0.95	259	i P	Pn	13 26 13.1	-0.6
GULE				i S	Sn	13 26 28.9	+1.2
GULE				IAML_P			
	comp=Z,204nm,0.1s						
GAZ	Gaziantep	1.05	106	PN	Pn	13 26 17.5	+2.5
TAHT	Tahtakopru-Hat	1.11	170	PN	Pn	13 26 16.6	+0.9
KUZU	Kuzuini	1.14	127	i P	Pb	13 26 11.2	-4.6
KUZU				i S	Sb	13 26 29.8	-1.0
GZT	Gaziantep	1.29	95	i P	Pn	13 26 16.1	-2.3
GZT				i S	Sb	13 26 33.3	-2.1
GZT				IAML_P			
	comp=Z,372nm,0.1s						
DARE	Darende-Malaty	1.64	47	PN	Pb	13 26 26.7	+2.4

IDC 13 13:29:08.7±3.7, 12°.26N×143°.87E, h118^{km}±30^{km}, mb3.1/3, mb1 3.4/3, mb1mx3.0/47, mbtmp3.5/3, Error ellipse: s-maj=171.5km s-min=20.9km az=113.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.65	36	P	Pn	13 29 36.7	-1.1
	30nm,0.3s,baz=199,slow=2.8,SNR=12						
GUMO				S	Sn	13 30 00.2	+0.4
	31nm,0.3s,baz=152,slow=22,SNR=6.9						
WRA	Warramunga Arr	33.34	196	P	P	13 35 35.5	-0.2
	0.5nm,0.6s,baz=20,slow=9.6,SNR=12						
ASAR	Alice Springs	37.01	195	P	P	13 36 07.3	+0.2
	0.4nm,0.5s,baz=21,slow=12,SNR=19						
YKA	Yellowknife Ar	84.48	27	P	P	13 41 28.1	-0.1
	0.1nm,0.5s,baz=285,slow=5.1,SNR=3.1						

TEH 13 13:43:58.4, 31°.13N×56°.79E, h10^{km}, ML3.6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.80	200	ePg	Pg	13 44 13.5	-0.3
KHGB				IAMB	IAmb	13 44 28.6	
	comp=Z,0.0nm,0.4s						
TVBK	TV Kerman	1.14	181	ePg	Pn	13 44 20.6	-0.1
TVBK				IAMB	IAmb	13 44 26.4	
	comp=Z,0.0nm,0.3s						
CHMN	Cheshme madani	1.42	153	ePn	Pn	13 44 24.7	+0.1
CHMN				IAMB	IAmb	13 44 27.9	
	comp=N,0.0nm,0.4s						
NGRK	Negar Kerman	1.48	182	ePn	Pg	13 44 26.6	-0.2
NGRK				IAMB	IAmb	13 44 30.3	
	comp=Z,0.0nm,0.4s						
IMEH	Mehriz	1.88	279	ePn	Pb	13 44 33.2	+0.2
IMEH				IAMB	IAmb	13 45 04.5	
	comp=N,8μm,0.3s						
TPRV	Parvadeh(Tabas	1.90	357	ePn	Pb	13 44 32.7	-0.5
TPRV				IAMB	IAmb	13 45 01.8	
	comp=Z,0.0nm,0.5s						
IKOO	Kooshah	2.29	55	ePn	Pn	13 44 37.7	+1.2
IKOO				IAMB	IAmb	13 45 20.0	
	comp=Z,3μm,0.5s						
ITEG	Tejag	2.43	43	ePn	Pn	13 44 39.4	+1.1
ITEG				IAMB	IAmb	13 45 21.4	
	comp=Z,1μm,0.3s						
TKDS	Koohdasht(Taba	2.50	6	ePn	Pn	13 44 41.0	+1.8
TKDS				IAMB	IAmb	13 44 51.5	
	comp=Z,0.0nm,0.3s						
TNSJ	Nastanj	2.83	357	ePn	Pn	13 44 45.7	+1.9
TNSJ				IAMB	IAmb	13 45 38.8	
	comp=Z,0.0nm,0.7s						
IDAH	Dahanechah	3.07	58	ePn	Pb	13 44 50.5	-2.8
IDAH				IAMB	IAmb	13 45 51.2	
	comp=E,2μm,0.9s						
IMON	Monand	3.19	49	ePn	Pn	13 44 51.6	+2.7
IMON				IAMB	IAmb	13 45 02.3	
	comp=Z,1μm,0.2s						

ISCJB 13 13:46:03.5±0.5, 51°.44N±0°.02×16°.11E±0°.03, h0^{km}, Error ellipse: s-maj=3.5km s-min=2.4km az=6.7

PRU 13 13:46:05.6±0.0, 51°.48N×16°.08E, h0^{km}

IDC 13 13:46:06.2±0.9, 51°.45N×15°.96E, h0^{km}, mb1 3.2/4, mb1mx3.0/46, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=14.1km s-min=7.6km az=127.0

ISC 13 13:46:03.3±0.7, 51°.56N±0°.03×16°.14E±0°.02, h0^{km}, n40, σ1^{s}.16/79, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.73	172	ePg	Pg	13 46 17.6	+0.3
KSP				eSg	Sg	13 46 26.5	-0.1
UPC	Upice	1.06	184	ePG	Pg	13 46 23.6	0.0
UPC				eSG	Sg	13 46 36.8	-0.5
	comp=Z,234nm,0.7s						
DPC	Dobruska-Polom	1.22	174	ePG	Pg	13 46 26.5	-0.2
DPC				eSG	Sg	13 46 41.7	-0.8
	comp=Z,136nm,0.8s						
PVCC	Panska Ves	1.43	224	ePG	Pn	13 46 30.6	+0.1
PVCC				eSG	Sg	13 46 49.7	+0.4
	comp=Z,217nm,0.2s						
BRG	Berggiesshubel	1.54	244	PN	Pn	13 46 32.1	+0.1
BRG				PG	Pg	13 46 33.4	+0.6
BRG				SG	Sg	13 46 54.0	+1.1
	102nm,0.4s						
KRLC	Kraliky	1.55	164	ePG	Pn	13 46 32.2	+0.1
KRLC				eSG	Sg	13 46 53.1	+0.2
	comp=Z,17nm,0.4s						
GOPC	GO Pecny, Ondr	1.86	208	ePN	Pn	13 46 36.8	+0.4
GOPC				ePG	Pb	13 46 38.2	0.0
GOPC				eSG	Sn	13 47 01.6	+1.0
	comp=Z,36nm,0.6s						
PRU	Pruhonice	1.88	213	ePN	Pn	13 46 36.5	-0.1
PRU				ePG	Pb	13 46 38.4	0.0
PRU				eSG	Sb	13 47 02.4	+0.1
	comp=Z,31nm,0.3s						
CLL	Collm	1.98	264	ePn	Pn	13 46 38.0	0.0
CLL				ePg	Pb	13 46 41.0	+0.9
CLL				eSg	Sg	13 47 07.0	+0.2
	comp=Z,40nm,0.4s						
MORC	Moravsky Berou	2.00	153	ePN	Pn	13 46 38.5	+0.1
MORC				eSG	Sb	13 47 06.2	+0.2
OKC	Ostrava-Krasne	2.15	143	ePG	Pg	13 46 44.7	+0.3
OKC				eSG	Sg	13 47 11.6	-0.7
	comp=Z,46nm,0.6s						
CHZP	Chorzow	2.21	124	ePg	Pg	13 46 47.2	+1.6
CHZP				eSg	Sg	13 47 15.7	+1.4
VRAC	Vranov	2.28	172	ePN	Pn	13 46 42.9	+0.8
VRAC				eSG	Sb	13 47 14.1	+0.2
VRAC	Vranov	2.28	172	Pn	Pn	13 46 43.4	+1.3
	comp=Z,2.5nm,0.3s,baz=345,slow=16,SNR=8.7						
VRAC				Lg	Lg	13 47 15.3	
	comp=Z,6.3nm,0.3s,baz=72,slow=16,SNR=18						
TREC	Trest	2.31	191	ePN	Pn	13 46 43.9	+1.3
TREC				ePG	Pb	13 46 46.7	+0.9
TREC				eSG	Sb	13 47 15.6	+0.7
	comp=Z,31nm,0.3s						
KRUC	Moravsky	2.51	176	ePN	Pn	13 46 46.1	+0.8
KRUC				eSG	Sb	13 47 21.1	+0.5
OJC	Ojcow	2.68	119	ePn	Pn	13 46 48.1	+0.4
OJC				ePg	Pg	13 46 56.5	+1.9
OJC				eSn	Sn	13 47 19.4	-1.4
OJC				eSg	Sg	13 47 31.6	+2.3
NKC	Novy Kostel	2.69	242	ePN	Pn	13 46 48.7	+0.9
NKC				ePG	Pb	13 46 53.9	+1.6
NKC				eSG	Sg	13 47 30.3	+0.7
	comp=Z,63nm,0.3s						
KHC	Kasperske Hory	2.94	215	ePN	Pn	13 46 51.2	0.0
KHC				ePG	Pb	13 46 57.5	+1.0
KHC				eSN	Sn	13 47 26.4	-0.8
KHC				eSG	Sg	13 47 36.1	-1.4
	comp=Z,12nm,0.3s						
GERES	GERESS Array B	3.14	211	Pn	Pn	13 46 54.7	+0.6
	comp=Z,0.9nm,0.3s,baz=29,slow=12,SNR=19						
GERES				Pg	Pb	13 47 00.7	+0.7
	comp=Z,2.9nm,0.3s,baz=29,slow=17,SNR=30						
GERES				Lg	Lg	13 47 41.5	
	comp=Z,4.0nm,0.3s,baz=25,slow=28,SNR=7.5						
LANS	Liptovska Anna	3.22	137	ePG	Pg	13 47 05.6	+0.6
LANS				eSG	Sg	13 47 45.6	-1.1
MODS	Modra-Piesok	3.28	167	ePG	Pg	13 47 04.6	-1.5
MODS				eSG	Sg	13 47 48.7	+0.2
MODS				eLG	Lg	13 47 53.4	
NIE	Niedzica	3.42	127	eP	Pg	13 47 10.9	+2.2
NIE				eS	Sg	13 47 56.0	+3.0
VYHS	Vyhne	3.53	149	ePG	Pg	13 47 10.7	-0.2
VYHS				eSG	Sg	13 47 54.4	-2.3
VYHS				eLG	Lg	13 48 03.5	
BSD	Bornholm Skovb	3.63	349	i P	Pn	13 47 01.4	+0.7
BSD				i S	Sn	13 47 42.7	-1.5
CONA	Conrad Observa	3.64	183	i Pn	Pn	13 47 01.9	+0.9
	comp=Z,0.4nm,0.1s						
CONA				Sg	Sg	13 47 58.8	-1.5
	comp=Z,8.3nm,0.3s						
MOA	Molln	3.91	199	ePn	Pn	13 47 05.3	+0.7
	comp=Z,1.3nm,0.2s						
MOA				Sg	Sg	13 48 07.1	-1.8
	comp=Z,4.7nm,0.3s						
ARSA	Arzberg	4.34	186	i Pn	Pn	13 47 10.5	0.0
	comp=Z,1.2nm,0.2s						
KBA	Koelnbreinsper	4.85	203	i Pn	Pn	13 47 18.6	+1.0
	comp=Z,1.7nm,0.3s						
KBA				Sg	Sg	13 48 39.4	+0.5
	comp=Z,3.2nm,0.3s						
SOKA	Soboth	4.94	189	Sg	Sb	13 48 32.1	+1.4
	comp=Z,1.1nm,0.2s						
MYKA	Terra Mystica	5.20	199	eSg	Sg	13 48 51.6	+1.3
	comp=Z,1.4nm,0.2s						
WTTA	Wattenberg	5.21	216	Sg	Sg	13 48 51.7	+1.1
	comp=Z,1.9nm,0.3s						
ABTA	Abfaltersbach	5.38	208	Sg	Sg	13 48 56.2	+0.4
	comp=Z,2.0nm,0.2s						
RETA	Reutte	5.38	223	Sg	Sb	13 48 43.3	+0.2
	comp=Z,0.4nm,0.2s						
FETA	Feichten	5.76	220	ePn	Pn	13 47 31.3	+1.2
	comp=Z,0.3nm,0.2s						
FETA				Sg	Sb	13 48 54.6	+0.3
	comp=Z,1.8nm,0.6s						
DAVA	Damuels	5.91	226	Sg	Sb	13 49 00.2	+1.5
	comp=Z,2.6nm,0.2s						
DAVOX	Davos/Dischmat	6.30	223	Lg	Lg	13 49 21.9	
	comp=Z,0.5nm,0.3s,baz=53,slow=20,SNR=2.4						
AKASG	Malin Array Be	8.28	91	Pn	Pn	13 48 05.3	+0.8
	comp=Z,0.8nm,0.3s,baz=277,slow=12,SNR=3.1						
AKASG				Sn	Sn	13 49 36.5	-2.1
	comp=Z,0.6nm,0.3s,baz=268,slow=25,SNR=2.3						
FINES	FINESS Array B	11.31	25	Pn	Pn	13 48 46.0	+0.1
	comp=Z,0.1nm,0.3s,baz=216,slow=12,SNR=4.9						
FINES				Sn	Sn	13 50 49.1	-3.7
	comp=Z,0.1nm,0.3s,baz=216,slow=22,SNR=2.6						
ARCES	ARCESS Array B	18.57	10	P	P	13 50 18.8	-2.5
	comp=Z,0.1nm,0.3s,baz=189,slow=12,SNR=5.1						

IDC 13 13:57:38.8±2.2, 10°.73S×164°.72E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/46, mbtmp3.8/5, ML4.4/1, Error ellipse: s-maj=62.3km s-min=32.2km az=160.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.87	285	Pn	Pn	13 58 54.4	+1.1
	14nm,0.3s,baz=144,slow=9.1,SNR=6.1						
HNR				Sn	Sn	13 59 50.3	-0.2
	13nm,0.3s,baz=42,slow=18,SNR=3.9						
WRA	Warramunga Arr	30.65	249	P	P	14 03 54.8	-0.4
	0.8nm,0.9s,baz=78,slow=9.4,SNR=5.0						
SONM	Songino Array	77.81	324	P	P	14 09 38.6	+0.4
	0.1nm,0.4s,baz=134,slow=6.2,SNR=2.0						
ILAR	Eielson Array	83.54	19	P	P	14 10 08.1	-0.2
	1.0nm,1.0s,baz=234,slow=6.5,SNR=6.2						
MKAR	Makanchi Array	92.60	317	P	P	14 10 52.2	-0.2
	0.5nm,0.8s,baz=93,slow=4.6,SNR=4.5						

DJA 13 13:58:52.2±1.1, 10°S±6°×11°5E±°, h27^{km}±8^{km}, M3.5/6, MLv3.5/6, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	Denpasar	0.83	0	P	Pb	13 59 06.6	-1.4
DNP				S	Sn	13 59 19.9	+0.5
SRBI	Singaraja	1.42	0	P	Pn	13 59 17.0	+0.8
SRBI				S	Sn	13 59 34.4	+0.4
JAGI	Jajag, Banyuwa	1.47	315	P	Pn	13 59 16.7	-0.3
GMJI	Gumukmas	2.13	305	P	Pn	13 59 26.6	+0.5
GMJI				S	Sn	13 59 51.5	-0.2

IDC 13 13:59:37.2±1.7, 11°.55S×165°.33E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.5/48, mbtmp3.7/4, ML3.7/1, MS3.9/1, Ms1 3.9/1, ms1mx2.7/27, Error ellipse: s-maj=53.1km s-min=35.6km az=113.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.52	174	Pn	Pn	14 02 09.4	-0.1
	0.6nm,0.3s,baz=314,slow=23,SNR=8.4						
WRA	Warramunga Arr	30.93	250	P	P	14 05 56.2	0.0
	0.6nm,0.7s,baz=82,slow=9.0,SNR=6.5						

RPZ	Rata Peaks	32.43	172	LR	LR	14 16 20.4	
	comp=Z,216nm,20.1s,baz=242,slow=31						
ILAR	Eielson Array	84.11	19	P	P	14 12 09.8	+0.1
	0.2nm,0.8s,baz=219,slow=5.4,SNR=4.5						
MKAR	Makanchi Array	93.61	317	P	P	14 12 55.3	-0.2
	0.3nm,0.8s,baz=97,slow=6.0,SNR=2.2						

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*NNC **13** 14:08:23.4±2.7, 34°.94N×73°.39E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=39.2km s-min=20.8km az=87.0*

ISC 13 14:08:19.6±1.8**, 34°.6N**±0°.1×**73°.8E**±0°.2**, h21**^{km}**, n13, σ1^{s}.91**/16**, 4C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	5.46	357	⇑Pn	Pn	14 09 40.9	+1.0
	1.4nm,0.4s						
SFK				⇓Sn	Sn	14 10 42.1	-0.1
	3.8nm,0.3s						
MNAS	Manas	8.00	353	⇑Pn	Pn	14 10 14.0	-0.6
	2.4nm,1.0s						
MNAS				⇑Sn	Sn	14 11 43.5	-1.0
	0.7nm,0.4s						
KK31	Karatay Array	8.92	344	Pn	Pn	14 10 27.8	+0.6
	0.6nm,0.3s,baz=158,slow=12,SNR=9.2						
KK31				⇑Sn	Sn	14 12 03.2	-3.9
	1.1nm,0.6s,baz=168,slow=25,SNR=3.5						
PYUN	Piuthan	10.14	127	*e*P	Pn	14 10 44.3	+0.2
	6.2nm,0.3s						
DANN	Dangsing	10.50	123	*e*P	Pn	14 10 48.8	-0.3
KOLN	Koldanda	10.76	126	*e*P	Pn	14 10 53.5	+0.9
DMN	Daman	11.89	123	*e*P	Pn	14 11 06.7	-1.4
KKN	Kakani	11.90	121	*e*P	Pn	14 11 07.4	-0.8
PKIN	Phulchoki	12.11	122	*e*P	Pn	14 11 09.3	-1.9
PKI	Pulchoki	12.12	122	*e*P	Pn	14 11 10.1	-1.3
JIRN	Jiri	12.62	120	*e*P	Pn	14 11 15.6	-2.7
	20nm,0.5s						
MK31	Makanchi Array	13.81	25	Pn	Pn	14 11 37.4	+3.4
	0.9nm,0.9s,baz=200,slow=10.0,SNR=4.7						
AB31	Akbulak array	17.92	329	P	P	14 12 29.4	+1.6
	0.2nm,0.4s,baz=125,slow=14,SNR=4.3						

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*IDC **13** 14:09:39.6±0.7, 46°.46N×155°.50E, h0^{km}, mb3.8/20, mb1 4.0/23, mb1mx3.9/61, mbtmp3.8/23, ML3.2/3, MS2.9/5, Ms1 2.9/5, ms1mx2.6/41, Error ellipse: s-maj=20.1km s-min=15.2km az=154.0*

*ISCJB **13** 14:09:40.5±0.4, 46°.47N±0°.06×155°.35E±0°.07, h18^{km}, mb4.0/26, Error ellipse: s-maj=9.7km s-min=5.7km az=148.6*

*NEIC **13** 14:09:41.1±0.4, 46°.61N×155°.50E, h10^{km}, mb4.4/9, Error ellipse: s-maj=10.4km s-min=5.9km az=138.0*

*SKHL **13** 14:09:42.6±0.3, 46°.16N×155°.42E, h55^{km}±2^{km}, mb5.4/3, msh5.2/3*

*MOS **13** 14:09:44.1±1.3, 46°.26N×155°.20E, h45^{km}, mb4.4/5, MS2.7/3, Error ellipse: s-maj=10.5km s-min=8.5km az=150.4*

ISC 13 14:09:42.2±0.7**, 46°.57N**±0°.08×**155°.28E**±0°.07**, h18**^{km}**, n98, σ1^{s}.91**/104**, mb4.0**/26**, 3D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	5.34	258	*i* P	Pn	14 11 01.2	+0.2
KUR				AMB	AMB	14 11 02.3	
	10.0nm,0.3s						
KUR				AMB	AMB	14 11 02.3	
	50nm,0.3s						
KUR				AMB	AMB	14 11 07.9	
	500nm,4.0s						
KUR				*i* S	Sn	14 12 00.0	-2.0
KUR				A	A	14 12 01.1	
	110nm,0.3s						
KUR				A	A	14 12 01.1	
	100nm,0.3s						
KUR				A	A	14 12 09.0	
	1µm,3.0s						
KUR				A	A	14 12 09.0	
	1µm,3.0s						
KUR	Kuril'sk	5.34	258*d*	*i*PN	Pn	14 11 02.0	+1.0
KUR				pmax	pmax		
	comp=Z,39nm,0.3s						
KUR				pmax	pmax		
	comp=N,9.0nm,0.1s						
KUR				pmax	pmax		
	comp=E,6.0nm,0.1s						
SHO	Shikotan	6.54	249	*e*P	Pn	14 11 16.3	-1.2
SHO				AMB	AMB	14 11 18.1	
	comp=E,30nm,0.6s						
SHO				AMB	AMB	14 11 18.1	
	comp=E,60nm,0.6s						
SHO				AMB	AMB	14 11 18.1	
	comp=E,600nm,4.0s						
SHO				*i* S	Sn	14 12 26.8	-4.9
SHO				A	A	14 12 32.2	
	comp=E,50nm,0.4s						
SHO				A	A	14 12 32.2	
	comp=E,40nm,0.4s						
SHO				A	A	14 12 36.0	
	comp=E,500nm,4.0s						
SHO	Shikotan	6.54	249*d*	*i*PN	Pn	14 11 15.9	-1.6
SHO				pmax	pmax		
	comp=E,14nm,0.5s						
SHO				pmax	pmax		
	comp=Z,26nm,0.5s						
SHO				pmax	pmax		
	comp=N,9.0nm,0.4s						
PEA0B	Petropavlovsk-	6.74	13	*e*Pn	Pn	14 11 16.4	-3.8
PETK	Petropavlovsk-	6.74	13	*e*Pn	Pn	14 11 16.2	-3.9
PETK				Sn	Sn	14 12 33.5	-2.9
PETK	Petropavlovsk-	6.74	13	Pn	Pn	14 11 17.1	-3.0
	comp=N,0.6nm,0.3s,baz=189,slow=14,SNR=24						
PETK				Sn	Sn	14 12 33.5	-2.9
	baz=262,slow=17,SNR=2.0						
PETK				LR	LR	14 14 15.6	
	comp=N,54nm,20.1s,baz=165,slow=41						
PEA1	Petropavlovsk-	6.74	13	*e*Pn	Pn	14 11 17.1	-3.1
PEA1				*e*Sn	Sn	14 12 33.5	-3.0
PET	Petropavlovsk	6.83	17	*e*Pn	Pn	14 11 17.2	-4.1
PET	Petropavlovsk	6.83	17	*e*PN	Pn	14 11 17.4	-3.9
YUK	Yuzh-Kuril'sk	7.10	253	*i* P	Pn	14 11 25.6	+0.3
YUK				AMB	AMB	14 11 27.5	
	comp=N,600nm,5.0s						
YUK				AMB	AMB	14 11 34.0	
	comp=N,30nm,0.7s						
YUK				AMB	AMB	14 11 34.0	
	comp=N,40nm,0.7s						
YUK				AMB	AMB	14 11 34.0	
	comp=N,90nm,0.7s						
YUK				*e*S	Sn	14 12 41.5	-3.9
YUK				A	A	14 12 44.6	
	comp=N,100nm,0.8s						
YUK				A	A	14 12 44.6	
	comp=N,140nm,0.8s						
YUK				A	A	14 12 46.0	
	comp=N,2µm,4.0s						
YUK				A	A	14 12 46.0	
	comp=N,900nm,4.0s						
YUK	Yuzh-Kuril'sk	7.10	253*d*	*i*PN	Pn	14 11 25.5	+0.3
YUK				pmax	pmax		
	comp=Z,85nm,0.7s						
YUK				pmax	pmax		
	comp=N,26nm,0.4s						
YUK				pmax	pmax		
	comp=E,39nm,0.5s						
LAGR	Lagunnoye	7.14	253	*e*P	Pn	14 11 25.0	-0.8
LAGR				*i* S	Sn	14 12 44.0	-2.4
LAGR	Lagunnoye	7.14	253	PN	Pn	14 11 25.6	-0.2
GRPR	Tuman	7.18	252	*e*P	Pn	14 11 26.0	-0.3
GRPR				*i* S	Sn	14 12 44.0	-3.3
GRPR	Tuman	7.18	252	*e*PN	Pn	14 11 26.9	+0.6
GLVR	Golovnino	7.45	251	*e*P	Pn	14 11 30.0	0.0
GLVR				*e*S	Sn	14 12 50.0	-4.0
GLVR	Golovnino	7.45	251	*e*PN	Pn	14 11 30.8	+0.8
YSS	Yuzh-Sakhalins	8.61	277	*e*P	Pn	14 11 46.0	+0.2
ASAJ	Asahikawa	9.26	259	Pn	Pn	14 11 56.3	+1.6
	comp=E,0.6nm,0.3s,baz=70,slow=23,SNR=8.5						
TYV	Tymovskoe	9.38	302	*e*P	Pn	14 12 00.1	+3.7
ERM	Erimo	9.80	247	*e*Pn	Pn	14 12 04.1	+1.9
ERM	Erimo	9.80	247	*e*PN	Pn	14 12 04.1	+1.9
TEY	Ternei	13.12	270	*e*P	Pn	14 12 43.6	-3.9
MA2	Magadan	13.31	350	Pn	Pn	14 12 46.8	-3.2
	comp=E,0.2nm,0.3s,baz=162,slow=13,SNR=4.8						
MA2				LR	LR	14 18 04.1	
	comp=E,51nm,19.3s,baz=210,slow=38						
EKMR	Ekimchan	15.77	303	*e*P	Pn	14 13 24.5	+1.2
EKMR				AMB	AMB	14 13 30.0	
	comp=E,6.0nm,0.7s						
KLR	Kul'dur	15.99	288	Pn	P	14 13 28.6	-0.9
	comp=E,0.1nm,0.3s,baz=93,slow=11,SNR=3.3						
KLR				LR	LR	14 18 49.0	
	comp=E,35nm,21.7s,baz=114,slow=34						
MJAR	Matsushiro Arr	16.20	238	Pn	Pn	14 13 22.3	-6.5
	comp=E,0.0nm,0.3s,baz=46,slow=13,SNR=3.3						
MAJO	Matsushiro	16.20	238	*e*P	Pn	14 13 30.3	+1.4
MAJO	Matsushiro	16.20	238	*e*P	Pn	14 13 30.3	+1.4
MJB9	Matsu-Tunnel	16.20	238	*e*Pn	Pn	14 13 30.3	+1.4
	comp=E,25nm,1.4s						
SEY	Seymchan	16.48	355	*e*P	Pn	14 13 33.0	+0.7
SEY	Seymchan	16.48	355	P	Pn	14 13 33.0	+0.7
SEY	Seymchan	16.48	355	Pn	Pn	14 13 33.0	+0.7
	comp=E,0.1nm,0.3s,baz=155,slow=17,SNR=3.8						
USA0B	Ussuriysk Arra	16.52	270	*e*Pn	Pn	14 13 33.3	+0.5
	comp=E,5.7nm,0.8s						
USRK	Ussuriysk Ar.	16.52	270	Pn	P	14 13 34.2	-1.2
	comp=E,0.2nm,0.3s,baz=69,slow=14,SNR=7.2						
KROS	Kirovskiy	19.55	304	*e*P	Pn	14 14 10.1	+0.1
KROS				AMB	AMB	14 14 12.2	
	comp=E,6.0nm,0.8s						
KSRS	Korea Array	22.18	256	P	P	14 14 39.2	+2.0
	comp=E,1.4nm,0.9s,baz=52,slow=14,SNR=4.3						
KSAR	Wonju Array Be	22.21	256	P	P	14 14 39.2	+1.7
KSAR	Wonju Array Be	22.21	256	P	P	14 14 39.2	+1.7
BILL	Bilibino	22.26	11	*e*P	P	14 14 34.9	-3.0
BILL				*e*PPP	PPP	14 15 07.5	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,59nm,15.0s						
H11S1	WAKE ISLAND Hy	29.53	158	T	T	14 46 35.9	
	baz=345						
H11S3	WAKE ISLAND Hy	29.54	158	T	T	14 46 34.7	
	baz=345,SNR=3.8						
H11S2	WAKE ISLAND Hy	29.54	158	T	T	14 46 37.5	
	baz=345						
SONA0	Songino Array	32.80	290	*e*P	P	14 16 16.4	+2.0
SONM	Songino Array	32.80	290	P	P	14 16 16.4	+2.0
	comp=Z,0.4nm,0.7s,baz=46,slow=8.5,SNR=3.5						
INK	Inuvik	41.01	32	*e*P	P	14 17 24.3	+0.6
	comp=Z,18nm,1.9s						
INK	Inuvik	41.01	32	*e*P	P	14 17 24.3	+0.6
INK	Inuvik	41.01	32	*e*P	P	14 17 24.3	+0.6
INK				pmax	pmax		
	comp=Z,18nm,1.9s						
INK	Inuvik	41.01	32	P	P	14 17 24.7	+1.0
	comp=Z,0.9nm,0.9s,baz=313,slow=1.9,SNR=3.6						
ZAA1	Zalesovo Array	43.92	307	*e*P	P	14 17 48.1	+0.5
ZALV	Zalesovo Beam	43.92	307	P	P	14 17 48.1	+0.5
	comp=Z,0.8nm,0.6s,baz=54,slow=7.3,SNR=3.1						
MK31	Makanchi Array	48.34	298	*e*P	P	14 18 23.3	+0.7
MK31	Makanchi Array	48.34	298	*e*P	P	14 18 23.3	+0.7
MK32	Makanchi Array	48.34	298	*e*P	P	14 18 23.4	+0.8
MKAR	Makanchi Array	48.34	298	*e*P	P	14 18 23.0	+0.4
	comp=Z,7.4nm,0.6s						
MKAR	Makanchi Array	48.34	298	*e*P	P	14 18 23.0	+0.4
MKAR	Makanchi Array	48.34	298	*e*P	P	14 18 23.0	+0.4
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MKAR	Makanchi Array	48.34	298	P	P	14 18 23.4	+0.8
	comp=Z,0.6nm,0.7s,baz=69,slow=8.0,SNR=6.9						
KURK	Kurchatov	48.70	305	*e*P	P	14 18 26.4	+1.2
	comp=Z,3.2nm,0.8s						
KURK	Kurchatov	48.70	305	*e*P	P	14 18 26.4	+1.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	50.18	37	P	P	14 18 35.9	-0.3
	comp=Z,0.3nm,0.8s,baz=299,slow=7.8,SNR=4.1						
YKB5	Yellowknife Ar	50.18	37	*e*P	P	14 18 35.4	-0.8
CMAR	Chiang Mai Arr	53.78	258	P	P	14 19 05.2	+1.4
	comp=Z,0.7nm,0.4s,baz=37,slow=7.5,SNR=7.6						
AAK	Ala-Archa	55.24	298	*e*P	P	14 19 14.8	+0.5
	comp=Z,1.8nm,0.8s						
AAK	Ala-Archa	55.24	298	*e*P	P	14 19 14.8	+0.5
AAK	Ala-Archa	55.24	298	*e*P	P	14 19 14.8	+0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	55.24	298	P	P	14 19 15.8	+1.5
	comp=Z,1.7nm,0.8s,baz=44,slow=2.9,SNR=9.7						
ARU	Arti	56.15	318	*e*P	P	14 19 20.7	+0.4
	comp=Z,4.6nm,0.6s						
ARU	Arti	56.15	318	*e*P	P	14 19 20.7	+0.4
ARA0	ARCESS Array S	58.51	342	*e*P	P	14 19 38.7	+1.9
ARCES	ARCESS Array B	58.51	342	P	P	14 19 38.7	+1.9
	comp=Z,3.3nm,0.8s,baz=30,slow=7.3,SNR=3.0						
ABKAR	Akbulak array	59.68	311	*e*P	P	14 19 46.3	+1.1
AKTO	Aktyubinsk	59.95	313	P	P	14 19 48.8	+1.8
	comp=Z,1.0nm,0.5s,baz=93,slow=5.2,SNR=4.3						
PD31	Pinedale Array	63.64	55	*e*P	P	14 20 11.0	-1.4
PDAR	Pinedale Array	63.64	55	P	P	14 20 11.8	-0.5
	comp=Z,0.2nm,0.6s,baz=72,slow=32,SNR=3.5						
FIA0	FINESS Array S	64.83	336	*e*P	P	14 20 20.0	+0.5
FIA0	FINESS Array S	64.83	336	*e*P	P	14 20 20.0	+0.5
FINES	FINESS Array B	64.83	336	*e*P	P	14 20 20.0	+0.5
FINES	FINESS Array B	64.83	336	P	P	14 20 20.0	+0.5
FINES	FINESS Array B	64.83	336	P	P	14 20 20.0	+0.5
	comp=Z,1.5nm,0.6s,baz=31,slow=7.4,SNR=12						
OBN	Obninsk	66.29	327	*e*P	P	14 20 27.8	-1.2
OBN	Obninsk	66.29	327	*e*P	P	14 20 27.8	-1.2
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WR1	Warramunga Arr	68.85	201	*e*P	P	14 20 45.1	-0.5
	comp=Z,16nm,1.7s						
WRA	Warramunga Arr	68.85	201	P	P	14 20 45.1	-0.5
	comp=Z,1.0nm,0.9s,baz=20,slow=6.6,SNR=6.1						
NB200	NORSAR Array S	68.87	342	*e*P	P	14 20 47.3	+2.0
NOA	NORSAR Array B	68.87	342	P	P	14 20 47.3	+2.0
	comp=Z,0.6nm,0.7s,baz=27,slow=6.5,SNR=2.7						
NOA				LR	LR	14 54 12.4	
	comp=Z,3.3nm,18.6s,baz=240,slow=39						
HFS	Hagfors	69.14	341	P	P	14 20 48.3	+1.4
	comp=Z,1.3nm,0.5s,baz=72,slow=4.8,SNR=4.8						
KBZ	Khabaz	72.05	315	P	P	14 21 07.4	+2.5
	comp=Z,1.6nm,0.8s,baz=240,slow=1.1,SNR=6.1						
AKASG	Malin Array Be	72.52	327	P	P	14 21 09.1	+1.5
	comp=Z,0.4nm,0.3s,baz=35,slow=5.9,SNR=4.0						
AKASG				LR	LR	14 54 09.3	
	comp=Z,34nm,21.7s,baz=250,slow=37						
AS31	Alice Springs	72.53	201	*e*P	P	14 21 08.3	+0.4
	comp=Z,3.0nm,1.7s						
ASAR	Alice Springs	72.53	201	P	P	14 21 08.4	+0.5
	comp=Z,1.1nm,0.8s,baz=17,slow=5.6,SNR=12						
TX31	Lajitas Ar. Si	76.28	62	*e*P	P	14 21 29.7	-0.3
LTX	Lajitas	76.28	62	*e*P	P	14 21 29.8	-0.2
LTX	Lajitas	76.28	62	*e*P	P	14 21 29.8	-0.2
TXAR	Lajitas Array	76.28	62	P	P	14 21 29.8	-0.2
	comp=Z,1.6nm,0.7s,baz=302,slow=4.4,SNR=19						
BR101	Keskin Array S	79.53	318	*e*P	P	14 21 47.9	-0.1
BRTR	Keskin Array B	79.53	318	P	P	14 21 47.9	-0.1
	comp=Z,0.3nm,0.3s,baz=23,slow=7.8,SNR=2.7						

KRSC 13 14:18:08.5±1.3**, 48°.87N**×**156°.97E, h16**^{km}±30^{km}**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.90	343	*e*P	Pn	14 18 41.1	+0.9
SKR				*e*S	Sb	14 19 05.3	-0.8
ALID	Alaid	2.20	336	*e*P	Pn	14 18 45.5	+0.9
PAU	Pauzhetka	2.60	358	*e*P	Pb	14 18 52.4	-2.3
PAU				*e*S	Sb	14 19 24.4	-2.0
KDTR	Khodutka, Kamc	3.02	13	*e*P	Pn	14 18 58.2	+2.5
KDTR				*e*S	Sb	14 19 35.6	-3.0
MTVR	Mutnovka	3.70	12	*e*P	Pn	14 19 08.2	+3.1
MTVR				*e*S	Sn	14 19 53.1	+4.7
RUS	Russkaya	3.70	15	*e*P	Pn	14 19 07.4	+2.4
RUS				*e*S	Sn	14 19 51.9	+3.7
KRMR	Karymshinskiy	4.03	10	*e*P	Pn	14 19 13.7	+4.2
DALK	Dalny	4.31	14	*e*P	Pn	14 19 16.7	+3.3
DALK				*e*S	Sn	14 20 07.4	+4.1
UGLR	Uglovaya	4.50	14	*e*P	Pn	14 19 20.5	+4.4
AVH	Avacha	4.54	14	*e*P	Pn	14 19 21.0	+4.4
SMAR	Somma	4.54	14	*e*P	Pn	14 19 21.7	+4.9
KOK	Koryaka	4.55	13	*e*P	Pn	14 19 21.4	+4.6
KRX	Arik	4.62	13	*e*P	Pn	14 19 22.7	+5.0
SPN	Mys Shipunski	4.65	23	*e*P	Pn	14 19 22.6	+4.6
GNL	Ganaly	4.87	7	*e*P	Pn	14 19 25.2	+4.0

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*ISCJB **13** 14:51:41.9±0.9, 48°.69N±0°.07×156°.6E±0°.1, h35^{km}, Error ellipse: s-maj=16.0km s-min=5.8km az=29.8*

*KRSC **13** 14:51:41.4±1.3, 48°.83N×157°.04E, h17^{km}±26^{km}, ML4.2*

*MOS **13** 14:51:41.4±2.3, 48°.83N×157°.04E, h17^{km}, mb4.3/1, Error ellipse: s-maj=51.9km s-min=5.8km az=82.9*

*SKHL **13** 14:51:42.2±0.7, 48°.61N×156°.53E, h36^{km}±4^{km}, mb4.3/3*

ISC 13 14:51:43.5±1.7**, 48°.7N**±0°.1×**156°.5E**±0°.1**, h35**^{km}**, n43, σ0^{s}.95**/64**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.02	352	*e*P	Pn	14 52 13.9	-1.1
SKR				*e*S	Sn	14 52 38.8	-0.2
SKR	Severo-Kuril's	2.02	352	*e*P	Pn	14 52 14.8	-0.2
SKR				AMB	AMB	14 52 17.4	
	60nm,0.3s						
SKR				*e*S	Sn	14 52 38.8	-0.2
SKR				A	A	14 52 43.5	
	370nm,0.3s						
SKR				A	A	14 52 43.5	
	390nm,0.3s						
SKR	Severo-Kuril's	2.02	352	*e*PN	Pn	14 52 14.8	-0.2
SKR				*e*S	Sn	14 52 38.8	-0.2
SKR				pmax	pmax		
	comp=Z,116nm,0.5s						
SKR				smax	smax		
	comp=E,601nm,0.7s						
SKR				smax	smax		
	comp=N,859nm,0.5s						
ALID	Alaid	2.28	344	*e*P	Pn	14 52 19.2	+0.4
PAU	Pauzhetka	2.79	4	*e*P	Pn	14 52 25.4	-0.2
PAU				*e*S	Sn	14 52 57.7	-0.4
PAU	Pauzhetka	2.79	4	*e*P	Pn	14 52 25.4	-0.2
PAU				*e*S	Sn	14 52 57.7	-0.4
PAU	Pauzhetka	2.79	4	PN	Pn	14 52 25.4	-0.2
PAU				S	Sn	14 52 57.7	-0.4
KDTR	Khodutka, Kamc	3.28	17	*e*P	Pn	14 52 32.0	-0.4
KDTR				*e*S	Sn	14 53 09.4	-0.7
KDTR	Khodutka, Kamc	3.28	17	PN	Pn	14 52 32.0	-0.4
KDTR				S	Sn	14 53 09.4	-0.7
MTVR	Mutnovka	3.95	15	*e*P	Pn	14 52 42.0	+0.4
MTVR				*e*S	Sn	14 53 26.6	-0.2
MTVR	Mutnovka	3.95	15	PN	Pn	14 52 42.0	+0.4
MTVR				S	Sn	14 53 26.6	-0.2
RUS	Russkaya	3.96	18	*e*P	Pn	14 52 41.3	-0.4
RUS				*e*S	Sn	14 53 25.5	-1.3
RUS	Russkaya	3.96	18	*e*P	Pn	14 52 41.3	-0.4
RUS	Russkaya	3.96	18	PN	Pn	14 52 41.3	-0.4
RUS				S	Sn	14 53 25.5	-1.3
KRMR	Karymshinskiy	4.27	13	*e*P	Pn	14 52 47.0	+1.0
KRMR				*e*S	Sn	14 53 35.6	+1.0
KRMR	Karymshinskiy	4.27	13	PN	Pn	14 52 47.0	+1.0
KRMR				S	Sn	14 53 35.6	+1.0
PET	Petropavlovsk	4.55	16	*e*P	Pn	14 52 50.3	+0.6
PET	Petropavlovsk	4.55	16	*e*P	Pn	14 52 50.0	+0.3
PET				AMB	AMB	14 52 51.5	
	comp=N,7.0nm,0.3s						
PET				AMB	AMB	14 52 51.5	
	comp=N,8.0nm,0.3s						
PET				*e*S	Sn	14 53 41.4	+0.1
PET				A	A	14 53 45.3	
	comp=N,50nm,0.4s						
PET	Petropavlovsk	4.55	16	*e*PN	Pn	14 52 50.0	+0.3
PET				*e*S	Sn	14 53 41.9	+0.6
PET				pmax	pmax		
	comp=Z,14nm,0.5s						
PET				smax	smax		
	comp=N,82nm,0.5s						
PET				smax	smax		
	comp=E,93nm,0.6s						
DALK	Dalny	4.58	17	*e*P	Pn	14 52 50.6	+0.5
DALK				*e*S	Sn	14 53 41.3	-0.7
DALK	Dalny	4.58	17	PN	Pn	14 52 50.6	+0.5
DALK				S	Sn	14 53 41.3	-0.7
UGLR	Uglovaya	4.76	17	*e*P	Pn	14 52 53.7	+1.0
UGLR	Uglovaya	4.76	17	PN	Pn	14 52 53.7	+1.0
AVH	Avacha	4.79	16	*e*P	Pn	14 52 54.7	+1.5
AVH	Avacha	4.79	16	*e*P	Pn	14 52 54.7	+1.5
AVH	Avacha	4.79	16	PN	Pn	14 52 54.7	+1.5
KOK	Koryaka	4.80	15	*e*P	Pn	14 52 55.2	+1.9
KOK	Koryaka	4.80	15	PN	Pn	14 52 55.2	+1.9
SMAR	Somma	4.80	16	*e*P	Pn	14 52 54.8	+1.3
SMAR	Somma	4.80	16	PN	Pn	14 52 54.8	+1.3
NLC	Nalytchevo	4.83	20	*e*P	Pn	14 52 53.8	+0.2
NLC	Nalytchevo	4.83	20	PN	Pn	14 52 53.8	+0.2
KRX	Arik	4.87	15	*e*P	Pn	14 52 55.8	+1.5
KRX	Arik	4.87	15	PN	Pn	14 52 55.8	+1.5
SPN	Mys Shipunski	4.94	25	*e*P	Pn	14 52 55.8	+0.7
SPN				*e*S	Sn	14 53 49.9	-1.1
SPN	Mys Shipunski	4.94	25	*e*P	Pn	14 52 55.8	+0.7
SPN	Mys Shipunski	4.94	25	PN	Pn	14 52 55.8	+0.7
SPN				S	Sn	14 53 49.9	-1.1
GNL	Ganaly	5.10	9	*e*P	Pn	14 52 58.8	+1.4
GNL	Ganaly	5.10	9	PN	Pn	14 52 58.8	+1.4
KUR	Kuril'sk	6.86	243	*e*P	Pn	14 53 21.6	+0.1
KUR				AMB	AMB	14 53 33.9	
	comp=E,10.0nm,0.6s						
KUR				AMB	AMB	14 53 33.9	
	comp=E,7.0nm,0.6s						
KUR				AMB	AMB	14 53 33.9	
	comp=E,20nm,0.6s						
KUR				*e*S	Sn	14 54 35.3	-3.0
KUR				A	A	14 54 56.7	
	comp=E,20nm,0.7s						
KUR				A	A	14 54 56.7	
	comp=E,80nm,0.7s						
KBTR	Krutoberegovo	8.46	25	*e*P	Pn	14 53 43.4	+0.1
KBTR	Krutoberegovo	8.46	25	PN	Pn	14 53 43.4	+0.1
YUK	Yuzh-Kuril'sk	8.72	242	*e*P	Pn	14 53 47.2	+0.2

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*ISCJB **13** 14:56:23.9±0.4, 33°.67S±0°.08×77°.60E±0°.10, h16^{km}, mb4.4/27, MS3.8/17, Error ellipse: s-maj=12.1km s-min=10.3km az=145.2*

*IDC **13** 14:56:23.2±0.7, 33°.66S×77°.52E, h0^{km}, mb4.2/15, mb1 4.2/15, mb1mx4.0/44, mbtmp4.2/15, MS3.8/17, Ms1 3.8/17, ms1mx3.6/34, Error ellipse: s-maj=26.0km s-min=20.4km az=44.0*

*NEIC **13** 14:56:24.8±0.3, 33°.62S×77°.57E, h10^{km}, mb4.8/12, Error ellipse: s-maj=9.3km s-min=6.8km az=219.0*

ISC 13 14:56:25.7±0.5**, 33°.6S**±0°.1×**77°.6E**±0°.1**, h16**^{km}**, n79, σ0^{s}.64**/61**, mb4.4**/27**, MS3.8**/17**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	26.29	349	T	T	15 29 15.5	
	baz=171,slow=76,SNR=58						
H08S1	Diego Carcia H	26.30	349	T	T	15 29 15.9	
	baz=171,slow=76,SNR=23						
H08S3	Diego Garcia H	26.31	349	T	T	15 29 17.9	
	baz=171,slow=76,SNR=260						
H01W2	Cape Leeuwin H	30.14	103	T	T	15 34 04.0	
	baz=262,slow=74,SNR=51						
H01W3	Cape Leeuwin H	30.15	103	T	T	15 34 04.3	
	baz=262,slow=74,SNR=63						
H01W1	Cape Leeuwin H	30.16	103	T	T	15 34 07.9	
	baz=262,slow=74,SNR=66						
MAW	Mawson	35.06	190	LR	LR	15 14 23.7	
	comp=Z,217nm,18.3s,baz=348,slow=31						
PALK	Pallekele	40.80	5	LR	LR	15 16 47.1	
	comp=Z,144nm,21.8s,baz=116,slow=30						
PSI	Prapat	41.48	33	LR	LR	15 17 29.1	
	comp=Z,413nm,21.1s,baz=252,slow=31						
BOSA	Boshof	44.67	262	LR	LR	15 19 11.0	
	comp=Z,130nm,19.2s,baz=93,slow=31						
KMBO	Kilima Mbogo	49.70	302	*e*P	P	15 05 17.5	+0.1
	25nm,0.2s						
KMBO	Kilima Mbogo	49.70	302	P	P	15 05 17.6	+0.1
	11nm,0.2s,baz=112,slow=6.5,SNR=4.5						
ASAR	Alice Springs	49.91	94	P	P	15 05 18.9	+0.1
	1.4nm,1.0s,baz=243,slow=6.8,SNR=9.8						
ASAR				LR	LR	15 24 15.4	
	comp=Z,51nm,19.2s,baz=256,slow=34						
AS31	Alice Springs	49.91	94	*e*P	P	15 05 19.0	+0.2
	0.8nm,0.9s						
AS01	Alice Springs	49.94	94	*e*P	P	15 05 18.6	-0.4
WRA	Warramunga Arr	51.90	90	P	P	15 05 34.0	+0.2
	3.5nm,1.1s,baz=243,slow=7.1,SNR=11						
WR1	Warramunga Arr	51.90	90	*e*P	P	15 05 34.0	+0.2
	8.7nm,1.3s						
WB2	Warramunga Arr	51.91	90	*e*P	P	15 05 33.0	-0.8
STKA	Stephens Creek	53.09	107	LR	LR	15 24 24.8	
	comp=Z,47nm,19.2s,baz=203,slow=32						
PBKT	Sadao Pong	54.70	28	*e*P	P	15 05 54.8	+0.6

CM01	Chiang Mai Arr	55.65	25	*e*P	P	15 06 01.8	+0.7
CM31	Chiang Mai Arr	55.68	25	*e*P	P	15 06 01.7	+0.4
CMAR	Chiang Mai Arr	55.68	25	P	P	15 06 02.0	+0.7
	0.6nm,0.8s,baz=217,slow=7.1,SNR=6.0						
CMAR				LR	LR	15 27 00.0	
	comp=Z,44nm,19.9s,baz=198,slow=33						
VNDA	Vanda	56.20	165	*e*P	P	15 06 04.7	+0.4
VNDA	Vanda	56.20	165	LR	LR	15 27 49.5	
	comp=Z,128nm,19.1s,baz=254,slow=34						
QSPA	South Pole Qui	56.51	180	*e*P	P	15 06 07.4	+0.5
	13nm,1.1s						
QSPA	South Pole Qui	56.51	180	P	P	15 06 07.0	+0.2
	8.2nm,1.1s,baz=279,slow=3.9,SNR=10						
VNA2	Neumayer--Watz	56.98	203	P	P	15 06 08.5	-1.5
	baz=335,slow=8.8						
VNA3	Neumayer Olymp	57.67	202	P	P	15 06 16.1	+1.3
WSAR	Wadi Sarin	59.37	340	LR	LR	15 26 43.4	
	comp=Z,57nm,19.1s,baz=170,slow=31						
SIJI	Sorong	59.86	69	LR	LR	15 29 11.6	
	comp=Z,54nm,19.9s,baz=84,slow=33						
RAYN	Ar Rayn	64.53	327	*e*P	P	15 07 02.4	+0.5
	9.8nm,1.2s						
JAY	Jayapura	66.39	77	LR	LR	15 33 18.9	
	comp=Z,54nm,21.9s,baz=266,slow=33						
KBL	Kabul	68.30	352	*e*P	P	15 07 25.9	-0.1
	12nm,1.1s						
GAR	Garm	72.59	354	*e*P	P	15 07 50.5	-1.5
	11nm,1.1s						
GEYT	Alibeck	73.47	344	P	P	15 07 58.1	+0.8
	0.8nm,0.5s,baz=255,slow=4.3,SNR=3.6						
XAN	Xi'an	73.48	27	*e*P	P	15 07 57.1	-0.3
	4.9nm,1.0s						
NRN	Naryn	74.72	359	*e*P	P	15 08 04.5	-0.3
	19nm,1.8s						
AAK	Ala-Archa	75.97	358	*e*P	P	15 08 11.8	+0.1
	13nm,1.6s						
AAK	Ala-Archa	75.97	358	P	P	15 08 12.1	+0.4
	1.9nm,0.8s,baz=167,slow=5.8,SNR=6.2						
KK31	Karatay Array	76.65	355	*e*P	P	15 08 16.0	+0.6
KKAR	Karatay Array	76.65	355	*e*P	P	15 08 16.1	+0.7
MK01	Makanchi Array	80.16	3	*e*P	P	15 08 33.1	-1.7
MAKZ	Makanchi	80.18	3	*e*P	P	15 08 34.2	-0.7
	2.5nm,0.9s						
MK32	Makanchi Array	80.18	3	*e*P	P	15 08 34.7	-0.1
MKAR	Makanchi Array	80.18	3	P	P	15 08 34.7	-0.1
	1.5nm,0.8s,baz=187,slow=6.8,SNR=7.6						
MKAR				LR	LR	15 42 01.2	
	comp=Z,65nm,19.8s,baz=168,slow=34						
KBZ	Khabaz	83.25	335	P	P	15 08 51.7	+0.6
	1.1nm,0.8s,baz=84,slow=9.2,SNR=2.8						
BR101	Keskin Array S	83.55	327	*e*P	P	15 08 53.0	0.0
BRTR	Keskin Array B	83.55	327	P	P	15 08 53.0	0.0
	1.2nm,0.9s,baz=148,slow=7.3,SNR=6.3						
KURBB	Kurchatov Arra	83.91	1	P	P	15 08 54.4	+0.1
	1.2nm,0.6s,baz=190,slow=5.0,SNR=11						
KURK	Kurchatov	84.00	1	*e*P	P	15 08 54.3	-0.4
	30nm,2.0s						
ABKAR	Akbulak array	84.01	348	*e*P	P	15 08 54.7	-0.2
KSRS	Korea Array	84.86	38	LR	LR	15 42 54.9	
	comp=Z,33nm,21.6s,baz=214,slow=33						
SONA0	Songino Array	85.13	19	*e*P	P	15 09 01.2	+0.4
SONM	Songino Array	85.13	19	P	P	15 09 01.2	+0.4
	1.5nm,0.9s,baz=197,slow=3.9,SNR=10.0						
SONM				LR	LR	15 44 46.8	
	comp=Z,93nm,21.7s,baz=187,slow=34						
SONA1	Songino Array	85.14	19	*e*P	P	15 09 00.3	-0.5
AKTO	Aktyubinsk	85.48	348	P	P	15 09 02.6	+0.3
	1.9nm,0.9s,baz=182,slow=3.4,SNR=5.6						
TOA0	Torodi Ar. Sit	85.77	289	*e*P	P	15 09 04.3	-0.3
TORD	Torodi Ar. Bea	85.77	289	P	P	15 09 04.5	-0.1
	2.9nm,1.0s,baz=125,slow=7.4,SNR=13						
TOA1	Torodi Ar. Sit	85.78	289	*e*P	P	15 09 04.5	-0.1
BVAR	Borovoye Array	86.53	356	P	P	15 09 07.8	+0.4
	1.3nm,1.0s,baz=158,slow=4.8,SNR=6.7						
BRVK	Borovoye	86.57	356	*e*P	P	15 09 07.5	-0.1
	5.5nm,1.4s						
DBIC	Dimbokro	87.38	280	LR	LR	15 44 02.8	
	comp=Z,25nm,20.6s,baz=108,slow=33						
ZAA0	Zalesovo Array	87.46	4	*e*P	P	15 09 10.9	-0.9
	20nm,1.4s						
ZALV	Zalesovo Beam	87.46	4	*e*P	P	15 09 10.9	-1.0
ZALV	Zalesovo Beam	87.46	4	P	P	15 09 12.0	+0.2
	4.1nm,0.8s,baz=199,slow=4.0,SNR=19						
ZALV				LR	LR	15 45 53.2	
	comp=Z,54nm,20.8s,baz=48,slow=34						
ZAA1	Zalesovo Array	87.46	4	*e*P	P	15 09 12.0	+0.1
USRK	Ussuriysk Ar.	91.95	36	LR	LR	15 50 53.7	
	comp=Z,59nm,19.1s,baz=205,slow=36						
ILAR	Eielson Array	138.89	27	PKP	PKPdf	15 15 50.4	0.0
	0.6nm,1.1s,baz=236,slow=3.5,SNR=4.7						
WHY	Whitehorse	145.76	28	*e*PKPdf	PKPab	15 16 03.7	+0.1
SKAG	Skagway	146.29	30	*e*PKPdf	PKPab	15 16 05.8	+0.3
SCHQ	Schefferville	147.38	321	*e*PKPbc	PKPbc	15 16 08.4	+0.4
SCHQ	Schefferville	147.38	321	PKPbc	PKPbc	15 16 06.5	-1.5
	6.3nm,1.0s,baz=79,slow=5.2,SNR=6.6						
DLBC	Dease Lake	149.08	28	*e*PKPbc	PKiKP	15 16 12.9	-0.9
YKW3	Yellowknife Ar	150.05	11	*e*PKPbc	PKPbc	15 16 14.5	-0.1
YKA	Yellowknife Ar	150.12	11	PKPbc	PKPbc	15 16 14.4	-0.4
	4.4nm,0.9s,baz=333,slow=3.1,SNR=40						
YKB5	Yellowknife Ar	150.12	11	*e*PKPbc	PKiKP	15 16 14.7	-0.9
NV01	Mina Array Sit	166.30	65	*e*PKPdf	PKPdf	15 16 29.3	-1.0
NVAR	Mina Array Bea	166.30	65	PKP	PKPdf	15 16 31.1	+0.7
	0.1nm,0.3s,baz=230,slow=0.7,SNR=3.0						

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*IDC **13** 15:02:06.5±1.5, 33°.91N×88°.24E, h0^{km}, mb3.4/5, mb1 3.5/8, mb1mx3.3/40, mbtmp3.3/8, ML2.7/3, MS3.0/5, Ms1 3.0/5, ms1mx2.7/39, Error ellipse: s-maj=60.4km s-min=19.6km az=65.0*

*ISCJB **13** 15:02:09.6±0.6, 34°.05N±0°.05×88°.2E±0°.1, h33^{km}, mb3.2/4, MS3.3/2, Error ellipse: s-maj=17.6km s-min=6.7km az=8.9*

ISC 13 15:02:11.8±0.9, 34°.07N±0°.09×88°.2E±0°.2, h35^{km}, n20, σ0^{s}.91/16, mb3.3/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	Gumba	6.44	198	*e*P	Pn	15 03 45.1	+0.6
JIRN	Jiri	6.61	195	*e*P	Pn	15 03 47.7	+0.9
DANN	Dangsing	6.83	215	*e*P	Pn	15 03 49.8	0.0
PKIN	Phulchoki	6.89	201	*e*P	Pn	15 03 51.6	+1.0
	6.3nm,0.5s						
DMN	Daman	6.95	203	*e*P	Pn	15 03 52.4	+1.0
	13nm,0.6s						
ODAN	Odare	7.22	185	*e*P	Pn	15 03 55.4	+0.3
	48nm,0.7s						
RAMN	Ramite	7.22	191	*e*P	Pn	15 03 54.7	-0.4
	12nm,0.7s						
PYUN	Piuthan	7.41	218	*e*P	Pn	15 03 56.6	-1.2
	10nm,0.8s						
BRDH	Bariadhala	11.76	164	LR	LR	15 10 54.7	
	comp=Z,47nm,21.5s,baz=98,slow=46						
MKAR	Makanchi Array	13.46	342	Pn	Pn	15 05 20.1	-0.2
	0.0nm,0.3s,baz=167,slow=14,SNR=4.2						
MKAR				LR	LR	15 10 53.0	
	comp=Z,54nm,19.6s,baz=299,slow=39						
KURBB	Kurchatov Arra	17.98	340	P	Pn	15 06 18.6	-0.2
	0.0nm,0.3s,baz=148,slow=12,SNR=5.9						
CMAR	Chiang Mai Arr	18.29	146	LR	LR	15 13 28.0	
	comp=Z,17nm,18.8s,baz=350,slow=38						
SONM	Songino Array	19.40	39	P	P	15 06 34.0	-0.9
	0.0nm,0.3s,baz=222,slow=15,SNR=2.3						
ZALV	Zalesovo Beam	20.01	354	P	Pn	15 06 43.6	+0.4
	0.9nm,0.5s,baz=166,slow=13,SNR=7.0						
BVAR	Borovoye Array	22.79	332	P	P	15 07 11.5	+0.2
	0.5nm,0.7s,baz=126,slow=9.7,SNR=3.8						
GEYT	Alibeck	24.55	288	LR	LR	15 18 60.0	
	comp=Z,43nm,20.6s,baz=210,slow=41						
JCJ	Chichijima	46.59	83	LR	LR	15 29 43.9	
	comp=Z,80nm,21.1s,baz=0.5,slow=36						
WRA	Warramunga Arr	69.42	134	P	P	15 13 16.3	-0.2
	0.5nm,0.9s,baz=328,slow=6.1,SNR=4.6						
ASAR	Alice Springs	72.03	136	P	P	15 13 30.6	-1.7
	0.4nm,0.8s,baz=329,slow=6.9,SNR=4.7						
YKA	Yellowknife Ar	82.04	10	P	P	15 14 29.5	+1.5
	0.1nm,0.7s,baz=357,slow=4.2,SNR=5.2						

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*IDC **13** 15:09:33.1±1.6, 11°.12S×165°.36E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.6/32, mbtmp3.8/6, ML4.0/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/31, Error ellipse: s-maj=40.0km s-min=29.4km az=128.0*

*ISCJB **13** 15:09:36.0±1.2, 11°.3S±0°.1×165°.3E±0°.1, h30^{km}, mb3.6/4, Error ellipse: s-maj=22.6km s-min=11.8km az=35.4*

ISC 13 15:09:37.7±1.3, 11°.2S±0°.1×165°.4E±0°.1, h30^{km}, n6, σ0^{s}.84/7, mb3.6/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.60	287	Pn	Pn	15 10 59.6	+0.5
	5.6nm,0.3s,baz=191,slow=12,SNR=3.6						
HNR				Sn	Sn	15 12 02.4	0.0
	6.0nm,0.3s,baz=196,slow=23,SNR=4.6						
HNR				LR	LR	15 13 22.1	
	comp=Z,94nm,18.6s,baz=60,slow=41						
DZM	Mont Dzumac	10.89	175	Pn	Pn	15 12 12.0	+0.3
	1.0nm,0.3s,baz=125,slow=23,SNR=11						
WRA	Warramunga Arr	31.09	250	P	P	15 15 52.4	-1.3
	1.0nm,0.9s,baz=80,slow=8.9,SNR=6.6						
ASAR	Alice Springs	32.40	243	P	P	15 16 05.0	-0.2
	0.3nm,0.5s,baz=63,slow=9.9,SNR=6.8						
ILAR	Eielson Array	83.75	19	P	P	15 22 03.1	-0.5
	0.2nm,0.6s,baz=232,slow=4.4,SNR=3.5						
MKAR	Makanchi Array	93.36	317	P	P	15 22 50.7	+0.7
	0.3nm,0.8s,baz=91,slow=6.3,SNR=3.3						

IDC 13 15:30:21.9±8.4, 17°.10S×173°.75W, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.5/32, mbtmp3.6/3, Error ellipse: s-maj=364.6km s-min=39.3km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.15	258	P	P	15 39 12.3	+0.3
	0.2nm,0.4s,baz=96,slow=7.4,SNR=4.0						
ASAR	Alice Springs	49.28	253	P	P	15 39 12.4	-0.6
	0.6nm,0.5s,baz=84,slow=8.5,SNR=5.7						
ILAR	Eielson Array	84.17	11	P	P	15 42 54.6	0.0
	0.4nm,0.8s,baz=224,slow=5.7,SNR=4.8						

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*IDC **13** 15:30:46.1±2.1, 5°.51S×130°.15E, h149^{km}±25^{km}, mb3.2/2, mb1 3.3/6, mb1mx3.1/32, mbtmp3.7/6, Error ellipse: s-maj=38.0km s-min=18.9km az=90.0*

*DJA **13** 15:30:58.4±0.5, 5°S±3°×13°1E±°, h63^{km}±11^{km}, M4.0/8, mb4.0/1, mB4.8/1, MLv4.1/8, Mw(mB)4.0/1*

ISC 13 15:30:41.5±0.8, 5°.71S±0°.05×130°.79E±0°.09, h150^{km}, n13, σ3^{s}.89/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.48	323	P	Pn	15 31 14.2	+3.3
BNDI				S	Sn	15 31 27.7	-5.6
SAUI	Saumlaki	2.31	167	P	Sn	15 31 49.4	-1.0
FAKI	Fak Fak	3.13	28	P	Pn	15 31 32.7	+2.1
FAKI				S	Sn	15 32 02.2	-6.4
SIJI	Sorong	4.83	6	P	Pn	15 31 56.2	+3.3
	3.1nm,0.3s,baz=191,slow=19,SNR=47						
SIJI				S	Sn	15 32 46.3	-2.1
	5.7nm,0.3s,baz=265,slow=22,SNR=15						
SWI	Sorong	4.84	6	P	Pn	15 31 54.6	+1.7
SWI				S	Sn	15 32 37.9	-11
RKPI	Ransiki, Papua	5.37	39	P	Pn	15 32 06.1	+6.2
RKPI				S	Sn	15 32 59.5	-1.6
SANI	Sanana	6.02	307	P	Pn	15 32 15.7	+7.2
BATI	Baumata	8.35	237	P	Pn	15 32 39.2	-0.5
	1.5nm,0.3s,baz=56,slow=13,SNR=2.9						
FITZ	Fitzroy Crossi	13.30	202	P	P	15 33 48.2	-0.7
	0.3nm,0.3s,baz=18,slow=9.2,SNR=22						
FITZ				S	Sn	15 36 09.7	-2.2
	0.4nm,0.3s,baz=254,slow=23,SNR=7.9						
WRA	Warramunga Arr	14.56	167	P	Pn	15 34 02.2	+1.6
	0.2nm,0.3s,baz=334,slow=13,SNR=15						
WRA				S	Sn	15 36 35.7	-6.6
	0.5nm,0.3s,baz=355,slow=22,SNR=9.0						
ASAR	Alice Springs	18.10	171	P	Pn	15 34 49.5	+5.8
	0.3nm,0.3s,baz=354,slow=13,SNR=13						
STKA	Stephens Creek	27.93	160	P	P	15 36 26.6	+8.8
	1.1nm,0.6s,baz=345,slow=12,SNR=2.1						
MKAR	Makanchi Array	67.59	326	P	P	15 41 23.3	+1.2
	0.1nm,0.5s,baz=134,slow=6.2,SNR=4.7						

IDC 13 15:44:59.6±48.0, 16°.40S×176°.98W, h0^{km}, mb4.3/3, mb1 4.5/3, mb1mx3.7/33, mbtmp4.3/3, Error ellipse: s-maj=895.8km s-min=152.4km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.55	240	P	P	15 52 41.0	0.0
	1.7nm,0.4s,baz=88,slow=7.7,SNR=12						
WRA	Warramunga Arr	46.26	258	P	P	15 53 26.9	-0.4
	0.9nm,0.5s,baz=94,slow=7.5,SNR=35						
ASAR	Alice Springs	46.52	253	P	P	15 53 29.2	-0.1
	7.9nm,0.6s,baz=88,slow=8.3,SNR=291						

IDC 13 15:46:08.1±5.0, 3°.14S×151°.53E, h0^{km}, mb3.1/3, mb1 3.3/3, mb1mx3.1/41, mbtmp3.1/3, Error ellipse: s-maj=155.0km s-min=33.7km az=103.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.68	224	P	P	15 51 22.4	+0.7
	0.3nm,0.4s,baz=48,slow=9.5,SNR=12						
ASAR	Alice Springs	26.59	218	P	P	15 51 47.9	-0.5
	0.1nm,0.4s,baz=55,slow=9.3,SNR=5.1						
MKAR	Makanchi Array	78.25	319	P	P	15 58 09.8	-0.1
	0.2nm,0.8s,baz=112,slow=7.0,SNR=2.4						

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*BJI **13** 15:55:35.2, 10°.84S×164°.90E, h14^{km}, mB5.2/34, mb4.6/51, Ms4.9/18, Ms7 4.6/12*

*IDC **13** 15:55:37.0±0.6, 10°.81S×164°.47E, h0^{km}, mb4.5/23, mb1 4.6/26, mb1mx4.6/36, mbtmp4.5/26, ML4.8/3, MS4.2/22, Ms1 4.2/22, ms1mx4.0/39, Error ellipse: s-maj=18.6km s-min=14.1km az=104.0*

*NEIC **13** 15:55:38.5±0.2, 10°.76S×164°.38E, h10^{km}, mb5.0/47, Error ellipse: s-maj=5.7km s-min=4.5km az=110.0*

*ISCJB **13** 15:55:39.5±0.2, 10°.85S±0°.04×164°.35E±0°.04, h29^{km}, mb4.8/85, MS4.3/24, Error ellipse: s-maj=5.5km s-min=5.2km az=2.0*

*MOS **13** 15:55:39.4±1.1, 10°.74S×164°.36E, h27^{km}, mb5.0/30, MS4.0/12, Error ellipse: s-maj=10.2km s-min=7.5km az=123.0*

*GCMT **13** 15:55:40.5±0.2, 10°.86S±0°.02×164°.44E±0°.02, h12^{km}, MW5.0/83, Moment Tensor Solution. s39,c44; s83,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.91±.11; $M_{\theta\theta}$-0.42±.10; $M_{\phi\phi}$-2.49±.09; $M_{r\theta}$1.27±.35; $M_{\theta\phi}$2.34±.08; $M_{\phi r}$-1.24±.29; Best double couple: $M_0$3.90300×10^{16} NP1:ϕ_s138.00000°,δ59.00000°,λ80.00000°. NP2: ϕ_s338.00000°,δ33.00000°,λ107.00000°. Principal axes: T 3.3820, Plg74.0000°, Azm21.0000°; N 1.0410, Plg9.0000°, Azm144.0000°; P -4.4250, Plg13.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 15:55:41.4±0.3, 10°.81S±0°.06×164°.42E±0°.05, h29^{km}, n181, σ1^{s}.49/172, mb4.9/85, MS4.4/25, 1C-2D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.61	287	*i* P	Pn	15 56 52.0	+2.8
HNR				*i* S	Sb	15 57 50.0	-6.8
HNR	Honiara	4.61	287	P	Pn	15 56 50.6	+1.4
HNR						15 57 44.1	
HNR				pmax	pmax		
	comp=Z,310nm,0.3s						
HNR				MLR	MLR		
	comp=Z,6µm,19.0s						
HNR	Honiara	4.61	287	Pn	Pn	15 56 50.6	+1.4
	comp=Z,310nm,0.3s,baz=142,slow=6.7,SNR=179						
HNR				Sn	Sn	15 57 44.1	+2.3
	baz=51,slow=6.5,SNR=1.6						
HNR				LR	LR	15 58 47.8	
	comp=Z,6µm,19.0s,baz=142,slow=41						
MARNC	Mare, Loyalty	11.16	162	*e*Pn	Pn	15 58 19.1	0.0
DZM	Mont Dzumac	11.37	170	*e*Pn	Pn	15 58 21.8	-0.2
	comp=Z,22nm,0.3s						
DZM				*e*LR	LR	16 01 10.0	
	comp=Z,1µm,22.7s						
DZM	Mont Dzumac	11.37	170	*e*Pn	Pn	15 58 21.8	-0.2
DZM	Mont Dzumac	11.37	170	Pn	Pn	15 58 21.4	-0.6
	comp=Z,1.8nm,0.3s,baz=318,slow=17,SNR=29						
OUENC	Ouen Island, N	11.78	169	*e*Pn	Pn	15 58 28.5	+1.0
PINNC	Pines Island,	12.09	167	*e*Pn	Pn	15 58 33.2	+1.4
FUNA	Funafuti	14.74	82	*e*Pn	P	15 59 12.5	-1.4
TARA	Tarawa	14.75	35	*e*Pn	Pn	15 59 09.5	+1.3
MSVF	Nonsavu	14.89	119	*e*Pn	Pn	15 59 10.7	+0.5
	comp=Z,101nm,1.6s						
MSVF	Nonsavu	14.89	119	*e*P	Pn	15 59 10.7	+0.5
MSVF				pmax	pmax		
	comp=Z,101nm,1.6s						
PATS	Pohnpei	18.55	341	*e*P	P	15 59 54.7	-1.4
	comp=Z,586nm,1.4s						
MANU	Manus Island	19.04	296	*e*P	Pn	16 00 02.3	0.0
	comp=Z,429nm,1.5s						
EIDS	Eidsvold	19.22	219	*e*P	Pn	16 00 06.1	+1.6
	comp=Z,99nm,1.5s						
CTA	Charters Tower	19.77	240	P	Pn	16 00 11.1	0.0
	comp=Z,0.9nm,0.3s,baz=62,slow=13,SNR=16						
CTA				LR	LR	16 06 34.5	
	comp=Z,1µm,21.9s,baz=70,slow=33						
CTAO	Charters Tower	19.77	240	*e*P	P	16 00 09.2	-0.2
	comp=Z,102nm,1.2s						
CTAO	Charters Tower	19.77	240	*e*P	P	16 00 09.3	-0.2
CTAO				pmax	pmax		
	comp=Z,102nm,1.2s						
COEN	Coen	20.98	259	*e*P	P	16 00 22.2	-0.4
	comp=Z,54nm,1.3s						
ARMA	Armidale	22.85	209	*e*P	P	16 00 44.8	+2.2
	comp=Z,51nm,1.3s						
JAY	Jayapura	24.93	288	P	P	16 01 03.2	+0.7
	comp=Z,13nm,0.9s,baz=141,slow=4.4,SNR=2.2						
H11S2	WAKE ISLAND Hy	29.20	4	T	T	16 32 19.8	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.20	4	T	T	16 32 21.8	
	baz=184,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.22	4	T	T	16 32 18.8	
	baz=184,slow=76,SNR=11						
URZ	Urewera	29.61	160	LR	LR	16 13 07.3	
	comp=Z,571nm,18.5s,baz=340,slow=36						
STKA	Stephens Creek	29.73	222	*e*P	P	16 01 46.8	+1.5
	comp=Z,3.5nm,0.9s						
STKA	Stephens Creek	29.73	222	P	P	16 01 46.9	+1.5
	comp=Z,5.1nm,0.8s,baz=35,slow=10,SNR=10						
STKA				LR	LR	16 12 35.7	
	comp=Z,785nm,19.1s,baz=37,slow=34						
WRAB	Tennant Creek	30.34	249	*e*P	P	16 01 47.2	-3.6
	comp=Z,18nm,1.0s						
WRAB	Tennant Creek	30.34	249	*i* P	P	16 01 47.5	-3.3
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s						
WB2	Warramunga Arr	30.34	249	*e*P	P	16 01 48.8	-2.0
WRA	Warramunga Arr	30.35	249	P	P	16 01 49.5	-1.5
	comp=Z,15nm,1.1s,baz=76,slow=9.1,SNR=23						
WRA				LR	LR	16 13 04.5	
	comp=Z,996nm,21.9s,baz=75,slow=34						
H11N1	WAKE ISLAND Hy	30.43	5	T	T	16 33 51.9	
	baz=184,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.43	5	T	T	16 33 51.6	
	baz=184,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	30.45	5	T	T	16 33 56.1	
	baz=184,slow=76,SNR=13						
AS01	Alice Springs	31.70	242	*e*P	P	16 02 01.3	-1.6
AS31	Alice Springs	31.74	242	*e*P	P	16 02 01.2	-2.0
	comp=Z,4.1nm,1.4s						
ASAR	Alice Springs	31.74	242	P	P	16 02 01.8	-1.5
	comp=Z,2.1nm,0.7s,baz=64,slow=10,SNR=44						
RPZ	Rata Peaks	33.29	171	P	P	16 02 15.2	-1.2
	comp=Z,14nm,0.8s,baz=332,slow=2.2,SNR=3.6						
BBOO	Buckleboo	34.05	226	*e*P	P	16 02 23.7	+0.4
	comp=Z,21nm,0.8s						
FITZ	Fitzroy Crossi	38.19	254	*e*P	P	16 02 56.7	-2.1
	comp=Z,20nm,1.0s						
FITZ	Fitzroy Crossi	38.19	254	LR	LR	16 18 11.5	
	comp=Z,841nm,19.6s,baz=62,slow=35						
FORT	Forrest	39.12	234	*e*P	P	16 03 05.6	-0.9
	comp=Z,44nm,0.8s						
BATI	Baumata	40.06	267	LR	LR	16 19 16.7	
	comp=Z,627nm,21.5s,baz=110,slow=35						
PPT	Papeete	45.02	104	LR	LR	16 18 15.3	
	comp=Z,467nm,20.6s,baz=270,slow=30						
PPT2	Papeete2	45.02	104	*e*S	S	16 10 31.5	-0.7
	comp=Z,108nm,31.5s						
PPT2				*e*LQ	LQ	16 14 36.0	
	comp=Z,864nm,28.0s						
PPT2				*e*LR	LR	16 16 29.0	
	comp=Z,921nm,23.5s,baz=271						
TBI	Tubuai	45.63	112	*e*LQ	LQ	16 14 52.2	
	comp=Z,1µm,28.2s						
TBI				*e*LR	LR	16 16 57.3	
	comp=Z,858nm,28.2s,baz=281						
NWAO	Narrogin (SRO)	48.52	235	LR	LR	16 24 23.0	
	comp=Z,987nm,20.0s,baz=324,slow=36						
MJAR	Matsushiro Arr	53.17	334	P	P	16 04 56.2	-0.7
	comp=Z,3.4nm,0.8s,baz=171,slow=8.6,SNR=6.0						
MJAR				LR	LR	16 31 02.3	
	comp=Z,74nm,18.0s,baz=130,slow=40						
MAJO	Matsushiro	53.17	334	*i* P	P	16 04 55.9	-1.0
MAJO				pmax	pmax		
	comp=Z,18nm,1.6s						
JNU	Nakatsue	54.13	325	*e*P	P	16 05 03.0	-1.1
	comp=Z,24nm,0.9s						
JNU	Nakatsue	54.13	325	P	P	16 05 04.5	+0.4
	comp=Z,19nm,0.9s,baz=9.2,slow=2.1,SNR=8.9						
TAOE	Nuku Hiva Isla	54.59	93	*e*S	S	16 12 44.3	-1.9
	comp=Z,145nm,26.0s						
TAOE				*e*LR	LR	16 20 59.5	
	comp=Z,509nm,26.5s,baz=262						
ASAJ	Asahikawa	58.15	342	P	P	16 05 32.8	+0.3
	comp=Z,13nm,1.0s,baz=214,slow=6.5						
TJN	Taejon	58.48	325	*i* P	P	16 05 33.0	-2.0
RKT	Rikitea	58.89	110	*e*LQ	LQ	16 20 27.4	
	comp=Z,351nm,30.2s						
RKT				*e*LR	LR	16 22 56.6	
	comp=Z,589nm,27.8s,baz=282						
KSRS	Korea Array	58.95	326	P	P	16 05 38.5	+0.2
	comp=Z,2.6nm,0.9s,baz=135,slow=7.2,SNR=10						
KSAR	Wonju Array Be	58.97	326	P	P	16 05 38.5	+0.1
KSAR	Wonju Array Be	58.97	326	P	P	16 05 38.5	+0.1
KS01	Wonju Array Si	58.99	326	*e*P	P	16 05 38.3	-0.2
YSS	Yuzh-Sakhalins	60.67	343	*e*P	P	16 05 52.1	+2.2
YSS				*e*		16 06 00.9	
YSS				*e*		16 06 07.8	
YSS				*e*		16 06 32.0	
NJ2	Nanjing	60.94	316	*e*P	P	16 05 52.5	+0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VLA	Vladivostok	61.34	333	*i* P	P	16 05 52.9	-1.6
VLA				pmax	pmax		
	comp=Z,13nm,1.2s						
QIZ	Qiongzhong	61.42	299	P	P	16 05 54.6	-0.9
QIZ				S	S	16 14 15.6	+0.5
QIZ				pmax	pmax		
	comp=Z,62nm,2.4s						
QIZ				LR	LR		
	comp=Z,300nm,19.1s						
USRK	Ussuriysk Ar.	62.16	334	P	P	16 06 01.2	+1.2
	comp=Z,2.1nm,0.6s,baz=126,slow=5.5,SNR=6.0						
WHN	Wuhan	63.27	312	⇓P	P	16 06 11.6	+4.0
MDJ	Mudanjiang	63.54	333	P	P	16 06 11.1	+1.9
MDJ				pmax	pmax		
	comp=Z,14nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,350nm,5.1s						
PET	Petropavlovsk	63.77	356	*i* P	P	16 06 09.9	-0.6
PET				pmax	pmax		
	comp=Z,11nm,1.1s						
PETK	Petropavlovsk-	63.92	355	P	P	16 06 11.8	+0.3
	comp=Z,4.5nm,0.9s,baz=164,slow=5.1,SNR=7.7						
TYV	Tymovskoe	64.27	345	*e*P	P	16 06 07.5	-6.3
TYV				pmax	pmax		
	comp=Z,2.0nm,1.6s						
CN2	Changchun	64.88	330	*e*P	P	16 06 18.5	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR	Gornyy	65.99	341	*e*P	P	16 06 25.8	+0.8
KLR	Kul'dur	66.33	337	*i* P	P	16 06 24.8	-2.4
KLR	Kul'dur	66.33	337	P	P	16 06 27.3	0.0
	comp=Z,4.3nm,0.9s,baz=124,slow=3.8,SNR=14						
PSI	Prapat	66.55	278	LR	LR	16 38 06.8	
	comp=Z,69nm,19.6s,baz=93,slow=38						
VNDA	Vanda	66.71	181	P	P	16 06 30.4	+1.1
	comp=Z,5.5nm,0.9s,baz=341,slow=8.3,SNR=3.8						
VNDA				LR	LR	16 32 12.7	
	comp=Z,84nm,18.0s,baz=354,slow=33						
ENH	Enshi	66.74	310	*e*P	P	16 06 28.8	-1.5
	comp=Z,28nm,1.3s						
NKL	Nikolayevsk	66.86	345	*e*P	P	16 06 31.0	+0.5
GYA	Guiyang	67.21	305	P	P	16 06 34.3	+0.8
GYA				S	S	16 15 27.6	+0.8

GYA				SKS	SKSac	16 16 27.9	-1.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.2s						
GYA				LR	LR		
	comp=Z,560nm,18.2s						
GYA				LR	LR		
	comp=Z,520nm,18.0s						
GYA				LR	LR		
	comp=Z,540nm,18.4s						
PBKT	Sadao Pong	68.39	293	eP	P	16 06 41.2	+0.3
	comp=Z,5.2nm,0.7s						
XAN	Xi'an	69.00	313	P	P	16 06 45.8	+1.3
XAN				pP	pP	16 06 50.0	-2.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,76nm,5.2s						
XAN				LR	LR		
	comp=Z,89nm,6.3s						
XAN				LR	LR		
	comp=Z,180nm,4.7s						
XAN				LR	LR		
	comp=Z,230nm,15.1s						
XAN	Xi'an	69.00	313	eP	P	16 06 44.1	-0.4
	comp=Z,18nm,1.5s						
XAN	Xi'an	69.00	313	eP	P	16 06 44.1	-0.4
XAN				pmax	pmax		
	comp=Z,18nm,1.5s						
KMI	Kunming	69.89	302	P	P	16 06 50.3	-0.1
KMI				sP	pP	16 06 58.4	+1.0
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,100nm,4.5s						
CM01	Chiang Mai Arr	70.80	294	eP	P	16 06 56.0	+0.2
HHC	Hu-ho-hao-te	70.81	320	eP	P	16 06 56.3	+0.7
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,6.2s						
CMAR	Chiang Mai Arr	70.83	294	P	P	16 06 57.0	+1.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,53nm,19.3s						
CMAR	Chiang Mai Arr	70.83	294	P	P	16 06 57.0	+1.0
	comp=Z,1.7nm,0.8s,baz=121,slow=4.7,SNR=15						
CMAR				LR	LR	16 38 31.4	
	comp=Z,52nm,19.3s,baz=110,slow=36						
CHTO	Chiang Mai	70.94	294	eP	P	16 06 56.0	-0.7
	comp=Z,24nm,1.8s						
CHTO	Chiang Mai	70.94	294	P	P	16 06 56.0	-0.7
CHTO				pmax	pmax		
	comp=Z,24nm,1.9s						
MA2	Magadan	71.00	353	eP	P	16 06 55.3	-0.9
	comp=Z,3.3nm,0.8s						
MA2	Magadan	71.00	353	i P	P	16 06 55.0	-1.2
MA2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CD2	Chengdu	71.43	308	eP	P	16 06 59.5	+0.1
HIA	Hailar	71.53	331	i P	P	16 06 58.6	-1.0
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZEA	Zeya	71.63	338	eP	P	16 07 02.4	+2.3
ZEA				pmax	pmax		
	comp=Z,37nm,1.4s						
LZH	Lanzhou	73.64	313	eP	P	16 07 14.1	+1.4
LZH				pP	pP	16 07 17.4	-3.0
LZH				sP	sP	16 07 20.3	-2.0
LZH				PcP	PcP	16 07 31.5	+3.1
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
SEY	Seymchan	74.10	354	i P	P	16 07 14.9	+0.4
GAMB	Gambell	76.57	11	eP	P	16 07 29.1	+0.5
	comp=Z,34nm,1.5s						
ULN	Ulaanbaatar	77.35	324	eP	P	16 07 34.0	+0.3
	comp=Z,9.0nm,1.1s						
ULN	Ulaanbaatar	77.35	324	i P	P	16 07 32.1	-1.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YAK	Yakutsk	77.51	344	eP	P	16 07 33.5	-0.5
YAK				e*PP	PcP	16 07 43.1	-1.1
YAK				eS	S	16 17 19.4	-3.5
YAK				e		16 17 45.7	
YAK				e*SS	ScS	16 17 56.1	+6.2
YAK				pmax	pmax		
	comp=Z,43nm,0.8s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,416nm,3.5s						
YAK				pmax	pmax		
	comp=N,249nm,3.8s						
YAK				pmax	pmax		
	comp=E,169nm,3.5s						
YAK				smax	smax		
	comp=N,85nm,2.2s						
YAK				smax	smax		
	comp=E,257nm,2.8s						
SONM	Songino Array	77.71	324	P	P	16 07 36.3	+0.6
	comp=E,2.6nm,0.7s,baz=146,slow=5.6,SNR=14						
SONA1	Songino Array	77.71	324	eP	P	16 07 35.9	+0.2
GTA	Gaotai	77.96	314	⇑P	P	16 07 38.3	+1.1
GTA				pP	pP	16 07 42.8	-2.3
GTA				sP	PcP	16 07 45.5	-1.5
GTA				S	S	16 17 37.0	+7.9
GTA				pmax	pmax		
	comp=E,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=E,160nm,7.6s						
GTA				LR	LR		
	comp=E,110nm,17.5s						
GTA				LR	LR		
	comp=E,170nm,17.1s						
GTA				LR	LR		
	comp=E,160nm,16.8s						
SVW2	Sparrevohn	78.30	19	eP	P	16 07 39.4	+0.9
	comp=E,44nm,1.2s						
ANM	Nome	78.54	13	eP	P	16 07 40.8	+1.1
	comp=E,12nm,1.2s						
ANM	Nome	78.54	13	P	P	16 07 40.8	+1.1
ANM				pmax	pmax		
	comp=Z,12nm,1.2s						
BILL	Bilibino	78.65	1	eP	P	16 07 39.6	-0.7
	comp=Z,13nm,1.0s						
BILL	Bilibino	78.65	1	eP	P	16 07 38.8	-1.5
BILL				e		16 07 50.7	
BILL				e		16 10 36.2	
BILL				pmax	pmax		
	comp=Z,11nm,1.0s						
RSO	Redoubt South	78.74	20	eP	P	16 07 40.6	-0.6
QSPA	South Pole Qui	79.19	180	eP	P	16 07 43.8	+0.2
	comp=Z,32nm,1.3s						
BOD	Bodaibo	79.77	335	eP	P	16 07 45.4	-1.1
BOD				pmax	pmax		
	comp=Z,8.0nm,1.8s						
SUA	Susitna One	80.15	20	eP	P	16 07 48.5	-0.2
	comp=Z,36nm,1.5s						
ZAK	Zakamensk	80.77	325	eP	P	16 07 50.9	-1.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CAST	Castle Rocks	81.13	18	eP	P	16 07 52.7	-1.1
	comp=Z,17nm,1.0s						
TLY	Talaya	81.21	327	i P	P	16 07 54.0	-0.5
RDOG	Red Dog Mine	82.05	12	eP	P	16 07 58.1	-0.5
	comp=Z,27nm,1.3s						
RND	Reindeer	82.14	19	eP	P	16 07 59.3	+0.1
	comp=Z,65nm,1.8s						
RND	Reindeer	82.14	19	eP	P	16 07 59.3	+0.1
RND				pmax	pmax		
	comp=Z,65nm,1.8s						
MCK	McKinley	82.34	19	eP	P	16 08 00.2	0.0
	comp=Z,40nm,1.4s						
MCK	McKinley	82.34	19	eP	P	16 08 00.2	0.0
MCK				pmax	pmax		
	comp=Z,40nm,1.4s						
IM3	Indian Mountai	82.55	16	eP	P	16 08 01.2	0.0
MLY	Manley	82.70	18	eP	P	16 08 01.3	-0.8
	comp=Z,20nm,1.6s						
WRH	Wood River Hil	83.12	19	eP	P	16 08 03.6	-0.6
	comp=Z,20nm,1.2s						
MDM	Murphy Dome	83.41	18	eP	P	16 08 05.0	-0.7
	comp=Z,20nm,1.0s						
HDA	Harding Lake	83.44	19	eP	P	16 08 05.4	-0.5
	comp=Z,31nm,1.0s						
COLA	College	83.47	19	eP	P	16 08 05.1	-0.9
	comp=Z,24nm,1.0s						
COLA	College	83.47	19d	iP	P	16 08 05.6	-0.4
COLA				pmax	pmax		
	comp=Z,22nm,1.0s						
RIDG	Independ'e Rid	83.70	20	eP	P	16 08 07.6	+0.3
	comp=Z,17nm,1.0s						
IL1	Eielson Array	83.71	19	eP	P	16 08 05.9	-1.3
ILAR	Eielson Array	83.71	19	P	P	16 08 07.5	+0.3
	comp=Z,12nm,1.0s,baz=232,slow=4.9,SNR=40						
ILAR				LR	LR	16 38 50.4	
	comp=Z,133nm,21.9s,baz=255,slow=31						
ILB	Eielson Array	83.71	19	eP	P	16 08 06.1	-1.1
SCRK	Sand Creek	84.14	20	eP	P	16 08 09.5	-0.1
	comp=Z,30nm,1.5s						
KNGR	Kungurtug, Tuv	84.14	324	i P	P	16 08 09.0	-0.9
COLD	Coldfoot	84.43	16	eP	P	16 08 12.5	+1.6
	comp=Z,5.0nm,1.0s						
MAW	Mawson	84.45	202	LR	LR	16 38 11.8	
	comp=Z,155nm,21.1s,baz=80,slow=30						
AFDM	Forest Hills D	85.03	49	eP	P	16 08 14.4	-0.1
	comp=Z,15nm,1.5s						
TOLK	Toolik Lake Re	85.61	15	eP	P	16 08 17.2	+0.4
	comp=Z,22nm,1.5s						
DAWY	Dawson	85.81	21	eP	P	16 08 19.3	+1.4
	comp=Z,18nm,1.3s						
NV01	Mina Array Sit	86.87	50	eP	P	16 08 23.1	-0.9
NVAR	Mina Array Bea	86.87	50	P	P	16 08 24.2	+0.3
	comp=Z,2.2nm,0.9s,baz=240,slow=7.6,SNR=9.6						
NVAR				LR	LR	16 38 45.9	
	comp=Z,303nm,21.3s,baz=290,slow=30						
WMQ	Urumqi	88.01	315	eP	P	16 08 29.1	0.0
WMQ				pP	PcP	16 08 33.4	+2.5
WMQ				sP	sP	16 08 38.9	0.0
WMQ				pmax	pmax		
	comp=Z,22nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,320nm,4.9s						
WMQ				LR	LR		
	comp=Z,120nm,21.1s						
WMQ				LR	LR		
	comp=Z,150nm,23.5s						
WMQ				LR	LR		
	comp=Z,150nm,16.5s						
J08A	Circle Bar Ran	88.14	45	eP	P	16 08 28.8	-0.9
	comp=Z,7.2nm,1.1s						
G08A	Pilot Rock	88.37	43	eP	P	16 08 30.5	-0.4
	comp=Z,4.5nm,1.0s						
KRAR	Krasnoyarsk	88.83	328	i P	P	16 08 31.3	-1.2
DGZ	Jazzator, Alta	89.89	321	i P	P	16 08 36.6	-1.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LCMT	Little Creek M	90.39	52	eP	P	16 08 40.6	+0.1
	comp=Z,9.1nm,1.4s						
CCUT	Cedar City	90.42	52	eP	P	16 08 40.2	-0.5
	comp=Z,7.2nm,1.3s						
U15A	North Rim	91.01	53	eP	P	16 08 43.2	-0.4
	comp=Z,5.4nm,1.1s						
MTPU	Mount Pierson	91.44	52	eP	P	16 08 45.9	+0.2
	comp=Z,3.1nm,1.0s						
MSU	Marysvale	91.55	51	eP	P	16 08 45.8	-0.2
MSU	Marysvale	91.55	51	eP	P	16 08 45.8	-0.2
HVU	Hansel Valley	91.81	48	eP	P	16 08 46.8	-0.2
	comp=Z,9.9nm,1.3s						
HVU	Hansel Valley	91.81	48	eP	P	16 08 46.8	-0.2
HVU				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MK01	Makanchi Array	92.45	317	eP	P	16 08 49.1	-0.5
MK31	Makanchi Array	92.46	317	eP	P	16 08 49.4	-0.3
MKAR	Makanchi Array	92.46	317	eP	P	16 08 49.4	-0.4
	comp=Z,24nm,0.8s						
MKAR	Makanchi Array	92.46	317	P	P	16 08 49.6	-0.1
	comp=Z,4.2nm,0.8s,baz=99,slow=5.7,SNR=29						
MKAR				LR	LR	16 52 18.4	
	comp=Z,32nm,19.2s,baz=103,slow=37						
ZALV	Zalesovo Beam	92.61	324	eP	P	16 08 48.2	-2.0
ZALV	Zalesovo Beam	92.61	324	P	P	16 08 49.4	-0.8
	comp=Z,2.6nm,0.8s,baz=116,slow=6.9,SNR=7.0						
ZALV				LR	LR	16 52 28.2	
	comp=Z,35nm,18.3s,baz=66,slow=37						
MAKZ	Makanchi	92.67	317	eP	P	16 08 50.0	-0.7
	comp=Z,8.7nm,1.1s						
MAKZ	Makanchi	92.67	317	eP	P	16 08 50.0	-0.7
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PV01	Paradox Valley	94.25	52	eP	P	16 08 57.5	-1.0
	comp=Z,2.6nm,0.7s						
PDAR	Pinedale Array	94.35	47	P	P	16 08 58.8	-0.1
	comp=Z,0.8nm,1.0s,baz=268,slow=5.0,SNR=3.5						
PDAR				LR	LR	16 45 03.8	
	comp=Z,108nm,19.8s,baz=261,slow=32						
YKA	Yellowknife Ar	95.36	27	P	P	16 09 02.8	+0.2
	comp=Z,0.2nm,0.6s,baz=258,slow=4.9,SNR=3.2						
YKA				LR	LR	16 44 44.7	
	comp=Z,17nm,21.3s,baz=239,slow=31						
NRIK	Noril'sk	95.45	340	P	P	16 09 03.0	+0.1
	comp=Z,0.7nm,0.3s,baz=83,slow=6.3,SNR=4.6						
NRIK				LR	LR	16 56 28.0	
	comp=Z,86nm,18.0s,baz=76,slow=38						
KURK	Kurchatov	95.63	320	P	P	16 09 03.5	-0.6
KURK	Kurchatov	95.63	320	P	P	16 09 03.6	-0.6
KURBB	Kurchatov Arra	95.67	320	P	P	16 09 03.5	-0.8
	comp=Z,0.3nm,0.7s,baz=86,slow=7.5,SNR=4.3						
NVL	N'lazarevskaya	96.50	189	eP	P	16 09 19.8	+12
NVL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TXAR	Lajitas Array	96.86	62	LR	LR	16 44 06.0	
	comp=Z,192nm,21.4s,baz=0.0,slow=30						
FRU	Bishkek	97.11	312	eP	Pdif	16 09 27.0	+16
BVAR	Borovoye Array	100.96	322	P	Pdif	16 09 27.2	-0.9
	comp=Z,0.9nm,0.8s,baz=106,slow=4.7,SNR=6.2						
ARCES	ARCESS Array B	115.78	345	PKP	PKiKP	16 14 20.5	-0.1
	comp=Z,4.7nm,1.0s,baz=353,slow=16,SNR=4.0						
OBN	Obninsk	119.92	328	ePKIKP	PKiKP	16 14 29.4	+0.4
OBN				e		16 15 48.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CLL	Collm	133.36	336	ePKIKP	PKPdf	16 14 52.0	-2.7
KEST	Kesra	146.43	322	PKPbc	PKPbc	16 15 20.4	+0.1
	comp=Z,10nm,0.9s,baz=305,slow=5.8,SNR=4.8						
ES19	SONSECA Array	149.41	342	ePKPbc	PKPbc	16 15 27.9	-0.3
ESDC	Sonseca Array	149.45	342	PKPbc	PKPbc	16 15 27.6	-0.6
	comp=Z,1.9nm,1.0s,baz=10,slow=2.0,SNR=3.4						
TOA0	Torodi Ar. Sit	162.94	280	ePKPdf	PKPdf	16 15 40.7	-1.3
TORD	Torodi Ar. Bea	162.94	280	PKP	PKPdf	16 15 41.4	-0.6
	comp=Z,0.7nm,0.9s,baz=349,slow=4.8,SNR=3.8						

ISCJB ***13*** *15:58:18.7±1.1, 2°.4N±0°.2×89°.09E±0°.10, h10km, mb3.4/5, MS4.0/1, Error ellipse: s-maj=24.1km s-min=10.4km az=25.3*

IDC ***13*** *15:58:20.0±1.7, 2°.49N×89°.34E, h0km, mb3.3/5, mb1 3.6/7, mb1mx3.4/46, mbtmp3.5/7, ML4.1/2, MS3.3/2, Ms1 3.3/2, ms1mx2.7/24, Error ellipse: s-maj=52.6km s-min=21.4km az=54.0*

ISC 13 15:58:21.1±1.4**, 2°.4N**±0°.2×**89°.2E**±0°.1**, h10km, n8,** σ1.17/8, **mb3.3**/5**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	9.74	300	Pn	Pn	16 00 42.8	+1.4
	0.9nm,0.3s,baz=116,slow=13,SNR=7.2						
PALK				Sn	Sn	16 02 29.4	-1.5
	5.2nm,0.3s,baz=296,slow=2.1,SNR=14						
PALK				LR	LR	16 03 24.7	
	comp=Z,40nm,19.8s,baz=116,slow=31						
CMAR	Chiang Mai Arr	18.56	30	Pn	Pn	16 02 39.1	+0.7
	0.4nm,0.3s,baz=214,slow=13,SNR=4.1						
MKAR	Makanchi Array	44.59	353	P	P	16 06 33.6	+0.2
	0.3nm,0.8s,baz=169,slow=8.4,SNR=3.2						
SONM	Songino Array	47.59	16	P	P	16 06 56.2	-1.1
	0.2nm,0.4s,baz=197,slow=9.2,SNR=4.4						
KURBB	Kurchatov Arra	48.85	351	P	P	16 07 06.8	+0.1
	0.1nm,0.4s,baz=172,slow=7.0,SNR=2.8						
WRA	Warramunga Arr	49.55	119	P	P	16 07 13.0	+0.4
	0.4nm,0.8s,baz=295,slow=8.4,SNR=3.4						
ASAR	Alice Springs	50.63	123	P	P	16 07 20.1	-0.7
	0.4nm,0.9s,baz=292,slow=7.1,SNR=3.5						
USRK	Ussuriysk Ar.	56.16	36	LR	LR	16 32 09.8	
	comp=Z,110nm,19.7s,baz=162,slow=36						

IDC ***13*** *16:01:47.2±1.6, 11°.63S×165°.35E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/33, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=46.3km s-min=30.0km az=121.0*

ISCJB ***13*** *16:01:49.1±1.2, 11°.8S±0°.1×165°.3E±0°.2, h24km, mb3.6/5, Error ellipse: s-maj=32.1km s-min=20.2km az=173.1*

ISC 13 16:01:50.9±1.3**, 11°.7S**±0°.1×**165°.4E**±0°.2**, h24km, n6,** σ0.61/6**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.38	174	Pn	Pn	16 04 18.7	+0.1
	0.3nm,0.3s,baz=97,slow=19,SNR=5.2						
WRA	Warramunga Arr	30.91	251	P	P	16 08 06.1	0.0
	0.7nm,0.6s,baz=81,slow=9.5,SNR=4.7						
ASAR	Alice Springs	32.17	244	P	P	16 08 16.7	-0.5
	0.5nm,0.8s,baz=74,slow=8.2,SNR=4.3						
CMAR	Chiang Mai Arr	72.02	294	P	P	16 13 13.3	-0.1
	0.3nm,0.7s,baz=108,slow=4.8,SNR=2.6						
ILAR	Eielson Array	84.23	19	P	P	16 14 19.6	-0.5
	0.3nm,0.6s,baz=241,slow=5.2,SNR=7.1						
MKAR	Makanchi Array	93.72	317	P	P	16 15 06.6	+0.8
	0.3nm,0.6s,baz=104,slow=5.9,SNR=3.7						

DJA ***13*** *16:04:19.3±0.6, 10°S±12°×11°1E±°, h265km±9km, M3.7/13, MLv3.7/13*

IDC ***13*** *16:04:28.4±3.2, 9°.77S×112°.00E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/38, mbtmp3.1/3, Error ellipse: s-maj=169.6km s-min=27.9km az=47.0*

ISC 13 16:04:29.2±1.5**, 9°.83S**±0°.10×**111°.86E**±0°.10**, h10km, n13,** σ2.57/14**, mb3.0**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	1.76	337	P	Pn	16 05 00.0	+0.2
PCJI				S	Sg	16 05 32.5	+6.6
PWJI	Pagerwojo	1.80	358	P	Pg	16 05 02.2	-1.6
PWJI				S	Sg	16 05 36.7	+10
WOJI	Wonogiri, Jawa	2.19	335	P	Pn	16 05 02.9	-2.8
WOJI				S	Sb	16 05 37.1	+1.0
GMJI	Gumukmas	2.20	45	P	Pg	16 05 13.8	+2.3
UGM	Wanagama	2.32	325	P	Pn	16 05 01.9	-5.6
UGM				S	Sn	16 05 35.7	-0.5
NGJI	Ngawi	2.48	351	P	Pn	16 05 07.8	-1.9
NGJI				S	Sg	16 05 46.3	-2.7
JAGI	Jajag, Banyuwa	2.64	59	P	Pg	16 05 20.3	+0.5
GRJI	Gresik	2.96	12	P	Pn	16 05 16.4	+0.1
TBJI	Tambak Boyo	3.00	360	P	Pn	16 05 14.5	-2.3
SMRI	Semarang	3.10	333	P	Pn	16 05 09.7	-8.6
WRA	Warramunga Arr	23.91	117	P	P	16 09 42.7	-0.8
	0.3nm,0.7s,baz=294,slow=11,SNR=2.9						
ASAR	Alice Springs	25.14	126	P	P	16 09 55.1	+0.4
	0.2nm,0.5s,baz=298,slow=9.2,SNR=7.5						
MKAR	Makanchi Array	62.25	337	P	P	16 14 52.4	+1.1
	0.1nm,0.5s,baz=151,slow=7.8,SNR=4.3						

IDC ***13*** *16:13:24.0±1.6, 10°.82S×164°.44E, h0km, mb3.5/5, mb1 3.7/7, mb1mx3.5/41, mbtmp3.6/7, ML3.4/2, Error ellipse: s-maj=38.5km s-min=29.4km az=132.0*

ISCJB ***13*** *16:13:26.8±1.2, 11°.0S±0°.1×164°.4E±0°.2, h29km, mb3.3/5, Error ellipse: s-maj=24.8km s-min=17.4km az=144.9*

ISC 13 16:13:28.5±1.3**, 10°.9S**±0°.1×**164°.4E**±0°.2**, h29km, n7,** σ0.51/7**, mb3.2**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.64	287	Pn	Pn	16 14 37.1	+0.5
	2.5nm,0.3s,baz=150,slow=8.1,SNR=3.1						
DZM	Mont Dzumac	11.31	170	Pn	Pn	16 16 08.7	+0.3
	0.2nm,0.3s,baz=135,slow=20,SNR=3.7						
WRA	Warramunga Arr	30.34	249	P	P	16 19 37.9	-0.1
	0.2nm,0.6s,baz=78,slow=9.1,SNR=3.5						
ASAR	Alice Springs	31.73	242	P	P	16 19 49.6	-0.5
	0.2nm,0.8s,baz=63,slow=10,SNR=4.2						
FITZ	Fitzroy Crossi	38.18	255	P	P	16 20 45.4	-0.4
	0.9nm,0.7s,baz=96,slow=9.5,SNR=5.0						
ILAR	Eielson Array	83.76	19	P	P	16 25 54.3	-0.3
	0.1nm,0.6s,baz=227,slow=6.1,SNR=4.9						
MKAR	Makanchi Array	92.51	317	P	P	16 26 37.4	+0.4
	0.2nm,0.6s,baz=94,slow=6.2,SNR=2.7						

CNRM ***13*** *16:15:12.7, 35°.92N×4°.18W, h10km, ml2.5*

MDD ***13*** *16:15:12.8±0.6, 35°.99N×4°.18W, h0km, mbLg3.0/8, Error ellipse: s-maj=5.4km s-min=3.4km az=164.0, PRXIMO*

SFS ***13*** *16:15:13.0, 36°.00N×4°.20W, ML2.6, ALBORAN W.*

INMG ***13*** *16:15:13.7±1.6, 36°.04N×4°.21W, h2km±3km, ML2.5, Error ellipse: s-maj=2.5km s-min=2.2km az=135.0*

IGIL ***13*** *16:15:14.3, 36°.04N×4°.24W, h0km, ML2.5*

ISC 13 16:15:11.9±1.1**, 36°.00N**±0°.02×**4°.15W**±0°.02**, h9km**±9km**, n96,** σ1.75/168**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMIJ	Mijas	0.76	318	Pg	Pg	16 15 26.1	-0.4
	35nm,0.3s,SNR=18						
EMIJ				Lg	Lg	16 15 35.9	
	440nm,0.2s,SNR=37						
EMAL	Malaga-Limoner	0.79	343	eP	Pg	16 15 28.0	+0.7
EMAL				eS	Sg	16 15 37.9	+0.3
PALE	Palemas	0.80	168	P	Pg	16 15 28.7	+1.4
PALE				S	Sg	16 15 39.3	+1.6
ELGU	Los Guajares,	0.96	26	Pg	Pg	16 15 30.0	-0.5
	48nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	16 15 42.7	
	535nm,0.1s,SNR=7.9						
CEU	Ceuta	1.00	265	Pg	Pg	16 15 30.4	-0.7
CEU				Lg	Lg	16 15 42.6	
CEU	Ceuta	1.00	265	eP	Pg	16 15 30.4	-0.7
CEU				eS	Sg	16 15 42.6	-1.5
ECEU	Ceuta	1.00	265	Pg	Pg	16 15 30.7	-0.5
	0.1nm,0.2s,SNR=7.9						
ECEU				Lg	Lg	16 15 43.0	
	39nm,0.1s,SNR=5.8						
SMIR	Smir Dam	1.05	253	P	Pg	16 15 30.5	-1.6
SMIR				S	Sb	16 15 47.4	+1.4
EGOR	Sierra Gorda,	1.11	2	Pg	Pg	16 15 32.9	-0.4
	6.3nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	16 15 47.8	
	82nm,0.3s,SNR=7.9						
EJIF	Jimena Fronter	1.16	293	Pg	Pg	16 15 33.9	-0.2
	18nm,0.2s,SNR=7.9						
EJIF				Lg	Lg	16 15 47.7	
	25nm,0.3s,SNR=7.9						
EMEL	Melilla	1.20	125	Pg	Pg	16 15 34.1	-0.7
	56nm,0.1s,SNR=7.9						
EMEL				Lg	Lg	16 15 49.2	
	535nm,0.2s,SNR=7.9						
MELI	Melilla	1.21	125	Lg	Lg	16 15 49.4	
	151nm,0.2s,SNR=7.9						
MELI	Melilla	1.21	125	i S	Sg	16 15 49.9	-1.0
GOG	Mont Gurugu	1.22	129	P	Pg	16 15 34.2	-1.1
GOG				S	Sg	16 15 51.0	-0.1
CHEFC	Chefchaouen	1.32	228	P	Pg	16 15 37.3	+0.1
CHEFC				S	Sg	16 15 54.6	+0.3
ALJ	Aljibe	1.32	294	Pg	Pn	16 15 39.8	+3.2
ALJ				Lg	Lg	16 15 58.8	
ALJ	Aljibe	1.32	294	eP	Pn	16 15 39.8	+3.2
ALJ				eS	Sn	16 15 58.8	+4.4
EQUE	Quentar	1.33	25	Pg	Pg	16 15 37.1	-0.3
	2.1nm,0.2s,SNR=14						
EQUE				Lg	Lg	16 15 53.3	
	16nm,0.4s,SNR=8.3						
EBER	Berja	1.35	48	Pn	Pg	16 15 36.5	-1.4
	15nm,0.2s,SNR=19						
EBER				Sn	Sg	16 15 53.8	-1.7
	59nm,0.3s,SNR=8.2						
LIJA	Lijar	1.36	312	Pg	Pg	16 15 38.8	+0.8
LIJA				Lg	Lg	16 15 54.2	
LIJA	Lijar	1.36	312	i P	Pg	16 15 38.8	+0.8
LIJA				eS	Sg	16 15 54.2	-1.4
AKLM	AKL	1.50	171	P	Pn	16 15 40.1	+1.0
AKLM				S	Sg	16 15 57.2	-3.1
GORA	Gorafe	1.72	31	Sn	Sn	16 16 06.9	+2.6
	46nm,0.6s,SNR=7.9						
RSA	Sarsar	1.76	231	P	Pn	16 15 43.7	+1.1
RSA				S	Sn	16 16 06.9	+1.7
EQES	Quesada	2.00	25	Pn	Pn	16 15 47.7	+1.8
	8.7nm,0.1s,SNR=46						
EQES				Sn	Sn	16 16 11.9	+0.9
	35nm,0.3s,SNR=24						
HORN	Hornachuelos	2.05	335	P	Pn	16 15 48.1	+1.6

HORN				S	**Sn**	**16 16 15.4**	**+3.3**
JBK	**JBK**	**2.10**	**142**	P	**Pn**	**16 15 47.3**	**-0.2**
JBK				S	**Sn**	**16 16 11.7**	**-2.1**
EADA	**Adamuz**	**2.19**	**351**	Pn	**Pn**	**16 15 49.9**	**+1.4**
	1.5nm,0.1s,SNR=37						
EADA				Sn	**Sn**	**16 16 16.0**	**+0.3**
	12nm,0.2s,SNR=4.5						
ECAB	**El Cabril**	**2.31**	**334**	Pn	**Pn**	**16 15 51.2**	**+1.1**
	6.3nm,0.4s,SNR=28						
ECAB				Sn	**Sn**	**16 16 18.8**	**+0.2**
	24nm,0.4s,SNR=9.5						
SESP	**Santiago Espad**	**2.47**	**31**	Pn	**Pn**	**16 15 54.1**	**+1.6**
	4.1nm,0.1s,SNR=7.9						
SESP				Sn	**Sn**	**16 16 24.0**	**+1.1**
	14nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**2.47**	**31**	P	**Pn**	**16 15 54.2**	**+1.7**
SESP				S	**Sb**	**16 16 28.7**	**+1.4**
IFR	**Ifrane**	**2.60**	**198**	*e*P	**Pn**	**16 15 54.7**	**+0.4**
IFR				*e*S	**Sn**	**16 16 25.9**	**-0.2**
EMIN	**Mina Concepcio**	**2.69**	**312**	Pn	**Pn**	**16 15 55.7**	**+0.4**
	2.3nm,0.4s,SNR=38						
EMIN				Sn	**Sn**	**16 16 27.1**	**-0.8**
	6.6nm,0.4s						
EGRO	**El Granado**	**3.09**	**301**	Pn	**Pn**	**16 16 01.1**	**+0.4**
	5.3nm,0.3s,SNR=25						
EGRO				Sn	**Sn**	**16 16 36.4**	**-1.4**
	18nm,0.6s,SNR=5.9						
MD31	**MD31**	**3.17**	**189**	P	**Pn**	**16 16 01.8**	**-0.1**
MD31				S	**Sn**	**16 16 39.1**	**-0.7**
PVAQ	**Vaqueiros**	**3.19**	**297**	*e*Pn	**Pn**	**16 16 02.6**	**+0.4**
PVAQ				*e*Sn	**Sn**	**16 16 38.8**	**-1.6**
PVAQ				A	A	16 16 43.2	
	8.3nm,0.2s						
PVAQ	**Vaqueiros**	**3.19**	**297**	Pn	**Pn**	**16 16 02.6**	**+0.4**
PVAQ				Sn	**Sn**	**16 16 38.8**	**-1.6**
	8.3nm,0.2s						
PVAQ	**Vaqueiros**	**3.19**	**297**	P	**Pn**	**16 16 02.5**	**+0.2**
PVAQ				S	**Sn**	**16 16 41.8**	**+1.4**
MDT	**Midelt**	**3.20**	**187**	P	**Pn**	**16 16 02.7**	**+0.3**
MDT				S	**Sn**	**16 16 40.2**	**-0.5**
ZHG	**ZHG**	**3.27**	**220**	P	**Pn**	**16 16 04.0**	**+0.6**
ZHG				S	**Sn**	**16 16 41.0**	**-1.5**
PBDV	**Barranco-do-Ve**	**3.29**	**293**	*e*Pn	**Pn**	**16 16 04.2**	**+0.6**
PBDV				*e*Sn	**Sn**	**16 16 42.1**	**-0.7**
PBDV				A	A	16 16 49.2	
	7.4nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.29**	**293**	Pn	**Pn**	**16 16 04.2**	**+0.6**
PBDV				Sn	**Sn**	**16 16 42.1**	**-0.7**
	7.4nm,0.3s						
ETOB	**Tobarra**	**3.36**	**37**	Pn	**Pn**	**16 16 07.1**	**+2.5**
	0.9nm,1.7s,SNR=7.9						
ETOB				Sn	**Sn**	**16 16 44.5**	**-0.1**
	3.3nm,0.4s,SNR=4.0						
PAB	**San Pablo**	**3.54**	**357**	Pn	**Pn**	**16 16 08.2**	**+1.1**
	2.2nm,0.2s,SNR=7.9						
PAB				Sn	**Sn**	**16 16 48.5**	**-0.7**
	4.8nm,0.7s,SNR=7.9						
EBAD	**Badajoz**	**3.58**	**321**	Pn	**Pn**	**16 16 07.9**	**+0.4**
	2.3nm,0.2s,SNR=18						
EBAD				Sn	**Sn**	**16 16 48.5**	**-1.3**
	1.5nm,0.3s,SNR=7.0						
PBEJ	**Beja**	**3.60**	**305**	*e*Pn	**Pn**	**16 16 10.6**	**+2.8**
PBEJ				*e*Sn	**Sn**	**16 16 49.0**	**-1.4**
PBEJ				A	A	16 16 52.2	
	7.8nm,0.4s						
PBEJ	**Beja**	**3.60**	**305**	Pn	**Pn**	**16 16 10.6**	**+2.8**
PBEJ				Sn	**Sn**	**16 16 49.0**	**-1.4**
	3.9nm,0.4s						
ESDC	**Sonseca Array**	**3.67**	**2**	Pn	**Pn**	**16 16 10.3**	**+1.5**
	1.3nm,0.2s,baz=188,slow=12,SNR=12						
ESDC				Sn	**Sn**	**16 16 50.9**	**-1.4**
	1.2nm,0.3s,baz=189,slow=28,SNR=5.5						
MESJ	**Messejana**	**3.75**	**301**	*e*P	**Pn**	**16 16 10.2**	**+0.4**
MESJ				*e*S	**Sn**	**16 16 51.6**	**-2.3**
MESJ				AML	AML	16 16 55.8	
	comp=N,12nm,0.4s						
MESJ	**Messejana**	**3.75**	**301**	*e*Pn	**Pn**	**16 16 10.6**	**+0.8**
MESJ				*e*Sn	**Sn**	**16 16 53.5**	**-0.5**
MESJ				A	A	16 16 58.0	
	comp=N,6.1nm,0.5s						
MESJ	**Messejana**	**3.75**	**301**	Pn	**Pn**	**16 16 10.6**	**+0.8**
MESJ				Sn	**Sn**	**16 16 53.5**	**-0.5**
	comp=N,6.1nm,0.5s						
MORF	**Marmelete**	**3.85**	**291**	*e*P	**Pn**	**16 16 11.4**	**+0.1**
MORF				*e*S	**Sn**	**16 16 53.8**	**-2.8**
MORF				AML	AML	16 16 57.2	
	comp=N,14nm,0.3s						
MORF	**Marmelete**	**3.85**	**291**	*e*Pn	**Pn**	**16 16 11.3**	**0.0**
MORF				*e*Sn	**Sn**	**16 16 55.4**	**-1.3**
MORF				A	A	16 16 57.9	
	comp=N,5.2nm,0.2s						
MORF	**Marmelete**	**3.85**	**291**	Pn	**Pn**	**16 16 11.3**	**0.0**
MORF				Sn	**Sn**	**16 16 55.4**	**-1.3**
	comp=N,5.2nm,0.2s						
PFVI	**Vila Bisbo**	**3.93**	**288**	*e*Pn	**Pn**	**16 16 13.8**	**+1.4**
PFVI				*e*Sn	**Sn**	**16 16 57.0**	**-1.6**
PFVI				A	A	16 17 01.7	
	comp=N,7.4nm,0.4s						
PFVI	**Vila Bisbo**	**3.93**	**288**	Pn	**Pn**	**16 16 13.1**	**+0.7**
	comp=N,6.5nm,0.3s,SNR=7.9						
PFVI				Sn	**Sn**	**16 16 57.0**	**-1.6**
	comp=N,14nm,0.5s,SNR=7.9						
PESTR	**Estremoz**	**3.96**	**317**	*e*Pn	**Pn**	**16 16 14.6**	**+1.8**
PESTR				*e*Sn	**Sn**	**16 16 58.0**	**-1.4**
PESTR				A	A	16 17 28.9	
	comp=N,7.9nm,0.6s						
PTEO	**Sao Teotonio**	**3.98**	**294**	*e*Pn	**Pn**	**16 16 14.4**	**+1.3**
PTEO				*e*Sn	**Sn**	**16 16 58.8**	**-1.1**
PTEO				A	A	16 17 09.1	
	comp=N,7.4nm,0.7s						
PTEO	**Sao Teotonio**	**3.98**	**294**	Pn	**Pn**	**16 16 14.4**	**+1.3**
PTEO				Sn	**Sn**	**16 16 58.8**	**-1.1**
	comp=N,3.7nm,0.7s						
PNCL	**Nicolau / Gran**	**4.09**	**302**	*e*Pn	**Pn**	**16 16 15.2**	**+0.7**
PNCL				*e*Sn	**Sn**	**16 17 00.0**	**-2.5**
PNCL				A	A	16 17 02.5	
	comp=N,6.2nm,0.3s						
PNCL	**Nicolau / Gran**	**4.09**	**302**	Pn	**Pn**	**16 16 15.2**	**+0.7**
PNCL				Sn	**Sn**	**16 17 00.0**	**-2.5**
	comp=N,6.2nm,0.3s						
PMRV	**Marv??o**	**4.28**	**324**	*e*Pn	**Pn**	**16 16 19.0**	**+1.8**
PMRV				*e*Sn	**Sn**	**16 17 05.2**	**-2.1**
PMRV				A	A	16 17 33.7	
	comp=N,5.0nm,0.5s						
PMRV	**Marv??o**	**4.28**	**324**	Pn	**Pn**	**16 16 19.0**	**+1.8**
PMRV				Sn	**Sn**	**16 17 05.2**	**-2.1**
	comp=N,5.0nm,0.5s						
EPLA	**Plasencia**	**4.34**	**340**	Pn	**Pn**	**16 16 19.5**	**+1.5**
	comp=N,2.1nm,0.3s,SNR=9.7						
EPLA				Sn	**Sn**	**16 17 06.5**	**-2.1**
	comp=N,5.2nm,0.4s						
PMTG	**Montargil**	**4.46**	**315**	*e*Pn	**Pn**	**16 16 20.6**	**+1.0**
PMTG				*e*Sn	**Sn**	**16 17 09.3**	**-2.3**
PMTG				A	A	16 17 12.8	
	comp=N,4.0nm,0.4s						
PMTG	**Montargil**	**4.46**	**315**	Pn	**Pn**	**16 16 20.6**	**+1.0**
PMTG				Sn	**Sn**	**16 17 09.3**	**-2.3**
	comp=N,4.0nm,0.4s						
GUD	**Guadarrama**	**4.64**	**360**	Pn	**Pn**	**16 16 24.3**	**+2.1**
	comp=N,2.1nm,0.4s,SNR=9.5						
GUD				Sn	**Sn**	**16 17 14.0**	**-2.2**
	comp=N,5.3nm,0.6s,SNR=4.0						
PCBR	**Castelo Branco**	**4.65**	**327**	*e*Pn	**Pn**	**16 16 24.8**	**+2.5**
PCBR				*e*Sn	**Sn**	**16 17 14.6**	**-1.7**
PCBR				A	A	16 17 17.0	
	comp=N,4.6nm,0.3s						
PCBR	**Castelo Branco**	**4.65**	**327**	Pn	**Pn**	**16 16 24.8**	**+2.5**
PCBR				Sn	**Sn**	**16 17 14.6**	**-1.7**
	comp=N,2.3nm,0.3s						
PTOM	**Tomar**	**4.94**	**318**	*e*Pn	**Pn**	**16 16 26.9**	**+0.6**
PTOM				*e*Sn	**Sn**	**16 17 21.8**	**-1.8**
PTOM				A	A	16 17 25.0	
	comp=N,7.0nm,0.5s						
PTOM	**Tomar**	**4.94**	**318**	Pn	**Pn**	**16 16 26.9**	**+0.6**
PTOM				Sn	**Sn**	**16 17 21.8**	**-1.8**
	comp=N,3.5nm,0.5s						
PMAFR	**Mafra**	**5.04**	**307**	*e*Pn	**Pn**	**16 16 29.6**	**+2.0**
PMAFR				*e*Sn	**Sn**	**16 17 23.6**	**-2.3**
PMAFR	**Mafra**	**5.04**	**307**	Pn	**Pn**	**16 16 30.2**	**+2.6**
	comp=N,0.4nm,0.1s,SNR=7.9						
PMAFR				Sn	**Sn**	**16 17 23.4**	**-2.5**
	comp=N,8.2nm,0.3s,SNR=7.9						
ETOR	**Torete**	**5.08**	**18**	Pn	**Pn**	**16 16 29.6**	**+1.3**
	comp=N,61nm,1.1s,SNR=7.9						
ETOR				Sn	**Sn**	**16 17 23.1**	**-4.1**
	comp=N,3.1nm,0.4s,SNR=7.9						
PCAS	**Casmilo, Conde**	**5.31**	**321**	*e*Pn	**Pn**	**16 16 33.4**	**+2.1**
PCAS	**Casmilo, Conde**	**5.31**	**321**	Pn	**Pn**	**16 16 33.4**	**+2.1**
PVIS	**Viseu**	**5.55**	**329**	*e*Pn	**Pn**	**16 16 36.0**	**+1.3**
PVIS	**Viseu**	**5.55**	**329**	Pn	**Pn**	**16 16 36.0**	**+1.3**
MVO	**Moncorvo**	**5.63**	**337**	*e*Pn	**Pn**	**16 16 37.7**	**+1.9**
MVO				*e*Sn	**Sn**	**16 17 37.5**	**-3.1**
MVO				A	A	16 18 20.4	
	comp=N,5.5nm,0.7s						
MVO	**Moncorvo**	**5.63**	**337**	Pn	**Pn**	**16 16 37.2**	**+1.4**
	comp=N,3.2nm,0.3s,SNR=17						
MVO				Sn	**Sn**	**16 17 37.7**	**-2.9**
	comp=N,1.1nm,0.3s,SNR=7.9						
PVRL	**Vila Real**	**5.96**	**333**	*e*Sn	**Sn**	**16 17 46.3**	**-2.4**
PVRL				A	A	16 17 49.6	
	comp=N,6.3nm,0.2s						
PVRL	**Vila Real**	**5.96**	**333**	Sn	**Sn**	**16 17 46.3**	**-2.4**
	comp=N,3.2nm,0.2s						
POLO	**Lamas de Olo**	**6.08**	**333**	*e*Pn	**Pn**	**16 16 43.5**	**+1.5**
POLO				*e*Sn	**Sn**	**16 17 48.0**	**-3.6**
POLO				A	A	16 17 52.9	
	comp=N,1.2nm,0.5s						
POLO				A	A	16 18 32.7	
	comp=N,1.4nm,0.8s						
POLO	**Lamas de Olo**	**6.08**	**333**	Pn	**Pn**	**16 16 43.5**	**+1.5**
POLO				Sn	**Sn**	**16 17 48.0**	**-3.6**
	comp=N,1.2nm,0.5s						
PBRG	**Braganca**	**6.14**	**342**	*e*Pn	**Pn**	**16 16 44.9**	**+2.1**
PBRG				*e*Sn	**Sn**	**16 17 51.8**	**-1.3**
PBRG	**Braganca**	**6.14**	**342**	Pn	**Pn**	**16 16 44.9**	**+2.1**
PBRG				Sn	**Sn**	**16 17 51.8**	**-1.3**
ECAL	**Calabor**	**6.27**	**342**	Pn	**Pn**	**16 16 45.9**	**+1.4**
	comp=N,0.9nm,0.1s,SNR=5.7						
ECAL				Sn	**Sn**	**16 17 53.5**	**-2.7**
	comp=N,2.6nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**6.39**	**26**	Sn	**Sn**	**16 17 57.2**	**-2.1**
	comp=N,17nm,0.2s,SNR=4.0						
PCAB	**Cabril**	**6.46**	**333**	*e*Pn	**Pn**	**16 16 49.1**	**+2.0**
PCAB				*e*Sn	**Sn**	**16 17 59.9**	**-1.0**
PCAB	**Cabril**	**6.46**	**333**	Pn	**Pn**	**16 16 49.1**	**+2.0**
PCAB				Sn	**Sn**	**16 17 59.9**	**-1.0**
ELOB	**Lobios**	**6.61**	**334**	Pn	**Pn**	**16 16 50.9**	**+1.7**
	comp=N,0.7nm,0.1s,SNR=7.9						
ELOB				Sn	**Sn**	**16 18 01.3**	**-3.4**
	comp=N,2.2nm,0.4s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.77**	**333**	*e*Pn	**Pn**	**16 16 54.0**	**+2.6**
PGAV				*e*Sn	**Sn**	**16 18 05.2**	**-3.4**
PGAV	**Gavieira, Arco**	**6.77**	**333**	Pn	**Pn**	**16 16 54.0**	**+2.6**
PGAV				Sn	**Sn**	**16 18 05.2**	**-3.4**
IELO	**Elcoad**	**7.20**	**17**	Pn	**Pn**	**16 16 59.1**	**+1.8**
	comp=N,0.5nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**7.34**	**354**	Pn	**Pn**	**16 17 00.6**	**+1.4**
	comp=N,1.4nm,0.3s,SNR=4.0						
EAGO	**Agolada(Pontev**	**7.45**	**337**	Pn	**Pn**	**16 17 02.0**	**+1.3**
	comp=N,0.4nm,0.1s,SNR=4.0						

MEX 13 16:25:50.5±0.4**, 15.°01N×93.°61W, h20**^{km}±999^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.79**	**29**	*e*P	Pb	16 26 02.8	-2.7
PCIG				*i* S	Sb	16 26 13.1	-2.6

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*SOME **13** 16:26:04.8, 40.°65N×78.°57E, h10^{km}*

*NNC **13** 16:26:11.0±2.1, 40.°94N×78.°56E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=14.9km s-min=13.4km az=174.0*

KRNET 13 16:26:07.5±0.1**, 40.°75N×78.°35E, h13**^{km}**, mb2.4, 13C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.06**	**337**	⇓*i*P	Pb	16 26 27.6	-0.3
	baz=37						
TARG				⇓*i*S	Sn	16 26 42.7	-0.5
	baz=37						
KDJ	**Kajisay**	**1.63**	**328**	⇑*i*P	Pg	16 26 38.3	-0.5
	baz=28						
KDJ				⇑*i*S	Sg	16 27 00.6	+0.5
	baz=28						
NRN	**Naryn**	**1.90**	**292**	⇑*i*P	Pg	16 26 43.4	-0.6
	baz=91						
NRN				⇑*i*S	Sg	16 27 09.3	+0.6
	baz=91						
ULHL	**Ulahol**	**2.18**	**314**	⇑*i*P	Pb	16 26 47.2	+0.4
	baz=14						
ULHL				⇑*i*S	Sg	16 27 16.8	-0.6
	baz=14						
TNSS	**Tian-Shan**	**2.51**	**336**	Pg	Pb	16 26 54.0	+1.3
	1.7nm,0.2s						
TNSS				Lg	Lg	16 27 28.9	
	1.7nm,0.5s						
TNSS	**Tian-Shan**	**2.51**	**336**	*e*P	Pb	16 26 54.0	+1.3
	1.7nm,0.2s						
TNSS				*e*S	Sg	16 27 28.9	+0.7
	1.7nm,0.5s						
MDOK	**Medeo**	**2.60**	**338**	Pg	Pb	16 26 55.3	+1.3
	2.5nm,0.3s						
MDOK				Lg	Lg	16 27 30.9	
	4.5nm,0.5s						
MDOK	**Medeo**	**2.60**	**338**	*e*P	Pb	16 26 55.3	+1.3
	2.5nm,0.3s						
MDOK				⇑*i*S	Sg	16 27 30.9	0.0
	4.5nm,0.5s						
PDGK	**Podgornoye**	**2.71**	**18**	Pg	Pb	16 26 54.7	-1.1
	0.3nm,0.3s						
PDGK				Lg	Lg	16 27 30.3	
	2.8nm,0.5s						
PDGK	**Podgornoye**	**2.71**	**18**	⇑Pn	Pb	16 26 54.0	-1.8
	2.6nm,1.1s						
PDGK				⇑Lg	Lg	16 27 29.9	
	3.0nm,0.4s						
PDGK	**Podgornoye**	**2.71**	**18**	⇑*i*P	Pb	16 26 53.9	-2.0
	baz=18						
PDGK				⇑*i*S	Sb	16 27 27.7	-1.3
	baz=18						
KURS	**Kuram**	**2.74**	**357**	Pg	Pb	16 26 57.3	+1.1
	0.6nm,0.2s						
KURS				Lg	Lg	16 27 34.7	
	1.5nm,0.5s						
KURS	**Kuram**	**2.74**	**357**	*e*P	Pb	16 26 57.3	+1.1
	0.6nm,0.2s						
KURS				*e*S	Sg	16 27 34.7	-0.7
	1.5nm,0.5s						
KST	**Kastek**	**2.90**	**323**	*e*P	Pb	16 27 00.2	+1.1
	1.4nm,0.3s						
KST				*e*S	Sg	16 27 39.5	-1.1
	2.5nm,0.3s						
TKM2	**Tokmak 2**	**2.99**	**317**	⇑Pn	Pb	16 27 00.8	+0.2
	0.7nm,0.3s						
TKM2				⇑Lg	Lg	16 27 44.9	
	1.5nm,0.7s						
CHKK	**Chushkaly**	**3.26**	**342**	Pg	Pb	16 27 07.0	+1.8
	0.6nm,0.1s						
CHKK				Lg	Lg	16 27 51.0	
	6.3nm,0.3s						
CHKK	**Chushkaly**	**3.26**	**342**	*e*P	Pb	16 27 07.0	+1.8
	0.6nm,0.1s						
CHKK				*e*S	Sg	16 27 51.0	-1.1
	6.3nm,0.3s						

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*ISCJB **13** 16:35:41.7±0.7, 42.°46N±0.°02×41.°10E±0.°05, h1^{km}±7^{km}, Error ellipse: s-maj=6.8km s-min=3.8km az=173.0*

*ISK **13** 16:35:42.5, 42.°36N×40.°94E, h15^{km}, ML2.6/2*

*TIF **13** 16:35:42.7, 42.°41N×40.°95E, h41^{km}±3^{km}*

*MOS **13** 16:35:43.7±0.0, 42.°49N×41.°07E, h9^{km}, MPVA3.0*

*NORS **13** 16:35:45.2±0.0, 42.°60N×41.°27E, h8^{km}, MPVA3.0*

*DDA **13** 16:35:46.5, 41.°81N×40.°59E, h7^{km}±5^{km}, ML3.0*

ISC 13 16:35:41.5±1.2**, 42.°41N**±0.°02×**41.°00E**±0.°05**, h8**^{km}±11^{km}**, n17, σ0.**^{s}**76**/34**, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.95**	**147**	PG	**Pn**	**16 36 01.3**	**+0.1**
BATM				SG	**Sn**	**16 36 14.8**	**-0.1**
BATM	**Batumi**	**0.95**	**147**	P	**Pn**	**16 36 01.6**	**+0.4**
BATM				S	**Sn**	**16 36 15.3**	**+0.4**
DOMR	**Dombai**	**1.00**	**27**	*e*Pg	**Pb**	**16 36 01.2**	**0.0**
DOMR				*e*Sg	**Sg**	**16 36 13.3**	**-0.5**
BCA	**Borcka**	**1.07**	**154**	PG	**Pn**	**16 36 02.8**	**0.0**
BCA				SG	**Sn**	**16 36 17.6**	**-0.2**
DBOC	**Borcka**	**1.17**	**154**	*i* P	**Pn**	**16 36 04.7**	**+0.5**
DBOC				*i* S	**Sn**	**16 36 20.5**	**+0.1**
ARXR	**Arkhyz**	**1.18**	**10**	*e*Pg	**Pn**	**16 36 04.4**	**0.0**
ARXR				*e*Sg	**Sb**	**16 36 19.6**	**+0.1**
CHOM	**Cayeli-Rize**	**1.32**	**188**	PN	**Pb**	**16 36 06.5**	**0.0**
CHOM				SN	**Sb**	**16 36 23.4**	**-0.1**
RPOR	**Krasnaya Polya**	**1.40**	**338**	*e*Pg	**Pg**	**16 36 08.4**	**0.0**
RPOR				*e*Sg	**Sg**	**16 36 27.4**	**+0.8**
ARTV	**Artvin**	**1.41**	**150**	*i* P	**Pb**	**16 36 08.1**	**0.0**
ARTV				*i* S	**Sg**	**16 36 26.7**	**0.0**
ARTV				IAML_P			
	comp=Z,2µm,0.1s						
DBAD	**Bademkaya**	**1.48**	**159**	*i* P	**Pg**	**16 36 09.9**	**0.0**
DBAD				*i* S	**Sn**	**16 36 24.9**	**-3.2**
DBAD				IAML_P			
	comp=Z,954nm,0.1s						
DAGI	**Agillar**	**1.49**	**152**	*i* P	**Pg**	**16 36 09.8**	**-0.3**
DAGI				*i* S	**Sn**	**16 36 28.4**	**0.0**
DAGI				IAML_P			
	comp=Z,437nm,0.1s						
NEY	**Neytrino**	**1.52**	**56**	*e*Pg	**Pg**	**16 36 10.5**	**-0.3**
NEY				*e*Sg	**Sn**	**16 36 29.4**	**+0.1**
DDEM	**Demirkent**	**1.61**	**159**	*i* P	**Pg**	**16 36 13.0**	**+0.5**
DDEM				IAML_P			
	comp=Z,866nm,0.1s						
SHA1	**Shidzhatmaz**	**1.81**	**42**	*e*Pg	**Pb**	**16 36 15.5**	**+0.6**
SHA1				*e*Pg	**Pg**	**16 36 15.7**	**-0.5**
SHA1				*e*Sg	**Sb**	**16 36 38.5**	**+0.7**
SHA1				*e*Sg	**Sb**	**16 36 38.5**	**+0.7**
KIV	**Kislovodsk**	**1.98**	**38**	PN	**Pb**	**16 36 17.2**	**-0.7**
KIV0	**Kislovodsk Arr**	**1.99**	**38**	*i* Pg	**Pg**	**16 36 18.8**	**-0.8**
KIV0				*e*Sg	**Sb**	**16 36 43.0**	**0.0**
ZEI	**Tsey**	**2.18**	**79**	*e*Pg	**Pg**	**16 36 23.0**	**-0.3**
ZEI				*e*Sg	**Sb**	**16 36 50.0**	**+1.4**

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*IDC **13** 16:39:28.4±2.1, 19.°77S×173.°36E, h0^{km}, mb4.1/8, mb1 4.3/8, mb1mx4.0/34, mbtmp4.1/8, MS3.4/6, Ms1 3.4/6, ms1mx3.1/24, Error ellipse: s-maj=67.4km s-min=25.9km az=136.0*

*ISCJB **13** 16:39:31.6±0.9, 19.°7S±0.°2×173.°3E±0.°1, h33^{km}, mb4.1/11, MS3.3/4, Error ellipse: s-maj=34.4km s-min=10.6km az=151.2*

*NEIC **13** 16:39:32.7±3.0, 19.°82S×173.°35E, h31^{km}±23^{km}, mb4.5/3, Error ellipse: s-maj=30.0km s-min=9.7km az=151.0*

ISC 13 16:39:33.2±0.9**, 19.°9S**±0.°2×**173.°4E**±0.°2**, h35**^{km}**, n30, σ1.**^{s}**04**/28**, mb4.1**/11**, MS3.5**/5**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.89**	**65**	*e*Pn	**Pn**	**16 40 44.5**	**+0.2**
PINNC	**Pines Island,**	**6.19**	**243**	*e*Pn	**Pn**	**16 40 59.6**	**-2.5**
DZM	**Mont Dzumac**	**6.86**	**250**	*e*Pn	**Pn**	**16 41 13.2**	**+1.8**
DZM	**Mont Dzumac**	**6.86**	**250**	LR	LR	16 43 33.0	
	comp=Z,534nm,20.4s,baz=92,slow=36						
HNR	**Honiara**	**16.64**	**307**	LR	LR	16 48 38.2	
	comp=Z,136nm,21.6s,baz=114,slow=33						
RAR	**Rarotonga**	**25.14**	**98**	LR	LR	16 52 39.2	
	comp=Z,52nm,21.6s,baz=264,slow=31						
STKA	**Stephens Creek**	**30.90**	**241**	*e*P	**P**	**16 45 48.3**	**+1.7**
	1.2nm,1.1s						
STKA	**Stephens Creek**	**30.90**	**241**	P	**P**	**16 45 47.9**	**+1.3**
	3.1nm,0.9s,baz=92,slow=11,SNR=4.3						
STKA				LR	LR	16 56 53.1	
	comp=Z,118nm,19.3s,baz=26,slow=34						
PPT	**Papeete**	**35.09**	**92**	LR	LR	16 57 48.4	
	comp=Z,26nm,19.5s,baz=268,slow=31						
WB2	**Warramunga Arr**	**36.66**	**263**	*e*P	**P**	**16 46 36.0**	**-0.8**
WR1	**Warramunga Arr**	**36.67**	**263**	*e*P	**P**	**16 46 35.9**	**-1.0**
	9.8nm,1.5s						
WRA	**Warramunga Arr**	**36.67**	**263**	P	**P**	**16 46 35.9**	**-1.0**
	1.7nm,1.1s,baz=96,slow=8.8,SNR=6.0						
AS01	**Alice Springs**	**36.76**	**257**	*e*P	**P**	**16 46 37.3**	**-0.3**
AS31	**Alice Springs**	**36.80**	**257**	*e*P	**P**	**16 46 37.9**	**-0.1**
	1.8nm,0.9s						
ASAR	**Alice Springs**	**36.80**	**257**	P	**P**	**16 46 37.5**	**-0.4**
	4.5nm,0.9s,baz=82,slow=8.8,SNR=33						
ASAR				LR	LR	17 00 37.9	
	comp=Z,85nm,19.7s,baz=93,slow=34						
FITZ	**Fitzroy Crossi**	**45.09**	**264**	*e*P	**P**	**16 47 46.4**	**+0.2**
	5.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**45.09**	**264**	P	**P**	**16 47 46.8**	**+0.5**
	4.6nm,0.9s,baz=144,slow=7.4,SNR=8.4						
MJAR	**Matsushiro Arr**	**65.23**	**329**	P	**P**	**16 50 10.6**	**-0.6**
	3.4nm,1.0s,baz=172,slow=9.8,SNR=6.2						
MAJO	**Matsushiro**	**65.23**	**329**	*e*P	**P**	**16 50 10.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**82.36**	**293**	P	**P**	**16 51 53.9**	**+1.9**
	1.9nm,1.0s,baz=118,slow=3.2,SNR=13						
CHTO	**Chiang Mai**	**82.50**	**293**	*e*P	**P**	**16 51 53.0**	**+0.3**
	5.5nm,1.1s						
ILAR	**Eielson Array**	**89.72**	**16**	P	**P**	**16 52 28.0**	**+0.8**
	0.4nm,0.9s,baz=224,slow=5.6,SNR=3.3						
SONA0	**Songino Array**	**90.12**	**322**	*e*P	**P**	**16 52 28.5**	**-1.1**
SONM	**Songino Array**	**90.12**	**322**	P	**P**	**16 52 28.5**	**-1.1**
	0.6nm,0.9s,baz=135,slow=4.9,SNR=4.1						
CLL	**Collm**	**145.05**	**338**	*e*PKPbc	**PKPdf**	**16 59 06.5**	**-0.2**
CLL	**Collm**	**145.05**	**338**	*i* PKPbc	**PKPdf**	**16 59 06.4**	**-0.2**
	comp=Z,8.0nm,0.8s						
CLL				*i* PKiKP	**PKiKP**	**16 59 11.0**	**+0.5**
	comp=Z,6.0nm,0.9s						
CLL				Lm	MLR	17 21 00.0	
	comp=Z,100nm,19.7s						
GERES	**GERESS Array B**	**146.81**	**335**	PKPbc	**PKPbc**	**16 59 11.2**	**-0.5**
	comp=Z,2.2nm,1.0s,baz=66,slow=3.3,SNR=8.8						
GEA0	**GERESS Array S**	**146.82**	**335**	*e*PKPdf	**PKPdf**	**16 59 10.3**	**+0.5**
GEA0				*e*PKPbc	**PKPab**	**16 59 11.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**169.61**	**231**	PKPab	**PKPab**	**17 00 51.1**	**-0.3**
	comp=Z,1.2nm,1.1s,baz=159,slow=4.6,SNR=3.6						
TOA1	**Torodi Ar. Sit**	**169.62**	**231**	*e*PKPab	**PKPab**	**17 00 51.1**	**-0.3**

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*IDC **13** 16:41:27.5±1.6, 10.°98S×164.°75E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.6/42, mbtmp3.8/6, ML4.0/2, Error ellipse: s-maj=33.7km s-min=30.5km az=143.0*

*ISCJB **13** 16:41:30.4±1.2, 11.°1S±0.°1×164.°7E±0.°1, h31^{km}, mb3.6/4, Error ellipse: s-maj=23.2km s-min=11.8km az=35.5*

ISC 13 16:41:32.2±1.3**, 11.°0S**±0.°2×**164.°8E**±0.°1**, h31**^{km}**, n6, σ0.**^{s}**87**/7**, mb3.5**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.03**	**288**	Pn	**Pn**	**16 42 45.3**	**-0.3**
	12nm,0.3s,baz=156,slow=7.3,SNR=6.8						
HNR				Sn	**Sn**	**16 43 43.6**	**+0.9**
	1.5nm,0.3s,baz=231,slow=18,SNR=2.0						
DZM	**Mont Dzumac**	**11.09**	**172**	Pn	**Pn**	**16 44 09.3**	**+0.5**
	0.5nm,0.3s,baz=35,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**30.61**	**249**	P	**P**	**16 47 42.6**	**-1.1**
	0.5nm,0.5s,baz=79,slow=8.9,SNR=12						
ASAR	**Alice Springs**	**31.97**	**243**	P	**P**	**16 47 55.2**	**-0.5**
	0.4nm,0.7s,baz=64,slow=10,SNR=4.5						
ILAR	**Eielson Array**	**83.80**	**19**	P	**P**	**16 53 58.0**	**-0.1**
	0.2nm,0.7s,baz=234,slow=5.2,SNR=4.7						
MKAR	**Makanchi Array**	**92.88**	**317**	P	**P**	**16 54 42.6**	**+0.5**
	0.5nm,0.7s,baz=94,slow=5.5,SNR=6.2						

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*ISCJB **13** 16:49:35.0±0.8, 12.°87S±0.°08×136.°56E±0.°06, h10^{km}, mb3.4/2, Error ellipse: s-maj=11.3km s-min=8.6km az=12.5*

*IDC **13** 16:49:35.9±1.2, 12.°77S×136.°31E, h0^{km}, mb3.6/2, mb1 4.1/7, mb1mx3.7/36, mbtmp4.0/7, ML3.9/5, Error ellipse: s-maj=28.7km s-min=17.3km az=79.0*

*AUST **13** 16:49:36.3±0.1, 12.°79S×136.°59E, h0^{km}, Error ellipse: s-maj=2.2km s-min=0.9km az=7.0*

ISC 13 16:49:37.3±1.0**, 12.°95S**±0.°08×**136.°45E**±0.°07**, h10**^{km}**, n27, σ2.**^{s}**18**/31**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDU	**Kakadu**	**3.88**	**273**	P	**Pn**	**16 50 39.1**	**+1.9**
	baz=4.0,SNR=27						
KDU				S	**Sg**	**16 51 44.1**	**+1.9**
	baz=4.0,SNR=6.5						
KDU	**Kakadu**	**3.88**	**273**	P	**Pn**	**16 50 39.2**	**+2.1**
	baz=4.0						
COEN	**Coen**	**6.62**	**99**	P	**Pn**	**16 51 13.6**	**-1.2**
	baz=6.5,SNR=111						
COEN				S	Sn	16 52 21.3	-9.1
	baz=6.5,SNR=5.2						
COEN	**Coen**	**6.62**	**99**	P	**Pn**	**16 51 13.6**	**-1.2**
	baz=6.5						
WRA	**Warramunga Arr**	**7.24**	**196**	Pn	**Pn**	**16 51 25.1**	**+1.8**
	2.8nm,0.3s,baz=17,slow=13,SNR=144						

WRA				Sn	Sn	16 52 43.6	-2.0
	10.0nm,0.3s,baz=13,slow=24,SNR=9.6						
WRA				Lg	Lg	16 53 30.8	
	17nm,0.3s,baz=10,slow=28,SNR=9.2						
WC3	Warramunga Arr	7.25	196	P	Pn	16 51 26.5	+3.1
	baz=7.4						
WC3	Warramunga Arr	7.25	196	P	Pn	16 51 26.5	+3.1
	baz=7.5						
KNRA	Kununurra	7.92	249	P	Pn	16 51 35.9	+3.2
	baz=8.1,SNR=15						
KNRA	Kununurra	7.92	249	P	Pn	16 51 35.4	+2.8
	baz=8.1						
QIS	Mount Isa	8.15	159	P	Pn	16 51 37.5	+1.7
	baz=8.3,SNR=5.0						
QIS	Mount Isa	8.15	159	P	Pn	16 51 36.5	+0.8
	baz=8.3						
MTSU	Mount Surprise	9.17	125	P	Pn	16 51 48.4	-1.3
	baz=9.2,SNR=21						
MTSU	Mount Surprise	9.17	125	P	Pn	16 51 48.7	-1.1
	baz=9.2						
AS01	Alice Springs	10.92	192	P	Pn	16 52 15.7	+2.0
	baz=11						
ASAR	Alice Springs	10.93	192	Pn	Pn	16 52 15.8	+2.0
	1.9nm,0.3s,baz=9.4,slow=13,SNR=142						
ASAR				Sn	Sn	16 54 15.1	-1.2
	1.7nm,0.3s,baz=9.1,slow=28,SNR=7.7						
ASAR				Lg	Lg	16 55 26.5	
	1.5nm,0.3s,baz=7.0,slow=31,SNR=4.5						
ASPA	Alice Springs	10.93	192	P	Pn	16 52 15.9	+2.0
	baz=11						
ASPA	Alice Springs	10.93	192	P	Pn	16 52 15.9	+2.0
	baz=11						
FITZ	Fitzroy Crossi	11.60	242	P	Pn	16 52 23.6	+0.6
	baz=12,SNR=12						
FITZ	Fitzroy Crossi	11.60	242	P	Pn	16 52 23.5	+0.4
	baz=12						
FITZ	Fitzroy Crossi	11.60	242	Pn	Pn	16 52 23.2	+0.1
	1.2nm,0.3s,baz=55,slow=9.9,SNR=49						
FITZ				Sn	Sn	16 54 26.8	-6.0
	1.9nm,0.3s,baz=86,slow=9.2,SNR=4.2						
FITZ				Lg	Lg	16 55 44.1	
	2.2nm,0.3s,baz=155,slow=15,SNR=4.0						
CTA	Charters Tower	11.78	128	Pn	Pn	16 52 26.3	+0.8
	0.2nm,0.3s,baz=310,slow=17,SNR=3.7						
CTA				Lg	Lg	16 55 53.3	
	1.0nm,0.3s,baz=38,slow=21,SNR=3.8						
WRKA	Warakurna	14.27	211	P	Pn	16 52 58.6	-1.1
	baz=14,SNR=14						
WRKA	Warakurna	14.27	211	P	Pn	16 52 58.1	-1.6
	baz=14,SNR=14						
WRKA	Warakurna	14.27	211	P	Pn	16 52 58.1	-1.6
	baz=14,SNR=14						
STKA	Stephens Creek	19.42	167	P	Pn	16 54 07.3	+2.3
	0.1nm,0.3s,baz=335,slow=17,SNR=2.8						
MKAR	Makanchi Array	76.68	325	P	P	17 01 27.9	-0.7
	0.1nm,0.3s,baz=124,slow=7.3,SNR=6.2						
ZALV	Zalesovo Beam	79.74	332	P	P	17 01 44.1	-1.2
	0.4nm,0.5s,baz=129,slow=5.5,SNR=2.5						

IDC 13 16:53:21.3±12.0**, 4°.17S**×**153°.98E, h309**^{km}±122^{km}**, mb3.1**/6**, mb1 3.4**/6**, mb1mx3.1**/44**, mbtmp3.8**/6**, Error ellipse: s-maj=65.8km s-min=38.5km az=107.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.75	229	P	P	16 58 15.7	0.0
	1.4nm,0.6s,baz=52,slow=9.4,SNR=3.1						
ASAR	Alice Springs	27.41	223	P	P	16 58 39.4	-0.1
	1.5nm,0.3s,baz=54,slow=9.2,SNR=5.8						
SONM	Songino Array	66.43	327	P	P	17 03 38.6	+0.5
	0.2nm,0.5s,baz=134,slow=5.7,SNR=5.0						
MKAR	Makanchi Array	80.63	319	P	P	17 05 00.7	+0.5
	0.3nm,0.5s,baz=92,slow=7.9,SNR=6.5						
ILAR	Eielson Array	81.14	22	P	P	17 05 02.5	+0.1
	0.5nm,0.8s,baz=250,slow=6.3,SNR=4.1						
ZALV	Zalesovo Beam	81.29	326	P	P	17 05 02.4	-1.0
	0.3nm,0.3s,baz=126,slow=7.3,SNR=2.0						
TORD	Torodi Ar. Bea	151.22	290	PKPbc	PKPbc	17 12 39.5	+0.1
	0.4nm,0.5s,baz=69,slow=2.0,SNR=3.6						

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*ISCJB **13** 16:55:25.0±0.3, 2°.97S±0°.03×130°.17E±0°.04, h24^{km}, mb4.1/10, MS3.2/2, Error ellipse: s-maj=5.4km s-min=4.9km az=169.9*

*NEIC **13** 16:55:28.3±0.8, 2°.96S×130°.26E, h35^{km}±8^{km}, mb4.4/9, Error ellipse: s-maj=9.0km s-min=5.2km az=57.0*

*IDC **13** 16:55:28.2±2.8, 2°.96S×130°.30E, h37^{km}±25^{km}, mb3.9/8, mb1 4.0/12, mb1mx3.8/40, mbtmp4.1/12, ML3.9/4, MS3.3/2, Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=25.9km s-min=10.9km az=79.0*

*DJA **13** 16:55:28.1±0.5, 3°S±4°×13°0E±°, h115^{km}±11^{km}, M4.2/7, mb4.8/3, mB4.9/2, MLv4.0/7, Mw(mB)4.2/2*

ISC 13 16:55:26.8±0.5**, 2°.91S**±0°.05×**130°.28E**±0°.05**, h24**^{km}**, n51,** σ**1^s.21**/53**, mb4.0**/10**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.65	193	P	Pb	16 55 57.4	+0.9
BNDI				S	Sb	16 56 21.7	+4.9
FAKI	Fak Fak	1.96	90	*e*Pn	Pn	16 55 59.1	+0.5
FAKI	Fak Fak	1.96	90	P	Pn	16 56 00.3	+1.7
FAKI				S	Sb	16 56 27.1	+1.1
SIJI	Sorong	2.25	26	Pn	Pn	16 56 02.8	+0.1
	13nm,0.3s,baz=220,slow=21,SNR=83						
SIJI				Sn	Sn	16 56 30.7	+1.1
	44nm,0.3s,baz=229,slow=20,SNR=16						
NLAI	Namlea	3.20	264	P	Pn	16 56 17.4	+1.8
RKPI	Ransiki, Papua	4.13	70	P	Pn	16 56 29.7	+1.2
SANI	Sanana	4.38	281	P	Pn	16 56 30.6	-1.2
TNTI	Ternate	4.68	321	*e*Pn	Pn	16 56 36.9	+1.0
BAKI	Biak	6.07	74	P	Pn	16 56 57.0	+1.9
	152nm,0.5s,2µm						
LUWI	Luwuk	7.73	284	*e*Pn	Pn	16 57 17.7	-0.3
APSI	Ampana	8.86	283	P	Pn	16 57 33.0	-0.4
SOEI	Soe	9.05	221	*e*Pn	Pn	16 57 34.5	-1.7
BATI	Baumata	9.79	222	Pn	Pn	16 57 47.3	+1.1
	0.4nm,0.3s,baz=209,slow=10,SNR=2.1						
MMRI	Maumere	9.82	234	*e*Pn	Pn	16 57 45.5	-1.1
MTN	Manton Dam	9.91	175	*e*Pn	Pn	16 57 46.6	-1.2
FITZ	Fitzroy Crossi	15.77	196	*e*P	P	16 59 09.4	-1.8
FITZ	Fitzroy Crossi	15.77	196	Pn	Pn	16 59 08.3	+0.9
	0.8nm,0.3s,baz=14,slow=15,SNR=4.2						
KKM	Kota Kinabalu	16.63	302	*e*Pn	P	16 59 20.7	-0.2
	39nm,1.2s						
COEN	Coen	16.81	132	*e*Pn	P	16 59 22.4	-0.5
	16nm,1.3s						
WRAB	Tennant Creek	17.38	167	*e*P	P	16 59 28.9	-0.2
	40nm,1.9s						
WR1	Warramunga Arr	17.39	167	*e*Pn	Pn	16 59 26.8	-1.2
	16nm,1.5s						
WRA	Warramunga Arr	17.39	167	P	Pn	16 59 26.8	-1.2
	0.7nm,0.3s,baz=345,slow=11,SNR=6.0						
WB2	Warramunga Arr	17.39	167	*e*P	P	16 59 29.1	-0.1
AS31	Alice Springs	20.93	171	*e*P	P	17 00 07.3	-0.7
	5.0nm,0.9s						
ASAR	Alice Springs	20.93	171	P	P	17 00 07.3	-0.7
	6.4nm,0.4s,baz=348,slow=11,SNR=44						
ASAR				S	S	17 03 58.6	-1.7
	1.9nm,0.8s,baz=350,slow=20,SNR=7.2						
AS01	Alice Springs	20.94	171	*e*P	P	17 00 07.2	-0.8
BLSI	Bandar Lampung	25.09	264	P	P	17 00 40.1	-10
STKA	Stephens Creek	30.72	161	*e*P	P	17 01 39.1	-1.0
	1.3nm,1.3s						
STKA	Stephens Creek	30.72	161	P	P	17 01 38.9	-1.2
	6.0nm,1.3s,baz=349,slow=16,SNR=3.6						
STKA				LR	LR	17 15 51.1	
	comp=Z,65nm,19.7s,baz=21,slow=40						
PSI	Prapat	31.86	280	*e*P	P	17 01 49.4	-1.0
	8.2nm,0.5s						
PSI	Prapat	31.86	280	P	P	17 01 49.5	-1.0
	6.2nm,0.4s,baz=180,slow=2.8,SNR=4.7						
JCJ	Chichijima	31.96	20	LR	LR	17 13 35.4	
	comp=Z,43nm,18.7s,baz=324,slow=34						
CM01	Chiang Mai Arr	37.43	306	*e*P	P	17 02 39.2	+0.8
CM31	Chiang Mai Arr	37.46	306	*e*P	P	17 02 40.1	+1.4
CMAR	Chiang Mai Arr	37.46	306	P	P	17 02 39.3	+0.6
	1.4nm,1.0s,baz=135,slow=7.8,SNR=11						
CHTO	Chiang Mai	37.64	306	*e*P	P	17 02 41.0	+0.7
	3.4nm,0.9s						
KSAR	Wonju Array Be	40.21	357	P	P	17 03 02.4	+1.0
KSRS	Korea Array	40.22	357	P	P	17 03 02.4	+0.9
	0.7nm,0.6s,baz=172,slow=8.3,SNR=4.3						
SONA0	Songino Array	54.69	340	*e*P	P	17 04 54.0	-0.1
SONM	Songino Array	54.69	340	P	P	17 04 54.0	-0.1
	0.5nm,0.7s,baz=142,slow=6.1,SNR=4.3						
MK01	Makanchi Array	64.98	326	*e*P	P	17 06 04.6	-0.2
MK31	Makanchi Array	65.00	326	*e*P	P	17 06 04.5	-0.4
MK32	Makanchi Array	65.00	326	*e*P	P	17 06 04.0	-1.0
MKAR	Makanchi Array	65.00	326	*e*P	P	17 06 04.3	-0.6
	7.7nm,0.6s						
MKAR	Makanchi Array	65.00	326	P	P	17 06 04.0	-1.0
	1.1nm,0.6s,baz=120,slow=8.5,SNR=18						
ZALV	Zalesovo Beam	68.08	333	P	P	17 06 23.8	-0.6
	0.3nm,0.3s,baz=99,slow=4.8,SNR=2.1						
ZAA1	Zalesovo Array	68.08	333	*e*P	P	17 06 23.8	-0.6
KURK	Kurchatov	69.21	328	*e*P	P	17 06 31.4	-0.2
	3.1nm,0.8s						
ABKAR	Akbulak array	79.51	321	*e*P	P	17 07 31.3	-0.3
RAYN	Ar Rayn	86.36	294	*e*P	P	17 08 08.2	+0.5
	4.0nm,0.8s						
CPUP	Villa Florida	150.01	166	PKPbc	PKiKP	17 15 16.7	-0.3
	2.0nm,0.4s,baz=328,slow=2.9,SNR=5.4						

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*DDA **13** 16:55:56.3, 37°.27N×37°.16E, h7^{km}±3^{km}, ML3.2*

*ISK **13** 16:55:56.0, 37°.29N×37°.10E, h5^{km}, ML1.9/7*

ISC 13 16:55:56.4±1.0**, 37°.28N**±0°.03×**37°.12E**±0°.03**, h7**^{km}±9^{km}**, n19,** σ**0^s.52**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.14	145	PG	Pg	16 55 59.2	-0.1
GAZ				SG	Sg	16 56 01.8	+0.5
KMRS	Kahramanmaras	0.28	322	PG	Pg	16 56 01.6	-0.3
KMRS				SG	Sg	16 56 05.1	-0.6
GZT	Gaziantep	0.36	79	*i* P	Pg	16 56 03.8	+0.2
GZT				IAML_P			
	comp=Z,5µm,0.1s						
KUZU	Kuzuini	0.51	184	*i* P	Pb	16 56 07.3	-0.5
KUZU				IAML_P			
	comp=Z,11µm,0.1s						
ANDN	Andirin	0.68	296	*i* P	Pg	16 56 09.6	+0.1
ANDN				IAML_P			
	comp=Z,3µm,0.1s						
ATAB	Bozova	0.96	78	*i* P	Pb	16 56 15.0	-0.3
ATAB				*i* S	Sb	16 56 28.2	0.0
ATAB				IAML_P			
	comp=Z,11µm,0.2s						
KOZT	Kozan	1.04	281	PG	Pg	16 56 16.5	+0.1
SAIM	ADANA	1.07	310	*i* P	Pn	16 56 18.4	+0.4
SAIM				IAML_P			
	comp=Z,1µm,0.1s						
TAHT	Tahtakopru-Hat	1.17	220	PN	Pg	16 56 18.6	-0.3
AKCD	Akcadag	1.20	32	*i* P	Pn	16 56 19.5	-0.2
AKCD				*i* S	Sn	16 56 36.2	-0.1
AKCD				IAML_P			
	comp=Z,1µm,0.1s						
SURC	SANLIURFA_SURC	1.26	108	*i* P	Pn	16 56 20.2	-0.3
SURC				*i* S	Sb	16 56 36.8	-0.2
SURC				IAML_P			
	comp=Z,527nm,0.2s						
YURE	YUREGIR	1.27	249	PN	Pg	16 56 20.9	+0.1
YURE	YUREGIR	1.27	249	*i* P	Pg	16 56 21.6	+0.9
DARE	Darende-Malaty	1.32	13	PN	Pg	16 56 21.8	+0.1
SANL	SANLIURFA_Merk	1.50	94	*i* P	Pg	16 56 24.6	-0.6
SANL				*i* S	Sg	16 56 45.0	+0.4
SANL				IAML_P			
	comp=Z,2µm,0.1s						
YAHY	KAYSERI_Yahyal	1.61	301	*i* P	Pn	16 56 25.9	+0.5
BNN	Bunyan	1.86	328	PN	Pb	16 56 29.9	-0.9
ELZG	Elazig	1.91	50	*i* P	Pb	16 56 31.9	+0.2
PTK	Pertek	2.41	48	PN	Pn	16 56 37.8	+1.4

IDC 13 16:58:01.0±1.5**, 2°.99S**×**130°.14E, h0**^{km}**, mb3.4**/2**, mb1 3.5**/4**, mb1mx3.3**/39**, mbtmp3.3**/4**, ML3.1**/2**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.6**/21**, Error ellipse: s-maj=52.3km s-min=25.2km az=85.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.38	28	Pn	Pn	16 58 40.8	-0.6
	2.8nm,0.3s,baz=198,slow=20,SNR=21						
SIJI				Sn	Sn	16 59 08.0	-3.4
	6.4nm,0.3s,baz=225,slow=19,SNR=7.6						
WRA	Warramunga Arr	17.34	167	P	P	17 02 05.6	-0.6
	0.1nm,0.3s,baz=345,slow=10,SNR=3.2						
ASAR	Alice Springs	20.88	170	P	P	17 02 44.3	-0.6
	1.4nm,0.7s,baz=354,slow=9.7,SNR=4.7						
URZ	Urewera	55.36	136	LR	LR	17 31 32.7	
	comp=Z,41nm,18.5s,baz=305,slow=36						
MKAR	Makanchi Array	64.98	326	P	P	17 08 43.1	+0.2
	0.2nm,0.6s,baz=125,slow=7.7,SNR=3.2						

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*ISCJB **13** 17:05:14.3±0.2, 38°.13N±0°.02×117°.97W±0°.02, h10^{km}, mb3.0/2, MS3.2/1, Error ellipse: s-maj=2.7km s-min=2.3km az=173.6*

*ANF **13** 17:05:14.3±0.4, 38°.07N×118°.03W, h6^{km}±2^{km}, ML3.9/20, Error ellipse: s-maj=2.5km s-min=1.7km az=164.0*

*REN **13** 17:05:15.2, 38°.03N×118°.05W, h9^{km}, ML3.5, MW3.7(USGS)*

*NEIC **13** 17:05:15.2±0.0, 38°.03N×118°.05W, h9^{km}, MW3.7, ML3.5(REN), Moment Tensor Solution. s57 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.00; $M_{\theta\theta}$-1.73; $M_{\phi\phi}$2.74; $M_{r\theta}$1.82; $M_{\theta\phi}$3.14; $M_{\phi r}$-1.05; Best double couple: $M_0$4.50000×10^{14} NP1:ϕ_s248.00000°, δ68.00000°, λ-22.00000°. NP2:ϕ_s346.00000°, δ70.00000°, λ-157.00000°. Principal axes: T 4.3600, Plg1.0000°, Azm117.0000°; N 0.2300, Plg60.0000°, Azm25.0000°; P -4.5900, Plg30.0000°, Azm208.0000°; After REN.*

*IDC **13** 17:05:17.7±0.8, 38°.17N×117°.99W, h0^{km}, mb3.2/2, mb1 3.4/6, mb1mx3.3/41, mbtmp3.1/6, ML3.1/4, MS2.9/5, Ms1 2.9/5, ms1mx2.6/17 Error ellipse: s-maj=8.8km s-min=5.1km az=34.0*

ISC 13 17:05:15.2±0.7**, 37°.99N**±0°.02×**118°.02W**±0°.02**, h10**^{km}**, n98,** σ**1^s.73**/111**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NV11	Mina Array Sit	0.46	347	*e*Pg	Pg	17 05 23.0	-1.2
NV01	Mina Array Sit	0.49	333	*e*Pg	Pg	17 05 22.9	-2.0
NVAR	Mina Array Bea	0.49	333	LR	LR	17 05 15.3	
	comp=Z,48nm,21.6s,baz=144,slow=8.0						
NVAR				Pg	Pg	17 05 23.5	-1.4
	638nm,0.3s,baz=159,slow=19,SNR=1027						
NVAR				Lg	Lg	17 05 29.3	
	2µm,0.3s,baz=137,slow=16,SNR=36						
MLAC	Mammoth, Mammo	0.74	241	P	Pb	17 05 29.5	-0.7
	baz=57,SNR=36						
MLAC				S	Sb	17 05 40.1	-0.4
	baz=57						
RYN	Ryan	0.75	328	*e*Pg	Pg	17 05 28.5	-1.2
OMMB	Old Mammoth Mi	0.86	245	*e*Pg	Pg	17 05 31.4	-0.4
MDPB	Devils Postpil	0.91	247	*e*Pg	Pg	17 05 32.3	-0.4
TIN	Tinemaha, Big	0.95	190	P	Pn	17 05 34.1	-0.5
	baz=8.2,SNR=107						
TIN				S	Sn	17 05 47.8	-0.4
	baz=8.2						
KVN	Kaiserville	1.06	357	*e*Pg	Pg	17 05 34.0	-1.7
GRAC	Grapevine Rang	1.12	152	P	Pn	17 05 37.4	+0.5
	baz=332						
GRAC				S	Sn	17 05 53.6	+1.2
	baz=332						
WAKR	Walker	1.23	295	*e*Pg	Pb	17 05 37.4	-1.3
YERR	Yerington	1.38	317	*e*Pn	Pn	17 05 39.6	-1.1
CWC	Cottonwood Cre	1.54	182	P	Pb	17 05 43.9	-0.1
	baz=0.8						
CWC				S	Sg	17 06 05.5	+0.6
	baz=0.8						
PNTR	Pine Nut	1.66	312	*e*Pn	Pn	17 05 43.5	-1.0
DAC	Darwin (Calif)	1.74	169	*e*Pn	Pb	17 05 46.5	-0.8
TPNV	Topopah Spring	1.75	126	*e*Pn	Pb	17 05 46.4	-1.1
TPNV	Topopah Spring	1.75	126	P	Pn	17 05 46.3	+0.5
	baz=308						
TPNV				Sg	Sg	17 06 14.3	+2.8
	baz=308						
FURC	Furnace Creek,	1.78	148	P	Pb	17 05 47.1	-0.7
	baz=329,SNR=198						
FURC				Sb	Sg	17 06 14.0	+1.7
	baz=329						
VCNR	Virginia City	1.83	316	*e*Pn	Pn	17 05 45.4	-1.5
CMB	Columbia Colle	1.87	272	*e*Pn	Pn	17 05 46.7	-0.6
R11A	Troy Canyon, C	1.95	79	*e*Pn	Pn	17 05 47.9	-0.7
R11A	Troy Canyon, C	1.95	79	P	Pn	17 05 47.9	-0.7
	baz=262						
R11A				Sg	Sg	17 06 17.9	-0.1
	baz=262						
MPMC	Manual Prospec	1.97	167	P	Pn	17 05 49.2	+0.4
	baz=347,SNR=132						
MPMC				Sb	Sg	17 06 20.1	+1.5
	baz=347						
RUBR	Rubicon Trail	1.98	303	*e*Pn	Pb	17 05 50.6	-0.9
VOG	Valley Oaks Go	1.99	214	Sb	Sg	17 06 19.2	+0.2
	baz=31						
PAHR	Pah Rah Range	2.02	329	*e*Pn	Pn	17 05 48.5	-1.0
VES	Vestal, Richgr	2.31	202	P	Pb	17 05 54.8	-2.0
	baz=20,SNR=89						
VES				Sb	Sg	17 06 28.8	-0.5
	baz=20						
ISA	Isabella, Lake	2.35	189	*e*Pn	Pn	17 05 55.5	+1.6
ISA	Isabella, Lake	2.35	189	P	Pn	17 05 54.5	+0.6
	baz=8.0,SNR=164						
ISA				Sb	Sg	17 06 30.6	-0.1
	baz=8.0						
AFDM	Forest Hills D	2.51	293	*e*Pn	Pn	17 05 54.9	-1.2
SHOC	Shoshone, Teco	2.51	146	P	Pn	17 05 56.3	+0.3
	baz=327,SNR=22						
SHOC				Sb	Sg	17 06 36.1	+0.3
	baz=327						
LRMC	Laurel Mtn Rad	2.52	174	P	Pn	17 05 57.0	+0.7
	baz=354,SNR=33						
LRMC				Sb	Sg	17 06 36.8	+0.8
	baz=354						
BMN	Battle Mountai	2.52	14	*e*Pn	Pn	17 05 55.5	-0.9
BEKR	Beckworth	2.62	317	*e*Pn	Pn	17 05 57.0	-0.7
SHPR	Sheep Range	2.72	122	*e*Pn	Pn	17 05 59.9	+0.8
GSC	Goldstone, Bar	2.85	160	*e*Pn	Pn	17 06 01.7	+0.9
GSC	Goldstone, Bar	2.85	160	P	Pn	17 06 01.7	+0.9
	baz=340,SNR=13						
GSC				Sb	Sg	17 06 46.3	-0.5
	baz=340						
PAGB	Antelope Grade	2.88	219	*e*Pn	Pn	17 06 01.9	+0.8
ARVC	Arvin	2.93	193	Pb	Pb	17 06 08.6	+1.2
	baz=12,SNR=17						
ARVC				Sb	Sg	17 06 48.4	-0.8
	baz=12						
SAO	San Andreas Ge	2.99	247	*e*Pn	Pn	17 06 03.8	+1.1
TUQ	Turquoise Moun	3.05	146	P	Pn	17 06 04.4	+0.8
	baz=327						
TUQ				S	Sn	17 06 42.0	+1.7
	baz=327						
EDW2	Edwards Air Fo	3.10	180	P	Pn	17 06 04.7	+0.5
	baz=359,SNR=26						
EDW2				Sb	Sg	17 06 53.9	-0.8
	baz=359						
ORV	Oroville	3.14	301	*e*Pn	Pn	17 06 04.4	-0.3
PSUT	Pine Spring	3.32	79	*e*Pn	Pn	17 06 07.8	+0.3
PSUT				*e*Pg	Pb	17 06 14.4	+0.1
OSI	Osito Audit: C	3.41	190	*e*Pg	Pg	17 06 18.3	-2.3
OSI	Osito Audit: C	3.41	190	Sb	Sg	17 07 02.6	-2.2
	baz=8.8						
HEC	Hector,Ludlow	3.43	156	Sb	Sg	17 07 04.6	-0.8
	baz=337						
ELK	Elko	3.50	37	*e*Pn	Pn	17 06 08.9	-0.9
ELK				Pg	Pb	17 06 18.6	+1.3
ELK				Lg	Lg	17 07 03.1	
ELK	Elko	3.50	37	Pn	Pn	17 06 10.0	+0.1
	2.3nm,0.3s,baz=240,slow=12,SNR=24						
ELK				Pg	Pb	17 06 18.6	+1.3
	17nm,0.3s,baz=248,slow=12,SNR=36						
ELK				Lg	Lg	17 07 03.1	
	8.4nm,0.3s,baz=39,slow=15,SNR=3.0						
ELK				LR	LR	17 07 54.7	
	comp=Z,136nm,19.9s,baz=200,slow=47						
CCUT	Cedar City	3.72	95	*e*Pn	Pn	17 06 13.0	+0.1
GMRC	Granite Mounta	3.72	149	Sb	Sg	17 07 12.7	-1.9
	baz=330						
LDFC	Landfair	3.73	140	*e*Pg	Pg	17 06 24.1	-2.6
MWC	Mount Wilson	3.75	180	*e*Pg	Pg	17 06 25.7	-1.4
LCMT	Little Creek M	3.92	103	*e*Pn	Pn	17 06 15.9	+0.3
SZCU	Shurtz Canyon	3.93	94	*e*Pn	Pn	17 06 16.1	+0.3
KNB	Kanab	4.25	102	*e*Pn	Pn	17 06 20.5	+0.4
MOD	Modoc Plateau	4.29	337	*e*Pn	Pn	17 06 19.0	-1.6
W13A	Hualapai Mount	4.40	130	*e*Pn	Pn	17 06 22.1	-0.2
TCRU	Three Creeks R	4.43	80	*e*Pg	Pg	17 06 37.6	-2.4
PFO	Pinyon Flats O	4.55	163	*e*Pn	Pn	17 06 24.8	+0.7
PFO				Pg	Pg	17 06 40.8	-1.4
PFO				Lg	Lg	17 07 41.5	
PFO	Pinyon Flats O	4.55	163	Pn	Pn	17 06 29.4	+5.2
	0.3nm,0.3s,baz=359,slow=17,SNR=3.5						
PFO				Pg	Pg	17 06 40.8	-1.4
	0.8nm,0.3s,baz=330,slow=8.9,SNR=11						
PFO				Lg	Lg	17 07 41.5	
	0.7nm,0.3s,baz=240,slow=20,SNR=2.7						
XPFO	Pion Flat	4.55	163	*e*Pn	Pn	17 06 24.6	+0.4
PKCU	Pink Cliffs	4.56	95	*e*Pn	Pn	17 06 25.2	+0.6
MTPU	Mount Pierson	4.61	88	*e*Pn	Pn	17 06 26.4	+1.2
DUG	Dugway, Tooele	4.61	60	*e*Pg	Pg	17 06 41.8	-1.7
MSU	Marysvale	4.63	82	*e*Pn	Pn	17 06 25.2	-0.2
U15A	North Rim	4.83	107	*e*Pn	Pn	17 06 28.6	+0.4
BGU	Big Grassy Mou	4.85	51	*e*Pn	Pn	17 06 26.6	-1.8
NLU	North Lily Min	5.03	65	*e*Pg	Pg	17 06 49.0	-2.6
Y12C	Blythe	5.09	145	*e*Pn	Pn	17 06 33.1	+1.6
Y12C				*e*Pg	Pg	17 06 50.3	-2.4
YBH	Yreka Blue Hor	5.20	317	Pn	Pn	17 06 36.2	+3.1
	0.2nm,0.3s,baz=146,slow=11,SNR=2.4						
YBH				Lg	Lg	17 07 56.6	
	0.2nm,0.3s,baz=288,slow=20,SNR=1.6						
YBH				LR	LR	17 08 49.5	
	comp=Z,91nm,20.2s,baz=143,slow=42						
J08A	Circle Bar Ran	5.38	356	*e*Pg	Pb	17 06 53.0	+3.7
SPUT	South Promonto	5.43	51	*e*Pg	Pg	17 06 56.3	-2.9
Q16A	Castle Valley	5.46	78	*e*Pg	Pg	17 06 58.7	-1.0
TMUT	Trail Mountain	5.49	74	*e*Pg	Pg	17 06 57.9	-2.5
HVU	Hansel Valley	5.53	45	*e*Pn	Pn	17 06 37.5	-0.2
GLA	Glamis	5.57	151	*e*Pg	Pg	17 07 01.2	-0.6
SRU	San Rafael Swe	5.98	77	*e*Pn	Pn	17 06 44.2	+0.3
PV05	Paradox Valley	7.04	87	*e*Pg	Pg	17 07 26.7	-3.3
PV23	Carpenter Ridg	7.11	83	*e*Pg	Pg	17 07 26.8	-4.5
PV21	Cone Mtn., Par	7.14	83	*e*Pg	Pg	17 07 28.1	-3.8
PV20	West Nyswonger	7.14	84	*e*Pg	Pg	17 07 26.5	-5.4
PV17	East Wray Mesa	7.15	85	*e*Pg	Pg	17 07 27.4	-4.6
PV04	Paradox Valley	7.19	84	*e*Pg	Pg	17 07 27.9	-4.9
PV11	David Mesa, Pa	7.22	85	*e*Pn	Pn	17 07 01.3	+0.4
PV13	Radium Mtn., P	7.26	86	*e*Pg	Pg	17 07 31.0	-3.2
PV12	Saucer Basin,	7.27	85	*e*Pn	Pn	17 07 01.4	-0.3
PV02	Paradox Valley	7.32	85	*e*Pg	Pg	17 07 31.2	-4.3
X18A	Snowflake	7.38	115	*e*Pg	Pg	17 07 30.5	-5.9
PV07	Paradox Valley	7.39	84	*e*Pg	Pg	17 07 30.5	-6.2
PV01	Paradox Valley	7.46	86	*e*Pg	Pg	17 07 33.4	-4.6
MVCO	Mesa Verde	7.60	93	*e*Pg	Pg	17 07 37.5	-3.2
PDAR	Pinedale Array	8.03	51	Pn	Pn	17 07 16.1	+4.0
	0.1nm,0.3s,baz=206,slow=10.0,SNR=5.7						
PDAR				Pg	Pb	17 07 27.2	-7.3
	0.1nm,0.3s,baz=240,slow=14,SNR=6.4						
PDAR				Lg	Lg	17 09 25.2	
	0.3nm,0.3s,baz=230,slow=25,SNR=5.7						
ANMO	Albuquerque	9.79	105	Pg	Pg	17 08 17.3	
	0.2nm,0.3s,baz=288,slow=13,SNR=9.1						
ANMO				Lg	Lg	17 10 25.1	
	0.1nm,0.3s,baz=163,slow=7.8,SNR=2.1						
ANMO				LR	LR	17 10 42.0	
	comp=Z,71nm,21.4s,baz=276,slow=33						
NEW	Newport	10.29	3	LR	LR	17 11 42.4	
	comp=Z,68nm,21.0s,baz=236,slow=38						
YKA	Yellowknife Ar	24.62	4	P	P	17 10 39.6	+4.1
	0.2nm,0.6s,baz=180,slow=8.6,SNR=7.6						
TKL	Tuckaleechee C	27.43	84	LR	LR	17 23 06.8	
	comp=Z,65nm,18.0s,baz=290,slow=39						
ILAR	Eielson Array	31.75	337	P	P	17 11 43.6	+4.5
	0.3nm,0.6s,baz=138,slow=11,SNR=3.0						

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*IDC **13** 17:05:11.6±2.0, 10°.90S×164°.78E, h0^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.5/35, mbtmp3.6/6, ML4.5/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/14, Error ellipse: s-maj=51.5km s-min=31.2km az=148.0*

*ISCJB **13** 17:05:15.7±1.0, 10°.8S±0°.1×164°.7E±0°.1, h31^{km}, mb3.4/5, MS2.9/1, Error ellipse: s-maj=20.2km s-min=11.6km az=30.2*

ISC 13 17:05:17.5±1.1**, 10°.7S**±0°.1×**164°.7E**±0°.1**, h31**^{km}**, n8,** σ**1^s.36**/8**, mb3.4**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.84	284	Pn	Pn	17 06 29.0	+0.7
	18nm,0.3s,baz=152,slow=5.7,SNR=16						
HNR				Sn	Sn	17 07 24.1	+0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	2.4nm,0.3s,baz=180,slow=19,SNR=1.3						
HNR	comp=Z,117nm,18.2s,baz=218,slow=40			LR	LR	17 08 31.2	
DZM	**Mont Dzumac** 0.4nm,0.3s,baz=336,slow=19,SNR=6.3	**11.45**	**172**	Pn	**Pn**	**17 08 00.1**	**+1.0**
WRA	**Warramunga Arr** 0.7nm,1.0s,baz=79,slow=9.2,SNR=4.1	**30.65**	**249**	P	**P**	**17 11 27.9**	**-1.6**
ASAR	**Alice Springs** 0.2nm,0.7s,baz=65,slow=10,SNR=5.0	**32.04**	**242**	P	**P**	**17 11 39.8**	**-2.0**
MJAR	**Matsushiro Arr** comp=Z,11nm,21.6s,baz=350,slow=34	**53.18**	**333**	LR	LR	17 35 21.1	
SONM	**Songino Array** 0.4nm,0.8s,baz=145,slow=5.6,SNR=2.3	**77.77**	**324**	P	**P**	**17 17 12.1**	**+0.2**
ILAR	**Eielson Array** 0.2nm,0.7s,baz=242,slow=5.8,SNR=2.4	**83.50**	**19**	P	**P**	**17 17 41.5**	**-0.5**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=94,slow=4.3,SNR=1.8	**92.56**	**317**	P	**P**	**17 18 26.6**	**+0.6**

IDC 13 17:15:11.9±5.7**, 10°.98S×167°.44E, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/25**, mbtmp3.6**/3**, MS3.2**/3**, Ms1 3.1**/3**, ms1mx2.8**/26**, Error ellipse: s-maj=289.0km s-min=36.5km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** comp=Z,117nm,20.6s,baz=70,slow=35	**7.53**	**281**	LR	LR	17 19 34.4	
DZM	**Mont Dzumac** comp=Z,119nm,20.2s,baz=44,slow=36	**11.07**	**185**	LR	LR	17 21 44.5	
H11S2	**WAKE ISLAND Hy** baz=181,slow=76,SNR=0.9	**29.29**	**359**	T	T	17 51 40.8	
H11S3	**WAKE ISLAND Hy** baz=181,slow=76,SNR=16	**29.29**	**359**	T	T	17 51 40.4	
H11S1	**WAKE ISLAND Hy** baz=181,slow=76,SNR=1.2	**29.30**	**359**	T	T	17 51 41.4	
H11N1	**WAKE ISLAND Hy** baz=184	**30.50**	**359**	T	T	17 53 15.6	
H11N3	**WAKE ISLAND Hy** baz=184	**30.50**	**359**	T	T	17 53 16.1	
H11N2	**WAKE ISLAND Hy** baz=184	**30.52**	**359**	T	T	17 53 13.7	
STKA	**Stephens Creek** comp=Z,47nm,18.8s,baz=30,slow=34	**31.65**	**225**	LR	LR	17 32 53.8	
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=81,slow=8.5,SNR=2.9	**33.07**	**250**	P	P	17 21 50.1	+0.6
ASAR	**Alice Springs** 0.3nm,0.7s,baz=78,slow=8.9,SNR=3.0	**34.31**	**244**	P	P	17 21 59.6	-0.8
ILAR	**Eielson Array** 1.3nm,1.1s,baz=218,slow=6.9,SNR=4.1	**82.93**	**18**	P	P	17 27 38.4	+0.1

NNC ***13*** *17:15:55.9±0.4, 42°.91N×77°.77E, h0^{km}±2^{km}, mb2.5, mpv3.0, Error ellipse: s-maj=3.7km s-min=1.4km az=175.0*

SOME ***13*** *17:15:56.8, 42°.90N×77°.75E, h15^{km}*

KRNET 13 17:15:56.8±0.1**, 42°.92N×77°.75E, h19^{km}, mb2.8, 18C-20D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty** 19nm,0.1s	**0.50**	**74**	P	Pg	17 16 06.3	-0.7
SATY	150nm,0.1s			S	Sg	17 16 13.5	-0.4
SATY	**Saty** 19nm,0.1s	**0.50**	**74**	*e*P	Pg	17 16 06.3	-0.7
SATY	150nm,0.1s			⇓*i*S	Sg	17 16 13.5	-0.4
KOTS	**Kotyrbulak** 3.5nm,0.1s	**0.56**	**304**	P	Pb	17 16 07.7	-0.3
KOTS	18nm,0.2s			S	Sb	17 16 15.6	-0.1
KOTS	**Kotyrbulak** baz=3.0	**0.56**	**304**	*e*P	Pb	17 16 07.7	-0.3
KOTS	baz=3.0			*e*S	Sb	17 16 15.6	-0.1
KOTS	**Kotyrbulak** 3.5nm,0.1s	**0.56**	**304**	*e*P	Pb	17 16 07.7	-0.3
KOTS	18nm,0.2s			*e*S	Sb	17 16 15.6	-0.1
MDOK	**Medeo** 0.9nm,0.2s	**0.57**	**295**	P	Pb	17 16 07.6	-0.5
MDOK	8.3nm,0.6s			S	Sb	17 16 15.0	-0.9
MDOK	**Medeo** 6.0nm,0.1s	**0.57**	**295**	Pg	Pb	17 16 07.6	-0.5
MDOK	13nm,0.1s			Lg	Lg	17 16 15.4	
MDOK	**Medeo** baz=95	**0.57**	**295**	*e*P	Pb	17 16 07.6	-0.5
MDOK	baz=95			*e*S	Sb	17 16 15.4	-0.4
MDOK	**Medeo** 6.0nm,0.1s	**0.57**	**295**	*e*P	Pb	17 16 07.6	-0.5
MDOK	13nm,0.1s			*e*S	Sb	17 16 15.4	-0.4
TNSS	**Tian-Shan** 2.4nm,0.1s	**0.60**	**281**	P	Pb	17 16 08.3	-0.5
TNSS	14nm,0.2s			S	Sg	17 16 17.1	0.0
TNSS	**Tian-Shan** baz=81	**0.60**	**281**	*e*P	Pb	17 16 08.4	-0.4
TNSS	baz=81			*e*S	Sg	17 16 17.1	0.0
TNSS	**Tian-Shan** 2.4nm,0.1s	**0.60**	**281**	*e*P	Pb	17 16 08.3	-0.5
TNSS	14nm,0.2s			*e*S	Sg	17 16 17.1	0.0
KURS	**Kuram** 12nm,0.1s	**0.64**	**29**	P	Pb	17 16 09.1	-0.3
KURS	12nm,0.3s			S	Sg	17 16 18.1	-0.1
KURS	**Kuram** baz=28	**0.64**	**29**	⇓*i*P	Pb	17 16 09.1	-0.3
KURS	baz=28			⇑*i*S	Sg	17 16 18.1	-0.1
KURS	**Kuram** 12nm,0.1s	**0.64**	**29**	⇓*i*P	Pb	17 16 09.1	-0.3
KURS	12nm,0.3s			⇑*i*S	Sg	17 16 18.1	-0.1
PRZ	**Przheval'sk** baz=32	**0.65**	**132**	⇑*i*P	Pg	17 16 10.1	+0.3
PRZ	baz=32			⇑*i*S	Sg	17 16 19.1	+0.6
IZV	**Izvestkoviy** 10nm,0.1s	**0.84**	**278**	P	Pb	17 16 12.8	-0.1
IZV	30nm,0.2s			S	Sg	17 16 24.3	-0.2
IZV	**Izvestkoviy** baz=78	**0.84**	**278**	*e*P	Pb	17 16 12.8	-0.1
IZV	baz=78			*e*S	Sg	17 16 24.3	-0.2
IZV	**Izvestkoviy** 10nm,0.1s	**0.84**	**278**	*e*P	Pb	17 16 12.8	-0.1
IZV	30nm,0.2s			*e*S	Sg	17 16 24.3	-0.2
KDJ	**Kajisay** baz=7.0	**0.90**	**208**	⇓*i*P	Pn	17 16 14.6	0.0
KDJ	baz=7.0			⇓*i*S	Sn	17 16 27.0	-0.1
UZB	**Uzynbulak** 17nm,0.1s	**0.96**	**76**	P	Pb	17 16 14.3	-0.6
UZB	28nm,0.2s			S	Sb	17 16 26.7	-0.6
UZB	**Uzynbulak** baz=76	**0.96**	**76**	*e*P	Pb	17 16 14.3	-0.6
UZB	baz=76			*e*S	Sb	17 16 26.7	-0.6
UZB	**Uzynbulak** 17nm,0.1s	**0.96**	**76**	*e*P	Pb	17 16 14.3	-0.6
UZB	28nm,0.2s			*e*S	Sb	17 16 26.7	-0.6
MTBS	**Maitube** baz=82	**0.99**	**282**	*e*P	Pb	17 16 15.2	-0.2
MTBS	baz=82			*e*S	Sb	17 16 28.4	+0.3
MTBS	**Maitube** 2.1nm,0.1s	**0.99**	**282**	*e*P	Pb	17 16 15.2	-0.2
MTBS	11nm,0.3s			*e*S	Sb	17 16 28.4	+0.3
CHKK	**Chushkaly** 7.0nm,0.1s	**1.08**	**329**	P	Pn	17 16 17.0	0.0
CHKK	50nm,0.2s			S	Sn	17 16 31.6	+0.1
CHKK	**Chushkaly** baz=30	**1.08**	**329**	*e*P	Pn	17 16 17.0	0.0
CHKK	baz=30			*e*S	Sn	17 16 31.6	+0.1
CHKK	**Chushkaly** 7.0nm,0.1s	**1.08**	**329**	*e*P	Pn	17 16 17.0	0.0
CHKK	50nm,0.2s			*e*S	Sn	17 16 31.6	+0.1
KTBS	**Karatobe** 3.0nm,0.1s	**1.11**	**316**	P	Pb	17 16 17.8	+0.4
KTBS	16nm,0.1s			S	Sg	17 16 32.5	-0.3
KTBS	**Karatobe** baz=12	**1.11**	**316**	*e*P	Pb	17 16 17.8	+0.4
KTBS	baz=12			*e*S	Sg	17 16 32.6	-0.3
KTBS	**Karatobe** 3.0nm,0.1s	**1.11**	**316**	*e*P	Pb	17 16 17.8	+0.4
KTBS	16nm,0.1s			*e*S	Sg	17 16 32.5	-0.3
TARG	**Taragay, Kyrgy** baz=78	**1.20**	**178**	⇓*i*P	Pn	17 16 18.8	-0.1
TARG	baz=78			⇓*i*S	Sb	17 16 34.1	-0.2
MNBS	**Baschi** 3.7nm,0.1s	**1.25**	**22**	P	Pb	17 16 20.0	+0.1
MNBS	37nm,0.2s			S	Sg	17 16 36.7	-0.7
MNBS	**Baschi** baz=28	**1.25**	**22**	*e*P	Pb	17 16 20.0	+0.2
MNBS	baz=28			*e*S	Sg	17 16 36.7	-0.6
MNBS	**Baschi** 3.7nm,0.1s	**1.25**	**22**	*e*P	Pb	17 16 20.0	+0.1
MNBS	37nm,0.2s			*e*S	Sg	17 16 36.7	-0.7
ARXS	**Arharly** 6.7nm,0.2s	**1.29**	**2**	P	Pb	17 16 20.7	+0.1
ARXS	37nm,0.2s			S	Sg	17 16 37.9	-0.8
ARXS	**Arharly** 6.7nm,0.2s	**1.29**	**2**	*e*P	Pb	17 16 20.6	+0.1
ARXS	37nm,0.2s			*e*S	Sg	17 16 37.9	-0.8
ULHL	**Ulahol** baz=39	**1.30**	**239**	⇓*i*P	Pb	17 16 20.6	-0.2
ULHL	baz=39			⇓*i*S	Sb	17 16 38.0	+0.8
KST	**Kastek** 2.6nm,0.2s	**1.32**	**276**	P	Pb	17 16 21.2	+0.2
KST	10.0nm,0.2s			S	Sg	17 16 38.6	-0.9
KST	**Kastek** baz=76	**1.32**	**276**	*e*P	Pb	17 16 21.2	+0.2
KST	baz=76			*e*S	Sg	17 16 38.7	-0.8
KST	**Kastek** 2.6nm,0.2s	**1.32**	**276**	*e*P	Pb	17 16 21.2	+0.2
KST	10.0nm,0.2s			*e*S	Sg	17 16 38.6	-0.9
PDGK	**Podgornoye** 1.3nm,0.2s	**1.34**	**72**	P	Pn	17 16 20.7	+0.1
PDGK	4.0nm,0.3s			S	Sb	17 16 38.2	+0.1
PDGK	**Podgornoye** 0.6nm,0.2s	**1.34**	**72**	⇑P	Pn	17 16 20.5	0.0
PDGK	5.0nm,0.6s			⇑S	Sb	17 16 38.2	+0.1
PDGK	**Podgornoye** baz=72	**1.34**	**72**	⇑*i*P	Pn	17 16 20.8	+0.2
PDGK	baz=72			⇑*i*S	Sb	17 16 38.3	+0.2
BOOM	**Boomskoye usch** baz=53	**1.40**	**253**	⇑*i*P	Pb	17 16 22.7	+0.2
BOOM	baz=53			⇑*i*S	Sg	17 16 41.4	-0.8
KUU	**Kurty** 2.0nm,0.1s	**1.41**	**314**	P	Pg	17 16 23.7	-0.4
KUU	28nm,0.2s			S	Sg	17 16 43.5	+1.0
KUU	**Kurty** baz=14	**1.41**	**314**	*e*P	Pg	17 16 23.7	-0.4
KUU	baz=14			*e*S	Sg	17 16 43.1	+0.6
KUU	**Kurty** 2.0nm,0.1s	**1.41**	**314**	*e*P	Pg	17 16 23.7	-0.4
KUU	28nm,0.2s			*e*S	Sg	17 16 43.1	+0.6
TKM2	**Tokmak 2** 0.3nm,0.2s	**1.58**	**271**	⇑P	Pb	17 16 25.9	+0.4
TKM2	3.0nm,0.3s			⇓S	Sg	17 16 46.8	-1.1
TKM2	**Tokmak 2** baz=71	**1.58**	**271**	⇑*i*P	Pb	17 16 26.1	+0.6
TKM2	baz=71			⇑*i*S	Sg	17 16 47.0	-0.9
NRN	**Naryn** baz=22	**1.98**	**222**	⇓*i*P	Pb	17 16 31.3	-1.1
NRN	baz=22			⇓*i*S	Sb	17 16 55.9	-0.8
KZA	**Kyzart** baz=46	**2.03**	**246**	⇓*i*P	Pb	17 16 32.4	-1.0
KZA	baz=46			⇓*i*S	Sb	17 16 57.8	-0.6
DJR	**Jarkent** 1.0nm,0.2s	**2.04**	**46**	Pg	Pb	17 16 33.1	-0.2
DJR	4.8nm,0.3s			Lg	Lg	17 16 59.8	
DJR	**Jarkent** 1.0nm,0.2s	**2.04**	**46**	*e*P	Pb	17 16 33.1	-0.2
DJR	4.8nm,0.3s			*e*S	Sb	17 16 59.5	+1.1
KBK	**Karagaybulak** baz=64	**2.08**	**264**	⇑*i*P	Pb	17 16 33.2	-0.8
KBK	baz=64			⇑*i*S	Sb	17 16 58.9	-0.6
AAK	**Ala-Archa** 1.7nm,0.6s	**2.41**	**264**	⇑Pg	Pb	17 16 40.6	+0.9
AAK	5.0nm,0.5s			⇓Lg	Lg	17 17 13.5	
KAPS	**Kapalarasan** 1.6nm,0.2s	**2.63**	**26**	Pg	Pb	17 16 43.5	+0.2
KAPS	4.3nm,0.2s			Lg	Lg	17 17 17.8	
KAPS	**Kapalarasan** 1.6nm,0.2s	**2.63**	**26**	*e*P	Pb	17 16 43.5	+0.2
KAPS	4.3nm,0.2s			*e*S	Sb	17 17 17.8	+2.5
ARLS	**Aral** baz=49	**2.75**	**248**	⇓*i*P	Pn	17 16 41.8	+1.7
ARLS	baz=49			⇓*i*S	Sn	17 17 14.0	+1.2
MNAS	**Manas** 0.8nm,0.7s	**3.89**	**265**	⇓Lg	Lg	17 17 59.8	
MAKZ	**Makanchi** 0.7nm,0.9s	**4.91**	**36**	⇓Lg	Lg	17 18 31.2	
MK31	**Makanchi Array**	**5.04**	**38**	⇑Pn	Pn	17 17 12.8	+1.4
MK31	0.2nm,0.5s			⇑Sn	Sn	17 18 10.9	+1.9
MK31	baz=219,slow=29,SNR=3.7			⇓Lg	Lg	17 18 34.4	

RSNC 13 17:33:55.1±1.4**, 4°.70N×74°.62W, h7^{km}**±5^{km}**, ML3.2, Mw3.5, 3D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.33**	**65**	⇓*i*Pg	Pg	17 34 02.0	+0.4
ROSC				*e*S	Sb	17 34 07.9	-1.1
ROSC	comp=Z,2µm,0.4s			*i*		17 34 10.5	
CTAB	**Cerro Tablazo,**	**0.51**	**53**	*e*P	Pg	17 34 05.1	0.0
CTAB				*e*S	Sg	17 34 12.1	+0.2
CTAB	comp=Z,1µm,0.6s			*i*		17 34 14.8	
RREF	**El Recreo**	**0.76**	**285**	⇓*i*P	Pg	17 34 09.3	-0.4
RREF				*e*S	Sg	17 34 19.9	+0.3
RREF	comp=Z,2µm,0.2s			*i*		17 34 22.1	
ANIL	**Santa Ana**	**0.81**	**255**	*e*P	Pg	17 34 09.5	-1.3
ANIL				*e*S	Sg	17 34 21.2	-0.2
ANIL	comp=Z,1µm,0.2s			*i*		17 34 22.3	
CHIC	**Chingaza**	**0.88**	**95**	⇓*i*P	Pg	17 34 10.1	-2.1
CHIC				*e*S	Sg	17 34 22.5	-1.2
CHIC	comp=N,440nm,0.3s			*i*		17 34 28.6	
NORC	**Norcasia**	**0.89**	**344**	*e*P	Pg	17 34 10.5	-1.7
NORC				*e*S	Sg	17 34 22.9	-0.9
NORC	comp=N,3µm,0.2s			*i*		17 34 23.9	
VILC	**Villavicencio,**	**1.09**	**123**	*e*P	Pg	17 34 12.8	-3.3
VILC	comp=N,852nm,0.4s			*i*		17 34 30.8	
SJAC	**San Juan de Ar**	**1.57**	**155**	*e*P	Pn	17 34 22.7	-0.8
PLMC	**San Jos del P**	**1.67**	**277**	*e*P	Pn	17 34 24.6	-0.2
PLMC	comp=N,604nm,0.2s			*i*		17 34 50.3	
HELC	**Santa Helena**	**1.73**	**328**	*e*P	Pn	17 34 24.7	-1.3
HELC				*e*S	Sn	17 34 47.5	-1.1
HELC	comp=N,129nm,0.4s			*i*		17 34 50.4	
PTBC	**PUERTO BERRIO,**	**1.83**	**5**	*e*P	Pn	17 34 24.6	-2.4
PTBC				*e*S	Sn	17 34 49.0	-1.5
PTBC	comp=N,632nm,0.2s			*i*		17 34 50.7	
YOTC	**Yotoco, Valle**	**1.87**	**248**	*e*P	Pn	17 34 25.9	-1.7
YOTC				*e*S	Sn	17 34 50.8	-0.7
YOTC	comp=N,114nm,0.5s			*i*		17 34 54.1	
RUSC	**La Rusia**	**1.93**	**52**	*e*P	Pn	17 34 27.3	-1.5
RUSC				*e*S	Sn	17 34 53.5	0.0
RUSC	comp=N,348nm,0.5s			*i*		17 34 57.0	
BETC	**Betania**	**2.17**	**202**	*e*P	Pn	17 34 30.9	-0.8
BETC				*e*S	Sn	17 34 57.3	-1.6
BETC	comp=Z,23nm,0.3s			*i*		17 35 05.5	
BARC	**Barichara**	**2.36**	**37**	*e*P	Pn	17 34 32.4	-2.1
ZARC	**Zaragoza, Cauc**	**2.78**	**355**	*e*S	Sn	17 35 13.6	-0.4
ZARC	comp=N,109nm,0.3s			*i*		17 35 19.8	
POPC	**Popayan, Colom**	**2.97**	**224**	*e*P	Pn	17 34 42.3	-0.6
POPC	comp=N,20nm,0.4s			*i*		17 35 37.1	
PAMC	**Pamplona, Colo**	**3.24**	**36**	*e*P	Pn	17 34 45.2	-1.6
PAMC	comp=E,78nm,0.2s			*i*		17 35 35.1	

MEX 13 17:40:35.5±1.0**, 17°.66N×101°.36W, h30^{km}, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.11**	**241**	*e*P	Pb	17 40 39.0	-1.9
ZIIG				*e*S	Sb	17 40 43.8	-0.8
ARIG	**Puente Sto Nin**	**1.14**	**57**	*e*P	Pn	17 40 53.3	-2.2
ARIG				*i* S	Sn	17 41 07.3	-2.9
CAIG	**El Cayaco**	**1.21**	**120**	*e*P	Pn	17 40 53.9	-2.5
CAIG				*e*S	Sn	17 41 09.2	-2.6
MEIG	**Mezcala**	**1.68**	**81**	*e*P	Pn	17 41 01.8	-1.1
MEIG				*e*S	Sn	17 41 22.4	-1.1
PLIG	**Platanillo**	**1.91**	**67**	*e*P	Pn	17 41 04.4	-1.8
PLIG				*e*S	Sn	17 41 27.5	-1.8

IDC ***13*** *17:47:55.8±1.9, 19°.37S×172°.69E, h0^{km}, mb3.9/8, mb1 4.2/8, mb1mx3.9/24, mbtmp3.9/8, MS3.3/9, Ms1 3.3/9, ms1mx3.1/25, Error ellipse: s-maj=65.0km s-min=27.7km az=144.0*

ISC 13 17:48:00.9±1.4**, 19°.2S**±0°.3×**172°.8E**±0°.2**, h35^{km}, n19, σ1^{s}.88**/14**, mb3.9**/8**, MS3.3**/7**, 1C, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 60nm,1.4s	**6.59**	**243**	*e*Pn	**Pn**	**17 49 37.7**	**+2.3**
DZM	comp=Z,538nm,25.9s			*e*LR	LR	17 51 09.6	
DZM	**Mont Dzumac** 0.1nm,0.3s,baz=87,slow=14,SNR=3.9	**6.59**	**243**	Pn	**Pn**	**17 49 38.0**	**+2.6**
HNR	**Honiara** comp=Z,145nm,20.4s,baz=136,slow=34	**15.79**	**306**	LR	LR	17 57 01.0	
URZ	**Urewera** comp=Z,37nm,21.0s,baz=0.0,slow=33	**19.34**	**170**	LR	LR	17 58 33.1	
RPZ	**Rata Peaks** comp=Z,81nm,19.2s,baz=348,slow=36	**24.47**	**183**	LR	LR	18 02 29.5	
RAR	**Rarotonga** comp=Z,22nm,21.0s,baz=267,slow=32	**25.81**	**99**	LR	LR	18 01 56.5	
STKA	**Stephens Creek** 1.5nm,0.7s,baz=75,slow=5.9,SNR=3.1	**30.72**	**240**	P	**P**	**17 54 10.6**	**-2.2**
STKA	comp=Z,74nm,19.4s,baz=27,slow=35			LR	LR	18 05 57.9	
PPT2	**Papeete2** comp=Z,142nm,29.0s	**35.70**	**94**	*e*LR	LR	18 04 18.9	
PPT	**Papeete** comp=Z,53nm,18.8s,baz=158,slow=35	**35.70**	**94**	LR	LR	18 08 43.7	
WRA	**Warramunga Arr** 1.0nm,1.0s,baz=94,slow=8.8,SNR=5.6	**36.19**	**262**	P	**P**	**17 54 57.8**	**-2.7**
WRA	comp=Z,44nm,18.5s,baz=290,slow=38			LR	LR	18 10 43.4	
ASAR	**Alice Springs** 2.8nm,0.9s,baz=86,slow=9.2,SNR=29	**36.39**	**256**	P	**P**	**17 55 02.0**	**-0.2**
ASAR	comp=Z,66nm,20.8s,baz=90,slow=35			LR	LR	18 09 02.6	
FITZ	**Fitzroy Crossi** 2.8nm,0.8s,baz=112,slow=6.3,SNR=6.7	**44.58**	**263**	P	**P**	**17 56 09.4**	**-0.5**
MJAR	**Matsushiro Arr** 2.4nm,1.0s,baz=183,slow=8.5,SNR=4.3	**64.37**	**330**	P	**P**	**17 58 34.2**	**+0.8**
CMAR	**Chiang Mai Arr** 1.4nm,1.0s,baz=115,slow=3.6,SNR=9.6	**81.58**	**293**	P	**P**	**18 00 17.3**	**+1.7**
SONM	**Songino Array** 0.4nm,0.9s,baz=126,slow=5.9,SNR=2.9	**89.25**	**322**	P	**P**	**18 00 53.0**	**-0.4**
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=254,slow=5.3,SNR=1.8	**93.82**	**60**	P	**P**	**18 01 17.0**	**+2.0**
TXAR	comp=Z,28nm,21.3s,baz=0.0,slow=30			LR	LR	18 34 36.3	
CLL	**Collm** comp=Z,12nm,1.1s	**144.23**	**338**	⇑*i*PKPbc	**PKPab**	**18 07 30.2**	**-0.6**
CLL				*i* PKPab	**PKiKP**	**18 07 34.4**	**-2.2**
BRG	**Berggiesshubel** comp=Z,16nm,1.3s	**144.25**	**337**	*i* PKP	**PKPab**	**18 07 30.3**	**-0.6**
GERES	**GERESS Array B** comp=Z,1.7nm,0.9s,baz=40,slow=1.7,SNR=7.4	**145.97**	**335**	PKPbc	**PKPdf**	**18 07 35.3**	**-0.9**

GUC ***13*** *17:51:15.4±0.5, 32°.54S×70°.71W, h78^{km}±10^{km}, ML3.3*

SJA ***13*** *17:51:15.8±0.9, 32°.52S×70°.66W, h63^{km}±19^{km}, ML3.4, MW3.6*

ISCJB ***13*** *17:51:17.2±0.7, 32°.41S±0°.04×70°.61W±0°.06, h25^{km}±10^{km}, Error ellipse: s-maj=9.4km s-min=5.7km az=161.0*

ISC 13 17:51:17.2±1.1**, 32°.42S**±0°.04×**70°.71W**±0°.07**, h33^{km}**±15^{km}**, n20, σ1^{s}.39**/24**, 3C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.61**	**205**	⇓*i*P	**Pb**	**17 51 29.3**	**-0.5**
ROCH				*i* S	**Sb**	**17 51 39.9**	**+1.5**
ROCH	comp=E,1µm,0.4s			IAML		17 51 42.6	
ROC1	**El Roble**	**0.62**	**205**	*e*P	**Pb**	**17 51 29.4**	**-0.4**
ROC1				*e*S	**Sb**	**17 51 40.1**	**+1.7**
PEL	**Peldehue**	**0.73**	**179**	*e*P	Pb	17 51 29.9	-1.6
PEL				*e*S	**Sb**	**17 51 40.5**	**-0.8**
PEL	**Peldehue**	**0.73**	**179**	⇑*i*P	Pb	17 51 30.1	-1.4
PEL				*i* S	**Sb**	**17 51 40.7**	**-0.6**
FCH	**Farellones**	**0.97**	**159**	⇑*i*P	Pb	17 51 33.4	-2.5
FCH				*i* S	**Sb**	**17 51 46.9**	**-1.6**
FCH	comp=E,3µm,0.2s			IAML		17 51 47.7	
CLCH	**Cerro Calan**	**0.99**	**172**	*e*P	**Pn**	**17 51 34.5**	**-0.4**
CLCH				*i* S	**Sb**	**17 51 48.8**	**+0.1**
CLCH	comp=E,1µm,0.6s			IAML		17 51 52.8	
CMCH	**Combarbala**	**1.26**	**348**	⇓*i*P	Pn	17 51 36.7	-2.0
CMCH				*e*S	**Sn**	**17 51 51.8**	**-2.9**
RTLS	**Leoncito** comp=Z,452nm,0.2s	**1.34**	**63**	IAML		17 51 52.2	
LMEL	**Las Melosas**	**1.49**	**164**	*e*P	**Pn**	**17 51 42.6**	**+0.8**
LMEL				*i* S	**Sb**	**17 52 03.1**	**+0.1**
LMEL	comp=N,721nm,0.1s			IAML		17 52 06.3	
ARCO	**CERRO ARCO**	**1.56**	**106**	*e*P	Pn	17 51 41.8	-1.0
ARCO				*e*S	**Sn**	**17 52 01.5**	**-0.4**
ARCO	comp=Z,656nm,0.3s			IAML		17 52 04.0	
ASAL	**Salagasta**	**1.59**	**97**	*e*P	Pn	17 51 42.1	-1.1
ASAL				*e*S	**Sn**	**17 52 02.4**	**-0.3**
AAGR	**Agrelo**	**1.72**	**113**	*e*S	**Sn**	**17 52 05.3**	**-0.5**
RTCV	**Cerro Valdivia**	**1.92**	**74**	*e*P	**Pn**	**17 51 48.0**	**+0.4**
RTLL	**Cerro Villicun**	**2.19**	**61**	*e*P	**Pn**	**17 51 52.7**	**+1.4**
RTLL	**Cerro Villicun**	**2.19**	**61**	*i* S	**Sn**	**17 52 17.4**	**+0.1**
GO04	**Tololo Observa**	**2.24**	**358**	*e*S	**Sb**	**17 52 22.2**	**-2.3**
GO04	**Tololo Observa**	**2.24**	**358**	⇑*i*P	**Pn**	**17 51 52.4**	**+0.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04				*e*S	Sn	17 52 21.0	+2.1
CFA	Coronel Fontan	2.25	70	*e*P	Pn	17 51 53.0	+0.8
ACCO	Cerro Coronel	2.30	38	*e*P	Pn	17 51 54.7	+1.6
AROD	Rodeo	2.48	26	*e*P	Pn	17 51 57.8	+2.2

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*DDA **13** 18:03:56.2, 38°.11N×41°.43E, h6^{km}±2^{km}, ML2.6*
*ISK **13** 18:03:56.9, 38°.08N×41°.32E, h6^{km}, ML2.2/7*
ISC 13 18:03:56.5±1.1**, 38°.03N**±0°.03×**41°.35E**±0°.03**, h5**^{km}±9^{km}**,**
n16, σ0ˢ.97/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTMN	Batman	0.15	204	*i* P	Pg	18 03 58.4	-1.1
BTMN				*i* S	Sg	18 04 02.5	+1.0
BTMN				IAML_P			
	comp=Z,5μm,0.4s						
SVAN	Silvan-Diyarba	0.17	316	PG	Pg	18 03 59.8	-0.1
SVAN				SG	Sg	18 04 02.7	+0.5
SVAN	Silvan-Diyarba	0.17	316	*i* P	Pg	18 04 00.1	+0.2
SVAN				*i* S	Sg	18 04 03.6	+1.5
SRTM	Siirt_Merkez	0.46	94	*i* P	Pg	18 04 05.1	-0.2
GURO	Guroymak-BITLI	0.75	46	PG	Pb	18 04 10.9	-1.3
GURO				SG	Sb	18 04 22.2	-0.6
HANI	Diyarbakir_Han	0.84	298	*i* P	Pb	18 04 13.4	-0.3
HANI				*i* S	Sn	18 04 26.5	-1.5
MARD	Mardin	0.84	212	*i* P	Pg	18 04 12.6	-0.1
MARD				*i* S	Sn	18 04 28.7	+0.6
MARD				IAML_P			
	comp=Z,2μm,0.4s						
DIYA	Diyarbakir	0.97	264	*i* P	Pn	18 04 17.0	0.0
DIYA				*i* S	Sn	18 04 32.5	+1.3
DIYA				IAML_P			
	comp=Z,1μm,0.3s						
SIRN	Sırnak	1.00	122	*i* P	Pg	18 04 15.5	-0.2
SIRN				*i* S	Sb	18 04 29.9	0.0
SIRN				IAML_P			
	comp=Z,822nm,0.2s						
SIRT	Sirnak	1.01	121	PG	Pn	18 04 17.2	-0.3
SIRT				SG	Sn	18 04 33.0	+0.8
BNGB	Bingl	1.09	332	PG	Pb	18 04 17.5	-0.6
AKDM	Akdamar-Van	1.32	76	PN	Pb	18 04 22.6	+0.7
GEVA	Gevas	1.38	78	*i* P	Pb	18 04 22.3	-0.6
GEVA				*i* S	Sn	18 04 43.7	+2.3
GEVA				IAML_P			
	comp=Z,305nm,0.3s						
PTK	Pertek	1.76	300	PN	Pn	18 04 27.9	0.0
CUKT	Cukurca	1.96	113	PN	Pb	18 04 32.1	-0.6
AGRB	Hanur-Agry	2.01	39	PN	Pb	18 04 32.2	-1.5

MEX 13 18:04:39.9±0.9**, 18°.31N×100°.18W, h46**^{km}±6^{km}**, MD3.7,**
Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.17	260	*e*P	Pn	18 04 45.7	-2.0
ARIG				*i* S	Sn	18 04 51.6	-1.6
PLIG	Platanillo	0.65	82	*e*P	Pn	18 04 50.9	-2.0
PLIG				*e*S	Sn	18 05 00.6	-1.7
MEIG	Mezcala	0.65	126	*e*P	Pn	18 04 50.9	-2.1
MEIG				*i* S	Sn	18 05 00.5	-1.9
YAIG	Yautepec	1.19	62	*e*P	Pn	18 04 58.5	-1.8
YAIG				*i* S	Sn	18 05 13.7	-1.7
CAIG	El Cayaco	1.26	184	*e*P	Pn	18 04 58.7	-2.4
CAIG				*e*S	Sn	18 05 14.7	-2.1
ZIIG	Zihuatanejo	1.41	241	*e*P	Pn	18 05 02.2	-1.0

TRN 13 18:17:44.3, 10°.42N×62°.00W, h9^{km}**, MD3.7, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.55	100	*e*P	Pb	18 17 55.6	-0.5
TPP				*e*S	Sb	18 18 03.5	-0.7
TRN	Trinidad (W)	0.63	69	*e*P	Pg	18 17 56.2	-0.4
TRN				*e*S	Sb	18 18 05.8	-0.6
TBH	Brigand Hill	0.92	86	*e*P	Pg	18 18 01.6	-0.5
TBH				*e*S	Sn	18 18 16.0	-0.8
TOSP	Speyside	1.69	59	*e*P	Pn	18 18 14.0	+0.1
TOSP				*e*S	Sn	18 18 35.8	+0.1
GRGR	Grenville	1.74	11	*e*P	Pn	18 18 14.6	-0.1
GRGR				*e*S	Sn	18 18 37.4	+0.5
GRHS	Sauteurs	1.83	11	*e*P	Pb	18 18 17.0	-1.0
GRSS	Sisters	1.91	12	*e*P	Pn	18 18 17.6	+0.6
FCV	Fort Charlotte	2.82	15	*e*P	Pn	18 18 29.8	+0.2
FCV				*e*S	Sn	18 19 04.3	+0.6
SVB	Belmont	2.93	14	*e*P	Pn	18 18 32.1	+1.0
SVB				*e*S	Sn	18 19 06.3	-0.2
SVCV	St. Vincent, C	2.96	16	*e*P	Pn	18 18 32.4	+0.9
SVV	Soufriere Volc	2.98	15	*e*P	Pn	18 18 32.8	+1.0
SVV				*e*S	Sn	18 19 07.5	-0.3
SSV	Crater Summit	3.00	15	*e*P	Pn	18 18 32.9	+0.8
SSV				*e*S	Sn	18 19 08.0	-0.2
MCLT	Moule a Chique	3.43	17	*e*P	Pn	18 18 38.5	+0.5
MCLT				*e*S	Sn	18 19 18.4	-0.4
SLDE	Delcer	3.49	15	*e*P	Pn	18 18 39.6	+0.8
SLDE				*e*S	Sn	18 19 19.9	-0.3
SLB	Belfond	3.52	15	*e*P	Pn	18 18 40.3	+1.1
SLB				*e*S	Sn	18 19 20.8	-0.2
SLPA	Patience	3.58	17	*e*S	Sn	18 19 21.4	-0.9
SLW	Petit Monier	3.73	16	*e*P	Pn	18 18 43.6	+1.5
SLW				*e*S	Sn	18 19 26.5	+0.3
FDF	Fort de France	4.37	11	*e*P	Pn	18 18 51.3	+0.4
FDF	Fort de France	4.37	11	*e*S	Sn	18 19 40.4	-1.6
PML	Morne Lenard	4.41	10	*e*P	Pn	18 18 52.1	+0.7
PCM	Pelee Case Pet	4.44	10	*e*P	Pn	18 18 52.6	+0.7
BAMF	Morne Balai	4.45	11	*e*P	Pn	18 18 50.4	-1.7
DSHT	Scott's Head	4.81	7	*e*P	Pn	18 18 58.0	+1.1
DSTT	Stowe	4.85	8	*e*P	Pn	18 18 58.0	+0.5
DBCT	Belle View Cho	4.87	7	*e*P	Pn	18 18 57.8	0.0
MDN	Morne-Daniel	4.91	7	*e*P	Pn	18 18 59.0	+0.7
DLPL	La Plaine	4.94	8	*e*P	Pn	18 18 58.8	+0.1
DLPL	La Plaine	4.94	8	*e*S	Sn	18 19 54.6	-1.5
ANWB	Willy Bob	7.21	2	*e*P	Pn	18 19 31.7	+1.8
ANWB	Willy Bob	7.21	2	*e*S	Sn	18 20 49.1	-2.9

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*IDC **13** 18:17:49.1±0.8, 10°.78S×164°.35E, h0^{km}, mb4.0/14, mb1 4.2/15, mb1mx4.1/33, mbtmp4.0/15, ML4.0/1, MS3.5/6, Ms1 3.4/6, ms1mx3.1/45, Error ellipse: s-maj=28.0km s-min=16.8km az=127.0*
*NEIC **13** 18:17:50.5±0.5, 10°.81S×164°.49E, h10^{km}, mb4.6/4, Error ellipse: s-maj=11.7km s-min=10.0km az=146.0*
*ISCJB **13** 18:17:51.7±0.4, 10°.89S±0°.05×164°.45E±0°.06, h29^{km}, mb4.1/16, MS3.4/4, Error ellipse: s-maj=9.2km s-min=7.4km az=157.8*
ISC 13 18:17:53.6±0.7**, 10°.82S**±0°.08×**164°.47E**±0°.09**, h29**^{km}**, n39,**
σ1ˢ.24/32**, mb4.1**/16**, MS3.3**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.67	287	*e*P	Pn	18 19 03.0	+0.8
HNR				*e*S	Sb	18 20 59.0	+48
HNR	Honiara	4.67	287	Pn	Pn	18 19 02.9	+0.8
	79nm,0.3s,baz=156,slow=5.5,SNR=45						
HNR				Sn	Sn	18 19 57.3	+2.0
	22nm,0.3s,baz=179,slow=17,SNR=2.4						
HNR				LR	LR	18 20 57.0	
	comp=Z,1μm,18.2s,baz=130,slow=41						
DZM	Mont Dzumac	11.35	171	*e*Pn	Pn	18 20 34.7	+0.8
	16nm,0.7s						
DZM				*e*LR	LR	18 22 59.0	
	comp=Z,174nm,23.6s						
DZM	Mont Dzumac	11.35	171	Pn	Pn	18 20 34.9	+1.0
	1.1nm,0.3s,baz=35,slow=7.5,SNR=22						
DZM				Sn	Sn	18 22 40.8	+0.9
	0.3nm,0.3s,baz=274,slow=19,SNR=2.6						
DZM				LR	LR	18 24 32.4	
	comp=Z,188nm,18.4s,baz=26,slow=35						
CTA	Charters Tower	19.82	240	P	Pn	18 22 23.0	-0.8
	0.5nm,0.3s,baz=76,slow=12,SNR=5.9						
CTAO	Charters Tower	19.82	240	*e*P	Pn	18 22 23.5	-0.3
	21nm,0.6s						
H11S2	WAKE ISLAND Hy	29.21	4	T	T	18 54 25.8	
	baz=184,slow=76,SNR=6.0						
H11S3	WAKE ISLAND Hy	29.21	4	T	T	18 54 19.7	
	baz=184,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	29.22	4	T	T	18 54 23.1	
	baz=184,slow=76,SNR=5.1						
STKA	Stephens Creek	29.76	222	P	P	18 23 59.0	+1.2
	1.9nm,0.6s,baz=51,slow=11,SNR=3.5						
STKA				LR	LR	18 36 05.2	
	comp=Z,49nm,18.1s,baz=28,slow=37						
WB2	Warramunga Arr	30.38	249	*e*P	P	18 24 01.4	-2.0
WR1	Warramunga Arr	30.39	249	*e*P	P	18 24 01.9	-1.7
	7.9nm,1.1s						
WRA	Warramunga Arr	30.39	249	P	P	18 24 01.9	-1.7
	2.6nm,0.9s,baz=78,slow=9.2,SNR=13						
H11N1	WAKE ISLAND Hy	30.43	4	T	T	18 56 02.0	
	baz=184,slow=76,SNR=7.0						
H11N3	WAKE ISLAND Hy	30.44	5	T	T	18 55 53.0	
	baz=184,slow=76,SNR=5.5						
H11N2	WAKE ISLAND Hy	30.45	5	T	T	18 56 05.8	
	baz=184,slow=76,SNR=4.3						
ASAR	Alice Springs	31.79	242	P	P	18 24 13.8	-2.0
	1.0nm,0.8s,baz=64,slow=10,SNR=30						
ASAR				LR	LR	18 36 42.7	
	comp=Z,86nm,18.1s,baz=82,slow=36						
BBOO	Buckleboo	34.08	226	*e*P	P	18 24 35.6	-0.1
	20nm,1.4s						
FITZ	Fitzroy Crossi	38.23	255	*e*P	P	18 25 09.6	-1.8
	27nm,1.8s						
FITZ	Fitzroy Crossi	38.23	255	P	P	18 25 09.5	-1.8
	3.4nm,0.6s,baz=74,slow=7.9,SNR=22						
PPT2	Papeete2	44.96	104	*e*LR	LR	18 38 40.1	
	comp=Z,36nm,21.0s						
NWAO	Narrogin (SRO)	48.56	235	P	P	18 26 32.3	-2.3
	4.1nm,0.7s,baz=52,slow=19,SNR=3.0						
JHJ	Hachijo jima 2	49.63	333	LR	LR	18 50 47.4	
	comp=Z,20nm,18.7s,baz=86,slow=40						
PETK	Petropavlovsk-	63.94	355	P	P	18 28 23.4	-0.3
	1.0nm,0.8s,baz=111,slow=7.9,SNR=2.2						
PEA1	Petropavlovsk-	63.94	355	*e*P	P	18 28 23.4	-0.4
CMAR	Chiang Mai Arr	70.88	294	P	P	18 29 08.8	+0.3
	0.4nm,0.5s,baz=121,slow=4.6,SNR=4.4						
SONA0	Songino Array	77.75	324	*e*P	P	18 29 49.1	+1.1
SONM	Songino Array	77.75	324	P	P	18 29 49.1	+1.1
	0.6nm,0.7s,baz=148,slow=5.9,SNR=5.5						
QSPA	South Pole Qui	79.18	180	P	P	18 29 56.9	+1.1
	0.7nm,0.3s,baz=329,slow=5.4,SNR=4.3						
IM3	Indian Mountai	82.55	16	*e*P	P	18 30 14.5	+1.1
IL1	Eielson Array	83.70	19	*e*P	P	18 30 18.1	-1.2
ILAR	Eielson Array	83.70	19	P	P	18 30 18.7	-0.7
	1.5nm,0.9s,baz=227,slow=4.7,SNR=10.0						
NVAR	Mina Array Bea	86.83	50	P	P	18 30 36.3	+0.4
	0.1nm,0.3s,baz=291,slow=5.7,SNR=2.5						
MK32	Makanchi Array	92.50	317	*e*P	P	18 31 01.9	-0.2
MKAR	Makanchi Array	92.50	317	P	P	18 31 01.9	-0.2
	1.0nm,0.8s,baz=88,slow=6.4,SNR=9.1						
ZALV	Zalesovo Beam	92.64	324	P	P	18 31 03.0	+0.4
	0.4nm,0.3s,baz=130,slow=8.3,SNR=2.8						
ZAA1	Zalesovo Array	92.64	324	*e*P	P	18 31 03.0	+0.4
PDAR	Pinedale Array	94.32	47	P	P	18 31 09.6	-1.2
	0.2nm,0.7s,baz=267,slow=11,SNR=2.7						
AAK	Ala-Archa	97.22	312	LR	LR	19 14 59.5	
	comp=Z,27nm,21.9s,baz=239,slow=35						

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*ISCJB **13** 18:25:20.4±0.6, 22°.70N±0°.04×122°.84E±0°.03, h100^{km}, Error ellipse: s-maj=5.4km s-min=3.5km az=167.0*
*JMA **13** 18:25:21.7±0.4, 22°.72N×122°.79E, h46^{km}*
*TAP **13** 18:25:23.7, 22°.70N×122°.62E, h87^{km}±1^{km}, ML2.8, D*
ISC 13 18:25:19.2±1.6**, 22°.58N**±0°.08×**122°.85E**±0°.04**, h100**^{km}**, n44,**
σ1ˢ.70/64**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	Ruisui	1.60	305	*e*P	Pn	18 25 46.3	-0.4
	baz=306						
TWF1	Yuli	1.63	299	*e*P	Pn	18 25 46.8	-0.3
	baz=303						
YULB	Yu-li	1.65	300	*e*P	Pn	18 25 47.4	+0.1
	baz=303						
TWGBT	Beinan	1.65	279	*e*P	Pn	18 25 48.3	+0.9
	baz=275						
TWGBT				*e*S	Sn	18 26 06.9	-1.9
	baz=275						
TWG	Pinlang	1.66	279	*e*P	Pn	18 25 48.3	+0.9
	baz=275						
TWG				*e*S	Sn	18 26 07.1	-1.8
	baz=275						
EHY	Hungye	1.69	304	*e*P	Pn	18 25 47.3	-0.5
	baz=304						
EHY				*e*S	Sn	18 26 06.5	-3.0
	baz=304						
EGFH	Guangfu	1.70	310	*e*S	Sn	18 26 07.3	-2.6
	baz=312						
HATJ	Hateruma jima	1.72	31	*e*S	Sn	18 26 08.0	-2.2
ECL	Taimali	1.75	271	*e*S	Sn	18 26 09.5	-1.6
	baz=266						
EAST	Anshuo	1.86	264	*e*P	Pn	18 25 52.1	+2.1
	baz=259						
IRIF	Iriomote-Funau	1.93	25	P	Pn	18 25 51.5	+0.6
IRIF				*e*S	Sn	18 26 13.4	-1.6
VWDT	VWDT	1.96	307	*e*P	Pn	18 25 52.2	+0.9
	baz=308						
NACB	Ninganchiao	1.96	324	*e*P	Pn	18 25 51.3	0.0
	baz=331						
NACB				*e*S	Sn	18 26 12.4	-3.5
	baz=331						
JKRS	Kuro-shima	1.97	33	P	Pn	18 25 52.8	+1.4
JKRS				*e*S	Sn	18 26 14.2	-1.7
MASBT	Mashibuluo	2.05	271	*e*P	Pn	18 25 54.3	+1.9
	baz=269						
ETLH	Xiulin Townshi	2.05	323	*e*S	Sn	18 26 15.2	-2.8
	baz=329						
OWD	Renai	2.06	312	*e*P	Pn	18 25 53.5	+0.8
	baz=313						
NANB	Nanao	2.10	332	*e*P	Pn	18 25 54.2	+1.1
	baz=330						
NANB				*e*S	Sn	18 26 17.2	-1.9
	baz=330						
ENA	Nanau	2.11	331	P	Pn	18 25 54.8	+1.6
	baz=330						
ENA				*e*S	Sn	18 26 17.6	-1.5
	baz=330						
SSLB	Suanglung	2.12	305	*e*P	Pn	18 25 54.7	+1.3
	baz=309						
CHGB	Renai	2.13	314	*e*P	Pn	18 25 54.4	+0.6
	baz=316						
CHGB				*e*S	Sn	18 26 18.6	-1.6
	baz=316						
WHF	Hehuan Shan	2.14	317	*e*P	Pn	18 25 54.4	+0.4
	baz=325						
WHF				*e*S	Sn	18 26 17.8	-2.7
	baz=325						
JIJ	Ishigaki jima	2.14	33	*e*S	Sn	18 26 17.7	-2.2
WHYT	Xinyi Township	2.15	302	*e*P	Pn	18 25 56.2	+2.4
	baz=303						
TWC	Suao	2.22	336	*e*S	Sn	18 26 20.6	-1.2
	baz=346						
NNSB	Datong	2.28	324	*e*P	Pn	18 25 56.3	+0.7
	baz=326						
NNSB				*e*S	Sn	18 26 21.7	-1.7
	baz=326						
NNS	Nan Shan	2.30	324	*e*S	Sn	18 26 22.1	-1.7
	baz=327						
NDT	Datong Townshi	2.36	329	*e*P	Pn	18 25 59.1	+2.6
	baz=332						
NDT				*e*S	Sn	18 26 23.4	-1.8
	baz=332						
ENTT	Nioudou	2.37	330	*e*S	Sn	18 26 24.7	-0.6
	baz=330						
TWE	Neicheng	2.40	333	*e*P	Pn	18 25 59.9	+2.9
	baz=337						
TWE				*e*S	Sn	18 26 24.7	-1.1
	baz=337						
JISG	Ishigakijimahi	2.41	34	P	Pn	18 25 57.6	+0.5
JISG				*e*S	Sn	18 26 24.3	-1.9
WHP	Taichung City	2.44	314	*e*P	Pn	18 26 00.2	+2.6
	baz=319						
YHNB	Yeheng	2.48	327	*e*P	Pn	18 25 59.8	+1.5
	baz=330						
YHNB				*e*S	Sn	18 26 26.7	-1.4
	baz=330						
NSK	Sanguang	2.50	327	*e*P	Pn	18 26 00.2	+1.8
	baz=329						
NSK				*e*S	Sn	18 26 26.4	-2.1
	baz=329						
NWLT	Wulai	2.52	331	*e*S	Sn	18 26 28.0	-0.8
	baz=326						
TIPB	Shuangxi	2.56	339	*e*P	Pn	18 26 00.5	+1.3
	baz=347						
TIPB				*e*S	Sn	18 26 29.4	-0.5
	baz=347						
TWQ1	Liyutan	2.60	313	*e*S	Sn	18 26 32.3	+1.6
	baz=325						
NSTT	Nanjuang	2.66	321	*e*P	Pn	18 26 03.2	+2.8
	baz=327						
NSTT				*e*S	Sn	18 26 32.6	+0.5
	baz=327						
LIOB	Emei	2.66	321	*e*P	Pn	18 26 03.2	+2.7
	baz=328						
LIOB				*e*S	Sn	18 26 32.2	0.0
	baz=328						
TWA	Mucha	2.66	334	*e*S	Sn	18 26 32.2	+0.1
	baz=337						
JTJ	Tarama	2.67	39	P	Pn	18 26 02.0	+1.5
JTJ				*e*S	Sn	18 26 31.7	-0.6
NHDH	Xindian Distri	2.67	333	*e*S	Sn	18 26 32.5	+0.1
	baz=330						
TATO	Taipei	2.69	333	*e*S	Sn	18 26 33.4	+0.4
	baz=335						
JIRB	Irabujima	3.09	43	*e*S	Sn	18 26 41.8	-0.6

TAP 13 18:25:47.0, 23°.15N×120°.96E, h7^{km}**, ML1.0, 1C, B,**
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau	0.06	55⇑	*i*P	Pg	18 25 49.3	+0.5
	baz=60						
ELDTW				*i* S	Sg	18 25 50.5	+0.4
	baz=60						
STYT	Tauyuan	0.19	273	*i* P	Pg	18 25 51.3	+0.5
	baz=273						
STYT				*i* S	Sg	18 25 53.9	+0.5
	baz=273						
SLGT	Liugui	0.33	241	*e*P	Pg	18 25 54.2	+0.7
	baz=280						
SLGT	Liugui	0.33	241	*e*P	Pg	18 25 54.2	+0.8
	baz=233						
WTP	Ta-pu	0.33	286	*e*P	Pb	18 25 54.6	-0.7
	baz=282						
WTP				*e*S	Sb	18 25 60.0	-1.0
	baz=282						
TPUB	Ta-pu	0.34	296	*e*S	Sb	18 25 59.8	-1.3
	baz=305						
SGST	Jiashian	0.35	259	*e*P	Pb	18 25 54.9	-0.7
	baz=284						
SGST	Jiashian	0.35	259	*e*P	Pb	18 25 55.1	-0.6
	baz=259						
SGST				*e*S	Sb	18 26 00.6	-1.0
	baz=259						
CHN4	Tsaushan	0.39	300	*e*P	Pb	18 25 55.8	-0.5
	baz=295						
CHN4	Tsaushan	0.39	300	*e*P	Pb	18 25 56.0	-0.3
	baz=308						
CHN4				*e*S	Sb	18 26 01.9	-0.7
	baz=308						
TWK	Hsinying	0.45	285	*e*P	Pb	18 25 57.5	+0.1
	baz=285						
CHN5	Tsauling	0.51	330	*e*P	Pb	18 25 58.3	-0.2
	baz=297						
CHN5	Tsauling	0.51	330	*e*P	Pb	18 25 58.2	-0.2
	baz=329						

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*ISCJB **13** 18:34:30.3±0.3, 23°.93N±0°.01×122°.16E±0°.02, h23^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=2.1km az=42.5*
*JMA **13** 18:34:30.3, 23°.90N×122°.10E, h36^{km}±3^{km}, M2.7*
*TAP **13** 18:34:31.2, 23°.95N×122°.10E, h41^{km}, ML2.8, C*
ISC 13 18:34:30.5±1.0**, 23°.91N**±0°.02×**122°.12E**±0°.02**, h30**^{km}±10^{km}**,**
n95, σ0ˢ.71/165**, 5C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.48	279	P	Pn	18 34 41.3	0.0
	baz=267						
HWA				*e*S	Sn	18 34 49.5	+0.8
	baz=267						
TWD	Chiawan	0.51	290	P	Pb	18 34 41.1	0.0
	baz=286						
TWD				*e*S	Sb	18 34 48.7	+0.3
	baz=286						
NACB	Ninganchiao	0.55	299	P	Pb	18 34 41.6	-0.2
	baz=296						
NACB				S	Sb	18 34 49.5	+0.1
	baz=296						
NANB	Nanao	0.62	327	P	Pb	18 34 42.9	0.0
	baz=315						
NANB				S	Sn	18 34 52.0	-0.2
	baz=315						
ENA	Nanau	0.63	326	P	Pb	18 34 43.0	0.0
	baz=315						
ENA				S	Sn	18 34 52.0	-0.4
	baz=315						
ESL	Shilin	0.64	262	P	Pb	18 34 42.8	-0.4
	baz=250						
ESL				*e*S	Sb	18 34 52.1	+0.3
	baz=250						
EOS1	EOS1	0.64	1	*e*P	Pn	18 34 43.6	+0.1
	baz=3.0						
EOS1				*e*S	Sn	18 34 52.8	+0.1
	baz=3.0						
ETLH	Xiulin Townshi	0.66	297	P	Pb	18 34 43.2	-0.4
	baz=294						
ETLH				*e*S	Sb	18 34 52.5	0.0
	baz=294						
EGFH	Guangfu	0.68	250	P	Pb	18 34 43.9	0.0
	baz=245						
EGFH				*e*S	Sn	18 34 53.9	+0.3
	baz=245						
TWC	Suao	0.74	341	P	Pn	18 34 45.2	+0.2
	baz=351						
TWC				*e*S	Sn	18 34 55.0	-0.3
	baz=351						
HGSD	Ruisui	0.76	237	*e*P	Pb	18 34 45.0	-0.2
	baz=227						
HGSD				*e*S	Sb	18 34 56.1	+0.8
	baz=227						
WHF	Hehuan Shan	0.82	287	P	Pb	18 34 46.0	-0.5
	baz=276						
WHF				*e*S	Sb	18 34 56.7	-0.7
	baz=276						
EHY	Hungye	0.83	242	*e*P	Pb	18 34 45.9	-0.5
	baz=250						
EHY				*e*S	Sb	18 34 57.3	0.0
	baz=250						
NNSB	Datong	0.85	308	*e*P	Pb	18 34 46.0	-0.8
	baz=306						
NNSB				*e*S	Sb	18 34 57.5	-0.5
	baz=306						
NNS	Nan Shan	0.87	308	P	Pb	18 34 46.5	-0.6
	baz=307						
NNS				*e*S	Sb	18 34 57.7	-0.7
	baz=307						
OWD	Renai	0.87	273	P	Pn	18 34 46.6	-0.2
	baz=270						
OWD				*e*S	Sb	18 34 57.5	-0.9
	baz=270						
CHGB	Renai	0.88	280	*e*P	Pn	18 34 47.0	-0.1
	baz=277						
CHGB				*e*S	Sb	18 34 59.2	+0.3
	baz=277						
NDT	Datong Townshi	0.89	322	*e*P	Pn	18 34 46.9	-0.1
	baz=321						
NDT				*e*S	Sb	18 34 58.3	-0.7
	baz=321						
ENTT	Nioudou	0.89	325	P	Pb	18 34 47.4	0.0
	baz=325						
ENTT				*e*S	Sb	18 34 58.3	-0.6
	baz=325						
VWDT	VWDT	0.91	261	P	Pn	18 34 47.7	+0.4
	baz=248						
VWDT				*e*S	Sb	18 34 59.4	-0.1
	baz=248						
YULB	Yu-li	0.91	236	*e*P	Pn	18 34 47.2	-0.1
	baz=245						
YULB				*e*S	Sb	18 34 59.4	-0.1
	baz=245						
TWE	Neicheng	0.91	333	P	Pn	18 34 47.4	+0.1
	baz=334						
TWE				*e*S	Sb	18 34 59.3	-0.3
	baz=334						
JYNG	Yonagunijimaku	0.93	54	P	Pb	18 34 47.7	-0.4
JYNG				*e*S	Sn	18 35 00.3	+0.5
TWF1	Yuli	0.93	234	P	Pn	18 34 47.8	+0.2
	baz=244						
TWF1				*e*S	Sb	18 34 59.9	-0.4
	baz=244						
TDCB	Techi	0.94	292	*e*P	Pn	18 34 48.0	+0.1
	baz=282						
TDCB				*e*S	Sb	18 34 59.4	-1.3

	baz=282						
NTC	**Toucheng**	**0.98**	**344**	*e*S	**Sn**	**18 35 01.2**	**+0.1**
	baz=357						
YOJ	**Yonaguni jima**	**0.98**	**56**	*e*P	**Pb**	**18 34 48.5**	**-0.5**
	baz=58						
YOJ				*e*S	**Sn**	**18 35 02.7**	**+1.5**
	baz=58						
YOJ	**Yonaguni jima**	**0.98**	**56**	P	**Pn**	**18 34 48.3**	**0.0**
YHNB	**Yeheng**	**1.02**	**318**	P	**Pn**	**18 34 49.0**	**+0.1**
	baz=307						
YHNB				*e*S	**Sn**	**18 35 01.2**	**-1.0**
	baz=307						
NWLT	**Wulai**	**1.03**	**327**	*e*P	**Pb**	**18 34 50.0**	**+0.2**
	baz=327						
NWLT				*e*S	**Sn**	**18 35 01.7**	**-0.8**
	baz=327						
NSK	**Sanguang**	**1.04**	**318**	P	**Pn**	**18 34 49.2**	**+0.2**
	baz=307						
NSK				*e*S	**Sn**	**18 35 01.7**	**-0.9**
	baz=307						
CHKT	**Chengkung**	**1.06**	**221**	*e*P	**Pn**	**18 34 48.8**	**-0.5**
	baz=210						
CHKT				*e*S	**Sn**	**18 35 00.9**	**-2.2**
	baz=210						
SSLB	**Suanglung**	**1.07**	**264**	*e*P	**Pn**	**18 34 49.6**	**+0.1**
	baz=261						
TIPB	**Shuangxi**	**1.10**	**346**	P	**Pn**	**18 34 50.2**	**+0.3**
	baz=357						
TIPB				*e*S	**Sn**	**18 35 03.5**	**-0.6**
	baz=357						
SMLT	**Sun Moon Lake**	**1.12**	**269**	P	**Pn**	**18 34 50.8**	**+0.6**
	baz=257						
WHP	**Taichung City**	**1.14**	**289**	*e*P	**Pn**	**18 34 51.1**	**+0.7**
	baz=281						
WHP				*e*S	**Sn**	**18 35 05.7**	**+0.7**
	baz=281						
TYC	**Yuchr**	**1.16**	**270**	*e*P	**Pn**	**18 34 51.1**	**+0.5**
	baz=267						
TWA	**Mucha**	**1.18**	**336**	*e*S	**Sn**	**18 35 05.8**	**-0.2**
	baz=336						
WHYT	**Xinyi Township**	**1.18**	**260**	*e*P	**Pn**	**18 34 51.9**	**+0.9**
	baz=257						
NHDH	**Xindian Distri**	**1.19**	**333**	*e*P	**Pb**	**18 34 51.9**	**-0.4**
	baz=321						
NHDH				*e*S	**Sn**	**18 35 06.4**	**+0.3**
	baz=321						
TATO	**Taipei**	**1.21**	**332**	*e*S	**Sn**	**18 35 06.6**	**-0.2**
	baz=321						
WLTB	**Daxi**	**1.23**	**320**	*e*P	**Pb**	**18 34 53.0**	**-0.1**
	baz=311						
WLTB				*e*S	**Sb**	**18 35 08.9**	**+0.2**
	baz=311						
ELDTW	**Lidau**	**1.24**	**235**	*i* P	**Pn**	**18 34 51.8**	**-0.1**
	baz=223						
ELDTW				*i* S	**Sn**	**18 35 07.0**	**-0.7**
	baz=223						
LIOB	**Emei**	**1.25**	**306**	⇑P	**Pb**	**18 34 52.8**	**-0.6**
	baz=298						
LIOB				*e*S	**Sn**	**18 35 08.3**	**+0.5**
	baz=298						
NSTT	**Nanjuang**	**1.25**	**306**	⇑P	**Pb**	**18 34 53.1**	**-0.4**
	baz=297						
NSTT				S	**Sb**	**18 35 08.7**	**-0.6**
	baz=297						
ALS	**Alishan**	**1.27**	**252**	⇑*i*P	**Pn**	**18 34 53.5**	**+1.0**
	baz=249						
WJS	**Zhushan**	**1.28**	**267**	P	**Pb**	**18 34 54.0**	**0.0**
	baz=264						
TWQ1	**Liyutan**	**1.31**	**290**	P	**Pb**	**18 34 54.2**	**-0.2**
	baz=288						
TWQ1				S	**Sb**	**18 35 11.6**	**+0.7**
	baz=288						
WNT	**Mingjian**	**1.31**	**269**	*e*S	**Sb**	**18 35 13.2**	**+2.2**
	baz=267						
YM01	**YM01**	**1.33**	**338**	*e*P	**Pn**	**18 34 53.8**	**+0.6**
	baz=338						
YM01				*e*S	**Sn**	**18 35 09.8**	**-0.1**
	baz=338						
NSY	**Sanyi**	**1.34**	**293**	*e*P	**Pb**	**18 34 54.8**	**-0.2**
	baz=291						
NSY				*e*S	**Sb**	**18 35 12.6**	**+0.7**
	baz=291						
TCU	**Taichung**	**1.34**	**281**	*e*P	**Pb**	**18 34 55.0**	**0.0**
	baz=279						
TCU				*e*S	**Sb**	**18 35 12.9**	**+1.1**
	baz=279						
YM11	**YM11**	**1.35**	**338**	*e*P	**Pn**	**18 34 52.8**	**-0.6**
	baz=338						
TWS1	**Kuangyinshan**	**1.35**	**332**	*e*P	**Pn**	**18 34 53.8**	**+0.5**
	baz=332						
TWS1				*e*S	**Sn**	**18 35 10.8**	**+0.5**
	baz=332						
YM04	**YM04**	**1.35**	**337**	*e*P	**Pn**	**18 34 53.5**	**+0.1**
	baz=337						
YM04				*e*S	**Sn**	**18 35 10.3**	**-0.1**
	baz=337						
YM05	**YM05**	**1.35**	**338**	*e*P	**Pn**	**18 34 53.5**	**+0.1**
	baz=338						
YM05				*e*S	**Sn**	**18 35 10.1**	**-0.4**
	baz=338						
CHN5	**Tsauling**	**1.36**	**257**	⇑P	**Pb**	**18 34 55.1**	**-0.2**
	baz=254						
NCUH	**Zhongli**	**1.36**	**321**	*e*S	**Sn**	**18 35 11.0**	**+0.5**
	baz=321						
NMLH	**Miaoli**	**1.37**	**298**	*e*P	**Pb**	**18 34 55.0**	**-0.4**
	baz=296						
NMLH				*e*S	**Sb**	**18 35 12.7**	**+0.1**
	baz=296						
NTST	**Danshui**	**1.40**	**334**	*e*S	**Sn**	**18 35 11.8**	**+0.4**
	baz=347						
PTSB	**Yuanli**	**1.40**	**293**	*e*P	**Pb**	**18 34 55.5**	**-0.5**
	baz=291						
PTSB				*e*S	**Sb**	**18 35 13.9**	**+0.4**
	baz=291						
WDJ	**Dajia District**	**1.42**	**288**	*e*P	**Pb**	**18 34 55.8**	**-0.6**
	baz=287						
WDJ				*e*S	**Sn**	**18 35 13.0**	**+1.0**
	baz=287						
WCHH	**Zhanghua**	**1.44**	**277**	*e*P	**Pb**	**18 34 56.2**	**-0.5**
	baz=275						
WCHH				*e*S	**Sb**	**18 35 15.4**	**+0.8**
	baz=275						
TWGBT	**Beinan**	**1.44**	**222**	P	**Pn**	**18 34 54.6**	**-0.1**
	baz=228						
TWGBT				*e*S	**Sn**	**18 35 11.8**	**-0.7**
	baz=228						
WGK	**Gukeng**	**1.44**	**262**	*e*P	**Pn**	**18 34 55.7**	**+1.1**
	baz=259						
WGK				*e*S	**Sb**	**18 35 16.9**	**+2.2**
	baz=259						
TWG	**Pinlang**	**1.45**	**222**	P	**Pn**	**18 34 54.4**	**-0.3**
	baz=228						
TWG				*e*S	**Sn**	**18 35 11.8**	**-0.8**
	baz=228						
STYT	**Tauyuan**	**1.45**	**240**	P	**Pn**	**18 34 55.9**	**+1.1**
	baz=237						
STYT				*e*S	**Sn**	**18 35 14.4**	**+1.5**
	baz=237						
WDLH	**Douliu**	**1.47**	**262**	P	**Pb**	**18 34 56.6**	**-0.5**
	baz=260						
WDLH				*e*S	**Sb**	**18 35 16.6**	**+1.3**
	baz=260						
TPUB	**Ta-pu**	**1.49**	**247**	*e*P	**Pb**	**18 34 57.0**	**-0.7**
	baz=244						
TPUB				*e*S	**Sb**	**18 35 16.6**	**+0.4**
	baz=244						
CHN4	**Tsaushan**	**1.50**	**249**	*e*P	**Pb**	**18 34 57.5**	**-0.3**
	baz=246						
CHN4				*e*S	**Sb**	**18 35 17.6**	**+1.1**
	baz=246						
WTP	**Ta-pu**	**1.53**	**245**	⇑*i*P	**Pb**	**18 34 57.7**	**-0.5**
	baz=242						
WTP				*e*S	**Sb**	**18 35 18.3**	**+1.0**
	baz=242						
IRIF	**Iriomote-Funau**	**1.53**	**73**	P	**Pn**	**18 34 56.2**	**+0.4**
IRIF				*e*S	**Sn**	**18 35 15.2**	**+0.5**
HATJ	**Hateruma jima**	**1.55**	**84**	*e*S	**Sn**	**18 35 16.0**	**+0.9**
CHY	**Chiayi**	**1.61**	**256**	*e*P	**Pb**	**18 34 58.9**	**-0.7**
	baz=253						
RLNB	**Erlin**	**1.61**	**270**	*e*P	**Pb**	**18 34 58.8**	**-0.8**
	baz=268						
RLNB				*e*S	**Sb**	**18 35 19.8**	**+0.3**
	baz=268						
TWK	**Hsinying**	**1.63**	**247**	*e*P	**Pb**	**18 34 59.0**	**-0.9**
	baz=245						
TWK				*e*S	**Sb**	**18 35 20.3**	**+0.2**
	baz=245						
CHN1	**Nanshi**	**1.63**	**244**	P	**Pn**	**18 34 58.9**	**+1.7**
	baz=242						
CHN1				*e*S	**Sb**	**18 35 21.0**	**+0.9**
	baz=242						
SLGT	**Liugui**	**1.63**	**236**	*e*P	**Pn**	**18 34 58.7**	**+1.5**
	baz=226						
SLGT				*e*S	**Sb**	**18 35 20.6**	**+0.5**
	baz=226						
SGST	**Jiashian**	**1.63**	**240**	P	**Pb**	**18 34 59.4**	**-0.6**
	baz=238						
SGST				*e*S	**Sb**	**18 35 21.7**	**+1.5**
	baz=238						
SNST	**Tainan City**	**1.64**	**246**	*e*P	**Pb**	**18 34 59.4**	**-0.6**
	baz=243						
SNST				*e*S	**Sb**	**18 35 20.7**	**+0.4**
	baz=243						
WTCT	**Ta-ch'eng**	**1.68**	**269**	*e*P	**Pb**	**18 34 59.7**	**-1.2**
	baz=267						
WTCT				*e*S	**Sb**	**18 35 21.4**	**-0.3**
	baz=267						
ECL	**Taimali**	**1.69**	**220**	*e*P	**Pn**	**18 34 57.4**	**-0.6**
	baz=217						
ECL				*e*S	**Sn**	**18 35 17.4**	**-1.2**
	baz=217						
JKRS	**Kuro-shima**	**1.76**	**79**	P	**Pn**	**18 34 59.7**	**+0.8**
WSF	**Szhu**	**1.76**	**262**	*e*P	**Pn**	**18 35 00.6**	**+1.7**
	baz=260						
WSF				*e*S	**Sb**	**18 35 24.1**	**+0.3**
	baz=260						
SSD	**Sandimen**	**1.79**	**230**	*e*P	**Pn**	**18 35 00.7**	**+1.3**
	baz=223						
SSD				*e*S	**Sb**	**18 35 24.9**	**+0.2**
	baz=223						
MASBT	**Mashibuluo**	**1.88**	**227**	*e*P	**Pn**	**18 35 01.2**	**+0.6**
	baz=223						
MASBT				*e*S	**Sb**	**18 35 27.0**	**-0.3**
	baz=223						
JIJ	**Ishigaki jima**	**1.90**	**76**	P	**Pn**	**18 35 01.1**	**+0.2**
SSPT	**Xinbi**	**2.01**	**226**	*e*P	**Pb**	**18 35 05.1**	**-1.3**
	baz=219						
SCZT	**Fangliau**	**2.06**	**222**	*e*P	**Pb**	**18 35 05.8**	**-1.4**
	baz=216						
JISG	**Ishigakijimahi**	**2.11**	**71**	P	**Pn**	**18 35 03.8**	**0.0**
JISG				S	**Sn**	**18 35 28.6**	**-0.4**
PHUB	**P'eng-hu**	**2.37**	**261**	*e*P	**Pn**	**18 35 08.1**	**+0.8**
	baz=274						
PHUB				*e*S	**Sn**	**18 35 35.8**	**+0.4**
	baz=274						
PNG	**Penghu**	**2.38**	**262**	*e*P	**Pn**	**18 35 08.3**	**+0.9**
	baz=260						
JTJ	**Tarama**	**2.47**	**72**	P	**Pn**	**18 35 09.1**	**+0.4**
VWUC	**VWUC**	**2.66**	**294**	*e*P	**Pn**	**18 35 11.1**	**-0.3**
	baz=293						
KNMB	**Chin-men Tao**	**3.45**	**280**	*e*P	**Pn**	**18 35 21.4**	**-0.9**
	baz=278						

IDC 13 18:37:40.8±3.1, 12°.31S×163°.99E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/52, mbtmp3.8/5, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=62.5km s-min=34.8km az=64.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.89**	**305**	Pn	Pn	18 38 56.6	+0.9
	10nm,0.3s,baz=281,slow=3.1,SNR=5.6						
DZM	**Mont Dzumac**	**9.99**	**167**	Pn	Pn	18 40 05.7	-0.1
	0.4nm,0.3s,baz=306,slow=22,SNR=10						
URZ	**Urewera**	**28.37**	**158**	LR	LR	18 53 36.7	
	comp=Z,48nm,19.6s,baz=194,slow=34						
WRA	**Warramunga Arr**	**29.44**	**251**	P	P	18 43 46.3	-0.3
	0.5nm,0.8s,baz=79,slow=9.3,SNR=6.2						
ASAR	**Alice Springs**	**30.69**	**244**	P	P	18 43 57.6	0.0
	0.3nm,0.7s,baz=65,slow=10,SNR=6.9						
H11N1	**WAKE ISLAND Hy**	**31.95**	**5**	T	T	19 18 26.0	
	baz=184,slow=76,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**31.96**	**5**	T	T	19 18 23.5	
	baz=184,slow=76,SNR=9.8						
H11N2	**WAKE ISLAND Hy**	**31.97**	**5**	T	T	19 18 23.9	
	baz=184,slow=76,SNR=7.8						
MKAR	**Makanchi Array**	**93.27**	**317**	P	P	18 50 57.4	-0.1
	0.2nm,0.8s,baz=107,slow=5.0,SNR=2.8						

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*IDC **13** 18:40:14.2±2.1, 37°.23N×142°.33E, h0^{km}, mb3.2/2, mb1 3.3/5, mb1mx3.0/61, mbtmp3.2/5, ML2.7/3, Error ellipse: s-maj=36.0km s-min=31.0km az=73.0*

*JMA **13** 18:40:17.4±0.2, 37°.40N×142°.04E, h28^{km}±3^{km}, M3.4*

ISC 13 18:40:15.9±2.2, 37°.40N±0°.06×142°.02E±0°.08, h6^{km}±13^{km}, n20, σ1^{s}31/26, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.91**	**268**	P	**Pb**	**18 40 34.5**	**+0.3**
JFK				*e*S	**Sb**	**18 40 46.3**	**-0.3**
JIKH	**Ishinomakikobu**	**1.01**	**335**	P	**Pb**	**18 40 35.6**	**-0.2**
ONAJ	**Iwakimizuishiy**	**1.02**	**253**	P	**Pb**	**18 40 35.8**	**-0.2**
ONAJ				*e*S	**Sb**	**18 40 48.7**	**-0.9**
JMM	**Marumori**	**1.08**	**296**	P	**Pb**	**18 40 37.0**	**0.0**
JMM				*e*S	**Sb**	**18 40 50.9**	**-0.4**
JIO	**Ouri**	**1.18**	**334**	P	**Pg**	**18 40 38.3**	**-0.2**
JIO				*e*S	**Sg**	**18 40 53.0**	**-0.8**
JFT	**Otama**	**1.34**	**275**	P	**Pn**	**18 40 41.8**	**+0.6**
JFT				*e*S	**Sb**	**18 40 58.7**	**-0.3**
JOU	**Okura**	**1.44**	**312**	P	**Pn**	**18 40 42.8**	**+0.2**
JOU				*e*S	**Sb**	**18 41 01.5**	**-0.3**
JMK	**Ichinoseki**	**1.67**	**338**	P	**Pn**	**18 40 45.9**	**+0.2**
JMK				*e*S	**Sn**	**18 41 05.8**	**-1.7**
JYS	**Shirataka**	**1.75**	**298**	P	**Pb**	**18 40 47.9**	**-0.5**
JYS				*e*S	**Sb**	**18 41 10.6**	**-0.1**
JFY	**Yanaizu**	**1.84**	**271**	*e*S	**Sn**	**18 41 11.7**	**-0.1**
JYK	**Kaneyama**	**2.00**	**320**	P	**Pn**	**18 40 50.7**	**+0.4**
JOM	**Ohasama**	**2.15**	**345**	P	**Pn**	**18 40 52.7**	**+0.4**
MJAR	**Matsushiro Arr**	**3.17**	**255**	Pn	**Pn**	**18 41 08.5**	**+2.1**
	0.1nm,0.3s,baz=74,slow=9.0,SNR=2.7						
MJAR				Sn	**Sb**	**18 41 48.1**	**-3.4**
	0.1nm,0.3s,baz=97,slow=19,SNR=2.7						
ASAJ	**Asahikawa**	**6.72**	**4**	Pn	**Pn**	**18 41 56.2**	**+1.1**
	0.2nm,0.3s,baz=90,slow=19,SNR=1.5						
KSRS	**Korea Array**	**11.21**	**275**	Pn	**Pn**	**18 42 59.3**	**+2.6**
	0.1nm,0.3s,baz=64,slow=12,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**27.93**	**122**	T	T	19 15 32.8	
	baz=314,slow=75,SNR=6.1						
H11N1	**WAKE ISLAND Hy**	**27.94**	**122**	T	T	19 15 39.6	
	baz=314,slow=75,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**27.95**	**122**	T	T	19 15 37.4	
	baz=314,slow=75,SNR=7.0						
SONM	**Songino Array**	**27.98**	**303**	P	**P**	**18 46 09.5**	**+2.0**
	0.2nm,0.5s,baz=97,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	**57.49**	**189**	P	**P**	**18 50 04.1**	**-1.9**
	0.2nm,0.8s,baz=7.0,slow=7.3,SNR=5.8						

PGC 13 18:43:21.1±0.8, 50°.48N×130°.27W, h10^{km}, MLSn2.9/10, Mw3.5/10, 202km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACB	**Port Alice, BC**	**1.77**	**90**	Pn	Pn	18 43 49.8	-1.9
PACB				Sn	Sn	18 44 10.3	-4.1
PHC	**Port Hardy**	**1.82**	**82**	Pn	Pn	18 43 51.0	-1.5
PHC				Sn	Sn	18 44 11.4	-4.1
HG4B	**Hotspring**	**1.90**	**343**	Pn	Pn	18 43 51.3	-2.3
HG4B				Sn	Sn	18 44 13.8	-3.8
EDB	**Eliza Dome**	**2.11**	**106**	Pn	Pn	18 43 54.6	-1.9
EDB				Sn	Sn	18 44 18.6	-4.1
BBB	**Bella Bella**	**2.18**	**38**	Pn	Pn	18 43 56.0	-1.3
BBB				Sn	Sn	18 44 19.8	-4.4
TLCB	**Telegraph Cove**	**2.19**	**87**	Pn	Pn	18 43 55.3	-2.2
HG3B	**Hotspring**	**2.22**	**341**	Pn	Pn	18 43 55.8	-2.1
BNB	**Barry Inlet**	**2.29**	**337**	Pn	Pn	18 43 57.2	-1.7
NCRB	**Newcastle Ridg**	**2.69**	**90**	Pn	Pn	18 44 03.3	-1.2
CBB	**Campbell River**	**3.18**	**96**	Pn	Pn	18 44 10.3	-0.8
BTB	**Buttle Lake**	**3.23**	**107**	Pn	Pn	18 44 10.8	-1.1
BTB				Sn	Sn	18 44 46.2	-4.4
TXB	**Texada**	**3.84**	**100**	Pn	Pn	18 44 19.9	-0.3
MGB	**Mount Grey**	**3.91**	**110**	Pn	Pn	18 44 20.7	-0.5
MGB				Sn	Sn	18 45 03.6	-3.7
SHB	**Sechelt**	**4.21**	**100**	Pn	Pn	18 44 25.5	0.0

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*IDC **13** 18:44:07.8±0.8, 46°.44N×153°.33E, h0^{km}, mb3.8/19, mb1 3.9/24, mb1mx3.8/63, mbtmp3.7/24, ML2.6/4, MS3.3/9, Ms1 3.3/9, ms1mx2.9/46, Error ellipse: s-maj=19.9km s-min=14.3km az=136.0*

*ISCJB **13** 18:44:09.6±0.4, 46°.41N±0°.06×153°.40E±0°.07, h24^{km}, mb4.0/31, MS3.3/7, Error ellipse: s-maj=10.6km s-min=3.8km az=144.5*

*SKHL **13** 18:44:09.5±0.1, 45°.81N×153°.90E, h35^{km}±5^{km}, mb4.6/2, msh5.0/3*

*MOS **13** 18:44:11.4±1.0, 46°.12N×153°.90E, h38^{km}, mb4.0/6, MS2.9/2, Error ellipse: s-maj=9.9km s-min=7.4km az=135.4*

*NEIC **13** 18:44:13.1±1.0, 46°.44N×153°.37E, h37^{km}±8^{km}, mb4.5/9, Error ellipse: s-maj=11.4km s-min=5.9km az=138.0*

ISC 13 18:44:11.5±0.7, 46°.34N±0°.09×153°.49E±0°.07, h24^{km}, n109, σ1^{s}38/109, mb4.2/37, MS3.4/8, 3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.08**	**256**	*i* P	**Pn**	**18 45 13.0**	**+0.6**
KUR				AMB	AMB	18 45 14.0	
	90nm,0.4s						
KUR				AMB	AMB	18 45 14.0	
	30nm,0.4s						
KUR				AMB	AMB	18 45 14.3	
	70nm,3.0s						
KUR				*i* S	**Sn**	**18 46 00.7**	**+1.3**
KUR				A	A	18 46 03.3	
	900nm,2.0s						
KUR				A	A	18 46 03.3	
	500nm,2.0s						
KUR				A	A	18 46 12.0	
	120nm,0.4s						
KUR				A	A	18 46 12.0	
	80nm,0.4s						
KUR	**Kuril'sk**	**4.08**	**256**	*d i*PN	**Pn**	**18 45 13.5**	**+1.1**
KUR				*i* S	**Sn**	**18 46 00.2**	**+0.8**
KUR				pmax	pmax		
	comp=Z,332nm,0.4s						
KUR				pmax	pmax		
	comp=N,94nm,0.3s						
KUR				pmax	pmax		
	comp=E,29nm,0.2s						
KUR				smax	smax		
	comp=E,74nm,0.6s						
KUR				smax	smax		
	comp=N,116nm,0.4s						
SKR	**Severo-Kuril's**	**4.68**	**21**	*i* PN	**Pb**	**18 45 35.3**	**+2.5**
SHO	**Shikotan**	**5.32**	**245**	*i* P	**Pn**	**18 45 29.0**	**-0.4**
SHO				AMB	AMB	18 45 34.3	
	comp=N,90nm,5.0s						
SHO				AMB	AMB	18 45 34.6	
	comp=N,30nm,0.4s						
SHO				AMB	AMB	18 45 34.6	
	comp=N,90nm,0.4s						
SHO				AMB	AMB	18 45 34.6	
	comp=N,50nm,0.4s						
SHO				*i* S	**Sn**	**18 46 28.6**	**-1.3**
SHO				A	A	18 46 31.5	
	comp=N,60nm,0.3s						
SHO				A	A	18 46 31.5	
	comp=N,70nm,0.3s						
SHO				A	A	18 46 42.4	
	comp=N,700nm,4.0s						
SHO				A	A	18 46 42.4	
	comp=N,900nm,4.0s						
SHO	**Shikotan**	**5.32**	**245**	*d i*PN	**Pn**	**18 45 29.6**	**+0.2**
SHO				pmax	pmax		
	comp=Z,31nm,0.6s						
SHO				pmax	pmax		
	comp=N,22nm,0.5s						
SHO				pmax	pmax		
	comp=E,21nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.86**	**250**	*i* P	**Pn**	**18 45 37.0**	**+0.2**
YUK				AMB	AMB	18 45 39.2	
	comp=E,30nm,0.7s						
YUK				AMB	AMB	18 45 39.2	
	comp=E,10.0nm,0.7s						
YUK				AMB	AMB	18 45 39.2	
	comp=E,60nm,0.7s						
YUK				*i* S	**Sn**	**18 46 42.7**	**-0.5**
YUK				A	A	18 46 45.0	
	comp=E,800nm,4.0s						
YUK				A	A	18 46 45.0	
	comp=E,2μm,4.0s						
YUK				A	A	18 46 50.0	
	comp=E,140nm,0.6s						
YUK				A	A	18 46 50.0	
	comp=E,130nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.86**	**250**	*d i*PN	**Pn**	**18 45 37.8**	**+1.0**
YUK				*i* S	**Sn**	**18 46 44.3**	**+1.1**
YUK				pmax	pmax		
	comp=Z,75nm,0.4s						
YUK				pmax	pmax		
	comp=N,26nm,0.6s						
YUK				pmax	pmax		
	comp=E,14nm,0.3s						
YUK				smax	smax		
	comp=E,32nm,0.4s						
YUK				smax	smax		
	comp=N,111nm,0.7s						
LAGR	**Lagunnoye**	**5.90**	**250**	*e*P	**Pn**	**18 45 37.5**	**+0.1**
LAGR				AMB	AMB	18 45 53.0	
	comp=N,30nm,0.4s						
LAGR				AMB	AMB	18 45 53.0	
	comp=N,60nm,0.4s						
LAGR				AMB	AMB	18 45 53.0	
	comp=N,20nm,0.4s						
LAGR				*e*S	**Sn**	**18 46 44.0**	**-0.2**
LAGR				A	A	18 47 04.0	
	comp=N,130nm,0.5s						
LAGR				A	A	18 47 04.0	
	comp=N,30nm,0.5s						
LAGR	**Lagunnoye**	**5.90**	**250**	PN	**Pn**	**18 45 37.2**	**-0.2**
LAGR				pmax	pmax		
	comp=Z,131nm,0.4s						
LAGR				pmax	pmax		
	comp=N,32nm,0.1s						
LAGR				pmax	pmax		
	comp=E,64nm,0.1s						
GRPR	**Tuman**	**5.94**	**249**	*e*P	**Pn**	**18 45 38.8**	**+0.9**
GRPR				*e*S	**Sn**	**18 46 45.0**	**-0.1**
GRPR				A	A	18 46 48.0	
	comp=E,50nm,0.4s						
GRPR				A	A	18 46 48.0	
	comp=E,60nm,0.4s						
GRPR	**Tuman**	**5.94**	**249**	*e*PN	**Pn**	**18 45 38.8**	**+0.9**
GLVR	**Golovnino**	**6.22**	**248**	*e*P	**Pn**	**18 45 41.0**	**-0.7**
GLVR				*e*S	**Sn**	**18 46 51.0**	**-0.9**
GLVR	**Golovnino**	**6.22**	**248**	*e*PN	**Pn**	**18 45 41.7**	**0.0**
PETK	**Petropavlovsk-**	**7.30**	**20**	*e*Pn	**Pn**	**18 45 56.3**	**-0.3**
PETK	**Petropavlovsk-**	**7.30**	**20**	*e*PN	**Pn**	**18 45 56.3**	**-0.3**
PETK	**Petropavlovsk-**	**7.30**	**20**	Pn	**Pn**	**18 45 55.8**	**-0.8**
	comp=E,0.3nm,0.3s,baz=165,slow=13,SNR=11						
PEA1	**Petropavlovsk-**	**7.31**	**20**	*e*Pn	**Pn**	**18 45 55.8**	**-0.8**
YSS	**Yuzh-Sakhalins**	**7.41**	**279**	*e*P	Pn	18 46 03.1	+5.0
YSS				AMB	AMB	18 46 04.2	
	comp=E,10.0nm,0.4s						
YSS	**Yuzh-Sakhalins**	**7.41**	**279**	*e*PN	Pn	18 46 03.1	+5.0
YSS				*e*S	**Sn**	**18 47 17.9**	**-3.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
YSS				MLR	MLR		
	comp=N,100nm,12.0s						
YSS				MLR	MLR		
	comp=E,100nm,15.0s						
ASAJ	**Asahikawa**	**8.00**	**258**	Pn	**Pn**	**18 46 08.1**	**+1.8**
	comp=E,0.9nm,0.3s,baz=74,slow=17,SNR=12						
UGL	**Uglegorsk**	**8.18**	**294**	PN	Pn	18 46 15.5	+7.0
UGL				pmax	pmax		
	comp=Z,35nm,0.7s						
TYV	**Tymovskoe**	**8.48**	**306**	*e*P	Pn	18 46 19.1	+6.3
TYV				AMB	AMB	18 46 20.8	
	comp=Z,10.0nm,0.4s						
TYV	**Tymovskoe**	**8.48**	**306**	*e*PN	**Pn**	**18 46 14.7**	**+1.9**
TYV				pmax	pmax		
	comp=Z,100nm,4.5s						
TYV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TYV				MLR	MLR		
	comp=Z,500nm,16.0s						
ERM	**Erimo**	**8.59**	**243**	*e*P	**Pn**	**18 46 15.4**	**+1.1**
ERM	**Erimo**	**8.59**	**243**	*i* PN	**Pn**	**18 46 15.4**	**+1.1**
MA2	**Magadan**	**13.36**	**354**	Pn	**Pn**	**18 47 19.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=163,slow=19,SNR=2.5						

MA2				LR	LR	18 52 16.4	
	comp=Z,54nm,21.0s,baz=182,slow=37						
KLR	Kul'dur	14.89	289	eP	Pn	18 47 41.5	+1.2
KLR	Kul'dur	14.89	289	i P	Pn	18 47 41.5	+1.2
KLR	Kul'dur	14.89	289	Pn	Pn	18 47 39.9	-0.4
	comp=Z,0.1nm,0.3s,baz=90,slow=12,SNR=2.5						
KLR				LR	LR	18 53 58.7	
	comp=Z,89nm,18.1s,baz=102,slow=40						
MJAR	Matsushiro Arr	15.05	235	Pn	Pn	18 47 42.5	0.0
	comp=Z,0.0nm,0.3s,baz=40,slow=8.2,SNR=3.3						
MAJO	Matsushiro	15.05	235	ePn	Pn	18 47 42.5	0.0
MAJO	Matsushiro	15.05	235	i P	Pn	18 47 43.6	+1.1
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
USRK	Ussuriysk Ar.	15.28	270	Pn	Pn	18 47 45.3	-0.3
	comp=Z,0.2nm,0.3s,baz=75,slow=17,SNR=3.9						
KSRS	Korea Array	20.93	254	P	P	18 48 51.0	-1.3
	comp=Z,1.8nm,0.7s,baz=74,slow=9.1,SNR=8.8						
KSRS				LR	LR	18 57 44.2	
	comp=Z,25nm,18.4s,baz=85,slow=39						
KS01	Wonju Array Si	20.93	254	eP	P	18 48 50.2	-2.2
KS15	Wonju Array Si	20.96	254	eP	P	18 48 51.0	-1.6
	comp=Z,13nm,1.0s						
KSAR	Wonju Array Be	20.96	254	P	P	18 48 51.0	-1.6
KSAR	Wonju Array Be	20.96	254	P	P	18 48 51.0	-1.6
HIA	Hailar	22.74	290	i P	P	18 49 16.8	+5.1
HIA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	31.28	290	eP	P	18 50 33.1	+3.6
ULN	Ulaanbaatar	31.28	290	i P	P	18 50 33.1	+3.6
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONA0	Songino Array	31.71	290	eP	P	18 50 30.4	-3.0
SONM	Songino Array	31.71	290	eP	P	18 50 37.4	+4.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	31.71	290	P	P	18 50 30.4	-3.0
	comp=Z,0.3nm,0.6s,baz=57,slow=5.3,SNR=2.7						
ILAR	Eielson Array	36.71	38	P	P	18 51 16.4	+0.1
	comp=Z,0.2nm,0.8s,baz=265,slow=7.2,SNR=3.3						
LZH	Lanzhou	38.16	273	eP	P	18 51 30.1	+1.0
LZH				pP	pwP	18 51 44.6	+4.5
LZH				sP	sP	18 51 50.6	+13
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
GTA	Gaotai	39.29	280	eP	P	18 51 39.1	+0.6
GTA				pP	pP	18 51 44.6	+0.3
GTA				sP	sP	18 51 47.4	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
INK	Inuvik	41.86	32	P	P	18 51 58.9	-0.2
	comp=Z,0.9nm,0.8s,baz=250,slow=6.8,SNR=3.6						
DGZ	Jazzator, Alta	43.03	300	i P	P	18 52 14.5	+5.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ZAA1	Zalesovo Array	43.06	306	eP	P	18 52 06.7	-2.3
ZALV	Zalesovo Beam	43.06	306	P	P	18 52 06.7	-2.3
	comp=Z,0.5nm,0.3s,baz=58,slow=8.7,SNR=2.8						
MK31	Makanchi Array	47.36	298	eP	P	18 52 41.1	-2.2
MK31	Makanchi Array	47.36	298	eP	P	18 52 41.1	-2.2
MK32	Makanchi Array	47.36	298	eP	P	18 52 41.9	-1.5
MKAR	Makanchi Array	47.36	298	P	P	18 52 41.9	-1.5
	comp=Z,1.8nm,0.8s,baz=65,slow=7.5,SNR=18						
MKAR				LR	LR	19 13 43.9	
	comp=Z,54nm,18.0s,baz=54,slow=38						
MK01	Makanchi Array	47.36	298	eP	P	18 52 41.6	-1.8
LSA	Lhasa	50.55	274	eP	P	18 53 09.2	+0.6
	comp=Z,2.4nm,0.9s						
LSA	Lhasa	50.55	274	eP	P	18 53 09.2	+0.6
YKA	Yellowknife Ar	51.10	37	P	P	18 53 11.4	-0.2
	comp=Z,0.5nm,0.7s,baz=296,slow=7.1,SNR=6.5						
BVAR	Borovoye Array	51.32	310	LR	LR	19 17 11.0	
	comp=Z,31nm,18.5s,baz=97,slow=39						
CHTO	Chiang Mai	52.28	257	eP	P	18 53 21.9	+0.9
	comp=Z,4.3nm,1.0s						
CHTO	Chiang Mai	52.28	257	eP	P	18 53 21.9	+0.9
CMAR	Chiang Mai Arr	52.53	257	eP	P	18 53 24.3	+1.4
CMAR	Chiang Mai Arr	52.53	257	eP	P	18 53 24.3	+1.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	52.53	257	P	P	18 53 23.0	+0.2
	comp=Z,0.6nm,0.3s,baz=36,slow=7.7,SNR=7.2						
AAK	Ala-Archa	54.25	297	P	P	18 53 34.8	-0.6
	comp=Z,1.3nm,0.8s,baz=64,slow=7.5,SNR=4.7						
RAMN	Ramite	55.40	274	eP	P	18 53 44.7	+0.6
ARU	Arti	55.49	318	i P	P	18 53 51.5	+7.5
ARU				pmax	pmax		
	comp=Z,3.0nm,1.3s						
PKI	Pulchoki	55.83	276	eP	P	18 53 47.6	+0.3
	comp=Z,2.9nm,0.5s						
PKIN	Phulchoki	55.84	276	eP	P	18 53 47.5	+0.3
	comp=Z,3.3nm,0.5s						
DMN	Daman	56.02	276	eP	P	18 53 48.6	+0.1
	comp=Z,6.6nm,0.6s						
DANN	Dangsing	56.48	277	eP	P	18 53 52.9	+1.0
	comp=Z,11nm,0.5s						
KOLN	Koldanda	56.95	277	eP	P	18 53 55.4	+0.3
	comp=Z,7.7nm,0.8s						
PYUN	Piuthan	57.16	278	eP	P	18 53 57.4	+0.8
	comp=Z,17nm,1.1s						
NEW	Newport	57.22	53	LR	LR	19 18 14.9	
	comp=Z,28nm,20.4s,baz=180,slow=36						
YBH	Yreka Blue Hor	57.71	62	LR	LR	19 14 55.7	
	comp=Z,51nm,18.9s,baz=64,slow=32						
ABKAR	Akbulak array	58.89	310	eP	P	18 54 06.7	-1.4
GAR	Garm	58.92	295	eP	P	18 54 08.6	-0.1
	comp=Z,8.9nm,1.0s						
GAR	Garm	58.92	295	eP	P	18 54 08.6	-0.1
YERR	Yerington	61.48	62	eP	P	18 54 26.0	-0.2
	comp=Z,16nm,0.3s						
KBL	Kabul	62.46	292	eP	P	18 54 31.8	-1.2
	comp=Z,3.2nm,0.8s						
KBL	Kabul	62.46	292	eP	P	18 54 31.8	-1.2
FIA0	FINESS Array S	64.52	335	eP	P	18 54 45.0	-0.9
FIA0	FINESS Array S	64.52	335	eP	P	18 54 45.0	-0.9
FINES	FINESS Array B	64.52	335	eP	P	18 54 45.0	-0.9
FINES	FINESS Array B	64.52	335	P	P	18 54 45.0	-0.9
FINES	FINESS Array B	64.52	335	P	P	18 54 45.0	-0.9
	comp=Z,1.8nm,0.5s,baz=37,slow=8.3,SNR=20						
FINES				LR	LR	19 25 56.0	
	comp=Z,31nm,18.6s,baz=270,slow=39						
GEYT	Alibeck	67.03	301	P	P	18 55 02.9	+0.4
	comp=Z,0.9nm,0.4s,baz=48,slow=6.4,SNR=3.1						
WR1	Warramunga Arr	68.21	199	eP	P	18 55 09.7	-0.2
	comp=Z,12nm,1.6s						
WRA	Warramunga Arr	68.21	199	P	P	18 55 09.7	-0.2
	comp=Z,0.4nm,0.8s,baz=22,slow=6.4,SNR=3.3						
NB2	NORSAR Subarra	68.70	341	P	P	18 55 12.3	-0.3
	comp=Z,0.6nm,0.6s,baz=28,slow=6.2						
NB200	NORSAR Array S	68.70	341	eP	P	18 55 11.9	-0.6
NOA	NORSAR Array B	68.70	341	P	P	18 55 12.0	-0.6
NOA	NORSAR Array B	68.70	341	P	P	18 55 11.9	-0.6
	comp=Z,0.9nm,0.6s,baz=28,slow=6.0,SNR=5.0						
NOA				LR	LR	19 30 00.5	
	comp=Z,12nm,19.1s,baz=270,slow=40						
KBZ	Khabaz	71.33	314	P	P	18 55 28.7	-0.2
	comp=Z,1.1nm,0.8s,baz=135,slow=11,SNR=4.5						
ASAR	Alice Springs	71.90	199	P	P	18 55 33.0	+0.5
	comp=Z,0.2nm,0.7s,baz=24,slow=5.6,SNR=4.2						
AKASG	Malin Array Be	72.03	326	P	P	18 55 32.0	-1.1
	comp=Z,3.3nm,0.6s,baz=34,slow=6.6,SNR=4.1						
AKBB	Malin Array Si	72.03	326	eP	P	18 55 31.5	-1.5
	comp=Z,3.5nm,0.8s						
AKBB	Malin Array Si	72.03	326	eP	P	18 55 31.5	-1.5
BUR08	Bucovina Ar. S	76.05	327	eP	P	18 55 56.4	-0.4
	comp=Z,16nm,1.8s						
BUR04	Bucovina Ar. S	76.07	327	eP	P	18 55 56.2	-0.6
CLL	Collm	76.94	336	eP	P	18 56 02.0	+0.4
CLL				e		18 56 07.0	
CLL				Lm	MLR	22 41 00.0	
	comp=N,200nm,19.3s						
CLL				Lm	MLR	22 41 00.0	
	comp=E,200nm,20.0s						
CLL				Lm	MLR	22 41 00.0	
	comp=Z,400nm,19.2s						
CLL	Collm	76.94	336	eP	P	18 56 02.0	+0.4
CLL				e		18 56 07.0	
LTX	Lajitas	77.47	61	eP	P	18 56 05.3	+0.2
LTX	Lajitas	77.47	61	eP	P	18 56 05.3	+0.2
TXAR	Lajitas Array	77.47	61	P	P	18 56 05.3	+0.3
	comp=Z,0.5nm,0.6s,baz=324,slow=4.3,SNR=6.0						
BR101	Keskin Array S	78.86	317	eP	P	18 56 12.3	-0.4
BRTR	Keskin Array B	78.86	317	P	P	18 56 12.3	-0.4
	comp=Z,0.6nm,0.8s,baz=91,slow=5.3,SNR=2.8						
GERES	GERESS Array B	78.94	334	P	P	18 56 12.8	0.0
	comp=Z,0.2nm,0.3s,baz=38,slow=5.0,SNR=2.9						

ISCJB ***13*** *18:49:40.0±0.6, 45°.07N±0°.05×106°.75W±0°.07, h0^{km}, Error ellipse: s-maj=7.0km s-min=6.5km az=44.8*

IDC ***13*** *18:49:39.2±1.2, 44°.88N×106°.75W, h0^{km}, mb1 3.6/2, mb1mx3.2/36, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=61.7km s-min=8.6km az=137.0*

NEIC ***13*** *18:49:40.4±0.6, 45°.06N×106°.71W, h0^{km}, ML3.0, Error ellipse: s-maj=7.2km s-min=7.1km az=157.0, Suspected Mining explosion.*

NEIC 35 km [22 miles] NNE of Sheridan.

ISC 13 18:49:39.9±1.2**, 45°.07N**±0°.05×**106°.68W**±0°.06**, h0^{km}, n38, σ1^{s}37**/36**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAO	LASA Array	1.65	11	ePn	Pn	18 50 09.6	-0.6
RLMT	Red Lodge	1.84	273	ePn	Pn	18 50 09.1	-3.9
RSSD	Black Hills	2.11	116	ePn	Pb	18 50 18.5	-0.7
GCMT	Greycliff	2.23	290	ePn	Pn	18 50 16.1	-2.1
K22A	Casper	2.42	177	ePn	Pn	18 50 21.6	+0.7
H17A	Grant Village	2.86	258	ePn	Pn	18 50 26.8	-0.3
YNR	Norris Junctio	2.87	264	ePn	Pn	18 50 27.1	-0.1
YHH	Holmes Hill	2.98	266	ePn	Pn	18 50 28.4	-0.3
YFT	Old Faithful	3.03	260	ePn	Pn	18 50 29.1	-0.2
FLWY	Flagg Ranch	3.04	252	ePn	Pn	18 50 29.2	-0.3
YPP	Pitchstone Pla	3.05	256	ePn	Pn	18 50 31.2	+1.5
YMR	Madison River	3.08	264	ePn	Pn	18 50 31.3	+1.3
BW06	Boulder Array	3.10	223	ePn	Pn	18 50 30.2	-0.2
PD31	Pinedale Array	3.10	223	ePn	Pn	18 50 30.0	-0.4
PDAR	Pinedale Array	3.10	223	Pn	Pn	18 50 30.8	+0.3
	1.9nm,0.3s,baz=51,slow=18,SNR=28						
PDAR				Lg	Lg	18 51 09.8	
	3.6nm,0.3s,baz=46,slow=28,SNR=15						
LOHW	Long Hollow	3.17	244	ePn	Pn	18 50 31.9	+0.6
MOOW	Moose Ponds	3.20	247	ePn	Pn	18 50 31.8	0.0
YHB	Horse Butte	3.23	266	ePn	Pn	18 50 32.3	+0.3
IMW	Indian Meadow	3.27	250	ePn	Pn	18 50 32.9	+0.2
QLMT	Earthquake Lak	3.38	268	ePn	Pn	18 50 34.2	0.0
RWWY	Rawlins	3.40	187	ePn	Pn	18 50 34.9	+0.4
FXWY	Fox Creek	3.43	247	ePn	Pn	18 50 35.0	0.0
TPAW	Teton Pass	3.45	244	ePn	Pn	18 50 35.3	+0.1
REDW	Red Top Meadow	3.45	242	ePn	Pn	18 50 35.3	+0.1
BOZ	Bozeman (W)	3.53	280	ePn	Pn	18 50 37.7	+1.5
EGMT	Eagleton	3.64	325	ePn	Pn	18 50 39.1	+1.5
DGMT	Dagmar	3.80	26	ePn	Pn	18 50 41.1	+1.3
AHID	Auburn Hatcher	3.94	236	ePn	Pn	18 50 39.5	-2.3
DLMT	Dillon	4.20	276	ePn	Pn	18 50 47.0	+1.7
N23A	Red Feather La	4.21	172	ePb	Pb	18 50 57.0	+2.0
MCMT	McKenzie Canyo	4.39	269	ePn	Pn	18 50 49.0	+0.9
ISCO	Idaho Springs	5.33	171	ePn	Pn	18 51 01.6	+0.6
MSO	Missoula	5.36	292	ePn	Pn	18 51 03.7	+2.4
SPUT	South Promonto	5.65	230	ePn	Pn	18 51 03.6	-1.7
SRU	San Rafael Swe	6.61	207	ePn	Pn	18 51 15.9	-2.6
NEW	Newport	7.86	298	Lg	Lg	18 53 43.4	
	0.2nm,0.3s,baz=4.0,slow=18,SNR=4.1						
I10CA	LAC DU BONNET	8.83	51	i		19 46 10.0	
	baz=232,slow=310,SNR=3.6						
ULM	Lac du Bonnet	8.94	51	Pn	Pn	18 51 49.3	-1.0
	0.3nm,0.3s,baz=234,slow=13,SNR=8.2						
ULM				Lg	Lg	18 54 21.1	
	0.2nm,0.3s,baz=144,slow=20,SNR=4.0						

IDC 13 19:09:04.2±2.5**, 1°.83S×133°.96E, h0^{km}, mb3.2**/2**, mb1 3.2**/4**, mb1mx3.1**/39**, mbtmp3.0**/4**, ML2.7**/2**, Error ellipse: s-maj=70.4km s-min=26.2km az=68.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.85	289	Pn	Pn	19 09 52.0	+1.0
	0.4nm,0.3s,baz=110,slow=20,SNR=6.6						
SIJI				Sn	Sn	19 10 15.0	-11
	1.1nm,0.3s,baz=243,slow=18,SNR=4.5						
WRA	Warramunga Arr	18.01	179	P	P	19 13 17.6	+0.9
	0.1nm,0.3s,baz=348,slow=11,SNR=5.8						
ASAR	Alice Springs	21.71	180	P	P	19 13 55.8	-1.3
	0.1nm,0.3s,baz=355,slow=11,SNR=9.3						
MKAR	Makanchi Array	66.24	324	P	P	19 19 54.2	0.0
	0.7nm,1.1s,baz=107,slow=5.0,SNR=3.6						

ANF ***13*** *19:13:02.0±0.3, 41°.74N×108°.71W, ML3.5/14, Error ellipse: s-maj=4.3km s-min=3.3km az=64.0*

ISCJB ***13*** *19:13:02.0±0.2, 41°.77N±0°.02×108°.70W±0°.03, h0^{km}, mb2.9/1, Error ellipse: s-maj=3.5km s-min=2.4km az=154.9*

IDC ***13*** *19:13:02.4±1.8, 41°.93N×108°.63W, h0^{km}, mb2.9/1, mb1 3.4/4, mb1mx3.2/44, mbtmp3.1/4, ML2.7/2, MS2.5/1, Ms1 2.5/1, ms1mx2.2/13, Error ellipse: s-maj=19.7km s-min=13.2km az=132.0*

NEIC ***13*** *19:13:02.1±0.5, 41°.77N×108°.72W, h0^{km}, ML3.4, Error ellipse: s-maj=8.5km s-min=5.4km az=73.0, Suspected Mining explosion.*

NEIC 45 km [28 miles] ENE of Rock Springs.

ISC 13 19:13:02.3±0.7**, 41°.81N**±0°.02×**108°.63W**±0°.02**, h0^{km}, n101, σ1^{s}40**/110**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RWWY	Rawlins	1.07	96	ePg	Pg	19 13 20.9	-1.9
BW06	Boulder Array	1.18	325	ePg	Pg	19 13 24.7	-0.2
BW06	Boulder Array	1.18	325	P	Pg	19 13 24.8	-0.2
	baz=148						
BW06				S	Sb	19 13 41.4	-0.2
	baz=148						
PD31	Pinedale Array	1.18	325	ePg	Pg	19 13 24.8	0.0
PDAR	Pinedale Array	1.18	325	ePg	Pg	19 13 24.1	-0.8
PDAR				Lg	Lg	19 13 42.4	
PDAR	Pinedale Array	1.18	325	Pg	Pg	19 13 24.9	0.0
	26nm,0.3s,baz=135,slow=19,SNR=607						
PDAR				Lg	Lg	19 13 42.4	
	40nm,0.3s,baz=136,slow=31,SNR=30						
O20A	White River Ci	1.70	170	ePn	Pn	19 13 32.6	-0.9
O20A	White River Ci	1.70	170	P	Pn	19 13 32.7	-0.8
	baz=348						
O20A				S	Sn	19 13 54.9	-1.1
	baz=348						
K22A	Casper	1.78	61	ePn	Pn	19 13 35.5	+1.0
K22A	Casper	1.78	61	P	Pb	19 13 35.6	-0.3
	baz=242						
K22A				S	Sg	19 14 01.4	+2.0
	baz=242						
AHID	Auburn Hatcher	2.06	298	ePn	Pn	19 13 39.1	+0.6
TCUT	Toone Canyon	2.20	253	ePn	Pn	19 13 40.8	+0.5
HWUT	Hardware Ranch	2.20	266	ePn	Pn	19 13 39.2	-1.2
N23A	Red Feather La	2.22	113	ePn	Pn	19 13 41.7	+1.0
N23A	Red Feather La	2.22	113	Pb	Pn	19 13 42.0	+1.3
	baz=294,SNR=70						
N23A				S	Sn	19 14 09.2	+0.2
	baz=294						
REDW	Red Top Meadow	2.26	314	ePn	Pb	19 13 42.6	-1.5
SNOW	Snow King Moun	2.28	317	ePn	Pn	19 13 41.3	-0.2
LOHW	Long Hollow	2.31	322	ePn	Pn	19 13 42.4	+0.4
TPAW	Teton Pass	2.40	315	ePn	Pn	19 13 42.9	-0.2
PHWY	Pilot Hill	2.44	101	ePn	Pn	19 13 45.0	+1.3
JLU	Jordanelle	2.44	241	ePn	Pn	19 13 42.6	-1.1
MOOW	Moose Ponds	2.48	322	ePn	Pn	19 13 44.0	-0.2
P18A	Preston Nutter	2.50	210	ePn	Pn	19 13 44.0	-0.5
FXWY	Fox Creek	2.54	317	ePn	Pn	19 13 45.0	0.0
CTU	Camp Tracy	2.60	246	ePn	Pn	19 13 45.0	-0.9
IMW	Indian Meadow	2.69	322	ePn	Pn	19 13 47.2	+0.1
FLWY	Flagg Ranch	2.73	327	ePn	Pn	19 13 48.2	+0.6
P17A	Butcher Ranch,	2.83	215	ePn	Pn	19 13 48.6	-0.3
MPU	Maple Canyon	2.89	233	ePn	Pn	19 13 49.9	0.0
SPUT	South Promonto	2.91	261	ePn	Pn	19 13 48.8	-1.2
SMCO	Snowmass	2.92	154	ePn	Pn	19 13 50.2	-0.2
YPP	Pitchstone Pla	2.93	328	ePn	Pn	19 13 50.6	+0.1
H17A	Grant Village	2.95	332	ePn	Pn	19 13 49.8	-0.9
H17A	Grant Village	2.95	332	Sb	Sg	19 14 35.9	-1.2
	baz=152						
LKWY	Lake	3.04	335	ePn	Pb	19 13 58.5	+1.0
ISCO	Idaho Springs	3.05	130	ePn	Pb	19 13 56.8	-0.8
ISCO	Idaho Springs	3.05	130	Pb	Pb	19 13 56.5	-1.1
	baz=311,SNR=14						
ISCO				Sb	Sb	19 14 36.7	+1.2
	baz=311						
SRU	San Rafael Swe	3.06	209	ePn	Pn	19 13 51.3	-0.8
YFT	Old Faithful	3.09	329	ePn	Pn	19 13 51.4	-1.3
HVU	Hansel Valley	3.10	271	ePn	Pn	19 13 51.4	-1.2
TMUT	Trail Mountain	3.19	219	ePn	Pn	19 13 53.2	-0.8
NLU	North Lily Min	3.20	236	ePn	Pn	19 13 52.9	-1.2
PV21	Cone Mtn., Par	3.25	185	ePn	Pn	19 13 55.1	+0.2
PV09	Paradox Valley	3.33	187	ePn	Pn	19 13 55.5	-0.4
RLMT	Red Lodge	3.34	352	ePn	Pn	19 13 58.7	+2.7
RLMT	Red Lodge	3.34	352	P	Pn	19 13 58.4	+2.3
	baz=173						
RLMT				Sb	Sb	19 14 45.1	+1.2
	baz=173						
PV23	Carpenter Ridg	3.37	185	ePn	Pn	19 13 56.6	+0.2
PV07	Paradox Valley	3.37	180	ePn	Pn	19 13 56.1	-0.3
YHH	Holmes Hill	3.39	332	ePn	Pn	19 13 58.9	+2.1
PV04	Paradox Valley	3.42	184	ePn	Pn	19 13 56.6	-0.4
BGU	Big Grassy Mou	3.42	257	ePn	Pn	19 13 58.1	+1.0
PV10	Paradox Valley	3.44	185	ePn	Pn	19 13 58.2	+0.7
PV14	Lion Creek, Pa	3.44	185	ePn	Pn	19 13 57.3	-0.2
PV15	Paradox Valley	3.47	178	ePn	Pn	19 13 58.2	+0.5
PV20	West Nyswonger	3.47	184	ePn	Pn	19 13 57.9	+0.1
Q16A	Castle Valley	3.48	215	ePn	Pn	19 13 58.5	+0.6
YHB	Horse Butte	3.48	328	ePg	Pb	19 14 05.2	+0.2
PV12	Saucer Basin,	3.49	182	ePn	Pn	19 13 57.9	-0.2
PV16	Nyswonger Mesa	3.50	184	ePn	Pn	19 13 58.0	-0.2
PV19	Morning Glory	3.51	184	ePn	Pn	19 13 58.0	-0.3
PV11	David Mesa, Pa	3.51	183	ePn	Pn	19 13 58.0	-0.3
PV17	East Wray Mesa	3.53	184	ePn	Pn	19 13 58.6	-0.1
DUG	Dugway, Tooele	3.55	244	ePn	Pn	19 13 56.9	-2.0
DUG	Dugway, Tooele	3.55	244	P	Pn	19 13 56.9	-2.0
	baz=62						
DUG				Sb	Sb	19 14 50.1	+0.3
	baz=62						
PV03	Paradox Valley	3.56	183	ePn	Pn	19 13 58.5	-0.5
PV02	Paradox Valley	3.60	181	ePn	Pn	19 13 58.7	-0.9
QLMT	Earthquake Lak	3.64	327	ePn	Pn	19 14 00.1	-0.1
PV13	Radium Mtn., P	3.65	182	ePn	Pn	19 14 00.2	-0.1
PV01	Paradox Valley	3.67	179	ePn	Pn	19 14 00.8	+0.2
PV05	Paradox Valley	3.74	186	ePn	Pn	19 14 00.0	-1.5
Q24A	Divide	3.89	136	ePg	Pb	19 14 12.3	+0.2
Q24A	Divide	3.89	136	Sb	Sb	19 15 03.8	+3.9
	baz=317						
RSSD	Black Hills	4.09	54	ePn	Pn	19 14 07.0	+0.7
RSSD	Black Hills	4.09	54	P	Pn	19 14 07.1	+0.8
	baz=237						
RSSD				Sb	Sg	19 15 12.9	-0.8
	baz=237						
MSU	Marysvale	4.27	221	ePn	Pn	19 14 08.8	0.0
S22A	4UR Ranch, Cre	4.29	161	ePn	Pn	19 14 10.2	+1.1
MCMT	McKenzie Canyo	4.31	316	ePn	Pn	19 14 09.2	-0.1
BOZ	Bozeman (W)	4.37	331	ePg	Pb	19 14 20.2	+0.2
DLMT	Dillon	4.57	322	ePg	Pb	19 14 25.3	+1.8
MVCO	Mesa Verde	4.59	179	ePn	Pn	19 14 13.2	-0.1
MVCO	Mesa Verde	4.59	179	P	Pn	19 14 13.5	+0.2
	baz=358						
HLID	Hailey	4.61	294	ePg	Pb	19 14 24.6	+0.5
HLID	Hailey	4.61	294	Pb	Pb	19 14 23.7	-0.5
	baz=111						
MTPU	Mount Pierson	4.65	217	ePg	Pb	19 14 24.1	-0.9
SDCO	Great Sand Dun	4.72	148	ePg	Pb	19 14 27.2	+1.0
SDCO	Great Sand Dun	4.72	148	Pb	Pb	19 14 26.4	+0.2
	baz=329						
SDCO				Sb	Sb	19 15 28.5	+4.9
	baz=329						
ELK	Elko	5.09	260	Pn	Pn	19 14 21.3	+1.3
	0.2nm,0.3s,baz=77,slow=14,SNR=3.0						
ELK				Pg	Pb	19 14 34.4	+2.0
	0.7nm,0.3s,baz=75,slow=12,SNR=6.3						
ELK				Lg	Lg	19 15 39.4	
	1.0nm,0.3s,baz=212,slow=17,SNR=7.0						
PSUT	Pine Spring	5.17	232	ePn	Pn	19 14 19.3	-1.8
LAO	LASA Array	5.18	19	Sb	Sb	19 15 43.0	+6.5
	baz=201						
PKCU	Pink Cliffs	5.20	214	ePg	Pb	19 14 34.7	+0.3
KNB	Kanab	5.78	215	ePg	Pb	19 14 44.8	+0.7
LCMT	Little Creek M	5.97	218	ePg	Pb	19 14 49.8	+2.4
U15A	North Rim	6.08	209	ePg	Pb	19 14 48.9	-0.4
R11A	Troy Canyon, C	6.35	239	Sb	Sb	19 16 12.0	+1.5
	baz=55						
WUAZ	Wupatki	6.64	200	ePn	Pn	19 14 41.6	+0.3
W18A	Petrified Fore	6.74	188	Sb	Sb	19 16 24.9	+3.3
	baz=6.5						
ANMO	Albuquerque	7.06	165	Lg	Lg	19 16 41.7	
	0.1nm,0.3s,baz=304,slow=11,SNR=2.2						
ANMO				LR	LR	19 17 15.6	
	comp=Z,31nm,18.8s,baz=200,slow=35						
KVN	Kaiserville	7.73	252	ePn	Pn	19 14 57.1	+0.9
NVAR	Mina Array Bea	8.14	249	Pn	Pn	19 15 04.4	+2.5
	0.1nm,0.3s,baz=64,slow=12,SNR=3.1						
NVAR				Lg	Lg	19 17 13.9	
	0.1nm,0.3s,baz=57,slow=38,SNR=1.7						
ULM	Lac du Bonnet	12.23	42	Pn	Pn	19 15 54.4	-3.3
	baz=223,slow=14,SNR=3.2						
ULM				Lg	Lg	19 19 26.7	
	0.3nm,0.3s,baz=151,slow=19,SNR=2.9						
YKA	Yellowknife Ar	21.02	352	P	P	19 17 46.0	-1.2
	0.4nm,0.7s,baz=164,slow=12,SNR=5.9						

UCR 13 19:20:45.8±1.3**, 11°.89N×86°.70W, h73^{km}**±6^{km}**, MD3.6, ML2.8, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.30	20	eP	Pn	19 20 57.7	+0.3
MGAN	Managua	0.51	60	eP	Pn	19 20 59.2	+0.2
MGAN				eS	Sn	19 21 09.9	+1.2
MOMN	Momotombo	0.53	17	eP	Pn	19 20 59.3	0.0
MOMN				eS	Sn	19 21 09.5	+0.3
CNGN	Cerro Negro	0.60	0	eP	Pn	19 21 00.1	+0.1
CNGN				eS	Sn	19 21 11.1	+0.7
CNGN				IAML		19 21 15.0	
	comp=N,418nm,0.1s						
CRIN	San Cristobal	0.87	337	eP	Pn	19 21 03.3	+0.3
CRIN				eS	Sn	19 21 16.7	+1.0
CONN	Concepcion	1.10	107	eP	Pn	19 21 05.7	-0.1
BOAB	BOACO BROADBAN	1.15	61	eP	Pn	19 21 06.5	+0.2
BOAB				eS	Sn	19 21 22.0	+0.3
MATN	Matagalpa	1.28	36	eP	Pn	19 21 08.2	+0.1
MATN				eS	Sn	19 21 25.1	+0.3
ACON	Acoyapa	1.49	87	eP	Pn	19 21 10.8	0.0
ACON				eS	Sn	19 21 30.1	+0.4
ACON				IAML		19 21 30.8	
	comp=N,79nm,0.6s						
GBS3	Finca Las Img	1.65	132	i P	Pn	19 21 13.6	+0.8
GB1A	Borinquen Arri	1.66	130	eP	Pn	19 21 13.4	+0.2
GB1A				eS	Sn	19 21 34.1	+0.3
BUEV	Buena Vista	1.67	131	i P	Pn	19 21 13.0	-0.2
BUEV				eP		19 21 13.4	
BUEV				eS	Sn	19 21 35.3	+1.4
LAPC	Finca la Perla	1.67	132	i P	Pn	19 21 13.3	+0.1
BUAI	Buenos Aires	1.68	127	i P	Pn	19 21 13.6	+0.3
CNCH	Conchagua	1.77	321	eP	Pn	19 21 14.4	-0.2
CNCH				eS	Sn	19 21 36.7	+0.5
MESS	Mesas	1.87	128	eP	Pn	19 21 16.3	+0.4
MESS				i P		19 21 16.4	
MESS				eS	Sn	19 21 39.1	+0.5
COLC	Colonia	1.91	130	i P	Pn	19 21 17.0	+0.6
COLC				i S	Sn	19 21 39.2	-0.3
CUI	Cuipilapa	1.94	129	i P	Pn	19 21 17.5	+0.6
CUI				eS	Sn	19 21 41.7	+1.3
PLVR	Palo Verde	2.03	139	eP	Pn	19 21 19.7	+1.6
PLVR				eS	Sn	19 21 43.1	+0.5
ACAL	Aguas Claras	2.06	127	i P	Pn	19 21 19.0	+0.6
AMAS	Alto Masis	2.10	127	i P	Pn	19 21 19.6	+0.6
LCY	Lacayo	2.18	314	eP	Pn	19 21 20.7	+0.7
PACA	Pacayal	2.23	315	eP	Pn	19 21 21.2	+0.4
PACA				eS	Sn	19 21 47.6	+0.2
ESPN	Las Esperanzas	2.37	82	eP	Pn	19 21 22.7	+0.2
TECA	Tecapa	2.37	312	eP	Pn	19 21 23.4	+0.7
LFRS	El Faro	2.88	307	eP	Pn	19 21 30.1	+0.7
LFRS				eS	Sn	19 22 03.9	+0.8

ISCJB ***13*** *19:23:30.1±0.8, 32°.23N±0°.04×115°.26W±0°.06, h15^{km}±7^{km}, Error ellipse: s-maj=9.1km s-min=5.3km az=155.2*

MEX ***13*** *19:23:30.7±0.5, 32°.35N×115°.03W, h16^{km}±150^{km}, MD3.6*

ECX ***13*** *19:23:31.2±0.6, 32°.22N×115°.29W, h5^{km}, MD2.8, ML3.0*

ISC 13 19:23:28.9±1.5**, 32°.23N**±0°.04×**115°.26W**±0°.05**, h14^{km}**±11^{km}**, n18, σ0^{s}58**/25**, 3C-10D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.20	350⇓	eP	Pb	19 23 35.0	+0.7
CPBX				eS	Sb	19 23 38.0	+0.1
CPBX				e		19 23 40.7	

CPBX				IAML		19 23 40.7	
	comp=N,13µm,0.2s						
SGL	**Mount Signal**	**0.58**	**317**	⇓*i*P	**Pn**	**19 23 41.4**	**-1.2**
COA	**Coachella**	**0.65**	**11**	⇑*i*P	**Pn**	**19 23 43.0**	**-0.6**
YUH	**Yuha Desert**	**0.70**	**307**	⇓*i*P	**Pn**	**19 23 43.3**	**-1.1**
COK	**Cook Ranch**	**0.73**	**328**	⇓*i*P	**Pn**	**19 23 44.4**	**-0.4**
RMX	**La Rumorosa**	**0.79**	**299**	⇓*e*P	**Pg**	**19 23 44.0**	**-0.2**
RMX				⇑*e*		19 23 53.8	
RMX				IAML		19 23 53.8	
	comp=E,347nm,0.1s						
IKP	**In-Ko-Pah, Jac**	**0.83**	**301**	⇓*e*P	**Pn**	**19 23 45.7**	**-0.5**
IKP				*e*S	**Sg**	**19 23 56.4**	**+0.4**
GLA	**Glamis**	**0.90**	**24**	⇑*e*P	**Pn**	**19 23 46.5**	**-0.7**
SPIG	**San Pedro Mart**	**1.19**	**188**	*e*P	**Pb**	**19 23 51.4**	**0.0**
SPIG				*i* S	**Sn**	**19 24 08.0**	**+0.6**
SPIG	**San Pedro Mart**	**1.19**	**188**	⇓*e*P	**Pb**	**19 23 51.4**	**0.0**
SPX	**San Pedro Mart**	**1.19**	**188**	*e*P	**Pb**	**19 23 51.4**	**0.0**
SPX				*e*S	**Sb**	**19 24 07.3**	**+0.6**
SPX	**San Pedro Mart**	**1.19**	**188**	⇓*e*P	**Pb**	**19 23 51.4**	**0.0**
CBX	**Cerro Bola**	**1.19**	**275**	*e*P	**Pg**	**19 23 52.0**	**+0.1**
CBX				*i* S	**Sn**	**19 24 07.5**	**+0.3**
CBX	**Cerro Bola**	**1.19**	**275**	*e*P	**Pg**	**19 23 51.8**	**0.0**
CBX				*e*S	**Sb**	**19 24 07.4**	**+0.8**
CBX				IAML		19 24 08.3	
	comp=E,294nm,0.4s						
TJIG	**Tijuana**	**1.21**	**280**	*e*P	**Pb**	**19 23 51.5**	**-0.1**
TJIG				*i* S	**Sn**	**19 24 07.3**	**-0.3**
TJIG	**Tijuana**	**1.21**	**280**	⇓*e*P	**Pb**	**19 23 51.6**	**-0.1**
BAR	**Barrett**	**1.27**	**291**	⇓*e*P	**Pg**	**19 23 53.2**	**-0.2**
SDRC	**San Diego Road**	**1.51**	**290**	*i* S	**Sb**	**19 24 16.4**	**+0.9**

MAN 13 19:25:30.9, 9°.00N×126°.32E, h28^{km}, mb4.3, ML3.2, MS2.9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.81**	**177**	⇑*e*P	Pn	19 25 46.8	+0.2
BIPH				*e*S	Sb	19 25 56.4	-0.7
SCPH	**Surigao**	**1.12**	**314**	⇑*e*P	Pn	19 25 49.7	-1.0

*IDC **13** 19:30:47.8±1.7, 11°.33S×164°.87E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.5/38, mbtmp3.7/6, ML3.9/2, MS2.4/1, Ms1 2.4/1, ms1mx2.3/24, Error ellipse: s-maj=39.5km s-min=31.7km az=122.0*

*ISCJB **13** 19:30:50.9±1.2, 11°.5S±0°.1×164°.8E±0°.2, h34^{km}, mb3.4/4, Error ellipse: s-maj=25.0km s-min=16.4km az=149.7*

ISC 13 19:30:52.6±1.3, 11°.4S±0°.1×164°.9E±0°.2, h34^{km}, n12, σ0$\overset{s}{.}$86/6, mb3.5/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.21**	**292**	Pn	**Pn**	**19 32 08.0**	**-0.3**
	8.6nm,0.3s,baz=173,slow=8.1,SNR=3.9						
HNR				LR	LR	19 33 30.7	
	comp=Z,42nm,21.0s,baz=78,slow=31						
DZM	**Mont Dzumac**	**10.69**	**172**	Pn	**Pn**	**19 33 23.3**	**-0.3**
	0.4nm,0.3s,baz=309,slow=13,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**29.79**	**4**	T	T	20 08 19.9	
	baz=194,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.79**	**4**	T	T	20 08 22.1	
	baz=194						
H11S1	**WAKE ISLAND Hy**	**29.80**	**4**	T	T	20 08 22.5	
	baz=194,slow=74						
WRA	**Warramunga Arr**	**30.52**	**250**	P	**P**	**19 37 03.9**	**+0.9**
	0.4nm,0.8s,baz=80,slow=9.3,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**31.01**	**4**	T	T	20 09 46.6	
	baz=183						
H11N3	**WAKE ISLAND Hy**	**31.02**	**4**	T	T	20 09 47.2	
	baz=183						
H11N2	**WAKE ISLAND Hy**	**31.03**	**4**	T	T	20 09 52.6	
	baz=183						
ASAR	**Alice Springs**	**31.83**	**243**	P	**P**	**19 37 14.9**	**+0.4**
	0.5nm,0.8s,baz=63,slow=10,SNR=7.3						
ILAR	**Eielson Array**	**84.16**	**19**	P	**P**	**19 43 20.6**	**+0.6**
	0.3nm,0.8s,baz=236,slow=5.5,SNR=4.6						
MKAR	**Makanchi Array**	**93.20**	**317**	P	**P**	**19 44 02.7**	**-0.9**
	0.2nm,0.7s,baz=84,slow=7.4,SNR=2.2						

*IDC **13** 19:31:48.2±1.6, 11°.41S×164°.85E, h0^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.6/38, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=40.3km s-min=31.0km az=125.0*

*ISCJB **13** 19:31:51.6±1.2, 11°.6S±0°.1×164°.8E±0°.2, h34^{km}, mb3.5/4, Error ellipse: s-maj=25.2km s-min=16.3km az=149.8*

ISC 13 19:31:53.3±1.3, 11°.5S±0°.1×164°.9E±0°.2, h34^{km}, n12, σ0$\overset{s}{.}$62/6, mb3.6/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.24**	**293**	Pn	**Pn**	**19 33 09.4**	**+0.1**
	13nm,0.3s,baz=178,slow=6.8,SNR=3.3						
DZM	**Mont Dzumac**	**10.63**	**172**	Pn	**Pn**	**19 34 23.5**	**+0.2**
	0.3nm,0.3s,baz=319,slow=20,SNR=2.2						
H11S2	**WAKE ISLAND Hy**	**29.85**	**4**	T	T	20 09 22.9	
	baz=176						
H11S3	**WAKE ISLAND Hy**	**29.86**	**4**	T	T	20 09 19.7	
	baz=176						
H11S1	**WAKE ISLAND Hy**	**29.87**	**4**	T	T	20 09 22.8	
	baz=176						
WRA	**Warramunga Arr**	**30.50**	**250**	P	**P**	**19 38 03.4**	**-0.1**
	0.2nm,0.5s,baz=79,slow=8.9,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**31.08**	**4**	T	T	20 10 43.6	
	baz=187						
H11N3	**WAKE ISLAND Hy**	**31.08**	**4**	T	T	20 10 52.8	
	baz=187						
H11N2	**WAKE ISLAND Hy**	**31.09**	**4**	T	T	20 10 42.2	
	baz=187						
ASAR	**Alice Springs**	**31.81**	**243**	P	**P**	**19 38 14.4**	**-0.6**
	0.5nm,0.7s,baz=64,slow=9.5,SNR=6.7						
ILAR	**Eielson Array**	**84.22**	**19**	P	**P**	**19 44 20.4**	**-0.5**
	0.3nm,0.6s,baz=242,slow=5.2,SNR=5.3						
MKAR	**Makanchi Array**	**93.25**	**317**	P	**P**	**19 45 05.2**	**+0.7**
	0.2nm,0.6s,baz=67,slow=3.7,SNR=2.7						

*NIED **13** 19:37:00, 37°.10N×142°.00E, h29^{km}, Mw3.6 Best double couple: M$_0$2.67000×10^{14} NP1:ϕ$_s$245.00000°, δ27.00000°, λ131.00000°. NP2:ϕ$_s$21.00000°, δ70.00000°, λ71.00000°.*

*IDC **13** 19:37:42.1±1.3, 37°.15N×142°.16E, h0^{km}, mb3.7/7, mb1 3.8/11, mb1mx3.6/48, mbtmp3.7/11, ML3.3/4, MS2.5/2, Ms1 2.5/2, ms1mx2.2/46, Error ellipse: s-maj=30.5km s-min=19.4km az=107.0*

*ISCJB **13** 19:37:43.8±1.2, 37°.19N±0°.04×142°.07E±0°.06, h18^{km}±7^{km}, mb3.5/7, Error ellipse: s-maj=8.0km s-min=6.1km az=19.2*

*JMA **13** 19:37:45.9±0.2, 37°.13N×141°.95E, h45^{km}±4^{km}, M3.9*

ISC 13 19:37:43.8±2.1, 37°.13N±0°.05×142°.00E±0°.07, h11^{km}±11^{km}, n31, σ1$\overset{s}{.}$50/37, mb3.7/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.93**	**285**	P	**Pb**	**19 38 02.3**	**+0.3**
JFK				S	**Sg**	**19 38 13.6**	**-0.3**
ONAJ	**Iwakimizuishiy**	**0.96**	**269**	P	**Pg**	**19 38 02.5**	**+0.1**
JFFD	**Fukushimafurud**	**1.15**	**268**	P	**Pb**	**19 38 05.3**	**-0.5**
JFFD				*e*S	**Sb**	**19 38 19.2**	**-1.6**
JMM	**Marumori**	**1.21**	**308**	P	**Pn**	**19 38 06.4**	**-0.3**
JMM				S	**Sb**	**19 38 20.7**	**-1.7**
JHO	**Hitachi**	**1.26**	**246**	P	**Pn**	**19 38 06.5**	**-0.9**
JHO				*e*S	**Sb**	**19 38 21.2**	**-2.7**
JFT	**Otama**	**1.38**	**287**	P	**Pb**	**19 38 09.8**	**+0.1**
JFT				S	**Sb**	**19 38 26.6**	**-0.8**
JIO	**Ouri**	**1.42**	**339**	P	**Pn**	**19 38 09.2**	**-0.3**
JIO				*e*S	**Sn**	**19 38 25.2**	**-3.0**
JOU	**Okura**	**1.63**	**320**	P	**Pn**	**19 38 12.7**	**+0.3**
JOU				*e*S	**Sn**	**19 38 32.2**	**-1.2**
JFY	**Yanaizu**	**1.85**	**279**	P	**Pn**	**19 38 16.4**	**+0.8**
JFY				*e*S	**Sn**	**19 38 38.4**	**-0.6**
JYS	**Shirataka**	**1.88**	**306**	P	**Pn**	**19 38 16.8**	**+0.9**
JYS				S	**Sn**	**19 38 38.9**	**-0.8**
JMK	**Ichinoseki**	**1.92**	**341**	P	**Pn**	**19 38 16.9**	**+0.5**
JMK				*e*S	**Sn**	**19 38 39.3**	**-1.3**
MJAR	**Matsushiro Arr**	**3.10**	**260**	Pn	**Pn**	**19 38 34.6**	**+2.0**
	1.3nm,0.3s,baz=88,slow=7.8,SNR=54						
MJAR				Sn	**Sb**	**19 39 13.7**	**-3.2**
	1.1nm,0.3s,baz=73,slow=24,SNR=4.7						
MJAR				LR	LR	19 39 38.0	
	comp=Z,43nm,18.1s,baz=80,slow=36						
MAT	**Matsushiro**	**3.10**	**260**	P	**Pn**	**19 38 35.4**	**+2.7**
MAT				*e*S	**Sn**	**19 39 12.5**	**+2.7**
JHJ	**Hachijo jima 2**	**4.40**	**205**	Pn	**Pn**	**19 38 51.2**	**+0.7**
	13nm,0.3s,baz=262,slow=15,SNR=4.2						
JHJ				Sn	**Sn**	**19 39 38.9**	**-2.8**
	13nm,0.3s,baz=46,slow=16,SNR=3.7						
ASAJ	**Asahikawa**	**6.99**	**4**	Pn	**Pn**	**19 39 27.2**	**+1.1**
	0.7nm,0.3s,baz=212,slow=12,SNR=7.8						
ASAJ				Sn	**Sn**	**19 40 44.5**	**-1.1**
	0.3nm,0.3s,baz=300,slow=20,SNR=2.6						
JNU	**Nakatsue**	**9.95**	**250**	Pn	**Pn**	**19 40 06.2**	**-0.6**
	0.2nm,0.3s,baz=53,slow=18,SNR=4.5						
USRK	**Ussuriysk Ar.**	**10.37**	**316**	Pn	Pn	19 40 19.8	+7.4
	0.2nm,0.3s,baz=125,slow=12,SNR=4.4						
KSRS	**Korea Array**	**11.22**	**276**	Pn	Pn	19 40 29.1	+4.9
	0.1nm,0.3s,baz=89,slow=13,SNR=6.8						
KSRS				LR	LR	19 44 36.7	
	comp=Z,38nm,18.1s,baz=70,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.79**	**122**	T	T	20 13 01.1	
	baz=314,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**27.80**	**122**	T	T	20 13 06.4	
	baz=314,slow=75,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	**27.81**	**122**	T	T	20 13 16.5	
	baz=314,slow=75,SNR=12						
SONM	**Songino Array**	**28.12**	**304**	P	**P**	**19 43 36.5**	**+0.7**
	0.7nm,0.7s,baz=98,slow=8.4,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**28.52**	**124**	T	T	20 14 02.9	
	baz=316,slow=76,SNR=6.5						
H11S3	**WAKE ISLAND Hy**	**28.52**	**124**	T	T	20 14 01.6	
	baz=316,slow=76,SNR=7.6						
H11S2	**WAKE ISLAND Hy**	**28.53**	**124**	T	T	20 14 02.3	
	baz=316,slow=76,SNR=3.8						
CMAR	**Chiang Mai Arr**	**41.98**	**256**	P	**P**	**19 45 36.9**	**+1.9**
	0.3nm,0.6s,baz=44,slow=7.8,SNR=3.7						
MKAR	**Makanchi Array**	**44.47**	**302**	P	**P**	**19 45 55.2**	**+0.3**
	0.8nm,0.7s,baz=86,slow=9.5,SNR=8.0						
WRA	**Warramunga Arr**	**57.22**	**189**	P	**P**	**19 47 31.3**	**+0.1**
	0.1nm,0.4s,baz=4.8,slow=6.9,SNR=8.7						
FINES	**FINESS Array B**	**68.95**	**332**	P	**P**	**19 48 47.7**	**-0.8**
	1.5nm,0.9s,baz=15,slow=5.8,SNR=4.2						
HFS	**Hagfors**	**74.19**	**336**	P	**P**	**19 49 21.0**	**+0.8**
	1.0nm,0.7s,baz=5.7,slow=4.3,SNR=3.4						
NOA	**NORSAR Array B**	**74.28**	**337**	P	**P**	**19 49 21.5**	**+0.8**
	1.0nm,1.1s,baz=34,slow=3.2,SNR=2.3						

IDC 13 19:45:32.7±56.0, 14°.69S×169°.62E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/38, mbtmp3.9/3, Error ellipse: s-maj=961.3km s-min=114.1km az=67.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.77**	**231**	P	P	19 51 49.6	-0.4
	0.4nm,0.3s,baz=60,slow=12,SNR=8.4						
WRA	**Warramunga Arr**	**34.04**	**256**	P	P	19 52 19.3	+0.4
	0.5nm,0.5s,baz=87,slow=8.9,SNR=15						
ASAR	**Alice Springs**	**34.81**	**250**	P	P	19 52 25.3	-0.3
	1.0nm,0.7s,baz=76,slow=9.1,SNR=27						

*NIED **13** 19:52:00, 37°.80N×143°.70E, h5^{km}, Mw4.3 Best double couple: M$_0$3.60000×10^{15} NP1:ϕ$_s$360.00000°, δ18.00000°, λ-105.00000°. NP2:ϕ$_s$196.00000°, δ73.00000°, λ-85.00000°.*

*IDC **13** 19:52:37.7±0.5, 37°.61N×143°.81E, h0^{km}, mb4.2/35, mb1 4.4/42, mb1mx4.3/67, mbtmp4.3/42, ML4.1/5, MS3.3/18, Ms1 3.4/18, ms1mx3.1/55, Error ellipse: s-maj=12.8km s-min=10.7km az=126.0*

*BJI **13** 19:52:38.3, 37°.60N×143°.80E, h27^{km}, mB5.0/38, mb4.6/64, Ms4.3/18, Ms7 4.0/19*

*NEIC **13** 19:52:40.9±1.4, 37°.64N×143°.76E, h20^{km}±9^{km}, mb4.7/45, Error ellipse: s-maj=5.6km s-min=3.6km az=141.0*

*JMA **13** 19:52:40.7±0.1, 37°.79N×143°.71E, h38^{km}, M4.4*

*ISCJB **13** 19:52:40.8±0.2, 37°.73N±0°.02×143°.66E±0°.02, h31^{km}, mb4.5/103, MS3.6/16, Error ellipse: s-maj=3.6km s-min=2.7km az=179.0*

*MOS **13** 19:52:41.6±0.9, 37°.93N×143°.62E, h29^{km}, mb4.7/57, Error ellipse: s-maj=7.1km s-min=4.8km az=115.8*

ISC 13 19:52:41.4±0.9, 37°.69N±0°.04×143°.79E±0°.04, h27^{km}±6^{km}, n271, σ1$\overset{s}{.}$83/291, mb4.5/108, MS3.5/17, 13C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.94**	**289**	P	**Pn**	**19 53 11.0**	**-1.5**
JIKH				*e*S	**Sn**	**19 53 33.0**	**-2.9**
JIO	**Ouri**	**2.07**	**292**	P	**Pn**	**19 53 12.8**	**-1.6**
JIO				*e*S	**Sn**	**19 53 36.6**	**-2.7**
JKMT	**Kesennumamotoy**	**2.14**	**302**	P	**Pn**	**19 53 13.7**	**-1.6**
JKMT				*e*S	**Sn**	**19 53 37.9**	**-3.0**
OFUJ	**Ofunato**	**2.17**	**311**	P	**Pn**	**19 53 14.0**	**-1.7**
OFUJ				*e*S	**Sn**	**19 53 38.5**	**-3.2**
JMK	**Ichinoseki**	**2.38**	**303**	P	**Pn**	**19 53 17.3**	**-1.3**
JMK				*e*S	**Sn**	**19 53 44.7**	**-2.2**
JOU	**Okura**	**2.56**	**286**	P	**Pn**	**19 53 20.2**	**-0.9**
JOU				*e*S	**Sn**	**19 53 49.7**	**-1.6**
JOM	**Ohasama**	**2.65**	**313**	P	**Pn**	**19 53 21.0**	**-1.3**
JOM				*e*S	**Sn**	**19 53 51.1**	**-2.4**
JFT	**Otama**	**2.74**	**268**	P	**Pn**	**19 53 22.9**	**-0.8**
JFT				*e*S	**Sn**	**19 53 54.6**	**-1.3**
JYK	**Kaneyama**	**2.96**	**296**	P	**Pn**	**19 53 25.5**	**-1.2**
JYK				*e*S	**Sn**	**19 53 58.6**	**-2.7**
JRG	**Rokugo**	**3.00**	**306**	P	**Pn**	**19 53 26.2**	**-1.0**
JRG				*e*S	**Sn**	**19 53 59.3**	**-3.0**
JANG	**Nango**	**3.21**	**327**	P	**Pn**	**19 53 28.6**	**-1.5**
JANG				*e*S	**Sn**	**19 54 03.3**	**-4.2**
JAH	**Hinai**	**3.50**	**316**	P	**Pn**	**19 53 32.7**	**-1.4**
JAH				*e*S	**Sn**	**19 54 12.0**	**-2.6**
JNS	**Sasagawa**	**3.54**	**273**	P	**Pn**	**19 53 34.4**	**-0.2**
JAW	**Awa shima**	**3.66**	**284**	P	**Pn**	**19 53 36.6**	**+0.4**
JAG	**Ashikaga**	**3.69**	**251**	P	**Pn**	**19 53 35.6**	**-1.0**
JTM	**Tenmabayashi**	**3.75**	**327**	P	**Pn**	**19 53 36.7**	**-0.7**
JTM				*e*S	**Sn**	**19 54 18.0**	**-2.6**
JOT	**Ohata**	**4.25**	**331**	P	**Pn**	**19 53 43.7**	**-0.7**
JRY	**Ryogami san**	**4.26**	**248**	P	**Pn**	**19 53 43.5**	**-1.0**
ERM	**Erimo**	**4.35**	**354**	*e*Pn	**Pn**	**19 53 44.1**	**-1.6**
ERM	**Erimo**	**4.35**	**354**	*i* P	**Pn**	**19 53 44.1**	**-1.6**
JOD2	**Odawara 2**	**4.49**	**239**	P	**Pn**	**19 53 46.4**	**-1.3**
MJAR	**Matsushiro Arr**	**4.60**	**257**	Pn	**Pn**	**19 53 49.3**	**+0.1**
	5.9nm,0.3s,baz=73,slow=8.7,SNR=378						
MJAR				Sn	**Sn**	**19 54 38.6**	**-3.2**
	baz=99,slow=20,SNR=1.8						
MJAR				LR	LR	19 55 47.8	
	comp=Z,386nm,20.7s,baz=60,slow=42						
MAJO	**Matsushiro**	**4.60**	**257**	*e*Pn	**Pn**	**19 53 49.6**	**+0.4**
MAJO				*e*Sn	**Sn**	**19 54 38.6**	**-3.2**
MAJO	**Matsushiro**	**4.60**	**257**	*c i*P	**Pn**	**19 53 49.2**	**0.0**
MAT	**Matsushiro**	**4.60**	**257**	P	**Pn**	**19 53 49.6**	**+0.4**
MAT				*e*S	**Sn**	**19 54 39.1**	**-2.7**
MJB9	**Matsu-Tunnel**	**4.60**	**257**	*e*Pn	**Pn**	**19 53 49.5**	**+0.3**
JNBK	**Urakawa-nobuka**	**4.66**	**351**	P	**Pn**	**19 53 48.7**	**-1.2**
JKB	**Kayabe**	**4.70**	**334**	P	**Pn**	**19 53 49.9**	**-0.6**
JHJ	**Hachijo jima 2**	**5.61**	**217**	Pn	**Pn**	**19 54 01.1**	**-1.9**
	36nm,0.3s,baz=83,slow=18,SNR=7.9						
JHJ				Sn	**Sn**	**19 55 00.8**	**-5.8**
	114nm,0.3s,baz=243,slow=21,SNR=6.1						
JHJ				LR	LR	19 56 14.1	
	comp=Z,82nm,20.6s,baz=16,slow=39						
INU	**Inuyama**	**5.93**	**249**	*e*Pn	**Pn**	**19 54 07.3**	**-0.1**
ASAJ	**Asahikawa**	**6.49**	**352**	Pn	**Pn**	**19 54 14.0**	**-1.1**
	11nm,0.3s,baz=197,slow=9.4,SNR=133						
ASAJ				Sn	**Sn**	**19 55 22.6**	**-5.5**
	2.3nm,0.3s,baz=201,slow=18,SNR=3.7						
YUK	**Yuzh-Kuril'sk**	**6.53**	**13**	⇑*i*P	**Pn**	**19 54 12.2**	**-3.5**
YUK				*i* S	**Sn**	**19 55 23.0**	**-6.3**
YUK				pmax	pmax		
	comp=N,101nm,0.5s						
YUK				pmax	pmax		
	comp=Z,130nm,0.5s						
YUK				pmax	pmax		
	comp=E,36nm,0.3s						
SHO	**Shikotan**	**6.59**	**20**	*e*P	**Pn**	**19 54 12.3**	**-4.2**
SHO				*e*S	**Sn**	**19 55 23.2**	**-7.6**
SHO				pmax	pmax		
	comp=Z,92nm,0.5s						
SHO				pmax	pmax		
	comp=N,19nm,0.3s						
SHO				pmax	pmax		
	comp=E,26nm,0.3s						
KUR	**Kuril'sk**	**8.14**	**21**	*e*P	**Pn**	**19 54 34.9**	**-2.8**
KUR				*i* S	**Sn**	**19 56 01.8**	**-6.9**
KUR				pmax	pmax		
	comp=N,24nm,0.4s						
KUR				pmax	pmax		
	comp=Z,47nm,0.4s						
KUR				pmax	pmax		
	comp=E,11nm,0.2s						
KUR				smax	smax		
	comp=E,100nm,0.4s						
KUR				smax	smax		
	comp=N,84nm,0.3s						
TEY	**Ternei**	**9.11**	**326**	⇑*e*P	**Pn**	**19 54 51.7**	**+0.7**
TEY				pmax	pmax		
	comp=N,90nm,0.7s						
TEY				pmax	pmax		
	comp=E,90nm,0.7s						
TEY				pmax	pmax		
	comp=Z,110nm,0.7s						
YSS	**Yuzh-Sakhalins**	**9.29**	**356**	*e*Pn	**Pn**	**19 54 54.8**	**+1.3**
YSS	**Yuzh-Sakhalins**	**9.29**	**356**	⇑*e*P	**Pn**	**19 54 52.9**	**-0.6**
YSS				*e*S	**Sn**	**19 56 32.4**	**-4.7**
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				smax	smax		
	comp=E,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
VLA	**Vladivostok**	**10.57**	**305**	*i* P	**Pn**	**19 55 11.6**	**+0.6**
VLA				pmax	pmax		
	comp=Z,23nm,1.0s						
CBIJ	**Chichi jima**	**10.65**	**188**	*e*Pn	**Pn**	**19 55 07.6**	**-4.6**
CBIJ				*e*Sn	Sn	19 56 57.5	-13
JCJ	**Chichijima**	**10.65**	**188**	Pn	**Pn**	**19 55 07.6**	**-4.6**
	comp=Z,15nm,0.3s,baz=79,slow=20,SNR=11						
JCJ				Sn	Sn	19 56 57.5	-13
	comp=Z,8.5nm,0.3s,baz=60,slow=20,SNR=3.4						
MSHR	**Mys Shultsa**	**10.83**	**301**	*e*P	**Pn**	**19 55 14.0**	**-0.6**
USA0B	**Ussuriysk Arra**	**11.04**	**310**	*e*Pn	**Pn**	**19 55 18.8**	**+1.4**
USRK	**Ussuriysk Ar.**	**11.04**	**310**	Pn	**Pn**	**19 55 17.9**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=115,slow=12,SNR=19						
USRK				LR	LR	19 59 31.5	
	comp=Z,140nm,20.1s,baz=93,slow=37						
JNU	**Nakatsue**	**11.47**	**250**	*e*Pn	**Pn**	**19 55 23.0**	**-0.5**
JNU	**Nakatsue**	**11.47**	**250**	Pn	**Pn**	**19 55 22.7**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=51,slow=9.2,SNR=11						
JNU				LR	LR	20 00 00.7	
	comp=Z,115nm,21.5s,baz=154,slow=39						
KSRS	**Korea Array**	**12.59**	**274**	Pn	**Pn**	**19 55 39.9**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=85,slow=14,SNR=24						
KSRS				LR	LR	20 00 26.9	
	comp=Z,137nm,18.1s,baz=56,slow=37						
KS01	**Wonju Array Si**	**12.61**	**274**	*e*Pn	**Pn**	**19 55 39.2**	**+0.2**
KS15	**Wonju Array Si**	**12.62**	**274**	*e*Pn	**Pn**	**19 55 40.0**	**+0.9**
KSAR	**Wonju Array Be**	**12.62**	**274**	Pn	**Pn**	**19 55 39.9**	**+0.7**
KSAR	**Wonju Array Be**	**12.62**	**274**	P	**Pn**	**19 55 39.9**	**+0.7**
MDJ	**Mudanjiang**	**12.73**	**307**	P	**Pn**	**19 55 40.5**	**-0.1**
MDJ				pP	P	19 55 48.4	-3.1
MDJ				sP		19 55 54.0	
MDJ				S	**Sn**	**19 58 04.6**	**+3.2**
MDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,120nm,5.0s						
MDJ				LR	LR		
	comp=Z,330nm,5.1s						
MDJ				LR	LR		
	comp=Z,370nm,5.4s						
MDJ				LR	LR		
	comp=Z,330nm,5.5s						
MDJ	**Mudanjiang**	**12.73**	**307**	*e*Pn	**Pn**	**19 55 41.1**	**+0.5**
TJN	**Taejon**	**13.19**	**269**	*i* P	**Pn**	**19 55 47.7**	**+0.8**
TYV	**Tymovskoe**	**13.20**	**357**	*e*P	**Pn**	**19 55 44.8**	**-2.1**
TYV				pmax	pmax		
	comp=Z,300nm,5.5s						
TYV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLR	**Kul'dur**	**14.45**	**327**	*i* P	**Pn**	**19 56 01.8**	**-2.3**
KLR	**Kul'dur**	**14.45**	**327**	Pn	**Pn**	**19 56 02.3**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=130,slow=12,SNR=27						
KLR				LR	LR	20 01 33.7	
	comp=Z,107nm,19.8s,baz=146,slow=37						
CN2	**Changchun**	**15.17**	**299**	*e*P	**Pn**	**19 56 11.3**	**-2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NKL	**Nikolayevsk**	**15.62**	**353**	*e*P	**Pn**	**19 56 17.0**	**-2.4**
PETK	**Petropavlovsk-**	**18.20**	**28**	P	**P**	**19 56 53.1**	**+1.1**
	baz=198,slow=14,SNR=3.6						
PETK				LR	LR	20 06 31.6	
	comp=Z,39nm,18.2s,baz=212,slow=46						
PEA1	**Petropavlovsk-**	**18.21**	**28**	*e*P	**P**	**19 56 53.1**	**+1.0**
ZEA	**Zeya**	**19.69**	**330**	*e*P	**P**	**19 57 08.2**	**-0.2**
ZEA				pmax	pmax		
	comp=N,21nm,0.8s						
ZEA				pmax	pmax		
	comp=E,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,46nm,0.8s						
HIA	**Hailar**	**20.84**	**311**	*e*P	**P**	**19 57 19.1**	**-1.8**
	comp=Z,8.4nm,0.8s						
HIA	**Hailar**	**20.84**	**311**	*i* P	**P**	**19 57 19.5**	**-1.4**
HIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NJ2	**Nanjing**	**21.18**	**262**	*e*P	**P**	**19 57 25.3**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TIA	**Tai'an**	**21.34**	**274**	P	**P**	**19 57 25.3**	**-1.0**
TIA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BJI	**Beijing**	**21.60**	**285**	P	**P**	**19 57 27.3**	**-1.8**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BJT	**Baijiatuau**	**21.60**	**285**	*e*P	**P**	**19 57 26.8**	**-2.4**
	comp=Z,26nm,0.9s						
BJT	**Baijiatuau**	**21.60**	**285**	*e*P	**P**	**19 57 26.8**	**-2.4**
BJT				pmax	pmax		
	comp=Z,26nm,0.9s						
MA2	**Magadan**	**22.36**	**9**	*i* P	**P**	**19 57 35.1**	**-2.0**
MA2				pmax	pmax		
	comp=Z,4.0nm,1.8s						
MA2	**Magadan**	**22.36**	**9**	P	**P**	**19 57 37.4**	**+0.3**
	comp=Z,2.1nm,0.5s,baz=218,slow=10.0,SNR=5.7						
TIY	**Taiyuan**	**24.75**	**280**	*e*P	**P**	**19 58 01.8**	**+1.0**
TIY				pmax	pmax		
	comp=Z,27nm,0.7s						
HHC	**Hu-ho-hao-te**	**25.07**	**287**	*e*P	**P**	**19 58 01.6**	**-2.1**
HHC				sP	pwP	19 58 17.8	+0.3
HHC				S	**S**	**20 02 18.0**	**-8.5**
HHC				sS	sS	20 02 35.9	-1.0
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
HHC				LR	LR		
	comp=Z,140nm,12.8s						
HHC				LR	LR		
	comp=Z,210nm,11.4s						
HHC				LR	LR		
	comp=Z,420nm,14.7s						
SEY	**Seymchan**	**25.82**	**9**	*ce*P	**P**	**19 58 08.6**	**-1.4**
SEY	**Seymchan**	**25.82**	**9**	P	**P**	**19 58 11.5**	**+1.5**
	comp=Z,3.1nm,0.8s,baz=184,slow=6.7,SNR=20						
YAK	**Yakutsk**	**25.89**	**345**	*e*P	**P**	**19 58 10.9**	**+0.2**
YAK				*e**PP	**sP**	**19 58 20.5**	**+1.4**
YAK				*e*		19 58 45.0	
YAK				*e*PPP	PPP	19 58 55.8	
YAK				*e*		20 01 39.8	
YAK				*e*S	**S**	**20 02 39.6**	**+0.8**
YAK				*e*SS	**SnSn**	**20 03 43.6**	**+7.5**
YAK				*e*SSS	SSS	20 04 02.1	
YAK				*e*		20 09 06.3	
YAK				pmax	pmax		
	comp=Z,31nm,0.6s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.6s						
YAK				pmax	pmax		
	comp=Z,383nm,3.5s						
YAK				pmax	pmax		
	comp=N,424nm,3.6s						
YAK				pmax	pmax		
	comp=E,316nm,3.1s						
YAK				smax	smax		
	comp=N,302nm,3.5s						
YAK				smax	smax		
	comp=E,220nm,3.3s						
BTO	**Baotou**	**26.26**	**287**	*e*P	**P**	**19 58 16.1**	**+1.7**
H11N2	**WAKE ISLAND Hy**	**26.92**	**125**	T	T	20 26 38.8	
	baz=317,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**26.93**	**125**	T	T	20 26 36.6	
	baz=317,slow=75,SNR=13						

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H11N3 WAKE ISLAND Hy  26.93 125  T       T        20 26 42.2
      baz=317,slow=75,SNR=17
H11S1 WAKE ISLAND Hy  27.69 127  T       T        20 27 30.9
      baz=319,slow=76,SNR=6.8
H11S3 WAKE ISLAND Hy  27.69 127  T       T        20 27 40.7
      baz=319,slow=76,SNR=7.9
H11S2 WAKE ISLAND Hy  27.70 127  T       T        20 27 32.8
      baz=319,slow=76,SNR=5.4
BOD   Bodaibo         28.02 326 eP       P        19 58 29.4 -0.6
BOD                              pmax    pmax
      comp=Z,9.0nm,1.0s
XAN   Xi'an           28.39 273  P       P        19 58 34.1 +0.6
XAN                              pP      sP       19 58 41.8 -0.2
XAN                              pmax    pmax
      comp=Z,3.0nm,0.6s
XAN                              pmax    pmax
      comp=Z,120nm,4.3s
XAN                              LR      LR
      comp=Z,100nm,4.0s
XAN                              LR      LR
      comp=Z,140nm,4.4s
XAN                              LR      LR
      comp=Z,99nm,5.2s
XAN   Xi'an           28.39 273 eP       P        19 58 33.6 +0.1
      comp=Z,13nm,1.1s
XAN   Xi'an           28.39 273 eP       P        19 58 33.6 +0.1
XAN                              pmax    pmax
      comp=Z,13nm,1.1s
ULN   Ulaanbaatar     28.57 303 eP       P        19 58 36.3 +1.1
      comp=Z,11nm,1.1s
ULN   Ulaanbaatar     28.57 303ceP       P        19 58 36.2 +1.1
ULN                              pmax    pmax
      comp=Z,13nm,1.3s
SONA1 Songino Array   29.00 302 eP       P        19 58 39.7 +0.7
SONA0 Songino Array   29.01 302 eP       P        19 58 40.5 +1.4
SONM  Songino Array   29.01 302  P       P        19 58 40.5 +1.4
      comp=Z,2.8nm,0.5s,baz=104,slow=7.5,SNR=16
SONM                             LR      LR       20 10 27.4
      comp=Z,81nm,19.2s,baz=214,slow=37
ENH   Enshi           29.27 266 eP       P        19 58 42.9 +1.5
      comp=Z,34nm,0.9s
TLY   Talaya          31.35 310 i P      P        19 59 00.2 +0.6
ZAK   Zakamensk       31.37 307 eP       P        19 58 59.7 -0.1
ZAK                              pmax    pmax
      comp=Z,7.0nm,0.9s
LZH   Lanzhou         31.82 280 eP       P        19 59 04.8 +0.8
LZH                              pP      sP       19 59 12.6 +0.1
LZH                              sP      pwP      19 59 16.8 -1.1
LZH                              pmax    pmax
      comp=Z,14nm,1.0s
LZH                              pmax    pmax
      comp=Z,220nm,4.9s
LZH                              LR      LR
      comp=Z,270nm,11.1s
LZH                              LR      LR
      comp=Z,390nm,12.5s
LZH                              LR      LR
      comp=Z,290nm,13.6s
BILL  Bilibino        32.88  15 eP       P        19 59 11.1 -1.6
BILL                             pmax    pmax
      comp=Z,2.0nm,1.0s
MOY   Mondy           32.98 309 eP       P        19 59 17.6 +3.7
MOY                              pmax    pmax
      comp=Z,3.0nm,1.0s
GYA   Guiyang         33.19 261  P       P        19 59 16.4 +0.4
GYA                              pP      pwP      19 59 27.6 -3.0
GYA                              sP      sP       19 59 32.0 +7.4
GYA                              PP      PnPn     20 00 28.4 +2.0
GYA                              S       S        20 04 33.8 -0.5
GYA                              sS      sS       20 04 50.3 +6.2
GYA                              SS      SnSn     20 06 34.0 -0.7
GYA                              pmax    pmax
      comp=Z,10.0nm,0.8s
GYA                              pmax    pmax
      comp=Z,110nm,4.9s
GYA                              LR      LR
      comp=Z,520nm,17.2s
GYA                              LR      LR
      comp=Z,560nm,17.0s
GYA                              LR      LR
      comp=Z,540nm,16.8s
CD2   Chengdu         33.56 271 eP       P        19 59 17.8 -1.3
CD2                              pmax    pmax
      comp=Z,10.0nm,0.5s
CD2                              pmax    pmax
      comp=Z,120nm,4.6s
GTA   Gaotai          34.18 287 ⇑P       P        19 59 25.9 +1.3
GTA                              pP      pwP      19 59 37.3 -1.1
GTA                              S       S        20 04 48.6 -0.8
GTA                              pmax    pmax
      comp=Z,11nm,0.8s
GTA                              pmax    pmax
      comp=Z,84nm,6.4s
GTA                              LR      LR
      comp=Z,120nm,18.7s
GTA                              LR      LR
      comp=Z,180nm,18.7s
GTA                              LR      LR
      comp=Z,140nm,20.0s
KMI   Kunming         36.92 262  P       P        19 59 49.3 +0.9
KMI                              pmax    pmax
      comp=Z,3.0nm,1.0s
KMI                              pmax    pmax
      comp=Z,78nm,4.3s
KMI   Kunming         36.92 262 eP       P        19 59 46.6 -1.7
      comp=Z,6.6nm,0.8s
KMI   Kunming         36.92 262 eP       P        19 59 46.6 -1.7
KMI                              pmax    pmax
      comp=Z,7.0nm,0.8s
ANM   Nome            40.06  31 eP       P        20 00 15.6 +1.7
      comp=Z,11nm,1.4s
ANM   Nome            40.06  31 eP       P        20 00 15.6 +1.7
ANM                              pmax    pmax
      comp=Z,11nm,1.4s
JAY   Jayapura        40.10 185  P       P        20 00 13.2 -1.6
      comp=Z,13nm,0.8s,baz=315,slow=5.7,SNR=2.9
DGZ   Jazzator, Alta  41.55 305diP       P        20 00 26.2 -0.4
DGZ                              pmax    pmax
      comp=Z,14nm,0.8s
WMQ   Urumqi          42.23 297 eP       P        20 00 33.9 +1.7
WMQ                              pP      sP       20 00 39.8 -1.0
WMQ                              sP      pwP      20 00 46.1  0.0
WMQ                              pmax    pmax
      comp=Z,22nm,1.1s
WMQ                              pmax    pmax
      comp=Z,240nm,3.9s
WMQ                              LR      LR
      comp=Z,58nm,19.1s
WMQ                              LR      LR
      comp=Z,44nm,25.9s
WMQ                              LR      LR
      comp=Z,100nm,25.9s
WMQ   Urumqi          42.23 297 eP       P        20 00 31.3 -0.9
      comp=Z,6.6nm,0.8s
WMQ   Urumqi          42.23 297 eP       P        20 00 31.3 -0.9
WMQ                              pmax    pmax
      comp=Z,7.0nm,0.8s
ZAA0  Zalesovo Array  42.88 312 eP       P        20 00 37.5 +0.4
      comp=Z,12nm,0.8s
ZAA1  Zalesovo Array  42.88 312 eP       P        20 00 38.0 +0.9
ZALV  Zalesovo Beam   42.88 312 eP       P        20 00 36.9 -0.3
ZALV  Zalesovo Beam   42.88 312  P       P        20 00 38.0 +0.9
      comp=Z,4.1nm,0.9s,baz=80,slow=9.2,SNR=20
CMMT  Chiang Mai      43.28 257  P       P        20 00 43.2 +2.3
      comp=Z,4.1nm,0.9s
CHTO  Chiang Mai      43.28 257 eP       P        20 00 41.3 +0.4
      comp=Z,7.1nm,1.3s
CHTO  Chiang Mai      43.28 257 eP       P        20 00 41.3 +0.4
CHTO                             pmax    pmax
      comp=Z,7.0nm,1.3s
CHTO  Chiang Mai      43.28 257  P       P        20 00 43.3 +2.4
      comp=Z,18nm,0.9s
NRIK  Noril'sk        43.48 335  LR      LR       20 19 46.5
      comp=Z,53nm,20.4s,baz=30,slow=37
CM31  Chiang Mai Arr  43.49 257 eP       P        20 00 43.3 +0.7
CMAR  Chiang Mai Arr  43.49 257ceP       P        20 00 44.0 +1.4
CMAR                             pmax    pmax
      comp=Z,2.0nm,0.8s
CMAR  Chiang Mai Arr  43.49 257  P       P        20 00 43.8 +1.2
      comp=Z,1.5nm,0.8s,baz=47,slow=6.2,SNR=15
CMAR                             LR      LR       20 19 35.7
      comp=Z,37nm,19.9s,baz=34,slow=37
CM01  Chiang Mai Arr  43.50 256 eP       P        20 00 43.4 +0.7
NVS   Novosibirsk     43.76 313 eP       P        20 00 50.6 +6.3
LSA   Lhasa           44.03 276 eP       P        20 00 47.8 +0.4
      comp=Z,8.8nm,1.5s
LSA   Lhasa           44.03 276 eP       P        20 00 47.8 +0.4
LSA                              pmax    pmax
      comp=Z,9.0nm,1.5s
IM3   Indian Mountai  45.13  31 eP       P        20 00 55.4 +0.3
KDAK  Kodiak Island   45.35  42  P       P        20 00 57.6 +0.7
      comp=Z,12nm,0.7s,baz=279,slow=3.5,SNR=6.3
MK01  Makanchi Array  45.37 302 eP       P        20 00 57.8 +0.4
MK31  Makanchi Array  45.38 302 eP       P        20 00 58.1 +0.7
MK32  Makanchi Array  45.38 302 eP       P        20 00 58.3 +0.9
MKAR  Makanchi Array  45.38 302 eP       P        20 00 58.0 +0.6
      comp=Z,41nm,1.0s
MKAR  Makanchi Array  45.38 302  P       P        20 00 58.3 +0.9
      comp=Z,4.5nm,0.8s,baz=86,slow=9.6,SNR=48
MKAR                             LR      LR       20 21 56.9
      comp=Z,30nm,18.1s,baz=50,slow=39
MAKZ  Makanchi        45.58 302 eP       P        20 00 59.9 +0.9
      comp=Z,5.2nm,1.0s
MAKZ  Makanchi        45.58 302 eP       P        20 00 59.9 +0.9
MAKZ                             pmax    pmax
      comp=Z,5.0nm,1.0s
SUA   Susitna One     46.20  37 eP       P        20 01 03.8  0.0
      comp=Z,11nm,1.0s
MLY   Manley          46.29  32 eP       P        20 01 05.7 +1.3
      comp=Z,18nm,1.6s
KURK  Kurchatov       47.02 308 eP       P        20 01 10.2 +0.1
      comp=Z,19nm,0.6s
KURK  Kurchatov       47.02 308ceP       P        20 01 10.5 +0.3
KURK                             pmax    pmax
      comp=Z,16nm,1.0s
TOLK  Toolik Lake Re  47.03  27 eP       P        20 01 09.9 -0.1
      comp=Z,7.1nm,1.1s
RND   Reindeer        47.07  35 eP       P        20 01 11.5 +1.0
      comp=Z,34nm,1.5s
RND   Reindeer        47.07  35 eP       P        20 01 11.5 +1.0
RND                              pmax    pmax
      comp=Z,34nm,1.5s
KURBB Kurchatov Arra  47.09 308  P       P        20 01 11.2 +0.5
      comp=Z,6.2nm,0.7s,baz=82,slow=8.3,SNR=36
MDM   Murphy Dome     47.36  32 eP       P        20 01 14.6 +1.9
      comp=Z,18nm,1.4s
HDA   Harding Lake    47.91  33 eP       P        20 01 17.6 +0.7
      comp=Z,31nm,1.8s
IL1   Eielson Array   47.93  33 eP       P        20 01 18.1 +1.0
ILAR  Eielson Array   47.93  33  P       P        20 01 17.8 +0.7
      comp=Z,3.5nm,0.7s,baz=260,slow=6.0,SNR=50
ILB   Eielson Array   47.93  33 eP       P        20 01 17.8 +0.7
PDGK  Podgornoye      48.14 298  P       P        20 01 18.8 -0.4
PDGK                             pmax    pmax
      comp=Z,8.0nm,1.1s
JIRN  Jiri            48.84 276 eP       P        20 01 26.4 +1.4
      comp=Z,22nm,0.4s
RAMN  Ramite          48.84 275 eP       P        20 01 25.6 +0.7
GUN   Gumba           48.97 276 eP       P        20 01 27.3 +1.3
      comp=Z,48nm,0.8s
SCRK  Sand Creek      49.22  34 eP       P        20 01 28.2 +1.1
      comp=Z,28nm,1.8s
PKI   Pulchoki        49.49 276 eP       P        20 01 30.5 +0.5
PKIN  Phulchoki       49.50 276 eP       P        20 01 30.7 +0.7
TARG  Taragay, Kyrgy  49.80 296 eP       P        20 01 32.4 +0.1
      comp=Z,4.9nm,0.8s
DANN  Dangsing        50.44 278 eP       P        20 01 38.2 +1.1
      comp=Z,52nm,0.7s
KOLN  Koldanda        50.83 277 eP       P        20 01 40.8 +0.8
      comp=Z,19nm,0.9s
TKM2  Tokmak 2        50.98 299  P       P        20 01 42.5 +1.5
      SNR=22
PYUN  Piuthan         51.15 278 eP       P        20 01 43.4 +1.0
      comp=Z,24nm,0.6s
NRN   Naryn           51.18 297 eP       P        20 01 41.2 -1.4
      comp=Z,3.3nm,0.8s
NRN   Naryn           51.18 297 eP       P        20 01 41.2 -1.4
NRN                              pmax    pmax
      comp=Z,3.0nm,0.8s
COEN  Coen            51.37 181 eP       P        20 01 44.0 +0.3
      comp=Z,7.6nm,0.8s
KBK   Karagaybulak    51.52 298  P       P        20 01 46.3 +1.4
      SNR=14
BVAR  Borovoye Array  51.53 312  P       P        20 01 45.3 +0.6
      comp=Z,2.0nm,0.7s,baz=76,slow=8.9,SNR=18
OTUK  Ortayu          51.57 306  P       P        20 01 44.8 -0.3
OTUK                             pmax    pmax
      comp=Z,3.0nm,0.8s
BRVK  Borovoye        51.59 312 eP       P        20 01 45.3 +0.3
      comp=Z,5.6nm,0.8s
BRVK  Borovoye        51.59 312 i P      P        20 01 45.5 +0.5
BRVK                             pmax    pmax
      comp=Z,3.0nm,0.8s
USP   Ospenovka       51.63 299  P       P        20 01 46.6 +1.0
      SNR=6.4
FRU   Bishkek         51.69 299 eP       P        20 01 46.0  0.0
AAK   Ala-Archa       51.84 299ceP       P        20 01 47.8 +0.5
AAK                              pmax    pmax
      comp=Z,6.0nm,1.7s
AAK   Ala-Archa       51.84 299  P       P        20 01 47.6 +0.3
      comp=Z,1.9nm,0.8s,baz=147,slow=3.5,SNR=9.8
KSH   Kashi           51.86 294  P       P        20 01 53.1 +5.6
KSH                              pP      pwP      20 02 02.8 +1.5
KSH                              PP      PP       20 03 52.3 +7.1
KSH                              pmax    pmax
      comp=Z,290nm,5.0s
EPYK  Eagle Plains    52.02  30 eP       P        20 01 50.0 +1.9
      comp=Z,15nm,1.2s
EKS2  Erkin-Say       52.33 299  P       P        20 01 52.3 +1.4
      SNR=5.8
AML   Almayashu       52.57 298  P       P        20 01 54.7 +1.7
      SNR=8.9
INK   Inuvik          52.94  28  P       P        20 01 56.0 +1.2
      comp=Z,1.5nm,0.7s,baz=290,slow=6.4,SNR=7.7
MNAS  Manas           53.27 299  P       P        20 01 59.3 +1.4
MNAS                             pmax    pmax
      comp=Z,12nm,0.8s
SFK   Sufi-Kurgan     53.46 296  P       P        20 01 59.7 +0.3
SFK                              pmax    pmax
      comp=Z,7.0nm,1.0s
PSI   Prapat          53.76 241  LR      LR       20 26 05.2
      comp=Z,38nm,18.3s,baz=291,slow=37
KK31  Karatay Array   54.43 300 eP       P        20 02 06.4 +0.2
KK31  Karatay Array   54.43 300 eP       P        20 02 06.4 +0.2
KKAR  Karatay Array   54.43 300 eP       P        20 02 06.4 +0.2
KKAR  Karatay Array   54.43 300 eP       P        20 02 06.4 +0.2
SVE   Sverdlovsk      55.91 319 eP       P        20 02 18.0 +1.4
SVE                              pmax    pmax
      comp=Z,10.0nm,0.8s
GAR   Garm            56.12 296 eP       P        20 02 18.5 -0.1
      comp=Z,13nm,1.0s
GAR   Garm            56.12 296 eP       P        20 02 18.5 -0.1
GAR                              pmax    pmax
      comp=Z,13nm,1.0s
NIL   Nilore          56.20 289 eP       P        20 02 18.9 -0.2
      comp=Z,9.1nm,1.0s
NIL   Nilore          56.20 289 eP       P        20 02 18.9 -0.2
NIL                              pmax    pmax
      comp=Z,9.0nm,1.0s
DLBC  Dease Lake      56.94  39  P       P        20 02 25.8 +1.7
      comp=Z,1.9nm,0.8s,baz=274,slow=18,SNR=4.3
ARU   Arti            57.12 319 eP       P        20 02 25.9 +0.7
      comp=Z,8.9nm,1.0s
ARU   Arti            57.12 319ceP       P        20 02 25.6 +0.4
ARU                              pmax    pmax
      comp=Z,9.0nm,1.0s
WRAB  Tennant Creek   57.99 190 eP       P        20 02 30.6 -1.1
      comp=Z,17nm,0.8s
WRAB  Tennant Creek   57.99 190ceP       P        20 02 30.6 -1.1
WRAB                             pmax    pmax
      comp=Z,16nm,0.7s
WB2   Warramunga Arr  58.00 190 eP       P        20 02 30.3 -1.5
WR1   Warramunga Arr  58.01 190 eP       P        20 02 31.4 -0.4
      comp=Z,18nm,0.8s
WR1                             ePcP     PcP      20 03 24.3 +0.7
WRA   Warramunga Arr  58.01 190  P       P        20 02 31.4 -0.5
      comp=Z,15nm,0.7s,baz=11,slow=7.4,SNR=119
WRA                              PcP     PcP      20 03 24.3 +0.7
      comp=Z,1.4nm,0.8s,baz=2.0,slow=4.0,SNR=5.2
KBL   Kabul           58.94 292  P       P        20 02 38.1 -0.5
KBL                              pmax    pmax
      comp=Z,8.0nm,0.9s
ABKAR Akbulak array   58.96 311 eP       P        20 02 38.3 +0.1
AKTO  Aktyubinsk      59.64 312  P       P        20 02 43.2 +0.3
      comp=Z,3.1nm,0.8s,baz=73,slow=11,SNR=8.1
KIRV  Kirov           60.86 323  P       P        20 02 52.4 +1.3
      comp=Z,3.0nm,0.5s,baz=348,slow=6.6,SNR=3.6
PRGR  Permogore       61.24 327 eP       P        20 02 53.3 -0.3
PRGR                             pmax    pmax
      comp=Z,3.0nm,0.7s
RES   Resolute Bay    61.49  15 eP       P        20 02 55.6 +0.4
      comp=Z,3.1nm,0.9s
RES   Resolute Bay    61.49  15  P       P        20 02 55.5 +0.4
      comp=Z,1.4nm,0.8s,baz=339,slow=5.4,SNR=7.6
AS01  Alice Springs   61.72 190 eP       P        20 02 57.2 -0.1
AS31  Alice Springs   61.73 190 eP       P        20 02 57.1 -0.2
      comp=Z,1.5nm,0.6s
ASAR  Alice Springs   61.73 190  P       P        20 02 57.3 -0.1
      comp=Z,5.2nm,0.8s,baz=12,slow=6.9,SNR=64
YKA   Yellowknife Ar  62.29  31  P       P        20 03 01.2 +0.6
      comp=Z,1.3nm,0.7s,baz=302,slow=6.6,SNR=15
ARA0  ARCESS Array S  64.04 340 eP       P        20 03 13.7 +1.4
ARCES ARCESS Array B  64.04 340  P       P        20 03 13.7 +1.4
      comp=Z,4.7nm,1.0s,baz=74,slow=10,SNR=3.4
GEYT  Alibeck         65.16 300  P       P        20 03 20.8 +0.6
      comp=Z,2.3nm,0.7s,baz=57,slow=5.5,SNR=4.7
GEYT                             LR      LR       20 33 23.6
      comp=Z,20nm,18.4s,baz=285,slow=38
OBN   Obninsk         68.69 324 eP       P        20 03 42.0 -0.2
OBN                              pmax    pmax
      comp=Z,4.0nm,0.7s
FIA0  FINESS Array S  69.11 333 eP       P        20 03 45.3 +0.7
FIA0  FINESS Array S  69.11 333 eP       P        20 03 45.3 +0.7
FINES FINESS Array B  69.11 333  P       P        20 03 45.3 +0.7
      comp=Z,2.0nm,0.7s,baz=46,slow=8.2,SNR=6.9
FINES                            LR      LR       20 36 02.9
      comp=Z,32nm,20.0s,baz=38,slow=38
STKA  Stephens Creek  69.23 182 eP       P        20 03 45.8 +0.1
      comp=Z,2.5nm,1.4s
STKA  Stephens Creek  69.23 182 eP       P        20 03 45.8 +0.1
STKA                             pmax    pmax
      comp=Z,3.0nm,1.4s
STKA  Stephens Creek  69.23 182  P       P        20 03 46.1 +0.4
      comp=Z,3.3nm,0.8s,baz=1.7,slow=6.8,SNR=7.7
VSR   Storozhevoye    69.67 320 eP       P        20 03 48.2 -0.1
VSR                              pmax    pmax
      comp=Z,5.0nm,1.3s
ZEI   Tsey            71.83 310 eP       P        20 04 01.4 -0.5
ZEI                              pmax    pmax
      comp=Z,3.0nm,0.8s
KIV   Kislovodsk      71.89 312 eP       P        20 04 02.7 +0.6
      comp=Z,12nm,0.9s
KIV   Kislovodsk      71.89 312 eP       P        20 04 02.0 -0.1
KIV                              pmax    pmax
      comp=Z,13nm,1.0s
KIV                              MLR     MLR
      comp=Z,26nm,18.0s
KBZ   Khabaz          71.90 312  P       P        20 04 03.3 +1.3
      comp=Z,3.9nm,0.9s,baz=110,slow=3.7,SNR=11
FFC   Flin Flon       72.12  34 eP       P        20 04 03.7 +0.5
      comp=Z,3.3nm,0.8s
FFC   Flin Flon       72.12  34 eP       P        20 04 03.7 +0.5
FFC                              pmax    pmax
      comp=Z,3.0nm,0.8s
MCMT  McKenzie Canyo  72.71  46 eP       P        20 04 06.3 -0.9
GNI   Garni           72.82 308 i P      P        20 04 08.2 +0.4
GNI                              pmax    pmax
      comp=Z,11nm,1.0s
GNI   Garni           72.82 308  P       P        20 04 07.7 -0.1
      comp=Z,1.3nm,0.3s,baz=240,slow=20,SNR=2.0
BOZ   Bozeman (W)     72.95  45 eP       P        20 04 09.7 +1.2
      comp=Z,2.6nm,0.7s
BOZ   Bozeman (W)     72.95  45 eP       P        20 04 09.7 +1.2
BOZ                              pmax    pmax
      comp=Z,3.0nm,0.7s
NV01  Mina Array Sit  73.08  54 eP       P        20 04 09.9 +0.5
NVAR  Mina Array Bea  73.08  54  P       P        20 04 10.9 +1.5
      comp=Z,1.0nm,0.7s,baz=289,slow=6.3,SNR=5.5
HFS   Hagfors         74.26 337  P       P        20 04 15.9 +0.2
      comp=Z,2.2nm,0.9s,baz=59,slow=8.6,SNR=7.7
HFS                              LR      LR       20 39 48.0
      comp=Z,43nm,18.1s,baz=64,slow=38
NB2   NORSAR Subarra  74.30 338  P       P        20 04 17.5 +1.5
      comp=Z,0.4nm,0.6s,baz=36,slow=6.2
NB200 NORSAR Array S  74.30 338 eP       P        20 04 17.3 +1.3
NOA   NORSAR Array B  74.30 338  P       P        20 04 17.3 +1.3
NOA                              pmax    pmax
      comp=Z,2.0nm,0.9s
NOA                              MLR     MLR
      comp=Z,20nm,21.6s
NOA   NORSAR Array B  74.30 338  P       P        20 04 17.3 +1.3
      comp=Z,0.5nm,0.6s,baz=222,slow=7.9,SNR=3.4
NOA                              LR      LR       20 39 50.0
      comp=Z,20nm,21.6s,baz=285,slow=38
IMW   Indian Meadow   74.36  46 eP       P        20 04 19.0 +2.0
      comp=Z,3.9nm,0.8s
FXWY  Fox Creek       74.47  47 eP       P        20 04 19.2 +1.6
      comp=Z,2.2nm,0.9s
MOOW  Moose Ponds     74.57  46 eP       P        20 04 18.9 +0.9
      comp=Z,12nm,1.9s
AKASG Malin Array Be  74.92 323  P       P        20 04 20.5 +0.8
      comp=Z,1.3nm,0.6s,baz=44,slow=6.5,SNR=3.1
AKBB  Malin Array Si  74.92 323 eP       P        20 04 18.6 -1.1
      comp=Z,6.4nm,0.9s
AKBB  Malin Array Si  74.92 323 eP       P        20 04 18.6 -1.1
AKBB                             pmax    pmax
      comp=Z,6.0nm,0.9s
KIEV  Kiev            74.94 323 i P      P        20 04 17.4 -2.3
KIEV                             pmax    pmax
      comp=Z,3.0nm,1.2s
FRB   Frobisher Bay   75.69  14  P       P        20 04 24.4 +0.6
      comp=Z,1.8nm,0.7s,baz=308,slow=9.9,SNR=3.3
PD31  Pinedale Array  75.85  47 eP       P        20 04 25.9 +0.4
PDAR  Pinedale Array  75.85  47 eP       P        20 04 26.0 +0.5
PDAR  Pinedale Array  75.85  47  P       P        20 04 26.2 +0.7
      comp=Z,1.6nm,0.7s,baz=270,slow=2.5,SNR=12
SRU   San Rafael Swe  77.55  50 eP       P        20 04 35.9 +0.8
      comp=Z,8.1nm,0.7s
SRU   San Rafael Swe  77.55  50 eP       P        20 04 35.9 +0.8
SRU                              pmax    pmax
      comp=Z,8.0nm,0.7s
ULM   Lac du Bonnet   77.91  35  P       P        20 04 38.0 +1.4
      comp=Z,1.4nm,0.6s,baz=332,slow=16,SNR=3.3
BUR08 Bucovina Ar. S  78.94 323 eP       P        20 04 43.1 +0.6
BUR04 Bucovina Ar. S  78.95 323 eP       P        20 04 43.7 +1.1
PV17  East Wray Mesa  79.03  50 eP       P        20 04 44.6 +1.3
      comp=Z,12nm,0.7s
PV01  Paradox Valley  79.36  50 eP       P        20 04 43.7 -1.5
      comp=Z,6.4nm,0.8s
BR101 Keskin Array S  79.82 313 eP       P        20 04 49.1 +1.6
BRTR  Keskin Array B  79.82 313  P       P        20 04 49.1 +1.6
      comp=Z,0.2nm,0.6s,baz=23,slow=7.8,SNR=3.7
VRAC  Vranov          81.58 328  P       P        20 04 59.0 +2.4
VRAC                             pmax    pmax
      comp=Z,2.0nm,0.6s
VRAC  Vranov          81.58 328  P       P        20 04 59.0 +2.4
      comp=Z,1.8nm,0.6s,baz=53,slow=10,SNR=3.0
ANMO  Albuquerque     82.72  51ceP       P        20 04 59.2 -3.9
ANMO                             pmax    pmax
      comp=Z,6.0nm,0.6s
LENM  Lemitar         82.91  52 eP       P        20 05 05.5 +1.5
GERES GERESS Array B  83.13 329  LR      LR       20 46 43.9
      comp=Z,29nm,21.2s,baz=12,slow=39
PPT   Papeete         83.25 118  LR      LR       20 34 30.9
      comp=Z,44nm,21.3s,baz=248,slow=30
LTX   Lajitas         88.22  54 eP       P        20 05 30.7 +0.3
LTX   Lajitas         88.22  54 eP       P        20 05 30.7 +0.3
TXAR  Lajitas Array   88.22  54  P       P        20 05 30.7 +0.3
      comp=Z,0.4nm,0.5s,baz=320,slow=3.1,SNR=7.1
VNA2  Neumayer--Watz 143.46 195  PKP     PKPbc    20 12 10.0 +0.5
VNA3  Neumayer Olymp 143.67 194  PKP     PKPbc    20 12 10.3 +0.1
LPAZ  La Paz         144.73  62 ePKPdf   PKPdf    20 12 17.0 +0.1
LPAZ  La Paz         144.73  62 ePKIKP   PKPdf    20 12 17.0 +0.1
LPAZ  La Paz         144.73  62  PKP     PKPdf    20 12 17.2 +0.3
      comp=Z,0.9nm,0.7s,baz=329,slow=4.5,SNR=3.6
```

KRSC 13 19:53:41.4±1.1,54°.35N×161°.98E,h31^{km}±10^{km},ML3.6,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.25**	**325**	*e*P	Pb	19 53 48.3	+0.1
KZV	**Kizimen**	**1.24**	**309**	*e*P	Pn	19 54 03.4	+0.7
TUMD	**Tumrok D**	**1.25**	**314**	*e*P	Pn	19 54 02.8	+0.1
TUMD				*e*S	Sn	19 54 18.7	+0.2
TUMR	**Tumrok**	**1.41**	**312**	*e*P	Pn	19 54 05.8	+0.8
KII	**Karymskiy**	**1.52**	**259**	*e*P	Pb	19 54 08.0	-0.9
SPN	**Mys Shipunski**	**1.71**	**223**	*e*P	Pn	19 54 09.6	+0.6
SPN				*e*S	Sn	19 54 29.5	-0.3
BZGR	**Bezymyannyi-Gr**	**1.75**	**336**	*e*P	Pb	19 54 11.7	-1.2
ZLN	**Zelenaya**	**1.80**	**339**	*e*P	Pb	19 54 12.5	-1.2
ZLN				*e*S	Sb	19 54 35.3	-0.5
LGNR	**Loginova**	**1.88**	**337**	*e*P	Pb	19 54 13.9	-1.3
CIRR	**Tsirk**	**1.90**	**339**	*e*P	Pb	19 54 14.2	-1.3
KBTR	**Krutoberegovo**	**1.92**	**14**	*e*P	Pn	19 54 13.4	+1.5
KBG	**Krutoberegovo**	**1.95**	**12**	*e*P	Pn	19 54 14.0	+1.7
KBG				*e*S	Sn	19 54 37.6	+1.9

NLC	Nalytchevo	1.96	234	*e*P	Pb	19 54 15.5	-0.8
KOZ	Kozyrevsk	2.09	326	*e*P	Pn	19 54 15.8	+1.5
SMAR	Somma	2.18	241	*e*P	Pb	19 54 18.0	-2.2
UGLR	Uglovaya	2.19	240	*e*P	Pb	19 54 18.2	-2.2
UGLR				*e*S	Sb	19 54 45.1	-2.1
AVH	Avacha	2.21	242	*e*P	Pb	19 54 18.7	-1.9
KRX	Arik	2.21	245	*e*P	Pb	19 54 18.5	-2.2
KRX				*e*S	Sn	19 54 44.9	+2.6
KOK	Koryaka	2.25	243	*e*P	Pb	19 54 19.3	-2.0
SMKR	Semkarok	2.25	353	*e*P	Pb	19 54 19.6	-1.8
BDR	Baidarnaya	2.26	349	*e*P	Pb	19 54 19.7	-1.9
DALK	Dalny	2.33	237	*e*P	Pb	19 54 20.1	-2.5
DALK				*e*S	Sb	19 54 48.0	-2.9
SRKR	Sorokina	2.35	349	*e*P	Pb	19 54 21.2	-1.9
GNL	Ganaly	2.47	256	*e*P	Pb	19 54 22.6	-2.5
KRMR	Karymshinskiy	2.75	238	*e*P	Pn	19 54 26.5	+3.2
KRMR				*e*S	Sb	19 54 59.6	-3.5
RUS	Russkaya	2.83	229	*e*P	Pn	19 54 27.6	+3.3
APC	Apacha	3.21	245	*e*P	Pn	19 54 32.9	+3.4
KDTR	Khodutka, Kamc	3.47	224	*e*P	Pn	19 54 37.4	+4.3

ISCJB ***13*** *20:06:16.8±0.4, 50°.87N±0°.05×156°.50E±0°.09, h145^{km}±2^{km}, mb3.7/30, Error ellipse: s-maj=11.7km s-min=4.8km az=44.4*

MOS ***13*** *20:06:16.8±1.1, 50°.68N×156°.94E, h121^{km}, mb4.2/7, Error ellipse: s-maj=12.5km s-min=4.8km az=73.5*

MOS Felt (II) at Severo-Kuril'sk.

KRSC ***13*** *20:06:16.4±1.4, 50°.65N×157°.01E, h123^{km}±13^{km}, ML4.4, FELT [II] at Severo-Kurilsk.*

IDC ***13*** *20:06:19.5±1.4, 51°.00N×156°.38E, h152^{km}±10^{km}, mb3.4/23, mb1 3.6/27, mb1mx3.5/49, mbtmp3.8/27, MS2.6/1, Ms1 2.6/1, ms1mx2.1/37, Error ellipse: s-maj=15.9km s-min=10.9km az=149.0*

ISC 13 20:06:17.0±0.7**, 50°.75N**±0°.07×**156°.71E**±0°.06**, h137**^{km}±5^{km}**, n96, σ1^{s}.25**/117**, mb3.8**/30**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.39	260	*e*P	Pn	20 06 36.4	+0.3
SKR				*e*S	Sn	20 06 50.1	-0.7
SKR	Severo-Kuril's	0.39	260	⇓*i*PN	Pn	20 06 36.5	+0.3
SKR				*i* S	Sn	20 06 50.1	-0.7
SKR				pmax	pmax		
	comp=Z,457nm,0.4s						
SKR				smax	smax		
	comp=N,16µm,0.5s						
SKR				smax	smax		
	comp=E,10µm,0.2s						
PAU	Pauzhetka	0.72	5	*e*P	Pn	20 06 38.5	+0.4
PAU				*e*S	Sn	20 06 54.6	+0.3
PAU	Pauzhetka	0.72	5	PN	Pn	20 06 38.5	+0.4
PAU				S	Sn	20 06 54.6	+0.3
ALID	Alaid	0.75	279	*e*P	Pn	20 06 39.1	+0.5
ALID				*e*S	Sn	20 06 55.2	+0.3
KDTR	Khodutka, Kamc	1.36	38	*e*P	Pn	20 06 43.9	-0.1
KDTR				*e*S	Sn	20 07 03.4	-1.2
KDTR	Khodutka, Kamc	1.36	38	PN	Pn	20 06 43.9	-0.1
KDTR				S	Sn	20 07 03.4	-1.2
MTVR	Mutnovka	1.96	27	*e*P	Pn	20 06 51.9	+1.0
MTVR				*e*S	Sn	20 07 17.2	+0.2
MTVR	Mutnovka	1.96	27	PN	Pn	20 06 51.9	+1.0
MTVR				S	Sn	20 07 17.2	+0.2
GRL	Gorelyy	1.99	25	*e*P	Pn	20 06 52.5	+1.2
GRL				*e*S	Sn	20 07 18.4	+0.8
GRL	Gorelyy	1.99	25	PN	Pn	20 06 52.5	+1.2
GRL				S	Sn	20 07 18.4	+0.8
RUS	Russkaya	2.02	33	*e*P	Pn	20 06 51.5	0.0
RUS				*e*S	Sn	20 07 16.6	-1.4
RUS	Russkaya	2.02	33	PN	Pn	20 06 51.5	0.0
RUS				S	Sn	20 07 16.6	-1.4
APC	Apacha	2.19	7	*e*P	Pn	20 06 54.4	+0.8
APC	Apacha	2.19	7	PN	Pn	20 06 54.4	+0.8
KRMR	Karymshinskiy	2.26	22	*e*P	Pn	20 06 55.3	+0.9
KRMR				*e*S	Sn	20 07 23.3	+0.1
KRMR	Karymshinskiy	2.26	22	PN	Pn	20 06 55.3	+0.9
KRMR				S	Sn	20 07 23.3	+0.1
PETK	Petropavlovsk-	2.44	14	P	Pn	20 06 57.7	+1.1
	comp=E,3.8nm,0.3s,baz=174,slow=12,SNR=130						
PETK				S	Sn	20 07 27.7	+0.5
	comp=E,5.3nm,0.3s,baz=176,slow=18,SNR=8.1						
PET	Petropavlovsk	2.57	27	*e*P	Pn	20 06 59.4	+1.2
PET				*e*S	Sn	20 07 30.0	-0.1
PET	Petropavlovsk	2.57	27	⇓*i*PN	Pn	20 06 59.5	+1.2
PET				*i* S	Sn	20 07 30.0	-0.1
PET				pmax	pmax		
	comp=Z,19nm,0.4s						
PET				smax	smax		
	comp=N,490nm,0.6s						
PET				smax	smax		
	comp=E,153nm,0.5s						
DALK	Dalny	2.61	28	*e*P	Pn	20 06 59.6	+0.9
DALK				*e*S	Sn	20 07 30.6	-0.3
DALK	Dalny	2.61	28	PN	Pn	20 06 59.6	+0.9
DALK				S	Sn	20 07 30.6	-0.3
UGLR	Uglovaya	2.79	27	*e*P	Pn	20 07 02.8	+1.7
UGLR	Uglovaya	2.79	27	PN	Pn	20 07 02.8	+1.7
KOK	Koryaka	2.81	24	*e*P	Pn	20 07 03.4	+2.0
KOK	Koryaka	2.81	24	PN	Pn	20 07 03.4	+2.0
AVH	Avacha	2.81	26	*e*P	Pn	20 07 03.3	+1.9
AVH				*e*S	Sn	20 07 36.9	+1.2
AVH	Avacha	2.81	26	PN	Pn	20 07 03.3	+1.9
AVH				S	Sn	20 07 36.9	+1.2
SMAR	Somma	2.83	26	*e*P	Pn	20 07 03.2	+1.5
SMAR	Somma	2.83	26	PN	Pn	20 07 03.2	+1.5
KRX	Arik	2.87	24	*e*P	Pn	20 07 03.7	+1.5
KRX				*e*S	Sn	20 07 37.3	+0.1
KRX	Arik	2.87	24	PN	Pn	20 07 03.7	+1.5
KRX				S	Sn	20 07 37.3	+0.1
NLC	Nalytchevo	2.92	33	*e*P	Pn	20 07 02.5	-0.1
NLC	Nalytchevo	2.92	33	PN	Pn	20 07 02.5	-0.1
GNL	Ganaly	3.04	14	*e*P	Pn	20 07 05.7	+1.3
GNL	Ganaly	3.04	14	PN	Pn	20 07 05.7	+1.3
SPN	Mys Shipunski	3.12	40	*e*P	Pn	20 07 05.3	+0.1
SPN				*e*S	Sn	20 07 39.6	-3.0
SPN	Mys Shipunski	3.12	40	PN	Pn	20 07 05.3	+0.1
SPN				S	Sn	20 07 39.6	-3.0
MKZ	Mys Kozlova	4.88	37	*e*P	Pn	20 07 27.9	-0.5
MKZ	Mys Kozlova	4.88	37	PN	Pn	20 07 27.9	-0.5
TUMD	Tumrok D	4.98	25	*e*P	Pn	20 07 32.1	+2.3
TUMR	Tumrok	4.99	23	PN	Pn	20 07 32.1	+2.1
KBTR	Krutoberegovo	6.57	31	*e*P	Pn	20 07 50.9	-0.1
KBTR	Krutoberegovo	6.57	31	PN	Pn	20 07 50.9	-0.1
MA2	Magadan	9.47	341	P	Pn	20 08 33.0	+3.2
	comp=E,0.4nm,0.3s,baz=136,slow=10,SNR=6.1						
MA2				LR	LR	20 12 38.0	
	comp=E,33nm,18.2s,baz=194,slow=41						
SHO	Shikotan	9.61	228	*e*PN	Pn	20 08 29.7	-2.1
YUK	Yuzh-Kuril'sk	9.96	232	*i* PN	Pn	20 08 38.2	+1.7
ASAJ	Asahikawa	11.63	241	P	Pn	20 09 00.2	+1.6
	comp=E,0.1nm,0.3s,baz=61,slow=19,SNR=1.8						
SEY	Seymchan	12.44	351	*i* PN	Pn	20 09 08.2	-0.8
SEY	Seymchan	12.44	351	P	Pn	20 09 09.2	+0.2
	comp=E,0.1nm,0.3s,baz=150,slow=9.2,SNR=6.0						
KLR	Kul'dur	16.11	274	P	Pn	20 09 54.7	-0.8
	comp=E,0.1nm,0.3s,baz=56,slow=11,SNR=2.3						
BILL	Bilibino	17.97	12	*e*P	P	20 10 15.8	-0.6
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK	Yakutsk	18.58	318	*e*P	P	20 10 22.3	-0.8
YAK				pmax	pmax		
	comp=Z,64nm,0.6s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,32nm,0.9s						
ILAR	Eielson Array	31.96	42	P	P	20 12 30.0	+0.7
	comp=E,1.0nm,0.6s,baz=264,slow=6.0,SNR=12						
H11N2	WAKE ISLAND Hy	31.99	162	T	T	20 46 30.1	
	baz=348,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	32.00	162	T	T	20 46 34.2	
	baz=348,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	32.00	162	T	T	20 46 31.4	
	baz=348,slow=76,SNR=31						
SONM	Songino Array	32.44	285	*e*P	P	20 12 34.9	+1.0
SONM	Songino Array	32.44	285	P	P	20 12 32.9	-1.0
	comp=E,0.2nm,0.4s,baz=67,slow=7.0,SNR=7.4						
SONM				PcP	PcP	20 15 18.5	+0.8
	comp=E,0.4nm,0.9s,baz=29,slow=3.3,SNR=4.4						
TLY	Talaya	32.65	293	*i* P	P	20 12 35.9	+0.3
H11S1	WAKE ISLAND Hy	33.14	162	T	T	20 47 54.7	
	baz=348,slow=76,SNR=33						
H11S3	WAKE ISLAND Hy	33.15	163	T	T	20 47 55.6	
	baz=348,slow=76,SNR=25						
H11S2	WAKE ISLAND Hy	33.16	162	T	T	20 47 56.1	
	baz=348,slow=76,SNR=41						
INK	Inuvik	37.00	35	P	P	20 13 13.9	+1.3
	comp=E,1.1nm,0.5s,baz=287,slow=6.4,SNR=6.3						
ZALV	Zalesovo Beam	42.30	303	P	P	20 13 54.6	-2.0
	comp=E,0.6nm,0.4s,baz=63,slow=9.9,SNR=2.8						
DGZ	Jazzator, Alta	42.84	297	*i* P	P	20 14 01.6	+0.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	46.30	40	P	P	20 14 29.4	+1.1
	comp=Z,1.2nm,0.6s,baz=298,slow=7.6,SNR=14						
KURK	Kurchatov	47.20	302	*i* P	P	20 14 35.0	-0.4
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MKAR	Makanchi Array	47.28	296	P	P	20 14 35.6	-0.6
	comp=Z,0.4nm,0.3s,baz=64,slow=6.9,SNR=19						
BRVK	Borovoye	50.23	308	*i* P	P	20 14 58.0	-0.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DAG	Danmarks Havn	52.72	359	⇑*i*P	P	20 15 16.5	-0.2
	comp=Z,3.3nm,0.8s						
DAG	Danmarks Havn	52.72	359	⇑*i*P	P	20 15 16.5	-0.2
ARU	Arti	53.69	317	*e*P	P	20 15 22.5	-1.6
ARU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	Ala-Archa	54.22	296	*i* P	P	20 15 27.5	-0.9
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARCES	ARCESS Array B	54.84	341	*e*P	P	20 15 30.4	-1.9
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	54.84	341	P	P	20 15 30.2	-2.1
	comp=Z,3.2nm,0.9s,baz=34,slow=7.6,SNR=5.4						
CMAR	Chiang Mai Arr	55.62	257	P	P	20 15 39.1	+0.6
	comp=Z,0.4nm,0.6s,baz=21,slow=6.7,SNR=5.6						
KIRV	Kirov	56.02	323	P	P	20 15 39.7	-1.0
	comp=Z,4.3nm,0.4s,baz=97,slow=4.1,SNR=5.1						
SUMG	Summit	56.51	5	*i* P	P	20 15 45.7	+1.1
	comp=Z,18nm,0.8s						
SUMG	Summit	56.51	5	*i* P	P	20 15 45.7	+1.1
NVAR	Mina Array Bea	58.55	67	P	P	20 16 01.1	+1.9
	comp=Z,0.3nm,0.6s,baz=285,slow=7.2,SNR=2.7						
FRB	Frobisher Bay	60.47	21	P	P	20 16 11.5	-0.1
	comp=Z,1.2nm,0.3s,baz=342,slow=7.0,SNR=5.1						
PDAR	Pinedale Array	60.52	58	P	P	20 16 13.2	+0.6
	comp=Z,0.5nm,0.5s,baz=241,slow=1.5,SNR=4.7						
FINES	FINESS Array B	61.41	335	P	P	20 16 16.5	-1.5
	comp=Z,0.5nm,0.4s,baz=36,slow=7.2,SNR=7.7						
NOA	NORSAR Array B	65.17	342	P	P	20 16 41.8	-1.0
	comp=Z,0.3nm,0.5s,baz=25,slow=6.3,SNR=9.0						
GEYT	Alibeck	66.57	302	P	P	20 16 50.0	-2.1
	comp=Z,0.8nm,0.5s,baz=54,slow=9.7,SNR=2.8						
AKASG	Malin Array Be	69.50	327	P	P	20 17 07.5	-2.7
	comp=Z,1.0nm,0.4s,baz=27,slow=7.0,SNR=3.5						
KBZ	Khabaz	69.75	315	P	P	20 17 11.7	-0.2
	comp=Z,1.4nm,0.8s,baz=50,slow=6.2,SNR=4.5						
WRA	Warramunga Arr	73.10	202	*i* P	P	20 17 34.2	+2.2
WRA	Warramunga Arr	73.10	202	P	P	20 17 32.8	+0.8
	comp=Z,0.1nm,0.3s,baz=19,slow=6.3,SNR=5.9						
TXAR	Lajitas Array	73.52	64	P	P	20 17 36.4	+1.6
	comp=Z,0.3nm,0.6s,baz=314,slow=5.2,SNR=4.0						
ASAR	Alice Springs	76.78	201	P	P	20 17 54.8	+1.6
	comp=Z,0.2nm,0.6s,baz=12,slow=5.5,SNR=6.9						
BRTR	Keskin Array B	77.04	318	*e*P	P	20 17 55.0	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	77.04	318	P	P	20 17 54.5	-0.2
	comp=Z,0.5nm,0.5s,baz=97,slow=1.8,SNR=4.6						
STKA	Stephens Creek	83.35	193	P	P	20 18 30.8	+2.6
	comp=Z,1.9nm,0.9s,baz=63,slow=11,SNR=3.0						
ESDC	Sonseca Array	88.37	345	P	P	20 18 51.8	-1.4
	comp=Z,0.5nm,0.7s,baz=1.5,slow=5.6,SNR=4.3						

IDC 13 20:14:43.0±1.6**, 2°.89S**×**130°.00E, h0**^{km}**, mb3.3**/2**, mb1 3.5**/4**, mb1mx3.3**/42**, mbtmp3.3**/4**, ML3.0**/2**, Error ellipse: s-maj=51.1km s-min=24.9km az=87.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.37	32	Pn	Pn	20 15 23.3	+0.1
	1.3nm,0.3s,baz=217,slow=23,SNR=12						
SIJI				Sn	Sn	20 15 48.2	-4.8
	1.5nm,0.3s,baz=270,slow=20,SNR=4.5						
WRA	Warramunga Arr	17.47	166	P	Pn	20 18 48.2	-0.1
	0.1nm,0.3s,baz=349,slow=11,SNR=7.8						
ASAR	Alice Springs	21.00	170	P	P	20 19 27.8	-0.4
	2.6nm,1.0s,baz=356,slow=10.0,SNR=28						
MKAR	Makanchi Array	64.83	326	P	P	20 25 24.1	+0.3
	0.2nm,0.7s,baz=123,slow=5.3,SNR=2.7						

IDC ***13*** *20:29:39.4±1.4, 10°.88S×164°.52E, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.7/25, mbtmp3.8/7, ML4.0/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/44, Error ellipse: s-maj=32.9km s-min=27.7km az=136.0*

ISCJB ***13*** *20:29:42.1±1.0, 11°.0S±0°.1×164°.5E±0°.1, h29^{km}, mb3.7/5, Error ellipse: s-maj=20.4km s-min=11.6km az=34.3*

ISC 13 20:29:43.5±1.2**, 10°.9S**±0°.1×**164°.6E**±0°.1**, h29**^{km}**, n14, σ2^{s}.06**/9**, mb3.7**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.79	287	*e*P	Pn	20 30 42.0	-12
HNR				*e*S	Sn	20 31 50.0	+1.5
HNR	Honiara	4.79	287	Pn	Pn	20 30 51.3	-2.6
	5.6nm,0.3s,baz=125,slow=12,SNR=2.5						
HNR				Sn	Sn	20 31 51.1	+2.7
	13nm,0.3s,baz=72,slow=20,SNR=3.4						
DZM	Mont Dzumac	11.26	171	Pn	Pn	20 32 23.5	+0.9
	1.3nm,0.3s,baz=330,slow=18,SNR=30						
DZM				LR	LR	20 36 22.7	
	comp=Z,118nm,18.9s,baz=13,slow=36						
H11S2	WAKE ISLAND Hy	29.27	4	T	T	21 06 19.6	
	baz=184,slow=76,SNR=6.5						
H11S3	WAKE ISLAND Hy	29.28	4	T	T	21 06 04.9	
	baz=184,slow=76,SNR=3.7						
H11S1	WAKE ISLAND Hy	29.29	4	T	T	21 06 15.1	
	baz=184,slow=76,SNR=4.3						
WRA	Warramunga Arr	30.47	249	P	P	20 35 53.3	-0.9
	0.4nm,0.5s,baz=79,slow=9.2,SNR=4.7						
H11N1	WAKE ISLAND Hy	30.50	4	T	T	21 07 44.8	
	baz=184,slow=76,SNR=5.3						
H11N3	WAKE ISLAND Hy	30.50	4	T	T	21 07 39.4	
	baz=184,slow=76,SNR=5.5						
H11N2	WAKE ISLAND Hy	30.52	4	T	T	21 07 38.9	
	baz=184,slow=76,SNR=5.1						
ASAR	Alice Springs	31.85	242	P	P	20 36 05.0	-1.3
	0.2nm,0.7s,baz=66,slow=9.7,SNR=3.9						
ILAR	Eielson Array	83.73	19	P	P	20 42 08.7	-0.8
	0.4nm,0.7s,baz=228,slow=6.6,SNR=3.0						
MKAR	Makanchi Array	92.64	317	P	P	20 42 54.0	+1.4
	0.4nm,0.9s,baz=104,slow=4.0,SNR=3.6						
ZALV	Zalesovo Beam	92.77	324	P	P	20 42 54.9	+1.9
	0.6nm,0.3s,baz=103,slow=4.6,SNR=3.4						

IDC ***13*** *20:36:45.6±1.5, 11°.40S×164°.85E, h0^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.7/37, mbtmp3.9/6, ML4.2/2, MS3.2/2, Ms1 3.2/2, ms1mx2.6/37, Error ellipse: s-maj=32.9km s-min=28.7km az=139.0*

ISCJB ***13*** *20:36:48.8±1.1, 11°.6S±0°.1×164°.8E±0°.1, h34^{km}, mb3.7/4, MS3.1/2, Error ellipse: s-maj=22.5km s-min=11.1km az=39.9*

ISC 13 20:36:50.4±1.3**, 11°.5S**±0°.1×**164°.9E**±0°.1**, h34**^{km}**, n14, σ1^{s}.65**/7**, mb3.8**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.25	293	Pn	Pn	20 38 04.4	-2.2
	11nm,0.3s,baz=164,slow=7.4,SNR=3.1						
HNR				Sn	Sn	20 39 07.9	+1.9
	8.3nm,0.3s,baz=187,slow=18,SNR=2.0						
DZM	Mont Dzumac	10.63	172	Pn	Pn	20 39 20.6	+0.2
	1.1nm,0.3s,baz=346,slow=15,SNR=7.4						
STKA	Stephens Creek	29.52	223	LR	LR	20 53 29.2	
	comp=Z,48nm,18.7s,baz=29,slow=34						
H11S2	WAKE ISLAND Hy	29.85	4	T	T	21 13 15.0	
	baz=181						
H11S3	WAKE ISLAND Hy	29.85	3	T	T	21 13 15.9	
	baz=181						
H11S1	WAKE ISLAND Hy	29.87	4	T	T	21 13 16.0	
	baz=181						
WRA	Warramunga Arr	30.52	250	P	P	20 43 01.4	+0.6
	0.3nm,0.5s,baz=79,slow=9.0,SNR=11						
H11N1	WAKE ISLAND Hy	31.08	4	T	T	21 14 57.5	
	baz=191						
H11N3	WAKE ISLAND Hy	31.08	4	T	T	21 14 58.2	
	baz=191						
H11N2	WAKE ISLAND Hy	31.09	4	T	T	21 14 59.1	
	baz=191						
ASAR	Alice Springs	31.82	243	P	P	20 43 11.6	-0.7
	1.1nm,0.9s,baz=76,slow=8.7,SNR=7.9						
RAR	Rarotonga	35.21	111	LR	LR	20 56 01.7	
	comp=Z,34nm,20.2s,baz=154,slow=33						
ILAR	Eielson Array	84.21	19	P	P	20 49 17.8	-0.2
	0.5nm,0.7s,baz=232,slow=5.0,SNR=9.9						
MKAR	Makanchi Array	93.26	317	P	P	20 50 02.9	+1.2
	0.5nm,0.8s,baz=103,slow=4.7,SNR=5.3						

ISCJB ***13*** *20:46:42.2±0.8, 60°.4S±0°.2×31°.9W±0°.5, h10^{km}, mb3.7/4, MS3.0/1, Error ellipse: s-maj=39.6km s-min=11.8km az=149.3*

IDC ***13*** *20:46:42.5±1.0, 60°.39S×31°.99W, h0^{km}, mb3.9/4, mb1 4.0/5, mb1mx3.9/26, mbtmp3.9/5, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/25, Error ellipse: s-maj=45.3km s-min=26.7km az=66.0*

ISC 13 20:46:43.4±0.8**, 60°.5S**±0°.2×**31°.6W**±0°.3**, h10**^{km}**, n17, σ2^{s}.05**/12**, mb3.7**/4**, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	13.91	150	P	Pn	20 50 01.3	+1.0
VNA2	Neumayer--Watz	14.31	147	P	Pn	20 50 07.8	+2.1
	baz=305,slow=16						
SNAA	Sanae	15.95	146	P	P	20 50 29.9	-1.3
SNAA	Sanae	15.95	146	Pn	P	20 50 29.8	-1.3
	0.5nm,0.3s,baz=308,slow=15,SNR=29						
SNAA				Sn	Sn	20 53 19.8	-4.4
	0.1nm,0.3s,baz=300,slow=14,SNR=3.1						
QSPA	South Pole Qui	29.77	180	P	P	20 52 52.0	+2.2
	0.6nm,0.6s,baz=193,slow=2.9,SNR=2.4						
CPUP	Villa Florida	38.41	321	P	P	20 54 03.5	-1.3
	0.6nm,0.4s,baz=164,slow=7.4,SNR=2.3						
CPUP				LR	LR	21 09 40.6	
	comp=Z,26nm,20.5s,baz=184,slow=36						
LPAZ	La Paz	51.38	313	P	P	20 55 48.0	-0.8
	1.0nm,0.9s,baz=104,slow=4.2,SNR=3.2						
H10S2	ASCENSION HYDR	52.94	21	T	T	21 53 19.7	
	baz=191						
H10S3	ASCENSION HYDR	52.94	21	T	T	21 53 20.6	
	baz=191						
H10S1	ASCENSION HYDR	52.96	21	T	T	21 53 21.5	
	baz=191						
H10N1	ASCENSION HYDR	54.06	21	T	T	21 54 42.6	
	baz=190						
H10N3	ASCENSION HYDR	54.06	21	T	T	21 54 44.7	
	baz=190						
H10N2	ASCENSION HYDR	54.07	21	T	T	21 54 46.0	
	baz=190						
TORD	Torodi Ar. Bea	78.04	33	P	P	20 58 43.5	+1.6
	1.9nm,0.9s,baz=202,slow=4.6,SNR=11						
YKA	Yellowknife Ar	137.86	317	PKP	PKPdf	21 06 05.5	-0.8
	0.3nm,0.7s,baz=128,slow=2.1,SNR=5.1						
ILAR	Eielson Array	151.13	307	PKPbc	PKPbc	21 06 34.8	-0.3
	1.5nm,0.9s,baz=142,slow=1.8,SNR=11						
SONM	Songino Array	152.84	99	PKPbc	PKPbc	21 06 39.7	+0.1
	0.2nm,0.7s,baz=226,slow=3.0,SNR=2.8						

NEIC ***13*** *20:49:59.6±0.6, 8°.14S×119°.53E, h174^{km}±8^{km}, mb4.6/4, Error ellipse: s-maj=11.8km s-min=6.2km az=203.0*

ISCJB ***13*** *20:50:00.2±0.2, 8°.27S±0°.04×119°.59E±0°.03, h200^{km}, mb4.0/18, Error ellipse: s-maj=5.9km s-min=3.6km az=39.6*

DJA ***13*** *20:50:02.1±0.3, 8°S±3°×12°0E±°, h167^{km}±4^{km}, M4.4/15, mb4.6/7, mB4.9/3, MLv4.4/15, Mw(mB)4.2/3*

IDC ***13*** *20:50:03.4±1.4, 8°.06S×119°.91E, h207^{km}±12^{km}, mb3.7/12, mb1 3.8/15, mb1mx3.5/55, mbtmp4.3/15, Error ellipse: s-maj=20.5km s-min=7.0km az=57.0*

ISC 13 20:50:01.6±0.4**, 8°.31S**±0°.05×**119°.60E**±0°.05**, h200**^{km}**, n72, σ1^{s}.60**/86**, mb4.0**/18**, 1C, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.52	153	P	Pn	20 50 34.1	-1.4
WSI				S	Sn	20 50 58.8	-3.2
PLAI	Plampang	1.87	254	P	Pn	20 50 37.5	-1.4
PLAI				S	Sn	20 51 03.7	-4.1
BASI	Baing, Sumba	2.13	153	P	Pn	20 50 40.8	-0.8
BASI				S	Sn	20 51 10.3	-2.5
MMRI	Maumere	2.63	97	*e*Pn	Pn	20 50 45.6	-1.5
MMRI	Maumere	2.63	97	P	Pn	20 50 45.9	-1.2
MMRI				S	Sn	20 51 20.9	-1.5
BKSI	Bulukumba	3.01	10	P	Pn	20 50 49.5	-2.0
BNSI	Bone	3.91	7	P	Pn	20 51 02.2	-0.2
SPSI	Sidrap Palu	4.32	2	P	Pn	20 51 06.6	-0.8
SRBI	Singaraja	4.34	273	P	Pn	20 51 07.7	-0.1
BATI	Baumata	4.44	116	P	Pn	20 51 10.2	+1.2
BATI	Baumata	4.44	116	P	Pn	20 51 09.0	+0.1
	141nm,0.3s,baz=341,slow=1.9,SNR=237						
BATI				S	Sn	20 52 00.1	-1.8
	23nm,0.3s,baz=218,slow=19,SNR=3.2						
SOEI	Soe	4.83	108	*e*Pn	Pn	20 51 12.5	-1.6
SOEI	Soe	4.83	108	P	Pn	20 51 14.1	0.0
JAGI	Jajag, Banyuwa	5.39	268	*e*Pn	Pn	20 51 17.9	-3.2
JAGI	Jajag, Banyuwa	5.39	268	P	Pn	20 51 20.5	-0.6
	55nm,0.6s,1µm						
PWJI	Pagerwojo	7.72	272	P	Pn	20 51 51.1	-0.2
	22nm,0.5s						
PCJI	Pacitan	8.33	270	P	Pn	20 51 57.8	-1.5
UGM	Wanagama	8.99	272	*e*Pn	Pn	20 52 06.4	-1.6
UGM	Wanagama	8.99	272	P	Pn	20 52 08.0	+0.1
	53nm,1.4s						
SMRI	Semarang	9.16	277	*e*Pn	Pn	20 52 05.3	-4.8
KPJI	Karang Pucung	10.61	274	P	Pn	20 52 29.8	+0.9
	20nm,0.6s						
FITZ	Fitzroy Crossi	11.37	149	P	Pn	20 52 39.3	+0.8
	2.2nm,0.3s,baz=350,slow=9.5,SNR=77						
FITZ				S	Sn	20 54 41.6	-3.8
	3.8nm,0.3s,baz=335,slow=19,SNR=7.8						
CISI	Cisompet, Garu	11.69	273	*e*Pn	Pn	20 52 40.3	-2.5
CISI	Cisompet, Garu	11.69	273	P	Pn	20 52 40.9	-1.9
MBWA	Marble Bar	12.78	179	*e*Pn	Pn	20 52 57.5	+1.0
FAKI	Fak Fak	13.68	68	*e*Pn	Pn	20 53 05.9	-1.8
SIJI	Sorong	13.77	58	P	Pn	20 53 07.2	-1.7
	4.6nm,0.3s,baz=201,slow=7.2,SNR=14						
SIJI				S	Sn	20 55 44.0	+1.1
	0.2nm,0.3s,baz=253,slow=19,SNR=2.6						
WRA	Warramunga Arr	18.37	131	P	Pn	20 54 03.4	-0.8
	1.4nm,0.3s,baz=303,slow=12,SNR=86						
WRA				S	S	20 57 19.2	-1.9
	0.3nm,0.3s,baz=317,slow=15,SNR=7.5						
WRAB	Tennant Creek	18.37	131	*e*P	P	20 54 01.9	+0.3
	7.7nm,0.6s						
WB2	Warramunga Arr	18.38	131	*e*P	P	20 54 01.7	-0.1
AS31	Alice Springs	20.52	140	*e*P	Pn	20 54 27.1	-3.0
	3.3nm,0.6s						
AS31				*e*S	S	20 58 05.9	+2.7
ASAR	Alice Springs	20.52	140	P	Pn	20 54 26.9	-3.1
	4.1nm,0.5s,baz=318,slow=9.7,SNR=48						
ASAR				S	S	20 58 03.1	-0.2
	12nm,0.8s,baz=322,slow=22,SNR=36						
ASAR				PcP	PcP	20 58 28.9	+1.1
	0.9nm,0.4s,baz=326,slow=1.4,SNR=6.8						
ASAR				ScP	ScP	21 01 47.5	+2.1
	0.5nm,0.6s,baz=316,slow=2.6,SNR=3.4						
AS01	Alice Springs	20.55	140	*e*P	Pn	20 54 28.0	-2.5
COEN	Coen	23.80	106	*e*P	P	20 54 57.6	+1.2
	26nm,0.7s						
STKA	Stephens Creek	31.12	142	P	P	20 56 04.0	+2.4
	3.4nm,0.6s,baz=314,slow=10,SNR=11						
CMAR	Chiang Mai Arr	33.51	323	P	P	20 56 22.5	+0.1
	0.3nm,0.4s,baz=151,slow=6.1,SNR=3.9						
CMAR				PcP	PcP	20 58 59.1	+0.4
	0.8nm,0.9s,baz=176,slow=1.9,SNR=4.5						
KMI	Kunming	37.06	334	P	P	20 56 55.1	+2.1
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,170nm,4.6s						
NJ2	Nanjing	40.14	359	*e*P	P	20 57 18.3	+0.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
XAN	Xi'an	43.31	347	P	P	20 57 45.1	+1.2
XAN				pP	pP	20 57 52.9	-33

XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	**Lanzhou**	**46.58**	**342**	*e*P	**P**	**20 58 08.6**	**-1.2**
LZH				pP	pP	20 58 48.0	-4.7
LZH				sP	PP	21 00 07.8	+5.8
LZH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
JIRN	**Jiri**	**48.20**	**319**	*e*P	**P**	**20 58 22.5**	**-0.2**
GUN	**Gumba**	**48.57**	**319**	*e*P	**P**	**20 58 25.4**	**-0.1**
PKI	**Pulchoki**	**48.65**	**318**	*e*P	**P**	**20 58 25.3**	**-0.8**
PKIN	**Phulchoki**	**48.66**	**318**	*e*P	**P**	**20 58 25.3**	**-0.8**
DMN	**Daman**	**48.88**	**318**	*e*P	**P**	**20 58 26.4**	**-1.3**
HHC	**Hu-ho-hao-te**	**49.47**	**352**	*e*P	**P**	**20 58 34.1**	**+2.3**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.7s						
KOLN	**Koldanda**	**49.99**	**317**	*e*P	**P**	**20 58 35.4**	**-0.6**
DANN	**Dangsing**	**50.26**	**318**	*e*P	**P**	**20 58 37.5**	**-0.7**
PYUN	**Piuthan**	**50.61**	**317**	*e*P	**P**	**20 58 40.2**	**-0.5**
GTA	**Gaotai**	**50.90**	**340**	⇑P	**P**	**20 58 43.8**	**+1.2**
GTA				pP	pP	20 59 23.5	-2.5
GTA				sP	sP	20 59 42.9	-5.0
GTA				PcP	**PcP**	**20 59 56.1**	**0.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**53.45**	**11**	P	**P**	**20 59 01.4**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=199,slow=5.9,SNR=4.1						
RPZ	**Rata Peaks**	**56.91**	**137**	P	**P**	**20 59 26.5**	**+0.5**
	comp=Z,21nm,1.0s,baz=315,slow=10.0,SNR=4.4						
SONM	**Songino Array**	**57.10**	**349**	P	**P**	**20 59 27.6**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=166,slow=8.3,SNR=22						
SONM				PKiKP	**PKiKP**	**21 06 45.7**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=183,slow=2.9,SNR=3.6						
SONA1	**Songino Array**	**57.12**	**349**	*e*P	**P**	**20 59 28.0**	**+0.6**
WMQ	**Urumqi**	**59.40**	**334**	*e*P	**P**	**20 59 45.6**	**+2.5**
MK01	**Makanchi Array**	**64.09**	**332**	*e*P	**P**	**21 00 13.9**	**-0.4**
MK31	**Makanchi Array**	**64.11**	**332**	*e*P	**P**	**21 00 14.6**	**0.0**
MKAR	**Makanchi Array**	**64.11**	**332**	*e*P	**P**	**21 00 14.6**	**+0.1**
	comp=Z,18nm,0.7s						
MKAR	**Makanchi Array**	**64.11**	**332**	P	**P**	**21 00 14.6**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=153,slow=6.9,SNR=60						
MKAR				pP	**pP**	**21 00 59.8**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=138,slow=6.2,SNR=5.1						
ZALV	**Zalesovo Beam**	**68.61**	**339**	*e*P	**P**	**21 00 41.6**	**-1.2**
ZALV	**Zalesovo Beam**	**68.61**	**339**	P	**P**	**21 00 42.0**	**-0.9**
	comp=Z,3.5nm,0.5s,baz=144,slow=5.2,SNR=13						
ZALV				pP	**pP**	**21 01 28.3**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=119,slow=5.1,SNR=3.8						
PETK	**Petropavlovsk-**	**69.21**	**23**	P	**P**	**21 00 44.2**	**-2.4**
	comp=Z,1.2nm,0.7s,baz=213,slow=2.7,SNR=2.6						
SEY	**Seymchan**	**75.35**	**15**	P	**P**	**21 01 22.2**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=231,slow=5.2,SNR=7.5						
QSPA	**South Pole Qui**	**81.68**	**180**	P	**P**	**21 02 00.6**	**+3.1**
	comp=Z,1.6nm,1.0s,baz=330,slow=2.0,SNR=4.5						
MATP	**Matopo**	**88.17**	**250**	P	**P**	**21 02 32.3**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=120,slow=4.1,SNR=4.7						
USHA	**Ushuaia**	**116.74**	**175**	PKP	**PKiKP**	**21 08 22.7**	**+0.7**
	comp=Z,8.5nm,0.9s,baz=253,slow=7.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**118.92**	**280**	PKP	**PKiKP**	**21 08 26.3**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=49,slow=1.6,SNR=8.1						
NVAR	**Mina Array Bea**	**120.12**	**50**	PKP	**PKiKP**	**21 08 29.4**	**0.0**
	comp=Z,0.5nm,0.6s,baz=241,slow=3.3,SNR=3.6						
TXAR	**Lajitas Array**	**134.37**	**57**	PKP	**PKiKP**	**21 08 57.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=270,slow=0.3,SNR=3.9						
CMIG	**Matias Romero**	**145.30**	**72**	PKP	**PKPab**	**21 09 17.6**	**+0.5**
	comp=Z,4.0nm,0.8s,baz=333,slow=5.2,SNR=5.1						
CPUP	**Villa Florida**	**145.44**	**185**	PKPbc	**PKiKP**	**21 09 18.8**	**-1.8**
	comp=Z,1.9nm,0.7s,baz=209,slow=6.2,SNR=5.7						
LPAZ	**La Paz**	**154.40**	**163**	PKPab	**PKPab**	**21 09 57.7**	**+2.9**
	comp=Z,1.6nm,0.6s,baz=177,slow=4.7,SNR=7.9						

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*ISCJB **13** 20:52:54.0±1.1, 11°29S±0°08×166°3E±0°2, h10^{km}, mb3.8/6, Error ellipse: s-maj=23.1km s-min=10.9km az=169.3*

*IDC **13** 20:52:54.8±1.5, 11°00S×166°26E, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/41, mbtmp3.9/8, ML4.2/2, Error ellipse: s-maj=40.7km s-min=27.9km az=125.0*

ISC 13 20:52:56.3±1.2**, 11°12S**±0°10×**166°3E**±0°2**, h10^{km}, n14, σ1^{s}81**/9**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.43**	**285**	Pn	**Pn**	**20 54 31.1**	**0.0**
	14nm,0.3s,baz=177,slow=17,SNR=5.7						
DZM	**Mont Dzumac**	**10.90**	**179**	Pn	**Pn**	**20 55 35.4**	**+2.8**
	0.7nm,0.3s,baz=131,slow=20,SNR=6.3						
DZM				Sn	**Sn**	**20 57 31.6**	**-3.1**
	0.1nm,0.3s,baz=323,slow=20,SNR=2.0						
H11S2	**WAKE ISLAND Hy**	**29.42**	**1**	T	T	21 29 23.5	
	baz=181,slow=76,SNR=47						
H11S3	**WAKE ISLAND Hy**	**29.43**	**1**	T	T	21 29 23.7	
	baz=181,slow=76,SNR=37						
H11S1	**WAKE ISLAND Hy**	**29.44**	**1**	T	T	21 29 24.7	
	baz=181,slow=76,SNR=24						
H11N1	**WAKE ISLAND Hy**	**30.64**	**1**	T	T	21 30 55.0	
	baz=182,slow=76,SNR=44						
H11N3	**WAKE ISLAND Hy**	**30.65**	**1**	T	T	21 30 55.6	
	baz=182,slow=76,SNR=40						
H11N2	**WAKE ISLAND Hy**	**30.66**	**1**	T	T	21 30 56.5	
	baz=182,slow=76,SNR=27						
WRA	**Warramunga Arr**	**31.93**	**250**	P	**P**	**20 59 22.6**	**+0.1**
	6.0nm,0.8s,baz=80,slow=9.3,SNR=10						
ASAR	**Alice Springs**	**33.21**	**244**	P	**P**	**20 59 33.0**	**-0.8**
	1.1nm,0.6s,baz=66,slow=9.3,SNR=4.1						
CMAR	**Chiang Mai Arr**	**72.60**	**293**	P	**P**	**21 04 25.0**	**+0.5**
	0.3nm,0.3s,baz=124,slow=4.5,SNR=3.8						
SONM	**Songino Array**	**79.02**	**324**	P	**P**	**21 05 01.1**	**+0.3**
	0.1nm,0.5s,baz=152,slow=4.3,SNR=4.4						
ILAR	**Eielson Array**	**83.42**	**18**	P	**P**	**21 05 22.6**	**-1.0**
	0.3nm,0.6s,baz=231,slow=5.3,SNR=3.8						
MKAR	**Makanchi Array**	**93.92**	**317**	P	**P**	**21 06 13.9**	**-0.5**
	0.3nm,0.6s,baz=103,slow=5.2,SNR=4.9						

IDC 13 20:54:53.0±2.1**, 10°68S**×**165°60E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/38**, mbtmp3.7**/4**, Error ellipse: s-maj=81.5km s-min=14.2km az=133.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.48**	**249**	P	P	21 01 16.9	+0.2
	0.8nm,0.8s,baz=81,slow=9.0,SNR=3.4						
ASAR	**Alice Springs**	**32.83**	**243**	P	P	21 01 28.4	-0.2
	0.7nm,0.7s,baz=67,slow=9.6,SNR=4.3						
ILAR	**Eielson Array**	**83.21**	**19**	P	P	21 07 21.0	+0.1
	0.5nm,0.8s,baz=228,slow=4.9,SNR=4.8						
MKAR	**Makanchi Array**	**93.16**	**317**	P	P	21 08 09.1	-0.2
	0.2nm,0.7s,baz=99,slow=3.6,SNR=2.5						

MAN 13 21:09:30.8, 11°62N×**122°37E, h1^{km}, mb4.1, ML2.9, MS2.5, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.01**	**168**	*e*P	Pg	21 09 43.0	-7.2
GUIM				*e*S	Sg	21 09 54.9	-8.5
LLP	**Lapu-Lapu**	**2.03**	**129**	*e*P	Pg	21 10 09.2	-0.6
TBP	**Tagbilaran**	**2.42**	**142**	*e*P	Pn	21 10 12.5	+1.1
MSLP	**Maasin**	**2.86**	**121**	*e*S	Pb	21 10 24.2	+1.6

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*KRNET **13** 21:21:14.1±0.1, 41°81N×79°76E, h14^{km}, mb2.0*

*SOME **13** 21:21:14.1, 41°73N×79°83E, h15^{km}*

*NNC **13** 21:21:15.4±0.7, 41°83N×79°78E, h2^{km}±4^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=5.5km s-min=3.4km az=4.0*

ISC 13 21:21:13.0±3.4**, 41°7N**±0°1×**79°90E**±0°08**, h11^{km}**±26^{km}**, n13, σ0^{s}47**/24**, 4C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.57**	**272**	⇓*i*P	**Pn**	**21 21 41.6**	**+0.4**
	baz=68						
TARG				⇓*i*S	**Sn**	**21 22 01.6**	**-0.1**
	baz=68						
UZB	**Uzynbulak**	**1.60**	**336**	*e*P	**Pn**	**21 21 42.1**	**+0.7**
	0.5nm,0.2s						
UZB				*e*S	**Sb**	**21 22 02.1**	**-0.9**
	1.8nm,0.1s						
PDGK	**Podgornoye**	**1.67**	**350**	P	**Pn**	**21 21 42.9**	**+0.5**
	0.5nm,0.3s						
PDGK				S	**Sn**	**21 22 03.6**	**-0.3**
	2.2nm,0.3s						
PDGK	**Podgornoye**	**1.67**	**350**	⇑*i*P	**Pn**	**21 21 42.7**	**+0.3**
	baz=52						
PDGK				⇑*i*S	**Sn**	**21 22 03.6**	**-0.3**
	baz=52						
SATY	**Saty**	**1.77**	**322**	P	**Pn**	**21 21 44.3**	**+0.6**
	2.8nm,0.3s						
SATY				S	**Sn**	**21 22 06.1**	**-0.2**
	4.8nm,0.1s						
SATY	**Saty**	**1.77**	**322**	*e*P	**Pn**	**21 21 44.3**	**+0.6**
	2.8nm,0.3s						
SATY				*e*S	**Sn**	**21 22 06.0**	**-0.2**
	4.8nm,0.1s						
KTMS	**Ketmen**	**1.79**	**11**	P	**Pb**	**21 21 46.0**	**0.0**
	1.4nm,0.1s						
KTMS				S	**Sb**	**21 22 08.5**	**-0.1**
	2.0nm,0.1s						
KTMS	**Ketmen**	**1.79**	**11**	*e*P	**Pb**	**21 21 45.7**	**-0.3**
	1.4nm,0.1s						
KTMS				*e*S	**Sb**	**21 22 08.4**	**-0.2**
	2.0nm,0.1s						
KDJ	**Kajisay**	**2.08**	**283**	⇑*i*P	**Pb**	**21 21 50.2**	**-0.7**
	baz=80						
KDJ				⇑*i*S	**Sb**	**21 22 16.4**	**-0.4**
	baz=80						
KURS	**Kuram**	**2.21**	**325**	Pg	**Pb**	**21 21 52.8**	**-0.3**
	1.4nm,0.4s						
KURS				Lg	Lg	21 22 20.6	
	1.7nm,0.4s						
KURS	**Kuram**	**2.21**	**325**	*e*P	**Pb**	**21 21 52.8**	**-0.3**
	1.4nm,0.4s						
KURS				*e*S	**Sb**	**21 22 20.6**	**+0.2**
	1.7nm,0.4s						
MDOK	**Medeo**	**2.58**	**306**	Pg	**Pb**	**21 21 59.3**	**-0.1**
	1.2nm,0.3s						
MDOK				Lg	Lg	21 22 32.0	
	3.6nm,0.5s						
MDOK	**Medeo**	**2.58**	**306**	*e*P	**Pb**	**21 21 59.3**	**-0.1**
	1.2nm,0.3s						
MDOK				*e*S	**Sb**	**21 22 32.0**	**+0.8**
	3.6nm,0.5s						

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*IDC **13** 21:27:22.2±1.3, 11°95S×165°36E, h0^{km}, mb4.0/9, mb1 4.1/10, mb1mx3.9/44, mbtmp4.0/10, ML3.6/1, MS3.1/3, Ms1 3.1/3, ms1mx2.9/36, Error ellipse: s-maj=43.7km s-min=20.9km az=130.0*

*ISCJB **13** 21:27:25.6±0.8, 12°2S±0°1×165°3E±0°2, h33^{km}, mb3.9/9, MS3.0/1, Error ellipse: s-maj=22.0km s-min=15.1km az=16.9*

ISC 13 21:27:27.6±0.9**, 12°1S**±0°1×**165°4E**±0°2**, h35^{km}, n13, σ1^{s}26**/11**, mb4.0**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.95**	**296**	LR	LR	21 31 21.2	
	comp=Z,124nm,21.0s,baz=156,slow=41						
DZM	**Mont Dzumac**	**10.01**	**174**	Pn	**Pn**	**21 29 49.2**	**+0.2**
	0.5nm,0.3s,baz=274,slow=22,SNR=1.7						
DZM				LR	LR	21 33 12.9	
	comp=Z,144nm,18.8s,baz=353,slow=35						
CTA	**Charters Tower**	**20.02**	**244**	P	**P**	**21 31 55.8**	**-1.8**
	4.6nm,0.8s,baz=80,slow=14,SNR=2.0						
URZ	**Urewera**	**28.11**	**160**	LR	LR	21 44 09.8	
	comp=Z,39nm,18.7s,baz=8.5,slow=36						
STKA	**Stephens Creek**	**29.47**	**224**	P	**P**	**21 33 29.6**	**+1.3**
	2.2nm,0.7s,baz=14,slow=17,SNR=3.9						
WRA	**Warramunga Arr**	**30.81**	**251**	P	**P**	**21 33 39.9**	**-0.4**
	1.0nm,0.9s,baz=83,slow=8.9,SNR=6.2						
ASAR	**Alice Springs**	**32.03**	**245**	P	**P**	**21 33 50.8**	**-0.3**
	1.6nm,0.8s,baz=74,slow=9.1,SNR=18						
FITZ	**Fitzroy Crossi**	**38.78**	**256**	P	**P**	**21 34 48.3**	**-0.8**
	4.0nm,0.9s,baz=78,slow=9.1,SNR=5.3						
SONM	**Songino Array**	**79.27**	**324**	P	**P**	**21 39 29.6**	**+0.1**
	0.5nm,0.9s,baz=115,slow=3.4,SNR=4.2						
GTA	**Gaotai**	**79.50**	**314**	*e*P	**P**	**21 39 32.9**	**+1.9**
GTA				pP	PcP	21 39 37.9	-1.0
GTA				sP	pP	21 39 41.3	+1.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ILAR	**Eielson Array**	**84.58**	**19**	P	**P**	**21 39 56.8**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=247,slow=5.0,SNR=14						
MKAR	**Makanchi Array**	**94.01**	**317**	P	**P**	**21 40 42.7**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=100,slow=6.7,SNR=8.4						
YKA	**Yellowknife Ar**	**96.03**	**27**	P	**P**	**21 40 49.3**	**-1.7**
	comp=Z,0.1nm,0.5s,baz=257,slow=5.6,SNR=3.3						

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*BJI **13** 21:30:30.7, 2°25S×139°40E, h31^{km}, mB5.3/48, mb4.7/67, Ms4.7/51, Ms7 4.5/51*

*ISCJB **13** 21:30:31.8±0.8, 2°02S±0°03×139°07E±0°02, h17^{km}±6^{km}, mb4.9/108, MS4.4/33, Error ellipse: s-maj=4.4km s-min=3.8km az=31.1*

*MOS **13** 21:30:32.4±0.9, 2°02S×139°03E, h23^{km}, mb5.1/50, Error ellipse: s-maj=10.1km s-min=5.3km az=110.1*

*IDC **13** 21:30:34.2±3.9, 2°07S×139°06E, h22^{km}±25^{km}, mb4.5/25, mb1 4.6/29, mb1mx4.5/39, mbtmp4.6/29, ML4.8/4, MS4.3/20, Ms1 4.2/20, ms1mx4.1/29, Error ellipse: s-maj=12.4km s-min=8.8km az=85.0*

*NEIC **13** 21:30:34.2±1.3, 2°05S×139°02E, h22^{km}±9^{km}, mb5.2/43, Error ellipse: s-maj=4.2km s-min=3.6km az=47.0*

NEIC Felt [III] at Sarmi.

*DJA **13** 21:30:36.7±0.7, 2°S±4°×13°9E±°, h30^{km}±6^{km}, M5.0/36, mB5.4/23, mb5.1/36, MLv5.5/6, Mw(mB)4.9/23*

*GCMT **13** 21:30:36.2±0.2, 1°90S±0°02×139°11E±0°01, h18^{km}, MW5.0/95, Moment Tensor Solution. s67,c79; s95,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.63±.14; $M_{\theta\theta}$-0.78±.09; $M_{\phi\phi}$-3.84±.12; $M_{r\theta}$-0.73±.22; $M_{\theta\phi}$1.66±.07; $M_{\phi r}$-0.48±.22; Best double couple: $M_0$4.67800×10^{16} NP1:ϕ_s166.00000°, δ47.00000°, λ104.00000°. NP2: ϕ_s326.00000°, δ45.00000°, λ76.00000°. Principal axes: T 4.7860, Plg80.0000°, Azm151.0000°; N -0.2090, Plg10.0000°, Azm337.0000°; P -4.5710, Plg1.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 21:30:35.8±0.7**, 2°12S**±0°03×**139°06E**±0°03**, h34^{km}**±2^{km}**, n391, σ1^{s}59**/408**, mb4.9**/115**, MS4.4**/35**, 10C-2D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.20**	**113**	P	**Pn**	**21 30 56.4**	**+0.2**
GENI				S	**Sb**	**21 31 15.1**	**+1.8**
JAY	**Jayapura**	**1.69**	**104**	P	**Pn**	**21 31 01.8**	**-1.2**
JAY						21 31 22.6	
JAY				pmax	pmax		
	comp=Z,648nm,0.3s						
JAY				smax	smax		
	comp=N,367nm,0.3s						
JAY				MLR	MLR		
	comp=Z,9µm,20.4s						
JAY	**Jayapura**	**1.69**	**104**	P	**Pn**	**21 31 02.6**	**-0.3**
JAY				S	**Sb**	**21 31 24.9**	**-2.3**
JAY	**Jayapura**	**1.69**	**104**	Pn	**Pn**	**21 31 01.8**	**-1.2**
	comp=Z,648nm,0.3s,baz=257,slow=10,SNR=418						
JAY				Sn	**Sn**	**21 31 22.6**	**-0.9**
	comp=Z,367nm,0.3s,baz=311,slow=22,SNR=7.6						
JAY				LR	LR	21 31 43.2	
	comp=Z,9µm,20.4s,baz=287,slow=40						
SRPI	**Serui, Papua**	**2.83**	**275**	P	**Pn**	**21 31 19.1**	**+0.4**
SRPI				S	**Sn**	**21 31 53.3**	**+1.7**
BAKI	**Biak**	**3.09**	**287**	P	**Pn**	**21 31 21.4**	**-0.9**
RKPI	**Ransiki, Papua**	**4.92**	**277**	P	Pn	21 31 53.6	+6.2
MMPI	**Merauke**	**6.44**	**168**	P	Pb	21 32 18.4	-8.8
FAKI	**Fak Fak**	**6.85**	**263**	*e*Pn	**Pn**	**21 32 14.1**	**+0.1**
FAKI	**Fak Fak**	**6.85**	**263**	P	**Pn**	**21 32 15.8**	**+1.8**
	comp=Z,370nm,0.6s,comp=Z,4µmcomp=Z,1.3nm						
SIJI	**Sorong**	**7.89**	**279**	Pn	**Pn**	**21 32 27.7**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=80,slow=11,SNR=8.2						
SIJI				Sn	**Sn**	**21 33 56.4**	**-0.1**
	baz=289,slow=21,SNR=1.1						
SIJI				LR	LR	21 35 41.3	
	comp=Z,3µm,19.9s,baz=74,slow=39						
MANU	**Manus Island**	**8.30**	**90**	*e*Pn	**Pn**	**21 32 34.7**	**+0.8**
SAUI	**Saumlaki**	**9.68**	**233**	*e*Pn	**Pn**	**21 32 50.6**	**-2.2**
PALU	**Palau**	**10.45**	**334**	P	**Pn**	**21 33 01.9**	**-1.5**
	baz=10,SNR=3.9						
NLAI	**Namlea**	**12.00**	**264**	P	**Pn**	**21 33 27.1**	**+2.5**
	comp=Z,155nm,1.1s,comp=Z,2µm						
TNTI	**Ternate**	**12.04**	**284**	*e*Pn	**Pn**	**21 33 28.9**	**+3.7**
TNTI	**Ternate**	**12.04**	**284**	P	**P**	**21 33 34.3**	**-3.3**
KDU	**Kakadu**	**12.36**	**212**	P	**Pn**	**21 33 28.8**	**-0.7**
	baz=12,SNR=68						
COEN	**Coen**	**12.45**	**161**	P	**Pn**	**21 33 31.4**	**+0.7**
	baz=13,SNR=12						
COEN	**Coen**	**12.45**	**161**	*e*Pn	**Pn**	**21 33 31.6**	**+0.9**
SANI	**Sanana**	**13.07**	**270**	P	**Pn**	**21 33 40.0**	**+0.8**
	comp=Z,85nm,0.7s,comp=Z,714nm						
RABL	**Rabaul**	**13.24**	**99**	*e*Pn	**Pn**	**21 33 43.0**	**+1.4**
DAV	**Davao City (W)**	**16.26**	**304**	*e*Pn	**Pn**	**21 34 20.6**	**-1.2**
	comp=Z,184nm,0.4s						
DAV	**Davao City (W)**	**16.26**	**304**	LR	LR	21 40 49.8	
	comp=Z,871nm,18.2s,baz=98,slow=38						
LUWI	**Luwuk**	**16.32**	**274**	*e*Pn	**Pn**	**21 34 21.0**	**-1.5**
	comp=Z,117nm,1.1s						
LUWI	**Luwuk**	**16.32**	**274**	P	**P**	**21 34 24.2**	**-1.0**
	comp=Z,78nm,1.6s,comp=Z,3µm						
KDI	**Kendari**	**16.52**	**263**	P	**P**	**21 34 28.5**	**+1.1**
	comp=Z,106nm,2.1s,comp=Z,3µm						
SOEI	**Soe**	**16.55**	**242**	*e*Pn	**Pn**	**21 34 25.1**	**-0.5**
	comp=Z,181nm,0.9s						
SOEI	**Soe**	**16.55**	**242**	P	**P**	**21 34 27.1**	**-0.7**
	comp=Z,223nm,1.4s,comp=Z,3µm						
GUMO	**Guam**	**16.63**	**20**	LR	LR	21 40 23.1	
	comp=Z,327nm,18.5s,baz=156,slow=36						
MTSU	**Mount Surprise**	**16.73**	**162**	P	**P**	**21 34 30.2**	**+0.4**
	baz=17,SNR=30						
BBSI	**Bau Bau**	**16.79**	**258**	P	P	21 34 44.1	+14
KNRA	**Kununurra**	**16.87**	**216**	P	**Pn**	**21 34 29.5**	**0.0**
	baz=17,SNR=37						
BATI	**Baumata**	**17.28**	**242**	P	**Pn**	**21 34 35.3**	**+0.6**
	comp=Z,81nm,0.5s,comp=Z,1µm						
BATI	**Baumata**	**17.28**	**242**	Pn	**Pn**	**21 34 34.1**	**-0.5**
	comp=Z,5.9nm,0.3s,baz=135,slow=2.9,SNR=11						
BATI				Sn	**Sn**	**21 37 45.3**	**-0.8**
	comp=Z,1.9nm,0.3s,baz=263,slow=16,SNR=2.0						
MRSI	**Marisa**	**17.31**	**278**	P	**P**	**21 34 37.3**	**+1.1**
	comp=Z,18nm,1.3s,comp=Z,361nm						
APSI	**Ampana**	**17.45**	**274**	P	**P**	**21 34 40.9**	**+3.2**
	comp=Z,89nm,1.2s,comp=Z,1µm						
MMRI	**Maumere**	**17.95**	**248**	*e*Pn	**Pn**	**21 34 41.8**	**-1.1**
	comp=Z,83nm,1.4s						
WRAB	**Tennant Creek**	**18.30**	**194**	*e*P	**P**	**21 34 46.8**	**-0.3**
	comp=Z,74nm,0.6s						
WRAB				*e*S	Sn	21 37 58.4	-12
WRAB	**Tennant Creek**	**18.30**	**194**	*ce*P	**P**	**21 34 47.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,81nm,0.8s						
WB2	**Warramunga Arr**	**18.30**	**194**	*e*P	**P**	**21 34 46.4**	**-0.7**
WRA	**Warramunga Arr**	**18.31**	**194**	*i* P	**P**	**21 34 46.5**	**-0.7**
WRA				pmax	pmax		
	comp=Z,36nm,0.5s						
WRA	**Warramunga Arr**	**18.31**	**194**	P	**P**	**21 34 46.3**	**-0.9**
	comp=Z,11nm,0.3s,baz=16,slow=12,SNR=117						
WRA				S	**Sn**	**21 38 01.7**	**-9.2**
	comp=Z,0.7nm,0.3s,baz=10,slow=22,SNR=8.7						
WRA				LR	LR	21 42 25.2	
	comp=Z,2µm,20.5s,baz=10.0,slow=39						
QIS	**Mount Isa**	**18.34**	**178**	P	**Pn**	**21 34 48.1**	**+0.5**
	baz=18,SNR=17						
BNSI	**Bone**	**19.06**	**263**	P	**Pn**	**21 35 00.8**	**+4.4**
	comp=Z,80nm,1.0s,comp=Z,3µm						
BKSI	**Bulukumba**	**19.16**	**260**	P	**Pn**	**21 35 02.3**	**+4.6**
	comp=Z,21nm,1.0s,comp=Z,1µm						
CTA	**Charters Tower**	**19.19**	**159**	P	**Pn**	**21 34 57.7**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=328,slow=9.2,SNR=14						
CTAO	**Charters Tower**	**19.19**	**159**	*e*P	**Pn**	**21 34 58.4**	**+0.4**
	comp=Z,16nm,0.8s						
CTAO	**Charters Tower**	**19.19**	**159**	*e*P	**Pn**	**21 34 58.4**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,16nm,0.8s						
TTSI	**Tana Toraja**	**19.25**	**267**	P	**Pn**	**21 35 02.2**	**+3.5**
	comp=Z,133nm,2.0s,comp=Z,4µm						
PCI	**Palu**	**19.26**	**273**	P	**Pn**	**21 35 02.3**	**+3.5**
	comp=Z,85nm,0.9s,comp=Z,2µm						
MPSI	**Mapaga**	**19.32**	**277**	P	**Pn**	**21 35 01.0**	**+1.5**
	comp=Z,18nm,2.3s,comp=Z,589nm						
SPSI	**Sidrap Palu**	**19.35**	**264**	P	**Pn**	**21 35 01.4**	**+1.5**
	comp=Z,58nm,2.1s,comp=Z,2µm						
BASI	**Baing, Sumba**	**20.05**	**246**	P	Pn	21 35 15.4	+7.2
FITZ	**Fitzroy Crossi**	**20.63**	**219**	P	**P**	**21 35 13.1**	**+0.5**
	baz=21,SNR=28						
FITZ	**Fitzroy Crossi**	**20.63**	**219**	*e*P	**P**	**21 35 13.1**	**+0.5**
	comp=Z,56nm,1.3s						
FITZ				S	**S**	**21 38 54.4**	**-7.0**
FITZ	**Fitzroy Crossi**	**20.63**	**219**	P	**P**	**21 35 13.0**	**+0.5**
	comp=Z,7.2nm,0.5s,baz=23,slow=11,SNR=18						
FITZ				S	**S**	**21 38 54.4**	**-7.0**
	comp=Z,35nm,0.8s,baz=97,slow=18,SNR=12						
FITZ				LR	LR	21 43 41.8	
	comp=Z,462nm,20.4s,baz=44,slow=38						
AS01	**Alice Springs**	**21.98**	**193**	*e*P	**P**	**21 35 27.0**	**-0.1**
AS31	**Alice Springs**	**22.00**	**193**	*e*P	**P**	**21 35 27.6**	**+0.4**
	comp=Z,21nm,0.6s						
ASAR	**Alice Springs**	**22.00**	**193**	P	**P**	**21 35 27.4**	**+0.2**
ASAR				S	**S**	**21 39 29.3**	**+1.0**
ASAR				pmax	pmax		
	comp=Z,33nm,0.7s						
ASAR				smax	smax		
	comp=N,4.0nm,0.7s						
ASAR	**Alice Springs**	**22.00**	**193**	P	**P**	**21 35 27.4**	**+0.2**
	comp=N,35nm,0.7s,baz=23,slow=11,SNR=387						
ASAR				S	**S**	**21 39 29.3**	**+1.0**
	comp=N,3.8nm,0.7s,baz=7.4,slow=26,SNR=5.8						
HNR	**Honiara**	**22.00**	**110**	*e*P	**P**	**21 35 27.2**	**-0.1**
	comp=N,147nm,0.8s						
HNR	**Honiara**	**22.00**	**110**	P	**P**	**21 35 28.1**	**+0.8**
	comp=N,111nm,0.8s,baz=201,slow=8.6,SNR=6.7						
PLAI	**Plampang**	**22.20**	**252**	P	**P**	**21 35 36.5**	**+7.0**
	comp=N,50nm,1.3s,comp=N,680nm						
KBKI	**Kotabaru**	**22.90**	**267**	P	**P**	**21 35 37.5**	**+0.6**
	comp=N,16nm,1.5s						
TGY	**Tagaytay City**	**24.13**	**312**	P	**P**	**21 35 52.9**	**+4.0**
	comp=N,197nm,0.3s,baz=52,slow=3.2,SNR=4.2						
SRBI	**Singaraja**	**24.47**	**255**	P	P	21 36 01.5	+10
WRKA	**Warakurna**	**25.04**	**204**	P	**P**	**21 35 57.2**	**+0.1**
	baz=25,SNR=90						
KMMI	**Kalianget**	**25.48**	**258**	P	**P**	**21 36 05.6**	**+4.5**
	comp=N,77nm,0.8s,comp=N,695nm						
EIDS	**Eidsvold**	**25.86**	**154**	P	**P**	**21 36 06.0**	**+1.5**
	baz=26,SNR=7.7						
EIDS	**Eidsvold**	**25.86**	**154**	*e*P	**P**	**21 36 05.9**	**+1.5**
	comp=N,93nm,1.1s						
RMQ	**Roma**	**25.96**	**160**	P	**P**	**21 36 07.9**	**+2.5**
	baz=26,SNR=7.9						
MBWA	**Marble Bar**	**26.70**	**223**	*e*P	**P**	**21 36 12.5**	**+0.4**
	comp=N,121nm,1.6s						
SBUM	**Sibu**	**27.22**	**279**	*e*P	**P**	**21 36 19.0**	**+2.2**
	comp=N,8.0nm,1.0s						
PWJI	**Pagerwojo**	**27.77**	**257**	P	P	21 36 30.1	+8.4
JCJ	**Chichijima**	**29.20**	**6**	LR	LR	21 46 23.6	
	comp=N,368nm,18.3s,baz=146,slow=33						
STKA	**Stephens Creek**	**29.70**	**176**	P	**P**	**21 36 39.5**	**+0.8**
	baz=30,SNR=16						
STKA	**Stephens Creek**	**29.70**	**176**	P	**P**	**21 36 39.5**	**+0.8**
	comp=N,14nm,0.6s,baz=353,slow=9.4,SNR=2.9						
STKA				LR	LR	21 49 47.1	
	comp=N,902nm,19.7s,baz=356,slow=39						
CMSA	**Cobar Meteorol**	**29.93**	**169**	P	**P**	**21 36 43.2**	**+2.4**
	baz=30,SNR=20						
FORT	**Forrest**	**30.35**	**199**	P	**P**	**21 36 45.8**	**+1.3**
	baz=30,SNR=45						
FORT	**Forrest**	**30.35**	**199**	*e*P	**P**	**21 36 45.6**	**+1.1**
	comp=N,100nm,0.6s						
ARMA	**Armidale**	**30.57**	**158**	P	**P**	**21 36 48.7**	**+2.1**
	baz=31,SNR=5.0						
BBOO	**Buckleboo**	**30.66**	**185**	P	**P**	**21 36 47.9**	**+0.7**
	baz=31,SNR=16						
BBOO	**Buckleboo**	**30.66**	**185**	*e*P	**P**	**21 36 47.9**	**+0.7**
	comp=N,73nm,1.4s						
HTT	**Hallett**	**31.15**	**180**	P	**P**	**21 36 52.5**	**+0.9**
	baz=31,SNR=31						
MEEK	**Meekatharra**	**31.30**	**217**	P	**P**	**21 36 53.4**	**+0.4**
	baz=31,SNR=7.5						
PPBI	**Pangkal Pinang**	**32.90**	**269**	P	P	21 37 16.0	+8.8
YNG	**Young**	**33.18**	**166**	P	**P**	**21 37 10.9**	**+1.5**
	baz=33,SNR=4.8						
DZM	**Mont Dzumac**	**33.19**	**129**	*e*S	**S**	**21 42 31.7**	**+4.1**
	comp=N,259nm,28.8s						
DZM				*e*LR	LR	21 46 04.6	
	comp=N,640nm,22.8s						
DZM	**Mont Dzumac**	**33.19**	**129**	P	**P**	**21 37 09.5**	**-0.2**
	comp=N,9.7nm,1.0s,baz=284,slow=4.2,SNR=3.1						
H11S3	**WAKE ISLAND Hy**	**34.04**	**52**	T	T	22 12 53.5	
	baz=236,slow=75,SNR=143						
H11S2	**WAKE ISLAND Hy**	**34.05**	**52**	T	T	22 12 54.1	

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       baz=236,slow=75,SNR=158
H11S1  WAKE ISLAND Hy 34.05  52  T       T       22 12 55.1
       baz=236,slow=75,SNR=102
CAN    Canberra       34.30 166  eP      P       21 37 18.9  -0.3
       comp=N,21nm,1.0s
CAN    Canberra       34.30 166  eP      P       21 37 18.9  -0.3
CAN                              pmax    pmax
       comp=Z,21nm,1.0s
CNB    Canberra Magne 34.39 165  P       P       21 37 21.7  +1.7
       baz=35,SNR=6.2
ARPS   Mount Arapiles 34.58 176  P       P       21 37 23.2  +1.8
       baz=35,SNR=13
MORW   Morawa         34.62 217  P       P       21 37 22.3  +0.4
       baz=35,SNR=26
MORW   Morawa         34.62 217  eP      P       21 37 22.5  +0.5
       comp=Z,71nm,1.5s
H11N1  WAKE ISLAND Hy 34.89  50  T       T       22 14 01.0
       baz=233,slow=75,SNR=20
H11N2  WAKE ISLAND Hy 34.90  50  T       T       22 14 00.3
       baz=233,slow=75,SNR=21
MDSI   Maura Dua      34.90 265  P       P       21 37 27.9  +3.3
       comp=Z,30nm,1.1s
H11N3  WAKE ISLAND Hy 34.90  50  T       T       22 14 00.6
       baz=233,slow=75,SNR=14
JHJ    Hachijo jima 2 35.05   1  LR      LR      21 49 04.2
       comp=Z,523nm,21.4s,baz=217,slow=32
BLDU   Ballidu        35.38 214  P       P       21 37 29.1  +0.7
       baz=36,SNR=14
LHSI   Lahat          35.53 266  P       P       21 37 38.4  +8.4
KLBR   Kellerberrin   35.55 212  P       P       21 37 30.3  +0.4
       baz=36,SNR=5.7
QIZ    Qiongzhong     35.59 307  P       P       21 37 30.0  -0.4
QIZ                              S       S       21 43 05.6  +1.1
QIZ                              LR      LR
       comp=Z,250nm,13.7s
QIZ                              LR      LR
       comp=Z,320nm,19.1s
QIZ                              LR      LR
       comp=Z,410nm,19.1s
TOO    Toolangi       35.77 171  P       P       21 37 33.9  +2.1
       baz=36,SNR=11
TOO    Toolangi       35.77 171  eP      P       21 37 35.7  +3.9
       comp=Z,125nm,2.0s
TOO    Toolangi       35.77 171  eP      P       21 37 35.7  +3.9
TOO                              pmax    pmax
       comp=Z,125nm,2.0s
JNU    Nakatsue       35.89 348  eP      P       21 37 31.8  -1.0
JNU    Nakatsue       35.89 348  P       P       21 37 31.6  -1.3
       comp=Z,11nm,0.9s,baz=158,slow=4.2,SNR=5.0
JNU                              LR      LR      21 51 18.6
       comp=Z,617nm,18.5s,baz=173,slow=35
NWAO   Narrogin (SRO) 36.87 211  P       P       21 37 42.0  +0.8
       baz=37,SNR=4.4
NWAO   Narrogin (SRO) 36.87 211  P       P       21 37 41.5  +0.4
       comp=Z,6.5nm,0.6s,baz=99,slow=18,SNR=6.6
SSE    Sheshan        37.15 334  P       P       21 37 42.3  -1.3
SSE                              S       S       21 43 30.4  +2.4
SSE                              pmax    pmax
       comp=Z,10.0nm,1.4s
SSE                              pmax    pmax
       comp=Z,75nm,4.2s
SSE                              LR      LR
       comp=Z,220nm,18.1s
SSE                              LR      LR
       comp=Z,140nm,18.3s
SSE    Sheshan        37.15 334  eP      P       21 37 42.5  -1.0
       comp=Z,8.5nm,0.9s
MJAR   Matsushiro Arr 38.47 359  P       P       21 37 52.7  -1.9
       comp=Z,1.1nm,0.5s,baz=180,slow=9.4,SNR=5.5
MJAR                             PcP     PcP     21 40 07.5  +0.1
       comp=Z,2.7nm,0.9s,baz=180,slow=2.9,SNR=5.4
MJAR                             LR      LR      21 51 45.4
       comp=Z,368nm,19.4s,baz=195,slow=33
PDSI   Padang         38.60 271  P       P       21 37 55.3  -0.9
       comp=Z,30nm,0.7s,comp=Z,601nm
NJ2    Nanjing        39.02 332  eP      P       21 37 59.1  -0.2
NJ2                              S       S       21 43 56.6  +0.5
NJ2                              pmax    pmax
       comp=Z,14nm,1.0s
NJ2                              pmax    pmax
       comp=Z,250nm,4.6s
NJ2                              LR      LR
       comp=Z,490nm,19.5s
NJ2                              LR      LR
       comp=Z,430nm,17.9s
NJ2                              LR      LR
       comp=Z,710nm,15.7s
SKNT   Sakolnakorn    39.47 300  P       P       21 38 09.8  +6.5
MNSI   Mandailing Nat 39.58 274  P       P       21 38 04.2  -0.1
       comp=Z,29nm,0.9s
SISI   Saibi          39.96 270  P       P       21 38 07.4  -0.1
       comp=Z,46nm,1.1s
SRAK   Srakaew        40.04 295  P       P       21 38 10.3  +2.3
       comp=Z,26nm,1.2s
WHN    Wuhan          40.12 326 ⇓P       P       21 38 09.3  +0.8
WHN                              S       S       21 44 13.0  +0.1
WHN                              LR      LR
       comp=Z,690nm,16.1s
PSI    Prapat         40.42 277  P       P       21 38 10.3  -1.1
       comp=Z,29nm,0.9s
PSI    Prapat         40.42 277  P       P       21 38 10.3  -1.1
       comp=Z,19nm,0.8s,baz=1.0,slow=3.6,SNR=14
TRTT   Trang          40.50 285  P       P       21 38 12.6  +0.7
       comp=Z,24nm,1.0s
KSAR   Wonju Array Be 40.70 346  P       P       21 38 12.0  -1.2
KSAR                             PcP     PcP     21 40 16.1  +1.6
KSAR   Wonju Array Be 40.70 346  P       P       21 38 12.0  -1.2
KSAR                                             21 40 16.1
KSRS   Korea Array    40.71 346  P       P       21 38 12.0  -1.2
       comp=Z,1.1nm,0.6s,baz=156,slow=9.3,SNR=4.7
KSRS                             PcP     PcP     21 40 16.1  +1.7
       comp=Z,1.2nm,0.7s,baz=169,slow=4.9,SNR=6.0
KSRS                             LR      LR      21 54 00.2
       comp=Z,346nm,18.6s,baz=156,slow=35
CHAI   Chaiyaphum     40.78 297  P       P       21 38 13.7  -0.5
       comp=Z,7.3nm,0.9s,comp=Z,76nm
TAU    Tasmania Unive 41.28 171  eP      P       21 38 19.2  +1.3
       comp=Z,11nm,0.9s
TAU    Tasmania Unive 41.28 171  eP      P       21 38 19.2  +1.3
TAU                              pmax    pmax
       comp=Z,11nm,0.9s
MSVF   Nonsavu        41.29 115  eP      P       21 38 20.9  +2.4
       comp=Z,108nm,1.5s
MSVF   Nonsavu        41.29 115  i P     P       21 38 18.7  +0.3
MSVF                             pmax    pmax
       comp=Z,41nm,1.4s
GSI    Gunungsitoli   41.62 274  eP      P       21 38 20.2  -0.9
       comp=Z,143nm,1.4s
KCSI   Kotacane, Aceh 41.65 278  P       P       21 38 23.1  +1.7
       comp=Z,34nm,1.2s
PHET   Kaeng Krachan  41.89 292  P       P       21 38 30.9  +7.6
GYA    Guiyang        42.26 314  P       P       21 38 25.8  -0.5
GYA                              pP      sP      21 38 37.6  -2.9
GYA                              PP      PP      21 40 09.4  +4.8
GYA                              S       S       21 44 46.0  +1.1
GYA                              sS      sS      21 45 02.8  +1.4
GYA                              SS      SS      21 47 48.3  -5.9
GYA                              pmax    pmax
       comp=Z,20nm,1.0s
GYA                              pmax    pmax
       comp=Z,120nm,5.4s
GYA                              LR      LR
       comp=Z,560nm,17.6s
GYA                              LR      LR
       comp=Z,540nm,17.4s
GYA                              LR      LR
       comp=Z,590nm,17.8s
LHMI   Lhok Sumawe    42.70 280  eP      P       21 38 28.7  -1.2
       comp=Z,180nm,1.2s
LHMI   Lhok Sumawe    42.70 280  P       P       21 38 34.7  +4.8
       comp=Z,138nm,1.1s
UTTA   Uttaradit      42.77 299  P       P       21 38 31.4  +1.0
       comp=Z,7.3nm,1.1s,comp=Z,61nm
SRDT   SRDT           42.81 294  P       P       21 38 37.7  +6.9
ENH    Enshi          42.82 321  eP      P       21 38 30.0  -0.7
       comp=Z,18nm,0.8s
UTHA   Uthaitani      42.93 296  P       P       21 38 31.9  +0.1
       comp=Z,9.0nm,1.0s,comp=Z,76nm
SNSI   Sinabang, Aceh 42.96 276  P       P       21 38 41.4  +9.3
TIA    Tai'an         43.27 334  P       P       21 38 33.4  -0.9
TIA                              pmax    pmax
       comp=Z,7.0nm,0.9s
SUKH   Sukhothai      43.47 298  P       P       21 38 44.3  +8.2
UMPA   Umpang Tak     43.69 296  P       P       21 38 42.1  +4.2
       comp=Z,7.2nm,1.0s,comp=Z,66nm
KMI    Kunming        44.41 310  P       P       21 38 44.3  +0.5
KMI                              pP      pP      21 38 51.3  -2.6
KMI                              sP      sP      21 38 56.8  -1.2
KMI                              PP      PcP     21 40 26.3  -1.1
KMI                              S       S       21 45 15.8  -0.9
KMI                              sS      sS      21 45 30.9  -2.4
KMI                              SS      SS      21 48 32.3  -4.3
KMI                              pmax    pmax
       comp=Z,22nm,1.1s
KMI                              pmax    pmax
       comp=Z,170nm,5.7s
KMI                              LR      LR
       comp=Z,160nm,12.8s
KMI                              LR      LR
       comp=Z,240nm,16.7s
KMI                              LR      LR
       comp=Z,350nm,16.7s
CM01   Chiang Mai Arr 44.43 299  eP      P       21 38 43.1  -0.7
CM31   Chiang Mai Arr 44.45 299  eP      P       21 38 43.9  -0.1
CM31   Chiang Mai Arr 44.45 299  P       P       21 38 44.4  +0.4
       SNR=12
CMAR   Chiang Mai Arr 44.45 299ceP       P       21 38 43.7  -0.3
CMAR                             pmax    pmax
       comp=Z,5.0nm,0.8s
CMAR   Chiang Mai Arr 44.45 299  P       P       21 38 43.6  -0.4
       comp=Z,5.2nm,0.8s,baz=119,slow=6.6,SNR=47
CMAR                             PcP     PP      21 40 28.8  +0.6
       comp=Z,4.1nm,0.9s,baz=140,slow=1.5,SNR=7.9
CMMT   Chiang Mai     44.59 300  P       P       21 38 45.0  -0.1
       comp=Z,21nm,1.1s
CHTO   Chiang Mai     44.59 300  eP      P       21 38 44.2  -1.0
       comp=Z,20nm,1.0s
CHTO   Chiang Mai     44.59 300  eP      P       21 38 44.2  -1.0
CHTO                             pmax    pmax
       comp=Z,20nm,1.0s
CHTO   Chiang Mai     44.59 300  P       P       21 38 45.1   0.0
       comp=Z,93nm,1.2s
VLA    Vladivostok    45.49 353  i P     P       21 38 52.2  +0.4
VLA                              pmax    pmax
       comp=Z,19nm,0.9s
XAN    Xi'an          45.80 324  P       P       21 38 54.0  -0.5
XAN                              pP      pP      21 38 59.1  -5.5
XAN                              PP      PP      21 40 39.8  -2.5
XAN                              pmax    pmax
       comp=Z,12nm,1.7s
XAN                              pmax    pmax
       comp=Z,94nm,3.5s
XAN                              LR      LR
       comp=Z,270nm,17.8s
XAN                              LR      LR
       comp=Z,170nm,14.9s
XAN                              LR      LR
       comp=Z,290nm,19.4s
XAN    Xi'an          45.80 324  eP      P       21 38 53.0  -1.5
       comp=Z,78nm,1.0s
XAN    Xi'an          45.80 324  eP      P       21 38 53.0  -1.5
XAN                              pmax    pmax
       comp=Z,78nm,1.0s
SNY    Shenyang       45.94 344 ⇑P       P       21 38 51.8  -3.6
SNY                              pmax    pmax
       comp=Z,6.0nm,0.5s
ASAJ   Asahikawa      46.14   4  P       P       21 38 55.8  -1.1
       comp=Z,9.3nm,1.0s,baz=163,slow=26,SNR=3.6
USA0B  Ussuriysk Arra 46.54 353  eP      P       21 39 00.0  -0.1
       comp=Z,21nm,1.2s
USRK   Ussuriysk Ar.  46.54 353  P       P       21 38 59.7  -0.4
       comp=Z,4.5nm,0.8s,baz=165,slow=7.9,SNR=12
BJT    Baijiatuau     46.88 336  eP      P       21 39 01.2  -1.7
       comp=Z,90nm,1.5s
BJT    Baijiatuau     46.88 336  eP      P       21 39 01.2  -1.7
BJT                              pmax    pmax
       comp=Z,90nm,1.5s
BJI    Beijing        46.90 336  P       P       21 39 01.4  -1.6
BJI                              S       S       21 45 54.4  +2.7
BJI                              pmax    pmax
       comp=Z,14nm,1.5s
BJI                              LR      LR
       comp=Z,330nm,17.7s
BJI                              LR      LR
       comp=Z,430nm,16.3s
BJI                              LR      LR
       comp=Z,350nm,19.9s
CD2    Chengdu        46.98 317  P       P       21 39 03.3  -0.6
CD2                              S       S       21 45 53.3   0.0
CD2                              pmax    pmax
       comp=Z,330nm,4.3s
CD2                              LR      LR
       comp=Z,780nm,19.6s
CD2                              LR      LR
       comp=Z,900nm,16.7s
MDJ    Mudanjiang     47.29 351  P       P       21 39 04.6  -1.4
MDJ                              pP      pP      21 39 14.1  -2.0
MDJ                              sP      sP      21 39 19.1  -1.2
MDJ                              PcS     PcS     21 44 26.0  -5.8
MDJ                              S       S       21 45 59.8  +2.7
MDJ                              pmax    pmax
       comp=Z,18nm,1.4s
MDJ                              pmax    pmax
       comp=Z,370nm,4.1s
MDJ                              LR      LR
       comp=Z,390nm,6.6s
MDJ                              LR      LR
       comp=Z,410nm,4.9s
MDJ                              LR      LR
       comp=Z,600nm,18.6s
MDJ    Mudanjiang     47.29 351  eP      P       21 39 05.3  -0.6
       comp=Z,13nm,0.8s
CN2    Changchun      47.32 347  eP      P       21 39 05.5  -0.7
CN2                              epP     pP      21 39 13.9  -2.4
CN2                              eS      S       21 45 56.0  -1.5
CN2                              pmax    pmax
       comp=Z,10.0nm,1.1s
CN2                              pmax    pmax
       comp=Z,200nm,3.0s
CN2                              LR      LR
       comp=Z,460nm,16.0s
CN2                              LR      LR
       comp=Z,2µm,16.0s
CN2                              LR      LR
       comp=Z,600nm,16.0s
YSS    Yuzh-Sakhalins 48.97   3  eP      P       21 39 18.0  -0.9
YSS                              e               21 41 14.2
YSS                              eS      S       21 46 21.4  +0.6
YSS                              e               21 46 39.5
HHC    Hu-ho-hao-te   49.57 333  eP      P       21 39 23.6  -0.1
HHC                              pP      pP      21 39 31.3  -2.6
HHC                              sP      sP      21 39 38.3  +0.2
HHC                              S       S       21 46 31.8  +2.1
HHC                              sS      sS      21 46 52.1  +6.8
HHC                              pmax    pmax
       comp=Z,11nm,0.9s
HHC                              pmax    pmax
       comp=Z,290nm,6.1s
HHC                              LR      LR
       comp=Z,460nm,18.6s
HHC                              LR      LR
       comp=Z,330nm,16.8s
HHC                              LR      LR
       comp=Z,740nm,18.8s
BTO    Baotou         50.10 331  eP      P       21 39 27.4  -0.4
LZH    Lanzhou        50.23 323  eP      P       21 39 20.6  -8.3
LZH                              pP      sP      21 40 00.0   +17
LZH                              sP      PcP     21 40 19.1   -29
LZH                              PP      PP      21 41 26.1  +1.6
LZH                              eS      S       21 46 26.4   -13
LZH                              sS      pS      21 46 42.6  -8.5
LZH    Lanzhou        50.23 323  SS      SS      21 49 51.9   -21
LZH                              pmax    pmax
       comp=Z,79nm,1.2s
LZH                              pmax    pmax
       comp=Z,300nm,4.1s
LZH                              LR      LR
       comp=N,1µm,12.5s
LZH                              LR      LR
       comp=E,1µm,17.9s
LZH                              LR      LR
       comp=Z,2µm,18.4s
KLR    Kul'dur        51.53 354c iP      P       21 39 36.9  -1.4
KLR    Kul'dur        51.53 354  P       P       21 39 38.0  -0.2
       comp=Z,6.7nm,0.6s,baz=178,slow=4.4,SNR=31
KLR                              LR      LR      21 59 25.9
       comp=Z,234nm,18.4s,baz=176,slow=34
TYV    Tymovskoe      52.87   3  eP      P       21 39 47.4  -0.7
TYV                              pmax    pmax
       comp=Z,11nm,1.6s
TYV                              pmax    pmax
       comp=Z,400nm,5.6s
SHL    Shillong       53.29 304  eP      P       21 39 52.0   0.0
HIA    Hailar         53.84 344  eP      P       21 39 54.9  -0.5
       comp=Z,10nm,0.8s
HIA                              ePcP    PcP     21 41 00.3  -0.5
HIA    Hailar         53.84 344  eP      P       21 39 54.9  -0.5
HIA                              e               21 41 00.3
HIA                              pmax    pmax
       comp=Z,10.0nm,0.8s
GTA    Gaotai         54.81 323  eP      P       21 40 03.1  +0.4
GTA                              pP      sP      21 40 13.3  -3.8
GTA                              sP      pP      21 40 17.8  +4.8
GTA                              S       S       21 47 41.4  -0.2
GTA                              sS      sS      21 47 55.0  -3.7
GTA                              SS      SS      21 51 24.4  -0.9
GTA                              pmax    pmax
       comp=Z,6.0nm,1.0s
GTA                              pmax    pmax
       comp=Z,120nm,6.7s
GTA                              LR      LR
       comp=Z,190nm,20.3s
GTA                              LR      LR
       comp=Z,240nm,19.0s
GTA                              LR      LR
       comp=Z,270nm,19.4s
NKL    Nikolayevsk    55.09   1  eP      P       21 40 03.0  -1.3
NKL                              pmax    pmax
       comp=Z,21nm,1.0s
LSA    Lhasa          55.62 309  eP      P       21 40 09.7  +0.5
       comp=Z,18nm,1.0s
LSA    Lhasa          55.62 309  i P     P       21 40 09.6  +0.4
       SNR=11
LSA    Lhasa          55.62 309  eP      P       21 40 09.7  +0.5
LSA                              pmax    pmax
       comp=Z,18nm,1.0s
ZEA    Zeya           56.52 352  eP      P       21 40 13.6  -1.0
ZEA                              pmax    pmax
       comp=Z,55nm,1.4s
ULN    Ulaanbaatar    57.08 335  eP      P       21 40 18.8   0.0
       comp=Z,16nm,0.9s
ULN    Ulaanbaatar    57.08 335ceP       P       21 40 18.4  -0.5
ULN                              pmax    pmax
       comp=Z,31nm,2.5s
ULN    Ulaanbaatar    57.08 335  P       P       21 40 18.9   0.0
       SNR=10
ULN                              P       P       21 40 18.9   0.0
       SNR=10
PETK   Petropavlovsk- 57.21  13  P       P       21 40 19.4  -0.1
PETK                             pmax    pmax
       comp=Z,10.0nm,1.0s
PETK   Petropavlovsk- 57.21  13  P       P       21 40 19.4  -0.1
       comp=Z,7.4nm,0.9s,baz=183,slow=10,SNR=10.0
SONM   Songino Array  57.34 334  P       P       21 40 20.3  -0.4
       comp=Z,2.5nm,0.5s,baz=152,slow=8.3,SNR=59
SONM                             LR      LR      22 05 32.2
       comp=Z,633nm,19.1s,baz=146,slow=37
SONA1  Songino Array  57.34 334  eP      P       21 40 19.6  -1.1
PET    Petropavlovsk  57.35  14  i P     P       21 40 19.6  -0.9
PET                              pmax    pmax
       comp=Z,14nm,1.3s
RAMN   Ramite         58.20 304  eP      P       21 40 27.1  -0.2
       comp=Z,56nm,0.9s
JIRN   Jiri           58.80 304  eP      P       21 40 30.7  -0.9
       comp=Z,70nm,1.0s
GUN    Gumba          59.14 304  eP      P       21 40 33.3  -0.7
       comp=Z,77nm,0.9s
PKI    Pulchoki       59.41 304  eP      P       21 40 35.0  -0.8
       comp=Z,23nm,0.9s
PKIN   Phulchoki      59.42 304  eP      P       21 40 34.9  -0.9
       comp=Z,15nm,0.9s
DMN    Daman          59.68 304  eP      P       21 40 37.1  -0.4
       comp=Z,86nm,0.9s
ZAK    Zakamensk      60.60 335  eP      P       21 40 42.4  -0.9
ZAK                              pmax    pmax
       comp=Z,33nm,1.1s
KOLN   Koldanda       60.99 303  eP      P       21 40 46.1  -0.3
       comp=Z,49nm,1.0s
DANN   Dangsing       61.05 304  eP      P       21 40 46.4  -0.6
       comp=Z,29nm,0.6s
TLY    Talaya         61.42 336  eP      P       21 40 49.0  +0.3
       comp=Z,59nm,1.3s
TLY    Talaya         61.42 336c iP      P       21 40 48.6  -0.1
TLY    Talaya         61.42 336  P       P       21 40 48.9  +0.2
       SNR=8.4
TLY                              P       P       21 40 48.9  +0.2
       SNR=8.4
PYUN   Piuthan        61.60 304  eP      P       21 40 50.2  -0.4
       comp=Z,187nm,1.0s
MA2    Magadan        62.20   7  eP      P       21 40 53.4  -0.3
       comp=Z,50nm,1.0s
MA2    Magadan        62.20   7ceP       P       21 40 52.6  -1.1
MA2                              pmax    pmax
       comp=Z,26nm,2.5s
MA2    Magadan        62.20   7  P       P       21 40 53.2  -0.5
       comp=Z,2.7nm,0.3s,baz=172,slow=4.7,SNR=7.5
MOY    Mondy          62.53 334  eP      P       21 40 56.8  +0.5
MOY                              pmax    pmax
       comp=Z,49nm,1.6s
HYB    Hyderabad      62.69 291  i P     P       21 40 57.5  -0.4
BOD    Bodaibo        63.03 345  eP      P       21 40 57.5  -1.8
BOD                              pmax    pmax
       comp=Z,27nm,1.6s
YAK    Yakutsk        64.38 355  eP      P       21 41 07.2  -0.8
YAK                              e*PP    pP      21 41 15.5  -3.0
YAK                              e               21 43 27.8
YAK                              ePPP    PPP     21 45 00.6
YAK                              eS      S       21 49 43.2  -0.7
YAK                              e*SS    sS      21 50 03.3  +1.8
YAK                              e               21 50 55.6
YAK                              eSS     SS      21 53 53.4  -1.0
YAK                              pmax    pmax
       comp=Z,192nm,0.9s
YAK                              pmax    pmax
       comp=N,57nm,0.9s
YAK                              pmax    pmax
       comp=E,10.0nm,0.9s
YAK                              pmax    pmax
       comp=Z,224nm,2.6s
YAK                              pmax    pmax
       comp=N,465nm,3.3s
YAK                              pmax    pmax
       comp=E,356nm,3.3s
YAK                              smax    smax
       comp=N,510nm,3.7s
YAK                              smax    smax
       comp=E,184nm,3.3s
WMQ    Urumqi         64.77 321  P       P       21 41 11.8  +0.7
WMQ                              pP      pP      21 41 19.6  -2.0
WMQ                              sP      sP      21 41 23.5  -2.1
WMQ                              ScP             21 45 45.0
WMQ                              S       S       21 49 49.4  -0.2
WMQ                              SS      SS      21 54 07.4  +6.0
WMQ                              pmax    pmax
       comp=E,56nm,1.1s
WMQ                              pmax    pmax
       comp=E,470nm,5.9s
WMQ                              LR      LR
       comp=E,260nm,15.9s
WMQ                              LR      LR
       comp=E,150nm,17.5s
WMQ                              LR      LR
       comp=E,200nm,17.5s
WMQ    Urumqi         64.77 321  eP      P       21 41 09.8  -1.4
       comp=E,26nm,0.9s
WMQ    Urumqi         64.77 321  eP      P       21 41 09.8  -1.4
WMQ                              pmax    pmax
       comp=Z,26nm,0.9s
SEY    Seymchan       65.66   7  i P     P       21 41 15.2  -1.2
SEY    Seymchan       65.66   7  P       P       21 41 16.2  -0.2
       comp=Z,2.3nm,0.8s,baz=207,slow=6.8,SNR=9.2
POO    Poona          67.30 291  eP      P       21 41 24.0  -3.8
DGZ    Jazzator, Alta 67.98 327d iP      P       21 41 31.7   0.0
DGZ                              pmax    pmax
       comp=Z,5.0nm,1.1s
MK01   Makanchi Array 69.52 322  eP      P       21 41 40.9  -0.3
MK31   Makanchi Array 69.54 322  eP      P       21 41 41.3   0.0
MK31   Makanchi Array 69.54 322  eP      P       21 41 41.3   0.0
MKAR   Makanchi Array 69.54 322  P       P       21 41 41.1  -0.2
       comp=Z,6.0nm,0.9s,baz=97,slow=8.4,SNR=68
MKAR                             LR      LR      22 14 29.2
       comp=Z,138nm,18.1s,baz=99,slow=38
MAKZ   Makanchi       69.74 322  eP      P       21 41 42.5   0.0
       comp=Z,23nm,0.9s
MAKZ   Makanchi       69.74 322  eP      P       21 41 42.5   0.0
MAKZ                             pmax    pmax
       comp=Z,23nm,0.9s
PDGK   Podgornoye     69.86 318  i P     P       21 41 41.4  -2.1
PDGK                             pmax    pmax
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	comp=Z,13nm,1.2s						
KSH	Kashi	70.94	313	P	P	21 41 51.9	+1.8
KSH				pP	pP	21 41 59.8	-0.9
KSH				PP	PP	21 44 32.1	+4.4
KSH				S	S	21 51 04.4	+0.6
KSH				sS	sS	21 51 22.1	+0.9
KSH				SS	SS	21 55 39.8	+2.6
KSH				pmax	pmax		
	comp=Z,36nm,1.3s						
KSH				pmax	pmax		
	comp=Z,290nm,5.7s						
KSH				LR	LR		
	comp=Z,130nm,4.1s						
KSH				LR	LR		
	comp=Z,120nm,4.1s						
KSH				LR	LR		
	comp=Z,540nm,4.9s						
NIL	Nilore	71.26	307	*e*P	P	21 41 52.3	+0.2
	comp=Z,81nm,0.9s						
NIL	Nilore	71.26	307	*e*P	P	21 41 52.3	+0.2
NIL				pmax	pmax		
	comp=Z,81nm,0.9s						
NRN	Naryn	71.57	315	*e*P	P	21 41 54.7	+0.5
NRN	Naryn	71.57	315	P	P	21 41 54.7	+0.5
PPT	Papeete	71.60	108	LR	LR	22 12 32.5	
	comp=Z,56nm,18.3s,baz=302,slow=35						
PPT2	Papeete2	71.60	108	*e*S	S	21 51 15.0	+3.0
	comp=Z,109nm,26.8s						
PPT2	Papeete2	71.60	108	*e*LR	LR	22 03 58.5	
	comp=Z,144nm,24.0s						
ZALV	Zalesovo Beam	71.61	330	*i* P	P	21 41 52.9	-0.8
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	Zalesovo Beam	71.61	330	P	P	21 41 52.7	-1.0
	comp=Z,1.6nm,0.5s,baz=110,slow=6.8,SNR=9.4						
ZALV				LR	LR	22 13 56.3	
	comp=Z,95nm,19.1s,baz=88,slow=36						
KZA	Kyzart	72.31	315	P	P	21 41 59.8	+1.1
	SNR=14						
TKM2	Tokmak 2	72.36	316	P	P	21 41 58.0	-0.7
	SNR=8.0						
TKM2	Tokmak 2	72.36	316	*i* P	P	21 41 57.7	-1.0
TKM2				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BILL	Bilibino	72.53	10	*e*P	P	21 41 58.4	-0.5
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NVS	Novosibirsk	72.86	330	*e*P	P	21 42 01.1	0.0
NVS				pmax	pmax		
	comp=Z,46nm,1.9s						
NVS				pmax	pmax		
	comp=N,25nm,2.0s						
NVS				pmax	pmax		
	comp=E,15nm,1.4s						
UCH	Uchtor	72.88	315	P	P	21 42 02.9	+0.8
	SNR=15						
SFK	Sufi-Kurgan	72.90	313	*i* P	P	21 41 58.7	-3.3
SFK				pmax	pmax		
	comp=Z,16nm,1.3s						
AAK	Ala-Archa	73.03	316	*e*P	P	21 42 02.4	-0.3
	comp=Z,7.2nm,1.1s						
AAK	Ala-Archa	73.03	316	*i* P	P	21 42 02.8	+0.2
	SNR=8.5						
AAK	Ala-Archa	73.03	316	*ce*P	P	21 42 02.7	0.0
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
USP	Ospenovka	73.23	316	P	P	21 42 03.9	+0.2
	SNR=13						
AML	Almayashu	73.42	315	P	P	21 42 05.7	+0.4
	SNR=14						
KURK	Kurchatov	73.44	325	*e*P	P	21 42 04.2	-0.4
	comp=Z,14nm,0.8s						
KURK	Kurchatov	73.44	325	*i* P	P	21 42 03.0	-1.7
KURK				pmax	pmax		
	comp=Z,20nm,1.2s						
KURK	Kurchatov	73.44	325	P	P	21 42 04.2	-0.4
	SNR=10						
KURK				P	P	21 42 04.2	-0.4
	SNR=10						
EKS2	Erkin-Say	73.54	316	P	P	21 42 05.9	+0.3
	SNR=8.1						
MNAS	Manas	74.37	315	*i* P	P	21 42 10.0	-0.5
MNAS				pmax	pmax		
	comp=Z,19nm,1.1s						
KBL	Kabul	74.86	307	*e*P	P	21 42 13.6	0.0
KBL	Kabul	74.86	307	*e*P	P	21 42 13.6	0.0
GAR	Garm	74.97	311	*e*P	P	21 42 14.3	+0.3
GAR	Garm	74.97	311	*e*P	P	21 42 14.4	+0.3
GAMB	Gambell	75.11	20	*e*P	P	21 42 14.8	+0.7
KK31	Karatay Array	75.96	315	*e*P	P	21 42 19.9	+0.4
KK31	Karatay Array	75.96	315	*e*P	P	21 42 19.9	+0.4
KKAR	Karatay Array	75.96	315	*e*P	P	21 42 19.9	+0.4
KKAR	Karatay Array	75.96	315	*e*P	P	21 42 19.9	+0.4
OTUK	Ortayu	76.31	321	P	P	21 42 21.7	+0.3
OTUK				pmax	pmax		
	comp=Z,12nm,1.0s						
VNDA	Vanda	76.34	175	P	P	21 42 21.7	+0.7
	comp=Z,6.8nm,0.6s,baz=332,slow=6.4,SNR=14						
VNDA				LR	LR	22 16 57.1	
	comp=Z,576nm,18.1s,baz=348,slow=36						
ANM	Nome	77.82	21	*e*P	P	21 42 30.4	+0.9
ANM	Nome	77.82	21	*e*P	P	21 42 30.4	+0.9
BRVK	Borovoye	79.10	325	*e*P	P	21 42 36.5	-0.2
BRVK	Borovoye	79.10	325	*c i*P	P	21 42 36.6	-0.2
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	Borovoye	79.10	325	P	P	21 42 36.6	-0.2
	SNR=9.3						
BRVK				P	P	21 42 36.6	-0.2
	SNR=9.3						
NRIK	Noril'sk	79.25	344	P	P	21 42 37.4	+0.1
	comp=Z,7.7nm,0.8s,baz=126,slow=5.7,SNR=18						
RDOG	Red Dog Mine	80.51	19	*e*P	P	21 42 44.9	+0.8
TAOE	Nuku Hiva Isla	80.58	99	*e*LR	LR	22 07 41.1	
	comp=Z,204nm,22.9s						
WSAR	Wadi Sarin	82.05	294	P	P	21 42 53.3	0.0
MHTO	MHTO	82.44	291	P	P	21 42 54.9	-0.5
MAW	Mawson	82.80	202	LR	LR	22 17 29.0	
	comp=Z,242nm,18.8s,baz=58,slow=34						
IM3	Indian Mountai	82.81	22	*e*P	P	21 42 56.2	-0.1
BPAW	Bear Paw Mtn.	83.25	25	*e*P	P	21 42 59.7	+1.0
MLY	Manley	83.66	24	*e*P	P	21 43 01.0	+0.2
RND	Reindeer	83.94	26	*e*P	P	21 43 01.7	-0.6
RND	Reindeer	83.94	26	*e*P	P	21 43 01.7	-0.6
MCK	McKinley	84.00	25	*e*P	P	21 43 02.0	-0.5
MCK	McKinley	84.00	25	*e*P	P	21 43 02.0	-0.5
SOHO	SOHO	84.04	294	P	P	21 43 02.7	-0.9
	SNR=6.1						
GEYT	Alibeck	84.15	308	P	P	21 43 04.9	+1.0
	comp=Z,3.5nm,0.8s,baz=150,slow=1.2,SNR=12						
DHY	Denali Highway	84.49	26	*e*P	P	21 43 03.9	-1.3
AB31	Akbulak array	84.50	320	*i* P	P	21 43 04.3	-1.0
AB31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ABKAR	Akbulak array	84.50	320	*e*P	P	21 43 04.9	-0.4
WRH	Wood River Hil	84.57	25	*e*P	P	21 43 04.7	-0.7
ALNE	Al Ain	84.75	294	*i* P	P	21 43 07.2	+0.1
	SNR=7.0						
COLA	College	84.78	24	*i* P	P	21 43 03.9	-2.5
COLA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FAQ	Al Faqa, Dubai	84.95	295	P	P	21 43 07.8	-0.3
FAQ	Al Faqa, Dubai	84.95	295	P	P	21 43 07.9	-0.3
FAQ				P	P	21 43 07.9	-0.3
DMTO	DMTO	85.03	288	P	P	21 43 07.8	-0.8
IL1	Eielson Array	85.15	24	*e*P	P	21 43 06.2	-2.1
ILAR	Eielson Array	85.15	24	P	P	21 43 06.6	-1.7
	comp=Z,2.4nm,0.8s,baz=260,slow=4.4,SNR=19						
ILB	Eielson Array	85.15	24	*e*P	P	21 43 07.0	-1.3
ASUD	Al Ashush, Dub	85.18	295	P	P	21 43 09.6	+0.3
ASUD	Al Ashush, Dub	85.18	295	P	P	21 43 09.5	+0.3
TOLK	Toolik Lake Re	85.25	20	*e*P	P	21 43 09.7	+0.9
TOLK	Toolik Lake Re	85.25	20	P	P	21 43 09.5	+0.7
	baz=252						
SVE	Sverdlovsk	85.44	327	*e*P	P	21 43 09.6	-0.2
SVE				pmax	pmax		
	comp=Z,18nm,1.5s						
FYU	Fort Yukon	86.27	23	*e*P	P	21 43 15.4	+1.7
ARU	Arti	86.50	327	*e*P	P	21 43 13.7	-1.4
ARU	Arti	86.50	327	*ce*P	P	21 43 14.5	-0.6
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
QSPA	South Pole Qui	87.83	180	*e*P	P	21 43 21.4	-0.1
	comp=Z,35nm,0.6s						
DAWY	Dawson	88.19	26	*e*P	P	21 43 23.4	+0.2
	comp=Z,27nm,1.4s						
BBB	Bella Bella	93.40	38	LR	LR	22 20 58.2	
	comp=Z,124nm,19.1s,baz=244,slow=32						
RAYN	Ar Rayn	94.10	293	*e*P	P	21 43 50.3	-1.3
	comp=Z,4.7nm,0.8s						
RAYN	Ar Rayn	94.10	293	*e*P	P	21 43 50.3	-1.3
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	95.92	314	LR	LR	22 32 13.4	
	comp=Z,31nm,20.3s,baz=116,slow=39						
KIV	Kislovodsk	96.06	314	*e*P	P	21 43 56.2	-3.9
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
OBN	Obninsk	98.87	325	*e*P	Pdif	21 44 14.9	+2.5
OBN				*e*		21 48 12.9	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YKA	Yellowknife Ar	99.38	27	P	Pdif	21 44 14.1	-0.5
	comp=Z,0.5nm,0.7s,baz=283,slow=4.9,SNR=5.1						
YKA				PKiKP	PKiKP	21 48 44.3	+0.4
	comp=Z,0.1nm,0.4s,baz=292,slow=1.4,SNR=4.3						
YKA				PKKPbc	PKKPbc	22 00 37.0	-3.4
	comp=Z,0.2nm,0.5s,baz=110,slow=2.9,SNR=5.9						
YKA				PKKP	PKKPdf	22 00 45.7	+1.5
	comp=Z,0.2nm,0.8s,baz=101,slow=3.0,SNR=3.7						
ARCES	ARCESS Array B	100.07	341	P	Pdif	21 44 16.3	-1.2
	comp=Z,1.4nm,0.6s,baz=66,slow=6.8,SNR=8.3						
NVAR	Mina Array Bea	101.21	51	P	Pdif	21 44 22.9	-0.6
	comp=Z,0.4nm,0.6s,baz=250,slow=7.6,SNR=4.6						
FINES	FINESS Array B	102.69	333	P	Pdif	21 44 28.1	-1.1
	comp=Z,0.8nm,0.7s,baz=72,slow=4.5,SNR=7.8						
ANMO	Albuquerque	111.17	53	*i* PKIKP	PKiKP	21 49 05.8	-1.0
DPC	Dobruska-Polom	111.99	324	AMS	AMS	22 39 40.0	
	comp=Z,200nm,16.9s						
UPC	Upice	112.10	325	AMS	AMS	22 40 20.0	
	comp=Z,300nm,17.2s						
GOPC	GO Pecny, Ondr	113.07	325	AMS	AMS	22 41 00.0	
	comp=Z,300nm,20.0s						
PRU	Pruhonice	113.18	325	AMS	AMS	22 40 50.0	
	comp=Z,300nm,23.8s						
ULM	Lac du Bonnet	113.37	35	PKiKP	PKiKP	21 49 09.5	-0.7
	comp=Z,1.2nm,0.4s,baz=326,slow=2.0,SNR=3.5						
GERES	GERESS Array B	114.18	324	PKP	PKPdf	21 49 11.7	-0.3
	comp=Z,0.7nm,0.6s,baz=42,slow=1.6,SNR=8.6						
MOA	Molln	114.28	323	*e*PKiKP	PKiKP	21 49 12.6	+0.5
	comp=Z,0.9nm,0.4s						
TXAR	Lajitas Array	114.69	59	PKP	PKiKP	21 49 13.7	+0.2
	comp=Z,0.5nm,0.6s,baz=174,slow=1.8,SNR=6.8						
ABTA	Abfaltersbach	115.84	322	*e*PKiKP	PKiKP	21 49 14.9	-0.3
	comp=Z,2.3nm,0.7s						
WTTA	Wattenberg	116.14	323	*e*PKiKP	PKiKP	21 49 15.7	-0.2
	comp=Z,3.8nm,0.5s						
WATA	Walderalm	116.14	323	*i* PKiKP	PKPdf	21 49 16.3	+0.4
	comp=Z,1.5nm,0.3s						
SQTA	Sankt Quirin	116.41	323	*e*PKPdf	PKPdf	21 49 15.3	-1.1
	comp=Z,0.4nm,0.2s						
MOTA	Moosalm	116.42	323	*e*PKPdf	PKPdf	21 49 14.5	-1.9
	comp=Z,1.9nm,0.6s						
FETA	Feichten	116.80	323	*e*PKiKP	PKiKP	21 49 17.5	+0.4
	comp=Z,0.9nm,0.6s						
DAVA	Damuels	117.17	324	*e*PKiKP	PKPdf	21 49 17.6	-0.3
	comp=Z,0.5nm,0.2s						
WMOK	Wichita Mounta	117.31	52	P	PKiKP	21 49 19.0	+0.6
	baz=288						
JCT	Junction City	117.68	57	*e*PKPdf	PKiKP	21 49 19.7	+0.5
JCT	Junction City	117.68	57	*e*PKIKP	PKiKP	21 49 19.7	+0.5
JCT	Junction City	117.68	57	P	PKiKP	21 49 19.6	+0.5
	baz=285						
H39A	Augusta	118.73	39	P	PKPdf	21 49 20.6	-0.2
	baz=299						
G40A	Rib Lake	119.11	38	P	PKiKP	21 49 21.7	+0.2
	baz=300						
K40A	Colesburg	119.76	41	P	PKPdf	21 49 22.1	-0.6
	baz=298						
O41A	Passleys Farm,	121.11	43	P	PKiKP	21 49 25.6	0.0
	baz=297						
U40A	Yellville	121.28	48	P	PKPdf	21 49 25.8	-0.1
	baz=293						
Q41A	Truxton	121.38	45	P	PKiKP	21 49 26.5	+0.3
	baz=296						
R41A	Rosebud	121.56	45	P	PKPdf	21 49 26.4	0.0
	baz=296						
S41A	Jillco Farms,	121.60	46	P	PKPdf	21 49 26.2	-0.3
	baz=295						
P42A	Winchester	121.72	44	P	PKPdf	21 49 26.6	0.0
	baz=297						
CCM	Cathedral Cave	121.76	46	P	PKPdf	21 49 26.7	-0.1
	baz=295						
T41A	Mountain View	121.81	47	P	PKiKP	21 49 27.1	0.0
	baz=294						
U41A	Viola	121.98	48	P	PKPdf	21 49 27.1	-0.1
	baz=294						
R42A	Luebbering	121.98	45	P	PKPdf	21 49 26.8	-0.4
	baz=296						
S42A	Caledonia	122.20	46	P	PKPdf	21 49 27.5	-0.1
	baz=296						
D47A	Chapleau	122.22	33	P	PKPdf	21 49 27.5	+0.1
	baz=308						
G46A	Petoskey	122.27	35	P	PKiKP	21 49 28.2	+0.5
	baz=305						
T42A	Van Buren	122.30	47	P	PKiKP	21 49 28.2	+0.2
	baz=295						
V42A	Cord	122.59	48	P	PKPdf	21 49 28.0	-0.4
	baz=294						
D48A	Paudash Townsh	122.85	32	P	PKPdf	21 49 28.6	0.0
	baz=309						
T43A	Greenville	122.86	46	P	PKPdf	21 49 28.7	-0.2
	baz=296						
SCHQ	Schefferville	123.37	18	PKP	PKPdf	21 49 29.3	-0.1
	comp=Z,2.5nm,0.7s,baz=325,slow=3.7,SNR=4.1						
Q45A	Warren Harvey,	123.55	43	P	PKiKP	21 49 30.6	+0.2
	baz=298						
P46A	Rosedale	123.84	42	P	PKiKP	21 49 31.4	+0.4
	baz=300						
E50A	Wahnapitae	123.89	32	P	PKiKP	21 49 31.1	+0.2
	baz=310						
L48A	N Adams	124.42	38	P	PKiKP	21 49 32.1	0.0
	baz=304						
E51A	G1948 Merrick	124.48	31	P	PKPdf	21 49 31.9	+0.2
	baz=311						
CHGQ	Chibougamau	124.55	26	P	PKPdf	21 49 31.4	-0.4
	baz=318						
D52A	ZEK Kipawa Sen	124.74	30	P	PKPdf	21 49 32.2	0.0
	baz=312						
W47A	Westpoint	125.62	47	P	PKPdf	21 49 34.0	-0.3
	baz=297						
W48A	Pulaski	126.16	47	P	PKPdf	21 49 35.5	+0.3
	baz=297						
X48A	Hartselle	126.39	48	P	PKPdf	21 49 35.6	-0.1
	baz=297						
M53A	WI Miller and	127.01	37	P	PKiKP	21 49 37.8	+0.6
	baz=307						
LRAL	Lakeview Retre	127.04	49	P	PKiKP	21 49 37.6	0.0
	baz=296						
Z49A	Columbiana	127.33	49	P	PKiKP	21 49 38.0	-0.1
	baz=296						
M54A	Oil Creek Stat	127.57	36	P	PKiKP	21 49 38.3	-0.1
	baz=308						
Z50A	Ashland	127.75	49	P	PKiKP	21 49 39.0	0.0
	baz=297						
150A	Eclectic	127.97	49	P	PKiKP	21 49 39.4	0.0
	baz=296						
ESDC	Sonseca Array	129.75	323	PKP	PKiKP	21 49 43.2	+0.4
	comp=Z,0.2nm,0.4s,baz=22,slow=2.6,SNR=3.2						
TORD	Torodi Ar. Bea	136.43	287	PKP	PKPdf	21 49 55.2	0.0
	comp=Z,2.9nm,0.7s,baz=61,slow=2.6,SNR=15						
DBIC	Dimbokro	143.75	278	PKhKP	PKPpre	21 50 05.8	
	comp=Z,7.4nm,0.5s,baz=73,slow=3.1,SNR=16						
ROSC	El Rosal	146.57	84	PKPbc	PKPab	21 50 16.4	-0.1
	comp=Z,10nm,0.5s,baz=100,slow=11,SNR=7.9						
LPAZ	La Paz	147.50	125	PKPbc	PKPbc	21 50 17.6	-0.7
	comp=Z,9.0nm,0.8s,baz=248,slow=3.1,SNR=30						
CPUP	Villa Florida	147.59	152	PKPbc	PKPdf	21 50 15.9	+1.1
	comp=Z,7.0nm,0.8s,baz=252,slow=2.1,SNR=17						
SDV	Santo Domingo	149.70	76	*e*PKPdf	PKPdf	21 50 19.4	+0.6
SDV				*e*PKPbc	PKPbc	21 50 23.8	+0.3
SJG	San Juan	150.60	56	*e*PKPdf	PKPdf	21 50 20.2	+0.4
SJG				*e*PKPbc	PKPbc	21 50 25.3	+0.1
SJG	San Juan	150.60	56	*e*PKIKP	PKPdf	21 50 20.2	+0.4
SJG				*e*		21 50 25.3	
BDFB	Brasilia	161.02	159	PKP	PKPdf	21 50 35.0	+1.2
	comp=Z,2.3nm,0.6s,baz=141,slow=1.4,SNR=5.0						

MAN 13 21:39:37.2, 16°.42N×120°.86E, h48^{km}, mb4.2, ML3.1, MS2.8, Luzon

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*IDC **13** 21:39:59.0±1.4, 37°.40N×144°.16E, h0^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.4/32, mbtmp3.4/5, ML2.8/1, Error ellipse: s-maj=32.6km s-min=30.1km az=87.0*

*ISCJB **13** 21:40:00.7±0.8, 37°.78N±0°.04×143°.78E±0°.06, h33^{km}, mb3.3/4, Error ellipse: s-maj=7.0km s-min=5.6km az=0.1*

*JMA **13** 21:40:01.4±0.2, 37°.78N×143°.74E, h50^{km}, M3.2*

ISC 13 21:40:02.6±1.2**, 37°.77N**±0°.05×**143°.77E**±0°.08**, h35**^{km}**, n22, σ1^{s}.12**/31**, mb3.4**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.90	287	P	Pn	21 40 31.8	-0.7
JIKH				*e*S	Sn	21 40 54.2	-1.0
JIO	Ouri	2.03	290	P	Pn	21 40 33.8	-0.5
JIO				*e*S	Sn	21 40 57.9	-0.5
JKMT	Kesennumamotoy	2.08	301	P	Pn	21 40 34.5	-0.5
JKMT				*e*S	Sn	21 40 58.8	-1.0
OFUJ	Ofunato	2.11	309	P	Pn	21 40 34.9	-0.5
OFUJ				*e*S	Sn	21 40 59.3	-1.0
JMK	Ichinoseki	2.33	301	P	Pn	21 40 38.1	-0.3
JMK				*e*S	Sn	21 41 05.5	-0.2
JOM	Ohasama	2.58	312	P	Pn	21 40 42.0	+0.1
JOM				*e*S	Sn	21 41 12.2	+0.2
JFT	Otama	2.74	266	P	Pn	21 40 44.1	+0.1
JFT				S	Sn	21 41 15.6	-0.3
JYK	Kaneyama	2.92	294	P	Pn	21 40 47.0	+0.5
JYK				*e*S	Sn	21 41 21.0	+0.7
JANG	Nango	3.14	327	*e*S	Sn	21 41 24.7	-1.1
JAG	Ashikaga	3.70	250	P	Pn	21 40 56.9	-0.4
JAG				*e*S	Sn	21 41 39.2	-0.5
BSO1	Boso 1	3.84	217	P	Pn	21 40 57.1	-1.6
JOT	Ohata	4.18	331	*e*S	Sn	21 41 50.8	-0.5
JRY	Ryogami san	4.28	247	P	Pn	21 41 04.6	-0.6
JRY				*e*S	Sn	21 41 51.3	-2.6
MJAR	Matsushiro Arr	4.61	256	Pn	Pn	21 41 10.7	+0.9
	0.4nm,0.3s,baz=90,slow=14,SNR=25						
MAT	Matsushiro	4.61	256	P	Pn	21 41 11.0	+1.2
JKB	Kayabe	4.62	334	*e*S	Sn	21 42 00.8	-1.5
JCH	Churui	4.85	356	P	Pn	21 41 12.5	-0.6
JCH				*e*S	Sn	21 42 05.0	-3.0
ASAJ	Asahikawa	6.40	352	Pn	Pn	21 41 35.1	+0.7
	1.9nm,0.3s,baz=209,slow=13,SNR=15						
SONM	Songino Array	28.96	302	P	P	21 46 04.5	+5.8
	0.1nm,0.4s,baz=99,slow=9.5,SNR=3.4						
MKAR	Makanchi Array	45.32	302	P	P	21 48 22.8	+5.8
	0.2nm,0.7s,baz=86,slow=9.7,SNR=3.3						
ILAR	Eielson Array	47.87	33	P	P	21 48 38.8	+2.1
	0.4nm,0.7s,baz=266,slow=5.9,SNR=4.2						
WRA	Warramunga Arr	58.08	190	P	P	21 49 52.2	-0.2
	0.8nm,0.8s,baz=9.6,slow=7.3,SNR=8.7						

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*TAP **13** 21:41:09.0, 23°.98N×121°.07E, h11^{km}, ML3.7, B*

*JMA **13** 21:41:08.0±0.1, 23°.97N×121°.06E, h4^{km}, M3.2*

*ISCJB **13** 21:41:09.6±0.2, 23°.967N±0°.008×121°.12E±0°.01, h8^{km}±1^{km}, Error ellipse: s-maj=1.8km s-min=1.2km az=32.2*

ISC 13 21:41:09.2±0.8**, 23°.97N**±0°.01×**121°.08E**±0°.01**, h13**^{km}±4^{km}**, n119, σ0^{s}.84**/198**, 33C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OWD	Renai	0.09	102	⇑*i*P	Pg	21 41 12.3	0.0
	baz=103						
OWD				S	Sg	21 41 14.3	-0.1
	baz=103						
CHGB	Renai	0.12	45	⇑P	Pg	21 41 12.7	0.0
	baz=57						
CHGB				S	Sg	21 41 14.8	-0.3
	baz=57						
SMLT	Sun Moon Lake	0.19	241	⇑*i*P	Pg	21 41 13.4	-0.2
	baz=237						
SMLT				S	Sg	21 41 16.7	+0.1
	baz=237						
TYC	Yuchr	0.22	251	⇑*i*P	Pg	21 41 13.8	-0.2
	baz=249						
TYC				*i* S	Sg	21 41 16.6	-0.5
	baz=249						
SSLB	Suanglung	0.22	212	⇑P	Pg	21 41 13.5	-0.5
	baz=204						
SSLB				S	Sg	21 41 16.2	-1.0
	baz=204						
VWDT	VWDT	0.23	166	⇓P	Pg	21 41 14.3	+0.2
	baz=158						
VWDT				*e*S	Sg	21 41 17.7	+0.3
	baz=158						
WHF	Hehuan Shan	0.24	45	⇑*i*P	Pg	21 41 15.0	+0.4
	baz=58						
WHF				*i* S	Sg	21 41 18.7	+0.4
	baz=58						
TDCB	Techi	0.29	14	⇑P	Pg	21 41 15.0	-0.3
	baz=16						
TDCB				S	Sg	21 41 18.4	-0.9
	baz=16						
TWT	Tachien	0.29	17	⇑*i*P	Pg	21 41 15.1	-0.3
	baz=17						
TWT				*e*S	Sg	21 41 18.6	-0.9
	baz=17						
WHP	Taichung City	0.33	338	⇓*i*P	Pb	21 41 16.0	-1.0
	baz=344						
WHP				*e*S	Sb	21 41 21.5	-0.8
	baz=344						
WHYT	Xinyi Township	0.35	217	⇑P	Pg	21 41 16.0	-0.3
	baz=211						
WHYT				*e*S	Sb	21 41 21.4	-1.3
	baz=211						
WJS	Zhushan	0.36	245	⇑*i*P	Pb	21 41 17.2	-0.2
	baz=244						
WJS				S	Sb	21 41 23.1	+0.1
	baz=244						
ESL	Shilin	0.36	116	⇓*i*P	Pb	21 41 16.9	-0.6
	baz=115						
ESL				S	Sg	21 41 21.7	+0.3
	baz=115						
WNT	Mingjian	0.38	255	⇑P	Pb	21 41 17.7	-0.1
	baz=254						
WNT				S	Sb	21 41 24.1	+0.5
	baz=254						
TCU	Taichung	0.41	295	*e*P	Pb	21 41 18.8	+0.4
	baz=292						
TCU				*e*S	Sb	21 41 25.5	+1.0
	baz=292						
ETLH	Xiulin Townshi	0.43	58	⇑P	Pb	21 41 18.0	-0.8
	baz=53						
ETLH				*e*S	Sg	21 41 23.5	-0.3
	baz=53						
EGFH	Guangfu	0.44	134	⇓*i*P	Pb	21 41 18.1	-0.7
	baz=123						
EGFH				S	Sg	21 41 23.5	-0.3
	baz=123						
TWQ1	Liyutan	0.47	323	⇓*i*P	Pb	21 41 19.4	+0.1
	baz=334						
TWQ1				S	Sb	21 41 27.2	+1.0
	baz=334						
HWA	Hwalien	0.48	90	⇑*i*P	Pb	21 41 19.4	-0.1
	baz=90						
HWA				S	Sb	21 41 25.9	-0.7
	baz=90						
ENLB	Shoufeng	0.48	98	⇑P	Pb	21 41 19.3	-0.3
	baz=99						
ENLB				S	Sb	21 41 25.8	-0.8
	baz=99						
TWD	Chiawan	0.48	77	⇑*i*P	Pb	21 41 18.9	-0.7
	baz=79						
TWD				*i* S	Sg	21 41 25.1	-0.1
	baz=79						
WCHH	Zhanghua	0.49	283	*e*P	Pn	21 41 20.5	-1.4
	baz=281						
WCHH				S	Sb	21 41 28.6	+1.8
	baz=281						
NACB	Ninganchiao	0.51	67	⇑P	Pg	21 41 19.2	0.0
	baz=79						
NACB				S	Sg	21 41 25.6	-0.5
	baz=79						
EHY	Hungye	0.52	154	⇓*i*P	Pb	21 41 19.4	-0.8
	baz=147						
EHY				*e*S	Sg	21 41 25.9	-0.3
	baz=147						
ALS	Alishan	0.53	209	P	Pb	21 41 19.7	-0.8
	baz=196						
ALS				*e*S	Sg	21 41 26.6	-0.1
	baz=196						
CHN5	Tsauling	0.53	225	⇑*i*P	Pb	21 41 20.4	0.0
	baz=223						

CHN5				S	**Sb**	**21 41 28.7**	**+0.8**
	baz=223						
NSY	**Sanyi**	**0.53**	**327**	⇓*i*P	**Pb**	**21 41 20.9**	**+0.5**
	baz=337						
NSY				S	**Sb**	**21 41 29.4**	**+1.4**
	baz=337						
NNSB	**Datong**	**0.53**	**31**	⇑P	**Pg**	**21 41 19.1**	**-0.5**
	baz=39						
NNSB				*e*S	**Sg**	**21 41 25.7**	**-1.1**
	baz=39						
NNS	**Nan Shan**	**0.54**	**30**	⇑*i*P	**Pg**	**21 41 19.4**	**-0.4**
	baz=38						
NNS				S	**Sg**	**21 41 26.1**	**-0.9**
	baz=38						
WDJ	**Dajia District**	**0.55**	**313**	⇓*i*P	**Pn**	**21 41 21.8**	**-1.0**
	baz=324						
WDJ				*e*S	**Sn**	**21 41 31.3**	**-0.5**
	baz=324						
WGK	**Gukeng**	**0.55**	**239**	⇑*i*P	**Pb**	**21 41 21.2**	**+0.4**
	baz=237						
WGK				*e*S	**Sb**	**21 41 30.1**	**+1.4**
	baz=237						
WDLH	**Douliu**	**0.57**	**240**	P	**Pb**	**21 41 21.5**	**+0.4**
	baz=239						
HGSD	**Ruisui**	**0.57**	**147**	⇓P	**Pb**	**21 41 20.9**	**-0.3**
	baz=151						
HGSD				S	**Sb**	**21 41 28.6**	**-0.6**
	baz=151						
PTSB	**Yuanli**	**0.58**	**324**	⇓*i*P	**Pn**	**21 41 22.2**	**-1.1**
	baz=335						
PTSB				*e*S	**Sn**	**21 41 31.7**	**-1.0**
	baz=335						
YULB	**Yu-li**	**0.61**	**161**	⇓P	**Pg**	**21 41 20.9**	**-0.3**
	baz=152						
YULB				S	**Sg**	**21 41 28.9**	**-0.4**
	baz=152						
NMLH	**Miaoli**	**0.62**	**335**	*e*P	**Pb**	**21 41 22.6**	**+0.6**
	baz=345						
NMLH				*e*S	**Sn**	**21 41 32.7**	**-1.0**
	baz=345						
TWF1	**Yuli**	**0.65**	**162**	⇓*i*P	**Pb**	**21 41 21.7**	**-0.8**
	baz=153						
TWF1				S	**Sg**	**21 41 30.1**	**-0.4**
	baz=153						
NSTT	**Nanjuang**	**0.66**	**354**	⇓*i*P	**Pb**	**21 41 22.4**	**-0.2**
	baz=356						
NSTT				*e*S	**Sb**	**21 41 30.8**	**-0.9**
	baz=356						
RLNB	**Erlin**	**0.67**	**263**	⇑P	**Pn**	**21 41 23.1**	**-1.2**
	baz=262						
RLNB				*e*S	**Sb**	**21 41 32.9**	**+1.1**
	baz=262						
LIOB	**Emei**	**0.67**	**355**	⇓*i*P	**Pb**	**21 41 22.3**	**-0.6**
	baz=356						
LIOB				*e*S	**Sg**	**21 41 31.1**	**-0.1**
	baz=356						
WTCT	**Ta-ch'eng**	**0.74**	**262**	*e*P	**Pb**	**21 41 23.5**	**-0.4**
	baz=260						
NDT	**Datong Townshi**	**0.74**	**32**	P	**Pg**	**21 41 23.1**	**-0.6**
	baz=34						
YHNB	**Yeheng**	**0.74**	**21**	⇑P	**Pg**	**21 41 23.1**	**-0.6**
	baz=23						
YHNB				*e*S	**Sg**	**21 41 31.7**	**-1.8**
	baz=23						
NSK	**Sanguang**	**0.74**	**20**	⇑*i*P	**Pg**	**21 41 23.1**	**-0.6**
	baz=22						
NSK				*e*S	**Sg**	**21 41 31.7**	**-1.8**
	baz=22						
ENA	**Nanau**	**0.75**	**53**	⇑*i*P	**Pg**	**21 41 23.6**	**-0.3**
	baz=47						
ENA				*e*S	**Sg**	**21 41 33.4**	**-0.4**
	baz=47						
NANB	**Nanao**	**0.76**	**53**	⇑P	**Pg**	**21 41 23.6**	**-0.4**
	baz=47						
NANB				*e*S	**Sg**	**21 41 33.0**	**-1.0**
	baz=47						
CHN4	**Tsaushan**	**0.76**	**216**	⇑*i*P	**Pn**	**21 41 24.8**	**-0.9**
	baz=214						
CHN4				*e*S	**Sn**	**21 41 36.5**	**-0.6**
	baz=214						
CHY	**Chiayi**	**0.77**	**232**	⇑P	**Pn**	**21 41 25.0**	**-0.8**
	baz=230						
CHY				S	**Sn**	**21 41 36.7**	**-0.5**
	baz=230						
ELDTW	**Lidau**	**0.78**	**184**	⇓*e*P	**Pg**	**21 41 23.1**	**-1.3**
	baz=189						
TPUB	**Ta-pu**	**0.79**	**212**	P	**Pb**	**21 41 24.9**	**+0.1**
	baz=210						
TPUB				S	**Sb**	**21 41 36.3**	**+0.9**
	baz=210						
ENTT	**Nioudou**	**0.80**	**34**	⇑*i*P	**Pg**	**21 41 24.2**	**-0.5**
	baz=28						
SBCB	**Hsinchu**	**0.82**	**354**	*e*P	**Pn**	**21 41 26.2**	**-0.3**
	baz=9.0						
HSN	**Hsinchu**	**0.83**	**353**	*e*P	**Pn**	**21 41 27.2**	**+0.5**
	baz=357						
WTP	**Ta-pu**	**0.84**	**211**	⇑*i*P	**Pb**	**21 41 25.9**	**+0.1**
	baz=209						
WTP				S	**Sn**	**21 41 38.4**	**-0.8**
	baz=209						
WSF	**Szhu**	**0.85**	**247**	P	**Pb**	**21 41 26.1**	**+0.1**
	baz=245						
STYT	**Tauyuan**	**0.86**	**200**	⇓*i*P	**Pb**	**21 41 25.5**	**-0.5**
	baz=198						
STYT				*e*S	**Sb**	**21 41 38.0**	**+0.4**
	baz=198						
NWLT	**Wulai**	**0.89**	**26**	*e*P	**Pg**	**21 41 25.3**	**-1.1**
	baz=27						
TWK	**Hsinying**	**0.89**	**218**	⇑*i*P	**Pn**	**21 41 26.8**	**-0.8**
	baz=215						
TWK				*e*S	**Sn**	**21 41 40.2**	**-0.1**
	baz=215						
CHKT	**Chengkung**	**0.91**	**163**	*e*P	**Pn**	**21 41 27.2**	**-0.5**
	baz=145						
TWE	**Neicheng**	**0.92**	**36**	⇑*i*P	**Pg**	**21 41 26.5**	**-0.5**
	baz=48						
SNST	**Tainan City**	**0.92**	**216**	*e*P	**Pb**	**21 41 26.9**	**-0.2**
	baz=214						
CHN1	**Nanshi**	**0.93**	**213**	P	**Pb**	**21 41 27.4**	**0.0**
	baz=223						
CHN1				*e*S	**Sn**	**21 41 40.6**	**-0.8**
	baz=223						
TWC	**Suao**	**0.94**	**48**	⇓*i*P	**Pg**	**21 41 27.1**	**-0.4**
	baz=45						
TWC				*e*S	**Sb**	**21 41 40.0**	**+0.1**
	baz=45						
NCUH	**Zhongli**	**0.99**	**5**	⇑P	**Pn**	**21 41 29.9**	**+0.9**
	baz=7.0						
NCUH				*e*S	**Sn**	**21 41 44.3**	**+1.5**
	baz=7.0						
ILA	**Ilan**	**1.00**	**38**	*e*P	**Pg**	**21 41 27.7**	**-0.7**
	baz=28						
NCU	**National Centr**	**1.00**	**6**	⇑*i*P	**Pn**	**21 41 30.0**	**+1.0**
	baz=8.0						
NCU				*e*S	**Sn**	**21 41 43.9**	**+0.9**
	baz=8.0						
SGST	**Jiashian**	**1.00**	**207**	*e*P	**Pn**	**21 41 28.6**	**-0.4**
	baz=205						
SGST				S	**Sn**	**21 41 43.4**	**+0.5**
	baz=205						
CHN8	**Yiju**	**1.01**	**232**	*e*P	**Pn**	**21 41 28.8**	**-0.3**
	baz=242						
CHN8				*e*S	**Sn**	**21 41 44.0**	**+0.7**
	baz=242						
SLGT	**Liugui**	**1.05**	**202**	*e*P	**Pn**	**21 41 29.6**	**-0.1**
	baz=201						
SLGT				*e*S	**Sn**	**21 41 44.2**	**-0.1**
	baz=201						
TATO	**Taipei**	**1.06**	**20**	*e*P	**Pn**	**21 41 29.8**	**-0.1**
	baz=28						
NHDH	**Xindian Distri**	**1.06**	**22**	*e*P	**Pn**	**21 41 30.9**	**+1.0**
	baz=28						
TWA	**Mucha**	**1.10**	**24**	*e*P	**Pb**	**21 41 30.2**	**0.0**
	baz=27						
TWA				*e*S	**Sn**	**21 41 46.3**	**+0.7**
	baz=27						
CHN3	**Shinhua**	**1.11**	**216**	*e*P	**Pn**	**21 41 31.4**	**+0.9**
	baz=227						
CHN3				*e*S	**Sn**	**21 41 48.1**	**+2.5**
	baz=227						
EOS1	**EOS1**	**1.11**	**59**	*e*P	**Pn**	**21 41 30.8**	**+0.2**
	baz=53						
EOS1				*e*S	**Sn**	**21 41 46.7**	**+0.9**
	baz=53						
SCLT	**Jiali**	**1.14**	**226**	P	**Pn**	**21 41 31.4**	**+0.5**
	baz=224						
SCLT				S	**Sn**	**21 41 48.8**	**+2.4**
	baz=224						
TWG	**Pinlang**	**1.15**	**180**	*e*P	**Pn**	**21 41 30.9**	**-0.2**
	baz=167						
TWGBT	**Beinan**	**1.15**	**180**	*e*P	**Pg**	**21 41 30.5**	**-0.9**
	baz=172						
TWGBT				*e*S	**Sn**	**21 41 47.2**	**+0.5**
	baz=172						
TWS1	**Kuangyinshan**	**1.16**	**15**	*e*P	**Pn**	**21 41 32.2**	**+1.0**
	baz=17						
TWS1				*e*S	**Sn**	**21 41 48.5**	**+1.5**
	baz=17						
EGS		**1.16**	**42**	*e*P	**Pn**	**21 41 31.2**	**0.0**
	baz=56						
TIPB	**Shuangxi**	**1.20**	**34**	⇓*i*P	**Pb**	**21 41 31.6**	**-0.4**
	baz=28						
TIPB				*e*S	**Sn**	**21 41 48.5**	**+0.4**
	baz=28						
TAI1	**Yung-k'ang**	**1.22**	**220**	*e*P	**Pn**	**21 41 32.7**	**+0.8**
	baz=218						
NTST	**Danshui**	**1.23**	**16**	*e*P	**Pg**	**21 41 33.1**	**+0.2**
	baz=16						
YM04	**YM04**	**1.25**	**19**	*e*P	**Pg**	**21 41 33.1**	**-0.1**
	baz=21						
YM04				*e*S	**Sn**	**21 41 51.2**	**+2.1**
	baz=21						
YM01	**YM01**	**1.25**	**21**	P	**Pg**	**21 41 33.4**	**+0.1**
	baz=23						
YM01				*e*S	**Sn**	**21 41 50.6**	**+1.4**
	baz=23						
NWF	**Wu-fen Shan**	**1.27**	**30**	*e*P	**Pg**	**21 41 33.1**	**-0.5**
	baz=33						
WFSB	**Wu-fen Shan**	**1.27**	**30**	*e*P	**Pg**	**21 41 33.8**	**+0.2**
	baz=33						
YM05	**YM05**	**1.27**	**20**	⇓P	**Pg**	**21 41 33.8**	**+0.2**
	baz=22						
YM05				*e*S	**Sn**	**21 41 50.9**	**+1.3**
	baz=22						
YM11	**YM11**	**1.27**	**21**	*e*P	**Pg**	**21 41 33.6**	**-0.1**
	baz=23						
YM11				*e*S	**Sn**	**21 41 51.9**	**+2.1**
	baz=23						
SSD	**Sandimen**	**1.29**	**199**	*e*P	**Pg**	**21 41 34.2**	**+0.1**
	baz=197						
SSD				*e*S	**Sn**	**21 41 51.6**	**+1.5**
	baz=197						
YM08	**YM08**	**1.29**	**21**	*e*P	**Pg**	**21 41 33.9**	**-0.3**
	baz=35						
TWB1	**Santiao Chiao**	**1.32**	**39**	*e*P	**Pn**	**21 41 33.5**	**+0.1**
	baz=33						
SGLT	**Jiouru**	**1.36**	**204**	*e*P	**Pg**	**21 41 37.2**	**+1.9**
	baz=202						
ECL	**Taimali**	**1.38**	**185**	*e*P	**Pg**	**21 41 34.9**	**-0.8**
	baz=168						
ECL				*e*S	**Sg**	**21 41 54.2**	**+0.7**
	baz=168						
TWY	**Chenhua**	**1.38**	**20**	*e*P	**Pb**	**21 41 34.7**	**-0.2**
	baz=34						
SNJT	**Kaohsiung City**	**1.39**	**210**	*e*P	**Pg**	**21 41 35.9**	**-0.1**
	baz=208						
MASBT	**Mashibuluo**	**1.42**	**197**	*e*P	**Pg**	**21 41 36.1**	**-0.3**
	baz=196						
MASBT				*e*S	**Sg**	**21 41 56.2**	**+1.4**
	baz=196						
PNG	**Penghu**	**1.46**	**254**	*e*P	**Pn**	**21 41 34.9**	**-0.4**
	baz=252						
PHUB	**P'eng-hu**	**1.46**	**252**	*e*P	**Pn**	**21 41 35.1**	**-0.1**
	baz=250						
PHUB				*e*S	**Sn**	**21 41 52.8**	**-1.4**
	baz=250						
WDGT	**Dungji**	**1.48**	**242**	*e*P	**Pn**	**21 41 35.8**	**+0.1**
	baz=226						
WDGT				*e*S	**Sg**	**21 41 56.0**	**-1.0**
	baz=226						
SSPT	**Xinbi**	**1.56**	**198**	*e*P	**Pg**	**21 41 38.8**	**-0.3**
	baz=198						
EAST	**Anshuo**	**1.60**	**188**	*e*P	**Pb**	**21 41 38.3**	**-0.3**
	baz=186						
EAST				*e*S	**Sg**	**21 42 01.0**	**+0.3**
	baz=186						
TAW	**Tawu**	**1.62**	**186**	*e*P	**Pb**	**21 41 39.0**	**+0.1**
	baz=175						
SCZT	**Fangliau**	**1.65**	**195**	*e*P	**Pb**	**21 41 39.5**	**0.0**
	baz=211						
SCZT				*e*S	**Sg**	**21 42 00.9**	**-1.5**
	baz=211						
VCHM	**Qimei**	**1.69**	**244**	P	**Pn**	**21 41 38.8**	**+0.2**
	baz=231						
VCHM				*e*S	**Sb**	**21 42 01.0**	**-0.5**
	baz=231						
WLCH	**Liuqiu**	**1.74**	**202**	*e*P	**Pb**	**21 41 40.8**	**-0.3**
	baz=200						
VWUC	**VWUC**	**1.80**	**305**	*e*P	**Pn**	**21 41 38.6**	**-1.3**
	baz=305						
YOJ	**Yonaguni jima**	**1.83**	**74**	*e*P	**Pn**	**21 41 38.5**	**-1.9**
	baz=75						
PCYT	**Pengchaiyu**	**1.88**	**28**	*e*P	**Pn**	**21 41 42.0**	**+0.9**
	baz=14						
LAY	**Lan-yu**	**1.97**	**167**	*e*P	**Pn**	**21 41 41.8**	**-0.6**
	baz=152						
TWK1	**Hengchun**	**2.04**	**187**	*e*P	**Pg**	**21 41 47.0**	**-1.3**
	baz=202						
TWKBT	**Hengchun**	**2.04**	**187**	*e*P	**Pn**	**21 41 44.4**	**+1.1**
	baz=202						
MATB	**Ma-tsu**	**2.40**	**335**	*e*P	**Pn**	**21 41 47.4**	**-0.8**
	baz=335						
IRIF	**Iriomote-Funau**	**2.45**	**81**	P	**Pn**	**21 41 50.1**	**+1.2**
IRIF				*e*S	**Sn**	**21 42 19.8**	**+1.1**
KNM	**Kinmen**	**2.46**	**281**	*e*P	**Pn**	**21 41 50.5**	**+1.4**
	baz=277						
HATJ	**Hateruma jima**	**2.49**	**88**	*e*S	**Sn**	**21 42 22.3**	**+2.5**
KNMB	**Chin-men Tao**	**2.51**	**282**	*e*P	**Pn**	**21 41 49.3**	**-0.4**
	baz=279						
JKRS	**Kuro-shima**	**2.69**	**84**	P	**Pn**	**21 41 53.1**	**+0.9**
JKRS				*e*S	**Sn**	**21 42 25.6**	**+0.9**
JIJ	**Ishigaki jima**	**2.82**	**81**	P	**Pn**	**21 41 54.6**	**+0.5**
JIJ				*e*S	**Sn**	**21 42 28.3**	**+0.3**
JISG	**Ishigakijimahi**	**3.01**	**78**	P	**Pn**	**21 41 57.3**	**+0.7**
JISG				*e*S	**Sn**	**21 42 33.6**	**+1.0**

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*IDC **13** 21:47:57.4±1.1, 37°.50N×143°.97E, h0^{km}, mb3.3/6, mb1 3.6/8, mb1mx3.5/37, mbtmp3.4/8, ML2.5/2, Error ellipse: s-maj=32.4km s-min=22.7km az=137.0*

*ISCJB **13** 21:48:00.3±0.6, 37°.73N±0°.04×143°.72E±0°.05, h33^{km}, mb3.3/6, Error ellipse: s-maj=5.7km s-min=5.2km az=154.6*

*JMA **13** 21:48:00.0±0.2, 37°.75N×143°.75E, h50^{km}, M3.3*

ISC 13 21:48:02.8±0.8, **37°.78N**±0°.05×**143°.74E**±0°.07, **h35**^{km}**, n27,** σ**2**.^{s}**11**/42, **mb3.3**/6, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**1.87**	**287**	P	**Pn**	**21 48 30.8**	**-1.4**
JIKH				S	**Sn**	**21 48 53.1**	**-1.5**
JIO	**Ouri**	**2.00**	**290**	P	**Pn**	**21 48 32.7**	**-1.3**
JIO				S	**Sn**	**21 48 56.3**	**-1.5**
JKMT	**Kesennumamotoy**	**2.06**	**301**	P	**Pn**	**21 48 33.5**	**-1.3**
JKMT				S	**Sn**	**21 48 58.1**	**-1.1**
OFUJ	**Ofunato**	**2.08**	**309**	P	**Pn**	**21 48 33.6**	**-1.5**
OFUJ				*e*S	**Sn**	**21 48 58.6**	**-1.2**
JMK	**Ichinoseki**	**2.30**	**301**	P	**Pn**	**21 48 37.1**	**-1.0**
JMK				*e*S	**Sn**	**21 49 04.4**	**-0.8**
JOM	**Ohasama**	**2.55**	**312**	P	**Pn**	**21 48 40.8**	**-0.9**
JOM				S	**Sn**	**21 49 11.1**	**-0.4**
JFT	**Otama**	**2.71**	**266**	P	**Pn**	**21 48 42.8**	**-1.1**
JFT				S	**Sn**	**21 49 14.1**	**-1.3**
JYK	**Kaneyama**	**2.89**	**294**	P	**Pn**	**21 48 45.9**	**-0.4**
JYK				S	**Sn**	**21 49 19.9**	**+0.1**
JANG	**Nango**	**3.11**	**327**	*e*S	**Sn**	**21 49 23.2**	**-2.2**
JAG	**Ashikaga**	**3.68**	**250**	P	**Pn**	**21 48 55.8**	**-1.4**
JAG				*e*S	**Sn**	**21 49 37.7**	**-1.6**
BSO1	**Boso 1**	**3.83**	**216**	P	**Pn**	**21 48 56.1**	**-2.7**
JRY	**Ryogami san**	**4.26**	**247**	P	**Pn**	**21 49 03.3**	**-1.8**
JRY				*e*S	**Sn**	**21 49 49.5**	**-4.1**
JOD2	**Odawara 2**	**4.51**	**238**	P	**Pn**	**21 49 06.7**	**-1.9**
JOD2				*e*S	**Sn**	**21 49 54.7**	**-5.1**
MJAR	**Matsushiro Arr**	**4.58**	**256**	Pn	**Pn**	**21 49 09.3**	**-0.3**
	0.6nm,0.3s,baz=91,slow=13,SNR=38						
MAT	**Matsushiro**	**4.59**	**256**	P	**Pn**	**21 49 09.9**	**+0.3**
MAT				*e*S	**Sn**	**21 50 02.0**	**+0.3**
JKB	**Kayabe**	**4.60**	**334**	P	**Pn**	**21 49 10.2**	**+0.4**
JKB				*e*S	**Sn**	**21 49 59.4**	**-2.5**
JCH	**Churui**	**4.84**	**357**	P	**Pn**	**21 49 11.6**	**-1.4**
JCH				*e*S	**Sn**	**21 50 03.8**	**-4.0**
NEM2	**Nemuro 2**	**5.79**	**15**	P	**Pn**	**21 49 23.3**	**-2.7**
NEM2				*e*S	**Sn**	**21 50 25.1**	**-6.0**
ASAJ	**Asahikawa**	**6.39**	**353**	Pn	**Pn**	**21 49 34.2**	**-0.2**
	1.7nm,0.3s,baz=235,slow=6.4,SNR=17						
KLR	**Kul'dur**	**14.35**	**327**	Pn	**P**	**21 51 30.1**	**+0.2**
	0.1nm,0.3s,baz=156,slow=6.6,SNR=4.3						
PETK	**Petropavlovsk-**	**18.14**	**28**	P	**Pn**	**21 52 13.6**	**+1.9**
	0.0nm,0.3s,baz=198,slow=14,SNR=2.4						
SONM	**Songino Array**	**28.93**	**302**	P	**P**	**21 54 01.6**	**+3.0**
	0.3nm,0.6s,baz=103,slow=7.9,SNR=2.9						
MKAR	**Makanchi Array**	**45.29**	**302**	P	**P**	**21 56 18.4**	**+1.4**
	0.1nm,0.6s,baz=64,slow=6.6,SNR=2.7						
ILAR	**Eielson Array**	**47.87**	**33**	P	**P**	**21 56 37.6**	**+0.7**
	0.4nm,0.7s,baz=261,slow=6.2,SNR=4.7						
WRA	**Warramunga Arr**	**58.09**	**190**	P	**P**	**21 57 51.0**	**-1.7**
	0.7nm,0.7s,baz=11,slow=7.4,SNR=8.3						
YKA	**Yellowknife Ar**	**62.23**	**31**	P	**P**	**21 58 21.4**	**+0.9**
	0.1nm,0.5s,baz=308,slow=7.0,SNR=3.5						
PDAR	**Pinedale Array**	**75.82**	**47**	P	**P**	**21 59 45.4**	**-0.1**
	0.3nm,0.7s,baz=312,slow=5.4,SNR=3.3						

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*REN **13** 22:20:16.2, 38°.03N×118°.04W, h11^{km}, ML3.8, MW3.7(USGS)*

*IDC **13** 22:20:16.2±0.9, 38°.04N×117°.99W, h0^{km}, mb3.3/2, mb1 3.6/5, mb1mx3.3/40, mbtmp3.3/5, ML3.2/3, MS3.8/1, Ms1 3.8/1, ms1mx2.7/21, Error ellipse: s-maj=9.4km s-min=5.6km az=56.0*

*NEIC **13** 22:20:16.2±0.0, 38°.03N×118°.04W, h11^{km}, MW3.7, ML3.8(REN), Moment Tensor Solution. s38 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.16; M$_{\theta\theta}$-0.11; M$_{\phi\phi}$3.28; M$_{r\theta}$1.87; M$_{\theta\phi}$2.51; M$_{\phi r}$-0.98; Best double couple: M$_{0}$4.60000×10^{14} NP1:ϕ_{s}237.00000°, δ54.00000°, λ-46.00000°. NP2:ϕ_{s}359.00000°, δ54.00000°, λ-134.00000°. Principal axes: T 4.6100, Plg0.0000°, Azm298.0000°; N -0.0300, Plg34.0000°, Azm28.0000°; P -4.5900, Plg56.0000°, Azm208.0000°; After REN.*

*ANF **13** 22:20:16.3±0.3, 38°.02N×118°.03W, h4^{km}±2^{km}, ML4.1/19 Error ellipse: s-maj=2.6km s-min=1.7km az=154.0*

ISC 13 22:20:15.1±1.1, **38°.00N**±0°.02×**118°.04W**±0°.02, **h1**^{km}±9^{km}**, n80,** σ**1**.^{s}**90**/125, **California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NV11	**Mina Array Sit**	**0.44**	**348**	*e*Pg	**Pg**	**22 20 24.3**	**+0.8**
NV11				*e*Sg	**Sg**	**22 20 28.9**	**-0.5**
NV01	**Mina Array Sit**	**0.48**	**335**	*e*Pg	**Pg**	**22 20 24.5**	**+0.3**
NV01				*e*Sg	**Sg**	**22 20 29.7**	**-0.7**
NVAR	**Mina Array Bea**	**0.48**	**335**	Pg	**Pg**	**22 20 24.9**	**+0.7**
	2µm,0.3s,baz=159,slow=18,SNR=1754						
NVAR				Lg	Lg	22 20 30.8	
	7µm,0.3s,baz=151,slow=23,SNR=96						
NVAR				LR	LR	22 20 33.2	
	comp=Z,58nm,21.2s,baz=170,slow=41						
MLAC	**Mammoth, Mammo**	**0.73**	**240**	P	**Pb**	**22 20 30.7**	**0.0**
	baz=57						
MLAC				S	**Sb**	**22 20 41.2**	**-0.1**
	baz=57						
RYN	**Ryan**	**0.73**	**329**	*e*Pg	**Pg**	**22 20 29.7**	**+0.6**
RYN				*e*Sg	**Sg**	**22 20 39.7**	**+1.0**
OMMB	**Old Mammoth Mi**	**0.85**	**243**	*e*Pg	**Pb**	**22 20 32.7**	**-0.1**
MDPB	**Devils Postpil**	**0.90**	**246**	*e*Pg	**Pb**	**22 20 33.5**	**-0.2**
MDPB				*e*Sg	**Sg**	**22 20 45.4**	**+1.4**
TIN	**Tinemaha, Big**	**0.95**	**189**	P	**Pn**	**22 20 35.4**	**-0.3**
	baz=8.7						
TIN				S	**Sn**	**22 20 48.8**	**-1.2**
	baz=8.7						
KVN	**Kaiserville**	**1.05**	**358**	*e*Pg	**Pg**	**22 20 35.3**	**0.0**
KVN				*e*Sn	**Sg**	**22 20 48.9**	**0.0**
GRAC	**Grapevine Rang**	**1.14**	**152**	P	**Pn**	**22 20 38.7**	**+0.5**
	baz=333						
WAKR	**Walker**	**1.21**	**295**	*e*Pg	**Pb**	**22 20 38.6**	**-0.3**
YERR	**Yerington**	**1.36**	**317**	*e*Pn	**Pn**	**22 20 40.8**	**-0.7**
YERR				*e*Sn	**Sg**	**22 20 59.2**	**+0.4**
CWC	**Cottonwood Cre**	**1.56**	**181**	P	**Pb**	**22 20 45.0**	**+0.2**
	baz=1.1						
PNTR	**Pine Nut**	**1.64**	**312**	*e*Pn	**Pn**	**22 20 44.7**	**-0.6**
DAC	**Darwin (Calif)**	**1.75**	**168**	*e*Pn	**Pb**	**22 20 47.5**	**-0.7**
DAC				*e*Pg	**Pg**	**22 20 49.9**	**+1.2**
DAC				*e*S	**Sg**	**22 21 12.4**	**+1.0**
TPNV	**Topopah Spring**	**1.77**	**126**	*e*Pn	**Pb**	**22 20 47.6**	**-0.8**
TPNV				*e*Sn	**Sg**	**22 21 13.7**	**+1.8**
TPNV	**Topopah Spring**	**1.77**	**126**	Pb	**Pg**	**22 20 49.5**	**+0.6**
	baz=308						
FURC	**Furnace Creek,**	**1.79**	**148**	Pb	**Pg**	**22 20 50.2**	**+0.7**
	baz=329						
FURC				Sb	**Sg**	**22 21 14.5**	**+1.8**
	baz=329						
VCNR	**Virginia City**	**1.81**	**316**	*e*Pn	**Pn**	**22 20 47.1**	**-0.5**
CMB	**Columbia Colle**	**1.85**	**272**	*e*Pn	**Pb**	**22 20 48.8**	**-1.0**
CMB				*e*S	**Sb**	**22 21 12.3**	**-1.1**
RUBR	**Rubicon Trail**	**1.96**	**303**	*e*Pn	**Pb**	**22 20 51.4**	**-0.3**
R11A	**Troy Canyon, C**	**1.97**	**79**	*e*Pn	**Pn**	**22 20 49.4**	**-0.4**
R11A				*e*Sn	**Sb**	**22 21 14.9**	**-2.0**
R11A	**Troy Canyon, C**	**1.97**	**79**	Pb	**Pb**	**22 20 52.1**	**+0.2**
	baz=261						
R11A				Sb	**Sg**	**22 21 18.9**	**+0.6**
	baz=261						
MPMC	**Manual Prospec**	**1.99**	**167**	P	**Pb**	**22 20 50.8**	**-1.3**
	baz=348						
VOG	**Valley Oaks Go**	**1.99**	**213**	P	**Pb**	**22 20 51.6**	**-0.4**
	baz=32						
VOG				Sb	**Sg**	**22 21 20.0**	**+1.1**
	baz=32						
PAHR	**Pah Rah Range**	**2.00**	**329**	*e*Pn	**Pn**	**22 20 49.6**	**-0.6**
VES	**Vestal, Richgr**	**2.31**	**202**	P	**Pb**	**22 20 56.2**	**-1.3**
	baz=21						
VES				Sb	**Sg**	**22 21 29.9**	**+0.6**
	baz=21						
ISA	**Isabella, Lake**	**2.36**	**189**	*e*Pn	**Pb**	**22 20 56.5**	**-1.9**
ISA	**Isabella, Lake**	**2.36**	**189**	Pb	**Pg**	**22 21 00.3**	**+0.1**
	baz=8.2						
ISA				Sb	**Sg**	**22 21 31.6**	**+0.9**
	baz=8.2						
AFDM	**Forest Hills D**	**2.49**	**293**	*e*Pn	**Pn**	**22 20 57.0**	**+0.2**
BMN	**Battle Mountai**	**2.51**	**14**	*e*Pn	**Pn**	**22 20 56.8**	**-0.4**
BMN				*e*Pg	**Pg**	**22 21 03.2**	**0.0**
BMN				*e*S	**Sg**	**22 21 34.0**	**-1.8**
SHOC	**Shoshone, Teco**	**2.53**	**145**	Sb	**Sg**	**22 21 37.6**	**+1.3**
	baz=327						
LRMC	**Laurel Mtn Rad**	**2.53**	**173**	P	**Pn**	**22 20 58.3**	**+0.9**
	baz=354						
BEKR	**Beckworth**	**2.60**	**317**	*e*Pn	**Pn**	**22 20 59.0**	**+0.5**
SHPR	**Sheep Range**	**2.74**	**122**	*e*Pn	**Pn**	**22 21 01.5**	**+1.2**
GSC	**Goldstone, Bar**	**2.87**	**159**	*e*Pn	**Pn**	**22 21 02.9**	**+0.9**
PAGB	**Antelope Grade**	**2.87**	**219**	*e*Pn	**Pn**	**22 21 03.4**	**+1.3**
ARVC	**Arvin**	**2.94**	**193**	Sb	**Sg**	**22 21 49.2**	**-0.1**
	baz=12						
SAO	**San Andreas Ge**	**2.98**	**247**	*e*Pn	**Pn**	**22 21 04.3**	**+0.8**
SAO				*e*S	**Sb**	**22 21 43.8**	**-2.0**
SMMC	**Simmler**	**3.10**	**211**	P	**Pn**	**22 21 06.8**	**+1.5**
	baz=29						
EDW2	**Edwards Air Fo**	**3.11**	**179**	P	**Pn**	**22 21 07.0**	**+1.6**
	baz=359						
ORV	**Oroville**	**3.12**	**301**	*e*Pn	**Pn**	**22 21 05.5**	**0.0**
ORV				*e*Pg	**Pb**	**22 21 11.8**	**+0.5**
ORV				*e*Sn	**Sn**	**22 21 35.0**	**-8.3**
PSUT	**Pine Spring**	**3.34**	**79**	*e*Pn	**Pn**	**22 21 09.9**	**+1.2**
PSUT				*e*Pg	**Pb**	**22 21 15.4**	**+0.2**
PKM	**Mcpherson Peak**	**3.42**	**205**	P	**Pn**	**22 21 11.7**	**+2.1**
	baz=24						
OSI	**Osito Audit: C**	**3.42**	**189**	*e*Pn	**Pn**	**22 21 10.8**	**+1.2**
OSI				*e*Pg	**Pg**	**22 21 19.9**	**-0.7**
HEC	**Hector,Ludlow**	**3.45**	**156**	P	**Pn**	**22 21 10.9**	**+0.9**
	baz=337						
ELK	**Elko**	**3.50**	**38**	Pn	**Pn**	**22 21 10.7**	**-0.2**
	3.4nm,0.3s,baz=231,slow=13,SNR=18						
ELK				Lg	Lg	22 22 04.7	
	54nm,0.3s,baz=310,slow=12,SNR=18						
O03E	**Paynes Creek**	**3.71**	**309**	Pb	**Pb**	**22 21 22.7**	**+1.1**
	baz=127						
CCUT	**Cedar City**	**3.73**	**95**	*e*Pn	**Pn**	**22 21 14.5**	**+0.4**
MWC	**Mount Wilson**	**3.77**	**180**	*e*Pn	**Pn**	**22 21 15.4**	**+0.9**
LCMT	**Little Creek M**	**3.94**	**103**	*e*Pn	**Pn**	**22 21 17.2**	**+0.3**
SZCU	**Shurtz Canyon**	**3.94**	**94**	*e*Pn	**Pn**	**22 21 16.1**	**-0.9**
KNB	**Kanab**	**4.26**	**102**	*e*Pn	**Pn**	**22 21 22.2**	**+0.9**
WDC	**Whiskeytown Da**	**4.34**	**308**	*e*Pn	**Pn**	**22 21 21.4**	**-0.7**
W13A	**Hualapai Mount**	**4.42**	**130**	*e*Pn	**Pn**	**22 21 26.0**	**+2.4**
W13A				*e*Pg	**Pg**	**22 21 38.7**	**-1.1**
TCRU	**Three Creeks R**	**4.44**	**80**	*e*Pn	**Pn**	**22 21 26.1**	**+2.2**
TCRU				*e*Pg	**Pg**	**22 21 38.4**	**-1.8**
WVOR	**Wild Horse Val**	**4.45**	**354**	*e*Pn	**Pn**	**22 21 26.8**	**+2.9**
PFO	**Pinyon Flats O**	**4.56**	**163**	*e*Pn	**Pn**	**22 21 26.5**	**+1.1**
PFO				*e*Pg	**Pg**	**22 21 41.7**	**-0.8**

PFO				eS	Sg	22 22 40.4	-1.3
PFO				Lg	Lg	22 22 45.1	
PFO	Pinyon Flats O	4.56	163	Pn	Pn	22 21 27.4	+2.0
	0.6nm,0.3s,baz=5.0,slow=14,SNR=4.7						
PFO				Pg	Pg	22 21 41.8	-0.7
	2.0nm,0.3s,baz=355,slow=14,SNR=4.2						
PFO				Sn	Sn	22 22 19.5	+0.4
	2.2nm,0.3s,baz=42,slow=22,SNR=4.3						
PFO				Lg	Lg	22 22 45.1	
	2.1nm,0.3s,baz=246,slow=22,SNR=2.5						
XPFO	Pion Flat	4.56	163	ePn	Pn	22 21 26.3	+0.9
XPFO				ePg	Pg	22 21 41.7	-0.9
PKCU	Pink Cliffs	4.58	95	ePn	Pn	22 21 27.2	+1.4
DUG	Dugway, Tooele	4.62	60	ePn	Pn	22 21 27.8	+1.6
DUG				ePg	Pg	22 21 41.9	-1.8
DUG				eS	Sb	22 22 37.0	+3.7
MTPU	Mount Pierson	4.63	88	ePn	Pn	22 21 27.9	+1.4
MTPU				ePg	Pg	22 21 42.3	-1.4
MSU	Marysvale	4.64	82	ePn	Pn	22 21 31.0	+4.4
MSU				ePg	Pg	22 21 41.8	-2.3
MSU				eSn	Sn	22 22 17.0	-4.3
U15A	North Rim	4.85	107	ePn	Pn	22 21 31.1	+1.6
U15A				ePg	Pg	22 21 44.9	-3.2
BGU	Big Grassy Mou	4.86	51	ePn	Pn	22 21 30.7	+1.2
Y12C	Blythe	5.11	145	ePn	Pn	22 21 35.1	+2.3
Y12C				ePg	Pg	22 21 51.5	-1.5
YBH	Yreka Blue Hor	5.18	318	Pn	Pn	22 21 35.4	+1.6
	0.3nm,0.3s,baz=150,slow=1.4,SNR=4.9						
YBH				Pg	Pb	22 21 49.7	+3.3
	0.9nm,0.3s,baz=132,slow=12,SNR=8.2						
YBH				Lg	Lg	22 22 59.4	
	0.2nm,0.3s,baz=205,slow=4.4,SNR=3.3						
SPUT	South Promonto	5.44	51	ePn	Pn	22 21 41.2	+3.7
SPUT				ePg	Pg	22 21 55.5	-3.7
HVU	Hansel Valley	5.54	45	ePn	Pn	22 21 42.4	+3.6
Y14A	Wickenburg	5.75	133	ePn	Pn	22 21 44.6	+2.9
Y14A				ePg	Pg	22 22 03.1	-2.2
P17A	Butcher Ranch,	5.90	73	ePn	Pn	22 21 48.3	+4.5
P17A				ePg	Pg	22 22 06.8	-1.2
WUAZ	Wupatki	5.90	113	ePn	Pn	22 21 43.2	-0.6
WUAZ				ePg	Pg	22 22 05.0	-3.0
WUAZ				eS	Sb	22 23 08.6	-1.4
HUMO	Hull Mountain	5.94	322	ePn	Pn	22 21 45.3	+1.1
	48nm,0.8s						
HUMO				eS	Sg	22 23 20.1	-5.8
HLID	Hailey	6.20	25	ePn	Pn	22 21 48.3	+0.3
HLID				ePg	Pb	22 22 08.7	+4.7
HLID				eS	Sb	22 23 25.3	+6.5
MVCO	Mesa Verde	7.62	93	ePn	Pn	22 22 08.9	+1.5
MVCO				ePg	Pg	22 22 39.1	-1.9
MVCO				eS	Sg	22 24 15.0	-4.7
ANMO	Albuquerque	9.81	105	Pg	Pg	22 23 17.8	
	0.2nm,0.3s,baz=312,slow=11,SNR=3.0						
YKA	Yellowknife Ar	24.61	4	P	P	22 25 37.4	+0.8
	0.3nm,0.7s,baz=179,slow=8.4,SNR=3.0						
CMIG	Matias Romero	29.10	129	LR	LR	22 39 38.8	
	comp=Z,154nm,18.4s,baz=211,slow=40						
ILAR	Eielson Array	31.73	337	P	P	22 26 43.1	+2.8
	0.6nm,0.9s,baz=152,slow=7.2,SNR=4.6						

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*CNRM **13** 22:34:01.4, 36°.42N×7°.71W, h30^{km}, ml2.5*
*MDD **13** 22:34:05.5±0.9, 36°.56N×7°.63W, h26^{km}±10^{km}, mbLg2.5/16, Error ellipse: s-maj=8.4km s-min=3.5km az=29.0, PRXIMO*
*IGIL **13** 22:34:05.1, 36°.52N×7°.65W, h22^{km}, ML2.1*
*INMG **13** 22:34:06.0±1.8, 36°.55N×7°.65W, h27^{km}±7^{km}, ML2.3, Error ellipse: s-maj=4.1km s-min=4.1km az=45.0*
ISC 13 22:34:00.6±1.2**, 36°.47N**±0°.03×**7°.61W**±0°.03**, h16**^{km}±9^{km}**, n85, σ1^{s}.86**/168**, 1C-8D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	0.82	342	⇓iPg	Pn	22 34 19.1	+1.6
PBDV				eSg	Sb	22 34 29.0	+1.7
PBDV				A	A	22 34 29.2	
	41nm,0.2s						
PBDV	Barranco-do-Ve	0.82	342	P	Pn	22 34 19.1	+1.6
PBDV				S	Sb	22 34 29.0	+1.7
	41nm,0.2s						
PVAQ	Vaqueiros	0.94	355	⇓iP	Pn	22 34 20.7	+1.5
PVAQ				eS	Sb	22 34 31.8	+1.0
PVAQ				A	A	22 34 32.4	
	96nm,0.4s						
PVAQ	Vaqueiros	0.94	355	P	Pn	22 34 20.7	+1.5
PVAQ				S	Sb	22 34 31.8	+1.0
	96nm,0.4s						
PVAQ	Vaqueiros	0.94	355	P	Pg	22 34 18.6	-0.3
PVAQ				S	Sb	22 34 32.1	+1.3
EGRO	El Granado	1.07	5	⇓P	Pn	22 34 22.7	+1.7
	14nm,0.1s,SNR=18						
EGRO				S	Sg	22 34 35.1	-0.2
	71nm,0.1s,SNR=17						
PFVI	Vila Bisbo	1.19	305	⇑eP	Pn	22 34 24.0	+1.5
PFVI				eS	Sb	22 34 37.4	-0.4
PFVI				A	A	22 34 42.6	
	21nm,0.4s						
PFVI	Vila Bisbo	1.19	305	P	Pn	22 34 23.9	+1.4
	1.9nm,0.0s,SNR=12						
PFVI				S	Sb	22 34 37.6	-0.2
	21nm,0.1s,SNR=6.5						
PFVI	Vila Bisbo	1.19	305	P	Pn	22 34 20.1	-2.4
PFVI				S	Sb	22 34 36.0	-1.8
MORF	Marmelete	1.19	315	eP	Pn	22 34 23.9	+1.2
MORF				eS	Sb	22 34 37.7	-0.2
MORF				AML	AML	22 34 38.9	
	comp=E,41nm,0.1s						
MORF	Marmelete	1.19	315	eP	Pn	22 34 23.8	+1.2
MORF				eS	Sb	22 34 38.0	+0.1
MORF				A	A	22 34 47.2	
	comp=E,35nm,0.2s						
MORF	Marmelete	1.19	315	P	Pn	22 34 23.9	+1.2
MORF				S	Sb	22 34 37.7	-0.2
	comp=E,41nm,0.1s						
PTEO	Sao Teotonio	1.40	321	⇓iP	Pn	22 34 26.5	+1.0
PTEO				eS	Sn	22 34 43.0	-0.7
PTEO				A	A	22 34 48.7	
	comp=E,15nm,0.4s						
PTEO	Sao Teotonio	1.40	321	P	Pn	22 34 26.5	+1.0
PTEO				S	Sn	22 34 43.0	-0.7
	comp=E,7.3nm,0.4s						
MESJ	Messejana	1.46	341	eP	Pb	22 34 27.9	+0.6
MESJ				eS	Sn	22 34 44.3	-0.7
MESJ				AML	AML	22 34 46.5	
	comp=E,16nm,0.1s						
MESJ	Messejana	1.46	341	⇓iP	Pb	22 34 28.0	+0.6
MESJ				eS	Sn	22 34 45.3	+0.2
MESJ				A	A	22 34 46.0	
	comp=E,15nm,0.2s						
MESJ	Messejana	1.46	341	P	Pb	22 34 27.9	+0.6
MESJ				S	Sn	22 34 44.3	-0.7
	comp=E,16nm,0.1s						
ESPR	Espera	1.46	73	P	Pg	22 34 28.8	+0.1
	comp=E,1.0nm,0.1s,SNR=9.2						
ESPR				S	Sg	22 34 46.0	-1.8
	comp=E,67nm,0.4s,SNR=12						
EMIN	Mina Concepcio	1.50	30	P	Pb	22 34 28.3	+0.3
	comp=E,0.9nm,0.1s,SNR=17						
EMIN				S	Sn	22 34 44.9	-1.2
	comp=E,10nm,0.1s,SNR=22						
PBEJ	Beja	1.57	352	eP	Pg	22 34 30.5	-0.3
PBEJ				eS	Sn	22 34 48.1	+0.2
PBEJ				A	A	22 34 48.5	
	comp=E,14nm,0.2s						
PBEJ	Beja	1.57	352	P	Pg	22 34 30.5	-0.3
PBEJ				S	Sn	22 34 48.1	+0.2
	comp=E,6.8nm,0.2s						
PBAR	Barrancos	1.77	15	eS	Sn	22 34 52.0	-0.7
PBAR	Barrancos	1.77	15	S	Sn	22 34 52.0	-0.7
PNCL	Nicolau / Gran	1.80	336	⇓ePn	Pn	22 34 32.5	+1.5
PNCL				eSn	Sn	22 34 53.3	-0.2
PNCL				A	A	22 35 03.7	
	comp=E,12nm,0.4s						
PNCL	Nicolau / Gran	1.80	336	P	Pn	22 34 32.5	+1.5
PNCL				S	Sn	22 34 53.3	-0.2
	comp=E,12nm,0.4s						
ECEU	Ceuta	1.89	107	P	Pb	22 34 35.4	+0.7
	comp=E,5.1nm,0.1s,SNR=7.9						
CEUT	Ceuta	1.93	107	P	Pn	22 34 31.9	-0.9
CEUT				S	Sn	22 34 57.5	+0.7
SMIR	Smir Dam	1.96	113	P	Pn	22 34 33.2	-0.1
SMIR				S	Sn	22 34 57.7	+0.2
RSA	Sarsar	2.14	137	P	Pn	22 34 33.9	-1.8
RSA				S	Sn	22 35 03.4	+1.3
EMIJ	Mijas	2.29	87	P	Pb	22 34 41.6	+0.2
	comp=E,0.4nm,0.1s,SNR=7.9						
EMIJ				S	Sn	22 35 06.8	+1.3
	comp=E,2.5nm,0.2s,SNR=7.9						
CHEFC	Chefchaouen	2.29	126	P	Pn	22 34 36.5	-1.3
CHEFC				S	Sn	22 35 04.6	-1.0
HORN	Hornachuelos	2.33	53	P	Pn	22 34 39.8	+1.6
HORN				S	Sn	22 35 07.7	+1.2
EBAD	Badajoz	2.33	11	⇓P	Pn	22 34 39.7	+1.4
	comp=E,1.0nm,0.1s,SNR=18						
EBAD				S	Sn	22 35 05.4	-1.3
	comp=E,8.6nm,0.2s,SNR=6.2						
ECAB	El Cabril	2.37	47	P	Pn	22 34 40.9	+2.0
	comp=E,0.8nm,0.1s,SNR=9.2						
ECAB				S	Sn	22 35 05.6	-2.1
	comp=E,4.1nm,0.4s,SNR=9.7						
PESTR	Estremoz	2.40	0	ePn	Pn	22 34 40.6	+1.4
PESTR				eSn	Sn	22 35 06.5	-1.8
PESTR				eSg	Sg	22 35 18.8	+1.1
PESTR				A	A	22 35 20.6	
	comp=E,5.9nm,0.6s						
PESTR	Estremoz	2.40	0	P	Pn	22 34 40.8	+1.6
PESTR				S	Sn	22 35 09.5	+1.2
PMTG	Montargil	2.65	349	ePn	Pn	22 34 44.3	+1.7
PMTG				eSn	Sn	22 35 13.9	-0.5
PMTG				A	A	22 35 24.9	
	comp=E,3.8nm,0.2s						
PMTG	Montargil	2.65	349	P	Pn	22 34 44.3	+1.7
PMTG				S	Sn	22 35 13.9	-0.5
	comp=E,3.8nm,0.2s						
PMAFR	Mafra	2.82	332	ePn	Pn	22 34 47.0	+2.0
PMAFR				eSn	Sn	22 35 18.0	-0.7
PMAFR				A	A	22 35 20.3	
	comp=E,19nm,0.7s						
PMAFR	Mafra	2.82	332	P	Pn	22 34 47.0	+2.0
	comp=E,3.9nm,0.1s,SNR=14						
PMAFR				S	Sn	22 35 17.9	-0.8
	comp=E,18nm,0.2s						
EGOR	Sierra Gorda,	2.88	76	P	Pb	22 34 49.4	-2.3
	comp=E,0.1nm,0.2s,SNR=7.9						
EGOR				S	Sn	22 35 20.4	0.0
	comp=E,2.8nm,0.2s,SNR=7.9						
EADA	Adamuz	2.95	54	P	Pn	22 34 48.9	+2.0
	comp=E,0.5nm,0.2s,SNR=7.9						
EADA				S	Sn	22 35 20.9	-1.1
	comp=E,3.0nm,0.1s,SNR=7.9						
PMRV	Marv??o	2.96	3	⇓iPn	Pn	22 34 48.6	+1.6
PMRV				eSn	Sn	22 35 20.1	-2.2
PMRV				A	A	22 35 21.9	
	comp=E,7.0nm,0.4s						
PMRV				eSg	Sg	22 35 35.3	-0.5
PMRV	Marv??o	2.96	3	P	Pn	22 34 48.6	+1.6
PMRV				S	Sn	22 35 20.1	-2.2
	comp=E,7.0nm,0.4s						
ZHG	ZHG	3.11	165	P	Pn	22 34 49.8	+0.7
ZHG				S	Sn	22 35 27.2	+1.1
PTOM	Tomar	3.21	349	ePn	Pn	22 34 52.3	+1.9
PTOM				eSn	Sn	22 35 26.2	-2.1
PTOM				eSg	Sg	22 35 42.5	-1.2
PTOM				A	A	22 35 57.8	
	comp=E,5.8nm,0.3s						
PTOM	Tomar	3.21	349	P	Pn	22 34 52.3	+1.9
PTOM				S	Sn	22 35 26.2	-2.1
ELGU	Los Guajares,	3.22	82	P	Pn	22 34 54.1	+3.5
	comp=E,1.0nm,0.2s,SNR=7.9						
ELGU				S	Sn	22 35 29.4	+0.6
	comp=E,7.8nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	3.37	2	ePn	Pn	22 34 54.2	+1.6
PCBR				eSn	Sn	22 35 31.1	-1.2
PCBR				A	A	22 35 31.9	
	comp=E,4.6nm,0.3s						
PCBR	Castelo Branco	3.37	2	P	Pn	22 34 54.2	+1.6
PCBR				S	Sn	22 35 31.1	-1.2
	comp=E,2.3nm,0.3s						
EQUE	Quentar	3.42	76	S	Sn	22 35 34.2	+0.5
	comp=E,0.8nm,0.1s,SNR=7.9						
LCRM	LCR	3.57	140	P	Pn	22 34 55.7	+0.2
LCRM				S	Sn	22 35 38.4	+0.9
PCAS	Casmilo, Conde	3.65	349	ePn	Pn	22 34 58.3	+1.9
PCAS				eSn	Sn	22 35 38.3	-0.9
PCAS	Casmilo, Conde	3.65	349	P	Pn	22 34 58.3	+1.9
PCAS				S	Sn	22 35 38.3	-0.9
EPLA	Plasencia	3.79	18	S	Sn	22 35 40.2	-2.5
	comp=E,1.9nm,0.2s,SNR=7.9						
EQES	Quesada	3.86	68	P	Pn	22 35 02.7	+3.2
	comp=E,0.1nm,0.1s,SNR=7.9						
EQES				S	Sn	22 35 43.2	-1.4
	comp=E,0.6nm,0.2s,SNR=7.9						
MTE	Manteigas	3.93	1	ePn	Pn	22 35 01.8	+1.5
MTE				eSn	Sn	22 35 43.7	-2.4
MTE				A	A	22 36 10.3	
	comp=E,7.0nm,0.7s						
MTE	Manteigas	3.93	1	P	Pn	22 35 01.8	+1.5
MTE				S	Sn	22 35 43.7	-2.4
	comp=E,3.5nm,0.7s						
SRHM	Skhour des Reh	3.99	184	P	Pn	22 35 02.6	+1.4
SRHM				S	Sn	22 35 51.2	+3.5
PAB	San Pablo	4.01	39	P	Pn	22 35 02.7	+1.2
	comp=E,0.1nm,0.1s,SNR=7.9						
PAB				S	Sn	22 35 43.7	-4.4
	comp=E,1.4nm,0.3s,SNR=7.9						
PVIS	Viseu	4.25	357	ePn	Pn	22 35 06.2	+1.5
PVIS				eSn	Sn	22 35 52.5	-1.5
PVIS				A	A	22 35 53.5	
	comp=E,3.9nm,0.2s						
PVIS	Viseu	4.25	357	P	Pn	22 35 06.2	+1.5
PVIS				S	Sn	22 35 52.5	-1.5
	comp=E,1.9nm,0.2s						
MD31	MD31	4.29	146	P	Pn	22 35 06.9	+1.7
MD31				S	Sn	22 35 55.8	+0.8
ESDC	Sonseca Array	4.30	41	P	Pn	22 35 07.3	+1.8
	comp=E,0.2nm,0.2s,baz=226,slow=14,SNR=4.6						
ESDC				S	Sn	22 35 53.5	-1.9
	comp=E,0.5nm,0.2s,baz=225,slow=23,SNR=4.9						
SESP	Santiago Espad	4.36	66	P	Pn	22 35 10.1	+3.7
	comp=E,0.2nm,0.1s,SNR=4.0						
SESP				S	Sn	22 35 54.7	-2.2
	comp=E,2.5nm,0.1s,SNR=7.9						
MDT	Midelt	4.40	145	P	Pn	22 35 08.5	+1.6
MDT				S	Sn	22 35 57.6	-0.2
MVO	Moncorvo	4.71	5	ePn	Pn	22 35 12.4	+1.3
MVO				eSn	Sn	22 36 02.1	-3.4
MVO				A	A	22 36 04.5	
	comp=E,8.8nm,0.3s						
MVO	Moncorvo	4.71	5	P	Pn	22 35 12.4	+1.3
	comp=E,5.7nm,0.2s,SNR=8.8						
MVO				S	Sn	22 36 02.6	-2.9
	comp=E,6.0nm,0.1s,SNR=8.6						
POLO	Lamas de Olo	4.90	358	ePn	Pn	22 35 15.2	+1.5
POLO				eSn	Sn	22 36 07.0	-3.2
POLO				A	A	22 36 09.5	
	comp=E,2.1nm,0.3s						
POLO	Lamas de Olo	4.90	358	P	Pn	22 35 15.2	+1.5
POLO				S	Sn	22 36 07.0	-3.2
	comp=E,2.1nm,0.3s						
GUD	Guadarrama	4.97	32	P	Pn	22 35 17.0	+2.3
	comp=E,0.0nm,0.1s,SNR=7.9						
GUD				S	Sn	22 36 09.1	-2.8
	comp=E,1.8nm,0.3s						
OUK	Oukaimeden	5.25	182	P	Pn	22 35 20.0	+1.3
OUK				S	Sn	22 36 17.6	-1.5
PCAB	Cabril	5.25	357	ePn	Pn	22 35 20.1	+1.7
PCAB				eSn	Sn	22 36 14.3	-4.3
PCAB	Cabril	5.25	357	P	Pn	22 35 20.1	+1.7
PCAB				S	Sn	22 36 14.3	-4.3
ETOB	Tobarra	5.28	64	P	Pn	22 35 20.4	+1.5
	comp=E,0.4nm,0.1s,SNR=7.9						
ETOB				S	Sn	22 36 16.4	-3.1
	comp=E,0.7nm,0.1s,SNR=7.9						
PBRG	Braganca	5.38	7	ePn	Pn	22 35 21.6	+1.4
PBRG				eSn	Sn	22 36 17.6	-4.1
PBRG				A	A	22 36 19.1	
	comp=E,2.4nm,0.3s						
PBRG	Braganca	5.38	7	P	Pn	22 35 21.6	+1.4
PBRG				S	Sn	22 36 17.6	-4.1
	comp=E,1.2nm,0.3s						
ELOB	Lobios	5.41	356	P	Pn	22 35 22.1	+1.4
	comp=E,0.6nm,0.1s,SNR=9.2						
ELOB				S	Sn	22 36 18.4	-4.2
	comp=E,2.6nm,0.1s,SNR=8.6						
ECAL	Calabor	5.51	7	P	Pn	22 35 23.6	+1.6
	comp=E,0.7nm,0.1s,SNR=13						
ECAL				S	Sn	22 36 21.3	-3.8
	comp=E,7.4nm,0.3s						
PGAV	Gavieira, Arco	5.52	355	ePn	Pn	22 35 23.7	+1.5
PGAV				eSn	Sn	22 36 22.5	-2.8
PGAV				A	A	22 36 45.0	
	comp=E,2.9nm,0.8s						
PGAV	Gavieira, Arco	5.52	355	P	Pn	22 35 23.7	+1.5
PGAV				S	Sn	22 36 22.5	-2.8
	comp=E,2.9nm,0.8s						
OUZM	OUZ	5.59	173	P	Pn	22 35 25.1	+2.0
OUZM				S	Sn	22 36 26.8	-0.3
TTIG	Tnine Tigouga,	5.94	187	P	Pn	22 35 26.9	-1.2
TTIG				S	Sn	22 36 35.0	-0.9
ETOR	Torete	6.15	43	P	Pn	22 35 32.9	+2.1
	comp=E,0.2nm,0.1s,SNR=7.9						
ETOR				S	Sn	22 36 37.6	-3.2
	comp=E,0.3nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	6.34	357	P	Pn	22 35 34.8	+1.4
	comp=E,0.5nm,0.1s,SNR=7.9						
EAGO				S	Sn	22 36 39.9	-5.6
	comp=E,1.0nm,0.1s,SNR=7.9						

IDC 13 22:38:39.1±1.0**, 17°.13S**×**175°.12W, h0**^{km}**, mb4.1**/7**, mb1 4.4**/7**, mb1mx4.1**/23**, mbtmp4.2**/7**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx2.8**/33**, Error ellipse: s-maj=48.3km s-min=19.8km az=138.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	12.34	192	LR	LR	22 45 43.2	
	comp=Z,2μm,21.6s,baz=82,slow=34						
URZ	Urewera	22.13	196	P	P	22 43 36.2	-0.1
	5.0nm,0.3s,baz=346,slow=12,SNR=13						
STKA	Stephens Creek	41.76	241	P	P	22 46 30.6	+0.3
	1.7nm,0.6s,baz=70,slow=8.4,SNR=3.6						
WRA	Warramunga Arr	47.86	258	P	P	22 47 19.1	-0.1
	1.7nm,0.4s,baz=97,slow=6.8,SNR=93						
ASAR	Alice Springs	48.02	253	P	P	22 47 20.1	-0.4
	10nm,0.5s,baz=89,slow=8.5,SNR=140						
NVAR	Mina Array Bea	76.71	42	P	P	22 50 33.1	+0.6
	0.6nm,0.6s,baz=232,slow=10,SNR=3.6						
ILAR	Eielson Array	84.46	12	P	P	22 51 13.1	-0.1
	0.4nm,0.5s,baz=219,slow=5.4,SNR=10						
PDAR	Pinedale Array	84.65	42	P	P	22 51 14.5	-0.6
	0.3nm,0.6s,baz=188,slow=5.5,SNR=3.3						

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*IDC **13** 22:53:05.8±4.5, 25°.41N×124°.94E, h88^{km}±44^{km}, mb3.0/3, mb1 3.2/3, mb1mx3.0/43, mbtmp3.3/3, Error ellipse: s-maj=36.2km s-min=25.9km az=69.0*
*ISCJB **13** 22:53:06.2±0.6, 25°.42N±0°.10×124°.94E±0°.08, h106^{km}±7^{km}, mb3.1/3, Error ellipse: s-maj=18.9km s-min=5.7km az=146.6*
*JMA **13** 22:53:07.7±0.1, 25°.45N×124°.88E, h93^{km}±4^{km}, M3.2*
ISC 13 22:53:07.0±1.0**, 25°.4N**±0°.1×**124°.92E**±0°.08**, h101**^{km}±11^{km}**, n15, σ0^{s}.56**/26**, mb3.1**/3**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.60	150	P	Pn	22 53 23.9	+0.3
JIKM				eS	Sn	22 53 36.2	+0.1
JIRB	Irabujima	0.65	160	P	Pn	22 53 24.1	0.0
JIRB				eS	Sn	22 53 36.3	-0.6
JMJ	Miyako jima 2	0.71	152	P	Pn	22 53 24.9	+0.3
JMJ				eS	Sn	22 53 37.7	-0.1
JOGS	Gusukube	0.81	147	P	Pn	22 53 26.1	+0.5
JOGS				S	Sn	22 53 39.7	+0.2
JTJ	Tarama	0.82	194	P	Pn	22 53 25.9	+0.2
JTJ				S	Sn	22 53 39.1	-0.6
JISG	Ishigakijimahi	1.02	213	P	Pn	22 53 28.1	+0.4
JISG				S	Sn	22 53 42.8	-0.5
JIJ	Ishigaki jima	1.29	214	P	Pn	22 53 30.8	0.0
JIJ				S	Sn	22 53 47.5	-1.3
JKRS	Kuro-shima	1.46	215	P	Pn	22 53 33.0	+0.2
JKRS				eS	Sn	22 53 51.9	-0.5
IRIF	Iriomote-Funau	1.55	225	P	Pn	22 53 34.0	+0.1
IRIF				S	Sn	22 53 54.1	-0.2
HATJ	Hateruma jima	1.72	217	eS	Sn	22 53 57.8	-0.2
JKE	Kume jima 2	1.89	62	P	Pn	22 53 38.5	+0.3
JKE				eS	Sn	22 54 02.3	+0.2
JOW	Kunigami	3.31	65	P	Pn	22 53 56.5	-0.4
	0.2nm,0.3s,baz=72,slow=22,SNR=1.9						
JOW				S	Sn	22 54 34.1	-1.4
	0.3nm,0.3s,baz=91,slow=19,SNR=2.1						
MKAR	Makanchi Array	39.87	313	P	P	23 00 30.9	+0.1
	0.2nm,0.4s,baz=102,slow=9.8,SNR=9.4						
WRA	Warramunga Arr	46.03	168	P	P	23 01 20.2	-0.4
	0.2nm,0.8s,baz=348,slow=7.6,SNR=2.9						
YKA	Yellowknife Ar	80.47	24	P	P	23 05 08.1	+0.7
	0.2nm,0.6s,baz=302,slow=5.4,SNR=5.2						

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*JMA **13** 22:56:22.9±0.3, 36°.96N×135°.30E, h364^{km}±4^{km}, M2.9*
*ISCJB **13** 22:56:23.5±0.5, 37°.06N±0°.07×135°.32E±0°.09, h350^{km}, mb2.8/2, Error ellipse: s-maj=10.4km s-min=8.8km az=139.2*
*IDC **13** 22:56:23.3±1.5, 36°.99N×135°.40E, h369^{km}±28^{km}, mb2.6/2, mb1 2.9/6, mb1mx2.6/51, mbtmp3.5/6, Error ellipse: s-maj=51.4km s-min=18.9km az=65.0*
ISC 13 22:56:23.0±0.9**, 36°.99N**±0°.09×**135°.34E**±0°.08**, h350**^{km}**, n23, σ1^{s}.41**/25**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	1.07	131	P	Pn	22 57 10.4	+1.3
JKY	Yasaka	1.37	188	P	Pn	22 57 11.7	+1.1
JKSM	Kasumi	1.50	202	P	Pn	22 57 12.1	+0.9
JSZ	Suzu	1.68	74	P	Pn	22 57 14.0	+1.9
JWT	Wachi	1.70	178	P	Pn	22 57 13.7	+1.2
JWT				eS	S	22 57 52.9	+0.8
JYTA	Yamagatataniai	1.79	141	P	Pn	22 57 14.2	+1.2
JOI	OKI	1.82	248	P	Pn	22 57 14.3	+1.2
JNG	Nsakai	2.29	104	P	Pn	22 57 18.2	+1.6
MAT	Matsushiro	2.34	100	P	Pn	22 57 18.4	+1.5
MAT	Matsushiro	2.34	100	P	Pn	22 57 18.4	+1.5
MJAR	Matsushiro Arr	2.34	100	P	Pn	22 57 18.8	+1.9
	0.5nm,0.3s,baz=278,slow=8.7,SNR=51						
JSD	Sado	2.54	65	P	Pn	22 57 20.1	+1.7
JIE	Ise	2.82	156	P	Pn	22 57 22.2	+1.3
JHK	Hiroka	2.95	84	P	Pn	22 57 23.4	+1.5
JRY	Ryogami san	3.03	108	P	Pn	22 57 24.5	+1.8
JFT	Otama	4.02	81	P	Pn	22 57 34.1	+1.9
JFK	Kawauchi	4.43	83	P	Pn	22 57 36.8	+0.3
BSO1	Boso 1	5.14	115	P	Pn	22 57 43.7	+0.1
BSO1				eS	S	22 58 48.3	-0.5
USRK	Ussuriysk Ar.	7.64	342	P	Pn	22 58 14.2	+1.4
	0.5nm,0.3s,baz=153,slow=11,SNR=7.9						
ASAJ	Asahikawa	9.01	36	P	Pn	22 58 28.7	-0.2
	1.2nm,0.3s,baz=222,slow=13,SNR=7.8						
KLR	Kul'dur	12.51	349	P	P	22 59 10.2	+0.1
	0.1nm,0.3s,baz=175,slow=11,SNR=4.1						
MKAR	Makanchi Array	40.01	301	P	P	23 03 23.6	-1.4
	0.2nm,0.4s,baz=81,slow=9.0,SNR=4.6						
WRA	Warramunga Arr	56.63	181	P	P	23 05 29.3	-1.4
	0.3nm,0.4s,baz=357,slow=7.6,SNR=12						

IDC 13 22:56:39.4±1.8**, 11°.03S**×**166°.21E, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.5**/40**, mbtmp3.7**/4**, Error ellipse: s-maj=81.1km s-min=10.1km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.92	250	P	P	23 03 07.1	0.0
	2.1nm,0.9s,baz=81,slow=9.0,SNR=16						
ASAR	Alice Springs	33.21	243	P	P	23 03 18.0	-0.4
	0.3nm,0.6s,baz=85,slow=9.7,SNR=3.9						
ILAR	Eielson Array	83.35	18	P	P	23 09 08.3	+0.2
	0.6nm,1.2s,baz=229,slow=5.2,SNR=3.5						
MKAR	Makanchi Array	93.82	317	P	P	23 09 57.8	-0.9
	0.4nm,0.7s,baz=119,slow=3.5,SNR=4.9						

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*KRNET **13** 22:56:60.0±0.1, 42°.41N×78°.72E, h35^{km}, mb1.8*
*SOME **13** 22:57:01.0, 42°.52N×78°.52E, h15^{km}*
*NNC **13** 22:57:01.1±0.9, 42°.57N×78°.53E, h0^{km}, mb2.2, mpv2.5, Error ellipse: s-maj=7.1km s-min=3.0km az=169.0*
ISC 13 22:57:01.7±1.0**, 42°.52N**±0°.03×**78°.60E**±0°.03**, h24**^{km}±7^{km}**, n30, σ1^{s}.13**/57**, 12C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.15	256	⇑iP	Pb	22 57 06.9	0.0
	baz=88						

PRZ				⇑iS	Sb	22 57 12.0	+1.5
	baz=88						
SATY	Saty	0.56	346	P	Pb	22 57 11.2	-1.7
	4.8nm,0.1s						
SATY				S	Sb	22 57 18.4	-2.2
	10nm,0.1s						
SATY	Saty	0.56	346	eP	Pb	22 57 11.2	-1.7
	4.8nm,0.1s						
SATY				eS	Sb	22 57 18.4	-2.2
	10nm,0.1s						
UZB	Uzynbulak	0.70	26	P	Pb	22 57 14.1	-1.3
	1.6nm,0.1s						
UZB				S	Sb	22 57 23.6	-1.1
	9.0nm,0.1s						
UZB	Uzynbulak	0.70	26	eP	Pb	22 57 14.1	-1.3
	1.6nm,0.1s						
UZB				eS	Sb	22 57 23.6	-1.1
	9.0nm,0.1s						
TARG	Taragay, Kyrgy	0.98	217	⇓iP	Pb	22 57 18.4	-1.9
	baz=25						
TARG				⇓iS	Sb	22 57 31.1	-2.0
	baz=25						
PDGK	Podgornoye	1.04	39	P	Pn	22 57 20.3	-0.6
	0.3nm,0.1s						
PDGK				S	Sb	22 57 34.2	-0.2
	1.0nm,0.2s						
PDGK	Podgornoye	1.04	39	⇑iP	Pn	22 57 20.0	-0.9
	baz=31						
PDGK				⇑iS	Sb	22 57 34.2	-0.2
	baz=31						
KDJ	Kajisay	1.12	250	⇑iP	Pn	22 57 22.0	0.0
	baz=56						
KDJ				⇑iS	Sn	22 57 36.8	+0.1
	baz=56						
KOTS	Kotyrbulak	1.30	304	P	Pn	22 57 24.3	-0.2
	0.7nm,0.2s						
KOTS				S	Sn	22 57 41.0	-0.3
	5.4nm,0.2s						
KOTS	Kotyrbulak	1.30	304	eP	Pn	22 57 24.3	-0.2
	0.7nm,0.2s						
KOTS				eS	Sn	22 57 41.0	-0.3
	5.4nm,0.2s						
MDOK	Medeo	1.31	300	P	Pn	22 57 24.2	-0.4
	0.9nm,0.5s						
MDOK				S	Sn	22 57 41.0	-0.3
	2.2nm,0.4s						
MDOK	Medeo	1.31	300	Pg	Pn	22 57 24.2	-0.4
	1.5nm,0.4s						
MDOK				Lg	Lg	22 57 40.9	
	1.8nm,0.2s						
MDOK	Medeo	1.31	300	eP	Pn	22 57 24.2	-0.4
	1.5nm,0.4s						
MDOK				eS	Sn	22 57 40.9	-0.5
	1.8nm,0.2s						
TNSS	Tian-Shan	1.32	294	P	Pn	22 57 24.8	-0.1
	0.9nm,0.1s						
TNSS				S	Sn	22 57 41.8	-0.2
	2.9nm,0.2s						
TNSS	Tian-Shan	1.32	294	eP	Pn	22 57 24.8	-0.1
	0.9nm,0.1s						
TNSS				eS	Sn	22 57 41.8	-0.2
	2.9nm,0.2s						
IZV	Izvestkoviy	1.55	290	P	Pb	22 57 29.1	-0.7
	1.8nm,0.2s						
IZV				S	Sb	22 57 49.0	0.0
	5.1nm,0.2s						
IZV	Izvestkoviy	1.55	290	eP	Pb	22 57 29.1	-0.7
	1.8nm,0.2s						
IZV				eS	Sb	22 57 49.0	0.0
	5.1nm,0.2s						
KTMS	Ketmen	1.59	54	P	Pb	22 57 30.8	+0.4
	0.5nm,0.1s						
KTMS				S	Sb	22 57 52.0	+1.9
	3.6nm,0.2s						
KTMS	Ketmen	1.59	54	eP	Pb	22 57 30.8	+0.4
	0.5nm,0.1s						
KTMS				eS	Sb	22 57 52.0	+1.9
	3.6nm,0.2s						
ULHL	Ulahol	1.77	262	⇑iP	Pn	22 57 31.5	+0.6
	baz=66						
ULHL				⇑iS	Sb	22 57 54.9	-0.4
	baz=66						
CHKK	Chushkaly	1.78	319	P	Pb	22 57 33.5	-0.1
	2.9nm,0.1s						
CHKK				S	Sb	22 57 56.9	+1.5
	4.4nm,0.2s						
CHKK	Chushkaly	1.78	319	⇓iP	Pb	22 57 33.5	-0.1
	2.9nm,0.1s						
CHKK				eS	Sb	22 57 56.9	+1.5
	4.4nm,0.2s						
ARXS	Arharly	1.78	342	P	Pb	22 57 33.3	-0.4
	1.2nm,0.3s						
ARXS				S	Sb	22 57 56.9	+1.2
	0.8nm,0.3s						
ARXS	Arharly	1.78	342	eP	Pb	22 57 33.3	-0.4
	1.2nm,0.3s						
ARXS				eS	Sb	22 57 56.9	+1.2
	0.8nm,0.3s						
BOOM	Boomskoye usch	1.96	270	⇑iP	Pn	22 57 35.0	+1.4
	baz=73						
BOOM				⇑iS	Sb	22 58 00.8	-0.2
	baz=73						
NRN	Naryn	2.22	242	⇑iP	Pn	22 57 37.6	+0.3
	baz=45						
NRN				⇑iS	Sn	22 58 05.3	+1.2
	baz=45						
TKM2	Tokmak 2	2.25	281	⇓Pg	Pb	22 57 43.4	+1.7
	0.2nm,0.3s						
TKM2				⇓Lg	Lg	22 58 10.4	
	1.9nm,0.6s						
KAPS	Kapalarasan	2.82	11	Pg	Pb	22 57 52.1	+0.8
	0.2nm,0.1s						
KAPS				Lg	Lg	22 58 28.6	
	1.1nm,0.4s						
KAPS	Kapalarasan	2.82	11	eP	Pb	22 57 52.1	+0.8
	0.2nm,0.1s						
KAPS				eS	Sb	22 58 28.6	+3.1
	1.1nm,0.4s						

IDC 13 22:57:26.6±4.3, 11°.84S×165°.52E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.5/38, mbtmp3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/20, Error ellipse: s-maj=213.0km s-min=34.6km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.97	293	LR	LR	23 01 36.2	
	comp=Z,91nm,18.4s,baz=156,slow=42						
WRA	Warramunga Arr	31.01	251	P	P	23 03 46.2	0.0
	0.4nm,0.6s,baz=82,slow=9.1,SNR=3.3						
ASAR	Alice Springs	32.24	244	P	P	23 03 57.1	0.0
	0.5nm,0.8s,baz=76,slow=8.9,SNR=4.2						
ILAR	Eielson Array	84.33	19	P	P	23 10 00.3	0.0
	0.3nm,0.8s,baz=230,slow=5.6,SNR=4.8						

IDC 13 23:03:57.6±3.6, 22°.08N×108°.07W, h0^{km}, mb3.7/2, mb1 4.1/6, mb1mx3.7/38, mbtmp3.9/6, ML3.8/4, MS3.1/10, Ms1 3.1/10, ms1mx3.0/46, Error ellipse: s-maj=64.5km s-min=32.0km az=24.0, Off coast of central Mexico

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	La Paz	2.88	315	Pn	Pn	23 04 45.0	+0.3
	2.7nm,0.3s,baz=148,slow=9.5,SNR=2.3						
LPIG				LR	LR	23 05 07.1	
	comp=Z,66nm,21.7s,baz=220,slow=24						
LPIG				Sn	Sn	23 05 16.1	-4.0
	6.8nm,0.3s,baz=344,slow=23,SNR=1.6						
TXAR	Lajitas Array	8.24	28	Pn	Pn	23 06 01.2	+2.6
	0.9nm,0.3s,baz=207,slow=13,SNR=33						
ANMO	Albuquerque	12.89	6	Pn	Pn	23 07 05.6	+3.2
	0.1nm,0.3s,baz=182,slow=17,SNR=3.4						
ANMO				LR	LR	23 12 13.5	
	comp=Z,117nm,19.5s,baz=195,slow=38						
CMIG	Matias Romero	13.38	109	Pn	Pn	23 07 08.9	0.0
	0.3nm,0.3s,baz=295,slow=19,SNR=6.3						
CMIG				LR	LR	23 12 16.9	
	comp=Z,119nm,21.3s,baz=223,slow=37						
PFO	Pinyon Flats O	13.66	329	Pn	Pn	23 07 14.8	+1.9
	0.1nm,0.3s,baz=139,slow=6.5,SNR=4.0						
APG	El Apazote	18.11	110	LR	LR	23 15 03.3	
	comp=Z,88nm,18.1s,baz=120,slow=37						
NVAR	Mina Array Bea	18.51	334	LR	LR	23 15 14.2	
	comp=Z,66nm,21.0s,baz=236,slow=37						
ELK	Elko	19.57	344	LR	LR	23 15 53.9	
	comp=Z,48nm,19.1s,baz=185,slow=37						
JTS	JuntasAbangare	25.07	114	LR	LR	23 17 39.1	
	comp=Z,42nm,20.2s,baz=54,slow=33						
ULM	Lac du Bonnet	29.70	16	P	P	23 10 04.1	-1.1
	1.0nm,0.6s,baz=233,slow=10,SNR=3.0						
ULM				LR	LR	23 23 00.6	
	comp=Z,34nm,20.9s,baz=118,slow=38						
ILAR	Eielson Array	49.65	339	P	P	23 12 51.1	+0.4
	0.5nm,0.9s,baz=143,slow=6.7,SNR=4.9						
NOA	NORSAR Array B	83.93	25	LR	LR	23 52 54.4	
	comp=Z,26nm,21.7s,baz=260,slow=35						
AKASG	Malin Array Be	98.33	26	LR	LR	00 01 30.5	
	comp=Z,19nm,21.8s,baz=15,slow=35						

IDC 13 23:07:37.9±0.8, 10°.55S×165°.62E, h0^{km}, mb3.9/12, mb1 4.1/14, mb1mx4.0/36, mbtmp4.0/14, ML4.3/2, MS3.6/8, Ms1 3.5/8, ms1mx3.2/37, Error ellipse: s-maj=22.4km s-min=18.5km az=132.0

NEIC 13 23:07:39.0±0.5, 10°.59S×165°.67E, h10^{km}, mb4.4/2, Error ellipse: s-maj=14.5km s-min=11.2km az=135.0

ISCJB 13 23:07:40.6±0.5, 10°.72S±0°.06×165°.58E±0°.07, h31^{km}, mb3.9/13, MS3.5/7, Error ellipse: s-maj=10.8km s-min=8.2km az=157.6

ISC 13 23:07:42.3±0.7, 10°.61S±0°.08×165°.69E±0°.08, h31^{km}, n34, σ1^{s}.40/28, mb3.9/13, MS3.5/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.77	281	eP	Pn	23 09 05.0	-0.9
HNR				eS	Sn	23 10 10.0	-1.1
HNR	Honiara	5.77	281	Pn	Pn	23 09 05.9	0.0
	15nm,0.3s,baz=249,slow=1.5,SNR=2.6						
HNR				Sn	Sn	23 10 14.9	+3.8
	19nm,0.3s,baz=190,slow=13,SNR=1.6						
HNR				LR	LR	23 11 24.0	
	comp=Z,941nm,20.2s,baz=123,slow=40						
DZM	Mont Dzumac	11.42	176	ePn	Pn	23 10 25.4	+2.0
	14nm,0.6s						
DZM				eLR	LR	23 12 46.7	
	comp=Z,296nm,26.6s						
DZM	Mont Dzumac	11.42	176	Pn	Pn	23 10 22.6	-0.8
	1.0nm,0.3s,baz=19,slow=21,SNR=7.1						
DZM				Sn	Sn	23 12 28.6	-1.5
	0.3nm,0.3s,baz=22,slow=22,SNR=1.9						
CTA	Charters Tower	20.95	241	P	P	23 12 23.4	+0.5
	12nm,0.8s,baz=68,slow=11,SNR=4.0						
JAY	Jayapura	26.07	286	P	P	23 13 12.2	-1.2
	12nm,0.9s,baz=107,slow=20,SNR=7.6						
H11S2	WAKE ISLAND Hy	28.93	2	T	T	23 44 09.2	
	baz=181,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	28.94	2	T	T	23 44 11.1	
	baz=181,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	28.95	2	T	T	23 44 10.6	
	baz=181,slow=76,SNR=13						
URZ	Urewera	29.38	161	P	P	23 13 43.4	+0.7
	5.5nm,0.7s,baz=326,slow=7.3,SNR=3.5						
URZ				LR	LR	23 24 06.3	
	comp=Z,88nm,18.4s,baz=352,slow=34						
H11N1	WAKE ISLAND Hy	30.16	2	T	T	23 45 41.6	
	baz=182,slow=76,SNR=20						
H11N3	WAKE ISLAND Hy	30.16	2	T	T	23 45 41.3	
	baz=182,slow=76,SNR=21						
H11N2	WAKE ISLAND Hy	30.17	2	T	T	23 45 42.1	
	baz=182,slow=76,SNR=15						
STKA	Stephens Creek	30.72	223	P	P	23 13 55.0	+0.4
	1.4nm,0.7s,baz=39,slow=15,SNR=2.1						
STKA				LR	LR	23 25 32.6	
	comp=Z,111nm,18.8s,baz=27,slow=35						
WRAB	Tennant Creek	31.57	249	eP	P	23 13 57.4	-5.0
WR1	Warramunga Arr	31.58	249	eP	P	23 14 01.1	-1.3
	3.8nm,1.0s						
WR1				ePcP	PcP	23 16 55.9	+1.3
WRA	Warramunga Arr	31.58	249	P	P	23 14 01.1	-1.3
	1.9nm,0.8s,baz=278,slow=14,SNR=12						
WRA				PcP	PcP	23 16 55.9	+1.3
	0.1nm,0.7s,baz=76,slow=2.8,SNR=2.3						
WRA				LR	LR	23 26 54.3	
	comp=Z,147nm,18.4s,baz=70,slow=37						
ASAR	Alice Springs	32.94	243	P	P	23 14 13.8	-0.6
	0.8nm,0.5s,baz=63,slow=10,SNR=14						
ASAR				LR	LR	23 26 39.1	
	comp=Z,90nm,18.9s,baz=80,slow=35						
PPT	Papeete	43.86	104	LR	LR	23 29 07.9	
	comp=Z,49nm,20.5s,baz=272,slow=29						
PPT2	Papeete2	43.86	104	eLR	LR	23 27 54.4	
	comp=Z,92nm,22.2s						
PETK	Petropavlovsk-	63.83	355	LR	LR	23 41 02.7	
	comp=Z,16nm,21.8s,baz=135,slow=31						
CM31	Chiang Mai Arr	71.89	293	eP	P	23 19 00.3	-2.6
	2.3nm,0.6s						
CMAR	Chiang Mai Arr	71.89	293	P	P	23 19 03.0	0.0
	0.4nm,0.4s,baz=127,slow=5.7,SNR=4.4						
SONA0	Songino Array	78.28	324	eP	P	23 19 38.7	-0.7
SONM	Songino Array	78.28	324	P	P	23 19 38.7	-0.7
	0.2nm,0.9s,baz=132,slow=4.3,SNR=2.5						
ILAR	Eielson Array	83.12	19	P	P	23 20 05.3	+0.5
	0.7nm,0.8s,baz=239,slow=4.3,SNR=6.2						
ILB	Eielson Array	83.12	19	eP	P	23 20 03.4	-1.4
NV01	Mina Array Sit	85.79	50	eP	P	23 20 18.8	-0.4
NVAR	Mina Array Bea	85.79	50	P	P	23 20 20.2	+1.0
	0.4nm,0.6s,baz=214,slow=6.3,SNR=1.6						
MK32	Makanchi Array	93.17	317	eP	P	23 20 55.0	+1.4
MKAR	Makanchi Array	93.17	317	P	P	23 20 55.0	+1.4
	0.3nm,0.7s,baz=98,slow=7.5,SNR=4.6						
YKA	Yellowknife Ar	94.61	27	P	P	23 20 59.3	-0.5
	0.1nm,0.5s,baz=254,slow=4.5,SNR=2.5						
TXAR	Lajitas Array	95.67	61	LR	LR	23 58 41.3	
	comp=Z,26nm,18.7s,baz=0.0,slow=32						
ARCES	ARCESS Array B	115.90	346	PKP	PKPdf	23 26 22.5	+1.0
	1.6nm,0.7s,baz=48,slow=1.8,SNR=6.2						

SOME 13 23:10:02.4, 42°.52N×79°.67E, h15^{km}

KRNET 13 23:10:02.3±0.1, 42°.57N×79°.63E, h13^{km}, mb2.5

NNC 13 23:10:02.8±0.7, 42°.60N×79°.67E, h0^{km}, mb2.3, mpv2.5, Error ellipse: s-maj=4.7km s-min=2.1km az=157.0

ISC 13 23:10:00.9±1.6, 42°.48N±0°.05×79°.66E±0°.05, h10^{km}±10^{km}, n24, σ0^{s}.82/46, 10C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.81	325	eP	Pg	23 10 16.6	0.0
	baz=23						
UZB				eS	Sg	23 10 26.7	-0.5
	baz=23						
UZB	Uzynbulak	0.81	325	eP	Pg	23 10 16.6	0.0
	2.2nm,0.2s						
UZB				eS	Sg	23 10 26.7	-0.5
	8.6nm,0.2s						
PDGK	Podgornoye	0.85	352	P	Pg	23 10 17.4	0.0
	0.3nm,0.1s						
PDGK				S	Sg	23 10 28.0	-0.6
	2.7nm,0.2s						
PDGK	Podgornoye	0.85	352	⇑iP	Pg	23 10 17.3	-0.1
	baz=52						
PDGK				⇑iS	Sg	23 10 27.9	-0.7
	baz=52						
PRZ	Przheval'sk	0.93	270	⇑iP	Pg	23 10 19.4	+0.6
	baz=65						
PRZ				⇑iS	Sg	23 10 31.5	+0.6
	baz=65						
SATY	Saty	1.09	302	P	Pn	23 10 22.7	+0.3
	1.6nm,0.1s						
SATY				S	Sn	23 10 37.1	-0.5
	7.0nm,0.1s						
SATY	Saty	1.09	302	eP	Pn	23 10 22.7	+0.3
	1.6nm,0.1s						
SATY				eS	Sn	23 10 37.0	-0.5
	7.0nm,0.1s						
KTMS	Ketmen	1.09	28	P	Pg	23 10 22.0	+0.1
	2.5nm,0.1s						
KTMS				S	Sb	23 10 35.9	-0.5
	2.9nm,0.2s						
KTMS	Ketmen	1.09	28	eP	Pg	23 10 22.0	+0.1
	baz=30						
KTMS				eS	Sb	23 10 35.9	-0.5
	baz=30						
KTMS	Ketmen	1.09	28	eP	Pg	23 10 22.0	+0.1
	2.5nm,0.1s						
KTMS				eS	Sb	23 10 35.9	-0.5
	2.9nm,0.2s						
KURS	Kuram	1.48	313	P	Pg	23 10 29.4	0.0
	0.4nm,0.1s						
KURS				S	Sg	23 10 48.7	+0.1
	3.0nm,0.3s						
KURS	Kuram	1.48	313	eP	Pg	23 10 29.4	0.0
	baz=11						
KURS				eS	Sg	23 10 48.7	+0.1
	baz=11						
KURS	Kuram	1.48	313	eP	Pg	23 10 29.4	0.0
	0.4nm,0.1s						
KURS				eS	Sg	23 10 48.8	+0.1
	3.0nm,0.3s						
DJR	Jarkent	1.85	3	eP	Pg	23 10 35.6	-0.8
	0.4nm,0.2s						
DJR				eS	Sg	23 10 59.4	-1.1
	1.4nm,0.2s						
KDJ	Kajisay	1.87	260	⇑iP	Pg	23 10 37.2	+0.4
	baz=57						
KDJ				⇑iS	Sg	23 11 01.6	+0.6
	baz=57						
TNSS	Tian-Shan	2.07	286	Pg	Pb	23 10 40.0	+1.2
	1.9nm,0.1s						
TNSS				Lg	Lg	23 11 06.8	
	2.1nm,0.2s						
TNSS	Tian-Shan	2.07	286	eP	Pb	23 10 40.0	+1.2
	baz=84						
TNSS				eS	Sg	23 11 06.8	-0.7
	baz=84						
TNSS	Tian-Shan	2.07	286	eP	Pb	23 10 40.0	+1.2
	1.9nm,0.1s						
TNSS				eS	Sg	23 11 06.8	-0.7
	2.1nm,0.2s						
ULHL	Ulahol	2.54	266	⇑iP	Pb	23 10 46.7	-0.1
	baz=64						
ULHL				⇑iS	Sb	23 11 19.2	+1.0
	baz=64						
BOOM	Boomskoye usch	2.75	271	⇓iP	Pb	23 10 49.2	-1.1
	baz=70						
BOOM				⇓iS	Sb	23 11 23.7	-0.4
	baz=70						
KAPS	Kapalarasan	2.81	356	Pg	Pb	23 10 52.5	+1.2
	0.2nm,0.3s						
KAPS				Lg	Lg	23 11 27.9	
	1.6nm,0.4s						
KAPS	Kapalarasan	2.81	356	eP	Pb	23 10 52.5	+1.2
	0.2nm,0.3s						
KAPS				eS	Sb	23 11 27.9	+2.1
	1.6nm,0.4s						
NRN	Naryn	2.92	250	⇓iP	Pb	23 10 52.7	-0.6
	baz=48						
NRN				⇓iS	Sb	23 11 29.6	+0.4
	baz=48						
TKM2	Tokmak 2	3.02	280	⇑iP	Pb	23 10 53.2	-1.8
	baz=78						
TKM2				⇑iS	Sb	23 11 30.1	-2.0
	baz=78						

ISCJB 13 23:10:07.7±0.4, 39°.48N±0°.02×25°.92E±0°.03, h3^{km}±4^{km}, Error ellipse: s-maj=3.5km s-min=2.9km az=173.4

DDA 13 23:10:07.2, 39°.50N×25°.95E, h7^{km}±4^{km}, ML2.9

ATH 13 23:10:07.6, 39°.48N×25°.94E, h16^{km}±6^{km}, ML2.1/5, Error ellipse: s-maj=6.7km s-min=0.9km az=156.0

ISK 13 23:10:07.1, 39°.49N×25°.87E, h5^{km}, ML2.6/23

ISC 13 23:10:07.7±1.0, 39°.49N±0°.02×25°.94E±0°.02, h10^{km}±9^{km}, n43, σ0^{s}.90/62, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.28	193	PG	Pg	23 10 13.2	-0.3
SIGR				SG	Sg	23 10 17.7	+0.4
SIGR	SIGRI	0.28	193	P	Pg	23 10 13.0	-0.5
SIGR				S	Sg	23 10 17.5	+0.2
SIGR				AML	AML	23 10 17.8	
	comp=E,1603µm,0.1s						
SIGR				AML	AML	23 10 19.5	
	comp=N,964µm,0.2s						
PRK	Paraskevi	0.36	133	P	Pb	23 10 15.2	-0.9
PRK				S	Sb	23 10 20.6	-1.2
PRK				AML	AML	23 10 21.1	
	comp=E,673µm,0.3s						
PRK				AML	AML	23 10 21.3	
	comp=N,687µm,0.3s						
BOZC	Bozcaada	0.36	14	PG	Pb	23 10 15.1	-1.2
BOZC				SG	Sb	23 10 20.5	-1.5
BOZC	Bozcaada	0.36	14	iP	Pb	23 10 15.8	-0.4
BOZC				iS	Sb	23 10 21.6	-0.4
BOZC				IAML_P			
	comp=Z,3µm,0.1s						
EZN	Ezine	0.45	42	PG	Pb	23 10 16.7	-1.0
BAYC	CANAKKALE_Bayr	0.53	62	iP	Pb	23 10 18.6	-0.6
BAYC				iS	Sg	23 10 25.3	+0.2
BAYC				IAML_P			
	comp=Z,3µm,0.1s						
AYVA	Ayvalik	0.61	107	iP	Pg	23 10 19.3	-0.2
AYVA				iS	Sb	23 10 28.2	-0.9
AYVA				IAML_P			
	comp=Z,707nm,0.1s						
LIA	Limnos Island	0.71	305	P	Pb	23 10 21.6	-0.6
LIA				S	Sb	23 10 32.3	+0.3
LIA				AML	AML	23 10 35.7	
	comp=E,333µm,0.4s						
LIA				AML	AML	23 10 36.0	
	comp=N,467µm,0.4s						
EFSA	Agios Efstrati	0.73	274	P	Pb	23 10 22.3	-0.3
EFSA				S	Sb	23 10 32.3	-0.4
PSRA	Psara	0.99	197	P	Pg	23 10 26.4	-0.4
PSRA				S	Sb	23 10 40.1	+0.1
GELI	Tayfur-Gelibol	1.00	24	PG	Pn	23 10 27.5	-0.2
SMTH	Samothraki Isl	1.03	342	P	Pb	23 10 27.2	-0.4
SMTH				S	Sn	23 10 42.1	-0.6
SMTH				AML	AML	23 10 43.6	
	comp=E,227µm,0.4s						
SMTH				AML	AML	23 10 44.1	
	comp=N,193µm,0.2s						
LPK	Lapseki	1.09	35	PN	Pn	23 10 28.7	-0.3
CHOS	Chios island	1.10	175	PN	Pb	23 10 28.7	-0.3
CHOS	Chios island	1.10	175	P	Pg	23 10 28.4	-0.6
CHOS				S	Sb	23 10 43.8	+0.4
URLA	Izmir	1.24	155	PN	Pn	23 10 31.7	+0.6
ENEZ	Enez	1.26	8	PN	Pg	23 10 31.9	+0.1
ERIK	Erikli-Kesan	1.26	20	PN	Pg	23 10 31.9	0.0
BALY	Balya	1.32	79	iP	Pb	23 10 32.2	-0.5
BALY				iS	Sn	23 10 50.1	+0.1
BALY				IAML_P			
	comp=Z,669nm,0.1s						
ZEY	zmir	1.32	160	iP	Pn	23 10 32.1	-0.1
ZEY				IAML_P			
	comp=Z,796nm,0.3s						
KRBG	Karabiga-Canak	1.38	49	PN	Pg	23 10 33.9	-0.3
STEP	BALIKESIR_Sava	1.39	94	iP	Pg	23 10 33.8	-0.5
STEP				iS	Sg	23 10 54.9	+2.6
STEP				IAML_P			
	comp=Z,1µm,0.2s						
BLCB	Balcova	1.40	142	PN	Pg	23 10 34.6	0.0
ALN	Alexandroupoli	1.41	3	PN	Pb	23 10 33.9	-0.2
ALN	Alexandroupoli	1.41	3	P	Pb	23 10 33.6	-0.4
ALN				S	Sg	23 10 53.6	+0.6
ALN				AML	AML	23 10 54.8	
	comp=N,146µm,0.5s						
ALN				AML	AML	23 10 55.0	
	comp=E,62µm,0.5s						
KESN	Edirne-Kesan	1.45	23	iP	Pg	23 10 36.0	+0.4
KESN				iS	Sg	23 10 54.0	-0.5
KESN				IAML_P			
	comp=Z,235nm,0.1s						
GONE	Gonen-Balikesi	1.46	67	PN	Pg	23 10 35.6	-0.1
RKY	Sarkoy-Tekirda	1.53	38	PN	Pg	23 10 36.2	-0.9
SART	Tekirdag	1.53	38	iP	Pg	23 10 36.9	-0.2
SART				iS	Sg	23 10 58.1	+1.1
SART				IAML_P			
	comp=Z,838nm,0.1s						
AKHS	Akhisar	1.58	112	iP	Pn	23 10 36.0	+0.2
AKHS				iS	Sg	23 11 00.4	+1.9
RDO	Rodhopi	1.68	350	PN	Pn	23 10 37.4	+0.2
EDC	Edincik	1.71	59	PN	Pb	23 10 38.9	-0.3
DURS	Dursunbey	1.96	86	iP	Pn	23 10 41.1	-0.1
DURS				iS	Sg	23 11 11.3	+0.4
DURS				IAML_P			
	comp=Z,299nm,0.2s						
KCTX	Karacabey (Bur	2.02	67	PN	Pn	23 10 42.8	+1.0
AYDB	Zeytinkoy-Aydi	2.17	135	PN	Pb	23 10 45.9	-1.3
KULA	Kula-Manisa	2.33	114	PN	Pn	23 10 47.7	+1.5
EDRB	Edirne	2.43	14	PN	Pn	23 10 48.7	+1.2
SLVT	Silivri	2.46	44	PN	Pn	23 10 49.3	+1.5
ARMT	Armutlu	2.49	64	PN	Pb	23 10 50.5	-2.0
TVSB	Tavsanli	2.73	90	PN	Pn	23 10 53.1	+1.4
BGKT	Bogazkoy	2.75	51	PN	Pn	23 10 53.6	+1.8
YLV	Yalova	2.85	67	PN	Pn	23 10 55.3	+2.0

ISCJB **13** *23:12:52.1±1.1, 11°.01S±0°.08×165°.8E±0°.2, h10^{km}, mb3.6/5, Error ellipse: s-maj=25.7km s-min=11.6km az=173.1*

IDC **13** *23:12:52.5±1.4, 10°.77S×165°.71E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.7/38, mbtmp3.8/7, ML4.3/1, Error ellipse: s-maj=47.2km s-min=24.0km az=126.0*

ISC 13 23:12:53.9±1.1**, 10°.89S**±0°.10×**165°.7E**±0°.3**, h10^{km}, n14, σ1^s.59**/8**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.14	177	Pn	Pn	23 15 35.6	+2.2
	2.1nm,0.3s,baz=315,slow=18,SNR=15						
DZM				Sn	Sn	23 17 35.5	-2.5
	0.2nm,0.3s,baz=248,slow=5.5,SNR=1.7						
CTA	Charters Tower	20.86	242	P	Pn	23 17 37.6	-1.0
	2.6nm,0.7s,baz=61,slow=13,SNR=2.3						
H11S2	WAKE ISLAND Hy	29.21	2	T	T	23 49 05.7	
	baz=180						
H11S3	WAKE ISLAND Hy	29.22	2	T	T	23 49 06.0	
	baz=180						
H11S1	WAKE ISLAND Hy	29.23	2	T	T	23 49 07.1	
	baz=180						
H11N1	WAKE ISLAND Hy	30.43	2	T	T	23 50 37.3	
	baz=183						
H11N3	WAKE ISLAND Hy	30.44	2	T	T	23 50 37.7	
	baz=183						
H11N2	WAKE ISLAND Hy	30.45	2	T	T	23 50 38.6	
	baz=183						
WRA	Warramunga Arr	31.52	250	P	P	23 19 16.5	0.0
	0.7nm,0.6s,baz=81,slow=9.2,SNR=10						
ASAR	Alice Springs	32.84	243	P	P	23 19 28.2	+0.1
	1.4nm,0.8s,baz=74,slow=9.7,SNR=14						
SONM	Songino Array	78.53	324	P	P	23 24 55.9	+0.3
	0.1nm,0.4s,baz=132,slow=4.1,SNR=2.4						
ILAR	Eielson Array	83.38	19	P	P	23 25 20.8	-0.1
	0.3nm,0.6s,baz=240,slow=5.4,SNR=4.1						
MKAR	Makanchi Array	93.40	317	P	P	23 26 09.0	-0.6
	0.2nm,0.7s,baz=108,slow=6.5,SNR=4.2						
ARCES	ARCESS Array B	116.18	345	PKP	PKPdf	23 31 36.1	-0.8
	2.5nm,0.9s,baz=25,slow=2.4,SNR=2.4						

NIED **13** *23:21:00, 35°.80N×141°.00E, h11^{km}, Mw3.3 Best double couple: M$_0$9.58000×10^{13} NP1:φ$_s$323.00000°, δ46.00000°, λ-138.00000°. NP2:φ$_s$201.00000°, δ61.00000°, λ-52.00000°.*

IDC **13** *23:21:30.0±1.5, 35°.63N×140°.72E, h0^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.2/37, mbtmp3.2/3, ML2.3/1, MS2.7/1, Ms1 2.7/1, ms1mx2.1/24, Error ellipse: s-maj=30.5km s-min=27.9km az=51.0*

ISCJB **13** *23:21:31.3±0.8, 35°.82N±0°.04×140°.91E±0°.08, h20^{km}±5^{km}, mb3.3/2, Error ellipse: s-maj=11.2km s-min=5.9km az=168.4*

JMA **13** *23:21:31.5±0.1, 35°.83N×140°.91E, h14^{km}±1^{km}, M3.6*

JMA Felt I J1.

ISC 13 23:21:31.8±1.0**, 35°.82N**±0°.04×**140°.84E**±0°.08**, h13**^{km}±6^{km}**, n20, σ0^s.88**/19**, 1C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.11	172	⇑P	Pg	23 21 35.0	0.0
CHOJ				S	Sg	23 21 37.3	+0.1
JIHU	Itakohorinouch	0.30	301	P	Pb	23 21 39.2	+0.2
JSMT	Sammumatsuo	0.36	242	P	Pb	23 21 40.1	0.0
JHYU	Hitachinakayam	0.56	339	P	Pg	23 21 43.1	+0.2
JHYU				S	Sg	23 21 50.9	+0.5
JCN	Nagara	0.65	233	P	Pn	23 21 45.8	-0.9
JYT	Yasato	0.67	308	P	Pg	23 21 44.8	0.0
JYT				S	Sg	23 21 54.2	+0.6
JHO	Hitachi	0.82	345	P	Pg	23 21 46.7	-1.1
JHO				S	Sg	23 21 57.7	-0.9
BSO4	Boso 4	0.92	207	P	Pn	23 21 50.3	0.0
BSO3	Boso 3	1.05	195	P	Pn	23 21 51.2	-0.7
MJAR	Matsushiro Arr	2.25	290	Pn	Pn	23 22 07.6	-1.1
	1.0nm,0.3s,baz=112,slow=35,SNR=24						
MJAR				Sn	Sn	23 22 37.5	+1.1
	0.6nm,0.3s,baz=122,slow=10,SNR=5.0						
MAT	Matsushiro	2.25	290	P	Pn	23 22 08.5	-0.3
MAT				eS	Sn	23 22 36.4	0.0
KLR	Kul'dur	14.97	336	LR	LR	23 30 09.5	
	comp=Z,28nm,21.4s,baz=76,slow=34						
H11N2	WAKE ISLAND Hy	27.95	118	T	T	23 56 25.4	
	baz=310						
H11N1	WAKE ISLAND Hy	27.96	118	T	T	23 56 27.2	
	baz=310						
H11N3	WAKE ISLAND Hy	27.97	118	T	T	23 56 27.2	
	baz=310						
H11S1	WAKE ISLAND Hy	28.62	120	T	T	23 57 14.1	
	baz=312,slow=74						
H11S3	WAKE ISLAND Hy	28.62	120	T	T	23 57 07.8	
	baz=312,slow=74						
H11S2	WAKE ISLAND Hy	28.63	120	T	T	23 57 20.1	
	baz=312						
ILAR	Eielson Array	50.77	32	P	P	23 30 33.1	+1.8
	0.3nm,0.8s,baz=274,slow=6.0,SNR=3.3						
WRA	Warramunga Arr	55.79	187	P	P	23 31 07.4	-1.3
	0.3nm,0.8s,baz=1.9,slow=7.5,SNR=2.7						

KRSC **13** *23:21:30.4±1.0, 52°.77N×160°.62E, h40^{km}±12^{km}, ML4.8*

MOS **13** *23:21:32.8±1.2, 52°.87N×160°.29E, h63^{km}, mb4.5/25, Error ellipse: s-maj=7.0km s-min=4.4km az=89.1*

ISCJB **13** *23:21:33.9±0.4, 52°.91N±0°.03×160°.28E±0°.05, h73^{km}±3^{km}, mb4.2/99, Error ellipse: s-maj=6.2km s-min=3.2km az=143.2*

IDC **13** *23:21:35.7±1.9, 52°.95N×160°.22E, h68^{km}±17^{km}, mb3.9/27, mb1 4.1/30, mb1mx4.1/44, mbtmp4.2/30, MS3.5/15, Ms1 3.5/15, ms1mx3.2/61, Error ellipse: s-maj=16.3km s-min=9.6km az=155.0*

NEIC **13** *23:21:35.4±0.6, 52°.99N×160°.23E, h67^{km}±5^{km}, mb4.4/63, Error ellipse: s-maj=6.6km s-min=3.3km az=163.0*

ISC 13 23:21:32.2±0.9**, 52°.81N**±0°.04×**160°.47E**±0°.04**, h45**^{km}±7^{km}**, n267, σ1^s.65**/285**, mb4.4**/105**, MS3.5**/14**, 4C-2D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.39	317	iP	Pn	23 21 42.0	+0.1
SPN				eS	Sn	23 21 48.7	-0.1
SPN	Mys Shipunski	0.39	317	PN	Pn	23 21 42.0	+0.1
SPN				S	Sn	23 21 48.7	-0.1
NLC	Nalytchevo	0.77	298	eP	Pn	23 21 47.1	+0.4
NLC				eS	Sn	23 21 58.1	+0.9
NLC	Nalytchevo	0.77	298	PN	Pn	23 21 47.1	+0.4
NLC				S	Sn	23 21 58.1	+0.9
DALK	Dalny	1.06	283	eP	Pn	23 21 51.5	+0.8
DALK				eS	Sn	23 22 05.7	+1.4
DALK	Dalny	1.06	283	PN	Pn	23 21 51.5	+0.8
DALK				S	Sn	23 22 05.7	+1.4
UGLR	Uglovaya	1.07	292	iP	Pn	23 21 52.0	+1.1
UGLR	Uglovaya	1.07	292	PN	Pn	23 21 52.0	+1.1
SMAR	Somma	1.10	295	iP	Pn	23 21 52.2	+0.7
SMAR				eS	Sn	23 22 06.9	+1.3
SMAR	Somma	1.10	295	PN	Pn	23 21 52.2	+0.7
SMAR				S	Sn	23 22 06.9	+1.3
PET	Petropavlovsk	1.12	282	ePn	Pn	23 21 52.0	+0.5
PET				eSn	Sn	23 21 59.2	-6.5
PET	Petropavlovsk	1.12	282	iP	Pn	23 21 52.5	+1.0
PET				eS	Sn	23 22 07.8	+2.1
PET	Petropavlovsk	1.12	282κ	iPN	Pn	23 21 52.4	+1.0
PET				eS	Sn	23 22 07.5	+1.8
PET				pmax	pmax		
	comp=Z,4μm,0.5s						
PET				smax	smax		
	comp=E,15μm,0.9s						
PET				smax	smax		
	comp=E,2μm,1.7s						
PET				smax	smax		
	comp=N,4μm,0.5s						
PET				smax	smax		
	comp=E,14μm,0.7s						
PET				smax	smax		
	comp=N,6μm,0.6s						
AVH	Avacha	1.14	294	iP	Pn	23 21 53.1	+1.3
AVH	Avacha	1.14	294	PN	Pn	23 21 53.1	+1.3
KOK	Koryaka	1.21	294	iP	Pn	23 21 53.9	+1.2
KOK	Koryaka	1.21	294	PN	Pn	23 21 53.9	+1.2
KRX	Arik	1.23	297	eP	Pn	23 21 54.1	+1.0
KRX	Arik	1.23	297	PN	Pn	23 21 54.1	+1.0
RUS	Russkaya	1.25	253	iP	Pn	23 21 54.0	+0.8
RUS				eS	Sn	23 22 11.1	+2.2
RUS	Russkaya	1.25	253	PN	Pn	23 21 54.0	+0.8
RUS				S	Sn	23 22 11.1	+2.2
KII	Karymskiy	1.37	334	eP	Pn	23 21 55.9	+0.9
KII				eS	Sn	23 22 13.7	+1.8
KII	Karymskiy	1.37	334	PN	Pn	23 21 55.9	+0.9
KII				S	Sn	23 22 13.7	+1.8
KRMR	Karymshinskiy	1.42	272	eP	Pn	23 21 56.4	+0.9
KRMR				eS	Sn	23 22 14.4	+1.4
KRMR	Karymshinskiy	1.42	272	PN	Pn	23 21 56.4	+0.9
KRMR				S	Sn	23 22 14.4	+1.4
MTVR	Mutnovka	1.43	258	eP	Pn	23 21 57.1	+1.2
MTVR	Mutnovka	1.43	258	PN	Pn	23 21 57.1	+1.2
GRL	Gorelyy	1.48	261	eP	Pn	23 21 58.3	+1.8
GRL				eS	Sn	23 22 17.9	+3.1
GRL	Gorelyy	1.48	261	PN	Pn	23 21 58.3	+1.8
GRL				S	Sn	23 22 17.9	+3.1
PEA0B	Petropavlovsk-	1.70	281	ePn	Pn	23 22 01.4	+2.0
PEA0B				eSn	Sn	23 22 12.6	-7.4
PETK	Petropavlovsk-	1.70	281	ePn	Pn	23 22 00.9	+1.5
PETK				S	Sn	23 22 23.6	+3.6
PETK	Petropavlovsk-	1.70	281	P	Pn	23 22 01.3	+1.9
	comp=N,409nm,0.3s,baz=96,slow=19,SNR=1533						
PETK				S	Sn	23 22 23.6	+3.6
	comp=N,177nm,0.3s,baz=230,slow=12,SNR=7.0						
PETK				LR	LR	23 22 47.9	
	comp=N,497nm,18.3s,baz=116,slow=47						
PEA1	Petropavlovsk-	1.70	281	ePn	Pn	23 22 01.3	+1.9
PEA1				eSn	Sn	23 22 23.6	+3.6
GNL	Ganaly	1.76	301	iP	Pn	23 22 02.4	+2.1
GNL				eS	Sn	23 22 25.8	+4.3
GNL	Ganaly	1.76	301	PN	Pn	23 22 02.4	+2.1
KDTR	Khodutka, Kamc	1.78	237	eP	Pn	23 22 01.5	+1.0
KDTR				eS	Sn	23 22 23.0	+1.2
KDTR	Khodutka, Kamc	1.78	237	PN	Pn	23 22 01.5	+1.0
KDTR				S	Sn	23 22 23.0	+1.2
MKZ	Mys Kozlova	1.90	23	iP	Pn	23 22 02.6	+0.5
MKZ				eS	Sn	23 22 24.5	-0.3
MKZ	Mys Kozlova	1.90	23	PN	Pn	23 22 02.6	+0.5
MKZ				S	Sn	23 22 24.5	-0.3
KZV	Kizimen	2.31	357	iP	Pn	23 22 09.6	+1.7
KZV	Kizimen	2.31	357	PN	Pn	23 22 09.6	+1.7
TUMD	Tumrok D	2.40	359	eP	Pn	23 22 10.2	+1.2
TUMD				eS	Sn	23 22 38.1	+1.0
TUMR	Tumrok	2.48	356	iP	Pn	23 22 12.4	+2.2
TUMR	Tumrok	2.48	356	PN	Pn	23 22 12.4	+2.2
PAU	Pauzhetka	2.63	241	eP	Pn	23 22 13.8	+1.7
PAU	Pauzhetka	2.63	241	PN	Pn	23 22 13.8	+1.7
BZGR	Bezymyannyi-Gr	3.14	2	eP	Pn	23 22 22.0	+2.8
BZGR	Bezymyannyi-Gr	3.14	2	PN	Pn	23 22 22.0	+2.8
ZLN	Zelenaya	3.22	3	eP	Pn	23 22 23.8	+3.5
ZLN	Zelenaya	3.22	3	PN	Pn	23 22 23.8	+3.5
SKR	Severo-Kuril's	3.44	233	ePN	Pn	23 22 24.3	+1.0
SKR				eS	Sn	23 23 01.2	-1.6
SKR				pmax	pmax		
	comp=Z,66nm,0.3s						
SKR				smax	smax		
	comp=E,453nm,0.4s						
SKR				smax	smax		
	comp=N,544nm,0.7s						
ALID	Alaid	3.62	239	eP	Pn	23 22 27.7	+1.8
KBTR	Krutoberegovo	3.67	21	eP	Pn	23 22 27.2	+0.8
KBTR	Krutoberegovo	3.67	21	PN	Pn	23 22 27.2	+0.8
BDR	Baidarnaya	3.79	6	eP	Pn	23 22 30.7	+2.6
BDR	Baidarnaya	3.79	6	PN	Pn	23 22 30.7	+2.6
SMKR	Semkarok	3.82	8	eP	Pn	23 22 31.5	+2.9
SMKR	Semkarok	3.82	8	PN	Pn	23 22 31.5	+2.9
SRKR	Sorokina	3.87	6	eP	Pn	23 22 31.6	+2.4
SRKR	Sorokina	3.87	6	PN	Pn	23 22 31.6	+2.4
SMY	Shemya	8.27	85	ePn	Pn	23 23 28.7	-0.7
SMY				eSn	Sn	23 24 48.9	-12
SMY	Shemya	8.27	85	ePN	Pn	23 23 28.7	-0.7
MA2	Magadan	8.66	325	iPN	Pn	23 23 34.9	+0.1
MA2	Magadan	8.66	325	P	Pn	23 23 35.9	+1.1
	comp=N,1.0nm,0.3s,baz=132,slow=16,SNR=1.8						
MA2				LR	LR	23 27 10.0	
	comp=N,120nm,21.5s,baz=140,slow=40						
SEY	Seymchan	11.01	340	iPN	Pn	23 24 09.0	+2.1
SEY	Seymchan	11.01	340	P	Pn	23 24 13.1	+6.2
	comp=N,0.2nm,0.3s,baz=145,slow=15,SNR=4.0						
NKL	Nikolayevsk	11.93	280	ePN	Pn	23 24 26.0	+6.5
YSS	Yuzh-Sakhalins	12.83	250	iPN	Pn	23 24 31.2	-0.5
ASAJ	Asahikawa	14.67	241	P	Pn	23 24 57.5	+0.7
	comp=N,4.9nm,0.3s,baz=72,slow=15,SNR=23						
BILL	Bilibino	15.53	8	ePn	Pn	23 25 08.5	+0.7
	comp=N,7.8nm,0.6s						
BILL	Bilibino	15.53	8	eP	Pn	23 25 08.1	+0.3
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ERM	Erimo	15.89	234	iP	Pn	23 25 08.3	-4.3
SPIA	Saint Paul Isl	17.28	64	ePn	Pn	23 25 27.9	-2.1
	comp=Z,27nm,0.9s						
KLR	Kul'dur	18.36	270	iP	P	23 25 41.0	-1.9
KLR	Kul'dur	18.36	270	P	P	23 25 43.1	+0.3
	comp=Z,0.2nm,0.3s,baz=65,slow=10,SNR=11						
USA0B	Ussuriysk Arra	20.63	257	eP	P	23 26 07.7	+0.1
	comp=Z,8.8nm,0.7s						
USRK	Ussuriysk Ar.	20.63	257	P	P	23 26 07.6	0.0
	comp=Z,9.7nm,0.8s,baz=58,slow=11,SNR=14						
USRK				LR	LR	23 35 14.0	
	comp=Z,98nm,18.2s,baz=35,slow=40						
ANM	Nome	20.98	43	eP	P	23 26 11.2	-0.1
	comp=Z,4.9nm,0.7s						
ANM	Nome	20.98	43	eP	P	23 26 11.2	-0.1
ANM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJB9	Matsu-Tunnel	22.55	233	eP	P	23 26 30.5	+2.2
	comp=Z,31nm,0.6s						
MAJO	Matsushiro	22.55	233	eP	P	23 26 29.8	+1.4
	comp=Z,31nm,0.6s						
MAJO	Matsushiro	22.55	233	iP	P	23 26 25.4	-3.0
MAJO				pmax	pmax		
	comp=Z,21nm,0.8s						
MAT	Matsushiro	22.55	233	P	P	23 26 29.8	+1.4
MJAR	Matsushiro Arr	22.55	233	P	P	23 26 30.2	+1.8
	comp=Z,17nm,0.6s,baz=16,slow=9.2,SNR=19						
RDOG	Red Dog Mine	23.14	35	eP	P	23 26 33.2	-0.9
	comp=Z,19nm,1.0s						
HIA	Hailar	25.61	279	eP	P	23 26 55.9	-1.2
	comp=Z,9.7nm,0.9s						
HIA	Hailar	25.61	279	eP	P	23 26 55.9	-1.2
HIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
IM3	Indian Mountai	26.06	42	eP	P	23 27 01.6	+0.7
BOD	Bodaibo	26.48	300	eP	P	23 27 02.8	-2.0
BOD				pmax	pmax		
	comp=Z,4.0nm,2.1s						
KDAK	Kodiak Island	26.74	60	eP	P	23 27 07.8	+0.6
	comp=Z,7.9nm,0.8s						
KDAK	Kodiak Island	26.74	60	P	P	23 27 07.8	+0.6
KDAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KDAK	Kodiak Island	26.74	60	P	P	23 27 07.8	+0.6
	comp=Z,10nm,0.8s,baz=286,slow=7.4,SNR=3.3						
BPAW	Bear Paw Mtn.	27.07	46	eP	P	23 27 10.6	+0.5
	comp=Z,5.5nm,1.0s						
MLY	Manley	27.21	44	eP	P	23 27 10.9	-0.5
	comp=Z,4.9nm,0.9s						
KSRS	Korea Array	27.32	249	P	P	23 27 13.3	+0.7
	comp=Z,5.2nm,0.8s,baz=43,slow=9.7,SNR=16						
KSRS				LR	LR	23 37 11.0	
	comp=Z,27nm,19.6s,baz=64,slow=34						
KS01	Wonju Array Si	27.32	249	eP	P	23 27 12.9	+0.3
KS15	Wonju Array Si	27.36	249	eP	P	23 27 13.3	+0.4
	comp=Z,5.2nm,0.8s						
KSAR	Wonju Array Be	27.36	249	P	P	23 27 13.3	+0.4
KSAR	Wonju Array Be	27.36	249	P	P	23 27 13.3	+0.4
COLD	Coldfoot	27.62	40	eP	P	23 27 17.2	+2.2
	comp=Z,2.8nm,1.1s						
WRH	Wood River Hil	28.34	46	eP	P	23 27 17.6	-3.8
	comp=Z,1.7nm,0.8s						
COLA	College	28.44	45	iP	P	23 27 20.2	-2.0
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
IL1	Eielson Array	28.85	45	eP	P	23 27 25.9	-0.1
ILAR	Eielson Array	28.85	45	P	P	23 27 26.1	+0.2
	comp=Z,1.9nm,0.6s,baz=267,slow=6.0,SNR=39						
ILB	Eielson Array	28.85	45	eP	P	23 27 27.2	+1.3
	comp=Z,3.0nm,0.7s						
JNU	Nakatsue	28.94	239	P	P	23 27 30.4	+3.3
	comp=Z,2.5nm,0.6s,baz=24,slow=10.0,SNR=2.4						
PRP	Porcupine Dome	29.42	43	eP	P	23 27 31.1	0.0
	comp=Z,6.1nm,0.9s						
FYU	Fort Yukon	29.54	41	eP	P	23 27 32.1	+0.1
	comp=Z,7.8nm,0.8s						
H11N2	WAKE ISLAND Hy	33.39	169	T	T	00 03 47.9	
	baz=353,slow=76,SNR=119						
H11N3	WAKE ISLAND Hy	33.41	169	T	T	00 03 49.2	
	baz=353,slow=76,SNR=128						
H11N1	WAKE ISLAND Hy	33.41	169	T	T	00 03 48.5	
	baz=353,slow=76,SNR=129						
ULN	Ulaanbaatar	33.78	284	ceP	P	23 28 07.6	-2.1
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
INK	Inuvik	33.95	37	eP	P	23 28 12.1	+1.4
	comp=Z,4.3nm,0.8s						
INK	Inuvik	33.95	37	P	P	23 28 11.9	+1.2
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	Inuvik	33.95	37	P	P	23 28 11.9	+1.2
	comp=Z,2.9nm,0.6s,baz=296,slow=6.9,SNR=20						
TLY	Talaya	34.04	291	iP	P	23 28 08.3	-3.4
SONA0	Songino Array	34.19	284	eP	P	23 28 12.2	-0.9
SONA0				ePcP	PcP	23 30 48.6	-0.4
SONM	Songino Array	34.19	284	P	P	23 28 12.2	-0.9
	comp=Z,1.4nm,0.6s,baz=62,slow=7.9,SNR=18						
SONM				PcP	PcP	23 30 48.7	-0.4
	comp=Z,0.8nm,0.6s,baz=72,slow=2.0,SNR=9.1						
SONM				LR	LR	23 43 12.3	
	comp=Z,66nm,18.6s,baz=46,slow=38						
H11S1	WAKE ISLAND Hy	34.58	170	T	T	00 06 01.2	
	baz=351,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	34.59	170	T	T	00 06 02.2	
	baz=351,slow=76,SNR=89						
H11S2	WAKE ISLAND Hy	34.60	170	T	T	00 06 02.0	
	baz=351,slow=76,SNR=21						
NRIK	Noril'sk	36.27	325	LR	LR	23 44 47.5	
	comp=Z,94nm,18.2s,baz=42,slow=39						
DLBC	Dease Lake	38.03	53	LR	LR	23 46 15.0	
	comp=Z,61nm,18.9s,baz=78,slow=39						
BBB	Bella Bella	41.81	61	LR	LR	23 45 34.9	
	comp=Z,69nm,18.9s,baz=176,slow=34						
LZH	Lanzhou	42.57	270	eP	P	23 29 23.6	0.0
LZH				pP	pP	23 29 33.6	-2.1
LZH				sP	sP	23 29 38.1	-2.8
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
GTA	Gaotai	42.87	277	eP	P	23 29 26.4	+0.4
GTA				pP	pP	23 29 35.8	-2.5
GTA				sP	sP	23 29 39.8	-3.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZAA1	Zalesovo Array	43.12	303	eP	P	23 29 26.0	-1.7
ZALV	Zalesovo Beam	43.12	303	iP	P	23 29 26.0	-1.7
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	43.12	303	P	P	23 29 26.0	-1.7
	comp=Z,0.6nm,0.3s,baz=46,slow=11,SNR=3.9						
ZALV				LR	LR	23 48 30.0	
	comp=Z,43nm,18.7s,baz=34,slow=38						
YKA	Yellowknife Ar	43.22	42	P	P	23 29 29.5	+1.1
	comp=Z,1.9nm,0.8s,baz=299,slow=7.9,SNR=19						
YKB5	Yellowknife Ar	43.22	42	eP	P	23 29 28.9	+0.6
NVS	Novosibirsk	43.46	305	eP	P	23 29 28.3	-2.1
DGZ	Jazzator, Alta	44.00	297	iP	P	23 29 32.3	-2.7
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SPITS	Spitsbergen Ar	47.45	351	P	P	23 30 01.8	+0.1
KURK	Kurchatov	48.08	302	eP	P	23 30 05.4	-1.5
	comp=Z,4.4nm,0.6s						
KURK	Kurchatov	48.08	302	ceP	P	23 30 04.6	-2.3
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MK31	Makanchi Array	48.48	296	eP	P	23 30 08.5	-1.6
	comp=Z,1.4nm,0.6s						
MK31	Makanchi Array	48.48	296	eP	P	23 30 08.5	-1.6
MK32	Makanchi Array	48.48	296	eP	P	23 30 08.5	-1.6
MKAR	Makanchi Array	48.48	296	eP	P	23 30 08.5	-1.6
	comp=Z,14nm,0.6s						
MKAR	Makanchi Array	48.48	296	P	P	23 30 08.5	-1.6
	comp=Z,1.5nm,0.5s,baz=58,slow=6.9,SNR=38						
MKAR				LR	LR	23 50 15.9	
	comp=Z,30nm,18.3s,baz=33,slow=36						
MK01	Makanchi Array	48.49	296	eP	P	23 30 08.1	-2.1
B08A	Colville Reser	48.62	61	eP	P	23 30 12.8	+1.7
	comp=Z,3.2nm,0.8s						
MAKZ	Makanchi	48.64	296	eP	P	23 30 09.7	-1.7
	comp=Z,1.9nm,0.8s						
MAKZ	Makanchi	48.64	296	eP	P	23 30 09.7	-1.7
NEW	Newport	49.85	60	LR	LR	23 50 29.5	
	comp=Z,45nm,18.9s,baz=336,slow=35						
DAG	Danmarks Havn	50.69	360	iP	P	23 30 26.6	+0.2
	comp=Z,1.9nm,0.9s						
DAG	Danmarks Havn	50.69	360	iP	P	23 30 26.6	+0.2
BRVK	Borovoye	50.77	309	eP	P	23 30 26.4	-1.0
	comp=Z,2.9nm,0.6s						
BRVK	Borovoye	50.77	309	iP	P	23 30 24.0	-3.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MOD	Modoc Plateau	52.16	68	eP	P	23 30 40.4	+2.3
	comp=Z,4.3nm,0.9s						
FCC	Fort Churchill	53.56	39	eP	P	23 30 48.1	+0.2
	comp=Z,6.3nm,0.8s						
FCC	Fort Churchill	53.56	39	eP	P	23 30 48.1	+0.2
ARA0	ARCESS Array S	53.62	342	eP	P	23 30 47.4	-0.9
ARCES	ARCESS Array B	53.62	342	P	P	23 30 47.4	-0.9
	comp=Z,2.9nm,0.7s,baz=43,slow=9.0,SNR=5.9						
ARU	Arti	53.76	318	eP	P	23 30 48.6	-0.9
	comp=Z,3.7nm,0.6s						
ARU	Arti	53.76	318	iP	P	23 30 47.6	-1.9
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
EGMT	Eagleton	53.80	56	eP	P	23 30 51.6	+1.5
	comp=Z,11nm,1.0s						
SUMG	Summit	54.21	7	eP	P	23 30 53.7	+0.6
SUMG	Summit	54.21	7	iP	P	23 30 53.7	+0.6
SUMG	Summit	54.21	7	iP	P	23 30 53.7	+0.6
PNTR	Pine Nut	54.43	70	eP	P	23 30 57.9	+3.0
	comp=Z,7.2nm,0.8s						
BOZ	Bozeman (W)	54.44	60	eP	P	23 30 56.6	+1.8
	comp=Z,2.6nm,0.7s						
BOZ	Bozeman (W)	54.44	60	eP	P	23 30 56.7	+1.8
YERR	Yerington	54.71	70	eP	P	23 30 57.6	+0.7
	comp=Z,4.9nm,0.9s						
BMN	Battle Mountai	54.87	68	eP	P	23 30 59.4	+1.4
	comp=Z,4.7nm,0.8s						
BMN	Battle Mountai	54.87	68	eP	P	23 30 59.4	+1.4
WAKR	Walker	54.92	71	eP	P	23 30 59.9	+1.4
	comp=Z,5.8nm,0.9s						
KVN	Kaiserville	55.31	69	eP	P	23 31 02.2	+0.9
	comp=Z,3.8nm,0.8s						
KVN	Kaiserville	55.31	69	eP	P	23 31 02.2	+0.9
YHH	Holmes Hill	55.39	60	eP	P	23 31 02.6	+0.7
	comp=Z,2.6nm,0.7s						
AAK	Ala-Archa	55.41	297	eP	P	23 31 00.6	-1.3
	comp=Z,2.5nm,0.9s						
AAK	Ala-Archa	55.41	297	ceP	P	23 30 59.3	-2.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NV01	Mina Array Sit	55.62	70	eP	P	23 31 05.7	+2.2
NVAR	Mina Array Bea	55.62	70	P	P	23 31 05.5	+2.0
	comp=Z,3.0nm,0.6s,baz=298,slow=7.3,SNR=18						
NV11	Mina Array Sit	55.71	70	eP	P	23 31 06.2	+2.2
	comp=Z,0.5nm,1.1s						
ELK	Elko	55.77	66	eP	P	23 31 07.0	+2.4
	comp=Z,2.8nm,0.8s						
ELK	Elko	55.77	66	eP	P	23 31 07.0	+2.4
IMW	Indian Meadow	55.95	61	eP	P	23 31 08.5	+2.6
	comp=Z,2.7nm,0.8s						
RLMT	Red Lodge	55.99	59	eP	P	23 31 07.3	+1.2
	comp=Z,3.9nm,0.8s						
FXWY	Fox Creek	56.08	61	eP	P	23 31 09.2	+2.4
	comp=Z,1.8nm,0.8s						
BGU	Big Grassy Mou	56.86	65	eP	P	23 31 12.8	+0.6
	comp=Z,2.5nm,0.5s						
R11A	Troy Canyon, C	57.22	68	eP	P	23 31 16.6	+1.7
	comp=Z,2.3nm,0.9s						
PD31	Pinedale Array	57.46	61	eP	P	23 31 18.4	+1.8
	comp=Z,2.7nm,0.7s						
PDAR	Pinedale Array	57.46	61	eP	P	23 31 17.8	+1.3
PDAR	Pinedale Array	57.46	61	P	P	23 31 18.3	+1.7
	comp=Z,2.8nm,0.7s,baz=303,slow=2.9,SNR=29						
TPNV	Topopah Spring	57.82	70	eP	P	23 31 20.2	+1.1
	comp=Z,3.6nm,0.8s						
TPNV	Topopah Spring	57.82	70	eP	P	23 31 20.2	+1.1
NLU	North Lily Min	58.06	65	eP	P	23 31 23.3	+2.5
	comp=Z,3.6nm,0.8s						
ABKAR	Akbulak array	58.15	311	eP	P	23 31 20.0	-1.0
	comp=Z,1.0nm,0.9s						

AKTO	Aktyubinsk	58.18	313	LR	LR	23 58 39.9	
	comp=Z,33nm,19.4s,baz=36,slow=38						
CMAR	Chiang Mai Arr	58.35	259	P	P	23 31 22.9	+0.1
	comp=Z,1.3nm,0.3s,baz=30,slow=6.9,SNR=7.8						
CMAR				LR	LR	23 57 37.5	
	comp=Z,48nm,18.0s,baz=120,slow=37						
GSC	Goldstone, Bar	58.66	72	eP	P	23 31 26.1	+1.2
	comp=Z,4.7nm,0.9s						
GSC	Goldstone, Bar	58.66	72	eP	P	23 31 26.1	+1.2
ULM	Lac du Bonnet	58.85	47	P	P	23 31 26.9	+1.1
	comp=Z,2.0nm,0.5s,baz=331,slow=9.1,SNR=6.6						
CCUT	Cedar City	59.03	68	eP	P	23 31 30.0	+2.4
	comp=Z,2.9nm,0.7s						
GUN	Gumba	59.15	276	eP	P	23 31 27.5	-1.2
BTK	Batken	59.19	297	eP	P	23 31 28.9	+0.4
	comp=Z,3.6nm,0.6s						
BTK	Batken	59.19	297	eP	P	23 31 28.9	+0.4
RSSD	Black Hills	59.37	56	eP	P	23 31 30.8	+0.9
	comp=Z,9.8nm,0.6s						
RSSD	Black Hills	59.37	56	eP	P	23 31 30.8	+0.9
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RAMN	Ramite	59.42	275	eP	P	23 31 29.9	-0.5
	comp=Z,14nm,0.5s						
LCMT	Little Creek M	59.48	68	eP	P	23 31 30.5	-0.1
	comp=Z,5.0nm,1.0s						
SRU	San Rafael Swe	59.50	65	eP	P	23 31 31.1	+0.3
	comp=Z,6.6nm,0.8s						
SRU	San Rafael Swe	59.50	65	eP	P	23 31 31.1	+0.3
SRU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PKI	Pulchoki	59.68	276	eP	P	23 31 31.9	-0.4
	comp=Z,11nm,0.7s						
PKIN	Phulchoki	59.69	277	eP	P	23 31 31.8	-0.5
DMN	Daman	59.84	277	eP	P	23 31 33.2	-0.1
	comp=Z,12nm,0.7s						
DANN	Dangsing	60.11	278	eP	P	23 31 35.0	-0.2
	comp=Z,13nm,0.7s						
GAR	Garm	60.21	296	eP	P	23 31 35.3	-0.2
	comp=Z,7.4nm,0.9s						
GAR	Garm	60.21	296	eP	P	23 31 35.3	-0.2
GAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FIA0	FINESS Array S	60.47	337	eP	P	23 31 37.0	+0.2
FIA0	FINESS Array S	60.47	337	eP	P	23 31 37.0	+0.2
FINES	FINESS Array B	60.47	337	P	P	23 31 37.0	+0.2
FINES	FINESS Array B	60.47	337	P	P	23 31 37.0	+0.2
	comp=Z,3.4nm,0.5s,baz=37,slow=7.8,SNR=22						
KOLN	Koldanda	60.63	278	eP	P	23 31 38.1	-0.5
	comp=Z,5.8nm,0.6s						
PYUN	Piuthan	60.75	279	eP	P	23 31 38.9	-0.6
	comp=Z,11nm,0.7s						
PV05	Paradox Valley	61.02	64	eP	P	23 31 41.6	+0.3
	comp=Z,7.7nm,0.7s						
PV03	Paradox Valley	61.03	64	eP	P	23 31 41.8	+0.5
	comp=Z,3.6nm,0.9s						
PV13	Radium Mtn., P	61.12	64	eP	P	23 31 42.8	+1.0
	comp=Z,5.4nm,0.8s						
NIL	Nilore	62.43	290	eP	P	23 31 49.3	-1.2
	comp=Z,5.8nm,0.6s						
NIL	Nilore	62.43	290	eP	P	23 31 49.3	-1.2
NIL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
S22A	4UR Ranch, Cre	62.50	63	eP	P	23 31 50.6	-0.6
	comp=Z,2.9nm,1.0s						
OBN	Obninsk	62.88	328	eP	P	23 31 51.1	-1.9
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NB2	NORSAR Subarra	63.88	344	P	P	23 31 59.6	-0.1
	comp=Z,1.0nm,0.6s,baz=20,slow=6.9						
NB2	NORSAR Subarra	63.88	344	P	P	23 31 59.5	-0.1
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB200	NORSAR Array S	63.88	344	eP	P	23 31 59.7	+0.1
NOA	NORSAR Array B	63.88	344	P	P	23 31 59.7	+0.1
	comp=Z,1.7nm,0.7s,baz=21,slow=6.7,SNR=10						
NORES	NORESS Array B	64.11	344	P	P	23 32 01.8	+0.7
TUC	Tucson	64.28	70	eP	P	23 32 02.1	-0.7
	comp=Z,1.1nm,1.1s						
TUC	Tucson	64.28	70	eP	P	23 32 02.1	-0.7
TUC				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ANMO	Albuquerque	64.76	65	ceP	P	23 31 59.6	-6.5
ANMO				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SCHQ	Schefferville	65.79	28	P	P	23 32 12.6	+0.3
	comp=Z,1.6nm,0.6s,baz=4.5,slow=5.7,SNR=6.9						
319A	Douglas	65.83	70	eP	P	23 32 15.2	+2.2
	comp=Z,6.1nm,0.9s						
GEYT	Alibeck	67.43	303	P	P	23 32 22.7	-0.3
	comp=Z,1.2nm,0.5s,baz=27,slow=6.6,SNR=3.4						
GEYT				LR	LR	00 04 00.3	
	comp=Z,35nm,18.5s,baz=125,slow=38						
AKASG	Malin Array Be	68.97	329	P	P	23 32 32.2	-0.1
	comp=Z,3.2nm,0.5s,baz=29,slow=6.7,SNR=4.6						
KIEV	Kiev	68.98	329	i P	P	23 32 29.4	-3.0
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WMOK	Wichita Mounta	69.05	60	eP	P	23 32 33.0	-0.1
	comp=Z,3.4nm,0.8s						
WMOK	Wichita Mounta	69.05	60	eP	P	23 32 33.0	-0.1
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	69.90	317	P	P	23 32 38.0	-0.1
KBZ	Khabaz	69.90	317	P	P	23 32 38.0	-0.1
	comp=Z,2.1nm,0.6s,baz=166,slow=2.5,SNR=9.3						
TX31	Lajitas Ar. Si	70.54	67	eP	P	23 32 43.1	+0.7
LTX	Lajitas	70.54	67	eP	P	23 32 44.0	+1.6
LTX	Lajitas	70.54	67	eP	P	23 32 44.0	+1.6
TXAR	Lajitas Array	70.54	67	P	P	23 32 44.0	+1.6
TXAR	Lajitas Array	70.54	67	P	P	23 32 44.0	+1.6
	comp=Z,2.9nm,0.6s,baz=302,slow=4.6,SNR=46						
CLL	Collm	72.70	339	eP	P	23 32 56.0	+1.1
CLL				epP	PcP	23 33 11.0	-1.1
CLL	Collm	72.70	339	eP	P	23 32 56.0	+1.1
CLL				e*PP	PcP	23 33 11.0	-1.1
BUR08	Bucovina Ar. S	72.91	330	eP	P	23 32 57.1	+0.7
	comp=Z,3.0nm,0.6s						
BUR04	Bucovina Ar. S	72.93	330	eP	P	23 32 56.8	+0.2
GERES	GERESS Array B	74.86	338	P	P	23 33 08.3	+0.5
	comp=Z,0.6nm,0.4s,baz=28,slow=6.8,SNR=6.9						
CONA	Conrad Observa	75.21	336	eP	P	23 33 07.7	-2.1
	comp=Z,0.2nm,0.2s						
MOA	Molln	75.66	337	eP	P	23 33 10.9	-1.4
	comp=Z,0.8nm,0.3s						
ARSA	Arzberg	75.92	336	eP	P	23 33 14.2	+0.4
	comp=Z,1.1nm,0.3s						
WR1	Warramunga Arr	75.92	205	eP	P	23 33 14.9	+0.9
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	75.92	205	P	P	23 33 14.9	+0.9
	comp=Z,0.9nm,0.8s,baz=24,slow=6.3,SNR=6.2						
SOKA	Soboth	76.58	336	eP	P	23 33 17.6	0.0
	comp=Z,1.8nm,0.6s						
KBA	Koelnbreinsper	76.60	338	eP	P	23 33 19.3	+1.5
	comp=Z,1.1nm,0.2s						
MOTA	Moosalm	76.85	339	eP	P	23 33 18.8	-0.5
	comp=Z,1.1nm,0.6s						
SQTA	Sankt Quirin	76.95	339	eP	P	23 33 16.0	-3.7
	comp=Z,2.8nm,0.7s						
BR101	Keskin Array S	76.98	321	eP	P	23 33 20.6	+0.5
BRTR	Keskin Array B	76.98	321	P	P	23 33 20.6	+0.5
	comp=Z,0.5nm,0.6s,baz=50,slow=3.1,SNR=4.3						
FETA	Feichten	77.24	339	eP	P	23 33 21.3	-0.1
	comp=Z,0.7nm,0.5s						
PALK	Pallekele	78.06	266	LR	LR	00 11 18.3	
	comp=Z,236nm,21.2s,baz=295,slow=38						
ASAR	Alice Springs	79.60	205	P	P	23 33 36.1	+1.7
	comp=Z,0.6nm,0.6s,baz=15,slow=5.8,SNR=8.6						
ESDC	Sonseca Array	86.90	348	P	P	23 34 12.8	+0.8
	comp=Z,0.4nm,0.6s,baz=4.0,slow=5.3,SNR=5.2						
ATD	Arta Tunnel	96.78	299	LR	LR	00 22 26.0	
	comp=Z,27nm,18.8s,baz=24,slow=38						

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*SOME **13** 23:30:45.3, 39°.90N×77°.30E, h0^{km}*

*KRNET **13** 23:30:46.3±0.1, 39°.93N×77°.24E, mb2.6*

*NNC **13** 23:30:47.1±0.6, 39°.97N×77°.26E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=4.3km s-min=2.6km az=142.0*

ISC 13 23:30:48.6±1.6**, 40°.03N**±0°.07×**77°.20E**±0°.05**, h10^{km}, n33, σ1^{s}43**/47**, 14C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	1.08	242	Pg	Pn	23 31 14.8	+4.9
KSH				Sg	Sn	23 31 36.3	+11
KSH				smax	smax		
	comp=N,57nm,0.3s						
KSH				smax	smax		
	comp=E,51nm,0.4s						
NRN	Naryn	1.67	327	⇓iP	Pb	23 31 18.9	-0.8
	baz=27						
NRN				⇓iS	Sg	23 31 42.8	+0.3
	baz=27						
TARG	Taragay, Kyrgy	1.76	15	⇑iP	Pb	23 31 20.5	-0.7
	baz=13						
TARG				⇑iS	Sg	23 31 45.8	+0.6
	baz=13						
ULHL	Ulahol	2.33	342	⇑iP	Pb	23 31 29.5	-1.3
	baz=42						
ULHL				⇑iS	Sb	23 32 01.0	+1.3
	baz=42						
KZA	Kyzart	2.52	325	⇑eP	Pb	23 31 32.2	-2.0
	baz=26						
KZA				⇑iS	Sb	23 32 05.1	-0.4
	baz=26						
BOOM	Boomskoye usch	2.64	339	⇓iP	Pn	23 31 33.2	+1.8
	baz=39						
BOOM				⇓iS	Sb	23 32 07.2	-1.3
	baz=39						
SFK	Sufi-Kurgan	2.84	271	Pg	Pb	23 31 39.5	0.0
	comp=E,0.7nm,0.2s						
SFK				Lg	Lg	23 32 18.7	
	comp=E,1.4nm,0.2s						
SFK	Sufi-Kurgan	2.84	271	⇑iP	Pn	23 31 35.0	+0.8
	baz=73						
SFK				⇑iS	Sn	23 32 10.8	+2.2
	baz=73						
ARLS	Aral	2.85	311	⇑iP	Pn	23 31 36.4	+2.2
	baz=12						
ARLS				⇑iS	Sb	23 32 12.4	-2.1
	baz=12						
TNSS	Tian-Shan	3.01	356	Pg	Pb	23 31 43.7	+1.2
	comp=E,2.1nm,0.4s						
TNSS				Lg	Lg	23 32 25.8	
	comp=E,7.3nm,0.8s						
TNSS	Tian-Shan	3.01	356	eP	Pb	23 31 43.7	+1.2
	comp=E,2.1nm,0.4s						
TNSS				⇓iS	Sg	23 32 25.8	+0.4
	comp=E,7.3nm,0.8s						
TKM2	Tokmak 2	3.13	338	⇓Pg	Pb	23 31 45.5	+1.1
	comp=E,1.7nm,0.7s						
TKM2				⇑Lg	Lg	23 32 28.8	
	comp=E,3.5nm,0.6s						
MDOK	Medeo	3.13	358	⇑Pg	Pg	23 31 46.3	-2.3
	comp=E,3.4nm,1.0s						
MDOK				⇓Lg	Lg	23 32 28.3	
	comp=E,7.7nm,0.6s						
MDOK	Medeo	3.13	358	Pg	Pb	23 31 45.4	+1.0
	comp=E,3.1nm,0.6s						
MDOK				Lg	Lg	23 32 28.7	
	comp=E,8.9nm,0.7s						
MDOK	Medeo	3.13	358	eP	Pb	23 31 45.4	+1.0
	comp=E,3.1nm,0.6s						
MDOK				eS	Sg	23 32 28.7	-0.6
	comp=E,8.9nm,0.7s						
KST	Kastek	3.15	343	Pg	Pb	23 31 46.0	+1.2
	comp=E,1.7nm,0.2s						
KST				Lg	Lg	23 32 29.8	
	comp=E,3.0nm,0.5s						
KST	Kastek	3.15	343	eP	Pb	23 31 46.0	+1.2
	comp=E,1.7nm,0.2s						
KST				eS	Sg	23 32 29.8	0.0
	comp=E,3.0nm,0.5s						
SATY	Saty	3.16	16	Pg	Pb	23 31 45.6	+0.7
	comp=E,6.6nm,0.8s						
SATY				Lg	Lg	23 32 29.1	
	comp=E,6.2nm,0.5s						
SATY	Saty	3.16	16	eP	Pb	23 31 45.6	+0.7
	comp=E,6.6nm,0.8s						
SATY				eS	Sg	23 32 29.1	-1.0
	comp=E,6.2nm,0.5s						
KOTS	Kotyrbulak	3.20	359	Pg	Pb	23 31 47.0	+1.4
	comp=E,1.7nm,0.4s						
KOTS				Lg	Lg	23 32 31.7	
	comp=E,8.3nm,0.7s						
KOTS	Kotyrbulak	3.20	359	eP	Pb	23 31 47.0	+1.4
	comp=E,1.7nm,0.4s						
KOTS				eS	Sg	23 32 31.7	+0.2
	comp=E,8.3nm,0.7s						
AAK	Ala-Archa	3.31	323	⇓Lg	Lg	23 32 34.1	
	comp=E,5.8nm,0.8s						
DGS	Degeres	3.38	342	Pg	Pb	23 31 50.2	+1.5
	comp=E,2.4nm,0.4s						
DGS				Lg	Lg	23 32 36.9	
	comp=E,4.4nm,0.7s						
DGS	Degeres	3.38	342	eP	Pb	23 31 50.2	+1.5
	comp=E,2.4nm,0.4s						
DGS				eS	Sg	23 32 36.9	-0.4
	comp=E,4.4nm,0.7s						
UZB	Uzynbulak	3.40	23	eP	Pb	23 31 50.2	+1.1
	comp=E,1.0nm,0.2s						
UZB				eS	Sg	23 32 36.5	-1.3
	comp=E,3.9nm,0.6s						
KURS	Kuram	3.53	12	Pg	Pb	23 31 51.9	+0.7
	comp=E,1.4nm,0.4s						
KURS				Lg	Lg	23 32 40.0	
	comp=E,3.9nm,0.7s						
KURS	Kuram	3.53	12	eP	Pb	23 31 51.9	+0.7
	comp=E,1.4nm,0.4s						
KURS				⇓iS	Sg	23 32 40.0	-2.0
	comp=E,3.9nm,0.7s						
PDGK	Podgornoye	3.72	27	Pg	Pb	23 31 54.7	+0.3
	comp=E,0.8nm,0.4s						
PDGK				Lg	Lg	23 32 44.8	
	comp=E,1.8nm,0.6s						
PDGK	Podgornoye	3.72	27	⇑Pg	Pg	23 31 56.3	-3.5
	comp=E,1.9nm,1.1s						
PDGK				⇓Lg	Lg	23 32 44.7	
	comp=E,4.5nm,0.7s						
PDGK	Podgornoye	3.72	27	⇓iP	Pn	23 31 47.6	+1.4
	baz=26						
PDGK				⇓iS	Sn	23 32 32.4	+2.3
	baz=26						
CHKK	Chushkaly	3.83	358	Pg	Pb	23 31 58.2	+2.0
	comp=E,0.6nm,0.1s						
CHKK				Lg	Lg	23 32 50.7	
	comp=E,6.4nm,0.5s						
CHKK	Chushkaly	3.83	358	eP	Pb	23 31 58.2	+2.0
	comp=E,0.6nm,0.1s						
CHKK				eS	Sg	23 32 50.7	-0.8
	comp=E,6.4nm,0.5s						
MNAS	Manas	4.31	306	⇑Lg	Lg	23 33 07.3	
	comp=E,2.1nm,0.9s						

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*ISCJB **13** 23:33:09.4±0.8, 33°.51N±0°.04×140°.90E±0°.07, h62^{km}±8^{km}, mb4.1/5, Error ellipse: s-maj=10.1km s-min=6.6km az=179.2*

*JMA **13** 23:33:10.0±0.1, 33°.55N×140°.89E, h51^{km}±4^{km}, M3.6*

*IDC **13** 23:33:12.6±5.2, 33°.69N×141°.12E, h86^{km}±43^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.3/54, mbtmp4.0/6, Error ellipse: s-maj=114.7km s-min=28.7km az=63.0*

ISC 13 23:33:10.1±1.5**, 33°.50N**±0°.05×**140°.90E**±0°.09**, h49^{km}**±15^{km}**, n20, σ0^{s}78**/30**, mb4.0**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	0.98	247	P	Pn	23 33 27.9	+0.3
JHCJ	Hachijojimakas	1.01	246	P	Pn	23 33 28.1	+0.1
JHCJ				S	Sn	23 33 41.5	+0.3
BSO1	Boso 1	1.16	3	P	Pn	23 33 29.4	-0.1
BSO1				S	Sn	23 33 43.4	-0.5
JMKN	Mikurajimanish	1.16	290	P	Pn	23 33 29.9	-0.1
JMKN				eS	Sn	23 33 44.3	-0.4
BSO3	Boso 3	1.34	346	P	Pn	23 33 32.1	-0.1
JAOM	Aogashimamukai	1.40	223	P	Pn	23 33 33.9	+0.6
BSO4	Boso 4	1.56	343	P	Pn	23 33 35.7	+0.3
JKO	Kozu shima	1.62	296	P	Pn	23 33 36.5	+0.2
JKO				S	Sn	23 33 55.8	-0.2
JTHY	Toshimahigashi	1.69	308	P	Pn	23 33 37.2	0.0
JTHY				eS	Sn	23 33 57.0	-0.6
JIM2	Oshima 3	1.72	315	P	Pn	23 33 37.6	-0.1
JIZS	Izushimoda	2.07	307	P	Pn	23 33 42.8	+0.3
JIZS				S	Sn	23 34 06.8	-0.3
KTJ3	Kamata3	2.09	314	P	Pn	23 33 42.7	+0.1
KTJ3				S	Sn	23 34 06.5	-0.9
JOD2	Odawara 2	2.31	320	P	Pn	23 33 46.0	+0.2
JOD2				eS	Sn	23 34 12.6	-0.4
MJAR	Matsushiro Arr	3.76	325	P	Pn	23 34 07.7	+2.1
	0.6nm,0.3s,baz=135,slow=21,SNR=14						
MJAR				S	Sn	23 34 49.9	+1.4
	0.4nm,0.3s,baz=230,slow=26,SNR=6.3						
MAT	Matsushiro	3.76	325	P	Pn	23 34 07.7	+2.1
MAT				S	Sn	23 34 49.5	+0.9
MKAR	Makanchi Array	45.72	305	P	P	23 41 25.2	-1.1
	0.4nm,0.9s,baz=92,slow=8.5,SNR=4.1						
FITZ	Fitzroy Crossi	53.33	198	P	P	23 42 24.6	+0.2
	0.8nm,0.6s,baz=0.0,slow=7.1,SNR=1.4						
WRA	Warramunga Arr	53.51	188	P	P	23 42 25.5	-0.3
	5.1nm,0.5s,baz=5.2,slow=7.6,SNR=162						
ASAR	Alice Springs	57.23	188	P	P	23 42 52.6	+0.1
	0.7nm,0.4s,baz=7.9,slow=7.7,SNR=13						
NWAO	Narrogin (SRO)	69.73	201	P	P	23 44 14.9	+0.1
	6.9nm,0.8s,baz=34,slow=3.6,SNR=3.7						

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*ISCJB **13** 23:39:05.4±0.5, 6°.73N±0°.08×123°.7E±0°.1, h600^{km}, mb3.9/16, Error ellipse: s-maj=17.0km s-min=7.4km az=149.7*

*IDC **13** 23:39:08.2±1.2, 6°.65N×123°.70E, h626^{km}±15^{km}, mb3.1/14, mb1 3.3/16, mb1mx2.9/67, mbtmp4.2/16, Error ellipse: s-maj=24.1km s-min=7.3km az=69.0*

ISC 13 23:39:06.2±0.5**, 6°.69N**±0°.09×**123°.7E**±0°.2**, h600^{km}, n28, σ1^{s}14**/37**, mb4.0**/20**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	0.79	48	⇓iP	P	23 40 17.5	+0.5
SIJI	Sorong	10.68	134	P	P	23 41 33.4	+1.6
	6.5nm,0.3s,baz=310,slow=10,SNR=16						
BATI	Baumata	16.78	180	P	P	23 42 31.4	+0.6
	3.2nm,0.3s,baz=268,slow=2.9,SNR=5.8						
SKNT	Sakolnakorn	21.78	300	P	P	23 43 17.2	+1.2
	6.5nm,0.9s,787nm						
FITZ	Fitzroy Crossi	24.70	175	P	P	23 43 42.3	+0.4
	1.4nm,0.3s,baz=9.2,slow=7.8,SNR=17						
CMAR	Chiang Mai Arr	26.77	298	P	P	23 44 01.2	+1.2
	3.4nm,0.7s,baz=111,slow=7.0,SNR=25						
CMAR				PcP	PcP	23 47 02.1	-0.5
	0.4nm,0.3s,baz=113,slow=4.3,SNR=3.0						
CMMT	Chiang Mai	26.90	299	P	P	23 44 02.1	+0.9
CHTO	Chiang Mai	26.90	299	P	P	23 44 02.2	+0.9
	51nm,0.7s						
WRA	Warramunga Arr	28.47	159	P	P	23 44 15.3	+0.4
	1.7nm,0.5s,baz=330,slow=11,SNR=36						
WRA				PcP	PcP	23 47 07.0	+0.1
	1.0nm,0.5s,baz=332,slow=2.6,SNR=13						
WRA				S	S	23 48 17.7	-4.1
	2.4nm,0.6s,baz=335,slow=16,SNR=12						
WRA				ScP	ScP	23 49 51.6	-0.5
	0.3nm,0.6s,baz=340,slow=3.2,SNR=2.7						
ASAR	Alice Springs	31.78	162	P	P	23 44 44.4	+1.2
	3.7nm,0.3s,baz=339,slow=7.4,SNR=69						
ASAR				PcP	PcP	23 47 15.8	+0.2
	1.5nm,0.5s,baz=348,slow=2.7,SNR=15						
ASAR				S	S	23 49 11.7	-0.9
	4.1nm,0.6s,baz=349,slow=20,SNR=28						
USRK	Ussuriysk Ar.	38.07	10	P	P	23 45 35.5	+0.5
	0.7nm,0.3s,baz=210,slow=9.2,SNR=6.6						
NWAO	Narrogin (SRO)	39.86	188	P	P	23 45 50.0	+0.4
	8.7nm,0.8s,baz=30,slow=8.1,SNR=5.5						
RAMN	Ramite	40.56	304	eP	P	23 45 56.3	+0.8
GUN	Gumba	41.53	305	eP	P	23 46 03.7	+0.4
	5.8nm,0.3s						
PKIN	Phulchoki	41.79	304	eP	P	23 46 05.2	0.0
STKA	Stephens Creek	41.99	157	P	P	23 46 07.7	+1.3
	3.3nm,0.4s,baz=337,slow=8.0,SNR=12						
KOLN	Koldanda	43.34	304	eP	P	23 46 17.9	+0.7
	5.7nm,0.3s						
DANN	Dangsing	43.42	305	eP	P	23 46 18.4	+0.4
	15nm,0.5s						
SONM	Songino Array	43.57	343	P	P	23 46 18.6	+0.1
	0.4nm,0.5s,baz=167,slow=8.9,SNR=5.9						
SONM				PcP	PcP	23 47 51.8	-0.6
	0.4nm,0.8s,baz=147,slow=3.4,SNR=3.4						
PYUN	Piuthan	43.96	304	eP	P	23 46 22.7	+0.7
	2.8nm,0.3s						
MKAR	Makanchi Array	53.40	326	P	P	23 47 31.9	+0.8
	0.7nm,0.4s,baz=123,slow=7.2,SNR=30						
MKAR				PcP	PcP	23 48 27.6	-0.8
	0.5nm,0.5s,baz=111,slow=4.4,SNR=5.6						
MKAR				ScP	ScP	23 51 27.6	-1.8
	0.5nm,0.6s,baz=108,slow=4.4,SNR=6.3						
NRIK	Noril'sk	66.86	347	P	P	23 48 59.4	+0.1
	0.8nm,0.5s,baz=115,slow=3.0,SNR=4.3						
ILAR	Eielson Array	83.77	26	P	P	23 50 32.7	-0.3
	0.2nm,0.5s,baz=263,slow=4.1,SNR=4.6						
BRTR	Keskin Array B	85.79	309	P	P	23 50 42.3	-1.3
	0.2nm,0.4s,baz=342,slow=18,SNR=2.8						
ARCES	ARCESS Array B	86.63	340	P	P	23 50 46.0	-0.8
	3.3nm,0.9s,baz=72,slow=5.9,SNR=2.8						
FINES	FINESS Array B	87.80	332	P	P	23 50 51.0	-1.3
	1.7nm,1.0s,baz=64,slow=3.5,SNR=3.1						
TORD	Torodi Ar. Bea	119.08	289	PKP	PKPdf	23 56 47.5	-1.3
	0.8nm,1.0s,baz=116,slow=1.4,SNR=8.1						
CPUP	Villa Florida	160.44	177	PKPab	PKPab	23 58 42.2	-1.6
	0.3nm,0.3s,baz=233,slow=2.4,SNR=3.0						

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*IDC **13** 23:39:24.8±1.5, 11°.55S×165°.09E, h0^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.6/49, mbtmp3.7/8, ML4.0/2, Error ellipse: s-maj=38.8km s-min=25.4km az=124.0*

*ISCJB **13** 23:39:28.3±1.1, 11°.7S±0°.1×165°.0E±0°.1, h34^{km}, mb3.5/5, Error ellipse: s-maj=21.4km s-min=15.7km az=159.5*

ISC 13 23:39:30.0±1.2**, 11°.6S**±0°.1×**165°.0E**±0°.2**, h34^{km}, n14, σ0^{s}68**/8**, mb3.5**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.43	293	Pn	Pn	23 40 48.3	-0.4
	15nm,0.3s,baz=217,slow=4.0,SNR=2.1						
DZM	Mont Dzumac	10.51	173	Pn	Pn	23 41 58.4	0.0
	0.4nm,0.3s,baz=0.0,slow=20,SNR=5.5						
CTA	Charters Tower	19.92	243	P	P	23 43 58.5	-0.5
	3.4nm,0.8s,baz=84,slow=9.2,SNR=2.3						
H11S2	WAKE ISLAND Hy	29.94	3	T	T	00 16 58.7	
	baz=184						
H11S3	WAKE ISLAND Hy	29.94	3	T	T	00 17 06.0	
	baz=184						
H11S1	WAKE ISLAND Hy	29.96	3	T	T	00 17 13.1	
	baz=184						
WRA	Warramunga Arr	30.63	250	P	P	23 45 41.9	+0.5
	0.7nm,0.5s,baz=81,slow=9.6,SNR=6.8						
H11N1	WAKE ISLAND Hy	31.16	3	T	T	00 18 35.5	
	baz=183						
H11N3	WAKE ISLAND Hy	31.17	3	T	T	00 18 33.4	
	baz=183						
H11N2	WAKE ISLAND Hy	31.18	3	T	T	00 18 40.2	
	baz=183						
ASAR	Alice Springs	31.91	244	P	P	23 45 52.5	-0.1
	0.4nm,0.7s,baz=78,slow=9.8,SNR=3.7						
SONM	Songino Array	78.69	324	P	P	23 51 29.6	+0.7
	0.4nm,0.9s,baz=127,slow=3.8,SNR=3.3						
ILAR	Eielson Array	84.26	19	P	P	23 51 56.9	-0.9
	0.7nm,1.2s,baz=242,slow=5.0,SNR=3.7						
MKAR	Makanchi Array	93.43	317	P	P	23 52 42.7	+0.6
	0.1nm,0.5s,baz=110,slow=4.7,SNR=2.5						

IDC 13 23:42:49.4±8.1**, 24°.51S**×**69°.13E, h0^{km}, mb3.5**/6**, mb1 3.7**/6**, mb1mx3.4**/64**, mbtmp3.5**/6**, Error ellipse: s-maj=263.7km s-min=31.5km az=49.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	17.07	11	T	T	00 03 46.5	
	baz=190						
H08S2	Diego Garcia H	17.08	11	T	T	00 03 47.8	
	baz=190,slow=74						
H08S3	Diego Garcia H	17.09	11	T	T	00 03 47.0	
	baz=190,slow=74						
FITZ	Fitzroy Crossi	52.74	95	P	P	23 52 04.8	-1.5
	1.1nm,0.8s,baz=252,slow=9.6,SNR=2.1						
ASAR	Alice Springs	58.63	104	P	P	23 52 49.2	+0.5
	0.4nm,0.6s,baz=250,slow=6.1,SNR=8.7						
WRA	Warramunga Arr	60.05	100	P	P	23 52 58.8	+0.2
	0.4nm,0.6s,baz=253,slow=6.9,SNR=5.1						
MKAR	Makanchi Array	71.96	9	P	P	23 54 14.3	-0.3
	0.2nm,0.5s,baz=188,slow=6.4,SNR=4.2						
BVAR	Borovoye Array	77.21	1	P	P	23 54 44.7	-0.1
	0.3nm,0.7s,baz=149,slow=6.2,SNR=2.3						
SONM	Songino Array	79.42	25	P	P	23 54 58.1	+0.7
	0.5nm,1.0s,baz=177,slow=9.7,SNR=2.9						

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*IDC **13** 23:51:12.9±1.5, 10°.77S×164°.31E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.9/31, mbtmp3.9/8, ML3.6/1, MS3.3/5,*

Ms1 3.3/5,ms1mx2.9/25,Error ellipse: s-maj=45.0km
s-min=25.2km az=123.0

ISC 13 23:51:17.8±1.0**,10°.8S**±0°.1×**164°.03E**±0°.10**,h29**^{km}**,n22,**
σ**1ˢ.88**/15**,mb3.7**/6**,MS3.3**/4**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.23**	**288**	*e*P	**Pb**	**23 52 29.0**	**-2.5**
HNR				*e*S	**Sn**	**23 53 10.0**	**+1.2**
HNR	**Honiara**	**4.23**	**288**	Pn	**Pb**	**23 52 27.1**	**-4.4**
	49nm,0.3s,baz=160,slow=6.7,SNR=4.0						
HNR				Sn	**Sb**	**23 53 23.0**	**+0.8**
	16nm,0.3s,baz=158,slow=12,SNR=2.0						
HNR				LR	LR	23 54 23.2	
	comp=Z,293nm,18.9s,baz=140,slow=42						
DZM	**Mont Dzumac**	**11.48**	**169**	Pn	**Pn**	**23 53 58.6**	**-1.4**
	0.4nm,0.3s,baz=0.0,slow=20,SNR=1.5						
CTA	**Charters Tower**	**19.47**	**239**	P	**Pn**	**23 55 45.9**	**+2.1**
	baz=69,slow=8.6,SNR=2.6						
H11S2	**WAKE ISLAND Hy**	**29.18**	**5**	T	T	00 27 59.5	
	baz=183						
H11S3	**WAKE ISLAND Hy**	**29.19**	**5**	T	T	00 27 42.5	
	baz=183						
H11S1	**WAKE ISLAND Hy**	**29.20**	**5**	T	T	00 27 54.6	
	baz=183						
STKA	**Stephens Creek**	**29.52**	**221**	LR	LR	00 08 23.1	
	comp=Z,22nm,19.1s,baz=25,slow=35						
URZ	**Urewera**	**29.79**	**159**	LR	LR	00 08 13.9	
	comp=Z,64nm,18.8s,baz=32,slow=34						
WRA	**Warramunga Arr**	**30.01**	**249**	P	**P**	**23 57 25.0**	**+0.8**
	1.0nm,0.9s,baz=78,slow=9.1,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**30.41**	**5**	T	T	00 29 26.5	
	baz=184						
H11N3	**WAKE ISLAND Hy**	**30.42**	**5**	T	T	00 29 22.3	
	baz=184						
H11N2	**WAKE ISLAND Hy**	**30.43**	**5**	T	T	00 29 24.3	
	baz=184						
ASAR	**Alice Springs**	**31.43**	**242**	P	**P**	**23 57 37.4**	**+0.6**
	0.4nm,0.7s,baz=70,slow=9.1,SNR=3.7						
ASAR				LR	LR	00 09 13.2	
	comp=Z,73nm,21.2s,baz=82,slow=34						
NWAO	**Narrogin (SRO)**	**48.23**	**235**	LR	LR	00 20 46.2	
	comp=Z,67nm,19.8s,baz=118,slow=37						
CMAR	**Chiang Mai Arr**	**70.45**	**294**	P	**P**	**00 02 31.4**	**+1.3**
	0.3nm,0.3s,baz=105,slow=6.9,SNR=2.8						
CMMT	**Chiang Mai**	**70.56**	**294**	P	**P**	**00 02 30.4**	**-0.3**
CHTO	**Chiang Mai**	**70.57**	**294**	P	**P**	**00 02 30.6**	**-0.1**
SONM	**Songino Array**	**77.45**	**324**	P	**P**	**00 03 12.4**	**+1.9**
	0.5nm,0.8s,baz=152,slow=4.7,SNR=5.4						
ILAR	**Eielson Array**	**83.79**	**19**	P	**P**	**00 03 42.7**	**-1.2**
	1.1nm,0.8s,baz=229,slow=5.9,SNR=11						
MKAR	**Makanchi Array**	**92.16**	**317**	P	**P**	**00 04 25.5**	**+0.8**
	0.8nm,0.8s,baz=103,slow=5.4,SNR=9.9						
TORD	**Torodi Ar. Bea**	**162.55**	**280**	PKPab	**PKPab**	**00 12 06.3**	**+0.2**
	1.0nm,1.0s,baz=58,slow=2.1,SNR=5.3						

ISCJB ***14*** *00:00:12.9±0.4,24°.40N±0°.03×122°.83E±0°.02,h66*^{km}*±5*^{km}*,*
Error ellipse: s-maj=4.4km s-min=2.7km az=0.7
JMA ***14*** *00:00:12.7±0.1,24°.43N×122°.84E,h70*^{km}*±1*^{km}*,M2.4*
TAP ***14*** *00:00:13.2,24°.39N×122°.80E,h63*^{km}*±1*^{km}*,ML2.9,C*

ISC 14 00:00:13.2±1.3**,24°.41N**±0°.04×**122°.84E**±0°.02**,h66**^{km}±7^{km}**,**
n66,σ**0ˢ.89**/117**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.10**	**68**	P	**Pn**	**00 00 22.9**	**-0.1**
JYNG				S	**Sn**	**00 00 30.6**	**+0.5**
YOJ	**Yonaguni jima**	**0.16**	**72**	P	**Pn**	**00 00 23.3**	**+0.1**
	baz=66						
YOJ				S	**Sn**	**00 00 30.5**	**+0.1**
	baz=66						
YOJ	**Yonaguni jima**	**0.16**	**72**	P	**Pn**	**00 00 23.2**	**0.0**
YOJ				S	**Sn**	**00 00 30.5**	**+0.1**
EOS1	**EOS1**	**0.66**	**282**	P	**Pn**	**00 00 27.4**	**0.0**
	baz=284						
EOS1				S	**Sn**	**00 00 37.8**	**0.0**
	baz=284						
IRIF	**Iriomote-Funau**	**0.81**	**95**	P	**Pn**	**00 00 29.1**	**-0.1**
IRIF				S	**Sn**	**00 00 41.3**	**+0.3**
TWC	**Suao**	**0.92**	**282**	P	**Pn**	**00 00 30.2**	**-0.4**
	baz=284						
TWC				*e*S	**Sn**	**00 00 42.5**	**-0.9**
	baz=284						
EGS		**0.93**	**298**	*e*P	**Pn**	**00 00 30.9**	**+0.3**
	baz=300						
HATJ	**Hateruma jima**	**0.95**	**112**	*e*S	**Sn**	**00 00 44.8**	**+0.8**
NANB	**Nanao**	**0.99**	**271**	*e*P	**Pn**	**00 00 31.8**	**+0.4**
	baz=272						
ENA	**Nanau**	**1.00**	**271**	*e*P	**Pn**	**00 00 32.2**	**+0.7**
	baz=272						
NTC	**Toucheng**	**1.02**	**296**	*e*P	**Pn**	**00 00 31.5**	**-0.3**
	baz=297						
NTC				*e*S	**Sn**	**00 00 44.6**	**-0.9**
	baz=297						
TIPB	**Shuangxi**	**1.08**	**301**	P	**Pn**	**00 00 32.0**	**-0.6**
	baz=303						
TIPB				*e*S	**Sn**	**00 00 46.7**	**-0.3**
	baz=303						
JKRS	**Kuro-shima**	**1.08**	**99**	P	**Pn**	**00 00 32.9**	**+0.4**
JKRS				S	**Sn**	**00 00 48.1**	**+1.2**
TWE	**Neicheng**	**1.11**	**286**	P	**Pn**	**00 00 32.9**	**-0.1**
	baz=287						
NACB	**Ninganchiao**	**1.16**	**258**	P	**Pn**	**00 00 33.4**	**-0.2**
	baz=258						
NACB				*e*S	**Sn**	**00 00 48.9**	**+0.1**
	baz=258						
WFSB	**Wu-fen Shan**	**1.17**	**304**	*e*P	**Pn**	**00 00 33.3**	**-0.3**
	baz=306						
WFSB				*e*S	**Sn**	**00 00 49.7**	**+0.8**
	baz=306						
ENTT	**Nioudou**	**1.18**	**281**	*e*P	**Pn**	**00 00 34.8**	**+0.9**
	baz=282						
ENTT				*e*S	**Sn**	**00 00 50.0**	**+0.6**
	baz=282						
TWD	**Chiawan**	**1.18**	**254**	*e*P	**Pn**	**00 00 33.8**	**0.0**
	baz=254						
TWD				*e*S	**Sn**	**00 00 48.6**	**-0.6**
	baz=254						
JIJ	**Ishigaki jima**	**1.19**	**92**	P	**Pn**	**00 00 33.6**	**-0.4**
JIJ				S	**Sn**	**00 00 48.8**	**-0.7**
HWA	**Hwalien**	**1.21**	**249**	*e*P	**Pn**	**00 00 34.4**	**+0.2**
	baz=249						
NDT	**Datong Townshi**	**1.22**	**279**	*e*P	**Pn**	**00 00 35.3**	**+0.9**
	baz=280						
NDT				S	**Sn**	**00 00 51.2**	**+0.9**
	baz=280						
ENLB	**Shoufeng**	**1.24**	**246**	*e*S	**Sn**	**00 00 50.0**	**-0.6**
	baz=246						
ETLH	**Xiulin Townshi**	**1.26**	**261**	P	**Pn**	**00 00 34.8**	**-0.2**
	baz=261						
ETLH				*e*S	**Sn**	**00 00 50.9**	**-0.2**
	baz=261						
NWLT	**Wulai**	**1.27**	**287**	P	**Pn**	**00 00 35.3**	**+0.2**
	baz=288						
NWLT				*e*S	**Sn**	**00 00 50.6**	**-0.8**
	baz=288						
NHDH	**Xindian Distri**	**1.32**	**295**	*e*P	**Pn**	**00 00 35.5**	**-0.1**
	baz=296						
NHDH				*e*S	**Sn**	**00 00 52.4**	**-0.1**
	baz=296						
NNSB	**Datong**	**1.33**	**271**	*e*P	**Pn**	**00 00 35.9**	**0.0**
	baz=271						
NNSB				*e*S	**Sn**	**00 00 51.7**	**-1.2**
	baz=271						
NNS	**Nan Shan**	**1.34**	**271**	*e*P	**Pn**	**00 00 36.3**	**+0.2**
	baz=272						
JISG	**Ishigakijimahi**	**1.35**	**82**	P	**Pn**	**00 00 35.3**	**-0.8**
JISG				S	**Sn**	**00 00 52.6**	**-0.6**
TATO	**Taipei**	**1.35**	**295**	*e*P	**Pn**	**00 00 35.6**	**-0.5**
	baz=296						
TATO				*e*S	**Sn**	**00 00 51.5**	**-1.8**
	baz=296						
YHNB	**Yeheng**	**1.36**	**281**	*e*P	**Pn**	**00 00 37.0**	**+0.7**
	baz=282						
YHNB				*e*S	**Sn**	**00 00 54.7**	**+1.1**
	baz=282						
YM01	**YM01**	**1.37**	**303**	*e*P	**Pn**	**00 00 35.3**	**-1.0**
	baz=303						
YM01				*e*S	**Sn**	**00 00 53.5**	**-0.2**
	baz=303						
NSK	**Sanguang**	**1.38**	**281**	*e*P	**Pn**	**00 00 37.1**	**+0.6**
	baz=282						
NSK				*e*S	**Sn**	**00 00 54.3**	**+0.4**
	baz=282						
YM05	**YM05**	**1.38**	**303**	*e*P	**Pn**	**00 00 35.0**	**-1.6**
	baz=304						
YM05				*e*S	**Sn**	**00 00 54.2**	**+0.2**
	baz=304						
YM04	**YM04**	**1.40**	**302**	*e*P	**Pn**	**00 00 36.9**	**+0.1**
	baz=303						
YM04				*e*S	**Sn**	**00 00 55.9**	**+1.5**
	baz=303						
ESL	**Shilin**	**1.42**	**245**	*e*P	**Pn**	**00 00 36.7**	**-0.3**
	baz=245						
ESL				*e*S	**Sn**	**00 00 54.4**	**-0.5**
	baz=245						
WHF	**Hehuan Shan**	**1.46**	**260**	P	**Pn**	**00 00 38.1**	**+0.2**
	baz=260						
WHF				*e*S	**Sn**	**00 00 53.7**	**-2.8**
	baz=260						
TWS1	**Kuangyinshan**	**1.46**	**298**	*e*S	**Sn**	**00 00 56.3**	**+0.4**
	baz=299						
NTST	**Danshui**	**1.47**	**301**	*e*S	**Sn**	**00 00 57.3**	**+1.3**
	baz=302						
EGFH	**Guangfu**	**1.49**	**240**	*e*P	**Pn**	**00 00 37.8**	**-0.1**
	baz=240						
EGFH				*e*S	**Sn**	**00 00 55.4**	**-1.1**
	baz=240						
TWT	**Tachien**	**1.53**	**264**	*e*P	**Pn**	**00 00 39.6**	**+1.0**
	baz=264						
TDCB	**Techi**	**1.54**	**264**	*e*P	**Pn**	**00 00 39.6**	**+0.9**
	baz=264						
TDCB				*e*S	**Sn**	**00 00 58.4**	**+0.3**
	baz=264						
CHGB	**Renai**	**1.56**	**257**	P	**Pn**	**00 00 39.8**	**+0.7**
	baz=257						
CHGB				*e*S	**Sn**	**00 00 58.5**	**-0.1**
	baz=257						
HGSD	**Ruisui**	**1.59**	**235**	*e*P	**Pn**	**00 00 39.2**	**0.0**
	baz=234						
HGSD				*e*S	**Sn**	**00 00 59.0**	**+0.1**
	baz=234						
OWD	**Renai**	**1.59**	**254**	P	**Pn**	**00 00 39.4**	**0.0**
	baz=253						
OWD				S	**Sn**	**00 00 58.0**	**-1.1**
	baz=253						
EHY	**Hungye**	**1.66**	**237**	*e*P	**Pn**	**00 00 40.3**	**+0.1**
	baz=236						
EHY				*e*S	**Sn**	**00 00 59.8**	**-0.7**
	baz=236						
LIOB	**Emei**	**1.68**	**278**	P	**Pn**	**00 00 41.4**	**+0.9**
	baz=278						
LIOB				*e*S	**Sn**	**00 01 01.7**	**+0.6**
	baz=278						
VWDT	**VWDT**	**1.69**	**247**	*e*P	**Pn**	**00 00 41.2**	**+0.6**
	baz=247						
VWDT				*e*S	**Sn**	**00 01 01.6**	**+0.4**
	baz=247						
JTJ	**Tarama**	**1.71**	**82**	P	**Pn**	**00 00 41.2**	**+0.3**
JTJ				*e*S	**Sn**	**00 01 01.6**	**-0.2**
WHP	**Taichung City**	**1.73**	**266**	*e*P	**Pn**	**00 00 42.9**	**+1.6**
	baz=266						
WHP				*e*S	**Sn**	**00 01 03.1**	**+0.6**
	baz=266						
YULB	**Yu-li**	**1.74**	**235**	P	**Pn**	**00 00 41.2**	**-0.1**
	baz=234						
YULB				S	**Sn**	**00 01 01.1**	**-1.5**
	baz=234						
TWF1	**Yuli**	**1.76**	**234**	*e*P	**Pn**	**00 00 41.7**	**+0.1**
	baz=232						
TWF1				S	**Sn**	**00 01 02.8**	**-0.3**
	baz=232						
SSLB	**Suanglung**	**1.83**	**251**	*e*P	**Pn**	**00 00 43.1**	**+0.5**
	baz=250						
SSLB				*e*S	**Sn**	**00 01 02.9**	**-2.0**
	baz=250						
SMLT	**Sun Moon Lake**	**1.85**	**254**	*e*P	**Pn**	**00 00 43.9**	**+1.0**
	baz=253						
SMLT				*e*S	**Sn**	**00 01 04.8**	**-0.5**
	baz=253						
TWQ1	**Liyutan**	**1.89**	**268**	*e*P	**Pn**	**00 00 45.6**	**+2.3**
	baz=268						
WHYT	**Xinyi Township**	**1.95**	**249**	*e*P	**Pn**	**00 00 45.9**	**+1.7**
	baz=248						
WHYT				*e*S	**Sn**	**00 01 08.8**	**+1.0**
	baz=248						
ELDTW	**Lidau**	**2.07**	**234**	*e*P	**Pn**	**00 00 45.9**	**+0.1**
	baz=233						
ELDTW				*e*S	**Sn**	**00 01 08.2**	**-2.5**
	baz=233						
TWGBT	**Beinan**	**2.26**	**226**	*e*P	**Pn**	**00 00 48.3**	**-0.1**
	baz=225						
TWGBT				*e*S	**Sn**	**00 01 14.3**	**-1.0**
	baz=225						
TWG	**Pinlang**	**2.27**	**226**	*e*P	**Pn**	**00 00 48.5**	**+0.1**
	baz=225						
TWG				*e*S	**Sn**	**00 01 14.3**	**-1.0**
	baz=225						
TPUB	**Ta-pu**	**2.31**	**242**	*e*P	**Pn**	**00 00 50.9**	**+1.9**
	baz=241						
TPUB				*e*S	**Sn**	**00 01 16.1**	**-0.2**
	baz=241						
WTP	**Ta-pu**	**2.35**	**241**	*e*P	**Pn**	**00 00 51.3**	**+1.8**
	baz=240						
WTP				*e*S	**Sn**	**00 01 16.9**	**-0.4**
	baz=240						
CHY	**Chiayi**	**2.39**	**248**	*e*S	**Sn**	**00 01 18.7**	**+0.4**
	baz=247						
SNST	**Tainan City**	**2.45**	**242**	*e*P	**Pn**	**00 00 53.1**	**+2.1**
	baz=241						
SNST				*e*S	**Sn**	**00 01 20.7**	**+0.9**
	baz=241						
SLGT	**Liugui**	**2.46**	**235**	*e*P	**Pn**	**00 00 52.9**	**+1.8**
	baz=234						
SLGT				S	**Sn**	**00 01 20.6**	**+0.6**
	baz=234						
PHUB	**P'eng-hu**	**3.12**	**254**	*e*P	**Pn**	**00 01 00.5**	**+0.5**
	baz=253						
PHUB				*e*S	**Sn**	**00 01 35.4**	**-0.8**
	baz=253						
PTMZ	**Houxiangcun**	**3.44**	**281**	*e*P	**Pn**	**00 01 04.0**	**-0.4**
	baz=280						
KNMB	**Chin-men Tao**	**4.06**	**272**	*e*P	**Pn**	**00 01 11.9**	**-0.9**
	baz=271						

IDC 14 00:00:18.8±2.5**,23°.84S**×**69°.94E,h0**^{km}**,mb3.8**/7**,**
mb1 3.9/7**,mb1mx3.7**/38**,mbtmp3.8**/7**,MS3.5**/4**,Ms1 3.5**/4**,**
ms1mx2.9/47**,Error ellipse: s-maj=78.2km**
s-min=27.4km az=46.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.28**	**9**	T	T	00 21 10.6	
	baz=190,slow=76,SNR=7.0						
H08S2	**Diego Garcia H**	**16.29**	**9**	T	T	00 21 10.4	
	baz=190,slow=76,SNR=9.7						
H08S3	**Diego Garcia H**	**16.30**	**9**	T	T	00 21 11.9	
	baz=190,slow=76,SNR=37						
MATP	**Matopo**	**38.44**	**267**	LR	LR	00 20 02.3	
	comp=Z,66nm,21.5s,baz=105,slow=31						
PSI	**Prapat**	**38.69**	**51**	LR	LR	00 20 16.9	
	comp=Z,64nm,19.1s,baz=269,slow=31						
LEM	**Lembang**	**39.91**	**71**	LR	LR	00 20 22.3	
	comp=Z,53nm,19.4s,baz=324,slow=30						
CMAR	**Chiang Mai Arr**	**50.68**	**37**	P	P	00 09 20.1	-0.1
	0.8nm,0.4s,baz=220,slow=8.3,SNR=7.3						
ASAR	**Alice Springs**	**58.07**	**104**	P	P	00 10 14.2	-0.1
	0.6nm,0.6s,baz=252,slow=6.4,SNR=13						
WRA	**Warramunga Arr**	**59.44**	**100**	P	P	00 10 23.8	0.0
	0.5nm,0.6s,baz=255,slow=6.8,SNR=9.7						
MKAR	**Makanchi Array**	**71.18**	**9**	P	P	00 11 39.7	+0.4
	0.5nm,0.6s,baz=197,slow=6.5,SNR=6.2						
BRTR	**Keskin Array B**	**71.74**	**331**	P	P	00 11 43.1	+0.1
	0.9nm,0.9s,baz=153,slow=4.7,SNR=3.8						
SONM	**Songino Array**	**78.51**	**24**	P	P	00 12 21.9	0.0
	0.6nm,0.8s,baz=215,slow=5.4,SNR=4.8						
ZALV	**Zalesovo Beam**	**78.52**	**9**	P	P	00 12 21.1	-0.5
	0.3nm,0.3s,baz=212,slow=5.1,SNR=3.2						
KLR	**Kul'dur**	**91.14**	**35**	LR	LR	00 56 30.6	
	comp=Z,40nm,18.5s,baz=182,slow=37						

IDC 14 00:09:56.4±12.0**,24°.26S**×**69°.57E,h0**^{km}**,mb3.7**/5**,**
mb1 3.8/5**,mb1mx3.5**/61**,mbtmp3.7**/5**,MS3.7**/4**,Ms1 3.7**/4**,**
ms1mx3.1/47**,Error ellipse: s-maj=393.6km**
s-min=31.5km az=51.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**33.17**	**20**	LR	LR	00 26 44.8	
	comp=Z,179nm,20.3s,baz=115,slow=30						
BOSA	**Boshof**	**39.75**	**254**	LR	LR	00 31 20.2	
	comp=Z,130nm,19.8s,baz=88,slow=32						
MAW	**Mawson**	**43.55**	**184**	LR	LR	00 32 44.0	
	comp=Z,88nm,19.9s,baz=38,slow=31						
CMAR	**Chiang Mai Arr**	**51.22**	**37**	LR	LR	00 38 40.5	
	comp=Z,47nm,18.2s,baz=180,slow=34						
ASAR	**Alice Springs**	**58.30**	**104**	P	P	00 19 52.9	-0.5
	0.6nm,0.7s,baz=257,slow=6.4,SNR=7.7						
WRA	**Warramunga Arr**	**59.70**	**100**	P	P	00 20 03.4	+0.2
	0.7nm,0.7s,baz=258,slow=6.6,SNR=7.1						
MKAR	**Makanchi Array**	**71.65**	**9**	P	P	00 21 18.9	-0.8
	0.7nm,0.8s,baz=179,slow=5.0,SNR=8.1						
ZALV	**Zalesovo Beam**	**79.00**	**9**	P	P	00 22 02.0	+0.2
	0.4nm,0.3s,baz=198,slow=4.1,SNR=2.4						
SONM	**Songino Array**	**79.03**	**24**	P	P	00 22 03.3	+1.0
	0.1nm,0.5s,baz=205,slow=6.4,SNR=2.0						

IDC ***14*** *00:14:42.9±0.9,35°.43N×28°.49E,h0*^{km}*,mb3.7/11,*
mb1 3.8/20,mb1mx3.7/50,mbtmp3.7/20,ML3.3/9,MS2.7/2,
Ms1 2.7/2,ms1mx2.2/48,Error ellipse: s-maj=18.3km
s-min=12.3km az=1.0
ISK ***14*** *00:14:45.4,35°.33N×28°.56E,h16*^{km}*,ML3.7/38*
DDA ***14*** *00:14:47.7,35°.52N×28°.47E,h24*^{km}*±1*^{km}*,ML3.7*
HLW ***14*** *00:14:48.5,35°.27N×28°.60E,h18*^{km}*±26*^{km}*,Md3.8,Ml4.2*
ATH ***14*** *00:14:48.5,35°.48N×28°.48E,h69*^{km}*±6*^{km}*,ML3.3/3,Error*
ellipse: s-maj=6.5km s-min=1.4km az=350.0
NIC ***14*** *00:14:49.8±0.1,35°.49N×28°.67E,h25*^{km}*,mb4.1,ML3.7*
GII ***14*** *00:14:49.8±0.0,35°.21N×28°.73E,h30*^{km}*,MD3.2/1*
THE ***14*** *00:14:50.7,35°.49N×28°.50E,h29*^{km}*±14*^{km}*,ML3.3/5,Error*
ellipse: s-maj=14.9km s-min=0.5km az=111.0

ISC 14 00:14:47.4±1.2**,35°.36N**±0°.03×**28°.56E**±0°.02**,h32**^{km}±9^{km}**,**
n129,σ**1ˢ.37**/157**,mb3.6**/11**,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.93**	**338**	PG	**Pb**	**00 15 04.1**	**-0.8**
ARG				SG	**Sn**	**00 15 17.8**	**+1.5**
ARG	**Arkhangelos**	**0.93**	**338**	P	**Pb**	**00 15 05.0**	**+0.1**
ARG				S	**Sb**	**00 15 16.7**	**-0.2**
ARG				AML	AML	00 15 21.9	
	comp=E,2892μm,0.4s						
ARG				AML	AML	00 15 23.6	
	comp=N,3066μm,0.8s						
ARG	**Arkhangelos**	**0.93**	**338**	P	**Pb**	**00 15 05.0**	**+0.1**
ARG				S	**Sb**	**00 15 15.2**	**-1.7**
KSL	**Kastellorizon**	**1.15**	**46**	P	**Pb**	**00 15 08.9**	**+0.3**
KSL	**Kastellorizon**	**1.15**	**46**	P	**Pb**	**00 15 09.0**	**+0.3**
KARP	**Karpathos**	**1.16**	**280**	PN	**Pn**	**00 15 07.6**	**+0.2**
KARP	**Karpathos**	**1.16**	**280**	P	**Pn**	**00 15 08.8**	**+1.4**
KARP				S	**Sb**	**00 15 24.5**	**+1.0**
KARP				AML	AML	00 15 25.6	
	comp=N,3310μm,0.5s						
KARP				AML	AML	00 15 27.7	
	comp=E,3949μm,0.5s						
KARP	**Karpathos**	**1.16**	**280**	P	**Pn**	**00 15 08.7**	**+1.4**
KARP				S	**Sn**	**00 15 23.0**	**+0.9**
AKAS	**Kas**	**1.22**	**44**	PN	**Pn**	**00 15 08.6**	**+0.3**
AKAS	**Kas**	**1.22**	**44**	*i* P	**Pb**	**00 15 10.6**	**+0.7**
FETY	**Fethiye**	**1.34**	**18**	PN	**Pn**	**00 15 10.4**	**+0.5**
FETY	**Fethiye**	**1.34**	**18**	P	**Pn**	**00 15 10.7**	**+0.8**
FETY	**Fethiye**	**1.34**	**18**	*i* P	**Pn**	**00 15 11.3**	**+1.4**
DALY	**Dalyan (Mula)**	**1.46**	**3**	PN	**Pn**	**00 15 12.1**	**+0.7**
DALY	**Dalyan (Mula)**	**1.46**	**3**	*i* P	**Pn**	**00 15 12.9**	**+1.4**
DALY				IAML_P			
	comp=Z,2μm,0.1s						
TURN	**Turunc**	**1.51**	**1**	*i* P	**Pn**	**00 15 13.7**	**+1.5**
TURN				IAML_P			
	comp=Z,3μm,0.2s						
DATC	**Datca-Mugla**	**1.58**	**333**	PN	**Pn**	**00 15 13.8**	**+0.7**
DAT	**Datca**	**1.58**	**330**	PN	**Pn**	**00 15 13.9**	**+0.6**
DAT	**Datca**	**1.58**	**330**	*i* P	**Pn**	**00 15 14.7**	**+1.4**
NISR	**Nisiros**	**1.71**	**318**	P	**Pn**	**00 15 15.4**	**+0.6**
ELL	**Elmali**	**1.77**	**38**	PN	**Pn**	**00 15 16.4**	**+0.6**
BDRM	**Kayabasi**	**1.93**	**332**	*i* P	**Pn**	**00 15 19.8**	**+1.9**
ZKR	**Zakros**	**1.93**	**263**	PN	**Pn**	**00 15 18.5**	**+0.5**
ZKR	**Zakros**	**1.93**	**263**	P	**Pn**	**00 15 19.5**	**+1.5**
ZKR				S	**Sn**	**00 15 42.8**	**+1.6**
ZKR	**Zakros**	**1.93**	**263**	P	**Pn**	**00 15 19.9**	**+1.9**
ZKR				S	**Sn**	**00 15 42.9**	**+1.6**
BODT	**Bodrum**	**1.98**	**330**	PN	**Pn**	**00 15 19.3**	**+0.6**
BODT	**Bodrum**	**1.98**	**330**	P	**Pn**	**00 15 19.2**	**+0.6**
BODT				S	**Sn**	**00 15 41.5**	**-0.8**
STIA	**Sitia Lasithi**	**2.03**	**266**	P	**Pn**	**00 15 21.4**	**+2.1**
MLSB	**Milas**	**2.03**	**342**	PN	**Pn**	**00 15 20.3**	**+0.9**
TAVA	**DENIZLI_Tavas**	**2.12**	**8**	*i* P	**Pn**	**00 15 22.7**	**+2.0**
TAVA				*i* S	**Sb**	**00 15 49.8**	**-1.4**
TAVA				IAML_P			
	comp=Z,4μm,0.2s						
KORT	**Korkueli**	**2.19**	**41**	PN	**Pn**	**00 15 22.4**	**+0.8**
KORT	**Korkueli**	**2.19**	**41**	*i* P	**Pb**	**00 15 24.9**	**-1.4**
KORT				*i* S	**Sb**	**00 15 53.9**	**+0.8**
ANTB	**Antalya**	**2.29**	**47**	PN	**Pn**	**00 15 23.9**	**+1.0**
AYDN	**Tasoluk**	**2.36**	**347**	*i* P	**Pn**	**00 15 26.1**	**+2.1**
AYDN				*i* S	**Sn**	**00 15 53.6**	**+1.7**
AYDN				IAML_P			
	comp=Z,5μm,0.2s						
NPS	**Neapolis**	**2.41**	**269**	P	**Pn**	**00 15 26.8**	**+2.2**
NPS				S	**Sn**	**00 15 54.2**	**+1.2**
NPS	**Neapolis**	**2.41**	**269**	P	**Pn**	**00 15 26.8**	**+2.2**
NPS				S	**Sn**	**00 15 54.6**	**+1.5**
LAST	**Lasithi**	**2.53**	**266**	P	**Pn**	**00 15 28.0**	**+1.7**
LAST				S	**Sn**	**00 15 56.1**	**0.0**
LAST	**Lasithi**	**2.53**	**266**	P	**Pn**	**00 15 28.2**	**+1.9**
GCAM	**G?zelcaml?**	**2.57**	**336**	PN	**Pn**	**00 15 28.1**	**+1.4**
BRDR	**BURDUR-Merkez**	**2.63**	**27**	*i* P	**Pn**	**00 15 30.3**	**+2.7**
BRDR				IAML_P			
	comp=Z,1μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**2.64**	**348**	PN	**Pn**	**00 15 28.9**	**+1.1**
BCK	**Bucak**	**2.66**	**37**	PN	**Pn**	**00 15 29.2**	**+1.1**
SMG	**Samos**	**2.73**	**330**	P	**Pn**	**00 15 29.5**	**+0.6**
SMG				S	**Sn**	**00 15 59.5**	**-1.3**
SMG				AML	AML	00 16 01.5	
	comp=N,412μm,0.3s						
SMG				AML	AML	00 16 04.4	
	comp=E,502μm,0.5s						
SMG	**Samos**	**2.73**	**330**	P	**Pn**	**00 15 29.6**	**+0.7**
SMG				S	**Sn**	**00 15 59.5**	**-1.3**
THT2	**Imerovigli**	**2.77**	**294**	P	**Pn**	**00 15 30.5**	**+1.0**
KEPZ	**Antalya-Kepez**	**2.91**	**57**	*i* P	**Pn**	**00 15 34.7**	**+3.3**
KEPZ				*i* S	**Sn**	**00 16 08.5**	**+3.3**
KEPZ				IAML_P			
	comp=Z,1μm,0.2s						
ISP	**Isparta**	**2.92**	**32**	P	**Pn**	**00 15 34.3**	**+2.6**
APE	**Apeiranthos**	**2.98**	**306**	PN	**Pn**	**00 15 33.5**	**+1.0**
APE	**Apeiranthos**	**2.98**	**306**	P	**Pn**	**00 15 33.3**	**+0.7**
APE				S	**Sn**	**00 16 05.7**	**-1.6**
APE	**Apeiranthos**	**2.98**	**306**	P	**Pn**	**00 15 33.2**	**+0.7**
IDI	**Anoyia**	**3.00**	**270**	PN	**Pn**	**00 15 33.8**	**+1.0**
IDI	**Anoyia**	**3.00**	**270**	Pn	**Pn**	**00 15 31.8**	**-1.0**
	comp=Z,5.8nm,0.3s,baz=29,slow=8.2,SNR=47						
IDI				Sn	**Sn**	**00 16 06.9**	**-0.8**
	comp=Z,12nm,0.3s,baz=201,slow=6.2,SNR=7.7						
ALAN	**Alanya-ANTALYA**	**3.06**	**66**	PN	**Pn**	**00 15 34.8**	**+1.3**
KHAL	**Karahalli**	**3.10**	**14**	*i* P	**Pn**	**00 15 35.6**	**+1.4**
KHAL				IAML_P			
	comp=Z,463nm,0.1s						
MANT	**Manisa**	**3.13**	**360**	*i* P	**Pn**	**00 15 35.9**	**+1.3**
MANT				*i* S	**Sn**	**00 16 11.4**	**+0.4**
MANT				IAML_P			
	comp=Z,752nm,0.2s						
PPCY	**Paphos**	**3.14**	**98**	P	**Pn**	**00 15 35.5**	**+0.9**
	baz=282						
KULA	**Kula-Manisa**	**3.15**	**1**	PN	**Pn**	**00 15 36.3**	**+1.5**
KZIL	**AFYON_Kizioren**	**3.16**	**23**	*i* P	**Pn**	**00 15 37.6**	**+2.6**
KZIL				IAML_P			
	comp=Z,286nm,0.1s						
BLCB	**Balcova**	**3.26**	**338**	PN	**Pn**	**00 15 37.3**	**+1.1**
ALFC	**Alefka**	**3.31**	**92**	P	**Pn**	**00 15 37.7**	**+0.7**
	baz=277						
ALFC				S	**Sn**	**00 16 15.3**	**0.0**
URLA	**Izmir**	**3.38**	**333**	PN	**Pn**	**00 15 39.2**	**+1.2**
LEF	**Lefka**	**3.55**	**93**	PN	**Pn**	**00 15 40.7**	**+0.4**
HDMB	**Hadim**	**3.56**	**62**	PN	**Pn**	**00 15 41.9**	**+1.4**
VAM	**Vamos**	**3.56**	**272**	P	**Pn**	**00 15 42.1**	**+1.7**
VAM	**Vamos**	**3.56**	**272**	P	**Pn**	**00 15 42.6**	**+2.2**
SHUT	**Suhut-Afyon**	**3.56**	**26**	PN	**Pn**	**00 15 41.9**	**+1.4**
SZAC	**Souni**	**3.60**	**98**	P	**Pn**	**00 15 41.9**	**+1.0**
	baz=283						
SZAC				S	**Sn**	**00 16 22.8**	**+0.5**
GVD	**Gavdhos**	**3.70**	**263**	PN	**Pn**	**00 15 43.8**	**+1.5**
IMMV	**Iera Moni Meta**	**3.74**	**273**	PN	**Pn**	**00 15 44.4**	**+1.5**
IMMV	**Iera Moni Meta**	**3.74**	**273**	P	**Pn**	**00 15 44.7**	**+1.8**

IMMV	Iera Moni Meta	3.74	273	P	Pn	00 15 44.7	+1.8
TEKE	Tekeli-Mersin	3.79	77	PN	Pn	00 15 45.1	+1.6
MAMC	Mammari	3.82	91	P	Pn	00 15 44.8	+0.9
	baz=276						
BERE	Bereket-Mersin	3.91	74	PN	Pn	00 15 47.0	+1.6
CSS	Mathiatis	3.93	94	PN	Pn	00 15 46.7	+1.2
CSS	Mathiatis	3.93	94	P	Pn	00 15 46.5	+1.0
	baz=279						
CSS				S	Sn	00 16 31.1	+0.6
CSS	Mathiatis	3.93	94	Pn	Pn	00 15 46.1	+0.6
KONT	Konya--Tatoy	4.00	49	PN	Pn	00 15 48.4	+2.0
KERA	Keramoti	4.09	272	P	Pn	00 15 49.3	+1.7
TEVE	Tevekalti-Mers	4.11	73	PN	Pn	00 15 49.6	+1.6
AKKU	Akkuyu-Mersin	4.14	77	PN	Pn	00 15 49.9	+1.6
TVSB	Tavsanli	4.15	10	PN	Pn	00 15 49.4	+0.9
LADK	Ladik-KONYA	4.17	46	PN	Pn	00 15 50.6	+1.8
IKL	Isikli	4.26	77	PN	Pn	00 15 51.7	+1.8
KEBE	Keben-Mersin	4.32	74	PN	Pn	00 15 52.4	+1.5
EREN	Erenkoy	4.58	86	PN	Pn	00 15 56.4	+2.0
KIZK	Mersin	4.67	75	PN	Pn	00 15 57.7	+2.1
VLI	Veliai	4.75	288	P	Pn	00 15 57.8	+1.0
DID	Didima	4.80	298	P	Pn	00 15 59.1	+1.7
SULT	Sultanhani-AKS	4.88	53	PN	Pn	00 16 00.9	+2.3
HBRG	Burj al `Arab	4.89	167	AMP		00 16 00.0	
	baz=167						
MERS	Mersin	5.06	71	PN	Pn	00 16 03.2	+2.2
KARA	Karaisali	5.58	68	PN	Pn	00 16 10.6	+2.5
HNTI	Hanita	5.93	111	Pn	Pn	00 16 12.9	-0.1
BRTR	Keskin Array B	5.94	41	Pn	Pn	00 16 13.2	0.0
	comp=Z,0.4nm,0.3s,baz=236,slow=13,SNR=16						
BRTR				Sn	Sn	00 17 21.8	+1.7
	comp=Z,0.5nm,0.3s,baz=213,slow=24,SNR=11						
OFRI	`Ofer	5.99	115	Pn	Pn	00 16 14.2	+0.3
MMA0B	Mount Meron ar	6.13	110	Pn	Pn	00 16 16.2	+0.4
MMAI	Mount Meron Ar	6.13	110	Pn	Pn	00 16 15.8	0.0
	comp=Z,2.8nm,0.3s,baz=303,slow=12,SNR=17						
MMAI				Sn	Sn	00 17 24.7	-0.2
	comp=Z,7.0nm,0.3s,baz=312,slow=29,SNR=11						
SLTI	Sal'it	6.23	118	Pn	Pn	00 16 16.8	-0.2
KSDI	Kefar Szold	6.26	108	Pn	Pn	00 16 17.8	+0.3
AMAZ	Amatzia	6.54	124	Pn	Pn	00 16 21.4	0.0
HMDT	Nahal Hemdat	6.57	116	Pn	Pn	00 16 21.6	-0.2
KZIT	Kziot	6.61	131	Pn	Pn	00 16 22.8	+0.5
YTIR	Yattir	6.78	124	Pn	Pn	00 16 24.7	0.0
YTIR				Sn	Sn	00 17 39.2	-1.6
DSI	Dead Sea	6.84	122	Pn	Pn	00 16 26.6	+1.2
DSI				Sn	Sn	00 17 40.5	-1.6
MZDA	Masada	6.98	123	Pn	Pn	00 16 27.4	+0.1
MZDA				Sn	Sn	00 17 42.8	-2.7
GHAJ	Ghor Haditha	7.12	123	Pn	Pn	00 16 29.5	+0.2
PRNI	Paran	7.37	131	Pn	Pn	00 16 32.5	-0.2
HRFI	Mount Harif	7.61	132	Pn	Pn	00 16 35.9	-0.2
ASF	Jabal al Asfar	7.63	112	Pn	Pn	00 16 37.7	+1.2
	comp=Z,0.2nm,0.3s,baz=280,slow=3.4,SNR=3.3						
ASF				Sn	Sn	00 18 04.2	+2.4
	comp=Z,0.3nm,0.3s,baz=150,slow=20,SNR=2.4						
MBRI	Mt Berech	7.71	134	Pn	Pn	00 16 37.7	+0.2
EIL	Elat	7.83	135	Pn	Pn	00 16 39.1	+0.1
EIL	Elat	7.83	135	Pn	Pn	00 16 39.1	+0.1
	comp=Z,1.3nm,0.3s,baz=305,slow=3.1,SNR=12						
EIL				Sn	Sn	00 18 02.5	-4.0
	comp=Z,6.1nm,0.3s,baz=332,slow=18,SNR=13						
EIL				LR	LR	00 20 29.5	
	comp=Z,19nm,21.2s,baz=32,slow=44						
MLR	Muntele Rosu	10.31	350	Pn	Pn	00 17 12.1	-1.1
	comp=Z,0.0nm,0.3s,baz=142,slow=19,SNR=1.5						
VAE	Valguarnera	11.60	285	Pn	Pn	00 17 30.7	+0.1
	comp=Z,0.3nm,0.3s,baz=15,slow=12,SNR=2.8						
VAE				Sn	Sn	00 19 27.8	-11
	comp=Z,0.5nm,0.3s,baz=162,slow=20,SNR=3.1						
KEST	Kesra	15.65	277	Pn	Pn	00 18 25.0	-0.6
	comp=Z,0.2nm,0.3s,baz=112,slow=19,SNR=2.3						
GERES	GERESS Array B	17.37	325	P	Pn	00 18 47.3	0.0
	comp=Z,0.1nm,0.3s,baz=134,slow=11,SNR=4.4						
DAVOX	Davos/Dischmat	18.08	315	LR	LR	00 27 40.6	
	comp=Z,60nm,18.3s,baz=70,slow=43						
GEYT	Alibeck	23.81	75	P	P	00 19 57.4	0.0
	comp=Z,0.5nm,0.3s,baz=283,slow=13,SNR=2.1						
ESDC	Sonseca Array	26.07	289	P	P	00 20 17.7	-0.3
	comp=Z,0.9nm,0.6s,baz=83,slow=10.0,SNR=10						
AKTO	Aktyubinsk	26.10	46	P	P	00 20 18.3	+0.2
	comp=Z,1.9nm,0.4s,baz=243,slow=10,SNR=8.9						
FINES	FINESS Array B	26.15	357	P	P	00 20 17.5	-0.9
	comp=Z,0.9nm,0.5s,baz=163,slow=12,SNR=9.2						
HFS	Hagfors	26.60	343	P	P	00 20 21.4	-1.0
	comp=Z,2.3nm,1.0s,baz=148,slow=14,SNR=5.8						
NOA	NORSAR Array B	27.99	342	P	P	00 20 34.7	-0.3
	comp=Z,0.9nm,1.0s,baz=158,slow=9.5,SNR=2.5						
TORD	Torodi Ar. Bea	32.81	234	P	P	00 21 17.5	-0.4
	comp=Z,0.5nm,0.6s,baz=33,slow=8.9,SNR=5.7						
MKAR	Makanchi Array	41.34	57	P	P	00 22 30.7	+0.7
	comp=Z,0.4nm,0.4s,baz=272,slow=7.5,SNR=16						
ZALV	Zalesovo Beam	42.86	46	P	P	00 22 42.8	+0.5
	comp=Z,0.7nm,0.4s,baz=263,slow=9.9,SNR=2.9						
SONM	Songino Array	57.20	52	P	P	00 24 32.4	+1.0
	comp=Z,0.3nm,0.4s,baz=286,slow=8.6,SNR=3.9						
YKA	Yellowknife Ar	78.08	343	P	P	00 26 41.3	-1.3
	comp=Z,0.3nm,0.5s,baz=30,slow=5.3,SNR=5.8						

ISCJB **14** *00:16:18.9±2.5, 11°.09S±0°.04×164°.75E±0°.04, h4^{km}±15^{km}, mb4.7/71, MS3.9/17, Error ellipse: s-maj=7.9km s-min=6.6km az=40.2*

IDC **14** *00:16:19.7±0.6, 11°.07S×164°.82E, h0^{km}, mb4.6/15, mb1 4.7/18, mb1mx4.6/34, mbtmp4.6/18, ML4.8/3, MS3.8/15, Ms1 3.8/15, ms1mx3.7/30, Error ellipse: s-maj=20.0km s-min=14.9km az=113.0*

BJI **14** *00:16:20.1, 10°.94S×165°.11E, h12^{km}, mb4.7/48, mB5.2/28, Ms4.9/7, Ms7 4.6/7*

MOS **14** *00:16:23.6±1.0, 11°.05S×164°.71E, h34^{km}, mb5.0/23, Error ellipse: s-maj=10.9km s-min=9.9km az=125.0*

GCMT **14** *00:16:24.2±0.3, 11°.16S±0°.04×164°.59E±0°.03, h17^{km}±1^{km}, MW4.8/64, Moment Tensor Solution. s25,c29; s64,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.19±.14; M$_{\theta\theta}$0.52±.09; M$_{\phi\phi}$1.67±.10; M$_{r\theta}$0.08±.35; M$_{\theta\phi}$0.24±.06; M$_{\phi r}$0.54±.25; Best double couple: M$_0$2.02900×10^{16} NP1:ϕ_s191.00000°,δ53.00000°,λ-91.00000°. NP2: ϕ_s12.00000°,δ37.00000°,λ-89.00000°. Principal axes: T 1.7930, Plg8.0000°, Azm281.0000°; N 0.4770, Plg0.0000°, Azm191.0000°; P -2.2660, Plg82.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **14** *00:16:24.2±2.0, 11°.07S×164°.80E, h29^{km}±14^{km}, mb4.8/41 Error ellipse: s-maj=6.5km s-min=5.6km az=224.0*

ISC 14 00:16:21.8±2.2**, 11°.10S**±0°.06×**164°.84E**±0°.06**, h13**^{km}±12^{km}**, n161, σ1^{s}23**/156**, mb4.8**/71**, MS3.8**/17**, 6C, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.09	289	*e*P	Pn	00 17 38.0	+0.2
HNR				*e*S	Sn	00 18 34.0	-2.5
HNR	Honiara	5.09	289	*e*Pn	Pn	00 17 37.4	-0.4
HNR				*e*Sn	Sn	00 18 34.3	-2.2
HNR	Honiara	5.09	289	Pn	Pn	00 17 37.4	-0.4
	74nm,0.3s,baz=153,slow=3.4,SNR=6.6						
HNR				Sn	Sn	00 18 33.9	-2.6
	31nm,0.3s,baz=90,slow=20,SNR=4.8						
MARNC	Mare, Loyalty	10.77	164	*e*Pn	Pn	00 18 57.4	+1.7
DZM	Mont Dzumac	11.02	172	*e*Pn	Pn	00 19 01.3	+2.0
	41nm,0.5s						
DZM				*e*LR	LR	00 21 34.7	
	comp=Z,781nm,25.0s						
DZM	Mont Dzumac	11.02	172	*e*Pn	Pn	00 19 01.6	+2.3
DZM				*e*Sn	Sn	00 21 01.0	-1.4
DZM	Mont Dzumac	11.02	172	Pn	Pn	00 19 00.6	+1.3
	5.5nm,0.3s,baz=338,slow=13,SNR=20						
DZM				Sn	Sn	00 21 01.0	-1.4
	0.1nm,0.3s,baz=344,slow=20,SNR=1.9						
DZM				LR	LR	00 22 28.1	
	comp=Z,714nm,19.7s,baz=39,slow=33						
ONTNC	Ouen Toro	11.25	172	*e*Pn	Pn	00 19 04.4	+2.1
PINNC	Pines Island,	11.72	168	*e*Pn	Pn	00 19 10.5	+1.7
RABL	Rabaul	14.31	298	*e*Pn	Pn	00 19 44.3	0.0
MSVF	Nonsavu	14.39	119	*e*Pn	Pn	00 19 42.8	-2.6
MANU	Manus Island	19.54	296	*e*P	P	00 20 47.5	-1.7
	54nm,0.9s						
CTA	Charters Tower	19.99	241	P	P	00 20 55.7	+1.5
	1.1nm,0.3s,baz=69,slow=12,SNR=23						
CTAO	Charters Tower	19.99	241	*e*P	Pn	00 20 56.0	0.0
	53nm,0.9s						
CTAO	Charters Tower	19.99	241	*e*P	Pn	00 20 56.0	0.0
COEN	Coen	21.34	260	*e*P	P	00 21 08.6	-0.2
	13nm,0.8s						
ARMA	Armidale	22.81	211	*e*P	P	00 21 23.5	-1.0
	17nm,1.1s						
JAY	Jayapura	25.41	288	LR	LR	00 33 10.5	
	comp=Z,224nm,18.2s,baz=103,slow=40						
URZ	Urewera	29.19	160	LR	LR	00 31 16.8	
	comp=Z,131nm,22.0s,baz=358,slow=31						
H11S2	WAKE ISLAND Hy	29.46	4	T	T	00 53 26.9	
	baz=184,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	29.46	4	T	T	00 53 24.1	
	baz=184,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	29.48	4	T	T	00 53 20.6	
	baz=184,slow=76,SNR=17						
STKA	Stephens Creek	29.80	223	*e*P	P	00 22 27.5	-1.0
	1.2nm,0.8s						
STKA				*e*PcP	PcP	00 25 32.2	+0.3
STKA	Stephens Creek	29.80	223	P	P	00 22 28.1	-0.3
	5.2nm,0.7s,baz=50,slow=11,SNR=11						
STKA				PcP	PcP	00 25 32.2	+0.3
	3.2nm,0.8s,baz=227,slow=5.9,SNR=4.1						
WRAB	Tennant Creek	30.62	250	*e*P	P	00 22 31.9	-4.0
	18nm,0.9s						
WRAB	Tennant Creek	30.62	250	*ce*P	P	00 22 34.8	-1.1
WRAB				pmax	pmax		
	comp=Z,32nm,1.3s						
WB2	Warramunga Arr	30.62	250	*e*P	P	00 22 35.5	-0.5
WB2				*e*PcP	PcP	00 25 35.7	+1.3
WR1	Warramunga Arr	30.63	250	*e*P	P	00 22 35.0	-1.1
	comp=Z,30nm,1.0s						
WR1				*e*PcP	PcP	00 25 34.5	+0.1
WRA	Warramunga Arr	30.63	250	*i* P	P	00 22 35.5	-0.5
WRA				pmax	pmax		
	comp=Z,15nm,0.9s						
WRA	Warramunga Arr	30.63	250	P	P	00 22 35.0	-1.1
	comp=Z,15nm,0.9s,baz=82,slow=9.0,SNR=80						
WRA				PcP	PcP	00 25 34.5	+0.1
	comp=Z,1.8nm,0.9s,baz=72,slow=2.8,SNR=5.5						
H11N1	WAKE ISLAND Hy	30.68	4	T	T	00 54 52.2	
	baz=184,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	30.69	4	T	T	00 54 53.8	
	baz=184,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.70	4	T	T	00 54 57.4	
	baz=184,slow=76,SNR=10						
GUMO	Guam	31.53	321	LR	LR	00 35 38.2	
	comp=Z,212nm,18.1s,baz=136,slow=37						
AS01	Alice Springs	31.93	243	*e*P	P	00 22 46.8	-0.7
AS01				*e*PcP	PcP	00 25 37.9	0.0
AS31	Alice Springs	31.97	243	*e*P	P	00 22 47.6	-0.2
	comp=Z,5.2nm,1.0s						
ASAR	Alice Springs	31.98	243	P	P	00 22 47.1	-0.8
	comp=Z,14nm,0.9s,baz=63,slow=10,SNR=92						
ASAR				PcP	PcP	00 25 38.2	+0.2
	comp=Z,1.0nm,0.7s,baz=76,slow=2.5,SNR=5.1						
ASAR				LR	LR	00 34 12.7	
	comp=Z,232nm,21.3s,baz=72,slow=34						
RPZ	Rata Peaks	32.94	172	P	P	00 22 56.3	+0.3
	comp=Z,8.3nm,0.6s,baz=340,slow=2.2,SNR=5.6						
BBOO	Buckleboo	34.15	226	*e*P	P	00 23 07.4	+0.7
	comp=Z,24nm,0.9s						
ODZ	Otahua Downs	34.19	173	*e*P	P	00 23 05.6	-1.2
	comp=Z,22nm,1.1s						
JOHN	Johnston Islan	37.51	43	*e*P	P	00 23 33.1	-2.5
	comp=Z,184nm,1.0s						
FITZ	Fitzroy Crossi	38.51	255	*e*P	P	00 23 43.2	-0.9
	comp=Z,14nm,1.0s						
FITZ	Fitzroy Crossi	38.51	255	P	P	00 23 43.0	-1.2
	baz=87,slow=7.8						
FORT	Forrest	39.29	234	*e*P	P	00 23 51.9	+1.4
	comp=Z,52nm,0.9s						
PPT	Papeete	44.55	104	LR	LR	00 40 35.7	
	comp=Z,146nm,21.6s,baz=272,slow=33						
PPT2	Papeete2	44.55	104	*e*S	S	00 31 11.6	+2.1
	comp=Z,64nm,25.2s						
PPT2				*e*LR	LR	00 37 00.7	
	comp=Z,213nm,22.2s						
TBI	Tubuai	45.14	112	*e*LR	LR	00 37 13.3	
	comp=Z,576nm,28.2s						
MORW	Morawa	48.82	241	*e*P	P	00 25 08.0	+0.9
MJAR	Matsushiro Arr	53.61	333	P	P	00 25 42.4	-0.4
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	Matsushiro Arr	53.61	333	P	P	00 25 42.4	-0.4
	comp=Z,1.4nm,0.5s,baz=168,slow=9.2,SNR=5.3						
MJAR				LR	LR	00 47 11.6	
	comp=Z,62nm,21.4s,baz=110,slow=35						
MAJO	Matsushiro	53.62	333	*e*P	P	00 25 42.4	-0.4
MAJO	Matsushiro	53.62	333	*i* P	P	00 25 43.3	+0.4
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LEM	Lembang	56.62	269	LR	LR	00 53 37.3	
	comp=Z,54nm,18.4s,baz=64,slow=40						
RKT	Rikitea	58.40	110	*e*LR	LR	00 43 21.0	
	comp=Z,577nm,29.8s						
KSRS	Korea Array	59.42	326	P	P	00 26 24.3	+0.1
	comp=Z,2.6nm,0.9s,baz=150,slow=7.5,SNR=6.3						
KSRS				LR	LR	00 50 19.9	
	comp=Z,37nm,20.3s,baz=125,slow=34						
KS15	Wonju Array Si	59.44	326	*e*P	P	00 26 24.3	0.0
	comp=Z,4.7nm,1.0s						
KSAR	Wonju Array Be	59.44	326	P	P	00 26 24.3	0.0
KS01	Wonju Array Si	59.45	326	*e*P	P	00 26 25.6	+1.2
YSS	Yuzh-Sakhalins	61.07	343	*e*P	P	00 26 38.3	+3.0
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2	Nanjing	61.44	316	*e*P	P	00 26 39.8	+1.7
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
USA0B	Ussuriysk Arra	62.60	334	*e*P	P	00 26 45.0	-0.6
	comp=Z,20nm,1.1s						
USRK	Ussuriysk Ar.	62.60	334	P	P	00 26 46.2	+0.5
	comp=Z,12nm,1.0s,baz=103,slow=6.2,SNR=13						
PETK	Petropavlovsk-	64.24	355	*e*P	P	00 26 54.7	-1.6
PETK	Petropavlovsk-	64.24	355	P	P	00 26 56.2	-0.1
	comp=Z,8.8nm,0.8s,baz=172,slow=12,SNR=10.0						
PEA1	Petropavlovsk-	64.25	355	*e*P	P	00 26 56.2	-0.2
CN2	Changchun	65.33	330	*e*P	P	00 27 06.3	+2.6
KLR	Kul'dur	66.75	337	*i* P	P	00 27 14.1	+1.4
PSI	Prapat	67.00	278	LR	LR	00 59 02.6	
	comp=Z,66nm,18.1s,baz=90,slow=38						
ENH	Enshi	67.24	309	*e*P	P	00 27 15.5	-0.8
	comp=Z,16nm,1.1s						
NKL	Nikolayevsk	67.25	344	*e*P	P	00 27 16.0	+0.3
NKL				pmax	pmax		
	comp=Z,26nm,1.0s						
XAN	Xi'an	69.50	313	P	P	00 27 31.1	+0.8
XAN				pP	sP	00 27 39.6	+5.1
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN	Xi'an	69.50	313	*e*P	P	00 27 30.2	-0.2
	comp=Z,9.1nm,1.0s						
XAN	Xi'an	69.50	313	*e*P	P	00 27 30.2	-0.2
KMI	Kunming	70.39	302	P	P	00 27 38.3	+2.1
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
KMI				pmax	pmax		
	comp=Z,83nm,4.2s						
KMI	Kunming	70.39	302	*e*P	P	00 27 34.9	-1.3
	comp=Z,13nm,1.1s						
KMI	Kunming	70.39	302	*e*P	P	00 27 34.9	-1.3
CM01	Chiang Mai Arr	71.29	294	*e*P	P	00 27 43.6	+2.0
HHC	Hu-ho-hao-te	71.30	320	*e*P	P	00 27 44.0	+2.7
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,79nm,6.5s						
CM31	Chiang Mai Arr	71.32	294	*e*P	P	00 27 42.3	+0.6
	comp=Z,4.4nm,1.0s						
CMAR	Chiang Mai Arr	71.32	294	*ce*P	P	00 27 44.2	+2.5
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	71.32	294	P	P	00 27 42.3	+0.6
	comp=Z,1.9nm,0.9s,baz=122,slow=4.9,SNR=11						
MA2	Magadan	71.34	352	*ce*P	P	00 27 41.1	+0.1
MA2				pmax	pmax		
	comp=Z,13nm,1.7s						
CHTO	Chiang Mai	71.43	294	P	P	00 27 47.8	+5.4
	comp=Z,16nm,1.2s						
CD2	Chengdu	71.93	308	*e*P	P	00 27 46.5	+1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HIA	Hailar	71.98	331	*e*P	P	00 27 44.1	-0.9
	comp=Z,18nm,1.0s						
HIA	Hailar	71.98	331	*i* P	P	00 27 45.8	+0.7
HIA				pmax	pmax		
	comp=Z,16nm,1.0s						
ZEA	Zeya	72.05	338	*e*P	P	00 27 45.3	0.0
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH	Lanzhou	74.14	313	*e*P	P	00 28 01.6	+3.3
LZH				PP	PP	00 30 49.1	+5.0
LZH				*e*S	S	00 37 29.3	-2.2
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
LZH				pmax	pmax		
	comp=Z,92nm,4.9s						
LZH				LR	LR		
	comp=Z,190nm,10.6s						
LZH				LR	LR		
	comp=Z,230nm,11.4s						
LZH				LR	LR		
	comp=Z,340nm,17.3s						
SEY	Seymchan	74.43	354	*i* P	P	00 27 57.8	-1.4
GAMB	Gambell	76.78	10	*e*P	P	00 28 14.0	+1.4
	comp=Z,8.2nm,1.1s						
ULN	Ulaanbaatar	77.82	324	*e*P	P	00 28 17.9	-1.2
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	77.82	324	*ce*P	P	00 28 19.0	-0.1
ULN				pmax	pmax		
	comp=Z,20nm,1.3s						
SONA0	Songino Array	78.19	324	*e*P	P	00 28 21.7	+0.6
SONM	Songino Array	78.19	324	P	P	00 28 21.7	+0.6
	comp=Z,7.8nm,1.1s,baz=142,slow=4.6,SNR=31						
SONM				LR	LR	01 02 01.9	
	comp=Z,41nm,20.3s,baz=142,slow=35						
SONA1	Songino Array	78.19	324	*e*P	P	00 28 21.5	+0.4
GTA	Gaotai	78.46	314	*e*P	P	00 28 23.8	+1.0
GTA				pP	pP	00 28 28.3	+2.8
GTA				S	S	00 38 19.8	+1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,93nm,7.3s						
GTA				LR	LR		
	comp=Z,120nm,18.4s						
GTA				LR	LR		
	comp=Z,140nm,19.7s						
GTA				LR	LR		
	comp=Z,130nm,19.0s						
QSPA	South Pole Qui	78.91	180	*e*P	P	00 28 24.0	-0.8
	comp=Z,27nm,1.1s						
BILL	Bilibino	78.94	1	*e*P	P	00 28 25.1	+0.5
	comp=Z,11nm,1.0s						
BILL	Bilibino	78.94	1	*c i*P	P	00 28 25.4	+0.8
BILL				*e*		00 31 28.1	
BILL				*e*S	S	00 38 23.2	+0.7
BILL				pmax	pmax		
	comp=Z,15nm,1.3s						
BOD	Bodaibo	80.20	335	*e*P	P	00 28 31.9	+0.2
BOD				pmax	pmax		
	comp=Z,6.0nm,1.6s						
ZAK	Zakamensk	81.24	325	*e*P	P	00 28 37.6	0.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CAST	Castle Rocks	81.27	18	*e*P	P	00 28 37.0	-0.4
	comp=Z,6.1nm,0.9s						
TLY	Talaya	81.67	327	*e*P	P	00 28 39.9	+0.1
	comp=Z,5.0nm,0.7s						
TLY	Talaya	81.67	327	*i* P	P	00 28 39.9	+0.1
IM3	Indian Mountai	82.72	16	*e*P	P	00 28 45.5	+0.7
WRH	Wood River Hil	83.26	19	*e*P	P	00 28 48.3	+0.6
	comp=Z,5.5nm,1.0s						
MDM	Murphy Dome	83.56	18	*e*P	P	00 28 49.8	+0.6
	comp=Z,9.9nm,1.1s						
HDA	Harding Lake	83.58	19	*e*P	P	00 28 49.9	+0.6
	comp=Z,12nm,0.9s						
COLA	College	83.62	18	*i* P	P	00 28 47.8	-1.7
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
IL1	Eielson Array	83.85	19	*e*P	P	00 28 50.7	0.0
ILAR	Eielson Array	83.85	19	P	P	00 28 50.2	-0.5
	comp=Z,2.8nm,0.9s,baz=225,slow=6.5,SNR=14						
ILB	Eielson Array	83.85	19	*e*P	P	00 28 51.6	+0.9
	comp=Z,4.1nm,1.1s						
KNGR	Kungurtug, Tuv	84.62	324	*i* P	P	00 28 53.7	-1.4
AFDM	Forest Hills D	84.91	49	*e*P	P	00 28 56.8	0.0
	comp=Z,6.3nm,1.1s						
EGAK	Eagle	85.73	20	*e*P	P	00 29 00.7	+0.5
	comp=Z,9.4nm,1.0s						
PAHR	Pah Rah Range	86.31	49	*e*P	P	00 29 02.6	-1.3
	comp=Z,3.6nm,1.0s						
NV01	Mina Array Sit	86.74	50	*e*P	P	00 29 06.8	+0.8
NVAR	Mina Array Bea	86.74	50	P	P	00 29 06.2	+0.1
	comp=Z,3.1nm,1.1s,baz=238,slow=7.7,SNR=8.7						
NV11	Mina Array Sit	86.85	50	*e*P	P	00 29 06.0	-0.5
	comp=Z,0.2nm,0.9s						
KVN	Kaiserville	87.07	49	*e*P	P	00 29 06.7	-1.0
	comp=Z,2.6nm,1.1s						
KVN	Kaiserville	87.07	49	*e*P	P	00 29 06.7	-1.0
J08A	Circle Bar Ran	88.05	45	*e*P	P	00 29 11.8	-0.4
	comp=Z,2.6nm,0.6s						
WMQ	Urumqi	88.50	315	*e*P	P	00 29 16.3	+2.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.9s						
WMQ				LR	LR		
	comp=Z,96nm,28.1s						
WMQ				LR	LR		
	comp=Z,130nm,26.5s						
WMQ				LR	LR		
	comp=Z,100nm,29.7s						
LCMT	Little Creek M	90.24	52	*e*P	P	00 29 23.7	+1.0
	comp=Z,4.3nm,1.2s						
CCUT	Cedar City	90.27	52	*e*P	P	00 29 23.2	+0.3
	comp=Z,2.0nm,1.0s						
DGZ	Jazzator, Alta	90.37	321	*i* P	P	00 29 22.4	-0.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
U15A	North Rim	90.85	53	*e*P	P	00 29 27.2	+1.6
	comp=Z,4.7nm,1.0s						
HLID	Hailey	90.95	46	*e*P	P	00 29 26.9	+1.1
	comp=Z,2.9nm,1.1s						
MSU	Marysvale	91.41	51	*e*P	P	00 29 27.5	-0.6
MSU	Marysvale	91.41	51	*e*P	P	00 29 27.5	-0.6
HVU	Hansel Valley	91.70	48	*e*P	P	00 29 29.2	-0.1
	comp=Z,6.6nm,1.2s						
HVU	Hansel Valley	91.70	48	*e*P	P	00 29 29.2	-0.1
MK01	Makanchi Array	92.94	317	*e*P	P	00 29 34.7	-0.1
MK31	Makanchi Array	92.95	317	*e*P	P	00 29 35.1	+0.3
	comp=Z,5.8nm,1.0s						
MK32	Makanchi Array	92.95	317	*e*P	P	00 29 34.4	-0.4
MKAR	Makanchi Array	92.95	317	*ce*P	P	00 29 35.5	+0.7
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	92.95	317	P	P	00 29 34.4	-0.4
	comp=Z,3.2nm,0.8s,baz=94,slow=5.9,SNR=24						
MKAR				PKKP	PKKPdf	00 46 45.8	+0.6
	comp=Z,0.5nm,0.7s,baz=278,slow=2.6,SNR=5.6						
MKAR				LR	LR	01 10 29.8	
	comp=Z,31nm,21.5s,baz=111,slow=35						
ZAA0	Zalesovo Array	93.08	324	*e*P	P	00 29 34.3	-0.9
	comp=Z,4.4nm,0.9s						
ZALV	Zalesovo Beam	93.08	324	*i* P	P	00 29 33.4	-1.8
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	93.08	324	P	P	00 29 34.2	-1.0
	comp=Z,2.9nm,0.9s,baz=109,slow=3.6,SNR=10						
ZALV				LR	LR	01 10 11.5	
	comp=Z,33nm,21.2s,baz=64,slow=35						
ZAA1	Zalesovo Array	93.08	324	*e*P	P	00 29 34.2	-1.0
MAKZ	Makanchi	93.17	317	*e*P	P	00 29 36.1	+0.3
	comp=Z,8.3nm,1.1s						
MAKZ	Makanchi	93.17	317	*e*P	P	00 29 36.1	+0.3
MAKZ				pmax	pmax		
	comp=Z,317nm,1.1s						
YKA	Yellowknife Ar	95.43	27	P	P	00 29 44.3	-1.5
	comp=Z,0.7nm,0.9s,baz=260,slow=4.3,SNR=7.0						
YKB5	Yellowknife Ar	95.43	27	*e*P	P	00 29 44.3	-1.5
NRIK	Noril'sk	95.86	340	LR	LR	01 14 13.6	
	comp=Z,40nm,19.5s,baz=75,slow=36						
TXAR	Lajitas Array	96.64	61	LR	LR	01 04 26.8	
	comp=Z,56nm,21.7s,baz=0.0,slow=30						
SNAA	Sanae	97.00	184	P	P	00 29 53.0	0.0
VNA3	Neumayer Olymp	97.76	182	P	Pdif	00 29 59.7	+3.2
VNA2	Neumayer--Watz	98.00	183	P	Pdif	00 29 58.2	+0.8
LPAZ	La Paz	120.96	117	PKP	PKiKP	00 35 16.2	+0.3
	comp=Z,1.2nm,0.7s,baz=146,slow=2.9,SNR=4.8						
CPUP	Villa Florida	124.65	133	PKP	PKiKP	00 35 22.3	+0.2

	comp=Z,1.9nm,0.8s,baz=305,slow=1.9,SNR=6.3						
SDV	Santo Domingo	125.39	87	ePKPdf	PKPdf	00 35 22.3	-1.5
GEC2	GERESS Array S	135.35	333	ePKPdf	PKPdf	00 35 41.4	-0.2
GERES	GERESS Array B	135.35	333	PKP	PKPdf	00 35 41.4	-0.2
	comp=Z,0.6nm,0.8s,baz=343,slow=1.0,SNR=5.2						
KEST	Kesra	146.91	322	PKPbc	PKPbc	00 36 04.3	-0.3
	comp=Z,11nm,1.0s,baz=208,slow=4.9,SNR=3.8						
ES19	SONSECA Array	149.81	343	ePKPbc	PKPbc	00 36 12.7	+0.7
ESDC	Sonseca Array	149.85	343	PKPbc	PKPbc	00 36 11.7	-0.4
	comp=Z,1.1nm,0.9s,baz=40,slow=1.7,SNR=6.6						
TOA0	Torodi Ar. Sit	163.39	279	ePKPdf	PKPdf	00 36 25.3	0.0
TORD	Torodi Ar. Bea	163.39	279	PKP	PKPdf	00 36 24.4	-1.0
	comp=Z,2.0nm,1.1s,baz=144,slow=1.2,SNR=7.2						
TOA1	Torodi Ar. Sit	163.40	279	ePKPdf	PKPdf	00 36 24.4	-1.0

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*NIED **14** 00:29:00, 36°.40N×143°.30E, h5^{km}, Mw4.0 Best double couple: M$_0$9.79000×10^{14} NP1:φ$_s$30.00000°, δ22.00000°, λ-85.00000°. NP2:φ$_s$205.00000°, δ68.00000°, λ-92.00000°.*

*IDC **14** 00:29:37.8±0.6, 36°.22N×143°.59E, h0^{km}, mb3.8/15, mb1 4.0/20, mb1mx4.0/37, mbtmp3.9/20, ML3.6/4, MS2.9/4, Ms1 2.9/4, ms1mx2.6/43, Error ellipse: s-maj=18.5km s-min=15.4km az=115.0*

*NEIC **14** 00:29:39.0±0.3, 36°.23N×143°.61E, h10^{km}, mb4.1/2, Error ellipse: s-maj=6.9km s-min=6.0km az=124.0*

*ISCJB **14** 00:29:41.1±0.4, 36°.32N±0°.03×143°.37E±0°.03, h33^{km}, mb3.8/16, Error ellipse: s-maj=4.5km s-min=3.7km az=167.1*

*JMA **14** 00:29:42.7±0.2, 36°.38N×143°.26E, h89^{km}, M3.8*

ISC 14 00:29:43.2±0.6, **36°.34N**±0°.05×**143°.43E**±0°.06, **h35^{km}, n57, σ1^s.88**/81, **mb3.8**/16, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	2.18	254	P	Pn	00 30 16.3	-0.7
CHOJ				eS	Sn	00 30 41.4	-1.4
ONAJ	Iwakimizuishiy	2.25	290	P	Pn	00 30 16.7	-1.3
ONAJ				S	Sn	00 30 42.9	-1.6
JFK	Kawauchi	2.29	297	P	Pn	00 30 17.3	-1.3
JFK				eS	Sn	00 30 43.5	-2.1
JHYU	Hitachinakayam	2.30	271	P	Pn	00 30 17.7	-0.9
JHYU				eS	Sn	00 30 43.4	-2.2
JHO	Hitachi	2.33	277	P	Pn	00 30 17.8	-1.1
JHO				eS	Sn	00 30 44.0	-2.3
BSO1	Boso 1	2.62	231	P	Pn	00 30 21.5	-1.0
BSO1				S	Sn	00 30 52.5	-0.3
JFT	Otama	2.75	296	P	Pn	00 30 24.4	-0.3
JFT				eS	Sn	00 30 55.1	-1.6
JMK	Ichinoseki	3.14	327	P	Pn	00 30 29.0	-1.2
JMK				S	Sn	00 31 03.6	-2.8
JAG	Ashikaga	3.21	273	P	Pn	00 30 30.3	-0.9
JAG				S	Sn	00 31 05.9	-2.3
JYK	Kaneyama	3.55	317	P	Pn	00 30 35.3	-0.4
JYK				eS	Sn	00 31 15.1	-1.3
JOM	Ohasama	3.56	332	P	Pn	00 30 34.8	-1.1
JOM				eS	Sn	00 31 14.4	-2.2
JNS	Sasagawa	3.61	295	eS	Sn	00 31 16.0	-1.9
JRY	Ryogami san	3.68	266	P	Pn	00 30 36.7	-0.9
JRY				eS	Sn	00 31 17.4	-2.4
JFNN	Fujinakano	4.03	255	S	Sn	00 31 26.5	-1.8
MJAR	Matsushiro Arr	4.22	274	Pn	Pn	00 30 44.3	-0.7
	0.8nm,0.3s,baz=94,slow=6.5,SNR=23						
MJAR				Sn	Sn	00 31 32.6	-0.4
	1.1nm,0.3s,baz=98,slow=7.7,SNR=5.7						
MJAR				LR	LR	00 32 35.9	
	comp=Z,118nm,19.3s,baz=80,slow=41						
MAJO	Matsushiro	4.22	274	ePn	Pn	00 30 46.2	+1.1
MAJO				eSn	Sn	00 31 32.6	-0.5
MAT	Matsushiro	4.22	274	P	Pn	00 30 45.4	+0.4
MAT				S	Sn	00 31 30.6	-2.5
MJB9	Matsu-Tunnel	4.22	274	ePn	Pn	00 30 46.2	+1.1
JHJ2	Mitsune	4.39	224	ePn	Pn	00 30 45.2	-2.1
JHJ2				eSn	Sn	00 31 32.5	-4.7
JHJ2	Mitsune	4.39	224	P	Pn	00 30 45.1	-2.2
JHJ2				eS	Sn	00 31 32.7	-4.5
JHJ	Hachijo jima 2	4.40	224	Pn	Pn	00 30 45.0	-2.5
	28nm,0.3s,baz=88,slow=21,SNR=7.2						
JHJ				Sn	Sn	00 31 32.5	-5.0
	71nm,0.3s,baz=68,slow=21,SNR=4.8						
INU	Inuyama	5.31	261	ePn	Pn	00 30 58.9	-1.1
JOT	Ohata	5.37	340	P	Pn	00 30 59.9	-0.8
JOT				eS	Sn	00 31 55.5	-5.7
ERM	Erimo	5.67	358	ePn	Pn	00 31 03.5	-1.4
ERM				eSn	Sn	00 32 00.5	-8.2
ASAJ	Asahikawa	7.79	356	Pn	Pn	00 31 33.0	-1.0
	1.4nm,0.3s,baz=201,slow=8.6,SNR=4.3						
ASAJ				Sn	Sn	00 32 55.2	-5.7
	0.9nm,0.3s,baz=3.2,slow=18,SNR=2.8						
JNU	Nakatsue	10.82	256	LR	LR	00 36 38.0	
	comp=Z,66nm,18.8s,baz=146,slow=38						
USRK	Ussuriysk Ar.	11.74	315	Pn	Pn	00 32 29.2	+1.1
	0.1nm,0.3s,baz=116,slow=13,SNR=4.1						
KSRS	Korea Array	12.47	280	LR	LR	00 37 07.6	
	comp=Z,57nm,18.6s,baz=76,slow=36						
KLR	Kul'dur	15.45	330	Pn	Pn	00 33 17.6	-0.7
	0.1nm,0.3s,baz=124,slow=15,SNR=3.6						
KLR				LR	LR	00 39 03.1	
	comp=Z,38nm,18.5s,baz=132,slow=36						
SEY	Seymchan	27.19	9	P	P	00 35 23.4	+0.3
	0.5nm,0.3s,baz=196,slow=11,SNR=4.3						
SONA1	Songino Array	29.51	305	eP	P	00 35 45.7	+1.5
SONA0	Songino Array	29.52	305	eP	P	00 35 46.3	+2.1
SONA0				ePcP	PcP	00 38 49.6	+0.8
SONM	Songino Array	29.52	305	P	P	00 35 46.3	+2.1
	0.7nm,0.6s,baz=103,slow=9.3,SNR=6.6						
SONM				PcP	PcP	00 38 49.6	+0.8
	0.3nm,0.6s,baz=107,slow=4.2,SNR=3.9						
ZAA1	Zalesovo Array	43.58	313	eP	P	00 37 44.6	+1.0
ZAA1				ePcP	PcP	00 39 30.9	+0.3
ZALV	Zalesovo Beam	43.58	313	P	P	00 37 44.6	+1.0
	0.6nm,0.5s,baz=101,slow=7.6,SNR=3.6						
ZALV				PcP	PcP	00 39 30.9	+0.3
	0.7nm,0.4s,baz=86,slow=1.9,SNR=3.8						
MK32	Makanchi Array	45.86	303	eP	P	00 38 03.6	+1.7
MK32				ePcP	PcP	00 39 39.4	+0.7
MKAR	Makanchi Array	45.86	303	P	P	00 38 03.6	+1.7
	0.3nm,0.7s,baz=88,slow=7.5,SNR=3.7						
MKAR				PcP	PcP	00 39 39.4	+0.7
	0.6nm,0.9s,baz=98,slow=7.4,SNR=3.0						
ILAR	Eielson Array	49.21	32	P	P	00 38 27.5	-0.2
	0.8nm,0.7s,baz=255,slow=6.2,SNR=11						
ILB	Eielson Array	49.21	32	eP	P	00 38 26.6	-1.1
	0.8nm,1.0s						
INK	Inuvik	54.26	27	P	P	00 39 06.0	+0.8
	2.0nm,1.0s,baz=266,slow=5.9,SNR=5.2						
WB2	Warramunga Arr	56.63	190	eP	P	00 39 20.4	-2.3
WR1	Warramunga Arr	56.63	190	eP	P	00 39 21.6	-1.2
	3.7nm,0.8s						
WRA	Warramunga Arr	56.63	190	P	P	00 39 21.6	-1.2
	2.7nm,0.6s,baz=8.6,slow=7.4,SNR=32						
AS01	Alice Springs	60.35	190	eP	P	00 39 47.1	-1.6
ASAR	Alice Springs	60.36	190	P	P	00 39 48.0	-0.7
	2.0nm,0.8s,baz=11,slow=6.0,SNR=15						
YKA	Yellowknife Ar	63.58	30	P	P	00 40 10.0	0.0
	0.2nm,0.5s,baz=301,slow=7.0,SNR=5.1						
FIA0	FINESS Array S	70.17	333	eP	P	00 40 52.2	+0.4
FINES	FINESS Array B	70.17	333	P	P	00 40 52.2	+0.4
	0.9nm,0.8s,baz=64,slow=9.6,SNR=3.8						
NVAR	Mina Array Bea	74.09	54	P	P	00 41 16.9	+0.8
	1.1nm,0.7s,baz=286,slow=6.4,SNR=7.1						
NB2	NORSAR Subarra	75.44	338	P	P	00 41 24.4	+1.2
	comp=Z,0.5nm,0.7s,baz=40,slow=5.9						
NB200	NORSAR Array S	75.44	338	eP	P	00 41 23.7	+0.5
NOA	NORSAR Array B	75.44	338	P	P	00 41 23.7	+0.5
	comp=Z,1.1nm,0.8s,baz=38,slow=5.7,SNR=4.2						
PDAR	Pinedale Array	76.98	46	P	P	00 41 32.5	0.0
	comp=Z,0.5nm,0.6s,baz=244,slow=3.5,SNR=6.9						
BR101	Keskin Array S	80.52	313	eP	P	00 41 53.7	+1.8
BRTR	Keskin Array B	80.52	313	P	P	00 41 53.7	+1.8
	comp=Z,0.9nm,0.9s,baz=46,slow=4.2,SNR=4.2						
LTX	Lajitas	89.24	54	eP	P	00 42 35.3	-0.6
TXAR	Lajitas Array	89.24	54	P	P	00 42 35.3	-0.6
	comp=Z,0.5nm,0.6s,baz=298,slow=3.0,SNR=6.7						

MEX 14 00:33:10.3±0.5, **16°.49N**×**98°.55W, h10^{km}**±9^{km}, **MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.42	103	iP	Pg	00 33 18.1	-0.5
PNIG				iS	Sg	00 33 24.3	+0.2
VHO	Vista Hermosa	1.83	71	eP	Pn	00 33 42.5	+0.4

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*ISCJB **14** 00:37:26.3±0.3, 45°.65N±0°.06×143°.33E±0°.09, h335^{km}±4^{km}, mb3.2/12, Error ellipse: s-maj=10.4km s-min=9.2km az=6.5*

*JMA **14** 00:37:27.0±0.3, 45°.64N×143°.28E, h333^{km}±2^{km}, M3.1*

*IDC **14** 00:37:27.1±0.5, 45°.76N×143°.24E, h322^{km}±6^{km}, mb3.0/12, mb1 3.2/17, mb1mx3.1/61, mbtmp3.8/17, Error ellipse: s-maj=13.9km s-min=11.1km az=133.0*

ISC 14 00:37:27.1±0.6, **45°.58N**±0°.07×**143°.36E**±0°.07, **h332^{km}**±6^{km}, **n36, σ1^s.30**/48, **mb3.3**/12, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	Soyaes	0.82	222	P	Pn	00 38 10.3	0.0
JSE				eS	S	00 38 44.1	-0.7
JWK2	Keihoku	1.06	256	P	Pn	00 38 11.3	+0.1
JWK2				eS	S	00 38 45.1	-1.3
ASAJ	Asahikawa	1.56	201	P	Pn	00 38 14.7	+0.8
ASAJ				eS	S	00 38 52.8	+1.5
ASAJ	Asahikawa	1.56	201	P	Pn	00 38 14.1	+0.2
	9.0nm,0.3s,baz=24,slow=6.1,SNR=42						
ASAJ				S	S	00 38 51.2	0.0
	baz=74,slow=33,SNR=9.8						
JMP	Maruseppu	1.57	180	eS	S	00 38 51.5	0.0
JTKR	Abashiri--Toko	1.65	166	P	Pn	00 38 15.3	+0.8
JTKR				eS	S	00 38 53.2	+0.9
JKK2	Kamakawa 2	1.76	194	P	Pn	00 38 16.0	+0.8
JKK2				eS	S	00 38 54.9	+1.2
JYG	Yagishiri	1.79	231	P	Pn	00 38 15.3	0.0
JRA	Rausu	2.07	142	P	Pn	00 38 18.4	+1.1
JHR	Hokuryu	2.17	213	P	Pn	00 38 18.8	+0.7
JAR	Ashorobuto	2.30	172	P	Pn	00 38 20.2	+1.0
JAR				eS	S	00 39 02.3	+1.5
JFR	Furan	2.47	193	P	Pn	00 38 21.7	+1.1
JAK	Akkeshi	2.75	159	P	Pn	00 38 22.9	-0.1
JAK				eS	S	00 39 06.1	-1.6
NEM2	Nemuro 2	2.79	141	P	Pn	00 38 22.1	-1.2
NEM2				eS	S	00 39 05.1	-3.3
JCH	Churui	2.96	180	P	Pn	00 38 24.5	-0.4
JCH				eS	S	00 39 08.3	-2.9
JNBK	Urakawa-nobuka	3.32	188	P	Pn	00 38 28.4	+0.1
JNBK				eS	S	00 39 16.5	-0.9
JKB	Kayabe	4.05	205	P	Pn	00 38 35.3	-0.4
JOSM	Okushiri--Mats	4.48	220	P	Pn	00 38 40.2	0.0
JOT	Ohata	4.52	203	P	Pn	00 38 40.3	-0.3
JOT				eS	S	00 39 36.2	-3.7
KLR	Kul'dur	8.68	299	P	Pn	00 39 28.2	-0.8
	0.2nm,0.3s,baz=113,slow=13,SNR=5.6						
MJAR	Matsushiro Arr	9.82	205	P	Pn	00 39 44.4	+1.3
	0.2nm,0.3s,baz=9.0,slow=11,SNR=9.4						
PETK	Petropavlovsk-	12.00	46	P	P	00 40 09.3	0.0
	0.3nm,0.3s,baz=213,slow=8.9,SNR=7.3						
MA2	Magadan	14.71	15	P	P	00 40 38.9	-0.2
	0.4nm,0.3s,baz=191,slow=11,SNR=6.8						
SEY	Seymchan	18.14	13	P	P	00 41 15.4	-0.7
	0.5nm,0.3s,baz=195,slow=7.8,SNR=20						
SONM	Songino Array	25.29	289	P	P	00 42 24.5	+0.1
	0.8nm,0.4s,baz=81,slow=8.8,SNR=13						
ZALV	Zalesovo Beam	37.73	305	P	P	00 44 10.9	-0.8
	0.4nm,0.3s,baz=69,slow=8.5,SNR=2.2						
MKAR	Makanchi Array	41.35	294	P	P	00 44 40.3	-1.1
	0.3nm,0.4s,baz=80,slow=9.2,SNR=5.6						
ILAR	Eielson Array	41.64	37	P	P	00 44 43.4	-0.1
	0.2nm,0.4s,baz=267,slow=6.3,SNR=8.8						
INK	Inuvik	46.21	31	P	P	00 45 18.3	-0.9
	0.5nm,0.3s,baz=260,slow=5.3,SNR=7.1						
YKA	Yellowknife Ar	55.78	33	P	P	00 46 30.0	+0.1
	0.8nm,0.6s,baz=306,slow=6.7,SNR=18						
GEYT	Alibeck	61.20	296	P	P	00 47 07.2	-0.3
	0.6nm,0.4s,baz=46,slow=8.3,SNR=2.6						
FINES	FINESS Array B	61.99	331	P	P	00 47 10.8	-1.4
	0.5nm,0.4s,baz=48,slow=6.3,SNR=10						
WRA	Warramunga Arr	65.72	189	P	P	00 47 38.3	+1.5
	0.2nm,0.7s,baz=9.2,slow=6.8,SNR=3.0						
KBZ	Khabaz	66.55	309	P	P	00 47 43.2	+1.2
	1.4nm,0.6s,baz=87,slow=6.0,SNR=7.1						
ASAR	Alice Springs	69.44	189	P	P	00 48 02.9	+2.9
	0.4nm,0.5s,baz=360,slow=5.2,SNR=6.9						
PDAR	Pinedale Array	70.75	48	P	P	00 48 09.1	+1.0
	0.2nm,0.6s,baz=242,slow=1.9,SNR=3.2						

IDC 14 00:49:41.9±1.7, **11°.03S**×**164°.65E, h0^{km}, mb3.6**/3, **mb1 4.0**/4, **mb1mx3.6**/42, **mbtmp3.7**/4, **ML3.5**/1, **MS3.1**/2, **Ms1 3.1**/2, **ms1mx2.8**/30, **Error ellipse: s-maj=50.9km s-min=31.0km az=129.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.89	288	LR	LR	00 52 52.0	
	comp=Z,133nm,19.4s,baz=27,slow=39						
DZM	Mont Dzumac	11.12	171	Pn	Pn	00 52 22.2	-0.1
	0.3nm,0.3s,baz=342,slow=20,SNR=2.3						
WRA	Warramunga Arr	30.48	249	P	P	00 55 57.1	+0.3
	0.8nm,0.8s,baz=81,slow=9.2,SNR=6.4						
ASAR	Alice Springs	31.84	243	P	P	00 56 08.7	-0.2
	0.4nm,0.6s,baz=61,slow=10,SNR=8.0						
ILAR	Eielson Array	83.84	19	P	P	01 02 13.0	0.0
	0.5nm,1.0s,baz=232,slow=4.2,SNR=3.0						
MKAR	Makanchi Array	92.78	317	LR	LR	01 47 23.5	
	comp=Z,13nm,18.4s,baz=34,slow=37						

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*NIED **14** 00:54:00, 38°.50N×141°.70E, h71^{km}, Mw3.7 Best double couple: M$_0$4.30000×10^{14} NP1:φ$_s$177.00000°, δ19.00000°, λ78.00000°. NP2:φ$_s$11.00000°, δ71.00000°, λ94.00000°.*

*IDC **14** 00:54:45.2±2.1, 38°.77N×142°.67E, h0^{km}, mb3.6/4, mb1 3.7/7, mb1mx3.5/42, mbtmp3.7/7, ML2.4/2, Error ellipse: s-maj=45.5km s-min=23.0km az=76.0*

*ISCJB **14** 00:54:54.7±0.8, 38°.52N±0°.03×141°.76E±0°.09, h58^{km}±4^{km}, mb3.4/4, Error ellipse: s-maj=11.7km s-min=5.3km az=8.9*

*JMA **14** 00:54:55.9±0.1, 38°.54N×141°.72E, h53^{km}±1^{km}, M3.7*

JMA Felt II J1.

ISC 14 00:54:55.3±1.2, **38°.53N**±0°.04×**141°.81E**±0°.09, **h50^{km}**±7^{km}, **n27, σ1^s.16**/33, **mb3.7**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.35	231	P	Pn	00 55 05.3	+0.4
JIKH				S	Sn	00 55 11.7	+0.1
JIO	Ouri	0.37	258	P	Pn	00 55 05.3	+0.2
JIO				S	Sn	00 55 11.6	-0.4
JKMT	Kesennumamotoy	0.38	317	P	Pn	00 55 05.7	+0.5
JKMT				S	Sn	00 55 12.4	+0.1
OFUJ	Ofunato	0.56	349	P	Pn	00 55 07.9	+0.6
OFUJ				S	Sn	00 55 16.1	+0.3
JMK	Ichinoseki	0.62	313	P	Pn	00 55 08.4	+0.4
JMK				S	Sn	00 55 17.1	-0.1
JOU	Okura	0.91	260	P	Pn	00 55 11.5	-0.4
JOU				S	Sn	00 55 23.3	-0.7
JOM	Ohasama	1.02	337	P	Pn	00 55 13.7	+0.4
JOM				eS	Sn	00 55 26.4	-0.2
JMM	Marumori	1.04	231	P	Pn	00 55 13.0	-0.6
JMM				S	Sn	00 55 25.8	-1.2
JYK	Kaneyama	1.20	289	P	Pn	00 55 15.6	-0.1
JRG	Rokugo	1.26	314	P	Pn	00 55 16.6	+0.1
JRG				eS	Sn	00 55 32.3	0.0
JFK	Kawauchi	1.38	213	P	Pn	00 55 18.0	-0.2
JFK				S	Sn	00 55 34.2	-1.1
JYS	Shirataka	1.40	258	P	Pn	00 55 18.4	-0.1
JYS				eS	Sn	00 55 35.7	-0.2
JFT	Otama	1.54	229	P	Pn	00 55 20.6	+0.2
MJAR	Matsushiro Arr	3.48	236	Pn	Pn	00 55 48.4	+1.4
	0.4nm,0.3s,baz=37,slow=12,SNR=16						
MJAR				Sn	Sn	00 56 41.0	+14
	0.2nm,0.3s,baz=167,slow=34,SNR=2.7						
MAT	Matsushiro	3.48	236	P	Pn	00 55 48.5	+1.5
MAT				eS	Sn	00 56 31.8	+4.8
JHJ	Hachijo jima 2	5.65	198	Pn	Pn	00 56 18.2	+1.5
	13nm,0.3s,baz=67,slow=18,SNR=2.9						
USRK	Ussuriysk Ar.	9.30	311	Pn	Pn	00 57 06.6	0.0
	0.2nm,0.3s,baz=120,slow=14,SNR=2.7						
SONM	Songino Array	27.24	301	P	P	01 00 36.1	+1.4
	0.2nm,0.5s,baz=119,slow=8.4,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.68	124	T	T	01 31 07.2	
	baz=316,slow=76,SNR=56						
H11N1	WAKE ISLAND Hy	28.69	124	T	T	01 31 09.4	
	baz=316,slow=76,SNR=62						
H11N3	WAKE ISLAND Hy	28.70	124	T	T	01 31 11.3	
	baz=316,slow=76,SNR=57						
H11S1	WAKE ISLAND Hy	29.44	126	T	T	01 32 02.0	
	baz=318,slow=76,SNR=75						
H11S3	WAKE ISLAND Hy	29.45	126	T	T	01 32 02.3	
	baz=318,slow=76,SNR=82						
H11S2	WAKE ISLAND Hy	29.46	126	T	T	01 32 02.7	
	baz=318,slow=76,SNR=77						
ZALV	Zalesovo Beam	41.15	311	P	P	01 02 33.4	-1.0
	0.7nm,0.4s,baz=81,slow=8.9,SNR=4.0						
MKAR	Makanchi Array	43.60	301	P	P	01 02 53.9	-0.7
	1.2nm,0.9s,baz=84,slow=8.9,SNR=11						
WRA	Warramunga Arr	58.59	188	P	P	01 04 46.0	-1.0
	0.4nm,0.7s,baz=4.6,slow=7.2,SNR=8.6						

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*IDC **14** 01:07:48.3±0.6, 15°.57N×147°.38E, h0^{km}, mb4.1/22, mb1 4.3/23, mb1mx4.2/39, mbtmp4.1/23, ML3.9/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/34, Error ellipse: s-maj=19.8km s-min=12.4km az=103.0*

*ISCJB **14** 01:07:51.0±0.3, 15°.56N±0°.04×147°.44E±0°.05, h29^{km}, mb4.4/64, MS3.4/9, Error ellipse: s-maj=8.2km s-min=5.6km az=30.7*

*MOS **14** 01:07:50.9±0.9, 15°.58N×147°.42E, h29^{km}, mb4.6/25, Error ellipse: s-maj=12.6km s-min=7.2km az=115.6*

*NEIC **14** 01:07:52.0±3.3, 15°.53N×147°.41E, h26^{km}±23^{km}, mb4.7/27, Error ellipse: s-maj=9.8km s-min=6.7km az=89.0*

ISC 14 01:07:52.2±0.4, **15°.54N**±0°.06×**147°.46E**±0°.07, **h29^{km}, n121, σ1^s.34**/112, **mb4.4**/64, **MS3.5**/9, **7C, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	1.86	296	ePn	Pb	01 08 23.0	-2.5
GUMO	Guam	3.17	233	Pn	Pn	01 08 39.3	-0.8
	15nm,0.3s,baz=18,slow=20,SNR=2.6						
GUMO				Sn	Sn	01 09 17.0	+0.1
	80nm,0.3s,baz=58,slow=21,SNR=7.9						
GUMO				LR	LR	01 10 00.8	
	comp=Z,525nm,19.5s,baz=82,slow=42						
PATS	Pohnpei	13.71	128	ePn	Pn	01 11 01.5	-3.2
MJAR	Matsushiro Arr	22.48	340	P	P	01 12 48.5	-0.7
	1.8nm,0.5s,baz=162,slow=10,SNR=4.3						
MAJO	Matsushiro	22.48	340	eP	P	01 12 48.5	-0.8
MAJO	Matsushiro	22.48	340	iP	P	01 12 49.0	-0.3
MAJO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SIJI	Sorong	22.84	226	P	P	01 12 53.8	+0.6
	comp=Z,12nm,0.6s,baz=53,slow=10,SNR=6.3						
JNU	Nakatsue	23.07	322	eP	P	01 12 53.6	-1.9
	comp=Z,20nm,1.3s						
FAKI	Fak Fak	23.72	221	eP	P	01 13 00.9	-1.0
	comp=Z,58nm,1.2s						
KSRS	Korea Array	27.85	325	P	P	01 13 39.2	0.0
	comp=Z,1.0nm,0.6s,baz=136,slow=9.0,SNR=3.4						
KSRS				LR	LR	01 23 40.3	
	comp=Z,68nm,20.3s,baz=150,slow=34						
KS15	Wonju Array Si	27.87	325	eP	P	01 13 39.2	-0.1
	comp=Z,15nm,1.3s						
KSAR	Wonju Array Be	27.87	325	P	P	01 13 39.2	-0.2
KSAR	Wonju Array Be	27.87	325	P	P	01 13 39.2	-0.2
ASAJ	Asahikawa	28.79	353	P	P	01 13 48.7	+1.2
	comp=Z,7.1nm,0.6s,baz=140,slow=8.4,SNR=5.3						
USRK	Ussuriysk Ar.	31.45	338	P	P	01 14 10.9	-0.1
	comp=Z,0.9nm,0.6s,baz=141,slow=9.0,SNR=3.0						
YSS	Yuzh-Sakhalins	31.57	354	eP	P	01 14 16.1	+4.1
TYV	Tymovskoe	35.45	355	eP	P	01 14 49.0	+3.2
TYV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KLR	Kul'dur	35.97	342	iP	P	01 14 50.0	-0.3
WRAB	Tennant Creek	37.53	201	eP	P	01 15 09.6	+5.7
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WR1	Warramunga Arr	37.54	201	eP	P	01 15 04.4	+0.4
	comp=Z,3.7nm,0.8s						
WR1				ePcP	PcP	01 17 23.0	+1.1
WRA	Warramunga Arr	37.54	201	iP	P	01 15 08.3	+4.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	37.54	201	P	P	01 15 04.4	+0.4
	comp=Z,0.6nm,0.4s,baz=27,slow=7.6,SNR=11						
WRA				PcP	PcP	01 17 23.0	+1.1
	comp=Z,0.6nm,0.8s,baz=14,slow=3.4,SNR=5.0						
NKL	Nikolayevsk	37.91	353	eP	P	01 15 08.5	+1.8
PETK	Petropavlovsk-	38.35	10	LR	LR	01 35 55.4	
	comp=Z,30nm,18.2s,baz=187,slow=44						
XAN	Xi'an	39.25	305	eP	P	01 15 19.3	+1.0
	comp=Z,5.2nm,0.6s						
XAN	Xi'an	39.25	305	eP	P	01 15 19.3	+1.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AS31	Alice Springs	41.15	199	eP	P	01 15 35.0	+0.9
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	41.15	199	P	P	01 15 35.1	+0.9
	comp=Z,0.4nm,0.6s,baz=23,slow=7.1,SNR=7.1						
DZM	Mont Dzumac	41.75	153	LR	LR	01 33 28.4	
	comp=Z,66nm,18.0s,baz=151,slow=37						
CHAI	Chaiyaphum	43.70	277	P	P	01 15 57.2	+2.2
	comp=Z,4.9nm,0.7s,comp=Z,553nm						
MA2	Magadan	44.04	2	ceP	P	01 15 56.8	-0.3
MA2				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PBKT	Sadao Pong	44.61	278	P	P	01 16 04.0	+1.7
UTTA	Uttaradit	44.91	280	P	P	01 16 06.9	+2.3
	comp=Z,4.0nm,0.8s						
UTHA	Uthaitani	46.17	277	P	P	01 16 17.3	+2.6
	comp=Z,2.7nm,1.0s						
ULN	Ulaanbaatar	46.29	323	ceP	P	01 16 14.7	-0.7
ULN				pmax	pmax		
	comp=Z,3.0nm,1.7s						
CM01	Chiang Mai Arr	46.37	281	eP	P	01 16 16.5	+0.3
CM31	Chiang Mai Arr	46.38	281	eP	P	01 16 17.1	+0.8
	comp=Z,8.0nm,0.8s						
CMAR	Chiang Mai Arr	46.38	281	ceP	P	01 16 17.5	+1.2
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	Chiang Mai Arr	46.38	281	P	P	01 16 17.1	+0.8
	comp=Z,4.1nm,0.7s,baz=81,slow=6.8,SNR=16						
CMAR				LR	LR	01 36 54.3	
	comp=Z,22nm,18.5s,baz=139,slow=38						
SONA0	Songino Array	46.66	323	eP	P	01 16 18.4	+0.2
SONM	Songino Array	46.66	323	P	P	01 16 18.4	+0.2
	comp=Z,0.7nm,0.5s,baz=131,slow=6.4,SNR=8.7						
SONM				LR	LR	01 36 03.3	
	comp=Z,57nm,18.3s,baz=184,slow=36						
SONA1	Songino Array	46.66	323	eP	P	01 16 17.1	-1.1
UMPA	Umpang Tak	46.66	278	P	P	01 16 21.6	+3.0
	comp=Z,3.5nm,1.2s,comp=Z,1μm						
SEY	Seymchan	47.47	3	ceP	P	01 16 23.9	-0.2
STKA	Stephens Creek	47.48	187	eP	P	01 16 24.9	+0.3
	comp=Z,1.0nm,1.0s						
STKA	Stephens Creek	47.48	187	eP	P	01 16 24.9	+0.3
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
STKA	Stephens Creek	47.48	187	P	P	01 16 24.9	+0.3
	comp=Z,1.5nm,0.5s,baz=350,slow=11,SNR=3.3						
LHI	Lord Howe Isla	48.10	167	eP	P	01 16 27.8	-1.5
	comp=Z,42nm,0.9s						
PSI	Prapat	49.42	260	LR	LR	01 38 34.8	
	comp=Z,36nm,18.0s,baz=274,slow=37						
ZAK	Zakamensk	49.68	324	eP	P	01 16 40.3	-1.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s						
KHLH	Kahului Airpor	53.35	75	eP	P	01 17 09.6	+0.3
	comp=Z,128nm,1.3s						
LSA	Lhasa	53.38	296	eP	P	01 17 12.4	+2.4
	comp=Z,8.8nm,0.6s						
LSA	Lhasa	53.38	296	eP	P	01 17 12.4	+2.4
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BILL	Bilibino	53.85	9	⇑eP	P	01 17 13.4	+1.2
BILL				pmax	pmax		
	comp=Z,8.0nm,2.5s						
BILL				MLR	MLR		
	comp=Z,45nm,17.0s						
COCO	West Island	57.17	244	iP	P	01 17 38.6	+1.7
DGZ	Jazzator, Alta	58.99	319	iP	P	01 17 49.7	+0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
RDOG	Red Dog Mine	61.23	19	eP	P	01 18 02.0	-2.2
	comp=Z,5.8nm,0.6s						
ZALV	Zalesovo Beam	61.54	323	P	P	01 18 05.5	-1.0
	comp=Z,0.8nm,0.4s,baz=104,slow=7.9,SNR=4.2						
ZAA1	Zalesovo Array	61.54	323	eP	P	01 18 05.5	-1.0
MK01	Makanchi Array	61.85	315	eP	P	01 18 08.9	+0.1
MK31	Makanchi Array	61.86	315	eP	P	01 18 09.4	+0.5

	comp=Z,2.8nm,0.6s						
MK31	Makanchi Array	61.86	315	*e*P	P	01 18 09.4	+0.5
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK32	Makanchi Array	61.86	315	*e*P	P	01 18 08.6	-0.3
MKAR	Makanchi Array	61.86	315	*i* P	P	01 18 09.1	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	61.86	315	P	P	01 18 08.6	-0.3
	comp=Z,0.9nm,0.4s,baz=89,slow=8.5,SNR=46						
MAKZ	Makanchi	62.08	315	*e*P	P	01 18 10.7	+0.4
	comp=Z,6.9nm,0.6s						
MAKZ	Makanchi	62.08	315	P	P	01 18 10.5	+0.2
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CAST	Castle Rocks	63.16	26	*e*P	P	01 18 19.6	+2.3
	comp=Z,12nm,1.4s						
PDGK	Podgornoye	63.52	311	P	P	01 18 22.7	+2.6
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BPAW	Bear Paw Mtn.	63.85	25	*e*P	P	01 18 26.0	+4.2
	comp=Z,4.9nm,0.9s						
MLY	Manley	64.26	25	*e*P	P	01 18 26.5	+2.1
	comp=Z,4.1nm,1.0s						
KURK	Kurchatov	64.74	319	*e*P	P	01 18 27.7	-0.2
	comp=Z,16nm,0.9s						
KURK	Kurchatov	64.74	319	*ce*P	P	01 18 27.6	-0.2
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
NRIK	Noril'sk	65.14	340	P	P	01 18 30.1	+0.1
	comp=Z,2.3nm,0.4s,baz=104,slow=6.0,SNR=6.3						
IL1	Eielson Array	65.75	25	*e*P	P	01 18 34.3	+0.2
ILAR	Eielson Array	65.75	25	P	P	01 18 34.4	+0.3
	comp=Z,0.9nm,0.6s,baz=251,slow=6.2,SNR=20						
ILB	Eielson Array	65.75	25	*e*P	P	01 18 34.4	+0.3
	comp=Z,6.1nm,1.2s						
TKM2	Tokmak 2	66.36	310	P	P	01 18 39.4	+0.7
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVA0	Borovoye Array	69.97	321	*i* P	P	01 19 00.9	0.0
BVA0				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRVK	Borovoye	70.04	321	*e*P	P	01 19 05.4	+4.1
	comp=Z,5.8nm,1.0s						
BRVK	Borovoye	70.04	321	*i* P	P	01 19 02.0	+0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KK31	Karatay Array	70.08	311	*e*P	P	01 19 02.3	+0.5
	comp=Z,5.2nm,0.8s						
KK31	Karatay Array	70.08	311	*e*P	P	01 19 02.3	+0.5
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	Karatay Array	70.08	311	*e*P	P	01 19 02.3	+0.5
	comp=Z,5.2nm,0.8s						
KKAR	Karatay Array	70.08	311	*e*P	P	01 19 02.3	+0.5
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GAR	Garm	70.49	306	*e*P	P	01 19 05.3	+0.8
	comp=Z,8.3nm,0.6s						
GAR	Garm	70.49	306	*e*P	P	01 19 05.3	+0.8
GAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
INK	Inuvik	71.62	23	*e*P	P	01 19 12.3	+1.7
	comp=Z,8.9nm,1.4s						
INK	Inuvik	71.62	23	*e*P	P	01 19 12.3	+1.7
INK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
INK	Inuvik	71.62	23	P	P	01 19 12.1	+1.5
	comp=Z,1.4nm,0.5s,baz=275,slow=6.9,SNR=17						
KBL	Kabul	71.94	302	*e*P	P	01 19 14.5	+1.0
	comp=Z,3.7nm,0.9s						
KBL	Kabul	71.94	302	*e*P	P	01 19 14.5	+1.0
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SVE	Sverdlovsk	75.42	325	*e*P	P	01 19 43.9	+11
ARU	Arti	76.61	325	*e*P	P	01 19 40.0	+0.1
	comp=Z,8.1nm,0.6s						
ARU	Arti	76.61	325	*c i*P	P	01 19 39.8	-0.1
ARU						01 19 49.8	
ARU						01 22 30.0	
ARU				S	S	01 29 19.9	-4.4
ARU				SS	SS	01 34 14.0	-5.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.5s						
AB31	Akbulak array	76.79	318	P	P	01 19 40.6	-0.5
AB31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ABKAR	Akbulak array	76.79	318	*e*P	P	01 19 41.1	-0.1
	comp=Z,3.6nm,0.6s						
YKA	Yellowknife Ar	79.98	28	P	P	01 19 59.5	+1.0
	comp=Z,0.7nm,0.5s,baz=286,slow=5.6,SNR=14						
YKB5	Yellowknife Ar	79.98	28	*e*P	P	01 19 59.6	+1.1
GEYT	Alibeck	80.11	307	P	P	01 20 00.3	+0.5
	comp=Z,0.6nm,0.4s,baz=109,slow=20,SNR=3.6						
PINE	Pine Mountain	80.56	47	*e*P	P	01 20 05.1	+2.8
	comp=Z,9.0nm,1.4s						
NV01	Mina Array Sit	83.75	52	*e*P	P	01 20 20.9	+1.8
NVAR	Mina Array Bea	83.75	52	P	P	01 20 20.9	+1.8
	comp=Z,0.2nm,0.3s,baz=285,slow=4.6,SNR=4.0						
ARA0	ARCESS Array S	86.00	343	*e*P	P	01 20 29.5	0.0
ARCES	ARCESS Array B	86.00	343	P	P	01 20 29.5	0.0
	comp=Z,4.7nm,0.9s,baz=58,slow=6.7,SNR=6.4						
TMUT	Trail Mountain	88.80	50	*e*P	P	01 20 42.6	-1.5
	comp=Z,5.2nm,0.9s						
KBZ	Khabaz	89.56	315	P	P	01 20 46.9	-0.1
	comp=Z,0.9nm,0.8s,baz=282,slow=6.0,SNR=4.0						
FIA0	FINESS Array S	90.44	336	*e*P	P	01 20 50.0	-0.8
FIA0	FINESS Array S	90.44	336	*e*P	P	01 20 50.0	-0.8
FINES	FINESS Array B	90.44	336	*i* P	P	01 20 50.5	-0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	90.44	336	P	P	01 20 50.0	-0.8
	comp=Z,0.7nm,0.4s,baz=65,slow=3.8,SNR=13						
VNDA	Vanda	93.25	177	P	P	01 21 02.8	-0.5
	comp=Z,5.6nm,1.0s,baz=265,slow=21,SNR=6.5						
ANMO	Albuquerque	93.88	52	*i* P	P	01 21 07.7	+0.1
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ULM	Lac du Bonnet	94.22	35	LR	LR	01 56 37.5	
	comp=Z,25nm,20.2s,baz=274,slow=31						
TXAR	Lajitas Array	98.20	57	LR	LR	01 59 50.3	
	comp=Z,17nm,20.2s,baz=0.0,slow=32						
TOA1	Torodi Ar. Sit	135.73	308	*e*PKPdf	PKiKP	01 27 11.0	-1.6
TORD	Torodi Ar. Bea	135.73	308	PKP	PKiKP	01 27 11.0	-1.6
	comp=Z,0.3nm,0.8s,baz=346,slow=0.9,SNR=2.8						
DBIC	Dimbokro	144.80	307	PKP	PKPdf	01 27 26.6	-0.8
	comp=Z,3.1nm,0.5s,baz=31,slow=4.1,SNR=7.5						
LPAZ	La Paz	145.79	96	*e*PKPdf	PKiKP	01 27 33.3	-0.6
LPAZ	La Paz	145.79	96	*e*PKP2	PKiKP	01 27 33.3	-0.6
LPAZ	La Paz	145.79	96	PKPbc	PKiKP	01 27 30.7	-3.1
	comp=Z,1.9nm,0.6s,baz=284,slow=4.5,SNR=6.9						

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*ISCJB **14** 01:22:36.8±0.5, 28.°4N±0.°1×139.°9E±0.°1, h450km, mb3.3/14, Error ellipse: s-maj=21.2km s-min=8.2km az=140.5*

*IDC **14** 01:22:36.7±0.8, 28.°54N×139.°57E, h419km±9km, mb3.1/14, mb1 3.3/17, mb1mx3.1/42, mbtmp3.8/17, Error ellipse: s-maj=19.5km s-min=13.5km az=69.0*

*JMA **14** 01:22:37.9±0.2, 28.°82N×140.°19E, h435km, M3.7*

ISC 14 01:22:38.5±0.6**, 28.°64N**±0.°09×**139.°9E**±0.°1**, h450**km**, n21, σ2.s44**/28**, mb3.3**/14**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.52	127	P	P	01 23 40.4	-1.9
CBIJ				S	S	01 24 29.5	-4.4
JCJ	Chichijima	2.52	127	P	P	01 23 40.2	-2.1
	119nm,0.3s,baz=12,slow=2.1,SNR=40						
JCJ				S	S	01 24 29.9	-4.0
	71nm,0.3s,baz=265,slow=23,SNR=12						
JHHJ	Haha-jima-NKT	2.83	135	P	P	01 23 42.7	-1.7
JHHJ				S	S	01 24 33.8	-3.9
JAG	Ashikaga	7.78	357	P	P	01 24 29.3	-2.1
JAG				S	S	01 25 58.0	-6.0
MJAR	Matsushiro Arr	8.01	350	P	P	01 24 31.7	-2.3
	0.1nm,0.3s,baz=166,slow=7.1,SNR=3.6						
USRK	Ussuriysk Ar.	16.78	340	P	P	01 26 08.3	+0.1
	0.4nm,0.3s,baz=174,slow=11,SNR=8.4						
KLR	Kul'dur	21.50	345	P	P	01 26 54.4	+1.1
	2.5nm,0.5s,baz=164,slow=8.1,SNR=18						
SONM	Songino Array	32.22	316	P	P	01 28 27.4	-0.7
	0.6nm,0.6s,baz=123,slow=8.1,SNR=7.0						
SONM				PcP	PcP	01 31 04.5	+0.8
	0.2nm,0.4s,baz=137,slow=1.6,SNR=3.9						
MKAR	Makanchi Array	47.96	309	P	P	01 30 33.9	-0.9
	0.4nm,0.6s,baz=95,slow=8.2,SNR=7.0						
MKAR				PcP	PcP	01 31 54.8	+0.1
	0.3nm,0.6s,baz=79,slow=6.6,SNR=5.7						
WRA	Warramunga Arr	48.60	187	P	P	01 30 39.6	-0.2
	0.1nm,0.3s,baz=3.7,slow=7.6,SNR=8.4						
WRA				PcP	PcP	01 31 58.5	+1.3
	0.2nm,0.5s,baz=1.3,slow=3.9,SNR=4.0						
ILAR	Eielson Array	57.33	29	P	P	01 31 44.0	+2.0
	0.2nm,0.4s,baz=249,slow=5.6,SNR=6.1						
INK	Inuvik	62.47	25	P	P	01 32 19.0	+2.8
	0.2nm,0.4s,baz=259,slow=5.2,SNR=3.6						
ARCES	ARCESS Array B	71.43	340	P	P	01 33 12.8	+1.1
	4.4nm,0.9s,baz=73,slow=8.4,SNR=14						
YKA	Yellowknife Ar	71.73	28	P	P	01 33 16.0	+2.4
	0.3nm,0.4s,baz=296,slow=5.8,SNR=6.1						
KBZ	Khabaz	75.50	312	P	P	01 33 35.8	+0.3
	1.6nm,0.8s,baz=138,slow=2.8,SNR=5.5						
FINES	FINESS Array B	75.68	333	P	P	01 33 36.4	+0.3
	2.1nm,0.3s,baz=70,slow=4.7,SNR=55						
NVAR	Mina Array Bea	81.12	51	P	P	01 34 09.2	+2.9
	0.5nm,0.6s,baz=317,slow=4.9,SNR=4.8						
NOA	NORSAR Array B	81.44	337	P	P	01 34 07.2	0.0
	0.9nm,0.8s,baz=54,slow=6.6,SNR=5.6						
BRTR	Keskin Array B	83.49	312	P	P	01 34 17.9	-0.3
	0.6nm,0.9s,baz=88,slow=3.4,SNR=2.8						
TXAR	Lajitas Array	96.25	52	P	P	01 35 21.2	+3.1
	0.2nm,0.8s,baz=305,slow=3.2,SNR=2.7						
TORD	Torodi Ar. Bea	122.07	310	PKP	PKiKP	01 40 41.7	-0.3
	0.2nm,0.5s,baz=98,slow=0.9,SNR=6.1						

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*ISK **14** 01:24:46.2, 38.°41N×42.°96E, h22km, ML1.9/4*

*ISCJB **14** 01:24:47.8±0.6, 38.°45N±0.°04×42.°97E±0.°05, h13km±6km, Error ellipse: s-maj=7.8km s-min=5.6km az=136.6*

*DDA **14** 01:24:47.5, 38.°48N×42.°98E, h7km±2km, ML2.5*

ISC 14 01:24:47.2±1.2**, 38.°46N**±0.°03×**42.°99E**±0.°04**, h13**km±10km**, n12, σ0.s90**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.13	182	PG	Pg	01 24 50.6	0.0
AKDM				SG	Sb	01 24 53.7	-0.9
GEVA	Gevas	0.16	158	*i* P	Pb	01 24 51.2	-0.9
GEVA				*i* S	Sb	01 24 55.8	+0.5
GEVA				IAML_P			
	comp=Z,5μm,0.1s						
TVAN	Van	0.34	78	*i* P	Pg	01 24 54.1	0.0
TVAN				*i* S	Sb	01 25 01.4	+0.7
TVAN				IAML_P			
	comp=Z,1μm,0.1s						
ADCV	BITLIS_Adilcev	0.41	330	*i* P	Pb	01 24 56.1	-0.3
ADCV				*i* S	Sb	01 25 03.0	+0.4
ADCV				IAML_P			
	comp=Z,396nm,0.1s						
VMUR	Van-Muradiye	0.70	41	*i* P	Pb	01 25 01.1	-0.3
VMUR				IAML_P			
	comp=Z,237nm,0.1s						
GURO	Guroymak-BITLI	0.75	277	PG	Pg	01 25 01.1	-0.7
MLAZ	Malazgirt-MUS	0.76	334	PG	Pb	01 25 02.2	-0.3
MLAZ				SG	Sn	01 25 13.8	-1.6
TUTA	Tutak	0.95	352	*i* P	Pg	01 25 05.6	0.0
TUTA				*i* S	Sn	01 25 19.7	-0.4
TUTA				IAML_P			
	comp=Z,854nm,0.2s						
SRTM	Siirt_Merkez	0.96	241	*i* P	Pn	01 25 08.6	+2.1
CLDR	Caldiran	1.00	46	PG	Pb	01 25 05.9	-0.6
CLDR	Caldiran	1.00	46	*i* P	Pn	01 25 07.8	+0.6
AGRB	Hanur-Agry	1.12	0	PN	Pb	01 25 07.7	-0.8

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*IDC **14** 01:42:18.5±2.3, 37.°12N×75.°80E, h0km, mb3.4/3, mb1 3.4/5, mb1mx3.2/39, mbtmp3.4/5, ML2.9/2, Error ellipse: s-maj=58.4km s-min=26.8km az=149.0*

*ISCJB **14** 01:42:30.4±0.5, 37.°48N±0.°06×76.°0E±0.°1, h105km, mb3.3/3, Error ellipse: s-maj=15.4km s-min=4.6km az=148.8*

*NNC **14** 01:42:34.4±5.7, 37.°78N×75.°66E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=52.5km s-min=41.5km az=62.0*

ISC 14 01:42:31.5±0.9**, 37.°44N**±0.°09×**75.°9E**±0.°1**, h105**km**, n16, σ1.s17**/20**, mb3.2**/3**, 4C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.18	325	⇑Pn	Pn	01 43 21.0	+1.0
	0.9nm,0.1s						
SFK				⇓Sn	Sn	01 43 58.1	+0.8
	9.1nm,0.2s						
AAK	Ala-Archa	5.30	349	⇓Pn	Pn	01 43 51.1	+2.7
	1.0nm,0.4s						
AAK				⇑Sn	Sn	01 44 48.5	+0.1
	6.0nm,0.7s						
MNAS	Manas	5.67	334	⇑Pn	Pn	01 43 54.1	+0.6
	1.2nm,0.5s						
MNAS				⇓Sn	Sn	01 44 55.4	-2.0
	1.9nm,0.3s						
KK31	Karatay Array	7.00	326	⇑Pn	Pn	01 44 11.7	+0.4
	0.3nm,0.2s,baz=142,slow=14,SNR=19						
KK31				⇓Sn	Sn	01 45 26.8	-2.4
	0.8nm,0.3s,baz=146,slow=20,SNR=4.5						
MKAR	Makanchi Array	10.48	25	Pn	Pn	01 44 57.1	-1.5
	0.1nm,0.3s,baz=202,slow=13,SNR=8.1						
PYUN	Piuthan	11.06	145	*e*P	Pn	01 45 06.8	+0.1
	9.5nm,0.4s						
DANN	Dangsing	11.21	142	*e*P	Pn	01 45 08.2	-0.7
	6.9nm,0.3s						
KOLN	Koldanda	11.62	144	*e*P	Pn	01 45 13.7	-0.5
	4.2nm,0.4s						
GUN	Gumba	12.68	136	*e*P	Pn	01 45 28.6	+0.2
	7.4nm,0.4s						
PKIN	Phulchoki	12.68	138	*e*P	Pn	01 45 27.6	-0.7
	3.5nm,0.3s						
PKI	Pulchoki	12.69	138	*e*P	Pn	01 45 28.2	-0.3
	4.5nm,0.4s						
JIRN	Jiri	13.05	135	*e*P	Pn	01 45 32.8	-0.4
	24nm,0.4s						
ZALV	Zalesovo Beam	17.62	18	P	P	01 46 29.1	-0.5
	0.2nm,0.3s,baz=224,slow=10,SNR=2.7						
SONM	Songino Array	24.58	55	P	P	01 47 42.2	+0.5
	0.5nm,0.7s,baz=259,slow=7.4,SNR=5.8						
FINES	FINESS Array B	38.95	324	P	P	01 49 47.1	+0.2
	0.3nm,0.3s,baz=104,slow=12,SNR=4.3						
TORD	Torodi Ar. Bea	69.64	271	P	P	01 53 30.0	+0.1
	0.2nm,0.5s,baz=44,slow=5.3,SNR=6.3						

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*IDC **14** 01:51:11.7±0.8, 49.°43N×94.°43E, h0km, mb3.6/11, mb1 3.8/16, mb1mx3.6/61, mbtmp3.6/16, ML3.2/5, Error ellipse: s-maj=20.1km s-min=9.2km az=178.0*

*ISCJB **14** 01:51:12.9±0.5, 49.°68N±0.°04×94.°18E±0.°05, h10km, mb3.6/12, Error ellipse: s-maj=6.2km s-min=4.9km az=168.6*

*MOS **14** 01:51:12.5±1.5, 49.°35N×94.°39E, h17km, mb4.0/5, Error ellipse: s-maj=12.0km s-min=9.2km az=24.9*

*ASRS **14** 01:51:13.6±1.5, 49.°51N×94.°31E, h15km, Ms3.6/2*

*NNC **14** 01:51:19.4±4.8, 49.°65N×93.°92E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=56.7km s-min=37.3km az=156.0*

ISC 14 01:51:13.5±0.6**, 49.°50N**±0.°05×**94.°29E**±0.°04**, h10**km**, n50, σ2.s71**/56**, mb3.7**/12**, 6C-4D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	Kyzyl	2.21	3	*e*Pg	Pb	01 51 53.0	-0.6
KZLR				*e*Sg	Sg	01 52 22.6	-2.0
KZLR	Kyzyl	2.21	3	*e*PN	Pb	01 51 53.0	-0.6
KZLR				*e*		01 52 22.6	
KNGR	Kungurtug, Tuv	2.36	61	*i* PN	Pn	01 51 52.9	+0.5
CERR	Cheremushki	3.81	333	*e*Pg	Pg	01 52 25.2	-1.3
CERR				*i* Sg	Sb	01 53 10.7	+3.6
CERR	Cheremushki	3.81	333	*e*PN	Pg	01 52 25.2	-1.3
CERR				*i*		01 53 10.7	
DGZ	Jazzator, Alta	4.46	275	*i* PN	Pn	01 52 23.9	+2.6
TASR	Tashtagol	5.19	311	*e*Pg	Pg	01 52 49.1	-3.7
TASR				*e*Sg	Sg	01 53 57.0	-3.0
TASR	Tashtagol	5.19	311	*e*PN	Pg	01 52 49.1	-3.7
TASR				*e*		01 53 57.0	
ZAK	Zakamensk	5.87	78	*e*PN	Pn	01 52 43.4	+2.7
ZAK				*e*		01 52 59.2	
ZAK				pmax	pmax		
	comp=Z,38nm,0.7s						
UKR	Ust'-Kan	6.27	287	*e*Pg	Pb	01 53 08.1	+5.3
UKR				*e*Sg	Sg	01 54 29.9	-4.9
UKR	Ust'-Kan	6.27	287	*e*PN	Pb	01 53 08.1	+5.3
UKR				*e*		01 54 29.9	
ELT	Eltsovka	6.29	310	*e*Pg	Pg	01 53 09.4	-4.5
ELT				*e*Sg	Sb	01 54 26.0	+7.8
ELT	Eltsovka	6.29	310	*e*PN	Pg	01 53 09.4	-4.5
ELT				*e*		01 54 26.0	
TLY	Talaya	6.35	66	*e*PN	Pb	01 53 06.2	+2.2
TLY				pmax	pmax		
	comp=Z,33nm,0.4s						
ZALV	Zalesovo Beam	7.38	311	*e*P	Pn	01 53 05.3	+4.2
ZALV	Zalesovo Beam	7.38	311	Pn	Pn	01 53 01.6	+0.4
	comp=Z,0.4nm,0.3s,baz=119,slow=9.6,SNR=4.4						
ZALV				Pg	Pg	01 53 28.6	-6.0
	comp=Z,0.7nm,0.3s,baz=108,slow=15,SNR=4.6						
ZALV				Sn	Sn	01 54 29.7	+4.9
	comp=Z,0.9nm,0.3s,baz=131,slow=18,SNR=3.7						
ZALV				Lg	Lg	01 55 01.3	
	comp=Z,1.4nm,0.3s,baz=122,slow=28,SNR=5.1						
SONM	Songino Array	8.19	97	Pn	Pn	01 53 11.1	-1.3
	comp=Z,1.0nm,0.3s,baz=285,slow=15,SNR=36						
SONM				Pg	Pb	01 53 40.5	+5.1
	comp=Z,1.1nm,0.3s,baz=286,slow=18,SNR=11						
SONM				Sn	Sn	01 54 42.8	-2.2
	comp=Z,0.6nm,0.3s,baz=290,slow=22,SNR=3.6						
SONM				Lg	Lg	01 55 28.6	
	comp=Z,2.6nm,0.3s,baz=288,slow=29,SNR=16						
MK31	Makanchi Array	8.47	256	⇑Pn	Pn	01 53 18.4	+2.2
	comp=Z,0.2nm,0.3s,baz=92,slow=11,SNR=4.5						
MK31				Pg	Pg	01 53 50.3	-5.2
	comp=Z,2.8nm,0.7s,baz=78,slow=18,SNR=9.5						
MK31				⇓Lg	Lg	01 55 41.6	
	comp=Z,9.7nm,0.6s,baz=68,slow=34,SNR=4.3						
MKAR	Makanchi Array	8.47	256	*e*P	Pn	01 53 20.8	+4.6
MKAR	Makanchi Array	8.47	256	Pn	Pn	01 53 17.6	+1.4
	comp=Z,0.2nm,0.3s,baz=91,slow=11,SNR=10.0						
MKAR				Sn	Sn	01 54 53.1	+1.4
	comp=Z,0.5nm,0.3s,baz=52,slow=21,SNR=2.9						
MKAR				Lg	Lg	01 55 40.1	
	comp=Z,1.1nm,0.3s,baz=70,slow=32,SNR=6.6						
ULN	Ulaanbaatar	8.61	96	*i* P	Pn	01 53 18.8	+0.6
NVS	Novosibirsk	8.64	312	*i* Sg	Sg	01 55 44.7	-5.9
MAKZ	Makanchi	8.66	257	⇑Pg	Pg	01 53 58.0	-1.2
	comp=Z,2.3nm,0.6s						
MAKZ				⇓Lg	Lg	01 55 44.8	
	comp=Z,37nm,1.1s						
KURK	Kurchatov	10.14	283	⇑Pn	Pn	01 53 43.0	+4.0
	comp=Z,2.1nm,0.8s						
KURK				⇓Lg	Lg	01 56 33.6	
	comp=Z,17nm,0.8s						
KURK	Kurchatov	10.14	283	*i* P	Pn	01 53 42.0	+3.0
KURBB	Kurchatov Arra	10.20	282	⇑Pn	Pn	01 53 42.5	+2.7
	comp=Z,3.2nm,0.5s						
KURBB				⇓Lg	Lg	01 56 35.8	
	comp=Z,24nm,0.7s						
KURBB	Kurchatov Arra	10.20	282	Pn	Pn	01 53 39.3	-0.5
	comp=Z,0.2nm,0.3s,baz=94,slow=14,SNR=24						
KURBB				Sn	Sn	01 55 33.7	-0.4
	comp=Z,0.1nm,0.3s,baz=96,slow=16,SNR=4.5						
KURBB				Lg	Lg	01 56 38.0	
	comp=Z,0.1nm,0.3s,baz=224,slow=27,SNR=4.9						
OTUK	Ortayu	14.49	273	⇑Lg	Lg	01 58 51.6	
	comp=Z,14nm,1.4s						
AAK	Ala-Archa	15.33	251	*i* P	Pn	01 54 50.4	+0.4
BVAR	Borovoye Array	15.35	292	Pn	Pn	01 54 48.9	-1.1
	comp=Z,0.1nm,0.3s,baz=111,slow=13,SNR=2.4						
BRVK	Borovoye	15.41	293	*i* P	P	01 54 55.5	0.0
HIA	Hailar	16.56	81	*i* P	Pn	01 55 04.5	-1.1
SVE	Sverdlovsk	21.29	303	*e*P	P	01 56 01.2	+1.3
ARU	Arti	22.41	302	*ce*P	P	01 56 11.7	-0.2
ARU				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AKTO	Aktyubinsk	23.21	286	P	P	01 56 21.1	+0.8
	comp=Z,0.8nm,0.6s,baz=91,slow=9.3,SNR=3.8						
KLR	Kul'dur	24.24	76	*i* P	P	01 56 28.8	-1.5
TEY	Ternei	28.77	83	*e*P	P	01 57 06.7	-4.5
ARCES	ARCESS Array B	37.55	327	*e*P	P	01 58 28.6	+1.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	37.55	327	P	P	01 58 28.2	+0.8
	comp=Z,1.5nm,0.7s,baz=81,slow=8.5,SNR=5.7						
FINES	FINESS Array B	38.62	314	P	P	01 58 36.8	+0.3
	comp=Z,1.8nm,1.0s,baz=57,slow=10,SNR=3.6						
AKASG	Malin Array Be	40.54	297	P	P	01 58 52.3	-0.2
	comp=Z,0.5nm,0.4s,baz=58,slow=8.4,SNR=2.2						
BRTR	Keskin Array B	43.19	281	*e*P	P	01 59 16.5	+2.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	43.19	281	P	P	01 59 15.9	+1.4
	comp=Z,0.8nm,0.7s,baz=71,slow=6.3,SNR=4.9						
NOA	NORSAR Array B	45.52	317	*e*P	P	01 59 32.8	0.0
NOA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
NOA	NORSAR Array B	45.52	317	P	P	01 59 32.7	-0.1
	comp=Z,1.1nm,1.1s,baz=67,slow=9.2,SNR=3.8						
ILAR	Eielson Array	56.61	27	P	P	02 00 56.6	+0.6
	comp=Z,0.7nm,0.8s,baz=314,slow=4.4,SNR=9.3						
YKA	Yellowknife Ar	66.01	14	P	P	02 01 59.1	-0.6
	comp=Z,0.6nm,0.7s,baz=338,slow=6.7,SNR=10						
WRA	Warramunga Arr	77.73	142	P	P	02 03 09.1	-1.4
	comp=Z,0.5nm,0.7s,baz=342,slow=6.0,SNR=6.4						
TORD	Torodi Ar. Bea	81.80	281	P	P	02 03 32.5	-0.3
	comp=Z,0.2nm,0.5s,baz=18,slow=5.4,SNR=3.0						
NVAR	Mina Array Bea	87.83	25	P	P	02 04 03.8	+0.6
	comp=Z,0.2nm,0.5s,baz=328,slow=8.5,SNR=2.6						

IDC 14 01:58:02.7±14.0**, 2.°45N**×**128.°12E, h250**km±158km**, mb2.9**/6**, mb1 3.0**/6**, mb1mx2.8**/44**, mbtmp3.5**/6**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.4**/11**, Error ellipse: s-maj=78.9km s-min=27.5km az=62.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.56	187	P	P	02 02 22.8	-0.1
	2.9nm,1.1s,baz=2.2,slow=16,SNR=3.6						
WRA	Warramunga Arr	23.07	165	P	P	02 02 46.7	0.0
	0.7nm,0.4s,baz=344,slow=11,SNR=22						
ASAR	Alice Springs	26.56	168	P	P	02 03 18.1	0.0
	0.3nm,0.5s,baz=360,slow=8.5,SNR=4.4						
HNR	Honiara	33.83	111	LR	LR	02 18 01.2	
	comp=Z,47nm,20.0s,baz=115,slow=35						
SONM	Songino Array	48.95	341	P	P	02 06 23.8	-0.3
	0.1nm,0.5s,baz=140,slow=9.1,SNR=3.3						
MKAR	Makanchi Array	59.39	325	P	P	02 07 39.4	+0.2
	0.3nm,0.4s,baz=115,slow=8.3,SNR=12						
KURBB	Kurchatov Arra	63.56	327	P	P	02 08 06.5	-0.3
	0.4nm,0.4s,baz=128,slow=5.9,SNR=4.8						

NEIC 14 01:59:12.3±0.0**, 53.°77N**×**166.°18W, h77**km**, ML3.5**(AEIC)**, After AEIC., Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.21	292	P	Pn	01 59 24.3	+0.5
UNV				S	Sn	01 59 33.3	+1.2
AKMO	Akutan Morgan	0.34	17	P	Pn	01 59 25.0	+0.5
AKMO				S	Sn	01 59 34.9	+1.4
MREP	Makushin Rep't	0.34	277	P	Pn	01 59 25.1	+0.5
ZRO	Akutan Zero	0.34	20	P	Pn	01 59 25.1	+0.5
MTBL	Makushin Table	0.36	304	P	Pn	01 59 25.3	+0.6
AKRB	Akutan Reef Bi	0.37	10	P	Pn	01 59 25.0	+0.3
AKRB				S	Sn	01 59 35.2	+1.3
MSW	Makushin Switc	0.39	292	P	Pn	01 59 25.2	+0.3
MSW				S	Sn	01 59 35.6	+1.5
LVA	Lava Point	0.40	12	P	Pn	01 59 25.4	+0.4
AHB	Akutan Harbor	0.41	32	P	Pn	01 59 25.6	+0.5
AKUT	Akutan	0.44	33	P	Pn	01 59 25.6	+0.4
AKUT				S	Sn	01 59 35.8	+1.1
AKGG	Akutan Green G	0.45	14	P	Pn	01 59 25.7	+0.4
AKGG				S	Sn	01 59 36.4	+1.5
MCIR	Makushin Cirqu	0.46	294	P	Pn	01 59 26.2	+0.7
AKSA	Akutan Strait	0.47	38	P	Pn	01 59 25.8	+0.3
AKSA				S	Sn	01 59 36.0	+0.9
AKSA				S		01 59 36.2	
WESP	Westdahl Peak	1.12	49	P	Pn	01 59 33.4	+0.7
WESP				S	Sn	01 59 49.3	+1.2
WECS	Westdahl Cape	1.12	47	P	Pn	01 59 33.5	+0.7
WESE	West Dahl East	1.17	52	P	Pn	01 59 34.2	+0.8
OKAK	Okmok	1.31	263	P	Pn	01 59 36.1	+1.1
SSBA	Shishaldin	1.57	49	P	Pn	01 59 38.7	+0.3
FALS	False Pass	1.95	55	P	Pn	01 59 44.1	+0.7
DRIA	Deer Island	2.59	61	P	Pn	01 59 52.5	+0.6

IDC **14** *02:01:35.2±2.0, 52°.27N×171°.04W, h0^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.6/57, mbtmp3.7/9, ML3.1/3, Error ellipse: s-maj=45.5km s-min=28.1km az=176.0*
ISCJB **14** *02:01:38.3±0.8, 51°.9N±0°.1×171°.09W±0°.08, h42^{km}, mb3.5/6, Error ellipse: s-maj=20.4km s-min=4.0km az=164.7*
NEIC **14** *02:01:38.8±0.0, 52°.10N×171°.18W, h24^{km}, ML3.2(AEIC), After AEIC.*
ISC 14 02:01:40.1±1.1**, 52°.1N**±0°.2×**171°.15W**±0°.07**, h42^{km}, n23, σ1^{s}.23**/24**, mb3.5**/6**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.83	278	P	Pn	02 02 08.5	-0.5
OKSP	Okmok Steeple	2.11	54	P	Pn	02 02 12.3	-0.6
OKWR	Okmok West Rim	2.26	51	P	Pn	02 02 15.2	+0.3
GSMY	Great Sitkin M	3.03	272	P	Pn	02 02 25.7	+0.2
GSTD	Great Sitkin T	3.08	272	P	Pn	02 02 26.2	-0.1
GSTD				S	Sn	02 03 03.9	+2.0
MREP	Makushin Rep't	3.19	55	P	Pn	02 02 28.7	+1.0
MSW	Makushin Switc	3.23	53	P	Pn	02 02 28.8	+0.6
MSW				S	Sn	02 03 07.9	+2.6
ETKA	Kagalaska Isla	3.26	269	P	Pn	02 02 29.2	+0.6
UNV	Unalaska Valle	3.33	56	P	Pn	02 02 29.7	+0.2
UNV				S	Sn	02 03 10.2	+2.3
ADAG	Mount Adagdak	3.37	271	P	Pn	02 02 31.0	+0.9
ADK	Adak	3.43	269	P	Pn	02 02 30.9	0.0
ADK				S	Sn	02 03 12.0	+1.7
KDAK	Kodiak Island	12.10	54	Pn	Pn	02 04 27.8	-1.8
	0.2nm,0.3s,baz=231,slow=13,SNR=3.2						
ILAR	Eielson Array	17.83	35	P	Pn	02 05 43.5	-1.1
	0.1nm,0.3s,baz=228,slow=9.1,SNR=6.5						
PETK	Petropavlovsk-	18.89	286	P	Pn	02 05 56.7	-0.9
	0.1nm,0.3s,baz=89,slow=12,SNR=3.3						
DLBC	Dease Lake	23.98	58	P	P	02 06 50.4	0.0
	1.8nm,0.7s,baz=270,slow=10,SNR=2.8						
INK	Inuvik	24.21	34	P	P	02 06 50.5	-1.8
	0.7nm,0.5s,baz=261,slow=7.4,SNR=7.3						
YKA	Yellowknife Ar	31.27	48	P	P	02 07 55.0	-0.4
	0.3nm,0.3s,baz=274,slow=8.0,SNR=8.7						
NEW	Newport	34.15	74	P	P	02 08 21.2	+0.4
	1.7nm,0.7s,baz=303,slow=12,SNR=3.5						
H11N2	WAKE ISLAND Hy	36.54	216	T	T	02 47 11.2	
	baz=28						
H11N3	WAKE ISLAND Hy	36.55	216	T	T	02 47 14.7	
	baz=28						
H11N1	WAKE ISLAND Hy	36.56	216	T	T	02 47 15.5	
	baz=28						
PDAR	Pinedale Array	41.54	78	P	P	02 09 24.0	+0.6
	0.5nm,0.5s,baz=309,slow=5.7,SNR=5.3						
TXAR	Lajitas Array	53.85	87	P	P	02 10 58.6	-0.2
	0.2nm,0.6s,baz=307,slow=7.5,SNR=2.4						

JMA **14** *02:07:33.7±0.3, 46°.74N×141°.79E, h40^{km}, M2.5*
SKHL **14** *02:07:34.4±0.6, 46°.50N×141°.91E, h10^{km}, mb3.3/1*
ISCJB **14** *02:07:35.7±0.9, 46°.55N±0°.04×142°.0E±0°.1, h14^{km}, Error ellipse: s-maj=13.5km s-min=4.6km az=11.4*
ISC 14 02:07:33.8±1.4**, 46°.62N**±0°.05×**141°.9E**±0°.1**, h14^{km}, n4, σ0^{s}.50**/8**, 1C, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHLM	Kholmsk	0.44	10	*e*Pg	Pn	02 07 46.1	+0.3
KHLM				*e*Sg	Sn	02 07 53.6	0.0
KHLM				A	A	02 07 54.1	
	690nm,0.3s						
YSS	Yuzh-Sakhalins	0.66	59	⇑*e*Pg	Pn	02 07 48.7	0.0
YSS				AMB	AMB	02 07 49.9	
	20nm,0.3s						
YSS				*e*Sg	Sn	02 07 59.0	+0.2
YSS				A	A	02 08 00.4	
	60nm,0.6s						
YSS				A	A	02 08 00.4	
	130nm,0.6s						
JWK2	Keihoku	1.30	181	P	Pb	02 07 57.7	-0.4
JWK2				*e*S	Sg	02 08 15.2	-0.6
JSE	Soyaes	1.72	164	P	Pn	02 08 04.0	+0.7
JSE				*e*S	Sn	02 08 25.4	+0.3

DDA **14** *02:10:35.8, 39°.35N×27°.37E, h7^{km}±3^{km}, ML2.7*
ISCJB **14** *02:10:36.2±0.5, 39°.33N±0°.03×27°.35E±0°.03, h6^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=3.9km az=22.3*
ISK **14** *02:10:36.0, 39°.30N×27°.35E, h10^{km}, ML2.1/7*
ISC 14 02:10:36.0±1.1**, 39°.33N**±0°.03×**27°.35E**±0°.03**, h8^{km}**±10^{km}**, n17, σ0^{s}.54**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.29	81	*i* P	Pg	02 10 41.3	-0.4
STEP				*i* S	Sg	02 10 46.0	+0.5
STEP				IAML_P			
	comp=Z,4μm,0.1s						
BALY	Balya	0.46	27	*i* P	Pg	02 10 44.1	-0.7
BALY				IAML_P			
	comp=Z,1μm,0.1s						
AYVA	Ayvalik	0.51	268	*i* P	Pg	02 10 46.4	+0.5
AYVA				*i* S	Sb	02 10 54.5	-0.3
AYVA				IAML_P			
	comp=Z,395nm,0.1s						
AKHS	Akhisar	0.58	141	*i* P	Pg	02 10 47.0	-0.1
AKHS				*i* S	Sb	02 10 56.1	-0.5
BAYC	CANAKKALE_Bayr	0.74	304	*i* P	Pb	02 10 51.0	-0.2
BAYC				*i* S	Sn	02 11 03.7	-0.6
BAYC				IAML_P			
	comp=Z,2μm,0.1s						
GONE	Gonen-Balikesi	0.76	20	PG	Pb	02 10 51.7	+0.3
GONE				SG	Sb	02 11 03.1	+1.2
DURS	Dursunbey	0.91	72	*i* P	Pb	02 10 54.3	+0.3
DURS				*i* S	Sg	02 11 05.6	+0.3
DURS				IAML_P			
	comp=Z,414nm,0.1s						
EZN	Ezine	0.93	302	PG	Pb	02 10 54.9	+0.5
KNL	Balıkesir	0.95	8	*i* P	Pg	02 10 53.3	-0.8
KNL				*i* S	Sg	02 11 06.5	0.0
KNL				IAML_P			
	comp=Z,492nm,0.2s						
BLCB	Balcova	0.98	194	PG	Pb	02 10 54.8	-0.3
DEMI	Demirci	1.10	105	*i* P	Pn	02 10 57.6	-0.1
DEMI				*i* S	Sn	02 11 13.8	+0.7
DEMI				IAML_P			
	comp=Z,941nm,0.1s						
BOZC	Bozcaada	1.13	297	PN	Pg	02 10 57.5	-0.1
URLA	Izmir	1.14	212	PN	Pn	02 10 57.9	-0.3
SIGR	SIGRI	1.17	265	PN	Pn	02 10 58.8	+0.2
MANT	Manisa	1.26	131	*i* P	Pg	02 11 00.9	+0.7
MANT				*i* S	Sb	02 11 16.4	-0.2
MANT				IAML_P			
	comp=Z,459nm,0.2s						
KULA	Kula-Manisa	1.31	128	PN	Pb	02 11 00.6	-0.2
AYDB	Zeytinkoy-Aydi	1.45	163	PN	Pn	02 11 01.9	-0.6

NIED **14** *02:40:00, 24°.60N×122°.60E, h56^{km}, Mw3.9 Best double couple: M$_0$7.13000×10^{14} NP1:ϕ_s30.00000°, δ52.00000°, λ40.00000°. NP2:ϕ_s272.00000°, δ59.00000°, λ134.00000°.*
BJI **14** *02:40:35.5, 24°.68N×122°.76E, h20^{km}, mb3.9/3, ML3.4/3*
TAP **14** *02:40:40.9, 24°.70N×122°.59E, h91^{km}, ML4.5, B*
JMA **14** *02:40:40.4±0.1, 24°.61N×122°.58E, h98^{km}±2^{km}, M3.7*
ISCJB **14** *02:40:40.0±0.2, 24°.72N±0°.02×122°.61E±0°.01, h98^{km}±2^{km}, mb3.3/6, Error ellipse: s-maj=2.8km s-min=2.0km az=166.7*
IDC **14** *02:40:42.1±4.7, 24°.91N×122°.74E, h116^{km}±54^{km}, mb3.1/6, mb1 3.2/7, mb1mx3.0/42, mbtmp3.4/7, Error ellipse: s-maj=37.5km s-min=16.2km az=58.0*
ISC 14 02:40:40.4±0.8**, 24°.73N**±0°.03×**122°.60E**±0°.02**, h98^{km}**±5^{km}**, n148, σ0^{s}.89**/267**, mb3.3**/6**, 1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.42	132	P	Pn	02 40 55.3	-0.1
JYNG				S	Sn	02 41 05.8	-0.8
YOJ	Yonaguni jima	0.46	126	P	Pn	02 40 55.5	-0.1
	baz=121						
YOJ				S	Sn	02 41 06.8	-0.2
	baz=121						
YOJ	Yonaguni jima	0.46	126	P	Pn	02 40 55.5	-0.1
YOJ				*e*S	Sn	02 41 06.6	-0.4
EOS1	EOS1	0.47	247	P	Pn	02 40 56.0	+0.3
	baz=249						
EOS1				S	Sn	02 41 07.3	+0.2
	baz=249						
EGS		0.62	281	*e*P	Pn	02 40 55.1	-1.8
	baz=283						
TWB1	Santiao Chiao	0.62	296	P	Pn	02 40 56.7	-0.2
	baz=299						
TWB1				*e*S	Sn	02 41 08.4	-0.9
	baz=299						
TWC	Suao	0.70	260	P	Pn	02 40 57.4	-0.1
	baz=261						
TWC				*e*S	Sn	02 41 09.3	-1.2
	baz=261						
NTC	Toucheng	0.71	280	P	Pn	02 40 58.0	+0.2
	baz=282						
NTC				*e*S	Sn	02 41 10.1	-0.6
	baz=282						
TIPB	Shuangxi	0.75	289	P	Pn	02 40 58.4	+0.3
	baz=291						
TIPB				*e*S	Sn	02 41 10.8	-0.5
	baz=291						
ILA	Ilan	0.78	273	*e*P	Pn	02 40 58.3	0.0
	baz=274						
ILA				*e*S	Sn	02 41 11.1	-0.7
	baz=274						
NWF	Wu-fen Shan	0.82	294	⇓P	Pn	02 40 59.4	+0.5
	baz=296						
NWF				*e*S	Sn	02 41 12.7	0.0
	baz=296						
WFSB	Wu-fen Shan	0.82	294	P	Pn	02 40 59.0	+0.3
	baz=296						
WFSB				*e*S	Sn	02 41 12.5	-0.1
	baz=296						
NANB	Nanao	0.83	249	P	Pn	02 40 59.1	+0.2
	baz=250						
NANB				S	Sn	02 41 12.4	-0.3
	baz=250						
ENA	Nanau	0.84	249	P	Pn	02 40 58.9	-0.1
	baz=249						
ENA				*e*S	Sn	02 41 11.9	-1.0
	baz=249						
TWE	Neicheng	0.85	269	P	Pn	02 40 59.4	+0.3
	baz=270						
TWE				*e*S	Sn	02 41 12.4	-0.7
	baz=270						
SLBB	Yuanshan	0.88	272	P	Pn	02 40 59.9	+0.5
	baz=273						
SLBB				*e*S	Sn	02 41 13.3	-0.4
	baz=273						
ENTT	Nioudou	0.95	265	*e*P	Pn	02 41 00.9	+0.8
	baz=265						
ENTT				*e*S	Sn	02 41 14.5	-0.5
	baz=265						
TWA	Mucha	0.96	285	P	Pn	02 41 00.7	+0.4
	baz=286						
TWA				*e*S	Sn	02 41 15.0	-0.1
	baz=286						
NDT	Datong Townshi	1.00	263	P	Pn	02 41 01.5	+0.8
	baz=264						
NDT				*e*S	Sn	02 41 15.7	-0.2
	baz=264						
NWLT	Wulai	1.00	273	P	Pn	02 41 01.0	+0.3
	baz=274						
NWLT				*e*S	Sn	02 41 15.9	-0.1
	baz=274						
NHDH	Xindian Distri	1.01	283	P	Pn	02 41 01.3	+0.6
	baz=284						
NHDH				*e*S	Sn	02 41 16.2	+0.2
	baz=284						
PCYT	Pengchaiyu	1.01	332	P	Pn	02 41 01.6	+0.8
	baz=333						
YM01	YM01	1.02	294	P	Pn	02 41 01.5	+0.5
	baz=295						
YM01				*e*S	Sn	02 41 16.5	+0.1
	baz=295						
YM08	YM08	1.03	296	*e*P	Pn	02 41 01.1	+0.2
	baz=298						
YM08				*e*S	Sn	02 41 16.8	+0.4
	baz=298						
YM11	YM11	1.03	295	P	Pn	02 41 01.5	+0.4
	baz=296						
YM11				*e*S	Sn	02 41 17.6	+0.9
	baz=296						
YM05	YM05	1.04	295	P	Pn	02 41 01.5	+0.4
	baz=296						
YM05				*e*S	Sn	02 41 17.0	+0.3
	baz=296						
TATO	Taipei	1.04	284	P	Pn	02 41 01.2	+0.1
	baz=285						
TATO				*e*S	Sn	02 41 16.8	+0.1
	baz=285						
YM04	YM04	1.06	294	*e*P	Pn	02 41 02.0	+0.7
	baz=295						
YM04				*e*S	Sn	02 41 16.9	-0.1
	baz=295						
TWY	Chenhua	1.06	301	P	Pn	02 41 01.8	+0.5
	baz=302						
TWY				*e*S	Sn	02 41 17.4	+0.4
	baz=302						
NACB	Ninganchiao	1.07	239	P	Pn	02 41 01.0	-0.5
	baz=239						
NACB				*e*S	Sn	02 41 16.7	-0.6
	baz=239						
IRIF	Iriomote-Funau	1.10	111	P	Pn	02 41 01.7	-0.1
IRIF				S	Sn	02 41 18.0	+0.2
YHNB	Yeheng	1.12	267	P	Pn	02 41 02.8	+0.7
	baz=268						
YHNB				*e*S	Sn	02 41 18.4	0.0
	baz=268						
TWD	Chiawan	1.12	235	P	Pn	02 41 01.6	-0.5
	baz=235						
TWD				*e*S	Sn	02 41 17.6	-0.8
	baz=235						
NTST	Danshui	1.13	293	P	Pn	02 41 02.8	+0.7
	baz=293						
NTST				*e*S	Sn	02 41 19.1	+0.6
	baz=293						
NSK	Sanguang	1.13	267	P	Pn	02 41 02.8	+0.5
	baz=268						
NSK				*e*S	Sn	02 41 18.5	-0.2
	baz=268						
TWS1	Kuangyinshan	1.14	289	P	Pn	02 41 02.9	+0.7
	baz=290						
TWS1				*e*S	Sn	02 41 19.1	+0.4
	baz=290						
ETLH	Xiulin Townshi	1.15	243	*e*P	Pn	02 41 02.1	-0.4
	baz=243						
ETLH				*e*S	Sn	02 41 18.5	-0.6
	baz=243						
NNSB	Datong	1.15	255	P	Pn	02 41 02.7	+0.2
	baz=255						
NNSB				*e*S	Sn	02 41 18.8	-0.3
	baz=255						
NNS	Nan Shan	1.16	256	P	Pn	02 41 02.8	+0.3
	baz=256						
NNS				*e*S	Sn	02 41 18.8	-0.5
	baz=256						
HWA	Hwalien	1.18	231	P	Pn	02 41 02.4	-0.3
	baz=230						
HWA				*e*S	Sn	02 41 18.8	-0.8
	baz=230						
ENLB	Shoufeng	1.23	228	P	Pn	02 41 03.0	-0.3
	baz=228						
ENLB				*e*S	Sn	02 41 19.9	-0.6
	baz=228						
HATJ	Hateruma jima	1.28	121	P	Pn	02 41 04.1	+0.2
HATJ				*e*S	Sn	02 41 21.4	-0.3
NCU	National Centr	1.31	281	P	Pn	02 41 05.6	+1.4
	baz=281						
NCU				*e*S	Sn	02 41 22.7	+0.5
	baz=281						
NCUH	Zhongli	1.31	281	P	Pn	02 41 05.6	+1.4
	baz=281						
NCUH				*e*S	Sn	02 41 22.9	+0.6
	baz=281						
WHF	Hehuan Shan	1.35	245	P	Pn	02 41 05.2	0.0
	baz=244						
WHF				*e*S	Sn	02 41 22.9	-0.9
	baz=244						
JKRS	Kuro-shima	1.37	111	P	Pn	02 41 05.3	+0.3
JKRS				*e*S	Sn	02 41 23.6	+0.1
TWT	Tachien	1.39	250	P	Pn	02 41 06.2	+0.8
	baz=250						
TWT				*e*S	Sn	02 41 24.2	+0.1
	baz=250						
TDCB	Techi	1.40	250	P	Pn	02 41 06.0	+0.5
	baz=250						
TDCB				*e*S	Sn	02 41 24.3	-0.1
	baz=250						
ESL	Shilin	1.41	230	*e*P	Pn	02 41 05.7	+0.3
	baz=229						
ESL				*e*S	Sn	02 41 23.8	-0.5
	baz=229						
LIOB	Emei	1.45	267	P	Pn	02 41 06.4	+0.5
	baz=267						
LIOB				*e*S	Sn	02 41 25.7	+0.5
	baz=267						
JIJ	Ishigaki jima	1.45	104	P	Pn	02 41 05.8	-0.1
JIJ				S	Sn	02 41 24.0	-1.2
NSTT	Nanjuang	1.46	266	P	Pn	02 41 07.0	+1.0
	baz=267						
NSTT				*e*S	Sn	02 41 25.9	+0.4
	baz=267						
CHGB	Renai	1.47	243	P	Pn	02 41 06.7	+0.3
	baz=243						
CHGB				*e*S	Sn	02 41 25.6	-0.4
	baz=243						
SBCB	Hsinchu	1.47	273	P	Pn	02 41 07.4	+1.2
	baz=273						
SBCB				*e*S	Sn	02 41 26.4	+0.7
	baz=273						
HSN	Hsinchu	1.49	273	*e*P	Pn	02 41 07.5	+1.1
	baz=274						
HSN				S	Sn	02 41 26.0	-0.1
	baz=274						
EGFH	Guangfu	1.51	226	*e*P	Pn	02 41 07.0	+0.4
	baz=225						
EGFH				S	Sn	02 41 26.1	-0.4
	baz=225						
OWD	Renai	1.52	240	*e*P	Pn	02 41 06.7	-0.2
	baz=239						
OWD				S	Sn	02 41 26.0	-0.9
	baz=239						
JISG	Ishigakijimahi	1.56	95	P	Pn	02 41 07.4	+0.1
JISG				S	Sn	02 41 27.1	-0.6
WHP	Taichung City	1.58	254	P	Pn	02 41 08.8	+1.2
	baz=254						
WHP				*e*S	Sn	02 41 28.4	+0.2
	baz=254						
HGSD	Ruisui	1.64	221	*e*P	Pn	02 41 07.7	-0.6
	baz=221						
HGSD				*e*S	Sn	02 41 29.0	-0.4
	baz=221						
VWDT	VWDT	1.65	234	P	Pn	02 41 08.6	+0.1
	baz=234						
VWDT				*e*S	Sn	02 41 29.7	-0.1
	baz=234						
NMLH	Miaoli	1.66	264	P	Pn	02 41 09.2	+0.7
	baz=264						
NMLH				*e*S	Sn	02 41 30.6	+0.6
	baz=264						
EHY	Hungye	1.69	224	*e*P	Pn	02 41 09.4	+0.4
	baz=223						
EHY				*e*S	Sn	02 41 30.2	-0.5
	baz=223						
NSY	Sanyi	1.71	260	P	Pn	02 41 10.1	+0.9
	baz=260						
NSY				*e*S	Sn	02 41 31.4	+0.4
	baz=260						
TWQ1	Liyutan	1.71	257	P	Pn	02 41 09.8	+0.6
	baz=257						
TWQ1				*e*S	Sn	02 41 31.6	+0.5
	baz=257						
PTSB	Yuanli	1.75	261	P	Pn	02 41 10.7	+1.0
	baz=261						
PTSB				S	Sn	02 41 32.0	0.0
	baz=261						
SMLT	Sun Moon Lake	1.77	242	P	Pn	02 41 10.8	+0.8
	baz=241						
SMLT				*e*S	Sn	02 41 32.4	-0.2
	baz=241						
SSLB	Suanglung	1.77	238	P	Pn	02 41 10.7	+0.6
	baz=238						
SSLB				*e*S	Sn	02 41 32.6	0.0
	baz=238						
YULB	Yu-li	1.79	222	*e*P	Pn	02 41 09.2	-1.0
	baz=222						
YULB				*e*S	Sn	02 41 33.1	+0.1
	baz=222						
TYC	Yuchr	1.79	243	P	Pn	02 41 11.3	+1.1
	baz=243						
TYC				*e*S	Sn	02 41 32.9	0.0
	baz=243						
TWF1	Yuli	1.82	221	*e*P	Pn	02 41 11.1	+0.4
	baz=220						
TWF1				*e*S	Sn	02 41 33.1	-0.5
	baz=220						
WDJ	Dajia District	1.83	258	P	Pn	02 41 11.4	+0.8
	baz=258						
WDJ				*e*S	Sn	02 41 34.4	+0.6
	baz=258						
TCU	Taichung	1.85	252	P	Pn	02 41 11.7	+0.8
	baz=252						
TCU				*e*S	Sn	02 41 34.6	+0.3
	baz=252						
WHYT	Xinyi Township	1.90	238	P	Pn	02 41 12.8	+1.1
	baz=237						
WHYT				*e*S	Sn	02 41 35.5	0.0
	baz=237						
JTJ	Tarama	1.91	92	P	Pn	02 41 12.2	+0.5
JTJ				*e*S	Sn	02 41 36.1	+0.5
WJS	Zhushan	1.94	242	P	Pn	02 41 13.0	+0.9
	baz=242						
WJS				*e*S	Sn	02 41 36.5	+0.2
	baz=242						
WNT	Mingjian	1.95	244	*e*P	Pn	02 41 13.4	+1.2
	baz=244						
WNT				*e*S	Sn	02 41 37.3	+0.8
	baz=244						
WCHH	Zhanghua	1.98	251	P	Pn	02 41 12.9	+0.4
	baz=251						
WCHH				*e*S	Sn	02 41 37.6	+0.5
	baz=251						
CHKT	Chengkung	1.98	215	*e*P	Pn	02 41 13.1	+0.5
	baz=214						
CHKT				S	Sn	02 41 36.5	-0.8
	baz=214						
ALS	Alishan	2.04	234	P	Pn	02 41 14.6	+0.8
	baz=233						
ALS				*e*S	Sn	02 41 38.6	-0.5
	baz=233						
CHN5	Tsauling	2.09	238	P	Pn	02 41 15.0	+0.8
	baz=237						
CHN5				*e*S	Sn	02 41 40.0	0.0
	baz=237						
ELDTW	Lidau	2.11	224	*e*P	Pn	02 41 13.9	-0.6
	baz=223						
ELDTW				*e*S	Sn	02 41 38.6	-1.9
	baz=223						
WGK	Gukeng	2.13	241	*e*P	Pn	02 41 15.9	+1.3
	baz=241						
WGK				*e*S	Sn	02 41 42.4	+1.5
	baz=241						
WDLH	Douliu	2.15	242	*e*P	Pn	02 41 15.8	+1.0
	baz=241						
WDLH				*e*S	Sn	02 41 41.6	+0.3
	baz=241						
RLNB	Erlin	2.21	248	P	Pn	02 41 16.0	+0.4
	baz=248						
RLNB				*e*S	Sn	02 41 43.1	+0.5
	baz=248						
CHN2	Minshiung	2.28	239	P	Pn	02 41 18.1	+1.6
	baz=238						
CHN2				*e*S	Sn	02 41 44.4	+0.1
	baz=238						
WTCT	Ta-ch'eng	2.29	248	*e*P	Pn	02 41 15.8	-0.9
	baz=248						
WTCT				*e*S	Sn	02 41 44.1	-0.3
	baz=248						
CHN4	Tsaushan	2.29	234	P	Pn	02 41 17.9	+1.2
	baz=233						
CHN4				*e*S	Sn	02 41 44.6	0.0
	baz=233						
TPUB	Ta-pu	2.30	232	P	Pn	02 41 18.0	+1.2
	baz=231						
TPUB				*e*S	Sn	02 41 44.7	-0.1
	baz=231						
STYT	Tauyuan	2.30	228	P	Pn	02 41 17.9	+1.0
	baz=227						
STYT				*e*S	Sn	02 41 44.9	+0.1
	baz=227						
JIRB	Irabujima	2.34	87	*e*S	Sn	02 41 45.1	-0.5
CHY	Chiayi	2.34	239	P	Pn	02 41 18.3	+1.0
	baz=238						
CHY				*e*S	Sn	02 41 45.7	+0.1
	baz=238						

WTP	**Ta-pu**	**2.34**	**231**	*e*P	**Pn**	**02 41 19.0**	**+1.5**
	baz=230						
TWGBT	**Beinan**	**2.36**	**217**	*e*P	**Pn**	**02 41 18.4**	**+0.7**
	baz=216						
TWGBT				*e*S	**Sn**	**02 41 45.8**	**-0.4**
	baz=216						
TWG	**Pinlang**	**2.36**	**217**	*e*P	**Pn**	**02 41 18.3**	**+0.7**
	baz=216						
TWG				*e*S	**Sn**	**02 41 45.8**	**-0.5**
	baz=216						
TTN	**Taitung**	**2.38**	**214**	*e*P	**Pn**	**02 41 18.4**	**+0.5**
	baz=213						
TTN				*e*S	**Sn**	**02 41 46.6**	**0.0**
	baz=213						
JIKM	**Ikemajima**	**2.41**	**85**	P	**Pn**	**02 41 19.3**	**+1.1**
JIKM				*e*S	**Sn**	**02 41 47.4**	**+0.1**
TWK	**Hsinying**	**2.42**	**233**	P	**Pn**	**02 41 19.3**	**+0.8**
	baz=233						
TWK				*e*S	**Sn**	**02 41 47.5**	**-0.2**
	baz=233						
WSF	**Szhu**	**2.43**	**244**	*e*P	**Pn**	**02 41 19.0**	**+0.5**
	baz=243						
WSF				*e*S	**Sn**	**02 41 47.7**	**-0.1**
	baz=243						
CHN1	**Nanshi**	**2.44**	**231**	P	**Pn**	**02 41 19.8**	**+1.0**
	baz=231						
CHN1				*e*S	**Sn**	**02 41 48.1**	**-0.1**
	baz=231						
SNST	**Tainan City**	**2.44**	**232**	P	**Pn**	**02 41 19.8**	**+1.1**
	baz=232						
SNST				S	**Sn**	**02 41 48.2**	**0.0**
	baz=232						
JMJ	**Miyako jima 2**	**2.45**	**88**	*e*S	**Sn**	**02 41 48.5**	**+0.4**
	baz=87						
JMJ	**Miyako jima 2**	**2.45**	**88**	*e*S	**Sn**	**02 41 47.6**	**-0.5**
SGST	**Jiashian**	**2.47**	**229**	P	**Pn**	**02 41 20.3**	**+1.1**
	baz=228						
SGST				*e*S	**Sn**	**02 41 48.6**	**-0.2**
	baz=228						
SLGT	**Liugui**	**2.49**	**226**	P	**Pn**	**02 41 20.8**	**+1.5**
	baz=226						
JOGS	**Gusukube**	**2.55**	**89**	*e*S	**Sn**	**02 41 49.4**	**-1.1**
CHN8	**Yiju**	**2.59**	**238**	*e*P	**Pn**	**02 41 21.1**	**+0.5**
	baz=237						
CHN8				*e*S	**Sn**	**02 41 51.6**	**+0.2**
	baz=237						
ECL	**Taimali**	**2.61**	**216**	*e*P	**Pn**	**02 41 19.9**	**-1.1**
	baz=215						
ECL				*e*S	**Sn**	**02 41 49.7**	**-2.3**
	baz=215						
SSD	**Sandimen**	**2.68**	**223**	P	**Pn**	**02 41 22.9**	**+1.1**
	baz=222						
SSD				*e*S	**Sn**	**02 41 54.5**	**+0.8**
	baz=222						
PTTC	**Pingtan**	**2.68**	**287**	*e*P	**Pn**	**02 41 21.7**	**-0.1**
	baz=287						
PTTC				*e*S	**Sn**	**02 41 52.0**	**-1.6**
	baz=287						
SCLT	**Jiali**	**2.69**	**235**	P	**Pn**	**02 41 23.3**	**+1.3**
	baz=235						
SCLT				*e*S	**Sn**	**02 41 53.9**	**-0.1**
	baz=235						
MASBT	**Mashibuluo**	**2.78**	**221**	P	**Pn**	**02 41 24.1**	**+0.9**
	baz=220						
MASBT				*e*S	**Sn**	**02 41 55.3**	**-0.7**
	baz=220						
MATB	**Ma-tsu**	**2.79**	**301**	P	**Pn**	**02 41 23.0**	**-0.2**
	baz=301						
TAW	**Tawu**	**2.84**	**214**	*e*P	**Pn**	**02 41 23.3**	**-0.6**
	baz=213						
TAW				*e*S	**Sn**	**02 41 55.6**	**-1.8**
	baz=213						
EAST	**Anshuo**	**2.84**	**215**	*e*P	**Pn**	**02 41 23.4**	**-0.7**
	baz=214						
SNJT	**Kaohsiung City**	**2.86**	**227**	*e*P	**Pn**	**02 41 25.9**	**+1.6**
	baz=226						
SNJT				*e*S	**Sn**	**02 41 57.7**	**-0.4**
	baz=226						
VWUC	**VWUC**	**2.88**	**276**	*e*P	**Pn**	**02 41 24.2**	**-0.2**
	baz=275						
SSPT	**Xinbi**	**2.92**	**220**	P	**Pn**	**02 41 26.7**	**+1.7**
	baz=219						
SCZT	**Fangliau**	**2.97**	**218**	P	**Pn**	**02 41 26.8**	**+1.0**
	baz=217						
PNG	**Penghu**	**3.02**	**248**	*e*P	**Pn**	**02 41 25.5**	**-0.8**
	baz=247						
PNG				*e*S	**Sn**	**02 41 59.7**	**-2.0**
	baz=247						
PHUB	**P'eng-hu**	**3.02**	**247**	*e*P	**Pn**	**02 41 25.7**	**-0.7**
	baz=246						
PHUB				*e*S	**Sn**	**02 42 00.0**	**-1.9**
	baz=246						
WDGT	**Dungji**	**3.06**	**242**	*e*P	**Pn**	**02 41 28.1**	**+1.1**
	baz=241						
WDGT				*e*S	**Sn**	**02 42 02.5**	**-0.4**
	baz=241						
XPSS	**Dashiqiu**	**3.09**	**316**	*e*P	**Pn**	**02 41 26.9**	**-0.3**
	baz=315						
WLCH	**Liuqiu**	**3.13**	**221**	*e*P	**Pn**	**02 41 29.9**	**+2.1**
	baz=220						
LYJJ	**Jianjiangzhen**	**3.14**	**306**	*e*P	**Pn**	**02 41 27.8**	**-0.1**
	baz=305						
PTMZ	**Houxiangcun**	**3.18**	**276**	*e*P	**Pn**	**02 41 28.3**	**-0.2**
	baz=276						
HEN	**Hengchun**	**3.21**	**213**	*e*P	**Pn**	**02 41 29.6**	**+0.7**
	baz=212						
HEN				*e*S	**Sn**	**02 42 05.6**	**-0.8**
	baz=212						
TSEB	**Hengchuen, Pin**	**3.23**	**209**	*e*S	**Sn**	**02 42 06.5**	**-0.2**
	baz=209						
TWKBT	**Hengchun**	**3.23**	**211**	*e*P	**Pn**	**02 41 29.3**	**+0.1**
	baz=210						
TWKBT				*e*S	**Sn**	**02 42 07.0**	**+0.2**
	baz=210						
TWK1	**Hengchun**	**3.23**	**211**	*e*P	**Pn**	**02 41 29.4**	**+0.2**
	baz=210						
TWK1				*e*S	**Sn**	**02 42 06.8**	**-0.1**
	baz=210						
VCHM	**Qimei**	**3.28**	**243**	*e*P	**Pn**	**02 41 29.5**	**-0.3**
	baz=242						
VCHM				*e*S	**Sn**	**02 42 06.0**	**-2.0**
	baz=242						
MHZQ	**Yeshan**	**3.51**	**294**	*e*P	**Pn**	**02 41 32.6**	**-0.3**
	baz=293						
QZH	**Quanzhou**	**3.65**	**274**	⇑*i*Pn	**Pn**	**02 41 34.5**	**-0.3**
QZH				Sn	**Sn**	**02 42 13.6**	**-3.4**
QZH				smax	smax		
	comp=N,100nm,0.7s						
QZH				smax	smax		
	comp=E,72nm,0.4s						
KNM	**Kinmen**	**3.81**	**266**	*e*P	**Pn**	**02 41 38.5**	**+1.5**
	baz=265						
KNM				*e*S	**Sn**	**02 42 20.5**	**-0.3**
	baz=265						
KNMB	**Chin-men Tao**	**3.85**	**267**	*e*P	**Pn**	**02 41 36.9**	**-0.6**
	baz=266						
KNMB				*e*S	**Sn**	**02 42 17.9**	**-3.8**
	baz=266						
AXDP	**Jialang**	**4.21**	**273**	*e*P	**Pn**	**02 41 42.5**	**0.0**
	baz=272						
AXDP				*e*S	**Sn**	**02 42 27.5**	**-3.1**
	baz=272						
ZPLA	**Ao Xicun**	**4.50**	**261**	*e*P	**Pn**	**02 41 46.2**	**-0.1**
	baz=260						
ZPLA				*e*S	**Sn**	**02 42 34.1**	**-3.4**
	baz=260						
ZZJH	**Jiuhuzhen**	**4.54**	**268**	*e*P	**Pn**	**02 41 46.9**	**+0.1**
	baz=267						
ZZJH				*e*S	**Sn**	**02 42 34.5**	**-3.8**
	baz=267						
JOW	**Kunigami**	**5.52**	**67**	*e*P	**Pn**	**02 41 59.4**	**-0.9**
	baz=67						
JOW	**Kunigami**	**5.52**	**67**	P	**Pn**	**02 41 59.8**	**-0.5**
	1.1nm,0.3s,baz=151,slow=13,SNR=15						
JOW				S	**Sn**	**02 43 00.4**	**-2.0**
	1.3nm,0.3s,baz=95,slow=18,SNR=5.5						
XAN	**Xi'an**	**15.09**	**311**	P	**P**	**02 44 11.9**	**+0.5**
XAN				pP	Pn	02 44 16.8	+8.3
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**22.85**	**259**	P	**P**	**02 45 36.6**	**+1.0**
	0.7nm,0.4s,baz=72,slow=6.7,SNR=4.2						
SONM	**Songino Array**	**26.39**	**335**	P	**P**	**02 46 06.8**	**-0.9**
	0.5nm,0.6s,baz=152,slow=11,SNR=2.4						
WMQ	**Urumqi**	**34.22**	**313**	*e*P	P	02 47 25.6	+8.8
MKAR	**Makanchi Array**	**38.86**	**315**	P	**P**	**02 47 56.1**	**0.0**
	0.2nm,0.5s,baz=104,slow=10,SNR=6.8						
KURBB	**Kurchatov Arra**	**42.53**	**319**	P	**P**	**02 48 25.1**	**-1.1**
	0.2nm,0.4s,baz=106,slow=9.6,SNR=3.0						
WRA	**Warramunga Arr**	**45.85**	**165**	P	**P**	**02 48 52.8**	**-0.2**
	0.4nm,0.5s,baz=347,slow=8.6,SNR=9.0						
ASAR	**Alice Springs**	**49.34**	**166**	P	**P**	**02 49 22.0**	**+2.0**
	0.2nm,0.3s,baz=355,slow=9.3,SNR=3.5						

SJA ***14*** *02:46:44.7±0.5, 22°.74S×66°.19W, h295^{km}±24^{km}, ML3.7, MW3.9*

ISCJB ***14*** *02:46:48.9±0.5, 23°.05S±0°.03×66°.30W±0°.07, h242^{km}, mb3.8/3, Error ellipse: s-maj=8.8km s-min=4.8km az=5.4*

IDC ***14*** *02:46:49.5±1.1, 22°.96S×66°.21W, h224^{km}±13^{km}, mb3.6/3, mb1 3.6/8, mb1mx3.3/25, mbtmp4.1/8, Error ellipse: s-maj=21.9km s-min=18.2km az=170.0*

ISC 14 02:46:49.3±0.7**, 23°.06S**±0°.06×**66°.37W**±0°.08**, h242**^{km}**, n18,** σ1.^{s}**74**/25**, mb4.0**/3**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.38**	**280**	P	**Pn**	**02 47 36.7**	**+1.5**
	40nm,0.3s,baz=106,slow=5.3,SNR=385						
LVC				S	**S**	**02 48 11.3**	**0.0**
	5.9nm,0.3s,baz=240,slow=20,SNR=3.5						
AHML	**Horco Molle**	**3.83**	**166**	*i* P	**Pn**	**02 47 51.8**	**+1.1**
AHML				IAML		02 47 54.2	
	comp=Z,7.3nm,0.5s						
AHML				*i* S	**S**	**02 48 42.3**	**+2.9**
CYA	**Choya**	**5.38**	**175**	*i* P	**Pn**	**02 48 11.0**	**+1.4**
CYA				IAML		02 48 14.8	
	comp=Z,16nm,0.3s						
ACLC	**CERRO LA CRUZ**	**6.36**	**185**	*i* P	**Pn**	**02 48 23.4**	**+1.4**
AGUA	**GUANDACOL**	**6.67**	**196**	*i* P	**Pn**	**02 48 27.4**	**+1.5**
LPAZ	**La Paz**	**6.94**	**346**	P	**Pn**	**02 48 30.1**	**+0.2**
	comp=Z,3.7nm,0.3s,baz=155,slow=8.4,SNR=73						
LPAZ				S	**S**	**02 49 47.0**	**-3.2**
	comp=Z,0.3nm,0.3s,baz=295,slow=17,SNR=6.5						
APLL	**PUNTA DE LOS L**	**7.30**	**181**	*i* P	**Pn**	**02 48 34.4**	**+0.6**
APLL				IAML		02 48 36.0	
	comp=Z,83nm,0.2s						
APLL				*i* S	**S**	**02 49 55.7**	**-1.9**
ACCO	**Cerro Coronel**	**7.87**	**197**	*i* P	**Pn**	**02 48 43.1**	**+1.9**
ACCO				*i* S	**S**	**02 50 09.7**	**-1.4**
AMOG	**MOGNA**	**8.07**	**193**	*i* P	**Pn**	**02 48 44.4**	**+0.8**
AMOG				*i* S	**S**	**02 50 12.5**	**-2.9**
RTLL	**Cerro Villicun**	**8.44**	**192**	*i* P	**Pn**	**02 48 48.6**	**+0.4**
RTLL				*i* S	**S**	**02 50 21.1**	**-3.0**
SIV	**San Ignacio**	**8.63**	**36**	P	**Pn**	**02 48 49.2**	**-1.5**
	comp=Z,3.6nm,0.3s,baz=236,slow=12,SNR=77						
CPUP	**Villa Florida**	**8.85**	**113**	P	**Pn**	**02 48 52.2**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=288,slow=12,SNR=3.9						
BDFB	**Brasilia**	**18.82**	**70**	P	**P**	**02 50 52.5**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=245,slow=12,SNR=9.8						
DBIC	**Dimbokro**	**66.96**	**72**	P	**P**	**02 57 16.9**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=227,slow=6.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**75.70**	**69**	P	**P**	**02 58 08.2**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=256,slow=5.6,SNR=36						
ESDC	**Sonseca Array**	**85.32**	**43**	P	**P**	**02 59 00.9**	**+1.6**
	comp=Z,0.9nm,0.8s,baz=236,slow=3.9,SNR=4.3						
ZALV	**Zalesovo Beam**	**142.30**	**28**	PKP	**PKPdf**	**03 05 54.2**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=305,slow=1.2,SNR=2.7						
MKAR	**Makanchi Array**	**145.44**	**39**	PKPbc	**PKiKP**	**03 06 01.4**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=305,slow=3.9,SNR=10						

ISCJB ***14*** *03:01:15.1±0.2, 7°.02S±0°.03×129°.75E±0°.04, h100^{km}, mb4.4/34, Error ellipse: s-maj=5.0km s-min=3.6km az=4.2*

NEIC ***14*** *03:01:19.5±0.5, 7°.02S×129°.73E, h126^{km}±5^{km}, mb4.6/19, Error ellipse: s-maj=5.5km s-min=5.3km az=45.0*

IDC ***14*** *03:01:19.6±2.0, 6°.90S×129°.68E, h119^{km}±18^{km}, mb3.9/16, mb1 4.0/18, mb1mx3.9/38, mbtmp4.4/18, MS3.3/8, Ms1 3.3/8, ms1mx3.0/38, Error ellipse: s-maj=15.6km s-min=12.1km az=75.0*

DJA ***14*** *03:01:19.9±0.2, 7°S±2°×13°0E±°, h124^{km}±4^{km}, M4.8/20, mB5.2/13, mb5.0/20, MLv5.1/10, Mw(mB)4.6/13*

ISC 14 03:01:17.7±0.3**, 6°.98S**±0°.03×**129°.70E**±0°.04**, h100**^{km}**, n124,** σ**1.^{s}86**/117**, mb4.4**/34**, 1C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.87**	**122**	*e*Pn	**Pn**	**03 01 52.6**	**+4.1**
SAUI				*e*Sn	**Sn**	**03 02 13.3**	**+1.1**
SAUI	**Saumlaki**	**1.87**	**122**	P	**Pn**	**03 01 52.7**	**+4.1**
SAUI				S	**Sn**	**03 02 17.4**	**+5.2**
BNDI	**Bandanaira**	**2.45**	**5**	P	**Pn**	**03 01 59.7**	**+3.5**
BNDI				S	**Sn**	**03 02 29.8**	**+4.1**
NLAI	**Namlea**	**4.53**	**325**	P	**Pn**	**03 02 28.2**	**+4.1**
FAKI	**Fak Fak**	**4.76**	**32**	*e*Pn	**Pn**	**03 02 28.5**	**+1.3**
FAKI				*e*Sn	**Sn**	**03 03 19.4**	**-2.0**
FAKI	**Fak Fak**	**4.76**	**32**	P	**Pn**	**03 02 28.0**	**+0.7**
SOEI	**Soe**	**6.04**	**242**	*e*Pn	**Pn**	**03 02 46.8**	**+2.0**
SOEI				*e*Sn	**Sn**	**03 03 51.1**	**-1.5**
SOEI	**Soe**	**6.04**	**242**	P	**Pn**	**03 02 47.2**	**+2.5**
	640nm,0.9s,6µm2.4nm						
SANI	**Sanana**	**6.14**	**323**	P	**Pn**	**03 02 50.0**	**+4.1**
	239nm,1.1s,2µm0.7nm						
SIJI	**Sorong**	**6.27**	**14**	P	**Pn**	**03 02 48.6**	**+0.9**
	20nm,0.3s,baz=215,slow=22,SNR=38						
SIJI				S	**Sn**	**03 03 55.5**	**-2.5**
	25nm,0.3s,baz=52,slow=23,SNR=23						
BATI	**Baumata**	**6.78**	**241**	P	**Pn**	**03 02 56.4**	**+1.8**
	220nm,1.0s,3µm0.8nm						
BATI	**Baumata**	**6.78**	**241**	P	**Pn**	**03 02 56.6**	**+1.9**
	68nm,0.3s,baz=125,slow=1.8,SNR=74						
BATI				S	**Sn**	**03 04 10.1**	**-0.3**
	42nm,0.3s,baz=307,slow=20,SNR=8.1						
BATI				LR	LR	03 05 04.8	
	comp=Z,172nm,18.8s,baz=68,slow=33						
RKPI	**Ransiki, Papua**	**7.03**	**40**	P	**Pn**	**03 02 59.6**	**+1.6**
	516nm,0.7s,5µm3.2nm						
BBSI	**Bau Bau**	**7.25**	**281**	P	Pn	03 03 05.7	+4.7
MMRI	**Maumere**	**7.58**	**257**	*e*Pn	**Pn**	**03 03 08.6**	**+3.1**
MMRI	**Maumere**	**7.58**	**257**	P	Pn	03 03 11.4	+5.9
TNTI	**Ternate**	**8.05**	**343**	*e*Pn	Pn	03 03 16.5	+4.6
TNTI	**Ternate**	**8.05**	**343**	P	Pn	03 03 17.5	+5.6
LUWI	**Luwuk**	**9.09**	**310**	*e*Pn	**Pn**	**03 03 23.7**	**-2.3**
LUWI				*e*Sn	Sn	03 05 23.5	+17
LUWI	**Luwuk**	**9.09**	**310**	P	Pn	03 03 40.0	+14
BASI	**Baing, Sumba**	**9.58**	**250**	P	**Pn**	**03 03 33.6**	**+0.9**
BKSI	**Bulukumba**	**9.67**	**279**	P	**Pn**	**03 03 37.7**	**+3.8**
BNSI	**Bone**	**9.89**	**285**	P	Pn	03 03 47.4	+10
APSI	**Ampana**	**10.04**	**307**	P	Pn	03 03 45.0	+5.9
MRSI	**Marisa**	**10.72**	**313**	P	Pn	03 03 52.8	+4.6
FITZ	**Fitzroy Crossi**	**11.74**	**199**	*e*Pn	Pn	03 03 59.3	-2.6
FITZ				*e*Sn	Sn	03 06 00.4	-11
FITZ	**Fitzroy Crossi**	**11.74**	**199**	P	Pn	03 03 59.2	-2.8
	10nm,0.3s,baz=31,slow=11,SNR=209						
FITZ				S	Sn	03 05 59.9	-11
	7.2nm,0.3s,baz=88,slow=20,SNR=15						
JAY	**Jayapura**	**11.82**	**68**	P	**Pn**	**03 04 04.4**	**+1.2**
	2.7nm,0.3s,baz=230,slow=14,SNR=4.4						
PLAI	**Plampang**	**11.96**	**260**	P	**Pn**	**03 04 03.5**	**-1.4**
MPSI	**Mapaga**	**12.19**	**306**	P	**P**	**03 04 18.9**	**+2.6**
WRAB	**Tennant Creek**	**13.64**	**161**	*e*Pn	Pn	03 04 23.6	-3.5
WRAB				*e*Sn	Sn	03 06 47.7	-10
WRA	**Warramunga Arr**	**13.65**	**161**	P	Pn	03 04 23.6	-3.5
	9.5nm,0.3s,baz=344,slow=13,SNR=306						
WRA				S	Sn	03 06 46.0	-11
	12nm,0.3s,baz=336,slow=22,SNR=11						
WRA				LR	LR	03 10 37.4	
	comp=Z,274nm,18.1s,baz=335,slow=41						
WR1	**Warramunga Arr**	**13.65**	**161**	*e*Pn	Pn	03 04 23.6	-3.5
WR1				*e*Sn	Sn	03 06 46.0	-11
KCP	**Kidapawan**	**14.64**	**342**	⇓*e*P	**P**	**03 04 43.4**	**-0.3**
COEN	**Coen**	**14.95**	**119**	*e*Pn	**Pn**	**03 04 43.4**	**-0.4**
COEN				*e*Sn	Sn	03 07 16.2	-13
JAGI	**Jajag, Banyuwa**	**15.48**	**264**	*e*Pn	**Pn**	**03 04 49.4**	**-1.2**
	15nm,0.9s						
AS31	**Alice Springs**	**17.07**	**167**	*e*P	**Pn**	**03 05 08.5**	**-1.8**
AS31				*e*Pn	**P**	**03 05 08.9**	**-1.6**
AS31				*e*S	Sn	03 08 11.3	-8.9
ASAR	**Alice Springs**	**17.07**	**167**	P	**Pn**	**03 05 08.9**	**-1.4**
	4.3nm,0.3s,baz=343,slow=9.7,SNR=175						
ASAR				S	Sn	03 08 11.3	-8.9
	3.9nm,0.3s,baz=344,slow=24,SNR=8.7						
ASAR				LR	LR	03 12 31.8	
	comp=Z,136nm,19.2s,baz=319,slow=39						
MBWA	**Marble Bar**	**17.08**	**213**	*e*P	**Pn**	**03 05 10.2**	**-0.1**
	49nm,0.8s						
AS01	**Alice Springs**	**17.08**	**167**	*e*P	**Pn**	**03 05 08.6**	**-1.8**
PWJI	**Pagerwojo**	**17.78**	**266**	P	Pn	03 05 26.0	+7.1
KKM	**Kota Kinabalu**	**18.67**	**314**	*e*P	**Pn**	**03 05 32.2**	**+2.5**
	31nm,0.9s						
SBUM	**Sibu**	**19.81**	**298**	*e*P	**P**	**03 05 42.6**	**+2.2**
	11nm,0.7s						
CTA	**Charters Tower**	**20.68**	**131**	P	**P**	**03 05 51.0**	**+1.2**
	4.5nm,0.7s,baz=325,slow=13,SNR=3.6						
CTA				S	**S**	**03 09 42.4**	**+7.0**
	2.6nm,0.5s,baz=263,slow=8.1,SNR=1.9						
CTAO	**Charters Tower**	**20.68**	**131**	*e*P	**P**	**03 05 48.5**	**-1.3**
	32nm,1.1s						
GIRL	**Giralia**	**21.55**	**222**	*e*P	**P**	**03 06 00.0**	**+0.9**
	132nm,1.1s						
CISI	**Cisompet, Garu**	**21.72**	**267**	*e*P	**P**	**03 05 59.3**	**-1.8**
	38nm,0.6s						
CISI	**Cisompet, Garu**	**21.72**	**267**	P	**P**	**03 06 00.9**	**-0.2**
FORT	**Forrest**	**23.73**	**184**	*e*P	**P**	**03 06 21.4**	**+0.7**
	35nm,0.7s						
PMBI	**Palembang**	**25.16**	**278**	P	**P**	**03 06 38.4**	**+4.5**
MORW	**Morawa**	**25.47**	**209**	*e*P	**P**	**03 06 34.5**	**-2.1**
	19nm,0.8s						
BBOO	**Buckleboo**	**26.37**	**168**	*e*P	**P**	**03 06 43.6**	**-1.1**
	6.9nm,0.9s						
STKA	**Stephens Creek**	**27.14**	**157**	*e*P	**P**	**03 06 52.2**	**+0.7**
	1.2nm,0.8s						
STKA	**Stephens Creek**	**27.14**	**157**	P	**P**	**03 06 52.2**	**+0.7**
	2.8nm,0.4s,baz=339,slow=7.7,SNR=11						
STKA				LR	LR	03 19 03.6	
	comp=Z,132nm,19.9s,baz=20,slow=39						
NWAO	**Narrogin (SRO)**	**28.30**	**203**	P	**P**	**03 07 02.1**	**+0.2**
	12nm,0.8s,baz=252,slow=8.1,SNR=6.0						
HNR	**Honiara**	**30.03**	**97**	LR	LR	03 19 19.8	
	comp=Z,118nm,19.2s,baz=87,slow=36						
PSI	**Prapat**	**32.22**	**287**	*e*P	**P**	**03 07 37.4**	**+0.5**
	15nm,0.8s						
PSI	**Prapat**	**32.22**	**287**	P	**P**	**03 07 36.6**	**-0.3**
	16nm,0.8s,baz=177,slow=1.2,SNR=14						
PSI				LR	LR	03 22 35.1	
	comp=Z,89nm,18.3s,baz=269,slow=40						
UTTA	**Uttaradit**	**37.85**	**311**	P	**P**	**03 08 24.7**	**-0.3**
	3.9nm,0.8s,96nm						
SUKH	**Sukhothai**	**38.39**	**310**	P	**P**	**03 08 29.8**	**+0.3**
	3.5nm,0.8s						
CM31	**Chiang Mai Arr**	**39.49**	**310**	*e*P	**P**	**03 08 38.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**39.49**	**310**	P	**P**	**03 08 38.5**	**-0.3**
	3.0nm,0.6s,baz=143,slow=7.4,SNR=15						
CMAR				LR	LR	03 26 01.0	
	comp=Z,5.2nm,18.2s,baz=105,slow=38						
CMMT	**Chiang Mai**	**39.70**	**311**	P	**P**	**03 08 40.4**	**-0.1**
	12nm,1.1s						
CHTO	**Chiang Mai**	**39.71**	**311**	*e*P	**P**	**03 08 40.1**	**-0.5**
	9.1nm,0.9s						
CHTO	**Chiang Mai**	**39.71**	**311**	P	**P**	**03 08 40.4**	**-0.2**
	54nm,0.9s						
NJ2	**Nanjing**	**40.17**	**346**	*e*P	**P**	**03 08 42.6**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KS15	**Wonju Array Si**	**44.22**	**358**	*e*P	**P**	**03 09 16.8**	**-0.2**
KSAR	**Wonju Array Be**	**44.22**	**358**	P	**P**	**03 09 16.8**	**-0.2**
KSRS	**Korea Array**	**44.23**	**358**	P	**P**	**03 09 16.8**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=182,slow=8.7,SNR=2.6						
KSRS				LR	LR	03 26 41.4	
	comp=Z,21nm,19.2s,baz=174,slow=34						
CD2	**Chengdu**	**45.13**	**328**	*e*P	**P**	**03 09 24.0**	**-0.4**
XAN	**Xi'an**	**45.30**	**336**	P	**P**	**03 09 23.8**	**-1.9**
XAN				pP	pP	03 09 36.0	-12
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN	**Xi'an**	**45.30**	**336**	*e*P	**P**	**03 09 24.4**	**-1.3**
	comp=Z,12nm,1.4s						
LZH	**Lanzhou**	**49.25**	**332**	*e*P	**P**	**03 09 56.1**	**-0.3**
LZH				pP	pP	03 10 15.0	-4.6
LZH				sP	pwP	03 10 27.8	+5.2
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC	**Hu-ho-hao-te**	**50.44**	**342**	*e*P	**P**	**03 10 06.3**	**+1.0**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,6.0s						
CN2	**Changchun**	**50.69**	**356**	*e*P	**P**	**03 10 08.5**	**+1.5**
USRK	**Ussuriysk Ar.**	**50.98**	**2**	P	**P**	**03 10 08.4**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=147,slow=5.8,SNR=2.9						
GTA	**Gaotai**	**53.81**	**331**	⇑P	**P**	**03 10 30.3**	**-0.1**
GTA				pP	pwP	03 11 00.6	+4.4
GTA				sP	sP	03 11 13.3	+8.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JIRN	**Jiri**	**54.35**	**311**	*e*P	**P**	**03 10 33.4**	**-1.4**
	comp=Z,16nm,0.4s						
GUN	**Gumba**	**54.72**	**311**	*e*P	**P**	**03 10 35.9**	**-1.5**
	comp=Z,30nm,0.7s						
PKI	**Pulchoki**	**54.89**	**311**	*e*P	**P**	**03 10 37.4**	**-1.2**
	comp=Z,7.4nm,0.5s						
PKIN	**Phulchoki**	**54.90**	**311**	*e*P	**P**	**03 10 37.4**	**-1.3**
	comp=Z,8.0nm,0.6s						
DMN	**Daman**	**55.14**	**311**	*e*P	**P**	**03 10 39.0**	**-1.3**
	comp=Z,13nm,0.7s						
KOLN	**Koldanda**	**56.36**	**310**	*e*P	**P**	**03 10 47.5**	**-1.5**
	comp=Z,16nm,0.6s						
DANN	**Dangsing**	**56.54**	**311**	*e*P	**P**	**03 10 48.9**	**-1.5**
PYUN	**Piuthan**	**56.99**	**310**	*e*P	**P**	**03 10 52.5**	**-1.0**
	comp=Z,27nm,0.6s						
ULN	**Ulaanbaatar**	**58.16**	**342**	*e*P	**P**	**03 11 01.1**	**-0.1**
	comp=Z,2.4nm,0.6s						
SONA0	**Songino Array**	**58.33**	**342**	*e*P	**P**	**03 11 02.1**	**-0.3**
SONM	**Songino Array**	**58.33**	**342**	P	**P**	**03 11 02.1**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=153,slow=6.2,SNR=10						
SONA1	**Songino Array**	**58.34**	**342**	*e*P	**P**	**03 11 01.7**	**-0.7**
WMQ	**Urumqi**	**63.22**	**327**	P	**P**	**03 11 37.3**	**+1.8**
PETK	**Petropavlovsk-**	**64.40**	**18**	P	**P**	**03 11 42.2**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=181,slow=7.2,SNR=3.1						
PEA1	**Petropavlovsk-**	**64.40**	**18**	*e*P	**P**	**03 11 42.2**	**-0.8**
MK01	**Makanchi Array**	**68.03**	**327**	*e*P	**P**	**03 12 05.3**	**-1.1**
MK31	**Makanchi Array**	**68.05**	**327**	*e*P	**P**	**03 12 05.8**	**-0.7**
MK32	**Makanchi Array**	**68.05**	**327**	*e*P	**P**	**03 12 05.8**	**-0.7**
MKAR	**Makanchi Array**	**68.05**	**327**	*e*P	**P**	**03 12 05.8**	**-0.7**
	comp=Z,28nm,0.9s						
MKAR	**Makanchi Array**	**68.05**	**327**	P	**P**	**03 12 05.8**	**-0.7**
	comp=Z,2.8nm,0.4s,baz=113,slow=8.5,SNR=105						
MAKZ	**Makanchi**	**68.23**	**327**	*e*P	**P**	**03 12 06.8**	**-0.8**
	comp=Z,7.6nm,1.4s						
AAK	**Ala-Archa**	**70.34**	**320**	P	**P**	**03 12 20.8**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=100,slow=5.6,SNR=5.3						
ZALV	**Zalesovo Beam**	**71.44**	**334**	*e*P	**P**	**03 12 25.2**	**-1.9**
ZALV	**Zalesovo Beam**	**71.44**	**334**	P	**P**	**03 12 25.6**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=116,slow=3.9,SNR=7.3						
ZAA1	**Zalesovo Array**	**71.44**	**334**	*e*P	**P**	**03 12 25.6**	**-1.5**
KURK	**Kurchatov**	**72.35**	**329**	*e*P	**P**	**03 12 31.8**	**-0.8**
	comp=Z,3.4nm,0.9s						
WSAR	**Wadi Sarin**	**75.59**	**296**	P	**P**	**03 12 51.5**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=183,slow=4.3,SNR=5.9						
GEYT	**Alibeck**	**79.98**	**310**	P	**P**	**03 13 14.8**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=35,slow=5.3,SNR=3.4						
OPO	**Ambohidratompo**	**80.74**	**252**	P	**P**	**03 13 20.3**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=114,slow=10.0,SNR=2.9						
ABKAR	**Akbulak array**	**82.31**	**322**	*e*P	**P**	**03 13 27.0**	**-1.3**
QSPA	**South Pole Qui**	**83.00**	**180**	*e*P	**P**	**03 13 31.5**	**-0.2**
	comp=Z,6.0nm,0.9s						
SYO	**Syowa Base**	**83.57**	**201**	⇓*e*X	P	03 13 29.0	-5.4
RAYN	**Ar Rayn**	**87.47**	**294**	*e*P	**P**	**03 13 54.2**	**-0.6**
	comp=Z,4.1nm,1.0s						
ILAR	**Eielson Array**	**93.45**	**25**	P	**P**	**03 14 19.1**	**-2.6**
	comp=Z,0.4nm,0.8s,baz=274,slow=3.7,SNR=4.9						
ILB	**Eielson Array**	**93.45**	**25**	*e*P	**P**	**03 14 19.1**	**-2.6**
ARA0	**ARCESS Array S**	**101.46**	**340**	*e*Pdif	**Pdif**	**03 14 55.5**	**-2.2**
ARCES	**ARCESS Array B**	**101.46**	**340**	P	**Pdif**	**03 14 55.5**	**-2.2**
	comp=Z,2.9nm,1.0s,baz=90,slow=7.2,SNR=2.8						
YKA	**Yellowknife Ar**	**107.86**	**26**	PKiKP	**PKiKP**	**03 19 31.0**	**-2.1**
	comp=Z,0.1nm,0.6s,baz=290,slow=1.5,SNR=4.3						
YKB5	**Yellowknife Ar**	**107.86**	**26**	*e*PKiKP	**PKiKP**	**03 19 31.0**	**-2.1**
PD31	**Pinedale Array**	**117.08**	**45**	*e*PKPdf	**PKPdf**	**03 19 51.3**	**-0.4**
PDAR	**Pinedale Array**	**117.08**	**45**	PKP	**PKPdf**	**03 19 51.3**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=290,slow=5.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	**128.52**	**281**	PKP	**PKPdf**	**03 20 12.9**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=120,slow=2.4,SNR=4.1						
TOA1	**Torodi Ar. Sit**	**128.52**	**281**	*e*PKPdf	**PKPdf**	**03 20 12.9**	**-1.1**
CPUP	**Villa Florida**	**146.19**	**169**	*e*PKPdf	**PKPdf**	**03 20 47.3**	**+1.2**
CPUP	**Villa Florida**	**146.19**	**169**	PKPbc	**PKPdf**	**03 20 47.4**	**+1.3**
	comp=Z,8.3nm,0.9s,baz=200,slow=2.6,SNR=23						
LPAZ	**La Paz**	**150.91**	**143**	*e*PKPbc	**PKPbc**	**03 21 00.3**	**-0.3**
LPAZ	**La Paz**	**150.91**	**143**	PKPbc	**PKPbc**	**03 21 00.5**	**0.0**
	comp=Z,1.2nm,0.4s,baz=16,slow=2.5,SNR=10						

MEX 14 03:07:48.4±0.9**, 16°.32N**×**98°.02W, h5**^{km}**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.12**	**307**	*e*P	Pg	03 07 50.1	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG				eS	Sg	03 07 52.7	0.0
VHO	**Vista Hermosa**	1.45	59	eP	Pn	03 08 12.1	-3.4
VHO				eS	Sb	03 08 30.3	-4.5
MEIG	**Mezcala**	2.21	317	eP	Pn	03 08 23.9	-1.9
MEIG				eS	Sn	03 08 51.0	-2.7

IDC 14 03:14:00.5±1.4**, 2°.91S**×**130°.24E, h0**^{km}**, mb3.5**/2**, mb1 3.6**/5**, mb1mx3.4**/36**, mbtmp3.4**/5**, ML3.4**/3**, Error ellipse: s-maj=46.6km s-min=20.2km az=95.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	2.27	27	Pn	Pn	03 14 40.5	+1.1
	3.2nm,0.3s,baz=270,slow=20,SNR=15						
SIJI				Sn	Sn	03 15 07.4	-0.7
	5.5nm,0.3s,baz=218,slow=22,SNR=9.7						
FITZ	**Fitzroy Crossi**	15.75	196	Pn	Pn	03 17 45.5	+1.6
	0.1nm,0.3s,baz=23,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	17.40	167	P	Pn	03 18 05.2	+0.3
	0.2nm,0.3s,baz=348,slow=11,SNR=16						
ASAR	**Alice Springs**	20.94	171	P	P	03 18 44.1	-0.9
	1.1nm,0.3s,baz=350,slow=10,SNR=14						
MKAR	**Makanchi Array**	64.98	326	P	P	03 24 42.3	-0.1
	0.1nm,0.5s,baz=116,slow=7.6,SNR=2.8						

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*ECX **14** 03:17:33.9±0.6, 31°.83N×116°.20W, h6^{km}, MD2.5, ML2.7, Fault plane solution: NP1:ϕ_s48.33000°, δ60.00000°, λ0.00000°.*
*MEX **14** 03:17:34.7±0.3, 31°.80N×116°.29W, h10^{km}, MD3.8*
ISC 14 03:17:32.3±1.0**, 31°.83N**±0°.03×**116°.19W**±0°.03**, h14**^{km}±11^{km}**, n19, σ0^{s}.48**/31**, 6C-11D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAX	**El Zacaton**	0.33	192	⇓eP	Pb	03 17 39.6	-0.3
ZAX				eS	Sb	03 17 44.5	-0.6
ECNX	**Esteban Cantu**	0.39	243	⇑eP	Pg	03 17 40.9	+0.7
ECNX				⇑eP	Pb	03 17 40.7	-0.3
ECNX				eS	Sb	03 17 46.4	-0.4
ECNX				eS	Sb	03 17 46.5	-0.4
PBX	**Punta Banda**	0.46	259	⇑eP	Pb	03 17 42.1	-0.1
CBX	**Cerro Bola**	0.62	320	eP	Pb	03 17 45.1	+0.1
CBX				eS	Sg	03 17 53.2	+0.3
CBX	**Cerro Bola**	0.62	320	⇓eP	Pb	03 17 45.1	+0.1
CBX				eS	Sg	03 17 53.4	+0.5
CBX				IAML		03 17 54.5	
	comp=N,424nm,0.5s						
TJIG	**Tijuana**	0.73	326	eP	Pb	03 17 46.8	0.0
TJIG				eS	Sg	03 17 56.2	+0.2
TJIG	**Tijuana**	0.73	326	⇓eP	Pb	03 17 46.7	0.0
TJIG				eS	Sg	03 17 56.0	-0.1
RMX	**La Rumorosa**	0.77	7	⇓iP	Pg	03 17 47.4	-0.1
RMX				eS	Sg	03 17 56.5	-1.1
RMX				IAML		03 17 57.2	
	comp=N,323nm,0.2s						
RMX				⇑e		03 17 57.2	
IKP	**In-Ko-Pah, Jac**	0.82	5	⇓iP	Pb	03 17 48.9	+0.5
IKP				eS	Sg	03 17 59.0	-0.1
BAR	**Barrett**	0.94	334	⇓eP	Pg	03 17 50.2	-0.3
CPBX	**Cerro Prieto**	0.95	52	⇑eP	Pn	03 17 51.9	+0.6
SPIG	**San Pedro Mart**	1.00	141	eP	Pb	03 17 51.6	0.0
SPIG				eS	Sb	03 18 04.7	-0.1
SPIG	**San Pedro Mart**	1.00	141	⇓eP	Pb	03 17 51.6	0.0
SPX	**San Pedro Mart**	1.00	141	eP	Pb	03 17 51.6	0.0
SPX				eS	Sg	03 18 04.4	-0.4
SPX	**San Pedro Mart**	1.00	141	⇓eP	Pb	03 17 51.6	0.0
WESC	**Westside Schoo**	1.00	23	⇑eP	Pn	03 17 52.7	+0.8
MONP2	**Monument Peak**	1.07	350	⇓eP	Pg	03 17 52.9	-0.2
SDRC	**San Diego Road**	1.10	325	⇓eP	Pg	03 17 52.9	-0.7
EML	**El Monte Cty P**	1.19	333	⇓eP	Pg	03 17 54.1	-1.1

IDC 14 03:19:23.7±12.0**, 5°.57N**×**94°.86E, h201**^{km}±110^{km}**, mb3.2**/6**, mb1 3.3**/7**, mb1mx3.0**/35**, mbtmp3.7**/7**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/14**, Error ellipse: s-maj=115.5km s-min=15.3km az=59.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	13.42	17	P	Pn	03 22 27.1	+0.6
	0.5nm,0.3s,baz=215,slow=11,SNR=4.3						
LEM	**Lembang**	17.71	134	LR	LR	03 30 39.6	
	comp=Z,70nm,18.9s,baz=202,slow=38						
MKAR	**Makanchi Array**	42.48	347	P	P	03 26 58.5	-0.6
	0.9nm,0.6s,baz=164,slow=9.2,SNR=14						
SONM	**Songino Array**	43.26	11	P	P	03 27 05.2	-0.2
	0.6nm,0.9s,baz=195,slow=6.6,SNR=4.1						
WRA	**Warramunga Arr**	46.36	124	P	P	03 27 30.2	0.0
	0.6nm,0.6s,baz=302,slow=9.4,SNR=9.5						
ASAR	**Alice Springs**	47.91	129	P	P	03 27 41.8	-0.3
	0.1nm,0.3s,baz=302,slow=7.5,SNR=3.3						
ZALV	**Zalesovo Beam**	48.92	352	P	P	03 27 49.4	+0.1
	0.5nm,0.2s,baz=172,slow=4.5,SNR=3.8						
ARCES	**ARCESS Array B**	77.67	340	P	P	03 30 58.2	+0.6
	9.0nm,1.1s,baz=92,slow=6.4,SNR=4.6						

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*JMA **14** 03:19:28.5±0.1, 24°.59N×122°.58E, h99^{km}±1^{km}, M2.0*
*TAP **14** 03:19:28.9, 24°.64N×122°.60E, h91^{km}±1^{km}, ML3.3, C*
*ISCJB **14** 03:19:29.1±0.4, 24°.65N±0°.03×122°.60E±0°.02, h91^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=2.5km az=177.2*
ISC 14 03:19:28.5±1.4**, 24°.66N**±0°.04×**122°.60E**±0°.02**, h98**^{km}±7^{km}**, n91, σ0^{s}.99**/154**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.38	124	P	Pn	03 19 43.4	+0.1
JYNG				S	Sn	03 19 54.3	-0.1
YOJ	**Yonaguni jima**	0.43	118	eP	Pn	03 19 43.4	-0.2
	baz=114						
YOJ				eS	Sn	03 19 55.3	+0.4
	baz=114						
YOJ	**Yonaguni jima**	0.43	118	P	Pn	03 19 43.6	0.0
YOJ				eS	Sn	03 19 54.8	-0.1
EOS1	**EOS1**	0.44	255	eP	Pn	03 19 44.0	+0.3
	baz=258						
EOS1				eS	Sn	03 19 55.4	+0.4
	baz=258						
TWB1	**Santiao Chiao**	0.65	302	eP	Pn	03 19 45.3	0.0
	baz=303						
TWC	**Suao**	0.68	266	P	Pn	03 19 45.6	-0.1
	baz=267						
TWC				eS	Sn	03 19 57.4	-1.0
	baz=267						
NTC	**Toucheng**	0.72	285	eS	Sn	03 19 58.2	-0.9
	baz=287						
TIPB	**Shuangxi**	0.77	294	P	Pn	03 19 47.0	+0.6
	baz=295						
TIPB				eS	Sn	03 19 59.0	-0.9
	baz=295						
NANB	**Nanao**	0.81	253	P	Pn	03 19 47.1	+0.3
	baz=254						
NANB				eS	Sn	03 19 59.8	-0.7
	baz=254						
ENA	**Nanau**	0.81	253	P	Pn	03 19 47.0	+0.1
	baz=254						
ENA				eS	Sn	03 19 59.8	-0.8
	baz=254						
NWF	**Wu-fen Shan**	0.84	299	P	Pn	03 19 47.5	+0.2
	baz=300						
NWF				eS	Sn	03 20 00.7	-0.6
	baz=300						
WFSB	**Wu-fen Shan**	0.84	299	P	Pn	03 19 47.4	+0.3
	baz=300						
WFSB				S	Sn	03 20 01.3	+0.1
	baz=300						
TWE	**Neicheng**	0.85	274	P	Pn	03 19 47.3	+0.1
	baz=275						
TWE				eS	Sn	03 20 00.8	-0.5
	baz=275						
SLBB	**Yuanshan**	0.88	276	P	Pn	03 19 48.1	+0.5
	baz=277						
SLBB				eS	Sn	03 20 02.1	+0.2
	baz=277						
ENTT	**Nioudou**	0.94	269	P	Pn	03 19 48.9	+0.7
	baz=270						
ENTT				eS	Sn	03 20 02.8	-0.2
	baz=270						
TWA	**Mucha**	0.97	289	eS	Sn	03 20 03.2	-0.5
	baz=290						
NDT	**Datong Townshi**	0.99	267	P	Pn	03 19 49.8	+1.0
	baz=268						
NDT				S	Sn	03 20 04.6	+0.7
	baz=268						
NWLT	**Wulai**	1.00	277	eP	Pn	03 19 49.6	+0.7
	baz=277						
NWLT				S	Sn	03 20 05.4	+1.2
	baz=277						
NHDH	**Xindian Distri**	1.02	287	eP	Pn	03 19 49.9	+0.9
	baz=288						
NHDH				eS	Sn	03 20 03.5	-0.9
	baz=288						
NACB	**Ninganchiao**	1.04	242	P	Pn	03 19 49.1	-0.2
	baz=243						
NACB				eS	Sn	03 20 04.4	-0.4
	baz=243						
YM01	**YM01**	1.05	297	eP	Pn	03 19 49.6	+0.2
	baz=298						
YM01				eS	Sn	03 20 04.7	-0.5
	baz=298						
YM04	**YM04**	1.08	297	eP	Pn	03 19 49.9	+0.1
	baz=297						
YM04				eS	Sn	03 20 05.3	-0.4
	baz=297						
IRIF	**Iriomote-Funau**	1.08	107	P	Pn	03 19 49.7	0.0
IRIF				S	Sn	03 20 06.0	+0.3
TWD	**Chiawan**	1.08	238	eP	Pn	03 19 50.0	+0.3
	baz=238						
TWD				eS	Sn	03 20 05.1	-0.6
	baz=238						
YHNB	**Yeheng**	1.11	271	P	Pn	03 19 50.9	+0.7
	baz=271						
YHNB				eS	Sn	03 20 06.7	+0.2
	baz=271						
ETLH	**Xiulin Townshi**	1.11	246	P	Pn	03 19 50.3	+0.1
	baz=247						
ETLH				eS	Sn	03 20 06.2	-0.3
	baz=247						
NSK	**Sanguang**	1.13	271	P	Pn	03 19 51.0	+0.7
	baz=271						
NSK				eS	Sn	03 20 06.9	+0.1
	baz=271						
NNSB	**Datong**	1.13	258	S	Sn	03 20 07.4	+0.5
	baz=259						
NNS	**Nan Shan**	1.14	259	eP	Pn	03 19 51.0	+0.5
	baz=259						
NNS				S	Sn	03 20 06.8	-0.2
	baz=259						
NTST	**Danshui**	1.16	296	eS	Sn	03 20 07.2	0.0
	baz=296						
TWS1	**Kuangyinshan**	1.16	292	eS	Sn	03 20 07.1	-0.1
	baz=293						
ENLB	**Shoufeng**	1.18	230	eS	Sn	03 20 08.3	+0.5
	baz=231						
HATJ	**Hateruma jima**	1.26	119	eS	Sn	03 20 09.3	0.0
NCU	**National Centr**	1.32	284	eS	Sn	03 20 11.4	+0.8
	baz=284						
NCUH	**Zhongli**	1.32	284	eS	Sn	03 20 11.5	+0.8
	baz=284						
WHF	**Hehuan Shan**	1.32	247	P	Pn	03 19 53.6	+0.6
	baz=247						
WHF				eS	Sn	03 20 10.7	-0.7
	baz=247						
JKRS	**Kuro-shima**	1.35	108	P	Pn	03 19 53.4	+0.5
JKRS				S	Sn	03 20 11.9	+0.6
ESL	**Shilin**	1.36	232	eP	Pn	03 19 52.8	-0.2
	baz=232						
ESL				eS	Sn	03 20 09.6	-1.9
	baz=232						
TWT	**Tachien**	1.36	253	eP	Pn	03 19 54.3	+1.1
	baz=253						
TWT				eS	Sn	03 20 12.1	+0.3
	baz=253						
TDCB	**Techi**	1.38	253	P	Pn	03 19 54.3	+1.0
	baz=253						
TDCB				eS	Sn	03 20 12.2	+0.1
	baz=253						
CHGB	**Renai**	1.43	245	P	Pn	03 19 54.5	+0.4
	baz=246						
CHGB				eS	Sn	03 20 13.3	-0.1
	baz=246						
JIJ	**Ishigaki jima**	1.44	102	P	Pn	03 19 54.1	+0.2
JIJ				S	Sn	03 20 12.8	-0.4
LIOB	**Emei**	1.44	270	eP	Pn	03 19 55.2	+1.2
	baz=270						
LIOB				S	Sn	03 20 13.1	-0.2
	baz=270						
NSTT	**Nanjuang**	1.45	269	eS	Sn	03 20 13.5	-0.1
	baz=269						
EGFH	**Guangfu**	1.46	227	eP	Pn	03 19 54.1	0.0
	baz=228						
EGFH				eS	Sn	03 20 12.9	-0.7
	baz=228						
SBCB	**Hsinchu**	1.47	275	eS	Sn	03 20 14.5	+0.6
	baz=276						
OWD	**Renai**	1.48	242	P	Pn	03 19 55.2	+0.6
	baz=242						
OWD				S	Sn	03 20 13.8	-0.5
	baz=242						
WHP	**Taichung City**	1.55	256	P	Pn	03 19 57.2	+1.7
	baz=256						
WHP				eS	Sn	03 20 16.4	+0.5
	baz=256						
JISG	**Ishigakijimahi**	1.56	92	P	Pn	03 19 55.6	+0.2
JISG				S	Sn	03 20 15.6	-0.2
HGSD	**Ruisui**	1.59	223	P	Pn	03 19 56.9	+1.1
	baz=223						
HGSD				eS	Sn	03 20 16.2	-0.2
	baz=223						
VWDT	**VWDT**	1.61	236	P	Pn	03 19 56.6	+0.5
	baz=236						
VWDT				eS	Sn	03 20 17.0	0.0
	baz=236						
EHY	**Hungye**	1.64	226	eP	Pn	03 19 56.1	-0.3
	baz=225						
EHY				eS	Sn	03 20 16.0	-1.7
	baz=225						
NMLH	**Miaoli**	1.65	266	P	Pn	03 19 57.4	+0.8
	baz=266						
NMLH				eS	Sn	03 20 17.7	-0.2
	baz=266						
NSY	**Sanyi**	1.69	262	eP	Pn	03 19 58.2	+1.1
	baz=262						
NSY				eS	Sn	03 20 19.4	+0.6
	baz=262						
TWQ1	**Liyutan**	1.69	260	P	Pn	03 19 58.0	+0.8
	baz=260						
TWQ1				eS	Sn	03 20 19.4	+0.5
	baz=260						
SMLT	**Sun Moon Lake**	1.73	244	eP	Pn	03 19 58.6	+0.9
	baz=244						
SMLT				eS	Sn	03 20 21.7	+1.7
	baz=244						
SSLB	**Suanglung**	1.74	240	eP	Pn	03 19 59.5	+1.8
	baz=240						
SSLB				eS	Sn	03 20 20.2	+0.3
	baz=240						
YULB	**Yu-li**	1.74	223	P	Pn	03 19 57.5	-0.3
	baz=223						
YULB				eS	Sn	03 20 19.8	-0.1
	baz=223						
TYC	**Yuchr**	1.76	245	eP	Pn	03 19 60.0	+2.0
	baz=245						
TYC				eS	Sn	03 20 22.4	+2.0
	baz=245						
TWF1	**Yuli**	1.77	223	P	Pn	03 19 58.1	+0.1
	baz=222						
TWF1				eS	Sn	03 20 20.3	-0.2
	baz=222						
WDJ	**Dajia District**	1.81	260	eS	Sn	03 20 22.0	+0.5
	baz=260						
WHYT	**Xinyi Township**	1.86	239	eP	Pn	03 20 01.2	+1.9
	baz=239						
WHYT				eS	Sn	03 20 23.1	+0.3
	baz=239						
WJS	**Zhushan**	1.90	244	eP	Pn	03 20 01.7	+1.9
	baz=244						
WJS				eS	Sn	03 20 24.2	+0.6
	baz=244						
JTJ	**Tarama**	1.91	90	S	Sn	03 20 24.4	+0.5
WNT	**Mingjian**	1.91	246	eP	Pn	03 20 01.6	+1.6
	baz=246						
WNT				eS	Sn	03 20 25.8	+1.9
	baz=246						
CHKT	**Chengkung**	1.92	216	eP	Pn	03 19 59.8	-0.3
	baz=216						
CHKT				eS	Sn	03 20 22.3	-1.8
	baz=216						
CHN5	**Tsauling**	2.05	239	eP	Pn	03 20 02.9	+1.1
	baz=239						
CHN5				eS	Sn	03 20 27.5	+0.3
	baz=239						
ELDTW	**Lidau**	2.06	225	eP	Pn	03 20 02.1	+0.1
	baz=225						
ELDTW				eS	Sn	03 20 26.6	-0.9
	baz=225						
WDLH	**Douliu**	2.12	243	eP	Pn	03 20 03.9	+1.3
	baz=243						
WDLH				eS	Sn	03 20 27.9	-0.7
	baz=243						
RLNB	**Erlin**	2.18	250	eS	Sn	03 20 30.4	+0.3
	baz=250						
CHN4	**Tsaushan**	2.25	235	eP	Pn	03 20 06.0	+1.7
	baz=235						
STYT	**Tauyuan**	2.25	229	eP	Pn	03 20 05.4	+1.0
	baz=228						
STYT				eS	Sn	03 20 33.0	+1.2
	baz=228						
WTP	**Ta-pu**	2.30	233	eP	Pn	03 20 06.3	+1.3
	baz=232						
WTP				eS	Sn	03 20 32.5	-0.4
	baz=232						
CHY	**Chiayi**	2.30	240	eP	Pn	03 20 06.3	+1.4
	baz=240						
TWGBT	**Beinan**	2.31	217	eP	Pn	03 20 05.3	+0.2
	baz=217						
TWGBT				eS	Sn	03 20 31.7	-1.3
	baz=217						
TWG	**Pinlang**	2.31	218	eP	Pn	03 20 05.5	+0.4
	baz=217						
TWG				eS	Sn	03 20 31.8	-1.3
	baz=217						
JIRB	**Irabujima**	2.35	85	eS	Sn	03 20 34.5	+0.6
TWK	**Hsinying**	2.38	235	eP	Pn	03 20 07.7	+1.6
	baz=234						
CHN1	**Nanshi**	2.40	233	eP	Pn	03 20 07.5	+1.2
	baz=232						
SNST	**Tainan City**	2.40	234	eP	Pn	03 20 07.3	+1.0
	baz=233						
SGST	**Jiashian**	2.43	230	eP	Pn	03 20 08.7	+2.1
	baz=229						
SLGT	**Liugui**	2.44	227	eP	Pn	03 20 08.9	+2.0
	baz=227						
SLGT				eS	Sn	03 20 37.2	+1.0
	baz=227						
MASBT	**Mashibuluo**	2.72	222	eP	Pn	03 20 12.3	+1.7
	baz=221						
MASBT				eS	Sn	03 20 44.0	+1.1
	baz=221						
EAST	**Anshuo**	2.78	216	eP	Pn	03 20 11.4	+0.1
	baz=215						
LAY	**Lan-yu**	2.79	200	eS	Sn	03 20 41.6	-2.8
	baz=200						
MATB	**Ma-tsu**	2.82	302	eP	Pn	03 20 11.3	-0.5
	baz=302						
VWUC	**VWUC**	2.88	277	eP	Pn	03 20 12.4	-0.2
	baz=277						
PNG	**Penghu**	2.99	249	eS	Sn	03 20 48.1	-1.0
	baz=248						
PHUB	**P'eng-hu**	2.99	248	eP	Pn	03 20 13.6	-0.5
	baz=248						
PHUB				eS	Sn	03 20 47.2	-2.1
	baz=248						
WDGT	**Dungji**	3.03	243	eP	Pn	03 20 15.3	+0.7
	baz=242						
KNMB	**Chin-men Tao**	3.84	268	eP	Pn	03 20 24.6	-0.8
	baz=267						
KNMB				eS	Sn	03 21 04.8	-4.8
	baz=267						

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*AAE **14** 03:34:53.1±19.0, 15°.85N×39°.94E, h0^{km}±876^{km}*
*IDC **14** 03:34:54.1±2.3, 13°.92N×40°.17E, h0^{km}, mb3.8/8, mb1 3.8/8, mb1mx3.6/32, mbtmp3.8/8, MS3.5/1, Ms1 3.4/1, ms1mx2.4/40, Error ellipse: s-maj=67.1km s-min=22.4km az=157.0*
ISC 14 03:35:00.8±0.8**, 14°.61N**±0°.05×**40°.06E**±0°.07**, h18**^{km}**, n19, σ2^{s}.12**/27**, mb3.8**/8**, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DESE	**Dese**	3.50	187	eP	Pb	03 35 59.8	-2.6
DESE				eS	Sb	03 36 43.7	-0.9
DESE	**Dese**	3.50	187	eP	Pb	03 35 59.8	-2.6
DESE				eS	Sb	03 36 43.7	-0.9
ATD	**Arta Tunnel**	4.09	138	eP	Pb	03 36 10.7	-1.7
ATD				eS	Sg	03 37 12.3	0.0
ATD	**Arta Tunnel**	4.09	138	eP	Pn	03 36 04.7	+2.1
ATD				eS	Sg	03 37 12.3	0.0
ANKE	**Ethiopia-Afar**	5.00	184	eP	Pn	03 36 12.6	-2.8
ANKE				i S	Sb	03 37 29.5	+1.5
ANKE	**Ethiopia-Afar**	5.00	184	eP	Pn	03 36 12.6	-2.8
ANKE				i S	Sb	03 37 29.5	+1.5
AAE	**Adis Abeba**	5.69	193	eP	Pb	03 36 41.3	+1.5
AAE				eS	Sb	03 37 50.6	+2.8
AAE	**Adis Abeba**	5.69	193	eP	Pb	03 36 41.3	+1.5
AAE				eS	Sb	03 37 50.6	+2.8
FURI	**Furi**	5.84	194	eP	Pb	03 36 42.2	-0.2
FURI				eS	Sb	03 37 56.3	+4.2
FURI	**Furi**	5.84	194	eP	Pb	03 36 42.2	-0.2
FURI				eS	Sb	03 37 56.3	+4.2
TORD	**Torodi Ar. Bea**	37.25	273	P	P	03 42 10.2	-1.6
	0.9nm,0.9s,baz=79,slow=7.8,SNR=5.0						
GERES	**GERESS Array B**	40.43	333	P	P	03 42 39.9	+1.7
	0.3nm,0.6s,baz=148,slow=7.6,SNR=4.0						
DBIC	**Dimbokro**	44.78	265	P	P	03 43 08.8	-5.0
	3.4nm,0.9s,baz=76,slow=8.3,SNR=3.5						
BOSA	**Boshof**	45.29	198	LR	LR	04 01 57.0	
	comp=Z,47nm,18.2s,baz=194,slow=36						
KURBB	**Kurchatov Arra**	47.47	33	P	P	03 43 33.7	-0.9
	1.0nm,0.8s,baz=237,slow=7.3,SNR=3.3						
MKAR	**Makanchi Array**	47.57	39	P	P	03 43 34.9	-0.6
	1.6nm,0.8s,baz=233,slow=8.5,SNR=8.8						
FINES	**FINESS Array B**	47.84	351	P	P	03 43 38.0	+0.7
	1.3nm,0.8s,baz=134,slow=12,SNR=3.5						
ZALV	**Zalesovo Beam**	52.52	32	P	P	03 44 14.4	+1.6
	0.3nm,0.3s,baz=224,slow=8.1,SNR=3.6						
SONM	**Songino Array**	63.45	44	P	P	03 45 29.1	-0.7
	0.5nm,0.7s,baz=270,slow=7.2,SNR=5.1						

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*IDC **14** 03:43:15.4±0.6, 30°.09N×68°.08E, h0^{km}, mb4.1/26, mb1 4.3/29, mb1mx4.2/48, mbtmp4.2/29, ML4.1/3, MS3.5/21, Ms1 3.5/21, ms1mx3.3/53, Error ellipse: s-maj=16.1km s-min=12.5km az=14.0*
*ISCJB **14** 03:43:16.4±0.2, 30°.01N±0°.02×68°.14E±0°.02, h24^{km}, mb4.3/71, MS3.4/20, Error ellipse: s-maj=3.5km s-min=2.9km az=5.3*
*NEIC **14** 03:43:17.7±2.4, 30°.05N×68°.06E, h16^{km}±15^{km}, mb4.5/26, Error ellipse: s-maj=6.4km s-min=4.6km az=175.0*
*MOS **14** 03:43:18.0±1.1, 30°.18N×68°.14E, h25^{km}, mb4.6/41, Error ellipse: s-maj=6.8km s-min=4.2km az=104.6*
*BJI **14** 03:43:18.3, 30°.22N×68°.35E, h10^{km}, mB4.7/9, mb4.2/13, Ms4.0/2, Ms7 3.8/2*
*NNC **14** 03:43:19.7±3.6, 30°.47N×68°.32E, h0^{km}, mb4.4, Error ellipse: s-maj=52.6km s-min=33.0km az=132.0*
ISC 14 03:43:18.9±0.4**, 30°.11N**±0°.04×**68°.13E**±0°.04**, h24**^{km}**, n233, σ1^{s}.83**/244**, mb4.4**/70**, MS3.4**/19**, 15C-19D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	4.49	10	ePn	Pn	03 44 28.1	+2.5
KBL				eSn	Sn	03 45 18.2	+1.1
KBL	**Kabul**	4.49	10	eP	Pn	03 44 28.1	+2.5
KBL				e		03 45 18.2	
NIL	**Nilore**	5.61	50	ePn	Pn	03 44 42.9	+2.1
NIL	**Nilore**	5.61	50	eP	Pn	03 44 42.9	+2.1
BHJ	**Bhuj**	6.96	168	eP	Pn	03 44 58.3	-1.0
BHJ				eS	Sn	03 46 14.8	-3.0
BHJ				IAML		03 46 27.6	
	comp=E,147nm,0.5s						
BHJ				IAML		03 46 27.6	
	comp=N,191nm,0.3s						
DHRM	**DHARAMSHALA**	7.32	71	eP	Pn	03 45 06.1	+1.6
DHRM				eS	Sn	03 46 25.8	-1.1
DHRM				IAML		03 47 08.0	
	comp=N,110nm,0.3s						
DHRM				IAML		03 47 10.8	
	comp=E,157nm,0.4s						
SMLA	**Simla**	7.85	80	eP	Pn	03 45 12.6	+1.0
SMLA				eS	Sn	03 46 38.2	-1.5
SMLA				IAML		03 46 49.8	
	comp=N,156nm,0.4s						
SMLA				IAML		03 46 50.5	

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      comp=E,121nm,0.5s
GAR   Garm             9.05  11 ePn    Pn     03 45 29.0 +0.8
GAR                             eSn    Sn     03 47 07.7 -1.7
GAR   Garm             9.05  11 eP     Pn     03 45 29.0 +0.8
GAR                             e             03 47 07.7
BTK   Batken          10.17  12 ePn    Pn     03 45 46.6 +3.2
BTK   Batken          10.17  12 eP     Pn     03 45 46.6 +3.2
BHPL  Bhopal          10.76 127 eP     Pn     03 45 51.0 -0.5
BHPL                            eS     Sn     03 47 47.0 -4.2
SFK   Sufi-Kurgan     10.82  23 ⇑Pn    Pn     03 45 54.4 +2.0
      comp=E,14nm,0.4s
SFK                             ⇑Sn    Sn     03 47 53.0 +0.2
      comp=E,15nm,0.7s
SFK   Sufi-Kurgan     10.82  23  P     Pn     03 45 53.0 +0.6
SFK                                           03 47 52.3
SFK                              pmax  pmax
      comp=Z,14nm,0.4s
SFK                              smax  smax
      comp=N,15nm,0.7s
WSAR  Wadi Sarin      10.90 233  Pn    Pn     03 45 50.7 -2.7
      comp=N,2.0nm,0.3s,baz=73,slow=4.8,SNR=31
WSAR                             Sn    Sn     03 47 41.1  -14
      comp=N,3.6nm,0.3s,baz=192,slow=21,SNR=18
WSAR                             LR    LR     03 51 47.6
      comp=N,165nm,18.3s,baz=94,slow=47
BANOM Banah           11.25 251 i P    Pn     03 45 56.7 -1.6
      SNR=20
BANOM Banah           11.25 251  P     Pn     03 45 56.7 -1.6
      SNR=20
SHME  Shamm           11.33 252 i P    Pn     03 45 58.3 -1.0
      SNR=8.4
GEYT  Alibeck         11.39 316  Pn    Pn     03 45 59.5 -0.6
      comp=N,0.7nm,0.3s,baz=122,slow=14,SNR=7.4
GEYT                             LR    LR     03 51 03.6
      comp=N,285nm,18.1s,baz=115,slow=41
SMDO  Samad           11.43 234  P     Pn     03 46 00.7 +0.1
MDH   Madha           11.52 248 i P    Pn     03 45 59.2 -2.8
      SNR=8.1
MDH   Madha           11.52 248  P     Pn     03 45 59.5 -2.4
MSFE  Esma-Masafi     11.61 249 i P    Pn     03 46 01.1 -2.1
      SNR=6.6
HOQ   Hoqain          11.64 239  P     Pn     03 46 01.5 -2.0
UOSS  Minazif         11.76 247 ePn    Pn     03 46 02.5 -2.7
UOSS  Minazif         11.76 247  P     Pn     03 46 02.2 -3.0
UOSS  Minazif         11.76 247  P     Pn     03 46 02.6 -2.6
JMDO  Jabal Madar     11.84 232  P     Pn     03 46 07.2 +0.9
HATD  Hatta, Dubai    11.88 247  P     Pn     03 46 05.2 -1.6
HATD  Hatta, Dubai    11.88 247  P     Pn     03 46 05.8 -1.0
SOHO  SOHO            11.91 243  P     Pn     03 46 04.7 -2.6
ASHO  Ashiyiah        12.01 246 i P    Pn     03 46 06.8 -1.7
      SNR=11
ASHO  Ashiyiah        12.01 246  P     Pn     03 46 06.9 -1.7
FAQ   Al Faqa, Dubai  12.35 247  P     Pn     03 46 12.7 -0.5
ASUD  Al Ashush, Dub  12.61 247 i P    Pn     03 46 16.8  0.0
      SNR=12
POO   Poona           12.64 154 eP     Pn     03 46 16.6 -0.7
POO                             ex     x      03 48 34.6
JBP   Jabalpur        12.65 120 eP     Pn     03 46 15.4 -1.9
JBP                             eS     Sn     03 48 27.6  -10
JBP                              IAML         03 49 12.3
      comp=N,705nm,0.6s
JBP                              IAML         03 49 12.5
      comp=E,517nm,0.2s
MNAS  Manas           12.85  15 ⇓Pn    Pn     03 46 19.3 -0.8
      comp=E,20nm,0.7s
MNAS                            ⇑Sn    Sn     03 48 38.2 -4.2
      comp=E,5.9nm,0.7s
MNAS  Manas           12.85  15  P     Pn     03 46 19.3 -0.8
MNAS                             pmax  pmax
      comp=Z,20nm,0.7s
NRN   Naryn           12.98  27 ePn    Pn     03 46 21.9 -0.1
NRN   Naryn           12.98  27 eP     Pn     03 46 21.9 -0.1
KK31  Karatay Array   13.11   8 ePn    Pn     03 46 24.5 +0.9
KK31                            eSn    Sn     03 48 43.3 -5.3
KK31  Karatay Array   13.11   8 ⇑Pn    Pn     03 46 23.0 -0.6
      comp=Z,2.3nm,0.5s,baz=199,slow=15,SNR=31
KK31                            ⇑Sn    Sn     03 48 41.3 -7.3
      comp=Z,2.4nm,0.6s
KK31  Karatay Array   13.11   8 eP     Pn     03 46 24.5 +0.9
KK31                            e             03 48 43.3
KKAR  Karatay Array   13.11   8 ePn    Pn     03 46 22.1 -1.5
KKAR  Karatay Array   13.11   8 eP     Pn     03 46 22.1 -1.5
PYUN  Piuthan         13.15  95 eP     Pn     03 46 23.0 -1.3
      comp=Z,32nm,0.5s
NGP   Nagpur          13.28 130 ex     Pn     03 46 23.6 -2.3
NGP                             ex     x      03 48 40.9
AAK   Ala-Archa       13.51  20 ePn    Pn     03 46 28.7 -0.4
AAK                             eSn    Sn     03 48 54.4 -4.1
AAK   Ala-Archa       13.51  20 ⇓Pn    Pn     03 46 30.1 +0.9
      comp=Z,6.6nm,0.5s
AAK                             ⇓Sn    Sn     03 48 52.6 -6.0
      comp=Z,11nm,0.8s
AAK   Ala-Archa       13.51  20 i P    Pn     03 46 29.8 +0.6
      SNR=16
AAK   Ala-Archa       13.51  20ceP     Pn     03 46 28.4 -0.7
AAK                              pmax  pmax
      comp=Z,13nm,1.7s
AAK   Ala-Archa       13.51  20  Pn    Pn     03 46 28.7 -0.4
      comp=Z,1.1nm,0.3s,baz=178,slow=5.4,SNR=15
AAK                              Sn    Sn     03 48 51.9 -6.6
      comp=Z,0.2nm,0.3s,baz=308,slow=19,SNR=3.7
AAK                              LR    LR     03 52 41.3
      comp=Z,90nm,18.6s,baz=192,slow=42
KOLN  Koldanda        13.75  96 eP     Pn     03 46 30.6 -1.9
      comp=Z,77nm,1.1s
DANN  Dangsing        13.76  93 eP     Pn     03 46 30.8 -2.0
      comp=Z,116nm,0.5s
TARG  Taragay, Kyrgy  13.99  31 ePn    Pn     03 46 37.6 +1.7
TKM2  Tokmak 2        14.12  23 ⇑Pn    Pn     03 46 36.8 -0.8
      comp=Z,9.9nm,0.9s
TKM2  Tokmak 2        14.12  23  P     Pn     03 46 36.7 -0.8
TKM2                             pmax  pmax
      comp=Z,10.0nm,0.9s
DMN   Daman           15.08  95 eP     Pn     03 46 47.6 -3.1
      comp=Z,36nm,0.8s
KKN   Kakani          15.19  95 eP     Pn     03 46 48.1 -4.0
      comp=Z,32nm,0.5s
PKIN  Phulchoki       15.34  95 eP     Pn     03 46 50.4 -3.7
      comp=Z,19nm,0.5s
PKI   Pulchoki        15.35  95 eP     Pn     03 46 50.5 -3.8
      comp=Z,20nm,0.5s
GUN   Gumba           15.68  94 eP     Pn     03 46 55.0 -3.6
      comp=Z,140nm,0.6s
HYB   Hyderabad       15.81 141 eP     Pn     03 47 00.2 +0.1
JIRN  Jiri            16.01  94 eP     Pn     03 46 59.5 -3.3
      comp=Z,114nm,0.5s
PDGK  Podgornoye      16.01  31  P     P      03 47 09.0 +3.1
PDGK                             pmax  pmax
      comp=Z,9.0nm,0.7s
BOK   Bokaro          17.02 107 eP     Pn     03 47 15.6 +0.2
OTUK  Ortayu          18.40   9  P     Pn     03 47 33.0 +0.7
OTUK                             pmax  pmax
      comp=Z,5.0nm,1.3s
BWNR  Bhubaneshwar    18.72 117 ex     Pn     03 47 45.6 +9.3
MAKZ  Makanchi        19.84  29 eP     P      03 47 47.9  0.0
      comp=Z,4.4nm,0.5s
MAKZ  Makanchi        19.84  29 ⇑P     P      03 47 47.7 -0.2
      comp=Z,7.1nm,0.8s
MAKZ  Makanchi        19.84  29 eP     P      03 47 47.9  0.0
MAKZ                             pmax  pmax
      comp=Z,4.0nm,0.5s
MK01  Makanchi Array  19.95  30 eP     P      03 47 48.4 -0.7
LSA   Lhasa           19.96  85 eP     P      03 47 49.5 -0.4
      comp=Z,15nm,0.7s
MK31  Makanchi Array  19.96  29 eP     P      03 47 48.8 -0.4
      comp=Z,3.2nm,0.6s
MK31  Makanchi Array  19.96  29  Pn    P      03 47 48.5 -0.7
      comp=Z,2.3nm,0.5s,baz=208,slow=11,SNR=40
MK31  Makanchi Array  19.96  29 eP     P      03 47 48.8 -0.4
MK31                             pmax  pmax
      comp=Z,3.0nm,0.6s
MK32  Makanchi Array  19.96  29 eP     P      03 47 48.9 -0.3
MK32                            ePcP   PcP    03 52 06.0 +0.9
MKAR  Makanchi Array  19.96  29 eP     P      03 47 48.8 -0.4
      comp=Z,38nm,0.5s
MKAR                             PcP   PcP    03 52 06.0 +0.9
MKAR  Makanchi Array  19.96  29 eP     P      03 47 48.8 -0.4
MKAR                             pmax  pmax
      comp=Z,38nm,0.5s
MKAR  Makanchi Array  19.96  29  P     P      03 47 48.9 -0.3
      comp=Z,2.8nm,0.5s,baz=210,slow=11,SNR=34
MKAR                             PcP   PcP    03 52 06.0 +0.9
      comp=Z,0.4nm,0.7s,baz=191,slow=1.5,SNR=3.9
MKAR                             LR    LR     03 56 29.6
      comp=Z,151nm,19.8s,baz=212,slow=40
AKT   Akhty           20.02 310 i P    Pn     03 47 50.9 -0.9
AKT                              pmax  pmax
      comp=Z,14nm,0.9s
AB31  Akbulak array   20.11 344  P     P      03 47 50.8  0.0
      comp=Z,8.0nm,0.6s,baz=152,slow=12,SNR=154
AB31  Akbulak array   20.11 344 i P    P      03 47 50.8  0.0
AB31                             pmax  pmax
      comp=Z,6.0nm,0.5s
ABKAR Akbulak array   20.11 344 eP     P      03 47 51.1 +0.3
      comp=Z,12nm,0.6s
SEKA  Sheki           20.25 309  P     P      03 47 52.4 -0.1
GANJ  Ganja           20.61 307  P     P      03 47 56.6 +0.3
NAX   Nakhchivan      20.66 302  P     P      03 47 57.7 +0.7
ZKTA  Zakatala        20.83 309  P     P      03 47 58.9 +0.2
GNBR  Gunib           20.95 312 i P    P      03 47 59.9 -0.2
GNBR                             pmax  pmax
      comp=Z,36nm,0.8s
RAYN  Ar Rayn         21.21 257 eP     P      03 48 02.4 -0.6
      comp=Z,12nm,0.9s
RAYN  Ar Rayn         21.21 257 eP     P      03 48 02.4 -0.6
RAYN                             pmax  pmax
      comp=Z,12nm,0.9s
SHL   Shillong        21.47  96 eP     P      03 48 07.5 +1.6
      comp=Z,12nm,0.8s
SHL   Shillong        21.47  96 eP     P      03 48 07.5 +1.6
SHL                              pmax  pmax
      comp=Z,12nm,0.8s
SHL   Shillong        21.47  96 eP     P      03 48 07.0 +1.1
GNI   Garni           21.54 304 eP     P      03 48 09.3 +2.8
      comp=Z,15nm,0.9s
GNI   Garni           21.54 304ceP     P      03 48 07.3 +0.8
GNI                              pmax  pmax
      comp=Z,92nm,1.0s
GNI   Garni           21.54 304  P     P      03 48 06.9 +0.4
      comp=Z,6.9nm,0.8s,baz=19,slow=11,SNR=4.2
GNI                              LR    LR     03 58 17.6
      comp=Z,48nm,21.6s,baz=106,slow=42
BTLR  Botlikh         21.56 312 i P    P      03 48 06.8 +0.2
BTLR                             pmax  pmax
      comp=Z,14nm,0.9s
AKTO  Aktyubinsk      21.68 342 ⇓P     P      03 48 10.0 +2.2
      comp=Z,22nm,0.9s
AKTO  Aktyubinsk      21.68 342  P     P      03 48 08.4 +0.6
      comp=Z,12nm,0.8s,baz=149,slow=11,SNR=14
AKTO                             LR    LR     03 57 40.2
      comp=Z,124nm,18.3s,baz=149,slow=40
KURBB Kurchatov Arra  21.93  18  P     P      03 48 09.8 -0.6
      comp=Z,7.7nm,0.6s,baz=210,slow=9.5,SNR=19
KURK  Kurchatov       22.04  18 eP     P      03 48 11.1 -0.5
KURK  Kurchatov       22.04  18 ⇑P     P      03 48 10.2 -1.4
      comp=Z,6.0nm,0.7s
KURK  Kurchatov       22.04  18 eP     P      03 48 11.1 -0.5
GROC  Groznyy         22.10 312 i P    P      03 48 13.1 +0.8
GROC                             pmax  pmax
      comp=Z,36nm,1.0s
TBLG  Delisi          22.14 308 eP     P      03 48 14.2 +1.4
      comp=Z,30nm,1.2s
TBLG  Delisi          22.14 308 eP     P      03 48 14.2 +1.4
TBLG                             pmax  pmax
      comp=Z,30nm,1.2s
BRDH  Bariadhala      22.30 104  LR    LR     03 58 39.6
      comp=Z,147nm,18.3s,baz=269,slow=41
BVAR  Borovoye Array  22.96   3  P     P      03 48 21.4  0.0
BVAR                             pmax  pmax
      comp=Z,1.0nm,0.5s
BVAR                             MLR   MLR
      comp=Z,242nm,19.5s
BVAR  Borovoye Array  22.96   3  P     P      03 48 21.4  0.0
      comp=Z,1.5nm,0.5s,baz=181,slow=7.2,SNR=6.1
BVAR                             LR    LR     03 58 47.2
      comp=Z,242nm,19.5s,baz=193,slow=40
BRVK  Borovoye        22.99   3 eP     P      03 48 22.4 +0.8
      comp=Z,11nm,0.8s
BRVK  Borovoye        22.99   3 eP     P      03 48 22.4 +0.8
BRVK                             pmax  pmax
      comp=Z,11nm,0.8s
ZEI   Tsey            23.15 310 eP     P      03 48 23.1 -0.5
ZEI                              pmax  pmax
      comp=Z,8.0nm,0.8s
NCK   Nalchik         23.66 311 i P    P      03 48 29.8 +1.4
NCK                              pmax  pmax
      comp=Z,10.0nm,1.0s
NEY   Neytrino        24.12 310 i P    P      03 48 34.8 +1.8
NEY                              pmax  pmax
      comp=Z,2.0nm,0.8s
KBZ   Khabaz          24.21 311  P     P      03 48 34.1 +0.5
      comp=Z,2.2nm,0.7s,baz=123,slow=7.6,SNR=10
PYA1  Pyatigorsk      24.23 312 i P    P      03 48 32.6 -1.2
PYA1                             pmax  pmax
      comp=Z,1.0nm,1.0s
SHA1  Shidzhatmaz     24.38 311 i P    P      03 48 36.3 +0.9
DGZ   Jazzator, Alta  24.41  31 i P    P      03 48 36.9 +1.3
DGZ                              pmax  pmax
      comp=Z,1.0nm,0.8s
KVAR  Kislovodsk Arr  24.44 311  P     P      03 48 36.9 +1.1
      comp=Z,2.1nm,0.5s,baz=97,slow=19,SNR=4.1
KVAR                             LR    LR     04 00 51.4
      comp=Z,64nm,18.2s,baz=93,slow=43
KIV   Kislovodsk      24.45 311 eP     P      03 48 39.2 +3.4
      comp=Z,10nm,0.9s
KIV   Kislovodsk      24.45 311 eP     P      03 48 36.7 +0.8
KIV                              pmax  pmax
      comp=Z,13nm,1.0s
KIV                              MLR   MLR
      comp=Z,28nm,15.0s
DOMR  Dombai          24.88 309 i P    P      03 48 41.7 +1.9
DOMR                             pmax  pmax
      comp=Z,10.0nm,1.0s
PALK  Pallekele       25.60 150  LR    LR     04 00 03.7
      comp=Z,196nm,18.9s,baz=296,slow=39
ZALV  Zalesovo Beam   26.72  22 eP     P      03 48 56.2  0.0
ZALV  Zalesovo Beam   26.72  22 i P    P      03 48 59.5 +3.3
ZALV                             pmax  pmax
      comp=Z,3.0nm,0.5s
ZALV  Zalesovo Beam   26.72  22  P     P      03 48 58.4 +2.2
      comp=Z,2.3nm,0.5s,baz=224,slow=11,SNR=7.2
ZALV                             LR    LR     04 00 43.9
      comp=Z,43nm,21.6s,baz=53,slow=39
ZAA1  Zalesovo Array  26.73  22 eP     P      03 48 58.4 +2.1
ARU   Arti            27.17 348ceP     P      03 48 59.6 -0.6
ARU                              pmax  pmax
      comp=Z,3.0nm,0.6s
GTA   Gaotai          27.52  62 eP     P      03 49 05.9 +2.2
GTA                              pP    pP     03 49 10.1 -1.3
GTA                              sP    sP     03 49 13.0 -1.5
MMAI  Mount Meron Ar  27.98 284  LR    LR     04 02 06.1
      comp=Z,135nm,19.1s,baz=100,slow=40
ANN   Anapa           28.24 310 eP     P      03 49 08.5 -1.4
ANN                             e*PP   pP     03 49 12.0 -5.7
ANN                             e             03 52 21.1
ANN                             eS     S      03 53 54.6 +0.2
ANN                              pmax  pmax
      comp=Z,23nm,1.0s
VRH   Novokhopyorsk   28.81 325 eP     P      03 49 17.4 +2.5
VRH                              pmax  pmax
      comp=Z,6.0nm,0.6s
BR101 Keskin Array S  29.71 298 eP     P      03 49 22.9 -0.4
BRTR  Keskin Array B  29.71 298ceP     P      03 49 22.8 -0.5
BRTR                             pmax  pmax
      comp=Z,1.0nm,0.7s
BRTR  Keskin Array B  29.71 298  P     P      03 49 22.9 -0.4
      comp=Z,0.8nm,0.7s,baz=124,slow=6.9,SNR=3.9
BRTR                             LR    LR     04 02 47.3
      comp=Z,43nm,19.1s,baz=93,slow=40
CHTO  Chiang Mai      30.12 105 eP     P      03 49 28.2 +1.3
      comp=Z,13nm,0.6s
CHTO  Chiang Mai      30.12 105 eP     P      03 49 28.2 +1.3
CHTO                             pmax  pmax
      comp=Z,13nm,0.6s
CHTO  Chiang Mai      30.12 105  P     P      03 49 28.2 +1.3
      comp=Z,87nm,0.7s
CMMT  Chiang Mai      30.13 105  P     P      03 49 28.1 +1.1
      comp=Z,20nm,0.6s
VSR   Storozhevoye    30.14 323 i P    P      03 49 28.8 +2.2
VSR                              pmax  pmax
      comp=Z,4.0nm,0.9s
CM31  Chiang Mai Arr  30.29 105 eP     P      03 49 29.4 +1.1
CMAR  Chiang Mai Arr  30.29 105  P     P      03 49 29.4 +1.1
      comp=Z,2.9nm,0.5s,baz=304,slow=9.8,SNR=7.8
CMAR                             LR    LR     04 05 29.4
      comp=Z,88nm,18.7s,baz=300,slow=44
SIM   Simferopol'     30.52 309 eP     P      03 49 31.2 +1.0
SIM                              pmax  pmax
      comp=Z,15nm,0.9s
LPSR  Galich'ya Gora  31.04 325 eP     P      03 49 36.3 +1.7
LPSR                             pmax  pmax
      comp=Z,10.0nm,0.6s
UTTA  Uttaradit       31.97 105  P     P      03 49 44.9 +1.7
      comp=Z,4.8nm,0.6s
OBN   Obninsk         33.62 327⇓iP     P      03 49 57.4 +0.2
OBN                             e             03 51 12.3
OBN                              pmax  pmax
      comp=Z,9.0nm,0.9s
OBN                              MLR   MLR
      comp=Z,113nm,18.0s
SONA0 Songino Array   34.19  48 eP     P      03 50 03.2 +0.8
SONM  Songino Array   34.19  48  P     P      03 50 03.2 +0.8
      comp=Z,0.4nm,0.8s,baz=248,slow=7.6,SNR=3.5
SONM                             LR    LR     04 04 26.0
      comp=Z,22nm,20.0s,baz=80,slow=37
XAN   Xi'an           34.63  73  P     P      03 50 07.5 +1.2
XAN                              pP    pP     03 50 12.3 -1.7
XAN                              pmax  pmax
      comp=Z,3.0nm,0.8s
PRGR  Permogore       34.84 341 eP     P      03 50 06.7 -0.9
PRGR                            e*PP   pP     03 50 10.1 -5.4
PRGR                             pmax  pmax
      comp=Z,13nm,0.8s
AKASG Malin Array Be  35.51 317  P     P      03 50 13.4 -0.2
      comp=Z,1.9nm,0.7s,baz=100,slow=7.1,SNR=3.6
AKBB  Malin Array Si  35.51 317 eP     P      03 50 13.9 +0.2
      comp=Z,12nm,1.4s
KIEV  Kiev            35.52 317 eP     P      03 50 12.9 -0.8
      comp=Z,10nm,1.4s
KIEV  Kiev            35.52 317 eP     P      03 50 12.9 -0.8
KIEV                             pmax  pmax
      comp=Z,10.0nm,1.4s
ENH   Enshi           35.61  79 eP     P      03 50 16.6 +1.8
      comp=Z,6.7nm,0.6s
PLOR  Plostina        35.84 308⇓iP     P      03 50 22.4 +5.8
PLOR  Plostina        35.84 308 ⇓P     P      03 50 22.4 +5.8
KLMR  Klimovskoe      36.14 337 eP     P      03 50 17.8 -1.1
KLMR                            e             03 51 41.0
KLMR                            e             03 52 42.7
KLMR                             pmax  pmax
      comp=Z,6.0nm,0.6s
KLMR  Klimovskoe      36.14 337 eP     P      03 50 17.9 -1.0
KLMR                             AMP          03 50 23.3
      comp=Z,6.0nm,0.6s
KLMR                            ePP    PP     03 51 41.0 -0.1
KLMR                            ePcP   PcP    03 52 42.8 -1.4
MLR   Muntele Rosu    36.26 307 eP     P      03 50 22.2 +2.0
      comp=Z,14nm,0.9s
MLR   Muntele Rosu    36.26 307⇓iP     P      03 50 22.3 +2.0
MLR   Muntele Rosu    36.26 307 eP     P      03 50 22.2 +2.0
MLR                              pmax  pmax
      comp=Z,14nm,0.9s
BIZ   Bicaz           36.43 309⇓iP     P      03 50 22.4 +0.8
DOPR  Dopca           36.72 308⇑iP     P      03 50 28.5 +4.4
VOIR                  36.87 307⇓iP     P      03 50 29.6 +4.2
VOIR                  36.87 307 ⇓P     P      03 50 29.6 +4.2
ARR   Arges           37.15 307⇓iP     P      03 50 28.6 +0.8
BURAR Bucovina Array  37.17 310⇓iP     P      03 50 28.5 +0.6
BURAR Bucovina Array  37.17 310 ⇓P     P      03 50 28.5 +0.6
BUR04 Bucovina Ar. S  37.17 310 eP     P      03 50 27.9 -0.1
BUR08 Bucovina Ar. S  37.18 310 eP     P      03 50 28.4 +0.3
      comp=Z,2.2nm,0.9s
GZR   Gura Zlata      38.45 306⇑iP     P      03 50 44.7 +6.0
GZR   Gura Zlata      38.45 306 ⇑P     P      03 50 44.7 +6.0
DRGR                  38.69 308⇓iP     P      03 50 41.7 +0.9
DRGR                  38.69 308 ⇓P     P      03 50 41.7 +0.9
TMCR  Tamitsa         39.00 340 eP     P      03 50 42.5 -0.5
TMCR                             pmax  pmax
      comp=Z,10.0nm,0.6s
TRPA  Tarpa           39.03 311⇓iP     P      03 50 45.0 +1.5
BZS   Buzias          39.28 306⇓iP     P      03 50 46.2 +0.5
BZS   Buzias          39.28 306 ⇓P     P      03 50 46.2 +0.5
NRIK  Noril'sk        40.83  10  P     P      03 50 59.3 +1.2
      comp=Z,4.5nm,0.5s,baz=258,slow=2.4,SNR=3.5
NRIK                             LR    LR     04 11 01.8
      comp=Z,109nm,18.8s,baz=200,slow=41
VYHS  Vyhne           41.53 310 eP     P      03 51 04.5 +0.2
VYHS  Vyhne           41.53 310 eP     P      03 51 04.5 +0.2
FIA0  FINESS Array S  41.68 331 eP     P      03 51 04.9 -0.4
FIA0  FINESS Array S  41.68 331 eP     P      03 51 04.9 -0.4
FINES FINESS Array B  41.68 331  P     P      03 51 04.9 -0.4
      comp=Z,3.9nm,0.6s,baz=144,slow=7.7,SNR=12
FINES                            LR    LR     04 11 59.3
      comp=Z,164nm,18.6s,baz=128,slow=41
MSF   Maaselka        43.02 338  P     P      03 51 20.4 +4.3
CONA  Conrad Observa  43.45 309 i P    P      03 51 19.2 -0.8
      comp=Z,9.1nm,1.7s
ARSA  Arzberg         43.63 308 i P    P      03 51 21.6 +0.2
      comp=Z,4.4nm,0.7s
MOA   Molln           44.52 309 i P    P      03 51 28.3 -0.1
      comp=Z,9.2nm,1.6s
GEC2  GERESS Array S  44.95 310 eP     P      03 51 32.0  0.0
      comp=Z,3.0nm,0.9s
GEC2  GERESS Array S  44.95 310 eP     P      03 51 32.0  0.0
GEC2                             pmax  pmax
      comp=Z,3.0nm,0.9s
GERES GERESS Array B  44.95 310  P     P      03 51 32.0  0.0
GERES                            pmax  pmax
      comp=Z,1.0nm,0.6s
GERES                            MLR   MLR
      comp=Z,30nm,18.2s
GERES GERESS Array B  44.95 310  P     P      03 51 32.0  0.0
      comp=Z,0.9nm,0.6s,baz=91,slow=6.9,SNR=7.7
GERES                            LR    LR     04 13 55.8
      comp=Z,30nm,18.2s,baz=324,slow=41
ARA0  ARCESS Array S  46.26 341 eP     P      03 51 41.9  0.0
ARCES ARCESS Array B  46.26 341  P     P      03 51 41.9  0.0
      comp=Z,5.4nm,0.6s,baz=130,slow=8.3,SNR=28
ARCES                            LR    LR     04 12 56.0
      comp=Z,248nm,20.0s,baz=124,slow=38
SQTA  Sankt Quirin    46.56 308 i P    P      03 51 45.3 +0.5
MOTA  Moosalm         46.64 308 i P    P      03 51 44.6 -0.8
      comp=Z,3.4nm,0.8s
DAVA  Damuels         47.47 308 eP     P      03 51 51.2 -0.7
      comp=Z,5.1nm,0.8s
NORES NORESS Array B  48.00 327  P     P      03 51 54.2 -1.4
NORES                            pmax  pmax
      comp=Z,1.0nm,0.3s
NB2   NORSAR Subarra  48.23 327  P     P      03 51 56.1 -1.3
      comp=Z,1.9nm,0.6s,baz=106,slow=7.9
NB200 NORSAR Array S  48.23 327 eP     P      03 51 56.4 -1.0
NOA   NORSAR Array B  48.23 327  P     P      03 51 56.4 -1.0
NOA                              pmax  pmax
      comp=Z,3.0nm,0.6s
NOA                              MLR   MLR
      comp=Z,47nm,18.5s
NOA   NORSAR Array B  48.23 327  P     P      03 51 56.4 -1.0
      comp=Z,2.4nm,0.6s,baz=107,slow=7.6,SNR=15
NOA                              LR    LR     04 15 56.7
      comp=Z,46nm,18.5s,baz=270,slow=41
KEST  Kesra           49.04 293 eP     P      03 52 04.2 +0.1
      comp=Z,29nm,1.4s
KEST  Kesra           49.04 293  P     P      03 52 04.2 +0.1
      comp=Z,8.6nm,0.6s,baz=154,slow=1.7,SNR=5.6
KS15  Wonju Array Si  49.49  65 eP     P      03 52 08.1 +0.7
      comp=Z,9.2nm,1.3s
KSAR  Wonju Array Be  49.49  65  P     P      03 52 08.1 +0.7
KSAR  Wonju Array Be  49.49  65  P     P      03 52 08.1 +0.7
KSRS  Korea Array     49.52  65  P     P      03 52 08.1 +0.5
      comp=Z,1.1nm,0.6s,baz=62,slow=32,SNR=4.9
KLR   Kul'dur         51.00  49  LR    LR     04 19 03.3
      comp=Z,10.0nm,21.1s,baz=222,slow=42
ESDC  Sonseca Array   58.47 301  P     P      03 53 12.6 -0.4
      comp=Z,0.8nm,0.6s,baz=64,slow=6.9,SNR=7.2
DAG   Danmarks Havn   60.21 345  P     P      03 53 28.9 +4.5
DAG                              pmax  pmax
      comp=Z,8.0nm,0.8s
TOA0  Torodi Ar. Sit  63.24 270 eP     P      03 53 45.0 -0.7
TOA1  Torodi Ar. Sit  63.24 270 eP     P      03 53 45.2 -0.5
TORD  Torodi Ar. Bea  63.24 270  P     P      03 53 45.2 -0.5
      comp=Z,2.1nm,0.8s,baz=40,slow=7.6,SNR=16
SUMG  Summit          66.34 342 eP     P      03 54 06.4 +0.9
      comp=Z,7.5nm,0.9s
SUMG  Summit          66.34 342 eP     P      03 54 06.4 +0.9
SUMG                             pmax  pmax
      comp=Z,8.0nm,0.9s
DBIC  Dimbokro        71.97 267 eP     P      03 54 42.3 +1.4
      comp=Z,11nm,1.4s
DBIC  Dimbokro        71.97 267  P     P      03 54 42.3 +1.4
      comp=Z,1.7nm,0.7s,baz=297,slow=4.5,SNR=3.3
INK   Inuvik          80.57   8 eP     P      03 55 30.0 +1.2
      comp=Z,2.4nm,0.6s
INK   Inuvik          80.57   8 eP     P      03 55 30.0 +1.2
INK                              pmax  pmax
      comp=Z,2.0nm,0.6s
WRA   Warramunga Arr  80.81 119  P     P      03 55 31.4 +0.6
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	comp=Z,3.5nm,0.8s,baz=321,slow=5.0,SNR=34						
WR1	**Warramunga Arr**	**80.81**	**119**	eP	**P**	**03 55 31.4**	**+0.6**
	comp=Z,8.1nm,0.9s						
WB2	**Warramunga Arr**	**80.82**	**119**	eP	**P**	**03 55 31.1**	**+0.2**
ILAR	**Eielson Array**	**81.56**	**14**	P	**P**	**03 55 33.9**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=313,slow=4.5,SNR=8.9						
ILB	**Eielson Array**	**81.56**	**14**	eP	**P**	**03 55 33.9**	**-0.3**
	comp=Z,10nm,1.5s						
AS31	**Alice Springs**	**82.71**	**123**	eP	**P**	**03 55 41.4**	**+0.5**
	comp=Z,2.2nm,1.2s						
ASAR	**Alice Springs**	**82.71**	**123**	P	**P**	**03 55 41.1**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=311,slow=5.4,SNR=31						
AS01	**Alice Springs**	**82.75**	**123**	eP	**P**	**03 55 40.5**	**-0.5**
YKA	**Yellowknife Ar**	**87.70**	**1**	P	**P**	**03 56 06.0**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=352,slow=4.9,SNR=14						
YKB5	**Yellowknife Ar**	**87.70**	**1**	eP	**P**	**03 56 05.3**	**+0.1**

IDC 14 03:44:44.3±3.0, 11°05S×164°52E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/22, mbtmp3.6/5, Error ellipse: s-maj=105.0km s-min=30.6km az=133.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.35**	**249**	P	P	03 50 57.2	-0.9
	0.4nm,0.7s,baz=80,slow=9.2,SNR=5.8						
ASAR	**Alice Springs**	**31.72**	**243**	P	P	03 51 10.8	+0.6
	0.5nm,0.7s,baz=63,slow=8.6,SNR=4.4						
SONM	**Songino Array**	**77.97**	**324**	P	P	03 56 45.1	+0.5
	0.2nm,0.6s,baz=140,slow=6.5,SNR=2.2						
ILAR	**Eielson Array**	**83.91**	**19**	P	P	03 57 15.4	-0.3
	0.7nm,0.9s,baz=230,slow=6.5,SNR=3.6						
MKAR	**Makanchi Array**	**92.71**	**317**	P	P	03 57 58.3	-0.1
	0.2nm,0.5s,baz=91,slow=6.1,SNR=3.1						

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*DDA **14** 03:44:46.4, 38°59N×39°64E, h5km±1km, ML3.5*
*ISK **14** 03:44:46.3, 38°61N×39°66E, h5km, ML3.3/22*

ISC 14 03:44:47.9±1.1, 38°59N±0°02×39°69E±0°02, h6km±10km, n45, σ1s01/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.38**	**323**	PG	**Pg**	**03 44 54.4**	**-1.0**
PTK				SG	**Sg**	**03 44 59.9**	**-0.6**
TNCL	**Tunceli-Merkez**	**0.54**	**348**	i P	**Pb**	**03 45 00.2**	**+0.4**
TNCL				i S	**Sb**	**03 45 08.9**	**+1.0**
TNCL				IAML_P			
	comp=Z,6µm,0.2s						
ELZG	**Elazig**	**0.56**	**261**	i P	**Pg**	**03 44 57.7**	**-1.0**
HANI	**Diyarbakir_Han**	**0.58**	**107**	i P	**Pb**	**03 44 59.3**	**-1.2**
HANI				IAML_P			
	comp=Z,14µm,0.1s						
DIYA	**Diyarbakir**	**0.74**	**153**	i P	**Pn**	**03 45 03.7**	**-1.3**
DIYA				i S	**Sn**	**03 45 15.1**	**-1.6**
BGOL	**Bingol**	**0.86**	**62**	i P	**Pb**	**03 45 04.5**	**-0.9**
BGOL				IAML_P			
	comp=Z,1µm,0.1s						
BNGB	**Bingl**	**0.87**	**62**	PG	**Pg**	**03 45 03.7**	**-0.9**
BNGB				SG	**Sn**	**03 45 17.6**	**-2.3**
REFA	**Refahiye_ERZN**	**1.08**	**319**	i P	Pn	03 45 15.6	+5.8
EUZM	**Uzumlu**	**1.12**	**0**	i P	**Pg**	**03 45 08.9**	**-0.4**
EUZM				i S	**Sn**	**03 45 25.5**	**-0.5**
EUZM				IAML_P			
	comp=Z,6µm,0.2s						
KEMA	**Kemaliye**	**1.16**	**306**	i P	**Pg**	**03 45 08.2**	**-1.9**
SVAN	**Silvan-Diyarba**	**1.26**	**110**	PN	**Pn**	**03 45 12.1**	**0.0**
SVAN	**Silvan-Diyarba**	**1.26**	**110**	i P	**Pn**	**03 45 12.6**	**+0.4**
SVAN				i S	**Sn**	**03 45 31.3**	**+1.8**
MAZI	**Mazidag**	**1.28**	**152**	PN	**Pn**	**03 45 11.6**	**-0.8**
URFA	**Urfa**	**1.33**	**211**	PN	**Pn**	**03 45 13.0**	**-0.1**
AKCD	**Akcadag**	**1.42**	**259**	i P	**Pn**	**03 45 12.4**	**-1.9**
AKCD				IAML_P			
	comp=Z,7µm,0.3s						
BTMN	**Batman**	**1.43**	**119**	i P	**Pg**	**03 45 14.7**	**-0.6**
BTMN				i S	**Sg**	**03 45 35.9**	**+2.2**
ECAT	**Cat-ERZURUM**	**1.43**	**44**	i P	**Pg**	**03 45 14.5**	**-0.7**
SANL	**SANLIURFA_Merk**	**1.52**	**202**	i P	**Pb**	**03 45 16.5**	**+0.1**
SANL				i S	**Sg**	**03 45 38.6**	**+2.0**
MARD	**Mardin**	**1.54**	**146**	i P	**Pg**	**03 45 17.0**	**-0.4**
MARD				i S	**Sg**	**03 45 38.1**	**+0.9**
KOPT	**Kop Dagi**	**1.56**	**23**	i P	**Pg**	**03 45 17.6**	**-0.2**
ATAB	**Bozova**	**1.57**	**225**	i P	**Pn**	**03 45 16.3**	**0.0**
ATAB				i S	**Sg**	**03 45 38.8**	**+0.5**
ATAB				IAML_P			
	comp=Z,6µm,0.1s						
KELT	**Kelkit**	**1.59**	**348**	i P	**Pb**	**03 45 17.7**	**-0.2**
KELT				IAML_P			
	comp=Z,2µm,0.1s						
DARE	**Darende-Malaty**	**1.73**	**270**	PN	**Pn**	**03 45 18.3**	**-0.3**
BAYT	**Aydıntepe-Bayb**	**1.84**	**11**	PN	**Pn**	**03 45 19.9**	**-0.2**
GURO	**Guroymak-BITLI**	**1.84**	**90**	PN	**Pb**	**03 45 20.5**	**-1.5**
CUKAN	**kangal_SIVAS**	**1.88**	**293**	i P	**Pb**	**03 45 21.9**	**-0.8**
SURC	**SANLIURFA_SURC**	**1.91**	**207**	i P	**Pn**	**03 45 21.2**	**+0.2**
SURC				i S	**Sg**	**03 45 51.2**	**+2.0**
SURC				IAML_P			
	comp=Z,570nm,0.2s						
CUZAR	**Zara_SIVAS**	**1.98**	**312**	i P	**Pb**	**03 45 24.4**	**0.0**
SUSE	**Susehri**	**1.99**	**325**	i P	**Pb**	**03 45 24.8**	**+0.2**
GZT	**Gaziantep**	**2.08**	**234**	i P	**Pn**	**03 45 23.3**	**-0.1**
GZT				i S	**Sg**	**03 45 56.2**	**+1.5**
GZT				IAML_P			
	comp=Z,995nm,0.2s						
KOPR	**Koprukoy-ERZUR**	**2.19**	**49**	PN	**Pn**	**03 45 25.4**	**+0.4**
MLAZ	**Malazgirt-MUS**	**2.30**	**75**	PN	**Pn**	**03 45 27.3**	**+0.8**
CUALT	**Altinyayla-SIV**	**2.39**	**288**	i P	**Pb**	**03 45 31.6**	**+0.2**
KTUT	**Trabzon**	**2.40**	**1**	PN	**Pn**	**03 45 28.2**	**+0.5**
GAZ	**Gaziantep**	**2.42**	**235**	PN	**Pn**	**03 45 28.4**	**+0.4**
SIRT	**Sirnak**	**2.43**	**116**	PN	**Pn**	**03 45 28.7**	**+0.5**
KMRS	**Kahramanmaras**	**2.45**	**245**	PN	**Pn**	**03 45 28.9**	**+0.4**
SVSK	**Karacayir**	**2.48**	**303**	PN	**Pn**	**03 45 29.2**	**+0.5**
RSDY	**Resadiye-TOKAT**	**2.57**	**315**	PN	**Pn**	**03 45 30.5**	**+0.4**
AKDM	**Akdamar-Van**	**2.60**	**95**	PN	**Pn**	**03 45 31.4**	**+0.8**
CHOM	**Cayeli-Rize**	**2.64**	**18**	PN	**Pn**	**03 45 31.7**	**+0.7**
AGRB	**Hanur-Agry**	**2.75**	**68**	PN	**Pn**	**03 45 33.6**	**+0.8**
TOKT	**Tokat**	**2.99**	**306**	PN	**Pn**	**03 45 36.4**	**+0.6**
BNN	**Bunyan**	**3.02**	**276**	PN	**Pn**	**03 45 36.9**	**+0.6**
KOZT	**Kozan**	**3.24**	**251**	PN	**Pn**	**03 45 40.4**	**+1.1**

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*IDC **14** 03:47:22.6±1.4, 31°19N×142°46E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.4/44, mbtmp3.3/6, ML2.5/1, MS2.3/1, Ms1 2.3/1, ms1mx2.0/20, Error ellipse: s-maj=38.1km s-min=27.1km az=73.0*
*ISCJB **14** 03:47:25.8±1.3, 31°3N±0°2×142°5E±0°3, h37km, mb3.5/5, Error ellipse: s-maj=35.1km s-min=20.4km az=158.8*

ISC 14 03:47:28.0±1.4, 31°2N±0°2×142°4E±0°3, h37km, n7, σ0s52/6, mb3.5/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.35**	**328**	Pn	**Pn**	**03 48 58.4**	**-0.6**
	0.1nm,0.3s,baz=152,slow=11,SNR=4.3						
KSRS	**Korea Array**	**13.49**	**301**	LR	LR	03 55 11.4	
	comp=Z,14nm,20.0s,baz=146,slow=35						
SONM	**Songino Array**	**32.00**	**312**	P	**P**	**03 53 51.1**	**+0.3**
	0.3nm,0.4s,baz=116,slow=9.8,SNR=5.1						
MKAR	**Makanchi Array**	**48.09**	**307**	P	**P**	**03 56 04.5**	**+0.6**
	0.2nm,0.5s,baz=86,slow=9.5,SNR=5.3						
KURBB	**Kurchatov Arra**	**50.37**	**312**	P	**P**	**03 56 21.4**	**+0.2**
	0.5nm,0.5s,baz=86,slow=7.5,SNR=3.1						
WRA	**Warramunga Arr**	**51.48**	**190**	P	**P**	**03 56 29.6**	**-0.3**
	0.4nm,0.7s,baz=6.6,slow=7.6,SNR=6.2						
ILAR	**Eielson Array**	**54.01**	**30**	P	**P**	**03 56 48.2**	**+0.1**
	0.2nm,0.6s,baz=259,slow=6.4,SNR=2.7						

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*ISCJB **14** 03:56:55.8±1.2, 14°98S±0°07×167°2E±0°2, h129km, mb3.8/7, Error ellipse: s-maj=31.1km s-min=10.6km az=178.9*
*IDC **14** 03:56:56.6±5.8, 15°00S×167°39E, h130km±57km, mb3.7/7, mb1 3.9/8, mb1mx3.5/42, mbtmp4.1/8, Error ellipse: s-maj=47.3km s-min=27.5km az=153.0*

ISC 14 03:56:56.3±1.2, 14°97S±0°10×167°4E±0°2, h129km, n10, σ0s94/10, mb3.9/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.13**	**187**	P	**Pn**	**03 58 38.0**	**0.0**
	4.2nm,0.3s,baz=25,slow=21,SNR=26						
DZM				S	**Sn**	**03 59 57.9**	**+0.2**
	9.6nm,0.3s,baz=123,slow=18,SNR=9.9						
STKA	**Stephens Creek**	**28.95**	**230**	P	**P**	**04 02 44.2**	**+0.7**
	4.0nm,0.6s,baz=32,slow=10,SNR=10						
WRA	**Warramunga Arr**	**31.91**	**256**	P	**P**	**04 03 08.3**	**-1.5**
	0.7nm,0.8s,baz=85,slow=8.9,SNR=7.9						
ASAR	**Alice Springs**	**32.72**	**249**	P	**P**	**04 03 16.1**	**-0.8**
	3.2nm,0.8s,baz=80,slow=9.0,SNR=32						
CMAR	**Chiang Mai Arr**	**75.18**	**294**	P	**P**	**04 08 25.9**	**+0.9**
	1.2nm,0.3s,baz=140,slow=3.2,SNR=4.7						
SONM	**Songino Array**	**82.77**	**324**	P	**P**	**04 09 07.0**	**+1.0**
	0.7nm,0.7s,baz=148,slow=7.9,SNR=4.6						
ILAR	**Eielson Array**	**86.71**	**18**	P	**P**	**04 09 24.8**	**-0.4**
	0.3nm,0.8s,baz=225,slow=6.2,SNR=2.7						
MKAR	**Makanchi Array**	**97.47**	**316**	P	Pdif	04 10 16.5	+0.9
	0.8nm,0.7s,baz=96,slow=6.2,SNR=9.8						
ARCES	**ARCESS Array B**	**120.52**	**345**	PKP	**PKPdf**	**04 15 31.5**	**-0.5**
	3.1nm,0.8s,baz=64,slow=2.1,SNR=6.2						
TORD	**Torodi Ar. Bea**	**166.03**	**264**	PKP	**PKPdf**	**04 16 46.1**	**-0.8**
	0.5nm,0.7s,baz=46,slow=1.0,SNR=4.6						

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*ISCJB **14** 03:57:13.7±0.6, 19°14N±0°08×145°9E±0°2, h109km, mb3.7/12, Error ellipse: s-maj=24.8km s-min=11.2km az=1.4*
*IDC **14** 03:57:16.2±3.3, 19°08N×145°93E, h120km±31km, mb3.5/12, mb1 3.7/14, mb1mx3.5/52, mbtmp3.9/14, Error ellipse: s-maj=25.7km s-min=15.3km az=89.0*

ISC 14 03:57:15.2±0.8, 19°1N±0°1×145°9E±0°2, h109km, n20, σ0s77/15, mb3.8/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.58**	**191**	P	**Pn**	**03 58 36.6**	**+0.6**
	31nm,0.3s,baz=135,slow=1.4,SNR=5.6						
MJAR	**Matsushiro Arr**	**18.64**	**340**	P	**P**	**04 01 25.1**	**+0.6**
	0.1nm,0.3s,baz=174,slow=12,SNR=3.0						
H11S3	**WAKE ISLAND Hy**	**19.66**	**88**	T	T	04 22 37.5	
	baz=275,slow=74,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**19.67**	**88**	T	T	04 22 39.1	
	baz=275,slow=74,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**19.68**	**88**	T	T	04 22 39.0	
	baz=275,slow=74,SNR=4.9						
H11N1	**WAKE ISLAND Hy**	**19.78**	**85**	T	T	04 22 53.9	
	baz=267,slow=74,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**19.80**	**85**	T	T	04 22 59.0	
	baz=246,slow=74,SNR=2.5						
USRK	**Ussuriysk Ar.**	**27.60**	**338**	P	**P**	**04 02 53.0**	**+0.8**
	0.6nm,0.4s,baz=148,slow=8.5,SNR=3.8						
WRA	**Warramunga Arr**	**40.44**	**197**	P	**P**	**04 04 42.6**	**-0.5**
	0.8nm,0.6s,baz=12,slow=8.5,SNR=12						
ASAR	**Alice Springs**	**44.11**	**196**	P	**P**	**04 05 12.5**	**-0.3**
	0.2nm,0.4s,baz=13,slow=8.6,SNR=3.6						
MKAR	**Makanchi Array**	**58.34**	**314**	P	**P**	**04 06 59.2**	**+0.3**
	0.4nm,0.6s,baz=94,slow=7.8,SNR=5.9						
KURBB	**Kurchatov Arra**	**61.16**	**318**	P	**P**	**04 07 17.1**	**-1.0**
	0.6nm,0.6s,baz=92,slow=7.6,SNR=3.0						
ILAR	**Eielson Array**	**63.18**	**26**	P	**P**	**04 07 30.6**	**-0.8**
	0.3nm,0.4s,baz=257,slow=5.9,SNR=9.2						
BVAR	**Borovoye Array**	**66.30**	**320**	P	**P**	**04 07 52.7**	**+0.9**
	0.8nm,0.4s,baz=91,slow=7.9,SNR=7.0						
INK	**Inuvik**	**68.91**	**23**	P	**P**	**04 08 07.6**	**-0.3**
	1.5nm,1.0s,baz=224,slow=5.5,SNR=3.3						
ARCES	**ARCESS Array B**	**82.17**	**342**	P	**P**	**04 09 24.1**	**+0.4**
	3.3nm,0.8s,baz=81,slow=7.5,SNR=9.1						
NVAR	**Mina Array Bea**	**82.71**	**52**	P	**P**	**04 09 28.3**	**+0.9**
	1.8nm,0.8s,baz=267,slow=5.7,SNR=7.5						
FINES	**FINESS Array B**	**86.60**	**335**	P	**P**	**04 09 44.9**	**-1.3**
	1.2nm,0.4s,baz=69,slow=4.9,SNR=21						
PDAR	**Pinedale Array**	**87.38**	**46**	P	**P**	**04 09 50.6**	**0.0**
	0.3nm,0.4s,baz=133,slow=1.8,SNR=4.9						
TORD	**Torodi Ar. Bea**	**132.36**	**310**	PKP	**PKPdf**	**04 16 17.3**	**-0.3**
	0.6nm,1.1s,baz=360,slow=3.0,SNR=3.2						

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*ISCJB **14** 03:58:56.7±0.6, 10°8S±0°1×166°5E±0°1, h10km, mb4.2/22, MS3.6/5, Error ellipse: s-maj=19.8km s-min=9.3km az=40.5*
*IDC **14** 03:58:56.2±1.1, 10°88S×166°62E, h0km, mb4.0/13, mb1 4.2/13, mb1mx4.0/44, mbtmp4.0/13, MS3.6/7, Ms1 3.5/7, ms1mx3.2/29, Error ellipse: s-maj=40.5km s-min=18.6km az=139.0*
*NEIC **14** 03:58:57.9±0.4, 10°86S×166°58E, h10km, mb4.5/13, Error ellipse: s-maj=16.8km s-min=7.5km az=135.0*

ISC 14 03:58:57.9±0.9, 10°9S±0°2×166°6E±0°2, h10km, n45, σ0s89/33, mb4.3/22, MS3.6/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.70**	**282**	LR	LR	04 03 24.2	
	comp=Z,556nm,18.2s,baz=132,slow=40						
DZM	**Mont Dzumac**	**11.14**	**181**	eLR	LR	04 03 25.5	
	comp=Z,281nm,26.8s						
DZM	**Mont Dzumac**	**11.14**	**181**	LR	LR	04 05 17.1	
	comp=Z,159nm,21.3s,baz=356,slow=34						
EIDS	**Eidsvold**	**20.59**	**223**	eP	**P**	**04 03 37.1**	**-0.2**
	14nm,0.8s						
CTA	**Charters Tower**	**21.62**	**242**	P	**P**	**04 03 49.2**	**+0.7**
	3.3nm,0.8s,baz=61,slow=13,SNR=2.0						
ARMA	**Armidale**	**23.92**	**213**	eP	**P**	**04 04 11.9**	**-0.4**
	20nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**29.17**	**0**	T	T	04 35 28.1	
	baz=181,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**29.18**	**0**	T	T	04 35 28.5	
	baz=181,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.19**	**0**	T	T	04 35 29.3	
	baz=181,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**30.39**	**1**	T	T	04 36 59.8	
	baz=182,slow=76,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	**30.39**	**1**	T	T	04 37 00.2	
	baz=182,slow=76,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**30.41**	**1**	T	T	04 37 05.3	
	baz=182,slow=76,SNR=4.2						
STKA	**Stephens Creek**	**31.15**	**224**	eP	**P**	**04 05 17.0**	**0.0**
	1.4nm,1.1s						
STKA	**Stephens Creek**	**31.15**	**224**	P	**P**	**04 05 17.0**	**0.0**
	2.4nm,0.7s,baz=16,slow=7.8,SNR=3.1						
STKA				LR	LR	04 17 14.0	
	comp=Z,93nm,18.4s,baz=27,slow=35						
WRAB	**Tennant Creek**	**32.32**	**250**	eP	**P**	**04 05 27.1**	**-0.4**
	5.9nm,0.8s						
WR1	**Warramunga Arr**	**32.33**	**250**	eP	**P**	**04 05 27.5**	**-0.1**
	9.2nm,0.8s						
WRA	**Warramunga Arr**	**32.33**	**250**	P	**P**	**04 05 27.5**	**-0.1**
	6.1nm,1.0s,baz=81,slow=9.2,SNR=28						
WRA				LR	LR	04 18 43.4	
	comp=Z,107nm,18.2s,baz=65,slow=37						
AS31	**Alice Springs**	**33.62**	**243**	eP	**P**	**04 05 38.4**	**-0.6**
	1.0nm,1.0s						
ASAR	**Alice Springs**	**33.62**	**243**	P	**P**	**04 05 38.4**	**-0.6**
	1.4nm,0.8s,baz=70,slow=9.4,SNR=9.3						
ASAR				LR	LR	04 18 27.8	
	comp=Z,129nm,21.5s,baz=90,slow=35						
BBOO	**Buckleboo**	**35.56**	**227**	eP	**P**	**04 05 55.9**	**+0.3**
	5.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.23**	**255**	eP	**P**	**04 06 35.6**	**+0.4**
	5.7nm,0.8s						
PPT2	**Papeete2**	**42.93**	**104**	eLR	LR	04 18 48.7	
	comp=Z,82nm,26.0s						
DAV	**Davao City (W)**	**44.55**	**292**	LR	LR	04 24 26.6	
	comp=Z,43nm,19.7s,baz=60,slow=34						
KSRS	**Korea Array**	**60.21**	**325**	P	**P**	**04 09 06.2**	**-0.1**
	0.7nm,0.5s,baz=132,slow=6.3,SNR=4.3						
KS15	**Wonju Array Si**	**60.22**	**325**	eP	**P**	**04 09 06.2**	**-0.2**
	9.3nm,1.4s						
KSAR	**Wonju Array Be**	**60.22**	**325**	P	**P**	**04 09 06.2**	**-0.2**
USRK	**Ussuriysk Ar.**	**63.17**	**333**	P	**P**	**04 09 27.0**	**+0.9**
	3.5nm,1.1s,baz=153,slow=9.7,SNR=5.6						
CM31	**Chiang Mai Arr**	**72.81**	**293**	eP	**P**	**04 10 27.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**72.81**	**293**	P	**P**	**04 10 27.7**	**+0.3**
	0.8nm,0.4s,baz=120,slow=5.4,SNR=3.2						
SONA0	**Songino Array**	**79.02**	**323**	eP	**P**	**04 11 02.3**	**-0.1**
SONM	**Songino Array**	**79.02**	**323**	P	**P**	**04 11 02.3**	**-0.1**
	0.6nm,0.8s,baz=135,slow=5.3,SNR=3.6						
ILAR	**Eielson Array**	**83.08**	**18**	P	**P**	**04 11 21.7**	**-1.8**
	1.5nm,0.9s,baz=228,slow=5.5,SNR=6.8						
ILB	**Eielson Array**	**83.08**	**18**	eP	**P**	**04 11 21.7**	**-1.8**
	8.7nm,1.5s						
NV01	**Mina Array Sit**	**85.27**	**50**	eP	**P**	**04 11 34.2**	**-1.3**
NVAR	**Mina Array Bea**	**85.27**	**50**	P	**P**	**04 11 34.2**	**-1.3**
	0.3nm,0.3s,baz=229,slow=6.9,SNR=5.9						
X16A	**Lo Mia Camp, P**	**89.53**	**55**	eP	**P**	**04 11 56.4**	**+0.3**
	2.8nm,0.4s						
PD31	**Pinedale Array**	**92.82**	**47**	eP	**P**	**04 12 12.6**	**+1.3**
	0.1nm,0.3s						
PDAR	**Pinedale Array**	**92.82**	**47**	P	**P**	**04 12 12.6**	**+1.3**
	0.2nm,0.7s,baz=282,slow=5.4,SNR=2.6						
MK01	**Makanchi Array**	**93.95**	**317**	eP	**P**	**04 12 15.5**	**-0.6**
MK31	**Makanchi Array**	**93.97**	**317**	eP	**P**	**04 12 15.8**	**-0.4**
	1.5nm,0.9s						
MK32	**Makanchi Array**	**93.97**	**317**	eP	**P**	**04 12 15.6**	**-0.6**
MKAR	**Makanchi Array**	**93.97**	**317**	P	**P**	**04 12 15.6**	**-0.6**
	1.0nm,0.7s,baz=95,slow=5.6,SNR=8.2						
YKA	**Yellowknife Ar**	**94.43**	**27**	P	**P**	**04 12 19.8**	**+1.8**
	0.3nm,0.7s,baz=260,slow=4.8,SNR=3.5						
YKB5	**Yellowknife Ar**	**94.43**	**27**	eP	**P**	**04 12 19.8**	**+1.8**
TXAR	**Lajitas Array**	**95.01**	**61**	LR	LR	04 49 59.0	
	comp=Z,27nm,18.6s,baz=0.0,slow=32						

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*NEIC **14** 04:00:24.8±0.0, 15°64N×94°13W, h74km, mb4.5/121, MD4.6(MEX), After MEX.*
NEIC Felt at El Espinal, Salina Cruz, San Cristobal de Las Casas, Tonala and Tuxtla Gutierrez.
*UCR **14** 04:00:24.6±1.1, 15°79N×93°72W, h194km±9km, MD4.4, ML4.3, mb4.5(NEIC)*
*IDC **14** 04:00:24.6±0.8, 15°83N×93°87W, h79km±6km, mb4.0/24, mb1 4.2/27, mb1mx4.2/40, mbtmp4.4/27, MS3.3/11, Ms1 3.3/11, ms1mx3.1/32, Error ellipse: s-maj=14.3km s-min=5.7km az=41.0*
*MEX **14** 04:00:24.8±0.7, 15°59N×94°13W, h74km±11km, MD4.0*
*ISCJB **14** 04:00:25.4±0.3, 15°92N±0°02×93°78W±0°02, h102km±2km, mb4.3/100, Error ellipse: s-maj=4.4km s-min=2.6km az=141.0*

ISC 14 04:00:23.6±0.6, 15°78N±0°04×93°95W±0°03, h77km±5km, n540, σ2s12/579, mb4.4/101, 2C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.71**	**96**	ePn	**Pn**	**04 00 40.4**	**+1.3**
PCIG				eSn	**Sn**	**04 00 53.2**	**+2.6**
PCIG		**0.71**	**96**	eP	**Pn**	**04 00 40.4**	**+1.3**
PCIG				eS	**Sn**	**04 00 53.2**	**+2.6**
CMIG	**Matias Romero**	**1.58**	**325**	eP	**Pn**	**04 00 50.8**	**+0.9**
CMIG				eS	**Sn**	**04 01 11.0**	**+1.2**
CMIG	**Matias Romero**	**1.58**	**325**	P	**Pn**	**04 00 50.8**	**+0.9**
	738nm,0.3s,baz=165,slow=13,SNR=4632						
CMIG				S	**Sn**	**04 01 11.0**	**+1.2**
	1µm,0.3s,baz=137,slow=14,SNR=20						
CCIG	**Comitan**	**1.81**	**74**	ePn	**Pn**	**04 00 55.1**	**+2.0**
CCIG				eSn	**Sn**	**04 01 15.7**	**+0.3**
CCIG				eSn	Sn	04 01 18.6	+3.1
CCIG	**Comitan**	**1.81**	**74**	eP	**Pn**	**04 00 55.1**	**+2.0**
CCIG				i S	**Sn**	**04 01 20.0**	**+4.5**
THIG		**1.84**	**118**	ePn	**Pn**	**04 00 54.4**	**+1.0**
THIG				eSn	**Sn**	**04 01 16.9**	**+0.9**
THIG		**1.84**	**118**	eP	**Pn**	**04 00 54.1**	**+0.8**
THIG				eS	**Sn**	**04 01 16.9**	**+0.9**
HUIG	**Huatulco**	**2.08**	**270**	ePn	**Pn**	**04 00 54.2**	**-2.3**
HUIG				eSn	**Sn**	**04 01 16.4**	**-5.2**
HUIG	**Huatulco**	**2.08**	**270**	eP	**Pn**	**04 00 54.2**	**-2.3**
HUIG				eS	**Sn**	**04 01 16.4**	**-5.2**
VHO	**Vista Hermosa**	**2.96**	**296**	ePn	**Pn**	**04 01 09.5**	**+0.9**
VHO				eSn	**Sn**	**04 01 41.7**	**-1.6**
VHO	**Vista Hermosa**	**2.96**	**296**	eP	**Pn**	**04 01 09.8**	**+1.2**
VHO				eS	**Sn**	**04 01 41.7**	**-1.6**
FUG	**Fuego 3**	**3.28**	**113**	eP	**Pn**	**04 01 16.6**	**+3.7**
APG	**El Apazote**	**3.45**	**103**	P	**Pn**	**04 01 16.2**	**+1.0**
	39nm,0.3s,baz=275,slow=16,SNR=496						
APG				S	**Sn**	**04 01 56.0**	**+0.9**
	545nm,0.3s,baz=82,slow=15,SNR=26						
APG				LR	LR	04 02 17.1	
	comp=Z,1µm,21.6s,baz=72,slow=33						
PCG	**Pacaya**	**3.51**	**113**	eP	**Pn**	**04 01 18.5**	**+2.3**
PCG				eS	**Sn**	**04 02 01.9**	**+5.2**
NBG	**Las Nubes**	**3.67**	**108**	eP	**Pn**	**04 01 21.2**	**+2.8**
IXG	**Ixpaco**	**3.74**	**115**	eP	**Pn**	**04 01 22.6**	**+3.4**
IXG				eS	**Sn**	**04 02 07.4**	**+5.3**
MRL	**Marmol**	**4.17**	**99**	eP	**Pn**	**04 01 27.0**	**+1.9**
MRL				eS	**Sn**	**04 02 12.9**	**+0.2**
RTR	**El Retiro**	**4.56**	**114**	eP	**Pn**	**04 01 33.0**	**+2.5**
LVIG	**Laguna Verde**	**4.57**	**329**	ePn	**Pn**	**04 01 29.4**	**-0.9**
LVIG				eSn	**Sn**	**04 02 20.0**	**-2.2**
SBLS	**San Blas**	**4.61**	**114**	eP	**Pn**	**04 01 33.2**	**+2.1**
SNJE	**San Jose**	**4.61**	**114**	eP	**Pn**	**04 01 33.1**	**+2.0**
CEVE	**Cerro Verde**	**4.61**	**114**	eP	**Pn**	**04 01 33.1**	**+1.9**
BOQS	**Boqueron**	**4.95**	**114**	eP	**Pn**	**04 01 38.0**	**+2.2**
BOQS				eS	**Sn**	**04 02 35.3**	**+3.3**
BOQS				IAML		04 02 40.5	
	comp=Z,612nm,0.3s						
UEES	**San Salvador**	**4.99**	**114**	eP	**Pn**	**04 01 38.8**	**+2.6**
SNET	**Serv Nac Est T**	**5.02**	**114**	eP	**Pn**	**04 01 38.2**	**+1.7**
SNET				eS	**Sn**	**04 02 34.9**	**+1.6**
LOMA	**San Marcos**	**5.08**	**114**	eP	**Pn**	**04 01 39.7**	**+2.3**
LBRS	**Las Brisas**	**5.16**	**113**	eP	**Pn**	**04 01 40.5**	**+2.0**
LFRS	**El Faro**	**5.19**	**114**	eP	**Pn**	**04 01 40.7**	**+1.7**
PAVA	**Las Pavas**	**5.27**	**112**	eP	**Pn**	**04 01 41.6**	**+1.7**
SNVI	**San Vicente**	**5.39**	**113**	eP	**Pn**	**04 01 44.0**	**+2.2**
PACA	**Pacayal**	**5.91**	**112**	eP	**Pn**	**04 01 50.9**	**+2.1**
MYIG	**Mrida**	**6.51**	**37**	ePn	**Pn**	**04 01 58.3**	**+1.4**
MYIG				eSn	**Sn**	**04 03 09.3**	**-0.5**
TEIG	**Tepich**	**6.97**	**50**	ePn	**Pn**	**04 02 03.2**	**+0.1**
TEIG				eSn	**Sn**	**04 03 22.1**	**+1.1**
CRIN	**San Cristobal**	**7.36**	**114**	eP	**Pn**	**04 02 08.0**	**-0.5**
CRIN				IAML		04 03 36.8	
	comp=N,326nm,0.5s						
ESTN	**Estel**	**7.81**	**109**	ePn	**Pn**	**04 02 16.6**	**+1.9**
ESTN				eSn	**Sn**	**04 03 39.6**	**-2.1**
ESTN	**Estel**	**7.81**	**109**	eP	**Pn**	**04 02 16.9**	**+2.2**
MOIG	**Morelia**	**7.91**	**300**	ePn	**Pn**	**04 02 20.0**	**+3.8**
MATN	**Matagalpa**	**8.28**	**109**	eP	**Pn**	**04 02 22.9**	**+1.8**
BOAB	**BOACO BROADBAN**	**8.69**	**111**	ePn	**Pn**	**04 02 27.3**	**+0.6**
GB1A	**Borinquen Arri**	**9.67**	**120**	eP	**Pn**	**04 02 40.9**	**+0.8**
BUEV	**Buena Vista**	**9.68**	**120**	eP	**Pn**	**04 02 40.9**	**+0.7**
GPS2	**Hotel Rincn d**	**9.75**	**120**	eP	**Pn**	**04 02 42.8**	**+1.7**
MESS	**Mesas**	**9.88**	**119**	eP	**Pn**	**04 02 43.9**	**+0.8**
CUI	**Cuipilapa**	**9.95**	**120**	eP	**Pn**	**04 02 44.5**	**+0.5**
PLVR	**Palo Verde**	**9.96**	**122**	eP	**Pn**	**04 02 45.9**	**+1.6**
ESPN	**Las Esperanzas**	**10.02**	**110**	ePn	**Pn**	**04 02 46.1**	**+1.3**
JTS	**JuntasAbangare**	**10.32**	**121**	ePn	**Pn**	**04 02 50.2**	**+1.2**
JTS				eSn	**Sn**	**04 04 40.7**	**-2.4**
JTS	**JuntasAbangare**	**10.32**	**121**	P	**Pn**	**04 02 50.2**	**+1.2**
	comp=N,9.0nm,0.3s,baz=15,slow=15,SNR=35						
JTS				S	**Sn**	**04 04 41.6**	**-1.5**
	comp=N,2.0nm,0.3s,baz=350,slow=19,SNR=4.5						
JTS	**JuntasAbangare**	**10.32**	**121**	eP	**Pn**	**04 02 50.0**	**+1.0**
ARE1	**Arenal 1**	**10.43**	**119**	eP	**Pn**	**04 02 51.8**	**+1.4**
LNIG	**Linares**	**10.44**	**331**	ePn	**Pn**	**04 02 51.5**	**+1.0**
LNIG				eSn	**Sn**	**04 04 42.6**	**-3.1**
ZAIG	**Zacatecas**	**10.70**	**312**	ePn	**Pn**	**04 02 56.8**	**+2.5**
LCR2	**La Lucha 2**	**11.41**	**121**	eP	**Pn**	**04 03 04.3**	**+0.3**
WBCY	**West Bay, Gran**	**12.49**	**72**	ePn	**Pn**	**04 03 20.6**	**+2.2**
WBCY				eSn	**Sn**	**04 05 28.1**	**-7.6**
FSCY	**Frank Sound, G**	**12.67**	**72**	ePn	**Pn**	**04 03 21.5**	**+0.6**
FSCY				eSn	**Sn**	**04 05 35.3**	**-4.8**
833A	**Chaparral WMA,**	**13.46**	**339**	ePn	**Pn**	**04 03 33.6**	**+2.3**
833A	**Chaparral WMA,**	**13.46**	**339**	P	**Pn**	**04 03 33.0**	**+1.6**
	baz=158,SNR=41						
HKT	**Hockley**	**14.21**	**353**	ePn	**Pn**	**04 03 43.5**	**+2.5**
HKT				eSn	**Sn**	**04 06 11.4**	**-5.9**
435B	**Jarrell**	**15.30**	**348**	ePn	**Pn**	**04 03 57.2**	**+2.0**
	comp=N,100nm,0.6s						
435B				eSn	Sn	04 06 33.7	-10
435B	**Jarrell**	**15.30**	**348**	P	**Pn**	**04 03 57.0**	**+1.8**
	baz=167,SNR=31						
HPIG		**15.55**	**317**	ePn	**Pn**	**04 04 00.8**	**+2.1**
	comp=N,26nm,1.3s						
JCT	**Junction City**	**15.58**	**341**	ePn	**Pn**	**04 04 00.7**	**+1.8**
	comp=N,45nm,0.8s						
JCT	**Junction City**	**15.58**	**341**	P	**Pn**	**04 04 00.4**	**+1.5**
	baz=159,SNR=9.8						
061Z	**Ochoppi**	**15.77**	**48**	ePn	**Pn**	**04 04 00.1**	**-1.1**
	comp=N,98nm,0.8s						
061Z	**Ochoppi**	**15.77**	**48**	P	**Pn**	**04 03 59.9**	**-1.4**
	baz=233						
NATX	**Nacogdoches**	**15.92**	**358**	ePn	**P**	**04 04 07.0**	**+1.8**
	comp=N,26nm,0.8s						
NATX				eSn	**Sn**	**04 06 52.4**	**-6.4**
LTX	**Lajitas**	**16.19**	**328**	ePn	**P**	**04 04 09.1**	**+0.7**
TXAR	**Lajitas Array**	**16.19**	**328**	P	**P**	**04 04 09.1**	**+0.7**
	comp=N,0.6nm,0.3s,baz=150,slow=13,SNR=98						
TX31	**Lajitas Ar. Si**	**16.19**	**328**	ePn	**Pn**	**04 04 08.9**	**+2.4**
WHTX	**Lake Whitney,**	**16.45**	**349**	ePn	**Pn**	**04 04 11.3**	**+1.7**
	comp=N,42nm,0.6s						
WHTX				eSn	Sn	04 07 01.1	-11
WHTX	**Lake Whitney,**	**16.45**	**349**	P	**Pn**	**04 04 11.0**	**+1.3**
	baz=169,SNR=17						
349A	**Repton**	**16.68**	**21**	P	**Pn**	**04 04 12.6**	**+0.1**
	baz=204						

PAYG	Puerto Ayora	16.75	167	*e*Pn	Pn	04 04 12.7	-0.9
	comp=N,31nm,0.8s						
DWPF	Disney Wildern	16.87	41	*e*Pn	P	04 04 16.4	+0.6
	comp=N,83nm,0.6s						
DWPF				*e*Sn	Sn	04 07 15.9	-6.0
DWPF	Disney Wildern	16.87	41	P	Pn	04 04 14.3	-0.6
	baz=226						
858A	St. Cloud	16.99	41	P	Pn	04 04 15.8	-0.5
	baz=226						
452A	Marianna	17.01	27	P	Pn	04 04 16.7	+0.1
	baz=210						
350A	Dozier	17.05	23	P	Pn	04 04 17.1	+0.1
	baz=206						
757A	Oxford	17.07	38	P	Pn	04 04 17.0	-0.4
	baz=222						
656A	Willston	17.12	36	*e*Pn	Pn	04 04 18.4	+0.3
	comp=N,43nm,0.8s						
656A	Willston	17.12	36	P	Pn	04 04 17.7	-0.3
	baz=220						
351A	Pinckard	17.20	25	P	Pn	04 04 18.9	-0.1
	baz=208						
453A	Whigham	17.40	29	*e*Pn	Pn	04 04 20.8	-0.6
	comp=N,47nm,0.9s						
453A	Whigham	17.40	29	P	Pn	04 04 21.1	-0.2
	baz=213						
Z41A	Richland Creek	17.43	3	*e*P	P	04 04 26.4	+4.4
	comp=N,101nm,1.1s						
Z41A				*e*Sn	Sn	04 07 24.7	-11
Z41A	Richland Creek	17.43	3	P	P	04 04 23.3	+1.4
	baz=184						
LPIG	La Paz	17.45	301	P	P	04 04 26.1	+3.8
	baz=326,slow=15,SNR=2.7						
LPIG				LR	LR	04 10 18.6	
	comp=N,76nm,21.1s,baz=84,slow=34						
ABTX	Abilene, Hawle	17.54	344	*e*P	Pn	04 04 24.9	+1.7
	comp=N,36nm,0.8s						
ABTX	Abilene, Hawle	17.54	344	P	Pn	04 04 24.7	+1.5
	baz=162						
250A	Grady	17.57	22	*e*P	P	04 04 25.6	+2.1
	comp=N,22nm,0.8s						
250A				*e*Sn	Sn	04 07 30.9	-7.9
250A	Grady	17.57	22	P	Pn	04 04 23.8	+0.2
	baz=205						
147A	Livingston	17.59	16	P	P	04 04 24.0	+0.3
	baz=199						
454A	Quitman	17.61	31	P	P	04 04 23.8	-0.1
	baz=215						
758A	Lake Helen	17.61	40	P	P	04 04 23.4	-0.5
	baz=225						
352A	Blakely	17.66	26	*e*P	Pn	04 04 26.6	+2.1
	comp=N,49nm,0.8s						
352A				*e*Sn	Sn	04 07 32.5	-8.4
352A	Blakely	17.66	26	P	P	04 04 24.5	0.0
	baz=210						
556A	Lake Butler	17.68	35	P	P	04 04 24.5	-0.2
	baz=219						
353A	Camilla	17.86	28	P	P	04 04 26.5	-0.2
	baz=212						
658A	Bunnell	17.91	39	P	P	04 04 26.5	-0.7
	baz=223						
455A	Stateville	17.93	32	P	P	04 04 27.0	-0.5
	baz=216						
149A	Jones	17.96	20	P	P	04 04 28.0	+0.3
	baz=203						
557A	Orange Park	18.07	36	P	P	04 04 28.5	-0.5
	baz=221						
252A	Lumpkin	18.19	26	P	P	04 04 30.4	+0.2
	baz=210						
TIGA	Tifton	18.23	29	*e*P	Pn	04 04 37.0	+5.6
	comp=N,54nm,0.6s						
TIGA	Tifton	18.23	29	P	P	04 04 30.8	+0.1
	baz=214						
150A	Eclectic	18.23	22	P	P	04 04 31.1	+0.4
	baz=205						
LRAL	Lakeview Retre	18.29	19	*e*P	Pn	04 04 35.3	+3.0
	comp=N,20nm,1.3s						
LRAL	Lakeview Retre	18.29	19	P	P	04 04 32.1	+0.6
	baz=202						
151A	Opelika	18.42	24	P	P	04 04 33.2	+0.4
	baz=207,SNR=8.8						
456A	Hilliard	18.45	34	*e*P	P	04 04 34.0	+0.8
	comp=N,207nm,1.4s						
Z49A	Columbiana	18.59	20	P	P	04 04 35.3	+0.6
	baz=203						
X40A	Basin Creek Fa	18.65	3	P	Pn	04 04 37.1	+0.6
	baz=184						
X41A	Kaden, Bauxite	18.68	4	P	Pn	04 04 37.5	+0.7
	baz=185						
MIAR	Mount Ida	18.68	1	*e*P	P	04 04 36.9	+1.2
	comp=N,18nm,0.9s						
MIAR	Mount Ida	18.68	1	P	P	04 04 36.6	+0.9
	baz=182						
152A	Waverly Hall	18.78	25	*e*P	Pn	04 04 39.4	+1.3
	comp=N,25nm,1.1s						
152A	Waverly Hall	18.78	25	P	P	04 04 36.8	0.0
	baz=209						
254A	Abbeville	18.79	29	P	P	04 04 37.5	+0.7
	baz=214						
Z50A	Ashland	18.85	21	*e*P	Pn	04 04 40.1	+1.2
	comp=N,19nm,0.8s						
Z50A	Ashland	18.85	21	P	P	04 04 36.9	-0.7
	baz=205,SNR=6.1						
GDL2	Guadalupe Moun	18.89	332	*e*P	Pn	04 04 41.0	+1.5
MNTX	Cornudas Mount	18.96	329	*e*P	P	04 04 40.9	+2.1
	comp=N,17nm,1.4s						
MNTX	Cornudas Mount	18.96	329	P	P	04 04 40.7	+1.8
	baz=145,SNR=9.3						
UALR	University of	18.97	4	*e*P	Pn	04 04 45.6	+5.3
	comp=N,17nm,0.8s						
OXF	Oxford	19.09	12	*e*P	P	04 04 40.1	-0.1
	comp=N,36nm,1.4s						
OXF	Oxford	19.09	12	P	P	04 04 40.5	+0.3
	baz=194						
255A	Hazlehurst	19.17	31	*e*P	P	04 04 41.1	+0.1
	comp=N,132nm,1.4s						
255A	Hazlehurst	19.17	31	P	P	04 04 40.3	-0.7
	baz=216						
Y49A	Blount Mountai	19.24	19	*e*P	Pn	04 04 44.1	+0.6
	comp=N,12nm,0.7s						
Y49A	Blount Mountai	19.24	19	P	P	04 04 42.6	+0.8
	baz=203						
X46A	Booneville	19.30	13	P	P	04 04 43.4	+0.9
	baz=196						
W39A	Magazine	19.33	0	*e*P	P	04 04 44.4	+1.6
	comp=N,16nm,0.6s						
W39A	Magazine	19.33	0	P	P	04 04 44.4	+1.6
	baz=181						
Z52A	Williamson	19.36	25	P	P	04 04 43.6	+0.5
	baz=209						
WMOK	Wichita Mounta	19.37	348	*e*P	P	04 04 44.7	+1.5
	comp=N,27nm,1.4s						
WMOK	Wichita Mounta	19.37	348	P	P	04 04 44.5	+1.3
	baz=166,SNR=8.9						
W41B	Gary Mavity, V	19.37	4	*e*P	Pn	04 04 49.5	+4.5
	comp=N,17nm,1.3s						
CPRX	Cap Rock	19.38	334	*e*P	Pn	04 04 46.3	+0.9
154A	Montrose	19.43	29	P	P	04 04 43.9	0.0
	baz=213						
DBBC	Dabeiba	19.43	115	*e*P	Pn	04 04 45.7	-0.3
DBBC	Dabeiba	19.43	115	*e*P	Pn	04 04 45.7	-0.3
X47A	Russelville	19.44	15	P	P	04 04 43.8	-0.2
	baz=198						
Y50A	Piedmont	19.49	21	P	P	04 04 44.8	+0.3
	baz=205						
X48A	Hartselle	19.60	17	*e*P	P	04 04 46.5	+0.8
	comp=N,32nm,1.4s						
X48A	Hartselle	19.60	17	P	P	04 04 46.5	+0.8
	baz=200						
UREC	San Jos de Ur	19.70	112	*e*P	P	04 04 44.1	-3.0
UREC	San Jos de Ur	19.70	112	*e*P	P	04 04 44.1	-3.0
Y51A	Rockmart	19.74	22	P	P	04 04 47.9	+0.6
	baz=206						
W45A	Hickory Valley	19.76	12	P	P	04 04 48.9	+1.4
	baz=194						
MSTX	Muleshoe	19.78	338	*e*P	P	04 04 49.5	+1.6
	comp=N,93nm,0.8s						
MSTX	Muleshoe	19.78	338	P	P	04 04 48.9	+1.1
	baz=155,SNR=30						
Z53A	Monticello	19.79	26	P	P	04 04 48.3	+0.6
	baz=211						
X49A	Woodville	19.87	19	P	P	04 04 48.8	+0.2
	baz=202						
W46A	Michie	19.91	14	P	P	04 04 49.8	+0.8
	baz=196						
GOGA	Godfrey	19.95	26	*e*P	P	04 04 50.1	+0.6
	comp=N,14nm,0.7s						
GOGA	Godfrey	19.95	26	P	P	04 04 49.8	+0.4
	baz=211						
V41A	Mountainview	19.98	4	P	P	04 04 50.1	+0.3
	baz=186,SNR=7.9						
X50B	Fort Payne	20.04	20	P	P	04 04 51.4	+0.9
	baz=204,SNR=8.2						
V42A	Cord	20.07	6	P	P	04 04 50.6	-0.2
	baz=188						
Z54A	Sparta	20.07	28	P	P	04 04 50.8	-0.1
	baz=213						
Y52A	Lilburn	20.09	25	*e*P	P	04 04 51.6	+0.5
	comp=N,18nm,0.8s						
Y52A	Lilburn	20.09	25	P	P	04 04 51.1	+0.1
	baz=209						
TUL1	Leonard	20.11	356	*e*P	P	04 04 53.2	+1.9
	comp=N,22nm,0.8s						
TUL1	Leonard	20.11	356	P	P	04 04 52.7	+1.5
	baz=175						
W47A	Westpoint	20.20	15	P	P	04 04 52.3	0.0
	baz=198						
AMTX	Amarillo	20.25	341	*e*P	P	04 04 54.3	+1.4
	comp=N,99nm,0.6s						
AMTX	Amarillo	20.25	341	P	P	04 04 54.6	+1.7
	baz=159						
W48A	Pulaski	20.27	17	P	P	04 04 53.4	+0.4
	baz=200						
Y53A	Monroe	20.28	26	P	P	04 04 52.7	-0.4
	baz=210						
V45A	Humboldt	20.37	12	P	P	04 04 54.7	+0.7
	baz=194						
X51A	Calhoun	20.41	22	*e*P	Pn	04 05 00.8	+3.6
	comp=N,17nm,0.8s						
X51A	Calhoun	20.41	22	P	P	04 04 54.9	+0.4
	baz=206						
HELC	Santa Helena	20.42	116	*e*P	P	04 04 52.9	-2.3
HELC	Santa Helena	20.42	116	*e*P	P	04 04 52.9	-2.3
W49A	Belvidere	20.45	18	P	P	04 04 55.6	+0.6
	baz=202						
U40A	Yellville	20.51	3	P	P	04 04 56.4	+0.8
	baz=184						
U41A	Viola	20.56	5	P	P	04 04 56.6	+0.6
	baz=186,SNR=12						
V46A	Holladay	20.60	14	P	P	04 04 55.8	-0.8
	baz=196						
SMLC	San Martn de	20.61	107	*e*P	P	04 04 53.7	-3.2
SMLC	San Martn de	20.61	107	*e*P	P	04 04 53.7	-3.2
U42A	Revenden	20.63	6	P	P	04 04 56.6	-0.2
	baz=188						
Y54A	Tignall	20.67	27	P	P	04 04 56.4	-0.9
	baz=212						
V47A	Nunnelly	20.77	15	P	P	04 04 58.4	0.0
	baz=198						
X52A	Dahlonega	20.80	24	P	P	04 04 58.4	-0.4
	baz=208						
W50A	Signal Mountai	20.83	20	*e*P	Pn	04 05 05.4	+3.2
	comp=N,26nm,0.6s						
W50A				*e*S	S	04 08 47.1	0.0
W50A	Signal Mountai	20.83	20	P	P	04 04 59.5	+0.5
	baz=204						
V48A	Smith Brothers	20.87	16	P	P	04 04 59.4	-0.1
	baz=200						
121A	Cookes Peak, D	20.88	325	P	P	04 05 02.5	+2.8
	baz=140,SNR=36						
319A	Douglas	20.90	321	*e*P	Pn	04 05 03.2	0.0
	comp=N,28nm,0.9s						
YOTC	Yotoco, Valle	20.91	122	*e*P	P	04 05 00.2	0.0
YOTC	Yotoco, Valle	20.91	122	*e*P	P	04 05 00.2	0.0
X53A	Estanollee	20.95	25	P	P	04 05 00.1	-0.3
	baz=210						
W51A	Cleveland	20.98	21	P	P	04 05 01.2	+0.6
	baz=206						
WVT	Waverly	20.98	14	*e*P	P	04 05 01.1	+0.5
	comp=N,5.8nm,0.6s						
WVT				*e*S	S	04 08 49.2	-0.9
WVT	Waverly	20.98	14	P	P	04 05 01.0	+0.3
	baz=197						
U46A	Springville	21.13	13	P	P	04 05 02.3	+0.1
	baz=196						
PBMO	Poplar Bluff	21.14	8	*e*P	P	04 05 03.3	+0.9
	comp=N,10nm,0.6s						
V49A	McMinnville	21.16	18	P	P	04 05 02.5	-0.1
	baz=202						
PTBC	PUERTO BERRIO,	21.20	114	*e*P	P	04 05 00.1	-3.1
PTBC	PUERTO BERRIO,	21.20	114	*e*P	P	04 05 00.1	-3.1
W52A	Murphy	21.22	23	*e*P	P	04 05 04.7	+1.4
	comp=N,9.3nm,0.9s						
W52A				*e*S	S	04 09 00.8	+5.7
W52A	Murphy	21.22	23	P	P	04 05 03.1	-0.2
	baz=208						
RREF	El Recreo	21.23	119	*e*P	P	04 05 04.9	+0.7
RREF	El Recreo	21.23	119	*e*P	P	04 05 04.9	+0.7
T41A	Mountain View	21.26	5	P	P	04 05 04.6	+0.9
	baz=186,SNR=9.1						
T42A	Van Buren	21.31	6	*e*P	P	04 05 05.8	+1.7
	comp=N,5.5nm,0.5s						
T42A				*e*S	S	04 09 00.1	+3.5
T42A	Van Buren	21.31	6	P	P	04 05 04.3	+0.1
	baz=188						
V50A	Pikevile	21.33	20	P	P	04 05 04.3	0.0
	baz=204						
ANIL	Santa Ana	21.40	120	*e*P	P	04 05 06.5	+0.9
ANIL	Santa Ana	21.40	120	*e*P	P	04 05 06.5	+0.9
U47A	Clarksville	21.41	15	P	P	04 05 05.1	-0.1
	baz=198						
T43A	Greenville	21.46	8	P	P	04 05 05.7	-0.1
	baz=190						
POPC	Popayan, Colom	21.51	126	*e*P	P	04 05 07.8	+1.1
POPC	Popayan, Colom	21.51	126	*e*P	P	04 05 07.8	+1.1
BNM	Barren Site	21.56	330	*e*P	P	04 05 10.6	+3.5
W53A	Cullowhee	21.59	25	P	P	04 05 07.2	0.0
	baz=210						
Y22D	IRIS PASSCAL I	21.64	330	*e*P	P	04 05 12.3	+4.4
	comp=N,34nm,0.8s						
X55A	Gracelyn & Ava	21.65	29	P	P	04 05 07.3	-0.6
	baz=214						
U48A	Cassie Pea, Po	21.67	16	P	P	04 05 06.9	-1.1
	baz=200						
V51A	Loudon	21.70	21	P	P	04 05 08.1	-0.2
	baz=206						
OTAV	Otavalo	21.74	134	*e*P	P	04 05 10.8	+1.4
	comp=N,4.7nm,0.9s						
LENM	Lemitar	21.74	330	*e*P	P	04 05 11.6	+2.6
TKL	Tuckaleechee C	21.78	23	*e*P	P	04 05 09.2	0.0
	comp=N,12nm,1.0s						
TKL				*e*S	S	04 09 06.8	+0.8
TKL	Tuckaleechee C	21.78	23	P	P	04 05 09.2	0.0
	comp=N,3.3nm,0.8s,baz=185,slow=14,SNR=2.8						
TKL				S	S	04 09 06.8	+0.8
	comp=N,4.8nm,0.9s,baz=109,slow=11,SNR=2.8						
TKL				LR	LR	04 15 06.9	
	comp=N,77nm,19.1s,baz=216,slow=41						
S41A	Jillco Farms,	21.80	5	P	P	04 05 10.3	+0.8
	baz=186						
T46A	Princeton	21.84	13	P	P	04 05 10.3	+0.5
	baz=196						
SDDR	Presa de Saban	21.85	78	*e*P	P	04 05 10.9	+0.7
	comp=N,21nm,0.8s						
U49A	Red Boiling Sp	21.89	18	P	P	04 05 10.1	-0.2
	baz=202						
CRUC	La Cruz	21.92	128	*e*P	P	04 05 13.3	+2.1
CRUC	La Cruz	21.92	128	*e*P	P	04 05 13.3	+2.1
S43A	Fulton Ridge,	21.97	8	P	P	04 05 10.0	-1.2
	baz=190						
LAZ	Ladron	22.01	330	*e*P	P	04 05 15.1	+3.2
S42A	Caledonia	22.08	7	P	P	04 05 12.2	-0.2
	baz=188						
U50A	Jamestown	22.09	20	P	P	04 05 11.1	-1.4
	baz=204						
ROSC	El Rosal	22.14	117	*e*P	P	04 05 15.9	+2.3
	comp=N,16nm,0.8s						
ROSC	El Rosal	22.14	117	*e*P	P	04 05 14.7	+1.0
ROSC	El Rosal	22.14	117	*e*P	P	04 05 14.7	+1.0
ROSC	El Rosal	22.14	117	P	P	04 05 14.9	+1.3
	comp=N,20nm,0.9s,baz=352,slow=2.3,SNR=15						
ANMO	Albuquerque	22.14	332	*e*P	P	04 05 15.4	+2.1
	comp=N,7.7nm,0.8s						
ANMO	Albuquerque	22.14	332	P	P	04 05 14.7	+1.4
	baz=147						
ANMO	Albuquerque	22.14	332	P	P	04 05 15.3	+2.0
	comp=N,5.7nm,0.6s,baz=142,slow=11,SNR=24						
ANMO				LR	LR	04 15 11.4	
	comp=N,38nm,21.4s,baz=100,slow=40						
V53A	Saluda	22.16	25	*e*P	P	04 05 14.1	+0.7
	comp=N,12nm,0.7s						
S44A	Carbondale	22.21	10	P	P	04 05 13.3	-0.5
	baz=192						
SIUC	Southern Illin	22.24	10	*e*pP	pP	04 05 26.3	-3.8
SIUC				*e*pP	sP	04 05 35.9	-4.0
SIUC				*e*S	S	04 09 19.5	+5.4
CCM	Cathedral Cave	22.31	6	*e*P	P	04 05 14.0	-0.9
	comp=N,9.3nm,0.9s						
CCM	Cathedral Cave	22.31	6	P	P	04 05 14.0	-0.9
	baz=187						
PAMC	Pamplona, Colo	22.43	110	*e*P	P	04 05 10.1	-6.7
PAMC	Pamplona, Colo	22.43	110	*e*P	P	04 05 10.1	-6.7
TUC	Tucson	22.47	320	P	P	04 05 18.8	+2.1
	baz=134						
T49A	Edmonton	22.51	18	*e*P	P	04 05 15.1	-1.9
	comp=N,7.8nm,1.0s						
T49A				*e*S	S	04 09 23.1	+4.5
T49A	Edmonton	22.51	18	P	P	04 05 15.4	-1.6
	baz=202						
R41A	Rosebud	22.54	5	P	P	04 05 16.0	-1.4
	baz=187						
R42A	Luebbering	22.58	6	P	P	04 05 16.6	-1.1
	baz=188,SNR=5.1						
S47A	Hartford	22.61	15	P	P	04 05 17.1	-0.9
	baz=198						
T50A	Nancy	22.64	19	P	P	04 05 16.4	-2.0
	baz=204						
TZTN	Tazewell	22.65	22	P	P	04 05 17.4	-1.2
	baz=207						
R43A	Red Bud	22.68	8	P	P	04 05 18.1	-0.7
	baz=190						
RUSC	La Rusia	22.70	113	*e*P	P	04 05 18.6	-1.1
RUSC	La Rusia	22.70	113	*e*P	P	04 05 18.6	-1.1
CHIC	Chingaza	22.75	117	*e*P	P	04 05 20.2	+0.1
CHIC	Chingaza	22.75	117	*e*P	P	04 05 20.2	+0.1
R44A	Waltonville	22.78	10	P	P	04 05 19.5	-0.4
	baz=192						
R45A	Skylar, Fairfi	22.97	11	P	P	04 05 21.3	-0.5
	baz=194,SNR=8.6						
VILC	Villavicencio,	23.05	118	*e*P	P	04 05 24.7	+1.8
VILC	Villavicencio,	23.05	118	*e*P	P	04 05 24.7	+1.8
R46A	Gibon Southern	23.05	13	P	P	04 05 22.3	-0.3
	baz=196						
Q41A	Truxton	23.20	5	P	P	04 05 23.4	-0.6
	baz=187,SNR=7.4						
T25A	Trinidad	23.21	338	*e*P	P	04 05 27.0	+2.7
	comp=N,14nm,0.8s						
T25A	Trinidad	23.21	338	P	P	04 05 25.8	+1.5
	baz=154,SNR=12						
S49A	Springfield	23.21	18	P	P	04 05 23.0	-1.1
	baz=202						
Q42A	Golden Eagle	23.23	7	P	P	04 05 24.1	-0.2
	baz=189						
KSU1	Kansas State U	23.35	355	*e*P	P	04 05 25.8	+0.5
	comp=N,13nm,0.9s						
KSU1	Kansas State U	23.35	355	P	P	04 05 24.3	-1.0
	baz=174						
WCI	Wyandotte Cave	23.36	15	*e*P	P	04 05 24.2	-1.1
	comp=N,10nm,0.7s						
WCI	Wyandotte Cave	23.36	15	P	P	04 05 24.1	-1.3
	baz=199						
R47A	Wooly Knot Far	23.36	15	P	P	04 05 24.0	-1.5
	baz=198						
T52A	Hallie	23.36	23	P	P	04 05 24.4	-1.0
	baz=208						
Q43A	New Douglas	23.37	8	P	P	04 05 24.1	-1.4
	baz=191,SNR=5.4						
S50A	Richmond	23.39	19	P	P	04 05 24.5	-1.2
	baz=204						
OLIL	Olney	23.43	12	*e*P	P	04 05 26.0	-0.1
	comp=N,17nm,1.0s						
Q44A	Meyer Farm, Va	23.43	10	P	P	04 05 25.1	-1.0
	baz=192						
CBKS	Cedar Bluff	23.50	349	*e*P	P	04 05 27.6	+0.9
	comp=N,22nm,0.6s						
CBKS	Cedar Bluff	23.50	349	P	P	04 05 25.8	-1.0
	baz=166,SNR=7.4						
214A	Organ Pipe Nat	23.53	317	P	P	04 05 28.1	+0.9
	baz=130						
X18A	Snowflake	23.57	325	*e*P	P	04 05 31.0	+3.4
	comp=N,12nm,1.0s						
Q45A	Warren Harvey,	23.58	11	P	P	04 05 26.7	-0.7
	baz=194						
TAMC	Tame, Arauca	23.62	111	*e*P	P	04 05 25.7	-2.4
TAMC	Tame, Arauca	23.62	111	*e*P	P	04 05 25.7	-2.4
R48A	Northridge Ran	23.63	16	P	P	04 05 26.9	-0.9
	baz=200						
R49A	Shelbyville	23.72	17	P	P	04 05 28.0	-0.6
	baz=202						
SDV	Santo Domingo	23.77	104	*e*P	P	04 05 29.5	-0.2
	comp=N,14nm,0.8s						
SDV	Santo Domingo	23.77	104	*e*P	P	04 05 30.1	+0.5
SDV	Santo Domingo	23.77	104	*e*P	P	04 05 30.1	+0.5
SDV	Santo Domingo	23.77	104	P	P	04 05 29.4	-0.2
	comp=N,13nm,0.7s,baz=295,slow=4.9,SNR=17						
SDV				LR	LR	04 14 44.7	
	comp=N,80nm,19.7s,baz=294,slow=36						
P42A	Winchester	23.92	7	*e*P	P	04 05 30.2	-0.3
	comp=N,21nm,0.6s						
P42A	Winchester	23.92	7	P	P	04 05 29.4	-1.0
	baz=189,SNR=8.6						
P41A	Barry, Barry	23.93	5	P	P	04 05 29.4	-1.2
	baz=187,SNR=6.3						
Q47A	Bedord North L	23.99	15	P	P	04 05 30.1	-1.0
	baz=198						
P44A	Sand Creek, Wi	24.05	10	P	P	04 05 31.2	-0.4
	baz=193						
P43A	Skaggs, Pawnee	24.08	8	P	P	04 05 31.5	-0.4
	baz=191						
SDCO	Great Sand Dun	24.14	337	*e*P	P	04 05 36.7	+3.8
	comp=N,9.7nm,1.1s						
SDCO	Great Sand Dun	24.14	337	P	P	04 05 34.9	+2.0
	baz=152						
Q48A	North Vernon	24.16	16	P	P	04 05 32.0	-0.6
	baz=200						
BLO	Bloomington	24.19	14	*e*P	P	04 05 32.5	-0.4
	comp=N,18nm,0.6s						
R51A	Hillsboro	24.22	20	P	P	04 05 32.7	-0.4
	baz=205						
P45A	Graceland, Par	24.27	12	*e*P	P	04 05 34.0	+0.4
	comp=N,16nm,1.3s						
P45A	Graceland, Par	24.27	12	P	P	04 05 32.8	-0.8
	baz=195						
X16A	Lo Mia Camp, P	24.33	323	*e*P	P	04 05 37.5	+3.0
	comp=N,6.1nm,0.8s						
KSCO	Kaye Shedlock’	24.36	343	*e*P	P	04 05 36.3	+1.7
	comp=N,18nm,1.3s						
KSCO	Kaye Shedlock’	24.36	343	P	P	04 05 36.0	+1.4
	baz=160						
O41A	Passleys Farm,	24.39	6	P	P	04 05 34.0	-0.7
	baz=188,SNR=6.3						
PTLC	Puerto Leguiza	24.45	128	*e*P	P	04 05 39.3	+3.7
PTLC	Puerto Leguiza	24.45	128	*e*P	P	04 05 39.3	+3.7
Q49A	Aurora	24.46	17	P	P	04 05 35.0	-0.3
	baz=202						
P46A	Rosedale	24.47	13	P	P	04 05 34.8	-0.5
	baz=196						
P47A	Martinsville	24.55	14	P	P	04 05 35.2	-1.0
	baz=198						
O42A	Bath	24.55	7	P	P	04 05 35.7	-0.4
	baz=189						
R52A	Catlettsburg	24.57	22	P	P	04 05 35.1	-1.3
	baz=207						
S22A	4UR Ranch, Cre	24.66	335	P	P	04 05 38.6	+1.0
	baz=150						
113A	Mohawk Valley,	24.67	317	*e*P	P	04 05 41.5	+4.1
	comp=N,7.2nm,0.9s						
P48A	Milroy	24.74	16	P	P	04 05 36.2	-1.7
	baz=200						
O44A	Mansfield	24.75	10	P	P	04 05 37.7	-0.2
	baz=193						
MVCO	Mesa Verde	24.94	332	*e*P	P	04 05 44.3	+4.2
	comp=N,8.9nm,0.7s						
MVCO	Mesa Verde	24.94	332	P	P	04 05 42.2	+2.2
	baz=146						
Y14A	Wickenburg	24.94	320	*e*P	P	04 05 44.4	+4.5
	comp=N,5.0nm,1.0s						
O45A	Potomac	24.97	11	P	P	04 05 39.0	-1.0
	baz=195						
HDIL	Hopedale	25.01	8	P	P	04 05 40.4	+0.1
	baz=191						
R54A	Victor	25.07	25	P	P	04 05 40.0	-0.9
	baz=211						
WUAZ	Wupatki	25.08	325	*e*P	P	04 05 46.3	+5.0
	comp=N,8.4nm,0.9s						
WUAZ	Wupatki	25.08	325	P	P	04 05 42.8	+1.5
	baz=138						
N40A	Mertquake, Sal	25.09	4	P	P	04 05 41.3	+0.2
	baz=186						
N42A	Yates City	25.18	7	P	P	04 05 41.8	-0.1
	baz=189						
SFIN	Lafayette	25.22	12	P	P	04 05 40.9	-1.3
	baz=196						
O47A	Sheridan	25.29	14	P	P	04 05 40.9	-2.0

	baz=198						
P50A	Jamestown	25.34	19	P	P	04 05 41.5	-1.9
	baz=204						
N43A	Stutzman Famil	25.41	8	P	P	04 05 43.2	-0.7
	baz=191						
N44A	Piper City	25.43	10	P	P	04 05 42.7	-1.4
	baz=193,SNR=6.0						
P51A	Williamsport	25.46	20	P	P	04 05 42.6	-1.8
	baz=205						
O48A	Farmland	25.56	16	P	P	04 05 43.5	-1.8
	baz=200						
N45A	Kentland	25.59	11	P	P	04 05 43.7	-1.9
	baz=195						
M40A	Post Highland	25.62	4	P	P	04 05 44.8	-1.1
	baz=186,SNR=14						
M39A	Webster	25.65	3	P	P	04 05 45.0	-1.2
	baz=184,SNR=7.5						
M41A	Milan	25.67	6	P	P	04 05 45.5	-0.9
	baz=188,SNR=6.8						
O49A	Covington	25.72	17	*e*P	P	04 05 45.5	-1.3
	comp=N,15nm,0.6s						
O49A	Covington	25.72	17	P	P	04 05 45.0	-1.8
	baz=202,SNR=6.6						
PV01	Paradox Valley	25.73	333	*e*P	P	04 05 53.9	+6.7
	comp=N,16nm,0.9s						
BGNE	Belgrade	25.79	353	P	P	04 05 47.5	0.0
	baz=171						
N46A	Monticello	25.79	13	P	P	04 05 46.5	-0.9
	baz=196						
Q54A	Coxs Mills	25.82	24	P	P	04 05 47.1	-0.6
	baz=210						
PV13	Radium Mtn., P	25.86	332	*e*P	P	04 05 53.5	+5.1
	comp=N,9.7nm,0.7s						
PV02	Paradox Valley	25.86	333	*e*P	P	04 05 55.3	+6.9
	comp=N,9.6nm,0.8s						
PDMCI	Parker Dam,Lak	25.89	319	P	P	04 05 49.4	+1.0
	baz=131						
P52A	Corning	25.91	21	P	P	04 05 47.6	-1.0
	baz=207						
PV05	Paradox Valley	25.92	332	*e*P	P	04 05 56.0	+7.1
	comp=N,8.9nm,0.7s						
M43A	Waltham Townsh	25.92	9	P	P	04 05 47.5	-1.1
	baz=191						
PV03	Paradox Valley	25.95	332	*e*P	P	04 05 54.3	+5.1
	comp=N,10nm,0.7s						
SMCO	Snowmass	25.95	336	*e*P	P	04 05 55.0	+5.6
	comp=N,34nm,1.2s						
PV12	Saucer Basin,	25.98	333	*e*P	P	04 05 54.2	+4.7
	comp=N,14nm,0.8s						
PV11	David Mesa, Pa	26.00	332	*e*P	P	04 05 56.3	+6.7
	comp=N,15nm,0.6s						
N47A	Urbana	26.01	14	P	P	04 05 47.6	-1.8
	baz=199						
PV17	East Wray Mesa	26.02	332	*e*P	P	04 05 56.1	+6.3
	comp=N,14nm,1.1s						
PV16	Nyswonger Mesa	26.03	332	*e*P	P	04 05 54.3	+4.4
	comp=N,6.0nm,0.8s						
OGNE	Ogallala	26.03	346	*e*P	P	04 05 54.7	+5.0
	comp=N,30nm,0.8s						
OGNE	Ogallala	26.03	346	P	P	04 05 49.6	-0.1
	baz=163						
SCIA	State Center	26.04	1	*e*P	P	04 05 49.5	-0.1
SCIA	State Center	26.04	1	P	P	04 05 48.6	-1.0
	baz=182						
PV04	Paradox Valley	26.09	333	*e*P	P	04 05 53.7	+3.3
	comp=N,12nm,0.9s						
N48A	Decatur	26.16	15	P	P	04 05 48.6	-2.2
	baz=200						
ACSO	Alum Creek Sta	26.16	19	P	P	04 05 49.7	-1.1
	baz=205						
PV23	Carpenter Ridg	26.19	332	*e*P	P	04 05 55.6	+4.3
	comp=N,20nm,0.8s						
L40A	Anamosa	26.29	5	*e*P	P	04 05 51.3	-0.6
	comp=N,15nm,0.6s						
L40A	Anamosa	26.29	5	P	P	04 05 51.8	-0.1
	baz=186						
L39A	Vinton	26.30	3	P	P	04 05 51.5	-0.5
	baz=185						
BC3	Big Chuckawall	26.33	316	P	P	04 05 52.9	+0.4
	baz=128						
M46A	Old House Fiel	26.36	13	P	P	04 05 52.2	-0.4
	baz=197						
L41A	Preston	26.37	6	P	P	04 05 51.9	-0.7
	baz=188						
L42A	Oliver, Polo	26.39	7	*e*P	P	04 05 51.7	-1.1
	comp=N,16nm,0.6s						
L42A	Oliver, Polo	26.39	7	P	P	04 05 51.4	-1.4
	baz=190,SNR=5.7						
N49A	Columbus Grove	26.44	17	P	P	04 05 51.6	-1.7
	baz=202						
O52A	Adamsville	26.44	21	P	P	04 05 52.1	-1.2
	baz=207						
SJG	San Juan	26.68	81	P	P	04 05 55.0	-0.7
	comp=N,2.9nm,0.4s,baz=2.7,slow=21,SNR=3.5						
K39A	Oelwein	26.89	3	P	P	04 05 55.9	-1.4
	baz=185						
K41A	Shullsburg	26.91	6	P	P	04 05 56.2	-1.3
	baz=188,SNR=5.4						
K40A	Colesburg	26.93	5	P	P	04 05 56.8	-0.9
	baz=186						
KNB	Kanab	26.97	325	*e*P	P	04 06 02.1	+3.7
	comp=N,4.0nm,0.9s						
PFO	Pinyon Flats O	26.98	315	*e*P	P	04 05 59.9	+1.5
	comp=N,3.7nm,1.1s						
PFO	Pinyon Flats O	26.98	315	P	P	04 05 59.9	+1.5
	comp=N,2.0nm,0.6s,baz=105,slow=3.6,SNR=2.3						
M49A	Liberty Center	27.01	17	P	P	04 05 56.8	-1.6
	baz=202						
L47A	Sherwood	27.17	14	P	P	04 05 58.6	-1.2
	baz=199						
K42A	Prairie Point,	27.19	7	P	P	04 05 59.5	-0.5
	baz=190						
JFWS	Jewell Farm	27.22	6	*e*P	P	04 05 59.9	-0.4
	comp=N,15nm,1.2s						
JFWS	Jewell Farm	27.22	6	P	P	04 05 59.3	-1.0
	baz=188						
K43A	Burlington	27.26	9	P	P	04 05 59.8	-0.8
	baz=192						
L48A	N Adams	27.33	16	P	P	04 05 59.7	-1.5
	baz=200						
MTPU	Mount Pierson	27.39	328	*e*P	P	04 06 08.4	+6.1
	comp=N,5.3nm,0.8s						
N53A	Lisbon	27.41	22	P	P	04 06 00.5	-1.5
	baz=208						
ATAH	Atahualpa	27.49	145	P	P	04 06 03.6	+0.2
	comp=N,2.5nm,0.5s,baz=337,slow=9.2,SNR=3.1						
ATAH				LR	LR	04 15 35.6	
	comp=N,29nm,20.2s,baz=1.1,slow=33						
J39A	Decorah	27.53	4	P	P	04 06 01.5	-1.5
	baz=185						
HEC	Hector,Ludlow	27.62	317	P	P	04 06 03.8	-0.3
	baz=128						
J40A	Soldiers Grove	27.66	5	P	P	04 06 03.1	-1.1
	baz=187						
L49A	Milan	27.66	16	P	P	04 06 02.5	-1.7
	baz=202						
J41A	Loganville	27.69	6	P	P	04 06 03.5	-1.0
	baz=188						
P18A	Preston Nutter	27.70	332	*e*P	P	04 06 03.2	-1.8
TUQ	Turquoise Moun	27.74	319	P	P	04 06 05.4	+0.3
	baz=130						
J42A	Columbus	27.75	8	P	P	04 06 03.4	-1.6
	baz=190						
AAM	Ann Arbor	27.87	16	P	P	04 06 04.9	-1.2
	baz=202						
M52A	Chesterland	27.88	20	P	P	04 06 04.2	-2.0
	baz=207						
J43A	Natural Harves	27.91	9	P	P	04 06 05.6	-0.8
	baz=192						
ECSD	EROS Data Cent	27.95	356	*e*P	P	04 06 06.4	-0.4
	comp=N,7.1nm,0.7s						
ECSD	EROS Data Cent	27.95	356	P	P	04 06 06.2	-0.6
	baz=175,SNR=9.2						
I39A	Houston	28.05	4	*e*P	P	04 06 07.6	-0.1
	comp=N,13nm,0.6s						
I39A	Houston	28.05	4	P	P	04 06 06.8	-0.9
	baz=185,SNR=6.6						
I40A	Norwalk	28.16	5	P	P	04 06 07.7	-1.0
	baz=187						
I42A	Draeger Farm,	28.34	8	P	P	04 06 09.3	-0.9
	baz=190						
I41A	Arkdale	28.39	6	P	P	04 06 10.0	-0.8
	baz=189						
L53A	Girard	28.62	22	P	P	04 06 11.6	-1.2
	baz=208						
H38A	Maiden Rock	28.83	2	P	P	04 06 13.9	-0.7
	baz=184						
H39A	Augusta	28.89	4	P	P	04 06 14.3	-0.8
	baz=186						
H40A	Chili	28.90	5	P	P	04 06 13.9	-1.3
	baz=187						
H41A	Junction City	28.97	6	P	P	04 06 14.6	-1.2
	baz=189						
H42A	Shiocton	29.00	8	P	P	04 06 15.1	-0.9
	baz=191						
MPMC	Manual Prospec	29.12	318	P	P	04 06 18.1	+0.5
	baz=128						
G38A	Ridgeland	29.35	3	P	P	04 06 18.0	-1.2
	baz=184,SNR=7.0						
SPMN	Marine on St.	29.36	2	*e*P	P	04 06 18.8	-0.6
	comp=N,26nm,0.6s						
SPMN	Marine on St.	29.36	2	P	P	04 06 18.2	-1.1
	baz=183,SNR=18						
G39A	Holcombe	29.50	4	P	P	04 06 19.5	-1.1
	baz=186,SNR=6.9						
H46A	Fife Lake	29.61	13	P	P	04 06 19.7	-1.7
	baz=197						
J52A	Paris	29.69	20	P	P	04 06 20.3	-1.9
	baz=207						
G42A	Mountain	29.73	8	P	P	04 06 21.4	-1.2
	baz=191						
G43A	Wallace	29.85	9	P	P	04 06 22.0	-1.7
	baz=192						
F37A	Hinrichs Farm,	29.87	2	P	P	04 06 22.7	-1.1
	baz=183,SNR=5.9						
GLMI	Grayling	30.00	13	P	P	04 06 23.4	-1.5
	baz=198						
PD31	Pinedale Array	30.04	337	*e*P	P	04 06 27.6	+2.1
PDAR	Pinedale Array	30.04	337	P	P	04 06 27.6	+2.1
	comp=N,0.4nm,0.6s,baz=152,slow=10,SNR=3.5						
PDAR				LR	LR	04 20 55.6	
	comp=N,40nm,20.4s,baz=206,slow=41						
F38A	Pierce - Schro	30.13	3	P	P	04 06 24.9	-1.2
	baz=184						
F39A	Loretta	30.15	4	P	P	04 06 24.7	-1.5
	baz=186						
F40A	Park Falls	30.21	5	P	P	04 06 25.0	-1.9
	baz=188						
F43A	Flat Rock, Esc	30.49	9	P	P	04 06 27.4	-1.9
	baz=193,SNR=5.1						
G47A	Hillman	30.51	14	P	P	04 06 27.6	-1.8
	baz=200						
E39A	Mellen	30.63	5	P	P	04 06 28.7	-1.9
	baz=187						
E40A	Wakefield	30.75	5	P	P	04 06 30.6	-1.0
	baz=188						
E38A	The Farm, Brul	30.80	3	P	P	04 06 31.3	-0.7
	baz=185						
E42A	Champion	30.97	8	P	P	04 06 31.9	-1.6
	baz=192						
ELK	Elko	30.98	328	*e*P	P	04 06 39.9	+5.9
	comp=N,2.9nm,0.9s						
NV11	Mina Array Sit	31.02	321	*e*P	P	04 06 37.7	+3.4
	comp=N,0.2nm,0.9s						
REDW	Red Top Meadow	31.04	336	*e*P	P	04 06 37.0	+2.5
	comp=N,3.3nm,0.7s						
E43A	Lone Tree Farm	31.05	9	P	P	04 06 32.6	-1.6
	baz=193						
SNOW	Snow King Moun	31.09	336	*e*P	P	04 06 38.3	+3.4
	comp=N,9.1nm,0.6s						
NV01	Mina Array Sit	31.11	321	*e*P	P	04 06 37.6	+2.6
NV01				*e*S	S	04 11 41.5	+6.1
NVAR	Mina Array Bea	31.11	321	P	P	04 06 37.5	+2.4
	comp=N,2.3nm,0.8s,baz=134,slow=8.8,SNR=13						
NVAR				S	S	04 11 41.5	+6.1
	comp=N,1.1nm,0.2s,baz=138,slow=16,SNR=27						
NVAR				LR	LR	04 21 24.2	
	comp=N,71nm,18.5s,baz=166,slow=41						
LOHW	Long Hollow	31.16	336	*e*P	P	04 06 37.8	+2.3
	comp=N,2.8nm,0.8s						
LOHW				*e*pP	pP	04 06 56.8	+3.3
MOOW	Moose Ponds	31.33	336	*e*P	P	04 06 40.0	+3.1
	comp=N,1.9nm,0.8s						
MOOW				*e*pP	pP	04 07 00.8	+5.7
FXWY	Fox Creek	31.34	336	*e*P	P	04 06 40.6	+3.5
	comp=N,1.9nm,0.8s						
FXWY				*e*pP	pP	04 06 60.0	+4.7
E44A	Grand Marais A	31.46	11	P	P	04 06 36.8	-1.1
	baz=195						
SADO	Sadowa	31.49	20	*e*P	P	04 06 36.6	-1.4
	comp=N,16nm,1.4s						
SADO	Sadowa	31.49	20	P	P	04 06 36.6	-1.4
	comp=N,1.5nm,0.4s,baz=225,slow=7.1,SNR=3.0						
D41A	Chassel	31.50	7	P	P	04 06 37.1	-1.1
	baz=190						
IMW	Indian Meadow	31.53	336	*e*P	P	04 06 43.5	+4.7
	comp=N,2.7nm,0.6s						
E46A	Sault Ste Mari	31.54	13	P	P	04 06 37.3	-1.2
	baz=198						
E47A	Iron Bridge	31.85	14	P	P	04 06 40.0	-1.2
	baz=200						
D46A	Sault St. Mari	32.09	13	P	P	04 06 41.9	-1.4
	baz=198						
EYMN	Ely	32.13	3	*e*P	P	04 06 42.2	-1.5
	comp=N,5.4nm,0.5s						
EYMN	Ely	32.13	3	P	P	04 06 42.8	-0.9
	baz=185						
MDND	Maddock	32.31	353	P	P	04 06 44.6	-0.7
	baz=170						
LAO	LASA Array	32.47	344	*e*P	P	04 06 45.7	-1.0
	comp=N,23nm,1.0s						
HLID	Hailey	32.72	332	P	P	04 06 51.8	+2.7
	baz=142						
E51A	G1948 Merrick	32.95	18	P	P	04 06 49.1	-1.7
	baz=206						
DLMT	Dillon	33.40	336	*e*P	P	04 06 59.1	+4.1
	comp=N,3.9nm,0.8s						
DLMT				*e*pP	pP	04 07 17.6	+4.4
D52A	ZEK Kipawa Sen	33.68	19	P	P	04 06 55.6	-1.6
	baz=208						
ULM	Lac du Bonnet	34.41	358	*e*P	P	04 07 02.1	-1.3
	comp=N,16nm,0.8s						
ULM	Lac du Bonnet	34.41	358	P	P	04 07 02.2	-1.3
	comp=N,17nm,0.7s,baz=177,slow=9.8,SNR=40						
J08A	Circle Bar Ran	34.53	328	*e*P	P	04 07 07.1	+2.3
	comp=N,8.0nm,0.7s						
F10A	Beach Ranch, E	35.85	332	*e*P	P	04 07 18.1	+2.0
	comp=N,9.1nm,0.8s						
MATQ	Matagami	36.39	18	P	P	04 07 18.6	-1.9
	baz=207						
PTGA	Pitinga	37.36	113	*e*P	P	04 07 28.4	-0.7
	comp=N,13nm,0.8s						
FFC	Flin Flon	39.36	353	*e*P	P	04 07 45.5	+0.1
	comp=N,7.1nm,0.6s						
LPAZ	La Paz	40.80	140	P	P	04 07 57.8	-0.7
	comp=N,1.8nm,0.7s,baz=359,slow=10,SNR=3.8						
MNMC	Minye Minye	42.17	144	*e*P	P	04 08 09.6	+0.4
	comp=N,17nm,0.9s						
FCC	Fort Churchill	42.91	360	*e*P	P	04 08 13.8	-0.6
	comp=N,9.3nm,0.7s						
SCHQ	Schefferville	44.25	22	*e*P	P	04 08 24.6	-0.8
	comp=N,5.6nm,1.1s						
SCHQ				*e*PcP	PcP	04 10 09.2	+0.7
SCHQ	Schefferville	44.25	22	P	P	04 08 24.6	-0.8
	comp=N,1.5nm,0.7s,baz=219,slow=10,SNR=2.3						
SCHQ				PcP	PcP	04 10 09.2	+0.7
	comp=N,2.3nm,0.6s,baz=285,slow=2.5,SNR=4.5						
LVC	Limon Verde	45.35	147	P	P	04 08 35.4	+0.5
	comp=N,2.8nm,0.8s,baz=247,slow=1.8,SNR=3.0						
GO02	Mina Guanaco	47.12	149	*e*P	P	04 08 48.9	+0.2
	comp=N,12nm,0.8s						
YKA	Yellowknife Ar	48.88	347	P	P	04 09 01.5	+0.2
	comp=N,3.0nm,0.5s,baz=152,slow=7.2,SNR=42						
YKB5	Yellowknife Ar	48.88	347	*e*P	P	04 08 58.0	-3.3
YKW3	Yellowknife Ar	48.94	347	*e*P	P	04 09 02.0	+0.2
	comp=N,5.5nm,1.2s						
CPUP	Villa Florida	54.95	139	*e*P	P	04 09 43.5	-3.5
	comp=N,3.0nm,1.0s						
CPUP	Villa Florida	54.95	139	P	P	04 09 43.5	-3.5
	comp=N,2.0nm,0.8s,baz=329,slow=6.3,SNR=7.0						
BDFB	Brasilia	55.06	122	*e*P	P	04 09 47.8	-0.3
BDFB	Brasilia	55.06	122	P	P	04 09 47.5	-0.6
	comp=N,19nm,0.8s,baz=291,slow=8.3,SNR=34						
INK	Inuvik	58.21	344	*e*P	P	04 10 10.2	+0.7
	comp=N,3.0nm,0.8s						
INK	Inuvik	58.21	344	P	P	04 10 09.9	+0.5
	comp=N,2.0nm,0.6s,baz=128,slow=6.3,SNR=22						
RES	Resolute Bay	58.91	360	*e*P	P	04 10 13.8	-0.4
	comp=N,3.6nm,0.8s						
SCM	Sheep Creek Mo	59.30	334	*e*P	P	04 10 15.7	-1.6
	comp=N,13nm,0.6s						
ILAR	Eielson Array	60.47	337	P	P	04 10 25.5	+0.4
	comp=N,0.4nm,0.6s,baz=129,slow=6.2,SNR=8.3						
ILB	Eielson Array	60.47	337	*e*P	P	04 10 25.5	+0.4
SUMG	Summit	65.03	16	*e*P	P	04 10 55.2	-0.6
	comp=N,12nm,1.1s						
SUMG	Summit	65.03	16	*i* P	P	04 10 56.3	+0.5
	comp=N,29nm,1.1s						
SCO	Scoresbysund	69.23	20	*i* P	P	04 11 21.9	0.0
	comp=N,6.6nm,0.7s						
DAG	Danmarks Havn	71.38	14	*i* P	P	04 11 34.0	-0.9
	comp=N,20nm,0.8s						
ESDC	Sonseca Array	80.09	52	P	P	04 12 25.1	-0.4
	comp=N,0.3nm,0.4s,baz=287,slow=5.8,SNR=6.7						
ES19	SONSECA Array	80.13	52	*e*P	P	04 12 24.2	-1.5
DOU	Dourbes	83.41	40	⇑P	P	04 12 41.6	-1.0
NB2	NORSAR Subarra	83.48	28	P	P	04 12 43.6	+0.8
	comp=Z,4.9nm,0.6s,baz=292,slow=5.3						
NB200	NORSAR Array S	83.48	28	*e*P	P	04 12 43.9	+1.1
NOA	NORSAR Array B	83.48	28	P	P	04 12 43.9	+1.1
	comp=Z,8.9nm,0.8s,baz=292,slow=5.2,SNR=38						
NOA				LR	LR	04 48 39.8	
	comp=Z,8.8nm,19.0s,baz=280,slow=35						
NC405	NORSAR Array S	83.68	28	*e*P	P	04 12 44.9	+1.1
WLF	Walferdange	84.50	40	⇑P	P	04 12 48.6	+0.4
ARA0	ARCESS Array S	85.03	18	*e*P	P	04 12 51.6	+1.1
ARCES	ARCESS Array B	85.03	18	P	P	04 12 51.6	+1.1
	comp=Z,4.1nm,0.5s,baz=287,slow=4.1,SNR=42						
ECH	Echery	85.59	41	*e*P	P	04 12 53.7	0.0
	comp=Z,8.8nm,0.7s						
STU	Stuttgart	86.68	40	*e*P	P	04 12 59.0	0.0
	comp=Z,24nm,0.7s						
DBIC	Dimbokro	87.34	84	*e*P	P	04 13 01.6	-1.2
	comp=Z,15nm,1.3s						
DBIC	Dimbokro	87.34	84	P	P	04 13 01.6	-1.2
	comp=Z,3.6nm,0.9s,baz=268,slow=9.5,SNR=3.1						
FUORN	Ofenpass-Fuorn	88.11	42	*e*P	P	04 13 06.7	+0.4
	comp=Z,7.5nm,0.8s						
BRG	Berggiesshubel	88.75	37	*e*P	P	04 13 09.2	+0.3
	comp=Z,7.9nm,1.0s						
KHC	Kasperske Hory	89.23	39	*e*P	P	04 13 11.1	-0.1
GEC2	GERESS Array S	89.42	39	*e*P	P	04 13 12.7	+0.5
	comp=Z,4.9nm,0.9s						
GERES	GERESS Array B	89.42	39	P	P	04 13 12.0	-0.2
	comp=Z,3.0nm,0.8s,baz=316,slow=3.7,SNR=23						
GERES				LR	LR	04 54 37.4	
	comp=Z,20nm,19.4s,baz=293,slow=36						
GEA0	GERESS Array S	89.42	39	*e*P	P	04 13 11.9	-0.2
PRU	Pruhonice	89.46	38	*e*P	P	04 13 11.8	-0.4
FIA0	FINESS Array S	89.68	25	*e*P	P	04 13 12.6	-0.3
FINES	FINESS Array B	89.68	25	P	P	04 13 12.6	-0.3
	comp=Z,1.4nm,0.6s,baz=318,slow=2.6,SNR=8.4						
DPC	Dobruska-Polom	90.35	37	*e*P	P	04 13 16.7	+0.3
KRLC	Kraliky	90.73	37	*e*P	P	04 13 18.3	+0.1
TOA1	Torodi Ar. Sit	91.78	76	*e*P	P	04 13 21.5	-2.1
TORD	Torodi Ar. Bea	91.78	76	P	P	04 13 21.5	-2.1
	comp=Z,0.5nm,0.9s,baz=286,slow=5.2,SNR=3.9						
VYHS	Vyhne	92.65	38	*e*P	P	04 13 22.8	-4.2
NRIK	Noril'sk	95.10	359	LR	LR	04 58 56.4	
	comp=Z,19nm,21.3s,baz=72,slow=37						
MK32	Makanchi Array	117.62	3	*e*PKPdf	PKiKP	04 19 03.2	+2.1
MKAR	Makanchi Array	117.62	3	PKP	PKiKP	04 19 03.2	+2.1
	comp=Z,0.1nm,0.4s,baz=339,slow=3.6,SNR=3.0						
BOSA	Boshof	122.81	114	PKP	PKiKP	04 19 13.7	+1.9
	comp=Z,4.7nm,0.8s,baz=234,slow=3.9,SNR=7.4						
LZH	Lanzhou	125.73	342	*e*PKP	PKiKP	04 19 27.3	+10
LZH				sPKP		04 19 41.8	
WR1	Warramunga Arr	133.97	257	*e*PKPdf	PKPdf	04 19 32.4	-0.5
WRA	Warramunga Arr	133.97	257	PKP	PKPdf	04 19 32.4	-0.5
	comp=Z,0.4nm,1.0s,baz=82,slow=2.8,SNR=4.0						
AS31	Alice Springs	134.45	252	*e*PKPdf	PKPdf	04 19 33.9	+0.2
ASAR	Alice Springs	134.45	252	PKP	PKPdf	04 19 33.9	+0.2
	comp=Z,0.2nm,0.7s,baz=311,slow=38,SNR=2.8						
CM31	Chiang Mai Arr	143.68	339	*e*PKPdf	PKPbc	04 19 49.0	+0.7
CMAR	Chiang Mai Arr	143.68	339	PKP	PKPbc	04 19 49.0	+0.7
	comp=Z,0.8nm,0.4s,baz=354,slow=2.7,SNR=2.6						

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*ISCJB **14** 04:01:31.8±0.4, 23.°23N±0.°02×122.°04E±0.°02, h20^{km}±2^{km},*
Error ellipse: s-maj=2.8km s-min=2.1km az=139.3
*TAP **14** 04:01:31.9, 23.°27N×121.°97E, h12^{km}, ML3.8, D*
*JMA **14** 04:01:32.6±0.2, 23.°27N×121.°92E, h33^{km}, M3.1*
ISC 14 04:01:32.5±1.1**, 23.°27N**±0.°02×**121.°98E**±0.°02**, h27**^{km}±12^{km}**,**
n88, σ0^{s}.82/173**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HGSD	Ruisui	0.56	294	P	Pb	04 01 43.6	-0.2
	baz=294						
HGSD				*e*S	Sn	04 01 51.9	-1.2
	baz=294						
CHKT	Chengkung	0.59	254	P	Pb	04 01 43.5	-0.7
	baz=253						
CHKT				*e*S	Sb	04 01 51.1	-1.2
	baz=253						
TWF1	Yuli	0.63	278	P	Pb	04 01 44.8	-0.2
	baz=277						
TWF1				*e*S	Sn	04 01 54.0	-1.0
	baz=277						
YULB	Yu-li	0.64	282	P	Pn	04 01 45.0	-0.9
	baz=281						
YULB				*e*S	Sn	04 01 54.4	-0.7
	baz=281						
EGFH	Guangfu	0.65	308	P	Pn	04 01 45.4	-0.6
	baz=308						
EGFH				*e*S	Sn	04 01 54.7	-0.6
	baz=308						
EHY	Hungye	0.65	292	P	Pn	04 01 45.1	-0.9
	baz=291						
EHY				*e*S	Sn	04 01 54.5	-0.9
	baz=291						
ENLB	Shoufeng	0.72	331	P	Pn	04 01 46.8	-0.2
	baz=331						
ENLB				*e*S	Sn	04 01 57.1	-0.1
	baz=331						
ESL	Shilin	0.74	318	P	Pb	04 01 46.6	-0.3
	baz=318						
ESL				*e*S	Sn	04 01 57.4	-0.2
	baz=318						
HWA	Hwalien	0.79	334	P	Pn	04 01 47.9	0.0
	baz=334						
HWA				*e*S	Sn	04 01 58.9	+0.1
	baz=334						
TWD	Chiawan	0.88	337	P	Pn	04 01 49.0	-0.2
	baz=337						
TWD				*e*S	Sn	04 02 01.9	+0.7
	baz=337						
ELDTW	Lidau	0.89	265	*e*P	Pb	04 01 48.2	-1.2
	baz=264						
ELDTW				S	Sn	04 02 01.0	-0.4
	baz=264						
VWDT	VWDT	0.91	302	P	Pn	04 01 49.5	-0.1
	baz=302						
VWDT				*e*S	Sn	04 02 02.2	+0.4
	baz=302						
TWGBT	Beinan	0.94	242	*e*P	Pn	04 01 49.9	0.0
	baz=241						
TWGBT				*e*S	Sn	04 02 03.4	+0.8
	baz=241						
TWG	Pinlang	0.95	242	*e*P	Pn	04 01 49.9	-0.1
	baz=241						
TWG				*e*S	Sn	04 02 03.4	+0.7
	baz=241						
NACB	Ninganchiao	0.97	339	*e*P	Pn	04 01 50.6	+0.2
	baz=338						
NACB				*e*S	Sn	04 02 04.5	+1.2
	baz=338						
OWD	Renai	1.01	313	*e*P	Pb	04 01 50.7	-0.7
	baz=313						
ETLH	Xiulin Townshi	1.04	334	P	Pb	04 01 51.5	-0.5
	baz=334						
ETLH				*e*S	Sn	04 02 06.7	+1.5
	baz=334						
SSLB	Suanglung	1.07	299	P	Pb	04 01 52.0	-0.5
	baz=299						
SSLB				*e*S	Sn	04 02 07.7	+1.7
	baz=299						
CHGB	Renai	1.08	317	P	Pb	04 01 52.2	-0.6
	baz=317						
CHGB				*e*S	Sn	04 02 06.2	-0.2
	baz=317						
WHF	Hehuan Shan	1.09	323	P	Pb	04 01 52.5	-0.6
	baz=323						
WHF				S	Sn	04 02 07.8	+0.8
	baz=323						
ALS	Alishan	1.11	283	P	Pb	04 01 52.8	-0.4
	baz=282						
ALS				*e*S	Sn	04 02 07.1	0.0
	baz=282						
WHYT	Xinyi Township	1.12	293	P	Pb	04 01 53.2	-0.1
	baz=292						
WHYT				*e*S	Sn	04 02 07.5	+0.5
	baz=292						

STYT	Tauyuan baz=264	1.13	265	P	Pb	04 01 52.7	-0.8
STYT	baz=264			*e*S	Sn	04 02 08.9	+1.6
ECL	Taimali baz=234	1.16	235	*e*P	Pb	04 01 53.5	-0.3
ECL	baz=234			*e*S	Sn	04 02 09.6	+1.7
SMLT	Sun Moon Lake baz=302	1.17	302	P	Pb	04 01 53.7	-0.4
SMLT	baz=302			*e*S	Sn	04 02 09.8	+1.6
NANB	Nanao baz=349	1.18	350	*e*P	Pb	04 01 54.0	-0.2
NANB	baz=349			*e*S	Sb	04 02 10.4	+1.4
ENA	Nanau baz=349	1.18	349	P	Pn	04 01 53.5	+0.3
ENA	baz=349			*e*S	Sb	04 02 10.4	+1.4
TYC	Yuchr baz=302	1.21	302	P	Pb	04 01 54.5	-0.3
TYC	baz=302			*e*S	Sb	04 02 11.1	+1.1
TWT	Tachien baz=322	1.23	323	P	Pb	04 01 55.0	-0.1
TWT	baz=322			*e*S	Sb	04 02 11.9	+1.2
TDCB	Techi baz=322	1.24	323	P	Pb	04 01 54.9	-0.5
TDCB	baz=322			*e*S	Sb	04 02 12.0	+1.1
CHN5	Tsauling baz=285	1.24	286	P	Pb	04 01 55.7	+0.4
CHN5	baz=285			*e*S	Sb	04 02 12.0	+1.1
TPUB	Ta-pu baz=271	1.24	272	P	Pb	04 01 55.0	-0.3
TPUB	baz=271			*e*S	Sb	04 02 12.0	+1.1
WTP	Ta-pu baz=269	1.26	269	P	Pb	04 01 55.2	-0.4
WTP	baz=269			*e*S	Sb	04 02 12.2	+0.8
WJS	Zhushan baz=295	1.28	296	*e*P	Pb	04 01 56.2	+0.3
WJS	baz=295			*e*S	Sb	04 02 12.9	+1.0
CHN4	Tsaushan baz=273	1.28	274	P	Pb	04 01 55.9	-0.1
CHN4	baz=273			*e*S	Sb	04 02 12.9	+0.9
NNSB	Datong baz=334	1.28	335	P	Pb	04 01 55.5	-0.6
NNSB	baz=334			*e*S	Sb	04 02 13.1	+0.9
NNS	Nan Shan baz=335	1.29	335	P	Pb	04 01 55.7	-0.6
NNS	baz=335			*e*S	Sb	04 02 13.3	+0.7
SGST	Jiashian baz=261	1.30	262	P	Pb	04 01 56.0	-0.3
SGST	baz=261			*e*S	Sb	04 02 13.2	+0.7
WNT	Mingjian baz=297	1.34	297	*e*P	Pb	04 01 57.2	+0.3
WNT	baz=297			*e*S	Sb	04 02 14.2	+0.6
CHN1	Nanshi baz=266	1.34	267	P	Pb	04 01 56.9	-0.1
CHN1	baz=266			*e*S	Sb	04 02 14.4	+0.7
TWC	Suao baz=355	1.34	355	P	Pb	04 01 56.6	-0.4
TWC	baz=355			S	Sb	04 02 13.8	0.0
SSD	Sandimen baz=247	1.34	248	P	Pb	04 01 56.1	-1.0
SSD	baz=247			*e*S	Sb	04 02 14.3	+0.4
EAST	Anshuo baz=229	1.36	230	*e*P	Pb	04 01 56.5	-0.9
EAST	baz=229			S	Sb	04 02 15.2	+0.8
SNST	Tainan City baz=268	1.36	268	P	Pb	04 01 57.1	-0.3
SNST	baz=268			*e*S	Sb	04 02 15.0	+0.6
WGK	Gukeng baz=287	1.37	288	*e*P	Pb	04 01 57.5	+0.1
WGK	baz=287			*e*S	Sb	04 02 15.0	+0.5
TWK	Hsinying baz=270	1.37	270	P	Pb	04 01 57.2	-0.3
TWK	baz=270			*e*S	Sb	04 02 15.0	+0.3
WHP	Taichung City baz=316	1.38	317	*e*P	Pb	04 01 57.7	-0.1
WHP	baz=316			*e*S	Sb	04 02 15.6	+0.6
NDT	Datong Townshi baz=342	1.40	342	P	Pb	04 01 57.3	-0.7
NDT	baz=342			*e*S	Sb	04 02 16.0	+0.6
MASBT	Mashibuluo baz=242	1.40	243	*e*P	Pb	04 01 57.1	-0.9
MASBT	baz=242			*e*S	Sb	04 02 15.9	+0.4
CHN2	Minshiung baz=280	1.41	281	*e*P	Pb	04 01 57.3	-0.8
CHN2	baz=280			*e*S	Sb	04 02 16.2	+0.5
ENTT	Nioudou baz=344	1.42	345	P	Pb	04 01 57.7	-0.6
ENTT	baz=344			*e*S	Sb	04 02 16.4	+0.4
CHY	Chiayi baz=279	1.45	279	*e*P	Pb	04 01 57.8	-1.0
CHY	baz=279			S	Sb	04 02 17.7	+0.8
JYNG	Yonagunijimaku	1.47	37	P	Pn	04 01 58.4	+1.1
JYNG				*e*S	Sn	04 02 16.1	+0.4
TWE	Neicheng baz=349	1.48	349	P	Pn	04 01 57.8	+0.4
TWE	baz=349			*e*S	Sb	04 02 17.8	+0.1
TCU	Taichung baz=306	1.48	307	*e*P	Pb	04 01 58.3	-1.1
TCU	baz=306			*e*S	Sb	04 02 17.9	+0.1
YHNB	Yeheng baz=338	1.50	339	P	Pb	04 01 58.9	-0.9
YHNB	baz=338			*e*S	Sb	04 02 18.6	+0.1
NSK	Sanguang baz=338	1.52	338	P	Pn	04 01 58.7	+0.8
NSK	baz=338			*e*S	Sb	04 02 18.8	-0.1
SLBB	Yuanshan baz=348	1.52	348	P	Pb	04 01 59.0	-0.9
SLBB	baz=348			*e*S	Sb	04 02 18.9	+0.1
YOJ	Yonaguni jima	1.52	38	P	Pn	04 01 58.9	+1.0
YOJ				*e*S	Sn	04 02 17.6	+0.8
WCHH	Zhanghua baz=302	1.54	302	*e*P	Pb	04 01 59.2	-1.1
WCHH	baz=302			*e*S	Sb	04 02 19.4	+0.1
SCZT	Fangliau baz=234	1.54	235	P	Pb	04 01 58.9	-1.4
SCZT	baz=234			*e*S	Sb	04 02 19.1	-0.3
TWQ1	Liyutan baz=314	1.54	315	*e*P	Pb	04 02 00.2	-0.2
TWQ1	baz=314			*e*S	Sb	04 02 19.6	0.0
NWLT	Wulai baz=344	1.57	344	P	Pb	04 02 00.0	-0.8
NWLT	baz=344			*e*S	Sb	04 02 20.2	-0.1
NTC	Toucheng baz=355	1.59	355	*e*P	Pb	04 02 00.8	-0.4
NTC	baz=355			S	Sb	04 02 20.8	0.0
NSY	Sanyi baz=316	1.60	316	*e*P	Pb	04 01 60.0	-1.4
NSY	baz=316			*e*S	Sb	04 02 20.8	-0.4
SNJT	Kaohsiung City baz=251	1.60	252	*e*P	Pb	04 01 60.0	-1.4
SNJT	baz=251			*e*S	Sb	04 02 20.8	-0.4
NSTT	Nanjuang baz=326	1.63	327	*e*P	Pb	04 02 00.4	-1.4
NSTT	baz=326			*e*S	Sb	04 02 21.6	-0.4
LIOB	Emei baz=327	1.63	327	P	Pb	04 02 00.6	-1.3
LIOB	baz=327			*e*S	Sb	04 02 21.8	-0.3
WDJ	Dajia District baz=311	1.63	312	*e*P	Pb	04 02 00.6	-1.4
WDJ	baz=311			*e*S	Sb	04 02 21.8	-0.3
NMLH	Miaoli baz=319	1.67	320	*e*P	Pb	04 02 01.1	-1.5
NMLH	baz=319			*e*S	Sb	04 02 22.7	-0.5
TIPB	Shuangxi baz=355	1.70	355	P	Pb	04 02 02.5	-0.7
TIPB	baz=355			*e*S	Sb	04 02 23.5	-0.7
TWB1	Santiao Chiao	1.73	0	*e*P	Pn	04 02 02.0	+1.1
TWB1				*e*S	Sb	04 02 24.3	-0.8
NHDH	Xindian Distri baz=346	1.74	346	P	Pb	04 02 03.0	-0.8
NHDH	baz=346			*e*S	Sb	04 02 24.5	-0.8
TWA	Mucha baz=348	1.75	348	*e*P	Pn	04 02 02.1	+1.1
TWA	baz=348			S	Sb	04 02 25.1	-0.3
TATO	Taipei baz=345	1.76	345	P	Pb	04 02 03.1	-1.0
TATO	baz=345			*e*S	Sb	04 02 24.9	-0.9
WFSB	Wu-fen Shan baz=354	1.81	354	P	Pn	04 02 03.0	+1.2
WFSB	baz=354			*e*S	Sb	04 02 26.1	-1.0
HATJ	Hateruma jima	1.85	64	P	Pn	04 02 03.1	+0.6
HATJ				S	Sn	04 02 24.7	-0.3
TWS1	Kuangyinshan baz=344	1.90	344	*e*P	Pb	04 02 05.3	-1.1
TWS1	baz=344			S	Sb	04 02 29.0	-0.7
YM01	YM01 baz=348	1.91	349	P	Pb	04 02 05.1	-1.6
YM01	baz=348			*e*S	Sb	04 02 28.6	-1.5
YM04	YM04 baz=348	1.92	348	P	Pb	04 02 05.2	-1.7
YM04	baz=348			*e*S	Sb	04 02 29.0	-1.5
IRIF	Iriomote-Funau	1.92	56	P	Pn	04 02 04.5	+1.0
IRIF				*e*S	Sn	04 02 27.5	+0.7
YM05	YM05 baz=348	1.93	349	P	Pn	04 02 05.1	+1.5
YM05	baz=348			*e*S	Sb	04 02 29.1	-1.6
JKRS	Kuro-shima	2.10	62	P	Pn	04 02 06.8	+1.0
JKRS				*e*S	Sn	04 02 31.3	+0.2
JIJ	Ishigaki jima	2.26	61	P	Pn	04 02 09.0	+0.9
JIJ				S	Sn	04 02 34.7	-0.5
JISG	Ishigakijimahi	2.51	58	P	Pn	04 02 11.9	+0.4
JISG				*e*S	Sn	04 02 40.5	-0.7
JTJ	Tarama	2.84	61	P	Pn	04 02 17.1	+1.0
JTJ				S	Sn	04 02 50.1	+0.6
JIRB	Irabujima	3.31	61	*e*S	Sn	04 03 00.3	-0.7
JIKM	Ikemajima	3.41	60	*e*S	Sn	04 03 02.5	-1.0

IDC 14 04:16:49.6±1.8**, 2°.07N**×**126°.11E, h0**^{km}**, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.4**/32**, mbtmp3.5**/4**, Error ellipse: s-maj=116.1km s-min=22.4km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi 2.1nm,1.0s,baz=353,slow=4.7,SNR=3.1	20.05	181	P	P	04 21 24.5	0.0
WRA	Warramunga Arr 0.4nm,0.3s,baz=339,slow=10,SNR=13	23.32	160	P	P	04 21 58.6	-1.0
ASAR	Alice Springs 0.2nm,0.3s,baz=351,slow=14,SNR=3.4	26.68	164	P	P	04 22 31.5	+0.8
MKAR	Makanchi Array 0.3nm,0.5s,baz=124,slow=8.6,SNR=12	58.57	326	P	P	04 26 48.2	0.0

*IDC **14** 04:20:46.0±1.6, 22°.48S×148°.21E, h0^{km}, mb3.7/1, mb1 3.7/5, mb1mx3.5/25, mbtmp3.6/5, ML3.7/4, Error ellipse: s-maj=25.6km s-min=18.3km az=66.0*

*ISCJB **14** 04:20:47.5±2.0, 22°.68S±0°.06×147°.8E±0°.2, h10^{km}, mb3.5/1, Error ellipse: s-maj=27.9km s-min=8.5km az=0.2*

ISC 14 04:20:47.9±1.8**, 22°.61S**±0°.07×**148°.0E**±0°.2**, h10**^{km}**, n7,** σ**1^{s}.64**/10**, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower 4.2nm,0.3s,baz=132,slow=15,SNR=24	3.00	326	Pn	Pn	04 21 34.7	-0.9
CTA	9.3nm,0.3s,baz=134,slow=19,SNR=39			Pg	Pb	04 21 42.1	+0.5
CTA	6.6nm,0.3s,baz=112,slow=17,SNR=4.2			Sn	Sn	04 22 11.4	-0.3
CTA	21nm,0.3s,baz=56,slow=20,SNR=11			Lg	Lg	04 22 19.6	
STKA	Stephens Creek 0.3nm,0.3s,baz=33,slow=13,SNR=5.5	10.86	210	Pn	Pn	04 23 25.0	+1.5
STKA	0.2nm,0.3s,baz=344,slow=15,SNR=2.1			Sn	Sn	04 25 22.9	-2.2
STKA	0.1nm,0.3s,baz=309,slow=19,SNR=2.0			Lg	Lg	04 26 37.2	
WRA	Warramunga Arr 0.5nm,0.3s,baz=102,slow=11,SNR=11	13.04	279	Pn	Pn	04 23 53.2	-0.2
WRA	0.2nm,0.3s,baz=106,slow=26,SNR=8.0			Lg	Lg	04 27 45.6	
ASAR	Alice Springs 0.2nm,0.3s,baz=90,slow=14,SNR=6.5	13.04	263	Pn	Pn	04 23 54.4	+1.0
ASAR	0.1nm,0.3s,baz=82,slow=26,SNR=5.8			Lg	Lg	04 27 48.3	
SONM	Songino Array 0.6nm,0.9s,baz=165,slow=5.4,SNR=3.9	79.46	333	P	P	04 32 55.5	+0.9
ILAR	Eielson Array 0.1nm,0.3s,baz=234,slow=4.0,SNR=4.6	100.28	23	P	Pdif	04 34 31.3	-2.7
TORD	Torodi Ar. Bea 0.9nm,0.7s,baz=88,slow=2.9,SNR=6.1	146.68	259	PKPbc	PKPbc	04 40 29.8	-1.0

*IDC **14** 04:31:38.8±1.5, 11°.17S×164°.41E, h0^{km}, mb3.7/5, mb1 4.1/8, mb1mx3.8/27, mbtmp4.0/8, ML4.1/3, MS2.8/1, Ms1 2.8/1, ms1mx2.5/35, Error ellipse: s-maj=33.9km s-min=25.2km az=111.0*

*ISCJB **14** 04:31:41.8±1.2, 11°.26S±0°.09×164°.3E±0°.1, h29^{km}, mb3.6/5, MS2.8/1, Error ellipse: s-maj=21.8km s-min=10.1km az=154.5*

ISC 14 04:31:43.5±1.3**, 11°.2S**±0°.1×**164°.4E**±0°.2**, h29**^{km}**, n9,** σ**0^{s}.88**/9**, mb3.7**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara 15nm,0.3s,baz=117,slow=2.3,SNR=2.2	4.67	291	Pn	Pn	04 32 52.6	+0.5
DZM	Mont Dzumac 1.9nm,0.3s,baz=323,slow=17,SNR=15	11.03	170	Pn	Pn	04 34 19.7	+0.2
DZM	0.2nm,0.3s,baz=153,slow=20,SNR=2.1			Sn	Sn	04 36 22.4	+0.5
CTA	Charters Tower 0.2nm,0.3s,baz=49,slow=11,SNR=5.0	19.54	241	P	P	04 36 09.7	+0.7
STKA	Stephens Creek 0.6nm,0.3s,baz=27,slow=6.8,SNR=2.4	29.43	222	P	P	04 37 44.0	-0.7
WRA	Warramunga Arr 0.8nm,1.1s,baz=80,slow=8.9,SNR=4.6	30.16	249	P	P	04 37 50.5	-0.9
ASAR	Alice Springs 0.7nm,0.9s,baz=74,slow=8.8,SNR=5.8	31.52	243	P	P	04 38 02.6	-0.8
JNU	Nakatsue comp=Z,8.6nm,20.5s,baz=160,slow=32	54.39	325	LR	LR	05 00 56.4	
ILAR	Eielson Array 0.5nm,0.9s,baz=239,slow=5.1,SNR=3.3	84.06	19	P	P	04 44 10.5	-0.6
MKAR	Makanchi Array 0.3nm,0.8s,baz=93,slow=2.9,SNR=3.6	92.68	317	P	P	04 44 53.9	+1.1

*ISK **14** 04:36:14.9, 39°.04N×25°.92E, h3^{km}, ML2.5/14*

*DDA **14** 04:36:15.4, 39°.04N×25°.90E, h7^{km}±3^{km}, ML2.8*

*ATH **14** 04:36:15.1, 39°.05N×25°.94E, h24^{km}±1^{km}, ML2.2/2, Error ellipse: s-maj=2.3km s-min=1.6km az=94.0*

ISC 14 04:36:15.6±1.0**, 39°.04N**±0°.03×**25°.89E**±0°.03**, h14**^{km}±6^{km}**, n32,** σ**0^{s}.75**/45**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.17	351	PG	Pg	04 36 19.5	-0.2
SIGR				SG	Sg	04 36 22.8	+0.3
SIGR	SIGRI	0.17	351	P	Pg	04 36 19.7	0.0
SIGR				S	Sg	04 36 22.6	+0.1
SIGR	comp=E,1364µm,0.6s			AML	AML	04 36 23.4	
SIGR	comp=N,1162µm,0.4s			AML	AML	04 36 23.9	
PRK	Paraskevi	0.36	55	P	Pb	04 36 22.9	-0.9
PRK				S	Sb	04 36 28.0	-1.3
PRK	comp=N,1211µm,0.5s			AML	AML	04 36 29.4	
PRK	comp=E,1012µm,0.4s			AML	AML	04 36 30.1	
CHOS	Chios island	0.66	169	PG	Pg	04 36 28.4	-0.2
CHOS	Chios island	0.66	169	P	Pg	04 36 28.1	-0.5
AYVA	Ayvalik	0.68	66	*i* P	Pg	04 36 28.1	-0.7
AYVA				*i* S	Sb	04 36 38.1	-0.3
AYVA	comp=Z,596nm,0.1s			IAML_P			
BOZC	Bozcaada	0.81	9	PG	Pg	04 36 30.8	-0.5
BOZC	Bozcaada	0.81	9	*i* P	Pb	04 36 31.6	+0.1
BOZC				*i* S	Sn	04 36 43.9	-0.6
BOZC	comp=Z,1µm,0.2s			IAML_P			
EZN	Ezine	0.85	23	PG	Pg	04 36 31.3	-0.8
BAYC	CANAKKALE_Bayr	0.86	36	*i* P	Pb	04 36 32.1	-0.4
BAYC				*i* S	Sn	04 36 45.6	-0.3
BAYC	comp=Z,801nm,0.1s			IAML_P			
URLA	Izmir	0.87	141	PG	Pb	04 36 32.2	-0.4
URLA	Izmir	0.87	141	*i* P	Pn	04 36 33.0	-0.5
URLA	comp=Z,3µm,0.2s			IAML_P			
ZEY	zmir	0.93	149	*i* P	Pg	04 36 33.1	-0.5
ZEY	comp=Z,2µm,0.2s			IAML_P			
LIA	Limnos Island	1.02	328	P	Pg	04 36 34.8	-0.5
LIA				S	Sn	04 36 49.9	+0.3
SKY	Skiros Island	1.06	262	P	Pn	04 36 36.8	+0.8
GELI	Tayfur-Gelibol	1.43	18	PN	Pb	04 36 42.0	0.0
SMTH	Samothraki Isl	1.46	349	P	Pn	04 36 42.0	+0.4
SMTH				S	Sn	04 37 00.8	+0.4
STEP	BALIKESIR_Sava	1.46	76	*i* P	Pb	04 36 42.1	-0.5
STEP				*i* S	Sg	04 37 03.8	+1.2
STEP	comp=Z,848nm,0.1s			IAML_P			
LPK	Lapseki	1.49	26	PN	Pb	04 36 43.1	0.0
BALY	Balya	1.51	62	*i* P	Pg	04 36 45.1	+0.5
BALY				*i* S	Sg	04 37 04.3	+0.1
BALY	comp=Z,477nm,0.3s			IAML_P			
ERIK	Erikli-Kesan	1.70	16	PN	Pb	04 36 46.1	-0.5
ENEZ	Enez	1.71	7	PN	Pb	04 36 46.3	-0.5
KRBG	Karabiga-Canak	1.73	38	PN	Pb	04 36 46.5	-0.7
ALN	Alexandroupoli	1.86	4	PN	Pb	04 36 48.5	-0.9
ALN	Alexandroupoli	1.86	4	P	Pn	04 36 47.5	+0.5
ALN				S	Sn	04 37 10.3	0.0
KESN	Edirne-Kesan	1.89	18	*i* P	Pg	04 36 51.9	+0.1
KESN				*i* S	Sb	04 37 14.5	+0.9
KESN	comp=Z,120nm,0.1s			IAML_P			
AYDB	Zeytinkoy-Aydi	1.91	124	PN	Pn	04 36 48.9	+1.0
RKY	Sarkoy-Tekirda	1.92	31	PN	Pb	04 36 49.2	-1.3
SART	Tekirdag	1.92	31	*i* P	Pg	04 36 51.1	-1.4
SART				*i* S	Sg	04 37 17.4	-0.1
SART	comp=Z,328nm,0.1s			IAML_P			
KULA	Kula-Manisa	2.23	103	PN	Pn	04 36 53.4	+1.2
ARMT	Armutlu	2.75	55	PN	Pn	04 37 01.0	+1.7
TVSB	Tavsanli	2.80	80	PN	Pn	04 37 01.7	+1.6

*IDC **14** 04:38:40.7±3.2, 10°.97S×164°.55E, h88^{km}±28^{km}, mb3.4/4, mb1 3.7/7, mb1mx3.5/41, mbtmp4.0/7, MS3.3/5, Ms1 3.3/5, ms1mx3.0/19, Error ellipse: s-maj=29.0km s-min=18.9km az=54.0*

ISC 14 04:38:34.9±1.2**, 10°.7S**±0°.1×**164°.2E**±0°.1**, h29**^{km}**, n15,** σ**2^{s}.07**/9**, mb3.5**/4**, MS3.2**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara 43nm,0.3s,baz=14,slow=8.6,SNR=3.9	4.43	287	P	Pb	04 39 49.1	-2.9
HNR	15nm,0.3s,baz=328,slow=20,SNR=3.7			S	Sb	04 40 45.8	+0.9
DZM	Mont Dzumac 1.2nm,0.3s,baz=311,slow=18,SNR=11	11.46	170	P	Pn	04 41 17.3	+0.4
DZM	0.2nm,0.3s,baz=302,slow=22,SNR=2.7			S	Sn	04 43 21.5	-2.5
DZM	comp=Z,239nm,18.9s,baz=24,slow=36			LR	LR	04 45 24.8	
CTA	Charters Tower 0.3nm,0.3s,baz=50,slow=7.9,SNR=4.4	19.66	240	P	Pn	04 43 05.9	+2.7
H11S2	WAKE ISLAND Hy baz=181,slow=76,SNR=54	29.15	5	T	T	05 14 59.9	
H11S3	WAKE ISLAND Hy baz=181,slow=76,SNR=23	29.15	5	T	T	05 15 00.2	
H11S1	WAKE ISLAND Hy baz=181,slow=76,SNR=42	29.16	5	T	T	05 15 01.3	
STKA	Stephens Creek comp=Z,41nm,19.0s,baz=26,slow=34	29.67	221	LR	LR	04 55 23.5	
URZ	Urewera comp=Z,88nm,18.4s,baz=315,slow=35	29.73	159	LR	LR	04 55 51.4	
WRA	Warramunga Arr 1.2nm,0.9s,baz=76,slow=9.5,SNR=6.9	30.21	249	P	P	04 44 44.4	+1.1
WRA	comp=Z,49nm,18.2s,baz=60,slow=37			LR	LR	04 57 32.5	
H11N1	WAKE ISLAND Hy baz=182,slow=76,SNR=24	30.38	5	T	T	05 16 31.5	
H11N3	WAKE ISLAND Hy baz=182,slow=76,SNR=18	30.38	5	T	T	05 16 31.9	
H11N2	WAKE ISLAND Hy baz=182,slow=76,SNR=20	30.39	5	T	T	05 16 32.8	
ASAR	Alice Springs 0.3nm,0.6s,baz=77,slow=9.7,SNR=4.0	31.62	242	P	P	04 44 56.8	+1.2
ASAR	comp=Z,45nm,19.4s,baz=80,slow=34			LR	LR	04 56 42.5	
SONM	Songino Array 0.2nm,0.8s,baz=125,slow=4.0,SNR=2.7	77.55	324	P	P	04 50 27.9	-0.4
ILAR	Eielson Array 1.7nm,1.0s,baz=237,slow=5.8,SNR=7.5	83.70	19	P	P	04 51 01.0	+0.3

*IDC **14** 04:46:17.5±0.7, 15°.39N×147°.36E, h0^{km}, mb4.0/19, mb1 4.1/19, mb1mx3.9/48, mbtmp4.0/19, MS3.1/4, Ms1 3.1/4, ms1mx2.7/46, Error ellipse: s-maj=24.0km s-min=14.9km az=96.0*

*ISCJB **14** 04:46:20.0±0.5, 15°.38N±0°.06×147°.34E±0°.09, h29^{km}, mb4.1/30, MS3.2/3, Error ellipse: s-maj=13.0km s-min=8.8km az=178.7*

*NEIC **14** 04:46:22.6±0.4, 15°.38N×147°.34E, h35^{km}, mb4.4/13, Error ellipse: s-maj=10.5km s-min=7.2km az=93.0*

ISC 14 04:46:21.6±0.7**, 15°.39N**±0°.09×**147°.4E**±0°.1**, h29**^{km}**, n51,** σ**1^{s}.28**/45**, mb4.2**/30**, MS3.1**/3**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	1.84	301	*e*Pn	Pn	04 46 52.5	+1.4
SARN	Sarigan	1.99	311	*e*Pn	Pb	04 46 57.7	+0.5
JCJ	Chichijima comp=Z,61nm,20.1s,baz=100,slow=36	12.60	338	LR	LR	04 53 53.7	
H11S3	WAKE ISLAND Hy baz=265,slow=74	18.76	78	T	T	05 10 01.8	
H11S1	WAKE ISLAND Hy baz=265,slow=74	18.77	78	T	T	05 10 01.0	
H11S2	WAKE ISLAND Hy baz=265	18.77	78	T	T	05 10 03.6	
JOW	Kunigami 23nm,1.3s	21.09	306	*e*P	P	04 50 58.5	-5.3
MJAR	Matsushiro Arr 0.8nm,0.5s,baz=302,slow=41,SNR=2.7	22.59	341	P	P	04 51 19.7	0.0
MAJO	Matsushiro	22.59	341	*e*P	P	04 51 19.7	0.0
JNU	Nakatsue 20nm,1.4s	23.12	323	*e*P	P	04 51 23.8	-1.5

SSLB	Suanglung	26.20	293	eP	P	04 51 52.5	-1.4
	18nm,1.2s						
KSRS	Korea Array	27.91	326	P	P	04 52 10.0	+0.9
	0.5nm,0.5s,baz=239,slow=39,SNR=3.0						
KSRS				LR	LR	05 02 03.0	
	comp=Z,39nm,18.9s,baz=166,slow=34						
KS15	Wonju Array Si	27.93	326	eP	P	04 52 10.1	+0.7
	15nm,1.4s						
KSAR	Wonju Array Be	27.93	326	P	P	04 52 10.1	+0.7
ASAJ	Asahikawa	28.92	353	P	P	04 52 18.1	+0.1
	1.8nm,0.3s,baz=281,slow=33,SNR=2.6						
USA0B	Ussuriysk Arra	31.54	339	eP	P	04 52 41.2	0.0
	9.7nm,1.4s						
WR1	Warramunga Arr	37.37	200	eP	P	04 53 31.0	-0.9
	5.4nm,1.4s						
WRA	Warramunga Arr	37.37	200	P	P	04 53 31.0	-0.9
	0.7nm,1.2s,baz=26,slow=9.8,SNR=2.8						
PETK	Petropavlovsk-	38.51	10	LR	LR	05 14 13.8	
	comp=Z,27nm,18.1s,baz=195,slow=44						
AS31	Alice Springs	40.98	199	eP	P	04 54 03.0	+0.9
	1.4nm,1.4s						
ASAR	Alice Springs	40.98	199	P	P	04 54 03.0	+0.9
	0.1nm,0.3s,baz=44,slow=6.7,SNR=3.3						
MA2	Magadan	44.19	2	eP	P	04 54 27.6	-0.1
MA2	Magadan	44.19	2	P	P	04 54 28.3	+0.7
	2.9nm,0.4s,baz=340,slow=23,SNR=3.0						
CISI	Cisompet, Garu	45.32	243	eP	P	04 54 36.0	-1.4
	52nm,0.4s						
CM31	Chiang Mai Arr	46.30	281	eP	P	04 54 46.6	+1.4
CMAR	Chiang Mai Arr	46.30	281	P	P	04 54 46.6	+1.4
	0.8nm,0.3s,baz=82,slow=6.7,SNR=5.0						
SONA0	Songino Array	46.71	323	eP	P	04 54 47.3	-0.7
SONM	Songino Array	46.71	323	P	P	04 54 47.3	-0.7
	0.5nm,0.6s,baz=133,slow=7.0,SNR=5.2						
STKA	Stephens Creek	47.32	187	eP	P	04 54 52.9	+0.2
	1.8nm,1.5s						
STKA	Stephens Creek	47.32	187	P	P	04 54 52.9	+0.2
	0.7nm,0.3s,baz=3.2,slow=18,SNR=2.1						
BILL	Bilibino	54.01	9	eP	P	04 55 41.0	-1.8
	6.6nm,0.6s						
MK32	Makanchi Array	61.89	315	eP	P	04 56 39.0	+0.5
MKAR	Makanchi Array	61.89	315	P	P	04 56 39.0	+0.5
	0.9nm,0.8s,baz=94,slow=8.5,SNR=5.1						
MAKZ	Makanchi	62.11	315	eP	P	04 56 40.7	+0.8
	2.0nm,1.0s						
KURK	Kurchatov	64.78	319	eP	P	04 56 57.6	+0.2
KURBB	Kurchatov Arra	64.83	319	P	P	04 56 57.6	-0.1
	6.0nm,0.8s,baz=97,slow=6.8,SNR=15						
ILAR	Eielson Array	65.92	25	P	P	04 57 04.3	-0.3
	0.5nm,0.5s,baz=252,slow=6.2,SNR=11						
ILB	Eielson Array	65.92	25	eP	P	04 57 04.3	-0.3
	5.5nm,1.4s						
BVAR	Borovoye Array	70.02	321	P	P	04 57 30.9	+0.3
	1.7nm,0.9s,baz=107,slow=7.9,SNR=5.4						
INK	Inuvik	71.79	23	eP	P	04 57 42.1	+1.1
	3.9nm,1.4s						
INK	Inuvik	71.79	23	P	P	04 57 42.1	+1.1
	0.8nm,0.6s,baz=251,slow=8.0,SNR=6.8						
AKTO	Aktyubinsk	77.88	319	LR	LR	05 35 13.5	
	comp=Z,18nm,18.3s,baz=108,slow=38						
YKA	Yellowknife Ar	80.16	28	P	P	04 58 29.8	+1.0
	0.4nm,0.5s,baz=286,slow=5.4,SNR=7.2						
NV01	Mina Array Sit	83.93	52	eP	P	04 58 50.2	+0.8
NVAR	Mina Array Bea	83.93	52	P	P	04 58 50.2	+0.8
	0.4nm,0.7s,baz=286,slow=7.6,SNR=2.4						
ARA0	ARCESS Array S	86.11	343	eP	P	04 59 00.7	+1.3
ARCES	ARCESS Array B	86.11	343	P	P	04 59 00.7	+1.3
	3.3nm,0.9s,baz=37,slow=6.2,SNR=3.2						
BOZ	Bozeman (W)	86.66	44	eP	P	04 59 00.0	-2.8
	2.6nm,0.8s						
KBZ	Khabaz	89.59	315	P	P	04 59 17.6	+1.0
	1.0nm,0.8s,baz=52,slow=9.1,SNR=3.1						
FIA0	FINESS Array S	90.53	336	eP	P	04 59 20.3	-0.3
FINES	FINESS Array B	90.53	336	P	P	04 59 20.3	-0.3
	1.6nm,0.9s,baz=104,slow=8.0,SNR=4.9						

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*KRNET **14** 04:48:51.2±0.1, 42°.55N×79°.73E, h16^{km}, mb3.3*
*ISCJB **14** 04:48:52.9±0.7, 42°.56N±0°.03×79°.75E±0°.04, h10^{km}, Error ellipse: s-maj=6.1km s-min=3.2km az=138.1*
*SOME **14** 04:48:52.1, 42°.60N×79°.58E, h5^{km}*
*NNC **14** 04:48:52.6±1.0, 42°.61N×79°.68E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=6.3km s-min=3.9km az=130.0*
ISC 14 04:48:52.5±1.1**, 42°.55N**±0°.04×**79°.71E**±0°.04**, h10^{km}, n52, σ1ˢ.34**/93**, 37C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.78	320	P	Pg	04 49 06.6	-1.0
	162nm,0.1s						
UZB				S	Sg	04 49 16.7	-1.2
	180nm,0.2s						
UZB	Uzynbulak	0.78	320	eP	Pg	04 49 06.6	-1.0
	baz=19						
UZB				eS	Sg	04 49 16.7	-1.2
	baz=19						
UZB	Uzynbulak	0.78	320	eP	Pg	04 49 06.6	-1.0
	162nm,0.1s						
UZB				eS	Sg	04 49 16.7	-1.2
	180nm,0.2s						
PDGK	Podgornoye	0.79	348	P	Pg	04 49 06.9	-1.1
	28nm,0.1s						
PDGK				S	Sg	04 49 17.3	-1.0
	135nm,0.1s						
PDGK	Podgornoye	0.79	348	⇑P	Pg	04 49 06.8	-1.1
	15nm,0.4s						
PDGK				⇓S	Sg	04 49 17.2	-1.0
	58nm,0.2s						
PDGK	Podgornoye	0.79	348	⇑iP	Pg	04 49 06.5	-1.4
	baz=47						
PDGK				⇑iS	Sg	04 49 17.3	-1.0
	baz=47						
PRZ	Przheval'sk	0.97	266	⇑iP	Pg	04 49 10.0	-1.3
	baz=67						
PRZ				⇑iS	Sg	04 49 23.6	-0.3
	baz=67						
KTMS	Ketmen	1.01	27	P	Pg	04 49 10.9	-1.1
	72nm,0.1s						
KTMS				S	Sg	04 49 24.3	-0.8
	62nm,0.2s						
KTMS	Ketmen	1.01	27	eP	Pg	04 49 10.9	-1.1
	baz=26						
KTMS				eS	Sg	04 49 24.3	-0.8
	baz=26						
KTMS	Ketmen	1.01	27	eP	Pg	04 49 10.9	-1.1
	72nm,0.1s						
KTMS				eS	Sg	04 49 24.3	-0.8
	62nm,0.2s						
SATY	Saty	1.09	298	P	Pg	04 49 11.7	-1.7
	37nm,0.1s						
SATY				S	Sg	04 49 26.3	-1.3
	262nm,0.1s						
SATY	Saty	1.09	298	eP	Pg	04 49 11.7	-1.7
	37nm,0.1s						
SATY				eS	Sg	04 49 26.3	-1.3
	262nm,0.1s						
TARG	Taragay, Kyrgy	1.64	241	⇑iP	Pn	04 49 20.9	-0.9
	baz=41						
TARG				⇑iS	Sb	04 49 44.0	0.0
	baz=41						
DJR	Jarkent	1.78	2	eP	Pb	04 49 24.4	-0.9
	6.4nm,0.2s						
DJR				eS	Sg	04 49 48.1	-1.7
	44nm,0.3s						
MNBS	Baschi	1.80	328	P	Pb	04 49 24.4	-1.3
	24nm,0.2s						
MNBS				S	Sb	04 49 47.4	-0.9
	251nm,0.2s						
MNBS	Baschi	1.80	328	eP	Pb	04 49 24.4	-1.3
	24nm,0.2s						
MNBS				eS	Sb	04 49 47.4	-0.9
	251nm,0.2s						
KDJ	Kajisay	1.92	258	⇑iP	Pb	04 49 26.4	-1.4
	baz=58						
KDJ				⇑iS	Sb	04 49 52.4	+0.5
	baz=58						
KOTS	Kotyrbulak	2.03	291	Pg	Pb	04 49 28.6	-0.9
	22nm,0.2s						
KOTS				Lg	Lg	04 49 55.2	
	156nm,0.4s						
KOTS	Kotyrbulak	2.03	291	eP	Pb	04 49 28.7	-0.9
	baz=90						
KOTS				eS	Sb	04 49 55.2	+0.2
	baz=90						
KOTS	Kotyrbulak	2.03	291	eP	Pb	04 49 28.6	-0.9
	22nm,0.2s						
KOTS				eS	Sb	04 49 55.2	+0.2
	156nm,0.4s						
MDOK	Medeo	2.05	288	⇑Pg	Pb	04 49 28.6	-1.4
	17nm,0.4s						
MDOK				⇑Lg	Lg	04 49 56.3	
	13nm,0.7s						
MDOK	Medeo	2.05	288	eP	Pb	04 49 29.1	-0.9
	baz=88						
MDOK				eS	Sb	04 49 55.5	-0.1
	baz=88						
MDOK	Medeo	2.05	288	eP	Pb	04 49 29.1	-0.9
	23nm,0.4s						
MDOK				eS	Sb	04 49 55.5	-0.1
	55nm,0.5s						
KNDC	Almaty	2.12	289	⇑Pg	Pb	04 49 31.1	-0.1
	17nm,0.3s						
KNDC				⇓Lg	Lg	04 50 01.0	
	59nm,0.4s						
ARXS	Arharly	2.16	321	Pg	Pb	04 49 30.4	-1.3
	42nm,0.4s						
ARXS				Lg	Lg	04 49 58.4	
	67nm,0.2s						
ARXS	Arharly	2.16	321	eP	Pb	04 49 30.4	-1.3
	42nm,0.4s						
ARXS				eS	Sb	04 49 58.4	-0.2
	67nm,0.2s						
IZV	Izvestkoviy	2.33	283	Pg	Pb	04 49 34.2	-0.6
	33nm,0.2s						
IZV				Lg	Lg	04 50 03.0	
	82nm,0.2s						
IZV	Izvestkoviy	2.33	283	eP	Pb	04 49 34.2	-0.6
	33nm,0.2s						
IZV				eS	Sb	04 50 04.0	+0.3
	82nm,0.2s						
MTBS	Maitube	2.48	285	eP	Pb	04 49 36.8	-0.5
	35nm,0.2s						
MTBS				eS	Sb	04 50 08.2	+0.3
	59nm,0.4s						
KTBS	Karatobe	2.50	299	Pg	Pb	04 49 36.8	-0.8
	14nm,0.2s						
KTBS				Lg	Lg	04 50 08.6	
	74nm,0.2s						
KTBS	Karatobe	2.50	299	eP	Pb	04 49 36.8	-0.8
	14nm,0.2s						
KTBS				eS	Sb	04 50 08.6	+0.1
	74nm,0.2s						
ULHL	Ulahol	2.59	264	⇑iP	Pn	04 49 36.0	+1.3
	baz=64						
ULHL				⇑iS	Sb	04 50 08.8	-2.3
	baz=64						
KAPS	Kapalarasan	2.75	355	eP	Pb	04 49 41.2	-0.5
	2.8nm,0.2s						
KAPS				eS	Sb	04 50 16.3	+0.9
	71nm,0.2s						
BOOM	Boomskoye usch	2.79	270	⇓iP	Pn	04 49 38.9	+1.5
	baz=70						
BOOM				⇓iS	Sb	04 50 14.0	-2.8
	baz=70						
KUU	Kurty	2.81	300	eP	Pb	04 49 42.1	-0.6
	4.1nm,0.3s						
KUU				eS	Sb	04 50 17.9	+0.8
	32nm,0.5s						
DGS	Degeres	2.98	285	Pg	Pb	04 49 45.3	-0.4
	16nm,0.4s						
DGS				Lg	Lg	04 50 23.1	
	70nm,0.3s						
DGS	Degeres	2.98	285	eP	Pb	04 49 45.3	-0.4
	16nm,0.4s						
DGS				eS	Sb	04 50 23.1	+0.9
	70nm,0.3s						
NRN	Naryn	2.98	249	⇑iP	Pn	04 49 41.9	+1.7
	baz=49						
NRN				⇑iS	Sb	04 50 19.1	-3.5
	baz=49						
TKM2	Tokmak 2	3.05	278	⇑Pn	Pb	04 49 44.3	-2.8
	1.8nm,0.2s						
TKM2				⇓Pg	Pg	04 49 50.4	-0.7
	2.1nm,0.3s						
TKM2				⇑Lg	Lg	04 50 25.8	
	12nm,0.4s						
TKM2	Tokmak 2	3.05	278	⇓iP	Pn	04 49 42.7	+1.6
	baz=78						
TKM2				⇓iS	Sn	04 50 19.9	+2.1
	baz=78						
KZA	Kyzart	3.34	263	⇑iP	Pn	04 49 46.3	+1.1
	baz=63						
KZA				⇑iS	Sn	04 50 26.8	+1.6
	baz=63						
KBK	Karagaybulak	3.52	273	⇑iP	Pn	04 49 49.2	+1.8
	baz=73						
KBK				⇑iS	Sn	04 50 31.1	+1.9
	baz=73						
CHMS	Chumysh	3.68	279	⇑iP	Pn	04 49 50.9	+1.4
	baz=79						
CHMS				⇑iS	Sn	04 50 35.1	+2.1
	baz=79						
AAK	Ala-Archa	3.85	273	⇓Pg	Pb	04 50 01.7	+1.0
	1.2nm,0.3s						
AAK				⇑Lg	Lg	04 50 50.8	
	14nm,0.6s						
AAK	Ala-Archa	3.85	273	⇑iP	Pn	04 49 53.2	+1.2
	baz=73						
AAK				⇑iS	Sn	04 50 39.3	+1.9
	baz=73						
UCH	Uchtor	3.86	267	⇑iP	Pn	04 49 53.4	+1.0
	baz=67						
UCH				⇑iS	Sn	04 50 40.2	+2.1
	baz=67						
USP	Ospenovka	3.90	282	⇑iP	Pn	04 49 54.3	+1.8
	baz=82						
USP				⇑iS	Sn	04 50 39.8	+1.5
	baz=82						
EKS2	Erkin-Say	4.38	273	⇑iP	Pn	04 50 00.5	+1.3
	baz=73						
EKS2				⇑iS	Sn	04 50 51.9	+1.5
	baz=73						
AML	Almayashu	4.48	267	⇓iP	Pn	04 50 02.4	+1.6
	baz=67						
AML				⇓iS	Sn	04 50 54.8	+1.6
	baz=67						
MAKZ	Makanchi	4.55	20	⇑Pn	Pn	04 50 03.3	+1.8
	1.1nm,0.2s						
MAKZ				⇑Lg	Lg	04 51 12.8	
	2.0nm,0.6s						
MK31	Makanchi Array	4.62	23	⇓Pn	Pn	04 50 04.2	+1.7
	0.3nm,0.2s,baz=46,slow=0.8,SNR=31						
MK31				⇑Lg	Lg	04 51 16.8	
	0.9nm,0.3s,baz=203,slow=27,SNR=6.6						
MNAS	Manas	5.33	272	⇑Pg	Pb	04 50 28.5	+2.7
	0.5nm,0.5s						
MNAS				⇓Lg	Lg	04 51 37.7	
	3.6nm,0.6s						

IDC 14 04:57:49.6±3.4**, 11°.74S**×**167°.66E, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.6**/33**, mbtmp3.6**/5**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.7**/26**, Error ellipse: s-maj=121.5km s-min=30.4km az=135.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.02	251	P	P	05 04 26.9	0.0
	1.2nm,0.8s,baz=83,slow=9.2,SNR=14						
WRA				LR	LR	05 17 54.9	
	comp=Z,52nm,18.3s,baz=70,slow=36						
ASAR	Alice Springs	34.18	245	P	P	05 04 37.1	+0.1
	0.3nm,0.5s,baz=72,slow=8.7,SNR=4.2						
SONM	Songino Array	80.34	323	P	P	05 10 03.1	+0.2
	0.2nm,0.5s,baz=134,slow=4.2,SNR=2.7						
ILAR	Eielson Array	83.58	18	P	P	05 10 19.5	+0.1
	0.3nm,0.8s,baz=238,slow=5.2,SNR=2.9						
MKAR	Makanchi Array	95.31	317	P	P	05 11 15.0	-0.7
	0.3nm,0.6s,baz=88,slow=5.4,SNR=3.6						

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*ISK **14** 05:00:45.9, 39°.26N×29°.13E, h4^{km}, ML2.0/9*
*ISCJB **14** 05:00:46.8±0.6, 39°.26N±0°.03×29°.13E±0°.04, h5^{km}±6^{km}, Error ellipse: s-maj=5.5km s-min=4.6km az=159.3*
*DDA **14** 05:00:46.1, 39°.26N×29°.14E, h4^{km}±1^{km}, ML2.5*
ISC 14 05:00:46.8±1.0**, 39°.25N**±0°.03×**29°.15E**±0°.03**, h11^{km}**±9^{km}**, n17, σ0ˢ.57**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAP	Saphane-Kutahy	0.23	165	PG	Pg	05 00 51.6	-0.1
SHAP				SG	Sg	05 00 55.7	+0.8
GEDZ	Gediz	0.29	134	PG	Pg	05 00 52.7	0.0
GDZ	Gediz	0.31	121	i P	Pb	05 00 53.8	-0.6
GDZ				i S	Sb	05 00 58.9	-0.6
TVSB	Tavsanli	0.32	50	PG	Pg	05 00 52.5	-0.7
DEMI	Demirci	0.39	239	i P	Pg	05 00 54.3	-0.2
DEMI				i S	Sg	05 01 00.4	+0.6
DURS	Dursunbey	0.63	304	i P	Pb	05 00 59.2	-0.6
DURS				IAML_P			
	comp=Z,380nm,0.1s						
KULA	Kula-Manisa	0.82	207	PG	Pg	05 01 02.1	-0.6
MANT	Manisa	0.88	211	i P	Pg	05 01 03.9	0.0
KHAL	Karahalli	0.92	163	i P	Pg	05 01 03.3	-1.2
KHAL				i S	Sb	05 01 17.4	+0.4
AKHS	Akhisar	1.10	251	i P	Pn	05 01 08.3	+0.1
AKHS				i S	Sn	05 01 23.7	+0.3
AKHS				IAML_P			
	comp=Z,1μm,0.2s						
KCTX	Karacabey (Bur	1.19	329	PN	Pg	05 01 09.2	-0.4
BORA	Eskisehir	1.19	58	PN	Pg	05 01 09.7	0.0
BORA	Eskisehir	1.19	58	i P	Pb	05 01 09.2	-0.3
BORA				i S	Sn	05 01 26.9	+1.1
SHUT	Suhut-Afyon	1.30	122	PN	Pg	05 01 11.7	0.0
YLV	Yalova	1.33	8	PN	Pb	05 01 11.7	-0.1
ARMT	Armutlu	1.33	351	PN	Pb	05 01 11.8	-0.1
GULT	Gulveren	1.58	41	PN	Pb	05 01 15.7	-0.5

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*IDC **14** 05:01:10.7±1.3, 11°.18S×165°.96E, h0^{km}, mb4.0/6, mb1 4.3/8, mb1mx3.9/36, mbtmp4.2/8, ML4.8/2, MS3.1/4, Ms1 3.1/4, ms1mx2.8/27, Error ellipse: s-maj=36.6km s-min=25.4km az=119.0*
*ISCJB **14** 05:01:11.2±0.7, 11°.28S±0°.07×165°.83E±0°.09, h10^{km}, mb5.2/1, MS3.5/4, Error ellipse: s-maj=14.5km s-min=8.8km az=149.9*
*NEIC **14** 05:01:15.1±3.7, 11°.22S×165°.84E, h25^{km}±25^{km}, mb4.3/5, Error ellipse: s-maj=15.8km s-min=9.4km az=221.0*
ISC 14 05:01:12.8±0.8**, 11°.2S**±0°.1×**165°.9E**±0°.1**, h10^{km}, n34, σ0ˢ.90**/29**, MS3.4**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.09	286	ePn	Pn	05 02 43.5	+0.5
HNR	Honiara	6.09	286	Pn	Pn	05 02 43.7	+0.7
	40nm,0.3s,baz=158,slow=9.9,SNR=3.8						
MARNC	Mare, Loyalty	10.44	169	ePn	Pn	05 03 43.1	+0.4
DZM	Mont Dzumac	10.84	177	ePn	Pn	05 03 48.2	0.0
DZM	Mont Dzumac	10.84	177	Pn	Pn	05 03 48.5	+0.3
	3.2nm,0.3s,baz=342,slow=13,SNR=29						
DZM				LR	LR	05 07 37.8	
	comp=Z,95nm,18.6s,baz=336,slow=36						
ONTNC	Ouen Toro	11.07	177	ePn	Pn	05 03 51.6	+0.3
PINNC	Pines Island,	11.46	173	ePn	Pn	05 03 56.9	+0.3
CTAO	Charters Tower	20.85	242	eP	P	05 05 54.9	-0.1
	17nm,1.3s						
BKZ	Black Stump Fm	29.42	163	eP	P	05 07 16.4	-0.2
	25nm,1.3s						
H11S2	WAKE ISLAND Hy	29.50	2	T	T	05 37 41.2	
	baz=182,slow=74						
H11S3	WAKE ISLAND Hy	29.50	2	T	T	05 37 42.2	
	baz=182						
H11S1	WAKE ISLAND Hy	29.52	2	T	T	05 37 44.2	
	baz=182,slow=74						
STKA	Stephens Creek	30.43	224	eP	P	05 07 25.6	-0.1
	0.6nm,0.8s						
STKA	Stephens Creek	30.43	224	P	P	05 07 26.0	+0.4
	3.1nm,0.7s,baz=50,slow=9.4,SNR=8.5						
H11N1	WAKE ISLAND Hy	30.72	2	T	T	05 39 13.2	
	baz=182,slow=76,SNR=4.3						
H11N3	WAKE ISLAND Hy	30.73	2	T	T	05 39 13.2	
	baz=182,slow=76,SNR=3.1						
H11N2	WAKE ISLAND Hy	30.74	2	T	T	05 39 15.3	
	baz=182,slow=76,SNR=3.6						
BFZ	Birch Farm	30.77	164	eP	P	05 07 26.9	-1.6
	67nm,1.6s						
THZ	Tophouse	31.07	170	eP	P	05 07 32.3	+1.1
	16nm,1.0s						
WR1	Warramunga Arr	31.56	250	eP	P	05 07 34.6	-1.1
WR1				ePcP	PcP	05 10 27.9	-0.6
WRA	Warramunga Arr	31.56	250	P	P	05 07 34.6	-1.1
	0.8nm,0.7s,baz=81,slow=9.1,SNR=7.1						
WRA				PcP	PcP	05 10 27.9	-0.6
	0.5nm,0.9s,baz=78,slow=3.5,SNR=4.0						
TOO	Toolangi	32.02	211	eP	P	05 07 40.4	+0.8
	11nm,1.2s						
AS31	Alice Springs	32.85	244	eP	P	05 07 46.5	-0.6
	2.0nm,1.4s						
AS31				ePcP	PcP	05 10 31.7	-0.3
ASAR	Alice Springs	32.85	244	P	P	05 07 45.9	-1.2
	0.4nm,0.6s,baz=72,slow=9.7,SNR=7.4						
ASAR				PcP	PcP	05 10 31.7	-0.3
	0.3nm,0.6s,baz=53,slow=3.6,SNR=2.9						
BBOO	Buckleboo	34.83	227	eP	P	05 08 03.9	-0.2
	18nm,1.5s						
KSRS	Korea Array	60.07	326	LR	LR	05 36 04.4	
	comp=Z,7.6nm,18.6s,baz=265,slow=35						
PETK	Petropavlovsk-	64.42	355	LR	LR	05 35 23.3	
	comp=Z,20nm,21.4s,baz=115,slow=32						
CM31	Chiang Mai Arr	72.29	294	eP	P	05 12 40.7	+1.6
CMAR	Chiang Mai Arr	72.29	294	P	P	05 12 40.7	+1.6
	0.8nm,0.3s,baz=107,slow=4.9,SNR=3.4						
CMAR				LR	LR	05 48 06.2	
	comp=Z,238nm,18.0s,baz=350,slow=39						
ILAR	Eielson Array	83.60	18	P	P	05 13 39.9	-1.1
	0.3nm,0.6s,baz=237,slow=4.9,SNR=10						
Y14A	Wickenburg	88.92	55	eP	P	05 14 09.4	+1.4
	6.0nm,0.6s						
MK32	Makanchi Array	93.72	317	eP	P	05 14 28.9	-1.1
MKAR	Makanchi Array	93.72	317	P	P	05 14 28.9	-1.1
	0.5nm,0.8s,baz=104,slow=6.1,SNR=3.3						
NRIK	Noril'sk	96.30	340	LR	LR	05 54 54.2	
	comp=Z,15nm,21.9s,baz=82,slow=34						

NNC 14 05:04:49.1±3.4**, 36°.42N**×**69°.37E, h0^{km}, mb3.5, mpv3.2, 4C-3D, Error ellipse: s-maj=33.9km s-min=22.3km az=146.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.84	41	⇓Pn	Pn	05 06 03.3	-0.2
	0.6nm,0.3s						
SFK				⇓Sn	Sn	05 07 00.9	+0.6
	1.4nm,0.1s						
MNAS	Manas	6.53	21	⇑Pn	Pn	05 06 28.0	+1.6
	1.1nm,0.5s						
MNAS				⇑Sn	Sn	05 07 43.3	+1.7
	1.9nm,0.5s						
KK31	Karatay Array	6.73	7	⇑Pn	Pn	05 06 30.2	+1.0
	0.5nm,0.2s,baz=198,slow=14,SNR=25						
KK31				Sn	Sn	05 07 47.0	+0.5
	0.6nm,0.3s,baz=187,slow=21,SNR=5.5						
AAK	Ala-Archa	7.36	31	⇑Pn	Pn	05 06 37.1	-0.8
	0.9nm,0.5s						
AAK				⇓Sn	Sn	05 08 03.9	+1.6
	2.7nm,0.6s						
AB31	Akbulak array	14.56	335	P	Pn	05 08 13.7	-2.5
	0.2nm,0.2s,baz=160,slow=11,SNR=15						

MEX 14 05:06:08.8±0.8**, 19°.12N**×**105°.25W, h18^{km}, MD4.0, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	0.43	27	eP	Pg	05 06 15.9	-1.6
CJM				eS	Sg	05 06 21.6	-1.9
R15V		1.20	87	eP	Pn	05 06 26.8	-4.0
R15V				eS	Sb	05 06 41.7	-4.5
EZ5V		1.60	77	eP	Pn	05 06 33.8	-2.6
EZ5V				eS	Sn	05 06 52.4	-4.3
ANIG	Ahuacatlan	2.04	19	eP	Pn	05 06 43.7	+1.3
ANIG				eS	Sb	05 07 10.2	-0.4

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*ISCJB **14** 05:10:38.5±0.5, 36°.33N±0°.03×71°.48E±0°.06, h114^{km}, mb3.4/6, Error ellipse: s-maj=7.7km s-min=3.7km az=160.9*
*IDC **14** 05:10:39.2±3.4, 36°.33N×71°.50E, h100^{km}±28^{km}, mb3.2/6, mb1 3.4/13, mb1mx3.2/48, mbtmp3.7/13, MS2.9/1, Ms1 2.9/1, ms1mx2.2/33, Error ellipse: s-maj=26.3km s-min=20.7km az=164.0*
*NNC **14** 05:10:43.4±2.5, 36°.70N×71°.17E, h165^{km}±39^{km}, mb3.4, mpv4.2, Error ellipse: s-maj=30.7km s-min=23.1km az=95.0*
ISC 14 05:10:38.9±0.6**, 36°.28N**±0°.05×**71°.34E**±0°.06**, h114^{km}, n46, σ2ˢ.13**/55**, mb3.4**/6**, 4C-9D, Afghanistan-Tajikistan border**

region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.09	24	⇑P	Pn	05 11 41.2	+1.4
	3.4nm,0.2s						
SFK				⇓S	Sn	05 12 28.6	+1.7
	12nm,0.2s						
DHRM	DHARAMSHALA	5.75	133	eP	Pn	05 12 03.2	+1.1
DHRM				eS	Sn	05 13 05.5	-1.4
DHRM				IAML		05 13 10.7	
	comp=N,198nm,0.2s						
DHRM				IAML		05 13 10.9	
	comp=E,183nm,0.3s						
AML	Almayashu	6.12	17	P	Pn	05 12 06.6	-0.6
	SNR=64						
MNAS	Manas	6.26	8	⇓P	Pn	05 12 08.3	-0.6
	comp=E,14nm,0.6s						
MNAS				⇑S	Sn	05 13 15.7	-3.4
	comp=E,9.8nm,0.4s						
UCH	Uchtor	6.42	22	P	Pn	05 12 11.2	-0.2
	SNR=22						
KZA	Kyzart	6.53	26	P	Pn	05 12 12.9	+0.1
	SNR=10.0						
EKS2	Erkin-Say	6.64	16	P	Pn	05 12 13.2	-0.8
	SNR=18						
AAK	Ala-Archa	6.80	20	P	Pn	05 12 16.1	0.0
	SNR=21						
AAK	Ala-Archa	6.80	20	⇓P	Pn	05 12 16.1	0.0
	comp=E,11nm,0.5s						
AAK				⇓S	Sn	05 13 29.4	-2.7
	comp=E,7.1nm,0.6s						
AAK	Ala-Archa	6.80	20	P	Pn	05 12 16.3	+0.2
	comp=E,5.8nm,0.3s,baz=162,slow=6.3,SNR=65						
AAK				S	Sn	05 13 29.8	-2.4
	comp=E,1.1nm,0.3s,baz=350,slow=21,SNR=8.0						
KK31	Karatay Array	6.84	355	⇑P	Pn	05 12 15.5	-1.1
	comp=E,20nm,0.3s,baz=178,slow=12,SNR=458						
KK31				⇓S	Sn	05 13 27.7	-5.3
	comp=E,3.4nm,0.5s,baz=179,slow=22,SNR=4.4						
KBK	Karagaybulak	6.95	23	P	Pn	05 12 18.6	+0.4
	SNR=9.9						
ULHL	Ulahol	7.06	31	P	Pn	05 12 20.6	+0.8
	SNR=6.0						
SMLA	Simla	7.07	135	eP	Pn	05 12 21.1	+1.4
SMLA				eS	Sn	05 13 35.6	-2.9
SMLA				IAML		05 13 39.6	
	comp=E,59nm,0.3s						
SMLA				IAML		05 13 40.1	
	comp=N,72nm,0.2s						
CHMS	Chumysh	7.20	20	P	Pn	05 12 21.4	-0.1
	SNR=6.7						
USP	Ospenovka	7.39	18	P	Pn	05 12 23.5	-0.5
	SNR=9.4						
TKM2	Tokmak 2	7.40	25	P	Pn	05 12 24.6	+0.3
	SNR=12						
TKM2	Tokmak 2	7.40	25	⇓P	Pn	05 12 24.0	-0.3
	comp=N,11nm,0.6s						
TKM2				⇑S	Sn	05 13 45.0	-1.7
	comp=N,1.8nm,0.5s						
KKR	Kurukshetra	7.80	142	eS	Sn	05 13 54.8	-1.6
JOSI	Joshimath	8.93	127	eP	Pn	05 12 47.0	+1.9
JOSI				eS	Sn	05 14 14.7	-9.4
JOSI				IAML		05 14 28.8	
	comp=E,45nm,0.9s						
JOSI				IAML		05 14 30.5	
	comp=N,38nm,0.2s						
KHET	Khetri	9.01	154	eP	Pn	05 12 45.7	-0.4
KHET				eS	Sn	05 14 19.6	-6.3
KHET				IAML		05 14 25.5	
	comp=N,12nm,0.4s						
KHET				IAML		05 14 26.3	
	comp=E,16nm,0.4s						
KALG	Kalgarh	9.19	135	eS	Sn	05 14 25.4	-4.6
GEYT	Alibeck	10.69	283	P	Pn	05 13 11.8	+3.0
	comp=E,0.5nm,0.3s,baz=193,slow=33,SNR=2.7						
GEYT				S	Sn	05 15 00.5	-6.0
	comp=E,1.4nm,0.3s,baz=96,slow=14,SNR=5.3						
OTUK	Ortayu	11.98	3	⇓P	Pn	05 13 22.4	-3.4
	comp=E,2.4nm,0.7s						
PYUN	Piuthan	12.79	126	eP	Pn	05 13 36.0	-0.8
	comp=E,12nm,0.4s						
DANN	Dangsing	13.14	124	eP	Pn	05 13 40.0	-1.4
	comp=E,8.9nm,0.4s						
MKAR	Makanchi Array	13.31	35	P	Pn	05 13 43.1	-0.1
	comp=E,0.1nm,0.3s,baz=222,slow=14,SNR=8.9						
KOLN	Koldanda	13.41	126	eP	Pn	05 13 43.8	-1.1
	comp=E,3.0nm,0.3s						
DMN	Daman	14.52	123	eP	Pn	05 13 59.2	0.0
PKIN	Phulchoki	14.74	122	eP	Pn	05 14 01.8	-0.2
	comp=E,5.8nm,0.4s						
PKI	Pulchoki	14.75	122	eP	Pn	05 14 01.9	-0.3
JIRN	Jiri	15.24	120	eP	Pn	05 14 08.5	+0.2
	comp=E,15nm,0.4s						
KURBB	Kurchatov Arra	15.24	18	P	Pn	05 14 08.0	+0.2
	comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=4.3						
AB31	Akbulak array	15.41	331	⇓P	Pn	05 14 08.2	-1.7
	comp=E,1.4nm,0.3s,baz=139,slow=12,SNR=100						
BVAR	Borovoye Array	16.75	358	P	Pn	05 14 26.3	-0.2
	comp=E,0.3nm,0.3s,baz=163,slow=11,SNR=6.9						
AKTO	Aktyubinsk	17.11	330	⇓P	P	05 14 30.1	-0.6
	comp=E,8.1nm,1.1s						
AKTO	Aktyubinsk	17.11	330	P	P	05 14 30.6	-0.1
	comp=E,0.7nm,0.3s,baz=128,slow=13,SNR=12						
ZALV	Zalesovo Beam	20.00	24	P	P	05 15 01.7	-0.5
	comp=E,0.9nm,0.3s,baz=210,slow=11,SNR=10						
MMAI	Mount Meron Ar	29.64	274	LR	LR	05 30 44.5	
	comp=E,22nm,20.7s,baz=115,slow=40						
FINES	FINESS Array B	37.82	326	P	P	05 17 46.2	+2.3
	comp=E,0.3nm,0.4s,baz=126,slow=9.7,SNR=6.0						
ARCES	ARCESS Array B	41.45	338	P	P	05 18 16.3	+2.4
	comp=E,4.8nm,1.0s,baz=118,slow=9.3,SNR=4.5						
NB2	NORSAR Subarra	44.72	323	P	P	05 18 42.3	+1.9
	comp=Z,0.3nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.72	323	P	P	05 18 42.6	+2.2
	comp=Z,0.4nm,0.4s,baz=97,slow=7.8,SNR=4.0						
TORD	Torodi Ar. Bea	65.99	269	P	P	05 21 14.8	+1.4
	comp=Z,0.2nm,0.4s,baz=38,slow=7.8,SNR=4.9						
YKA	Yellowknife Ar	81.45	3	P	P	05 22 44.7	+1.8
	comp=Z,0.1nm,0.4s,baz=343,slow=5.2,SNR=3.6						
WRA	Warramunga Arr	81.64	122	P	P	05 22 46.1	+1.6
	comp=Z,0.1nm,0.5s,baz=330,slow=4.5,SNR=3.2						

IDC 14 05:11:01.4±1.6**, 15°.27S**×**165°.45E, h0^{km}, mb4.0**/4**, mb1 4.2**/5**, mb1mx3.8**/36**, mbtmp4.0**/5**, ML4.0**/1**, Error ellipse: s-maj=37.6km s-min=27.5km az=114.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.83	172	Pn	Pn	05 12 43.0	0.0
	2.6nm,0.3s,baz=328,slow=20,SNR=22						
DZM				Sn	Sn	05 14 02.2	+0.6
	0.9nm,0.3s,baz=306,slow=19,SNR=3.0						
STKA	Stephens Creek	27.31	229	P	P	05 16 47.9	-0.1
	3.5nm,0.5s,baz=44,slow=7.8,SNR=11						
WRA	Warramunga Arr	29.99	257	P	P	05 17 12.1	+0.1
	0.6nm,0.6s,baz=86,slow=9.3,SNR=9.3						
ASAR	Alice Springs	30.84	249	P	P	05 17 19.4	0.0
	1.0nm,0.7s,baz=81,slow=8.9,SNR=11						
ILAR	Eielson Array	87.59	18	P	P	05 23 51.0	0.0
	0.4nm,0.6s,baz=211,slow=6.3,SNR=12						

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*IDC **14** 05:23:19.9±1.9, 32°.01N×46°.99E, h0^{km}, mb3.6/10, mb1 3.7/10, mb1mx3.5/40, mbtmp3.6/10, MS3.1/1, Ms1 3.1/1, ms1mx2.3/31, Error ellipse: s-maj=42.6km s-min=21.8km az=161.0*

*ISN **14** 05:23:20.6±1.0, 32°.50N×46°.97E, h0^{km}±4^{km}, ML3.6*

*ISCJB **14** 05:23:24.3±0.5, 32°.44N±0°.05×46°.91E±0°.04, h20^{km}, mb3.6/8, MS3.0/1, Error ellipse: s-maj=7.3km s-min=4.2km az=8.1*

*THR **14** 05:23:24.5, 32°.52N×46°.94E, h14^{km}, ML3.5*

*TEH **14** 05:23:24.6, 32°.60N×47°.05E, h10^{km}, ML3.6*

ISC 14 05:23:26.0±0.8**, 32°.48N**±0°.04×**46°.89E**±0°.04**, h20^{km}, n39, σ1^{s}.20**/42**, mb3.5**/8**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	Badra	1.02	308	ePg	Pb	05 23 43.0	-2.0
IBDR				eSg	Sb	05 23 58.0	0.0
IKFM	Kafar-mosalman	1.32	38	ePg	Pn	05 23 46.2	-3.1
IKFM				IAMB	IAmb	05 24 08.3	
	comp=Z,0.0nm,0.5s						
NSR	Nassriya	1.60	204	ePn	Pn	05 23 52.0	-1.1
NSR				eSn	Sn	05 24 15.0	+1.8
IKMR	Kamar-syah	1.63	50	ePg	Pn	05 23 51.8	-1.7
IKMR				IAMB	IAmb	05 24 17.6	
	comp=Z,0.0nm,0.6s						
SHGR	Shooshtar-Gavs	1.66	102	ePg	Pn	05 23 54.3	+0.3
SHGR	Shooshtar-Gavs	1.66	102	ePg	Pn	05 23 54.3	+0.3
IKOM	Komasi	1.77	17	ePn	Pn	05 23 54.7	-1.0
IKOM				IAMB	IAmb	05 23 56.5	
	comp=Z,0.0nm,0.3s						
KCHF	Cheshme Sefid,	1.79	4	ePn	Pn	05 23 55.4	-0.7
KCHF				IAMB	IAmb	05 24 27.1	
	comp=Z,0.0nm,0.4s						
IGHG	Ghaleghazi	1.86	352	ePn	Pn	05 23 57.0	0.0
IGHG				IAMB	IAmb	05 24 32.2	
	comp=Z,12µm,0.6s						
IVIS	Veis	2.04	359	ePn	Pn	05 23 59.4	0.0
IVIS				IAMB	IAmb	05 24 29.7	
	comp=N,10µm,0.4s						
HSAM	Samen	2.25	39	ePn	Pn	05 24 01.0	-1.3
HSAM				IAMB	IAmb	05 24 36.0	
	comp=N,0.0nm,0.6s						
BHD	Baghdad	2.25	291	ePn	Pn	05 24 01.0	-1.1
BHD				eSn	Sn	05 24 32.0	+2.7
SNGE	Sanandaj	2.63	8	ePn	Pn	05 24 08.1	+0.5
SNGE	Sanandaj	2.63	8	eAML	AML	05 24 49.4	
	comp=E,222nm,0.7s						
SNGE				eAML	AML	05 24 53.0	
	comp=N,162nm,0.6s						
SNGE	Sanandaj	2.63	8	ePn	Pn	05 24 08.1	+0.5
SNGE				eSg	Sb	05 24 45.6	+1.0
KHMZ	Khomeyn	2.87	63	ePn	Pn	05 24 11.4	+0.6
KHMZ	Khomeyn	2.87	63	ePn	Pn	05 24 11.4	+0.6
HSRG	Sareghieh	2.99	22	ePn	Pn	05 24 13.0	+0.4
HSRG				IAMB	IAmb	05 24 58.7	
	comp=N,0.0nm,0.6s						
HAGD	Aghdareh	3.00	38	ePn	Pn	05 24 11.8	-0.8
HAGD				IAMB	IAmb	05 24 18.3	
	comp=Z,0.0nm,0.3s						
ASAO	Ashtian	3.34	51	ePn	Pn	05 24 17.6	+0.3
ASAO	Ashtian	3.34	51	ePn	Pn	05 24 17.6	+0.3
ZNGN	Zangian	3.38	95	ePn	Pn	05 24 17.5	-0.5
IKRK	Kirkuk	3.60	325	ePn	Pn	05 24 20.0	-0.7
IKRK				eSn	Sn	05 25 04.0	+1.4
IKLH	Kolahrood	4.04	77	ePn	Pn	05 24 26.7	-0.2
IKLH				IAMB	IAmb	05 25 38.2	
	comp=Z,492nm,0.7s						
GHVR	GHOM	4.19	60	ePn	Pn	05 24 28.9	0.0
GHVR	GHOM	4.19	60	ePn	Pn	05 24 28.9	0.0
IZEF	Zefreh	4.61	83	ePn	Pn	05 24 33.8	-1.0
IZEF				IAMB	IAmb	05 24 55.9	
	comp=Z,223nm,0.5s						
RTB	Rutbah	5.57	277	ePn	Pn	05 24 48.0	+0.2
RTB				eSn	Sn	05 25 52.0	+0.8
AKTO	Aktyubinsk	19.74	21	P	Pn	05 27 55.8	-0.2
	comp=Z,0.6nm,0.4s,baz=189,slow=12,SNR=3.6						
MLR	Muntele Rosu	20.75	315	P	P	05 28 07.5	+2.0
	comp=Z,1.2nm,0.6s,baz=119,slow=17,SNR=2.1						
AKASG	Malin Array Be	22.39	330	P	P	05 28 25.0	+2.0
	comp=Z,1.0nm,0.5s,baz=136,slow=10,SNR=2.6						
KIRV	Kirov	26.16	3	LR	LR	05 40 25.5	
	comp=Z,40nm,20.2s,baz=147,slow=38						
BVAR	Borovoye Array	26.61	33	P	P	05 29 04.7	+1.9
	comp=Z,0.8nm,0.5s,baz=210,slow=11,SNR=5.6						
KURBB	Kurchatov Arra	29.50	43	P	P	05 29 27.5	-1.3
	comp=Z,0.2nm,0.2s,baz=249,slow=9.1,SNR=2.5						
MKAR	Makanchi Array	30.50	52	P	P	05 29 36.4	-1.3
	comp=Z,0.6nm,0.8s,baz=238,slow=4.1,SNR=6.2						
FINES	FINESS Array B	31.97	341	P	P	05 29 50.0	-0.4
	comp=Z,1.6nm,0.7s,baz=150,slow=9.5,SNR=11						
ZALV	Zalesovo Beam	34.40	40	P	P	05 30 11.0	-0.7
	comp=Z,0.7nm,0.4s,baz=254,slow=12,SNR=4.1						
TORD	Torodi Ar. Bea	45.49	256	P	P	05 31 41.0	-3.2
	comp=Z,0.3nm,0.5s,baz=64,slow=7.8,SNR=7.0						
YKA	Yellowknife Ar	84.19	351	P	P	05 35 54.9	-0.7
	comp=Z,0.1nm,0.5s,baz=10,slow=5.3,SNR=4.8						

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*ISCJB **14** 05:32:46.4±0.6, 11°.08S±0°.06×164°.1E±0°.1, h29^{km}, mb4.0/9, MS3.1/3, Error ellipse: s-maj=16.4km s-min=9.0km az=170.3*

*IDC **14** 05:32:53.4±2.7, 11°.21S×164°.16E, h80^{km}±23^{km}, mb3.7/9, mb1 4.0/12, mb1mx3.8/34, mbtmp4.2/12, MS3.3/5, Ms1 3.2/5, ms1mx2.9/30, Error ellipse: s-maj=21.0km s-min=16.7km az=62.0*

ISC 14 05:32:48.3±0.8**, 11°.02S**±0°.09×**164°.3E**±0°.1**, h29^{km}, n21, σ2^{s}.04**/14**, mb4.0**/9**, MS3.2**/3**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.59	290	P	Pn	05 33 57.4	+1.6
	94nm,0.3s,baz=124,slow=3.6,SNR=11						
HNR				S	Sn	05 34 51.8	+3.7
	18nm,0.3s,baz=22,slow=23,SNR=3.1						
HNR				LR	LR	05 35 49.6	
	comp=Z,616nm,19.3s,baz=114,slow=39						
DZM	Mont Dzumac	11.17	170	P	Pn	05 35 28.1	+1.9
	1.1nm,0.3s,baz=1.3,slow=10.0,SNR=11						
DZM				S	Sn	05 37 31.8	+1.5
	0.1nm,0.3s,baz=34,slow=5.9,SNR=1.9						
DZM				LR	LR	05 38 50.3	
	comp=Z,88nm,20.2s,baz=26,slow=32						
CTA	Charters Tower	19.59	240	P	Pn	05 37 12.8	-3.0
	0.4nm,0.3s,baz=63,slow=11,SNR=2.2						
JAY	Jayapura	24.91	288	LR	LR	05 48 16.3	
	comp=Z,72nm,19.8s,baz=316,slow=37						
H11S2	WAKE ISLAND Hy	29.42	5	T	T	06 09 13.4	
	baz=184,slow=76,SNR=5.2						
H11S3	WAKE ISLAND Hy	29.42	5	T	T	06 09 13.1	
	baz=184,slow=76,SNR=3.4						
H11S1	WAKE ISLAND Hy	29.43	5	T	T	06 09 14.3	
	baz=184,slow=76,SNR=4.3						
STKA	Stephens Creek	29.52	222	LR	LR	05 49 24.0	
	comp=Z,41nm,20.8s,baz=25,slow=34						
WRA	Warramunga Arr	30.18	249	P	P	05 38 54.0	-2.4
	1.5nm,0.9s,baz=78,slow=9.0,SNR=12						
H11N1	WAKE ISLAND Hy	30.64	5	T	T	06 10 53.1	
	baz=184,slow=76,SNR=5.2						
H11N3	WAKE ISLAND Hy	30.65	5	T	T	06 10 54.8	
	baz=184,slow=76,SNR=6.7						
H11N2	WAKE ISLAND Hy	30.66	5	T	T	06 10 47.1	
	baz=184,slow=76,SNR=5.1						
ASAR	Alice Springs	31.56	242	P	P	05 39 06.7	-1.8
	0.9nm,0.6s,baz=68,slow=9.1,SNR=9.5						
FITZ	Fitzroy Crossi	38.04	255	LR	LR	05 54 59.7	
	comp=Z,41nm,20.5s,baz=82,slow=35						
PETK	Petropavlovsk-	64.12	356	P	P	05 43 20.9	+1.2
	1.5nm,0.7s,baz=187,slow=3.8,SNR=3.1						
CMAR	Chiang Mai Arr	70.83	294	P	P	05 44 02.2	-0.7
	1.1nm,0.3s,baz=122,slow=3.3,SNR=3.2						
KDAK	Kodiak Island	77.07	22	P	P	05 44 38.8	+0.3
	9.2nm,0.8s,baz=197,slow=9.4,SNR=2.4						
SONM	Songino Array	77.83	324	P	P	05 44 41.8	-1.4
	0.7nm,0.8s,baz=143,slow=6.6,SNR=5.9						
ILAR	Eielson Array	83.94	19	P	P	05 45 15.2	-0.1
	1.0nm,0.9s,baz=212,slow=6.4,SNR=5.3						
MKAR	Makanchi Array	92.55	317	P	P	05 45 55.6	-1.4
	0.8nm,0.7s,baz=97,slow=6.6,SNR=9.3						
YKA	Yellowknife Ar	95.59	27	P	P	05 46 11.3	+0.8
	0.2nm,1.0s,baz=264,slow=4.6,SNR=2.8						

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*NEIC **14** 05:37:57.2±0.0, 16°.30N×98°.25W, h5^{km}, MD4.1(MEX), After MEX.*

MEX 14 05:37:58.0±1.1**, 16°.46N**×**98°.08W, h2^{km}, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.08	212	eP	Pg	05 37 58.9	-0.8
PNIG				eS	Sg	05 38 01.6	+0.8
PNIG	Pinotepa	0.08	212	eP	Pg	05 37 58.9	-0.8
PNIG				eS	Sg	05 38 01.6	+0.8
VHO	Vista Hermosa	1.43	65	eP	Pn	05 38 22.8	-2.3
VHO				eS	Sn	05 38 44.5	-0.1
VHO	Vista Hermosa	1.43	65	eP	Pn	05 38 21.6	-3.5
VHO				eS	Sg	05 38 40.4	-3.5
HUIG	Huatulco	2.02	110	eP	Pn	05 38 32.5	-0.5
HUIG				eS	Sn	05 38 55.8	-3.1
HUIG	Huatulco	2.02	110	eP	Pn	05 38 32.5	-0.5
HUIG				eS	Sn	05 38 55.8	-3.1
MEIG	Mezcala	2.07	315	eP	Pn	05 38 29.6	-4.3
MEIG				eS	Sn	05 38 55.6	-4.7
MEIG	Mezcala	2.07	315	eP	Pn	05 38 29.6	-4.3
MEIG				eS	Sn	05 38 55.6	-4.7
CAIG	El Cayaco	2.17	286	eP	Pn	05 38 29.4	-5.8
CAIG				eS	Sn	05 38 58.5	-4.3
CAIG	El Cayaco	2.17	286	eP	Pn	05 38 29.4	-5.8
CAIG				eS	Sn	05 38 58.5	-4.3
CMIG	Matias Romero	3.12	78	eP	Pb	05 38 52.6	-1.7
CMIG				eS	Sn	05 39 26.9	+0.7
CMIG	Matias Romero	3.12	78	eP	Pb	05 38 52.6	-1.7
CMIG				eS	Sn	05 39 26.9	+0.7

IDC 14 05:40:14.6±1.8**, 11°.01S**×**165°.09E, h0^{km}, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.6**/34**, mbtmp3.7**/4**, ML3.6**/1**, Error ellipse: s-maj=53.5km s-min=33.1km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.08	173	Pn	Pn	05 42 54.2	-0.2
	0.4nm,0.3s,baz=42,slow=14,SNR=5.6						
WRA	Warramunga Arr	30.89	250	P	P	05 46 33.3	+0.2
	0.2nm,0.6s,baz=78,slow=8.7,SNR=4.6						
ASAR	Alice Springs	32.23	243	P	P	05 46 44.8	-0.2
	1.4nm,1.0s,baz=69,slow=9.8,SNR=9.5						
ILAR	Eielson Array	83.69	19	P	P	05 52 45.0	0.0
	0.5nm,0.8s,baz=237,slow=5.7,SNR=4.7						

IDC 14 05:45:03.8±1.6**, 11°.18S**×**165°.06E, h0^{km}, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.6**/35**, mbtmp3.8**/5**, ML4.0**/1**, Error ellipse: s-maj=48.5km s-min=28.9km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.91	173	Pn	Pn	05 47 41.9	+0.6
	1.2nm,0.3s,baz=0.0,slow=19,SNR=13						
WRA	Warramunga Arr	30.80	250	P	P	05 51 21.5	-0.1
	0.9nm,0.7s,baz=81,slow=9.1,SNR=10.0						
ASAR	Alice Springs	32.13	243	P	P	05 51 33.2	-0.1
	1.0nm,0.7s,baz=70,slow=9.1,SNR=13						
ILAR	Eielson Array	83.86	19	P	P	05 57 35.0	0.0
	0.2nm,0.7s,baz=226,slow=6.2,SNR=2.9						
MKAR	Makanchi Array	93.16	317	P	P	05 58 20.0	-0.1
	0.2nm,0.7s,baz=110,slow=3.8,SNR=2.0						

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*ISCJB **14** 05:48:04.5±0.5, 49°.42N±0°.08×153°.8E±0°.1, h150^{km}, mb3.4/14, Error ellipse: s-maj=14.8km s-min=4.2km az=137.6*

*MOS **14** 05:48:04.4±2.8, 48°.95N×155°.26E, h184^{km}, mb4.2/1, Error ellipse: s-maj=20.0km s-min=5.4km az=71.4*

*KRSC **14** 05:48:04.3±2.0, 48°.95N×155°.26E, h184^{km}±20^{km}, ML4.5*

*IDC **14** 05:48:08.2±1.5, 49°.77N×153°.56E, h172^{km}±14^{km}, mb3.1/14, mb1 3.3/18, mb1mx3.2/43, mbtmp3.6/18, Error ellipse: s-maj=18.8km s-min=9.7km az=143.0*

ISC 14 05:48:05.4±0.7**, 49°.56N**±0°.10×**153°.86E**±0°.08**, h150^{km}, n60, σ2^{s}.22**/75**, mb3.4**/14**, 2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.84	51	eP	Pn	05 48 40.2	+1.6
SKR				eS	Sn	05 49 07.8	+3.6
SKR	Severo-Kuril's	1.84	51	ePN	Pn	05 48 40.3	+1.6
SKR				eS	Sn	05 49 07.9	+3.7
SKR				smax	smax		
	comp=E,198nm,0.2s						
SKR				smax	smax		
	comp=N,191nm,0.3s						
PAU	Pauzhetka	2.69	43	eP	Pn	05 48 50.6	+1.8
PAU				eS	Sn	05 49 25.9	+3.6
PAU	Pauzhetka	2.69	43	PN	Pn	05 48 50.6	+1.8
PAU				S	Sn	05 49 25.9	+3.6
KDTR	Khodutka, Kamc	3.50	48	eP	Pn	05 48 59.1	0.0
KDTR				eS	Sn	05 49 39.9	-0.9
KDTR	Khodutka, Kamc	3.50	48	PN	Pn	05 48 59.1	0.0
KDTR				S	Sn	05 49 39.9	-0.9
APC	Apacha	3.96	30	eP	Pn	05 49 07.7	+2.7
APC	Apacha	3.96	30	PN	Pn	05 49 07.7	+2.7
MTVR	Mutnovka	4.01	41	eP	Pn	05 49 07.8	+2.0
MTVR				eS	Sn	05 49 56.2	+3.5
MTVR	Mutnovka	4.01	41	PN	Pn	05 49 07.8	+2.0
MTVR				S	Sn	05 49 56.2	+3.5
RUS	Russkaya	4.12	44	eP	Pn	05 49 07.6	+0.5
RUS				eS	Sn	05 49 55.1	0.0
RUS	Russkaya	4.12	44	PN	Pn	05 49 07.6	+0.5
RUS				S	Sn	05 49 55.1	0.0
KRMR	Karymshinskiy	4.24	38	eP	Pn	05 49 10.8	+2.1
KRMR				eS	Sn	05 50 00.1	+2.2
KRMR	Karymshinskiy	4.24	38	PN	Pn	05 49 10.8	+2.1
KRMR				S	Sn	05 50 00.1	+2.2
PETK	Petropavlovsk-	4.30	33	P	Pn	05 49 12.1	+2.7
	comp=N,1.0nm,0.3s,baz=208,slow=16,SNR=13						
PETK				S	Sn	05 50 02.4	+3.1
	comp=N,0.5nm,0.3s,baz=210,slow=17,SNR=3.0						
KOK	Koryaka	4.79	37	eP	Pn	05 49 19.1	+3.1
KOK	Koryaka	4.79	37	PN	Pn	05 49 19.1	+3.1
UGLR	Uglovaya	4.80	38	eP	Pn	05 49 18.8	+2.6
UGLR	Uglovaya	4.80	38	PN	Pn	05 49 18.8	+2.6
AVH	Avacha	4.81	38	eP	Pn	05 49 19.3	+3.0
AVH	Avacha	4.81	38	PN	Pn	05 49 19.3	+3.0
SMAR	Somma	4.83	38	eP	Pn	05 49 20.2	+3.5
SMAR	Somma	4.83	38	PN	Pn	05 49 20.2	+3.5
KRX	Arik	4.84	36	eP	Pn	05 49 19.6	+2.8
KRX	Arik	4.84	36	PN	Pn	05 49 19.6	+2.8
GNL	Ganaly	4.86	30	eP	Pn	05 49 19.7	+2.7
GNL	Ganaly	4.86	30	PN	Pn	05 49 19.7	+2.7
SDLR	Sedlovina	4.88	38	eP	Pn	05 49 19.3	+2.1
SDLR	Sedlovina	4.88	38	PN	Pn	05 49 19.3	+2.1
NLC	Nalytchevo	4.99	41	eS	Sn	05 50 13.9	-1.8
SPN	Mys Shipunski	5.25	45	eP	Pn	05 49 22.2	+0.2
SPN				eS	Sn	05 50 18.5	-3.2
SPN	Mys Shipunski	5.25	45	PN	Pn	05 49 22.2	+0.2
SPN				S	Sn	05 50 18.5	-3.2
KZV	Kizimen	6.82	33	eP	Pn	05 49 45.9	+2.8
KZV	Kizimen	6.82	33	PN	Pn	05 49 45.9	+2.8
MKZ	Mys Kozlova	6.97	41	eP	Pn	05 49 44.6	-0.3
MKZ	Mys Kozlova	6.97	41	PN	Pn	05 49 44.6	-0.3
SHO	Shikotan	7.46	223	PN	Pn	05 49 47.8	-3.7
SHO				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KBTR	Krutoberegovo	8.58	36	eP	Pn	05 50 05.7	-0.7
KBTR	Krutoberegovo	8.58	36	PN	Pn	05 50 05.7	-0.7
ASAJ	Asahikawa	9.44	239	P	Pn	05 50 18.5	+0.6
	comp=Z,1.0nm,0.3s,baz=67,slow=15,SNR=6.9						
KLR	Kul'dur	14.40	277	⇑eP	Pn	05 51 23.0	+0.9
KLR	Kul'dur	14.40	277	P	Pn	05 51 21.7	-0.4
	comp=Z,0.1nm,0.3s,baz=119,slow=13,SNR=2.9						
USRK	Ussuriysk Ar.	15.86	259	P	Pn	05 51 40.0	-0.3
	comp=Z,0.1nm,0.3s,baz=71,slow=12,SNR=2.4						
BILL	Bilibino	19.55	14	⇑eP	P	05 52 15.9	-5.1
BILL				eS	S	05 55 52.0	-1.3
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KSRS	Korea Array	22.24	247	P	P	05 52 49.8	0.0
	comp=Z,0.7nm,0.4s,baz=46,slow=12,SNR=4.2						
ILAR	Eielson Array	34.07	41	P	P	05 54 35.7	+0.7
	comp=Z,0.5nm,0.6s,baz=262,slow=6.7,SNR=7.7						
MKAR	Makanchi Array	46.14	295	P	P	05 56 13.0	-1.6
	comp=Z,1.0nm,0.9s,baz=68,slow=7.1,SNR=6.8						
YKA	Yellowknife Ar	48.39	38	P	P	05 56 32.0	+0.3
YKA	Yellowknife Ar	48.39	38	P	P	05 56 32.0	+0.3
	comp=Z,0.3nm,0.6s,baz=298,slow=6.9,SNR=5.7						
CMAR	Chiang Mai Arr	53.55	255	P	P	05 57 11.5	+0.8
	comp=Z,0.6nm,0.4s,baz=34,slow=6.6,SNR=4.9						
NVAR	Mina Array Bea	60.72	64	P	P	05 58 02.2	+1.0
	comp=Z,0.2nm,0.4s,baz=296,slow=8.7,SNR=3.0						
FINES	FINESS Array B	61.72	334	P	P	05 58 06.5	-0.6
	comp=Z,0.5nm,0.6s,baz=54,slow=9.7,SNR=5.2						
PDAR	Pinedale Array	62.71	55	P	P	05 58 15.2	+0.8
	comp=Z,0.3nm,0.8s,baz=319,slow=3.8,SNR=2.9						
NOA	NORSAR Array B	65.73	341	P	P	05 58 32.0	-1.5
	comp=Z,1.1nm,0.9s,baz=24,slow=6.2,SNR=2.5						
AKASG	Malin Array Be	69.49	326	P	P	05 58 54.8	-2.4
	comp=Z,0.3nm,0.3s,baz=34,slow=6.6,SNR=3.4						
SCHQ	Schefferville	70.53	24	P	P	05 59 03.1	-0.4
	comp=Z,2.4nm,0.9s,baz=320,slow=7.8,SNR=3.2						
WRA	Warramunga Arr	71.33	199	P	P	05 59 11.4	+2.7
	comp=Z,0.2nm,0.7s,baz=17,slow=6.1,SNR=2.6						
ASAR	Alice Springs	75.03	199	P	P	05 59 30.0	-0.3
ASAR	Alice Springs	75.03	199	P	P	05 59 30.0	-0.3
	comp=Z,0.1nm,0.4s,baz=12,slow=5.7,SNR=2.6						
TXAR	Lajitas Array	75.70	62	P	P	05 59 34.6	+0.3
	comp=Z,0.2nm,0.5s,baz=294,slow=6.2,SNR=7.0						

IDC 14 05:48:15.8±1.6**,10°.80S**×**165°.60E,h0^{km},mb3.6**/4**, mb1 3.8**/5**,mb1mx3.6**/34**,mbtmp3.7**/5**,ML3.7**/1**,Error ellipse: s-maj=49.7km s-min=28.0km az=120.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.24**	**176**	Pn	Pn	05 51 00.1	+2.1
	0.6nm,0.3s,baz=312,slow=12,SNR=12						
WRA	**Warramunga Arr**	**31.44**	**249**	P	P	05 54 38.9	-0.3
	0.5nm,0.8s,baz=81,slow=8.6,SNR=4.1						
ASAR	**Alice Springs**	**32.78**	**243**	P	P	05 54 50.0	-1.0
	0.6nm,0.7s,baz=76,slow=9.4,SNR=7.0						
SONM	**Songino Array**	**78.38**	**324**	P	P	06 00 19.9	+1.4
	0.4nm,0.7s,baz=108,slow=4.7,SNR=3.1						
ILAR	**Eielson Array**	**83.32**	**19**	P	P	06 00 43.2	-1.1
	0.4nm,0.8s,baz=224,slow=7.6,SNR=4.0						

IDC 14 05:50:56.5±85.0**,14°.46S**×**168°.23E,h0^{km},mb3.7**/3**, mb1 3.8**/3**,mb1mx3.5**/26**,mbtmp3.7**/3**,Error ellipse: s-maj=1444.0km s-min=129.3km az=65.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.87**	**230**	P	P	05 57 05.5	-0.3
	1.4nm,0.4s,baz=60,slow=8.9,SNR=3.9						
WRA	**Warramunga Arr**	**32.79**	**256**	P	P	05 57 32.1	+0.4
	0.1nm,0.4s,baz=87,slow=9.1,SNR=4.7						
ASAR	**Alice Springs**	**33.63**	**249**	P	P	05 57 38.9	-0.2
	0.4nm,0.6s,baz=72,slow=9.5,SNR=4.5						

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*NEIC **14** 06:30:24.8±0.3, 10°.79S×166°.13E, h10^{km}, mb4.8/16, Error ellipse: s-maj=8.5km s-min=6.5km az=91.0*

*BJI **14** 06:30:24.1, 10°.80S×166°.20E, h10^{km}, mB5.1/15, mb4.7/25, Ms4.8/5, Ms7 4.4/6*

*MOS **14** 06:30:25.7±0.8, 10°.75S×165°.90E, h22^{km}, mb5.0/13, Error ellipse: s-maj=11.0km s-min=10.2km az=98.2*

*ISCJB **14** 06:30:27.1±0.2, 10°.86S±0°.03×166°.05E±0°.05, h35^{km}, mb4.7/52, MS4.0/26, Error ellipse: s-maj=7.0km s-min=4.2km az=155.8*

*IDC **14** 06:30:28.9±2.2, 10°.89S×166°.14E, h40^{km}±18^{km}, mb4.2/18, mb1 4.3/19, mb1mx4.3/30, mbtmp4.4/19, ML5.3/2, MS3.9/22, Ms1 3.9/22, ms1mx3.8/30, Error ellipse: s-maj=17.7km s-min=13.8km az=94.0*

*GCMT **14** 06:30:32.8±0.3, 10°.76S±0°.02×166°.32E±0°.02, h12^{km}, MW5.2/64, Moment Tensor Solution. s30,c36; s64,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.55±.10; M$_{\theta\theta}$1.11±.09; M$_{\phi\phi}$-0.56±.09; M$_{r\theta}$1.74±.23; M$_{\theta\phi}$0.32±.07; M$_{\phi r}$-7.11±.24; Best double couple: M$_0$7.32100×10^{16} NP1:φ$_s$166.00000°,δ90.00000°,λ89.00000°. NP2: φ$_s$67.00000°,δ1.00000°,λ171.00000°. Principal axes: T 6.7380, Plg45.0000°, Azm75.0000°; N 1.1610, Plg1.0000°, Azm166.0000°; P -7.9030, Plg45.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 06:30:28.2±0.4**,10°.92S**±0°.05×**166°.24E**±0°.07**,h35^{km},n132, σ1^{s}.89**/132**,mb4.7**/52**,MS4.0**/26**,4C-10D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.37**	**283**	*e*P	**Pn**	**06 32 02.0**	**+2.3**
HNR				*e*S	**Sn**	**06 33 08.0**	**-3.3**
HNR	**Honiara**	**6.37**	**283**	Pn	**Pn**	**06 32 00.6**	**+0.9**
	230nm,0.3s,baz=145,slow=4.9,SNR=24						
HNR				Sn	**Sn**	**06 33 08.2**	**-3.0**
	baz=34,slow=3.6,SNR=1.5						
HNR				LR	LR	06 34 36.2	
	comp=Z,3µm,21.5s,baz=118,slow=39						
MARNC	**Mare, Loyalty**	**10.64**	**171**	*e*Pn	**Pn**	**06 33 00.5**	**+2.3**
DZM	**Mont Dzumac**	**11.09**	**179**	*e*Pn	**Pn**	**06 33 08.6**	**+4.1**
	48nm,0.3s						
DZM				*e*Sn	**Sn**	**06 35 01.9**	**-5.4**
	26nm,0.3s						
DZM				*e*LR	LR	06 35 37.4	
	comp=Z,1µm,25.1s						
DZM	**Mont Dzumac**	**11.09**	**179**	*e*Pn	**Pn**	**06 33 08.5**	**+4.0**
DZM				Sn	**Sn**	**06 35 05.5**	**-1.8**
DZM	**Mont Dzumac**	**11.09**	**179**	Pn	**Pn**	**06 33 06.4**	**+1.9**
	6.3nm,0.3s,baz=298,slow=20,SNR=114						
DZM				Sn	**Sn**	**06 35 05.5**	**-1.8**
	2.2nm,0.3s,baz=150,slow=20,SNR=3.4						
ONTNC	**Ouen Toro**	**11.32**	**179**	*e*Pn	Pn	06 33 12.5	+4.9
PINNC	**Pines Island,**	**11.68**	**174**	*e*Pn	Pn	06 33 17.7	+5.2
MSVF	**Nonsavu**	**13.29**	**122**	⇓*e*P	**P**	**06 33 41.7**	**-2.1**
EIDS	**Eidsvold**	**20.32**	**223**	*e*P	**P**	**06 34 58.7**	**-2.7**
	31nm,0.8s						
MANU	**Manus Island**	**20.71**	**294**	*e*P	Pn	06 35 07.8	-0.4
	113nm,1.4s						
CTA	**Charters Tower**	**21.29**	**242**	P	**P**	**06 35 11.9**	**0.0**
	8.1nm,0.5s,baz=68,slow=12,SNR=15						
CTA				LR	LR	06 42 23.2	
	comp=Z,438nm,20.1s,baz=80,slow=34						
CTAO	**Charters Tower**	**21.29**	**242**	*e*P	**P**	**06 35 10.8**	**-1.1**
	47nm,1.3s						
CTAO	**Charters Tower**	**21.29**	**242**	*e*P	**P**	**06 35 10.8**	**-1.1**
CTAO				pmax	pmax		
	comp=Z,47nm,1.3s						
COEN	**Coen**	**22.73**	**260**	*e*P	**P**	**06 35 26.3**	**-1.0**
	comp=Z,43nm,1.5s						
ARMA	**Armidale**	**23.68**	**213**	*e*P	**P**	**06 35 38.5**	**+1.6**
	comp=Z,51nm,1.4s						
JAY	**Jayapura**	**26.68**	**286**	LR	LR	06 47 54.3	
	comp=Z,298nm,18.5s,baz=78,slow=39						
MKAZ	**Moumakai**	**27.28**	**164**	P	**P**	**06 36 12.0**	**+2.7**
RUGZ	**Raukumara Rang**	**28.82**	**161**	P	**P**	**06 36 24.7**	**+1.4**
URZ	**Urewera**	**28.91**	**162**	P	**P**	**06 36 24.8**	**+0.8**
	comp=Z,5.0nm,0.3s,baz=278,slow=2.3,SNR=12						
URZ				LR	LR	06 46 27.9	
	comp=Z,317nm,19.1s,baz=332,slow=33						
URZ	**Urewera**	**28.91**	**162**	P	**P**	**06 36 25.2**	**+1.3**
MUGZ	**Murupara**	**29.01**	**163**	P	**P**	**06 36 26.7**	**+1.9**
MWZ	**Matawai**	**29.11**	**162**	P	**P**	**06 36 26.6**	**+0.9**
MRHZ	**Matea Rd**	**29.24**	**164**	P	**P**	**06 36 29.2**	**+2.3**
KRVZ	**Karewarewa**	**29.28**	**165**	P	**P**	**06 36 29.9**	**+2.6**
WTVZ	**West Tongariro**	**29.29**	**165**	P	**P**	**06 36 30.0**	**+2.6**
NGZ	**Ngauruhoe**	**29.35**	**165**	P	**P**	**06 36 30.4**	**+2.4**
COVZ	**Chateau Observ**	**29.36**	**165**	P	**P**	**06 36 30.6**	**+2.5**
MTHZ	**Maungataniwha**	**29.38**	**163**	P	**P**	**06 36 30.0**	**+1.9**
FWVZ	**Far West T-bar**	**29.41**	**165**	P	**P**	**06 36 31.2**	**+2.6**
TUVZ	**Tukino**	**29.45**	**165**	P	**P**	**06 36 32.5**	**+3.6**
TRVZ	**Turoa**	**29.45**	**165**	P	**P**	**06 36 31.4**	**+2.4**
SNGZ	**Shannon Statio**	**29.46**	**162**	P	**P**	**06 36 29.9**	**+1.1**
RAHZ	**Arahi**	**29.51**	**163**	P	**P**	**06 36 30.3**	**+1.0**
RIGZ	**Rimuhau**	**29.52**	**162**	P	**P**	**06 36 31.0**	**+1.6**
BKZ	**Black Stump Fm**	**29.57**	**164**	P	**P**	**06 36 31.1**	**+1.2**
NMHZ	**Naumai**	**29.60**	**163**	P	**P**	**06 36 32.2**	**+2.1**
MOVZ	**Moawhango**	**29.61**	**165**	P	**P**	**06 36 31.7**	**+1.6**
BHHZ	**Black Hill Sta**	**29.76**	**165**	P	**P**	**06 36 32.8**	**+1.2**
KWHZ	**Kaweka Forest**	**29.80**	**164**	P	**P**	**06 36 33.4**	**+1.6**
ARHZ	**Aropaoanui**	**29.81**	**163**	P	**P**	**06 36 33.4**	**+1.5**
STKA	**Stephens Creek**	**30.87**	**224**	P	**P**	**06 36 41.8**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=40,slow=9.7,SNR=5.9						
STKA				PcP	**PcP**	**06 39 37.9**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=99,slow=3.7,SNR=3.1						
STKA				LR	LR	06 48 26.9	
	comp=Z,443nm,19.8s,baz=35,slow=35						
SNZO	**South Karori**	**31.17**	**168**	*e*P	**P**	**06 36 45.4**	**+1.5**
THZ	**Tophouse**	**31.27**	**170**	*e*P	**P**	**06 36 46.5**	**+1.7**
	comp=Z,39nm,0.9s						
WRAB	**Tennant Creek**	**31.97**	**250**	*e*P	**P**	**06 36 49.7**	**-1.5**
	comp=Z,15nm,1.0s						
WRAB	**Tennant Creek**	**31.97**	**250**	*d i*P	**P**	**06 36 50.0**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,22nm,1.3s						
WB2	**Warramunga Arr**	**31.97**	**250**	*e*P	**P**	**06 36 49.8**	**-1.5**
WB2				*e*pP	**P**	**06 36 50.7**	**-0.6**
WRA	**Warramunga Arr**	**31.98**	**250**	P	**P**	**06 36 50.4**	**-1.0**
	comp=Z,5.0nm,0.5s,baz=81,slow=9.1,SNR=52						
WRA				PcP	**PcP**	**06 39 40.6**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=79,slow=2.9,SNR=6.4						
WRA				ScP	**ScP**	**06 43 21.5**	**-0.6**
	comp=Z,1.9nm,1.0s,baz=81,slow=4.0,SNR=7.4						
WRA				LR	LR	06 50 03.9	
	comp=Z,454nm,18.2s,baz=65,slow=37						
KHZ	**Kahutara**	**32.02**	**170**	*e*P	**P**	**06 36 53.4**	**+2.1**
LTZ	**Lake Taylor**	**32.17**	**172**	*e*P	**P**	**06 36 54.3**	**+1.5**
	comp=Z,36nm,0.8s						
TOO	**Toolangi**	**32.43**	**212**	*e*P	**P**	**06 36 56.0**	**+0.9**
	comp=Z,28nm,1.4s						
TOO	**Toolangi**	**32.43**	**212**	*e*P	**P**	**06 36 56.0**	**+0.9**
TOO				pmax	pmax		
	comp=Z,28nm,1.4s						
FOZ	**Fox Glacier**	**32.64**	**175**	*e*P	**P**	**06 36 59.2**	**+2.5**
	comp=Z,58nm,0.9s						
OXZ	**Oxford**	**32.67**	**172**	*e*P	**P**	**06 36 58.7**	**+1.6**
	comp=Z,37nm,0.6s						
RPZ	**Rata Peaks**	**32.94**	**174**	*e*P	**P**	**06 37 01.2**	**+1.8**
	comp=Z,79nm,0.7s						
RPZ	**Rata Peaks**	**32.94**	**174**	P	**P**	**06 36 59.8**	**+0.4**
	comp=Z,81nm,0.8s,baz=354,slow=1.8,SNR=31						
MQZ	**McQueen's Vall**	**33.13**	**171**	*e*P	**P**	**06 37 02.2**	**+1.2**
	comp=Z,72nm,1.0s						
AS31	**Alice Springs**	**33.28**	**243**	*e*P	**P**	**06 37 01.6**	**-1.2**
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**33.28**	**243**	P	**P**	**06 37 00.8**	**-1.9**
	comp=Z,4.0nm,0.7s,baz=73,slow=9.4,SNR=50						
ASAR				PcP	**PcP**	**06 39 43.3**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=75,slow=2.1,SNR=8.4						
ASAR				ScP	**ScP**	**06 43 26.6**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=63,slow=2.0,SNR=5.2						
ASAR				LR	LR	06 49 28.8	
	comp=Z,374nm,21.6s,baz=77,slow=34						
BBOO	**Buckleboo**	**35.27**	**227**	*e*P	**P**	**06 37 19.9**	**+0.2**
	comp=Z,9.5nm,0.8s						
SIJI	**Sorong**	**36.15**	**284**	LR	LR	06 52 37.5	
	comp=Z,200nm,21.2s,baz=12,slow=37						
FITZ	**Fitzroy Crossi**	**39.88**	**255**	*e*P	**P**	**06 37 58.3**	**-0.7**
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.88**	**255**	LR	LR	06 53 23.2	
	comp=Z,270nm,21.4s,baz=84,slow=34						
PPT	**Papeete**	**43.25**	**104**	LR	LR	06 52 13.0	
	comp=Z,214nm,20.4s,baz=286,slow=30						
PPT2	**Papeete2**	**43.25**	**104**	*e*S	S	06 45 12.9	+21
	comp=Z,115nm,31.5s						
PPT2				*e*LR	LR	06 50 50.4	
	comp=Z,697nm,27.0s,baz=260						
TBI	**Tubuai**	**43.93**	**112**	*e*LQ	LQ	06 49 15.0	
	comp=Z,517nm,32.0s						
TBI				*e*LR	LR	06 51 07.0	
	comp=Z,986nm,29.8s,baz=272						
TGY	**Tagaytay City**	**51.35**	**298**	LR	LR	07 00 06.9	
	comp=Z,154nm,20.1s,baz=78,slow=35						
TAOE	**Nuku Hiva Isla**	**52.80**	**93**	*e*LR	LR	06 54 55.4	
	comp=Z,378nm,29.1s						
MJAR	**Matsushiro Arr**	**54.09**	**332**	P	**P**	**06 39 48.5**	**-1.1**
	comp=Z,2.9nm,0.9s,baz=166,slow=8.8,SNR=5.6						
MJAR				LR	LR	07 00 32.8	
	comp=Z,28nm,21.8s,baz=140,slow=33						
RKT	**Rikitea**	**57.17**	**110**	*e*LQ	LQ	06 54 49.5	
	comp=Z,204nm,28.0s						
RKT				*e*LR	LR	06 57 13.0	
	comp=Z,545nm,31.8s,baz=276						
KSRS	**Korea Array**	**60.05**	**325**	P	**P**	**06 40 32.0**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSRS	**Korea Array**	**60.05**	**325**	P	**P**	**06 40 31.9**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=132,slow=7.6,SNR=4.3						
KSAR	**Wonju Array Be**	**60.06**	**325**	P	**P**	**06 40 31.9**	**+0.1**
KSAR	**Wonju Array Be**	**60.06**	**325**	P	**P**	**06 40 32.0**	**+0.1**
YSS	**Yuzh-Sakhalins**	**61.32**	**342**	⇓*e*P	**P**	**06 40 40.4**	**+0.2**
YSS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2	**Nanjing**	**62.28**	**315**	*e*P	**P**	**06 40 48.4**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.9s						
QIZ	**Qiongzhong**	**63.05**	**298**	P	**P**	**06 40 55.8**	**+3.4**
QIZ				S	**S**	**06 49 27.1**	**+6.0**
QIZ				LR	LR		
	comp=Z,240nm,20.1s						
USRK	**Ussuriysk Ar.**	**63.06**	**333**	P	**P**	**06 40 52.6**	**+0.7**
	comp=Z,3.7nm,0.8s,baz=119,slow=7.2,SNR=7.8						
USRK				LR	LR	07 05 39.4	
	comp=Z,34nm,21.9s,baz=151,slow=34						
PETK	**Petropavlovsk-**	**64.19**	**354**	P	**P**	**06 40 59.5**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=163,slow=5.4,SNR=4.6						
PETK				LR	LR	07 02 57.0	
	comp=Z,99nm,20.4s,baz=156,slow=30						
CN2	**Changchun**	**65.89**	**329**	*e*P	P	06 41 17.1	+6.7
VNDA	**Vanda**	**66.62**	**181**	LR	LR	07 07 22.0	
	comp=Z,59nm,18.6s,baz=254,slow=33						
KLR	**Kul'dur**	**67.14**	**336**	⇓*e*P	**P**	**06 41 18.9**	**+0.6**
PBKT	**Sadao Pong**	**70.08**	**292**	*e*P	**P**	**06 41 37.9**	**+0.6**
	comp=Z,5.2nm,1.1s						
XAN	**Xi'an**	**70.40**	**312**	P	**P**	**06 41 38.4**	**-0.7**
XAN				pP	pP	06 41 42.9	-6.7
XAN				S	**S**	**06 50 52.8**	**+3.2**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,120nm,4.5s						
XAN				LR	LR		
	comp=Z,84nm,7.0s						
XAN				LR	LR		
	comp=Z,230nm,23.0s						
MA2	**Magadan**	**71.36**	**352**	⇓*i*P	**P**	**06 41 43.8**	**-0.4**
MA2				pmax	pmax		
	comp=Z,12nm,2.5s						
KMI	**Kunming**	**71.47**	**301**	P	**P**	**06 41 49.8**	**+3.8**
KMI				pmax	pmax		
	comp=Z,11nm,1.3s						
KMI				pmax	pmax		
	comp=Z,130nm,4.4s						
HHC	**Hu-ho-hao-te**	**72.06**	**319**	*e*P	P	06 41 54.6	+5.6
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,6.7s						
ZEA	**Zeya**	**72.42**	**337**	*e*P	**P**	**06 41 51.1**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,15nm,1.0s						
CMAR	**Chiang Mai Arr**	**72.51**	**293**	P	**P**	**06 41 52.0**	**0.0**
	comp=Z,1.5nm,0.4s,baz=110,slow=4.7,SNR=7.6						
CMAR				LR	LR	07 15 30.0	
	comp=Z,31nm,18.1s,baz=163,slow=37						
CD2	**Chengdu**	**72.92**	**307**	*e*P	**P**	**06 41 59.0**	**+4.7**
CD2	**Chengdu**	**72.92**	**307**	*e*P	**P**	**06 41 55.0**	**+0.7**
SEY	**Seymchan**	**74.41**	**353**	⇓*i*P	**P**	**06 42 02.5**	**+0.3**
LZH	**Lanzhou**	**75.04**	**312**	*e*P	**P**	**06 42 06.4**	**-0.3**
LZH				pP	pP	06 42 10.5	-6.8
LZH				sP	PcP	06 42 13.3	-7.0
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
ULN	**Ulaanbaatar**	**78.49**	**324**	*e*P	**P**	**06 42 25.8**	**-0.1**
	comp=Z,7.2nm,1.0s						
ULN	**Ulaanbaatar**	**78.49**	**324**	*e*P	**P**	**06 42 25.8**	**-0.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BILL	**Bilibino**	**78.75**	**0**	*e*P	**P**	**06 42 26.8**	**+0.1**
	comp=Z,7.9nm,0.8s						
BILL				*e*PP	**PP**	**06 45 24.9**	**-0.6**
BILL	**Bilibino**	**78.75**	**0**	⇓*i*P	**P**	**06 42 27.4**	**+0.7**
BILL				*e*		06 42 36.0	
BILL				*e*		06 45 24.0	
BILL				*e*S	**S**	**06 52 14.4**	**-7.1**
BILL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,54nm,16.0s						
SONM	**Songino Array**	**78.86**	**324**	P	**P**	**06 42 27.7**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=146,slow=5.3,SNR=13						
SONM				LR	LR	07 17 52.1	
	comp=Z,15nm,18.1s,baz=14,slow=36						
QSPA	**South Pole Qui**	**79.08**	**180**	*e*P	**P**	**06 42 29.0**	**+0.1**
	comp=Z,45nm,0.8s						
GTA	**Gaotai**	**79.33**	**314**	⇑P	**P**	**06 42 30.9**	**+0.2**
GTA				pP	PcP	06 42 35.1	-3.7
GTA				sP	pP	06 42 38.0	-3.3
GTA				S	**S**	**06 52 27.8**	**-1.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,78nm,6.7s						
GTA				LR	LR		
	comp=Z,120nm,19.4s						
GTA				LR	LR		
	comp=Z,180nm,18.1s						
BOD	**Bodaibo**	**80.63**	**335**	*e*P	**P**	**06 42 36.4**	**-0.7**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ZAK	**Zakamensk**	**81.88**	**325**	*e*P	**P**	**06 42 42.5**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	**Talaya**	**82.29**	**326**	*c i*P	**P**	**06 42 45.4**	**-0.7**
COLA	**College**	**83.02**	**18**	*d i*P	**P**	**06 42 50.4**	**+0.9**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ILAR	**Eielson Array**	**83.24**	**18**	P	**P**	**06 42 50.6**	**-0.1**
	comp=Z,4.9nm,0.7s,baz=230,slow=4.4,SNR=75						
CMB	**Columbia Colle**	**83.89**	**50**	*e*P	**P**	**06 42 55.8**	**+1.1**
	comp=Z,22nm,0.9s						
CMB	**Columbia Colle**	**83.89**	**50**	*e*P	**P**	**06 42 55.8**	**+1.1**
CMB				pmax	pmax		
	comp=Z,22nm,0.9s						
EGAK	**Eagle**	**85.09**	**20**	*e*P	**P**	**06 43 01.3**	**+1.2**
	comp=Z,10nm,0.7s						
KNGR	**Kungurtug, Tuv**	**85.30**	**323**	⇑*i*P	**P**	**06 43 00.7**	**-0.9**
NVAR	**Mina Array Bea**	**85.57**	**50**	LR	LR	07 14 21.6	
	comp=Z,181nm,19.5s,baz=265,slow=31						
WMQ	**Urumqi**	**89.35**	**315**	*e*P	P	06 43 26.8	+5.5
WMQ				LR	LR		
	comp=Z,170nm,25.3s						
WMQ				LR	LR		
	comp=Z,210nm,29.1s						
WMQ				LR	LR		
	comp=Z,150nm,29.1s						
INK	**Inuvik**	**89.63**	**19**	P	**P**	**06 43 21.6**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=218,slow=12,SNR=3.1						
DUG	**Dugway, Tooele**	**90.15**	**49**	P	**P**	**06 43 28.4**	**+3.2**
DUG				pmax	pmax		
	comp=Z,6.0nm,2.6s						
WUAZ	**Wupatki**	**90.15**	**54**	*e*P	**P**	**06 43 26.6**	**+1.2**
	comp=Z,3.6nm,0.8s						
DGZ	**Jazzator, Alta**	**91.11**	**320**	*c i*P	**P**	**06 43 28.5**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PDAR	**Pinedale Array**	**93.11**	**47**	P	**P**	**06 43 38.6**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=241,slow=1.5,SNR=8.4						
PDAR				LR	LR	07 18 28.0	
	comp=Z,42nm,19.9s,baz=269,slow=31						
ZALV	**Zalesovo Beam**	**93.74**	**324**	P	**P**	**06 43 39.5**	**-1.8**
	comp=Z,3.4nm,0.9s,baz=111,slow=6.5,SNR=11						
ZALV				LR	LR	07 26 19.2	
	comp=Z,24nm,19.3s,baz=73,slow=36						
MKAR	**Makanchi Array**	**93.77**	**317**	P	**P**	**06 43 41.2**	**-0.5**
	comp=Z,5.3nm,0.8s,baz=99,slow=6.1,SNR=48						
ANMO	**Albuquerque**	**93.97**	**55**	⇓*e*P	**P**	**06 43 42.8**	**-0.3**
YKA	**Yellowknife Ar**	**94.64**	**27**	P	**P**	**06 43 44.7**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=259,slow=4.6,SNR=24						
TXAR	**Lajitas Array**	**95.34**	**61**	P	**P**	**06 43 50.7**	**+1.3**
	comp=Z,0.3nm,0.8s,baz=229,slow=5.5,SNR=2.9						
TXAR				LR	LR	07 19 13.8	
	comp=Z,119nm,20.7s,baz=0.0,slow=31						
NRIK	**Noril'sk**	**96.18**	**340**	LR	LR	07 24 22.6	
	comp=Z,50nm,22.0s,baz=47,slow=34						
BRVK	**Borovoye**	**102.22**	**322**	⇓*e*P	**Pdif**	**06 44 18.3**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
ARCES	**ARCESS Array B**	**116.34**	**346**	PKP	**PKPdf**	**06 49 06.7**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=55,slow=1.6,SNR=18						
FINES	**FINESS Array B**	**121.83**	**339**	PKP	**PKPdf**	**06 49 16.1**	**-2.2**
	comp=Z,1.6nm,0.7s,baz=135,slow=0.8,SNR=7.0						
SDV	**Santo Domingo**	**124.00**	**87**	*e*PKPdf	**PKPdf**	**06 49 23.2**	**-0.9**
BOSA	**Boshof**	**125.54**	**223**	PKP	**PKPdf**	**06 49 27.3**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=189,slow=3.2,SNR=3.9						
CLL	**Collm**	**134.19**	**337**	*e*PKPdf	**PKPdf**	**06 49 43.0**	**+0.8**
CLL				LmV		07 47 00.0	
	comp=Z,100nm,18.3s						
GERES	**GERESS Array B**	**135.81**	**334**	PKP	**PKPdf**	**06 49 45.2**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=90,slow=4.0,SNR=4.7						
KEST	**Kesra**	**147.61**	**323**	PKPbc	**PKPbc**	**06 50 09.8**	**+0.3**
	comp=Z,12nm,0.8s,baz=269,slow=2.8,SNR=7.4						
ESDC	**Sonseca Array**	**150.07**	**345**	PKPbc	**PKPbc**	**06 50 14.8**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=16,slow=2.8,SNR=8.2						
ESDC				PKPab	**PKPab**	**06 50 21.0**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=20,slow=3.9,SNR=7.7						
TORD	**Torodi Ar. Bea**	**164.72**	**280**	PKP	**PKPdf**	**06 50 28.3**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=340,slow=1.1,SNR=5.3						
TORD				PKPab	**PKPab**	**06 51 23.2**	**-2.0**
	comp=Z,0.7nm,0.9s,baz=134,slow=8.5,SNR=4.0						

IDC 14 06:42:20.8±1.8**,10°.54S**×**165°.60E,h0^{km},mb3.6**/4**, mb1 4.0**/6**,mb1mx3.6**/41**,mbtmp3.9**/6**,ML2.9**/1**,Error ellipse: s-maj=43.6km s-min=32.4km az=137.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.67**	**281**	Pn	Pn	06 43 46.0	-0.4
	50nm,0.3s,baz=255,slow=5.1,SNR=4.1						
DZM	**Mont Dzumac**	**11.49**	**176**	Pn	Pn	06 45 05.2	-1.1
	0.1nm,0.3s,baz=356,slow=17,SNR=4.0						
DZM				Sn	Sn	06 47 02.9	-13
	0.1nm,0.3s,baz=122,slow=15,SNR=2.3						
WRA	**Warramunga Arr**	**31.52**	**249**	P	P	06 48 44.6	-0.2
	0.8nm,1.0s,baz=79,slow=9.3,SNR=5.8						
ASAR	**Alice Springs**	**32.89**	**243**	P	P	06 48 56.6	-0.3
	0.3nm,0.8s,baz=65,slow=8.8,SNR=3.4						
FITZ	**Fitzroy Crossi**	**39.37**	**254**	P	P	06 49 53.2	+0.8
	1.6nm,0.7s,baz=72,slow=9.5,SNR=2.6						
ILAR	**Eielson Array**	**83.09**	**19**	P	P	06 54 48.0	0.0
	0.6nm,1.1s,baz=235,slow=5.4,SNR=4.3						

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*NEIC **14** 06:43:38.0±0.0, 24°.03S×66°.65W, h248^{km}, MD4.2(SJA), ML4.2(GUC), After SJA.*

*SJA **14** 06:43:38.1±0.5, 24°.03S×66°.65W, h248^{km}±15^{km}, ML3.6, MW4.2*

*ISCJB **14** 06:43:39.3±0.5, 24°.10S±0°.03×67°.23W±0°.06, h250^{km}, mb3.2/2, Error ellipse: s-maj=7.5km s-min=3.7km az=160.8*

*IDC **14** 06:43:41.2±3.5, 23°.96S×66°.67W, h199^{km}±27^{km}, mb3.0/2, mb1 3.5/5, mb1mx3.2/24, mbtmp3.8/5, Error ellipse: s-maj=39.9km s-min=18.1km az=35.0*

*GUC **14** 06:43:42.3±0.6, 23°.76S×67°.53W, h261^{km}±14^{km}, ML4.2*

ISC 14 06:43:38.6±0.8**,24°.08S**±0°.05×**67°.01W**±0°.06**,h250^{km},n36, σ2^{s}.44**/49**,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.52**	**115**	*i* P	**Pn**	**06 44 14.9**	**-2.3**
SLA				IAML		06 44 15.5	
	comp=Z,390nm,0.6s						
LVC	**Limon Verde**	**2.27**	**310**	*e*Pn	**Pn**	**06 44 24.4**	**+0.3**
LVC				*e*S	**S**	**06 44 56.9**	**-3.0**
GO02	**Mina Guanaco**	**2.58**	**245**	*e*Pn	**Pn**	**06 44 27.9**	**+0.8**
GO02				*e*S	**S**	**06 45 03.5**	**-1.8**
PB06	**IPOC Station P**	**2.72**	**300**	*e*P	**Pn**	**06 44 29.1**	**+0.8**
PB06				*i* S	**S**	**06 45 04.3**	**-3.2**
PB09	**IPOC Station P**	**3.06**	**317**	*e*P	**Pn**	**06 44 33.1**	**+1.0**
PB09				*i* S	**S**	**06 45 11.7**	**-2.6**
PB09				IAML		06 45 14.7	
	comp=N,338nm,0.3s						
AHML	**Horco Molle**	**3.09**	**151**	*i* P	**Pn**	**06 44 30.6**	**-1.6**
AHML				IAML		06 44 31.9	
	comp=Z,48nm,0.6s						
AHML				*i* S	**S**	**06 45 09.6**	**-4.9**
PB05	**IPOC Station P**	**3.17**	**292**	*e*P	**Pn**	**06 44 33.9**	**+0.7**
PB05				*i* S	**S**	**06 45 12.8**	**-3.5**
PB05				IAML		06 45 16.9	
	comp=N,270nm,0.2s						
PB03	**IPOC Station P**	**3.23**	**308**	*e*P	**Pn**	**06 44 34.5**	**+0.7**
PB03				*i* S	**S**	**06 45 14.3**	**-3.3**
PB04	**IPOC Station P**	**3.37**	**300**	*e*Pn	**Pn**	**06 44 36.2**	**+0.8**
PB04				*e*S	**S**	**06 45 17.2**	**-3.1**
PB04	**IPOC Station P**	**3.37**	**300**	*e*P	**Pn**	**06 44 36.2**	**+0.8**
PB04				*i* S	**S**	**06 45 17.1**	**-3.2**
PB07	**IPOC Station P**	**3.54**	**311**	*e*P	**Pn**	**06 44 37.9**	**+0.7**
PB07				*i* S	**S**	**06 45 20.1**	**-3.6**
PB01	**IPOC Station P**	**3.79**	**322**	*e*Pn	**Pn**	**06 44 40.7**	**+0.6**
PB01	**IPOC Station P**	**3.79**	**322**	*e*P	**Pn**	**06 44 40.4**	**+0.3**
PB01				*i* S	**S**	**06 45 25.4**	**-3.4**
PB02	**IPOC Station P**	**3.82**	**315**	*e*P	**Pn**	**06 44 40.7**	**+0.1**
PB02				*i* S	**S**	**06 45 25.5**	**-4.1**
PB08	**IPOC Station P**	**4.39**	**333**	*i* S	**S**	**06 45 39.9**	**-2.3**
CYA	**Choya**	**4.48**	**166**	*i* P	**Pn**	**06 44 48.1**	**0.0**
CYA				IAML		06 44 50.0	
	comp=Z,24nm,0.5s						
GO03	**Copiap**	**4.55**	**219**	*e*Pn	**Pn**	**06 44 47.2**	**-1.7**
GO03				*e*S	**S**	**06 45 41.9**	**-3.1**
PB11	**IPOC Station P**	**4.95**	**330**	*e*Pn	**Pn**	**06 44 53.9**	**-0.1**
PB11				*e*S	**S**	**06 45 51.1**	**-2.9**
ACLC	**CERRO LA CRUZ**	**5.33**	**179**	*i* P	**Pn**	**06 44 59.1**	**+0.6**
MNMC	**Minye Minye**	**5.48**	**333**	*e*Pn	**Pn**	**06 45 04.1**	**+3.5**
MNMC				*e*S	**S**	**06 46 01.2**	**-4.8**
AGUA	**GUANDACOL**	**5.55**	**193**	*i* P	**Pn**	**06 45 02.8**	**+1.6**

LCO	Las Campanas	5.92	213	*e*Pn	Pn	06 45 08.0	+2.0
LCO				*e*S	S	06 46 08.5	-7.4
APLL	PUNTA DE LOS L	6.31	176	*i* P	Pn	06 45 10.8	+0.2
APLL				IAML		06 45 12.7	
	comp=Z,26nm,0.2s						
GO04	Tololo Observa	6.95	208	*e*Pn	Pn	06 45 15.5	-3.3
GO04				*e*		06 46 28.4	
LPAZ	La Paz	7.82	352	*e*Pn	Pn	06 45 32.4	+2.1
LPAZ				*e*S	S	06 46 59.8	-0.2
LPAZ	La Paz	7.82	352	P	Pn	06 45 32.4	+2.1
	comp=Z,0.8nm,0.3s,baz=115,slow=3.4,SNR=21						
LPAZ				S	S	06 46 59.4	-0.7
	comp=Z,0.2nm,0.3s,baz=67,slow=9.9,SNR=3.6						
ACAN	Cantantal	8.17	181	*i* P	Pn	06 45 34.6	+0.6
CPUP	Villa Florida	9.05	106	P	Pn	06 45 44.4	-0.8
	comp=Z,0.1nm,0.3s,baz=299,slow=8.8,SNR=4.4						
TRQA	Tornquist	14.58	164	*e*P	P	06 46 55.3	+1.5
BDFB	Brasilia	19.72	68	*e*P	Pn	06 47 53.9	-0.7
BDFB	Brasilia	19.72	68	P	Pn	06 47 53.2	-1.5
	comp=Z,1.9nm,0.3s,baz=238,slow=11,SNR=42						
TXAR	Lajitas Array	63.73	324	P	P	06 53 52.5	+8.4
	comp=Z,0.2nm,0.7s,baz=139,slow=8.4,SNR=3.0						
TORD	Torodi Ar. Bea	76.61	69	P	P	06 55 07.7	+5.5
	comp=Z,0.5nm,0.4s,baz=254,slow=5.4,SNR=13						
ASAR	Alice Springs	128.38	205	PKP	PKiKP	07 02 24.9	+8.1
	comp=Z,0.7nm,1.1s,baz=170,slow=5.7,SNR=3.3						
ZALV	Zalesovo Beam	143.46	28	PKP	PKiKP	07 02 49.4	+2.9
	comp=Z,0.4nm,0.3s,baz=325,slow=7.2,SNR=2.6						
MKAR	Makanchi Array	146.59	40	PKPbc	PKiKP	07 02 58.6	+5.5
	comp=Z,0.6nm,0.5s,baz=301,slow=3.1,SNR=10						

ISK ***14*** *06:47:34.2, 38°.34N×42°.50E, h17km, ML2.6/7*
ISCJB ***14*** *06:47:35.4±0.5, 38°.31N±0°.03×42°.50E±0°.03, h1km±6km, Error ellipse: s-maj=5.3km s-min=3.3km az=148.3*
DDA ***14*** *06:47:35.1, 38°.35N×42°.48E, h7km±5km, ML2.9*
ISC 14 06:47:35.0±1.1**, 38°.33N**±0°.03×**42°.51E**±0°.02**, h9**km±10km**, n19, σ0^{s}.67**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.37	90	PG	Pg	06 47 42.4	+0.1
AKDM				SG	Sg	06 47 48.3	+1.0
GEVA	Gevas	0.43	92	*i* P	Pb	06 47 44.3	-0.6
GEVA				*i* S	Sb	06 47 52.0	+0.4
GURO	Guroymak-BITLI	0.43	301	PG	Pg	06 47 43.3	-0.2
GURO				SG	Sg	06 47 49.7	+0.4
ADCV	BITLIS_Adilcev	0.51	19	*i* P	Pb	06 47 46.9	+0.6
ADCV				*i* S	Sb	06 47 54.9	+1.0
SRTM	Siirt_Merkez	0.57	234	*i* P	Pb	06 47 47.1	-0.1
SRTM				*i* S	Sb	06 47 55.8	+0.2
TVAN	Van	0.73	74	*i* P	Pg	06 47 48.6	-0.6
TVAN				IAML_P			
	comp=Z,2μm,0.1s						
MLAZ	Malazgirt-MUS	0.81	2	PG	Pg	06 47 50.5	-0.2
SIRT	Sirnak	0.83	184	PG	Pg	06 47 50.8	-0.1
SIRN	Sırnak	0.83	185	*i* P	Pb	06 47 51.7	0.0
SIRN				IAML_P			
	comp=Z,2μm,0.1s						
SVAN	Silvan-Diyarba	1.05	261	PG	Pg	06 47 54.6	-0.5
SVAN	Silvan-Diyarba	1.05	261	*i* P	Pn	06 47 56.0	+0.1
SVAN				IAML_P			
	comp=Z,491nm,0.1s						
VMUR	Van-Muradiye	1.06	51	*i* P	Pn	06 47 56.8	+0.5
VMUR				*i* S	Sn	06 48 11.4	+0.1
BTMN	Batman	1.07	246	*i* P	Pn	06 47 56.6	+0.3
BTMN				*i* S	Sn	06 48 10.9	-0.4
TUTA	Tutak	1.10	12	*i* P	Pn	06 47 56.9	0.0
TUTA				*i* S	Sn	06 48 13.3	+1.0
TUTA				IAML_P			
	comp=Z,2μm,0.2s						
AGRB	Hanur-Agry	1.30	17	PN	Pn	06 47 57.8	-1.8
CLDR	Caldiran	1.37	53	PN	Pn	06 47 59.1	-1.5
EATA	Eleskirt	1.53	360	*i* P	Pg	06 48 04.0	-0.4
EATA				*i* S	Sg	06 48 24.3	-0.1
HANI	Diyarbakir_Han	1.66	274	*i* P	Pb	06 48 05.9	+0.1
HANI				*i* S	Sg	06 48 27.8	-0.5
HANI				IAML_P			
	comp=Z,872nm,0.3s						
MARD	Mardin	1.70	234	*i* P	Pn	06 48 05.6	+0.5
MARD				*i* S	Sb	06 48 28.0	-0.2

IDC ***14*** *06:50:07.6±1.1, 1°.15S×120°.50E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/30, mbtmp3.7/7, ML2.9/1, Error ellipse: s-maj=143.8km s-min=16.3km az=63.0*
ISCJB ***14*** *06:50:10.9±0.5, 1°.19S±0°.05×120°.14E±0°.04, h28km, mb3.7/6, Error ellipse: s-maj=6.8km s-min=5.9km az=36.4*
DJA ***14*** *06:50:11.4±0.5, 1°S±3°×12°0E±°, h17km±5km, M4.2/12, MLv4.2/12*
ISC 14 06:50:10.7±0.7**, 1°.22S**±0°.04×**120°.21E**±0°.04**, h28**km**, n19, σ2^{s}.40**/21**, mb3.8**/6**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	Palu	0.48	310	P	Pb	06 50 19.1	-1.7
PCI				S	Sn	06 50 27.0	-2.3
APSI	Ampana	1.47	78	P	Pb	06 50 36.1	-1.4
APSI				S	Sb	06 50 56.4	+0.6
MPSI	Mapaga	1.57	349	P	Pn	06 50 36.1	-0.7
TTSI	Tana Toraja	1.86	192	P	Pb	06 50 42.1	-1.9
TTSI				S	Sb	06 51 09.1	+2.3
MRSI	Marisa	2.42	46	P	Pb	06 50 50.0	-3.5
LUWI	Luwuk	2.57	86	P	Pb	06 50 54.0	-2.2
SPSI	Sidrap Palu	2.76	189	P	Pb	06 50 56.7	-2.8
BNSI	Bone	3.16	182	P	Pb	06 51 01.9	-4.4
KDI	Kendari	3.64	139	P	Pn	06 51 07.0	+1.8
BKSI	Bulukumba	4.08	181	P	Pb	06 51 17.3	-4.6
KMSI	Cibinong	4.17	65	P	Pb	06 51 17.0	-6.5
KBKI	Kotabaru	4.54	243	P	Pn	06 51 19.0	+1.4
FITZ	Fitzroy Crossi	17.61	163	P	P	06 54 14.8	-0.1
	0.0nm,0.3s,baz=334,slow=11,SNR=2.3						
WRA	Warramunga Arr	23.18	144	P	P	06 55 14.7	-0.7
	1.3nm,0.6s,baz=324,slow=11,SNR=20						
ASAR	Alice Springs	25.97	150	P	P	06 55 42.7	+1.5
	0.5nm,0.6s,baz=345,slow=16,SNR=6.1						
STKA	Stephens Creek	36.57	149	P	P	06 57 13.6	-0.8
	0.4nm,0.3s,baz=317,slow=8.5,SNR=2.2						
SONM	Songino Array	50.32	348	P	P	06 59 07.3	+2.2
	0.5nm,0.6s,baz=165,slow=7.4,SNR=5.0						
MKAR	Makanchi Array	58.23	330	P	P	07 00 04.9	+2.3
	1.1nm,0.7s,baz=133,slow=7.6,SNR=17						
ZALV	Zalesovo Beam	62.30	337	P	P	07 00 30.4	+0.1
	0.6nm,0.5s,baz=149,slow=7.5,SNR=3.4						

ISCJB ***14*** *07:07:01.4±0.5, 28°.5S±0°.1×62°.6E±0°.1, h10km, mb4.3/18, MS3.6/3, Error ellipse: s-maj=17.9km s-min=13.9km az=26.5*
IDC ***14*** *07:07:01.8±0.7, 28°.43S×62°.60E, h0km, mb4.2/13, mb1 4.3/13, mb1mx4.0/38, mbtmp4.2/13, MS3.6/3, Ms1 3.7/3, ms1mx3.0/39, Error ellipse: s-maj=25.5km s-min=19.8km az=35.0*
NEIC ***14*** *07:07:03.2±0.4, 28°.46S×62°.54E, h10km, mb4.3/4, Error ellipse: s-maj=13.4km s-min=10.3km az=207.0*
ISC 14 07:07:03.3±0.7**, 28°.5S**±0°.2×**62°.5E**±0°.2**, h10**km**, n31, σ0^{s}.72**/31**, mb4.3**/18**, MS3.8**/3**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	39.18	180	LR	LR	07 26 49.0	
	comp=Z,123nm,18.4s,baz=31,slow=30						
CM31	Chiang Mai Arr	58.43	41	*e*P	P	07 17 01.0	+1.6
CMAR	Chiang Mai Arr	58.43	41	P	P	07 17 01.0	+1.6
	0.9nm,0.3s,baz=234,slow=7.7,SNR=6.0						
CMAR				LR	LR	07 38 57.1	
	comp=Z,15nm,18.5s,baz=210,slow=33						
QSPA	South Pole Qui	61.70	180	*e*P	P	07 17 22.8	+1.3
QSPA	South Pole Qui	61.70	180	P	P	07 17 22.0	+0.5
	4.4nm,0.9s,baz=297,slow=3.6,SNR=9.0						
ASAR	Alice Springs	63.44	104	P	P	07 17 33.5	-0.3
	1.5nm,0.6s,baz=244,slow=6.3,SNR=23						
AS31	Alice Springs	63.44	104	*e*P	P	07 17 33.3	-0.5
	0.7nm,0.6s						
AS01	Alice Springs	63.48	104	*e*P	P	07 17 33.8	-0.2
VNDA	Vanda	64.44	166	LR	LR	07 43 23.5	
	comp=Z,91nm,18.1s,baz=240,slow=34						
WR1	Warramunga Arr	65.20	100	*e*P	P	07 17 44.6	-0.6
	4.1nm,1.1s						
WR1				*e*PcP	PcP	07 18 17.6	-0.2
WRA	Warramunga Arr	65.20	100	P	P	07 17 44.6	-0.7
	1.6nm,0.7s,baz=247,slow=5.8,SNR=18						
WRA				PcP	PcP	07 18 17.6	-0.2
	0.8nm,0.6s,baz=245,slow=3.1,SNR=7.0						
TORD	Torodi Ar. Bea	71.89	296	P	P	07 18 26.4	-0.6
	0.9nm,0.9s,baz=113,slow=5.6,SNR=5.1						
TOA1	Torodi Ar. Sit	71.89	296	*e*P	P	07 18 26.4	-0.6
BR101	Keskin Array S	72.97	337	*e*P	P	07 18 32.9	-0.2
BRTR	Keskin Array B	72.97	337	P	P	07 18 32.9	-0.2
	1.0nm,0.8s,baz=163,slow=9.0,SNR=4.3						
DBIC	Dimbokro	73.65	287	P	P	07 18 39.0	+1.5
	2.0nm,0.7s,baz=180,slow=6.1,SNR=3.5						
MK32	Makanchi Array	76.99	14	*e*P	P	07 18 55.9	-0.1
MKAR	Makanchi Array	76.99	14	P	P	07 18 55.9	-0.1
	0.7nm,0.9s,baz=226,slow=6.6,SNR=5.6						
ABKAR	Akbulak array	77.39	358	*e*P	P	07 18 58.3	+0.2
	1.4nm,0.7s						
AKASG	Malin Array Be	84.13	339	P	P	07 19 34.0	-0.1
	0.9nm,0.6s,baz=166,slow=4.4,SNR=2.7						
ZALV	Zalesovo Beam	84.29	13	*e*P	P	07 19 34.7	-0.3
ZALV	Zalesovo Beam	84.29	13	P	P	07 19 34.4	-0.6
	1.3nm,0.4s,baz=204,slow=4.3,SNR=9.4						
ZAA1	Zalesovo Array	84.30	13	*e*P	P	07 19 34.4	-0.6
SONA0	Songino Array	85.55	28	*e*P	P	07 19 41.2	-0.3
SONM	Songino Array	85.55	28	P	P	07 19 41.2	-0.3
	1.8nm,1.0s,baz=240,slow=3.9,SNR=10						
ULN	Ulaanbaatar	85.84	28	*e*P	P	07 19 43.3	+0.3
	3.0nm,0.7s						
KSAR	Wonju Array Be	89.69	46	P	P	07 20 01.2	-0.3
KSRS	Korea Array	89.72	46	P	P	07 20 01.2	-0.5
	0.8nm,0.6s,baz=238,slow=3.8,SNR=3.7						
SPB	Sao Paulo	95.01	240	*e*P	P	07 20 25.6	-1.1
	22nm,0.5s						
USRK	Ussuriysk Ar.	96.14	43	P	P	07 20 30.3	-0.9
	1.7nm,0.7s,baz=240,slow=3.3,SNR=4.8						
YKA	Yellowknife Ar	145.90	358	PKPbc	PKPbc	07 26 42.0	-0.3
	2.9nm,0.6s,baz=348,slow=3.4,SNR=77						

ISCJB ***14*** *07:07:59.2±1.1, 37°.68N±0°.05×143°.74E±0°.07, h33km, mb3.3/4, Error ellipse: s-maj=8.6km s-min=6.0km az=26.0*
JMA ***14*** *07:07:59.6±0.1, 37°.70N×143°.71E, h43km, M3.3*
IDC ***14*** *07:08:02.8±4.1, 37°.08N×143°.33E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/31, mbtmp3.4/5, ML2.6/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/33, Error ellipse: s-maj=93.0km s-min=28.0km az=162.0*
ISC 14 07:07:59.4±2.1**, 37°.71N**±0°.07×**143°.8E**±0°.1**, h35**km**, n23, σ1^{s}.18**/30**, mb3.4**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.97	289	P	Pn	07 08 30.4	+0.1
JIKH				S	Sn	07 08 52.8	-1.0
JIO	Ouri	2.11	292	P	Pn	07 08 32.3	+0.2
JIO				*e*S	Sn	07 08 56.6	-0.5
JKMT	Kesennumamotoy	2.17	301	P	Pn	07 08 33.2	+0.2
JKMT				*e*S	Sn	07 08 57.8	-0.8
OFUJ	Ofunato	2.19	309	P	Pn	07 08 33.6	+0.3
OFUJ				*e*S	Sn	07 08 58.8	-0.4
JMK	Ichinoseki	2.41	302	P	Pn	07 08 36.8	+0.5
JMK				*e*S	Sn	07 09 04.6	0.0
JOM	Ohasama	2.67	312	P	Pn	07 08 40.7	+0.8
JOM				*e*S	Sn	07 09 11.2	+0.2
JFT	Otama	2.79	267	P	Pn	07 08 42.5	+0.9
JFT				*e*S	Sn	07 09 13.6	-0.5
JYK	Kaneyama	3.00	295	P	Pn	07 08 45.7	+1.3
JYK				*e*S	Sn	07 09 19.8	+0.7
JANG	Nango	3.22	326	P	Pn	07 08 48.9	+1.4
JANG				*e*S	Sn	07 09 24.9	+0.2
JAG	Ashikaga	3.74	251	P	Pn	07 08 55.7	+1.1
JAG				S	Sn	07 09 37.2	-0.2
JRY	Ryogami san	4.31	248	P	Pn	07 09 02.9	+0.5
JRY				S	Sn	07 09 49.4	-2.1
MJAR	Matsushiro Arr	4.65	257	Pn	Pn	07 09 07.9	+0.7
	0.4nm,0.3s,baz=80,slow=13,SNR=12						
MJAR				Sn	Sn	07 09 58.2	-1.8
	baz=86,slow=24,SNR=3.4						
MAT	Matsushiro	4.65	257	P	Pn	07 09 09.0	+1.8
MAT				*e*S	Sn	07 09 57.7	-2.3
JCH	Churui	4.92	356	P	Pn	07 09 11.6	+0.8
JCH				*e*S	Sn	07 10 04.7	-1.7
NEM2	Nemuro 2	5.84	14	P	Pn	07 09 23.9	+0.5
NEM2				*e*S	Sn	07 10 26.3	-2.7
KSRS	Korea Array	12.64	274	LR	LR	07 15 15.3	
	comp=Z,35nm,19.1s,baz=130,slow=35						
H11N2	WAKE ISLAND Hy	26.89	125	T	T	07 41 56.1	
	baz=317						
H11N1	WAKE ISLAND Hy	26.90	125	T	T	07 41 56.6	
	baz=317						
H11N3	WAKE ISLAND Hy	26.91	125	T	T	07 41 54.9	
	baz=317						
SONM	Songino Array	29.04	302	P	P	07 14 04.5	+8.3
	0.1nm,0.5s,baz=100,slow=6.0,SNR=2.6						
ZALV	Zalesovo Beam	42.90	312	P	P	07 16 03.3	+9.0
	0.7nm,0.3s,baz=81,slow=12,SNR=2.9						
MKAR	Makanchi Array	45.41	302	P	P	07 16 22.5	+8.0
	0.3nm,0.7s,baz=88,slow=9.2,SNR=4.2						
ILAR	Eielson Array	47.89	33	P	P	07 16 48.2	+15
	0.3nm,0.6s,baz=252,slow=6.2,SNR=5.3						

DDA ***14*** *07:10:58.8, 37°.72N×37°.46E, h16km±1km, ML3.5*
ISK ***14*** *07:10:58.4, 37°.74N×37°.46E, h5km, ML3.3/10*
ISC 14 07:10:59.2±1.0**, 37°.74N**±0°.02×**37°.44E**±0°.02**, h11**km±10km**, n37, σ0^{s}.87**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GZT	Gaziantep	0.39	165	*i* P	Pb	07 11 07.9	-0.4
GZT				*i* S	Sb	07 11 13.2	-1.2
KMRS	Kahramanmaras	0.49	242	PG	Pg	07 11 08.7	-0.1
KMRS				SG	Sg	07 11 15.8	+0.6
GAZ	Gaziantep	0.59	198	PG	Pg	07 11 10.6	-0.2
ELBS	KAHRAMANMARAS_	0.64	338	*i* P	Pb	07 11 12.3	-0.1
ELBS				*i* S	Sb	07 11 22.1	+0.7
AKCD	Akcadag	0.68	34	*i* P	Pb	07 11 13.0	-0.2
AKCD				*i* S	Sb	07 11 22.4	-0.2
ATAB	Bozova	0.73	111	*i* P	Pg	07 11 13.2	-0.2
ATAB				*i* S	Sb	07 11 23.4	-0.6
DARE	Darende-Malaty	0.83	2	PG	Pg	07 11 14.6	-0.8
ANDN	Andirin	0.88	260	*i* P	Pg	07 11 16.6	+0.3
ANDN				*i* S	Sg	07 11 28.6	+0.8
ANDN				IAML_P			
	comp=Z,4μm,0.1s						
CUGUR	Gurin_SVAS	0.99	352	*i* P	Pb	07 11 17.2	-1.4
CUGUR				*i* S	Sn	07 11 33.3	-0.1
KUZU	Kuzuini	1.00	197	*i* P	Pn	07 11 19.6	+0.3
KUZU				*i* S	Sn	07 11 34.2	+0.8
SAIM	ADANA	1.10	283	*i* P	Pg	07 11 21.0	+0.6
SAIM				*i* S	Sn	07 11 36.6	+0.6
URFA	Urfa	1.14	105	PN	Pb	07 11 20.2	-0.8
SURC	SANLIURFA_SURC	1.27	132	*i* P	Pb	07 11 22.8	-0.4
SURC				*i* S	Sg	07 11 40.5	+0.5
KOZT	Kozan	1.31	259	PN	Pg	07 11 24.2	-0.1
SANL	SANLIURFA_Merk	1.36	114	*i* P	Pb	07 11 24.0	-0.7
SANL				*i* S	Sg	07 11 42.0	-0.9
ELZG	Elazig	1.44	58	*i* P	Pb	07 11 25.8	-0.3
ELZG				*i* S	Sg	07 11 47.3	+1.8
ELZG				IAML_P			
	comp=Z,5μm,0.2s						
CUKAN	kangal_SIVAS	1.58	1	*i* P	Pg	07 11 29.2	-0.3
CUALT	Altinyayla-SIV	1.63	341	*i* P	Pn	07 11 27.0	-1.0
BNN	Bunyan	1.68	312	PN	Pb	07 11 29.5	-0.7
YAHY	KAYSERI_Yahyal	1.68	283	*i* P	Pg	07 11 31.0	-0.5
TAHT	Tahtakopru-Hat	1.69	217	PN	Pb	07 11 29.5	-0.8
YURE	YUREGIR	1.70	238	PN	Pb	07 11 29.9	-0.7
YURE	YUREGIR	1.70	238	*i* P	Pb	07 11 30.8	+0.2
KEMA	Kemaliye	1.74	28	*i* P	Pg	07 11 32.2	-0.4
GUNE	Kayseri	1.84	310	*i* P	Pg	07 11 35.5	+0.9
CUSAR	Sarkisla-SIVAS	1.92	331	*i* P	Pg	07 11 36.4	+0.2
KARA	Karaisali	1.96	257	PN	Pb	07 11 33.5	-1.4
YAYL	Yayladag	2.01	213	*i* P	Pg	07 11 38.5	+0.7
KRTS	Karatas	2.02	235	PN	Pb	07 11 34.3	-1.6
TNCL	Tunceli-Merkez	2.15	50	*i* P	Pg	07 11 40.5	0.0
CUZAR	Zara_SIVAS	2.16	7	*i* P	Pb	07 11 38.9	+0.4
GULE	Gulek	2.17	259	*i* P	Pb	07 11 37.8	-0.8
GULE				IAML_P			
	comp=Z,1μm,0.1s						
SIRC	Yozgat	2.40	312	*i* P	Pb	07 11 40.7	-1.9
HANI	Diyarbakir_Han	2.43	73	*i* P	Pn	07 11 39.8	+0.9
MERS	Mersin	2.48	250	PN	Pn	07 11 40.9	+1.2
KERG	Konya-Eregli	2.65	264	*i* P	Pb	07 11 44.6	-2.3
KERG				IAML_P			
	comp=Z,191nm,0.3s						
MARD	Mardin	2.69	98	*i* P	Pn	07 11 42.8	+0.2

ISCJB ***14*** *07:14:22.6±0.6, 37°.75N±0°.03×37°.45E±0°.04, h11km±5km, Error ellipse: s-maj=4.9km s-min=4.5km az=6.0*
DDA ***14*** *07:14:22.1, 37°.73N×37°.48E, h7km±2km, ML2.7*
ISK ***14*** *07:14:22.9, 37°.80N×37°.29E, h18km, ML2.0/7*
ISC 14 07:14:22.4±1.0**, 37°.75N**±0°.03×**37°.41E**±0°.04**, h15**km±10km**, n15, σ0^{s}.77**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GZT	Gaziantep	0.42	163	*i* P	Pg	07 14 30.9	0.0
GZT				*i* S	Sg	07 14 36.3	-0.3
KMRS	Kahramanmaras	0.47	238	PG	Pg	07 14 31.9	+0.1
KMRS				SG	Sb	07 14 38.9	-0.4
GAZ	Gaziantep	0.60	195	PG	Pb	07 14 35.8	+1.1
GAZ				SG	Sn	07 14 45.3	-0.8
ELBS	KAHRAMANMARAS_	0.61	339	*i* P	Pb	07 14 35.1	+0.2
ELBS				*i* S	Sn	07 14 45.6	-0.8
ELBS				IAML_P			
	comp=Z,304nm,0.1s						
AKCD	Akcadag	0.68	37	*i* P	Pg	07 14 35.5	-0.2
AKCD				*i* S	Sg	07 14 44.7	0.0
ATAB	Bozova	0.76	112	*i* P	Pg	07 14 36.1	-1.1
ATAB				*i* S	Sg	07 14 46.8	-0.5
ATAB				IAML_P			
	comp=Z,3μm,0.1s						
DARE	Darende-Malaty	0.82	4	PG	Pb	07 14 38.7	+0.2
DARE				SG	Sb	07 14 50.1	+0.7
ANDN	Andirin	0.86	259	*i* P	Pb	07 14 39.6	+0.4
ANDN				*i* S	Sn	07 14 51.6	-0.9
ANDN				IAML_P			
	comp=Z,571nm,0.1s						
SAIM	ADANA	1.07	282	*i* P	Pn	07 14 44.5	+1.4
KOZT	Kozan	1.28	258	PN	Pn	07 14 45.4	-0.5
SURC	SANLIURFA_SURC	1.30	132	*i* P	Pn	07 14 46.3	+0.1
SANL	SANLIURFA_Merk	1.39	114	*i* P	Pn	07 14 47.8	+0.4
BNN	Bunyan	1.65	312	PN	Pn	07 14 50.3	-0.7
TAHT	Tahtakopru-Hat	1.69	216	PN	Pn	07 14 52.1	+0.7
PTK	Pertek	1.93	53	PN	Pn	07 14 56.4	+1.4

DDA ***14*** *07:19:09.9, 38°.29N×42°.54E, h7km±3km, ML3.2*
NSSP ***14*** *07:19:09.4, 38°.32N×42°.43E, h9km, Ms3.1*
ISK ***14*** *07:19:09.8, 38°.34N×42°.50E, h5km, ML3.1/8*
ISCJB ***14*** *07:19:10.3±0.5, 38°.31N±0°.03×42°.48E±0°.03, h4km±6km, Error ellipse: s-maj=5.8km s-min=4.0km az=167.9*
ISC 14 07:19:10.4±1.1**, 38°.29N**±0°.03×**42°.49E**±0°.02**, h9**km±11km**, n23, σ1^{s}.40**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.39	85	PG	Pg	07 19 17.4	-0.6
AKDM				SG	Sg	07 19 23.5	+0.3
GURO	Guroymak-BITLI	0.44	306	PG	Pg	07 19 18.4	-0.7
GURO				SG	Sg	07 19 24.6	-0.3
GEVA	Gevas	0.45	87	*i* P	Pb	07 19 19.4	-1.1
GEVA				*i* S	Sb	07 19 27.7	+0.3
GEVA				IAML_P			
	comp=Z,33μm,0.1s						
SRTM	Siirt_Merkez	0.54	236	*i* P	Pb	07 19 21.4	-0.7
SRTM				IAML_P			
	comp=Z,3μm,0.1s						
ADCV	BITLIS_Adilcev	0.55	20	*i* P	Pb	07 19 21.0	-1.2
ADCV				*i* S	Sb	07 19 29.6	-0.6
TVAN	Van	0.76	72	*i* P	Pg	07 19 24.1	-0.9
TVAN				IAML_P			
	comp=Z,359nm,0.1s						
SIRT	Sirnak	0.79	183	PG	Pb	07 19 26.5	+0.2
SIRN	Sırnak	0.80	184	*i* P	Pn	07 19 27.6	-0.2
MLAZ	Malazgirt-MUS	0.85	3	PG	Pg	07 19 25.7	-1.0
SVAN	Silvan-Diyarba	1.03	262	PG	Pb	07 19 30.4	0.0
SVAN	Silvan-Diyarba	1.03	262	*i* P	Pb	07 19 30.2	-0.1
BTMN	Batman	1.04	248	*i* P	Pn	07 19 31.8	+0.5
VMUR	Van-Muradiye	1.09	50	*i* P	Pb	07 19 30.7	-0.9
VMUR				*i* S	Sn	07 19 47.2	-0.2
VMUR				IAML_P			
	comp=Z,2μm,0.1s						
TUTA	Tutak	1.14	13	*i* P	Pb	07 19 31.6	-0.7
TUTA				IAML_P			
	comp=Z,3μm,0.2s						
BASK	Baskale_VAN	1.22	101	*i* P	Pg	07 19 32.5	-1.2
AGRB	Hanur-Agry	1.34	17	PN	Pb	07 19 34.9	-0.9
CLDR	Caldiran	1.40	52	PN	Pn	07 19 35.9	-0.4
CLDR	Caldiran	1.40	52	*i* P	Pn	07 19 35.9	-0.4
CLDR				IAML_P			
	comp=Z,2μm,0.2s						
BNGB	Bingl	1.58	297	PN	Pb	07 19 38.9	-0.9
BGOL	Bingol	1.58	297	*i* P	Pg	07 19 40.6	-0.2
KOPR	Koprukoy-ERZUR	1.77	344	PN	Pn	07 19 41.3	0.0
MAZI	Mazidag	1.82	243	PN	Pn	07 19 42.1	+0.2
GNI	Garni	2.55	43	*i* P	Pg	07 20 00.7	+1.5
GNI				*i* S	Sg	07 20 38.1	+5.9

ISCJB ***14*** *07:27:02.0±0.6, 6°.85N±0°.03×73°.13W±0°.03, h157km±5km, mb3.5/1, Error ellipse: s-maj=5.6km s-min=4.3km az=27.4*
IDC ***14*** *07:27:01.2±0.9, 6°.53N×72°.77W, h173km±8km, mb3.2/1, mb1 3.5/3, mb1mx3.0/29, mbtmp3.8/3, Error ellipse: s-maj=50.1km s-min=8.0km az=131.0*
RSNC ***14*** *07:27:03.5±1.1, 6°.83N×73°.13W, h150km±5km, ML3.1, Mw3.3*
ISC 14 07:27:02.8±1.1**, 6°.85N**±0°.03×**73°.12W**±0°.04**, h152**km±7km**, n25, σ0^{s}.71**/46**, 5C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	193	*i* P	Pn	07 27 23.6	-0.2
BARC				*e*S	Sn	07 27 38.9	-0.9
BARC				*i*		07 27 40.4	
	comp=Z,281nm,0.3s						
BRRC	Barranca, Sant	0.64	294	⇑*i*P	Pn	07 27 25.5	+0.4
BRRC				*e*S	Sn	07 27 42.9	+0.7
BRRC				*i*		07 27 46.6	
	comp=Z,189nm,0.4s						
PAMC	Pamplona, Colo	0.64	41	⇑*i*P	Pn	07 27 26.4	+0.7
PAMC				*e*S	Sn	07 27 43.7	+0.5
PAMC				*i*		07 27 45.9	
	comp=Z,331nm,0.6s						
RUSC	La Rusia	0.95	178	⇑*i*P	Pn	07 27 27.4	-0.5
RUSC				*e*S	Sn	07 27 46.4	-0.7
RUSC				*i*		07 27 49.2	
	comp=Z,75nm,0.2s						
PTBC	PUERTO BERRIO,	1.36	257	*i* P	Pn	07 27 30.1	-1.0
PTBC				*e*S	Sn	07 27 52.0	-0.8
PTBC				*i*		07 27 57.5	
	comp=Z,232nm,0.3s						
TAMC	Tame, Arauca	1.38	107	⇑*i*P	Pn	07 27 31.8	+0.4
TAMC				*i*		07 27 52.6	
	comp=Z,101nm,0.4s						
TAMC				*e*S	Sn	07 27 53.5	+0.3
OCAC	Ocana	1.40	352	*e*P	Pn	07 27 31.7	+0.1
OCAC				*e*S	Sn	07 27 53.7	0.0
OCAC				*i*		07 27 59.5	
	comp=Z,187nm,0.3s						
ZARC	Zaragoza, Cauc	1.84	290	*e*P	Pn	07 27 36.5	+0.3
ZARC				*e*S	Sn	07 28 01.9	0.0
ZARC				*i*		07 28 08.8	
	comp=Z,164nm,0.5s						
SMLC	San Martn de	2.16	334	*e*P	Pn	07 27 39.8	-0.1
SMLC				*e*S	Sn	07 28 09.2	+0.7
SMLC				*i*		07 28 12.6	
	comp=Z,83nm,0.2s						
CHIC	Chingaza	2.29	195	⇓*i*P	Pn	07 27 41.6	-0.3
CHIC				*e*S	Sn	07 28 10.9	-1.0
CHIC				*i*		07 28 14.8	
	comp=Z,63nm,0.6s						
ROSC	El Rosal	2.32	211	⇑*i*P	Pn	07 27 43.1	+0.8
ROSC				*e*S	Sn	07 28 13.5	+0.8
ROSC				*i*		07 28 19.7	
	comp=Z,170nm,0.5s						
ROSC	El Rosal	2.32	211	P	Pn	07 27 43.3	+1.0
	comp=Z,16nm,0.3s,baz=10,slow=12,SNR=46						
ROSC				S	Sn	07 28 12.3	-0.4
	comp=Z,22nm,0.3s,baz=131,slow=19,SNR=11						
HELC	Santa Helena	2.48	255	*e*P	Pn	07 27 44.5	+0.3
HELC				*e*S	Sn	07 28 16.0	+0.1
HELC				*i*		07 28 22.4	
	comp=Z,72nm,0.3s						
UREC	San Jos de Ur	2.56	291	*e*P	Pn	07 27 44.1	-0.6
UREC				*e*S	Sn	07 28 17.0	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
UREC				*i*		07 28 27.9	
	comp=Z,90nm,0.3s						
VILC	Villavicencio,	2.78	192	*e*P	Pn	07 27 48.5	+0.9
VILC				*e*S	Sn	07 28 21.0	-1.3
RREF	El Recreo	2.94	229	*e*P	Pn	07 27 51.1	+1.0
RREF				*e*S	Sn	07 28 26.8	+0.2
RREF				*i*		07 28 33.1	
	comp=Z,107nm,0.3s						
DBBC	Dabeiba	3.07	273	*e*P	Pn	07 27 51.2	0.0
DBBC				*e*S	Sn	07 28 27.6	-1.1
DBBC				*i*		07 28 34.6	
	comp=Z,70nm,0.5s						
CODC	Agustn Codazz	3.08	354	*e*P	Pn	07 27 51.0	-0.3
CODC				*e*S	Sn	07 28 29.2	+0.3
CODC				*i*		07 28 34.5	
	comp=Z,23nm,0.3s						
SDV	Santo Domingo	3.19	50	⇓*i*P	Pn	07 27 52.8	0.0
SDV				*e*S	Sn	07 28 30.0	-1.6
SDV				*i*		07 28 32.3	
	comp=Z,3.0nm,0.4s						
SDV	Santo Domingo	3.19	50	P	Pn	07 27 52.8	0.0
	comp=Z,23nm,0.3s,baz=220,slow=5.0,SNR=262						
SDV				S	Sn	07 28 30.7	-0.9
	comp=Z,7.4nm,0.3s,baz=262,slow=23,SNR=8.9						
ANIL	Santa Ana	3.26	224	*e*P	Pn	07 27 54.1	+0.2
ANIL				*e*S	Sn	07 28 33.0	-0.4
ANIL				*i*		07 28 39.7	
	comp=Z,60nm,0.3s						
PLMC	San Jos del P	3.69	239	*e*P	Pn	07 27 59.2	+0.1
PLMC				*e*S	Sn	07 28 41.5	-1.4
YKA	Yellowknife Ar	63.24	340	P	P	07 37 13.7	-1.0
	comp=Z,0.4nm,0.6s,baz=133,slow=6.7,SNR=17						
ASAR	Alice Springs	149.13	234	PKPbc	PKPdf	07 46 29.4	-0.3
	comp=Z,0.9nm,1.2s,baz=142,slow=2.6,SNR=3.2						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPdf	07 46 32.9	+1.1
	comp=Z,0.2nm,0.4s,baz=106,slow=2.7,SNR=6.6						

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*NEIC **14** 07:28:27.2±0.0, 16°.48N×98°.05W, h4^{km}, MD4.1(MEX), After MEX.*

MEX 14 07:28:27.0±0.8**, 16°.48N×98°.05W, h2^{km}±5^{km}, MD4.1, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PNIG	Pinotepa	0.12	222	*e*Pg	Pg	07 28 28.6	-0.7
PNIG				*e*Sg	Sg	07 28 31.4	+0.6
PNIG	Pinotepa	0.12	222	*e*P	Pg	07 28 28.6	-0.7
PNIG				*e*S	Sg	07 28 31.4	+0.6
HUIG	Huatulco	1.99	110	*e*Pn	Pn	07 28 58.7	-3.0
HUIG				*e*Sn	Sn	07 29 22.2	-5.0
HUIG	Huatulco	1.99	110	*e*P	Pn	07 28 58.2	-3.4
HUIG				*e*S	Sn	07 29 22.2	-5.0
MEIG	Mezcala	2.08	314	*e*Pn	Pn	07 28 59.7	-3.3
MEIG				*e*Sn	Sn	07 29 24.8	-4.7
MEIG	Mezcala	2.08	314	*e*P	Pn	07 28 59.7	-3.3
MEIG				*e*S	Sn	07 29 24.8	-4.7
CAIG	El Cayaco	2.20	285	*e*Pn	Pn	07 28 58.2	-6.3
CAIG				*e*Sn	Sn	07 29 28.4	-3.9
CAIG	El Cayaco	2.20	285	*e*P	Pn	07 28 57.9	-6.7
CAIG				*e*S	Sn	07 29 28.4	-3.9
CMIG	Matias Romero	3.09	78	*e*Pn	Pn	07 29 18.6	+1.8
CMIG				*e*Sn	Sn	07 29 51.1	-3.2
CMIG	Matias Romero	3.09	78	*e*P	Pn	07 29 18.6	+1.8
CMIG				*e*S	Sn	07 29 51.1	-3.2
LVIG	Laguna Verde	3.58	25	*e*Pn	Pn	07 29 17.8	-5.8
LVIG				*e*Sn	Sn	07 29 59.1	-7.3

WEL 14 07:34:03.0±1.2**, 47°S**±6°×**16°6E**±°**, h5^{km}, ML3.5**/9**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PYZ	Puysegur Point	0.84	41	P	Pg	07 34 19.5	+0.3
PYZ				S	Sb	07 34 31.1	-0.7
APZ	The Paps	1.45	92	P	Pg	07 34 30.9	+0.1
APZ				S	Sn	07 34 49.5	+0.1
DCZ	Deep Cove	1.60	34	P	Pn	07 34 29.8	-2.2
WHZ	Wether Hill Ro	1.70	58	P	Pn	07 34 32.4	-0.9
WHZ				S	Sn	07 34 55.2	-0.2
MLZ	Mavora Lakes	2.12	48	P	Pn	07 34 39.2	+0.1
MLZ				S	Sb	07 35 07.4	-1.1
SYZ	Scrubby Hill	2.26	84	P	Pn	07 34 40.8	-0.2
SYZ				S	Sn	07 35 08.9	-0.3
MSZ	Milford Sound	2.57	35	P	Pn	07 34 45.3	+0.1
TUZ	Tuapeka	2.73	73	P	Pn	07 34 47.1	-0.4
TUZ				S	Sn	07 35 20.8	-0.1
EAZ	Earnscleugh	2.86	58	P	Pn	07 34 49.1	-0.2
EAZ				S	Sn	07 35 25.0	+0.9
WKZ	Wanaka	2.95	49	P	Pn	07 34 51.4	+0.8
WKZ				S	Sn	07 35 29.2	+2.8
JCZ	Jackson Bay	3.41	38	P	Pn	07 34 56.9	0.0
JCZ				S	Sn	07 35 38.1	+0.3
ODZ	Otahua Downs	3.76	64	P	Pn	07 34 59.7	-2.0
LBZ	Lake Benmore	3.87	53	P	Pn	07 35 01.2	-2.0
LBZ				S	Sn	07 35 45.7	-3.3
FOZ	Fox Glacier	4.29	42	P	Pn	07 35 08.6	-0.4
FOZ				S	Sn	07 35 58.0	-1.4

IDC 14 07:37:53.3±3.4**, 4°.36S×151°.23E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/41**, mbtmp3.4**/3**, Error ellipse: s-maj=125.5km s-min=46.3km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA	Warramunga Arr	22.60	225	P	P	07 42 56.0	+0.2
	0.4nm,0.5s,baz=50,slow=10.0,SNR=5.3						
ASAR	Alice Springs	25.45	219	P	P	07 43 22.7	-0.5
	0.3nm,0.4s,baz=56,slow=9.0,SNR=6.4						
FITZ	Fitzroy Crossi	28.51	239	P	P	07 43 50.9	0.0
	0.3nm,0.3s,baz=54,slow=7.0,SNR=4.9						
TORD	Torodi Ar. Bea	148.69	288	PKPbc	PKPbc	07 57 43.4	-0.3
	0.3nm,0.7s,baz=63,slow=2.7,SNR=2.7						

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*DDA **14** 07:50:39.6, 40°.76N×44°.42E, h7^{km}±1^{km}, ML2.9*
*TIF **14** 07:50:39.9, 40°.80N×44°.40E, h14^{km}±2^{km}*
*NORS **14** 07:50:42.9±0.0, 41°.04N×44°.29E, h2^{km}, MPVA3.7*
*MOS **14** 07:50:42.9±0.0, 41°.04N×44°.29E, h2^{km}, MPVA3.7*

ISC 14 07:50:39.5±1.2**, 40°.80N**±0°.03×**44°.42E**±0°.04**, h8^{km}**±12^{km}**, n14, σ0^{s}.47**/26**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KZRT	Kazreti	0.59	358	P	Pb	07 50 52.1	0.0
KZRT				S	Sb	07 51 00.3	-0.3
EAK	Akyaka	0.63	260	*i* P	Pb	07 50 52.7	-0.2
EAK				*i* S	Sg	07 51 00.7	+0.7
EAK				IAML_P			
	comp=Z,3μm,0.1s						
BGD	Bogdanovka	0.78	307	P	Pb	07 50 55.9	+0.4
BGD				S	Sb	07 51 06.8	+0.6
TRLG	Trialeti	0.78	342	P	Pb	07 50 55.4	0.0
TRLG				S	Sb	07 51 06.1	-0.1
DIGO	Kars	0.88	245	*i* P	Pg	07 50 56.4	-0.1
DIGO				*i* S	Sg	07 51 07.4	-0.6
BTNK	Botanikuri	0.93	18	P	Pb	07 50 58.5	+0.5
BTNK				S	Sb	07 51 11.5	+1.1
BTNK	Botanikuri	0.93	18	*i* P	Pb	07 50 58.2	+0.3
BTNK				IAML_P			
	comp=Z,4μm,0.1s						
TBLG	Delisi	0.96	14	*i* P	Pn	07 50 59.3	-0.1
TBLG				*i* S	Sn	07 51 12.9	-0.4
TBLG				IAML_P			
	comp=Z,2μm,0.1s						
IGDI	IGDIR	0.96	196	*i* P	Pg	07 50 58.0	-0.1
IGDI				*i* S	Sg	07 51 10.7	+0.1
IGDI				IAML_P			
	comp=Z,403nm,0.2s						
SEAG	Tbilisi Sea	1.01	17	P	Sn	07 51 14.2	-0.2
ZEI	Tsey	2.03	349	*e*Pg	Pg	07 51 18.3	-0.1
ZEI				*e*Sg	Sg	07 51 44.2	-0.5
LACR	Lac	2.03	357	*e*Pg	Pg	07 51 18.4	-0.1
LACR				*e*Sg	Sg	07 51 45.7	+0.9
DIGR	Digorskoe uzhe	2.19	344	*e*Pg	Pg	07 51 21.4	-0.2
DIGR				*e*Sg	Sg	07 51 49.5	-0.5
BTLR	Botlikh	2.30	35	*e*Pg	Pg	07 51 23.5	-0.2
BTLR				*e*Sg	Sg	07 51 53.0	-0.5

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*DDA **14** 07:56:09.9, 38°.82N×43°.53E, h7^{km}±2^{km}, ML2.9*
*ISCJB **14** 07:56:10.6±0.6, 38°.83N±0°.03×43°.51E±0°.06, h10^{km}±5^{km}, Error ellipse: s-maj=8.0km s-min=4.6km az=26.7*
*ISK **14** 07:56:10.3, 38°.85N×43°.52E, h7^{km}, ML2.4/7*

ISC 14 07:56:10.4±1.0**, 38°.82N**±0°.04×**43°.53E**±0°.04**, h11^{km}**±9^{km}**, n14, σ0^{s}.50**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VMUR	Van-Muradiye	0.17	10	*i* P	Pg	07 56 14.0	-0.3
VMUR				*i* S	Sg	07 56 17.6	+0.5
CLDR	Caldiran	0.44	43	PG	Pg	07 56 18.9	-0.3
CLDR				SG	Sg	07 56 25.8	+0.7
CLDR	Caldiran	0.44	43	*i* P	Pg	07 56 18.4	-0.8
CLDR				*i* S	Sb	07 56 26.3	-0.7
CLDR				IAML_P			
	comp=Z,6μm,0.1s						
GEVA	Gevas	0.63	216	*i* P	Pb	07 56 23.0	-0.5
ADCV	BITLIS_Adilcev	0.63	269	*i* P	Pg	07 56 22.7	0.0
AKDM	Akdamar-Van	0.66	222	PG	Pb	07 56 23.7	-0.2
AKDM				SG	Sb	07 56 33.5	+0.4
DYDN	Diyadin	0.73	10	*i* P	Pg	07 56 24.6	-0.1
DYDN				*i* S	Sb	07 56 35.3	-0.2
DYDN				IAML_P			
	comp=Z,2μm,0.1s						
TUTA	Tutak	0.81	316	*i* P	Pg	07 56 25.5	-0.6
BASK	Baskale_VAN	0.85	154	*i* P	Pg	07 56 26.4	-0.5
BASK				IAML_P			
	comp=Z,2μm,0.2s						
AGRB	Hanur-Agry	0.86	331	PG	Pg	07 56 26.6	-0.5
AGRB				SG	Sb	07 56 39.0	-0.2
GURO	Guroymak-BITLI	1.21	258	PN	Pg	07 56 33.1	-0.5
TASB	TASBURUN-IGDIR	1.28	25	PN	Pg	07 56 34.9	-0.2
CUKT	Cukurca	1.57	178	PN	Pb	07 56 39.6	+0.1
GNI	Garni	1.62	35	PN	Pn	07 56 39.7	+0.6

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*KRNET **14** 08:07:00.8±0.1, 41°.60N×78°.07E, h29^{km}, mb1.8*
*NNC **14** 08:07:03.2±3.9, 41°.91N×78°.37E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=27.2km s-min=25.2km az=166.0, Suspected Mining explosion.*

ISC 14 08:06:59.7±2.1**, 41°.55N**±0°.09×**78°.04E**±0°.07**, h0^{km}, n11, σ0^{s}.84**/19**, 13C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TARG	Taragay, Kyrgy	0.25	315	⇑*i*P	Pb	08 07 07.0	-0.5
	baz=2.0						
TARG				⇑*i*S	Sb	08 07 11.3	-1.3
	baz=2.0						
KDJ	Kajisay	0.87	312	⇑*i*P	Pb	08 07 17.4	-0.4
	baz=9.0						
KDJ				⇑*i*S	Sg	08 07 28.5	+0.9
	baz=9.0						
PRZ	Przheval'sk	0.97	16	⇑*i*P	Pg	08 07 18.2	-0.1
	baz=16						
PRZ				⇑*i*S	Sg	08 07 29.9	-1.0
	baz=16						
ULHL	Ulahol	1.51	298	⇑*i*P	Pb	08 07 28.8	0.0
	baz=96						
ULHL				⇑*i*S	Sg	08 07 47.5	-0.9
	baz=96						
NRN	Naryn	1.54	266	⇑*i*P	Pg	08 07 28.9	-0.4
	baz=64						
NRN				⇑*i*S	Sb	08 07 49.5	0.0
	baz=64						
IZV	Izvestkoviy	1.82	325	P	Pn	08 07 33.1	+0.5
	1.7nm,0.2s						
IZV				S	Sb	08 07 57.2	-0.3
	2.6nm,0.2s						
BOOM	Boomskoye usch	1.83	302	⇑*i*P	Pn	08 07 32.8	+0.2
	baz=0.0						
BOOM				⇑*i*S	Sn	08 07 55.8	-0.7
	baz=0.0						
TKM2	Tokmak 2	2.27	308	⇓Pn	Pg	08 07 44.5	+1.1
	0.5nm,0.2s						
TKM2				⇑Sn	Sg	08 08 13.2	+0.4
	1.3nm,0.4s						
KTBS	Karatobe	2.38	335	Pg	Pb	08 07 42.8	-0.8
	2.1nm,0.3s						
KTBS				Lg	Lg	08 08 14.0	
	3.1nm,0.2s						
DGS	Degeres	2.38	316	Pg	Pb	08 07 43.7	+0.1
	1.8nm,0.4s						
DGS				Lg	Lg	08 08 16.0	
	3.7nm,0.3s						
ARXS	Arharly	2.67	357	Pg	Pn	08 07 45.9	+1.9
	4.2nm,0.3s						
ARXS				Lg	Lg	08 08 19.2	
	5.8nm,0.4s						

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*IDC **14** 08:13:45.8±3.9, 18°.60N×105°.00W, h0^{km}, mb3.4/5, mb1 3.7/7, mb1mx3.6/33, mbtmp3.4/7, ML3.1/2, MS2.6/4, Ms1 2.6/4, ms1mx2.5/23, Error ellipse: s-maj=84.8km s-min=36.8km az=32.0*
*ISCJB **14** 08:13:48.0±1.0, 18°.76N±0°.07×104°.84W±0°.05, h20^{km}, mb3.3/5, MS4.0/1, Error ellipse: s-maj=10.3km s-min=6.1km az=17.7*
*MEX **14** 08:13:48.9±0.9, 18°.67N×104°.94W, h18^{km}±43^{km}, MD4.1*

ISC 14 08:13:50.7±1.5**, 19°.0N**±0°.1×**104°.79W**±0°.06**, h20^{km}, n17, σ1^{s}.49**/17**, mb3.2**/5**, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CJM	Chamela	0.58	336	*i* P	Pb	08 14 02.2	0.0
CJM				*e*S	Sb	08 14 11.7	+1.7
R15V		0.79	75	*e*P	Pb	08 14 04.8	-1.1
R15V				*e*S	Sn	08 14 17.7	-0.4
EZ5V		1.23	66	*e*P	Pb	08 14 12.7	-0.8
EZ5V				*e*S	Sn	08 14 30.0	+0.7
ANIG	Ahuacatlan	2.09	7	*e*P	Pn	08 14 25.8	+1.0
ANIG				*i* S	Sb	08 14 52.7	-0.9
MOIG	Morelia	3.48	78	*e*P	Pn	08 14 42.9	-1.0
MOIG				*e*S	Sn	08 15 24.7	+0.1
H06E1	SOCORRO T-PHAS	5.81	269	T	T	08 21 06.5	
	SNR=6.2						
H06S1	SOCORRO T	5.84	269	T	T	08 21 13.6	
	SNR=4.0						
LPIG	La Paz	7.24	316	Sn	Sn	08 16 52.7	-4.3
	4.2nm,0.3s,baz=58,slow=1.1,SNR=5.2						
LPIG				LR	LR	08 17 02.8	
	comp=Z,14nm,20.3s,baz=72,slow=27						
CMIG	Matias Romero	9.61	100	Pn	Pn	08 16 08.2	+0.2
	0.3nm,0.3s,baz=276,slow=13,SNR=4.8						
CMIG				LR	LR	08 20 04.4	
	comp=Z,98nm,21.0s,baz=282,slow=39						
TXAR	Lajitas Array	10.37	5	Pn	Pn	08 16 24.0	+5.5
	0.0nm,0.3s,baz=187,slow=13,SNR=5.2						
TXAR				LR	LR	08 20 18.5	
	comp=Z,29nm,20.0s,baz=0.0,slow=36						
APG	El Apazote	14.26	104	LR	LR	08 22 32.1	
	comp=Z,43nm,19.3s,baz=297,slow=37						
NVAR	Mina Array Bea	22.68	332	P	P	08 18 52.4	+1.2
	0.4nm,0.6s,baz=158,slow=12,SNR=4.2						
PDAR	Pinedale Array	24.06	351	P	P	08 19 06.3	+1.3
	0.3nm,0.6s,baz=155,slow=13,SNR=3.6						
YKA	Yellowknife Ar	44.02	353	P	P	08 21 56.4	-0.2
	1.3nm,0.8s,baz=164,slow=7.6,SNR=18						
INK	Inuvik	52.52	347	P	P	08 23 02.3	+0.2
	1.0nm,0.5s,baz=135,slow=6.8,SNR=13						
ILAR	Eielson Array	53.64	339	P	P	08 23 11.1	+0.6
	0.2nm,0.7s,baz=163,slow=5.9,SNR=3.4						
LVC	Limon Verde	54.20	138	LR	LR	08 41 42.7	
	comp=Z,135nm,19.3s,baz=182,slow=31						

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*HLW **14** 08:16:46.5, 33°.41N×27°.68E, h22^{km}±52^{km}, Md3.8, Ml3.7*

ISC 14 08:16:44.3±3.7**, 33°.3N**±0°.3×**27°.6E**±0°.1**, h10^{km}, n15, σ1^{s}.65**/14**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SLUM	Salum	2.69	230	P	Pn	08 17 28.3	+0.6
	baz=229						
SLUM				S	Sn	08 17 58.8	-1.6
	baz=229						
SLUM				AMP		08 18 00.0	
	baz=229						
HBRG	Burj al `Arab	3.26	144	P	Pn	08 17 36.6	+1.1
	baz=146						
SWA2		4.41	206	P	Pn	08 17 52.7	+1.5
	baz=206						
SWA2				AMP		08 18 00.0	
	baz=206						
SWA2				S	Sn	08 18 40.1	-2.6
	baz=206						
HNAT	Natroun	4.42	144	P	Pn	08 17 52.4	+0.9
	baz=145						
HNAT				AMP		08 18 00.0	
	baz=145						
HHAG	Hagoal	5.03	130	P	Pn	08 17 58.9	-1.1
	baz=131						
HHAG				AMP		08 18 00.0	
	baz=131						
GLL	Jalalah	5.05	135	P	Pn	08 17 59.5	-0.7
	baz=136						
NBNS	Bani Suef	5.58	145	P	Pn	08 18 08.8	+1.3
	baz=146						
HFRF	Wahat Farafira	6.11	174	P	Pn	08 18 16.0	+1.4
	baz=174						
GHAJ	Ghor Haditha	7.00	104	P	Pn	08 18 38.4	+12
WALJ	Wala	7.12	101	P	Pb	08 18 43.1	-5.0
AQBJ	Aqaba	7.24	117	P	Pb	08 18 50.1	-0.1
JDRJ	Daraweish	7.27	108	P	Pn	08 18 31.1	+0.3
HSNJ	Maan	7.48	111	P	Pn	08 18 36.4	+2.7
HDK1	Dakhla	7.83	168	P	Pn	08 18 40.3	+1.9
	baz=168						
ASF	Jabal al Asfar	7.88	95	P	Pb	08 18 54.9	-6.2

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*NNC **14** 08:22:30.7±2.5, 53°.46N×87°.49E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=19.4km s-min=15.7km az=16.0, Suspected Mining explosion.*

KRAR 14 08:22:26.4±0.4**, 53°.63N×87°.77E, M2.5, 9C-3D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KURK	Kurchatov	6.34	246	⇑Pn	Pn	08 24 02.1	+1.1
	3.5nm,0.7s						
KURK				⇑Sn	Sn	08 25 14.1	0.0
	2.7nm,0.5s						
KURK				⇑Lg	Lg	08 25 47.6	
	14nm,0.9s						
KURBB	Kurchatov Arra	6.44	246	⇑Pn	Pn	08 24 04.0	+1.7
	5.5nm,0.6s						
KURBB				⇑Sn	Sn	08 25 15.1	-1.3
	7.3nm,0.6s						
KURBB				⇑Lg	Lg	08 25 54.0	
	13nm,0.6s						
MK31	Makanchi Array	7.69	209	⇑Pn	Pn	08 24 21.3	+1.7
	0.2nm,0.3s,baz=28,slow=13,SNR=22						
MK31				⇓Sn	Sn	08 25 46.8	-0.6
	1.0nm,0.7s,baz=29,slow=26,SNR=2.6						
MK31				⇓Lg	Lg	08 26 27.1	
	5.1nm,0.8s,baz=36,slow=32,SNR=5.1						
MAKZ	Makanchi	7.77	211	⇑Pn	Pn	08 24 22.1	+1.4
	0.7nm,0.5s						
MAKZ				⇑Sn	Sn	08 25 49.5	+0.1
	2.3nm,0.8s						
MAKZ				⇓Lg	Lg	08 26 29.4	
	3.8nm,0.9s						

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*DDA **14** 08:26:22.4, 37°.27N×42°.19E, h7^{km}±6^{km}, ML2.6*
*ISCJB **14** 08:26:23.7±1.5, 37°.4N±0°.1×42°.17E±0°.08, h10^{km}, Error ellipse: s-maj=17.0km s-min=7.8km az=162.7*
*ISK **14** 08:26:28.4, 37°.78N×41°.72E, h6^{km}, ML2.3/5*

ISC 14 08:26:24.0±1.3**, 37°.42N**±0°.08×**42°.12E**±0°.06**, h10^{km}, n10, σ2^{s}.52**/11**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SIRN	Sırnak	0.24	71	*i* P	Pg	08 26 29.0	0.0
SIRN				IAML_P			
	comp=Z,2μm,0.1s						
SIRT	Sirnak	0.26	72	PG	Pn	08 26 41.1	+7.0
SIRT				SG	Sb	08 26 50.4	+15
SRTM	Siirt_Merkez	0.59	344	*i* P	Pg	08 26 37.0	+1.4
BTMN	Batman	0.83	305	*i* P	Pn	08 26 50.7	+8.9
BTMN				IAML_P			
	comp=Z,476nm,0.4s						
MARD	Mardin	1.08	265	*i* P	Pn	08 26 45.4	+0.1
MARD				*i* S	Sn	08 26 59.4	-0.9
MARD				IAML_P			
	comp=Z,659nm,0.1s						
AKDM	Akdamar-Van	1.13	36	PN	Pg	08 26 50.4	+4.6
GURO	Guroymak-BITLI	1.13	356	PG	Pn	08 26 44.5	-1.6
GURO				SG	Sb	08 26 56.2	-4.4
MAZI	Mazidag	1.34	272	PG	Pb	08 26 48.9	-0.3
HANI	Diyarbakir_Han	1.69	307	*i* P	Pn	08 26 54.7	+1.0
HANI				*i* S	Sn	08 27 17.1	+1.7
PTK	Pertek	2.61	305	PN	Pn	08 27 05.6	-0.8

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*ISCJB **14** 08:40:15.3±0.2, 25°.05S±0°.01×68°.47W±0°.04, h121^{km}±3^{km}, mb4.1/19, Error ellipse: s-maj=5.4km s-min=2.3km az=170.1*
*SJA **14** 08:40:15.5±0.9, 25°.05S×68°.50W, h127^{km}±12^{km}, ML4.1, MW3.6*
*NEIC **14** 08:40:15.1±0.5, 25°.09S×68°.33W, h100^{km}±6^{km}, mb4.1/14, Error ellipse: s-maj=10.8km s-min=5.5km az=86.0*
*IDC **14** 08:40:16.8±2.9, 24°.97S×68°.17W, h105^{km}±20^{km}, mb3.7/8, mb1 4.0/12, mb1mx3.8/30, mbtmp4.1/12, Error ellipse: s-maj=32.9km s-min=16.2km az=31.0*
*GUC **14** 08:40:16.7±0.5, 24°.98S×68°.61W, h123^{km}±6^{km}, ML4.7*

ISC 14 08:40:15.7±0.7**, 25°.03S**±0°.03×**68°.43W**±0°.04**, h106^{km}**±7^{km}**, n100, σ1^{s}.62**/139**, mb4.0**/19**, 2C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GO02	Mina Guanaco	1.06	263	*e*Pn	Pn	08 40 39.3	+1.7
GO02				*e*Sn	Sn	08 40 56.9	+2.8
GO02	Mina Guanaco	1.06	263	*e*P	Pn	08 40 39.3	+1.7
GO02				*e*S	Sn	08 40 56.1	+2.1
GO02				IAML		08 40 56.9	
	comp=E,10μm,0.2s						
PB14	IPOC Station P	1.84	282	*e*P	Pn	08 40 47.7	+0.9
PB14	IPOC Station P	1.84	282	⇓*e*P	Pn	08 40 47.6	+0.9
PB14				*e*S	Sn	08 41 11.0	+0.6
PB15	IPOC Station P	2.05	332	*e*P	Pn	08 40 50.8	+1.4
PB15	IPOC Station P	2.05	332	⇑*e*P	Pn	08 40 50.7	+1.3
PB15				*e*S	Sn	08 41 16.9	+1.8
LVC	Limon Verde	2.45	350	*e*Pn	Pn	08 40 56.5	+1.7
LVC				*e*Sn	Sn	08 41 23.3	-1.4
LVC	Limon Verde	2.45	350	*e*P	Pn	08 40 56.2	+1.4
LVC				*e*S	Sn	08 41 26.9	+2.2
LVC	Limon Verde	2.45	350	P	Pn	08 40 56.4	+1.7
	comp=E,73nm,0.3s,baz=166,slow=9.6,SNR=459						
LVC				S	Sn	08 41 25.8	+1.2
	comp=E,68nm,0.3s,baz=173,slow=14,SNR=8.7						
PB10	IPOC Station P	2.46	308	*e*Pn	Pn	08 40 55.8	+1.3
PB10				*e*Sn	Sn	08 41 26.1	+1.8
PB06	IPOC Station P	2.54	335	*e*P	Pn	08 40 56.8	+1.0
PB06				*e*S	Sn	08 41 27.8	+1.3
PB06	IPOC Station P	2.54	335	⇑*e*P	Pn	08 40 56.7	+1.0
PB06				*e*S	Sn	08 41 27.7	+1.3
PB06				IAML		08 41 28.9	
	comp=N,4μm,0.2s						
SLA	San Lorenzo	2.68	84	⇓*i*P	Pn	08 41 00.5	+3.0
SLA				*i* S	Sn	08 41 33.1	+3.5
PB05	IPOC Station P	2.71	323	*e*P	Pn	08 40 59.2	+1.2
PB05				*e*S	Sn	08 41 31.4	+1.1
PB05	IPOC Station P	2.71	323	⇓*e*P	Pn	08 40 59.1	+1.2
PB05				*e*S	Sn	08 41 31.0	+0.7
PB05				IAML		08 41 37.7	
	comp=E,3μm,0.2s						
GO03	Copiap	3.02	212	*e*Pn	Pn	08 41 02.6	+0.6
GO03				*e*Sn	Sn	08 41 37.8	+0.2
GO03	Copiap	3.02	212	*e*P	Pn	08 41 02.6	+0.6
GO03				*e*S	Sn	08 41 37.8	+0.2
PB04	IPOC Station P	3.11	329	*e*Pn	Pn	08 41 03.9	+0.6
PB04				*e*Sn	Sn	08 41 35.5	-4.6
PB04	IPOC Station P	3.11	329	*e*P	Pn	08 41 03.9	+0.6
PB04				*e*S	Sn	08 41 40.3	+0.3
PB04	IPOC Station P	3.11	329	⇓*e*P	Pn	08 41 03.9	+0.6
PB04				*e*S	Sn	08 41 40.0	0.0
PB04				IAML		08 41 52.4	
	comp=N,3μm,0.5s						
PB03	IPOC Station P	3.21	338	*e*P	Pn	08 41 05.4	+0.8
PB03				*e*S	Sn	08 41 42.5	+0.3
AHML	Horco Molle	3.29	123	*i* P	Pn	08 41 07.6	+2.0

HJA	Humahuaca	3.31	57	*i* P	Pn	08 41 08.9	+2.8
HJA				IAML		08 41 10.1	
	comp=Z,194nm,0.6s						
PB09	IPOC Station P	3.31	347	*e*P	Pn	08 41 07.7	+1.8
PB09				*e*S	Sn	08 41 45.9	+1.3
PB09	IPOC Station P	3.31	347	⇓*e*P	Pn	08 41 07.7	+1.8
PB09				*e*S	Sn	08 41 46.2	+1.6
PB07	IPOC Station P	3.55	338	*e*P	Pn	08 41 09.6	+0.4
YJA	Yavi	3.90	44	*i* P	Pn	08 41 17.0	+2.9
YJA				IAML		08 41 18.6	
	comp=Z,47nm,0.4s						
PB02	IPOC Station P	3.93	340	*e*P	Pn	08 41 14.4	+0.1
PB02				*e*S	Sn	08 42 02.1	+2.6
PB01	IPOC Station P	4.09	346	*e*Pn	Pn	08 41 16.7	+0.4
PB01				*e*Sn	Sn	08 42 02.7	-0.6
PB01	IPOC Station P	4.09	346	*e*P	Pn	08 41 16.6	+0.4
PB01				*e*S	Sn	08 42 03.4	+0.1
CYA	Choya	4.13	146	*i* P	Pn	08 41 17.4	+0.6
CYA				IAML		08 41 19.2	
	comp=Z,53nm,0.5s						
CYA				*e*S	Sn	08 42 06.0	+1.9
AGUA	GUANDACOL	4.44	181	*e*P	Pn	08 41 22.7	+1.7
AGUA				*e*S	Sn	08 42 13.4	+1.8
LCO	Las Campanas	4.45	207	*e*Pn	Pn	08 41 20.9	-0.4
LCO				*e*Sn	Sn	08 42 15.0	+2.8
LCO	Las Campanas	4.45	207	*e*P	Pn	08 41 20.9	-0.4
LCO				*e*S	Sn	08 42 18.5	+6.3
ACLC	CERRO LA CRUZ	4.57	164	*e*P	Pn	08 41 24.5	+1.6
ACLC				*e*S	Sn	08 42 16.3	+1.3
PB08	IPOC Station P	4.91	352	*e*P	Pn	08 41 27.9	+0.1
PB08				*e*S	Sn	08 42 23.6	-0.1
ACDV	Cuesta del Vie	5.16	187	*e*P	Pn	08 41 32.2	+1.4
ACDV				*e*S	Sn	08 42 33.9	+4.7
AROD	Rodeo	5.20	190	*e*P	Pn	08 41 33.0	+1.5
PB11	IPOC Station P	5.37	348	*e*Pn	Pn	08 41 32.3	-1.4
PB11				*e*Sn	Sn	08 42 34.1	-0.3
PB11	IPOC Station P	5.37	348	*e*P	Pn	08 41 32.5	-1.2
PB11				*e*S	Sn	08 42 33.7	-0.6
GO04	Tololo Observa	5.54	202	*e*Pn	Pn	08 41 34.2	-1.7
GO04	Tololo Observa	5.54	202	*e*P	Pn	08 41 34.6	-1.4
ACCO	Cerro Coronel	5.56	186	*e*P	Pn	08 41 37.5	+1.1
ACCO				*e*S	Sn	08 42 41.7	+2.5
APLL	PUNTA DE LOS L	5.60	163	*i* P	Pn	08 41 37.4	+0.7
APLL				IAML		08 41 38.5	
	comp=Z,28nm,0.4s						
APLL				*e*S	Sn	08 42 39.8	0.0
PSGCX	Pisagua	5.63	344	*e*P	Pn	08 41 34.8	-2.4
AMOG	MOGNA	5.88	181	*e*P	Pn	08 41 40.7	+0.2
AMOG				*e*S	Sn	08 42 44.9	-1.8
MNMC	Minye Minye	5.97	349	*e*Pn	Pn	08 41 39.7	-2.2
MNMC				*e*Sn	Sn	08 42 47.2	-2.0
MNMCX	Minye Minye	5.97	349	*e*P	Pn	08 41 41.0	-1.0
MNMCX				*e*S	Sn	08 42 46.4	-2.8
RTLL	Cerro Villicun	6.27	180	*e*P	Pn	08 41 46.1	+0.3
RTLL				IAML		08 41 47.6	
	comp=Z,262nm,0.3s						
SJA	San Juan	6.47	181	IAML		08 41 49.9	
	comp=Z,92nm,0.3s						
CFA	Coronel Fontan	6.55	179	*e*P	Pn	08 41 49.4	-0.1
CFA				*e*S	Sn	08 42 59.0	-3.8
PB12	IPOC Station P	6.62	344	*e*P	Pn	08 41 48.0	-2.7
RTLS	Leoncito	6.79	186	*e*P	Pn	08 41 52.9	-0.1
RTLS				IAML		08 41 53.5	
	comp=Z,114nm,0.3s						
RTCV	Cerro Valdivia	6.81	181	*e*P	Pn	08 41 53.1	+0.1
AUSP	Uspallata	7.21	186	*e*P	Pn	08 41 58.6	-0.1
ACAN	Cantantal	7.30	172	*e*P	Pn	08 41 59.3	-0.4
ASAL	Salagasta	7.54	183	*e*P	Pn	08 42 02.7	-0.3
MRA	San Martin	7.74	163	*e*P	Pn	08 42 05.5	-0.1
MRA				IAML		08 42 08.0	
	comp=Z,17nm,0.3s						
ARCO	CERRO ARCO	7.79	183	*e*P	Pn	08 42 06.0	-0.5
ARCO				IAML		08 42 09.8	
	comp=Z,58nm,0.3s						
AAGR	Agrelo	8.03	182	*e*P	Pn	08 42 09.2	-0.5
ROC1	El Roble	8.23	195	*e*Pn	Pn	08 42 08.6	-3.9
ROC1				*e*Sn	Sn	08 43 42.0	-2.0
ROC1	El Roble	8.23	195	*e*P	Pn	08 42 09.7	-2.9
PEL	Peldehue	8.32	193	*e*Pn	Pn	08 42 11.3	-2.3
PEL				*e*Sn	Sn	08 43 45.1	-0.7
LPAZ	La Paz	8.71	2	*e*Pn	Pn	08 42 19.4	-0.1
LPAZ				*e*Sn	Sn	08 43 55.7	-0.4
LPAZ	La Paz	8.71	2	*e*P	Pn	08 42 19.2	-0.2
LPAZ	La Paz	8.71	2	P	Pn	08 42 19.4	-0.1
	comp=Z,3.6nm,0.3s,baz=167,slow=6.3,SNR=105						
CPUP	Villa Florida	10.10	100	P	Pn	08 42 35.6	-2.1
	comp=Z,0.4nm,0.3s,baz=270,slow=12,SNR=7.5						
SIV	San Ignacio	11.33	39	P	Pn	08 42 50.9	-3.6
	comp=Z,5.4nm,0.3s,baz=255,slow=11,SNR=102						
TRQA	Tornquist	14.10	159	*e*Pn	Pn	08 43 30.0	-0.6
GO06	Curarrehue	14.73	189	*e*Pn	Pn	08 43 37.6	-1.3
NNA	Nana	15.22	327	*e*Pn	Pn	08 43 45.4	+0.3
	comp=Z,5.2nm,0.7s						
PLCA	Paso Flores	15.76	186	*e*Pn	Pn	08 43 51.0	-0.7
	comp=Z,5.8nm,1.0s						
BDFB	Brasilia	21.28	68	*e*P	P	08 44 55.2	+1.3
	comp=Z,2.6nm,0.6s						
BDFB	Brasilia	21.28	68	P	P	08 44 52.5	-1.5
	comp=Z,2.3nm,0.4s,baz=238,slow=9.9,SNR=4.7						
PTGA	Pitinga	25.51	20	*e*P	P	08 45 35.1	+0.7
	comp=Z,4.3nm,0.6s						
PTGA	Pitinga	25.51	20	P	P	08 45 34.7	+0.3
	comp=Z,6.0nm,0.6s,baz=317,slow=22,SNR=14						
OBIP	Obispado Ponce	42.85	3	*e*P	P	08 48 02.6	-0.9
	comp=Z,13nm,1.1s						
CCIG	Comitan	47.12	328	*e*P	P	08 48 38.7	+1.2
	comp=Z,3.2nm,0.7s						
TEIG	Tepich	48.95	335	*e*P	P	08 48 52.6	+1.2
	comp=Z,11nm,1.0s						
LNIG	Linares	58.01	326	*e*P	P	08 49 57.6	0.0
	comp=Z,3.0nm,0.6s						
SNAA	Sanae	58.82	160	*e*P	P	08 50 01.8	-0.8
SACV	Santiago Islan	59.08	53	*e*P	P	08 50 04.5	-0.7
	comp=Z,28nm,1.1s						
TZTN	Tazewell	62.88	346	*e*P	P	08 50 30.3	-0.2
	comp=Z,2.2nm,0.8s						
WVT	Waverly	63.53	343	*e*P	P	08 50 35.0	+0.3
X40A	Basin Creek Fa	63.56	338	*e*P	P	08 50 34.6	-0.3
	comp=Z,0.9nm,0.4s						
TXAR	Lajitas Array	63.78	326	P	P	08 50 38.1	+1.4
	comp=Z,0.6nm,0.6s,baz=155,slow=7.0,SNR=10						
TX31	Lajitas Ar. Si	63.78	326	*e*P	P	08 50 37.5	+0.9
	comp=Z,0.7nm,0.6s						
MNTX	Cornudas Mount	66.55	326	*e*P	P	08 50 55.2	+0.8
	comp=Z,1.9nm,0.9s						
W13A	Hualapai Mount	73.69	322	*e*P	P	08 51 40.7	+2.5
	comp=Z,1.6nm,0.8s						
PDAR	Pinedale Array	77.38	330	P	P	08 52 00.7	+1.5
	comp=Z,0.3nm,0.6s,baz=126,slow=7.5,SNR=3.8						
TORD	Torodi Ar. Bea	78.15	69	P	P	08 52 03.6	-0.2
	comp=Z,0.5nm,0.5s,baz=262,slow=4.7,SNR=8.1						
NVAR	Mina Array Bea	78.54	322	P	P	08 52 07.5	+1.8
	comp=Z,0.2nm,0.2s,baz=168,slow=9.2,SNR=6.8						
ULM	Lac du Bonnet	78.80	342	P	P	08 52 06.9	+0.4
	comp=Z,1.2nm,0.5s,baz=202,slow=4.3,SNR=3.1						
PNTR	Pine Nut	79.72	322	*e*P	P	08 52 13.6	+1.4
	comp=Z,4.7nm,0.9s						
YKA	Yellowknife Ar	94.65	340	P	P	08 53 25.1	+0.9
	comp=Z,0.9nm,0.6s,baz=137,slow=4.4,SNR=20						
ASAR	Alice Springs	126.97	206	PKP	PKiKP	08 59 08.9	+0.4
	comp=Z,0.3nm,0.8s,baz=151,slow=2.1,SNR=3.6						
WRA	Warramunga Arr	130.11	208	PKP	PKiKP	08 59 15.1	+0.3
	comp=Z,0.2nm,0.8s,baz=159,slow=1.7,SNR=4.5						
KURBB	Kurchatov Arra	143.98	36	PKP	PKPdf	08 59 38.2	-0.2
	comp=Z,0.1nm,0.3s,baz=295,slow=3.3,SNR=4.9						
ZALV	Zalesovo Beam	144.91	28	PKP	PKPdf	08 59 40.9	+0.9
	comp=Z,5.4nm,0.6s,baz=300,slow=4.0,SNR=24						
MKAR	Makanchi Array	148.15	40	PKPbc	PKiKP	08 59 50.2	-0.5
	comp=Z,1.1nm,0.6s,baz=304,slow=2.8,SNR=12						
MKAR				pPKPbc	pPKPab	09 00 21.4	-0.5
	comp=Z,0.4nm,0.6s,baz=290,slow=3.2,SNR=3.0						

IGQ 14 08:40:48.2±1.1, 3°S±14°×7°7W±1°6, h9^{km}, MLv3.7, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUYO	Puyo, Santa Ro	2.08	328	P	Pn	08 41 21.0	-2.5
PUYO				S	Sn	08 41 46.4	-3.2
BPAT	Tungurahua Vol	2.32	319	P	Pn	08 41 24.5	-2.5
BPAT				S	Sn	08 41 52.7	-3.2
PAT1	Patacocha	2.32	319	P	Pn	08 41 24.3	-2.7
ARRY	Arrayan	2.33	319	P	Pn	08 41 24.4	-2.7
BMAS	Trigal station	2.35	319	P	Pn	08 41 24.4	-2.9
BMAS				S	Sn	08 41 53.1	-3.4
BULB	Ulba Tungurahu	2.35	321	P	Pn	08 41 24.4	-3.0
BULB				S	Sn	08 41 54.0	-2.7
BRUN	Tungurahua Vol	2.37	321	P	Pn	08 41 25.6	-1.9
POND	Pondoa	2.39	320	P	Pn	08 41 25.0	-2.9
POND				S	Sn	08 41 54.4	-3.1
BIL2	Estacion Bilba	2.40	319	P	Pn	08 41 24.4	-3.5
ARDO	Archidona, Ten	2.43	339	P	Pn	08 41 25.5	-2.7
ARDO				S	Sn	08 41 54.9	-3.2
COHC	Cochancay	2.46	289	P	Pn	08 41 27.3	-1.2
COHC				S	Sn	08 41 56.0	-2.7
PIS1	Pisayambo	2.64	326	P	Pn	08 41 30.5	-1.0
PIS1				S	Sn	08 42 01.5	-2.5
MILO	Milagro-Astudi	2.81	291	P	Pn	08 41 31.2	-2.1
ANTS	Antisana-Sarah	3.03	336	P	Pn	08 41 35.1	-1.8
MCRA	Macar, Loja	3.21	250	P	Pn	08 41 32.6	-6.3

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*SOME **14** 08:41:46.7, 40°.32N×77°.55E, h10^{km}*

*NNC **14** 08:41:47.3±2.3, 40°.37N×77°.56E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=15.8km s-min=9.9km az=175.0*

*KRNET **14** 08:41:55.0±0.1, 40°.51N×77°.31E, h35^{km}, mb2.1*

ISC 14 08:41:49.2±3.0, 40°.4N±0°.1×77°.46E±0°.07, h16^{km}±16^{km}, n17, σ1^{s}.30/26, 8C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.50	313	⇑*i*P	Pg	08 42 19.9	+1.8
	baz=12						
NRN				⇑*i*S	Sg	08 42 38.2	+0.6
	baz=12						
KDJ	Kajisay	1.72	353	⇑*i*P	Pg	08 42 24.4	+2.2
	baz=57						
KDJ				⇑*i*S	Sg	08 42 45.6	+1.0
	baz=57						
ULHL	Ulahol	2.04	334	⇓*i*P	Pg	08 42 28.3	-0.1
	baz=36						
ULHL				⇓*i*S	Sb	08 42 52.9	+1.6
	baz=36						
KZA	Kyzart	2.35	315	⇓*e*P	Pg	08 42 32.8	-1.5
	baz=16						
KZA				⇓*i*S	Sb	08 43 00.2	-0.2
	baz=16						
BOOM	Boomskoye usch	2.36	331	⇑*e*P	Pg	08 42 32.9	-1.6
	baz=33						
BOOM				⇑*i*S	Sb	08 43 00.4	-0.1
	baz=33						
TNSS	Tian-Shan	2.64	352	*e*P	Pb	08 42 36.6	+0.2
	1.4nm,0.3s						
TNSS				*e*S	Sg	08 43 12.6	-1.5
	6.3nm,0.5s						
MDOK	Medeo	2.75	354	⇓Pg	Pg	08 42 40.3	-1.7
	2.0nm,0.5s						
MDOK				Lg	Lg	08 43 17.4	
	6.2nm,0.6s						
MDOK	Medeo	2.75	354	*e*P	Pb	08 42 39.0	+0.8
	0.6nm,0.3s						
MDOK				*e*S	Sg	08 43 16.8	-1.0
	7.1nm,0.7s						
KST	Kastek	2.85	337	Pg	Pb	08 42 41.3	+1.5
	1.9nm,0.4s						
KST				Lg	Lg	08 43 21.3	
	4.3nm,0.6s						
KST	Kastek	2.85	337	*e*P	Pb	08 42 41.0	+1.2
	1.0nm,0.3s						
KST				*e*S	Sg	08 43 20.0	-0.8
	5.6nm,0.7s						
TKM2	Tokmak 2	2.86	331	⇓Pg	Pg	08 42 42.4	-1.6
	0.4nm,0.3s						
TKM2				⇓Lg	Lg	08 43 21.2	
	4.8nm,0.7s						
UZB	Uzynbulak	2.96	23	Pg	Pb	08 42 42.0	+0.3
	0.5nm,0.3s						
UZB				Lg	Lg	08 43 22.0	
	2.4nm,0.7s						
DGS	Degeres	3.09	336	Pg	Pb	08 42 45.1	+1.3
	1.7nm,0.6s						
DGS				Lg	Lg	08 43 27.4	
	4.0nm,0.4s						
DGS	Degeres	3.09	336	*e*P	Pb	08 42 45.1	+1.3
	0.7nm,0.3s						
DGS				*e*S	Sg	08 43 27.1	-1.2
	3.9nm,0.4s						
AAK	Ala-Archa	3.14	316	⇓Pg	Pb	08 42 43.6	-1.1
	0.7nm,0.5s						
AAK				⇓Lg	Lg	08 43 28.9	
	2.7nm,0.7s						
PDGK	Podgornoye	3.27	27	Pg	Pb	08 42 46.4	-0.6
	0.6nm,0.4s						
PDGK				Lg	Lg	08 43 29.4	
	1.3nm,0.6s						
PDGK	Podgornoye	3.27	27	⇑Pg	Pb	08 42 47.6	+0.6
	0.4nm,0.4s						
PDGK				⇑Lg	Lg	08 43 30.8	
	2.2nm,0.7s						

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*IDC **14** 08:48:20.5±0.8, 78°.20N×7°.55E, h0^{km}, mb3.4/7, mb1 3.7/10, mb1mx3.4/46, mbtmp3.5/10, ML2.7/3, MS3.1/14, Ms1 3.1/14, ms1mx2.9/44, Error ellipse: s-maj=18.4km s-min=12.0km az=15.0*

*NAO **14** 08:48:22.8±2.8, 78°.17N×8°.62E, h5^{km}±14^{km}, ML2.9*

*BER **14** 08:48:23.3±2.6, 78°.12N×8°.47E, h6^{km}±12^{km}, ML2.7, ML2.9(NAO), Confirmed Earthquake*

*IEPN **14** 08:48:23.0, 78°.24N×8°.37E, h15^{km}, station ZFI2 has station magnitude of 3.15*

ISC 14 08:48:22.8±1.2, 78°.18N±0°.05×8°.61E±0°.05, h19^{km}±4^{km}, n41, σ2^{s}.10/45, mb3.5/7, MS3.1/10, 2C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.00	40	Pg	Pg	08 48 41.3	-0.9
KBS				Lg	Lg	08 48 55.0	
KBS	Kingsbay	1.00	40	⇑*i*P	Pg	08 48 41.4	-0.9
KBS				*i* S	Sb	08 48 54.7	+0.5
KBS	Kingsbay	1.00	40	*e*P	Pg	08 48 41.5	-0.8
KBS				*e*S	Sg	08 48 55.0	-0.4
KBS				IAML		08 48 57.3	
	comp=Z,473nm,0.3s						
BRBA	Barentsburg A	1.17	93	Pg	Pb	08 48 44.5	+0.2
BRBA				Lg	Lg	08 49 01.2	
BRBA	Barentsburg A	1.17	93	Pg	Pb	08 48 44.5	+0.2
BRBA				Sg	Sg	08 49 01.2	+0.5
SPA0	Spitsbergen Ar	1.60	86	Pn	Pb	08 48 51.6	0.0
	baz=269,slow=14						
SPA0				Pg	Pg	08 48 52.5	-1.0
	baz=262,slow=14						
SPA0				Lg	Lg	08 49 13.9	
	baz=267,slow=22						
SPA0	Spitsbergen Ar	1.60	86	⇑*i*P	Pb	08 48 51.6	0.0
SPA0				*e*S	Sb	08 49 12.8	+1.4
SPA0	Spitsbergen Ar	1.60	86	Pn	Pb	08 48 51.6	0.0
	baz=269,slow=14						
SPA0				Pg	Pg	08 48 52.5	-1.0
	baz=262,slow=14						
SPA0				Sg	Sg	08 49 13.9	-0.5
	baz=267,slow=22						
SPITS	Spitsbergen Ar	1.60	86	Pn	Pb	08 48 51.6	0.0
	baz=260,slow=13,SNR=1005						
SPITS				Sn	Sb	08 49 13.4	+2.0
	baz=261,slow=16,SNR=20						
SPITS				LR	LR	08 49 39.9	
	comp=Z,344nm,18.3s,baz=305,slow=44						
HSP	Hornsund	1.91	125	Pn	Pn	08 48 53.7	-0.5
HSP				Sn	Sn	08 49 16.8	-0.8
HSPB	Hornsund (broa	1.91	125	*e*P	Pn	08 48 53.8	-0.4
HSPB				*e*S	Sn	08 49 17.0	-0.6
HSPB				IAML		08 49 17.7	
	comp=Z,40nm,0.4s						
HOPEN	Hopen	3.97	107	Pn	Pn	08 49 22.0	-0.5
HOPEN				Sn	Sn	08 50 07.4	-0.9
HOPEN	Hopen	3.97	107	*e*P	Pn	08 49 22.1	-0.4
HOPEN				*e*S	Sn	08 50 07.5	-0.9
HOPEN				IAML		08 50 09.3	
	comp=Z,46nm,0.4s						
BJO1	Bjornoya	4.43	141	Pn	Pn	08 49 29.6	+0.8
BJO	Bjornoya	4.46	141	Pn	Pn	08 49 29.6	+0.5
DAG	Danmarks Havn	6.06	270	*i* P	Pn	08 49 44.0	-7.1
DAG				*i* S	Sn	08 50 43.5	-16
ZFI2	Zemlya Franca-	7.46	51	*i* P	Pn	08 50 11.2	+0.9
	comp=Z,3µm,1.0s						
ZFI2				*i* S	Sn	08 51 30.7	-3.5
ARA0	ARCESS Array S	9.81	143	Pn	Pn	08 50 43.6	+1.1
	baz=325,slow=11						
ARA0				Sn	Sn	08 52 25.9	-6.0
	baz=344,slow=22						
ARA0	ARCESS Array S	9.81	143	Pn	Pn	08 50 43.6	+1.1
	baz=325,slow=11						
ARA0				Sn	Sn	08 52 25.9	-6.0
	baz=344,slow=22						
ARCES	ARCESS Array B	9.81	143	Pn	Pn	08 50 42.8	+0.2
	comp=Z,0.1nm,0.3s,baz=328,slow=12,SNR=3.8						
ARCES				Sn	Sn	08 52 25.7	-6.2
	comp=Z,0.1nm,0.3s,baz=332,slow=17,SNR=2.7						
BORG	Borgarnes	16.15	230	LR	LR	08 56 34.4	
	comp=Z,43nm,20.7s,baz=7.1,slow=31						
NOA	NORSAR Array B	17.25	176	LR	LR	08 58 22.6	
	comp=Z,22nm,18.2s,baz=315,slow=35						
FINES	FINESS Array B	17.70	152	P	P	08 52 30.6	+2.0
	comp=Z,0.1nm,0.3s,baz=356,slow=12,SNR=2.1						
FINES				LR	LR	08 59 45.9	
	comp=Z,30nm,19.9s,baz=162,slow=38						
HFS	Hagfors	18.21	172	P	P	08 52 35.1	+1.0
	comp=Z,0.1nm,0.3s,baz=349,slow=12,SNR=3.5						
SFJD	Kangerlussuaq	19.74	269	LR	LR	09 00 51.0	
	comp=Z,75nm,19.3s,baz=40,slow=38						
NRIK	Noril'sk	21.74	70	LR	LR	09 03 37.3	
	comp=Z,47nm,19.2s,baz=88,slow=42						
KIRV	Kirov	23.75	122	LR	LR	09 03 34.7	
	comp=Z,46nm,20.2s,baz=210,slow=38						
FRB	Frobisher Bay	26.26	281	LR	LR	09 04 11.7	
	comp=Z,45nm,20.4s,baz=12,slow=36						
BVAR	Borovoye Array	32.99	102	P	P	08 55 00.0	+4.1
	comp=Z,0.3nm,0.5s,baz=343,slow=9.5,SNR=2.9						
BVAR				LR	LR	09 10 47.3	
	comp=Z,84nm,18.2s,baz=22,slow=40						
MLR	Muntele Rosu	33.49	158	LR	LR	09 08 03.6	
	comp=Z,38nm,19.3s,baz=354,slow=35						
YKA	Yellowknife Ar	35.49	318	P	P	08 55 16.2	-1.2
	comp=Z,0.1nm,0.6s,baz=12,slow=8.1,SNR=3.4						
ILAR	Eielson Array	36.52	343	P	P	08 55 27.2	+1.0
	comp=Z,0.5nm,0.8s,baz=9.8,slow=7.3,SNR=5.1						
KURBB	Kurchatov Arra	36.93	95	P	P	08 55 31.9	+2.1
	comp=Z,0.4nm,0.6s,baz=343,slow=7.8,SNR=3.4						
MKAR	Makanchi Array	41.34	93	P	P	08 56 09.8	+3.0
	comp=Z,1.6nm,1.1s,baz=355,slow=5.7,SNR=5.1						
MKAR				LR	LR	09 18 32.4	
	comp=Z,15nm,18.8s,baz=346,slow=44						
AAK	Ala-Archa	43.73	103	LR	LR	09 17 04.8	
	comp=Z,27nm,18.3s,baz=330,slow=39						
GEYT	Alibeck	45.18	122	LR	LR	09 19 45.0	
	comp=Z,25nm,18.4s,baz=80,slow=42						
KSRS	Korea Array	59.19	54	LR	LR	09 24 53.6	
	comp=Z,9.2nm,19.1s,baz=345,slow=37						
TORD	Torodi Ar. Bea	65.13	187	P	P	08 59 01.5	-0.4
	comp=Z,0.3nm,0.6s,baz=346,slow=6.7,SNR=2.9						
TXAR	Lajitas Array	65.88	298	P	P	08 59 06.0	-0.7
	comp=Z,0.3nm,0.8s,baz=35,slow=5.0,SNR=4.4						
CMAR	Chiang Mai Arr	72.13	86	LR	LR	09 35 10.8	
	comp=Z,16nm,19.1s,baz=280,slow=39						
ASAR	Alice Springs	119.99	60	PKP	PKiKP	09 07 12.1	+0.8
	comp=Z,0.3nm,0.7s,baz=29,slow=2.1,SNR=5.5						

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*NNC **14** 09:00:47.7±4.8, 51°.42N×81°.84E, h0^{km}, mb3.2, mpv2.7, Error ellipse: s-maj=48.9km s-min=18.0km az=15.0, Suspected Mining explosion.*

IDC 14 09:00:48.3±1.2, 51°.46N×81°.79E, h0^{km}, mb1 2.3/3, mb1mx2.3/49, mbtmp2.3/3, ML1.6/3, 4C-3D, Error ellipse: s-maj=16.2km s-min=11.7km az=128.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.13	251	⇑Pg	Pb	09 01 26.6	-1.1
	3.4nm,0.4s						
KURK				⇓Lg	Lg	09 01 56.5	
	11nm,0.5s						
KURBB	Kurchatov Arra	2.22	249	⇓Pg	Pb	09 01 27.9	-1.3
	3.3nm,0.3s						
KURBB				⇓Lg	Lg	09 01 58.8	
	38nm,0.7s						
KURBB	Kurchatov Arra	2.22	249	Pn	Pn	09 01 26.0	-0.3
	0.1nm,0.3s,baz=69,slow=15,SNR=5.8						
KURBB				Lg	Lg	09 01 58.6	
	0.6nm,0.3s,baz=67,slow=30,SNR=13						
I46RU	ZALESOVO INFRA	3.10	35	*i*		09 20 30.0	
	baz=208,slow=324,SNR=1.5						
ZALV	Zalesovo Beam	3.10	35	Pn	Pn	09 01 37.6	-0.8
	0.3nm,0.3s,baz=219,slow=17,SNR=3.1						
ZALV				Pg	Pb	09 01 43.6	-0.6
	1.0nm,0.3s,baz=222,slow=16,SNR=8.3						
ZALV				Sn	Sn	09 02 14.1	-2.0
	0.7nm,0.3s,baz=214,slow=23,SNR=5.6						
ZALV				Lg	Lg	09 02 28.7	
	1.0nm,0.3s,baz=229,slow=26,SNR=5.2						
MK31	Makanchi Array	4.68	176	⇑Pn	Pn	09 02 00.6	+0.3
	0.1nm,0.2s,baz=8.3,slow=12,SNR=23						
MK31				⇑Pg	Pb	09 02 10.7	-0.5
	1.0nm,0.5s,baz=1.3,slow=13,SNR=5.8						
MK31				⇑Lg	Lg	09 03 12.2	
	3.1nm,0.6s,baz=8.2,slow=28,SNR=6.3						
MKAR	Makanchi Array	4.68	176	Pn	Pn	09 02 00.5	+0.2
	0.1nm,0.3s,baz=359,slow=7.2,SNR=5.1						
MKAR				Pg	Pb	09 02 10.8	-0.5
	0.4nm,0.3s,baz=356,slow=15,SNR=13						
MKAR				Lg	Lg	09 03 08.0	
	0.2nm,0.3s,baz=353,slow=27,SNR=4.5						
BVAR	Borovoye Array	7.17	287	Sn	Sn	09 03 51.5	-5.0
	0.2nm,0.3s,baz=100,slow=25,SNR=2.9						

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*UPP **14** 09:04:34.4±3.6, 64°.48N×31°.17E, h0^{km}, ML1.7, Suspected explosion*

*IDC **14** 09:04:36.5±3.0, 64°.74N×31°.44E, h0^{km}, mb1 3.1/3, mb1mx2.9/49, mbtmp3.2/3, ML2.5/3, Error ellipse: s-maj=46.5km s-min=9.6km az=99.0*

*HEL **14** 09:04:38.1±0.3, 64°.81N×30°.53E, h0^{km}, ML2.1, Explosion*

*NAO **14** 09:04:39.3±1.9, 64°.79N×30°.22E, ML2.3*

*BER **14** 09:04:40.0±4.7, 64°.82N×30°.16E, h0^{km}, ML2.3(NAO), Suspected explosion*

ISC 14 09:04:34.2±1.1, 64°.77N±0°.02×31°.15E±0°.07, h0^{km}, n44, σ1^{s}.96/66, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.36	338	PG	Pg	09 05 00.5	+0.3
	baz=166						
KU6				MSG		09 05 15.7	
	comp=Z,14nm,0.2s						
KU6				SG	Sg	09 05 17.3	-0.6
MSF	Maaselka	1.44	323	PG	Pn	09 05 00.9	-0.6
	baz=152						
MSF				SN	Sg	09 05 20.1	-0.4
OUL	Oulu	2.26	280	PG	Pn	09 05 14.0	+1.3
OUL				SG	Sn	09 05 40.5	-0.7
RNF	Rovaniemi	2.81	313	PB	Pb	09 05 23.2	-2.0
RNF				SG	Sb	09 05 58.0	-2.1
SUF	Sumiainen	3.03	229	PG	Pb	09 05 26.9	-2.0
SUF				MSG		09 06 02.3	
	comp=Z,7.4nm,0.2s						
SUF				SG	Sb	09 06 04.8	-1.7
VRF	Varrio	3.05	349	PN	Pn	09 05 26.3	+2.7
VRF				MSG		09 06 05.4	
	comp=Z,3.9nm,0.2s						
VRF				SG	Sb	09 06 09.1	+2.1
TOF	Tornio	3.14	298	PG	Pb	09 05 30.0	-0.7
TOF				MSG		09 06 02.8	
	comp=Z,8.2nm,0.2s						
TOF				SG	Sn	09 06 05.5	+2.7
SGF	Sodankyl	3.27	327	PN	Pn	09 05 27.9	+1.2
SGF				SG	Sb	09 06 12.5	-0.9
KAF	Kangasniemi	3.44	221	PB	Pn	09 05 32.9	+3.9
	baz=29						
KAF				SG	Sb	09 06 18.6	+0.3
KALU	Kalix	3.45	292	P	Pn	09 05 31.0	+2.0
KALU	Kalix	3.45	292	PB	Pn	09 05 31.3	+2.3
	baz=110						
KEF	Keuruu	3.84	230	PB	Pn	09 05 37.4	+2.9
PAJU	Pajala	3.99	308	P	Pn	09 05 38.0	+1.4
FIA0	FINESS Array S	4.06	217	Pn	Pn	09 05 39.5	+2.1
	baz=30,slow=14						
FIA0				Pg	Pb	09 05 47.5	+1.1
	baz=28,slow=16						
FIA0				Sn	Sn	09 06 26.7	+1.1
	baz=40,slow=28						
FIA0				Lg	Lg	09 06 36.6	
	baz=38,slow=28						

FIA0	**FINESS Array S**	**4.06**	**217**	Pn	**Pn**	**09 05 39.5**	**+2.1**
	baz=30,slow=14						
FIA0				Pg	**Pb**	**09 05 47.5**	**+1.1**
	baz=28,slow=16						
FIA0				Sn	**Sn**	**09 06 26.7**	**+1.1**
	baz=40,slow=28						
FIA0				Sg	**Sb**	**09 06 36.6**	**+0.6**
	baz=38,slow=28						
FIA0	**FINESS Array S**	**4.06**	**217**	PN	**Pn**	**09 05 39.5**	**+2.1**
	baz=26						
FINES	**FINESS Array B**	**4.06**	**217**	Pn	**Pn**	**09 05 39.2**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=34,slow=14,SNR=9.8						
FINES				Pg	**Pb**	**09 05 47.5**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=36,slow=15,SNR=12						
FINES				Sn	**Sn**	**09 06 27.0**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=30,slow=17,SNR=2.9						
FINES				Lg	Lg	09 06 37.5	
	comp=Z,0.8nm,0.3s,baz=38,slow=25,SNR=6.2						
SJUU	**Sjulsmark**	**4.10**	**285**	P	**Pn**	**09 05 38.6**	**+0.6**
ERTU	**Ertsjaerv**	**4.12**	**300**	P	**Pn**	**09 05 39.8**	**+1.6**
ERTU	**Ertsjaerv**	**4.12**	**300**	PN	**Pn**	**09 05 39.8**	**+1.6**
VAF	**Ylistaro**	**4.13**	**249**	PB	**Pn**	**09 05 41.7**	**+3.3**
BURU	**Burvik**	**4.20**	**272**	PN	**Pn**	**09 05 40.0**	**+0.6**
BURU				SG	**Sb**	**09 06 42.2**	**+2.1**
HARU	**Harads**	**4.46**	**293**	P	**Pn**	**09 05 45.4**	**+2.4**
VJF	**Virojoki**	**4.56**	**203**	PB	**Pb**	**09 05 51.0**	**-3.9**
VJF				SG	**Sg**	**09 06 57.1**	**-3.5**
MASU	**Masugnsbyn**	**4.59**	**310**	P	**Pn**	**09 05 48.5**	**+3.7**
UMAU	**Umeaa**	**4.64**	**264**	PN	**Pn**	**09 05 46.4**	**+1.0**
UMAU				SG	**Sb**	**09 06 56.0**	**+3.3**
LILU	**Lilltraesk**	**4.82**	**281**	P	**Pn**	**09 05 48.2**	**+0.3**
DUNU	**Dundret**	**4.93**	**303**	P	**Pn**	**09 05 50.5**	**+1.1**
LANU	**Lannavaara**	**4.93**	**316**	P	**Pn**	**09 05 51.0**	**+1.5**
ARA0	**ARCESS Array S**	**5.26**	**338**	Pn	**Pn**	**09 05 55.3**	**+1.4**
	baz=154,slow=14						
ARA0				Sn	**Sn**	**09 06 53.9**	**-1.3**
	baz=157,slow=28						
ARA0				Lg	Lg	09 07 15.1	
	baz=150,slow=37						
ARA0	**ARCESS Array S**	**5.26**	**338**	Pn	**Pn**	**09 05 55.3**	**+1.4**
	baz=154,slow=14						
ARA0				Sn	**Sn**	**09 06 53.9**	**-1.3**
	baz=157,slow=28						
ARA0				Sg	**Sb**	**09 07 15.1**	**+4.6**
	baz=150,slow=37						
ARCES	**ARCESS Array B**	**5.26**	**338**	Pn	**Pn**	**09 05 55.3**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=154,slow=13,SNR=70						
ARCES				Sn	**Sn**	**09 06 53.2**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=156,slow=25,SNR=6.3						
ARCES				Lg	Lg	09 07 15.6	
	comp=Z,1.6nm,0.3s,baz=148,slow=33,SNR=9.5						
KUA	**Kurravaara**	**5.39**	**311**	P	**Pn**	**09 05 58.1**	**+2.3**
RATU	**Laukkuluspa**	**5.57**	**308**	P	**Pn**	**09 06 00.2**	**+2.0**
SALU	**Saltoluokta**	**5.77**	**303**	P	**Pn**	**09 06 02.4**	**+1.5**
NIKU	**Nikkaluokta**	**5.78**	**308**	P	**Pn**	**09 06 02.8**	**+1.7**
I43RU	**DUBNA INFRASON**	**8.60**	**157**	*i*		09 59 50.0	
	baz=348,slow=327,SNR=0.9						
HFS	**Hagfors**	**9.31**	**248**	Pn	**Pn**	**09 06 50.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=65,slow=12,SNR=4.1						
HFS				Lg	Lg	09 09 20.9	
	comp=Z,0.3nm,0.3s,baz=59,slow=23,SNR=4.8						
NB2	**NORSAR Subarra**	**9.81**	**257**	Pn	**Pn**	**09 06 56.0**	**-0.4**
	baz=51,slow=14						
NB2	**NORSAR Subarra**	**9.81**	**257**	Pn	**Pn**	**09 06 56.0**	**-0.4**
	baz=51,slow=14						
NRA0	**NORESS Array S**	**9.84**	**255**	Pn	**Pn**	**09 06 55.5**	**-1.2**
	baz=49,slow=16						
NRA0	**NORESS Array S**	**9.84**	**255**	Pn	**Pn**	**09 06 55.5**	**-1.2**
	baz=49,slow=16						
SPA0	**Spitsbergen Ar**	**14.18**	**348**	Pn	**Pn**	**09 07 54.4**	**-1.4**
	baz=148,slow=16						
SPA0	**Spitsbergen Ar**	**14.18**	**348**	Pn	**Pn**	**09 07 54.4**	**-1.4**
	baz=148,slow=16						

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*IDC **14** 09:16:40.0±1.3, 2.°98S×130.°28E, h0^{km}, mb3.8/3, mb1 4.0/6, mb1mx3.6/49, mbtmp3.8/6, ML3.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.4/39, Error ellipse: s-maj=45.5km s-min=19.4km az=92.0*

*ISCJB **14** 09:16:41.3±0.8, 3.°03S±0.°07×130.°3E±0.°2, h24^{km}, mb3.7/2, Error ellipse: s-maj=28.4km s-min=8.5km az=13.9*

ISC 14 09:16:43.3±1.0**, 3.°02S**±0.°09×**130.°4E**±0.°2**, h24**^{km}**, n7, σ0^{s}78**/7**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.32**	**23**	Pn	**Pn**	**09 17 20.2**	**+0.2**
	3.9nm,0.3s,baz=286,slow=18,SNR=30						
SIJI				Sn	**Sn**	**09 17 47.6**	**-0.2**
	10nm,0.3s,baz=149,slow=6.4,SNR=6.2						
BATI	**Baumata**	**9.75**	**223**	LR	LR	09 23 32.8	
	comp=Z,115nm,18.8s,baz=74,slow=42						
FITZ	**Fitzroy Crossi**	**15.68**	**197**	Pn	**Pn**	**09 20 22.4**	**-0.4**
	0.1nm,0.3s,baz=15,slow=16,SNR=2.6						
WRA	**Warramunga Arr**	**17.27**	**167**	P	**Pn**	**09 20 42.0**	**-1.0**
	0.3nm,0.3s,baz=349,slow=12,SNR=22						
ASAR	**Alice Springs**	**20.81**	**171**	P	**P**	**09 21 24.2**	**+1.1**
	15nm,1.0s,baz=348,slow=11,SNR=66						
SONM	**Songino Array**	**54.82**	**340**	P	**P**	**09 26 11.7**	**+0.1**
	0.6nm,0.9s,baz=147,slow=8.2,SNR=4.3						
MKAR	**Makanchi Array**	**65.13**	**326**	P	**P**	**09 27 22.1**	**-0.2**
	0.6nm,0.7s,baz=118,slow=8.2,SNR=8.3						

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*IDC **14** 09:19:40.0±1.1, 3.°43S×101.°54E, h0^{km}, mb4.0/14, mb1 4.1/14, mb1mx3.9/63, mbtmp4.0/14, MS2.8/1, Ms1 2.8/1, ms1mx2.3/39, Error ellipse: s-maj=38.2km s-min=15.7km az=53.0*

*ISCJB **14** 09:19:44.6±0.5, 3.°53S±0.°05×101.°45E±0.°05, h50^{km}, mb4.2/20, Error ellipse: s-maj=9.5km s-min=5.0km az=41.5*

*NEIC **14** 09:19:47.1±0.8, 3.°45S×101.°59E, h54^{km}±7^{km}, mb4.2/6, Error ellipse: s-maj=12.6km s-min=5.1km az=52.0*

*DJA **14** 09:19:47.9±0.6, 3°S±4°×10°2E±°, h33^{km}±9^{km}, M4.0/9, MLv4.0/9*

ISC 14 09:19:46.9±0.6**, 3.°47S**±0.°06×**101.°60E**±0.°06**, h50**^{km}**, n53, σ0^{s}91**/50**, mb4.1**/20**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.71**	**63**	P	**Pn**	**09 20 01.9**	**+1.1**
MASI				S	**Sn**	**09 20 12.3**	**+1.3**
KRJI	**Kerinci**	**1.38**	**354**	P	**Pn**	**09 20 11.4**	**+1.6**
KRJI				S	**Sn**	**09 20 28.7**	**+1.7**
MNAI	**Manna**	**1.61**	**123**	*e*Pn	**Pn**	**09 20 13.7**	**+0.7**
MNAI				*e*Sn	**Sn**	**09 20 33.6**	**+1.0**
MNAI	**Manna**	**1.61**	**123**	P	**Pn**	**09 20 13.6**	**+0.7**
MNAI				S	**Sn**	**09 20 33.4**	**+0.8**
PPSI	**Pulau Pagai**	**1.74**	**294**	P	**Pn**	**09 20 16.1**	**+1.4**
LHSI	**Lahat**	**1.95**	**101**	P	**Pn**	**09 20 19.0**	**+1.5**
MDSI	**Maura Dua**	**2.76**	**112**	P	**Pn**	**09 20 29.8**	**+1.2**
PDSI	**Padang**	**2.79**	**336**	P	**Pn**	**09 20 30.0**	**+1.0**
LWLI	**Liwa**	**2.89**	**122**	P	**Pn**	**09 20 32.0**	**+1.4**
MYKOM	**Kota Tinggi**	**5.69**	**23**	*e*Pn	**Pn**	**09 21 08.7**	**-0.2**
GSI	**Gunungsitoli**	**6.22**	**320**	*e*Pn	**Pn**	**09 21 15.8**	**-0.3**
LEM	**Lembang**	**6.86**	**119**	LR	LR	09 24 30.2	
	comp=Z,74nm,18.4s,baz=24,slow=42						
JAGI	**Jajag, Banyuwa**	**13.43**	**112**	*e*Sn	**Sn**	**09 25 20.9**	**-1.8**
CM31	**Chiang Mai Arr**	**21.95**	**353**	*e*P	**P**	**09 24 35.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**21.95**	**353**	P	**P**	**09 24 35.7**	**-0.7**
	0.8nm,0.4s,baz=186,slow=8.1,SNR=4.0						
H08S2	**Diego Garcia H**	**29.26**	**261**	T	T	09 55 42.1	
	baz=86,slow=76						
H08S3	**Diego Garcia H**	**29.27**	**261**	T	T	09 55 38.1	
	baz=86,slow=76,SNR=63						
H08S1	**Diego Carcia H**	**29.28**	**261**	T	T	09 55 38.6	
	baz=86						
H01W3	**Cape Leeuwin H**	**33.35**	**161**	T	T	10 00 42.7	
	baz=338						
H01W2	**Cape Leeuwin H**	**33.37**	**161**	T	T	10 00 43.6	
	baz=338						
H01W1	**Cape Leeuwin H**	**33.37**	**161**	T	T	10 00 40.4	
	baz=338						
WRA	**Warramunga Arr**	**35.87**	**120**	P	**P**	**09 26 42.7**	**+0.3**
	0.8nm,0.4s,baz=304,slow=9.1,SNR=11						
WR1	**Warramunga Arr**	**35.88**	**120**	*e*P	**P**	**09 26 42.7**	**+0.3**
	3.1nm,0.8s						
ASAR	**Alice Springs**	**37.10**	**126**	P	**P**	**09 26 52.9**	**+0.1**
	1.0nm,0.4s,baz=298,slow=8.1,SNR=18						
AS31	**Alice Springs**	**37.10**	**126**	*e*P	**P**	**09 26 52.4**	**-0.4**
	0.7nm,0.4s						
STKA	**Stephens Creek**	**46.98**	**132**	*e*P	**P**	**09 28 13.6**	**+0.4**
STKA	**Stephens Creek**	**46.98**	**132**	P	**P**	**09 28 14.2**	**+1.0**
	1.5nm,0.5s,baz=314,slow=8.7,SNR=3.6						
WMQ	**Urumqi**	**48.71**	**347**	*e*P	**P**	**09 28 28.1**	**+1.6**
	14nm,0.7s						
SONA0	**Songino Array**	**51.26**	**4**	*e*P	**P**	**09 28 46.6**	**+0.8**
SONM	**Songino Array**	**51.26**	**4**	P	**P**	**09 28 46.6**	**+0.8**
	1.5nm,0.5s,baz=189,slow=9.6,SNR=18						
MAJO	**Matsushiro**	**52.43**	**37**	*e*P	**P**	**09 28 54.0**	**-0.6**
MJAR	**Matsushiro Arr**	**52.44**	**37**	P	**P**	**09 28 54.0**	**-0.6**
	0.5nm,0.5s,baz=249,slow=14,SNR=3.2						
MK01	**Makanchi Array**	**52.85**	**343**	*e*P	**P**	**09 28 57.1**	**-0.3**
MK31	**Makanchi Array**	**52.88**	**343**	*e*P	**P**	**09 28 57.7**	**0.0**
	2.6nm,0.6s						
MK32	**Makanchi Array**	**52.88**	**343**	*e*P	**P**	**09 28 57.9**	**+0.2**
MKAR	**Makanchi Array**	**52.88**	**343**	*e*P	**P**	**09 28 57.7**	**0.0**
	33nm,0.5s						
MKAR	**Makanchi Array**	**52.88**	**343**	P	**P**	**09 28 57.9**	**+0.2**
	4.3nm,0.6s,baz=156,slow=8.7,SNR=85						
MAKZ	**Makanchi**	**52.98**	**343**	*e*P	**P**	**09 28 58.4**	**-0.1**
	1.7nm,0.9s						
USRK	**Ussuriysk Ar.**	**54.72**	**26**	P	**P**	**09 29 10.9**	**-0.3**
	1.4nm,0.6s,baz=214,slow=5.1,SNR=5.9						
KURBB	**Kurchatov Arra**	**57.41**	**343**	P	**P**	**09 29 29.8**	**-0.5**
	0.8nm,0.6s,baz=160,slow=6.6,SNR=5.5						
KURK	**Kurchatov**	**57.47**	**343**	*e*P	**P**	**09 29 29.8**	**-0.9**
KLR	**Kul'dur**	**58.64**	**23**	P	**P**	**09 29 38.0**	**-0.9**
	1.3nm,0.8s,baz=212,slow=6.8,SNR=6.1						
ZALV	**Zalesovo Beam**	**58.91**	**349**	*e*P	**P**	**09 29 39.2**	**-1.5**
ZALV	**Zalesovo Beam**	**58.91**	**349**	P	**P**	**09 29 40.0**	**-0.7**
	2.1nm,0.5s,baz=175,slow=5.4,SNR=5.1						
ZAA1	**Zalesovo Array**	**58.91**	**349**	*e*P	**P**	**09 29 40.0**	**-0.7**
BVAR	**Borovoye Array**	**62.11**	**339**	P	**P**	**09 30 01.5**	**-1.1**
	0.8nm,0.5s,baz=147,slow=10,SNR=6.5						
ABKAR	**Akbulak array**	**63.69**	**331**	*e*P	**P**	**09 30 12.6**	**-0.5**
	1.8nm,0.8s						
KBZ	**Khabaz**	**70.46**	**319**	P	**P**	**09 30 56.4**	**+0.2**
	1.9nm,0.9s,baz=85,slow=5.6,SNR=5.0						
BR101	**Keskin Array S**	**75.49**	**312**	*e*P	**P**	**09 31 25.8**	**-0.4**
BRTR	**Keskin Array B**	**75.49**	**312**	P	**P**	**09 31 25.8**	**-0.4**
	0.9nm,0.6s,baz=127,slow=7.3,SNR=4.8						
FIA1	**FINESS Array S**	**86.15**	**332**	*e*P	**P**	**09 32 21.2**	**-1.2**
LTX	**Lajitas**	**144.84**	**40**	*e*PKPdf	**PKPab**	**09 39 18.7**	**+0.4**
TXAR	**Lajitas Array**	**144.84**	**40**	PKP	**PKPab**	**09 39 18.7**	**+0.4**
	1.5nm,0.6s,baz=248,slow=0.9,SNR=27						

IDC 14 09:31:45.3±2.2**, 54.°69N**×**83.°66E, h0**^{km}**, mb1 2.4**/2**, mb1mx2.4**/50**, mbtmp2.4**/2**, ML2.2**/2**, Error ellipse: s-maj=18.3km s-min=10.5km az=168.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.00**	**137**	*i*		09 36 05.9	
	baz=316,slow=329,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.00**	**137**	Pg	Pg	09 32 03.9	-0.7
	2.9nm,0.3s,baz=317,slow=15,SNR=20						
ZALV				Lg	Lg	09 32 18.4	
	3.4nm,0.3s,baz=322,slow=31,SNR=16						
KURBB	**Kurchatov Arra**	**5.13**	**220**	Pn	Pn	09 33 02.9	-0.4
	0.1nm,0.3s,baz=40,slow=13,SNR=3.4						
KURBB				Sn	Sn	09 34 02.0	-1.1
	0.0nm,0.3s,baz=35,slow=21,SNR=2.2						
KURBB				Lg	Lg	09 34 24.4	
	0.0nm,0.3s,baz=40,slow=29,SNR=3.2						
MKAR	**Makanchi Array**	**7.95**	**187**	Pn	Pn	09 33 42.8	+0.8
	0.1nm,0.3s,baz=13,slow=12,SNR=3.8						
MKAR				Sn	Sn	09 35 13.2	+0.5
	0.1nm,0.3s,baz=19,slow=20,SNR=3.5						
MKAR				Lg	Lg	09 35 56.6	
	0.1nm,0.3s,baz=6.0,slow=29,SNR=2.8						

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*SOME **14** 09:33:16.4, 39.°55N×73.°48E, h15^{km}*

*NNC **14** 09:33:17.6±1.6, 39.°58N×73.°87E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=14.9km s-min=6.9km az=38.0*

*KRNET **14** 09:33:18.4±0.1, 39.°59N×73.°82E, h7^{km}, mb3.3*

ISC 14 09:33:14.7±1.6**, 39.°53N**±0.°07×**73.°91E**±0.°04**, h15**^{km}±12^{km}**, n40, σ1^{s}48**/63**, 31C-9D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.58**	**327**	⇑P	**Pn**	**09 33 27.6**	**-1.0**
	25nm,0.3s						
SFK				⇑S	**Sb**	**09 33 35.5**	**+0.7**
	47nm,0.3s						
SFK	**Sufi-Kurgan**	**0.58**	**327**	⇑*i*P	**Pn**	**09 33 27.7**	**-1.0**
	baz=30						
SFK				⇑*i*S	**Sb**	**09 33 35.5**	**+0.7**
	baz=30						
DRK	**Karamyk**	**1.63**	**269**	⇑*e*P	**Pg**	**09 33 48.3**	**+2.2**
	baz=67						
DRK				⇑*e*S	**Sg**	**09 34 09.4**	**+2.1**
	baz=67						
ARSB	**Arslanbob**	**1.93**	**339**	⇑*i*P	**Pg**	**09 33 53.4**	**+1.7**
	baz=40						
ARSB				⇑*i*S	**Sg**	**09 34 19.2**	**+2.4**
	baz=40						
ARLS	**Aral**	**2.35**	**8**	⇑*i*P	**Pg**	**09 33 59.5**	**-0.3**
	baz=9.0						
ARLS				⇑*i*S	**Sg**	**09 34 29.9**	**-0.4**
	baz=9.0						
BTK	**Batken**	**2.44**	**284**	⇑*i*P	**Pg**	**09 34 00.4**	**-1.0**
	baz=82						
BTK				⇑*i*S	**Sg**	**09 34 31.5**	**-1.5**
	baz=82						
NRN	**Naryn**	**2.48**	**39**	⇑*i*P	**Pg**	**09 34 02.3**	**-0.1**
	baz=41						
NRN				⇑*i*S	**Sg**	**09 34 33.9**	**-0.7**
	baz=41						
AML	**Almayashu**	**2.61**	**357**	P	**Pg**	**09 34 04.7**	**0.0**
	SNR=19						
AML	**Almayashu**	**2.61**	**357**	⇓*i*P	**Pg**	**09 34 03.4**	**-1.3**
	baz=58						
AML				⇓*e*S	**Sg**	**09 34 36.2**	**-2.3**
	baz=58						
ARK	**Arkit**	**2.71**	**328**	⇑*i*P	**Pb**	**09 34 03.8**	**+0.9**
	baz=28						
ARK				⇑*i*S	**Sb**	**09 34 36.9**	**+0.9**
	baz=28						
UCH	**Uchtor**	**2.74**	**9**	P	**Pg**	**09 34 06.2**	**-1.0**
	SNR=12						
UCH	**Uchtor**	**2.74**	**9**	⇓*i*P	**Pg**	**09 34 05.7**	**-1.5**
	baz=11						
UCH				⇓*i*S	**Sb**	**09 34 39.6**	**+2.4**
	baz=11						
KZA	**Kyzart**	**2.74**	**21**	P	**Pg**	**09 34 08.2**	**+0.9**
	SNR=20						
KZA	**Kyzart**	**2.74**	**21**	⇑*i*P	**Pg**	**09 34 05.9**	**-1.4**
	baz=23						
KZA				⇑*i*S	**Sg**	**09 34 40.4**	**-2.5**
	baz=23						
EKS2	**Erkin-Say**	**3.13**	**358**	⇑*i*P	**Pb**	**09 34 10.5**	**+0.3**
	baz=59						
EKS2				⇑*i*S	**Sb**	**09 34 48.5**	**+0.3**
	baz=59						
AAK	**Ala-Archa**	**3.14**	**8**	P	**Pg**	**09 34 14.0**	**-0.8**
	SNR=9.1						
AAK	**Ala-Archa**	**3.14**	**8**	⇑Pg	**Pg**	**09 34 13.6**	**-1.3**
	5.3nm,0.7s						
AAK				⇑Lg	Lg	09 34 55.8	
	25nm,0.6s						
AAK	**Ala-Archa**	**3.14**	**8**	⇑*e*P	**Pb**	**09 34 10.9**	**+0.6**
	baz=9.0						
AAK				⇑*i*S	**Sb**	**09 34 48.5**	**+0.1**
	baz=9.0						
MNAS	**Manas**	**3.14**	**341**	⇓Pn	**Pb**	**09 34 10.6**	**+0.2**
	2.9nm,0.4s						
MNAS				⇓Lg	Lg	09 34 50.2	
	9.3nm,0.4s						
MNAS	**Manas**	**3.14**	**341**	Pg	**Pb**	**09 34 10.7**	**+0.4**
	3.2nm,0.4s						
MNAS				Lg	Lg	09 34 50.6	
	7.6nm,0.4s						
MNAS	**Manas**	**3.14**	**341**	⇑*i*P	**Pb**	**09 34 10.3**	**0.0**
	baz=41						
MNAS				⇑*i*S	**Sb**	**09 34 48.0**	**-0.5**
	baz=41						
MRKS	**Merke**	**3.25**	**351**	Pg	**Pb**	**09 34 13.4**	**+1.2**
	9.6nm,0.4s						
MRKS				Lg	Lg	09 34 54.5	
	25nm,0.6s						
MRKS	**Merke**	**3.25**	**351**	*e*P	**Pb**	**09 34 13.4**	**+1.2**
	9.6nm,0.4s						
MRKS				*e*S	**Sb**	**09 34 54.5**	**+2.7**
	25nm,0.6s						
BOOM	**Boomskoye usch**	**3.33**	**27**	⇑*e*P	**Pb**	**09 34 13.5**	**-0.2**
	baz=28						
BOOM				⇑*e*S	**Sb**	**09 34 53.9**	**-0.2**
	baz=28						
TKM2	**Tokmak 2**	**3.62**	**20**	⇓Pg	**Pg**	**09 34 24.5**	**+0.4**
	1.3nm,0.3s						
TKM2				⇑Lg	Lg	09 35 12.1	
	6.6nm,0.6s						
USP	**Ospenovka**	**3.76**	**7**	P	**Pb**	**09 34 22.6**	**+1.7**
	SNR=6.4						
KST	**Kastek**	**3.84**	**23**	*e*P	**Pg**	**09 34 27.8**	**-0.4**
	3.4nm,0.3s						
KST				*e*S	**Sg**	**09 35 19.2**	**+1.2**
	13nm,0.8s						
IUG	**Iuzhnay**	**3.94**	**313**	Pg	**Pb**	**09 34 22.0**	**-1.8**
	14nm,0.5s						
IUG				Lg	Lg	09 35 09.1	
	32nm,0.6s						
IUG	**Iuzhnay**	**3.94**	**313**	*e*P	**Pb**	**09 34 22.0**	**-1.8**
	14nm,0.5s						
IUG				*e*S	**Sb**	**09 35 09.2**	**-2.2**
	32nm,0.6s						
DGS	**Degeres**	**3.97**	**20**	Pg	**Pg**	**09 34 30.2**	**-0.5**
	2.4nm,1.0s						
DGS				Lg	Lg	09 35 23.2	
	14nm,0.7s						
DGS	**Degeres**	**3.97**	**20**	*e*P	**Pg**	**09 34 30.5**	**-0.2**
	2.4nm,1.0s						
DGS				*e*S	**Sg**	**09 35 23.2**	**+1.2**
	14nm,0.7s						
IZV	**Izvestkoviy**	**4.05**	**29**	Pg	**Pg**	**09 34 31.8**	**-0.6**
	5.8nm,0.6s						
IZV				Lg	Lg	09 35 27.1	
	12nm,0.5s						
IZV	**Izvestkoviy**	**4.05**	**29**	*e*P	**Pg**	**09 34 32.8**	**+0.4**
	2.5nm,0.4s						
IZV				*e*S	**Sg**	**09 35 27.9**	**+3.0**
	12nm,0.5s						
KK31	**Karatay Array**	**4.39**	**326**	Pn	**Pb**	**09 34 27.4**	**-4.2**
	0.3nm,0.3s,baz=123,slow=12,SNR=11						
KK31				⇑Pg	**Pg**	**09 34 38.3**	**-0.5**
	1.0nm,0.3s,baz=139,slow=15,SNR=7.9						
KK31				⇓Sn	**Sn**	**09 35 13.9**	**+2.1**
	0.6nm,0.2s,baz=141,slow=17,SNR=4.8						
KK31				⇑Lg	Lg	09 35 34.3	
	9.2nm,0.8s,baz=147,slow=32,SNR=4.2						
KOTS	**Kotyrbulak**	**4.42**	**32**	Pg	**Pg**	**09 34 38.3**	**-1.0**
	3.0nm,0.3s						
KOTS				Lg	Lg	09 35 37.1	
	23nm,0.6s						
KOTS	**Kotyrbulak**	**4.42**	**32**	*e*P	**Pg**	**09 34 37.5**	**-1.8**
	3.0nm,0.3s						
KOTS				*e*S	**Sg**	**09 35 37.1**	**+0.6**
	23nm,0.6s						
KTBS	**Karatobe**	**4.67**	**26**	Pg	**Pg**	**09 34 43.6**	**-0.5**
	2.3nm,0.6s						
KTBS	**Karatobe**	**4.67**	**26**	*e*P	**Pg**	**09 34 42.8**	**-1.3**
	2.3nm,0.6s						
KTBS				*e*S	**Sg**	**09 35 46.2**	**+1.6**
	5.6nm,0.3s						
ARXS	**Arharly**	**5.52**	**31**	Pg	**Pg**	**09 34 58.4**	**-2.0**
	6.1nm,0.6s						
PDGK	**Podgornoye**	**5.66**	**46**	⇓Lg	Lg	09 36 14.7	
	7.1nm,1.1s						

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*SJA **14** 09:49:34.9±0.4, 22.°41S×68.°65W, h228^{km}±33^{km}, ML4.5, MW3.4*

*NEIC **14** 09:49:38.8±0.5, 22.°66S×68.°30W, h106^{km}±5^{km}, mb4.3/7, ML4.5(GUC), Error ellipse: s-maj=9.6km s-min=6.5km az=89.0*

*ISCJB **14** 09:49:38.6±0.2, 22.°70S±0.°02×68.°47W±0.°04, h126^{km}±3^{km}, mb3.9/11, Error ellipse: s-maj=6.0km s-min=3.7km az=174.3*

*IDC **14** 09:49:38.6±0.6, 22.°47S×68.°27W, h99^{km}±6^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.9/22, mbtmp4.2/13, MS2.7/3, Ms1 2.8/3, ms1mx2.6/20, Error ellipse: s-maj=24.1km s-min=15.8km az=4.0*

*GUC **14** 09:49:39.9±0.7, 22.°58S×68.°62W, h130^{km}±5^{km}, ML4.5*

*VAO **14** 09:49:40.4±0.5, 22.°38S×68.°35W, h108^{km}±5^{km}, mb4.4*

ISC 14 09:49:39.2±0.6**, 22.°63S**±0.°04×**68.°34W**±0.°05**, h110**^{km}±6^{km}**, n106, σ1^{s}86**/130**, mb4.1**/11**, 5C-9D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.53**	**272**	*e*Pn	**Pn**	**09 49 57.5**	**+0.9**
LVC				*e*Pn	Pn	09 49 57.8	+1.1
LVC				*e*Sn	**Sn**	**09 50 09.5**	**-0.3**
LVC				*e*Sn	Sn	09 50 10.2	+0.4
LVC	**Limon Verde**	**0.53**	**272**	P	**Pn**	**09 49 57.5**	**+0.9**
	1µm,0.3s,baz=140,slow=6.2						
LVC				S	**Sn**	**09 50 09.5**	**-0.3**
	2µm,0.3s,baz=107,slow=19,SNR=118						
LVC	**Limon Verde**	**0.53**	**272**	*e*P	**Pn**	**09 49 58.0**	**+1.3**
PB06	**IPOC Station P**	**1.14**	**266**	⇑*e*P	**Pn**	**09 50 02.3**	**+0.2**
PB06				*e*S	**Sn**	**09 50 20.2**	**+0.9**
PB06				IAML		09 50 21.4	
	comp=E,7µm,0.4s						
PB09	**IPOC Station P**	**1.18**	**314**	⇓*e*P	**Pn**	**09 50 03.3**	**+0.8**
PB09				*e*S	**Sn**	**09 50 21.1**	**+1.0**
PB09				IAML		09 50 24.0	
	comp=E,10µm,0.6s						
PB15	**IPOC Station P**	**1.20**	**241**	⇑*e*P	**Pn**	**09 50 03.3**	**+0.6**
PB15				*e*S	**Sn**	**09 50 21.9**	**+1.5**
PB03	**IPOC Station P**	**1.43**	**293**	⇑*e*P	**Pn**	**09 50 05.5**	**+0.2**
PB03				*e*S	**Sn**	**09 50 24.7**	**-0.5**
PB03				IAML		09 50 25.2	
	comp=N,13µm,0.2s						
PB07	**IPOC Station P**	**1.69**	**302**	*e*P	**Pn**	**09 50 08.8**	**+0.2**
PB07				*e*S	**Sn**	**09 50 30.1**	**-0.7**
PB07				IAML		09 50 31.9	
	comp=E,13µm,0.2s						
PB04	**IPOC Station P**	**1.70**	**280**	*e*Pn	**Pn**	**09 50 08.6**	**0.0**
PB04				*e*Sn	**Sn**	**09 50 30.5**	**-0.5**
PB04	**IPOC Station P**	**1.70**	**280**	⇑*e*P	**Pn**	**09 50 08.5**	**-0.1**
PB04				*e*S	**Sn**	**09 50 29.9**	**-1.1**
PB04				IAML		09 50 32.5	
	comp=N,6µm,0.2s						
PB05	**IPOC Station P**	**1.74**	**262**	⇑*e*P	**Pn**	**09 50 08.6**	**-0.4**
PB05				*e*S	**Sn**	**09 50 30.3**	**-1.3**
PB01	**IPOC Station P**	**1.90**	**326**	*e*Pn	**Pn**	**09 50 11.6**	**+0.5**
PB01				*e*Sn	**Sn**	**09 50 35.3**	**0.0**
PB01	**IPOC Station P**	**1.90**	**326**	⇓*e*P	**Pn**	**09 50 11.5**	**+0.5**
PB01				*e*S	**Sn**	**09 50 35.4**	**0.0**
PB01				IAML		09 50 36.0	
	comp=E,4µm,0.2s						
PB02	**IPOC Station P**	**1.94**	**312**	⇓*e*P	**Pn**	**09 50 11.7**	**+0.1**
PB02				*e*S	**Sn**	**09 50 35.2**	**-1.2**
PB02				IAML		09 50 37.0	
	comp=N,8µm,0.7s						
PB10	**IPOC Station P**	**2.22**	**246**	*e*Pn	**Pn**	**09 50 14.3**	**-0.7**
PB10				*e*Sn	**Sn**	**09 50 40.4**	**-2.1**
GO02	**Mina Guanaco**	**2.77**	**204**	*e*Pn	**Pn**	**09 50 23.4**	**+0.8**
GO02				*e*Sn	**Sn**	**09 50 54.0**	**-1.8**
PB11	**IPOC Station P**	**3.11**	**336**	*e*Pn	**Pn**	**09 50 26.1**	**-0.7**
PB11				*e*Sn	**Sn**	**09 50 57.0**	**-6.4**
MNMC	**Minye Minye**	**3.67**	**341**	*e*Pn	**Pn**	**09 50 33.8**	**-0.6**
MNMC				*e*Sn	Sn	09 51 06.8	-10
AHML	**Horco Molle**	**4.96**	**147**	⇓*e*P	**Pn**	**09 50 54.6**	**+3.1**
AHML				IAML		09 50 56.4	
	comp=Z,50nm,0.7s						
GO03	**Copiap**	**5.24**	**199**	*e*Pn	**Pn**	**09 50 53.7**	**-1.6**
LPAZ	**La Paz**	**6.31**	**2**	P	**Pn**	**09 51 11.9**	**+1.5**
	comp=Z,6.3nm,0.3s,baz=182,slow=7.5,SNR=237						
LPAZ				S	Sn	09 52 10.5	-11
	comp=Z,0.7nm,0.3s,baz=166,slow=9.3,SNR=4.3						
LPAZ				LR	LR	09 54 08.6	
	comp=Z,86nm,21.2s,baz=202,slow=44						
LCO	**Las Campanas**	**6.71**	**198**	*e*Pn	**Pn**	**09 51 12.0**	**-3.4**
AGUA	**GUANDACOL**	**6.83**	**181**	⇓*e*P	**Pn**	**09 51 16.6**	**-0.4**
ACLC	**CERRO LA CRUZ**	**6.88**	**170**	*e*P	**Pn**	**09 51 18.2**	**+0.5**
ACLC				⇓*e*S	Sn	09 52 06.1	-29
AROD	**Rodeo**	**7.58**	**187**	*e*P	**Pn**	**09 51 26.9**	**-0.4**
AROD				*e*S	**Sn**	**09 52 49.5**	**-2.2**
GO04	**Tololo Observa**	**7.83**	**196**	*e*Pn	**Pn**	**09 51 26.7**	**-4.0**
GO04	**Tololo Observa**	**7.83**	**196**	*e*P	**Pn**	**09 51 27.0**	**-3.6**
GO04				*e*S	**Sn**	**09 52 52.7**	**-5.0**
APLL	**PUNTA DE LOS L**	**7.91**	**169**	⇓*e*P	**Pn**	**09 51 31.0**	**-0.4**
APLL				IAML		09 51 32.7	
	comp=Z,22nm,0.7s						
ACCO	**Cerro Coronel**	**7.96**	**185**	*e*P	**Pn**	**09 51 31.3**	**-1.1**
AMOG	**MOGNA**	**8.28**	**181**	*e*P	**Pn**	**09 51 34.8**	**-1.8**
AMOG				*e*S	**Sn**	**09 53 03.5**	**-4.9**
RTLL	**Cerro Villicun**	**8.67**	**181**	*e*P	**Pn**	**09 51 40.0**	**-1.8**
RTLL				IAML		09 51 41.1	
	comp=Z,69nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RTLS	Leoncito	9.18	185	*e*P	Pn	09 51 46.8	-2.2
RTLS				IAML		09 51 48.2	
	comp=Z,26nm,0.6s						
RTLS				*e*S	Sn	09 53 23.2	-7.3
RTCV	Cerro Valdivia	9.20	181	*e*P	Pn	09 51 47.0	-2.0
RTCV				*e*S	Sn	09 52 42.3	-48
SIV	San Ignacio	9.52	47	P	Pn	09 51 51.5	-1.9
	comp=Z,9.3nm,0.3s,baz=240,slow=6.8,SNR=128						
SIV				S	Sn	09 53 31.5	-7.1
	comp=Z,3.2nm,0.3s,baz=145,slow=23,SNR=12						
SIV				LR	LR	09 55 07.4	
	comp=Z,31nm,19.9s,baz=115,slow=35						
AUSP	Uspallata	9.61	185	*e*P	Pn	09 51 52.3	-2.4
ACAN	Cantantal	9.66	174	*e*P	Pn	09 51 54.0	-1.2
ASAL	Salagasta	9.94	182	*e*P	Pn	09 51 56.5	-2.5
MRA	San Martin	10.03	167	*e*P	Pn	09 51 58.5	-1.8
MRA				IAML		09 52 03.1	
	comp=Z,8.9nm,0.2s						
ARCO	CERRO ARCO	10.19	183	⇓*e*P	Pn	09 52 01.2	-1.3
ARCO				IAML		09 52 05.8	
	comp=Z,11nm,0.3s						
AAGR	Agrelo	10.43	182	⇓*e*P	Pn	09 52 04.4	-1.3
ROC1	El Roble	10.58	192	*e*Pn	Pn	09 52 07.5	-0.4
CPUP	Villa Florida	10.68	112	*e*Pn	Pn	09 52 09.7	+0.6
CPUP	Villa Florida	10.68	112	P	Pn	09 52 08.8	-0.3
	comp=Z,0.1nm,0.3s,baz=296,slow=12,SNR=5.0						
CPUP				LR	LR	09 57 09.3	
	comp=Z,56nm,18.3s,baz=281,slow=42						
CPUP	Villa Florida	10.68	112	*e*P	Pn	09 52 11.8	+2.8
AQDB	Aquidauana	11.95	82	*e*P	Pn	09 52 27.8	+1.6
TRCB	Terra Rica	14.49	94	*e*P	P	09 53 01.0	-1.7
C2SB	Chapadao do Su	15.00	78	*e*P	Pn	09 53 06.6	+1.0
PTGB	Pitanga	15.05	101	*e*P	P	09 53 09.0	0.0
ITAB	Concordia	15.40	111	*e*P	P	09 53 13.8	+1.1
CPSB	Cacapava Do Su	15.41	123	*e*P	P	09 53 12.2	-0.6
PLTB	Pedras Altas	15.94	128	*e*P	P	09 53 21.4	+2.6
TRQA	Tornquist	16.32	162	*e*Pn	Pn	09 53 21.8	-0.1
	comp=Z,34nm,0.9s						
TRQA	Tornquist	16.32	162	*e*P	P	09 53 26.9	+4.0
ITRB	Iturama	17.02	84	*e*P	P	09 53 31.5	+0.8
GO06	Curarrehue	17.11	188	*e*Pn	Pn	09 53 31.4	-0.3
	comp=Z,25nm,1.1s						
FRTB	Fartura	17.30	96	*e*P	Pn	09 53 35.6	+1.5
PLCA	Paso Flores	18.15	185	*e*P	Pn	09 53 44.3	+0.2
	comp=Z,10nm,1.0s						
ATAH	Atahualpa	18.20	326	P	Pn	09 53 48.6	+3.4
	comp=Z,0.4nm,0.3s,baz=170,slow=6.1,SNR=5.0						
BB19B	Bebedouro	18.46	89	*e*P	Pn	09 53 47.5	-0.4
RCLB	Rio Claro- Sao	19.22	93	*e*P	P	09 53 55.8	+0.9
SPB	Sao Paulo	19.25	97	*e*P	P	09 53 55.5	+0.4
	comp=Z,24nm,1.0s						
IPMB	Ipameri, GO	19.43	80	*e*P	P	09 53 58.0	+0.8
BDFB	Brasilia	20.41	74	*e*P	P	09 54 06.8	-1.0
	comp=Z,24nm,1.1s						
BDFB				*e*P	P	09 54 07.7	-0.1
BDFB	Brasilia	20.41	74	P	P	09 54 07.7	-0.1
	comp=Z,12nm,0.5s,baz=257,slow=11,SNR=18						
BSCB	Bom Sucesso	21.93	90	*e*P	P	09 54 26.6	+2.5
ESAR	Angra dos Reis	22.03	96	*e*P	P	09 54 26.2	+1.3
PTGA	Pitinga	23.24	22	*e*P	P	09 54 35.7	-1.3
	comp=Z,6.9nm,0.8s						
PTGA	Pitinga	23.24	22	P	P	09 54 35.1	-1.9
	comp=Z,4.7nm,0.3s,baz=219,slow=15,SNR=12						
PTGA	Pitinga	23.24	22	*e*P	P	09 54 36.3	-0.7
MCI6	Montes Claros	23.71	80	*e*P	P	09 54 41.2	-0.3
JANB	Januaria	23.93	76	*e*P	P	09 54 44.0	+0.7
DUB01	Friburgo-RJ	24.01	94	*e*P	P	09 54 45.1	+1.1
CAM01	Campos-RJ	24.70	93	*e*P	P	09 54 51.4	+1.1
OTAV	Otavalo	24.77	335	*e*P	P	09 54 54.3	+2.9
	comp=Z,3.7nm,0.9s						
OTAV	Otavalo	24.77	335	*e*P	P	09 54 50.4	-1.0
SJMB	Sao Joao De Ma	25.69	86	*e*P	P	09 55 00.3	+1.0
BSFB	Barra de Sao F	25.97	87	*e*P	P	09 55 01.8	0.0
RIB01	Linhares ES	26.28	88	*e*P	P	09 55 05.3	+0.7
SDV	Santo Domingo	31.40	356	*e*P	P	09 55 49.5	-0.7
PMSA	Palmer Station	42.23	177	*e*P	P	09 57 24.4	+3.3
LTX	Lajitas	61.85	325	*e*P	P	09 59 46.5	-0.5
TXAR	Lajitas Array	61.85	325	P	P	09 59 46.5	-0.5
	comp=Z,0.2nm,0.6s,baz=161,slow=8.0,SNR=4.0						
DBIC	Dimbokro	68.55	73	P	P	10 00 30.9	+0.3
	comp=Z,4.9nm,0.7s,baz=225,slow=6.1,SNR=5.8						
PDAR	Pinedale Array	75.35	330	P	P	10 01 11.2	+0.4
	comp=Z,0.1nm,0.4s,baz=105,slow=9.4,SNR=2.3						
ULM	Lac du Bonnet	76.55	342	P	P	10 01 16.4	-0.8
	comp=Z,1.1nm,0.6s,baz=166,slow=1.8,SNR=5.5						
NVAR	Mina Array Bea	76.70	322	P	P	10 01 19.8	+1.1
	comp=Z,0.4nm,0.8s,baz=149,slow=3.9,SNR=3.4						
SCHQ	Schefferville	77.15	1	P	P	10 01 20.1	-0.3
	comp=Z,3.3nm,1.0s,baz=164,slow=4.5,SNR=4.0						
TOA0	Torodi Ar. Sit	77.24	70	*e*P	P	10 01 20.3	-1.5
TOA1	Torodi Ar. Sit	77.24	70	*e*P	P	10 01 20.4	-1.4
TORD	Torodi Ar. Bea	77.24	70	P	P	10 01 20.4	-1.4
	comp=Z,3.9nm,0.6s,baz=267,slow=5.4,SNR=43						
BOSA	Boshof	82.45	118	P	P	10 01 50.8	+0.8
	comp=Z,5.3nm,1.1s,baz=261,slow=13,SNR=3.0						
SFJD	Kangerlussuaq	90.33	7	*e*P	P	10 02 28.2	+0.9
YKA	Yellowknife Ar	92.42	340	P	P	10 02 37.5	+0.4
	comp=Z,0.7nm,0.5s,baz=133,slow=4.6,SNR=22						
ASAR	Alice Springs	129.16	207	PKP	PKPdf	10 08 35.5	+0.3
	comp=Z,0.7nm,0.6s,baz=135,slow=1.8,SNR=14						
WR1	Warramunga Arr	132.25	209	*e*PKPdf	PKiKP	10 08 42.2	0.0
WRA	Warramunga Arr	132.25	209	PKP	PKiKP	10 08 42.2	0.0
	comp=Z,0.8nm,0.5s,baz=150,slow=1.7,SNR=25						
BVAR	Borovoye Array	136.41	35	PKP	PKiKP	10 08 49.3	-0.3
	comp=Z,0.6nm,0.6s,baz=225,slow=1.8,SNR=3.3						
KURK	Kurchatov	141.97	34	*e*PKPdf	PKPdf	10 08 58.1	+0.1
KURBB	Kurchatov Arra	141.97	34	PKP	PKPdf	10 08 58.2	+0.1
	comp=Z,0.4nm,0.6s,baz=301,slow=2.5,SNR=3.1						
ZAA1	Zalesovo Array	142.73	26	*e*PKPdf	PKPdf	10 08 57.1	-2.1
ZALV	Zalesovo Beam	142.73	26	PKP	PKPdf	10 08 57.1	-2.1
	comp=Z,1.0nm,0.5s,baz=300,slow=3.6,SNR=5.5						
MK32	Makanchi Array	146.22	37	*e*PKPdf	PKPbc	10 09 06.9	0.0
MKAR	Makanchi Array	146.22	37	PKPbc	PKPbc	10 09 06.9	0.0
	comp=Z,2.8nm,0.7s,baz=313,slow=3.6,SNR=20						
KLR	Kul'dur	149.06	334	PKPbc	PKPbc	10 09 14.2	-0.3
	comp=Z,0.9nm,0.6s,baz=56,slow=6.3,SNR=5.8						
SONA0	Songino Array	154.50	8	*e*PKPbc	PKiKP	10 09 27.4	+0.3
SONA0				*e*PKPab	PKPab	10 09 42.4	+0.6
SONM	Songino Array	154.50	8	PKPbc	PKiKP	10 09 27.4	+0.3
	comp=Z,0.1nm,0.3s,baz=280,slow=2.3,SNR=3.5						
SONM				PKPab	PKPab	10 09 42.4	+0.6
	comp=Z,0.8nm,0.9s,baz=313,slow=4.1,SNR=4.4						

ISK ***14*** *10:03:05.9, 38°.33N×38°.17E, h3km, ML1.5/3*
DDA ***14*** *10:03:08.0, 38°.30N×38°.13E, h7km±6km, ML2.6*
ISC 14 10:03:06.9±1.3, **38°.31N**±0°.03×**38°.16E**±0°.03, **h1**km±12km,
n9, σ0s.80/18, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKCD	Akcadag	0.18	264	*i* P	Pg	10 03 10.9	+0.4
AKCD				*i* S	Sg	10 03 13.6	+0.7
AKCD				IAML_P			
	comp=Z,34µm,0.1s						
HEKM	Malatya_Hekimh	0.58	345	*i* P	Pb	10 03 19.0	-1.0
HEKM				*i* S	Sb	10 03 30.2	+1.3
HEKM				IAML_P			
	comp=Z,2µm,0.1s						
DARE	Darende-Malaty	0.59	296	PG	Pg	10 03 18.0	-0.2
DARE				SG	Sb	10 03 27.2	-1.7
ELZG	Elazig	0.68	74	*e*P	Pb	10 03 21.9	+0.3
ELZG				*i* S	Sb	10 03 32.2	+0.6
ELZG				IAML_P			
	comp=Z,340nm,0.1s						
KEMA	Kemaliye	0.99	15	*e*P	Pg	10 03 25.6	-0.3
KEMA				*i* S	Sn	10 03 42.7	0.0
URFA	Urfa	1.02	149	PG	Pg	10 03 26.4	0.0
URFA				SG	Sb	10 03 41.3	0.0
GZT	Gaziantep	1.06	206	*e*P	Pn	10 03 28.8	-0.3
GZT				*i* S	Sn	10 03 44.5	-0.1
GZT				IAML_P			
	comp=Z,185nm,0.2s						
PTK	Pertek	1.13	59	PN	Pg	10 03 27.9	-0.7
PTK				SN	Sb	10 03 43.8	-0.8
CUKAN	kangal_SIVAS	1.14	332	*i* P	Pn	10 03 30.9	+0.8
CUKAN				*i* S	Sn	10 03 47.2	+0.8

IDC 14 10:03:13.1±2.3, **7°.08S×129°.10E, h0**km, **mb3.3**/1,
mb1 3.1/3, **mb1mx3.0**/26, **mbtmp2.9**/3, **ML2.6**/2, **Error ellipse: s-maj=112.9km s-min=34.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.76	159	Pn	Pn	10 06 29.5	-0.1
	0.0nm,0.3s,baz=337,slow=14,SNR=3.2						
WRA				Sn	Sn	10 08 55.9	-7.3
	0.1nm,0.3s,baz=316,slow=29,SNR=3.9						
ASAR	Alice Springs	17.12	165	P	Pn	10 07 14.1	+0.1
	0.0nm,0.3s,baz=348,slow=11,SNR=4.7						
MKAR	Makanchi Array	67.81	327	P	P	10 14 13.0	0.0
	0.3nm,0.9s,baz=126,slow=4.4,SNR=2.2						

IDC ***14*** *10:16:54.3±7.5, 40°.42N×144°.44E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.2/27, mbtmp3.3/3, ML2.5/1, Error ellipse: s-maj=156.7km s-min=66.5km az=178.0*
ISCJB ***14*** *10:17:14.6±0.8, 37°.91N±0°.04×144°.05E±0°.06, h33km, mb3.6/2, Error ellipse: s-maj=6.7km s-min=6.1km az=28.4*
JMA ***14*** *10:17:16.5±0.1, 37°.91N×143°.88E, h33km, M3.3*
ISC 14 10:17:16.6±1.3, **37°.93N**±0°.06×**144°.02E**±0°.08, **h35**km, **n16,**
σ1s.26/29, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.05	282	P	Pn	10 17 48.3	-0.2
JIKH				*e*S	Sn	10 18 11.4	-1.4
JIO	Ouri	2.17	285	P	Pn	10 17 50.1	-0.1
JIO				S	Sn	10 18 15.2	-0.6
OFUJ	Ofunato	2.17	303	P	Pn	10 17 50.5	+0.3
OFUJ				*e*S	Sn	10 18 15.7	-0.2
JKMT	Kesennumamotoy	2.19	295	P	Pn	10 17 50.5	+0.1
JKMT				S	Sn	10 18 15.7	-0.5
JMK	Ichinoseki	2.42	296	P	Pn	10 17 54.2	+0.5
JMK				*e*S	Sn	10 18 21.9	-0.2
JOM	Ohasama	2.63	307	P	Pn	10 17 57.4	+0.8
JOM				S	Sn	10 18 28.2	+0.9
JFT	Otama	2.95	263	P	Pn	10 18 01.5	+0.6
JFT				*e*S	Sn	10 18 34.4	-0.6
JYK	Kaneyama	3.04	290	P	Pn	10 18 03.0	+0.8
JYK				*e*S	Sn	10 18 38.4	+1.1
JANG	Nango	3.12	322	S	Sn	10 18 39.5	+0.1
JAG	Ashikaga	3.94	249	P	Pn	10 18 14.4	-0.1
JAG				*e*S	Sn	10 18 58.6	-0.9
JRY	Ryogami san	4.52	247	P	Pn	10 18 22.0	-0.5
JRY				S	Sn	10 19 10.8	-3.0
JCH	Churui	4.71	354	P	Pn	10 18 25.7	+0.6
JCH				*e*S	Sn	10 19 17.7	-0.8
MJAR	Matsushiro Arr	4.84	255	Pn	Pn	10 18 27.8	+0.9
	0.1nm,0.3s,baz=49,slow=29,SNR=7.2						
MJAR				Sn	Sn	10 19 25.3	+3.6
	0.1nm,0.3s,baz=205,slow=44,SNR=3.2						
NEM2	Nemuro 2	5.59	13	P	Pn	10 18 37.6	+0.4
NEM2				*e*S	Sn	10 19 37.3	-2.8
WRA	Warramunga Arr	58.27	191	P	P	10 27 08.0	+0.2
	0.6nm,0.8s,baz=11,slow=7.2,SNR=8.6						
ASAR	Alice Springs	62.00	191	P	P	10 27 32.8	-0.4
	0.3nm,0.8s,baz=15,slow=7.7,SNR=3.7						

STR 14 10:25:41.8±0.5, **49°N**±2°×°±°, **h11**km±5km, **MLv1.1**/6,
Germany

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KTD	Kalmit	0.19	339	Pg	Pg	10 25 45.8	-0.3
KTD				Sg	Sg	10 25 48.8	-0.1
LANF	Langenberg	0.30	238	Pg	Pg	10 25 47.7	-0.2
OPP	Oppenau	0.65	180	Pg	Pg	10 25 54.5	+0.1
ABH	Alteburg	0.85	331	Pg	Pg	10 25 58.2	-0.1
ABH				Sg	Sg	10 26 09.4	+0.1
WLS	Welschbruch	0.92	218	Pg	Pb	10 25 60.0	+0.2
ECH	Echery	1.15	217	Pg	Pn	10 26 03.9	0.0
ECH				Sg	Sn	10 26 19.6	-0.1
KIZ	Kirchzarten	1.20	189	Pg	Pn	10 26 03.7	-0.9
KIZ				Sg	Sb	10 26 20.2	0.0

KNET ***14*** *10:40:24.4±0.3, 42°.69N×74°.86E, h13km±2km, ml1.8, Error ellipse: s-maj=2.1km s-min=1.7km az=70.0*
NNC ***14*** *10:40:24.8±0.3, 42°.71N×74°.86E, h0km, mb2.9, mpv2.9, Error ellipse: s-maj=4.1km s-min=1.5km az=166.0*
SOME ***14*** *10:40:25.1, 42°.68N×74°.87E, h10km*
KRNET ***14*** *10:40:25.0±0.1, 42°.69N×74°.86E, h18km, mb2.6*
ISC 14 10:40:25.1±0.8, **42°.69N**±0°.02×**74°.85E**±0°.01, **h15**km±4km,
n74, σ0s.75/133, **42C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.08	113	⇑P	Pg	10 40 27.9	-0.4
	191nm,0.1s,SNR=845						
KBK				⇓S	Sg	10 40 29.9	-0.6
	497nm,0.2s						
KBK	Karagaybulak	0.08	113	⇑*i*P	Pg	10 40 27.8	-0.5
	baz=15						
KBK				⇑*i*S	Sg	10 40 29.8	-0.6
	baz=15						
FRU1	Bishkek	0.20	307	⇑*i*P	Pg	10 40 29.9	0.0
	baz=7.0						
FRU1				⇑*i*S	Sg	10 40 33.4	+0.3
	baz=7.0						
AAK	Ala-Archa	0.27	260	⇑P	Pg	10 40 30.8	-0.2
	34nm,0.2s,SNR=30						
AAK				⇑S	Sg	10 40 34.8	-0.2
	64nm,0.2s						
AAK	Ala-Archa	0.27	260	⇑P	Pg	10 40 30.6	-0.4
	11nm,0.2s						
AAK				⇑S	Sg	10 40 34.7	-0.2
	69nm,0.4s						
AAK	Ala-Archa	0.27	260	⇑*i*P	Pg	10 40 30.7	-0.2
	baz=60						
AAK				⇑*i*S	Sg	10 40 34.7	-0.2
	baz=60						
CHMS	Chumysh	0.32	347	⇑P	Pg	10 40 31.6	-0.2
	29nm,0.1s,SNR=9.4						
CHMS				⇓S	Sg	10 40 36.2	-0.1
	142nm,0.1s						
CHMS	Chumysh	0.32	347	⇓*i*P	Pg	10 40 31.6	-0.2
	baz=46						
CHMS				⇓*i*S	Sg	10 40 36.2	-0.1
	baz=46						
UCH	Uchtor	0.52	209	P	Pg	10 40 35.4	-0.2
	16nm,0.1s,SNR=155						
UCH				⇑S	Sg	10 40 42.1	-0.5
	17nm,0.2s						
UCH	Uchtor	0.52	209	⇓*i*P	Pg	10 40 35.4	-0.2
	baz=9.0						
UCH				⇓*i*S	Sg	10 40 42.4	-0.2
	baz=9.0						
TKM2	Tokmak 2	0.60	67	P	Pg	10 40 36.4	-0.6
	8.7nm,0.1s,SNR=65						
TKM2				⇓S	Sg	10 40 44.3	-0.5
	99nm,0.2s						
TKM2	Tokmak 2	0.60	67	⇑P	Pg	10 40 36.2	-0.7
	1.1nm,0.3s						
TKM2				⇑S	Sg	10 40 44.1	-0.7
	30nm,0.2s						
TKM2	Tokmak 2	0.60	67	⇑*i*P	Pg	10 40 36.3	-0.6
	baz=67						
TKM2				⇑*i*S	Sg	10 40 44.2	-0.7
	baz=67						
USP	Ospenovka	0.64	336	⇓P	Pg	10 40 37.2	-0.4
	9.0nm,0.2s,SNR=59						
USP				⇑S	Sg	10 40 45.8	-0.2
	79nm,0.1s						
USP	Ospenovka	0.64	336	⇓*i*P	Pg	10 40 37.1	-0.5
	baz=36						
USP				⇓*i*S	Sg	10 40 45.6	-0.4
	baz=36						
KZA	Kyzart	0.68	154	⇑P	Pg	10 40 38.2	-0.2
	3.7nm,0.1s,SNR=11						
KZA				⇓S	Sg	10 40 47.6	+0.2
	69nm,0.2s						
KZA	Kyzart	0.68	154	⇑*i*P	Pg	10 40 38.2	-0.2
	baz=54						
KZA				⇑*i*S	Sg	10 40 47.7	+0.2
	baz=54						
SGDS	Sogindy	0.78	348	P	Pg	10 40 39.8	-0.5
	14nm,0.1s						
SGDS				S	Sg	10 40 50.2	-0.5
	51nm,0.2s						
EKS2	Erkin-Say	0.79	269	⇑*i*P	Pg	10 40 39.9	-0.6
	baz=68						
EKS2				⇑*i*S	Sb	10 40 51.4	+0.1
	baz=68						
BOOM	Boomskoye usch	0.83	103	⇑*i*P	Pg	10 40 40.7	-0.5
	baz=3.0						
BOOM				⇑*i*S	Sg	10 40 51.8	-0.3
	baz=3.0						
DGS	Degeres	0.87	50	P	Pg	10 40 41.8	-0.3
	2.9nm,0.2s						
DGS				S	Sg	10 40 53.4	-0.2
	36nm,0.5s						
DGS	Degeres	0.87	50	*e*P	Pg	10 40 41.8	-0.3
	baz=50						
DGS				*e*S	Sg	10 40 53.4	-0.2
	baz=50						
DGS	Degeres	0.87	50	*e*P	Pg	10 40 41.8	-0.3
	2.9nm,0.2s						
DGS				*e*S	Sg	10 40 53.4	-0.2
	36nm,0.5s						
KST	Kastek	0.89	66	P	Pg	10 40 42.1	-0.3
	6.5nm,0.1s						
KST				S	Sb	10 40 54.0	-0.2
	48nm,0.3s						
KST	Kastek	0.89	66	*e*P	Pg	10 40 42.1	-0.3
	baz=66						
KST				*e*S	Sb	10 40 54.0	-0.2
	baz=66						
KST	Kastek	0.89	66	*e*P	Pg	10 40 42.1	-0.3
	6.5nm,0.1s						
KST				*e*S	Sb	10 40 54.0	-0.2
	48nm,0.3s						
ARLS	Aral	0.91	206	⇓*i*P	Pg	10 40 42.2	-0.6
	baz=6.0						
ARLS				⇓*i*S	Sg	10 40 54.6	-0.2
	baz=6.0						
AML	Almayashu	1.02	237	⇓P	Pg	10 40 44.6	-0.4
	2.7nm,0.2s,SNR=7.5						
AML	Almayashu	1.02	237	⇑*i*P	Pg	10 40 44.5	-0.4
	baz=38						
AML				⇑*i*S	Sg	10 40 58.1	-0.2
	baz=38						
ULHL	Ulahol	1.12	113	⇑P	Pb	10 40 45.8	-0.6
	1.9nm,0.1s,SNR=24						
ULHL	Ulahol	1.12	113	⇑*i*P	Pb	10 40 45.7	-0.6
	baz=13						
ULHL				⇑*i*S	Sb	10 41 00.6	-0.2
	baz=13						
MRKS	Merke	1.20	273	P	Pn	10 40 47.3	-0.2
	21nm,0.1s						
MRKS				S	Sb	10 41 03.0	0.0
	19nm,0.2s						
MRKS	Merke	1.20	273	*e*P	Pn	10 40 47.3	-0.2
	baz=73						
MRKS				*e*S	Sb	10 41 03.0	0.0
	baz=73						
MRKS	Merke	1.20	273	*e*P	Pn	10 40 47.3	-0.2
	21nm,0.1s						
MRKS				*e*S	Sb	10 41 03.0	0.0
	19nm,0.2s						
IZV	Izvestkoviy	1.34	74	P	Pb	10 40 50.1	0.0
	5.1nm,0.1s						
IZV				S	Sg	10 41 08.0	-0.4
	14nm,0.2s						
IZV	Izvestkoviy	1.34	74	*e*P	Pb	10 40 50.1	0.0
	baz=74						
IZV				*e*S	Sg	10 41 08.1	-0.4
	baz=74						
IZV	Izvestkoviy	1.34	74	*e*P	Pb	10 40 50.1	0.0
	5.1nm,0.1s						
IZV				*e*S	Sg	10 41 08.0	-0.4
	14nm,0.2s						
NRN	Naryn	1.52	145	⇑*i*P	Pb	10 40 53.1	-0.1
	baz=46						
NRN				⇑*i*S	Sb	10 41 13.1	+0.8
	baz=46						
TNSS	Tian-Shan	1.58	76	P	Pb	10 40 54.0	-0.3
	2.9nm,0.2s						
TNSS				S	Sb	10 41 14.6	+0.4
	11nm,0.3s						
TNSS	Tian-Shan	1.58	76	*e*P	Pb	10 40 54.0	-0.3
	baz=76						
TNSS				*e*S	Sb	10 41 14.6	+0.4
	baz=76						
TNSS	Tian-Shan	1.58	76	*e*P	Pb	10 40 54.0	-0.3
	2.9nm,0.2s						
TNSS				*e*S	Sb	10 41 14.6	+0.4
	11nm,0.3s						
KUU	Kurty	1.62	41	P	Pb	10 40 54.6	-0.2
	5.0nm,0.2s						
KUU				S	Sb	10 41 15.4	+0.3
	15nm,0.3s						
KUU	Kurty	1.62	41	*e*P	Pb	10 40 54.6	-0.2
	baz=41						
KUU				*e*S	Sb	10 41 15.5	+0.3
	baz=41						
KUU	Kurty	1.62	41	*e*P	Pb	10 40 54.6	-0.2
	5.0nm,0.2s						
KUU				*e*S	Sb	10 41 15.4	+0.3
	15nm,0.3s						
MDOK	Medeo	1.68	73	⇓Pg	Pb	10 40 56.2	+0.4
	1.0nm,0.3s						
MDOK				⇑Lg	Lg	10 41 18.1	
	5.4nm,0.4s						
MDOK	Medeo	1.68	73	Pg	Pn	10 40 54.9	+0.7
	2.7nm,0.4s						
MDOK				Lg	Lg	10 41 15.9	
	9.3nm,0.3s						
MDOK	Medeo	1.68	73	*e*P	Pn	10 40 54.9	+0.7
	baz=73						
MDOK				*e*S	Sn	10 41 16.0	+0.4
	baz=73						
MDOK	Medeo	1.68	73	*e*P	Pn	10 40 54.9	+0.7
	2.7nm,0.4s						
MDOK				*e*S	Sn	10 41 15.9	+0.4
	9.3nm,0.3s						
KTBS	Karatobe	1.69	52	P	Pb	10 40 56.1	+0.2
	2.7nm,0.1s						
KTBS				S	Sg	10 41 18.1	-1.3
	18nm,0.3s						
KTBS	Karatobe	1.69	52	*e*P	Pb	10 40 56.1	+0.2
	baz=48						
KTBS				*e*S	Sg	10 41 18.1	-1.3
	baz=48						
KTBS	Karatobe	1.69	52	*e*P	Pb	10 40 56.1	+0.2
	2.7nm,0.1s						
KTBS				*e*S	Sg	10 41 18.1	-1.3
	18nm,0.3s						
MNAS	Manas	1.75	264	⇑Pg	Pb	10 40 56.9	-0.1
	0.7nm,0.2s						
MNAS				⇑Lg	Lg	10 41 20.3	
	0.8nm,0.2s						
MNAS	Manas	1.75	264	P	Pb	10 40 56.9	-0.1
	1.7nm,0.1s						
MNAS				S	Sb	10 41 19.5	+0.8
	1.5nm,0.1s						
MNAS	Manas	1.75	264	⇑*i*P	Pb	10 40 56.8	-0.1
	baz=64						
MNAS				⇑*i*S	Sg	10 41 20.3	-1.0
	baz=64						
KOTS	Kotyrbulak	1.75	71	P	Pb	10 40 57.4	+0.4
	1.6nm,0.1s						
KOTS				S	Sg	10 41 20.2	-1.2
	20nm,0.4s						
KOTS	Kotyrbulak	1.75	71	*e*P	Pb	10 40 57.4	+0.4
	baz=71						
KOTS				*e*S	Sg	10 41 20.2	-1.2
	baz=71						
KOTS	Kotyrbulak	1.75	71	*e*P	Pb	10 40 57.4	+0.4
	1.6nm,0.1s						
KOTS				*e*S	Sg	10 41 20.2	-1.2
	20nm,0.4s						
KDJ	Kajisay	1.81	107	⇑*i*P	Pb	10 40 57.9	-0.2
	baz=7.0						
KDJ				⇑*i*S	Sb	10 41 21.7	+1.0
	baz=7.0						
CHKK	Chushkaly	1.95	52	Pg	Pb	10 41 01.0	+0.6
	1.8nm,0.2s						
CHKK				Lg	Lg	10 41 26.3	
	44nm,0.4s						
CHKK	Chushkaly	1.95	52	*e*P	Pb	10 41 01.0	+0.6
	baz=53						
CHKK				*e*S	Sg	10 41 26.3	-1.5
	baz=53						
CHKK	Chushkaly	1.95	52	*e*P	Pb	10 41 01.0	+0.6
	1.8nm,0.2s						
CHKK				*e*S	Sg	10 41 26.3	-1.5
	44nm,0.4s						
TARG	Taragay, Kyrgy	2.39	113	⇑*i*P	Pn	10 41 05.8	+1.6
	baz=13						
TARG				⇑*i*S	Sb	10 41 35.9	-1.8
	baz=13						
KURS	Kuram	2.56	71	Pg	Pb	10 41 11.1	+0.3
	1.5nm,0.6s						

KURS				Lg	Lg	10 41 43.8	
	8.0nm,0.6s						
KURS	Kuram	2.56	71	*e*P	Pb	10 41 11.1	+0.3
	baz=71						
KURS				*e*S	Sb	10 41 43.8	+1.7
	baz=71						
KURS	Kuram	2.56	71	*e*P	Pb	10 41 11.1	+0.3
	1.5nm,0.6s						
KURS				*e*S	Sb	10 41 43.8	+1.7
	8.0nm,0.6s						
ARXS	Arharly	2.65	54	Pg	Pb	10 41 12.9	+0.6
	1.5nm,0.4s						
ARXS				Lg	Lg	10 41 46.7	
	14nm,0.3s						
ARXS	Arharly	2.65	54	*e*P	Pb	10 41 12.9	+0.6
	1.5nm,0.4s						
ARXS				*e*S	Sb	10 41 46.7	+2.0
	14nm,0.3s						
UZB	Uzynbulak	3.10	80	Pg	Pb	10 41 21.5	+1.5
	1.6nm,0.2s						
UZB				Lg	Lg	10 42 01.8	
	6.1nm,0.2s						
UZB	Uzynbulak	3.10	80	*e*P	Pb	10 41 21.5	+1.5
	baz=80						
UZB				*e*S	Sg	10 42 01.8	-2.8
	baz=80						
UZB	Uzynbulak	3.10	80	*e*P	Pb	10 41 21.5	+1.5
	1.6nm,0.2s						
UZB				*e*S	Sg	10 42 01.8	-2.8
	6.1nm,0.2s						
KK31	Karatay Array	3.22	279	⇑Pg	Pg	10 41 25.4	-1.3
	0.6nm,0.3s,baz=102,slow=15,SNR=19						
KK31				Lg	Lg	10 42 08.0	
	0.2nm,0.3s,baz=99,slow=30,SNR=4.5						
PDGK	Podgornoye	3.46	78	Pg	Pb	10 41 26.1	-0.1
	0.6nm,0.5s						
PDGK				Lg	Lg	10 42 09.5	
	1.7nm,0.4s						
PDGK	Podgornoye	3.46	78	⇓Lg	Lg	10 42 12.3	
	2.8nm,0.6s						
OTUK	Ortayu	5.83	343	⇓Lg	Lg	10 43 25.0	
	0.5nm,0.5s						

IDC ***14*** *10:47:29.6±1.4, 32°.54S×72°.00W, h0^{km}, mb4.0/1, mb1 4.0/2, mb1mx3.6/19, mbtmp3.9/2, ML3.6/1, MS3.4/1, Ms1 3.3/1, ms1mx2.8/17, Error ellipse: s-maj=94.8km s-min=51.5km az=119.0*

SJA ***14*** *10:47:32.4±1.2, 32°.60S×71°.93W, h10^{km}±22^{km}, ML3.5, MW3.5*

GUC ***14*** *10:47:34.1±0.5, 32°.44S×71°.69W, h25^{km}±4^{km}, ML3.6*

ISC 14 10:47:30.3±1.9**, 32°.45S**±0°.04×**71°.90W**±0°.07**, h7**^{km}±10^{km}**, n35, σ1^s.38**/47**, 2C-12D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROC1	El Roble	0.91	125	*e*P	Pn	10 47 50.0	+0.3
ROC1				⇓*e*S	Sn	10 48 01.7	-1.5
ROCH	El Roble	0.91	125	⇓*e*P	Pn	10 47 50.0	+0.2
ROCH				*e*S	Sn	10 48 01.8	-1.4
ROCH				IAML		10 48 04.4	
	comp=N,3µm,0.4s						
PEL	Peldehue	1.23	124	⇓*e*P	Pg	10 47 55.2	+1.2
PEL				⇓*e*S	Sn	10 48 11.3	+0.4
PEL	Peldehue	1.23	124	*e*P	Pg	10 47 54.8	+0.8
PEL				*e*S	Sg	10 48 10.3	+0.3
PEL				IAML		10 48 12.2	
	comp=E,2µm,0.3s						
CLCH	Cerro Calan	1.48	130	⇓*e*P	Pg	10 47 59.0	+0.2
CLCH				*e*S	Sb	10 48 17.8	+0.4
CLCH				IAML		10 48 24.5	
	comp=E,2µm,0.6s						
CMCH	Combarbala	1.49	31	*e*P	Pg	10 47 59.5	+0.7
CMCH				*e*S	Sg	10 48 18.8	+0.7
CMCH				IAML		10 48 27.4	
	comp=N,4µm,0.7s						
FCH	Farellones	1.61	123	⇑*e*P	Pg	10 48 01.2	-0.1
FCH				*e*S	Sb	10 48 21.3	0.0
FCH				IAML		10 48 24.2	
	comp=E,813nm,0.3s						
LMEL	Las Melosas	1.99	135	*e*P	Pb	10 48 06.9	0.0
LMEL				*e*S	Sb	10 48 32.2	+0.2
LMEL				IAML		10 48 38.3	
	comp=N,798nm,0.1s						
AUSP	Uspallata	2.14	85	*e*P	Pg	10 48 11.6	+0.2
AUSP				⇓*e*S	Sg	10 48 39.1	0.0
RTLS	Leoncito	2.30	74	⇓*e*P	Pg	10 48 15.1	+0.6
RTLS				*e*S	Sg	10 48 45.8	+1.5
RTLS				IAML		10 48 52.2	
	comp=Z,283nm,0.5s						
GO04	Tololo Observa	2.46	23	*e*P	Pg	10 48 17.2	-0.3
GO04				*e*S	Sg	10 48 50.6	+1.3
GO04	Tololo Observa	2.46	23	⇑*e*P	Pg	10 48 16.4	-1.0
GO04				*e*S	Sg	10 48 47.1	-2.3
ARCO	CERRO ARCO	2.53	100	*e*P	Pg	10 48 18.4	-0.5
ARCO				IAML		10 48 24.7	
	comp=Z,153nm,0.3s						
ARCO				⇓*e*S	Sg	10 48 52.1	+0.4
ASAL	Salagasta	2.59	94	*e*P	Pg	10 48 18.5	-1.5
AAGR	Agrelo	2.66	105	⇓*e*P	Pg	10 48 20.0	-1.4
RTCV	Cerro Valdivia	2.91	79	*e*P	Pb	10 48 23.1	+0.5
RTCV				⇓*e*S	Sg	10 49 04.8	+1.0
SJA	San Juan	2.98	73	IAML		10 48 39.5	
	comp=Z,99nm,0.3s						
ACCO	Cerro Coronel	3.05	53	⇓*e*P	Pb	10 48 26.1	+1.0
AROD	Rodeo	3.08	43	*e*P	Pb	10 48 26.2	+0.5
RTLL	Cerro Villicun	3.12	70	⇓*e*P	Pb	10 48 25.2	-1.0
RTLL				IAML		10 49 13.9	
	comp=Z,181nm,0.4s						
AMOG	MOGNA	3.27	63	*e*P	Pb	10 48 27.6	-1.2
ACDV	Cuesta del Vie	3.29	47	*e*P	Pb	10 48 28.0	-1.1
LCO	Las Campanas	3.58	17	*e*P	Pn	10 48 28.2	+1.7
ACAN	Cantantal	3.99	89	*e*P	Pb	10 48 36.7	-4.3
AGUA	GUANDACOL	4.16	46	*e*P	Pb	10 48 40.2	-3.6
APLL	PUNTA DE LOS L	5.03	67	*e*P	Pn	10 48 49.6	+3.4
APLL				IAML		10 49 58.8	
	comp=Z,35nm,0.7s						
LPAZ	La Paz	16.45	13	Pn	P	10 51 22.9	-2.2
	comp=Z,0.1nm,0.3s,baz=191,slow=10,SNR=5.5						
BDFB	Brasilia	27.39	58	LR	LR	11 05 08.4	
	comp=Z,74nm,20.4s,baz=276,slow=38						
TORD	Torodi Ar. Bea	83.58	70	P	P	11 00 00.1	+0.6
	comp=Z,1.2nm,0.8s,baz=250,slow=4.2,SNR=7.9						
WRA	Warramunga Arr	122.17	209	PKP	PKiKP	11 06 25.9	-0.7
	comp=Z,0.3nm,0.8s,baz=152,slow=1.7,SNR=4.1						
BVAR	Borovoye Array	146.06	41	PKPbc	PKPab	11 07 11.4	+0.3
	comp=Z,0.7nm,0.4s,baz=318,slow=1.9,SNR=4.4						
AAK	Ala-Archa	151.65	59	PKPbc	PKiKP	11 07 26.5	+0.7
	comp=Z,1.0nm,0.5s,baz=221,slow=5.2,SNR=6.6						
KURBB	Kurchatov Arra	151.65	41	PKPbc	PKiKP	11 07 25.5	+0.1
	comp=Z,0.9nm,0.6s,baz=299,slow=3.1,SNR=7.0						
ZALV	Zalesovo Beam	152.85	31	PKPbc	PKiKP	11 07 28.3	+0.6
	comp=Z,1.4nm,0.7s,baz=310,slow=4.1,SNR=6.1						
MKAR	Makanchi Array	155.64	46	PKPab	PKPab	11 07 51.3	+0.5
	comp=Z,0.4nm,0.6s,baz=299,slow=3.8,SNR=6.1						

ISCJB ***14*** *10:48:49.8±0.7, 18°.04N±0°.07×145°.4E±0°.2, h300^{km}, mb3.3/9, Error ellipse: s-maj=22.2km s-min=9.1km az=177.9*

IDC ***14*** *10:48:49.2±1.6, 18°.11N×145°.53E, h275^{km}±16^{km}, mb3.1/9, mb1 3.3/11, mb1mx3.1/56, mbtmp3.8/11, Error ellipse: s-maj=22.2km s-min=12.1km az=84.0*

ISC 14 10:48:51.0±0.8**, 17°.98N**±0°.08×**145°.5E**±0°.2**, h300**^{km}**, n11, σ1^s.11**/14**, mb3.3**/9**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.40	188	P	Pn	10 50 01.0	-0.8
	25nm,0.3s,baz=321,slow=8.1,SNR=8.5						
GUMO				S	S	10 50 57.0	-1.5
	7.6nm,0.3s,baz=19,slow=4.4,SNR=3.5						
JOW	Kunigami	18.17	302	P	P	10 52 41.8	-0.7
	0.3nm,0.3s,baz=132,slow=12,SNR=5.1						
ASAJ	Asahikawa	26.18	355	P	P	10 53 58.8	+0.3
	2.4nm,0.5s,baz=133,slow=19,SNR=3.5						
WRA	Warramunga Arr	39.23	197	P	P	10 55 52.9	+1.7
	0.6nm,0.6s,baz=21,slow=8.8,SNR=18						
WRA				PcP	PcP	10 57 54.7	+1.0
	0.7nm,0.9s,baz=18,slow=3.8,SNR=3.9						
ASAR	Alice Springs	42.90	196	P	P	10 56 22.4	+1.5
	0.2nm,0.4s,baz=13,slow=6.4,SNR=7.9						
ASAR				PcP	PP	10 58 06.9	-0.8
	0.3nm,0.9s,baz=34,slow=6.8,SNR=3.5						
SONM	Songino Array	43.58	322	P	P	10 56 25.3	-0.8
	0.5nm,0.6s,baz=135,slow=7.2,SNR=4.4						
CMAR	Chiang Mai Arr	44.11	278	P	P	10 56 31.8	+1.2
	0.4nm,0.3s,baz=64,slow=6.9,SNR=5.4						
ZALV	Zalesovo Beam	58.46	323	P	P	10 58 14.9	-0.9
	0.6nm,0.4s,baz=111,slow=6.5,SNR=3.6						
MKAR	Makanchi Array	58.81	314	P	P	10 58 18.5	0.0
	1.2nm,0.6s,baz=91,slow=7.5,SNR=20						
ILAR	Eielson Array	64.38	26	P	P	10 58 54.5	-0.6
	0.2nm,0.4s,baz=252,slow=6.1,SNR=7.0						
NVAR	Mina Array Bea	83.75	52	P	P	11 00 47.6	+0.3
	0.8nm,0.6s,baz=263,slow=6.5,SNR=6.3						

IDC 14 11:00:34.1±6.0**, 48°.49N**×**33°.56E, h0**^{km}**, mb1 2.0**/1**, mb1mx2.0**/39**, mbtmp2.0**/1**, ML2.6**/1**, Error ellipse: s-maj=62.1km s-min=48.6km az=37.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	Malin Array Be	3.59	310	Pn	Pn	11 01 31.6	+0.6
	0.5nm,0.3s,baz=124,slow=18,SNR=1.8						
AKASG				Lg	Lg	11 02 27.1	
	1.1nm,0.3s,baz=127,slow=30,SNR=2.8						
AKASG				Rg	Rg	11 02 44.1	
	0.3nm,0.3s,baz=127,slow=28,SNR=4.3						
I43RU	DUBNA INFRASON	8.54	14	*i*		11 56 50.0	
	baz=192,slow=320,SNR=1.0						
I31KZ	AKTYUBINSK INF	16.02	74	*i*		12 44 00.0	
	baz=268,slow=296,SNR=1.3						

IDC ***14*** *11:15:19.6±0.5, 0°.37S×98°.65E, h0^{km}, mb4.5/26, mb1 4.6/28, mb1mx4.5/46, mbtmp4.5/28, ML3.9/2, MS3.7/14, Ms1 3.7/14, ms1mx3.4/45, Error ellipse: s-maj=18.3km s-min=12.6km az=56.0*

BJI ***14*** *11:15:20.5, 0°.50S×98°.40E, h15^{km}, mB5.0/34, mb4.7/45, Ms4.5/24, Ms7 4.2/24*

DJA ***14*** *11:15:21.9±0.3, 0°S±4°×9°8E±°, h10^{km}, M4.8/14, mb4.7/11, mB5.0/1, MLv4.8/14, Mw(mB)4.3/1*

ISCJB ***14*** *11:15:22.1±0.3, 0°.48S±0°.04×98°.46E±0°.04, h32^{km}, mb4.7/78, MS3.9/22, Error ellipse: s-maj=6.4km s-min=3.6km az=136.6*

MOS ***14*** *11:15:23.9±0.9, 0°.33S×98°.66E, h42^{km}, mb4.9/30, Error ellipse: s-maj=12.2km s-min=5.7km az=103.0*

KLM ***14*** *11:15:23.3, 0°.60S×98°.29E, h41^{km}, mb4.7*

NEIC ***14*** *11:15:24.7±0.7, 0°.41S×98°.57E, h35^{km}±5^{km}, mb4.8/23, Error ellipse: s-maj=7.6km s-min=4.0km az=49.0*

ISC 14 11:15:24.4±0.4**, 0°.47S**±0°.04×**98°.40E**±0°.05**, h32**^{km}**, n200, σ2^s.09**/210**, mb4.7**/78**, MS3.9**/24**, 11C-10D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	Pulau Batu	0.43	344	P	Pb	11 15 30.1	-3.7
SISI	Saibi	1.10	141	P	Pn	11 15 41.1	-2.4
MNSI	Mandailing Nat	1.72	43	P	Pn	11 15 48.4	-3.7
GSI	Gunungsitoli	1.94	335	*e*Pn	Pn	11 15 54.4	-0.8
GSI	Gunungsitoli	1.94	335	P	Pn	11 15 55.1	-0.1
PDSI	Padang	2.11	102	P	Pn	11 15 55.6	-1.9
BKNI	Bangkinang	2.75	73	*e*Pn	Pn	11 16 04.7	-1.6
BKNI	Bangkinang	2.75	73	P	Pn	11 16 08.0	+1.6
PPSI	Pulau Pagai	2.79	145	P	Pn	11 16 05.9	-0.9
SDSI	Sungai Dareh	3.06	99	P	Pb	11 16 15.2	-3.0
PSI	Prapat	3.29	9	*e*Pn	Pn	11 16 10.6	-3.2
PSI	Prapat	3.29	9	*e*P	Pn	11 16 10.6	-3.2
PSI	Prapat	3.29	9	Pn	Pn	11 16 10.0	-3.9
	7.4nm,0.3s,baz=180,slow=7.4,SNR=13						
KRJI	Kerinci	3.46	118	P	Pn	11 16 16.4	+0.3
SNSI	Sinabang, Aceh	3.53	324	P	Pn	11 16 17.8	+0.8
TPTI		3.90	342	P	Pn	11 16 21.1	-1.0
TSI	Tuntungan	3.95	2	P	Pb	11 16 29.9	-3.4
KCSI	Kotacane, Aceh	4.01	351	P	Pn	11 16 22.4	-1.3
FRIM	Kepong	4.89	41	P	Pn	11 16 37.2	+1.5
KGM	Kluang	5.50	63	P	Pn	11 16 46.4	+2.2
IPM	Ipoh	5.57	28	*e*Pn	Pn	11 16 43.2	-1.9
IPM	Ipoh	5.57	28	P	Pn	11 16 47.8	+2.7
LHMI	Lhok Sumawe	5.84	346	*e*Pn	Pn	11 16 48.1	-0.7
MYKOM	Kota Tinggi	5.89	68	*e*Pn	Pn	11 16 48.1	-1.4
MYKOM	Kota Tinggi	5.89	68	P	Pn	11 16 48.8	-0.7
MNAI	Manna	5.97	130	*e*Pn	Pn	11 16 49.5	-1.2
LHSI	Lahat	6.11	123	P	Pn	11 16 52.6	+0.1
KULM	Kulim	6.15	21	*e*Pn	Pn	11 16 51.6	-1.4
KULM	Kulim	6.15	21	P	Pn	11 16 53.3	+0.3
BSI	Banda Aceh	6.69	332	P	Pn	11 16 59.4	-1.1
MDSI	Maura Dua	7.02	125	P	Pn	11 17 04.0	-1.0
KTGM	Kuala Trenggan	7.45	39	P	Pn	11 17 13.0	+2.1
KASI	Kota Agung	7.89	130	P	Pn	11 17 15.3	-1.7
TRTT	Trang	8.35	9	P	Pn	11 17 27.7	+4.4
KSM	Kuching	12.06	81	*e*Pn	Pn	11 18 12.4	-1.8
KPJI	Karang Pucung	12.52	123	P	Pn	11 18 23.5	+3.1
SRDT	SRDT	14.74	3	P	P	11 19 01.5	+5.1
SRAK	Srakaew	14.83	14	P	P	11 19 03.2	+5.8
BTM	Bintulu	15.12	76	P	Pn	11 18 56.0	+0.1
UTHA	Uthaitani	15.96	4	P	P	11 19 12.2	+2.3
UMPA	Umpang Tak	16.57	2	P	P	11 19 22.0	+5.2
PBKT	Sadao Pong	17.12	8	P	Pn	11 19 21.6	+0.3
	15nm,1.2s,2µm						
SKNT	Sakolnakorn	18.18	17	P	P	11 19 40.2	+5.6
UTTA	Uttaradit	18.22	7	P	Pn	11 19 35.6	+0.6
	3.1nm,0.8s						
CMAR	Chiang Mai Arr	18.82	2	*ce*P	P	11 19 40.9	-0.6
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	18.82	2	P	P	11 19 40.3	-1.2
	comp=Z,0.2nm,0.3s,baz=190,slow=11,SNR=24						
CMAR				LR	LR	11 27 45.5	
	comp=Z,265nm,19.6s,baz=187,slow=40						
KKM	Kota Kinabalu	18.93	70	*e*P	P	11 19 42.5	-0.4
	comp=Z,37nm,0.9s						
KKM	Kota Kinabalu	18.93	70	P	P	11 19 42.8	-0.1
CMMT	Chiang Mai	19.17	2	P	Pn	11 19 49.3	+2.8
CHTO	Chiang Mai	19.17	2	P	Pn	11 19 49.4	+2.9
SDKM	Sandakan	19.72	72	P	P	11 19 51.3	-0.3
TSM	Tawau	20.02	76	P	P	11 19 53.5	-1.3
MPSI	Mapaga	21.51	88	P	P	11 20 15.5	+4.6
BNSI	Bone	22.03	101	P	P	11 20 18.9	+2.4
	comp=Z,30nm,1.2s						
BKSI	Bulukumba	22.22	103	P	P	11 20 24.5	+6.0
QIZ	Qiongzhong	22.40	30	P	P	11 20 20.5	+0.1
QIZ				S	S	11 24 27.1	+2.4
QIZ				LR	LR		
	comp=Z,290nm,13.9s						
QIZ				LR	LR		
	comp=Z,270nm,6.7s						
QIZ				LR	LR		
	comp=Z,160nm,9.6s						
MRSI	Marisa	23.56	88	P	P	11 20 31.4	-0.9
	comp=Z,22nm,1.4s						
BRDH	Bariadhala	23.93	344	LR	LR	11 31 08.9	
	comp=Z,208nm,21.4s,baz=171,slow=40						
LUWI	Luwuk	24.38	91	*e*P	P	11 20 38.0	-2.0
	comp=Z,65nm,1.0s						
LUWI	Luwuk	24.38	91	P	P	11 20 45.0	+5.1
KMI	Kunming	25.79	9	P	P	11 20 54.5	+1.7
KMI				pP	pP	11 21 00.9	-1.2
KMI				PP	PnPn	11 21 32.9	+2.4
KMI				S	S	11 25 21.4	+1.0
KMI				sS	pS	11 25 31.8	+0.9
KMI				SS	SnSn	11 26 21.9	+4.4
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,100nm,4.7s						
KMI				LR	LR		
	comp=Z,260nm,10.5s						
KMI				LR	LR		
	comp=Z,220nm,10.1s						
KMI				LR	LR		
	comp=Z,270nm,11.6s						
SHL	Shillong	26.64	347	*e*P	P	11 21 00.0	-0.5
H08S2	Diego Garcia H	26.79	254	T	T	11 48 44.9	
	baz=75,slow=75,SNR=313						
H08S3	Diego Garcia H	26.80	254	T	T	11 48 48.7	
	baz=75,slow=75,SNR=1488						
H08S1	Diego Carcia H	26.81	254	T	T	11 48 49.7	
	baz=75,slow=75,SNR=102						
GYA	Guiyang	27.93	16	⇑*i*P	P	11 21 11.8	-0.2
GYA				pP	pP	11 21 21.0	-0.3
GYA				PP	PnPn	11 22 05.0	+5.4
GYA				S	S	11 25 56.3	+2.3
GYA				SS	SnSn	11 27 19.4	+10
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,60nm,3.9s						
GYA				LR	LR		
	comp=Z,480nm,15.9s						
GYA				LR	LR		
	comp=Z,480nm,15.8s						
GYA				LR	LR		
	comp=Z,440nm,16.3s						
DAV	Davao City (W)	28.13	74	LR	LR	11 33 27.2	
	comp=Z,141nm,19.7s,baz=324,slow=39						
LSA	Lhasa	30.79	348	*e*P	P	11 21 37.3	-0.4
	comp=Z,6.6nm,0.8s						
LSA	Lhasa	30.79	348	*e*P	P	11 21 37.3	-0.4
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CD2	Chengdu	31.62	9	*e*P	P	11 21 45.0	+0.4
CD2				S	S	11 26 54.9	+3.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
CD2				LR	LR		
	comp=Z,900nm,16.2s						
CD2				LR	LR		
	comp=Z,580nm,14.7s						
FITZ	Fitzroy Crossi	31.99	125	*e*P	P	11 21 46.1	-1.9
	comp=Z,7.4nm,0.9s						
ENH	Enshi	32.34	18	*e*P	P	11 21 49.0	-1.9
	comp=Z,52nm,1.0s						
XAN	Xi'an	35.72	15	P	P	11 22 19.3	-0.9
XAN				pP	pP	11 22 28.3	-1.3
XAN				pmax	pmax		
	comp=Z,51nm,0.9s						
XAN				pmax	pmax		
	comp=Z,47nm,3.5s						
XAN				LR	LR		
	comp=Z,240nm,14.4s						
XAN				LR	LR		
	comp=Z,190nm,10.4s						
XAN				LR	LR		
	comp=Z,190nm,17.3s						
XAN	Xi'an	35.72	15	*e*P	P	11 22 18.4	-1.8
	comp=Z,71nm,0.9s						
XAN				*e*S	S	11 27 55.3	+0.2
XAN	Xi'an	35.72	15	*e*P	P	11 22 18.4	-1.8
XAN				*e*S	S	11 27 55.3	+0.2
XAN				pmax	pmax		
	comp=Z,71nm,0.9s						
LZH	Lanzhou	36.72	7	*e*P	P	11 22 28.9	0.0
LZH				pP	pP	11 22 36.4	-1.9
LZH				sP	sP	11 22 39.8	-2.3
LZH				*e*S	S	11 28 06.3	-4.3
LZH				SS	SnSn	11 30 34.0	-9.0
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,5.1s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,14.9s						
NJ2	Nanjing	37.69	29	*e*P	P	11 22 36.8	-0.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA	Gaotai	39.71	2	*e*P	P	11 22 53.6	-0.4
GTA				pP	pP	11 22 58.0	-5.4
GTA				S	S	11 28 55.1	-0.6
GTA				SS	SS	11 31 43.3	-8.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,120nm,6.8s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,18.7s						
GTA				LR	LR		
	comp=Z,130nm,19.7s						
WRA	Warramunga Arr	40.15	121	P	P	11 22 55.8	-2.0
	comp=Z,7.9nm,0.6s,baz=302,slow=9.0,SNR=156						
WRA				PcP	PcP	11 25 01.8	-0.1
	comp=Z,1.0nm,0.5s,baz=312,slow=2.6,SNR=8.2						
WR1	Warramunga Arr	40.15	121	*e*P	P	11 22 55.8	-2.0
	comp=Z,11nm,0.6s						
WR1				*e*PcP	PcP	11 25 01.8	-0.1
WRAB	Tennant Creek	40.15	121	*e*P	P	11 22 56.1	-1.7
	comp=Z,11nm,0.6s						
WRAB	Tennant Creek	40.15	121	*d i*P	P	11 22 55.9	-1.9
WRAB				pmax	pmax		
	comp=Z,19nm,1.7s						
WB2	Warramunga Arr	40.16	121	*e*P	P	11 22 55.6	-2.2
WB2				*e*P	P	11 22 56.1	-1.7
ASAR	Alice Springs	41.44	126	P	P	11 23 06.7	-1.7
	comp=Z,7.8nm,0.8s,baz=301,slow=8.0,SNR=135						
ASAR				PcP	PcP	11 25 06.5	+0.4
	comp=Z,2.1nm,0.7s,baz=301,slow=3.2,SNR=8.9						
HHC	Hu-ho-hao-te	42.83	15	*e*P	P	11 23 20.1	+0.5
HHC				pP	pP	11 23 28.8	-0.3
HHC				sP	sP	11 23 32.4	-0.5
HHC				S	S	11 29 44.8	+2.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
HHC				LR	LR		
	comp=Z,210nm,13.2s						
HHC				LR	LR		
	comp=Z,220nm,13.3s						
HHC				LR	LR		
	comp=Z,430nm,11.5s						
BJT	Baijiatuau	43.44	20	*e*P	P	11 23 24.1	-0.3
	comp=Z,14nm,1.1s						
BJT	Baijiatuau	43.44	20	*e*P	P	11 23 24.1	-0.3
BJT				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ	Urumqi	45.12	349	P	P	11 23 39.0	+1.1
WMQ				pP	pP	11 23 43.9	-3.5
WMQ				sP	sP	11 23 48.1	-3.2
WMQ				pmax	pmax		
	comp=Z,26nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.6s						
WMQ				LR	LR		
	comp=Z,120nm,35.5s						
WMQ				LR	LR		
	comp=Z,170nm,27.5s						
WMQ				LR	LR		
	comp=Z,110nm,22.7s						
TARG	Taragay, Kyrgy	45.95	339	*e*P	P	11 23 44.5	-0.4
	comp=Z,9.2nm,0.9s						
SFK	Sufi-Kurgan	46.26	333	P	P	11 23 48.2	+1.1
SFK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NRN	Naryn	46.38	337	*e*P	P	11 23 48.5	+0.3
	comp=Z,8.8nm,0.6s						
KDJ	Kajisay	46.53	338	*e*P	P	11 23 47.8	-1.4
	comp=Z,12nm,0.8s						
KDJ	Kajisay	46.53	338	*e*P	P	11 23 47.8	-1.4
KDJ				pmax	pmax		
	comp=Z,12nm,0.8s						
KSAR	Wonju Array Be	46.54	33	P	P	11 23 47.3	-1.7
KSAR	Wonju Array Be	46.54	33	P	P	11 23 47.3	-1.7
KSRS	Korea Array	46.56	33	P	P	11 23 47.3	-2.0
	comp=Z,5.7nm,0.4s,baz=222,slow=9.0,SNR=13						
KSRS				LR	LR	11 44 38.1	
	comp=Z,124nm,18.4s,baz=217,slow=38						
PDGK	Podgornoye	46.78	341	P	P	11 23 52.2	+1.1
PDGK				pmax	pmax		
	comp=Z,14nm,0.8s						
GAR	Garm	46.97	330	*e*P	P	11 23 52.0	-0.6
	comp=Z,8.7nm,1.1s						
GAR	Garm	46.97	330	*e*P	P	11 23 52.0	-0.6
GAR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AAK	Ala-Archa	48.00	336	*e*P	P	11 24 01.0	+0.4
	comp=Z,2.6nm,1.0s						
AAK				*e*P	P	11 24 01.1	+0.5
AAK	Ala-Archa	48.00	336	*de*P	P	11 24 02.4	+1.8
AAK				pmax	pmax		
	comp=Z,14nm,2.5s						
AAK	Ala-Archa	48.00	336	P	P	11 24 01.1	+0.5

	comp=Z,1.8nm,0.6s,baz=146,slow=5.5,SNR=6.8						
SONA0	Songino Array	48.61	7	*e*P	P	11 24 04.8	-0.3
SONM	Songino Array	48.61	7	P	P	11 24 04.8	-0.3
	comp=Z,5.6nm,0.8s,baz=190,slow=8.4,SNR=46						
SONM				LR	LR	11 47 31.4	
	comp=Z,104nm,18.5s,baz=210,slow=40						
SONA1	Songino Array	48.62	7	*e*P	P	11 24 05.0	-0.3
MNAS	Manas	48.71	335	P	P	11 24 07.2	+1.2
MNAS				pmax	pmax		
	comp=Z,8.0nm,1.9s						
ULN	Ulaanbaatar	48.73	8	*e*P	P	11 24 05.2	-0.9
	comp=Z,8.1nm,0.8s						
ULN	Ulaanbaatar	48.73	8	*d i*P	P	11 24 06.4	+0.3
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
MK01	Makanchi Array	49.12	345	*e*P	P	11 24 08.8	-0.2
MK31	Makanchi Array	49.14	345	*e*P	P	11 24 09.2	0.0
	comp=Z,7.7nm,0.7s						
MK31	Makanchi Array	49.14	345	*e*P	P	11 24 09.2	0.0
MK31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MK32	Makanchi Array	49.14	345	*e*P	P	11 24 09.1	-0.1
MKAR	Makanchi Array	49.14	345	*e*P	P	11 24 09.2	0.0
	comp=Z,64nm,0.6s						
MKAR	Makanchi Array	49.14	345	*e*P	P	11 24 09.2	0.0
MKAR				pmax	pmax		
	comp=Z,64nm,0.6s						
MKAR	Makanchi Array	49.14	345	P	P	11 24 09.1	0.0
	comp=Z,8.6nm,0.5s,baz=154,slow=8.3,SNR=120						
MKAR				LR	LR	11 48 50.3	
	comp=Z,46nm,19.2s,baz=147,slow=41						
MAKZ	Makanchi	49.24	345	*e*P	P	11 24 10.1	+0.2
	comp=Z,6.9nm,0.7s						
MAKZ	Makanchi	49.24	345	*e*P	P	11 24 10.1	+0.2
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CN2	Changchun	50.27	25	*e*P	P	11 24 21.3	+3.6
ZAK	Zakamensk	50.83	4	*e*P	P	11 24 20.1	-1.9
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
DGZ	Jazzator, Alta	50.86	351	*de*P	P	11 24 22.8	+0.5
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KNGR	Kungurtug, Tuv	50.89	359	⇑*i*P	P	11 24 22.6	+0.2
STKA	Stephens Creek	51.36	132	P	P	11 24 25.5	-0.7
	comp=Z,6.4nm,0.6s,baz=308,slow=8.1,SNR=20						
STKA				LR	LR	11 48 38.6	
	comp=Z,90nm,21.1s,baz=266,slow=39						
MJAR	Matsushiro Arr	52.13	41	LR	LR	11 46 08.6	
	comp=Z,38nm,21.9s,baz=220,slow=36						
TLY	Talaya	52.15	4	*e*P	P	11 24 32.2	+0.5
	comp=Z,5.5nm,0.9s						
TLY	Talaya	52.15	4	*d i*P	P	11 24 32.5	+0.8
USA0B	Ussuriysk Arra	53.59	30	*e*P	P	11 24 41.6	-0.9
	comp=Z,13nm,1.1s						
USRK	Ussuriysk Ar.	53.59	30	P	P	11 24 41.4	-1.1
	comp=Z,4.6nm,0.6s,baz=226,slow=6.3,SNR=10						
USRK				LR	LR	11 49 35.9	
	comp=Z,76nm,18.8s,baz=206,slow=38						
KURBB	Kurchatov Arra	53.65	344	P	P	11 24 43.0	+0.2
	comp=Z,4.7nm,0.7s,baz=165,slow=6.8,SNR=27						
KURK	Kurchatov	53.71	345	*e*P	P	11 24 43.0	-0.2
KURK	Kurchatov	53.71	345	⇓*e*P	P	11 24 43.6	+0.4
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV	Zalesovo Beam	55.39	350	P	P	11 24 55.4	+0.1
	comp=Z,12nm,0.7s,baz=176,slow=6.0,SNR=34						
ZALV				LR	LR	11 54 23.3	
	comp=Z,34nm,18.9s,baz=316,slow=42						
ZAA1	Zalesovo Array	55.39	350	*e*P	P	11 24 55.5	+0.1
NVS	Novosibirsk	56.52	350	*i* P	P	11 25 03.0	-0.4
KLR	Kul'dur	57.22	25	*d i*P	P	11 25 07.5	-1.0
KLR	Kul'dur	57.22	25	P	P	11 25 07.1	-1.4
	comp=Z,6.0nm,0.9s,baz=255,slow=6.4,SNR=18						
BVAR	Borovoye Array	58.21	341	P	P	11 25 15.1	-0.3
	comp=Z,3.5nm,0.6s,baz=141,slow=7.6,SNR=19						
BRVK	Borovoye	58.27	340	*d i*P	P	11 25 15.4	-0.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZEA	Zeya	59.09	20	*e*P	P	11 25 20.8	-0.6
BOD	Bodaibo	59.43	10	*e*P	P	11 25 23.3	-0.5
BOD				pmax	pmax		
	comp=Z,15nm,1.2s						
ABKAR	Akbulak array	59.54	332	*e*P	P	11 25 24.2	-0.5
GRNR	Gornyy	60.40	27	*e*P	P	11 25 28.8	-1.8
YSS	Yuzh-Sakhalins	61.06	33	⇑*e*P	P	11 25 38.1	+3.0
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
KMBO	Kilima Mbogo	61.14	269	P	P	11 25 40.0	+3.4
	comp=Z,1.0nm,0.4s,baz=59,slow=9.8,SNR=6.0						
AKTO	Aktyubinsk	61.26	332	P	P	11 25 35.9	-0.6
	comp=Z,2.2nm,0.9s,baz=127,slow=3.1,SNR=6.7						
GNI	Garni	63.32	316	⇑*e*P	P	11 25 51.5	+0.8
GNI				pmax	pmax		
	comp=Z,23nm,0.8s						
NKL	Nikolayevsk	63.95	27	*e*P	P	11 25 52.5	-1.8
SVE	Sverdlovsk	64.67	338	*e*P	P	11 25 59.0	0.0
SVE				pmax	pmax		
	comp=Z,23nm,1.2s						
ZEI	Tsey	65.04	319	*e*P	P	11 26 02.8	+0.9
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	Arti	65.18	337	*e*P	P	11 26 01.9	-0.4
	comp=Z,10nm,0.9s						
ARU	Arti	65.18	337	*e*P	P	11 26 01.9	-0.4
ARU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NCK	Nalchik	65.55	319	⇑*e*P	P	11 26 06.3	+1.3
NCK				pmax	pmax		
	comp=Z,8.0nm,0.2s						
NEY	Neytrino	66.02	319	⇑*e*P	P	11 26 08.1	-0.1
NEY				pmax	pmax		
	comp=Z,3.0nm,1.5s						
KBZ	Khabaz	66.11	319	P	P	11 26 09.6	+1.1
	comp=Z,5.0nm,0.9s,baz=122,slow=5.8,SNR=9.9						
KIV	Kislovodsk	66.35	319	*e*P	P	11 26 10.9	+0.7
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
YAK	Yakutsk	66.69	15	*e*P	P	11 26 10.6	-1.3
YAK				*e*		11 26 39.6	
YAK				*e*S	S	11 34 59.3	-1.9
YAK				*e**SS	sS	11 35 23.2	+5.6
YAK				pmax	pmax		
	comp=Z,142nm,0.9s						
YAK				pmax	pmax		
	comp=N,50nm,1.0s						
YAK				pmax	pmax		
	comp=E,31nm,0.9s						
YAK				pmax	pmax		
	comp=Z,265nm,2.5s						
YAK				pmax	pmax		
	comp=N,145nm,2.7s						
YAK				pmax	pmax		
	comp=E,293nm,3.5s						
YAK				smax	smax		
	comp=E,714nm,4.8s						
YAK				smax	smax		
	comp=N,461nm,4.3s						
YAK				MLR	MLR		
	comp=Z,318nm,16.0s						
YAK				MLR	MLR		
	comp=N,820nm,17.0s						
NRIK	Noril'sk	70.06	356	P	P	11 26 32.4	-0.5
	comp=N,3.2nm,0.4s,baz=161,slow=4.5,SNR=10.0						
NRIK				LR	LR	12 01 06.2	
	comp=N,54nm,18.2s,baz=206,slow=39						
KIRV	Kirov	70.32	335	P	P	11 26 34.5	-0.1
	comp=N,9.5nm,0.5s,baz=59,slow=6.8,SNR=3.9						
BR101	Keskin Array S	71.12	312	*e*P	P	11 26 40.0	-0.1
BRTR	Keskin Array B	71.12	312	P	P	11 26 40.0	-0.1
BRTR	Keskin Array B	71.12	312	P	P	11 26 40.0	-0.1
	comp=N,2.0nm,0.7s,baz=135,slow=8.3,SNR=9.9						
MAW	Mawson	71.38	194	LR	LR	11 50 34.4	
	comp=N,55nm,19.2s,baz=28,slow=30						
VSR	Storozhevoye	71.61	325	⇓*e*P	P	11 26 41.4	-1.3
VSR				pmax	pmax		
	comp=Z,18nm,1.1s						
MA2	Magadan	72.32	25	*e*P	P	11 26 45.6	-1.0
	comp=Z,6.7nm,0.8s						
MA2	Magadan	72.32	25	*e*P	P	11 26 45.7	-1.0
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MA2	Magadan	72.32	25	P	P	11 26 45.7	-1.0
	comp=Z,5.0nm,0.6s,baz=228,slow=5.5,SNR=18						
LPSR	Galich'ya Gora	72.34	327	*e*P	P	11 26 45.5	-1.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PETK	Petropavlovsk-	72.46	33	P	P	11 26 46.5	-1.3
	comp=Z,1.9nm,0.7s,baz=192,slow=5.6,SNR=3.8						
PETK				LR	LR	11 58 28.2	
	comp=Z,23nm,21.9s,baz=152,slow=36						
PEA1	Petropavlovsk-	72.47	33	*e*P	P	11 26 46.5	-1.3
PRGR	Permogore	73.64	337	*e*P	P	11 26 53.1	-1.3
PRGR				pmax	pmax		
	comp=Z,23nm,0.7s						
OBN	Obninsk	74.66	328	⇑*e*P	P	11 27 01.0	+0.5
OBN				*e*		11 27 12.7	
OBN				*e*		11 29 45.4	
OBN				pmax	pmax		
	comp=Z,13nm,0.4s						
OBN				MLR	MLR		
	comp=Z,41nm,13.0s						
SEY	Seymchan	74.83	23	⇓*e*P	P	11 27 00.4	-1.0
SEY	Seymchan	74.83	23	P	P	11 27 00.3	-1.1
	comp=Z,8.2nm,1.0s,baz=241,slow=5.1,SNR=27						
BOSA	Boshof	75.00	241	P	P	11 27 05.1	+1.8
	comp=Z,5.9nm,1.0s,baz=118,slow=4.0,SNR=4.0						
BOSA				LR	LR	11 52 58.4	
	comp=Z,46nm,21.1s,baz=34,slow=30						
KLMR	Klimovskoe	75.77	334	*e*P	P	11 27 04.9	-1.9
KLMR				pmax	pmax		
	comp=Z,11nm,1.4s						
KLMR	Klimovskoe	75.77	334	*e*P	P	11 27 04.9	-1.9
KLMR				AMP		11 27 11.2	
	comp=Z,11nm,1.4s						
AKASG	Malin Array Be	77.30	322	*i* P	P	11 27 15.6	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	77.30	322	P	P	11 27 15.4	-0.4
	comp=Z,2.1nm,0.7s,baz=87,slow=5.0,SNR=6.2						
KIEV	Kiev	77.31	322	⇑*e*P	P	11 27 14.9	-0.9
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TMCR	Tamitsa	77.92	337	*e*P	P	11 27 19.0	+0.2
TMCR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BKZ	Black Stump Fm	80.47	130	*e*P	P	11 27 33.3	-0.2
	comp=Z,24nm,1.2s						
FIA0	FINESS Array S	82.02	332	*e*P	P	11 27 41.1	0.0
FIA0	FINESS Array S	82.02	332	*e*P	P	11 27 41.1	0.0
FINES	FINESS Array B	82.02	332	P	P	11 27 41.1	0.0
	comp=Z,3.6nm,0.4s,baz=108,slow=5.7,SNR=47						
BILL	Bilibino	82.29	21	⇑*e*P	P	11 27 40.7	-1.7
BILL				*e*		11 30 52.1	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ARA0	ARCESS Array S	84.50	340	*e*P	P	11 27 54.2	+0.4
ARCES	ARCESS Array B	84.50	340	P	P	11 27 54.2	+0.4
	comp=Z,4.4nm,0.8s,baz=94,slow=4.9,SNR=10						
GEC2	GERESS Array S	86.85	319	*e*P	P	11 28 07.0	+1.0
	comp=Z,2.7nm,0.9s						
GEC2	GERESS Array S	86.85	319	*e*P	P	11 28 07.0	+1.0
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	GERESS Array B	86.85	319	P	P	11 28 07.0	+1.0
	comp=Z,1.0nm,0.9s,baz=93,slow=5.3,SNR=8.2						
YKA	Yellowknife Ar	113.36	16	PP	PP	11 34 46.8	-2.3
	comp=Z,0.2nm,0.8s,baz=318,slow=6.2,SNR=3.8						
NV01	Mina Array Sit	129.40	37	*e*PKPdf	PKPdf	11 34 30.6	+0.1
NVAR	Mina Array Bea	129.40	37	PKP	PKiKP	11 34 31.5	+0.2
	comp=Z,0.6nm,0.8s,baz=266,slow=2.3,SNR=4.9						
ANMO	Albuquerque	138.59	31	⇑*e*PKIKP	PKPdf	11 34 47.8	-0.1
LTX	Lajitas	144.41	34	*e*PKPdf	PKPbc	11 34 56.7	0.0
LTX	Lajitas	144.41	34	*e*PKIKP	PKPbc	11 34 56.7	0.0
TXAR	Lajitas Array	144.41	34	PKP	PKPbc	11 34 56.7	0.0
	comp=Z,0.6nm,0.5s,baz=348,slow=0.6,SNR=13						
TXAR				SKP		11 38 32.8	
	comp=Z,0.4nm,0.8s,baz=222,slow=1.7,SNR=3.4						
CPUP	Villa Florida	144.54	219	PKP	PKPdf	11 34 58.6	+0.1
	comp=Z,5.5nm,0.9s,baz=120,slow=2.5,SNR=13						
JCT	Junction City	145.50	28	*e*PKPbc	PKPdf	11 34 59.4	-0.7
JCT	Junction City	145.50	28	*e*PKIKP	PKPdf	11 34 59.4	-0.7
X48A	Hartselle	145.81	8	*e*PKPdf	PKPdf	11 34 59.5	-1.0

IDC **14** *11:24:32.8±0.6, 0°.40S×98°.61E, $h0^{km}$, mb4.4/22, mb1 4.5/24, mb1mx4.2/55, mbtmp4.4/24, ML3.4/1, Error ellipse: s-maj=19.5km s-min=13.3km az=61.0*

ISCJB **14** *11:24:35.7±0.3, 0°.40S±0°.04×98°.59E±0°.05, $h32^{km}$, mb4.5/37, Error ellipse: s-maj=8.3km s-min=4.5km az=141.9*

DJA **14** *11:24:36.6±0.5, 0˚S±4˚×9˚8E±˚, $h10^{km}$, M4.6/15, mb4.8/3, mB4.8/1, MLv4.5/15, Mw(mB)4.0/1*

NEIC **14** *11:24:37.9±0.7, 0°.48S×98°.61E, $h37^{km}\pm5^{km}$, mb4.6/20, Error ellipse: s-maj=7.9km s-min=4.0km az=54.0*

ISC 14 11:24:37.5±0.5, **0°.39S**±0°.05×**98°.51E**±0°.05, **$h32^{km}$, n94, $\sigma 1^{s}37$**/90, **mb4.5**/37, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.41	325	P	Pb	11 24 43.9	-2.8
SISI	Saibi	1.09	148	P	Pn	11 24 55.0	-1.6
MNSI	Mandailing Nat	1.59	42	P	Pn	11 25 02.3	-1.2
GSI	Gunungsitoli	1.93	331	*e*Pn	Pn	11 25 08.8	+0.6
GSI	Gunungsitoli	1.93	331	P	Pn	11 25 10.0	+1.8
PDSI	Padang	2.02	105	P	Pn	11 25 07.7	-1.7
BKNI	Bangkinang	2.63	74	*e*Pn	Pn	11 25 18.0	+0.3
BKNI	Bangkinang	2.63	74	P	Pb	11 25 23.6	-0.4
PPSI	Pulau Pagai	2.79	148	P	Pn	11 25 19.2	-0.8
SDSI	Sungai Dareh	2.96	100	P	Pb	11 25 28.8	-0.9
PSI	Prapat	3.20	7	*e*Pn	Pn	11 25 24.9	-0.9
PSI	Prapat	3.20	7	Pn	Pn	11 25 24.5	-1.3
	4.9nm,0.3s,baz=180,slow=4.0,SNR=10						
KRJI	Kerinci	3.40	120	P	Pn	11 25 31.3	+2.9
TPTI		3.87	340	P	Pb	11 25 41.4	-3.7
TSI	Tuntungan	3.87	1	P	Pb	11 25 44.6	-0.5
KCSI	Kotacane, Aceh	3.96	349	P	Pn	11 25 39.9	+3.8
IPM	Ipoh	5.45	27	*e*Pn	Pn	11 25 58.6	+2.0
MYKOM	Kota Tinggi	5.76	68	*e*Pn	Pn	11 26 00.7	-0.1
MNAI	Manna	5.94	132	*e*Pn	Pn	11 26 02.5	-0.8
KULM	Kulim	6.04	21	*e*Pn	Pn	11 26 05.5	+0.9
LHSI	Lahat	6.06	124	P	Pn	11 26 07.3	+2.3
	70nm,0.5s,0.3nm						
MDSI	Maura Dua	6.97	126	P	Pn	11 26 17.7	+0.2
	31nm,0.6s,559nm0.1nm						
KASI	Kota Agung	7.85	131	P	Pn	11 26 31.7	+2.1
TRTT	Trang	8.26	8	P	Pn	11 26 42.0	+6.8
CISI	Cisompet, Garu	11.69	128	*e*Pn	Pn	11 27 18.5	-3.8
KSM	Kuching	11.94	81	*e*Pn	Pn	11 27 24.0	-1.7
SBUM	Sibu	13.99	78	*e*Pn	Pn	11 27 52.9	-0.8
UTHA	Uthaitani	15.88	3	P	P	11 28 27.2	+5.0
PBKT	Sadao Pong	17.03	8	P	P	11 28 44.3	+9.3
CMAR	Chiang Mai Arr	18.74	1	P	P	11 28 54.0	+0.2
	baz=189,slow=11,SNR=15						
KKM	Kota Kinabalu	18.79	70	*e*P	P	11 28 52.4	-2.2
	36nm,0.9s						
CMMT	Chiang Mai	19.09	1	P	Pn	11 29 08.1	+9.4
CHTO	Chiang Mai	19.09	1	P	Pn	11 29 08.2	+9.5
SHL	Shillong	26.59	347	*e*P	P	11 30 13.2	0.0
	20nm,1.0s						
H08S2	Diego Garcia H	26.92	254	T	T	11 58 01.1	
	baz=76,slow=75,SNR=114						
H08S3	Diego Garcia H	26.92	254	T	T	11 58 00.8	
	baz=76,slow=75,SNR=721						
H08S1	Diego Carcia H	26.94	254	T	T	11 57 58.7	
	baz=76,slow=75,SNR=33						
FITZ	Fitzroy Crossi	31.94	125	*e*P	P	11 30 59.3	-1.4
	7.4nm,1.0s						
ENH	Enshi	32.24	18	*e*P	P	11 31 03.0	-0.2
	23nm,0.7s						
XAN	Xi'an	35.62	15	*e*P	P	11 31 32.1	-0.4
	38nm,0.8s						
WR1	Warramunga Arr	40.09	121	*e*P	P	11 32 08.7	-1.8
	8.2nm,0.6s						
WR1				*e*PcP	PcP	11 34 15.4	+0.5
WRA	Warramunga Arr	40.09	121	P	P	11 32 08.7	-1.8
	7.0nm,0.6s,baz=302,slow=9.0,SNR=108						
WRA				PcP	PcP	11 34 15.4	+0.5
	0.9nm,0.6s,baz=312,slow=2.6,SNR=7.5						
WRAB	Tennant Creek	40.09	121	*e*P	P	11 32 09.0	-1.5
	9.3nm,0.8s						
AS31	Alice Springs	41.40	127	*e*P	P	11 32 20.3	-1.0
	2.2nm,0.6s						
ASAR	Alice Springs	41.40	127	P	P	11 32 20.4	-0.9
	7.4nm,0.8s,baz=301,slow=8.0,SNR=119						
ASAR				PcP	PcP	11 34 19.7	+0.6
	1.7nm,0.7s,baz=305,slow=3.2,SNR=10						
AS01	Alice Springs	41.43	127	*e*P	P	11 32 20.3	-1.2
AS01				*e*PcP	PcP	11 34 19.5	+0.3
JNU	Nakatsue	45.16	39	*e*P	P	11 32 51.2	-0.3
	9.9nm,0.9s						
JNU	Nakatsue	45.16	39	P	P	11 32 51.3	-0.3
	7.2nm,0.8s,baz=172,slow=7.7,SNR=4.8						
TARG	Taragay, Kyrgy	45.92	338	*e*P	P	11 32 59.8	+2.0
	5.2nm,1.1s						
NRN	Naryn	46.36	337	*e*P	P	11 33 02.0	+0.9
	5.8nm,1.0s						
KS15	Wonju Array Si	46.41	33	*e*P	P	11 33 00.5	-0.8
KSAR	Wonju Array Be	46.41	33	P	P	11 33 00.5	-0.8
KSRS	Korea Array	46.44	33	P	P	11 33 00.5	-1.0
	3.8nm,0.8s,baz=223,slow=8.8,SNR=10.0						
KDJ	Kajisay	46.50	338	*e*P	P	11 33 03.7	+1.5
	7.8nm,1.0s						
SONA0	Songino Array	48.52	7	*e*P	P	11 33 18.7	+1.1
SONM	Songino Array	48.52	7	P	P	11 33 18.7	+1.1
	4.8nm,0.8s,baz=192,slow=8.6,SNR=21						
SONA1	Songino Array	48.54	7	*e*P	P	11 33 18.6	+0.9
ULN	Ulaanbaatar	48.64	8	*e*P	P	11 33 19.2	+0.7
	5.5nm,1.0s						
MK01	Makanchi Array	49.08	345	*e*P	P	11 33 22.4	+0.6
MK31	Makanchi Array	49.10	345	*e*P	P	11 33 22.9	+0.9
	3.9nm,0.8s						
MK32	Makanchi Array	49.10	345	*e*P	P	11 33 22.8	+0.8
MKAR	Makanchi Array	49.10	345	*e*P	P	11 33 22.9	+0.9
	30nm,0.6s						
MKAR	Makanchi Array	49.10	345	P	P	11 33 22.8	+0.9
	4.6nm,0.7s,baz=155,slow=8.3,SNR=58						
MAKZ	Makanchi	49.19	345	*e*P	P	11 33 23.7	+1.0
	5.0nm,0.9s						
STKA	Stephens Creek	51.32	132	*e*P	P	11 33 38.8	-0.3
	1.4nm,0.7s						
STKA	Stephens Creek	51.32	132	P	P	11 33 39.3	+0.3
	6.0nm,0.6s,baz=310,slow=6.9,SNR=19						
USRK	Ussuriysk Ar.	53.48	30	P	P	11 33 55.2	+0.4
	6.0nm,0.9s,baz=235,slow=3.3,SNR=10						
KURBB	Kurchatov Arra	53.60	344	P	P	11 33 56.2	+0.6
	3.2nm,0.7s,baz=166,slow=7.2,SNR=25						
KURK	Kurchatov	53.66	344	*e*P	P	11 33 56.2	+0.1
KURK				*e*P	P	11 33 57.1	+1.1
ZAA0	Zalesovo Array	55.34	350	*e*P	P	11 34 08.7	+0.5
	9.1nm,0.8s						
ZALV	Zalesovo Beam	55.34	350	*e*P	P	11 34 08.5	+0.4
ZALV	Zalesovo Beam	55.34	350	P	P	11 34 08.6	+0.5
	7.4nm,0.7s,baz=177,slow=6.6,SNR=34						
ZAA1	Zalesovo Array	55.34	350	*e*P	P	11 34 08.6	+0.5
KLR	Kul'dur	57.10	25	P	P	11 34 21.0	+0.2
	3.9nm,0.9s,baz=259,slow=6.9,SNR=13						
BVAR	Borovoye Array	58.18	340	P	P	11 34 28.1	-0.2
	3.4nm,0.8s,baz=131,slow=8.1,SNR=14						
ABKAR	Akbulak array	59.53	332	*e*P	P	11 34 37.8	0.0
	3.7nm,1.0s						
KBZ	Khabaz	66.13	319	P	P	11 35 22.5	+0.7
	2.7nm,1.0s,baz=159,slow=3.8,SNR=5.0						
NRIK	Noril'sk	70.00	356	P	P	11 35 44.8	-0.8
	3.2nm,0.4s,baz=160,slow=7.3,SNR=3.9						
KIRV	Kirov	70.30	335	P	P	11 35 47.9	+0.2
	5.7nm,0.5s,baz=114,slow=4.6,SNR=3.5						
BR101	Keskin Array S	71.15	312	*e*P	P	11 35 53.2	-0.3
BRTR	Keskin Array B	71.15	312	P	P	11 35 53.2	-0.3
	1.0nm,0.7s,baz=148,slow=8.3,SNR=5.0						
MATP	Matopo	71.16	249	P	P	11 35 55.9	+2.0
	6.4nm,0.8s,baz=91,slow=4.7,SNR=11						
MA2	Magadan	72.20	25	*e*P	P	11 35 58.5	-0.7
	3.0nm,0.7s						
MA2	Magadan	72.20	25	P	P	11 35 58.7	-0.5
	3.3nm,0.5s,baz=228,slow=4.4,SNR=12						
PETK	Petropavlovsk-	72.34	33	P	P	11 35 59.9	-0.3
	3.0nm,0.9s,baz=208,slow=11,SNR=4.0						
PEA1	Petropavlovsk-	72.34	33	*e*P	P	11 35 59.9	-0.3
SEY	Seymchan	74.71	23	P	P	11 36 14.0	+0.1
	4.7nm,1.1s,baz=236,slow=6.2,SNR=18						
AKASG	Malin Array Be	77.31	322	P	P	11 36 28.9	0.0
	0.8nm,0.4s,baz=89,slow=4.3,SNR=5.5						
BUR04	Bucovina Ar. S	79.08	319	*e*P	P	11 36 39.2	+0.2
FIA0	FINESS Array S	82.01	332	*e*P	P	11 36 54.8	+0.6
FINES	FINESS Array B	82.01	332	P	P	11 36 54.8	+0.6
	2.9nm,0.6s,baz=115,slow=5.3,SNR=12						
LTX	Lajitas	144.28	34	*e*PKPdf	PKPbc	11 44 10.0	+0.5
TXAR	Lajitas Array	144.28	34	PKP	PKPbc	11 44 10.0	+0.5
	0.4nm,0.5s,baz=204,slow=0.5,SNR=12						
CPUP	Villa Florida	144.67	219	PKP	PKPdf	11 44 11.6	-0.3
	3.5nm,0.9s,baz=134,slow=4.1,SNR=9.9						

ISCJB **14** *11:37:57.9±0.6, 10°.60S±0°.07×161°.38E±0°.08, $h61^{km}$, mb4.0/11, Error ellipse: s-maj=13.2km s-min=7.0km az=140.5*

IDC **14** *11:37:58.6±2.9, 10°.53S×161°.46E, $h54^{km}\pm22^{km}$, mb4.0/8, mb1 4.1/9, mb1mx3.8/43, mbtmp4.3/9, ML4.1/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/29, Error ellipse: s-maj=22.6km s-min=17.1km az=72.0*

NEIC **14** *11:37:59.2±0.8, 10°.52S×161°.40E, $h60^{km}\pm8^{km}$, mb4.0/5, Error ellipse: s-maj=9.5km s-min=7.2km az=222.0*

ISC 14 11:37:59.3±0.8, **10°.5S**±0°.1×**161°.5E**±0°.1, **$h61^{km}$, n31, $\sigma 0^{s}92$**/28, **mb4.1**/11, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	Honiara	1.81	305	*e*P	Pn	11 38 27.0	-1.2
HNR				*e*S	Sn	11 38 50.0	-0.1
HNR	Honiara	1.81	305	*e*Pn	Pn	11 38 27.6	-0.6
HNR				*e*Pn	Pn	11 38 27.8	-0.5
HNR				*e*Sn	Sn	11 38 49.8	-0.3
HNR				*e*Sn	Sn	11 38 50.6	+0.5
HNR				*e*		11 39 21.7	
HNR	Honiara	1.81	305	P	Pn	11 38 27.6	-0.6
	130nm,0.3s,baz=156,slow=7.2,SNR=39						
HNR				S	Sn	11 38 50.6	+0.5
	356nm,0.3s,baz=201,slow=17,SNR=17						
HNR				LR	LR	11 39 21.7	
	comp=Z,935nm,18.3s,baz=206,slow=45						
DZM	Mont Dzumac	12.49	158	P	Pn	11 40 53.5	-0.9
	1.1nm,0.3s,baz=15,slow=7.2,SNR=50						
DZM				LR	LR	11 45 09.1	
	comp=Z,119nm,21.4s,baz=38,slow=35						
MARNC	Mare, Loyalty	12.64	151	*e*Pn	Pn	11 40 55.7	-0.6
OUENC	Ouen Island, N	12.96	157	*e*Pn	Pn	11 41 00.7	0.0
PINNC	Pines Island,	13.37	155	*e*Pn	Pn	11 41 06.4	+0.1
CTA	Charters Tower	17.50	235	P	P	11 42 02.1	+2.4
	0.4nm,0.3s,baz=65,slow=12,SNR=6.8						
CTAO	Charters Tower	17.50	235	*e*Pn	Pn	11 41 58.8	-0.5
	6.6nm,0.8s						
WRAB	Tennant Creek	27.76	247	*e*P	P	11 43 41.6	-1.0
	3.2nm,0.6s						
WB2	Warramunga Arr	27.76	247	*e*P	P	11 43 41.2	-1.4
WB2				*e*P	P	11 43 42.3	-0.4
WR1	Warramunga Arr	27.77	247	*e*P	P	11 43 42.5	-0.3
	4.1nm,0.8s						
WR1				*e*		11 53 38.0	
WRA	Warramunga Arr	27.77	247	P	P	11 43 42.5	-0.3
	2.0nm,0.5s,baz=76,slow=8.9,SNR=47						
WRA				LR	LR	11 53 38.0	
	comp=Z,85nm,21.6s,baz=55,slow=34						
GUMO	Guam	29.02	325	LR	LR	11 54 29.3	
	comp=Z,75nm,21.7s,baz=85,slow=34						
H11S2	WAKE ISLAND Hy	29.23	10	T	T	12 15 11.7	
	baz=189,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.24	10	T	T	12 14 58.3	
	baz=189,slow=76,SNR=9.3						
H11S1	WAKE ISLAND Hy	29.25	10	T	T	12 15 04.9	
	baz=189,slow=76,SNR=9.1						
AS01	Alice Springs	29.32	240	*e*P	P	11 43 55.1	-1.3
AS31	Alice Springs	29.36	240	*e*P	P	11 43 55.7	-1.1
	0.3nm,0.4s						
AS31				*e*		11 55 32.3	
ASAR	Alice Springs	29.36	240	P	P	11 43 55.7	-1.1
	0.6nm,0.5s,baz=63,slow=10,SNR=23						
ASAR				LR	LR	11 55 32.3	
	comp=Z,91nm,19.5s,baz=68,slow=36						
H11N1	WAKE ISLAND Hy	30.46	10	T	T	12 16 40.7	
	baz=188,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	30.47	10	T	T	12 16 39.4	
	baz=188,slow=76,SNR=6.5						
H11N2	WAKE ISLAND Hy	30.48	10	T	T	12 16 32.9	
	baz=188,slow=76,SNR=4.3						
FITZ	Fitzroy Crossi	35.48	254	P	P	11 44 49.8	-0.5
	6.8nm,0.6s,baz=78,slow=7.7,SNR=41						
BATI	Baumata	37.17	267	P	P	11 45 06.2	+1.4
	6.0nm,0.4s,baz=141,slow=4.2,SNR=5.5						
SONA0	Songino Array	75.75	325	*e*P	P	11 49 39.4	+0.7
SONM	Songino Array	75.75	325	P	P	11 49 39.4	+0.7
	2.1nm,0.6s,baz=141,slow=5.4,SNR=11						
ILAR	Eielson Array	84.35	20	P	P	11 50 24.9	+0.4
	0.3nm,0.5s,baz=253,slow=4.7,SNR=9.2						

MK32	Makanchi Array	90.24	318	eP	P	11 50 53.1	-0.3
MKAR	Makanchi Array	90.24	318	P	P	11 50 53.1	-0.3
	0.6nm,0.6s,baz=97,slow=6.1,SNR=7.4						
YKA	Yellowknife Ar	96.41	28	P	P	11 51 21.4	+0.1
	0.1nm,0.4s,baz=262,slow=4.6,SNR=5.8						

IDC 14 11:47:12.7±1.3, 25°.65N×109°.90W, h0km, mb3.3/2, mb1 3.7/5, mb1mx3.6/37, mbtmp3.3/5, ML3.8/2, MS3.6/15, Ms1 3.6/15, ms1mx3.6/18, Error ellipse: s-maj=26.0km s-min=15.9km az=113.0

ISCJB 14 11:47:14.3±0.7, 25°.70N±0°.06×109°.8W±0°.2, h19km, mb3.2/2, MS3.5/8, Error ellipse: s-maj=20.3km s-min=7.2km az=11.6

MEX 14 11:47:16.4±0.8, 25°.85N×110°.12W, h16km±17km, MD4.4

ISC 14 11:47:15.3±0.9, 25°.58N±0°.07×109°.7W±0°.1, h19km, n21, σ1s.08/11, MS3.6/8, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	La Paz	1.56	200	iP	Pn	11 47 42.6	+0.5
LPIG				iS	Sb	11 48 03.0	0.0
LPIG	La Paz	1.56	200	Pn	Pn	11 47 42.6	+0.5
	13nm,0.3s,baz=331,slow=1.8,SNR=24						
LPIG				Sn	Sb	11 48 02.8	-0.3
	32nm,0.3s,baz=193,slow=10,SNR=11						
SLBS	Sierra La Lagu	1.90	186	eP	Pb	11 47 49.3	-0.1
GUYB	Guaymas	2.52	336	eP	Pn	11 47 47.9	-7.4
TXAR	Lajitas Array	6.56	54	Pn	Pn	11 48 51.9	+1.0
	0.6nm,0.3s,baz=229,slow=14,SNR=50						
TXAR				Lg	Lg	11 50 42.5	
	3.1nm,0.3s,baz=199,slow=32,SNR=7.2						
ANMO	Albuquerque	9.75	16	LR	LR	11 53 52.1	
	comp=Z,388nm,21.1s,baz=195,slow=41						
PFO	Pinyon Flats O	9.91	325	LR	LR	11 53 07.2	
	comp=Z,213nm,20.0s,baz=158,slow=36						
NVAR	Mina Array Bea	14.72	333	Pn	Pn	11 50 43.4	+0.7
	0.3nm,0.3s,baz=146,slow=15,SNR=6.9						
NVAR				LR	LR	11 55 40.1	
	comp=Z,154nm,20.6s,baz=152,slow=35						
ELK	Elko	15.80	344	Pn	P	11 51 01.5	+0.6
	0.1nm,0.3s,baz=173,slow=6.6,SNR=9.4						
ELK				LR	LR	11 57 08.6	
	comp=Z,595nm,18.8s,baz=173,slow=38						
CMIG	Matias Romero	16.20	119	LR	LR	11 57 03.7	
	comp=Z,380nm,20.1s,baz=277,slow=36						
PDAR	Pinedale Array	17.14	0	P	Pn	11 51 11.5	-2.5
	baz=168,slow=8.9,SNR=4.9						
PDAR				LR	LR	11 57 55.7	
	comp=Z,416nm,18.5s,baz=193,slow=38						
YBH	Yreka Blue Hor	19.36	330	LR	LR	11 58 27.4	
	comp=Z,134nm,19.5s,baz=164,slow=35						
APG	El Apazote	20.88	117	LR	LR	11 59 34.1	
	comp=Z,327nm,21.4s,baz=292,slow=35						
NEW	Newport	23.38	347	LR	LR	12 01 41.4	
	comp=Z,194nm,19.8s,baz=172,slow=37						
TKL	Tuckaleechee C	24.43	60	LR	LR	12 02 43.1	
	comp=Z,300nm,18.5s,baz=252,slow=38						
ULM	Lac du Bonnet	26.86	20	LR	LR	12 03 25.3	
	comp=Z,180nm,18.1s,baz=203,slow=36						
JTS	JuntasAbangare	27.98	118	LR	LR	12 05 54.6	
	comp=Z,131nm,18.2s,baz=5.0,slow=40						
YKA	Yellowknife Ar	37.05	356	P	P	11 54 23.3	-0.5
	0.3nm,0.8s,baz=176,slow=7.8,SNR=4.6						
YKA				LR	LR	12 10 09.6	
	comp=Z,30nm,19.8s,baz=188,slow=37						
ROSC	El Rosal	39.70	115	LR	LR	12 14 51.8	
	comp=Z,53nm,18.4s,baz=266,slow=42						
ILAR	Eielson Array	45.86	339	P	P	11 55 35.7	-0.3
	0.4nm,1.0s,baz=147,slow=7.4,SNR=4.3						
PPT	Papeete	57.82	226	LR	LR	12 16 10.7	
	comp=Z,31nm,21.6s,baz=6.5,slow=30						

ISCJB 14 11:55:55.6±1.0, 11°.01S±0°.08×165°.98E±0°.10, h35km, mb3.8/5, MS3.3/3, Error ellipse: s-maj=15.9km s-min=8.6km az=145.3

IDC 14 11:55:59.6±3.9, 10°.96S×165°.94E, h59km±32km, mb3.6/5, mb1 4.0/7, mb1mx3.6/30, mbtmp4.1/7, ML4.6/2, MS3.4/5, Ms1 3.4/5, ms1mx3.0/36, Error ellipse: s-maj=32.2km s-min=20.5km az=50.0

ISC 14 11:55:57.2±1.2, 10°.9S±0°.1×166°.1E±0°.1, h35km, n17, σ1s.20/11, mb3.9/5, MS3.3/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.20	283	eP	Pn	11 57 27.0	+0.8
HNR				eS	Sn	11 58 36.0	0.0
HNR	Honiara	6.20	283	P	Pn	11 57 27.3	+1.0
	48nm,0.3s,baz=133,slow=4.7,SNR=13						
HNR				S	Sn	11 58 36.4	+0.5
	7.9nm,0.3s,baz=349,slow=21,SNR=1.6						
HNR				LR	LR	11 59 51.4	
	comp=Z,486nm,18.6s,baz=101,slow=38						
DZM	Mont Dzumac	11.12	178	P	Pn	11 58 35.1	+1.3
	1.3nm,0.3s,baz=126,slow=23,SNR=20						
DZM				S	Sn	12 00 36.0	-1.0
	0.2nm,0.3s,baz=143,slow=20,SNR=3.4						
DZM				LR	LR	12 02 41.2	
	comp=Z,217nm,18.4s,baz=50,slow=36						
H11S2	WAKE ISLAND Hy	29.21	1	T	T	12 32 18.3	
	baz=181,slow=76,SNR=48						
H11S3	WAKE ISLAND Hy	29.21	1	T	T	12 32 21.4	
	baz=181,slow=76,SNR=27						
H11S1	WAKE ISLAND Hy	29.23	1	T	T	12 32 17.3	
	baz=181,slow=76,SNR=31						
H11N1	WAKE ISLAND Hy	30.43	2	T	T	12 33 52.7	
	baz=182,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	30.43	2	T	T	12 33 48.3	
	baz=182,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	30.45	2	T	T	12 33 49.4	
	baz=182,slow=76,SNR=16						
STKA	Stephens Creek	30.77	224	LR	LR	12 13 23.0	
	comp=Z,75nm,18.5s,baz=29,slow=34						
WRA	Warramunga Arr	31.83	250	P	P	12 02 18.7	-0.3
	1.4nm,0.8s,baz=80,slow=9.0,SNR=13						
ASAR	Alice Springs	33.14	243	P	P	12 02 30.0	-0.4
	0.7nm,0.8s,baz=72,slow=8.7,SNR=7.4						
SIJI	Sorong	35.98	284	LR	LR	12 17 24.4	
	comp=Z,53nm,20.3s,baz=136,slow=36						
FITZ	Fitzroy Crossi	39.72	255	LR	LR	12 19 15.6	
	comp=Z,38nm,18.5s,baz=85,slow=35						
CMAR	Chiang Mai Arr	72.34	293	P	P	12 07 17.6	-2.4
	0.7nm,0.3s,baz=111,slow=4.9,SNR=3.4						
ILAR	Eielson Array	83.27	18	P	P	12 08 20.9	+1.1
	0.4nm,0.6s,baz=236,slow=4.9,SNR=5.6						
MKAR	Makanchi Array	93.63	317	P	P	12 09 09.7	-0.3
	0.5nm,0.9s,baz=108,slow=6.9,SNR=4.3						

DDA 14 11:58:09.4, 38°.88N×33°.66E, h7km±3km, ML2.7

ISK 14 11:58:09.4, 38°.92N×33°.65E, h9km±1km, ML1.8/5

ISC 14 11:58:09.8±0.9, 38°.90N±0°.03×33°.63E±0°.03, h7km±6km, n15, σ0s.95/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SERE	Sereflikochisa	0.07	314	PG	Pg	11 58 11.6	-0.2
SERE				SG	Sg	11 58 13.7	+0.5
YAYX	Yaylak	0.15	73	PG	Pg	11 58 12.8	-0.1
YAYX				SG	Sg	11 58 15.2	+0.1
AKSY	AKSARAY - Alti	0.27	157	iP	Pg	11 58 15.2	+0.1
AKSY				iS	Sg	11 58 19.1	+0.5
AKSY				IAML_P			
	comp=Z,1µm,0.1s						
KKUL	Konya-Kulu	0.62	297	iP	Pb	11 58 22.4	-0.6
KKUL				iS	Sb	11 58 32.3	+0.3
KKUL				IAML_P			
	comp=Z,1µm,0.1s						
CHBY	Cihanbeyli	0.66	242	PG	Pb	11 58 23.1	-0.6
AFSR	Afar-Bala (An	0.70	322	PG	Pg	11 58 23.2	-0.1
SULT	Sultanhani-AKS	0.70	187	PG	Pb	11 58 23.9	-0.5
CDAG	Cicekdag	0.93	38	iP	Pb	11 58 27.3	-1.0
CDAG				iS	Sn	11 58 41.7	-1.3
CDAG				IAML_P			
	comp=Z,2µm,0.1s						
AVNS	Nevsehir-Avano	0.95	95	iP	Pn	11 58 29.5	-0.3
AVNS				iS	Sn	11 58 45.1	+1.5
AVNS				IAML_P			
	comp=Z,1µm,0.2s						
DELI	KIRIKKALE	1.12	11	iP	Pb	11 58 31.1	-0.6
DELI				iS	Sn	11 58 47.5	-0.3
DELI				IAML_P			
	comp=Z,403nm,0.1s						
ANTO	Ankara	1.17	327	PN	Pg	11 58 31.9	-0.3
KDHN	Kadinhani	1.24	253	iP	Pn	11 58 33.1	-0.6
KDHN				iS	Sn	11 58 51.3	+0.6
SIRC	Yozgat	1.26	69	iP	Pg	11 58 33.2	-0.8
SIRC				iS	Sn	11 58 52.5	+1.3
SIRC				IAML_P			
	comp=Z,202nm,0.2s						
ELDT	Eldivan	1.60	354	iP	Pb	11 58 39.4	-0.4
ELDT				iS	Sg	11 59 03.5	+2.2
ELDT				IAML_P			
	comp=Z,253nm,0.2s						
COAL	Corum-Alaca	1.71	37	iP	Pg	11 58 42.3	-0.4
COAL				iS	Sg	11 59 07.1	+2.1
COAL				IAML_P			
	comp=Z,67nm,0.2s						

KRNET 14 12:08:47.9±0.1, 40°.81N×78°.61E, mb2.1

SOME 14 12:08:50.9, 40°.87N×78°.38E, h5km

NNC 14 12:08:52.4±1.4, 40°.94N×78°.33E, h0km, mb3.0, mpv2.6, 15C-1D, Error ellipse: s-maj=9.6km s-min=6.9km az=175.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	Kajisay	1.47	324	⇑iP	Pn	12 09 18.9	-1.4
	baz=22						
KDJ				⇑iS	Sn	12 09 41.8	+1.5
	baz=22						
PRZ	Przheval'sk	1.54	2	⇑iP	Pn	12 09 18.7	-2.7
	baz=55						
PRZ				⇑iS	Sg	12 09 41.3	-0.7
	baz=55						
NRN	Naryn	1.82	286	⇑eP	Pn	12 09 25.4	+0.1
	baz=88						
NRN				⇑iS	Sg	12 09 51.9	+0.9
	baz=88						
ULHL	Ulahol	2.04	311	⇑eP	Pn	12 09 28.0	-0.2
	baz=10.0						
ULHL				⇑iS	Sb	12 09 57.1	+0.7
	baz=10.0						
UZB	Uzynbulak	2.27	13	eP	Pb	12 09 33.8	-0.5
	1.2nm,0.5s						
UZB				eS	Sg	12 10 04.9	-0.3
	3.5nm,0.4s						
TNSS	Tian-Shan	2.33	334	Pg	Pb	12 09 35.1	-0.5
	3.0nm,0.3s						
TNSS				Lg	Lg	12 10 07.3	
	3.4nm,0.5s						
TNSS	Tian-Shan	2.33	334	eP	Pb	12 09 35.1	-0.5
	3.0nm,0.3s						
TNSS				eS	Sg	12 10 07.3	-0.2
	3.4nm,0.5s						
MDOK	Medeo	2.42	337	Pg	Pb	12 09 36.2	-0.7
	2.0nm,0.4s						
MDOK				Lg	Lg	12 10 10.7	
	5.5nm,0.7s						
MDOK	Medeo	2.42	337	eP	Pb	12 09 36.5	-0.3
	2.6nm,0.5s						
MDOK				eS	Sg	12 10 09.3	-0.7
	4.9nm,0.6s						
PDGK	Podgornoye	2.54	20	Pg	Pb	12 09 38.7	-0.2
	0.5nm,0.3s						
PDGK				Lg	Lg	12 10 13.0	
	3.2nm,0.7s						
PDGK	Podgornoye	2.54	20	⇓Pg	Pb	12 09 39.2	+0.3
	0.5nm,0.4s						
PDGK				⇑Lg	Lg	12 10 12.9	
	3.6nm,0.6s						
KZA	Kyzart	2.58	297	⇑iP	Pn	12 09 36.0	+0.3
	baz=98						
KZA				⇑iS	Sb	12 10 10.5	-1.6
	baz=98						
TKM2	Tokmak 2	2.84	315	⇑Pg	Pb	12 09 44.5	+0.4
	0.9nm,0.6s						
TKM2				⇑Lg	Lg	12 10 21.9	
	1.5nm,0.5s						
TKM2	Tokmak 2	2.84	315	⇑iP	Pn	12 09 39.3	+0.1
	baz=14						
TKM2				⇑iS	Sn	12 10 16.2	+2.0
	baz=14						
CHKK	Chushkaly	3.08	342	Pg	Pb	12 09 48.8	+0.8
	1.1nm,0.1s						
CHKK				Lg	Lg	12 10 30.3	
	4.0nm,0.3s						
CHKK	Chushkaly	3.08	342	eP	Pb	12 09 48.8	+0.8
	1.1nm,0.1s						
CHKK				eS	Sg	12 10 30.3	-1.0
	4.0nm,0.3s						
ARXS	Arharly	3.29	354	Pg	Pb	12 09 51.4	-0.3
	0.7nm,0.3s						
ARXS				Lg	Lg	12 10 34.8	
	3.6nm,0.4s						
ARXS	Arharly	3.29	354	eP	Pb	12 09 51.4	-0.3
	0.7nm,0.3s						
ARXS				eS	Sb	12 10 34.8	+2.4
	3.6nm,0.4s						

MAN 14 12:13:50.4, 17°.55N×122°.48E, h33km, mb4.4, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALP	Palanan	0.49	186	eP	Pn	12 14 01.5	+0.5
PALP				eS	Sn	12 14 09.8	+1.3
CAUP	Cauayan	0.87	226	eP	Pb	12 14 07.4	+0.4
CAUP				eS	Sn	12 14 16.1	-1.8
APYP	Conner	1.22	285	eP	Pn	12 14 11.0	-0.1
APYP				eS	Sn	12 14 26.2	-0.2
ABRA	Dolores	1.69	273	eP	Pn	12 14 18.1	+0.6
ABRA				eS	Sn	12 14 38.5	+0.5
BALP	Baler	2.00	206	eP	Pn	12 14 23.3	+1.4

IDC 14 12:20:32.5±1.2, 65°.44S×123°.77E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.7/32, mbtmp3.6/3, Error ellipse: s-maj=118.7km s-min=25.6km az=98.0, South of Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	South Pole Qui	24.64	180	P	P	12 25 54.6	+0.1
	1.3nm,0.7s,baz=330,slow=2.4,SNR=6.5						
H01W2	Cape Leeuwin H	31.12	345	T	T	13 00 06.0	
	baz=172,slow=76,SNR=196						
H01W1	Cape Leeuwin H	31.12	345	T	T	13 00 06.3	
	baz=172,slow=76,SNR=184						
H01W3	Cape Leeuwin H	31.13	345	T	T	13 00 07.2	
	baz=172,slow=76,SNR=208						
ASAR	Alice Springs	42.28	14	P	P	12 28 27.7	+0.1
	1.2nm,0.7s,baz=185,slow=7.6,SNR=16						
WRA	Warramunga Arr	46.01	14	P	P	12 28 57.2	-0.3
	0.3nm,0.5s,baz=190,slow=6.9,SNR=13						
ARCES	ARCESS Array B	150.64	315	PKPbc	PKPbc	12 40 24.4	-0.1
	2.2nm,0.9s,baz=83,slow=2.9,SNR=4.8						
INK	Inuvik	151.35	49	PKPbc	PKPbc	12 40 25.4	-0.7
	1.1nm,0.7s,baz=240,slow=1.0,SNR=4.8						

IDC 14 12:25:23.7±1.8, 10°.83S×165°.63E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.5/43, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=53.5km s-min=32.4km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.21	176	Pn	Pn	12 28 05.8	+0.5
	0.9nm,0.3s,baz=315,slow=11,SNR=21						
WRA	Warramunga Arr	31.46	249	P	P	12 31 47.4	+0.2
	0.1nm,0.5s,baz=84,slow=9.2,SNR=3.2						
ASAR	Alice Springs	32.79	243	P	P	12 31 58.7	-0.3
	0.6nm,0.8s,baz=63,slow=10,SNR=3.6						
ILAR	Eielson Array	83.34	19	P	P	12 37 52.2	-0.1
	0.3nm,0.7s,baz=231,slow=5.8,SNR=4.8						

IDC 14 12:32:03.6±0.6, 2°.54S×103°.03E, h0km, mb4.1/12, mb1 4.2/12, mb1mx3.9/56, mbtmp4.1/12, MS3.8/2, Ms1 3.8/2, ms1mx2.9/43, Error ellipse: s-maj=23.0km s-min=14.3km az=59.0

DJA 14 12:32:06.3±0.2, 2°S±2°×10°3E±°, h10km, M4.5/23, mb4.2/3, MLv4.7/23

NEIC 14 12:32:08.4±0.7, 2°.52S×103°.04E, h35km±6km, mb4.1/7, Error ellipse: s-maj=10.4km s-min=5.5km az=56.0

NEIC Felt [III] in Musi Rawas.

ISC 14 12:32:05.5±1.5, 2°.50S±0°.03×103°.01E±0°.03, h12km±10km, n68, σ1s.03/70, mb4.1/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASI	Maura Aman, Be	1.00	230	P	Pb	12 32 24.5	-0.4
MASI				S	Sg	12 32 38.3	+0.3
JMBI	JAMBI	1.06	36	P	Pb	12 32 26.0	+0.1
JMBI				S	Sg	12 32 40.6	+0.7
LHSI	Lahat	1.42	159	P	Pb	12 32 32.1	+0.2
LHSI				S	Sg	12 32 52.9	+1.7
KRJI	Kerinci	1.60	285	P	Pn	12 32 33.9	+0.2
PMBI	Palembang	1.81	104	P	Pb	12 32 37.6	-1.0
PMBI				S	Sg	12 33 03.3	-0.4
MNAI	Manna	1.85	182	ePn	Pb	12 32 38.4	-1.0
MNAI				eSn	Sn	12 33 00.7	+0.2
MNAI	Manna	1.85	182	P	Pb	12 32 38.7	-0.6
SDSI	Sungai Dareh	2.22	314	P	Pb	12 32 44.4	-1.2
RGRI	Rengat	2.24	342	P	Pb	12 32 44.7	-1.2
RGRI				S	Sg	12 33 16.2	-1.4
MDSI	Maura Dua	2.29	150	P	Pn	12 32 43.3	+0.1
DSRI	Dabo	2.54	38	P	Pn	12 32 46.9	+0.3
LWLI	Liwa	2.71	157	P	Pn	12 32 51.1	+2.0
KLI	Kotabumi	2.98	142	P	Pb	12 32 56.1	-2.6
PDSI	Padang	3.00	302	P	Pn	12 32 53.4	+0.5
PDSI				S	Pb	12 32 59.1	+0.2
PPSI	Pulau Pagai	3.01	265	P	Pn	12 32 52.6	-0.5
PPBI	Pangkal Pinang	3.14	84	P	Pn	12 32 56.0	+1.2
PPBI				S	Sg	12 33 45.7	-0.7
KASI	Kota Agung	3.35	154	P	Pn	12 32 59.2	+1.5
BKNI	Bangkinang	3.43	325	ePn	Pn	12 33 00.0	+1.2
BKNI	Bangkinang	3.43	325	P	Pn	12 32 58.3	-0.5
BLSI	Bandar Lampung	3.62	142	P	Pn	12 33 03.3	+1.9
TPRI	Tanjung Pinang	3.71	24	P	Pn	12 33 03.4	+0.7
SISI	Saibi	4.09	286	P	Pn	12 33 07.4	-0.5
MYKOM	Kota Tinggi	4.34	11	ePn	Pn	12 33 12.0	+0.7
TPI	Tanjungpandan	4.64	93	P	Pn	12 33 08.0	-7.5
MNSI	Mandailing Nat	4.74	314	P	Pn	12 33 16.4	-0.5
GSI	Gunungsitoli	6.62	305	ePn	Pn	12 33 42.8	+0.1
PSI	Prapat	6.66	322	ePn	Pn	12 33 43.5	+0.1
PSI				Lg	Lg	12 35 33.7	
PSI	Prapat	6.66	322	Lg	Lg	12 35 33.7	
	4.4nm,0.3s,baz=181,slow=5.8,SNR=4.9						
CISI	Cisompet, Garu	6.94	137	ePn	Pn	12 33 46.4	-0.8
IPM	Ipoh	7.21	344	ePn	Pn	12 33 51.7	+0.9
KULM	Kulim	8.09	343	ePn	Pn	12 34 03.7	+0.8
KSM	Kuching	8.29	62	ePn	Pn	12 34 05.4	-0.2
KRAB	Krabi	11.31	340	P	Pn	12 34 47.8	+0.8
	254nm,1.0s,15µm						
CM01	Chiang Mai Arr	21.16	349	eP	P	12 36 51.9	+1.1
CMAR	Chiang Mai Arr	21.20	349	P	P	12 36 52.5	+1.3
	2.0nm,0.8s,baz=186,slow=8.5,SNR=9.8						
FITZ	Fitzroy Crossi	27.07	126	eP	P	12 37 47.5	-0.7
	3.0nm,0.7s						
FITZ	Fitzroy Crossi	27.07	126	P	P	12 37 48.0	-0.1
	2.9nm,0.7s,baz=320,slow=8.7,SNR=11						
BRDH	Bariadhala	27.37	337	LR	LR	12 49 18.3	
	comp=Z,46nm,18.1s,baz=188,slow=38						
WRA	Warramunga Arr	35.16	122	P	P	12 38 58.5	-1.1
	0.4nm,0.4s,baz=306,slow=8.4,SNR=37						
WR1	Warramunga Arr	35.16	122	eP	P	12 38 58.5	-1.1
	3.8nm,1.1s						
ASAR	Alice Springs	36.55	128	P	P	12 39 10.7	-0.7
	1.3nm,0.5s,baz=301,slow=7.6,SNR=43						
AS31	Alice Springs	36.55	128	eP	P	12 39 10.4	-1.0
	0.9nm,0.4s						
GENI	Genyem	37.12	91	P	P	12 39 17.9	+1.5
CTA	Charters Tower	45.67	116	LR	LR	13 01 35.0	
	comp=Z,515nm,19.8s,baz=44,slow=39						
STKA	Stephens Creek	46.59	133	eP	P	12 40 33.7	0.0
	1.4nm,1.0s						
STKA	Stephens Creek	46.59	133	P	P	12 40 33.7	0.0
	2.6nm,0.5s,baz=319,slow=7.6,SNR=15						
SONA0	Songino Array	50.21	3	eP	P	12 41 03.6	+2.1
SONM	Songino Array	50.21	3	P	P	12 41 03.6	+2.1
	2.7nm,0.7s,baz=184,slow=9.3,SNR=24						
SONA1	Songino Array	50.22	3	eP	P	12 41 01.8	+0.3
MK01	Makanchi Array	52.34	342	eP	P	12 41 16.6	-0.7
MK31	Makanchi Array	52.37	342	eP	P	12 41 17.2	-0.3
	1.4nm,1.1s						
MK32	Makanchi Array	52.37	342	eP	P	12 41 16.8	-0.7
MKAR	Makanchi Array	52.37	342	eP	P	12 41 17.2	-0.3
	8.3nm,1.0s						
MKAR	Makanchi Array	52.37	342	P	P	12 41 16.8	-0.7
	1.1nm,0.7s,baz=142,slow=8.0,SNR=16						
USRK	Ussuriysk Ar.	53.23	26	P	P	12 41 24.6	+0.7
	1.5nm,0.6s,baz=202,slow=2.7,SNR=3.4						
KURBB	Kurchatov Arra	56.92	342	P	P	12 41 49.6	-0.8
	0.8nm,0.6s,baz=159,slow=6.6,SNR=6.0						
KURK	Kurchatov	56.97	342	eP	P	12 41 49.6	-1.2
ZALV	Zalesovo Beam	58.26	347	P	P	12 41 58.9	-0.9
	1.8nm,0.6s,baz=169,slow=5.3,SNR=9.3						
ZAA1	Zalesovo Array	58.26	347	eP	P	12 41 58.9	-0.9
BVAR	Borovoye Array	61.72	338	P	P	12 42 21.6	-2.0
	0.9nm,0.7s,baz=126,slow=7.3,SNR=4.9						
ABKAR	Akbulak array	63.55	330	eP	P	12 42 33.8	-2.0
	2.0nm,0.8s						
MATP	Matopo	74.62	250	P	P	12 43 45.9	+0.5
	4.5nm,0.5s,baz=88,slow=5.3,SNR=18						
BOSA	Boshof	78.06	241	P	P	12 44 05.1	+0.2
	2.2nm,0.5s,baz=165,slow=1.9,SNR=4.7						
LTX	Lajitas	143.18	41	ePKPdf	PKPbc	12 51 37.9	+0.6
TXAR	Lajitas Array	143.18	41	PKP	PKPbc	12 51 37.9	+0.6
	0.3nm,0.7s,baz=77,slow=1.7,SNR=3.9						
CPUP	Villa Florida	145.61	212	ePKPdf	PKPdf	12 51 43.6	-1.1
CPUP	Villa Florida	145.61	212	PKPbc	PKPdf	12 51 44.5	-0.2
	2.0nm,0.6s,baz=159,slow=4.5,SNR=8.0						
BDFB	Brasilia	146.15	237	PKPbc	PKPbc	12 51 46.5	-0.4
	3.0nm,0.4s,baz=98,slow=3.2,SNR=4.3						

KRNET 14 12:36:04.7±0.1, 42°.61N×79°.66E, h14km, mb2.6

SOME 14 12:36:05.0, 42°.65N×79°.65E, h10km

NNC 14 12:36:05.2±1.1, 42°.66N×79°.66E, h0km, mb3.0, mpv2.8, 10C-11D, Error ellipse: s-maj=7.1km s-min=3.9km az=135.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.67	316	P	Pg	12 36 18.4	+0.4
	14nm,0.1s						
UZB				S	Sb	12 36 28.5	-1.3
	26nm,0.2s						
UZB	Uzynbulak	0.67	316	eP	Pg	12 36 18.4	+0.4
	baz=19						
UZB				eS	Sb	12 36 28.5	-1.3
	baz=19						
UZB	Uzynbulak	0.67	316	eP	Pg	12 36 18.4	+0.4
	14nm,0.1s						
UZB				eS	Sb	12 36 28.5	-1.3
	26nm,0.2s						
PDGK	Podgornoye	0.68	350	P	Pg	12 36 18.5	+0.3
	5.1nm,0.1s						
PDGK				S	Sg	12 36 28.2	+1.3
	9.1nm,0.2s						
PDGK	Podgornoye	0.68	350	⇑P	Pg	12 36 18.4	+0.2
	1.8nm,0.2s						
PDGK				⇑S	Sg	12 36 28.4	+1.5
	5.4nm,0.3s						
PDGK	Podgornoye	0.68	350	⇑iP	Pg	12 36 18.5	+0.4
	baz=50						
PDGK				⇑iS	Sb	12 36 28.6	-1.3
	baz=50						
PRZ	Przheval'sk	0.94	259	⇓iP	Pg	12 36 22.5	-0.8
	baz=63						
PRZ				⇓iS	Sg	12 36 35.0	-0.5
	baz=63						
DJR	Jarkent	1.67	3	P	Pn	12 36 35.5	-0.3
	1.8nm,0.2s						
DJR				S	Sn	12 36 57.4	-0.6
	13nm,0.1s						
DJR	Jarkent	1.67	3	eP	Pn	12 36 35.5	-0.3
	1.8nm,0.2s						
DJR				eS	Sn	12 36 57.4	-0.6
	13nm,0.1s						
KDJ	Kajisay	1.91	255	⇓iP	Pn	12 36 40.0	+0.9
	baz=56						
KDJ				⇓iS	Sb	12 37 05.2	-0.2
	baz=56						
MDOK	Medeo	1.98	285	Pg	Pg	12 36 42.7	-0.4
	1.3nm,0.4s						
MDOK				Lg	Lg	12 37 07.7	
	3.0nm,0.4s						
TNSS	Tian-Shan	2.03	282	Pg	Pb	12 36 42.5	-0.6
	3.0nm,0.3s						
TNSS				Lg	Lg	12 37 09.6	

	7.6nm,0.2s						
TNSS	**Tian-Shan**	2.03	282	*e*P	Pb	12 36 42.5	-0.6
	baz=83						
TNSS				*e*S	Sb	12 37 09.6	+0.6
	baz=83						
TNSS	**Tian-Shan**	2.03	282	*e*P	Pb	12 36 42.5	-0.6
	3.0nm,0.3s						
TNSS				*e*S	Sb	12 37 09.6	+0.6
	7.6nm,0.2s						
IZV	**Izvestkoviy**	2.27	280	Pg	Pb	12 36 45.9	-1.2
	1.4nm,0.2s						
IZV				Lg	Lg	12 37 15.7	
	7.5nm,0.4s						
IZV	**Izvestkoviy**	2.27	280	*e*P	Pb	12 36 45.9	-1.2
	baz=82						
IZV				*e*S	Sb	12 37 15.7	-0.1
	baz=82						
IZV	**Izvestkoviy**	2.27	280	*e*P	Pb	12 36 45.9	-1.1
	1.4nm,0.2s						
IZV				*e*S	Sb	12 37 15.7	0.0
	7.5nm,0.4s						
KTBS	**Karatobe**	2.41	297	Pg	Pb	12 36 48.8	-0.7
	1.3nm,0.2s						
KTBS				Lg	Lg	12 37 20.4	
	8.1nm,0.3s						
KTBS	**Karatobe**	2.41	297	*e*P	Pb	12 36 48.8	-0.7
	baz=97						
KTBS				*e*S	Sb	12 37 20.3	+0.5
	baz=97						
KTBS	**Karatobe**	2.41	297	*e*P	Pb	12 36 48.8	-0.7
	1.3nm,0.2s						
KTBS				*e*S	Sb	12 37 20.4	+0.5
	8.1nm,0.3s						
ULHL	**Ulahol**	2.56	262	⇓*i*P	Pn	12 36 49.9	+1.8
	baz=63						
ULHL				⇓*i*S	Sn	12 37 21.5	+1.4
	baz=63						
KAPS	**Kapalarasan**	2.63	355	Pg	Pb	12 36 52.3	-0.9
	0.5nm,0.1s						
KAPS				Lg	Lg	12 37 25.8	
	4.8nm,0.5s						
KAPS	**Kapalarasan**	2.63	355	*e*P	Pb	12 36 52.3	-0.9
	0.5nm,0.1s						
KAPS				*e*S	Sb	12 37 25.8	-0.3
	4.8nm,0.5s						
KST	**Kastek**	2.74	279	Pg	Pb	12 36 54.8	-0.3
	2.2nm,0.4s						
KST				Lg	Lg	12 37 30.6	
	4.0nm,0.4s						
KST	**Kastek**	2.74	279	*e*P	Pb	12 36 54.8	-0.3
	baz=80						
KST				*e*S	Sb	12 37 30.6	+1.3
	baz=80						
KST	**Kastek**	2.74	279	*e*P	Pb	12 36 54.8	-0.3
	2.2nm,0.4s						
KST				*e*S	Sb	12 37 30.6	+1.2
	4.0nm,0.4s						
DGS	**Degeres**	2.91	283	Pg	Pb	12 36 57.3	-0.6
	1.3nm,0.2s						
DGS				Lg	Lg	12 37 34.8	
	9.2nm,0.4s						
DGS	**Degeres**	2.91	283	*e*P	Pb	12 36 57.3	-0.7
	baz=84						
DGS				*e*S	Sb	12 37 34.7	+0.6
	baz=84						
DGS	**Degeres**	2.91	283	*e*P	Pb	12 36 57.3	-0.6
	1.3nm,0.2s						
DGS				*e*S	Sb	12 37 34.8	+0.6
	9.2nm,0.4s						
NRN	**Naryn**	2.99	247	⇑*i*P	Pn	12 36 55.2	+1.1
	baz=48						
NRN				⇑*i*S	Sn	12 37 31.9	+1.1
	baz=48						
TKM2	**Tokmak 2**	3.00	276	⇑Pg	Pg	12 37 02.7	0.0
	0.3nm,0.3s						
TKM2				⇓Lg	Lg	12 37 38.9	
	1.9nm,0.5s						
TKM2	**Tokmak 2**	3.00	276	⇓*i*P	Pn	12 36 55.4	+1.3
	baz=77						
TKM2				⇓*i*S	Sn	12 37 32.3	+1.4
	baz=77						
KZA	**Kyzart**	3.32	261	⇓*i*P	Pn	12 37 00.4	+1.7
	baz=62						
KZA				⇓*i*S	Sn	12 37 39.6	+0.6
	baz=62						
AAK	**Ala-Archa**	3.81	271	⇑Lg	Lg	12 38 04.1	
	1.3nm,0.6s						
MK31	**Makanchi Array**	4.54	24	⇑Pn	Pn	12 37 15.5	+0.4
	baz=306,slow=26,SNR=18						
MK31				⇑Lg	Lg	12 38 25.9	
	0.1nm,0.2s,baz=202,slow=36,SNR=7.3						

IDC 14 12:41:16.4±4.5**, 10°.39S**×**166°.63E, h54**^{km}±39^{km}**, mb3.5**/3**, mb1 4.0**/5**, mb1mx3.4**/51**, mbtmp4.0**/5**, ML4.5**/2**, Error ellipse: s-maj=45.9km s-min=34.8km az=6.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	6.66	278	P	Pn	12 42 51.4	-0.3
	31nm,0.3s,baz=139,slow=4.1,SNR=13						
DZM	**Mont Dzumac**	11.62	181	P	Pn	12 43 59.9	+0.2
	1.1nm,0.3s,baz=325,slow=11,SNR=15						
H11S2	**WAKE ISLAND Hy**	28.69	0	T	T	13 17 40.5	
	baz=181,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	28.70	0	T	T	13 17 41.6	
	baz=181,slow=76,SNR=18						
H11S1	**WAKE ISLAND Hy**	28.71	0	T	T	13 17 42.6	
	baz=181,slow=76,SNR=21						
H11N1	**WAKE ISLAND Hy**	29.91	0	T	T	13 19 12.2	
	baz=182,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	29.91	1	T	T	13 19 12.6	
	baz=182,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	29.93	0	T	T	13 19 13.6	
	baz=182,slow=76,SNR=10						
WRA	**Warramunga Arr**	32.53	249	P	P	12 47 42.9	+0.4
	0.9nm,0.8s,baz=81,slow=9.2,SNR=11						
ASAR	**Alice Springs**	33.87	243	P	P	12 47 53.7	-0.5
	0.5nm,0.9s,baz=68,slow=9.7,SNR=6.3						
TXAR	**Lajitas Array**	94.75	61	P	P	12 54 32.5	-0.2
	0.2nm,0.4s,baz=207,slow=2.5,SNR=3.6						

IDC ***14*** *12:42:10.6±0.9, 19°.22S×176°.44W, h0^{km}, mb4.3/11, mb1 4.5/11, mb1mx4.1/42, mbtmp4.3/11, MS3.8/5, Ms1 3.8/5, ms1mx3.5/34, Error ellipse: s-maj=39.7km s-min=19.1km az=148.0*

ISCJB ***14*** *12:42:12.9±0.6, 19°.1S±0°.2×176°.60W±0°.09, h21^{km}, mb4.4/27, MS3.6/3, Error ellipse: s-maj=23.8km s-min=9.0km az=157.6*

NEIC ***14*** *12:42:12.2±0.3, 19°.26S×176°.48W, h10^{km}, mb4.6/17, Error ellipse: s-maj=14.7km s-min=6.0km az=157.0*

ISC 14 12:42:13.7±0.7**, 19°.3S**±0°.2×**176°.5W**±0°.1**, h21**^{km}**, n48, σ0^{s}.78**/40**, mb4.5**/27**, MS3.6**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	5.40	286	Pn	**Pn**	**12 43 32.8**	**-0.3**
	31nm,0.7s						
RAR	**Rarotonga**	15.81	100	LR	LR	12 51 54.2	
	comp=Z,291nm,18.6s,baz=268,slow=37						
DZM	**Mont Dzumac**	16.21	257	*e*LR	LR	12 49 14.4	
	comp=Z,1µm,26.7s						
DZM	**Mont Dzumac**	16.21	257	LR	LR	12 50 51.7	
	comp=Z,858nm,20.5s,baz=62,slow=32						
HNR	**Honiara**	24.80	290	LR	LR	12 55 20.4	
	comp=Z,182nm,20.5s,baz=94,slow=32						
TBI	**Tubuai**	25.49	104	*e*LQ	LQ	12 52 08.3	
	680nm,29.2s						
TBI				*e*LR	LR	12 53 15.0	
	comp=Z,428nm,34.8s						
PPT2	**Papeete2**	25.58	91	*e*LQ	LQ	12 52 10.3	
	418nm,24.2s						
PPT2				*e*LR	LR	12 53 14.5	
	comp=Z,889nm,27.0s						
PPT	**Papeete**	25.58	91	LR	LR	12 57 14.4	
	comp=Z,96nm,18.3s,baz=278,slow=35						
TAOE	**Nuku Hiva Isla**	36.67	79	*e*LR	LR	12 58 17.3	
	comp=Z,352nm,28.1s						
RKT	**Rikitea**	38.81	103	*e*LR	LR	12 59 15.5	
	comp=Z,374nm,29.5s						
STKA	**Stephens Creek**	39.60	243	*e*P	**P**	**12 49 43.7**	**-0.1**
	2.9nm,1.0s						
STKA				*e*		13 04 46.1	
STKA	**Stephens Creek**	39.60	243	P	**P**	**12 49 45.0**	**+1.1**
	11nm,1.0s,baz=94,slow=9.3,SNR=9.5						
STKA				LR	LR	13 04 46.1	
	comp=Z,173nm,18.2s,baz=41,slow=34						
BBOO	**Buckleboo**	44.37	243	*e*P	**P**	**12 50 23.2**	**+0.4**
	13nm,1.0s						
WRAB	**Tennant Creek**	46.18	261	*e*P	**P**	**12 50 38.1**	**+0.8**
	6.0nm,1.1s						
WR1	**Warramunga Arr**	46.19	261	*e*P	**P**	**12 50 37.1**	**-0.3**
	12nm,1.1s						
WRA	**Warramunga Arr**	46.19	261	P	**P**	**12 50 37.1**	**-0.3**
	8.7nm,1.2s,baz=96,slow=7.7,SNR=14						
AS31	**Alice Springs**	46.19	255	*e*P	**P**	**12 50 38.6**	**+1.2**
	4.6nm,0.8s						
ASAR	**Alice Springs**	46.19	255	P	**P**	**12 50 38.6**	**+1.2**
	14nm,0.8s,baz=86,slow=8.3,SNR=30						
FITZ	**Fitzroy Crossi**	54.61	261	*e*P	**P**	**12 51 42.2**	**+1.1**
	4.4nm,0.9s						
MJAR	**Matsushiro Arr**	70.09	322	P	**P**	**12 53 24.5**	**+0.2**
	2.4nm,0.8s,baz=164,slow=6.0,SNR=4.4						
MAJO	**Matsushiro**	70.09	322	*e*P	**P**	**12 53 24.5**	**+0.1**
PETK	**Petropavlovsk-**	75.47	344	P	**P**	**12 53 56.5**	**+0.6**
	4.4nm,0.9s,baz=131,slow=8.1,SNR=3.8						
PEA1	**Petropavlovsk-**	75.47	344	*e*P	**P**	**12 53 56.5**	**+0.6**
NVAR	**Mina Array Bea**	79.16	43	P	**P**	**12 54 18.2**	**+0.9**
	1.2nm,0.8s,baz=217,slow=8.6,SNR=6.0						
X16A	**Lo Mia Camp, P**	81.67	49	*e*P	**P**	**12 54 31.6**	**+0.8**
	1.6nm,0.9s						
U15A	**North Rim**	82.09	47	*e*P	**P**	**12 54 34.0**	**+0.9**
	3.8nm,1.1s						
G08A	**Pilot Rock**	82.79	37	*e*P	**P**	**12 54 36.8**	**+0.5**
	2.2nm,1.0s						
GAMB	**Gambell**	82.86	2	*e*P	**P**	**12 54 36.7**	**+0.6**
	2.2nm,0.9s						
SRU	**San Rafael Swe**	84.66	46	*e*P	**P**	**12 54 46.4**	**+0.2**
	4.9nm,1.1s						
JLU	**Jordanelle**	84.79	44	*e*P	P	12 54 51.2	+4.4
	4.4nm,0.3s						
MNTX	**Cornudas Mount**	84.89	54	*e*P	**P**	**12 54 48.1**	**+0.9**
	5.3nm,0.9s						
TX31	**Lajitas Ar. Si**	85.20	57	*e*P	**P**	**12 54 49.4**	**+0.4**
	5.1nm,1.1s						
LTX	**Lajitas**	85.20	57	*e*P	**P**	**12 54 49.8**	**+0.8**
TXAR	**Lajitas Array**	85.20	57	P	**P**	**12 54 49.8**	**+0.8**
	2.5nm,1.0s,baz=222,slow=5.0,SNR=12						
MCK	**McKinley**	85.48	12	*e*P	**P**	**12 54 49.9**	**+0.4**
	9.8nm,1.0s						
ANMO	**Albuquerque**	85.53	51	*e*P	**P**	**12 54 51.1**	**+0.5**
	3.4nm,1.0s						
WRH	**Wood River Hil**	86.31	12	*e*P	**P**	**12 54 53.4**	**-0.1**
	10nm,1.2s						
ILAR	**Eielson Array**	86.82	12	P	**P**	**12 54 55.5**	**-0.5**
	2.6nm,1.0s,baz=229,slow=6.2,SNR=9.9						
ILB	**Eielson Array**	86.82	12	*e*P	**P**	**12 54 55.5**	**-0.5**
PDAR	**Pinedale Array**	87.10	43	P	**P**	**12 54 58.0**	**-0.3**
	0.3nm,0.6s,baz=204,slow=2.0,SNR=3.3						
INK	**Inuvik**	92.73	15	P	**P**	**12 55 22.7**	**-1.0**
	1.4nm,1.0s,baz=176,slow=4.2,SNR=3.7						
YKA	**Yellowknife Ar**	94.81	24	P	**P**	**12 55 32.8**	**-0.7**
	0.3nm,0.8s,baz=234,slow=4.5,SNR=4.5						
BR101	**Keskin Array S**	147.03	315	*e*PKPbc	**PKPab**	**13 01 55.5**	**-1.4**
BRTR	**Keskin Array B**	147.03	315	PKPbc	**PKPab**	**13 01 55.5**	**-1.4**
	0.7nm,0.6s,baz=142,slow=5.7,SNR=4.0						
CLL	**Collm**	147.17	349	*e*PKPbc	**PKPab**	**13 01 56.0**	**-0.7**
	comp=Z,12nm,0.8s						
CLL				*e*		13 02 03.0	
GERES	**GERESS Array B**	149.37	347	PKPbc	**PKiKP**	**13 02 01.1**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=359,slow=3.9,SNR=5.2						
TORD	**Torodi Ar. Bea**	173.66	164	PKP	**PKPdf**	**13 02 21.5**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=270,slow=1.4,SNR=4.2						
TORD				PKPab	**PKPab**	**13 03 51.3**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=254,slow=2.6,SNR=3.9						
TOA1	**Torodi Ar. Sit**	173.67	164	*e*PKPdf	**PKPdf**	**13 02 21.5**	**-1.0**
TOA1				*e*PKPab	**PKPab**	**13 03 51.3**	**-0.5**

ISCJB ***14*** *12:43:44.5±0.4, 24°.83N±0°.02×122°.12E±0°.02, h3^{km}±4^{km}, Error ellipse: s-maj=3.4km s-min=2.9km az=11.3*

JMA ***14*** *12:43:44.6±0.1, 24°.87N×122°.05E, h37^{km}±4^{km}, M2.6*

TAP ***14*** *12:43:45.4, 24°.83N×122°.08E, h8^{km}, ML2.9, B*

ISC 14 12:43:44.5±0.9**, 24°.84N**±0°.02×**122°.11E**±0°.02**, h12**^{km}±7^{km}**, n56, σ0^{s}.50**/78**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.16	273	P	**Pg**	**12 43 48.0**	**-0.3**
	baz=275						
EGS				S	**Sg**	**12 43 50.3**	**-0.6**
	baz=275						
TWB1	**Santiao Chiao**	0.20	327	*e*P	**Pg**	**12 43 48.9**	**-0.1**
	baz=336						
TWB1				*e*S	**Sg**	**12 43 52.2**	**+0.1**
	baz=336						
NTC	**Toucheng**	0.26	274	P	**Pg**	**12 43 49.8**	**-0.1**
	baz=276						
NTC				*e*S	**Sg**	**12 43 53.7**	**+0.2**
	baz=276						
EOS1	**EOS1**	0.29	177	P	**Pg**	**12 43 51.2**	**+0.7**
	baz=171						
EOS1				S	**Sb**	**12 43 55.9**	**-0.4**
	baz=171						
TIPB	**Shuangxi**	0.29	298	*e*P	**Pg**	**12 43 50.6**	**0.0**
	baz=301						
TIPB				*e*S	**Sg**	**12 43 54.5**	**-0.1**
	baz=301						
TWC	**Suao**	0.33	226	*e*P	**Pg**	**12 43 50.7**	**-0.5**
	baz=222						
ILA	**Ilan**	0.34	258	*e*S	**Sg**	**12 43 55.7**	**-0.2**
	baz=257						
NWF	**Wu-fen Shan**	0.38	308	*e*P	**Pg**	**12 43 52.4**	**+0.2**
	baz=311						
NWF				*e*S	**Sb**	**12 43 58.2**	**-0.9**
	baz=311						
WFSB	**Wu-fen Shan**	0.38	308	P	**Pg**	**12 43 52.5**	**+0.4**
	baz=311						
WFSB				*e*S	**Sg**	**12 43 58.1**	**+0.8**
	baz=311						
TWE	**Neicheng**	0.42	254	P	**Pg**	**12 43 52.5**	**-0.4**
	baz=252						
TWE				*e*S	**Sg**	**12 43 58.5**	**0.0**
	baz=252						
TWA	**Mucha**	0.50	287	*e*P	**Pg**	**12 43 54.6**	**+0.3**
	baz=288						
NANB	**Nanao**	0.52	219	*e*P	**Pg**	**12 43 54.4**	**-0.4**
	baz=216						
NANB				*e*S	**Sb**	**12 44 02.8**	**-0.3**
	baz=216						
ENA	**Nanau**	0.53	220	*e*P	**Pg**	**12 43 55.0**	**+0.1**
	baz=216						
ENTT	**Nioudou**	0.53	249	P	**Pg**	**12 43 54.7**	**-0.3**
	baz=247						
ENTT				*e*S	**Sg**	**12 44 01.9**	**-0.1**
	baz=247						
NHDH	**Xindian Distri**	0.55	283	*e*S	**Sg**	**12 44 02.6**	**+0.1**
	baz=284						
NWLT	**Wulai**	0.56	264	*e*P	**Pg**	**12 43 55.8**	**+0.4**
	baz=264						
NWLT				S	**Sg**	**12 44 03.2**	**+0.4**
	baz=264						
YM01	**YM01**	0.58	302	*e*P	**Pb**	**12 43 56.5**	**-0.1**
	baz=304						
YM11	**YM11**	0.59	304	*e*P	**Pb**	**12 43 56.7**	**-0.1**
	baz=306						
YM08	**YM08**	0.59	307	P	**Pg**	**12 43 56.4**	**+0.4**
	baz=308						
NDT	**Datong Townshi**	0.59	247	P	**Pg**	**12 43 55.7**	**-0.4**
	baz=246						
YM05	**YM05**	0.59	304	*e*P	**Pb**	**12 43 56.7**	**-0.2**
	baz=305						
YM04	**YM04**	0.61	301	*e*P	**Pb**	**12 43 57.0**	**-0.2**
	baz=303						
TWS1	**Kuangyinshan**	0.68	293	*e*P	**Pb**	**12 43 59.0**	**+0.6**
	baz=294						
YHNB	**Yeheng**	0.69	256	*e*P	**Pg**	**12 43 57.5**	**-0.5**
	baz=255						
NSK	**Sanguang**	0.70	257	P	**Pg**	**12 43 57.8**	**-0.4**
	baz=256						
NSK				*e*S	**Sg**	**12 44 06.0**	**-1.5**
	baz=256						
NNSB	**Datong**	0.78	239	*e*P	**Pg**	**12 43 59.7**	**+0.1**
	baz=237						
NNSB				S	**Sg**	**12 44 10.1**	**+0.3**
	baz=237						
NNS	**Nan Shan**	0.78	240	*e*P	**Pg**	**12 43 59.6**	**0.0**
	baz=238						
PCYT	**Pengchaiyu**	0.79	357	*e*P	**Pn**	**12 44 01.3**	**-0.3**
	baz=359						
NACB	**Ninganchiao**	0.81	216	*e*P	**Pg**	**12 43 59.8**	**-0.4**
	baz=214						
NACB				*e*S	**Sg**	**12 44 10.1**	**-0.7**
	baz=214						
ETLH	**Xiulin Townshi**	0.85	223	*e*P	**Pg**	**12 44 00.6**	**-0.4**
	baz=221						
ETLH				*e*S	**Sb**	**12 44 12.8**	**+0.2**
	baz=221						
JYNG	**Yonagunijimaku**	0.85	117	P	**Pg**	**12 44 01.4**	**+0.4**
JYNG				*e*S	**Sb**	**12 44 13.7**	**+1.1**
TWD	**Chiawan**	0.89	212	*e*P	**Pg**	**12 44 01.7**	**0.0**
	baz=210						
YOJ	**Yonaguni jima**	0.90	114	*e*P	**Pg**	**12 44 02.1**	**+0.2**
	baz=113						
YOJ	**Yonaguni jima**	0.90	114	P	**Pg**	**12 44 01.9**	**0.0**
YOJ				*e*S	**Sb**	**12 44 14.8**	**+0.8**
LIOB	**Emei**	1.01	259	*e*P	**Pn**	**12 44 05.1**	**+0.5**
	baz=259						
SBCB	**Hsinchu**	1.02	268	*e*P	**Pn**	**12 44 05.8**	**+1.1**
	baz=267						
NSTT	**Nanjuang**	1.03	259	*e*P	**Pn**	**12 44 05.7**	**+0.9**
	baz=258						
WHF	**Hehuan Shan**	1.03	228	*e*P	**Pg**	**12 44 04.4**	**-0.1**
	baz=227						
WHF				*e*S	**Sg**	**12 44 18.0**	**0.0**
	baz=227						
ENLB	**Shoufeng**	1.04	207	*e*S	**Sn**	**12 44 19.3**	**0.0**
	baz=205						
TDCB	**Techi**	1.04	236	*e*P	**Pg**	**12 44 03.9**	**-0.8**
	baz=235						
CHGB	**Renai**	1.15	228	*e*P	**Pn**	**12 44 07.2**	**+0.5**
	baz=227						
CHGB				*e*S	**Sn**	**12 44 22.8**	**+0.3**
	baz=227						
WHP	**Taichung City**	1.20	243	*e*P	**Pb**	**12 44 07.4**	**+0.2**
	baz=241						
OWD	**Renai**	1.22	224	*e*P	**Pn**	**12 44 07.9**	**+0.3**
	baz=223						
OWD				*e*S	**Sg**	**12 44 24.2**	**+0.2**
	baz=223						
EGFH	**Guangfu**	1.32	208	*e*P	**Pb**	**12 44 09.4**	**+0.2**
	baz=207						
VWDT	**VWDT**	1.39	220	*e*P	**Pn**	**12 44 10.4**	**+0.6**
	baz=218						
TYC	**Yuchr**	1.47	231	*e*P	**Pg**	**12 44 12.5**	**-0.3**
	baz=230						
SSLB	**Suanglung**	1.48	226	*e*P	**Pb**	**12 44 12.2**	**+0.1**
	baz=224						
SSLB				*e*S	**Sg**	**12 44 32.2**	**-0.2**
	baz=224						
EHY	**Hungye**	1.51	209	*e*P	**Pb**	**12 44 12.6**	**+0.2**
	baz=207						
IRIF	**Iriomote-Funau**	1.56	108	P	**Pn**	**12 44 11.2**	**-0.8**
WHYT	**Xinyi Township**	1.61	226	*e*P	**Pb**	**12 44 14.4**	**+0.1**
	baz=224						
YULB	**Yu-li**	1.62	207	*e*P	**Pn**	**12 44 13.7**	**+0.8**
	baz=206						
TWF1	**Yuli**	1.65	207	*e*P	**Pn**	**12 44 13.9**	**+0.5**
	baz=205						
HATJ	**Hateruma jima**	1.73	116	P	**Pn**	**12 44 14.3**	**-0.1**
JKRS	**Kuro-shima**	1.83	109	P	**Pn**	**12 44 15.6**	**-0.2**
JKRS				*e*S	**Sn**	**12 44 37.3**	**-1.6**
JIJ	**Ishigaki jima**	1.91	104	P	**Pn**	**12 44 17.0**	**+0.1**
CHN4	**Tsaushan**	2.03	223	*e*P	**Pb**	**12 44 21.4**	**0.0**
	baz=222						

IDC 14 12:44:25.0±2.7**, 18°.93S**×**176°.54W, h0**^{km}**, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.6**/45**, mbtmp3.8**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx3.1**/37**, Error ellipse: s-maj=209.9km s-min=32.3km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	44.89	286	LR	LR	13 11 11.8	
	comp=Z,66nm,18.2s,baz=78,slow=36						
WRA	**Warramunga Arr**	46.20	260	P	P	12 52 52.0	-0.1
	1.1nm,0.9s,baz=95,slow=7.5,SNR=6.0						
ASAR	**Alice Springs**	46.23	255	P	P	12 52 52.2	-0.1
	2.5nm,0.8s,baz=98,slow=8.8,SNR=9.9						
TXAR	**Lajitas Array**	85.05	57	P	P	12 57 03.0	-0.1
	0.6nm,1.0s,baz=220,slow=6.9,SNR=3.8						
GERES	**GERESS Array B**	149.03	347	PKPbc	PKPbc	13 04 14.7	-0.5
	1.2nm,0.9s,baz=38,slow=1.7,SNR=4.4						

MOS ***14*** *12:54:04.8±2.5, 53°.97N×166°.13E, h20^{km}, mb4.5/1, Error ellipse: s-maj=32.7km s-min=9.7km az=170.4*

KRSC 14 12:54:04.8±1.5**, 53°.97N**×**166°.13E, h20**^{km}±32^{km}**, ML4.3, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	2.65	285	*e*P	Pn	12 54 48.2	+1.9
MKZ				*e*S	Sb	12 55 20.7	-2.8
MKZ	**Mys Kozlova**	2.65	285	PN	Pn	12 54 48.2	+1.9
MKZ				S	Sb	12 55 20.7	-2.8
TUMR	**Tumrok**	3.72	293	*e*P	Pn	12 55 03.3	+2.1
TUMR	**Tumrok**	3.72	293	PN	Pn	12 55 03.3	+2.1
SPN	**Mys Shipunski**	3.75	259	*e*P	Pn	12 55 05.1	+3.7
SPN				*e*S	Sn	12 55 49.9	+5.0
SPN	**Mys Shipunski**	3.75	259	PN	Pn	12 55 05.1	+3.7
SPN				S	Sn	12 55 49.9	+5.0
KII	**Karymskiy**	3.94	274	*e*P	Pb	12 55 09.3	-4.3
KII	**Karymskiy**	3.94	274	PN	Pb	12 55 09.3	-4.3
NLC	**Nalytchevo**	4.12	262	*e*P	Pn	12 55 10.6	+4.0
NLC				*e*S	Sn	12 55 59.5	+5.3
NLC	**Nalytchevo**	4.12	262	PN	Pn	12 55 10.6	+4.0
NLC				S	Sn	12 55 59.5	+5.3
UGLR	**Uglovaya**	4.42	263	*e*P	Pn	12 55 15.1	+4.3
UGLR	**Uglovaya**	4.42	263	PN	Pn	12 55 15.1	+4.3
SMAR	**Somma**	4.42	264	*e*P	Pn	12 55 15.2	+4.3
SMAR	**Somma**	4.42	264	PN	Pn	12 55 15.2	+4.3
AVH	**Avacha**	4.46	264	*e*P	Pn	12 55 15.6	+4.3
AVH				*e*S	Sn	12 56 07.6	+5.0
AVH	**Avacha**	4.46	264	PN	Pn	12 55 15.6	+4.3
AVH				S	Sn	12 56 07.6	+5.0
KRX	**Arik**	4.49	265	*e*P	Pn	12 55 16.0	+4.2
KRX	**Arik**	4.49	265	PN	Pn	12 55 16.0	+4.2
DALK	**Dalny**	4.50	261	*e*P	Pn	12 55 16.3	+4.5
DALK				*e*S	Sn	12 56 10.0	+6.5
DALK	**Dalny**	4.50	261	PN	Pn	12 55 16.3	+4.5
DALK				S	Sn	12 56 10.0	+6.5
KOK	**Koryaka**	4.51	264	*e*P	Pn	12 55 16.2	+4.2
KOK	**Koryaka**	4.51	264	PN	Pn	12 55 16.2	+4.2
PET	**Petropavlovsk**	4.56	261	*e*P	Pn	12 55 17.5	+4.9
PET	**Petropavlovsk**	4.56	261	*e*PN	Pb	12 55 18.7	-5.4
PET				*e*S	Sn	12 56 11.5	+6.5
PET				smax	smax		
	comp=N,23nm,0.4s						
PET				smax	smax		
	comp=E,24nm,0.5s						
RUS	**Russkaya**	4.83	255	*e*P	Pn	12 55 20.7	+4.4
RUS				*e*S	Sn	12 56 15.2	+3.6
RUS	**Russkaya**	4.83	255	PN	Pn	12 55 20.7	+4.4
RUS				S	Sn	12 56 15.2	+3.6
GNL	**Ganaly**	4.86	270	*e*P	Pn	12 55 21.5	+4.7
GNL	**Ganaly**	4.86	270	PN	Pn	12 55 21.5	+4.7
KRMR	**Karymshinskiy**	4.92	260	*e*P	Pn	12 55 22.4	+4.9
KRMR				*e*S	Sn	12 56 19.5	+5.7
KRMR	**Karymshinskiy**	4.92	260	PN	Pn	12 55 22.4	+4.9
KRMR				S	Sn	12 56 19.5	+5.7
MTVR	**Mutnovka**	5.00	256	*e*P	Pn	12 55 23.9	+5.1
MTVR				*e*S	Sn	12 56 21.7	+5.7
MTVR	**Mutnovka**	5.00	256	PN	Pn	12 55 23.9	+5.1
MTVR				S	Sn	12 56 21.7	+5.7
KDTR	**Khodutka, Kamc**	5.33	249	*e*P	Pn	12 55 27.4	+4.2
KDTR				*e*S	Sn	12 56 28.3	+4.3
KDTR	**Khodutka, Kamc**	5.33	249	PN	Pn	12 55 27.4	+4.2
KDTR				S	Sn	12 56 28.3	+4.3

IDC ***14*** *13:04:41.4±1.3, 18°.90S×176°.50W, h0^{km}, mb4.2/10, mb1 4.4/10, mb1mx4.2/28, mbtmp4.1/10, MS4.8/4, Ms1 4.8/4, ms1mx4.6/46, Error ellipse: s-maj=69.7km s-min=19.0km az=149.0*

ISCJB ***14*** *13:04:42.7±0.6, 19°.0S±0°.2×176°.52W±0°.08, h21^{km}, mb4.4/14, MS4.9/2, Error ellipse: s-maj=27.1km s-min=10.4km az=172.7*

NEIC ***14*** *13:04:46.7±0.7, 18°.93S×176°.58W, h35^{km}, mb4.2/1, Error ellipse: s-maj=27.6km s-min=10.0km az=158.0*

ISC 14 13:04:45.0±0.8**, 19°.0S**±0°.2×**176°.4W**±0°.1**, h21**^{km}**, n21, σ1^{s}.56**/17**, mb4.3**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.39**	**282**	*e*Pn	**Pn**	**13 06 02.7**	**-1.5**
	63nm,0.8s						
RAO	**Raoul Island**	**10.34**	**187**	LR	LR	13 10 33.5	
	comp=Z,6μm,21.3s,baz=8.0,slow=34						
RAR	**Rarotonga**	**15.80**	**101**	LR	LR	13 12 43.2	
	comp=Z,2μm,21.7s,baz=261,slow=30						
DZM	**Mont Dzumac**	**16.35**	**256**	*e*P	**P**	**13 08 38.7**	**+2.5**
	97nm,1.4s						
HNR	**Honiara**	**24.76**	**289**	P	**P**	**13 10 09.1**	**+3.7**
PPT2	**Papeete2**	**25.52**	**91**	*e*P	**P**	**13 10 11.7**	**-0.6**
	52nm,1.1s						
PPT	**Papeete**	**25.52**	**91**	LR	LR	13 17 25.0	
	comp=Z,1μm,21.1s,baz=258,slow=30						
PMOR	**Pomariorio Ree**	**27.55**	**86**	*e*P	**P**	**13 10 31.3**	**+0.7**
	88nm,1.4s						
VAH	**Vaihoa**	**27.76**	**87**	*e*P	**P**	**13 10 32.9**	**+0.5**
	53nm,1.4s						
STKA	**Stephens Creek**	**39.80**	**243**	P	**P**	**13 12 16.7**	**-0.1**
	6.0nm,1.0s,baz=78,slow=11,SNR=3.1						
WRAB	**Tennant Creek**	**46.30**	**260**	*e*P	**P**	**13 13 06.8**	**-2.7**
	2.4nm,0.7s						
WRA	**Warramunga Arr**	**46.30**	**260**	P	**P**	**13 13 08.3**	**-1.3**
	7.9nm,1.1s,baz=98,slow=5.8,SNR=27						
ASAR	**Alice Springs**	**46.33**	**255**	P	**P**	**13 13 08.8**	**-1.1**
	6.7nm,0.8s,baz=92,slow=8.1,SNR=82						
PETK	**Petropavlovsk-**	**75.18**	**344**	P	**P**	**13 16 25.5**	**-0.1**
	1.7nm,0.8s,baz=132,slow=10,SNR=4.0						
NVAR	**Mina Array Bea**	**78.89**	**43**	P	**P**	**13 16 47.0**	**-0.1**
	1.9nm,1.1s,baz=227,slow=8.3,SNR=4.0						
TXAR	**Lajitas Array**	**84.97**	**57**	P	**P**	**13 17 19.2**	**+0.1**
	2.4nm,1.1s,baz=216,slow=6.2,SNR=12						
ILAR	**Eielson Array**	**86.49**	**12**	P	**P**	**13 17 25.4**	**-0.3**
	0.9nm,0.9s,baz=227,slow=4.8,SNR=7.3						
PDAR	**Pinedale Array**	**86.83**	**43**	P	**P**	**13 17 28.1**	**-0.1**
	0.4nm,0.8s,baz=226,slow=7.3,SNR=2.8						
INK	**Inuvik**	**92.41**	**15**	P	**P**	**13 17 53.1**	**-0.4**
	1.5nm,1.0s,baz=202,slow=6.0,SNR=3.4						
YKA	**Yellowknife Ar**	**94.50**	**24**	P	**P**	**13 18 03.4**	**+0.2**
	0.7nm,1.0s,baz=248,slow=3.3,SNR=2.9						
ATAH	**Atahualpa**	**95.24**	**99**	LR	LR	13 52 59.4	
	comp=Z,1μm,19.0s,baz=254,slow=30						

SOME ***14*** *13:09:15.4, 43°.82N×83°.12E, h0^{km}*

NNC ***14*** *13:09:20.9±4.1, 44°.06N×82°.81E, h0^{km}, mb2.6, mpv2.2, Error ellipse: s-maj=38.1km s-min=16.6km az=130.0*

ISC 14 13:09:19.0±2.8**, 43°.8N**±0°.1×**83°.3E**±0°.1**, h24^{km}, n6, σ2^{s}.07**/9**, 3C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**2.56**	**282**	*e*P	**Pb**	**13 10 02.0**	**-2.3**
	0.4nm,0.4s						
DJR				*e*S	**Sb**	**13 10 36.5**	**+1.3**
	5.4nm,0.3s						
PDGK	**Podgornoye**	**2.79**	**261**	⇑Pg	**Pb**	**13 10 07.9**	**-0.4**
	1.0nm,0.5s						
PDGK				⇑Lg	Lg	13 10 38.1	
	3.2nm,0.6s						
MK31	**Makanchi Array**	**3.04**	**347**	⇓Pn	**Pn**	**13 10 07.0**	**+1.3**
	baz=188,slow=14,SNR=11						
MK31				Lg	Lg	13 10 47.0	
	0.5nm,0.2s,baz=171,slow=29,SNR=5.6						
MAKZ	**Makanchi**	**3.11**	**343**	⇓Pg	**Pb**	**13 10 12.3**	**-1.3**
	0.3nm,0.3s						
MAKZ				⇑Lg	Lg	13 10 50.3	
	1.1nm,0.5s						
KAPS	**Kapalarasan**	**3.15**	**299**	*e*P	**Pb**	**13 10 11.9**	**-2.5**
	0.4nm,0.2s						
KAPS				*e*S	**Sb**	**13 10 53.6**	**+1.3**
	3.7nm,0.3s						
UZB	**Uzynbulak**	**3.17**	**259**	*e*P	**Pb**	**13 10 12.5**	**-2.2**
	0.6nm,0.4s						
UZB				*e*S	**Sb**	**13 10 54.5**	**+1.7**
	2.5nm,0.2s						

BJI ***14*** *13:13:49.5, 67°.58N×142°.61E, h10^{km}, mB7.1/75, mb6.4/80, Ms7.4/97, Ms7 7.3/89*

ISCJB ***14*** *13:13:50.9±0.1, 67°.57N±0°.01×142°.72E±0°.02, h11^{km}, mb6.4/767, MS6.8/250, Error ellipse: s-maj=1.6km s-min=1.2km az=161.8*

MOS ***14*** *13:13:51.6±1.0, 67°.56N×142°.68E, h14^{km}, mb6.7/97, MS6.9/68, Error ellipse: s-maj=8.3km s-min=3.7km az=92.5 Broadband fault plane solution: P waves. M$_0$2.80000×10^{19} NP1:φ$_s$349.00000°, δ52.00000°, λ128.00000°. NP2:φ$_s$117.00000°, δ52.00000°, λ52.00000°. Principal axes: T Plg61.0000°, Azm323.0000°; N Plg29.0000°, Azm143.0000°; P Plg0.0000°, Azm53.0000°;*

MOS Fault plane solution: P-wave C254, D42 . Felt (VI-VII) at Kuberganya; (V-VI) at Deputatskiy, Suturuokha; (V) at Batagay, Belaya Gora, Boronuk, Verkhoyansk, Tabalakh, Ese-Khaya; (IV-V) at Khonuu; (IV) at Abyy, Buor-Sysy, Saydy; (III-IV) at Ust'-Nera.

IDC ***14*** *13:13:51.0±0.3, 67°.53N×142°.68E, h0^{km}, mb5.9/45, mb1 6.0/47, mb1mx6.0/48, mbtmp5.9/47, ML5.0/4, MS6.6/52, Ms1 6.6/52, ms1mx6.5/59 Error ellipse: s-maj=9.0km s-min=8.4km az=149.0*

YARS ***14*** *13:13:52.3±0.2, 67°.58N±0°.01×142°.67E±0°.03, h14^{km}±9^{km}*

NEIC ***14*** *13:13:53.0±0.0, 67°.91N×141°.83E, h15^{km} Best double couple: NP1:φ$_s$327.00000°, δ53.00000°, λ111.00000°. NP2:φ$_s$115.00000°, δ42.00000°, λ65.00000°. Principal axes: T 1.0400, Plg72.0000°, Azm293.0000°; N 0.0100, Plg16.0000°, Azm133.0000°; P -1.0600, Plg5.0000°, Azm42.0000°;*

NEIC ***14*** *13:13:53.1±0.1, 67°.63N×142°.51E, h11^{km}, mb6.5/299, ME6.8, MS6.7/116, MW6.6, MW6.7, MW6.6 Error ellipse: s-maj=2.9km s-min=2.0km az=162.0, Moment Tensor Solution. s164 Moment tensor: Scale 10^{18}Nm; M$_{rr}$7.36; M$_{\theta\theta}$-4.43; M$_{\phi\phi}$-2.93; M$_{r\theta}$1.20; M$_{\theta\phi}$5.63; M$_{\phi r}$2.20; Best double couple: M$_0$8.90000×10^{18} NP1:φ$_s$111.00000°, δ47.00000°, λ60.00000°. NP2:φ$_s$331.00000°, δ51.00000°, λ118.00000°. Principal axes: T 8.3200, Plg69.0000°, Azm307.0000°; N 1.0500, Plg21.0000°, Azm132.0000°; P -9.3800, Plg2.0000°, Azm42.0000°; Broadband fault plane solution: P waves. NP1:φ$_s$117.00000°, δ62.00000°, λ41.00000°. NP2:φ$_s$5.00000°, δ55.00000°, λ145.00000°. Principal axes: T Plg48.0000°, Azm334.0000°; N Plg0.0000°, Azm0.0000°; P Plg2.0000°, Azm257.0000°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by a larger one about 2 seconds later. Depth from synthetics of broadband displacement seismograms based on larger event. Apparent Stress 0.82 MPa. Energy computed from BB mechanism.*

GCMT ***14*** *13:13:59.1±0.0, 67°.65N×142°.51E, h12^{km}, MW6.7/149, Moment Tensor Solution. s149,c380; s148,c692; Duration: 5^{s}.3 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.11±.01; M$_{\theta\theta}$-0.68±.01; M$_{\phi\phi}$-0.43±.01; M$_{r\theta}$0.24±.01; M$_{\theta\phi}$0.80±.00; M$_{\phi r}$0.07±.02; Best double couple: M$_0$1.26700×10^{19} NP1:φ$_s$118.00000°, δ50.00000°, λ73.00000°. NP2:φ$_s$324.00000°, δ43.00000°, λ109.00000°. Principal axes: T 1.1660, Plg77.0000°, Azm324.0000°; N 0.2050, Plg13.0000°, Azm130.0000°; P -1.3680, Plg3.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *13:14:11.2±0.0, 67°.37N×142°.28E, h16^{km}, Moment Tensor Solution. s121 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.10; M$_{\theta\theta}$-0.66; M$_{\phi\phi}$-0.44; M$_{r\theta}$0.90; M$_{\theta\phi}$0.65; M$_{\phi r}$0.56; Best double couple: M$_0$1.50000×10^{19} NP1:φ$_s$334.00000°, δ43.00000°, λ137.00000°. NP2:φ$_s$98.00000°, δ63.00000°, λ56.00000°. Principal axes: T 1.7600, Plg58.0000°, Azm320.0000°; N -0.4800, Plg30.0000°, Azm116.0000°; P -1.2800, Plg11.0000°, Azm212.0000°;*

ISC 14 13:13:52.7±0.4**, 67°.52N**±0°.02×**142°.70E**±0°.02**, h9^{km}**±2^{km}**, h9^{km}:pP-P, n2697, σ1^{s}.70**/3023**, mb6.6**/821**, MS6.8**/285**, 245C-66D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.07**	**169**	*e*P	**Pg**	**13 14 12.2**	**-1.1**
MOMR				*e*S	**Sg**	**13 14 27.2**	**0.0**
MOMR				pmax	pmax		
	comp=Z,60μm,0.6s						
MOMR				smax	smax		
	comp=E,445μm,0.8s						
MOMR	**Moma**	**1.07**	**169**	*e*P	**Pg**	**13 14 12.2**	**-1.1**
MOMR				Pmax		13 14 12.2	
	comp=Z,60μm,0.6s						
MOMR				*e*S	**Sg**	**13 14 27.2**	**0.0**
MOMR				Smax		13 14 27.2	
	comp=N,4μm,0.8s						
MOMR				Smax		13 14 27.2	
	comp=E,45μm,0.8s						
YBGR	**Belaya Gora**	**1.66**	**51**	*e*P	**Pn**	**13 14 20.8**	**-1.2**
YBGR				*i* P	**Pb**	**13 14 21.3**	**-2.1**
YBGR				Pmax		13 14 21.3	
	comp=E,6μm,0.5s						
YBGR				Pmax		13 14 21.3	
	comp=Z,7μm,0.5s						
YBGR				*e*S	**Sn**	**13 14 42.6**	**-0.8**
YBGR				*e*S	**Sb**	**13 14 43.1**	**-1.4**
YBGR				Smax		13 14 43.1	
	comp=N,2μm,0.4s						
YBGR				Smax		13 14 43.1	
	comp=E,3μm,0.4s						
BTGS	**Batagay**	**3.09**	**276**	*e*P	**Pn**	**13 14 41.3**	**-0.3**
BTGS				*e*S	**Sn**	**13 15 17.1**	**-1.5**
BTGS				pmax	pmax		
	comp=Z,10μm,0.4s						
BTGS				smax	smax		
	comp=N,18μm,0.7s						
BTGS	**Batagay**	**3.09**	**276**	*e*P	**Pn**	**13 14 41.3**	**-0.3**
BTGS				*e*P	**Pb**	**13 14 47.6**	**-0.2**
BTGS				Pmax		13 14 47.6	
	comp=Z,10μm,0.4s						
BTGS				*e*S	**Sn**	**13 15 17.1**	**-1.5**
BTGS				*e*S	**Sb**	**13 15 28.1**	**+2.5**
BTGS				Smax		13 15 28.1	
	comp=N,8μm,0.7s						
ATKR	**Artyk**	**3.50**	**162**	*e*P	**Pn**	**13 14 48.6**	**+1.3**
ATKR				*e*S	**Sn**	**13 15 28.6**	**-0.1**
ATKR				smax	smax		
	comp=E,27μm,1.0s						
ATKR	**Artyk**	**3.50**	**162**	*e*P	**Pn**	**13 14 48.6**	**+1.3**
ATKR				*e*P	**Pb**	**13 14 56.8**	**+2.0**
ATKR				Pmax		13 14 56.8	
	comp=E,1μm,0.4s						
ATKR				Pmax		13 14 56.8	
	comp=Z,4μm,0.4s						
ATKR				*e*S	**Sn**	**13 15 28.6**	**-0.1**
ATKR				*e*S	**Sg**	**13 15 42.7**	**-2.2**
ATKR				Smax		13 15 42.7	
	comp=N,2μm,1.0s						
ATKR				Smax		13 15 42.7	
	comp=E,77μm,1.0s						
SEY	**Seymchan**	**6.14**	**134**	*e*Pn	**Pn**	**13 15 23.6**	**+0.2**
SEY				Lg	Lg	13 17 01.8	
SEY	**Seymchan**	**6.14**	**134**	⇓*e*P	**Pn**	**13 15 23.6**	**+0.2**
SEY	**Seymchan**	**6.14**	**134**	Pn	**Pn**	**13 15 23.2**	**-0.3**
	comp=E,16nm,0.3s,baz=316,slow=14,SNR=154						
SEY				Lg	Lg	13 17 01.8	
	comp=E,453nm,0.3s,baz=7.3,slow=4.0,SNR=5.1						
YAK	**Yakutsk**	**7.81**	**231**	*e*P	**Pn**	**13 15 48.6**	**+2.2**
YAK				pmax	pmax		
	comp=Z,16μm,0.8s						
YAK	**Yakutsk**	**7.81**	**231**	*e*P	**Pn**	**13 15 45.9**	**-0.5**
YAK				*e*P	Pb	13 16 13.0	+4.9
YAK				Pmax		13 16 13.0	
	comp=E,3μm,0.8s						
YAK				Pmax		13 16 13.0	
	comp=Z,380nm,0.8s						
YAK				*e*S	**Sn**	**13 17 10.6**	**-4.2**
YAK				*e*S	Sg	13 17 53.9	-9.2
YAK				Smax		13 17 53.9	
	comp=N,6μm,1.1s						
YAK				Smax		13 17 53.9	
	comp=E,3μm,1.1s						
MA2	**Magadan**	**8.74**	**152**	*e*Pn	**Pn**	**13 16 00.9**	**+1.9**
MA2				Lg	Lg	13 18 27.8	
MA2	**Magadan**	**8.74**	**152**	*d i*P	**Pn**	**13 16 01.3**	**+2.2**
MA2				pmax	pmax		
	comp=Z,255nm,1.7s						
MA2	**Magadan**	**8.74**	**152**	Pn	**Pn**	**13 16 00.2**	**+1.1**
	comp=Z,1.4nm,0.3s,baz=341,slow=15,SNR=48						
MA2				Lg	Lg	13 18 27.8	
	comp=Z,4μm,0.3s,baz=1.3,slow=1.4,SNR=4.7						
BILL	**Bilibino**	**8.93**	**76**	*e*Pn	**Pn**	**13 16 02.9**	**+1.3**
BILL	**Bilibino**	**8.93**	**76**	*d i*P	**Pn**	**13 16 03.2**	**+1.6**
BILL				*e*S	**Sn**	**13 17 44.8**	**+2.7**
BILL				pmax	pmax		
	comp=Z,1μm,1.7s						
BILL				MLR	MLR		
	comp=Z,452μm,18.0s						
NRGR	**Nerungri**	**13.69**	**226**	*i* P	**Pn**	**13 17 06.5**	**-0.3**
NRGR				S	**Sn**	**13 19 35.3**	**-3.6**
NRGR				smax	smax		
	comp=N,7μm,0.8s						
OKH	**Okha**	**14.02**	**179**	*c i*P	**Pn**	**13 17 13.9**	**+2.7**
OKH				*i* S	**Sn**	**13 19 45.6**	**-1.0**
OKH				pmax	pmax		
	comp=Z,32μm,10.0s						
OKH				smax	smax		
	comp=N,37μm,12.4s						
OKH				MLR	MLR		
	comp=Z,238μm,10.0s						
NKL	**Nikolayevsk**	**14.45**	**185**	*i* P	**Pn**	**13 17 18.0**	**+0.9**
NKL				*e*S	**S**	**13 20 09.0**	**-8.2**
NKL				pmax	pmax		
	comp=N,34μm,15.0s						
NKL				pmax	pmax		
	comp=Z,43μm,8.0s						
NKL				pmax	pmax		
	comp=Z,750nm,1.0s						
NKL				smax	smax		
	comp=E,80μm,12.0s						
ZEA	**Zeya**	**15.69**	**216**	*de*P	**Pn**	**13 17 31.2**	**-2.4**
ZEA				pmax	pmax		
	comp=N,710nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,750nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,51μm,6.0s						
ZEA				pmax	pmax		
	comp=E,15μm,7.0s						
ZEA				pmax	pmax		
	comp=N,35μm,6.0s						
ZEA				MLR	MLR		
	comp=Z,460μm,12.0s						
PEA0B	**Petropavlovsk-**	**16.17**	**146**	*e*Pn	**P**	**13 17 41.8**	**-1.3**
	comp=Z,4μm,1.1s						
PETK	**Petropavlovsk-**	**16.17**	**146**	Pn	**P**	**13 17 41.8**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=339,slow=9.9,SNR=64						
PETK				LR	LR	13 24 43.4	
	comp=Z,217μm,18.6s,baz=329,slow=40						
I44RU	**PETROPAVLOVSK**	**16.18**	**146**	*i*		14 55 00.0	
	baz=341,slow=326,SNR=4.0						
BOD	**Bodaibo**	**16.20**	**247**	*e*P	**Pn**	**13 17 36.6**	**-3.6**
BOD				*e*		13 20 46.5	
BOD				pmax	pmax		
	comp=Z,2μm,1.9s						
PET	**Petropavlovsk**	**16.46**	**144**	α *i*P	**P**	**13 17 48.6**	**+2.3**
PET				pmax	pmax		
	comp=Z,3μm,1.0s						
PET				pmax	pmax		
	comp=Z,60μm,8.2s						
PET				pmax	pmax		
	comp=Z,74μm,10.2s						
PET				MLR	MLR		
	comp=Z,210μm,15.0s						
PET				MLR	MLR		
	comp=Z,197μm,14.0s						
TYV	**Tymovskoe**	**16.71**	**180**	*e*P	**P**	**13 17 50.6**	**+1.6**
TYV				pmax	pmax		
	comp=Z,117nm,1.1s						
TYV				pmax	pmax		
	comp=Z,24μm,6.5s						
TYV				MLR	MLR		
	comp=Z,440μm,14.0s						
TYV				MLR	MLR		
	comp=N,496μm,13.0s						
GRNR	**Gornyy**	**17.09**	**194**	*e*P	**P**	**13 17 53.2**	**-0.1**
GRNR				*e*S	**Sn**	**13 21 01.2**	**-0.2**
GRNR				pmax	pmax		
	comp=N,88nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,52nm,1.0s						
GRNR				smax	smax		
	comp=E,190nm,1.0s						
SKR	**Severo-Kuril's**	**18.16**	**152**	⇑*i*P	**P**	**13 18 06.7**	**+1.7**
SKR				pmax	pmax		
	comp=Z,87μm,6.7s						
SKR				pmax	pmax		
	comp=Z,66μm,9.0s						
SKR				pmax	pmax		
	comp=Z,6μm,1.2s						
SKR				MLR	MLR		
	comp=Z,166μm,14.0s						
SKR				MLR	MLR		
	comp=Z,171μm,14.0s						
UGL	**Uglegorsk**	**18.50**	**181**	⇓*i*P	**Pn**	**13 18 11.3**	**+2.4**
UGL				*e*S	**S**	**13 21 39.9**	**+0.2**
UGL				pmax	pmax		
	comp=Z,306nm,0.9s						
UGL				pmax	pmax		
	comp=Z,64μm,6.9s						
UGL				pmax	pmax		
	comp=E,18μm,5.7s						
UGL				pmax	pmax		
	comp=N,63μm,7.1s						
UGL				smax	smax		
	comp=E,397nm,1.2s						
UGL				smax	smax		
	comp=N,103μm,10.9s						
UGL				smax	smax		
	comp=E,118μm,15.7s						
UGL				MLR	MLR		
	comp=Z,281μm,11.0s						
UGL				MLR	MLR		
	comp=N,276μm,11.0s						
UGL				MLR	MLR		
	comp=E,221μm,14.0s						
GAMB	**Gambell**	**18.82**	**80**	*e*P	**Pn**	**13 18 13.8**	**+1.0**
	comp=E,2μm,1.4s						
KLR	**Kul'dur**	**19.16**	**202**	*d i*P	**Pn**	**13 18 17.0**	**+0.1**
KLR	**Kul'dur**	**19.16**	**202**	P	**Pn**	**13 18 17.7**	**+0.7**
	comp=E,3.8nm,0.3s,baz=14,slow=10,SNR=84						
KLR				S	**S**	**13 21 55.6**	**+2.6**
	comp=E,1.3nm,0.3s,baz=320,slow=6.3,SNR=2.5						
KLR				Lg	Lg	13 23 56.8	
	comp=E,1.7nm,0.3s,baz=80,slow=21,SNR=4.5						
KLR				LR	LR	13 26 05.8	
	comp=E,165μm,19.5s,baz=11,slow=38						
NRIK	**Noril'sk**	**19.78**	**301**	P	**Pn**	**13 18 23.7**	**-0.5**
	comp=E,13nm,0.3s,baz=74,slow=11,SNR=187						
NRIK				S	**S**	**13 21 56.5**	**-8.8**
	comp=E,17nm,0.3s,baz=357,slow=22,SNR=3.4						
NRIK				Lg	Lg	13 24 05.6	
	comp=E,28nm,0.3s,baz=313,slow=18,SNR=3.5						
NRIK				LR	LR	13 26 32.0	
	comp=E,193μm,18.5s,baz=72,slow=38						
RDOG	**Red Dog Mine**	**20.02**	**63**	*e*P	Pn	13 18 26.4	-0.8
	comp=E,4μm,1.3s						
YSS	**Yuzh-Sakhalins**	**20.62**	**180**	*e*P	**P**	**13 18 32.5**	**+0.6**
	comp=E,2μm,1.4s						
YSS	**Yuzh-Sakhalins**	**20.62**	**180**	⇓*e*P	**P**	**13 18 32.0**	**0.0**
YSS				*e*		13 18 42.2	
YSS				*e*		13 18 52.6	
YSS				*e*S	**S**	**13 22 18.7**	**-3.5**
YSS				pmax	pmax		
	comp=Z,48μm,12.0s						
YSS				pmax	pmax		
	comp=E,42μm,12.4s						
YSS				smax	smax		
	comp=N,37μm,13.1s						
YSS				smax	smax		
	comp=E,66μm,11.6s						
YSS				MLR	MLR		
	comp=Z,244μm,16.0s						
YSS				MLR	MLR		
	comp=N,225μm,16.0s						
YSS				MLR	MLR		
	comp=E,184μm,14.0s						
ANM	**Nome**	**20.77**	**73**	*e*P	Pn	13 18 35.5	-0.4
	comp=E,1μm,1.0s						
ANM	**Nome**	**20.77**	**73**	*e*P	Pn	13 18 35.5	-0.4
CIT	**Chita**	**21.04**	**237**	*e*P	**P**	**13 18 38.8**	**+2.2**
CIT				*e*		13 19 02.8	
CIT				*e*		13 22 54.9	
CIT				pmax	pmax		
	comp=Z,12μm,3.2s						
SMY	**Shemya**	**21.19**	**119**	*e*P	**P**	**13 18 37.8**	**-0.2**
	comp=Z,651nm,1.3s						
SMY	**Shemya**	**21.19**	**119**	*e*P	**P**	**13 18 37.8**	**-0.2**
HIA	**Hailar**	**21.65**	**224**	*e*P	**P**	**13 18 43.2**	**+0.1**
	comp=Z,3μm,1.3s						
HIA				LR	LR		
	comp=Z,203μm,20.0s						
HIA	**Hailar**	**21.65**	**224**	*d i*P	**P**	**13 18 43.7**	**+0.6**
HIA				pmax	pmax		
	comp=Z,3μm,1.2s						
HIA				MLR	MLR		
	comp=Z,302μm,15.0s						
KUR	**Kuril'sk**	**22.51**	**170**	*c i*P	**P**	**13 18 52.6**	**+0.4**
KUR				*e*		13 18 56.8	
KUR				*e*S	**S**	**13 23 02.5**	**+3.6**
KUR				*i* SS	Sn	13 23 10.1	-1.7
KUR				pmax	pmax		
	comp=Z,3μm,1.3s						
KUR				pmax	pmax		
	comp=N,1μm,1.2s						
KUR				pmax	pmax		
	comp=E,519nm,1.0s						
KUR				pmax	pmax		
	comp=Z,39μm,5.8s						
KUR				MLR	MLR		
	comp=E,57μm,14.0s						
KUR				MLR	MLR		
	comp=Z,69μm,14.0s						
KUR				MLR	MLR		
	comp=N,84μm,15.0s						
TEY	**Ternei**	**22.77**	**191**	⇑*e*P	**P**	**13 18 56.1**	**+1.1**
TEY				*e*S	**S**	**13 23 00.8**	**-2.9**
TEY				pmax	pmax		
	comp=Z,160nm,2.2s						
TEY				smax	smax		
	comp=N,172μm,10.5s						
TEY				MLR	MLR		
	comp=N,344μm,12.0s						
TEY				MLR	MLR		
	comp=Z,456μm,13.0s						
ASAJ	**Asahikawa**	**23.46**	**180**	P	**P**	**13 19 01.7**	**-0.4**
	comp=Z,123nm,0.7s,baz=349,slow=8.2,SNR=57						
ASAJ				S	**S**	**13 23 19.5**	**+4.1**
	comp=Z,121nm,1.1s,baz=324,slow=30,SNR=1.1						
ASAJ				LR	LR	13 28 30.8	
	comp=Z,216μm,18.7s,baz=26,slow=38						
SPIA	**Saint Paul Isl**	**23.52**	**93**	*e*P	**P**	**13 19 04.8**	**+2.2**
	comp=Z,3μm,1.4s						
YUK	**Yuzh-Kuril'sk**	**23.60**	**174**	*d i*P	**P**	**13 19 06.2**	**+2.7**
YUK				*e*PPP	PPP	13 19 35.3	
YUK				*i* S	**S**	**13 23 22.7**	**+5.1**
YUK				*e*SS	**SnSn**	**13 23 57.3**	**+3.3**
YUK				pmax	pmax		
	comp=Z,1μm,1.1s						
YUK				pmax	pmax		
	comp=E,337nm,1.4s						
YUK				pmax	pmax		
	comp=N,477nm,0.9s						
YUK				pmax	pmax		
	comp=Z,2μm,1.2s						
YUK				MLR	MLR		
	comp=Z,143μm,15.0s						
YUK				MLR	MLR		
	comp=E,194μm,16.0s						
YUK				MLR	MLR		
	comp=N,120μm,15.0s						
MDJ	**Mudanjiang**	**23.99**	**203**	P	**P**	**13 19 06.6**	**-0.6**
MDJ				pP	pP	13 19 09.8	-0.2
MDJ				sP	sP	13 19 10.9	-0.2
MDJ				PP	**PnPn**	**13 19 34.9**	**-0.6**
MDJ				S	**S**	**13 23 25.8**	**+2.0**
MDJ				SS	**SnSn**	**13 24 08.0**	**+4.5**
MDJ				ScS	**ScS**	**13 30 12.8**	**-1.0**
MDJ				pmax	pmax		
	comp=N,2μm,1.6s						
MDJ				pmax	pmax		
	comp=N,56μm,5.0s						
MDJ				LR	LR		
	comp=N,269μm,8.0s						
MDJ				LR	LR		
	comp=N,884μm,15.1s						
MDJ				LR	LR		
	comp=N,367μm,9.6s						
MDJ	**Mudanjiang**	**23.99**	**203**	*e*P	**P**	**13 19 06.6**	**-0.6**
	comp=N,2μm,1.1s						

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MDJ                                  LR        LR
      comp=Z,239µm,21.0s
IRK   Irkutsk            24.05 250  eP        P          13 19 08.2 +0.4
IRK                                  pmax      pmax
      comp=Z,15µm,3.3s
USA0B Ussuriysk Arra     24.06 199  eP        P          13 19 08.3 +0.4
      comp=Z,1µm,1.3s
USRK  Ussuriysk Ar.      24.06 199   P        P          13 19 07.7  -0.2
      comp=Z,163nm,0.8s,baz=8.5,slow=8.4,SNR=138
USRK                                 S        S          13 23 30.0 +5.0
      comp=Z,37nm,0.9s,baz=3.1,slow=7.2,SNR=2.0
USRK                                 LR       LR         13 27 34.3
      comp=Z,247µm,19.5s,baz=9.9,slow=34
IM3   Indian Mountai     24.17  64  eP        P          13 19 09.2 +0.4
TOLK  Toolik Lake Re     24.17  56  eP        P          13 19 10.2 +1.4
      comp=Z,3µm,1.3s
TOLK  Toolik Lake Re     24.17  56   P        P          13 19 09.5 +0.7
      baz=300
TOLK                                 S        S          13 23 29.9 +3.3
      baz=300
COLD  Coldfoot           24.70  59  eP        P          13 19 16.2 +2.7
      comp=Z,2µm,1.1s
TLY   Talaya             24.73 250  eP        P          13 19 15.4 +1.4
      comp=Z,2µm,1.3s
TLY                                  LR       LR
      comp=Z,137µm,22.0s
TLY   Talaya             24.73 250c iP        P          13 19 15.1 +1.1
TLY                                 eS        S          13 23 38.0 +2.2
TLY                                 eSS       SnSn       13 24 24.9 +3.3
TLY                                 eSSS      SSS        13 24 39.3
TLY                                  pmax     pmax
      comp=Z,6µm,2.3s
TLY                                  MLR      MLR
      comp=Z,1092µm,14.0s
TLY   Talaya             24.73 250   P        P          13 19 15.0 +0.9
      SNR=802
TLY                                  P        P          13 19 15.0 +0.9
      SNR=802
KIWB  Kanaga Island      24.98 109  eP        P          13 19 16.6 +0.3
ADK   Adak               25.13 108  eP        P          13 19 16.1  -1.5
      comp=Z,1µm,1.0s
ADK                                  LR       LR
      comp=Z,143µm,19.0s
ADK   Adak               25.13 108  eP        P          13 19 16.1  -1.5
VLA   Vladivostok        25.14 199c iP        P          13 19 17.1  -0.6
VLA                                  pmax     pmax
      comp=Z,518nm,1.0s
VLA                                  MLR      MLR
      comp=Z,202µm,16.0s
CN2   Changchun          25.50 210  eP        P          13 19 19.9  -1.0
CN2                                 esP       sP         13 19 28.9 +4.0
CN2                                 eS        S          13 23 45.8  -2.2
CN2                                  pmax     pmax
      comp=Z,460nm,1.0s
CN2                                  pmax     pmax
      comp=Z,38µm,9.0s
CN2                                  LR       LR
      comp=Z,565µm,12.0s
CN2                                  LR       LR
      comp=Z,402µm,12.0s
CN2                                  LR       LR
      comp=Z,742µm,12.0s
ERM   Erimo              25.56 179  eP        P          13 19 21.0  -0.5
      comp=Z,550nm,1.4s
ERM                                  LR       LR
      comp=Z,73µm,20.0s
ERM   Erimo              25.56 179  eP        P          13 19 21.0  -0.5
MOY   Mondy              25.71 253  eP        P          13 19 23.8 +0.8
MOY                                  pmax     pmax
      comp=Z,3µm,1.6s
MLY   Manley             25.74  64  eP        P          13 19 25.0 +1.9
      comp=Z,2µm,1.7s
MSHR  Mys Shultsa        25.76 200c iP        P          13 19 24.2 +0.8
ZAK   Zakamensk          25.93 248  eP        P          13 19 25.6 +0.6
ZAK                                  pmax     pmax
      comp=Z,761nm,1.9s
BPAW  Bear Paw Mtn.      26.21  66  eP        P          13 19 28.2 +0.8
      comp=Z,2µm,1.6s
CAST  Castle Rocks       26.24  67  eP        P          13 19 28.5 +0.9
      comp=Z,908nm,1.2s
SVW2  Sparrevohn         26.45  74  eP        P          13 19 26.1  -3.4
      comp=Z,553nm,1.3s
PPLA  Purkeypile         26.53  68  eP        P          13 19 31.2 +0.9
      comp=Z,2µm,1.7s
MDM   Murphy Dome        26.65  62  eP        P          13 19 31.8 +0.6
      comp=Z,952nm,1.0s
FYU   Fort Yukon         26.70  58  eP        P          13 19 33.7 +2.0
      comp=Z,5µm,1.6s
ULN   Ulaanbaatar        26.76 241  eP        P          13 19 34.8 +2.2
      comp=Z,1µm,1.4s
ULN   Ulaanbaatar        26.76 241  eP        P          13 19 34.8 +2.2
ULN   Ulaanbaatar        26.76 241   P        P          13 19 34.4 +1.8
      SNR=430
ULN                                  P        P          13 19 34.4 +1.8
      SNR=430
POKR  Poker Plat Res     26.82  62   P        P          13 19 33.6 +0.7
      baz=307
I53US FAIRBANKS INFR     26.82  62  i                    15 44 20.0
      baz=308,slow=335,SNR=0.3
TCOL  CIGO, UAF Yank     26.82  62   P        P          13 19 33.4 +0.6
      baz=307
COLA  College            26.83  62  eP        P          13 19 33.4 +0.6
      comp=Z,747nm,0.9s
COLA                                 LR       LR
      comp=Z,160µm,19.0s
COLA  College            26.83  62  eP        P          13 19 33.4 +0.6
TRF   Thorofare Moun     26.86  66  eP        P          13 19 34.2 +0.9
      comp=Z,2µm,1.2s
WRH   Wood River Hil     26.99  63  eP        P          13 19 34.6 +0.3
      comp=Z,772nm,1.2s
SONA1 Songino Array      27.00 241  eP        P          13 19 36.0 +1.3
SONM  Songino Array      27.01 241   P        P          13 19 35.7 +0.9
SONM                                 MLR      MLR
      comp=Z,139µm,21.5s
SONM  Songino Array      27.01 241   P        P          13 19 35.7 +0.9
      comp=Z,127nm,0.9s,baz=26,slow=6.5,SNR=429
SONM                                 LR       LR         13 32 14.9
      comp=Z,139µm,21.5s,baz=44,slow=41
SONM                                 P3KPbc              13 52 12.7
      comp=Z,1.0nm,0.7s,baz=194,slow=3.0,SNR=3.0
MCK   McKinley           27.16  65  eP        P          13 19 36.6 +0.8
      comp=Z,2µm,1.5s
MCK   McKinley           27.16  65  eP        P          13 19 36.6 +0.8
NIKH  Nikolski High      27.20  98  eP        P          13 19 36.9 +0.6
      comp=Z,936nm,1.0s
IL1   Eielson Array      27.22  62  eP        P          13 19 35.8  -0.5
ILAR  Eielson Array      27.22  62   P        P          13 19 35.9  -0.5
      comp=Z,152nm,0.8s,baz=300,slow=8.2,SNR=278
ILAR                                 LR       LR         13 30 54.4
      comp=Z,95µm,19.3s,baz=319,slow=38
ILAR                                 P3KPbc              13 52 10.4
      comp=Z,3.2nm,0.9s,baz=145,slow=2.5,SNR=10.0
PRP   Porcupine Dome     27.22  60  eP        P          13 19 37.4 +0.8
      comp=Z,2µm,1.8s
RND   Reindeer           27.39  65  eP        P          13 19 36.7  -1.3
RND   Reindeer           27.39  65  eP        P          13 19 36.7  -1.3
HDA   Harding Lake       27.42  63  eP        P          13 19 38.2  0.0
      comp=Z,997nm,1.4s
HDA   Harding Lake       27.42  63   P        P          13 19 38.1  0.0
      baz=308
UNV   Unalaska Valle     27.42  94  eP        P          13 19 38.8 +0.6
      comp=Z,1µm,1.1s
AKUT  Akutan             27.48  93  eP        P          13 19 40.1 +1.3
      comp=Z,5µm,1.9s
SNY   Shenyang           27.76 212 ⇑P         P          13 19 41.5 +0.1
SNY                                  S        S          13 24 26.6 +2.8
SNY                                  pmax     pmax
      comp=Z,36µm,12.0s
SNY                                  LR       LR
      comp=Z,830µm,9.8s
SNY                                  LR       LR
      comp=Z,393µm,11.0s
SNY                                  LR       LR
      comp=Z,1190µm,9.7s
FALS  False Pass         27.84  90  eP        P          13 19 43.5 +1.5
      comp=Z,4µm,1.8s
KNGR  Kungurtug, Tuv     27.85 255c iP        P          13 19 43.8 +1.5
RSO   Redoubt South      27.91  73  eP        P          13 19 44.0 +1.2
SUA   Susitna One        27.97  70  eP        P          13 19 43.0  -0.3
      comp=Z,1µm,1.3s
DHY   Denali Highway     28.12  65  eP        P          13 19 44.3  -0.3
      comp=Z,1µm,1.5s
PMR   Palmer             28.47  69  eP        P          13 19 48.0 +0.5
      comp=Z,738nm,1.6s
PMR   Palmer             28.47  69  eP        P          13 19 48.0 +0.5
RIDG  Independ'e Rid     28.56  63  eP        P          13 19 48.2  -0.2
      comp=Z,782nm,1.4s
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RC01  Rabbit Creek A     28.59  70  eP        P          13 19 47.5  -1.1
      comp=Z,433nm,1.1s
SDPT  Sand Point         28.61  87  eP        P          13 19 49.7 +0.9
      comp=Z,424nm,1.1s
SML   Sawmill            28.61  68  eP        P          13 19 48.4  -0.4
      comp=Z,626nm,1.0s
SML   Sawmill            28.61  68  eP        P          13 19 48.4  -0.4
CHGN  Chignik            28.70  84  eP        P          13 19 49.8 +0.2
      comp=Z,908nm,1.5s
SCRK  Sand Creek         28.70  62  eP        P          13 19 49.6  -0.1
      comp=Z,210nm,1.1s
KNK   Knik Glacier       28.83  68  eP        P          13 19 50.6  -0.2
      comp=Z,2µm,1.8s
PAX   Paxson             28.85  64  eP        P          13 19 52.5 +1.5
      comp=Z,376nm,1.4s
PAX   Paxson             28.85  64  eP        P          13 19 52.5 +1.5
HOM   Homer              28.86  73  eP        P          13 19 52.6 +1.5
      comp=Z,830nm,1.0s
DOT   Dot Lake           28.89  62  eP        P          13 19 50.4  -0.9
      comp=Z,228nm,1.0s
SCM   Sheep Creek Mo     28.95  67  eP        P          13 19 51.6  -0.3
      comp=Z,3µm,1.9s
SCM   Sheep Creek Mo     28.95  67  eP        P          13 19 51.6  -0.3
BRLK  Bradley Lake       29.07  73  eP        P          13 19 52.8  -0.1
      comp=Z,716nm,0.9s
INK   Inuvik             29.26  49  eP        P          13 19 55.3 +0.8
      comp=Z,1µm,1.8s
INK   Inuvik             29.26  49  eP        P          13 19 55.3 +0.8
INK   Inuvik             29.26  49   P        P          13 19 55.0 +0.5
      comp=Z,56nm,1.1s,baz=323,slow=10,SNR=53
INK                                  LR       LR         13 33 32.9
      comp=Z,152µm,19.4s,baz=290,slow=40
INK                                  P3KPbc              13 52 00.8
      comp=Z,11nm,1.1s,baz=127,slow=5.6,SNR=9.8
HARP  HAARP              29.33  65  eP        P          13 19 55.9 +0.7
      comp=Z,1µm,1.7s
SEW   Seward             29.36  71  eP        P          13 19 55.7 +0.3
      comp=Z,599nm,0.8s
MENT  Mentasta           29.47  63  eP        P          13 19 55.9  -0.6
      comp=Z,211nm,0.9s
EPYK  Eagle Plains       29.52  54  eP        P          13 19 57.4 +0.4
      comp=Z,840nm,1.4s
EPYK  Eagle Plains       29.52  54   P        P          13 19 57.3 +0.4
      baz=310
KLU   Klutina            29.68  67  eP        P          13 19 58.3  0.0
      comp=Z,1µm,1.7s
KDAK  Kodiak Island      29.84  77  eP        P          13 20 00.6 +0.9
      comp=Z,894nm,1.9s
KDAK  Kodiak Island      29.84  77  i P       P          13 20 00.2 +0.5
KDAK  Kodiak Island      29.84  77   P        P          13 19 59.7 +0.1
      comp=Z,122nm,1.0s,baz=281,slow=3.7,SNR=18
KDAK                                 LR       LR         13 32 12.0
      comp=Z,210µm,20.4s,baz=332,slow=37
OHAK  Old Harbor         29.97  78  eP        P          13 20 00.1  -0.7
      comp=Z,1µm,1.5s
DIV   Divide             29.98  67  eP        P          13 20 00.9  -0.1
      comp=Z,676nm,1.4s
NVS   Novosibirsk        30.00 275⇓iP         P          13 20 01.0  -0.2
NVS                                 eS        S          13 24 55.3  -3.5
NVS                                 i SS      ScP        13 26 29.4   -15
NVS                                  pmax     pmax
      comp=N,2µm,2.2s
NVS                                  pmax     pmax
      comp=Z,3µm,2.2s
NVS                                  pmax     pmax
      comp=E,2µm,2.4s
NVS                                  smax     smax
      comp=N,90nm,2.5s
NVS                                  smax     smax
      comp=E,2µm,2.2s
ZALV  Zalesovo Beam      30.07 272   P        P          13 20 01.2  -0.6
      comp=E,182nm,0.8s,baz=42,slow=6.0,SNR=242
ZALV                                 LR       LR         13 32 40.8
      comp=E,148µm,21.1s,baz=24,slow=38
ZALV                                 P3KPbc              13 51 57.1
      comp=E,3.0nm,0.8s,baz=219,slow=1.8,SNR=6.8
SII   Sitkinak Islan     30.12  80  eP        P          13 20 02.6 +0.3
      comp=E,674nm,0.9s
DAWY  Dawson             30.18  59  eP        P          13 20 02.4  -0.3
      comp=E,185nm,1.1s
EYAK  Cordova Ski Ar     30.39  68  eP        P          13 20 05.9 +1.4
      comp=E,590nm,1.0s
MID   Middleton Isla     30.96  70  eP        P          13 20 10.2 +0.6
      comp=E,2µm,0.9s
MID   Middleton Isla     30.96  70  eP        P          13 20 10.2 +0.6
DL2   Dalian             30.98 213⇑iP         P          13 20 09.8  -0.1
DL2                                  PP       PnPn       13 21 09.1  -1.4
DL2                                  S        S          13 25 10.3  -4.0
DL2                                  pmax     pmax
      comp=E,120nm,0.9s
DL2                                  pmax     pmax
      comp=E,16µm,11.8s
DL2                                  LR       LR
      comp=E,412µm,11.4s
DL2                                  LR       LR
      comp=E,203µm,14.3s
DL2                                  LR       LR
      comp=E,463µm,11.6s
KBS   Kingsbay           31.00 343  eP        P          13 20 11.1 +1.2
      comp=E,2µm,1.8s
KBS                                  LR       LR
      comp=Z,81µm,19.0s
KBS   Kingsbay           31.00 343  eP        P          13 20 11.1 +1.2
KBS   Kingsbay           31.00 343  eP        P          13 20 10.5 +0.7
KBS                                  IVmB_BB             13 20 19.8
      comp=Z,15µm,3.8s
KBS                                 eS        S          13 25 14.6 +0.5
HMT   Hamilton           31.06  67  eP        P          13 20 12.3 +1.8
      comp=Z,528nm,0.9s
SPA0  Spitsbergen Ar     31.10 341  eP        P          13 20 11.0 +0.3
SPA0  Spitsbergen Ar     31.10 341  eP        P          13 20 10.0  -0.7
SPA0                                 IVmB_BB             13 20 18.7
      comp=Z,16µm,1.5s
SPA0                                eS        S          13 25 15.8 +0.1
SPITS Spitsbergen Ar     31.10 341   P        P          13 20 11.0 +0.3
      comp=Z,808nm,0.9s,baz=72,slow=11,SNR=89
SPITS                                PcP      PcP        13 23 05.4  -0.1
      comp=Z,63nm,0.5s,baz=88,slow=6.2,SNR=10
SPITS                                LR       LR         13 33 17.7
      comp=Z,64µm,18.2s,baz=210,slow=38
MJB9  Matsu-Tunnel       31.12 187  eP        P          13 20 10.5  -0.8
      comp=Z,90nm,1.0s
MAJO  Matsushiro         31.13 187  eP        P          13 20 10.4  -0.9
      comp=Z,87nm,1.0s
MAJO                                 LR       LR
      comp=Z,100µm,20.0s
MAJO  Matsushiro         31.13 187ceP         P          13 20 10.4  -0.9
MAJO                                 pmax     pmax
      comp=Z,89nm,1.0s
MAJO                                 MLR      MLR
      comp=Z,91µm,17.0s
MAJO  Matsushiro         31.13 187  eP        P          13 20 10.8  -0.6
MAT   Matsushiro         31.13 187   P        P          13 20 10.3  -1.0
MAT                                  S        S          13 25 27.2   +10
MJAR  Matsushiro Arr     31.13 187   P        P          13 20 10.0  -1.3
MJAR                                 MLR      MLR
      comp=Z,107µm,18.0s
MJAR  Matsushiro Arr     31.13 187   P        P          13 20 10.0  -1.3
      comp=Z,33nm,1.0s,baz=358,slow=9.4,SNR=38
MJAR                                 LR       LR         13 33 55.3
      comp=Z,107µm,18.0s,baz=35,slow=39
MJAR                                 P3KPbc              13 51 53.5
      comp=Z,2.3nm,1.0s,baz=200,slow=10,SNR=4.4
BJI   Beijing            31.16 221   P        P          13 20 12.3 +0.7
BJI                                  S        S          13 25 17.3 +0.1
BJI                                  pmax     pmax
      comp=Z,220nm,1.9s
BJI   Beijing            31.16 221   P        P          13 20 12.3 +0.7
BJI                                  pmax     pmax
      comp=Z,3µm,2.0s
BJT   Baijiatuau         31.19 221  eP        P          13 20 12.3 +0.5
      comp=Z,3µm,2.0s
BJT                                  LR       LR
      comp=Z,257µm,22.0s
HOPEN Hopen              31.20 336  eP        P          13 20 10.0  -1.6
HOPEN                                IVmB_BB             13 20 19.9
      comp=Z,12µm,6.2s
HOPEN                               e                    13 21 21.4
HOPEN                               eS        S          13 25 18.4 +1.2
KS01  Wonju Array Si     31.23 203  eP        P          13 20 11.3  -0.9
KSRS  Korea Array        31.25 203   P        P          13 20 11.3  -1.0
      comp=Z,25nm,0.9s,baz=9.3,slow=8.8,SNR=70
KSRS                                 PcP      PcP        13 23 06.4  -0.1
      comp=Z,46nm,1.1s,baz=59,slow=2.8,SNR=3.8
KSRS                                 LR       LR         13 33 45.8
      comp=Z,148µm,19.1s,baz=26,slow=38
KS15  Wonju Array Si     31.27 203  eP        P          13 20 12.8 +0.3
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KSAR  Wonju Array Be     31.27 203   P        P          13 20 11.3  -1.2
KSAR                                 PcP      PcP        13 23 06.4  -0.1
KSAR  Wonju Array Be     31.27 203   P        P          13 20 11.3  -1.2
KSAR                                                     13 23 06.4
HHC   Hu-ho-hao-te       31.66 228  eP        P          13 20 17.8 +1.7
HHC                                  sP       sP         13 20 26.0 +6.0
HHC                                  S        S          13 25 26.3 +1.1
HHC                                  SS       ScP        13 27 09.1   +18
HHC                                  pmax     pmax
      comp=Z,110nm,1.1s
HHC                                  pmax     pmax
      comp=Z,16µm,4.5s
HHC                                  LR       LR
      comp=Z,515µm,10.4s
HHC                                  LR       LR
      comp=Z,264µm,10.5s
HHC                                  LR       LR
      comp=Z,588µm,10.3s
HSPB  Hornsund (broa     32.16 340  eP        P          13 20 20.8 +0.8
HSPB                                e                    13 21 30.9
HSPB                                eS        S          13 25 34.5 +2.3
HSPB  Hornsund (broa     32.16 340  eP        P          13 20 20.4 +0.4
HSPB                                 IVmB_BB             13 20 24.2
      comp=Z,12µm,1.9s
HSPB                                eS        S          13 25 32.2   0.0
HSPB                                 IVMsBB              13 37 56.1
      comp=Z,48µm,14.4s
BTO   Baotou             32.34 230  eP        P          13 20 22.8 +0.8
INU   Inuyama            32.38 189  eP        P          13 20 21.5  -0.8
      comp=Z,96nm,1.0s
TJN   Taejon             32.39 203d iP        P          13 20 21.4  -0.9
DGZ   Jazzator, Alta     32.40 265c iP        P          13 20 22.5  -0.1
DGZ                                  pmax     pmax
      comp=Z,599nm,1.5s
DGZ                                  MLR      MLR
      comp=Z,169µm,13.0s
HYT   Haines Junctio     33.06  62  eP        P          13 20 30.5 +2.3
      comp=Z,506nm,1.7s
RES   Resolute Bay       33.37  24   P        P          13 20 30.5  -0.1
      comp=Z,153nm,0.8s,baz=316,slow=7.3,SNR=128
RES                                  S        S          13 25 52.0 +1.1
      comp=Z,32nm,1.1s,baz=11,slow=23,SNR=1.7
RES                                  LR       LR         13 35 50.5
      comp=Z,62µm,19.1s,baz=328,slow=40
BJO   Bjornoya           33.69 336  eP        P          13 20 34.0 +0.6
BJO                                  IVmB_BB             13 20 37.5
      comp=Z,12µm,1.6s
BJO                                 ePP       PP         13 21 48.9  -0.3
I18DK QAANAAQ INFRAS33.94  12  i                         16 42 50.5
      baz=325,slow=442,SNR=3.0
WHY   Whitehorse         34.07  61  eP        P          13 20 36.6  -0.3
      comp=Z,172nm,1.0s
TIY   Taiyuan            34.34 225⇑iP         P          13 20 41.5 +2.0
TIY                                  PP       PP         13 21 57.1 +0.1
TIY                                  S        S          13 26 11.9 +5.1
TIY                                  pmax     pmax
      comp=Z,400nm,1.1s
TIY                                  pmax     pmax
      comp=Z,17µm,4.9s
TIY                                  LR       LR
      comp=Z,666µm,10.5s
TIY                                  LR       LR
      comp=Z,304µm,9.3s
TIY                                  LR       LR
      comp=Z,748µm,11.4s
JHJ   Hachijo jima 2     34.48 184   LR       LR         13 34 52.5
      comp=Z,50µm,18.1s,baz=40,slow=37
TIA   Tai'an             34.56 218   P        P          13 20 41.6 +0.3
TIA                                  PP       PP         13 21 58.3  -1.2
TIA                                  S        S          13 26 15.8 +5.7
TIA                                  pmax     pmax
      comp=Z,9µm,9.4s
TIA                                  LR       LR
      comp=Z,69µm,12.8s
TIA                                  LR       LR
      comp=Z,43µm,12.2s
TIA                                  LR       LR
      comp=Z,55µm,13.5s
SEM   Semipalatinsk      34.59 272d iP        P          13 20 39.3  -2.4
SEM                                 e                    13 21 53.3
SEM                                 i S       S          13 26 10.6  -0.2
SEM                                  pmax     pmax
      comp=Z,2µm,1.2s
SEM                                  smax     smax
      comp=E,27µm,6.7s
SEM                                  MLR      MLR
      comp=Z,95µm,14.0s
SEM   Semipalatinsk      34.59 272⇓iP         P          13 20 39.4  -2.4
      comp=Z,2µm,1.2s
SEM                                ⇑ePP       PnPn       13 21 53.3  -3.5
SEM                                ⇓iS        S          13 26 10.7  -0.2
      comp=Z,27µm,6.7s
SEM                                 eLR       LR         13 34 26.7
      comp=Z,95µm,13.7s
SKAG  Skagway            34.81  62  eP        P          13 20 44.4 +1.2
      comp=Z,1µm,1.6s
TULEG Thule              34.86  12  eP        P          13 20 41.1  -2.4
      comp=Z,2µm,2.0s
KURK  Kurchatov          34.97 274  eP        P          13 20 44.7  0.0
      comp=Z,3µm,1.6s
KURK                                 PP       PP         13 22 03.1  -0.7
KURK                                 LR       LR
      comp=Z,284µm,19.0s
KURK  Kurchatov          34.97 274c iP        P          13 20 43.8  -0.9
KURK                                 pmax     pmax
      comp=Z,2µm,1.7s
KURK                                 MLR      MLR
      comp=Z,305µm,15.0s
KURK  Kurchatov          34.97 274   P        P          13 20 45.1 +0.4
      SNR=652
KURK                                 P        P          13 20 45.1 +0.4
      SNR=652
KURBB Kurchatov Arra     35.08 274   P        P          13 20 44.7  -0.9
      comp=Z,393nm,0.9s,baz=42,slow=8.7,SNR=561
KURBB                                PP       PP         13 22 03.1  -1.9
      comp=Z,254nm,1.1s,baz=40,slow=11,SNR=4.6
JNU   Nakatsue           35.12 197  eP        P          13 20 46.1  -0.1
      comp=Z,173nm,0.9s
JNU                                  S        S          13 26 22.6 +3.8
JNU   Nakatsue           35.12 197   S        S          13 26 22.6 +3.8
      comp=Z,13nm,0.9s,baz=318,slow=6.7,SNR=7.6
JNU                                  LR       LR         13 35 47.2
      comp=Z,92µm,18.1s,baz=20,slow=38
ZSN   Zaisan             35.23 265d iP        P          13 20 46.2  -0.8
ZSN                                  pmax     pmax
      comp=Z,4µm,1.3s
ZSN                                  MLR      MLR
      comp=Z,72µm,13.0s
ZSN   Zaisan             35.23 265⇓iP         P          13 20 46.2  -0.8
      comp=Z,4µm,1.3s
ZSN                                 eLR       LR         13 34 53.7
      comp=Z,72µm,12.8s
DAG   Danmarks Havn      35.48 353⇑iP         P          13 20 48.6  -0.2
      comp=Z,430nm,0.9s
DAG   Danmarks Havn      35.48 353⇑iP         P          13 20 48.6  -0.2
DAG                                  pmax     pmax
      comp=Z,360nm,0.9s
BESE  Bessie Mountai     35.63  63  eP        P          13 20 51.0 +0.6
      comp=Z,418nm,1.5s
LVZ   Lovozero           35.97 322  eP        P          13 20 52.6  -0.5
      comp=Z,664nm,0.9s
LVZ                                  LR       LR
      comp=Z,110µm,21.0s
LVZ   Lovozero           35.97 322c iP        P          13 20 52.4  -0.7
LVZ                                  pmax     pmax
      comp=Z,859nm,1.0s
LVZ                                  MLR      MLR
      comp=Z,161µm,18.0s
JIS   Juneau Island      36.02  63  eP        P          13 20 54.9 +1.3
      comp=Z,402nm,1.2s
HAMF  Hammerfest         36.09 330  eP        P          13 20 52.9  -1.2
HAMF                                 IAmb     IAmb       13 20 55.8
      comp=Z,333nm,1.0s
HAMF                                e                    13 22 08.9
HAMF                                eS        S          13 26 34.5 +1.6
HAMF                                 IVMsBB              13 39 50.1
      comp=Z,58µm,14.4s
KEV   Kevo               36.17 328  eP        P          13 20 54.4  -0.3
      comp=Z,243nm,1.0s
KEV                                  LR       LR
      comp=Z,232µm,20.0s
KEV   Kevo               36.17 328  eP        P          13 20 54.4  -0.3
KEV   Kevo               36.17 328   P        P          13 20 54.6  -0.1
BVA0  Borovoye Array     36.27 283   P        P          13 20 55.4  -0.4
BVA0                                 pmax     pmax
      comp=Z,955nm,1.4s
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BVAR	**Borovoye Array**	36.27	283	LR	LR	13 35 39.0	
	comp=Z,107µm,18.4s,baz=39,slow=36						
BRVK	**Borovoye**	36.28	284	*e*P	P	13 20 56.3	+0.3
	comp=Z,1µm,1.3s						
BRVK				LR	LR		
	comp=Z,232µm,22.0s						
BRVK	**Borovoye**	36.28	284	*c* *i*P	P	13 20 56.2	+0.3
BRVK				pmax	pmax		
	comp=Z,1µm,1.4s						
BRVK				MLR	MLR		
	comp=Z,454µm,15.0s						
BRVK	**Borovoye**	36.28	284	P	P	13 20 56.3	+0.3
	SNR=333						
BRVK				P	P	13 20 56.3	+0.3
	SNR=333						
APA	**Apatity**	36.52	323	⇓*i*P	P	13 20 56.1	-1.7
APA				*i* PPP	PPP	13 22 26.0	
APA				*i* S	S	13 26 37.0	-2.6
APA				MLR	MLR		
	comp=Z,105µm,16.0s						
SIT	**Sitka**	36.63	65	*e*P	P	13 20 59.3	+0.5
	comp=Z,2µm,1.9s						
SIT	**Sitka**	36.63	65	*e*P	P	13 20 59.3	+0.5
ARCES	**ARCESS Array B**	36.65	328	*e*P	P	13 20 57.2	-1.7
ARCES				PP	PP	13 22 24.0	+2.0
ARCES				PcP	PcP	13 23 22.0	+0.7
ARCES	**ARCESS Array B**	36.65	328	P	P	13 20 58.5	-0.4
	comp=Z,210nm,0.9s,baz=34,slow=8.8,SNR=65						
ARCES				PP	PP	13 22 24.0	+2.0
	comp=Z,288nm,1.2s,baz=43,slow=13,SNR=7.4						
ARCES				PcP	PcP	13 23 22.0	+0.7
	comp=Z,37nm,0.7s,baz=33,slow=3.3,SNR=4.8						
ARCES				LR	LR	13 40 51.2	
	comp=Z,159µm,18.7s,baz=28,slow=44						
ARE0	**ARCESS Array S**	36.65	328	*e*P	P	13 20 58.7	-0.2
	comp=Z,21nm,1.1s						
ARE0	**ARCESS Array S**	36.65	328	*e*P	P	13 20 58.8	-0.2
ARE0				IVmB_BB		13 21 06.8	
	comp=Z,11µm,3.0s						
ARE0				*e*PP	PnPn	13 22 21.4	-0.3
ARE0				*e*S	S	13 26 42.6	+1.1
ARE0				IVMs_BB	IVMs_BB	13 40 29.8	
	comp=Z,58µm,15.6s						
GTA	**Gaotai**	36.68	242	⇑P	P	13 20 59.9	+0.3
GTA				pP	sP	13 21 04.3	+0.7
GTA				sP	pP	13 21 07.0	+4.6
GTA				PP	PP	13 22 26.4	+3.5
GTA				PcP	PcP	13 23 23.3	+1.2
GTA				S	S	13 26 42.9	+0.1
GTA				sS	sS	13 26 49.9	+2.5
GTA				ScP	ScP	13 27 06.0	-2.5
GTA				SS	SS	13 29 11.5	-11
GTA				pmax	pmax		
	comp=Z,17µm,10.0s						
GTA				LR	LR		
	comp=Z,229µm,14.9s						
GTA				LR	LR		
	comp=Z,455µm,17.1s						
GTA				LR	LR		
	comp=Z,337µm,15.6s						
MK31	**Makanchi Array**	36.76	267	*e*P	P	13 21 00.2	+0.1
MK31	**Makanchi Array**	36.76	267	*e*P	P	13 21 00.2	+0.1
MKAR	**Makanchi Array**	36.76	267	*e*P	P	13 21 00.2	+0.1
	comp=Z,4µm,0.9s						
MKAR				PP	PP	13 22 25.7	+2.2
MKAR				*e*		13 51 29.7	
MKAR	**Makanchi Array**	36.76	267	*e*P	P	13 21 00.2	+0.1
MKAR	**Makanchi Array**	36.76	267	P	P	13 20 58.9	-1.2
	comp=Z,465nm,0.8s,baz=39,slow=6.4,SNR=595						
MKAR				PP	PP	13 22 25.7	+2.2
	comp=Z,223nm,0.9s,baz=42,slow=8.9,SNR=2.6						
MKAR				LR	LR	13 36 38.9	
	comp=Z,105µm,21.4s,baz=14,slow=37						
MKAR				P3KPbc		13 51 29.7	
	comp=Z,3.8nm,1.1s,baz=222,slow=3.3,SNR=9.2						
MK01	**Makanchi Array**	36.77	267	*e*P	P	13 20 59.3	-0.9
SVE	**Sverdlovsk**	36.84	295	*d* *i*P	P	13 21 01.9	+1.2
SVE				*e*		13 22 25.3	
SVE				*e*S	S	13 26 50.1	+5.4
SVE				pmax	pmax		
	comp=Z,2µm,2.0s						
SVE				pmax	pmax		
	comp=Z,15µm,10.3s						
SVE				MLR	MLR		
	comp=Z,223µm,17.0s						
MAKZ	**Makanchi**	36.87	267	*e*P	P	13 21 01.0	0.0
	comp=Z,716nm,1.0s						
MAKZ	**Makanchi**	36.87	267	*e*P	P	13 21 01.0	0.0
WMQ	**Urumqi**	37.20	259	P	P	13 21 05.4	+1.5
WMQ				pP	sP	13 21 09.9	+2.0
WMQ				PP	PnPn	13 22 30.3	+1.5
WMQ				PcP	PcP	13 23 24.5	+1.0
WMQ				S	S	13 26 53.8	+3.3
WMQ				sS	sS	13 26 59.4	+4.1
WMQ				PcS	PcS	13 27 15.0	+3.2
WMQ				SS	SnSn	13 29 20.3	-4.5
WMQ				pmax	pmax		
	comp=Z,2µm,1.1s						
WMQ				pmax	pmax		
	comp=Z,72µm,6.7s						
WMQ				LR	LR		
	comp=Z,252µm,13.9s						
WMQ				LR	LR		
	comp=Z,107µm,10.9s						
WMQ				LR	LR		
	comp=Z,59µm,18.5s						
WMQ	**Urumqi**	37.20	259	*e*P	P	13 21 04.7	+0.8
	comp=Z,2µm,1.3s						
WMQ	**Urumqi**	37.20	259	*e*P	P	13 21 04.7	+0.8
WMQ				pmax	pmax		
	comp=Z,2µm,1.3s						
DLBC	**Dease Lake**	37.37	60	*e*P	P	13 21 06.5	+1.3
	comp=Z,892nm,1.3s						
DLBC	**Dease Lake**	37.37	60	LR	LR	13 38 43.2	
	comp=Z,72µm,18.4s,baz=322,slow=40						
KTK1	**Kautokeino**	37.54	329	*e*P	P	13 21 05.5	-1.0
KTK1				*e*PP	PP	13 22 31.8	0.0
KTK1				*e*S	S	13 26 51.6	-3.4
KTK1				IVMs_BB	IVMs_BB	13 40 07.3	
	comp=Z,59µm,16.4s						
KULLO	**Kullorsuaq**	37.56	9	*i* P	P	13 21 06.6	0.0
KULLO	**Kullorsuaq**	37.56	9	*i* P	P	13 21 06.6	0.0
TRO	**Tromso**	37.83	332	P	P	13 21 09.1	+0.2
TRO	**Tromso**	37.83	332	⇑*i*P	P	13 21 07.8	-1.1
TRO				*e*PP	PnPn	13 22 35.9	-0.2
TRO				*e*S	S	13 27 01.8	+2.4
TRO				*e*SS	SS	13 29 43.6	-1.3
TRO				IVMsBB		13 42 51.1	
	comp=Z,47µm,12.8s						
ARU	**Arti**	37.88	296	*e*P	P	13 21 09.6	+0.2
	comp=Z,3µm,2.0s						
ARU				LR	LR		
	comp=Z,92µm,19.0s						
ARU	**Arti**	37.88	296	*e*P	P	13 21 09.6	+0.2
PRGR	**Permogore**	37.96	310	⇑*i*P	P	13 21 10.5	+0.4
PRGR				*e*		13 22 36.0	
PRGR				*e*S	S	13 26 58.7	-2.8
PRGR				pmax	pmax		
	comp=Z,578nm,1.1s						
TMCR	**Tamitsa**	38.09	317	*e*P	P	13 21 11.3	+0.2
TMCR				*e*S	S	13 27 03.2	-0.1
TMCR				pmax	pmax		
	comp=Z,1µm,1.2s						
WRAK	**Wrangell Islan**	38.16	64	*e*P	P	13 21 12.9	+1.1
	comp=Z,1µm,2.0s						
NJ2	**Nanjing**	38.17	214	*e*P	P	13 21 12.3	+0.2
NJ2				pP	sP	13 21 16.0	0.0
NJ2				sP	pP	13 21 19.4	+4.5
NJ2				PP	PnPn	13 22 42.6	+1.9
NJ2				S	S	13 27 06.0	+0.8
NJ2				sS	ScP	13 27 16.3	+2.3
NJ2				pmax	pmax		
	comp=Z,220nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,20µm,4.9s						
NJ2				LR	LR		
	comp=Z,272µm,11.9s						
NJ2				LR	LR		
	comp=Z,166µm,15.2s						
NJ2				LR	LR		
	comp=Z,230µm,14.6s						
SGF	**Sodankyl**	38.17	326	P	P	13 21 12.0	+0.2
SGF				pmax	pmax		
	comp=Z,818nm,1.2s						
LZH	**Lanzhou**	38.38	235	*e*P	P	13 21 15.3	+1.2
LZH				pP	sP	13 21 20.3	+2.3
LZH				sP	pP	13 21 22.5	+5.6
LZH				PP	PP	13 22 45.0	+3.3
LZH				*e*S	S	13 27 07.8	-0.9
LZH				sS	ScP	13 27 15.9	+0.9
LZH				SS	SS	13 29 49.8	-7.4
LZH				pmax	pmax		
	comp=Z,51µm,6.2s						
LZH				LR	LR		
	comp=Z,414µm,11.7s						
LZH				LR	LR		
	comp=Z,326µm,12.0s						
LZH				LR	LR		
	comp=Z,477µm,14.6s						
SSE	**Sheshan**	38.62	210	P	P	13 21 15.3	-0.6
SSE				S	S	13 27 13.1	+1.1
SSE	**Sheshan**	38.62	210	*e*P	P	13 21 15.2	-0.6
	comp=Z,666nm,1.0s						
CRAG	**Craig**	38.65	65	*e*P	P	13 21 18.4	+2.6
	comp=Z,530nm,1.0s						
XAN	**Xi'an**	38.76	228	P	P	13 21 17.8	+0.7
XAN				pP	sP	13 21 25.1	+4.0
XAN				PP	PP	13 22 47.9	+2.2
XAN				S	S	13 27 14.3	+0.1
XAN				pmax	pmax		
	comp=Z,28µm,7.7s						
XAN				LR	LR		
	comp=Z,329µm,12.0s						
XAN				LR	LR		
	comp=Z,166µm,12.5s						
XAN				LR	LR		
	comp=Z,316µm,11.0s						
XAN	**Xi'an**	38.76	228	*e*P	P	13 21 17.3	+0.1
	comp=Z,355nm,1.2s						
XAN	**Xi'an**	38.76	228	P	P	13 21 17.3	+0.1
YKW3	**Yellowknife Ar**	38.84	46	*e*P	P	13 21 17.1	-0.3
	comp=Z,2µm,1.9s						
MSF	**Maaselka**	38.89	323	P	P	13 21 17.8	0.0
MSF				pmax	pmax		
	comp=Z,1µm,1.2s						
YKA	**Yellowknife Ar**	38.89	46	P	P	13 21 16.9	-1.0
	comp=Z,68nm,0.8s,baz=321,slow=7.7,SNR=225						
YKA				LR	LR	13 40 17.0	
	comp=Z,5µm,21.5s,baz=348,slow=41						
YKA				P3KPbc		13 51 19.8	
	comp=Z,0.6nm,0.7s,baz=141,slow=4.3,SNR=10						
YKA				PKP2ab		13 55 14.2	
	comp=Z,1.8nm,1.1s,baz=159,slow=3.4,SNR=3.8						
YKB5	**Yellowknife Ar**	38.89	46	*e*P	P	13 21 16.5	-1.4
KIRV	**Kirov**	39.22	304	P	P	13 21 21.3	+0.7
	comp=Z,190nm,1.1s,baz=34,slow=7.9,SNR=74						
KIRV				PP	PP	13 22 52.3	+2.1
	comp=Z,230nm,1.0s,baz=29,slow=14,SNR=5.7						
KIRV				S	S	13 27 24.2	+3.8
	comp=Z,20nm,0.7s,baz=330,slow=15,SNR=1.6						
OTUK	**Ortayu**	39.38	277	P	P	13 21 22.9	+0.7
OTUK				pmax	pmax		
	comp=Z,2µm,1.5s						
TDK	**Taldyqorghan**	39.75	269	*c* *i*P	P	13 21 23.8	-1.4
TDK				*i*		13 22 56.6	
TDK				*e*S	S	13 27 31.3	+2.5
TDK				smax	smax		
	comp=E,14µm,4.6s						
TDK				MLR	MLR		
	comp=Z,299µm,11.0s						
TDK	**Taldyqorghan**	39.75	269	⇑*i*P	P	13 21 23.8	-1.4
	comp=Z,21µm,1.1s						
TDK				⇑*i*PP	PP	13 22 56.7	+0.4
TDK				*e*S	S	13 27 31.4	+2.5
	comp=Z,14µm,4.6s						
TDK				*e*LR	LR	13 38 05.1	
	comp=Z,299µm,11.5s						
STEI	**Steigen**	39.98	332	*e*P	P	13 21 25.6	-1.3
STEI				IVmB_BB		13 21 30.3	
	comp=Z,8µm,2.5s						
STEI				*e*PP	PP	13 22 59.1	+0.7
STEI				*e*		13 27 34.6	
STEI				*e*SS	SS	13 30 27.3	-0.7
STEI				IVMsBB		13 42 13.5	
	comp=Z,38µm,16.3s						
LOF	**Lofoten**	40.10	333	*e*P	P	13 21 27.4	-0.6
LOF				IVmB_BB		13 21 35.8	
	comp=Z,15µm,2.8s						
LOF				*e*PP	PP	13 23 02.2	+2.5
LOF				*e*S	S	13 27 34.1	+0.5
LOF				*e*SS	SS	13 30 31.3	+0.9
LOF				IVMs_BB	IVMs_BB	13 46 15.8	
	comp=Z,31µm,13.3s						
SUMG	**Summit**	40.15	1	*e*P	P	13 21 29.1	+0.3
	comp=Z,1µm,1.5s						
SUMG	**Summit**	40.15	1	*i* P	P	13 21 28.9	+0.2
SUMG	**Summit**	40.15	1	*e*P	P	13 21 29.1	+0.3
OUL	**Oulu**	40.30	324	P	P	13 21 29.1	-0.4
OUL				pmax	pmax		
	comp=Z,629nm,1.5s						
KLMR	**Klimovskoe**	40.36	313	⇑*i*P	P	13 21 30.2	+0.1
KLMR				*e*		13 23 03.1	
KLMR				pmax	pmax		
	comp=Z,2µm,1.5s						
KLMR	**Klimovskoe**	40.36	313	⇑*i*P	P	13 21 30.2	+0.1
KLMR				⇑*i*P	P	13 21 30.2	+0.1
KLMR				*i* P	P	13 21 30.2	+0.1
KLMR				AMP		13 21 34.2	
	comp=Z,2µm,1.4s						
KLMR				*e*PP	PP	13 23 03.1	+0.5
JMIC	**Jan Mayen**	40.39	346	*e*P	P	13 21 31.4	+1.1
JMIC				IVmB_BB		13 21 39.7	
	comp=Z,16µm,1.9s						
JMIC				*e*S	S	13 27 37.3	-0.6
JMIC				*e*SS	SS	13 30 36.5	+0.4
JMIC				IVMs_BB	IVMs_BB	13 36 19.5	
	comp=Z,17µm,14.6s						
CBIJ	**Chichi jima**	40.44	181	P	P	13 21 30.6	-0.6
JCJ	**Chichijima**	40.44	181	P	P	13 21 30.6	-0.6
	comp=Z,240nm,0.8s,baz=313,slow=6.0,SNR=6.4						
WHN	**Wuhan**	40.64	219	⇑P	P	13 21 32.6	-0.2
WHN				S	S	13 27 41.3	-1.1
WHN				pmax	pmax		
	comp=Z,190nm,0.9s						
WHN				pmax	pmax		
	comp=Z,31µm,5.5s						
WHN				LR	LR		
	comp=Z,275µm,13.3s						
WHN				LR	LR		
	comp=Z,192µm,10.3s						
WHN				LR	LR		
	comp=Z,313µm,15.7s						
DIB	**Dawson Inlet,**	40.69	67	*e*P	P	13 21 34.1	+1.2
	comp=Z,1µm,1.6s						
PDGK	**Podgornoye**	40.74	266	P	P	13 21 34.2	+0.5
PDGK				pmax	pmax		
	comp=Z,882nm,1.2s						
KPKS	**Kokpek**	40.94	267	*c* *i*P	P	13 21 33.5	-1.7
KPKS				*i*		13 23 11.2	
KPKS				*e*S	S	13 27 45.9	-0.9
KPKS				pmax	pmax		
	comp=Z,8µm,1.1s						
KPKS				smax	smax		
	comp=E,11µm,5.5s						
KPKS				MLR	MLR		
	comp=Z,173µm,11.0s						
KPKS	**Kokpek**	40.94	267	⇑*i*P	P	13 21 33.5	-1.7
	comp=Z,8µm,1.1s						
KPKS				⇑*i*PP	PP	13 23 11.2	+1.9
KPKS				*e*S	S	13 27 46.0	-0.9
	comp=Z,11µm,5.5s						
KPKS				*e*LR	LR	13 38 55.4	
	comp=Z,173µm,11.4s						
UZB	**Uzynbulak**	41.08	267	*c* *i*P	P	13 21 34.7	-1.7
UZB				*e*		13 23 09.6	
UZB				*i* S	S	13 27 50.2	+1.2
UZB				pmax	pmax		
	comp=Z,3µm,1.4s						
UZB				smax	smax		
	comp=E,10µm,5.8s						
UZB				MLR	MLR		
	comp=Z,82µm,13.0s						
UZB	**Uzynbulak**	41.08	267	⇑*i*P	P	13 21 34.8	-1.7
	comp=Z,3µm,1.4s						
UZB				*e*PP	PP	13 23 09.6	-1.3
UZB				⇑*i*S	S	13 27 50.2	+1.2
	comp=Z,10µm,5.8s						
UZB				*e*LR	LR	13 38 45.7	
	comp=Z,82µm,12.7s						
CHKK	**Chushkaly**	41.26	269	⇓*i*P	P	13 21 35.7	-2.1
CHKK				*e*		13 23 09.9	
CHKK				pmax	pmax		
	comp=Z,2µm,1.1s						
CHKK	**Chushkaly**	41.26	269	⇓*i*P	P	13 21 35.7	-2.1
	comp=Z,2µm,1.1s						
CHKK				⇑*e*PP	PP	13 23 09.9	-2.8
ZHN	**Zhinishke**	41.28	267	*c* *i*P	P	13 21 36.5	-1.6
ZHN				*e*		13 23 14.0	
ZHN				*e*S	S	13 27 54.0	+2.0
ZHN				pmax	pmax		
	comp=Z,4µm,1.5s						
ZHN				smax	smax		
	comp=E,519nm,5.3s						
ZHN				MLR	MLR		
	comp=Z,122µm,11.0s						
ZHN	**Zhinishke**	41.28	267	⇑*i*P	P	13 21 36.6	-1.6
	comp=Z,4µm,1.4s						
ZHN				*e*PP	PP	13 23 14.1	+0.9
ZHN				⇑*e*S	S	13 27 54.0	+2.0
	comp=Z,519nm,5.2s						
ZHN				*e*LR	LR	13 39 02.9	
	comp=Z,122µm,11.2s						
BTLS	**Baital**	41.39	273	*d* *i*P	P	13 21 37.3	-1.5
BTLS				*i*		13 23 13.0	
BTLS				*i* S	S	13 27 53.7	+0.4
BTLS				pmax	pmax		
	comp=Z,5µm,1.3s						
BTLS				smax	smax		
	comp=E,5µm,3.1s						
BTLS				MLR	MLR		
	comp=Z,80µm,12.0s						
BTLS	**Baital**	41.39	273	⇓*i*P	P	13 21 37.3	-1.5
	comp=Z,5µm,1.2s						
BTLS				⇓*i*PP	PP	13 23 13.0	-1.1
BTLS				⇓*i*S	S	13 27 53.7	+0.4
	comp=Z,5µm,3.1s						
BTLS				*e*LR	LR	13 38 50.2	
	comp=Z,80µm,12.0s						
KUU	**Kurty**	41.48	270	*d* *i*P	P	13 21 38.1	-1.5
KUU				*e*		13 23 15.2	
KUU				*e*S	S	13 27 56.3	+1.7
KUU				pmax	pmax		
	comp=Z,6µm,1.7s						
KUU				smax	smax		
	comp=E,6µm,3.6s						
KUU				MLR	MLR		
	comp=Z,86µm,12.0s						
KUU	**Kurty**	41.48	270	⇓*i*P	P	13 21 38.1	-1.5
	comp=Z,6µm,1.7s						
KUU				*e*PP	PP	13 23 15.3	+0.2
KUU				⇓*e*S	S	13 27 56.3	+1.7
	comp=Z,6µm,3.6s						
KUU				*e*LR	LR	13 39 38.8	
	comp=Z,86µm,11.6s						
KONS	**Konsvik**	41.64	332	*e*P	P	13 21 39.8	-0.7
KONS				IVmB_BB		13 21 43.9	
	comp=Z,7µm,2.8s						
KONS				*e*PP	PP	13 23 14.7	-1.7
KONS				*e*S	S	13 27 57.4	+0.9
KONS				*e*SS	SS	13 31 04.0	+3.1
KONS				IVMs_BB	IVMs_BB	13 43 16.2	
	comp=Z,40µm,15.3s						
MOR8	**Moi Rana**	41.69	331	*e*P	P	13 21 39.0	-2.0
MOR8				*e*sP	pP	13 21 44.0	0.0
MOR8				IVmB_BB		13 21 48.5	
	comp=Z,15µm,4.7s						
MOR8				*e*PP	PP	13 23 15.2	-1.9
MOR8				*e*S	S	13 27 56.2	-1.1
MOR8				*e*SS	SS	13 31 01.5	-0.6
MOR8				IVMsBB		13 43 40.4	
	comp=Z,47µm,13.3s						
MDOK	**Medeo**	41.82	269	*d* *i*P	P	13 21 40.7	-1.8
MDOK				*e*		13 23 19.2	
MDOK				*e*S	S	13 27 57.2	-2.8
MDOK				pmax	pmax		
	comp=Z,6µm,1.4s						
MDOK				smax	smax		
	comp=E,7µm,7.8s						
MDOK				MLR	MLR		
	comp=Z,136µm,11.0s						
MDOK	**Medeo**	41.82	269	⇓*i*P	P	13 21 40.8	-1.8
	comp=Z,6µm,1.4s						
MDOK				⇑*e*PP	PP	13 23 19.2	+0.3
MDOK				⇓*e*S	S	13 27 57.3	-2.8
	comp=Z,7µm,7.8s						
MDOK				*e*LR	LR	13 39 04.7	
	comp=Z,136µm,11.2s						
AAA	**Alma-Ata**	41.84	269	*e*P	P	13 21 44.2	+1.6
AAA				pmax	pmax		
	comp=Z,21µm,7.3s						
AAA				MLR	MLR		
	comp=Z,186µm,10.0s						
AAA	**Alma-Ata**	41.84	269	⇑*i*P	P	13 21 40.8	-1.7
	comp=Z,3µm,1.6s						
AAA				⇑*e*PP	PP	13 23 16.9	-2.2
AAA				*e*S	S	13 28 01.3	+1.2
	comp=Z,10µm,6.7s						
AAA				*e*LR	LR	13 39 10.9	
	comp=Z,71µm,10.3s						
SCO	**Scoresbysund**	41.86	352	*e*P	P	13 21 42.0	-0.4
	comp=Z,480nm,1.1s						
SCO	**Scoresbysund**	41.86	352	⇑*i*P	P	13 21 43.1	+0.8
	comp=Z,451nm,1.1s						
SCO	**Scoresbysund**	41.86	352	⇑*i*P	P	13 21 43.1	+0.8
PRZ	**Przheval'sk**	41.88	267	*e*P	P	13 21 43.3	+0.2
	comp=Z,2µm,1.5s						
PRZ	**Przheval'sk**	41.88	267	*e*P	P	13 21 43.3	+0.2
TNSS	**Tian-Shan**	41.97	269	*e*P	P	13 21 42.5	-1.5
TNSS				pmax	pmax		
	comp=Z,2µm,1.1s						
TNSS	**Tian-Shan**	41.97	269	*e*P	P	13 21 42.5	-1.5
	comp=Z,2µm,1.1s						
MTBS	**Maitube**	42.09	269	⇓*e*P	P	13 21 43.1	-1.5
MTBS				pmax	pmax		
	comp=Z,3µm,1.0s						
MTBS	**Maitube**	42.09	269	⇓*e*P	P	13 21 43.2	-1.5
	comp=Z,3µm,1.1s						
ENH	**Enshi**	42.15	225	*e*P	P	13 21 44.7	-0.6
	comp=Z,738nm,1.4s						
ENH				LR	LR		
	comp=Z,203µm,20.0s						
TKM2	**Tokmak 2**	42.59	270	P	P	13 21 50.1	+1.2
	SNR=518						
TKM2	**Tokmak 2**	42.59	270	P	P	13 21 48.8	-0.1
TKM2				pmax	pmax		
	comp=Z,1µm,1.6s						
KDJ	**Kajisay**	42.65	268	*e*P	P	13 21 50.9	+1.5
	comp=Z,2µm,1.8s						
KDJ	**Kajisay**	42.65	268	*e*P	P	13 21 50.9	+1.5
USP	**Ospenovka**	42.71	271	P	P	13 21 50.0	+0.3
	SNR=330						
TARG	**Taragay, Kyrgy**	42.76	267	*e*P	P	13 21 51.7	+1.2
	comp=Z,1µm,1.3s						
CHMS	**Chumysh**	42.85	271	P	P	13 21 51.2	+0.5
	SNR=430						
AKTO	**Aktyubinsk**	42.91	291	P	P	13 21 50.0	-1.2
	comp=Z,336nm,0.8s,baz=36,slow=7.8,SNR=333						
AKTO				S	S	13 28 17.2	+1.6
	comp=Z,21nm,1.0s,baz=355,slow=19,SNR=2.1						
ULHL	**Ulahol**	42.91	269	P	P	13 21 53.3	+1.8
	SNR=13						
FRU	**Bishkek**	43.04	271	*e*P	P	13 21 53.0	+0.7
FRU				*i* S	S	13 28 25.0	+7.3
FRU				*i*		13 31 24.0	
FRU				pmax	pmax		
	comp=Z,2µm,1.8s						
FRU				smax	smax		
	comp=E,29µm,14.0s						
BBB	**Bella Bella**	43.05	64	*e*P	P	13 21 52.1	-0.1
	comp=E,626nm,1.4s						
BBB	**Bella Bella**	43.05	64	LR	LR	13 39 17.1	
	comp=E,47µm,20.9s,baz=328,slow=35						
FRU1	**Bishkek**	43.05	271	*e*P	P	13 21 54.1	+1.6
	comp=E,3µm,1.4s						
FRU1	**Bishkek**	43.05	271	*e*P	P	13 21 54.1	+1.6
KBK	**Karagaybulak**	43.06	270	P	P	13 21 53.2	+0.5
	SNR=536						
AB31	**Akbulak array**	43.19	288	*i* P	P	13 21 52.0	-1.4
AB31				pmax	pmax		
	comp=Z,802nm,1.1s						
ABKAR	**Akbulak array**	43.19	288	*e*P	P	13 21 53.5	+0.1
CD2	**Chengdu**	43.20	232	P	P	13 21 53.9	+0.1
CD2				pP	sP	13 21 57.3	-0.4
CD2				PP	PP	13 23 34.3	+0.4
CD2				PcS	PcS	13 27 35.8	+0.2
CD2				S	S	13 28 21.1	+0.7

CD2				pmax	pmax		
	comp=Z,1µm,0.8s						
CD2				pmax	pmax		
	comp=Z,68µm,6.9s						
CD2				LR	LR		
	comp=Z,338µm,12.4s						
CD2				LR	LR		
	comp=Z,264µm,11.4s						
CD2				LR	LR		
	comp=Z,516µm,12.9s						
ILULI	**Ilulissat**	**43.20**	**7**	⇑*i*P	**P**	**13 21 52.5**	**-0.8**
ILULI				*i*		13 23 35.8	
	comp=Z,151µm,14.0s						
ILULI	**Ilulissat**	**43.20**	**7**	⇑*i*P	**P**	**13 21 52.5**	**-0.8**
ILULI				*i*		13 23 35.8	
AAK	**Ala-Archa**	**43.25**	**271**	P	**P**	**13 21 54.4**	**+0.2**
	SNR=480						
AAK	**Ala-Archa**	**43.25**	**271**	*e*P	**P**	**13 21 54.5**	**+0.3**
	comp=Z,3µm,1.7s						
AAK				LR	LR		
	comp=Z,112µm,21.0s						
AAK	**Ala-Archa**	**43.25**	**271**	*i* P	**P**	**13 21 54.6**	**+0.3**
	SNR=1098						
AAK	**Ala-Archa**	**43.25**	**271**	P	**P**	**13 21 54.5**	**+0.3**
AAK				pmax	pmax		
	comp=Z,3µm,2.0s						
FIA1	**FINESS Array S**	**43.39**	**321**	*e*P	**P**	**13 21 53.8**	**-1.0**
FINES	**FINESS Array B**	**43.39**	**321**	*i* P	**P**	**13 21 53.9**	**-0.9**
FINES				pmax	pmax		
	comp=Z,340nm,0.9s						
FINES	**FINESS Array B**	**43.39**	**321**	P	**P**	**13 21 53.4**	**-1.4**
	comp=Z,338nm,0.9s,baz=38,slow=9.6,SNR=160						
FINES				LR	LR	13 42 52.3	
	comp=Z,122µm,19.8s,baz=22,slow=40						
KZA	**Kyzart**	**43.44**	**269**	P	**P**	**13 21 57.8**	**+1.8**
	SNR=23						
EKS2	**Erkin-Say**	**43.51**	**271**	P	**P**	**13 21 57.9**	**+1.7**
	SNR=433						
UCH	**Uchtor**	**43.59**	**270**	P	**P**	**13 21 57.8**	**+0.5**
	SNR=429						
NSS	**Namsos**	**43.63**	**332**	*e*P	**P**	**13 21 55.3**	**-1.4**
NSS				IVmB_BB		13 22 06.0	
	comp=Z,16µm,5.7s						
NSS				*e*PP	**PP**	**13 23 37.5**	**-0.3**
NSS				*e*SS	SS	13 31 41.5	+1.5
NSS				IVMsBB		13 44 17.8	
	comp=Z,44µm,17.9s						
NRN	**Naryn**	**43.70**	**268**	*e*P	**P**	**13 21 58.5**	**+0.5**
	comp=Z,700nm,1.2s						
NRN	**Naryn**	**43.70**	**268**	*e*P	**P**	**13 21 58.6**	**+0.5**
PUL	**Pulkovo**	**43.78**	**317**	*c i*P	**P**	**13 21 58.3**	**+0.3**
PUL				pmax	pmax		
	comp=Z,2µm,1.7s						
PUL				MLR	MLR		
	comp=Z,216µm,15.0s						
PUL	**Pulkovo**	**43.78**	**317**	*e*P	**P**	**13 21 58.2**	**+0.2**
PUL				IAmb	IAmb	13 22 02.7	
	comp=Z,621nm,0.7s						
AML	**Almayashu**	**43.99**	**271**	P	**P**	**13 22 01.5**	**+1.1**
	SNR=487						
MNAS	**Manas**	**44.15**	**272**	P	**P**	**13 22 02.0**	**+0.6**
MNAS				pmax	pmax		
	comp=Z,2µm,1.5s						
DZA	**Taraz**	**44.25**	**274**	*de*P	**P**	**13 22 00.8**	**-1.3**
DZA				*i*		13 23 43.7	
DZA				pmax	pmax		
	comp=Z,2µm,1.3s						
DZA				MLR	MLR		
	comp=Z,92µm,12.0s						
DZA	**Taraz**	**44.25**	**274**	⇓*e*P	**P**	**13 22 00.8**	**-1.3**
	comp=Z,2µm,1.3s						
DZA				⇑*i*PP	**PP**	**13 23 43.8**	**-1.2**
DZA				*e*LR	LR	13 40 46.7	
	comp=Z,92µm,11.8s						
KK31	**Karatay Array**	**44.38**	**275**	*e*P	**P**	**13 22 03.1**	**0.0**
KK31	**Karatay Array**	**44.38**	**275**	*i* P	**P**	**13 22 03.7**	**+0.6**
KK31				pmax	pmax		
	comp=Z,2µm,1.8s						
KKAR	**Karatay Array**	**44.38**	**275**	*e*P	**P**	**13 22 03.1**	**0.0**
KKAR	**Karatay Array**	**44.38**	**275**	*e*P	**P**	**13 22 03.1**	**0.0**
TATO	**Taipei**	**44.52**	**208**	*e*P	**P**	**13 22 05.7**	**+1.4**
	comp=Z,453nm,0.9s						
TATO	**Taipei**	**44.52**	**208**	P	**P**	**13 22 07.0**	**+2.7**
	SNR=7.9						
YHNB	**Yeheng**	**44.84**	**208**	*e*P	**P**	**13 22 06.9**	**0.0**
	comp=Z,279nm,1.0s						
QZH	**Quanzhou**	**45.10**	**212**	⇑*i*P	**P**	**13 22 08.8**	**-0.1**
QZH				PP	**PP**	**13 23 54.3**	**+0.1**
QZH				S	**S**	**13 28 46.0**	**-2.0**
QZH				SS	**ScS**	**13 32 04.3**	**-1.6**
QZH				pmax	pmax		
	comp=Z,350nm,1.2s						
QZH				pmax	pmax		
	comp=Z,17µm,8.1s						
QZH				LR	LR		
	comp=Z,194µm,15.2s						
QZH				LR	LR		
	comp=Z,323µm,16.1s						
QZH				LR	LR		
	comp=Z,142µm,11.4s						
TBLU	**Trondheim**	**45.11**	**332**	⇑*i*P	**P**	**13 22 07.5**	**-1.1**
TBLU				IVmB_BB		13 22 14.9	
	comp=Z,11µm,2.0s						
TBLU				*e*S	**S**	**13 28 42.1**	**-5.2**
TBLU				IVMsBB		13 49 06.2	
	comp=Z,41µm,10.5s						
MOS	**Moscow**	**45.20**	**310**	*e*P	**P**	**13 22 08.2**	**-1.1**
MOS				*e*		13 23 54.8	
MOS				*e*S	**S**	**13 28 48.8**	**+0.1**
MOS				*e*SS	**SS**	**13 32 11.2**	**+0.7**
MOS				pmax	pmax		
	comp=Z,1µm,1.5s						
MOS				pmax	pmax		
	comp=N,13µm,7.1s						
MOS				pmax	pmax		
	comp=Z,23µm,7.3s						
MOS				pmax	pmax		
	comp=E,9µm,6.9s						
NACB	**Ninganchiao**	**45.28**	**208**	*e*P	**P**	**13 22 10.2**	**-0.2**
	comp=E,360nm,1.3s						
KSH	**Kashi**	**45.37**	**267**	⇑*i*P	P	13 22 16.3	+5.2
KSH				pP	sP	13 22 19.1	+3.9
KSH				PP	**PP**	**13 24 01.0**	**+4.1**
KSH				S	**S**	**13 28 58.0**	**+6.1**
KSH				sS	sS	13 29 04.9	+8.2
KSH				SS	**SS**	**13 32 11.3**	**-3.2**
KSH				pmax	pmax		
	comp=E,230nm,1.1s						
KSH				pmax	pmax		
	comp=E,63µm,8.7s						
KSH				LR	LR		
	comp=E,67µm,8.4s						
KSH				LR	LR		
	comp=E,70µm,8.4s						
KSH				LR	LR		
	comp=E,88µm,9.6s						
IUG	**Iuzhnay**	**45.39**	**274**	*c i*P	**P**	**13 22 09.7**	**-1.5**
IUG				*e*S	**S**	**13 28 55.7**	**+3.7**
IUG				pmax	pmax		
	comp=Z,8µm,1.3s						
IUG				smax	smax		
	comp=E,9µm,5.3s						
IUG				MLR	MLR		
	comp=Z,99µm,12.0s						
IUG	**Iuzhnay**	**45.39**	**274**	⇑*i*P	**P**	**13 22 09.7**	**-1.5**
	comp=Z,8µm,1.3s						
IUG				*e*S	**S**	**13 28 55.8**	**+3.7**
	comp=Z,9µm,5.3s						
IUG				*e*LR	LR	13 41 15.8	
	comp=Z,99µm,11.5s						
CHM	**Chimkent**	**45.40**	**275**	*d i*P	**P**	**13 22 10.2**	**-1.0**
CHM				*e*		13 23 56.5	
CHM				*e*S	**S**	**13 28 54.8**	**+2.7**
CHM				pmax	pmax		
	comp=Z,5µm,1.6s						
CHM				smax	smax		
	comp=E,18µm,6.2s						
CHM				MLR	MLR		
	comp=Z,65µm,12.0s						
CHM	**Chimkent**	**45.40**	**275**	⇓*i*P	**P**	**13 22 10.3**	**-1.0**
	comp=Z,5µm,1.6s						
CHM				⇑*e*PP	**PP**	**13 23 56.6**	**-0.6**
CHM				⇓*e*S	**S**	**13 28 54.8**	**+2.7**
	comp=Z,18µm,6.2s						
CHM				*e*LR	LR	13 41 23.2	
	comp=Z,65µm,12.3s						
SFJD	**Kangerlussuaq**	**45.44**	**7**	*e*P	**P**	**13 22 10.5**	**-0.6**
	comp=Z,698nm,1.3s						
SFJD				LR	LR		
	comp=Z,87µm,19.0s						
SFJD	**Kangerlussuaq**	**45.44**	**7**	*i* P	**P**	**13 22 10.3**	**-0.8**
	comp=Z,84µm,16.0s						
SFJD	**Kangerlussuaq**	**45.44**	**7**	*e*P	**P**	**13 22 10.5**	**-0.6**
SFJD	**Kangerlussuaq**	**45.44**	**7**	*e*P	**P**	**13 22 10.8**	**-0.3**
SSLB	**Suanglung**	**45.78**	**208**	*e*P	**P**	**13 22 14.8**	**+0.4**
	comp=Z,226nm,1.0s						
VSU	**Vasula**	**45.83**	**319**	*c i*P	**P**	**13 22 14.5**	**+0.2**
VSU				pmax	pmax		
	comp=Z,3µm,1.7s						
VSU				MLR	MLR		
	comp=Z,408µm,16.0s						
VSU	**Vasula**	**45.83**	**319**	*e*P	**P**	**13 22 14.4**	**0.0**
VSU				IAmb	IAmb	13 22 18.4	
	comp=Z,2µm,1.2s						
MIDW	**Midway**	**46.02**	**128**	PFAKE		13 22 30.0	+14
MIDW				LR	LR		
	comp=Z,31µm,22.0s						
OBN	**Obninsk**	**46.04**	**310**	*e*P	**P**	**13 22 16.1**	**+0.1**
	comp=Z,2µm,1.3s						
OBN				LR	LR		
	comp=Z,77µm,19.0s						
OBN	**Obninsk**	**46.04**	**310**	⇑*i*P	**P**	**13 22 17.0**	**+1.0**
OBN	**Obninsk**	**46.04**	**310**	*c i*P	**P**	**13 22 16.1**	**+0.1**
OBN				*i*		13 23 52.6	
OBN				*i*		13 24 04.3	
OBN				*e*PPP	PPP	13 24 44.8	
OBN				*i* S	**S**	**13 29 01.2**	**+0.3**
OBN				pmax	pmax		
	comp=Z,2µm,1.7s						
OBN				MLR	MLR		
	comp=Z,113µm,16.0s						
YULB	**Yu-li**	**46.10**	**208**	*e*P	**P**	**13 22 19.6**	**+2.7**
	comp=Z,222nm,1.4s						
MOL	**Molde**	**46.22**	**333**	*e*P	**P**	**13 22 16.4**	**-0.9**
MOL				IAmb	IAmb	13 22 24.6	
	comp=Z,764nm,1.4s						
MOL				*e*PP	**PP**	**13 24 05.0**	**-0.4**
MOL				*e*S	**S**	**13 29 05.2**	**+1.8**
MOL				IVMsBB		13 48 49.0	
	comp=Z,24µm,12.0s						
TPUB	**Ta-pu**	**46.31**	**209**	*e*P	**P**	**13 22 19.1**	**+0.5**
	comp=Z,149nm,1.0s						
DOMB	**Dombas**	**46.44**	**332**	*e*P	**P**	**13 22 19.1**	**-0.1**
DOMB				*e*S	**S**	**13 29 08.9**	**+2.2**
DOMB				*e*SS	**SS**	**13 32 35.6**	**+4.0**
DOMB				IVMsBB		13 46 05.4	
	comp=Z,44µm,16.2s						
LLLB	**Lillooet**	**46.50**	**61**	*e*P	**P**	**13 22 20.4**	**+0.6**
	comp=Z,502nm,1.4s						
GYA	**Guiyang**	**46.54**	**227**	⇓*i*P	**P**	**13 22 20.4**	**0.0**
GYA				PcP	**PcP**	**13 23 57.8**	**+3.2**
GYA				ScP	**ScP**	**13 27 49.8**	**+2.0**
GYA				S	**S**	**13 29 06.5**	**-2.4**
GYA				ScS	**ScS**	**13 32 14.8**	**-0.7**
GYA				SS	**SS**	**13 32 28.0**	**-6.6**
GYA				pmax	pmax		
	comp=Z,180nm,0.9s						
GYA				pmax	pmax		
	comp=Z,18µm,9.8s						
GYA				LR	LR		
	comp=Z,132µm,14.8s						
GYA				LR	LR		
	comp=Z,143µm,12.5s						
GYA				LR	LR		
	comp=Z,223µm,14.8s						
AKN	**Aaknes**	**46.68**	**333**	*e*P	**P**	**13 22 21.3**	**+0.2**
AKN				*e*P	**P**	**13 22 21.3**	**+0.2**
AKN				IAmb	IAmb	13 22 23.6	
	comp=Z,768nm,1.2s						
AKN				*e*PP	**PP**	**13 24 10.2**	**-0.1**
AKN				*e*S	**S**	**13 29 11.1**	**+1.0**
AKN				*e*ScS	**ScS**	**13 32 14.2**	**-1.0**
AKN				IVMsBB		13 50 33.0	
	comp=Z,35µm,10.2s						
TWG	**Pinlang**	**46.70**	**208**	*e*P	**P**	**13 22 24.7**	**+3.1**
	comp=Z,533nm,1.1s						
BTK	**Batken**	**46.88**	**272**	*e*P	**P**	**13 22 24.9**	**+1.9**
	comp=Z,2µm,1.2s						
BTK	**Batken**	**46.88**	**272**	*e*P	**P**	**13 22 24.9**	**+1.9**
NB2	**NORSAR Subarra**	**46.97**	**330**	P	**P**	**13 22 23.4**	**0.0**
	comp=Z,1µm,1.0s,baz=24,slow=7.9						
NB2	**NORSAR Subarra**	**46.97**	**330**	P	**P**	**13 22 23.4**	**0.0**
	baz=24,slow=7.9						
NOA	**NORSAR Array B**	**46.97**	**330**	P	**P**	**13 22 22.0**	**-1.3**
	comp=Z,574nm,0.9s,baz=24,slow=7.8,SNR=219						
NOA				PcP	**PcP**	**13 23 55.1**	**-0.4**
	comp=Z,75nm,1.1s,baz=17,slow=4.2,SNR=2.8						
NOA				LR	LR	13 45 12.4	
	comp=Z,52µm,19.2s,baz=25,slow=40						
FRB	**Frobisher Bay**	**47.11**	**18**	P	**P**	**13 22 21.9**	**-2.4**
NC602	**NORSAR Array S**	**47.19**	**330**	*e*P	**P**	**13 22 24.4**	**-0.6**
NC602	**NORSAR Array S**	**47.19**	**330**	*e*P	**P**	**13 22 24.4**	**-0.6**
NC602				*e*PP	**PP**	**13 24 16.0**	**+0.6**
NC602				*e*S	**S**	**13 29 17.7**	**+0.4**
NC602				IVMsBB		13 48 10.5	
	comp=Z,55µm,14.9s						
NORES	**NORESS Array B**	**47.19**	**330**	P	**P**	**13 22 25.0**	**0.0**
NORES				pmax	pmax		
	comp=Z,604nm,0.9s						
FCC	**Fort Churchill**	**47.31**	**36**	*e*P	**P**	**13 22 24.8**	**-1.1**
	comp=Z,1µm,1.5s						
FCC	**Fort Churchill**	**47.31**	**36**	*e*P	**P**	**13 22 24.8**	**-1.1**
HFS	**Hagfors**	**47.31**	**328**	P4KPbc		14 00 08.2	
	comp=Z,1.7nm,0.6s,baz=38,slow=7.5,SNR=5.1						
LPSR	**Galich'ya Gora**	**47.49**	**307**	*e*P	**P**	**13 22 27.1**	**-0.4**
LPSR				*e*		13 24 19.6	
LPSR				*e*S	**S**	**13 29 20.9**	**-0.9**
LPSR				*e*SS	**SS**	**13 32 46.7**	**-2.1**
LPSR				pmax	pmax		
	comp=Z,2µm,1.2s						
LPSR				smax	smax		
	comp=E,9µm,6.9s						
LPSR				MLR	MLR		
	comp=Z,168µm,17.0s						
BORG	**Borgarnes**	**47.53**	**351**	PFAKE		13 22 40.0	+12
BORG				LR	LR		
	comp=Z,18µm,19.0s						
BORG	**Borgarnes**	**47.53**	**351**	*e*P	**P**	**13 22 29.8**	**+2.2**
FOO	**Floro**	**47.56**	**334**	*e*P	**P**	**13 22 28.0**	**+0.2**
FOO				IVmB_BB		13 22 36.5	
	comp=Z,15µm,4.0s						
FOO				*e*S	**S**	**13 29 23.9**	**+1.5**
FOO				IVMsBB		13 51 18.3	
	comp=Z,26µm,9.6s						
PGC	**Sidney**	**47.64**	**64**	*e*P	**P**	**13 22 28.9**	**+0.3**
	comp=Z,2µm,1.9s						
SLIT	**Slitere, Latvi**	**47.67**	**321**	*e*P	**P**	**13 22 28.7**	**0.0**
SLIT				IAmb	IAmb	13 22 32.4	
	comp=Z,12µm,1.2s						
HYA	**Hoyanger**	**47.77**	**333**	*e*P	**P**	**13 22 28.9**	**-0.6**
HYA				IVmBBB		13 22 33.4	
	comp=Z,9µm,1.8s						
HYA				*e*PP	**PP**	**13 24 19.6**	**-1.2**
HYA				*e*S	**S**	**13 29 27.8**	**+2.4**
HYA				IVMs_BB	IVMs_BB	13 49 40.6	
	comp=Z,34µm,13.5s						
VRH	**Novokhopyorsk**	**47.82**	**304**	*e*P	**P**	**13 22 29.4**	**-0.6**
VRH				*e*		13 24 22.9	
VRH				*e*S	**S**	**13 29 23.6**	**-2.8**
VRH				*e*SS	**SS**	**13 32 50.0**	**-4.2**
VRH				pmax	pmax		
	comp=Z,1µm,0.9s						
VRH				smax	smax		
	comp=N,16µm,7.8s						
VRH				MLR	MLR		
	comp=Z,154µm,15.0s						
A04D	**Lummi Island**	**47.84**	**63**	P	**P**	**13 22 30.9**	**+0.8**
	baz=329,SNR=58						
GAR	**Garm**	**47.99**	**272**	*e*P	**P**	**13 22 31.7**	**0.0**
	comp=Z,2µm,1.1s						
GAR	**Garm**	**47.99**	**272**	*e*P	**P**	**13 22 31.7**	**0.0**
GZH	**Guangzhou**	**48.04**	**217**	⇑*i*P	P	13 22 26.8	-5.2
GZH				PcP	**PcP**	**13 23 58.4**	**-1.4**
GZH				PP	**PP**	**13 24 17.1**	**-6.9**
GZH				PcS	**PcS**	**13 27 53.6**	**-2.0**
GZH				pmax	pmax		
	comp=Z,28µm,9.9s						
GZH				LR	LR		
	comp=Z,114µm,12.0s						
GZH				LR	LR		
	comp=Z,115µm,11.8s						
OSL	**Oslo**	**48.08**	**330**	*e*P	**P**	**13 22 31.2**	**-0.7**
OSL				*e*sP	**sP**	**13 22 35.9**	**-0.1**
OSL				*e*S	**S**	**13 29 32.5**	**+2.6**
OSL				IVmBBB		13 29 46.8	
	comp=Z,8µm,8.8s						
SUE	**Sulen**	**48.12**	**334**	*e*P	**P**	**13 22 32.2**	**+0.1**
SUE				IVmB_BB		13 22 40.3	
	comp=Z,14µm,2.7s						
SUE				*e*S	**S**	**13 29 33.3**	**+3.0**
SUE				IVMsBB		13 50 16.7	
	comp=Z,36µm,14.7s						
VORR	**Voronezh**	**48.21**	**306**	⇑*i*P	**P**	**13 22 31.0**	**-2.0**
VORR				pmax	pmax		
	comp=Z,1µm,1.4s						
IZAR	**Zarasai**	**48.36**	**317**	*e*P	**P**	**13 22 34.2**	**+0.1**
IZAR				IAmb	IAmb	13 22 37.9	
	comp=Z,576nm,1.4s						
B06A	**Marblemount**	**48.42**	**62**	*e*P	**P**	**13 22 34.7**	**0.0**
	comp=Z,1µm,2.0s						
B05A	**Bryant**	**48.44**	**63**	P	**P**	**13 22 35.3**	**+0.5**
	baz=330,SNR=60						
LSA	**Lhasa**	**48.46**	**246**	P	**P**	**13 22 37.3**	**+1.5**
LSA				pmax	pmax		
	comp=Z,290nm,1.4s						
LSA				LR	LR		
	comp=Z,69µm,11.7s						
LSA				LR	LR		
	comp=Z,37µm,10.6s						
LSA				LR	LR		
	comp=Z,151µm,10.1s						
LSA	**Lhasa**	**48.46**	**246**	*e*P	**P**	**13 22 37.2**	**+1.4**
	comp=Z,2µm,1.4s						
LSA				LR	LR		
	comp=Z,136µm,19.0s						
LSA	**Lhasa**	**48.46**	**246**	P	**P**	**13 22 38.2**	**+2.4**
LSA	**Lhasa**	**48.46**	**246**	*e*P	**P**	**13 22 37.2**	**+1.4**
ISAL	**Salakas**	**48.55**	**317**	*e*P	**P**	**13 22 35.6**	**+0.1**
ISAL				IAmb	IAmb	13 22 39.5	
	comp=Z,436nm,1.0s						
KONO	**Kongsberg**	**48.57**	**330**	*e*P	**P**	**13 22 35.7**	**+0.1**
	comp=Z,680nm,0.9s						
KONO	**Kongsberg**	**48.57**	**330**	*c i*P	**P**	**13 22 35.6**	**-0.1**
KONO				pmax	pmax		
	comp=Z,809nm,1.0s						
KONO				MLR	MLR		
	comp=Z,63µm,15.0s						
KONO	**Kongsberg**	**48.57**	**330**	*e*P	**P**	**13 22 34.8**	**-0.9**
KONO				*e*PP	**PP**	**13 24 28.2**	**+0.2**
KONO				*e*S	**S**	**13 29 37.2**	**+0.4**
KONO				IVmBBB		13 49 08.3	
	comp=Z,50µm,14.0s						
NLWA	**Neilton Lookou**	**48.57**	**65**	*e*P	**P**	**13 22 37.5**	**+1.6**
	comp=Z,1µm,1.8s						
NLWA				LR	LR		
	comp=Z,53µm,19.0s						
ASK	**Askoy**	**48.58**	**334**	*e*P	**P**	**13 22 35.0**	**-0.8**
ASK				*e*PP	**PP**	**13 24 28.5**	**+0.4**
ASK				*e*S	**S**	**13 29 36.0**	**-0.9**
ASK				IVMsBB		13 50 13.9	
	comp=Z,35µm,13.6s						
HKC	**Hong Kong Obse**	**48.61**	**216**	⇑P	**P**	**13 22 39.0**	**+2.6**
IDID	**Didziasalis**	**48.61**	**317**	*e*P	**P**	**13 22 36.4**	**+0.3**
IDID				IAmb	IAmb	13 22 40.0	
	comp=Z,382nm,1.0s						
VSR	**Storozhevoye**	**48.62**	**305**	⇑*i*P	**P**	**13 22 35.4**	**-0.8**
VSR				*e*		13 24 32.3	
VSR				*e*S	**S**	**13 29 37.8**	**+0.1**
VSR				*e*SS	**SS**	**13 33 05.5**	**-1.6**
VSR				pmax	pmax		
	comp=Z,2µm,1.2s						
VSR				smax	smax		
	comp=E,4100µm,7.4s						
BER	**Bergen**	**48.65**	**333**	*e*P	**P**	**13 22 36.4**	**+0.2**
BER				*e*PP	**PP**	**13 24 28.5**	**-0.3**
BER				*e*S	**S**	**13 29 35.6**	**-2.4**
BER				*e*SS	**SS**	**13 33 07.5**	**+0.3**
BER				IVMsBB		13 50 09.2	
	comp=Z,42µm,11.5s						
IIGN	**Ignalina**	**48.72**	**317**	*e*P	**P**	**13 22 37.2**	**+0.3**
IIGN				IAmb	IAmb	13 22 40.9	
	comp=Z,573nm,1.1s						
D03D	**Eldon**	**48.72**	**64**	P	**P**	**13 22 37.8**	**+0.8**
	baz=330,SNR=34						
ODD1	**Odda**	**48.87**	**332**	*e*P	**P**	**13 22 38.3**	**+0.3**
ODD1				*e*PP	**PP**	**13 24 32.5**	**+1.7**
ODD1				*e*S	**S**	**13 29 39.5**	**-1.6**
ODD1				*e*		13 33 08.4	
ODD1				IVMsBB		13 49 35.0	
	comp=Z,69µm,14.2s						
MCO	**Taipa Grande**	**48.92**	**217**	P	**P**	**13 22 39.0**	**+0.2**
KMI	**Kunming**	**48.93**	**231**	P	**P**	**13 22 38.9**	**-0.2**
KMI				pP	pP	13 22 42.3	+0.3
KMI				sP	sP	13 22 44.3	+1.2
KMI				PP	**PP**	**13 24 32.0**	**-0.3**
KMI				S	**S**	**13 29 38.8**	**-4.3**
KMI				sS	sS	13 29 48.6	+0.7
KMI				pmax	pmax		
	comp=Z,340nm,1.0s						
KMI				pmax	pmax		
	comp=Z,24µm,8.1s						
KMI				LR	LR		
	comp=Z,195µm,12.9s						
KMI				LR	LR		
	comp=Z,248µm,12.8s						
KMI				LR	LR		
	comp=Z,263µm,11.2s						
KMI	**Kunming**	**48.93**	**231**	*e*P	**P**	**13 22 38.9**	**-0.2**
	comp=Z,691nm,1.0s						
KMI	**Kunming**	**48.93**	**231**	*e*P	**P**	**13 22 38.9**	**-0.2**
FFC	**Flin Flon**	**48.97**	**44**	*e*P	**P**	**13 22 37.7**	**-1.1**
	comp=Z,786nm,1.1s						
FFC				LR	LR		
	comp=Z,65µm,19.0s						
FFC	**Flin Flon**	**48.97**	**44**	*i* P	**P**	**13 22 38.0**	**-0.8**
NACGM	**Naroch**	**48.97**	**316**	*e*P	**P**	**13 22 37.0**	**-1.8**
NACGM				*e*P	**P**	**13 22 37.0**	**-1.8**
NACGM				PM		13 22 39.0	
	comp=Z,1.0nm,1.0s						
NACGM				*e*PcP	**PcP**	**13 24 02.0**	**-0.7**
NACGM				*e*PP	**PP**	**13 24 32.0**	**+0.2**
NACGM				*e*PPP	PPP	13 25 40.0	
NACGM				*e*S	**S**	**13 29 40.0**	**-2.5**
NACGM				*e*PS	pS	13 30 04.0	+18
NACGM				*e*ScS	**ScS**	**13 32 20.0**	**-10**
NACGM				*e*SS	**SS**	**13 33 16.0**	**+3.5**
NACGM				*e*SSS	SSS	13 34 24.0	
NACGM				*e*LQ	LQ	13 39 46.0	
NACGM				*e*LR	LR	13 42 22.0	
MICGM	**Minsk**	**49.03**	**315**	⇑*i*P	**P**	**13 22 39.0**	**-0.3**
MICGM				PM		13 22 43.0	
	comp=Z,4.9nm,1.4s						
MICGM				PM		13 22 43.0	
	comp=N,4.3nm,1.5s						
MICGM				PM		13 22 43.0	
	comp=E,2.5nm,1.8s						
MICGM				PM		13 22 44.0	
	comp=Z,36nm,10.0s						
MICGM				PM		13 22 46.0	
	comp=N,14nm,7.0s						
MICGM				PM		13 22 46.0	
	comp=Z,39nm,8.0s						
MICGM				PM		13 22 47.0	
	comp=E,7.5nm,8.0s						
MICGM				*e*PcP	**PcP**	**13 24 04.0**	**+1.1**
MICGM				*e*PP	**PP**	**13 24 32.0**	**-0.4**
MICGM				PPM		13 24 36.0	
	comp=Z,21nm,10.0s						
MICGM				PPM		13 24 38.0	
	comp=Z,41nm,12.0s						
MICGM				*e*PPP	PPP	13 25 36.0	
MICGM				*e*S	**S**	**13 29 42.0**	**-1.4**
MICGM				SM		13 29 48.0	
	comp=E,5.9nm,10.0s						
MICGM				SM		13 29 52.0	
	comp=N,31nm,20.0s						
MICGM				SM		13 29 52.0	
	comp=N,38nm,12.0s						
MICGM				*e*PS		13 29 52.0	
MICGM				*e*ScS	ScS	13 32 18.0	-13
MICGM				*e*SS	**SS**	**13 33 16.0**	**+2.5**
MICGM				*e*SSS	SSS	13 34 40.0	
MICGM				*e*LQ	LQ	13 38 04.0	
MICGM				*e*LR	LR	13 42 20.0	
MICGM				LRM	MLR	13 46 00.0	
	comp=N,292nm,16.0s						

MICGM				LRM	MLR	13 46 08.0	
	comp=Z,334nm,16.0s						
MICGM				LRM	MLR	13 46 08.0	
	comp=E,191nm,14.0s						
MNK	Minsk	49.03	315	⇑iP	P	13 22 39.0	-0.3
MNK				e		13 24 04.0	
MNK				e		13 24 32.0	
MNK				eS	S	13 29 42.0	-1.4
MNK				e		13 29 52.0	
MNK				pmax	pmax		
	comp=Z,5µm,1.4s						
MNK				pmax	pmax		
	comp=N,4µm,1.5s						
MNK				pmax	pmax		
	comp=E,2µm,1.8s						
MNK				pmax	pmax		
	comp=Z,36µm,10.0s						
MNK				pmax	pmax		
	comp=N,15µm,7.0s						
MNK				pmax	pmax		
	comp=Z,39µm,8.0s						
MNK				pmax	pmax		
	comp=E,7µm,8.0s						
MNK				pmax	pmax		
	comp=Z,21µm,10.0s						
MNK				pmax	pmax		
	comp=Z,41µm,12.0s						
MNK				smax	smax		
	comp=E,6µm,10.0s						
MNK				smax	smax		
	comp=N,31µm,16.0s						
MNK				smax	smax		
	comp=N,38µm,12.0s						
MNK				MLR	MLR		
	comp=N,292µm,16.0s						
MNK				MLR	MLR		
	comp=Z,334µm,16.0s						
MNK				MLR	MLR		
	comp=E,191µm,14.0s						
C06D	Leavenworth	49.14	62	P	P	13 22 40.5	+0.2
	baz=330,SNR=43						
PBUR	Paburg	49.20	320	eP	P	13 22 40.8	+0.2
PBUR				IAmb	IAmb	13 22 44.2	
	comp=Z,1µm,1.0s						
B08A	Colville Reser	49.29	61	eP	P	13 22 41.4	0.0
	comp=Z,1µm,1.9s						
BLS5	Blasjo	49.36	332	eP	P	13 22 42.0	+0.2
BLS5				IVmB_BB		13 22 45.5	
	comp=Z,9µm,2.4s						
BLS5				esP	sP	13 22 45.6	-0.2
BLS5				e		13 24 47.5	
BLS5				eS	S	13 29 48.9	+0.9
BLS5				IVMsBB		13 47 47.1	
	comp=Z,47µm,15.6s						
D05A	Enumclaw	49.40	63	eP	P	13 22 42.7	+0.5
	comp=Z,1µm,1.4s						
E04D	Cinebar	49.74	64	P	P	13 22 46.0	+1.1
	baz=330,SNR=38						
KMY	Karmoy	49.77	333	eP	P	13 22 45.6	+0.7
KMY				ePP	PP	13 24 39.6	+0.7
KMY				eS	S	13 29 54.3	+0.6
KMY				IVMs_BB	IVMs_BB	13 49 15.7	
	comp=Z,40µm,11.0s						
LTY	Liberty	49.79	62	eP	P	13 22 45.3	0.0
	comp=Z,984nm,1.7s						
LON	Longmire	49.84	64	eP	P	13 22 46.1	+0.4
	comp=Z,1µm,1.8s						
LON	Longmire	49.84	64	eP	P	13 22 46.1	+0.4
LRW	Lerwick	49.93	337	IAMs_20	IAMs_20	13 46 08.6	
	comp=Z,37µm,17.5s						
F04D	Rainier, OR	50.00	65	P	P	13 22 47.6	+0.8
	baz=330						
HOMB	Homborsund	50.06	330	eP	P	13 22 46.0	-1.0
HOMB				IVmB_BB		13 22 56.2	
	comp=Z,11µm,5.5s						
HOMB				ePP	PP	13 24 42.2	+0.6
HOMB				eS	S	13 29 56.0	-1.7
HOMB				eSS	SS	13 33 34.8	+4.9
HOMB				IVMsBB		13 48 42.5	
	comp=Z,39µm,13.3s						
NEW	Newport	50.11	59	eP	P	13 22 47.6	-0.1
	comp=Z,933nm,1.9s						
NEW	Newport	50.11	59	eP	P	13 22 47.6	-0.1
NEW	Newport	50.11	59	P	P	13 22 47.6	-0.1
	baz=331,SNR=39						
NEW	Newport	50.11	59	P	P	13 22 47.5	-0.2
	comp=Z,70nm,1.2s,baz=322,slow=7.3,SNR=19						
NEW				LR	LR	13 45 28.0	
	comp=Z,82µm,21.9s,baz=323,slow=38						
C09A	Chrisman Ranch	50.13	60	eP	P	13 22 47.7	-0.1
	comp=Z,965nm,1.9s						
SNART	Snartemo	50.24	331	eP	P	13 22 47.7	-0.7
SNART				ePP	PP	13 24 43.7	+0.4
SNART				eS	S	13 30 02.2	+2.0
SNART				IVMsBB		13 49 00.2	
	comp=Z,32µm,12.9s						
D08A	Wollman Farm,	50.56	61	eP	P	13 22 50.4	-0.6
	comp=Z,1µm,2.0s						
G03D	McMinnville, O	50.67	66	P	P	13 22 52.9	+1.1
	baz=330,SNR=14						
SUW	Suwalki	50.70	318	eP	P	13 22 51.7	-0.3
SUW				ePP	PP	13 24 49.0	+1.4
SUW				LMZ	LR	13 46 49.0	
	comp=Z,249µm,16.5s						
SUW	Suwalki	50.70	318	eP	P	13 22 51.7	-0.3
	comp=Z,2µm,0.9s						
SUW	Suwalki	50.70	318	eP	P	13 22 51.7	-0.3
SUW				e		13 24 49.0	
SUW				MLR	MLR		
	comp=Z,249µm,16.5s						
F05D	White Salmon	50.71	64	P	P	13 22 53.4	+1.2
	baz=331,SNR=38						
KLNR	Kaliningrad	50.91	321	c iP	P	13 22 53.2	-0.3
KLNR				pmax	pmax		
	comp=Z,3µm,1.3s						
KLNR				MLR	MLR		
	comp=Z,132µm,17.0s						
HAWA	Hanford	50.93	62	eP	P	13 22 53.8	0.0
	comp=Z,306nm,1.4s						
HAWA				LR	LR		
	comp=Z,67µm,19.0s						
E08A	Dider Farm, El	51.00	62	eP	P	13 22 54.5	+0.1
	comp=Z,546nm,1.4s						
COR	Corvallis	51.20	66	eP	P	13 22 57.3	+1.4
	comp=Z,848nm,1.1s						
COR	Corvallis	51.20	66	eP	P	13 22 57.3	+1.4
F07A	Phinny Hill Vi	51.23	63	eP	P	13 22 56.7	+0.7
	comp=Z,242nm,0.8s						
E09A	Wood Farm, Sta	51.29	61	eP	P	13 22 56.6	+0.1
	comp=Z,773nm,1.6s						
G05D	Wamic, OR	51.32	64	P	P	13 22 57.7	+0.8
	baz=331,SNR=20						
IVI	Ivigtut	51.33	7	eP	P	13 22 55.8	-0.8
	comp=Z,268nm,0.9s						
I02D	Swisshome	51.42	67	P	P	13 22 58.9	+1.3
	baz=331						
H04D	Lebanon	51.45	66	P	P	13 22 58.9	+1.2
	baz=331,SNR=22						
H04D				S	S	13 30 15.4	-2.0
	baz=331						
NRS	Narsarsuaq	51.49	5	i P	P	13 22 56.9	-0.9
NRS	Narsarsuaq	51.49	5	i P	P	13 22 56.9	-0.9
H04A	Detroit Lake	51.51	65	eP	P	13 22 58.5	+0.3
	comp=Z,402nm,1.1s						
NIL	Nilore	51.56	266	eP	P	13 22 59.2	+0.5
	comp=Z,2µm,1.4s						
NIL				LR	LR		
	comp=Z,102µm,19.0s						
NIL	Nilore	51.56	266	eP	P	13 22 59.2	+0.5
MUD	Monsted U'grnd	51.63	329	i P	P	13 22 59.5	+0.6
	comp=Z,735nm,1.2s						
	comp=Z,126µm,17.0s						
MUD	Monsted U'grnd	51.63	329	i P	P	13 22 59.5	+0.6
MUD				pmax	pmax		
	comp=Z,740nm,1.2s						
MUD				MLR	MLR		
	comp=Z,130µm,17.0s						
DHRM	DHARAMSHALA	51.63	262	eP	P	13 22 59.1	-0.5
DHRM				IAMs_20	IAMs_20	14 10 07.1	
	comp=Z,21µm,15.0s						
BSD	Bornholm Skovb	51.67	325	⇑iP	P	13 22 58.9	-0.4
	comp=Z,972nm,0.9s						
	comp=Z,121µm,15.0s						
BSD	Bornholm Skovb	51.67	325	⇑iP	P	13 22 58.9	-0.4
COP	Copenhagen	51.68	327	⇑iP	P	13 22 59.4	+0.1
	comp=Z,309nm,1.0s						
	comp=Z,39µm,11.0s						
COP	Copenhagen	51.68	327	⇑iP	P	13 22 59.4	+0.1
COP				pmax	pmax		
	comp=Z,310nm,1.0s						
COP				MLR	MLR		
	comp=Z,39µm,11.0s						
I03D	Drain, OR	51.96	67	P	P	13 23 02.5	+1.0
	baz=331,SNR=22						
GUN	Gumba	51.97	250	eP	P	13 23 02.6	+0.4
SHL	Shillong	52.00	243	eP	P	13 23 02.7	+0.4
	comp=Z,3µm,1.9s						
SHL	Shillong	52.00	243	eP	P	13 23 02.7	+0.4
SHL	Shillong	52.00	243	eP	P	13 23 03.0	+0.7
SHL				IAmb	IAmb	13 23 04.9	
	comp=Z,251nm,0.5s						
SHL				ex	x	13 30 30.5	
MLA1	Latheron	52.01	338	⇑eP	P	13 23 01.9	+0.1
AKASG	Malin Array Be	52.05	312	i P	P	13 23 01.6	-0.5
AKASG				pmax	pmax		
	comp=Z,561nm,0.9s						
AKASG	Malin Array Be	52.05	312	P	P	13 23 00.1	-2.0
	comp=Z,536nm,0.9s,baz=28,slow=8.3,SNR=272						
AKASG				S	S	13 30 26.6	+1.1
	comp=Z,1.5nm,0.5s,baz=33,slow=10.0,SNR=3.6						
AKASG				LR	LR	13 47 45.0	
	comp=Z,60µm,18.3s,baz=0.0,slow=39						
AKBB	Malin Array Si	52.05	312	eP	P	13 23 01.0	-1.1
	comp=Z,827nm,1.1s						
AKBB	Malin Array Si	52.05	312	eP	P	13 23 01.0	-1.1
KIEV	Kiev	52.06	312	eP	P	13 23 00.7	-1.5
	comp=Z,803nm,1.1s						
KIEV				LR	LR		
	comp=Z,97µm,20.0s						
KIEV	Kiev	52.06	312	⇑iP	P	13 23 02.1	-0.1
KIEV	Kiev	52.06	312	i P	P	13 23 01.8	-0.4
	SNR=294						
KIEV	Kiev	52.06	312	c iP	P	13 23 01.6	-0.6
KIEV				MLR	MLR		
	comp=Z,106µm,15.0s						
F10A	Beach Ranch, E	52.07	61	eP	P	13 23 02.6	+0.1
	comp=Z,217nm,0.9s						
JIRN	Jiri	52.09	250	eP	P	13 23 03.2	+0.1
AK11	Malin Array Si	52.09	312	eP	P	13 23 00.3	-2.1
G08A	Pilot Rock	52.09	62	eP	P	13 23 02.5	-0.2
	comp=Z,1µm,2.0s						
I05D	Terrebonne, OR	52.10	65	P	P	13 23 02.7	0.0
	baz=331,SNR=48						
I04A	Tendick Farm,	52.20	66	P	P	13 23 04.0	+0.5
	baz=331,SNR=43						
J01E	Myrtle Point	52.22	68	P	P	13 23 04.8	+1.3
	baz=331,SNR=39						
KKN	Kakani	52.30	251	eP	P	13 23 05.1	+0.6
SMLA	Simla	52.31	261	eP	P	13 23 02.7	-1.5
SMLA				IAmb	IAmb	13 23 07.3	
	comp=Z,701nm,0.5s						
SMLA				IAMs_20	IAMs_20	13 54 53.8	
	comp=Z,31µm,10.2s						
KEBM	Edson Butte	52.33	68	eP	P	13 23 07.1	+2.7
	comp=Z,2µm,1.8s						
DANN	Dangsing	52.34	252	eP	P	13 23 05.6	+0.6
ODAN	Odare	52.38	248	eP	P	13 23 05.2	0.0
	comp=Z,3µm,1.2s						
KBL	Kabul	52.39	270	eP	P	13 23 04.2	-0.9
	comp=Z,3µm,1.9s						
KBL	Kabul	52.39	270	eP	P	13 23 04.2	-0.9
MSO	Missoula	52.40	57	eP	P	13 23 05.0	0.0
	comp=Z,270nm,1.3s						
MSO	Missoula	52.40	57	P	P	13 23 05.4	+0.4
	baz=332,SNR=69						
PKIN	Phulchoki	52.45	250	eP	P	13 23 05.9	+0.2
PKI	Pulchoki	52.45	250	eP	P	13 23 06.1	+0.3
DMN	Daman	52.52	251	eP	P	13 23 06.9	+0.6
	comp=Z,1µm,0.8s						
RGN	Rugen	52.55	325	eP	P	13 23 06.0	+0.2
	comp=Z,2µm,1.0s						
RGN	Rugen	52.55	325	eP	P	13 23 06.3	+0.6
RGN				IAmb	IAmb	13 23 09.3	
	comp=Z,1µm,0.9s						
RAMN	Ramite	52.58	249	eP	P	13 23 06.6	-0.1
	comp=Z,2µm,0.9s						
EGMT	Eagleton	52.67	54	eP	P	13 23 07.0	+0.1
	comp=Z,826nm,1.6s						
EGMT				LR	LR		
	comp=Z,116µm,20.0s						
EGMT	Eagleton	52.67	54	P	P	13 23 07.3	+0.3
	baz=333,SNR=48						
DDI	Dehra Dun	52.69	259	eP	P	13 23 07.0	-0.2
DDI				eP	P	13 23 08.0	+0.7
DDI				IAmb	IAmb	13 23 12.3	
	comp=Z,845nm,0.9s						
MCD	Coleburn Disti	52.69	338	⇑eP	P	13 23 06.4	-0.5
PINE	Pine Mountain	52.72	65	eP	P	13 23 08.6	+1.2
	comp=Z,404nm,0.9s						
K02D	Willamette Mer	52.72	68	P	P	13 23 08.6	+1.2
	baz=331,SNR=31						
GOF	Gofitskoye	52.74	299	⇑iP	P	13 23 08.0	+0.7
GOF				eS	S	13 30 47.9	+13
GOF				pmax	pmax		
	comp=Z,2µm,1.3s						
QIZ	Qiongzhong	52.78	220	P	P	13 23 08.8	+0.9
QIZ				sP	sP	13 23 12.4	+0.5
QIZ				PP	PP	13 25 06.8	-0.3
QIZ				S	S	13 30 36.9	+0.8
QIZ				pmax	pmax		
	comp=Z,120nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,12µm,9.2s						
QIZ				LR	LR		
	comp=Z,80µm,11.6s						
QIZ				LR	LR		
	comp=Z,123µm,14.3s						
QIZ				LR	LR		
	comp=Z,100µm,10.6s						
QIZ	Qiongzhong	52.78	220	eP	P	13 23 09.3	+1.3
	comp=Z,1µm,1.9s						
QIZ				LR	LR		
	comp=Z,9µm,20.0s						
J04D	Umpqua Nationa	52.79	66	P	P	13 23 08.7	+0.7
	baz=332,SNR=48						
GKP	Gorka Klasztor	52.84	322	eP	P	13 23 08.2	+0.2
GKP				ePP	PP	13 25 09.8	+2.9
GKP				eS	S	13 30 40.6	+4.4
GKP				LMZ	LR	13 49 11.8	
	comp=Z,235µm,16.7s						
GKP	Gorka Klasztor	52.84	322	eP	P	13 23 08.2	+0.2
GKP				e		13 25 09.8	
GKP				eS	S	13 30 40.6	+4.4
GKP				MLR	MLR		
	comp=Z,235µm,16.7s						
PYUN	Piuthan	52.85	253	eP	P	13 23 08.7	+0.1
	comp=Z,3µm,1.1s						
MME1	Meikle Cairn	52.91	337	⇑eP	P	13 23 08.0	-0.4
KOLN	Koldanda	52.93	252	eP	P	13 23 09.6	+0.4
	comp=Z,2µm,1.0s						
I07A	Izee	52.96	63	eP	P	13 23 10.0	+0.8
	comp=Z,246nm,1.1s						
MDO	Dochfour	52.99	338	⇑iP	P	13 23 08.8	-0.2
BMO	Blue Mountains	53.03	61	eP	P	13 23 09.6	0.0
	comp=Z,955nm,1.9s						
BMO				LR	LR		
	comp=Z,54µm,20.0s						
BMO	Blue Mountains	53.03	61	eP	P	13 23 09.6	0.0
MAK	Makhachkala	53.04	294	eP	P	13 23 10.7	+1.1
MAK				e		13 25 17.6	
MAK				ePPP	PPP	13 26 13.7	
MAK				eS	S	13 30 42.0	+2.9
MAK				i SS	SS	13 34 19.3	+1.7
MAK				i SSS	SSS	13 36 04.5	
MAK				pmax	pmax		
	comp=Z,18µm,5.2s						
MAK				pmax	pmax		
	comp=Z,3µm,1.7s						
MAK				MLR	MLR		
	comp=N,230µm,17.0s						
MAK				MLR	MLR		
	comp=Z,231µm,16.0s						
MAK				MLR	MLR		
	comp=E,197µm,16.0s						
HUMO	Hull Mountain	53.05	67	eP	P	13 23 10.9	+1.2
	comp=E,716nm,1.5s						
J05D	Fort Rock, OR	53.06	65	P	P	13 23 11.0	+1.1
	baz=332,SNR=173						
KAC	Achnashellach	53.06	339	⇑iP	P	13 23 09.6	+0.1
HRY	Holter Researc	53.19	56	eP	P	13 23 11.0	+0.2
L02E	Cave Junction	53.21	68	P	P	13 23 11.9	+1.0
	baz=332,SNR=18						
DRUM	Mains of Drumt	53.23	337	⇑eP	P	13 23 10.6	-0.2
DRUM				IAmb	IAmb	13 23 13.9	
	comp=Z,833nm,1.0s						
DRUM				IAMs_20	IAMs_20	13 54 03.8	
	comp=Z,54µm,13.1s						
KPL	Plockton	53.27	339	⇑eP	P	13 23 11.3	+0.3
KPL				IAmb	IAmb	13 23 13.7	
	comp=Z,479nm,1.1s						
KPL				IAMs_20	IAMs_20	13 43 57.5	
	comp=Z,37µm,17.4s						
BEL	Belsk	53.29	319	eP	P	13 23 11.9	+0.6
BEL				ePP	PP	13 25 12.7	+1.7
BEL				eS	S	13 30 45.5	+3.2
BEL				LMZ	LR	13 48 32.0	
	comp=Z,209µm,15.7s						
BEL	Belsk	53.29	319	eP	P	13 23 11.9	+0.6
BEL				e		13 25 12.7	
BEL				eS	S	13 30 45.5	+3.2
BEL				MLR	MLR		
	comp=Z,209µm,15.7s						
GROC	Groznyy	53.43	295	eP	P	13 23 12.6	+0.2
GROC				e		13 24 20.1	
GROC				e		13 25 13.1	
GROC				pmax	pmax		
	comp=Z,747nm,1.2s						
K04D	Chiloquin, OR	53.46	66	P	P	13 23 14.0	+1.1
	baz=332,SNR=29						
GEYT	Alibeck	53.58	282	P	P	13 23 13.6	-0.1
	comp=Z,307nm,0.9s,baz=349,slow=4.7,SNR=211						
GEYT				LR	LR	13 48 56.2	
	comp=Z,148µm,19.6s,baz=35,slow=39						
GYA0B	ALIBECK ARRAY	53.58	282	eP	P	13 23 14.0	+0.3
	comp=Z,898nm,1.2s						
L04D	Klamath Falls	53.62	67	P	P	13 23 14.7	+0.7
	baz=332,SNR=40						
EDU	Dundee	53.66	337	⇑iP	P	13 23 13.9	-0.1
KIV	Kislovodsk	53.83	298	eP	P	13 23 16.7	+1.2
	comp=Z,1µm,1.0s						
KIV				LR	LR		
	comp=Z,74µm,19.0s						
KIV	Kislovodsk	53.83	298	⇑iP	P	13 23 17.0	+1.5
KIV	Kislovodsk	53.83	298	i P	P	13 23 15.9	+0.4
	SNR=246						
KIV	Kislovodsk	53.83	298	eP	P	13 23 15.1	-0.4
KIV				e		13 25 16.7	
KIV				eS	S	13 30 50.5	+0.4
KIV				eSS	SS	13 34 30.7	+0.4
KIV				pmax	pmax		
	comp=Z,3µm,4.7s						
KIV				pmax	pmax		
	comp=Z,2µm,1.0s						
KIV				MLR	MLR		
	comp=Z,62µm,17.0s						
KIV	Kislovodsk	53.83	298	P	P	13 23 16.5	+1.0
	SNR=470						
GUMO	Guam	53.90	177	LR	LR	13 45 48.5	
	comp=Z,21µm,20.4s,baz=20,slow=36						
YBH	Yreka Blue Hor	53.91	67	eP	P	13 23 17.0	+0.9
	comp=Z,123nm,1.2s						
YBH	Yreka Blue Hor	53.91	67	eP	P	13 23 17.0	+0.9
INVG	Invergeldie, C	53.93	338	⇑eP	P	13 23 15.7	-0.2
INVG				IAmb	IAmb	13 23 20.0	
	comp=Z,597nm,1.5s						
INVG				IAMs_20	IAMs_20	13 55 19.2	
	comp=Z,44µm,12.2s						
NCK	Nalchik	53.93	297	c iP	P	13 23 17.3	+1.2
NCK				pmax	pmax		
	comp=Z,668nm,1.0s						
NCK				MLR	MLR		
	comp=Z,128µm,17.0s						
DGMT	Dagmar	53.95	49	eP	P	13 23 16.1	-0.1
	comp=Z,2µm,1.8s						
DGMT				LR	LR		
	comp=Z,80µm,20.0s						
DGMT	Dagmar	53.95	49	P	P	13 23 15.9	-0.3
	baz=334,SNR=63						
J08A	Circle Bar Ran	53.95	63	eP	P	13 23 17.4	+1.0
	comp=Z,273nm,1.4s						
KBZ	Khabaz	53.96	298	P	P	13 23 16.0	-0.3
KBZ				MLR	MLR		
	comp=Z,85µm,18.6s						
KBZ	Khabaz	53.96	298	P	P	13 23 16.0	-0.3
	comp=Z,898nm,1.0s,baz=50,slow=6.3,SNR=359						
KBZ				LR	LR	13 49 11.2	
	comp=Z,85µm,18.6s,baz=5.0,slow=39						
DLMT	Dillon	54.14	57	eP	P	13 23 18.6	+0.8
	comp=Z,1µm,1.7s						
M02C	Callahan	54.15	68	P	P	13 23 19.3	+1.5
	baz=332,SNR=44						
M04C	Macdoel	54.17	67	P	P	13 23 18.8	+0.7
	baz=332,SNR=51						
EAB	Aberfoyle	54.20	338	⇑eP	P	13 23 16.9	-1.0
ESY	Stoneypath	54.21	337	⇑eP	P	13 23 17.8	-0.2
JCC	Jacoby Creek,	54.24	69	eP	P	13 23 21.1	+2.8
	comp=Z,1µm,1.8s						
BOZ	Bozeman (W)	54.24	56	eP	P	13 23 19.0	+0.4
	comp=Z,1µm,1.7s						
BOZ				LR	LR		
	comp=Z,99µm,21.0s						
BOZ	Bozeman (W)	54.24	56	eP	P	13 23 19.0	+0.4
BOZ	Bozeman (W)	54.24	56	P	P	13 23 18.9	+0.4
	baz=333,SNR=170						
LAWE	Loch Awe, Argy	54.28	339	⇑eP	P	13 23 18.6	+0.1
LAWE				IAmb	IAmb	13 23 21.6	
	comp=Z,754nm,1.0s						
LAWE				IAMs_20	IAMs_20	13 54 50.3	
	comp=Z,43µm,12.8s						
LVV	L'vov	54.28	316	i P	P	13 23 18.7	+0.1
LVV				e		13 24 26.6	
LVV				i		13 25 22.6	
LVV				i S	S	13 30 50.7	-5.2
LVV				i SS	SS	13 34 38.7	+1.7
LVV				pmax	pmax		
	comp=Z,3µm,1.5s						
LVV				MLR	MLR		
	comp=N,72µm,17.0s						
LVV				MLR	MLR		
	comp=E,65µm,17.0s						
LVV				MLR	MLR		
	comp=Z,91µm,17.0s						
EDI	Edinburgh	54.29	337	⇑eP	P	13 23 18.4	-0.1
EDI				IAmb	IAmb	13 23 21.3	
	comp=Z,450nm,1.1s						
EDI				IAMs_20	IAMs_20	13 55 22.3	
	comp=Z,45µm,13.4s						
KHMM	Horse Mountain	54.30	69	eP	P	13 23 20.4	+1.4
	comp=Z,749nm,1.4s						
RUE	Ruedersdorf	54.37	324	eP	P	13 23 19.4	+0.2
RUE				IAmb	IAmb	13 23 23.0	
	comp=Z,861nm,1.1s						
EAU	Auchinoon	54.40	337	⇑iP	P	13 23 19.2	-0.2
EBL	Broad Law	54.41	337	⇑iP	P	13 23 19.4	-0.1
NEY	Neytrino	54.44	298	c iP	P	13 23 21.2	+1.1
NEY				pmax	pmax		
	comp=Z,127nm,1.0s						
NEY				MLR	MLR		
	comp=Z,39µm,14.0s						
ZEI	Tsey	54.45	297	eP	P	13 23 14.6	-5.6
ZEI				e		13 25 19.2	
ZEI				eS	S	13 30 59.4	+0.7
ZEI				pmax	pmax		
	comp=Z,788nm,1.2s						
ZEI				pmax	pmax		
	comp=N,674nm,1.0s						
ZEI				pmax	pmax		
	comp=E,747nm,1.0s						
ZEI				pmax	pmax		
	comp=Z,4µm,6.6s						
ZEI				MLR	MLR		
	comp=Z,131µm,16.0s						
ZEI				MLR	MLR		
	comp=N,76µm,15.0s						
ZEI				MLR	MLR		
	comp=E,17µm,10.0s						
NDI	New Delhi	54.48	259	eP	P	13 23 20.0	-0.3
NDI				eS	S	13 31 00.0	+1.0
ZKTA	Zakatala	54.52	294	P	P	13 23 20.8	+0.4
N02D	Trinity Center	54.58	68	P	P	13 23 22.3	+1.4
	baz=332,SNR=35						
MOD	Modoc Plateau	54.60	65	eP	P	13 23 22.2	+1.0
	comp=E,1µm,1.7s						
ULM	Lac du Bonnet	54.62	42	eP	P	13 23 19.5	-1.6
	comp=E,835nm,1.6s						
ULM				S	S	13 30 57.7	-2.6
ULM	Lac du Bonnet	54.62	42	P	P	13 23 19.7	-1.3
	comp=E,86nm,0.8s,baz=330,slow=8.1,SNR=44						
ULM				S	S	13 30 57.7	-2.6

	comp=E,7.7nm,1.0s,baz=323,slow=22,SNR=1.9						
ULM				LR	LR	13 48 01.2	
	comp=E,74µm,21.9s,baz=342,slow=38						
ULM				P4KPbc		14 00 40.4	
	comp=E,2.3nm,0.7s,baz=342,slow=5.8,SNR=3.4						
GCMT	**Greycliff**	**54.69**	**55**	*e*P	**P**	**13 23 22.9**	**+1.0**
SEKA	**Sheki**	**54.69**	**293**	P	**P**	**13 23 22.1**	**+0.3**
WVOR	**Wild Horse Val**	**54.71**	**64**	*e*P	**P**	**13 23 22.3**	**+0.3**
	comp=E,232nm,1.2s						
WVOR	**Wild Horse Val**	**54.71**	**64**	*e*P	**P**	**13 23 22.3**	**+0.3**
BRDH	**Bariadhala**	**54.75**	**242**	LR	LR	13 49 37.9	
	comp=E,75µm,20.8s,baz=30,slow=39						
KWP	**Kalwaria Pacla**	**54.81**	**316**	*e*P	**P**	**13 23 23.1**	**+0.7**
KWP				*e*S	**S**	**13 31 06.7**	**+3.7**
KWP				LMZ	LR	13 50 51.3	
	comp=E,99µm,18.2s						
KWP	**Kalwaria Pacla**	**54.81**	**316**	*e*P	**P**	**13 23 23.1**	**+0.7**
KWP				*e*S	**S**	**13 31 06.7**	**+3.7**
KWP				MLR	MLR		
	comp=Z,99µm,18.2s						
ANN	**Anapa**	**54.82**	**303**	*c* *i*P	**P**	**13 23 22.3**	**-0.2**
ANN				*i* *PP	**pP**	**13 23 24.2**	**-1.3**
ANN				*i*		13 25 29.2	
ANN				*i* PPP	PPP	13 26 35.3	
ANN				*i* S	**S**	**13 31 05.2**	**+2.0**
ANN				pmax	pmax		
	comp=N,795nm,1.4s						
ANN				pmax	pmax		
	comp=E,214nm,1.5s						
ANN				pmax	pmax		
	comp=Z,319nm,1.5s						
ANN				MLR	MLR		
	comp=E,10µm,15.0s						
ANN				MLR	MLR		
	comp=N,73µm,15.0s						
ANN				MLR	MLR		
	comp=Z,86µm,15.0s						
ESK	**Eskdalemuir**	**54.88**	**337**	*e*P	**P**	**13 23 23.0**	**+0.2**
	comp=Z,670nm,1.1s						
ESK				LR	LR		
	comp=Z,37µm,19.0s						
ESK	**Eskdalemuir**	**54.88**	**337**	⇑*e*P	**P**	**13 23 23.1**	**+0.3**
ESK				IAmb	IAmb	13 23 25.5	
	comp=Z,656nm,1.1s						
ESK				IAMs_20	IAMs_20	13 55 40.8	
	comp=Z,219µm,12.3s						
ESK	**Eskdalemuir**	**54.88**	**337**	*i* P	**P**	**13 23 23.4**	**+0.6**
KMRM	**Mail Ridge**	**54.88**	**69**	*e*P	**P**	**13 23 26.2**	**+3.1**
	comp=Z,1µm,1.9s						
LAO	**LASA Array**	**54.95**	**52**	*e*P	**P**	**13 23 24.8**	**+1.2**
	comp=Z,740nm,1.5s						
LAO				LR	LR		
	comp=Z,42µm,19.0s						
LAO	**LASA Array**	**54.95**	**52**	P	**P**	**13 23 24.1**	**+0.6**
	baz=334,SNR=12						
WDC	**Whiskeytown Da**	**54.98**	**68**	*e*P	**P**	**13 23 24.6**	**+0.8**
	comp=Z,1µm,1.8s						
WDC	**Whiskeytown Da**	**54.98**	**68**	*e*P	**P**	**13 23 24.6**	**+0.8**
QLMT	**Earthquake Lak**	**54.99**	**57**	*e*P	**P**	**13 23 25.0**	**+0.9**
OJC	**Ojcow**	**55.02**	**319**	*e*P	**P**	**13 23 24.5**	**+0.5**
OJC				*e*PP	**PP**	**13 25 32.4**	**+5.8**
OJC				*e*S	**S**	**13 31 07.3**	**+1.5**
OJC				LMZ	LR	13 49 25.6	
	comp=Z,120µm,19.4s						
OJC	**Ojcow**	**55.02**	**319**	*e*P	**P**	**13 23 23.3**	**-0.6**
	comp=Z,1µm,1.0s						
OJC	**Ojcow**	**55.02**	**319**	*e*P	**P**	**13 23 24.5**	**+0.5**
OJC				*e*		13 25 32.4	
OJC				*e*S	**S**	**13 31 07.3**	**+1.5**
OJC				MLR	MLR		
	comp=Z,120µm,19.4s						
TBLG	**Delisi**	**55.09**	**295**	*e*P	**P**	**13 23 25.6**	**+1.0**
	comp=Z,1µm,1.2s						
TBLG	**Delisi**	**55.09**	**295**	*e*P	**P**	**13 23 25.6**	**+1.0**
TBLG	**Delisi**	**55.09**	**295**	*i* P	**P**	**13 23 25.5**	**+0.8**
BHH	**Howats Hill**	**55.09**	**337**	⇑*i*P	**P**	**13 23 24.7**	**+0.3**
MNGR	**Mingechevir, A**	**55.12**	**293**	P	**P**	**13 23 25.4**	**+0.7**
YHB	**Horse Butte**	**55.13**	**57**	*e*P	**P**	**13 23 26.1**	**+1.0**
	comp=Z,971nm,1.5s						
HLID	**Hailey**	**55.14**	**60**	*e*P	**P**	**13 23 25.2**	**+0.1**
	comp=Z,172nm,1.0s						
HLID				LR	LR		
	comp=Z,63µm,20.0s						
HLID	**Hailey**	**55.14**	**60**	P	**P**	**13 23 25.5**	**+0.4**
	baz=333,SNR=76						
EDMD	**Edmundbyers**	**55.15**	**336**	⇑*e*P	**P**	**13 23 25.0**	**+0.2**
EDMD				IAmb	IAmb	13 23 27.9	
	comp=Z,1µm,1.0s						
EDMD				IAMs_20	IAMs_20	13 54 26.4	
	comp=Z,45µm,15.0s						
SOC	**Sochi**	**55.16**	**300**	⇑*i*P	**P**	**13 23 25.4**	**+0.4**
SOC				*e*		13 25 27.1	
SOC				*i* S	**S**	**13 31 08.5**	**+0.8**
SOC				*e*SS	**SS**	**13 34 43.3**	**-7.6**
SOC				pmax	pmax		
	comp=Z,1µm,1.0s						
SOC				pmax	pmax		
	comp=Z,3µm,1.6s						
SOC				MLR	MLR		
	comp=Z,189µm,15.0s						
YHH	**Holmes Hill**	**55.21**	**56**	*e*P	**P**	**13 23 26.2**	**+0.5**
	comp=Z,1µm,1.6s						
TGY	**Tagaytay City**	**55.25**	**206**	LR	LR	13 47 46.9	
	comp=Z,33µm,19.4s,baz=14,slow=37						
O02D	**Mt. Diablo Mer**	**55.25**	**68**	P	**P**	**13 23 27.1**	**+1.3**
	baz=332,SNR=25						
YMR	**Madison River**	**55.28**	**56**	*e*P	**P**	**13 23 27.2**	**+1.0**
	comp=Z,1µm,1.4s						
KSP	**Ksiaz**	**55.31**	**322**	*e*P	**P**	**13 23 26.3**	**+0.3**
KSP				*e*PP	**PP**	**13 25 31.9**	**+2.7**
KSP				*e*PPP	PPP	13 26 36.0	
KSP				*e*S	**S**	**13 31 12.7**	**+3.1**
KSP				LMZ	LR	13 50 14.6	
	comp=Z,213µm,18.7s						
KSP	**Ksiaz**	**55.31**	**322**	*e*P	**P**	**13 23 26.3**	**+0.3**
KSP				*e*		13 25 31.9	
KSP				*e*S	**S**	**13 31 12.7**	**+3.1**
KSP				MLR	MLR		
	comp=Z,213µm,18.7s						
YNR	**Norris Junctio**	**55.33**	**56**	*e*P	**P**	**13 23 28.2**	**+1.6**
	comp=Z,701nm,1.3s						
KCPM	**Cahto Peak**	**55.40**	**69**	*e*P	**P**	**13 23 29.7**	**+2.7**
	comp=Z,1µm,1.9s						
RLMT	**Red Lodge**	**55.41**	**55**	*e*P	**P**	**13 23 27.8**	**+0.6**
	comp=Z,2µm,1.4s						
RLMT				LR	LR		
	comp=Z,78µm,19.0s						
RLMT	**Red Lodge**	**55.41**	**55**	P	**P**	**13 23 28.5**	**+1.4**
	baz=334,SNR=374						
BBO1	**Bothel**	**55.44**	**337**	⇑*i*P	**P**	**13 23 27.1**	**+0.2**
O03E	**Paynes Creek**	**55.50**	**67**	P	**P**	**13 23 28.0**	**+0.3**
	baz=333,SNR=55						
GANJ	**Ganja**	**55.50**	**293**	P	**P**	**13 23 27.9**	**+0.3**
KIS	**Kishinev**	**55.50**	**311**	⇓*i*P	**P**	**13 23 26.0**	**-1.4**
	comp=Z,4µm,2.0s						
KIS	**Kishinev**	**55.50**	**311**	*i* PcP	**PcP**	**13 24 30.0**	**+2.7**
KIS	**Kishinev**	**55.50**	**311**	*i* PP	PP	13 25 40.0	+9.1
	comp=Z,3µm,14.0s						
KIS	**Kishinev**	**55.50**	**311**	*i* PcS	PcS	13 28 32.0	+4.7
KIS	**Kishinev**	**55.50**	**311**	⇓*i*P	**P**	**13 23 26.0**	**-1.4**
KIS				*i*		13 24 30.0	
KIS				*i*		13 25 40.0	
KIS				*i* S	**S**	**13 31 14.0**	**+1.8**
KIS				*i*		13 33 10.0	
KIS				pmax	pmax		
	comp=Z,4µm,2.0s						
KIS				pmax	pmax		
	comp=N,11µm,10.0s						
KIS				pmax	pmax		
	comp=Z,19µm,14.0s						
KIS				pmax	pmax		
	comp=Z,3µm,14.0s						
KIS				pmax	pmax		
	comp=N,11µm,12.0s						
KIS				smax	smax		
	comp=N,20µm,13.0s						
KIS				MLR	MLR		
	comp=Z,134µm,15.0s						
KIS				MLR	MLR		
	comp=N,70µm,12.0s						
KIS				MLR	MLR		
	comp=E,30µm,12.0s						
KIS				MLR	MLR		
	comp=Z,121µm,20.0s						
YFT	**Old Faithful**	**55.52**	**56**	*e*P	**P**	**13 23 30.2**	**+2.2**
	comp=Z,446nm,0.9s						
CLGH	**Cloghs, Cushen**	**55.52**	**339**	⇑*e*P	**P**	**13 23 27.7**	**+0.2**
CLGH				IAmb	IAmb	13 23 30.7	
	comp=Z,972nm,1.1s						
CLGH				IAMs_20	IAMs_20	13 56 28.7	
	comp=Z,44µm,14.0s						
GAL1	**Galloway**	**55.53**	**338**	⇑*e*P	**P**	**13 23 27.4**	**-0.1**
GAL1				IAmb	IAmb	13 23 30.6	
	comp=Z,271nm,1.1s						
GAL1				IAMs_20	IAMs_20	13 56 07.9	
	comp=Z,28µm,13.5s						
RAC	**Raciborz**	**55.55**	**320**	*e*P	**P**	**13 23 27.9**	**+0.1**
RAC				*e*S	**S**	**13 31 14.0**	**+1.2**
RAC				MLR	MLR		
	comp=Z,147µm,17.7s						
LKWY	**Lake**	**55.55**	**56**	PFAKE		13 23 40.0	+12
LKWY				LR	LR		
	comp=Z,163µm,20.0s						
KESW	**Keswick, Cumbr**	**55.56**	**337**	⇑*e*P	**P**	**13 23 28.1**	**+0.3**
KESW				IAmb	IAmb	13 23 31.2	
	comp=Z,1µm,1.1s						
KESW				IAMs_20	IAMs_20	13 56 15.4	
	comp=Z,54µm,12.5s						
NIE	**Niedzica**	**55.63**	**318**	*e*P	**P**	**13 23 29.2**	**+0.8**
NIE				*e*PcP	**PcP**	**13 24 29.7**	**+1.9**
NIE				*e*PPP	PPP	13 26 43.5	
NIE				*e*S	**S**	**13 31 15.6**	**+1.6**
NIE				LMZ	LR	13 50 28.7	
	comp=Z,100µm,16.5s						
NIE	**Niedzica**	**55.63**	**318**	*e*P	**P**	**13 23 29.2**	**+0.8**
NIE				*e*		13 24 29.7	
NIE				*e*PPP	PPP	13 26 43.5	
NIE				*e*S	**S**	**13 31 15.6**	**+1.6**
NIE				MLR	MLR		
	comp=Z,100µm,16.5s						
CLL	**Collm**	**55.64**	**324**	*e*P	**P**	**13 23 27.1**	**-1.2**
	comp=Z,1µm,0.9s						
CLL	**Collm**	**55.64**	**324**	⇑*i*P	**P**	**13 23 28.2**	**-0.2**
	comp=Z,1µm,1.0s						
CLL				*e*Plp		13 23 29.0	
	comp=Z,10µm,19.3s						
CLL				*e*Pmax		13 23 30.0	
CLL				*e*PcP	**PcP**	**13 24 29.0**	**+1.2**
CLL				*e*PP	**PP**	**13 25 38.0**	**+5.9**
CLL				*e*PPP	PPP	13 26 44.0	
CLL				*e*PcS	**PcS**	**13 28 28.0**	**+0.3**
CLL				*e*S	**S**	**13 31 15.0**	**+1.0**
CLL				*e*		13 31 56.0	
CLL				*e*SS	**SS**	**13 35 00.0**	**+1.8**
CLL				*e*		13 36 00.0	
CLL				*e*SSS	SSS	13 36 54.0	
CLL				Lmax		13 52 00.0	
CLL	**Collm**	**55.64**	**324**	⇑*i*P	**P**	**13 23 28.2**	**-0.2**
CLL				*e*		13 25 38.0	
CLL				*e*S	**S**	**13 31 15.0**	**+1.0**
CLL				pmax	pmax		
	comp=Z,1µm,1.0s						
CLL				MLR	MLR		
	comp=Z,95µm,15.6s						
H17A	**Grant Village**	**55.65**	**56**	*e*P	**P**	**13 23 31.3**	**+2.4**
	comp=Z,1µm,1.5s						
H17A	**Grant Village**	**55.65**	**56**	P	**P**	**13 23 31.3**	**+2.4**
	baz=334,SNR=204						
YPP	**Pitchstone Pla**	**55.69**	**57**	*e*P	**P**	**13 23 31.2**	**+2.0**
	comp=Z,730nm,1.4s						
IAS	**Iasi**	**55.69**	**312**	⇓*i*P	**P**	**13 23 29.9**	**+1.1**
UPC	**Upice**	**55.69**	**322**	⇑*i*P	**P**	**13 23 28.8**	**0.0**
UPC				*e*PP	**PP**	**13 25 35.2**	**+2.7**
UPC				*e*S	**S**	**13 31 13.8**	**-0.9**
UPC				AMS	AMS	13 50 20.0	
	comp=Z,183µm,17.2s						
UPC	**Upice**	**55.69**	**322**	⇑*i*P	**P**	**13 23 28.8**	**0.0**
UPC				*e*		13 25 35.2	
UPC				*e*S	**S**	**13 31 13.8**	**-0.9**
UPC				MLR	MLR		
	comp=Z,183µm,17.2s						
IDGL	**Inch Island, C**	**55.72**	**340**	*i* P	**P**	**13 23 29.1**	**+0.2**
IDGL				*e*S	**S**	**13 31 16.5**	**+1.5**
IDGL				*e*LQ	LQ	13 37 23.0	
BOK	**Bokaro**	**55.73**	**248**	*e*P	**P**	**13 23 29.6**	**+0.3**
BOK				IAmb	IAmb	13 23 40.5	
	comp=Z,1µm,1.4s						
SIM	**Simferopol'**	**55.74**	**305**	*c* *i*P	**P**	**13 23 29.5**	**+0.3**
SIM				*i*		13 25 39.0	
SIM				*e*PPP	PPP	13 26 53.0	
SIM				*i* S	**S**	**13 31 23.0**	**+7.5**
SIM				pmax	pmax		
	comp=Z,11µm,7.5s						
SIM				pmax	pmax		
	comp=Z,4µm,6.5s						
SIM				MLR	MLR		
	comp=Z,122µm,16.0s						
DPC	**Dobruska-Polom**	**55.76**	**321**	⇑*i*P	**P**	**13 23 29.6**	**+0.3**
DPC				*e*PP	**PP**	**13 25 32.9**	**-0.3**
DPC				*e*S	**S**	**13 31 18.0**	**+2.2**
DPC				AMS	AMS	13 50 20.0	
	comp=Z,198µm,16.9s						
DPC	**Dobruska-Polom**	**55.76**	**321**	⇑*i*P	**P**	**13 23 29.6**	**+0.3**
DPC				*e*		13 25 32.9	
DPC				*e*S	**S**	**13 31 18.0**	**+2.2**
DPC				MLR	MLR		
	comp=Z,198µm,16.9s						
SLPK	**Sellapark**	**55.77**	**337**	*e*P	**P**	**13 23 29.1**	**-0.1**
OKC	**Ostrava-Krasne**	**55.79**	**320**	⇑*i*P	**P**	**13 23 29.9**	**+0.4**
OKC				*e*PP	**PP**	**13 25 35.6**	**+2.2**
OKC				*e*S	**S**	**13 31 20.5**	**+4.5**
OKC				AMS	AMS	13 50 20.0	
	comp=Z,155µm,15.1s						
OKC	**Ostrava-Krasne**	**55.79**	**320**	⇑*i*P	**P**	**13 23 29.9**	**+0.4**
OKC				*e*		13 25 35.6	
OKC				*e*S	**S**	**13 31 20.5**	**+4.5**
OKC				MLR	MLR		
	comp=Z,155µm,15.1s						
MDND	**Maddock**	**55.81**	**46**	*e*P	**P**	**13 23 29.6**	**-0.1**
	comp=Z,1µm,1.2s						
MDND	**Maddock**	**55.81**	**46**	P	**P**	**13 23 29.8**	**+0.1**
	baz=336,SNR=67						
BRG	**Berggiesshubel**	**55.83**	**323**	⇑*i*P	**P**	**13 23 29.8**	**0.0**
	comp=Z,328nm,1.0s						
BRG				PCP	**PcP**	**13 24 30.0**	**+1.5**
BRG				PP	**PP**	**13 25 36.0**	**+2.2**
BRG				S	**S**	**13 31 13.0**	**-3.6**
BRG				SS	**SS**	**13 35 01.0**	**-0.2**
BRG				*e*PKPPKP		13 53 21.8	
	comp=Z,180nm,2.3s						
	comp=N,96µm,12.6s						
	comp=E,103µm,14.0s						
	comp=Z,140µm,15.4s						
BRG	**Berggiesshubel**	**55.83**	**323**	⇑*i*P	**P**	**13 23 29.8**	**0.0**
BRG						13 24 30.0	
BRG						13 25 36.0	
BRG				S	**S**	**13 31 13.0**	**-3.6**
BRG				SS	**SS**	**13 35 01.0**	**-0.2**
BRG				pmax	pmax		
	comp=Z,328nm,1.0s						
BRG				MLR	MLR		
	comp=N,96µm,12.6s						
BRG				MLR	MLR		
	comp=E,103µm,14.0s						
BRG				MLR	MLR		
	comp=Z,140µm,15.4s						
UZH	**Uzhgorod**	**55.84**	**316**	*e*P	**P**	**13 23 27.5**	**-2.3**
UZH				*i*		13 23 30.0	
UZH				*i*		13 23 35.4	
UZH				*e*		13 24 28.6	
UZH				*e*		13 25 35.5	
UZH				*i* S	**S**	**13 31 07.7**	**-8.9**
UZH				*i*		13 31 19.2	
UZH				MLR	MLR		
	comp=N,14µm,15.0s						
UZH				MLR	MLR		
	comp=E,20µm,15.0s						
UZH				MLR	MLR		
	comp=Z,22µm,15.0s						
FLWY	**Flagg Ranch**	**55.89**	**57**	*e*P	**P**	**13 23 31.7**	**+1.1**
	comp=Z,3µm,1.8s						
KRLC	**Kraliky**	**55.91**	**321**	⇑*i*P	**P**	**13 23 30.5**	**+0.1**
KRLC				*e*S	**S**	**13 31 19.7**	**+2.0**
KRLC				AMS	AMS	13 50 30.0	
KRLC	**Kraliky**	**55.91**	**321**	⇑*i*P	**P**	**13 23 30.5**	**+0.1**
KRLC				*e*S	**S**	**13 31 19.7**	**+2.0**
PRAR	**RASCA**	**55.92**	**313**	⇓*i*P	**P**	**13 23 30.7**	**+0.2**
HPK	**Haverah Park**	**55.94**	**335**	⇑*e*P	**P**	**13 23 31.0**	**+0.5**
HPK				IAmb	IAmb	13 23 37.4	
	comp=Z,2µm,1.5s						
HPK				IAMs_20	IAMs_20	13 53 12.7	
	comp=Z,38µm,16.7s						
BUR04	**Bucovina Ar. S**	**55.97**	**314**	*e*P	**P**	**13 23 29.4**	**-1.6**
BURAR	**Bucovina Array**	**55.97**	**314**	⇓*i*P	**P**	**13 23 31.3**	**+0.4**
BURAR	**Bucovina Array**	**55.97**	**314**	P	**P**	**13 23 31.3**	**+0.4**
IMW	**Indian Meadow**	**55.98**	**57**	*e*P	**P**	**13 23 32.7**	**+1.4**
	comp=Z,2µm,1.9s						
SCHQ	**Schefferville**	**55.99**	**20**	P	**P**	**13 23 29.4**	**-1.4**
	comp=Z,265nm,0.8s,baz=356,slow=7.6,SNR=62						
SCHQ				S	**S**	**13 31 16.9**	**-1.7**
	comp=Z,14nm,1.0s,baz=167,slow=18,SNR=2.1						
SCHQ				LR	LR	13 48 46.5	
	comp=Z,99µm,19.5s,baz=357,slow=37						
SCHQ				PKPPKP		13 53 30.9	
	comp=Z,10nm,1.2s,baz=209,slow=3.5,SNR=3.6						
MORC	**Moravsky Berou**	**56.00**	**320**	*e*P	**P**	**13 23 30.4**	**-0.6**
	comp=Z,672nm,1.0s						
MORC	**Moravsky Berou**	**56.00**	**320**	⇑*i*P	**P**	**13 23 31.5**	**+0.5**
MORC	**Moravsky Berou**	**56.00**	**320**	*e*P	**P**	**13 23 30.4**	**-0.6**
MORC	**Moravsky Berou**	**56.00**	**320**	⇑*i*P	**P**	**13 23 31.3**	**+0.3**
MORC				*e*S	**S**	**13 31 22.4**	**+3.5**
PVCC	**Panska Ves**	**56.01**	**323**	⇑*i*P	**P**	**13 23 31.2**	**+0.1**
PVCC				*e*S	**S**	**13 31 18.9**	**0.0**
PVCC				AMS	AMS	13 51 30.0	
	comp=Z,113µm,13.4s						
PVCC	**Panska Ves**	**56.01**	**323**	⇑*i*P	**P**	**13 23 31.2**	**+0.1**
PVCC				*e*S	**S**	**13 31 18.9**	**0.0**
PVCC				MLR	MLR		
	comp=Z,113µm,13.4s						
CHTO	**Chiang Mai**	**56.01**	**232**	*e*P	**P**	**13 23 30.8**	**-0.6**
	comp=Z,311nm,1.1s						
CHTO				LR	LR		
	comp=Z,82µm,21.0s						
CHTO	**Chiang Mai**	**56.01**	**232**	*e*P	**P**	**13 23 30.8**	**-0.6**
CHTO	**Chiang Mai**	**56.01**	**232**	P	**P**	**13 23 31.7**	**+0.3**
	SNR=155						
CHTO				P	**P**	**13 23 31.7**	**+0.3**
	SNR=155						
CHTO	**Chiang Mai**	**56.01**	**232**	P	**P**	**13 23 31.1**	**-0.3**
	comp=Z,899nm,1.0s,comp=Z,65µmcomp=Z,237µm						
CHTO	**Chiang Mai**	**56.01**	**232**	*e*P	**P**	**13 23 30.9**	**-0.5**
CMMT	**Chiang Mai**	**56.01**	**232**	P	**P**	**13 23 31.0**	**-0.4**
	comp=Z,210nm,1.7s,comp=Z,14µm						
LANS	**Liptovska Anna**	**56.09**	**319**	*e*P	**P**	**13 23 32.7**	**+1.0**
LANS	**Liptovska Anna**	**56.09**	**319**	*e*P	**P**	**13 23 32.7**	**+1.0**
LEOM	**Leova**	**56.14**	**311**	⇑*i*P	**P**	**13 23 32.5**	**+0.4**
LEOM	**Leova**	**56.14**	**311**	P	**P**	**13 23 32.4**	**+0.4**
MOOW	**Moose Ponds**	**56.17**	**57**	*e*P	**P**	**13 23 33.3**	**+0.6**
	comp=Z,2µm,1.8s						
FXWY	**Fox Creek**	**56.18**	**57**	*e*P	**P**	**13 23 33.4**	**+0.7**
	comp=Z,690nm,1.5s						
HOPS	**Hopland Field**	**56.19**	**69**	*e*P	**P**	**13 23 34.0**	**+1.5**
	comp=Z,621nm,1.4s						
WIM	**Isle of Man**	**56.23**	**338**	⇑*e*P	**P**	**13 23 32.5**	**-0.1**
TRPA	**Tarpa**	**56.23**	**316**	*e*S	**S**	**13 31 23.1**	**+1.2**
TRPA				⇑*e*P	**P**	**13 23 33.0**	**+0.4**
TRPA				*e*SS	**SS**	**13 35 18.0**	**+10**
ORV	**Oroville**	**56.26**	**68**	*e*P	**P**	**13 23 32.8**	**-0.2**
	comp=Z,619nm,1.9s						
ORV	**Oroville**	**56.26**	**68**	*e*P	**P**	**13 23 32.8**	**-0.2**
SKNT	**Sakolnakorn**	**56.29**	**226**	P	**P**	**13 23 33.5**	**+0.1**
	comp=Z,370nm,1.1s,comp=Z,8µmcomp=Z,21µm						
GMM	**Mts of Mourne**	**56.32**	**338**	⇑*i*P	**P**	**13 23 33.0**	**-0.2**
BIZ	**Bicaz**	**56.34**	**313**	⇑*i*P	**P**	**13 23 33.7**	**+0.3**
WTSB	**Winterswijk**	**56.34**	**329**	*i* P	**P**	**13 23 33.6**	**+0.3**
TPAW	**Teton Pass**	**56.34**	**57**	*e*P	**P**	**13 23 34.2**	**+0.3**
	comp=Z,2µm,1.6s						
LOHW	**Long Hollow**	**56.34**	**57**	*e*P	**P**	**13 23 35.0**	**+1.2**
	comp=Z,961nm,1.5s						
CM31	**Chiang Mai Arr**	**56.35**	**232**	*e*P	**P**	**13 23 34.5**	**+0.6**
CM31	**Chiang Mai Arr**	**56.35**	**232**	P	**P**	**13 23 34.2**	**+0.4**
	SNR=139						
CMAR	**Chiang Mai Arr**	**56.35**	**232**	*i* P	**P**	**13 23 34.0**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,99nm,1.0s						
CMAR	**Chiang Mai Arr**	**56.35**	**232**	P	**P**	**13 23 32.8**	**-1.1**
	comp=Z,99nm,1.0s,baz=8.4,slow=8.7,SNR=207						
CMAR				PP	**PP**	**13 25 38.8**	**-0.3**
	comp=Z,69nm,1.1s,baz=6.5,slow=6.4,SNR=2.4						
CMAR				LR	LR	13 50 12.8	
	comp=Z,64µm,20.0s,baz=23,slow=39						
CMAR				P4KPbc		14 00 48.3	
	comp=Z,1.2nm,0.7s,baz=357,slow=4.7,SNR=11						
CM01	**Chiang Mai Arr**	**56.38**	**232**	*e*P	**P**	**13 23 32.9**	**-1.1**
BEKR	**Beckworth**	**56.39**	**67**	*e*P	**P**	**13 23 34.8**	**+0.6**
	comp=Z,264nm,1.0s						
BMR	**Baia Mare**	**56.39**	**315**	⇑*i*P	**P**	**13 23 34.7**	**+0.9**
AGMN	**Agassiz Nation**	**56.41**	**43**	PFAKE		13 23 50.0	+16
AGMN				LR	LR		
	comp=Z,67µm,19.0s						
SNOW	**Snow King Moun**	**56.43**	**57**	*e*P	**P**	**13 23 35.6**	**+1.2**
	comp=Z,3µm,1.9s						
GDXM	**Geysers**	**56.46**	**69**	*e*P	**P**	**13 23 36.8**	**+2.3**
	comp=Z,530nm,1.4s						
REDW	**Red Top Meadow**	**56.49**	**57**	*e*P	**P**	**13 23 36.1**	**+1.2**
	comp=Z,1µm,1.4s						
DBOC	**Borcka**	**56.49**	**298**	*i* P	**P**	**13 23 34.1**	**-0.6**
GNI	**Garni**	**56.49**	**294**	*e*P	**P**	**13 23 36.4**	**+1.6**
	comp=Z,2µm,1.4s						
GNI				LR	LR		
	comp=Z,292µm,19.0s						
GNI	**Garni**	**56.49**	**294**	*i* P	**P**	**13 23 35.8**	**+1.0**
	SNR=202						
GNI	**Garni**	**56.49**	**294**	*d* *i*P	**P**	**13 23 35.9**	**+1.0**
GNI				pmax	pmax		
	comp=Z,4µm,1.3s						
GNI				MLR	MLR		
	comp=Z,616µm,19.0s						
LBWR	**Ladybower, Pea**	**56.50**	**335**	⇑*e*P	**P**	**13 23 34.5**	**+0.1**
LBWR				IAmb	IAmb	13 23 37.6	
	comp=Z,1µm,1.1s						
LBWR				IAMs_20	IAMs_20	13 53 36.6	
	comp=Z,54µm,16.5s						
BIR	**Birlad**	**56.51**	**311**	⇓*i*P	**P**	**13 23 36.3**	**+1.6**
BIR	**Birlad**	**56.51**	**311**	P	**P**	**13 23 36.3**	**+1.6**
PRU	**Pruhonice**	**56.52**	**323**	⇑*i*P	**P**	**13 23 35.1**	**+0.4**
PRU				*e*PP	PP	13 25 48.4	+8.5
PRU				*e*S	**S**	**13 31 26.5**	**+0.8**
PRU				AMS	AMS	13 51 10.0	
	comp=Z,122µm,14.1s						
PRU	**Pruhonice**	**56.52**	**323**	⇑*i*P	**P**	**13 23 35.1**	**+0.4**
PRU				*e*		13 25 48.4	
PRU				*e*S	**S**	**13 31 26.5**	**+0.8**
PRU				MLR	MLR		
	comp=Z,122µm,14.1s						
GOPC	**GO Pecny, Ondr**	**56.53**	**322**	⇑*i*P	**P**	**13 23 35.1**	**+0.3**
GOPC				AMS	AMS	13 51 10.0	
	comp=Z,129µm,14.8s						
GOPC	**GO Pecny, Ondr**	**56.53**	**322**	⇑*i*P	**P**	**13 23 35.1**	**+0.3**
GOPC				MLR	MLR		
	comp=Z,129µm,14.8s						
UTTA	**Uttaradit**	**56.54**	**230**	P	**P**	**13 23 35.9**	**+0.7**
	comp=Z,374nm,0.9s,comp=Z,3µm						
ARTV	**Artvin**	**56.55**	**297**	*i* P	**P**	**13 23 35.7**	**+0.4**
TESR	**Tescani**	**56.57**	**312**	⇓*i*P	**P**	**13 23 35.2**	**+0.1**
MOX	**Moxa**	**56.57**	**325**	P	**P**	**13 23 35.3**	**+0.2**
DAGI	**Agillar**	**56.65**	**297**	*i* P	**P**	**13 23 35.7**	**-0.1**
VRAC	**Vranov**	**56.66**	**321**	⇓*i*P	**P**	**13 23 36.3**	**+0.5**
VRAC	**Vranov**	**56.66**	**321**	⇑*i*P	**P**	**13 23 36.1**	**+0.3**
VRAC				*e*S	**S**	**13 31 31.5**	**+3.8**
ARCR	**ARCALIA**	**56.69**	**314**	⇑*i*P	**P**	**13 23 37.3**	**+1.3**
WACR	**West Acre**	**56.76**	**333**	*e*P	**P**	**13 23 36.3**	**0.0**
WACR				IAmb	IAmb	13 23 39.8	
	comp=Z,1µm,1.0s						
WACR				IAMs_20	IAMs_20	13 55 39.9	
	comp=Z,61µm,13.6s						
NKC	**Novy Kostel**	**56.77**	**324**	⇑*i*P	**P**	**13 23 37.0**	**+0.5**
NKC				*e*S	**S**	**13 31 28.9**	**-0.2**
NKC				AMS	AMS	13 53 00.0	
	comp=Z,99µm,11.9s						
NKC	**Novy Kostel**	**56.77**	**324**	⇑*i*P	**P**	**13 23 37.0**	**+0.5**
NKC				*e*S	**S**	**13 31 28.9**	**-0.2**
NKC				MLR	MLR		
	comp=Z,99µm,11.9s						
DBAD	**Bademkaya**	**56.77**	**297**	*i* P	**P**	**13 23 34.5**	**-2.3**
VYHS	**Vyhne**	**56.86**	**319**	*e*P	**P**	**13 23 37.5**	**+0.3**
VYHS				pmax	pmax		
	comp=Z,357nm,1.2s						
VYHS	**Vyhne**	**56.86**	**319**	*e*P	**P**	**13 23 37.5**	**+0.3**
VYHS				*e*PP	**PP**	**13 25 47.8**	**+4.8**
VYHS				*e*S	**S**	**13 31 35.0**	**+4.7**
VYHS				*e*L	L	13 49 51.2	
DDEM	**Demirkent**	**56.87**	**297**	*i* P	**P**	**13 23 38.6**	**+1.2**
PAHR	**Pah Rah Range**	**56.87**	**66**	*e*P	**P**	**13 23 38.3**	**+0.8**
	comp=Z,1µm,2.0s						

STNC	Stoke	56.87	336	⇑*e*P	P	13 23 37.2	0.0
STNC				IAmb	IAmb	13 23 39.8	
	comp=Z,994nm,1.4s						
STNC				IAMs_20	IAMs_20	13 56 53.7	
	comp=Z,51µm,13.2s						
KOLL	Kolacno	56.89	319	*e*P	P	13 23 37.8	+0.4
KOLL	Kolacno	56.89	319	*e*P	P	13 23 37.8	+0.4
WME	Myndd Eilian	56.90	337	⇑*i*P	P	13 23 37.1	-0.3
WPS	Cemaes, Angles	56.93	337	⇑*e*P	P	13 23 37.0	-0.5
WPS				IAmb	IAmb	13 23 39.5	
	comp=Z,391nm,1.2s						
WPS				IAMs_20	IAMs_20	13 57 07.8	
	comp=Z,50µm,13.3s						
KRUC	Moravsky	56.94	321	⇑*i*P	P	13 23 38.0	+0.3
KRUC				*e*S	S	13 31 31.8	+0.5
AHID	Auburn Hatcher	56.94	58	*e*P	P	13 23 38.9	+0.8
	comp=Z,1µm,1.7s						
AHID				LR	LR		
	comp=Z,84µm,20.0s						
TREC	Trest	56.94	322	⇑*i*P	P	13 23 38.1	+0.4
TREC				*e*PP	PP	13 25 47.7	+4.0
TREC				*e*S	S	13 31 33.9	+2.5
TREC				AMS	AMS	13 51 10.0	
	comp=Z,174µm,16.2s						
TREC	Trest	56.94	322	⇑*i*P	P	13 23 38.1	+0.4
TREC				*e*		13 25 47.7	
TREC				*e*S	S	13 31 33.9	+2.5
TREC				MLR	MLR		
	comp=Z,174µm,16.2s						
BMN	Battle Mountai	56.98	64	*e*P	P	13 23 39.4	+1.1
	comp=Z,1µm,1.8s						
BMN	Battle Mountai	56.98	64	*e*P	P	13 23 39.4	+1.1
BMN				pmax	pmax		
	comp=Z,1µm,1.8s						
AFDM	Forest Hills D	56.98	68	*e*P	P	13 23 38.6	+0.4
	comp=Z,424nm,1.8s						
MCCM	Marconi Confer	57.02	70	*e*P	P	13 23 40.7	+2.3
	comp=Z,574nm,1.5s						
WLF1	Llynfaes	57.02	337	⇑*e*P	P	13 23 37.5	-0.6
WLF1				IAmb	IAmb	13 23 40.2	
	comp=Z,876nm,1.1s						
WLF1				IAMs_20	IAMs_20	13 57 09.5	
	comp=Z,88µm,13.5s						
GIUM	Giurgiulesti	57.05	310	⇓*i*P	P	13 23 39.4	+0.9
SUKH	Sukhothai	57.06	231	P	P	13 23 39.9	+1.0
	comp=Z,206nm,1.0s,comp=Z,2µm						
CWF	Charnwood Fore	57.07	335	⇑*e*P	P	13 23 38.5	0.0
CWF				IAmb	IAmb	13 23 41.5	
	comp=Z,777nm,1.2s						
CWF				IAMs_20	IAMs_20	13 56 07.2	
	comp=Z,41µm,15.2s						
YRC	Rhoscolyn	57.08	337	⇑*i*P	P	13 23 37.9	-0.7
LTVH	Ltavrtes, Hu	57.09	316	*e*P	P	13 23 38.0	-0.7
LTVH				*e*S	S	13 31 41.1	+7.9
NAX	Nakhchivan	57.10	293	P	P	13 23 39.2	+0.2
PETR	Petresti	57.12	311	⇓*i*P	P	13 23 40.3	+1.3
PSZ	Piszkesteto	57.12	318	*e*P	P	13 23 38.9	-0.2
	comp=Z,1µm,1.0s						
PSZ	Piszkesteto	57.12	318	⇑*i*P	P	13 23 40.0	+0.9
PSZ	Piszkesteto	57.12	318	*e*P	P	13 23 38.0	-1.1
PSZ				*e*S	S	13 31 36.0	+2.1
PSZ				*e*SS	SS	13 35 24.1	+2.3
PSZ	Piszkesteto	57.12	318	*e*P	P	13 23 38.9	-0.2
YLL	Llanberis	57.13	337	⇑*e*P	P	13 23 39.7	+0.8
ODBI	Odobesti	57.13	311	⇑*i*P	P	13 23 40.7	+1.6
VRI	Vrincioaia	57.13	312	⇑*i*P	P	13 23 39.7	+0.5
VRI	Vrincioaia	57.13	312	P	P	13 23 39.6	+0.4
VCNR	Virginia City	57.14	66	*e*P	P	13 23 40.2	+0.7
	comp=Z,1µm,2.0s						
TLCR		57.15	310	⇑*i*P	P	13 23 40.0	+0.8
TLCR		57.15	310	P	P	13 23 40.0	+0.8
PLOR	Plostina	57.17	312	⇑*i*P	P	13 23 39.7	+0.3
SMOL	Smolenice	57.20	320	*e*P	P	13 23 40.5	+1.0
SMOL	Smolenice	57.20	320	*e*P	P	13 23 40.5	+1.0
FOEL	Foel Wylfa	57.22	336	⇑*e*P	P	13 23 39.7	0.0
FOEL				IAmb	IAmb	13 23 42.7	
	comp=Z,473nm,1.1s						
FOEL				IAMs_20	IAMs_20	13 54 04.0	
	comp=Z,48µm,17.4s						
CJR	Cluj-Napoca	57.24	314	⇑*i*P	P	13 23 40.7	+0.8
HVU	Hansel Valley	57.28	59	*e*P	P	13 23 41.3	+0.9
	comp=Z,2µm,1.9s						
HVU	Hansel Valley	57.28	59	*e*P	P	13 23 41.3	+0.9
LLW	Llanuwychllyn	57.34	336	⇑*e*P	P	13 23 40.5	+0.1
PNTR	Pine Nut	57.34	66	*e*P	P	13 23 42.1	+1.1
	comp=Z,2µm,2.0s						
DSB	Dublin	57.35	338	*i* P	P	13 23 40.6	+0.1
DSB				*e*S	S	13 31 37.6	+1.0
DSB				*e*LQ	LQ	13 37 54.4	
DSB	Dublin	57.35	338	*e*P	P	13 23 40.3	-0.2
	comp=Z,557nm,1.2s						
CFR	Carcaliu	57.35	310	⇑*i*P	P	13 23 40.7	+0.1
CFR	Carcaliu	57.35	310	P	P	13 23 40.7	+0.1
MODS	Modra-Piesok	57.36	320	*e*P	P	13 23 41.5	+0.8
MODS				pmax	pmax		
	comp=Z,1µm,1.5s						
MODS	Modra-Piesok	57.36	320	*e*P	P	13 23 41.5	+0.8
MODS				*e*PP	PP	13 25 48.1	+0.6
MODS				*e*S	S	13 31 38.1	+1.1
MODS				*e*L	L	13 51 14.2	
ELK	Elko	57.38	62	*e*P	P	13 23 41.8	+0.6
	comp=Z,1µm,2.0s						
ELK	Elko	57.38	62	*e*P	P	13 23 41.8	+0.6
DYDN	Diyadin	57.40	295	*i* P	P	13 23 51.2	+10
DRGR		57.41	315	⇑*i*P	P	13 23 41.5	+0.3
DRGR		57.41	315	P	P	13 23 41.4	+0.3
DOPR	Dopca	57.42	313	⇑*i*P	P	13 23 42.2	+1.0
BW06	Boulder Array	57.44	56	*e*P	P	13 23 41.3	-0.3
	comp=Z,1µm,1.9s						
BW06				LR	LR		
	comp=Z,70µm,20.0s						
BW06	Boulder Array	57.44	56	P	P	13 23 42.0	+0.4
	baz=334,SNR=203						
PD31	Pinedale Array	57.44	56	*e*P	P	13 23 41.2	-0.4
PDAR	Pinedale Array	57.44	56	*e*P	P	13 23 40.1	-1.5
PDAR	Pinedale Array	57.44	56	P	P	13 23 41.1	-0.4
	comp=Z,55nm,0.7s,baz=358,slow=2.2,SNR=138						
PDAR				S	S	13 31 41.8	+3.2
	comp=Z,2.9nm,1.1s,baz=245,slow=32,SNR=2.0						
PDAR				LR	LR	13 50 28.5	
	comp=Z,63µm,20.5s,baz=347,slow=38						
RCP	Roxas	57.45	203	⇑*e*P	P	13 23 42.4	+0.7
MACK	Trabzon	57.49	299	*i* P	P	13 23 41.7	-0.1
EATA	Eleskirt	57.53	296	*i* P	P	13 23 52.4	+10
KHC	Kasperske Hory	57.55	323	*e*P	P	13 23 41.2	-0.8
	comp=Z,182nm,1.2s						
KHC	Kasperske Hory	57.55	323	⇑*i*P	P	13 23 42.6	+0.6
KHC				*e*PP	PP	13 25 51.8	+2.7
KHC				*e*S	S	13 31 33.1	-6.3
KHC				AMS	AMS	13 53 30.0	
	comp=Z,149µm,11.8s						
KHC	Kasperske Hory	57.55	323	⇑*i*P	P	13 23 42.6	+0.6
KHC				*e*		13 25 51.8	
KHC				*e*S	S	13 31 33.1	-6.3
KHC				MLR	MLR		
	comp=Z,149µm,11.8s						
GRA1	Grafenberg Arr	57.55	325	*e*P	P	13 23 42.3	+0.3
	comp=Z,801nm,1.2s						
GRF	Grafenberg Arr	57.55	325	*e*P	P	13 23 42.3	+0.3
GRFO	Grafenberg	57.55	325	*e*P	P	13 23 42.2	+0.2
	comp=Z,882nm,1.3s						
GRFO	Grafenberg	57.55	325	*e*P	P	13 23 42.3	+0.2
YERR	Yerington	57.56	66	*e*P	P	13 23 43.5	+1.0
	comp=Z,482nm,1.1s						
HOMI	Horasan	57.57	297	*i* P	P	13 23 44.6	+2.0
ZST	Bratislava	57.57	320	*e*P	P	13 23 42.1	-0.1
ZST				*e*		13 25 52.2	
ZST	Bratislava	57.57	320	*e*P	P	13 23 42.1	-0.1
ZST				*e*PP	PP	13 25 52.2	+2.9
IGLA	Glengowla, Co	57.58	341	*i* P	P	13 23 41.7	-0.4
IGLA				*e*S	S	13 31 40.7	+1.1
IGLA				*e*LQ	LQ	13 38 04.2	
SRO	Srobarova	57.62	319	*e*P	P	13 23 43.4	+0.9
SRO	Srobarova	57.62	319	*e*P	P	13 23 43.4	+0.9
HGN	Heimansgroeve	57.65	329	*i* P	P	13 23 42.7	0.0
HGN				*e*PP	PP	13 25 57.4	+7.5
HGN				*e*PPP	PPP	13 27 04.0	
HGN				*e*S	S	13 31 47.0	+6.4
SRO2	Moca	57.65	319	*e*P	P	13 23 42.0	-0.7
SRO2	Moca	57.65	319	*e*P	P	13 23 42.0	-0.7
KEKH	Kekaha	57.66	112	*e*P	P	13 23 46.6	+3.5
	comp=Z,658nm,1.4s						
BEBN	Eben Emael	57.67	329	⇑P	P	13 23 43.0	+0.2
CLDR	Caldiran	57.68	295	*i* P	P	13 23 45.4	+2.1
WET	Wettzell	57.70	323	P	P	13 23 43.4	+0.3
MLR	Muntele Rosu	57.70	312	*e*P	P	13 23 43.7	+0.4
	comp=Z,858nm,1.0s						
MLR	Muntele Rosu	57.70	312	⇓*i*P	P	13 23 44.2	+0.9
MLR	Muntele Rosu	57.70	312	*e*P	P	13 23 43.7	+0.4
MLR	Muntele Rosu	57.70	312	S	S	13 31 45.0	+3.3
	comp=Z,16nm,1.0s,baz=212,slow=6.5,SNR=2.2						
MEM	Membach	57.78	329	⇑P	P	13 23 43.8	+0.2
	comp=Z,678nm,1.2s						
GEC2	GERESS Array S	57.78	323	*e*P	P	13 23 43.9	+0.1
	comp=Z,587nm,1.1s						
GEC2	GERESS Array S	57.78	323	*e*P	P	13 23 43.9	+0.1
GERES	GERESS Array B	57.78	323	P	P	13 23 42.9	-0.8
	comp=Z,279nm,0.9s,baz=30,slow=6.2,SNR=292						
GERES				LR	LR	13 51 56.4	
	comp=Z,57µm,18.4s,baz=19,slow=40						
GEA0	GERESS Array S	57.79	323	*e*P	P	13 23 42.5	-1.3
SPUT	South Promonto	57.81	59	*e*P	P	13 23 44.8	+0.7
	comp=Z,2µm,2.0s						
TUTA	Tutak	57.83	296	*i* P	P	13 23 46.4	+2.0
EYMN	Ely	57.85	40	*e*P	P	13 23 41.8	-2.3
	comp=Z,578nm,1.3s						
EYMN				LR	LR		
	comp=Z,104µm,21.0s						
EYMN	Ely	57.85	40	P	P	13 23 42.7	-1.5
	baz=339,SNR=124						
HARR	Harsova	57.86	310	⇑*i*P	P	13 23 45.4	+1.2
HARR	Harsova	57.86	310	P	P	13 23 45.3	+1.1
CHAI	Chaiyaphum	57.87	228	P	P	13 23 44.8	+0.2
	comp=Z,179nm,1.0s,comp=Z,1µm						
ISR	Istrita	57.87	311	⇓*i*P	P	13 23 45.8	+1.4
KVN	Kaiserville	57.91	65	*e*P	P	13 23 45.5	+0.7
	comp=Z,291nm,0.9s						
KVN	Kaiserville	57.91	65	*e*P	P	13 23 45.6	+0.7
TLB	Topalu	57.92	310	⇑*i*P	P	13 23 44.9	+0.3
TLB	Topalu	57.92	310	P	P	13 23 44.8	+0.2
WAKR	Walker	57.92	67	*e*P	P	13 23 46.4	+1.4
	comp=Z,2µm,2.0s						
UCC	Uccle	57.92	330	*e*P	P	13 23 44.9	+0.3
	comp=Z,572nm,1.1s						
UCC	Uccle	57.92	330	*e*P	P	13 23 44.9	+0.3
UCC	Uccle	57.92	330	⇑P	P	13 23 44.6	0.0
	comp=Z,274nm,1.5s						
RSSD	Black Hills	57.93	51	*e*P	P	13 23 44.2	-0.8
	comp=Z,914nm,1.9s						
RSSD	Black Hills	57.93	51	*e*P	P	13 23 44.2	-0.8
RSSD	Black Hills	57.93	51	P	P	13 23 44.4	-0.6
	baz=336						
TIRR	Tirgusor	57.93	310	*e*P	P	13 23 45.0	+0.4
	comp=Z,608nm,1.0s						
TIRR	Tirgusor	57.93	310	⇑*i*P	P	13 23 45.1	+0.4
TIRR	Tirgusor	57.93	310	*e*P	P	13 23 45.0	+0.4
VMUR	Van-Muradiye	57.94	295	*i* P	P	13 23 47.8	+2.7
BAYB	BAYBURT	57.94	298	*i* P	P	13 23 45.3	+0.2
BGU	Big Grassy Mou	57.96	60	*e*P	P	13 23 45.9	+0.7
	comp=Z,434nm,1.7s						
CMB	Columbia Colle	58.01	68	*e*P	P	13 23 46.3	+0.8
	comp=Z,776nm,1.9s						
CMB	Columbia Colle	58.01	68	*e*P	P	13 23 46.3	+0.8
VOIR		58.01	313	⇑*i*P	P	13 23 46.3	+0.9
VOIR		58.01	313	P	P	13 23 46.2	+0.9
MCH1	Michaelchurch	58.06	336	⇑*e*P	P	13 23 45.4	-0.1
MCH1				IAmb	IAmb	13 23 48.5	
	comp=Z,366nm,1.1s						
MCH1				IAMs_20	IAMs_20	13 54 36.3	
	comp=Z,37µm,15.7s						
KOPT	Kop Dagi	58.08	298	*i* P	P	13 23 48.4	+2.2
SECR		58.08	312	⇑*i*P	P	13 23 46.9	+1.1
ORDU	Ordu-Boztepe	58.09	300	*i* P	P	13 23 46.1	+0.2
BCLA	Clavier	58.10	329	⇑P	P	13 23 46.1	+0.3
	comp=Z,697nm,1.3s						
AMRR	Amara	58.10	311	⇓*i*P	P	13 23 47.2	+1.3
LPW	Lampeter	58.11	337	⇑*e*P	P	13 23 45.7	-0.2
LPW				IAMs_20	IAMs_20	13 57 52.6	
	comp=Z,55µm,13.4s						
CONA	Conrad Observa	58.13	321	*i* pP	P	13 23 46.9	+0.7
	comp=Z,629nm,1.2s,SNR=192						
RYN	Ryan	58.13	66	*e*P	P	13 23 47.6	+1.2
	comp=Z,293nm,1.1s						
STRD	Stroud	58.14	335	⇑*e*P	P	13 23 46.0	0.0
STRD				IAmb	IAmb	13 23 52.5	
	comp=Z,6µm,2.2s						
STRD				IAMs_20	IAMs_20	13 57 28.1	
	comp=Z,52µm,13.1s						
CVDA	Cernavoda	58.15	310	⇑*i*P	P	13 23 47.5	+1.3
MONM	Monmouth	58.18	336	⇑*e*P	P	13 23 46.4	+0.1
MONM				IAmb	IAmb	13 23 50.8	
	comp=Z,2µm,1.7s						
MONM				IAMs_20	IAMs_20	13 57 08.3	
	comp=Z,54µm,13.6s						
SIRR	Siria	58.18	316	⇓*i*P	P	13 23 47.1	+0.6
ELSH	Elham, Standar	58.18	333	⇑*e*P	P	13 23 46.7	+0.3
ELSH				IAmb	IAmb	13 23 49.6	
	comp=Z,913nm,1.0s						
ELSH				IAMs_20	IAMs_20	13 56 09.0	
	comp=Z,56µm,12.1s						
SOP	Sopron	58.18	320	*e*P	P	13 23 46.1	-0.4
SOP				*e*S	S	13 31 49.0	+1.4
SOP				*e*SS	SS	13 36 11.0	+33
ARR	Arges	58.19	313	⇑*i*P	P	13 23 47.9	+1.3
DEV	Deva	58.20	314	⇓*i*P	P	13 23 47.7	+1.1
DEV	Deva	58.20	314	P	P	13 23 47.6	+1.0
MTUR	Matau	58.20	313	⇑*i*P	P	13 23 48.5	+1.8
ECAT	Cat-ERZURUM	58.28	297	*i* P	P	13 23 49.8	+2.3
OLDB	Oldbury-Upon-S	58.31	335	⇑*e*P	P	13 23 47.2	0.0
OLDB				IAmb	IAmb	13 23 49.7	
	comp=Z,965nm,1.3s						
OLDB				IAMs_20	IAMs_20	13 57 11.0	
	comp=Z,54µm,13.1s						
TCUT	Toone Canyon	58.32	59	*e*P	P	13 23 48.9	+1.1
	comp=Z,782nm,0.9s						
SWN1	Swindon	58.33	335	⇑*e*P	P	13 23 47.4	0.0
SWN1				IAmb	IAmb	13 23 50.9	
	comp=Z,2µm,1.0s						
SWN1				IAMs_20	IAMs_20	13 57 42.9	
	comp=Z,61µm,12.2s						
SULR		58.36	311	⇑*i*P	P	13 23 48.3	+0.6
RSBS	Rosebush, Pemb	58.37	337	IAMs_20	IAMs_20	13 56 35.1	
	comp=Z,24µm,15.9s						
KELT	Kelkit	58.38	299	*i* P	P	13 23 48.7	+0.5
LEHL	Lehliu	58.38	311	⇑*i*P	P	13 23 49.0	+1.1
NVAR	Mina Array Bea	58.39	66	P	P	13 23 48.6	+0.3
	comp=Z,61nm,0.9s,baz=322,slow=4.5,SNR=83						
NVAR				LR	LR	13 49 00.6	
	comp=Z,51µm,18.9s,baz=344,slow=36						
NVAR				PKPPKP		13 53 30.6	
	comp=Z,16nm,1.1s,baz=152,slow=4.5,SNR=16						
NVAR				P4KPbc		14 00 57.7	
	comp=Z,1.0nm,0.8s,baz=169,slow=2.3,SNR=4.0						
ADCV	BITLIS_Adilcev	58.39	295	*i* P	P	13 23 50.4	+2.1
TVAN	Van	58.41	295	*i* P	P	13 23 50.4	+2.0
ICOR	Ion Corvin	58.42	310	⇓*i*P	P	13 23 49.5	+1.4
WOL	Wolverton	58.43	334	⇑*e*P	P	13 23 47.6	-0.5
WOL				IAMs_20	IAMs_20	13 57 09.9	
	comp=Z,65µm,12.4s						
JBP	Jabalpur	58.44	254	⇑*e*P	P	13 23 48.9	+0.4
JBP				AMS	AMS	13 52 08.0	
	comp=Z,72µm,13.1s						
C40A	Isle Royale Na	58.45	38	*e*P	P	13 23 48.0	-0.3
	comp=Z,1µm,1.9s						
C40A	Isle Royale Na	58.45	38	P	P	13 23 46.9	-1.4
	baz=339,SNR=7.0						
BATH	Bath	58.49	335	⇑*e*P	P	13 23 48.5	0.0
BATH				IAmb	IAmb	13 23 51.6	
	comp=Z,979nm,1.1s						
LLP	Lapu-Lapu	58.49	202	*e*P	P	13 23 48.5	-0.5
LLP				*e*S	S	13 31 56.5	+4.3
UMPA	Umpang Tak	58.50	231	P	P	13 23 51.0	+2.0
	comp=Z,179nm,1.1s,comp=Z,1µm						
GIVF	Givet	58.50	330	*e*P	P	13 23 47.9	-0.7
GIVF				pmax	pmax		
	comp=Z,607nm,1.3s						
K22A	Casper	58.50	54	*e*P	P	13 23 48.4	-0.6
	comp=Z,1µm,1.5s						
K22A	Casper	58.50	54	P	P	13 23 48.6	-0.4
	baz=335,SNR=155						
OPA	Opana	58.55	110	*e*P	P	13 23 51.4	+2.1
	comp=Z,763nm,1.2s						
OPA	Opana	58.55	110	*e*P	P	13 23 51.4	+2.1
DOU	Dourbes	58.55	330	⇑P	P	13 23 49.0	0.0
	comp=Z,187nm,1.2s						
TIH	Tihany	58.58	319	*e*P	P	13 23 48.1	-1.1
TIH				*e*S	S	13 31 52.1	-0.7
TIH				*e*SS	SS	13 35 51.1	+6.6
MOA	Molln	58.58	322	*i* pP	P	13 23 49.6	+0.3
	comp=Z,571nm,1.3s,SNR=144						
CTU	Camp Tracy	58.59	59	*e*P	P	13 23 50.5	+0.8
	comp=Z,1µm,1.8s						
HMNX	Herstmonceux	58.59	333	⇑*e*P	P	13 23 49.8	+0.6
HMNX				IAmb	IAmb	13 23 52.3	
	comp=Z,1µm,1.1s						
HMNX				IAMs_20	IAMs_20	13 54 50.1	
	comp=Z,61µm,15.2s						
BASK	Baskale_VAN	58.62	294	*i* P	P	13 23 52.4	+2.5
EUZM	Uzumlu	58.63	298	*i* P	P	13 23 52.7	+2.8
WLF	Walferdange	58.65	328	*e*P	P	13 23 50.1	+0.4
	comp=Z,1µm,1.1s						
WLF	Walferdange	58.65	328	*e*P	P	13 23 50.1	+0.4
WLF	Walferdange	58.65	328	⇓P	P	13 23 50.0	+0.3
	comp=Z,208nm,1.8s						
BAIF	Baives	58.66	330	*e*P	P	13 23 49.2	-0.5
BAIF				pmax	pmax		
	comp=Z,732nm,1.3s						
SUSE	Susehri	58.68	300	*i* P	P	13 23 51.2	+0.9
GZR	Gura Zlata	58.68	314	⇑*i*P	P	13 23 49.6	-0.5
DUG	Dugway, Tooele	58.69	60	*e*P	P	13 23 50.3	0.0
	comp=Z,2µm,2.0s						
DUG				LR	LR		
	comp=Z,46µm,21.0s						
DUG	Dugway, Tooele	58.69	60	*e*P	P	13 23 50.3	0.0
DUG	Dugway, Tooele	58.69	60	P	P	13 23 51.4	+1.2
	baz=334,SNR=237						
PSN	Preselentsi	58.70	309	*i* P	P	13 23 50.9	+0.8
SAO	San Andreas Ge	58.76	69	*e*P	P	13 23 51.8	+1.1
	comp=Z,138nm,0.8s						
SAO	San Andreas Ge	58.76	69	*e*P	P	13 23 51.8	+1.1
JLU	Jordanelle	58.77	59	*e*P	P	13 23 51.5	+0.5
	comp=Z,915nm,1.3s						
KIP	Kipapa	58.79	111	*e*P	P	13 23 52.2	+1.2
	comp=Z,700nm,1.1s						
KIP				LR	LR		
	comp=Z,50µm,20.0s						
KIP	Kipapa	58.79	111	*e*P	P	13 23 52.2	+1.2
BZS	Buzias	58.79	315	⇓*i*P	P	13 23 51.2	+0.5
BZS	Buzias	58.79	315	P	P	13 23 51.1	+0.4
MDPB	Devils Postpil	58.83	67	*e*P	P	13 23 53.0	+1.6
	comp=Z,327nm,0.9s						
ARSA	Arzberg	58.84	321	*i* pP	P	13 23 51.9	+0.8
	comp=Z,269nm,1.1s,SNR=69						
STU	Stuttgart	58.87	326	*e*P	P	13 23 51.5	+0.3
	comp=Z,791nm,1.1s						
STU	Stuttgart	58.87	326	*e*P	P	13 23 51.5	+0.3
HON	Honolulu	58.88	111	*e*P	P	13 23 54.6	+3.1
HON	Honolulu	58.88	111	*e*P	P	13 23 54.7	+3.1
MLAC	Mammoth, Mammo	58.92	66	P	P	13 23 54.1	+2.1
	baz=334,SNR=29						
UTHA	Uthaitani	58.93	230	P	P	13 23 52.9	+0.9
	comp=Z,243nm,1.1s,comp=Z,2µm						
YOVA	Hakkari_Yksek	58.94	293	*i* P	P	13 23 53.6	+1.5
BGOL	Bingol	58.94	297	*i* P	P	13 23 53.8	+1.8
BWNR	Bhubaneshwar	58.97	247	*e*P	P	13 23 49.3	-2.9
BWNR				IAmb	IAmb	13 23 51.1	
	comp=Z,807nm,1.4s						
BWNR				IAMs_20	IAMs_20	14 27 10.1	
	comp=Z,6µm,16.8s						
MORH	Mrgy, Hungar	59.02	318	*e*P	P	13 23 51.1	-1.2
MORH	Mrgy, Hungar	59.02	318	*e*P	P	13 23 51.1	-1.2
MORH				*e*S	S	13 32 03.0	+4.5
MORH				*e*SS	SS	13 35 56.1	+4.6
E38A	The Farm, Brul	59.09	41	*e*P	P	13 23 50.9	-1.9
	comp=Z,825nm,1.4s						
E38A	The Farm, Brul	59.09	41	P	P	13 23 50.6	-2.2
	baz=339,SNR=58						
CUZAR	Zara_SIVAS	59.11	300	*i* P	P	13 23 53.8	+0.6
SUSD	Miller	59.11	47	P	P	13 23 52.3	-0.8
	baz=337,SNR=20						
BANR	Banloc	59.14	316	⇓*i*P	P	13 23 54.0	+0.9
VAL	Valentia	59.14	341	*i* P	P	13 23 52.9	-0.1
VAL				*e*S	S	13 32 01.7	+1.8
VAL				*e*LQ	LQ	13 38 34.9	
NLU	North Lily Min	59.15	60	*e*P	P	13 23 54.1	+0.5
	comp=Z,2µm,1.8s						
RWWY	Rawlins	59.16	55	*e*P	P	13 23 53.2	-0.5
	comp=Z,1µm,1.8s						
MATQ	Matagami	59.17	29	P	P	13 23 51.8	-1.5
	baz=343,SNR=66						
TNCL	Tunceli-Merkez	59.21	298	*i* P	P	13 23 58.2	+4.3
JOHN	Johnston Islan	59.22	124	PFAKE		13 24 10.0	+16
JOHN				LR	LR		
	comp=Z,2µm,20.0s						
REFA	Refahiye_ERZN	59.22	299	*i* P	P	13 23 51.9	-2.2
SRE	Strehaia	59.23	314	⇑*i*P	P	13 23 55.0	+1.2
MPU	Maple Canyon	59.24	59	*e*P	P	13 23 55.1	+0.9
	comp=Z,287nm,1.1s						
HERR	Herculane	59.25	314	⇑*i*P	P	13 23 54.3	+0.4
BEHE	Becsehely	59.26	319	⇑*e*P	P	13 23 53.0	-0.9
BEHE				*e*S	S	13 32 03.0	+1.4
BEHE				*e*SS	SS	13 36 02.1	+6.9
BEHE	Becsehely	59.26	319	⇑*i*P	P	13 23 54.9	+0.9
HTL	Hartland	59.26	337	⇑*e*P	P	13 23 54.0	+0.2
HTL				IAmb	IAmb	13 24 00.8	
	comp=Z,490nm,1.2s						
HTL				IAMs_20	IAMs_20	13 55 26.0	
	comp=Z,41µm,15.7s						
BHPL	Bhopal	59.33	256	*e*P	P	13 23 53.3	-1.5
SCER	sogukcermik	59.35	300	*i* P	P	13 23 55.7	+0.8
PRD	Provadia	59.37	310	*i* P	P	13 23 56.0	+1.2
ILGA	Ilgaz	59.38	304	*e*P	P	13 23 56.5	+1.3
	comp=Z,849nm,1.0s						
D41A	Chassel	59.39	38	*e*P	P	13 23 51.2	-3.7
	comp=Z,1µm,1.3s						
D41A	Chassel	59.39	38	P	P	13 23 53.7	-1.2
	baz=340,SNR=39						
SRTM	Siirt_Merkez	59.40	296	*i* P	P	13 23 57.6	+2.4
R11A	Troy Canyon, C	59.41	63	*e*P	P	13 23 55.0	-0.3
	comp=Z,426nm,1.1s						
R11A	Troy Canyon, C	59.41	63	P	P	13 23 56.2	+0.9
	baz=334,SNR=249						
KEMA	Kemaliye	59.43	299	*i* P	P	13 23 56.4	+1.0
BFO	Black Forest	59.47	326	*e*P	P	13 23 54.5	-1.0
	comp=Z,490nm,1.0s						
BFO				LR	LR		
	comp=Z,3µm,19.0s						
BFO	Black Forest	59.47	326	*i* P	P	13 23 55.4	0.0
CUKT	Cukurca	59.48	294	*i* P	P	13 23 57.5	+1.7
SOKA	Soboth	59.50	321	*i* pP	P	13 23 56.2	+0.5
	comp=Z,244nm,1.1s,SNR=54						
VLAD	Vladila	59.51	312	⇓*i*P	P	13 23 56.7	+1.0
SVAN	Silvan-Diyarba	59.51	296	*i* P	P	13 23 57.9	+2.0
PERS	Pernice	59.52	321	*i* P	P	13 23 56.2	+0.4
PERS				*i*		13 23 59.9	
PERS				*e*PP	PP	13 26 05.2	-1.4
PERS				*e*		13 27 21.0	
PERS				*e*		13 27 25.5	
PERS				*e*S	S	13 32 05.1	0.0
KBA	Koelnbreinsper	59.52	322	*i* pP	P	13 23 57.2	+1.2
	comp=Z,1µm,1.2s,SNR=313						
MDVR	Moldovita	59.54	315	⇑*i*P	P	13 23 55.9	-0.1
HANI	Diyarbakir_Han	59.55	297	*i* P	P	13 23 58.2	+2.1
E39A	Mellen	59.55	40	P	P	13 23 53.9	-2.1
	baz=339,SNR=71						
F38A	Pierce - Schro	59.61	41	P	P	13 23 55.0	-1.4
	baz=339,SNR=142						
CHGQ	Chibougamau	59.61	27	P	P	13 23 54.7	-1.6
	baz=345,SNR=60						
CDF	Champ du Feu	59.61	327	*e*P	P	13 23 55.9	-0.6
CDF				pmax	pmax		
	comp=Z,903nm,1.2s						
F37A	Hinrichs Farm,	59.64	42	P	P	13 23 55.2	-1.4
	baz=339,SNR=22						
TIN	Tinemaha, Big	59.65	66	P	P	13 23 58.9	+1.9
	baz=334,SNR=32						
E40A	Wakefield	59.65	40	P	P	13 23 55.4	-1.3
	baz=340,SNR=79						
SRAK	Srakaew	59.65	227	P	P	13 23 56.1	-0.9
	comp=Z,400nm,0.9s,comp=Z,4µm						
SIRT	Sirnak	59.66	295	*e*P	P	13 23 58.0	+1.0
	comp=Z,3µm,1.1s						
PUNG	Punghina	59.66	314	⇓*i*P	P	13 23 56.4	-0.4
SIRN	Sırnak	59.68	295	*i* P	P	13 23 58.3	+1.2
WATA	Walderalm	59.69	324	*i* pP	P	13 23 58.3	+1.2
	comp=Z,542nm,1.0s,SNR=107						
FRGS	Fruska Gora	59.70	317	⇑*i*P	P	13 23 56.9	-0.2
BTMN	Batman	59.72	296	*i* P	P	13 23 59.0	+1.7
CUKAN	kangal_SIVAS	59.73	300	*i* P	P	13 23 58.2	+0.7
RETA	Reutte	59.73	324	*i* pP	P	13 23 57.4	0.0
	comp=Z,190nm,1.3s,SNR=49						
SZH	Strazhica	59.74	311	*i* P	P	13 23 57.7	+0.3
WTTA	Wattenberg	59.75	324	*i* pP	P	13 23 58.2	+0.6

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          comp=Z,1µm,1.4s,SNR=211
OBKA  Obir              59.77 321  i pP       P            13 23 58.6 +0.9
          comp=Z,920nm,1.1s,SNR=115
MOTA  Moosalm           59.79 324  i pP       P            13 23 58.1 +0.3
          comp=Z,270nm,1.0s,SNR=84
ECH   Echery            59.83 327  eP         P            13 23 56.8  -1.1
          comp=Z,720nm,1.1s
ECH   Echery            59.83 327  eP         P            13 23 56.8  -1.1
PSUT  Pine Spring       59.83  62  eP         P            13 23 58.8 +0.5
          comp=Z,2µm,2.0s
KHLH  Kahului Airpor    59.84 109  eP         P            13 24 00.1 +1.9
          comp=Z,789nm,1.2s
E41A  Kenton            59.86  39   P         P            13 23 56.4  -1.7
          baz=340,SNR=45
MYKA  Terra Mystica     59.88 322  i pP       P            13 23 58.8 +0.5
          comp=Z,308nm,1.0s,SNR=88
SQTA  Sankt Quirin      59.89 324  i pP       P            13 23 58.9 +0.4
          comp=Z,956nm,1.3s,SNR=158
F39A  Loretta           59.89  41   P         P            13 23 56.9  -1.4
          baz=339,SNR=142
VOG   Valley Oaks Go    59.90  68   P         P            13 23 59.1 +0.7
          baz=334
ELZG  Elazig            59.95 298  i P        P            13 24 01.1 +2.0
HEKM  Malatya_Hekimh    59.96 299  i P        P            13 24 00.6 +1.4
PVL   Pavlikeni         59.96 311  i P        P            13 23 59.4 +0.6
LSQQ  Lebel-sur-Quev    59.96  29   P         P            13 23 57.3  -1.5
          baz=344
GRAC  Grapevine Rang    60.00  66   P         P            13 24 01.2 +1.9
          baz=334,SNR=96
P17A  Butcher Ranch,    60.02  59  eP         P            13 24 00.6 +1.0
          comp=Z,2µm,2.0s
TMUT  Trail Mountain    60.03  59  eP         P            13 24 00.5 +0.8
          comp=Z,2µm,2.0s
ABTA  Abfaltersbach     60.03 323  i pP       P            13 23 59.8 +0.4
          comp=Z,365nm,1.2s,SNR=76
HLK   Haleakala         60.03 109  eP         P            13 24 03.4 +3.5
          comp=Z,604nm,1.2s
P18A  Preston Nutter    60.05  58  eP         P            13 24 01.2 +1.3
SPMN  Marine on St.     60.06  42  eP         P            13 23 57.9  -1.6
          comp=Z,677nm,1.4s
SPMN  Marine on St.     60.06  42   P         P            13 23 57.8  -1.7
          baz=339,SNR=31
PHWY  Pilot Hill        60.06  54  eP         P            13 23 59.5  -0.4
          comp=Z,519nm,1.6s
F40A  Park Falls        60.09  40   P         P            13 23 57.9  -1.8
          baz=340,SNR=87
PAGB  Antelope Grade    60.11  69  eP         P            13 24 01.6 +1.5
          comp=Z,503nm,1.2s
DAVA  Damuels           60.12 325  i pP       P            13 24 00.1   0.0
          comp=Z,393nm,1.2s,SNR=93
E42A  Champion          60.14  38   P         P            13 23 58.3  -1.8
          baz=340,SNR=63
COWI  Conover           60.16  39  eP         P            13 23 58.2  -1.9
          comp=Z,304nm,1.4s
COWI                                LR        LR
          comp=Z,108µm,21.0s
SRDT  SRDT              60.17 230   P         P            13 24 01.1 +0.5
          comp=Z,512nm,1.2s,comp=Z,14µmcomp=Z,797µm
FETA  Feichten          60.18 324  i pP       P            13 24 01.1 +0.6
          comp=Z,368nm,1.2s,SNR=87
CRES  Cresnjev          60.19 320⇑iP          P            13 24 00.4   0.0
HAU   Haudompre         60.19 328  eP         P            13 23 59.6  -0.8
HAU                                 pmax      pmax
          comp=Z,665nm,1.2s
LJU   Ljubljana         60.21 321⇑iP          P            13 24 00.4  -0.2
CGP   Cagayan de Oro    60.22 201  eP         P            13 24 02.9 +2.1
O20A  White River Ci    60.24  57  eP         P            13 24 01.3 +0.3
          comp=Z,659nm,1.4s
O20A  White River Ci    60.24  57   P         P            13 24 01.2 +0.1
          baz=336,SNR=77
CWC   Cottonwood Cre    60.25  66   P         P            13 24 02.2 +1.1
          baz=334
N23A  Red Feather La    60.28  54  eP         P            13 24 01.4   0.0
          comp=Z,434nm,1.3s
N23A  Red Feather La    60.28  54   P         P            13 24 01.4   0.0
          baz=336,SNR=95
JMB   Yambol            60.29 310  i P        P            13 24 00.7  -0.4
CUGUR Gurin_SVAS        60.33 300  i P        P            13 24 03.4 +1.8
TEKS  Tekeris           60.34 316  eP         P            13 24 01.5 +0.1
G38A  Ridgeland         60.35  42   P         P            13 23 59.7  -1.8
          baz=339,SNR=66
VISS  Visnje            60.36 321  i P        P            13 24 01.6   0.0
VISS                               e                       13 24 05.4
VISS                               ePP        PP           13 26 11.7  -2.4
VISS                               e                       13 27 34.1
VISS                               eS         S            13 32 16.4 +0.5
OZLJ  Ozalj             60.38 320   P         P            13 24 01.8 +0.2
Q16A  Castle Valley     60.38  60  eP         P            13 24 03.3 +1.2
          comp=Z,2µm,1.9s
MARD  Mardin            60.41 296  i P        P            13 24 03.8 +1.7
E43A  Lone Tree Farm    60.41  37  eP         P            13 24 00.1  -1.8
          comp=Z,389nm,1.3s
E43A  Lone Tree Farm    60.41  37   P         P            13 24 00.3  -1.6
          baz=340,SNR=45
G39A  Holcombe          60.41  41   P         P            13 24 00.2  -1.7
          baz=339,SNR=59
MSU   Marysvale         60.41  61  eP         P            13 24 03.6 +1.3
MSU   Marysvale         60.41  61  eP         P            13 24 03.6 +1.3
ECSD  EROS Data Cent    60.42  46  eP         P            13 24 00.9  -1.1
          comp=Z,551nm,1.2s
ECSD                                LR        LR
          comp=Z,56µm,19.0s
ECSD  EROS Data Cent    60.42  46   P         P            13 24 00.9  -1.1
          baz=338,SNR=250
SRU   San Rafael Swe    60.42  59  eP         P            13 24 02.7 +0.4
          comp=Z,246nm,1.0s
SRU   San Rafael Swe    60.42  59  eP         P            13 24 02.7 +0.4
E44A  Grand Marais A    60.43  36   P         P            13 24 01.1  -0.9
          baz=341,SNR=33
VES   Vestal, Richgr    60.43  68   P         P            13 24 02.5 +0.3
          baz=334,SNR=38
TPNV  Topopah Spring    60.43  65  eP         P            13 24 03.2 +0.8
          comp=Z,2µm,2.0s
TPNV  Topopah Spring    60.43  65  eP         P            13 24 03.2 +0.8
TPNV  Topopah Spring    60.43  65   P         P            13 24 03.3 +0.9
          baz=334,SNR=93
JAVS  Javornik          60.47 321  i P        P            13 24 02.0  -0.4
JAVS                               e                       13 24 05.8
JAVS                               ePP        PP           13 26 22.5 +7.4
JAVS                               e                       13 27 32.4
JAVS                               eS         S            13 32 13.3  -4.2
AKCD  Akcadag           60.50 299  i P        P            13 24 03.4 +0.6
F41A  Three Lakes       60.50  39  eP         P            13 24 00.7  -1.9
          comp=Z,1µm,2.0s
F41A  Three Lakes       60.50  39   P         P            13 24 00.8  -1.8
          baz=340,SNR=32
CEY   Cerknica          60.52 321⇑iP          P            13 24 02.0  -0.7
BOJS  Bojanci           60.54 320  eP         P            13 24 02.9 +0.2
BOJS                               i                       13 24 07.0
BOJS                               ePP        PP           13 26 23.7 +8.0
BOJS                               e                       13 27 27.4
BOJS                               eS         S            13 32 22.7 +4.5
DOB   Doboj             60.54 318  eP         P            13 24 02.8   0.0
DAC   Darwin (Calif)    60.57  66  eP         P            13 24 05.5 +2.1
          comp=Z,466nm,1.5s
DAC   Darwin (Calif)    60.57  66  eP         P            13 24 05.5 +2.1
SMMC  Simmler           60.58  69   P         P            13 24 04.8 +1.5
          baz=334,SNR=31
D46A  Sault St. Mari    60.59  35   P         P            13 24 01.9  -1.3
          baz=341,SNR=77
BR131 Keskin Array S    60.61 303   P         P            13 24 04.2 +0.6
          SNR=131
BRTR  Keskin Array B    60.61 303  i P        P            13 24 04.0 +0.5
BRTR                                pmax      pmax
          comp=Z,162nm,0.9s
BRTR  Keskin Array B    60.61 303   P         P            13 24 03.0  -0.5
          comp=Z,161nm,0.9s,baz=46,slow=3.8,SNR=154
BRTR                                PKPPKP    P'P'df       13 53 23.4  -4.9
          comp=Z,2.3nm,1.0s,baz=70,slow=1.4,SNR=4.7
BRTR                                LR        LR           13 54 52.4
          comp=Z,36µm,18.0s,baz=24,slow=41
JRS   Jersey            60.62 334⇑eP          P            13 24 02.9  -0.4
NGP   Nagpur            60.63 254⇑eP          P            13 24 03.7   0.0
NGP                                eS         S            13 32 19.6  -0.3
NGP                                ex         x            13 54 24.0
          comp=Z,57µm,14.6s
DIVS  Divibare          60.63 316  eP         P            13 24 02.5  -1.1
          comp=Z,181nm,1.1s
DIVS  Divibare          60.63 316⇑iP          P            13 24 03.1  -0.5
D47A  Chapleau          60.64  34   P         P            13 24 02.4  -1.1
          baz=342,SNR=75
JSA   Saint Aubin       60.64 334⇑eP          P            13 24 03.0  -0.3
JSA                                 IAmb      IAmb         13 24 06.1
          comp=Z,763nm,1.1s
JSA                                 IAMs_20   IAMs_20      13 58 06.1
          comp=Z,61µm,12.6s
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FURC  Furnace Creek,    60.65  65   P         P            13 24 05.1 +1.5
          baz=334,SNR=104
FUORN Ofenpass-Fuorn    60.67 324  eP         P            13 24 04.6 +0.7
          comp=Z,3µm,1.9s
G40A  Rib Lake          60.67  40  eP         P            13 24 01.3  -2.4
          comp=Z,690nm,1.2s
G40A  Rib Lake          60.67  40   P         P            13 24 02.3  -1.4
          baz=340,SNR=145
MHA   Mahukona          60.68 109  eP         P            13 24 06.0 +2.1
MHA   Mahukona          60.68 109  eP         P            13 24 06.1 +2.1
H38A  Maiden Rock       60.70  42   P         P            13 24 02.4  -1.5
          baz=339,SNR=20
F42A  Maple Grove Fa    60.72  38   P         P            13 24 02.4  -1.7
          baz=340,SNR=8.0
ELBS  KAHRAMANMARAS_60.73 300  i P        P            13 24 05.7 +1.4
ANTO  Ankara            60.75 304  eP         P            13 24 05.5 +1.1
          comp=Z,789nm,1.2s
ANTO                                LR        LR
          comp=Z,54µm,19.0s
ANTO  Ankara            60.75 304⇓iP          P            13 24 05.5 +1.1
ANTO  Ankara            60.75 304  eP         P            13 24 05.5 +1.1
ANTO  Ankara            60.75 304   P         P            13 24 05.4 +1.1
          SNR=143
ANTO                                P         P            13 24 05.4 +1.1
          SNR=143
ANTO                                P         P            13 24 05.4 +1.1
          SNR=143
BLY   Banja Luka        60.76 318  eP         P            13 24 05.4 +1.1
          comp=Z,238nm,1.4s
BLY   Banja Luka        60.76 318⇑iP          P            13 24 03.7  -0.6
BLY   Banja Luka        60.76 318⇑iP          P            13 24 03.8  -0.6
FLN   La Foliniere      60.77 333  eP         P            13 24 03.1  -1.2
FLN                                 pmax      pmax
          comp=Z,568nm,1.0s
VLDQ  Val d'Or          60.78  30  eP         P            13 24 02.0  -2.4
          comp=Z,830nm,1.8s
MPMC  Manual Prospec    60.80  66   P         P            13 24 06.2 +1.3
          baz=334,SNR=108
D48A  Paudash Townsh    60.80  33   P         P            13 24 03.3  -1.3
          baz=342,SNR=25
D49A  Beulah Townshi    60.81  33   P         P            13 24 03.6  -1.0
          baz=342,SNR=36
ISA   Isabella, Lake    60.81  67  eP         P            13 24 05.1 +0.3
          comp=Z,854nm,1.9s
ISA   Isabella, Lake    60.81  67  eP         P            13 24 05.1 +0.3
ISA   Isabella, Lake    60.81  67   P         P            13 24 05.3 +0.4
          baz=334,SNR=56
MTPU  Mount Pierson     60.84  61  eP         P            13 24 07.0 +1.6
          comp=Z,1µm,1.5s
E45A  Wooded Hills,     60.84  36   P         P            13 24 03.3  -1.6
          baz=341,SNR=28
LDF   La Druitiere      60.87 333  eP         P            13 24 03.8  -1.1
LDF                                 pmax      pmax
          comp=Z,615nm,1.0s
F43A  Flat Rock, Esc    60.88  38   P         P            13 24 03.5  -1.5
          baz=340,SNR=38
CCUT  Cedar City        60.88  62  eP         P            13 24 06.7 +1.1
          comp=Z,172nm,1.2s
HPAH  Hawaii Prepara    60.90 109  eP         P            13 24 06.9 +1.3
          comp=Z,329nm,1.0s
PGB   Panagyurishte     60.91 312  i P        P            13 24 05.8 +0.4
F44A  Big Bay de Noc    60.92  37   P         P            13 24 03.8  -1.5
          baz=341,SNR=22
HAPS  Han Pijesak,Bl    60.92 317  eP         P            13 24 04.8  -0.7
SZCU  Shurtz Canyon     60.94  62  eP         P            13 24 06.9 +1.0
          comp=Z,2µm,1.9s
H39A  Augusta           60.95  41   P         P            13 24 04.2  -1.4
          baz=339,SNR=35
CLF   Chambon-Foret     60.98 331  eP         P            13 24 06.1 +0.4
          comp=Z,1µm,1.1s
G41A  Antigo            60.98  39   P         P            13 24 04.0  -1.8
          baz=340,SNR=9.2
BBLS  Lazi&#263;i       61.01 316⇑iP          P            13 24 06.1   0.0
TUE   Stuetta           61.01 325  eP         P            13 24 06.6 +0.4
          comp=Z,1µm,1.4s
PATY  Pattaya           61.02 228   P         P            13 24 07.6 +1.3
          comp=Z,137nm,1.1s,comp=Z,3µm
PKM   Mcpherson Peak    61.03  69   P         P            13 24 08.0 +1.5
          baz=334,SNR=44
E46A  Sault Ste Mari    61.03  35   P         P            13 24 04.5  -1.6
          baz=341,SNR=53
VTS   Vitosha           61.11 313  eP         P            13 24 06.4  -0.5
VTS   Vitosha           61.11 313⇓iP          P            13 24 07.0 +0.1
VTS   Vitosha           61.11 313   P         P            13 24 05.6  -1.3
VTS   Vitosha           61.11 313  eP         P            13 24 06.4  -0.5
VTS   Vitosha           61.11 313  i P        P            13 24 06.2  -0.7
ATAB  Bozova            61.12 298  i P        P            13 24 08.5 +1.6
G42A  Mountain          61.13  39  eP         P            13 24 04.8  -2.0
          comp=Z,411nm,1.4s
G42A  Mountain          61.13  39   P         P            13 24 05.1  -1.7
          baz=340,SNR=37
SANL  SANLIURFA_Merk 61.15 298  i P        P            13 24 08.1 +1.0
ARVC  Arvin             61.16  68   P         P            13 24 07.5 +0.3
          baz=334,SNR=9.3
PLD   Plovdiv           61.17 311  i P        P            13 24 01.1  -6.0
HUH   Hualalai          61.17 109  eP         P            13 24 10.3 +2.6
          comp=Z,673nm,1.4s
E47A  Iron Bridge       61.17  35   P         P            13 24 05.6  -1.5
          baz=342,SNR=74
SHPR  Sheep Range       61.21  64  eP         P            13 24 08.5 +0.8
          comp=Z,1µm,1.8s
POHA  Pohakuloa         61.21 109  eP         P            13 24 09.1 +1.1
          comp=Z,467nm,1.0s
POHA                                LR        LR
          comp=Z,25µm,21.0s
D50A  G1974 Best Tow    61.22  32   P         P            13 24 06.2  -1.2
          baz=343,SNR=58
H40A  Chili             61.23  41   P         P            13 24 05.9  -1.6
          baz=340,SNR=70
KHLU  Kahalu`u          61.23 109  eP         P            13 24 09.9 +2.0
          comp=Z,734nm,1.4s
LRMC  Laurel Mtn Rad    61.25  67   P         P            13 24 09.1 +1.2
          baz=335,SNR=84
G43A  Wallace           61.30  38  eP         P            13 24 06.1  -1.8
          comp=Z,568nm,1.4s
G43A  Wallace           61.30  38   P         P            13 24 06.3  -1.6
          baz=340,SNR=42
PKCU  Pink Cliffs       61.34  61  eP         P            13 24 10.6 +1.8
          comp=Z,5µm,2.0s
SHOC  Shoshone, Teco    61.37  65   P         P            13 24 10.2 +1.6
          baz=335,SNR=70
HMH   Humu‘ula Sheep    61.37 109  eP         P            13 24 10.5 +1.4
          comp=Z,594nm,1.2s
ISCO  Idaho Springs     61.38  55  eP         P            13 24 08.8  -0.1
          comp=Z,340nm,1.4s
ISCO                                LR        LR
          comp=Z,95µm,19.0s
ISCO  Idaho Springs     61.38  55  eP         P            13 24 08.8  -0.1
ISCO  Idaho Springs     61.38  55   P         P            13 24 09.7 +0.8
          baz=336,SNR=118
D51A  Lot 18 Range I    61.38  31   P         P            13 24 07.2  -1.3
          baz=343,SNR=52
E48A  Lockeyer          61.39  34   P         P            13 24 07.3  -1.3
          baz=342
PHET  Kaeng Krachan     61.39 229   P         P            13 24 09.9 +1.1
          comp=Z,183nm,1.0s,comp=Z,1µm
LOR   Lormes            61.40 329  eP         P            13 24 07.4  -1.2
LOR                                 pmax      pmax
          comp=Z,1µm,1.2s
MLOA  Mauna Loa Obse    61.40 109  eP         P            13 24 11.3 +1.9
          comp=Z,461nm,1.0s
F45A  CMU Biological    61.40  37   P         P            13 24 07.0  -1.6
          baz=341,SNR=24
LCMT  Little Creek M    61.41  62  eP         P            13 24 10.1 +1.1
          comp=Z,1µm,1.9s
H41A  Junction City     61.42  40  eP         P            13 24 06.9  -1.9
          comp=Z,489nm,1.4s
H41A  Junction City     61.42  40   P         P            13 24 07.2  -1.6
          baz=340,SNR=75
OGNE  Ogallala          61.43  51  eP         P            13 24 08.6  -0.4
          comp=Z,2µm,1.6s
OGNE                                LR        LR
          comp=Z,72µm,19.0s
OGNE  Ogallala          61.43  51   P         P            13 24 08.6  -0.4
          baz=337,SNR=39
PV21  Cone Mtn., Par    61.43  58  eP         P            13 24 09.8 +0.6
          comp=Z,944nm,1.2s
PV09  Paradox Valley    61.43  58  eP         P            13 24 09.9 +0.6
MWH   Moku‘aweowe       61.44 109  eP         P            13 24 12.8 +3.0
          comp=Z,524nm,1.2s
SBC   Santa Barbara     61.46  69   P         P            13 24 10.3 +1.1
          baz=334
GZT   Gaziantep         61.47 299  i P        P            13 24 11.5 +2.1
DAV   Davao City (W)    61.47 199⇑eP          P            13 24 10.9 +1.5
DAV   Davao City (W)    61.47 199   LR        LR           13 50 12.1
          comp=Z,54µm,21.6s,baz=5.5,slow=36
DAV   Davao City (W)    61.47 199  eP         P            13 24 09.2  -0.1
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F46A  Macinaw City C    61.49  36   P         P            13 24 07.7  -1.5
          baz=341,SNR=19
CTBH  Cotabato--PC H    61.49 201⇓iP          P            13 24 10.3 +0.8
MLH   Mauna Loa         61.51 109  eP         P            13 24 11.3 +1.4
          comp=Z,476nm,1.0s
MLH   Mauna Loa         61.51 109  eP         P            13 24 11.3 +1.4
PLE   Pljevlja          61.51 316⇑iP          P            13 24 09.9 +0.4
SMCO  Snowmass          61.51  56  eP         P            13 24 09.8  -0.2
          comp=Z,625nm,1.4s
PV23  Carpenter Ridg    61.52  58  eP         P            13 24 10.4 +0.6
          comp=Z,2µm,1.5s
NVLJ  Novalja           61.52 320   P         P            13 24 08.8  -0.6
SURC  SANLIURFA_SURC61.54 298  i P        P            13 24 10.8 +1.1
KNB   Kanab             61.55  62  eP         P            13 24 11.5 +1.5
          comp=Z,3µm,1.7s
KNB   Kanab             61.55  62  eP         P            13 24 11.5 +1.5
SENIN Lac Senin/Sane    61.56 326  eP         P            13 24 09.8  -0.1
          comp=Z,480nm,1.2s
PV10  Paradox Valley    61.58  58  eP         P            13 24 11.5 +1.3
          comp=Z,2µm,1.7s
PV14  Lion Creek, Pa    61.58  58  eP         P            13 24 10.8 +0.6
          comp=Z,1µm,1.4s
KCP   Kidapawan         61.59 200⇑iP          P            13 24 11.0 +0.7
AIN   Ainahou           61.59 109  eP         P            13 24 12.4 +1.9
          comp=Z,1µm,1.5s
PV04  Paradox Valley    61.60  58  eP         P            13 24 11.0 +0.7
          comp=Z,2µm,1.7s
PV20  West Nyswonger    61.63  58  eP         P            13 24 11.3 +0.8
          comp=Z,1µm,1.4s
PV07  Paradox Valley    61.65  58  eP         P            13 24 11.2 +0.5
          comp=Z,2µm,1.9s
ROSF  Rostrenen         61.65 335  eP         P            13 24 09.4  -0.9
ROSF                                pmax      pmax
          comp=Z,736nm,1.1s
KHU   Kahuku            61.65 109  eP         P            13 24 12.1 +1.2
          comp=Z,1µm,1.3s
KHU   Kahuku            61.65 109  eP         P            13 24 12.1 +1.2
PV19  Morning Glory     61.66  58  eP         P            13 24 10.7   0.0
          comp=Z,2µm,1.8s
OSI   Osito Audit: C    61.66  68  eP         P            13 24 12.5 +1.9
          comp=Z,2µm,1.9s
OSI   Osito Audit: C    61.66  68   P         P            13 24 11.9 +1.3
          baz=335,SNR=16
I39A  Houston           61.66  42  eP         P            13 24 08.5  -2.0
          comp=Z,313nm,0.8s
SSF   Saint Saulge      61.66 329  eP         P            13 24 09.3  -1.1
SSF                                 pmax      pmax
          comp=Z,672nm,1.2s
PV16  Nyswonger Mesa    61.67  58  eP         P            13 24 11.4 +0.5
          comp=Z,2µm,1.8s
PUH   Pauahi            61.68 109  eP         P            13 24 12.2 +1.3
          comp=Z,630nm,1.0s
EDW2  Edwards Air Fo    61.68  67   P         P            13 24 11.9 +1.2
          baz=335,SNR=99
D52A  ZEK Kipawa Sen    61.69  31   P         P            13 24 09.2  -1.3
          baz=344,SNR=128
PV17  East Wray Mesa    61.69  58  eP         P            13 24 11.4 +0.5
          comp=Z,3µm,1.9s
PV11  David Mesa, Pa    61.70  58  eP         P            13 24 11.6 +0.5
          comp=Z,1µm,1.4s
PV12  Saucer Basin,     61.71  58  eP         P            13 24 11.7 +0.6
          comp=Z,2µm,1.9s
HLP   Hilina Pali       61.72 109  eP         P            13 24 13.5 +2.4
          comp=Z,2µm,1.7s
GSC   Goldstone, Bar    61.72  66  eP         P            13 24 12.1 +1.1
          comp=Z,2µm,2.0s
GSC   Goldstone, Bar    61.72  66  eP         P            13 24 12.1 +1.1
GSC   Goldstone, Bar    61.72  66   P         P            13 24 12.2 +1.1
          baz=335,SNR=72
E50A  Wahnapitae        61.74  33   P         P            13 24 09.7  -1.3
          baz=343,SNR=17
PV03  Paradox Valley    61.75  58  eP         P            13 24 11.8 +0.5
          comp=Z,2µm,1.8s
PV15  Paradox Valley    61.79  58  eP         P            13 24 12.1 +0.4
          comp=Z,652nm,1.2s
H42A  Shiocton          61.80  39   P         P            13 24 09.6  -1.7
          baz=340,SNR=17
IVA   Berane            61.80 315⇑iP          P            13 24 11.6 +0.1
RDO   Rodhopi           61.81 310  eP         P            13 24 09.3  -2.1
RDO   Rodhopi           61.81 310   P         P            13 24 09.3  -2.1
PV05  Paradox Valley    61.83  58  eP         P            13 24 12.4 +0.5
          comp=Z,765nm,1.2s
PV02  Paradox Valley    61.83  58  eP         P            13 24 12.5 +0.6
          comp=Z,294nm,1.0s
PV13  Radium Mtn., P    61.84  58  eP         P            13 24 12.5 +0.5
          comp=Z,2µm,2.0s
KKB   Krupnik           61.85 313  i P        P            13 24 11.8 +0.1
D54A  Lac Fusel, La     61.85  29   P         P            13 24 10.2  -1.4
          baz=344,SNR=41
I40A  Norwalk           61.86  41   P         P            13 24 10.4  -1.4
          baz=340,SNR=67
ALN   Alexandroupoli    61.89 310   P         P            13 24 11.2  -0.7
ALN   Alexandroupoli    61.89 310   P         P            13 24 11.2  -0.7
ALN   Alexandroupoli    61.89 310  eP         P            13 24 12.7 +0.8
I41A  Arkdale           61.89  40   P         P            13 24 10.5  -1.5
          baz=340,SNR=46
SCZ2  Santa Cruz Isl    61.89  69   P         P            13 24 13.2 +1.0
          baz=335,SNR=11
E51A  G1948 Merrick     61.89  32   P         P            13 24 10.5  -1.4
          baz=343,SNR=38
G46A  Petoskey          61.90  36   P         P            13 24 10.4  -1.5
          baz=341,SNR=23
TUQ   Turquoise Moun    61.91  65   P         P            13 24 13.9 +1.5
          baz=335,SNR=45
F48A  Evansville        61.91  34   P         P            13 24 10.4  -1.7
          baz=342,SNR=16
KOME  Kolasin           61.92 316⇑iP          P            13 24 12.0  -0.3
MMB   Musomiste         61.92 312  i P        P            13 24 13.0 +0.7
PV01  Paradox Valley    61.95  58  eP         P            13 24 12.9 +0.1
          comp=Z,904nm,1.5s
AVF   Avril sur Loir    61.95 330  eP         P            13 24 11.2  -1.1
AVF                                 pmax      pmax
          comp=Z,567nm,1.1s
G45A  Suttons Bay       61.98  37   P         P            13 24 10.9  -1.6
          baz=341,SNR=15
BLG   Laguna Peak, P    61.99  68   P         P            13 24 13.6 +0.8
          baz=335,SNR=11
SMF   Signal de Mont    62.00 329  eP         P            13 24 11.3  -1.4
SMF                                 pmax      pmax
          comp=Z,460nm,1.2s
H43A  Windswept, Lux    62.02  39  eP         P            13 24 11.4  -1.4
          comp=Z,940nm,1.7s
H43A  Windswept, Lux    62.02  39   P         P            13 24 11.1  -1.7
          baz=341,SNR=23
PVY   Plav              62.04 315⇑iP          P            13 24 12.4  -0.7
QUIF  Quistinic         62.04 335  eP         P            13 24 11.1  -1.8
QUIF                                pmax      pmax
          comp=Z,1µm,1.2s
RRX   Edison Barstow    62.04  66   P         P            13 24 14.2 +1.1
          baz=335
F49A  Sandfield         62.10  34   P         P            13 24 11.9  -1.5
          baz=342,SNR=20
J39A  Decorah           62.10  42   P         P            13 24 11.4  -2.0
          baz=340,SNR=41
NVR   Nevrokopi         62.10 312   P         P            13 24 12.2  -1.3
NVR   Nevrokopi         62.10 312   P         P            13 24 12.2  -1.3
DECC  Green Verdugo     62.12  68   P         P            13 24 14.5 +0.8
          baz=335
BGNE  Belgrade          62.14  48  eP         P            13 24 12.8  -0.9
          comp=Z,753nm,1.3s
BGNE  Belgrade          62.14  48   P         P            13 24 12.8  -0.9
          baz=338,SNR=31
NKME  Niksic            62.15 316⇑iP          P            13 24 13.0  -0.8
KAVA  Kavala            62.24 311   P         P            13 24 12.7  -1.6
MWC   Mount Wilson      62.25  68  eP         P            13 24 15.8 +1.1
          comp=Z,2µm,1.8s
MWC   Mount Wilson      62.25  68  eP         P            13 24 15.8 +1.1
PASC  Pasadena Art C    62.25  68  eP         P            13 24 16.0 +1.5
          comp=Z,1µm,2.0s
BHJ   Bhuj              62.26 264  eP         P            13 24 12.5  -2.2
BHJ                                 IAmb      IAmb         13 24 23.3
          comp=Z,124µm,6.2s
U15A  North Rim         62.26  62  eP         P            13 24 15.6 +0.7
          comp=Z,847nm,1.8s
G47A  Hillman           62.26  35   P         P            13 24 12.4  -2.0
          baz=342,SNR=12
STIP  Stip              62.26 313  i P        P            13 24 13.0  -1.5
BGF   Bois d'Agland     62.28 330  eP         P            13 24 13.4  -1.1
BGF                                 pmax      pmax
          comp=Z,313nm,1.1s
PAS   Pasadena          62.28  68   P         P            13 24 16.0 +1.3
H45A  Beulah            62.28  37   P         P            13 24 12.9  -1.6
          baz=341,SNR=7.7
I42A  Draeger Farm,     62.29  40  eP         P            13 24 12.9  -1.7
          comp=Z,1µm,1.6s
I42A  Draeger Farm,     62.29  40   P         P            13 24 12.9  -1.7
          baz=340,SNR=62
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Q24A	**Divide**	**62.29**	**55**	P	**P**	**13 24 15.3**	**+0.2**
	baz=336,SNR=44						
J40A	**Soldiers Grove**	**62.29**	**41**	P	**P**	**13 24 13.0**	**-1.7**
	baz=340,SNR=53						
E52A	**Mattawa**	**62.30**	**31**	P	**P**	**13 24 13.3**	**-1.4**
	baz=344,SNR=38						
HEC	**Hector,Ludlow**	**62.31**	**66**	P	**P**	**13 24 16.5**	**+1.5**
	baz=335,SNR=38						
LATQ	**La Tuque**	**62.33**	**26**	P	**P**	**13 24 13.5**	**-1.3**
	baz=346,SNR=26						
TREB	**Trebinje**	**62.35**	**317**	⇑*i*P	**P**	**13 24 14.7**	**-0.4**
BFSC	**Mount Baldy Ra**	**62.38**	**67**	P	**P**	**13 24 16.9**	**+1.3**
	baz=335,SNR=87						
PDG	**Podgorica**	**62.38**	**316**	⇓*i*P	**P**	**13 24 15.1**	**-0.1**
PDG	**Podgorica**	**62.38**	**316**	⇑*i*P	**P**	**13 24 14.6**	**-0.6**
STON	**Ston**	**62.38**	**317**	P	**P**	**13 24 13.7**	**-1.5**
TTG	**Podgorica**	**62.38**	**316**	⇑*i*P	**P**	**13 24 14.8**	**-0.4**
TTG	**Podgorica**	**62.38**	**316**	*e*P	**P**	**13 24 14.6**	**-0.6**
	comp=Z,338nm,1.3s						
TTG	**Podgorica**	**62.38**	**316**	*e*P	**P**	**13 24 14.6**	**-0.6**
F51A	**Arnstein**	**62.39**	**32**	P	**P**	**13 24 13.7**	**-1.6**
	baz=343,SNR=30						
SRS	**Serrai**	**62.40**	**312**	*e*P	**P**	**13 24 13.6**	**-1.8**
SRS	**Serrai**	**62.40**	**312**	P	**P**	**13 24 13.6**	**-1.8**
SRS	**Serrai**	**62.40**	**312**	*e*P	**P**	**13 24 13.6**	**-1.8**
GLMI	**Grayling**	**62.42**	**36**	PFAKE		13 24 30.0	+14
GLMI				LR	LR		
	comp=Z,77µm,19.0s						
GLMI	**Grayling**	**62.42**	**36**	P	**P**	**13 24 14.2**	**-1.3**
	baz=342,SNR=9.6						
SMTH	**Samothraki Isl**	**62.43**	**310**	*e*P	**P**	**13 24 14.1**	**-1.5**
SMTH	**Samothraki Isl**	**62.43**	**310**	P	**P**	**13 24 14.1**	**-1.5**
I43A	**Langenfeld Bro**	**62.48**	**39**	P	**P**	**13 24 14.4**	**-1.5**
	baz=341,SNR=28						
LPL	**La Plagne**	**62.48**	**327**	*e*P	**P**	**13 24 15.9**	**-0.3**
LPL				pmax	pmax		
	comp=Z,655nm,1.1s						
LPG	**La Plagne**	**62.50**	**327**	*e*P	**P**	**13 24 16.2**	**-0.2**
LPG				pmax	pmax		
	comp=Z,1µm,1.2s						
VAY	**Valandovo**	**62.50**	**313**	*i* P	**P**	**13 24 16.2**	**+0.2**
J41A	**Loganville**	**62.51**	**41**	P	**P**	**13 24 14.4**	**-1.7**
	baz=340,SNR=67						
LDFC	**Landfair**	**62.52**	**65**	*e*P	**P**	**13 24 17.3**	**+0.9**
	comp=Z,512nm,1.1s						
THAS	**Thassos island**	**62.54**	**311**	P	**P**	**13 24 15.5**	**-0.8**
KNT	**Kendrikon**	**62.55**	**312**	P	**P**	**13 24 15.0**	**-1.5**
KNT	**Kendrikon**	**62.55**	**312**	P	**P**	**13 24 15.0**	**-1.5**
KNT	**Kendrikon**	**62.55**	**312**	P	**P**	**13 24 15.0**	**-1.5**
DRLN	**Deer Lake**	**62.56**	**15**	*e*P	**P**	**13 24 15.8**	**-0.5**
	comp=Z,249nm,1.0s						
H46A	**Fife Lake**	**62.56**	**37**	P	**P**	**13 24 14.4**	**-2.0**
	baz=341,SNR=7.6						
HCY	**Herceg Novi**	**62.57**	**316**	⇑*i*P	**P**	**13 24 16.1**	**-0.4**
HCY	**Herceg Novi**	**62.57**	**316**	*e*P	**P**	**13 24 15.2**	**-1.3**
GMRC	**Granite Mounta**	**62.59**	**65**	P	**P**	**13 24 17.9**	**+0.9**
	baz=335,SNR=118						
BUM	**Brajici-Budva**	**62.60**	**316**	⇑*i*P	**P**	**13 24 15.9**	**-0.9**
SNCC	**San Nicolas Is**	**62.60**	**69**	P	**P**	**13 24 17.9**	**+1.0**
	baz=335						
BBRC	**Big Bear Solar**	**62.62**	**67**	P	**P**	**13 24 18.3**	**+1.1**
	baz=335,SNR=32						
FMP	**Fort Macarthur**	**62.63**	**68**	P	**P**	**13 24 17.8**	**+0.8**
	baz=335						
DRME	**Dracevica, Mon**	**62.63**	**316**	⇑*i*P	**P**	**13 24 16.4**	**-0.5**
DRME	**Dracevica, Mon**	**62.63**	**316**	⇑*i*P	**P**	**13 24 16.5**	**-0.5**
F52A	**Sundridge**	**62.63**	**32**	P	**P**	**13 24 15.7**	**-1.3**
	baz=343,SNR=49						
K39A	**Oelwein**	**62.64**	**43**	P	**P**	**13 24 14.7**	**-2.3**
	baz=340,SNR=53						
TCF	**Toulx Ste Croi**	**62.66**	**330**	*e*P	**P**	**13 24 16.1**	**-1.0**
TCF				pmax	pmax		
	comp=Z,568nm,1.2s						
TOBO	**Tobermory, Bru**	**62.72**	**34**	P	**P**	**13 24 16.0**	**-1.4**
	baz=343,SNR=14						
H47A	**Mio**	**62.73**	**36**	P	**P**	**13 24 16.0**	**-1.5**
	baz=342,SNR=6.2						
ALGO	**Algonquin Park**	**62.74**	**31**	P	**P**	**13 24 15.9**	**-1.7**
	baz=344,SNR=54						
SOH	**Sokhos**	**62.74**	**312**	P	**P**	**13 24 16.0**	**-1.7**
PHP	**Peshkopia**	**62.75**	**315**	P	**P**	**13 24 16.4**	**-1.4**
J42A	**Columbus**	**62.77**	**40**	P	**P**	**13 24 15.8**	**-2.0**
	baz=340,SNR=59						
MFF	**Saint Martin d**	**62.79**	**332**	*e*P	**P**	**13 24 17.3**	**-0.6**
MFF				pmax	pmax		
	comp=Z,2µm,1.8s						
I45A	**Fountain**	**62.79**	**38**	P	**P**	**13 24 16.4**	**-1.6**
	baz=341,SNR=6.6						
MVCO	**Mesa Verde**	**62.81**	**58**	*e*P	**P**	**13 24 18.9**	**+0.4**
	comp=Z,268nm,1.3s						
MVCO				LR	LR		
	comp=Z,41µm,21.0s						
MVCO	**Mesa Verde**	**62.81**	**58**	P	**P**	**13 24 18.7**	**+0.2**
	baz=336,SNR=46						
ULC	**Ulcinj**	**62.82**	**316**	⇑*i*P	**P**	**13 24 18.3**	**+0.1**
KRUS	**Krusevo**	**62.83**	**314**	*i* P	**P**	**13 24 18.3**	**0.0**
H48A	**Harrisville**	**62.83**	**35**	P	**P**	**13 24 16.6**	**-1.6**
	baz=342,SNR=16						
K40A	**Colesburg**	**62.84**	**42**	P	**P**	**13 24 16.2**	**-2.1**
	baz=340,SNR=114						
CIS	**Catalina Islan**	**62.86**	**68**	P	**P**	**13 24 18.9**	**+0.2**
	baz=335,SNR=17						
S22A	**4UR Ranch, Cre**	**62.87**	**57**	*e*P	**P**	**13 24 19.5**	**+0.6**
	comp=Z,578nm,1.7s						
S22A	**4UR Ranch, Cre**	**62.87**	**57**	P	**P**	**13 24 19.2**	**+0.3**
	baz=336,SNR=86						
JFWS	**Jewell Farm**	**62.87**	**41**	*e*P	**P**	**13 24 16.6**	**-1.9**
	comp=Z,529nm,1.4s						
JFWS				LR	LR		
	comp=Z,64µm,19.0s						
JFWS	**Jewell Farm**	**62.87**	**41**	*e*P	**P**	**13 24 16.6**	**-1.9**
JFWS	**Jewell Farm**	**62.87**	**41**	P	**P**	**13 24 16.4**	**-2.1**
	baz=340,SNR=46						
GRG	**Griva**	**62.88**	**313**	P	**P**	**13 24 17.4**	**-1.3**
J43A	**Natural Harves**	**62.89**	**40**	P	**P**	**13 24 16.8**	**-1.8**
	baz=341,SNR=44						
W13A	**Hualapai Mount**	**62.92**	**64**	*e*P	**P**	**13 24 19.8**	**+0.5**
	comp=Z,1µm,1.8s						
BNI	**Bardonecchia**	**62.94**	**326**	*e*P	**P**	**13 24 19.4**	**+0.3**
	comp=Z,346nm,1.0s						
BNI	**Bardonecchia**	**62.94**	**326**	*e*P	**P**	**13 24 19.5**	**+0.3**
BUKO	**Buck Lake**	**62.96**	**32**	P	**P**	**13 24 17.5**	**-1.6**
	baz=343,SNR=44						
NEE2	**Needles Airpor**	**62.97**	**64**	P	**P**	**13 24 20.0**	**+0.8**
	baz=335						
KDM	**Kudat**	**63.00**	**209**	P	**P**	**13 24 20.8**	**+1.2**
HORT	**Hortiatis**	**63.02**	**312**	P	**P**	**13 24 18.8**	**-0.8**
HORT	**Hortiatis**	**63.02**	**312**	P	**P**	**13 24 18.8**	**-0.8**
KSCO	**Kaye Shedlock'**	**63.02**	**53**	*e*P	**P**	**13 24 19.4**	**-0.3**
	comp=Z,557nm,1.1s						
KSCO	**Kaye Shedlock'**	**63.02**	**53**	P	**P**	**13 24 19.6**	**-0.1**
	baz=337,SNR=27						
SCIA	**State Center**	**63.04**	**44**	*e*P	**P**	**13 24 18.8**	**-0.9**
	comp=Z,446nm,1.0s						
SCIA				LR	LR		
	comp=Z,48µm,19.0s						
SCIA	**State Center**	**63.04**	**44**	P	**P**	**13 24 18.4**	**-1.3**
	baz=339,SNR=8.5						
LIA	**Limnos Island**	**63.06**	**310**	P	**P**	**13 24 18.3**	**-1.5**
LIA	**Limnos Island**	**63.06**	**310**	P	**P**	**13 24 18.3**	**-1.5**
I46A	**Reed City**	**63.07**	**37**	P	**P**	**13 24 18.1**	**-1.7**
	baz=342,SNR=7.2						
MURC	**Murrieta**	**63.12**	**67**	P	**P**	**13 24 21.0**	**+0.7**
	baz=335,SNR=19						
PLG	**Polygyros**	**63.13**	**312**	P	**P**	**13 24 18.3**	**-2.0**
PLG	**Polygyros**	**63.13**	**312**	P	**P**	**13 24 18.3**	**-2.0**
PLG	**Polygyros**	**63.13**	**312**	P	**P**	**13 24 18.3**	**-2.0**
TRQ	**Mont Tremblant**	**63.14**	**28**	*e*P	**P**	**13 24 19.1**	**-1.3**
K41A	**Shullsburg**	**63.14**	**41**	P	**P**	**13 24 18.2**	**-2.1**
	baz=340,SNR=49						
L39A	**Vinton**	**63.16**	**43**	P	**P**	**13 24 18.2**	**-2.2**
	baz=340,SNR=80						
PEMO	**Pembroke**	**63.16**	**30**	P	**P**	**13 24 18.5**	**-1.9**
	baz=344,SNR=50						
SSB	**Saint Sauveur**	**63.17**	**328**	*e*P	**P**	**13 24 20.2**	**-0.3**
	comp=Z,320nm,1.1s						
SSB	**Saint Sauveur**	**63.17**	**328**	*e*P	**P**	**13 24 20.2**	**-0.3**
SSB				pmax	pmax		
	comp=Z,320nm,1.1s						
BELC	**Belle Mtn. Jos**	**63.18**	**66**	P	**P**	**13 24 21.6**	**+0.7**
	baz=335,SNR=42						
F55A	**Otter Lake**	**63.18**	**30**	P	**P**	**13 24 18.9**	**-1.6**
	baz=344,SNR=25						
OHR	**Ohrid**	**63.19**	**314**	*i* P	**P**	**13 24 19.9**	**-0.8**
SCI2	**San Clemente I**	**63.20**	**69**	P	**P**	**13 24 21.5**	**+0.7**
	baz=335,SNR=13						
I47A	**Gladwin**	**63.21**	**36**	P	**P**	**13 24 19.5**	**-1.3**
	baz=342,SNR=13						
K42A	**Prairie Point,**	**63.22**	**41**	P	**P**	**13 24 19.1**	**-1.8**
	baz=340,SNR=40						
TIR	**Tirane**	**63.23**	**315**	P	**P**	**13 24 18.8**	**-2.1**
TIR	**Tirane**	**63.23**	**315**	⇑*i*P	**P**	**13 24 20.8**	**-0.1**
TIR	**Tirane**	**63.23**	**315**	P	**P**	**13 24 18.8**	**-2.1**
TIR	**Tirane**	**63.23**	**315**	*e*P	**P**	**13 24 20.8**	**-0.1**
MBDF	**Montbardon**	**63.23**	**326**	*e*P	**P**	**13 24 19.4**	**-1.7**
MBDF				pmax	pmax		
	comp=Z,434nm,1.4s						
I48A	**Sherman Twp**	**63.23**	**36**	P	**P**	**13 24 19.6**	**-1.3**
	baz=342,SNR=47						
ORIF	**Oris-en-Rattie**	**63.23**	**327**	*e*P	**P**	**13 24 20.6**	**-0.4**
ORIF				pmax	pmax		
	comp=Z,939nm,1.1s						
SDCO	**Great Sand Dun**	**63.29**	**55**	*e*P	**P**	**13 24 21.1**	**-0.7**
	comp=Z,602nm,1.4s						
SDCO				LR	LR		
	comp=Z,43µm,19.0s						
SDCO	**Great Sand Dun**	**63.29**	**55**	P	**P**	**13 24 21.8**	**+0.1**
	baz=337,SNR=203						
J45A	**Montague**	**63.33**	**38**	P	**P**	**13 24 19.7**	**-1.8**
	baz=341						
IRM	**Iron Mountain**	**63.34**	**65**	P	**P**	**13 24 23.1**	**+1.3**
	baz=335,SNR=208						
PRK	**Paraskevi**	**63.34**	**309**	P	**P**	**13 24 20.7**	**-1.0**
PRK	**Paraskevi**	**63.34**	**309**	P	**P**	**13 24 20.7**	**-1.0**
PRK	**Paraskevi**	**63.34**	**309**	P	**P**	**13 24 20.7**	**-1.0**
ISP	**Isparta**	**63.34**	**305**	⇓*i*P	**P**	**13 24 22.3**	**+0.5**
ISP	**Isparta**	**63.34**	**305**	P	**P**	**13 24 19.3**	**-2.5**
ISP	**Isparta**	**63.34**	**305**	*e*P	**P**	**13 24 21.4**	**-0.4**
MANT	**Manisa**	**63.34**	**307**	*e*P	**P**	**13 24 22.2**	**+0.2**
	comp=Z,2µm,1.1s						
PFO	**Pinyon Flats O**	**63.37**	**66**	*e*P	**P**	**13 24 22.7**	**+0.6**
	comp=Z,1µm,1.9s						
PFO	**Pinyon Flats O**	**63.37**	**66**	*e*P	**P**	**13 24 22.7**	**+0.6**
PFO	**Pinyon Flats O**	**63.37**	**66**	P	**P**	**13 24 22.8**	**+0.6**
	baz=335,SNR=46						
PFO	**Pinyon Flats O**	**63.37**	**66**	LR	LR	13 52 25.3	
	comp=Z,66µm,18.7s,baz=338,slow=36						
PFO				PKPPKP	**P'P'df**	**13 53 20.9**	**-2.1**
	comp=Z,6.2nm,1.1s,baz=224,slow=1.7,SNR=6.0						
XPFO	**Pion Flat**	**63.37**	**66**	*e*P	**P**	**13 24 22.7**	**+0.6**
	comp=Z,1µm,1.9s						
BMRO	**Meriville Lake**	**63.39**	**34**	P	**P**	**13 24 20.6**	**-1.3**
	baz=343,SNR=12						
WUAZ	**Wupatki**	**63.40**	**61**	*e*P	**P**	**13 24 23.3**	**+0.9**
	comp=Z,273nm,1.1s						
WUAZ	**Wupatki**	**63.40**	**61**	P	**P**	**13 24 23.4**	**+1.1**
	baz=336,SNR=92						
L40A	**Anamosa**	**63.42**	**42**	*e*P	**P**	**13 24 20.0**	**-2.1**
	comp=Z,755nm,1.3s						
L40A	**Anamosa**	**63.42**	**42**	P	**P**	**13 24 19.8**	**-2.3**
	baz=340,SNR=85						
G53A	**Haliburton**	**63.42**	**32**	P	**P**	**13 24 20.9**	**-1.2**
	baz=344,SNR=59						
PAIG	**Paliouri**	**63.47**	**311**	P	**P**	**13 24 21.2**	**-1.3**
BATG	**Bathurst New B**	**63.48**	**21**	*e*P	**P**	**13 24 22.5**	**0.0**
	comp=Z,2µm,2.0s						
SIGR	**SIGRI**	**63.50**	**309**	P	**P**	**13 24 20.2**	**-2.5**
K43A	**Burlington**	**63.55**	**40**	*e*P	**P**	**13 24 21.5**	**-1.5**
	comp=Z,526nm,1.1s						
K43A	**Burlington**	**63.55**	**40**	P	**P**	**13 24 21.1**	**-1.9**
	baz=341,SNR=26						
PDMCI	**Parker Dam,Lak**	**63.55**	**64**	P	**P**	**13 24 23.8**	**+0.7**
	baz=336,SNR=110						
J46A	**Howard City**	**63.58**	**37**	P	**P**	**13 24 21.4**	**-1.8**
	baz=342						
L41A	**Preston**	**63.59**	**42**	P	**P**	**13 24 21.2**	**-2.1**
	baz=340,SNR=114						
ALFO	**Alfred**	**63.65**	**29**	P	**P**	**13 24 22.5**	**-1.1**
	baz=345,SNR=54						
LIT	**Litokhoron**	**63.65**	**312**	*e*P	**P**	**13 24 22.1**	**-1.7**
LIT	**Litokhoron**	**63.65**	**312**	P	**P**	**13 24 22.1**	**-1.7**
LIT	**Litokhoron**	**63.65**	**312**	*e*P	**P**	**13 24 23.9**	**+0.1**
SADO	**Sadowa**	**63.65**	**32**	*e*P	**P**	**13 24 21.6**	**-2.1**
	comp=Z,925nm,1.8s						
SADO	**Sadowa**	**63.65**	**32**	LR	LR	13 52 40.3	
	comp=Z,54µm,21.8s,baz=6.5,slow=37						
BANO	**Bancroft**	**63.66**	**31**	P	**P**	**13 24 22.7**	**-1.0**
	baz=344,SNR=46						
I49A	**Point Hope**	**63.66**	**35**	P	**P**	**13 24 22.1**	**-1.6**
	baz=342,SNR=9.8						
KZN	**Kozani**	**63.66**	**313**	P	**P**	**13 24 22.1**	**-1.8**
KZN	**Kozani**	**63.66**	**313**	P	**P**	**13 24 22.1**	**-1.8**
KZN	**Kozani**	**63.66**	**313**	P	**P**	**13 24 22.1**	**-1.8**
G55A	**Calabogie**	**63.67**	**30**	P	**P**	**13 24 22.2**	**-1.6**
	baz=344,SNR=25						
BRCO	**Bruce Peninsul**	**63.67**	**34**	P	**P**	**13 24 22.4**	**-1.4**
	baz=343,SNR=6.8						
BC3	**Big Chuckawall**	**63.68**	**66**	P	**P**	**13 24 25.2**	**+1.0**
	baz=335,SNR=76						
ORHO	**Orleans, Herit**	**63.70**	**29**	P	**P**	**13 24 22.6**	**-1.3**
	baz=345						
M39A	**Webster**	**63.72**	**43**	P	**P**	**13 24 22.5**	**-1.6**
	baz=340,SNR=60						
RJF	**Les Rejaudoux**	**63.74**	**330**	*e*P	**P**	**13 24 23.5**	**-0.7**
RJF				pmax	pmax		
	comp=Z,520nm,1.1s						
NEST	**Nestorio**	**63.77**	**314**	P	**P**	**13 24 23.1**	**-1.5**
109C	**Camp Elliot, M**	**63.79**	**67**	P	**P**	**13 24 25.6**	**+0.9**
	baz=335,SNR=12						
CPE	**Camp Elliot**	**63.79**	**67**	*e*P	**P**	**13 24 26.3**	**+1.5**
	comp=Z,1µm,2.0s						
PLVO	**Plevna**	**63.81**	**30**	*e*P	**P**	**13 24 23.4**	**-1.3**
	comp=Z,441nm,1.1s						
PLVO	**Plevna**	**63.81**	**30**	P	**P**	**13 24 23.7**	**-1.0**
	baz=344,SNR=54						
BASO	**Ashfield**	**63.85**	**34**	P	**P**	**13 24 23.8**	**-1.2**
	baz=343						
BWLO	**Walkerton**	**63.86**	**34**	P	**P**	**13 24 23.9**	**-1.2**
	baz=343,SNR=10.0						
L42A	**Oliver, Polo**	**63.87**	**41**	*e*P	**P**	**13 24 22.9**	**-2.2**
	comp=Z,444nm,0.9s						
L42A	**Oliver, Polo**	**63.87**	**41**	P	**P**	**13 24 23.4**	**-1.8**
	baz=340,SNR=88						
J47A	**Sunmer**	**63.88**	**37**	P	**P**	**13 24 23.8**	**-1.4**
	baz=342,SNR=16						
SBF	**Sospel**	**63.91**	**325**	*e*P	**P**	**13 24 23.2**	**-2.3**
SBF				pmax	pmax		
	comp=Z,897nm,1.3s						
Y12C	**Blythe**	**63.92**	**65**	*e*P	**P**	**13 24 26.2**	**+0.6**
	comp=Z,2µm,1.9s						
Y12C	**Blythe**	**63.92**	**65**	P	**P**	**13 24 26.7**	**+1.1**
	baz=336,SNR=98						
L43A	**Garden Prairie**	**63.93**	**40**	P	**P**	**13 24 23.5**	**-2.1**
	baz=341,SNR=31						
PENT	**Pentalofos**	**63.95**	**313**	P	**P**	**13 24 24.0**	**-1.8**
AQU	**L'Aquila**	**63.96**	**320**	*e*P	**P**	**13 24 26.5**	**+0.7**
	comp=Z,1µm,1.2s						
AQU	**L'Aquila**	**63.96**	**320**	*e*P	**P**	**13 24 26.5**	**+0.7**
AQU	**L'Aquila**	**63.96**	**320**	⇑*i*P	**P**	**13 24 26.5**	**+0.7**
M40A	**Post Highland**	**63.96**	**43**	P	**P**	**13 24 23.6**	**-2.2**
	baz=340,SNR=31						
KKM	**Kota Kinabalu**	**63.97**	**210**	*e*P	**P**	**13 24 25.8**	**-0.4**
	comp=Z,384nm,1.2s						
KKM	**Kota Kinabalu**	**63.97**	**210**	P	**P**	**13 24 27.1**	**+0.9**
CAF	**Calviac**	**64.00**	**330**	*e*P	**P**	**13 24 25.7**	**-0.3**
CAF				pmax	pmax		
	comp=Z,760nm,1.1s						
MONP2	**Monument Peak**	**64.03**	**67**	P	**P**	**13 24 27.4**	**+0.8**
	baz=335,SNR=68						
J48A	**Bridge Port**	**64.06**	**36**	P	**P**	**13 24 24.8**	**-1.5**
	baz=342,SNR=32						
CBKS	**Cedar Bluff**	**64.08**	**50**	*e*P	**P**	**13 24 25.4**	**-1.2**
	comp=Z,663nm,1.1s						
CBKS				LR	LR		
	comp=Z,87µm,21.0s						
CBKS	**Cedar Bluff**	**64.08**	**50**	*e*P	**P**	**13 24 25.4**	**-1.2**
CBKS	**Cedar Bluff**	**64.08**	**50**	P	**P**	**13 24 25.5**	**-1.1**
	baz=338,SNR=66						
KPRO	**Kipourio**	**64.11**	**313**	P	**P**	**13 24 26.4**	**-0.4**
I52A	**Shelburne**	**64.11**	**33**	P	**P**	**13 24 25.4**	**-1.4**
	baz=343						
AOS	**Alonnisos**	**64.11**	**311**	P	**P**	**13 24 24.0**	**-2.8**
XOR	**Xorichti**	**64.13**	**311**	P	**P**	**13 24 26.2**	**-0.8**
XOR	**Xorichti**	**64.13**	**311**	P	**P**	**13 24 26.2**	**-0.8**
BAR	**Barrett**	**64.14**	**67**	*e*P	**P**	**13 24 28.0**	**+0.9**
	comp=Z,1µm,2.0s						
L44A	**Lake County Fo**	**64.14**	**40**	P	**P**	**13 24 25.2**	**-1.8**
	baz=341,SNR=21						
J49A	**Marlette**	**64.14**	**36**	P	**P**	**13 24 25.5**	**-1.4**
	baz=342,SNR=26						
VLO	**Vlora**	**64.14**	**315**	*e*P	**P**	**13 24 27.1**	**+0.2**
VLO	**Vlora**	**64.14**	**315**	P	**P**	**13 24 27.1**	**+0.2**
FYTO	**Fytoko, Volos**	**64.17**	**312**	P	**P**	**13 24 25.9**	**-1.2**
K46A	**Dorr**	**64.18**	**38**	P	**P**	**13 24 25.2**	**-1.9**
	baz=342,SNR=9.9						
SDKM	**Sandakan**	**64.18**	**208**	P	**P**	**13 24 27.9**	**+0.4**
I51A	**Listowel**	**64.19**	**34**	P	**P**	**13 24 25.8**	**-1.4**
	baz=343,SNR=22						
T25A	**Trinidad**	**64.19**	**55**	*e*P	**P**	**13 24 26.8**	**-0.8**
	comp=Z,141nm,1.1s						
T25A	**Trinidad**	**64.19**	**55**	P	**P**	**13 24 26.8**	**-0.8**
	baz=337,SNR=44						
SKY	**Skiros Island**	**64.19**	**310**	P	**P**	**13 24 25.9**	**-1.4**
CHOS	**Chios island**	**64.20**	**309**	P	**P**	**13 24 26.4**	**-1.0**
CHOS	**Chios island**	**64.20**	**309**	P	**P**	**13 24 26.4**	**-1.0**
DELO	**Deloro Mine**	**64.20**	**31**	P	**P**	**13 24 26.1**	**-1.2**
	baz=344,SNR=52						
SWSC	**Sam W. Stewart**	**64.20**	**66**	P	**P**	**13 24 28.4**	**+1.0**
	baz=336,SNR=40						
HYB	**Hyderabad**	**64.23**	**253**	*i* P	**P**	**13 24 26.0**	**-1.8**
	comp=Z,460nm,1.0s						
HYB				*e*PP	**PP**	**13 26 52.0**	**+3.1**
HYB				*e*		13 28 24.0	
HYB				*e*S	**S**	**13 33 06.0**	**+0.7**
HYB				LR	LR		
	comp=Z,42nm,16.0s						
HYB	**Hyderabad**	**64.23**	**253**	*e*P	**P**	**13 24 27.0**	**-0.8**
HYB				IAmb	IAmb	13 24 30.9	
LFF	**La Frestale**	**64.23**	**331**	*e*P	**P**	**13 24 27.0**	**-0.5**
LFF				pmax	pmax		
	comp=Z,191nm,0.6s						
M41A	**Milan**	**64.24**	**42**	P	**P**	**13 24 25.2**	**-2.4**
	baz=340,SNR=72						
SKIA	**Skiathos**	**64.24**	**311**	P	**P**	**13 24 26.4**	**-1.2**
BAI	**Bari**	**64.25**	**317**	*e*P	**P**	**13 24 27.5**	**-0.1**
H55A	**Tweed**	**64.25**	**31**	P	**P**	**13 24 26.4**	**-1.2**
	baz=344,SNR=37						
Y14A	**Wickenburg**	**64.28**	**63**	*e*P	**P**	**13 24 29.1**	**+1.1**
	comp=Z,912nm,1.8s						
THL	**Klokotos Trika**	**64.29**	**312**	P	**P**	**13 24 24.5**	**-3.4**
W18A	**Petrified Fore**	**64.31**	**60**	*e*P	**P**	**13 24 29.2**	**+0.8**
	comp=Z,712nm,1.7s						
W18A	**Petrified Fore**	**64.31**	**60**	P	**P**	**13 24 29.3**	**+0.9**
	baz=336,SNR=22						
IKP	**In-Ko-Pah, Jac**	**64.36**	**67**	P	**P**	**13 24 29.5**	**+0.9**
	baz=336,SNR=46						
M42A	**Sheffield**	**64.36**	**41**	P	**P**	**13 24 26.2**	**-2.2**
	baz=340,SNR=7.2						
K47A	**Vermontville**	**64.38**	**37**	P	**P**	**13 24 26.9**	**-1.6**
	baz=342,SNR=13						
X16A	**Lo Mia Camp, P**	**64.38**	**62**	*e*P	**P**	**13 24 30.0**	**+1.2**
	comp=Z,1µm,1.9s						
H56A	**Elgin**	**64.39**	**30**	P	**P**	**13 24 27.1**	**-1.4**
	baz=345,SNR=47						
FASA	**Fasano**	**64.39**	**317**	*e*P	**P**	**13 24 28.6**	**0.0**
MOQ	**Mont Orford**	**64.43**	**27**	*e*P	**P**	**13 24 27.9**	**-0.9**
N40A	**Mertquake, Sal**	**64.43**	**43**	P	**P**	**13 24 26.9**	**-1.9**
	baz=340,SNR=66						
PKRO	**Pickering**	**64.44**	**32**	P	**P**	**13 24 27.5**	**-1.3**
	baz=344,SNR=12						
GLA	**Glamis**	**64.45**	**65**	*e*P	**P**	**13 24 30.3**	**+1.1**
	comp=Z,2µm,1.9s						
GLA	**Glamis**	**64.45**	**65**	*e*P	**P**	**13 24 30.3**	**+1.1**
GLA	**Glamis**	**64.45**	**65**	P	**P**	**13 24 30.2**	**+1.1**
	baz=336,SNR=38						
K48A	**Perry**	**64.45**	**37**	P	**P**	**13 24 27.6**	**-1.4**
	baz=342,SNR=37						
I53A	**Kortright Cn E**	**64.47**	**33**	P	**P**	**13 24 27.6**	**-1.4**
	baz=344						
I55A	**Frankford**	**64.48**	**31**	P	**P**	**13 24 27.9**	**-1.2**
	baz=344,SNR=27						
CGL1	**Ceglie Messapi**	**64.51**	**316**	*e*P	**P**	**13 24 30.4**	**+1.0**
JAN	**Janina**	**64.53**	**313**	P	**P**	**13 24 27.8**	**-1.7**
SG1	**Sgolgore (BA)**	**64.55**	**317**	*e*P	**P**	**13 24 29.7**	**0.0**
SRN	**Sarande**	**64.56**	**314**	P	**P**	**13 24 28.2**	**-1.4**
ACTO	**Acton**	**64.58**	**33**	P	**P**	**13 24 28.3**	**-1.4**
	baz=343,SNR=18						
SMIA	**Simia**	**64.58**	**311**	P	**P**	**13 24 27.8**	**-2.1**
M43A	**Waltham Townsh**	**64.58**	**41**	P	**P**	**13 24 27.9**	**-2.0**
	baz=341,SNR=30						
SMG	**Samos**	**64.59**	**308**	P	**P**	**13 24 28.6**	**-1.3**
SMG	**Samos**	**64.59**	**308**	P	**P**	**13 24 28.6**	**-1.3**
DRWO	**Darlington Wes**	**64.60**	**32**	P	**P**	**13 24 28.9**	**-0.9**
	baz=344,SNR=10						
DRCO	**St. Marys Ceme**	**64.60**	**32**	P	**P**	**13 24 28.8**	**-1.1**
	baz=344,SNR=50						
WLVO	**Wesleyville**	**64.62**	**32**	P	**P**	**13 24 28.7**	**-1.3**
	baz=344,SNR=54						
K49A	**Clarkson**	**64.62**	**36**	P	**P**	**13 24 28.4**	**-1.7**
	baz=342,SNR=28						
MASS	**Massafra**	**64.62**	**317**	*e*P	**P**	**13 24 29.4**	**-0.7**
MRKA	**Markates**	**64.63**	**311**	P	**P**	**13 24 27.3**	**-2.9**
FRNY	**Flat Rock**	**64.66**	**28**	*e*P	**P**	**13 24 28.8**	**-1.4**
	comp=Z,848nm,1.8s						
PBA	**Port Blair**	**64.68**	**236**	*e*P	P	13 24 32.1	+1.4
	comp=Z,2µm,1.5s						
PBA	**Port Blair**	**64.68**	**236**	*e*P	P	13 24 31.1	+0.4
LONY	**Lake Ozonia**	**64.68**	**29**	*e*P	**P**	**13 24 29.2**	**-1.2**
	comp=Z,2µm,1.9s						
LONY	**Lake Ozonia**	**64.68**	**29**	P	**P**	**13 24 29.2**	**-1.2**
	baz=345,SNR=77						
TAR1	**Taranto**	**64.69**	**317**	*e*P	**P**	**13 24 31.6**	**+1.1**
L46A	**Eue Claire**	**64.69**	**38**	P	**P**	**13 24 28.8**	**-1.8**
	baz=342						
AGG	**Agios Georgios**	**64.70**	**312**	*e*P	**P**	**13 24 30.1**	**-0.6**
AGG	**Agios Georgios**	**64.70**	**312**	P	**P**	**13 24 27.8**	**-2.9**
AGG	**Agios Georgios**	**64.70**	**312**	*e*P	**P**	**13 24 30.1**	**-0.6**
ELFO	**Elginfield**	**64.70**	**34**	P	**P**	**13 24 29.0**	**-1.6**
	baz=343,SNR=23						
KSU1	**Kansas State U**	**64.72**	**48**	*e*P	**P**	**13 24 29.2**	**-1.6**
	comp=Z,803nm,1.3s						
KSU1				LR	LR		
	comp=Z,54µm,20.0s						
KSU1	**Kansas State U**	**64.72**	**48**	P	**P**	**13 24 29.0**	**-1.7**
	baz=339,SNR=74						
TORO	**Toronto--Lesli**	**64.72**	**33**	P	**P**	**13 24 29.4**	**-1.3**
	baz=344						
MATE	**Matera**	**64.72**	**317**	⇑*i*P	**P**	**13 24 30.3**	**-0.4**
KEK	**Kerkira**	**64.77**	**314**	P	**P**	**13 24 29.7**	**-1.4**
X18A	**Snowflake**	**64.78**	**61**	*e*P	**P**	**13 24 31.9**	**+0.4**
	comp=Z,423nm,1.4s						
PHNC	**Paralimni**	**64.78**	**301**	P	**P**	**13 24 32.0**	**+0.8**
N41A	**Harden Midland**	**64.78**	**43**	*e*P	**P**	**13 24 29.0**	**-2.2**
	comp=Z,689nm,1.4s						
N41A	**Harden Midland**	**64.78**	**43**	P	**P**	**13 24 29.0**	**-2.2**
	baz=340,SNR=61						
IGT	**Igoumenitsa**	**64.79**	**314**	*e*P	**P**	**13 24 30.1**	**-1.1**
IGT	**Igoumenitsa**	**64.79**	**314**	P	**P**	**13 24 30.1**	**-1.1**
IGT	**Igoumenitsa**	**64.79**	**314**	*e*P	**P**	**13 24 30.1**	**-1.1**
EREA	**Eretria**	**64.80**	**310**	P	**P**	**13 24 29.7**	**-1.6**
HWQ	**Hawqa**	**64.81**	**299**	*e*P	**P**	**13 24 31.4**	**-0.1**
ATAL	**Atalanti**	**64.81**	**311**	P	**P**	**13 24 29.7**	**-1.6**
SGSI	**Sangihe**	**64.81**	**199**	P	**P**	**13 24 29.8**	**-1.7**
J52A	**Paris**	**64.84**	**34**	P	**P**	**13 24 29.8**	**-1.6**
	baz=343,SNR=17						
AXAR	**Agios Charalam**	**64.84**	**312**	*e*P	**P**	**13 24 31.6**	**0.0**
AXAR	**Agios Charalam**	**64.84**	**312**	P	**P**	**13 24 31.6**	**0.0**
LKR	**Lokris**	**64.85**	**311**	P	**P**	**13 24 27.3**	**-4.3**
LKR	**Lokris**	**64.85**	**311**	P	**P**	**13 24 27.3**	**-4.3**
M44A	**Midewin, Midew**	**64.86**	**40**	P	**P**	**13 24 29.8**	**-1.9**
	baz=341,SNR=31						
N42A	**Yates City**	**64.88**	**42**	P	**P**	**13 24 29.6**	**-2.2**
	baz=340,SNR=28						
MAMC	**Mammari**	**64.90**	**301**	P	**P**	**13 24 30.4**	**-1.6**
SHME	**Shamm**	**64.92**	**277**	*i* P	**P**	**13 24 32.5**	**+0.2**
	SNR=37						
EVR	**Evrytania**	**64.95**	**312**	P	**P**	**13 24 30.1**	**-2.3**
EVR	**Evrytania**	**64.95**	**312**	P	**P**	**13 24 30.1**	**-2.3**
POO	**Poona**	**64.96**	**258**	*e*P	**P**	**13 24 31.7**	**-0.9**
POO				IAmb	IAmb	13 24 35.2	
PKME	**Peaks-Kenny Pk**	**64.96**	**24**	*e*P	**P**	**13 24 31.6**	**-0.6**
	comp=Z,617nm,1.4s						
PKME				LR	LR		
	comp=Z,65µm,22.0s						
PKME	**Peaks-Kenny Pk**	**64.96**	**24**	P	**P**	**13 24 31.7**	**-0.5**
	baz=347,SNR=32						
BANOM	**Banah**	**64.97**	**277**	*i* P	**P**	**13 24 32.7**	**+0.1**
	SNR=54						
BANOM	**Banah**	**64.97**	**277**	P	**P**	**13 24 33.7**	**+1.1**
	SNR=50						
BANOM				P	**P**	**13 24 33.7**	**+1.1**
	SNR=50						
BANOM				P	**P**	**13 24 33.7**	**+1.1**
	SNR=50						
L47A	**Sherwood**	**64.99**	**38**	P	**P**	**13 24 30.5**	**-1.9**
	baz=342,SNR=66						
N43A	**Stutzman Famil**	**65.00**	**41**	P	**P**	**13 24 30.6**	**-2.0**
	baz=341,SNR=17						

BOM	Bombay	65.02	259	*e*P	P	13 24 31.3	-1.6
AAM	Ann Arbor	65.03	36	PFAKE		13 24 40.0	+7.3
AAM				LR	LR		
	comp=Z,59µm,20.0s						
AAM	Ann Arbor	65.03	36	P	P	13 24 31.3	-1.5
	baz=342						
CSS	Mathiatis	65.05	301	*e*P	P	13 24 31.1	-1.9
	comp=Z,2µm,1.9s						
CSS	Mathiatis	65.05	301	P	P	13 24 31.0	-1.9
CSS	Mathiatis	65.05	301	P	P	13 24 31.1	-1.9
CSS	Mathiatis	65.05	301	P	P	13 24 32.8	-0.2
	comp=Z,118nm,1.8s						
M45A	Boilermakers S	65.05	39	P	P	13 24 31.1	-1.8
	baz=341,SNR=6.1						
113A	Mohawk Valley,	65.08	65	*e*P	P	13 24 34.0	+0.8
	comp=Z,267nm,1.4s						
TYNO	Tyneside	65.11	33	P	P	13 24 31.9	-1.3
	baz=344,SNR=18						
K51A	Iona Station	65.11	35	P	P	13 24 32.1	-1.2
	baz=343,SNR=18						
ALFC	Alefka	65.11	302	P	P	13 24 33.2	-0.2
STCO	Saint Catharin	65.14	33	P	P	13 24 32.0	-1.4
	baz=344,SNR=8.4						
PTL	Penteli	65.16	310	*e*P	P	13 24 31.6	-2.1
PTL	Penteli	65.16	310	P	P	13 24 31.6	-2.1
KSL	Kastellorizon	65.17	305	*e*P	P	13 24 32.1	-1.6
KSL	Kastellorizon	65.17	305	P	P	13 24 32.1	-1.6
L49A	Milan	65.19	36	P	P	13 24 32.4	-1.3
	baz=342,SNR=24						
L48A	N Adams	65.20	37	P	P	13 24 32.2	-1.6
	baz=342,SNR=56						
DSF	Desfina	65.21	312	*e*P	P	13 24 31.1	-2.9
DSF	Desfina	65.21	312	P	P	13 24 31.1	-2.9
VILL	Villia	65.21	311	P	P	13 24 31.1	-2.9
ANX	Ano Chora	65.22	312	P	P	13 24 31.6	-2.5
K52A	Tillsonburg	65.23	34	P	P	13 24 32.2	-1.8
	baz=343						
BHL	Bhannes	65.25	299	*e*P	P	13 24 34.4	0.0
M46A	Old House Fiel	65.25	39	*e*P	P	13 24 32.5	-1.6
	comp=Z,318nm,1.0s						
M46A	Old House Fiel	65.25	39	P	P	13 24 32.6	-1.6
	baz=342,SNR=29						
ATHU	Athens Univers	65.26	310	P	P	13 24 32.5	-1.8
ATH	Athens Observa	65.27	310	P	P	13 24 32.0	-2.3
ATH	Athens Observa	65.27	310	P	P	13 24 32.0	-2.3
ATH	Athens Observa	65.27	310	P	P	13 24 32.0	-2.3
PVO	Paravola	65.31	312	P	P	13 24 32.5	-2.1
HDIL	Hopedale	65.33	41	*e*P	P	13 24 32.7	-2.0
	comp=Z,844nm,1.4s						
HDIL				LR	LR		
	comp=Z,73µm,19.0s						
HDIL	Hopedale	65.33	41	P	P	13 24 32.6	-2.0
	baz=341,SNR=32						
BEYL	Beirut	65.33	299	*e*P	P	13 24 34.5	-0.2
MEDO	Medina	65.33	32	P	P	13 24 33.3	-1.4
	baz=344,SNR=28						
O41A	Passleys Farm,	65.33	43	P	P	13 24 32.7	-2.0
	baz=340,SNR=148						
KALE	Kalithea	65.34	312	P	P	13 24 33.0	-1.9
SERG	Sergoula	65.34	312	P	P	13 24 31.6	-3.3
VLY	Voula,Athens	65.36	310	P	P	13 24 32.5	-2.4
J55A	Hilton	65.36	31	P	P	13 24 33.6	-1.3
	baz=344,SNR=24						
TSM	Tawau	65.37	207	P	P	13 24 35.6	+0.4
EFP	Efpalio	65.37	312	P	P	13 24 33.4	-1.6
NCB	Newcomb	65.38	28	*e*P	P	13 24 34.0	-1.0
	comp=Z,2µm,1.9s						
TRIZ	Trizonia	65.38	312	P	P	13 24 32.5	-2.6
SZAC	Souni	65.39	302	P	P	13 24 34.3	-0.9
LKD2	Lefkada island	65.39	313	P	P	13 24 33.0	-2.2
LKD2	Lefkada island	65.39	313	P	P	13 24 33.0	-2.2
N44A	Piper City	65.39	40	P	P	13 24 33.4	-1.7
	baz=341,SNR=27						
LTK	Loutraki	65.44	311	P	P	13 24 32.5	-3.0
PPCY	Paphos	65.44	302	P	P	13 24 35.4	-0.1
DQRL	Deir Qamar	65.45	299	*e*P	P	13 24 36.0	+0.2
O42A	Bath	65.47	42	P	P	13 24 33.7	-1.9
	baz=340						
M47A	Cromwell	65.47	38	P	P	13 24 33.7	-1.9
	baz=342						
L50A	Kingsville	65.47	36	P	P	13 24 34.2	-1.3
	baz=343,SNR=28						
LOUT	Loutraki	65.47	311	P	P	13 24 33.0	-2.7
GGN	Saint George	65.48	23	*e*P	P	13 24 35.1	-0.4
	comp=Z,2µm,1.8s						
N45A	Kentland	65.50	40	P	P	13 24 34.0	-1.7
	baz=341,SNR=37						
NISR	Nisiros	65.51	307	P	P	13 24 33.9	-2.0
LBNH	Lisbon	65.52	27	*e*P	P	13 24 35.4	-0.5
	comp=Z,1µm,1.6s						
LBNH	Lisbon	65.52	27	*e*P	P	13 24 35.4	-0.5
LBNH	Lisbon	65.52	27	P	P	13 24 35.3	-0.5
	baz=346,SNR=35						
LAKA	Lakka	65.53	312	*e*P	P	13 24 34.8	-1.3
LAKA	Lakka	65.53	312	P	P	13 24 34.8	-1.3
TRAZ	Trapeza	65.53	312	P	P	13 24 34.5	-1.6
MSFE	Esma-Masafi	65.53	277	*i* P	P	13 24 35.8	-0.5
	SNR=45						
MDH	Madha	65.53	277	*i* P	P	13 24 35.4	-0.8
	SNR=37						
MDH	Madha	65.53	277	P	P	13 24 35.4	-0.8
	SNR=34						
MDH				P	P	13 24 35.4	-0.8
	SNR=34						
MDH				P	P	13 24 35.4	-0.8
	SNR=34						
ANMO	Albuquerque	65.55	58	*e*P	P	13 24 36.4	0.0
	comp=Z,450nm,1.8s						
ANMO				LR	LR		
	comp=Z,56µm,22.0s						
ANMO	Albuquerque	65.55	58*c*	*i*P	P	13 24 36.6	+0.2
ANMO				pmax	pmax		
	comp=Z,372nm,2.0s						
ANMO	Albuquerque	65.55	58	P	P	13 24 36.5	0.0
	baz=337						
ANMO	Albuquerque	65.55	58	PKPPKP	P'P'df	13 53 10.1	-10
	comp=Z,2.9nm,1.0s,baz=136,slow=8.0,SNR=3.5						
RCY	Rachaya	65.56	299	*e*P	P	13 24 36.5	+0.1
QRWL	Qaraoun	65.56	299	*e*P	P	13 24 36.7	+0.3
ARG	Arkhangelos	65.57	306	P	P	13 24 35.4	-0.9
M48A	Edgerton	65.57	37	P	P	13 24 34.5	-1.7
	baz=342,SNR=10						
CUC	Castrocucco	65.57	318	*e*P	P	13 24 35.7	-0.6
	comp=Z,337nm,1.2s						
APE	Apeiranthos	65.57	309⇑	*i*P	P	13 24 36.3	-0.1
APE	Apeiranthos	65.57	309	P	P	13 24 34.5	-1.9
APE	Apeiranthos	65.57	309*c*	*i*P	P	13 24 34.7	-1.7
APE				pmax	pmax		
	comp=Z,428nm,1.8s						
APE				MLR	MLR		
	comp=Z,42µm,15.0s						
UMQ	Umm Al-Quwin	65.57	278	*i* P	P	13 24 37.3	+0.9
	SNR=15						
UMQ	Umm Al-Quwin	65.57	278	P	P	13 24 37.5	+1.1
	SNR=16						
UMQ				P	P	13 24 37.5	+1.1
	SNR=16						
UMQ				P	P	13 24 37.5	+1.1
	SNR=16						
O43A	Sugar Creek Fa	65.58	41	P	P	13 24 34.0	-2.3
	baz=341,SNR=18						
WVL	Waterville	65.59	25	*e*P	P	13 24 36.0	-0.3
	comp=Z,1µm,2.0s						
N46A	Monticello	65.64	39	P	P	13 24 34.9	-1.9
	baz=342,SNR=66						
KLV	Kalavryta, Ach	65.66	312	P	P	13 24 34.8	-2.2
KLV	Kalavryta, Ach	65.66	312	P	P	13 24 34.8	-2.2
AMGA	Amorgos Island	65.68	308	P	P	13 24 37.8	+0.8
P41A	Barry, Barry	65.70	43	P	P	13 24 35.1	-2.0
	baz=340,SNR=157						
GUR	Goura	65.71	312	P	P	13 24 35.4	-1.9
SHBL	Chebaa	65.72	299	*e*P	P	13 24 37.8	+0.3
AXS	Araxos	65.74	312	P	P	13 24 36.3	-1.1
M49A	Liberty Center	65.75	37	P	P	13 24 35.5	-1.9
	baz=342,SNR=60						
EMMW	East Machias	65.79	23	*e*P	P	13 24 37.2	-0.4
	comp=Z,276nm,0.9s						
SERI	Serifos	65.80	309	P	P	13 24 35.4	-2.4
LAZ	Ladron	65.82	58	*e*P	P	13 24 38.6	+0.4
K55A	Perry	65.83	32	P	P	13 24 36.1	-1.8
	baz=344,SNR=25						
RLS	Riolos of Patr	65.84	312	P	P	13 24 37.2	-0.8
RLS	Riolos of Patr	65.84	312	P	P	13 24 37.2	-0.8
DID	Didima	65.85	311	*e*P	P	13 24 35.1	-3.0
DID	Didima	65.85	311	P	P	13 24 35.1	-3.0
MMNY	Mt. Morris Dam	65.86	32	*e*P	P	13 24 36.6	-1.5
	comp=Z,975nm,2.0s						
DRO	Drossia	65.87	312	P	P	13 24 38.1	-0.2
UOSS	Minazif	65.89	277	*e*P	P	13 24 38.0	-0.6
	comp=Z,802nm,1.3s						
UOSS	Minazif	65.89	277	*i* P	P	13 24 38.2	-0.4
	SNR=90						
UOSS	Minazif	65.89	277	P	P	13 24 37.9	-0.6
	SNR=77						
UOSS				P	P	13 24 37.9	-0.6
	SNR=77						
KSDI	Kefar Szold	65.89	299	P	P	13 24 39.2	+0.8
N47A	Urbana	65.91	38	P	P	13 24 36.3	-2.1
	baz=342,SNR=33						
GBN	Guysborough	65.92	18	*e*P	P	13 24 38.6	+0.2
	comp=Z,446nm,1.2s						
O44A	Mansfield	65.92	41	P	P	13 24 36.2	-2.3
	baz=341						
IOSP	Ios island	65.96	309	P	P	13 24 33.6	-5.2
P42A	Winchester	65.97	43	*e*P	P	13 24 36.8	-2.1
	comp=Z,816nm,1.4s						
P42A	Winchester	65.97	43	P	P	13 24 36.7	-2.1
	baz=341,SNR=109						
HNH	Hanover	65.98	27	*e*P	P	13 24 38.5	-0.3
	comp=Z,881nm,1.6s						
VLS	Valsamata	65.98	313	P	P	13 24 37.8	-1.2
VLS	Valsamata	65.98	313	P	P	13 24 37.8	-1.2
VLS	Valsamata	65.98	313	P	P	13 24 37.8	-1.2
KRND	KRANIDI	65.99	311	P	P	13 24 37.2	-1.8
O45A	Potomac	66.01	40	P	P	13 24 37.3	-1.8
	baz=341						
ERPA	Erie	66.02	34	*e*P	P	13 24 37.6	-1.5
	comp=Z,1µm,1.8s						
ERPA	Erie	66.02	34	P	P	13 24 37.3	-1.8
	baz=344,SNR=27						
HATD	Hatta, Dubai	66.03	277	*i* P	P	13 24 39.0	-0.4
	SNR=154						
M50A	Fremont	66.03	36	P	P	13 24 37.3	-1.9
	baz=343,SNR=21						
SFIN	Lafayette	66.04	40	*e*P	P	13 24 37.4	-1.9
	comp=Z,636nm,1.5s						
SFIN	Lafayette	66.04	40	P	P	13 24 37.2	-2.1
	baz=342,SNR=9.4						
ACCN	Adirondack Com	66.05	28	*e*P	P	13 24 38.6	-0.7
	comp=Z,2µm,1.9s						
NAZ	Nazwa, Dubai	66.06	277	*i* P	P	13 24 39.2	-0.4
	SNR=46						
LPM	Los Pinos Moun	66.07	58	*e*P	P	13 24 40.3	+0.5
N48A	Decatur	66.09	38	P	P	13 24 37.5	-2.1
	baz=342,SNR=27						
TIP	Timpagrande	66.09	317	*e*P	P	13 24 39.8	+0.2
	comp=Z,2µm,1.4s						
TIP	Timpagrande	66.09	317⇑	*i*P	P	13 24 40.2	+0.5
TIP	Timpagrande	66.09	317	P	P	13 24 39.9	+0.2
LENM	Lemitar	66.09	58	*e*P	P	13 24 40.3	+0.4
TRIP	Tripoli	66.11	311	P	P	13 24 39.0	-0.8
L53A	Girard	66.12	34	P	P	13 24 38.4	-1.4
	baz=344,SNR=41						
P43A	Skaggs, Pawnee	66.13	42	P	P	13 24 37.9	-2.0
	baz=341,SNR=59						
MMAI	Mount Meron Ar	66.14	299	P	P	13 24 40.4	+0.3
	comp=Z,337nm,1.0s,baz=35,slow=7.9,SNR=6.7						
MMAI				S	S	13 33 33.0	+4.5
	comp=Z,0.8nm,0.3s,baz=40,slow=4.3,SNR=2.7						
214A	Organ Pipe Nat	66.15	64	P	P	13 24 40.9	+0.8
	baz=336,SNR=94						
ANAF	Anafi Island	66.16	308	P	P	13 24 38.4	-1.7
ASHO	Ashiyiah	66.18	277	*i* P	P	13 24 40.0	-0.5
	SNR=85						
ASHO	Ashiyiah	66.18	277	P	P	13 24 40.3	-0.2
	SNR=148						
ASHO				P	P	13 24 40.3	-0.2
	SNR=148						
TRTT	Trang	66.19	228	P	P	13 24 40.6	+0.1
	comp=Z,129nm,1.1s,comp=Z,4µm						
BNM	Barren Site	66.22	58	*e*P	P	13 24 41.1	+0.3
VLX	Vlachokerasia	66.22	311	P	P	13 24 40.2	-0.4
N49A	Columbus Grove	66.23	37	*e*P	P	13 24 38.6	-1.8
	comp=Z,507nm,1.4s						
N49A	Columbus Grove	66.23	37	P	P	13 24 38.8	-1.7
	baz=342,SNR=40						
SANT	Santorini	66.24	308	P	P	13 24 38.4	-2.3
MHLO	Agia Marina, M	66.26	309	P	P	13 24 40.8	+0.1
AMT	Artemida-Makis	66.26	312	P	P	13 24 39.6	-1.2
M52A	Chesterland	66.27	35	P	P	13 24 39.4	-1.4
	baz=343,SNR=44						
L55A	Hinsdale	66.28	32	P	P	13 24 39.4	-1.5
	baz=344,SNR=35						
M51A	Elyria	66.29	35	P	P	13 24 39.2	-1.7
	baz=343,SNR=23						
FAQ	Al Faqa, Dubai	66.30	277	*i* P	P	13 24 40.4	-0.8
	SNR=37						
Q41A	Truxton	66.33	43	P	P	13 24 39.3	-1.9
	baz=340,SNR=166						
ASF	Jabal al Asfar	66.40	297	P	P	13 24 42.3	+0.5
ASF	Jabal al Asfar	66.40	297	P	P	13 24 42.3	+0.5
	comp=Z,178nm,1.0s,baz=344,slow=5.7,SNR=12						
O47A	Sheridan	66.40	39	P	P	13 24 39.3	-2.3
	baz=342,SNR=65						
HAL	Halifax	66.41	20	*e*P	P	13 24 41.6	+0.1
	comp=Z,471nm,0.7s						
HAL	Halifax	66.41	20	*e*P	P	13 24 41.6	+0.1
BIDO	Bidbid	66.44	275	P	P	13 24 42.0	0.0
	SNR=109						
BIDO				P	P	13 24 42.0	0.0
	SNR=109						
KARP	Karpathos	66.48	307	P	P	13 24 41.1	-1.1
KARP	Karpathos	66.48	307	P	P	13 24 41.1	-1.1
SOHO	SOHO	66.50	276	P	P	13 24 41.7	-0.7
	SNR=129						
SOHO				P	P	13 24 41.7	-0.7
	SNR=129						
SOHO				P	P	13 24 41.7	-0.7
	SNR=129						
WSAR	Wadi Sarin	66.50	274	P	P	13 24 43.0	+0.5
	SNR=143						
WSAR	Wadi Sarin	66.50	274	P	P	13 24 42.8	+0.3
	comp=Z,92nm,0.9s,baz=53,slow=6.8						
ASUD	Al Ashush, Dub	66.51	278	*i* P	P	13 24 41.9	-0.6
	SNR=27						
TUC	Tucson	66.52	62	*e*P	P	13 24 43.3	+0.7
	comp=Z,267nm,1.6s						
TUC	Tucson	66.52	62	*e*P	P	13 24 43.3	+0.7
TUC	Tucson	66.52	62	P	P	13 24 43.4	+0.8
	baz=336						
M53A	WI Miller and	66.52	34	P	P	13 24 40.9	-1.5
	baz=344,SNR=67						
P44A	Sand Creek, Wi	66.53	41	P	P	13 24 40.4	-2.0
	baz=341,SNR=38						
ITM	Ithomi	66.53	312	P	P	13 24 40.5	-2.0
ITM	Ithomi	66.53	312	P	P	13 24 40.5	-2.0
PKDT	Phuket	66.53	229	P	P	13 24 43.3	+0.6
	comp=Z,105nm,1.3s,comp=Z,5µmcomp=Z,19µm						
U32A	Winter Ranch,	66.55	51	*e*P	P	13 24 41.7	-0.9
	comp=Z,215nm,0.9s						
Q42A	Golden Eagle	66.56	43	P	P	13 24 41.1	-1.5
	baz=341,SNR=142						
SKLT	Songkhla	66.57	226	P	P	13 24 43.8	+0.9
	comp=Z,315nm,1.3s,comp=Z,13µm						
N50A	Nevada	66.61	36	P	P	13 24 40.9	-2.0
	baz=343,SNR=29						
O48A	Farmland	66.63	38	P	P	13 24 40.9	-2.2
	baz=342,SNR=74						
MMLI	Mount Malkishu	66.66	298	P	P	13 24 44.1	+0.7
VLI	Veliai	66.67	311	P	P	13 24 40.5	-2.8
M54A	Oil Creek Stat	66.67	33	*e*P	P	13 24 41.5	-1.8
	comp=Z,979nm,1.7s						
M54A	Oil Creek Stat	66.67	33	P	P	13 24 41.6	-1.8
	baz=344,SNR=30						
TRY	Troy	66.68	28	*e*P	P	13 24 43.1	-0.2
	comp=Z,1µm,1.9s						
P45A	Graceland, Par	66.69	40	*e*P	P	13 24 41.2	-2.3
	comp=Z,322nm,1.3s						
P45A	Graceland, Par	66.69	40	P	P	13 24 41.3	-2.2
	baz=341,SNR=36						
HOQ	Hoqain	66.70	275	P	P	13 24 43.8	+0.1
	SNR=34						
AJN	Ajban	66.70	278	*i* P	P	13 24 42.9	-0.7
	SNR=11						
AJN	Ajban	66.70	278	P	P	13 24 43.4	-0.3
	SNR=20						
AJN				P	P	13 24 43.4	-0.3
	SNR=20						
AJN				P	P	13 24 43.4	-0.3
	SNR=20						
HSUJ	Al Zarqa	66.70	298	P	P	13 24 44.6	+0.9
P46A	Rosedale	66.74	40	P	P	13 24 41.6	-2.2
	baz=342,SNR=7.3						
Q43A	New Douglas	66.75	42	P	P	13 24 42.0	-1.8
	baz=341,SNR=89						
BINY	Binghamton	66.75	30	PFAKE		13 25 00.0	+16
BINY				LR	LR		
	comp=Z,97µm,20.0s						
BINY	Binghamton	66.75	30	P	P	13 24 42.2	-1.7
	baz=345,SNR=38						
PYL	PYLOS	66.85	312	P	P	13 24 42.0	-2.5
ALNE	Al Ain	66.87	277	*i* P	P	13 24 44.4	-0.4
	SNR=51						
O49A	Covington	66.89	38	*e*P	P	13 24 42.8	-1.9
	comp=Z,1µm,1.7s						
O49A	Covington	66.89	38	P	P	13 24 42.8	-1.9
	baz=342,SNR=74						
SMDO	Samad	66.89	274	P	P	13 24 45.3	+0.2
	SNR=53						
SLM	Saint Louis	66.89	43	*e*P	P	13 24 43.3	-1.5
	comp=Z,341nm,1.1s						
SLM	Saint Louis	66.89	43	*e*P	P	13 24 43.3	-1.5
M55A	Ridgway	66.90	33	P	P	13 24 43.0	-1.8
	baz=344,SNR=37						
N52A	McGinn's Farm,	66.90	35	P	P	13 24 43.1	-1.7
	baz=343,SNR=26						
R41A	Rosebud	66.91	44	P	P	13 24 42.8	-2.1
	baz=340,SNR=71						
WBK	Wadi Bani Khal	66.94	273	P	P	13 24 46.7	+1.4
	SNR=40						
Q44A	Meyer Farm, Va	66.96	42	*e*P	P	13 24 43.0	-2.1
	comp=Z,505nm,1.3s						
Q44A	Meyer Farm, Va	66.96	42	P	P	13 24 43.0	-2.1
	baz=341,SNR=28						
KYTH	Kithira	67.06	310	P	P	13 24 45.2	-0.7
KTHR	Kythira	67.07	310	P	P	13 24 45.0	-0.9
R42A	Luebbering	67.08	43	P	P	13 24 44.2	-1.8
	baz=341,SNR=74						
N53A	Lisbon	67.09	35	P	P	13 24 44.2	-1.8
	baz=344,SNR=51						
P47A	Martinsville	67.09	39	P	P	13 24 44.0	-2.1
	baz=342,SNR=43						
O50A	Cable	67.09	37	P	P	13 24 44.2	-1.9
	baz=343,SNR=32						
AMTX	Amarillo	67.12	54	*e*P	P	13 24 45.4	-1.0
	comp=Z,677nm,1.4s						
AMTX	Amarillo	67.12	54	P	P	13 24 45.6	-0.8
	baz=338						
N54A	Moraine State	67.12	34	*e*P	P	13 24 44.6	-1.6
	comp=Z,1µm,1.8s						
N54A	Moraine State	67.12	34	P	P	13 24 44.9	-1.4
	baz=344,SNR=45						
ACSO	Alum Creek Sta	67.16	36	*e*P	P	13 24 44.6	-1.8
	comp=Z,315nm,0.9s						
ACSO				LR	LR		
	comp=Z,75µm,22.0s						
ACSO	Alum Creek Sta	67.16	36	P	P	13 24 44.7	-1.8
	baz=343						
ZKR	Zakros	67.17	307	P	P	13 24 45.2	-1.4
CCM	Cathedral Cave	67.17	44	*e*P	P	13 24 43.9	-2.6
	comp=Z,764nm,1.4s						
CCM	Cathedral Cave	67.17	44	*e*P	P	13 24 43.9	-2.6
CCM	Cathedral Cave	67.17	44	P	P	13 24 44.6	-2.0
	baz=340						
CEL	Celeste	67.18	317	*e*P	P	13 24 45.2	-1.5
	comp=Z,179nm,1.1s						
Q45A	Warren Harvey,	67.18	41	P	P	13 24 44.5	-2.1
	baz=341,SNR=87						
JLN	Jalan Bani Buh	67.19	273	P	P	13 24 47.4	+0.6
	SNR=189						
JLN				P	P	13 24 47.4	+0.6
	SNR=189						
NPS	Neapolis	67.22	308	P	P	13 24 45.9	-1.0
NPS	Neapolis	67.22	308	P	P	13 24 45.9	-1.0
ARQ	Araqi	67.22	276	P	P	13 24 47.7	+0.6
	SNR=50						
Q46A	CEJHS Indians,	67.26	40	P	P	13 24 45.1	-2.0
	baz=342,SNR=5.6						
HRV	Adam Dziewonsk	67.27	27	*e*P	P	13 24 47.2	+0.1
	comp=Z,1µm,1.8s						
HRV	Adam Dziewonsk	67.27	27	*e*P	P	13 24 47.2	+0.1
HRV	Adam Dziewonsk	67.27	27	P	P	13 24 46.9	-0.2
	baz=347						
R43A	Red Bud	67.31	43	P	P	13 24 45.3	-2.1
	baz=341,SNR=36						
P48A	Milroy	67.32	39	P	P	13 24 45.2	-2.3
	baz=342,SNR=75						
121A	Cookes Peak, D	67.32	60	P	P	13 24 48.6	+0.8
	baz=337,SNR=70						
O51A	Pataskala	67.33	36	P	P	13 24 45.6	-1.9
	baz=343,SNR=31						
BLO	Bloomington	67.33	40	*e*P	P	13 24 46.1	-1.4
	comp=Z,396nm,1.5s						
BLO	Bloomington	67.33	40	*e*P	P	13 24 46.1	-1.4
WALJ	Wala	67.33	298	P	P	13 24 49.0	+1.4
ANKY	Antikythira Is	67.35	310	P	P	13 24 45.5	-2.2
OLIL	Olney	67.35	41	*e*P	P	13 24 45.5	-2.2
	comp=Z,411nm,1.2s						
QUA2	Belchertown	67.35	28	*e*P	P	13 24 47.5	-0.2
	comp=Z,1µm,1.9s						
LAST	Lasithi	67.35	308	P	P	13 24 45.9	-1.9
IDI	Anoyia	67.41	308	P	P	13 24 44.6	-3.6
IDI	Anoyia	67.41	308⇑	*i*P	P	13 24 45.1	-3.1
IDI	Anoyia	67.41	308	P	P	13 24 44.6	-3.6
KSPA	Keystone Colle	67.42	30	*e*P	P	13 24 47.0	-1.0
	comp=Z,278nm,1.4s						
P49A	Miami Univ. Ec	67.42	38	P	P	13 24 45.9	-2.2
	baz=342,SNR=48						
WES	Weston	67.43	27	*e*P	P	13 24 48.2	+0.1
	comp=Z,1µm,2.0s						
WES	Weston	67.43	27	*e*P	P	13 24 48.2	+0.1
CHAN	Chania	67.45	309	P	P	13 24 45.9	-2.4
FVM	French Village	67.46	43	*e*P	P	13 24 45.9	-2.5
	comp=Z,990nm,1.5s						
FVM	French Village	67.46	43	*e*P	P	13 24 45.9	-2.5
TNTI	Ternate	67.47	197	*e*P	P	13 24 48.5	-0.1
	comp=Z,243nm,1.2s						
TNTI	Ternate	67.47	197	P	P	13 24 47.1	-1.5
S41A	Jillco Farms,	67.48	44	P	P	13 24 46.9	-1.6
	baz=340,SNR=188						
JMDO	Jabal Madar	67.49	274	P	P	13 24 49.3	+0.5
	SNR=42						
BSY	Bisya	67.50	275	P	P	13 24 48.8	0.0
	SNR=88						
N55A	Marion Center	67.51	33	P	P	13 24 47.1	-1.6
	baz=344,SNR=54						
VAM	Vamos	67.51	309	P	P	13 24 46.7	-2.0
VAM	Vamos	67.51	309	P	P	13 24 46.7	-2.0
IMMV	Iera Moni Meta	67.53	309	P	P	13 24 47.3	-1.5
O52A	Adamsville	67.53	36	*e*P	P	13 24 46.9	-1.9
	comp=Z,409nm,0.9s						
O52A	Adamsville	67.53	36	P	P	13 24 47.1	-1.7
	baz=343,SNR=88						
SWQJ	Swaqa	67.54	297	P	P	13 24 49.8	+0.7
O53A	New Philadelph	67.54	35	P	P	13 24 47.3	-1.6
	baz=343,SNR=46						
R44A	Waltonville	67.56	42	P	P	13 24 47.2	-1.8
	baz=341,SNR=90						
S42A	Caledonia	67.56	44	P	P	13 24 47.0	-2.0
	baz=341,SNR=95						
P50A	Jamestown	67.56	37	P	P	13 24 47.0	-2.0
	baz=343,SNR=76						
Q47A	Bedord North L	67.58	40	P	P	13 24 47.3	-1.8
	baz=342,SNR=37						
MSTX	Muleshoe	67.62	55	*e*P	P	13 24 48.6	-1.0
	comp=Z,580nm,1.3s						
MSTX	Muleshoe	67.62	55	P	P	13 24 48.6	-1.0
	baz=338,SNR=41						
MDRS	Chennai	67.62	249	*e*P	P	13 24 49.7	+0.1
MDRS				IAmb	IAmb	13 24 53.4	
	comp=Z,129nm,0.5s						
MDRS				IAMs_20	IAMs_20	13 56 27.6	
	comp=Z,72µm,9.1s						
GHAJ	Ghor Haditha	67.65	298	P	P	13 24 50.2	+0.6
	comp=Z,473nm,1.4s						
AMAZ	Amatzia	67.66	298	P	P	13 24 50.5	+0.7
R45A	Skylar, Fairfi	67.72	41	P	P	13 24 48.1	-1.9
	baz=341,SNR=33						
LISJ	El Lisan	67.74	298	P	P	13 24 51.6	+1.5
GOA	Goa	67.75	256	*e*P	P	13 24 49.7	-0.7
Q48A	North Vernon	67.75	39	P	P	13 24 47.9	-2.3
	baz=342,SNR=31						
O54A	Avella	67.79	34	P	P	13 24 49.0	-1.5
	baz=344,SNR=40						
P51A	Williamsport	67.86	37	*e*P	P	13 24 48.5	-2.3
	comp=Z,798nm,1.8s						
P51A	Williamsport	67.86	37	P	P	13 24 48.5	-2.3
	baz=343,SNR=38						
SSPA	Standing Stone	67.88	32	*e*P	P	13 24 49.0	-2.0

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      comp=Z,1µm,2.0s
SSPA  Standing Stone    67.88  32  P      P    13 24 48.9 -2.0
      baz=344
Q49A  Aurora            67.88  38  P      P    13 24 49.1 -1.9
      baz=342,SNR=31
319A  Douglas           67.88  61 eP      P    13 24 51.5 +0.2
      comp=Z,2µm,1.8s
P52A  Corning           67.92  36  P      P    13 24 49.1 -2.2
      baz=343,SNR=22
TUL1  Leonard           67.92  48 eP      P    13 24 49.9 -1.5
      comp=Z,1µm,1.5s
TUL1  Leonard           67.92  48  P      P    13 24 50.0 -1.3
      baz=340,SNR=60
S43A  Fulton Ridge,     67.94  43  P      P    13 24 49.4 -2.0
      baz=341,SNR=87
T41A  Mountain View     67.98  45  P      P    13 24 50.0 -1.7
      baz=340,SNR=308
R46A  Gibon Southern    67.99  41  P      P    13 24 49.8 -1.9
      baz=342,SNR=10.0
O55A  Ligonier          67.99  34  P      P    13 24 50.0 -1.7
      baz=344,SNR=22
SIUC  Southern Illin    68.03  42 eP      P    13 24 50.3 -1.6
      comp=Z,416nm,1.0s
N59A  State Game Lan    68.03  31 eP      P    13 24 50.5 -1.4
      comp=Z,609nm,1.7s
N59A  State Game Lan    68.03  31  P      P    13 24 50.6 -1.4
      baz=345,SNR=15
GVD   Gavdhos           68.07 309  P      P    13 24 51.2 -1.1
KMSI  Cibinong          68.07 200  P      P    13 24 50.8 -1.6
O56A  Blue Knob Stat    68.09  33 eP      P    13 24 50.6 -1.8
      comp=Z,1µm,1.7s
O56A  Blue Knob Stat    68.09  33  P      P    13 24 50.3 -2.1
      baz=344,SNR=29
ODNJ  Ogdensburg        68.10  30 eP      P    13 24 51.5 -0.9
      comp=Z,303nm,1.4s
WMOK  Wichita Mounta    68.14  51 eP      P    13 24 51.6 -1.1
      comp=Z,1µm,1.9s
WMOK  Wichita Mounta    68.14  51 eP      P    13 24 51.6 -1.1
WMOK  Wichita Mounta    68.14  51  P      P    13 24 52.0 -0.7
      baz=339,SNR=136
JDRJ  Daraweish         68.14 297  P      P    13 24 54.6 +1.6
R47A  Wooly Knot Far    68.16  40  P      P    13 24 50.9 -1.9
      baz=342,SNR=33
T42A  Van Buren         68.18  44 eP      P    13 24 50.5 -2.3
      comp=Z,674nm,1.5s
T42A  Van Buren         68.18  44  P      P    13 24 50.8 -2.0
      baz=341,SNR=118
YLE   Yale              68.18  28 eP      P    13 24 53.1 +0.3
      comp=Z,240nm,1.1s
R48A  Northridge Ran    68.22  39  P      P    13 24 51.5 -1.7
      baz=342,SNR=22
Q51A  Peebles           68.22  37 eP      P    13 24 50.5 -2.7
      comp=Z,979nm,1.8s
Q51A  Peebles           68.22  37  P      P    13 24 51.2 -2.0
      baz=343,SNR=32
P53A  Whipple           68.23  35 eP      P    13 24 51.5 -1.7
      comp=Z,2µm,1.7s
P53A  Whipple           68.23  35  P      P    13 24 51.3 -1.9
      baz=343,SNR=52
Q50A  Georgetown        68.25  38  P      P    13 24 51.3 -2.1
      baz=343,SNR=48
SBUM  Sibu              68.26 213 eP      P    13 24 53.4 -0.3
      comp=Z,205nm,1.3s
SBUM  Sibu              68.26 213  P      P    13 24 55.2 +1.5
WCI   Wyandotte Cave    68.28  40 eP      P    13 24 51.7 -1.8
      comp=Z,308nm,1.1s
WCI   Wyandotte Cave    68.28  40 eP      P    13 24 51.7 -1.8
WCI   Wyandotte Cave    68.28  40  P      P    13 24 51.7 -1.8
      baz=342
PAL   Palisades         68.30  29 eP      P    13 24 52.1 -1.5
      comp=Z,619nm,1.4s
PAL   Palisades         68.30  29 eP      P    13 24 52.1 -1.5
PAL   Palisades         68.30  29  P      P    13 24 52.5 -1.1
      baz=346,SNR=22
P54A  Burton            68.32  35  P      P    13 24 52.4 -1.4
      baz=344,SNR=38
U40A  Yellville         68.33  46  P      P    13 24 51.9 -2.0
      baz=340,SNR=182
T43A  Greenville        68.34  43  P      P    13 24 52.0 -1.9
      baz=341,SNR=40
M65A  Busby, Falmout    68.35  26  P      P    13 24 52.8 -1.1
      baz=347
KULM  Kulim             68.35 226 eP      P    13 24 53.8 -0.4
      comp=Z,332nm,1.0s
KULM  Kulim             68.35 226  P      P    13 24 54.6 +0.4
MAHO  Mahon             68.39 327⇑iP      P    13 24 53.9 -0.3
MAHO                              iS      S    13 33 56.8 +1.6
MCWV  Mont Chateau      68.41  34  P      P    13 24 52.7 -1.6
      baz=344,SNR=6.2
KZIT  Kziot             68.41 299  P      P    13 24 54.8 +0.3
S46A  Don Dixon Farm    68.44  41  P      P    13 24 52.5 -2.0
      baz=342,SNR=30
MRSI  Marisa            68.45 202  P      P    13 24 53.1 -1.7
R49A  Shelbyville       68.49  39  P      P    13 24 52.8 -2.0
      baz=342,SNR=51
CPNY  Central Park      68.50  29 eP      P    13 24 53.8 -1.0
      comp=Z,2µm,2.0s
PAGS  Pennsylvania G    68.51  32 eP      P    13 24 53.5 -1.4
      comp=Z,989nm,1.8s
CLTB  Caltabellotta     68.52 319 eP      P    13 24 56.0 +0.9
      comp=Z,435nm,1.6s
Q52A  Bidwell           68.53  36  P      P    13 24 52.9 -2.2
      baz=343,SNR=32
P55A  Reedsville        68.55  34  P      P    13 24 53.6 -1.7
      baz=344,SNR=25
PBRG  Braganca          68.57 336 eP      P    13 24 54.5 -0.8
      comp=Z,512nm,1.4s
PBRG                              iS      S    13 34 01.7 +4.3
HSNJ  Maan              68.57 297  P      P    13 24 57.1 +1.5
PBMO  Poplar Bluff      68.59  44 eP      P    13 24 53.4 -2.1
      comp=Z,412nm,1.4s
U41A  Viola             68.60  45  P      P    13 24 53.9 -1.7
      baz=340,SNR=152
PGAV  Gavieira, Arco    68.64 337⇑eP      P    13 24 55.8 -0.1
      comp=Z,2µm,1.7s
PGAV                              iS      S    13 34 02.1 +3.7
PGAV                              eLQ     LQ   13 43 39.3
PGAV                              eLR     LR   13 47 02.4
CMBY  CAMPBELL BAY      68.68 233 eP      P    13 24 56.4 +0.2
MZR   Muzera            68.69 279 iP      P    13 24 55.9 -0.4
      SNR=45
MZR   Muzera            68.69 279  P      P    13 24 55.7 -0.6
      SNR=50
MZR                                P      P    13 24 55.7 -0.6
      SNR=50
R50A  Paris             68.70  38  P      P    13 24 54.5 -1.7
      baz=343,SNR=30
SIJI  Sorong            68.72 192  S      S    13 34 02.3 +2.7
      comp=Z,3.7nm,0.4s,baz=244,slow=22,SNR=3.0
S47A  Hartford          68.73  40  P      P    13 24 54.3 -2.1
      baz=342,SNR=30
GDL2  Guadalupe Moun    68.75  57 eP      P    13 24 56.4 -0.3
U42A  Revenden          68.78  44  P      P    13 24 55.2 -1.4
      baz=341,SNR=172
MHTO  MHTO              68.80 274  P      P    13 24 56.8 -0.1
      SNR=157
MHTO                               P      P    13 24 56.8 -0.1
      SNR=157
MHTO                               P      P    13 24 56.8 -0.1
      SNR=157
MVL   Millersville      68.80  31 eP      P    13 24 56.3 -0.5
      comp=Z,432nm,1.9s
T45A  Paducah           68.83  42  P      P    13 24 55.5 -1.5
      baz=341,SNR=5.9
Q54A  Coxs Mills        68.84  35  P      P    13 24 55.5 -1.5
      baz=344,SNR=45
PCAB  Cabril            68.86 337 eP      P    13 24 56.9 -0.2
      comp=Z,702nm,1.4s
R51A  Hillsboro         68.86  38  P      P    13 24 55.7 -1.5
      baz=343,SNR=102
S48A  Wiedeman Farm,    68.88  40  P      P    13 24 55.7 -1.6
      baz=342,SNR=40
MNTX  Cornudas Mount    68.88  58 eP      P    13 24 57.1 -0.3
      comp=Z,327nm,1.2s
MNTX                               LR     LR
      comp=Z,56µm,22.0s
MNTX  Cornudas Mount    68.88  58  P      P    13 24 57.9 +0.5
      baz=338,SNR=197
MPSI  Mapaga            68.90 205  P      P    13 24 55.8 -1.8
S49A  Springfield       68.94  39  P      P    13 24 56.0 -1.7
      baz=342,SNR=46
U43A  Rector            68.98  44  P      P    13 24 56.1 -1.8
      baz=341,SNR=31
HRFI  Mount Harif       68.99 298  P      P    13 24 58.6 +0.5
Q55A  Buckhannon        68.99  35  P      P    13 24 56.9 -1.1
      baz=344,SNR=36
T46A  Princeton         69.00  41  P      P    13 24 56.8 -1.3
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      baz=342,SNR=36
IPM   Ipoh              69.02 225 eP      P    13 24 56.7 -1.7
      comp=Z,244nm,1.0s
IPM   Ipoh              69.02 225  P      P    13 24 58.3 -0.1
R52A  Catlettsburg      69.05  37  P      P    13 24 56.4 -2.0
      baz=343,SNR=9.5
V41A  Mountainview      69.06  45  P      P    13 24 56.5 -1.9
      baz=340,SNR=131
RKPI  Ransiki, Papua    69.14 189  P      P    13 24 58.1 -1.0
POLO  Lamas de Olo      69.15 337 eP      P    13 24 58.9 -0.1
      comp=Z,358nm,1.4s
POLO                              iS      S    13 34 09.0 +4.5
W39A  Magazine          69.16  47 eP      P    13 24 57.2 -1.8
      comp=Z,1µm,1.8s
W39A  Magazine          69.16  47  P      P    13 24 57.4 -1.6
      baz=340,SNR=58
R53A  Hurricane         69.21  36  P      P    13 24 57.8 -1.5
      baz=343,SNR=74
PVRL  Vila Real         69.23 337 eP      P    13 24 59.5  0.0
MVO   Moncorvo          69.24 336⇑eP      P    13 24 59.1 -0.5
      comp=Z,1µm,1.4s
MVO                               iS      S    13 34 03.5 -1.9
MVO                               eLQ     LQ   13 43 55.9
MVO                               eLR     LR   13 47 27.7
      comp=Z,44µm,19.4s
V42A  Cord              69.25  45  P      P    13 24 57.9 -1.7
      baz=341,SNR=84
T47A  Sharon Grove      69.25  41  P      P    13 24 58.2 -1.4
      baz=342,SNR=12
S50A  Richmond          69.26  38  P      P    13 24 57.8 -1.8
      baz=343,SNR=34
AQBJ  Aqaba             69.27 298  P      P    13 25 00.8 +1.0
TARA  Tarawa            69.27 147 eP      P    13 25 03.7 +3.8
      comp=Z,450nm,1.3s
T48A  Bowling Green     69.31  40  P      P    13 24 58.3 -1.6
      baz=342,SNR=48
EIL   Elat              69.36 298  P      P    13 25 00.9 +0.6
      comp=Z,402nm,1.4s
EIL   Elat              69.36 298  P      P    13 25 00.1 -0.3
      comp=Z,431nm,1.2s,baz=350,slow=5.2,SNR=73
SRPI  Serui, Papua      69.39 187  P      P    13 24 59.7 -0.9
U45A  Rockin P Farm,    69.43  42  P      P    13 24 59.6 -1.1
      baz=342,SNR=39
UCM   Universidad Co    69.44 333⇑iP      P    13 25 02.5 +1.7
UCM                               iS      S    13 34 08.6 +0.7
LHMI  Lhok Sumawe       69.46 230 eP      P    13 25 02.5 +1.4
      comp=Z,1µm,0.9s
LHMI  Lhok Sumawe       69.46 230  P      P    13 24 58.8 -2.3
MANU  Manus Island      69.49 175 eP      P    13 25 03.9 +2.6
      comp=Z,352nm,1.8s
S51A  Beattyville       69.49  38 eP      P    13 24 59.0 -2.1
      comp=Z,733nm,1.8s
S51A  Beattyville       69.49  38  P      P    13 24 59.0 -2.1
      baz=343,SNR=26
V43A  Jonesboro         69.50  44  P      P    13 25 00.2 -0.9
      baz=341,SNR=23
PTO   Porto             69.50 337 eP      P    13 25 01.4 +0.3
T49A  Edmonton          69.53  40 eP      P    13 24 59.8 -1.6
      comp=Z,885nm,1.7s
T49A  Edmonton          69.53  40  P      P    13 25 00.0 -1.3
      baz=342,SNR=66
R54A  Victor            69.57  36  P      P    13 25 00.1 -1.5
      baz=344,SNR=63
S52A  Salyersville      69.57  37  P      P    13 24 59.8 -1.8
      baz=343
U46A  Springville       69.58  42  P      P    13 25 00.6 -1.0
      baz=342,SNR=9.0
W41B  Gary Mavity, V    69.61  46 eP      P    13 24 59.5 -2.3
      comp=Z,1µm,1.4s
W41B  Gary Mavity, V    69.61  46  P      P    13 25 00.3 -1.5
      baz=341,SNR=221
KSM   Kuching           69.62 215 eP      P    13 25 01.7 -0.4
      comp=Z,440nm,1.2s
KSM   Kuching           69.62 215  P      P    13 25 02.1 +0.1
V44A  Blytheville       69.63  44  P      P    13 25 00.9 -1.0
      baz=341
R55A  Marlinton         69.67  35  P      P    13 25 00.5 -1.7
      baz=344,SNR=23
BSI   Banda Aceh        69.70 231  P      P    13 24 57.7 -4.9
W42A  Bald Knob         69.72  45  P      P    13 25 01.2 -1.3
      baz=341,SNR=18
U47A  Clarksville       69.72  41  P      P    13 25 01.3 -1.3
      baz=342,SNR=45
T50A  Nancy             69.78  39  P      P    13 25 01.2 -1.7
      baz=343,SNR=54
S53A  Williamson        69.79  37  P      P    13 25 01.2 -1.8
      baz=343,SNR=16
PVIS  Viseu             69.81 337⇑eP      P    13 25 02.6 -0.5
      comp=Z,713nm,1.3s
WDD   Wied Dalam        69.82 317 eP      P    13 25 03.6 +0.4
      comp=Z,1µm,1.1s
LUWI  Luwuk             69.83 201 eP      P    13 25 01.1 -2.3
      comp=Z,498nm,1.1s
LUWI  Luwuk             69.83 201  P      P    13 25 01.4 -1.9
      comp=Z,443nm,1.0s,comp=Z,8µm
MIAR  Mount Ida         69.83  47 eP      P    13 25 01.6 -1.6
      comp=Z,367nm,1.4s
MIAR                               LR     LR
      comp=Z,43µm,20.0s
MIAR  Mount Ida         69.83  47 eP      P    13 25 01.6 -1.6
MIAR  Mount Ida         69.83  47  P      P    13 25 01.9 -1.3
      baz=340,SNR=49
ABTX  Abilene, Hawle    69.84  53 eP      P    13 25 02.4 -1.0
      comp=Z,682nm,1.2s
ABTX  Abilene, Hawle    69.84  53  P      P    13 25 02.5 -0.9
      baz=339,SNR=106
U48A  Cassie Pea, Po    69.85  41  P      P    13 25 01.9 -1.4
      baz=342,SNR=44
APSI  Ampana            69.86 202  P      P    13 25 01.9 -1.6
WVT   Waverly           69.88  42 eP      P    13 25 01.5 -2.0
      comp=Z,652nm,1.2s
WVT   Waverly           69.88  42 eP      P    13 25 01.5 -2.0
WVT   Waverly           69.88  42  P      P    13 25 02.0 -1.5
      baz=342
JAY   Jayapura          69.89 182  P      P    13 25 03.1 -0.7
DQM   DQM               69.92 273  P      P    13 25 03.4 -0.5
      SNR=76
DQM                                P      P    13 25 03.4 -0.5
      SNR=76
DQM                                P      P    13 25 03.4 -0.5
      SNR=76
UALR  University of     69.96  46 eP      P    13 25 02.4 -1.6
      comp=Z,754nm,1.5s
V45A  Humboldt          69.96  43  P      P    13 25 02.8 -1.1
      baz=342,SNR=47
GENI  Genyem            69.98 183  P      P    13 25 03.6 -0.6
U49A  Red Boiling Sp    70.03  40  P      P    13 25 02.9 -1.5
      baz=342,SNR=66
FRIM  Kepong            70.05 224  P      P    13 25 04.6 -0.1
T51A  Gray              70.05  38  P      P    13 25 02.6 -1.9
      baz=343,SNR=51
MTE   Manteigas         70.07 336 eP      P    13 25 04.6 -0.1
      comp=Z,1µm,1.4s
MTE                               iS      S    13 34 21.5 +6.3
MTE                               eLQ     LQ   13 44 15.7
MTE                               eLR     LR   13 47 44.6
MTE   Manteigas         70.07 336 eP      P    13 25 04.3 -0.4
      comp=Z,644nm,1.2s
S55A  Lewisburg         70.07  35  P      P    13 25 03.3 -1.4
      baz=344,SNR=21
X40A  Basin Creek Fa    70.09  46 eP      P    13 25 02.0 -2.8
      comp=Z,248nm,0.8s
X40A  Basin Creek Fa    70.09  46  P      P    13 25 03.4 -1.4
      baz=340,SNR=102
W43A  Forest City       70.11  44  P      P    13 25 03.9 -1.0
      baz=341,SNR=8.3
V46A  Holladay          70.12  42  P      P    13 25 03.8 -1.1
      baz=342,SNR=95
SMKI  Samarinda         70.12 207  P      P    13 25 03.3 -1.8
PCI   Palu              70.13 204  P      P    13 25 03.5 -1.7
SGKI  Sangatta, Kali    70.14 207  P      P    13 25 03.4 -1.8
T52A  Hallie            70.14  37  P      P    13 25 03.5 -1.6
      baz=343,SNR=24
ES19  SONSECA Array     70.15 333 eP      P    13 25 04.0 -1.1
X41A  Kaden, Bauxite    70.17  46  P      P    13 25 03.7 -1.6
      baz=341
ESDC  Sonseca Array     70.19 333  P      P    13 25 04.8 -0.6
      comp=Z,281nm,1.1s,baz=7.6,slow=6.4,SNR=219
ESDC                               S      S    13 34 17.7 +1.2
      comp=Z,1.0nm,0.7s,baz=17,slow=7.2,SNR=2.3
ESDC                               LR     LR   14 01 27.2
      comp=Z,43µm,18.3s,baz=25,slow=41
ESLA  Sonseca Array     70.19 333 eP      P    13 25 05.2 -0.2
      comp=Z,433nm,1.2s
V47A  Nunnelly          70.25  42  P      P    13 25 04.4 -1.4
      baz=342,SNR=80
W44A  Shelby Farms P    70.30  44  P      P    13 25 04.5 -1.5
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      baz=341
CBN   Corbin Frederi    70.33  33  PFAKE       13 25 20.0 +14
CBN                                LR     LR
      comp=Z,77µm,20.0s
CBN   Corbin Frederi    70.33  33  P      P    13 25 04.7 -1.5
      baz=345,SNR=7.6
U50A  Jamestown         70.36  39  P      P    13 25 05.0 -1.5
      baz=343,SNR=45
T53A  Wise              70.36  37  P      P    13 25 05.1 -1.4
      baz=343,SNR=9.1
X42A  Stuttgart         70.36  45  P      P    13 25 05.3 -1.2
      baz=341,SNR=6.8
PAB   San Pablo         70.38 333 eP      P    13 25 05.4 -1.2
      comp=Z,482nm,1.3s
PAB                                LR     LR
      comp=Z,38µm,20.0s
PAB   San Pablo         70.38 333 eP      P    13 25 05.4 -1.2
SANI  Sanana            70.41 198  P      P    13 25 05.5 -1.4
W45A  Hickory Valley    70.45  43  P      P    13 25 05.8 -1.2
      baz=342,SNR=70
R58B  Mineral           70.45  33 eP      P    13 25 05.6 -1.4
      comp=Z,356nm,1.8s
R58B  Mineral           70.45  33  P      P    13 25 05.5 -1.5
      baz=345,SNR=18
V48A  Smith Brothers    70.51  41 eP      P    13 25 05.8 -1.6
      comp=Z,718nm,1.6s
V48A  Smith Brothers    70.51  41  P      P    13 25 06.0 -1.4
      baz=342,SNR=65
T54A  Tazewell          70.51  36  P      P    13 25 06.0 -1.4
      baz=344,SNR=41
TZTN  Tazewell          70.54  38 eP      P    13 25 06.4 -1.2
      comp=Z,494nm,1.6s
TZTN  Tazewell          70.54  38  P      P    13 25 06.1 -1.5
      baz=343,SNR=38
PCAS  Casmilo, Conde    70.55 337⇑eP      P    13 25 07.1 -0.5
      comp=Z,1µm,1.4s
PCAS                              iS      S    13 34 18.5 -2.2
SRIG  Santa Rosalia     70.58  66 eP      P    13 25 10.3 +2.4
      comp=Z,695nm,1.3s
U51A  La Follette       70.59  39  P      P    13 25 06.1 -1.8
      baz=343,SNR=24
X43A  Marvell           70.60  45 eP      P    13 25 07.0 -0.9
      comp=Z,3µm,1.8s
X43A  Marvell           70.60  45  P      P    13 25 07.0 -0.9
      baz=341,SNR=23
PCBR  Castelo Branco    70.60 336 eP      P    13 25 07.8 -0.1
      comp=Z,1µm,1.4s
BLA   Blacksburg        70.62  35 eP      P    13 25 06.6 -1.5
      comp=Z,608nm,1.4s
BLA                                LR     LR
      comp=Z,76µm,19.0s
BLA   Blacksburg        70.62  35 eP      P    13 25 06.6 -1.5
BLA   Blacksburg        70.62  35  P      P    13 25 06.5 -1.7
      baz=344,SNR=30
TSI   Tuntungan         70.64 227  P      P    13 25 06.1 -2.2
FAKI  Fak Fak           70.67 191 eP      P    13 25 08.2 -0.3
      comp=Z,242nm,1.4s
FAKI  Fak Fak           70.67 191  P      P    13 25 07.4 -1.1
W46A  Michie            70.68  43  P      P    13 25 07.0 -1.4
      baz=342,SNR=29
V49A  McMinnville       70.71  40  P      P    13 25 07.1 -1.5
      baz=342,SNR=35
Y41A  Eaglette Beard    70.72  46  P      P    13 25 07.7 -1.0
      baz=341,SNR=27
U52A  Thorn Hill        70.73  38  P      P    13 25 07.0 -1.7
      baz=343,SNR=30
KGM   Kluang            70.77 222  P      P    13 25 10.0 +0.9
W47A  Westpoint         70.77  42  P      P    13 25 07.6 -1.4
      baz=342,SNR=128
CAEH  'Ain El Ouahch    70.81 324  P      P    13 25 09.3 +0.1
CMAH  Djebel Manchou    70.83 323  P      P    13 25 09.1 -0.3
KCSI  Kotacane, Aceh    70.85 228  P      P    13 25 07.0 -2.6
      comp=Z,167nm,1.0s,comp=Z,7µm
MYKOM Kota Tinggi       70.85 222 eP      P    13 25 09.1 -0.5
      comp=Z,370nm,1.1s
PLAL  Pickwick Lake     70.91  42 eP      P    13 25 08.2 -1.6
      comp=Z,2µm,1.8s
U53A  Fall Branch       70.94  37  P      P    13 25 08.4 -1.6
      baz=343,SNR=46
PTOM  Tomar             70.96 337 eP      P    13 25 09.6 -0.5
      comp=Z,576nm,1.4s
BKB   Balikpapan        70.97 207  P      P    13 25 07.6 -2.7
PMRV  Marv??o           70.99 336⇑eP      P    13 25 09.5 -0.8
      comp=Z,349nm,1.5s
PMRV                              iS      S    13 34 31.4 +5.5
PMRV                              eLQ     LQ   13 44 25.1
PMRV                              eLR     LR   13 50 57.2
      comp=Z,39µm,34.6s
Y42A  Garnett, Star     70.99  46  P      P    13 25 09.4 -0.9
      baz=341,SNR=13
OXF   Oxford            71.00  44 eP      P    13 25 08.8 -1.6
      comp=Z,2µm,1.3s
OXF   Oxford            71.00  44 eP      P    13 25 08.8 -1.6
OXF   Oxford            71.00  44  P      P    13 25 08.6 -1.8
      baz=342,SNR=130
V50A  Pikevile          71.00  40  P      P    13 25 08.7 -1.6
      baz=343,SNR=49
MTKI  Muara Teweh, K    71.03 210  P      P    13 25 10.0 -0.7
W48A  Pulaski           71.05  41  P      P    13 25 09.2 -1.5
      baz=342,SNR=77
V51A  Loudon            71.06  39 eP      P    13 25 09.1 -1.6
      comp=Z,295nm,1.1s
V51A  Loudon            71.06  39  P      P    13 25 09.2 -1.5
      baz=343,SNR=48
WHTX  Lake Whitney,     71.09  51 eP      P    13 25 09.9 -1.0
      comp=Z,1µm,1.6s
WHTX  Lake Whitney,     71.09  51  P      P    13 25 10.1 -0.8
      baz=340
ABSA  Djebel Ababsia    71.15 323  P      P    13 25 11.1 -0.3
Y43A  Makayla and Ka    71.16  45  P      P    13 25 10.4 -0.9
      baz=341,SNR=29
X46A  Booneville        71.17  43  P      P    13 25 09.9 -1.5
      baz=342,SNR=12
V52A  Sevierville       71.20  38 eP      P    13 25 09.9 -1.7
      comp=Z,736nm,1.6s
V52A  Sevierville       71.20  38  P      P    13 25 10.0 -1.5
      baz=343,SNR=31
PSI   Prapat            71.21 227 eP      P    13 25 10.5 -1.4
      comp=Z,513nm,0.9s
PSI   Prapat            71.21 227 eP      P    13 25 10.5 -1.4
PSI   Prapat            71.21 227  S      S    13 34 26.8 -2.2
      comp=Z,2.9nm,0.4s,baz=360,slow=20,SNR=1.9
RAYN  Ar Rayn           71.21 286  PFAKE       13 25 20.0 +8.2
RAYN                               LR     LR
      comp=Z,53µm,19.0s
KEST  Kesra             71.22 321 eP      P    13 25 11.0 -0.8
KEST  Kesra             71.22 321  P      P    13 25 12.1 +0.3
      comp=Z,266nm,1.2s,baz=316,slow=3.8,SNR=26
KEST                               LR     LR   14 04 16.2
      comp=Z,23µm,18.4s,baz=325,slow=42
W49A  Belvidere         71.24  41  P      P    13 25 10.3 -1.5
      baz=342,SNR=92
DFRA  Djebel Bou Aff    71.25 324  P      P    13 25 12.6 +0.6
Z41A  Richland Creek    71.26  47  P      P    13 25 10.9 -1.0
      baz=341,SNR=21
TPTI                    71.27 229  P      P    13 25 09.9 -2.2
TKL   Tuckaleechee C    71.33  39 eP      P    13 25 10.7 -1.7
      comp=Z,665nm,1.7s
TKL   Tuckaleechee C    71.33  39 eP      P    13 25 10.7 -1.7
CASM  Ain Smara         71.39 324  P      P    13 25 11.9 -0.9
W50A  Signal Mountai    71.40  40 eP      P    13 25 11.1 -1.8
      comp=Z,250nm,1.3s
W50A  Signal Mountai    71.40  40  P      P    13 25 11.2 -1.7
      baz=343,SNR=33
X47A  Russelville       71.40  42  P      P    13 25 11.2 -1.6
      baz=342,SNR=120
NLAI  Namlea            71.46 196  P      P    13 25 11.9 -1.3
PMTG  Montargil         71.47 336 eP      P    13 25 12.8 -0.3
      comp=Z,797nm,1.4s
PMTG                              iS      S    13 34 33.0 +1.6
TPRI  Tanjung Pinang    71.52 221  P      P    13 25 11.6 -2.0
V53A  Saluda            71.55  38 eP      P    13 25 12.6 -1.2
      comp=Z,813nm,1.9s
V53A  Saluda            71.55  38  P      P    13 25 12.3 -1.5
      baz=343,SNR=17
W51A  Cleveland         71.57  40  P      P    13 25 12.1 -1.7
      baz=343,SNR=35
PESTR Estremoz          71.57 336 eP      P    13 25 12.9 -0.9
      comp=Z,641nm,1.5s
PESTR                             iS      S    13 34 37.6 +5.0
PESTR                             eLR     LR   13 43 22.2
      comp=Z,40µm,21.4s
PESTR Estremoz          71.57 336 eP      P    13 25 13.0 -0.7
CTEI  Djebel Teioual    71.59 324  P      P    13 25 14.2 +0.1
TX31  Lajitas Ar. Si    71.62  57 eP      P    13 25 14.2 -0.1
TXAR  Lajitas Array     71.62  57  P      P    13 25 13.9 -0.4
      comp=Z,69nm,1.0s,baz=343,slow=3.9,SNR=123
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TXAR				S	S	13 34 35.3	+1.7
	comp=Z,4.8nm,1.1s,baz=90,slow=2.5,SNR=2.6						
TXAR				PKPPKP	P'P'df	13 53 02.5	-6.9
	comp=Z,1.9nm,1.0s,baz=182,slow=3.5,SNR=5.9						
TXAR				LR	LR	13 59 22.0	
	comp=Z,55µm,21.0s,baz=0.0,slow=38						
ABA	Alger-Bouzarea	71.62	327	P	P	13 25 14.6	+0.5
X48A	Hartselle	71.67	42	eP	P	13 25 12.6	-1.8
	comp=Z,860nm,1.6s						
X48A	Hartselle	71.67	42	P	P	13 25 12.7	-1.7
	baz=342,SNR=71						
CART	Cartagena	71.67	330	eP	P	13 25 14.3	-0.1
	comp=Z,631nm,1.3s						
CART	Cartagena	71.67	330⇑	iP	P	13 25 14.2	-0.1
CART				iS	S	13 34 36.4	+2.6
SET	Setif	71.69	325	P	P	13 25 15.0	+0.4
Z43A	Armstrong Fami	71.73	46	P	P	13 25 13.4	-1.3
	baz=341,SNR=7.5						
PMAFR	Mafra	71.74	337	eP	P	13 25 13.5	-1.3
	comp=Z,1µm,1.5s						
PMAFR				iS	S	13 34 34.6	0.0
JCT	Junction City	71.78	54	eP	P	13 25 14.8	-0.4
	comp=Z,2µm,1.5s						
JCT				LR	LR		
	comp=Z,63µm,20.0s						
JCT	Junction City	71.78	54	eP	P	13 25 14.8	-0.4
JCT	Junction City	71.78	54	P	P	13 25 14.9	-0.3
	baz=339,SNR=128						
X49A	Woodville	71.80	41	P	P	13 25 13.7	-1.4
	baz=342,SNR=62						
W52A	Murphy	71.84	39	eP	P	13 25 13.8	-1.7
	comp=Z,318nm,1.0s						
W52A	Murphy	71.84	39	P	P	13 25 13.9	-1.5
	baz=343,SNR=80						
CKHR	Kef el Ahmar	71.84	325	P	P	13 25 16.0	+0.4
RABL	Rabaul	71.86	170	eP	P	13 25 15.7	0.0
	comp=Z,771nm,1.6s						
PMST	Lisbon--Monsan	71.94	337	eP	P	13 25 14.7	-1.3
	comp=Z,651nm,1.4s						
W53A	Cullowhee	71.95	38	P	P	13 25 14.6	-1.7
	baz=343,SNR=28						
LIS	Lisbon	71.96	337	eP	P	13 25 15.3	-0.7
LIS				eS	S	13 34 36.4	-0.6
LIS				AMS	AMS	14 04 11.8	
	comp=Z,48µm,19.1s						
LIS	Lisbon	71.96	337	eP	P	13 25 15.3	-0.7
LIS				eS	S	13 34 36.3	-0.6
X50B	Fort Payne	72.02	40	P	P	13 25 15.0	-1.5
	baz=343,SNR=70						
X51A	Calhoun	72.11	40	eP	P	13 25 15.6	-1.5
	comp=Z,700nm,1.4s						
X51A	Calhoun	72.11	40	P	P	13 25 15.7	-1.4
	baz=343,SNR=48						
NATX	Nacogdoches	72.13	49	eP	P	13 25 17.2	0.0
	comp=Z,649nm,1.3s						
NATX				LR	LR		
	comp=Z,41µm,20.0s						
NATX	Nacogdoches	72.13	49	P	P	13 25 16.5	-0.7
	baz=340,SNR=17						
Y48A	Jasper	72.15	42	P	P	13 25 15.5	-1.8
	baz=342,SNR=64						
AKET	Djebel Ketaf	72.17	326	P	P	13 25 18.3	+0.7
435B	Jarrell	72.18	52	eP	P	13 25 17.1	-0.5
	comp=Z,355nm,1.2s						
435B	Jarrell	72.18	52	P	P	13 25 17.1	-0.5
	baz=340,SNR=16						
EMHD	Djebel Mahouad	72.22	327	P	P	13 25 18.5	+0.7
TTSI	Tana Toraja	72.23	204	P	P	13 25 16.1	-1.8
	comp=Z,132nm,1.8s,comp=Z,7µmcomp=Z,25µm						
X52A	Dahlonega	72.31	39	P	P	13 25 17.0	-1.3
	baz=343,SNR=34						
SNSI	Sinabang, Aceh	72.32	229	P	P	13 25 16.3	-2.2
Y49A	Blount Mountai	72.40	41	eP	P	13 25 16.8	-2.1
	comp=Z,570nm,1.6s						
Y49A	Blount Mountai	72.40	41	P	P	13 25 17.0	-1.8
	baz=342,SNR=40						
KMSC	Kings Mountain	72.40	37	eP	P	13 25 16.7	-2.1
	comp=Z,481nm,1.3s						
KMSC	Kings Mountain	72.40	37	P	P	13 25 17.4	-1.4
	baz=344,SNR=70						
EBNR	Beni Rached	72.43	328	P	P	13 25 21.0	+2.0
PBEJ	Beja	72.44	336	eP	P	13 25 19.2	+0.2
	comp=Z,461nm,1.5s						
BNDI	Bandanaira	72.45	193	P	P	13 25 18.1	-1.1
PNCL	Nicolau / Gran	72.46	337⇑	eP	P	13 25 18.2	-0.8
	comp=Z,513nm,1.7s						
PNCL				iS	S	13 34 48.3	+5.6
Y50A	Piedmont	72.54	41	P	P	13 25 18.1	-1.6
	baz=343,SNR=106						
X53A	Estanollee	72.55	39	P	P	13 25 18.2	-1.5
	baz=343,SNR=46						
ECHA	Ech Chlef	72.60	328	P	P	13 25 20.0	+0.1
145A	Houston Renfro	72.66	45	P	P	13 25 19.4	-1.0
	baz=342,SNR=9.6						
MESJ	Messejana	72.67	336	eP	P	13 25 19.9	-0.5
MESJ				eS	S	13 34 44.6	-0.7
MESJ				AMS	AMS	14 05 14.0	
	comp=Z,34µm,16.5s						
MESJ	Messejana	72.67	336	eP	P	13 25 19.6	-0.8
	comp=Z,514nm,1.8s						
MESJ	Messejana	72.67	336	eP	P	13 25 19.8	-0.5
MESJ				eS	S	13 34 44.5	-0.7
Y51A	Rockmart	72.70	40	P	P	13 25 19.2	-1.4
	baz=343,SNR=89						
KDI	Kendari	72.72	201	P	P	13 25 19.3	-1.5
	comp=Z,184nm,1.4s,comp=Z,10µmcomp=Z,44µm						
PALK	Pallekele	72.83	246	eP	P	13 25 21.7	+0.2
	comp=Z,260nm,1.1s						
PALK	Pallekele	72.83	246	iP	P	13 25 21.8	+0.2
	SNR=30						
PALK	Pallekele	72.83	246	iP	P	13 25 22.1	+0.5
PALK	Pallekele	72.83	246	P	P	13 25 22.1	+0.5
	SNR=13						
PALK				P	P	13 25 22.1	+0.5
	SNR=13						
PALK	Pallekele	72.83	246	LR	LR	13 59 35.0	
	comp=Z,19µm,18.4s,baz=296,slow=38						
EANR	'Ain N'Sour	72.84	328	P	P	13 25 21.5	0.0
OKGL	Djebel Kef Gue	72.85	329	P	P	13 25 22.0	+0.5
VBMS	Vicksburg	72.87	45	P	P	13 25 20.5	-1.1
	baz=341						
DMTO	DMTO	72.93	275	P	P	13 25 21.1	-1.0
	SNR=29						
DMTO				P	P	13 25 21.1	-1.0
	SNR=29						
X55A	Gracelyn & Ava	72.97	37	P	P	13 25 20.5	-1.7
	baz=344,SNR=39						
Y52A	Lilburn	72.98	39	eP	P	13 25 21.1	-1.2
	comp=Z,946nm,1.5s						
Y52A	Lilburn	72.98	39	P	P	13 25 21.2	-1.0
	baz=343,SNR=54						
BKNI	Bangkinang	72.99	224	eP	P	13 25 21.8	-0.7
	comp=Z,2µm,1.0s						
BKNI	Bangkinang	72.99	224	P	P	13 25 20.4	-2.0
Z49A	Columbiana	73.00	42	P	P	13 25 20.7	-1.6
	baz=342,SNR=48						
GSI	Gunungsitoli	73.01	228	eP	P	13 25 22.1	-0.5
	comp=Z,336nm,0.9s						
GSI	Gunungsitoli	73.01	228	P	P	13 25 20.5	-2.1
H07N1	FLORES T-PHASE	73.01	355	eP	P	13 25 24.7	+2.3
PVAQ	Vaqueiros	73.02	336	eP	P	13 25 22.3	-0.1
	comp=Z,507nm,1.4s						
PVAQ				iS	S	13 34 49.6	+0.4
PVAQ	Vaqueiros	73.02	336	eLQ	LQ	13 45 55.7	
PVAQ				eLR	LR	13 49 40.1	
TRD	Trivandrum	73.03	251	eP	P	13 25 22.6	0.0
LRAL	Lakeview Retre	73.03	42	eP	P	13 25 20.3	-2.2
	comp=Z,496nm,1.5s						
LRAL	Lakeview Retre	73.03	42	P	P	13 25 20.5	-2.1
	baz=342,SNR=49						
147A	Livingston	73.04	43	eP	P	13 25 21.1	-1.5
	comp=Z,1µm,1.5s						
147A	Livingston	73.04	43	P	P	13 25 20.7	-1.9
	baz=342,SNR=52						
PTEO	Sao Teotonio	73.04	337⇑	eP	P	13 25 21.3	-1.2
	comp=Z,396nm,1.8s						
CNNC	Cliffs of the	73.07	34	PFAKE		13 25 30.0	+7.3
CNNC				LR	LR		
	comp=Z,95µm,22.0s						
CNNC	Cliffs of the	73.07	34	P	P	13 25 21.3	-1.4
	baz=345						
X56A	White Oak	73.09	37	P	P	13 25 21.5	-1.4
	baz=344,SNR=53						
Z50A	Ashland	73.09	41	eP	P	13 25 20.6	-2.4
	comp=Z,1µm,1.8s						
Z50A	Ashland	73.09	41	P	P	13 25 21.3	-1.7
	baz=343,SNR=50						
KBKI	Kotabaru	73.10	208	P	P	13 25 21.4	-1.6
Y53A	Monroe	73.10	39	P	P	13 25 21.7	-1.2
	baz=343,SNR=47						
EMAL	Malaga-Limoner	73.10	333⇑	iP	P	13 25 22.1	-0.8
EMAL				iS	S	13 34 50.5	+0.4
LIJA	Lijar	73.13	334	iP	P	13 25 23.8	+0.5
SPSI	Sidrap Palu	73.14	204	P	P	13 25 21.8	-1.5
HPIG		73.18	60	eP	P	13 25 23.2	-0.6
	comp=Z,1µm,1.8s						
WHFO	Wadi Hawf	73.19	276	P	P	13 25 23.9	+0.2
	SNR=35						
PBDV	Barranco-do-Ve	73.22	336	eP	P	13 25 23.8	+0.2
	comp=Z,637nm,2.0s						
PBDV				iS	S	13 34 56.9	+5.4
Z51A	Franklin	73.22	40	P	P	13 25 22.0	-1.7
	baz=343,SNR=25						
MORF	Marmelete	73.27	336	eP	P	13 25 23.3	-0.7
MORF				eS	S	13 34 51.6	-0.6
MORF				AMS	AMS	14 00 29.3	
	comp=Z,44µm,18.1s						
MORF	Marmelete	73.27	336	eP	P	13 25 23.3	-0.7
	comp=Z,793nm,1.5s						
MORF				iS	S	13 34 55.6	+3.5
MORF	Marmelete	73.27	336	eP	P	13 25 23.2	-0.7
MORF				eS	S	13 34 51.5	-0.6
GIBL	Gibalbin	73.30	334	eP	P	13 25 24.0	-0.1
Y54A	Tignall	73.31	38	P	P	13 25 22.8	-1.3
	baz=344,SNR=45						
H07S1	FLORES T-PHASE	73.33	355	eP	P	13 25 27.2	+2.9
H07S1				eS	S	13 34 58.6	+5.9
H07S1				eLQ	LQ	13 44 40.4	
H07S1				eLR	LR	13 48 26.8	
ETRT	Tiaret	73.34	328	P	P	13 25 25.0	+0.5
OJGS	Djebel Guires	73.35	328	P	P	13 25 24.0	-0.5
OJBR	Djebel Berber	73.35	329	P	P	13 25 23.0	-1.5
USTO	Oran	73.38	329	P	P	13 25 22.0	-2.6
PBKI	Pangkalan Bun	73.39	213	P	P	13 25 22.9	-1.9
RBK	Rabkut	73.41	276	P	P	13 25 26.5	+1.5
	SNR=12						
X58A	Rowland	73.42	35	P	P	13 25 23.4	-1.4
	baz=345,SNR=9.4						
PFVI	Vila Bisbo	73.46	337⇑	eP	P	13 25 24.4	-0.6
	comp=Z,870nm,1.6s						
PFVI				iS	S	13 34 56.7	+2.5
PFVI	Vila Bisbo	73.46	337	eP	P	13 25 24.2	-0.9
	comp=Z,848nm,1.5s						
HKT	Hockley	73.48	51	eP	P	13 25 25.0	-0.2
	comp=Z,895nm,1.7s						
HKT	Hockley	73.48	51	eP	P	13 25 25.0	-0.2
149A	Jones	73.50	42	P	P	13 25 23.6	-1.7
	baz=342,SNR=56						
BNSI	Bone	73.52	204	P	P	13 25 24.0	-1.5
Z52A	Williamson	73.53	40	P	P	13 25 24.4	-1.1
	baz=343,SNR=59						
SRBC	Serra Branca	73.54	352	eP	P	13 25 29.7	+4.2
	comp=Z,2µm,1.1s						
ALJ	Aljibe	73.54	334	eP	P	13 25 26.0	+0.5
PGRA	Graciosa	73.54	352	eP	P	13 25 27.8	+2.3
	comp=Z,1µm,1.7s						
PGRA				eS	S	13 34 51.5	-3.6
PGRA				eLQ	LQ	13 44 47.7	
PGRA				eLR	LR	13 48 48.4	
	comp=Z,9µm,20.2s						
GOGA	Godfrey	73.55	39	eP	P	13 25 24.2	-1.3
	comp=Z,1µm,1.7s						
GOGA				LR	LR		
	comp=Z,78µm,20.0s						
GOGA	Godfrey	73.55	39	eP	P	13 25 24.3	-1.3
GOGA	Godfrey	73.55	39	P	P	13 25 24.4	-1.2
	baz=343,SNR=43						
Z53A	Monticello	73.65	39	P	P	13 25 24.8	-1.4
	baz=343,SNR=60						
150A	Eclectic	73.69	41	P	P	13 25 24.7	-1.7
	baz=343,SNR=93						
ODJA	Bouhanifia	73.69	329	P	P	13 25 28.0	+1.5
SFS	San Fernando	73.69	334	eP	P	13 25 27.4	+1.0
	comp=Z,404nm,1.2s						
SFS	San Fernando	73.69	334	eP	P	13 25 27.4	+1.0
SFS	San Fernando	73.69	334⇑	iP	P	13 25 28.7	+2.4
SFS				iS	S	13 35 01.4	+4.5
CNIL	Conil	73.76	334	eP	P	13 25 27.5	+0.7
ROSA	Rosais	73.86	353	eP	P	13 25 30.6	+3.2
	comp=Z,913nm,1.6s						
ROSA				eS	S	13 34 56.6	-2.1
ROSA				eS	S	13 34 57.6	-1.1
ROSA	Rosais	73.86	353	eLQ	LQ	13 45 04.5	
ROSA				eLR	LR	13 49 05.3	
	comp=Z,8µm,21.2s						
ROSA	Rosais	73.86	353	eP	P	13 25 28.6	+1.2
	comp=Z,1µm,1.3s						
OTSS	Djebel Tessala	73.87	330	P	P	13 25 23.0	-4.6
Z54A	Sparta	73.87	39	P	P	13 25 26.2	-1.3
	baz=344,SNR=88						
ADH	Angra Heroismo	73.88	352	eP	P	13 25 29.4	+2.0
	comp=Z,652nm,1.3s						
ABTO	Aybut	73.89	276	P	P	13 25 28.7	+0.8
	SNR=15						
PPI	Padang Panjang	73.91	224	P	P	13 25 25.8	-2.1
833A	Chaparral WMA,	73.92	54	eP	P	13 25 28.0	+0.2
	comp=Z,1µm,1.5s						
833A	Chaparral WMA,	73.92	54	P	P	13 25 27.9	0.0
	baz=340,SNR=50						
151A	Opelika	73.94	41	P	P	13 25 25.9	-2.0
	baz=343,SNR=38						
PMAN	Manadas	73.94	353	eP	P	13 25 31.6	+3.8
	comp=Z,1µm,1.4s						
152A	Waverly Hall	73.95	40	eP	P	13 25 26.2	-1.8
	comp=Z,944nm,1.9s						
152A	Waverly Hall	73.95	40	P	P	13 25 26.4	-1.6
	baz=343,SNR=33						
PCED	Cedros	73.98	353	eP	P	13 25 33.1	+5.1
	comp=Z,630nm,1.4s						
OLHC	Oulhaca	74.02	330	P	P	13 25 24.0	-4.4
Z55A	Blythe	74.05	38	P	P	13 25 27.3	-1.2
	baz=344,SNR=8.0						
HOR	Horta	74.07	353	eP	P	13 25 32.8	+4.2
	comp=Z,655nm,1.4s						
PICO	Pico	74.09	353	eP	P	13 25 32.8	+4.0
	comp=Z,741nm,1.5s						
PPBI	Pangkal Pinang	74.09	218	P	P	13 25 27.0	-1.9
SDSI	Sungai Dareh	74.09	223	P	P	13 25 26.7	-2.2
CEU	Ceuta	74.11	333⇑	iP	P	13 25 28.2	-0.6
CEU				iS	S	13 35 03.5	+2.0
PBSI	Pulau Batu	74.11	227	P	P	13 25 27.0	-2.0
PCAN	Candelaria	74.13	353	eP	P	13 25 32.8	+3.8
	comp=Z,456nm,1.3s						
KAPI	Kappang	74.18	204	PFAKE		13 25 40.0	+11
KAPI				LR	LR		
	comp=Z,11µm,21.0s						
153A	Fort Valley	74.19	40	P	P	13 25 28.2	-1.2
	baz=343,SNR=26						
JMBI	JAMBI	74.19	221	P	P	13 25 27.6	-1.9
LPIG	La Paz	74.21	65	P	P	13 25 30.2	+0.6
	comp=Z,28nm,0.3s,baz=360,slow=2.7,SNR=11						
250A	Grady	74.22	42	eP	P	13 25 28.3	-1.3
	comp=Z,2µm,1.8s						
250A	Grady	74.22	42	P	P	13 25 27.7	-1.8
	baz=343						
BBSI	Bau Bau	74.23	201	P	P	13 25 28.3	-1.4
MELI	Melilla	74.26	331⇑	iP	P	13 25 28.5	-1.3
MELI				iS	S	13 35 04.0	+0.8
TPI	Tanjungpandan	74.31	217	P	P	13 25 29.9	-0.3
PDSI	Padang	74.33	224	P	P	13 25 28.0	-2.3
251A	Midway	74.33	41	P	P	13 25 28.6	-1.6
	baz=343,SNR=113						
154A	Montrose	74.40	39	eP	P	13 25 29.1	-1.4
	comp=Z,1µm,1.1s						
154A	Montrose	74.40	39	P	P	13 25 29.4	-1.2
	baz=344,SNR=19						
BKSI	Bulukumba	74.42	203	P	P	13 25 29.3	-1.5
155A	Kite	74.55	38	P	P	13 25 30.2	-1.2
	baz=344,SNR=57						
349A	Repton	74.58	43	P	P	13 25 30.4	-1.2
	baz=342,SNR=27						
252A	Lumpkin	74.59	40	P	P	13 25 30.0	-1.7
	baz=343,SNR=27						
PSET	Sete Cidades	74.61	351	eP	P	13 25 33.7	+1.9
	comp=Z,746nm,1.3s						
PSET	Sete Cidades	74.61	351	eLR	LR	13 49 07.7	
	comp=Z,6µm,17.7s						
NHSC	New Hope	74.62	36	eP	P	13 25 31.1	-0.7
	comp=Z,711nm,1.1s						
NHSC				LR	LR		
	comp=Z,96µm,22.0s						
NHSC	New Hope	74.62	36	P	P	13 25 30.6	-1.2
	baz=344,SNR=16						
BART	Pico Bartolome	74.62	350	eP	P	13 25 35.3	+3.4
	comp=Z,1µm,1.6s						
BART				eS	S	13 35 02.6	-4.9
PCALD	Caldeiras da R	74.62	350	eP	P	13 25 34.0	+2.2
	comp=Z,867nm,1.3s						
PCALD				eS	S	13 35 09.6	+2.3
GRON	Grota Negra	74.66	350	eP	P	13 25 32.8	+0.7
	comp=Z,753nm,1.4s						
CMLA	Cha da Macela	74.66	350	eP	P	13 25 32.8	+0.8
	comp=Z,800nm,1.2s						
CMLA				eS	S	13 35 10.6	+2.9
CMLA	Cha da Macela	74.66	350	eLQ	LQ	13 45 14.1	
CMLA				eLR	LR	13 48 58.0	
	comp=Z,13µm,17.9s						
CMLA	Cha da Macela	74.66	350	PFAKE		13 25 40.0	+8.0
CMLA				LR	LR		
	comp=Z,19µm,21.0s						
CMLA	Cha da Macela	74.66	350	eP	P	13 25 34.8	+2.8
253A	Americus	74.68	40	P	P	13 25 30.8	-1.4
	baz=343,SNR=30						
MNCY	Minicoy	74.69	254	eP	P	13 25 32.5	+0.1
PDA	Ponta Delgada	74.69	350	eP	P	13 25 35.9	+3.8
	comp=Z,1µm,1.2s						
SLBS	Sierra La Lagu	74.72	65	eP	P	13 25 33.6	+1.0
	comp=Z,690nm,1.5s						
350A	Dozier	74.73	42	P	P	13 25 31.0	-1.6
	baz=343						
156A	Sylvania	74.75	38	P	P	13 25 31.6	-1.0
	baz=344,SNR=34						
BRAL	Brewton	74.79	43	eP	P	13 25 33.0	+0.2
	comp=Z,553nm,1.0s						
BRAL				LR	LR		
	comp=Z,71µm,21.0s						
BRAL	Brewton	74.79	43	P	P	13 25 31.7	-1.1
	baz=342						
448A	Bay Minette	74.80	43	P	P	13 25 32.1	-0.8
	baz=342						
254A	Abbeville	75.00	39	P	P	13 25 32.7	-1.4
	baz=344,SNR=35						
352A	Blakely	75.03	41	eP	P	13 25 33.2	-1.0
	comp=Z,1µm,1.9s						
352A	Blakely	75.03	41	P	P	13 25 32.7	-1.6
	baz=343,SNR=7.5						
351A	Pinckard	75.06	41	P	P	13 25 33.0	-1.4
	baz=343,SNR=16						
SISI	Saibi	75.10	226	P	P	13 25 32.8	-1.9
KVTX	Kingsville	75.11	53	PFAKE		13 25 50.0	+15
KVTX				LR	LR		
	comp=Z,43µm,19.0s						
449A	Pace	75.13	43	P	P	13 25 33.8	-1.1
	baz=342						
PMBI	Palembang	75.16	219	P	P	13 25 33.2	-1.9
KRJI	Kerinci	75.19	223	P	P	13 25 33.4	-2.0
255A	Hazlehurst	75.21	39	eP	P	13 25 34.2	-1.1
	comp=Z,3µm,1.7s						
255A	Hazlehurst	75.21	39	P	P	13 25 34.2	-1.1
	baz=344,SNR=48						
450A	Crestview	75.25	42	P	P	13 25 34.6	-1.0
	baz=343						
256A	Glennville	75.30	38	P	P	13 25 34.7	-1.0
	baz=344,SNR=5.4						
353A	Camilla	75.34	40	P	P	13 25 34.8	-1.2
	baz=343,SNR=27						
PSMN	Pico do Norte,	75.39	350	eP	P	13 25 38.1	+1.9
	comp=Z,389nm,1.6s						
PSMN				eS	S	13 35 16.7	+0.9
PSMN	Pico do Norte,	75.39	350	eLQ	LQ	13 45 31.0	
PSMN				eLR	LR	13 49 39.0	
	comp=Z,10µm,20.2s						
PSMA	Santa Maria	75.40	350	eP	P	13 25 39.4	+3.1
	comp=Z,732nm,1.7s						
TIGA	Tifton	75.41	40	P	P	13 25 35.5	-0.9
	baz=344,SNR=20						
257A	Skidaway Islan	75.51	37	P	P	13 25 35.9	-1.0
	baz=344						
452A	Marianna	75.57	41	P	P	13 25 36.0	-1.3
	baz=343,SNR=6.7						
451A	Vernon	75.65	42	eP	P	13 25 39.6	+1.8
	comp=Z,1µm,1.4s						
451A	Vernon	75.65	42	P	P	13 25 37.0	-0.9
	baz=343,SNR=6.2						
355A	Pearson	75.68	39	P	P	13 25 36.7	-1.2
	baz=344,SNR=29						
SAUI	Saumlaki	75.76	192	eP	P	13 25 38.5	0.0
	comp=Z,779nm,0.9s						
SAUI	Saumlaki	75.76	192	P	P	13 25 37.6	-0.9
453A	Whigham	75.78	40	eP	P	13 25 38.1	-0.4
	comp=Z,1µm,1.4s						
453A	Whigham	75.78	40	P	P	13 25 37.8	-0.8
	baz=343,SNR=19						
MMPI	Merauke	75.81	182	P	P	13 25 38.7	-0.1
356A	Blackshear	75.87	38	P	P	13 25 37.8	-1.2
	baz=344						
357A	Townsend	75.93	38	P	P	13 25 38.5	-0.9
	baz=344						
MASI	Maura Aman, Be	76.00	222	P	P	13 25 38.0	-2.0
454A	Quitman	76.09	40	P	P	13 25 39.1	-1.2
	baz=344,SNR=6.3						
455A	Stateville	76.21	39	P	P	13 25 39.9	-1.1
	baz=344,SNR=14						
PPSI	Pulau Pagai	76.22	224	P	P	13 25 39.3	-1.9
552A	Lynn Haven	76.23	42	P	P	13 25 39.9	-1.2
	baz=343						
LHSI	Lahat	76.33	220	P	P	13 25 40.0	-1.8
553A	Crawfordville	76.39	41	P	P	13 25 41.3	-0.7
	baz=343,SNR=16						
456A	Hilliard	76.47	39	eP	P	13 25 42.4	-0.1
	comp=Z,738nm,1.0s						
456A	Hilliard	76.47	39	P	P	13 25 41.9	-0.5
	baz=344,SNR=8.6						
554A	Perry	76.68	40	P	P	13 25 42.8	-0.9
	baz=344,SNR=6.8						
457A	Yulee	76.68	38	P	P	13 25 42.6	-1.1
	baz=344,SNR=5.8						
MDSI	Maura Dua	76.81	220	P	P	13 25 42.4	-2.1
	comp=Z,153nm,1.3s,comp=Z,8µm						
555A	McAlpin	76.82	40	P	P	13 25 43.4	-1.1
	baz=344,SNR=18						
MNAI	Manna	76.99	221	P	P	13 25 43.7	-1.8
AVE	Averroes	76.99	335⇑	iP	P	13 25 46.6	+1.2
AVE				iS	S	13 35 34.7	+1.2
KLI	Kotabumi	77.00	219	P	P	13 25 43.6	-2.0
556A	Lake Butler	77.07	39	P	P	13 25 45.0	-0.9
	baz=344,SNR=30						
LNIG	Linares	77.09	55	eP	P	13 25 44.6	-1.5
	comp=Z,1µm,2.0s						
KMMI	Kalianget	77.16	209	P	P	13 25 44.9	-1.5
557A	Orange Park	77.22	39	P	P	13 25 45.8	-0.9
	baz=344,SNR=12						
GRJI	Gresik	77.32	211	P	P	13 25 45.8	-1.5
655A	Horseshoe Beac	77.33	40	P	P	13 25 46.2	-1.2
	baz=344						
LWLI	Liwa	77.35	220	P	P	13 25 45.7	-1.9
TBJI	Tambak Boyo	77.35	211	P	P	13 25 45.9	-1.6
MMRI	Maumere	77.37	201	eP	P	13 25 46.4	-1.2
	comp=Z,918nm,1.3s						
MMRI	Maumere	77.37	201	P	P	13 25 46.4	-1.2
	comp=Z,578nm,1.6s,comp=Z,19µmcomp=Z,38µm						
BLSI	Bandar Lampung	77.40	218	P	P	13 25 45.6	-2.2
	comp=Z,345nm,1.3s,comp=Z,8µmcomp=Z,29µm						
EDFI	Ende, Flores	77.56	201	P	P	13 25 46.8	-2.0
	comp=Z,163nm,1.3s,comp=Z,8µm						
657A	Interlachen	77.60	39	P	P	13 25 48.1	-0.7
	baz=344,SNR=7.8						
656A	Willston	77.64	39	P	P	13 25 48.2	-0.8
	baz=344,SNR=21						
KASI	Kota Agung	77.73	219	P	P	13 25 46.4	-3.2
HNR	Honiara	77.75	163	PFAKE		13 26 00.0	+10
HNR				LR	LR		
	comp=Z,20µm,21.0s						
ABJI	Asem Bagus	77.84	209	P	P	13 25 48.8	-1.4
	comp=Z,183nm,1.4s,comp=Z,11µmcomp=Z,32µm						
TNG	Tangerang	77.84	217	P	P	13 25 48.6	-1.7
SMRI	Semarang	77.86	213	P	P	13 25 48.8	-1.6
658A	Bunnell	77.90	38	P	P	13 25 49.6	-1.0
	baz=344,SNR=5.5						
SRBI	Singaraja	77.94	208	P	P	13 25 49.1	-1.7
	comp=Z,150nm,1.1s,comp=Z,8µmcomp=Z,27µm						
NGJI	Ngawi	77.96	212	P	P	13 25 49.4	-1.5
ZAIG	Zacatecas	78.07	59	eP	P	13 25 52.5	+0.5
	comp=Z,693nm,1.5s						
757A	Oxford	78.17	39	P	P	13 25 51.3	-0.7
	baz=344,SNR=16						
DBJI	Dramaga	78.19	217	P	P	13 25 50.5	-1.7
SOEI	Soe	78.21	199	eP	P	13 25 49.4	-3.0
	comp=Z,589nm,1.1s						

SOEI	Soe	78.21	199	P	P	13 25 51.2	-1.2
PLAI	Plampang	78.23	205	P	P	13 25 49.6	-2.8
LEM	Lembang	78.26	216	P	P	13 25 50.9	-1.9
758A	Lake Helen	78.36	38	P	P	13 25 51.8	-1.3
	baz=344						
GMJI	Gumukmas	78.45	210	P	P	13 25 52.0	-1.6
	comp=Z,564nm,1.2s,comp=Z,12µm						
KPJI	Karang Pucung	78.46	214	P	P	13 25 51.8	-1.8
	comp=Z,151nm,1.1s,comp=Z,11µm						
PMPS	Porto Santo	78.49	342	eP	P	13 25 54.1	+0.4
	comp=Z,1µm,1.4s						
JAGI	Jajag, Banyuwa	78.51	209	eP	P	13 25 50.9	-3.1
	comp=Z,319nm,1.3s						
JAGI	Jajag, Banyuwa	78.51	209	P	P	13 25 50.8	-3.1
WOJI	Wonogiri, Jawa	78.53	212	P	P	13 25 52.5	-1.5
WSI	Waingapu	78.66	203	P	P	13 25 52.5	-2.3
	comp=Z,686nm,1.4s,comp=Z,20µm						
SKJI	Sukabumi	78.67	217	P	P	13 25 53.1	-1.7
	comp=Z,245nm,0.9s,comp=Z,6µm						
UGM	Wanagama	78.68	213	eP	P	13 25 52.1	-2.9
	comp=Z,1µm,1.6s						
UGM	Wanagama	78.68	213	P	P	13 25 53.1	-1.8
	comp=Z,461nm,1.4s,comp=Z,14µmcomp=Z,31µm						
BATI	Baumata	78.73	199	P	P	13 25 53.8	-1.4
	comp=Z,257nm,1.1s,comp=Z,5µm						
857A	Zephyrhills	78.77	39	P	P	13 25 54.4	-0.9
	baz=344,SNR=7.7						
PMOZ	Porto Moniz, M	78.82	343	eP	P	13 25 57.0	+1.3
	comp=Z,608nm,1.6s						
PMOZ				i S	S	13 35 56.9	+3.4
PMOZ	Porto Moniz, M	78.82	343	eLQ	LQ	13 46 23.7	
PMOZ				eLR	LR	13 52 03.9	
	comp=Z,14µm,22.9s						
PCJI	Pacitan	78.82	212	P	P	13 25 53.2	-2.5
	comp=Z,318nm,1.2s,comp=Z,9µm						
PMAR	Madeira	78.89	343⇑	eP	P	13 25 55.5	-0.7
	comp=Z,1µm,1.5s						
CISI	Cisompet, Garu	78.92	215	eP	P	13 25 55.0	-1.3
CISI	Cisompet, Garu	78.92	215	P	P	13 25 54.5	-1.8
	comp=Z,106nm,0.8s,comp=Z,7µmcomp=Z,28µm						
FUL	Funchal	78.96	343	eP	P	13 25 56.9	+0.6
	comp=Z,887nm,1.5s						
CMJI	Cimerak	79.00	215	P	P	13 25 54.3	-2.3
	comp=Z,98nm,1.2s,comp=Z,6µm						
ANIG	Ahuacatlan	79.01	61	P	P	13 25 57.9	+1.0
858A	St. Cloud	79.03	39	P	P	13 25 56.0	-0.8
	baz=344,SNR=7.7						
DWPF	Disney Wildern	79.12	39	eP	P	13 25 56.9	-0.4
	comp=Z,290nm,1.0s						
DWPF	Disney Wildern	79.12	39	P	P	13 25 56.4	-0.8
	baz=344						
DWPF	Disney Wildern	79.12	39	eP	P	13 25 56.7	-0.5
BASI	Baing, Sumba	79.16	202	P	P	13 25 55.5	-2.0
	comp=Z,2µm,1.5s,comp=Z,31µmcomp=Z,25µm						
859A	Kempfer Cattle	79.29	38	P	P	13 25 57.3	-0.9
	baz=345,SNR=18						
957A	Wimauma	79.34	40	P	P	13 25 57.7	-0.8
	baz=344,SNR=6.0						
958A	Wauchula	79.54	39	P	P	13 25 58.9	-0.7
	baz=344						
959A	Okeechobee	79.81	38	P	P	13 26 00.6	-0.5
	baz=345,SNR=7.0						
058A	Arcadia	80.03	39	P	P	13 26 01.4	-0.9
	baz=344						
FUNA	Funafuti	80.22	143	PFAKE		13 26 20.0	+17
FUNA				LR	LR		
	comp=Z,17µm,19.0s						
CJM	Chamela	80.28	62	P	P	13 26 03.3	-0.4
059A	Moore Haven	80.28	39	P	P	13 26 02.9	-0.7
	baz=344						
060A	Indiantown	80.40	38	P	P	13 26 03.2	-1.0
	baz=345						
059Z	Ave Maria	80.81	39	P	P	13 26 05.8	-0.7
	baz=344						
060Z	West Palm Beac	80.96	38	P	P	13 26 06.7	-0.6
	baz=345						
COEN	Coen	81.25	180	eP	P	13 26 08.5	-0.2
	comp=Z,128nm,1.0s						
061Z	Ochoppi	81.39	39	eP	P	13 26 12.3	+2.7
	comp=Z,554nm,1.4s						
061Z	Ochoppi	81.39	39	P	P	13 26 08.2	-1.3
	baz=345						
MOIG	Morelia	81.40	59	eP	P	13 26 11.4	+1.4
	comp=Z,1µm,2.0s						
XMIS	Christmas Isla	82.24	217	eP	P	13 26 13.0	-1.0
	comp=Z,333nm,1.1s						
062Z	Marathon	82.45	39	P	P	13 26 13.4	-1.8
	baz=345						
LVIG	Laguna Verde	82.89	55	eP	P	13 26 18.0	+0.5
	comp=Z,2µm,2.0s						
ARIG	Puente Sto Nin	82.98	59	P	P	13 26 17.5	-0.5
ATD	Arta Tunnel	83.18	283	eP	P	13 26 19.3	+0.2
ATD				eS	PP	13 29 06.8	-23
ATD	Arta Tunnel	83.18	283	P	P	13 26 20.1	+1.0
	comp=Z,130nm,1.0s,baz=2.6,slow=5.6,SNR=34						
ATD				PP	PP	13 29 32.7	+2.7
	comp=Z,106nm,1.3s,baz=41,slow=0.3,SNR=4.0						
ZIIG	Zihuatanejo	83.24	60	P	P	13 26 16.6	-2.7
MACI	Morro de la Ar	83.26	342	eP	P	13 26 19.7	+0.2
	comp=Z,688nm,1.0s						
MYIG	Mrida	83.73	48	eP	P	13 26 22.8	+1.0
	comp=Z,3µm,1.8s						
TPIG	Tehuac#an	83.82	56	P	P	13 26 22.9	+0.4
TAM	Tamanrasset	84.54	321	eP	P	13 26 26.4	+0.3
	comp=Z,227nm,1.2s						
TAM	Tamanrasset	84.54	321	eP	P	13 26 26.4	+0.3
DESE	Dese	84.75	286	i P	P	13 26 30.7	+3.2
TEIG	Tepich	84.84	47	eP	P	13 26 27.3	-0.2
	comp=Z,933nm,1.5s						
COCO	West Island	86.09	225	eP	P	13 26 34.1	+0.6
	comp=Z,828nm,1.0s						
COCO				LR	LR		
	comp=Z,19µm,21.0s						
COCO	West Island	86.09	225	i P	P	13 26 34.6	+1.1
ANKE	Ethiopia-Afar	86.12	286	i P	P	13 26 31.6	-2.8
ANKE				i S	PP	13 30 00.2	+5.9
ANKE	Ethiopia-Afar	86.12	286	i P	P	13 26 31.6	-2.8
ANKE				i S	PP	13 30 00.2	+5.9
FITZ	Fitzroy Crossi	86.29	196	eP	P	13 26 33.6	-0.8
	comp=Z,416nm,1.2s						
FITZ	Fitzroy Crossi	86.29	196	P	P	13 26 34.0	-0.4
	comp=Z,292nm,1.1s,baz=357,slow=6.5,SNR=82						
FITZ				S	S	13 36 57.6	-12
	comp=Z,2.9nm,1.1s,baz=233,slow=19,SNR=2.9						
AAE	Adis Abeba	87.00	286	eP	P	13 26 36.4	-2.2
AAE				eS	PP	13 30 08.9	+7.6
AAE	Adis Abeba	87.00	286	eP	P	13 26 36.4	-2.2
AAE				eS	PP	13 30 05.0	+3.6
CTAO	Charters Tower	87.39	177	eP	P	13 26 39.7	-0.1
	comp=Z,212nm,1.4s						
CTAO				LR	LR		
	comp=Z,23µm,22.0s						
CTAO	Charters Tower	87.39	177	eP	P	13 26 39.7	-0.1
WRAB	Tennant Creek	87.41	188	eP	P	13 26 38.8	-1.1
	comp=Z,219nm,1.4s						
WRAB				LR	LR		
	comp=Z,14µm,21.0s						
WRAB	Tennant Creek	87.41	188	eP	P	13 26 38.8	-1.1
WRA	Warramunga Arr	87.42	188	P	P	13 26 38.9	-1.0
	comp=Z,17nm,0.8s,baz=3.7,slow=5.4,SNR=98						
WRA				S	SKSac	13 37 06.1	-1.3
	comp=Z,0.5nm,1.0s,baz=180,slow=5.5,SNR=1.9						
WRA				PKKPbc	PKKPbc	13 44 28.6	+1.3
	comp=Z,4.6nm,0.9s,baz=198,slow=2.1,SNR=10						
WRA				PKPPKP	P'P'df	13 52 35.3	+3.1
	comp=Z,3.1nm,1.1s,baz=178,slow=1.8,SNR=6.1						
WRA				LR	LR	14 04 28.3	
	comp=Z,7µm,20.6s,baz=5.0,slow=35						
CCIG	Comitan	87.45	52	eP	P	13 26 41.1	+0.5
	comp=Z,185nm,1.3s						
FSCY	Frank Sound, G	87.61	41	eP	P	13 26 41.8	+0.8
	comp=Z,2µm,1.6s						
GRTK	Grand Turk	87.76	31	eP	P	13 26 42.8	+1.0
	comp=Z,317nm,1.1s						
GRTK				LR	LR		
	comp=Z,31µm,20.0s						
MSVF	Nonsavu	88.88	147	eP	P	13 26 48.1	+1.1
	comp=Z,198nm,1.4s						
MSVF	Nonsavu	88.88	147c	iP	P	13 26 48.5	+1.5
MSVF				pmax	pmax		
	comp=Z,168nm,1.8s						
MSVF				MLR	MLR		
	comp=Z,13µm,18.0s						
DGAR	Diego Garcia	89.39	249	PFAKE		13 27 00.0	+11
DGAR				LR	LR		
	comp=Z,17µm,21.0s						
MTDJ	Mount Denham	89.55	38	eP	P	13 26 50.8	+0.4
	comp=Z,1µm,1.9s						
MTDJ				LR	LR		
	comp=Z,35µm,19.0s						
MBWA	Marble Bar	90.04	201	eP	P	13 26 52.0	-0.3
	comp=Z,348nm,1.3s						
MBWA				LR	LR		
	comp=Z,13µm,21.0s						
MBWA	Marble Bar	90.04	201	eP	P	13 26 52.2	0.0
SDDR	Presa de Saban	90.19	32	eP	P	13 26 53.6	+0.3
	comp=Z,339nm,1.2s						
SDDR				LR	LR		
	comp=Z,31µm,20.0s						
MARNC	Mare, Loyalty	90.70	157	eP	P	13 26 58.4	+3.1
	comp=Z,430nm,1.1s						
SDD	Santo Domingo	90.97	31	eP	P	13 26 58.2	+1.3
	comp=Z,965nm,1.4s						
TGUH	Tegucigalpa,Un	90.99	48	eP	P	13 26 58.0	+1.0
	comp=Z,420nm,1.4s						
DZM	Mont Dzumac	91.05	158	eP	P	13 26 58.2	+1.1
	comp=Z,480nm,1.2s						
DZM	Mont Dzumac	91.05	158	eSP	SP	13 39 00.2	-2.5
	comp=Z,10µm,25.4s						
DZM				eSS	SS	13 44 03.4	+4.6
	comp=Z,8µm,27.4s						
DZM				eLQ	LQ	13 52 12.2	
	comp=Z,42µm,32.9s						
DZM				eLR	LR	13 55 59.9	
	comp=Z,26µm,22.1s						
DZM	Mont Dzumac	91.05	158	eP	P	13 26 58.6	+1.5
	comp=Z,231nm,1.1s						
DZM	Mont Dzumac	91.05	158	LR	LR	14 08 25.3	
	comp=Z,6µm,18.0s,baz=314,slow=36						
ASAR	Alice Springs	91.14	188	P	P	13 26 56.5	-0.9
	comp=Z,70nm,1.2s,baz=9.1,slow=4.9,SNR=90						
ASAR				PKKPbc	PKKPbc	13 44 20.4	+2.2
	comp=Z,6.5nm,1.0s,baz=177,slow=2.7,SNR=5.7						
ASAR				PKPPKP		13 52 28.5	
	comp=Z,1.6nm,1.1s,baz=143,slow=1.9,SNR=5.1						
ASAR				LR	LR	14 06 51.6	
	comp=Z,12µm,19.9s,baz=0.5,slow=35						
ONTNC	Ouen Toro	91.28	158	eP	P	13 26 59.9	+1.9
	comp=Z,310nm,1.3s						
AGP	Aguadilla	91.55	28	eP	P	13 27 02.3	+2.7
	comp=Z,521nm,1.4s						
MPR	Mayaguez	91.74	28	eP	P	13 27 00.8	+0.3
	comp=Z,446nm,1.8s						
CBYP	Canovanas	91.91	27	eP	P	13 27 01.0	-0.3
	comp=Z,423nm,2.0s						
OBIP	Obispado Ponce	92.00	28	eP	P	13 27 01.8	+0.1
	comp=Z,125nm,1.1s						
SJG	San Juan	92.02	27	PFAKE		13 27 10.0	+8.3
SJG				LR	LR		
	comp=Z,24µm,20.0s						
MTP	Monte Pirata	92.13	27	eP	P	13 27 02.6	+0.3
	comp=Z,319nm,1.4s						
SMRT	St. Maarten	92.59	24	eP	P	13 27 06.2	+1.8
EIDS	Eidsvold	92.81	172	eP	P	13 27 05.0	0.0
	comp=Z,91nm,1.0s						
BOAB	BOACO BROADBA	92.97	47	eP	P	13 27 06.2	0.0
	comp=Z,41nm,1.2s						
SEUS	St. Eustatius	93.15	24	eP	P	13 27 05.8	-1.2
ANWB	Willy Bob	93.17	23	PFAKE		13 27 20.0	+13
ANWB				LR	LR		
	comp=Z,29µm,22.0s						
ANWB	Willy Bob	93.17	23	eP	P	13 27 09.5	+2.4
TAOE	Nuku Hiva Isla	93.25	105	ePP	PP	13 30 51.3	+0.2
	comp=Z,1µm,26.8s						
TAOE				eS	S	13 38 10.2	-4.5
	comp=Z,7µm,28.0s						
TAOE				eSP	SP	13 39 24.4	-2.8
	comp=Z,5µm,27.8s						
TAOE				eSS	SS	13 44 25.9	-4.3
	comp=Z,14µm,26.2s						
TAOE				eLQ	LQ	13 53 06.8	
	comp=Z,22µm,30.8s						
TAOE				eLR	LR	13 57 01.9	
	comp=Z,38µm,23.1s,baz=341						
BPA	Boggy Peak	93.77	23	eP	P	13 27 13.1	+3.2
MLYT	Lee's Yard	94.03	24	eP	P	13 27 14.6	+3.5
TOA0	Torodi Ar. Sit	94.73	322	eP	P	13 27 13.0	-1.3
TOA0	Torodi Ar. Sit	94.73	322	P	P	13 27 13.4	-0.9
	SNR=30						
TORD	Torodi Ar. Bea	94.73	322	P	P	13 27 13.2	-1.1
	comp=Z,90nm,1.1s,baz=15,slow=3.0,SNR=60						
TORD				LR	LR	14 15 30.8	
	comp=Z,24µm,19.4s,baz=345,slow=39						
JTS	JuntasAbangare	95.23	47	eP	P	13 27 17.1	+0.5
	comp=Z,38nm,1.4s						
JTS				LR	LR		
	comp=Z,23µm,20.0s						
JTS	JuntasAbangare	95.23	47	eP	P	13 27 17.1	+0.5
DWS	Wesley	95.30	23	eP	P	13 27 18.2	+1.3
MDN	Morne-Daniel	95.53	23	eP	P	13 27 26.0	+8.1
DLPL	La Plaine	95.54	23	eP	P	13 27 23.3	+5.3
PMOR	Pomariorio Ree	96.13	115	eP	P	13 27 19.8	-0.6
	comp=Z,155nm,1.4s						
FDF	Fort de France	96.14	23	eP	P	13 27 21.9	+1.1
VAH	Vaihoa	96.44	114	eP	P	13 27 21.0	-0.8
	comp=Z,138nm,1.2s						
KMBO	Kilima Mbogo	96.92	284	i P	P	13 27 25.8	+1.3
KMBO	Kilima Mbogo	96.92	284	P	P	13 27 24.8	+0.2
	comp=Z,1.1nm,0.3s,baz=8.0,slow=4.6,SNR=14						
KMBO				PP	PP	13 31 24.9	+5.3
	comp=Z,10nm,1.0s,baz=20,slow=8.6,SNR=3.9						
KMBO				LR	LR	14 16 06.6	
	comp=Z,42µm,19.5s,baz=24,slow=38						
SMRC	Santa Marta, M	97.13	36	eP	Pdif	13 27 31.9	+6.6
SMRC	Santa Marta, M	97.13	36	eP	Pdif	13 27 31.9	+6.6
SACV	Santiago Islan	97.13	347	PFAKE		13 27 40.0	+15
SACV				LR	LR		
	comp=Z,11µm,20.0s						
MCLT	Moule a Chique	97.18	23	eP	P	13 27 23.6	-1.9
SSV	Crater Summit	97.52	23	eP	P	13 27 26.2	-0.9
SVB	Belmont	97.56	24	eP	Pdif	13 27 28.9	+1.7
BCIP	Isla Barro Col	97.69	42	PFAKE		13 27 40.0	+12
BCIP				LR	LR		
	comp=Z,44µm,21.0s						
ARMA	Armidale	97.86	172	eP	Pdif	13 27 30.6	+2.4
	comp=Z,139nm,1.9s						
PPT	Papeete	97.92	117	LR	LR	14 05 32.9	
	comp=Z,11µm,20.3s,baz=326,slow=32						
BBGH	Gun Hill	97.94	22	PFAKE		13 27 40.0	+11
BBGH				LR	LR		
	comp=Z,34µm,21.0s						
BBGH	Gun Hill	97.94	22	eP	Pdif	13 27 33.1	+4.2
PPT2	Papeete2	97.94	117	ePP	PP	13 31 26.3	-1.3
	comp=Z,2µm,27.2s						
PPT2				eSKSac	SKSac	13 38 04.8	-1.4
	comp=Z,5µm,25.7s						
PPT2				eSP	SP	13 40 15.8	-2.8
	comp=Z,7µm,24.9s						
PPT2				eSS	SS	13 45 35.7	-1.3
	comp=Z,12µm,25.2s						
PPT2	Papeete2	97.94	117	eLR	LR	13 59 17.1	
	comp=Z,45µm,27.2s,baz=339						
TIAR	Tiarei	97.99	117	eP	P	13 27 28.3	-0.6
	comp=Z,16nm,1.0s						
RAR	Rarotonga	98.01	127	LR	LR	14 05 48.9	
	comp=Z,10µm,21.3s,baz=334,slow=32						
SJCC	San Jacinto, C	98.13	38	eP	Pdif	13 27 30.6	+0.7
SJCC	San Jacinto, C	98.13	38	eP	Pdif	13 27 30.6	+0.7
MORW	Morawa	98.35	203	eP	Pdif	13 27 32.5	+2.2
	comp=Z,48nm,1.3s						
CODC	Agustn Codazz	98.50	36	eP	Pdif	13 27 31.5	+0.2
CODC	Agustn Codazz	98.50	36	eP	Pdif	13 27 31.5	+0.2
FORT	Forrest	98.61	193	eP	P	13 27 31.2	-0.1
	comp=Z,77nm,0.9s						
GRGR	Grenville	98.62	24	PFAKE		13 27 40.0	+8.1
GRGR				LR	LR		
	comp=Z,26µm,20.0s						
GRGR	Grenville	98.62	24	eP	P	13 27 31.2	-0.7
MBAR	Mbarara	98.83	290	eP	Pdif	13 27 33.8	+0.8
	comp=Z,70nm,1.7s						
MBAR				LR	LR		
	comp=Z,634nm,20.0s						
MBAR	Mbarara	98.83	290	eP	Pdif	13 27 33.8	+0.8
MBAR	Mbarara	98.83	290	P	P	13 27 31.6	-1.4
	comp=Z,4.5nm,0.2s,baz=34,slow=7.3,SNR=14						
STKA	Stephens Creek	99.09	181	P	Pdif	13 27 32.0	-1.4
	comp=Z,7.0nm,0.8s,baz=326,slow=5.5,SNR=9.6						
STKA				LR	LR	14 11 30.6	
	comp=Z,12µm,21.8s,baz=342,slow=35						
SMLC	San Martn de	99.45	37	eP	Pdif	13 27 34.5	-1.1
SMLC	San Martn de	99.45	37	eP	Pdif	13 27 34.5	-1.1
TOSP	Speyside	99.61	23	eP	Pdif	13 27 41.3	+5.0
UREC	San Jos de Ur	100.12	39	eP	Pdif	13 27 38.5	-0.1
UREC	San Jos de Ur	100.12	39	eP	Pdif	13 27 38.5	-0.1
SDV	Santo Domingo	100.13	33	PFAKE		13 27 50.0	+11
SDV				LR	LR		
	comp=Z,30µm,21.0s						
SDV	Santo Domingo	100.13	33	eP	Pdif	13 27 37.2	-1.7
SDV	Santo Domingo	100.13	33	eP	Pdif	13 27 37.2	-1.7
SDV	Santo Domingo	100.13	33	eP	Pdif	13 27 37.7	-1.2
OCAC	Ocana	100.17	36	eP	Pdif	13 27 38.2	-0.8
OCAC	Ocana	100.17	36	eP	Pdif	13 27 38.2	-0.8
ZARC	Zaragoza, Cauc	100.53	38	eP	Pdif	13 27 39.2	-1.2
ZARC	Zaragoza, Cauc	100.53	38	eP	Pdif	13 27 39.2	-1.2
RAO	Raoul Island	100.89	146	PFAKE		13 27 50.0	+8.5
RAO				LR	LR		
	comp=Z,12µm,20.0s						
SOLC	Bahia Solano	101.13	41	eP	Pdif	13 27 41.2	-1.9
SOLC	Bahia Solano	101.13	41	eP	Pdif	13 27 41.2	-1.9
BRRC	Barranca, Sant	101.17	37	eP	Pdif	13 27 43.9	+0.6
BRRC	Barranca, Sant	101.17	37	eP	Pdif	13 27 43.9	+0.6
PAMC	Pamplona, Colo	101.17	36	eP	Pdif	13 27 42.9	-1.0
PAMC	Pamplona, Colo	101.17	36	eP	Pdif	13 27 42.9	-1.0
PTBC	PUERTO BERRIO,	101.54	38	eP	Pdif	13 27 44.5	-0.4
PTBC	PUERTO BERRIO,	101.54	38	eP	Pdif	13 27 44.5	-0.4
HELC	Santa Helena	101.62	39	eP	Pdif	13 27 44.1	-1.6
HELC	Santa Helena	101.62	39	eP	Pdif	13 27 44.1	-1.6
BARC	Barichara	101.79	37	eP	Pdif	13 27 46.1	-0.2
BARC	Barichara	101.79	37	eP	Pdif	13 27 46.1	-0.2
NWAO	Narrogin (SRO)	101.97	202	PFAKE		13 28 00.0	+14
NWAO				LR	LR		
	comp=Z,10µm,20.0s						
TAMC	Tame, Arauca	102.25	35	eP	Pdif	13 27 51.2	+3.0
TAMC	Tame, Arauca	102.25	35	eP	Pdif	13 27 51.2	+3.0
DBIC	Dimbokro	102.47	327	ePdif	Pdif	13 27 48.0	-1.0
DBIC	Dimbokro	102.47	327	eP	Pdif	13 27 48.0	-1.0
DBIC	Dimbokro	102.47	327	P	Pdif	13 27 47.9	-1.1
	comp=Z,32nm,1.1s,baz=353,slow=7.3,SNR=15						
RUSC	La Rusia	102.49	37	eP	Pdif	13 27 49.8	+0.1
RUSC	La Rusia	102.49	37	eP	Pdif	13 27 49.8	+0.1
TIC	Toumodi	102.53	327	eP	Pdif	13 27 46.4	-2.9
PLMC	San Jos del P	102.68	40	eP	Pdif	13 27 51.9	+1.8
PLMC	San Jos del P	102.68	40	eP	Pdif	13 27 51.9	+1.8
KIC	Kosan Boka	102.75	327	eP	Pdif	13 27 48.4	-1.9
	comp=Z,104nm,1.3s						
RREF	El Recreo	102.91	39	eP	Pdif	13 27 53.2	+1.4
RREF	El Recreo	102.91	39	eP	Pdif	13 27 53.2	+1.4
LIC	Lamto	102.94	327	eP	Pdif	13 27 46.8	-4.3
	comp=Z,175nm,1.3s						
ROSC	El Rosal	103.22	38	eP	Pdif	13 27 53.8	+1.0
ROSC	El Rosal	103.22	38	eP	Pdif	13 27 53.8	+1.0
ROSC	El Rosal	103.22	38	Pdiff	Pdif	13 27 53.8	+1.0
	comp=Z,9.3nm,0.7s,baz=357,slow=15,SNR=6.9						
ROSC				PP	PP	13 32 04.3	-3.0
	comp=Z,33nm,1.0s,baz=118,slow=7.0,SNR=6.3						
ANIL	Santa Ana	103.29	39	eP	Pdif	13 27 58.1	+5.0
ANIL	Santa Ana	103.29	39	eP	Pdif	13 27 58.1	+5.0
TBI	Tubuai	103.32	119	ePP	PP	13 32 03.4	-4.8
	comp=Z,822nm,27.5s						
TBI				eSKSac	SKSac	13 38 31.5	-0.5
	comp=Z,3µm,27.0s						
TBI	Tubuai	103.32	119	ePS	PS	13 41 16.7	+0.1
	comp=Z,5µm,28.2s						
TBI				eSS	SS	13 46 50.6	-1.1
	comp=Z,9µm,32.2s						
TBI	Tubuai	103.32	119	eLQ	LQ	13 57 02.8	
	comp=Z,21µm,38.5s						
TBI				eLR	LR	14 01 52.2	
	comp=Z,27µm,22.0s,baz=336						
YOTC	Yotoco, Valle	103.55	40	eP	Pdif	13 27 50.5	-3.5
YOTC	Yotoco, Valle	103.55	40	eP	Pdif	13 27 50.5	-3.5
CHIC	Chingaza	103.56	38	eP	Pdif	13 27 58.2	+3.8
CHIC	Chingaza	103.56	38	eP	Pdif	13 27 58.2	+3.8
PAYG	Puerto Ayora	104.02	55	PFAKE		13 28 10.0	+14
PAYG				LR	LR		
	comp=Z,13µm,19.0s						
VILC	Villavicencio,	104.07	38	eP	Pdif	13 27 54.5	-1.8
VILC	Villavicencio,	104.07	38	eP	Pdif	13 27 54.5	-1.8
POPC	Popayan, Colom	104.85	41	eP	Pdif	13 27 58.1	-1.9
POPC	Popayan, Colom	104.85	41	eP	Pdif	13 27 58.1	-1.9
TUMC	Tumaco	105.01	43	eP	Pdif	13 27 51.8	-8.5
TUMC	Tumaco	105.01	43	eP	Pdif	13 27 51.8	-8.5
BETC	Betania	105.03	40	eP	Pdif	13 27 57.1	-3.4
BETC	Betania	105.03	40	eP	Pdif	13 27 57.1	-3.4
GCUF	Volcan Galeras	105.95	42	eP	Pdif	13 28 05.7	+0.6
GCUF	Volcan Galeras	105.95	42	eP	Pdif	13 28 05.7	+0.6
OTAV	Otavalo	106.61	43	PFAKE		13 32 30.0	+11
OTAV				LR	LR		
	comp=Z,20µm,21.0s						
PTLC	Puerto Leguiza	107.60	40	eP	Pdif	13 28 15.1	+3.2
PTLC	Puerto Leguiza	107.60	40	eP	Pdif	13 28 15.1	+3.2
RKT	Rikitea	108.25	106	ePP	PP	13 32 42.3	-2.2
	comp=Z,788nm,29.2s						
RKT				eSKSac	SKSac	13 38 52.4	-1.6
	comp=Z,2µm,27.0s						
RKT	Rikitea	108.25	106	ePS	PS	13 42 09.2	+1.6
	comp=Z,2µm,24.5s						
RKT				eSS	SS	13 47 57.9	-0.9
	comp=Z,10µm,34.0s						
RKT	Rikitea	108.25	106	eLQ	LQ	13 59 27.3	
	comp=Z,19µm,35.2s						
RKT				eLR	LR	14 03 58.6	
	comp=Z,19µm,24.0s,baz=327						
OPO	Ambohidratompo	109.10	268	PP	PP	13 32 43.6	-7.4
	comp=Z,6.2nm,0.8s,baz=329,slow=4.6,SNR=4.3						
ABPO	Ambohimpanom	109.49	267	PFAKE		13 32 30.0	+6.7
ABPO				LR	LR		
	comp=Z,8µm,19.0s						
TAU	Tasmania Unive	110.16	176	PFAKE		13 32 40.0	+16
TAU				LR	LR		
	comp=Z,10µm,21.0s						
SNZO	South Karori	111.18	155	PFAKE		13 32 40.0	+14
SNZO				LR	LR		
	comp=Z,19µm,22.0s						
PTGA	Pitinga	111.50	24	PFAKE		13 32 40.0	+13
PTGA				LR	LR		
	comp=Z,16µm,21.0s						
LSZ	Lusaka	113.31	287	PFAKE		13 32 40.0	+9.4
LSZ				LR	LR		
	comp=Z,25µm,21.0s						
MATP	Matopo	117.91	285	PKP	PKPdf	13 32 38.2	-1.1
	comp=Z,16nm,1.1s,baz=41,slow=2.4,SNR=9.9						
MATP				PP	PP	13 33 46.4	-7.0
	comp=Z,19nm,1.0s,baz=26,slow=8.8,SNR=5.2						
RCBR	Riachuelo	118.40	358	PFAKE		13 32 50.0	+10
RCBR				LR	LR		
	comp=Z,33µm,22.0s						
ASCN	Ascension	118.52	334	PFAKE		13 32 50.0	+9.4
ASCN				LR	LR		
	comp=Z,20µm,21.0s						
NNA	Nana	118.73	45	PFAKE		13 32 50.0	+9.0
NNA				LR	LR		
	comp=Z,12µm,22.0s						
TSUM	Tsumeb	120.72	296	ePKPdf	PKiKP	13 32 44.9	+0.1
RPN	Rapa Nui	121.63	85	PFAKE		13 33 00.0	+14
RPN				LR	LR		
	comp=Z,5µm,21.0s						
LPAZ	La Paz	125.06	37	ePKPdf	PKPdf	13 32 53.8	0.0
LPAZ				PP	PP	13 34 39.6	-2.7
LPAZ	La Paz	125.06	37	eP	PKPdf	13 32 53.2	-0.5
LPAZ	La Paz	125.06	37	ePKIKP	PKPdf	13 32 53.8	0.0
LPAZ						13 34 39.7	
LPAZ	La Paz	125.06	37	PKP	PKPdf	13 32 53.3	-0.5
	comp=Z,8.3nm,0.8s,baz=7.1,slow=7.3,SNR=14						
LPAZ				PP	PP	13 34 39.7	-2.7
	comp=Z,9.4nm,0.9s,baz=8.5,slow=8.1,SNR=5.0						
LPAZ	La Paz	125.06	37	eP	PKPdf	13 32 51.7	-2.1
PB12	IPOC Station P	126.77	40	eP	PKiKP	13 33 00.3	+3.5
SALV	Santo Antonio	127.05	22	eP	PKPdf	13 32 56.5	-0.2
JANB	Januaria	127.38	9	eP	PKPdf	13 32 56.2	-1.3
MNMCX	Minye Minye	127.45	40	eP	PKiKP	13 32 58.2	-0.2
MNMC	Minye Minye	127.45	40	ePKPdf	PKPdf	13 32 57.9	+0.1
BDFB	Brasilia	127.69	13	ePKPdf	PKPdf	13 32 58.1	-0.1
BDFB	Brasilia	127.69	13	PKP	PKPdf	13 32 57.5	-0.7
	comp=Z,51nm,1.1s,baz=41,slow=2.3,SNR=15						
PSGCX	Pisagua	127.77	40	eP	PKiKP	13 33 00.3	+1.6
PB11	IPOC Station P	128.04	40	ePKPdf	PKPdf	13 32 58.5	-0.3
PB11	IPOC Station P	128.04	40	eP	PKiKP	13 33 00.3	+0.9
PB08	IPOC Station P	128.53	39	eP	PKiKP	13 33 02.8	+2.2
MCI8	Montes Claros	128.99	8	eP	PKPdf	13 33 00.1	-0.5
MCI9	Montes Claros	129.03	8	eP	PKPdf	13 33 00.3	-0.3
MCI7	Montes Claros	129.12	8	eP	PKPdf	13 33 00.1	-0.7
MCI6	Montes Claros	129.14	8	eP	PKPdf	13 33 00.3	-0.5
PB01	IPOC Station P	129.31	40	ePKPdf	PKiKP	13 33 01.5	-0.3
PB01	IPOC Station P	129.31	40	eP	PKPdf	13 33 01.4	+0.3
PB02	IPOC Station P	129.48	41	eP	PKPdf	13 33 01.0	-0.4

PB07	IPOC Station P	129.87	41	*e*P	PKiKP	13 33 06.0	+3.0
IPMB	Ipameri, GO	129.99	14	*e*P	PKPdf	13 33 01.8	-0.6
PB09	IPOC Station P	130.10	40	*e*P	PKiKP	13 33 09.9	+6.4
PB03	IPOC Station P	130.21	41	*e*P	PKiKP	13 33 03.9	+0.2
PB04	IPOC Station P	130.38	41	*e*PKPdf	PKiKP	13 33 04.2	+0.2
PB04	IPOC Station P	130.38	41	*e*P	PKiKP	13 33 07.4	+3.4
PMNB	Patos De Minas	130.69	11	*e*P	PKPdf	13 33 04.0	+0.2
PB05	IPOC Station P	130.87	42	*e*P	PKiKP	13 33 06.7	+1.8
PB06	IPOC Station P	130.89	41	*e*P	PKiKP	13 33 04.6	-0.5
LVC	Limon Verde	130.96	40	*e*PKPdf	PKiKP	13 33 05.8	+0.4
LVC				LR	LR		
	comp=Z,11µm,20.0s						
LVC	Limon Verde	130.96	40	*e*PKIKP	PKiKP	13 33 05.8	+0.4
LVC				MLR	MLR		
	comp=Z,11µm,20.0s						
LVC	Limon Verde	130.96	40	*e*P	PKPdf	13 33 02.4	-2.1
SJMB	Sao Joao De Ma	131.14	5	*e*P	PKPdf	13 33 03.9	-0.6
BSFB	Barra de Sao F	131.28	4	*e*P	PKPdf	13 33 03.2	-1.6
YJA	Yavi	131.34	36	*e*P	PKiKP	13 33 06.0	-0.3
PB15	IPOC Station P	131.39	41	*e*P	PKiKP	13 33 07.8	+1.7
PB10	IPOC Station P	131.41	42	*e*P	PKiKP	13 33 06.7	+0.8
ITRB	Iturama	131.48	17	*e*P	PKPdf	13 33 03.2	-2.0
AQDB	Aquidauana	131.54	23	*e*P	PKPdf	13 33 04.1	-1.2
SUR	Sutherland	131.60	286	PFAKE		13 33 20.0	+14
SUR				LR	LR		
	comp=Z,42µm,19.0s						
RIB01	Linhares ES	131.77	4	*e*P	PKPdf	13 33 05.0	-0.6
HJA	Humahuaca	132.36	36	*e*P	PKiKP	13 33 08.1	-0.2
PB14	IPOC Station P	132.51	42	*e*P	PKiKP	13 33 11.3	+2.8
BB19B	Bebedouro	133.01	14	*e*P	PKPdf	13 33 07.1	-0.9
ALF01	Guarapari-ES	133.06	4	*e*P	PKPdf	13 33 06.8	-1.2
GO02	Mina Guanaco	133.23	42	*e*PKPdf	PKiKP	13 33 09.4	-0.4
BSCB	Bom Sucesso	133.25	10	*e*P	PKPdf	13 33 06.5	-2.0
CAM01	Campos-RJ	134.23	6	*e*P	PKPdf	13 33 10.0	-0.2
TRCB	Terra Rica	134.26	20	*e*P	PKPdf	13 33 09.7	-0.6
RCLB	Rio Claro- Sao	134.45	13	*e*P	PKPdf	13 33 08.9	-1.9
DUB01	Friburgo-RJ	134.45	7	*e*P	PKPdf	13 33 09.7	-1.0
VAS01	Vassouras-RJ	134.60	8	*e*P	PKPdf	13 33 10.0	-0.9
FRTB	Fartura	135.16	16	*e*P	PKPdf	13 33 10.6	-1.5
ESAR	Angra dos Reis	135.28	9	*e*P	PKPdf	13 33 11.3	-0.8
CASY	Casey	135.44	198	*e*PKPdf	PKPdf	13 33 08.1	-3.0
CASY				LR	LR		
	comp=Z,2µm,19.0s						
PTGB	Pitanga	136.22	20	*e*P	PKPdf	13 33 11.9	-2.1
LCO	Las Campanas	136.60	45	PFAKE		13 33 30.0	+13
LCO				LR	LR		
	comp=Z,17µm,22.0s						
LCO	Las Campanas	136.60	45	*e*P	PKPdf	13 33 12.7	-2.1
LCO	Las Campanas	136.60	45	*e*P	PKPdf	13 33 14.1	-0.7
CPUP	Villa Florida	137.01	27	PKhKP	PKPpre	13 33 05.4	
	comp=Z,9.5nm,1.1s,baz=357,slow=5.3,SNR=7.7						
CPUP	Villa Florida	137.01	27	*e*P	PKPdf	13 33 14.2	-1.1
TIJ01	Guaruva-PR	137.18	16	*e*P	PKPdf	13 33 14.7	-1.1
CYA	Choya	137.31	38	*e*P	PKPdf	13 33 12.6	-3.3
AGUA	GUANDACOL	137.64	42	*e*P	PKPpre	13 33 11.2	
GO04	Tololo Observa	137.68	45	*e*PKPdf	PKiKP	13 33 19.7	+1.0
GO04	Tololo Observa	137.68	45	*e*P	PKPdf	13 33 14.1	-2.6
ACLC	CERRO LA CRUZ	137.97	40	*e*P	PKPpre	13 33 08.5	
ACDV	Cuesta del Vie	138.12	43	*e*P	PKPdf	13 33 18.3	+0.8
ACCO	Cerro Coronel	138.53	43	*e*P	PKPpre	13 33 11.1	
ITAB	Concordia	138.70	20	*e*P	PKPpre	13 33 14.4	
APLL	PUNTA DE LOS L	139.00	40	*e*P	PKPpre	13 33 12.4	
AMOG	MOGNA	139.02	43	*e*P	PKPdf	13 33 16.8	-2.2
RTLL	Cerro Villicun	139.39	43	*e*P	PKPpre	13 33 13.8	
ZON	Zonda	139.54	43	*e*P	PKPpre	13 33 14.5	
RTLS	Leoncito	139.62	44	*e*P	PKPpre	13 33 12.0	
RTCV	Cerro Valdivia	139.88	43	*e*P	PKPdf	13 33 19.8	-0.7
AUSP	Uspallata	140.00	44	*e*P	PKPpre	13 33 13.2	
ROC1	El Roble	140.26	47	*e*PKPdf	PKPdf	13 33 21.1	-0.3
ROC1	El Roble	140.26	47	*e*P	PKiKP	13 33 22.6	-1.3
TER01	Tubaro-SC	140.34	16	*e*P	PKPdf	13 33 19.7	-1.6
ASAL	Salagasta	140.49	44	*e*P	PKPpre	13 33 14.5	
PEL	Peldehue	140.51	47	*e*PKPdf	PKPdf	13 33 21.8	+0.2
PEL	Peldehue	140.51	47	*e*P	PKPpre	13 33 17.3	
PEL	Peldehue	140.51	47	*e*PKIKP	PKPdf	13 33 21.8	+0.2
ACAN	Cantantal	140.62	42	*e*P	PKPdf	13 33 18.7	-3.1
CNLB	Canela	140.91	19	*e*P	PKPdf	13 33 20.4	-2.1
AAGR	Agrelo	140.96	44	*e*P	PKPdf	13 33 20.4	-2.0
MRA	San Martin	141.13	40	*e*P	PKPpre	13 33 16.9	
AVIZ	Vizcacheras	141.41	44	*e*P	PKPdf	13 33 22.4	-0.8
CPSB	Cacapava Do Su	141.63	23	*e*P	PKPdf	13 33 23.1	-0.5
PLTB	Pedras Altas	142.94	23	*e*P	PKPdf	13 33 24.6	-1.3
VNDA	Vanda	145.28	173	*e*PKPbc	PKPbc	13 33 28.1	-0.3
VNDA	Vanda	145.28	173	*e*PKIKP	PKPbc	13 33 28.1	-0.3
VNDA	Vanda	145.28	173	PKPbc	PKPbc	13 33 27.0	-1.5
	comp=Z,195nm,1.1s,baz=316,slow=4.5,SNR=17						
MAW	Mawson	145.75	222	PKPbc	PKPab	13 33 30.4	-0.2
	comp=Z,246nm,1.0s,baz=32,slow=3.4,SNR=31						
SBA	Scott Base	145.87	171	*e*PKPdf	PKPab	13 33 31.4	+0.6
SBA				LR	LR		
	comp=Z,11µm,19.0s						
SBA	Scott Base	145.87	171	*e*PKP2	PKPab	13 33 31.4	+0.6
SBA				MLR	MLR		
	comp=Z,11µm,19.0s						
GO06	Curarrehue	146.28	51	*e*PKPdf	PKPbc	13 33 32.4	-0.4
TRQA	Tornquist	147.41	38	*e*PKPdf	PKPdf	13 33 34.1	+0.7
TRQA	Tornquist	147.41	38	*e*PKP2	PKPdf	13 33 34.1	+0.7
TRQA	Tornquist	147.41	38	*e*P	PKPdf	13 33 32.9	-0.5
PLCA	Paso Flores	147.61	51	*e*PKPdf	PKPdf	13 33 34.6	+0.9
PLCA	Paso Flores	147.61	51	*e*PKP2	PKPdf	13 33 34.7	+0.9
PLCA	Paso Flores	147.61	51	*e*P	PKPdf	13 33 33.8	+0.1
SYO	Syowa Base	153.19	231	⇑*e*P	PKPpre	13 33 22.2	
SYO	Syowa Base	153.19	231	⇓*e*P	PKPpre	13 33 29.4	
SYO	Syowa Base	153.19	231	⇑*i*P	PKPdf	13 33 44.4	+3.0
GO09	Cerro Castillo	156.35	64	*e*PKPab	PKPab	13 34 16.7	+1.9
QSPA	South Pole Qui	157.31	180	*e*PKPdf	PKPdf	13 33 45.0	-2.2
QSPA				PKPab	PKPab	13 34 18.9	+0.3
QSPA				PP	PP	13 37 55.0	-3.5
QSPA				LR	LR		
	comp=Z,12µm,19.0s						
QSPA	South Pole Qui	157.31	180	PKP	PKPdf	13 33 45.1	-2.0
	comp=Z,33nm,1.1s,baz=299,slow=0.0,SNR=18						
QSPA				PKPab	PKPab	13 34 18.9	+0.3
	comp=Z,93nm,0.9s,baz=241,slow=2.5,SNR=8.7						
QSPA				PP	PP	13 37 55.0	-3.5
	comp=Z,52nm,1.2s,baz=141,slow=3.5,SNR=3.1						
EFI	East Falkland	161.12	43	*e*PKPab	PKPab	13 34 35.6	+0.2
EFI				LR	LR		
	comp=Z,25µm,22.0s						
NVL	N'lazarevskaya	162.62	237	*e*PKIKP	PKPdf	13 33 54.0	+1.1
NVL				*e*PPP	PPP	13 42 14.6	
NVL				*e*SS	SS	13 58 48.9	-0.2
HOPE	Hope Point	166.71	358	PFAKE		13 34 10.0	+13
HOPE				LR	LR		
	comp=Z,12µm,19.0s						
SNAA	Sanae	167.42	235	PKP	PKPdf	13 33 55.7	-1.4
SNAA				x	x	13 35 02.3	
SNAA	Sanae	167.42	235	PKP	PKPdf	13 33 55.2	-1.9
	comp=Z,36nm,1.3s,baz=32,slow=1.5,SNR=17						
SNAA				PKPab	PKPab	13 35 02.5	-0.3
	comp=Z,91nm,1.2s,baz=72,slow=4.4,SNR=11						
SNAA				PP	PP	13 38 52.2	0.0
	comp=Z,8.3nm,1.1s,baz=78,slow=8.5,SNR=2.9						
PMSA	Palmer Station	168.87	88	PFAKE		13 34 10.0	+12
PMSA				LR	LR		
	comp=Z,14µm,21.0s						
PMSA	Palmer Station	168.87	88	*e*P	PKPdf	13 33 59.3	+1.2
VNA2	Neumayer--Watz	168.93	239	PKP	PKPdf	13 33 56.4	-1.7
VNA2				x	x	13 35 10.5	
VNA3	Neumayer Olymp	169.63	236	PKP	PKPdf	13 33 55.9	-2.6
VNA3				x	x	13 35 08.9	

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*SOME **14** 13:15:30.3, 42°.15N×76°.20E, h10^{km}*

*NNC **14** 13:15:33.4±1.9, 42°.30N×76°.17E, h0^{km}, mb2.2, mpv2.4, Error ellipse: s-maj=13.6km s-min=7.5km az=176.0*

KRNET 14 13:15:29.9±0.1, 42°.15N×76°.20E, h18^{km}, mb2.0, 14C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	0.10	18	⇑*i*P	Pb	13 15 33.1	+0.5
	baz=18						
ULHL				⇑*i*S	Sb	13 15 35.1	+0.8
	baz=18						
BOOM	Boomskoye usch	0.39	331	⇑*i*P	Pg	13 15 37.4	-0.8
	baz=31						
BOOM				⇑*i*S	Sg	13 15 43.5	-0.2
	baz=31						
KZA	Kyzart	0.71	265	⇑*i*P	Pg	13 15 43.6	-0.3
	baz=65						
KZA				⇑*i*S	Sg	13 15 53.4	0.0
	baz=65						
NRN	Naryn	0.73	192	⇑*i*P	Pg	13 15 44.3	+0.1
	baz=93						
NRN				⇑*i*S	Sg	13 15 54.3	+0.4
	baz=93						
KDJ	Kajisay	0.73	91	⇓*i*P	Pb	13 15 44.0	-0.2
	baz=91						
KDJ				⇓*i*S	Sb	13 15 53.9	0.0
	baz=91						
TKM2	Tokmak 2	0.89	330	⇑P	Pb	13 15 46.9	-0.1
	0.2nm,0.2s						
TKM2				⇓S	Sg	13 15 59.2	0.0
	0.3nm,0.2s						
TKM2	Tokmak 2	0.89	330	⇓*i*P	Pb	13 15 47.1	+0.1
	baz=30						
TKM2				⇓*i*S	Sb	13 15 58.9	+0.2
	baz=30						
KST	Kastek	0.91	349	*e*P	Pb	13 15 47.5	+0.2
	baz=49						
KST				*e*S	Sg	13 15 59.7	-0.1
	baz=49						
KST	Kastek	0.91	349	*e*P	Pb	13 15 47.5	+0.2
	1.3nm,0.1s						
KST				*e*S	Sg	13 15 59.6	-0.2
	2.1nm,0.2s						
MTBS	Maitube	1.00	10	P	Pb	13 15 48.5	-0.2
	2.8nm,0.1s						
MTBS				S	Sb	13 16 01.1	-0.5
	9.7nm,0.2s						
MTBS	Maitube	1.00	10	*e*P	Pb	13 15 48.5	-0.2
	baz=10.0						
MTBS				*e*S	Sb	13 16 01.1	-0.5
	baz=10.0						
MTBS	Maitube	1.00	10	*e*P	Pb	13 15 48.5	-0.2
	2.8nm,0.1s						
MTBS				*e*S	Sb	13 16 01.1	-0.5
	9.7nm,0.2s						
KBK	Karagaybulak	1.06	299	⇓*i*P	Pb	13 15 49.5	-0.3
	baz=99						
KBK				⇓*i*S	Sg	13 16 03.9	-0.4
	baz=99						
DGS	Degeres	1.14	344	P	Pg	13 15 51.9	-0.1
	1.4nm,0.1s						
DGS				S	Sg	13 16 07.1	+0.2
	2.1nm,0.2s						
DGS	Degeres	1.14	344	*e*P	Pg	13 15 51.9	-0.1
	baz=44						
DGS				*e*S	Sg	13 16 07.2	+0.3
	baz=44						
DGS	Degeres	1.14	344	*e*P	Pg	13 15 51.9	-0.1
	1.4nm,0.1s						
DGS				*e*S	Sg	13 16 07.1	+0.2
	2.1nm,0.2s						
UCH	Uchtor	1.25	274	⇑*i*P	Pn	13 15 53.0	+0.1
	baz=74						
UCH				⇑*e*S	Sn	13 16 10.1	+0.5
	baz=74						
TARG	Taragay, Kyrgy	1.27	109	⇓*i*P	Pn	13 15 53.3	+0.2
	baz=9.0						
TARG				⇓*i*S	Sg	13 16 10.7	-0.4
	baz=9.0						
AAK	Ala-Archa	1.35	292	P	Pg	13 15 58.5	+2.5
	1.2nm,0.7s						
AAK				S	Sg	13 16 13.2	-0.5
	0.5nm,0.2s						
ARLS	Aral	1.43	259	⇑*i*P	Pb	13 15 55.6	-0.4
	baz=59						
ARLS				⇑*i*S	Sb	13 16 14.5	+0.6
	baz=59						
SGDS	Sogindy	1.74	319	P	Pg	13 16 03.4	0.0
	0.4nm,0.1s						
SGDS				S	Sg	13 16 26.6	+0.6
	1.5nm,0.1s						
CHKK	Chushkaly	1.80	18	P	Pb	13 16 03.3	+0.9
	0.8nm,0.1s						
CHKK				S	Sg	13 16 26.7	-1.3
	5.9nm,0.2s						
CHKK	Chushkaly	1.80	18	*e*P	Pb	13 16 03.3	+0.9
	baz=19						
CHKK				*e*S	Sg	13 16 26.7	-1.3
	baz=19						
CHKK	Chushkaly	1.80	18	*e*P	Pb	13 16 03.3	+0.9
	0.8nm,0.1s						
CHKK				*e*S	Sg	13 16 26.7	-1.3
	5.9nm,0.2s						
PDGK	Podgornoye	2.70	63	⇑Pn	Pg	13 16 21.0	-0.7
	0.8nm,0.7s						
PDGK				⇓Sn	Sb	13 16 52.6	+2.1
	0.9nm,0.6s						

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*IDC **14** 13:18:35.5±0.6, 67°.53N×142°.66E, h0^{km}, mb5.4/31, mb1 5.6/31, mb1mx5.3/61, mbtmp5.4/31, Error ellipse: s-maj=14.9km s-min=11.9km az=155.0*

*MOS **14** 13:18:35.9±1.0, 67°.57N×142°.64E, h16^{km}, mb5.4/2, Error ellipse: s-maj=26.5km s-min=7.8km az=98.3*

*NEIC **14** 13:18:36.7±0.3, 67°.49N×142°.74E, h10^{km}, mb5.3/2, Error ellipse: s-maj=7.9km s-min=7.2km az=155.0*

*YARS **14** 13:18:37.4±0.3, 67°.61N±0°.02×142°.68E±0°.04, h10^{km}*

*ISCJB **14** 13:18:42.9±0.9, 67°.73N±0°.06×142°.77E±0°.08, h72^{km}±8^{km}, mb5.4/41, Error ellipse: s-maj=9.8km s-min=4.7km az=169.9*

ISC 14 13:18:37.7±0.8**, 67°.55N**±0°.04×**142°.72E**±0°.04**, h15**^{km}±5^{km}**, h15**^{km}**:pP-P, n282, σ1^{s}.09**/295**, mb5.6**/46**, 2C, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.10	169	*e*P	Pn	13 18 57.9	-0.6
MOMR				*e*S	Sb	13 19 12.7	+0.2
MOMR				pmax	pmax		
	comp=Z,7µm,0.3s						
MOMR				smax	smax		
	comp=E,40µm,0.6s						
MOMR	Moma	1.10	169	*e*P	Pn	13 18 57.9	-0.6
MOMR				Pmax		13 18 57.9	
	comp=Z,7µm,0.3s						
MOMR				*e*S	Sb	13 19 12.7	+0.2
MOMR				Smax		13 19 12.7	
	comp=N,3µm,0.6s						
MOMR				Smax		13 19 12.7	
	comp=E,10µm,0.6s						
YBGR	Belaya Gora	1.64	51	*e*P	Pn	13 19 05.9	0.0
YBGR				Pmax		13 19 05.9	
	comp=Z,4µm,0.8s						
YBGR				*e*S	Sb	13 19 27.9	-0.1
YBGR				Smax		13 19 27.9	
	comp=N,7µm,0.6s						
YBGR				Smax		13 19 27.9	
	comp=E,8µm,0.6s						
BTGS	Batagay	3.10	276	*e*P	Pb	13 19 32.3	0.0
BTGS				pmax	pmax		
	comp=Z,5µm,0.9s						
BTGS	Batagay	3.10	276	*e*P	Pb	13 19 32.3	0.0
BTGS				Pmax		13 19 32.3	
	comp=Z,5µm,0.9s						
BTGS				*e*S	Sb	13 20 13.0	+3.2
BTGS				Smax		13 20 13.0	
	comp=N,1µm,1.4s						
BTGS				Smax		13 20 13.0	
	comp=E,10µm,1.4s						
ATKR	Artyk	3.52	163	*e*P	Pb	13 19 42.2	+2.5
ATKR				pmax	pmax		
	comp=Z,8µm,0.9s						
ATKR	Artyk	3.52	163	*e*P	Pb	13 19 42.2	+2.5
ATKR				Pmax		13 19 42.2	
	comp=Z,8µm,0.9s						
ATKR				*e*S	Sg	13 20 29.2	-1.5
ATKR				Smax		13 20 29.2	
	comp=N,7µm,0.9s						
ASAJ	Asahikawa	23.49	180	P	P	13 23 45.9	-0.6
	comp=N,74nm,1.2s,baz=33,slow=9.8,SNR=2.7						
USRK	Ussuriysk Ar.	24.09	199	P	P	13 23 52.3	+0.1
	comp=N,74nm,1.0s,baz=6.2,slow=11,SNR=5.0						
TOLK	Toolik Lake Re	24.15	56	P	P	13 23 54.2	+1.6
	baz=300						
ILAR	Eielson Array	27.20	62	P	P	13 24 21.1	+0.8
	comp=N,55nm,0.8s,baz=298,slow=8.1,SNR=6.2						
ZALV	Zalesovo Beam	30.07	272	P	P	13 24 46.2	+0.3
	comp=N,155nm,1.0s,baz=39,slow=6.9,SNR=6.7						
SPITS	Spitsbergen Ar	31.07	341	P	P	13 24 55.0	+0.5
	comp=N,178nm,0.9s,baz=104,slow=10,SNR=4.6						
SPITS				PcP	PcP	13 27 49.3	0.0
	comp=N,49nm,0.7s,baz=86,slow=3.7,SNR=11						
MJAR	Matsushiro Arr	31.16	187	PcP	PcP	13 27 49.9	-0.3
	comp=N,17nm,1.0s,baz=17,slow=2.0,SNR=5.0						
RES	Resolute Bay	33.34	24	P	P	13 25 14.7	+0.4
	comp=N,35nm,0.6s,baz=315,slow=9.7,SNR=5.2						
KURK	Kurchatov	34.98	274	P	P	13 25 29.8	+1.1
KURK	Kurchatov	34.98	274	P	P	13 25 29.8	+1.1
KURBB	Kurchatov Arra	35.09	274	P	P	13 25 29.8	+0.1
	comp=N,62nm,0.6s,baz=82,slow=21,SNR=11						
ARCES	ARCESS Array B	36.63	328	P	P	13 25 42.2	-0.6
	comp=N,31nm,0.8s,baz=44,slow=8.6,SNR=6.4						
MKAR	Makanchi Array	36.76	267	P	P	13 25 43.8	-0.4
	comp=N,99nm,0.7s,baz=35,slow=7.8,SNR=5.1						
YKA	Yellowknife Ar	38.87	46	P	P	13 26 02.2	+0.6
	comp=N,22nm,0.8s,baz=322,slow=8.0,SNR=3.6						
SUMG	Summit	40.12	1	*i* P	P	13 26 12.8	+0.3
SUMG	Summit	40.12	1	*i* P	P	13 26 12.8	+0.3
SCO	Scoresbysund	41.83	352	*i* P	P	13 26 26.7	+0.6
	comp=N,131nm,1.1s						
SCO	Scoresbysund	41.83	352	*i* P	P	13 26 26.7	+0.6
USP	Ospenovka	42.72	271	P	P	13 26 34.8	+1.1
	SNR=11						
CHMS	Chumysh	42.85	271	P	P	13 26 35.9	+1.1
	SNR=6.5						
AKTO	Aktyubinsk	42.90	291	P	P	13 26 35.1	0.0
	comp=N,65nm,0.7s,baz=55,slow=8.8,SNR=11						
AAK	Ala-Archa	43.26	271	P	P	13 26 39.6	+1.4
	SNR=11						
FINES	FINESS Array B	43.37	321	P	P	13 26 38.5	-0.2
	comp=N,27nm,0.5s,baz=30,slow=8.0,SNR=10						
KZA	Kyzart	43.45	269	P	P	13 26 41.2	+1.2
	SNR=12						
AML	Almayashu	44.00	271	P	P	13 26 45.9	+1.5
	SNR=8.9						
SFJD	Kangerlussuaq	45.41	7	*i* P	P	13 26 54.5	-0.4
SFJD	Kangerlussuaq	45.41	7	*i* P	P	13 26 54.5	-0.4
NB2	NORSAR Subarra	46.95	330	P	P	13 27 06.6	-0.6
	comp=Z,48nm,0.8s,baz=24,slow=7.9						
NB2	NORSAR Subarra	46.95	330	P	P	13 27 06.6	-0.6
	baz=24,slow=7.9						
NOA	NORSAR Array B	46.95	330	P	P	13 27 06.5	-0.7
	comp=Z,91nm,0.9s,baz=24,slow=7.8,SNR=11						
B05A	Bryant	48.42	63	P	P	13 27 19.5	+0.9
	baz=329						
C06D	Leavenworth	49.12	62	P	P	13 27 24.6	+0.5
	baz=330						
F05D	White Salmon	50.69	64	P	P	13 27 37.4	+1.3
	baz=330						
I02D	Swisshome	51.41	67	P	P	13 27 42.7	+1.3
	baz=331						
MUD	Monsted U'grnd	51.61	329	*i* P	P	13 27 42.5	-0.2
	comp=Z,175nm,1.2s						
MUD	Monsted U'grnd	51.61	329	*i* P	P	13 27 42.5	-0.2
BSD	Bornholm Skovb	51.65	325	*i* P	P	13 27 42.6	-0.5
	comp=Z,197nm,0.8s						
BSD	Bornholm Skovb	51.65	325	*i* P	P	13 27 42.6	-0.5
AKASG	Malin Array Be	52.03	312	P	P	13 27 45.3	-0.7
	comp=Z,69nm,0.8s,baz=28,slow=8.2,SNR=5.6						
I05D	Terrebonne, OR	52.08	65	P	P	13 27 47.7	+1.2
	baz=331						
J01E	Myrtle Point	52.20	68	P	P	13 27 49.1	+1.7
	baz=331						
J04D	Umpqua Nationa	52.78	66	P	P	13 27 53.2	+1.3
	baz=331						
J05D	Fort Rock, OR	53.04	65	P	P	13 27 55.4	+1.6
	baz=332						
GEYT	Alibeck	53.58	282	P	P	13 27 58.6	+1.0
	comp=Z,71nm,0.9s,baz=357,slow=4.0,SNR=9.6						
DGMT	Dagmar	53.92	49	P	P	13 28 00.6	+0.6
	baz=334						
KBZ	Khabaz	53.95	298	P	P	13 28 01.1	+0.9
	comp=Z,86nm,0.8s,baz=46,slow=5.7,SNR=6.4						
BOZ	Bozeman (W)	54.22	56	P	P	13 28 02.4	0.0
	baz=333						
ULM	Lac du Bonnet	54.59	42	P	P	13 28 03.8	-1.0
	comp=Z,35nm,0.8s,baz=293,slow=9.0,SNR=3.3						
ESK	Eskdalemuir	54.85	337	*e*P	P	13 28 05.7	-0.9
	comp=Z,37nm,0.8s						
ESK	Eskdalemuir	54.85	337	*e*P	P	13 28 05.7	-0.9
ESK				pmax	pmax		
	comp=Z,37nm,0.8s						
RLMT	Red Lodge	55.39	55	P	P	13 28 12.6	+1.7
	baz=334						
O03E	Paynes Creek	55.48	68	P	P	13 28 12.2	+0.7
	baz=332						
CLL	Collm	55.62	324	⇑*i*P	P	13 28 11.7	-0.5
	comp=Z,218nm,1.0s						
CLL				*e*pP	pP	13 28 17.0	-0.1
CLL	Collm	55.62	324	⇑*i*P	P	13 28 11.7	-0.5
CLL				*e*		13 28 17.0	
DPC	Dobruska-Polom	55.74	321	*e*P	P	13 28 13.5	+0.3
DPC				*e*pP	pP	13 28 17.9	-0.2
DPC	Dobruska-Polom	55.74	321	*e*P	P	13 28 13.5	+0.3
DPC				*e*		13 28 17.9	
OKC	Ostrava-Krasne	55.77	320	*e*P	P	13 28 12.8	-0.5
OKC				*e*pP	pP	13 28 17.6	-0.6
OKC	Ostrava-Krasne	55.77	320	*e*P	P	13 28 12.8	-0.5
OKC				*e*		13 28 17.6	
MDND	Maddock	55.79	46	P	P	13 28 14.1	+0.5
	baz=336						
KRLC	Kraliky	55.89	321	*e*P	P	13 28 14.4	+0.2
KRLC				*e*pP	pP	13 28 18.4	-0.7
KRLC	Kraliky	55.89	321	*e*P	P	13 28 14.4	+0.2
KRLC				*e*		13 28 18.4	
SCHQ	Schefferville	55.96	20	P	P	13 28 13.9	-0.8
	comp=Z,64nm,0.7s,baz=352,slow=6.9,SNR=5.7						
LANS	Liptovska Anna	56.08	319	*e*P	P	13 28 16.1	+0.5
LANS	Liptovska Anna	56.08	319	*e*P	P	13 28 16.1	+0.5
CMAR	Chiang Mai Arr	56.37	232	P	P	13 28 18.2	+0.2
	comp=Z,12nm,0.8s,baz=13,slow=8.7,SNR=4.7						
PRU	Pruhonice	56.50	323	*e*P	P	13 28 18.2	-0.3
PRU				*e*pP	pP	13 28 23.9	+0.5
PRU	Pruhonice	56.50	323	*e*P	P	13 28 18.2	-0.3
PRU				*e*		13 28 23.9	
NKC	Novy Kostel	56.75	324	*e*P	P	13 28 20.5	+0.2
NKC	Novy Kostel	56.75	324	*e*P	P	13 28 20.5	+0.2
VYHS	Vyhne	56.84	319	*e*P	P	13 28 21.0	0.0
VYHS	Vyhne	56.84	319	*e*P	P	13 28 21.0	0.0
TREC	Trest	56.92	322	*e*P	P	13 28 21.6	0.0
TREC				*e*pP	pP	13 28 26.2	-0.3
TREC	Trest	56.92	322	*e*P	P	13 28 21.6	0.0
TREC				*e*		13 28 26.2	
MODS	Modra-Piesok	57.34	320	*e*P	P	13 28 24.9	+0.3
MODS	Modra-Piesok	57.34	320	*e*P	P	13 28 24.9	+0.3
BW06	Boulder Array	57.42	56	P	P	13 28 26.2	+0.8
	baz=334						
PDAR	Pinedale Array	57.42	56	P	P	13 28 26.1	+0.7
	comp=Z,23nm,0.7s,baz=343,slow=2.5,SNR=7.1						
KHC	Kasperske Hory	57.53	323	*e*P	P	13 28 25.5	-0.4
KHC				*e*pP	pP	13 28 30.7	-0.1
KHC	Kasperske Hory	57.53	323	*e*P	P	13 28 25.5	-0.4
KHC				*e*		13 28 30.7	
MLR	Muntele Rosu	57.69	312	P	P	13 28 28.5	+1.4
	comp=Z,56nm,0.8s,baz=344,slow=3.5,SNR=8.6						
GERES	GERESS Array B	57.77	323	P	P	13 28 27.7	+0.1
	comp=Z,47nm,1.0s,baz=28,slow=6.0,SNR=5.6						
NVAR	Mina Array Bea	58.37	66	P	P	13 28 33.8	+1.6
	comp=Z,22nm,0.8s,baz=311,slow=5.2,SNR=4.9						
MOA	Molln	58.56	322	*e*P	P	13 28 32.8	-0.3
	comp=Z,76nm,1.2s						
DUG	Dugway, Tooele	58.67	60	P	P	13 28 35.4	+1.3
	baz=334						
KIP	Kipapa	58.79	111	*e*P	P	13 28 33.9	-1.0
KIP	Kipapa	58.79	111	*e*P	P	13 28 33.9	-1.0
SUSD	Miller	59.09	47	P	P	13 28 36.6	-0.3
	baz=337						
R11A	Troy Canyon, C	59.39	63	P	P	13 28 38.9	-0.2
	baz=334						
SOKA	Soboth	59.48	321	*i* P	P	13 28 38.6	-1.0
	comp=Z,74nm,1.2s						
KBA	Koelnbreinsper	59.51	322	*i* P	P	13 28 38.6	-1.2
	comp=Z,185nm,1.2s						
E39A	Mellen	59.52	40	P	P	13 28 38.5	-1.3
	baz=339						
F38A	Pierce - Schro	59.58	41	P	P	13 28 39.5	-0.7
	baz=339						
E40A	Wakefield	59.62	40	P	P	13 28 39.8	-0.6
	baz=339						
WATA	Walderalm	59.67	324	*i* pP	P	13 28 41.1	+0.1
	comp=Z,93nm,0.9s						
WTTA	Wattenberg	59.73	324	*i* pP	P	13 28 41.6	+0.2
	comp=Z,189nm,1.3s						
OBKA	Obir	59.75	321	*i* pP	P	13 28 41.8	+0.3
	comp=Z,90nm,1.1s						
MOTA	Moosalm	59.77	324	*i* P	P	13 28 40.7	-1.0
	comp=Z,44nm,1.0s						
MYKA	Terra Mystica	59.86	322	*i* pP	P	13 28 43.0	+0.9
	comp=Z,98nm,1.3s						
SQTA	Sankt Quirin	59.87	324	*i* pP	P	13 28 42.7	+0.4

	comp=Z,140nm,1.2s						
F40A	Park Falls	60.06	40	P	P	13 28 41.9	-1.6
	baz=339						
CWC	Cottonwood Cre	60.23	66	P	P	13 28 46.7	+1.7
	baz=334						
ECSD	EROS Data Cent	60.40	46	P	P	13 28 45.4	-0.4
	baz=338						
E44A	Grand Marais A	60.40	37	P	P	13 28 45.0	-0.8
	baz=341						
VES	Vestal, Richgr	60.41	68	P	P	13 28 46.9	+0.9
	baz=334						
TPNV	Topopah Spring	60.42	65	P	P	13 28 47.6	+1.4
	baz=334						
D46A	Sault St. Mari	60.57	35	P	P	13 28 45.8	-1.1
	baz=341						
BRTR	Keskin Array B	60.60	303	P	P	13 28 47.7	+0.2
	comp=Z,23nm,0.8s,baz=19,slow=3.5,SNR=7.7						
D47A	Chapleau	60.61	34	P	P	13 28 46.4	-0.8
	baz=342						
G40A	Rib Lake	60.65	40	P	P	13 28 46.3	-1.2
	baz=339						
D49A	Beulah Townshi	60.78	33	P	P	13 28 47.6	-0.7
	baz=342						
PKM	Mcpherson Peak	61.01	69	P	P	13 28 52.5	+2.2
	baz=334						
G42A	Mountain	61.11	39	P	P	13 28 48.7	-1.9
	baz=340						
E47A	Iron Bridge	61.15	35	P	P	13 28 49.7	-1.1
	baz=342						
D50A	G1974 Best Tow	61.19	32	P	P	13 28 50.2	-0.9
	baz=343						
H40A	Chili	61.21	41	P	P	13 28 50.4	-0.9
	baz=340						
G43A	Wallace	61.27	38	P	P	13 28 50.3	-1.4
	baz=340						
F46A	Macinaw City C	61.46	36	P	P	13 28 51.6	-1.4
	baz=341						
D52A	ZEK Kipawa Sen	61.66	31	P	P	13 28 53.3	-1.0
	baz=343						
EDW2	Edwards Air Fo	61.66	67	P	P	13 28 56.0	+1.4
	baz=334						
D54A	Lac Fusel, La	61.83	29	P	P	13 28 54.3	-1.1
	baz=344						
I40A	Norwalk	61.83	41	P	P	13 28 54.7	-0.8
	baz=340						
I41A	Arkdale	61.86	40	P	P	13 28 54.5	-1.2
	baz=340						
BLG	Laguna Peak, P	61.98	68	P	P	13 28 57.9	+1.3
	baz=334						
F49A	Sandfield	62.07	34	P	P	13 28 55.9	-1.2
	baz=342						
I42A	Draeger Farm,	62.26	40	P	P	13 28 57.3	-1.1
	baz=340						
J40A	Soldiers Grove	62.27	41	P	P	13 28 56.8	-1.6
	baz=340						
E52A	Mattawa	62.27	31	P	P	13 28 57.3	-1.1
	baz=343						
F51A	Arnstein	62.36	32	P	P	13 28 57.8	-1.2
	baz=343						
BFSC	Mount Baldy Ra	62.36	67	P	P	13 29 00.9	+1.5
	baz=335						
E53A	Dumoine, Ponti	62.38	30	P	P	13 28 58.3	-0.9
	baz=344						
I43A	Langenfeld Bro	62.45	39	P	P	13 28 58.5	-1.1
	baz=340						
J41A	Loganville	62.48	41	P	P	13 28 59.0	-0.9
	baz=340						
K39A	Oelwein	62.62	43	P	P	13 28 59.2	-1.6
	baz=339						
ALGO	Algonquin Park	62.71	31	P	P	13 28 59.8	-1.6
	baz=344						
J42A	Columbus	62.75	40	P	P	13 29 00.3	-1.4
	baz=340						
J43A	Natural Harves	62.86	40	P	P	13 29 00.7	-1.7
	baz=340						
BUKO	Buck Lake	62.93	32	P	P	13 29 02.1	-0.8
	baz=343						
KSCO	Kaye Shedlock’	63.00	53	P	P	13 29 03.9	+0.3
	baz=337						
MURC	Murrieta	63.10	67	P	P	13 29 05.0	+0.8
	baz=335						
I47A	Gladwin	63.18	36	P	P	13 29 04.0	-0.5
	baz=342						
I48A	Sherman Twp	63.20	36	P	P	13 29 03.9	-0.8
	baz=342						
IRM	Iron Mountain	63.32	65	P	P	13 29 07.2	+1.5
	baz=335						
PFO	Pinyon Flats O	63.35	67	P	P	13 29 07.1	+1.1
	baz=335						
TPFO	Pinon Flats	63.36	67	P	P	13 29 07.2	+1.2
	baz=335						
BMRO	Meriville Lake	63.36	34	P	P	13 29 04.4	-1.3
	baz=343						
G53A	Haliburton	63.39	32	P	P	13 29 05.1	-0.8
	baz=344						
PDMCI	Parker Dam,Lak	63.53	64	P	P	13 29 08.2	+1.3
	baz=335						
L41A	Preston	63.57	42	P	P	13 29 05.4	-1.7
	baz=340						
ALFO	Alfred	63.62	29	P	P	13 29 06.4	-1.0
	baz=345						
BANO	Bancroft	63.63	31	P	P	13 29 06.3	-1.2
	baz=344						
I49A	Point Hope	63.64	35	P	P	13 29 05.9	-1.7
	baz=342						
Y12C	Blythe	63.90	65	P	P	13 29 11.0	+1.6
	baz=335						
CBKS	Cedar Bluff	64.05	50	P	P	13 29 09.8	-0.6
	baz=338						
I52A	Shelburne	64.08	33	P	P	13 29 09.7	-0.8
	baz=343						
L44A	Lake County Fo	64.12	40	P	P	13 29 09.6	-1.1
	baz=341						
K46A	Dorr	64.15	38	P	P	13 29 09.3	-1.6
	baz=341						
DELO	Deloro Mine	64.17	31	P	P	13 29 10.1	-1.0
	baz=344						
SWSC	Sam W. Stewart	64.19	66	P	P	13 29 12.8	+1.5
	baz=335						
H55A	Tweed	64.23	31	P	P	13 29 10.6	-0.8
	baz=344						
IKP	In-Ko-Pah, Jac	64.35	67	P	P	13 29 13.8	+1.4
	baz=335						
N40A	Mertquake, Sal	64.40	43	P	P	13 29 11.3	-1.3
	baz=340						
GLA	Glamis	64.43	65	P	P	13 29 14.6	+1.6
	baz=336						
I55A	Frankford	64.45	31	P	P	13 29 12.1	-0.8
	baz=344						
DRWO	Darlington Wes	64.57	32	P	P	13 29 12.8	-0.8
	baz=344						
DRCO	St. Marys Ceme	64.57	32	P	P	13 29 12.9	-0.7
	baz=344						
WLVO	Wesleyville	64.59	32	P	P	13 29 13.1	-0.7
	baz=344						
K49A	Clarkson	64.59	36	P	P	13 29 13.2	-0.7
	baz=342						
LONY	Lake Ozonia	64.65	29	P	P	13 29 13.4	-0.8
	baz=345						
PKME	Peaks-Kenny Pk	64.94	24	P	P	13 29 15.8	-0.2
	baz=347						
L47A	Sherwood	64.96	38	P	P	13 29 13.9	-2.4
	baz=342						
O41A	Passleys Farm,	65.31	43	P	P	13 29 17.0	-1.5
	baz=340						
M48A	Edgerton	65.54	37	P	P	13 29 19.0	-1.0
	baz=342						
P41A	Barry, Barry	65.67	43	P	P	13 29 19.2	-1.6
	baz=340						
M49A	Liberty Center	65.72	37	P	P	13 29 20.1	-1.0
	baz=342						
P42A	Winchester	65.95	43	P	P	13 29 20.9	-1.8
	baz=340						
ERPA	Erie	65.99	34	P	P	13 29 21.7	-1.2
	baz=343						
L53A	Girard	66.09	34	P	P	13 29 22.5	-1.1
	baz=343						
P43A	Skaggs, Pawnee	66.11	42	P	P	13 29 22.3	-1.4
	baz=341						
MMAI	Mount Meron Ar	66.13	299	P	P	13 29 24.4	+0.3
	comp=Z,23nm,0.7s,baz=35,slow=7.8,SNR=4.7						
M52A	Chesterland	66.25	35	P	P	13 29 23.8	-0.8
	baz=343						
Q41A	Truxton	66.31	44	P	P	13 29 24.1	-0.9
	baz=340						
ASF	Jabal al Asfar	66.39	297	P	P	13 29 26.0	+0.2
ASF	Jabal al Asfar	66.39	297	P	P	13 29 26.0	+0.2
	comp=Z,36nm,1.0s,baz=336,slow=6.3,SNR=5.2						
Q42A	Golden Eagle	66.53	43	P	P	13 29 25.2	-1.2
	baz=340						
N50A	Nevada	66.58	36	P	P	13 29 24.3	-2.4
	baz=342						
Q43A	New Douglas	66.72	42	P	P	13 29 26.3	-1.3
	baz=341						
O49A	Covington	66.86	38	P	P	13 29 27.1	-1.4
	baz=342						
R42A	Luebbering	67.06	43	P	P	13 29 28.3	-1.5
	baz=340						
N53A	Lisbon	67.06	35	P	P	13 29 28.5	-1.3
	baz=343						
P47A	Martinsville	67.06	39	P	P	13 29 28.3	-1.5
	baz=342						
CCM	Cathedral Cave	67.15	44	P	P	13 29 28.8	-1.5
	baz=340						
Q45A	Warren Harvey,	67.16	41	P	P	13 29 29.0	-1.4
	baz=341						
R43A	Red Bud	67.29	43	P	P	13 29 29.5	-1.7
	baz=341						
P48A	Milroy	67.29	39	P	P	13 29 29.4	-1.9
	baz=342						
P49A	Miami Univ. Ec	67.39	38	P	P	13 29 30.4	-1.5
	baz=342						
S41A	Jillco Farms,	67.45	44	P	P	13 29 30.9	-1.5
	baz=340						
O52A	Adamsville	67.50	36	P	P	13 29 31.0	-1.6
	baz=343						
R44A	Waltonville	67.53	42	P	P	13 29 31.3	-1.5
	baz=341						
S42A	Caledonia	67.54	44	P	P	13 29 31.1	-1.7
	baz=340						
S43A	Fulton Ridge,	67.91	43	P	P	13 29 33.5	-1.7
	baz=341						
T41A	Mountain View	67.96	45	P	P	13 29 34.1	-1.4
	baz=340						
T42A	Van Buren	68.15	44	P	P	13 29 35.3	-1.3
	baz=340						
Q51A	Peebles	68.20	37	P	P	13 29 35.6	-1.4
	baz=343						
PAL	Palisades	68.28	29	P	P	13 29 36.6	-0.8
	baz=346						
R49A	Shelbyville	68.47	39	P	P	13 29 36.7	-1.9
	baz=342						
R51A	Hillsboro	68.83	38	P	P	13 29 39.6	-1.4
	baz=343						
V41A	Mountainview	69.04	45	P	P	13 29 40.4	-1.8
	baz=340						
R53A	Hurricane	69.18	36	P	P	13 29 41.4	-1.7
	baz=343						
EIL	Elat	69.35	298	P	P	13 29 44.5	+0.3
	comp=Z,44nm,0.8s,baz=18,slow=5.8,SNR=7.4						
U45A	Rockin P Farm,	69.41	42	P	P	13 29 43.8	-0.7
	baz=341						
W41B	Gary Mavity, V	69.58	46	P	P	13 29 44.6	-1.1
	baz=340						
T50A	Nancy	69.75	39	P	P	13 29 45.3	-1.4
	baz=342						
S53A	Williamson	69.76	37	P	P	13 29 45.4	-1.4
	baz=343						
ABTX	Abilene, Hawle	69.82	53	P	P	13 29 46.9	-0.3
	baz=339						
WVT	Waverly	69.86	42	P	P	13 29 46.5	-0.8
	baz=342						
V45A	Humboldt	69.93	43	P	P	13 29 47.1	-0.7
	baz=341						
X40A	Basin Creek Fa	70.07	46	P	P	13 29 47.7	-0.9
	baz=340						
V46A	Holladay	70.09	42	P	P	13 29 47.6	-1.2
	baz=342						
ESDC	Sonseca Array	70.16	333	P	P	13 29 49.0	-0.2
	comp=Z,52nm,1.0s,baz=11,slow=6.1,SNR=5.4						
V47A	Nunnelly	70.22	42	P	P	13 29 48.5	-1.0
	baz=342						
X43A	Marvell	70.58	45	P	P	13 29 51.1	-0.6
	baz=341						
W46A	Michie	70.66	43	P	P	13 29 50.7	-1.5
	baz=342						
V49A	McMinnville	70.69	40	P	P	13 29 51.0	-1.4
	baz=342						
Y41A	Eaglette Beard	70.70	46	P	P	13 29 51.6	-0.9
	baz=340						
W47A	Westpoint	70.75	42	P	P	13 29 51.6	-1.1
	baz=342						
OXF	Oxford	70.97	44	P	P	13 29 53.0	-1.2
	baz=341						
Y43A	Makayla and Ka	71.13	45	P	P	13 29 54.5	-0.6
	baz=341						
W49A	Belvidere	71.21	41	P	P	13 29 54.3	-1.3
	baz=342						
PSI	Prapat	71.23	227	P	P	13 29 55.2	-0.8
	comp=Z,54nm,0.8s,baz=360,slow=7.0,SNR=8.2						
X47A	Russelville	71.38	42	P	P	13 29 55.2	-1.4
	baz=342						
TXAR	Lajitas Array	71.60	57	P	P	13 29 58.7	+0.5
	comp=Z,9.0nm,0.8s,baz=346,slow=3.4,SNR=4.3						
X48A	Hartselle	71.65	42	P	P	13 29 56.7	-1.5
	baz=342						
JCT	Junction City	71.76	54	P	P	13 29 59.0	0.0
	baz=339						
X49A	Woodville	71.77	41	P	P	13 29 58.0	-0.9
	baz=342						
W52A	Murphy	71.81	39	P	P	13 29 58.3	-0.9
	baz=343						
NATX	Nacogdoches	72.11	49	P	P	13 30 00.9	-0.1
	baz=340						
Y49A	Blount Mountai	72.37	41	P	P	13 30 01.2	-1.4
	baz=342						
KMSC	Kings Mountain	72.38	37	P	P	13 30 01.3	-1.3
	baz=344						
Y50A	Piedmont	72.51	41	P	P	13 30 02.1	-1.3
	baz=342						
145A	Houston Renfro	72.64	45	P	P	13 30 03.3	-0.9
	baz=341						
Y51A	Rockmart	72.67	40	P	P	13 30 02.7	-1.7
	baz=343						
Z49A	Columbiana	72.97	42	P	P	13 30 04.6	-1.5
	baz=342						
X56A	White Oak	73.07	37	P	P	13 30 05.4	-1.3
	baz=344						
Z50A	Ashland	73.07	41	P	P	13 30 05.4	-1.4
	baz=342						
Y53A	Monroe	73.08	39	P	P	13 30 05.7	-1.0
	baz=343						
Y54A	Tignall	73.28	38	P	P	13 30 06.9	-1.0
	baz=343						
GOGA	Godfrey	73.53	39	P	P	13 30 08.4	-1.0
	baz=343						
Z53A	Monticello	73.63	39	P	P	13 30 08.9	-1.1
	baz=343						
150A	Eclectic	73.66	41	P	P	13 30 08.8	-1.4
	baz=342						
833A	Chaparral WMA,	73.90	54	P	P	13 30 11.8	+0.2
	baz=339						
152A	Waverly Hall	73.93	40	P	P	13 30 10.5	-1.3
	baz=343						
153A	Fort Valley	74.17	40	P	P	13 30 12.4	-0.8
	baz=343						
250A	Grady	74.19	42	P	P	13 30 11.7	-1.6
	baz=342						
251A	Midway	74.30	41	P	P	13 30 12.9	-1.1
	baz=343						
155A	Kite	74.52	38	P	P	13 30 14.9	-0.3
	baz=344						
252A	Lumpkin	74.56	40	P	P	13 30 14.5	-1.0
	baz=343						
NHSC	New Hope	74.59	36	P	P	13 30 15.1	-0.5
	baz=344						
156A	Sylvania	74.72	38	P	P	13 30 15.9	-0.5
	baz=344						
255A	Hazlehurst	75.19	39	P	P	13 30 18.3	-0.7
	baz=344						
353A	Camilla	75.31	40	P	P	13 30 18.9	-0.9
	baz=343						
355A	Pearson	75.65	39	P	P	13 30 20.7	-1.0
	baz=344						
453A	Whigham	75.76	40	P	P	13 30 21.5	-0.8
	baz=343						
553A	Crawfordville	76.36	41	P	P	13 30 24.9	-0.9
	baz=343						
MDT	Midelt	76.96	332	P	P	13 30 29.1	-0.1
	comp=Z,25nm,1.1s,baz=13,slow=8.4,SNR=3.8						
556A	Lake Butler	77.04	39	P	P	13 30 28.7	-1.0
	baz=344						
557A	Orange Park	77.19	39	P	P	13 30 29.8	-0.7
	baz=344						
656A	Willston	77.62	39	P	P	13 30 32.5	-0.4
	baz=344						
757A	Oxford	78.14	39	P	P	13 30 35.3	-0.5
	baz=344						
857A	Zephyrhills	78.75	39	P	P	13 30 38.8	-0.4
	baz=344						
DWPF	Disney Wildern	79.09	39	P	P	13 30 40.7	-0.3
	baz=344						
WRAB	Tennant Creek	87.44	188	P	P	13 31 21.4	-2.6
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	87.44	188	P	P	13 31 21.4	-2.6
WRAB				pmax	pmax		
	comp=Z,11nm,0.7s						
VNDA	Vanda	145.31	173	PKIKP	PKPdf	13 38 12.0	-0.5
VNDA	Vanda	145.31	173	PKPbc	PKPdf	13 38 12.0	-0.5
	comp=Z,37nm,1.1s,baz=341,slow=3.2,SNR=3.6						
MAW	Mawson	145.78	222	PKPbc	PKPdf	13 38 13.3	-0.2
	comp=Z,76nm,0.9s,baz=58,slow=3.9,SNR=6.5						

*DDA **14** 13:21:38.9, 37°.84N×29°.15E, h7^{km}±2^{km}, ML2.4*
*ISK **14** 13:21:38.3, 37°.84N×29°.19E, h9^{km}, ML2.0/5*
*ISCJB **14** 13:21:39.2±0.8, 37°.84N±0°.04×29°.18E±0°.06, h9^{km}±6^{km}, Error ellipse: s-maj=8.9km s-min=5.0km az=30.7*
ISC 14 13:21:38.9±1.1**, 37°.84N**±0°.04×**29°.19E**±0°.06**, h11**^{km}±9^{km}**, n9, σ0^s.26**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.15	237	PG	Pg	13 21 42.1	-0.2
DENT				SG	Sg	13 21 44.9	+0.3
TAVA	DENIZLI_Tavas	0.43	211	*i* P	Pg	13 21 47.4	+0.1
TAVA				*i* S	Sb	13 21 55.0	-0.1
TAVA				IAML_P			
	comp=Z,494nm,0.1s						
KHAL	Karahalli	0.59	24	*i* P	Pb	13 21 50.9	-0.4
KHAL				*i* S	Sb	13 21 59.9	+0.2
KHAL				IAML_P			
	comp=Z,946nm,0.1s						
KULA	Kula-Manisa	0.80	329	PG	Pg	13 21 54.1	-0.2
KULA				SG	Sb	13 22 05.6	0.0
MANT	Manisa	0.82	323	*i* P	Pb	13 21 55.6	+0.2
MANT				*i* S	Sb	13 22 06.5	0.0
MANT				IAML_P			
	comp=Z,467nm,0.1s						
AYDB	Zeytinkoy-Aydi	1.03	277	PG	Pb	13 21 58.4	-0.4
AYDN	Tasoluk	1.05	261	*i* P	Pb	13 21 59.2	+0.1
AYDN				*i* S	Sb	13 22 12.7	-0.2
AYDN				IAML_P			
	comp=Z,467nm,0.2s						
SHUT	Suhut-Afyon	1.29	56	PN	Pn	13 22 03.1	+0.1
TVSB	Tavsanli	1.63	8	PN	Pn	13 22 07.9	+0.3

*IDC **14** 13:26:48.9±2.0, 67°.51N×142°.77E, h0^{km}, mb4.5/6, mb1 4.7/6, mb1mx4.1/63, mbtmp4.5/6, MS6.2/1, Ms1 6.2/1, ms1mx4.7/62, Error ellipse: s-maj=57.1km s-min=21.6km az=174.0*
*MOS **14** 13:26:48.1±2.6, 67°.65N×142°.86E, h9^{km}, mb4.6/1, Error ellipse: s-maj=56.7km s-min=21.5km az=90.0*
*ISCJB **14** 13:26:49.1±0.7, 67°.61N±0°.05×142°.7E±0°.2, h10^{km}, mb4.4/6, MS6.2/1, Error ellipse: s-maj=11.1km s-min=6.9km az=12.1*
*YARS **14** 13:26:50.3±0.1, 67°.600N±0°.006×142°.82E±0°.02, h10^{km}*
ISC 14 13:26:50.5±0.7**, 67°.54N**±0°.05×**142°.88E**±0°.05**, h10**^{km}**, n14, σ1^s.15**/19**, mb4.4**/6**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.08	173	*e*P	Pg	13 27 11.1	-0.2
MOMR				*e*S	Sn	13 27 26.3	-0.4
MOMR				pmax	pmax		
	comp=Z,792nm,0.6s						
MOMR				smax	smax		
	comp=E,1µm,0.4s						
MOMR	Moma	1.08	173	*e*P	Pg	13 27 11.1	-0.2
MOMR				Pmax		13 27 11.1	
	comp=Z,792nm,0.6s						
MOMR				*e*S	Sn	13 27 26.3	-0.4
MOMR				Smax		13 27 26.3	
	comp=E,1µm,0.4s						
YBGR	Belaya Gora	1.60	50	*e*P	Pn	13 27 18.5	-0.3
YBGR				Pmax		13 27 18.5	
	comp=Z,166nm,0.2s						
YBGR				*e*S	Sn	13 27 39.2	-0.2
YBGR				Smax		13 27 39.2	
	comp=N,2µm,0.2s						
BTGS	Batagay	3.16	276	*e*P	Pb	13 27 46.4	-0.2
BTGS				*e*S	Sb	13 28 27.1	+2.0
BTGS				pmax	pmax		
	comp=Z,422nm,0.8s						
BTGS				smax	smax		
	comp=N,892nm,0.7s						
BTGS	Batagay	3.16	276	*e*P	Pb	13 27 46.4	-0.2
BTGS				Pmax		13 27 46.4	
	comp=Z,422nm,0.8s						
BTGS				*e*S	Sb	13 28 27.1	+2.0
BTGS				Smax		13 28 27.1	
	comp=N,892nm,0.7s						
ATKR	Artyk	3.50	164	*e*P	Pb	13 27 54.1	+1.6
ATKR				pmax	pmax		
	comp=Z,149nm,0.6s						
ATKR	Artyk	3.50	164	*e*P	Pb	13 27 54.1	+1.6
ATKR				Pmax		13 27 54.1	
	comp=Z,149nm,0.6s						
ATKR				*e*S	Sg	13 28 40.2	-2.5
ATKR				Smax		13 28 40.2	
	comp=N,1µm,0.6s						
ILAR	Eielson Array	27.15	62	P	P	13 32 33.6	+0.2
	comp=N,6.7nm,1.0s,baz=299,slow=7.6,SNR=6.7						
ARCES	ARCESS Array B	36.67	328	P	P	13 33 56.8	+0.1
	comp=N,11nm,1.0s,baz=36,slow=9.4,SNR=2.6						
MKAR	Makanchi Array	36.83	267	P	P	13 33 57.7	-0.6
	comp=N,66nm,1.2s,baz=38,slow=7.3,SNR=3.7						
YKA	Yellowknife Ar	38.83	46	P	P	13 34 15.1	+0.1
	comp=N,2.5nm,0.9s,baz=322,slow=8.2,SNR=3.5						
AKTO	Aktyubinsk	42.97	291	LR	LR	13 54 42.6	
	comp=N,28µm,18.1s,baz=23,slow=39						
FINES	FINESS Array B	43.41	321	P	P	13 34 52.1	-0.6
	comp=N,9.7nm,1.0s,baz=36,slow=9.8,SNR=8.0						
PDAR	Pinedale Array	57.37	56	P	P	13 36 39.1	+0.4
	comp=N,1.4nm,0.7s,baz=24,slow=2.6,SNR=5.1						

*IDC **14** 13:28:04.5±0.4, 67°.55N×142°.38E, h0^{km}, mb4.7/34, mb1 4.8/34, mb1mx4.7/60, mbtmp4.7/34, Error ellipse: s-maj=12.2km s-min=10.6km az=133.0*
*MOS **14** 13:28:04.6±1.0, 67°.60N×142°.54E, h10^{km}, mb5.2/23, Error ellipse: s-maj=18.0km s-min=5.9km az=91.9*
*ISCJB **14** 13:28:05.1±0.1, 67°.61N±0°.02×142°.15E±0°.06, h10^{km}, mb4.9/68, MS6.2/1, Error ellipse: s-maj=4.0km s-min=2.9km az=139.2*
*YARS **14** 13:28:06.6±0.3, 67°.67N±0°.02×142°.55E±0°.04, h10^{km}*
*NEIC **14** 13:28:06.4±0.2, 67°.61N×142°.18E, h10^{km}, mb5.1/20, Error ellipse: s-maj=5.1km s-min=4.3km az=167.0*
ISC 14 13:28:06.4±0.3**, 67°.56N**±0°.04×**142°.13E**±0°.04**, h10**^{km}**, n296, σ1^s.10**/301**, mb4.9**/81**, 5C-10D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.18	158	*e*P	Pb	13 28 28.3	-0.6
MOMR				*e*S	Sb	13 28 44.3	+0.1
MOMR				pmax	pmax		
	comp=Z,822nm,0.2s						
MOMR				smax	smax		
	comp=N,22µm,0.6s						
MOMR	Moma	1.18	158	*e*P	Pb	13 28 28.3	-0.6
MOMR				Pmax		13 28 28.3	
	comp=Z,822nm,0.2s						
MOMR				*e*S	Sb	13 28 44.3	+0.1
MOMR				Smax		13 28 44.3	
	comp=N,2µm,0.6s						
YBGR	Belaya Gora	1.81	56	*i* P	Pn	13 28 35.2	-2.4
YBGR				Pmax		13 28 35.2	
	comp=Z,10µm,0.5s						
YBGR				*e*S	Sn	13 28 57.3	-3.2
YBGR				Smax		13 28 57.3	
	comp=N,1µm,0.7s						
BTGS	Batagay	2.87	275	*e*P	Pg	13 29 00.7	-0.7
BTGS				*e*S	Sg	13 29 39.1	+0.6
BTGS				pmax	pmax		
	comp=Z,438nm,0.3s						
BTGS				smax	smax		
	comp=N,5µm,0.5s						

BTGS	**Batagay**	**2.87**	**275**	*e*P	**Pg**	**13 29 00.7**	**-0.7**
BTGS				Pmax		13 29 00.7	
	comp=Z,438nm,0.3s						
BTGS				*e*S	**Sg**	**13 29 39.1**	**+0.6**
BTGS				Smax		13 29 39.1	
	comp=N,5µm,0.5s						
ATKR	**Artyk**	**3.62**	**159**	*e*P	**Pb**	**13 29 12.7**	**+2.3**
ATKR				pmax	pmax		
	comp=Z,1µm,1.0s						
ATKR	**Artyk**	**3.62**	**159**	*e*P	**Pb**	**13 29 12.7**	**+2.3**
ATKR				Pmax		13 29 12.7	
	comp=Z,1µm,1.0s						
ATKR				*e*S	**Sg**	**13 29 59.8**	**-2.6**
ATKR				Smax		13 29 59.8	
	comp=N,2µm,0.8s						
SEY	**Seymchan**	**6.33**	**132⇓**	*e*P	**Pn**	**13 29 42.7**	**+3.1**
YAK	**Yakutsk**	**7.67**	**230**	*e*P	**Pg**	**13 30 28.9**	**-4.3**
YAK				Pmax		13 30 28.9	
	comp=Z,2µm,0.8s						
YAK				*e*S	**Sg**	**13 32 10.5**	**-1.9**
YAK				Smax		13 32 10.5	
	comp=E,10µm,1.2s						
BILL	**Bilibino**	**9.13**	**76**	*e*Pn	**Pn**	**13 30 18.7**	**+0.8**
BILL	**Bilibino**	**9.13**	**76⇓**	*e*P	**Pn**	**13 30 18.4**	**+0.5**
BILL				*e*S	**Sn**	**13 32 02.1**	**+1.5**
BILL				pmax	pmax		
	comp=Z,185nm,1.8s						
BILL				MLR	MLR		
	comp=Z,22µm,16.0s						
PEA1	**Petropavlovsk-**	**16.33**	**145**	*e*Pn	**Pn**	**13 31 57.0**	**+1.5**
PETK	**Petropavlovsk-**	**16.33**	**145**	Pn	**Pn**	**13 31 57.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=325,slow=7.4,SNR=5.7						
PET	**Petropavlovsk**	**16.63**	**143**	P	**P**	**13 32 01.9**	**+0.2**
PET	**Petropavlovsk**	**16.63**	**143**	*e*P	**P**	**13 32 03.6**	**+1.9**
PET				pmax	pmax		
	comp=Z,239nm,1.0s						
SKR	**Severo-Kuril's**	**18.30**	**151⇑**	*i*P	**P**	**13 32 20.9**	**+0.7**
KLR	**Kul'dur**	**19.12**	**201⇓**	*e*P	**Pn**	**13 32 30.0**	**-0.1**
RDOG	**Red Dog Mine**	**20.20**	**63**	*e*P	**P**	**13 32 39.6**	**-1.2**
	comp=Z,98nm,1.1s						
YSS	**Yuzh-Sakhalins**	**20.67**	**179⇑**	*i*P	**P**	**13 32 46.5**	**+0.5**
YSS				pmax	pmax		
	comp=Z,317nm,3.2s						
HIA	**Hailar**	**21.54**	**223⇑**	*e*P	**P**	**13 32 55.4**	**-0.1**
HIA				pmax	pmax		
	comp=Z,1µm,3.5s						
KUR	**Kuril'sk**	**22.59**	**169⇓**	*e*P	**P**	**13 33 06.2**	**-0.5**
ASAJ	**Asahikawa**	**23.50**	**179**	P	**P**	**13 33 15.1**	**-1.1**
	comp=Z,15nm,0.8s,baz=52,slow=12,SNR=13						
USRK	**Ussuriysk Ar.**	**24.04**	**198**	P	**P**	**13 33 21.7**	**+0.5**
	comp=Z,37nm,0.9s,baz=9.9,slow=11,SNR=23						
TOLK	**Toolik Lake Re**	**24.33**	**56**	*e*P	**P**	**13 33 22.9**	**-0.9**
	comp=Z,42nm,0.8s						
TOLK	**Toolik Lake Re**	**24.33**	**56**	P	**P**	**13 33 22.7**	**-1.1**
	baz=300						
IM3	**Indian Mountai**	**24.34**	**63**	*e*P	**P**	**13 33 22.9**	**-1.0**
COLD	**Coldfoot**	**24.86**	**59**	*e*P	**P**	**13 33 28.7**	**+0.1**
	comp=Z,83nm,1.2s						
VLA	**Vladivostok**	**25.11**	**198⇓**	*e*P	**P**	**13 33 31.8**	**+0.8**
VLA				pmax	pmax		
	comp=Z,643nm,2.8s						
MSHR	**Mys Shultsa**	**25.73**	**199⇓**	*e*P	**P**	**13 33 37.5**	**+0.9**
MLY	**Manley**	**25.92**	**63**	*e*P	**P**	**13 33 37.8**	**-0.4**
	comp=Z,122nm,1.4s						
TCOL	**CIGO, UAF Yank**	**27.00**	**62**	P	**P**	**13 33 46.6**	**-1.3**
	baz=308						
COLA	**College**	**27.00**	**62⇑**	*e*P	**P**	**13 33 47.3**	**-0.6**
COLA				pmax	pmax		
	comp=Z,17nm,1.0s						
IL1	**Eielson Array**	**27.39**	**62**	*e*P	**P**	**13 33 50.8**	**-0.6**
ILAR	**Eielson Array**	**27.39**	**62**	P	**P**	**13 33 49.9**	**-1.6**
	comp=Z,17nm,0.9s,baz=298,slow=7.9,SNR=13						
ILB	**Eielson Array**	**27.39**	**62**	*e*P	**P**	**13 33 50.5**	**-0.9**
	comp=Z,44nm,1.1s						
ZAA1	**Zalesovo Array**	**29.85**	**272**	*e*P	**P**	**13 34 14.2**	**+0.8**
ZALV	**Zalesovo Beam**	**29.85**	**272**	P	**P**	**13 34 14.2**	**+0.8**
	comp=Z,9.9nm,1.0s,baz=39,slow=7.1,SNR=4.4						
SPA0	**Spitsbergen Ar**	**30.99**	**341**	*e*P	**P**	**13 34 22.1**	**-1.1**
	comp=Z,111nm,1.4s						
SPA0				*e*PcP	**PcP**	**13 37 18.4**	**-0.3**
SPITS	**Spitsbergen Ar**	**30.99**	**341**	P	**P**	**13 34 23.2**	**0.0**
	comp=Z,19nm,0.9s,baz=54,slow=13,SNR=15						
SPITS				PcP	**PcP**	**13 37 18.4**	**-0.3**
	comp=Z,8.7nm,0.9s,baz=81,slow=5.2,SNR=8.4						
MJA0	**Matsu Arr-Jizo**	**31.15**	**186**	*e*P	**P**	**13 34 26.9**	**+1.8**
MJA0				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAJO	**Matsushiro**	**31.15**	**186**	*e*P	**P**	**13 34 24.3**	**-0.7**
MAJO	**Matsushiro**	**31.15**	**186**	*e*P	**P**	**13 34 24.3**	**-0.7**
MJAR	**Matsushiro Arr**	**31.15**	**186**	P	**P**	**13 34 24.3**	**-0.7**
	comp=Z,12nm,1.3s,baz=3.5,slow=8.0,SNR=4.3						
KSRS	**Korea Array**	**31.21**	**202**	P	**P**	**13 34 25.6**	**0.0**
	comp=Z,5.4nm,0.8s,baz=359,slow=8.7,SNR=11						
KSAR	**Wonju Array Be**	**31.23**	**202**	P	**P**	**13 34 25.6**	**-0.1**
KSAR	**Wonju Array Be**	**31.23**	**202**	P	**P**	**13 34 25.6**	**-0.1**
HHC	**Hu-ho-hao-te**	**31.53**	**228**	*e*P	**P**	**13 34 28.4**	**-0.1**
HHC				S	**S**	**13 39 33.1**	**-3.5**
HHC				pmax	pmax		
	comp=Z,100nm,1.0s						
HHC				LR	LR		
	comp=N,43µm,11.6s						
HHC				LR	LR		
	comp=E,41µm,11.8s						
HHC				LR	LR		
	comp=Z,12µm,11.2s						
TJN	**Taejon**	**32.35**	**203⇓**	*e*P	**P**	**13 34 35.7**	**+0.2**
RES	**Resolute Bay**	**33.42**	**24**	P	**P**	**13 34 43.5**	**-1.0**
	comp=Z,11nm,1.0s,baz=280,slow=5.8,SNR=4.0						
KURK	**Kurchatov**	**34.75**	**273**	*e*P	**P**	**13 34 58.1**	**+1.8**
KURK	**Kurchatov**	**34.75**	**273**	P	**P**	**13 34 58.1**	**+1.8**
KURBB	**Kurchatov Arra**	**34.86**	**273**	P	**P**	**13 34 58.1**	**+0.8**
	comp=Z,6.7nm,0.6s,baz=54,slow=4.7,SNR=13						
BVAR	**Borovoye Array**	**36.05**	**283**	P	**P**	**13 35 07.9**	**+0.5**
	comp=Z,18nm,0.8s,baz=42,slow=8.4,SNR=11						
ARA0	**ARCESS Array S**	**36.50**	**328**	*e*P	**P**	**13 35 10.5**	**-0.7**
ARCES	**ARCESS Array B**	**36.50**	**328**	*e*P	**P**	**13 35 10.9**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARCES	**ARCESS Array B**	**36.50**	**328**	P	**P**	**13 35 10.5**	**-0.7**
	comp=Z,8.5nm,0.9s,baz=39,slow=9.3,SNR=12						
MK32	**Makanchi Array**	**36.54**	**266**	*e*P	**P**	**13 35 12.1**	**+0.3**
MKAR	**Makanchi Array**	**36.54**	**266**	*e*P	**P**	**13 35 11.6**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,20nm,0.7s						
MKAR	**Makanchi Array**	**36.54**	**266**	P	**P**	**13 35 12.1**	**+0.3**
	comp=Z,20nm,0.7s,baz=28,slow=7.5,SNR=23						
TMCR	**Tamitsa**	**37.90**	**316**	*e*P	**P**	**13 35 23.3**	**+0.2**
TMCR				pmax	pmax		
	comp=Z,135nm,1.5s						
YKA	**Yellowknife Ar**	**39.02**	**46**	P	**P**	**13 35 31.4**	**-1.1**
	comp=Z,8.1nm,0.8s,baz=324,slow=7.9,SNR=15						
AAK	**Ala-Archa**	**43.03**	**270⇓**	*e*P	**P**	**13 36 07.4**	**+1.4**
AAK				pmax	pmax		
	comp=Z,63nm,0.9s						
FIA0	**FINESS Array S**	**43.22**	**321**	*e*P	**P**	**13 36 06.8**	**-0.2**
FIA0	**FINESS Array S**	**43.22**	**321**	*e*P	**P**	**13 36 06.8**	**-0.2**
FINES	**FINESS Array B**	**43.22**	**321**	P	**P**	**13 36 06.8**	**-0.2**
	comp=Z,9.0nm,0.8s,baz=32,slow=8.0,SNR=13						
OBN	**Obninsk**	**45.84**	**310⇓**	*e*P	**P**	**13 36 29.7**	**+1.7**
OBN				*e*		13 38 12.3	
OBN				*e*S	S	13 43 30.2	+19
OBN				pmax	pmax		
	comp=Z,526nm,2.1s						
NB2	**NORSAR Subarra**	**46.82**	**330**	P	**P**	**13 36 35.5**	**-0.2**
	comp=Z,3.8nm,0.7s,baz=24,slow=7.9						
NB2	**NORSAR Subarra**	**46.82**	**330**	P	**P**	**13 36 34.7**	**-1.0**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NB200	**NORSAR Array S**	**46.82**	**330**	*e*P	**P**	**13 36 35.2**	**-0.5**
NOA	**NORSAR Array B**	**46.82**	**330**	P	**P**	**13 36 35.2**	**-0.5**
	comp=Z,7.5nm,0.8s,baz=24,slow=7.8,SNR=8.6						
NORES	**NORESS Array B**	**47.04**	**329**	P	**P**	**13 36 37.1**	**-0.3**
NORES				pmax	pmax		
	comp=Z,4.0nm,0.3s						
FRB	**Frobisher Bay**	**47.14**	**18**	P	**P**	**13 36 39.9**	**+1.8**
FRB				pmax	pmax		
	comp=Z,52nm,0.9s						
LSA	**Lhasa**	**48.28**	**245**	P	**P**	**13 36 44.6**	**-3.3**
LSA	**Lhasa**	**48.28**	**245**	P	**P**	**13 36 44.7**	**-3.3**
VSR	**Storozhevoye**	**48.41**	**305⇑**	*e*P	**P**	**13 36 48.1**	**0.0**
VSR				pmax	pmax		
	comp=Z,132nm,1.4s						
B05A	**Bryant**	**48.61**	**62**	P	**P**	**13 36 48.6**	**-1.0**
	baz=330						
FFC	**Flin Flon**	**49.09**	**44**	*i* P	**P**	**13 36 52.6**	**-0.7**
GUN	**Gumba**	**51.78**	**249**	*e*P	**P**	**13 37 15.8**	**+1.4**
	comp=Z,336nm,1.4s						
AKASG	**Malin Array Be**	**51.86**	**312**	P	**P**	**13 37 13.8**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=27,slow=8.2,SNR=5.6						
KIEV	**Kiev**	**51.87**	**312⇓**	*i*P	**P**	**13 37 13.8**	**-0.5**
KIEV				pmax	pmax		
	comp=Z,85nm,2.4s						
JIRN	**Jiri**	**51.90**	**249**	*e*P	**P**	**13 37 16.8**	**+1.5**
	comp=Z,272nm,1.0s						
KKN	**Kakani**	**52.11**	**250**	*e*P	**P**	**13 37 18.3**	**+1.6**
	comp=Z,147nm,1.0s						
DANN	**Dangsing**	**52.15**	**252**	*e*P	**P**	**13 37 18.6**	**+1.5**
	comp=Z,188nm,1.1s						
ODAN	**Odare**	**52.20**	**247**	*e*P	**P**	**13 37 18.4**	**+1.0**
	comp=Z,129nm,1.2s						
PKIN	**Phulchoki**	**52.26**	**250**	*e*P	**P**	**13 37 18.8**	**+1.0**
PKI	**Pulchoki**	**52.26**	**250**	*e*P	**P**	**13 37 19.0**	**+1.1**
DMN	**Daman**	**52.33**	**250**	*e*P	**P**	**13 37 19.9**	**+1.5**
	comp=Z,209nm,1.3s						
RAMN	**Ramite**	**52.40**	**248**	*e*P	**P**	**13 37 19.8**	**+0.9**
PYUN	**Piuthan**	**52.66**	**253**	*e*P	**P**	**13 37 21.7**	**+1.0**
	comp=Z,140nm,1.0s						
KOLN	**Koldanda**	**52.73**	**252**	*e*P	**P**	**13 37 22.6**	**+1.3**
	comp=Z,380nm,1.5s						
GROC	**Groznyy**	**53.21**	**295**	*e*P	P	13 37 13.7	-11
GROC				*e*		13 38 32.3	
GROC				*e*		13 39 22.8	
GEYT	**Alibeck**	**53.35**	**281**	P	**P**	**13 37 26.7**	**+1.2**
	comp=Z,12nm,0.8s,baz=325,slow=2.3,SNR=6.3						
KIV	**Kislovodsk**	**53.62**	**298**	*e*P	**P**	**13 37 28.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KBZ	**Khabaz**	**53.74**	**297**	P	**P**	**13 37 29.5**	**+1.3**
	comp=Z,29nm,1.1s,baz=35,slow=16,SNR=7.9						
L04D	**Klamath Falls**	**53.80**	**66**	P	**P**	**13 37 28.8**	**-0.2**
	baz=332						
ULM	**Lac du Bonnet**	**54.73**	**42**	P	**P**	**13 37 36.4**	**+1.0**
	comp=Z,6.2nm,1.1s,baz=318,slow=7.4,SNR=5.3						
KIS	**Kishinev**	**55.30**	**310**	*i* P	P	13 37 46.0	+6.4
	comp=Z,2µm,4.0s						
KIS	**Kishinev**	**55.30**	**310**	*i* P	P	13 37 46.0	+6.4
YHH	**Holmes Hill**	**55.37**	**56**	*e*P	**P**	**13 37 39.9**	**-0.5**
	comp=Z,16nm,1.0s						
CLL	**Collm**	**55.48**	**324**	*e*P	**P**	**13 37 39.0**	**-1.7**
	comp=Z,20nm,0.9s						
CLL	**Collm**	**55.48**	**324**	*e*P	**P**	**13 37 39.0**	**-1.7**
CLL				pmax	pmax		
	comp=Z,20nm,0.9s						
RLMT	**Red Lodge**	**55.56**	**54**	*e*P	**P**	**13 37 42.2**	**+0.4**
	comp=Z,32nm,0.9s						
RLMT	**Red Lodge**	**55.56**	**54**	P	**P**	**13 37 45.0**	**+3.3**
	baz=334						
CMMT	**Chiang Mai**	**55.87**	**232**	P	P	13 37 49.3	+5.3
	comp=Z,13nm,1.1s						
CHTO	**Chiang Mai**	**55.87**	**232**	*e*P	**P**	**13 37 43.4**	**-0.6**
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**55.87**	**232**	*e*P	**P**	**13 37 43.4**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**55.87**	**232**	P	P	13 37 49.3	+5.4
	comp=Z,59nm,1.2s						
LANS	**Liptovska Anna**	**55.91**	**318**	*e*P	**P**	**13 37 45.1**	**+1.1**
LANS	**Liptovska Anna**	**55.91**	**318**	*e*P	**P**	**13 37 45.0**	**+1.1**
MDND	**Maddock**	**55.94**	**46**	P	**P**	**13 37 43.5**	**-0.6**
	baz=336						
SCHQ	**Schefferville**	**56.02**	**20**	P	**P**	**13 37 42.9**	**-1.7**
	comp=Z,13nm,0.8s,baz=4.5,slow=8.1,SNR=9.3						
SKNT	**Sakolnakorn**	**56.17**	**225**	P	**P**	**13 37 47.5**	**+1.4**
	comp=Z,12nm,1.4s						
CMAR	**Chiang Mai Arr**	**56.20**	**231**	P	**P**	**13 37 46.8**	**+0.5**
	comp=Z,4.7nm,0.8s,baz=357,slow=6.8,SNR=6.0						
MOOW	**Moose Ponds**	**56.33**	**56**	*e*P	**P**	**13 37 48.2**	**+0.9**
	comp=Z,12nm,0.9s						
UTTA	**Uttaradit**	**56.40**	**229**	P	**P**	**13 37 49.2**	**+1.5**
	comp=Z,11nm,1.0s						
VYHS	**Vyhne**	**56.68**	**318**	*e*P	**P**	**13 37 49.7**	**+0.3**
VYHS				*e*		13 37 54.0	
VYHS	**Vyhne**	**56.68**	**318**	*e*P	**P**	**13 37 49.7**	**+0.3**
VYHS				*e*sP	**sP**	**13 37 54.0**	**-0.2**
SUKH	**Sukhothai**	**56.92**	**230**	P	**P**	**13 37 53.2**	**+1.8**
	comp=Z,9.2nm,1.1s						
PBKT	**Sadao Pong**	**57.40**	**229**	*e*P	**P**	**13 37 55.4**	**+0.6**
	comp=Z,17nm,1.0s						
PBKT	**Sadao Pong**	**57.40**	**229**	P	**P**	**13 37 56.4**	**+1.6**
	comp=Z,25nm,1.4s						
HVU	**Hansel Valley**	**57.44**	**59**	*e*P	**P**	**13 37 54.8**	**-0.3**
	comp=Z,12nm,0.9s						
HVU	**Hansel Valley**	**57.44**	**59**	*e*P	**P**	**13 37 54.8**	**-0.3**
HVU				pmax	pmax		
	comp=Z,13nm,0.9s						
BW06	**Boulder Array**	**57.59**	**56**	P	**P**	**13 37 55.5**	**-0.7**
	baz=334						
PD31	**Pinedale Array**	**57.59**	**56**	*e*P	**P**	**13 37 55.6**	**-0.6**
	comp=Z,8.2nm,0.8s						
PDAR	**Pinedale Array**	**57.59**	**56**	P	**P**	**13 37 55.4**	**-0.8**
	comp=Z,7.6nm,0.7s,baz=8.2,slow=2.8,SNR=24						
GEC2	**GERESS Array S**	**57.62**	**322**	*e*P	**P**	**13 37 55.9**	**-0.2**
GEC2	**GERESS Array S**	**57.62**	**322**	*e*P	**P**	**13 37 55.9**	**-0.2**
GERES	**GERESS Array B**	**57.62**	**322**	P	**P**	**13 37 55.9**	**-0.2**
	comp=Z,6.0nm,0.9s,baz=36,slow=7.1,SNR=12						
CHAI	**Chaiyaphum**	**57.74**	**227**	P	**P**	**13 37 57.8**	**+0.6**
	comp=Z,5.7nm,0.9s						
EYMN	**Ely**	**57.96**	**40**	P	**P**	**13 37 55.9**	**-2.5**
	baz=339						
KVN	**Kaiserville**	**58.08**	**65**	*e*P	**P**	**13 38 00.0**	**+0.3**
	comp=Z,6.3nm,0.8s						
KVN	**Kaiserville**	**58.08**	**65**	*e*P	**P**	**13 38 00.0**	**+0.3**
KVN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WAKR	**Walker**	**58.10**	**66**	*e*P	**P**	**13 38 00.3**	**+0.5**
	comp=Z,13nm,1.0s						
UMPA	**Umpang Tak**	**58.36**	**231**	P	P	13 38 08.2	+6.6
	comp=Z,6.9nm,1.1s,comp=Z,197nm						
MOA	**Molln**	**58.41**	**321**	*i* pP	**P**	**13 38 01.6**	**0.0**
	comp=Z,5.5nm,0.9s						
NV01	**Mina Array Sit**	**58.57**	**65**	*e*P	**P**	**13 38 03.5**	**+0.4**
NVAR	**Mina Array Bea**	**58.57**	**65**	P	**P**	**13 38 03.0**	**-0.1**
	comp=Z,6.8nm,0.8s,baz=312,slow=5.5,SNR=14						
K22A	**Casper**	**58.65**	**54**	P	**P**	**13 38 05.0**	**+1.5**
	baz=335						
UTHA	**Uthaitani**	**58.80**	**230**	P	**P**	**13 38 06.7**	**+2.1**
	comp=Z,7.8nm,1.1s						
DUG	**Dugway, Tooele**	**58.85**	**60**	P	**P**	**13 38 05.3**	**+0.3**
	baz=334						
SUSD	**Miller**	**59.24**	**47**	P	**P**	**13 38 08.4**	**+1.0**
	baz=337						
BFO	**Black Forest**	**59.31**	**326**	*i* P	**P**	**13 38 08.1**	**+0.2**
KBA	**Koelnbreinsper**	**59.35**	**322**	*i* pP	**P**	**13 38 09.2**	**+0.8**
	comp=Z,3.2nm,0.5s						
R11A	**Troy Canyon, C**	**59.58**	**63**	P	**P**	**13 38 12.9**	**+2.8**
	baz=334						
WTTA	**Wattenberg**	**59.58**	**323**	*i* pP	**P**	**13 38 10.4**	**+0.5**
	comp=Z,3.3nm,0.4s						
OBKA	**Obir**	**59.60**	**321**	*i* pP	**P**	**13 38 10.6**	**+0.6**
	comp=Z,11nm,0.8s						
E39A	**Mellen**	**59.65**	**40**	P	**P**	**13 38 10.2**	**0.0**
	baz=339						
MYKA	**Terra Mystica**	**59.70**	**321**	*i* pP	**P**	**13 38 10.7**	**+0.1**
	comp=Z,1.2nm,0.4s						
F38A	**Pierce - Schro**	**59.72**	**41**	P	**P**	**13 38 11.6**	**+1.0**
	baz=339						
E40A	**Wakefield**	**59.75**	**39**	P	**P**	**13 38 11.8**	**+0.8**
	baz=340						
PSUT	**Pine Spring**	**60.00**	**61**	*e*P	**P**	**13 38 13.6**	**+0.6**
	comp=Z,12nm,0.8s						
LSQQ	**Lebel-sur-Quev**	**60.03**	**29**	P	**P**	**13 38 13.5**	**+0.7**
	baz=344						
F40A	**Park Falls**	**60.19**	**40**	P	**P**	**13 38 14.4**	**+0.4**
	baz=340						
E42A	**Champion**	**60.24**	**38**	P	**P**	**13 38 14.9**	**+0.7**
	baz=340						
BR101	**Keskin Array S**	**60.40**	**303**	*e*P	**P**	**13 38 16.0**	**+0.3**
BRTR	**Keskin Array B**	**60.40**	**303**	*e*P	**P**	**13 38 15.7**	**0.0**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	**60.40**	**303**	P	**P**	**13 38 16.0**	**+0.3**
	comp=Z,4.5nm,0.8s,baz=26,slow=3.8,SNR=10.0						
CWC	**Cottonwood Cre**	**60.43**	**66**	P	**P**	**13 38 16.4**	**+0.5**
	baz=334						
DAVOX	**Davos/Dischmat**	**60.44**	**324**	P	**P**	**13 38 16.4**	**+0.6**
	comp=Z,7.6nm,0.8s,baz=351,slow=10,SNR=5.0						
G38A	**Ridgeland**	**60.46**	**41**	P	**P**	**13 38 16.3**	**+0.5**
	baz=339						
ECSD	**EROS Data Cent**	**60.54**	**45**	*e*P	**P**	**13 38 15.0**	**-1.4**
	comp=Z,19nm,0.8s						
ECSD	**EROS Data Cent**	**60.54**	**45**	P	**P**	**13 38 17.8**	**+1.4**
	baz=338						
D46A	**Sault St. Mari**	**60.68**	**35**	P	**P**	**13 38 18.1**	**+0.8**
	baz=342						
D47A	**Chapleau**	**60.72**	**34**	P	**P**	**13 38 18.5**	**+0.9**
	baz=342						
G40A	**Rib Lake**	**60.78**	**40**	P	**P**	**13 38 18.7**	**+0.7**
	baz=340						
D49A	**Beulah Townshi**	**60.88**	**32**	P	**P**	**13 38 19.3**	**+0.6**
	baz=342						
MPMC	**Manual Prospec**	**60.98**	**66**	P	**P**	**13 38 22.4**	**+2.6**
	baz=335						
E46A	**Sault Ste Mari**	**61.12**	**35**	P	**P**	**13 38 21.5**	**+1.3**
	baz=342						
PKM	**Mcpherson Peak**	**61.21**	**68**	P	**P**	**13 38 21.9**	**+0.6**
	baz=334						
G42A	**Mountain**	**61.23**	**38**	P	**P**	**13 38 21.6**	**+0.6**
	baz=340						
PHET	**Kaeng Krachan**	**61.26**	**229**	P	P	13 38 27.2	+5.7
	comp=Z,6.1nm,0.9s						
E47A	**Iron Bridge**	**61.26**	**34**	P	**P**	**13 38 22.2**	**+1.0**
	baz=342						
H40A	**Chili**	**61.34**	**40**	P	**P**	**13 38 22.8**	**+1.0**
	baz=340						
LRMC	**Laurel Mtn Rad**	**61.43**	**66**	P	**P**	**13 38 23.5**	**+0.8**
	baz=335						
D51A	**Lot 18 Range I**	**61.46**	**31**	P	**P**	**13 38 23.5**	**+1.0**
	baz=343						
E48A	**Lockeyer**	**61.47**	**33**	P	**P**	**13 38 23.8**	**+1.2**
	baz=342						
H41A	**Junction City**	**61.53**	**40**	P	**P**	**13 38 23.4**	**+0.4**
	baz=340						
D52A	**ZEK Kipawa Sen**	**61.76**	**30**	P	**P**	**13 38 25.5**	**+1.0**
	baz=344						
I39A	**Houston**	**61.77**	**41**	P	**P**	**13 38 25.2**	**+0.5**
	baz=340						
EDW2	**Edwards Air Fo**	**61.86**	**67**	P	**P**	**13 38 25.6**	**0.0**
	baz=335						
I42A	**Draeger Farm,**	**62.39**	**39**	P	**P**	**13 38 29.2**	**+0.4**
	baz=340						
J40A	**Soldiers Grove**	**62.40**	**41**	P	**P**	**13 38 29.4**	**+0.5**
	baz=340						
E53A	**Dumoine, Ponti**	**62.48**	**30**	P	**P**	**13 38 30.5**	**+1.1**
	baz=344						
BFSC	**Mount Baldy Ra**	**62.56**	**67**	P	**P**	**13 38 33.5**	**+3.2**
	baz=335						
K39A	**Oelwein**	**62.76**	**42**	P	**P**	**13 38 31.0**	**-0.3**
	baz=340						
ALGO	**Algonquin Park**	**62.81**	**30**	P	**P**	**13 38 31.9**	**+0.4**
	baz=344						
J42A	**Columbus**	**62.88**	**40**	P	**P**	**13 38 32.5**	**+0.4**
	baz=340						
K40A	**Colesburg**	**62.95**	**42**	P	**P**	**13 38 33.5**	**+0.9**
	baz=340						
K41A	**Shullsburg**	**63.25**	**41**	P	**P**	**13 38 35.1**	**+0.5**
	baz=340						
SDCO	**Great Sand Dun**	**63.44**	**55**	P	**P**	**13 38 38.3**	**+2.0**
	baz=337						
G53A	**Haliburton**	**63.49**	**31**	P	**P**	**13 38 37.4**	**+1.2**
	baz=344						
L40A	**Anamosa**	**63.53**	**42**	P	**P**	**13 38 36.9**	**+0.5**
	baz=340						
TPFO	**Pinon Flats**	**63.56**	**66**	P	**P**	**13 38 36.6**	**-0.3**
	baz=335						
K43A	**Burlington**	**63.65**	**39**	P	**P**	**13 38 37.7**	**+0.5**
	baz=341						
L41A	**Preston**	**63.70**	**41**	P	**P**	**13 38 38.0**	**+0.5**
	baz=340						
PDMCI	**Parker Dam,Lak**	**63.73**	**64**	P	**P**	**13 38 40.7**	**+2.9**
	baz=336						
M39A	**Webster**	**63.83**	**43**	P	**P**	**13 38 38.8**	**+0.4**
	baz=340						
PLVO	**Plevna**	**63.88**	**30**	P	**P**	**13 38 39.6**	**+0.9**
	baz=344						
L42A	**Oliver, Polo**	**63.98**	**41**	P	**P**	**13 38 39.9**	**+0.5**
	baz=340						
M40A	**Post Highland**	**64.07**	**42**	P	**P**	**13 38 40.6**	**+0.6**
	baz=340						
CBKS	**Cedar Bluff**	**64.21**	**50**	P	**P**	**13 38 42.3**	**+1.2**
	baz=338						
MONP2	**Monument Peak**	**64.21**	**66**	P	**P**	**13 38 44.1**	**+2.7**
	baz=335						
M41A	**Milan**	**64.35**	**42**	P	**P**	**13 38 42.0**	**+0.2**
	baz=340						
N40A	**Mertquake, Sal**	**64.54**	**43**	P	**P**	**13 38 43.4**	**+0.3**
	baz=340						
DRWO	**Darlington Wes**	**64.67**	**32**	P	**P**	**13 38 44.9**	**+1.0**
	baz=344						
WLVO	**Wesleyville**	**64.69**	**31**	P	**P**	**13 38 44.6**	**+0.6**
	baz=344						
LONY	**Lake Ozonia**	**64.75**	**28**	P	**P**	**13 38 45.0**	**+0.6**
	baz=345						
KSU1	**Kansas State U**	**64.85**	**47**	P	**P**	**13 38 45.4**	**+0.3**
	baz=339						
N41A	**Harden Midland**	**64.90**	**42**	P	**P**	**13 38 45.8**	**+0.4**
	baz=340						
L47A	**Sherwood**	**65.08**	**37**	P	**P**	**13 38 46.9**	**+0.3**
	baz=342						
P41A	**Barry, Barry**	**65.81**	**43**	P	**P**	**13 38 51.7**	**+0.4**
	baz=340						
M49A	**Liberty Center**	**65.84**	**36**	P	**P**	**13 38 52.4**	**+0.9**
	baz=342						
MMAI	**Mount Meron Ar**	**65.93**	**298**	P	**P**	**13 38 52.9**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=42,slow=10,SNR=3.8						
P42A	**Winchester**	**66.08**	**42**	P	**P**	**13 38 53.7**	**+0.6**
	baz=341						
ASF	**Jabal al Asfar**	**66.19**	**297**	P	**P**	**13 38 54.2**	**+0.2**
	comp=Z,5.3nm,0.9s,baz=356,slow=18,SNR=4.8						
P43A	**Skaggs, Pawnee**	**66.24**	**41**	P	**P**	**13 38 54.7**	**+0.6**
	baz=341						
WSAR	**Wadi Sarin**	**66.28**	**273**	P	**P**	**13 38 55.1**	**+0.5**
	comp=Z,5.0nm,0.9s,baz=73,slow=6.7,SNR=3.5						
Q41A	**Truxton**	**66.45**	**43**	P	**P**	**13 38 56.2**	**+0.7**
	baz=340						
M53A	**WI Miller and**	**66.60**	**34**	P	**P**	**13 38 57.6**	**+1.1**
	baz=344						
Q42A	**Golden Eagle**	**66.67**	**42**	P	**P**	**13 38 57.8**	**+0.9**
	baz=341						
O48A	**Farmland**	**66.73**	**38**	P	**P**	**13 38 57.5**	**+0.2**
	baz=342						
Q43A	**New Douglas**	**66.86**	**42**	P	**P**	**13 38 58.9**	**+0.8**
	baz=341						
O49A	**Covington**	**66.98**	**37**	P	**P**	**13 38 59.0**	**+0.2**
	baz=342						
R41A	**Rosebud**	**67.03**	**43**	P	**P**	**13 38 59.3**	**+0.1**
	baz=340						
Q44A	**Meyer Farm, Va**	**67.07**	**41**	P	**P**	**13 39 00.2**	**+0.8**
	baz=341						
N53A	**Lisbon**	**67.17**	**34**	P	**P**	**13 39 01.0**	**+0.9**
	baz=344						
R42A	**Luebbering**	**67.20**	**43**	P	**P**	**13 39 00.9**	**+0.7**
	baz=341						
ACSO	**Alum Creek Sta**	**67.25**	**36**	P	**P**	**13 39 01.1**	**+0.6**
	baz=343						
AMTX	**Amarillo**	**67.27**	**53**	P	**P**	**13 39 01.7**	**+0.9**
	baz=338						
CCM	**Cathedral Cave**	**67.29**	**43**	*e*P	**P**	**13 38 59.9**	**-0.9**
	comp=Z,21nm,0.8s						
CCM	**Cathedral Cave**	**67.29**	**43**	*e*P	**P**	**13 38 59.9**	**-0.9**
CCM				pmax	pmax		
	comp=Z,21nm,0.8s						
CCM	**Cathedral Cave**	**67.29**	**43**	P	**P**	**13 39 01.3**	**+0.5**
	baz=341						
Q45A	**Warren Harvey,**	**67.29**	**41**	P	**P**	**13 39 01.3**	**+0.5**
	baz=341						
HRV	**Adam Dziewonsk**	**67.33**	**26**	P	**P**	**13 39 01.8**	**+0.8**
	baz=347						
O51A	**Pataskala**	**67.42**	**36**	P	**P**	**13 39 02.4**	**+0.8**
	baz=343						
P48A	**Milroy**	**67.42**	**38**	P	**P**	**13 39 00.6**	**-1.0**
	baz=342						
R43A	**Red Bud**	**67.42**	**42**	P	**P**	**13 39 02.3**	**+0.6**
	baz=341						
N55A	**Marion Center**	**67.59**	**33**	P	**P**	**13 39 03.5**	**+0.8**
	baz=344						
S41A	**Jillco Farms,**	**67.60**	**44**	P	**P**	**13 39 03.5**	**+0.7**
	baz=340						
O52A	**Adamsville**	**67.62**	**35**	P	**P**	**13 39 03.7**	**+0.8**
	baz=343						
O53A	**New Philadelph**	**67.63**	**35**	P	**P**	**13 39 03.9**	**+0.9**
	baz=344						
P50A	**Jamestown**	**67.66**	**37**	P	**P**	**13 39 03.9**	**+0.8**
	baz=343						
R44A	**Waltonville**	**67.67**	**42**	P	**P**	**13 39 03.9**	**+0.7**
	baz=341						
Q47A	**Bedord North L**	**67.68**	**39**	P	**P**	**13 39 03.8**	**+0.6**
	baz=342						
S42A	**Caledonia**	**67.68**	**43**	P	**P**	**13 39 03.7**	**+0.4**
	baz=341						
Q48A	**North Vernon**	**67.85**	**39**	P	**P**	**13 39 04.8**	**+0.5**

	baz=342						
O54A	Avella	67.87	34	P	P	13 39 05.3	+0.8
	baz=344						
S43A	Fulton Ridge,	68.05	43	P	P	13 39 04.7	-1.0
	baz=341						
T41A	Mountain View	68.10	44	P	P	13 39 06.6	+0.6
	baz=341						
WMOK	Wichita Mounta	68.28	51	P	P	13 39 08.5	+1.4
	baz=339						
T42A	Van Buren	68.30	44	P	P	13 39 07.4	+0.3
	baz=341						
U40A	Yellville	68.45	45	P	P	13 39 08.6	+0.4
	baz=340						
T43A	Greenville	68.46	43	P	P	13 39 08.4	+0.2
	baz=341						
S47A	Hartford	68.84	40	P	P	13 39 11.3	+0.7
	baz=342						
U42A	Revenden	68.90	44	P	P	13 39 11.6	+0.7
	baz=341						
R51A	Hillsboro	68.96	37	P	P	13 39 11.8	+0.5
	baz=343						
V41A	Mountainview	69.18	45	P	P	13 39 13.1	+0.3
	baz=341						
U46A	Springville	69.69	41	P	P	13 39 17.2	+1.4
	baz=342						
W41B	Gary Mavity, V	69.73	45	P	P	13 39 17.0	+0.9
	baz=341						
T50A	Nancy	69.88	39	P	P	13 39 17.7	+0.7
	baz=343						
ABTX	Abilene, Hawle	69.98	52	P	P	13 39 19.1	+1.3
	baz=339						
WVT	Waverly	69.99	41	P	P	13 39 19.4	+1.7
WVT	Waverly	69.99	41	P	P	13 39 18.9	+1.2
	baz=342						
ES19	SONSECA Array	70.01	333	*e*P	P	13 39 16.8	-1.1
ESDC	Sonseca Array	70.05	333	P	P	13 39 17.6	-0.5
	comp=Z,3.7nm,0.7s,baz=7.5,slow=6.5,SNR=14						
X40A	Basin Creek Fa	70.22	46	P	P	13 39 20.0	+0.9
	baz=341						
V46A	Holladay	70.23	42	P	P	13 39 20.3	+1.1
	baz=342						
V47A	Nunnelly	70.36	41	P	P	13 39 20.9	+1.0
	baz=342						
TZTN	Tazewell	70.64	38	P	P	13 39 22.6	+0.9
	baz=343						
W47A	Westpoint	70.88	41	P	P	13 39 24.1	+0.9
	baz=342						
OXF	Oxford	71.12	43	P	P	13 39 25.3	+0.7
	baz=342						
W49A	Belvidere	71.34	40	P	P	13 39 26.7	+0.8
	baz=342						
X47A	Russelville	71.51	42	P	P	13 39 27.4	+0.4
	baz=342						
LTX	Lajitas	71.78	57	*e*P	P	13 39 29.0	+0.2
LTX	Lajitas	71.78	57	*e*P	P	13 39 29.0	+0.2
TXAR	Lajitas Array	71.78	57	P	P	13 39 29.0	+0.2
	comp=Z,1.5nm,0.6s,baz=338,slow=2.8,SNR=12						
X48A	Hartselle	71.78	41	P	P	13 39 29.0	+0.4
	baz=342						
X49A	Woodville	71.91	41	P	P	13 39 30.1	+0.8
	baz=342						
JCT	Junction City	71.93	53	P	P	13 39 30.7	+1.1
	baz=339						
X50B	Fort Payne	72.12	40	P	P	13 39 31.3	+0.6
	baz=343						
Y48A	Jasper	72.26	41	P	P	13 39 32.0	+0.5
	baz=342						
Y49A	Blount Mountai	72.51	41	P	P	13 39 33.4	+0.4
	baz=342						
Y50A	Piedmont	72.64	40	P	P	13 39 34.2	+0.4
	baz=343						
Y51A	Rockmart	72.80	40	P	P	13 39 35.3	+0.6
	baz=343						
Z50A	Ashland	73.20	41	P	P	13 39 37.2	+0.1
	baz=343						
149A	Jones	73.61	42	P	P	13 39 39.7	+0.2
	baz=342						
GOGA	Godfrey	73.65	39	P	P	13 39 40.2	+0.5
	baz=344						
150A	Eclectic	73.79	41	P	P	13 39 40.6	0.0
	baz=343						
251A	Midway	74.44	41	P	P	13 39 44.6	+0.3
	baz=343						
FITZ	Fitzroy Crossi	86.28	196	*e*P	P	13 40 47.3	-0.6
	comp=Z,16nm,1.0s						
FITZ	Fitzroy Crossi	86.28	196	P	P	13 40 47.3	-0.6
	comp=Z,11nm,1.0s,baz=8.0,slow=5.9,SNR=12						
WR1	Warramunga Arr	87.44	187	*e*P	P	13 40 51.9	-1.7
	comp=Z,4.9nm,1.0s						
WRA	Warramunga Arr	87.44	187	*i* P	P	13 40 52.7	-0.9
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	87.44	187	P	P	13 40 51.9	-1.7
	comp=Z,2.2nm,0.9s,baz=2.9,slow=5.3,SNR=13						
ASAR	Alice Springs	91.16	188	P	P	13 41 09.6	-1.4
	comp=Z,1.3nm,0.8s,baz=6.2,slow=4.3,SNR=7.7						
MAW	Mawson	145.64	222	PKPbc	PKPbc	13 47 43.3	0.0
	comp=Z,11nm,0.8s,baz=48,slow=4.5,SNR=5.1						

ISK 14 13:35:36.5, 40°.53N×29°.24E, h1km, ML1.9/6, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEMT	Gemlik	0.10	203	PG	Pg	13 35 38.9	+0.5
GEMT				SG	Sg	13 35 40.6	+0.8
YLV	Yalova	0.11	69	PG	Pg	13 35 39.1	+0.5
YLV				SG	Sg	13 35 41.3	+1.3
ARMT	Armutlu	0.29	277	PG	Pg	13 35 43.3	+1.2
ARMT				SG	Sb	13 35 48.3	-1.6
MDNY	Mudanya-Bursa	0.32	240	PG	Pb	13 35 44.1	-0.8
GULT	Gulveren	0.98	95	PG	Pb	13 35 56.1	-0.1
TVSB	Tavsanli	1.09	171	PN	Pb	13 35 58.3	+0.1
BORA	Eskisehir	1.13	125	PN	Pn	13 35 59.3	-0.2

BJI ***14*** *13:44:26.8, 67°.90N×142°.40E, h10km, mb4.5/10*

IDC ***14*** *13:44:28.4±0.5, 67°.57N×142°.77E, h0km, mb4.1/26, mb1 4.3/27, mb1mx4.1/69, mbtmp4.1/27, ML3.5/1, Error ellipse: s-maj=14.6km s-min=11.7km az=170.0*

ISCJB ***14*** *13:44:28.5±0.2, 67°.62N±0°.03×142°.67E±0°.07, h10km, mb4.3/42, Error ellipse: s-maj=4.3km s-min=4.0km az=24.0*

MOS ***14*** *13:44:29.6±1.1, 67°.73N×142°.59E, h15km, mb4.9/15, Error ellipse: s-maj=18.7km s-min=7.1km az=99.8*

YARS ***14*** *13:44:30.1±0.2, 67°.58N±0°.01×142°.80E±0°.02, h8km±9km*

NEIC ***14*** *13:44:30.2±0.3, 67°.66N×142°.62E, h10km, mb4.6/11, Error ellipse: s-maj=8.6km s-min=6.3km az=176.0*

ISC 14 13:44:30.2±0.4, **67°.57N**±0°.04×**142°.61E**±0°.03, **h10km, n101,** σ1ˢ.**58**/116, **mb4.4**/42, **6C-7D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.13	168	*e*P	Pb	13 44 50.1	-1.7
MOMR				*e*S	Sb	13 45 05.0	-1.5
MOMR				pmax	pmax		
	comp=Z,383nm,0.2s						
MOMR				smax	smax		
	comp=N,7μm,0.6s						
MOMR	Moma	1.13	168	*e*P	Pb	13 44 50.1	-1.7
MOMR				Pmax		13 44 50.1	
	comp=Z,383nm,0.2s						
MOMR				*e*S	Sb	13 45 05.0	-1.5
MOMR				Smax		13 45 05.0	
	comp=N,7μm,0.6s						
YBGR	Belaya Gora	1.66	53	*i* P	Pn	13 44 58.2	-1.1
YBGR				Pmax		13 44 58.2	
	comp=Z,408nm,0.2s						
YBGR				*e*S	Sn	13 45 19.7	-0.9
YBGR				Smax		13 45 19.7	
	comp=N,3μm,0.4s						
BTGS	Batagay	3.05	275	*e*P	Pn	13 45 20.7	+2.3
BTGS				*e*S	Sn	13 45 56.4	+1.5
BTGS				pmax	pmax		
	comp=Z,109nm,0.3s						
BTGS	Batagay	3.05	275	*e*P	Pn	13 45 20.7	+2.3
BTGS				*e*P	Pg	13 45 26.8	-1.8
BTGS				Pmax		13 45 26.8	
	comp=Z,109nm,0.3s						
BTGS				*e*S	Sn	13 45 56.4	+1.5
BTGS				*e*S	Sg	13 46 06.5	-1.6
BTGS				Smax		13 46 06.5	
	comp=N,1μm,0.6s						
ATKR	Artyk	3.56	162	*e*P	Pn	13 45 26.1	+0.7
ATKR				*e*S	Sn	13 46 06.2	-1.3
ATKR				pmax	pmax		
	comp=Z,175nm,0.5s						
ATKR	Artyk	3.56	162	*e*P	Pn	13 45 26.1	+0.7
ATKR				*e*P	Pb	13 45 34.3	+1.2
ATKR				Pmax		13 45 34.3	
	comp=Z,175nm,0.5s						
ATKR				*e*S	Sn	13 46 06.2	-1.3
ATKR				*e*S	Sb	13 46 19.5	+3.2
ATKR				Smax		13 46 19.5	
	comp=N,2μm,0.7s						
SEY	Seymchan	6.20	134⇑	*e*P	Pn	13 46 05.7	+4.1
SEY	Seymchan	6.20	134	Pn	Pn	13 46 01.2	-0.4
	comp=N,1.1nm,0.3s,baz=343,slow=19,SNR=2.2						
YAK	Yakutsk	7.82	231	*e*P	Pn	13 46 24.9	+1.1
YAK				*e*S	Sn	13 47 50.7	-1.5
YAK				pmax	pmax		
	comp=Z,185nm,0.8s						
YAK	Yakutsk	7.82	231	*e*P	Pn	13 46 24.9	+1.1
YAK				*e*P	Pb	13 46 51.0	+5.4
YAK				Pmax		13 46 51.0	
	comp=Z,185nm,0.8s						
YAK				*e*S	Sn	13 47 50.7	-1.5
YAK				*e*S	Sg	13 48 33.8	-6.9
YAK				Smax		13 48 33.8	
	comp=N,887nm,0.7s						
MA2	Magadan	8.80	152	*e*Pn	Pn	13 46 41.2	+3.9
MA2	Magadan	8.80	152⇓	*e*P	Pn	13 46 38.5	+1.2
BILL	Bilibino	8.95	76	*e*Pn	Pn	13 46 42.8	+3.5
BILL	Bilibino	8.95	76⇑	*e*P	Pn	13 46 42.1	+2.8
BILL				pmax	pmax		
	comp=Z,113nm,1.6s						
BILL				MLR	MLR		
	comp=Z,10μm,16.0s						
PETK	Petropavlovsk-	16.23	146	*e*Pn	P	13 48 20.8	-0.4
PETK				*e*Sn	Sn	13 51 16.1	-1.8
PETK	Petropavlovsk-	16.23	146	*e*P	P	13 48 20.8	-0.4
PETK				*e*		13 51 16.1	
PET	Petropavlovsk	16.52	144⇑	*e*P	P	13 48 24.9	+0.6
PET				pmax	pmax		
	comp=Z,47nm,1.4s						
SKR	Severo-Kuril's	18.22	152⇓	*e*P	P	13 48 45.8	+2.8
GAMB	Gambell	18.84	80	*e*P	P	13 48 49.5	-0.3
	comp=Z,11nm,1.2s						
KLR	Kul'dur	19.19	202⇑	*e*P	Pn	13 48 58.1	+3.4
KLR	Kul'dur	19.19	202	P	Pn	13 48 55.8	+1.1
	comp=Z,0.2nm,0.3s,baz=12,slow=13,SNR=5.3						
NRIK	Noril'sk	19.73	300	P	Pn	13 49 02.0	+1.1
NRIK	Noril'sk	19.73	300	P	Pn	13 49 02.0	+1.1
	comp=Z,0.5nm,0.3s,baz=76,slow=12,SNR=4.2						
YSS	Yuzh-Sakhalins	20.67	180⇓	*e*P	Pn	13 49 15.3	+3.2
YSS				pmax	pmax		
	comp=Z,33nm,1.9s						
ANM	Nome	20.79	74	*e*P	P	13 49 11.8	+0.7
	comp=Z,6.2nm,0.7s						
ANM	Nome	20.79	74	*e*P	P	13 49 11.8	+0.7
ANM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ASAJ	Asahikawa	23.51	180	P	P	13 49 38.9	-1.0
	comp=Z,4.5nm,0.8s,baz=55,slow=8.3,SNR=4.0						
USRK	Ussuriysk Ar.	24.10	199	P	P	13 49 45.2	-0.3
	comp=Z,1.1nm,0.5s,baz=1.1,slow=13,SNR=4.9						
TOLK	Toolik Lake Re	24.17	56	*e*P	P	13 49 45.7	-0.5
	comp=Z,54nm,1.7s						
COLD	Coldfoot	24.70	59	*e*P	P	13 49 49.5	-1.4
	comp=Z,18nm,1.1s						
CN2	Changchun	25.52	210	*e*P	P	13 50 02.3	+3.8
MLY	Manley	25.75	64	*e*P	P	13 49 59.4	-1.1
	comp=Z,5.6nm,0.8s						
CAST	Castle Rocks	26.25	68	*e*P	P	13 50 04.2	-0.8
	comp=Z,5.8nm,0.8s						
MDM	Murphy Dome	26.65	62	*e*P	P	13 50 08.1	-0.5
	comp=Z,8.3nm,0.8s						
COLA	College	26.84	62⇓	*i*P	P	13 50 10.0	-0.2
SONM	Songino Array	27.00	241	P	P	13 50 14.1	+2.0
	comp=Z,1.1nm,0.8s,baz=25,slow=7.8,SNR=5.4						
IL1	Eielson Array	27.23	62	*e*P	P	13 50 11.4	-2.3
ILAR	Eielson Array	27.23	62	P	P	13 50 13.2	-0.5
	comp=Z,6.0nm,0.7s,baz=297,slow=7.9,SNR=52						
ILB	Eielson Array	27.23	62	*e*P	P	13 50 11.2	-2.6
SUA	Susitna One	27.99	70	*e*P	P	13 50 19.7	-1.0
	comp=Z,71nm,1.9s						
INK	Inuvik	29.25	49	P	P	13 50 31.4	-0.4
	comp=Z,0.6nm,0.6s,baz=297,slow=10,SNR=3.5						
ZALV	Zalesovo Beam	30.03	272	P	P	13 50 38.8	+0.1
	comp=Z,1.0nm,0.6s,baz=34,slow=11,SNR=3.6						
SPITS	Spitsbergen Ar	31.04	341	PcP	PcP	13 53 42.5	-0.1
	comp=Z,3.7nm,0.7s,baz=72,slow=8.1,SNR=5.2						
HHC	Hu-ho-hao-te	31.67	228	*e*P	P	13 50 55.5	+2.0
KURK	Kurchatov	34.94	274	P	P	13 51 23.0	+1.3
KURK	Kurchatov	34.94	274	P	P	13 51 23.0	+1.3
KURBB	Kurchatov Arra	35.04	274	P	P	13 51 23.0	+0.4
	comp=Z,2.0nm,0.6s,baz=36,slow=8.6,SNR=21						
BVAR	Borovoye Array	36.23	283	P	P	13 51 33.0	+0.2
BVAR	Borovoye Array	36.23	283	P	P	13 51 33.0	+0.2
	comp=Z,2.1nm,0.7s,baz=44,slow=8.7,SNR=11						
ARCES	ARCESS Array B	36.59	328	P	P	13 51 35.2	-0.5
	comp=Z,5.4nm,0.9s,baz=45,slow=10,SNR=7.4						
GTA	Gaotai	36.67	242	*e*P	P	13 51 36.3	-0.6
GTA				pP	sP	13 51 40.6	-0.7
GTA				sP	pP	13 51 43.0	+2.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MK31	Makanchi Array	36.73	267	*e*P	P	13 51 35.3	-1.8
MK31	Makanchi Array	36.73	267	*e*P	P	13 51 35.3	-1.8
MKAR	Makanchi Array	36.73	267	*e*P	P	13 51 35.5	-1.6
	comp=Z,25nm,0.6s						
MKAR	Makanchi Array	36.73	267	*e*P	P	13 51 35.5	-1.6
MKAR				pmax	pmax		
	comp=Z,25nm,0.6s						
MKAR	Makanchi Array	36.73	267	P	P	13 51 37.0	-0.1
	comp=Z,3.6nm,0.6s,baz=46,slow=6.8,SNR=27						
MK01	Makanchi Array	36.74	267	*e*P	P	13 51 36.5	-0.8
WMQ	Urumqi	37.17	259	*e*P	P	13 51 43.3	+2.3
TMCR	Tamitsa	38.02	316	*e*P	P	13 51 47.1	-0.8
NJ2	Nanjing	38.19	214	*e*P	P	13 51 50.9	+1.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YKA	Yellowknife Ar	38.88	46	P	P	13 51 54.6	-0.5
	comp=Z,1.4nm,0.7s,baz=322,slow=8.0,SNR=29						
AKTO	Aktyubinsk	42.86	291	P	P	13 52 28.0	0.0
	comp=Z,3.1nm,0.7s,baz=62,slow=10,SNR=8.9						
ABKAR	Akbulak array	43.14	288	*e*P	P	13 52 30.7	+0.4
CD2	Chengdu	43.21	232	*e*P	P	13 52 30.5	-0.6
AAK	Ala-Archa	43.22	270	*e*P	P	13 52 32.7	+1.5
	comp=Z,4.4nm,0.6s						
AAK	Ala-Archa	43.22	270⇓	*i*P	P	13 52 33.0	+1.8
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AAK	Ala-Archa	43.22	270	P	P	13 52 32.8	+1.6
	comp=Z,4.8nm,0.6s,baz=106,slow=3.9,SNR=17						
FINES	FINESS Array B	43.33	321	P	P	13 52 31.6	0.0
	comp=Z,4.0nm,0.4s,baz=29,slow=9.0,SNR=51						
VSU	Vasula	45.77	319⇓	*e*P	P	13 52 50.6	-0.6
VSU				pmax	pmax		
	comp=Z,26nm,1.0s						
OBN	Obninsk	45.98	310⇓	*e*P	P	13 52 52.9	0.0
OBN				*e*		13 54 40.2	
OBN				*e*S	S	13 59 46.4	+9.2
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NB2	NORSAR Subarra	46.91	330	P	P	13 52 59.3	-0.9
	comp=Z,2.9nm,1.0s,baz=24,slow=7.9						
NOA	NORSAR Array B	46.91	330	*e*P	P	13 53 00.3	+0.1
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA	NORSAR Array B	46.91	330	P	P	13 52 59.6	-0.6
	comp=Z,3.3nm,0.8s,baz=24,slow=7.8,SNR=6.0						
HFS	Hagfors	47.25	328	P	P	13 53 02.3	-0.5
	baz=32,slow=8.5						
HFS				PcP	PcP	13 54 32.7	-1.0
	comp=Z,2.3nm,0.7s,baz=98,slow=3.1,SNR=5.9						
LPSR	Galich'ya Gora	47.44	306	*e*P	P	13 53 03.5	-0.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRH	Novokhopyorsk	47.77	303	*e*P	P	13 53 05.7	-1.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	48.56	305	*e*P	P	13 53 11.7	-1.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FFC	Flin Flon	48.95	44	*e*P	P	13 53 15.2	-0.8
	comp=Z,40nm,1.9s						
FFC	Flin Flon	48.95	44	*e*P	P	13 53 15.3	-0.8
FFC				pmax	pmax		
	comp=Z,39nm,1.9s						
AKASG	Malin Array Be	51.99	312	*e*P	P	13 53 38.4	-0.6
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKASG	Malin Array Be	51.99	312	P	P	13 53 38.5	-0.6
	comp=Z,4.0nm,0.6s,baz=28,slow=8.4,SNR=5.3						
KIEV	Kiev	52.00	312⇑	*i*P	P	13 53 38.2	-0.9
KIV	Kislovodsk	53.78	298	*e*P	P	13 53 53.2	+0.8
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
NCK	Nalchik	53.87	297⇑	*e*P	P	13 53 52.7	-0.3
NCK				pmax	pmax		
	comp=Z,17nm,0.6s						
KBZ	Khabaz	53.91	298	P	P	13 53 54.5	+1.3
	comp=Z,4.5nm,0.8s,baz=52,slow=4.7,SNR=7.6						
EKA	Eskdalemuir Ar	54.79	337	P	P	13 53 59.5	0.0
	comp=Z,4.6nm,0.8s,baz=15,slow=4.9,SNR=5.1						
CLL	Collm	55.58	324	*i* P	P	13 54 05.0	-0.2
CLL	Collm	55.58	324	*i* P	P	13 54 05.0	-0.2
DPC	Dobruska-Polom	55.70	321	*e*P	P	13 54 05.4	-0.8
DPC	Dobruska-Polom	55.70	321	*e*P	P	13 54 05.4	-0.8
PDAR	Pinedale Array	57.44	56	P	P	13 54 18.6	-0.3
	comp=Z,2.0nm,0.7s,baz=338,slow=3.2,SNR=4.6						
GERES	GERESS Array B	57.72	323	*e*P	P	13 54 22.2	+1.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	57.72	323	P	P	13 54 20.8	+0.1
	comp=Z,1.0nm,0.7s,baz=22,slow=7.4,SNR=3.7						
NVAR	Mina Array Bea	58.40	66	P	P	13 54 26.1	+0.4
	comp=Z,2.5nm,0.8s,baz=319,slow=5.5,SNR=4.8						
BRTR	Keskin Array B	60.55	303	P	P	13 54 40.6	+0.2
	comp=Z,1.4nm,0.7s,baz=77,slow=3.7,SNR=3.6						
ESDC	Sonseca Array	70.12	333	P	P	13 55 41.7	-0.7
	comp=Z,1.5nm,0.6s,baz=7.0,slow=6.0,SNR=7.9						
TXAR	Lajitas Array	71.62	57	P	P	13 55 51.1	-0.6
	comp=Z,0.5nm,0.6s,baz=356,slow=2.6,SNR=6.7						
WRA	Warramunga Arr	87.47	188	*i* P	P	13 57 18.1	+0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	87.47	188	P	P	13 57 16.3	-1.2
	comp=Z,0.6nm,0.7s,baz=0.9,slow=5.7,SNR=8.9						
ASAR	Alice Springs	91.19	188	P	P	13 57 33.4	-1.5
	comp=Z,0.3nm,0.7s,baz=358,slow=4.9,SNR=4.3						

ISCJB ***14*** *13:47:15.7±0.3, 67°.63N±0°.03×142°.41E±0°.10, h10km, mb4.1/31, MS5.8/1, Error ellipse: s-maj=5.2km s-min=5.0km az=7.2*

IDC ***14*** *13:47:15.6±0.6, 67°.59N×142°.45E, h0km, mb4.1/25, mb1 4.3/25, mb1mx4.1/64, mbtmp4.1/25, Error ellipse: s-maj=15.9km s-min=12.5km az=154.0*

MOS ***14*** *13:47:15.2±1.0, 67°.60N×142°.46E, h10km, mb4.5/8, Error ellipse: s-maj=24.4km s-min=10.6km az=86.2*

YARS ***14*** *13:47:17.2±0.2, 67°.66N±0°.01×142°.50E±0°.03, h8km±4km*

NEIC ***14*** *13:47:17.1±0.3, 67°.59N×142°.46E, h10km, mb4.3/1, Error ellipse: s-maj=8.8km s-min=7.3km az=139.0*

ISC 14 13:47:17.1±0.4, **67°.56N**±0°.04×**142°.45E**±0°.03, **h10km, n69,** σ1ˢ.**43**/83, **mb4.3**/37, **5C-3D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.14	164	*e*P	Pn	13 47 39.1	0.0
MOMR				*e*S	Sn	13 47 54.8	+0.1
MOMR				pmax	pmax		
	comp=Z,2μm,0.6s						
MOMR				smax	smax		
	comp=N,7μm,0.9s						
MOMR	Moma	1.14	164	*e*P	Pn	13 47 39.1	0.0
MOMR				Pmax		13 47 39.1	
	comp=Z,2μm,0.6s						
MOMR				*e*S	Sn	13 47 54.8	+0.1
MOMR				Smax		13 47 54.8	
	comp=N,7μm,0.9s						
YBGR	Belaya Gora	1.71	53	*i* P	Pn	13 47 46.2	-0.8
YBGR				Pmax		13 47 46.2	
	comp=Z,2μm,0.4s						
YBGR				*e*S	Sn	13 48 08.2	-0.7
YBGR				Smax		13 48 08.2	
	comp=N,9μm,0.4s						
BTGS	Batagay	2.99	275	*e*P	Pn	13 48 05.7	+1.2
BTGS				*e*S	Sn	13 48 40.4	0.0
BTGS				pmax	pmax		
	comp=Z,133nm,0.3s						
BTGS	Batagay	2.99	275	*e*P	Pn	13 48 05.7	+1.2
BTGS				*e*P	Pb	13 48 11.2	+0.8
BTGS				Pmax		13 48 11.2	
	comp=Z,133nm,0.3s						
BTGS				*e*S	Sn	13 48 40.4	0.0
BTGS				*e*S	Sb	13 48 49.8	+2.9
BTGS				Smax		13 48 49.8	
	comp=N,2μm,0.5s						
ATKR	Artyk	3.57	161	*e*P	Pn	13 48 14.3	+1.8
ATKR				*e*S	Sn	13 48 55.9	+1.2
ATKR				pmax	pmax		
	comp=Z,242nm,0.7s						
ATKR	Artyk	3.57	161	*e*P	Pn	13 48 14.3	+1.8
ATKR				*e*P	Pg	13 48 23.8	-1.6
ATKR				Pmax		13 48 23.8	
	comp=Z,242nm,0.7s						
ATKR				*e*S	Sn	13 48 55.9	+1.2
ATKR				*e*S	Sg	13 49 10.2	-1.3
ATKR				Smax		13 49 10.2	
	comp=N,3μm,0.7s						
YAK	Yakutsk	7.76	230	*e*S	Sn	13 50 36.5	-1.3
YAK				*e*S	Sg	13 51 20.0	-5.9
YAK				Smax		13 51 20.0	
	comp=N,1μm,0.9s						
BILL	Bilibino	9.01	76	Pn	Pn	13 49 17.9	-9.1
	comp=N,84nm,1.2s						
BILL	Bilibino	9.01	76⇑	*e*P	Pn	13 49 24.8	-2.3
BILL				*e*S	Sn	13 51 07.4	-1.0
BILL				pmax	pmax		
	comp=Z,55nm,1.0s						
BILL				MLR	MLR		
	comp=Z,15μm,17.0s						
PET	Petropavlovsk	16.55	144	*e*P	P	13 51 16.7	+5.2
PET				pmax	pmax		
	comp=Z,43nm,1.0s						
KLR	Kul'dur	19.16	202⇑	*e*P	P	13 51 40.4	0.0
HIA	Hailar	21.61	223⇓	*e*P	P	13 52 08.2	+1.2
MDJ	Mudanjiang	23.99	203	*e*P	P	13 52 31.0	-0.5
	comp=Z,7.6nm,0.9s						
USRK	Ussuriysk Ar.	24.07	199	P	P	13 52 32.9	+0.6
	comp=Z,4.2nm,0.6s,baz=9.7,slow=10,SNR=13						
MOY	Mondy	25.63	252	*e*P	P	13 52 49.4	+2.9
ULN	Ulaanbaatar	26.70	240⇓	*e*P	P	13 52 54.4	-1.8
SONM	Songino Array	26.94	241	P	P	13 53 00.3	+1.9
	comp=Z,1.7nm,0.8s,baz=25,slow=7.8,SNR=3.5						
ILAR	Eielson Array	27.29	62	P	P	13 53 01.3	+0.1
	comp=Z,2.7nm,0.9s,baz=302,slow=8.0,SNR=7.4						
SPITS	Spitsbergen Ar	31.03	341	P	P	13 53 34.0	-0.3
	comp=Z,1.2nm,0.4s,baz=57,slow=11,SNR=16						
SPITS				PcP	PcP	13 56 29.2	-0.3
	comp=Z,2.2nm,0.5s,baz=71,slow=8.9,SNR=10						
KSRS	Korea Array	31.25	203	*e*P	P	13 53 38.1	+1.5
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	Korea Array	31.25	203	P	P	13 53 36.7	+0.2
	comp=Z,0.9nm,0.7s,baz=358,slow=9.4,SNR=5.5						
KSAR	Wonju Array Be	31.27	203	P	P	13 53 36.7	0.0
KSAR	Wonju Array Be	31.27	203	P	P	13 53 36.7	0.0
HHC	Hu-ho-hao-te	31.62	228	*e*P	P	13 53 38.9	-1.0
HHC				S	S	13 58 44.3	-4.4
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				LR	LR		
	comp=N,13μm,10.4s						
HHC				LR	LR		
	comp=E,13μm,13.0s						
HHC				LR	LR		
	comp=Z,7μm,10.4s						
DGZ	Jazzator, Alta	32.31	264⇑	*e*P	P	13 53 47.0	+1.0
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
TJN	Taejon	32.39	203	*ce*P	P	13 53 47.3	+0.7
KURK	Kurchatov	34.87	274	P	P	13 54 09.0	+0.9
KURK	Kurchatov	34.87	274	P	P	13 54 09.0	+0.9
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KURBB	Kurchatov Arra	34.98	274	P	P	13 54 09.0	-0.1
	comp=Z,3.3nm,0.5s,baz=36,slow=8.6,SNR=21						
BVAR	Borovoye Array	36.17	283	P	P	13 54 19.0	-0.2
	comp=Z,3.8nm,0.6s,baz=47,slow=8.1,SNR=12						
BRVK	Borovoye	36.18	283⇓	*e*P	P	13 54 18.5	-0.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARCES	ARCESS Array B	36.56	328	PcP	PcP	13 56 45.2	-0.2
	comp=Z,2.7nm,0.8s,baz=42,slow=3.8,SNR=4.8						
MKAR	Makanchi Array	36.66	266	P	P	13 54 23.1	-0.4
	comp=Z,5.7nm,0.5s,baz=28,slow=7.2,SNR=26						
YKA	Yellowknife Ar	38.94	46	P	P	13 54 42.3	-0.2
	comp=Z,0.8nm,0.7s,baz=322,slow=8.3,SNR=7.4						
AKTO	Aktyubinsk	42.80	290	P	P	13 55 14.5	0.0
	comp=Z,3.0nm,0.5s,baz=59,slow=6.9,SNR=12						
AAK	Ala-Archa	43.16	270⇑	*e*P	P	13 55 19.0	+1.3
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AAK	Ala-Archa	43.16	270	P	P	13 55 18.9	+1.3
	comp=Z,8.6nm,0.6s,baz=104,slow=3.7,SNR=25						
FINES	FINESS Array B	43.30	321	*i* P	P	13 55 18.2	-0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	43.30	321	P	P	13 55 17.9	-0.5
	comp=Z,1.8nm,0.4s,baz=24,slow=8.9,SNR=9.0						
NOA	NORSAR Array B	46.89	330	*e*P	P	13 55 46.6	-0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	46.89	330	P	P	13 55 46.0	-0.9
	comp=Z,1.1nm,0.5s,baz=24,slow=7.8,SNR=3.7						
FFC	Flin Flon	49.01	44	*i* P	P	13 56 03.5	+0.1
GUN	Gumba	51.89	250	*e*P	P	13 56 26.9	+1.0
	comp=Z,29nm,0.8s						
AKASG	Malin Array Be	51.95	312	P	P	13 56 24.7	-1.0
	comp=Z,1.0nm,0.4s,baz=28,slow=8.5,SNR=3.3						
JIRN	Jiri	52.01	249	*e*P	P	13 56 27.8	+1.0
	comp=Z,50nm,0.8s						
KKN	Kakani	52.22	250	*e*P	P	13 56 29.4	+1.2
	comp=Z,50nm,0.8s						
DANN	Dangsing	52.26	252	*e*P	P	13 56 29.7	+1.1
	comp=Z,25nm,0.6s						
PKIN	Phulchoki	52.37	250	*e*P	P	13 56 30.0	+0.6
PKI	Pulchoki	52.37	250	*e*P	P	13 56 30.1	+0.7
	comp=Z,27nm,1.0s						
DMN	Daman	52.45	250	*e*P	P	13 56 31.2	+1.3
PYUN	Piuthan	52.77	253	*e*P	P	13 56 32.8	+0.5
	comp=Z,31nm,1.0s						
KOLN	Koldanda	52.85	252	*e*P	P	13 56 33.7	+0.9
GEYT	Alibeck	53.47	282	P	P	13 56 36.9	-0.2
	comp=Z,2.3nm,0.6s,baz=346,slow=3.7,SNR=3.7						
KIV	Kislovodsk	53.73	298	*e*P	P	13 56 40.6	+1.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	Khabaz	53.85	298	P	P	13 56 40.3	+0.5
	comp=Z,5.2nm,0.9s,baz=56,slow=5.7,SNR=6.4						
CLL	Collm	55.55	324	*e*P	P	13 56 51.0	-1.0
CLL	Collm	55.55	324	*e*P	P	13 56 51.0	-1.0
CMAR	Chiang Mai Arr	56.30	232	P	P	13 56 57.4	-0.3
	comp=Z,0.4nm,0.4s,baz=352,slow=6.6,SNR=3.5						
PDAR	Pinedale Array	57.50	56	P	P	13 57 06.6	+0.3
	comp=Z,2.0nm,0.7s,baz=358,slow=1.8,SNR=7.1						
GERES	GERESS Array B	57.69	322	*e*P	P	13 57 07.4	0.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	57.69	322	P	P	13 57 07.2	-0.1
	comp=Z,1.2nm,0.7s,baz=32,slow=7.8,SNR=6.4						
NVAR	Mina Array Bea	58.46	65	P	P	13 57 14.3	+1.3
	comp=Z,1.7nm,0.8s,baz=308,slow=4.8,SNR=4.5						
BRTR	Keskin Array B	60.51	303	P	P	13 57 27.2	+0.2
	comp=Z,1.7nm,0.7s,baz=25,slow=6.0,SNR=5.1						
ESDC	Sonseca Array	70.11	333	P	P	13 58 28.3	-0.8
	comp=Z,1.4nm,0.6s,baz=6.1,slow=6.1,SNR=9.7						
TXAR	Lajitas Array	71.68	57	P	P	13 58 38.6	-0.3
	comp=Z,0.4nm,0.5s,baz=318,slow=1.7,SNR=5.4						
WRA	Warramunga Arr	87.45	188	*i* P	P	14 00 04.1	-0.2
WRA	Warramunga Arr	87.45	188	P	P	14 00 03.3	-1.0
	comp=Z,0.3nm,0.5s,baz=1.2,slow=5.5,SNR=9.1						
ASAR	Alice Springs	91.17	188	P	P	14 00 21.1	-0.7
	comp=Z,0.3nm,0.7s,baz=14,slow=4.7,SNR=4.5						

YARS 14 13:52:06.2±0.3**, 67°.58N**±0°.02×**142°.69E**±0°.04**, h10km,**
Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.14	169	*e*P	Pb	13 52 26.9	-1.0
MOMR				pmax	pmax		
	comp=Z,47nm,0.3s						
MOMR	Moma	1.14	169	*e*P	Pb	13 52 26.9	-1.0
MOMR				Pmax		13 52 26.9	
	comp=Z,47nm,0.3s						
MOMR				*e*S	Sb	13 52 41.4	-1.3
MOMR				Smax		13 52 41.4	
	comp=N,698nm,0.3s						
YBGR	Belaya Gora	1.63	52	*e*P	Pn	13 52 34.6	-0.2
YBGR				Pmax		13 52 34.6	
	comp=Z,77nm,0.2s						
YBGR				*e*S	Sb	13 52 57.1	+0.3
YBGR				Smax		13 52 57.1	
	comp=N,917nm,0.2s						
BTGS	Batagay	3.08	275	*e*P	Pb	13 53 01.3	+0.3
BTGS				*e*S	Sg	13 53 42.0	-3.0
BTGS				pmax	pmax		
	comp=Z,16nm,0.5s						
BTGS				smax	smax		
	comp=N,198nm,0.4s						
BTGS	Batagay	3.08	275	*e*P	Pb	13 53 01.3	+0.3
BTGS				Pmax		13 53 01.3	
	comp=Z,16nm,0.5s						
BTGS				*e*S	Sg	13 53 42.0	-3.0
BTGS				Smax		13 53 42.0	
	comp=N,198nm,0.4s						
BTGS	Batagay	3.08	275	*e*S	Sg	13 53 42.4	-2.6

ISCJB ***14*** *13:52:14.6±0.3, 67°.60N±0°.04×142°.62E±0°.10, h10km, mb4.1/29, MS5.2/1, Error ellipse: s-maj=5.6km s-min=5.3km az=42.6*
IDC ***14*** *13:52:14.5±0.8, 67°.56N×142°.78E, h0km, mb4.0/21, mb1 4.2/21, mb1mx4.0/65, mbtmp4.0/21, MS5.1/1, Ms1 5.1/1, ms1mx4.4/53, Error ellipse: s-maj=19.6km s-min=14.1km az=154.0*
MOS ***14*** *13:52:14.1±1.0, 67°.61N×142°.85E, h11km, mb4.5/10, Error ellipse: s-maj=21.4km s-min=11.0km az=97.1*
YARS ***14*** *13:52:16.6±0.3, 67°.58N±0°.02×142°.79E±0°.05, h7km*
NEIC ***14*** *13:52:16.0±0.2, 67°.58N×142°.80E, h10km, mb4.2/4, Error ellipse: s-maj=6.1km s-min=5.1km az=183.0*
ISC 14 13:52:16.0±0.4**, 67°.57N**±0°.05×**142°.78E**±0°.04**, h10km, n61,** σ**0ˢ.86**/67**, mb4.1**/29**, 3C-3D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.12	171	*e*P	Pn	13 52 37.9	+0.2
MOMR				Pmax		13 52 37.9	
	comp=Z,1μm,0.9s						
MOMR				*e*S	Sg	13 52 51.3	-0.8
MOMR				Smax		13 52 51.3	
	comp=N,4μm,0.5s						
YBGR	Belaya Gora	1.60	51	*i* P	Pn	13 52 44.3	0.0
YBGR				Pmax		13 52 44.3	
	comp=Z,2μm,0.9s						
YBGR				*e*S	Sb	13 53 06.5	+0.6
YBGR				Smax		13 53 06.5	
	comp=N,5μm,0.2s						
BTGS	Batagay	3.12	275	*e*P	Pn	13 53 06.6	+1.5
BTGS				*e*P	Pb	13 53 11.9	+0.5
BTGS				Pmax		13 53 11.9	
	comp=Z,26nm,0.3s						
BTGS				*e*S	Sg	13 53 53.7	-2.3
BTGS				Smax		13 53 53.7	
	comp=N,539nm,0.6s						
ATKR	Artyk	3.54	163	*e*P	Pb	13 53 20.3	+1.6
ATKR				Pmax		13 53 20.3	
	comp=Z,193nm,0.7s						
ATKR				*e*S	Sg	13 54 06.6	-3.0
ATKR				Smax		13 54 06.6	
	comp=N,2μm,0.7s						
MA2	Magadan	8.77	152	*e*Pn	Pn	13 54 23.6	+1.0
BILL	Bilibino	8.88	76	*e*Pn	Pn	13 54 22.5	-1.6
BILL	Bilibino	8.88	76	*e*P	Pn	13 54 22.5	-1.6
PETK	Petropavlovsk-	16.20	146	*e*Pn	Pn	13 56 02.9	-0.5
PETK	Petropavlovsk-	16.20	146	*e*P	Pn	13 56 02.9	-0.5
TOLK	Toolik Lake Re	24.12	56	*e*P	P	13 57 32.2	+0.8
	comp=N,7.0nm,0.7s						
IM3	Indian Mountai	24.12	64	*e*P	P	13 57 32.2	+0.8
USRK	Ussuriysk Ar.	24.12	199	P	P	13 57 31.2	-0.4
	comp=N,3.6nm,0.8s,baz=357,slow=9.6,SNR=6.7						
COLD	Coldfoot	24.64	59	*e*P	P	13 57 36.4	+0.2
	comp=N,10nm,1.2s						
MOY	Mondy	25.75	253	*e*P	P	13 57 48.0	+1.5
COLA	College	26.77	62⇑	*e*P	P	13 57 56.6	+1.2
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONA0	Songino Array	27.06	241	*e*P	P	13 57 59.8	+1.5
SONM	Songino Array	27.06	241	P	P	13 57 59.8	+1.5
	comp=Z,1.1nm,0.8s,baz=20,slow=7.2,SNR=4.8						
ILAR	Eielson Array	27.16	62	P	P	13 57 59.5	+0.5
	comp=Z,4.0nm,0.8s,baz=299,slow=8.4,SNR=20						
KNGR	Kungurtug, Tuv	27.90	255⇓	*e*P	P	13 58 05.8	0.0
SPITS	Spitsbergen Ar	31.06	341	P	P	13 58 34.1	+0.7
	comp=Z,6.8nm,1.0s,baz=53,slow=20,SNR=3.4						
SPITS				PcP	PcP	14 01 28.2	-0.3
	comp=Z,4.2nm,0.8s,baz=78,slow=8.7,SNR=6.8						
RES	Resolute Bay	33.31	24	P	P	13 58 53.2	+0.1
	comp=Z,1.0nm,0.9s,baz=306,slow=11,SNR=4.3						
KURK	Kurchatov	35.00	274	*e*P	P	13 59 08.5	+0.5
KURK	Kurchatov	35.00	274	P	P	13 59 08.5	+0.5
KURBB	Kurchatov Arra	35.11	274	P	P	13 59 08.5	-0.4
	comp=Z,1.0nm,0.3s,baz=38,slow=8.7,SNR=7.0						
BVAR	Borovoye Array	36.29	283	P	P	13 59 19.1	0.0
	comp=Z,1.3nm,0.7s,baz=53,slow=7.6,SNR=6.2						
BRVK	Borovoye	36.30	284⇑	*e*P	P	13 59 18.8	-0.4
BRVK				pmax	pmax		
	comp=Z,17nm,3.8s						
ARA0	ARCESS Array S	36.62	328	*e*P	P	13 59 21.5	-0.3
ARCES	ARCESS Array B	36.62	328	P	P	13 59 21.5	-0.3
	comp=Z,4.1nm,0.9s,baz=34,slow=8.8,SNR=3.7						
ARCES				PcP	PcP	14 01 44.2	-0.1
	comp=Z,1.3nm,0.6s,baz=23,slow=6.6,SNR=5.7						
MK31	Makanchi Array	36.79	267	*e*P	P	13 59 22.9	-0.5
	comp=Z,2.2nm,0.9s						
MK31	Makanchi Array	36.79	267	*e*P	P	13 59 23.0	-0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK32	Makanchi Array	36.79	267	*e*P	P	13 59 22.9	-0.6
MKAR	Makanchi Array	36.79	267	P	P	13 59 22.9	-0.5
	comp=Z,2.3nm,0.7s,baz=48,slow=7.3,SNR=14						
MK01	Makanchi Array	36.81	267	*e*P	P	13 59 23.1	-0.6
ARU	Arti	37.88	296⇑	*e*P	P	13 59 32.3	-0.2
ARU				pmax	pmax		
	comp=Z,17nm,1.9s						
YKA	Yellowknife Ar	38.83	46	P	P	13 59 40.6	+0.2
	comp=Z,1.0nm,0.7s,baz=322,slow=8.0,SNR=15						
AKTO	Aktyubinsk	42.92	291	P	P	14 00 14.2	-0.1
	comp=Z,1.8nm,0.8s,baz=41,slow=6.1,SNR=4.7						
AAK	Ala-Archa	43.28	271	P	P	14 00 18.4	+0.9
	comp=Z,2.2nm,0.6s,baz=40,slow=4.0,SNR=7.7						
FIA0	FINESS Array S	43.36	321	*e*P	P	14 00 17.5	-0.2
FIA0	FINESS Array S	43.36	321	*e*P	P	14 00 17.5	-0.2
FINES	FINESS Array B	43.36	321	*i* P	P	14 00 17.7	0.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	FINESS Array B	43.36	321	P	P	14 00 17.5	-0.2
	comp=Z,1.0nm,0.3s,baz=25,slow=8.7,SNR=9.0						
NB2	NORSAR Subarra	46.94	330	P	P	14 00 45.8	-0.4
	comp=Z,1.0nm,0.7s,baz=24,slow=7.9						
NB200	NORSAR Array S	46.94	330	*e*P	P	14 00 45.6	-0.5
NOA	NORSAR Array B	46.94	330	P	P	14 00 45.6	-0.5
	comp=Z,2.5nm,0.9s,baz=24,slow=7.7,SNR=4.0						
VSR	Storozhevoye	48.61	305⇓	*e*P	P	14 00 58.2	-1.0
VSR				pmax	pmax		
	comp=Z,13nm,1.0s						
FFC	Flin Flon	48.91	44	*i* P	P	14 01 02.0	+0.6
AKASG	Malin Array Be	52.04	312	P	P	14 01 24.6	-0.5
	comp=Z,2.9nm,0.7s,baz=28,slow=8.1,SNR=3.4						
KIEV	Kiev	52.05	312⇓	*e*P	P	14 01 24.3	-0.9
KIEV				pmax	pmax		
	comp=Z,20nm,2.2s						
GUMO	Guam	53.95	177	LR	LR	14 24 45.4	
	comp=Z,2μm,20.1s,baz=334,slow=36						
KBZ	Khabaz	53.96	298	P	P	14 01 40.2	+0.8
	comp=Z,4.0nm,0.9s,baz=32,slow=3.7,SNR=7.2						
CLL	Collm	55.61	324	*e*P	P	14 01 51.0	-0.3
CLL	Collm	55.61	324	*e*P	P	14 01 51.0	-0.3
PDAR	Pinedale Array	57.38	56	P	P	14 02 04.7	+0.4
	comp=Z,1.1nm,0.7s,baz=7.1,slow=2.7,SNR=4.9						
GERES	GERESS Array B	57.76	323	*e*P	P	14 02 07.4	+0.7
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	57.76	323	P	P	14 02 06.9	+0.2
	comp=Z,0.9nm,0.7s,baz=33,slow=5.1,SNR=5.7						
BR101	Keskin Array S	60.61	303	*e*P	P	14 02 27.0	+0.4
BRTR	Keskin Array B	60.61	303	*e*P	P	14 02 26.4	-0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	60.61	303	P	P	14 02 27.0	+0.4
	comp=Z,0.7nm,0.6s,baz=38,slow=5.6,SNR=3.8						
ESDC	Sonseca Array	70.15	333	P	P	14 03 28.1	-0.2
	comp=Z,0.2nm,0.3s,baz=360,slow=6.9,SNR=4.6						
WR1	Warramunga Arr	87.48	188	*e*P	P	14 05 02.4	-0.9
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	87.48	188	P	P	14 05 02.4	-1.0
	comp=Z,0.4nm,0.8s,baz=9.0,slow=5.6,SNR=4.7						

DDA ***14*** *13:54:37.5, 39°.27N×29°.15E, h7km±1km, ML2.5*
ISK ***14*** *13:54:37.8, 39°.26N×29°.18E, h5km, ML2.5/4*
ISCJB ***14*** *13:54:38.2±0.5, 39°.27N±0°.03×29°.14E±0°.03, h6km±6km, Error ellipse: s-maj=4.8km s-min=4.3km az=145.0*
ISC 14 13:54:38.0±1.0**, 39°.26N**±0°.03×**29°.16E**±0°.03**, h13**km±9km**,**
n13, σ**0ˢ.32**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAP	Saphane-Kutahy	0.24	168	PG	Pg	13 54 43.3	+0.1
SHAP				SG	Sg	13 54 46.8	0.0
GEDZ	Gediz	0.29	138	PG	Pg	13 54 44.2	+0.1
GEDZ				SG	Sg	13 54 48.4	+0.2
TVSB	Tavsanli	0.30	51	PG	Pg	13 54 44.1	-0.2
TVSB				SG	Sg	13 54 48.2	-0.3
GDZ	Gediz	0.30	124	*i* P	Pg	13 54 44.4	+0.1
GDZ				*i* S	Sb	13 54 49.6	-0.7
GDZ				IAML_P			
	comp=Z,1μm,0.1s						
DEMI	Demirci	0.41	238	*i* P	Pb	13 54 47.0	-0.1
DEMI				*i* S	Sg	13 54 52.2	+0.5
DEMI				IAML_P			
	comp=Z,1μm,0.1s						
DURS	Dursunbey	0.63	303	*i* P	Pg	13 54 50.2	-0.1
DURS				*i* S	Sb	13 54 59.4	-0.3
DURS				IAML_P			
	comp=Z,326nm,0.1s						
KULA	Kula-Manisa	0.84	208	PG	Pg	13 54 54.1	-0.2
MANT	Manisa	0.90	212	*i* P	Pb	13 54 55.8	+0.2
MANT				*i* S	Sg	13 55 07.0	-0.3
MANT				IAML_P			
	comp=Z,1μm,0.1s						
CAVI	Cavuskoy	1.08	29	PG	Pg	13 54 58.9	+0.1
BORA	Eskisehir	1.18	58	*i* P	Pg	13 55 00.7	0.0
BORA				*i* S	Sn	13 55 16.9	+0.6
BORA				IAML_P			
	comp=Z,608nm,0.1s						
KCTX	Karacabey (Bur	1.18	329	PN	Pg	13 55 00.8	+0.1
YLV	Yalova	1.31	7	PN	Pg	13 55 03.4	+0.1
ARMT	Armutlu	1.32	350	PN	Pg	13 55 03.5	0.0

MOS ***14*** *13:56:25.8±0.0, 43°.06N×45°.27E, h20km, MPVA3.7*
NORS ***14*** *13:56:27.1±0.0, 43°.03N×45°.29E, h18km, MPVA3.5*
ISCJB ***14*** *13:56:28.3±0.4, 43°.08N±0°.03×45°.29E±0°.03, h23km±4km, Error ellipse: s-maj=5.9km s-min=2.8km az=21.3*
ISC 14 13:56:27.1±1.0**, 43°.06N**±0°.03×**45°.28E**±0°.02**, h16**km±9km**,**
n25, σ**0ˢ.99**/48**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GROC	Groznyy	0.40	69	*e*Pg	Pg	13 56 35.2	0.0
GROC				*e*Sg	Sb	13 56 42.5	+0.9
VLKR	Vladikavkaz	0.44	268	*e*Pg	Pb	13 56 37.3	+0.8
VLKR				*e*Sg	Sb	13 56 44.6	+1.6
BTKR	Batakoyurt	0.62	300	*e*Pg	Pn	13 56 41.6	+0.3
BTKR				*e*Sg	Sn	13 56 50.7	-0.2
ARNR	Ardon	0.74	279	*e*Pg	Pn	13 56 43.6	+0.8
ARNR				*e*Sg	Sn	13 56 55.4	+1.6
LACR	Lac	0.76	252	*i* Pg	Pb	13 56 41.4	-0.6
LACR				*e*Sg	Sg	13 56 52.9	+0.8
TRKR	Terskaya	0.77	329	*e*Pg	Pb	13 56 42.0	-0.1
TRKR				*e*Sg	Sg	13 56 53.7	+1.3
BTLR	Botlikh	0.80	120	*e*Pg	Pg	13 56 42.3	-0.3
BTLR				*e*Sg	Sn	13 56 54.3	-0.9
STDR	Stavd-Durt	0.94	289	*e*Pg	Pb	13 56 44.5	-0.5
STDR				*e*Sg	Sn	13 56 59.8	+1.0
PRTR	Priterechnaya	1.00	314	*e*Pg	Pb	13 56 46.5	+0.5
PRTR				*e*Sg	Sg	13 57 00.1	+0.5
ZEI	Tsey	1.05	255	*i* Pg	Pb	13 56 46.1	-0.9
ZEI				*e*Sg	Sb	13 57 00.5	-0.1
LSNR	Lesken	1.09	282	*e*Pg	Pb	13 56 47.6	+0.1
LSNR				*e*Sg	Sg	13 57 03.2	+0.9
XNZR	Khunzakh	1.17	116	*e*Pg	Pg	13 56 49.5	-0.2
XNZR				*e*Sg	Sg	13 57 05.7	+0.7
DIGR	Digorskoe uzhe	1.26	263	*e*Pg	Pn	13 56 48.7	-1.5
DIGR				*e*Sg	Sb	13 57 05.8	-0.8
NCK	Nalchik	1.31	290	*e*Pg	Pn	13 56 50.5	-0.1
NCK				*e*Sg	Sb	13 57 08.3	+0.6
GNBR	Gunib	1.41	118	*e*Pg	Pg	13 56 53.4	-0.9
GNBR				*e*Sg	Sg	13 57 11.4	-1.1
LGD	Lagodekhi	1.42	150	P	Pg	13 56 54.2	-0.2
LGD				S	Sg	13 57 12.4	-0.4
BTNK	Botanikuri	1.42	195	P	Pg	13 56 53.8	-0.7
KBTC	Kuba-Taba	1.56	300	*e*Pg	Pb	13 56 55.1	-0.4
KBTC				*e*Sg	Sb	13 57 15.8	+0.7
MAK	Makhachkala	1.63	93	*e*Pg	Pn	13 56 55.6	+0.5
TRLG	Trialeti	1.76	210	P	Pb	13 56 59.3	+0.4
TRLG				S	Sg	13 57 23.9	+0.3
PYA1	Pyatigorsk	1.88	303	*e*Pg	Pn	13 56 57.9	-0.6
PYA1				*e*Sg	Sn	13 57 20.3	-1.6
NEY	Neytrino	1.88	277	*e*Pg	Pn	13 56 58.9	+0.2
NEY				*e*Sg	Sb	13 57 24.0	-0.5
SHA1	Shidzhatmaz	2.03	290	*e*Pg	Pn	13 57 00.3	-0.5
SHA1				*e*Pg	Pb	13 57 01.1	-2.6
SHA1				*e*Sg	Sb	13 57 28.1	-0.7
KIV	Kislovodsk	2.09	296	*e*Pg	Pn	13 56 59.4	-2.1
KIV				*e*Sg	Sn	13 57 28.8	+1.6
GNI	Garni	2.94	188	*e*Pn	Pn	13 57 15.2	+2.0

ISCJB ***14*** *13:57:57.0±0.3, 67°.66N±0°.04×142°.4E±0°.1, h10km, mb3.8/18, Error ellipse: s-maj=5.6km s-min=5.3km az=30.4*
IDC ***14*** *13:57:56.8±0.8, 67°.62N×142°.53E, h0km, mb3.8/14, mb1 4.0/14, mb1mx3.8/48, mbtmp3.8/14, Error ellipse: s-maj=23.4km s-min=16.2km az=146.0*
MOS ***14*** *13:57:56.6±1.0, 67°.64N×142°.35E, h10km, mb4.3/1, Error ellipse: s-maj=32.8km s-min=16.0km az=90.7*
YARS ***14*** *13:57:58.3±0.3, 67°.68N±0°.01×142°.58E±0°.04*
NEIC ***14*** *13:57:58.4±0.4, 67°.61N×142°.48E, h10km, mb4.1/3, Error ellipse: s-maj=12.7km s-min=7.2km az=152.0*
ISC 14 13:57:58.4±0.5**, 67°.59N**±0°.04×**142°.44E**±0°.04**, h10km, n40,** σ**1ˢ.30**/55**, mb3.9**/18**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.17	164	*e*P	Pb	13 58 20.6	0.0
MOMR				*e*S	Sb	13 58 36.3	+0.5
MOMR				pmax	pmax		
	comp=Z,146nm,0.2s						
MOMR				smax	smax		
	comp=E,2μm,0.3s						
MOMR	Moma	1.17	164	*e*P	Pb	13 58 20.6	0.0
MOMR				Pmax		13 58 20.6	
	comp=Z,146nm,0.2s						
MOMR				*e*S	Sb	13 58 36.3	+0.5
MOMR				Smax		13 58 36.3	
	comp=E,2μm,0.3s						
YBGR	Belaya Gora	1.70	54	*i* P	Pn	13 58 26.3	-1.7
YBGR				Pmax		13 58 26.3	
	comp=Z,848nm,0.4s						
YBGR				*e*S	Sn	13 58 48.7	-1.1
YBGR				Smax		13 58 48.7	
	comp=N,3μm,0.6s						
BTGS	Batagay	2.98	275	*e*P	Pn	13 58 47.6	+1.9
BTGS				*e*S	Sn	13 59 22.1	+0.7
BTGS				pmax	pmax		
	comp=Z,95nm,0.4s						
BTGS	Batagay	2.98	275	*e*P	Pn	13 58 47.6	+1.9
BTGS				*e*P	Pb	13 58 52.4	+0.9
BTGS				Pmax		13 58 52.4	
	comp=Z,95nm,0.4s						
BTGS				*e*S	Sn	13 59 22.1	+0.7
BTGS				*e*S	Sg	13 59 32.6	-1.5
BTGS				Smax		13 59 32.6	
	comp=N,740nm,0.5s						
ATKR	Artyk	3.60	161	*e*P	Pn	13 58 55.5	+1.3
ATKR				*e*S	Sn	13 59 37.3	+0.6
ATKR				pmax	pmax		
	comp=Z,86nm,0.5s						
ATKR	Artyk	3.60	161	*e*P	Pn	13 58 55.5	+1.3
ATKR				*e*P	Pb	13 59 04.4	+2.4
ATKR				Pmax		13 59 04.4	
	comp=Z,86nm,0.5s						
ATKR				*e*S	Sn	13 59 37.3	+0.6
ATKR				*e*S	Sg	13 59 51.8	-2.0
ATKR				Smax		13 59 51.8	
	comp=N,831nm,0.5s						
YAK	Yakutsk	7.78	230	*e*P	Pn	13 59 52.9	+1.5
YAK				*e*S	Sn	14 01 18.1	-1.3
YAK				pmax	pmax		
	comp=Z,115nm,0.9s						
YAK	Yakutsk	7.78	230	*e*P	Pn	13 59 52.9	+1.5
YAK				*e*P	Pb	14 00 19.1	+6.0
YAK				Pmax		14 00 19.1	
	comp=Z,115nm,0.9s						
YAK				*e*S	Sn	14 01 18.1	-1.3
YAK				*e*S	Sg	14 02 02.6	-5.1
YAK				Smax		14 02 02.6	
	comp=N,696nm,1.0s						
USRK	Ussuriysk Ar.	24.09	199	P	P	14 03 13.8	+0.1
	comp=N,1.3nm,0.6s,baz=23,slow=10,SNR=4.5						
TOLK	Toolik Lake Re	24.22	56	*e*P	P	14 03 14.1	-0.7
	comp=N,3.6nm,0.8s						
IM3	Indian Mountai	24.23	64	*e*P	P	14 03 14.3	-0.5
MOY	Mondy	25.63	252	*e*P	P	14 03 29.2	+1.4
SONA0	Songino Array	26.95	241	*e*P	P	14 03 41.2	+1.4
SONM	Songino Array	26.95	241	P	P	14 03 41.2	+1.4
	comp=N,0.9nm,0.8s,baz=26,slow=8.0,SNR=3.9						
ILAR	Eielson Array	27.27	62	P	P	14 03 42.1	-0.2
	comp=N,1.1nm,0.8s,baz=301,slow=7.5,SNR=10						
SPITS	Spitsbergen Ar	31.00	341	P	P	14 04 15.4	+0.1
	comp=N,5.6nm,0.9s,baz=72,slow=8.0,SNR=6.1						
SPITS				PcP	PcP	14 07 10.2	-0.5
	comp=N,2.4nm,0.7s,baz=81,slow=6.8,SNR=14						
RES	Resolute Bay	33.35	24	P	P	14 04 37.9	+2.0
	comp=N,0.5nm,0.6s,baz=298,slow=9.9,SNR=4.4						
MK31	Makanchi Array	36.66	266	*e*P	P	14 05 03.2	-1.5
MK31	Makanchi Array	36.66	266	*e*P	P	14 05 03.2	-1.5
MK32	Makanchi Array	36.66	266	*e*P	P	14 05 04.7	-0.1
MKAR	Makanchi Array	36.66	266	P	P	14 05 04.7	-0.1
	comp=N,2.5nm,0.5s,baz=47,slow=7.1,SNR=29						
MAKZ	Makanchi	36.77	267	*e*P	P	14 05 04.9	-0.8
	comp=N,2.1nm,0.8s						
MAKZ	Makanchi	36.77	267	*e*P	P	14 05 04.9	-0.8
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	38.92	46	P	P	14 05 22.9	-0.7
	comp=Z,0.2nm,0.6s,baz=322,slow=8.0,SNR=4.0						
ABKAR	Akbulak array	43.07	288	*e*P	P	14 05 57.8	-0.2
AAK	Ala-Archa	43.15	270	*e*P	P	14 06 00.5	+1.7
	comp=Z,4.0nm,0.7s						
FIA0	FINESS Array S	43.27	321	*e*P	P	14 05 58.9	-0.4
FIA0	FINESS Array S	43.27	321	*e*P	P	14 05 58.9	-0.4
FINES	FINESS Array B	43.27	321	P	P	14 05 58.9	-0.4
	comp=Z,1.2nm,0.5s,baz=26,slow=9.0,SNR=9.6						
AKASG	Malin Array Be	51.93	312	P	P	14 07 06.0	-0.7
	comp=Z,1.5nm,0.6s,baz=29,slow=8.1,SNR=2.9						
KBZ	Khabaz	53.84	298	P	P	14 07 21.8	+0.9
	comp=Z,1.6nm,0.8s,baz=77,slow=7.8,SNR=5.6						
CLL	Collm	55.52	324	*e*P	P	14 07 32.0	-1.0
CLL	Collm	55.52	324	*e*P	P	14 07 32.0	-1.0
CMAR	Chiang Mai Arr	56.31	232	P	P	14 07 38.8	-0.2
	comp=Z,0.3nm,0.5s,baz=357,slow=8.1,SNR=3.1						
PDAR	Pinedale Array	57.48	56	P	P	14 07 47.1	-0.3
	comp=Z,0.3nm,0.6s,baz=304,slow=12,SNR=4.2						
GERES	GERESS Array B	57.67	322	P	P	14 07 48.5	+0.1
	comp=Z,0.7nm,0.7s,baz=28,slow=6.0,SNR=4.5						
BR101	Keskin Array S	60.49	303	*e*P	P	14 08 08.4	+0.2
BRTR	Keskin Array B	60.49	303	P	P	14 08 08.4	+0.2
	comp=Z,1.1nm,0.8s,baz=37,slow=6.4,SNR=3.7						
ESDC	Sonseca Array	70.08	333	P	P	14 09 09.8	-0.4
	comp=Z,0.2nm,0.4s,baz=13,slow=6.2,SNR=4.3						

DJA 14 13:59:34.7±0.4**, 2°S**±3°×**10°3E**±°**, h10km, M3.6**/9**, MLv3.6**/9**,**
Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

MASI	**Maura Aman, Be**	0.94	225	P	Pg	13 59 52.9	0.0
MASI				S	Sn	14 00 06.8	-0.9
JMBI	**JAMBI**	1.11	41	P	Pb	13 59 55.2	-0.8
LHSI	**Lahat**	1.48	156	P	Pn	14 00 01.2	-0.2
KRJI	**Kerinci**	1.50	285	P	Pb	14 00 02.5	-0.1
MNAI	**Manna**	1.88	179	P	Pn	14 00 06.6	-0.3
SDSI	**Sungai Dareh**	2.13	316	P	Pn	14 00 10.9	+0.6
MDSI	**Maura Dua**	2.37	148	P	Pn	14 00 13.4	-0.3
LWLI	**Liwa**	2.78	156	P	Pg	14 00 28.1	+0.1
PDSI	**Padang**	2.90	302	P	Pn	14 00 21.1	+0.2
PPI	**Padang Panjang**	3.21	308	P	Pb	14 00 33.9	+2.0
PPBI	**Pangkal Pinang**	3.24	85	P	Pb	14 00 33.1	+0.8

IDC 14 14:27:46.5±1.8**, 11°.30S**×**165°.66E, h0^{km}, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.5**/50**, mbtmp3.6**/4**, ML4.0**/1**, Error ellipse: s-maj=52.4km s-min=32.5km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	10.74	176	Pn	Pn	14 30 21.7	0.0
	1.2nm,0.3s,baz=112,slow=21,SNR=11						
WRA	**Warramunga Arr**	31.31	250	P	P	14 34 07.9	-1.0
	0.5nm,0.8s,baz=82,slow=9.0,SNR=8.6						
ASAR	**Alice Springs**	32.60	244	P	P	14 34 21.0	+0.9
	0.3nm,1.0s,baz=77,slow=9.6,SNR=3.1						
ILAR	**Eielson Array**	83.78	19	P	P	14 40 17.3	0.0
	0.2nm,0.7s,baz=238,slow=5.2,SNR=4.8						

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*ISCJB **14** 14:28:35.0±1.2, 25°.4S±0°.2×177°.4W±0°.2, h160^{km}, mb3.9/4, Error ellipse: s-maj=27.9km s-min=21.2km az=163.0*

*IDC **14** 14:28:36.9±8.0, 25°.41S×177°.46W, h160^{km}±67^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.4/46, mbtmp4.3/5, Error ellipse: s-maj=38.8km s-min=32.6km az=39.0*

ISC 14 14:28:36.3±0.9**, 25°.4S**±0°.1×**177°.3W**±0°.2**, h160^{km}, n14, σ0^{s}.72**/15**, mb4.0**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	13.62	199	P	**Pn**	**14 31 43.4**	**+0.4**
	1.5nm,0.3s,baz=272,slow=3.7,SNR=13						
STKA	**Stephens Creek**	36.45	250	P	**P**	**14 35 26.9**	**+1.0**
	1.5nm,0.4s,baz=99,slow=11,SNR=5.5						
ASAR	**Alice Springs**	44.20	262	P	**P**	**14 36 28.9**	**-0.8**
	2.5nm,0.9s,baz=94,slow=8.0,SNR=37						
WRA	**Warramunga Arr**	44.74	267	P	**P**	**14 36 32.6**	**-1.5**
	1.2nm,0.6s,baz=104,slow=8.3,SNR=18						
WRA				PcP	**PcP**	**14 38 14.2**	**+0.6**
	0.2nm,0.5s,baz=100,slow=3.7,SNR=5.3						
PETK	**Petropavlovsk-**	81.19	345	P	**P**	**14 40 34.5**	**+0.7**
	2.9nm,0.6s,baz=162,slow=6.2,SNR=9.6						
SNAA	**Sanae**	83.08	178	P	**P**	**14 40 43.1**	**-0.5**
VNA3	**Neumayer Olymp**	83.19	176	P	**P**	**14 40 43.8**	**-0.4**
VNA2	**Neumayer--Watz**	83.64	177	P	**P**	**14 40 45.9**	**-0.5**
MKAR	**Makanchi Array**	114.99	312	PKP	PKPdf	14 46 57.6	-0.5
	0.4nm,0.7s,baz=82,slow=2.6,SNR=4.9						
BVAR	**Borovoye Array**	123.20	318	PKP	**PKPdf**	**14 47 13.8**	**+0.1**
	0.7nm,0.7s,baz=107,slow=5.1,SNR=3.9						
ARCES	**ARCESS Array B**	133.87	349	PKP	**PKPdf**	**14 47 33.6**	**+0.1**
	3.0nm,0.8s,baz=94,slow=6.3,SNR=4.1						
HFS	**Hagfors**	144.49	351	PKP	**PKPab**	**14 47 51.9**	**0.0**
	2.2nm,0.7s,baz=64,slow=3.4,SNR=8.3						
BRTR	**Keskin Array B**	150.44	306	PKPbc	**PKPbc**	**14 48 09.3**	**0.0**
	0.6nm,0.6s,baz=132,slow=4.1,SNR=3.4						
TORD	**Torodi Ar. Bea**	167.74	176	PKP	**PKPdf**	**14 48 23.4**	**-0.8**
	0.3nm,0.4s,baz=113,slow=1.7,SNR=3.8						
TORD				PKPab	**PKPab**	**14 49 31.4**	**+0.2**
	1.4nm,0.9s,baz=170,slow=4.0,SNR=6.0						

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*IDC **14** 14:47:56.7±0.9, 11°.43S×164°.95E, h0^{km}, mb4.3/12, mb1 4.3/14, mb1mx4.1/45, mbtmp4.2/14, ML4.3/2, Error ellipse: s-maj=23.2km s-min=20.0km az=120.0*

*NEIC **14** 14:47:58.1±0.5, 11°.43S×164°.98E, h10^{km}, mb4.0/2, Error ellipse: s-maj=12.8km s-min=10.2km az=87.0*

*ISCJB **14** 14:48:00.2±0.6, 11°.52S±0°.09×164°.87E±0°.08, h34^{km}, mb4.1/14, Error ellipse: s-maj=14.0km s-min=10.0km az=36.5*

ISC 14 14:48:01.8±0.7**, 11°.5S**±0°.1×**164°.9E**±0°.1**, h34^{km}, n22, σ0^{s}.69**/19**, mb4.0**/14**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.30	292	Pn	**Pn**	**14 49 18.8**	**+0.1**
	15nm,0.3s,baz=151,slow=8.8,SNR=7.0						
HNR				Sn	**Sn**	**14 50 18.3**	**-0.4**
	34nm,0.3s,baz=177,slow=20,SNR=6.7						
DZM	**Mont Dzumac**	10.65	172	Pn	**Pn**	**14 50 31.7**	**-0.5**
	1.7nm,0.3s,baz=309,slow=17,SNR=30						
STKA	**Stephens Creek**	29.60	223	P	**P**	**14 54 04.7**	**+0.8**
	2.2nm,1.0s,baz=69,slow=8.7,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	29.81	3	T	T	15 25 40.9	
	baz=184,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	29.81	3	T	T	15 25 36.4	
	baz=184,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	29.82	3	T	T	15 25 39.4	
	baz=184,slow=76,SNR=9.5						
WRA	**Warramunga Arr**	30.60	250	P	**P**	**14 54 12.1**	**-0.8**
	1.7nm,0.7s,baz=81,slow=9.1,SNR=21						
WRA				PcP	**PcP**	**14 57 11.9**	**+0.8**
	0.4nm,0.7s,baz=93,slow=2.7,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	31.03	4	T	T	15 27 15.8	
	baz=184,slow=76,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	31.04	4	T	T	15 27 15.1	
	baz=184,slow=76,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	31.05	4	T	T	15 27 08.5	
	baz=184,slow=76,SNR=4.4						
ASAR	**Alice Springs**	31.90	243	P	**P**	**14 54 23.1**	**-1.3**
	2.2nm,0.8s,baz=69,slow=9.4,SNR=24						
ASAR				PcP	**PcP**	**14 57 14.9**	**+0.4**
	0.5nm,0.7s,baz=71,slow=2.6,SNR=4.6						
FITZ	**Fitzroy Crossi**	38.51	255	P	**P**	**14 55 21.0**	**-0.3**
	1.4nm,0.5s,baz=56,slow=7.5,SNR=7.5						
BATI	**Baumata**	40.53	268	P	**P**	**14 55 38.6**	**+0.4**
	17nm,0.6s,baz=194,slow=2.5,SNR=11						
CMAR	**Chiang Mai Arr**	71.55	294	P	**P**	**14 59 20.8**	**+0.8**
	0.9nm,0.8s,baz=121,slow=4.6,SNR=9.5						
ULN	**Ulaanbaatar**	78.17	324	P	**P**	**14 59 57.2**	**-0.8**
	1.1nm,0.8s						
SONM	**Songino Array**	78.53	324	P	**P**	**15 00 00.7**	**+0.9**
	0.8nm,0.8s,baz=147,slow=6.9,SNR=7.4						
QSPA	**South Pole Qui**	78.55	180	P	**P**	**15 00 00.3**	**+0.6**
	5.5nm,1.0s,baz=349,slow=0.6,SNR=9.6						
BILL	**Bilibino**	79.29	1	*e*P	**P**	**15 00 03.7**	**+0.3**
	1.3nm,0.8s						
ILAR	**Eielson Array**	84.15	19	P	**P**	**15 00 29.0**	**-0.1**
	1.0nm,0.6s,baz=226,slow=5.6,SNR=18						
MKAR	**Makanchi Array**	93.28	317	P	**P**	**15 01 13.2**	**+0.1**
	2.5nm,0.8s,baz=97,slow=6.0,SNR=28						
ZALV	**Zalesovo Beam**	93.42	324	P	**P**	**15 01 12.9**	**-0.7**
	1.3nm,0.8s,baz=146,slow=3.7,SNR=6.3						
YKA	**Yellowknife Ar**	95.70	27	P	**P**	**15 01 23.2**	**-0.7**
	0.2nm,0.7s,baz=259,slow=4.5,SNR=4.0						

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*IDC **14** 14:48:10.5±1.1, 11°.44S×165°.02E, h0^{km}, mb4.4/12, mb1 4.5/13, mb1mx4.2/43, mbtmp4.4/13, ML4.8/1, Error ellipse: s-maj=28.6km s-min=22.6km az=111.0*

*ISCJB **14** 14:48:14.3±0.8, 11°.5S±0°.1×164°.90E±0°.10, h34^{km}, mb4.3/12, Error ellipse: s-maj=18.6km s-min=12.0km az=25.7*

ISC 14 14:48:15.7±0.9**, 11°.4S**±0°.1×**165°.0E**±0°.1**, h34^{km}, n13, σ0^{s}.79**/16**, mb4.2**/12**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.33	291	Pn	**Pn**	**14 49 32.7**	**-0.3**
	28nm,0.3s,baz=155,slow=7.1,SNR=8.1						
HNR				Sn	**Sn**	**14 50 33.1**	**-0.1**
	42nm,0.3s,baz=180,slow=20,SNR=7.8						
STKA	**Stephens Creek**	29.64	223	P	**P**	**14 54 18.4**	**+0.2**
	2.3nm,0.7s,baz=70,slow=10,SNR=5.7						
WRA	**Warramunga Arr**	30.64	250	P	**P**	**14 54 26.2**	**-0.9**
	2.4nm,0.7s,baz=79,slow=9.3,SNR=13						
WRA				PcP	**PcP**	**14 57 25.8**	**+0.7**
	0.3nm,0.6s,baz=78,slow=2.7,SNR=6.7						
ASAR	**Alice Springs**	31.94	243	P	**P**	**14 54 37.3**	**-1.3**
	3.0nm,0.8s,baz=62,slow=10,SNR=6.5						
ASAR				PcP	**PcP**	**14 57 28.9**	**+0.4**
	0.8nm,0.7s,baz=72,slow=2.1,SNR=6.5						
FITZ	**Fitzroy Crossi**	38.55	255	P	**P**	**14 55 35.1**	**-0.4**
	2.1nm,0.5s,baz=51,slow=9.3,SNR=8.2						
BATI	**Baumata**	40.57	268	P	**P**	**14 55 53.0**	**+0.6**
	32nm,0.6s,baz=172,slow=2.8,SNR=10.0						
KSRS	**Korea Array**	59.77	326	P	**P**	**14 58 17.8**	**+0.3**
	0.4nm,0.6s,baz=139,slow=6.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	71.57	294	P	**P**	**14 59 34.9**	**+0.8**
	3.7nm,1.1s,baz=120,slow=4.3,SNR=12						
SONM	**Songino Array**	78.53	324	P	**P**	**15 00 14.5**	**+0.7**
	1.5nm,0.8s,baz=148,slow=7.7,SNR=8.0						
QSPA	**South Pole Qui**	78.57	180	P	**P**	**15 00 14.4**	**+0.6**
	11nm,1.0s,baz=14,slow=2.6,SNR=8.8						
MKAR	**Makanchi Array**	93.28	317	P	**P**	**15 01 27.4**	**+0.3**
	3.5nm,0.8s,baz=97,slow=6.3,SNR=18						
ZALV	**Zalesovo Beam**	93.42	324	P	**P**	**15 01 27.1**	**-0.4**
	2.3nm,0.8s,baz=112,slow=3.5,SNR=7.8						
YKA	**Yellowknife Ar**	95.67	27	P	**P**	**15 01 36.1**	**-1.5**
	0.3nm,0.8s,baz=258,slow=4.4,SNR=4.9						

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*KRNET **14** 14:49:17.3±0.1, 43°.83N×78°.07E, h20^{km}, mb2.4*

*SOME **14** 14:49:18.3, 43°.80N×78°.07E, h15^{km}*

NNC 14 14:49:16.7±0.4**, 43°.84N**×**78°.06E, h0^{km}, mb2.3, mpv2.5, 16C-6D, Error ellipse: s-maj=3.8km s-min=2.6km az=172.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNBS	**Baschi**	0.34	46	P	Pg	14 49 24.5	+1.2
	1.2nm,0.1s						
MNBS				S	Sg	14 49 29.2	+1.4
	33nm,0.1s						
MNBS	**Baschi**	0.34	46	*e*P	Pg	14 49 24.5	+1.2
	baz=66						
MNBS				*e*S	Sg	14 49 29.2	+1.4
	baz=66						
MNBS	**Baschi**	0.34	46	*e*P	Pg	14 49 24.5	+1.2
	1.2nm,0.1s						
MNBS				*e*S	Sg	14 49 29.2	+1.4
	33nm,0.1s						
KURS	**Kuram**	0.36	167	P	Pg	14 49 24.7	+1.0
	3.0nm,0.1s						
KURS				S	Sg	14 49 29.2	+0.9
	20nm,0.3s						
KURS	**Kuram**	0.36	167	*e*P	Pg	14 49 24.7	+1.0
	baz=68						
KURS				*e*S	Sg	14 49 29.3	+0.9
	baz=68						
KURS	**Kuram**	0.36	167	*e*P	Pg	14 49 24.7	+1.0
	3.0nm,0.1s						
KURS				*e*S	Sg	14 49 29.3	+0.9
	20nm,0.3s						
ARXS	**Arharly**	0.41	336	P	Pg	14 49 25.6	+1.1
	1.7nm,0.0s						
ARXS				S	Sg	14 49 30.8	+1.0
	28nm,0.1s						
ARXS	**Arharly**	0.41	336	*e*P	Pg	14 49 25.6	+1.1
	3.2nm,0.1s						
ARXS				*e*S	Sg	14 49 31.4	+1.6
	28nm,0.1s						
CHKK	**Chushkaly**	0.77	271	P	Pg	14 49 31.7	+0.2
	2.9nm,0.1s						
CHKK				S	Sg	14 49 41.2	-0.3
	11nm,0.1s						
CHKK	**Chushkaly**	0.77	271	*e*P	Pg	14 49 32.1	+0.6
	baz=73						
CHKK				*e*S	Sg	14 49 42.1	+0.6
	baz=73						
CHKK	**Chushkaly**	0.77	271	*e*P	Pg	14 49 32.1	+0.6
	2.9nm,0.1s						
CHKK				*e*S	Sg	14 49 42.0	+0.5
	11nm,0.1s						
KOTS	**Kotyrbulak**	0.92	229	P	Pg	14 49 34.8	+0.5
	0.6nm,0.1s						
KOTS				S	Sg	14 49 46.5	+0.4
	2.9nm,0.1s						
KOTS	**Kotyrbulak**	0.92	229	*e*P	Pb	14 49 35.1	-0.5
	baz=30						
KOTS				*e*S	Sg	14 49 46.9	+0.8
	baz=30						
KOTS	**Kotyrbulak**	0.92	229	*e*P	Pb	14 49 35.1	-0.5
	0.6nm,0.2s						
KOTS				*e*S	Sg	14 49 46.9	+0.8
	2.9nm,0.1s						
UZB	**Uzynbulak**	0.99	134	P	Pg	14 49 35.7	0.0
	2.0nm,0.1s						
UZB				S	Sg	14 49 48.1	-0.4
	3.9nm,0.1s						
UZB	**Uzynbulak**	0.99	134	*e*P	Pg	14 49 35.7	0.0
	baz=34						
UZB				*e*S	Sg	14 49 48.1	-0.4
	baz=34						
UZB	**Uzynbulak**	0.99	134	*e*P	Pg	14 49 35.7	0.0
	2.0nm,0.1s						
UZB				*e*S	Sg	14 49 48.1	-0.4
	3.9nm,0.1s						
MDOK	**Medeo**	1.00	228	⇑P	Pg	14 49 36.4	+0.5
	0.4nm,0.4s						
MDOK				⇓S	Sn	14 49 53.3	+0.3
	0.5nm,0.2s						
KTBS	**Karatobe**	1.00	263	P	Pg	14 49 35.7	-0.2
	1.4nm,0.3s						
KTBS				S	Sg	14 49 48.2	-0.8
	5.3nm,0.2s						
KTBS	**Karatobe**	1.00	263	*e*P	Pg	14 49 35.7	-0.2
	1.4nm,0.3s						
KTBS				*e*S	Sg	14 49 48.2	-0.8
	5.3nm,0.2s						
TNSS	**Tian-Shan**	1.14	225	P	Pg	14 49 38.4	-0.2
	1.0nm,0.1s						
TNSS				S	Sg	14 49 52.8	-0.5
	7.4nm,0.3s						
TNSS	**Tian-Shan**	1.14	225	*e*P	Pb	14 49 39.3	-0.3
	0.8nm,0.2s						
TNSS				*e*S	Sg	14 49 54.0	+0.7
	7.4nm,0.3s						
PDGK	**Podgornoye**	1.16	116	P	Pg	14 49 38.9	-0.1
	0.4nm,0.1s						
PDGK				S	Sg	14 49 53.6	-0.4
	0.8nm,0.1s						
PDGK	**Podgornoye**	1.16	116	⇓P	Pg	14 49 39.3	+0.4
	0.2nm,0.2s						
PDGK				⇓S	Sg	14 49 53.5	-0.6
	0.5nm,0.2s						
PDGK	**Podgornoye**	1.16	116	⇑*i*P	Pg	14 49 38.9	-0.1
	baz=15						
PDGK				⇑*i*S	Sg	14 49 53.7	-0.3
	baz=15						
KUU	**Kurty**	1.24	273	P	Pg	14 49 40.1	-0.4
	1.1nm,0.1s						
KUU				S	Sg	14 49 55.7	-0.9
	10nm,0.1s						
KUU	**Kurty**	1.24	273	*e*P	Pg	14 49 40.4	-0.1
	baz=74						
KUU				*e*S	Sg	14 49 56.3	-0.3
	baz=74						
KUU	**Kurty**	1.24	273	*e*P	Pg	14 49 40.4	-0.1
	2.0nm,0.1s						
KUU				*e*S	Sg	14 49 56.3	-0.3
	10nm,0.1s						
IZV	**Izvestkoviy**	1.32	233	P	Pg	14 49 42.2	+0.2
	0.9nm,0.1s						
IZV				S	Sg	14 49 59.6	+0.3
	3.3nm,0.2s						
IZV	**Izvestkoviy**	1.32	233	*e*P	Pg	14 49 42.2	+0.1
	baz=34						
IZV				*e*S	Sg	14 49 59.5	+0.3
	baz=34						
IZV	**Izvestkoviy**	1.32	233	*e*P	Pg	14 49 42.2	+0.2
	0.9nm,0.1s						
IZV				*e*S	Sg	14 49 59.6	+0.3
	3.3nm,0.2s						
MTBS	**Maitube**	1.38	240	P	Pg	14 49 42.5	-0.7
	4.3nm,0.2s						
MTBS				S	Sg	14 49 59.8	-1.2
	10nm,0.2s						
MTBS	**Maitube**	1.38	240	*e*P	Pg	14 49 42.8	-0.4
	baz=40						
MTBS				*e*S	Sg	14 50 00.6	-0.5
	baz=40						
MTBS	**Maitube**	1.38	240	*e*P	Pg	14 49 42.8	-0.3
	4.3nm,0.2s						
MTBS				*e*S	Sg	14 50 00.6	-0.4
	10nm,0.2s						
PRZ	**Przheval'sk**	1.38	169	⇑*i*P	Pg	14 49 42.8	-0.4
	baz=69						
PRZ				⇑*i*S	Sg	14 50 00.6	-0.5
	baz=69						
KTMS	**Ketmen**	1.71	103	P	Pn	14 49 48.1	+0.2
	1.2nm,0.1s						
KTMS				S	Sn	14 50 09.9	-0.8
	7.1nm,0.3s						
KTMS	**Ketmen**	1.71	103	*e*P	Pn	14 49 48.1	+0.1
	baz=2.0						
KTMS				*e*S	Sn	14 50 09.8	-0.9
	baz=2.0						
KTMS	**Ketmen**	1.71	103	*e*P	Pn	14 49 48.1	+0.2
	1.2nm,0.1s						
KTMS				*e*S	Sn	14 50 09.9	-0.8
	7.1nm,0.3s						
KAPS	**Kapalarasan**	1.72	32	P	Pb	14 49 49.0	-0.2
	0.3nm,0.1s						
KAPS				S	Sn	14 50 10.9	+0.2
	1.2nm,0.1s						
KAPS	**Kapalarasan**	1.72	32	*e*P	Pb	14 49 49.0	-0.2
	0.3nm,0.1s						
KAPS				*e*S	Sn	14 50 10.8	+0.2
	1.2nm,0.1s						
KST	**Kastek**	1.72	243	P	Pg	14 49 49.8	+0.1
	1.0nm,0.1s						
KST				S	Sg	14 50 12.2	+0.3
	2.9nm,0.3s						
KST	**Kastek**	1.72	243	*e*P	Pg	14 49 49.8	+0.1
	1.0nm,0.1s						
KST				*e*S	Sg	14 50 12.2	+0.3
	2.9nm,0.3s						
DGS	**Degeres**	1.77	251	P	Pb	14 49 49.6	-0.4
	2.4nm,0.4s						
DGS				S	Sn	14 50 12.0	+0.1
	6.1nm,0.5s						
DGS	**Degeres**	1.77	251	*e*P	Pb	14 49 49.6	-0.4
	2.4nm,0.4s						
DGS				*e*S	Sn	14 50 12.0	+0.1
	6.1nm,0.5s						
KDJ	**Kajisay**	1.83	201	⇑*e*P	Pb	14 49 50.8	-0.3
	baz=1.0						
KDJ				⇑*i*S	Sn	14 50 13.7	+0.2
	baz=1.0						
TKM2	**Tokmak 2**	2.02	244	⇑P	Pb	14 49 53.6	-0.8
	0.3nm,0.3s						
TKM2				⇓S	Sb	14 50 20.7	+0.7
	1.5nm,0.3s						
TKM2	**Tokmak 2**	2.02	244	⇑*i*P	Pn	14 49 53.1	+0.9
	baz=44						
TKM2				⇑*i*S	Sn	14 50 19.0	+0.8
	baz=44						
BOOM	**Boomskoye usch**	2.05	230	⇑*i*P	Pn	14 49 53.5	+0.8
	baz=30						
BOOM				⇑*i*S	Sn	14 50 19.3	+0.2
	baz=30						
ULHL	**Ulahol**	2.08	220	⇓*i*P	Pn	14 49 53.8	+0.8
	baz=21						
ULHL				⇓*i*S	Sn	14 50 20.2	+0.5
	baz=21						
TARG	**Taragay, Kyrgy**	2.12	185	⇑*i*P	Pn	14 49 54.2	+0.4
	baz=86						
TARG				⇑*i*S	Sn	14 50 20.9	-0.1
	baz=86						
KZA	**Kyzart**	2.71	230	⇑*i*P	Pn	14 50 03.8	+1.9
	baz=31						
KZA				⇑*i*S	Sn	14 50 36.2	+0.6
	baz=31						

IDC 14 14:55:00.8±2.5**, 10°.00S**×**113°.43E, h0^{km}, mb3.3**/4**, mb1 3.6**/4**, mb1mx3.3**/46**, mbtmp3.3**/4**, Error ellipse: s-maj=134.8km s-min=21.7km az=47.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.46	119	P	P	15 00 02.7	+0.9
	0.6nm,0.8s,baz=293,slow=11,SNR=4.8						
ASAR	**Alice Springs**	23.80	127	P	P	15 00 14.8	-0.7
	0.4nm,0.7s,baz=304,slow=9.6,SNR=7.8						
CMAR	**Chiang Mai Arr**	31.69	333	P	P	15 01 27.5	+1.2
	0.5nm,0.3s,baz=171,slow=8.4,SNR=6.7						
MKAR	**Makanchi Array**	63.01	336	P	P	15 05 28.7	-0.9
	0.2nm,0.5s,baz=149,slow=7.1,SNR=8.2						

IDC 14 15:03:39.1±49.0**, 16°.62S**×**175°.25W, h0^{km}, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.7**/40**, mbtmp3.8**/3**, Error ellipse: s-maj=934.1km s-min=178.9km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	41.89	241	P	P	15 11 31.8	+0.3
	1.2nm,0.8s,baz=70,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	47.84	258	P	P	15 12 18.7	-0.4
	0.3nm,0.6s,baz=93,slow=8.1,SNR=6.9						
ASAR	**Alice Springs**	48.05	253	P	P	15 12 20.5	-0.2
	1.5nm,0.4s,baz=90,slow=8.1,SNR=54						

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*DJA **14** 15:04:08.9±1.0, 6°S±4°×10°4E±°, h12^{km}±7^{km}, M3.8/8, MLv3.8/8*

*ISCJB **14** 15:04:09.8±1.1, 5°.66S±0°.06×103°.60E±0°.07, h33^{km}, mb3.5/4, Error ellipse: s-maj=11.2km s-min=8.6km az=150.7*

*IDC **14** 15:04:13.6±4.5, 3°.16S×106°.26E, h0^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.3/53, mbtmp3.4/4, Error ellipse: s-maj=257.4km s-min=23.0km az=53.0*

ISC 14 15:04:10.0±1.3**, 5°.61S**±0°.08×**103°.58E**±0°.08**, h35^{km}, n12, σ1^{s}.58**/15**, mb3.3**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	**Liwa**	0.75	39	P	**Pn**	**15 04 23.8**	**-0.4**
LWLI				S	**Sn**	**15 04 34.3**	**-0.1**
KASI	**Kota Agung**	0.91	85	P	**Pn**	**15 04 25.9**	**-0.4**
KASI				S	**Sn**	**15 04 38.0**	**-0.2**
MDSI	**Maura Dua**	1.26	28	P	**Pn**	**15 04 31.5**	**+0.4**
MDSI				S	**Sn**	**15 04 48.4**	**+1.6**
MNAI	**Manna**	1.39	333	P	**Pn**	**15 04 33.5**	**+0.7**
KLI	**Kotabumi**	1.47	60	P	**Pn**	**15 04 35.0**	**+1.1**
BLSI	**Bandar Lampung**	1.67	82	P	**Pn**	**15 04 37.5**	**+0.8**
LHSI	**Lahat**	1.77	358	P	**Pn**	**15 04 39.7**	**+1.6**
CISI	**Cisompet, Garu**	4.63	115	P	**Pn**	**15 05 18.4**	**+0.9**
WRA	**Warramunga Arr**	33.12	118	P	**P**	**15 10 42.1**	**-0.9**
	0.1nm,0.4s,baz=305,slow=8.9,SNR=3.0						
ASAR	**Alice Springs**	34.26	125	P	**P**	**15 10 56.2**	**+3.2**
	0.1nm,0.5s,baz=301,slow=8.0,SNR=7.0						
MKAR	**Makanchi Array**	55.48	342	P	**P**	**15 13 39.0**	**-2.4**
	0.2nm,0.4s,baz=148,slow=7.5,SNR=6.5						
ZALV	**Zalesovo Beam**	61.39	347	P	**P**	**15 14 20.3**	**-2.1**
	1.1nm,0.4s,baz=108,slow=3.2,SNR=5.4						

YARS 14 15:07:53.3±0.2**, 67°.67N**±0°.01×**142°.32E**±0°.03**, h10^{km}, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	1.26	163	*e*P	Pn	15 08 16.4	-0.5
MOMR				Pmax		15 08 16.4	
	comp=Z,4.0nm,0.2s						
MOMR				*e*S	Sb	15 08 31.7	-1.6
MOMR				Smax		15 08 31.7	
	comp=N,17nm,0.3s						
YBGR	**Belaya Gora**	1.69	57	*e*P	Pb	15 08 23.9	-0.5
YBGR				Pmax		15 08 23.9	
	comp=Z,35nm,0.3s						
YBGR				*e*S	Sb	15 08 45.3	-0.4
YBGR				Smax		15 08 45.3	
	comp=E,39nm,0.2s						
BTGS	**Batagay**	2.93	273	*e*S	Sb	15 09 23.8	+2.4
BTGS				Smax		15 09 23.8	
	comp=N,10.0nm,0.4s						

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*BJI **14** 15:08:31.6, 67°.59N×143°.19E, h11^{km}, mB5.4/22, mb4.9/59, Ms5.0/16, Ms7 4.8/16*

*IDC **14** 15:08:33.0±0.4, 67°.51N×142°.83E, h0^{km}, mb4.6/38, mb1 4.7/40, mb1mx4.7/52, mbtmp4.6/40, ML4.3/2, Error ellipse: s-maj=11.2km s-min=9.4km az=142.0*

*MOS **14** 15:08:33.4±0.9, 67°.64N×142°.63E, h12^{km}, mb5.1/80, Error ellipse: s-maj=9.1km s-min=3.7km az=94.5*

*NEIC **14** 15:08:34.9±0.1, 67°.58N×142°.54E, h10^{km}, mb5.0/285, Error ellipse: s-maj=3.2km s-min=2.0km az=165.0*

*YARS **14** 15:08:35.6±0.2, 67°.58N±0°.01×142°.84E±0°.03, h12^{km}±4^{km}*

*ISCJB **14** 15:08:37.5±0.6, 67°.60N±0°.02×142°.66E±0°.04, h43^{km}±5^{km}, mb4.9/400, MS4.8/2, Error ellipse: s-maj=3.4km s-min=2.2km az=165.0*

ISC 14 15:08:35.4±0.9**, 67°.54N**±0°.03×**142°.68E**±0°.03**, h14^{km}**±5^{km}**, n819, σ1^{s}.19**/848**, mb5.0**/413**, 48C-14D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.10	169	eP	Pb	15 08 55.1	-0.9
MOMR				eS	Sb	15 09 09.8	-0.3
MOMR				pmax	pmax		
	comp=Z,732nm,0.3s						
MOMR				smax	smax		
	comp=N,15µm,0.3s						
MOMR	Moma	1.10	169	eP	Pb	15 08 55.1	-0.9
MOMR				Pmax		15 08 55.1	
	comp=Z,732nm,0.3s						
MOMR				eS	Sb	15 09 09.8	-0.3
MOMR				Smax		15 09 09.8	
	comp=N,5µm,0.3s						
YBGR	Belaya Gora	1.66	51	i P	Pn	15 09 03.4	-0.5
YBGR				Pmax		15 09 03.4	
	comp=Z,8µm,0.5s						
YBGR				eS	Sn	15 09 25.2	+0.3
YBGR				Smax		15 09 25.2	
	comp=N,5µm,0.3s						
BTGS	Batagay	3.08	276	eP	Pn	15 09 25.6	+2.1
BTGS				eS	Sn	15 10 01.8	+1.8
BTGS				pmax	pmax		
	comp=Z,304nm,0.3s						
BTGS	Batagay	3.08	276	eP	Pn	15 09 25.6	+2.1
BTGS				eP	Pg	15 09 32.6	-1.7
BTGS				Pmax		15 09 32.6	
	comp=Z,304nm,0.3s						
BTGS				eS	Sn	15 10 01.8	+1.8
BTGS				eS	Sg	15 10 12.5	-1.7
BTGS				Smax		15 10 12.5	
	comp=E,8µm,0.5s						
ATKR	Artyk	3.52	162	eP	Pn	15 09 30.8	+1.2
ATKR				eS	Sn	15 10 11.4	+0.5
ATKR				pmax	pmax		
	comp=Z,2µm,0.7s						
ATKR	Artyk	3.52	162	eP	Pn	15 09 30.8	+1.2
ATKR				eP	Pb	15 09 39.6	+2.2
ATKR				Pmax		15 09 39.6	
	comp=Z,2µm,0.7s						
ATKR				eS	Sn	15 10 11.4	+0.5
ATKR				eS	Sg	15 10 25.6	-2.6
ATKR				Smax		15 10 25.6	
	comp=E,4µm,0.5s						
SEY	Seymchan	6.16	134	ePn	Pn	15 10 06.5	+0.8
SEY				eLg	Lg	15 11 41.5	
SEY	Seymchan	6.16	134⇓	eP	Pn	15 10 08.8	+3.1
SEY	Seymchan	6.16	134	Pn	Pn	15 10 06.5	+0.8
	comp=E,2.1nm,0.3s,baz=341,slow=17,SNR=11						
SEY				Lg	Lg	15 11 41.5	
	comp=E,11nm,0.3s,baz=35,slow=23,SNR=3.7						
YAK	Yakutsk	7.82	231	eP	Pn	15 10 27.5	-1.0
YAK				e		15 12 08.4	
YAK				pmax	pmax		
	comp=Z,240nm,0.4s						
YAK				smax	smax		
	comp=E,2µm,0.8s						
YAK				smax	smax		
	comp=N,1µm,0.5s						
YAK	Yakutsk	7.82	231	eS	Sb	15 12 39.4	+16
YAK				Smax		15 12 39.4	
	comp=E,5µm,0.8s						
MA2	Magadan	8.76	152	ePn	Pn	15 10 42.4	+1.0
MA2				eLg	Lg	15 13 11.1	
MA2	Magadan	8.76	152⇓	eP	Pn	15 10 43.8	+2.4
MA2				pmax	pmax		
	comp=Z,26nm,1.7s						
MA2	Magadan	8.76	152	Pn	Pn	15 10 42.2	+0.8
	comp=Z,0.6nm,0.3s,baz=332,slow=20,SNR=14						
MA2				Lg	Lg	15 13 11.1	
	comp=Z,4.0nm,0.3s,baz=318,slow=12,SNR=6.7						
BILL	Bilibino	8.93	76	ePn	Pn	15 10 44.8	+1.1
BILL	Bilibino	8.93	76c	iP	Pn	15 10 45.5	+1.8
BILL				pmax	pmax		
	comp=Z,25nm,1.0s						
NKL	Nikolayevsk	14.47	185	eP	Pn	15 12 02.0	+2.6
NKL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA	Zeya	15.70	216	eP	Pn	15 12 16.2	+0.5
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,9.0s						
PEA1	Petropavlovsk-	16.19	146	ePn	P	15 12 24.2	-1.0
PETK	Petropavlovsk-	16.19	146	Pn	P	15 12 24.2	-1.1
PETK	Petropavlovsk-	16.19	146	P	P	15 12 24.2	-1.1
PETK	Petropavlovsk-	16.19	146	Pn	P	15 12 24.2	-1.1
	comp=Z,1.2nm,0.3s,baz=28,slow=5.3,SNR=16						
BOD	Bodaibo	16.19	247	eP	Pn	15 12 19.1	-3.0
BOD				pmax	pmax		
	comp=Z,35nm,0.9s						
PET	Petropavlovsk	16.48	144	ePn	P	15 12 29.6	+1.1
	comp=Z,62nm,0.9s						
PET	Petropavlovsk	16.48	144	eP	P	15 12 31.1	+2.7
PET				pmax	pmax		
	comp=Z,83nm,0.9s						
TYV	Tymovskoe	16.73	180	eP	P	15 12 32.2	+1.0
TYV				eS	S	15 15 42.7	-2.5
TYV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TYV				smax	smax		
	comp=E,700nm,10.5s						
GRNR	Gornyy	17.11	194	eP	P	15 12 36.0	+0.6
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
SKR	Severo-Kuril’s	18.18	152	eP	P	15 12 50.1	+2.9
SKR				pmax	pmax		
	comp=Z,92nm,0.8s						
GAMB	Gambell	18.82	80	eP	Pn	15 12 55.1	+0.4
	comp=Z,18nm,0.8s						
KLR	Kul'dur	19.17	202	eP	Pn	15 12 59.5	+0.5
KLR	Kul'dur	19.17	202⇑	eP	Pn	15 13 00.1	+1.0
KLR	Kul'dur	19.17	202	P	Pn	15 12 59.5	+0.5
	comp=Z,0.5nm,0.3s,baz=16,slow=10,SNR=15						
KLR				Lg	Lg	15 18 40.2	
	comp=Z,0.1nm,0.3s,baz=251,slow=22,SNR=3.8						
NRIK	Noril'sk	19.76	301	P	P	15 13 05.1	+0.7
NRIK	Noril'sk	19.76	301	P	P	15 13 05.1	+0.7
	comp=Z,1.7nm,0.3s,baz=74,slow=12,SNR=29						
RDOG	Red Dog Mine	20.02	63	eP	P	15 13 07.9	+0.7
	comp=Z,145nm,1.6s						
YSS	Yuzh-Sakhalins	20.64	180	eP	Pn	15 13 15.5	-0.9
	comp=Z,27nm,1.1s						
YSS	Yuzh-Sakhalins	20.64	180⇓	eP	P	15 13 13.0	-1.1
YSS				e		15 13 21.3	
YSS				e		15 13 47.1	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s						
YSS				MLR	MLR		
	comp=N,600nm,12.0s						
YSS				MLR	MLR		
	comp=E,1µm,14.0s						
ANM	Nome	20.78	73	eP	P	15 13 16.4	+0.9
	comp=E,21nm,0.7s						
ANM	Nome	20.78	73	eP	P	15 13 16.4	+0.9
ANM				pmax	pmax		
	comp=Z,21nm,0.7s						
HIA	Hailar	21.66	224	eP	P	15 13 24.7	-0.4
	comp=Z,52nm,0.8s						
HIA	Hailar	21.66	224	eP	P	15 13 24.7	-0.4
HIA				pmax	pmax		
	comp=Z,52nm,0.8s						
TEY	Ternei	22.78	191⇑	eP	P	15 13 37.6	+0.5
TEY				pmax	pmax		
	comp=Z,20nm,0.6s						
ASAJ	Asahikawa	23.48	180	eP	P	15 13 43.5	-0.6
ASAJ	Asahikawa	23.48	180	P	P	15 13 43.6	-0.6
ASAJ	Asahikawa	23.48	180	P	P	15 13 43.5	-0.6
	comp=Z,6.4nm,0.6s,baz=36,slow=8.5,SNR=19						
SPIA	Saint Paul Isl	23.54	93	eP	P	15 13 45.5	+0.9
MDJ	Mudanjiang	24.00	203	P	P	15 13 49.3	+0.1
MDJ				pmax	pmax		
	comp=Z,37nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,2µm,9.6s						
MDJ	Mudanjiang	24.00	203	eP	P	15 13 48.8	-0.4
	comp=Z,45nm,1.0s						
IRK	Irkutsk	24.05	250	eP	P	15 13 43.9	-5.7
IRK				e		15 14 19.3	
IRK				pmax	pmax		
	comp=Z,71nm,3.2s						
USRK	Ussuriysk Ar.	24.08	199	P	P	15 13 50.0	+0.1
USRK				PcP	PcP	15 17 30.8	0.0
USRK	Ussuriysk Ar.	24.08	199	P	P	15 13 50.0	+0.1
	comp=Z,12nm,0.8s,baz=9.4,slow=9.7,SNR=30						
USRK				PcP	PcP	15 17 30.8	0.0
	comp=Z,2.5nm,0.5s,baz=224,slow=2.6,SNR=5.6						
TOLK	Toolik Lake Re	24.17	56	eP	P	15 13 50.7	0.0
	comp=Z,54nm,1.2s						
TOLK	Toolik Lake Re	24.17	56	P	P	15 13 51.3	+0.7
	baz=300						
COLD	Coldfoot	24.70	59	eP	P	15 13 56.1	+0.7
	comp=Z,54nm,1.1s						
TLY	Talaya	24.73	250	eP	P	15 13 54.8	-1.1
	comp=Z,16nm,0.8s						
TLY	Talaya	24.73	250⇑	eP	P	15 13 57.2	+1.3
ADK	Adak	25.15	108	eP	P	15 13 59.8	+0.2
	comp=Z,59nm,1.3s						
ADK	Adak	25.15	108	eP	P	15 13 59.8	+0.2
ADK				pmax	pmax		
	comp=Z,59nm,1.3s						
VLA	Vladivostok	25.15	199⇓	eP	P	15 14 01.6	+1.9
VLA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GSTR	Great Sitkin T	25.20	107	eP	P	15 14 01.6	+1.5
CN2	Changchun	25.51	210	eP	P	15 14 04.5	+1.6
ERM	Erimo	25.58	179	eP	P	15 14 04.4	+0.9
	comp=Z,42nm,1.0s						
ERM	Erimo	25.58	179	eP	P	15 14 04.4	+0.9
ERM				pmax	pmax		
	comp=Z,42nm,1.0s						
MOY	Mondy	25.70	253	eP	P	15 14 05.9	+1.1
MOY				pmax	pmax		
	comp=Z,60nm,1.6s						
MLY	Manley	25.74	64	eP	P	15 14 05.1	+0.1
	comp=Z,19nm,0.9s						
ZAK	Zakamensk	25.93	248	eP	P	15 14 07.5	+0.7
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
BPAW	Bear Paw Mtn.	26.21	66	eP	P	15 14 10.2	+1.0
	comp=Z,21nm,1.0s						
CAST	Castle Rocks	26.24	67	eP	P	15 14 10.1	+0.6
	comp=Z,23nm,0.9s						
SVW2	Sparrevohn	26.45	74	eP	P	15 14 11.4	+0.1
	comp=Z,33nm,1.4s						
PPLA	Purkeypile	26.53	68	eP	P	15 14 12.4	+0.2
	comp=Z,96nm,1.8s						
MDM	Murphy Dome	26.65	62	eP	P	15 14 13.4	+0.3
	comp=Z,27nm,0.8s						
FYU	Fort Yukon	26.69	58	eP	P	15 14 14.6	+1.1
	comp=Z,57nm,1.2s						
BWN	Browne	26.70	65	eP	P	15 14 14.1	+0.5
	comp=Z,27nm,0.9s						
ULN	Ulaanbaatar	26.76	241	eP	P	15 14 12.0	-2.5
	comp=Z,5.5nm,0.9s						
ULN	Ulaanbaatar	26.76	241⇓	eP	P	15 14 15.5	+1.1
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
POKR	Poker Plat Res	26.82	62	P	P	15 14 16.2	+1.5
	baz=307						
COLA	College	26.83	62	eP	P	15 14 15.4	+0.7
	comp=Z,34nm,0.8s						
COLA	College	26.83	62⇑	eP	P	15 14 15.6	+1.0
COLA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TRF	Thorofare Moun	26.86	66	eP	P	15 14 16.4	+1.2
	comp=Z,39nm,1.0s						
WRH	Wood River Hil	26.99	63	eP	P	15 14 17.3	+1.2
	comp=Z,9.5nm,0.8s						
SONA0	Songino Array	27.01	241	eP	P	15 14 18.2	+1.6
SONM	Songino Array	27.01	241	P	P	15 14 18.2	+1.6
SONM	Songino Array	27.01	241	P	P	15 14 18.2	+1.6
SONM	Songino Array	27.01	241	P	P	15 14 18.2	+1.6
	comp=Z,5.8nm,0.8s,baz=23,slow=9.2,SNR=45						
MCK	McKinley	27.16	65	eP	P	15 14 18.3	+0.6
	comp=Z,30nm,0.9s						
MCK	McKinley	27.16	65	eP	P	15 14 18.3	+0.6
MCK				pmax	pmax		
	comp=Z,30nm,0.9s						
NIKH	Nikolski High	27.21	98	eP	P	15 14 19.3	+1.1
	comp=Z,349nm,1.5s						
IL1	Eielson Array	27.22	62	eP	P	15 14 18.5	+0.3
ILAR	Eielson Array	27.22	62	P	P	15 14 18.4	+0.2
ILAR	Eielson Array	27.22	62	P	P	15 14 18.4	+0.2
ILAR	Eielson Array	27.22	62	P	P	15 14 18.4	+0.2
	comp=Z,18nm,0.7s,baz=298,slow=7.9,SNR=97						
PRP	Porcupine Dome	27.22	60	eP	P	15 14 20.0	+1.6
	comp=Z,54nm,1.8s						
RND	Reindeer	27.39	66	eP	P	15 14 20.0	+0.1
	comp=Z,10nm,1.0s						
RND	Reindeer	27.39	66	eP	P	15 14 20.0	+0.1
RND				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HDA	Harding Lake	27.42	63	eP	P	15 14 20.3	+0.3
	comp=Z,11nm,0.8s						
HDA	Harding Lake	27.42	63	P	P	15 14 20.6	+0.6
	baz=308						
KNGR	Kungurtug, Tuv	27.85	255⇑	iP	P	15 14 25.1	+1.0
RSO	Redoubt South	27.91	73	eP	P	15 14 27.2	+2.5
SUA	Susitna One	27.98	70	eP	P	15 14 25.2	+0.1
	comp=Z,27nm,0.7s						
DHY	Denali Highway	28.12	65	eP	P	15 14 26.2	-0.2
	comp=Z,11nm,0.9s						
GHO	Glory Hole Cre	28.42	68	eP	P	15 14 29.0	-0.1
	comp=Z,30nm,1.2s						
PMR	Palmer	28.47	69	eP	P	15 14 29.0	-0.4
	comp=Z,9.4nm,0.7s						
PMR	Palmer	28.47	69	eP	P	15 14 29.0	-0.4
PMR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
RIDG	Independ’e Rid	28.56	63	eP	P	15 14 31.8	+1.5
	comp=Z,18nm,1.2s						
RC01	Rabbit Creek A	28.59	70	eP	P	15 14 29.5	-0.9
	comp=Z,66nm,1.6s						
SML	Sawmill	28.61	68	eP	P	15 14 30.6	0.0
	comp=Z,17nm,0.8s						
SML	Sawmill	28.61	68	eP	P	15 14 30.7	0.0
SML				pmax	pmax		
	comp=Z,17nm,0.8s						
SDPT	Sand Point	28.62	87	eP	P	15 14 29.7	-1.0
	comp=Z,123nm,1.0s						
SCRK	Sand Creek	28.70	62	eP	P	15 14 33.4	+1.8
	comp=Z,5.8nm,0.9s						
KNK	Knik Glacier	28.83	68	eP	P	15 14 32.5	-0.1
	comp=Z,21nm,0.9s						
PAX	Paxson	28.85	64	eP	P	15 14 34.5	+1.6
	comp=Z,8.1nm,0.9s						
HOM	Homer	28.87	73	eP	P	15 14 32.6	-0.3
	comp=Z,627nm,1.3s						
DOT	Dot Lake	28.89	62	eP	P	15 14 32.9	-0.3
	comp=Z,57nm,2.0s						
SCM	Sheep Creek Mo	28.95	67	eP	P	15 14 32.5	-1.2
	comp=Z,86nm,1.7s						
SCM	Sheep Creek Mo	28.95	67	eP	P	15 14 32.6	-1.2
SCM				pmax	pmax		
	comp=Z,86nm,1.7s						
BRLK	Bradley Lake	29.07	73	eP	P	15 14 33.8	-1.1
	comp=Z,53nm,0.8s						
EGAK	Eagle	29.13	59	eP	P	15 14 35.0	-0.2
	comp=Z,7.4nm,0.9s						
INK	Inuvik	29.25	49	eP	P	15 14 36.4	+0.1
	comp=Z,20nm,1.6s						
INK	Inuvik	29.25	49	eP	P	15 14 36.4	+0.1
INK				pmax	pmax		
	comp=Z,20nm,1.6s						
INK	Inuvik	29.25	49	P	P	15 14 36.2	0.0
	comp=Z,2.1nm,0.8s,baz=318,slow=8.9,SNR=5.8						
HARP	HAARP	29.33	65	eP	P	15 14 35.7	-1.4
	comp=Z,158nm,2.0s						
SEW	Seward	29.36	71	eP	P	15 14 36.7	-0.6
	comp=Z,270nm,1.9s						
MENT	Mentasta	29.47	63	eP	P	15 14 38.9	+0.5
	comp=Z,9.1nm,0.6s						
EPYK	Eagle Plains	29.52	54	eP	P	15 14 38.5	-0.2
	comp=Z,8.2nm,0.8s						
EPYK	Eagle Plains	29.52	54	P	P	15 14 39.0	+0.2
	baz=310						
KLU	Klutina	29.68	67	eP	P	15 14 40.2	0.0
	comp=Z,19nm,1.1s						
KDAK	Kodiak Island	29.84	77	eP	P	15 14 43.5	+1.9
	comp=Z,140nm,1.8s						
DIV	Divide	29.98	67	eP	P	15 14 45.3	+2.5
	comp=Z,72nm,1.8s						
NVS	Novosibirsk	29.99	275⇓	iP	P	15 14 43.1	+0.2
NVS				eS	S	15 19 36.5	-3.4
NVS				pmax	pmax		
	comp=N,5.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NVS				smax	smax		
	comp=E,8.0nm,1.0s						
ZAA1	Zalesovo Array	30.06	272	eP	P	15 14 43.6	+0.1
ZAA0	Zalesovo Array	30.06	272	eP	P	15 14 43.0	-0.5
	comp=E,8.8nm,0.8s						
ZALV	Zalesovo Beam	30.06	272	eP	P	15 14 42.1	-1.5
ZALV	Zalesovo Beam	30.06	272	P	P	15 14 43.6	+0.1
ZALV	Zalesovo Beam	30.06	272	P	P	15 14 43.6	+0.1
	comp=E,6.4nm,0.5s,baz=48,slow=7.3,SNR=22						
SII	Sitkinak Islan	30.12	80	eP	P	15 14 43.8	-0.4
	comp=E,386nm,1.6s						
DAWY	Dawson	30.17	59	eP	P	15 14 44.6	+0.1
	comp=E,19nm,1.6s						
EYAK	Cordova Ski Ar	30.39	68	eP	P	15 14 46.5	+0.2
	comp=E,222nm,1.7s						
MID	Middleton Isla	30.96	70	eP	P	15 14 50.6	-0.9
	comp=E,384nm,1.0s						
MID	Middleton Isla	30.96	70	eP	P	15 14 50.6	-0.9
MID				pmax	pmax		
	comp=Z,384nm,1.0s						
KBS	Kingsbay	30.98	343	eP	P	15 14 51.9	+0.4
	comp=Z,20nm,1.1s						
HMT	Hamilton	31.06	67	eP	P	15 14 54.9	+2.5
	comp=Z,69nm,0.9s						
MAJO	Matsushiro	31.15	187	eP	P	15 14 53.6	+0.3
	comp=Z,12nm,1.2s						
MAJO				ePcP	PcP	15 17 47.7	-0.3
MAJO	Matsushiro	31.15	187	eP	P	15 14 53.6	+0.3
MAJO				e		15 17 47.7	
MAJO				pmax	pmax		
	comp=Z,12nm,1.2s						
MJAR	Matsushiro Arr	31.15	187	PcP	PcP	15 17 47.7	-0.3
MJAR	Matsushiro Arr	31.15	187	PcP	PcP	15 17 47.7	-0.3
	comp=Z,1.3nm,0.7s,baz=19,slow=1.6,SNR=5.4						
BJI	Beijing	31.17	221	P	P	15 14 54.4	+0.9
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJT	Baijiatuau	31.20	221	eP	P	15 14 53.7	0.0
	comp=Z,13nm,0.9s						
BJT	Baijiatuau	31.20	221	eP	P	15 14 53.7	0.0
BJT				pmax	pmax		
	comp=Z,13nm,0.9s						
KS01	Wonju Array Si	31.25	203	eP	P	15 14 53.6	-0.5
KSRS	Korea Array	31.26	203	P	P	15 14 53.9	-0.4
KSRS						15 17 48.1	
KSRS	Korea Array	31.26	203	P	P	15 14 53.9	-0.4
	comp=Z,1.5nm,0.8s,baz=359,slow=9.0,SNR=5.9						
KSRS				PcP	PcP	15 17 48.1	-0.2
	comp=Z,1.7nm,0.8s,baz=28,slow=1.8,SNR=4.6						
KSAR	Wonju Array Be	31.28	203	P	P	15 14 53.9	-0.6
KSAR				PcP	PcP	15 17 48.0	-0.3
KSAR	Wonju Array Be	31.28	203	P	P	15 14 53.9	-0.6
KSAR						15 17 48.1	
HHC	Hu-ho-hao-te	31.67	228	eP	P	15 14 59.3	+1.3
HHC				S	S	15 20 01.5	-5.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,4.2s						
HHC				LR	LR		
	comp=Z,2µm,12.4s						
HHC				LR	LR		
	comp=Z,1µm,12.6s						
HHC				LR	LR		
	comp=Z,2µm,11.2s						
DGZ	Jazzator, Alta	32.40	265c	iP	P	15 15 05.6	+1.2
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HYT	Haines Junctio	33.06	62	eP	P	15 15 11.8	+1.7
	comp=Z,47nm,1.9s						
YKU2	Yakutat	33.27	65	eP	P	15 15 12.6	+1.0
	comp=Z,3µm,1.2s						
RES	Resolute Bay	33.36	24	eP	P	15 15 12.0	-0.3
	comp=Z,19nm,1.5s						
RES	Resolute Bay	33.36	24	P	P	15 15 12.5	+0.2
RES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RES	Resolute Bay	33.36	24	P	P	15 15 12.5	+0.2
	comp=Z,2.4nm,0.7s,baz=8.4,slow=9.9,SNR=13						
WHY	Whitehorse	34.07	61	eP	P	15 15 18.5	-0.3
	comp=Z,36nm,1.9s						
DHAK	Deception Hill	34.09	65	eP	P	15 15 19.4	+0.5
	comp=Z,116nm,1.1s						
SKAG	Skagway	34.81	62	eP	P	15 15 25.4	+0.4
	comp=Z,18nm,1.1s						
TULEG	Thule	34.84	12	eP	P	15 15 24.6	-0.5
	comp=Z,8.3nm,1.0s						
KURK	Kurchatov	34.96	274	eP	P	15 15 26.5	+0.1
	comp=Z,20nm,1.1s						
KURK	Kurchatov	34.96	274	P	P	15 15 27.7	+1.2
KURK				pmax	pmax		
	comp=Z,12nm,0.5s						
KURBB	Kurchatov Arra	35.07	274	P	P	15 15 27.6	+0.3
	comp=Z,12nm,0.5s,baz=36,slow=8.6,SNR=105						
JNU	Nakatsue	35.14	197	eP	P	15 15 28.2	0.0
	comp=Z,10nm,1.1s						
JNU	Nakatsue	35.14	197	P	P	15 15 27.6	-0.6
	comp=Z,5.1nm,0.9s,baz=182,slow=6.2,SNR=4.0						
DAG	Danmarks Havn	35.46	353	i P	P	15 15 29.8	-0.6
	comp=Z,16nm,0.6s						
DAG				i		15 15 59.0	
DAG	Danmarks Havn	35.46	353	P	P	15 15 29.8	-0.6
DAG				pmax	pmax		
	comp=Z,24nm,0.8s						
LVZ	Lovozero	35.95	322	eP	P	15 15 34.1	-0.7
	comp=Z,15nm,0.7s						
LVZ	Lovozero	35.95	322⇓	iP	P	15 15 33.8	-1.0
LVZ				pmax	pmax		
	comp=Z,27nm,1.3s						
JIS	Juneau Island	36.02	63	eP	P	15 15 35.8	+0.4
	comp=Z,27nm,1.2s						
KEV	Kevo	36.14	328	eP	P	15 15 35.7	-0.7
	comp=Z,72nm,1.5s						
KEV	Kevo	36.14	328	eP	P	15 15 35.7	-0.7
KEV				pmax	pmax		
	comp=Z,71nm,1.5s						
BVA0	Borovoye Array	36.26	283	i P	P	15 15 37.1	-0.5
BVA0				pmax	pmax		
	comp=Z,13nm,0.7s						
BVAR	Borovoye Array	36.26	283	P	P	15 15 37.6	0.0
BVAR				PcP	PcP	15 18 02.4	+0.2
BVAR	Borovoye Array	36.26	283	P	P	15 15 37.6	0.0
BVAR						15 18 02.4	
BVAR				pmax	pmax		
	comp=Z,13nm,0.6s						
BVAR	Borovoye Array	36.26	283	P	P	15 15 37.6	0.0
	comp=Z,13nm,0.6s,baz=46,slow=8.4,SNR=97						
BVAR				PcP	PcP	15 18 02.4	+0.2
	comp=Z,2.8nm,0.6s,baz=58,slow=2.5,SNR=4.2						
BRVK	Borovoye	36.27	283	eP	P	15 15 37.5	-0.1
	comp=Z,14nm,0.9s						
BRVK	Borovoye	36.27	283c	iP	P	15 15 37.6	-0.1
BRVK				pmax	pmax		
	comp=Z,15nm,0.9s						
ARA0	ARCESS Array S	36.63	328	eP	P	15 15 40.0	-0.5
ARA0				ePcP	PcP	15 18 03.0	0.0
ARCES	ARCESS Array B	36.63	328	eP	P	15 15 39.9	-0.7
ARCES				PcP	PcP	15 18 03.0	0.0
ARCES	ARCESS Array B	36.63	328	P	P	15 15 40.1	-0.5
ARCES						15 18 03.1	
ARCES	ARCESS Array B	36.63	328	P	P	15 15 40.0	-0.5
	comp=Z,3.8nm,0.6s,baz=44,slow=9.3,SNR=22						
ARCES				PcP	PcP	15 18 03.0	0.0
	comp=Z,5.6nm,0.5s,baz=35,slow=3.6,SNR=22						
ARE0	ARCESS Array S	36.63	328	eP	P	15 15 40.0	-0.6
	comp=Z,5.7nm,1.9s						
SIT	Sitka	36.63	65	eP	P	15 15 45.4	+4.7
	comp=Z,204nm,1.8s						
GTA	Gaotai	36.68	242	eP	P	15 15 43.0	+1.5
GTA				pP	pP	15 15 47.0	+1.0
GTA				sP	sP	15 15 50.1	+2.3
GTA				PcP	PcP	15 18 03.8	-0.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MK31	Makanchi Array	36.75	267	eP	P	15 15 42.0	+0.1
MK31	Makanchi Array	36.75	267	eP	P	15 15 42.0	+0.1
MK32	Makanchi Array	36.75	267	eP	P	15 15 41.6	-0.2
MKAR	Makanchi Array	36.75	267	eP	P	15 15 41.9	0.0
	comp=Z,139nm,0.6s						
MKAR	Makanchi Array	36.75	267	eP	P	15 15 41.9	0.0
MKAR				pmax	pmax		
	comp=Z,139nm,0.6s						
MKAR	Makanchi Array	36.75	267	P	P	15 15 41.6	-0.2
	comp=Z,22nm,0.6s,baz=44,slow=7.2,SNR=293						
MK01	Makanchi Array	36.76	267	eP	P	15 15 42.0	0.0

SVE	Sverdlovsk	36.83	295	eP	P	15 15 43.5	+1.1
SVE				pmax	pmax		
	comp=Z,26nm,0.9s						
MAKZ	Makanchi	36.86	267	eP	P	15 15 42.5	-0.3
	comp=Z,12nm,0.7s						
MAKZ	Makanchi	36.86	267	eP	P	15 15 42.5	-0.3
MAKZ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ	Urumqi	37.19	259	P	P	15 15 47.1	+1.4
WMQ				pP	sP	15 15 52.4	+0.3
WMQ				sP	pP	15 15 55.1	+4.9
WMQ				pmax	pmax		
	comp=Z,42nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,2µm,11.6s						
WMQ				LR	LR		
	comp=Z,2µm,28.3s						
WMQ				LR	LR		
	comp=Z,520nm,21.3s						
WMQ				LR	LR		
	comp=Z,2µm,19.5s						
WMQ	Urumqi	37.19	259	eP	P	15 15 46.3	+0.6
	comp=Z,24nm,1.1s						
WMQ	Urumqi	37.19	259	eP	P	15 15 46.3	+0.6
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
DLBC	Dease Lake	37.37	60	eP	P	15 15 50.9	+3.8
	comp=Z,50nm,1.9s						
ARU	Arti	37.86	296	eP	P	15 15 51.0	-0.1
ARU	Arti	37.86	296	⇑iP	P	15 15 51.0	-0.1
ARU				pmax	pmax		
	comp=Z,18nm,1.7s						
PRGR	Permogore	37.94	310	eP	P	15 15 47.9	-3.8
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TMCR	Tamitsa	38.06	317	eP	P	15 15 51.3	-1.4
TMCR				pmax	pmax		
	comp=Z,24nm,0.5s						
NJ2	Nanjing	38.18	214	eP	P	15 15 56.3	+2.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	Lanzhou	38.38	235	eP	P	15 15 57.9	+2.0
LZH				pP	pP	15 16 00.8	+0.3
LZH				sP	sP	15 16 03.3	+1.0
LZH				pmax	pmax		
	comp=Z,55nm,0.9s						
SSE	Sheshan	38.63	210	eP	P	15 15 57.4	-0.4
	comp=Z,31nm,0.6s						
CRAG	Craig	38.65	65	eP	P	15 15 58.5	+0.9
	comp=Z,256nm,1.9s						
XAN	Xi'an	38.77	227	P	P	15 15 59.6	+0.5
XAN				pP	sP	15 16 04.9	-0.5
XAN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
XAN	Xi'an	38.77	227	eP	P	15 15 59.5	+0.5
	comp=Z,12nm,1.3s						
XAN	Xi'an	38.77	227	eP	P	15 15 59.5	+0.5
MSF	Maaselka	38.87	323	P	P	15 15 59.9	+0.4
MSF				pmax	pmax		
	comp=Z,40nm,0.8s						
YKA	Yellowknife Ar	38.89	46	P	P	15 15 59.5	-0.2
YKA	Yellowknife Ar	38.89	46	P	P	15 15 59.5	-0.2
YKA	Yellowknife Ar	38.89	46	P	P	15 15 59.5	-0.2
	comp=Z,5.2nm,0.7s,baz=322,slow=7.8,SNR=26						
YKB5	Yellowknife Ar	38.89	46	eP	P	15 15 59.5	-0.2
OTUK	Ortayu	39.37	277	P	P	15 16 03.9	0.0
OTUK				pmax	pmax		
	comp=Z,12nm,0.7s						
SUMG	Summit	40.13	1	eP	P	15 16 10.3	-0.1
	comp=Z,40nm,1.7s						
SUMG	Summit	40.13	1	iP	P	15 16 10.3	-0.1
	comp=Z,18nm,0.6s						
SUMG	Summit	40.13	1	iP	P	15 16 10.3	-0.1
SUMG				pmax	pmax		
	comp=Z,18nm,0.6s						
OUL	Oulu	40.27	324	P	P	15 16 12.4	+1.2
OUL				pmax	pmax		
	comp=Z,16nm,1.1s						
KLMR	Klimovskoe	40.34	313	eP	P	15 16 09.6	-2.2
KLMR				pmax	pmax		
	comp=Z,25nm,1.4s						
KLMR	Klimovskoe	40.34	313	eP	P	15 16 09.7	-2.1
KLMR				AMP		15 16 14.4	
	comp=Z,25nm,1.4s						
DIB	Dawson Inlet,	40.69	67	eP	P	15 16 16.8	+2.0
	comp=Z,26nm,1.0s						
PDGK	Podgornoye	40.73	266	iP	P	15 16 16.0	+0.6
PDGK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SCO	Scoresbysund	41.84	352	eP	P	15 16 24.6	+0.7
	comp=Z,13nm,1.1s						
SCO	Scoresbysund	41.84	352	iP	P	15 16 24.4	+0.4
	comp=Z,7.7nm,0.6s						
SCO	Scoresbysund	41.84	352	eP	P	15 16 24.7	+0.7
SCO				pmax	pmax		
	comp=Z,13nm,1.1s						
ENH	Enshi	42.16	225	eP	P	15 16 27.0	-0.1
	comp=Z,12nm,0.8s						
SUF	Sumiainen	42.24	322	P	P	15 16 27.6	+0.2
SUF				pmax	pmax		
	comp=Z,29nm,0.8s						
KDJ	Kajisay	42.65	268	eP	P	15 16 33.0	+1.8
	comp=Z,9.1nm,0.9s						
USP	Ospenovka	42.70	271	P	P	15 16 32.9	+1.5
	SNR=21						
TARG	Taragay, Kyrgy	42.75	267	eP	P	15 16 33.3	+1.1
	comp=Z,9.9nm,0.9s						
TARG				eS	S	15 22 55.2	-0.3
VAF	Ylistaro	42.76	324	P	P	15 16 31.9	+0.3
VAF				pmax	pmax		
	comp=Z,27nm,1.4s						
CHMS	Chumysh	42.84	271	P	P	15 16 34.1	+1.6
	SNR=30						
AKTO	Aktyubinsk	42.89	291	eP	P	15 16 32.9	+0.1
AKTO	Aktyubinsk	42.89	291	iP	P	15 16 32.7	-0.1
AKTO				pmax	pmax		
	comp=Z,15nm,0.5s						
AKTO	Aktyubinsk	42.89	291	P	P	15 16 32.9	+0.1
	comp=Z,15nm,0.5s,baz=50,slow=7.4,SNR=64						
FRU	Bishkek	43.03	271	eP	P	15 16 35.5	+1.4
FRU				e		15 18 18.0	
FRU				pmax	pmax		
	comp=Z,40nm,1.8s						
FRU1	Bishkek	43.04	271	eP	P	15 16 36.1	+1.9
	comp=Z,22nm,0.8s						
FRU1	Bishkek	43.04	271	eP	P	15 16 36.1	+1.9
FRU1				pmax	pmax		
	comp=Z,22nm,0.8s						
KBK	Karagaybulak	43.05	270	P	P	15 16 36.0	+1.6
	SNR=15						
ABKAR	Akbulak array	43.17	288	eP	P	15 16 35.1	0.0
	comp=Z,13nm,0.6s						
CD2	Chengdu	43.21	232	eP	P	15 16 34.5	-1.1
AAK	Ala-Archa	43.24	271	P	P	15 16 37.5	+1.6
	SNR=36						
AAK	Ala-Archa	43.24	271	eP	P	15 16 37.3	+1.4
AAK	Ala-Archa	43.24	271	iP	P	15 16 37.5	+1.6
	SNR=73						
AAK	Ala-Archa	43.24	271	P	P	15 16 37.3	+1.4
AAK				pmax	pmax		
	comp=Z,20nm,0.6s						
AAK	Ala-Archa	43.24	271	P	P	15 16 37.5	+1.6
	comp=Z,28nm,0.6s,baz=84,slow=3.3,SNR=162						
FIA0	FINESS Array S	43.37	321	eP	P	15 16 36.4	-0.1
FIA0	FINESS Array S	43.37	321	eP	P	15 16 36.4	-0.1
FINES	FINESS Array B	43.37	321	P	P	15 16 36.4	-0.1
FINES	FINESS Array B	43.37	321	P	P	15 16 36.4	-0.1
FINES				pmax	pmax		
	comp=Z,12nm,0.7s						
FINES	FINESS Array B	43.37	321	P	P	15 16 36.4	-0.1
	comp=Z,12nm,0.7s,baz=32,slow=8.9,SNR=45						
KZA	Kyzart	43.43	269	P	P	15 16 39.3	+1.5
	SNR=24						
EKS2	Erkin-Say	43.50	271	P	P	15 16 39.4	+1.4
	SNR=20						
UCH	Uchtor	43.59	270	P	P	15 16 40.6	+1.5
	SNR=9.1						
NRN	Naryn	43.70	268	eP	P	15 16 41.3	+1.5
	comp=Z,12nm,0.7s						
NRN	Naryn	43.70	268	eP	P	15 16 41.3	+1.5
NRN				pmax	pmax		
	comp=Z,12nm,0.7s						
AML	Almayashu	43.98	271	P	P	15 16 43.8	+1.6
	SNR=28						
MNAS	Manas	44.14	272	iP	P	15 16 44.6	+1.5
MNAS				pmax	pmax		
	comp=Z,26nm,0.6s						
KK31	Karatay Array	44.37	274	eP	P	15 16 45.3	+0.5
	comp=Z,13nm,1.3s						
KK31				ePP	PP	15 18 30.4	+2.3
KK31	Karatay Array	44.37	274	iP	P	15 16 45.3	+0.5
KK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	44.37	274	eP	P	15 16 45.3	+0.5
	comp=Z,13nm,1.3s						
KKAR				ePP	PP	15 18 30.9	+2.7
KKAR	Karatay Array	44.37	274	eP	P	15 16 45.3	+0.5
KKAR				e		15 18 30.9	
KKAR				pmax	pmax		
	comp=Z,13nm,1.3s						
TATO	Taipei	44.53	208	eP	P	15 16 47.0	+0.8
	comp=Z,238nm,1.8s						
YHNB	Yeheng	44.85	208	eP	P	15 16 47.4	-1.5
	comp=Z,51nm,1.5s						
ARSB	Arslanbob	44.95	271	eP	P	15 16 51.0	+1.4
	comp=Z,40nm,1.8s						
NACB	Ninganchiao	45.30	208	eP	P	15 16 50.8	-1.5
	comp=Z,32nm,1.3s						
KSH	Kashi	45.36	267	P	P	15 16 58.1	+5.2
KSH				pP	sP	15 17 03.3	+4.0
KSH				PP	PP	15 18 46.3	+7.6
KSH				S	S	15 23 39.5	+6.5
KSH				pmax	pmax		
	comp=Z,15nm,0.6s						
KSH				pmax	pmax		
	comp=Z,3µm,12.0s						
KSH				LR	LR		
	comp=Z,410nm,7.4s						
KSH				LR	LR		
	comp=Z,470nm,8.9s						
KSH				LR	LR		
	comp=Z,610nm,8.5s						
SFJD	Kangerlussuaq	45.42	7	eP	P	15 16 52.1	-0.7
	comp=Z,55nm,2.0s						
SFJD	Kangerlussuaq	45.42	7	eP	P	15 16 52.1	-0.7
SFJD				pmax	pmax		
	comp=Z,55nm,2.0s						
SSLB	Suanglung	45.79	208	eP	P	15 16 55.5	-0.8
	comp=Z,51nm,1.7s						
VSU	Vasula	45.81	319	⇓iP	P	15 16 56.3	+0.3
VSU				pmax	pmax		
	comp=Z,71nm,1.7s						
VSU	Vasula	45.81	319	eP	P	15 16 55.8	-0.2
VSU				IAmb	IAmb	15 16 57.5	
	comp=Z,40nm,0.8s						
SFK	Sufi-Kurgan	45.88	270	P	P	15 16 58.4	+1.3
SFK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
OBN	Obninsk	46.02	310	eP	P	15 16 57.8	+0.1
OBN	Obninsk	46.02	310	deP	P	15 16 58.1	+0.4
OBN				e		15 18 33.4	
OBN				e		15 18 49.5	
OBN				pmax	pmax		
	comp=Z,38nm,1.7s						
OBN				MLR	MLR		
	comp=Z,589nm,16.0s						
OBN	Obninsk	46.02	310	P	P	15 16 57.9	+0.2
	comp=Z,3.1nm,0.4s,baz=94,slow=9.7,SNR=6.2						
YULB	Yu-li	46.11	208	eP	P	15 17 00.5	+1.7
	comp=Z,54nm,1.8s						
LLLB	Lillooet	46.50	61	eP	P	15 17 04.9	+3.2
	comp=Z,14nm,1.4s						
GYA	Guiyang	46.55	227	⇑iP	P	15 17 02.8	+0.5
GYA				pP	sP	15 17 09.6	+0.9
GYA				PP	PP	15 18 52.8	+1.2
GYA				S	S	15 23 52.4	+2.1
GYA				sS	sS	15 23 59.0	+1.1
GYA				SS	SS	15 27 09.0	-7.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,160nm,5.4s						
GYA				LR	LR		
	comp=Z,780nm,17.7s						
GYA				LR	LR		
	comp=Z,790nm,17.6s						
GYA				LR	LR		
	comp=Z,1µm,17.5s						
NC303	NORSAR Array S	46.75	330	eP	P	15 17 03.0	-0.4
	comp=Z,81nm,1.7s						
NC405	NORSAR Array S	46.78	330	eP	P	15 17 03.6	-0.1
	comp=Z,34nm,0.9s						
NC204	NORSAR Array S	46.82	330	eP	P	15 17 03.6	-0.4
	comp=Z,27nm,1.0s						
NB201	NORSAR Array S	46.92	330	eP	P	15 17 05.0	+0.2
NB2	NORSAR Subarra	46.95	330	P	P	15 17 04.3	-0.7
	comp=Z,8.4nm,0.7s,baz=24,slow=7.9						
NB2	NORSAR Subarra	46.95	330	P	P	15 17 01.2	-3.8
NB2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NB200	NORSAR Array S	46.95	330	eP	P	15 17 04.5	-0.4
NOA	NORSAR Array B	46.95	330	P	P	15 17 04.5	-0.4
NOA	NORSAR Array B	46.95	330	P	P	15 17 04.6	-0.4
NOA	NORSAR Array B	46.95	330	P	P	15 17 04.5	-0.4
	comp=Z,14nm,0.8s,baz=24,slow=7.8,SNR=36						
NBO00	NORSAR Array S	47.04	330	eP	P	15 17 05.0	-0.7
	comp=Z,38nm,1.1s						
FRB	Frobisher Bay	47.10	18	P	P	15 17 04.8	-1.2
FRB				pmax	pmax		
	comp=Z,16nm,1.7s						
NC602	NORSAR Array S	47.17	330	eP	P	15 17 05.8	-0.8
	comp=Z,23nm,1.0s						
NORES	NORESS Array B	47.17	330	P	P	15 17 06.1	-0.5
NORES				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NAO01	NORSAR Array S	47.19	330	eP	P	15 17 06.5	-0.4
	comp=Z,44nm,1.1s						
FCC	Fort Churchill	47.30	36	eP	P	15 17 06.8	-0.9
	comp=Z,6.1nm,0.7s						
FCC	Fort Churchill	47.30	36	eP	P	15 17 06.8	-0.9
FCC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LPSR	Galich'ya Gora	47.48	306	eP	P	15 17 08.5	-0.6
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
SLIT	Slitere, Latvi	47.65	321	eP	P	15 17 10.4	0.0
SLIT				IAmb	IAmb	15 17 11.7	
	comp=Z,233nm,1.0s						
VRH	Novokhopyorsk	47.80	304	eP	P	15 17 10.8	-0.9
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
GAR	Garm	47.98	272	eP	P	15 17 14.5	+1.1
	comp=Z,57nm,0.9s						
GAR	Garm	47.98	272	eP	P	15 17 14.5	+1.1
GAR				pmax	pmax		
	comp=Z,57nm,0.9s						
LSA	Lhasa	48.46	246	eP	P	15 17 18.9	+1.3
	comp=Z,14nm,0.9s						
LSA	Lhasa	48.46	246	P	P	15 17 19.5	+1.9
ISAL	Salakas	48.52	317	eP	P	15 17 17.5	+0.3
ISAL				IAmb	IAmb	15 17 18.7	
	comp=Z,12nm,0.7s						
KONO	Kongsberg	48.55	330	eP	P	15 17 16.9	-0.4
	comp=Z,56nm,1.1s						
KONO	Kongsberg	48.55	330	ceP	P	15 17 18.1	+0.8
KONO				pmax	pmax		
	comp=Z,64nm,1.7s						
IDID	Didziasalis	48.59	317	eP	P	15 17 18.0	+0.2
IDID				IAmb	IAmb	15 17 19.2	
	comp=Z,11nm,0.8s						
VSR	Storozhevoye	48.60	305	ceP	P	15 17 16.8	-1.1
VSR				pmax	pmax		
	comp=Z,57nm,0.7s						
IIGN	Ignalina	48.70	317	eP	P	15 17 18.9	+0.4
IIGN				IAmb	IAmb	15 17 20.0	
	comp=Z,16nm,0.6s						
CHGR	Chuyangaron	48.72	273	eP	P	15 17 19.9	+0.8
	comp=Z,87nm,0.5s						
KMI	Kunming	48.94	231	P	P	15 17 21.1	+0.1
KMI				pP	pP	15 17 25.4	-0.2
KMI				sP	sP	15 17 30.9	+3.5
KMI				pmax	pmax		
	comp=Z,26nm,0.8s						
KMI				pmax	pmax		
	comp=Z,630nm,12.5s						
KMI	Kunming	48.94	231	eP	P	15 17 20.2	-0.8
	comp=Z,19nm,0.6s						
KMI	Kunming	48.94	231	eP	P	15 17 20.2	-0.8
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
FFC	Flin Flon	48.96	44	iP	P	15 17 20.2	-0.4
B08A	Colville Reser	49.29	61	eP	P	15 17 23.0	-0.2
	comp=Z,7.5nm,0.8s						
D05A	Enumclaw	49.40	63	eP	P	15 17 26.9	+2.9
	comp=Z,23nm,1.1s						
LTY	Liberty	49.79	62	eP	P	15 17 27.2	+0.1
	comp=Z,8.3nm,0.9s						
LTY				ePcP	PcP	15 18 47.2	-0.4
LON	Longmire	49.84	64	eP	P	15 17 29.0	+1.5
	comp=Z,7.4nm,1.1s						
LON	Longmire	49.84	64	eP	P	15 17 29.0	+1.5
LON				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NEW	Newport	50.10	59	eP	P	15 17 31.8	+2.4
	comp=Z,5.2nm,1.1s						
NEW	Newport	50.10	59	eP	P	15 17 31.8	+2.4
NEW				pmax	pmax		
	comp=Z,5.0nm,1.1s						
D08A	Wollman Farm,	50.56	61	eP	P	15 17 35.7	+2.8
	comp=Z,31nm,1.9s						
SUW	Suwalki	50.68	318	eP	P	15 17 33.4	-0.3
SUW	Suwalki	50.68	318	eP	P	15 17 33.3	-0.4
	comp=Z,56nm,0.7s						
SUW	Suwalki	50.68	318	eP	P	15 17 33.4	-0.3
KLNR	Kaliningrad	50.89	321	deP	P	15 17 35.3	+0.1
KLNR				pmax	pmax		
	comp=Z,111nm,1.5s						
E08A	Dider Farm, El	51.00	62	eP	P	15 17 36.7	+0.5
	comp=Z,10nm,1.0s						
F07A	Phinny Hill Vi	51.23	63	eP	P	15 17 41.5	+3.7
	comp=Z,16nm,0.9s						
E09A	Wood Farm, Sta	51.29	61	eP	P	15 17 41.7	+3.4
	comp=Z,8.8nm,1.1s						
H04A	Detroit Lake	51.51	65	eP	P	15 17 43.0	+2.9
	comp=Z,8.4nm,0.9s						
NIL	Nilore	51.55	266	eP	P	15 17 41.5	+1.0
	comp=Z,22nm,0.9s						
NIL	Nilore	51.55	266	eP	P	15 17 41.5	+1.0
NIL				pmax	pmax		
	comp=Z,22nm,0.9s						
BSD	Bornholm Skovb	51.65	325	iP	P	15 17 40.6	-0.3
BSD				i		15 18 09.2	
BSD	Bornholm Skovb	51.65	325	iP	P	15 17 40.6	-0.3
AKASG	Malin Array Be	52.03	312	P	P	15 17 43.1	-0.6
AKASG	Malin Array Be	52.03	312	P	P	15 17 43.2	-0.6
AKASG	Malin Array Be	52.03	312	P	P	15 17 43.1	-0.6
	comp=Z,17nm,0.7s,baz=29,slow=8.3,SNR=19						
AKBB	Malin Array Si	52.03	312	eP	P	15 17 43.3	-0.5
	comp=Z,17nm,0.8s						
KIEV	Kiev	52.04	312	eP	P	15 17 42.9	-0.9
	comp=Z,16nm,0.8s						
KIEV	Kiev	52.04	312	⇑iP	P	15 17 43.3	-0.6
KIEV	Kiev	52.04	312	iP	P	15 17 43.3	-0.6
	SNR=11						
KIEV	Kiev	52.04	312	⇑eP	P	15 17 43.1	-0.8
KIEV				pmax	pmax		
	comp=Z,17nm,0.8s						
AK11	Malin Array Si	52.07	312	eP	P	15 17 43.1	-1.0
F10A	Beach Ranch, E	52.07	61	eP	P	15 17 46.2	+1.9
	comp=Z,7.2nm,0.9s						
G08A	Pilot Rock	52.09	62	eP	P	15 17 48.0	+3.5
	comp=Z,4.9nm,0.8s						
KEBM	Edson Butte	52.33	68	eP	P	15 17 47.4	+1.1
	comp=Z,176nm,1.8s						
KBL	Kabul	52.38	270	eP	P	15 17 46.2	-0.7
	comp=Z,10nm,0.8s						
KBL	Kabul	52.38	270	eP	P	15 17 46.2	-0.7
KBL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PINE	Pine Mountain	52.72	65	eP	P	15 17 50.1	+0.8
	comp=Z,14nm,0.8s						
J04D	Umpqua Nationa	52.79	66	P	P	15 17 50.8	+0.9
	baz=331						
QIZ	Qiongzhong	52.79	220	eP	P	15 17 50.9	+1.1
	comp=Z,66nm,1.6s						
I07A	Izee	52.96	63	eP	P	15 17 51.9	+0.9
	comp=Z,3.7nm,0.8s						
BMO	Blue Mountains	53.03	61	eP	P	15 17 53.0	+1.6
	comp=Z,3.0nm,1.0s						
BMO	Blue Mountains	53.03	61	eP	P	15 17 53.0	+1.6
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HUMO	Hull Mountain	53.05	67	eP	P	15 17 53.2	+1.7
	comp=Z,39nm,1.9s						
J05D	Fort Rock, OR	53.06	65	P	P	15 17 53.1	+1.3
	baz=332						
HRY	Holter Researc	53.18	56	eP	P	15 17 53.2	+0.6
HRY				ePcP	PcP	15 18 59.9	-0.5
GEYT	Alibeck	53.56	282	P	P	15 17 56.3	+1.0
GEYT	Alibeck	53.56	282	P	P	15 17 56.3	+1.0
	comp=Z,9.5nm,0.5s,baz=349,slow=6.0,SNR=18						
GYA0B	ALIBECK ARRAY	53.56	282	eP	P	15 17 56.1	+0.7
	comp=Z,12nm,0.6s						
KVAR	Kislovodsk Arr	53.81	298	P	P	15 17 58.6	+1.4
KVAR	Kislovodsk Arr	53.81	298	P	P	15 17 58.6	+1.4
	comp=Z,12nm,0.8s,baz=270,slow=19,SNR=13						
KIV	Kislovodsk	53.81	298	⇑iP	P	15 17 58.0	+0.9
KIV	Kislovodsk	53.81	298	iP	P	15 17 58.2	+1.0
	SNR=8.0						
KIV	Kislovodsk	53.81	298	eP	P	15 17 58.1	+0.9
KIV				pmax	pmax		
	comp=Z,41nm,1.0s						
NCK	Nalchik	53.91	297	⇓eP	P	15 17 59.0	+1.2
NCK				pmax	pmax		
	comp=Z,18nm,0.5s						
DGMT	Dagmar	53.94	49	eP	P	15 17 57.5	-0.4
	comp=Z,47nm,1.9s						
KBZ	Khabaz	53.94	298	P	P	15 17 59.0	+1.0
KBZ	Khabaz	53.94	298	P	P	15 17 59.0	+1.0
	comp=Z,20nm,0.8s,baz=56,slow=3.9,SNR=55						
DLMT	Dillon	54.13	57	eP	P	15 18 00.4	+0.8
	comp=Z,6.6nm,1.1s						
BOZ	Bozeman (W)	54.24	56	eP	P	15 18 00.8	+0.5
	comp=Z,4.7nm,1.0s						
BOZ	Bozeman (W)	54.24	56	eP	P	15 18 00.8	+0.5
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LVV	L'vov	54.27	316	eP	P	15 17 59.6	-0.7
KHMM	Horse Mountain	54.30	69	eP	P	15 18 01.8	+1.0
	comp=Z,28nm,1.2s						
NEY	Neytrino	54.43	298	⇑eP	P	15 18 03.0	+1.2
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZEI	Tsey	54.43	297	eP	P	15 18 01.3	-0.5
ZEI				pmax	pmax		
	comp=Z,13nm,0.8s						
MCMT	McKenzie Canyo	54.53	58	eP	P	15 18 02.9	+0.3
MOD	Modoc Plateau	54.60	65	eP	P	15 18 03.2	+0.1
	comp=Z,7.1nm,0.8s						
ULM	Lac du Bonnet	54.61	42	eP	P	15 18 01.3	-1.5
	comp=Z,29nm,1.6s						
ULM	Lac du Bonnet	54.61	42	P	P	15 18 01.6	-1.2
ULM				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ULM	Lac du Bonnet	54.61	42	P	P	15 18 01.6	-1.2
	comp=Z,3.4nm,0.5s,baz=326,slow=9.5,SNR=5.4						
GCMT	Greycliff	54.69	55	eP	P	15 18 03.6	0.0
WVOR	Wild Horse Val	54.71	64	eP	P	15 18 06.2	+2.4
	comp=Z,4.4nm,0.8s						
KWP	Kalwaria Pacla	54.79	316	eP	P	15 18 03.4	-0.7
	comp=Z,669nm,0.6s						
KWP	Kalwaria Pacla	54.79	316	eP	P	15 18 03.4	-0.7
ANN	Anapa	54.80	303	eP	P	15 17 57.7	-6.5
ANN				e		15 20 02.7	
ANN				eS	S	15 25 34.0	-10
ANN				pmax	pmax		
	comp=Z,68nm,1.5s						
EKA	Eskdalemuir Ar	54.83	337	P	P	15 18 03.9	-0.4
WDC	Whiskeytown Da	54.98	68	eP	P	15 18 07.0	+1.4
	comp=Z,8.8nm,0.8s						
WDC	Whiskeytown Da	54.98	68	eP	P	15 18 07.0	+1.4
WDC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
QLMT	Earthquake Lak	54.98	57	eP	P	15 18 06.2	+0.3
OJC	Ojcow	55.00	319	eP	P	15 18 05.9	+0.2
OJC	Ojcow	55.00	319	eP	P	15 18 05.3	-0.3
	comp=Z,26nm,0.7s						
OJC	Ojcow	55.00	319	eP	P	15 18 05.9	+0.2
TBLG	Delisi	55.08	295	eP	P	15 18 06.7	+0.4
	comp=Z,11nm,0.6s						
TBLG	Delisi	55.08	295	eP	P	15 18 06.7	+0.4
TBLG				pmax	pmax		
	comp=Z,11nm,0.6s						
YHB	Horse Butte	55.13	57	eP	P	15 18 08.0	+1.0
	comp=Z,7.1nm,0.9s						
YHH	Holmes Hill	55.21	56	eP	P	15 18 09.2	+1.6
	comp=Z,8.2nm,0.9s						
KSP	Ksiaz	55.29	322	eP	P	15 18 07.8	+0.1

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KSP   Ksiaz             55.29 322  eP    P      15 18 07.8 +0.1
RLMT  Red Lodge         55.41  55  eP    P      15 18 07.9 -1.0
      comp=Z,20nm,0.8s
RLMT  Red Lodge         55.41  55   P    P      15 18 10.2 +1.3
      baz=334
KIS   Kishinev          55.48 311  eP    P      15 18 07.0 -2.1
KIS   Kishinev          55.48 311  eP    P      15 18 07.0 -2.1
YFT   Old Faithful      55.51  56  eP    P      15 18 11.4 +1.7
      comp=Z,11nm,0.8s
LKWY  Lake              55.55  56  eP    P      15 18 12.3 +2.3
      comp=Z,14nm,0.9s
LKWY  Lake              55.55  56  eP    P      15 18 12.3 +2.3
LKWY                                pmax pmax
      comp=Z,14nm,0.9s
NIE   Niedzica          55.61 318  eP    P      15 18 10.8 +0.7
NIE   Niedzica          55.61 318  eP    P      15 18 10.8 +0.7
CLL   Collm             55.62 324  eP    P      15 18 08.8 -1.2
      comp=Z,32nm,0.9s
CLL   Collm             55.62 324⇑iP     P      15 18 09.7 -0.3
      comp=Z,37nm,1.0s
CLL                                epP   pP     15 18 14.0 -0.7
CLL   Collm             55.62 324⇑iP     P      15 18 09.7 -0.3
CLL                                 pmax pmax
      comp=Z,37nm,1.0s
H17A  Grant Village     55.65  56  eP    P      15 18 12.6 +1.9
      comp=Z,11nm,1.0s
H17A  Grant Village     55.65  56   P    P      15 18 13.7 +3.0
      baz=334
YPP   Pitchstone Pla    55.69  56  eP    P      15 18 13.0 +2.0
      comp=Z,24nm,1.7s
DPC   Dobruska-Polom    55.74 321  eP    P      15 18 11.5 +0.5
DPC   Dobruska-Polom    55.74 321  eP    P      15 18 11.5 +0.5
OKC   Ostrava-Krasne    55.77 320  eP    P      15 18 12.1 +1.0
OKC   Ostrava-Krasne    55.77 320  eP    P      15 18 12.1 +1.0
MDND  Maddock           55.81  46  eP    P      15 18 11.6 +0.2
      comp=Z,24nm,1.1s
BRG   Berggiesshubel    55.81 323  eP    P      15 18 11.2 -0.2
      comp=Z,9.6nm,1.0s
BRG   Berggiesshubel    55.81 323  eP    P      15 18 11.2 -0.2
BRG                                 pmax pmax
      comp=Z,10.0nm,1.0s
KRLC  Kraliky           55.88 321  eP    P      15 18 12.3 +0.3
KRLC  Kraliky           55.88 321  eP    P      15 18 12.3 +0.3
FLWY  Flagg Ranch       55.89  57  eP    P      15 18 13.4 +1.0
      comp=Z,13nm,0.8s
BUR08 Bucovina Ar. S    55.93 314  eP    P      15 18 12.1 -0.3
BUR04 Bucovina Ar. S    55.95 314  eP    P      15 18 12.4 -0.2
BURAR Bucovina Array    55.95 314⇑iP     P      15 18 12.5 -0.1
BURAR Bucovina Array    55.95 314   P    P      15 18 12.5 -0.1
MORC  Moravsky Berou    55.98 320  eP    P      15 18 12.9 +0.2
      comp=Z,18nm,0.9s
MORC  Moravsky Berou    55.98 320⇑iP     P      15 18 13.1 +0.4
MORC  Moravsky Berou    55.98 320  eP    P      15 18 12.9 +0.2
MORC                                pmax pmax
      comp=Z,18nm,0.9s
MORC  Moravsky Berou    55.98 320⇑iP     P      15 18 13.0 +0.4
IMW   Indian Meadow     55.98  57  eP    P      15 18 13.5 +0.4
      comp=Z,3.9nm,0.8s
SCHQ  Schefferville     55.98  20   P    P      15 18 11.4 -1.2
SCHQ  Schefferville     55.98  20   P    P      15 18 11.4 -1.2
      comp=Z,5.1nm,0.7s,baz=351,slow=7.4,SNR=9.5
CHTO  Chiang Mai        56.02 232  eP    P      15 18 12.9 -0.3
      comp=Z,6.9nm,1.1s
CHTO  Chiang Mai        56.02 232  eP    P      15 18 12.9 -0.3
CHTO                                pmax pmax
      comp=Z,7.0nm,1.1s
CHTO  Chiang Mai        56.02 232   P    P      15 18 13.7 +0.4
      comp=Z,32nm,1.1s
CMMT  Chiang Mai        56.02 232   P    P      15 18 13.6 +0.3
      comp=Z,7.2nm,1.0s
LANS  Liptovska Anna    56.07 319  eP    P      15 18 14.6 +1.2
LANS  Liptovska Anna    56.07 319  eP    P      15 18 14.6 +1.2
LANS                               e            15 18 43.9
MOOW  Moose Ponds       56.17  57  eP    P      15 18 15.6 +1.2
      comp=Z,8.1nm,0.9s
FXWY  Fox Creek         56.18  57  eP    P      15 18 15.9 +1.4
      comp=Z,6.8nm,1.2s
TRPA  Tarpa             56.21 316⇑iP     P      15 18 14.8 +0.5
TRPA  Tarpa             56.21 316⇓eP     P      15 18 13.1 -1.2
SKNT  Sakolnakorn       56.30 226   P    P      15 18 15.8 +0.5
      comp=Z,8.7nm,0.8s
BIZ   Bicaz             56.32 313⇑iP     P      15 18 15.7 +0.6
TPAW  Teton Pass        56.34  57  eP    P      15 18 15.8 +0.1
      comp=Z,7.8nm,0.8s
LOHW  Long Hollow       56.34  57  eP    P      15 18 16.2 +0.6
      comp=Z,12nm,1.3s
CM31  Chiang Mai Arr    56.35 232  eP    P      15 18 15.2 -0.4
CMAR  Chiang Mai Arr    56.35 232   P    P      15 18 15.4 -0.3
CMAR  Chiang Mai Arr    56.35 232  i P   P      15 18 15.8 +0.1
CMAR                                pmax pmax
      comp=Z,1.0nm,0.4s
CMAR  Chiang Mai Arr    56.35 232   P    P      15 18 15.4 -0.3
      comp=Z,4.5nm,1.1s,baz=9.4,slow=8.4,SNR=17
CM01  Chiang Mai Arr    56.38 232  eP    P      15 18 15.3 -0.6
BEKR  Beckworth         56.39  67  eP    P      15 18 16.5 +0.6
      comp=Z,7.2nm,0.8s
SNOW  Snow King Moun    56.42  57  eP    P      15 18 16.3  0.0
      comp=Z,7.3nm,0.8s
GDXM  Geysers           56.46  69  eP    P      15 18 16.6 +0.3
      comp=Z,20nm,1.3s
GNI   Garni             56.48 294  eP    P      15 18 15.1 -1.5
      comp=Z,34nm,1.5s
GNI   Garni             56.48 294c iP    P      15 18 17.1 +0.6
GNI                                 pmax pmax
      comp=Z,77nm,1.3s
GNI   Garni             56.48 294   P    P      15 18 18.2 +1.6
      comp=Z,7.3nm,0.7s,baz=165,slow=2.6,SNR=6.7
REDW  Red Top Meadow    56.48  57  eP    P      15 18 17.1 +0.5
      comp=Z,11nm,0.8s
GOPC  GO Pecny, Ondr    56.51 322  eP    P      15 18 16.8 +0.3
GOPC  GO Pecny, Ondr    56.51 322  eP    P      15 18 16.8 +0.3
UTTA  Uttaradit         56.54 230   P    P      15 18 17.7 +0.7
      comp=Z,9.7nm,0.8s,comp=Z,81nm
TESR  Tescani           56.55 312⇑iP     P      15 18 16.6 -0.2
KARS  Kars              56.63 296  eP    P      15 18 17.3 -0.3
      comp=Z,47nm,0.8s
KARS  Kars              56.63 296  eP    P      15 18 17.3 -0.3
KARS                                pmax pmax
      comp=Z,47nm,0.8s
VRAC  Vranov            56.64 321⇑iP     P      15 18 18.1 +0.7
VRAC  Vranov            56.64 321   P    P      15 18 18.1 +0.7
VRAC  Vranov            56.64 321⇑iP     P      15 18 17.8 +0.4
ARCR  ARCALIA           56.67 314⇑iP     P      15 18 17.5 -0.1
VYHS  Vyhne             56.84 319  eP    P      15 18 18.9 +0.1
VYHS  Vyhne             56.84 319  eP    P      15 18 18.9 +0.1
VYHS                               e            15 18 48.5
PAHR  Pah Rah Range     56.87  66  eP    P      15 18 20.2 +0.8
      comp=Z,11nm,1.2s
KRUC  Moravsky          56.92 321⇑iP     P      15 18 19.7 +0.3
AHID  Auburn Hatcher    56.94  58  eP    P      15 18 20.5 +0.6
      comp=Z,7.4nm,0.9s
SUKH  Sukhothai         57.07 231   P    P      15 18 22.1 +1.4
      comp=Z,5.2nm,0.9s
PSZ   Piszkesteto       57.10 318  eP    P      15 18 21.2 +0.4
      comp=Z,22nm,0.9s
PSZ   Piszkesteto       57.10 318⇑iP     P      15 18 21.5 +0.7
PSZ   Piszkesteto       57.10 318  eP    P      15 18 21.2 +0.4
PSZ                                 pmax pmax
      comp=Z,22nm,0.9s
PSZ   Piszkesteto       57.10 318  eP    P      15 18 21.1 +0.3
ODBI  Odobesti          57.12 311⇑iP     P      15 18 22.1 +1.3
VRI   Vrincioaia        57.12 312⇑iP     P      15 18 21.6 +0.8
VRI   Vrincioaia        57.12 312   P    P      15 18 21.6 +0.8
PLOR  Plostina          57.15 312⇑iP     P      15 18 20.8 -0.3
PLOR  Plostina          57.15 312   P    P      15 18 20.7 -0.3
HVU   Hansel Valley     57.27  59  eP    P      15 18 22.9 +0.7
      comp=Z,8.3nm,0.8s
HVU   Hansel Valley     57.27  59  eP    P      15 18 22.9 +0.7
HVU                                 pmax pmax
      comp=Z,8.0nm,0.8s
CFR   Carcaliu          57.33 310⇑iP     P      15 18 21.5 -0.8
CFR   Carcaliu          57.33 310   P    P      15 18 21.5 -0.8
MODS  Modra-Piesok      57.34 320  eP    P      15 18 23.5 +1.1
MODS                                pmax pmax
      comp=Z,15nm,1.0s
MODS  Modra-Piesok      57.34 320  eP    P      15 18 23.5 +1.1
MODS                               e            15 18 52.4
PNTR  Pine Nut          57.35  66  eP    P      15 18 22.8  0.0
      comp=Z,29nm,1.8s
ELK   Elko              57.38  62  eP    P      15 18 23.5 +0.5
      comp=Z,6.1nm,1.0s
ELK   Elko              57.38  62  eP    P      15 18 23.5 +0.5
ELK                                 pmax pmax
      comp=Z,6.0nm,1.0s
DRGR                    57.39 315⇑iP     P      15 18 22.9 +0.1
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DRGR                    57.39 315   P    P      15 18 22.9 +0.1
DOPR  Dopca             57.41 313⇑iP     P      15 18 23.6 +0.7
BW06  Boulder Array     57.44  56  eP    P      15 18 23.4  0.0
      comp=Z,6.6nm,0.8s
BW06  Boulder Array     57.44  56   P    P      15 18 23.9 +0.5
      baz=334
PDAR  Pinedale Array    57.44  56   P    P      15 18 23.7 +0.3
PDAR  Pinedale Array    57.44  56   P    P      15 18 23.7 +0.3
      comp=Z,5.4nm,0.7s,baz=3.0,slow=2.8,SNR=23
KHC   Kasperske Hory    57.52 323  eP    P      15 18 23.5 -0.2
      comp=Z,7.3nm,1.5s
KHC   Kasperske Hory    57.52 323  eP    P      15 18 24.2 +0.5
KHC   Kasperske Hory    57.52 323  eP    P      15 18 24.2 +0.5
GRA1  Grafenberg Arr    57.53 325  eP    P      15 18 24.0 +0.3
      comp=Z,14nm,0.5s
GRF   Grafenberg Arr    57.53 325  eP    P      15 18 24.0 +0.3
GRF                                 pmax pmax
      comp=Z,14nm,0.5s
GRFO  Grafenberg        57.53 325  eP    P      15 18 24.0 +0.3
      comp=Z,11nm,0.6s
GRFO  Grafenberg        57.53 325  eP    P      15 18 24.0 +0.3
GRFO                                pmax pmax
      comp=Z,11nm,0.6s
PBKT  Sadao Pong        57.53 229  eP    P      15 18 24.0  0.0
PBKT  Sadao Pong        57.53 229   P    P      15 18 24.7 +0.7
      comp=Z,14nm,0.9s
YERR  Yerington         57.56  66  eP    P      15 18 24.7 +0.4
      comp=Z,7.1nm,0.6s
MLR   Muntele Rosu      57.68 312  eP    P      15 18 25.5 +0.6
      comp=Z,15nm,0.8s
MLR   Muntele Rosu      57.68 312⇓iP     P      15 18 26.7 +1.7
MEM   Membach           57.76 329 ⇑P     P      15 18 25.3  0.0
GEC2  GERESS Array S    57.76 323  eP    P      15 18 25.2 -0.3
      comp=Z,14nm,1.0s
GEC2  GERESS Array S    57.76 323  eP    P      15 18 25.2 -0.3
GEC2                                pmax pmax
      comp=Z,14nm,1.0s
GERES GERESS Array B    57.76 323   P    P      15 18 25.4 -0.1
GERES GERESS Array B    57.76 323   P    P      15 18 25.4 -0.1
GERES GERESS Array B    57.76 323   P    P      15 18 25.4 -0.1
      comp=Z,6.3nm,0.9s,baz=38,slow=6.8,SNR=37
GEA0  GERESS Array S    57.77 323  eP    P      15 18 25.0 -0.5
HWUT  Hardware Ranch    57.83  59  eP    P      15 18 27.6 +1.5
      comp=Z,20nm,1.4s
EYMN  Ely               57.85  40  eP    P      15 18 27.2 +1.3
      comp=Z,14nm,1.1s
CHAI  Chaiyaphum        57.88 228   P    P      15 18 26.9 +0.5
      comp=Z,4.7nm,0.9s
TLB   Topalu            57.90 310⇑iP     P      15 18 27.0 +0.7
TLB   Topalu            57.90 310   P    P      15 18 26.9 +0.7
KVN   Kaiserville       57.91  65  eP    P      15 18 27.5 +0.8
      comp=Z,6.6nm,0.7s
KVN   Kaiserville       57.91  65  eP    P      15 18 27.5 +0.8
KVN                                 pmax pmax
      comp=Z,7.0nm,0.7s
RSSD  Black Hills       57.92  51  eP    P      15 18 26.9 +0.2
      comp=Z,5.3nm,0.8s
RSSD  Black Hills       57.92  51  eP    P      15 18 27.0 +0.2
RSSD                                pmax pmax
      comp=Z,5.0nm,0.8s
WAKR  Walker            57.92  67  eP    P      15 18 26.8  0.0
      comp=Z,13nm,1.2s
BGU   Big Grassy Mou    57.96  60  eP    P      15 18 27.4 +0.5
      comp=Z,6.6nm,1.5s
VOIR                    57.99 313⇑iP     P      15 18 26.5 -0.6
VOIR                    57.99 313   P    P      15 18 26.4 -0.6
CMB   Columbia Colle    58.01  68  eP    P      15 18 28.0 +0.7
      comp=Z,10nm,1.4s
CMB   Columbia Colle    58.01  68  eP    P      15 18 28.0 +0.7
CMB                                 pmax pmax
      comp=Z,10.0nm,1.4s
BCLA  Clavier           58.08 329 ⇑P     P      15 18 27.5  0.0
CONA  Conrad Observa    58.10 321  i pP  P      15 18 28.4 +0.6
      comp=Z,10nm,1.3s
RYN   Ryan              58.13  66  eP    P      15 18 27.9 -0.4
      comp=Z,4.9nm,0.9s
SIRR  Siria             58.16 316⇑iP     P      15 18 28.5 +0.4
SOP   Sopron            58.16 320  eP    P      15 18 28.1  0.0
ARR   Arges             58.17 313⇑iP     P      15 18 29.2 +0.9
TCUT  Toone Canyon      58.32  59  eP    P      15 18 30.1 +0.4
      comp=Z,22nm,1.0s
NV01  Mina Array Sit    58.39  66  eP    P      15 18 30.5 +0.4
NVAR  Mina Array Bea    58.39  66   P    P      15 18 30.8 +0.6
NVAR  Mina Array Bea    58.39  66   P    P      15 18 30.8 +0.6
      comp=Z,6.2nm,0.8s,baz=317,slow=5.2,SNR=19
NV11  Mina Array Sit    58.44  65  eP    P      15 18 31.0 +0.6
      comp=Z,0.4nm,1.1s
K22A  Casper            58.50  54  eP    P      15 18 29.9 -0.8
      comp=Z,20nm,1.3s
UMPA  Umpang Tak        58.50 231   P    P      15 18 33.9 +3.1
      comp=Z,3.7nm,1.0s,comp=Z,111nm
DOU   Dourbes           58.53 330 ⇑P     P      15 18 30.5 -0.1
OPA   Opana             58.56 110  eP    P      15 18 31.9 +0.7
      comp=Z,74nm,1.0s
OPA   Opana             58.56 110  eP    P      15 18 31.9 +0.7
OPA                                 pmax pmax
      comp=Z,74nm,1.0s
MOA   Molln             58.56 322  i pP  P      15 18 31.3 +0.4
      comp=Z,12nm,1.1s
CTU   Camp Tracy        58.59  59  eP    P      15 18 30.9 -0.6
      comp=Z,7.2nm,0.9s
BAIF  Baives            58.64 330  eP    P      15 18 31.0 -0.4
BAIF                                pmax pmax
      comp=Z,18nm,1.0s
GZR   Gura Zlata        58.66 314⇑iP     P      15 18 32.0 +0.2
GZR   Gura Zlata        58.66 314   P    P      15 18 31.9 +0.2
DUG   Dugway, Tooele    58.69  60  eP    P      15 18 33.2 +1.1
      comp=Z,10nm,0.9s
DUG   Dugway, Tooele    58.69  60   P    P      15 18 33.5 +1.5
      baz=334
BZS   Buzias            58.77 315⇑iP     P      15 18 32.4  0.0
BZS   Buzias            58.77 315   P    P      15 18 32.4  0.0
JLU   Jordanelle        58.77  59  eP    P      15 18 33.2 +0.4
      comp=Z,12nm,1.0s
MDPB  Devils Postpil    58.83  67  eP    P      15 18 33.4 +0.2
      comp=Z,11nm,0.8s
STU   Stuttgart         58.84 326  eP    P      15 18 32.8 -0.1
      comp=Z,18nm,0.7s
STU   Stuttgart         58.84 326  eP    P      15 18 32.8 -0.1
STU                                 pmax pmax
      comp=Z,19nm,0.7s
UTHA  Uthaitani         58.94 230   P    P      15 18 35.0 +1.1
      comp=Z,7.7nm,0.8s,comp=Z,66nm
MORH  Mrgy, Hungar      59.00 318  eP    P      15 18 33.0 -0.9
NLU   North Lily Min    59.15  60  eP    P      15 18 36.4 +1.0
      comp=Z,14nm,1.0s
RWWY  Rawlins           59.15  55  eP    P      15 18 36.4 +0.9
      comp=Z,44nm,2.0s
JOHN  Johnston Islan    59.23 124  eP    P      15 18 35.9 +0.1
      comp=Z,378nm,1.3s
MPU   Maple Canyon      59.24  59  eP    P      15 18 36.5 +0.5
      comp=Z,7.7nm,1.1s
ILGA  Ilgaz             59.37 304  eP    P      15 18 35.8 -1.1
      comp=Z,24nm,0.9s
R11A  Troy Canyon, C    59.41  63  eP    P      15 18 37.3 +0.1
      comp=Z,10nm,1.1s
R11A  Troy Canyon, C    59.41  63   P    P      15 18 37.9 +0.8
      baz=334
BFO   Black Forest      59.45 326  i P   P      15 18 37.3 +0.2
SOKA  Soboth            59.48 321  i pP  P      15 18 38.5 +1.1
      comp=Z,11nm,1.2s
KBA   Koelnbreinsper    59.50 322  i pP  P      15 18 38.8 +1.1
      comp=Z,20nm,1.1s
MDVR  Moldovita         59.52 315⇑iP     P      15 18 37.0 -0.6
E39A  Mellen            59.54  40   P    P      15 18 36.2 -1.5
      baz=339
CDF   Champ du Feu      59.59 327  eP    P      15 18 37.6 -0.6
CDF                                 pmax pmax
      comp=Z,14nm,0.8s
F38A  Pierce - Schro    59.60  41   P    P      15 18 36.9 -1.2
      baz=339
SIRT  Sirnak            59.65 295  eP    P      15 18 38.3 -0.4
      comp=Z,30nm,1.0s
WATA  Walderalm         59.67 324  epP   P      15 18 39.5 +0.7
      comp=Z,7.1nm,0.7s
WTTA  Wattenberg        59.73 324  i pP  P      15 18 39.8 +0.6
      comp=Z,12nm,0.9s
OBKA  Obir              59.75 321  i pP  P      15 18 40.0 +0.8
      comp=Z,18nm,1.0s
MOTA  Moosalm           59.77 324   pP   P      15 18 39.8 +0.3
      comp=Z,10nm,1.1s
ECH   Echery            59.80 327  eP    P      15 18 39.2 -0.3
      comp=Z,11nm,0.8s
ECH   Echery            59.80 327  eP    P      15 18 39.2 -0.3
ECH                                 pmax pmax
      comp=Z,11nm,0.8s
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PSUT  Pine Spring       59.83  62  eP    P      15 18 40.8 +0.7
      comp=Z,11nm,0.9s
MYKA  Terra Mystica     59.85 322  i P   P      15 18 38.3 -1.6
      comp=Z,9.0nm,1.4s
SQTA  Sankt Quirin      59.86 324  i pP  P      15 18 40.5 +0.4
      comp=Z,16nm,1.1s
F39A  Loretta           59.88  41   P    P      15 18 38.8 -1.3
      baz=339
GRAC  Grapevine Rang    60.00  66   P    P      15 18 43.0 +1.9
      baz=334
P17A  Butcher Ranch,    60.02  59  eP    P      15 18 42.2 +0.9
      comp=Z,8.2nm,0.8s
P18A  Preston Nutter    60.05  58  eP    P      15 18 41.5 -0.2
SPMN  Marine on St.     60.05  42  eP    P      15 18 40.7 -0.6
      comp=Z,13nm,1.0s
FETA  Feichten          60.16 324   P    P      15 18 41.0 -1.1
      comp=Z,5.5nm,1.0s
HAU   Haudompre         60.17 328  eP    P      15 18 41.3 -0.8
HAU                                 pmax pmax
      comp=Z,30nm,1.2s
SRDT  SRDT              60.18 230   P    P      15 18 48.6 +6.2
O20A  White River Ci    60.23  57  eP    P      15 18 44.2 +1.4
      comp=Z,27nm,1.8s
TCRU  Three Creeks R    60.23  61  eP    P      15 18 42.9  0.0
      comp=Z,8.1nm,0.9s
HINF  Hinteralfeld      60.25 327  eP    P      15 18 41.7 -0.9
HINF                                pmax pmax
      comp=Z,14nm,1.1s
N23A  Red Feather La    60.27  54  eP    P      15 18 43.4 +0.2
      comp=Z,14nm,1.4s
Q16A  Castle Valley     60.38  60  eP    P      15 18 44.0 +0.2
      comp=Z,8.7nm,0.8s
ECSD  EROS Data Cent    60.41  46  eP    P      15 18 42.2 -1.5
      comp=Z,6.5nm,0.6s
ECSD  EROS Data Cent    60.41  46   P    P      15 18 42.9 -0.9
      baz=338
MSU   Marysvale         60.41  61  eP    P      15 18 44.8 +0.7
MSU   Marysvale         60.41  61  eP    P      15 18 44.8 +0.7
SRU   San Rafael Swe    60.42  59  eP    P      15 18 43.8 -0.3
      comp=Z,14nm,1.1s
SRU   San Rafael Swe    60.42  59  eP    P      15 18 43.8 -0.3
SRU                                 pmax pmax
      comp=Z,14nm,1.1s
TPNV  Topopah Spring    60.43  65  eP    P      15 18 45.0 +0.8
      comp=Z,5.6nm,1.0s
TPNV  Topopah Spring    60.43  65  eP    P      15 18 45.0 +0.8
TPNV                                pmax pmax
      comp=Z,6.0nm,1.0s
DAC   Darwin (Calif)    60.57  66  eP    P      15 18 45.9 +0.7
      comp=Z,4.9nm,1.1s
DAC   Darwin (Calif)    60.57  66  eP    P      15 18 45.9 +0.7
DAC                                 pmax pmax
      comp=Z,5.0nm,1.1s
BR101 Keskin Array S    60.59 303  eP    P      15 18 45.6 +0.4
BRTR  Keskin Array B    60.59 303   P    P      15 18 45.6 +0.4
BRTR  Keskin Array B    60.59 303  i P   P      15 18 45.5 +0.4
BRTR                                pmax pmax
      comp=Z,6.0nm,0.8s
BRTR  Keskin Array B    60.59 303   P    P      15 18 45.6 +0.4
      comp=Z,5.9nm,0.8s,baz=50,slow=3.9,SNR=27
DIVS  Divibare          60.61 316  eP    P      15 18 45.0 -0.3
      comp=Z,20nm,1.7s
D47A  Chapleau          60.63  34   P    P      15 18 44.2 -1.0
      baz=342
FUORN Ofenpass-Fuorn    60.65 324  eP    P      15 18 45.3 -0.3
      comp=Z,8.0nm,0.8s
G40A  Rib Lake          60.67  40  eP    P      15 18 44.2 -1.3
      comp=Z,14nm,1.0s
G40A  Rib Lake          60.67  40   P    P      15 18 44.5 -1.0
      baz=340
ANTO  Ankara            60.73 304  eP    P      15 18 46.3 +0.2
      comp=Z,18nm,1.1s
ANTO  Ankara            60.73 304  eP    P      15 18 46.3 +0.2
ANTO                                pmax pmax
      comp=Z,18nm,1.1s
FLN   La Foliniere      60.74 333  eP    P      15 18 44.9 -1.0
FLN                                 pmax pmax
      comp=Z,17nm,0.9s
MPMC  Manual Prospec    60.80  66   P    P      15 18 48.4 +1.7
      baz=334
ISA   Isabella, Lake    60.81  67  eP    P      15 18 48.0 +1.3
      comp=Z,6.1nm,1.4s
MTPU  Mount Pierson     60.84  61  eP    P      15 18 48.8 +1.6
      comp=Z,25nm,1.6s
LDF   La Druitiere      60.84 333  eP    P      15 18 45.6 -1.0
LDF                                 pmax pmax
      comp=Z,22nm,0.9s
CCUT  Cedar City        60.88  62  eP    P      15 18 47.6 +0.3
      comp=Z,3.3nm,0.8s
SZCU  Shurtz Canyon     60.94  62  eP    P      15 18 47.7  0.0
      comp=Z,20nm,1.9s
CLF   Chambon-Foret     60.96 331  eP    P      15 18 46.7 -0.7
      comp=Z,154nm,1.9s
TUE   Stuetta           60.99 325  eP    P      15 18 47.1 -0.7
      comp=Z,12nm,0.9s
VTS   Vitosha           61.09 313  eP    P      15 18 47.6 -0.9
      comp=Z,4.4nm,0.8s
VTS   Vitosha           61.09 313⇑iP     P      15 18 48.7 +0.1
VTS   Vitosha           61.09 313  eP    P      15 18 47.7 -0.9
VTS                                 pmax pmax
      comp=Z,4.0nm,0.8s
GRR   Gorron            61.17 333  eP    P      15 18 47.9 -0.9
GRR                                 pmax pmax
      comp=Z,16nm,0.9s
D50A  G1974 Best Tow    61.21  32   P    P      15 18 47.6 -1.5
      baz=343
SHPR  Sheep Range       61.21  64  eP    P      15 18 49.7 +0.2
      comp=Z,6.3nm,0.9s
KHLU  Kahalu`u          61.25 109  eP    P      15 18 50.5 +0.7
      comp=Z,213nm,1.5s
PKCU  Pink Cliffs       61.33  61  eP    P      15 18 51.8 +1.2
      comp=Z,32nm,1.1s
ISCO  Idaho Springs     61.37  55  eP    P      15 18 51.6 +0.9
      comp=Z,3.8nm,0.9s
ISCO  Idaho Springs     61.37  55  eP    P      15 18 51.6 +0.9
ISCO                                pmax pmax
      comp=Z,4.0nm,0.9s
LOR   Lormes            61.38 329  eP    P      15 18 49.2 -1.1
LOR                                 pmax pmax
      comp=Z,16nm,0.8s
PHET  Kaeng Krachan     61.39 229   P    P      15 18 52.3 +1.6
      comp=Z,6.2nm,0.8s
LCMT  Little Creek M    61.41  62  eP    P      15 18 51.2 +0.4
      comp=Z,6.5nm,0.9s
OGNE  Ogallala          61.42  51  eP    P      15 18 51.0 +0.3
      comp=Z,15nm,0.7s
PV21  Cone Mtn., Par    61.43  58  eP    P      15 18 51.4 +0.4
      comp=Z,9.3nm,1.0s
PV09  Paradox Valley    61.43  58  eP    P      15 18 51.0 -0.1
SMCO  Snowmass          61.51  56  eP    P      15 18 52.2 +0.5
      comp=Z,6.5nm,0.8s
PV23  Carpenter Ridg    61.51  58  eP    P      15 18 51.7 +0.1
      comp=Z,28nm,1.2s
SENIN Lac Senin/Sane    61.54 326  eP    P      15 18 51.0 -0.6
      comp=Z,34nm,1.8s
KNB   Kanab             61.55  62  eP    P      15 18 52.2 +0.4
      comp=Z,10nm,1.0s
KNB   Kanab             61.55  62  eP    P      15 18 52.2 +0.4
KNB                                 pmax pmax
      comp=Z,10.0nm,1.0s
PV10  Paradox Valley    61.57  58  eP    P      15 18 52.5 +0.5
      comp=Z,22nm,1.0s
PV14  Lion Creek, Pa    61.58  58  eP    P      15 18 52.4 +0.4
      comp=Z,21nm,1.0s
PV04  Paradox Valley    61.60  58  eP    P      15 18 52.3 +0.2
      comp=Z,14nm,1.0s
ROSF  Rostrenen         61.63 335  eP    P      15 18 51.3 -0.6
ROSF                                pmax pmax
      comp=Z,92nm,1.6s
PV20  West Nyswonger    61.63  58  eP    P      15 18 52.4  0.0
      comp=Z,12nm,0.9s
SSF   Saint Saulge      61.64 329  eP    P      15 18 51.1 -0.9
SSF                                 pmax pmax
      comp=Z,17nm,1.0s
PV07  Paradox Valley    61.65  58  eP    P      15 18 52.3 -0.2
      comp=Z,6.5nm,1.0s
PV19  Morning Glory     61.65  58  eP    P      15 18 52.4 -0.1
      comp=Z,13nm,1.1s
I39A  Houston           61.66  42  eP    P      15 18 50.4 -1.8
      comp=Z,11nm,0.8s
I39A  Houston           61.66  42   P    P      15 18 50.9 -1.3
      baz=339
KHU   Kahuku            61.67 109  eP    P      15 18 54.7 +1.9
      comp=Z,561nm,1.9s
D52A  ZEK Kipawa Sen    61.67  31   P    P      15 18 51.0 -1.2
      baz=343
PV16  Nyswonger Mesa    61.67  58  eP    P      15 18 52.2 -0.4
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	comp=Z,10nm,0.9s						
PV17	East Wray Mesa	61.69	58	*e*P	P	15 18 53.1	+0.4
	comp=Z,13nm,0.9s						
PUH	Pauahi	61.70	109	*e*P	P	15 18 52.7	-0.1
	comp=Z,112nm,1.1s						
PV11	David Mesa, Pa	61.70	58	*e*P	P	15 18 52.7	-0.1
	comp=Z,22nm,1.3s						
PV12	Saucer Basin,	61.70	58	*e*P	P	15 18 53.5	+0.7
	comp=Z,14nm,1.1s						
GSC	Goldstone, Bar	61.72	66	*e*P	P	15 18 52.8	-0.1
	comp=Z,5.8nm,1.3s						
GSC	Goldstone, Bar	61.72	66	*e*P	P	15 18 52.8	-0.1
GSC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PV03	Paradox Valley	61.75	58	*e*P	P	15 18 52.9	-0.3
	comp=Z,14nm,1.2s						
PV15	Paradox Valley	61.79	58	*e*P	P	15 18 53.1	-0.3
	comp=Z,11nm,0.8s						
PV05	Paradox Valley	61.83	58	*e*P	P	15 18 54.6	+0.9
	comp=Z,7.1nm,0.6s						
PV02	Paradox Valley	61.83	58	*e*P	P	15 18 53.0	-0.7
PV13	Radium Mtn., P	61.84	58	*e*P	P	15 18 53.0	-0.8
PV01	Paradox Valley	61.95	58	*e*P	P	15 18 54.8	+0.2
	comp=Z,9.8nm,1.0s						
SMF	Signal de Mont	61.98	329	*e*P	P	15 18 54.1	-0.2
SMF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BGF	Bois d'Agland	62.25	330	*e*P	P	15 18 55.9	-0.3
BGF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
J40A	Soldiers Grove	62.28	41	P	P	15 18 55.4	-1.0
	baz=340						
HEC	Hector,Ludlow	62.31	66	P	P	15 18 57.5	+0.6
	baz=335						
F51A	Arnstein	62.38	32	P	P	15 18 55.8	-1.2
	baz=343						
BFSC	Mount Baldy Ra	62.38	67	P	P	15 18 58.5	+1.2
	baz=335						
E53A	Dumoine, Ponti	62.39	30	P	P	15 18 56.1	-1.0
	baz=344						
GLMI	Grayling	62.41	36	*e*P	P	15 18 59.1	+1.8
	comp=Z,110nm,1.4s						
LPL	La Plagne	62.46	327	*e*P	P	15 18 57.7	-0.1
LPL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LDFC	Landfair	62.52	65	*e*P	P	15 18 59.4	+1.1
	comp=Z,30nm,1.1s						
K39A	Oelwein	62.64	43	P	P	15 18 56.9	-1.9
	baz=340						
TCF	Toulx Ste Croi	62.64	330	*e*P	P	15 18 57.9	-0.8
TCF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MFF	Saint Martin d	62.77	332	*e*P	P	15 18 59.1	-0.5
MFF				pmax	pmax		
	comp=Z,43nm,1.2s						
K40A	Colesburg	62.84	42	P	P	15 18 58.6	-1.4
	baz=340						
W13A	Hualapai Mount	62.92	64	*e*P	P	15 19 01.2	+0.1
	comp=Z,5.2nm,0.9s						
BUKO	Buck Lake	62.95	32	P	P	15 18 59.8	-1.0
	baz=343						
MBDF	Montbardon	63.21	326	*e*P	P	15 19 04.1	+1.4
MBDF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ORIF	Oris-en-Rattie	63.21	327	*e*P	P	15 19 02.4	-0.3
ORIF				pmax	pmax		
	comp=Z,15nm,0.8s						
SDCO	Great Sand Dun	63.29	55	*e*P	P	15 19 04.1	+0.6
	comp=Z,12nm,1.4s						
SDCO	Great Sand Dun	63.29	55	P	P	15 19 03.4	-0.1
	baz=337						
IRM	Iron Mountain	63.34	65	P	P	15 19 04.4	+0.9
	baz=335						
WUAZ	Wupatki	63.40	61	*e*P	P	15 19 03.5	-0.6
	comp=Z,6.1nm,1.1s						
G53A	Haliburton	63.41	32	P	P	15 19 03.1	-0.7
	baz=344						
L40A	Anamosa	63.41	42	*e*P	P	15 19 04.3	+0.4
	comp=Z,13nm,1.0s						
PDMCI	Parker Dam,Lak	63.55	64	P	P	15 19 06.3	+1.3
	baz=336						
SADO	Sadowa	63.64	32	*e*P	P	15 19 04.4	-1.0
	comp=Z,51nm,1.8s						
RJF	Les Rejaudoux	63.72	330	*e*P	P	15 19 05.3	-0.6
RJF				pmax	pmax		
	comp=Z,12nm,0.9s						
PLVO	Plevna	63.79	30	P	P	15 19 05.6	-0.8
	baz=344						
L42A	Oliver, Polo	63.86	41	*e*P	P	15 19 06.6	-0.3
	comp=Z,15nm,0.9s						
Y12C	Blythe	63.92	65	*e*P	P	15 19 07.2	-0.1
	comp=Z,11nm,0.8s						
CAF	Calviac	63.97	330	*e*P	P	15 19 07.5	-0.1
KKM	Kota Kinabalu	63.98	210	*e*P	P	15 19 06.8	-1.2
	comp=Z,35nm,1.1s						
CBKS	Cedar Bluff	64.07	50	*e*P	P	15 19 06.6	-1.8
	comp=Z,16nm,0.8s						
CBKS	Cedar Bluff	64.07	50	*e*P	P	15 19 06.6	-1.8
CBKS				pmax	pmax		
	comp=Z,15nm,0.8s						
LFF	La Frestale	64.21	331	*e*P	P	15 19 08.8	-0.3
LFF				pmax	pmax		
	comp=Z,12nm,0.6s						
W18A	Petrified Fore	64.31	60	*e*P	P	15 19 10.7	+0.5
	comp=Z,3.0nm,0.8s						
X16A	Lo Mia Camp, P	64.37	62	*e*P	P	15 19 10.9	+0.3
	comp=Z,4.4nm,0.8s						
MOQ	Mont Orford	64.41	27	*e*P	P	15 19 09.5	-1.0
GLA	Glamis	64.45	65	*e*P	P	15 19 11.2	+0.3
	comp=Z,11nm,1.0s						
GLA	Glamis	64.45	65	*e*P	P	15 19 11.2	+0.3
GLA				pmax	pmax		
	comp=Z,11nm,1.0s						
AGG	Agios Georgios	64.68	312	*e*P	P	15 19 11.4	-0.9
	comp=Z,83nm,1.9s						
AGG	Agios Georgios	64.68	312	*e*P	P	15 19 11.4	-0.9
AGG				pmax	pmax		
	comp=Z,83nm,1.9s						
KSU1	Kansas State U	64.71	48	*e*P	P	15 19 10.7	-1.8
	comp=Z,16nm,0.8s						
X18A	Snowflake	64.77	61	*e*P	P	15 19 13.2	0.0
	comp=Z,24nm,1.9s						
N41A	Harden Midland	64.78	43	*e*P	P	15 19 11.6	-1.3
	comp=Z,18nm,1.1s						
PKME	Peaks-Kenny Pk	64.95	24	*e*P	P	15 19 12.6	-1.3
	comp=Z,90nm,1.8s						
LMN	Caledonia Moun	65.04	21	*e*P	P	15 19 14.4	-0.2
MTLF	Montolieu	65.47	329	*e*P	P	15 19 17.3	-0.1
MTLF				pmax	pmax		
	comp=Z,14nm,0.8s						
P41A	Barry, Barry	65.69	43	P	P	15 19 17.2	-1.6
	baz=340						
P42A	Winchester	65.96	43	*e*P	P	15 19 18.3	-2.2
	comp=Z,12nm,0.8s						
P42A	Winchester	65.96	43	P	P	15 19 19.0	-1.6
	baz=340						
HATD	Hatta, Dubai	66.01	277	P	P	15 19 21.0	-0.1
EPF	Esparros	66.13	331	*e*P	P	15 19 20.8	-0.9
EPF				pmax	pmax		
	comp=Z,12nm,0.6s						
FAQ	Al Faqa, Dubai	66.29	277	P	P	15 19 22.4	-0.5
Q41A	Truxton	66.33	43	P	P	15 19 21.0	-2.0
	baz=340						
ETSF	Etsaut	66.42	331	*e*P	P	15 19 23.7	+0.1
ETSF				pmax	pmax		
	comp=Z,31nm,1.6s						
WSAR	Wadi Sarin	66.49	274	P	P	15 19 24.7	+0.5
	comp=Z,2.9nm,0.8s,baz=282,slow=4.9,SNR=3.7						
Q42A	Golden Eagle	66.55	43	P	P	15 19 22.8	-1.5
	baz=341						
O49A	Covington	66.88	38	*e*P	P	15 19 24.3	-2.2
	comp=Z,74nm,1.8s						
O49A	Covington	66.88	38	P	P	15 19 24.6	-1.9
	baz=342						
CCM	Cathedral Cave	67.17	44	*e*P	P	15 19 26.3	-2.0
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	67.17	44	*e*P	P	15 19 26.3	-2.0
CCM	Cathedral Cave	67.17	44	P	P	15 19 26.0	-2.3
	baz=340						
P48A	Milroy	67.31	39	P	P	15 19 27.3	-1.9
	baz=342						
S41A	Jillco Farms,	67.47	44	P	P	15 19 28.6	-1.6
	baz=340						
R44A	Waltonville	67.55	42	P	P	15 19 29.1	-1.6
	baz=341						
S42A	Caledonia	67.55	44	P	P	15 19 29.0	-1.7
	baz=341						
S43A	Fulton Ridge,	67.93	43	P	P	15 19 31.6	-1.6
	baz=341						
T41A	Mountain View	67.98	45	P	P	15 19 32.0	-1.5
	baz=340						
WMOK	Wichita Mounta	68.13	51	*e*P	P	15 19 33.4	-1.1
	comp=Z,3.3nm,0.8s						
WMOK	Wichita Mounta	68.13	51	*e*P	P	15 19 33.4	-1.1
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMOK	Wichita Mounta	68.13	51	P	P	15 19 33.5	-1.0
	baz=339						
T42A	Van Buren	68.17	44	*e*P	P	15 19 32.4	-2.3
	comp=Z,8.3nm,0.8s						
T42A	Van Buren	68.17	44	P	P	15 19 32.8	-1.8
	baz=341						
U40A	Yellville	68.33	46	P	P	15 19 33.8	-1.8
	baz=340						
PGAV	Gavieira, Arco	68.62	337	*e*P	P	15 19 43.3	+5.8
U42A	Revenden	68.77	44	P	P	15 19 36.7	-1.7
	baz=341						
Q54A	Coxs Mills	68.83	35	P	P	15 19 37.1	-1.6
	baz=344						
R51A	Hillsboro	68.85	38	P	P	15 19 37.1	-1.7
	baz=343						
MNTX	Cornudas Mount	68.88	58	*e*P	P	15 19 38.9	-0.2
	comp=Z,4.8nm,0.9s						
MNTX	Cornudas Mount	68.88	58	P	P	15 19 38.9	-0.2
	baz=338						
MVO	Moncorvo	69.22	336	*e*P	P	15 19 41.1	-0.1
	comp=Z,16nm,1.3s						
W41B	Gary Mavity, V	69.60	46	*e*P	P	15 19 41.7	-1.9
	comp=Z,11nm,1.0s						
W41B	Gary Mavity, V	69.60	46	P	P	15 19 41.9	-1.7
	baz=341						
PVIS	Viseu	69.79	337	*e*P	P	15 19 44.5	-0.2
	comp=Z,29nm,2.0s						
WVT	Waverly	69.87	42	*e*P	P	15 19 43.6	-1.6
	comp=Z,15nm,0.9s						
WVT	Waverly	69.87	42	*e*P	P	15 19 43.6	-1.6
WVT				pmax	pmax		
	comp=Z,15nm,0.9s						
WVT	Waverly	69.87	42	P	P	15 19 44.0	-1.2
	baz=342						
MTE	Manteigas	70.04	336	*e*P	P	15 19 46.1	-0.2
X40A	Basin Creek Fa	70.08	46	P	P	15 19 45.1	-1.5
	baz=340						
V46A	Holladay	70.11	42	P	P	15 19 45.1	-1.6
	baz=342						
ESDC	Sonseca Array	70.16	333	*e*P	P	15 19 46.8	-0.2
ESDC	Sonseca Array	70.16	333	P	P	15 19 46.8	-0.2
	comp=Z,4.3nm,0.6s,baz=5.8,slow=6.5,SNR=22						
V47A	Nunnelly	70.24	42	P	P	15 19 46.1	-1.4
	baz=342						
PCBR	Castelo Branco	70.58	336	*e*P	P	15 19 49.0	-0.5
	comp=Z,30nm,1.6s						
W47A	Westpoint	70.77	42	P	P	15 19 49.4	-1.4
	baz=342						
W48A	Pulaski	71.04	41	P	P	15 19 50.8	-1.6
	baz=342						
RAYN	Ar Rayn	71.20	286	*e*P	P	15 19 53.4	-0.1
	comp=Z,18nm,0.8s						
PSI	Prapat	71.21	227	*e*P	P	15 19 52.7	-1.1
	comp=Z,15nm,0.8s						
PSI	Prapat	71.21	227	*e*P	P	15 19 52.7	-1.1
PSI				pmax	pmax		
	comp=Z,15nm,0.8s						
W49A	Belvidere	71.23	41	P	P	15 19 52.0	-1.5
	baz=342						
X47A	Russelville	71.39	42	P	P	15 19 53.1	-1.4
	baz=342						
LTX	Lajitas	71.62	57	*e*P	P	15 19 55.7	-0.4
LTX	Lajitas	71.62	57	*e*P	P	15 19 55.7	-0.4
TXAR	Lajitas Array	71.62	57	P	P	15 19 55.7	-0.4
TXAR	Lajitas Array	71.62	57	P	P	15 19 55.7	-0.4
	comp=Z,0.4nm,0.5s,baz=355,slow=3.8,SNR=7.1						
JCT	Junction City	71.78	54	*e*P	P	15 19 56.2	-0.7
	comp=Z,17nm,1.1s						
W52A	Murphy	71.83	39	P	P	15 19 56.1	-1.1
	baz=343						
Y49A	Blount Mountai	72.39	41	P	P	15 19 58.9	-1.6
	baz=342						
Y50A	Piedmont	72.53	41	P	P	15 19 59.7	-1.7
	baz=343						
Y51A	Rockmart	72.69	40	P	P	15 20 00.8	-1.5
	baz=343						
MORF	Marmelete	73.24	336	*e*P	P	15 20 05.4	-0.2
	comp=Z,40nm,1.6s						
150A	Eclectic	73.68	41	P	P	15 20 06.7	-1.4
	baz=343						
PDSI	Padang	74.34	224	P	P	15 20 14.2	+2.0
BATI	Baumata	78.75	199	P	P	15 20 36.1	-0.9
	comp=Z,5.5nm,0.4s,baz=231,slow=5.3,SNR=4.2						
FITZ	Fitzroy Crossi	86.31	196	*e*P	P	15 21 15.4	-0.9
	comp=Z,8.8nm,1.1s						
FITZ	Fitzroy Crossi	86.31	196	P	P	15 21 15.8	-0.5
	baz=23,slow=6.9						
WB2	Warramunga Arr	87.44	188	*e*P	P	15 21 19.8	-2.0
WR1	Warramunga Arr	87.44	188	*e*P	P	15 21 20.4	-1.4
	comp=Z,3.6nm,0.9s						
WRA	Warramunga Arr	87.44	188	P	P	15 21 20.4	-1.4
WRA	Warramunga Arr	87.44	188	P	P	15 21 20.4	-1.4
	comp=Z,2.0nm,0.7s,baz=5.2,slow=5.2,SNR=26						
AS31	Alice Springs	91.16	188	*e*P	P	15 21 37.9	-1.4
	comp=Z,3.1nm,1.8s						
ASAR	Alice Springs	91.16	188	P	P	15 21 38.1	-1.2
ASAR	Alice Springs	91.16	188	P	P	15 21 38.1	-1.2
	comp=Z,1.1nm,0.8s,baz=4.1,slow=4.7,SNR=21						
TOA1	Torodi Ar. Sit	94.71	322	*e*P	P	15 21 54.5	-1.4
TOA0	Torodi Ar. Sit	94.71	322	*e*P	P	15 21 53.8	-2.2
TORD	Torodi Ar. Bea	94.71	322	P	P	15 21 54.5	-1.4
TORD	Torodi Ar. Bea	94.71	322	P	P	15 21 54.5	-1.4
	comp=Z,1.0nm,0.6s,baz=347,slow=7.0,SNR=8.3						
PLCA	Paso Flores	147.61	51	*e*PKPbc	PKPbc	15 28 18.0	-0.2
PLCA	Paso Flores	147.61	51	*e*PKP2	PKPbc	15 28 18.0	-0.2
SYO	Syowa Base	153.19	231	⇓*e*pPKPdf	pPKPdf	15 28 28.0	-0.2
SYO	Syowa Base	153.19	231	⇑*e*PKiKP	PKiKP	15 28 33.6	+2.9

IDC ***14*** *15:09:01.9±1.7, 67°.60N×143°.01E, h0^{km}, mb4.7/19, mb1 4.8/19, mb1mx4.5/48, mbtmp4.6/19, Error ellipse: s-maj=38.3km s-min=18.0km az=94.0*

ISCJB ***14*** *15:09:02.9±0.2, 67°.64N±0°.03×142°.45E±0°.08, h10^{km}, mb4.9/63, Error ellipse: s-maj=4.6km s-min=4.1km az=167.3*

MOS ***14*** *15:09:02.5±0.8, 67°.60N×142°.64E, h11^{km}, mb5.0/20, Error ellipse: s-maj=17.6km s-min=8.5km az=96.8*

NEIC ***14*** *15:09:04.7±0.2, 67°.64N×142°.46E, h10^{km}, mb4.9/46, Error ellipse: s-maj=5.3km s-min=3.9km az=173.0*

YARS ***14*** *15:09:04.9±0.2, 67°.65N±0°.01×142°.60E±0°.03, h10^{km}*

ISC 14 15:09:04.6±0.4**, 67°.61N**±0°.04×**142°.61E**±0°.04**, h10^{km}, n155, σ0^{s}.94**/161**, mb4.8**/71**, 5C-1D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.17	168	*e*P	Pg	15 09 27.1	+0.1
MOMR				*e*S	Sb	15 09 41.8	-0.3
MOMR				pmax	pmax		
	comp=Z,4µm,0.3s						
MOMR				smax	smax		
	comp=E,5µm,0.2s						
MOMR	Moma	1.17	168	*e*P	Pg	15 09 27.1	+0.1
MOMR				Pmax		15 09 27.1	
	comp=Z,4µm,0.3s						
MOMR				*e*S	Sb	15 09 41.8	-0.3
MOMR				Smax		15 09 41.8	
	comp=E,5µm,0.2s						
YBGR	Belaya Gora	1.63	54	*e*P	Pn	15 09 33.3	-0.1
YBGR				Pmax		15 09 33.3	
	comp=Z,9µm,0.4s						
YBGR				*e*S	Sb	15 09 55.4	0.0
YBGR				Smax		15 09 55.4	
	comp=N,6µm,0.3s						
BTGS	Batagay	3.05	275	*e*P	Pb	15 09 59.4	+0.5
BTGS				*e*S	Sb	15 10 39.1	+3.0
BTGS				pmax	pmax		
	comp=Z,1µm,0.9s						
BTGS				smax	smax		
	comp=N,3µm,0.5s						
BTGS	Batagay	3.05	275	*e*P	Pb	15 09 59.4	+0.5
BTGS				Pmax		15 09 59.4	
	comp=Z,1µm,0.9s						
BTGS				*e*S	Sb	15 10 39.1	+3.0
BTGS				Smax		15 10 39.1	
	comp=N,3µm,0.5s						
ATKR	Artyk	3.59	162	*e*P	Pb	15 10 10.3	+2.1
ATKR				pmax	pmax		
	comp=Z,761nm,0.3s						
ATKR	Artyk	3.59	162	*e*P	Pb	15 10 10.3	+2.1
ATKR				Pmax		15 10 10.3	
	comp=Z,761nm,0.3s						
ATKR				*e*S	Sg	15 10 57.4	-2.5
ATKR				Smax		15 10 57.4	
	comp=E,3µm,0.5s						
MA2	Magadan	8.83	152	*e*Pn	Pn	15 11 12.4	+0.2
MA2	Magadan	8.83	152	*e*P	Pn	15 11 12.4	+0.2
BILL	Bilibino	8.94	76	*e*Pn	Pn	15 11 15.2	+1.7
BILL	Bilibino	8.94	76	*e*P	Pn	15 11 15.3	+1.7
PET	Petropavlovsk	16.55	144	*e*Pn	P	15 13 00.0	+0.9
	comp=E,76nm,1.1s						
PET	Petropavlovsk	16.55	144	*e*P	P	15 13 00.0	+0.9
PET				pmax	pmax		
	comp=Z,76nm,1.1s						
GAMB	Gambell	18.84	80	*e*P	Pn	15 13 24.7	+0.1
	comp=Z,14nm,0.9s						
ANM	Nome	20.78	74	*e*P	P	15 13 45.4	+0.1
	comp=Z,55nm,1.5s						
ANM	Nome	20.78	74	*e*P	P	15 13 45.4	+0.1
ANM				pmax	pmax		
	comp=Z,55nm,1.5s						
HIA	Hailar	21.69	224	*e*P	P	15 13 56.1	+0.8
	comp=Z,52nm,0.8s						
HIA	Hailar	21.69	224	*e*P	P	15 13 56.1	+0.8
HIA				pmax	pmax		
	comp=Z,52nm,0.8s						
SPIA	Saint Paul Isl	23.56	93	*e*P	P	15 14 14.3	-0.5
	comp=Z,67nm,1.0s						
MDJ	Mudanjiang	24.06	203	*e*P	P	15 14 19.4	-0.3
	comp=Z,45nm,1.0s						
USRK	Ussuriysk Ar.	24.14	199	P	P	15 14 20.1	-0.2
	comp=Z,13nm,0.7s,baz=12,slow=10,SNR=12						
CAST	Castle Rocks	26.24	68	*e*P	P	15 14 38.8	-0.5
	comp=Z,8.9nm,0.8s						
IL1	Eielson Array	27.21	62	*e*P	P	15 14 50.0	+2.0
RSO	Redoubt South	27.91	73	*e*P	P	15 14 54.7	+0.1
SUA	Susitna One	27.97	70	*e*P	P	15 14 54.5	-0.5
	comp=Z,17nm,0.6s						
GHO	Glory Hole Cre	28.42	68	*e*P	P	15 14 59.5	+0.5
	comp=Z,16nm,0.8s						
SCM	Sheep Creek Mo	28.95	67	*e*P	P	15 15 03.9	+0.3
	comp=Z,78nm,1.7s						
SCM	Sheep Creek Mo	28.95	67	*e*P	P	15 15 03.9	+0.3
SCM				pmax	pmax		
	comp=Z,79nm,1.7s						
BRLK	Bradley Lake	29.07	73	*e*P	P	15 15 05.3	+0.6
	comp=Z,151nm,1.8s						
EGAK	Eagle	29.11	59	*e*P	P	15 15 06.2	+1.2
	comp=Z,7.4nm,0.9s						
SEW	Seward	29.36	71	*e*P	P	15 15 07.7	+0.5
	comp=Z,146nm,1.8s						
ZAA1	Zalesovo Array	30.03	272	*e*P	P	15 15 12.6	-0.5
ZAA0	Zalesovo Array	30.03	272	*e*P	P	15 15 12.8	-0.4
	comp=Z,8.8nm,0.8s						
ZALV	Zalesovo Beam	30.03	272	*e*P	P	15 15 12.5	-0.7
ZALV	Zalesovo Beam	30.03	272	P	P	15 15 12.6	-0.6
	comp=Z,5.2nm,0.7s,baz=33,slow=7.1,SNR=7.0						
SII	Sitkinak Islan	30.14	80	*e*P	P	15 15 15.8	+1.7
	comp=Z,361nm,1.6s						
KS01	Wonju Array Si	31.30	203	*e*P	P	15 15 22.5	-2.0
KSRS	Korea Array	31.32	203	P	P	15 15 23.9	-0.7
	comp=Z,3.2nm,0.9s,baz=7.8,slow=7.1,SNR=5.8						
KSAR	Wonju Array Be	31.34	203	P	P	15 15 23.9	-0.9
KSAR	Wonju Array Be	31.34	203	P	P	15 15 23.9	-0.9
KURK	Kurchatov	34.93	274	*e*P	P	15 15 56.8	+0.7
KURK	Kurchatov	34.93	274	P	P	15 15 56.8	+0.7
KURBB	Kurchatov Arra	35.04	274	P	P	15 15 56.8	-0.2
	comp=Z,8.7nm,0.7s,baz=42,slow=8.9,SNR=9.5						
BVAR	Borovoye Array	36.22	283	P	P	15 16 06.7	-0.4
	comp=Z,12nm,0.8s,baz=46,slow=8.5,SNR=12						
BRVK	Borovoye	36.23	283	*e*P	P	15 16 06.3	-0.9
BRVK	Borovoye	36.23	283	*e*P	P	15 16 06.3	-0.9
ARA0	ARCESS Array S	36.56	328	*e*P	P	15 16 09.2	-0.6
ARCES	ARCESS Array B	36.56	328	P	P	15 16 09.2	-0.6
	comp=Z,4.2nm,0.7s,baz=36,slow=10,SNR=4.6						
GTA	Gaotai	36.69	242	*e*P	P	15 16 12.1	+0.7
GTA				pP	sP	15 16 15.8	-0.1
GTA				sP	pP	15 16 18.3	+3.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK32	Makanchi Array	36.73	267	*e*P	P	15 16 11.2	-0.4
MKAR	Makanchi Array	36.73	267	*e*P	P	15 16 10.9	-0.7
	comp=Z,115nm,0.7s						
MKAR	Makanchi Array	36.73	267	P	P	15 16 11.2	-0.4
	comp=Z,15nm,0.6s,baz=50,slow=8.2,SNR=13						
MAKZ	Makanchi	36.84	267	*e*P	P	15 16 11.0	-1.5
	comp=Z,14nm,0.9s						
MAKZ	Makanchi	36.84	267	*e*P	P	15 16 11.0	-1.5
MAKZ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ	Urumqi	37.18	259	*e*P	P	15 16 16.3	+0.8
	comp=Z,24nm,1.1s						
WMQ	Urumqi	37.18	259	*e*P	P	15 16 16.3	+0.8
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
ARU	Arti	37.81	296	*e*P	P	15 16 19.8	-0.7
ARU	Arti	37.81	296	*e*P	P	15 16 19.8	-0.7
XAN	Xi'an	38.80	227	*e*P	P	15 16 28.0	-1.2
	comp=Z,12nm,1.3s						
XAN	Xi'an	38.80	227	*e*P	P	15 16 28.0	-1.2
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
YKB5	Yellowknife Ar	38.85	46	*e*P	P	15 16 27.2	-2.1
SUMG	Summit	40.06	0	*e*P	P	15 16 39.0	-0.7
	comp=Z,28nm,1.8s						
SUMG	Summit	40.06	0	*e*P	P	15 16 39.0	-0.7
SUMG				pmax	pmax		
	comp=Z,28nm,1.8s						
WHN	Wuhan	40.69	219	⇓P	P	15 16 44.6	-0.3
ENH	Enshi	42.19	225	*e*P	P	15 16 56.3	-0.9
	comp=Z,7.2nm,0.8s						
KDJ	Kajisay	42.62	267	*e*P	P	15 17 01.9	+1.1
	comp=Z,9.1nm,0.9s						
KDJ	Kajisay	42.62	267	*e*P	P	15 17 01.9	+1.1
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TARG	Taragay, Kyrgy	42.73	267	*e*P	P	15 17 02.7	+0.7
	comp=Z,9.3nm,0.9s						
AKTO	Aktyubinsk	42.84	291	P	P	15 17 02.3	0.0
	comp=Z,6.1nm,0.4s,baz=59,slow=9.4,SNR=5.7						
ILULI	Ilulissat	43.12	7	*e*P	P	15 17 03.8	-0.5
	comp=Z,13nm,0.7s						
ILULI	Ilulissat	43.12	7	*e*P	P	15 17 03.8	-0.5
ILULI				pmax	pmax		
	comp=Z,13nm,0.7s						
ABKAR	Akbulak array	43.13	288	*e*P	P	15 17 03.7	-0.9
	comp=Z,16nm,0.9s						
AAK	Ala-Archa	43.22	270	*e*P	P	15 17 06.4	+0.8
AAK	Ala-Archa	43.22	270	P	P	15 17 06.8	+1.2
	comp=Z,15nm,0.7s,baz=115,slow=3.7,SNR=8.4						
FIA1	FINESS Array S	43.30	321	*e*P	P	15 17 04.7	-1.1
FIA0	FINESS Array S	43.30	321	*e*P	P	15 17 05.4	-0.4
FIA0	FINESS Array S	43.30	321	*e*P	P	15 17 05.4	-0.4
FINES	FINESS Array B	43.30	321	P	P	15 17 05.4	-0.4
	comp=Z,10nm,0.5s,baz=32,slow=8.9,SNR=16						
NRN	Naryn	43.67	268	*e*P	P	15 17 10.4	+0.9
	comp=Z,11nm,0.7s						
NRN	Naryn	43.67	268	*e*P	P	15 17 10.4	+0.9
NRN				pmax	pmax		
	comp=Z,11nm,0.7s						
KK31	Karatay Array	44.34	274	*e*P	P	15 17 14.5	0.0
	comp=Z,13nm,1.3s						
KK31	Karatay Array	44.34	274	*e*P	P	15 17 14.5	0.0
KK31				pmax	pmax		
	comp=Z,13nm,1.3s						
KKAR	Karatay Array	44.34	274	*e*P	P	15 17 14.4	-0.1
	comp=Z,13nm,1.3s						
KKAR	Karatay Array	44.34	274	*e*P	P	15 17 14.4	-0.1
KKAR				pmax	pmax		
	comp=Z,13nm,1.3s						
NC303	NORSAR Array S	46.67	330	*e*P	P	15 17 31.8	-0.9
	comp=Z,81nm,1.7s						
NC405	NORSAR Array S	46.71	330	*e*P	P	15 17 32.1	-0.9
	comp=Z,129nm,1.9s						
NC204	NORSAR Array S	46.74	330	*e*P	P	15 17 32.7	-0.6
	comp=Z,27nm,1.0s						
NB201	NORSAR Array S	46.85	330	*e*P	P	15 17 34.5	+0.4
	comp=Z,97nm,1.8s						
NB200	NORSAR Array S	46.88	330	*e*P	P	15 17 33.7	-0.6
NOA	NORSAR Array B	46.88	330	P	P	15 17 33.7	-0.6
	comp=Z,8.4nm,0.8s,baz=24,slow=7.8,SNR=6.5						
NBO00	NORSAR Array S	46.97	330	*e*P	P	15 17 34.8	-0.3
	comp=Z,24nm,1.0s						

NC602	NORSAR Array S	47.09	330	eP	P	15 17 36.0	0.0
	comp=Z,94nm,1.9s						
NAO01	NORSAR Array S	47.12	330	eP	P	15 17 36.1	-0.1
	comp=Z,24nm,0.9s						
FCC	Fort Churchill	47.26	36	eP	P	15 17 37.1	-0.1
	comp=Z,10nm,1.1s						
FCC	Fort Churchill	47.26	36	eP	P	15 17 37.1	-0.1
FCC				pmax	pmax		
	comp=Z,11nm,1.1s						
GAR	Garm	47.95	272	eP	P	15 17 43.9	+0.8
	comp=Z,57nm,0.9s						
GAR	Garm	47.95	272	eP	P	15 17 43.9	+0.8
GAR				pmax	pmax		
	comp=Z,57nm,0.9s						
KONO	Kongsberg	48.47	330	eP	P	15 17 47.1	+0.5
	comp=Z,119nm,1.7s						
KONO	Kongsberg	48.47	330	eP	P	15 17 47.1	+0.5
KONO				pmax	pmax		
	comp=Z,119nm,1.7s						
CHGR	Chuyangaron	48.70	272	eP	P	15 17 49.3	+0.5
	comp=Z,40nm,0.7s						
KMI	Kunming	48.96	230	eP	P	15 17 50.9	-0.2
KMI	Kunming	48.96	230	eP	P	15 17 50.9	-0.2
SUW	Suwalki	50.61	318	eP	P	15 18 02.4	-0.6
SUW	Suwalki	50.61	318	eP	P	15 18 02.4	-0.6
AKASG	Malin Array Be	51.96	312	P	P	15 18 12.5	-0.7
	comp=Z,7.4nm,0.6s,baz=29,slow=8.2,SNR=6.7						
AKBB	Malin Array Si	51.96	312	eP	P	15 18 12.3	-0.9
	comp=Z,10.0nm,0.8s						
KIEV	Kiev	51.98	312	eP	P	15 18 12.2	-1.1
	comp=Z,9.3nm,0.8s						
KIEV	Kiev	51.98	312	eP	P	15 18 12.2	-1.1
KIEV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AK11	Malin Array Si	52.00	312	eP	P	15 18 12.2	-1.3
KBL	Kabul	52.35	270	eP	P	15 18 15.6	-1.0
	comp=Z,6.8nm,0.8s						
KBL	Kabul	52.35	270	eP	P	15 18 15.6	-1.0
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RGN	Rugen	52.46	325	eP	P	15 18 17.1	+0.3
	comp=Z,103nm,1.4s						
GEYT	Alibeck	53.52	282	P	P	15 18 25.6	+0.6
	comp=Z,7.0nm,0.8s,baz=343,slow=4.6,SNR=8.2						
GYA0B	ALIBECK ARRAY	53.52	282	eP	P	15 18 24.3	-0.7
	comp=Z,14nm,1.1s						
KBZ	Khabaz	53.89	298	P	P	15 18 28.1	+0.6
	comp=Z,14nm,0.8s,baz=65,slow=3.1,SNR=6.9						
OJC	Ojcow	54.93	319	eP	P	15 18 35.4	+0.4
OJC	Ojcow	54.93	319	eP	P	15 18 35.4	+0.4
KSP	Ksiaz	55.22	322	eP	P	15 18 37.2	+0.1
KSP	Ksiaz	55.22	322	eP	P	15 18 37.2	+0.1
NIE	Niedzica	55.54	318	eP	P	15 18 40.2	+0.7
NIE	Niedzica	55.54	318	eP	P	15 18 40.2	+0.7
CLL	Collm	55.55	324	⇑iP	P	15 18 38.8	-0.6
	comp=Z,25nm,0.7s						
CLL	Collm	55.55	324	⇑iP	P	15 18 38.8	-0.6
CLL				pmax	pmax		
	comp=Z,25nm,0.7s						
DPC	Dobruska-Polom	55.67	321	eP	P	15 18 40.2	-0.2
DPC	Dobruska-Polom	55.67	321	eP	P	15 18 40.2	-0.2
KRLC	Kraliky	55.81	321	eP	P	15 18 41.6	+0.2
KRLC	Kraliky	55.81	321	eP	P	15 18 41.6	+0.2
MORC	Moravsky Berou	55.91	320	⇑iP	P	15 18 42.1	0.0
CM31	Chiang Mai Arr	56.38	232	eP	P	15 18 44.8	-1.0
CMAR	Chiang Mai Arr	56.38	232	P	P	15 18 45.0	-0.8
CMAR	Chiang Mai Arr	56.38	232	P	P	15 18 44.9	-0.8
	comp=Z,1.8nm,0.6s,baz=354,slow=7.5,SNR=4.9						
VRAC	Vranov	56.57	321	⇑iP	P	15 18 46.9	+0.1
KRUC	Moravsky	56.85	321	⇑iP	P	15 18 48.8	0.0
KHC	Kasperske Hory	57.45	323	eP	P	15 18 53.4	+0.3
KHC	Kasperske Hory	57.45	323	eP	P	15 18 53.4	+0.3
GEC2	GERESS Array S	57.69	323	eP	P	15 18 54.1	-0.7
	comp=Z,14nm,1.2s						
GERES	GERESS Array B	57.69	323	P	P	15 18 54.6	-0.2
	comp=Z,6.4nm,0.9s,baz=26,slow=7.4,SNR=12						
GEA0	GERESS Array S	57.70	323	eP	P	15 18 53.9	-1.0
CONA	Conrad Observa	58.03	321	i pP	P	15 18 58.0	+0.7
	comp=Z,6.5nm,1.1s						
NV01	Mina Array Sit	58.38	66	eP	P	15 19 02.1	+2.1
MOA	Molln	58.49	322	i pP	P	15 19 00.2	-0.1
	comp=Z,8.3nm,0.9s						
SOKA	Soboth	59.40	321	i pP	P	15 19 08.7	+1.9
	comp=Z,16nm,1.4s						
KBA	Koelnbreinsper	59.43	322	i pP	P	15 19 08.2	+1.1
	comp=Z,9.7nm,0.8s						
WTTA	Wattenberg	59.65	323	i pP	P	15 19 09.1	+0.4
	comp=Z,10nm,0.8s						
OBKA	Obir	59.68	321	i pP	P	15 19 09.6	+0.9
	comp=Z,17nm,0.7s						
MOTA	Moosalm	59.70	324	i pP	P	15 19 08.9	0.0
	comp=Z,4.3nm,0.7s						
ECH	Echery	59.73	327	eP	P	15 19 08.0	-0.9
	comp=Z,25nm,1.5s						
ECH	Echery	59.73	327	eP	P	15 19 08.0	-0.9
ECH				pmax	pmax		
	comp=Z,25nm,1.5s						
SQTA	Sankt Quirin	59.79	324	i pP	P	15 19 10.4	+0.9
	comp=Z,12nm,1.1s						
BR101	Keskin Array S	60.53	303	eP	P	15 19 14.9	+0.2
BRTR	Keskin Array B	60.53	303	P	P	15 19 14.9	+0.2
	comp=Z,4.0nm,0.7s,baz=41,slow=4.5,SNR=8.8						
O56A	Blue Knob Stat	68.03	33	eP	P	15 20 06.6	+2.9
	comp=Z,140nm,1.5s						
ESDC	Sonseca Array	70.09	333	P	P	15 20 16.0	-0.5
	comp=Z,3.0nm,0.6s,baz=7.8,slow=6.1,SNR=6.8						
TOA1	Torodi Ar. Sit	94.64	322	eP	P	15 22 23.9	-1.7
TORD	Torodi Ar. Bea	94.64	322	P	P	15 22 23.9	-1.7
	comp=Z,1.4nm,1.1s,baz=6.5,slow=4.3,SNR=4.4						

DJA 14 15:09:13.8±0.3, 2°S±3°×10°3E±°, h10^{km}, M3.5/12, MLv3.5/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.96	224	P	Pg	15 09 32.1	-0.2
MASI				S	Sg	15 09 44.9	+0.1
JMBI	JAMBI	1.09	42	P	Pb	15 09 34.4	-0.4
KRJI	Kerinci	1.49	284	P	Pn	15 09 40.9	+0.2
LHSI	Lahat	1.50	156	P	Pn	15 09 40.0	-0.8
MNAI	Manna	1.90	179	P	Pn	15 09 46.5	+0.2
PMBI	Palembang	1.92	104	P	Pn	15 09 45.6	-1.0
MDSI	Maura Dua	2.39	148	P	Pn	15 09 53.2	+0.2
DSRI	Dabo	2.57	40	P	Pn	15 09 54.8	-0.7
LWLI	Liwa	2.80	156	P	Pn	15 09 58.4	-0.3
PDSI	Padang	2.88	302	P	Pb	15 10 05.0	-0.4
PPBI	Pangkal Pinang	3.24	85	P	Pn	15 10 04.4	-0.3

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*IDC **14** 15:14:53.9±0.4, 67°.55N×142°.89E, h0^{km}, mb4.5/34, mb1 4.7/35, mb1mx4.6/44, mbtmp4.5/35, ML4.1/1, MS4.5/2, Ms1 4.6/2, ms1mx3.8/41, Error ellipse: s-maj=12.4km s-min=9.9km az=152.0*

*MOS **14** 15:14:53.8±0.8, 67°.63N×142°.78E, h10^{km}, mb5.0/120, Error ellipse: s-maj=10.3km s-min=4.2km az=98.2*

*BJI **14** 15:14:54.6, 67°.60N×142°.60E, h17^{km}, mB5.3/20, mb4.8/48, Ms5.0/13, Ms7 4.7/12*

*NEIC **14** 15:14:55.7±0.1, 67°.61N×142°.64E, h10^{km}, mb4.9/230, Error ellipse: s-maj=3.4km s-min=2.1km az=167.0*

*YARS **14** 15:14:56.0±0.2, 67°.58N±0°.01×142°.83E±0°.03, h7^{km}*

*ISCJB **14** 15:14:58.6±0.7, 67°.64N±0°.02×142°.73E±0°.04, h45^{km}±6^{km}, mb4.9/341, Error ellipse: s-maj=3.8km s-min=2.3km az=165.9*

ISC 14 15:14:55.5±0.6, 67°.55N±0°.03×142°.69E±0°.03, h10^{km}±3^{km}, n620, σ1^{s}16/654, mb4.9/364, 35C-20D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.11	169	eP	Pg	15 15 15.7	-1.0
MOMR				eS	Sg	15 15 30.6	-0.4
MOMR				pmax	pmax		
	comp=Z,2µm,0.6s						
MOMR				smax	smax		
	comp=N,14µm,0.5s						
MOMR	Moma	1.11	169	eP	Pg	15 15 15.7	-1.0
MOMR				Pmax		15 15 15.7	
	comp=Z,2µm,0.6s						
MOMR				eS	Sg	15 15 30.6	-0.4
MOMR				Smax		15 15 30.6	
	comp=N,4µm,0.5s						
YBGR	Belaya Gora	1.64	52	eP	Pn	15 15 23.7	-0.7
YBGR				Pmax		15 15 23.7	
	comp=Z,1µm,0.2s						
YBGR				eS	Sn	15 15 45.5	0.0
YBGR				Smax		15 15 45.5	
	comp=N,5µm,0.3s						
BTGS	Batagay	3.09	276	eP	Pn	15 15 46.2	+2.0
BTGS				eS	Sn	15 16 22.1	+1.0
BTGS				pmax	pmax		
	comp=Z,583nm,0.8s						
BTGS				smax	smax		
	comp=N,2µm,0.7s						
BTGS	Batagay	3.09	276	eP	Pn	15 15 46.2	+2.0
BTGS				eP	Pg	15 15 53.1	-1.4
BTGS				Pmax		15 15 53.1	
	comp=Z,583nm,0.8s						
BTGS				eS	Sn	15 16 22.1	+1.0
BTGS				eS	Sg	15 16 32.6	-1.8
BTGS				Smax		15 16 32.6	
	comp=N,2µm,0.7s						
ATKR	Artyk	3.53	162	eP	Pg	15 16 00.5	-2.5
ATKR				eS	Sg	15 16 45.2	-3.5
ATKR				pmax	pmax		
	comp=Z,606nm,0.5s						
ATKR				smax	smax		
	comp=N,8µm,0.7s						
ATKR	Artyk	3.53	162	eP	Pg	15 16 00.5	-2.5
ATKR				Pmax		15 16 00.5	
	comp=Z,606nm,0.5s						
ATKR				eS	Sg	15 16 45.2	-3.5
ATKR				Smax		15 16 45.2	
	comp=N,8µm,0.7s						
SEY	Seymchan	6.16	134	⇑eP	Pn	15 16 31.5	+5.1
YAK	Yakutsk	7.83	231	eP	Pn	15 16 49.8	+0.5
YAK				e		15 18 12.9	
YAK				pmax	pmax		
	comp=Z,270nm,0.9s						
YAK				smax	smax		
	comp=N,467nm,0.6s						
YAK				smax	smax		
	comp=E,867nm,0.6s						
YAK	Yakutsk	7.83	231	eS	Sg	15 18 59.6	-6.8
YAK				Smax		15 18 59.6	
	comp=N,2µm,0.7s						
MA2	Magadan	8.77	152	ePn	Pn	15 17 00.3	-1.8
MA2	Magadan	8.77	152	eP	Pn	15 17 00.3	-1.8
BILL	Bilibino	8.92	76	ePn	Pn	15 17 04.2	0.0
BILL	Bilibino	8.92	76	⇑eP	Pn	15 17 07.6	+3.4
BILL				eS	Sn	15 18 45.9	+1.3
BILL				pmax	pmax		
	comp=Z,34nm,1.3s						
BILL				MLR	MLR		
	comp=Z,1µm,18.0s						
NRGR	Nerungri	13.71	226	eP	Pn	15 18 14.3	+4.6
NRGR				S	Sn	15 20 43.1	+1.2
NRGR				smax	smax		
	comp=N,110nm,0.9s						
PEA0B	Petropavlovsk-	16.20	146	ePn	P	15 18 45.9	-0.2
	comp=N,67nm,1.1s						
PETK	Petropavlovsk-	16.20	146	ePn	P	15 18 46.0	0.0
PETK	Petropavlovsk-	16.20	146	eP	P	15 18 46.1	0.0
PET	Petropavlovsk	16.49	144	ePn	P	15 18 49.5	+0.3
	comp=N,44nm,0.9s						
PET	Petropavlovsk	16.49	144	eP	P	15 18 52.5	+3.3
PET				pmax	pmax		
	comp=Z,62nm,1.0s						
SKR	Severo-Kuril's	18.19	152	eP	P	15 19 13.3	+5.3
SKR				pmax	pmax		
	comp=Z,124nm,1.3s						
GAMB	Gambell	18.82	80	eP	P	15 19 14.6	-0.2
	comp=Z,12nm,0.8s						
KLR	Kul'dur	19.19	202	P	Pn	15 19 21.0	+1.1
	comp=Z,0.6nm,0.3s,baz=343,slow=8.6,SNR=5.2						
RDOG	Red Dog Mine	20.01	63	eP	P	15 19 27.8	-0.1
	comp=Z,33nm,0.8s						
YSS	Yuzh-Sakhalins	20.65	180	eP	P	15 19 35.5	+0.5
	comp=Z,53nm,1.5s						
YSS	Yuzh-Sakhalins	20.65	180	⇑eP	P	15 19 35.9	+1.0
YSS				e		15 19 42.4	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
YSS				MLR	MLR		
	comp=E,600nm,16.0s						
ANM	Nome	20.77	74	eP	P	15 19 36.4	+0.3
	comp=E,16nm,0.6s						
ANM	Nome	20.77	74	eP	P	15 19 36.4	+0.3
ANM				pmax	pmax		
	comp=Z,16nm,0.6s						
SMY	Shemya	21.20	119	eP	P	15 19 42.3	+1.4
	comp=Z,223nm,2.0s						
SMY	Shemya	21.20	119	eP	P	15 19 42.3	+1.4
SMY				pmax	pmax		
	comp=Z,223nm,2.0s						
HIA	Hailar	21.67	224	eP	P	15 19 46.9	+0.9
	comp=Z,149nm,1.4s						
HIA	Hailar	21.67	224	deP	P	15 19 49.3	+3.3
HIA				pmax	pmax		
	comp=Z,43nm,1.4s						
ASAJ	Asahikawa	23.49	180	P	P	15 20 04.4	-0.7
	comp=Z,5.6nm,0.6s,baz=59,slow=14,SNR=9.3						
SPIA	Saint Paul Isl	23.53	93	eP	P	15 20 05.4	+0.1
	comp=Z,156nm,1.6s						
MDJ	Mudanjiang	24.02	203	P	P	15 20 10.3	+0.2
MDJ				pmax	pmax		
	comp=Z,33nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,380nm,7.2s						
MDJ	Mudanjiang	24.02	203	eP	P	15 20 09.9	-0.2
	comp=Z,22nm,0.8s						
USA0B	Ussuriysk Arra	24.09	199	eP	P	15 20 11.1	+0.3
	comp=Z,35nm,1.4s						
USRK	Ussuriysk Ar.	24.09	199	P	P	15 20 10.9	+0.2
	comp=Z,6.6nm,0.7s,baz=14,slow=9.7,SNR=15						
USRK				PcP	PcP	15 23 51.7	+0.1
	comp=Z,2.0nm,0.7s,baz=268,slow=2.0,SNR=4.2						
TOLK	Toolik Lake Re	24.16	56	eP	P	15 20 11.0	-0.3
	comp=Z,32nm,0.9s						
COLD	Coldfoot	24.68	59	eP	P	15 20 16.6	+0.5
	comp=Z,27nm,0.8s						
TLY	Talaya	24.74	250	eP	P	15 20 16.4	-0.3
	comp=Z,21nm,0.8s						
TLY	Talaya	24.74	250	⇓eP	P	15 20 20.1	+3.4
KIWB	Kanaga Island	25.00	109	eP	P	15 20 20.2	+1.2
ADK	Adak	25.14	108	eP	P	15 20 21.6	+1.3
	comp=Z,92nm,1.5s						
ADK	Adak	25.14	108	eP	P	15 20 21.6	+1.3
ADK				pmax	pmax		
	comp=Z,92nm,1.5s						
VLA	Vladivostok	25.17	199	⇑eP	P	15 20 26.0	+5.4
VLA				pmax	pmax		
	comp=Z,55nm,1.5s						
CN2	Changchun	25.52	210	eP	P	15 20 27.3	+3.5
ERM	Erimo	25.59	179	eP	P	15 20 27.4	+3.0
ERM	Erimo	25.59	179	eP	P	15 20 27.4	+3.0
MOY	Mondy	25.71	253	eP	P	15 20 27.2	+1.6
MOY				pmax	pmax		
	comp=Z,40nm,1.5s						
MLY	Manley	25.73	64	eP	P	15 20 25.5	-0.1
	comp=Z,14nm,0.8s						
MSHR	Mys Shultsa	25.79	200	⇓eP	P	15 20 30.7	+4.5
ZAK	Zakamensk	25.94	248	eP	P	15 20 28.3	+0.6
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BPAW	Bear Paw Mtn.	26.20	66	eP	P	15 20 29.8	-0.1
	comp=Z,25nm,1.2s						
CAST	Castle Rocks	26.23	68	eP	P	15 20 30.0	-0.2
	comp=Z,20nm,0.9s						
SVW2	Sparrevohn	26.44	74	eP	P	15 20 31.8	-0.2
	comp=Z,31nm,1.6s						
PPLA	Purkeypile	26.52	69	eP	P	15 20 32.6	-0.3
	comp=Z,96nm,1.9s						
MDM	Murphy Dome	26.64	62	eP	P	15 20 33.9	+0.2
	comp=Z,25nm,0.9s						
FYU	Fort Yukon	26.68	58	eP	P	15 20 35.2	+1.1
	comp=Z,76nm,1.3s						
BWN	Browne	26.69	65	eP	P	15 20 36.5	+2.3
	comp=Z,32nm,1.0s						
ULN	Ulaanbaatar	26.77	241	eP	P	15 20 36.5	+1.2
	comp=Z,9.0nm,1.2s						
ULN	Ulaanbaatar	26.77	241	⇓iP	P	15 20 37.4	+2.1
ULN				pmax	pmax		
	comp=Z,10.0nm,1.7s						
COLA	College	26.82	62	eP	P	15 20 35.4	+0.1
	comp=Z,21nm,0.8s						
COLA	College	26.82	62	deP	P	15 20 35.7	+0.4
COLA				pmax	pmax		
	comp=Z,12nm,0.8s						
TRF	Thorofare Moun	26.85	66	eP	P	15 20 36.0	+0.2
	comp=Z,26nm,0.9s						
WRH	Wood River Hil	26.98	63	eP	P	15 20 36.5	-0.3
	comp=Z,22nm,1.4s						
SONA1	Songino Array	27.01	241	eP	P	15 20 39.0	+1.6
SONA0	Songino Array	27.02	241	eP	P	15 20 39.2	+1.7
SONA0				ePcP	PcP	15 23 58.9	+0.5
SONM	Songino Array	27.02	241	P	P	15 20 39.2	+1.7
	comp=Z,3.7nm,0.8s,baz=24,slow=9.2,SNR=14						
SONM				PcP	PcP	15 23 58.9	+0.4
	comp=Z,1.1nm,0.6s,baz=334,slow=1.5,SNR=5.2						
MCK	McKinley	27.14	65	eP	P	15 20 38.7	+0.3
	comp=Z,20nm,0.9s						
IL1	Eielson Array	27.21	62	eP	P	15 20 38.2	-0.6
ILAR	Eielson Array	27.21	62	P	P	15 20 38.6	-0.2
	comp=Z,15nm,0.7s,baz=298,slow=8.5,SNR=60						
ILAR				LR	LR	15 31 51.9	
	comp=Z,898nm,18.9s,baz=80,slow=38						
PRP	Porcupine Dome	27.21	60	eP	P	15 20 39.9	+0.8
	comp=Z,6.9nm,1.0s						
RND	Reindeer	27.38	66	eP	P	15 20 41.3	+0.8
	comp=Z,8.1nm,0.9s						
RND	Reindeer	27.38	66	eP	P	15 20 41.3	+0.8
RND				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HDA	Harding Lake	27.41	63	eP	P	15 20 40.6	-0.1
	comp=Z,8.6nm,0.8s						
UNV	Unalaska Valle	27.43	95	eP	P	15 20 42.7	+1.8
	comp=Z,241nm,1.9s						
KNGR	Kungurtug, Tuv	27.86	255	⇑eP	P	15 20 47.0	+2.0
RSO	Redoubt South	27.90	73	eP	P	15 20 46.8	+1.5
SUA	Susitna One	27.96	70	eP	P	15 20 45.4	-0.4
	comp=Z,18nm,0.5s						
DHY	Denali Highway	28.11	65	eP	P	15 20 46.4	-0.8
	comp=Z,16nm,1.3s						
GHO	Glory Hole Cre	28.41	68	eP	P	15 20 49.3	-0.4
	comp=Z,27nm,1.1s						
PMR	Palmer	28.46	69	eP	P	15 20 50.0	0.0
	comp=Z,65nm,1.9s						
PMR	Palmer	28.46	69	eP	P	15 20 50.0	0.0
PMR				pmax	pmax		
	comp=Z,65nm,1.9s						
RIDG	Independ'e Rid	28.55	63	eP	P	15 20 49.3	-1.6
	comp=Z,57nm,1.9s						
RC01	Rabbit Creek A	28.58	70	eP	P	15 20 49.8	-1.3
	comp=Z,26nm,1.2s						
SML	Sawmill	28.60	68	eP	P	15 20 50.7	-0.7
	comp=Z,34nm,1.4s						
SML	Sawmill	28.60	68	eP	P	15 20 50.7	-0.7
SML				pmax	pmax		
	comp=Z,34nm,1.4s						
SDPT	Sand Point	28.61	87	eP	P	15 20 51.3	-0.1
	comp=Z,878nm,1.8s						
SCRK	Sand Creek	28.69	62	eP	P	15 20 50.9	-1.3
	comp=Z,24nm,1.7s						
KNK	Knik Glacier	28.82	69	eP	P	15 20 52.9	-0.4
	comp=Z,119nm,2.0s						
HOM	Homer	28.86	73	eP	P	15 20 52.3	-1.3
	comp=Z,598nm,1.2s						
DOT	Dot Lake	28.88	62	eP	P	15 20 53.1	-0.7
	comp=Z,6.5nm,0.8s						
SCM	Sheep Creek Mo	28.94	67	eP	P	15 20 53.9	-0.5
	comp=Z,127nm,2.0s						
SCM	Sheep Creek Mo	28.94	67	eP	P	15 20 53.9	-0.5
SCM				pmax	pmax		
	comp=Z,127nm,2.0s						
BRLK	Bradley Lake	29.06	73	eP	P	15 20 54.5	-1.0
	comp=Z,31nm,0.8s						
EGAK	Eagle	29.11	59	eP	P	15 20 56.0	+0.2
	comp=Z,19nm,1.6s						
INK	Inuvik	29.24	49	eP	P	15 20 56.9	0.0
	comp=Z,7.8nm,1.3s						
INK	Inuvik	29.24	49	P	P	15 20 57.0	+0.1
	comp=Z,1.5nm,0.7s,baz=311,slow=18,SNR=11						
HARP	HAARP	29.32	65	eP	P	15 20 57.1	-0.6
	comp=Z,133nm,1.8s						
SEW	Seward	29.35	71	eP	P	15 20 56.6	-1.3
	comp=Z,208nm,2.0s						
MENT	Mentasta	29.46	63	eP	P	15 20 58.7	-0.3
	comp=Z,29nm,1.5s						
EPYK	Eagle Plains	29.51	54	eP	P	15 20 59.2	-0.2
	comp=Z,49nm,2.0s						
KLU	Klutina	29.66	67	eP	P	15 21 00.4	-0.4
	comp=Z,71nm,1.8s						
KDAK	Kodiak Island	29.83	77	eP	P	15 21 02.0	-0.2
	comp=Z,170nm,1.8s						
KDAK	Kodiak Island	29.83	77	eP	P	15 21 02.0	-0.2
KDAK				pmax	pmax		
	comp=Z,170nm,1.8s						
DIV	Divide	29.97	67	eP	P	15 21 03.5	0.0
	comp=Z,77nm,1.6s						
OHAK	Old Harbor	29.97	78	eP	P	15 21 03.3	-0.2
	comp=Z,210nm,1.9s						
NVS	Novosibirsk	30.00	275	⇑iP	P	15 21 04.3	+0.6
NVS				pmax	pmax		
	comp=Z,15nm,1.4s						
NVS				pmax	pmax		
	comp=N,9.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,11nm,1.5s						
ZAA1	Zalesovo Array	30.06	272	eP	P	15 21 04.7	+0.4
ZAA1				ePcP	PcP	15 24 05.5	-0.1
ZAA0	Zalesovo Array	30.07	272	eP	P	15 21 04.4	+0.1
	comp=E,6.1nm,0.8s						
ZALV	Zalesovo Beam	30.07	272	eP	P	15 21 03.2	-1.2
ZALV				PcP	PcP	15 24 05.5	-0.1
ZALV	Zalesovo Beam	30.07	272	i P	P	15 21 04.6	+0.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	30.07	272	P	P	15 21 04.7	+0.4
	comp=Z,2.1nm,0.4s,baz=51,slow=8.1,SNR=5.1						
ZALV				PcP	PcP	15 24 05.5	-0.1
	comp=Z,1.2nm,0.4s,baz=20,slow=2.7,SNR=6.1						
ZALV				LR	LR	15 34 56.0	
	comp=Z,1µm,18.9s,baz=138,slow=40						
SII	Sitkinak Islan	30.12	80	eP	P	15 21 05.7	+0.8
	comp=Z,322nm,1.6s						
DAWY	Dawson	30.16	59	eP	P	15 21 06.0	+0.8
	comp=Z,18nm,1.6s						
EYAK	Cordova Ski Ar	30.38	68	eP	P	15 21 08.0	+0.9
	comp=Z,233nm,1.7s						
MID	Middleton Isla	30.95	70	eP	P	15 21 14.1	+2.0
	comp=Z,458nm,1.2s						
MID	Middleton Isla	30.95	70	eP	P	15 21 14.1	+2.0
MID				pmax	pmax		
	comp=Z,458nm,1.2s						
KBS	Kingsbay	30.97	343	eP	P	15 21 13.3	+1.1
	comp=Z,40nm,1.4s						
KBS	Kingsbay	30.97	343	eP	P	15 21 13.3	+1.1
KBS				pmax	pmax		
	comp=Z,40nm,1.4s						
HMT	Hamilton	31.05	67	eP	P	15 21 13.3	+0.3
	comp=Z,60nm,0.7s						
SPA0	Spitsbergen Ar	31.07	341	eP	P	15 21 12.7	-0.3
	comp=Z,23nm,0.9s						
MAJO	Matsushiro	31.16	187	eP	P	15 21 15.2	+1.0
	comp=Z,16nm,1.4s						
BJT	Baijiatuau	31.21	221	eP	P	15 21 15.2	+0.6
	comp=Z,7.7nm,0.9s						
KSRS	Korea Array	31.28	203	P	P	15 21 15.0	-0.2
KSRS	Korea Array	31.28	203	P	P	15 21 15.0	-0.2
	comp=Z,1.8nm,0.9s,baz=5.3,slow=8.6,SNR=5.9						
KS15	Wonju Array Si	31.30	203	eP	P	15 21 15.0	-0.4
KSAR	Wonju Array Be	31.30	203	P	P	15 21 15.0	-0.4
KSAR	Wonju Array Be	31.30	203	P	P	15 21 15.0	-0.4
HHC	Hu-ho-hao-te	31.68	228	eP	P	15 21 20.3	+1.4
HHC				pP	sP	15 21 25.0	+1.8
HHC				S	S	15 26 24.3	-3.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,4.1s						
HHC				LR	LR		
	comp=Z,1µm,10.9s						
HHC				LR	LR		
	comp=Z,1µm,12.3s						
HHC				LR	LR		
	comp=Z,2µm,13.1s						
DGZ	Jazzator, Alta	32.40	265	c iP	P	15 21 26.5	+1.3
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INU	Inuyama	32.41	189	eP	P	15 21 27.0	+1.8
	comp=Z,32nm,1.8s						
HYT	Haines Junctio	33.05	62	eP	P	15 21 31.1	+0.4
	comp=Z,55nm,1.9s						
RES	Resolute Bay	33.34	24	eP	P	15 21 32.6	-0.3

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             comp=Z,18nm,1.5s
RES   Resolute Bay        33.34  24  eP      P       15 21 32.6 -0.3
RES                                   pmax   pmax
             comp=Z,18nm,1.5s
WHY   Whitehorse          34.05  61  eP      P       15 21 40.0 +0.5
             comp=Z,40nm,1.8s
SKAG  Skagway             34.79  62  eP      P       15 21 46.9 +1.3
             comp=Z,36nm,1.4s
KURK  Kurchatov           34.97 274  eP      P       15 21 47.5 +0.3
             comp=Z,21nm,1.4s
KURK  Kurchatov           34.97 274   P      P       15 21 48.6 +1.3
KURK                                  pmax   pmax
             comp=Z,6.0nm,0.6s
KURBB Kurchatov Arra      35.08 274   P      P       15 21 48.6 +0.4
             comp=Z,6.1nm,0.6s,baz=36,slow=8.6,SNR=36
JNU   Nakatsue            35.15 197  eP      P       15 21 48.2 -0.9
             comp=Z,24nm,1.6s
DAG   Danmarks Havn       35.44 353⇑iP      P       15 21 50.5 -0.6
             comp=Z,9.6nm,0.8s
DAG   Danmarks Havn       35.44 353⇑iP      P       15 21 50.5 -0.6
DAG                                   pmax   pmax
             comp=Z,7.0nm,0.8s
LVZ   Lovozero            35.94 322  eP      P       15 21 54.9 -0.6
             comp=Z,102nm,1.8s
LVZ   Lovozero            35.94 322  eP      P       15 21 54.9 -0.6
LVZ                                   pmax   pmax
             comp=Z,102nm,1.8s
JIS   Juneau Island       36.01  63  eP      P       15 21 57.3 +1.2
             comp=Z,61nm,1.7s
KEV   Kevo                36.14 328  eP      P       15 21 56.4 -0.7
             comp=Z,96nm,1.7s
KEV   Kevo                36.14 328  eP      P       15 21 56.4 -0.7
KEV                                   pmax   pmax
             comp=Z,97nm,1.7s
BVAR  Borovoye Array      36.26 283   P      P       15 21 58.3 -0.1
             comp=Z,5.7nm,0.7s,baz=51,slow=8.5,SNR=19
BVAR                                  PcP    PcP     15 24 23.2 +0.2
             comp=Z,1.4nm,0.5s,baz=32,slow=1.7,SNR=5.4
BRVK  Borovoye            36.27 283  eP      P       15 21 58.2 -0.2
             comp=Z,8.2nm,0.9s
BRVK  Borovoye            36.27 283ceP      P       15 21 58.5  0.0
BRVK                                  pmax   pmax
             comp=Z,10.0nm,1.0s
ARA0  ARCESS Array S      36.62 328  eP      P       15 22 00.5 -0.8
ARA0                                 ePcP    PcP     15 24 23.9  0.0
ARCES ARCESS Array B      36.62 328   P      P       15 22 00.5 -0.8
             comp=Z,5.4nm,0.8s,baz=42,slow=7.8,SNR=17
ARCES                                 PcP    PcP     15 24 23.8  0.0
             comp=Z,4.0nm,0.5s,baz=37,slow=3.3,SNR=19
ARE0  ARCESS Array S      36.62 328  eP      P       15 22 00.2 -1.1
             comp=Z,2.7nm,1.4s
SIT   Sitka               36.62  65  eP      P       15 22 00.4 -1.0
             comp=Z,87nm,1.4s
SIT   Sitka               36.62  65  eP      P       15 22 00.4 -1.0
SIT                                   pmax   pmax
             comp=Z,87nm,1.4s
GTA   Gaotai              36.69 242  eP      P       15 22 04.0 +1.7
GTA                                   pP     sP      15 22 08.6 +1.9
GTA                                   sP     pP      15 22 11.1 +5.7
GTA                                   PcP    PcP     15 24 24.8 +0.1
GTA                                   pmax   pmax
             comp=Z,5.0nm,1.1s
MK31  Makanchi Array      36.76 267  eP      P       15 22 02.4 -0.3
             comp=Z,8.6nm,0.8s
MK31  Makanchi Array      36.76 267  eP      P       15 22 02.4 -0.3
MK31                                  pmax   pmax
             comp=Z,9.0nm,0.8s
MK32  Makanchi Array      36.76 267  eP      P       15 22 02.4 -0.3
MKAR  Makanchi Array      36.76 267  eP      P       15 22 02.4 -0.3
             comp=Z,65nm,0.8s
MKAR  Makanchi Array      36.76 267   P      P       15 22 02.4 -0.3
             comp=Z,11nm,0.6s,baz=27,slow=6.7,SNR=46
MK01  Makanchi Array      36.77 267  eP      P       15 22 02.2 -0.6
SVE   Sverdlovsk          36.83 295⇓eP      P       15 22 04.1 +1.0
SVE                                   pmax   pmax
             comp=Z,19nm,0.8s
MAKZ  Makanchi            36.86 267  eP      P       15 22 03.3 -0.3
             comp=Z,5.5nm,0.7s
MAKZ  Makanchi            36.86 267  eP      P       15 22 03.3 -0.3
MAKZ                                  pmax   pmax
             comp=Z,6.0nm,0.7s
WMQ   Urumqi              37.20 259  eP      P       15 22 08.3 +1.8
WMQ                                   pP     sP      15 22 12.4 +1.5
WMQ                                   sP     pP      15 22 13.9 +4.3
WMQ                                   pmax   pmax
             comp=Z,27nm,1.3s
WMQ                                   LR     LR
             comp=Z,2µm,19.9s
WMQ                                   LR     LR
             comp=Z,3µm,21.3s
WMQ                                   LR     LR
             comp=Z,1µm,30.5s
WMQ   Urumqi              37.20 259  eP      P       15 22 08.6 +2.1
             comp=Z,22nm,1.4s
WMQ   Urumqi              37.20 259  eP      P       15 22 08.6 +2.1
WMQ                                   pmax   pmax
             comp=Z,22nm,1.4s
DLBC  Dease Lake          37.36  60  eP      P       15 22 09.0 +1.3
             comp=Z,26nm,1.5s
ARU   Arti                37.86 296  eP      P       15 22 12.7 +0.8
             comp=Z,8.3nm,0.9s
ARU   Arti                37.86 296⇓iP      P       15 22 12.5 +0.6
ARU                                   pmax   pmax
             comp=Z,10.0nm,0.8s
TMCR  Tamitsa             38.06 317  eP      P       15 22 13.3 -0.1
TMCR                                  pmax   pmax
             comp=Z,20nm,0.7s
NJ2   Nanjing             38.19 214  eP      P       15 22 17.1 +2.2
NJ2                                   pmax   pmax
             comp=Z,7.0nm,0.5s
LZH   Lanzhou             38.40 235  eP      P       15 22 18.9 +2.1
LZH                                   pP     sP      15 22 22.0 +0.8
LZH                                   sP     pP      15 22 24.8 +4.9
LZH                                   pmax   pmax
             comp=Z,28nm,0.9s
SSE   Sheshan             38.64 210  eP      P       15 22 18.9 +0.2
             comp=Z,147nm,2.0s
XAN   Xi'an               38.78 227   P      P       15 22 20.8 +0.8
XAN                                   pP     sP      15 22 29.0 +4.7
XAN                                   pmax   pmax
             comp=Z,4.0nm,1.0s
XAN   Xi'an               38.78 227  eP      P       15 22 20.6 +0.8
             comp=Z,25nm,1.8s
XAN   Xi'an               38.78 227   P      P       15 22 20.7 +0.8
XAN                                   pmax   pmax
             comp=Z,25nm,1.8s
YKA   Yellowknife Ar      38.87  46   P      P       15 22 20.1 -0.2
             comp=Z,4.3nm,0.7s,baz=322,slow=8.0,SNR=37
OTUK  Ortayu              39.37 277   P      P       15 22 25.4 +0.7
OTUK                                  pmax   pmax
             comp=Z,8.0nm,1.4s
SUMG  Summit              40.12   1  i P     P       15 22 31.2 +0.1
SUMG  Summit              40.12   1  i P     P       15 22 31.2 +0.1
OUL   Oulu                40.27 324   P      P       15 22 31.8 -0.1
OUL                                   pmax   pmax
             comp=Z,25nm,1.2s
KLMR  Klimovskoe          40.34 313  eP      P       15 22 31.9 -0.6
KLMR                                 e               15 24 34.2
KLMR                                  pmax   pmax
             comp=Z,25nm,1.5s
KLMR  Klimovskoe          40.34 313  eP      P       15 22 31.9 -0.6
KLMR                                  AMP            15 22 34.3
             comp=Z,25nm,1.6s
KLMR                                 ePcP    PcP     15 24 34.2 -1.3
PDGK  Podgornoye          40.74 266   P      P       15 22 37.0 +0.7
PDGK                                  pmax   pmax
             comp=Z,7.0nm,0.9s
SCO   Scoresbysund        41.83 352  i P     P       15 22 45.2 +0.5
SCO   Scoresbysund        41.83 352  i P     P       15 22 45.2 +0.5
ENH   Enshi               42.17 225  eP      P       15 22 48.1 +0.1
             comp=Z,31nm,1.6s
SUF   Sumiainen           42.24 322  eP      P       15 22 48.3 +0.2
SUF                                   pmax   pmax
             comp=Z,37nm,0.6s
USP   Ospenovka           42.71 271   P      P       15 22 53.6 +1.3
             SNR=9.7
VAF   Ylistaro            42.76 324   P      P       15 22 52.5 +0.2
VAF                                   pmax   pmax
             comp=Z,28nm,0.8s
CHMS  Chumysh             42.84 271   P      P       15 22 55.0 +1.7
             SNR=13
AKTO  Aktyubinsk          42.89 291   P      P       15 22 54.1 +0.5
             comp=Z,9.2nm,0.7s,baz=42,slow=7.5,SNR=25
BBB   Bella Bella         43.04  64  eP      P       15 22 57.4 +2.7
FRU1  Bishkek             43.05 271  eP      P       15 22 54.4 -0.7
             comp=Z,15nm,0.5s
FRU1  Bishkek             43.05 271  eP      P       15 22 54.4 -0.7
FRU1                                  pmax   pmax
             comp=Z,15nm,0.5s
KBK   Karagaybulak        43.06 270   P      P       15 22 57.0 +1.7
             SNR=7.0
ABKAR Akbulak array       43.17 288  eP      P       15 22 55.9  0.0
             comp=Z,8.9nm,0.8s
CD2   Chengdu             43.22 232  eP      P       15 22 56.0 -0.5
AAK   Ala-Archa           43.25 271   P      P       15 22 58.6 +1.8
             SNR=14
AAK   Ala-Archa           43.25 271  eP      P       15 22 58.3 +1.5
             comp=Z,13nm,0.6s
AAK   Ala-Archa           43.25 271⇑iP      P       15 22 58.6 +1.8
AAK                                   pmax   pmax
             comp=Z,10.0nm,0.6s
AAK   Ala-Archa           43.25 271   P      P       15 22 58.5 +1.8
             comp=Z,12nm,0.5s,baz=100,slow=3.7,SNR=52
FIA1  FINESS Array S      43.36 321  eP      P       15 22 56.7 -0.5
FIA0  FINESS Array S      43.36 321  eP      P       15 22 57.1  0.0
FIA0  FINESS Array S      43.36 321  eP      P       15 22 57.2  0.0
FINES FINESS Array B      43.36 321   P      P       15 22 57.1  0.0
             comp=Z,12nm,0.5s,baz=30,slow=9.1,SNR=116
KZA   Kyzart              43.44 269   P      P       15 23 00.2 +1.6
             SNR=9.9
EKS2  Erkin-Say           43.50 271   P      P       15 23 00.3 +1.5
             SNR=6.8
NRN   Naryn               43.70 268  eP      P       15 23 02.3 +1.7
             comp=Z,5.8nm,0.7s
NRN   Naryn               43.70 268  eP      P       15 23 02.3 +1.7
NRN                                   pmax   pmax
             comp=Z,6.0nm,0.7s
AML   Almayashu           43.99 271   P      P       15 23 04.9 +1.9
             SNR=13
MNAS  Manas               44.14 272   P      P       15 23 05.8 +1.9
MNAS                                  pmax   pmax
             comp=Z,17nm,1.2s
KK31  Karatay Array       44.38 274  eP      P       15 23 05.6 -0.1
KK31  Karatay Array       44.38 274  eP      P       15 23 05.6 -0.1
KKAR  Karatay Array       44.38 274  eP      P       15 23 05.6 -0.1
KKAR  Karatay Array       44.38 274  eP      P       15 23 05.6 -0.1
KSH   Kashi               45.37 267   P      P       15 23 18.8 +5.1
KSH                                   pP     sP      15 23 22.6 +4.5
KSH                                   pmax   pmax
             comp=Z,1µm,10.1s
VSU   Vasula              45.80 319⇓iP      P       15 23 17.3 +0.6
VSU   Vasula              45.80 319  eP      P       15 23 16.6 -0.1
VSU                                   IAmb   IAmb    15 23 17.4
             comp=Z,26nm,0.8s
SFK   Sufi-Kurgan         45.88 270   P      P       15 23 18.6 +0.7
SFK                                   pmax   pmax
             comp=Z,4.0nm,1.0s
OBN   Obninsk             46.02 310  eP      P       15 23 19.2 +0.8
             comp=Z,21nm,0.9s
OBN   Obninsk             46.02 310⇓eP      P       15 23 18.7 +0.2
OBN                                  e               15 24 54.8
OBN                                  e               15 25 05.4
OBN                                   pmax   pmax
             comp=Z,23nm,1.3s
OBN                                   MLR    MLR
             comp=Z,547nm,16.0s
OBN   Obninsk             46.02 310   P      P       15 23 18.9 +0.4
             comp=Z,1.8nm,0.3s,baz=95,slow=3.9,SNR=5.0
LLLB  Lillooet            46.49  61  eP      P       15 23 23.2 +0.9
             comp=Z,36nm,2.0s
GYA   Guiyang             46.56 227   P      P       15 23 23.8 +0.6
GYA                                   pP     sP      15 23 30.4 +2.8
GYA                                   PP     PP      15 25 14.3 +1.9
GYA                                   S      S       15 30 09.8 -1.9
GYA                                   sS     sS      15 30 21.0 +4.1
GYA                                   SS     SS      15 33 30.8 -6.7
GYA                                   pmax   pmax
             comp=Z,10.0nm,0.7s
GYA                                   pmax   pmax
             comp=Z,180nm,5.5s
GYA                                   LR     LR
             comp=Z,830nm,17.2s
GYA                                   LR     LR
             comp=Z,410nm,17.3s
GYA                                   LR     LR
             comp=Z,1µm,18.3s
NC303 NORSAR Array S      46.74 330  eP      P       15 23 23.4 -0.6
NC405 NORSAR Array S      46.78 330  eP      P       15 23 23.9 -0.5
             comp=Z,108nm,2.0s
NC204 NORSAR Array S      46.81 330  eP      P       15 23 24.5 -0.2
BTK   Batken              46.88 272  eP      P       15 23 28.8 +3.2
             comp=Z,12nm,0.8s
NB201 NORSAR Array S      46.92 330  eP      P       15 23 25.4 -0.1
NB2   NORSAR Subarra      46.94 330   P      P       15 23 25.0 -0.7
             comp=Z,5.8nm,0.8s,baz=24,slow=7.9
NB2   NORSAR Subarra      46.94 330   P      P       15 23 22.2 -3.5
NB2                                   pmax   pmax
             comp=Z,6.0nm,0.9s
NB200 NORSAR Array S      46.94 330  eP      P       15 23 25.3 -0.4
NB200                                ePcP    PcP     15 24 57.6 -0.4
NOA   NORSAR Array B      46.94 330   P      P       15 23 25.3 -0.4
             comp=Z,9.9nm,0.8s,baz=24,slow=7.8,SNR=22
NOA                                   PcP    PcP     15 24 57.6 -0.4
             comp=Z,2.0nm,0.9s,baz=22,slow=3.8,SNR=3.5
NBO00 NORSAR Array S      47.03 330  eP      P       15 23 26.3 -0.1
FRB   Frobisher Bay       47.08  18   P      P       15 23 25.2 -1.5
FRB                                   pmax   pmax
             comp=Z,17nm,1.1s
NC602 NORSAR Array S      47.16 330  eP      P       15 23 26.1 -1.3
             comp=Z,84nm,1.7s
NORES NORESS Array B      47.16 330   P      P       15 23 26.8 -0.6
NORES                                 pmax   pmax
             comp=Z,6.0nm,0.3s
NAO01 NORSAR Array S      47.18 330  eP      P       15 23 27.1 -0.5
FCC   Fort Churchill      47.28  36  eP      P       15 23 27.2 -1.1
             comp=Z,26nm,1.6s
FCC   Fort Churchill      47.28  36  eP      P       15 23 27.2 -1.1
FCC                                   pmax   pmax
             comp=Z,26nm,1.6s
LPSR  Galich'ya Gora      47.47 306  eP      P       15 23 29.9  0.0
LPSR                                  pmax   pmax
             comp=Z,20nm,0.7s
PGC   Sidney              47.63  64  eP      P       15 23 31.9 +0.8
             comp=Z,52nm,1.6s
SLIT  Slitere, Latvi      47.64 321  eP      P       15 23 30.7 -0.4
SLIT                                  IAmb   IAmb    15 23 32.4
             comp=Z,150nm,0.9s
VRH   Novokhopyorsk       47.80 304  eP      P       15 23 31.7 -0.7
VRH                                   pmax   pmax
             comp=Z,20nm,0.6s
LSA   Lhasa               48.47 246  eP      P       15 23 40.4 +1.9
             comp=Z,16nm,1.1s
ISAL  Salakas             48.52 317  eP      P       15 23 38.1 +0.2
ISAL                                  IAmb   IAmb    15 23 38.8
             comp=Z,7.0nm,0.6s
KONO  Kongsberg           48.54 330  eP      P       15 23 38.0  0.0
             comp=Z,123nm,1.7s
KONO  Kongsberg           48.54 330  eP      P       15 23 38.0  0.0
KONO                                  pmax   pmax
             comp=Z,123nm,1.7s
IDID  Didziasalis         48.59 317  eP      P       15 23 38.6 +0.2
IDID                                  IAmb   IAmb    15 23 40.0
             comp=Z,8.5nm,0.8s
VSR   Storozhevoye        48.60 305d iP     P       15 23 38.2 -0.4
VSR                                   pmax   pmax
             comp=Z,38nm,0.6s
IIGN  Ignalina            48.69 317  eP      P       15 23 39.5 +0.2
IIGN                                  IAmb   IAmb    15 23 40.7
             comp=Z,12nm,0.7s
FFC   Flin Flon           48.95  44  eP      P       15 23 40.1 -1.2
             comp=Z,13nm,0.8s
FFC   Flin Flon           48.95  44  i P     P       15 23 40.7 -0.6
KMI   Kunming             48.95 231   P      P       15 23 42.0 +0.1
KMI                                   pP     sP      15 23 45.6 -0.7
KMI                                   pmax   pmax
             comp=Z,17nm,0.9s
KMI   Kunming             48.95 231  eP      P       15 23 41.4 -0.5
             comp=Z,16nm,0.9s
KMI   Kunming             48.95 231  eP      P       15 23 41.4 -0.5
KMI                                   pmax   pmax
             comp=Z,16nm,0.9s
B08A  Colville Reser      49.28  61  eP      P       15 23 43.6 -0.3
             comp=Z,6.5nm,0.8s
D05A  Enumclaw            49.39  63  eP      P       15 23 45.7 +1.0
             comp=Z,22nm,0.9s
LTY   Liberty             49.78  62  eP      P       15 23 47.2 -0.6
             comp=Z,6.3nm,0.8s
LON   Longmire            49.83  64  eP      P       15 23 48.2 +0.1
             comp=Z,6.8nm,1.1s
LON   Longmire            49.83  64  eP      P       15 23 48.3 +0.1
LON                                   pmax   pmax
             comp=Z,7.0nm,1.1s
NEW   Newport             50.09  59  eP      P       15 23 49.7 -0.5
             comp=Z,2.9nm,0.8s
NEW   Newport             50.09  59  eP      P       15 23 49.7 -0.5
NEW                                   pmax   pmax
             comp=Z,3.0nm,0.8s
C09A  Chrisman Ranch      50.11  60  eP      P       15 23 49.6 -0.7
             comp=Z,14nm,1.5s
D08A  Wollman Farm,       50.54  61  eP      P       15 23 52.7 -0.8
             comp=Z,25nm,1.9s
SUW   Suwalki             50.68 318  eP      P       15 23 54.4  0.0
SUW   Suwalki             50.68 318  eP      P       15 23 53.7 -0.7
             comp=Z,40nm,0.7s
SUW   Suwalki             50.68 318  eP      P       15 23 54.4  0.0
KLNR  Kaliningrad         50.88 321⇓iP      P       15 23 54.9 -1.0
KLNR                                  pmax   pmax
             comp=Z,38nm,0.8s
F07A  Phinny Hill Vi      51.22  63  eP      P       15 24 01.2 +2.7
             comp=Z,15nm,0.9s
H04A  Detroit Lake        51.49  65  eP      P       15 24 00.8 +0.1
             comp=Z,39nm,1.8s
NIL   Nilore              51.56 266  eP      P       15 24 02.5 +1.2
             comp=Z,11nm,1.0s
NIL   Nilore              51.56 266  eP      P       15 24 02.5 +1.2
NIL                                   pmax   pmax
             comp=Z,11nm,1.0s
BSD   Bornholm Skovb      51.65 325⇑iP      P       15 24 01.3 -0.3
             comp=Z,26nm,0.6s
BSD   Bornholm Skovb      51.65 325⇑iP      P       15 24 01.3 -0.3
BSD                                   pmax   pmax
             comp=Z,26nm,0.6s
GUN   Gumba               51.98 250  eP      P       15 24 05.9 +1.0
             comp=Z,32nm,0.8s
AKASG Malin Array Be      52.03 312   P      P       15 24 04.0 -0.5
             comp=Z,16nm,0.7s,baz=29,slow=8.4,SNR=18
AKBB  Malin Array Si      52.03 312  eP      P       15 24 03.7 -0.9
             comp=Z,13nm,0.8s
KIEV  Kiev                52.04 312  eP      P       15 24 03.7 -0.9
             comp=Z,13nm,0.9s
KIEV  Kiev                52.04 312⇑iP      P       15 24 04.2 -0.4
KIEV  Kiev                52.04 312c iP     P       15 24 03.7 -0.9
KIEV                                  pmax   pmax
             comp=Z,15nm,0.9s
F10A  Beach Ranch, E      52.06  61  eP      P       15 24 05.0  0.0
             comp=Z,5.7nm,0.8s
AK11  Malin Array Si      52.06 312  eP      P       15 24 03.7 -1.1
G08A  Pilot Rock          52.08  62  eP      P       15 24 05.1  0.0
             comp=Z,3.9nm,0.8s
JIRN  Jiri                52.09 250  eP      P       15 24 07.0 +1.2
             comp=Z,54nm,0.7s
KKN   Kakani              52.30 251  eP      P       15 24 08.5 +1.3
             comp=Z,54nm,0.8s
DANN  Dangsing            52.35 252  eP      P       15 24 08.9 +1.3
             comp=Z,44nm,0.7s
KBL   Kabul               52.38 270  eP      P       15 24 07.1 -0.6
             comp=Z,6.8nm,0.8s
KBL   Kabul               52.38 270  eP      P       15 24 07.1 -0.6
KBL                                   pmax   pmax
             comp=Z,7.0nm,0.8s
PKIN  Phulchoki           52.45 250  eP      P       15 24 09.2 +0.8
RGN   Rugen               52.52 325  eP      P       15 24 08.2 +0.1
             comp=Z,42nm,0.7s
DMN   Daman               52.53 251  eP      P       15 24 10.2 +1.3
             comp=Z,33nm,1.0s
PINE  Pine Mountain       52.71  65  eP      P       15 24 10.7 +0.7
             comp=Z,14nm,0.8s
PYUN  Piuthan             52.86 253  eP      P       15 24 12.0 +0.7
             comp=Z,41nm,1.0s
KOLN  Koldanda            52.93 252  eP      P       15 24 12.9 +1.1
             comp=Z,69nm,1.2s
I07A  Izee                52.95  63  eP      P       15 24 12.3 +0.7
             comp=Z,4.7nm,0.8s
BMO   Blue Mountains      53.02  61  eP      P       15 24 12.1  0.0
             comp=Z,2.9nm,0.9s
BMO   Blue Mountains      53.02  61  eP      P       15 24 12.1  0.0
BMO                                   pmax   pmax
             comp=Z,3.0nm,0.9s
GEYT  Alibeck             53.57 282   P      P       15 24 17.1 +0.9
             comp=Z,4.7nm,0.7s,baz=308,slow=5.5,SNR=8.4
GYA0B ALIBECK ARRAY       53.57 282  eP      P       15 24 17.2 +1.0
             comp=Z,15nm,1.3s
LRM   Limekiln Ridge      53.76  57  eP      P       15 24 17.6 -0.1
KVAR  Kislovodsk Arr      53.81 298   P      P       15 24 19.8 +1.9
             comp=Z,8.2nm,0.7s,baz=266,slow=19,SNR=8.5
KIV   Kislovodsk          53.81 298  eP      P       15 24 18.7 +0.7
             comp=Z,24nm,0.8s
KIV   Kislovodsk          53.81 298  eP      P       15 24 18.7 +0.7
KIV                                   pmax   pmax
             comp=Z,29nm,1.0s
NCK   Nalchik             53.91 297⇑eP      P       15 24 20.3 +1.7
NCK                                   pmax   pmax
             comp=Z,20nm,0.6s
DGMT  Dagmar              53.93  49  eP      P       15 24 18.0 -0.7
             comp=Z,22nm,1.4s
KBZ   Khabaz              53.94 298   P      P       15 24 19.9 +1.2
             comp=Z,14nm,0.8s,baz=67,slow=3.9,SNR=26
DLMT  Dillon              54.12  57  eP      P       15 24 20.5 +0.2
             comp=Z,5.2nm,1.0s
BOZ   Bozeman (W)         54.23  56  eP      P       15 24 20.9 -0.1
             comp=Z,3.0nm,0.8s
BOZ   Bozeman (W)         54.23  56  eP      P       15 24 20.9 -0.1
BOZ                                   pmax   pmax
             comp=Z,3.0nm,0.8s
LVV   L'vov               54.26 316  eP      P       15 24 21.1 +0.1
NEY   Neytrino            54.42 298⇓eP      P       15 24 24.5 +2.0
NEY                                   pmax   pmax
             comp=Z,3.0nm,0.8s
ZEI   Tsey                54.43 297  eP      P       15 24 22.3 -0.3
ZEI                                   pmax   pmax
             comp=Z,6.0nm,0.7s
MCMT  McKenzie Canyo      54.52  58  eP      P       15 24 23.8 +0.5
ULM   Lac du Bonnet       54.60  42  eP      P       15 24 22.0 -1.5
ULM   Lac du Bonnet       54.60  42  eP      P       15 24 22.0 -1.5
ULM   Lac du Bonnet       54.60  42   P      P       15 24 21.9 -1.6
             comp=Z,3.6nm,0.6s,baz=318,slow=8.9,SNR=6.1
GCMT  Greycliff           54.67  55  eP      P       15 24 25.1 +0.8
WVOR  Wild Horse Val      54.70  64  eP      P       15 24 25.1 +0.6
             comp=Z,4.8nm,1.0s
ESK   Eskdalemuir         54.84 337  eP      P       15 24 25.0 -0.2
             comp=Z,102nm,1.6s
ESK   Eskdalemuir         54.84 337  eP      P       15 24 25.0 -0.2
ESK                                   pmax   pmax
             comp=Z,102nm,1.6s
KMRM  Mail Ridge          54.87  69  eP      P       15 24 28.2 +2.5
             comp=Z,104nm,1.7s
WDC   Whiskeytown Da      54.97  68  eP      P       15 24 26.7 +0.4
             comp=Z,7.8nm,0.8s
WDC   Whiskeytown Da      54.97  68  eP      P       15 24 26.7 +0.4
WDC                                   pmax   pmax
             comp=Z,8.0nm,0.8s
QLMT  Earthquake Lak      54.97  57  eP      P       15 24 27.4 +0.9
OJC   Ojcow               55.00 319  eP      P       15 24 26.8 +0.4
OJC   Ojcow               55.00 319  eP      P       15 24 26.3 -0.1
             comp=Z,21nm,0.8s
OJC   Ojcow               55.00 319  eP      P       15 24 26.8 +0.4
YHB   Horse Butte         55.12  57  eP      P       15 24 27.3 -0.3
             comp=Z,5.6nm,0.9s
HLID  Hailey              55.13  60  eP      P       15 24 27.4 -0.3
HLID                                 ePcP    PcP     15 25 28.9 +0.1
YHH   Holmes Hill         55.20  56  eP      P       15 24 28.8 +0.5
             comp=Z,8.3nm,0.8s
YMR   Madison River       55.27  56  eP      P       15 24 29.2 +0.5
             comp=Z,6.6nm,0.9s
KSP   Ksiaz               55.28 322  eP      P       15 24 28.4  0.0
KSP   Ksiaz               55.28 322  eP      P       15 24 28.4  0.0
RLMT  Red Lodge           55.40  55  eP      P       15 24 30.4 +0.7
             comp=Z,19nm,0.8s
YFT   Old Faithful        55.50  56  eP      P       15 24 31.3 +0.9
             comp=Z,12nm,0.8s
LKWY  Lake                55.54  56  eP      P       15 24 32.3 +1.6
             comp=Z,15nm,0.8s
NIE   Niedzica            55.61 318  eP      P       15 24 31.9 +1.1
NIE   Niedzica            55.61 318  eP      P       15 24 31.9 +1.1
CLL   Collm               55.61 324  eP      P       15 24 30.4 -0.3
             comp=Z,24nm,0.9s
CLL   Collm               55.61 324⇑iP      P       15 24 30.5 -0.3
             comp=Z,29nm,1.0s
CLL                                  epP     pP      15 24 34.0  0.0
CLL                                   Lm     MLR     15 59 00.0
             comp=Z,900nm,21.5s
CLL   Collm               55.61 324⇑iP      P       15 24 30.5 -0.3
CLL                                  e               15 24 34.0
CLL                                   pmax   pmax
             comp=Z,29nm,1.0s
H17A  Grant Village       55.63  56  eP      P       15 24 33.3 +1.9
             comp=Z,8.1nm,0.9s
YPP   Pitchstone Pla      55.67  57  eP      P       15 24 33.0 +1.3
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	comp=Z,5.2nm,0.8s						
DPC	Dobruska-Polom	55.73	321	*e*P	P	15 24 32.0	+0.3
DPC				*e*pP	pP	15 24 35.4	+0.5
DPC	Dobruska-Polom	55.73	321	*e*P	P	15 24 32.0	+0.3
DPC				*e*		15 24 35.4	
BRG	Berggiesshubel	55.80	323	*e*P	P	15 24 32.0	-0.2
	comp=Z,4.9nm,0.8s						
BRG	Berggiesshubel	55.80	323	*e*P	P	15 24 32.0	-0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KRLC	Kraliky	55.88	321	*e*P	P	15 24 33.1	+0.3
KRLC	Kraliky	55.88	321	*e*P	P	15 24 33.1	+0.3
BUR08	Bucovina Ar. S	55.92	314	*e*P	P	15 24 33.1	-0.1
	comp=Z,26nm,1.6s						
BUR04	Bucovina Ar. S	55.94	314	*e*P	P	15 24 32.7	-0.6
BURAR	Bucovina Array	55.94	314	⇓*i*P	P	15 24 33.6	+0.2
BURAR	Bucovina Array	55.94	314	P	P	15 24 33.5	+0.2
SCHQ	Schefferville	55.96	20	*e*P	P	15 24 32.4	-0.9
	comp=Z,51nm,2.0s						
SCHQ	Schefferville	55.96	20	P	P	15 24 31.7	-1.6
	comp=Z,5.4nm,0.7s,baz=0.5,slow=7.4,SNR=9.3						
IMW	Indian Meadow	55.96	57	*e*P	P	15 24 34.6	+0.8
	comp=Z,7.5nm,1.1s						
MORC	Moravsky Berou	55.97	320	*e*P	P	15 24 33.5	+0.1
	comp=Z,14nm,0.9s						
MORC	Moravsky Berou	55.97	320	⇑*i*P	P	15 24 33.9	+0.5
MORC	Moravsky Berou	55.97	320	P	P	15 24 33.8	+0.4
MORC				pmax	pmax		
	comp=Z,18nm,1.1s						
MORC	Moravsky Berou	55.97	320	⇑*i*P	P	15 24 33.6	+0.1
PVCC	Panska Ves	55.98	323	*e*P	P	15 24 34.1	+0.7
PVCC	Panska Ves	55.98	323	*e*P	P	15 24 34.1	+0.7
CHTO	Chiang Mai	56.03	232	*e*P	P	15 24 33.5	-0.7
	comp=Z,5.3nm,1.1s						
CHTO	Chiang Mai	56.03	232	*e*P	P	15 24 33.5	-0.7
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CHTO	Chiang Mai	56.03	232	P	P	15 24 35.0	+0.9
	comp=Z,24nm,1.2s						
CMMT	Chiang Mai	56.03	232	P	P	15 24 34.9	+0.7
	comp=Z,5.5nm,1.2s						
LANS	Liptovska Anna	56.07	319	*e*P	P	15 24 35.0	+0.9
LANS				*e*		15 24 38.5	
LANS	Liptovska Anna	56.07	319	*e*P	P	15 24 35.0	+0.9
LANS				*e*sP	sP	15 24 38.5	-0.1
FXWY	Fox Creek	56.17	57	*e*P	P	15 24 36.0	+0.9
	comp=Z,3.4nm,0.7s						
TRPA	Tarpa	56.20	316	⇓*i*P	P	15 24 35.7	+0.7
SKNT	Sakolnakorn	56.31	226	P	P	15 24 37.2	+1.0
	comp=Z,6.4nm,1.1s						
BIZ	Bicaz	56.31	313	⇓*i*P	P	15 24 35.7	-0.2
TPAW	Teton Pass	56.33	57	*e*P	P	15 24 36.5	+0.1
	comp=Z,9.2nm,0.7s						
LOHW	Long Hollow	56.33	57	*e*P	P	15 24 37.7	+1.4
	comp=Z,9.1nm,1.3s						
CM31	Chiang Mai Arr	56.37	232	*e*P	P	15 24 37.1	+0.5
CMAR	Chiang Mai Arr	56.37	232	*i* P	P	15 24 36.9	+0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	56.37	232	P	P	15 24 36.6	0.0
	comp=Z,1.9nm,0.9s,baz=5.2,slow=8.2,SNR=12						
CMAR				PcP	PcP	15 25 33.3	-0.3
	comp=Z,0.8nm,0.9s,baz=350,slow=4.4,SNR=5.0						
BEKR	Beckworth	56.38	67	*e*P	P	15 24 37.1	+0.4
	comp=Z,6.3nm,0.7s						
CM01	Chiang Mai Arr	56.40	232	*e*P	P	15 24 36.5	-0.3
SNOW	Snow King Moun	56.41	57	*e*P	P	15 24 37.9	+1.0
	comp=Z,8.9nm,0.9s						
REDW	Red Top Meadow	56.47	57	*e*P	P	15 24 37.9	+0.6
	comp=Z,11nm,0.8s						
GNI	Garni	56.48	294	c *i*P	P	15 24 38.7	+1.4
GNI				pmax	pmax		
	comp=Z,81nm,1.3s						
GNI	Garni	56.48	294	P	P	15 24 39.0	+1.7
	comp=Z,7.1nm,0.8s,baz=65,slow=3.5,SNR=5.8						
PRU	Pruhonice	56.49	322	*e*P	P	15 24 37.4	+0.3
PRU	Pruhonice	56.49	322	*e*P	P	15 24 37.4	+0.3
MOX	Moxa	56.54	325	P	P	15 24 37.9	+0.4
MOX				pmax	pmax		
	comp=Z,16nm,1.1s						
TESR	Tescani	56.55	312	⇑*i*P	P	15 24 37.5	0.0
UTTA	Uttaradit	56.56	230	P	P	15 24 39.0	+1.1
	comp=Z,5.9nm,0.9s,comp=Z,61nm						
KARS	Kars	56.63	296	*e*P	P	15 24 39.3	+0.9
	comp=Z,34nm,0.6s						
KARS	Kars	56.63	296	*e*P	P	15 24 39.3	+0.9
KARS				pmax	pmax		
	comp=Z,34nm,0.6s						
VRAC	Vranov	56.63	321	⇑*i*P	P	15 24 38.8	+0.7
VRAC	Vranov	56.63	321	P	P	15 24 38.5	+0.3
VRAC				pmax	pmax		
	comp=Z,11nm,1.0s						
VRAC	Vranov	56.63	321	⇑*i*P	P	15 24 38.5	+0.3
BUG	Bochum--Univer	56.71	328	P	P	15 24 39.1	+0.5
BUG				pmax	pmax		
	comp=Z,21nm,1.1s						
NKC	Novy Kostel	56.74	324	*e*P	P	15 24 39.4	+0.5
NKC	Novy Kostel	56.74	324	*e*P	P	15 24 39.4	+0.5
VYHS	Vyhne	56.83	319	*e*P	P	15 24 40.0	+0.4
VYHS				*e*		15 24 43.1	
VYHS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VYHS	Vyhne	56.83	319	*e*P	P	15 24 40.0	+0.4
VYHS				*e*sP	pP	15 24 43.1	+0.3
PAHR	Pah Rah Range	56.86	66	*e*P	P	15 24 40.1	0.0
	comp=Z,10nm,1.2s						
KRUC	Moravsky	56.91	321	P	P	15 24 40.7	+0.6
KRUC				pmax	pmax		
	comp=Z,14nm,1.2s						
KRUC	Moravsky	56.91	321	⇑*i*P	P	15 24 40.5	+0.4
TREC	Trest	56.91	322	*e*P	P	15 24 40.7	+0.6
TREC	Trest	56.91	322	*e*P	P	15 24 40.7	+0.6
AHID	Auburn Hatcher	56.93	58	*e*P	P	15 24 39.4	-1.1
	comp=Z,4.8nm,0.6s						
BMN	Battle Mountai	56.97	64	*e*P	P	15 24 40.6	-0.2
BMN	Battle Mountai	56.97	64	*e*P	P	15 24 40.6	-0.2
SUKH	Sukhothai	57.08	231	P	P	15 24 44.0	+2.4
	comp=Z,3.2nm,1.0s						
PSZ	Piszkesteto	57.09	318	*e*P	P	15 24 42.0	+0.5
	comp=Z,19nm,0.9s						
PSZ	Piszkesteto	57.09	318	⇑*i*P	P	15 24 42.5	+1.0
PSZ	Piszkesteto	57.09	318	*e*P	P	15 24 42.0	+0.5
PSZ				pmax	pmax		
	comp=Z,19nm,0.9s						
VRI	Vrincioaia	57.11	312	⇑*i*P	P	15 24 42.0	+0.4
VRI	Vrincioaia	57.11	312	P	P	15 24 41.9	+0.4
PLOR	Plostina	57.15	312	⇑*i*P	P	15 24 42.0	+0.1
PLOR	Plostina	57.15	312	P	P	15 24 42.0	+0.1
SMOL	Smolenice	57.17	320	P	P	15 24 43.2	+1.3
SMOL				pmax	pmax		
	comp=Z,33nm,0.8s						
OZUR		57.17	312	⇓*i*P	P	15 24 42.0	0.0
HVU	Hansel Valley	57.26	59	*e*P	P	15 24 43.4	+0.5
	comp=Z,9.3nm,0.8s						
HVU	Hansel Valley	57.26	59	*e*P	P	15 24 43.4	+0.5
HVU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CFR	Carcaliu	57.33	310	⇓*i*P	P	15 24 43.2	+0.1
CFR	Carcaliu	57.33	310	P	P	15 24 43.0	-0.1
CFR				pmax	pmax		
	comp=Z,16nm,1.2s						
PNTR	Pine Nut	57.34	66	*e*P	P	15 24 45.2	+1.7
	comp=Z,23nm,1.7s						
MODS	Modra-Piesok	57.34	320	*e*P	P	15 24 43.8	+0.7
MODS				pmax	pmax		
	comp=Z,14nm,1.1s						
MODS	Modra-Piesok	57.34	320	*e*P	P	15 24 43.8	+0.7
ELK	Elko	57.36	62	*e*P	P	15 24 44.3	+0.6
	comp=Z,3.3nm,0.8s						
ELK	Elko	57.36	62	*e*P	P	15 24 44.3	+0.6
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DRGR		57.39	315	P	P	15 24 43.9	+0.3
DRGR				pmax	pmax		
	comp=Z,20nm,0.9s						
BW06	Boulder Array	57.42	56	*e*P	P	15 24 43.7	-0.4
PDAR	Pinedale Array	57.42	56	P	P	15 24 44.1	0.0
	comp=Z,5.2nm,0.7s,baz=5.7,slow=2.8,SNR=34						
KHC	Kasperske Hory	57.52	323	*e*P	P	15 24 44.5	+0.1
	comp=Z,5.0nm,1.4s						
KHC	Kasperske Hory	57.52	323	*e*P	P	15 24 44.9	+0.5
KHC	Kasperske Hory	57.52	323	*e*P	P	15 24 44.9	+0.5
PBKT	Sadao Pong	57.55	229	*e*P	P	15 24 44.5	-0.4
PBKT	Sadao Pong	57.55	229	P	P	15 24 45.7	+0.8
	comp=Z,12nm,0.9s						
WET	Wettzell	57.67	323	P	P	15 24 45.8	+0.3
WET				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MLR	Muntele Rosu	57.68	312	*e*P	P	15 24 47.1	+1.4
	comp=Z,13nm,0.8s						
MLR	Muntele Rosu	57.68	312	⇑*i*P	P	15 24 45.1	-0.6
GRB1	Grafenberg Arr	57.71	324	P	P	15 24 47.1	+1.3
GRB1				pmax	pmax		
	comp=Z,20nm,1.1s						
BUD	Budapest	57.72	318	P	P	15 24 46.8	+1.0
BUD				pmax	pmax		
	comp=Z,18nm,0.8s						
MEM	Membach	57.75	329	P	P	15 24 46.5	+0.5
MEM				pmax	pmax		
	comp=Z,24nm,1.4s						
MEM	Membach	57.75	329	⇓P	P	15 24 46.2	+0.2
GEC2	GERESS Array S	57.76	323	*e*P	P	15 24 45.9	-0.3
	comp=Z,12nm,1.1s						
GEC2	GERESS Array S	57.76	323	*e*P	P	15 24 45.9	-0.3
GEC2				pmax	pmax		
	comp=Z,12nm,1.1s						
GERES	GERESS Array B	57.76	323	P	P	15 24 46.2	0.0
	comp=Z,5.7nm,0.9s,baz=29,slow=6.1,SNR=25						
GEA0	GERESS Array S	57.76	323	*e*P	P	15 24 45.7	-0.5
HWUT	Hardware Ranch	57.82	59	*e*P	P	15 24 47.3	+0.5
	comp=Z,6.1nm,0.6s						
HARR	Harsova	57.83	310	⇑*i*P	P	15 24 47.3	+0.7
CHAI	Chaiyaphum	57.89	228	P	P	15 24 49.1	+1.8
	comp=Z,2.5nm,1.1s						
KVN	Kaiserville	57.89	65	*e*P	P	15 24 48.4	+1.0
	comp=Z,7.3nm,0.7s						
KVN	Kaiserville	57.89	65	*e*P	P	15 24 48.4	+1.0
KVN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VOIR		57.98	313	⇑*i*P	P	15 24 48.7	+0.9
VOIR		57.98	313	P	P	15 24 48.7	+0.9
BCLA	Clavier	58.07	329	⇓P	P	15 24 48.2	0.0
CONA	Conrad Observa	58.10	321	*i* pP	P	15 24 49.3	+0.7
	comp=Z,11nm,1.5s						
SIRR	Siria	58.15	316	⇑*i*P	P	15 24 48.8	-0.1
SOP	Sopron	58.16	320	P	P	15 24 49.8	+0.9
SOP				pmax	pmax		
	comp=Z,17nm,0.8s						
ARR	Arges	58.16	313	⇓*i*P	P	15 24 50.4	+1.4
TCUT	Toone Canyon	58.31	59	*e*P	P	15 24 50.6	+0.2
	comp=Z,16nm,0.7s						
NV01	Mina Array Sit	58.38	66	*e*P	P	15 24 51.5	+0.7
NVAR	Mina Array Bea	58.38	66	P	P	15 24 51.7	+0.9
	comp=Z,6.8nm,0.8s,baz=319,slow=5.8,SNR=14						
NV11	Mina Array Sit	58.43	66	*e*P	P	15 24 51.5	+0.4
	comp=Z,0.3nm,0.8s						
UMPA	Umpang Tak	58.52	231	P	P	15 24 55.5	+3.8
	comp=Z,4.2nm,1.2s						
DOU	Dourbes	58.52	330	P	P	15 24 51.3	-0.1
DOU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
DOU	Dourbes	58.52	330	P	P	15 24 51.2	-0.1
MOA	Molln	58.56	322	*i* pP	P	15 24 52.0	+0.3
	comp=Z,8.3nm,1.0s						
CTU	Camp Tracy	58.58	59	*e*P	P	15 24 52.6	+0.5
	comp=Z,12nm,1.3s						
WLF	Walferdange	58.62	328	*e*P	P	15 24 54.5	+2.4
	comp=Z,295nm,1.8s						
WLF	Walferdange	58.62	328	*e*P	P	15 24 54.5	+2.4
WLF				pmax	pmax		
	comp=Z,295nm,1.8s						
GZR	Gura Zlata	58.66	314	⇑*i*P	P	15 24 52.6	+0.1
DUG	Dugway, Tooele	58.67	60	P	P	15 24 53.4	+0.6
DUG				pmax	pmax		
	comp=Z,14nm,0.9s						
JLU	Jordanelle	58.76	59	*e*P	P	15 24 53.7	+0.2
	comp=Z,13nm,1.0s						
BZS	Buzias	58.77	315	⇑*i*P	P	15 24 53.2	+0.1
BZS	Buzias	58.77	315	*e*P	P	15 24 53.4	+0.3
BZS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MDPB	Devils Postpil	58.82	67	*e*P	P	15 24 55.4	+1.4
	comp=Z,11nm,0.8s						
UTHA	Uthaitani	58.95	230	P	P	15 24 56.0	+1.3
NLU	North Lily Min	59.13	60	*e*P	P	15 24 57.0	+0.9
	comp=Z,9.7nm,0.8s						
RWWY	Rawlins	59.14	55	*e*P	P	15 24 56.0	-0.1
	comp=Z,9.3nm,1.2s						
MPU	Maple Canyon	59.23	59	*e*P	P	15 24 56.9	+0.2
	comp=Z,6.3nm,0.8s						
ILGA	Ilgaz	59.36	304	*e*P	P	15 24 57.5	-0.1
	comp=Z,14nm,0.8s						
R11A	Troy Canyon, C	59.39	63	*e*P	P	15 24 58.1	+0.3
	comp=Z,6.6nm,0.9s						
BFO	Black Forest	59.44	326	*e*P	P	15 24 57.2	-0.6
	comp=Z,9.5nm,0.8s						
BFO	Black Forest	59.44	326	*i* P	P	15 24 58.3	+0.5
SOKA	Soboth	59.47	321	*i* pP	P	15 24 59.4	+1.2
	comp=Z,6.5nm,1.1s						
KBA	Koelnbreinsper	59.50	322	*i* pP	P	15 24 59.5	+1.1
	comp=Z,9.6nm,0.7s						
KBA	Koelnbreinsper	59.50	322	P	P	15 24 59.3	+0.9
KBA				pmax	pmax		
	comp=Z,13nm,1.4s						
MDVR	Moldovita	59.51	315	⇑*i*P	P	15 24 58.3	-0.1
CDF	Champ du Feu	59.58	327	*e*P	P	15 24 58.4	-0.5
CDF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SIRT	Sirnak	59.65	295	*e*P	P	15 24 59.8	+0.3
	comp=Z,56nm,0.3s						
WATA	Walderalm	59.66	324	*i* pP	P	15 25 00.9	+1.4
	comp=Z,3.5nm,0.5s						
WTTA	Wattenberg	59.72	324	*i* pP	P	15 25 00.6	+0.6
	comp=Z,13nm,0.8s						
OBKA	Obir	59.74	321	*i* pP	P	15 25 00.8	+0.8
	comp=Z,9.3nm,0.7s						
MOTA	Moosalm	59.76	324	*i* pP	P	15 25 00.8	+0.6
	comp=Z,2.7nm,0.6s						
ECH	Echery	59.80	327	*e*P	P	15 24 59.5	-0.8
	comp=Z,13nm,0.9s						
ECH	Echery	59.80	327	*e*P	P	15 24 59.5	-0.8
ECH				pmax	pmax		
	comp=Z,13nm,0.9s						
PSUT	Pine Spring	59.82	62	*e*P	P	15 25 01.7	+0.9
	comp=Z,12nm,0.7s						
MYKA	Terra Mystica	59.85	322	*i* pP	P	15 25 01.1	+0.4
	comp=Z,3.0nm,0.6s						
SQTA	Sankt Quirin	59.86	324	*i* pP	P	15 25 01.2	+0.4
	comp=Z,4.9nm,0.7s						
SLE	Schleitheim	59.94	326	P	P	15 25 01.0	-0.3
SLE				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ABTA	Abfaltersbach	60.00	323	*i* pP	P	15 25 03.1	+1.3
	comp=Z,3.9nm,0.6s						
P17A	Butcher Ranch,	60.01	59	*e*P	P	15 25 03.1	+1.1
	comp=Z,9.4nm,0.9s						
TMUT	Trail Mountain	60.02	59	*e*P	P	15 25 02.2	0.0
	comp=Z,8.6nm,1.4s						
P18A	Preston Nutter	60.03	58	*e*P	P	15 25 02.8	+0.4
FETA	Feichten	60.15	324	*i* pP	P	15 25 03.3	+0.3
	comp=Z,7.3nm,1.3s						
O20A	White River Ci	60.22	57	*e*P	P	15 25 02.8	-0.7
	comp=Z,5.5nm,0.9s						
TCRU	Three Creeks R	60.22	61	*e*P	P	15 25 03.9	+0.3
	comp=Z,18nm,0.3s						
HINF	Hinteralfeld	60.24	327	*e*P	P	15 25 02.5	-0.8
HINF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
Q16A	Castle Valley	60.37	60	*e*P	P	15 25 04.7	+0.1
	comp=Z,8.6nm,0.7s						
E43A	Lone Tree Farm	60.38	37	*e*P	P	15 25 04.7	+0.4
	comp=Z,29nm,1.4s						
ECSD	EROS Data Cent	60.40	46	*e*P	P	15 25 02.7	-1.8
	comp=Z,6.9nm,0.8s						
MSU	Marysvale	60.40	61	*e*P	P	15 25 05.7	+0.9
SRU	San Rafael Swe	60.41	59	*e*P	P	15 25 05.2	+0.4
	comp=Z,9.9nm,0.9s						
SRU	San Rafael Swe	60.41	59	P	P	15 25 05.2	+0.4
SRU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TPNV	Topopah Spring	60.42	65	*e*P	P	15 25 04.9	0.0
	comp=Z,5.8nm,1.0s						
TPNV	Topopah Spring	60.42	65	*e*P	P	15 25 04.9	0.0
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DAC	Darwin (Calif)	60.56	66	*e*P	P	15 25 06.4	+0.5
	comp=Z,5.7nm,1.4s						
DAC	Darwin (Calif)	60.56	66	P	P	15 25 06.4	+0.5
DAC				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BR101	Keskin Array S	60.59	303	*e*P	P	15 25 06.4	+0.4
BR131	Keskin Array S	60.59	303	*e*P	P	15 25 05.7	-0.3
BRTR	Keskin Array B	60.59	303	*i* P	P	15 25 06.6	+0.6
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	60.59	303	P	P	15 25 06.4	+0.4
	comp=Z,4.2nm,0.8s,baz=53,slow=4.1,SNR=18						
FUORN	Ofenpass-Fuorn	60.64	324	*e*P	P	15 25 06.5	+0.1
	comp=Z,37nm,1.8s						
G40A	Rib Lake	60.65	40	*e*P	P	15 25 04.1	-2.0
	comp=Z,16nm,1.1s						
ANTO	Ankara	60.73	304	*e*P	P	15 25 05.2	-1.7
	comp=Z,9.2nm,0.8s						
ANTO	Ankara	60.73	304	*e*P	P	15 25 05.2	-1.7
ANTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FLN	La Foliniere	60.73	333	*e*P	P	15 25 05.7	-0.9
FLN				pmax	pmax		
	comp=Z,15nm,0.8s						
MTPU	Mount Pierson	60.82	61	*e*P	P	15 25 09.0	+1.1
	comp=Z,26nm,1.6s						
LDF	La Druitiere	60.83	333	*e*P	P	15 25 06.4	-0.9
LDF				pmax	pmax		
	comp=Z,16nm,1.0s						
CCUT	Cedar City	60.87	62	*e*P	P	15 25 09.1	+1.0
	comp=Z,6.6nm,1.2s						
HPAH	Hawaii Prepara	60.92	109	*e*P	P	15 25 08.9	+0.6
	comp=Z,138nm,1.3s						
SZCU	Shurtz Canyon	60.92	62	*e*P	P	15 25 08.4	+0.1
	comp=Z,4.1nm,0.7s						
CLF	Chambon-Foret	60.95	331	*e*P	P	15 25 08.4	+0.3
	comp=Z,174nm,1.9s						
TUE	Stuetta	60.98	325	*e*P	P	15 25 08.7	+0.1
	comp=Z,20nm,1.2s						
VTS	Vitosha	61.09	313	*e*P	P	15 25 08.6	-0.7
	comp=Z,30nm,2.0s						
VTS	Vitosha	61.09	313	*e*P	P	15 25 08.6	-0.7
VTS				pmax	pmax		
	comp=Z,30nm,2.0s						
GRR	Gorron	61.16	333	*e*P	P	15 25 08.7	-0.8
GRR				pmax	pmax		
	comp=Z,13nm,0.8s						
SHPR	Sheep Range	61.20	64	*e*P	P	15 25 10.6	+0.4
	comp=Z,5.7nm,0.9s						
LOR	Lormes	61.37	329	*e*P	P	15 25 10.0	-1.0
LOR				pmax	pmax		
	comp=Z,19nm,1.0s						
LCMT	Little Creek M	61.40	62	*e*P	P	15 25 11.5	0.0
	comp=Z,4.3nm,0.8s						
PV21	Cone Mtn., Par	61.41	58	*e*P	P	15 25 12.0	+0.3
	comp=Z,13nm,1.2s						
PV09	Paradox Valley	61.42	58	*e*P	P	15 25 12.1	+0.2
SMCO	Snowmass	61.50	56	*e*P	P	15 25 12.6	+0.1
	comp=Z,7.7nm,1.0s						
PV23	Carpenter Ridg	61.50	58	*e*P	P	15 25 12.6	+0.3
	comp=Z,20nm,1.1s						
KNB	Kanab	61.54	62	*e*P	P	15 25 13.3	+0.8
	comp=Z,9.4nm,1.0s						
KNB	Kanab	61.54	62	*e*P	P	15 25 13.3	+0.8
KNB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PV14	Lion Creek, Pa	61.57	58	*e*P	P	15 25 12.8	0.0
	comp=Z,16nm,1.0s						
PV04	Paradox Valley	61.59	58	*e*P	P	15 25 13.6	+0.8
	comp=Z,6.6nm,0.9s						
ROSF	Rostrenen	61.62	335	*e*P	P	15 25 12.0	-0.6
ROSF				pmax	pmax		
	comp=Z,119nm,1.8s						
SSF	Saint Saulge	61.63	329	*e*P	P	15 25 12.7	-0.1
SSF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PV16	Nyswonger Mesa	61.66	58	*e*P	P	15 25 13.7	+0.3
	comp=Z,7.5nm,0.8s						
PV17	East Wray Mesa	61.67	58	*e*P	P	15 25 13.5	+0.1
	comp=Z,11nm,0.8s						
PV11	David Mesa, Pa	61.69	58	*e*P	P	15 25 13.6	+0.1
	comp=Z,22nm,1.3s						
PV12	Saucer Basin,	61.69	58	*e*P	P	15 25 13.6	0.0
	comp=Z,36nm,2.0s						
GSC	Goldstone, Bar	61.71	66	*e*P	P	15 25 14.1	+0.5
	comp=Z,3.6nm,0.7s						
GSC	Goldstone, Bar	61.71	66	*e*P	P	15 25 14.1	+0.5
GSC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PV03	Paradox Valley	61.73	58	*e*P	P	15 25 13.9	+0.1
	comp=Z,14nm,1.3s						
PV15	Paradox Valley	61.77	58	*e*P	P	15 25 14.4	+0.3
	comp=Z,11nm,0.8s						
PV02	Paradox Valley	61.81	58	*e*P	P	15 25 14.9	+0.4
	comp=Z,6.1nm,0.9s						
PV13	Radium Mtn., P	61.83	58	*e*P	P	15 25 14.8	+0.3
	comp=Z,16nm,1.4s						
AVF	Avril sur Loir	61.92	330	*e*P	P	15 25 13.8	-0.9
AVF				pmax	pmax		
	comp=Z,11nm,0.9s						
PV01	Paradox Valley	61.93	58	*e*P	P	15 25 15.1	-0.1
	comp=Z,7.1nm,1.0s						
SMF	Signal de Mont	61.97	329	*e*P	P	15 25 14.9	-0.1
SMF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BGF	Bois d'Agland	62.25	330	*e*P	P	15 25 18.9	+2.0
BGF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SRS	Serrai	62.37	312	*e*P	P	15 25 18.3	+0.5
SRS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LPL	La Plagne	62.45	327	*e*P	P	15 25 18.5	-0.1
LPL				pmax	pmax		
	comp=Z,13nm,0.9s						
LPG	La Plagne	62.47	327	*e*P	P	15 25 18.8	0.0
LPG				pmax	pmax		
	comp=Z,12nm,0.8s						
KNT	Kendrikon	62.53	312	P	P	15 25 19.6	+0.7
KNT				pmax	pmax		
	comp=Z,8.0nm,1.6s						
TCF	Toulx Ste Croi	62.63	330	*e*P	P	15 25 18.7	-0.8
TCF				pmax	pmax		
	comp=Z,42nm,1.7s						
W13A	Hualapai Mount	62.91	64	*e*P	P	15 25 21.4	-0.4
	comp=Z,4.7nm,0.8s						
MBDF	Montbardon	63.20	326	*e*P	P	15 25 23.3	-0.2
MBDF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ORIF	Oris-en-Rattie	63.21	327	*e*P	P	15 25 23.2	-0.2
ORIF				pmax	pmax		
	comp=Z,14nm,0.8s						
SDCO	Great Sand Dun	63.27	55	*e*P	P	15 25 24.0	-0.2
	comp=Z,3.3nm,0.7s						
WUAZ	Wupatki	63.38	61	*e*P	P	15 25 25.5	+0.7
VIVF	Saint-Julien-l	63.52	328	*e*P	P	15 25 24.6	-0.8
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RJF	Les Rejaudoux	63.71	330	*e*P	P	15 25 26.1	-0.5
RJF				pmax	pmax		
	comp=Z,11nm,0.8s						
Y12C	Blythe	63.91	65	*e*P	P	15 25 28.3	+0.2
	comp=Z,10nm,0.7s						
CAF	Calviac	63.97	330	*e*P	P	15 25 28.3	-0.1
CAF				pmax	pmax		
	comp=Z,20nm,0.9s						
LFF	La Frestale	64.20	331	*e*P	P	15 25 29.6	-0.3
LFF				pmax	pmax		
	comp=Z,11nm,0.5s						
HYB	Hyderabad	64.24	253	*i* P	P	15 25 31.0	+0.5
X16A	Lo Mia Camp, P	64.36	62	*e*P	P	15 25 31.4	+0.1
	comp=Z,4.0nm,0.6s						
KSU1	Kansas State U	64.70	48	*e*P	P	15 25 31.4	-1.8
	comp=Z,18nm,0.7s						
MTLF	Montolieu	65.46	329	*e*P	P	15 25 38.2	+0.1
MTLF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
P42A	Winchester	65.95	43	*e*P	P	15 25 39.1	-2.2
	comp=Z,13nm,0.7s						
EPF	Esparros	66.12	331	*e*P	P	15 25 41.6	-0.8
EPF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ETSF	Etsaut	66.42	331	*e*P	P	15 25 44.3	-0.1
ETSF				pmax	pmax		
	comp=Z,50nm,2.0s						
ACSO	Alum Creek Sta	67.14	36	*e*P	P	15 25 47.0	-1.8
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	67.15	44	*e*P	P	15 25 46.7	-2.3
	comp=Z,7.7nm,0.6s						
CCM	Cathedral Cave	67.15	44	*e*P	P	15 25 46.7	-2.3
CCM				pmax	pmax		
	comp=Z,8.0nm,0.6s						
319A	Douglas	67.87	61	*e*P	P	15 25 53.9	+0.1
	comp=Z,12nm,0.7s						

WMOK	**Wichita Mounta**	**68.12**	**51**	*e*P	**P**	**15 25 54.1**	**-1.1**
	comp=Z,4.6nm,0.7s						
WMOK	**Wichita Mounta**	**68.12**	**51**	*e*P	**P**	**15 25 54.1**	**-1.1**
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
T42A	**Van Buren**	**68.16**	**44**	*e*P	**P**	**15 25 53.0**	**-2.3**
	comp=Z,7.7nm,0.7s						
MNTX	**Cornudas Mount**	**68.87**	**58**	*e*P	**P**	**15 25 59.7**	**-0.2**
	comp=Z,4.4nm,0.8s						
W41B	**Gary Mavity, V**	**69.59**	**46**	*e*P	**P**	**15 26 02.2**	**-2.1**
	comp=Z,15nm,0.6s						
WVT	**Waverly**	**69.86**	**42**	*e*P	**P**	**15 26 03.7**	**-2.2**
	comp=Z,10nm,0.8s						
WVT	**Waverly**	**69.86**	**42**	*e*P	**P**	**15 26 03.7**	**-2.2**
WVT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
X40A	**Basin Creek Fa**	**70.07**	**46**	*e*P	**P**	**15 26 04.9**	**-2.4**
	comp=Z,7.6nm,0.6s						
ES19	**SONSECA Array**	**70.12**	**333**	*e*P	**P**	**15 26 06.8**	**-0.7**
ESDC	**Sonseca Array**	**70.15**	**333**	P	**P**	**15 26 07.5**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=5.9,slow=6.4,SNR=24						
RAYN	**Ar Rayn**	**71.20**	**286**	*e*P	**P**	**15 26 14.2**	**-0.1**
	comp=Z,12nm,0.9s						
PSI	**Prapat**	**71.23**	**227**	*e*P	**P**	**15 26 13.1**	**-1.5**
	comp=Z,14nm,0.8s						
PSI	**Prapat**	**71.23**	**227**	*e*P	**P**	**15 26 13.1**	**-1.5**
PSI				pmax	pmax		
	comp=Z,14nm,0.8s						
LTX	**Lajitas**	**71.61**	**57**	*e*P	**P**	**15 26 16.5**	**-0.3**
TXAR	**Lajitas Array**	**71.61**	**57**	P	**P**	**15 26 16.5**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=336,slow=3.9,SNR=13						
JCT	**Junction City**	**71.77**	**54**	*e*P	**P**	**15 26 16.4**	**-1.3**
	comp=Z,16nm,1.0s						
JCT	**Junction City**	**71.77**	**54**	*e*P	**P**	**15 26 16.4**	**-1.3**
JCT				pmax	pmax		
	comp=Z,16nm,1.0s						
FITZ	**Fitzroy Crossi**	**86.32**	**196**	*e*P	**P**	**15 27 36.5**	**-0.7**
	comp=Z,8.8nm,1.3s						
WB2	**Warramunga Arr**	**87.45**	**188**	*e*P	**P**	**15 27 41.4**	**-1.3**
WR1	**Warramunga Arr**	**87.45**	**188**	*e*P	**P**	**15 27 41.2**	**-1.5**
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**87.45**	**188**	P	**P**	**15 27 41.2**	**-1.5**
	comp=Z,1.5nm,0.7s,baz=0.6,slow=5.7,SNR=15						
ASAR	**Alice Springs**	**91.18**	**188**	P	**P**	**15 27 59.0**	**-1.2**
ASAR	**Alice Springs**	**91.18**	**188**	P	**P**	**15 27 59.0**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=4.2,slow=4.7,SNR=15						
TOA1	**Torodi Ar. Sit**	**94.70**	**322**	*e*P	**P**	**15 28 15.1**	**-1.7**
TOA1				*e*PP	**PP**	**15 32 02.1**	**-2.2**
TORD	**Torodi Ar. Bea**	**94.71**	**322**	P	**P**	**15 28 15.1**	**-1.7**
	comp=Z,1.0nm,0.8s,baz=350,slow=4.2,SNR=5.2						
TORD				PP	**PP**	**15 32 02.1**	**-2.2**
	comp=Z,0.6nm,0.8s,baz=10,slow=8.8,SNR=4.1						
PLCA	**Paso Flores**	**147.59**	**51**	*e*PKPbc	**PKPbc**	**15 34 38.2**	**-0.8**
PLCA	**Paso Flores**	**147.59**	**51**	*e*PKP2	**PKPbc**	**15 34 38.2**	**-0.8**

DJA 14 15:14:56.7±0.7**,2°S**±3°×**10°3E**±°**,h11**^{km}±8^{km}**,M3.7**/9**,**
MLv3.7/9**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASI	**Maura Aman, Be**	**0.97**	**226**	P	Pg	15 15 15.0	-0.4
MASI				S	Sb	15 15 28.6	+0.3
JMBI	**JAMBI**	**1.09**	**41**	P	Pb	15 15 16.9	-0.6
JMBI				S	Sn	15 15 32.5	-0.4
LHSI	**Lahat**	**1.48**	**156**	P	Pn	15 15 23.1	-0.2
KRJI	**Kerinci**	**1.51**	**284**	P	Pn	15 15 23.8	0.0
MNAI	**Manna**	**1.89**	**179**	P	Pn	15 15 29.0	+0.1
PMBI	**Palembang**	**1.90**	**104**	P	Pn	15 15 28.1	-0.9
MDSI	**Maura Dua**	**2.37**	**148**	P	Pn	15 15 35.0	-0.5
DSRI	**Dabo**	**2.57**	**40**	P	Pn	15 15 37.8	-0.5
BKNI	**Bangkinang**	**3.35**	**326**	P	Pn	15 15 48.9	-0.2

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*ISCJB **14** 15:31:53.3±0.7, 67°.60N±0°.05×142°.7E±0°.1, h10^{km}, mb3.4/3, Error ellipse: s-maj=8.4km s-min=7.2km az=29.3*
*IDC **14** 15:31:53.1±2.5, 67°.60N×142°.59E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.3/33, mbtmp3.6/3, Error ellipse: s-maj=80.7km s-min=29.0km az=171.0*
*YARS **14** 15:31:54.3±0.3, 67°.60N±0°.02×142°.81E±0°.04, h10^{km}*
ISC 14 15:31:54.0±0.9**,67°.55N**±0°.07×**142°.77E**±0°.05**,h10**^{km}**,n6,**
σ**1**^{s}**.14**/11**,mb3.5**/3**,Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	**Moma**	**1.10**	**171**	*e*P	**Pb**	**15 32 14.6**	**-0.5**
MOMR				Pmax		15 32 14.6	
	comp=Z,24nm,0.1s						
MOMR				*e*S	**Sb**	**15 32 30.1**	**+0.7**
MOMR				Smax		15 32 30.1	
	comp=N,426nm,0.3s						
YBGR	**Belaya Gora**	**1.62**	**51**	*e*P	**Pn**	**15 32 22.1**	**-0.5**
YBGR				Pmax		15 32 22.1	
	comp=Z,85nm,0.3s						
YBGR				*e*S	**Sn**	**15 32 43.7**	**+0.2**
YBGR				Smax		15 32 43.7	
	comp=E,381nm,0.2s						
BTGS	**Batagay**	**3.12**	**276**	*e*P	**Pn**	**15 32 44.1**	**+1.0**
BTGS				*e*P	**Pb**	**15 32 50.1**	**+0.7**
BTGS				Pmax		15 32 50.1	
	comp=Z,5.0nm,0.2s						
BTGS				*e*S	**Sn**	**15 33 20.2**	**-0.1**
BTGS				*e*S	**Sg**	**15 33 31.3**	**-2.6**
BTGS				Smax		15 33 31.3	
	comp=N,96nm,0.6s						
ILAR	**Eielson Array**	**27.18**	**62**	P	**P**	**15 37 38.0**	**+0.9**
	comp=N,0.9nm,0.8s,baz=300,slow=7.5,SNR=9.4						
MKAR	**Makanchi Array**	**36.79**	**267**	P	**P**	**15 39 01.4**	**0.0**
	comp=N,0.3nm,0.7s,baz=52,slow=7.0,SNR=4.0						
FINES	**FINESS Array B**	**43.38**	**321**	P	**P**	**15 39 55.7**	**-0.2**
	comp=N,0.7nm,0.5s,baz=28,slow=8.6,SNR=6.2						

IDC 14 15:51:55.2±1.6**,10°.69S**×**164°.06E,h0**^{km}**,mb3.4**/3**,**
mb1 3.8/4**,mb1mx3.5**/39**,mbtmp3.6**/4**,ML3.7**/1**,MS4.4**/1**,**
Ms1 4.4/1**,ms1mx3.7**/32**,Error ellipse: s-maj=49.1km**
s-min=31.0km az=128.0,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.54**	**169**	Pn	Pn	15 54 40.8	-0.7
	0.5nm,0.3s,baz=312,slow=14,SNR=27						
H11S2	**WAKE ISLAND Hy**	**29.12**	**5**	T	T	16 28 22.8	
	baz=184,slow=76,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	**29.12**	**5**	T	T	16 28 27.5	
	baz=184,slow=76,SNR=4.0						
H11S1	**WAKE ISLAND Hy**	**29.13**	**5**	T	T	16 28 23.1	
	baz=184,slow=76,SNR=4.4						
WRA	**Warramunga Arr**	**30.06**	**249**	P	P	15 58 06.6	+0.1
	0.3nm,0.7s,baz=78,slow=9.2,SNR=5.5						
H11N1	**WAKE ISLAND Hy**	**30.34**	**5**	T	T	16 29 59.3	
	baz=184,slow=76,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**30.35**	**5**	T	T	16 29 53.9	
	baz=184,slow=76,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	**30.36**	**5**	T	T	16 29 54.4	
	baz=184,slow=76,SNR=3.8						
ASAR	**Alice Springs**	**31.48**	**242**	P	P	15 58 19.0	-0.1
	0.2nm,0.9s,baz=62,slow=9.8,SNR=3.8						
TGY	**Tagaytay City**	**49.35**	**299**	LR	LR	16 20 47.3	
	comp=Z,346nm,19.2s,baz=128,slow=35						
ILAR	**Eielson Array**	**83.72**	**19**	P	P	16 04 25.8	+0.1
	0.6nm,1.0s,baz=232,slow=6.5,SNR=4.1						

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*IDC **14** 15:57:52.6±1.6, 11°.59S×165°.62E, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.8/47, mbtmp4.0/9, ML4.2/2, Error ellipse: s-maj=38.1km s-min=26.1km az=114.0*
*ISCJB **14** 15:57:54.8±0.8, 11°.66S±0°.09×165°.5E±0°.1, h24^{km}, mb4.2/13, Error ellipse: s-maj=17.6km s-min=9.5km az=147.6*
*NEIC **14** 15:57:54.5±0.7, 11°.54S×165°.56E, h10^{km}, mb4.5/8, Error ellipse: s-maj=14.1km s-min=7.9km az=58.0*
ISC 14 15:57:56.6±1.1**,11°.6S**±0°.1×**165°.6E**±0°.1**,h24**^{km}**,n23,**
σ**0**^{s}**.92**/23**,mb4.1**/13**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.95**	**290**	*e*Pn	**Pn**	**15 59 22.1**	**-1.0**
HNR	**Honiara**	**5.95**	**290**	Pn	**Pn**	**15 59 23.8**	**+0.7**
	3.3nm,0.3s,baz=9.4,slow=13,SNR=5.4						
DZM	**Mont Dzumac**	**10.49**	**176**	*e*Pn	**Pn**	**16 00 24.7**	**-1.0**
DZM	**Mont Dzumac**	**10.49**	**176**	Pn	**Pn**	**16 00 25.2**	**-0.5**
	3.0nm,0.3s,baz=295,slow=14,SNR=32						
ONTNC	**Ouen Toro**	**10.73**	**176**	*e*Pn	**Pn**	**16 00 28.4**	**-0.3**
PINNC	**Pines Island,**	**11.14**	**171**	*e*Pn	**Pn**	**16 00 34.8**	**+0.3**
COEN	**Coen**	**22.00**	**261**	*e*P	**P**	**16 02 49.8**	**+0.5**
	20nm,1.5s						
ARMA	**Armidale**	**22.82**	**213**	*e*P	**P**	**16 02 59.1**	**+1.2**
	47nm,1.8s						
BKZ	**Black Stump Fm**	**29.16**	**162**	*e*P	**P**	**16 03 55.2**	**-0.8**
	66nm,1.9s						
STKA	**Stephens Creek**	**29.98**	**224**	*e*P	**P**	**16 04 03.7**	**+0.4**
	2.9nm,1.6s						
STKA	**Stephens Creek**	**29.98**	**224**	P	**P**	**16 04 03.9**	**+0.6**
	1.3nm,0.7s,baz=17,slow=11,SNR=3.8						
THZ	**Tophouse**	**30.77**	**169**	*e*P	**P**	**16 04 11.5**	**+1.3**
	23nm,1.1s						
WRAB	**Tennant Creek**	**31.17**	**251**	*e*P	**P**	**16 04 12.9**	**-1.1**
	5.2nm,0.8s						
WB2	**Warramunga Arr**	**31.17**	**251**	*e*P	**P**	**16 04 13.0**	**-1.0**
WR1	**Warramunga Arr**	**31.18**	**251**	*e*P	**P**	**16 04 13.2**	**-0.9**
	8.2nm,0.9s						
WRA	**Warramunga Arr**	**31.18**	**251**	P	**P**	**16 04 13.2**	**-0.9**
	1.4nm,0.9s,baz=78,slow=9.0,SNR=9.3						
ASAR	**Alice Springs**	**32.44**	**244**	P	**P**	**16 04 23.6**	**-1.6**
	1.3nm,0.8s,baz=69,slow=9.6,SNR=17						
FITZ	**Fitzroy Crossi**	**39.12**	**256**	*e*P	**P**	**16 05 21.5**	**-0.9**
	8.4nm,1.4s						
FITZ	**Fitzroy Crossi**	**39.12**	**256**	P	**P**	**16 05 21.4**	**-0.9**
	2.1nm,0.7s,baz=83,slow=8.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**72.18**	**294**	P	**P**	**16 09 21.0**	**+1.0**
	0.7nm,0.8s,baz=129,slow=6.0,SNR=6.4						
SONA0	**Songino Array**	**78.99**	**324**	*e*P	**P**	**16 09 59.0**	**+0.4**
SONM	**Songino Array**	**78.99**	**324**	P	**P**	**16 09 59.0**	**+0.4**
	0.9nm,0.9s,baz=148,slow=4.1,SNR=4.0						
ILAR	**Eielson Array**	**84.03**	**19**	P	**P**	**16 10 24.1**	**-0.6**
	0.4nm,0.6s,baz=244,slow=3.9,SNR=4.0						

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*IDC **14** 16:00:15.6±1.3, 2°.90S×128°.70E, h0^{km}, mb3.8/3, mb1 4.2/5, mb1mx3.7/42, mbtmp4.0/5, ML4.0/2, MS3.8/1, Ms1 3.8/1, ms1mx3.4/45, Error ellipse: s-maj=41.4km s-min=23.5km az=74.0*
*ISCJB **14** 16:00:18.0±0.3, 2°.81S±0°.04×128°.77E±0°.03, h33^{km}, Error ellipse: s-maj=5.6km s-min=4.3km az=20.2*
*DJA **14** 16:00:19.0±2.6, 3°S±4°×12°9E±°, h12^{km}±22^{km}, M4.3/12, mb4.5/6, mB5.3/1, MLv4.2/12, Mw(mB)4.8/1*
*NEIC **14** 16:00:20.3±0.4, 2°.86S×128°.74E, h35^{km}, mb4.2/11, Error ellipse: s-maj=9.8km s-min=6.4km az=66.0*
ISC 14 16:00:20.4±0.6**,2°.76S**±0°.06×**128°.79E**±0°.05**,h35**^{km}**,n42,**
σ**1**^{s}**.48**/45**,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**1.75**	**254**	P	**Pn**	**16 00 50.9**	**+2.6**
BNDI	**Bandanaira**	**2.08**	**148**	P	**Pn**	**16 00 55.6**	**+2.9**
SANI	**Sanana**	**2.89**	**284**	P	**Pn**	**16 01 03.9**	**0.0**
SWI	**Sorong**	**3.10**	**53**	P	**Pn**	**16 01 05.9**	**-0.9**
SIJI	**Sorong**	**3.10**	**53**	Pn	**Pn**	**16 01 06.2**	**-0.7**
	15nm,0.3s,baz=255,slow=18,SNR=198						
SIJI				Sn	**Sn**	**16 01 42.2**	**-0.6**
	22nm,0.3s,baz=234,slow=23,SNR=8.1						
SIJI				LR	LR	16 03 02.8	
	comp=Z,1µm,19.6s,baz=146,slow=51						
FAKI	**Fak Fak**	**3.46**	**93**	*e*Pn	**Pn**	**16 01 10.9**	**-0.9**
FAKI				*e*Sn	**Sn**	**16 01 52.3**	**+0.7**
FAKI	**Fak Fak**	**3.46**	**93**	P	**Pn**	**16 01 12.1**	**+0.3**
TNTI	**Ternate**	**3.78**	**338**	*e*Pn	**Pn**	**16 01 15.0**	**-1.2**
TNTI	**Ternate**	**3.78**	**338**	P	**Pn**	**16 01 15.0**	**-1.2**
RKPI	**Ransiki, Papua**	**5.52**	**77**	P	**Pn**	**16 01 40.0**	**-0.2**
KMSI	**Cibinong**	**5.84**	**304**	P	**Pn**	**16 01 44.5**	**0.0**
	65nm,0.8s,0.8nm						
LUWI	**Luwuk**	**6.25**	**286**	*e*Pn	**Pn**	**16 01 50.0**	**-0.2**
LUWI				*e*Sn	**Sn**	**16 02 58.5**	**-1.9**
LUWI	**Luwuk**	**6.25**	**286**	P	**Pn**	**16 01 50.7**	**+0.5**
MRSI	**Marisa**	**7.56**	**295**	P	**Pn**	**16 02 08.5**	**+0.3**
	18nm,0.7s,0.1nm						
SOEI	**Soe**	**8.28**	**213**	P	**Pn**	**16 02 21.5**	**+3.4**
MMRI	**Maumere**	**8.75**	**228**	*e*Pn	**Pn**	**16 02 20.8**	**-3.7**
PCI	**Palu**	**9.13**	**281**	P	**Pn**	**16 02 31.0**	**+1.2**
MPSI	**Mapaga**	**9.40**	**289**	P	**Pn**	**16 02 34.4**	**+0.9**
MTN	**Manton Dam**	**10.29**	**167**	*e*Pn	**Pn**	**16 02 43.4**	**-2.2**
FITZ	**Fitzroy Crossi**	**15.56**	**191**	*e*Pn	**Pn**	**16 03 58.1**	**+0.9**
	18nm,1.8s						
WRAB	**Tennant Creek**	**17.92**	**163**	*e*Pn	**Pn**	**16 04 25.4**	**-1.6**
	5.2nm,0.8s						
WR1	**Warramunga Arr**	**17.92**	**163**	*e*Pn	**Pn**	**16 04 25.1**	**-1.8**
	8.2nm,0.9s						
WRA	**Warramunga Arr**	**17.92**	**163**	P	**Pn**	**16 04 25.1**	**-1.8**
	0.5nm,0.3s,baz=336,slow=13,SNR=20						
WB2	**Warramunga Arr**	**17.93**	**163**	*e*Pn	**Pn**	**16 04 25.1**	**-2.0**
	8.2nm,0.8s						
COEN	**Coen**	**18.05**	**129**	*e*Pn	**P**	**16 04 29.0**	**+0.3**
	18nm,1.5s						
MBWA	**Marble Bar**	**20.31**	**205**	*e*P	**P**	**16 04 52.4**	**-1.0**
	26nm,1.3s						
AS31	**Alice Springs**	**21.37**	**167**	*e*P	**P**	**16 05 04.1**	**-0.8**
	3.2nm,0.6s						
ASAR	**Alice Springs**	**21.37**	**167**	P	**P**	**16 05 04.3**	**-0.6**
	7.2nm,0.7s,baz=349,slow=12,SNR=86						
AS01	**Alice Springs**	**21.38**	**167**	*e*P	**P**	**16 05 04.3**	**-0.7**
SSLB	**Suanglung**	**27.46**	**344**	*e*P	**P**	**16 06 05.4**	**+2.0**
	30nm,1.8s						
BBOO	**Buckleboo**	**30.67**	**168**	*e*P	**P**	**16 06 30.4**	**-1.3**
	22nm,1.5s						
PATS	**Pohnpei**	**30.97**	**72**	*e*P	**P**	**16 06 35.2**	**+0.6**
	349nm,1.5s						
LHMI	**Lhok Sumawe**	**32.78**	**284**	*e*P	**P**	**16 06 49.4**	**-1.1**
	77nm,1.1s						
CAN	**Canberra**	**37.44**	**152**	*e*P	**P**	**16 07 30.6**	**+0.1**
	48nm,1.7s						
BKZ	**Black Stump Fm**	**56.45**	**136**	*e*P	**P**	**16 10 00.8**	**+1.9**
	48nm,1.7s						
JOHN	**Johnston Islan**	**63.87**	**70**	*e*P	**P**	**16 10 50.8**	**+0.7**
	263nm,1.0s						
MK01	**Makanchi Array**	**64.02**	**326**	*e*P	**P**	**16 10 51.3**	**+0.8**
MK32	**Makanchi Array**	**64.04**	**326**	*e*P	**P**	**16 10 51.8**	**+1.1**
MKAR	**Makanchi Array**	**64.04**	**326**	P	**P**	**16 10 51.8**	**+1.1**
	0.3nm,0.6s,baz=126,slow=7.3,SNR=6.2						
ZALV	**Zalesovo Beam**	**67.27**	**334**	P	**P**	**16 11 12.6**	**+1.3**
	0.6nm,0.5s,baz=126,slow=7.5,SNR=4.7						
ZAA1	**Zalesovo Array**	**67.27**	**334**	*e*P	**P**	**16 11 12.6**	**+1.3**
HLP	**Hilina Pali**	**77.64**	**70**	*e*P	**P**	**16 12 13.1**	**-0.7**
	283nm,1.4s						

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*ISCJB **14** 16:10:57.8±0.4, 67°.70N±0°.05×142°.5E±0°.1, h10^{km}, mb3.8/11, MS4.3/1, Error ellipse: s-maj=6.8km s-min=6.0km az=13.3*
*IDC **14** 16:10:57.6±1.1, 67°.67N×142°.18E, h0^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.4/50, mbtmp3.5/6, ML3.3/1, Error ellipse: s-maj=34.7km s-min=20.4km az=150.0*
*YARS **14** 16:10:58.7±0.2, 67°.65N±0°.01×142°.38E±0°.03, h6^{km}*
*MOS **14** 16:10:58.6±1.5, 67°.79N×142°.48E, h16^{km}, mb4.4/6, Error ellipse: s-maj=29.4km s-min=13.3km az=89.3*
ISC 14 16:10:59.2±0.6**,67°.63N**±0°.04×**142°.41E**±0°.04**,h10**^{km}**,n31,**
σ**1**^{s}**.90**/36**,mb3.7**/11**,3C-7D,Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	**Moma**	**1.21**	**164**	*i* P	**Pn**	**16 11 20.9**	**-1.2**
MOMR				*e*S	**Sb**	**16 11 37.2**	**-0.5**
MOMR				pmax	pmax		
	comp=Z,163nm,0.2s						
MOMR				smax	smax		
	comp=N,1µm,0.2s						
MOMR	**Moma**	**1.21**	**164**	*i* P	**Pn**	**16 11 20.9**	**-1.2**
MOMR				Pmax		16 11 20.9	
	comp=Z,163nm,0.2s						
MOMR				*e*S	**Sb**	**16 11 37.2**	**-0.5**
MOMR				Smax		16 11 37.2	
	comp=N,1µm,0.2s						
YBGR	**Belaya Gora**	**1.69**	**56**	*i* P	**Pn**	**16 11 28.8**	**+0.1**
YBGR				Pmax		16 11 28.8	
	comp=Z,2µm,0.4s						
YBGR				*e*S	**Sb**	**16 11 51.0**	**-0.5**
YBGR				Smax		16 11 51.0	
	comp=N,3µm,0.4s						
BTGS	**Batagay**	**2.97**	**274**	*e*P	**Pn**	**16 11 46.5**	**+0.1**
BTGS				*e*S	**Sn**	**16 12 21.4**	**-0.6**
BTGS				pmax	pmax		
	comp=Z,56nm,0.5s						
BTGS	**Batagay**	**2.97**	**274**	*e*P	**Pn**	**16 11 46.5**	**+0.1**
BTGS				*e*P	**Pb**	**16 11 51.7**	**-0.5**
BTGS				Pmax		16 11 51.7	
	comp=Z,56nm,0.5s						
BTGS				*e*S	**Sn**	**16 12 21.4**	**-0.6**
BTGS				*e*S	**Sb**	**16 12 30.8**	**+2.3**
BTGS				Smax		16 12 30.8	
	comp=N,432nm,0.5s						
ATKR	**Artyk**	**3.63**	**161**	*e*S	**Sb**	**16 12 51.3**	**+3.7**
ATKR				Smax		16 12 51.3	
	comp=N,946nm,0.7s						
SEY	**Seymchan**	**6.29**	**134**	Pn	**Pn**	**16 12 32.4**	**+0.5**
	comp=N,0.6nm,0.3s,baz=318,slow=14,SNR=12						
SEY				Lg	Lg	16 14 17.3	
	comp=N,1.2nm,0.3s,baz=9.7,slow=20,SNR=3.8						
YAK	**Yakutsk**	**7.80**	**230**	*e*P	Pn	16 12 45.1	-7.4
YAK				pmax	pmax		
	comp=Z,19nm,0.5s						
YAK	**Yakutsk**	**7.80**	**230**	*e*S	Sg	16 14 59.4	-10
YAK				Smax		16 14 59.4	
	comp=N,417nm,0.9s						
MA2	**Magadan**	**8.88**	**151**	Lg	Lg	16 15 41.3	
	comp=N,0.4nm,0.3s,baz=266,slow=21,SNR=8.4						
BILL	**Bilibino**	**9.01**	**76**⇓	*e*P	Pn	16 13 03.2	-5.9
BILL				*e*S	**Sn**	**16 14 49.8**	**-0.6**
BILL				pmax	pmax		
	comp=Z,8.0nm,3.5s						
BILL				MLR	MLR		
	comp=Z,1µm,22.0s						
BOD	**Bodaibo**	**16.14**	**246**	*e*P	**Pn**	**16 14 40.5**	**-5.3**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.9s						
PET	**Petropavlovsk**	**16.61**	**144**	*e*P	**P**	**16 14 55.4**	**+1.1**
PET				pmax	pmax		
	comp=Z,23nm,0.9s						
KLR	**Kul'dur**	**19.22**	**202**⇓	*e*P	**Pn**	**16 15 26.8**	**+2.8**
HIA	**Hailar**	**21.66**	**223**⇓	*e*P	**P**	**16 15 52.1**	**+2.6**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**24.13**	**199**	P	**P**	**16 16 14.2**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=5.9,slow=6.3,SNR=5.4						
MOY	**Mondy**	**25.63**	**252**	*e*P	**P**	**16 16 30.1**	**+1.4**
MSHR	**Mys Shultsa**	**25.83**	**199**⇑	*e*P	**P**	**16 16 31.0**	**+0.7**
ULN	**Ulaanbaatar**	**26.72**	**240**⇓	*e*P	**P**	**16 16 41.9**	**+3.3**
ILAR	**Eielson Array**	**27.27**	**62**	P	**P**	**16 16 43.3**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=301,slow=8.2,SNR=5.7						
HHC	**Hu-ho-hao-te**	**31.65**	**228**	*e*P	**P**	**16 17 22.6**	**+0.2**
HHC				S	**S**	**16 22 26.3**	**-5.0**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,310nm,6.1s						
HHC				LR	LR		
	comp=N,410nm,14.7s						
HHC				LR	LR		
	comp=E,280nm,11.2s						
HHC				LR	LR		
	comp=Z,300nm,12.1s						
DGZ	**Jazzator, Alta**	**32.30**	**264**⇓	*e*P	**P**	**16 17 28.6**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.7s						
BRVK	**Borovoye**	**36.15**	**283**⇓	*e*P	**P**	**16 18 03.2**	**+2.0**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**36.65**	**266**	*e*P	**P**	**16 18 04.8**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**36.65**	**266**	P	**P**	**16 18 04.5**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=28,slow=6.8,SNR=21						
YKA	**Yellowknife Ar**	**38.90**	**46**	P	**P**	**16 18 24.4**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=324,slow=8.2,SNR=5.4						
AAK	**Ala-Archa**	**43.14**	**270**⇓	*i*P	**P**	**16 19 00.7**	**+1.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,2.0s						
VSU	**Vasula**	**45.68**	**319**⇑	*e*P	**P**	**16 19 18.2**	**-1.3**
VSU				pmax	pmax		
	comp=Z,42nm,1.5s						
KIEV	**Kiev**	**51.91**	**312**⇑	*e*P	**P**	**16 20 05.7**	**-1.7**
KIEV				pmax	pmax		
	comp=Z,15nm,3.1s						
KIV	**Kislovodsk**	**53.68**	**298**	*e*P	**P**	**16 20 21.3**	**+0.5**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**56.33**	**232**	P	**P**	**16 20 40.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=359,slow=7.0,SNR=5.0						

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*ISCJB **14** 16:14:41.6±1.0, 31°.59S±0°.03×69°.71W±0°.06, h118^{km}±11^{km}, Error ellipse: s-maj=8.5km s-min=5.4km az=8.0*
*GUC **14** 16:14:41.0±0.5, 31°.59S×70°.05W, h136^{km}±9^{km}, ML3.7*
*SJA **14** 16:14:42.1±0.7, 31°.59S×69°.65W, h107^{km}±4^{km}, ML3.5, MW3.5*
ISC 14 16:14:42.6±1.8**,31°.59S**±0°.04×**69°.73W**±0°.06**,**
h109^{km}±16^{km}**,n21,**σ**0**^{s}**.60**/27**,5C-1D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	**0.42**	**120**	*e*P	**Pn**	**16 14 59.0**	**-0.3**
RTLS				*e*S	**Sn**	**16 15 12.0**	**+0.2**
RTLS				IAML		16 15 12.4	
	comp=Z,2µm,0.2s						
AUSP	**Uspallata**	**0.70**	**155**	*e*P	**Pn**	**16 15 01.1**	**-0.1**
RTCV	**Cerro Valdivia**	**1.05**	**105**	*e*P	**Pn**	**16 15 03.7**	**-0.6**
RTLL	**Cerro Villicun**	**1.10**	**77**	*e*P	**Pn**	**16 15 04.0**	**-0.9**
RTLL	**Cerro Villicun**	**1.10**	**77**	IAML		16 15 22.7	
	comp=N,2µm,0.4s						
ACCO	**Cerro Coronel**	**1.15**	**30**	*e*P	**Pn**	**16 15 05.7**	**0.0**
AMOG	**MOGNA**	**1.24**	**59**	*e*P	**Pn**	**16 15 05.9**	**-0.6**
ASAL	**Salagasta**	**1.25**	**143**⇓	*e*P	**Pn**	**16 15 06.5**	**-0.1**
CFA	**Coronel Fontan**	**1.27**	**91**	*e*P	**Pn**	**16 15 05.9**	**-0.8**
ARCO	**CERRO ARCO**	**1.42**	**152**	*e*P	**Pn**	**16 15 08.6**	**0.0**
ARCO				*e*S	**Sn**	**16 15 28.6**	**+0.3**
ARCO				IAML		16 15 30.6	
	comp=Z,329nm,0.2s						
AROD	**Rodeo**	**1.44**	**9**	*e*P	**Pn**	**16 15 09.6**	**+0.7**
ACDV	**Cuesta del Vie**	**1.51**	**21**	*e*P	**Pn**	**16 15 10.1**	**+0.5**
AAGR	**Agrelo**	**1.68**	**153**	*e*P	**Pn**	**16 15 11.5**	**-0.1**
GO04	**Tololo Observa**	**1.69**	**327**⇑	*i*P	**Pn**	**16 15 11.6**	**-0.3**
GO04				*i* S	**Sn**	**16 15 34.5**	**+0.5**
PEL	**Peldehue**	**1.75**	**207**⇑	*i*P	**Pn**	**16 15 11.9**	**-0.5**
PEL				*i* S	**Sn**	**16 15 35.2**	**0.0**
PEL				IAML		16 15 38.8	
	comp=N,441nm,0.2s						
ROCH	**El Roble**	**1.75**	**218**⇑	*i*P	**Pn**	**16 15 11.9**	**-0.8**
ROCH				*i* S	**Sn**	**16 15 35.1**	**-0.4**
ROCH				IAML		16 15 37.2	
	comp=N,1µm,0.3s						
FCH	**Farellones**	**1.80**	**195**⇑	*i*P	**Pn**	**16 15 13.7**	**+0.4**
FCH				*i* S	**Sn**	**16 15 38.3**	**+1.7**
FCH				IAML		16 15 42.9	
	comp=E,749nm,0.3s						
CLCH	**Cerro Calan**	**1.93**	**201**	*e*P	**Pn**	**16 15 14.4**	**-0.3**
CLCH				*e*S	**Sn**	**16 15 39.5**	**+0.4**
CLCH				IAML		16 15 42.6	
	comp=E,745nm,0.6s						
LMEL	**Las Melosas**	**2.29**	**190**	IAML		16 15 53.0	
	comp=N,333nm,0.3s						
AGUA	**GUANDACOL**	**2.35**	**27**	*e*P	**Pn**	**16 15 20.6**	**+0.4**
LCO	**Las Campanas**	**2.70**	**342**⇑	*i*P	**Pn**	**16 15 24.3**	**-0.6**
LCO				*e*S	**Sn**	**16 15 57.0**	**-0.4**

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*IDC **14** 16:17:13.8±6.5, 6°.02N×126°.48E, h72^{km}±125^{km}, mb3.2/4, mb1 3.4/4, mb1mx3.0/44, mbtmp3.5/4, Error ellipse: s-maj=97.3km s-min=39.4km az=143.0*
*ISCJB **14** 16:17:15.2±0.6, 6°.00N±0°.09×125°.72E±0°.09, h119^{km}±8^{km}, mb3.3/4, Error ellipse: s-maj=16.9km s-min=12.4km az=35.5*
*MAN **14** 16:17:15.6, 6°.02N×125°.87E, h105^{km}, mb4.6, ML3.5, MS3.4*
ISC 14 16:17:16.3±0.9**,6°.05N**±0°.09×**125°.74E**±0°.08**,h118**^{km}±9^{km}**,**
n12,σ**1**^{s}**.77**/17**,mb3.4**/4**,1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.06**	**336**	*e*P	**Pn**	**16 17 32.0**	**-0.5**
DDMP				*e*S	**Sn**	**16 17 43.2**	**-1.4**
DAV	**Davao City (W)**	**1.02**	**351**	P	**Pn**	**16 17 37.8**	**-0.7**
	27nm,0.3s,baz=265,slow=11,SNR=3.9						
DAV				S	**Sn**	**16 17 54.6**	**-0.6**
	77nm,0.3s,baz=139,slow=23,SNR=7.3						
MATI	**Mati**	**1.03**	**30**	*e*P	**Pn**	**16 17 36.5**	**-2.0**
MATI				*e*S	**Sn**	**16 17 56.9**	**+1.7**
DMPH	**Davao City--Mi**	**1.05**	**348**	*e*P	Pn	16 17 44.3	+5.6
DMPH				*e*S	**Sn**	**16 18 00.3**	**+4.7**
KCP	**Kidapawan**	**1.15**	**326**⇓	*i*P	**Pn**	**16 17 40.2**	**+0.4**
KCP				*i* S	**Sn**	**16 17 58.2**	**+0.6**

SKMP	Bagumbayan, Su	1.27	292	eP	Pn	16 17 41.3	+0.3
CTBH	Cotabato--PC H	1.88	308	⇑iP	Pn	16 17 45.8	-2.4
CTBH				i S	Sn	16 18 12.2	-0.3
BUKP	Musuan	1.94	340	eP	Sn	16 18 12.8	-1.1
FITZ	Fitzroy Crossi	24.00	180	P	P	16 22 21.0	+0.7
	1.4nm,1.1s,baz=3.8,slow=10,SNR=5.7						
WRA	Warramunga Arr	27.18	162	P	P	16 22 48.4	-0.6
	0.4nm,0.8s,baz=347,slow=10,SNR=4.8						
ASAR	Alice Springs	30.59	165	P	P	16 23 19.1	-0.2
	0.4nm,0.5s,baz=342,slow=7.0,SNR=17						
STKA	Stephens Creek	40.64	159	P	P	16 24 45.5	+0.6
	1.0nm,0.8s,baz=331,slow=10,SNR=4.0						

SOME ***14*** *16:18:56.3, 42°.53N×79°.65E, h10^{km}*

NNC ***14*** *16:18:57.7±2.8, 42°.62N×79°.71E, h0^{km}, mb2.7, mpv2.7, Error ellipse: s-maj=19.5km s-min=10.3km az=143.0*

KRNET 14 16:18:55.8±0.1**, 42°.55N×79°.70E, h6^{km}, mb2.6, 13C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	Podgornoye	0.80	349	P	Pg	16 19 11.3	+0.2
	1.0nm,0.1s						
PDGK				S	Sg	16 19 21.8	+0.3
	11nm,0.1s						
PDGK	Podgornoye	0.80	349	⇓P	Pg	16 19 11.0	-0.1
	1.6nm,0.4s						
PDGK				⇑S	Sg	16 19 21.5	0.0
	5.1nm,0.4s						
PDGK	Podgornoye	0.80	349	⇓iP	Pg	16 19 11.3	+0.1
	baz=48						
PDGK				⇓iS	Sg	16 19 21.9	+0.3
	baz=48						
PRZ	Przheval'sk	0.97	267	⇑eP	Pg	16 19 14.2	-0.1
	baz=67						
PRZ				⇑iS	Sg	16 19 27.2	+0.3
	baz=67						
KTMS	Ketmen	1.02	28	P	Pb	16 19 15.7	-0.2
	12nm,0.1s						
KTMS				S	Sb	16 19 29.9	+0.2
	4.0nm,0.1s						
KTMS	Ketmen	1.02	28	eP	Pb	16 19 15.7	-0.2
	baz=27						
KTMS				eS	Sb	16 19 29.8	+0.2
	baz=27						
KTMS	Ketmen	1.02	28	eP	Pb	16 19 15.7	-0.2
	12nm,0.1s						
KTMS				eS	Sb	16 19 29.9	+0.2
	4.0nm,0.1s						
DJR	Jarkent	1.79	2	eP	Pb	16 19 28.9	-0.1
	1.4nm,0.2s						
DJR				eS	Sb	16 19 52.4	+0.7
	7.6nm,0.3s						
MNBS	Baschi	1.80	329	P	Pb	16 19 29.0	-0.4
	5.4nm,0.2s						
MNBS				S	Sb	16 19 52.7	+0.5
	16nm,0.2s						
MNBS	Baschi	1.80	329	eP	Pb	16 19 29.0	-0.3
	baz=29						
MNBS				eS	Sb	16 19 52.7	+0.5
	baz=29						
MNBS	Baschi	1.80	329	eP	Pb	16 19 28.9	-0.4
	5.4nm,0.2s						
MNBS				eS	Sb	16 19 52.7	+0.5
	16nm,0.2s						
KDJ	Kajisay	1.92	258	⇑iP	Pg	16 19 31.9	-0.6
	baz=58						
KDJ				⇑iS	Sg	16 19 56.9	-0.4
	baz=58						
MDOK	Medeo	2.05	288	⇑P	Pb	16 19 33.5	0.0
	0.7nm,0.3s						
MDOK				⇓S	Sb	16 19 59.8	+0.6
	4.9nm,0.6s						
IZV	Izvestkoviy	2.33	283	Pg	Pb	16 19 37.7	-0.6
	2.3nm,0.1s						
IZV				Lg	Lg	16 20 07.5	
	8.7nm,0.3s						
IZV	Izvestkoviy	2.33	283	eP	Pb	16 19 37.7	-0.5
	baz=83						
IZV				eS	Sb	16 20 07.5	+0.2
	baz=83						
IZV	Izvestkoviy	2.33	283	eP	Pb	16 19 37.7	-0.6
	2.3nm,0.1s						
IZV				eS	Sb	16 20 07.5	+0.2
	8.7nm,0.3s						
ULHL	Ulahol	2.58	265	⇓iP	Pb	16 19 41.3	-1.3
	baz=65						
ULHL				⇓iS	Sb	16 20 13.8	-0.9
	baz=65						
BOOM	Boomskoye usch	2.78	270	⇑iP	Pb	16 19 44.1	-1.9
	baz=70						
BOOM				⇑iS	Sb	16 20 18.1	-2.3
	baz=70						
NRN	Naryn	2.98	249	⇑eP	Pb	16 19 47.2	-2.2
	baz=49						
NRN				⇑iS	Sb	16 20 24.1	-2.0
	baz=49						
TKM2	Tokmak 2	3.05	278	⇓Pn	Pb	16 19 50.0	-0.6
	1.0nm,0.7s						
TKM2				⇑Sn	Sb	16 20 29.1	+1.0
	1.8nm,0.3s						
TKM2	Tokmak 2	3.05	278	⇑iP	Pn	16 19 47.6	+2.9
	baz=78						
TKM2				⇑iS	Sn	16 20 24.6	+3.0
	baz=78						
KZA	Kyzart	3.34	263	⇓iP	Pn	16 19 52.1	+3.2
	baz=63						
KZA				⇓iS	Sn	16 20 32.1	+3.1
	baz=63						
KBK	Karagaybulak	3.51	273	⇓iP	Pn	16 19 54.3	+3.2
	baz=73						
KBK				⇓iS	Sn	16 20 35.9	+2.9
	baz=73						

MOS ***14*** *16:28:10.9±1.3, 67°.30N×142°.63E, h12^{km}, mb4.4/5, Error ellipse: s-maj=23.8km s-min=11.7km az=90.0*

ISCJB ***14*** *16:28:12.8±0.3, 67°.57N±0°.04×142°.42E±0°.08, h10^{km}, mb4.3/28, MS4.7/1, Error ellipse: s-maj=5.7km s-min=4.5km az=170.6*

IDC ***14*** *16:28:12.3±0.9, 67°.47N×142°.62E, h0^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.7/33, mbtmp3.8/11, ML2.9/1, MS4.6/1, Ms1 4.6/1, ms1mx3.5/56, Error ellipse: s-maj=26.0km s-min=15.8km az=13.0*

NEIC ***14*** *16:28:14.2±0.4, 67°.52N×142°.41E, h10^{km}, mb4.5/23, Error ellipse: s-maj=10.4km s-min=5.8km az=182.0*

YARS ***14*** *16:28:14.3±0.3, 67°.59N±0°.01×142°.70E±0°.04, h6^{km}*

ISC 14 16:28:13.7±0.5**, 67°.52N**±0°.04×**142°.48E**±0°.04**, h10^{km}, n71, σ1^{s}.55**/77**, mb4.3**/28**, 1C, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.09	164	eP	Pb	16 28 34.1	-0.5
MOMR				eS	Sb	16 28 49.6	+0.7
MOMR				pmax	pmax		
	comp=Z,366nm,0.4s						
MOMR				smax	smax		
	comp=E,786nm,0.4s						
MOMR	Moma	1.09	164	i P	Pb	16 28 34.1	-0.5
MOMR				Pmax		16 28 34.1	
	comp=Z,366nm,0.4s						
MOMR				eS	Sb	16 28 49.6	+0.7
MOMR				Smax		16 28 49.6	
	comp=E,786nm,0.4s						
YBGR	Belaya Gora	1.73	52	i P	Pn	16 28 42.3	-1.5
YBGR				eP	Pb	16 28 42.6	-2.9
YBGR				Pmax		16 28 42.6	
	comp=Z,307nm,0.2s						
YBGR				eS	Sn	16 29 04.8	-1.1
YBGR				Smax		16 29 04.8	
	comp=N,4µm,0.4s						
BTGS	Batagay	3.01	276	eP	Pn	16 29 03.9	+2.6
BTGS				eS	Sn	16 29 39.1	+1.8
BTGS				pmax	pmax		
	comp=Z,31nm,0.3s						
BTGS	Batagay	3.01	276	eP	Pn	16 29 03.9	+2.6
BTGS				eP	Pg	16 29 10.3	-0.9
BTGS				Pmax		16 29 10.3	
	comp=Z,31nm,0.3s						
BTGS				eS	Sn	16 29 39.1	+1.8
BTGS				eS	Sg	16 29 49.5	-0.7
BTGS				Smax		16 29 49.5	
	comp=E,635nm,0.4s						
ATKR	Artyk	3.52	161	eS	Sg	16 30 05.3	-1.4
ATKR				Smax		16 30 05.3	
	comp=N,433nm,0.5s						
SEY	Seymchan	6.20	133	Pn	Pn	16 29 43.5	-1.6
	comp=N,0.3nm,0.3s,baz=329,slow=18,SNR=2.5						
SEY				Lg	Lg	16 31 27.4	
	comp=N,2.2nm,0.3s,baz=30,slow=24,SNR=10						
YAK	Yakutsk	7.74	231	eP	Pn	16 30 03.8	-2.5
YAK				e		16 31 30.2	
YAK				pmax	pmax		
	comp=Z,26nm,0.3s						
YAK				smax	smax		
	comp=N,88nm,0.4s						
YAK				smax	smax		
	comp=E,110nm,0.5s						
YAK	Yakutsk	7.74	231	eS	Sg	16 32 17.0	-4.9
YAK				Smax		16 32 17.0	
	comp=N,511nm,0.8s						
MA2	Magadan	8.78	151	ePn	Pn	16 30 14.9	-5.6
MA2				eLg	Lg	16 32 50.5	
MA2	Magadan	8.78	151	eP	Pn	16 30 14.9	-5.6
MA2	Magadan	8.78	151	Lg	Lg	16 32 48.8	
	comp=N,0.5nm,0.3s,baz=48,slow=22,SNR=7.1						
BILL	Bilibino	9.01	76	ePn	Pn	16 30 22.9	-0.7
BILL	Bilibino	9.01	76	⇑eP	Pn	16 30 24.1	+0.5
BILL				pmax	pmax		
	comp=Z,9.0nm,2.7s						
NRGR	Nerungri	13.63	226	eP	Pn	16 31 27.6	+0.8
NRGR				S	Sn	16 33 54.4	-3.7
NRGR				smax	smax		
	comp=N,30nm,0.8s						
BOD	Bodaibo	16.12	247	eP	Pn	16 31 56.6	-3.4
BOD				e		16 34 55.7	
BOD				pmax	pmax		
	comp=Z,4.0nm,1.7s						
PEA0B	Petropavlovsk-	16.22	145	ePn	Pn	16 32 03.0	+1.7
	comp=Z,32nm,1.4s						
PETK	Petropavlovsk-	16.22	145	ePn	Pn	16 32 03.1	+1.8
PETK	Petropavlovsk-	16.22	145	eP	Pn	16 32 03.1	+1.8
GAMB	Gambell	18.90	80	eP	Pn	16 32 34.9	+0.3
	comp=Z,3.7nm,1.0s						
RDOG	Red Dog Mine	20.10	63	eP	P	16 32 48.2	+1.2
	comp=Z,3.6nm,0.7s						
ANM	Nome	20.86	73	eP	Pn	16 32 59.3	+1.6
	comp=Z,5.8nm,1.4s						
ANM	Nome	20.86	73	eP	Pn	16 32 59.3	+1.6
ANM				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TOLK	Toolik Lake Re	24.25	56	eP	P	16 33 29.6	-0.8
	comp=Z,19nm,1.6s						
COLD	Coldfoot	24.77	59	eP	P	16 33 34.7	-0.4
	comp=Z,12nm,1.4s						
MLY	Manley	25.82	64	eP	P	16 33 46.5	+1.8
	comp=Z,16nm,1.9s						
CAST	Castle Rocks	26.32	67	eP	P	16 33 51.3	+2.2
	comp=Z,28nm,2.0s						
MDM	Murphy Dome	26.73	62	eP	P	16 33 56.0	+3.2
	comp=Z,11nm,1.6s						
FYU	Fort Yukon	26.77	58	eP	P	16 33 56.2	+3.1
	comp=Z,47nm,2.0s						
ILAR	Eielson Array	27.30	62	P	P	16 33 57.3	-0.6
	comp=Z,0.9nm,0.7s,baz=300,slow=8.4,SNR=8.2						
ILB	Eielson Array	27.30	62	eP	P	16 33 57.8	-0.1
PRP	Porcupine Dome	27.30	60	eP	P	16 33 59.3	+1.3
	comp=Z,4.1nm,0.8s						
SUA	Susitna One	28.05	70	eP	P	16 34 07.5	+2.7
	comp=Z,38nm,1.6s						
GHO	Glory Hole Cre	28.50	68	eP	P	16 34 11.0	+2.2
	comp=Z,61nm,1.6s						
KNK	Knik Glacier	28.91	68	eP	P	16 34 13.8	+1.5
	comp=Z,46nm,1.6s						
DOT	Dot Lake	28.96	62	eP	P	16 34 14.9	+2.1
	comp=Z,18nm,1.5s						
ZAA1	Zalesovo Array	29.98	272	eP	P	16 34 21.4	-0.4
ZALV	Zalesovo Beam	29.98	272	eP	P	16 34 21.5	-0.3
ZALV	Zalesovo Beam	29.98	272	P	P	16 34 21.4	-0.4
	comp=Z,1.2nm,0.5s,baz=317,slow=5.8,SNR=5.9						
DIV	Divide	30.06	67	eP	P	16 34 23.3	+0.8
	comp=Z,81nm,1.9s						
BESE	Bessie Mountai	35.71	63	eP	P	16 35 10.0	-1.9
LVZ	Lovozero	35.92	322	eP	P	16 35 13.6	+0.1
	comp=Z,67nm,1.7s						
LVZ	Lovozero	35.92	322	eP	P	16 35 13.6	+0.1
LVZ				pmax	pmax		
	comp=Z,67nm,1.7s						
ARA0	ARCESS Array S	36.61	328	eP	P	16 35 20.6	+1.3
ARA0				ePcP	PcP	16 37 42.3	+0.2
ARCES	ARCESS Array B	36.61	328	eP	P	16 35 19.9	+0.6
ARCES				PcP	PcP	16 37 42.3	+0.2
ARCES	ARCESS Array B	36.61	328	P	P	16 35 20.6	+1.2
	comp=Z,3.4nm,0.8s,baz=27,slow=10,SNR=3.5						
ARCES				PcP	PcP	16 37 42.3	+0.2
	comp=Z,9.0nm,1.1s,baz=3.8,slow=7.3,SNR=3.6						
ARE0	ARCESS Array S	36.61	328	eP	P	16 35 19.4	0.0
	comp=Z,6.4nm,1.9s						
MK31	Makanchi Array	36.67	267	eP	P	16 35 20.1	0.0
MK32	Makanchi Array	36.67	267	eP	P	16 35 20.6	+0.4
MKAR	Makanchi Array	36.67	267	eP	P	16 35 19.7	-0.5
	comp=Z,8.1nm,0.6s						
MKAR	Makanchi Array	36.67	267	eP	P	16 35 19.7	-0.5
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MKAR	Makanchi Array	36.67	267	P	P	16 35 20.6	+0.4
	comp=Z,1.2nm,0.6s,baz=39,slow=6.8,SNR=17						
MK01	Makanchi Array	36.69	267	eP	P	16 35 21.0	+0.7
SIT	Sitka	36.71	65	eP	P	16 35 19.1	-1.2
	comp=Z,109nm,1.6s						
SIT	Sitka	36.71	65	eP	P	16 35 19.1	-1.2
SIT				pmax	pmax		
	comp=Z,109nm,1.6s						
MAKZ	Makanchi	36.78	267	eP	P	16 35 20.7	-0.4
	comp=Z,5.5nm,1.7s						
MAKZ	Makanchi	36.78	267	eP	P	16 35 20.7	-0.4
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.7s						
YKA	Yellowknife Ar	38.96	46	P	P	16 35 39.1	-0.2
	comp=Z,0.4nm,0.7s,baz=323,slow=8.1,SNR=7.7						
AAK	Ala-Archa	43.17	270	eP	P	16 36 15.9	+1.6
	comp=Z,1.6nm,0.6s						
FIA1	FINESS Array S	43.34	321	eP	P	16 36 15.4	+0.2
FIA0	FINESS Array S	43.34	321	eP	P	16 36 15.5	+0.3
FIA0	FINESS Array S	43.34	321	eP	P	16 36 15.5	+0.3
FINES	FINESS Array B	43.34	321	P	P	16 36 15.5	+0.3
	comp=Z,1.6nm,0.6s,baz=33,slow=9.1,SNR=11						
NB200	NORSAR Array S	46.93	330	eP	P	16 36 43.8	0.0
NOA	NORSAR Array B	46.93	330	P	P	16 36 43.8	0.0
	comp=Z,1.4nm,0.8s,baz=24,slow=7.8,SNR=3.4						
CHGR	Chuyangaron	48.65	272	eP	P	16 36 58.7	+1.2
	comp=Z,4.9nm,0.5s						
GEYT	Alibeck	53.49	282	LR	LR	17 05 24.6	
	comp=Z,600nm,19.6s,baz=340,slow=42						
KBZ	Khabaz	53.88	298	P	P	16 37 38.5	+1.9
	comp=Z,0.9nm,0.7s,baz=356,slow=9.4,SNR=4.2						
CLL	Collm	55.59	324	eP	P	16 37 49.0	+0.2
PDAR	Pinedale Array	57.51	56	P	P	16 38 02.9	-0.1
	comp=Z,0.3nm,0.7s,baz=175,slow=0.5,SNR=3.5						
GERES	GERESS Array B	57.73	322	P	P	16 38 05.0	+0.8
	comp=Z,0.6nm,0.6s,baz=66,slow=5.5,SNR=3.7						

MAN 14 16:32:54.5, 11°.76N×125°.38E, h33^{km}, mb3.9, ML2.6, MS2.2, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.17	161	eP	Pb	16 33 01.9	+1.1
BESP				eS	Sb	16 33 07.3	+2.3
PLP	Palo	0.71	214	⇑iP	Pb	16 33 08.8	+0.3
PLP				i S	Sb	16 33 18.5	+0.4
CNP	Catarman	1.02	317	eP	Pn	16 33 12.4	-0.1
CNP				eS	Sn	16 33 25.7	-0.1
OCLP	Ormoc	1.04	227	eP	Pb	16 33 13.9	0.0

NNC ***14*** *16:42:11.3±0.6, 42°.61N×73°.46E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=9.4km s-min=3.9km az=162.0*

SOME ***14*** *16:42:12.3, 42°.65N×73°.40E, h15^{km}*

KRNET ***14*** *16:42:12.2±0.1, 42°.63N×73°.40E, h20^{km}, mb2.5*

KNET ***14*** *16:42:12.8±0.6, 42°.60N×73°.49E, h20^{km}±2^{km}, ml1.8, Error ellipse: s-maj=4.1km s-min=2.3km az=110.0*

ISC 14 16:42:12.1±0.8**, 42°.59N**±0°.02×**73°.39E**±0°.02**, h18^{km}**±6^{km}**, n66, σ1^{s}.01**/114**, 35C-26D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	0.20	322	eP	Pg	16 42 16.9	-0.2
	baz=11						
MRKS				eS	Sg	16 42 20.2	-0.3
	baz=11						
MRKS	Merke	0.20	322	eP	Pg	16 42 16.9	-0.2
	343nm,0.1s						
MRKS				eS	Sg	16 42 20.2	-0.3
	256nm,0.1s						
EKS2	Erkin-Say	0.29	76	⇑P	Pg	16 42 18.6	-0.1
	4.4nm,0.1s,SNR=54						
EKS2				⇑S	Sg	16 42 22.6	-0.5
	27nm,0.2s						
EKS2	Erkin-Say	0.29	76	⇓iP	Pg	16 42 18.4	-0.2
	baz=84						
EKS2				⇓iS	Sg	16 42 22.5	-0.6
	baz=84						
AML	Almayashu	0.51	154	⇓P	Pb	16 42 22.9	+0.1
	7.4nm,0.1s,SNR=32						
AML				⇑S	Sb	16 42 30.5	+0.4
	64nm,0.2s						
AML	Almayashu	0.51	154	⇓iP	Pb	16 42 22.8	0.0
	baz=56						
AML				⇓iS	Sb	16 42 30.4	+0.4
	baz=56						
MNAS	Manas	0.66	261	⇑P	Pg	16 42 24.9	-0.2
	0.5nm,0.2s						
MNAS				⇓S	Sg	16 42 34.1	0.0
	12nm,0.2s						
MNAS	Manas	0.66	261	⇑iP	Pg	16 42 25.0	-0.2
	baz=58						
MNAS				⇑iS	Sg	16 42 33.8	-0.3
	baz=58						
AAK	Ala-Archa	0.82	86	⇑P	Pg	16 42 27.8	-0.3
	6.4nm,0.1s,SNR=16						
AAK				⇑S	Sg	16 42 38.7	-0.3
	17nm,0.3s						
AAK	Ala-Archa	0.82	86	⇓Pn	Pg	16 42 27.7	-0.4
	1.4nm,0.3s						
AAK				⇓Sn	Sg	16 42 38.6	-0.3
	7.0nm,0.3s						
AAK	Ala-Archa	0.82	86	⇓eP	Pg	16 42 27.6	-0.4
	baz=89						
AAK				⇓iS	Sg	16 42 38.2	-0.7
	baz=89						
UCH	Uchtor	0.91	113	⇑P	Pg	16 42 29.6	-0.3
	2.6nm,0.2s,SNR=15						
UCH				⇓S	Sb	16 42 42.3	+0.8
	8.8nm,0.1s						
UCH	Uchtor	0.91	113	⇑iP	Pg	16 42 29.5	-0.3
	baz=16						
UCH				⇑iS	Sb	16 42 42.0	+0.5
	baz=16						
FRU1	Bishkek	0.94	76	⇑iP	Pb	16 42 29.6	-0.3
	baz=78						
FRU1				⇑iS	Sb	16 42 42.2	+0.2
	baz=78						
ARLS	Aral	1.01	136	⇓iP	Pg	16 42 31.5	-0.2
	baz=38						
ARLS				⇓iS	Sn	16 42 45.2	0.0
	baz=38						
USP	Ospenovka	1.06	50	⇓P	Pb	16 42 31.3	-0.6
	8.0nm,0.1s,SNR=13						
USP				⇑S	Sb	16 42 45.2	-0.3
	30nm,0.2s						
USP	Ospenovka	1.06	50	⇓iP	Pb	16 42 31.1	-0.8
	baz=52						
USP				⇓iS	Sb	16 42 44.9	-0.5
	baz=52						
CHMS	Chumysh	1.08	67	⇑P	Pb	16 42 31.9	-0.4
	3.1nm,0.1s,SNR=10.0						
CHMS				⇑S	Sb	16 42 45.8	-0.2
	37nm,0.1s						
CHMS	Chumysh	1.08	67	⇓iP	Pb	16 42 31.7	-0.6
	baz=69						
CHMS				⇓iS	Sb	16 42 45.7	-0.4
	baz=69						
KBK	Karagaybulak	1.15	86	⇑P	Pn	16 42 33.8	+0.4
	6.3nm,0.1s,SNR=41						
KBK				⇑S	Sb	16 42 48.6	+0.3
	23nm,0.1s						
KBK	Karagaybulak	1.15	86	⇑iP	Pb	16 42 33.7	+0.1
	baz=88						
KBK				⇑iS	Sb	16 42 48.9	+0.7
	baz=88						
SGDS	Sogindy	1.25	46	P	Pn	16 42 34.3	-0.4
	28nm,0.2s						
SGDS				S	Sb	16 42 50.3	-0.7
	38nm,0.1s						
ARSB	Arslanbob	1.30	194	⇑iP	Pg	16 42 37.0	-0.3
	baz=93						
ARSB				⇑iS	Sg	16 42 54.8	+0.5
	baz=93						
ARK	Arkit	1.32	234	⇑iP	Pb	16 42 37.1	+0.7
	baz=31						
ARK				⇑iS	Sg	16 42 55.5	+0.5
	baz=31						
KZA	Kyzart	1.47	110	⇓iP	Pb	16 42 39.6	+0.5
	baz=11						
KZA				⇓iS	Sg	16 42 59.7	-0.1
	baz=11						
TKM2	Tokmak 2	1.66	78	⇑P	Pb	16 42 42.0	-0.1
	1.4nm,0.1s,SNR=13						
TKM2	Tokmak 2	1.66	78	⇑Pn	Pb	16 42 42.1	-0.1
	0.4nm,0.2s						
TKM2				⇓Sn	Sb	16 43 03.5	+0.6
	16nm,0.2s						
TKM2	Tokmak 2	1.66	78	⇑iP	Pb	16 42 41.9	-0.3
	baz=79						
TKM2				⇑iS	Sb	16 43 03.8	+1.0
	baz=79						
DGS	Degeres	1.87	69	P	Pb	16 42 45.7	0.0
	3.8nm,0.2s						
DGS				S	Sb	16 43 09.6	+0.9
	21nm,0.2s						
DGS	Degeres	1.87	69	eP	Pb	16 42 45.7	0.0
	baz=70						
DGS				eS	Sb	16 43 09.6	+0.9
	baz=70						
DGS	Degeres	1.87	69	eP	Pb	16 42 45.7	0.0
	3.8nm,0.2s						
DGS				eS	Sb	16 43 09.6	+0.9
	21nm,0.2s						
BOOM	Boomskoye usch	1.89	92	⇑iP	Pb	16 42 46.2	+0.1
	baz=93						
BOOM				⇑iS	Sb	16 43 10.8	+1.4
	baz=93						
KST	Kastek	1.95	76	Pg	Pb	16 42 46.9	-0.1
	6.9nm,0.3s						
KST				Lg	Lg	16 43 12.5	
	23nm,0.5s						
KST	Kastek	1.95	76	eP	Pb	16 42 46.9	-0.1
	baz=77						
KST				eS	Sb	16 43 12.5	+1.5
	baz=77						
KST	Kastek	1.95	76	eP	Pb	16 42 46.9	-0.1
	6.9nm,0.3s						
KST				eS	Sb	16 43 12.5	+1.5
	23nm,0.5s						
ULHL	Ulahol	2.14	98	⇓iP	Pb	16 42 49.6	-0.8
	baz=99						
ULHL				⇓iS	Sb	16 43 16.4	-0.3
	baz=99						
KK31	Karatay Array	2.18	285	⇓Pn	Pb	16 42 51.6	+0.7
	0.1nm,0.2s,baz=102,slow=17,SNR=7.0						
KK31				Sn	Sg	16 43 20.2	-1.9
	1.6nm,0.3s,baz=114,slow=28,SNR=11						
NRN	Naryn	2.26	120	⇑iP	Pb	16 42 51.2	-1.4
	baz=21						
NRN				⇑iS	Sb	16 43 19.8	-0.6
	baz=21						
MTBS	Maitube	2.30	75	Pg	Pb	16 42 53.2	+0.2
	1.4nm,0.1s						
MTBS				Lg	Lg	16 43 22.6	
	13nm,0.2s						
MTBS	Maitube	2.30	75	eP	Pb	16 42 53.2	+0.2
	baz=76						
MTBS				eS	Sb	16 43 22.6	+1.5
	baz=76						
MTBS	Maitube	2.30	75	eP	Pb	16 42 53.2	+0.2
	1.4nm,0.1s						
MTBS				eS	Sb	16 43 22.6	+1.5
	13nm,0.2s						
IZV	Izvestkoviy	2.41	78	Pg	Pb	16 42 55.7	+0.6
	0.9nm,0.2s						
IZV				Lg	Lg	16 43 27.2	
	20nm,0.3s						
IZV	Izvestkoviy	2.41	78	eP	Pb	16 42 55.7	+0.6
	baz=79						
IZV				eS	Sg	16 43 27.3	-2.5
	baz=79						

IZV	**Izvestkoviy** 0.9nm,0.2s	**2.41**	**78**	*e*P	**Pb**	**16 42 55.7**	**+0.6**
IZV	20nm,0.3s			*e*S	**Sg**	**16 43 27.2**	**-2.5**
KUU	**Kurty** 1.1nm,0.2s	**2.52**	**58**	Pg	**Pb**	**16 42 56.6**	**-0.1**
KUU	11nm,0.4s			Lg	Lg	16 43 28.5	
KUU	**Kurty** baz=59	**2.52**	**58**	*e*P	**Pb**	**16 42 56.6**	**-0.1**
KUU	baz=59			*e*S	**Sb**	**16 43 28.4**	**+1.1**
KUU	**Kurty** 1.1nm,0.2s	**2.52**	**58**	*e*P	**Pb**	**16 42 56.6**	**-0.1**
KUU	11nm,0.4s			*e*S	**Sb**	**16 43 28.5**	**+1.1**
IUG	**Iuzhnay** 1.8nm,0.1s	**2.53**	**261**	Pg	**Pg**	**16 42 59.2**	**-1.4**
IUG	8.9nm,0.3s			Lg	Lg	16 43 32.7	
IUG	**Iuzhnay** baz=60	**2.53**	**261**	*e*P	**Pg**	**16 42 59.2**	**-1.4**
IUG	baz=60			*e*S	**Sg**	**16 43 32.8**	**-0.6**
IUG	**Iuzhnay** 1.8nm,0.1s	**2.53**	**261**	*e*P	**Pg**	**16 42 59.2**	**-1.4**
IUG	8.9nm,0.3s			*e*S	**Sg**	**16 43 32.7**	**-0.6**
SFK	**Sufi-Kurgan** 0.3nm,0.2s	**2.58**	**178**	⇑Pg	**Pg**	**16 43 01.8**	**+0.2**
SFK	3.0nm,0.5s			⇓Lg	Lg	16 43 33.9	
SFK	**Sufi-Kurgan** 0.7nm,0.1s	**2.58**	**178**	Pg	**Pg**	**16 42 59.9**	**-1.7**
SFK	3.2nm,0.2s			Lg	Lg	16 43 34.0	
TNSS	**Tian-Shan** 1.6nm,0.3s	**2.66**	**79**	Pg	**Pb**	**16 42 59.8**	**+0.5**
TNSS	8.3nm,0.3s			Lg	Lg	16 43 34.0	
TNSS	**Tian-Shan** baz=80	**2.66**	**79**	*e*P	**Pb**	**16 42 59.8**	**+0.5**
TNSS	baz=80			*e*S	**Sb**	**16 43 34.1**	**+2.4**
TNSS	**Tian-Shan** 1.6nm,0.3s	**2.66**	**79**	*e*P	**Pb**	**16 42 59.8**	**+0.5**
TNSS	8.3nm,0.3s			*e*S	**Sb**	**16 43 34.0**	**+2.4**
KTBS	**Karatobe** 1.4nm,0.2s	**2.66**	**64**	Pg	**Pb**	**16 42 59.6**	**+0.5**
KTBS	10nm,0.3s			Lg	Lg	16 43 33.5	
KTBS	**Karatobe** baz=63	**2.66**	**64**	*e*P	**Pb**	**16 42 59.6**	**+0.5**
KTBS	baz=63			*e*S	**Sb**	**16 43 33.5**	**+2.1**
KTBS	**Karatobe** 1.4nm,0.2s	**2.66**	**64**	*e*P	**Pb**	**16 42 59.6**	**+0.5**
KTBS	10nm,0.3s			*e*S	**Sb**	**16 43 33.5**	**+2.1**
MDOK	**Medeo** 2.5nm,0.3s	**2.75**	**77**	⇑Lg	Lg	16 43 37.0	
MDOK	**Medeo** 1.0nm,0.2s	**2.75**	**77**	Pg	**Pb**	**16 43 01.3**	**+0.5**
MDOK	7.1nm,0.2s			Lg	Lg	16 43 36.4	
MDOK	**Medeo** baz=78	**2.75**	**77**	*e*P	**Pb**	**16 43 01.3**	**+0.5**
MDOK	baz=78			*e*S	**Sb**	**16 43 36.5**	**+2.3**
MDOK	**Medeo** 1.0nm,0.2s	**2.75**	**77**	*e*P	**Pb**	**16 43 01.3**	**+0.5**
MDOK	7.1nm,0.2s			*e*S	**Sb**	**16 43 36.4**	**+2.3**
ARXS	**Arharly** 0.9nm,0.3s	**3.62**	**62**	Pg	**Pb**	**16 43 17.1**	**+1.6**
ARXS	7.4nm,0.4s			Lg	Lg	16 44 03.5	
ARXS	**Arharly** 0.9nm,0.3s	**3.62**	**62**	*e*P	**Pb**	**16 43 17.1**	**+1.6**
ARXS	7.4nm,0.4s			*e*S	**Sb**	**16 44 03.5**	**+4.5**
PDGK	**Podgornoye** 2.5nm,0.6s	**4.54**	**79**	⇓Lg	Lg	16 44 34.7	
OTUK	**Ortayu** 0.5nm,0.3s	**5.70**	**353**	⇑Lg	Lg	16 45 09.2	

ISCJB ***14*** *16:43:37.4±0.3, 36°.67N±0°.03×140°.48E±0°.05, h118^{km}±2^{km}, mb4.1/24, Error ellipse: s-maj=6.2km s-min=4.5km az=2.3*

NEIC ***14*** *16:43:38.4±0.6, 36°.70N×140°.50E, h108^{km}±4^{km}, mb4.4/14, Error ellipse: s-maj=7.7km s-min=5.5km az=85.0*

IDC ***14*** *16:43:38.7±1.5, 36°.66N×140°.46E, h104^{km}±13^{km}, mb3.7/10, mb1 3.8/16, mb1mx3.6/55, mbtmp4.1/16, MS4.7/1, Ms1 4.7/1, ms1mx3.2/48, Error ellipse: s-maj=22.2km s-min=10.1km az=77.0*

JMA ***14*** *16:43:39.9±0.1, 36°.67N×140°.39E, h104^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s213.00000°, δ87.00000°, λ-83.00000°. NP2: ϕ_s324.00000°, δ7.00000°, λ-159.00000°. Principal axes: T Plg42.0000°, Azm297.0000°; N Plg7.0000°, Azm33.0000°; P Plg47.0000°, Azm130.0000°;*

JMA Felt II J1.

ISC 14 16:43:38.2±0.6**, 36°.71N**±0°.04×**140°.46E**±0°.05**, h107**^{km}±5^{km}**, n80, σ1^{s}.36**/87**, mb4.1**/24**, 1C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.13**	**137**	⇑P	**Pn**	**16 43 54.5**	**+1.3**
JHO				S	**Sn**	**16 44 05.2**	**+0.9**
JFK	**Kawauchi**	**0.74**	**27**	⇓P	**Pn**	**16 43 58.5**	**+1.8**
JFK				S	**Sn**	**16 44 12.1**	**+1.5**
JFT	**Otama**	**0.81**	**353**	⇓P	**Pn**	**16 43 59.1**	**+1.7**
JFT				S	**Sn**	**16 44 13.7**	**+1.9**
JAG	**Ashikaga**	**0.85**	**251**	⇓P	**Pn**	**16 43 58.7**	**+1.0**
JFY	**Yanaizu**	**0.92**	**319**	⇓P	**Pn**	**16 43 59.8**	**+1.4**
JFY				S	**Sn**	**16 44 14.6**	**+0.9**
JKT	**Katashina**	**0.97**	**274**	⇓P	**Pn**	**16 44 00.1**	**+1.1**
JMM	**Marumori**	**1.19**	**13**	⇓P	**Pn**	**16 44 02.8**	**+1.6**
JHK	**Hiroka**	**1.27**	**296**	⇓P	**Pn**	**16 44 03.3**	**+1.1**
JHK				S	**Sn**	**16 44 20.9**	**+0.6**
JRY	**Ryogami san**	**1.43**	**242**	⇓P	**Pn**	**16 44 05.0**	**+0.9**
JRY				*e*S	**Sn**	**16 44 23.8**	**+0.1**
JNS	**Sasagawa**	**1.43**	**321**	⇓P	**Pn**	**16 44 05.1**	**+1.0**
JNS				S	**Sn**	**16 44 24.1**	**+0.4**
MJAR	**Matsushiro Arr** 4.6nm,0.3s,baz=77,slow=8.9,SNR=332	**1.81**	**265**	P	**Pn**	**16 44 09.4**	**+0.7**
MAJO	**Matsushiro**	**1.82**	**265**	*e*Pn	**Pn**	**16 44 09.8**	**+1.0**
MAJO				*e*Sn	**Sn**	**16 44 33.4**	**+1.3**
MAT	**Matsushiro**	**1.82**	**265**	P	**Pn**	**16 44 09.9**	**+1.1**
MAT				S	**Sn**	**16 44 31.8**	**-0.3**
MAT	**Matsushiro**	**1.82**	**265**	P	**Pn**	**16 44 09.9**	**+1.1**
JOD2	**Odawara 2**	**1.82**	**218**	⇓P	**Pn**	**16 44 09.3**	**+0.5**
MJB9	**Matsu-Tunnel**	**1.82**	**266**	*e*Pn	**Pn**	**16 44 09.9**	**+1.1**
MJB9				*e*Sn	**Sn**	**16 44 32.9**	**+0.7**
INU	**Inuyama**	**3.10**	**245**	*e*Pn	**Pn**	**16 44 26.9**	**+1.4**
JHJ	**Hachijo jima 2** 46nm,0.3s,baz=100,slow=22,SNR=18	**3.62**	**189**	P	**Pn**	**16 44 33.1**	**+0.7**
JHJ	91nm,0.3s,baz=118,slow=21,SNR=15			S	**Sn**	**16 45 13.6**	**-0.9**
JHJ2	**Mitsune**	**3.63**	**189**	*e*Pn	**Pn**	**16 44 32.9**	**+0.4**
JHJ2				*e*Sn	**Sn**	**16 45 14.2**	**-0.3**
ERM	**Erimo**	**5.70**	**21**	*e*Pn	**Pn**	**16 44 60.0**	**-0.4**
ERM				*e*Sn	**Sn**	**16 45 57.9**	**-6.5**
ASAJ	**Asahikawa** 0.7nm,0.3s,baz=193,slow=14,SNR=13	**7.58**	**12**	P	**Pn**	**16 45 25.6**	**-0.3**
JNU	**Nakatsue**	**8.64**	**248**	*e*Pn	**Pn**	**16 45 41.8**	**+1.3**
JNU	**Nakatsue** 0.4nm,0.3s,baz=121,slow=1.8,SNR=4.7	**8.64**	**248**	P	**Pn**	**16 45 42.2**	**+1.8**
CBIJ	**Chichi jima**	**9.70**	**171**	*e*Pn	**Pn**	**16 45 52.9**	**-1.8**
JCJ	**Chichijima** 9.7nm,0.3s,baz=27,slow=20,SNR=6.9	**9.70**	**171**	P	**Pn**	**16 45 52.9**	**-1.9**
USA0B	**Ussuriysk Arra**	**9.88**	**322**	*e*Pn	**Pn**	**16 45 58.2**	**+1.1**
USRK	**Ussuriysk Ar.** 0.6nm,0.3s,baz=129,slow=12,SNR=15	**9.88**	**322**	P	**Pn**	**16 45 57.7**	**+0.6**
KSRS	**Korea Array** baz=89,slow=15,SNR=6.7	**10.04**	**278**	P	**Pn**	**16 46 01.9**	**+2.5**
KSAR	**Wonju Array Be**	**10.07**	**278**	P	**Pn**	**16 46 01.9**	**+2.1**
CN2	**Changchun**	**13.46**	**306**	*e*P	**Pn**	**16 46 42.4**	**-2.4**
KLR	**Kul'dur** 0.3nm,0.3s,baz=146,slow=14,SNR=7.4	**14.03**	**336**	P	**Pn**	**16 46 50.3**	**-1.8**
SSE	**Sheshan** 45nm,1.3s	**16.94**	**256**	*e*Pn	**Pn**	**16 47 26.9**	**-1.7**
NJ2	**Nanjing**	**18.42**	**262**	*e*P	**Pn**	**16 47 46.8**	**+0.4**
NJ2	comp=Z,7.0nm,1.0s			pmax	pmax		
NJ2	comp=N,410nm,9.2s			LR	LR		
NJ2	comp=E,530nm,12.5s			LR	LR		
NJ2	comp=Z,750nm,14.1s			LR	LR		
BJT	**Baijiatuau** comp=Z,4.8nm,0.7s	**19.32**	**287**	*e*P	**P**	**16 47 54.1**	**-0.7**
HHC	**Hu-ho-hao-te**	**22.85**	**289**	*e*P	**P**	**16 48 29.8**	**-2.6**
HHC	comp=Z,6.0nm,0.9s			pmax	pmax		
HHC	comp=Z,140nm,4.0s			pmax	pmax		
ENH	**Enshi** comp=Z,4.1nm,0.7s	**26.54**	**265**	*e*P	**P**	**16 49 05.5**	**-0.5**
ULN	**Ulaanbaatar** comp=Z,3.6nm,1.2s	**26.91**	**305**	*e*P	**P**	**16 49 08.8**	**-0.4**
SONA1	**Songino Array**	**27.33**	**305**	*e*P	**P**	**16 49 12.8**	**-0.3**
SONA0	**Songino Array**	**27.33**	**305**	*e*P	**P**	**16 49 13.0**	**0.0**
SONM	**Songino Array** comp=Z,2.0nm,0.6s,baz=105,slow=8.7,SNR=18	**27.33**	**305**	P	**P**	**16 49 13.0**	**0.0**
H11N2	**WAKE ISLAND Hy** baz=313,slow=75,SNR=15	**28.65**	**119**	T	T	17 19 42.7	
H11N1	**WAKE ISLAND Hy** baz=313,slow=75,SNR=21	**28.66**	**119**	T	T	17 19 43.2	
H11N3	**WAKE ISLAND Hy** baz=313,slow=75,SNR=18	**28.67**	**119**	T	T	17 19 44.0	
H11S1	**WAKE ISLAND Hy** baz=314,slow=76,SNR=67	**29.34**	**121**	T	T	17 20 32.6	
H11S3	**WAKE ISLAND Hy** baz=314,slow=76,SNR=24	**29.34**	**121**	T	T	17 20 35.8	
H11S2	**WAKE ISLAND Hy** baz=314,slow=76,SNR=28	**29.35**	**121**	T	T	17 20 32.4	
LZH	**Lanzhou**	**29.37**	**280**	*e*P	**P**	**16 49 30.6**	**-0.6**
LZH				pP	pP	16 49 53.8	-1.6
LZH				sP	sP	16 50 06.3	-1.7
LZH	comp=Z,12nm,1.0s			pmax	pmax		
CD2	**Chengdu**	**30.91**	**270**	*e*P	**P**	**16 49 43.4**	**-1.4**
GTA	**Gaotai**	**31.93**	**287**	*e*P	**P**	**16 49 53.8**	**+0.1**
GTA				pP	pP	16 50 18.3	+0.4
GTA				sP	sP	16 50 31.6	+1.2
GTA	comp=Z,1.0nm,1.0s			pmax	pmax		
DAV	**Davao City (W)** comp=Z,1μm,20.1s,baz=138,slow=35	**32.48**	**208**	LR	LR	17 02 39.7	
WMQ	**Urumqi**	**40.30**	**297**	*e*P	**P**	**16 51 06.6**	**+1.7**
WMQ	comp=N,490nm,18.7s			LR	LR		
WMQ	comp=E,340nm,18.7s			LR	LR		
WMQ	comp=Z,720nm,18.7s			LR	LR		
ZAA0	**Zalesovo Array** comp=Z,6.0nm,1.3s	**41.57**	**313**	*e*P	**P**	**16 51 14.8**	**-0.3**
ZAA1	**Zalesovo Array**	**41.57**	**313**	*e*P	**P**	**16 51 15.7**	**+0.7**
ZALV	**Zalesovo Beam**	**41.57**	**313**	*e*P	**P**	**16 51 14.7**	**-0.4**
ZALV	**Zalesovo Beam** comp=Z,1.3nm,0.5s,baz=93,slow=6.6,SNR=10	**41.57**	**313**	P	**P**	**16 51 15.7**	**+0.7**
MK01	**Makanchi Array**	**43.64**	**302**	*e*P	**P**	**16 51 32.6**	**+0.7**
MK31	**Makanchi Array** comp=Z,3.3nm,0.9s	**43.64**	**302**	*e*P	**P**	**16 51 31.7**	**-0.3**
MK32	**Makanchi Array**	**43.64**	**302**	*e*P	**P**	**16 51 33.0**	**+1.0**
MKAR	**Makanchi Array** comp=Z,20nm,0.8s	**43.64**	**302**	*e*P	**P**	**16 51 31.4**	**-0.5**
MKAR	**Makanchi Array** comp=Z,2.7nm,0.7s,baz=88,slow=10.0,SNR=32	**43.64**	**302**	P	**P**	**16 51 33.0**	**+1.0**
MKAR	comp=Z,0.9nm,0.7s,baz=87,slow=13,SNR=4.0			pP	**pP**	**16 51 55.3**	**-1.9**
MAKZ	**Makanchi** comp=Z,2.9nm,0.9s	**43.85**	**302**	*e*P	**P**	**16 51 34.2**	**+0.5**
KURK	**Kurchatov** comp=Z,8.0nm,0.8s	**45.53**	**308**	*e*P	**P**	**16 51 47.1**	**+0.3**
KSH	**Kashi**	**49.84**	**294**	P	P	16 52 25.6	+5.1
KSH				pP	sP	16 52 52.8	-5.5
KSH	comp=Z,160nm,4.7s			pmax	pmax		
ILAR	**Eielson Array** comp=Z,0.5nm,0.8s,baz=259,slow=6.9,SNR=5.3	**50.18**	**32**	P	**P**	**16 52 24.9**	**+2.4**
ILAR	comp=Z,0.6nm,0.7s,baz=264,slow=5.6,SNR=4.7			pP	**pP**	**16 52 49.5**	**+1.5**
ILB	**Eielson Array**	**50.18**	**32**	*e*P	**P**	**16 52 22.7**	**+0.2**
ARU	**Arti** comp=Z,4.6nm,0.8s	**56.09**	**318**	*e*P	**P**	**16 53 05.7**	**-0.2**
WRAB	**Tennant Creek** comp=Z,10.0nm,1.5s	**56.63**	**187**	*e*P	**P**	**16 53 10.5**	**+0.4**
WB2	**Warramunga Arr**	**56.64**	**187**	*e*P	**P**	**16 53 09.7**	**-0.5**
WR1	**Warramunga Arr** comp=Z,15nm,1.8s	**56.64**	**187**	*e*P	**P**	**16 53 10.7**	**+0.5**
WRA	**Warramunga Arr** comp=Z,2.3nm,0.7s,baz=4.5,slow=7.4,SNR=52	**56.64**	**187**	P	**P**	**16 53 10.7**	**+0.5**
ABKAR	**Akbulak array** comp=Z,2.9nm,0.7s	**57.56**	**310**	*e*P	**P**	**16 53 16.5**	**+0.1**
ASAR	**Alice Springs** comp=Z,0.7nm,0.7s,baz=17,slow=6.0,SNR=12	**60.37**	**187**	P	**P**	**16 53 36.9**	**+0.9**
ONTNC	**Ouen Toro** comp=Z,43nm,1.1s	**63.62**	**153**	*e*P	**P**	**16 53 56.2**	**-1.6**
FIA0	**FINESS Array S**	**68.74**	**332**	*e*P	**P**	**16 54 30.8**	**+0.8**
FINES	**FINESS Array B** comp=Z,1.9nm,0.8s,baz=90,slow=5.7,SNR=5.2	**68.74**	**332**	P	**P**	**16 54 30.8**	**+0.8**
KBZ	**Khabaz** comp=Z,1.9nm,0.9s,baz=337,slow=2.5,SNR=5.0	**70.53**	**310**	P	**P**	**16 54 42.5**	**+1.2**
AKASG	**Malin Array Be** comp=Z,1.3nm,0.6s,baz=49,slow=6.5,SNR=4.2	**74.08**	**322**	P	**P**	**16 55 02.8**	**+0.5**
NB2	**NORSAR Subarra** comp=Z,0.6nm,0.5s,baz=39,slow=6.2	**74.19**	**337**	P	**P**	**16 55 03.5**	**+0.7**
NB200	**NORSAR Array S**	**74.19**	**337**	*e*P	**P**	**16 55 03.6**	**+0.7**
NOA	**NORSAR Array B** comp=Z,0.9nm,0.6s,baz=39,slow=5.8,SNR=4.7	**74.19**	**337**	P	**P**	**16 55 03.6**	**+0.7**

ISCJB ***14*** *16:49:39.4±0.6, 6°.87N±0°.03×73°.13W±0°.04, h158^{km}±5^{km}, mb3.1/2, Error ellipse: s-maj=6.1km s-min=4.4km az=17.2*

IDC ***14*** *16:49:40.2±1.3, 6°.83N×72°.99W, h162^{km}±34^{km}, mb2.9/2, mb1 3.4/4, mb1mx3.0/39, mbtmp3.5/4, Error ellipse: s-maj=90.9km s-min=7.7km az=133.0*

RSNC ***14*** *16:49:40.8±1.1, 6°.83N×73°.14W, h152^{km}±4^{km}, ML3.4, Mw3.6*

ISC 14 16:49:40.1±1.0**, 6°.86N**±0°.03×**73°.13W**±0°.04**, h154**^{km}±7^{km}**, n23, σ0^{s}.79**/41**, 1C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**191**	⇑*i*P	**Pn**	**16 50 01.3**	**-0.2**
BARC				*e*S	**Sn**	**16 50 16.7**	**-1.0**
BARC	comp=Z,1μm,0.2s			*i*		16 50 17.7	
BRRC	**Barranca, Sant**	**0.63**	**293**	*e*P	**Pn**	**16 50 03.2**	**+0.5**
BRRC				*e*S	**Sn**	**16 50 20.3**	**+0.4**
BRRC	comp=N,684nm,0.3s			*i*		16 50 21.5	
PAMC	**Pamplona, Colo**	**0.64**	**42**	⇓*i*P	**Pn**	**16 50 04.2**	**+0.8**
PAMC				*e*S	**Sn**	**16 50 21.3**	**+0.2**
PAMC	comp=N,398nm,0.3s			*i*		16 50 22.9	
RUSC	**La Rusia**	**0.96**	**177**	⇓*i*P	**Pn**	**16 50 05.1**	**-0.5**
RUSC				*e*S	**Sn**	**16 50 24.2**	**-0.9**
RUSC	comp=N,348nm,0.3s			*i*		16 50 25.8	
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	*e*P	**Pn**	**16 50 07.9**	**-0.7**
PTBC				*e*S	**Sn**	**16 50 29.4**	**-0.9**
PTBC	comp=N,425nm,0.5s			*i*		16 50 34.6	
OCAC	**Ocana**	**1.39**	**352**	*e*P	**Pn**	**16 50 09.3**	**+0.2**
OCAC				*e*S	**Sn**	**16 50 31.2**	**-0.1**
TAMC	**Tame, Arauca**	**1.40**	**107**	⇓*i*P	**Pn**	**16 50 09.5**	**+0.5**
TAMC				*e*S	**Sn**	**16 50 31.2**	**+0.1**
TAMC	comp=E,159nm,0.5s			*i*		16 50 32.7	
ZARC	**Zaragoza, Cauc**	**1.83**	**290**	*e*P	**Pn**	**16 50 13.8**	**+0.3**
ZARC				*e*S	**Sn**	**16 50 39.4**	**+0.1**
ZARC	comp=N,332nm,0.4s			*i*		16 50 45.5	
SMLC	**San Martn de**	**2.15**	**334**	*e*P	**Pn**	**16 50 17.7**	**+0.5**
SMLC				*e*S	**Sn**	**16 50 46.8**	**+0.9**
SMLC	comp=N,348nm,0.2s			*i*		16 50 53.5	
NORC	**Norcasia**	**2.15**	**233**	*e*P	**Pn**	**16 50 17.0**	**-0.4**
NORC				*e*S	**Sn**	**16 50 45.7**	**-0.3**
NORC	comp=N,301nm,0.1s			*i*		16 50 47.7	
CHIC	**Chingaza**	**2.29**	**195**	*e*P	**Pn**	**16 50 19.1**	**-0.3**
CHIC				*e*S	**Sn**	**16 50 48.5**	**-1.2**
CHIC	comp=N,217nm,0.3s			*i*		16 50 51.2	
ROSC	**El Rosal**	**2.33**	**211**	*e*P	**Pn**	**16 50 21.2**	**+1.5**
ROSC	comp=Z,181nm,0.5s			*i*		16 50 55.0	
ROSC	**El Rosal** comp=Z,20nm,0.3s,baz=101,slow=18,SNR=17	**2.33**	**211**	P	**Pn**	**16 50 21.3**	**+1.5**
ROSC	comp=Z,37nm,0.3s,baz=103,slow=16,SNR=12			S	**Sn**	**16 50 52.5**	**+2.1**
HELC	**Santa Helena**	**2.47**	**255**	*e*P	**Pn**	**16 50 22.5**	**+1.0**
HELC				*e*S	**Sn**	**16 50 53.4**	**0.0**
HELC	comp=N,75nm,0.7s			*i*		16 50 58.5	
UREC	**San Jos de Ur**	**2.54**	**291**	*e*P	**Pn**	**16 50 20.9**	**-1.1**
UREC	comp=N,200nm,0.3s			*i*		16 51 03.2	
VILC	**Villavicencio,**	**2.78**	**192**	*e*P	**Pn**	**16 50 25.1**	**-0.1**
VILC				*e*S	**Sn**	**16 50 58.8**	**-1.1**
CODC	**Agustn Codazz**	**3.07**	**354**	*e*P	**Pn**	**16 50 28.6**	**0.0**
CODC				*e*S	**Sn**	**16 51 06.4**	**+0.1**
CODC	comp=N,80nm,0.7s			*i*		16 51 12.4	
SDV	**Santo Domingo**	**3.19**	**51**	*e*P	**Pn**	**16 50 30.6**	**+0.3**
SDV	comp=Z,28nm,0.4s			*i*		16 51 10.2	
SDV	**Santo Domingo** comp=Z,11nm,0.3s,baz=232,slow=11,SNR=37	**3.19**	**51**	P	**Pn**	**16 50 30.6**	**+0.3**
SDV	comp=Z,12nm,0.3s,baz=29,slow=21,SNR=18			S	**Sn**	**16 51 08.1**	**-1.1**
ANIL	**Santa Ana**	**3.26**	**224**	*e*P	**Pn**	**16 50 31.4**	**+0.1**
ANIL				*e*S	**Sn**	**16 51 11.4**	**+0.5**
SJCC	**San Jacinto, C**	**3.64**	**326**	*e*P	**Pn**	**16 50 35.4**	**-0.5**
SJCC				*e*S	**Sn**	**16 51 18.2**	**-1.1**
SJCC	comp=E,58nm,0.3s			*i*		16 51 22.8	
TXAR	**Lajitas Array** comp=E,0.1nm,0.5s,baz=130,slow=9.7,SNR=2.3	**36.43**	**312**	P	**P**	**16 56 30.7**	**+0.5**
YKA	**Yellowknife Ar** comp=E,0.4nm,0.6s,baz=130,slow=6.1,SNR=8.3	**63.23**	**340**	P	**P**	**16 59 51.3**	**-0.4**

IDC ***14*** *16:52:11.6±0.4, 4°.33S×135°.38E, h0^{km}, mb5.0/19, mb1 5.1/23, mb1mx5.0/32, mbtmp5.0/23, ML5.3/4, MS4.5/23, Ms1 4.5/23, ms1mx4.3/41, Error ellipse: s-maj=17.2km s-min=10.8km az=70.0*

BJI ***14*** *16:52:12.3, 4°.62S×135°.70E, h38^{km}, mB5.4/48, mb5.1/69, Ms4.8/51, Ms7 4.5/49*

ISCJB ***14*** *16:52:12.7±0.8, 4°.40S±0°.02×135°.34E±0°.02, h20^{km}±6^{km}, mb5.2/199, MS4.5/33, Error ellipse: s-maj=3.4km s-min=3.0km az=44.5*

DJA ***14*** *16:52:14.6±0.1, 4°S±2°×13°5E±°, h10^{km}, M5.2/79, mB5.6/48, mb5.1/79, MLv5.8/10, Mw(mB)5.1/48, Mwp5.5/1*

MOS ***14*** *16:52:14.8±1.0, 4°.34S×135°.29E, h33^{km}, mb5.4/65, MS4.4/14, Error ellipse: s-maj=8.4km s-min=4.7km az=113.7*

NEIC ***14*** *16:52:15.4±1.2, 4°.40S×135°.26E, h27^{km}±8^{km}, mb5.3/115, Error ellipse: s-maj=3.9km s-min=2.8km az=53.0*

NEIC Felt [IV] at Nabire.

GCMT ***14*** *16:52:16.4±0.2, 4°.41S±0°.02×135°.39E±0°.02, h17^{km}, MW5.4/98, Moment Tensor Solution. s39,c50; s98,c160; Duration: 1^{s}.2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.30±.07; $M_{\theta\theta}$-0.68±.04; $M_{\phi\phi}$-0.62±.04; $M_{r\theta}$0.50±.11; $M_{\theta\phi}$0.70±.02; $M_{\phi r}$-0.31±.11; Best double couple: $M_0$1.44800×10^{17} NP1: ϕ_s129.00000°, δ57.00000°, λ84.00000°. NP2: ϕ_s319.00000°, δ33.00000°, λ98.00000°. Principal axes: T 1.4300, Plg77.0000°, Azm21.0000°; N 0.0380, Plg5.0000°, Azm132.0000°; P -1.4660, Plg12.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 16:52:14.9±0.5**, 4°.49S**±0°.03×**135°.30E**±0°.03**, h25**^{km}±3^{km}**, h25**^{km}**:pP-P, n804, σ1^{s}.33**/847**, mb5.2**/216**, MS4.5**/33**, 18C-14D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**2.76**	**20**	P	**Pn**	**16 52 56.5**	**-1.2**
SRPI				S	**Sn**	**16 53 28.9**	**-1.4**
RKPI	**Ransiki, Papua**	**3.16**	**339**	P	**Pn**	**16 53 02.2**	**-1.0**
BAKI	**Biak**	**3.37**	**14**	P	**Pn**	**16 53 04.8**	**-1.3**
FAKI	**Fak Fak**	**3.42**	**297**	*e*Pn	**Pn**	**16 53 06.6**	**-0.2**
FAKI				*e*Sn	**Sn**	**16 53 43.1**	**-3.5**
FAKI	**Fak Fak**	**3.42**	**297**	P	**Pn**	**16 53 06.8**	**0.0**
FAKI				S	**Sn**	**16 53 45.7**	**-0.9**
GENI	**Genyem**	**5.21**	**69**	P	**Pn**	**16 53 31.6**	**+0.2**
SAUI	**Saumlaki**	**5.28**	**229**	*e*Pn	**Pn**	**16 53 35.1**	**+2.7**
SAUI				*e*Sn	**Sn**	**16 54 24.9**	**-7.6**
SAUI	**Saumlaki** 1μm,0.6s,19μm15nm	**5.28**	**229**	P	**Pn**	**16 53 35.5**	**+3.1**
SAUI	1μm,0.6s,19μm15nm			S	**Sn**	**16 54 38.8**	**+6.3**
BNDI	**Bandanaira**	**5.38**	**269**	P	**Pn**	**16 53 35.4**	**+1.7**
BNDI				S	**Sn**	**16 54 38.1**	**+3.1**
SIJI	**Sorong** 60nm,0.3s,baz=224,slow=22,SNR=198	**5.40**	**312**	Pn	**Pn**	**16 53 32.5**	**-1.6**
SIJI	86nm,0.3s,baz=338,slow=23,SNR=12			Sn	**Sn**	**16 54 32.3**	**-3.2**
SIJI	comp=Z,2μm,18.4s,baz=162,slow=40			LR	LR	16 55 44.7	
SWI	**Sorong** 36nm,1.1s,0.3nm	**5.41**	**312**	P	**Pn**	**16 53 33.8**	**-0.3**
SWI	36nm,1.1s,0.3nm			S	**Sn**	**16 54 32.6**	**-3.0**
JAY	**Jayapura**	**5.74**	**70**	P	**Pn**	**16 53 38.9**	**+0.2**
JAY				S	**Sn**	**16 54 44.4**	**+0.6**
JAY	**Jayapura** 11nm,0.3s,baz=231,slow=11,SNR=44	**5.74**	**70**	Pn	**Pn**	**16 53 39.3**	**+0.7**
JAY	16nm,0.3s,baz=132,slow=21,SNR=3.5			Sn	**Sn**	**16 54 42.9**	**-0.9**
MMPI	**Merauke**	**6.41**	**128**	P	**Pn**	**16 53 51.5**	**+3.6**
NLAI	**Namlea**	**8.28**	**278**	P	**Pn**	**16 54 14.8**	**+1.3**
KDU	**Kakadu** baz=8.7,SNR=354	**8.61**	**199**	P	**Pn**	**16 54 19.1**	**+1.0**
MTN	**Manton Dam** baz=9.3,SNR=1000	**9.27**	**206**	P	**Pn**	**16 54 28.8**	**+1.7**
MTN	baz=9.3			S	**Sn**	**16 56 12.7**	**+2.0**
TNTI	**Ternate**	**9.49**	**303**	*e*Pn	**Pn**	**16 54 29.8**	**-0.5**
TNTI	**Ternate**	**9.49**	**303**	P	**Pn**	**16 54 30.8**	**+0.6**
SANI	**Sanana** 147nm,0.6s,1μm	**9.61**	**284**	P	**Pn**	**16 54 30.8**	**-1.0**
MNI	**Manado**	**12.00**	**299**	P	**Pn**	**16 55 05.9**	**+1.3**
MNI	comp=Z,164nm,0.9s			pmax	pmax		
SOEI	**Soe**	**12.13**	**244**	*e*Pn	**Pn**	**16 55 06.2**	**-0.3**
SOEI	**Soe**	**12.13**	**244**	P	**Pn**	**16 55 08.1**	**+1.6**
COEN	**Coen** baz=12,SNR=99	**12.20**	**141**	P	**Pn**	**16 55 05.9**	**-1.4**
COEN	baz=12			S	**Sn**	**16 57 14.8**	**-7.8**
COEN	**Coen**	**12.20**	**141**	*e*Pn	**Pn**	**16 55 05.0**	**-2.3**
MANU	**Manus Island**	**12.29**	**79**	*e*Pn	**Pn**	**16 55 10.3**	**+1.8**
KMSI	**Cibinong**	**12.38**	**294**	P	**Pn**	**16 55 10.3**	**+0.6**
BBSI	**Bau Bau**	**12.72**	**265**	P	**Pn**	**16 55 16.3**	**+1.8**
KNRA	**Kununurra** baz=13,SNR=129	**12.84**	**210**	P	**Pn**	**16 55 15.9**	**-0.2**
KNRA	baz=13			S	**Sn**	**16 57 34.5**	**-3.9**
BATI	**Baumata** comp=Z,170nm,0.8s,comp=Z,2μm	**12.86**	**243**	P	**Pn**	**16 55 16.6**	**+0.2**
BATI	**Baumata** comp=Z,48nm,0.3s,baz=120,slow=3.3,SNR=51	**12.86**	**243**	Pn	**Pn**	**16 55 16.3**	**-0.1**
BATI	comp=Z,15nm,0.3s,baz=206,slow=23,SNR=5.4			Sn	**Sn**	**16 57 37.7**	**-1.2**
BATI	comp=Z,2μm,19.1s,baz=70,slow=46			LR	LR	17 02 05.2	
LUWI	**Luwuk**	**12.97**	**285**	*e*Pn	**Pn**	**16 55 15.8**	**-2.0**
LUWI	**Luwuk** comp=Z,127nm,0.9s,comp=Z,1μm	**12.97**	**285**	P	**Pn**	**16 55 19.3**	**+1.4**
MMRI	**Maumere**	**13.62**	**252**	*e*Pn	**Pn**	**16 55 25.8**	**-0.9**
MMRI	**Maumere** comp=Z,130nm,0.7s,comp=Z,2μm	**13.62**	**252**	P	**Pn**	**16 55 29.4**	**+2.7**
APSI	**Ampana**	**14.09**	**284**	P	**Pn**	**16 55 34.2**	**+1.0**
EDFI	**Ende, Flores**	**14.17**	**252**	P	Pn	16 55 22.5	-12
MRSI	**Marisa** comp=Z,55nm,1.0s,comp=Z,532nm	**14.23**	**290**	P	**Pn**	**16 55 34.2**	**-0.9**
BKSI	**Bulukumba** comp=Z,33nm,1.0s,comp=Z,471nm	**15.15**	**266**	P	**Pn**	**16 55 47.8**	**+0.3**
BNSI	**Bone**	**15.15**	**270**	P	**Pn**	**16 55 49.7**	**+2.2**

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      comp=Z,42nm,1.1s,comp=Z,827nm
KCP   Kidapawan         15.31 318⇑eP      Pn     16 55 50.1 +0.5
WRAB  Tennant Creek     15.38 183diP      Pn     16 55 48.2 -2.3
WRAB                                pmax   pmax
      comp=Z,44nm,0.7s
WR1   Warramunga Arr    15.39 183 ePn     Pn     16 55 47.7 -2.9
      comp=Z,307nm,0.8s
WR1                               eSn     Sn     16 58 31.6 -8.9
WRA   Warramunga Arr    15.39 183  Pn     Pn     16 55 47.7 -2.9
      comp=Z,2.0nm,0.3s,baz=6.4,slow=13,SNR=83
WRA                                Sn     Sn     16 58 31.7 -8.9
      comp=Z,12nm,0.3s,baz=0.9,slow=23,SNR=9.4
WRA                                LR     LR     17 02 06.2
      comp=Z,5µm,18.2s,baz=0.0,slow=38
SPSI  Sidrap Palu       15.50 271  P      Pn     16 55 52.9 +0.8
      comp=Z,41nm,1.1s,comp=Z,521nm
TTSI  Tana Toraja       15.52 275  P      P      16 56 00.7 +4.2
BASI  Baing, Sumba      15.67 248  P      Pn     16 55 53.5 -0.8
      comp=Z,237nm,0.9s,comp=Z,2µm
WSI   Waingapu          15.75 250  P      P      16 55 57.9 -1.2
PCI   Palu              15.85 283  P      P      16 56 00.8 +0.6
PCI                                pmax   pmax
      comp=Z,150nm,1.1s
PCI   Palu              15.85 283  P      P      16 55 58.6 -1.6
      comp=Z,150nm,1.1s,comp=Z,2µm
CTBH  Cotabato--PC H    16.03 316⇓iP      P      16 56 00.8 -1.4
MPSI  Mapaga            16.12 287  P      Pn     16 56 00.7 +0.6
      comp=Z,32nm,1.3s,comp=Z,678nm
MTSU  Mount Surprise    16.18 148  S      Sn     16 58 44.4  -15
      baz=16
FITZ  Fitzroy Crossi    16.50 214  P      Pn     16 56 04.0 -0.9
      baz=17,SNR=169
FITZ  Fitzroy Crossi    16.50 214 ePn     Pn     16 56 03.0 -1.9
      comp=Z,142nm,0.6s
FITZ  Fitzroy Crossi    16.50 214  Pn     Pn     16 56 03.0 -1.9
      comp=Z,10nm,0.3s,baz=39,slow=11,SNR=73
FITZ                               LR     LR     17 03 44.7
      comp=Z,2µm,20.2s,baz=36,slow=42
RABL  Rabaul            16.82  90 ePn     Pn     16 56 08.4 -0.5
      comp=Z,107nm,0.9s
MSLP  Maasin            17.87 324 eP      Pn     16 56 21.1 -0.9
PLAI  Plampang          17.93 255  P      Pn     16 56 22.4 -0.4
      comp=Z,78nm,0.8s,comp=Z,1µm
SMKI  Samarinda         18.51 282  P      Pn     16 56 37.1 +7.1
CTA   Charters Tower    18.82 146  P      Pn     16 56 35.6 +2.0
      comp=Z,4.5nm,0.3s,baz=323,slow=12,SNR=46
CTA                                LR     LR     17 03 24.1
      comp=Z,1µm,19.4s,baz=322,slow=36
CTAO  Charters Tower    18.82 146 eP      Pn     16 56 34.7 +1.0
      comp=Z,62nm,0.8s
CTAO  Charters Tower    18.82 146 eP      Pn     16 56 34.7 +1.0
CTAO                               pmax   pmax
      comp=Z,62nm,0.8s
AS01  Alice Springs     19.11 184 eP      P      16 56 36.7 +0.5
AS31  Alice Springs     19.11 184 eP      P      16 56 36.7 +0.4
AS31                              eSn     Sn     17 00 04.0 -6.8
ASAR  Alice Springs     19.11 184  P      P      16 56 36.3  0.0
      comp=Z,10.0nm,0.3s,baz=352,slow=14,SNR=389
ASAR                               S      Sn     17 00 04.6 -6.2
      comp=Z,5.0nm,0.3s,baz=3.6,slow=26,SNR=6.2
ASAR                               LR     LR     17 04 22.0
      comp=Z,6µm,18.2s,baz=7.0,slow=38
KBKI  Kotabaru          19.13 273  P      Pn     16 56 38.7 +1.3
GUIM  Jordan            19.64 320 eP      P      16 56 41.8 -0.2
GUIM                              eS      pP     16 56 50.0 +1.2
RCP   Roxas             20.25 322⇑eP      Pn     16 56 50.1 -0.6
SRBI  Singaraja         20.28 259  P      Pn     16 56 52.5 +1.4
      comp=Z,63nm,1.3s,comp=Z,2µm
GUMO  Guam              20.32  28  LR     LR     17 05 18.5
      comp=Z,806nm,18.1s,baz=188,slow=39
DNP   Denpasar          20.39 257  P      Pn     16 56 55.5 +3.2
      comp=Z,239nm,1.1s
MTKI  Muara Teweh, K    20.68 279  P      Pn     16 56 57.7 +1.9
      comp=Z,91nm,1.2s,comp=Z,4µm
ABJI  Asem Bagus        21.20 260  P      P      16 57 01.4 +2.4
      comp=Z,128nm,1.1s,comp=Z,2µm
KMMI  Kalianget         21.38 262  P      P      16 57 04.4 +3.5
      comp=Z,170nm,1.1s,comp=Z,1µm
JAGI  Jajag, Banyuwa    21.38 258 eP      P      16 57 01.0  0.0
      comp=Z,106nm,1.1s
JAGI  Jajag, Banyuwa    21.38 258  P      P      16 57 03.2 +2.3
      comp=Z,101nm,1.1s,comp=Z,2µm
WRKA  Warakurna         21.51 198  P      P      16 57 04.1 +1.8
      baz=22,SNR=540
KKM   Kota Kinabalu     21.74 299 eP      P      16 57 05.0 +0.1
      comp=Z,163nm,0.9s
SJMP  San Jose          21.96 320 eP      P      16 57 07.7 +0.6
GMJI  Gumukmas          22.04 259  P      P      16 57 10.3 +2.3
      comp=Z,60nm,1.0s,comp=Z,1µm
MBWA  Marble Bar        22.44 221 eP      P      16 57 13.4 +1.2
      comp=Z,64nm,0.8s
TGY   Tagaytay City     23.33 323  P      P      16 57 22.5 +0.9
      comp=Z,187nm,0.3s,baz=75,slow=23,SNR=4.3
PWJI  Pagerwojo         23.62 260  P      P      16 57 25.2 +0.8
      comp=Z,42nm,1.0s,comp=Z,763nm
PBKI  Pangkalan Bun     23.65 273  P      P      16 57 27.5 +2.8
      comp=Z,636nm,1.1s
NGJI  Ngawi             23.88 262  P      P      16 57 29.2 +2.3
SBUM  Sibu              24.07 286 eP      P      16 57 30.5 +1.8
      comp=Z,46nm,1.1s
PCJI  Pacitan           24.25 260  P      P      16 57 33.3 +3.0
      comp=Z,59nm,0.8s,comp=Z,1µm
WOJI  Wonogiri, Jawa    24.46 261  P      P      16 57 44.0  +12
UGM   Wanagama          24.86 261 eP      P      16 57 34.5 -1.4
      comp=Z,128nm,1.2s
UGM   Wanagama          24.86 261  P      P      16 57 38.2 +2.3
      comp=Z,88nm,1.1s
HNR   Honiara           24.94 103 eP      P      16 57 36.4 -0.2
      comp=Z,134nm,0.9s
HNR   Honiara           24.94 103 eP      P      16 57 36.4 -0.2
HNR                                pmax   pmax
      comp=Z,134nm,0.9s
RMQ   Roma              25.38 151  P      P      16 57 42.7 +2.2
      baz=26,SNR=13
KSM   Kuching           25.67 283 eP      P      16 57 43.3 +0.1
      comp=Z,37nm,1.0s
EIDS  Eidsvold          25.70 145  P      P      16 57 44.4 +1.0
      baz=26,SNR=10
EIDS  Eidsvold          25.70 145 eP      P      16 57 43.4  0.0
      comp=Z,44nm,1.0s
KPJI  Karang Pucung     26.38 263  P      P      16 57 52.6 +3.0
      comp=Z,95nm,0.7s,comp=Z,2µm
CMJI  Cimerak           26.89 262  P      P      16 57 59.7 +5.4
      comp=Z,59nm,1.1s
FORT  Forrest           27.03 194  P      P      16 57 57.1 +1.8
      baz=27,SNR=23
FORT  Forrest           27.03 194 eP      P      16 57 57.0 +1.7
      comp=Z,302nm,0.8s
MEEK  Meekatharra       27.20 214  P      P      16 57 58.2 +1.3
      baz=27,SNR=20
CISI  Cisompet, Garu    27.50 262 eP      P      16 57 58.1 -1.7
      comp=Z,101nm,0.8s
CISI  Cisompet, Garu    27.50 262  P      P      16 58 00.5 +0.7
      comp=Z,119nm,0.7s,comp=Z,1µm
LEM   Lembang           27.64 264  P      P      16 58 03.3 +2.1
LEM   Lembang           27.64 264  P      P      16 58 02.5 +1.3
      comp=Z,26nm,1.0s,baz=116,slow=9.1,SNR=5.2
LEM                                LR     LR     17 11 00.7
      comp=Z,654nm,20.1s,baz=92,slow=41
STKA  Stephens Creek    27.88 168  P      P      16 58 03.2 +0.3
      baz=28,SNR=43
STKA  Stephens Creek    27.88 168  P      P      16 58 03.2 +0.3
      comp=Z,22nm,0.8s,baz=346,slow=8.3,SNR=30
STKA                               LR     LR     17 10 37.3
      comp=Z,1µm,18.5s,baz=344,slow=40
BBOO  Buckleboo         28.19 179  P      P      16 58 06.4 +0.8
      baz=28,SNR=28
BBOO  Buckleboo         28.19 179 eP      P      16 58 06.1 +0.4
      comp=Z,109nm,1.4s
CMSA  Cobar Meteorol    28.62 161  P      P      16 58 10.7 +1.1
      baz=29,SNR=36
HTT   Hallett           28.99 174  P      P      16 58 15.7 +2.8
      baz=29,SNR=14
XMIS  Christmas Isla    29.98 257 eP      P      16 58 21.4 -0.5
      comp=Z,65nm,1.0s
ARMA  Armidale          30.04 151  P      P      16 58 23.2 +0.9
      baz=30,SNR=7.8
ARMA  Armidale          30.04 151 eP      P      16 58 23.7 +1.4
      comp=Z,78nm,1.8s
MORW  Morawa            30.52 215  P      P      16 58 27.5 +1.1
      baz=31,SNR=5.3
MORW  Morawa            30.52 215 eP      P      16 58 27.6 +1.2
      comp=Z,34nm,1.0s
KASI  Kota Agung        30.70 267  P      P      16 58 30.7 +2.5
      comp=Z,43nm,1.1s
YULB  Yu-li             30.90 334 eP      P      16 58 30.7 +0.9
      comp=Z,15nm,1.2s
MDSI  Maura Dua         31.03 269  P      P      16 58 32.5 +1.4
      comp=Z,22nm,1.1s
TPUB  Ta-pu             31.11 333 eP      P      16 58 31.1 -0.6
      comp=Z,45nm,1.5s
LWLI  Liwa              31.14 268  P      P      16 58 36.5 +4.3
      comp=Z,19nm,0.9s,comp=Z,34µm
YOJ   Yonaguni jima     31.16 338 eP      P      16 58 30.8 -1.3
      comp=Z,97nm,1.1s
YOJ   Yonaguni jima     31.16 338 eP      P      16 58 30.8 -1.3
YOJ                                pmax   pmax
      comp=Z,97nm,1.1s
BLDU  Ballidu           31.35 212  P      P      16 58 36.1 +2.4
      baz=32,SNR=10
SSLB  Suanglung         31.39 334 eP      P      16 58 32.7 -1.5
      comp=Z,29nm,1.3s
NACB  Ninganchiao       31.46 336 eP      P      16 58 33.6 -1.1
      comp=Z,66nm,1.8s
KLBR  Kellerberrin      31.60 209  P      P      16 58 38.1 +2.2
      baz=32,SNR=17
LHSI  Lahat             31.70 270  P      P      16 58 40.4 +3.4
      comp=Z,62nm,1.8s,comp=Z,1µm
JOW   Kunigami          31.87 348 eP      P      16 58 38.0 -0.3
      comp=Z,14nm,0.8s
YHNB  Yeheng            31.99 336 eP      P      16 58 39.4 -0.1
      comp=Z,32nm,1.3s
YNG   Young             32.06 159  P      P      16 58 41.4 +1.5
      baz=32,SNR=11
ARPS  Mount Arapiles    32.68 170  P      P      16 58 46.6 +1.2
      baz=33,SNR=18
NWAO  Narrogin (SRO)    32.95 209 eP      P      16 58 47.6 -0.1
      comp=Z,88nm,1.4s
NWAO  Narrogin (SRO)    32.95 209  P      P      16 58 50.4 +2.7
      comp=Z,27nm,0.8s,baz=272,slow=8.3,SNR=12
CAN   Canberra          33.19 159 eP      P      16 58 51.6 +1.7
      comp=Z,56nm,1.2s
CAN   Canberra          33.19 159 eP      P      16 58 51.6 +1.7
CAN                                pmax   pmax
      comp=Z,56nm,1.2s
KRJI  Kerinci           33.87 273  P      P      16 58 58.4 +2.3
      comp=Z,126nm,1.1s,comp=Z,1µm
TOO   Toolangi          34.22 166 eP      P      16 59 00.1 +1.3
      comp=Z,12nm,0.9s
TOO   Toolangi          34.22 166 eP      P      16 59 00.1 +1.3
TOO                                pmax   pmax
      comp=Z,12nm,0.9s
QIZ   Qiongzhong        34.27 314  P      P      16 59 00.1 +0.7
QIZ                                S      S      17 04 23.8 -1.5
QIZ                                sS     sS     17 04 40.0 +2.5
QIZ                                LR     LR
      comp=Z,460nm,13.7s
QIZ                                LR     LR
      comp=Z,490nm,16.7s
QIZ                                LR     LR
      comp=Z,650nm,20.6s
BKNI  Bangkinang        34.56 277 eP      P      16 59 03.2 +1.2
      comp=Z,216nm,1.1s
BKNI  Bangkinang        34.56 277  P      P      16 59 05.0 +3.0
      comp=Z,168nm,1.0s
KWAJ  Kwajalein Atol    34.81  68 eP      P      16 59 06.3 +2.1
      comp=Z,835nm,1.5s
KWAJ  Kwajalein Atol    34.81  68 eP      P      16 59 06.3 +2.1
DZM   Mont Dzumac       34.86 123 eP      P      16 59 06.0 +1.4
      comp=Z,86nm,1.5s
DZM                               eLR     LR     17 08 39.8
      comp=Z,2µm,24.9s
DZM   Mont Dzumac       34.86 123 eP      P      16 59 05.5 +1.0
      comp=Z,28nm,1.0s
DZM   Mont Dzumac       34.86 123  P      P      16 59 05.6 +1.0
      comp=Z,15nm,0.9s,baz=313,slow=4.8,SNR=7.4
LHI   Lord Howe Isla    34.95 143 eP      P      16 59 07.2 +2.1
      comp=Z,145nm,1.4s
ONTNC Ouen Toro         34.97 123 eP      P      16 59 06.6 +1.2
      comp=Z,36nm,0.8s
PDSI  Padang            34.98 275  P      P      16 59 06.2 +0.6
      comp=Z,20nm,0.7s
IPM   Ipoh              35.38 284 eP      P      16 59 08.5 -0.6
      comp=Z,42nm,0.9s
PINNC Pines Island,     35.93 123 eP      P      16 59 14.3 +0.7
      comp=Z,104nm,1.3s
KULM  Kulim             35.95 285 eP      P      16 59 14.3 +0.4
      comp=Z,19nm,0.9s
MARNC Mare, Loyalty     35.96 121 eP      P      16 59 13.4 -0.6
      comp=Z,154nm,1.2s
MNSI  Mandailing Nat    36.08 277  P      P      16 59 17.3 +2.3
      comp=Z,64nm,0.5s
SKLT  Songkhla          36.50 288  P      P      16 59 21.6 +3.0
      comp=Z,57nm,1.0s
PSI   Prapat            37.06 281 eP      P      16 59 21.2 -2.4
      comp=Z,70nm,1.0s
PSI   Prapat            37.06 281  P      P      16 59 23.7  0.0
      comp=Z,48nm,0.9s,baz=180,slow=3.9,SNR=24
TSI   Tuntungan         37.55 282  P      P      16 59 29.7 +2.1
      comp=Z,134nm,1.2s
TRTT  Trang             37.58 289  P      P      16 59 29.3 +1.5
      comp=Z,61nm,1.1s,comp=Z,772nm
SKNT  Sakolnakorn       37.58 305  P      P      16 59 28.6 +0.8
      comp=Z,10nm,1.6s,comp=Z,946nm
JNU   Nakatsue          37.64 354 eP      P      16 59 26.0 -2.1
      comp=Z,49nm,0.8s
SRAK  Srakaew           37.77 300  P      P      16 59 27.4 -2.0
SSE   Sheshan           37.86 340 eP      P      16 59 30.2 +0.2
      comp=Z,110nm,1.1s
GSI   Gunungsitoli      38.13 278 eP      P      16 59 31.6 -1.0
      comp=Z,195nm,1.5s
GSI                               ePcP    PcP    17 01 49.2 +1.8
GSI   Gunungsitoli      38.13 278  P      P      16 59 33.7 +1.1
      comp=Z,90nm,1.1s
KCSI  Kotacane, Aceh    38.33 281  P      P      16 59 34.7 +0.4
      comp=Z,33nm,1.1s
TPTI                    38.86 281  P      P      16 59 39.7 +1.0
      comp=Z,37nm,1.2s,comp=Z,609nm
PKDT  Phuket            38.88 288  P      P      16 59 40.4 +1.6
      comp=Z,44nm,1.0s,comp=Z,382nm
PHET  Kaeng Krachan     39.43 296  P      P      16 59 45.2 +1.9
      comp=Z,15nm,1.0s,comp=Z,267nm
LHMI  Lhok Sumawe       39.51 284 eP      P      16 59 43.5 -0.6
      comp=Z,146nm,1.0s
LHMI  Lhok Sumawe       39.51 284  P      P      16 59 46.5 +2.5
      comp=Z,176nm,1.2s
SNSI  Sinabang, Aceh    39.54 279  P      P      16 59 46.7 +2.3
      comp=Z,152nm,1.3s
NJ2   Nanjing           39.56 338 eP      P      16 59 44.8 +0.6
NJ2                                pP     sP     16 59 53.8 -0.9
NJ2                                PP     PP     17 01 15.3 -0.1
NJ2                                S      S      17 05 46.9 +1.3
NJ2                                pmax   pmax
      comp=Z,24nm,1.5s
NJ2                                pmax   pmax
      comp=Z,290nm,4.3s
NJ2                                LR     LR
      comp=Z,510nm,16.8s
NJ2                                LR     LR
      comp=Z,470nm,16.3s
NJ2                                LR     LR
      comp=Z,750nm,14.1s
INU   Inuyama           39.66   2 eP      P      16 59 46.0 +1.0
      comp=Z,15nm,1.1s
TAU   Tasmania Unive    39.72 166 eP      P      16 59 46.4 +1.0
      comp=Z,55nm,1.4s
TAU   Tasmania Unive    39.72 166 eP      P      16 59 46.4 +1.0
TAU                                pmax   pmax
      comp=Z,55nm,1.4s
PBKT  Sadao Pong        39.87 302 eP      P      16 59 46.8 -0.2
PBKT  Sadao Pong        39.87 302  P      P      16 59 49.0 +2.0
      comp=Z,11nm,1.6s
WHN   Wuhan             40.19 331 ⇓P      P      16 59 50.3 +0.9
WHN                                S      S      17 06 00.8 +5.8
WHN                                LR     LR
      comp=Z,820nm,16.7s
SRDT  SRDT              40.47 298  P      P      16 59 53.9 +1.9
      comp=Z,39nm,1.1s
UTHA  Uthaitani         40.70 300  P      P      16 59 55.4 +1.5
      comp=Z,7.1nm,1.1s,comp=Z,66nm
UTTA  Uttaradit         40.79 304  P      P      16 59 56.2 +1.6
      comp=Z,3.2nm,0.8s,comp=Z,51nm
MJAR  Matsushiro Arr    40.91   4  P      P      16 59 52.6 -2.7
MJAR                                             17 01 56.7
MJAR                               pmax   pmax
      comp=Z,8.0nm,0.9s
MJAR                               MLR    MLR
      comp=Z,475nm,20.2s
MJAR  Matsushiro Arr    40.91   4  P      P      16 59 52.6 -2.7
      comp=Z,8.6nm,0.9s,baz=190,slow=9.7,SNR=16
MJAR                               PcP    PcP    17 01 56.7 +1.1
      comp=Z,6.3nm,0.9s,baz=203,slow=4.3,SNR=7.6
MJAR                               LR     LR     17 13 41.2
      comp=Z,475nm,20.2s,baz=205,slow=32
MAJO  Matsushiro        40.91   4 eP      P      16 59 53.0 -2.3
      comp=Z,36nm,1.4s
MAJO                              ePcP    PcP    17 01 56.8 +1.1
MAJO  Matsushiro        40.91   4⇓iP      P      16 59 53.4 -1.9
MAJO                               pmax   pmax
      comp=Z,15nm,0.9s
MAT   Matsushiro        40.91   4  P      P      16 59 53.0 -2.3
MAT                                S      S      17 06 06.2 +0.6
MJB9  Matsu-Tunnel      40.91   4 eP      P      16 59 53.2 -2.2
      comp=Z,39nm,1.5s
BSI   Banda Aceh        41.17 284  P      P      16 59 58.1 +0.3
      comp=Z,64nm,1.2s,comp=Z,23µm
TJN   Taejon            41.33 350ceP      P      16 59 58.0 -0.7
GYA   Guiyang           41.41 319  P      P      17 00 00.6 +0.8
GYA                                pP     sP     17 00 10.8 +0.5
GYA                                PP     PnPn   17 01 40.4 -0.1
GYA                                S      S      17 06 14.3 +0.6
GYA                                sS     sS     17 06 30.6 +4.6
GYA                                SS     SS     17 09 13.0 -5.4
GYA                                pmax   pmax
      comp=Z,30nm,0.7s
GYA                                pmax   pmax
      comp=Z,180nm,5.5s
GYA                                LR     LR
      comp=Z,1µm,17.2s
GYA                                LR     LR
      comp=Z,1µm,17.3s
GYA                                LR     LR
      comp=Z,1µm,18.3s
UMPA  Umpang Tak        41.50 301  P      P      17 00 01.8 +1.3
      comp=Z,7.1nm,1.1s
KS15  Wonju Array Si    42.28 351 eP      P      17 00 04.5 -2.1
KS15                              ePcP    PcP    17 02 00.3 +0.2
KSAR  Wonju Array Be    42.28 351  P      P      17 00 05.1 -1.5
KSAR                               PcP    PcP    17 02 01.1 +1.0
KSAR  Wonju Array Be    42.28 351  P      P      17 00 05.1 -1.5
KSAR                                             17 02 01.1
KSRS  Korea Array       42.29 351  P      P      17 00 05.1 -1.5
      comp=Z,10nm,1.0s,baz=172,slow=9.4,SNR=27
KSRS                               PcP    PcP    17 02 01.1 +1.0
      comp=Z,5.8nm,1.0s,baz=193,slow=3.6,SNR=9.6
KSRS                               LR     LR     17 16 22.3
      comp=Z,291nm,20.9s,baz=161,slow=34
KS01  Wonju Array Si    42.31 351 eP      P      17 00 04.8 -2.1
KS01                              ePcP    PcP    17 01 59.9 -0.3
CM01  Chiang Mai Arr    42.44 304 eP      P      17 00 07.7 -0.4
CM31  Chiang Mai Arr    42.47 304 eP      P      17 00 08.3 -0.1
CM31                              ePcP    PcP    17 02 02.7 +1.5
CM31  Chiang Mai Arr    42.47 304  P      P      17 00 08.3 -0.1
      SNR=8.9
CMAR  Chiang Mai Arr    42.47 304ceP      P      17 00 09.0 +0.6
CMAR                               pmax   pmax
      comp=Z,9.0nm,0.8s
CMAR  Chiang Mai Arr    42.47 304  P      P      17 00 08.5 +0.1
      comp=Z,8.4nm,0.8s,baz=129,slow=6.9,SNR=60
CMAR                               PcP    PcP    17 02 03.4 +2.2
      comp=Z,5.5nm,1.1s,baz=165,slow=1.6,SNR=4.9
ENH   Enshi             42.49 326 eP      P      17 00 07.5 -0.9
      comp=Z,35nm,1.0s
ENH                               ePcP    PcP    17 02 01.5 +0.5
CMMT  Chiang Mai        42.64 304  P      P      17 00 10.1 +0.3
      comp=Z,15nm,0.9s
CHTO  Chiang Mai        42.64 304 eP      P      17 00 09.9 +0.1
      comp=Z,10nm,0.7s
CHTO  Chiang Mai        42.64 304 eP      P      17 00 09.9 +0.1
CHTO                               pmax   pmax
      comp=Z,10.0nm,0.7s
CHTO  Chiang Mai        42.64 304  P      P      17 00 09.4 -0.4
      SNR=8.0
CHTO  Chiang Mai        42.64 304  P      P      17 00 10.2 +0.4
      comp=Z,66nm,0.8s
CMBY  CAMPBELL BAY      42.85 285 eP      P      17 00 13.2 +1.7
CMBY                               IAmb   IAmb   17 00 18.4
      comp=Z,92nm,1.1s
KMI   Kunming           43.21 315  P      P      17 00 15.4 +0.8
KMI                                pP     pP     17 00 22.9 +0.8
KMI                                sP     sP     17 00 32.0 +6.9
KMI                                pmax   pmax
      comp=Z,34nm,1.2s
KMI                                pmax   pmax
      comp=Z,170nm,4.4s
KMI                                LR     LR
      comp=Z,260nm,15.0s
KMI                                LR     LR
      comp=Z,320nm,15.8s
KMI                                LR     LR
      comp=Z,320nm,16.0s
KMI   Kunming           43.21 315 eP      P      17 00 14.8 +0.2
      comp=Z,58nm,1.3s
KMI   Kunming           43.21 315 eP      P      17 00 14.8 +0.2
KMI                                pmax   pmax
      comp=Z,58nm,1.3s
MSVF  Nonsavu           43.84 111 eP      P      17 00 21.0 +1.4
      comp=Z,24nm,0.9s
MSVF  Nonsavu           43.84 111 eP      P      17 00 21.0 +1.4
MSVF                               pmax   pmax
      comp=Z,24nm,0.9s
PBA   Port Blair        45.27 291 eP      P      17 00 27.3 -3.6
XAN   Xi'an             45.70 329  P      P      17 00 33.8 -0.4
XAN                                pP     pP     17 00 41.0 -0.8
XAN                                S      S      17 07 14.9 -1.2
XAN                                pmax   pmax
      comp=Z,20nm,1.0s
XAN                                pmax   pmax
      comp=Z,270nm,3.5s
XAN                                LR     LR
      comp=Z,370nm,21.1s
XAN                                LR     LR
      comp=Z,130nm,7.8s
XAN                                LR     LR
      comp=Z,380nm,22.1s
XAN   Xi'an             45.70 329 eP      P      17 00 33.0 -1.2
      comp=Z,109nm,1.0s
XAN   Xi'an             45.70 329 eP      P      17 00 33.0 -1.2
XAN                                pmax   pmax
      comp=Z,109nm,1.0s
CD2   Chengdu           46.33 322  P      P      17 00 39.0 -0.1
CD2                                pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                                pmax   pmax
      comp=Z,120nm,4.8s
OUZ   Omahuta           46.74 136 eP      P      17 00 44.4 +2.1
      comp=Z,117nm,1.7s
ERM   Erimo             46.83   8 eP      P      17 00 43.5 +0.7
      comp=Z,47nm,1.1s
ERM   Erimo             46.83   8 eP      P      17 00 43.5 +0.7
ERM                                pmax   pmax
      comp=Z,47nm,1.1s
TIY   Taiyuan           47.06 335 eP      P      17 00 45.4 +0.6
TIY                                pmax   pmax
      comp=Z,67nm,1.0s
BJT   Baijiatuau        47.66 340 eP      P      17 00 48.5 -0.8
      comp=Z,117nm,1.0s
BJT   Baijiatuau        47.66 340 eP      P      17 00 48.5 -0.8
BJT                                pmax   pmax
      comp=Z,117nm,1.0s
BJI   Beijing           47.67 340  P      P      17 00 49.3 -0.1
BJI                                pmax   pmax
      comp=Z,84nm,1.0s
USA0B Ussuriysk Arra    48.56 357 eP      P      17 00 55.4 -0.7
      comp=Z,24nm,1.4s
USRK  Ussuriysk Ar.     48.56 357  P      P      17 00 55.9 -0.3
      comp=Z,5.3nm,0.7s,baz=180,slow=8.0,SNR=14
USRK                               LR     LR     17 19 34.4
      comp=Z,360nm,19.8s,baz=162,slow=34
ASAJ  Asahikawa         48.83   7  LR     LR     17 20 38.4
      comp=Z,332nm,19.4s,baz=200,slow=35
CN2   Changchun         48.88 351 eP      P      17 00 58.4 -0.3
CN2                               eS      S      17 07 58.5 -2.4
CN2                                pmax   pmax
      comp=Z,10.0nm,0.8s
CN2                                pmax   pmax
      comp=Z,100nm,3.0s
CN2                                LR     LR
      comp=Z,470nm,20.0s
CN2                                LR     LR
      comp=Z,500nm,20.0s
CN2                                LR     LR
      comp=Z,560nm,20.0s
MDJ   Mudanjiang        49.15 355  P      P      17 00 59.3 -1.4
MDJ                                pP     sP     17 01 09.4 -1.9
MDJ                                sP     pP     17 01 13.8 +5.4
MDJ                                PP     PP     17 02 53.4 -1.3
MDJ                                S      S      17 08 07.1 +2.5
MDJ                                sS     sS     17 08 24.4 +7.0
MDJ                                pmax   pmax
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	comp=Z,26nm,0.9s						
MDJ				LR	LR		
	comp=Z,460nm,19.9s						
MDJ				LR	LR		
	comp=Z,410nm,20.7s						
MDJ				LR	LR		
	comp=Z,580nm,19.1s						
MDJ	Mudanjiang	49.15	355	eP	P	17 00 59.1	-1.6
	comp=Z,17nm,0.8s						
TEY	Ternei	49.31	1⇓	eP	P	17 01 01.7	-0.2
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
HIZ	Hauiti	49.37	139	eP	P	17 01 04.1	+1.6
	comp=Z,139nm,1.4s						
DCZ	Deep Cove	49.37	151	eP	P	17 01 04.0	+1.6
	comp=Z,70nm,0.9s						
MLZ	Mavora Lakes	49.77	150	eP	P	17 01 06.7	+1.1
MLZ				ePcP	PcP	17 02 22.4	-3.9
WKZ	Wanaka	49.85	149	eP	P	17 01 07.7	+1.5
	comp=Z,110nm,1.3s						
LZH	Lanzhou	49.96	326	eP	P	17 01 08.1	+0.8
LZH				pP	sP	17 01 20.4	+2.5
LZH				sP	pP	17 01 25.3	+10
LZH				eS	S	17 08 16.0	-0.7
LZH				sS	sS	17 08 37.3	+8.0
LZH				SS	SS	17 11 46.8	-3.2
LZH				pmax	pmax		
	comp=Z,220nm,1.0s						
LZH				pmax	pmax		
	comp=Z,870nm,4.9s						
LZH				LR	LR		
	comp=Z,3µm,14.9s						
LZH				LR	LR		
	comp=Z,2µm,17.3s						
LZH				LR	LR		
	comp=Z,3µm,18.2s						
THZ	Tophouse	50.02	143	eP	P	17 01 08.2	+0.6
	comp=Z,150nm,1.8s						
WHZ	Wether Hill Ro	50.06	151	eP	P	17 01 08.3	+0.6
	comp=Z,103nm,1.4s						
HHC	Hu-ho-hao-te	50.08	337	eP	P	17 01 08.1	0.0
HHC				sP	sP	17 01 19.6	+0.9
HHC				pmax	pmax		
	comp=Z,80nm,1.1s						
HHC				pmax	pmax		
	comp=Z,380nm,5.0s						
HHC				LR	LR		
	comp=Z,420nm,13.9s						
HHC				LR	LR		
	comp=Z,370nm,14.2s						
HHC				LR	LR		
	comp=Z,520nm,12.4s						
LBZ	Lake Benmore	50.17	148	eP	P	17 01 09.5	+1.0
	comp=Z,112nm,1.2s						
RPZ	Rata Peaks	50.19	147	P	P	17 01 09.3	+0.5
	comp=Z,12nm,0.6s,baz=317,slow=4.0,SNR=10						
OXZ	Oxford	50.49	146	eP	P	17 01 12.0	+0.9
	comp=Z,200nm,1.8s						
BTO	Baotou	50.51	335	eP	P	17 01 12.8	+1.5
KUR	Kuril'sk	50.76	11	deP	P	17 01 13.0	+0.1
BKZ	Black Stump Fm	50.79	139	eP	P	17 01 13.7	+0.3
	comp=Z,28nm,0.8s						
BFZ	Birch Farm	51.45	140	eP	P	17 01 18.2	-0.1
	comp=Z,28nm,0.8s						
SHL	Shillong	51.63	308	eP	P	17 01 20.0	-0.1
SHL				IAmb	IAmb	17 01 22.1	
	comp=Z,32nm,0.4s						
YSS	Yuzh-Sakhalins	51.64	7⇑	eP	P	17 01 18.6	-0.9
YSS				e		17 01 24.5	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
KLR	Kul'dur	53.59	357⇑	eP	P	17 01 32.9	-1.0
KLR	Kul'dur	53.59	357	LR	LR	17 22 51.0	
	comp=Z,414nm,19.2s,baz=178,slow=34						
LSA	Lhasa	54.26	312	eP	P	17 01 40.0	+0.3
	comp=Z,12nm,0.8s						
LSA	Lhasa	54.26	312	eP	P	17 01 40.1	+0.3
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
BWNR	Bhubaneshwar	54.48	299	ex	P	17 01 37.5	-3.4
GTA	Gaotai	54.57	326	⇑P	P	17 01 42.0	+0.6
GTA				pP	sP	17 01 51.8	-0.3
GTA				sP	pP	17 01 55.8	+6.7
GTA				PcP	PcP	17 02 42.8	-1.7
GTA				pmax	pmax		
	comp=Z,19nm,1.3s						
GRNR	Gornyy	55.05	1	eP	P	17 01 44.0	-0.5
GRNR				e		17 02 47.2	
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
HIA	Hailar	55.22	348	eP	P	17 01 44.8	-1.1
	comp=Z,18nm,1.1s						
HIA				ePcP	PcP	17 02 47.0	+0.4
HIA	Hailar	55.22	348c	iP	P	17 01 45.7	-0.1
HIA				pmax	pmax		
	comp=Z,17nm,1.1s						
TYV	Tymovskoe	55.49	6	eP	P	17 01 47.0	-0.7
TYV				pmax	pmax		
	comp=Z,13nm,1.7s						
TYV				pmax	pmax		
	comp=Z,200nm,5.8s						
BOK	Bokaro	55.74	303	eP	P	17 01 49.0	-1.1
BOK				IAmb	IAmb	17 01 52.7	
	comp=Z,7.3nm,1.2s						
RAMN	Ramite	56.48	306	eP	P	17 01 55.8	+0.3
	comp=Z,67nm,1.0s						
JIRN	Jiri	57.11	307	eP	P	17 02 00.2	0.0
	comp=Z,53nm,0.9s						
MDRS	Chennai	57.38	289	eP	P	17 02 00.9	-0.9
MDRS				IAmb	IAmb	17 02 05.1	
	comp=Z,46nm,1.4s						
MDRS	Chennai	57.38	289	ex	P	17 02 12.8	+11
MDRS				ex	x	17 09 12.8	
MDRS				ex	x	17 12 54.8	
MDRS				ex	x	17 23 42.8	
MDRS				ex	x	17 29 24.8	
MDRS				ex	x	17 38 54.8	
GUN	Gumba	57.47	307	eP	P	17 02 02.9	+0.2
	comp=Z,41nm,0.8s						
NKL	Nikolayevsk	57.60	4	eP	P	17 02 02.0	-0.6
NKL				pmax	pmax		
	comp=Z,18nm,0.8s						
PKI	Pulchoki	57.70	307	eP	P	17 02 04.0	-0.3
	comp=Z,14nm,0.8s						
PKIN	Phulchoki	57.71	307	eP	P	17 02 04.0	-0.3
	comp=Z,10nm,0.7s						
ULN	Ulaanbaatar	57.73	338	eP	P	17 02 04.0	+0.1
	comp=Z,65nm,1.3s						
ULN				ePcP	PcP	17 02 56.7	+0.1
ULN	Ulaanbaatar	57.73	338c	iP	P	17 02 04.0	+0.1
ULN				pmax	pmax		
	comp=Z,56nm,1.3s						
ULN	Ulaanbaatar	57.73	338	P	P	17 02 04.1	+0.1
	SNR=23						
SONA0	Songino Array	57.95	337	eP	P	17 02 05.1	-0.3
SONA0				ePcP	PcP	17 02 58.4	+0.9
SONM	Songino Array	57.95	337	P	P	17 02 05.1	-0.3
	comp=Z,15nm,0.8s,baz=152,slow=4.4,SNR=76						
SONM				PcP	PcP	17 02 58.4	+0.9
	comp=Z,4.7nm,0.7s,baz=151,slow=5.0,SNR=5.5						
SONM				LR	LR	17 26 04.9	
	comp=Z,312nm,21.8s,baz=146,slow=35						
DMN	Daman	57.96	306	eP	P	17 02 06.1	+0.1
	comp=Z,58nm,1.1s						
SONA1	Songino Array	57.96	337	eP	P	17 02 05.3	-0.3
SONA1				ePcP	PcP	17 02 57.6	+0.1
ZEA	Zeya	58.41	354	eP	P	17 02 06.4	-1.9
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
KOLN	Koldanda	59.24	306	eP	P	17 02 15.5	+0.6
	comp=Z,69nm,1.1s						
DANN	Dangsing	59.35	307	eP	P	17 02 15.9	+0.1
	comp=Z,71nm,1.1s						
PYUN	Piuthan	59.87	306	eP	P	17 02 19.4	+0.2
	comp=Z,134nm,1.0s						
HYB	Hyderabad	60.08	293	iP	P	17 02 21.0	+0.3
HYB	Hyderabad	60.08	293	eP	P	17 02 19.4	-1.3
HYB				IAmb	IAmb	17 02 23.4	
	comp=Z,46nm,1.8s						
PETK	Petropavlovsk-	60.41	15	eP	P	17 02 21.3	-0.9
PETK				ePcP	PcP	17 03 06.9	-0.1
PETK	Petropavlovsk-	60.41	15	P	P	17 02 21.5	-0.8
	comp=Z,13nm,0.8s,baz=168,slow=4.4,SNR=22						
PETK				LR	LR	17 24 46.3	
	comp=Z,283nm,21.7s,baz=186,slow=32						
PEA1	Petropavlovsk-	60.42	15	eP	P	17 02 21.5	-0.8
PET	Petropavlovsk	60.60	16	eP	P	17 02 22.2	-1.2
	comp=Z,44nm,1.1s						
PET	Petropavlovsk	60.60	16	eP	P	17 02 22.6	-0.8
PET				pmax	pmax		
	comp=Z,43nm,1.0s						
NGP	Nagpur	60.72	297	eP	P	17 02 23.6	-1.3
NGP				IAmb	IAmb	17 02 26.6	
	comp=Z,6.8nm,0.5s						
ZAK	Zakamensk	61.22	337	eP	P	17 02 27.4	-0.5
ZAK				pmax	pmax		
	comp=Z,44nm,1.3s						
TLY	Talaya	62.13	338	eP	P	17 02 34.0	+0.1
	comp=Z,44nm,0.8s						
TLY	Talaya	62.13	338	eP	P	17 02 33.9	+0.1
TLY				pmax	pmax		
	comp=Z,86nm,1.4s						
TLY				MLR	MLR		
	comp=Z,1µm,18.0s						
TLY	Talaya	62.13	338	P	P	17 02 34.2	+0.4
	SNR=12						
IRK	Irkutsk	62.35	339	eP	P	17 02 36.3	+0.9
IRK				pmax	pmax		
	comp=Z,77nm,3.2s						
BHPL	Bhopal	62.80	299	eP	P	17 02 38.5	-0.4
BHPL				IAmb	IAmb	17 02 41.7	
	comp=Z,143nm,2.5s						
MOY	Mondy	63.12	337	eP	P	17 02 40.9	+0.3
MOY				pmax	pmax		
	comp=Z,78nm,1.6s						
KNGR	Kungurtug, Tuv	63.76	334⇑	eP	P	17 02 45.7	+0.8
WMQ	Urumqi	64.35	324	P	P	17 02 49.1	+0.3
WMQ				pP	pP	17 02 57.3	+0.7
WMQ				sP	sP	17 03 00.1	+0.5
WMQ				pmax	pmax		
	comp=Z,64nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,750nm,4.7s						
WMQ				LR	LR		
	comp=Z,440nm,24.7s						
WMQ				LR	LR		
	comp=Z,320nm,26.7s						
WMQ				LR	LR		
	comp=Z,450nm,22.7s						
WMQ	Urumqi	64.35	324	eP	P	17 02 48.7	-0.1
	comp=Z,72nm,1.5s						
WMQ	Urumqi	64.35	324	eP	P	17 02 48.7	-0.1
WMQ				pmax	pmax		
	comp=Z,72nm,1.5s						
BOD	Bodaibo	64.44	348	eP	P	17 02 48.0	-1.0
BOD				pmax	pmax		
	comp=Z,24nm,1.9s						
POO	Poona	64.69	293	eP	P	17 02 50.3	-1.2
DDI	Dehra Dun	64.70	306	eP	P	17 02 50.5	-0.9
MA2	Magadan	65.03	9	eP	P	17 02 52.7	-0.1
	comp=Z,16nm,1.0s						
MA2	Magadan	65.03	9c	eP	P	17 02 53.2	+0.3
MA2				pmax	pmax		
	comp=Z,19nm,1.0s						
SMLA	Simla	65.71	307	eP	P	17 02 58.5	+0.6
YAK	Yakutsk	66.47	357	eP	P	17 03 01.9	-0.2
YAK				pmax	pmax		
	comp=N,117nm,0.9s						
DHRM	DHARAMSHALA	66.81	308	eP	P	17 03 04.5	-0.7
DHRM				IAmb	IAmb	17 03 07.2	
	comp=Z,18nm,0.6s						
DGZ	Jazzator, Alta	67.97	329c	eP	P	17 03 12.2	+0.1
DGZ				pmax	pmax		
	comp=Z,33nm,1.2s						
SEY	Seymchan	68.48	8⇑	iP	P	17 03 15.0	+0.2
KIWB	Kanaga Island	69.12	29	eP	P	17 03 18.5	-0.5
MK01	Makanchi Array	69.15	324	eP	P	17 03 19.5	+0.1
PDGK	Podgornoye	69.17	320	P	P	17 03 19.6	-0.1
PDGK				pmax	pmax		
	comp=Z,16nm,0.9s						
MK31	Makanchi Array	69.17	324	eP	P	17 03 18.9	-0.5
MK31	Makanchi Array	69.17	324	P	P	17 03 19.0	-0.5
MK31				pmax	pmax		
	comp=Z,32nm,1.0s						
MK32	Makanchi Array	69.17	324	eP	P	17 03 19.6	+0.2
MKAR	Makanchi Array	69.17	324	eP	P	17 03 19.1	-0.3
	comp=Z,141nm,0.9s						
MKAR	Makanchi Array	69.17	324	P	P	17 03 19.6	+0.2
	comp=Z,19nm,0.9s,baz=117,slow=7.1,SNR=77						
MAKZ	Makanchi	69.36	324	eP	P	17 03 20.4	-0.2
	comp=Z,40nm,0.9s						
MAKZ	Makanchi	69.36	324	eP	P	17 03 20.4	-0.2
MAKZ				pmax	pmax		
	comp=Z,40nm,0.9s						
PRZ	Przheval'sk	69.49	319	eP	P	17 03 23.4	+1.7
	comp=Z,36nm,1.2s						
TARG	Taragay, Kyrgy	69.55	318	eP	P	17 03 22.7	+0.3
	comp=Z,10nm,0.8s						
BHJ	Bhuj	69.66	297	eP	P	17 03 22.9	0.0
NIL	Nilore	69.70	308	eP	P	17 03 23.2	+0.1
	comp=Z,19nm,0.9s						
NIL	Nilore	69.70	308	eP	P	17 03 23.2	+0.1
NIL				pmax	pmax		
	comp=Z,19nm,0.9s						
KSH	Kashi	69.87	315	P	P	17 03 25.8	+1.7
KSH				sP	PcP	17 03 42.9	-3.6
KSH				PP	PP	17 06 04.3	+5.4
KSH				S	S	17 12 32.4	-0.2
KSH				sS	sS	17 12 51.0	+5.3
KSH				SS	SS	17 17 02.4	+0.4
KSH				pmax	pmax		
	comp=Z,34nm,1.0s						
KSH				pmax	pmax		
	comp=Z,300nm,5.4s						
KSH				LR	LR		
	comp=Z,220nm,4.5s						
KSH				LR	LR		
	comp=Z,210nm,4.4s						
KSH				LR	LR		
	comp=Z,360nm,7.2s						
KDJ	Kajisay	70.14	318	eP	P	17 03 27.2	+1.4
	comp=Z,14nm,0.8s						
KDJ	Kajisay	70.14	318	eP	P	17 03 27.2	+1.4
KDJ				pmax	pmax		
	comp=Z,14nm,0.8s						
NRN	Naryn	70.64	317	eP	P	17 03 28.8	-0.2
	comp=Z,10nm,0.9s						
NRN	Naryn	70.64	317	eP	P	17 03 28.8	-0.2
NRN				pmax	pmax		
	comp=Z,11nm,0.9s						
KZA	Kyzart	71.42	317	P	P	17 03 34.8	+1.0
	SNR=22						
TKM2	Tokmak 2	71.54	318	P	P	17 03 34.5	+0.2
	SNR=16						
ZAA0	Zalesovo Array	71.80	331	eP	P	17 03 33.8	-1.6
	comp=Z,35nm,0.9s						
ZALV	Zalesovo Beam	71.80	331	iP	P	17 03 34.0	-1.3
ZALV				pmax	pmax		
	comp=Z,35nm,0.9s						
ZALV	Zalesovo Beam	71.80	331	P	P	17 03 34.1	-1.2
	comp=Z,35nm,0.9s,baz=119,slow=3.7,SNR=86						
ZAA1	Zalesovo Array	71.81	331	eP	P	17 03 34.1	-1.2
SFK	Sufi-Kurgan	71.82	315	P	P	17 03 36.0	-0.1
SFK				pmax	pmax		
	comp=Z,14nm,0.9s						
KBK	Karagaybulak	71.86	318	P	P	17 03 37.2	+1.0
	SNR=8.2						
UCH	Uchtor	71.98	317	P	P	17 03 38.2	+0.9
	SNR=31						
CHMS	Chumysh	72.13	318	P	P	17 03 38.7	+1.1
	SNR=6.4						
FRU	Bishkek	72.16	318	eP	P	17 03 37.0	-0.8
AAK	Ala-Archa	72.16	317	P	P	17 03 39.0	+1.1
	SNR=12						
AAK	Ala-Archa	72.16	317	eP	P	17 03 37.8	-0.2
	comp=Z,24nm,1.3s						
AAK	Ala-Archa	72.16	317⇓	iP	P	17 03 38.6	+0.6
AAK				pmax	pmax		
	comp=Z,22nm,1.3s						
AAK	Ala-Archa	72.16	317	P	P	17 03 37.2	-0.8
	SNR=8.6						
AAK	Ala-Archa	72.16	317	LR	LR	17 37 53.5	
	comp=Z,140nm,19.3s,baz=92,slow=38						
USP	Ospenovka	72.41	318	P	P	17 03 39.6	+0.3
	SNR=32						
AML	Almayashu	72.50	317	P	P	17 03 41.2	+0.9
	SNR=33						
EKS2	Erkin-Say	72.65	317	P	P	17 03 41.9	+1.0
	SNR=17						
ARSB	Arslanbob	72.68	316	eP	P	17 03 40.6	-0.5
	comp=Z,25nm,0.9s						
NVS	Novosibirsk	73.08	332⇓	iP	P	17 03 42.7	-0.2
NVS				eS	S	17 13 10.0	+1.3
NVS				pmax	pmax		
	comp=Z,50nm,1.1s						
NVS				pmax	pmax		
	comp=N,20nm,1.2s						
NVS				pmax	pmax		
	comp=E,31nm,1.2s						
NVS				smax	smax		
	comp=E,12nm,2.1s						
KURK	Kurchatov	73.25	326	eP	P	17 03 43.6	-0.4
	comp=E,62nm,1.1s						
KURK	Kurchatov	73.25	326c	iP	P	17 03 43.4	-0.6
KURK				pmax	pmax		
	comp=Z,74nm,1.3s						
KURK	Kurchatov	73.25	326	P	P	17 03 43.8	-0.3
	SNR=20						
KBL	Kabul	73.29	308	eP	P	17 03 43.9	-1.1
	comp=Z,14nm,1.1s						
KBL	Kabul	73.29	308	eP	P	17 03 43.9	-1.1
KBL				pmax	pmax		
	comp=Z,14nm,1.1s						
MNAS	Manas	73.45	317	P	P	17 03 45.8	+0.2
MNAS				pmax	pmax		
	comp=Z,19nm,1.0s						
BTK	Batken	73.75	314	eP	P	17 03 48.0	+0.7
	comp=Z,21nm,1.2s						
BTK	Batken	73.75	314	eP	P	17 03 48.1	+0.7
BTK				pmax	pmax		
	comp=Z,21nm,1.2s						
VNDA	Vanda	74.34	174	eP	P	17 03 50.9	+0.9
VNDA	Vanda	74.34	174	P	P	17 03 51.2	+1.2
	comp=Z,8.2nm,0.7s,baz=327,slow=8.2,SNR=8.8						
VNDA				LR	LR	17 33 46.4	
	comp=Z,526nm,20.4s,baz=354,slow=34						
PPT2	Papeete2	74.48	107	eLR	LR	17 26 49.3	
	comp=Z,478nm,23.0s						
PPT	Papeete	74.48	107	LR	LR	17 34 29.8	
	comp=Z,222nm,20.7s,baz=276,slow=34						
KK31	Karatay Array	75.04	317	eP	P	17 03 55.0	+0.3
KK31	Karatay Array	75.04	317	eP	P	17 03 55.0	+0.3
KKAR	Karatay Array	75.04	317	eP	P	17 03 55.0	+0.3
KKAR	Karatay Array	75.04	317	eP	P	17 03 55.0	+0.3
BILL	Bilibino	75.55	12⇑	eP	P	17 03 56.8	-0.3
BILL				e		17 04 06.4	
BILL				e		17 06 47.6	
BILL				eSS	SS	17 18 19.9	-7.5
BILL				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,175nm,19.0s						
OTUK	Ortayu	75.81	322	P	P	17 03 58.9	-0.1
OTUK				pmax	pmax		
	comp=Z,35nm,1.1s						
GAMB	Gambell	78.64	21	eP	P	17 04 14.1	-0.4
	comp=Z,11nm,1.2s						
BVA0	Borovoye Array	78.85	326	iP	P	17 04 15.4	-0.5
BVA0				pmax	pmax		
	comp=Z,68nm,1.3s						
BRVK	Borovoye	78.92	326	eP	P	17 04 15.3	-1.0
	comp=Z,78nm,1.3s						
BRVK	Borovoye	78.92	326c	iP	P	17 04 15.8	-0.5
BRVK				pmax	pmax		
	comp=Z,75nm,1.3s						
BRVK	Borovoye	78.92	326	P	P	17 04 16.1	-0.2
	SNR=25						
MAW	Mawson	79.22	202	eP	P	17 04 18.0	+0.4
MAW	Mawson	79.22	202	eP	P	17 04 18.0	+0.4
MAW	Mawson	79.22	202	LR	LR	17 36 31.3	
	comp=Z,672nm,21.1s,baz=60,slow=34						
MHTO	MHTO	79.83	292	P	P	17 04 21.7	-0.3
	SNR=9.5						
NRIK	Noril'sk	80.49	345	P	P	17 04 24.7	+0.3
	comp=Z,32nm,1.0s,baz=126,slow=5.9,SNR=28						
NRIK				LR	LR	17 39 51.8	
	comp=Z,225nm,21.8s,baz=124,slow=36						
ANM	Nome	81.40	22	eP	P	17 04 29.5	+0.1
	comp=Z,14nm,1.3s						
ANM	Nome	81.40	22	eP	P	17 04 29.5	+0.1
ANM				pmax	pmax		
	comp=Z,14nm,1.3s						
SOHO	SOHO	81.62	295	P	P	17 04 30.2	-1.2
GEYT	Alibeck	82.69	309	P	P	17 04 37.4	+0.6
	comp=Z,13nm,1.0s,baz=101,slow=3.0,SNR=18						
AB31	Akbulak array	83.89	320	iP	P	17 04 42.5	-0.2
AB31				pmax	pmax		
	comp=Z,11nm,0.8s						
ABKAR	Akbulak array	83.89	320	eP	P	17 04 41.4	-1.4
	comp=Z,21nm,1.0s						
TAOE	Nuku Hiva Isla	83.95	98	eLR	LR	17 31 29.5	
	comp=Z,374nm,23.1s						
RDOG	Red Dog Mine	83.97	19	eP	P	17 04 43.0	+0.3
	comp=Z,35nm,1.1s						
KDAK	Kodiak Island	84.35	31	LR	LR	17 37 36.1	
	comp=Z,308nm,21.1s,baz=267,slow=32						
AKTO	Aktyubinsk	85.38	321	P	P	17 04 50.1	-0.1
AKTO				pmax	pmax		
	comp=Z,32nm,1.4s						
SVE	Sverdlovsk	85.41	328	eP	P	17 04 51.2	+1.0
SVE				pmax	pmax		
	comp=Z,33nm,1.4s						
QSPA	South Pole Qui	85.47	180	eP	P	17 04 50.9	+0.3
	comp=Z,56nm,1.5s						
CAST	Castle Rocks	86.30	25	eP	P	17 04 53.4	-1.1
	comp=Z,14nm,1.2s						
ARU	Arti	86.42	327	eP	P	17 04 53.5	-1.7
	comp=Z,29nm,1.1s						
ARU	Arti	86.42	327	deP	P	17 04 54.1	-1.1
ARU				pmax	pmax		
	comp=Z,33nm,1.3s						
IM3	Indian Mountai	86.43	23	eP	P	17 04 53.8	-1.3
BPAW	Bear Paw Mtn.	86.96	25	eP	P	17 04 57.6	-0.2
	comp=Z,48nm,2.0s						
MLY	Manley	87.33	24	eP	P	17 04 59.1	-0.5
	comp=Z,11nm,1.1s						
KNK	Knik Glacier	87.37	28	eP	P	17 04 59.6	-0.2
	comp=Z,56nm,1.3s						
SML	Sawmill	87.52	28	eP	P	17 05 00.5	-0.1
	comp=Z,49nm,1.2s						
BWN	Browne	87.62	25	eP	P	17 05 02.2	+1.3
	comp=Z,51nm,1.2s						
RND	Reindeer	87.69	26	eP	P	17 04 59.9	-1.5
	comp=Z,57nm,1.1s						
RND	Reindeer	87.69	26	eP	P	17 04 59.9	-1.5
RND				pmax	pmax		
	comp=Z,57nm,1.1s						
MCK	McKinley	87.74	26	eP	P	17 05 00.8	-0.7
	comp=Z,50nm,1.2s						
MCK	McKinley	87.74	26	eP	P	17 05 00.8	-0.7
MCK				pmax	pmax		
	comp=Z,51nm,1.2s						
SYO	Syowa Base	87.89	201⇑	esP	sP	17 05 20.4	+7.3
SCM	Sheep Creek Mo	87.99	28	eP	P	17 05 02.9	0.0
	comp=Z,66nm,1.2s						
SCM	Sheep Creek Mo	87.99	28	eP	P	17 05 02.9	0.0
SCM				pmax	pmax		
	comp=Z,66nm,1.2s						
COLD	Coldfoot	88.16	22	eP	P	17 05 04.4	+1.0
	comp=Z,6.6nm,1.1s						
DHY	Denali Highway	88.26	26	eP	P	17 05 04.0	-0.2
	comp=Z,42nm,1.1s						
WRH	Wood River Hil	88.28	25	eP	P	17 05 03.0	-1.1
	comp=Z,31nm,1.2s						
MDM	Murphy Dome	88.34	24	eP	P	17 05 03.7	-0.7
	comp=Z,43nm,2.0s						
TCOL	CIGO, UAF Yank	88.47	25	P	P	17 05 05.0	+0.1
	baz=256						
COLA	College	88.48	25⇑	eP	P	17 05 05.3	+0.4
COLA				pmax	pmax		
	comp=Z,18nm,1.3s						
DIV	Divide	88.57	28	eP	P	17 05 05.8	+0.3
	comp=Z,61nm,1.2s						
POKR	Poker Plat Res	88.71	24	P	P	17 05 06.5	+0.4
	baz=257						
HDA	Harding Lake	88.75	25	eP	P	17 05 05.9	-0.4
	comp=Z,12nm,1.0s						
HDA	Harding Lake	88.75	25	P	P	17 05 06.2	-0.1
	baz=257						
TOLK	Toolik Lake Re	88.77	21	eP	P	17 05 06.2	-0.1
	comp=Z,9.9nm,1.1s						
TOLK	Toolik Lake Re	88.77	21	P	P	17 05 06.5	+0.2
	baz=255						
ILAR	Eielson Array	88.85	25	P	P	17 05 05.6	-1.2
	comp=Z,6.1nm,0.9s,baz=261,slow=4.8,SNR=31						
ILAR				LR	LR	17 39 51.1	
	comp=Z,154nm,20.6s,baz=277,slow=32						

MENT	**Mentasta**	**89.86**	**27**	*e*P	**P**	**17 05 12.6**	**+1.0**
	comp=Z,12nm,1.1s						
FYU	**Fort Yukon**	**89.91**	**23**	*e*P	**P**	**17 05 12.4**	**+0.8**
	comp=Z,64nm,1.8s						
EGAK	**Eagle**	**91.27**	**25**	*e*P	**P**	**17 05 18.7**	**+0.7**
	comp=Z,16nm,1.5s						
RAYN	**Ar Rayn**	**91.58**	**293**	*e*P	**P**	**17 05 20.1**	**-0.4**
	comp=Z,11nm,1.1s						
RAYN	**Ar Rayn**	**91.58**	**293**	*e*P	**P**	**17 05 20.1**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,11nm,1.1s						
DAWY	**Dawson**	**91.94**	**26**	*e*P	**P**	**17 05 21.2**	**-0.1**
	comp=Z,6.6nm,1.0s						
EPYK	**Eagle Plains**	**93.27**	**24**	P	**P**	**17 05 27.4**	**+0.1**
	baz=266						
GNI	**Garni**	**93.29**	**310**⇓	*e*P	**P**	**17 05 28.2**	**0.0**
GNI				pmax	pmax		
	comp=Z,21nm,1.6s						
PRGR	**Permogore**	**93.76**	**331**	*e*P	**P**	**17 05 27.0**	**-2.5**
PRGR				*e**PP	**pP**	**17 05 34.3**	**-3.3**
PRGR				*e*		17 09 13.2	
PRGR				pmax	pmax		
	comp=Z,16nm,0.8s						
ZEI	**Tsey**	**94.05**	**312**	*e*P	**P**	**17 05 29.3**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
INK	**Inuvik**	**94.58**	**22**	*e*P	**P**	**17 05 31.1**	**-2.0**
	comp=Z,11nm,1.3s						
INK	**Inuvik**	**94.58**	**22**	P	**P**	**17 05 32.6**	**-0.6**
	comp=Z,4.0nm,1.0s,baz=272,slow=6.9,SNR=7.0						
KIV	**Kislovodsk**	**94.97**	**314**	*e*P	**P**	**17 05 36.2**	**+0.5**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VRH	**Novokhopyorsk**	**95.72**	**321**	*e*P	**P**	**17 05 35.9**	**-2.9**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLMR	**Klimovskoe**	**96.72**	**331**	*e*P	**P**	**17 05 40.9**	**-2.1**
KLMR				*e*		17 09 35.8	
KLMR				pmax	pmax		
	comp=Z,34nm,1.5s						
KLMR	**Klimovskoe**	**96.72**	**331**	*e*P	**P**	**17 05 41.0**	**-2.1**
KLMR				AMP		17 05 44.3	
	comp=Z,34nm,1.4s						
KLMR				*e*PP	**PP**	**17 09 35.9**	**-2.0**
TMCR	**Tamitsa**	**97.19**	**334**	*e*P	**P**	**17 05 44.0**	**-1.1**
TMCR				pmax	pmax		
	comp=Z,12nm,0.8s						
VSR	**Storozhevoye**	**97.32**	**321**⇓	*e*P	**P**	**17 05 43.5**	**-2.6**
VSR				pmax	pmax		
	comp=Z,17nm,1.1s						
LPSR	**Galich'ya Gora**	**97.42**	**322**	*e*P	**P**	**17 05 44.1**	**-2.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LVZ	**Lovozero**	**98.14**	**338***d*	*i*P	**P**	**17 05 47.0**	**-2.5**
LVZ				pmax	pmax		
	comp=Z,39nm,1.4s						
OBN	**Obninsk**	**98.66**	**325**⇓	*e*P	**P**	**17 05 52.0**	**+0.1**
OBN				*e*		17 09 54.8	
OBN				*e*SS	SS	17 23 58.8	-6.6
OBN				pmax	pmax		
	comp=Z,37nm,1.9s						
OBN				MLR	MLR		
	comp=Z,124nm,16.0s						
APA	**Apatity**	**98.66**	**338**⇓	*i*P	**P**	**17 05 48.5**	**-3.2**
APA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
APA				MLR	MLR		
	comp=Z,500nm,16.0s						
I02D	**Swisshome**	**100.90**	**46**	P	**Pdif**	**17 06 02.6**	**+0.4**
	baz=274						
ARA0	**ARCESS Array S**	**101.04**	**340**	*e*Pdif	**Pdif**	**17 06 02.6**	**+0.3**
ARCES	**ARCESS Array B**	**101.04**	**340**	P	**Pdif**	**17 06 02.6**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=93,slow=5.7,SNR=6.1						
G03D	**McMinnville, O**	**101.23**	**45**	P	**Pdif**	**17 06 03.7**	**0.0**
	baz=275						
E04D	**Cinebar**	**101.58**	**44**	P	**Pdif**	**17 06 04.9**	**-0.3**
	baz=276						
M04C	**Macdoel**	**102.56**	**48**	P	**Pdif**	**17 06 09.4**	**-0.5**
	baz=275						
FIA0	**FINESS Array S**	**103.06**	**332**	*e*Pdif	**Pdif**	**17 06 11.2**	**-0.2**
FINES	**FINESS Array B**	**103.06**	**332**	P	**Pdif**	**17 06 11.2**	**-0.2**
	comp=Z,4.3nm,0.9s,baz=333,slow=2.1,SNR=6.4						
YKA	**Yellowknife Ar**	**103.17**	**27**	Pdiff	**Pdif**	**17 06 10.9**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=293,slow=4.8,SNR=4.8						
NVAR	**Mina Array Bea**	**105.61**	**51**	Pdiff	**Pdif**	**17 06 26.4**	**+2.7**
	comp=Z,1.8nm,1.0s,baz=252,slow=6.1,SNR=6.4						
BW06	**Boulder Array**	**111.38**	**46**	P	**PKiKP**	**17 10 46.9**	**-0.6**
	baz=284						
O20A	**White River Ci**	**112.98**	**48**	P	**PKiKP**	**17 10 51.1**	**+0.5**
	baz=284						
S22A	**4UR Ranch, Cre**	**114.63**	**50**	P	**PKiKP**	**17 10 54.4**	**+0.4**
	baz=284						
RSSD	**Black Hills**	**114.84**	**43**	P	**PKiKP**	**17 10 54.0**	**-0.1**
	baz=289						
121A	**Cookes Peak, D**	**115.01**	**56**	P	PKPdf	17 10 55.2	+0.4
	baz=281						
ISCO	**Idaho Springs**	**115.02**	**48**	P	PKPdf	17 10 55.0	+0.3
	baz=286						
ANMO	**Albuquerque**	**115.58**	**53**	*e*PKPdf	**PKiKP**	**17 10 55.8**	**0.0**
ANMO	**Albuquerque**	**115.58**	**53**	*e*PKIKP	**PKiKP**	**17 10 55.8**	**0.0**
ANMO	**Albuquerque**	**115.58**	**53**	P	**PKPdf**	**17 10 56.6**	**+0.8**
	baz=283						
Q24A	**Divide**	**115.59**	**49**	P	**PKPdf**	**17 10 57.2**	**+1.3**
	baz=286						
SDCO	**Great Sand Dun**	**115.65**	**50**	*e*PKPdf	**PKiKP**	**17 10 56.1**	**+0.1**
SDCO	**Great Sand Dun**	**115.65**	**50**	P	**PKiKP**	**17 10 55.8**	**-0.2**
	baz=285						
T25A	**Trinidad**	**116.65**	**51**	P	**PKPdf**	**17 10 57.7**	**-0.1**
	baz=286						
MNTX	**Cornudas Mount**	**117.18**	**57**	*e*PKPdf	**PKiKP**	**17 10 59.3**	**+0.6**
MNTX	**Cornudas Mount**	**117.18**	**57**	P	**PKiKP**	**17 10 59.7**	**+0.9**
	baz=282						
ULM	**Lac du Bonnet**	**117.44**	**34**	PKP	**PKPdf**	**17 10 58.1**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=308,slow=2.7,SNR=5.8						
MSTX	**Muleshoe**	**118.78**	**54**	*e*PKPdf	**PKiKP**	**17 11 02.6**	**+0.7**
MSTX	**Muleshoe**	**118.78**	**54**	P	**PKiKP**	**17 11 02.8**	**+0.9**
	baz=285						
TX31	**Lajitas Ar. Si**	**119.12**	**59**	*e*PKPdf	**PKPdf**	**17 11 02.8**	**+0.1**
TX31				*e*PKPdf	**PKiKP**	**17 11 03.3**	**+0.6**
LTX	**Lajitas**	**119.12**	**59**	*e*PKPdf	**PKPdf**	**17 11 02.4**	**-0.2**
LTX	**Lajitas**	**119.12**	**59**	*e*PKIKP	**PKPdf**	**17 11 02.4**	**-0.2**
TXAR	**Lajitas Array**	**119.12**	**59**	PKP	**PKPdf**	**17 11 02.4**	**-0.2**
	comp=Z,2.9nm,1.0s,baz=300,slow=1.7,SNR=14						
AMTX	**Amarillo**	**119.40**	**52**	P	**PKPdf**	**17 11 03.0**	**0.0**
	baz=286						
CBKS	**Cedar Bluff**	**119.66**	**47**	P	**PKiKP**	**17 11 03.9**	**+0.5**
	baz=290						
BGNE	**Belgrade**	**119.85**	**44**	P	**PKiKP**	**17 11 04.2**	**+0.6**
	baz=293						
ECSD	**EROS Data Cent**	**119.95**	**41**	*e*PKPdf	**PKiKP**	**17 11 04.2**	**+0.4**
ECSD	**EROS Data Cent**	**119.95**	**41**	P	**PKPdf**	**17 11 03.6**	**-0.1**
	baz=295						
EYMN	**Ely**	**121.09**	**35**	P	**PKiKP**	**17 11 06.1**	**+0.2**
	baz=302						
F37A	**Hinrichs Farm,**	**121.56**	**38**	P	**PKPdf**	**17 11 06.8**	**+0.1**
	baz=300						
ABTX	**Abilene, Hawle**	**121.66**	**54**	P	**PKiKP**	**17 11 08.1**	**+0.6**
	baz=287						
WMOK	**Wichita Mounta**	**121.72**	**52**	*e*PKPdf	**PKiKP**	**17 11 07.9**	**+0.4**
WMOK	**Wichita Mounta**	**121.72**	**52**	*e*PKIKP	**PKiKP**	**17 11 07.9**	**+0.4**
WMOK	**Wichita Mounta**	**121.72**	**52**	P	**PKPdf**	**17 11 07.5**	**+0.1**
	baz=288						
E38A	**The Farm, Brul**	**121.76**	**36**	P	**PKiKP**	**17 11 07.4**	**+0.2**
	baz=301						
KSU1	**Kansas State U**	**121.83**	**46**	P	**PKiKP**	**17 11 08.1**	**+0.6**
	baz=293						
F38A	**Pierce - Schro**	**121.90**	**37**	P	**PKiKP**	**17 11 08.2**	**+0.7**
	baz=301						
JCT	**Junction City**	**122.11**	**57**	*e*PKPdf	**PKPdf**	**17 11 08.4**	**+0.1**
JCT	**Junction City**	**122.11**	**57**	*e*PKIKP	**PKPdf**	**17 11 08.4**	**+0.1**
JCT	**Junction City**	**122.11**	**57**	P	**PKiKP**	**17 11 08.8**	**+0.3**
	baz=285						
H38A	**Maiden Rock**	**122.29**	**39**	P	**PKPdf**	**17 11 08.2**	**0.0**
	baz=300						
G38A	**Ridgeland**	**122.31**	**38**	P	**PKPdf**	**17 11 08.2**	**0.0**
	baz=300						
E39A	**Mellen**	**122.47**	**36**	P	**PKPdf**	**17 11 08.5**	**0.0**
	baz=302						
F39A	**Loretta**	**122.49**	**37**	P	**PKPdf**	**17 11 08.4**	**-0.1**
	baz=302						
G39A	**Holcombe**	**122.67**	**37**	P	**PKPdf**	**17 11 08.8**	**-0.1**
	baz=301						
E40A	**Wakefield**	**122.81**	**36**	P	**PKPdf**	**17 11 08.7**	**-0.4**
	baz=303						
H39A	**Augusta**	**122.91**	**38**	P	**PKPdf**	**17 11 08.9**	**-0.5**
	baz=301						
F40A	**Park Falls**	**122.97**	**36**	P	**PKPdf**	**17 11 09.1**	**-0.3**
	baz=302						
I39A	**Houston**	**123.17**	**39**	*e*PKPdf	**PKPdf**	**17 11 09.0**	**-0.8**
I39A	**Houston**	**123.17**	**39**	P	**PKPdf**	**17 11 09.4**	**-0.5**
	baz=300						
G40A	**Rib Lake**	**123.26**	**37**	P	**PKPdf**	**17 11 10.2**	**+0.2**
	baz=302						
J39A	**Decorah**	**123.31**	**40**	P	**PKiKP**	**17 11 10.5**	**+0.1**
	baz=299						
H40A	**Chili**	**123.48**	**38**	P	**PKiKP**	**17 11 10.8**	**+0.1**
	baz=301						
TUL1	**Leonard**	**123.62**	**49**	*e*PKPdf	**PKPdf**	**17 11 10.6**	**-0.4**
TUL1	**Leonard**	**123.62**	**49**	P	**PKiKP**	**17 11 11.5**	**+0.2**
	baz=292						
F41A	**Three Lakes**	**123.66**	**36**	P	**PKiKP**	**17 11 11.4**	**+0.4**
	baz=303						
L39A	**Vinton**	**123.70**	**41**	P	**PKiKP**	**17 11 11.2**	**0.0**
	baz=298						
I40A	**Norwalk**	**123.72**	**39**	P	**PKiKP**	**17 11 11.2**	**0.0**
	baz=301						
J40A	**Soldiers Grove**	**123.89**	**39**	P	**PKPdf**	**17 11 11.0**	**-0.3**
	baz=300						
M39A	**Webster**	**123.89**	**42**	P	**PKPdf**	**17 11 11.2**	**-0.1**
	baz=298						
H41A	**Junction City**	**123.94**	**37**	P	**PKPdf**	**17 11 11.5**	**+0.2**
	baz=302						
E42A	**Champion**	**123.96**	**35**	P	**PKPdf**	**17 11 11.1**	**-0.2**
	baz=305						
K40A	**Colesburg**	**123.98**	**40**	P	**PKPdf**	**17 11 11.4**	**-0.1**
	baz=300						
I41A	**Arkdale**	**124.10**	**38**	P	**PKPdf**	**17 11 11.5**	**-0.1**
	baz=302						
L40A	**Anamosa**	**124.24**	**41**	P	**PKPdf**	**17 11 11.9**	**-0.1**
	baz=299						
G42A	**Mountain**	**124.33**	**36**	P	**PKPdf**	**17 11 11.9**	**-0.1**
	baz=304						
J41A	**Loganville**	**124.36**	**39**	P	**PKPdf**	**17 11 12.0**	**-0.2**
	baz=301						
JFWS	**Jewell Farm**	**124.45**	**39**	P	**PKPdf**	**17 11 12.5**	**+0.2**
	baz=300						
E43A	**Lone Tree Farm**	**124.52**	**34**	P	**PKPdf**	**17 11 12.6**	**+0.2**
	baz=306						
L41A	**Preston**	**124.71**	**40**	P	**PKPdf**	**17 11 12.3**	**-0.5**
	baz=300						
F43A	**Flat Rock, Esc**	**124.73**	**35**	P	**PKiKP**	**17 11 13.1**	**0.0**
	baz=305						
F44A	**Big Bay de Noc**	**125.07**	**35**	P	**PKiKP**	**17 11 14.1**	**+0.3**
	baz=306						
N41A	**Harden Midland**	**125.13**	**42**	*e*PKPdf	**PKPdf**	**17 11 13.2**	**-0.5**
L42A	**Oliver, Polo**	**125.28**	**40**	P	**PKPdf**	**17 11 13.9**	**-0.1**
	baz=300						
J43A	**Natural Harves**	**125.35**	**38**	P	**PKPdf**	**17 11 14.1**	**0.0**
	baz=303						
O41A	**Passleys Farm,**	**125.39**	**43**	P	**PKiKP**	**17 11 14.7**	**+0.1**
	baz=298,SNR=8.8						
W39A	**Magazine**	**125.41**	**49**	*e*PKPdf	**PKiKP**	**17 11 15.0**	**+0.2**
W39A	**Magazine**	**125.41**	**49**	P	**PKPdf**	**17 11 14.4**	**0.0**
	baz=293						
P41A	**Barry, Barry**	**125.48**	**43**	P	**PKiKP**	**17 11 14.9**	**+0.2**
	baz=298						
M42A	**Sheffield**	**125.49**	**41**	P	**PKPdf**	**17 11 14.6**	**+0.2**
	baz=300						
E45A	**Wooded Hills,**	**125.54**	**34**	P	**PKiKP**	**17 11 15.1**	**+0.4**
	baz=308						
N42A	**Yates City**	**125.62**	**42**	P	**PKiKP**	**17 11 15.3**	**+0.3**
	baz=300						
U40A	**Yellville**	**125.64**	**48**	P	**PKPdf**	**17 11 14.9**	**+0.1**
	baz=294						
Q41A	**Truxton**	**125.69**	**44**	P	**PKiKP**	**17 11 15.2**	**0.0**
	baz=297,SNR=8.5						
K43A	**Burlington**	**125.76**	**39**	P	**PKPdf**	**17 11 14.2**	**-0.7**
	baz=302						
L43A	**Garden Prairie**	**125.78**	**40**	P	**PKPdf**	**17 11 15.1**	**+0.2**
	baz=302						
MIAR	**Mount Ida**	**125.81**	**50**	*e*PKPdf	**PKiKP**	**17 11 16.1**	**+0.6**
MIAR	**Mount Ida**	**125.81**	**50**	P	**PKiKP**	**17 11 16.3**	**+0.7**
	baz=292						
D46A	**Sault St. Mari**	**125.83**	**32**	P	**PKiKP**	**17 11 15.5**	**+0.3**
	baz=309						
R41A	**Rosebud**	**125.88**	**45**	P	**PKPdf**	**17 11 15.1**	**-0.1**
	baz=297,SNR=16						
S41A	**Jillco Farms,**	**125.93**	**46**	P	**PKPdf**	**17 11 15.3**	**-0.1**
	baz=296						
P42A	**Winchester**	**126.01**	**43**	*e*PKPdf	**PKPdf**	**17 11 15.3**	**-0.1**
P42A	**Winchester**	**126.01**	**43**	P	**PKPdf**	**17 11 15.1**	**-0.3**
	baz=298,SNR=6.9						
E46A	**Sault Ste Mari**	**126.01**	**33**	P	**PKiKP**	**17 11 15.6**	**0.0**
	baz=308						
CCM	**Cathedral Cave**	**126.09**	**45**	*e*PKPdf	**PKPdf**	**17 11 14.9**	**-0.7**
CCM	**Cathedral Cave**	**126.09**	**45**	*e*PKIKP	**PKPdf**	**17 11 14.9**	**-0.7**
CCM	**Cathedral Cave**	**126.09**	**45**	P	**PKPdf**	**17 11 15.9**	**+0.3**
	baz=297						
N43A	**Stutzman Famil**	**126.13**	**41**	P	**PKiKP**	**17 11 16.1**	**0.0**
	baz=300						
T41A	**Mountain View**	**126.16**	**47**	P	**PKPdf**	**17 11 16.1**	**+0.3**
	baz=296,SNR=6.2						
Q42A	**Golden Eagle**	**126.19**	**44**	P	**PKPdf**	**17 11 15.8**	**+0.1**
	baz=298						
HDIL	**Hopedale**	**126.25**	**42**	P	**PKPdf**	**17 11 16.2**	**+0.3**
	baz=300						
R42A	**Luebbering**	**126.30**	**45**	P	**PKPdf**	**17 11 16.1**	**0.0**
	baz=297,SNR=5.3						
L44A	**Lake County Fo**	**126.30**	**39**	P	**PKPdf**	**17 11 15.9**	**0.0**
	baz=302						
U41A	**Viola**	**126.34**	**47**	P	**PKPdf**	**17 11 16.1**	**0.0**
	baz=295						
G46A	**Petoskey**	**126.34**	**34**	P	**PKiKP**	**17 11 16.3**	**0.0**
	baz=307						
V41A	**Mountainview**	**126.39**	**48**	P	**PKiKP**	**17 11 16.7**	**0.0**
	baz=294						
E47A	**Iron Bridge**	**126.51**	**32**	P	**PKiKP**	**17 11 16.8**	**+0.2**
	baz=310						
S42A	**Caledonia**	**126.53**	**45**	P	**PKiKP**	**17 11 17.0**	**0.0**
	baz=297						
P43A	**Skaggs, Pawnee**	**126.54**	**43**	P	**PKiKP**	**17 11 16.9**	**+0.1**
	baz=299						
W41B	**Gary Mavity, V**	**126.57**	**49**	P	**PKiKP**	**17 11 17.3**	**+0.2**
	baz=294						
M44A	**Midewin, Midew**	**126.64**	**40**	P	**PKiKP**	**17 11 17.2**	**+0.2**
	baz=302						
X41A	**Kaden, Bauxite**	**126.64**	**50**	P	**PKiKP**	**17 11 17.5**	**+0.3**
	baz=293						
T42A	**Van Buren**	**126.64**	**46**	*e*PKPdf	**PKPdf**	**17 11 17.1**	**+0.3**
T42A	**Van Buren**	**126.64**	**46**	P	**PKPdf**	**17 11 16.9**	**+0.2**
	baz=296,SNR=9.3						
FVM	**French Village**	**126.69**	**45**	*e*PKPdf	**PKPdf**	**17 11 17.1**	**+0.4**
FVM	**French Village**	**126.69**	**45**	*e*PKIKP	**PKPdf**	**17 11 17.2**	**+0.4**
SCHQ	**Schefferville**	**126.70**	**16**	*e*PKPdf	**PKiKP**	**17 11 16.8**	**0.0**
SCHQ	**Schefferville**	**126.70**	**16**	PKP	**PKiKP**	**17 11 17.5**	**+0.7**
	comp=Z,7.4nm,0.9s,baz=44,slow=3.4,SNR=7.1						
Q43A	**New Douglas**	**126.76**	**43**	P	**PKiKP**	**17 11 17.5**	**+0.1**
	baz=299						
U42A	**Revenden**	**126.83**	**47**	P	**PKiKP**	**17 11 17.5**	**0.0**
	baz=296						
R43A	**Red Bud**	**126.91**	**44**	P	**PKiKP**	**17 11 18.0**	**+0.3**
	baz=298						
V42A	**Cord**	**126.95**	**48**	P	**PKPdf**	**17 11 17.2**	**-0.1**
	baz=295,SNR=5.6						
G47A	**Hillman**	**127.00**	**34**	P	**PKiKP**	**17 11 17.7**	**+0.1**
	baz=308						
MATQ	**Matagami**	**127.00**	**26**	P	**PKPdf**	**17 11 17.1**	**+0.2**
	baz=317,SNR=5.7						
S43A	**Fulton Ridge,**	**127.13**	**45**	P	**PKiKP**	**17 11 18.1**	**-0.1**
	baz=297						
T43A	**Greenville**	**127.20**	**46**	P	**PKiKP**	**17 11 18.2**	**-0.1**
	baz=297						
P44A	**Sand Creek, Wi**	**127.23**	**42**	P	**PKiKP**	**17 11 18.3**	**0.0**
	baz=300						
PBMO	**Poplar Bluff**	**127.23**	**46**	*e*PKPdf	**PKPdf**	**17 11 16.8**	**-1.0**
F48A	**Evansville**	**127.26**	**33**	P	**PKiKP**	**17 11 18.2**	**+0.1**
	baz=310						
I48A	**Sherman Twp**	**127.69**	**35**	P	**PKPdf**	**17 11 18.8**	**+0.4**
	baz=308						
M46A	**Old House Fiel**	**127.70**	**39**	P	**PKPdf**	**17 11 18.8**	**+0.2**
	baz=303						
SFIN	**Lafayette**	**127.78**	**41**	P	**PKiKP**	**17 11 19.3**	**-0.1**
	baz=302						
P45A	**Graceland, Par**	**127.79**	**42**	P	**PKiKP**	**17 11 19.4**	**0.0**
	baz=301						
LSQQ	**Lebel-sur-Quev**	**127.81**	**26**	P	**PKiKP**	**17 11 19.1**	**0.0**
	baz=318						
D50A	**G1974 Best Tow**	**127.81**	**30**	P	**PKiKP**	**17 11 19.3**	**0.0**
	baz=314						
K47A	**Vermontville**	**127.83**	**37**	P	**PKiKP**	**17 11 19.8**	**+0.4**
	baz=306						
Q45A	**Warren Harvey,**	**127.83**	**43**	P	**PKiKP**	**17 11 20.2**	**+0.7**
	baz=300						
E50A	**Wahnapitae**	**127.86**	**31**	P	**PKiKP**	**17 11 19.8**	**+0.5**
	baz=312						
OLIL	**Olney**	**127.95**	**43**	*e*PKPdf	**PKPdf**	**17 11 19.3**	**+0.1**
R45A	**Skylar, Fairfi**	**128.04**	**44**	P	**PKiKP**	**17 11 19.8**	**-0.1**
	baz=299						
D51A	**Lot 18 Range I**	**128.10**	**30**	P	**PKiKP**	**17 11 19.9**	**+0.1**
	baz=314						
L47A	**Sherwood**	**128.10**	**38**	P	**PKiKP**	**17 11 20.0**	**0.0**
	baz=305						
J48A	**Bridge Port**	**128.18**	**36**	P	**PKiKP**	**17 11 20.3**	**+0.2**
	baz=307						
CHGQ	**Chibougamau**	**128.26**	**24**	P	**PKPdf**	**17 11 19.6**	**+0.1**
	baz=321,SNR=7.3						
VLDQ	**Val d'Or**	**128.28**	**28**	*e*PKPdf	**PKPdf**	**17 11 18.8**	**-0.7**
I49A	**Point Hope**	**128.34**	**35**	P	**PKiKP**	**17 11 20.6**	**+0.3**
	baz=308						
E51A	**G1948 Merrick**	**128.42**	**30**	P	**PKiKP**	**17 11 20.9**	**+0.4**
	baz=314						
O47A	**Sheridan**	**128.45**	**40**	P	**PKPdf**	**17 11 20.3**	**+0.2**
	baz=303						
J49A	**Marlette**	**128.51**	**35**	P	**PKPdf**	**17 11 19.9**	**-0.1**
	baz=308						
L48A	**N Adams**	**128.59**	**38**	P	**PKiKP**	**17 11 21.0**	**+0.1**
	baz=306						
F51A	**Arnstein**	**128.62**	**31**	P	**PKiKP**	**17 11 20.7**	**-0.2**
	baz=313						
P47A	**Martinsville**	**128.79**	**41**	P	**PKPdf**	**17 11 20.7**	**0.0**
	baz=302						
W45A	**Hickory Valley**	**128.85**	**48**	P	**PKiKP**	**17 11 21.9**	**+0.3**
	baz=296						
L49A	**Milan**	**128.89**	**37**	P	**PKiKP**	**17 11 21.7**	**+0.2**
	baz=306						
D53A	**Lac Vacive, Po**	**128.91**	**29**	P	**PKiKP**	**17 11 21.4**	**0.0**
	baz=316						
T46A	**Princeton**	**128.91**	**45**	P	**PKiKP**	**17 11 21.8**	**+0.1**
	baz=299						
OXF	**Oxford**	**128.97**	**48**	P	**PKPdf**	**17 11 21.4**	**+0.2**
	baz=296						
Q47A	**Bedord North L**	**128.97**	**42**	P	**PKiKP**	**17 11 22.0**	**+0.2**
	baz=302						
E52A	**Mattawa**	**129.01**	**30**	P	**PKPdf**	**17 11 21.1**	**+0.1**
	baz=314						
F52A	**Sundridge**	**129.01**	**31**	P	**PKPdf**	**17 11 21.2**	**+0.2**
	baz=313						
O48A	**Farmland**	**129.09**	**40**	P	**PKPdf**	**17 11 21.5**	**+0.2**
	baz=304						
M49A	**Liberty Center**	**129.14**	**38**	P	**PKiKP**	**17 11 22.2**	**+0.1**
	baz=306						
ES19	**SONSECA Array**	**129.18**	**319**	*e*PKPdf	**PKPdf**	**17 11 21.1**	**-0.5**
R47A	**Wooly Knot Far**	**129.24**	**43**	P	**PKiKP**	**17 11 22.4**	**+0.1**
	baz=301						
N49A	**Columbus Grove**	**129.33**	**39**	*e*PKPdf	**PKPdf**	**17 11 20.9**	**-0.8**
N49A	**Columbus Grove**	**129.33**	**39**	P	**PKiKP**	**17 11 22.4**	**0.0**
	baz=305						
V46A	**Holladay**	**129.34**	**46**	P	**PKPdf**	**17 11 22.3**	**+0.4**
	baz=298						
S47A	**Hartford**	**129.35**	**44**	P	**PKPdf**	**17 11 22.0**	**+0.2**
	baz=300						
P48A	**Milroy**	**129.35**	**41**	P	**PKiKP**	**17 11 22.5**	**-0.1**
	baz=303						
D54A	**Lac Fusel, La**	**129.35**	**28**	P	**PKiKP**	**17 11 22.2**	**-0.2**
	baz=317						
WVT	**Waverly**	**129.39**	**46**	P	**PKiKP**	**17 11 22.8**	**+0.1**
	baz=298						
WCI	**Wyandotte Cave**	**129.43**	**43**	P	**PKiKP**	**17 11 22.9**	**+0.1**
	baz=301						
E53A	**Dumoine, Ponti**	**129.43**	**29**	P	**PKiKP**	**17 11 22.5**	**+0.1**
	baz=316						
Q48A	**North Vernon**	**129.44**	**42**	P	**PKiKP**	**17 11 22.9**	**+0.2**
	baz=302						
L50A	**Kingsville**	**129.51**	**37**	P	**PKiKP**	**17 11 23.0**	**+0.2**
	baz=307						
ALGO	**Algonquin Park**	**129.54**	**30**	P	**PKiKP**	**17 11 22.9**	**+0.2**
	baz=315						
E54A	**Lac Daplat, Po**	**129.62**	**29**	P	**PKiKP**	**17 11 22.9**	**0.0**
	baz=316						
U47A	**Clarksville**	**129.63**	**45**	P	**PKiKP**	**17 11 23.0**	**-0.1**
	baz=299						
O49A	**Covington**	**129.65**	**39**	P	**PKiKP**	**17 11 23.0**	**-0.1**
	baz=304						
M50A	**Fremont**	**129.75**	**37**	P	**PKiKP**	**17 11 23.4**	**+0.2**
	baz=307						
V47A	**Nunnelly**	**129.76**	**46**	P	**PKiKP**	**17 11 23.3**	**-0.2**
	baz=298						
P49A	**Miami Univ. Ec**	**129.77**	**40**	P	**PKiKP**	**17 11 23.3**	**-0.1**
	baz=304						
G53A	**Haliburton**	**129.83**	**31**	P	**PKPdf**	**17 11 22.7**	**+0.2**
	baz=314						
S48A	**Wiedeman Farm,**	**129.88**	**43**	P	**PKiKP**	**17 11 23.7**	**+0.1**
	baz=301						
T48A	**Bowling Green**	**129.93**	**44**	P	**PKiKP**	**17 11 24.0**	**+0.3**
	baz=300						
Q49A	**Aurora**	**129.94**	**41**	P	**PKiKP**	**17 11 24.0**	**+0.3**
	baz=303						
W47A	**Westpoint**	**129.97**	**47**	P	**PKPdf**	**17 11 23.1**	**0.0**
	baz=298						
N50A	**Nevada**	**130.06**	**38**	P	**PKiKP**	**17 11 23.7**	**-0.2**
	baz=306						
X47A	**Russelville**	**130.12**	**48**	P	**PKiKP**	**17 11 24.3**	**+0.1**
	baz=297						
U48A	**Cassie Pea, Po**	**130.12**	**45**	P	**PKiKP**	**17 11 24.4**	**+0.2**
	baz=300						
O50A	**Cable**	**130.13**	**39**	P	**PKiKP**	**17 11 24.4**	**+0.3**
	baz=305						
PEMO	**Pembroke**	**130.14**	**30**	P	**PKiKP**	**17 11 23.9**	**0.0**
	baz=316						
R49A	**Shelbyville**	**130.15**	**42**	P	**PKiKP**	**17 11 24.3**	**+0.2**
	baz=302						
BANO	**Bancroft**	**130.26**	**31**	P	**PKiKP**	**17 11 24.7**	**+0.5**
	baz=314						
V48A	**Smith Brothers**	**130.30**	**46**	*e*PKPdf	**PKPdf**	**17 11 23.2**	**-0.5**
V48A	**Smith Brothers**	**130.30**	**46**	P	**PKiKP**	**17 11 24.5**	**0.0**
	baz=299						
P50A	**Jamestown**	**130.32**	**40**	P	**PKiKP**	**17 11 24.6**	**+0.1**
	baz=305						
S49A	**Springfield**	**130.34**	**43**	P	**PKiKP**	**17 11 24.9**	**+0.3**
	baz=302						
W48A	**Pulaski**	**130.50**	**46**	P	**PKiKP**	**17 11 24.9**	**-0.1**
	baz=298						
T49A	**Edmonton**	**130.52**	**43**	*e*PKPdf	**PKiKP**	**17 11 24.7**	**-0.3**
T49A	**Edmonton**	**130.52**	**43**	P	**PKiKP**	**17 11 24.9**	**0.0**
	baz=301						
TYNO	**Tyneside**	**130.53**	**34**	P	**PKiKP**	**17 11 24.9**	**+0.1**
	baz=311						
DRWO	**Darlington Wes**	**130.63**	**32**	P	**PKiKP**	**17 11 25.0**	**+0.1**
	baz=313						
U49A	**Red Boiling Sp**	**130.65**	**44**	P	**PKiKP**	**17 11 25.4**	**+0.2**
	baz=300						
M52A	**Chesterland**	**130.67**	**36**	P	**PKiKP**	**17 11 25.3**	**+0.1**
	baz=308						
PLVO	**Plevna**	**130.68**	**30**	P	**PKiKP**	**17 11 25.1**	**+0.1**
	baz=315						
G55A	**Calabogie**	**130.70**	**30**	P	**PKiKP**	**17 11 25.3**	**+0.2**
	baz=316						
X48A	**Hartselle**	**130.74**	**47**	*e*PKPdf	**PKPdf**	**17 11 23.8**	**-0.8**
X48A	**Hartselle**	**130.74**	**47**	P	**PKPdf**	**17 11 24.9**	**+0.3**
	baz=298						
DELO	**Deloro Mine**	**130.77**	**31**	P	**PKiKP**	**17 11 25.5**	**+0.3**
	baz=314						
WLVO	**Wesleyville**	**130.77**	**32**	P	**PKiKP**	**17 11 25.5**	**+0.3**
	baz=313						
P51A	**Williamsport**	**130.86**	**39**	P	**PKiKP**	**17 11 25.4**	**-0.1**
	baz=305						
Y48A	**Jasper**	**130.90**	**48**	P	**PKiKP**	**17 11 25.6**	**-0.2**
	baz=297						
LATQ	**La Tuque**	**130.90**	**25**	P	**PKiKP**	**17 11 25.4**	**0.0**
	baz=322						
N52A	**McGinn’s Farm,**	**130.92**	**37**	P	**PKiKP**	**17 11 25.9**	**+0.2**
	baz=308						
Q51A	**Peebles**	**130.94**	**40**	P	**PKPdf**	**17 11 24.9**	**0.0**
	baz=305						
I55A	**Frankford**	**130.95**	**31**	P	**PKiKP**	**17 11 25.5**	**-0.1**
	baz=314						
H55A	**Tweed**	**130.97**	**31**	P	**PKiKP**	**17 11 25.9**	**+0.3**
	baz=315						
S50A	**Richmond**	**130.99**	**42**	P	**PKPdf**	**17 11 25.3**	**+0.4**
	baz=303						
W49A	**Belvidere**	**131.00**	**46**	P	**PKiKP**	**17 11 25.7**	**-0.3**
	baz=299						
T50A	**Nancy**	**131.04**	**43**	P	**PKPdf**	**17 11 25.4**	**+0.3**
	baz=302						
M53A	**WI Miller and**	**131.14**	**36**	P	**PKPdf**	**17 11 25.7**	**+0.5**
	baz=309						
X49A	**Woodville**	**131.24**	**47**	P	**PKiKP**	**17 11 26.5**	**+0.1**
	baz=298						
ALFO	**Alfred**	**131.31**	**28**	P	**PKPdf**	**17 11 25.6**	**+0.3**
	baz=318						
U50A	**Jamestown**	**131.35**	**44**	P	**PKiKP**	**17 11 27.1**	**+0.4**
	baz=301						

P52A	Corning	131.35	39	P	PKiKP	17 11 26.7	+0.1
	baz=306						
LRAL	Lakeview Retre	131.42	49	ePKPdf	PKiKP	17 11 26.7	-0.2
LRAL	Lakeview Retre	131.42	49	P	PKiKP	17 11 27.2	+0.3
	baz=297						
N53A	Lisbon	131.44	37	P	PKiKP	17 11 26.6	-0.1
	baz=309						
J55A	Hilton	131.53	32	P	PKPdf	17 11 26.4	+0.6
	baz=314						
S51A	Beattyville	131.55	42	P	PKiKP	17 11 27.2	+0.2
	baz=304						
O53A	New Philadelph	131.55	37	P	PKPdf	17 11 26.2	+0.3
	baz=308						
V50A	Pikevile	131.55	45	P	PKiKP	17 11 27.2	+0.1
	baz=300						
W50A	Signal Mountai	131.64	46	P	PKiKP	17 11 27.4	+0.1
	baz=300						
Q52A	Bidwell	131.66	40	P	PKiKP	17 11 27.4	+0.2
	baz=306						
T51A	Gray	131.68	43	P	PKiKP	17 11 27.7	+0.3
	baz=303						
M54A	Oil Creek Stat	131.68	35	P	PKiKP	17 11 27.4	+0.2
	baz=310						
Z49A	Columbiana	131.70	49	P	PKiKP	17 11 27.4	0.0
	baz=297						
X50B	Fort Payne	131.75	47	P	PKPdf	17 11 27.1	+0.6
	baz=299						
K55A	Perry	131.76	33	P	PKiKP	17 11 27.3	0.0
	baz=313						
149A	Jones	131.77	49	P	PKiKP	17 11 27.4	-0.2
	baz=297						
R52A	Catlettsburg	131.78	40	P	PKPdf	17 11 27.0	+0.6
	baz=305						
N54A	Moraine State	131.84	36	P	PKPdf	17 11 26.9	+0.4
	baz=310						
P53A	Whipple	131.90	38	P	PKiKP	17 11 27.8	+0.1
	baz=307						
L55A	Hinsdale	131.93	34	P	PKPdf	17 11 27.1	+0.5
	baz=312						
W51A	Cleveland	132.05	45	P	PKiKP	17 11 28.1	0.0
	baz=300						
O54A	Avella	132.10	37	P	PKiKP	17 11 28.3	+0.2
	baz=309						
Z50A	Ashland	132.12	48	ePKPdf	PKPdf	17 11 27.9	+0.6
Z50A	Ashland	132.12	48	P	PKPdf	17 11 27.9	+0.6
	baz=298						
TZTN	Tazewell	132.17	43	P	PKPdf	17 11 27.6	+0.3
	baz=303						
LONY	Lake Ozonia	132.20	29	P	PKPdf	17 11 27.6	+0.5
	baz=318						
M55A	Ridgway	132.22	35	P	PKiKP	17 11 28.1	-0.1
	baz=311						
150A	Eclectic	132.35	49	P	PKiKP	17 11 28.8	+0.1
	baz=297						
U52A	Thorn Hill	132.38	43	P	PKiKP	17 11 29.1	+0.3
	baz=303						
P54A	Burton	132.39	38	P	PKiKP	17 11 28.7	0.0
	baz=308						
V52A	Sevierville	132.51	44	P	PKiKP	17 11 29.1	+0.1
	baz=302						
N55A	Marion Center	132.54	35	P	PKiKP	17 11 28.6	-0.3
	baz=311						
T53A	Wise	132.61	42	P	PKPdf	17 11 28.4	+0.2
	baz=304						
O55A	Ligonier	132.72	36	P	PKPdf	17 11 28.9	+0.7
	baz=310						
P55A	Reedsville	132.85	37	P	PKPdf	17 11 29.1	+0.6
	baz=309						
151A	Opelika	132.91	49	P	PKiKP	17 11 29.5	-0.4
	baz=298						
U53A	Fall Branch	132.93	43	P	PKiKP	17 11 29.6	-0.2
	baz=304						
R54A	Victor	132.93	40	P	PKPdf	17 11 29.4	+0.7
	baz=306						
O56A	Blue Knob Stat	133.11	36	P	PKPdf	17 11 29.7	+0.7
	baz=311						
V53A	Saluda	133.14	44	P	PKiKP	17 11 30.1	-0.3
	baz=303						
W53A	Cullowhee	133.16	44	P	PKiKP	17 11 30.2	-0.3
	baz=302						
SSPA	Standing Stone	133.26	35	P	PKiKP	17 11 30.1	-0.3
	baz=312						
Z52A	Williamson	133.27	47	P	PKiKP	17 11 30.4	-0.2
	baz=299						
R55A	Marlinton	133.42	39	P	PKiKP	17 11 30.5	-0.3
	baz=308						
LBNH	Lisbon	133.73	27	P	PKiKP	17 11 31.6	+0.4
	baz=321						
452A	Marianna	133.77	51	P	PKiKP	17 11 31.7	+0.1
	baz=297						
Z53A	Monticello	133.84	47	P	PKiKP	17 11 31.8	+0.1
	baz=300						
GOGA	Godfrey	133.85	47	P	PKiKP	17 11 31.9	+0.1
	baz=300						
BLA	Blacksburg	133.87	40	P	PKiKP	17 11 31.8	+0.1
	baz=306						
253A	Americus	134.02	49	P	PKiKP	17 11 32.1	-0.1
	baz=298						
Y54A	Tignall	134.18	46	P	PKiKP	17 11 32.0	-0.4
	baz=301						
N59A	State Game Lan	134.25	33	P	PKPdf	17 11 31.8	+0.7
	baz=314						
Z54A	Sparta	134.39	46	P	PKPdf	17 11 32.3	+0.8
	baz=301						
KMSC	Kings Mountain	134.44	43	P	PKiKP	17 11 33.0	+0.1
	baz=304						
X55A	Gracelyn & Ava	134.60	44	P	PKiKP	17 11 33.3	+0.1
	baz=303						
155A	Kite	134.97	47	P	PKiKP	17 11 33.6	-0.5
	baz=301						
R58B	Mineral	135.00	38	P	PKiKP	17 11 33.6	-0.4
	baz=310						
555A	McAlpin	135.81	50	P	PKPdf	17 11 34.7	+0.5
	baz=298						
GO02	Mina Guanaco	141.88	142	ePKPdf	PKPdf	17 11 44.0	-1.9
NNA	Nana	144.09	117	ePKPdf	PKPdf	17 11 49.6	-0.1
NNA	Nana	144.09	117	ePKIKP	PKPdf	17 11 49.6	-0.1
LVC	Limon Verde	144.15	140	ePKPdf	PKPdf	17 11 50.3	+0.2
LVC	Limon Verde	144.15	140	ePKIKP	PKPdf	17 11 50.3	+0.2
BCIP	Isla Barro Col	144.82	81	ePKPdf	PKPab	17 11 49.9	0.0
PB01	IPOC Station P	144.86	137	ePKPbc	PKPdf	17 11 51.0	0.0
PB11	IPOC Station P	145.61	135	ePKPdf	PKPdf	17 11 52.1	-0.2
TUMC	Tumaco	145.92	93	eP	PKPab	17 11 55.0	+0.9
TUMC	Tumaco	145.92	93	eP	PKPab	17 11 55.0	+0.9
OTAV	Otavalo	146.02	96	ePKPdf	PKPdf	17 11 52.5	-1.1
OTAV				ePKPbc	PKPab	17 11 55.5	+0.5
OTAV	Otavalo	146.02	96	ePKIKP	PKPdf	17 11 52.5	-1.1
OTAV				e		17 11 55.5	
MNMC	Minye Minye	146.06	135	ePKPdf	PKPab	17 11 55.9	+1.2
GRGC	Isla de Gorgon	146.57	91	eP	PKPab	17 11 56.3	-0.2
GRGC	Isla de Gorgon	146.57	91	eP	PKPab	17 11 56.3	-0.2
CMBC	Cumbal	146.73	95	eP	PKiKP	17 12 00.1	+0.9
CMBC	Cumbal	146.73	95	eP	PKiKP	17 12 00.1	+0.9
CPUP	Villa Florida	147.01	159	PKPbc	PKPab	17 11 57.4	-0.3
	comp=Z,41nm,1.1s,baz=222,slow=2.3,SNR=60						
GCUF	Volcan Galeras	147.24	95	eP	PKPab	17 11 59.6	-0.1
GCUF	Volcan Galeras	147.24	95	eP	PKPab	17 11 59.6	-0.1
CRUC	La Cruz	147.67	94	eP	PKPbc	17 11 59.0	-0.1
CRUC	La Cruz	147.67	94	eP	PKPbc	17 11 59.0	-0.1
YOTC	Yotoco, Valle	148.44	90	eP	PKPdf	17 11 58.3	+1.1
YOTC	Yotoco, Valle	148.44	90	eP	PKPdf	17 11 58.3	+1.1
PLMC	San Jos del P	148.52	88	eP	PKPbc	17 12 00.9	0.0
PLMC	San Jos del P	148.52	88	eP	PKPbc	17 12 00.9	0.0
LPAZ	La Paz	148.96	132	ePKPdf	PKPdf	17 11 58.0	-0.6
LPAZ				ePKPbc	PKiKP	17 12 03.8	-0.1
LPAZ	La Paz	148.96	132	ePKIKP	PKPdf	17 11 58.0	-0.6
LPAZ				e		17 12 03.8	
LPAZ	La Paz	148.96	132	PKPbc	PKPbc	17 12 03.3	+0.7
	comp=Z,10nm,0.9s,baz=276,slow=2.3,SNR=17						
UREC	San Jos de Ur	149.18	82	eP	PKPbc	17 12 02.3	-0.2
UREC	San Jos de Ur	149.18	82	eP	PKPbc	17 12 02.3	-0.2
HELC	Santa Helena	149.26	85	eP	PKiKP	17 12 04.3	-0.1
HELC	Santa Helena	149.26	85	eP	PKiKP	17 12 04.3	-0.1
BETC	Betania	149.27	92	eP	PKPdf	17 11 58.3	-0.2
BETC	Betania	149.27	92	eP	PKPdf	17 11 58.3	-0.2
ANIL	Santa Ana	149.39	89	eP	PKPdf	17 12 00.3	+1.3
ANIL	Santa Ana	149.39	89	eP	PKPdf	17 12 00.3	+1.3
RREF	El Recreo	149.45	88	eP	PKPdf	17 12 01.6	+2.1
RREF	El Recreo	149.45	88	eP	PKPdf	17 12 01.6	+2.1
PTLC	Puerto Leguiza	149.63	97	eP	PKPdf	17 11 59.6	+0.6
PTLC	Puerto Leguiza	149.63	97	eP	PKPdf	17 11 59.6	+0.6
ZARC	Zaragoza, Cauc	149.86	83	eP	PKPdf	17 11 59.6	+0.3
ZARC	Zaragoza, Cauc	149.86	83	eP	PKPdf	17 11 59.6	+0.3
NORC	Norcasia	149.93	87	eP	PKPdf	17 11 59.6	+0.1
NORC	Norcasia	149.93	87	eP	PKPdf	17 11 59.6	+0.1
PTBC	PUERTO BERRIO,	150.31	85	eP	PKPdf	17 12 02.3	+2.2
PTBC	PUERTO BERRIO,	150.31	85	eP	PKPdf	17 12 02.3	+2.2
SDDR	Presa de Saban	150.32	59	ePKPbc	PKPbc	17 12 05.6	+0.5
ROSC	El Rosal	150.47	88	ePKPdf	PKPdf	17 11 59.8	-1.0
ROSC				ePKPbc	PKPbc	17 12 06.7	+0.6
ROSC	El Rosal	150.47	88	eP	PKPbc	17 12 04.9	-1.2
ROSC	El Rosal	150.47	88	eP	PKPbc	17 12 04.9	-1.2
SJAC	San Juan de Ar	150.79	91	eP	PKiKP	17 12 08.3	+1.0
SJAC	San Juan de Ar	150.79	91	eP	PKiKP	17 12 08.3	+1.0
CODC	Agustn Codazz	150.99	78	eP	PKPdf	17 12 00.9	-0.1
CODC	Agustn Codazz	150.99	78	eP	PKPdf	17 12 00.9	-0.1
CHIC	Chingaza	151.06	89	eP	PKPdf	17 12 00.9	-0.8
CHIC	Chingaza	151.06	89	eP	PKPdf	17 12 00.9	-0.8
VILC	Villavicencio,	151.08	90	eP	PKPbc	17 12 06.3	-1.0
VILC	Villavicencio,	151.08	90	eP	PKPbc	17 12 06.3	-1.0
OCAC	Ocana	151.32	81	eP	PKPdf	17 12 02.3	+0.5
OCAC	Ocana	151.32	81	eP	PKPdf	17 12 02.3	+0.5
BARC	Barichara	151.57	84	eP	PKiKP	17 12 09.6	+0.6
BARC	Barichara	151.57	84	eP	PKiKP	17 12 09.6	+0.6
RUSC	La Rusia	151.70	86	eP	PKPbc	17 12 07.6	-1.5
RUSC	La Rusia	151.70	86	eP	PKPbc	17 12 07.6	-1.5
PAMC	Pamplona, Colo	152.01	83	eP	PKPdf	17 12 04.3	+1.0
PAMC	Pamplona, Colo	152.01	83	eP	PKPdf	17 12 04.3	+1.0
SDV	Santo Domingo	153.88	79	ePKPdf	PKPdf	17 12 06.1	+0.4
SDV				ePKPbc	pPKPdf	17 12 13.7	-0.3
CRPR	Cabo Rojo, PR	154.29	57	ePKPdf	PKPdf	17 12 06.4	+0.6
CRPR				ePKPbc	PKiKP	17 12 14.3	+0.2

ISCJB **14** *16:54:43.7±0.6, 67°.62N±0°.05×142°.4E±0°.1, h10km, mb3.5/3, Error ellipse: s-maj=7.4km s-min=6.8km az=150.5*

IDC **14** *16:54:43.4±2.7, 67°.75N×142°.40E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.3/50, mbtmp3.6/3, Error ellipse: s-maj=96.0km s-min=29.0km az=169.0*

MOS **14** *16:54:43.2±1.4, 67°.71N×142°.40E, h10km, mb4.4/1, Error ellipse: s-maj=48.8km s-min=20.3km az=94.2*

YARS **14** *16:54:44.7±0.3, 67°.62N±0°.01×142°.60E±0°.04, h8km*

ISC 14 16:54:44.4±0.8**, 67°.52N**±0°.05×**142°.52E**±0°.04**, h10**km**, n13,** σ1ˢ85/18**, mb3.6**/3**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.09	165	eP	Pn	16 55 05.5	-0.2
MOMR				eS	Sn	16 55 20.8	0.0
MOMR				pmax	pmax		
	comp=Z,137nm,0.2s						
MOMR				smax	smax		
	comp=N,1μm,0.4s						
MOMR	Moma	1.09	165	eP	Pn	16 55 05.5	-0.2
MOMR				Pmax		16 55 05.5	
	comp=Z,137nm,0.2s						
MOMR				eS	Sn	16 55 20.8	0.0
MOMR				Smax		16 55 20.8	
	comp=N,1μm,0.4s						
YBGR	Belaya Gora	1.71	52	i P	Pn	16 55 13.4	-0.8
YBGR				Pmax		16 55 13.4	
	comp=Z,281nm,0.4s						
YBGR				eS	Sn	16 55 35.8	-0.4
YBGR				Smax		16 55 35.8	
	comp=N,778nm,0.2s						
BTGS	Batagay	3.02	276	eP	Pn	16 55 33.5	+1.3
BTGS				eS	Sn	16 56 08.3	-0.1
BTGS				pmax	pmax		
	comp=Z,49nm,0.3s						
BTGS	Batagay	3.02	276	eP	Pn	16 55 33.5	+1.3
BTGS				eP	Pb	16 55 39.5	+1.3
BTGS				Pmax		16 55 39.5	
	comp=Z,49nm,0.3s						
BTGS				eS	Sn	16 56 08.3	-0.1
BTGS				eS	Sg	16 56 18.4	-3.0
BTGS				Smax		16 56 18.4	
	comp=E,240nm,0.4s						
ATKR	Artyk	3.52	161	eS	Sg	16 56 37.0	-0.3
ATKR				Smax		16 56 37.0	
	comp=N,695nm,0.6s						
SEY	Seymchan	6.19	133	Pn	Pn	16 56 21.2	+5.6
	comp=N,0.3nm,0.3s,baz=300,slow=20,SNR=3.0						
SEY				Lg	Lg	16 57 58.9	
	comp=N,1.1nm,0.3s,baz=22,slow=14,SNR=9.3						
YAK	Yakutsk	7.76	231	eS	Sg	16 58 47.7	-5.4
YAK				Smax		16 58 47.7	
	comp=N,316nm,0.9s						
MA2	Magadan	8.77	151	Lg	Lg	16 59 23.7	
	comp=N,0.6nm,0.3s,baz=297,slow=9.2,SNR=5.6						
NRGR	Nerungri	13.64	226	eP	Pn	16 58 00.2	+2.5
ILAR	Eielson Array	27.28	62	P	P	17 00 28.3	-0.1
	comp=N,0.5nm,0.7s,baz=299,slow=9.2,SNR=5.9						
MKAR	Makanchi Array	36.69	267	P	P	17 01 51.2	+0.2
	comp=N,0.7nm,0.6s,baz=44,slow=7.3,SNR=5.8						
AKASG	Malin Array Be	52.00	312	P	P	17 03 52.3	-0.9
	comp=N,0.4nm,0.5s,baz=24,slow=9.2,SNR=2.1						

ISCJB **14** *16:56:20.2±0.3, 22°.36N±0°.03×5°.98E±0°.06, h10km, mb4.3/42, Error ellipse: s-maj=8.6km s-min=4.3km az=17.9*

IDC **14** *16:56:20.6±1.0, 22°.57N×5°.85E, h0km, mb4.1/10, mb1 4.5/15, mb1mx4.1/49, mbtmp4.3/15, ML4.6/5, Error ellipse: s-maj=28.0km s-min=20.4km az=124.0*

LDG **14** *16:56:21.3±0.3, 22°.42N×6°.13E, h2km, Ml5.4/3, ms3.5/1, Error ellipse: s-maj=10.4km s-min=7.8km az=80.0*

NEIC **14** *16:56:22.2±0.4, 22°.46N×5°.89E, h10km, mb4.5/15, Error ellipse: s-maj=9.7km s-min=6.3km az=106.0*

INMG **14** *16:56:47.4, 25°.38N×6°.72E, h15km*

ISC 14 16:56:21.7±0.5**, 22°.42N**±0°.05×**5°.80E**±0°.07**, h10**km**, n101,** σ2ˢ78/106**, mb4.5**/42**, Southern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAM	Tamanrasset	0.45	325	ePg	Pg	16 56 30.4	-0.2
TAM				eSg	Sg	16 56 36.6	0.0
TOA1	Torodi Ar. Sit	10.01	204	ePn	Pn	16 58 46.7	+1.1
TOA1				eSn	Sn	17 00 39.7	+1.6
TOA1				eLg	Lg	17 01 42.7	
TOA0	Torodi Ar. Sit	10.01	204	ePn	Pn	16 58 46.4	+0.7
TOA0				eSn	Sn	17 00 36.7	-1.5
TOA0				eLg	Lg	17 01 44.5	
TORD	Torodi Ar. Bea	10.01	204	Pn	Pn	16 58 46.7	+1.1
	6.9nm,0.3s,baz=27,slow=13,SNR=178						
TORD				Sn	Sn	17 00 39.7	+1.5
	14nm,0.3s,baz=16,slow=28,SNR=5.6						
TORD				Lg	Lg	17 01 42.7	
	12nm,0.3s,baz=24,slow=29,SNR=4.5						
ATAF	Djebel Tarf	13.47	355	P	Pn	16 59 30.8	-2.2
KEST	Kesra	13.62	12	ePn	Pn	16 59 31.0	-4.0
KEST	Kesra	13.62	12	Pn	Pn	16 59 31.4	-3.6
	2.3nm,0.3s,baz=155,slow=5.4,SNR=11						
KEST				Lg	Lg	17 03 30.9	
	1.2nm,0.3s,baz=122,slow=22,SNR=2.7						
MDT	Midelt	13.86	321	Pn	Pn	16 59 36.8	-1.6
	4.7nm,0.3s,baz=167,slow=8.4,SNR=63						
MDT				Lg	Lg	17 03 41.0	
	1.7nm,0.3s,baz=302,slow=13,SNR=3.9						
EMHD	Djebel Mahouad	13.96	350	P	P	16 59 49.5	+1.7
DBIC	Dimbokro	18.73	215	eP	Pn	17 00 43.5	+2.4
	16nm,0.8s						
DBIC				eSn	Sn	17 04 03.7	-7.1
DBIC				Lg	Lg	17 06 09.1	
DBIC	Dimbokro	18.73	215	P	Pn	17 00 43.5	+2.4
	2.8nm,0.3s,baz=14,slow=13,SNR=20						
DBIC				S	Sn	17 04 03.5	-7.3
	1.0nm,0.3s,baz=304,slow=22,SNR=3.5						
DBIC				Lg	Lg	17 06 09.1	
	3.7nm,0.3s,baz=112,slow=16,SNR=4.0						
TIC	Toumodi	18.84	215	eP	Pn	17 00 45.9	+3.5
KIC	Kosan Boka	18.93	214	eP	Pn	17 00 47.4	+3.9
	86nm,1.1s						
PVAQ	Vaqueiros	18.95	325	eP	Pn	17 00 46.4	+2.8
ESDC	Sonseca Array	19.11	336	P	P	17 00 44.7	0.0
	0.3nm,0.3s,baz=148,slow=10,SNR=6.5						
PAB	San Pablo	19.14	335	eP	Pn	17 00 45.5	-0.4
	5.8nm,0.8s						
LIC	Lamto	19.20	215	eP	Pn	17 00 49.0	+2.4
	143nm,1.3s						
LIC	Lamto	19.20	215	eP	Pn	17 00 49.1	+2.4
	44nm,0.8s,baz=25						
LIC				eSn	S	17 04 23.7	+0.2
	720nm,1.1s						
LIC				eR			
	454nm,25.2s						
LIC	Lamto	19.20	215	eP	Pn	17 00 49.1	+2.4
CUC	Castrocucco	19.48	24	eP	P	17 00 46.6	-2.2
	13nm,0.9s						
PMRV	Marv??o	20.35	329	eP	Pn	17 01 02.1	+1.8
	15nm,1.7s						
PCBR	Castelo Branco	20.72	330	eP	Pn	17 01 05.9	+1.4
	21nm,1.8s						
MTLF	Montolieu	21.08	353	eP	P	17 01 10.8	+4.7
	70nm,1.3s,SNR=11						
MTLF	Montolieu	21.08	353	eP	P	17 01 10.8	+4.7
FRF	La Foret Royal	21.10	2	eP	P	17 01 07.4	+1.1
	74nm,1.1s,SNR=8.5						
FRF	La Foret Royal	21.10	2	eP	P	17 01 07.4	+1.1
ETSF	Etsaut	21.10	347	eP	P	17 01 10.2	+3.8
	34nm,1.3s,SNR=3.6						
ETSF	Etsaut	21.10	347	eP	P	17 01 10.2	+3.8
MTE	Manteigas	21.20	331	eP	P	17 01 09.8	+2.4
	36nm,1.9s						
SBF	Sospel	21.43	3	eP	P	17 01 09.7	-0.2
	43nm,0.8s,SNR=4.1						
SBF	Sospel	21.43	3	eP	P	17 01 09.7	-0.2
SMRF	Simiane la Rot	21.50	360	eP	P	17 01 12.4	+1.7
	102nm,1.4s,SNR=2.9						
SMRF	Simiane la Rot	21.50	360	eP	P	17 01 12.4	+1.7
MVO	Moncorvo	21.59	333	eP	P	17 01 12.9	+1.2
	34nm,1.5s						
LASF	Ste Croix	21.66	356	eP	P	17 01 18.1	+5.7
	59nm,1.4s,SNR=3.9						
LASF	Ste Croix	21.66	356	eP	P	17 01 18.1	+5.7
	59nm,1.4s						
AGG	Agios Georgios	21.75	37	eP	P	17 01 13.5	0.0
	56nm,1.7s						
PBRG	Braganca	22.01	334	eP	P	17 01 17.6	+1.4
	24nm,1.6s						
MBDF	Montbardon	22.27	2	eP	P	17 01 21.0	+2.0
	73nm,1.4s,SNR=3.2						
MBDF	Montbardon	22.27	2	eP	P	17 01 21.0	+2.0
VIVF	Saint-Julien-l	22.40	358	eP	P	17 01 26.9	+6.6
	39nm,1.3s,SNR=2.8						
VIVF	Saint-Julien-l	22.40	358	eP	P	17 01 26.9	+6.6
	39nm,1.3s						
ORIF	Oris-en-Rattie	22.44	0	eP	P	17 01 22.8	+2.0
	51nm,1.1s,SNR=3.2						
ORIF	Oris-en-Rattie	22.44	0	eP	P	17 01 22.8	+2.0
CAF	Calviac	22.66	353	eP	P	17 01 24.0	+0.9
CAF	Calviac	22.66	353	eP	P	17 01 24.0	+0.9
LFF	La Frestale	22.85	351	eP	P	17 01 26.5	+1.5
LFF	La Frestale	22.85	351	eP	P	17 01 26.5	+1.5
LPG	La Plagne	23.04	2	eP	P	17 01 30.7	+3.4
	80nm,1.2s,SNR=1.9						
LPG	La Plagne	23.04	2	eP	P	17 01 30.7	+3.4
LPL	La Plagne	23.05	2	eP	P	17 01 29.7	+2.3
	69nm,1.2s,SNR=1.9						
LPL	La Plagne	23.05	2	eP	P	17 01 29.7	+2.3
SENIN	Lac Senin/Sane	23.92	3	eP	P	17 01 40.9	+4.9
	14nm,1.3s						
TCF	Toulx Ste Croi	23.99	354	eP	P	17 01 39.3	+2.9
TCF	Toulx Ste Croi	23.99	354	eP	P	17 01 39.3	+2.9
SMF	Signal de Mont	24.22	357	eP	P	17 01 43.9	+5.3
	22nm,1.0s,SNR=1.8						
SMF	Signal de Mont	24.22	357	eP	P	17 01 43.9	+5.3
	22nm,1.0s						
AVF	Avril sur Loir	24.40	356	eP	P	17 01 44.8	+4.7
	17nm,0.9s,SNR=3.5						
AVF	Avril sur Loir	24.40	356	eP	P	17 01 44.8	+4.7
	17nm,0.9s						
SSF	Saint Saulge	24.66	356	eP	P	17 01 43.7	+1.2
SSF	Saint Saulge	24.66	356	eP	P	17 01 43.7	+1.2
LOR	Lormes	24.84	357	eP	P	17 01 45.4	+1.2
	11nm,0.9s,baz=176,SNR=1.0						
LOR	Lormes	24.84	357	eP	P	17 01 45.4	+1.2
ABTA	Abfaltersbach	24.87	11	i P	P	17 01 46.0	+1.4
	6.7nm,0.6s						
DAVA	Damuels	25.03	7	i P	P	17 01 44.6	-1.5
	5.8nm,0.7s						
RETA	Reutte	25.33	8	i P	P	17 01 47.4	-1.2
	2.6nm,0.6s						
HINF	Hinteralfeld	25.36	2	eP	P	17 01 49.2	+0.3
	19nm,1.1s,SNR=1.1						
HINF	Hinteralfeld	25.36	2	eP	P	17 01 49.2	+0.3
HAU	Haudompre	25.54	1	eP	P	17 01 56.5	+6.0
	19nm,1.0s,SNR=2.6						
HAU	Haudompre	25.54	1	eP	P	17 01 56.5	+6.0
	19nm,1.0s						
ECH	Echery	25.77	2	eP	P	17 01 52.9	+0.4
	14nm,1.2s						
MEZF	Maizieres J’vi	26.04	359	eP	P	17 01 55.2	+0.2
	38nm,1.2s,SNR=1.6						
MEZF	Maizieres J’vi	26.04	359	eP	P	17 01 55.2	+0.2
MOA	Molln	26.27	13	i P	P	17 01 58.4	+1.3
	3.9nm,0.7s						
GEA0	GERESS Array S	27.10	11	eP	P	17 02 03.0	-1.7
GEC2	GERESS Array S	27.11	11	eP	P	17 02 01.3	-3.5
GERES	GERESS Array B	27.11	11	P	P	17 02 03.7	-1.1
	2.3nm,0.8s,baz=186,slow=9.4,SNR=14						
KHC	Kasperske Hory	27.36	11	eP	P	17 02 05.2	-1.8
	8.8nm,1.7s						
BRG	Berggiesshubel	29.11	11	eP	P	17 02 22.9	+0.4
	11nm,1.4s						
BRTR	Keskin Array B	29.26	47	P	P	17 02 23.6	-0.5
	1.5nm,0.7s,baz=232,slow=7.0,SNR=7.1						
BR101	Keskin Array S	29.26	47	eP	P	17 02 23.6	-0.5
BR131	Keskin Array S	29.26	47	eP	P	17 02 25.1	+0.9
	3.4nm,0.9s						
CLL	Collm	29.38	9	eP	P	17 02 26.0	+1.2
CLL				e		17 04 24.0	
BUR04	Bucovina Ar. S	29.58	27	eP	P	17 02 26.4	-0.4
BUR08	Bucovina Ar. S	29.60	27	eP	P	17 02 26.9	-0.1
	21nm,1.8s						
RAYN	Ar Rayn	36.49	80	eP	P	17 03 27.1	-0.3
	3.0nm,0.9s						
KBZ	Khabaz	37.23	46	P	P	17 03 33.3	0.0
	3.2nm,0.8s,baz=233,slow=2.1,SNR=10						
ARA0	ARCESS Array S	48.60	9	eP	P	17 05 03.6	-1.4
ARCES	ARCESS Array B	48.60	9	P	P	17 05 03.6	-1.4
	4.7nm,0.7s,baz=178,slow=6.1,SNR=9.3						
MK32	Makanchi Array	64.91	48	eP	P	17 07 01.7	+0.3
MKAR	Makanchi Array	64.91	48	P	P	17 07 01.7	+0.3
	1.3nm,0.7s,baz=297,slow=5.3,SNR=3.7						
ZAA1	Zalesovo Array	65.79	40	eP	P	17 07 06.4	-0.5
ZALV	Zalesovo Beam	65.79	40	P	P	17 07 06.4	-0.5
	3.5nm,0.9s,baz=282,slow=7.0,SNR=4.1						
WMQ	Urumqi	69.14	50	eP	P	17 07 32.0	+3.6
WMQ				LR	LR		
	comp=N,220nm,36.7s						
WMQ				LR	LR		
	comp=E,400nm,23.9s						
WMQ				LR	LR		
	comp=Z,340nm,19.1s						
SONA0	Songino Array	80.47	42	eP	P	17 08 33.5	-0.5
SONM	Songino Array	80.47	42	P	P	17 08 33.5	-0.5
	comp=Z,1.4nm,1.0s,baz=263,slow=4.6,SNR=5.6						
YKA	Yellowknife Ar	83.20	336	P	P	17 08 47.8	-0.1
	comp=Z,1.1nm,0.8s,baz=51,slow=5.4,SNR=17						
CMAR	Chiang Mai Arr	85.92	72	P	P	17 09 02.1	-0.4
	comp=Z,0.8nm,0.9s,baz=291,slow=5.9,SNR=6.7						
HHC	Hu-ho-hao-te	86.77	47	eP	P	17 09 04.6	-1.9
HHC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,190nm,6.4s						
PDAR	Pinedale Array	92.03	318	P	P	17 09 32.0	+0.6
	comp=Z,0.6nm,0.9s,baz=69,slow=4.9,SNR=3.9						
CN2	Changchun	94.01	39	eP	P	17 09 42.0	+1.9

YARS 14 17:02:47.4±0.3**, 67°.62N**±0°.02×**142°.59E**±0°.04**, h10**km**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.18	168	eP	Pb	17 03 08.3	-1.6
MOMR				Pmax		17 03 08.3	
	comp=Z,12nm,0.2s						
MOMR				eS	Sb	17 03 24.4	-0.8
MOMR				Smax		17 03 24.4	
	comp=N,71nm,0.3s						
YBGR	Belaya Gora	1.63	54	eP	Pn	17 03 16.1	0.0
YBGR				Pmax		17 03 16.1	
	comp=Z,63nm,0.4s						
YBGR				eS	Sb	17 03 38.5	+0.3
YBGR				Smax		17 03 38.5	
	comp=E,127nm,0.4s						
BTGS	Batagay	3.04	274	eP	Pb	17 03 41.7	+0.2
BTGS				Pmax		17 03 41.7	
	comp=Z,7.0nm,0.2s						
BTGS				eS	Sg	17 04 21.8	-3.1
BTGS				Smax		17 04 21.8	

	comp=N,12nm,0.2s						
BTGS	Batagay	3.04	274	*e*P	Pb	17 03 42.2	+0.7

YARS 14 17:02:53.7±0.3**, 67°.60N**±0°.02×**142°.58E**±0°.04**, h10**^{km}**,**
Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.17	167	*e*P	Pb	17 03 14.9	-1.0
MOMR				Pmax		17 03 14.9	
	comp=Z,72nm,0.2s						
MOMR				*e*S	Sb	17 03 29.8	-1.2
MOMR				Smax		17 03 29.8	
	comp=N,156nm,0.2s						
YBGR	Belaya Gora	1.65	54	*e*P	Pn	17 03 22.6	0.0
YBGR				Pmax		17 03 22.6	
	comp=Z,127nm,0.3s						
YBGR				*e*S	Sb	17 03 45.1	+0.2
YBGR				Smax		17 03 45.1	
	comp=N,235nm,0.2s						
BTGS	Batagay	3.04	275	*e*P	Pb	17 03 47.9	+0.1
BTGS				Pmax		17 03 47.9	
	comp=Z,7.0nm,0.2s						
BTGS				*e*S	Sn	17 04 17.5	-0.6
BTGS				*e*S	Sb	17 04 27.9	+3.1
BTGS				Smax		17 04 27.9	
	comp=N,34nm,0.2s						

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*IDC **14** 17:03:20.5±0.5, 15°.94S×173°.24W, h0^{km}, mb4.6/16, mb1 4.8/17, mb1mx4.6/32, mbtmp4.6/17, ML3.5/1, MS4.1/4, Ms1 4.1/4, ms1mx3.5/40, Error ellipse: s-maj=23.7km s-min=13.9km az=135.0*

*MOS **14** 17:03:25.5±1.4, 15°.68S×173°.40W, h33^{km}, mb5.0/43, Error ellipse: s-maj=15.3km s-min=8.9km az=52.0*

*ISCJB **14** 17:03:29.0±0.1, 16°.04S±0°.04×173°.39W±0°.05, h79^{km}, mb4.8/179, Error ellipse: s-maj=7.8km s-min=3.2km az=39.5*

*NEIC **14** 17:03:29.5±1.5, 16°.03S×173°.21W, h68^{km}±6^{km}, mb4.9/170, Error ellipse: s-maj=17.1km s-min=13.7km az=127.0*

ISC 14 17:03:30.6±0.4**, 16°.01S**±0°.10×**173°.38W**±0°.09**, h79**^{km}**,**
n385, σ0^{s}83/363**, mb4.8**/179**, 32C-14D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.49	133	*e*Pn	Pn	17 04 27.8	-8.4
NIUE				*e*Sn	Sn	17 05 11.1	-16
MSVF	Nonsavu	8.38	257	*e*Pn	Pn	17 05 36.3	+6.9
KNTN	Kanton	13.25	7	*e*Pn	Pn	17 06 29.7	-5.9
RAR	Rarotonga	13.90	114	Pn	Pn	17 06 35.9	-8.1
	2.3nm,0.3s,baz=297,slow=10,SNR=4.8						
RAR				LR	LR	17 10 35.5	
	comp=Z,291nm,21.6s,baz=312,slow=32						
MARNC	Mare, Loyalty	18.42	250	*e*P	P	17 07 39.1	-0.6
	127nm,0.9s						
PINNC	Pines Island,	19.24	247	*e*P	P	17 07 46.5	-2.2
	58nm,1.0s						
OUENC	Ouen Island, N	19.72	248	*e*P	Pn	17 07 54.8	-1.3
	64nm,0.9s						
DZM	Mont Dzumac	19.99	249	*e*P	P	17 07 53.7	-3.3
	112nm,0.9s						
DZM				*e*LR	LR	17 12 51.4	
	comp=Z,2μm,24.9s						
DZM	Mont Dzumac	19.99	249	*e*P	Pn	17 07 58.3	-1.1
	42nm,0.8s						
DZM	Mont Dzumac	19.99	249	P	Pn	17 07 58.1	-1.3
	12nm,0.8s,baz=84,slow=17,SNR=9.0						
ONTNC	Ouen Toro	20.04	249	*e*P	Pn	17 07 59.5	-0.4
	41nm,0.9s						
OUZ	Omahuta	22.40	209	*e*P	P	17 08 24.0	+1.4
	17nm,0.8s						
MXZ	Matakaoa Point	22.69	197	*e*P	P	17 08 26.5	+0.8
	104nm,1.5s						
PAE	Paea	22.84	98	*e*T	T	17 31 41.7	
	4.4nm,0.2s						
PPT	Papeete	22.84	97	LR	LR	17 14 40.5	
	comp=Z,295nm,21.4s,baz=291,slow=30						
PPT2	Papeete2	22.84	97	*e*LR	LR	17 13 48.3	
	comp=Z,696nm,25.0s						
PPT2	Papeete2	22.84	97	*e*T	T	17 31 42.8	
	8.0nm,0.3s						
TIAR	Tiarei	23.06	97	*e*T	T	17 31 58.7	
	4.0nm,0.3s						
TVO	Taravao	23.16	98	*e*T	T	17 32 05.9	
	1.9nm,0.3s						
TBI	Tubuai	23.66	112	*e*T	T	17 32 49.4	
	11nm,0.2s						
URZ	Urewera	23.69	199	*e*P	P	17 08 35.0	-0.1
	21nm,0.7s						
URZ				*e*P	P	17 08 35.1	0.0
URZ	Urewera	23.69	199	P	P	17 08 35.1	0.0
	15nm,0.6s,baz=25,slow=2.2,SNR=18						
HIZ	Hauiti	24.69	203	*e*P	P	17 08 45.7	+1.5
	87nm,1.2s						
HIZ	Hauiti	24.69	203	P	P	17 08 45.6	+1.4
BKZ	Black Stump Fm	24.72	199	*e*P	P	17 08 43.8	-0.7
	74nm,1.9s						
BKZ	Black Stump Fm	24.72	199	P	P	17 08 44.9	+0.4
VAH	Vaihoa	24.81	92	*e*T	T	17 34 07.5	
	9.0nm,0.3s						
TRVZ	Turoa	25.14	201	P	P	17 08 47.9	-0.7
BHHZ	Black Hill Sta	25.15	199	P	P	17 08 47.9	-0.5
KAHZ	Kahuranaki	25.18	198	P	P	17 08 50.2	+1.6
BFZ	Birch Farm	26.18	198	*e*P	P	17 08 58.1	+0.5
	56nm,1.5s						
BFZ	Birch Farm	26.18	198	P	P	17 08 58.3	+0.6
MRZ	Mangatainoka R	26.37	199	P	P	17 08 58.3	-1.1
OGWZ	Otaki Gorge	26.64	200	P	P	17 09 01.3	-0.5
HNR	Honiara	26.80	281	LR	LR	17 18 15.1	
	comp=Z,920nm,19.5s,baz=145,slow=33						
DUWZ	D'Urville Isla	27.05	202	P	P	17 09 05.5	0.0
SNZO	South Karori	27.23	200	*e*P	P	17 09 06.2	-1.0
	88nm,1.2s						
TCW	Tory Channel	27.29	201	P	P	17 09 09.2	+1.5
QRZ	Quartz Range	27.58	204	P	P	17 09 12.3	+2.1
TUWZ	Tuamarina	27.60	201	P	P	17 09 09.6	-0.8
NNZ	Nelson	27.61	202	P	P	17 09 11.2	+0.8
THZ	Tophouse	28.25	202	*e*P	P	17 09 15.7	-0.6
	65nm,1.5s						
KHZ	Kahutara	28.61	200	*e*P	P	17 09 18.7	-0.7
	113nm,1.4s						
LTZ	Lake Taylor	29.37	202	*e*P	P	17 09 24.8	-1.4
	34nm,1.0s						
OXZ	Oxford	29.93	202	*e*P	P	17 09 29.8	-1.4
	168nm,1.8s						
MQZ	McQueen's Vall	30.05	200	*e*P	P	17 09 33.1	+1.0
	379nm,2.0s						
RPZ	Rata Peaks	30.62	202	*e*P	P	17 09 36.9	-0.4
	47nm,1.3s						
RPZ				*e*P	P	17 09 38.3	+1.1
RPZ	Rata Peaks	30.62	202	P	P	17 09 38.3	+1.1
	9.6nm,0.6s,baz=43,slow=3.1,SNR=5.0						
FOZ	Fox Glacier	30.94	204	*e*P	P	17 09 39.9	0.0
	98nm,1.4s						
LBZ	Lake Benmore	31.52	203	*e*P	P	17 09 43.4	-1.7
	134nm,1.8s						
ODZ	Otahua Downs	31.92	202	*e*P	P	17 09 47.3	-1.3
	119nm,1.6s						
WKZ	Wanaka	32.34	204	*e*P	P	17 09 50.5	-1.9
	192nm,1.6s						
MLZ	Mavora Lakes	33.14	204	*e*P	P	17 09 58.8	-0.5
	172nm,2.0s						
TAOE	Nuku Hiva Isla	33.19	82	*e*T	T	17 44 27.6	
	54nm,0.2s						
DCZ	Deep Cove	33.61	205	*e*P	P	17 10 03.6	+0.3
	52nm,1.2s						
WHZ	Wether Hill Ro	33.64	204	*e*P	P	17 10 03.2	-0.5
	118nm,1.7s						
EIDS	Eidsvold	34.43	248	*e*P	P	17 10 10.3	-0.5
	71nm,1.6s						
ARMA	Armidale	35.05	240	*e*P	P	17 10 15.5	-0.6
	341nm,2.0s						
RKT	Rikitea	36.80	107	*e*T	T	17 49 11.9	
	9.1nm,0.3s						
CAN	Canberra	38.67	233	*e*P	P	17 10 48.0	+1.2
	286nm,1.8s						
CAN	Canberra	38.67	233	*e*P	P	17 10 48.0	+1.2
CAN				pmax	pmax		
	comp=Z,286nm,1.8s						
H11S2	WAKE ISLAND Hy	39.49	329	T	T	17 52 56.1	
	baz=149,slow=76,SNR=43						
H11S3	WAKE ISLAND Hy	39.51	329	T	T	17 52 46.5	
	baz=149,slow=76,SNR=41						
H11S1	WAKE ISLAND Hy	39.51	329	T	T	17 52 46.9	
	baz=149,slow=76,SNR=59						
HMH	Humu'ula Sheep	39.53	27	*e*P	P	17 10 53.9	-0.4
	comp=Z,424nm,1.9s						
LPH	Laupahoehoe	39.91	27	*e*pP	pP	17 11 12.8	-2.8
H11N3	WAKE ISLAND Hy	40.45	331	T	T	17 54 03.6	
	baz=150,slow=76,SNR=42						
H11N1	WAKE ISLAND Hy	40.45	331	T	T	17 54 03.8	
	baz=150,slow=76,SNR=50						
H11N2	WAKE ISLAND Hy	40.47	331	T	T	17 54 00.8	
	baz=150,slow=76,SNR=5.8						
COEN	Coen	41.96	267	*e*P	P	17 11 16.6	+2.5
	comp=Z,21nm,1.4s						
TOO	Toolangi	42.09	231	*e*P	P	17 11 15.7	+0.7
	comp=Z,128nm,1.8s						
TOO	Toolangi	42.09	231	*e*P	P	17 11 15.7	+0.7
TOO				pmax	pmax		
	comp=Z,128nm,1.8s						
STKA	Stephens Creek	43.75	240	P	P	17 11 28.9	+0.5
	comp=Z,18nm,0.8s,baz=84,slow=10,SNR=17						
MIDW	Midway	44.13	355	*e*P	P	17 11 30.7	-0.6
	comp=Z,153nm,1.1s						
BBOO	Buckleboo	48.52	240	*e*P	P	17 12 05.5	-0.3
	comp=Z,153nm,1.9s						
WB2	Warramunga Arr	49.71	257	*e*P	P	17 12 14.0	-1.2
WB2				*e*P	P	17 12 14.7	-0.4
WRAB	Tennant Creek	49.71	257	*e*P	P	17 12 14.9	-0.3
	comp=Z,19nm,1.3s						
WRAB	Tennant Creek	49.71	257⇓	*e*P	P	17 12 15.0	-0.2
WRAB				pmax	pmax		
	comp=Z,21nm,1.4s						
WR1	Warramunga Arr	49.72	257	*e*P	P	17 12 15.0	-0.3
	comp=Z,38nm,1.5s						
WRA	Warramunga Arr	49.72	257	*e*P	P	17 12 15.4	+0.2
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRA	Warramunga Arr	49.72	257	P	P	17 12 15.0	-0.3
	comp=Z,2.9nm,0.6s,baz=91,slow=7.1,SNR=36						
AS01	Alice Springs	49.90	252	*e*P	P	17 12 16.0	-0.5
AS31	Alice Springs	49.94	252	*e*P	P	17 12 16.5	-0.3
ASAR	Alice Springs	49.94	252	P	P	17 12 16.4	-0.5
	comp=Z,12nm,0.6s,baz=91,slow=7.5,SNR=97						
ASAR				LR	LR	17 32 39.2	
	comp=Z,258nm,18.3s,baz=72,slow=35						
MTN	Manton Dam	53.70	266	*e*P	P	17 12 45.2	+0.3
	comp=Z,42nm,1.6s						
FORT	Forrest	55.16	243	*e*P	P	17 12 54.8	-0.5
	comp=Z,68nm,1.4s						
FITZ	Fitzroy Crossi	58.10	258	*e*P	P	17 13 16.7	+0.4
	comp=Z,24nm,1.5s						
SOEI	Soe	60.92	268	*e*P	P	17 13 36.2	+0.3
	comp=Z,52nm,1.5s						
MBWA	Marble Bar	63.21	254	*e*P	P	17 13 51.3	+0.3
	comp=Z,63nm,1.6s						
GIRL	Giralia	68.05	252	*e*P	P	17 14 24.2	+2.1
	comp=Z,338nm,1.3s						
NIKH	Nikolski High	68.81	3	*e*P	P	17 14 26.4	+0.3
	comp=Z,334nm,1.4s						
ERM	Erimo	70.28	327⇓	*e*P	P	17 14 33.9	-1.5
ERM				pmax	pmax		
	comp=Z,76nm,1.9s						
H06S1	SOCORRO T	70.47	63	T	T	18 31 07.9	
	SNR=22						
H06E1	SOCORRO T-PHAS	70.51	63	T	T	18 31 09.0	
KMRM	Mail Ridge	72.53	38	*e*P	P	17 14 50.1	+0.9
	comp=Z,50nm,1.0s						
ISA	Isabella, Lake	73.08	44	*e*P	P	17 14 49.5	-3.0
	comp=Z,9.8nm,0.4s						
ISA	Isabella, Lake	73.08	44	*e*P	P	17 14 49.5	-3.0
ISA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CMB	Columbia Colle	73.21	41	*e*P	P	17 14 51.3	-1.9
	comp=Z,11nm,0.8s						
CMB	Columbia Colle	73.21	41	*e*P	P	17 14 51.3	-1.9
CMB				pmax	pmax		
	comp=Z,11nm,0.8s						
PETK	Petropavlovsk-	73.21	342	*e*P	P	17 14 53.4	+0.6
PETK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PETK	Petropavlovsk-	73.21	342	P	P	17 14 53.1	+0.3
	comp=Z,6.4nm,0.9s,baz=128,slow=9.6,SNR=8.9						
PEA1	Petropavlovsk-	73.22	342	*e*P	P	17 14 53.1	+0.3
PFO	Pinyon Flats O	73.32	47	*i* P	P	17 14 55.2	+1.1
AFDM	Forest Hills D	73.39	40	*e*P	P	17 14 53.5	-0.8
	comp=Z,13nm,1.1s						
WDC	Whiskeytown Da	73.45	38	*e*P	P	17 14 54.8	+0.3
	comp=Z,16nm,1.1s						
WDC	Whiskeytown Da	73.45	38	*e*P	P	17 14 54.8	+0.3
WDC				pmax	pmax		
	comp=Z,16nm,1.1s						
OMMB	Old Mammoth Mi	73.85	42	*e*P	P	17 14 57.1	-0.3
	comp=Z,9.6nm,1.3s						
DAC	Darwin (Calif)	74.01	44	*e*P	P	17 14 57.7	-0.4
	comp=Z,6.3nm,1.0s						
DAC	Darwin (Calif)	74.01	44	*e*P	P	17 14 57.7	-0.4
DAC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YSS	Yuzh-Sakhalins	74.02	330⇓	*e*P	P	17 14 59.1	+1.5
YSS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
QSPA	South Pole Qui	74.04	180	*e*P	P	17 14 58.1	+0.4
	comp=Z,21nm,1.4s						
YBH	Yreka Blue Hor	74.07	37	*e*P	P	17 14 58.4	+0.1
	comp=Z,24nm,0.9s						
YBH	Yreka Blue Hor	74.07	37	*e*P	P	17 14 58.4	+0.1
YBH				pmax	pmax		
	comp=Z,24nm,0.9s						
WAKR	Walker	74.09	41	*e*P	P	17 14 58.5	-0.1
	comp=Z,12nm,0.7s						
BEKR	Beckworth	74.32	40	*e*P	P	17 14 59.8	-0.1
	comp=Z,11nm,0.9s						
PNTR	Pine Nut	74.33	41	*e*P	P	17 15 00.2	+0.2
	comp=Z,16nm,0.8s						
HUMO	Hull Mountain	74.49	36	*e*P	P	17 15 01.2	+0.7
	comp=Z,21nm,1.1s						
YERR	Yerington	74.50	41	*e*P	P	17 15 00.6	-0.3
	comp=Z,10nm,0.7s						
RYN	Ryan	74.74	42	*e*P	P	17 15 02.4	0.0
	comp=Z,8.5nm,0.8s						
NV01	Mina Array Sit	74.77	42	*e*P	P	17 15 02.6	+0.1
NVAR	Mina Array Bea	74.77	42	P	P	17 15 02.6	+0.1
	comp=Z,13nm,0.7s,baz=227,slow=9.9,SNR=56						
113A	Mohawk Valley,	74.80	49	*e*P	P	17 15 01.6	-0.9
	comp=Z,19nm,1.8s						
PAHR	Pah Rah Range	74.83	40	*e*P	P	17 15 02.3	-0.5
	comp=Z,11nm,1.0s						
KVN	Kaiserville	75.26	41	*e*P	P	17 15 04.7	-0.6
	comp=Z,8.6nm,0.8s						
KVN	Kaiserville	75.26	41	*e*P	P	17 15 04.7	-0.6
KVN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TPNV	Topopah Spring	75.28	44	*e*P	P	17 15 05.2	-0.3
	comp=Z,9.8nm,0.9s						
TPNV	Topopah Spring	75.28	44	*e*P	P	17 15 05.2	-0.3
TPNV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MOD	Modoc Plateau	75.59	38	*e*P	P	17 15 06.8	-0.2
	comp=Z,22nm,0.9s						
SHPR	Sheep Range	75.78	45	*e*P	P	17 15 08.3	0.0
	comp=Z,11nm,1.0s						
Y14A	Wickenburg	75.94	48	*e*P	P	17 15 08.6	-0.6
	comp=Z,7.6nm,0.6s						
H04A	Detroit Lake	76.24	35	*e*P	P	17 15 10.2	-0.4
	comp=Z,21nm,1.0s						
PINE	Pine Mountain	76.38	36	*e*P	P	17 15 11.9	+0.3
	comp=Z,37nm,0.8s						
R11A	Troy Canyon, C	76.49	43	*e*P	P	17 15 12.3	-0.1
	comp=Z,6.1nm,1.1s						
TUC	Tucson	76.76	51	*e*P	P	17 15 14.0	+0.2
	comp=Z,37nm,1.9s						
TUC	Tucson	76.76	51	*e*P	P	17 15 14.0	+0.2
TUC				pmax	pmax		
	comp=Z,37nm,1.9s						
WVOR	Wild Horse Val	76.90	38	*e*P	P	17 15 14.3	-0.2
	comp=Z,14nm,0.9s						
WVOR	Wild Horse Val	76.90	38	*e*P	P	17 15 14.3	-0.2
WVOR				pmax	pmax		
	comp=Z,14nm,0.9s						
X16A	Lo Mia Camp, P	77.31	48	*e*P	P	17 15 17.3	+0.3
	comp=Z,9.3nm,0.9s						
LCMT	Little Creek M	77.35	45	*e*P	P	17 15 17.2	+0.1
	comp=Z,7.2nm,0.9s						
I07A	Izee	77.38	37	*e*P	P	17 15 17.3	+0.2
	comp=Z,15nm,0.9s						
319A	Douglas	77.45	52	*e*P	P	17 15 17.4	-0.4
	comp=Z,10nm,0.8s						
J08A	Circle Bar Ran	77.54	38	*e*P	P	17 15 17.9	-0.1
	comp=Z,20nm,1.0s						
CCUT	Cedar City	77.55	45	*e*P	P	17 15 18.6	+0.2
	comp=Z,14nm,1.1s						
KNB	Kanab	77.64	46	*e*P	P	17 15 19.2	+0.4
	comp=Z,8.9nm,0.9s						
U15A	North Rim	77.71	46	*e*P	P	17 15 19.6	+0.3
	comp=Z,12nm,0.9s						
PSUT	Pine Spring	77.74	44	*e*P	P	17 15 19.3	-0.1
	comp=Z,7.9nm,0.8s						
LON	Longmire	77.76	33	*e*P	P	17 15 18.5	-0.6
	comp=Z,27nm,1.9s						
LON	Longmire	77.76	33	*e*P	P	17 15 18.5	-0.6
LON				pmax	pmax		
	comp=Z,27nm,1.9s						
WUAZ	Wupatki	77.90	47	*e*P	P	17 15 20.4	+0.2
	comp=Z,12nm,1.1s						
ELK	Elko	78.03	41	*e*P	P	17 15 20.7	-0.3
	comp=Z,6.5nm,1.0s						
ELK	Elko	78.03	41	*e*P	P	17 15 20.7	-0.3
ELK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PKCU	Pink Cliffs	78.21	45	*e*P	P	17 15 20.9	-1.2
	comp=Z,30nm,1.2s						
G08A	Pilot Rock	78.42	36	*e*P	P	17 15 23.0	+0.2
	comp=Z,15nm,0.9s						
MTPU	Mount Pierson	78.60	45	*e*P	P	17 15 25.0	+0.7
	comp=Z,12nm,1.0s						
E07A	Sunnyside	78.69	34	*e*P	P	17 15 24.6	+0.4
	comp=Z,16nm,0.9s						
TCRU	Three Creeks R	78.72	44	*e*P	P	17 15 25.0	+0.2
	comp=Z,12nm,1.0s						
HAWA	Hanford	78.77	35	*e*P	P	17 15 24.6	0.0
	comp=Z,14nm,1.0s						
MSU	Marysvale	78.85	44	*e*P	P	17 15 26.2	+0.7
BMO	Blue Mountains	79.10	37	*e*P	P	17 15 26.2	-0.3
	comp=Z,12nm,1.0s						
DUG	Dugway, Tooele	79.30	43	*e*P	P	17 15 25.8	-2.0
	comp=Z,13nm,1.4s						
DUG	Dugway, Tooele	79.30	43	*e*P	P	17 15 25.8	-2.0
DUG				pmax	pmax		
	comp=Z,13nm,1.4s						
D08A	Wollman Farm,	79.50	34	*e*P	P	17 15 28.7	+0.1
	comp=Z,18nm,1.0s						
BGU	Big Grassy Mou	79.54	42	*e*P	P	17 15 29.2	+0.1
	comp=Z,10nm,1.7s						
GAMB	Gambell	79.54	1	*e*P	P	17 15 28.9	+0.5
	comp=Z,8.2nm,1.1s						
E09A	Wood Farm, Sta	79.60	35	*e*P	P	17 15 28.8	-0.3
	comp=Z,8.4nm,0.9s						
Q16A	Castle Valley	79.73	45	*e*P	P	17 15 30.2	-0.1
	comp=Z,5.8nm,0.7s						
F10A	Beach Ranch, E	79.80	36	*e*P	P	17 15 29.8	-0.5
	comp=Z,15nm,0.8s						
TMUT	Trail Mountain	79.90	44	*e*P	P	17 15 32.0	+0.7
	comp=Z,18nm,1.0s						
B08A	Colville Reser	80.08	33	*e*P	P	17 15 31.0	-0.7
	comp=Z,13nm,1.1s						
HLID	Hailey	80.09	39	*e*P	P	17 15 31.8	-0.3
	comp=Z,13nm,1.0s						
SPUT	South Promonto	80.11	42	*e*P	P	17 15 32.2	0.0
	comp=Z,17nm,1.6s						
HVU	Hansel Valley	80.15	41	*e*P	P	17 15 32.2	-0.2
	comp=Z,7.8nm,0.7s						
HVU	Hansel Valley	80.15	41	*e*P	P	17 15 32.2	-0.2
HVU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SRU	San Rafael Swe	80.27	45	*e*P	P	17 15 33.2	+0.1
	comp=Z,11nm,1.1s						
SRU	San Rafael Swe	80.27	45	*e*P	P	17 15 33.2	+0.1
SRU				pmax	pmax		
	comp=Z,11nm,1.1s						
P17A	Butcher Ranch,	80.30	44	*e*P	P	17 15 33.2	-0.1
	comp=Z,12nm,1.0s						
C09A	Chrisman Ranch	80.30	34	*e*P	P	17 15 32.7	-0.2
	comp=Z,10nm,0.9s						
JLU	Jordanelle	80.40	43	*e*P	P	17 15 33.5	-0.4
	comp=Z,9.9nm,1.2s						
LENM	Lemitar	80.45	50	*e*P	P	17 15 34.1	-0.2
NJ2	Nanjing	80.54	307	*e*P	P	17 15 35.1	+0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ANM	Nome	80.56	3	*e*P	P	17 15 34.1	+0.2
	comp=Z,6.5nm,1.2s						
ANM	Nome	80.56	3	*e*P	P	17 15 34.1	+0.2
ANM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MNTX	Cornudas Mount	80.58	53	*e*P	P	17 15 34.2	-0.5
	comp=Z,15nm,1.4s						
TCUT	Toone Canyon	80.69	43	*e*P	P	17 15 35.4	0.0
	comp=Z,24nm,0.9s						
PV05	Paradox Valley	80.74	46	*e*P	P	17 15 36.5	+0.8
	comp=Z,12nm,0.9s						
MA2	Magadan	80.75	342	*e*P	P	17 15 34.7	-0.3
	comp=Z,7.4nm,1.3s						
MA2	Magadan	80.75	342⇑	*i*P	P	17 15 34.6	-0.4
MA2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MA2	Magadan	80.75	342	P	P	17 15 35.3	+0.3
	comp=Z,1.5nm,0.5s,baz=153,slow=7.9,SNR=5.9						
PV09	Paradox Valley	80.92	46	*e*P	P	17 15 36.8	0.0
PV10	Paradox Valley	80.92	46	*e*P	P	17 15 36.7	0.0
	comp=Z,14nm,0.8s						
PV19	Morning Glory	80.93	46	*e*P	P	17 15 37.1	+0.4
	comp=Z,12nm,1.0s						
PV14	Lion Creek, Pa	80.93	46	*e*P	P	17 15 36.6	-0.2
	comp=Z,14nm,0.9s						
PV17	East Wray Mesa	80.93	46	*e*P	P	17 15 36.6	-0.1
	comp=Z,38nm,1.6s						
TXAR	Lajitas Array	80.94	56	P	P	17 15 36.9	+0.1
	comp=Z,2.1nm,0.8s,baz=222,slow=6.7,SNR=17						
LTX	Lajitas	80.94	56	*e*P	P	17 15 36.9	+0.1
PV20	West Nyswonger	80.95	46	*e*P	P	17 15 36.9	0.0
	comp=Z,13nm,1.0s						
PV13	Radium Mtn., P	80.97	46	*e*P	P	17 15 37.2	+0.3
	comp=Z,12nm,1.1s						
PV16	Nyswonger Mesa	80.97	46	*e*P	P	17 15 36.8	-0.1
	comp=Z,4.3nm,0.7s						
PV23	Carpenter Ridg	80.98	46	*e*P	P	17 15 36.6	-0.5
	comp=Z,16nm,0.8s						
PV03	Paradox Valley	81.00	46	*e*P	P	17 15 36.7	-0.4
	comp=Z,14nm,1.2s						
PV11	David Mesa, Pa	81.00	46	*e*P	P	17 15 35.3	-1.8
	comp=Z,27nm,1.4s						
PV04	Paradox Valley	81.02	46	*e*P	P	17 15 37.1	-0.1
	comp=Z,11nm,0.8s						
PV02	Paradox Valley	81.05	46	*e*P	P	17 15 37.2	-0.2
	comp=Z,14nm,1.3s						
PV21	Cone Mtn., Par	81.05	46	*e*P	P	17 15 37.4	0.0
	comp=Z,14nm,0.8s						
PV12	Saucer Basin,	81.06	46	*e*P	P	17 15 37.3	-0.2
	comp=Z,35nm,1.5s						
PV01	Paradox Valley	81.13	46	*e*P	P	17 15 37.8	0.0
	comp=Z,8.7nm,0.8s						
ANMO	Albuquerque	81.18	50	*e*P	P	17 15 38.1	0.0
	comp=Z,8.0nm,1.1s						
ANMO	Albuquerque	81.18	50	*e*P	P	17 15 38.1	0.0
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RND	Reindeer	81.43	11	*e*P	P	17 15 38.5	-0.1
	comp=Z,9.8nm,0.8s						
RND	Reindeer	81.43	11	*e*P	P	17 15 38.5	-0.1
RND				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MCK	McKinley	81.72	11	*e*P	P	17 15 39.4	-0.6
	comp=Z,21nm,0.9s						
MCK	McKinley	81.72	11	*e*P	P	17 15 39.4	-0.6
MCK				pmax	pmax		
	comp=Z,21nm,0.9s						
DLMT	Dillon	82.15	38	*e*P	P	17 15 43.0	0.0
	comp=Z,24nm,1.6s						
MSO	Missoula	82.16	37	*e*P	P	17 15 41.4	-1.5
	comp=Z,17nm,1.4s						
S22A	4UR Ranch, Cre	82.17	47	*e*P	P	17 15 43.4	0.0
	comp=Z,15nm,0.8s						
REDW	Red Top Meadow	82.18	41	*e*P	P	17 15 43.0	-0.3
	comp=Z,19nm,1.4s						
TPAW	Teton Pass	82.19	41	*e*P	P	17 15 42.6	-0.7
	comp=Z,22nm,1.5s						
FXWY	Fox Creek	82.22	40	*e*P	P	17 15 43.1	-0.3
	comp=Z,11nm,1.3s						
IMW	Indian Meadow	82.40	40	*e*P	P	17 15 44.4	0.0
	comp=Z,32nm,1.7s						
MOOW	Moose Ponds	82.45	40	*e*P	P	17 15 43.8	-0.8
	comp=Z,10nm,1.6s						
LOHW	Long Hollow	82.47	41	*e*P	P	17 15 43.9	-0.8
	comp=Z,25nm,1.8s						
FLWY	Flagg Ranch	82.64	40	*e*P	P	17 15 46.1	+0.5
	comp=Z,17nm,1.1s						
YPP	Pitchstone Pla	82.68	40	*e*P	P	17 15 46.4	+0.5

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              comp=Z,16nm,1.8s
YHB    Horse Butte        82.68  39  eP        P        17 15 45.4 -0.4
              comp=Z,13nm,1.0s
BW06   Boulder Array      82.71  42  eP        P        17 15 45.1 -0.9
              comp=Z,7.1nm,0.9s
PD31   Pinedale Array     82.71  42  eP        P        17 15 45.3 -0.7
              comp=Z,6.4nm,0.8s
PDAR   Pinedale Array     82.71  42   P        P        17 15 45.3 -0.7
              comp=Z,5.4nm,0.8s,baz=217,slow=3.4,SNR=50
SMCO   Snowmass           82.72  46  eP        P        17 15 46.1 -0.3
              comp=Z,33nm,1.5s
YMR    Madison River      82.78  40  eP        P        17 15 46.6 +0.3
              comp=Z,14nm,0.3s
BOZ    Bozeman (W)        82.86  39  eP        P        17 15 46.5 -0.1
              comp=Z,14nm,1.3s
BOZ    Bozeman (W)        82.86  39  eP        P        17 15 46.5 -0.1
BOZ                                   pmax     pmax
              comp=Z,14nm,1.3s
H17A   Grant Village      82.88  40  eP        P        17 15 48.0 +1.1
              comp=Z,5.8nm,0.8s
YHH    Holmes Hill        82.91  40  eP        P        17 15 47.5 +0.4
              comp=Z,8.2nm,1.0s
COLA   College            82.95  11c iP        P        17 15 46.0 -0.4
COLA                                  pmax     pmax
              comp=Z,16nm,0.8s
ILAR   Eielson Array      83.04  11   P        P        17 15 46.2 -0.6
              comp=Z,3.7nm,0.7s,baz=229,slow=6.2,SNR=103
ILB    Eielson Array      83.04  11  eP        P        17 15 45.9 -1.0
              comp=Z,48nm,1.8s
LKWY   Lake               83.08  40  eP        P        17 15 49.0 +1.2
              comp=Z,11nm,0.9s
SEY    Seymchan           83.11 345⇑eP        P        17 15 46.8 -0.5
SEY    Seymchan           83.11 345   P        P        17 15 47.5 +0.2
              comp=Z,5.9nm,0.8s,baz=147,slow=4.9,SNR=21
SDCO   Great Sand Dun     83.11  48  eP        P        17 15 47.6 -0.7
              comp=Z,11nm,1.3s
MSTX   Muleshoe           83.52  52  eP        P        17 15 49.5 -0.7
              comp=Z,16nm,0.9s
RWWY   Rawlins            83.72  44  eP        P        17 15 49.6 -1.7
              comp=Z,19nm,0.9s
ISCO   Idaho Springs      83.94  46  eP        P        17 15 52.4 -0.1
              comp=Z,3.2nm,0.8s
ISCO   Idaho Springs      83.94  46  eP        P        17 15 52.4 -0.1
ISCO                                  pmax     pmax
              comp=Z,3.0nm,0.8s
PRP    Porcupine Dome     83.97  11  eP        P        17 15 51.9  0.0
              comp=Z,13nm,0.8s
DAWY   Dawson             84.00  14  eP        P        17 15 52.1 +0.2
              comp=Z,12nm,0.8s
RLMT   Red Lodge          84.05  40  eP        P        17 15 52.9 +0.1
              comp=Z,11nm,1.0s
N23A   Red Feather La     84.21  45  eP        P        17 15 53.0 -0.8
              comp=Z,16nm,1.0s
EGAK   Eagle              84.21  13  eP        P        17 15 52.4 -0.5
              comp=Z,9.4nm,1.0s
AMTX   Amarillo           84.71  52  eP        P        17 15 55.3 -0.9
              comp=Z,21nm,0.8s
COLD   Coldfoot           84.74   9  eP        P        17 15 56.3 +0.8
              comp=Z,20nm,2.0s
BILL   Bilibino           85.11 352  eP        P        17 15 57.3 -0.1
              comp=Z,15nm,1.2s
BILL   Bilibino           85.11 352ceP        P        17 15 57.5 +0.2
BILL                                 e                  17 19 11.6
BILL                                  pmax     pmax
              comp=Z,14nm,1.2s
BILL                                  MLR      MLR
              comp=Z,98nm,17.0s
EGMT   Eagleton           85.20  37  eP        P        17 15 58.0 -0.4
              comp=Z,17nm,1.5s
ABTX   Abilene, Hawle     85.40  54  eP        P        17 15 59.0 -0.6
              comp=Z,26nm,0.9s
TOLK   Toolik Lake Re     86.14   9  eP        P        17 16 03.4 +0.9
              comp=Z,6.5nm,1.0s
RSSD   Black Hills        86.90  42  eP        P        17 16 05.8 -1.2
              comp=Z,3.2nm,0.7s
RSSD   Black Hills        86.90  42  eP        P        17 16 05.8 -1.2
RSSD                                  pmax     pmax
              comp=Z,3.0nm,0.7s
HKT    Hockley            87.49  58⇓eP        P        17 16 10.7 +0.9
HKT                                   pmax     pmax
              comp=Z,9.0nm,1.4s
HIA    Hailar             87.69 323⇑eP        P        17 16 10.3 -0.1
HIA                                   pmax     pmax
              comp=Z,2.0nm,0.6s
HHC    Hu-ho-hao-te       89.45 313  eP        P        17 16 18.1 -1.0
HHC                                   pmax     pmax
              comp=Z,4.0nm,1.2s
HHC                                   pmax     pmax
              comp=Z,100nm,6.6s
YKA    Yellowknife Ar     90.65  23  eP        P        17 16 23.9  0.0
YKA                                   pmax     pmax
              comp=Z,2.0nm,1.0s
YKA    Yellowknife Ar     90.65  23   P        P        17 16 23.8 -0.2
              comp=Z,2.1nm,0.9s,baz=236,slow=4.4,SNR=21
YKB5   Yellowknife Ar     90.65  23  eP        P        17 16 23.4 -0.6
JTS    JuntasAbangare     91.30  80c iP        P        17 16 29.0 +0.8
CD2    Chengdu            92.14 301  eP        P        17 16 31.0 -0.7
FFC    Flin Flon          92.60  33  i P       P        17 16 33.7 +0.5
CMAR   Chiang Mai Arr     92.82 288  eP        P        17 16 37.2 +2.1
CMAR                                  pmax     pmax
              comp=Z,2.0nm,0.9s
CMAR   Chiang Mai Arr     92.82 288   P        P        17 16 37.1 +2.0
              comp=Z,1.7nm,0.9s,baz=91,slow=2.6,SNR=15
CHTO   Chiang Mai         92.92 289   P        P        17 16 37.0 +1.5
CHTO                                  pmax     pmax
              comp=Z,4.0nm,1.8s
NVL    N'lazarevskaya     93.37 182  eP        P        17 16 47.7  +11
NVL                                   pmax     pmax
              comp=Z,1.0nm,0.5s
LZH    Lanzhou            93.60 306  eP        P        17 16 38.6 +0.1
LZH                                   pP       PcP      17 16 48.3 +9.3
LZH                                   sP       pP       17 16 52.6 -6.9
LZH                                   pmax     pmax
              comp=Z,10.0nm,1.1s
ULM    Lac du Bonnet      94.39  39  eP        P        17 16 40.7 -0.9
ULM                                   pmax     pmax
              comp=Z,2.0nm,0.8s
ULM    Lac du Bonnet      94.39  39   P        P        17 16 40.2 -1.4
              comp=Z,2.1nm,0.8s,baz=243,slow=4.5,SNR=3.6
GTA    Gaotai             97.57 309  eP        Pdif     17 16 59.0 +2.5
GTA                                   pP       PcP      17 17 03.4 +6.9
GTA                                   sP       P        17 17 06.3  +10
GTA                                   pmax     pmax
              comp=Z,1.0nm,0.9s
BVAR   Borovoye Array    118.37 322   PKP      PKiKP    17 22 09.1 +0.3
              comp=Z,1.2nm,0.7s,baz=90,slow=1.5,SNR=11
BRVK   Borovoye          118.43 322⇑iPKIKP    PKiKP    17 22 09.2 +0.3
ARU    Arti              123.87 328c iPKIKP   PKiKP    17 22 19.3 -0.2
ARU                                   pmax     pmax
              comp=Z,10.0nm,2.5s
ARA0   ARCESS Array S    125.21 352  ePKPdf    PKiKP    17 22 22.3 +0.4
ARCES  ARCESS Array B    125.21 352   PKP      PKiKP    17 22 22.3 +0.4
              comp=Z,6.3nm,0.8s,baz=48,slow=1.8,SNR=13
PRGR   Permogore         126.70 338  ePKIKP    PKPpre   17 22 20.1
PRGR                                  pmax     pmax
              comp=Z,5.0nm,0.8s
FIA0   FINESS Array S    132.54 347  ePKPdf    PKiKP    17 22 36.5 -0.2
FIA0   FINESS Array S    132.54 347  ePKIKP    PKiKP    17 22 36.5 -0.2
FINES  FINESS Array B    132.54 347  ePKIKP    PKiKP    17 22 37.1 +0.4
FINES                                 pmax     pmax
              comp=Z,3.0nm,0.6s
FINES  FINESS Array B    132.54 347   PKP      PKiKP    17 22 36.5 -0.2
              comp=Z,3.0nm,0.6s,baz=39,slow=3.7,SNR=16
OBN    Obninsk           134.68 336⇑iPKIKP    PKiKP    17 22 41.3 +0.1
OBN                                  e                  17 25 14.9
OBN                                   pmax     pmax
              comp=Z,33nm,2.2s
GNI    Garni             139.11 314⇓ePKIKP    PKPdf    17 22 47.4 -1.3
AK11   Malin Array Si    140.94 337  ePKPdf    PKPdf    17 22 51.4 -0.1
OJC    Ojcow             144.25 345  ePKP      PKPdf    17 22 57.1 -0.3
OJC    Ojcow             144.25 345  ePKPdf    PKPdf    17 22 56.1 -1.3
OJC    Ojcow             144.25 345  ePKIKP    PKPdf    17 22 57.1 -0.3
CLL    Collm             144.42 353  ePKPdf    PKPdf    17 22 56.6 -1.0
CLL    Collm             144.42 353⇑iPKPdf    PKPdf    17 22 57.0 -0.6
              comp=Z,6.0nm,0.8s
CLL                                  e                  17 23 12.0
CLL    Collm             144.42 353⇑iPKIKP    PKPdf    17 22 57.0 -0.6
CLL                                  e                  17 23 12.0
CLL                                   pmax     pmax
              comp=Z,6.0nm,0.8s
DPC    Dobruska-Polom    144.86 349  ePKP      PKPdf    17 22 59.0 +0.5
DPC    Dobruska-Polom    144.86 349  ePKIKP    PKPdf    17 22 59.0 +0.5
NIE    Niedzica          144.87 344  ePKP      PKPdf    17 22 59.3 +0.8
NIE    Niedzica          144.87 344  ePKIKP    PKPdf    17 22 59.3 +0.8
BUR08  Bucovina Ar. S    144.92 338  ePKPbc    PKPdf    17 22 58.7 -0.1
BUR04  Bucovina Ar. S    144.94 338  ePKPbc    PKPdf    17 22 58.9 +0.1
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BURAR  Bucovina Array    144.94 338⇑iP        PKPdf    17 22 58.4 -0.4
BURAR  Bucovina Array    144.94 338 ⇑PKIKP    PKPdf    17 22 58.4 -0.4
UZH    Uzhgorod          145.02 342⇓iPKIKP    PKPdf    17 22 59.5 +0.8
KRLC   Kraliky           145.04 349  ePKP      PKiKP    17 23 00.2 -2.5
KRLC   Kraliky           145.04 349  ePKIKP    PKiKP    17 23 00.2 -2.5
BIZ    Bicaz             145.17 336⇑iP        PKPdf    17 23 00.2 +1.1
MORC   Moravsky Berou    145.17 348  ePKPbc    PKPdf    17 22 58.7 -0.4
MORC   Moravsky Berou    145.17 348⇑iP        PKPdf    17 22 59.6 +0.5
MORC   Moravsky Berou    145.17 348  ePKIKP    PKPdf    17 22 58.7 -0.4
MORC   Moravsky Berou    145.17 348  ePKP      PKPdf    17 22 59.5 +0.5
TESR   Tescani           145.31 335⇓iP        PKPab    17 23 00.2 +0.8
LANS   Liptovska Anna    145.32 345  ePKIKP    PKiKP    17 23 00.8 -2.5
LANS   Liptovska Anna    145.32 345  ePKP      PKiKP    17 23 00.8 -2.5
TRPA   Tarpa             145.39 341⇓iP        PKPab    17 23 00.5 +0.9
PRU    Pruhonice         145.50 351  ePKP      PKPab    17 23 00.6 +0.6
PRU    Pruhonice         145.50 351  ePKIKP    PKPab    17 23 00.6 +0.6
GOPC   GO Pecny, Ondr    145.54 351  ePKP      PKPab    17 23 00.9 +0.7
GOPC   GO Pecny, Ondr    145.54 351  ePKIKP    PKPab    17 23 00.9 +0.7
CFR    Carcaliu          145.75 333⇓iP        PKPab    17 23 01.8 +0.7
CFR    Carcaliu          145.75 333 ⇓PKIKP    PKPab    17 23 01.8 +0.7
VRI    Vrincioaia        145.80 335⇑iP        PKPab    17 23 01.7 +0.4
VRI    Vrincioaia        145.80 335 ⇑PKIKP    PKPab    17 23 01.7 +0.4
VRAC   Vranov            145.81 348⇑iP        PKPab    17 23 01.6 +0.4
VRAC   Vranov            145.81 348 ⇑PKIKP    PKPab    17 23 01.7 +0.5
VRAC   Vranov            145.81 348  ePKP      PKPab    17 23 01.6 +0.4
KRUC   Moravsky          146.08 348  ePKP      PKPab    17 23 02.2  0.0
VYHS   Vyhne             146.09 345  ePKP2     PKPab    17 23 02.8 +0.5
VYHS   Vyhne             146.09 345  ePKP      PKPab    17 23 02.8 +0.5
TLB    Topalu            146.25 332⇑iP        PKiKP    17 23 03.9 -1.3
TLB    Topalu            146.25 332 ⇑PKP2     PKiKP    17 23 03.9 -1.3
PSZ    Piszkesteto       146.35 344  ePKPdf    PKPbc    17 23 01.3 -1.2
PSZ    Piszkesteto       146.35 344 ⇑PKP2     PKiKP    17 23 04.2 -1.3
MLR    Muntele Rosu      146.43 335 ⇑PKP2     PKPab    17 23 03.9  0.0
KHC    Kasperske Hory    146.48 352  ePKPdf    PKPdf    17 23 00.6 -0.8
KHC    Kasperske Hory    146.48 352  ePKP      PKPab    17 23 03.9 +0.1
KHC    Kasperske Hory    146.48 352  ePKP2     PKPab    17 23 03.9 +0.1
DRGR                     146.51 340⇓iP        PKPab    17 23 03.9 -0.2
DRGR                     146.51 340 ⇓PKP2     PKPab    17 23 03.9 -0.2
MODS   Modra-Piesok      146.56 347  ePKP2     PKiKP    17 23 04.9 -0.9
MODS   Modra-Piesok      146.56 347  ePKP      PKiKP    17 23 04.9 -0.9
BR101  Keskin Array S    146.64 320  ePKPbc    PKPab    17 23 04.7 -0.3
BR131  Keskin Array S    146.64 320  ePKPbc    PKiKP    17 23 05.1 -1.4
BRTR   Keskin Array B    146.64 320   PKPbc    PKPab    17 23 04.7 -0.3
              comp=Z,3.3nm,0.8s,baz=116,slow=2.8,SNR=14
GEC2   GERESS Array S    146.74 351  ePKPbc    PKPab    17 23 04.4 -0.5
GEC2   GERESS Array S    146.74 351  ePKP2     PKPab    17 23 04.4 -0.5
GERES  GERESS Array B    146.74 351  ePKP2     PKPab    17 23 04.6 -0.3
GERES                                 pmax     pmax
              comp=Z,3.0nm,0.7s
GERES  GERESS Array B    146.74 351   PKPbc    PKPab    17 23 04.3 -0.6
              comp=Z,2.7nm,0.7s,baz=29,slow=3.0,SNR=25
GEA0   GERESS Array S    146.75 351  ePKPbc    PKPab    17 23 04.2 -0.8
VOIR                     146.83 336⇑iP        PKiKP    17 23 05.9 -0.6
VOIR                     146.83 336 ⇑PKP2     PKiKP    17 23 06.0 -0.6
ARR    Arges             147.05 336⇑iP        PKPab    17 23 05.7 -0.5
CONA   Conrad Observa    147.27 348  i PKPab   PKiKP    17 23 06.5 -0.9
              comp=Z,6.3nm,0.6s
SIRR   Siria             147.32 341⇑iP        PKPab    17 23 06.4 -0.8
MOA    Molln             147.63 350  i PKPbc   PKiKP    17 23 06.4 -1.7
              comp=Z,4.0nm,0.6s
GZR    Gura Zlata        147.71 338⇓iP        PKiKP    17 23 07.2 -1.2
GZR    Gura Zlata        147.71 338 ⇓PKIKP    PKiKP    17 23 07.2 -1.2
BFO    Black Forest      147.74 358  ePKPbc    PKiKP    17 23 06.7 -1.6
BFO    Black Forest      147.74 358  i PKP2    PKiKP    17 23 07.4 -0.9
BZS    Buzias            147.91 340⇑iP        PKiKP    17 23 07.8 -0.9
BZS    Buzias            147.91 340 ⇑PKP2     PKiKP    17 23 07.8 -0.9
ARSA   Arzberg           147.99 349  i PKiKP   PKiKP    17 23 08.6 -0.2
              comp=Z,2.8nm,0.8s
HERR   Herculane         148.28 338⇑iP        PKiKP    17 23 08.6 -0.9
RETA   Reutte            148.43 355  i PKiKP   PKiKP    17 23 09.3 -0.5
              comp=Z,2.1nm,0.5s
WATA   Walderalm         148.50 354  i PKiKP   PKiKP    17 23 09.6 -0.5
              comp=Z,4.7nm,0.5s
KBA    Koelnbreinsper    148.52 351  i PKiKP   PKiKP    17 23 09.4 -0.7
              comp=Z,2.4nm,0.4s
MOTA   Moosalm           148.53 354  i PKiKP   PKiKP    17 23 09.9 -0.2
              comp=Z,5.6nm,0.7s,SNR=5.5
WTTA   Wattenberg        148.56 353  i PKiKP   PKiKP    17 23 09.7 -0.5
              comp=Z,10nm,0.6s
MDVR   Moldovita         148.61 339⇑iP        PKiKP    17 23 10.5 +0.3
SOKA   Soboth            148.63 349  i PKiKP   PKiKP    17 23 09.4 -0.8
              comp=Z,5.6nm,0.8s
SQTA   Sankt Quirin      148.65 354  i PKiKP   PKiKP    17 23 10.0 -0.3
              comp=Z,2.8nm,0.6s
DAVA   Damuels           148.70 356  i PKiKP   PKiKP    17 23 10.3 -0.2
              comp=Z,8.5nm,0.8s,SNR=5.2
OBKA   Obir              148.88 349  i PKPbc   PKPbc    17 23 09.0 -0.4
              comp=Z,3.4nm,0.7s
FETA   Feichten          148.89 355  i PKiKP   PKiKP    17 23 10.7 -0.1
              comp=Z,4.3nm,0.7s
MYKA   Terra Mystica     148.91 351  i PKiKP   PKiKP    17 23 09.8 -1.0
              comp=Z,4.2nm,0.5s
ABTA   Abfaltersbach     148.96 352  i PKiKP   PKiKP    17 23 10.2 -0.8
              comp=Z,9.7nm,0.6s
FUORN  Ofenpass-Fuorn    149.33 355  ePKPbc    PKiKP    17 23 11.6 -0.3
DIVS   Divibare          149.79 341  ePKPbc    PKiKP    17 23 12.4 -0.3
VTS    Vitosha           149.90 335  ePKPbc    PKiKP    17 23 13.4 +0.4
VTS    Vitosha           149.90 335⇑iP        PKiKP    17 23 13.4 +0.4
VTS    Vitosha           149.90 335  ePKP2     PKiKP    17 23 13.5 +0.4
BNI    Bardonecchia      151.05 360  ePKPbc    PKiKP    17 23 16.3 +0.9
BNI    Bardonecchia      151.05 360  ePKIKP    PKiKP    17 23 16.3 +0.9
ESDC   Sonseca Array     154.68  19   PKPbc    PKiKP    17 23 24.1 +1.2
              comp=Z,0.2nm,0.4s,baz=335,slow=2.8,SNR=3.9
ESDC                                  PKPab    PKPab    17 23 38.3 +0.4
              comp=Z,0.2nm,0.3s,baz=320,slow=3.2,SNR=4.9
TOA1   Torodi Ar. Sit    174.45 120  ePKPdf    PKPdf    17 23 32.0 -0.1
TOA1                                 ePKPab    PKPab    17 25 04.9 -0.4
TORD   Torodi Ar. Bea    174.45 120   PKP      PKPdf    17 23 32.0 -0.1
              comp=Z,0.9nm,0.8s,baz=308,slow=1.1,SNR=5.9
TORD                                  PKPab    PKPab    17 25 04.9 -0.4
              comp=Z,1.9nm,0.9s,baz=288,slow=5.1,SNR=7.5
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KRNET ***14*** *17:14:14.4±0.1, 42.̊59N×79.̊64E, h16km, mb2.3*
NNC ***14*** *17:14:15.4±1.4, 42.̊68N×79.̊68E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=9.5km s-min=5.3km az=154.0*
SOME ***14*** *17:14:16.9, 42.̊75N×79.̊65E, h15km*
ISC 14 17:14:14.5±1.7**, 42.̊65N**±0.̊05×**79.̊70E**±0.̊04**, h4**km±11km**,**
n33, σ1.̊**70**/60**, 10C-12D, Lake Issyk-Kul region**

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Code   Station Name        Δ°   AZ°    Phase ID              Time     Res
                                       Op       ISC       h  m  s    ISC
PDGK   Podgornoye         0.70 347   P        Pg        17 14 28.3 +0.4
              2.4nm,0.1s
PDGK                                 S        Sg        17 14 36.8 -0.2
              8.7nm,0.3s
PDGK   Podgornoye         0.70 347  ⇓P        Pg        17 14 28.3 +0.4
              0.9nm,0.3s
PDGK                                ⇑S        Sn        17 14 38.9 -3.6
              6.0nm,0.3s
PDGK   Podgornoye         0.70 347⇓iP         Pg        17 14 28.3 +0.4
              baz=52
PDGK                              ⇓iS         Sn        17 14 39.1 -3.4
              baz=52
UZB    Uzynbulak          0.70 315   P        Pg        17 14 29.0 +1.0
              1.2nm,0.1s
UZB                                  S        Sb        17 14 38.0 -1.5
              10nm,0.2s
UZB    Uzynbulak          0.70 315  eP        Pg        17 14 29.0 +1.0
              baz=21
UZB                                 eS        Sb        17 14 38.0 -1.5
              baz=21
UZB    Uzynbulak          0.70 315  eP        Pg        17 14 29.0 +1.0
              1.2nm,0.1s
UZB                                 eS        Sb        17 14 38.0 -1.5
              10nm,0.2s
KTMS   Ketmen             0.93  31   P        Pb        17 14 32.8 -0.5
              2.5nm,0.1s
KTMS                                 S        Sg        17 14 44.6 +0.2
              10nm,0.3s
KTMS   Ketmen             0.93  31  eP        Pb        17 14 32.8 -0.5
              2.5nm,0.1s
KTMS                                eS        Sg        17 14 44.6 +0.2
              10nm,0.3s
PRZ    Przheval'sk        0.97 261⇓iP         Pb        17 14 31.5 -2.5
              baz=64
PRZ                               ⇓iS         Sb        17 14 44.2 -3.1
              baz=64
MNBS   Baschi             1.71 327   P        Pb        17 14 46.4 -0.1
              2.1nm,0.3s
MNBS                                 S        Sg        17 15 08.0 -1.6
              11nm,0.2s
MNBS   Baschi             1.71 327  eP        Pb        17 14 46.5 -0.1
              2.1nm,0.3s
MNBS                                eS        Sg        17 15 08.1 -1.5
              11nm,0.2s
KDJ    Kajisay            1.94 255⇑iP         Pn        17 14 48.6 +0.3
              baz=57
KDJ                               ⇑iS         Sn        17 15 13.8 +0.6
              baz=57
KOTS   Kotyrbulak         1.99 288   Pg       Pb        17 14 52.5 +1.2
              1.5nm,0.2s
KOTS                                 Lg       Lg        17 15 18.1
              9.0nm,0.3s
TNSS   Tian-Shan          2.06 282   Pg       Pb        17 14 52.9 +0.2
              1.3nm,0.2s
TNSS                                 Lg       Lg        17 15 18.9
              2.1nm,0.3s
TNSS   Tian-Shan          2.06 282  eP        Pb        17 14 52.5 -0.2
              baz=84
TNSS                                eS        Sb        17 15 17.9 -0.9
              baz=84
TNSS   Tian-Shan          2.06 282  eP        Pb        17 14 52.5 -0.2
              0.7nm,0.2s
TNSS                                eS        Sb        17 15 17.9 -0.9
              2.1nm,0.3s
IZV    Izvestkoviy        2.30 281   Pg       Pb        17 14 56.1 -0.6
              2.0nm,0.2s
IZV                                  Lg       Lg        17 15 24.7
              4.4nm,0.1s
IZV    Izvestkoviy        2.30 281  eP        Pb        17 14 56.9 +0.2
              1.8nm,0.1s
IZV                                 eS        Sb        17 15 25.3 -0.2
              4.4nm,0.1s
CHKK   Chushkaly          2.32 302  eP        Pb        17 14 57.3 +0.4
              0.8nm,0.3s
CHKK                                eS        Sb        17 15 26.5 +0.7
              5.3nm,0.2s
KTBS   Karatobe           2.45 297   Pg       Pb        17 14 58.9 -0.2
              1.5nm,0.3s
KTBS                                 Lg       Lg        17 15 29.1
              6.2nm,0.3s
KTBS   Karatobe           2.45 297  eP        Pb        17 14 59.8 +0.7
              baz=97
KTBS                                eS        Sb        17 15 30.2 +0.6
              baz=97
KTBS   Karatobe           2.45 297  eP        Pb        17 14 59.8 +0.7
              1.5nm,0.3s
KTBS                                eS        Sb        17 15 30.1 +0.6
              6.2nm,0.3s
ULHL   Ulahol             2.59 262⇓iP         Pn        17 14 58.2 +0.8
              baz=63
ULHL                              ⇓iS         Sn        17 15 30.2 +0.8
              baz=63
KAPS   Kapalarasan        2.65 355   Pg       Pb        17 15 03.6 +1.1
              0.6nm,0.2s
KAPS                                 Lg       Lg        17 15 37.2
              4.5nm,0.4s
KAPS   Kapalarasan        2.65 355  eP        Pb        17 15 03.6 +1.1
              0.6nm,0.2s
KAPS                                eS        Sg        17 15 37.2 -2.3
              4.5nm,0.4s
KUU    Kurty              2.75 298   Pg       Pb        17 15 04.0 -0.2
              0.3nm,0.2s
KUU                                  Lg       Lg        17 15 37.9
              3.9nm,0.5s
KUU    Kurty              2.75 298  eP        Pb        17 15 04.4 +0.2
              0.3nm,0.3s
KUU                                 eS        Sb        17 15 38.2 -0.1
              3.9nm,0.5s
BOOM   Boomskoye usch     2.78 268⇑iP         Pn        17 15 00.6 +0.7
              baz=69
BOOM                              ⇑iS         Sn        17 15 34.7 +0.7
              baz=69
NRN    Naryn              3.01 247⇓iP         Pn        17 15 03.7 +0.5
              baz=48
NRN                               ⇓iS         Sn        17 15 40.3 +0.4
              baz=48
TKM2   Tokmak 2           3.03 277⇑eP         Pn        17 15 04.5 +1.1
              baz=78
TKM2                              ⇑iS         Sn        17 15 41.5 +1.3
              baz=78
KZA    Kyzart             3.35 262⇑iP         Pn        17 15 08.4 +0.5
              baz=63
KZA                               ⇑iS         Sn        17 15 48.4 +0.1
              baz=63
MAKZ   Makanchi           4.46  21  ⇑Pn       Pn        17 15 25.8 +2.9
              0.2nm,0.2s
MAKZ                                ⇓Sn       Sn        17 16 19.4 +4.1
              0.3nm,0.6s
MAKZ                                ⇓Lg       Lg        17 16 34.2
              0.2nm,0.6s
MK31   Makanchi Array     4.54  23   Pn       Pn        17 15 26.5 +2.6
              0.1nm,0.3s,baz=168,slow=14,SNR=6.9
MK31                                 Sn       Sb        17 16 22.3 -7.3
              0.1nm,0.3s,baz=204,slow=25,SNR=4.9
MK31                                ⇓Lg       Lg        17 16 40.9
              baz=202,slow=27,SNR=4.5
```

IDC ***14*** *17:17:08.5±1.5, 36.̊62N×141.̊80E, h0km, mb3.8/4, mb1 3.8/8, mb1mx3.6/59, mbtmp3.8/8, ML3.2/4, Error ellipse: s-maj=35.5km s-min=19.6km az=75.0*
ISCJB ***14*** *17:17:09.0±1.1, 36.̊69N±0.̊03×141.̊78E±0.̊06, h21km±7km, mb4.4/11, Error ellipse: s-maj=8.4km s-min=5.5km az=8.4*
JMA ***14*** *17:17:10.2±0.2, 36.̊69N×141.̊72E, h35km±4km, M3.8*
NEIC ***14*** *17:17:12.3±0.9, 36.̊66N×141.̊79E, h35km±8km, mb4.6/7, Error ellipse: s-maj=12.1km s-min=9.4km az=108.0*
ISC 14 17:17:08.4±3.5**, 36.̊70N**±0.̊05×**141.̊76E**±0.̊07**, h7**km±22km**,**
n41, σ1.̊**34**/43**, mb4.3**/11**, Near east coast of eastern Honshu**

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Code   Station Name        Δ°   AZ°    Phase ID              Time     Res
                                       Op       ISC       h  m  s    ISC
ONAJ   Iwakimizuishiy     0.87 298   P        Pb        17 17 25.7 -0.1
JHO    Hitachi            0.96 265   P        Pb        17 17 26.8 -0.6
JHO                                  S        Sb        17 17 39.1 -1.2
JFK    Kawauchi           0.97 314   P        Pb        17 17 27.1 -0.5
JHYU   Hitachinakayam     1.01 250   P        Pb        17 17 27.9 -0.3
JHYU                                 S        Sb        17 17 40.1 -1.5
JFFD   Fukushimafurud     1.04 293   P        Pb        17 17 28.0 -0.7
JMM    Marumori           1.40 327   P        Pn        17 17 33.4 -0.9
JMM                                 eS        Sn        17 17 51.0 -2.0
JFT    Otama              1.40 306   P        Pn        17 17 34.3 -0.1
JIO    Ouri               1.78 350   P        Pn        17 17 38.8 -0.8
JFY    Yanaizu            1.79 294   P        Pn        17 17 40.3 +0.6
JAG    Ashikaga           1.88 262   P        Pn        17 17 40.4 -0.5
JOU    Okura              1.88 333   P        Pn        17 17 41.3 +0.3
JOU                                 eS        Sn        17 18 04.2 -0.8
MJAR   Matsushiro Arr     2.86 268   Pn       Pn        17 17 55.0 +0.6
              2.0nm,0.3s,baz=94,slow=13,SNR=121
MAJO   Matsushiro         2.86 268  ePn       Pn        17 17 55.6 +1.2
MAT    Matsushiro         2.86 268   P        Pn        17 17 55.7 +1.2
MAT                                  S        Sn        17 18 28.9 -0.3
MJB9   Matsu-Tunnel       2.86 268  ePn       Pn        17 17 55.8 +1.3
JHJ2   Mitsune            3.92 205  ePn       Pn        17 18 10.2 +1.3
JHJ    Hachijo jima 2     3.92 205   Pn       Pn        17 18 10.5 +1.5
              26nm,0.3s,baz=342,slow=22,SNR=5.8
JHJ                                  Sn       Sn        17 18 55.1 -0.2
              33nm,0.3s,baz=91,slow=23,SNR=2.9
INU    Inuyama            4.07 252  ePn       Pn        17 18 13.5 +2.4
ERM    Erimo              5.42  11  ePn       Pn        17 18 29.9 +0.3
ASAJ   Asahikawa          7.44   5   Pn       Pn        17 19 00.7 +3.4
              0.5nm,0.3s,baz=291,slow=6.7,SNR=5.9
JNU    Nakatsue           9.62 251  ePn       Pn        17 19 27.2 -0.1
KSRS   Korea Array       11.08 278   Pn       Pn        17 19 50.9 +3.6
              0.1nm,0.3s,baz=92,slow=14,SNR=4.2
SARN   Sarigan           20.23 169  eP        P         17 21 41.5 -2.7
              136nm,1.4s
MA2    Magadan           23.63  11  eP        P         17 22 18.9 -0.9
              189nm,0.9s
XAN    Xi'an             26.84 274  eP        P         17 22 49.5  0.0
              11nm,1.8s
ENH    Enshi             27.58 266  eP        P         17 22 56.1 -0.2
              6.9nm,0.8s
H11N2  WAKE ISLAND Hy    27.74 121   T        T         17 51 58.0
              baz=312
H11N1  WAKE ISLAND Hy    27.75 121   T        T         17 52 10.7
              baz=312
H11N3  WAKE ISLAND Hy    27.76 121   T        T         17 52 02.2
              baz=312
ULN    Ulaanbaatar       27.77 305  eP        P         17 22 57.1 -0.8
              4.1nm,1.2s
WAKE   Wake Island       27.88 122  eP        P         17 22 59.4 +0.5
              990nm,1.8s
SONA1  Songino Array     28.20 304  eP        P         17 23 02.7 +0.9
SONA0  Songino Array     28.20 304  eP        P         17 23 03.6 +1.8
SONM   Songino Array     28.20 304   P        P         17 23 03.6 +1.8
              0.9nm,0.6s,baz=103,slow=8.7,SNR=8.3
KURK   Kurchatov         46.36 308  eP        P         17 25 34.6 -0.4
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	3.7nm,0.8s						
KURBB	Kurchatov Arra	46.43	308	P	P	17 25 36.4	+0.9
	1.1nm,0.8s,baz=81,slow=7.7,SNR=4.2						
FRU1	Bishkek	50.75	299	*e*pP	pP	17 26 19.6	+8.9
WB2	Warramunga Arr	56.77	188	*e*P	P	17 26 53.9	+0.8
WR1	Warramunga Arr	56.77	188	*e*P	P	17 26 53.5	+0.4
	19nm,1.8s						
WRA	Warramunga Arr	56.77	188	P	P	17 26 53.6	+0.4
	1.0nm,0.7s,baz=5.8,slow=7.2,SNR=24						
ASAR	Alice Springs	60.49	188	P	P	17 27 19.8	+0.7
	0.6nm,0.7s,baz=14,slow=5.4,SNR=13						

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*ISCJB **14** 17:17:39.9±0.1, 67.°64N±0.°02×142.°48E±0.°05, h10km, mb4.5/123, MS3.6/1, Error ellipse: s-maj=3.3km s-min=2.9km az=163.1*

*IDC **14** 17:17:39.8±0.5, 67.°57N×142.°58E, h0km, mb4.3/29, mb1 4.4/32, mb1mx4.2/56, mbtmp4.3/32, ML4.3/3, MS3.7/2, Ms1 3.7/2, ms1mx3.0/57, Error ellipse: s-maj=11.5km s-min=10.1km az=72.0*

*MOS **14** 17:17:40.0±0.9, 67.°63N×142.°53E, h12km, mb4.7/57, Error ellipse: s-maj=12.5km s-min=4.9km az=95.8*

*BJI **14** 17:17:40.2, 67.°40N×142.°70E, h9km, mB5.0/17, mb4.6/35, Ms4.6/11, Ms7 4.4/11*

*YARS **14** 17:17:41.3±0.3, 67.°61N±0.°02×142.°57E±0.°04, h4km*

*NEIC **14** 17:17:41.4±1.4, 67.°61N×142.°45E, h10km±1km, mb4.8/72, Error ellipse: s-maj=14.4km s-min=7.6km az=157.0*

ISC 14 17:17:41.6±0.3**, 67.°58N**±0.°04×**142.°56E**±0.°03**, h10km, n280, σ1.°14**/295**, mb4.6**/127**, 29C-12D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMR	Moma	1.15	167	*i* P	Pb	17 18 02.3	-1.2
MOMR				*e*S	Sb	17 18 18.1	-0.4
MOMR				pmax	pmax		
	comp=Z,1µm,0.3s						
MOMR				smax	smax		
	comp=N,8µm,0.3s						
MOMR	Moma	1.15	167	*i* P	Pb	17 18 02.3	-1.2
MOMR				Pmax		17 18 02.3	
	comp=Z,1µm,0.3s						
MOMR				*e*S	Sb	17 18 18.1	-0.4
MOMR				Smax		17 18 18.1	
	comp=N,8µm,0.3s						
YBGR	Belaya Gora	1.67	53	*i* P	Pn	17 18 10.2	-0.5
YBGR				*e*P	Pn	17 18 10.5	-0.2
YBGR				Pmax		17 18 10.5	
	comp=Z,599nm,0.2s						
YBGR				*e*S	Sb	17 18 32.7	-0.5
YBGR				Smax		17 18 32.7	
	comp=N,4µm,0.3s						
BTGS	Batagay	3.03	275	*e*P	Pn	17 18 30.4	+0.9
BTGS				*e*S	Sn	17 19 05.1	-0.6
BTGS				pmax	pmax		
	comp=Z,46nm,0.3s						
BTGS				smax	smax		
	comp=N,1µm,0.4s						
BTGS	Batagay	3.03	275	*e*P	Pn	17 18 30.4	+0.9
BTGS				*e*P	Pb	17 18 35.5	0.0
BTGS				Pmax		17 18 35.5	
	comp=Z,46nm,0.3s						
BTGS				*e*S	Sn	17 19 05.1	-0.6
BTGS				*e*S	Sb	17 19 15.4	+2.9
BTGS				Smax		17 19 15.4	
	comp=N,1µm,0.4s						
SEY	Seymchan	6.22	134⇓	*e*P	Pn	17 19 14.0	+0.7
SEY	Seymchan	6.22	134	Pn	Pn	17 19 13.0	-0.3
	comp=N,2.8nm,0.3s,baz=315,slow=13,SNR=33						
SEY				Lg	Lg	17 20 56.9	
	comp=N,6.0nm,0.3s,baz=8.1,slow=16,SNR=11						
YAK	Yakutsk	7.81	231	*e*P	Pn	17 19 35.1	0.0
YAK				*e*		17 21 00.9	
YAK				pmax	pmax		
	comp=Z,313nm,0.8s						
YAK				smax	smax		
	comp=N,333nm,0.5s						
YAK				smax	smax		
	comp=E,521nm,0.4s						
MA2	Magadan	8.82	152⇑	*e*P	Pn	17 19 51.2	+2.2
MA2				pmax	pmax		
	comp=Z,16nm,1.7s						
MA2	Magadan	8.82	152	Pn	Pn	17 19 49.6	+0.6
	comp=Z,0.9nm,0.3s,baz=354,slow=14,SNR=12						
MA2				Lg	Lg	17 22 18.5	
	comp=Z,1.9nm,0.3s,baz=267,slow=17,SNR=8.8						
BILL	Bilibino	8.96	76	*e*Pn	Pn	17 19 53.0	+2.1
BILL	Bilibino	8.96	76⇓	*e*P	Pn	17 19 54.0	+3.1
BILL				*e*S	Sn	17 21 35.1	+3.4
BILL				pmax	pmax		
	comp=Z,20nm,2.5s						
BILL				MLR	MLR		
	comp=Z,401nm,16.0s						
NKL	Nikolayevsk	14.51	185	*e*P	Pn	17 21 07.0	+0.3
ZEA	Zeya	15.71	215	*e*P	Pn	17 21 22.7	+0.1
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
ZEA				MLR	MLR		
	comp=N,800nm,8.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,8.0s						
BOD	Bodaibo	16.17	247	*e*P	Pn	17 21 24.5	-4.0
BOD				*e*		17 24 20.2	
BOD				pmax	pmax		
	comp=Z,13nm,1.3s						
PEA1	Petropavlovsk-	16.25	146	*e*Pn	P	17 21 31.8	-0.9
PETK	Petropavlovsk-	16.26	146	Pn	P	17 21 31.8	-0.9
	comp=Z,0.6nm,0.3s,baz=343,slow=7.9,SNR=9.9						
PET	Petropavlovsk	16.55	144	*e*Pn	P	17 21 36.3	+0.3
	comp=Z,89nm,0.9s						
PET	Petropavlovsk	16.55	144	*e*P	P	17 21 38.3	+2.4
PET				pmax	pmax		
	comp=Z,119nm,1.0s						
GRNR	Gornyy	17.14	193	*e*P	Pn	17 21 41.2	+0.3
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
SKR	Severo-Kuril’s	18.24	152⇓	*e*P	Pn	17 21 54.4	-0.1
GAMB	Gambell	18.86	80	*e*P	Pn	17 22 04.1	+2.2
	comp=Z,9.2nm,0.8s						
KLR	Kul'dur	19.20	202⇓	*e*P	P	17 22 04.8	-0.4
KLR	Kul'dur	19.20	202	P	P	17 22 05.3	+0.1
	comp=Z,0.3nm,0.3s,baz=348,slow=11,SNR=12						
KLR				Lg	Lg	17 27 48.5	
	comp=Z,0.1nm,0.3s,baz=280,slow=14,SNR=4.5						
RDOG	Red Dog Mine	20.04	63	*e*P	Pn	17 22 15.4	-0.6
	comp=Z,47nm,1.6s						
YSS	Yuzh-Sakhalins	20.69	180	*e*P	P	17 22 18.6	-2.8
YSS				*e*		17 22 21.1	
ANM	Nome	20.81	74	*e*P	Pn	17 22 26.2	+1.2
	comp=Z,6.8nm,0.6s						
ANM	Nome	20.81	74	*e*P	Pn	17 22 26.2	+1.2
ANM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HIA	Hailar	21.66	223	*e*P	P	17 22 32.5	+0.5
	comp=Z,32nm,0.9s						
HIA	Hailar	21.66	223	*ce*P	P	17 22 32.9	+1.0
HIA				pmax	pmax		
	comp=Z,25nm,1.1s						
ASAJ	Asahikawa	23.52	180	P	P	17 22 50.5	-1.0
	comp=Z,6.0nm,0.7s,baz=55,slow=9.3,SNR=9.6						
MDJ	Mudanjiang	24.03	203	*e*P	P	17 22 56.3	0.0
	comp=Z,91nm,1.4s						
USA0B	Ussuriysk Arra	24.11	199	*e*P	P	17 22 56.7	-0.3
	comp=Z,25nm,1.0s						
USRK	Ussuriysk Ar.	24.11	199	P	P	17 22 56.9	-0.2
	comp=Z,12nm,0.8s,baz=10,slow=9.7,SNR=23						
TOLK	Toolik Lake Re	24.18	56	*e*P	P	17 22 57.3	-0.3
	comp=Z,12nm,1.0s						
TLY	Talaya	24.70	249⇑	*e*P	P	17 23 04.0	+1.6
COLD	Coldfoot	24.71	59	*e*P	P	17 23 03.2	+0.9
	comp=Z,7.0nm,0.8s						
VLA	Vladivostok	25.18	199⇑	*e*P	P	17 23 07.4	+0.6
VLA				pmax	pmax		
	comp=Z,26nm,0.9s						
ADK	Adak	25.20	108	*e*P	P	17 23 08.7	+1.8
	comp=Z,53nm,1.1s						
ADK	Adak	25.20	108	*e*P	P	17 23 08.7	+1.8
ADK				pmax	pmax		
	comp=Z,53nm,1.1s						
MOY	Mondy	25.67	252	*e*P	P	17 23 14.3	+3.0
MOY				*e*		17 28 51.1	
MOY				pmax	pmax		
	comp=Z,20nm,1.3s						
MLY	Manley	25.77	64	*e*P	P	17 23 12.5	+0.5
	comp=Z,7.6nm,0.9s						
ZAK	Zakamensk	25.90	248	*e*P	P	17 23 12.5	-0.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BPAW	Bear Paw Mtn.	26.24	66	*e*P	P	17 23 14.9	-1.3
	comp=Z,20nm,1.6s						
CAST	Castle Rocks	26.27	68	*e*P	P	17 23 18.8	+2.3
	comp=Z,6.7nm,0.8s						
SVW2	Sparrevohn	26.48	74	*e*P	P	17 23 19.3	+0.8
	comp=Z,27nm,1.5s						
PPLA	Purkeypile	26.56	68	*e*P	P	17 23 19.2	-0.1
	comp=Z,54nm,1.9s						
MDM	Murphy Dome	26.67	62	*e*P	P	17 23 20.4	+0.3
	comp=Z,9.2nm,1.0s						
COLA	College	26.85	62⇓	*e*P	P	17 23 24.6	+3.0
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TRF	Thorofare Moun	26.88	66	*e*P	P	17 23 24.0	+1.8
	comp=Z,60nm,2.0s						
SONA1	Songino Array	26.98	241	*e*P	P	17 23 23.9	+0.7
WRH	Wood River Hil	27.01	63	*e*P	P	17 23 23.3	+0.1
	comp=Z,10nm,1.2s						
MCK	McKinley	27.18	65	*e*P	P	17 23 25.2	+0.5
	comp=Z,21nm,1.5s						
MCK	McKinley	27.18	65	*e*P	P	17 23 25.2	+0.5
MCK				pmax	pmax		
	comp=Z,21nm,1.5s						
ILAR	Eielson Array	27.24	62	*e*P	P	17 23 28.6	+3.4
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ILAR	Eielson Array	27.24	62	P	P	17 23 25.4	+0.2
	comp=Z,5.1nm,0.9s,baz=294,slow=7.9,SNR=24						
ILB	Eielson Array	27.24	62	*e*P	P	17 23 25.6	+0.4
KNGR	Kungurtug, Tuv	27.82	255⇓	*e*P	P	17 23 32.4	+1.7
SUA	Susitna One	28.00	70	*e*P	P	17 23 32.3	+0.1
	comp=Z,15nm,0.9s						
DHY	Denali Highway	28.14	65	*e*P	P	17 23 31.6	-1.8
	comp=Z,31nm,1.9s						
GHO	Glory Hole Cre	28.45	68	*e*P	P	17 23 36.3	+0.2
	comp=Z,14nm,1.0s						
SML	Sawmill	28.64	68	*e*P	P	17 23 37.1	-0.6
	comp=Z,65nm,1.6s						
SML	Sawmill	28.64	68	*e*P	P	17 23 37.2	-0.6
SML				pmax	pmax		
	comp=Z,65nm,1.6s						
SCM	Sheep Creek Mo	28.97	67	*e*P	P	17 23 41.4	+0.6
	comp=Z,74nm,1.8s						
SCM	Sheep Creek Mo	28.97	67	*e*P	P	17 23 41.4	+0.6
SCM				pmax	pmax		
	comp=Z,74nm,1.8s						
BRLK	Bradley Lake	29.10	73	*e*P	P	17 23 43.2	+1.3
	comp=Z,161nm,1.8s						
KLU	Klutina	29.70	67	*e*P	P	17 23 47.0	-0.2
	comp=Z,51nm,1.8s						
ZAA1	Zalesovo Array	30.01	272	*e*P	P	17 23 50.1	+0.2
ZAA0	Zalesovo Array	30.01	272	*e*P	P	17 23 49.8	-0.1
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	30.01	272	*e*P	P	17 23 49.5	-0.5
ZALV	Zalesovo Beam	30.01	272	P	P	17 23 50.1	+0.1
	comp=Z,1.4nm,0.7s,baz=33,slow=6.0,SNR=7.0						
SII	Sitkinak Islan	30.16	80	*e*P	P	17 23 50.8	-0.5
	comp=Z,457nm,1.9s						
DAWY	Dawson	30.19	59	*e*P	P	17 23 50.6	-0.9
	comp=Z,13nm,1.6s						
KBS	Kingsbay	30.92	343	*e*P	P	17 23 57.5	-0.3
	comp=Z,44nm,1.4s						
KBS	Kingsbay	30.92	343	*e*P	P	17 23 57.5	-0.3
KBS				pmax	pmax		
	comp=Z,44nm,1.4s						
SPA0	Spitsbergen Ar	31.02	341	*e*P	P	17 23 58.8	+0.2
	comp=Z,45nm,1.5s						
SPITS	Spitsbergen Ar	31.02	341	P	P	17 23 58.5	-0.2
	comp=Z,12nm,0.8s,baz=60,slow=9.0,SNR=17						
SPITS				PcP	PcP	17 26 54.0	+0.1
	comp=Z,5.0nm,0.9s,baz=95,slow=5.1,SNR=7.3						
MAJO	Matsushiro	31.19	187	*e*P	P	17 23 59.3	-1.2
MAJO	Matsushiro	31.19	187	*e*P	P	17 23 59.3	-1.2
MJAR	Matsushiro Arr	31.19	187	P	P	17 23 59.3	-1.2
	comp=Z,1.8nm,0.8s,baz=8.6,slow=13,SNR=3.8						
KSRS	Korea Array	31.29	203	P	P	17 24 00.8	-0.5
	comp=Z,1.3nm,0.7s,baz=354,slow=7.9,SNR=5.8						
KSRS				LR	LR	17 36 17.3	
	comp=Z,127nm,18.4s,baz=8.0,slow=36						
KS15	Wonju Array Si	31.31	203	*e*P	P	17 24 00.2	-1.3
HHC	Hu-ho-hao-te	31.66	228	*e*P	P	17 24 06.1	+1.3
HHC				S	S	17 29 14.5	+0.7
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,4.4s						
HHC				LR	LR		
	comp=Z,390nm,11.8s						
HHC				LR	LR		
	comp=Z,640nm,12.7s						
HHC				LR	LR		
	comp=Z,300nm,12.0s						
DGZ	Jazzator, Alta	32.35	265⇓	*e*P	P	17 24 12.2	+1.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RES	Resolute Bay	33.33	24	*e*P	P	17 24 18.3	-0.6
	comp=Z,8.2nm,1.3s						
RES	Resolute Bay	33.33	24	P	P	17 24 19.0	+0.1
	comp=Z,1.5nm,0.6s,baz=312,slow=9.1,SNR=9.8						
KURK	Kurchatov	34.91	274	*e*P	P	17 24 33.0	+0.1
	comp=Z,13nm,1.4s						
KURK				*e*P	P	17 24 33.5	+0.6
KURK	Kurchatov	34.91	274⇑	*e*P	P	17 24 33.7	+0.8
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURBB	Kurchatov Arra	35.02	274	P	P	17 24 33.5	-0.3
	comp=Z,2.3nm,0.5s,baz=36,slow=8.6,SNR=25						
DAG	Danmarks Havn	35.40	353⇑	*i*P	P	17 24 36.0	-0.8
	comp=Z,7.5nm,0.8s						
DAG	Danmarks Havn	35.40	353⇑	*i*P	P	17 24 36.0	-0.8
DAG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BVAR	Borovoye Array	36.20	283	P	P	17 24 43.8	-0.1
	comp=Z,3.2nm,0.6s,baz=45,slow=7.9,SNR=20						
BRVK	Borovoye	36.21	283	*ce*P	P	17 24 43.8	-0.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARA0	ARCESS Array S	36.56	328	*e*P	P	17 24 46.1	-0.8
ARCES	ARCESS Array B	36.56	328	P	P	17 24 46.1	-0.8
	comp=Z,4.2nm,0.8s,baz=46,slow=8.7,SNR=6.1						
GTA	Gaotai	36.66	242	*e*P	P	17 24 49.3	+1.2
GTA				pP	sP	17 24 53.5	+0.9
GTA				sP	pP	17 24 56.1	+4.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK31	Makanchi Array	36.70	267	*e*P	P	17 24 47.4	-0.9
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	36.70	267	*e*P	P	17 24 47.4	-0.9
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK32	Makanchi Array	36.70	267	*e*P	P	17 24 47.7	-0.6
MKAR	Makanchi Array	36.70	267	*e*P	P	17 24 47.9	-0.4
	comp=Z,32nm,0.7s						
MKAR	Makanchi Array	36.70	267	*e*P	P	17 24 48.0	-0.4
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	Makanchi Array	36.70	267	P	P	17 24 47.7	-0.6
	comp=Z,4.5nm,0.6s,baz=47,slow=7.1,SNR=59						
SVE	Sverdlovsk	36.77	295	*e*P	P	17 24 49.8	+1.1
MAKZ	Makanchi	36.81	267	*e*P	P	17 24 48.3	-0.9
	comp=Z,4.4nm,0.8s						
MAKZ	Makanchi	36.81	267	*e*P	P	17 24 48.3	-0.9
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WMQ	Urumqi	37.16	259	*e*P	P	17 24 57.3	+5.1
WMQ				LR	LR		
	comp=Z,390nm,17.1s						
WMQ				LR	LR		
	comp=Z,400nm,22.7s						
WMQ				LR	LR		
	comp=Z,350nm,20.7s						
ARU	Arti	37.80	296⇓	*e*P	P	17 24 57.6	+0.2
ARU				pmax	pmax		
	comp=Z,5.0nm,1.7s						
NJ2	Nanjing	38.19	214	*e*P	P	17 25 02.6	+1.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LZH	Lanzhou	38.37	235	*e*P	P	17 25 04.4	+1.7
LZH				pP	sP	17 25 07.4	+0.2
LZH				sP	pP	17 25 09.9	+4.0
LZH				PP	PnPn	17 26 35.0	+3.0
LZH				*e*S	S	17 30 57.1	-0.1
LZH				sS	ScP	17 31 06.4	+2.9
LZH				SS	SnSn	17 33 37.8	-4.4
LZH				pmax	pmax		
	comp=Z,43nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,5.2s						
LZH				LR	LR		
	comp=Z,510nm,12.2s						
LZH				LR	LR		
	comp=Z,290nm,13.8s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
SSE	Sheshan	38.65	210	*e*P	P	17 25 03.8	-1.0
	comp=Z,54nm,1.4s						
YKA	Yellowknife Ar	38.89	46	P	P	17 25 06.5	0.0
	comp=Z,0.8nm,0.7s,baz=322,slow=8.1,SNR=11						
YKB5	Yellowknife Ar	38.89	46	*e*P	P	17 25 06.2	-0.3
OTUK	Ortayu	39.32	277	P	P	17 25 10.8	+0.5
OTUK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KLMR	Klimovskoe	40.27	312	P	P	17 25 14.1	-4.0
KLMR				pmax	pmax		
	comp=Z,11nm,1.5s						
KLMR	Klimovskoe	40.27	312	P	P	17 25 14.1	-4.0
KLMR				AMP		17 25 26.2	
	comp=Z,11nm,1.5s						
SCO	Scoresbysund	41.79	352	*e*P	P	17 25 29.7	-0.7
	comp=Z,54nm,1.9s						
SCO	Scoresbysund	41.79	352	*e*P	P	17 25 29.7	-0.7
SCO				pmax	pmax		
	comp=Z,55nm,1.9s						
TARG	Taragay, Kyrgy	42.70	267	*e*P	P	17 25 37.8	-0.9
	comp=Z,2.6nm,0.7s						
AKTO	Aktyubinsk	42.83	291	P	P	17 25 38.9	-0.3
	comp=Z,4.6nm,0.6s,baz=36,slow=8.1,SNR=16						
ABKAR	Akbulak array	43.11	288	*e*P	P	17 25 40.3	-1.1
AAK	Ala-Archa	43.20	270	*e*P	P	17 25 43.2	+0.8
	comp=Z,6.8nm,0.7s						
AAK				*e*P	P	17 25 43.9	+1.5
AAK	Ala-Archa	43.20	270	*c i*P	P	17 25 43.5	+1.1
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AAK	Ala-Archa	43.20	270	P	P	17 25 43.9	+1.5
	comp=Z,5.3nm,0.6s,baz=96,slow=2.3,SNR=29						
FIA1	FINESS Array S	43.30	321	*e*P	P	17 25 42.4	-0.4
FIA1				*e*P	P	17 25 42.4	-0.4
FIA0	FINESS Array S	43.30	321	*e*P	P	17 25 42.4	-0.4
FIA0	FINESS Array S	43.30	321	*e*P	P	17 25 42.4	-0.4
FINES	FINESS Array B	43.30	321	P	P	17 25 42.4	-0.4
	comp=Z,5.7nm,0.7s,baz=33,slow=9.2,SNR=34						
NRN	Naryn	43.65	268	*e*P	P	17 25 47.1	+0.8
	comp=Z,3.3nm,0.8s						
NRN	Naryn	43.65	268	*e*P	P	17 25 47.1	+0.8
NRN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MNAS	Manas	44.09	272	P	P	17 25 51.0	+1.4
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSH	Kashi	45.32	267	P	P	17 26 04.8	+5.4
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,180nm,4.8s						
SFK	Sufi-Kurgan	45.83	269	P	P	17 26 05.5	+1.9
SFK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
NC405	NORSAR Array S	46.72	330	*e*P	P	17 26 09.1	-1.0
NC204	NORSAR Array S	46.75	330	*e*P	P	17 26 10.0	-0.3
	comp=Z,127nm,1.9s						
BTK	Batken	46.82	272	*e*P	P	17 26 11.7	+0.5
	comp=Z,8.2nm,1.0s						
BTK	Batken	46.82	272	*e*P	P	17 26 11.7	+0.5
BTK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NB201	NORSAR Array S	46.86	330	*e*P	P	17 26 11.5	+0.4
	comp=Z,184nm,2.0s						
NB2	NORSAR Subarra	46.88	330	P	P	17 26 10.2	-1.1
	comp=Z,2.2nm,0.6s,baz=24,slow=7.9						
NB200	NORSAR Array S	46.88	330	*e*P	P	17 26 10.6	-0.8
NOA	NORSAR Array B	46.88	330	*e*P	P	17 26 10.8	-0.5
NOA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NOA	NORSAR Array B	46.88	330	P	P	17 26 10.6	-0.8
	comp=Z,4.8nm,0.8s,baz=24,slow=7.8,SNR=13						
NBO00	NORSAR Array S	46.98	330	*e*P	P	17 26 11.2	-0.8
	comp=Z,128nm,2.0s						
FRB	Frobisher Bay	47.07	18	P	P	17 26 11.7	-0.9
FRB				pmax	pmax		
	comp=Z,9.0nm,1.9s						
NC602	NORSAR Array S	47.10	330	*e*P	P	17 26 12.3	-0.7
	comp=Z,86nm,1.9s						
NAO01	NORSAR Array S	47.13	330	*e*P	P	17 26 12.4	-0.8
	comp=Z,94nm,1.7s						
FCC	Fort Churchill	47.29	36	*e*P	P	17 26 14.2	-0.2
	comp=Z,6.6nm,1.4s						
FCC	Fort Churchill	47.29	36	*e*P	P	17 26 14.2	-0.2
FCC				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LPSR	Galich'ya Gora	47.41	306	*e*P	P	17 26 14.7	-0.8
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VRH	Novokhopyorsk	47.74	303	*e*P	P	17 26 16.8	-1.2
VRH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
GAR	Garm	47.93	272	*e*P	P	17 26 20.1	+0.2
	comp=Z,14nm,0.9s						
GAR	Garm	47.93	272	*e*P	P	17 26 20.1	+0.2
GAR				pmax	pmax		
	comp=Z,14nm,0.9s						
LSA	Lhasa	48.44	245	*e*P	P	17 26 25.7	+1.4
	comp=Z,11nm,1.6s						
LSA	Lhasa	48.44	245	*e*P	P	17 26 25.7	+1.4
LSA				pmax	pmax		
	comp=Z,11nm,1.6s						
VSR	Storozhevoye	48.54	305	*e*P	P	17 26 22.6	-1.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CHGR	Chuyangaron	48.68	272	*e*P	P	17 26 26.0	+0.4
	comp=Z,14nm,0.7s						
KMI	Kunming	48.93	230	*e*P	P	17 26 27.3	-0.5
	comp=Z,4.3nm,0.8s						
FFC	Flin Flon	48.96	44	*e*P	P	17 26 25.9	-1.5
	comp=Z,7.9nm,1.0s						
FFC	Flin Flon	48.96	44	*i* P	P	17 26 27.0	-0.4
SUW	Suwalki	50.62	318	*e*P	P	17 26 39.3	-0.7
	comp=Z,20nm,0.8s						
SUW	Suwalki	50.62	318	*e*P	P	17 26 39.3	-0.7
SUW				pmax	pmax		
	comp=Z,20nm,0.8s						
NIL	Nilore	51.51	266	*e*P	P	17 26 47.9	+0.9
	comp=Z,11nm,1.1s						
NIL	Nilore	51.51	266	*e*P	P	17 26 47.9	+0.9
NIL				pmax	pmax		
	comp=Z,11nm,1.1s						
BSD	Bornholm Skovb	51.59	325	*i* P	P	17 26 46.2	-1.1
	comp=Z,11nm,0.7s						
BSD	Bornholm Skovb	51.59	325	*i* P	P	17 26 46.2	-1.1
BSD				pmax	pmax		
	comp=Z,11nm,0.7s						
GUN	Gumba	51.94	250	*e*P	P	17 26 51.9	+1.2
	comp=Z,15nm,0.8s						
AKASG	Malin Array Be	51.96	312	P	P	17 26 49.1	-1.0
	comp=Z,5.3nm,0.7s,baz=26,slow=8.0,SNR=6.6						
AKBB	Malin Array Si	51.96	312	*e*P	P	17 26 49.4	-0.8
	comp=Z,24nm,1.8s						
AKBB	Malin Array Si	51.96	312	*e*P	P	17 26 49.4	-0.8
AKBB				pmax	pmax		
	comp=Z,24nm,1.8s						
KIEV	Kiev	51.97	312⇑	*i*P	P	17 26 49.1	-1.1
KIEV	Kiev	51.97	312⇓	*e*P	P	17 26 48.7	-1.5
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AK11	Malin Array Si	52.00	312	*e*P	P	17 26 49.1	-1.3
JIRN	Jiri	52.06	249	*e*P	P	17 26 53.0	+1.4
	comp=Z,32nm,0.8s						
DANN	Dangsing	52.31	252	*e*P	P	17 26 54.8	+1.4
	comp=Z,22nm,0.7s						
PKI	Pulchoki	52.42	250	*e*P	P	17 26 55.5	+1.3
DMN	Daman	52.49	251	*e*P	P	17 26 56.1	+1.4
RAMN	Ramite	52.56	249	*e*P	P	17 26 56.6	+1.4
PYUN	Piuthan	52.82	253	*e*P	P	17 27 00.0	+3.0
	comp=Z,18nm,0.9s						
KOLN	Koldanda	52.89	252	*e*P	P	17 26 58.9	+1.3
	comp=Z,20nm,0.7s						
GEYT	Alibeck	53.51	282	P	P	17 27 02.5	+0.7
	comp=Z,1.2nm,0.4s,baz=250,slow=4.3,SNR=4.9						
KIV	Kislovodsk	53.75	298	*e*P	P	17 27 02.9	-0.6

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      comp=Z,11nm,0.9s
KIV   Kislovodsk         53.75 298⇑iP     P      17 27 04.4 +0.8
KIV   Kislovodsk         53.75 298 eP     P      17 27 04.4 +0.8
KIV                                pmax   pmax
      comp=Z,13nm,1.1s
NCK   Nalchik            53.85 297⇑eP     P      17 27 05.1 +0.9
NCK                                pmax   pmax
      comp=Z,5.0nm,0.3s
KBZ   Khabaz             53.88 298  P     P      17 27 05.3 +0.9
      comp=Z,6.5nm,0.9s,baz=52,slow=8.7,SNR=14
NEY   Neytrino           54.36 298⇑eP     P      17 27 09.7 +1.5
NEY                                pmax   pmax
      comp=Z,1.0nm,0.9s
ZEI   Tsey               54.37 296 eP     P      17 27 06.8 -1.4
ZEI                                pmax   pmax
      comp=Z,4.0nm,0.9s
OJC   Ojcow              54.94 319 eP     P      17 27 11.1 -0.9
      comp=Z,11nm,0.8s
OJC   Ojcow              54.94 319 eP     P      17 27 11.1 -0.9
OJC                                pmax   pmax
      comp=Z,11nm,0.8s
YHH   Holmes Hill        55.22  56 eP     P      17 27 14.5 -0.1
      comp=Z,2.6nm,1.0s
RLMT  Red Lodge          55.42  55 eP     P      17 27 13.3 -2.5
      comp=Z,5.1nm,0.9s
CLL   Collm              55.55 324 eP     P      17 27 15.5 -0.9
      comp=Z,13nm,0.8s
CLL   Collm              55.55 324⇑iP     P      17 27 15.8 -0.6
      comp=Z,15nm,0.9s
CLL                                i pP   pP     17 27 20.0 +0.3
CLL   Collm              55.55 324⇑iP     P      17 27 15.8 -0.6
CLL                                i             17 27 20.0
DPC   Dobruska-Polom     55.67 321 eP     P      17 27 17.1 -0.3
DPC   Dobruska-Polom     55.67 321 eP     P      17 27 17.1 -0.3
BRG   Berggiesshubel     55.74 323 eP     P      17 27 17.4 -0.4
      comp=Z,8.7nm,1.3s
BRG   Berggiesshubel     55.74 323 eP     P      17 27 17.4 -0.4
BRG                                pmax   pmax
      comp=Z,9.0nm,1.3s
KRLC  Kraliky            55.82 321 eP     P      17 27 18.6 +0.2
KRLC                               epP    pP     17 27 21.7  0.0
KRLC  Kraliky            55.82 321 eP     P      17 27 18.6 +0.2
KRLC                               e             17 27 21.7
BUR08 Bucovina Ar. S     55.86 313 eP     P      17 27 18.3 -0.6
BUR04 Bucovina Ar. S     55.88 313 eP     P      17 27 18.1 -0.8
BURAR Bucovina Array     55.88 313⇑iP     P      17 27 18.4 -0.6
BURAR Bucovina Array     55.88 313  P     P      17 27 18.4 -0.6
MORC  Moravsky Berou     55.91 320 eP     P      17 27 18.8 -0.3
      comp=Z,6.3nm,0.8s
MORC  Moravsky Berou     55.91 320⇓iP     P      17 27 19.1  0.0
MORC  Moravsky Berou     55.91 320 eP     P      17 27 18.8 -0.3
MORC                               pmax   pmax
      comp=Z,6.0nm,0.8s
MORC  Moravsky Berou     55.91 320 eP     P      17 27 18.9 -0.2
SCHQ  Schefferville      55.95  20 eP     P      17 27 17.9 -1.3
      comp=Z,30nm,1.7s
SCHQ  Schefferville      55.95  20  P     P      17 27 18.0 -1.2
      comp=Z,2.9nm,0.6s,baz=5.5,slow=7.7,SNR=11
LANS  Liptovska Anna     56.01 318 eP     P      17 27 20.2 +0.4
LANS  Liptovska Anna     56.01 318 eP     P      17 27 20.2 +0.4
TRPA  Tarpa              56.14 316⇑iP     P      17 27 20.8 +0.1
CM31  Chiang Mai Arr     56.34 232 eP     P      17 27 21.5 -1.0
      comp=Z,13nm,1.8s
CMAR  Chiang Mai Arr     56.34 232 i P    P      17 27 22.2 -0.3
CMAR                               pmax   pmax
      comp=Z,1.0nm,0.5s
CMAR  Chiang Mai Arr     56.34 232  P     P      17 27 21.9 -0.6
      comp=Z,0.8nm,0.5s,baz=358,slow=6.7,SNR=12
GNI   Garni              56.41 294⇓eP     P      17 27 23.3 +0.3
GNI                                pmax   pmax
      comp=Z,23nm,1.5s
TESR  Tescani            56.48 312⇑iP     P      17 27 22.2 -1.0
MOX   Moxa               56.48 325  P     P      17 27 23.6 +0.5
MOX                                pmax   pmax
      comp=Z,9.0nm,1.0s
UTTA  Uttaradit          56.54 230  P     P      17 27 25.1 +1.3
VRAC  Vranov             56.58 321⇑iP     P      17 27 24.3 +0.5
VRAC  Vranov             56.58 321  P     P      17 27 24.4 +0.6
VRAC                               pmax   pmax
      comp=Z,12nm,1.0s
VRAC  Vranov             56.58 321 eP     P      17 27 23.8  0.0
VYHS  Vyhne              56.77 319 eP     P      17 27 25.3 +0.1
VYHS                               pmax   pmax
      comp=Z,3.0nm,0.9s
VYHS  Vyhne              56.77 319 eP     P      17 27 25.3 +0.1
KRUC  Moravsky           56.85 321  P     P      17 27 26.4 +0.7
KRUC                               pmax   pmax
      comp=Z,6.0nm,1.2s
KRUC  Moravsky           56.85 321 eP     P      17 27 25.7  0.0
TREC  Trest              56.85 321 eP     P      17 27 25.8  0.0
TREC  Trest              56.85 321 eP     P      17 27 25.8  0.0
PSZ   Piszkesteto        57.03 318 eP     P      17 27 27.2 +0.1
      comp=Z,8.9nm,0.9s
PSZ   Piszkesteto        57.03 318⇑iP     P      17 27 27.6 +0.5
PSZ   Piszkesteto        57.03 318 eP     P      17 27 27.2 +0.1
PSZ                                pmax   pmax
      comp=Z,9.0nm,0.9s
CFR   Carcaliu           57.27 310⇑iP     P      17 27 28.7  0.0
CFR   Carcaliu           57.27 310  P     P      17 27 28.7  0.0
DRGR                     57.33 315⇑iP     P      17 27 28.9 -0.3
DRGR                     57.33 315  P     P      17 27 33.2 +4.0
DRGR                               pmax   pmax
      comp=Z,12nm,1.3s
PD31  Pinedale Array     57.45  56 eP     P      17 27 30.3  0.0
PDAR  Pinedale Array     57.45  56  P     P      17 27 30.7 +0.4
      comp=Z,0.5nm,0.3s,baz=347,slow=3.7,SNR=6.5
KHC   Kasperske Hory     57.46 323 eP     P      17 27 30.1  0.0
KHC                                epP    sP     17 27 34.4 -0.2
KHC   Kasperske Hory     57.46 323 eP     P      17 27 30.1  0.0
KHC                                e             17 27 34.4
MLR   Muntele Rosu       57.62 312⇑iP     P      17 27 32.3 +0.9
MLR   Muntele Rosu       57.62 312  P     P      17 27 32.3 +0.9
MEM   Membach            57.70 329 ⇑P     P      17 27 32.1 +0.4
GEC2  GERESS Array S     57.70 323 eP     P      17 27 31.7 -0.1
      comp=Z,9.7nm,1.3s
GEC2  GERESS Array S     57.70 323 eP     P      17 27 31.7 -0.1
GEC2                               pmax   pmax
      comp=Z,10.0nm,1.3s
GERES GERESS Array B     57.70 323  P     P      17 27 31.7 -0.1
      comp=Z,2.8nm,0.8s,baz=38,slow=6.8,SNR=18
GEA0  GERESS Array S     57.70 323 eP     P      17 27 31.2 -0.7
VOIR                     57.92 313⇑iP     P      17 27 33.7 +0.3
VOIR                     57.92 313  P     P      17 27 33.7 +0.3
CONA  Conrad Observa     58.04 321 i pP   P      17 27 36.0 +1.7
      comp=Z,5.8nm,1.1s
SIRR  Siria              58.09 315⇑iP     P      17 27 34.2 -0.3
ARR   Arges              58.10 313⇓iP     P      17 27 35.7 +1.0
GZR   Gura Zlata         58.59 314⇑iP     P      17 27 37.8 -0.3
GZR   Gura Zlata         58.59 314  P     P      17 27 37.8 -0.3
BZS   Buzias             58.70 315⇑iP     P      17 27 38.2 -0.6
BZS   Buzias             58.70 315  P     P      17 27 39.0 +0.2
BZS                                pmax   pmax
      comp=Z,7.0nm,1.9s
BFO   Black Forest       59.38 326 i P    P      17 27 44.0 +0.5
KBA   Koelnbreinsper     59.44 322 i pP   P      17 27 45.1 +1.1
      comp=Z,14nm,1.4s
KBA   Koelnbreinsper     59.44 322  P     P      17 27 46.0 +1.9
KBA                                pmax   pmax
      comp=Z,10.0nm,1.0s
MDVR  Moldovita          59.45 315⇑iP     P      17 27 43.7 -0.3
WATA  Walderalm          59.61 323 i pP   P      17 27 45.6 +0.4
      comp=Z,6.8nm,0.9s
WTTA  Wattenberg         59.66 323 i pP   P      17 27 46.2 +0.5
      comp=Z,10.0nm,0.9s
OBKA  Obir               59.68 321 i pP   P      17 27 46.5 +0.8
      comp=Z,11nm,0.8s
PSUT  Pine Spring        59.85  62 eP     P      17 27 46.5 -0.5
      comp=Z,2.2nm,0.7s
DAVA  Damuels            60.03 325 i P    P      17 27 46.5 -1.7
      comp=Z,9.6nm,1.2s
BR101 Keskin Array S     60.53 303 eP     P      17 27 51.8 +0.1
BRTR  Keskin Array B     60.53 303 eP     P      17 27 51.9 +0.3
BRTR                               pmax   pmax
      comp=Z,2.0nm,0.7s
BRTR  Keskin Array B     60.53 303  P     P      17 27 51.8 +0.1
      comp=Z,2.0nm,0.7s,baz=37,slow=4.4,SNR=8.8
BRTR                               LR     LR     17 59 15.2
      comp=Z,55nm,18.2s,baz=84,slow=41
PV14  Lion Creek, Pa     61.60  58 eP     P      17 27 59.0  0.0
      comp=Z,26nm,1.9s
ES19  SONSECA Array      70.06 333 eP     P      17 28 52.0 -1.3
ESDC  Sonseca Array      70.10 333  P     P      17 28 52.9 -0.7
      comp=Z,2.1nm,0.7s,baz=7.4,slow=6.3,SNR=14
RAYN  Ar Rayn            71.14 286 eP     P      17 28 59.4 -0.6
      comp=Z,4.1nm,1.0s
RAYN  Ar Rayn            71.14 286 eP     P      17 28 59.4 -0.6
RAYN                               pmax   pmax
      comp=Z,4.0nm,1.0s
LTX   Lajitas            71.63  57 eP     P      17 29 03.2 +0.1
LTX   Lajitas            71.63  57 eP     P      17 29 03.2 +0.1
TXAR  Lajitas Array      71.63  57  P     P      17 29 03.2 +0.1
      comp=Z,0.3nm,0.5s,baz=357,slow=5.3,SNR=5.0
WR1   Warramunga Arr     87.48 188 eP     P      17 30 27.4 -1.5
      comp=Z,22nm,1.9s
WRA   Warramunga Arr     87.48 188 i P    P      17 30 29.0 +0.1
WRA                                pmax   pmax
      comp=Z,1.0nm,0.7s
WRA   Warramunga Arr     87.48 188  P     P      17 30 27.4 -1.5
      comp=Z,0.9nm,0.7s,baz=7.6,slow=5.6,SNR=6.2
AS31  Alice Springs      91.20 188 eP     P      17 30 45.4 -1.0
      comp=Z,1.1nm,1.3s
ASAR  Alice Springs      91.20 188  P     P      17 30 44.9 -1.4
      comp=Z,0.3nm,0.7s,baz=354,slow=3.7,SNR=5.5
```

IDC 14 17:23:15.4±2.8**, 11°.52S×164°.76E, h0^{km}, mb4.0**/3**, mb1 4.1**/4**, mb1mx3.6**/39**, mbtmp4.0**/4**, ML3.6**/1**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.8**/41**, Error ellipse: s-maj=59.3km s-min=33.9km az=75.0, Santa Cruz Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
DZM   Mont Dzumac        10.62 171   Pn     Pn       17 25 49.4 +0.4
      0.4nm,0.3s,baz=341,slow=18,SNR=5.9
DZM                                  Sn     Sn       17 27 49.9 +1.1
      0.2nm,0.3s,baz=3.4,slow=19,SNR=6.3
WRA   Warramunga Arr     30.41 250   P      P        17 29 29.8 +0.1
      0.7nm,0.7s,baz=80,slow=9.1,SNR=7.1
ASAR  Alice Springs      31.72 243   P      P        17 29 41.0 -0.2
      1.6nm,0.8s,baz=74,slow=9.0,SNR=18
KSRS  Korea Array        59.72 326   LR     LR       17 55 15.2
      comp=Z,41nm,21.4s,baz=322,slow=32
MKAR  Makanchi Array     93.20 317   P      P        17 36 31.7 -0.1
      0.7nm,0.8s,baz=101,slow=6.3,SNR=8.6
```

MAN 14 17:30:33.7, 12°.84N×126°.00E, h38^{km}, mb4.2, ML3.0, MS2.7, 1C, Samar

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
CNP   Catarman            1.34 256  eP      Pn       17 30 56.1 +0.2
CNP                                 eS      Sn       17 31 13.6 +1.1
BESP  Borongan            1.34 204  eP      Pn       17 30 56.0  0.0
BESP                                eS      Sn       17 31 09.1 -3.5
PLP   Palo                1.94 211⇑eP      Pn       17 31 05.6 +1.5
PLP                                 i S     Sn       17 31 25.5 -1.8
PVCP  Virac               1.95 293  eP      Pn       17 31 05.1 +0.9
```

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*ISCJB **14** 17:32:17.5±0.4, 67°.60N±0°.04×142°.8E±0°.1, h10^{km}, mb3.6/8, Error ellipse: s-maj=7.0km s-min=5.5km az=138.0*

*IDC **14** 17:32:17.9±0.9, 67°.74N×142°.83E, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.5/66, mbtmp3.6/8, ML3.9/2, Error ellipse: s-maj=26.3km s-min=16.5km az=155.0*

*MOS **14** 17:32:17.1±0.9, 67°.63N×142°.94E, h10^{km}, mb4.2/2, Error ellipse: s-maj=35.6km s-min=13.7km az=90.9*

*NEIC **14** 17:32:18.8±1.3, 67°.68N×142°.81E, h10^{km}±2^{km}, mb4.0/3, Error ellipse: s-maj=20.6km s-min=11.5km az=117.0*

*YARS **14** 17:32:18.6±0.3, 67°.59N±0°.02×142°.89E±0°.04, h8^{km}*

ISC 14 17:32:18.5±0.6**, 67°.56N**±0°.05×**142°.95E**±0°.04**, h10^{km}, n30, σ1^{s}30**/36**, mb3.7**/8**, Eastern Siberia**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
MOMR  Moma                1.10 174  eP      Pn       17 32 38.5 -1.5
MOMR                                eS      Sb       17 32 54.1 +0.1
MOMR                                 pmax   pmax
      comp=Z,188nm,0.3s
MOMR                                 smax   smax
      comp=N,894nm,0.2s
MOMR  Moma                1.10 174  eP      Pn       17 32 38.5 -1.5
MOMR                                 Pmax            17 32 38.5
      comp=Z,188nm,0.3s
MOMR                                eS      Sb       17 32 54.1 +0.1
MOMR                                 Smax            17 32 54.1
      comp=N,894nm,0.2s
YBGR  Belaya Gora         1.56  50  eP      Pb       17 32 46.2 -1.3
YBGR                                 Pmax            17 32 46.2
      comp=Z,72nm,0.2s
YBGR                                eS      Sg       17 33 07.4 -1.3
YBGR                                 Smax            17 33 07.4
      comp=N,1μm,0.2s
BTGS  Batagay             3.18 276  eP      Pn       17 33 09.0 +0.5
BTGS                                eS      Sn       17 33 45.4 -1.1
BTGS                                 pmax   pmax
      comp=Z,16nm,0.4s
BTGS  Batagay             3.18 276  eP      Pn       17 33 09.0 +0.5
BTGS                                eP      Pb       17 33 15.1  0.0
BTGS                                 Pmax            17 33 15.1
      comp=Z,16nm,0.4s
BTGS                                eS      Sn       17 33 45.4 -1.1
BTGS                                eS      Sg       17 33 56.7 -3.9
BTGS                                 Smax            17 33 56.7
      comp=N,280nm,0.6s
SEY   Seymchan            6.10 135   Lg     Lg       17 35 32.1
      comp=N,1.7nm,0.3s,baz=218,slow=20,SNR=8.6
MA2   Magadan             8.73 153  ePn     Pn       17 34 21.8 -2.9
MA2   Magadan             8.73 153   Pn     Pn       17 34 27.3 +2.6
      comp=N,0.3nm,0.3s,baz=357,slow=18,SNR=6.0
MA2                                  Lg     Lg       17 36 56.5
      comp=N,0.4nm,0.3s,baz=194,slow=4.7,SNR=5.0
KLR   Kul'dur            19.23 203   P      Pn       17 36 44.6 +1.1
      comp=N,0.1nm,0.3s,baz=359,slow=14,SNR=3.6
COLD  Coldfoot           24.59  59  eP      P        17 37 39.6 +1.3
      comp=N,3.4nm,0.9s
SONA0 Songino Array      27.11 242  eP      P        17 38 03.1 +1.8
SONM  Songino Array      27.11 242   P      P        17 38 03.2 +1.8
      comp=N,0.4nm,0.6s,baz=19,slow=9.2,SNR=2.7
ILAR  Eielson Array      27.11  62   P      P        17 38 01.7 +0.6
      comp=N,1.8nm,0.8s,baz=296,slow=7.8,SNR=17
ILB   Eielson Array      27.11  62  eP      P        17 38 01.2 +0.2
MK31  Makanchi Array     36.85 267  eP      P        17 39 26.2 -0.3
      comp=N,1.0nm,1.1s
MK31  Makanchi Array     36.85 267  eP      P        17 39 26.3 -0.3
MK31                                 pmax   pmax
      comp=Z,1.0nm,1.1s
MK32  Makanchi Array     36.85 267  eP      P        17 39 26.0 -0.6
MKAR  Makanchi Array     36.85 267  eP      P        17 39 26.0 -0.6
      comp=Z,6.4nm,0.7s
MKAR  Makanchi Array     36.85 267   P      P        17 39 26.0 -0.6
MKAR                                 pmax   pmax
      comp=Z,1.0nm,0.6s
MKAR  Makanchi Array     36.85 267   P      P        17 39 26.0 -0.6
      comp=Z,0.7nm,0.6s,baz=32,slow=6.3,SNR=11
YKA   Yellowknife Ar     38.80  46   P      P        17 39 42.6 -0.1
      comp=Z,0.5nm,0.7s,baz=321,slow=7.9,SNR=8.5
YKB5  Yellowknife Ar     38.80  46  eP      P        17 39 42.8 +0.1
ABKAR Akbulak array      43.27 288  eP      P        17 40 19.1 -0.5
AAK   Ala-Archa          43.35 271   P      P        17 40 22.0 +1.4
FIA0  FINESS Array S     43.42 321  eP      P        17 40 20.2 -0.5
FIA0  FINESS Array S     43.42 321  eP      P        17 40 20.2 -0.5
FINES FINESS Array B     43.42 321   P      P        17 40 20.2 -0.5
      comp=Z,0.8nm,0.7s,baz=30,slow=9.1,SNR=5.6
CLL   Collm              55.66 324  eP      P        17 41 54.0 -0.2
CLL                                  LmV             18 10 00.0
      comp=Z,100nm,19.6s
PD31  Pinedale Array     57.34  57  eP      P        17 42 06.6 +0.1
PDAR  Pinedale Array     57.34  57   P      P        17 42 07.0 +0.5
      comp=Z,0.7nm,0.7s,baz=2.4,slow=2.6,SNR=6.8
```

IDC 14 17:44:38.0±1.5**, 2°.97S×130°.34E, h0^{km}, mb3.6**/2**, mb1 3.7**/4**, mb1mx3.4**/45**, mbtmp3.5**/4**, ML3.3**/2**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.6**/38**, Error ellipse: s-maj=52.4km s-min=21.6km az=93.0, Seram**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
SIJI  Sorong              2.28  24   Pn     Pn       17 45 17.8 +0.9
      2.4nm,0.3s,baz=134,slow=1.8,SNR=28
SIJI                                 Sn     Sn       17 45 45.5 -0.2
      8.1nm,0.3s,baz=84,slow=24,SNR=12
WRA   Warramunga Arr     17.32 167   P      Pn       17 48 40.1 -1.3
      0.2nm,0.3s,baz=351,slow=12,SNR=8.5
ASAR  Alice Springs      20.86 171   P      P        17 49 22.1 +0.4
      2.0nm,0.5s,baz=356,slow=11,SNR=61
RPZ   Rata Peaks         54.25 144   LR     LR       18 16 57.8
      comp=Z,65nm,18.1s,baz=170,slow=36
MKAR  Makanchi Array     65.08 326   P      P        17 55 20.3 -0.2
      0.3nm,0.6s,baz=109,slow=8.8,SNR=4.8
```

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*ISCJB **14** 17:54:56.8±0.3, 67°.56N±0°.04×142°.81E±0°.10, h10^{km}, mb3.9/13, MS3.7/1, Error ellipse: s-maj=6.8km s-min=4.9km az=148.9*

*IDC **14** 17:54:56.6±0.8, 67°.58N×142°.92E, h0^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.7/62, mbtmp3.8/12, ML3.3/2, MS3.8/1, Ms1 3.8/1, ms1mx2.7/45, Error ellipse: s-maj=21.4km s-min=14.1km az=175.0*

*MOS **14** 17:54:56.1±1.1, 67°.55N×142°.95E, h8^{km}, mb4.3/2, Error ellipse: s-maj=23.4km s-min=12.3km az=87.2*

*NEIC **14** 17:54:57.9±2.3, 67°.55N×143°.13E, h10^{km}±2^{km}, mb4.3/4, Error ellipse: s-maj=18.9km s-min=15.8km az=129.0*

*YARS **14** 17:54:58.1±0.2, 67°.56N±0°.01×142°.91E±0°.04, h7^{km}*

ISC 14 17:54:58.2±0.5**, 67°.51N**±0°.05×**142°.98E**±0°.04**, h10^{km}, n42, σ1^{s}09**/47**, mb3.9**/13**, 1C, Eastern Siberia**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
MOMR  Moma                1.05 175  eP      Pb       17 55 17.6 -0.8
MOMR                                eS      Sg       17 55 32.5 +0.6
MOMR                                 pmax   pmax
      comp=Z,216nm,0.3s
MOMR                                 smax   smax
      comp=Z,1μm,0.3s
MOMR  Moma                1.05 175  eP      Pb       17 55 17.6 -0.8
MOMR                                 Pmax            17 55 17.6
      comp=Z,216nm,0.3s
MOMR                                eS      Sg       17 55 32.5 +0.6
MOMR                                 Smax            17 55 32.5
      comp=N,1μm,0.3s
YBGR  Belaya Gora         1.59  48  i P     Pn       17 55 25.7 -0.6
YBGR                                 Pmax            17 55 25.7
      comp=Z,281nm,0.2s
YBGR                                eS      Sb       17 55 47.3 -0.4
YBGR                                 Smax            17 55 47.3
      comp=N,2μm,0.2s
BTGS  Batagay             3.20 276  eP      Pn       17 55 49.4 +1.0
BTGS                                eS      Sn       17 56 25.1 -1.4
BTGS                                 pmax   pmax
      comp=Z,20nm,0.2s
BTGS  Batagay             3.20 276  eP      Pn       17 55 49.4 +1.0
BTGS                                eP      Pb       17 55 55.0  0.0
BTGS                                 Pmax            17 55 55.0
      comp=Z,20nm,0.2s
BTGS                                eS      Sn       17 56 25.1 -1.4
BTGS                                eS      Sb       17 56 36.2 +2.3
BTGS                                 Smax            17 56 36.2
      comp=E,182nm,0.3s
SEY   Seymchan            6.05 135   Pn     Pn       17 56 26.5 -1.1
      comp=E,0.5nm,0.3s,baz=308,slow=13,SNR=12
SEY                                  Lg     Lg       17 58 10.9
      comp=E,1.4nm,0.3s,baz=15,slow=11,SNR=6.2
MA2   Magadan             8.68 153   Lg     Lg       17 59 35.5
      comp=E,0.8nm,0.3s,baz=286,slow=23,SNR=8.3
BILL  Bilibino            8.83  76⇑eP      Pn       17 57 09.4 +3.8
BILL                                 pmax   pmax
      comp=Z,3.0nm,1.1s
BOD   Bodaibo            16.29 248  eP      Pn       17 58 46.5 -0.2
BOD                                  pmax   pmax
      comp=Z,4.0nm,1.7s
KLR   Kul'dur            19.19 203   P      Pn       17 59 23.5 +0.9
      comp=Z,0.1nm,0.3s,baz=0.9,slow=7.2,SNR=6.3
TOLK  Toolik Lake Re     24.09  56  eP      P        18 00 13.4  0.0
      comp=Z,22nm,1.8s
COLD  Coldfoot           24.61  59  eP      P        18 00 19.4 +1.2
      comp=Z,5.2nm,1.0s
MOY   Mondy              25.80 253  eP      P        18 00 30.4 +1.2
SONA0 Songino Array      27.09 242  eP      P        18 00 41.2 +0.4
SONM  Songino Array      27.09 242   P      P        18 00 41.2 +0.4
      comp=Z,0.6nm,0.7s,baz=29,slow=7.8,SNR=4.5
ILAR  Eielson Array      27.13  62   P      P        18 00 40.7 -0.1
      comp=Z,1.8nm,0.8s,baz=294,slow=7.9,SNR=22
KDAK  Kodiak Island      29.73  77   LR     LR       18 14 20.3
      comp=Z,165nm,19.2s,baz=189,slow=39
KURK  Kurchatov          35.08 274  eP      P        18 01 51.4 +0.5
KURK  Kurchatov          35.08 274   P      P        18 01 51.4 +0.5
KURBB Kurchatov Arra     35.19 274   P      P        18 01 51.4 -0.5
      comp=Z,2.4nm,0.2s,baz=37,slow=8.9,SNR=9.8
BVAR  Borovoye Array     36.38 284   P      P        18 02 01.4 -0.6
      comp=Z,1.0nm,0.7s,baz=47,slow=9.1,SNR=5.9
MK31  Makanchi Array     36.86 267  eP      P        18 02 05.4 -0.9
MK31  Makanchi Array     36.86 267  eP      P        18 02 05.4 -0.9
MK32  Makanchi Array     36.86 267  eP      P        18 02 05.4 -0.9
MKAR  Makanchi Array     36.86 267  eP      P        18 02 04.6 -1.7
      comp=Z,5.8nm,0.6s
MKAR  Makanchi Array     36.86 267   P      P        18 02 04.6 -1.7
MKAR                                 pmax   pmax
      comp=Z,6.0nm,0.6s
MKAR  Makanchi Array     36.86 267   P      P        18 02 05.4 -0.9
      comp=Z,0.8nm,0.6s,baz=46,slow=7.2,SNR=13
MK01  Makanchi Array     36.88 267  eP      P        18 02 04.8 -1.6
YKA   Yellowknife Ar     38.83  46   P      P        18 02 22.6  0.0
      comp=Z,0.7nm,0.7s,baz=323,slow=8.1,SNR=15
YKB5  Yellowknife Ar     38.83  46  eP      P        18 02 22.3 -0.4
AAK   Ala-Archa          43.36 271  eP      P        18 03 01.3 +0.9
      comp=Z,1.6nm,0.6s
AAK   Ala-Archa          43.36 271  eP      P        18 03 01.3 +0.9
AAK                                  pmax   pmax
      comp=Z,2.0nm,0.6s
FIA0  FINESS Array S     43.46 321  eP      P        18 02 60.0 -0.8
FIA0  FINESS Array S     43.46 321  eP      P        18 03 00.0 -0.8
FINES FINESS Array B     43.46 321   P      P        18 03 00.0 -0.8
FINES FINESS Array B     43.46 321   P      P        18 02 60.0 -0.8
      comp=Z,0.8nm,0.4s,baz=31,slow=9.2,SNR=8.9
KBZ   Khabaz             54.06 298   P      P        18 04 22.6 +0.3
      comp=Z,0.8nm,0.5s,baz=14,slow=8.0,SNR=5.3
CLL   Collm              55.71 324  eP      P        18 04 34.0 -0.2
PDAR  Pinedale Array     57.36  57   P      P        18 04 46.5 +0.2
      comp=Z,0.5nm,0.5s,baz=48,slow=2.2,SNR=7.0
LTX   Lajitas            71.54  58  eP      P        18 06 18.3 -0.8
LTX   Lajitas            71.54  58  eP      P        18 06 18.3 -0.8
TXAR  Lajitas Array      71.54  58   P      P        18 06 18.3 -0.8
      comp=Z,0.1nm,0.4s,baz=343,slow=4.0,SNR=3.6
```

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*ISCJB **14** 17:58:47.8±0.6, 67°.61N±0°.05×142°.4E±0°.1, h10^{km}, mb3.6/4, Error ellipse: s-maj=7.7km s-min=7.4km az=138.3*

*IDC **14** 17:58:47.5±2.3, 67°.56N×142°.44E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.3/59, mbtmp3.7/4, Error ellipse: s-maj=74.7km s-min=25.5km az=168.0*

*YARS **14** 17:58:48.5±0.2, 67°.62N±0°.01×142°.50E±0°.03, h4^{km}*

ISC 14 17:58:48.8±0.8**, 67°.55N**±0°.07×**142°.57E**±0°.05**, h10^{km}, n7, σ0^{s}96**/12**, mb3.6**/4**, Eastern Siberia**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
MOMR  Moma                1.12 167  eP      Pb       17 59 10.0 -0.2
MOMR                                 Pmax            17 59 10.0
      comp=Z,31nm,0.2s
MOMR                                eS      Sb       17 59 25.5 +0.7
MOMR                                 Smax            17 59 25.5
      comp=N,516nm,0.4s
YBGR  Belaya Gora         1.68  53  eP      Pn       17 59 17.6 -0.5
YBGR                                 Pmax            17 59 17.6
      comp=Z,645nm,0.3s
YBGR                                eS      Sn       17 59 40.3 +0.7
YBGR                                 Smax            17 59 40.3
      comp=N,570nm,0.3s
BTGS  Batagay             3.04 275  eP      Pn       17 59 37.2 +0.4
BTGS                                eP      Pb       17 59 42.6 -0.2
BTGS                                 Pmax            17 59 42.6
      comp=Z,13nm,0.2s
BTGS                                eS      Sn       18 00 11.6 -1.5
BTGS                                eS      Sb       18 00 21.6 +1.7
BTGS                                 Smax            18 00 21.6
      comp=N,187nm,0.3s
ILAR  Eielson Array      27.25  62   P      P        18 04 33.1 +0.7
      comp=N,0.4nm,0.8s,baz=308,slow=11,SNR=3.6
BVAR  Borovoye Array     36.21 283   P      P        18 05 51.8 +0.6
      comp=N,0.5nm,0.7s,baz=45,slow=6.5,SNR=3.4
MKAR  Makanchi Array     36.71 267   P      P        18 05 54.8 -0.8
      comp=N,0.8nm,0.5s,baz=34,slow=7.5,SNR=13
FINES FINESS Array B     43.33 321   P      P        18 06 49.7 -0.5
      comp=N,2.5nm,1.0s,baz=38,slow=7.0,SNR=3.2
```

IDC 14 18:04:39.2±2.9**, 4°.54N×93°.90E, h0^{km}, mb3.6**/3**, mb1 3.7**/4**,**

mb1mx3.3/48, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=109.2km s-min=26.0km az=62.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.68	19	Pn	Pn	18 08 09.6	+1.2
	0.1nm,0.3s,baz=204,slow=15,SNR=5.0						
MKAR	Makanchi Array	43.27	348	P	P	18 12 42.1	-0.4
	0.2nm,0.5s,baz=162,slow=7.2,SNR=3.8						
WRA	Warramunga Arr	46.60	123	P	P	18 13 09.2	-0.3
	1.2nm,0.7s,baz=302,slow=9.0,SNR=17						
ASAR	Alice Springs	48.03	128	P	P	18 13 20.7	+0.1
	0.4nm,0.5s,baz=299,slow=7.9,SNR=7.9						

*IDC **14** 18:22:33.3±1.1, 36°.37N×142°.72E, h0^{km}, mb3.8/9, mb1 3.9/12, mb1mx3.7/43, mbtmp3.8/12, ML3.2/3, Error ellipse: s-maj=26.3km s-min=19.9km az=89.0*
*ISCJB **14** 18:22:34.2±0.6, 36°.43N±0°.05×142°.66E±0°.06, h15^{km}, mb4.0/19, Error ellipse: s-maj=7.3km s-min=6.5km az=24.3*
*JMA **14** 18:22:36.9±0.2, 36°.45N×142°.57E, h61^{km}, M3.3*
*NEIC **14** 18:22:38.7±0.5, 36°.47N×142°.65E, h35^{km}, mb4.5/8, Error ellipse: s-maj=9.4km s-min=6.7km az=115.0*
ISC 14 18:22:35.7±0.8, 36°.42N±0°.05×142°.65E±0°.08, h15^{km}, n49, σ1^{s}.44/52, mb4.2/19, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.62	244	P	Pn	18 23 03.2	-0.4
ONAJ	Iwakimizuishiy	1.63	295	P	Pn	18 23 03.2	-0.7
ONAJ				eS	Sn	18 23 21.9	-2.8
JHYU	Hitachinakayam	1.66	268	P	Pn	18 23 03.6	-0.7
JHYU				eS	Sn	18 23 23.2	-2.2
JHO	Hitachi	1.69	277	P	Pn	18 23 03.5	-1.1
JMM	Marumori	2.07	315	P	Pn	18 23 09.0	-0.8
JFT	Otama	2.15	301	P	Pn	18 23 10.8	-0.2
BSO1	Boso 1	2.23	218	P	Pn	18 23 11.7	+0.1
JIO	Ouri	2.28	333	P	Pn	18 23 11.8	-0.9
JIO				eS	Sn	18 23 38.5	-2.0
JOU	Okura	2.50	321	P	Pn	18 23 15.4	-0.4
JAG	Ashikaga	2.58	271	P	Pn	18 23 16.5	-0.3
JMK	Ichinoseki	2.77	336	P	Pn	18 23 18.7	-0.8
MJAR	Matsushiro Arr	3.58	273	Pn	Pn	18 23 30.7	+0.1
	0.4nm,0.3s,baz=103,slow=8.0,SNR=31						
MAJO	Matsushiro	3.58	273	ePn	Pn	18 23 31.2	+0.5
MJB9	Matsu-Tunnel	3.58	273	ePn	Pn	18 23 31.2	+0.5
JHJ	Hachijo jima 2	4.05	216	Sn	Sn	18 24 19.6	-4.7
	9.5nm,0.3s,baz=64,slow=23,SNR=3.1						
INU	Inuyama	4.70	258	ePn	Pn	18 23 46.8	+0.9
ASAJ	Asahikawa	7.69	360	Pn	Pn	18 24 26.9	-0.1
	0.6nm,0.3s,baz=56,slow=33,SNR=7.9						
ASAJ				Sn	Sn	18 25 50.5	-3.3
	0.4nm,0.3s,baz=120,slow=20,SNR=3.3						
KSRS	Korea Array	11.83	279	Pn	Pn	18 25 25.8	+2.0
	0.2nm,0.3s,baz=103,slow=14,SNR=5.2						
KSAR	Wonju Array Be	11.86	279	Pn	Pn	18 25 25.8	+1.6
KLR	Kul'dur	15.07	332	Pn	P	18 26 12.1	-1.1
	0.1nm,0.3s,baz=132,slow=16,SNR=4.3						
NJ2	Nanjing	20.13	264	eP	Pn	18 27 11.1	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MA2	Magadan	23.76	10	P	P	18 27 47.4	+0.2
	comp=Z,0.9nm,0.2s,baz=178,slow=10,SNR=5.8						
HHC	Hu-ho-hao-te	24.61	290	eP	P	18 27 52.8	-2.6
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,4.1s						
XAN	Xi'an	27.57	275	eP	P	18 28 22.0	-0.2
	comp=Z,18nm,1.5s						
ENH	Enshi	28.28	267	eP	P	18 28 28.9	+0.4
	comp=Z,16nm,1.3s						
ULN	Ulaanbaatar	28.52	305	eP	P	18 28 31.3	+0.7
	comp=Z,5.8nm,1.2s						
SONA0	Songino Array	28.95	305	eP	P	18 28 35.1	+0.6
SONM	Songino Array	28.95	305	P	P	18 28 35.1	+0.6
	comp=Z,2.0nm,0.8s,baz=110,slow=9.0,SNR=10						
LZH	Lanzhou	31.15	281	eP	P	18 28 57.3	+3.2
LZH				pP	pwP	18 29 05.8	+2.5
LZH				sP	sP	18 29 10.8	+12
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
CD2	Chengdu	32.67	272	eP	P	18 29 06.6	-0.8
GTA	Gaotai	33.69	288	eP	P	18 29 16.8	+0.5
GTA				pP	pwP	18 29 28.6	+3.1
GTA				sP	sP	18 29 32.0	+11
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WMQ	Urumqi	42.00	298	eP	P	18 30 30.0	+3.7
ZAA1	Zalesovo Array	43.06	313	eP	P	18 30 35.0	+0.4
ZALV	Zalesovo Beam	43.06	313	P	P	18 30 35.0	+0.4
	comp=Z,0.6nm,0.6s,baz=88,slow=6.4,SNR=6.3						
MK01	Makanchi Array	45.28	303	eP	P	18 30 52.5	-0.2
MK31	Makanchi Array	45.28	303	eP	P	18 30 52.9	+0.3
	comp=Z,3.2nm,1.0s						
MK32	Makanchi Array	45.28	303	eP	P	18 30 53.1	+0.5
MKAR	Makanchi Array	45.28	303	eP	P	18 30 52.9	+0.3
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	45.28	303	P	P	18 30 53.1	+0.5
	comp=Z,1.6nm,0.7s,baz=88,slow=9.1,SNR=12						
MAKZ	Makanchi	45.49	303	eP	P	18 30 55.5	+1.2
	comp=Z,7.7nm,1.5s						
KURK	Kurchatov	47.09	309	eP	P	18 31 06.6	-0.2
	comp=Z,4.1nm,0.8s						
ILAR	Eielson Array	49.48	32	P	P	18 31 26.0	+0.9
	comp=Z,0.3nm,0.6s,baz=268,slow=6.3,SNR=3.8						
WR1	Warramunga Arr	56.60	189	eP	P	18 32 17.5	-0.4
	comp=Z,22nm,2.0s						
WRA	Warramunga Arr	56.60	189	P	P	18 32 17.5	-0.5
	comp=Z,0.3nm,0.8s,baz=4.9,slow=7.0,SNR=6.4						
ASAR	Alice Springs	60.33	189	P	P	18 32 43.6	-0.4
	comp=Z,0.1nm,0.6s,baz=356,slow=5.7,SNR=4.2						
FIA0	FINESS Array S	69.81	333	eP	P	18 33 44.5	-0.6
FINES	FINESS Array B	69.81	333	P	P	18 33 44.6	-0.6
	comp=Z,1.5nm,0.8s,baz=48,slow=5.7,SNR=4.8						
KBZ	Khabaz	72.05	311	P	P	18 34 00.3	+1.3
	comp=Z,2.0nm,0.8s,baz=64,slow=6.5,SNR=6.8						
CLL	Collm	82.12	331	eP	P	18 34 55.0	-0.5

*IDC **14** 18:32:39.3±1.5, 12°.11S×165°.14E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.7/26, mbtmp3.7/6, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/28, Error ellipse: s-maj=45.2km s-min=28.9km az=125.0*
*ISCJB **14** 18:32:42.8±1.2, 12°.3S±0°.1×165°.1E±0°.2, h33^{km}, mb3.6/5, MS3.7/1, Error ellipse: s-maj=30.6km s-min=19.5km az=170.5*
ISC 14 18:32:44.6±1.3, 12°.2S±0°.1×165°.3E±0°.3, h35^{km}, n8, σ1^{s}.02/5, mb3.6/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.87	297	LR	LR	18 36 34.6	
	comp=Z,93nm,18.7s,baz=194,slow=41						
DZM	Mont Dzumac	9.93	174	Pn	Pn	18 35 05.3	+0.2
	0.3nm,0.3s,baz=288,slow=15,SNR=7.5						
WRA	Warramunga Arr	30.66	251	P	P	18 38 53.3	-2.9
	0.3nm,0.8s,baz=76,slow=8.0,SNR=4.0						
ASAR	Alice Springs	31.88	245	P	P	18 39 06.0	-0.8
	0.7nm,0.8s,baz=74,slow=8.7,SNR=7.2						
CMAR	Chiang Mai Arr	72.11	294	P	P	18 44 07.1	+1.0
	0.4nm,0.8s,baz=125,slow=4.7,SNR=4.7						
ILAR	Eielson Array	84.71	19	P	P	18 45 14.1	-0.6
	1.3nm,0.6s,baz=233,slow=5.4,SNR=20						
ELK	Elko	90.04	48	LR	LR	19 16 21.8	
	comp=Z,31nm,21.1s,baz=116,slow=29						
MKAR	Makanchi Array	93.99	317	P	P	18 45 59.3	+0.2
	0.4nm,0.8s,baz=103,slow=6.1,SNR=5.1						

NNC 14 18:36:56.4±5.1, 36°.96N×70°.40E, h0^{km}, mb3.9, mpv3.5, 5C-4D, Error ellipse: s-maj=48.0km s-min=36.4km az=131.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.90	38	⇑Pn	Pn	18 37 57.0	-0.8
	2.5nm,0.4s						
SFK				⇓Sn	Sn	18 38 47.1	+2.6
	2.6nm,0.3s						
MNAS	Manas	5.75	16	⇓Pn	Pn	18 38 22.8	-0.4
	1.3nm,0.4s						
MNAS				⇑Sn	Sn	18 39 30.3	+0.4
	3.2nm,0.5s						
KK31	Karatay Array	6.14	1	Pn	Pn	18 38 29.8	+1.5
	2.7nm,0.5s,baz=204,slow=17,SNR=32						
KK31				⇑Sn	Sn	18 39 41.9	+2.7
	2.7nm,0.5s,baz=188,slow=24,SNR=9.4						
AAK	Ala-Archa	6.49	28	⇓Pn	Pn	18 38 31.4	-1.9
	2.8nm,0.4s						
AAK				⇓Sn	Sn	18 39 45.5	-2.6
	3.2nm,0.8s						
TKM2	Tokmak 2	7.17	32	⇑Pn	Pn	18 38 44.4	+1.8
	2.1nm,0.5s						
TKM2				⇑Sn	Sn	18 40 07.9	+3.0
	0.7nm,0.2s						

*SOME **14** 18:38:37.2, 42°.57N×79°.68E, h15^{km}*
*KRNET **14** 18:38:37.4±0.1, 42°.57N×79°.66E, h10^{km}, mb2.5*
*NNC **14** 18:38:37.5±1.3, 42°.59N×79°.65E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=8.3km s-min=5.1km az=156.0*
ISC 14 18:38:36.3±1.6, 42°.52N±0°.05×79°.66E±0°.04, h8^{km}±10^{km}, n37, σ0^{s}.91/69, 10C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.78	323	P	Pg	18 38 51.4	0.0
	5.2nm,0.2s						
UZB				S	Sg	18 39 01.7	+0.2
	14nm,0.2s						
UZB	Uzynbulak	0.78	323	eP	Pg	18 38 51.4	0.0
	baz=21						
UZB				eS	Sg	18 39 01.7	+0.2
	baz=21						
UZB	Uzynbulak	0.78	323	eP	Pg	18 38 51.4	0.0
	5.2nm,0.2s						
UZB				eS	Sg	18 39 01.7	+0.2
	14nm,0.2s						
PDGK	Podgornoye	0.81	351	P	Pg	18 38 51.7	-0.2
	2.6nm,0.2s						
PDGK				S	Sg	18 39 02.5	-0.1
	2.4nm,0.1s						
PDGK	Podgornoye	0.81	351	⇑P	Pg	18 38 51.8	-0.2
	2.0nm,0.4s						
PDGK				⇑S	Sg	18 39 02.6	-0.1
	2.2nm,0.5s						
PDGK	Podgornoye	0.81	351	⇓iP	Pg	18 38 51.9	-0.1
	baz=51						
PDGK				⇓iS	Sg	18 39 02.3	-0.3
	baz=51						
PRZ	Przheval'sk	0.93	268	⇓iP	Pb	18 38 55.1	+0.3
	baz=65						
PRZ				⇓iS	Sb	18 39 07.8	+0.4
	baz=65						
KTMS	Ketmen	1.05	29	P	Pg	18 38 56.6	+0.1
	2.8nm,0.1s						
KTMS				S	Sn	18 39 10.8	-1.6
	6.0nm,0.1s						
KTMS	Ketmen	1.05	29	eP	Pg	18 38 56.6	+0.1
	baz=29						
KTMS				eS	Sn	18 39 10.8	-1.6
	baz=29						
KTMS	Ketmen	1.05	29	eP	Pg	18 38 56.6	+0.1
	2.8nm,0.1s						
KTMS				eS	Sn	18 39 10.8	-1.6
	6.0nm,0.1s						
KURS	Kuram	1.46	312	P	Pn	18 39 03.3	+0.3
	1.4nm,0.4s						
KURS				S	Sb	18 39 22.1	-0.3
	1.4nm,0.5s						
KURS	Kuram	1.46	312	eP	Pn	18 39 03.3	+0.3
	baz=11						
KURS				eS	Sb	18 39 22.1	-0.3
	baz=11						
KURS	Kuram	1.46	312	eP	Pn	18 39 03.3	+0.3
	1.4nm,0.4s						
KURS				eS	Sb	18 39 22.1	-0.3
	1.4nm,0.5s						
MNBS	Baschi	1.81	330	P	Pb	18 39 09.2	-0.5
	2.4nm,0.2s						
MNBS				S	Sb	18 39 32.3	-0.2
	12nm,0.2s						
MNBS	Baschi	1.81	330	eP	Pb	18 39 09.2	-0.5
	baz=29						
MNBS				eS	Sb	18 39 32.3	-0.2
	baz=29						
MNBS	Baschi	1.81	330	eP	Pb	18 39 09.2	-0.5
	2.4nm,0.2s						
MNBS				eS	Sb	18 39 32.3	-0.2
	12nm,0.2s						
DJR	Jarkent	1.81	3	P	Pb	18 39 09.4	-0.4
	0.8nm,0.2s						
DJR				S	Sg	18 39 33.4	-1.0
	3.1nm,0.2s						
DJR	Jarkent	1.81	3	eP	Pb	18 39 09.6	-0.2
	0.8nm,0.2s						
DJR				eS	Sg	18 39 33.1	-1.4
	3.1nm,0.2s						
KDJ	Kajisay	1.88	259	⇑iP	Pb	18 39 12.2	+1.2
	baz=57						
KDJ				⇑iS	Sg	18 39 37.4	+0.7
	baz=57						
KOTS	Kotyrbulak	2.00	292	Pg	Pg	18 39 14.7	+0.1
	1.0nm,0.3s						
KOTS				Lg	Lg	18 39 41.7	
	7.9nm,0.5s						
KOTS	Kotyrbulak	2.00	292	eP	Pb	18 39 14.2	+1.2
	baz=90						
KOTS				eS	Sg	18 39 40.5	-0.1
	baz=90						
KOTS	Kotyrbulak	2.00	292	eP	Pb	18 39 14.2	+1.2
	1.0nm,0.3s						
KOTS				eS	Sg	18 39 40.5	-0.1
	7.9nm,0.5s						
ARXS	Arharly	2.15	322	Pg	Pb	18 39 15.4	-0.2
	0.7nm,0.3s						
ARXS				Lg	Lg	18 39 42.8	
	7.0nm,0.3s						
ARXS	Arharly	2.15	322	eP	Pb	18 39 15.4	-0.2
	0.7nm,0.3s						
ARXS				eS	Sb	18 39 42.8	+0.3
	7.0nm,0.3s						
IZV	Izvestkoviy	2.30	284	Pg	Pb	18 39 18.4	+0.3
	1.3nm,0.2s						
IZV	Izvestkoviy	2.30	284	eP	Pb	18 39 18.4	+0.3
	baz=83						
IZV				eS	Sb	18 39 48.2	+1.4
	baz=83						
IZV	Izvestkoviy	2.30	284	eP	Pb	18 39 18.4	+0.3
	1.3nm,0.2s						
IZV				eS	Sb	18 39 48.2	+1.4
	5.8nm,0.4s						
CHKK	Chushkaly	2.36	305	Pg	Pb	18 39 19.1	0.0
	0.3nm,0.1s						
CHKK				Lg	Lg	18 39 49.2	
	5.3nm,0.2s						
CHKK	Chushkaly	2.36	305	eP	Pb	18 39 19.1	0.0
	baz=5.0						
CHKK				eS	Sb	18 39 49.2	+0.7
	baz=5.0						
CHKK	Chushkaly	2.36	305	eP	Pb	18 39 19.1	0.0
	0.3nm,0.1s						
CHKK				eS	Sb	18 39 49.2	+0.7
	5.3nm,0.2s						
ULHL	Ulahol	2.55	265	⇑eP	Pb	18 39 21.9	-0.5
	baz=64						
ULHL				⇑eS	Sb	18 39 54.2	+0.2
	baz=64						
BOOM	Boomskoye usch	2.75	271	⇑iP	Pb	18 39 24.2	-1.6
	baz=70						
BOOM				⇑iS	Sb	18 39 58.2	-1.6
	baz=70						
KAPS	Kapalarasan	2.77	356	Pg	Pb	18 39 25.7	-0.3
	0.6nm,0.4s						
KAPS				Lg	Lg	18 40 00.5	
	2.3nm,0.2s						
KAPS	Kapalarasan	2.77	356	eP	Pb	18 39 25.7	-0.3
	0.6nm,0.4s						
KAPS				eS	Sb	18 40 00.5	+0.3
	2.3nm,0.2s						
NRN	Naryn	2.94	249	⇓iP	Pb	18 39 27.9	-1.2
	baz=49						
NRN				⇓eS	Sb	18 40 04.1	-1.2
	baz=49						
TKM2	Tokmak 2	3.02	279	⇓iP	Pb	18 39 28.1	-2.3
	baz=78						
TKM2				⇓iS	Sb	18 40 05.0	-2.6
	baz=78						
MK31	Makanchi Array	4.66	23	Pn	Pn	18 39 49.6	+2.6
	0.2nm,0.5s,baz=222,slow=13,SNR=4.4						
MK31				⇑Sn	Sn	18 40 43.2	+1.9
	0.1nm,0.3s,baz=206,slow=26,SNR=3.9						
MK31				⇑Lg	Lg	18 41 01.8	
	0.3nm,0.6s						

MEX 14 18:43:25.9±0.9, 15°.17N×93°.33W, h67^{km}±14^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.55	12	eP	Pn	18 43 37.4	-1.5
PCIG				eS	Sn	18 43 46.7	-1.8
THIG		1.06	104	eP	Pn	18 43 43.5	-1.5
THIG				eS	Sn	18 43 58.2	-1.2
CCIG	Comitan	1.60	46	eP	Pn	18 43 51.1	-1.1
CCIG				eS	Sn	18 44 10.9	-1.2

MEX 14 18:49:48.9±0.3, 14°.96N×93°.42W, h16^{km}±47^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.77	15	eP	Pg	18 50 01.1	-2.8
PCIG				eS	Sg	18 50 10.8	-3.3

*BJI **14** 18:57:13.9, 8°.19S×120°.01E, h29^{km}, mB5.0/28, mb4.7/49, Ms4.5/12, Ms7 4.5/12*
*ISCJB **14** 18:57:20.5±0.2, 7°.49S±0°.02×119°.71E±0°.02, h33^{km}, mb4.8/87, MS3.7/18, Error ellipse: s-maj=3.4km s-min=3.3km az=25.3*
*DJA **14** 18:57:21.0±0.6, 8°S±1°×12°0E±°, h13^{km}±5^{km}, M4.7/28, mB5.2/19, mb4.8/25, MLv5.0/28, Mw(mB)4.6/19*
*MOS **14** 18:57:22.3±1.1, 7°.47S×119°.76E, h51^{km}, mb4.9/24, Error ellipse: s-maj=11.6km s-min=5.8km az=111.9*
*NEIC **14** 18:57:23.9±0.5, 7°.46S×119°.77E, h49^{km}±5^{km}, mb4.8/40, Error ellipse: s-maj=6.0km s-min=3.9km az=48.0*
*IDC **14** 18:57:24.8±2.3, 7°.43S×119°.73E, h53^{km}±21^{km}, mb4.3/20, mb1 4.5/23, mb1mx4.4/37, mbtmp4.6/23, ML4.3/3, MS3.6/17, Ms1 3.6/17, ms1mx3.4/46, Error ellipse: s-maj=17.6km s-min=10.8km az=69.0*
ISC 14 18:57:22.3±0.3, 7°.58S±0°.04×119°.76E±0°.04, h35^{km}, n256, σ1^{s}.61/252, mb4.8/85, MS3.7/18, 13C-10D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	2.15	166	P	Pn	18 57 57.2	+1.6
EDFI	Ende, Flores	2.24	121	P	Pn	18 57 58.4	+1.4
BKSI	Bulukumba	2.27	9	P	Pn	18 57 55.5	-1.8
PLAI	Plampang	2.32	238	P	Pn	18 57 58.5	+0.5
PLAI				S	Sn	18 58 25.3	-0.1
MMRI	Maumere	2.67	113	ePn	Pn	18 58 03.7	+0.9
MMRI	Maumere	2.67	113	P	Pn	18 58 04.5	+1.7
BASI	Baing, Sumba	2.75	163	P	Pn	18 58 05.5	+1.6
BNSI	Bone	3.17	6	P	Pn	18 58 09.2	-0.6
BBSI	Bau Bau	3.48	54	P	Pn	18 58 15.4	+1.4
SPSI	Sidrap Palu	3.59	0	P	Pn	18 58 13.8	-1.7
TTSI	Tana Toraja	4.50	1	P	Pn	18 58 28.0	0.0
SRBI	Singaraja	4.53	263	P	Pn	18 58 26.6	-1.8
KDI	Kendari	4.59	39	P	Pn	18 58 29.5	+0.3
DNP	Denpasar	4.63	256	P	Pn	18 58 31.3	+1.5
BATI	Baumata	4.66	124	P	Pn	18 58 32.3	+2.1
BATI	Baumata	4.66	124	P	Pn	18 58 34.5	+4.3
	20nm,0.3s,baz=18,slow=1.1,SNR=17						
BATI				S	Sn	18 59 21.1	-2.0
	11nm,0.3s,baz=257,slow=19,SNR=4.5						
BATI				LR	LR	19 00 58.3	
	comp=Z,810nm,20.0s,baz=315,slow=45						
SOEI	Soe	4.96	116	ePn	Pn	18 58 40.6	+6.2
SOEI	Soe	4.96	116	P	Pn	18 58 39.3	+4.9
JAGI	Jajag, Banyuwa	5.62	261	ePn	Pn	18 58 45.3	+1.9
JAGI	Jajag, Banyuwa	5.62	261	P	Pn	18 58 42.0	-1.5
	266nm,0.4s,5μm1.5nm						
KMMI	Kalianget	5.77	275	P	Pn	18 58 45.4	-0.1
GMJI	Gumukmas	6.29	263	P	Pn	18 58 53.0	+0.3
PCI	Palu	6.63	1	P	Pn	18 59 00.5	+3.2
PCI				pmax	pmax		
	comp=Z,101nm,0.8s						
PCI	Palu	6.63	1	P	Pn	18 58 58.5	+1.2
	comp=Z,101nm,0.8s,comp=Z,2μmcomp=Z,0.6nm						
APSI	Ampana	6.88	16	P	Pn	18 59 00.6	-0.2
	comp=Z,101nm,1.0s,comp=Z,933nmcomp=Z,0.4nm						
BKB	Balikpapan	6.89	335	P	Pn	18 59 03.6	+2.7
LUWI	Luwuk	7.15	25	ePn	Pn	18 59 04.3	-0.2
LUWI	Luwuk	7.15	25	P	Pn	18 59 04.5	0.0
GRJI	Gresik	7.25	275	P	Pn	18 59 06.1	+0.3
SMKI	Samarinda	7.53	340	P	Pn	18 59 19.3	+10
MPSI	Mapaga	7.86	1	P	Pn	18 59 15.5	+1.3
PWJI	Pagerwojo	7.89	266	P	Pn	18 59 15.1	+0.4
NGJI	Ngawi	8.23	271	P	Pn	18 59 19.6	+0.3
SANI	Sanana	8.29	49	P	Pn	18 59 22.4	+2.4
	comp=Z,112nm,0.7s,comp=Z,986nmcomp=Z,0.4nm						
MRSI	Marisa	8.29	15	P	Pn	18 59 20.4	+0.3
	comp=Z,96nm,0.9s,comp=Z,622nmcomp=Z,0.3nm						
NLAI	Namlea	8.48	60	P	Pn	18 59 28.6	+5.8
	comp=Z,242nm,0.7s,comp=Z,2μmcomp=Z,0.7nm						
PCJI	Pacitan	8.52	265	P	Pn	18 59 23.6	+0.3
UGM	Wanagama	9.16	267	ePn	Pn	18 59 36.1	+4.0
UGM	Wanagama	9.16	267	P	Pn	18 59 32.3	+0.3
KPJI	Karang Pucung	10.74	271	P	Pn	18 59 54.0	+0.3
CMJI	Cimerak	11.21	268	P	Pn	19 00 00.5	+0.3
CISI	Cisompet, Garu	11.84	269	ePn	Pn	19 00 09.5	+0.7
CISI	Cisompet, Garu	11.84	269	P	Pn	19 00 09.1	+0.3
FITZ	Fitzroy Crossi	11.92	152	P	Pn	19 00 09.2	-0.7
	comp=Z,0.7nm,0.3s,baz=331,slow=7.4,SNR=31						
FITZ				S	Sn	19 02 17.7	-4.1
	comp=Z,1.8nm,0.3s,baz=184,slow=19,SNR=4.6						
FITZ				LR	LR	19 05 41.0	
	comp=Z,164nm,20.0s,baz=327,slow=41						
LEM	Lembang	12.07	273	P	Pn	19 00 14.5	+2.4
	comp=Z,2.4nm,0.3s,baz=64,slow=7.8,SNR=11						
MTN	Manton Dam	12.36	116	ePn	Pn	19 00 16.1	+0.3
DBJI	Dramaga	12.95	274	P	P	19 00 37.3	+3.2
SIJI	Sorong	13.27	60	P	Pn	19 00 29.9	+1.6
	comp=Z,0.7nm,0.3s,baz=220,slow=5.0,SNR=12						
SIJI				LR	LR	19 05 46.5	
	comp=Z,516nm,19.8s,baz=312,slow=38						
FAKI	Fak Fak	13.27	70	P	Pn	19 00 30.7	+2.4
MBWA	Marble Bar	13.50	180	ePn	Pn	19 00 31.5	+0.1
KASI	Kota Agung	15.30	277	P	P	19 00 59.3	-0.9
DAV	Davao City (W)	15.67	22	LR	LR	19 07 37.8	
	comp=Z,323nm,20.0s,baz=234,slow=40						
MDSI	Maura Dua	15.79	280	P	P	19 01 13.4	+7.7
WR1	Warramunga Arr	18.73	132	eP	P	19 01 37.3	-0.9
	comp=Z,22nm,0.6s						
WR1				eSn	Sn	19 04 59.7	-7.7
WRA	Warramunga Arr	18.73	132	i P	P	19 01 39.5	+1.3
WRA				pmax	pmax		
	comp=Z,20nm,0.7s						
WRA	Warramunga Arr	18.73	132	P	P	19 01 37.3	-0.9
	comp=Z,2.8nm,0.3s,baz=307,slow=13,SNR=142						
WRA				S	Sn	19 04 59.7	-7.7
	comp=Z,0.1nm,0.3s,baz=309,slow=24,SNR=4.9						
WRAB	Tennant Creek	18.73	132	eP	P	19 01 38.2	0.0
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	18.73	132	d iP	P	19 01 39.6	+1.4
KRJI	Kerinci	19.02	286	P	Pn	19 01 55.3	+13
GENI	Genyem	20.92	77	P	P	19 02 05.7	+3.7
	comp=Z,86nm,1.1s						
AS31	Alice Springs	20.98	141	eP	P	19 02 04.0	+1.3
	comp=Z,41nm,0.7s						
ASAR	Alice Springs	20.98	141	P	P	19 02 04.6	+1.9
	comp=Z,96nm,0.8s,baz=313,slow=9.3,SNR=395						
ASAR				S	S	19 05 51.7	-3.0
	comp=Z,1.7nm,0.7s,baz=307,slow=18,SNR=4.2						
ASAR				LR	LR	19 10 12.6	
	comp=Z,163nm,20.9s,baz=316,slow=36						
AS01	Alice Springs	21.01	141	eP	P	19 02 03.6	+0.6
JAY	Jayapura	21.46	78	LR	LR	19 13 01.8	
	comp=Z,161nm,18.3s,baz=138,slow=44						
TGY	Tagaytay City	21.57	3	LR	LR	19 09 59.6	
	comp=Z,72nm,20.8s,baz=140,slow=35						
MORW	Morawa	21.66	189	eP	P	19 02 10.6	+0.6
	comp=Z,44nm,1.0s						
MNSI	Mandailing Nat	21.78	292	P	P	19 02 23.8	+13
IPM	Ipoh	22.20	302	eP	P	19 02 16.8	+1.0
	comp=Z,19nm,0.7s						
KULM	Kulim	22.95	303	eP	P	19 02 23.4	-0.4
	comp=Z,30nm,0.9s						
PSI	Prapat	23.20	296	eP	P	19 02 25.6	-0.8

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              comp=Z,42nm,0.8s
PSI    Prapat             23.20 296  eP       P         19 02 25.7  -0.8
PSI                                   pmax     pmax
              comp=Z,42nm,0.8s
PSI    Prapat             23.20 296   P       P         19 02 27.5  +1.0
              comp=Z,6.8nm,0.4s,baz=179,slow=2.6,SNR=8.1
GSI    Gunungsitoli       23.82 291   P       P         19 02 33.7  +1.4
TSI    Tuntungan          23.84 297   P       P         19 02 45.6   +13
COEN   Coen               23.85 107  eP       P         19 02 33.2  +0.6
              comp=Z,101nm,1.7s
FORT   Forrest            24.36 162  eP       P         19 02 38.6  +1.5
              comp=Z,46nm,0.8s
KCSI   Kotacane, Aceh     24.55 296   P       P         19 02 39.9  +0.8
              comp=Z,50nm,0.9s,comp=Z,800nm
TRTT   Trang              25.19 307   P       P         19 02 46.1  +1.3
              comp=Z,16nm,0.8s
NWAO   Narrogin (SRO)     25.33 185   P       P         19 02 47.3  +1.4
              comp=Z,38nm,0.9s,baz=240,slow=11,SNR=18
SNSI   Sinabang, Aceh     25.40 292   P       P         19 02 49.1  +2.4
              comp=Z,136nm,0.9s
SRAK   Srakaew            27.73 321   P       P         19 03 04.9  -2.8
              comp=Z,36nm,1.0s
BBOO   Buckleboo          29.31 151  eP       P         19 03 23.1  +1.4
              comp=Z,32nm,0.6s
PBKT   Sadao Pong         30.35 322  eP       P         19 03 29.4  -1.5
PBKT   Sadao Pong         30.35 322   P       P         19 03 31.2  +0.2
              comp=Z,6.6nm,0.7s,comp=Z,980nm
UTHA   Uthaitani          30.55 319   P       P         19 03 37.0  +4.2
              comp=Z,7.0nm,0.7s,comp=Z,56nm
UMPA   Umpang Tak         31.41 319   P       P         19 03 50.4   +10
UTTA   Uttaradit          31.51 323   P       P         19 03 42.7  +1.5
              comp=Z,3.3nm,0.7s
STKA   Stephens Creek     31.60 143  eP       P         19 03 43.5  +1.7
              comp=Z,4.1nm,0.8s
STKA   Stephens Creek     31.60 143  eP       P         19 03 43.6  +1.7
STKA                                  pmax     pmax
              comp=Z,4.0nm,0.8s
STKA   Stephens Creek     31.60 143   P       P         19 03 43.8  +1.9
              comp=Z,18nm,0.5s,baz=319,slow=9.0,SNR=70
STKA                                  LR       LR       19 16 31.4
              comp=Z,55nm,19.5s,baz=315,slow=36
CM01   Chiang Mai Arr     32.99 322  eP       P         19 03 52.7  -1.6
CM31   Chiang Mai Arr     33.03 322  eP       P         19 03 52.1  -2.5
              comp=Z,6.2nm,1.0s
CMAR   Chiang Mai Arr     33.03 322ceP       P         19 03 54.7  +0.1
CMAR                                  pmax     pmax
              comp=Z,3.0nm,0.8s
CMAR   Chiang Mai Arr     33.03 322   P       P         19 03 54.3  -0.3
              comp=Z,2.5nm,0.8s,baz=143,slow=7.1,SNR=23
CMAR                                  PcP      PcP      19 06 39.0  +1.0
              comp=Z,1.7nm,0.8s,baz=178,slow=3.1,SNR=9.1
CMAR                                  LR       LR       19 20 01.7
              comp=Z,133nm,18.4s,baz=157,slow=41
CMMT   Chiang Mai         33.30 322   P       P         19 03 57.2  +0.3
              comp=Z,8.9nm,0.8s
CHTO   Chiang Mai         33.30 322  eP       P         19 03 56.3  -0.6
              comp=Z,5.9nm,0.8s
CHTO   Chiang Mai         33.30 322  eP       P         19 03 56.3  -0.6
CHTO                                  pmax     pmax
              comp=Z,6.0nm,0.8s
CHTO   Chiang Mai         33.30 322   P       P         19 03 57.2  +0.3
              comp=Z,39nm,0.9s
GYA    Guiyang            36.14 340   P       P         19 04 19.3  -2.2
GYA                                   pP       pP       19 04 32.0  +1.5
GYA                                   PP       PP       19 05 47.4  +3.2
GYA                                   S        S        19 09 55.8  -3.3
GYA                                   sS       sS       19 10 16.3  +2.6
GYA                                   SS       SnSn     19 12 25.8  -0.8
GYA                                   pmax     pmax
              comp=Z,10.0nm,0.8s
GYA                                   pmax     pmax
              comp=Z,110nm,4.9s
GYA                                   LR       LR
              comp=Z,480nm,17.1s
GYA                                   LR       LR
              comp=Z,410nm,17.0s
GYA                                   LR       LR
              comp=Z,470nm,17.2s
KMI    Kunming            36.48 334   P       P         19 04 26.3  +1.7
KMI                                   pmax     pmax
              comp=Z,5.0nm,0.9s
KMI                                   pmax     pmax
              comp=Z,78nm,4.3s
TOO    Toolangi           37.90 146  eP       P         19 04 36.1  -0.1
              comp=Z,20nm,1.2s
TOO    Toolangi           37.90 146  eP       P         19 04 36.1  -0.1
TOO                                   pmax     pmax
              comp=Z,20nm,1.2s
WHN    Wuhan              38.26 352 ⇓P       P         19 04 39.8  +0.6
WHN                                   pmax     pmax
              comp=Z,34nm,1.0s
ENH    Enshi              38.90 346  eP       P         19 04 43.7  -1.0
              comp=Z,15nm,0.8s
NJ2    Nanjing            39.42 359  eP       P         19 04 49.5  +0.6
NJ2                                   pmax     pmax
              comp=Z,12nm,0.5s
CD2    Chengdu            41.23 339   P       P         19 05 03.4  -0.6
CD2                                   S        S        19 11 16.6  +1.0
CD2                                   pmax     pmax
              comp=Z,40nm,0.6s
CD2                                   pmax     pmax
              comp=Z,120nm,4.8s
CD2                                   LR       LR
              comp=Z,590nm,14.7s
CD2                                   LR       LR
              comp=Z,360nm,10.8s
JNU    Nakatsue           41.83  14  eP       P         19 05 08.0  -0.9
              comp=Z,26nm,0.9s
XAN    Xi'an              42.65 347   P       P         19 05 14.8  -0.8
XAN                                   pP       pP       19 05 23.4  -1.2
XAN                                   pmax     pmax
              comp=Z,8.0nm,1.2s
XAN    Xi'an              42.65 347  eP       P         19 05 13.7  -1.9
              comp=Z,7.7nm,0.9s
XAN    Xi'an              42.65 347  eP       P         19 05 13.7  -1.9
XAN                                   pmax     pmax
              comp=Z,8.0nm,0.9s
SHL    Shillong           42.67 321  eP       P         19 05 16.5  +0.5
TJN    Taejon             44.30   9⇓iP       P         19 05 28.8   0.0
KS15   Wonju Array Si     45.42   9  eP       P         19 05 38.5  +0.7
KSAR   Wonju Array Be     45.42   9   P       P         19 05 38.5  +0.9
KSAR   Wonju Array Be     45.42   9   P       P         19 05 38.6  +0.9
KSRS   Korea Array        45.44   9   P       P         19 05 38.5  +0.7
              comp=Z,28nm,1.0s,baz=188,slow=9.3,SNR=69
KSRS                                  LR       LR       19 25 08.3
              comp=Z,42nm,21.3s,baz=182,slow=37
KS01   Wonju Array Si     45.46   9  eP       P         19 05 38.1  +0.1
LZH    Lanzhou            45.94 342  eP       P         19 05 51.5  +9.5
LZH                                   pP       pwP      19 05 59.3  +2.8
LZH                                   sP       sP       19 06 03.3  +8.5
LZH                                   pmax     pmax
              comp=Z,30nm,1.1s
LSA    Lhasa              46.16 325   P       P         19 05 44.4  +0.2
LSA                                   pmax     pmax
              comp=Z,4.0nm,0.7s
LSA    Lhasa              46.16 325  eP       P         19 05 43.7  -0.5
              comp=Z,6.9nm,0.7s
LSA    Lhasa              46.16 325  eP       P         19 05 43.7  -0.5
LSA                                   pmax     pmax
              comp=Z,7.0nm,0.7s
RAMN   Ramite             47.02 318  eP       P         19 05 50.8   0.0
              comp=Z,32nm,0.6s
MAJO   Matsushiro         47.18  20  eP       P         19 05 50.6  -1.0
              comp=Z,40nm,1.7s
MAJO   Matsushiro         47.18  20⇓eP       P         19 05 50.8  -0.8
MAJO                                  pmax     pmax
              comp=Z,24nm,1.6s
MAT    Matsushiro         47.18  20   P       P         19 05 50.2  -1.4
MJAR   Matsushiro Arr     47.18  20   P       P         19 05 50.5  -1.1
              comp=Z,6.2nm,1.0s,baz=190,slow=8.6,SNR=11
MJAR                                  LR       LR       19 26 54.6
              comp=Z,25nm,19.0s,baz=225,slow=38
MJB9   Matsu-Tunnel       47.18  20  eP       P         19 05 50.9  -0.7
BJT    Baijiatuau         47.47 356  eP       P         19 05 52.8  -0.9
              comp=Z,22nm,0.6s
BJT    Baijiatuau         47.47 356  eP       P         19 05 52.8  -0.9
BJT                                   pmax     pmax
              comp=Z,22nm,0.6s
BJI    Beijing            47.49 356   P       P         19 05 53.3  -0.6
BJI                                   pmax     pmax
              comp=Z,22nm,0.6s
HYB    Hyderabad          47.69 302  i P      P         19 05 55.0  -0.9
JIRN   Jiri               47.76 319  eP       P         19 05 56.3  -0.4
              comp=Z,53nm,0.7s
GUN    Gumba              48.13 319  eP       P         19 05 59.1  -0.4
              comp=Z,45nm,0.8s
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PKI    Pulchoki           48.22 318  eP       P         19 05 59.3  -0.9
              comp=Z,23nm,0.6s
PKIN   Phulchoki          48.23 318  eP       P         19 05 59.2  -1.0
              comp=Z,19nm,0.5s
DMN    Daman              48.45 318  eP       P         19 06 01.3  -0.6
              comp=Z,41nm,0.8s
HHC    Hu-ho-hao-te       48.77 352  eP       P         19 06 03.4  -0.5
HHC                                   pmax     pmax
              comp=Z,7.0nm,1.0s
HHC                                   pmax     pmax
              comp=Z,54nm,4.1s
KOLN   Koldanda           49.57 317  eP       P         19 06 09.7  -0.7
              comp=Z,38nm,0.9s
DANN   Dangsing           49.83 317  eP       P         19 06 11.8  -0.7
              comp=Z,75nm,0.7s
PYUN   Piuthan            50.19 316  eP       P         19 06 14.2  -0.9
              comp=Z,45nm,0.9s
GTA    Gaotai             50.27 340  eP       P         19 06 15.6  +0.2
GTA                                   pP       pP       19 06 25.4  +0.8
GTA                                   sP       sP       19 06 29.3  +1.0
GTA                                   PcP      PcP      19 07 29.9  -4.2
GTA                                   S        S        19 13 23.9  -1.9
GTA                                   sS       sS       19 13 39.9  -0.9
GTA                                   SS       SS       19 16 55.9  -4.0
GTA                                   pmax     pmax
              comp=Z,3.0nm,1.0s
GTA                                   pmax     pmax
              comp=Z,76nm,7.3s
GTA                                   LR       LR
              comp=Z,190nm,18.7s
GTA                                   LR       LR
              comp=Z,120nm,19.7s
VLA    Vladivostok        51.65  11d iP       P         19 06 27.7  +2.2
VLA                                   pmax     pmax
              comp=Z,20nm,0.3s
MDJ    Mudanjiang         52.70   9   P       P         19 06 33.3  -0.1
MDJ                                   pmax     pmax
              comp=Z,27nm,0.6s
MDJ                                   pmax     pmax
              comp=Z,60nm,4.7s
MDJ    Mudanjiang         52.70   9  eP       P         19 06 33.0  -0.3
              comp=Z,29nm,0.8s
USRK   Ussuriysk Ar.      52.71  11   P       P         19 06 33.0  -0.4
              comp=Z,5.0nm,0.5s,baz=190,slow=6.4,SNR=40
ULN    Ulaanbaatar        56.33 350  eP       P         19 06 58.9  -0.9
              comp=Z,8.5nm,0.9s
ULN    Ulaanbaatar        56.33 350ceP       P         19 06 59.2  -0.7
ULN                                   pmax     pmax
              comp=Z,8.0nm,1.0s
SONA0  Songino Array      56.42 349  eP       P         19 06 59.9  -0.6
SONM   Songino Array      56.42 349   P       P         19 06 59.9  -0.6
              comp=Z,5.4nm,1.0s,baz=165,slow=8.5,SNR=20
SONM                                  LR       LR       19 34 48.1
              comp=Z,67nm,18.5s,baz=66,slow=40
SONA1  Songino Array      56.43 349  eP       P         19 06 58.7  -1.9
HIA    Hailar             56.60 360  eP       P         19 07 00.8  -0.8
              comp=Z,6.4nm,0.8s
HIA    Hailar             56.60 360  eP       P         19 07 00.8  -0.8
HIA                                   pmax     pmax
              comp=Z,6.0nm,0.8s
RPZ    Rata Peaks         57.34 138   LR      LR        19 33 09.3
              comp=Z,114nm,19.7s,baz=244,slow=37
KLR    Kul'dur            57.53   9⇓eP       P         19 07 07.8  -0.3
WMQ    Urumqi             58.82 333  eP       P         19 07 18.3  +1.0
WMQ                                   sP       sP       19 07 30.3   0.0
WMQ                                   pmax     pmax
              comp=Z,11nm,0.7s
WMQ                                   pmax     pmax
              comp=Z,260nm,4.5s
WMQ                                   LR       LR
              comp=Z,170nm,24.3s
WMQ                                   LR       LR
              comp=Z,190nm,21.5s
WMQ                                   LR       LR
              comp=Z,800nm,31.5s
ZAK    Zakamensk          59.47 348  eP       P         19 07 19.9  -1.9
ZAK                                   pmax     pmax
              comp=Z,3.0nm,1.3s
GRNR   Gornyy             59.88  12  eP       P         19 07 24.0  -0.4
NIL    Nilore             60.20 316  eP       P         19 07 25.2  -1.9
              comp=Z,10nm,0.6s
NIL    Nilore             60.20 316  eP       P         19 07 25.2  -1.9
NIL                                   pmax     pmax
              comp=Z,10.0nm,0.6s
MOY    Mondy              61.18 347  eP       P         19 07 33.3  -0.1
ZEA    Zeya               61.41   5  eP       P         19 07 34.1  -0.7
ZEA                                   pmax     pmax
              comp=N,24nm,1.0s
ZEA                                   pmax     pmax
              comp=Z,35nm,1.0s
KSH    Kashi              61.93 323   P       P         19 07 38.8   0.0
KSH                                   pP       pP       19 07 48.0  -0.2
KSH                                   PP       PP       19 10 02.4  +7.0
KSH                                   S        S        19 15 57.3  -3.3
KSH                                   sS       sS       19 16 14.6  -1.5
KSH                                   SS       SS       19 20 08.4  +4.8
KSH                                   pmax     pmax
              comp=Z,29nm,0.8s
KSH                                   pmax     pmax
              comp=Z,200nm,4.9s
KSH                                   LR       LR
              comp=Z,160nm,4.7s
KSH                                   LR       LR
              comp=Z,130nm,5.1s
KSH                                   LR       LR
              comp=Z,350nm,6.1s
NKL    Nikolayevsk        63.05  14  eP       P         19 07 45.3  -0.5
NRN    Naryn              63.12 324  eP       P         19 07 46.0  -0.9
              comp=Z,4.4nm,0.7s
NRN    Naryn              63.12 324  eP       P         19 07 46.1  -0.9
NRN                                   pmax     pmax
              comp=Z,4.0nm,0.7s
MK01   Makanchi Array     63.53 332  eP       P         19 07 48.0  -1.2
MK31   Makanchi Array     63.55 332  eP       P         19 07 48.3  -1.0
MK31   Makanchi Array     63.55 332  eP       P         19 07 48.3  -1.0
MK32   Makanchi Array     63.55 332  eP       P         19 07 48.3  -1.0
MKAR   Makanchi Array     63.55 332  eP       P         19 07 48.3  -1.0
              comp=Z,38nm,0.8s
MKAR   Makanchi Array     63.55 332ceP       P         19 07 48.5  -0.8
MKAR                                  pmax     pmax
              comp=Z,5.0nm,0.8s
MKAR   Makanchi Array     63.55 332   P       P         19 07 48.3  -1.0
              comp=Z,4.9nm,0.8s,baz=144,slow=7.1,SNR=34
DGZ    Jazzator, Alta     63.62 337ceP       P         19 07 49.4  -0.5
DGZ                                   pmax     pmax
              comp=Z,2.0nm,1.1s
KBL    Kabul              63.62 315  eP       P         19 07 48.9  -1.4
              comp=Z,8.1nm,0.8s
KBL    Kabul              63.62 315  eP       P         19 07 48.9  -1.4
KBL                                   pmax     pmax
              comp=Z,8.0nm,0.8s
MAKZ   Makanchi           63.70 332  eP       P         19 07 49.3  -1.0
              comp=Z,3.4nm,0.9s
MAKZ   Makanchi           63.70 332  eP       P         19 07 49.3  -1.0
MAKZ                                  pmax     pmax
              comp=Z,3.0nm,0.9s
AAK    Ala-Archa          64.75 325  eP       P         19 07 56.7  -0.8
              comp=Z,6.0nm,0.8s
AAK    Ala-Archa          64.75 325⇓eP       P         19 07 57.5   0.0
AAK                                   pmax     pmax
              comp=Z,8.0nm,1.7s
BOD    Bodaibo            65.34 357  eP       P         19 08 00.4  -0.3
BOD                                   pmax     pmax
              comp=Z,13nm,0.9s
BTK    Batken             65.43 320  eP       P         19 08 01.7  -0.1
              comp=Z,13nm,1.4s
BTK    Batken             65.43 320  eP       P         19 08 01.7  -0.1
BTK                                   pmax     pmax
              comp=Z,13nm,1.4s
WSAR   Wadi Sarin         67.11 299   P       P         19 08 12.4  -0.4
              comp=Z,6.3nm,0.8s,baz=175,slow=2.4,SNR=5.1
ZAA0   Zalesovo Array     67.99 339  eP       P         19 08 15.6  -2.2
ZALV   Zalesovo Beam      67.99 339  eP       P         19 08 15.3  -2.4
ZALV   Zalesovo Beam      67.99 339  eP       P         19 08 15.3  -2.4
ZALV   Zalesovo Beam      67.99 339   P       P         19 08 15.9  -1.8
              comp=Z,5.1nm,0.8s,baz=142,slow=4.0,SNR=15
ZAA1   Zalesovo Array     68.00 339  eP       P         19 08 15.9  -1.8
KURK   Kurchatov          68.07 333  eP       P         19 08 17.1  -1.1
              comp=Z,7.7nm,0.8s
KURK   Kurchatov          68.07 333⇓eP       P         19 08 19.2  +1.0
KURK                                  pmax     pmax
              comp=Z,7.0nm,1.0s
PETK   Petropavlovsk-     68.48  23   P       P         19 08 21.2  +0.4
              comp=Z,2.4nm,0.5s,baz=189,slow=8.3,SNR=6.3
PEA1   Petropavlovsk-     68.48  23  eP       P         19 08 21.2  +0.3
YAK    Yakutsk            69.83   5  eP       P         19 08 28.4  -0.5
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YAK                                   pmax     pmax
              comp=Z,34nm,0.6s
YAK                                   pmax     pmax
              comp=N,26nm,0.9s
MA2    Magadan            71.36  16  eP       P         19 08 37.9  -0.5
              comp=N,4.6nm,0.8s
MA2    Magadan            71.36  16⇑eP       P         19 08 38.7  +0.4
MA2                                   pmax     pmax
              comp=Z,12nm,2.5s
GEYT   Alibeck            73.01 313   P       P         19 08 48.2  -0.6
              comp=Z,7.3nm,0.9s,baz=152,slow=4.2,SNR=15
GYA0B  ALIBECK ARRAY      73.01 313  eP       P         19 08 48.1  -0.7
              comp=Z,9.4nm,1.0s
VNDA   Vanda              73.27 171   P       P         19 08 51.7  +2.1
              comp=Z,2.1nm,0.6s,baz=336,slow=8.1,SNR=4.6
BVAR   Borovoye Array     73.41 331   LR      LR        19 43 34.3
              comp=Z,41nm,20.1s,baz=121,slow=38
BRVK   Borovoye           73.48 331  eP       P         19 08 49.8  -1.3
              comp=Z,2.8nm,0.8s
BRVK   Borovoye           73.48 331⇑eP       P         19 08 50.1  -1.0
BRVK                                  pmax     pmax
              comp=Z,5.0nm,1.5s
SEY    Seymchan           74.61  15⇑eP       P         19 08 57.6  +0.1
ABKAR  Akbulak array      76.84 324  eP       P         19 09 09.4  -1.2
RAYN   Ar Rayn            78.76 296  eP       P         19 09 21.1  -0.8
              comp=Z,3.1nm,0.8s
RAYN   Ar Rayn            78.76 296  eP       P         19 09 21.1  -0.8
RAYN                                  pmax     pmax
              comp=Z,3.0nm,0.8s
SYO    Syowa Base         79.44 201⇑eP       P         19 09 26.0  +1.3
SYO    Syowa Base         79.44 201⇓ePcP     PcP       19 09 31.8  -0.8
SYO    Syowa Base         79.44 201⇑epP      pP        19 09 34.8  +0.8
NRIK   Noril'sk           79.91 349   P       P         19 09 26.6  -0.5
              comp=Z,1.9nm,0.3s,baz=132,slow=7.2,SNR=3.4
SVE    Sverdlovsk         80.20 331  eP       P         19 09 27.6  -1.3
QSPA   South Pole Qui     82.41 180  eP       P         19 09 41.5  +0.8
              comp=Z,11nm,0.8s
QSPA   South Pole Qui     82.41 180   P       P         19 09 41.6  +0.8
              comp=Z,2.7nm,0.8s,baz=134,slow=1.2,SNR=10.0
GNI    Garni              83.55 312⇑eP       P         19 09 48.4  +1.2
GNI                                   pmax     pmax
              comp=Z,43nm,1.3s
GNI    Garni              83.55 312   LR      LR        19 52 23.8
              comp=Z,16nm,20.4s,baz=98,slow=40
SIRT   Sirnak             84.62 309  eP       P         19 09 52.6   0.0
              comp=Z,28nm,0.9s
ZEI    Tsey               84.86 314  eP       P         19 09 53.1  -0.7
ZEI                                   pmax     pmax
              comp=Z,8.0nm,0.9s
NCK    Nalchik            85.26 315⇑eP       P         19 09 55.6   0.0
NCK                                   pmax     pmax
              comp=Z,2.0nm,0.2s
KBZ    Khabaz             85.81 315   P       P         19 09 58.1  -0.1
              comp=Z,4.6nm,0.9s,baz=130,slow=2.4,SNR=13
NEY    Neytrino           85.81 314⇑eP       P         19 09 59.0  +0.5
NEY                                   pmax     pmax
              comp=Z,2.0nm,1.0s
KIV    Kislovodsk         86.01 315  eP       P         19 10 00.2  +0.8
KIV                                   pmax     pmax
              comp=Z,5.0nm,1.0s
KIRV   Kirov              86.38 330   LR      LR        19 53 25.2
              comp=Z,43nm,18.3s,baz=174,slow=39
VRH    Novokhopyorsk      88.43 322  eP       P         19 10 09.3  -1.5
VRH                                   pmax     pmax
              comp=Z,10.0nm,0.8s
VSR    Storozhevoye       90.00 322⇓iP       P         19 10 16.4  -1.7
VSR                                   pmax     pmax
              comp=Z,12nm,0.7s
ANM    Nome               90.37  25  eP       P         19 10 20.6  +1.0
              comp=Z,3.4nm,0.8s
ANM    Nome               90.37  25  eP       P         19 10 20.6  +1.0
ANM                                   pmax     pmax
              comp=Z,3.0nm,0.8s
BR101  Keskin Array S     91.81 310  eP       P         19 10 28.1  +1.0
BRTR   Keskin Array B     91.81 310   P       P         19 10 28.1  +1.0
              comp=Z,0.6nm,0.9s,baz=46,slow=4.2,SNR=3.0
OBN    Obninsk            92.27 325⇑eP       P         19 10 28.8  +0.2
OBN                                  e                  19 14 05.9
OBN                                  eS       SKSac     19 20 56.9  -2.2
OBN                                   pmax     pmax
              comp=Z,5.0nm,0.4s
OBN                                   MLR      MLR
              comp=Z,57nm,16.0s
SNAA   Sanae              92.56 195   P       P         19 10 41.2   +11
VNA2   Neumayer--Watz     94.19 195   P       P         19 10 48.4   +11
AKASG  Malin Array Be     96.14 320   LR      LR        20 00 07.0
              comp=Z,25nm,18.3s,baz=335,slow=39
COLD   Coldfoot           96.95  23  eP       P         19 10 50.0  +0.2
              comp=Z,13nm,1.7s
TOLK   Toolik Lake Re     97.25  22  eP       P         19 10 51.8  +0.6
              comp=Z,5.7nm,0.8s
RND    Reindeer           97.34  27  eP       P         19 10 51.2  -0.5
              comp=Z,61nm,1.8s
RND    Reindeer           97.34  27  eP       P         19 10 51.2  -0.5
ILAR   Eielson Array      98.23  26   P       P         19 10 54.4  -1.3
              comp=Z,0.5nm,0.7s,baz=238,slow=5.5,SNR=9.9
TORD   Torodi Ar. Bea    118.94 281   PKP     PKPdf     19 16 07.2  -1.1
              comp=Z,0.7nm,0.6s,baz=114,slow=2.0,SNR=6.3
TOA1   Torodi Ar. Sit    118.95 281  ePKPdf   PKPdf     19 16 07.2  -1.1
V52A   Sevierville       144.67  34  ePKPdf   PKPab     19 16 55.1  +0.6
TKL    Tuckaleechee C    144.71  34   PKP     PKPab     19 16 55.2  +0.6
              comp=Z,14nm,0.8s,baz=173,slow=2.8,SNR=8.3
CMIG   Matias Romero     144.92  71   PKP     PKPbc     19 16 56.2  +0.3
              comp=Z,1.1nm,0.4s,baz=275,slow=1.3,SNR=4.3
Z50A   Ashland           145.10  39  ePKPbc   PKPbc     19 16 54.2  -1.9
V53A   Saluda            145.23  33  ePKPbc   PKPbc     19 16 56.5   0.0
CPUP   Villa Florida     146.18 185  ePKPdf   PKPab     19 17 00.5  +0.2
CPUP   Villa Florida     146.18 185   PKPbc   PKPab     19 17 00.9  +0.6
              comp=Z,5.3nm,0.9s,baz=193,slow=4.1,SNR=10
GO02   Mina Guanaco      146.21 165  ePKPdf   PKPbc     19 17 00.2   0.0
152A   Waverly Hall      146.24  39  ePKPdf   PKPbc     19 17 00.0  +0.3
KMSC   Kings Mountain    146.42  32  ePKPdf   PKPdf     19 17 00.2  +1.3
GOGA   Godfrey           146.49  37  ePKPdf   PKPdf     19 17 00.3  +1.3
GOGA   Godfrey           146.49  37  ePKP2    PKPdf     19 17 00.3  +1.3
APG    El Apazote        149.49  73   PKPbc   PKPbc     19 17 09.6  +0.4
              comp=Z,5.5nm,0.9s,baz=190,slow=3.5,SNR=4.6
PB11   IPOC Station P    151.30 161  ePKPdf   PKPdf     19 17 07.4   0.0
MNMC   Minye Minye       151.90 161  ePKPdf   PKPdf     19 17 06.8  -1.7
LPAZ   La Paz            155.03 162  ePKPab   PKPab     19 17 37.8  +0.2
LPAZ   La Paz            155.03 162  ePKP2    PKPab     19 17 37.8  +0.2
LPAZ   La Paz            155.03 162   PKPab   PKPab     19 17 38.8  +1.3
              comp=Z,4.3nm,0.7s,baz=187,slow=4.0,SNR=12
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ISCJB ***14*** *19:10:31.8±0.7, 10°.73S±0°.08×112°.52E±0°.06, h28^{km}, mb3.6/6, Error ellipse: s-maj=11.9km s-min=7.3km az=22.3*

IDC ***14*** *19:10:31.5±2.5, 10°.29S×113°.15E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/51, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=133.7km s-min=17.3km az=50.0*

DJA ***14*** *19:10:33.3±0.9, 11°S±10°×11°3E±°, h10^{km}, M4.0/13, mb4.2/4, mB5.3/1, MLv3.9/13, Mw(mB)4.7/1*

ISC 14 19:10:34.1±1.0, **10°.7S**±0°.1×**112°.58E**±0°.09, **h28^{km}, n20,** σ0^{s}.**80**/19, **mb3.7**/6, **South of Jawa**

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Code   Station Name        Δ°   AZ°    Phase ID               Time     Res
                                     Op        ISC         h  m  s     ISC
GMJI   Gumukmas            2.54  20  P         Pn        19 11 13.2  -0.3
JAGI   Jajag, Banyuwa      2.69  35  P         Pn        19 11 15.6   0.0
PCJI   Pacitan             2.83 331  P         Pn        19 11 16.4  -1.1
UGM    Wanagama            3.42 323  P         Pn        19 11 25.3  -0.3
SRBI   Singaraja           3.67  45  P         Pn        19 11 29.2  +0.3
GRJI   Gresik              3.75 359  P         Pn        19 11 29.6  -0.5
KMMI   Kalianget           3.86  21  P         Pn        19 11 31.3  -0.4
KPJI   Karang Pucung       4.91 312  P         Pn        19 11 45.9  -0.1
CMJI   Cimerak             4.99 305  P         Pn        19 11 46.4  -0.8
PLAI   Plampang            5.45  71  P         Pn        19 11 54.4  +0.9
CISI   Cisompet, Garu      5.64 303  P         Pn        19 11 56.1   0.0
KASI   Kota Agung          9.50 302  P         Pn        19 12 49.2  +0.1
MDSI   Maura Dua          10.35 306  P         Pn        19 13 00.9  +0.1
FITZ   Fitzroy Crossi     14.64 122  Pn        Pn        19 13 54.3  -5.1
              0.2nm,0.3s,baz=310,slow=13,SNR=9.3
FITZ                                 Sn        Sn        19 16 23.2   -18
              0.1nm,0.3s,baz=186,slow=19,SNR=3.8
WRA    Warramunga Arr     22.89 116  P         P         19 15 34.3  -1.5
              1.2nm,0.8s,baz=293,slow=11,SNR=9.7
ASAR   Alice Springs      24.07 125  P         P         19 15 46.7  -0.7
              0.5nm,0.6s,baz=302,slow=9.6,SNR=9.6
CMAR   Chiang Mai Arr     31.93 335  P         P         19 16 59.4  +1.8
              1.1nm,0.4s,baz=170,slow=7.9,SNR=14
STKA   Stephens Creek     34.10 133  P         P         19 17 16.9  +0.4
              1.4nm,0.7s,baz=316,slow=6.1,SNR=4.5
SONM   Songino Array      58.52 355  P         P         19 20 27.1  -0.9
              0.4nm,0.6s,baz=174,slow=8.1,SNR=4.4
```

MKAR	Makanchi Array	63.30	337	P	P	19 21 00.4	0.0
	0.3nm,0.4s,baz=150,slow=7.3,SNR=12						

GUC 14 19:11:25.9±0.7,22°.83S×68°.44W,h139km±6km,ML3.5,4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.02	248	⇑iP	Pn	19 11 50.5	+0.4
PB15				eS	Sn	19 12 09.6	+1.1
PB06	IPOC Station P	1.05	277	⇑iP	Pn	19 11 50.8	+0.5
PB06				i S	Sn	19 12 09.9	+1.0
PB06				IAML		19 12 10.8	
	comp=N,2μm,0.4s						
PB09	IPOC Station P	1.27	324	eP	Pn	19 11 53.2	+0.7
PB09				eS	Sn	19 12 14.1	+1.4
PB09				IAML		19 12 16.8	
	comp=N,261nm,0.3s						
PB03	IPOC Station P	1.44	302	⇑iP	Pn	19 11 55.0	+0.7
PB03				eS	Sn	19 12 16.9	+1.1
PB03				IAML		19 12 17.9	
	comp=N,1μm,0.3s						
PB05	IPOC Station P	1.63	269	⇑eP	Pn	19 11 57.0	+0.8
PB05				eS	Sn	19 12 20.9	+1.6
PB05				IAML		19 12 29.6	
	comp=N,321nm,0.4s						
PB04	IPOC Station P	1.66	287	eP	Pn	19 11 57.4	+0.8
PB04				eS	Sn	19 12 21.8	+1.8
PB04				IAML		19 12 28.4	
	comp=N,688nm,0.6s						
PB07	IPOC Station P	1.73	309	eP	Pn	19 11 58.4	+0.9
PB07				eS	Sn	19 12 22.8	+1.2
PB07				IAML		19 12 24.6	
	comp=E,660nm,0.3s						
PB02	IPOC Station P	2.02	318	eP	Pn	19 12 01.8	+1.0
PB02				eS	Sn	19 12 28.4	+0.9
PB02				IAML		19 12 34.7	
	comp=E,365nm,0.3s						
PB01	IPOC Station P	2.03	331	eP	Pn	19 12 01.7	+0.8
PB01				eS	Sn	19 12 28.4	+0.8
PB01				IAML		19 12 30.9	
	comp=N,216nm,0.2s						
PB10	IPOC Station P	2.06	250	eP	Pn	19 12 01.9	+0.8
PB10				eS	Sn	19 12 29.0	+0.9
PB10				IAML		19 12 38.0	
	comp=E,179nm,0.3s						
PB14	IPOC Station P	2.54	225	eP	Pn	19 12 07.3	0.0
PB14				eS	Sn	19 12 39.0	-0.1
PB14				IAML		19 12 44.2	
	comp=N,180nm,0.3s						

IDC 14 19:16:48.1±1.0,3°.66S×102°.42E,h0km,mb4.0/15, mb1 4.1/15,mb1mx3.9/57,mbtmp4.0/15,MS3.6/7, Ms1 3.6/7,ms1mx3.2/40,Error ellipse: s-maj=52.3km s-min=13.5km az=52.0

ISCJB 14 19:16:49.2±0.4,3°.71S±0°.05×102°.45E±0°.05,h10km, mb4.1/19,MS3.5/6,Error ellipse: s-maj=9.0km s-min=3.7km az=139.5

DJA 14 19:16:52.2±0.2,4°S±2°×10°3E±°,h10km,M4.6/21, mb4.5/10,mB4.7/1,MLv4.6/21,Mw(mB)4.0/1

NEIC 14 19:16:52.1±2.5,3°.78S×102°.33E,h30km±17km,mb4.6/4, Error ellipse: s-maj=18.0km s-min=5.4km az=52.0

NEIC Felt [IV] at Kapahiang.

ISC 14 19:16:51.0±0.5,3°.67S±0°.05×102°.52E±0°.05,h10km,n79, σ2s04/71,mb4.2/19,MS3.5/6,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.60	332	S	Sg	19 17 10.7	+0.2
MNAI	Manna	0.81	147	ePg	Pg	19 17 07.3	+0.6
MNAI	Manna	0.81	147	P	Pg	19 17 07.6	+0.9
LHSI	Lahat	1.01	99	P	Pg	19 17 09.7	-0.9
MDSI	Maura Dua	1.84	116	P	Pn	19 17 23.3	+0.6
KRJI	Kerinci	1.89	326	P	Pn	19 17 25.1	+1.6
LWLI	Liwa	2.04	131	P	Pn	19 17 27.5	+2.0
JMBI	JAMBI	2.32	29	P	Pn	19 17 29.2	-0.1
PMBI	Palembang	2.37	72	P	Pn	19 17 31.7	+1.7
KLI	Kotabumi	2.61	117	P	Pb	19 17 37.6	-0.4
PPSI	Pulau Pagai	2.66	290	P	Pn	19 17 35.1	+1.1
KASI	Kota Agung	2.70	133	P	Pn	19 17 36.6	+2.1
SDSI	Sungai Dareh	2.93	338	P	Pn	19 17 38.4	+0.7
BLSI	Bandar Lampung	3.20	122	P	Pb	19 17 46.4	-1.6
RGRI	Rengat	3.31	357	P	Pg	19 17 53.3	-1.2
PDSI	Padang	3.43	323	P	Pn	19 17 45.3	+0.7
PPI	Padang Panjang	3.83	326	P	Pn	19 17 52.8	+2.6
PPBI	Pangkal Pinang	3.91	68	P	Pn	19 17 50.7	-0.6
SISI	Saibi	4.14	304	P	Pn	19 17 55.5	+1.1
BKNI	Bangkinang	4.24	340	ePn	Pn	19 17 54.3	-1.4
BKNI	Bangkinang	4.24	340	P	Pb	19 18 07.9	+2.2
TPRI	Tanjung Pinang	4.98	24	P	Pn	19 18 06.8	+0.8
DBJI	Dramaga	5.09	124	P	Pb	19 18 17.0	-3.3
PBSI	Pulau Batu	5.55	310	P	Pn	19 18 14.7	+0.9
MYKOM	Kota Tinggi	5.59	14	ePn	Pn	19 18 15.2	+0.9
LEM	Lembang	5.97	122	Pn	Pn	19 18 24.8	+5.2
	3.5nm,0.3s,baz=210,slow=8.4,SNR=10						
LEM				Lg	Lg	19 19 59.4	
	1.0nm,0.3s,baz=131,slow=20,SNR=2.1						
LEM				LR	LR	19 21 04.2	
	comp=Z,472nm,20.1s,baz=264,slow=42						
CISI	Cisompet, Garu	6.53	126	ePn	Pn	19 18 27.6	+0.2
CISI	Cisompet, Garu	6.53	126	P	Pn	19 18 29.2	+1.9
GSI	Gunungsitoli	6.99	315	ePn	Pn	19 18 30.2	-3.3
GSI	Gunungsitoli	6.99	315	P	Pn	19 18 34.3	+0.7
CMJI	Cimerak	7.17	125	P	Pn	19 18 38.1	+2.0
PSI	Prapat	7.37	331	Pn	Pn	19 18 42.2	+3.4
	0.6nm,0.3s,baz=179,slow=5.7,SNR=4.0						
PSI				Lg	Lg	19 20 39.8	
	3.3nm,0.3s,baz=180,slow=18,SNR=6.4						
IPM	Ipoh	8.23	350	ePn	Pn	19 18 53.2	+2.5
KCSI	Kotacane, Aceh	8.58	326	P	Pn	19 18 56.1	+0.7
SNSI	Sinabang, Aceh	8.65	314	P	Pn	19 18 57.1	+0.8
KULM	Kulim	9.10	348	ePn	Pn	19 19 05.2	+2.7
SRAK	Srakaew	17.58	358	P	P	19 21 04.2	+6.8
BKSI	Bulukumba	17.63	96	P	P	19 21 03.9	+6.0
MPSI	Mapaga	17.82	77	P	P	19 21 09.2	+9.1
PBKT	Sadao Pong	20.17	356	P	Pn	19 21 39.4	+12
UTTA	Uttaradit	21.37	355	P	P	19 21 48.2	+9.4
BATI	Baumata	21.96	108	P	P	19 21 50.4	+5.1
	12nm,0.6s,baz=190,slow=3.9,SNR=3.6						
BATI				LR	LR	19 30 47.2	
	comp=Z,152nm,19.6s,baz=297,slow=38						
CM01	Chiang Mai Arr	22.23	351	eP	P	19 21 46.2	-1.9
CMAR	Chiang Mai Arr	22.27	351	P	P	19 21 47.3	-1.2
	0.5nm,0.8s,baz=186,slow=9.2,SNR=5.9						
CMAR				LR	LR	19 30 29.2	
	comp=Z,66nm,20.3s,baz=180,slow=37						
PALK	Pallekele	24.34	297	LR	LR	19 30 19.9	
	comp=Z,164nm,21.3s,baz=117,slow=34						
FITZ	Fitzroy Crossi	26.80	124	eP	P	19 22 31.1	-0.4
	6.2nm,1.0s						
FITZ	Fitzroy Crossi	26.80	124	P	P	19 22 31.2	-0.4
	3.9nm,0.9s,baz=171,slow=1.4,SNR=7.2						
BRDH	Bariadhala	28.26	338	LR	LR	19 36 50.7	
	comp=Z,93nm,18.8s,baz=153,slow=43						
WRA	Warramunga Arr	34.98	120	P	P	19 23 42.1	-1.7
	0.8nm,0.5s,baz=301,slow=8.8,SNR=24						
WR1	Warramunga Arr	34.98	120	eP	P	19 23 42.1	-1.7
	12nm,1.5s						
WRAB	Tennant Creek	34.99	120	eP	P	19 23 42.4	-1.5
	18nm,1.8s						
ASAR	Alice Springs	36.24	126	P	P	19 23 54.2	-0.4
	1.3nm,0.5s,baz=295,slow=7.6,SNR=26						
AS31	Alice Springs	36.24	126	eP	P	19 23 55.2	+0.5
AS01	Alice Springs	36.28	126	eP	P	19 23 54.0	-1.0
GTA	Gaotai	42.94	357	eP	P	19 24 52.8	+2.4
GTA				pP	sP	19 24 56.0	+1.0
GTA				sP	pP	19 24 59.0	+5.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	Stephens Creek	46.17	132	P	P	19 25 16.1	0.0
	comp=Z,2.5nm,0.9s,baz=317,slow=7.9,SNR=5.0						
SONA0	Songino Array	51.41	3	eP	P	19 25 55.8	-0.5
SONM	Songino Array	51.41	3	P	P	19 25 55.8	-0.5
	comp=Z,2.2nm,0.6s,baz=186,slow=8.2,SNR=23						
SONM				LR	LR	19 49 34.1	
	comp=Z,58nm,18.1s,baz=24,slow=38						
AAK	Ala-Archa	52.62	334	P	P	19 26 04.8	-0.7
	comp=Z,1.3nm,0.7s,baz=137,slow=5.2,SNR=6.4						
MK32	Makanchi Array	53.34	343	eP	P	19 26 08.5	-2.0
MKAR	Makanchi Array	53.34	343	eP	P	19 26 08.4	-2.0
	comp=Z,12nm,0.7s						
MKAR	Makanchi Array	53.34	343	P	P	19 26 08.5	-2.0
	comp=Z,2.4nm,0.7s,baz=146,slow=7.8,SNR=24						
KURBB	Kurchatov Arra	57.88	342	P	P	19 26 41.5	-1.5
	comp=Z,1.5nm,0.8s,baz=160,slow=6.4,SNR=6.3						
KURK	Kurchatov	57.93	342	eP	P	19 26 41.5	-1.9
ZALV	Zalesovo Beam	59.29	348	P	P	19 26 50.5	-2.3
	comp=Z,3.7nm,0.8s,baz=162,slow=3.2,SNR=13						
ZAA1	Zalesovo Array	59.30	348	eP	P	19 26 50.5	-2.4
BVAR	Borovoye Array	62.63	339	P	P	19 27 12.7	-2.8
	comp=Z,1.0nm,0.6s,baz=136,slow=8.5,SNR=8.9						
ABKAR	Akbulak array	64.31	331	eP	P	19 27 24.1	-2.6
DZM	Mont Dzumac	64.49	113	LR	LR	19 59 36.9	
	comp=Z,68nm,18.5s,baz=302,slow=40						
KBZ	Khabaz	71.21	319	P	P	19 28 09.6	-0.8
	comp=Z,1.4nm,0.7s,baz=117,slow=8.3,SNR=4.1						
BR101	Keskin Array S	76.30	312	eP	P	19 28 38.6	-2.0
BRTR	Keskin Array B	76.30	312	P	P	19 28 38.6	-2.0
	comp=Z,0.8nm,0.8s,baz=145,slow=8.7,SNR=4.1						
FIA0	FINESS Array S	86.75	332	eP	P	19 29 33.3	-1.9
FINES	FINESS Array B	86.75	332	P	P	19 29 33.3	-1.9
	comp=Z,0.8nm,0.6s,baz=107,slow=4.8,SNR=4.8						
ARA0	ARCESS Array S	88.89	340	eP	P	19 29 43.6	-1.7
ARCES	ARCESS Array B	88.89	340	P	P	19 29 43.6	-1.7
	comp=Z,1.6nm,0.8s,baz=86,slow=5.7,SNR=2.6						
CPUP	Villa Florida	144.36	212	PKP	PKPab	19 36 27.4	+1.1
	comp=Z,2.1nm,0.7s,baz=54,slow=4.9,SNR=3.0						
LTX	Lajitas	144.39	41	ePKPdf	PKPab	19 36 26.4	-0.1
TXAR	Lajitas Array	144.39	41	PKP	PKPab	19 36 26.4	-0.1
	comp=Z,0.4nm,0.6s,baz=256,slow=2.7,SNR=5.8						

YARS 14 19:19:29.8±0.5,67°.58N±0°.03×142°.76E±0°.06,h10km, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMR	Moma	1.13	171	eP	Pb	19 19 49.7	-1.7
MOMR				Pmax		19 19 49.7	
	comp=Z,2.0nm,0.2s						
MOMR				eS	Sb	19 20 05.3	-0.9
MOMR				Smax		19 20 05.3	
	comp=E,6.0nm,0.4s						
YBGR	Belaya Gora	1.61	52	eP	Pn	19 19 57.8	-0.3
YBGR				Pmax		19 19 57.8	
	comp=Z,3.0nm,0.2s						
YBGR				eS	Sb	19 20 20.2	+0.4
YBGR				Smax		19 20 20.2	
	comp=N,8.0nm,0.2s						

NNC 14 19:19:49.6±0.5,42°.88N×76°.02E,h0km,mb2.6,mpv2.8, Error ellipse: s-maj=4.6km s-min=2.2km az=174.0

SOME 14 19:19:50.6,42°.92N×75°.98E,h20km

KNET 14 19:19:50.8±1.1,42°.85N×75°.95E,h19km±4km,ml1.5,Error ellipse: s-maj=12.3km s-min=2.8km az=40.0

KRNET 14 19:19:50.4±0.1,42°.92N×75°.99E,h22km,mb2.4,25C-23D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KST	Kastek	0.12	352	P	Pb	19 19 54.5	-1.5
	69nm,0.1s						
KST				S	Sb	19 19 57.3	-2.5
	174nm,0.1s						
KST	Kastek	0.12	352	⇑eP	Pb	19 19 54.5	-1.4
	baz=53						
KST				⇑eS	Sb	19 19 57.5	-2.2
	baz=53						
KST	Kastek	0.12	352	⇑eP	Pb	19 19 54.5	-1.5
	69nm,0.1s						
KST				eS	Sb	19 19 57.4	-2.3
	174nm,0.1s						
TKM2	Tokmak 2	0.29	270	⇑P	Pb	19 19 57.0	-0.1
	7.7nm,0.1s,SNR=83						
TKM2				⇑S	Sb	19 20 01.9	+0.1
	149nm,0.1s						
TKM2	Tokmak 2	0.29	270	⇑P	Pb	19 19 56.9	-0.3
	0.5nm,0.1s						
TKM2				⇑S	Sb	19 20 01.7	-0.2
	21nm,0.2s						
TKM2	Tokmak 2	0.29	270	⇓iP	Pb	19 19 56.9	-0.3
	baz=70						
TKM2				⇓iS	Sb	19 20 01.7	-0.1
	baz=70						
DGS	Degeres	0.36	334	P	Pb	19 19 58.2	0.0
	20nm,0.1s						
DGS				S	Sb	19 20 03.5	+0.1
	103nm,0.1s						
DGS	Degeres	0.36	334	eP	Pb	19 19 58.2	0.0
	baz=34						
DGS				eS	Sb	19 20 03.6	+0.1
	baz=34						
DGS	Degeres	0.36	334	eP	Pb	19 19 58.2	0.0
	20nm,0.1s						
DGS				eS	Sb	19 20 03.5	+0.1
	103nm,0.1s						
MTBS	Maitube	0.39	57	P	Pb	19 19 58.2	-0.5
	8.4nm,0.1s						
MTBS				S	Sb	19 20 03.7	-0.6
	48nm,0.1s						
MTBS	Maitube	0.39	57	eP	Pb	19 19 58.2	-0.4
	baz=57						
MTBS				eS	Sb	19 20 03.7	-0.5
	baz=57						
MTBS	Maitube	0.39	57	eP	Pb	19 19 58.2	-0.5
	8.4nm,0.1s						
MTBS				eS	Sb	19 20 03.7	-0.6
	48nm,0.1s						
BOOM	Boomskoye usch	0.43	184	⇑iP	Pb	19 19 58.7	-0.7
	baz=84						
BOOM				⇑iS	Sb	19 20 04.7	-0.8
	baz=84						
IZV	Izvestkoviy	0.47	76	P	Pb	19 19 59.6	-0.6
	26nm,0.1s						
IZV				S	Sb	19 20 06.3	-0.5
	44nm,0.1s						
IZV	Izvestkoviy	0.47	76	eP	Pb	19 19 59.6	-0.6
	baz=76						
IZV				eS	Sb	19 20 06.3	-0.5
	baz=76						
IZV	Izvestkoviy	0.47	76	eP	Pb	19 19 59.6	-0.6
	26nm,0.1s						
IZV				eS	Sb	19 20 06.3	-0.6
	44nm,0.1s						
ULHL	Ulahol	0.70	164	⇓P	Pb	19 20 03.3	-0.8
	2.9nm,0.2s,SNR=19						
ULHL				⇑S	Sb	19 20 12.5	-0.8
	18nm,0.3s						
TNSS	Tian-Shan	0.71	80	P	Pb	19 20 03.7	-0.7
	6.2nm,0.1s						
TNSS				S	Sb	19 20 13.0	-1.0
	20nm,0.2s						
TNSS	Tian-Shan	0.71	80	eP	Pb	19 20 03.7	-0.7
	baz=80						
TNSS				eS	Sb	19 20 13.0	-1.0
	baz=80						
TNSS	Tian-Shan	0.71	80	eP	Pb	19 20 03.7	-0.7
	6.2nm,0.1s						
TNSS				eS	Sb	19 20 13.0	-1.0
	20nm,0.2s						
KNDC	Almaty	0.78	67	⇑S	Sb	19 20 16.1	+0.6
	6.5nm,0.2s						
KBK	Karagaybulak	0.81	251	⇓P	Pb	19 20 06.1	+0.3
	3.0nm,0.1s,SNR=18						
KBK				⇓S	Sn	19 20 17.4	-0.6
	56nm,0.4s						
KBK	Karagaybulak	0.81	251	⇓iP	Pb	19 20 06.0	+0.1
	baz=51						
KBK				⇓iS	Sb	19 20 17.1	+0.7
	baz=51						
MDOK	Medeo	0.82	72	P	Pb	19 20 05.5	-0.5
	0.7nm,0.3s						
MDOK				S	Sb	19 20 16.4	-0.2
	4.0nm,0.3s						
MDOK	Medeo	0.82	72	Pg	Pb	19 20 05.5	-0.4
	3.4nm,0.1s						
MDOK				Lg	Lg	19 20 16.3	
	14nm,0.2s						
MDOK	Medeo	0.82	72	eP	Pb	19 20 05.5	-0.5
	baz=72						
MDOK				eS	Sb	19 20 16.2	-0.4
	baz=72						
MDOK	Medeo	0.82	72	eP	Pb	19 20 05.5	-0.4
	3.4nm,0.1s						
MDOK				eS	Sb	19 20 16.3	-0.4
	14nm,0.2s						
KOTS	Kotyrbulak	0.88	69	P	Pb	19 20 06.8	-0.3
	0.9nm,0.2s						
KOTS				S	Sb	19 20 18.5	-0.1
	12nm,0.2s						
KOTS	Kotyrbulak	0.88	69	eP	Pb	19 20 06.9	-0.2
	baz=69						
KOTS				eS	Sb	19 20 18.6	0.0
	baz=69						
KOTS	Kotyrbulak	0.88	69	eP	Pb	19 20 06.8	-0.3
	0.9nm,0.2s						
KOTS				eS	Sb	19 20 18.5	-0.1
	12nm,0.2s						
CHMS	Chumysh	0.91	275	⇓P	Pb	19 20 07.3	-0.2
	1.4nm,0.1s,SNR=5.5						
CHMS				⇓S	Sn	19 20 20.1	-0.3
	7.1nm,0.1s						
CHMS	Chumysh	0.91	275	⇓iP	Pb	19 20 07.2	-0.3
	baz=75						
CHMS				⇓iS	Sn	19 20 19.8	-0.6
	baz=75						
KTBS	Karatobe	0.94	32	P	Pb	19 20 07.5	-0.5
	2.4nm,0.1s						
KTBS				S	Sb	19 20 19.6	-0.5
	6.1nm,0.2s						
KTBS	Karatobe	0.94	32	eP	Pb	19 20 07.5	-0.6
	baz=24						
KTBS				eS	Sb	19 20 19.6	-0.5
	baz=24						
KTBS	Karatobe	0.94	32	eP	Pb	19 20 07.5	-0.5
	2.4nm,0.1s						
KTBS				eS	Sb	19 20 19.6	-0.5
	6.1nm,0.2s						
KZA	Kyzart	1.00	213	⇓iP	Pn	19 20 09.5	0.0
	baz=13						
KZA				⇓iS	Sn	19 20 23.4	+0.2
	baz=13						
FRU1	Bishkek	1.00	264	⇑iP	Pb	19 20 09.0	-0.1
	baz=64						
FRU1				⇑iS	Sb	19 20 22.2	+0.3
	baz=64						
KUU	Kurty	1.01	15	P	Pb	19 20 09.1	0.0
	1.0nm,0.1s						
KUU				S	Sn	19 20 22.4	-0.3
	6.9nm,0.1s						
KUU	Kurty	1.01	15	eP	Pb	19 20 09.1	0.0
	baz=15						
KUU				eS	Sn	19 20 22.4	-0.3
	baz=15						
KUU	Kurty	1.01	15	eP	Pb	19 20 09.1	0.0
	1.0nm,0.1s						
KUU				eS	Sn	19 20 22.4	-0.3
	6.9nm,0.1s						
SGDS	Sogindy	1.12	299	P	Pb	19 20 11.1	-0.1
	4.7nm,0.1s						
SGDS				S	Sn	19 20 25.7	0.0
	4.4nm,0.1s						
AAK	Ala-Archa	1.13	256	⇑P	Pb	19 20 11.6	+0.2
	0.5nm,0.4s						
AAK				⇓S	Sn	19 20 26.7	+0.6
	1.9nm,0.4s						
AAK	Ala-Archa	1.13	256	⇑eP	Pb	19 20 11.3	-0.1
	baz=56						
AAK				⇑iS	Sn	19 20 26.6	+0.5
	baz=56						
USP	Ospenovka	1.14	288	P	Pb	19 20 11.5	+0.1
	1.1nm,0.1s,SNR=14						
USP				⇓S	Sn	19 20 28.2	+2.1
	4.1nm,0.1s						
USP	Ospenovka	1.14	288	⇑eP	Pn	19 20 11.1	0.0
	baz=88						
USP				⇑iS	Sn	19 20 26.3	+0.2
	baz=88						
KDJ	Kajisay	1.19	131	⇑iP	Pb	19 20 12.8	+0.5
	baz=31						
KDJ				⇑iS	Sn	19 20 29.0	+1.7
	baz=31						
CHKK	Chushkaly	1.19	38	P	Pb	19 20 12.1	-0.1
	1.9nm,0.1s						
CHKK				S	Sn	19 20 27.5	+0.3
	15nm,0.1s						
CHKK	Chushkaly	1.19	38	eP	Pb	19 20 12.1	-0.1
	baz=38						
CHKK				eS	Sn	19 20 27.5	+0.3
	baz=38						
CHKK	Chushkaly	1.19	38	eP	Pb	19 20 12.1	-0.1
	1.9nm,0.1s						
CHKK				eS	Sn	19 20 27.5	+0.3
	15nm,0.1s						
UCH	Uchtor	1.29	238	⇓eP	Pb	19 20 14.3	+0.1
	baz=38						
UCH				⇓iS	Sb	19 20 31.3	+0.8
	baz=38						
NRN	Naryn	1.49	180	⇓iP	Pb	19 20 18.2	+0.7
	baz=80						
NRN				⇓iS	Sb	19 20 38.0	+2.0
	baz=80						
EKS2	Erkin-Say	1.65	262	⇓P	Pb	19 20 20.8	+0.7
	2.2nm,0.3s,SNR=11						
EKS2	Erkin-Say	1.65	262	⇑eP	Pb	19 20 20.0	-0.1
	baz=62						
EKS2				⇑iS	Sb	19 20 41.3	+0.9
	baz=62						
KURS	Kuram	1.69	70	P	Pb	19 20 21.2	+0.3
	0.8nm,0.2s						
KURS				S	Sb	19 20 43.1	+1.2
	4.0nm,0.3s						
KURS	Kuram	1.69	70	eP	Pb	19 20 21.2	+0.3
	baz=70						
KURS				eS	Sb	19 20 43.1	+1.3
	baz=70						
KURS	Kuram	1.69	70	eP	Pb	19 20 21.2	+0.3
	0.8nm,0.2s						
KURS				eS	Sb	19 20 43.0	+1.2
	4.0nm,0.3s						
TARG	Taragay, Kyrgy	1.80	131	⇑iP	Pb	19 20 22.7	-0.2
	baz=31						
TARG				⇑iS	Sb	19 20 45.9	+0.8
	baz=31						
ARXS	Arharly	1.86	45	P	Pb	19 20 23.1	-0.6
	2.1nm,0.2s						
ARXS				S	Sb	19 20 46.4	-0.2
	5.4nm,0.2s						
ARXS	Arharly	1.86	45	eP	Pb	19 20 23.1	-0.6
	2.1nm,0.2s						
ARXS				eS	Sb	19 20 46.4	-0.2
	5.4nm,0.2s						
AML	Almayashu	1.87	246	⇓iP	Pb	19 20 23.4	-0.6
	baz=46						
AML				⇓iS	Sb	19 20 47.0	-0.1
	baz=46						
MRKS	Merke	2.04	266	Pg	Pb	19 20 26.8	0.0
	3.9nm,0.2s						
MRKS				Lg	Lg	19 20 53.2	
	5.0nm,0.4s						
MRKS	Merke	2.04	266	eP	Pb	19 20 26.8	0.0
	baz=66						
MRKS				eS	Sb	19 20 53.2	+1.5
	baz=66						
MRKS	Merke	2.04	266	eP	Pb	19 20 26.8	0.0
	3.9nm,0.2s						
MRKS				eS	Sb	19 20 53.2	+1.5
	5.0nm,0.4s						
MNBS	Baschi	2.10	56	Pg	Pb	19 20 28.1	+0.1
	0.9nm,0.2s						
MNBS				Lg	Lg	19 20 55.0	
	5.9nm,0.2s						
MNBS	Baschi	2.10	56	eP	Pb	19 20 28.1	+0.2
	baz=59						
MNBS				eS	Sb	19 20 55.0	+1.3
	baz=59						
MNBS	Baschi	2.10	56	eP	Pb	19 20 28.1	+0.1
	0.9nm,0.2s						
MNBS				eS	Sb	19 20 55.0	+1.3
	5.9nm,0.2s						
UZB	Uzynbulak	2.24	83	Pg	Pb	19 20 30.7	+0.4
	0.7nm,0.2s						
UZB				Lg	Lg	19 20 59.3	
	6.5nm,0.3s						
UZB	Uzynbulak	2.24	83	eP	Pb	19 20 30.7	+0.5
	baz=83						
UZB				eS	Sb	19 20 59.4	+1.9
	baz=83						
UZB	Uzynbulak	2.24	83	eP	Pb	19 20 30.6	+0.4
	0.7nm,0.2s						
UZB				eS	Sb	19 20 59.3	+1.8
	6.5nm,0.3s						
PDGK	Podgornoye	2.60	80	Pg	Pb	19 20 36.8	+0.5
	0.3nm,0.2s						
PDGK				Lg	Lg	19 21 10.6	
	1.8nm,0.2s						

PDGK	Podgornoye	2.60	80	⇓Lg	Lg	19 21 10.0	
	1.3nm,0.3s						
MNAS	Manas	2.60	262	⇑Lg	Lg	19 21 10.6	
	1.1nm,0.5s						
MNAS	Manas	2.60	262	Pg	Pb	19 20 36.9	+0.5
	0.2nm,0.1s						
MNAS				Lg	Lg	19 21 10.1	
	1.0nm,0.5s						
KK31	Karatay Array	4.02	274	Lg	Lg	19 21 55.4	
	0.6nm,0.4s,baz=95,slow=26,SNR=5.8						

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*IDC **14** 19:19:37.2±1.7, 0°.72N×122°.51E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/56, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=142.4km s-min=25.2km az=64.0*
*ISCJB **14** 19:19:56.6±0.7, 0°.34N±0°.08×122°.11E±0°.07, h200km, mb3.2/3, Error ellipse: s-maj=11.9km s-min=10.0km az=178.6*
*DJA **14** 19:19:59.3±0.7, 0°N±4°×12°2E±°, h174km±6km, M2.9/6, MLv2.9/6*
ISC 14 19:19:57.6±1.0**, 0°.35N**±0°.09×**122°.10E**±0°.07**, h200km, n10, σ1s.28**/14**, mb3.4**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.21	309	P	Pn	19 20 22.8	-1.2
MRSI				S	Sn	19 20 41.4	-2.9
APSI	Ampana	1.33	200	P	Pn	19 20 29.6	-0.3
APSI				S	Sn	19 20 53.5	-1.5
LUWI	Luwuk	1.53	154	P	Pn	19 20 31.6	-0.1
LUWI				S	Sn	19 20 57.1	-1.1
KMSI	Cibinong	1.89	83	P	Pn	19 20 35.0	-0.1
KMSI				S	Sn	19 21 03.2	-0.9
MPSI	Mapaga	2.20	270	P	Pn	19 20 38.2	-0.1
PCI	Palu	2.58	241	P	Pn	19 20 42.7	+0.2
FITZ	Fitzroy Crossi	18.66	169	P	P	19 24 00.8	+0.1
	0.1nm,0.3s,baz=355,slow=11,SNR=6.8						
WRA	Warramunga Arr	23.46	150	P	P	19 24 49.6	+0.2
	0.9nm,0.6s,baz=326,slow=11,SNR=4.6						
ASAR	Alice Springs	26.48	155	P	P	19 25 17.6	+1.0
	0.4nm,0.5s,baz=345,slow=13,SNR=5.8						
MKAR	Makanchi Array	57.85	329	P	P	19 29 30.0	+1.6
	0.1nm,0.3s,baz=128,slow=8.3,SNR=4.5						

YARS 14 19:20:11.0±0.4**, 67°.61N**±0°.02×**142°.73E**±0°.05**, h8km, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.16	170	eP	Pg	19 20 32.5	-0.8
MOMR				Pmax		19 20 32.5	
	comp=Z,6.0nm,0.2s						
MOMR				eS	Sg	19 20 46.7	-1.7
MOMR				Smax		19 20 46.7	
	comp=N,31nm,0.2s						
YBGR	Belaya Gora	1.60	53	eP	Pn	19 20 38.8	-0.7
YBGR				Pmax		19 20 38.8	
	comp=Z,7.0nm,0.1s						
YBGR				eS	Sb	19 21 01.0	+0.1
YBGR				Smax		19 21 01.0	
	comp=N,30nm,0.2s						
BTGS	Batagay	3.10	274	eS	Pb	19 21 06.1	-0.1
BTGS				Smax	Pb	19 21 06.1	-0.1
	comp=E,2.0nm,0.2s						
BTGS	Batagay	3.10	274	eP	Pn	19 21 00.5	+0.5
BTGS				eP	Pb	19 21 06.1	-0.1
BTGS				Pmax		19 21 06.1	
	comp=Z,2.0nm,0.3s						
BTGS				eS	Sn	19 21 36.2	-0.9
BTGS				eS	Sg	19 21 47.2	-3.0
BTGS				Smax		19 21 47.2	
	comp=N,20nm,0.6s						

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*NEIC **14** 19:22:57.6±0.3, 11°.56S×165°.96E, h10km, mb4.8/28, Error ellipse: s-maj=9.2km s-min=6.1km az=151.0*
*ISCJB **14** 19:22:60.0±0.3, 11°.71S±0°.06×165°.93E±0°.04, h37km, mb4.6/44, MS4.0/12, Error ellipse: s-maj=8.9km s-min=6.1km az=170.2*
*BJI **14** 19:22:59.1, 11°.33S×165°.86E, h20km, mB4.9/9, mb4.5/20, Ms4.6/3, Ms7 4.3/3*
*IDC **14** 19:23:02.9±3.4, 11°.60S×165°.97E, h52km±28km, mb4.1/15, mb1 4.3/17, mb1mx4.1/39, mbtmp4.4/17, ML4.5/2, MS3.9/12, Ms1 3.9/12, ms1mx3.6/27, Error ellipse: s-maj=20.9km s-min=19.3km az=140.0*
ISC 14 19:23:01.2±0.5**, 11°.60S**±0°.08×**166°.05E**±0°.07**, h37km, n81, σ1s.18**/79**, mb4.6**/44**, MS4.0**/12**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.37	289	ePn	Pn	19 24 31.8	-0.8
HNR				eSn	Sn	19 25 45.1	+0.9
HNR	Honiara	6.37	289	P	Pn	19 24 32.7	+0.1
	32nm,0.3s,baz=130,slow=8.6,SNR=9.1						
HNR				S	Sn	19 25 45.1	+0.9
	baz=186,slow=19,SNR=1.8						
HNR				LR	LR	19 27 14.3	
	comp=Z,1μm,21.0s,baz=98,slow=40						
DZM	Mont Dzumac	10.42	178	ePn	Pn	19 25 29.5	+1.2
	7.8nm,0.3s						
DZM				eLR	LR	19 28 03.2	
	comp=Z,558nm,23.6s						
DZM	Mont Dzumac	10.42	178	ePn	Pn	19 25 28.9	+0.7
DZM	Mont Dzumac	10.42	178	P	Pn	19 25 29.5	+1.2
	1.4nm,0.3s,baz=354,slow=17,SNR=8.5						
DZM				LR	LR	19 29 10.9	
	comp=Z,373nm,21.5s,baz=22,slow=35						
MSVF	Nonsavu	13.11	119	ePn	Pn	19 26 04.7	-0.4
CTA	Charters Tower	20.81	244	P	Pn	19 27 41.0	-1.3
	13nm,0.8s,baz=46,slow=11,SNR=5.5						
CTAO	Charters Tower	20.81	244	eP	P	19 27 40.2	+0.6
	44nm,1.3s						
MANU	Manus Island	20.82	296	eP	P	19 27 40.0	+0.2
	96nm,1.3s						
COEN	Coen	22.43	262	eP	P	19 27 56.7	-0.3
	16nm,1.1s						
ARMA	Armidale	23.02	213	eP	P	19 28 04.3	+1.1
	41nm,1.3s						
URZ	Urewera	28.33	161	LR	LR	19 38 13.6	
	comp=Z,110nm,21.9s,baz=342,slow=32						
STKA	Stephens Creek	30.25	224	eP	P	19 29 08.7	0.0
	1.0nm,0.8s						
STKA	Stephens Creek	30.25	224	P	P	19 29 09.0	+0.3
	3.7nm,0.8s,baz=24,slow=10,SNR=9.5						
STKA				LR	LR	19 40 38.7	
	comp=Z,334nm,20.3s,baz=22,slow=35						
WRAB	Tennant Creek	31.56	251	eP	P	19 29 19.7	-0.8
	9.0nm,1.0s						
WB2	Warramunga Arr	31.57	251	eP	P	19 29 18.8	-1.6
WR1	Warramunga Arr	31.58	251	eP	P	19 29 19.6	-1.0
	13nm,1.0s						
WR1				ePcP	PcP	19 32 12.8	+0.1
WRA	Warramunga Arr	31.58	251	P	P	19 29 19.6	-1.0
	7.2nm,0.9s,baz=80,slow=9.3,SNR=47						
WRA				PcP	PcP	19 32 12.8	+0.1
	0.8nm,0.9s,baz=81,slow=3.5,SNR=4.4						
WRA				LR	LR	19 41 30.1	
	comp=Z,232nm,20.3s,baz=85,slow=35						
AS01	Alice Springs	32.77	244	eP	P	19 29 28.5	-2.6
AS31	Alice Springs	32.81	244	eP	P	19 29 29.9	-1.6
	2.9nm,0.8s						
ASAR	Alice Springs	32.81	244	P	P	19 29 30.1	-1.3
	8.1nm,0.8s,baz=74,slow=9.5,SNR=91						
ASAR				PcP	PcP	19 32 15.2	-0.9
	1.0nm,0.7s,baz=67,slow=2.7,SNR=6.4						
ASAR				LR	LR	19 42 03.8	
	comp=Z,277nm,20.0s,baz=70,slow=35						
SIJI	Sorong	36.13	285	P	P	19 29 60.0	-0.2
	8.5nm,0.7s,baz=91,slow=11,SNR=4.0						
FITZ	Fitzroy Crossi	39.53	256	eP	P	19 30 28.3	-0.6
	27nm,1.9s						
FITZ	Fitzroy Crossi	39.53	256	P	P	19 30 28.4	-0.4
	2.8nm,0.8s,baz=81,slow=9.5,SNR=9.1						
BATI	Baumata	41.62	268	P	P	19 30 46.6	+0.4
	15nm,0.8s,baz=194,slow=13,SNR=4.3						
PPT	Papeete	43.28	103	LR	LR	19 45 42.1	
	comp=Z,113nm,21.3s,baz=323,slow=31						
PPT2	Papeete2	43.28	103	eLR	LR	19 43 18.5	
	comp=Z,271nm,28.0s						
MBWA	Marble Bar	45.30	252	eP	P	19 31 15.8	0.0
	109nm,1.7s						
TAOE	Nuku Hiva Isla	52.96	92	eLR	LR	19 47 51.7	
	comp=Z,158nm,23.3s						
RKT	Rikitea	57.12	110	eLR	LR	19 49 46.7	
	comp=Z,298nm,24.5s						
KSRS	Korea Array	60.50	326	LR	LR	19 55 51.3	
	comp=Z,30nm,21.6s,baz=52,slow=33						
XAN	Xi'an	70.71	312	P	P	19 34 13.1	-0.6
XAN				pP	pP	19 34 18.0	-5.6
XAN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
XAN	Xi'an	70.71	312	eP	P	19 34 13.3	-0.4
	6.0nm,1.3s						
KMI	Kunming	71.66	301	P	P	19 34 21.8	+1.9
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,79nm,4.3s						
HHC	Hu-ho-hao-te	72.44	320	eP	P	19 34 24.8	+0.7
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,97nm,6.4s						
CM01	Chiang Mai Arr	72.58	294	eP	P	19 34 25.0	-0.2
CM31	Chiang Mai Arr	72.60	294	eP	P	19 34 26.3	+1.0
CMAR	Chiang Mai Arr	72.60	294	P	P	19 34 25.6	+0.3
	2.0nm,0.8s,baz=124,slow=4.7,SNR=20						
CHTO	Chiang Mai	72.72	294	eP	P	19 34 24.9	-1.1
	10nm,1.4s						
CHTO	Chiang Mai	72.72	294	P	P	19 34 27.3	+1.3
	22nm,1.2s						
CD2	Chengdu	73.17	307	eP	P	19 34 29.5	+1.0
LZH	Lanzhou	75.35	312	eP	P	19 34 42.8	+1.6
LZH				pP	pP	19 34 50.1	-1.1
LZH				sP	PcP	19 34 53.8	-0.6
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
GAMB	Gambell	77.06	10	eP	P	19 34 52.0	+2.0
	4.9nm,0.8s						
QSPA	South Pole Qui	78.41	180	eP	P	19 34 58.2	+0.3
	22nm,1.4s						
SONA0	Songino Array	79.28	324	eP	P	19 35 02.4	-0.7
SONM	Songino Array	79.28	324	P	P	19 35 02.4	-0.7
	0.7nm,0.8s,baz=140,slow=4.5,SNR=4.8						
GTA	Gaotai	79.65	314	⇑P	P	19 35 06.0	+0.8
GTA				pP	PcP	19 35 10.8	-2.2
GTA				sP	pP	19 35 13.0	-2.3
GTA				S	S	19 45 04.9	-0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,57nm,6.8s						
GTA				LR	LR		
	comp=N,120nm,18.7s						
GTA				LR	LR		
	comp=E,120nm,19.7s						
GTA				LR	LR		
	comp=Z,130nm,19.0s						
IM3	Indian Mountai	82.88	15	eP	P	19 35 22.9	+1.4
WRH	Wood River Hil	83.36	18	eP	P	19 35 24.8	+0.7
	9.4nm,1.0s						
MDM	Murphy Dome	83.66	18	eP	P	19 35 26.4	+0.7
	6.0nm,0.9s						
HDA	Harding Lake	83.67	19	eP	P	19 35 26.8	+1.1
	14nm,0.8s						
RIDG	Independ'e Rid	83.89	20	eP	P	19 35 27.0	+0.1
	33nm,1.4s						
ILAR	Eielson Array	83.94	18	P	P	19 35 27.3	+0.2
	2.0nm,0.8s,baz=241,slow=5.8,SNR=22						
ILB	Eielson Array	83.94	18	eP	P	19 35 27.9	+0.9
MAW	Mawson	84.32	202	LR	LR	20 05 49.1	
	comp=Z,89nm,21.2s,baz=84,slow=30						
AFDM	Forest Hills D	84.34	49	eP	P	19 35 29.6	-0.1
	6.4nm,1.0s						
EGAK	Eagle	85.79	20	eP	P	19 35 37.5	+1.1
	8.9nm,0.8s						
NV01	Mina Array Sit	86.15	50	eP	P	19 35 40.5	+1.5
NVAR	Mina Array Bea	86.15	50	P	P	19 35 40.1	+1.1
	2.8nm,0.8s,baz=231,slow=7.7,SNR=3.9						
NVAR				LR	LR	20 06 06.9	
	comp=Z,141nm,21.0s,baz=269,slow=30						
NV11	Mina Array Sit	86.26	50	eP	P	19 35 41.3	+1.8
	0.3nm,1.0s						
G08A	Pilot Rock	87.84	43	eP	P	19 35 48.6	+1.6
	4.7nm,1.3s						
WMQ	Urumqi	89.69	315	eP	P	19 35 58.3	+2.6
WMQ				LR	LR		
	comp=N,100nm,16.7s						
WMQ				LR	LR		
	comp=E,120nm,29.1s						
WMQ				LR	LR		
	comp=Z,95nm,18.1s						
U15A	North Rim	90.20	53	eP	P	19 36 00.6	+2.1
	4.3nm,0.8s						
X16A	Lo Mia Camp, P	90.39	55	eP	P	19 35 58.9	-0.4
	4.4nm,0.7s						
HLID	Hailey	90.45	46	eP	P	19 36 01.6	+2.3
	2.2nm,0.8s						
HVU	Hansel Valley	91.16	48	eP	P	19 36 04.4	+1.7
	11nm,0.6s						
NLU	North Lily Min	91.22	50	eP	P	19 36 04.2	+1.1
	2.7nm,0.9s						
LOHW	Long Hollow	93.15	46	eP	P	19 36 12.1	+0.2
	7.5nm,1.0s						
PDAR	Pinedale Array	93.71	47	P	P	19 36 14.8	+0.2
	0.3nm,0.5s,baz=212,slow=14,SNR=3.7						
PDAR				LR	LR	20 11 36.0	
	comp=Z,30nm,19.5s,baz=253,slow=31						
MK32	Makanchi Array	94.12	317	eP	P	19 36 15.1	-1.0
MKAR	Makanchi Array	94.12	317	eP	P	19 36 15.2	-0.8
	10nm,0.8s						
MKAR	Makanchi Array	94.12	317	P	P	19 36 15.1	-1.0
	0.9nm,0.7s,baz=93,slow=4.8,SNR=9.7						
ZALV	Zalesovo Beam	94.17	324	P	P	19 36 15.4	-0.7
	0.5nm,0.4s,baz=129,slow=5.9,SNR=3.0						
ZAA1	Zalesovo Array	94.18	324	eP	P	19 36 15.4	-0.7
MAKZ	Makanchi	94.34	317	eP	P	19 36 15.7	-1.4
	4.3nm,1.3s						
YKA	Yellowknife Ar	95.33	27	P	P	19 36 21.4	+0.3
	0.5nm,0.7s,baz=254,slow=4.8,SNR=7.0						
LTX	Lajitas	95.83	61	eP	P	19 36 21.6	-2.8
TXAR	Lajitas Array	95.83	61	P	P	19 36 21.6	-2.8
	0.4nm,0.9s,baz=265,slow=5.4,SNR=2.9						
TXAR				LR	LR	20 11 35.5	
	comp=Z,97nm,20.7s,baz=0.0,slow=30						
ARA0	ARCESS Array S	116.94	345	ePKPdf	PKPdf	19 41 39.9	-1.6
ARCES	ARCESS Array B	116.94	345	PKP	PKPdf	19 41 39.8	-1.6
	2.1nm,0.8s,baz=72,slow=2.9,SNR=3.7						
ESDC	Sonseca Array	150.67	344	PKPbc	PKPbc	19 42 49.6	-0.2
	0.3nm,0.5s,baz=30,slow=4.3,SNR=3.2						

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*IDC **14** 19:46:36.6±1.7, 11°.59S×165°.03E, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.7/26, mbtmp3.8/6, ML4.1/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/35, Error ellipse: s-maj=39.0km s-min=31.8km az=119.0*
*ISCJB **14** 19:46:40.1±1.2, 11°.7S±0°.1×165°.0E±0°.2, h34km, mb3.6/4, MS3.3/2, Error ellipse: s-maj=25.8km s-min=16.7km az=150.7*
ISC 14 19:46:41.8±1.3**, 11°.6S**±0°.1×**165°.0E**±0°.2**, h34km, n8, σ0s.57**/6**, mb3.7**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.43	293	Pn	Pn	19 48 00.8	+0.4
	8.2nm,0.3s,baz=191,slow=3.4,SNR=6.4						
HNR				LR	LR	19 50 19.2	
	comp=Z,98nm,20.5s,baz=131,slow=41						
DZM	Mont Dzumac	10.47	173	Pn	Pn	19 49 10.1	+0.3
	0.9nm,0.3s,baz=305,slow=21,SNR=12						
WRA	Warramunga Arr	30.60	250	P	P	19 52 52.5	-0.4
	1.2nm,0.8s,baz=81,slow=9.1,SNR=9.6						
ASAR	Alice Springs	31.88	244	P	P	19 53 03.5	-0.7
	0.3nm,0.9s,baz=67,slow=10,SNR=3.5						
NWAO	Narrogin (SRO)	48.54	236	LR	LR	20 17 52.8	
	comp=Z,48nm,18.7s,baz=202,slow=39						
TGY	Tagaytay City	50.62	299	LR	LR	20 16 32.2	
	comp=Z,19nm,18.6s,baz=122,slow=36						
ILAR	Eielson Array	84.29	19	P	P	19 59 09.6	-0.2
	0.5nm,0.9s,baz=236,slow=5.1,SNR=4.1						
MKAR	Makanchi Array	93.45	317	P	P	19 59 54.2	+0.2
	0.4nm,0.9s,baz=101,slow=4.6,SNR=3.9						

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*JMA **14** 19:51:05.9±0.2, 24°.97N×122°.86E, h148km±3km, M2.5*
*TAP **14** 19:51:05.3, 25°.26N×122°.78E, h143km±1km, ML2.8, D*
*ISCJB **14** 19:51:06.4±0.6, 24°.98N±0°.06×122°.87E±0°.02, h137km±5km, Error ellipse: s-maj=9.7km s-min=2.9km az=174.9*
ISC 14 19:51:05.9±1.7**, 24°.99N**±0°.08×**122°.86E**±0°.03**, h147km**±11km**, n44, σ0s.75**/80**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.55	172	P	Pn	19 51 27.4	+0.3
JYNG				eS	Sn	19 51 43.5	+0.3
YOJ	Yonaguni jima	0.55	166	eP	Pn	19 51 27.5	+0.4
	baz=162						
YOJ				eS	Sn	19 51 44.6	+1.4
	baz=162						
EOS1	EOS1	0.80	237	eP	Pn	19 51 29.2	+0.5
	baz=214						
EOS1				eS	Sn	19 51 46.9	+0.9
	baz=214						
TIPB	Shuangxi	0.94	269	eP	Pn	19 51 30.2	+0.3
	baz=256						
TIPB				eS	Sn	19 51 46.0	-2.0
	baz=256						
TWC	Suao	1.00	248	P	Pn	19 51 30.1	-0.1
	baz=229						
TWC				eS	Sn	19 51 48.1	-0.8
	baz=229						
IRIF	Iriomote-Funau	1.03	130	P	Pn	19 51 30.6	0.0
IRIF				eS	Sn	19 51 49.6	+0.3
TWE	Neicheng	1.12	256	eP	Pn	19 51 31.2	-0.1
	baz=247						
TWE				eS	Sn	19 51 50.4	-0.3
	baz=247						
NANB	Nanao	1.16	241	eP	Pn	19 51 31.9	+0.2
	baz=227						
NANB				eS	Sn	19 51 51.4	-0.1
	baz=227						
ENA	Nanau	1.16	241	eP	Pn	19 51 32.0	+0.2
	baz=227						
ENA				eS	Sn	19 51 51.4	-0.1
	baz=227						
YM01	YM01	1.18	278	eP	Pn	19 51 32.4	+0.4
	baz=268						
ENTT	Nioudou	1.23	254	eP	Pn	19 51 33.0	+0.5
	baz=244						
ENTT				eS	Sn	19 51 53.0	+0.3
	baz=244						
NWLT	Wulai	1.25	260	eP	Pn	19 51 32.5	-0.2
	baz=251						
NWLT				eS	Sn	19 51 53.7	+0.5
	baz=251						
HATJ	Hateruma jima	1.27	137	P	Pn	19 51 32.9	+0.1
HATJ				S	Sn	19 51 53.4	0.0
NDT	Datong Townshi	1.29	253	eP	Pn	19 51 33.6	+0.6
	baz=243						
NDT				eS	Sn	19 51 54.4	+0.7
	baz=243						
JKRS	Kuro-shima	1.29	126	P	Pn	19 51 33.6	+0.6
JKRS				S	Sn	19 51 53.9	+0.2
JIJ	Ishigaki jima	1.32	118	P	Pn	19 51 33.4	0.0
JIJ				S	Sn	19 51 53.1	-1.2
JISG	Ishigakijimahi	1.38	107	P	Pn	19 51 33.9	0.0
JISG				eS	Sn	19 51 54.6	-0.7
YHNB	Yeheng	1.39	257	eP	Pn	19 51 34.4	+0.3
	baz=247						
YHNB				eS	Sn	19 51 55.1	-0.5
	baz=247						
NSK	Sanguang	1.40	257	eP	Pn	19 51 34.4	+0.2
	baz=246						
NSK				eS	Sn	19 51 55.1	-0.8
	baz=246						
NACB	Ninganchiao	1.41	235	eP	Pn	19 51 33.4	-0.9
	baz=217						
NACB				eS	Sn	19 51 55.1	-0.8
	baz=217						
NNSB	Datong	1.46	248	eP	Pn	19 51 34.9	0.0
	baz=227						
NNSB				eS	Sn	19 51 56.5	-0.5
	baz=227						
NNS	Nan Shan	1.46	248	eS	Sn	19 51 56.9	-0.2
	baz=227						
TWD	Chiawan	1.47	232	eP	Pn	19 51 35.0	+0.2
	baz=216						
TWD				eS	Sn	19 51 56.5	-0.4
	baz=216						
ETLH	Xiulin Townshi	1.48	238	eS	Sn	19 51 56.5	-0.9
	baz=227						
ENLB	Shoufeng	1.58	227	eS	Sn	19 51 58.6	-0.5
	baz=213						
WHF	Hehuan Shan	1.68	240	eP	Pn	19 51 37.6	-0.1
	baz=225						
WHF				eS	Sn	19 52 00.8	-1.0
	baz=225						
JTJ	Tarama	1.71	101	P	Pn	19 51 37.9	+0.4
JTJ				S	Sn	19 52 01.1	-0.5
LIOB	Emei	1.71	259	eP	Pn	19 51 37.1	-0.4
	baz=240						
LIOB				eS	Sn	19 52 00.9	-0.9
	baz=240						
NSTT	Nanjuang	1.73	258	eP	Pn	19 51 37.8	+0.1
	baz=239						
NSTT				eS	Sn	19 52 01.6	-0.4
	baz=239						
ESL	Shilin	1.75	228	eS	Sn	19 52 01.1	-1.4
	baz=226						
CHGB	Renai	1.80	239	eP	Pn	19 51 38.6	-0.1
	baz=230						
CHGB				eS	Sn	19 52 03.4	-0.4
	baz=230						
OWD	Renai	1.85	236	eP	Pn	19 51 38.9	-0.3
	baz=222						
WHP	Taichung City	1.88	248	eP	Pn	19 51 40.3	+0.7
	baz=239						
HGSD	Ruisui	1.99	222	eS	Sn	19 52 06.8	-0.6
	baz=210						
VWDT	VWDT	2.00	232	eP	Pn	19 51 42.5	+1.8
	baz=218						
VWDT				eS	Sn	19 52 06.8	-0.7
	baz=218						
SMLT	Sun Moon Lake	2.10	239	eP	Pn	19 51 43.1	+1.0
	baz=238						
SMLT				eS	Sn	19 52 10.5	+0.5
	baz=238						
JIRB	Irabujima	2.11	94	P	Pn	19 51 42.2	+0.2
JIRB				S	Sn	19 52 08.6	-1.2
SSLB	Suanglung	2.11	236	eP	Pn	19 51 43.1	+0.9
	baz=222						
SSLB				eS	Sn	19 52 10.8	+0.8
	baz=222						
TYC	Yuchr	2.12	240	eP	Pn	19 51 43.0	+0.7
	baz=238						
TYC				eS	Sn	19 52 10.6	+0.4
	baz=238						
YULB	Yu-li	2.14	222	eP	Pn	19 51 41.6	-0.9
	baz=223						
YULB				eS	Sn	19 52 07.7	-2.9
	baz=223						
JIKM	Ikemajima	2.17	91	P	Pn	19 51 43.5	+0.7
JIKM				eS	Sn	19 52 10.7	-0.4
JOGS	Gusukube	2.32	95	P	Pn	19 51 45.4	+0.7
JOGS				S	Sn	19 52 13.9	-0.6
CHN5	Tsauling	2.43	236	eP	Pn	19 51 46.5	+0.4
	baz=228						
CHN5				eS	Sn	19 52 17.3	+0.3
	baz=228						
TPUB	Ta-pu	2.65	231	eP	Pn	19 51 49.7	+1.0
	baz=232						
TPUB				eS	Sn	19 52 22.2	+0.6
	baz=232						

MAN 14 20:19:17.4, 14°.11N×122°.63E, h6km, mb3.9, ML2.7, MS2.3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	0.28	222	⇓iP	Pg	20 19 23.4	+0.5
GQP				i S	Sg	20 19 27.8	+1.3
AUQP	San Andres	0.79	177	eP	Pg	20 19 32.5	-0.1
POLP	Polilio Island	0.91	312	eP	Pg	20 19 35.2	+0.3
POLP				eS	Sn	20 19 49.8	-0.5
BOAC	Boac	1.00	230	eP	Pb	20 19 37.2	-0.1
BOAC				eS	Sn	20 19 52.4	-0.2
PVCP	Virac	1.56	109	eP	Pn	20 19 45.2	-0.5

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*ISCJB **14** 20:26:13.5±0.1, 67°.65N±0°.02×142°.62E±0°.05, h10km, mb4.5/127, MS4.1/34, Error ellipse: s-maj=3.5km s-min=2.6km az=156.3*

IDC ***14*** *20:26:13.6±0.5, 67.°67N×142.°62E, h0^{km}, mb4.1/28, mb1 4.3/33, mb1mx4.2/49, mbtmp4.1/33, ML4.1/4, MS4.0/28, Ms1 4.0/28, ms1mx3.9/44, Error ellipse: s-maj=12.1km s-min=10.7km az=162.0*

MOS ***14*** *20:26:13.0±0.9, 67.°65N×142.°70E, h7^{km}, mb4.8/50, MS4.3/5, Error ellipse: s-maj=11.2km s-min=4.7km az=93.4*

BJI ***14*** *20:26:13.3, 67.°54N×142.°31E, h5^{km}, mB5.1/33, mb4.5/43, Ms5.0/38, Ms7 4.7/35*

YARS ***14*** *20:26:14.4±0.3, 67.°61N±0.°02×142.°87E±0.°04, h6^{km}*

GCMT ***14*** *20:26:14.1±0.3, 67.°72N±0.°03×143.°28E±0.°09, h22^{km}±1^{km}, MW4.9/73, Moment Tensor Solution. s14,c16; s73,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.08±.27; $M_{\theta\theta}$-1.22±.16; $M_{\phi\phi}$-0.86±.16; $M_{r\theta}$-1.08±.26; $M_{\theta\phi}$1.54±.09; $M_{\phi r}$0.55±.25; Best double couple: $M_0$2.63800×10^{16} NP1:ϕ_s303.00000°, δ59.00000°, λ80.00000°. NP2: ϕ_s142.00000°, δ32.00000°, λ106.00000°. Principal axes: T 2.4050, Plg74.0000°, Azm187.0000°; N 0.4650, Plg8.0000°, Azm308.0000°; P -2.8710, Plg13.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *20:26:15.2±0.1, 67.°64N×142.°52E, h10^{km}, mb4.8/72 Error ellipse: s-maj=4.1km s-min=2.6km az=167.0*

ISC 14 20:26:15.1±0.3, **67.°60N**±0.°04×**142.°73E**±0.°03, **h10**^{km}, **n286, σ1.§20**/303, **mb4.7**/134, **MS4.1**/36, **35C-12D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.15**	**170**	*e*P	**Pb**	**20 26 35.0**	**-2.0**
MOMR				*e*S	**Sb**	**20 26 50.4**	**-1.5**
MOMR				pmax	pmax		
	comp=Z,270nm,0.2s						
MOMR	**Moma**	**1.15**	**170**	*e*P	**Pb**	**20 26 35.0**	**-2.0**
MOMR				Pmax		20 26 35.0	
	comp=Z,270nm,0.2s						
MOMR				*e*S	**Sb**	**20 26 50.4**	**-1.5**
MOMR				Smax		20 26 50.4	
	comp=N,5μm,0.7s						
YBGR	**Belaya Gora**	**1.60**	**53**	*i* P	**Pn**	**20 26 41.5**	**-1.9**
YBGR				Pmax		20 26 41.5	
	comp=Z,826nm,0.2s						
YBGR				*e*S	**Sn**	**20 27 03.0**	**-1.2**
YBGR				Smax		20 27 03.0	
	comp=N,4μm,0.3s						
BTGS	**Batagay**	**3.10**	**275**	*e*P	**Pn**	**20 27 04.9**	**+1.0**
BTGS				*e*S	**Sn**	**20 27 41.6**	**+0.7**
BTGS				pmax	pmax		
	comp=Z,713nm,0.9s						
BTGS	**Batagay**	**3.10**	**275**	*e*P	**Pn**	**20 27 04.9**	**+1.0**
BTGS				*e*P	**Pb**	**20 27 11.3**	**+1.1**
BTGS				Pmax		20 27 11.3	
	comp=Z,713nm,0.9s						
BTGS				*e*S	**Sn**	**20 27 41.6**	**+0.7**
BTGS				*e*S	**Sg**	**20 27 51.9**	**-2.5**
BTGS				Smax		20 27 51.9	
	comp=N,1μm,0.6s						
BTGS				Smax		20 27 51.9	
	comp=E,2μm,0.6s						
SEY	**Seymchan**	**6.18**	**135**	Pn	**Pn**	**20 27 45.3**	**-1.0**
	comp=E,1.4nm,0.3s,baz=308,slow=12,SNR=31						
SEY				Lg	Lg	20 29 24.3	
	comp=E,11nm,0.3s,baz=61,slow=10,SNR=8.5						
YAK	**Yakutsk**	**7.87**	**231**	*e*P	**Pn**	**20 28 09.1**	**-0.3**
YAK				*e*		20 29 36.0	
YAK				pmax	pmax		
	comp=Z,77nm,0.4s						
YAK				smax	smax		
	comp=E,331nm,0.6s						
YAK				smax	smax		
	comp=N,311nm,0.6s						
MA2	**Magadan**	**8.80**	**152**	⇓*e*P	**Pn**	**20 28 23.9**	**+1.7**
MA2				pmax	pmax		
	comp=Z,18nm,1.3s						
MA2	**Magadan**	**8.80**	**152**	Pn	**Pn**	**20 28 23.3**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=352,slow=15,SNR=8.5						
MA2				Lg	Lg	20 30 46.1	
	comp=Z,1.9nm,0.3s,baz=233,slow=18,SNR=4.6						
MA2				LR	LR	20 31 59.8	
	comp=Z,405nm,21.4s,baz=338,slow=39						
BILL	**Bilibino**	**8.90**	**76**	*e*Pn	**Pn**	**20 28 24.3**	**+0.9**
BILL	**Bilibino**	**8.90**	**76**	⇑*i*P	**Pn**	**20 28 24.0**	**+0.5**
BILL				*e*S	**Sn**	**20 30 07.5**	**+3.9**
BILL				pmax	pmax		
	comp=Z,34nm,1.7s						
BILL				MLR	MLR		
	comp=Z,2μm,18.0s						
NKL	**Nikolayevsk**	**14.53**	**185**	*e*P	**Pn**	**20 29 42.0**	**+1.6**
NKL				MLR	MLR		
	comp=Z,600nm,12.0s						
ZEA	**Zeya**	**15.75**	**216**	*e*P	**Pn**	**20 29 56.5**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,72nm,1.8s						
ZEA				MLR	MLR		
	comp=Z,4μm,9.0s						
ZEA				MLR	MLR		
	comp=N,4μm,8.0s						
PEA1	**Petropavlovsk-**	**16.23**	**146**	*e*Pn	**P**	**20 30 04.9**	**-1.0**
PETK	**Petropavlovsk-**	**16.23**	**146**	Pn	**P**	**20 30 04.9**	**-1.1**
	comp=N,0.1nm,0.3s,baz=342,slow=7.8,SNR=13						
PETK				LR	LR	20 36 23.5	
	comp=N,180nm,20.2s,baz=329,slow=37						
BOD	**Bodaibo**	**16.24**	**247**	*e*P	**Pn**	**20 30 01.1**	**-1.8**
BOD				pmax	pmax		
	comp=Z,21nm,1.9s						
PET	**Petropavlovsk**	**16.52**	**144**	*e*Pn	**P**	**20 30 08.2**	**-0.9**
	comp=Z,87nm,1.3s						
PET	**Petropavlovsk**	**16.52**	**144**	*e*P	**P**	**20 30 10.4**	**+1.3**
PET				pmax	pmax		
	comp=Z,61nm,1.3s						
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
TYV	**Tymovskoe**	**16.79**	**180**	*e*P	**P**	**20 30 11.6**	**-0.5**
TYV				*e*S	**Sn**	**20 33 21.3**	**+5.2**
TYV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TYV				smax	smax		
	comp=N,400nm,5.9s						
GRNR	**Gornyy**	**17.17**	**194**	*e*P	**P**	**20 30 16.0**	**-0.4**
GRNR				pmax	pmax		
	comp=Z,21nm,1.2s						
SKR	**Severo-Kuril's**	**18.22**	**152**	⇓*e*P	**P**	**20 30 29.2**	**+1.3**
GAMB	**Gambell**	**18.79**	**80**	*e*P	**P**	**20 30 34.4**	**+0.3**
	comp=Z,24nm,1.2s						
KLR	**Kul'dur**	**19.24**	**202**	⇓*e*P	**P**	**20 30 37.6**	**-1.5**
KLR	**Kul'dur**	**19.24**	**202**	P	**Pn**	**20 30 40.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=12,slow=9.8,SNR=8.8						
KLR				Lg	Lg	20 36 15.3	
	comp=Z,0.1nm,0.3s,baz=315,slow=5.2,SNR=6.2						
KLR				LR	LR	20 38 20.0	
	comp=Z,525nm,19.7s,baz=12,slow=38						
NRIK	**Noril'sk**	**19.75**	**300**	P	**P**	**20 30 45.0**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=65,slow=8.0,SNR=7.6						
NRIK				Lg	Lg	20 36 36.2	
	comp=Z,0.3nm,0.3s,baz=150,slow=23,SNR=3.5						
RDOG	**Red Dog Mine**	**19.98**	**63**	*e*P	**P**	**20 30 46.7**	**-0.4**
	comp=Z,58nm,1.3s						
YSS	**Yuzh-Sakhalins**	**20.70**	**180**	⇓*e*P	**P**	**20 30 54.8**	**-0.2**
YSS				*e*		20 30 58.7	
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
YSS				MLR	MLR		
	comp=N,600nm,14.0s						
ANM	**Nome**	**20.74**	**74**	*e*P	**P**	**20 30 55.6**	**+0.2**
	comp=N,37nm,1.5s						
ANM	**Nome**	**20.74**	**74**	*e*P	**P**	**20 30 55.6**	**+0.2**
ANM				pmax	pmax		
	comp=Z,37nm,1.5s						
HIA	**Hailar**	**21.72**	**224**	*e*P	**P**	**20 31 05.2**	**-0.8**
	comp=Z,28nm,1.1s						
HIA	**Hailar**	**21.72**	**224**	*e*P	**P**	**20 31 05.3**	**-0.8**
HIA				pmax	pmax		
	comp=Z,28nm,1.1s						
ASAJ	**Asahikawa**	**23.54**	**180**	P	**P**	**20 31 27.2**	**+2.1**
	comp=Z,12nm,0.8s,baz=320,slow=15,SNR=4.6						
ASAJ				LR	LR	20 40 48.7	
	comp=Z,458nm,20.0s,baz=22,slow=37						
MDJ	**Mudanjiang**	**24.06**	**203**	P	**P**	**20 31 29.6**	**-0.6**
MDJ				S	**S**	**20 35 42.1**	**-5.0**
MDJ				PcS	**PcS**	**20 38 53.3**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,43nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,240nm,4.0s						
MDJ				LR	LR		
	comp=Z,1μm,8.0s						
MDJ				LR	LR		
	comp=Z,2μm,13.5s						
MDJ				LR	LR		
	comp=Z,960nm,13.5s						
MDJ	**Mudanjiang**	**24.06**	**203**	*e*P	**P**	**20 31 29.7**	**-0.4**
	comp=Z,90nm,1.5s						
IRK	**Irkutsk**	**24.08**	**250**	*e*P	**P**	**20 31 30.6**	**+0.3**
IRK				pmax	pmax		
	comp=Z,109nm,3.3s						
TOLK	**Toolik Lake Re**	**24.12**	**56**	*e*P	**P**	**20 31 30.6**	**0.0**
	comp=Z,105nm,1.5s						
IM3	**Indian Mountai**	**24.12**	**64**	*e*P	**P**	**20 31 30.3**	**-0.3**
USRK	**Ussuriysk Ar.**	**24.14**	**199**	P	**P**	**20 31 30.4**	**-0.5**
	comp=Z,9.4nm,1.0s,baz=5.3,slow=8.2,SNR=13						
USRK				Lg	Lg	20 38 56.2	
	comp=Z,0.5nm,0.6s,baz=359,slow=33,SNR=2.6						
USRK				LR	LR	20 41 25.2	
	comp=Z,591nm,20.4s,baz=3.9,slow=38						
COLD	**Coldfoot**	**24.65**	**59**	*e*P	**P**	**20 31 35.2**	**-0.1**
	comp=Z,50nm,1.4s						
TLY	**Talaya**	**24.77**	**250**	*e*P	**P**	**20 31 36.1**	**-0.5**
	comp=Z,6.6nm,1.0s						
TLY	**Talaya**	**24.77**	**250**	*e*P	**P**	**20 31 37.6**	**+1.0**
TLY				pmax	pmax		
	comp=Z,53nm,2.3s						
TLY				MLR	MLR		
	comp=Z,3μm,17.0s						
VLA	**Vladivostok**	**25.21**	**199**	⇓*e*P	**P**	**20 31 40.7**	**+0.1**
VLA				pmax	pmax		
	comp=Z,27nm,1.0s						
MLY	**Manley**	**25.70**	**64**	*e*P	**P**	**20 31 45.3**	**+0.4**
	comp=Z,52nm,1.6s						
MOY	**Mondy**	**25.74**	**253**	*e*P	**P**	**20 31 46.6**	**+1.1**
MOY				pmax	pmax		
	comp=Z,44nm,2.1s						
ZAK	**Zakamensk**	**25.97**	**248**	*e*P	**P**	**20 31 47.1**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.9s						
BPAW	**Bear Paw Mtn.**	**26.17**	**66**	*e*P	**P**	**20 31 51.1**	**+1.9**
	comp=Z,43nm,1.6s						
CAST	**Castle Rocks**	**26.20**	**68**	*e*P	**P**	**20 31 51.2**	**+1.8**
	comp=Z,29nm,1.4s						
MDM	**Murphy Dome**	**26.60**	**63**	*e*P	**P**	**20 31 53.3**	**+0.2**
	comp=Z,19nm,1.2s						
FYU	**Fort Yukon**	**26.64**	**58**	*e*P	**P**	**20 31 55.1**	**+1.7**
	comp=Z,112nm,1.4s						
COLA	**College**	**26.78**	**63**	⇓*e*P	**P**	**20 31 54.7**	**+0.1**
COLA				pmax	pmax		
	comp=Z,15nm,1.2s						
ULN	**Ulaanbaatar**	**26.81**	**241**	*e*P	**P**	**20 31 54.7**	**-0.5**
	comp=Z,6.4nm,1.3s						
ULN	**Ulaanbaatar**	**26.81**	**241**	⇑*e*P	**P**	**20 31 55.9**	**+0.7**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
TRF	**Thorofare Moun**	**26.82**	**66**	*e*P	**P**	**20 31 56.0**	**+0.8**
	comp=Z,73nm,1.6s						
SONA1	**Songino Array**	**27.04**	**241**	*e*P	**P**	**20 31 57.0**	**-0.3**
SONA0	**Songino Array**	**27.05**	**241**	*e*P	**P**	**20 31 58.3**	**+0.9**
SONA0				*e*		20 40 28.1	
SONM	**Songino Array**	**27.05**	**241**	P	**P**	**20 31 58.3**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=28,slow=8.8,SNR=16						
SONM				Lg	Lg	20 40 28.1	
	comp=Z,2.1nm,1.1s,baz=9.7,slow=27,SNR=4.8						
SONM				LR	LR	20 43 16.0	
	comp=Z,848nm,18.2s,baz=18,slow=38						
IL1	**Eielson Array**	**27.17**	**62**	*e*P	**P**	**20 31 57.2**	**-0.9**
ILAR	**Eielson Array**	**27.17**	**62**	P	**P**	**20 31 57.6**	**-0.5**
	comp=Z,4.7nm,1.0s,baz=301,slow=7.8,SNR=25						
ILAR				LR	LR	20 43 42.0	
	comp=Z,177nm,19.3s,baz=318,slow=39						
ILB	**Eielson Array**	**27.17**	**62**	*e*P	**P**	**20 31 57.9**	**-0.3**
INK	**Inuvik**	**29.20**	**49**	*e*P	**P**	**20 32 16.2**	**+0.1**
	comp=Z,28nm,1.9s						
INK	**Inuvik**	**29.20**	**49**	P	**P**	**20 32 16.7**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=289,slow=10.0,SNR=4.0						
INK				LR	LR	20 45 47.5	
	comp=Z,348nm,20.4s,baz=290,slow=40						
KDAK	**Kodiak Island**	**29.81**	**77**	LR	LR	20 45 36.5	
	comp=Z,894nm,18.4s,baz=323,slow=39						
NVS	**Novosibirsk**	**30.01**	**275**	⇑*i*P	**P**	**20 32 23.8**	**+0.4**
NVS				*e*		20 33 17.8	
NVS				pmax	pmax		
	comp=Z,21nm,2.0s						
NVS				pmax	pmax		
	comp=N,13nm,1.9s						
NVS				pmax	pmax		
	comp=E,12nm,1.6s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.0s						
ZAA1	**Zalesovo Array**	**30.07**	**272**	*e*P	**P**	**20 32 24.1**	**+0.1**
ZAA0	**Zalesovo Array**	**30.08**	**272**	*e*P	**P**	**20 32 23.8**	**-0.3**
	comp=E,4.9nm,0.8s						
ZALV	**Zalesovo Beam**	**30.08**	**272**	*e*P	**P**	**20 32 23.5**	**-0.5**
ZALV	**Zalesovo Beam**	**30.08**	**272**	P	**P**	**20 32 24.1**	**0.0**
	comp=E,2.7nm,0.8s,baz=39,slow=7.6,SNR=9.2						
ZALV				LR	LR	20 46 33.7	
	comp=E,84nm,19.1s,baz=70,slow=41						
MJAR	**Matsushiro Arr**	**31.21**	**187**	LR	LR	20 44 43.1	
	comp=E,154nm,18.3s,baz=40,slow=36						
BJI	**Beijing**	**31.23**	**221**	P	**P**	**20 32 34.4**	**+0.1**
BJI				pmax	pmax		
	comp=E,7.0nm,1.4s						
BJI				LR	LR		
	comp=E,760nm,6.5s						
BJI				LR	LR		
	comp=E,830nm,9.5s						
BJI				LR	LR		
	comp=E,470nm,21.6s						
BJI	**Beijing**	**31.23**	**221**	P	**P**	**20 32 34.2**	**-0.1**
BJI				pmax	pmax		
	comp=Z,30nm,1.5s						
BJT	**Baijiatuau**	**31.25**	**221**	*e*P	**P**	**20 32 34.2**	**-0.3**
	comp=Z,30nm,1.5s						
BJT	**Baijiatuau**	**31.25**	**221**	*e*P	**P**	**20 32 34.2**	**-0.3**
BJT				pmax	pmax		
	comp=Z,30nm,1.5s						
KSRS	**Korea Array**	**31.33**	**203**	LR	LR	20 45 36.4	
	comp=Z,404nm,18.4s,baz=22,slow=37						
HHC	**Hu-ho-hao-te**	**31.72**	**228**	*e*P	**P**	**20 32 39.3**	**+0.5**
HHC				sP	sP	20 32 50.3	+7.0
HHC				S	**S**	**20 37 48.6**	**+0.3**
HHC				sS	sS	20 37 57.3	+3.8
HHC				pmax	pmax		
	comp=Z,6.0nm,1.8s						
HHC				pmax	pmax		
	comp=Z,190nm,4.8s						
HHC				LR	LR		
	comp=Z,2μm,9.7s						
HHC				LR	LR		
	comp=Z,730nm,7.5s						
HHC				LR	LR		
	comp=Z,2μm,9.8s						
DGZ	**Jazzator, Alta**	**32.42**	**265**	*d i*P	**P**	**20 32 46.2**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RES	**Resolute Bay**	**33.30**	**24**	*e*P	**P**	**20 32 51.5**	**-0.6**
	comp=Z,18nm,1.6s						
RES	**Resolute Bay**	**33.30**	**24**	*e*P	**P**	**20 32 51.5**	**-0.6**
RES				pmax	pmax		
	comp=Z,18nm,1.6s						
KURK	**Kurchatov**	**34.98**	**274**	*e*P	**P**	**20 33 05.2**	**-1.7**
	comp=Z,17nm,1.4s						
KURK	**Kurchatov**	**34.98**	**274**	*c i*P	**P**	**20 33 06.8**	**-0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
JNU	**Nakatsue**	**35.20**	**197**	LR	LR	20 47 49.0	
	comp=Z,221nm,18.4s,baz=17,slow=37						
DAG	**Danmarks Havn**	**35.40**	**353**	P	**P**	**20 33 10.7**	**+0.4**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	**Borovoye**	**36.28**	**283**	*e*P	**P**	**20 33 17.4**	**-0.6**
	comp=Z,8.9nm,0.9s						
BRVK	**Borovoye**	**36.28**	**283**	*c i*P	**P**	**20 33 17.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARA0	**ARCESS Array S**	**36.59**	**328**	*e*P	**P**	**20 33 19.8**	**-0.8**
ARA0				*e*PcP	**PcP**	**20 35 43.0**	**-0.3**
ARCES	**ARCESS Array B**	**36.59**	**328**	P	**P**	**20 33 19.8**	**-0.8**
	comp=Z,4.1nm,0.9s,baz=27,slow=10,SNR=3.8						
ARCES				PcP	**PcP**	**20 35 43.0**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=28,slow=4.1,SNR=3.5						
GTA	**Gaotai**	**36.73**	**242**	⇑P	**P**	**20 33 22.8**	**+0.6**
GTA				pP	sP	20 33 27.3	+0.6
GTA				sP	pP	20 33 29.9	+4.5
GTA				PcP	**PcP**	**20 35 44.8**	**+0.4**
GTA				S	**S**	**20 39 04.3**	**-1.3**
GTA				sS	sS	20 39 19.5	+8.6
GTA				SS	**SnSn**	**20 41 33.1**	**-2.7**
GTA				pmax	pmax		
	comp=Z,130nm,6.5s						
GTA				LR	LR		
	comp=Z,640nm,13.0s						
GTA				LR	LR		
	comp=Z,740nm,14.0s						
GTA				LR	LR		
	comp=Z,960nm,15.2s						
MK31	**Makanchi Array**	**36.77**	**267**	*e*P	**P**	**20 33 21.8**	**-0.6**
	comp=Z,5.4nm,0.8s						
MK31	**Makanchi Array**	**36.77**	**267**	*e*P	**P**	**20 33 21.8**	**-0.6**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK32	**Makanchi Array**	**36.77**	**267**	*e*P	**P**	**20 33 21.8**	**-0.6**
MKAR	**Makanchi Array**	**36.77**	**267**	*e*P	**P**	**20 33 21.6**	**-0.8**
	comp=Z,33nm,0.8s						
MKAR	**Makanchi Array**	**36.77**	**267**	*i* P	**P**	**20 33 21.7**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	**Makanchi Array**	**36.77**	**267**	P	**P**	**20 33 21.8**	**-0.6**
	comp=Z,6.2nm,0.9s,baz=49,slow=6.5,SNR=57						
MKAR				LR	LR	20 49 21.5	
	comp=Z,127nm,21.9s,baz=22,slow=38						
MK01	**Makanchi Array**	**36.79**	**267**	*e*P	**P**	**20 33 21.5**	**-1.1**
SVE	**Sverdlovsk**	**36.82**	**295**	*e*P	**P**	**20 33 23.7**	**+1.0**
MAKZ	**Makanchi**	**36.88**	**267**	*e*P	**P**	**20 33 22.5**	**-0.8**
	comp=Z,7.8nm,1.1s						
MAKZ	**Makanchi**	**36.88**	**267**	*e*P	**P**	**20 33 22.5**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ	**Urumqi**	**37.22**	**259**	P	**P**	**20 33 27.6**	**+1.3**
WMQ				pP	sP	20 33 31.3	+0.5
WMQ				sP	pP	20 33 37.1	+7.6
WMQ				PcS	**PcS**	**20 39 35.3**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,24nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.8s						
WMQ				LR	LR		
	comp=Z,8μm,38.9s						
WMQ				LR	LR		
	comp=Z,810nm,22.1s						
WMQ				LR	LR		
	comp=Z,470nm,17.9s						
DLBC	**Dease Lake**	**37.32**	**60**	P	**P**	**20 33 28.9**	**+1.9**
	comp=Z,4.9nm,1.0s,baz=280,slow=7.3,SNR=3.2						
ARU	**Arti**	**37.85**	**296**	⇑*i*P	**P**	**20 33 31.2**	**-0.2**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PRGR	**Permogore**	**37.92**	**310**	*e*P	**P**	**20 33 27.7**	**-4.2**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
TMCR	**Tamitsa**	**38.04**	**317**	*e*P	**P**	**20 33 33.0**	**+0.1**
LZH	**Lanzhou**	**38.43**	**235**	*e*P	**P**	**20 33 38.8**	**+2.1**
LZH				pP	sP	20 33 43.6	+2.4
LZH				sP	pP	20 33 46.9	+7.0
LZH				PcP	**PcP**	**20 35 54.9**	**+5.1**
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,280nm,4.6s						
LZH				LR	LR		
	comp=Z,1μm,9.5s						
LZH				LR	LR		
	comp=Z,690nm,8.9s						
LZH				LR	LR		
	comp=Z,2μm,12.7s						
XAN	**Xi'an**	**38.82**	**227**	*e*P	**P**	**20 33 39.7**	**-0.1**
	comp=Z,15nm,1.6s						
YKA	**Yellowknife Ar**	**38.83**	**46**	P	**P**	**20 33 39.4**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=320,slow=8.0,SNR=11						
YKA				LR	LR	20 53 60.0	
	comp=Z,11nm,18.0s,baz=332,slow=43						
OTUK	**Ortayu**	**39.38**	**277**	P	**P**	**20 33 44.7**	**+0.3**
OTUK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KLMR	**Klimovskoe**	**40.32**	**313**	*e*P	**P**	**20 33 50.6**	**-1.4**
KLMR				*e*		20 35 24.5	
KLMR				pmax	pmax		
	comp=Z,15nm,1.4s						
KLMR	**Klimovskoe**	**40.32**	**313**	*e*P	**P**	**20 33 50.6**	**-1.4**
KLMR				AMP		20 33 59.7	
	comp=Z,15nm,1.4s						
KLMR				*e*PP	**PP**	**20 35 24.5**	**+0.1**
WHN	**Wuhan**	**40.71**	**219**	⇑P	P	20 34 03.0	+7.5
ENH	**Enshi**	**42.22**	**225**	*e*P	**P**	**20 34 07.2**	**-0.8**
	comp=Z,46nm,2.0s						
BBB	**Bella Bella**	**43.01**	**64**	LR	LR	20 51 29.0	
	comp=Z,136nm,21.0s,baz=304,slow=35						
FRU	**Bishkek**	**43.05**	**271**	*e*P	**P**	**20 34 16.0**	**+1.4**
ABKAR	**Akbulak array**	**43.17**	**288**	*e*P	**P**	**20 34 15.3**	**-0.2**
CD2	**Chengdu**	**43.26**	**232**	*e*P	**P**	**20 34 16.0**	**-0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AAK	**Ala-Archa**	**43.26**	**271**	*e*P	**P**	**20 34 16.2**	**-0.3**
	comp=Z,22nm,1.5s						
AAK	**Ala-Archa**	**43.26**	**271**	⇑*e*P	**P**	**20 34 16.4**	**-0.1**
AAK				pmax	pmax		
	comp=Z,25nm,2.5s						
FIA0	**FINESS Array S**	**43.33**	**321**	*e*P	**P**	**20 34 16.4**	**-0.2**
FIA0	**FINESS Array S**	**43.33**	**321**	*e*P	**P**	**20 34 16.4**	**-0.2**
FINES	**FINESS Array B**	**43.33**	**321**	P	**P**	**20 34 16.4**	**-0.2**
	comp=Z,4.4nm,0.7s,baz=28,slow=8.6,SNR=12						
FINES				LR	LR	20 54 04.2	
	comp=Z,78nm,18.4s,baz=20,slow=39						
MNAS	**Manas**	**44.15**	**272**	P	**P**	**20 34 25.1**	**+1.5**
MNAS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KSH	**Kashi**	**45.38**	**267**	P	P	20 34 38.5	+5.1
KSH				pP	sP	20 34 41.5	+3.6
KSH				PP	**PP**	**20 36 22.6**	**+3.3**
KSH				S	**S**	**20 41 19.0**	**+4.8**
KSH				sS	sS	20 41 26.6	+7.1
KSH				SS	**ScS**	**20 44 32.0**	**+2.2**
KSH				pmax	pmax		
	comp=Z,350nm,5.5s						
KSH				LR	LR		
	comp=Z,240nm,4.9s						
KSH				LR	LR		
	comp=Z,210nm,4.9s						
KSH				LR	LR		
	comp=Z,360nm,6.4s						
VSU	**Vasula**	**45.78**	**319**	⇑*i*P	**P**	**20 34 36.7**	**+0.6**
VSU				pmax	pmax		
	comp=Z,29nm,1.0s						
OBN	**Obninsk**	**46.00**	**310**	⇓*i*P	**P**	**20 34 37.9**	**0.0**
OBN				*e*		20 36 11.8	
OBN				*e*		20 36 24.2	
OBN				*e*SS	SS	20 44 39.9	-6.7
OBN				pmax	pmax		
	comp=Z,27nm,2.5s						
OBN				MLR	MLR		
	comp=Z,225nm,17.0s						
GYA	**Guiyang**	**46.60**	**227**	*e*P	**P**	**20 34 43.3**	**+0.2**
GYA				PP	**PP**	**20 36 33.3**	**+0.8**
GYA				S	**S**	**20 41 30.3**	**-1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,90nm,6.6s						
GYA				LR	LR		
	comp=Z,890nm,15.3s						
GYA				LR	LR		
	comp=Z,370nm,10.0s						
GYA				LR	LR		
	comp=Z,1μm,16.2s						
NB2	**NORSAR Subarra**	**46.91**	**330**	P	**P**	**20 34 44.3**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=24,slow=7.9						
NB200	**NORSAR Array S**	**46.91**	**330**	*e*P	**P**	**20 34 43.6**	**-1.5**
NOA	**NORSAR Array B**	**46.91**	**330**	P	**P**	**20 34 43.6**	**-1.5**
	comp=Z,4.5nm,1.1s,baz=24,slow=7.7,SNR=4.0						
NOA				LR	LR	20 57 30.6	
	comp=Z,60nm,19.4s,baz=10.0,slow=40						
FRB	**Frobisher Bay**	**47.04**	**18**	P	**P**	**20 34 44.2**	**-1.7**
	comp=Z,2.4nm,0.7s,baz=360,slow=13,SNR=5.0						
FCC	**Fort Churchill**	**47.24**	**36**	*e*P	**P**	**20 34 47.1**	**-0.4**
	comp=Z,18nm,1.4s						
FCC	**Fort Churchill**	**47.24**	**36**	*e*P	**P**	**20 34 47.2**	**-0.4**

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FCC                               pmax    pmax
      comp=Z,18nm,1.4s
LPSR  Galich'ya Gora    47.46 306  eP     P         20 34 48.2 -1.2
LPSR                              pmax    pmax
      comp=Z,10.0nm,1.0s
VRH   Novokhopyorsk     47.79 304  eP     P         20 34 50.0 -1.9
VRH                               pmax    pmax
      comp=Z,10.0nm,1.1s
LSA   Lhasa             48.51 246  eP     P         20 34 58.0 -0.3
      comp=Z,16nm,1.6s
LSA   Lhasa             48.51 246  eP     P         20 34 58.0 -0.3
LSA                               pmax    pmax
      comp=Z,15nm,1.6s
VSR   Storozhevoye      48.59 305⇑iP     P         20 34 56.9 -1.2
VSR                               pmax    pmax
      comp=Z,21nm,0.8s
FFC   Flin Flon         48.90  44  eP     P         20 34 59.8 -0.7
      comp=Z,30nm,2.0s
FFC   Flin Flon         48.90  44  i P    P         20 35 01.1 +0.6
KMI   Kunming           48.99 231   P     P         20 35 01.9 +0.1
KMI                                pP     pP        20 35 04.6 -0.4
KMI                                sP     sP        20 35 09.1 +2.8
KMI                               pmax    pmax
      comp=Z,6.0nm,0.8s
KMI                               pmax    pmax
      comp=Z,190nm,4.1s
KMI                               LR      LR
      comp=Z,450nm,11.5s
KMI                               LR      LR
      comp=Z,430nm,11.5s
KMI                               LR      LR
      comp=Z,640nm,10.9s
LTY   Liberty           49.74  62  eP     P         20 35 06.8 -0.4
      comp=Z,9.1nm,1.0s
SUW   Suwalki           50.65 318  eP     P         20 35 12.8 -1.0
SUW   Suwalki           50.65 318  eP     P         20 35 12.5 -1.3
      comp=Z,19nm,0.8s
SUW   Suwalki           50.65 318  eP     P         20 35 12.8 -1.0
KLNR  Kaliningrad       50.85 321⇓eP     P         20 35 15.1 -0.2
KLNR                              pmax    pmax
      comp=Z,36nm,1.3s
NIL   Nilore            51.57 266  eP     P         20 35 21.9 +0.8
      comp=Z,8.1nm,0.9s
NIL   Nilore            51.57 266  eP     P         20 35 21.9 +0.8
NIL                               pmax    pmax
      comp=Z,8.0nm,0.9s
AKASG Malin Array Be    52.01 312   P     P         20 35 22.8 -1.2
      comp=Z,6.3nm,0.7s,baz=28,slow=8.1,SNR=3.3
AKBB  Malin Array Si    52.01 312  eP     P         20 35 23.4 -0.7
      comp=Z,6.8nm,0.8s
GUN   Gumba             52.01 250  eP     P         20 35 25.2 +0.5
      comp=Z,60nm,1.2s
KIEV  Kiev              52.02 312  eP     P         20 35 23.1 -1.0
      comp=Z,7.0nm,0.9s
KIEV  Kiev              52.02 312⇑iP     P         20 35 22.1 -2.0
KIEV  Kiev              52.02 312⇓iP     P         20 35 23.6 -0.5
KIEV                              pmax    pmax
      comp=Z,8.0nm,0.9s
G08A  Pilot Rock        52.04  62  eP     P         20 35 25.0 +0.5
      comp=Z,4.8nm,1.0s
AK11  Malin Array Si    52.04 312  eP     P         20 35 22.8 -1.5
JIRN  Jiri              52.12 250  eP     P         20 35 26.1 +0.5
      comp=Z,22nm,0.7s
DANN  Dangsing          52.38 252  eP     P         20 35 28.0 +0.6
      comp=Z,30nm,0.7s
KBL   Kabul             52.40 270  eP     P         20 35 26.0 -1.4
      comp=Z,18nm,1.8s
KBL   Kabul             52.40 270  eP     P         20 35 26.0 -1.4
KBL                               pmax    pmax
      comp=Z,18nm,1.8s
PKIN  Phulchoki         52.48 250  eP     P         20 35 28.2  0.0
      comp=Z,11nm,0.9s
PKI   Pulchoki          52.48 250  eP     P         20 35 28.6 +0.3
DMN   Daman             52.56 251  eP     P         20 35 29.4 +0.7
      comp=Z,19nm,0.9s
PYUN  Piuthan           52.88 253  eP     P         20 35 30.9 -0.2
      comp=Z,20nm,1.0s
KOLN  Koldanda          52.96 252  eP     P         20 35 32.1 +0.5
      comp=Z,29nm,1.0s
GEYT  Alibeck           53.57 282   P     P         20 35 36.1 +0.3
      comp=Z,3.7nm,0.8s,baz=347,slow=6.1,SNR=9.0
GEYT                              LR      LR        21 01 38.2
      comp=Z,210nm,18.4s,baz=20,slow=40
KIV   Kislovodsk        53.80 298  eP     P         20 35 37.6 +0.1
      comp=Z,13nm,0.9s
KIV   Kislovodsk        53.80 298⇑iP     P         20 35 38.2 +0.7
KIV   Kislovodsk        53.80 298  eP     P         20 35 37.6 +0.1
KIV                               pmax    pmax
      comp=Z,16nm,1.1s
NCK   Nalchik           53.90 297⇓eP     P         20 35 39.1 +1.0
NCK                               pmax    pmax
      comp=Z,6.0nm,0.5s
KBZ   Khabaz            53.93 298   P     P         20 35 38.9 +0.6
      comp=Z,9.2nm,1.0s,baz=49,slow=6.8,SNR=15
KBZ                               LR      LR        21 01 32.2
      comp=Z,138nm,18.1s,baz=28,slow=39
NEY   Neytrino          54.42 298⇑eP     P         20 35 41.8 -0.3
NEY                               pmax    pmax
      comp=Z,7.0nm,2.4s
ZEI   Tsey              54.42 297  eP     P         20 35 41.3 -0.9
ZEI                               pmax    pmax
      comp=Z,5.0nm,0.8s
ULM   Lac du Bonnet     54.55  42  LR     LR        21 02 14.7
      comp=Z,213nm,19.0s,baz=312,slow=40
KWP   Kalwaria Pacla    54.76 316  eP     P         20 35 44.9 +0.6
KWP   Kalwaria Pacla    54.76 316  eP     P         20 35 44.9 +0.6
OJC   Ojcow             54.97 319  eP     P         20 35 46.2 +0.4
OJC   Ojcow             54.97 319  eP     P         20 35 45.3 -0.5
      comp=Z,11nm,0.8s
OJC   Ojcow             54.97 319  eP     P         20 35 46.2 +0.4
YHH   Holmes Hill       55.16  56  eP     P         20 35 47.2 -0.4
      comp=Z,9.0nm,1.4s
KSP   Ksiaz             55.26 322  eP     P         20 35 47.9 +0.1
KSP   Ksiaz             55.26 322  eP     P         20 35 47.9 +0.1
RLMT  Red Lodge         55.36  55  eP     P         20 35 49.3 +0.4
      comp=Z,12nm,0.9s
CLL   Collm             55.58 324  eP     P         20 35 49.2 -1.0
      comp=Z,8.3nm,0.9s
CLL   Collm             55.58 324⇑iP     P         20 35 49.5 -0.7
      comp=Z,8.0nm,0.8s
CLL                                esP    sP        20 35 56.0 +1.3
CLL   Collm             55.58 324⇑iP     P         20 35 49.5 -0.7
CLL                                e                20 35 56.0
CLL                               pmax    pmax
      comp=Z,8.0nm,0.8s
NIE   Niedzica          55.58 318  eP     P         20 35 50.8 +0.5
NIE   Niedzica          55.58 318  eP     P         20 35 50.8 +0.5
H17A  Grant Village     55.60  56  eP     P         20 35 52.7 +2.0
      comp=Z,16nm,1.5s
YPP   Pitchstone Pla    55.64  57  eP     P         20 35 51.9 +0.8
      comp=Z,17nm,1.6s
DPC   Dobruska-Polom    55.71 321  eP     P         20 35 51.7 +0.5
DPC   Dobruska-Polom    55.71 321  eP     P         20 35 51.7 +0.5
OKC   Ostrava-Krasne    55.74 320   P     P         20 35 52.2 +0.9
OKC                               pmax    pmax
      comp=Z,7.0nm,0.9s
FLWY  Flagg Ranch       55.84  57  eP     P         20 35 54.7 +2.3
      comp=Z,29nm,1.6s
KRLC  Kraliky           55.85 321  eP     P         20 35 52.7 +0.5
KRLC  Kraliky           55.85 321  eP     P         20 35 52.7 +0.5
BUR08 Bucovina Ar. S    55.90 314  eP     P         20 35 52.2 -0.4
SCHQ  Schefferville     55.92  20  eP     P         20 35 51.2 -1.4
      comp=Z,29nm,1.8s
SCHQ  Schefferville     55.92  20   P     P         20 35 50.8 -1.7
      comp=Z,1.8nm,0.6s,baz=356,slow=7.6,SNR=5.5
SCHQ                              LR      LR        21 00 02.6
      comp=Z,189nm,21.8s,baz=326,slow=36
BUR04 Bucovina Ar. S    55.92 314  eP     P         20 35 51.9 -0.9
BURAR Bucovina Array    55.92 314⇑iP     P         20 35 52.0 -0.8
BURAR Bucovina Array    55.92 314 ⇑P     P         20 35 52.0 -0.8
MORC  Moravsky Berou    55.94 320  eP     P         20 35 52.3 -0.5
      comp=Z,6.9nm,0.9s
MORC  Moravsky Berou    55.94 320⇑iP     P         20 35 52.9  0.0
MORC  Moravsky Berou    55.94 320 ⇑P     P         20 35 52.9  0.0
MORC                                                20 35 53.9
LANS  Liptovska Anna    56.04 319  eP     P         20 35 54.0 +0.4
LANS  Liptovska Anna    56.04 319  eP     P         20 35 54.0 +0.4
MOOW  Moose Ponds       56.12  57  eP     P         20 35 55.7 +1.2
      comp=Z,18nm,1.7s
FXWY  Fox Creek         56.13  57  eP     P         20 35 55.7 +1.2
      comp=Z,5.4nm,1.4s
TRPA  Tarpa             56.18 316⇑iP     P         20 35 54.5  0.0
LOHW  Long Hollow       56.29  57  eP     P         20 35 55.2 -0.4
      comp=Z,16nm,1.6s
CM31  Chiang Mai Arr    56.40 232  eP     P         20 35 56.1 -0.3
CMAR  Chiang Mai Arr    56.40 232  i P    P         20 35 57.0 +0.6
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CMAR                              pmax    pmax
      comp=Z,1.0nm,0.8s
CMAR  Chiang Mai Arr    56.40 232   P     P         20 35 56.1 -0.3
      comp=Z,0.6nm,0.7s,baz=6.7,slow=7.5,SNR=6.5
CMAR                              LR      LR        21 02 33.9
      comp=Z,248nm,19.7s,baz=27,slow=39
REDW  Red Top Meadow    56.44  57  eP     P         20 35 57.5 +0.8
      comp=Z,26nm,1.7s
GNI   Garni             56.47 294  eP     P         20 35 57.4 +0.5
      comp=Z,7.7nm,1.0s
GNI   Garni             56.47 294⇓eP     P         20 35 58.3 +1.4
GNI                               pmax    pmax
      comp=Z,11nm,0.8s
TESR  Tescani           56.53 312⇑iP     P         20 35 57.0  0.0
UTTA  Uttaradit         56.60 230   P     P         20 35 59.7 +1.9
      comp=Z,2.5nm,0.9s
VRAC  Vranov            56.61 321⇑iP     P         20 35 57.7 +0.1
VRAC  Vranov            56.61 321 ⇑P     P         20 35 57.7 +0.1
VRAC                                                20 35 58.8
VYHS  Vyhne             56.81 319  eP     P         20 35 59.2 +0.2
VYHS                              pmax    pmax
      comp=Z,4.0nm,1.2s
VYHS  Vyhne             56.81 319  eP     P         20 35 59.2 +0.2
KRUC  Moravsky          56.89 321   P     P         20 36 00.1 +0.6
KRUC                              pmax    pmax
      comp=Z,8.0nm,1.0s
TREC  Trest             56.89 322   P     P         20 36 00.9 +1.3
TREC                              pmax    pmax
      comp=Z,2.0nm,1.1s
PSZ   Piszkesteto       57.07 318  eP     P         20 36 00.2 -0.7
      comp=Z,11nm,1.0s
PSZ   Piszkesteto       57.07 318⇑iP     P         20 36 01.3 +0.4
PSZ   Piszkesteto       57.07 318 ⇑P     P         20 36 01.3 +0.4
PSZ                                                 20 36 02.5
HVU   Hansel Valley     57.23  59  eP     P         20 36 03.0 +0.7
      comp=Z,4.9nm,1.0s
HVU   Hansel Valley     57.23  59  eP     P         20 36 03.0 +0.7
HVU                               pmax    pmax
      comp=Z,5.0nm,1.0s
ELK   Elko              57.33  62  eP     P         20 36 05.4 +2.3
      comp=Z,19nm,1.7s
ELK   Elko              57.33  62   P     P         20 36 05.0 +1.9
ELK                               pmax    pmax
      comp=Z,2.0nm,1.0s
ELK   Elko              57.33  62   P     P         20 36 05.0 +1.9
      comp=Z,1.5nm,0.9s,baz=313,slow=3.6,SNR=6.7
DRGR                    57.37 315⇑iP     P         20 36 02.7 -0.3
DRGR                    57.37 315 ⇑P     P         20 36 02.7 -0.3
DOPR  Dopca             57.38 313⇑iP     P         20 35 59.7 -3.4
PDAR  Pinedale Array    57.38  56   P     P         20 36 03.3 -0.1
      comp=Z,0.8nm,0.9s,baz=353,slow=9.4,SNR=9.4
PDAR                              LR      LR        21 03 36.7
      comp=Z,276nm,18.1s,baz=350,slow=39
KHC   Kasperske Hory    57.49 323  eP     P         20 36 04.5 +0.7
KHC   Kasperske Hory    57.49 323  eP     P         20 36 04.5 +0.7
YERR  Yerington         57.52  66  eP     P         20 36 05.5 +1.1
      comp=Z,9.6nm,1.1s
PBKT  Sadao Pong        57.59 229   P     P         20 36 06.5 +1.7
      comp=Z,5.2nm,0.8s
GEC2  GERESS Array S    57.73 323  eP     P         20 36 05.3 -0.3
GEC2  GERESS Array S    57.73 323  eP     P         20 36 05.3 -0.3
GERES GERESS Array B    57.73 323   P     P         20 36 05.3 -0.3
      comp=Z,1.5nm,0.9s,baz=39,slow=8.6,SNR=12
GERES                             LR      LR        21 04 25.0
      comp=Z,118nm,18.4s,baz=23,slow=40
GEA0  GERESS Array S    57.74 323  eP     P         20 36 04.6 -1.0
KVN   Kaiserville       57.86  65  eP     P         20 36 07.5 +0.7
      comp=Z,9.1nm,1.3s
KVN   Kaiserville       57.86  65  eP     P         20 36 07.5 +0.7
KVN                               pmax    pmax
      comp=Z,9.0nm,1.3s
WAKR  Walker            57.88  67  eP     P         20 36 08.0 +1.1
      comp=Z,10.0nm,1.2s
ARR   Arges             58.14 313⇑iP     P         20 36 08.2 -0.3
TCUT  Toone Canyon      58.27  59  eP     P         20 36 10.3 +0.6
      comp=Z,12nm,1.0s
NV01  Mina Array Sit    58.35  66  eP     P         20 36 11.2 +0.9
NVAR  Mina Array Bea    58.35  66   P     P         20 36 11.0 +0.8
      comp=Z,2.8nm,1.1s,baz=334,slow=6.0,SNR=8.3
NVAR                              LR      LR        21 02 42.9
      comp=Z,141nm,21.9s,baz=326,slow=38
NV11  Mina Array Sit    58.40  66  eP     P         20 36 11.8 +1.3
      comp=Z,0.7nm,1.4s
GZR   Gura Zlata        58.63 314⇑iP     P         20 36 12.4 +0.5
GZR   Gura Zlata        58.63 314 ⇑P     P         20 36 12.4 +0.5
DUG   Dugway, Tooele    58.64  60  eP     P         20 36 12.6 +0.5
      comp=Z,10nm,1.4s
DUG   Dugway, Tooele    58.64  60  eP     P         20 36 12.6 +0.5
DUG                               pmax    pmax
      comp=Z,10.0nm,1.4s
JLU   Jordanelle        58.72  59  eP     P         20 36 14.0 +1.1
      comp=Z,24nm,1.6s
BZS   Buzias            58.74 315⇑iP     P         20 36 12.1 -0.5
BZS   Buzias            58.74 315 ⇑P     P         20 36 12.2 -0.4
OMMB  Old Mammoth Mi    58.83  67  eP     P         20 36 14.4 +0.7
      comp=Z,9.1nm,1.3s
UTHA  Uthaitani         58.99 230   P     P         20 36 16.9 +2.3
R11A  Troy Canyon, C    59.36  63  eP     P         20 36 17.9 +0.6
      comp=Z,7.3nm,1.3s
MDVR  Moldovita         59.49 315⇑iP     P         20 36 17.8  0.0
PSUT  Pine Spring       59.78  62  eP     P         20 36 20.5 +0.4
      comp=Z,4.3nm,1.0s
MSU   Marysvale         60.37  61  eP     P         20 36 24.9 +0.7
MSU   Marysvale         60.37  61  eP     P         20 36 24.9 +0.7
BR101 Keskin Array S    60.58 303  eP     P         20 36 25.9 +0.3
BRTR  Keskin Array B    60.58 303   P     P         20 36 25.9 +0.3
      comp=Z,1.7nm,0.8s,baz=54,slow=4.2,SNR=6.9
BRTR                              LR      LR        21 04 23.9
      comp=Z,52nm,18.9s,baz=35,slow=38
MTPU  Mount Pierson     60.79  61  eP     P         20 36 28.6 +1.4
      comp=Z,13nm,1.5s
SHPR  Sheep Range       61.17  64  eP     P         20 36 29.5 -0.1
      comp=Z,9.3nm,1.4s
PV09  Paradox Valley    61.38  58  eP     P         20 36 32.2 +1.0
KNB   Kanab             61.50  62  eP     P         20 36 32.8 +0.9
      comp=Z,24nm,1.6s
KNB   Kanab             61.50  62  eP     P         20 36 32.8 +0.9
KNB                               pmax    pmax
      comp=Z,24nm,1.6s
PV16  Nyswonger Mesa    61.62  58  eP     P         20 36 33.4 +0.7
      comp=Z,8.8nm,1.1s
SDCO  Great Sand Dun    63.24  56  eP     P         20 36 43.9 +0.3
      comp=Z,19nm,1.8s
HYB   Hyderabad         64.27 253  i P    P         20 36 49.0 -1.3
ESDC  Sonseca Array     70.12 333   P     P         20 37 26.4 -0.8
      comp=Z,1.1nm,0.6s,baz=7.6,slow=6.1,SNR=12
KEST  Kesra             71.17 321  LR     LR        21 11 56.3
      comp=Z,34nm,21.3s,baz=280,slow=39
RAYN  Ar Rayn           71.20 286  eP     P         20 37 33.4 -0.6
      comp=Z,10.0nm,1.2s
RAYN  Ar Rayn           71.20 286  eP     P         20 37 33.4 -0.6
RAYN                              pmax    pmax
      comp=Z,10.0nm,1.2s
LTX   Lajitas           71.57  58  eP     P         20 37 35.3 -0.9
LTX   Lajitas           71.57  58  eP     P         20 37 35.3 -0.9
TXAR  Lajitas Array     71.57  58   P     P         20 37 35.3 -0.9
      comp=Z,0.1nm,0.4s,baz=308,slow=4.4,SNR=4.8
TXAR                              LR      LR        21 12 58.1
      comp=Z,154nm,18.2s,baz=0.0,slow=39
WR1   Warramunga Arr    87.50 188  eP     P         20 39 01.7 -0.8
      comp=Z,22nm,1.9s
WRA   Warramunga Arr    87.50 188  i P    P         20 39 04.9 +2.4
WRA                               pmax    pmax
      comp=Z,1.0nm,0.8s
WRA   Warramunga Arr    87.50 188   P     P         20 39 01.7 -0.8
      comp=Z,0.7nm,0.8s,baz=5.7,slow=5.1,SNR=7.6
ASAR  Alice Springs     91.22 188   P     P         20 39 18.8 -1.2
      comp=Z,0.4nm,0.8s,baz=1.4,slow=5.0,SNR=4.2
TOA1  Torodi Ar. Sit    94.68 322  eP     P         20 39 34.3 -1.9
TORD  Torodi Ar. Bea    94.68 322   P     P         20 39 34.3 -1.9
      comp=Z,0.4nm,0.9s,baz=1.3,slow=6.2,SNR=3.7
```

IDC 14 20:34:01.2±2.2, 50.02N×114.61W, h0km, mb2.6/1, mb1 3.3/3, mb1mx3.1/40, mbtmp2.9/3, ML3.0/2, Error ellipse: s-maj=39.8km s-min=9.7km az=118.0, Alberta

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op      ISC        h  m  s    ISC
NEW   Newport            2.41 224   Pn      Pb        20 34 43.9 -1.6
      1.5nm,0.3s,baz=39,slow=12,SNR=15
NEW                                 Lg      Lg        20 35 15.7
      1.8nm,0.3s,baz=6.8,slow=9.2,SNR=6.3
I56US NEWPORT INFRAS     2.41 224   i                 20 53 30.0
      baz=45,slow=330,SNR=2.5
YKA   Yellowknife Ar    12.51 360   Pn      Pn        20 36 56.0 -4.1
      0.1nm,0.3s,baz=183,slow=13,SNR=7.5
YKA                                 Lg      Lg        20 40 25.4
      baz=172,slow=28,SNR=2.9
ILAR  Eielson Array     22.46 323   P       P         20 39 01.5  0.0
      0.1nm,0.6s,baz=126,slow=9.3,SNR=1.7
```

SOME 14 20:34:47.7, 43.25N×81.33E, h20km

NNC 14 20:34:48.5±1.1, 43.28N×81.23E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=8.6km s-min=4.8km az=149.0

ISC 14 20:34:50.7±1.8, 43.34N±0.06×81.06E±0.06, h10km±12km, n43, σ1.15/65, 9C-1D, Northern Xinjiang

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op      ISC        h  m  s    ISC
KTMS  Ketmen             0.53 282   P       Pb        20 35 02.0 -0.2
      150nm,0.1s
KTMS                                S       Sn        20 35 12.8 -0.8
      888nm,0.2s
KTMS  Ketmen             0.53 282  eP       Pb        20 35 02.0 -0.2
      150nm,0.1s
KTMS                               eS       Sn        20 35 12.8 -0.8
      497nm,0.3s
PDGK  Podgornoye         1.15 270   P       Pb        20 35 12.4 -0.3
      10nm,0.1s
PDGK                                S       Sn        20 35 30.3 +1.4
      55nm,0.3s
PDGK  Podgornoye         1.15 270  ⇑P       Pb        20 35 12.2 -0.6
      4.2nm,0.2s
PDGK                               ⇑S       Sn        20 35 30.5 +1.7
      30nm,0.3s
DJR   Jarkent            1.35 318   P       Pb        20 35 16.1 -0.1
      16nm,0.3s
DJR                                 S       Sg        20 35 36.6 +2.3
      45nm,0.4s
DJR   Jarkent            1.35 318  eP       Pb        20 35 16.1 -0.1
      16nm,0.3s
DJR                                eS       Sg        20 35 36.6 +2.3
      45nm,0.4s
UZB   Uzynbulak          1.50 263   P       Pb        20 35 18.3 -0.5
      22nm,0.1s
UZB                                 S       Sg        20 35 40.3 +1.3
      113nm,0.3s
UZB   Uzynbulak          1.50 263  eP       Pb        20 35 18.3 -0.5
      22nm,0.1s
UZB                                eS       Sg        20 35 40.3 +1.3
      113nm,0.3s
MNBS  Baschi             2.07 292   Pg      Pb        20 35 28.0 -0.4
      7.1nm,0.2s
MNBS                                Lg      Lg        20 35 57.4
      120nm,0.2s
MNBS  Baschi             2.07 292  eP       Pb        20 35 27.4 -1.0
      7.1nm,0.2s
MNBS                               eS       Sg        20 35 57.0 -0.2
      120nm,0.2s
KURS  Kuram              2.11 275   Pg      Pb        20 35 29.2  0.0
      11nm,0.3s
KURS                                Lg      Lg        20 35 59.1
      46nm,0.5s
KURS  Kuram              2.11 275  eP       Pb        20 35 28.6 -0.6
      2.2nm,0.6s
KURS                               eS       Sg        20 35 58.5 -0.1
      46nm,0.5s
KAPS  Kapalarasan        2.30 328   Pg      Pb        20 35 30.9 -1.4
      13nm,0.2s
KAPS                                Lg      Lg        20 36 02.0
      31nm,0.2s
KAPS  Kapalarasan        2.30 328  eP       Pb        20 35 31.5 -0.8
      14nm,0.2s
KAPS                               eS       Sb        20 36 02.3 +1.5
      31nm,0.2s
ARXS  Arharly            2.50 292   Pg      Pb        20 35 36.3 +0.6
      7.9nm,0.4s
ARXS                                Lg      Lg        20 36 11.3
      64nm,0.4s
ARXS  Arharly            2.50 292  eP       Pb        20 35 35.7 -0.1
      3.0nm,0.4s
ARXS                               eS       Sg        20 36 10.1 -0.9
      64nm,0.4s
KOTS  Kotyrbulak         2.89 269   Pg      Pb        20 35 42.8 +0.4
      7.4nm,0.2s
KOTS                                Lg      Lg        20 36 22.4
      54nm,0.4s
KOTS  Kotyrbulak         2.89 269  eP       Pb        20 35 42.7 +0.3
      7.4nm,0.2s
KOTS                               eS       Sg        20 36 22.4 -1.0
      54nm,0.4s
MDOK  Medeo              2.94 268   Pg      Pg        20 35 49.0 +2.0
      3.5nm,0.5s
MDOK                                Lg      Lg        20 36 25.8
      3.2nm,0.3s
MDOK  Medeo              2.94 268   Pg      Pb        20 35 44.3 +1.0
      7.0nm,0.6s
MDOK                                Lg      Lg        20 36 24.9
      10nm,0.2s
MDOK  Medeo              2.94 268  eP       Pb        20 35 43.7 +0.4
      2.9nm,0.6s
MDOK                               eS       Sg        20 36 24.0 -1.0
      10nm,0.2s
KNDC  Almaty             2.99 269  ⇑Lg      Lg        20 36 28.0
      8.2nm,0.3s
CHKK  Chushkaly          3.00 281   Pg      Pb        20 35 44.7 +0.4
      2.6nm,0.2s
CHKK                                Lg      Lg        20 36 25.7
      30nm,0.2s
CHKK  Chushkaly          3.00 281  eP       Pb        20 35 44.7 +0.4
      2.6nm,0.2s
CHKK                               eS       Sg        20 36 25.7 -1.5
      30nm,0.2s
TNSS  Tian-Shan          3.02 266   Pg      Pb        20 35 45.4 +0.5
      5.2nm,0.3s
TNSS                                Lg      Lg        20 36 26.8
      15nm,0.3s
TNSS  Tian-Shan          3.02 266  eP       Pb        20 35 45.4 +0.5
      5.2nm,0.3s
TNSS                               eS       Sg        20 36 27.1 -0.7
      15nm,0.3s
KTBS  Karatobe           3.21 278   Pg      Pb        20 35 48.4 +0.6
      3.4nm,0.3s
KTBS                                Lg      Lg        20 36 31.9
      14nm,0.5s
KTBS  Karatobe           3.21 278  eP       Pb        20 35 48.4 +0.6
      3.4nm,0.3s
KTBS                               eS       Sg        20 36 31.9 -1.8
      14nm,0.5s
IZV   Izvestkoviy        3.27 266   Pg      Pb        20 35 50.5 +1.6
      2.6nm,0.2s
IZV                                 Lg      Lg        20 36 35.9
      15nm,0.2s
IZV   Izvestkoviy        3.27 266  eP       Pb        20 35 49.1 +0.2
      2.6nm,0.2s
IZV                                eS       Sg        20 36 33.5 -2.1
      15nm,0.2s
MTBS  Maitube            3.39 268   Pg      Pb        20 35 51.7 +0.7
      4.9nm,0.1s
MTBS                                Lg      Lg        20 36 37.6
      11nm,0.2s
MTBS  Maitube            3.39 268  eP       Pb        20 35 52.5 +1.5
      2.2nm,0.3s
MTBS                               eS       Sg        20 36 38.3 -1.3
      11nm,0.2s
KUU   Kurty              3.48 281   Pg      Pb        20 35 53.6 +1.3
      1.4nm,0.2s
KUU                                 Lg      Lg        20 36 40.9
      26nm,0.5s
KUU   Kurty              3.48 281  eP       Pb        20 35 53.6 +1.3
      1.4nm,0.2s
KUU                                eS       Sg        20 36 40.9 -1.3
      26nm,0.5s
MAKZ  Makanchi           3.53  10  ⇑Pg      Pb        20 35 54.6 +1.4
      3.0nm,0.5s
MAKZ                               ⇑Lg      Lg        20 36 41.7
      2.0nm,0.4s
MK31  Makanchi Array     3.56  14  ⇑Pn      Pn        20 35 45.5 -0.6
      0.1nm,0.2s,baz=202,slow=14,SNR=97
MK31                                Pg      Pb        20 35 52.4 -1.4
      0.9nm,0.2s,baz=186,slow=15,SNR=33
MK31                                Sn      Sn        20 36 27.4 -0.8
      0.6nm,0.2s,baz=190,slow=28,SNR=4.5
MK31                               ⇑Lg      Lg        20 36 45.5
      2.4nm,0.3s,baz=192,slow=26,SNR=10
KST   Kastek             3.74 267   Pg      Pb        20 35 58.7 +1.7
      5.0nm,0.5s
KST                                 Lg      Lg        20 36 49.6
      6.8nm,0.4s
KST   Kastek             3.74 267  eP       Pb        20 35 58.7 +1.7
      5.0nm,0.5s
KST                                eS       Sg        20 36 49.6 -1.2
```

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	6.8nm,0.4s						
DGS	Degeres	3.86	270	Pg	Pb	20 35 59.8	+0.8
	3.9nm,0.3s						
DGS				Lg	Lg	20 36 51.5	
	16nm,0.3s						
DGS	Degeres	3.86	270	*e*P	Pg	20 36 02.1	-2.6
	2.8nm,0.3s						
DGS				*e*S	Sg	20 36 54.8	+0.1
	16nm,0.3s						
TKM2	Tokmak 2	4.02	266	⇓Pg	Pg	20 36 07.4	-0.4
	2.1nm,0.6s						
TKM2				⇑Lg	Lg	20 36 59.2	
	3.6nm,0.3s						
AAK	Ala-Archa	4.87	264	⇑Lg	Lg	20 37 27.6	
	3.5nm,0.6s						
ZSN	Zaisan	4.91	32	Pg	Pb	20 36 17.3	+0.6
	1.9nm,0.4s						
ZSN				Lg	Lg	20 37 21.7	
	4.4nm,0.4s						

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*ISCJB **14** 20:39:26.8±0.9, 11°.04S±0°.09×165°.9E±0°.1, h10km, MS2.8/1, Error ellipse: s-maj=19.0km s-min=10.3km az=149.5*

*IDC **14** 20:39:26.7±1.6, 10°.91S×166°.01E, h0km, mb3.7/5, mb1 4.1/7, mb1mx3.8/39, mbtmp4.1/7, ML5.0/2, MS3.0/3, Ms1 2.9/3, ms1mx2.7/27, Error ellipse: s-maj=40.5km s-min=26.1km az=131.0*

*NEIC **14** 20:39:28.4±0.9, 10°.94S×165°.97E, h10km, mb4.6/1, Error ellipse: s-maj=18.2km s-min=10.0km az=60.0*

ISC 14 20:39:28.4±1.2**, 10°.9S**±0°.1×**166°.0E**±0°.2**, h10km, n23, σ1§24**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.18	283	*e*Pn	Pn	20 41 00.3	+0.6
HNR	Honiara	6.18	283	Pn	Pn	20 41 00.8	+1.0
	81nm,0.3s,baz=135,slow=5.8,SNR=19						
HNR				LR	LR	20 43 32.7	
	comp=Z,79nm,20.8s,baz=46,slow=40						
MARNC	Mare, Loyalty	10.67	170	*e*Pn	Pn	20 42 02.1	+0.8
DZM	Mont Dzumac	11.09	178	*e*Pn	Pn	20 42 07.9	+0.7
DZM	Mont Dzumac	11.09	178	Pn	Pn	20 42 08.7	+1.5
	4.4nm,0.3s,baz=356,slow=16,SNR=23						
DZM				LR	LR	20 46 07.6	
	comp=Z,151nm,18.7s,baz=34,slow=36						
OUENC	Ouen Island, N	11.45	176	*e*Pn	Pn	20 42 10.3	-1.8
PINNC	Pines Island,	11.70	174	*e*Pn	Pn	20 42 16.3	+0.9
CTA	Charters Tower	21.11	242	P	P	20 44 14.2	+0.7
	3.0nm,0.6s,baz=90,slow=13,SNR=3.2						
H11S2	WAKE ISLAND Hy	29.24	1	T	T	21 15 50.0	
	baz=181,slow=76,SNR=104						
H11S3	WAKE ISLAND Hy	29.24	1	T	T	21 15 50.3	
	baz=181,slow=76,SNR=79						
H11S1	WAKE ISLAND Hy	29.25	1	T	T	21 15 51.3	
	baz=181,slow=76,SNR=96						
H11N1	WAKE ISLAND Hy	30.46	2	T	T	21 17 21.5	
	baz=182,slow=76,SNR=42						
H11N3	WAKE ISLAND Hy	30.46	2	T	T	21 17 21.9	
	baz=182,slow=76,SNR=42						
H11N2	WAKE ISLAND Hy	30.48	2	T	T	21 17 22.9	
	baz=182,slow=76,SNR=30						
STKA	Stephens Creek	30.73	224	LR	LR	20 55 30.6	
	comp=Z,22nm,21.3s,baz=27,slow=31						
WRAB	Tennant Creek	31.79	250	*e*P	P	20 45 51.8	-1.5
	14nm,1.6s						
WB2	Warramunga Arr	31.79	250	*e*P	P	20 45 51.7	-1.6
WR1	Warramunga Arr	31.80	250	*e*P	P	20 45 52.3	-1.1
	29nm,1.9s						
WRA	Warramunga Arr	31.80	250	P	P	20 45 52.3	-1.1
	2.8nm,0.7s,baz=81,slow=9.2,SNR=38						
ASAR	Alice Springs	33.11	243	P	P	20 46 03.1	-1.7
	0.4nm,0.6s,baz=64,slow=10,SNR=16						
ILAR	Eielson Array	83.31	18	P	P	20 51 54.9	-0.2
	0.1nm,0.6s,baz=232,slow=4.9,SNR=3.3						
MK32	Makanchi Array	93.64	317	*e*P	P	20 52 45.4	+0.3
MKAR	Makanchi Array	93.64	317	P	P	20 52 45.4	+0.3
	0.2nm,0.7s,baz=97,slow=4.8,SNR=3.7						

MEX 14 20:53:10.5±0.6**, 16°.02N×98°.29W, h5km, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.40	22	*e*P	Pg	20 53 14.5	-3.8
PNIG				*e*S	Sg	20 53 22.6	-1.0
VHO	Vista Hermosa	1.82	55	*e*P	Pn	20 53 39.2	-3.5
VHO				*e*S	Sn	20 54 02.0	-4.3
HUIG	Huatulco	2.11	96	*e*P	Pn	20 53 43.2	-3.3
HUIG				*e*S	Sn	20 54 07.8	-5.3
CAIG	El Cayaco	2.16	299	*e*P	Pn	20 53 43.7	-3.5
CAIG				*e*S	Sn	20 54 10.1	-4.3
CMIG	Matias Romero	3.43	71	*e*P	Pn	20 54 01.9	-2.7
CMIG				*e*S	Sn	20 54 42.4	-3.4

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*MOS **14** 20:56:21.4±2.3, 48°.06N×156°.22E, h16km, mb4.5/1, Error ellipse: s-maj=97.3km s-min=7.4km az=80.7*

*SKHL **14** 20:56:21.2±0.3, 47°.92N×155°.61E, h31km±1km, mb4.1/1*

KRSC 14 20:56:21.4±1.7**, 48°.06N×156°.22E, h16km**±29km**, ML4.4, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.63	359	*e*P	Pn	20 57 03.5	+0.4
SKR				*e*S	Sn	20 57 35.7	+1.1
SKR	Severo-Kuril's	2.63	359	*e*P	Pn	20 57 03.7	+0.6
SKR				AMB	AMB	20 57 04.4	
	40nm,0.5s						
SKR				*e*S	Sn	20 57 35.8	+1.2
SKR				A	A	20 57 37.1	
	60nm,0.2s						
SKR	Severo-Kuril's	2.63	359	PN	Pn	20 57 03.5	+0.4
SKR				S	Sn	20 57 35.7	+1.1
PAU	Pauzhetka	3.43	6	*e*P	Pn	20 57 17.3	+3.2
PAU				*e*S	Sb	20 57 59.4	-3.8
PAU	Pauzhetka	3.43	6	*e*P	Pn	20 57 17.3	+3.2
PAU				*e*S	Sb	20 57 59.2	-4.0
PAU	Pauzhetka	3.43	6	PN	Pn	20 57 17.3	+3.2
PAU				S	Sb	20 57 59.4	-3.8
KDTR	Khodutka, Kamc	3.94	17	*e*P	Pn	20 57 24.8	+3.7
KDTR				*e*S	Sn	20 58 12.0	+5.1
KDTR	Khodutka, Kamc	3.94	17	PN	Pn	20 57 24.8	+3.7
KDTR				S	Sn	20 58 12.0	+5.1
MTVR	Mutnovka	4.60	15	*e*P	Pn	20 57 34.3	+3.9
MTVR				*e*S	Sn	20 58 29.0	+5.5
MTVR	Mutnovka	4.60	15	PN	Pn	20 57 34.3	+3.9
MTVR				S	Sn	20 58 29.0	+5.5
RUS	Russkaya	4.62	18	*e*P	Pn	20 57 33.6	+3.2
RUS	Russkaya	4.62	18	*e*P	Pn	20 57 33.6	+3.2
RUS	Russkaya	4.62	18	PN	Pn	20 57 33.6	+3.2
KRMR	Karymshinskiy	4.93	14	*e*P	Pn	20 57 39.3	+4.6
KRMR	Karymshinskiy	4.93	14	PN	Pn	20 57 39.3	+4.6
UGLR	Uglovaya	5.42	17	*e*P	Pn	20 57 46.1	+4.6
UGLR	Uglovaya	5.42	17	PN	Pn	20 57 46.1	+4.6
AVH	Avacha	5.45	16	*e*P	Pn	20 57 47.2	+5.2
AVH	Avacha	5.45	16	PN	Pn	20 57 47.2	+5.2
KOK	Koryaka	5.46	15	*e*P	Pn	20 57 47.1	+5.0
KOK	Koryaka	5.46	15	*e*P	Pn	20 57 47.1	+5.0
KOK	Koryaka	5.46	15	PN	Pn	20 57 47.1	+5.0
SMAR	Somma	5.46	17	*e*P	Pn	20 57 47.9	+5.7
SMAR	Somma	5.46	17	PN	Pn	20 57 47.9	+5.7
SPN	Mys Shipunski	5.59	24	*e*P	Pn	20 57 48.5	+4.7
SPN	Mys Shipunski	5.59	24	*e*P	Pn	20 57 48.5	+4.7
SPN	Mys Shipunski	5.59	24	PN	Pn	20 57 48.5	+4.7
GNL	Ganaly	5.75	10	*e*P	Pn	20 57 50.4	+4.4
GNL	Ganaly	5.75	10	PN	Pn	20 57 50.4	+4.4

MEX 14 20:58:05.5±0.7**, 16°.09N×97°.83W, h20km**±38km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.42	316	*i* P	Pb	20 58 12.7	-1.5
PNIG				*i* S	Sb	20 58 18.6	-1.5
VHO	Vista Hermosa	1.43	47	*i* P	Pn	20 58 27.1	-3.4
VHO				*i* S	Sn	20 58 44.4	-4.5
HUIG	Huatulco	1.68	101	*e*P	Pn	20 58 32.2	-1.6
HUIG				*e*S	Sn	20 58 49.6	-5.3
CAIG	El Cayaco	2.53	292	*e*P	Pn	20 58 43.6	-1.8
CAIG				*e*S	Sn	20 59 12.6	-3.0
CMIG	Matias Romero	2.99	70	*e*P	Pn	20 58 50.0	-1.8
CMIG				*e*S	Sn	20 59 24.1	-3.1

PGC 14 21:02:37.5±1.1**, 50°.47N×130°.17W, h10km, MLSn2.9**/27**, Mw3.5**/27**, Mw3.5**/27**, 196km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPBC	Brooks Peninsu	1.57	101	Pn	Pn	21 03 02.6	-2.8
BPBC				Sn	Sn	21 03 20.7	-5.1
PACB	Port Alice, BC	1.71	90	Pn	Pn	21 03 05.0	-2.2
PHC	Port Hardy	1.76	81	Pn	Pn	21 03 06.3	-1.6
PHC				Sn	Sn	21 03 26.5	-3.9
MAYB	Maynard	1.92	91	Pn	Pn	21 03 08.3	-2.0
HG4B	Hotspring	1.93	341	Pn	Pn	21 03 07.9	-2.5
HG4B				Sn	Sn	21 03 31.3	-3.5
EDB	Eliza Dome	2.05	106	Pn	Pn	21 03 09.5	-2.5
EDB				Sn	Sn	21 03 32.3	-5.3
TLCB	Telegraph Cove	2.13	87	Pn	Pn	21 03 11.4	-1.6
TLCB				Sn	Sn	21 03 36.4	-3.1
BBB	Bella Bella	2.15	36	Pn	Pn	21 03 12.0	-1.2
BBB				Sn	Sn	21 03 35.8	-4.1
HG3B	Hotspring	2.25	340	Pn	Pn	21 03 12.6	-2.1
HG3B				Sn	Sn	21 03 39.7	-2.8
BNB	Barry Inlet	2.33	335	Pn	Pn	21 03 13.9	-1.9
BNB				Sn	Sn	21 03 41.3	-3.2
WOSB	Woss	2.33	96	Pn	Pn	21 03 14.4	-1.5
NCRB	Newcastle Ridg	2.63	90	Pn	Pn	21 03 18.5	-1.5
GDR	Gold River	2.75	103	Pn	Pn	21 03 19.8	-1.8
MOBC	Moresby Island	2.90	338	Pn	Pn	21 03 22.3	-1.4
DIB	Dawson Inlet,	3.09	333	Sn	Sn	21 04 00.3	-2.8
CBB	Campbell River	3.11	96	Pn	Pn	21 03 25.6	-1.0
BTB	Buttle Lake	3.16	107	Pn	Pn	21 03 25.6	-1.9
B928	Bamfield	3.66	115	Pn	Pn	21 03 33.7	-0.3
TXB	Texada	3.77	100	Pn	Pn	21 03 34.5	-1.2
MGB	Mount Grey	3.84	110	Pn	Pn	21 03 35.3	-1.4
MGB				Sn	Sn	21 04 17.4	-4.7
YOUB	Youbou, Lake C	4.14	110	Pn	Pn	21 03 40.6	-0.2
SHB	Sechelt	4.15	100	Pn	Pn	21 03 39.1	-1.9
PFB	Port Renfrew	4.19	115	Pn	Pn	21 03 40.6	-0.8
B926	Mesachie Lake	4.26	111	Pn	Pn	21 03 42.0	-0.3
LZB	Mount Lazard	4.53	112	Pn	Pn	21 03 46.5	+0.4
BIB	Bowen Island	4.56	101	Pn	Pn	21 03 46.6	+0.2
WSLR	Whistler	4.66	91	Pn	Pn	21 03 47.6	-0.3
B009	North Saanich	4.74	110	Pn	Pn	21 03 49.5	+0.6
B010	North Saanich	4.74	110	Pn	Pn	21 03 49.5	+0.6
SNB	Saturna Island	4.86	108	Pn	Pn	21 03 51.1	+0.6
MCW	Mount Constitu	5.10	108	Pn	Pn	21 03 54.3	+0.4
LLLB	Lillooet	5.29	85	Pn	Pn	21 03 56.4	-0.1
FSB	Fort Saint Jam	5.37	39	Pn	Pn	21 03 58.1	+0.5
FSB				Sg	Sn	21 04 57.4	-2.0
VDB	Vedder Mountai	5.42	102	Pn	Pn	21 03 59.4	+1.1
HDW	Hoodsport	5.46	118	Pn	Pn	21 03 59.5	+0.6
MBW	Mount Baker	5.63	104	Pn	Pn	21 04 02.3	+1.0
JCW	Jim Creek	5.85	110	Pn	Pn	21 04 04.8	+0.6
B06A	Marblemount	5.99	106	Pn	Pn	21 04 06.5	+0.5
GPW	Glacier Peak	6.36	108	Pn	Pn	21 04 11.9	+0.5
GPW				Sn	Sn	21 05 03.1	-21
LTY	Liberty	7.04	114	Pn	Pn	21 04 22.1	+1.4
B08A	Colville Reser	7.38	102	Pn	Pn	21 04 26.1	+0.9
DLBC	Dease Lake	7.98	1	Pn	Pn	21 04 35.0	+1.5
DLBC				Sg	Sb	21 06 21.5	-9.3

MEX 14 21:06:24.9±0.7**, 14°.45N×93°.04W, h17km**±134km**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.25	352	*e*P	Pn	21 06 43.9	-3.8
PCIG				*e*S	Sb	21 06 59.0	-5.0

IDC 14 21:13:26.0±1.6**, 11°.43S×164°.94E, h0km, mb3.4**/3**, mb1 3.8**/5**, mb1mx3.5**/33**, mbtmp3.7**/5**, ML4.0**/2**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.7**/18**, Error ellipse: s-maj=34.2km s-min=30.7km az=151.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.30	292	Pn	Pn	21 14 47.3	+0.8
	22nm,0.3s,baz=138,slow=4.1,SNR=3.7						
HNR				Sn	Sn	21 15 51.2	+2.9
	7.8nm,0.3s,baz=183,slow=17,SNR=1.8						
HNR				LR	LR	21 16 50.3	
	comp=Z,89nm,21.0s,baz=231,slow=38						
DZM	Mont Dzumac	10.68	172	Pn	Pn	21 16 01.5	+1.1
	0.3nm,0.3s,baz=301,slow=17,SNR=3.9						
RAO	Raoul Island	23.87	140	LR	LR	21 25 26.3	
	comp=Z,178nm,18.1s,baz=337,slow=30						
WRA	Warramunga Arr	30.61	250	P	P	21 19 41.5	-0.6
	0.1nm,0.4s,baz=79,slow=9.2,SNR=4.5						
ASAR	Alice Springs	31.91	243	P	P	21 19 53.5	-0.1
	0.5nm,0.7s,baz=81,slow=10,SNR=5.4						
ILAR	Eielson Array	84.13	19	P	P	21 25 58.6	0.0
	0.3nm,0.8s,baz=242,slow=5.1,SNR=3.7						

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*ISCJB **14** 21:29:54.9±0.7, 7°.4S±0°.1×68°.36E±0°.05, h10km, mb4.0/15, MS3.8/30, Error ellipse: s-maj=15.6km s-min=6.7km az=177.5*

*IDC **14** 21:29:54.9±1.3, 7°.51S×68°.13E, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.8/51, mbtmp3.8/12, MS3.8/31, Ms1 3.8/31, ms1mx3.7/47, Error ellipse: s-maj=39.2km s-min=17.7km az=42.0*

*GCMT **14** 21:30:01.0±0.3, 7°.55S±0°.02×68°.17E±0°.02, h12km, MW4.8/74, Moment Tensor Solution. s12,c12; s74,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.29±.10; $M_{\theta\theta}$-1.83±.08; $M_{\phi\phi}$2.12±.07; $M_{r\theta}$-0.48±.28; $M_{\theta\phi}$0.26±.09; $M_{\phi r}$0.29±.25; Best double couple: $M_0$2.08000×10^{16} NP1:ϕ_s140.00000°,δ83.00000°,λ-164.00000°. NP2: ϕ_s48.00000°,δ74.00000°,λ-8.00000°. Principal axes: T 2.1650, Plg6.0000°, Azm273.0000°; N -0.1730, Plg72.0000°, Azm163.0000°; P -1.9960, Plg17.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 14 21:29:57.1±1.1**, 7°.4S**±0°.2×**68°.34E**±0°.09**, h10km, n48, σ1§42**/22**, mb4.0**/15**, MS3.8**/30**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N3	Diego Garcia H	2.85	68	Pn	Pn	21 30 39.2	-3.1
H08N3				Sn	Sn	21 31 16.0	-0.6
H08N3				T	T	21 33 53.4	
	baz=247,slow=74						
H08N2	Diego Garcia H	2.86	68	Pn	Pn	21 30 39.4	-3.1
H08N2				Sn	Sn	21 31 16.2	-0.7
H08N2				T	T	21 33 47.9	
	baz=247,slow=74,SNR=253						
H08N1	Diego Carcia H	2.87	68	Pn	Pn	21 30 39.5	-3.1
H08N1				Sn	Sn	21 31 16.5	-0.6
H08N1				T	T	21 33 52.2	
	baz=247,slow=74,SNR=224						
H08S1	Diego Carcia H	4.11	93	Pn	Pn	21 30 58.2	-1.5
H08S3	Diego Garcia H	4.12	93	Pn	Pn	21 30 58.4	-1.5
H08S2	Diego Garcia H	4.13	93	Pn	Pn	21 30 58.5	-1.5
PALK	Pallekele	19.12	40	LR	LR	21 39 57.6	
	comp=Z,260nm,18.8s,baz=155,slow=31						
OPO	Ambohidratompo	23.36	240	LR	LR	21 41 50.6	
	comp=Z,466nm,20.9s,baz=46,slow=31						
WSAR	Wadi Sarin	31.93	343	LR	LR	21 46 56.0	
	comp=Z,101nm,18.6s,baz=169,slow=32						
PSI	Prapat	32.17	73	LR	LR	21 48 21.8	
	comp=Z,782nm,20.8s,baz=268,slow=34						
LEM	Lembang	38.97	92	P	P	21 37 25.0	+0.9
	8.6nm,0.4s,baz=328,slow=18,SNR=4.1						
LEM				LR	LR	21 50 02.9	
	comp=Z,216nm,21.2s,baz=155,slow=31						
CMAR	Chiang Mai Arr	39.67	49	P	P	21 37 31.8	+2.2
	1.6nm,0.7s,baz=243,slow=9.3,SNR=13						
CHTO	Chiang Mai	39.89	49	P	P	21 37 34.1	+2.6
	27nm,1.2s						
CMMT	Chiang Mai	39.89	49	P	P	21 37 34.0	+2.5
	6.0nm,1.2s						
PBKT	Sadao Pong	40.14	53	P	P	21 37 36.3	+2.8
GEYT	Alibeck	46.12	349	LR	LR	21 56 17.6	
	comp=Z,118nm,18.9s,baz=180,slow=34						
H01W3	Cape Leeuwin H	50.09	130	T	T	22 32 46.2	
	baz=292,slow=75,SNR=14						
H01W2	Cape Leeuwin H	50.09	130	T	T	22 32 45.9	
	baz=292,slow=75,SNR=14						
H01W1	Cape Leeuwin H	50.11	130	T	T	22 32 47.6	
	baz=292,slow=75,SNR=14						
NWAO	Narrogin (SRO)	51.84	126	LR	LR	21 56 44.1	
	comp=Z,205nm,21.3s,baz=142,slow=31						
MKAR	Makanchi Array	55.40	12	P	P	21 39 30.8	-0.8
	0.4nm,0.8s,baz=205,slow=8.5,SNR=6.4						
TGY	Tagaytay City	56.41	68	LR	LR	22 02 06.8	
	comp=Z,131nm,20.8s,baz=230,slow=34						
FITZ	Fitzroy Crossi	56.69	107	LR	LR	22 00 03.9	
	comp=Z,98nm,20.9s,baz=278,slow=32						
BRTR	Keskin Array B	56.84	328	P	P	21 39 42.0	-0.2
	0.6nm,0.9s,baz=157,slow=6.7,SNR=3.0						
BRTR				LR	LR	22 04 25.6	
	comp=Z,40nm,18.9s,baz=116,slow=36						
AKTO	Aktyubinsk	58.32	352	P	P	21 39 52.2	+0.1
	1.3nm,0.8s,baz=177,slow=9.4,SNR=3.5						
AKTO				LR	LR	22 04 30.2	
	comp=Z,39nm,19.2s,baz=157,slow=36						
KURBB	Kurchatov Arra	58.49	8	P	P	21 39 53.5	+0.2
	0.6nm,0.8s,baz=202,slow=7.2,SNR=4.7						
DAV	Davao City (W)	58.88	77	LR	LR	22 02 36.1	
	comp=Z,93nm,19.4s,baz=266,slow=33						
MAW	Mawson	60.20	182	LR	LR	22 00 57.0	
	comp=Z,47nm,21.2s,baz=9.0,slow=31						
BVAR	Borovoye Array	60.25	1	P	P	21 40 05.3	-0.1
	0.3nm,0.6s,baz=169,slow=7.6,SNR=2.5						
BVAR				LR	LR	22 05 56.6	
	comp=Z,46nm,20.2s,baz=191,slow=36						
ZALV	Zalesovo Beam	62.71	11	P	P	21 40 21.7	-0.3
	0.3nm,0.4s,baz=214,slow=3.7,SNR=3.1						
ZALV				LR	LR	22 08 09.4	
	comp=Z,62nm,18.7s,baz=248,slow=36						
SIJI	Sorong	63.05	87	LR	LR	22 06 08.0	
	comp=Z,54nm,19.2s,baz=13,slow=34						
SONM	Songino Array	64.46	27	LR	LR	22 08 48.3	
	comp=Z,56nm,18.6s,baz=45,slow=36						
ASAR	Alice Springs	64.70	113	P	P	21 40 36.0	+0.1
	2.7nm,0.8s,baz=279,slow=6.2,SNR=23						
ASAR				LR	LR	22 04 50.5	
	comp=Z,48nm,21.9s,baz=279,slow=32						
WRA	Warramunga Arr	64.97	108	P	P	21 40 38.8	+1.1
	8.0nm,1.0s,baz=282,slow=6.3,SNR=38						
WRA				LR	LR	22 05 55.2	
	comp=Z,93nm,21.4s,baz=275,slow=33						
AKASG	Malin Array Be	67.04	334	P	P	21 40 49.7	-0.6
	0.4nm,0.4s,baz=138,slow=5.7,SNR=2.8						
AKASG				LR	LR	22 10 03.2	
	comp=Z,20nm,21.1s,baz=320,slow=36						
TORD	Torodi Ar. Bea	69.27	287	LR	LR	22 11 04.9	
	comp=Z,66nm,18.1s,baz=350,slow=36						
KSRS	Korea Array	71.23	46	LR	LR	22 13 57.9	
	comp=Z,50nm,18.9s,baz=220,slow=37						
STKA	Stephens Creek	71.91	121	LR	LR	22 11 15.8	
	comp=Z,96nm,18.3s,baz=226,slow=34						
DBIC	Dimbokro	74.33	279	LR	LR	22 14 14.5	
	comp=Z,40nm,18.6s,baz=84,slow=36						
DAVOX	Davos/Dischmat	74.74	323	LR	LR	22 14 13.8	
	comp=Z,48nm,18.5s,baz=81,slow=36						
FINES	FINESS Array B	76.11	341	LR	LR	22 14 12.5	
	comp=Z,68nm,18.6s,baz=118,slow=35						
NRIK	Noril'sk	77.75	7	LR	LR	22 16 44.9	
	comp=Z,63nm,18.2s,baz=227,slow=36						
KLR	Kul'dur	78.82	37	P	P	21 41 59.8	-0.5
	1.3nm,0.8s,baz=270,slow=3.3,SNR=4.5						
JCJ	Chichijima	79.18	61	LR	LR	22 13 16.1	
	comp=Z,66nm,20.9s,baz=132,slow=33						
HFS	Hagfors	79.86	336	LR	LR	22 18 58.3	
	comp=Z,76nm,18.4s,baz=132,slow=37						
ESDC	Sonseca Array	81.31	312	P	P	21 42 13.0	-1.1
	0.1nm,0.4s,baz=95,slow=5.0,SNR=2.9						
NOA	NORSAR Array B	81.39	336	LR	LR	22 18 45.9	
	comp=Z,44nm,20.6s,baz=135,slow=36						
PETK	Petropavlovsk-	95.50	37	LR	LR	22 30 05.9	
	comp=Z,26nm,19.8s,baz=232,slow=38						

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*ISK **14** 21:33:08.7, 42°.33N×40°.86E, h10km, ML3.1/10*

*TIF **14** 21:33:09.4, 42°.35N×40°.99E, h26km±3km*

*MOS **14** 21:33:10.7±1.8, 42°.53N×41°.03E, h9km, mb3.9/1, Error ellipse: s-maj=8.2km s-min=6.9km az=73.5*

*NORS **14** 21:33:10.5±0.0, 42°.52N×41°.32E, h6km, MPVA3.7*

*DDA **14** 21:33:10.7, 42°.15N×40°.90E, h5km±2km, ML3.2*

ISC 14 21:33:07.9±1.3**, 42°.38N**±0°.02×**40°.91E**±0°.02**, h6km**±11km**, n59, σ1§18**/85**, 2C-9D, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.97	143	PG	Pn	21 33 27.7	-0.4
BATM				SG	Sn	21 33 41.7	-0.5
BATM	Batumi	0.97	143	P	Pn	21 33 27.9	-0.2
BATM				S	Sn	21 33 41.9	-0.3
BCA	Borcka	1.08	150	PG	Pn	21 33 28.9	-0.6
BCA				SG	Sn	21 33 43.6	-1.2
DBOC	Borcka	1.18	151	*i* P	Pn	21 33 31.2	+0.3
DBOC				*i* S	Sn	21 33 46.8	-0.6
ARXR	Arkhyz	1.21	13	*i* Pg	Pn	21 33 30.7	-0.8
ARXR				*i* Sg	Sb	21 33 44.7	-2.4
CHOM	Cayeli-Rize	1.29	185	PN	Pg	21 33 32.6	0.0
CHAY	Cayeli-Rize	1.30	186	PN	Pg	21 33 32.8	-0.1
RPOR	Krasnaya Polya	1.40	340	⇑*e*PG	Pb	21 33 34.5	+0.1
RPOR				*e*S	Sb	21 33 53.0	+0.5
RPOR	Krasnaya Polya	1.40	340	*i* Pg	Pg	21 33 34.8	+0.1
RPOR				*i* Sg	Sb	21 33 52.7	+0.2
ARTV	Artvin	1.42	147	*i* P	Pb	21 33 34.5	-0.4
ARTV				IAML_P			
	comp=Z,7μm,0.1s						
DBAD	Bademkaya	1.48	157	*i* P	Pb	21 33 35.3	-0.6
DBAD				*i* S	Sn	21 33 53.7	-1.3
DBAD				IAML_P			
	comp=Z,3μm,0.2s						
SOC	Sochi	1.48	324	*e*PG	Pg	21 33 36.6	+0.2
SOC				*e*		21 33 56.5	
SOC				pmax	pmax		
	comp=Z,44nm,0.2s						
SOC				smax	smax		
	comp=E,330nm,0.2s						
SOC				smax	smax		
	comp=N,114nm,0.2s						
SOC	Sochi	1.48	324	*i* Pg	Pg	21 33 36.8	+0.5
SOC				*i* Sg	Sg	21 33 56.2	+0.6
DAGI	Agillar	1.50	150	*i* P	Pb	21 33 36.0	-0.3
DAGI				IAML_P			
	comp=Z,1μm,0.2s						
NEY	Neytrino	1.59	56	*de*PG	Pn	21 33 36.6	-0.1
NEY				pmax	pmax		
	comp=Z,115nm,0.4s						
NEY	Neytrino	1.59	56	*i* Pg	Pn	21 33 36.8	+0.1
NEY				*e*Sg	Sn	21 33 55.2	-2.4
DDEM	Demirkent	1.62	157	*i* P	Pb	21 33 37.7	-0.5
DDEM				IAML_P			
	comp=Z,4μm,0.2s						
KTUT	Trabzon	1.64	212	PN	Pb	21 33 37.3	-1.2
MACK	Trabzon	1.68	211	*i* P	Pg	21 33 39.5	-0.5
MACK				IAML_P			
	comp=Z,2μm,0.1s						
GUZR	Guzeripl'	1.71	340	*i* Pg	Pb	21 33 39.9	+0.1
GUZR				*i* Sg	Sb	21 34 01.4	-0.2
SHA1	Shidzhatmaz	1.86	43	*e*PN	Pb	21 33 41.9	-0.5
SHA1				*e*S	Sn	21 34 04.6	+0.1
SHA1	Shidzhatmaz	1.86	43	*e*Pg	Pn	21 33 41.1	+0.6
SHA1				*e*Sg	Sn	21 34 04.5	+0.1
LZRR	Lazarevskoye	1.91	325	*i* Pg	Pb	21 33 42.3	-0.8
LZRR				*i* Sg	Sb	21 34 07.0	-0.3
DIGR	Digorskoe uzhe	2.04	74	*e*PN	Pb	21 33 44.2	-1.2
DIGR				pmax	pmax		
	comp=Z,34nm,0.3s						
DIGR	Digorskoe uzhe	2.04	74	*e*Pg	Pn	21 33 43.6	+0.7
DIGR				*e*Sg	Sn	21 34 08.6	-0.1
KIV	Kislovodsk	2.04	39	PN	Pb	21 33 45.0	-0.3
KIV	Kislovodsk	2.04	39	*i* PN	Pb	21 33 45.0	-0.3
KIV				*i* S	Sn	21 34 09.7	+1.1
KIV0	Kislovodsk Arr	2.04	39	*i* Pg	Pb	21 33 45.0	-0.4
KIV0				*i* Sg	Sn	21 34 09.7	+0.9
BAYB	BAYBURT	2.18	193	*i* P	Pb	21 33 47.3	-0.6
BAYB				IAML_P			
	comp=Z,111nm,0.1s						
ZEI	Tsey	2.24	79	*e*PN	Pb	21 33 47.3	-1.6
ZEI				*e*S	Sb	21 34 16.2	-0.8
ZEI	Tsey	2.24	79	*e*Pg	Pb	21 33 47.3	-1.6
ZEI				*e*Sg	Sb	21 34 16.2	-0.8

NCK	**Nalchik**	**2.26**	**60**	⇓*e*PN	**Pb**	**21 33 48.7**	**-0.4**
NCK	**Nalchik**	**2.26**	**60**	*e*Pg	**Pb**	**21 33 48.2**	**-0.9**
NCK				*e*Sg	**Sb**	**21 34 17.3**	**-0.1**
PYA1	**Pyatigorsk**	**2.31**	**43**	⇓*e*PN	**Pb**	**21 33 49.5**	**-0.5**
LSNR	**Lesken**	**2.32**	**66**	*de*PN	**Pb**	**21 33 49.8**	**-0.4**
LSNR	**Lesken**	**2.32**	**66**	*e*Pg	**Pb**	**21 33 49.6**	**-0.6**
LSNR				*e*Sg	**Sb**	**21 34 17.5**	**-1.6**
KARS	**Kars**	**2.39**	**136**	PN	**Pn**	**21 33 49.0**	**+1.3**
KARS	**Kars**	**2.39**	**136**	PN	**Pn**	**21 33 49.1**	**+1.3**
KORR	**Kora**	**2.43**	**72**	*de*PN	**Pb**	**21 33 52.0**	**0.0**
KORR				pmax	pmax		
	comp=Z,11nm,0.3s						
KOPR	**Koprukoy-ERZUR**	**2.49**	**163**	PN	**Pn**	**21 33 49.9**	**+0.7**
TRLG	**Trialeti**	**2.52**	**108**	P	**Pb**	**21 33 53.4**	**-0.3**
TRLG				S	**Sb**	**21 34 25.1**	**0.0**
LACR	**Lac**	**2.54**	**79**	*de*PN	**Pb**	**21 33 52.6**	**-1.3**
LACR	**Lac**	**2.54**	**79**	*e*Pg	**Pb**	**21 33 52.0**	**-1.9**
LACR				*e*Sg	**Sb**	**21 34 24.6**	**-0.8**
KELT	**Kelkit**	**2.56**	**210**	*i* P	**Pb**	**21 33 53.4**	**-0.9**
KELT				IAML_P			
	comp=Z,157nm,0.2s						
ARNR	**Ardon**	**2.61**	**71**	⇓*e*PN	**Pn**	**21 33 51.2**	**+0.7**
EAK	**Akyaka**	**2.64**	**129**	*i* P	**Pb**	**21 33 56.4**	**+0.8**
KZRT	**Kazreti**	**2.79**	**110**	P	**Sb**	**21 34 33.1**	**+0.6**
VOZR	**Vozrozhdenie**	**2.92**	**319**	*e*Pn	**Pb**	**21 33 58.1**	**-2.2**
VOZR				*e*Sn	**Sb**	**21 34 33.5**	**-2.8**
TBLG	**Delisi**	**2.92**	**102**	PN	**Pn**	**21 33 56.9**	**+2.0**
SUSE	**Susehri**	**2.98**	**224**	*i* P	**Pb**	**21 33 59.2**	**-2.3**
SUSE				*i* S	**Sb**	**21 34 35.7**	**-2.5**
SUSE				IAML_P			
	comp=Z,116nm,0.1s						
GOF	**Gofitskoye**	**3.09**	**29**	*e*PN	**Pn**	**21 33 54.8**	**-2.3**
ANN	**Anapa**	**3.50**	**315**	*e*PN	**Pb**	**21 34 09.7**	**-0.4**
ANN				*e*		21 34 50.3	
ANN				pmax	pmax		
	comp=Z,11nm,0.6s						
ANN				smax	smax		
	comp=E,17nm,0.9s						
ERBA	**Erbaa**	**3.56**	**243**	*i* P	**Pn**	**21 34 06.7**	**+3.1**
ERBA				*i* S	**Sn**	**21 34 47.2**	**+1.3**
GNI	**Garni**	**3.65**	**126**	PN	**Pn**	**21 34 06.9**	**+1.9**
GNI	**Garni**	**3.65**	**126**	⇑*e*PN	**Pb**	**21 34 13.0**	**+0.2**
GROC	**Groznyy**	**3.69**	**76**	⇓*e*PN	**Pn**	**21 34 08.0**	**+2.6**
SNOP	**Sinop**	**4.25**	**267**	PN	**Pn**	**21 34 14.7**	**+1.5**
DIKM	**Dikmen**	**4.28**	**262**	PN	**Pn**	**21 34 15.5**	**+2.0**
ARU	**Arti**	**18.07**	**33**	⇓*e*P	**P**	**21 37 21.1**	**+1.3**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.5s						

*MOS **14** 21:37:18.3±0.9, 51°.72N×102°.09E, h10^{km}, mb4.4/1, Error ellipse: s-maj=17.0km s-min=12.1km az=157.0*

BYKL 14 21:37:17.8±0.3**, 51°.72N×102°.07E, h17^{km}**±3^{km}**, 3C-3D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARS	**Arshan**	**0.30**	**47**	⇓*i*Pg	Pb	21 37 24.7	0.0
ARS				*e*Sg	Sb	21 37 29.1	-0.3
ARS				Pmax			
	1μm,0.2s						
ARS				Smax			
	3μm,0.3s						
ARS	**Arshan**	**0.30**	**47**	⇓*i*PG	Pb	21 37 24.6	-0.1
ARS				*e*		21 37 29.4	
ARS				pmax	pmax		
	comp=Z,1μm,0.2s						
ARS				smax	smax		
	comp=E,3μm,0.2s						
MOY	**Mondy**	**0.67**	**266**	⇑*i*Pg	Pg	21 37 30.5	-0.5
MOY				*i* Sg	Sg	21 37 39.9	-0.1
MOY				Pmax			
	comp=E,66nm,0.3s						
MOY				Smax			
	comp=E,5μm,0.6s						
MOY	**Mondy**	**0.67**	**266**	*e*PG	Pg	21 37 30.6	-0.4
MOY				*e*		21 37 40.1	
MOY				pmax	pmax		
	comp=Z,92nm,0.5s						
MOY				smax	smax		
	comp=N,7μm,0.5s						
TLY	**Talaya**	**0.98**	**92**	⇓*i*Pg	Pb	21 37 35.6	-0.7
TLY				*e*Sg	Sb	21 37 48.8	-0.2
TLY				Pmax			
	comp=N,60nm,0.1s						
TLY				Smax			
	comp=N,1μm,0.2s						
TLY	**Talaya**	**0.98**	**92**	*e*PG	Pb	21 37 35.5	-0.8
TLY				*e*		21 37 48.1	
TLY				pmax	pmax		
	comp=Z,121nm,0.3s						
TLY				smax	smax		
	comp=E,2.0nm,0.5s						
IRK	**Irkutsk**	**1.46**	**68**	*e*Pg	Pb	21 37 44.6	+0.1
IRK				*e*Sg	Sb	21 38 03.7	+1.0
IRK				Pmax			
	comp=E,243nm,0.2s						
IRK				Smax			
	comp=E,1μm,0.3s						
IRK	**Irkutsk**	**1.46**	**68**	*e*PG	Pb	21 37 44.8	+0.3
IRK				*e*		21 38 03.7	
IRK				pmax	pmax		
	comp=Z,242nm,0.2s						
IRK				smax	smax		
	comp=E,1μm,0.4s						
IVK	**Ivanovka**	**1.46**	**86**	*e*Pg	Pn	21 37 43.9	+0.5
IVK				*e*Sg	Sb	21 38 03.0	+0.3
IVK	**Ivanovka**	**1.46**	**86**	*e*PG	Pb	21 37 44.3	-0.2
IVK				*e*		21 38 03.0	
IVK				pmax	pmax		
	comp=Z,53nm,0.1s						
IVK				smax	smax		
	comp=N,505nm,0.4s						
ZAK	**Zakamensk**	**1.54**	**150**	⇑*i*Pg	Pb	21 37 45.4	-0.6
ZAK				*e*Sg	Sg	21 38 06.7	-0.8
ZAK				*e*		21 38 09.2	
ZAK				Pmax			
	comp=N,104nm,0.1s						
ZAK				max			
	comp=N,461nm,0.4s						
ZAK	**Zakamensk**	**1.54**	**150**	*e*PG	Pb	21 37 45.3	-0.7
ZAK				*e*		21 38 06.8	
ZAK				pmax	pmax		
	comp=Z,90nm,0.1s						
ZAK				smax	smax		
	comp=E,460nm,0.4s						
ORL	**Orlik**	**1.62**	**301**	⇑*i*Pg	Pb	21 37 47.1	-0.1
ORL				*e*Sg	Sb	21 38 08.0	+0.6
ORL				*e*		21 38 10.2	
ORL				Pmax			
	comp=E,80nm,0.3s						
ORL				max			
	comp=E,195nm,0.8s						
ORL	**Orlik**	**1.62**	**301**	*e*PN	Pb	21 37 47.1	-0.1
ORL				*e*		21 38 08.1	
ORL				pmax	pmax		
	comp=Z,81nm,0.3s						
ORL				smax	smax		
	comp=N,195nm,0.7s						
LSTR	**Listvyanka**	**1.72**	**84**	*e*Pg	Pb	21 37 49.0	0.0
LSTR				*e*Sg	Sb	21 38 10.9	+0.6
LSTR				Pmax			
	comp=N,35nm,0.2s						
LSTR				Smax			
	comp=N,396nm,0.6s						
LSTR	**Listvyanka**	**1.72**	**84**	*e*PN	Pb	21 37 48.8	-0.2
LSTR				*e*		21 38 10.9	
LSTR				pmax	pmax		
	comp=Z,43nm,0.5s						
LSTR				smax	smax		
	comp=N,395nm,0.5s						
BGT	**Bolshoye Golou**	**2.09**	**80**	*e*Pn	Pn	21 37 53.5	+1.4
BGT				*e*Pg	Pb	21 37 55.0	-0.3
BGT				*i* Sg	Sb	21 38 22.7	+1.7
BGT	**Bolshoye Golou**	**2.09**	**80**	*e*PN	Pb	21 37 55.1	-0.2
BGT				*e*		21 38 22.7	
BGT				pmax	pmax		
	comp=Z,103nm,0.5s						
BGT				smax	smax		
	comp=E,1μm,0.5s						
STDB	**Stepnoy Dvoret**	**2.70**	**79**	*e*Pg	Pb	21 38 07.4	+1.8
STDB				*e*Sg	Sg	21 38 43.5	-0.9
TRG	**Tyrgan**	**2.83**	**67**	*e*Pn	Pn	21 38 03.8	+1.6
TRG				*e*		21 38 05.0	
TRG				*e*Pg	Pb	21 38 08.4	+0.6
TRG				*e*		21 38 38.7	
TRG				*e*Sg	Sb	21 38 44.2	+2.0
TRG				Pmax			
	comp=E,36nm,0.3s						
TRG				Smax			
	comp=E,274nm,0.2s						
TRG	**Tyrgan**	**2.83**	**67**	*e*PN	Pn	21 38 03.8	+1.6
TRG				*e*		21 38 08.6	
TRG				*e*S	Sn	21 38 37.3	+1.4
TRG				*e*		21 38 44.1	
TRG				pmax	pmax		
	comp=Z,37nm,0.2s						
TRG				smax	smax		
	comp=E,272nm,0.2s						
KAB	**Kabansk**	**2.86**	**82**	*e*Sg	Sb	21 38 46.3	+3.3
KAB				Smax			
	comp=E,704nm,0.6s						
FFNB	**Fofonovo**	**2.93**	**82**	*e*Pg	Pb	21 38 09.9	+0.4
FFNB				*e*Sg	Sb	21 38 47.9	+2.9
HRMR	**Khuramsha**	**3.04**	**90**	*e*Pn	Pn	21 38 06.9	+1.8
HRMR				*e*		21 38 09.7	
HRMR				*e*Pg	Pb	21 38 12.4	+0.9
HRMR				*e*Sn	Sn	21 38 42.9	+1.7
HRMR				*e*		21 38 47.9	
HRMR				*e*Sg	Sb	21 38 51.5	+3.2
HRMR				Pmax			
	comp=E,48nm,0.3s						
HRMR				Smax			
	comp=E,942nm,0.4s						
KNGR	**Kungurtug, Tuv**	**3.08**	**250**	*e*Pn	Pn	21 38 05.4	-0.3
KNGR				*e*Pg	Pb	21 38 11.1	-1.0
KNGR				*e*Sg	Sb	21 38 52.8	+3.4
ZRHB	**Zarechye**	**3.24**	**73**	*e*Sg	Sg	21 38 58.4	-3.4
TRTB	**Turuntaevo**	**3.48**	**79**	*e*Pn	Pn	21 38 13.2	+2.1
TRTB				*e*		21 38 16.0	
TRTB				*e*Pg	Pb	21 38 19.7	+0.8
TRTB				*e*Sg	Sb	21 39 04.0	+3.2
TDJR	**Todzha**	**3.75**	**283**	*e*	Pn	21 38 16.8	+1.9
TDJR				Pg	Pb	21 38 25.4	+1.9
TDJR				*e*Sg	Sg	21 39 13.4	-4.7
KELR	**Kotokel**	**3.84**	**72**	*e*Pg	Pb	21 38 25.3	+0.3
KELR				*e*Sg	Sb	21 39 14.6	+3.4
OGRR	**Ongureny**	**3.88**	**58**	*e*Pn	Pn	21 38 19.4	+2.8
OGRR				*e*Pg	Pb	21 38 27.3	+1.7
OGRR				*e*		21 39 04.4	
OGRR				*e*Sg	Sb	21 39 16.7	+4.5
OGRR				Pmax			
	comp=E,33nm,0.5s						
OGRR				Smax			
	comp=E,118nm,0.9s						
OGRR	**Ongureny**	**3.88**	**58**	*e*PN	Pn	21 38 19.5	+2.9
OGRR				*e*		21 38 28.5	
OGRR				*e*		21 39 16.8	
OGRR				pmax	pmax		
	comp=Z,30nm,0.4s						
OGRR				smax	smax		
	comp=E,118nm,0.9s						
MXMB	**Maximikha**	**4.36**	**67**	*e*Pn	Pn	21 38 23.2	-0.1
MXMB				*e*Pg	Pb	21 38 36.3	+2.4
MXMB				*e*Sn	Sn	21 39 13.6	-0.1
MXMB				*e*Sg	Sg	21 39 33.2	-4.5
ERNS	**Erzin**	**4.61**	**254**	*e*Pn	Pn	21 38 26.7	0.0
ERNS				*e*Pg	Pb	21 38 40.1	+2.0
ERNS				*e*Sg	Sb	21 39 39.1	+5.8
ULN	**Ulaanbaatar**	**5.03**	**138**	*e*	Pb	21 38 42.3	-3.1
ULN				*e*Pg	Pg	21 38 48.9	-5.2
ULN				*e*Sg	Sg	21 39 54.2	-5.0
SYVR	**Suvo**	**5.20**	**65**	*e*Pn	Pn	21 38 36.7	+2.0
SYVR				*e*Pg	Pb	21 38 49.7	+1.5
SYVR				*e*Sg	Sb	21 39 56.8	+6.5
SYVR				Pmax			
	comp=E,3.0nm,0.7s						
SYVR				Smax			
	comp=E,13nm,0.6s						
NIZ	**Nizh Angarsk**	**6.01**	**45**	*e*Pn	Pn	21 38 47.8	+1.9
NIZ				*e*Pg	Pb	21 39 05.6	+3.6
NIZ				*e*		21 39 55.7	
NIZ				*e*Sg	Sg	21 40 24.1	-6.4
NIZ				Pmax			
	comp=E,7.0nm,0.6s						
NIZ				Smax			
	comp=E,27nm,0.7s						
KMO	**Kumora**	**6.83**	**49**	*e*Pn	Pn	21 38 59.0	+1.9
KMO				*e*Sn	Sn	21 40 14.3	-0.1
KMO				*e*Sg	Sg	21 40 50.0	-6.7
KMO				Smax			
	comp=E,35nm,1.0s						
KPC	**Khapcheranga**	**6.85**	**103**	*e*Pn	Pn	21 38 55.8	-1.7
KPC				*e*Pg	Pb	21 39 20.3	+3.9
KPC				*e*Sn	Sn	21 40 10.1	-4.9
KPC				*e*Sg	Sg	21 40 50.0	-7.5
KPC				Pmax			
	comp=E,2.0nm,0.2s						
KPC				Smax			
	comp=E,34nm,0.9s						
UKT	**Uakit**	**7.84**	**57**	*e*	Pn	21 39 14.0	+2.9
UKT				*e*		21 39 33.4	
UKT				*e*Sg	Sb	21 41 20.4	+14
UKT				max			
	comp=E,2.0nm,0.9s						
UKT				Smax			
	comp=E,6.0nm,1.0s						
TUP	**Tupik**	**11.09**	**69**	*e*Sg		21 43 02.1	
TUP				Smax			
	comp=E,5.0nm,1.7s						

*IDC **14** 21:46:08.6±0.6, 0°.40S×98°.52E, h0^{km}, mb4.4/20, mb1 4.4/22, mb1mx4.3/47, mbtmp4.3/22, ML3.7/2, MS3.4/1, Ms1 3.6/1, ms1mx2.7/36, Error ellipse: s-maj=21.0km s-min=13.3km az=59.0*

*ISCJB **14** 21:46:11.6±0.3, 0°.41S±0°.03×98°.51E±0°.04, h32^{km}, mb4.4/44, Error ellipse: s-maj=7.1km s-min=3.3km az=143.7*

*DJA **14** 21:46:11.3±0.3, 0°S±3°×9°8E±°, h10^{km}, M4.7/19, mB5.8/1, mb4.6/14, MLv4.7/19, Mw(mB)5.4/1*

*NEIC **14** 21:46:12.6±1.9, 0°.47S×98°.59E, h29^{km}±13^{km}, mb4.5/20, Error ellipse: s-maj=8.7km s-min=4.3km az=53.0*

ISC 14 21:46:13.6±0.4**, 0°.43S**±0°.04×**98°.47E**±0°.06**, h32^{km}, n111,** σ**1^s.72**/113**, mb4.5**/44**, 1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	**Pulau Batu**	**0.42**	**333**	P	**Pb**	**21 46 19.6**	**-3.3**
PBSI				S	**Sb**	**21 46 26.9**	**-2.4**
SISI	**Saibi**	**1.08**	**145**	P	**Pn**	**21 46 31.3**	**-1.2**
SISI				S	**Sn**	**21 46 45.8**	**-0.6**
MNSI	**Mandailing Nat**	**1.65**	**42**	P	**Pn**	**21 46 37.8**	**-2.5**
GSI	**Gunungsitoli**	**1.94**	**333**	*e*Pn	**Pn**	**21 46 44.1**	**-0.3**
GSI	**Gunungsitoli**	**1.94**	**333**	P	**Pn**	**21 46 44.5**	**+0.1**
PDSI	**Padang**	**2.05**	**103**	P	**Pn**	**21 46 45.4**	**-0.4**
BKNI	**Bangkinang**	**2.68**	**74**	*e*Pn	**Pn**	**21 46 51.5**	**-3.0**
BKNI	**Bangkinang**	**2.68**	**74**	P	**Pn**	**21 46 55.6**	**+1.1**
PPSI	**Pulau Pagai**	**2.78**	**146**	P	**Pn**	**21 46 56.5**	**+0.6**
SDSI	**Sungai Dareh**	**3.00**	**100**	P	**Pn**	**21 46 59.7**	**+0.8**
PSI	**Prapat**	**3.25**	**8**	*e*Pn	**Pn**	**21 46 59.3**	**-3.1**
PSI	**Prapat**	**3.25**	**8**	Pn	**Pn**	**21 46 59.1**	**-3.3**
	2.9nm,0.3s,baz=180,slow=8.7,SNR=18						
KRJI	**Kerinci**	**3.42**	**119**	P	**Pn**	**21 47 05.6**	**+0.9**
RGRI	**Rengat**	**3.87**	**89**	P	**Pn**	**21 47 10.6**	**-0.2**
TSI	**Tuntungan**	**3.91**	**1**	P	**Pn**	**21 47 12.6**	**+1.2**
KCSI	**Kotacane, Aceh**	**3.99**	**350**	P	**Pn**	**21 47 11.8**	**-0.8**
MASI	**Maura Aman, Be**	**4.63**	**126**	P	**Pn**	**21 47 21.3**	**-0.1**
IPM	**Ipoh**	**5.51**	**28**	*e*Pn	**Pn**	**21 47 34.0**	**+0.6**
MYKOM	**Kota Tinggi**	**5.82**	**68**	*e*Pn	**Pn**	**21 47 36.0**	**-1.6**
LHMI	**Lhok Sumawe**	**5.83**	**345**	*e*Pn	**Pn**	**21 47 39.2**	**+1.4**
MNAI	**Manna**	**5.94**	**131**	*e*Pn	**Pn**	**21 47 37.5**	**-1.9**
LHSI	**Lahat**	**6.07**	**124**	P	**Pn**	**21 47 41.9**	**+0.7**
KULM	**Kulim**	**6.09**	**21**	*e*Pn	**Pn**	**21 47 41.9**	**+0.5**
MDSI	**Maura Dua**	**6.98**	**125**	P	**Pn**	**21 47 53.8**	**+0.1**
	31nm,0.5s,0.1nm						
LWLI	**Liwa**	**7.20**	**129**	P	**Pn**	**21 47 57.9**	**+1.1**
KASI	**Kota Agung**	**7.86**	**130**	P	**Pn**	**21 48 04.4**	**-1.3**
TRTT	**Trang**	**8.30**	**8**	P	Pn	21 48 18.9	+7.0
SBUM	**Sibu**	**14.04**	**78**	*e*Pn	**Pn**	**21 49 28.2**	**-2.2**
SRAK	**Srakaew**	**14.78**	**14**	P	**P**	**21 49 50.6**	**+4.5**
PBKT	**Sadao Pong**	**17.07**	**8**	*e*Pn	**Pn**	**21 50 10.3**	**+0.3**
	4.9nm,0.9s						
PBKT	**Sadao Pong**	**17.07**	**8**	P	P	21 50 19.8	+8.3
UTTA	**Uttaradit**	**18.18**	**6**	P	**P**	**21 50 29.2**	**+5.5**
CM01	**Chiang Mai Arr**	**18.74**	**1**	*e*P	**P**	**21 50 28.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**18.78**	**1**	P	**P**	**21 50 28.4**	**-1.9**
	0.2nm,0.3s,baz=191,slow=11,SNR=17						
CMAR				LR	LR	21 56 58.2	
	comp=Z,103nm,18.8s,baz=190,slow=35						
CMMT	**Chiang Mai**	**19.13**	**1**	P	**Pn**	**21 50 38.8**	**+3.6**
	3.9nm,1.3s						
CHTO	**Chiang Mai**	**19.13**	**1**	*e*P	**P**	**21 50 33.4**	**-0.8**
	8.6nm,1.3s						
CHTO	**Chiang Mai**	**19.13**	**1**	P	**Pn**	**21 50 38.8**	**+3.6**
	27nm,1.4s						
MPSI	**Mapaga**	**21.44**	**88**	P	**P**	**21 50 59.6**	**+0.3**
BNSI	**Bone**	**21.97**	**101**	P	**P**	**21 51 04.4**	**-0.6**
BKSI	**Bulukumba**	**22.16**	**103**	P	**P**	**21 51 07.8**	**+0.8**
KMI	**Kunming**	**25.74**	**9**	P	**P**	**21 51 43.6**	**+2.0**
KMI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,110nm,4.0s						
KMI	**Kunming**	**25.74**	**9**	*e*P	**P**	**21 51 41.5**	**-0.1**
	comp=Z,6.5nm,0.9s						
H08S2	**Diego Garcia H**	**26.87**	**254**	T	T	22 19 35.3	
	baz=76,slow=75,SNR=79						
H08S3	**Diego Garcia H**	**26.87**	**254**	T	T	22 19 35.7	
	baz=76,slow=75,SNR=1299						
H08S1	**Diego Carcia H**	**26.88**	**254**	T	T	22 19 36.6	
	baz=76,slow=75,SNR=16						
GYA	**Guiyang**	**27.88**	**16**	⇓*i*P	**P**	**21 52 00.8**	**0.0**
GYA				pP	sP	21 52 12.4	-1.5
GYA				PP	**PnPn**	**21 52 53.3**	**+5.2**
GYA				S	**S**	**21 56 42.0**	**-0.4**
GYA				sS	sS	21 57 00.8	+3.1
GYA				SS	**SnSn**	**21 58 06.4**	**+8.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,90nm,5.9s						
GYA				LR	LR		
	comp=N,320nm,15.9s						
GYA				LR	LR		
	comp=E,340nm,16.3s						
GYA				LR	LR		
	comp=Z,390nm,16.2s						
LSA	**Lhasa**	**30.77**	**347**	*e*P	**P**	**21 52 27.1**	**+0.4**
	comp=Z,12nm,1.6s						
CD2	**Chengdu**	**31.57**	**9**	*e*P	**P**	**21 52 33.4**	**0.0**
FITZ	**Fitzroy Crossi**	**31.95**	**125**	*e*P	**P**	**21 52 34.1**	**-2.7**
	comp=Z,13nm,1.2s						
ENH	**Enshi**	**32.29**	**18**	*e*P	**P**	**21 52 38.6**	**-1.0**
XAN	**Xi'an**	**35.67**	**15**	P	**P**	**21 53 08.0**	**-1.0**
XAN				pP	pP	21 53 17.3	-1.0
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
XAN	**Xi'an**	**35.67**	**15**	*e*P	**P**	**21 53 07.9**	**-1.1**
LZH	**Lanzhou**	**36.68**	**7**	*e*P	**P**	**21 53 18.3**	**+0.6**
LZH				pP	pP	21 53 26.3	-0.8
LZH				sP	sP	21 53 30.3	-0.7
LZH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NJ2	**Nanjing**	**37.63**	**29**	*e*P	**P**	**21 53 25.6**	**0.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA	**Gaotai**	**39.67**	**2**	*e*P	**P**	**21 53 43.0**	**+0.2**
GTA				pP	pP	21 53 52.0	-0.3
GTA				sP	sP	21 53 56.1	-0.1
GTA				PcP	**PcP**	**21 55 48.8**	**-0.5**
GTA				S	**S**	**21 59 45.1**	**+0.8**
GTA	**Gaotai**	**39.67**	**2**	ScS	ScS	22 03 44.0	-4.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,56nm,6.4s						
GTA				LR	LR		
	comp=N,130nm,17.1s						
GTA				LR	LR		
	comp=E,150nm,17.5s						
GTA				LR	LR		
	comp=Z,140nm,18.7s						
WRA	**Warramunga Arr**	**40.10**	**121**	P	**P**	**21 53 44.7**	**-1.9**
	comp=Z,5.7nm,0.6s,baz=302,slow=9.0,SNR=70						
WRA				PcP	**PcP**	**21 55 51.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=314,slow=2.4,SNR=5.5						
WRAB	**Tennant Creek**	**40.11**	**121**	*e*P	**P**	**21 53 44.4**	**-2.2**
	comp=Z,4.5nm,0.3s						
WB2	**Warramunga Arr**	**40.12**	**121**	*e*P	**P**	**21 53 44.2**	**-2.5**
ASAR	**Alice Springs**	**41.41**	**127**	P	**P**	**21 53 56.4**	**-1.0**
	comp=Z,5.7nm,0.7s,baz=304,slow=8.0,SNR=66						
ASAR				PcP	**PcP**	**21 55 55.6**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=311,slow=2.7,SNR=8.0						
AS31	**Alice Springs**	**41.41**	**127**	*e*P	**P**	**21 53 55.5**	**-1.8**
	comp=Z,2.2nm,0.8s						
AS01	**Alice Springs**	**41.44**	**126**	*e*P	**P**	**21 53 55.9**	**-1.8**
HHC	**Hu-ho-hao-te**	**42.78**	**15**	*e*P	**P**	**21 54 08.9**	**+0.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,5.4s						
BJT	**Baijiatuau**	**43.38**	**20**	*e*P	**P**	**21 54 13.0**	**-0.1**
	comp=Z,16nm,1.4s						
WMQ	**Urumqi**	**45.10**	**349**	P	**P**	**21 54 28.4**	**+1.5**
WMQ				pP	pP	21 54 33.3	-3.2
WMQ				sP	sP	21 54 36.8	-3.5
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.5s						
WMQ				LR	LR		
	comp=N,71nm,18.7s						
WMQ				LR	LR		
	comp=E,110nm,17.5s						
WMQ				LR	LR		
	comp=Z,58nm,19.9s						
NRN	**Naryn**	**46.38**	**337**	*e*P	**P**	**21 54 36.8**	**-0.6**
	comp=Z,10nm,1.3s						
KSAR	**Wonju Array Be**	**46.47**	**33**	P	**P**	**21 54 36.9**	**-0.8**
KSRS	**Korea Array**	**46.50**	**33**	P	**P**	**21 54 36.9**	**-1.0**
	comp=Z,3.5nm,0.8s,baz=221,slow=8.1,SNR=9.9						
KS01	**Wonju Array Si**	**46.50**	**33**	*e*P	**P**	**21 54 35.8**	**-2.1**
ARSB	**Arslanbob**	**47.55**	**334**	*e*P	**P**	**21 54 46.2**	**-0.1**
	comp=Z,6.0nm,0.8s						
AAK	**Ala-Archa**	**48.00**	**336**	*e*P	**P**	**21 54 49.6**	**-0.2**
	comp=Z,3.8nm,1.1s						
SONM	**Songino Array**	**48.57**	**7**	P	**P**	**21 54 54.5**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=188,slow=9.3,SNR=29						
SONA1	**Songino Array**	**48.58**	**7**	*e*P	**P**	**21 54 53.7**	**-0.4**
ULN	**Ulaanbaatar**	**48.68**	**8**	*e*P	**P**	**21 54 54.6**	**-0.3**
	comp=Z,6.0nm,1.0s						
MK01	**Makanchi Array**	**49.10**	**345**	*e*P	**P**	**21 54 58.1**	**+0.1**
MK31	**Makanchi Array**	**49.13**	**345**	*e*P	**P**	**21 54 58.1**	**-0.1**
MKAR	**Makanchi Array**	**49.13**	**345**	P	**P**	**21 54 58.6**	**+0.4**
	comp=Z,4.1nm,0.5s,baz=156,slow=8.4,SNR=87						
MAKZ	**Makanchi**	**49.22**	**345**	*e*P	**P**	**21 54 58.2**	**-0.7**
	comp=Z,3.2nm,0.7s						
STKA	**Stephens Creek**	**51.33**	**132**	*e*P	**P**	**21 55 13.8**	**-1.3**
	comp=Z,1.4nm,0.8s						
STKA	**Stephens Creek**	**51.33**	**132**	P	**P**	**21 55 15.4**	**+0.3**
	comp=Z,5.5nm,0.7s,baz=312,slow=7.5,SNR=16						
MJAR	**Matsushiro Arr**	**52.06**	**41**	P	**P**	**21 55 21.2**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=214,slow=7.3,SNR=4.1						
TLY	**Talaya**	**52.11**	**4**	*e*P	**P**	**21 55 20.7**	**+0.1**
	comp=Z,6.8nm,0.7s						
USRK	**Ussuriysk Ar.**	**53.53**	**30**	P	**P**	**21 55 30.2**	**-1.0**
	comp=Z,6.0nm,0.8s,baz=260,slow=2.7,SNR=13						
KURK	**Kurchatov**	**53.69**	**344**	*e*P	**P**	**21 55 32.0**	**-0.2**
ZAA0	**Zalesovo Array**	**55.37**	**350**	*e*P	**P**	**21 55 44.4**	**+0.1**
	comp=Z,9.9nm,0.9s						
ZALV	**Zalesovo Beam**	**55.37**	**350**	*e*P	**P**	**21 55 44.3**	**-0.1**
ZALV	**Zalesovo Beam**	**55.37**	**350**	P	**P**	**21 55 44.4**	**+0.1**
	comp=Z,8.4nm,0.8s,baz=181,slow=6.0,SNR=40						
BRVK	**Borovoye**	**58.26**	**340**	*e*P	**P**	**21 56 03.7**	**-1.2**
ABKAR	**Akbulak array**	**59.54**	**332**	*e*P	**P**	**21 56 13.3**	**-0.6**
KMBO	**Kilima Mbogo**	**61.21**	**269**	P	**P**	**21 56 26.7**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=71,slow=3.5,SNR=4.1						
TBLG	**Delisi**	**64.04**	**318**	*e*P	**P**	**21 56 45.4**	**+1.1**
	comp=Z,9.5nm,1.1s						
ARU	**Arti**	**65.17**	**337**	*e*P	**P**	**21 56 50.4**	**-1.1**
	comp=Z,6.4nm,0.7s						
KBZ	**Khabaz**	**66.13**	**319**	P	**P**	**21 56 57.9**	**0.0**
	comp=Z,1.5nm,0.9s,baz=192,slow=13,SNR=4.3						
KIV	**Kislovodsk**	**66.36**	**319**	*e*P	**P**	**21 56 59.5**	**-0.1**
	comp=Z,2.2nm,0.4s						
NRIK	**Noril'sk**	**70.03**	**356**	P	**P**	**21 57 21.9**	**0.0**
	comp=Z,3.6nm,0.6s,baz=87,slow=5.4,SNR=4.9						
KIRV	**Kirov**	**70.31**	**335**	P	**P**	**21 57 23.6**	**-0.2**
	comp=Z,6.3nm,0.6s,baz=257,slow=7.6,SNR=4.3						
LSZ	**Lusaka**	**70.88**	**254**	*e*P	**P**	**21 57 28.4**	**+0.2**

	comp=Z,1.5nm,0.6s						
BRTR	**Keskin Array B**	**71.14**	**312**	P	**P**	**21 57 28.8**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=136,slow=7.2,SNR=6.4						
PETK	**Petropavlovsk-**	**72.40**	**33**	P	**P**	**21 57 35.6**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=249,slow=6.0,SNR=2.8						
AKASG	**Malin Array Be**	**77.32**	**322**	P	**P**	**21 58 04.2**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=88,slow=4.6,SNR=4.1						
BUR04	**Bucovina Ar. S**	**79.08**	**319**	*e*P	**P**	**21 58 15.9**	**+0.9**
FINES	**FINESS Array B**	**82.02**	**332**	P	**P**	**21 58 30.5**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=104,slow=6.3,SNR=32						
VYHS	**Vyhne**	**83.45**	**319**	*e*P	**P**	**21 58 38.9**	**+0.8**
ARCES	**ARCESS Array B**	**84.49**	**340**	P	**P**	**21 58 43.0**	**+0.1**
	comp=Z,2.5nm,1.0s,baz=1.4,slow=4.9,SNR=4.3						
GERES	**GERESS Array B**	**86.87**	**319**	P	**P**	**21 58 55.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=72,slow=4.3,SNR=5.8						
QSPA	**South Pole Qui**	**89.52**	**180**	P	**P**	**21 59 09.2**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=308,slow=1.4						
TCUT	**Toone Canyon**	**131.30**	**30**	*e*PKPdf	**PKiKP**	**22 05 24.4**	**+0.1**
TXAR	**Lajitas Array**	**144.34**	**34**	PKP	PKPbc	22 05 45.8	+0.1
	comp=Z,0.7nm,0.8s,baz=329,slow=1.5,SNR=4.2						
CPUP	**Villa Florida**	**144.61**	**219**	*e*PKPdf	**PKPdf**	**22 05 47.7**	**0.0**
CPUP	**Villa Florida**	**144.61**	**219**	PKP	**PKPdf**	**22 05 47.5**	**-0.3**
	comp=Z,4.8nm,0.9s,baz=134,slow=4.8,SNR=9.1						
JCT	**Junction City**	**145.44**	**28**	*e*PKPbc	**PKPab**	**22 05 49.5**	**+0.1**

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*SOME **14** 21:51:17.5, 42°.50N×79°.68E, h15^{km}*
*NNC **14** 21:51:18.1±1.2, 42°.57N×79°.64E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=8.5km s-min=4.6km az=148.0*
KRNET 14 21:51:18.2±0.1**, 42°.58N×79°.64E, h16**^{km}**, mb2.5, 17C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.73**	**321**	P	Pg	21 51 32.1	-0.4
	7.6nm,0.1s						
UZB				S	Sb	21 51 42.4	0.0
	8.3nm,0.2s						
UZB	**Uzynbulak**	**0.73**	**321**	*e*P	Pg	21 51 32.1	-0.4
	baz=21						
UZB				*e*S	Sb	21 51 42.4	0.0
	baz=21						
UZB	**Uzynbulak**	**0.73**	**321**	*e*P	Pg	21 51 32.1	-0.4
	7.6nm,0.1s						
UZB				*e*S	Sb	21 51 42.4	0.0
	8.3nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**351**	P	Pg	21 51 32.8	-0.2
	4.2nm,0.2s						
PDGK				S	Sb	21 51 44.0	+0.8
	1.3nm,0.1s						
PDGK	**Podgornoye**	**0.75**	**351**	⇓P	Pg	21 51 32.6	-0.4
	1.1nm,0.2s						
PDGK				⇑S	Sb	21 51 43.2	0.0
	1.7nm,0.3s						
PDGK	**Podgornoye**	**0.75**	**351**	⇓*i*P	Pg	21 51 32.4	-0.6
	baz=51						
PDGK				⇓*i*S	Sb	21 51 43.7	+0.5
	baz=51						
PRZ	**Przheval'sk**	**0.93**	**264**	⇑*i*P	Pb	21 51 35.7	-0.3
	baz=64						
PRZ				⇑*i*S	Sb	21 51 47.9	-0.2
	baz=64						
KTMS	**Ketmen**	**1.01**	**31**	P	Pb	21 51 36.9	-0.4
	2.7nm,0.1s						
KTMS				S	Sg	21 51 51.3	+0.4
	4.0nm,0.1s						
KTMS	**Ketmen**	**1.01**	**31**	*e*P	Pb	21 51 36.9	-0.5
	baz=30						
KTMS				*e*S	Sg	21 51 51.3	+0.3
	baz=30						
KTMS	**Ketmen**	**1.01**	**31**	*e*P	Pb	21 51 36.9	-0.4
	2.7nm,0.1s						
KTMS				*e*S	Sg	21 51 51.3	+0.4
	4.0nm,0.1s						
KURS	**Kuram**	**1.41**	**310**	P	Pb	21 51 44.1	-0.1
	0.5nm,0.1s						
KURS				S	Sg	21 52 03.3	-0.5
	1.9nm,0.2s						
KURS	**Kuram**	**1.41**	**310**	*e*P	Pb	21 51 44.1	-0.1
	baz=10.0						
KURS				*e*S	Sg	21 52 03.3	-0.4
	baz=10.0						
KURS	**Kuram**	**1.41**	**310**	*e*P	Pb	21 51 44.1	-0.1
	0.5nm,0.1s						
KURS				*e*S	Sg	21 52 03.3	-0.5
	1.9nm,0.2s						
MNBS	**Baschi**	**1.75**	**329**	P	Pb	21 51 50.4	+0.4
	1.7nm,0.2s						
MNBS				S	Sg	21 52 14.6	0.0
	4.1nm,0.2s						
MNBS	**Baschi**	**1.75**	**329**	*e*P	Pb	21 51 50.4	+0.4
	1.7nm,0.2s						
MNBS				*e*S	Sg	21 52 14.6	0.0
	4.1nm,0.2s						
DJR	**Jarkent**	**1.75**	**3**	P	Pb	21 51 50.6	+0.6
	1.3nm,0.2s						
DJR				S	Sg	21 52 14.4	-0.2
	0.9nm,0.1s						
DJR	**Jarkent**	**1.75**	**3**	*e*P	Pb	21 51 50.6	+0.6
	1.3nm,0.2s						
DJR				*e*S	Sg	21 52 14.4	-0.2
	0.9nm,0.1s						
KDJ	**Kajisay**	**1.88**	**257**	⇑*i*P	Pb	21 51 53.0	+0.7
	baz=57						
KDJ				⇑*i*S	Sb	21 52 17.1	+1.4
	baz=57						
KOTS	**Kotyrbulak**	**1.97**	**290**	Pg	Pb	21 51 54.6	+0.8
	2.6nm,0.2s						
KOTS				Lg	Lg	21 52 21.3	
	13nm,0.3s						
KOTS	**Kotyrbulak**	**1.97**	**290**	*e*P	Pb	21 51 54.6	+0.8
	2.6nm,0.2s						
KOTS				*e*S	Sg	21 52 21.3	-0.3
	13nm,0.3s						
MDOK	**Medeo**	**2.00**	**288**	⇓Pn	Pb	21 51 53.7	-0.5
	0.5nm,0.4s						
MDOK				⇑Sn	Sb	21 52 20.1	+1.2
	4.2nm,0.5s						
MDOK	**Medeo**	**2.00**	**288**	Pg	Pb	21 51 54.5	+0.3
	1.0nm,0.1s						
MDOK				Lg	Lg	21 52 21.1	
	6.3nm,0.5s						
MDOK	**Medeo**	**2.00**	**288**	*e*P	Pb	21 51 54.5	+0.3
	baz=88						
MDOK				*e*S	Sg	21 52 21.2	-1.2
	baz=88						
MDOK	**Medeo**	**2.00**	**288**	*e*P	Pb	21 51 54.5	+0.3
	1.0nm,0.1s						
MDOK				*e*S	Sg	21 52 21.1	-1.3
	6.3nm,0.5s						
TNSS	**Tian-Shan**	**2.04**	**284**	Pg	Pb	21 51 54.7	-0.4
	1.2nm,0.1s						
TNSS				Lg	Lg	21 52 21.5	
	3.5nm,0.2s						
TNSS	**Tian-Shan**	**2.04**	**284**	*e*P	Pb	21 51 54.7	-0.4
	baz=84						
TNSS				*e*S	Sb	21 52 21.5	+1.2
	baz=84						
TNSS	**Tian-Shan**	**2.04**	**284**	*e*P	Pb	21 51 54.7	-0.4
	1.2nm,0.1s						
TNSS				*e*S	Sb	21 52 21.5	+1.2
	3.5nm,0.2s						
ARXS	**Arharly**	**2.10**	**322**	Pg	Pb	21 51 56.2	+0.3
	1.2nm,0.3s						
ARXS				Lg	Lg	21 52 24.0	
	5.7nm,0.3s						
ARXS	**Arharly**	**2.10**	**322**	*e*P	Pb	21 51 56.2	+0.3
	1.2nm,0.3s						
ARXS				*e*S	Sg	21 52 24.0	-1.8
	5.7nm,0.3s						
IZV	**Izvestkoviy**	**2.28**	**282**	Pg	Pb	21 51 59.0	-0.1
	2.1nm,0.2s						
IZV				Lg	Lg	21 52 29.1	
	6.6nm,0.2s						
IZV	**Izvestkoviy**	**2.28**	**282**	*e*P	Pb	21 51 59.0	-0.1
	2.1nm,0.2s						
IZV				*e*S	Sb	21 52 29.1	+2.1
	6.6nm,0.2s						
CHKK	**Chushkaly**	**2.32**	**304**	Pg	Pb	21 51 59.7	0.0
	0.7nm,0.2s						
CHKK				Lg	Lg	21 52 29.9	
	9.1nm,0.2s						
CHKK	**Chushkaly**	**2.32**	**304**	*e*P	Pb	21 51 59.7	0.0
	0.7nm,0.2s						
CHKK				*e*S	Sb	21 52 29.9	+1.7
	9.1nm,0.2s						
KTBS	**Karatobe**	**2.44**	**298**	Pg	Pb	21 52 02.2	+0.4
	1.0nm,0.3s						
KTBS				Lg	Lg	21 52 34.4	
	5.2nm,0.2s						
KTBS	**Karatobe**	**2.44**	**298**	*e*P	Pb	21 52 02.2	+0.4
	baz=97						
KTBS				*e*S	Sg	21 52 34.3	-2.5
	baz=97						
KTBS	**Karatobe**	**2.44**	**298**	*e*P	Pb	21 52 02.2	+0.4
	1.0nm,0.3s						
KTBS				*e*S	Sg	21 52 34.4	-2.4
	5.2nm,0.2s						
ULHL	**Ulahol**	**2.54**	**264**	⇑*i*P	Pb	21 52 02.3	-1.3
	baz=64						
ULHL				⇑*i*S	Sb	21 52 34.2	-0.5
	baz=64						
BOOM	**Boomskoye usch**	**2.74**	**269**	⇓*i*P	Pb	21 52 05.0	-1.9
	baz=69						
BOOM				⇓*i*S	Sb	21 52 38.1	-2.2
	baz=69						
KST	**Kastek**	**2.75**	**281**	Pg	Pb	21 52 06.9	-0.2
	2.1nm,0.1s						
KST				Lg	Lg	21 52 42.3	
	3.0nm,0.2s						
KST	**Kastek**	**2.75**	**281**	*e*P	Pb	21 52 06.9	-0.2
	2.1nm,0.1s						
KST				*e*S	Sb	21 52 42.3	+1.7
	3.0nm,0.2s						
DGS	**Degeres**	**2.92**	**284**	Pg	Pb	21 52 10.0	+0.1
	1.4nm,0.4s						
DGS				Lg	Lg	21 52 47.7	
	9.8nm,0.5s						
DGS	**Degeres**	**2.92**	**284**	*e*P	Pb	21 52 10.1	+0.1
	1.4nm,0.4s						
DGS				*e*S	Sb	21 52 47.7	+2.2
	9.8nm,0.5s						
NRN	**Naryn**	**2.95**	**248**	⇑*i*P	Pb	21 52 08.0	-2.6
	baz=48						
NRN				⇑*i*S	Sb	21 52 44.1	-2.4
	baz=48						
TKM2	**Tokmak 2**	**3.00**	**278**	⇓Pn	Pb	21 52 08.4	-3.0
	0.8nm,0.7s						
TKM2				⇑Sn	Sb	21 52 47.3	-0.6
	1.2nm,0.3s						
TKM2	**Tokmak 2**	**3.00**	**278**	⇑*i*P	Pn	21 52 08.3	+3.0
	baz=78						
TKM2				⇑*i*S	Sb	21 52 45.0	-2.9
	baz=78						
KZA	**Kyzart**	**3.30**	**263**	⇑*i*P	Pn	21 52 12.7	+3.1
	baz=63						
KZA				⇑*i*S	Sn	21 52 52.0	+3.3
	baz=63						
MAKZ	**Makanchi**	**4.54**	**21**	⇑Pn	Pn	21 52 29.7	+3.4
	0.1nm,0.3s						
MAKZ				⇑Sn	Sn	21 53 22.9	+4.2
	0.1nm,0.6s						

YARS 14 21:57:45.0±0.2**, 67°.67N**±0°.01×**142°.72E**±0°.03**, h10**^{km}**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.23**	**171**	*e*P	Pn	21 58 07.2	-0.9
MOMR				Pmax		21 58 07.2	
	comp=Z,4.0nm,0.2s						
YBGR	**Belaya Gora**	**1.56**	**55**	*e*P	Pn	21 58 12.7	-0.1
YBGR				Pmax		21 58 12.7	
	comp=Z,4.0nm,0.2s						
YBGR				*e*S	Sb	21 58 33.6	-0.2
YBGR				Smax		21 58 33.6	
	comp=N,13nm,0.2s						
BTGS	**Batagay**	**3.09**	**273**	*e*S	Sb	21 59 20.5	+3.0
BTGS				Smax		21 59 20.5	
	comp=N,6.0nm,0.4s						

YARS 14 21:58:02.6±0.5**, 67°.59N**±0°.03×**142°.54E**±0°.06**, h10**^{km}**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.16**	**166**	*e*P	Pb	21 58 22.7	-2.0
MOMR				Pmax		21 58 22.7	
	comp=Z,18nm,0.2s						
MOMR				*e*S	Sb	21 58 39.3	-0.4
MOMR				Smax		21 58 39.3	
	comp=N,18nm,0.5s						
MOMR	**Moma**	**1.16**	**166**	*e*S	Pb	21 58 22.7	-2.0
MOMR				Smax	Pb	21 58 22.7	-2.0
	comp=N,20nm,0.5s						
YBGR	**Belaya Gora**	**1.67**	**54**	*e*P	Pn	21 58 31.9	+0.1
YBGR				Pmax		21 58 31.9	
	comp=Z,18nm,0.2s						
YBGR				*e*S	Sb	21 58 54.5	+0.2
YBGR				Smax		21 58 54.5	
	comp=N,31nm,0.3s						
BTGS	**Batagay**	**3.02**	**275**	*e*S	Sb	21 59 36.3	+3.0
BTGS				Smax		21 59 36.3	
	comp=N,5.0nm,0.4s						

MEX 14 22:21:02.0±0.4**, 16°.22N×98°.12W, h5**^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**358**	*e*P	Pg	22 21 04.9	-0.5
PNIG				*i* S	Sg	22 21 07.8	+0.1

MEX 14 22:26:07.9±0.4**, 16°.21N×98°.14W, h5**^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.18**	**3**	*e*P	Pg	22 26 11.2	-0.3
PNIG				*i* S	Sg	22 26 14.0	+0.1

MEX 14 22:35:13.0±0.3**, 16°.26N×98°.25W, h13**^{km}±1^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**41**	*e*P	Pg	22 35 16.4	-0.6
PNIG				*i* S	Sg	22 35 19.3	-0.5

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*ISCJB **14** 22:47:59.2±0.5, 37°.78N±0°.02×26°.90E±0°.05, h4^{km}±5^{km}, Error ellipse: s-maj=6.4km s-min=3.6km az=157.7*
*DDA **14** 22:47:59.1, 37°.80N×26°.94E, h7^{km}±2^{km}, ML2.6*
*ISK **14** 22:47:59.1, 37°.81N×26°.93E, h10^{km}, ML2.8/17*
ISC 14 22:47:59.6±1.0**, 37°.79N**±0°.03×**26°.92E**±0°.03**, h12**^{km}±8^{km}**, n26, σ0^{s}.50**/34**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	**zmir**	**0.26**	**354**	*i* P	**Pg**	**22 48 05.4**	**+0.3**
DGB				IAML_P			
	comp=Z,5μm,0.1s						
GCAM	**G?zelcaml?**	**0.27**	**110**	PG	**Pg**	**22 48 04.7**	**-0.5**
GCAM				SG	**Sg**	**22 48 09.1**	**+0.3**
GCAM	**G?zelcaml?**	**0.27**	**110**	*i* P	**Pb**	**22 48 05.6**	**-0.7**
GCAM				*i* S	**Sg**	**22 48 09.2**	**+0.3**
GMLD	**Gumuldur**	**0.28**	**360**	PG	**Pg**	**22 48 05.1**	**-0.4**
GMLD				SG	**Sg**	**22 48 09.3**	**-0.1**
ZEY	**zmir**	**0.55**	**324**	*i* P	**Pg**	**22 48 10.3**	**-0.1**
ZEY				IAML_P			
	comp=Z,2μm,0.1s						
BLCB	**Balcova**	**0.60**	**9**	PG	**Pg**	**22 48 10.7**	**-0.6**
BLCB				SG	**Sg**	**22 48 19.4**	**+0.1**
URLA	**Izmir**	**0.62**	**336**	PG	**Pg**	**22 48 11.4**	**-0.3**
URLA	**Izmir**	**0.62**	**336**	*i* P	**Pg**	**22 48 11.4**	**-0.3**
URLA				*i* S	**Sb**	**22 48 21.3**	**+0.2**
URLA				IAML_P			
	comp=Z,982nm,0.1s						
YKAV	**Yalikavak-Bodr**	**0.73**	**156**	PG	**Pg**	**22 48 13.7**	**0.0**
AYDN	**Tasoluk**	**0.77**	**100**	*i* P	**Pb**	**22 48 14.8**	**-0.2**
AYDN				IAML_P			
	comp=Z,4μm,0.1s						
AYDB	**Zeytinkoy-Aydi**	**0.79**	**78**	PG	**Pg**	**22 48 14.4**	**-0.4**
BODT	**Bodrum**	**0.79**	**157**	PG	**Pg**	**22 48 14.9**	**-0.1**
BDRM	**Kayabasi**	**0.84**	**150**	*i* P	**Pb**	**22 48 16.1**	**0.0**
BDRM				*i* S	**Sb**	**22 48 27.6**	**+0.3**
BDRM				IAML_P			
	comp=Z,576nm,0.2s						
MLSB	**Milas**	**0.84**	**126**	PG	**Pg**	**22 48 15.7**	**-0.2**
KRBN	**Karaburun**	**0.85**	**340**	PG	**Pg**	**22 48 15.7**	**-0.3**
CHOS	**Chios island**	**0.90**	**311**	PG	**Pg**	**22 48 16.9**	**-0.1**
FOCM	**Foa**	**0.93**	**351**	PG	**Pg**	**22 48 17.3**	**-0.3**
DAT	**Datca**	**1.19**	**153**	PN	**Pg**	**22 48 22.3**	**-0.1**
DATC	**Datca-Mugla**	**1.19**	**150**	PN	**Pg**	**22 48 22.3**	**-0.2**
GOMA	**Golmarmara-Man**	**1.21**	**40**	PN	**Pg**	**22 48 22.3**	**-0.5**
YER	**Yerkesik**	**1.27**	**121**	PN	**Pb**	**22 48 23.4**	**-0.1**
AKHS	**Akhisar**	**1.29**	**33**	*i* P	**Pn**	**22 48 23.5**	**0.0**
AKHS				*i* S	**Sg**	**22 48 42.8**	**+1.5**
AKHS				IAML_P			
	comp=Z,342nm,0.2s						
APE	**Apeiranthos**	**1.32**	**237**	PN	**Pb**	**22 48 24.4**	**+0.1**
MANT	**Manisa**	**1.47**	**61**	*i* P	**Pg**	**22 48 29.2**	**+1.4**
MANT				*i* S	**Sn**	**22 48 44.6**	**-0.7**
KULA	**Kula-Manisa**	**1.55**	**62**	PN	**Pn**	**22 48 27.2**	**+0.1**
DEMI	**Demirci**	**1.89**	**48**	*i* P	**Pg**	**22 48 35.9**	**+0.1**
DEMI				IAML_P			
	comp=Z,197nm,0.2s						

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*IDC **14** 22:53:06.7±1.8, 2°.88N×95°.87E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.5/36, mbtmp3.6/6, ML3.3/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/30, Error ellipse: s-maj=52.3km s-min=19.9km az=50.0*
*ISCJB **14** 22:53:09.1±1.2, 2°.9N±0°.2×95°.8E±0°.1, h31^{km}, mb3.6/5, MS2.7/1, Error ellipse: s-maj=26.1km s-min=11.3km az=22.5*
ISC 14 22:53:11.1±1.7**, 2°.9N**±0°.2×**95°.9E**±0°.1**, h31**^{km}**, n13, σ0^{s}.24**/7**, mb3.7**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.06**	**91**	Pn	**Pn**	**22 53 57.2**	**-0.3**
	4.0nm,0.3s,baz=360,slow=6.8,SNR=17						
PSI				Sn	**Sn**	**22 54 33.4**	**+0.2**
	3.1nm,0.3s,baz=180,slow=3.7,SNR=6.3						
H08S2	**Diego Garcia H**	**25.55**	**246**	T	T	23 24 49.0	
	baz=68,slow=74						
H08S3	**Diego Garcia H**	**25.55**	**246**	T	T	23 24 49.7	
	baz=68,slow=74						
H08S1	**Diego Carcia H**	**25.56**	**246**	T	T	23 24 50.8	
	baz=68						
H01W3	**Cape Leeuwin H**	**41.29**	**157**	T	T	23 44 38.3	
	baz=332,slow=74						
H01W2	**Cape Leeuwin H**	**41.30**	**157**	T	T	23 44 40.4	
	baz=332						
H01W1	**Cape Leeuwin H**	**41.30**	**157**	T	T	23 44 42.2	
	baz=332,slow=74						
WRA	**Warramunga Arr**	**44.05**	**123**	P	**P**	**23 01 16.6**	**+0.1**
	0.3nm,0.5s,baz=300,slow=9.1,SNR=8.0						
KSRS	**Korea Array**	**45.28**	**36**	LR	LR	23 23 00.1	
	comp=Z,9.0nm,19.3s,baz=245,slow=40						
MKAR	**Makanchi Array**	**45.32**	**347**	P	**P**	**23 01 26.4**	**+0.2**
	0.3nm,0.3s,baz=164,slow=8.1,SNR=11						
ASAR	**Alice Springs**	**45.46**	**128**	P	**P**	**23 01 27.8**	**0.0**
	0.2nm,0.3s,baz=300,slow=7.3,SNR=4.3						
SONM	**Songino Array**	**45.71**	**10**	P	**P**	**23 01 29.4**	**0.0**
	0.9nm,0.7s,baz=194,slow=9.1,SNR=7.7						
ZALV	**Zalesovo Beam**	**51.72**	**352**	P	**P**	**23 02 15.1**	**-0.2**
	0.4nm,0.3s,baz=169,slow=8.8,SNR=3.6						

MEX 14 22:57:41.4±0.6**, 15°.27N×93°.93W, h16**^{km}±999^{km}**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.81**	**58**	*e*P	Pb	22 57 54.0	-3.1
PCIG				*e*S	Sb	22 58 04.3	-3.4

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*MOS **14** 23:01:43.8±0.0, 42°.57N×44°.36E, h13^{km}, MPVA2.9*
*NORS **14** 23:01:44.6±0.0, 42°.61N×44°.39E, h7^{km}, MPVA2.9*
ISC 14 23:01:47.3±1.1**, 42°.70N**±0°.04×**44°.43E**±0°.03**, h6**^{km}±9^{km}**, n15, σ1^{s}.21**/30**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LACR	**Lac**	**0.16**	**323**	*i* Pg	**Pg**	**23 01 50.0**	**-0.7**
LACR				*e*Sg	**Sg**	**23 01 55.5**	**+2.6**
ZEI	**Tsey**	**0.40**	**283**	*e*Pg	**Pg**	**23 01 54.5**	**-0.6**
ZEI				*e*Sg	**Sg**	**23 02 00.8**	**+0.4**
KORR	**Kora**	**0.47**	**326**	*i* Pg	**Pb**	**23 01 57.2**	**-0.9**
KORR				*e*Sg	**Sb**	**23 02 06.0**	**+0.7**
ARNR	**Ardon**	**0.49**	**348**	*e*Pg	**Pb**	**23 01 57.6**	**-0.8**
ARNR				*e*Sg	**Sb**	**23 02 07.5**	**+1.6**
DIGR	**Digorskoe uzhe**	**0.66**	**288**	*e*Pg	**Pg**	**23 01 59.0**	**-1.0**
DIGR				*e*Sg	**Sg**	**23 02 08.2**	**-0.3**
BTKR	**Batakoyurt**	**0.68**	**7**	*e*Pg	**Pb**	**23 02 01.3**	**-0.3**
BTKR				*e*Sg	**Sn**	**23 02 13.9**	**-0.5**
STDR	**Stavd-Durt**	**0.72**	**338**	*e*Pg	**Pn**	**23 02 04.1**	**+0.1**
STDR				*e*Sg	**Sn**	**23 02 16.6**	**+1.1**
LSNR	**Lesken**	**0.73**	**323**	*e*Pg	**Pb**	**23 02 02.4**	**-0.1**
LSNR				*e*Sg	**Sn**	**23 02 14.3**	**-1.4**
GROC	**Groznyy**	**1.12**	**63**	*e*Pg	**Pn**	**23 02 08.9**	**-0.6**
GROC				*e*Sg	**Sn**	**23 02 27.4**	**+2.1**
TRLG	**Trialeti**	**1.18**	**192**	P	**Pb**	**23 02 09.6**	**-0.6**
TRLG				S	**Sn**	**23 02 29.7**	**+2.6**
BTLR	**Botlikh**	**1.32**	**91**	*e*Pg	**Pn**	**23 02 10.5**	**-1.9**
BTLR				*e*Sg	**Sg**	**23 02 30.3**	**+0.5**
KBTC	**Kuba-Taba**	**1.34**	**327**	*e*Pg	**Pn**	**23 02 11.7**	**-1.0**
KBTC				*e*Sg	**Sg**	**23 02 30.9**	**+0.3**
NEY	**Neytrino**	**1.37**	**294**	*e*Pg	**Pg**	**23 02 14.5**	**+0.9**
NEY				*e*Sg	**Sg**	**23 02 32.5**	**+1.2**
SHA1	**Shidzhatmaz**	**1.66**	**309**	*e*Pg	**Pb**	**23 02 17.4**	**-1.0**
SHA1				*e*Sg	**Sg**	**23 02 40.4**	**-0.3**
DBC	**Dubki**	**1.79**	**79**	*e*Pg	**Pn**	**23 02 17.9**	**-1.0**
DBC				*e*Sg	**Sb**	**23 02 43.9**	**+0.5**

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*NIED **14** 23:35:00, 44°.70N×149°.30E, h41^{km}, Mw4.4 Best double couple: $M_0$4.93000×10^{15} NP1:ϕ_s249.00000°, δ31.00000°, λ170.00000°. NP2:ϕ_s348.00000°, δ85.00000°, λ59.00000°.*
*JMA **14** 23:35:38.2±0.6, 44°.75N×149°.34E, h30^{km}, M5.3*
*ISCJB **14** 23:35:40.0±0.5, 44°.46N±0°.03×149°.14E±0°.04, h42^{km}±4^{km}, mb4.4/110, MS3.8/12, Error ellipse: s-maj=5.6km s-min=3.4km az=141.4*
*MOS **14** 23:35:40.2±0.8, 44°.48N×149°.13E, h44^{km}, mb4.7/50, MS3.7/3, Error ellipse: s-maj=6.1km s-min=5.3km az=105.5*
*SKHL **14** 23:35:40.5±0.5, 44°.47N×149°.21E, h50^{km}±4^{km}*
*IDC **14** 23:35:44.0±2.3, 44°.60N×149°.07E, h60^{km}±20^{km}, mb4.0/28, mb1 4.1/34, mb1mx4.1/40, mbtmp4.3/34, ML3.7/6, MS3.6/12, Ms1 3.6/12, ms1mx3.3/36, Error ellipse: s-maj=14.1km s-min=10.3km az=149.0*
*NEIC **14** 23:35:43.0±0.4, 44°.51N×149°.06E, h54^{km}±3^{km}, mb4.5/59, Error ellipse: s-maj=4.4km s-min=2.6km az=151.0*
ISC 14 23:35:42.1±0.6**, 44°.47N**±0°.05×**149°.09E**±0°.05**, h47**^{km}±5^{km}**, n362, σ1^{s}.36**/393**, mb4.5**/120**, MS3.9**/12**, 20C-23D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.16**	**312**	*i* P	**Pn**	**23 36 00.0**	**-1.9**
KUR				AMB	AMB	23 36 02.0	
	320nm,0.2s						
KUR				AMB	AMB	23 36 02.0	
	430nm,0.2s						
KUR				AMB	AMB	23 36 02.0	
	780nm,0.2s						
KUR				*e*S	**Sn**	**23 36 15.2**	**-1.4**
KUR				A	A	23 36 16.0	
	4μm,0.2s						
KUR				A	A	23 36 16.0	
	250nm,0.2s						
KUR	**Kuril'sk**	**1.16**	**312**	*d i*PN	**Pn**	**23 36 00.7**	**-1.2**
KUR				*i* S	**Sn**	**23 36 15.5**	**-1.1**
KUR				pmax	pmax		
	comp=Z,778nm,0.1s						
KUR				pmax	pmax		
	comp=N,324nm,0.2s						
KUR				pmax	pmax		
	comp=E,427nm,0.2s						
KUR				smax	smax		
	comp=N,4μm,0.2s						
KUR				smax	smax		
	comp=E,247nm,0.2s						
SHO	**Shikotan**	**1.73**	**251**	*i* P	**Pn**	**23 36 09.1**	**-0.6**
SHO				AMB	AMB	23 36 13.6	
	comp=E,670nm,0.3s						
SHO				*i* S	**Sn**	**23 36 30.6**	**0.0**
SHO				A	A	23 36 34.0	

	comp=E,2µm,0.3s						
SHO				A	A	23 36 34.0	
	comp=E,1µm,0.3s						
SHO	**Shikotan**	**1.73**	**251**	d *i*PN	**Pn**	**23 36 08.1**	**-1.6**
SHO				*i* S	**Sn**	**23 36 28.1**	**-2.5**
SHO				pmax	pmax		
	comp=Z,370nm,0.4s						
SHO				smax	smax		
	comp=E,1µm,0.3s						
SHO				smax	smax		
	comp=N,239nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.36**	**261**	*i* P	**Pn**	**23 36 18.2**	**-0.1**
YUK				AMB	AMB	23 36 21.0	
	comp=N,570nm,0.5s						
YUK				AMB	AMB	23 36 21.0	
	comp=N,320nm,0.5s						
YUK				AMB	AMB	23 36 21.0	
	comp=N,1µm,0.5s						
YUK				*i* S	**Sn**	**23 36 46.0**	**0.0**
YUK				A	A	23 36 53.0	
	comp=N,3µm,0.5s						
YUK				A	A	23 36 53.0	
	comp=N,3µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.36**	**261**	c *i*PN	**Pn**	**23 36 17.9**	**-0.4**
YUK				*i* S	**Sn**	**23 36 45.1**	**-0.9**
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				pmax	pmax		
	comp=N,569nm,0.1s						
YUK				pmax	pmax		
	comp=E,323nm,0.1s						
YUK				smax	smax		
	comp=N,3µm,0.5s						
YUK				smax	smax		
	comp=E,3µm,0.4s						
LAGR	**Lagunnoye**	**2.41**	**261**	*e*P	**Pn**	**23 36 18.0**	**-0.9**
LAGR				*e*S	**Sn**	**23 36 46.0**	**-1.2**
LAGR				A	A	23 36 55.9	
	comp=E,3µm,0.5s						
LAGR				A	A	23 36 55.9	
	comp=E,4µm,0.5s						
LAGR	**Lagunnoye**	**2.41**	**261**	*e*PN	**Pn**	**23 36 18.1**	**-0.9**
LAGR				*e*S	**Sn**	**23 36 46.2**	**-1.0**
LAGR				smax	smax		
	comp=N,3µm,0.5s						
LAGR				smax	smax		
	comp=E,7µm,0.5s						
GRPR	**Tuman**	**2.43**	**260**	*e*P	**Pn**	**23 36 18.0**	**-1.3**
GRPR				*e*S	**Sn**	**23 36 46.0**	**-1.8**
GRPR				A	A	23 36 57.0	
	comp=E,3µm,0.5s						
GRPR				A	A	23 36 57.0	
	comp=E,1µm,0.5s						
GRPR	**Tuman**	**2.43**	**260**	*e*PN	**Pn**	**23 36 18.5**	**-0.8**
GRPR				*e*S	**Sn**	**23 36 46.9**	**-0.9**
GRPR				smax	smax		
	comp=N,4µm,0.3s						
GRPR				smax	smax		
	comp=E,1µm,0.3s						
NEM2	**Nemuro 2**	**2.66**	**247**	P	**Pn**	**23 36 21.3**	**-1.1**
NEM2				*e*S	**Sn**	**23 36 54.9**	**+1.6**
JRA	**Rausu**	**2.90**	**261**	P	**Pn**	**23 36 26.6**	**+0.9**
JNK	**Nakash**	**3.27**	**256**	P	**Pn**	**23 36 30.8**	**-0.1**
JNK				*e*S	**Sn**	**23 37 10.1**	**+1.6**
JAK	**Akkeshi**	**3.51**	**247**	P	**Pn**	**23 36 33.8**	**-0.3**
JAK				*e*S	**Sn**	**23 37 15.0**	**+0.7**
JTKR	**Abashiri--Toko**	**3.76**	**264**	P	**Pn**	**23 36 37.9**	**+0.4**
JAR	**Ashorobuto**	**4.02**	**255**	P	**Pn**	**23 36 42.5**	**+1.4**
JAR				*e*S	**Sn**	**23 37 31.2**	**+4.3**
JOB	**Onbets**	**4.12**	**250**	P	**Pn**	**23 36 43.1**	**+0.6**
JOB				*e*S	**Sn**	**23 37 31.5**	**+2.2**
JMP	**Maruseppu**	**4.14**	**266**	P	**Pn**	**23 36 44.0**	**+1.2**
HRK	**Horoka**	**4.42**	**259**	*e*P	**Pn**	**23 36 48.7**	**+2.1**
JCH	**Churui**	**4.56**	**248**	P	**Pn**	**23 36 49.0**	**+0.5**
JCH				*e*S	**Sn**	**23 37 41.3**	**+1.2**
JKK2	**Kamakawa 2**	**4.60**	**265**	P	**Pn**	**23 36 51.2**	**+2.1**
JSE	**Soyaes**	**4.66**	**278**	P	**Pn**	**23 36 51.8**	**+1.9**
ASAJ	**Asahikawa**	**4.67**	**268**	P	**Pn**	**23 36 52.5**	**+2.4**
ASAJ	**Asahikawa**	**4.67**	**268**	P	**Pn**	**23 36 52.1**	**+2.0**
	comp=E,9.5nm,0.3s,baz=60,slow=18,SNR=25						
ASAJ				LR	LR	23 38 55.8	
	comp=E,1µm,18.4s,baz=120,slow=41						
MYR	**Moyori**	**4.76**	**245**	*e*P	**Pn**	**23 36 52.1**	**+0.9**
MYR				*e*S	**Sn**	**23 37 46.7**	**+1.7**
JFR	**Furan**	**4.88**	**257**	P	**Pn**	**23 36 55.1**	**+2.2**
JFR				*e*S	**Sn**	**23 37 53.1**	**+5.0**
JEM	**Erimo**	**4.98**	**243**	P	**Pn**	**23 36 55.5**	**+1.3**
ERM	**Erimo**	**4.98**	**243**	*e*Pn	**Pn**	**23 36 55.8**	**+1.6**
ERM				*e*Sn	**Sn**	**23 37 51.0**	**+0.5**
ERM	**Erimo**	**4.98**	**243**	*e*P	**Pn**	**23 36 56.5**	**+2.2**
ERM	**Erimo**	**4.98**	**243**	d *i*PN	**Pn**	**23 36 56.5**	**+2.2**
ERM				pmax	pmax		
	comp=Z,170nm,0.5s						
JAB	**Ashibetsu**	**5.05**	**261**	P	**Pn**	**23 36 58.1**	**+2.9**
YSS	**Yuzh-Sakhalins**	**5.08**	**301**	*e*Pn	**Pn**	**23 36 56.1**	**+0.4**
YSS	**Yuzh-Sakhalins**	**5.08**	**301**	*e*P	**Pn**	**23 36 56.3**	**+0.6**
YSS				AMB	AMB	23 36 57.3	
	comp=Z,200nm,0.7s						
YSS				*e*S	**Sn**	**23 37 54.0**	**+0.9**
YSS				A	A	23 37 55.5	
	comp=Z,70nm,0.5s						
YSS				A	A	23 37 55.5	
	comp=Z,120nm,0.5s						
YSS	**Yuzh-Sakhalins**	**5.08**	**301**	⇑*e*PN	**Pn**	**23 36 56.3**	**+0.6**
YSS				*e*S	**Sn**	**23 37 54.0**	**+0.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				smax	smax		
	comp=N,80nm,1.0s						
YSS				smax	smax		
	comp=E,110nm,0.6s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS				MLR	MLR		
	comp=N,500nm,14.0s						
YSS				MLR	MLR		
	comp=E,600nm,15.0s						
JNBK	**Urakawa-nobuka**	**5.11**	**247**	P	**Pn**	**23 36 55.9**	**-0.2**
JBT2	**Biratori 2**	**5.17**	**253**	P	**Pn**	**23 36 57.6**	**+0.8**
JNB	**Noboribetsu**	**6.19**	**254**	P	**Pn**	**23 37 11.1**	**+0.2**
JNB				*e*S	**Sn**	**23 38 21.8**	**+1.5**
JKB	**Kayabe**	**6.43**	**249**	P	**Pn**	**23 37 14.3**	**+0.2**
JKB				*e*S	**Sn**	**23 38 24.2**	**-2.0**
JYM2	**Yakumo 2**	**6.78**	**253**	P	**Pn**	**23 37 19.6**	**+0.6**
JANG	**Nango**	**6.94**	**236**	P	**Pn**	**23 37 19.2**	**-2.0**
JANG				*e*S	**Sn**	**23 38 32.6**	**-6.1**
JTM	**Tenmabayashi**	**6.96**	**241**	P	**Pn**	**23 37 20.8**	**-0.7**
JTM				*e*S	**Sn**	**23 38 34.9**	**-4.4**
JSR	**Shiriuchi**	**7.00**	**248**	P	**Pn**	**23 37 22.2**	**+0.2**
JOSM	**Okushiri--Mats**	**7.41**	**255**	P	**Pn**	**23 37 28.0**	**+0.4**
OFUJ	**Ofunato**	**7.72**	**228**	P	**Pn**	**23 37 29.5**	**-2.5**
TYV	**Tymovskoe**	**7.73**	**328**	*e*P	**Pn**	**23 37 32.6**	**+0.7**
SKR	**Severo-Kuril’s**	**7.82**	**35**	*e*P	**Pn**	**23 37 31.7**	**-1.5**
SKR				AMB	AMB	23 37 37.2	
	comp=E,110nm,0.9s						
SKR				*e*S	**Sn**	**23 38 54.6**	**-5.7**
SKR				A	A	23 39 14.5	
	comp=E,80nm,0.8s						
SKR				A	A	23 39 14.5	
	comp=E,130nm,0.8s						
SKR	**Severo-Kuril’s**	**7.82**	**35**	*e*PN	**Pn**	**23 37 31.7**	**-1.5**
SKR				pmax	pmax		
	comp=Z,113nm,0.9s						
JRG	**Rokugo**	**8.08**	**234**	P	**Pn**	**23 37 36.0**	**-0.9**
TEY	**Ternei**	**8.90**	**278**	*e*P	**Pn**	**23 37 51.2**	**+3.1**
TEY				AMB	AMB	23 37 56.6	
	comp=Z,60nm,0.9s						
TEY				AMB	AMB	23 37 56.6	
	comp=Z,50nm,0.9s						
TEY	**Ternei**	**8.90**	**278**	⇓*e*PN	Pn	23 37 54.1	+6.0
TEY				pmax	pmax		
	comp=E,60nm,1.0s						
TEY				pmax	pmax		
	comp=Z,60nm,0.8s						
OKH	**Okha**	**9.94**	**338**	*e*P	**Pn**	**23 38 05.6**	**+3.4**
NKL	**Nikolayevsk**	**10.30**	**330**	*e*P	**Pn**	**23 38 08.5**	**+1.4**
NKL	**Nikolayevsk**	**10.30**	**330**	*e*PN	**Pn**	**23 38 09.0**	**+1.9**
PEA0B	**Petropavlovsk-**	**10.34**	**30**	*e*Pn	**Pn**	**23 38 08.8**	**+1.1**
PETK	**Petropavlovsk-**	**10.34**	**30**	*e*Pn	**Pn**	**23 38 09.2**	**+1.6**
PETK	**Petropavlovsk-**	**10.34**	**30**	*e*PN	**Pn**	**23 38 09.3**	**+1.6**
PETK	**Petropavlovsk-**	**10.34**	**30**	P	**Pn**	**23 38 07.1**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=209,slow=16,SNR=4.2						
PETK				LR	LR	23 42 21.4	
	comp=Z,102nm,19.5s,baz=217,slow=39						
MJAR	**Matsushiro Arr**	**11.45**	**230**	P	**Pn**	**23 38 21.6**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=32,slow=12,SNR=14						
MJB9	**Matsu-Tunnel**	**11.45**	**230**	*e*Pn	**Pn**	**23 38 22.1**	**-0.8**
MAJO	**Matsushiro**	**11.45**	**230**	*e*Pn	**Pn**	**23 38 22.1**	**-0.9**
MAJO	**Matsushiro**	**11.45**	**230**	*e*P	**Pn**	**23 38 23.5**	**+0.6**
MAJO	**Matsushiro**	**11.45**	**230**	c*e*PN	**Pn**	**23 38 23.5**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,14nm,0.6s						
MAT	**Matsushiro**	**11.45**	**230**	P	**Pn**	**23 38 21.5**	**-1.4**
MAT				S	**Sn**	**23 40 30.3**	**+0.9**
USA0B	**Ussuriysk Arra**	**12.25**	**275**	*e*Pn	**Pn**	**23 38 34.2**	**+0.4**
USRK	**Ussuriysk Ar.**	**12.25**	**275**	P	**Pn**	**23 38 34.4**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=90,slow=13,SNR=26						
USRK				LR	LR	23 43 29.4	
	comp=Z,238nm,18.4s,baz=70,slow=38						
KLR	**Kul'dur**	**12.78**	**298**	P	**Pn**	**23 38 43.6**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=103,slow=15,SNR=20						
KLR				LR	LR	23 44 00.2	
	comp=Z,233nm,18.3s,baz=106,slow=39						
EKMR	**Ekimchan**	**13.66**	**315**	*e*P	**Pn**	**23 38 52.8**	**-0.2**
EKMR				AMB	AMB	23 38 58.2	
	comp=Z,10.0nm,1.0s						
MDJ	**Mudanjiang**	**13.91**	**277**	P	**Pn**	**23 38 57.6**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,12nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.0s						
MDJ	**Mudanjiang**	**13.91**	**277**	*e*Pn	**Pn**	**23 38 56.7**	**+0.3**
MA2	**Magadan**	**15.17**	**3**	*e*P	**Pn**	**23 39 12.3**	**-0.7**
MA2	**Magadan**	**15.17**	**3**	⇓*e*P	**Pn**	**23 39 12.3**	**-0.7**
MA2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BMKR	**Bomnak**	**16.59**	**315**	*e*P	**Pn**	**23 39 30.5**	**-0.7**
BMKR				AMB	AMB	23 39 48.5	
	comp=Z,20nm,0.9s						
ZEA	**Zeya**	**16.98**	**311**	*e*P	**Pn**	**23 39 35.0**	**-1.1**
ZEA				AMB	AMB	23 39 38.8	
	comp=Z,20nm,0.8s						
ZEA	**Zeya**	**16.98**	**311**	*e*P	**P**	**23 39 37.2**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				MLR	MLR		
	comp=E,200nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
KROS	**Kirovskiy**	**17.43**	**313**	*e*P	**Pn**	**23 39 38.0**	**-3.6**
KROS				AMB	AMB	23 39 40.0	
	comp=Z,20nm,1.0s						
KSRS	**Korea Array**	**17.43**	**254**	P	**Pn**	**23 39 41.1**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=60,slow=11,SNR=9.7						
KSRS				LR	LR	23 46 45.9	
	comp=Z,215nm,18.8s,baz=58,slow=38						
KSAR	**Wonju Array Be**	**17.46**	**254**	P	**Pn**	**23 39 41.1**	**-1.0**
KSAR	**Wonju Array Be**	**17.46**	**254**	P	**Pn**	**23 39 41.1**	**-1.0**
JNU	**Nakatsue**	**18.12**	**237**	P	**Pn**	**23 39 50.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=80,slow=7.7,SNR=2.8						
JNU				LR	LR	23 47 29.9	
	comp=Z,126nm,20.3s,baz=16,slow=39						
TJN	**Taejon**	**18.37**	**251**	⇓*e*P	**Pn**	**23 39 54.1**	**+0.8**
SEY	**Seymchan**	**18.60**	**5**	*e*P	**P**	**23 39 54.6**	**-0.5**
SEY	**Seymchan**	**18.60**	**5**	⇑*i*P	**P**	**23 39 54.6**	**-0.5**
SEY	**Seymchan**	**18.60**	**5**	P	**P**	**23 39 54.1**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=180,slow=9.7,SNR=7.6						
HIA	**Hailar**	**20.56**	**294**	⇑*e*P	**P**	**23 40 16.9**	**+0.2**
HIA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
YAK	**Yakutsk**	**20.93**	**334**	*e*P	Pn	23 40 24.5	+1.0
YAK				pmax	pmax		
	comp=N,52nm,0.9s						
YAK				pmax	pmax		
	comp=Z,158nm,0.9s						
YAK				pmax	pmax		
	comp=E,26nm,0.9s						
BJT	**Baijiatuau**	**24.67**	**271**	*e*P	**P**	**23 40 58.9**	**+0.5**
	comp=E,13nm,0.7s						
BJT	**Baijiatuau**	**24.67**	**271**	*e*P	**P**	**23 40 58.9**	**+0.5**
BJT				pmax	pmax		
	comp=Z,13nm,0.7s						
BILL	**Bilibino**	**25.29**	**15**	*e*P	**P**	**23 41 03.2**	**-0.6**
BILL	**Bilibino**	**25.29**	**15**	⇑*e*P	**P**	**23 41 03.5**	**-0.3**
BILL				*e*		23 41 39.6	
BILL				pmax	pmax		
	comp=Z,17nm,4.0s						
BILL				MLR	MLR		
	comp=Z,136nm,19.0s						
NJ2	**Nanjing**	**26.62**	**253**	*e*P	**P**	**23 41 19.6**	**+3.5**
NJ2				pmax	pmax		
	comp=Z,23nm,0.7s						
HHC	**Hu-ho-hao-te**	**27.67**	**276**	*e*P	**P**	**23 41 25.3**	**-0.3**
HHC				sP	sP	23 41 43.0	0.0
HHC				S	**S**	**23 45 58.3**	**-6.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,4.1s						
HHC				LR	LR		
	comp=N,160nm,11.3s						
HHC				LR	LR		
	comp=E,210nm,10.7s						
HHC				LR	LR		
	comp=Z,490nm,11.3s						
H11N2	**WAKE ISLAND Hy**	**28.79**	**143**	T	T	00 12 22.7	
	baz=334,slow=76,SNR=776						
H11N1	**WAKE ISLAND Hy**	**28.80**	**143**	T	T	00 12 26.1	
	baz=334,slow=76,SNR=416						
H11N3	**WAKE ISLAND Hy**	**28.80**	**143**	T	T	00 12 22.2	
	baz=334,slow=76,SNR=743						
ULN	**Ulaanbaatar**	**29.05**	**292**	*e*P	**P**	**23 41 37.8**	**-0.1**
	comp=Z,6.1nm,1.2s						
ULN	**Ulaanbaatar**	**29.05**	**292**	*e*P	**P**	**23 41 38.2**	**+0.3**
ULN	**Ulaanbaatar**	**29.05**	**292**	c *i*P	**P**	**23 41 38.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONA1	**Songino Array**	**29.48**	**292**	*e*P	**P**	**23 41 41.3**	**-0.4**
SONM	**Songino Array**	**29.49**	**292**	P	**P**	**23 41 42.1**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=81,slow=7.9,SNR=16						
SONM				LR	LR	23 54 32.9	
	comp=Z,172nm,18.8s,baz=162,slow=38						
H11S1	**WAKE ISLAND Hy**	**29.79**	**145**	T	T	00 13 41.6	
	baz=334,slow=76,SNR=742						
H11S3	**WAKE ISLAND Hy**	**29.80**	**145**	T	T	00 13 40.1	
	baz=334,slow=76,SNR=838						
H11S2	**WAKE ISLAND Hy**	**29.81**	**145**	T	T	00 13 42.9	
	baz=334,slow=76,SNR=542						
XAN	**Xi'an**	**32.51**	**265**	P	**P**	**23 42 08.8**	**+0.4**
XAN				pP	pP	23 42 18.3	-2.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN	**Xi'an**	**32.51**	**265**	*e*P	**P**	**23 42 08.5**	**+0.1**
	comp=Z,0.1nm,0.2s						
XAN	**Xi'an**	**32.51**	**265**	*e*P	**P**	**23 42 08.5**	**+0.1**
ENH	**Enshi**	**34.17**	**259**	*e*P	**P**	**23 42 22.7**	**-0.1**
	comp=Z,8.3nm,0.8s						
GTA	**Gaotai**	**36.55**	**280**	⇑P	**P**	**23 42 44.3**	**+1.0**
GTA				pP	sP	23 42 59.6	-1.6
GTA				sP	pP	23 43 06.4	+11
GTA				PcP	**PcP**	**23 45 07.4**	**+1.4**
GTA				pmax	pmax		
	comp=Z,11nm,0.7s						
GTA				pmax	pmax		
	comp=Z,47nm,7.5s						
GTA				LR	LR		
	comp=N,150nm,17.5s						
GTA				LR	LR		
	comp=E,140nm,16.2s						
GTA				LR	LR		
	comp=Z,110nm,17.1s						
IM3	**Indian Mountai**	**37.26**	**35**	*e*P	**P**	**23 42 48.7**	**-0.2**
KDAK	**Kodiak Island**	**37.73**	**48**	*i* P	**P**	**23 42 53.1**	**+0.2**
KDAK	**Kodiak Island**	**37.73**	**48**	P	**P**	**23 42 52.8**	**-0.1**
	comp=Z,15nm,1.0s,baz=299,slow=13,SNR=3.3						
CAST	**Castle Rocks**	**37.80**	**39**	*e*P	**P**	**23 42 53.7**	**+0.2**
	comp=Z,43nm,2.0s						
CD2	**Chengdu**	**37.86**	**265**	*e*P	**P**	**23 42 53.0**	**-1.5**
GYA	**Guiyang**	**38.45**	**257**	⇑*i*P	**P**	**23 42 59.5**	**0.0**
GYA				pP	sP	23 43 16.3	-0.1
GYA				PP	**PnPn**	**23 44 32.8**	**+2.6**
GYA				S	**S**	**23 48 46.0**	**-5.5**
GYA				sS	sS	23 49 17.6	+6.9
GYA				SS	**SnSn**	**23 51 32.3**	**-8.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,110nm,5.3s						
GYA				LR	LR		
	comp=N,410nm,15.8s						
GYA				LR	LR		
	comp=E,370nm,16.4s						
GYA				LR	LR		
	comp=Z,320nm,16.2s						
TOLK	**Toolik Lake Re**	**39.16**	**31**	*e*P	**P**	**23 43 05.2**	**+0.3**
	comp=Z,4.3nm,0.8s						
COLA	**College**	**39.67**	**37**	*e*P	**P**	**23 43 09.1**	**+0.1**
	comp=Z,4.5nm,0.5s						
COLA	**College**	**39.67**	**37**	*e*P	**P**	**23 43 09.4**	**+0.4**
COLA	**College**	**39.67**	**37**	⇓*e*P	**P**	**23 43 09.4**	**+0.4**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
IL1	**Eielson Array**	**40.08**	**37**	*e*P	**P**	**23 43 11.8**	**-0.7**
ILAR	**Eielson Array**	**40.08**	**37**	P	**P**	**23 43 11.9**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=258,slow=8.2,SNR=23						
ILB	**Eielson Array**	**40.08**	**37**	*e*P	**P**	**23 43 12.4**	**-0.1**
PRP	**Porcupine Dome**	**40.64**	**36**	*e*P	**P**	**23 43 17.0**	**-0.3**
	comp=Z,20nm,1.7s						
DGZ	**Jazzator, Alta**	**41.27**	**300**	⇑*e*P	**P**	**23 43 23.3**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**41.68**	**307**	*i* P	**P**	**23 43 25.7**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**41.68**	**307**	P	**P**	**23 43 25.1**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=79,slow=8.5,SNR=3.6						
ZALV				PcP	**PcP**	**23 45 21.5**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=82,slow=1.9,SNR=7.3						
ZALV				LR	LR	00 01 50.0	
	comp=Z,69nm,19.9s,baz=70,slow=38						
KMI	**Kunming**	**42.03**	**258**	*e*P	**P**	**23 43 30.4**	**+1.1**
	comp=Z,17nm,1.2s						
KMI	**Kunming**	**42.03**	**258**	*e*P	**P**	**23 43 30.4**	**+1.1**
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
WMQ	**Urumqi**	**43.13**	**292**	*e*P	**P**	**23 43 39.0**	**+1.2**
WMQ				pP	pP	23 43 52.3	+2.1
WMQ				sP	sP	23 44 00.5	+4.9
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
WMQ				LR	LR		
	comp=N,170nm,16.3s						
WMQ				LR	LR		
	comp=E,180nm,21.5s						
WMQ				LR	LR		
	comp=Z,160nm,19.3s						
WMQ	**Urumqi**	**43.13**	**292**	*e*P	**P**	**23 43 39.2**	**+1.4**
	comp=Z,8.1nm,0.6s						
WMQ	**Urumqi**	**43.13**	**292**	*e*P	**P**	**23 43 39.2**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
INK	**Inuvik**	**45.08**	**31**	*e*P	**P**	**23 43 53.0**	**+0.1**
	comp=Z,20nm,1.8s						
INK	**Inuvik**	**45.08**	**31**	*e*P	**P**	**23 43 53.0**	**+0.1**
INK				pmax	pmax		
	comp=Z,20nm,1.8s						
INK	**Inuvik**	**45.08**	**31**	P	**P**	**23 43 53.2**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=302,slow=6.5,SNR=10						
MK31	**Makanchi Array**	**45.49**	**298**	*e*P	**P**	**23 43 55.9**	**-0.7**
MK31	**Makanchi Array**	**45.49**	**298**	*e*P	**P**	**23 43 55.9**	**-0.7**
MKAR	**Makanchi Array**	**45.49**	**298**	*e*P	**P**	**23 43 56.0**	**-0.6**
	comp=Z,18nm,0.9s						
MKAR				PcP	**PcP**	**23 45 35.0**	**+0.3**
MKAR	**Makanchi Array**	**45.49**	**298**	P	**P**	**23 43 56.4**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=79,slow=8.7,SNR=38						
MKAR				PcP	**PcP**	**23 45 35.0**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=68,slow=4.1,SNR=3.0						
MKAR				LR	LR	00 04 17.7	
	comp=Z,198nm,18.1s,baz=60,slow=38						
MK01	**Makanchi Array**	**45.49**	**298**	*e*P	**P**	**23 43 55.9**	**-0.7**
MAKZ	**Makanchi**	**45.68**	**298**	*e*P	**P**	**23 43 57.7**	**-0.4**
	comp=Z,2.6nm,0.8s						
MAKZ	**Makanchi**	**45.68**	**298**	*e*P	**P**	**23 43 57.7**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**46.28**	**304**	P	**P**	**23 44 02.9**	**+0.1**
KURK				PcP	**PcP**	**23 45 37.2**	**-0.2**
KURK	**Kurchatov**	**46.28**	**304**	*e*P	**P**	**23 44 04.1**	**+1.4**
KURK	**Kurchatov**	**46.28**	**304**	⇓*e*P	**P**	**23 44 04.1**	**+1.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURBB	**Kurchatov Arra**	**46.37**	**304**	P	**P**	**23 44 02.9**	**-0.5**
	comp=Z,1.8nm,0.2s,baz=70,slow=8.6,SNR=6.6						
KURBB				PcP	**PcP**	**23 45 37.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=83,slow=4.6,SNR=4.1						
SKNT	**Sakolnakorn**	**46.67**	**249**	P	**P**	**23 44 08.4**	**+2.2**
	comp=Z,5.2nm,0.9s						
LSA	**Lhasa**	**47.56**	**272**	*e*P	**P**	**23 44 14.2**	**+0.7**
LSA	**Lhasa**	**47.56**	**272**	*e*P	**P**	**23 44 14.2**	**+0.7**
UTTA	**Uttaradit**	**48.45**	**253**	P	**P**	**23 44 21.4**	**+1.5**
	comp=Z,5.1nm,0.8s						
CMMT	**Chiang Mai**	**48.82**	**255**	P	**P**	**23 44 23.9**	**+1.1**
	comp=Z,11nm,0.8s						
CHTO	**Chiang Mai**	**48.82**	**255**	*e*P	**P**	**23 44 23.3**	**+0.5**
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	**48.82**	**255**	*e*P	**P**	**23 44 23.3**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	**48.82**	**255**	P	**P**	**23 44 24.0**	**+1.2**
	comp=Z,46nm,0.8s						
PBKT	**Sadao Pong**	**48.98**	**251**	*e*P	**P**	**23 44 24.1**	**+0.1**
PBKT	**Sadao Pong**	**48.98**	**251**	P	**P**	**23 44 25.5**	**+1.5**
	comp=Z,9.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**49.06**	**255**	*e*P	**P**	**23 44 25.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**49.06**	**255**	*i* P	**P**	**23 44 25.8**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**49.06**	**255**	P	**P**	**23 44 25.9**	**+1.2**
	comp=Z,3.6nm,0.7s,baz=41,slow=7.2,SNR=23						
CM01	**Chiang Mai Arr**	**49.08**	**255**	*e*P	**P**	**23 44 25.1**	**+0.4**
SRAK	**Srakaew**	**50.09**	**248**	P	**P**	**23 44 31.6**	**-0.9**
	comp=Z,24nm,1.0s						
BVAR	**Borovoye Array**	**50.12**	**309**	P	**P**	**23 44 32.0**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=77,slow=7.7,SNR=7.0						
BVAR				PcP	**PcP**	**23 45 50.9**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=97,slow=4.2,SNR=3.0						
BRVK	**Borovoye**	**50.17**	**310**	*e*P	**P**	**23 44 32.7**	**0.0**
	comp=Z,1.9nm,0.8s						
BRVK	**Borovoye**	**50.17**	**310**	*e*P	**P**	**23 44 32.7**	**0.0**
BRVK	**Borovoye**	**50.17**	**310**	⇓*e*P	**P**	**23 44 32.7**	**0.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
UMPA	**Umpang Tak**	**50.68**	**253**	P	**P**	**23 44 40.5**	**+3.6**
	comp=Z,5.2nm,0.9s,comp=Z,121nm						
UTHA	**Uthaitani**	**50.73**	**252**	P	**P**	**23 44 39.3**	**+2.0**
	comp=Z,3.0nm,0.8s						
OTUK	**Ortayu**	**51.03**	**303**	P	**P**	**23 44 39.8**	**+0.5**
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TKM2	**Tokmak 2**	**51.45**	**296**	P	**P**	**23 44 43.7**	**+1.0**
	SNR=5.1						
USP	**Ospenovka**	**51.99**	**297**	P	**P**	**23 44 47.5**	**+0.9**
	SNR=7.3						
KBK	**Karagaybulak**	**52.00**	**296**	P	**P**	**23 44 47.8**	**+1.0**
	SNR=6.3						
KZA	**Kyzart**	**52.09**	**295**	P	**P**	**23 44 49.5**	**+1.7**
	SNR=9.8						
JIRN	**Jiri**	**52.29**	**274**	*e*P	**P**	**23 44 50.0**	**+0.7**
	comp=Z,42nm,0.5s						
AAK	**Ala-Archa**	**52.30**	**296**	*e*P	**P**	**23 44 48.7**	**-0.3**
	comp=Z,5.6nm,1.1s						
AAK	**Ala-Archa**	**52.30**	**296**	*e*P	**P**	**23 44 49.1**	**+0.1**
AAK	**Ala-Archa**	**52.30**	**296**	⇑*i*P	**P**	**23 44 49.1**	**+0.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	**52.30**	**296**	P	**P**	**23 44 49.6**	**+0.6**
	comp=Z,3.2nm,0.4s,baz=96,slow=5.3,SNR=23						
GUN	**Gumba**	**52.36**	**274**	*e*P	**P**	**23 44 50.3**	**+0.4**
	comp=Z,44nm,0.5s						
RAMN	**Ramite**	**52.41**	**273**	*e*P	**P**	**23 44 50.6**	**+0.5**
	comp=Z,73nm,0.5s						
PHET	**Kaeng Krachan**	**52.50**	**249**	P	**P**	**23 44 53.7**	**+3.2**
	comp=Z,4.7nm,0.8s						
EKS2	**Erkin-Say**	**52.75**	**296**	P	**P**	**23 44 53.2**	**+0.9**
	SNR=6.3						
KSH	**Kashi**	**52.89**	**292**	P	**P**	**23 44 57.8**	**+4.4**
KSH				pP	sP	23 45 17.5	+6.0
KSH				pmax	pmax		
	comp=Z,280nm,4.9s						
PKI	**Pulchoki**	**52.90**	**274**	*e*P	**P**	**23 44 54.2**	**+0.4**
	comp=Z,18nm,0.6s						
PKIN	**Phulchoki**	**52.90**	**274**	*e*P	**P**	**23 44 54.1**	**+0.3**
	comp=Z,12nm,0.5s						
AML	**Almayashu**	**53.07**	**296**	P	**P**	**23 44 51.6**	**-3.4**
	SNR=6.9						
DMN	**Daman**	**53.09**	**274**	*e*P	**P**	**23 44 56.0**	**+0.9**

	comp=Z,36nm,0.6s						
DANN	**Dangsing**	**53.62**	**276**	*e*P	**P**	**23 44 59.9**	**+0.9**
	comp=Z,39nm,0.6s						
MNAS	**Manas**	**53.65**	**297**	P	**P**	**23 45 00.1**	**+1.2**
MNAS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RES	**Resolute Bay**	**53.87**	**17**	*e*P	**P**	**23 44 59.3**	**-0.6**
	comp=Z,5.1nm,0.8s						
RES	**Resolute Bay**	**53.87**	**17**	*e*P	**P**	**23 44 59.3**	**-0.6**
RES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARSB	**Arslanbob**	**53.93**	**295**	*e*P	**P**	**23 45 01.3**	**+0.3**
	comp=Z,16nm,0.8s						
KOLN	**Koldanda**	**54.07**	**275**	*e*P	**P**	**23 45 03.0**	**+0.7**
	comp=Z,32nm,0.9s						
SFK	**Sufi-Kurgan**	**54.27**	**294**	P	**P**	**23 45 03.9**	**+0.3**
SFK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PYUN	**Piuthan**	**54.31**	**276**	*e*P	**P**	**23 45 04.7**	**+0.7**
	comp=Z,21nm,0.7s						
YKA	**Yellowknife Ar**	**54.42**	**35**	P	**P**	**23 45 04.3**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=298,slow=6.8,SNR=30						
YKB5	**Yellowknife Ar**	**54.42**	**35**	*e*P	**P**	**23 45 03.3**	**-0.7**
ARU	**Arti**	**54.77**	**317**	*e*P	**P**	**23 45 05.6**	**-1.0**
	comp=Z,6.1nm,0.5s						
ARU	**Arti**	**54.77**	**317**	*e*P	**P**	**23 45 06.3**	**-0.4**
ARU	**Arti**	**54.77**	**317**	⇓*e*P	**P**	**23 45 06.3**	**-0.4**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BTK	**Batken**	**56.00**	**295**	*e*P	**P**	**23 45 16.5**	**+0.6**
	comp=Z,5.2nm,0.8s						
BTK	**Batken**	**56.00**	**295**	*e*P	**P**	**23 45 16.5**	**+0.6**
BTK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ABKAR	**Akbulak array**	**57.70**	**309**	*e*P	**P**	**23 45 26.8**	**-0.8**
NIL	**Nilore**	**57.91**	**287**	*e*P	**P**	**23 45 29.4**	**-0.1**
NIL	**Nilore**	**57.91**	**287**	*e*P	**P**	**23 45 29.4**	**-0.1**
ARCES	**ARCESS Array B**	**59.05**	**340**	P	**P**	**23 45 35.1**	**-1.7**
	comp=Z,2.5nm,0.8s,baz=39,slow=7.2,SNR=3.5						
KBL	**Kabul**	**60.25**	**291**	*e*P	**P**	**23 45 45.3**	**-0.5**
	comp=Z,15nm,1.1s						
KBL	**Kabul**	**60.25**	**291**	*e*P	**P**	**23 45 45.3**	**-0.5**
KBL				pmax	pmax		
	comp=Z,15nm,1.1s						
NEW	**Newport**	**60.81**	**50**	*e*P	**P**	**23 45 49.3**	**+0.1**
	comp=Z,2.9nm,0.7s						
NEW	**Newport**	**60.81**	**50**	*e*P	**P**	**23 45 49.3**	**+0.1**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WVOR	**Wild Horse Val**	**63.37**	**56**	*e*P	**P**	**23 46 06.1**	**-0.4**
	comp=Z,1.5nm,0.6s						
WVOR	**Wild Horse Val**	**63.37**	**56**	*e*P	**P**	**23 46 06.1**	**-0.4**
WVOR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FFC	**Flin Flon**	**64.29**	**38**	*e*P	**P**	**23 46 12.3**	**+0.1**
	comp=Z,5.8nm,1.0s						
FFC	**Flin Flon**	**64.29**	**38**	*i* P	**P**	**23 46 13.3**	**+1.1**
LRM	**Limekiln Ridge**	**64.83**	**50**	*e*P	**P**	**23 46 12.8**	**-3.5**
FINES	**FINESS Array B**	**64.86**	**334**	*e*P	**P**	**23 46 16.0**	**+0.2**
FINES	**FINESS Array B**	**64.86**	**334**	*i* P	**P**	**23 46 16.1**	**+0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**64.86**	**334**	P	**P**	**23 46 14.9**	**-0.9**
	comp=Z,2.0nm,0.5s,baz=40,slow=7.3,SNR=21						
EGMT	**Eagleton**	**64.89**	**47**	*e*P	**P**	**23 46 16.2**	**-0.1**
	comp=Z,14nm,1.0s						
HLID	**Hailey**	**65.13**	**53**	*e*P	**P**	**23 46 18.4**	**+0.2**
	comp=Z,1.2nm,0.8s						
GEYT	**Alibeck**	**65.31**	**300**	P	**P**	**23 46 19.7**	**+0.5**
	comp=Z,5.1nm,0.6s,baz=41,slow=4.7,SNR=7.9						
GEYT				LR	LR	00 16 42.6	
	comp=Z,57nm,18.6s,baz=345,slow=38						
BOZ	**Bozeman (W)**	**65.42**	**50**	*e*P	**P**	**23 46 20.0**	**0.0**
	comp=Z,4.3nm,0.8s						
BOZ	**Bozeman (W)**	**65.42**	**50**	*e*P	**P**	**23 46 20.0**	**0.0**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRAB	**Tennant Creek**	**65.49**	**195**	*e*P	**P**	**23 46 20.6**	**+0.3**
	comp=Z,5.3nm,0.8s						
WRAB	**Tennant Creek**	**65.49**	**195**	*de*P	**P**	**23 46 20.8**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WB2	**Warramunga Arr**	**65.50**	**195**	*e*P	**P**	**23 46 20.6**	**+0.2**
WRA	**Warramunga Arr**	**65.50**	**195**	P	**P**	**23 46 21.0**	**+0.6**
	comp=Z,4.5nm,0.8s,baz=15,slow=6.9,SNR=34						
WC3	**Warramunga Arr**	**65.51**	**195**	*e*P	**P**	**23 46 20.8**	**+0.3**
	comp=Z,4.8nm,0.8s						
KVN	**Kaiserville**	**65.75**	**59**	*e*P	**P**	**23 46 22.5**	**+0.2**
	comp=Z,3.3nm,0.9s						
KVN				*e*pP	**sP**	**23 46 40.2**	**+0.8**
KVN	**Kaiserville**	**65.75**	**59**	*e*P	**P**	**23 46 22.5**	**+0.2**
KVN				e*PP	**sP**	**23 46 40.3**	**+0.8**
KVN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NV01	**Mina Array Sit**	**66.01**	**59**	*e*P	**P**	**23 46 24.5**	**+0.5**
NV01				*e*pP	**pwP**	**23 46 38.9**	**-1.9**
NVAR	**Mina Array Bea**	**66.01**	**59**	P	**P**	**23 46 24.7**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=278,slow=6.8,SNR=9.8						
GCMT	**Greycliff**	**66.35**	**49**	*e*P	**P**	**23 46 26.2**	**+0.2**
YHH	**Holmes Hill**	**66.36**	**50**	*e*P	**P**	**23 46 26.9**	**+0.7**
	comp=Z,6.1nm,1.1s						
H17A	**Grant Village**	**66.76**	**50**	*e*P	**P**	**23 46 29.4**	**+0.7**
	comp=Z,4.4nm,0.9s						
FXWY	**Fox Creek**	**66.99**	**51**	*e*P	**P**	**23 46 30.1**	**-0.1**
	comp=Z,5.1nm,1.4s						
MOOW	**Moose Ponds**	**67.08**	**51**	*e*P	**P**	**23 46 31.0**	**+0.3**
	comp=Z,5.0nm,1.2s						
VSR	**Storozhevoye**	**67.09**	**320**	*d i*P	**P**	**23 46 29.6**	**-0.7**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
R11A	**Troy Canyon, C**	**67.72**	**58**	*e*P	**P**	**23 46 35.0**	**+0.2**
	comp=Z,2.4nm,0.9s						
HWUT	**Hardware Ranch**	**68.00**	**53**	*e*P	**P**	**23 46 36.3**	**-0.2**
	comp=Z,1.6nm,0.5s						
DUG	**Dugway, Tooele**	**68.19**	**55**	*e*P	**P**	**23 46 37.9**	**+0.2**
	comp=Z,3.0nm,0.9s						
DUG	**Dugway, Tooele**	**68.19**	**55**	*e*P	**P**	**23 46 37.9**	**+0.2**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TPNV	**Topopah Spring**	**68.21**	**59**	*e*P	**P**	**23 46 38.2**	**+0.3**
	comp=Z,5.0nm,0.9s						
TPNV	**Topopah Spring**	**68.21**	**59**	*e*P	**P**	**23 46 38.2**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BW06	**Boulder Array**	**68.38**	**51**	*e*P	**P**	**23 46 39.3**	**+0.4**
	comp=Z,3.4nm,1.0s						
PD31	**Pinedale Array**	**68.38**	**51**	*e*P	**P**	**23 46 39.0**	**+0.1**
PDAR	**Pinedale Array**	**68.38**	**51**	*e*P	**P**	**23 46 38.8**	**-0.1**
PDAR	**Pinedale Array**	**68.38**	**51**	P	**P**	**23 46 39.0**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=270,slow=1.5,SNR=9.5						
AS01	**Alice Springs**	**69.20**	**195**	*e*P	**P**	**23 46 44.3**	**+0.5**
AS31	**Alice Springs**	**69.21**	**195**	*e*P	**P**	**23 46 45.9**	**+2.0**
	comp=Z,1.4nm,1.0s						
ASAR	**Alice Springs**	**69.21**	**195**	P	**P**	**23 46 45.2**	**+1.3**
	comp=Z,2.5nm,0.7s,baz=12,slow=6.1,SNR=32						
NB2	**NORSAR Subarra**	**69.43**	**340**	P	**P**	**23 46 43.7**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.43**	**340**	P	**P**	**23 46 43.8**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=32,slow=6.6,SNR=20						
NORES	**NORESS Array B**	**69.61**	**339**	P	**P**	**23 46 48.5**	**+2.6**
NORES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
LCMT	**Little Creek M**	**70.00**	**58**	*e*P	**P**	**23 46 49.5**	**+0.5**
	comp=Z,7.1nm,1.1s						
ULM	**Lac du Bonnet**	**70.08**	**38**	P	**P**	**23 46 48.0**	**-1.0**
ULM	**Lac du Bonnet**	**70.08**	**38**	P	**P**	**23 46 48.0**	**-1.0**
	comp=Z,2.1nm,0.5s,baz=335,slow=6.7,SNR=6.6						
KIV	**Kislovodsk**	**70.31**	**313**	*e*P	**P**	**23 46 51.0**	**+0.3**
	comp=Z,12nm,0.8s						
KIV	**Kislovodsk**	**70.31**	**313**	⇓*i*P	**P**	**23 46 52.9**	**+2.2**
KIV	**Kislovodsk**	**70.31**	**313**	*e*P	**P**	**23 46 52.0**	**+1.3**
KIV	**Kislovodsk**	**70.31**	**313**	*e*P	**P**	**23 46 52.0**	**+1.3**
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV				MLR	MLR		
	comp=Z,64nm,18.0s						
KBZ	**Khabaz**	**70.36**	**312**	P	**P**	**23 46 51.1**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=70,slow=5.0,SNR=12						
KBZ				LR	LR	00 22 21.5	
	comp=Z,78nm,19.1s,baz=30,slow=40						
RSSD	**Black Hills**	**70.45**	**47**	*e*P	**P**	**23 46 50.8**	**-0.9**
	comp=Z,3.7nm,0.9s						
RSSD	**Black Hills**	**70.45**	**47**	*e*P	**P**	**23 46 50.8**	**-0.9**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZEI	**Tsey**	**70.46**	**311**	*e*P	**P**	**23 46 50.2**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TBLG	**Delisi**	**70.72**	**310**	*e*P	**P**	**23 46 53.1**	**+0.1**
	comp=Z,7.7nm,0.7s						
TBLG	**Delisi**	**70.72**	**310**	*e*P	**P**	**23 46 53.2**	**+0.1**
TBLG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
U15A	**North Rim**	**70.96**	**58**	*e*P	**P**	**23 46 55.1**	**+0.2**
	comp=Z,3.4nm,0.9s						
PV17	**East Wray Mesa**	**71.70**	**54**	*e*P	**P**	**23 46 59.7**	**+0.4**
	comp=Z,7.3nm,0.8s						
GNI	**Garni**	**71.80**	**309**	*e*P	**P**	**23 46 59.2**	**-0.7**
	comp=Z,14nm,0.6s						
GNI	**Garni**	**71.80**	**309**	⇑*e*P	**P**	**23 47 00.0**	**+0.2**
GNI				pmax	pmax		
	comp=Z,30nm,1.6s						
AKASG	**Malin Array Be**	**71.82**	**325**	P	**P**	**23 46 58.9**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=40,slow=6.6,SNR=6.3						
KIEV	**Kiev**	**71.83**	**325**	*e*P	**P**	**23 46 58.9**	**-0.6**
	comp=Z,2.9nm,0.5s						
KIEV	**Kiev**	**71.83**	**325**	⇓*i*P	**P**	**23 46 59.3**	**-0.3**
KIEV	**Kiev**	**71.83**	**325**	*e*P	**P**	**23 46 58.5**	**-1.1**
KIEV	**Kiev**	**71.83**	**325**	⇑*i*P	**P**	**23 46 58.5**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AK11	**Malin Array Si**	**71.86**	**325**	*e*P	**P**	**23 46 59.9**	**+0.1**
X16A	**Lo Mia Camp, P**	**72.82**	**59**	*e*P	**P**	**23 47 06.5**	**+0.4**
	comp=Z,3.6nm,0.8s						
SDCO	**Great Sand Dun**	**74.05**	**53**	*e*P	**P**	**23 47 13.2**	**-0.2**
	comp=Z,0.6nm,0.6s						
ECSD	**EROS Data Cent**	**74.49**	**43**	*e*P	**P**	**23 47 15.8**	**+0.3**
	comp=Z,18nm,1.7s						
TUC	**Tucson**	**74.65**	**60**	*e*P	**P**	**23 47 16.5**	**-0.1**
	comp=Z,2.1nm,0.6s						
TUC	**Tucson**	**74.65**	**60**	*e*P	**P**	**23 47 16.5**	**-0.1**
TUC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KWP	**Kalwaria Pacla**	**75.27**	**327**	*e*P	**P**	**23 47 20.1**	**+0.2**
	comp=Z,83nm,0.7s						
KWP	**Kalwaria Pacla**	**75.27**	**327**	*e*P	**P**	**23 47 20.1**	**+0.2**
KWP				pmax	pmax		
	comp=Z,83nm,0.7s						
ANMO	**Albuquerque**	**75.45**	**55**	*e*P	**P**	**23 47 20.9**	**-0.4**
	comp=Z,1.0nm,0.7s						
ANMO	**Albuquerque**	**75.45**	**55**	*e*P	**P**	**23 47 21.0**	**-0.4**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LEOM	**Leova**	**75.47**	**322**	⇓*i*P	**P**	**23 47 21.1**	**+0.1**
LEOM	**Leova**	**75.47**	**322**	P	**P**	**23 47 21.1**	**+0.1**
BUR08	**Bucovina Ar. S**	**75.86**	**325**	*e*P	**P**	**23 47 22.8**	**-0.6**
BUR04	**Bucovina Ar. S**	**75.87**	**325**	*e*P	**P**	**23 47 23.0**	**-0.4**
BURAR	**Bucovina Array**	**75.87**	**325**	⇓*i*P	**P**	**23 47 23.8**	**+0.4**
BURAR	**Bucovina Array**	**75.87**	**325**	P	**P**	**23 47 23.8**	**+0.4**
OJC	**Ojcow**	**75.89**	**329**	*e*P	**P**	**23 47 23.2**	**-0.2**
	comp=Z,9.2nm,1.1s						
OJC	**Ojcow**	**75.89**	**329**	*e*P	**P**	**23 47 23.2**	**-0.2**
OJC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BIZ	**Bicaz**	**76.03**	**324**	⇑*i*P	**P**	**23 47 24.6**	**+0.3**
TESR	**Tescani**	**76.14**	**323**	⇓*i*P	**P**	**23 47 25.2**	**+0.4**
TLCR		**76.21**	**321**	⇑*i*P	**P**	**23 47 25.9**	**+0.7**
TLCR		**76.21**	**321**	P	**P**	**23 47 25.9**	**+0.7**
STKA	**Stephens Creek**	**76.29**	**187**	P	**P**	**23 47 26.6**	**+1.0**
	comp=Z,0.4nm,0.2s,baz=355,slow=8.5,SNR=4.4						
SCHQ	**Schefferville**	**76.47**	**20**	P	**P**	**23 47 27.3**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=337,slow=7.7,SNR=3.5						
TRPA	**Tarpa**	**76.55**	**326**	⇑*i*P	**P**	**23 47 27.8**	**+0.7**
LANS	**Liptovska Anna**	**76.89**	**329**	*e*P	**P**	**23 47 30.2**	**+1.1**
LANS	**Liptovska Anna**	**76.89**	**329**	*e*P	**P**	**23 47 30.2**	**+1.1**
UPC	**Upice**	**77.00**	**331**	*e*P	**P**	**23 47 30.3**	**+0.7**
UPC	**Upice**	**77.00**	**331**	*e*P	**P**	**23 47 30.3**	**+0.7**
DPC	**Dobruska-Polom**	**77.02**	**331**	*e*P	**P**	**23 47 30.7**	**+0.9**
DPC	**Dobruska-Polom**	**77.02**	**331**	*e*P	**P**	**23 47 30.7**	**+0.9**
MORC	**Moravsky Berou**	**77.07**	**330**	*e*P	**P**	**23 47 30.0**	**-0.1**
	comp=Z,6.0nm,0.9s						
MORC	**Moravsky Berou**	**77.07**	**330**	⇑*i*P	**P**	**23 47 30.5**	**+0.4**
MORC	**Moravsky Berou**	**77.07**	**330**	*e*P	**P**	**23 47 30.0**	**-0.1**
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MORC	**Moravsky Berou**	**77.07**	**330**	*e*P	**P**	**23 47 30.5**	**+0.4**
DOPR	**Dopca**	**77.10**	**323**	⇓*i*P	**P**	**23 47 31.5**	**+1.2**
MLR	**Muntele Rosu**	**77.24**	**323**	⇓*i*P	**P**	**23 47 32.9**	**+1.6**
MLR	**Muntele Rosu**	**77.24**	**323**	P	**P**	**23 47 32.8**	**+1.5**
CLL	**Collm**	**77.31**	**333**	*e*P	**P**	**23 47 30.6**	**-0.7**
	comp=Z,8.4nm,0.7s						
CLL	**Collm**	**77.31**	**333**	⇓*i*P	**P**	**23 47 31.1**	**-0.2**
	comp=Z,9.0nm,0.6s						
CLL	**Collm**	**77.31**	**333**	*e*P	**P**	**23 47 30.6**	**-0.7**
CLL	**Collm**	**77.31**	**333**	*e*P	**P**	**23 47 30.6**	**-0.7**
CLL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PVCC	**Panska Ves**	**77.47**	**332**	*e*P	**P**	**23 47 33.9**	**+1.7**
PVCC	**Panska Ves**	**77.47**	**332**	*e*P	**P**	**23 47 33.9**	**+1.7**
DRGR		**77.56**	**325**	⇓*i*P	**P**	**23 47 33.3**	**+0.4**
DRGR		**77.56**	**325**	P	**P**	**23 47 33.3**	**+0.4**
VOIR		**77.67**	**323**	⇑*i*P	**P**	**23 47 34.7**	**+1.1**
VOIR		**77.67**	**323**	P	**P**	**23 47 34.7**	**+1.1**
VYHS	**Vyhne**	**77.67**	**329**	*e*P	**P**	**23 47 34.1**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VYHS	**Vyhne**	**77.67**	**329**	*e*P	**P**	**23 47 34.1**	**+0.6**
VRAC	**Vranov**	**77.80**	**330**	⇓*i*P	**P**	**23 47 35.2**	**+1.0**
VRAC	**Vranov**	**77.80**	**330**	P	**P**	**23 47 35.2**	**+1.0**
VRAC	**Vranov**	**77.80**	**330**	*e*P	**P**	**23 47 34.7**	**+0.5**
EKA	**Eskdalemuir Ar**	**77.83**	**344**	P	**P**	**23 47 33.7**	**-0.5**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ESK	**Eskdalemuir**	**77.85**	**344**	*i* P	**P**	**23 47 34.8**	**+0.5**
ARR	**Arges**	**77.90**	**324**	⇑*i*P	**P**	**23 47 36.3**	**+1.4**
GOPC	**GO Pecny, Ondr**	**77.92**	**332**	*e*PCP	**PcP**	**23 47 44.4**	**-0.1**
PRU	**Pruhonice**	**77.94**	**332**	*e*P	**P**	**23 47 35.6**	**+0.7**
PRU	**Pruhonice**	**77.94**	**332**	*e*P	**P**	**23 47 35.6**	**+0.7**
BRTR	**Keskin Array B**	**78.05**	**315**	*i* P	**P**	**23 47 36.4**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRTR	**Keskin Array B**	**78.05**	**315**	P	**P**	**23 47 36.0**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=105,slow=2.4,SNR=9.9						
KRUC	**Moravsky**	**78.08**	**330**	*e*P	**P**	**23 47 36.0**	**+0.3**
KHC	**Kasperske Hory**	**79.00**	**332**	*e*P	**P**	**23 47 40.4**	**-0.4**
	comp=Z,2.4nm,0.6s						
KHC	**Kasperske Hory**	**79.00**	**332**	*e*P	**P**	**23 47 41.1**	**+0.3**
KHC				*e*PCP	**PcP**	**23 47 50.9**	**+1.7**
KHC	**Kasperske Hory**	**79.00**	**332**	*e*P	**P**	**23 47 40.4**	**-0.4**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GEC2	**GERESS Array S**	**79.20**	**332**	*e*P	**P**	**23 47 41.3**	**-0.7**
	comp=Z,17nm,1.8s						
GEC2	**GERESS Array S**	**79.20**	**332**	*e*P	**P**	**23 47 41.3**	**-0.7**
GEC2				pmax	pmax		
	comp=Z,17nm,1.8s						
GERES	**GERESS Array B**	**79.20**	**332**	P	**P**	**23 47 41.7**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=34,slow=5.5,SNR=18						
GEA0	**GERESS Array S**	**79.21**	**332**	*e*P	**P**	**23 47 41.4**	**-0.6**
CONA	**Conrad Observa**	**79.23**	**330**	*e*P	**P**	**23 47 43.0**	**+0.9**
	comp=Z,2.3nm,0.6s						
GRFO	**Grafenberg**	**79.28**	**334**	*e*P	**P**	**23 47 42.3**	**0.0**
	comp=Z,5.0nm,0.6s						
GRFO	**Grafenberg**	**79.28**	**334**	*e*P	**P**	**23 47 42.3**	**0.0**
GRFO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MDVR	**Moldovita**	**79.60**	**325**	⇑*i*P	**P**	**23 47 44.2**	**0.0**
MOA	**Molln**	**79.86**	**331**	*e*P	**P**	**23 47 46.2**	**+0.7**
	comp=Z,1.2nm,0.5s						
SOKA	**Soboth**	**80.59**	**330**	*i* P	**P**	**23 47 50.2**	**+0.6**
	comp=Z,3.0nm,0.9s						
VTS	**Vitosha**	**80.71**	**323**	⇓*i*P	**P**	**23 47 51.3**	**+1.0**
TXAR	**Lajitas Array**	**81.09**	**58**	P	**P**	**23 47 52.8**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=300,slow=4.0,SNR=28						
TXAR				LR	LR	00 19 56.2	
	comp=Z,13nm,21.8s,baz=0.0,slow=33						
MOTA	**Moosalm**	**81.37**	**333**	*i* P	**P**	**23 47 54.0**	**+0.3**
	comp=Z,2.3nm,0.6s						
BFO	**Black Forest**	**81.38**	**335**	*i* P	**P**	**23 47 51.4**	**-2.2**
SQTA	**Sankt Quirin**	**81.44**	**332**	*i* PcP	**P**	**23 47 55.4**	**+1.3**
	comp=Z,1.1nm,0.4s						
PMOR	**Pomariorio Ree**	**82.28**	**120**	*e*T	T	01 18 53.6	
	comp=Z,16nm,0.2s						
MIAR	**Mount Ida**	**82.95**	**48**	*e*P	**P**	**23 48 02.3**	**+0.2**
	comp=Z,27nm,1.7s						
MIAR	**Mount Ida**	**82.95**	**48**	*e*P	**P**	**23 48 02.3**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,27nm,1.7s						
PPT2	**Papeete2**	**83.23**	**123**	*e*LR	LR	00 13 57.2	
	comp=Z,78nm,24.5s						
TBI	**Tubuai**	**87.74**	**126**	*e*T	T	01 25 49.9	
	comp=Z,3.0nm,0.2s						
ESDC	**Sonseca Array**	**92.79**	**340**	P	**P**	**23 48 49.2**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=0.7,slow=4.0,SNR=2.4						
TORD	**Torodi Ar. Bea**	**115.45**	**324**	PKP	**PKiKP**	**23 54 18.6**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=5.3,slow=2.1,SNR=2.5						
LCO	**Las Campanas**	**144.96**	**77**	*e*PKPdf	**PKPab**	**23 55 13.8**	**+0.1**
LCO	**Las Campanas**	**144.96**	**77**	*e*PKIKP	**PKPab**	**23 55 13.8**	**+0.1**
SNAA	**Sanae**	**149.56**	**197**	PKPbc	**PKPbc**	**23 55 24.8**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=327,slow=8.0,SNR=3.5						

LJU 14 23:44:56.4, 45°.52N×14°.31E, h11km, ML0.1, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDS	**Knezji Dol**	**0.05**	**78**	*i* Pg	Pg	23 44 58.7	+0.1
KNDS				*i* Sg	Sg	23 45 00.2	0.0
	comp=Z,1.0nm,0.1s						
SKDS	**Skadanscina**	**0.21**	**278**	*i* Pg	Pg	23 45 00.8	-0.1
SKDS				*i* Sg	Sg	23 45 04.3	+0.4
	comp=Z,1.0nm,0.1s						
CEY	**Cerknica**	**0.23**	**20**	*i* Pg	Pg	23 45 01.1	-0.2
CEY				*i* Sg	Sg	23 45 04.9	+0.3
	comp=Z,0.0nm,0.1s						
GBRS	**Gornja Briga**	**0.35**	**88**	*i* Pg	Pg	23 45 03.6	+0.2
	comp=Z,1.0nm,0.1s						
JAVS	**Javornik**	**0.41**	**335**	*i* Sg	Sg	23 45 11.0	+0.9

IDC ***14*** *23:57:58.4±0.6, 0°.42S×98°.51E, h0km, mb4.4/16, mb1 4.5/18, mb1mx4.4/35, mbtmp4.4/18, ML4.1/2, MS3.5/10, Ms1 3.5/10, ms1mx3.2/33, Error ellipse: s-maj=27.5km s-min=13.4km az=60.0*

DJA ***14*** *23:58:00.3±0.3, 0°S±3°×9°8E±°, h10km, M4.8/16, mB5.6/2, mb4.8/11, MLv4.8/16, Mw(mB)5.1/2*

ISCJB ***14*** *23:58:00.9±0.3, 0°.44S±0°.04×98°.45E±0°.04, h32km, mb4.6/57, MS3.7/17, Error ellipse: s-maj=7.1km s-min=3.6km az=143.8*

MOS ***14*** *23:58:00.3±1.0, 0°.44S×98°.53E, h27km, mb4.8/22, Error ellipse: s-maj=13.6km s-min=6.2km az=102.9*

NEIC ***14*** *23:58:01.7±1.8, 0°.47S×98°.50E, h25km±12km, mb4.6/22, Error ellipse: s-maj=8.4km s-min=3.7km az=54.0*

KLM ***14*** *23:58:05.3, 0°.75S×98°.60E, h35km, mb4.7*

ISC 14 23:58:02.8±0.4**, 0°.45S**±0°.04×**98°.35E**±0°.06**, h32km, n160, σ1°.80**/163**, mb4.7**/57**, MS3.7**/17**, 7C-9D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	**Pulau Batu**	**0.40**	**350**	P	**Pb**	**23 58 08.1**	**-3.6**
PBSI				S	**Sb**	**23 58 13.2**	**-4.6**
SISI	**Saibi**	**1.14**	**140**	P	**Pn**	**23 58 20.5**	**-2.1**
MNSI	**Mandailing Nat**	**1.74**	**45**	P	**Pn**	**23 58 27.7**	**-3.1**
GSI	**Gunungsitoli**	**1.90**	**336**	*e*Pn	**Pn**	**23 58 33.9**	**+0.8**
GSI	**Gunungsitoli**	**1.90**	**336**	P	**Pn**	**23 58 33.2**	**+0.2**
PDSI	**Padang**	**2.16**	**102**	P	**Pn**	**23 58 33.9**	**-2.7**
BKNI	**Bangkinang**	**2.79**	**74**	*e*Pn	**Pn**	**23 58 43.7**	**-1.6**
BKNI	**Bangkinang**	**2.79**	**74**	P	**Pn**	**23 58 43.6**	**-1.6**
PPSI	**Pulau Pagai**	**2.84**	**144**	P	**Pn**	**23 58 46.6**	**+0.8**
SDSI	**Sungai Dareh**	**3.11**	**99**	P	**Pb**	**23 58 54.8**	**-2.7**
PSI	**Prapat**	**3.28**	**10**	*e*P	**Pn**	**23 58 48.8**	**-3.2**
PSI	**Prapat**	**3.28**	**10**	Pn	**Pn**	**23 58 48.9**	**-3.1**
	5.9nm,0.3s,baz=180,slow=9.0,SNR=19						
KRJI	**Kerinci**	**3.51**	**118**	P	**Pn**	**23 58 54.8**	**-0.5**
TSI	**Tuntungan**	**3.93**	**3**	P	**Pb**	**23 59 07.5**	**-3.8**
KCSI	**Kotacane, Aceh**	**3.98**	**352**	P	**Pn**	**23 59 01.2**	**-0.5**
MASI	**Maura Aman, Be**	**4.72**	**125**	P	**Pn**	**23 59 11.6**	**-0.2**
FRIM	**Kepong**	**4.91**	**42**	P	**Pn**	**23 59 17.5**	**+3.1**
KGM	**Kluang**	**5.54**	**64**	P	**Pn**	**23 59 24.4**	**+1.4**
IPM	**Ipoh**	**5.57**	**29**	*e*Pn	**Pn**	**23 59 24.2**	**+0.7**
IPM	**Ipoh**	**5.57**	**29**	P	**Pn**	**23 59 24.6**	**+1.1**
LHMI	**Lhok Sumawe**	**5.81**	**346**	*e*Pn	**Pn**	**23 59 26.1**	**-0.7**
MYKOM	**Kota Tinggi**	**5.93**	**68**	*e*Pn	**Pn**	**23 59 27.3**	**-1.1**
MYKOM	**Kota Tinggi**	**5.93**	**68**	P	**Pn**	**23 59 30.5**	**+2.1**
MNAI	**Manna**	**6.02**	**130**	*e*Pn	**Pn**	**23 59 27.6**	**-2.1**
KULM	**Kulim**	**6.14**	**22**	*e*Pn	**Pn**	**23 59 30.4**	**-0.9**
KULM	**Kulim**	**6.14**	**22**	P	**Pn**	**23 59 34.3**	**+3.0**
LHSI	**Lahat**	**6.16**	**123**	P	**Pn**	**23 59 31.4**	**-0.2**
BSI	**Banda Aceh**	**6.64**	**333**	P	**Pn**	**23 59 38.5**	**+0.2**
MDSI	**Maura Dua**	**7.07**	**125**	P	**Pn**	**23 59 43.3**	**-0.8**
	36nm,0.6s,0.1nm						
LWLI	**Liwa**	**7.29**	**129**	P	Pb	23 59 58.1	-11
KTGM	**Kuala Trenggan**	**7.46**	**40**	P	**Pn**	**23 59 50.8**	**+1.3**
KASI	**Kota Agung**	**7.94**	**130**	P	**Pn**	**23 59 54.6**	**-1.5**
	48nm,0.8s,0.2nm						
CISI	**Cisompet, Garu**	**11.79**	**127**	P	**Pn**	**00 00 48.3**	**-0.5**
CM01	**Chiang Mai Arr**	**18.76**	**2**	*e*P	**Pn**	**00 02 19.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**18.79**	**2**	P	**P**	**00 02 20.0**	**+0.3**
	0.6nm,0.3s,baz=188,slow=12,SNR=13						
CHTO	**Chiang Mai**	**19.15**	**2**	*e*P	**P**	**00 02 22.4**	**-1.1**
	7.4nm,0.8s						
CHTO	**Chiang Mai**	**19.15**	**2**	*e*P	**P**	**00 02 22.5**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MPSI	**Mapaga**	**21.56**	**88**	P	**P**	**00 02 54.2**	**+4.4**
BNSI	**Bone**	**22.08**	**101**	P	**P**	**00 02 58.7**	**+3.3**
BKSI	**Bulukumba**	**22.27**	**103**	P	**P**	**00 02 57.4**	**0.0**
MRSI	**Marisa**	**23.61**	**88**	P	**P**	**00 03 12.0**	**+0.9**
BRDH	**Bariadhala**	**23.89**	**345**	LR	LR	00 15 08.6	
	comp=Z,101nm,18.5s,baz=164,slow=43						
KMI	**Kunming**	**25.77**	**9**	P	**P**	**00 03 32.0**	**+0.9**
KMI				pP	pP	00 03 35.8	-4.5
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,100nm,5.2s						
KMI				LR	LR		
	comp=N,180nm,16.9s						
KMI				LR	LR		
	comp=E,200nm,11.9s						
KMI				LR	LR		
	comp=Z,180nm,12.9s						
SHL	**Shillong**	**26.61**	**347**	*e*P	**P**	**00 03 41.0**	**+2.4**
H08S2	**Diego Garcia H**	**26.75**	**254**	T	T	00 31 20.2	
	baz=76,slow=75,SNR=27						
H08S3	**Diego Garcia H**	**26.75**	**254**	T	T	00 31 28.1	
	baz=76,slow=75,SNR=525						
H08S1	**Diego Carcia H**	**26.77**	**254**	T	T	00 31 25.7	
	baz=76,slow=75,SNR=4.6						
GYA	**Guiyang**	**27.92**	**16**	⇑*i*P	**P**	**00 03 50.4**	**+0.1**
GYA				PP	**PnPn**	**00 04 43.3**	**+5.4**
GYA				S	**S**	**00 08 30.1**	**-2.2**
GYA				SS	**SnSn**	**00 09 57.6**	**+10**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,110nm,4.3s						
GYA				LR	LR		
	comp=N,410nm,16.0s						
GYA				LR	LR		
	comp=E,380nm,16.3s						
GYA				LR	LR		
	comp=Z,370nm,16.3s						
DAV	**Davao City (W)**	**28.17**	**74**	LR	LR	00 16 04.9	
	comp=Z,96nm,19.6s,baz=272,slow=39						
LSA	**Lhasa**	**30.76**	**348**	*e*P	**P**	**00 04 16.6**	**+0.8**
	comp=Z,4.7nm,0.4s						
LSA	**Lhasa**	**30.76**	**348**	*e*P	**P**	**00 04 16.6**	**+0.8**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
CD2	**Chengdu**	**31.60**	**9**	*e*P	**P**	**00 04 23.5**	**+0.7**
FITZ	**Fitzroy Crossi**	**32.04**	**125**	*e*P	**P**	**00 04 25.1**	**-1.7**
	comp=Z,7.8nm,0.9s						
ENH	**Enshi**	**32.34**	**18**	*e*P	**P**	**00 04 28.0**	**-1.2**
XAN	**Xi'an**	**35.71**	**15**	P	**P**	**00 04 57.6**	**-0.9**
XAN				pP	pP	00 05 01.5	-6.4
XAN				pmax	pmax		
	comp=Z,38nm,0.8s						
XAN				pmax	pmax		
	comp=Z,180nm,3.7s						
XAN				LR	LR		
	comp=E,170nm,9.6s						
XAN				LR	LR		
	comp=Z,140nm,17.4s						
XAN	**Xi'an**	**35.71**	**15**	*e*P	**P**	**00 04 57.6**	**-0.9**
XAN	**Xi'an**	**35.71**	**15**	*e*P	**P**	**00 04 57.6**	**-0.9**
LZH	**Lanzhou**	**36.70**	**7**	*e*P	**P**	**00 05 07.4**	**+0.3**
LZH				pP	pP	00 05 10.9	-5.6
LZH				sP	sP	00 05 12.8	-7.6
LZH				*e*PP	**PnPn**	**00 06 32.5**	**+1.4**
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						

LZH				pmax	pmax		
	comp=Z,78nm,5.2s						
LZH				LR	LR		
	comp=N,380nm,13.0s						
LZH				LR	LR		
	comp=E,380nm,13.4s						
LZH				LR	LR		
	comp=Z,500nm,16.7s						
NJ2	**Nanjing**	**37.70**	**29**	*e*P	**P**	**00 05 15.5**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	**Gaotai**	**39.69**	**2**	*e*P	**P**	**00 05 32.5**	**+0.3**
GTA				pP	pP	00 05 36.8	-4.8
GTA				sP	sP	00 05 39.6	-5.9
GTA				S	**S**	**00 11 36.0**	**+2.2**
GTA				sS	pS	00 11 44.1	-0.5
GTA				SS	**SS**	**00 14 25.8**	**-4.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,95nm,7.9s						
GTA				LR	LR		
	comp=N,100nm,17.1s						
GTA				LR	LR		
	comp=E,140nm,19.0s						
GTA				LR	LR		
	comp=Z,160nm,16.8s						
WRA	**Warramunga Arr**	**40.20**	**121**	P	**P**	**00 05 34.5**	**-2.1**
	comp=Z,6.6nm,0.5s,baz=302,slow=8.9,SNR=70						
WRA				PcP	**PcP**	**00 07 40.9**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=318,slow=2.5,SNR=5.3						
WRAB	**Tennant Creek**	**40.20**	**121**	*e*P	**P**	**00 05 35.0**	**-1.6**
	comp=Z,6.4nm,0.5s						
WRAB	**Tennant Creek**	**40.20**	**121**	*d i*P	**P**	**00 05 34.4**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s						
WB2	**Warramunga Arr**	**40.21**	**121**	*e*P	**P**	**00 05 34.4**	**-2.3**
FORT	**Forrest**	**41.28**	**140**	*e*P	**P**	**00 05 45.2**	**-0.1**
	comp=Z,15nm,0.9s						
NIL	**Nilore**	**41.31**	**328**	*e*P	**P**	**00 05 46.5**	**+0.9**
	comp=Z,7.7nm,0.8s						
NIL	**Nilore**	**41.31**	**328**	*e*P	**P**	**00 05 46.5**	**+0.9**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AS31	**Alice Springs**	**41.49**	**126**	*e*P	**P**	**00 05 46.3**	**-0.9**
	comp=Z,2.8nm,0.8s						
ASAR	**Alice Springs**	**41.49**	**126**	P	**P**	**00 05 46.0**	**-1.2**
	comp=Z,6.6nm,0.6s,baz=303,slow=7.8,SNR=69						
ASAR				PcP	**PcP**	**00 07 45.4**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=308,slow=2.6,SNR=8.2						
AS01	**Alice Springs**	**41.53**	**126**	*e*P	**P**	**00 05 45.6**	**-1.9**
HHC	**Hu-ho-hao-te**	**42.82**	**15**	*e*P	**P**	**00 05 58.8**	**+0.9**
HHC				pP	pP	00 06 03.3	-4.1
HHC				S	**S**	**00 12 17.9**	**-2.3**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.1s						
HHC				LR	LR		
	comp=N,160nm,12.8s						
HHC				LR	LR		
	comp=E,200nm,12.8s						
HHC				LR	LR		
	comp=Z,260nm,11.9s						
KSH	**Kashi**	**44.74**	**335**	P	P	00 06 18.8	+5.5
KSH				pmax	pmax		
	comp=Z,200nm,4.4s						
WMQ	**Urumqi**	**45.09**	**349**	*e*P	**P**	**00 06 15.8**	**-0.2**
WMQ				pP	pP	00 06 22.1	-3.4
WMQ				sP	sP	00 06 26.0	-3.4
WMQ				pmax	pmax		
	comp=Z,44nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,440nm,7.7s						
WMQ				LR	LR		
	comp=N,81nm,19.3s						
WMQ				LR	LR		
	comp=E,130nm,20.3s						
WMQ				LR	LR		
	comp=Z,72nm,16.1s						
NRN	**Naryn**	**46.34**	**337**	*e*P	**P**	**00 06 27.2**	**+0.9**
	comp=Z,7.7nm,0.9s						
NRN	**Naryn**	**46.34**	**337**	*e*P	**P**	**00 06 27.2**	**+0.9**
NRN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSAR	**Wonju Array Be**	**46.54**	**33**	P	**P**	**00 06 26.6**	**-0.9**
KSAR	**Wonju Array Be**	**46.54**	**33**	P	**P**	**00 06 26.6**	**-0.9**
KSRS	**Korea Array**	**46.57**	**33**	P	**P**	**00 06 26.6**	**-1.1**
	comp=Z,3.9nm,0.8s,baz=222,slow=7.8,SNR=5.1						
KSRS				LR	LR	00 28 23.7	
	comp=Z,74nm,18.2s,baz=207,slow=39						
KS01	**Wonju Array Si**	**46.57**	**33**	*e*P	**P**	**00 06 27.4**	**-0.3**
BTK	**Batken**	**47.50**	**331**	*e*P	**P**	**00 06 36.2**	**+1.2**
	comp=Z,4.4nm,0.9s						
BTK	**Batken**	**47.50**	**331**	*e*P	**P**	**00 06 36.3**	**+1.2**
BTK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARSB	**Arslanbob**	**47.51**	**334**	*e*P	**P**	**00 06 36.0**	**+0.8**
	comp=Z,15nm,1.3s						
AAK	**Ala-Archa**	**47.96**	**336**	*e*P	**P**	**00 06 39.8**	**+1.1**
	comp=Z,1.5nm,0.5s						
AAK	**Ala-Archa**	**47.96**	**336**	⇑*e*P	**P**	**00 06 41.1**	**+2.4**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	**Songino Array**	**48.59**	**7**	P	**P**	**00 06 44.3**	**+0.9**
	comp=Z,4.2nm,0.5s,baz=190,slow=8.7,SNR=28						
SONM				LR	LR	00 30 00.3	
	comp=Z,76nm,19.8s,baz=194,slow=40						
SONA1	**Songino Array**	**48.61**	**7**	*e*P	**P**	**00 06 43.4**	**-0.1**
ULN	**Ulaanbaatar**	**48.71**	**8**	*e*P	**P**	**00 06 43.9**	**-0.5**
	comp=Z,6.4nm,0.7s						
ULN	**Ulaanbaatar**	**48.71**	**8**	⇓*i*P	**P**	**00 06 45.2**	**+0.9**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MK01	**Makanchi Array**	**49.09**	**345**	*e*P	**P**	**00 06 47.8**	**+0.7**
MK31	**Makanchi Array**	**49.11**	**345**	*e*P	**P**	**00 06 47.4**	**+0.1**
MK31	**Makanchi Array**	**49.11**	**345**	*e*P	**P**	**00 06 47.4**	**+0.1**
MKAR	**Makanchi Array**	**49.11**	**345**	P	**P**	**00 06 48.1**	**+0.9**
	comp=Z,5.9nm,0.6s,baz=156,slow=8.0,SNR=115						
MKAR				LR	LR	00 32 40.9	
	comp=Z,32nm,18.1s,baz=138,slow=42						
MAKZ	**Makanchi**	**49.20**	**345**	*e*P	**P**	**00 06 49.0**	**+1.0**
	comp=Z,5.6nm,0.9s						
MAKZ	**Makanchi**	**49.20**	**345**	*e*P	**P**	**00 06 49.0**	**+1.0**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CTAO	**Charters Tower**	**50.75**	**116**	*e*P	**P**	**00 06 58.5**	**-1.6**
CTAO	**Charters Tower**	**50.75**	**116**	*e*P	**P**	**00 06 58.6**	**-1.6**
ZAK	**Zakamensk**	**50.81**	**4**	*e*P	**P**	**00 06 59.4**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
DGZ	**Jazzator, Alta**	**50.83**	**351**	*d i*P	**P**	**00 07 02.1**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**51.41**	**132**	*e*P	**P**	**00 07 04.3**	**-0.6**
	comp=Z,1.9nm,0.6s						
STKA	**Stephens Creek**	**51.41**	**132**	*e*P	**P**	**00 07 04.3**	**-0.6**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
STKA	**Stephens Creek**	**51.41**	**132**	P	**P**	**00 07 05.3**	**+0.4**
	comp=Z,6.8nm,0.6s,baz=311,slow=7.0,SNR=27						
STKA				LR	LR	00 30 33.1	
	comp=Z,64nm,21.7s,baz=347,slow=38						
MOY	**Mondy**	**51.97**	**2**	*e*P	**P**	**00 07 09.8**	**+0.9**
TLY	**Talaya**	**52.13**	**4**	*e*P	**P**	**00 07 09.6**	**-0.3**
	comp=Z,14nm,0.8s						
TLY	**Talaya**	**52.13**	**4**	*ce*P	**P**	**00 07 10.9**	**+0.9**
MJAR	**Matsushiro Arr**	**52.15**	**41**	LR	LR	00 29 08.7	
	comp=Z,18nm,20.6s,baz=155,slow=36						
USA0B	**Ussuriysk Arra**	**53.60**	**30**	*e*P	**P**	**00 07 19.6**	**-1.3**
	comp=Z,20nm,1.4s						
USRK	**Ussuriysk Ar.**	**53.60**	**30**	P	**P**	**00 07 20.3**	**-0.6**
	comp=Z,9.2nm,1.0s,baz=262,slow=2.2,SNR=6.7						
USRK				LR	LR	00 31 21.1	
	comp=Z,53nm,18.8s,baz=189,slow=37						
KURK	**Kurchatov**	**53.67**	**345**	*e*P	**P**	**00 07 21.0**	**-0.3**
KURK	**Kurchatov**	**53.67**	**345**	*e*P	**P**	**00 07 21.0**	**-0.3**
ZAA0	**Zalesovo Array**	**55.36**	**350**	*e*P	**P**	**00 07 33.3**	**-0.2**
	comp=Z,9.8nm,0.9s						
ZALV	**Zalesovo Beam**	**55.36**	**350**	*e*P	**P**	**00 07 33.6**	**+0.1**
ZALV	**Zalesovo Beam**	**55.36**	**350**	*i* P	**P**	**00 07 34.0**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZALV	**Zalesovo Beam**	**55.36**	**350**	P	**P**	**00 07 34.0**	**+0.5**
	comp=Z,8.2nm,0.7s,baz=184,slow=6.2,SNR=49						
NVS	**Novosibirsk**	**56.49**	**350**	*i* P	**P**	**00 07 42.5**	**+0.9**
KLR	**Kul'dur**	**57.22**	**25**	⇑*e*P	**P**	**00 07 45.9**	**-1.0**
BRVK	**Borovoye**	**58.24**	**340**	*e*P	**P**	**00 07 53.8**	**-0.2**
BRVK	**Borovoye**	**58.24**	**340**	⇓*i*P	**P**	**00 07 54.3**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOD	**Bodaibo**	**59.42**	**10**	*e*P	**P**	**00 08 02.4**	**+0.3**
BOD				pmax	pmax		
	comp=Z,16nm,0.9s						
ABKAR	**Akbulak array**	**59.50**	**332**	*e*P	**P**	**00 08 03.0**	**+0.2**
YSS	**Yuzh-Sakhalins**	**61.07**	**33**	⇓*e*P	**P**	**00 08 13.5**	**-0.1**
YSS				pmax	pmax		
	comp=Z,38nm,2.1s						
GNI	**Garni**	**63.27**	**316**	*e*P	**P**	**00 08 29.5**	**+0.8**
GNI	**Garni**	**63.27**	**316**	*e*P	**P**	**00 08 29.5**	**+0.8**
SVE	**Sverdlovsk**	**64.63**	**338**	⇑*e*P	**P**	**00 08 38.1**	**+1.0**
SVE				pmax	pmax		
	comp=Z,11nm,0.8s						
ARU	**Arti**	**65.14**	**337**	*e*P	**P**	**00 08 40.6**	**+0.2**
	comp=Z,5.4nm,0.8s						
ARU	**Arti**	**65.14**	**337**	*c i*P	**P**	**00 08 40.4**	**0.0**
ARU						00 11 01.4	
ARU				S	**S**	**00 17 27.4**	**+6.4**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NEY	**Neytrino**	**65.97**	**319**	⇓*e*P	**P**	**00 08 48.8**	**+2.5**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.4s						
KBZ	**Khabaz**	**66.06**	**319**	P	**P**	**00 08 47.8**	**+1.2**
	comp=Z,3.1nm,0.8s,baz=123,slow=6.5,SNR=6.2						
KIV	**Kislovodsk**	**66.30**	**319**	*e*P	**P**	**00 08 48.8**	**+0.5**
	comp=Z,11nm,1.1s						
KIV	**Kislovodsk**	**66.30**	**319**	*e*P	**P**	**00 08 49.0**	**+0.7**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NRIK	**Noril'sk**	**70.04**	**356**	P	**P**	**00 09 10.9**	**-0.2**
	comp=Z,4.2nm,0.6s,baz=172,slow=4.9,SNR=8.8						
NRIK				LR	LR	00 43 10.1	
	comp=Z,60nm,18.7s,baz=245,slow=39						
LSZ	**Lusaka**	**70.76**	**254**	*e*P	**P**	**00 09 16.4**	**-0.3**
	comp=Z,1.7nm,0.7s						
LSZ	**Lusaka**	**70.76**	**254**	*e*P	**P**	**00 09 16.5**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**71.06**	**313**	P	**P**	**00 09 18.7**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=133,slow=6.8,SNR=8.0						
VSR	**Storozhevoye**	**71.57**	**325**	*e*P	**P**	**00 09 19.4**	**-1.4**
VSR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MA2	**Magadan**	**72.32**	**25**	*e*P	**P**	**00 09 24.2**	**-0.9**
	comp=Z,6.9nm,0.8s						
MA2	**Magadan**	**72.32**	**25**	⇓*e*P	**P**	**00 09 24.8**	**-0.3**
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PRGR	**Permogore**	**73.59**	**337**	*e*P	**P**	**00 09 31.4**	**-1.2**
PRGR				*e**PP	**pP**	**00 09 36.7**	**-5.9**
PRGR				pmax	pmax		
	comp=Z,18nm,0.6s						
SEY	**Seymchan**	**74.82**	**23**	⇓*i*P	**P**	**00 09 39.5**	**-0.2**
KLMR	**Klimovskoe**	**75.72**	**334**	*e*P	**P**	**00 09 43.8**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
KLMR	**Klimovskoe**	**75.72**	**334**	*e*P	**P**	**00 09 43.9**	**-1.0**
KLMR				AMP		00 09 46.9	
	comp=Z,13nm,1.4s						
KIEV	**Kiev**	**77.26**	**322**	*e*P	**P**	**00 09 53.8**	**-0.1**
	comp=Z,1.8nm,0.3s						
KIEV	**Kiev**	**77.26**	**322**	*e*P	**P**	**00 09 53.8**	**-0.1**
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BUR04	**Bucovina Ar. S**	**79.02**	**319**	*e*P	**P**	**00 10 04.9**	**+1.0**
BUR08	**Bucovina Ar. S**	**79.03**	**319**	*e*P	**P**	**00 10 05.1**	**+1.2**
BKZ	**Black Stump Fm**	**80.53**	**130**	*e*P	**P**	**00 10 11.7**	**-0.5**
	comp=Z,17nm,0.9s						
FINES	**FINESS Array B**	**81.98**	**332**	P	**P**	**00 10 20.2**	**+0.9**
	comp=Z,3.4nm,0.5s,baz=104,slow=5.3,SNR=33						
BILL	**Bilibino**	**82.29**	**21**	⇑*e*P	**P**	**00 10 22.3**	**+1.5**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KLNR	**Kaliningrad**	**83.50**	**325**	⇓*e*P	**P**	**00 10 26.8**	**-0.5**
KLNR				pmax	pmax		
	comp=Z,88nm,1.7s						
ARCES	**ARCESS Array B**	**84.46**	**340**	P	**P**	**00 10 33.1**	**+1.1**
	comp=Z,5.2nm,1.0s,baz=92,slow=6.1,SNR=8.1						
GERES	**GERESS Array B**	**86.80**	**319**	P	**P**	**00 10 44.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=89,slow=5.5,SNR=5.0						
NOA	**NORSAR Array B**	**88.99**	**331**	P	**P**	**00 10 54.4**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=80,slow=7.3,SNR=3.3						
NOA				LR	LR	00 52 55.3	
	comp=Z,9.7nm,18.1s,baz=10.0,slow=37						
QSPA	**South Pole Qui**	**89.51**	**180**	P	**P**	**00 10 58.4**	**+1.8**
	comp=Z,0.6nm,0.5s,baz=286,slow=3.7,SNR=4.7						
NVAR	**Mina Array Bea**	**129.41**	**37**	PKP	**PKiKP**	**00 17 10.7**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=324,slow=2.8,SNR=2.9						
MNTX	**Cornudas Mount**	**141.66**	**34**	*e*PKPdf	**PKPdf**	**00 17 31.7**	**0.0**
TXAR	**Lajitas Array**	**144.41**	**34**	PKP	PKPbc	00 17 35.9	+0.8
	comp=Z,1.3nm,0.9s,baz=339,slow=0.8,SNR=9.7						
CPUP	**Villa Florida**	**144.52**	**220**	*e*PKPdf	**PKPdf**	**00 17 36.6**	**-0.1**
CPUP	**Villa Florida**	**144.52**	**220**	*e*PKIKP	**PKPdf**	**00 17 36.7**	**-0.1**
CPUP	**Villa Florida**	**144.52**	**220**	PKP	**PKPdf**	**00 17 36.8**	**0.0**
	comp=Z,3.4nm,0.9s,baz=90,slow=5.6,SNR=9.0						
JCT	**Junction City**	**145.51**	**28**	*e*PKPbc	**PKPab**	**00 17 38.7**	**0.0**
JCT	**Junction City**	**145.51**	**28**	*e*PKIKP	**PKPab**	**00 17 38.7**	**0.0**

ISCJB ***14*** *23:58:08.5±0.5, 30°.87S±0°.04×179°.2W±0°.1, h250^{km}, mb3.9/5, Error ellipse: s-maj=14.6km s-min=4.4km az=14.4*

WEL ***14*** *23:58:11.0±0.9, 31°S±8°×17°8W±2°1, h223^{km}±12^{km}*

IDC ***14*** *23:58:11.2±2.8, 30°.72S×179°.19W, h259^{km}±25^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.7/26, mbtmp4.4/7, Error ellipse: s-maj=35.4km s-min=21.5km az=160.0*

ISC 14 23:58:08.9±0.8, **30°.99S**±0°.07×**179°.0W**±0°.1, **h250**^{km}**, n58,** σ1^{s}.**64**/68, **mb4.0**/5, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.97**	**29**	P	**Pn**	**23 58 52.1**	**+1.0**
GLKZ				S	**S**	**23 59 23.0**	**-1.3**
MXZ	**Matakaoa Point**	**6.92**	**198**	P	**Pn**	**23 59 51.4**	**+3.0**
MXZ				S	**S**	**00 01 11.1**	**+2.8**
GRZ	**Great Barrier**	**6.98**	**220**	P	**Pn**	**23 59 51.5**	**+2.2**
KUZ	**Kuaotunu**	**7.22**	**216**	P	Pn	23 59 57.4	+5.2
HAZ	**Te Kaha**	**7.25**	**201**	P	**Pn**	**23 59 54.0**	**+1.5**
HAZ				S	**S**	**00 01 16.9**	**+1.0**
PKGZ	**Pakihiroa**	**7.29**	**198**	P	**Pn**	**23 59 53.8**	**+0.7**
PKGZ				S	**S**	**00 01 17.9**	**+1.0**
PUZ	**Puketiti**	**7.41**	**197**	P	**Pn**	**23 59 55.2**	**+0.5**
PUZ				S	**S**	**00 01 20.0**	**+0.3**
WCZ	**Waipu Caves**	**7.42**	**227**	P	Pn	00 00 00.8	+6.0
RUGZ	**Raukumara Rang**	**7.47**	**201**	P	**Pn**	**23 59 58.1**	**+2.5**
RUGZ				S	**S**	**00 01 21.2**	**-0.1**
TWGZ	**Tauwhareparae**	**7.58**	**198**	P	**Pn**	**23 59 59.1**	**+2.2**
TWGZ				S	**S**	**00 01 24.7**	**+1.0**
WHRZ	**Whale Island**	**7.61**	**205**	P	Pn	00 00 02.5	+5.3
CNGZ	**Carnagh Statio**	**7.82**	**196**	P	**Pn**	**00 00 00.7**	**+0.9**
MWZ	**Matawai**	**7.86**	**200**	P	**Pn**	**00 00 00.4**	**0.0**
MWZ				S	**S**	**00 01 29.4**	**-0.7**
TKGZ	**Te Karaka**	**7.87**	**198**	P	**Pn**	**23 59 59.7**	**-0.7**
TKGZ				S	**S**	**00 01 30.3**	**+0.1**
URZ	**Urewera**	**7.92**	**203**	P	**Pn**	**00 00 05.4**	**+4.3**
	2.7nm,0.3s,baz=272,slow=4.2,SNR=12						
URZ	**Urewera**	**7.92**	**203**	P	**Pn**	**00 00 01.5**	**+0.4**
URZ				S	**S**	**00 01 30.2**	**-1.2**
RAGZ	**Rawiri**	**8.04**	**200**	P	**Pn**	**00 00 03.3**	**+0.6**
RAGZ				S	**S**	**00 01 35.1**	**+0.7**
MUGZ	**Murupara**	**8.23**	**204**	P	**Pn**	**00 00 06.2**	**+1.2**
MUGZ				S	**S**	**00 01 39.5**	**+0.8**
SNGZ	**Shannon Statio**	**8.33**	**200**	P	**Pn**	**00 00 06.0**	**-0.2**
SNGZ				S	**S**	**00 01 40.8**	**-0.1**
BKZ	**Black Stump Fm**	**8.95**	**203**	P	**Pn**	**00 00 17.3**	**+3.2**
HIZ	**Hauiti**	**9.04**	**212**	P	**P**	**00 00 21.5**	**-1.0**
MCHZ	**McNeill Hill**	**9.13**	**201**	P	**Pn**	**00 00 19.3**	**+2.9**
KRVZ	**Karewarewa**	**9.19**	**207**	P	**Pn**	**00 00 19.3**	**+2.0**
KWHZ	**Kaweka Forest**	**9.20**	**203**	P	**P**	**00 00 21.9**	**-2.5**
NGZ	**Ngauruhoe**	**9.28**	**207**	P	**Pn**	**00 00 21.9**	**+3.5**
FWVZ	**Far West T-bar**	**9.37**	**207**	P	**Pn**	**00 00 20.6**	**+1.0**
FWVZ	**Far West T-bar**	**9.37**	**207**	P	**Pn**	**00 00 20.6**	**+1.0**
BHHZ	**Black Hill Sta**	**9.38**	**204**	P	**Pn**	**00 00 22.2**	**+2.5**
KAHZ	**Kahuranaki**	**9.40**	**200**	P	**Pn**	**00 00 18.3**	**-1.5**
TRVZ	**Turoa**	**9.41**	**207**	P	**Pn**	**00 00 22.6**	**+2.5**
TSZ	**Takapari Road**	**9.93**	**203**	P	**Pn**	**00 00 26.7**	**+0.2**
DVHZ	**Dannevirke**	**10.08**	**202**	P	**Pn**	**00 00 24.5**	**-3.8**
PRWZ	**Pori Road**	**10.37**	**202**	P	**Pn**	**00 00 34.4**	**+2.4**
BFZ	**Birch Farm**	**10.40**	**200**	P	**Pn**	**00 00 29.7**	**-2.7**
HOWZ	**Holdsworth Sta**	**10.83**	**203**	P	**Pn**	**00 00 37.1**	**-0.7**
OGWZ	**Otaki Gorge**	**10.88**	**204**	P	**Pn**	**00 00 37.9**	**-0.4**
TMWZ	**Te Maipa**	**10.90**	**201**	P	**Pn**	**00 00 37.5**	**-1.2**
KIW	**Kapiti Island**	**11.01**	**205**	P	**Pn**	**00 00 38.2**	**-1.8**
DUWZ	**D'Urville Isla**	**11.34**	**208**	P	**Pn**	**00 00 43.7**	**-0.4**
TCW	**Tory Channel**	**11.55**	**206**	P	**Pn**	**00 00 45.3**	**-1.4**
TUWZ	**Tuamarina**	**11.86**	**207**	P	**Pn**	**00 00 50.6**	**0.0**
QRZ	**Quartz Range**	**11.96**	**213**	P	**Pn**	**00 00 52.7**	**+0.8**
THZ	**Tophouse**	**12.56**	**209**	P	**Pn**	**00 00 58.6**	**-0.8**
KHZ	**Kahutara**	**12.87**	**206**	P	**Pn**	**00 01 01.4**	**-1.5**
DZM	**Mont Dzumac**	**15.74**	**301**	P	**Pn**	**00 01 36.1**	**-2.0**
	0.9nm,0.3s,baz=125,slow=17,SNR=7.8						
STKA	**Stephens Creek**	**33.50**	**258**	P	**P**	**00 04 26.9**	**+2.0**
	4.8nm,0.7s,baz=102,slow=11,SNR=13						
ASAR	**Alice Springs**	**42.21**	**268**	P	**P**	**00 05 37.5**	**-0.2**
	1.6nm,0.5s,baz=104,slow=7.7,SNR=20						
ASAR				ScP	**ScP**	**00 10 52.8**	**-0.6**
	0.3nm,0.6s,baz=120,slow=4.0,SNR=4.9						
WRA	**Warramunga Arr**	**43.25**	**273**	P	**P**	**00 05 45.5**	**-0.6**
	4.6nm,0.6s,baz=111,slow=7.7,SNR=21						
PETK	**Petropavlovsk-**	**86.17**	**346**	P	**P**	**00 10 21.2**	**-0.3**
	2.7nm,0.7s,baz=157,slow=7.9,SNR=4.7						
NVAR	**Mina Array Bea**	**89.27**	**43**	P	**P**	**00 10 38.1**	**+1.3**
	0.9nm,0.8s,baz=222,slow=8.7,SNR=5.8						
MKAR	**Makanchi Array**	**117.48**	**310**	PKP	**PKPdf**	**00 16 24.2**	**-0.4**
	0.2nm,0.4s,baz=197,slow=1.4,SNR=5.9						
ARCES	**ARCESS Array B**	**138.97**	**347**	PKhKP	PKPpre	00 16 58.6	
	3.5nm,0.8s,baz=27,slow=2.2,SNR=3.8						
FINES	**FINESS Array B**	**145.39**	**339**	PKPbc	**PKPbc**	**00 17 16.4**	**-0.2**
	18nm,0.7s,baz=57,slow=3.3,SNR=67						
NB2	**NORSAR Subarra**	**149.19**	**350**	PKP	**PKPbc**	**00 17 27.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=17,slow=4.1						
NOA	**NORSAR Array B**	**149.19**	**350**	PKPbc	**PKPbc**	**00 17 27.3**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=15,slow=4.2,SNR=6.6						
AKASG	**Malin Array Be**	**151.23**	**321**	PKPbc	**PKiKP**	**00 17 32.5**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=53,slow=2.6,SNR=9.0						
BRTR	**Keskin Array B**	**152.10**	**297**	PKPbc	**PKiKP**	**00 17 34.7**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=142,slow=4.7,SNR=5.3						
GERES	**GERESS Array B**	**159.72**	**335**	PKPab	**PKPab**	**00 18 17.3**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=44,slow=4.2,SNR=3.8						

NNC ***15*** *00:04:30.9±0.4, 42°.78N×76°.84E, h0^{km}, mb2.3, mpv2.2, Error ellipse: s-maj=3.7km s-min=1.7km az=165.0*

SOME ***15*** *00:04:31.5, 42°.80N×76°.85E, h10^{km}*

KRNET 15 00:04:31.3±0.1, **42°.80N**×**76°.87E, h17**^{km}**, mb2.2, 15C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.25**	**14**	P	Pg	00 04 36.8	-0.5
	2.8nm,0.1s						
TNSS				S	Sg	00 04 40.5	-0.7
	19nm,0.2s						
TNSS	**Tian-Shan**	**0.25**	**14**	*e*P	Pg	00 04 36.8	-0.4
	baz=14						
TNSS				*e*S	Sg	00 04 40.6	-0.7
	baz=14						
TNSS	**Tian-Shan**	**0.25**	**14**	*e*P	Pg	00 04 36.8	-0.5
	2.8nm,0.1s						
TNSS				*e*S	Sg	00 04 40.5	-0.7
	19nm,0.2s						
IZV	**Izvestkoviy**	**0.30**	**322**	P	Pg	00 04 37.8	-0.2
	4.2nm,0.1s						
IZV				S	Sg	00 04 42.4	-0.2
	12nm,0.2s						
IZV	**Izvestkoviy**	**0.30**	**322**	*e*P	Pg	00 04 37.8	-0.2
	baz=22						
IZV				*e*S	Sg	00 04 42.3	-0.2
	baz=22						
IZV	**Izvestkoviy**	**0.30**	**322**	*e*P	Pg	00 04 37.8	-0.2
	4.2nm,0.1s						
IZV				*e*S	Sg	00 04 42.2	-0.3
	12nm,0.2s						
MDOK	**Medeo**	**0.39**	**20**	Pg	Pg	00 04 39.0	-0.4
	1.8nm,0.3s						
MDOK				Lg	Lg	00 04 44.2	
	7.2nm,0.2s						
MDOK	**Medeo**	**0.39**	**20**	*e*P	Pg	00 04 39.0	-0.5
	baz=20						
MDOK				*e*S	Sg	00 04 44.1	-0.9
	baz=20						
MDOK	**Medeo**	**0.39**	**20**	*e*P	Pg	00 04 39.0	-0.4
	1.8nm,0.3s						
MDOK				*e*S	Sg	00 04 44.1	-0.8
	7.2nm,0.2s						
KOTS	**Kotyrbulak**	**0.47**	**22**	P	Pg	00 04 40.8	-0.2
	1.0nm,0.1s						
KOTS				S	Sg	00 04 47.4	0.0
	31nm,0.4s						
KOTS	**Kotyrbulak**	**0.47**	**22**	*e*P	Pg	00 04 40.8	-0.2
	baz=22						
KOTS				*e*S	Sg	00 04 47.4	0.0
	baz=22						
KOTS	**Kotyrbulak**	**0.47**	**22**	*e*P	Pg	00 04 40.8	-0.2
	1.0nm,0.1s						
KOTS				*e*S	Sg	00 04 47.4	0.0
	31nm,0.4s						
KDJ	**Kajisay**	**0.70**	**161**	⇑*i*P	Pg	00 04 45.0	-0.2
	baz=60						
KDJ				⇑*i*S	Sg	00 04 54.4	-0.2
	baz=60						
KST	**Kastek**	**0.71**	**291**	P	Pg	00 04 45.0	-0.3
	3.7nm,0.3s						
KST				S	Sg	00 04 54.4	-0.3
	4.9nm,0.3s						
KST	**Kastek**	**0.71**	**291**	*e*P	Pg	00 04 45.0	-0.2
	baz=91						
KST				*e*S	Sg	00 04 54.4	-0.3
	baz=91						
KST	**Kastek**	**0.71**	**291**	*e*P	Pg	00 04 45.0	-0.3
	3.7nm,0.3s						
KST				*e*S	Sg	00 04 54.4	-0.3
	4.9nm,0.3s						
ULHL	**Ulahol**	**0.72**	**220**	⇑*i*P	Pg	00 04 45.1	-0.3
	baz=20						
ULHL				⇑*i*S	Sg	00 04 54.4	-0.6
	baz=20						
BOOM	**Boomskoye usch**	**0.75**	**246**	⇑*i*P	Pg	00 04 45.7	-0.3
	baz=46						
BOOM				⇑*i*S	Sg	00 04 55.6	-0.4
	baz=46						
DGS	**Degeres**	**0.92**	**299**	P	Pb	00 04 48.8	-0.1
	1.1nm,0.2s						
DGS				S	Sb	00 05 00.9	+0.1
	3.8nm,0.2s						
DGS	**Degeres**	**0.92**	**299**	*e*P	Pb	00 04 48.8	-0.1
	baz=0.0						
DGS				*e*S	Sb	00 05 00.9	+0.1
	baz=0.0						
DGS	**Degeres**	**0.92**	**299**	*e*P	Pb	00 04 48.8	-0.1
	1.1nm,0.2s						
DGS				*e*S	Sb	00 05 00.9	+0.1
	3.8nm,0.2s						
KTBS	**Karatobe**	**0.93**	**352**	P	Pb	00 04 48.9	-0.1
	1.1nm,0.2s						
KTBS				S	Sb	00 05 01.1	+0.1
	4.3nm,0.2s						
KTBS	**Karatobe**	**0.93**	**352**	*e*P	Pb	00 04 48.9	-0.1
	baz=44						
KTBS				*e*S	Sb	00 05 01.1	+0.1
	baz=44						
KTBS	**Karatobe**	**0.93**	**352**	*e*P	Pb	00 04 48.9	-0.1
	1.1nm,0.2s						
KTBS				*e*S	Sb	00 05 01.1	+0.1
	4.3nm,0.2s						
TKM2	**Tokmak 2**	**0.94**	**278**	⇓P	Pb	00 04 47.9	-1.4
	0.6nm,0.7s						
TKM2				⇓S	Sg	00 05 02.0	-0.1
	1.2nm,0.3s						
TKM2	**Tokmak 2**	**0.94**	**278**	⇑*i*P	Pb	00 04 49.4	+0.1
	baz=78						
TKM2				⇑*i*S	Sg	00 05 02.0	-0.1
	baz=78						
KUU	**Kurty**	**1.16**	**341**	P	Pg	00 04 53.7	-0.1
	1.0nm,0.1s						
KUU				S	Sg	00 05 09.3	+0.3
	2.7nm,0.2s						
KUU	**Kurty**	**1.16**	**341**	*e*P	Pg	00 04 53.7	-0.1
	baz=41						
KUU				*e*S	Sg	00 05 09.3	+0.3
	baz=41						
KUU	**Kurty**	**1.16**	**341**	*e*P	Pg	00 04 53.7	-0.1
	1.0nm,0.1s						
KUU				*e*S	Sg	00 05 09.3	+0.3
	2.7nm,0.2s						

SATY	**Saty** 1.2nm,0.3s	**1.16**	**76**	P	Pg	00 04 53.5	-0.3
SATY	1.4nm,0.1s			S	Sg	00 05 09.0	0.0
SATY	**Saty** 0.2nm,0.1s	**1.16**	**76**	*e*P	Pg	00 04 53.5	-0.3
SATY	1.2nm,0.1s			*e*S	Sg	00 05 09.0	0.0
TARG	**Taragay, Kyrgy** baz=47	**1.27**	**147**	⇓*i*P	Pn	00 04 54.8	+0.1
TARG	baz=47			⇓*i*S	Sn	00 05 11.7	+0.1
AAK	**Ala-Archa** 0.7nm,0.5s	**1.75**	**266**	⇑Pn	Pb	00 05 02.4	-0.8
AAK	1.3nm,0.7s			⇑Sn	Sg	00 05 26.8	-1.1
USP	**Ospenovka** baz=86	**1.80**	**286**	⇑*i*P	Pb	00 05 04.7	+0.9
USP	baz=86			⇑*i*S	Sg	00 05 28.1	-1.1
PDGK	**Podgornoye** 0.3nm,0.3s	**2.00**	**74**	Pg	Pg	00 05 08.9	-0.8
PDGK	0.7nm,0.4s			Lg	Lg	00 05 35.6	
PDGK	**Podgornoye** 0.9nm,0.8s	**2.00**	**74**	⇑Pn	Pn	00 05 05.6	+1.2
PDGK	1.1nm,0.5s			⇓Sn	Sg	00 05 34.1	-1.5
PDGK	**Podgornoye** baz=74	**2.00**	**74**	⇓*i*P	Pb	00 05 07.3	0.0
PDGK	baz=74			⇓*i*S	Sb	00 05 33.1	+1.2
ARLS	**Aral** baz=45	**2.10**	**244**	⇑*i*P	Pb	00 05 08.3	-0.8
ARLS	baz=45			⇑*i*S	Sb	00 05 34.9	-0.1

IDC 15 00:10:09.6±1.9**, 7°.73S×128°.25E, h0^{km}, mb3.3**/1**, mb1 3.7**/4**, mb1mx3.5**/27**, mbtmp3.6**/4**, ML3.7**/3**, Error ellipse: s-maj=53.0km s-min=31.2km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata** 6.6nm,0.3s,baz=63,slow=4.5,SNR=3.0	**5.16**	**241**	Pn	Pn	00 11 28.6	+0.3
BATI	4.5nm,0.3s,baz=310,slow=20,SNR=2.0			Sn	Sn	00 12 22.2	-6.3
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=327,slow=13,SNR=20	**13.50**	**155**	Pn	Pn	00 13 22.8	+0.2
WRA	0.3nm,0.3s,baz=334,slow=22,SNR=8.6			Sn	Sn	00 15 46.2	-7.2
ASAR	**Alice Springs** 0.2nm,0.3s,baz=342,slow=12,SNR=11	**16.75**	**162**	Pn	Pn	00 14 05.5	-0.3
MKAR	**Makanchi Array** 0.3nm,1.0s,baz=119,slow=5.6,SNR=2.2	**67.90**	**328**	P	P	00 21 10.1	0.0

SJA 15 00:23:57.7±0.7**, 26°.05S×66°.06W, h236^{km}**±12^{km}**, ML3.2, MW3.7, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.42**	**21**	*i* P	Pn	00 24 34.8	+0.5
SLA				*i* S	S	00 25 01.8	-1.1
SLA	comp=Z,158nm,0.9s			IAML		00 25 02.4	
CYA	**Choya**	**2.39**	**175**	*i* P	Pn	00 24 42.7	-0.1
CYA				*i* S	S	00 25 17.0	-1.4
CYA	comp=Z,65nm,0.4s			IAML		00 25 18.2	
ACLC	**CERRO LA CRUZ**	**3.45**	**193**	*i* P	Pn	00 24 54.9	+0.3
AGUA	**GUANDACOL**	**4.04**	**212**	*i* P	Pn	00 25 02.0	+0.6
APLL	**PUNTA DE LOS L**	**4.35**	**185**	*i* P	Pn	00 25 06.0	+1.0
APLL	comp=Z,14nm,0.8s			IAML		00 25 21.1	

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*IDC **15** 00:24:38.3±1.2, 11°.43S×165°.53E, h0^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.8/33, mbtmp3.8/9, ML3.9/1, Error ellipse: s-maj=39.0km s-min=22.8km az=133.0*

*ISCJB **15** 00:24:40.4±0.8, 11°.6S±0°.1×165°.5E±0°.2, h24^{km}, mb3.7/7, Error ellipse: s-maj=22.2km s-min=16.2km az=15.5*

ISC 15 00:24:42.1±0.9**, 11°.5S**±0°.1×**165°.5E**±0°.2**, h24^{km}, n15, σ0^s.92**/10**, mb3.6**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 0.8nm,0.3s,baz=190,slow=20,SNR=6.9	**10.58**	**175**	Pn	**Pn**	**00 27 12.5**	**+0.1**
CTA	**Charters Tower** 3.3nm,0.8s,baz=77,slow=14,SNR=3.0	**20.41**	**243**	P	**P**	**00 29 18.4**	**+0.7**
H11S2	**WAKE ISLAND Hy** baz=192,slow=74	**29.79**	**2**	T	T	01 00 54.0	
H11S3	**WAKE ISLAND Hy** baz=192,slow=74	**29.80**	**2**	T	T	01 00 54.5	
H11S1	**WAKE ISLAND Hy** baz=192	**29.81**	**2**	T	T	01 00 52.8	
H11N1	**WAKE ISLAND Hy** baz=182,slow=76	**31.01**	**2**	T	T	01 02 26.1	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76	**31.02**	**3**	T	T	01 02 30.4	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76	**31.03**	**3**	T	T	01 02 28.2	
WRA	**Warramunga Arr** 1.8nm,0.7s,baz=82,slow=9.0,SNR=24	**31.14**	**250**	P	**P**	**00 30 58.8**	**-0.4**
WRA	0.3nm,1.1s,baz=85,slow=1.8,SNR=2.8			PcP	**PcP**	**00 33 53.9**	**-0.4**
ASAR	**Alice Springs** 0.5nm,0.6s,baz=74,slow=9.1,SNR=5.3	**32.41**	**244**	P	**P**	**00 31 09.3**	**-1.2**
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=125,slow=4.5,SNR=2.3	**72.08**	**294**	P	**P**	**00 36 06.3**	**+1.4**
SONM	**Songino Array** 0.4nm,0.9s,baz=139,slow=8.3,SNR=3.1	**78.88**	**324**	P	**P**	**00 36 43.2**	**-0.3**
ILAR	**Eielson Array** 0.4nm,0.5s,baz=237,slow=5.1,SNR=11	**83.98**	**19**	P	**P**	**00 37 09.1**	**-0.9**
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=76,slow=6.1,SNR=2.6	**93.68**	**317**	P	**P**	**00 37 56.6**	**-0.2**
PDAR	**Pinedale Array** 0.1nm,0.4s,baz=263,slow=7.2,SNR=2.1	**94.00**	**47**	P	**P**	**00 37 59.4**	**+0.8**

SJA 15 00:28:49.8±0.5**, 31°.25S×68°.33W, h107^{km}**±2^{km}**, ML3.4, MW3.8, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.14**	**238**	*i* P	Pn	00 29 05.3	+0.6
RTLL				*i* S	Sn	00 29 16.7	+0.8
RTLL	comp=Z,2μm,0.4s			IAML		00 29 18.1	
SJA	**San Juan**	**0.34**	**215**	*i* P	Pn	00 29 06.3	+0.9
SJA	comp=Z,11μm,0.2s			AMPG		00 29 06.8	
SJA	comp=Z,24μm,0.2s			AMSG		00 29 18.7	
AMOG	**MOGNA**	**0.34**	**336**	*i* P	Pn	00 29 06.5	+1.0
AMOG				*i* S	Sn	00 29 18.1	+0.9
CFA	**Coronel Fontan**	**0.36**	**167**	*i* P	Pn	00 29 06.2	+0.6
CFA				*i* S	Sn	00 29 18.0	+0.7
RTCV	**Cerro Valdivia**	**0.63**	**196**	*i* P	Pn	00 29 08.0	+0.6
ACCO	**Cerro Coronel**	**0.92**	**316**	*i* P	Pn	00 29 11.4	+1.2
RTLS	**Leoncito**	**0.99**	**236**	*i* P	Pn	00 29 12.0	+1.1
RTLS	comp=Z,482nm,0.2s			IAML		00 29 29.3	
ACDV	**Cuesta del Vie**	**1.27**	**328**	*i* P	Pn	00 29 15.2	+1.2
ACDV	comp=Z,464nm,0.2s			IAML		00 29 15.4	
AUSP	**Uspallata**	**1.32**	**223**	*i* P	Pn	00 29 15.6	+1.0
AUSP				*i* S	Sn	00 29 35.3	+2.0
ASAL	**Salagasta**	**1.40**	**198**	*i* P	Pn	00 29 16.4	+1.1
ASAL				*i* S	Sn	00 29 36.2	+1.6
ASAL				IAML		00 29 36.6	
ACAN	**Cantantal**	**1.41**	**137**	*i* P	Pn	00 29 16.6	+1.3
AROD	**Rodeo**	**1.46**	**318**	*i* P	Pn	00 29 17.7	+1.4
ARCO	**CERRO ARCO**	**1.66**	**198**	*i* P	Pn	00 29 19.7	+1.1
ARCO				*i* S	Sn	00 29 41.7	+1.2
ARCO	comp=Z,882nm,0.7s			IAML		00 29 43.8	
APLL	**PUNTA DE LOS L**	**1.77**	**62**	*i* P	Pn	00 29 21.0	+1.1
APLL				*i* S	Sn	00 29 43.8	+1.1
APLL	comp=Z,180nm,0.2s			IAML		00 29 46.0	
MRA	**San Martin**	**2.51**	**118**	*i* P	Pn	00 29 30.4	+1.0

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*ISCJB **15** 00:53:38.1±0.8, 10°.8S±0°.1×164°.9E±0°.1, h10^{km}, mb3.9/9, MS3.2/1, Error ellipse: s-maj=21.7km s-min=14.1km az=17.3*

*IDC **15** 00:53:38.5±1.1, 10°.63S×164°.83E, h0^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.9/27, mbtmp3.9/11, ML4.0/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/18, Error ellipse: s-maj=37.9km s-min=18.8km az=124.0*

ISC 15 00:53:39.4±0.8**, 10°.81S**±0°.09×**165°.0E**±0°.2**, h10^{km}, n19, σ1^s.52**/12**, mb3.9**/9**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara** comp=Z,246nm,19.1s,baz=140,slow=40	**5.12**	**285**	LR	LR	00 56 59.2	
DZM	**Mont Dzumac** 0.9nm,0.3s,baz=329,slow=20,SNR=7.7	**11.29**	**173**	Pn	**Pn**	**00 56 22.5**	**+1.5**
DZM	0.2nm,0.3s,baz=116,slow=23,SNR=1.8			Sn	**Sn**	**00 58 24.7**	**-2.7**
CTA	**Charters Tower** 4.9nm,0.9s,baz=59,slow=14,SNR=2.6	**20.23**	**241**	P	Pn	00 58 16.8	0.0
H11S2	**WAKE ISLAND Hy** baz=183,slow=76,SNR=35	**29.16**	**3**	T	T	01 30 07.9	
H11S3	**WAKE ISLAND Hy** baz=183,slow=76,SNR=18	**29.16**	**3**	T	T	01 30 12.0	
H11S1	**WAKE ISLAND Hy** baz=183,slow=76,SNR=17	**29.18**	**3**	T	T	01 29 59.1	
STKA	**Stephens Creek** 3.7nm,0.7s,baz=48,slow=10,SNR=11	**30.09**	**222**	P	**P**	**00 59 51.2**	**+2.1**
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=14	**30.39**	**4**	T	T	01 31 46.0	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=12	**30.39**	**4**	T	T	01 31 42.8	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=11	**30.40**	**4**	T	T	01 31 43.6	
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=81,slow=8.7,SNR=12	**30.84**	**249**	P	**P**	**00 59 55.5**	**-0.4**
WRA	comp=Z,50nm,18.1s,baz=135,slow=38			LR	LR	01 12 57.9	
ASAR	**Alice Springs** 0.8nm,0.6s,baz=73,slow=9.0,SNR=8.8	**32.21**	**243**	P	**P**	**01 00 07.2**	**-0.8**
PETK	**Petropavlovsk-** 1.3nm,0.8s,baz=164,slow=5.7,SNR=2.9	**63.96**	**355**	P	**P**	**01 04 11.7**	**-0.9**
CMAR	**Chiang Mai Arr** 0.8nm,0.3s,baz=123,slow=4.5,SNR=4.4	**71.31**	**294**	P	**P**	**01 04 58.6**	**-1.1**
SONM	**Songino Array** 0.7nm,0.8s,baz=140,slow=7.1,SNR=4.7	**78.02**	**324**	P	**P**	**01 05 38.8**	**+0.5**
ILAR	**Eielson Array** 0.4nm,0.7s,baz=240,slow=5.1,SNR=5.5	**83.53**	**19**	P	**P**	**01 06 07.3**	**+0.1**
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=96,slow=5.8,SNR=3.8	**92.82**	**317**	P	**P**	**01 06 52.7**	**+0.3**
PDAR	**Pinedale Array** 0.5nm,0.9s,baz=248,slow=4.8,SNR=2.7	**93.96**	**47**	P	**P**	**01 06 58.9**	**+0.8**
ESDC	**Sonseca Array** 0.3nm,0.7s,baz=355,slow=1.4,SNR=2.4	**149.61**	**343**	PKPbc	**PKiKP**	**01 13 29.2**	**-1.6**

NNC 15 01:17:32.1±7.5**, 39°.48N×71°.18E, h0^{km}, mb3.2, mpv2.9, 4C-1D, Error ellipse: s-maj=72.7km s-min=30.1km az=16.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 7.7nm,0.4s	**1.87**	**73**	⇑P	Pb	01 18 06.9	-0.3
MNAS	**Manas** 1.7nm,0.5s	**3.16**	**18**	⇑Pn	Pn	01 18 24.4	+1.1
MNAS	16nm,0.8s			⇑Lg	Lg	01 19 13.0	
KK31	**Karatay Array** 0.7nm,0.4s,baz=173,slow=12,SNR=42	**3.65**	**352**	⇑Pn	Pn	01 18 28.2	-1.6
KK31	2.0nm,0.5s,baz=182,slow=22,SNR=5.2			⇓Lg	Lg	01 19 30.6	

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*KRNET **15** 01:17:39.7±0.1, 40°.04N×75°.54E, mb3.5*

*SOME **15** 01:17:40.2, 40°.00N×75°.65E, h25^{km}*

*ISCJB **15** 01:17:41.3±0.8, 39°.95N±0°.05×75°.58E±0°.05, h10^{km}, Error ellipse: s-maj=7.5km s-min=4.1km az=151.4*

*NNC **15** 01:17:41.7±1.1, 40°.10N×75°.58E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=9.6km s-min=4.7km az=147.0*

ISC 15 01:17:39.3±1.3**, 39°.90N**±0°.06×**75°.69E**±0°.04**, h10^{km}, n59, σ2^s.03**/84**, 20C-19D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn** baz=13	**1.55**	**9**	⇑*i*P	**Pn**	**01 18 06.4**	**-0.9**
NRN	baz=13			⇑*i*S	**Sn**	**01 18 26.0**	**-1.6**
SFK	**Sufi-Kurgan** 18nm,0.1s	**1.69**	**275**	Pg	**Pn**	**01 18 09.4**	**+0.4**
SFK	61nm,0.3s			Lg	Lg	01 18 30.4	
SFK	**Sufi-Kurgan** baz=70	**1.69**	**275**	⇑*i*P	**Pn**	**01 18 09.4**	**+0.4**
SFK	baz=70			⇑*i*S	**Sn**	**01 18 30.1**	**-0.7**
SFK	**Sufi-Kurgan** 56nm,0.4s	**1.69**	**275**	⇑S	**Sn**	**01 18 30.0**	**-0.9**
KZA	**Kyzart** SNR=36	**2.20**	**351**	P	**Pn**	**01 18 17.6**	**+1.3**
KZA	**Kyzart** baz=54	**2.20**	**351**	⇓*i*P	**Pn**	**01 18 17.6**	**+1.3**
KZA	baz=54			⇓*i*S	**Sn**	**01 18 45.4**	**+1.6**
ARLS	**Aral** baz=34	**2.22**	**333**	⇓*i*P	**Pn**	**01 18 17.4**	**+1.1**
ARLS	baz=34			⇓*i*S	**Sn**	**01 18 44.9**	**+1.0**
ULHL	**Ulahol** SNR=28	**2.38**	**10**	P	**Pb**	**01 18 21.8**	**-0.6**
ULHL	**Ulahol** baz=13	**2.38**	**10**	⇑*i*P	**Pb**	**01 18 20.7**	**-1.7**
ULHL	baz=13			⇑*i*S	**Sb**	**01 18 50.6**	**-1.3**
TARG	**Taragay, Kyrgy** baz=45	**2.43**	**41**	⇑*i*P	**Pb**	**01 18 22.1**	**-1.3**
TARG	baz=45			⇑*i*S	**Sb**	**01 18 54.1**	**+0.6**
UCH	**Uchtor** SNR=65	**2.49**	**339**	P	**Pn**	**01 18 21.9**	**+1.6**
UCH	**Uchtor** baz=41	**2.49**	**339**	⇑*i*P	**Pn**	**01 18 21.7**	**+1.4**
UCH	baz=41			⇑*i*S	**Sn**	**01 18 52.1**	**+1.1**
KDJ	**Kajisay** baz=30	**2.50**	**26**	⇑*e*P	**Pb**	**01 18 22.8**	**-1.5**
KDJ	baz=30			⇑*i*S	**Sb**	**01 18 53.4**	**-1.8**
ARSB	**Arslanbob** baz=4.0	**2.51**	**305**	⇓*i*P	**Pn**	**01 18 21.3**	**+1.1**
ARSB	baz=4.0			⇓*i*S	**Sn**	**01 18 51.5**	**+0.5**
BOOM	**Boomskoye usch** baz=7.0	**2.59**	**4**	⇓*i*P	**Pn**	**01 18 23.6**	**+2.1**
BOOM	baz=7.0			⇓*i*S	**Sn**	**01 18 55.0**	**+1.8**
AML	**Almayashu** SNR=30	**2.69**	**327**	P	**Pn**	**01 18 24.0**	**+1.0**
AML	**Almayashu** baz=27	**2.69**	**327**	⇓*i*P	**Pn**	**01 18 23.8**	**+0.7**
AML	baz=27			⇓*i*S	**Sn**	**01 18 56.1**	**+0.2**
KBK	**Karagaybulak** SNR=26	**2.81**	**349**	P	**Pb**	**01 18 30.0**	**+0.3**
AAK	**Ala-Archa** SNR=18	**2.88**	**342**	P	**Pn**	**01 18 27.8**	**+2.3**
AAK	**Ala-Archa** 24nm,0.8s	**2.88**	**342**	⇓Pn	**Pn**	**01 18 27.6**	**+2.2**
AAK	28nm,0.5s			⇓Lg	Lg	01 19 06.9	
FRU1	**Bishkek** baz=47	**3.02**	**345**	⇓*e*P	**Pn**	**01 18 28.5**	**+1.3**
FRU1	baz=47			⇓*i*S	**Sn**	**01 19 04.0**	**+0.6**
TKM2	**Tokmak 2** SNR=9.8	**3.02**	**359**	P	**Pn**	**01 18 29.7**	**+2.3**
TKM2	**Tokmak 2** 5.7nm,0.3s	**3.02**	**359**	⇑Pn	**Pn**	**01 18 29.5**	**+2.1**
TKM2	41nm,0.6s			⇑Lg	Lg	01 19 11.8	
DRK	**Karamyk** baz=60	**3.03**	**263**	⇑*i*P	**Pn**	**01 18 29.7**	**+2.1**
DRK	baz=60			⇑*i*S	**Sn**	**01 19 06.2**	**+2.1**
EKS2	**Erkin-Say** SNR=12	**3.11**	**333**	P	**Pn**	**01 18 30.8**	**+2.2**
KST	**Kastek** 14nm,0.6s	**3.15**	**4**	Pg	**Pb**	**01 18 36.3**	**+0.9**
KST	47nm,0.7s			Lg	Lg	01 19 16.4	
KST	**Kastek** 14nm,0.6s	**3.15**	**4**	*e*P	**Pb**	**01 18 36.3**	**+0.9**
KST	47nm,0.7s			*e*S	**Sb**	**01 19 16.4**	**+2.5**
CHMS	**Chumysh** SNR=5.3	**3.18**	**347**	P	**Pn**	**01 18 31.6**	**+2.2**
TNSS	**Tian-Shan** 12nm,0.3s	**3.27**	**16**	Pg	**Pb**	**01 18 38.9**	**+1.2**
TNSS	20nm,0.5s			Lg	Lg	01 19 20.7	
TNSS	**Tian-Shan** 12nm,0.3s	**3.27**	**16**	*e*P	**Pb**	**01 18 38.9**	**+1.2**
TNSS	20nm,0.5s			*e*S	**Sb**	**01 19 20.7**	**+2.9**
MTBS	**Maitube** 8.6nm,0.3s	**3.27**	**9**	Pg	**Pb**	**01 18 38.4**	**+0.9**
MTBS	16nm,0.6s			Lg	Lg	01 19 19.9	
MTBS	**Maitube** 8.6nm,0.3s	**3.27**	**9**	*e*P	**Pb**	**01 18 38.4**	**+0.9**
MTBS	16nm,0.6s			*e*S	**Sb**	**01 19 19.9**	**+2.4**
DGS	**Degeres** 10nm,0.6s	**3.34**	**1**	Pg	**Pb**	**01 18 39.7**	**+1.0**
DGS	40nm,0.6s			Lg	Lg	01 19 22.0	
DGS	**Degeres** 10nm,0.6s	**3.34**	**1**	*e*P	**Pb**	**01 18 39.7**	**+1.0**
DGS	40nm,0.6s			*e*S	**Sb**	**01 19 22.0**	**+2.6**
MRKS	**Merke** 19nm,0.4s	**3.40**	**328**	Pg	**Pb**	**01 18 38.6**	**-1.0**
MRKS	21nm,0.6s			Lg	Lg	01 19 20.5	
MRKS	**Merke** 19nm,0.4s	**3.40**	**328**	*e*P	**Pb**	**01 18 38.6**	**-1.0**
MRKS	21nm,0.6s			*e*S	**Sb**	**01 19 20.6**	**-0.4**
MDOK	**Medeo** 7.3nm,0.9s	**3.42**	**17**	⇓Pn	**Pn**	**01 18 34.9**	**+2.1**
MDOK	42nm,0.8s			⇑Lg	Lg	01 19 21.6	
MDOK	**Medeo** 6.3nm,0.5s	**3.42**	**17**	Pg	**Pb**	**01 18 40.9**	**+0.9**
MDOK	29nm,0.8s			Lg	Lg	01 19 24.4	
MDOK	**Medeo** 6.3nm,0.5s	**3.42**	**17**	*e*P	**Pb**	**01 18 40.9**	**+0.9**
MDOK	29nm,0.8s			*e*S	**Sb**	**01 19 24.4**	**+2.8**
USP	**Ospenovka** SNR=14	**3.48**	**346**	P	**Pn**	**01 18 35.4**	**+1.9**
KOTS	**Kotyrbulak** 6.3nm,0.5s	**3.50**	**17**	Pg	**Pb**	**01 18 42.6**	**+1.2**
KOTS	123nm,0.5s			Lg	Lg	01 19 27.4	
KOTS	**Kotyrbulak** 6.3nm,0.5s	**3.50**	**17**	*e*P	**Pb**	**01 18 42.6**	**+1.2**
KOTS	123nm,0.5s			*e*S	**Sb**	**01 19 27.4**	**+3.4**
MNAS	**Manas** 5.9nm,0.5s	**3.53**	**318**	Pg	**Pb**	**01 18 42.1**	**+0.1**
MNAS	14nm,0.4s			Lg	Lg	01 19 26.8	
MNAS	**Manas** baz=18	**3.53**	**318**	⇓*e*P	**Pn**	**01 18 35.6**	**+1.3**
MNAS	baz=18			⇓*i*S	**Sn**	**01 19 16.2**	**0.0**
SATY	**Saty** 10nm,0.8s	**3.76**	**32**	Pg	**Pb**	**01 18 46.9**	**+1.1**
SATY	21nm,0.6s			Lg	Lg	01 19 34.7	
SATY	**Saty** 10nm,0.8s	**3.76**	**32**	*e*P	**Pb**	**01 18 47.0**	**+1.1**
SATY	21nm,0.6s			*e*S	**Sb**	**01 19 34.7**	**+3.3**
KTBS	**Karatobe** 12nm,0.7s	**3.88**	**11**	Pg	**Pb**	**01 18 49.6**	**+1.7**
KTBS	39nm,0.5s			Lg	Lg	01 19 39.0	
KTBS	**Karatobe** 12nm,0.7s	**3.88**	**11**	*e*P	**Pb**	**01 18 49.6**	**+1.7**
KTBS	39nm,0.5s			*e*S	**Sb**	**01 19 39.0**	**+4.1**
KUU	**Kurty** 4.2nm,0.4s	**4.02**	**7**	Pg	**Pb**	**01 18 51.7**	**+1.5**
KUU	37nm,0.8s			Lg	Lg	01 19 42.7	
KUU	**Kurty** 4.2nm,0.4s	**4.02**	**7**	*e*P	**Pb**	**01 18 51.7**	**+1.5**
KUU	37nm,0.8s			*e*S	**Sb**	**01 19 42.7**	**+3.9**
PDGK	**Podgornoye** 1.3nm,0.6s	**4.46**	**38**	Pg	**Pb**	**01 18 59.9**	**+2.3**
PDGK	5.6nm,1.0s			Lg	Lg	01 19 56.7	
PDGK	**Podgornoye** 2.0nm,0.6s	**4.46**	**38**	⇓Pn	**Pn**	**01 18 48.6**	**+1.6**
PDGK	8.3nm,0.5s			⇑Lg	Lg	01 19 54.5	
ARXS	**Arharly** 6.6nm,0.6s	**4.59**	**20**	Pg	**Pb**	**01 19 03.3**	**+3.3**
ARXS	7.1nm,0.5s			Lg	Lg	01 20 03.7	
ARXS	**Arharly** 6.6nm,0.6s	**4.59**	**20**	*e*P	**Pb**	**01 19 03.1**	**+3.1**
ARXS	7.1nm,0.5s			*e*S	**Sg**	**01 20 02.6**	**-4.1**
KK31	**Karatay Array** 2.8nm,0.7s,baz=131,slow=18,SNR=8.4	**5.04**	**311**	⇓Pn	**Pn**	**01 18 58.5**	**+3.6**
KK31	5.5nm,0.6s,baz=126,slow=27,SNR=4.2			⇑Lg	Lg	01 20 20.4	
DJR	**Jarkent** 1.1nm,0.6s	**5.38**	**33**	Pg	**Pb**	**01 19 17.6**	**+4.3**
DJR	2.4nm,0.7s			Lg	Lg	01 20 28.1	
DJR	**Jarkent**	**5.38**	**33**	*e*P	**Pg**	**01 19 18.1**	**-4.1**
DJR	2.4nm,0.7s			*e*S	**Sg**	**01 20 28.1**	**-3.8**
KAPS	**Kapalarasan** 1.7nm,0.6s	**6.02**	**25**	Pg	Pg	01 19 29.8	-4.8
KAPS	4.2nm,0.7s			Lg	Lg	01 20 48.5	
KAPS	**Kapalarasan** 1.7nm,0.6s	**6.02**	**25**	*e*P	Pg	01 19 29.8	-4.8
KAPS	4.2nm,0.7s			*e*S	**Sg**	**01 20 48.5**	**-4.1**

IDC 15 01:29:34.8±2.5**, 10°.54S×121°.29E, h0^{km}, mb3.5**/2**, mb1 3.5**/4**, mb1mx3.2**/36**, mbtmp3.3**/4**, ML3.2**/2**, Error ellipse: s-maj=228.1km s-min=29.7km az=51.0, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=305,slow=13,SNR=7.9	**15.67**	**128**	Pn	Pn	01 33 17.8	+0.6
ASAR	**Alice Springs** 0.1nm,0.3s,baz=317,slow=9.8,SNR=3.8	**17.75**	**139**	P	Pn	01 33 43.0	-0.6
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=122,slow=6.3,SNR=6.0	**66.86**	**332**	P	P	01 40 27.8	-0.8
KURBB	**Kurchatov Arra** 0.3nm,0.4s,baz=127,slow=7.0,SNR=3.2	**71.35**	**333**	P	P	01 40 57.2	+0.8

IDC 15 01:38:12.8±1.7**, 2°.96S×130°.26E, h0^{km}, mb3.2**/2**, mb1 3.3**/4**, mb1mx3.1**/53**, mbtmp3.1**/4**, ML2.8**/2**, Error ellipse: s-maj=55.0km s-min=23.4km az=94.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong** 1.2nm,0.3s,baz=204,slow=20,SNR=1.9	**2.31**	**26**	Pn	Pn	01 38 52.7	+0.5
SIJI	2.0nm,0.3s,baz=208,slow=22,SNR=1.8			Sn	Sn	01 39 21.8	+0.4
WRA	**Warramunga Arr** 0.0nm,0.3s,baz=352,slow=12,SNR=1.5	**17.34**	**167**	P	P	01 42 17.4	-0.6
ASAR	**Alice Springs** 0.2nm,0.3s,baz=355,slow=11,SNR=4.8	**20.88**	**171**	P	P	01 42 56.2	-0.6
MKAR	**Makanchi Array** 0.4nm,1.0s,baz=108,slow=7.7,SNR=1.7	**65.03**	**326**	P	P	01 48 55.0	0.0

*IDC **15** 01:41:59.4±3.8, 67°.24N×143°.17E, h0^{km}, mb3.2/5, mb1 3.4/5, mb1mx3.2/72, mbtmp3.2/5, Error ellipse: s-maj=174.8km s-min=21.7km az=165.0*

*ISCJB **15** 01:42:00.4±0.6, 67°.58N±0°.05×142°.9E±0°.1, h10^{km}, mb3.2/5, Error ellipse: s-maj=8.3km s-min=6.4km az=40.8*

*YARS **15** 01:42:01.3±0.2, 67°.59N±0°.01×142°.96E±0°.03, h10^{km}*

ISC 15 01:42:01.4±0.8, 67°.49N±0°.06×143°.07E±0°.05, h10^{km}, n8, σ0^{s}.94/13, mb3.1/5, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.03	177	*e*P	Pn	01 42 21.2	-0.6
MOMR				Pmax		01 42 21.2	
	comp=Z,116nm,0.3s						
MOMR				*e*S	Sn	01 42 36.5	+0.2
MOMR				Smax		01 42 36.5	
	comp=E,734nm,0.5s						
YBGR	Belaya Gora	1.57	47	*e*P	Pn	01 42 28.8	-0.5
YBGR				Pmax		01 42 28.8	
	comp=Z,36nm,0.2s						
YBGR				*e*S	Sn	01 42 49.3	-0.4
YBGR				Smax		01 42 49.3	
	comp=N,412nm,0.3s						
BTGS	Batagay	3.23	277	*e*P	Pn	01 42 51.9	-0.2
BTGS				*e*P	Pb	01 42 58.2	-0.6
BTGS				Pmax		01 42 58.2	
	comp=Z,8.0nm,0.2s						
BTGS				*e*S	Sn	01 43 29.0	-1.6
BTGS				*e*S	Sb	01 43 40.2	+2.0
BTGS				Smax		01 43 40.2	
	comp=N,145nm,0.6s						
ILAR	Eielson Array	27.11	62	P	P	01 47 44.3	+0.4
	comp=N,0.5nm,0.8s,baz=301,slow=7.8,SNR=6.5						
KURBB	Kurchatov Arra	35.22	274	P	P	01 48 55.4	0.0
	comp=N,0.1nm,0.3s,baz=41,slow=7.7,SNR=1.7						
BVAR	Borovoye Array	36.41	284	P	P	01 49 06.0	+0.5
	comp=N,0.2nm,0.5s,baz=231,slow=38,SNR=2.2						
MKAR	Makanchi Array	36.90	267	P	P	01 49 09.2	-0.5
	comp=N,0.2nm,0.5s,baz=32,slow=8.5,SNR=2.4						
YKA	Yellowknife Ar	38.81	46	P	P	01 49 26.2	+0.5
	comp=N,0.2nm,0.6s,baz=322,slow=8.3,SNR=5.2						

PGC 15 02:24:47.8±0.8, 50°.47N×130°.30W, h10^{km}, MLSn3.0/20, Mw3.6/20, 204km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BPBC	Brooks Peninsu	1.65	100	Pn	Pn	02 25 14.1	-2.8
BPBC				Sn	Sn	02 25 33.1	-5.0
PACB	Port Alice, BC	1.79	90	Pn	Pn	02 25 16.3	-2.4
PACB				Sn	Sn	02 25 36.6	-4.9
PHC	Port Hardy	1.84	82	Pn	Pn	02 25 17.5	-1.9
PHC				Sn	Sn	02 25 38.2	-4.5
HG4B	Hotspring	1.91	343	Pn	Pn	02 25 18.9	-1.5
HG4B				Sn	Sn	02 25 40.2	-4.3
MAYB	Maynard	2.00	91	Pn	Pn	02 25 19.6	-2.1
MAYB				Sn	Sn	02 25 43.0	-3.9
EDB	Eliza Dome	2.13	105	Pn	Pn	02 25 21.3	-2.1
EDB				Sn	Sn	02 25 46.8	-3.0
BBB	Bella Bella	2.19	38	Pn	Pn	02 25 22.3	-1.9
BBB				Sn	Sn	02 25 47.2	-4.3
TLCB	Telegraph Cove	2.21	87	Pn	Pn	02 25 23.1	-1.4
TLCB				Sn	Sn	02 25 48.4	-3.4
HG3B	Hotspring	2.23	342	Pn	Pn	02 25 23.1	-1.6
HG3B				Sn	Sn	02 25 48.9	-3.4
BNB	Barry Inlet	2.29	337	Pn	Pn	02 25 23.9	-1.9
WOSB	Woss	2.41	96	Pn	Pn	02 25 25.9	-1.4
NCRB	Newcastle Ridg	2.71	90	Pn	Pn	02 25 29.8	-1.7
GDR	Gold River	2.83	103	Pn	Pn	02 25 31.4	-1.6
MOBC	Moresby Island	2.87	339	Pn	Pn	02 25 32.7	-0.9
MOBC				Sn	Sn	02 26 05.4	-2.8
BCBC	Bella Coola	2.92	48	Sn	Sn	02 26 06.6	-2.8
DIB	Dawson Inlet,	3.05	335	Pn	Pn	02 25 33.9	-2.2
CBB	Campbell River	3.19	96	Pn	Pn	02 25 36.9	-1.1
CBB				Sn	Sn	02 26 12.9	-3.3
BTB	Buttle Lake	3.24	106	Pn	Pn	02 25 37.3	-1.6
TXB	Texada	3.85	99	Pn	Pn	02 25 45.8	-1.4
MGB	Mount Grey	3.92	110	Pn	Pn	02 25 47.1	-1.1
YOUB	Youbou, Lake C	4.22	110	Pn	Pn	02 25 52.1	-0.1
SHB	Sechelt	4.23	99	Pn	Pn	02 25 51.5	-0.9
PFB	Port Renfrew	4.26	114	Pn	Pn	02 25 52.3	-0.5
FSB	Fort Saint Jam	5.42	40	Pn	Pn	02 26 08.6	-0.1
MBW	Mount Baker	5.71	104	Pn	Pn	02 26 13.1	+0.3

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*ISCJB **15** 02:26:57.8±0.3, 59°.53N±0°.03×153°.11W±0°.07, h113^{km}±3^{km}, mb3.8/2, Error ellipse: s-maj=6.8km s-min=3.6km az=36.9*

*IDC **15** 02:26:58.0±2.1, 59°.53N×153°.44W, h83^{km}±33^{km}, mb3.4/2, mb1 3.4/6, mb1mx3.0/55, mbtmp3.6/6, Error ellipse: s-maj=33.2km s-min=15.3km az=113.0*

*NEIC **15** 02:27:00.1±0.0, 59°.54N×153°.19W, h99^{km}, ML3.1(AEIC), After AEIC.*

ISC 15 02:26:59.1±0.9, 59°.54N±0°.04×153°.16W±0°.05, h105^{km}±6^{km}, n70, σ0^{s}.91/80, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUL	Augustine Lava	0.21	221	P	Pn	02 27 13.8	-0.2
AUL				S	Sn	02 27 24.8	-0.3
AUE	Augustine Isla	0.21	210	P	Pn	02 27 13.6	-0.4
AUW	Augustine West	0.23	222	P	Pn	02 27 13.9	-0.2
ILS	Iliamna Low So	0.42	7	P	Pn	02 27 14.5	-0.6
IVE	Iliamna Volcan	0.48	9	P	Pn	02 27 15.1	-0.4
ILW	Iliamna West	0.52	2	P	Pn	02 27 15.3	-0.5
HOM	Homer	0.78	81	P	Pn	02 27 18.1	+0.4
HOM				S	Sn	02 27 32.9	+1.2
FONW	Fourpeaked Sta	0.81	209	P	Pn	02 27 17.7	-0.4
RDWB	Redoubt West	0.96	10	P	Pn	02 27 19.4	-0.3
RDWB				S	Sn	02 27 34.4	-0.8
RDJH	Redoubt Jeurge	1.07	10	P	Pn	02 27 20.6	-0.2
RDJH				S	Sn	02 27 36.5	-0.6
BRLK	Bradley Lake	1.18	78	P	Pn	02 27 21.6	-0.3
BRLK				S	Sn	02 27 38.6	-0.5
KAHG	Katmai Hook Gl	1.27	215	P	Pn	02 27 22.9	-0.1
SPCR	Spurr Chakacha	1.73	16	P	Pn	02 27 28.6	0.0
KELA	Mount Kelaz	1.73	231	P	Pn	02 27 28.3	-0.3
SPWE	Spurr West	1.76	10	P	Pn	02 27 29.4	+0.5
SLKM	Skilak Lake	1.77	55	P	Pn	02 27 29.2	+0.3
SPBG	Spurr Blockage	1.77	13	P	Pn	02 27 29.3	+0.3
KDAK	Kodiak Island	1.79	170	P	Pn	02 27 28.2	-1.0
	17nm,0.3s,baz=3.6,slow=12,SNR=481						
KDAK				S	Sn	02 27 49.9	-2.2
	19nm,0.3s,baz=304,slow=23,SNR=15						
ANCK	Angle Creek	1.81	223	P	Pn	02 27 29.5	0.0
CAHL	Cahill	1.86	218	P	Pn	02 27 30.2	0.0
CNTC	Contact Creek	1.91	229	P	Pn	02 27 30.6	-0.2
KJL	Kejulik	1.95	221	P	Pn	02 27 31.5	+0.2
SEW	Seward	1.96	72	P	Pn	02 27 31.6	+0.3
SVW2	Sparrevohn	1.97	323	P	Pn	02 27 31.0	-0.5
SUA	Susitna One	2.27	31	P	Pn	02 27 36.2	+0.8
SUA				S	Sn	02 28 03.4	+0.2
RC01	Rabbit Creek A	2.31	46	P	Pn	02 27 35.9	+0.1
RC01				S	Sn	02 28 03.4	-0.5
OHAK	Old Harbor	2.33	182	P	Pn	02 27 34.7	-1.3
PTE	Portage	2.46	56	P	Pn	02 27 37.8	+0.1
PLK1	Peulik 1	2.51	227	P	Pn	02 27 38.8	+0.4
PLK4	Peulik 4	2.54	222	P	Pn	02 27 39.3	+0.3
PWL	Port Wells	2.75	59	P	Pn	02 27 41.0	-0.6
PWL				S	Sn	02 28 12.4	-1.9
PMR	Palmer	2.86	42	P	Pn	02 27 43.0	-0.1
KNK	Knik Glacier	2.99	49	P	Pn	02 27 44.1	-0.7
SII	Sitkinak Islan	3.04	191	P	Pn	02 27 44.1	-1.4
SML	Sawmill	3.29	44	P	Pn	02 27 48.0	-0.7
PPLA	Purkeypile	3.40	8	P	Pn	02 27 51.1	+0.7
JPK	Jack Peak	3.60	62	P	Pn	02 27 52.0	-0.9
TT01	Tatalina	3.65	339	P	Pn	02 27 53.1	-0.4
SCM	Sheep Creek Mo	3.68	49	P	Pn	02 27 53.6	-0.4
HUR	Hurricane	3.84	25	P	Pn	02 27 56.9	+0.7
CAST	Castle Rocks	3.92	7	P	Pn	02 27 57.4	+0.1
DIV	Divide	4.00	63	P	Pn	02 27 57.9	-0.5
KLU	Klutina	4.08	58	P	Pn	02 27 58.8	-0.6
TRF	Thorofare Moun	4.16	18	P	Pn	02 28 00.4	-0.1
RND	Reindeer	4.39	26	P	Pn	02 28 03.5	-0.1
MCK	McKinley	4.66	24	P	Pn	02 28 07.3	+0.1
BPAW	Bear Paw Mtn.	4.69	12	P	Pn	02 28 07.7	+0.1
HARP	HAARP	4.84	50	P	Pn	02 28 09.7	0.0
PAX	Paxson	5.06	44	P	Pn	02 28 12.3	-0.4
PS10	TAPS Pump St10	5.26	39	P	Pn	02 28 15.8	+0.5
WRH	Wood River Hil	5.49	24	P	Pn	02 28 17.5	-0.8
MLY	Manley	5.62	11	P	Pn	02 28 19.4	-0.9
MENT	Mentasta	5.69	49	P	Pn	02 28 20.6	-0.5
RIDG	Independ'e Rid	5.78	40	P	Pn	02 28 21.8	-0.6
COLA	College	5.90	23	*e*Pn	Pn	02 28 22.7	-1.2
	6.2nm,0.6s						
MDM	Murphy Dome	5.90	21	P	Pn	02 28 23.5	-0.5
ILAR	Eielson Array	6.01	27	P	Pn	02 28 24.6	-0.9
	2.4nm,0.3s,baz=215,slow=13,SNR=76						
ILAR				S	Sn	02 29 28.3	-4.5
	1.3nm,0.3s,baz=40,slow=5.4,SNR=7.2						
SCRK	Sand Creek	6.22	40	P	Pn	02 28 28.5	+0.1
IM3	Indian Mountai	6.47	358	P	Pn	02 28 31.4	-0.2
BCA3	Beaver Creek A	6.52	52	P	Pn	02 28 32.7	+0.4
PRP	Porcupine Dome	6.96	27	P	Pn	02 28 37.9	-0.5
EGAK	Eagle	7.68	42	P	Pn	02 28 47.0	-1.1
DAWY	Dawson	7.94	49	*e*Pn	Pn	02 28 52.2	+0.6
	2.8nm,0.4s						
BM3	Burnt Mountain	8.77	22	P	Pn	02 29 01.9	-1.0
DLBC	Dease Lake	11.97	85	P	Pn	02 29 49.1	+3.0
	0.5nm,0.3s,baz=270,slow=11,SNR=12						
INK	Inuvik	12.26	36	P	Pn	02 29 49.8	+0.1
	0.1nm,0.3s,baz=230,slow=13,SNR=4.7						
YKA	Yellowknife Ar	18.72	64	P	P	02 31 10.3	+1.3
	0.1nm,0.3s,baz=276,slow=10.0,SNR=7.7						
KSRS	Korea Array	53.20	283	P	P	02 36 06.4	+0.3
	0.6nm,0.5s,baz=47,slow=9.6,SNR=3.3						
KSAR	Wonju Array Be	53.23	283	P	P	02 36 06.4	+0.1
SONM	Songino Array	54.99	306	P	P	02 36 19.7	+0.5
	0.4nm,0.6s,baz=49,slow=6.4,SNR=4.6						

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*IDC **15** 02:28:44.2±2.7, 22°.94S×170°.21E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/33, mbtmp4.0/8, ML3.5/1, Error ellipse: s-maj=83.3km s-min=28.1km az=151.0*

ISC 15 02:28:48.6±1.5, 22°.9S±0°.4×170°.1E±0°.1, h25^{km}, n14, σ0^{s}.62/15, mb4.2/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.50	282	Pn	Pn	02 29 42.0	+0.4
	4.4nm,0.3s,baz=125,slow=12,SNR=46						
DZM				Sn	Sn	02 30 21.8	-0.4
	5.6nm,0.3s,baz=130,slow=10,SNR=3.9						
ASAR	Alice Springs	33.23	261	P	P	02 35 23.8	-0.2
	1.2nm,0.5s,baz=86,slow=9.3,SNR=16						
WRA	Warramunga Arr	33.40	268	P	P	02 35 24.1	-1.3
	0.4nm,0.7s,baz=104,slow=7.6,SNR=3.9						
USRK	Ussuriysk Ar.	75.31	333	P	P	02 40 29.5	-0.1
	0.9nm,0.4s,baz=165,slow=10,SNR=6.9						
PETK	Petropavlovsk-	76.41	352	P	P	02 40 35.6	0.0
	2.3nm,1.0s,baz=167,slow=7.2,SNR=2.9						
CMAR	Chiang Mai Arr	80.74	294	P	P	02 41 01.6	+1.3
	1.0nm,0.3s,baz=156,slow=4.0,SNR=5.0						
SONM	Songino Array	90.59	323	P	P	02 41 49.0	+0.2
	0.6nm,0.9s,baz=131,slow=5.9,SNR=4.0						
ILAR	Eielson Array	93.42	17	P	P	02 42 00.5	-0.8
	0.9nm,1.0s,baz=232,slow=5.1,SNR=4.8						
GERES	GERESS Array B	148.04	330	PKPbc	PKPbc	02 48 32.2	+0.2
	0.9nm,0.8s,baz=50,slow=2.1,SNR=6.9						
KBA	Koelnbreinsper	149.46	328	*i* PKPbc	PKPbc	02 48 36.1	+0.3
	2.6nm,0.7s						
ABTA	Abfaltersbach	150.10	328	*i* PKPbc	PKPbc	02 48 37.3	+0.1
	1.2nm,0.5s						
MOTA	Moosalm	150.33	331	*i* PKPbc	PKPbc	02 48 38.0	+0.1
	2.9nm,0.7s						
SQTA	Sankt Quirin	150.37	330	*i* PKPbc	PKPbc	02 48 38.2	+0.2
	3.9nm,0.7s						
FETA	Feichten	150.74	330	*i* PKPbc	PKiKP	02 48 39.5	0.0
	1.5nm,0.6s						

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*ISCJB **15** 02:42:19.6±1.2, 37°.33N±0°.04×141°.67E±0°.07, h16^{km}±7^{km}, mb3.7/10, Error ellipse: s-maj=10.2km s-min=6.4km az=25.6*

*JMA **15** 02:42:21.3±0.1, 37°.37N×141°.56E, h24^{km}±2^{km}, M3.4*

*IDC **15** 02:42:24.9±4.2, 37°.01N×141°.62E, h56^{km}±37^{km}, mb3.3/8, mb1 3.4/9, mb1mx3.2/58, mbtmp3.5/9, ML2.3/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/54, Error ellipse: s-maj=52.6km s-min=23.9km az=160.0*

ISC 15 02:42:19.3±1.9, 37°.33N±0°.05×141°.61E±0°.07, h5^{km}±10^{km}, n27, σ0^{s}.83/29, mb3.7/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.59	273	P	Pb	02 42 32.0	-0.2
JFK				S	Sg	02 42 39.5	+1.2
ONAJ	Iwakimizuishiy	0.69	251	P	Pb	02 42 33.9	0.0
ONAJ				S	Sb	02 42 43.1	-0.7
JMM	Marumori	0.84	309	P	Pg	02 42 35.8	+0.3
JMM				S	Sg	02 42 46.6	+0.2
JFFD	Fukushimafurud	0.87	254	P	Pb	02 42 36.9	-0.1
JFFD				S	Sb	02 42 48.1	-0.9
JFT	Otama	1.03	281	P	Pb	02 42 40.0	+0.3
JFT				S	Sb	02 42 53.2	-0.4
JHO	Hitachi	1.10	230	P	Pg	02 42 40.1	-0.4
JIO	Ouri	1.14	349	P	Pg	02 42 41.0	-0.2
JIO				S	Sg	02 42 54.7	-1.2
JOU	Okura	1.27	324	P	Pn	02 42 43.7	-0.2
JOU				S	Sg	02 43 00.0	-0.3
JYS	Shirataka	1.51	306	P	Pn	02 42 47.8	+0.7
JYS				S	Sn	02 43 07.1	-0.1
MJAR	Matsushiro Arr	2.84	255	P	Pn	02 43 06.5	+1.2
	0.4nm,0.3s,baz=79,slow=16,SNR=11						
MJAR				S	Sb	02 43 43.9	-1.7
	0.4nm,0.3s,baz=84,slow=17,SNR=5.4						
KSRS	Korea Array	10.89	275	LR	LR	02 48 44.3	
	comp=Z,19nm,20.1s,baz=136,slow=35						
SONM	Songino Array	27.75	303	P	P	02 48 09.8	+0.8
	0.1nm,0.3s,baz=101,slow=7.5,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.17	122	T	T	03 17 45.4	
	baz=314,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	28.17	122	T	T	03 17 44.6	
	baz=314,slow=75,SNR=29						
H11N3	WAKE ISLAND Hy	28.18	122	T	T	03 17 45.3	
	baz=314,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	28.89	124	T	T	03 18 38.3	
	baz=316,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	28.89	124	T	T	03 18 35.3	
	baz=316,slow=75,SNR=9.6						
H11S2	WAKE ISLAND Hy	28.91	124	T	T	03 18 40.4	
	baz=316,slow=75,SNR=9.4						
CMAR	Chiang Mai Arr	41.73	255	P	P	02 50 07.7	-1.7
	0.7nm,0.3s,baz=51,slow=7.1,SNR=3.0						
ZALV	Zalesovo Beam	41.83	312	P	P	02 50 10.9	+1.0
	0.4nm,0.4s,baz=104,slow=6.1,SNR=2.6						
MKAR	Makanchi Array	44.09	302	P	P	02 50 28.8	+0.3
	0.4nm,0.6s,baz=89,slow=8.9,SNR=5.5						
KURBB	Kurchatov Arra	45.94	308	P	P	02 50 43.0	0.0
	2.8nm,0.2s,baz=78,slow=7.7,SNR=2.7						
ILAR	Eielson Array	49.16	32	P	P	02 51 09.2	+1.4
	0.3nm,0.8s,baz=258,slow=6.9,SNR=2.7						
YKA	Yellowknife Ar	63.47	30	P	P	02 52 49.8	-0.1
	0.1nm,0.8s,baz=290,slow=5.8,SNR=2.5						
FINES	FINESS Array B	68.62	332	P	P	02 53 22.8	-0.2
	1.3nm,0.8s,baz=60,slow=5.5,SNR=3.1						
AKASG	Malin Array Be	74.16	322	P	P	02 53 57.2	+0.5
	0.4nm,0.4s,baz=56,slow=4.1,SNR=2.4						
KEST	Kesra	94.88	323	P	P	02 55 42.1	-0.6
	4.2nm,1.0s,baz=67,slow=7.7,SNR=2.1						

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*ISCJB **15** 02:43:34.6±0.5, 34°.60N±0°.04×73°.14E±0°.07, h21^{km}, mb3.8/12, Error ellipse: s-maj=8.6km s-min=5.0km az=150.2*

*IDC **15** 02:43:41.5±3.1, 34°.87N×72°.99E, h45^{km}±29^{km}, mb3.5/12, mb1 3.6/17, mb1mx3.4/62, mbtmp3.7/17, ML3.5/5, Error ellipse: s-maj=22.1km s-min=17.9km az=3.0*

*NNC **15** 02:43:45.3±8.9, 35°.46N×71°.02E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=89.3km s-min=63.5km az=117.0*

ISC 15 02:43:37.6±0.7, 34°.70N±0°.07×73°.04E±0°.08, h21^{km}, n31, σ2^{s}.39/34, mb3.9/11, 6C-4D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	5.31	4	⇓Pn	Pn	02 45 00.4	+4.5
	2.9nm,0.4s						
SFK				⇑Sn	Sn	02 45 59.5	+2.9
	9.9nm,0.4s						
MNAS	Manas	7.78	357	⇑Pn	Pn	02 45 31.2	+1.5
	1.5nm,0.4s						
MNAS				⇑Sn	Sn	02 46 55.9	-1.4
	3.6nm,0.5s						
AAK	Ala-Archa	8.01	8	⇓Pn	Pn	02 45 37.6	+4.9
	1.5nm,0.6s						
AAK				⇑Sn	Sn	02 47 06.2	+3.5
	2.1nm,0.6s						
AAK	Ala-Archa	8.01	8	P	Pn	02 45 33.8	+1.0
	0.3nm,0.3s,baz=176,slow=13,SNR=3.9						
AAK				S	Sn	02 47 01.4	-1.3
	0.4nm,0.3s,baz=81,slow=19,SNR=1.8						
TKM2	Tokmak 2	8.45	13	⇓Pn	Pn	02 45 47.2	+8.3
	4.1nm,1.1s						
TKM2				⇓Sn	Sn	02 47 18.1	+4.4
	3.2nm,0.6s						
KK31	Karatay Array	8.62	348	⇑Pn	Pn	02 45 40.8	-0.2
	2.5nm,0.3s,baz=178,slow=13,SNR=76						
KK31				⇑Sn	Sn	02 47 09.6	-7.9
	1.9nm,0.4s,baz=186,slow=28,SNR=6.9						
PYUN	Piuthan	10.75	125	*e*P	Pn	02 46 09.5	-1.0
	5.9nm,0.2s						
DANN	Dangsing	11.12	122	*e*P	Pn	02 46 14.6	-1.1
	18nm,0.4s						
KOLN	Koldanda	11.37	125	*e*P	Pn	02 46 18.0	-1.0
	5.0nm,0.3s						
GEYT	Alibeck	12.46	289	P	Pn	02 46 35.0	+1.4
	0.3nm,0.3s,baz=114,slow=14,SNR=3.0						
DMN	Daman	12.52	121	*e*P	Pn	02 46 32.4	-2.3
	5.5nm,0.3s						
PKIN	Phulchoki	12.74	121	*e*P	Pn	02 46 35.3	-2.5
	5.2nm,0.3s						
PKI	Pulchoki	12.75	121	*e*P	Pn	02 46 35.7	-2.3
	8.1nm,0.4s						
GUN	Gumba	12.89	118	*e*P	Pn	02 46 37.0	-2.9
	8.2nm,0.3s						
JIRN	Jiri	13.26	118	*e*P	Pn	02 46 41.8	-3.2
	14nm,0.3s						
MKAR	Makanchi Array	13.95	27	P	Pn	02 46 53.1	-0.9
	0.0nm,0.3s,baz=218,slow=13,SNR=2.7						
KURBB	Kurchatov Arra	16.41	12	P	Pn	02 47 23.1	-3.3
	0.1nm,0.3s,baz=202,slow=10,SNR=3.6						
BVAR	Borovoye Array	18.41	355	P	Pn	02 47 51.3	-0.1
	0.3nm,0.3s,baz=152,slow=8.3,SNR=5.5						
AKTO	Aktyubinsk	19.16	330	P	P	02 47 59.7	+0.2
	0.5nm,0.3s,baz=154,slow=7.0,SNR=8.5						
ZALV	Zalesovo Beam	20.95	20	P	P	02 48 16.9	-2.0
	3.5nm,0.5s,baz=214,slow=11,SNR=17						
SONM	Songino Array	28.06	52	P	P	02 49 28.0	+0.4
	0.3nm,0.9s,baz=270,slow=8.6,SNR=2.5						
CMAR	Chiang Mai Arr	28.14	118	P	P	02 49 31.4	+3.0
	0.9nm,0.3s,baz=299,slow=9.2,SNR=4.8						
AKASG	Malin Array Be	35.37	310	P	P	02 50 31.2	-0.2
	1.0nm,0.5s,baz=94,slow=8.8,SNR=2.5						
FINES	FINESS Array B	39.90	327	P	P	02 51 09.9	+0.3
	1.1nm,0.7s,baz=120,slow=11,SNR=5.1						
ARCES	ARCESS Array B	43.43	338	P	P	02 51 38.8	+0.3
	2.7nm,0.7s,baz=116,slow=7.9,SNR=18						
NOA	NORSAR Array B	46.81	324	P	P	02 52 05.1	-0.4
	1.3nm,1.0s,baz=103,slow=8.1,SNR=2.6						
KEST	Kesra	51.20	291	P	P	02 52 40.0	+0.5
	2.7nm,0.7s,baz=78,slow=20,SNR=2.9						
ESDC	Sonseca Array	59.77	300	P	P	02 53 40.9	-0.2
	0.1nm,0.4s,baz=57,slow=7.7,SNR=3.1						
TORD	Torodi Ar. Bea	67.36	271	P	P	02 54 31.3	-0.2
	0.6nm,0.6s,baz=42,slow=6.7,SNR=14						
BOSA	Boshof	77.48	222	P	P	02 55 32.8	+1.1
	1.5nm,0.5s,baz=48,slow=16,SNR=3.7						
YKA	Yellowknife Ar	82.95	4	P	P	02 56 00.2	-0.3
	0.1nm,0.4s,baz=352,slow=5.2,SNR=6.4						

IDC 15 02:44:35.8±4.5, 23°.78S×177°.23W, h0^{km}, mb3.9/3, mb1 4.2/3, mb1mx3.7/37, mbtmp3.9/3, Error ellipse: s-maj=307.5km s-min=34.4km az=158.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.55	260	P	P	02 52 49.6	-0.1
	0.5nm,0.3s,baz=96,slow=8.5,SNR=7.6						
WRA	Warramunga Arr	44.94	265	P	P	02 52 52.6	-0.2
	2.0nm,0.6s,baz=104,slow=8.0,SNR=10.0						
PDAR	Pinedale Array	90.86	43	P	P	02 57 41.5	0.0
	0.2nm,0.5s,baz=224,slow=3.8,SNR=2.5						

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*ISCJB **15** 02:48:20.3±0.8, 6°.63S±0°.06×129°.96E±0°.08, h146^{km}, mb3.6/3, Error ellipse: s-maj=11.8km s-min=8.8km az=3.7*

*IDC **15** 02:48:22.4±2.1, 6°.69S×129°.97E, h159^{km}±21^{km}, mb3.3/3, mb1 3.3/8, mb1mx3.2/49, mbtmp3.8/8, Error ellipse: s-maj=23.8km s-min=14.4km az=85.0*

ISC 15 02:48:20.4±0.8, 6°.72S±0°.06×130°.1E±0°.1, h146^{km}, n8, σ3^{s}.19/13, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.92	11	P	Pn	02 49 47.7	+1.6
	1.2nm,0.3s,baz=180,slow=20,SNR=9.1						
SIJI				S	Sn	02 50 47.8	-5.3
	4.9nm,0.3s,baz=232,slow=22,SNR=13						
BATI	Baumata	7.28	241	P	Pn	02 50 06.3	+2.0
	8.9nm,0.3s,baz=70,slow=10,SNR=7.1						
BATI				S	Sn	02 51 23.6	-2.2
	10nm,0.3s,baz=36,slow=20,SNR=6.6						
FITZ	Fitzroy Crossi	12.13	201	P	Pn	02 51 09.8	+1.2
	0.2nm,0.3s,baz=28,slow=11,SNR=18						
FITZ				S	Sn	02 53 17.6	-5.0
	0.6nm,0.3s,baz=282,slow=21,SNR=6.9						
WRA	Warramunga Arr	13.76	163	P	Pn	02 51 31.0	+1.4
	0.5nm,0.3s,baz=347,slow=13,SNR=18						
WRA				S	Sn	02 53 58.0	-3.9
	0.6nm,0.3s,baz=338,slow=22,SNR=7.5						
ASAR	Alice Springs	17.23	168	P	Pn	02 52 15.0	+2.6
	0.4nm,0.3s,baz=349,slow=11,SNR=16						
ASAR				S	S	02 55 22.5	-1.4
	0.1nm,0.3s,baz=350,slow=22,SNR=3.7						
STKA	Stephens Creek	27.22	158	P	P	02 53 53.7	+3.0
	0.7nm,0.3s,baz=331,slow=10,SNR=3.2						
SONM	Songino Array	58.22	341	P	P	02 57 59.5	0.0
	0.1nm,0.4s,baz=134,slow=7.8,SNR=2.0						
MKAR	Makanchi Array	68.07	327	P	P	02 59 04.0	-0.3
	1.0nm,0.4s,baz=117,slow=7.7,SNR=28						

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*ISCJB **15** 02:51:27.3±0.9, 19°.7S±0°.2×179°.5W±0°.1, h700^{km}, mb3.7/18, Error ellipse: s-maj=31.4km s-min=10.6km az=151.3*

*IDC **15** 02:51:28.4±1.9, 19°.71S×179°.45W, h699^{km}±19^{km}, mb3.2/18, mb1 3.4/19, mb1mx3.3/38, mbtmp4.3/19, Error ellipse: s-maj=30.6km s-min=11.3km az=153.0*

ISC 15 02:51:28.0±1.0, 19°.7S±0°.2×179°.4W±0°.1, h700^{km}, n30, σ0^{s}.80/33, mb3.8/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	13.46	258	P	P	02 54 20.1	+0.4
	0.5nm,0.3s,baz=70,slow=19,SNR=2.8						
CTA	Charters Tower	32.29	263	P	P	02 57 05.0	+0.2
	3.5nm,0.3s,baz=88,slow=9.8,SNR=2.9						
STKA	Stephens Creek	36.97	243	P	P	02 57 43.5	+0.6
	1.2nm,0.4s,baz=76,slow=8.2,SNR=3.2						
JAY	Jayapura	42.58	289	P	P	02 58 28.0	+0.5
	34nm,1.1s,baz=144,slow=14,SNR=4.3						
WRA	Warramunga Arr	43.43	262	P	P	02 58 33.4	-0.5
	1.7nm,0.3s,baz=97,slow=7.7,SNR=18						
WRA				PcP	PcP	03 00 05.7	+0.5
	0.4nm,0.7s,baz=101,slow=3.4,SNR=2.8						
WRA				S	S	03 04 13.9	-1.7
	0.8nm,0.9s,baz=96,slow=14,SNR=5.6						
ASAR	Alice Springs	43.44	256	P	P	02 58 34.1	+0.1
	2.2nm,0.4s,baz=87,slow=8.3,SNR=16						
ASAR				PcP	PcP	03 00 05.0	-0.3
	0.6nm,0.5s,baz=99,slow=3.3,SNR=3.4						
ASAR				S	S	03 04 14.3	-1.4
	1.0nm,0.7s,baz=87,slow=14,SNR=7.9						
FITZ	Fitzroy Crossi	51.85	262	P	P	02 59 36.0	+0.1
	0.8nm,0.4s,baz=109,slow=5.5,SNR=2.0						
MJAR	Matsushiro Arr	68.84	324	P	P	03 01 25.4	-0.8
	2.0nm,0.6s,baz=168,slow=6.7,SNR=3.4						
ASAJ	Asahikawa	72.46	332	P	P	03 01 48.2	+1.3
	6.1nm,0.8s,baz=188,slow=5.4,SNR=2.9						
PETK	Petropavlovsk-	75.22	346	P	P	03 02 02.0	-0.2
	2.9nm,0.7s,baz=133,slow=8.1,SNR=3.8						
KSRS	Korea Array	75.47	319	P	P	03 02 04.9	+1.0
	0.9nm,0.6s,baz=128,slow=5.3,SNR=1.5						
USRK	Ussuriysk Ar.	77.62	326	P	P	03 02 16.1	+0.7
	1.2nm,0.6s,baz=116,slow=4.4,SNR=2.4						
NVAR	Mina Array Bea	81.37	44	P	P	03 02 36.0	+0.6
	1.0nm,0.6s,baz=224,slow=9.2,SNR=7.5						

SEY	Seymchan	85.36	347	P	P	03 02 54.0	0.0
	2.4nm,0.6s,baz=142,slow=7.9,SNR=4.3						
TXAR	Lajitas Array	87.74	58	P	P	03 03 07.0	+0.8
	0.7nm,0.8s,baz=217,slow=6.0,SNR=7.7						
ILAR	Eielson Array	87.87	13	P	P	03 03 04.7	-1.2
	1.4nm,0.8s,baz=216,slow=5.7,SNR=10						
CMAR	Chiang Mai Arr	88.65	290	P	P	03 03 12.2	+1.7
	0.9nm,0.3s,baz=108,slow=2.1,SNR=1.8						
PDAR	Pinedale Array	89.30	44	P	P	03 03 13.4	+0.2
	0.5nm,0.6s,baz=208,slow=3.3,SNR=4.9						
YKA	Yellowknife Ar	96.37	25	P	P	03 03 43.8	-0.9
	0.1nm,0.5s,baz=236,slow=4.7,SNR=1.8						
MKAR	Makanchi Array	109.75	314	PKiKP	PKiKP	03 08 41.7	-0.7
	0.2nm,0.4s,baz=100,slow=1.7,SNR=3.0						
KURBB	Kurchatov Arra	112.62	318	PKiKP	PKiKP	03 08 47.1	-0.5
	0.4nm,0.7s,baz=72,slow=3.0,SNR=3.7						
BVAR	Borovoye Array	117.68	320	PKP	PKPdf	03 08 56.4	-0.9
	1.0nm,0.3s,baz=113,slow=2.0,SNR=7.8						
ARCES	ARCESS Array B	127.94	349	PKP	PKPdf	03 09 15.8	-0.7
	4.2nm,0.9s,baz=61,slow=1.0,SNR=2.4						
FINES	FINESS Array B	134.68	343	PKP	PKPdf	03 09 29.6	+0.3
	0.5nm,0.4s,baz=43,slow=2.7,SNR=2.2						
NOA	NORSAR Array B	138.07	352	PKP	PKiKP	03 09 37.0	-1.0
	0.4nm,0.5s,baz=14,slow=3.8,SNR=1.3						
NOA				SKP		03 12 08.4	
	1.3nm,0.9s,baz=354,slow=10,SNR=3.2						
AKASG	Malin Array Be	141.73	331	PKhKP	PKPpre	03 09 38.1	
	3.3nm,0.3s,baz=43,slow=4.2,SNR=18						
BRTR	Keskin Array B	145.38	312	PKPbc	PKPbc	03 09 51.0	-0.1
	1.3nm,0.7s,baz=89,slow=2.3,SNR=4.9						
GERES	GERESS Array B	149.12	343	PKPbc	PKPbc	03 10 00.6	+0.2
	0.8nm,0.5s,baz=33,slow=3.8,SNR=7.8						
CONA	Conrad Observa	149.29	340	i PKiKP	PKiKP	03 10 01.4	-0.1
	1.8nm,0.5s						
ABTA	Abfaltersbach	151.36	343	i PKPbc	PKPbc	03 10 05.0	-0.5
	1.8nm,0.6s						

MOS ***15*** *03:02:17.4±0.8,19°.68S×174°.49W,h33^{km},mb5.7/100, MS4.9/12,Error ellipse: s-maj=7.9km s-min=6.2km az=51.9*

IDC ***15*** *03:02:19.7±1.7,19°.72S×174°.44W,h41^{km}±14^{km},mb5.3/35, mb1 5.4/36,mb1mx5.4/38,mbtmp5.5/36,ML6.3/2,MS4.7/23, Ms1 4.7/23,ms1mx4.6/26,Error ellipse: s-maj=11.7km s-min=8.6km az=134.0*

ISCJB ***15*** *03:02:21.3±0.8,19°.71S±0°.02×174°.46W±0°.02,h70^{km}±7^{km}, mb5.6/395,Error ellipse: s-maj=3.8km s-min=2.7km az=145.5*

BJI ***15*** *03:02:23.4,19°.47S×174°.36W,h76^{km},mB5.8/48, mb5.4/57,Ms5.3/56,Ms7 5.1/59*

NEIC ***15*** *03:02:23.0±0.0,19°.92S×174°.26W,h80^{km},Moment Tensor Solution. s15 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.76; $M_{\theta\theta}$0.24; $M_{\phi\phi}$2.52; $M_{r\theta}$-0.13; $M_{\theta\phi}$0.73; $M_{\phi r}$4.16; Best double couple: $M_0$5.00000×10^{17} NP1:ϕ_s181.00000°, δ74.00000°,λ-98.00000°. NP2:ϕ_s29.00000°,δ18.00000°, λ-63.00000°. Principal axes: T 4.8800, Plg28.0000°, Azm278.0000°; N 0.2000, Plg7.0000°, Azm183.0000°; P -5.0900, Plg60.0000°, Azm79.0000°;*

NEIC ***15*** *03:02:23.1±0.1,19°.73S×174°.47W,h74^{km},mb5.8/300, ME5.2,MW5.8,MW5.7 Error ellipse: s-maj=2.9km s-min=1.6km az=142.0,Moment Tensor Solution. s67 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.64; $M_{\theta\theta}$0.75; $M_{\phi\phi}$3.89; $M_{r\theta}$-0.24; $M_{\theta\phi}$-0.82; $M_{\phi r}$5.21; Best double couple: $M_0$6.80000×10^{17} NP1:ϕ_s341.00000°,δ20.00000°, λ-103.00000°. NP2:ϕ_s174.00000°,δ70.00000°, λ-85.00000°. Principal axes: T 6.4800, Plg25.0000°, Azm261.0000°; N 0.6300, Plg4.0000°, Azm353.0000°; P -7.1100, Plg65.0000°, Azm92.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s20.00000°,δ15.00000°, λ-90.00000°. NP2:ϕ_s200.00000°,δ75.00000°, λ-90.00000°. Principal axes: T Plg30.0000°, Azm290.0000°; N Plg0.0000°, Azm0.0000°; P Plg60.0000°, Azm110.0000°; Apparent Stress 0.33 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [III] at Neiafu. Also felt at Pangai.

GCMT ***15*** *03:02:26.1±0.1,19°.86S±0°.01×173°.90W±0°.01,h93^{km}, MW5.7/141,Moment Tensor Solution. s133,c275; s141,c337; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.62±.04; $M_{\theta\theta}$0.74±.05; $M_{\phi\phi}$1.88±.05; $M_{r\theta}$-0.23±.03; $M_{\theta\phi}$1.25±.04; $M_{\phi r}$3.73±.03; Best double couple: $M_0$4.55500×10^{17} NP1:ϕ_s185.00000°,δ74.00000°, λ-106.00000°. NP2:ϕ_s50.00000°,δ23.00000°, λ-47.00000°. Principal axes: T 4.2610, Plg27.0000°, Azm288.0000°; N 0.5870, Plg15.0000°, Azm190.0000°; P -4.8480, Plg59.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 15 03:02:22.8±0.4**,19°.86S**±0°.04×**174°.37W**±0°.04**,h75**^{km}±3^{km}**, h75**^{km}**:pP-P,n1489,**σ**1^{s}57**/1548**,mb5.8**/390**,65C-61D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.26	80	ePn	Pn	03 03 20.9	-4.3
NIUE				eSn	Sn	03 04 02.5	-11
MSVF	Nonsavu	7.49	285	ePn	Pn	03 04 16.9	+7.5
RIZ	Raoul Island	9.89	198	P	Pn	03 04 42.9	+0.8
RIZ				S	Sn	03 06 29.2	-2.2
RAO	Raoul Island	9.89	198	ePn	Pn	03 04 42.6	+0.5
RAO				eSn	Sn	03 06 30.0	-1.4
RAO	Raoul Island	9.89	198	eP	Pn	03 04 42.6	+0.5
RAO				e		03 06 30.0	
RAO	Raoul Island	9.89	198	P	Pn	03 04 42.0	-0.1
	222nm,0.3s,baz=89,slow=23,SNR=11						
RAO				S	Sn	03 06 30.7	-0.8
	865nm,0.3s,baz=154,slow=23,SNR=19						
GLKZ	Green Lake	9.90	198	P	Pn	03 04 43.3	+1.0
GLKZ				S	Sn	03 06 30.3	-1.4
FUNA	Funafuti	12.88	330	ePn	Pn	03 05 24.5	+1.7
RAR	Rarotonga	13.74	98	ePn	Pn	03 05 29.6	-4.6
RAR				S	Sn	03 07 50.2	-15
RAR	Rarotonga	13.74	98	P	Pn	03 05 30.7	-3.6
	56nm,0.3s,baz=296,slow=13,SNR=40						
RAR				S	Sn	03 07 50.2	-15
	30nm,0.3s,baz=27,slow=16,SNR=5.4						
MARNC	Mare, Loyalty	16.55	261	ePn	P	03 06 11.6	-0.1
	924nm,0.9s						
PINNC	Pines Island,	17.18	258	ePn	P	03 06 19.5	+1.0
	608nm,1.0s						
KNTN	Kanton	17.18	9	ePn	Pn	03 06 15.2	-2.9
	995nm,1.5s						
OUENC	Ouen Island, N	17.71	258	ePn	Pn	03 06 25.6	+1.0
	516nm,1.1s						
DZM	Mont Dzumac	18.06	260	eP	Pn	03 06 28.9	+0.1
	1µm,1.1s						
DZM				eLQ	LQ	03 09 56.2	
	9µm,25.8s						
DZM				eLR	LR	03 10 40.0	
	comp=Z,19µm,25.9s						
DZM	Mont Dzumac	18.06	260	eP	Pn	03 06 31.3	+2.5
	673nm,1.1s						
DZM	Mont Dzumac	18.06	260	P	Pn	03 06 30.0	+1.1
	14nm,0.3s,baz=78,slow=23,SNR=89						
DZM				LR	LR	03 11 05.4	
	comp=Z,3µm,19.9s,baz=88,slow=29						
ONTNC	Ouen Toro	18.06	259	eP	Pn	03 06 29.9	+1.1
	598nm,1.1s						
GRZ	Great Barrier	18.61	207	P	Pn	03 06 37.3	+2.0
OUZ	Omahuta	18.63	212	eP	Pn	03 06 36.9	+1.4
	477nm,1.4s						
OUZ	Omahuta	18.63	212	P	Pn	03 06 37.5	+2.0
MXZ	Matakaoa Point	18.76	198	eP	Pn	03 06 38.0	+0.9
	70nm,1.0s						
MXZ	Matakaoa Point	18.76	198	P	Pn	03 06 38.6	+1.6
MXZ				S	S	03 09 52.1	-13
WCZ	Waipu Caves	18.84	209	P	Pn	03 06 41.0	+2.9
KUZ	Kuaotunu	18.93	205	P	Pn	03 06 41.1	+2.0
WMGZ	Waiomatatini S	18.97	198	P	Pn	03 06 42.4	+3.0
WMGZ				S	S	03 09 58.2	-11
HAZ	Te Kaha	19.10	199	P	P	03 06 39.0	-0.5
HAZ				S	S	03 10 00.3	-12
PKGZ	Pakihiroa	19.13	199	P	Pn	03 06 42.0	+0.6
PKGZ				S	S	03 09 57.6	-15
PUZ	Puketiti	19.25	198	P	Pn	03 06 44.4	+1.5
PUZ				S	S	03 10 01.1	-14
RUGZ	Raukumara Rang	19.32	199	P	P	03 06 42.5	+0.4
RUGZ				S	S	03 10 01.3	-16
TWGZ	Tauwhareparae	19.43	198	P	Pn	03 06 46.1	+1.1
TWGZ				P	S	03 10 07.5	-11
WHRZ	Whale Island	19.45	201	P	Pn	03 06 47.0	+1.7
WHRZ				S	S	03 10 12.4	-7.0
OPRZ	Ohinepanea	19.58	202	P	Pn	03 06 49.2	+2.4
CNGZ	Carnagh Statio	19.64	198	P	Pn	03 06 51.1	+3.6
CNGZ				P	S	03 10 14.4	-8.7
CNGZ	Carnagh Statio	19.64	198	P	S	03 10 14.4	-8.7
MARZ	Manawahe	19.67	201	P	Pn	03 06 50.0	+2.2
TKGZ	Te Karaka	19.71	198	P	Pn	03 06 48.8	+0.6
TKGZ				S	S	03 10 12.7	-12
TKGZ	Te Karaka	19.71	198	P	S	03 10 14.5	-10
MWZ	Matawai	19.71	199	P	Pn	03 06 47.5	-0.8
MWZ				S	S	03 10 11.8	-13
URZ	Urewera	19.77	200	eP	Pn	03 06 48.7	-0.3
	640nm,1.4s						
URZ				S	S	03 10 13.0	-13
URZ	Urewera	19.77	200	P	Pn	03 06 49.0	+0.1
	86nm,0.3s,baz=332,slow=2.0,SNR=190						
URZ				S	S	03 10 13.0	-13
	5.6nm,0.3s,baz=127,slow=20,SNR=6.2						
URZ	Urewera	19.77	200	P	Pn	03 06 48.6	-0.3
KARZ	Kaharoa	19.85	202	P	Pn	03 06 50.9	+1.0
MKRZ	Makatiti	19.88	202	P	Pn	03 06 53.8	+3.4
OMRZ	Omania	19.88	202	P	Pn	03 06 52.3	+2.0
RAGZ	Rawiri	19.89	199	P	Pn	03 06 51.0	+0.5
RAGZ	Rawiri	19.89	199	P	S	03 10 21.0	-7.1
NGRZ	Ngongotaha	19.94	202	P	Pn	03 06 54.3	+3.3
TARZ	Mount Tarawera	19.95	201	P	Pn	03 06 52.2	+1.0
RIGZ	Rimuhau	19.98	198	P	Pn	03 06 51.9	+0.5
RIGZ	Rimuhau	19.98	198	P	S	03 10 17.3	-12
UTU	Utuhina	20.01	202	P	Pn	03 06 54.7	+2.9
HLRZ	Highlands Stat	20.02	202	P	Pn	03 06 54.5	+2.6
RRRZ	Republican Roa	20.04	201	P	Pn	03 06 54.2	+2.0
MUGZ	Murupara	20.08	201	P	P	03 06 50.9	+0.7
HSRZ	Hossack Road	20.11	202	P	Pn	03 06 55.6	+2.6
RTZ	Ruatahuna	20.14	200	P	P	03 06 52.0	+1.1
RTZ	Ruatahuna	20.14	200	P	S	03 10 27.5	-5.4
PRGZ	Paritu Road	20.14	198	P	Pn	03 06 55.7	+2.4
PRGZ	Paritu Road	20.14	198	P	S	03 10 20.9	-12
HRRZ	Handcock Road	20.17	202	P	Pn	03 06 55.2	+1.5
SNGZ	Shannon Statio	20.18	199	P	Pn	03 06 54.5	+0.7
SNGZ	Shannon Statio	20.18	199	P	S	03 10 24.0	-10
GRRZ	Galatos Road	20.19	202	P	Pn	03 06 55.6	+1.6
PRRZ	Plateau Road	20.23	201	P	Pn	03 06 55.4	+1.1
KNZ	Kokohu	20.30	198	P	Pn	03 06 55.1	0.0
KNZ	Kokohu	20.30	198	P	S	03 10 24.1	-12
ALRZ	Allen Road	20.30	201	P	Pn	03 06 55.8	+0.6
WPRZ	Whakapapatarin	20.32	202	P	Pn	03 06 57.1	+1.6
MHGZ	Mahia Peninsul	20.35	197	P	Pn	03 06 56.7	+0.9
MHGZ	Mahia Peninsul	20.35	197	P	S	03 10 26.9	-10
RAHZ	Arahi	20.38	199	P	P	03 06 54.6	+1.2
RAHZ	Arahi	20.38	199	P	S	03 10 31.0	-6.6
TLZ	Tolley Road	20.38	203	P	Pn	03 06 57.2	+1.0
MTHZ	Maungataniwha	20.40	200	P	Pn	03 06 56.5	+0.1
MTHZ	Maungataniwha	20.40	200	P	S	03 10 34.4	-3.6
KUTZ	Kaahu Road	20.42	203	P	Pn	03 06 58.8	+2.2
WHHZ	Waihua	20.48	199	P	Pn	03 06 57.9	+0.6
WHHZ	Waihua	20.48	199	P	S	03 10 30.9	-8.7
MRHZ	Matea Rd	20.52	201	P	Pn	03 06 56.8	-1.0
NMHZ	Naumai	20.63	200	P	Pn	03 06 58.3	-0.9
NMHZ	Naumai	20.63	200	P	S	03 10 37.1	-5.6
WATZ	Wairara	20.64	202	P	Pn	03 06 58.9	-0.4
ARHZ	Aropaoanui	20.72	199	P	Pn	03 06 59.3	-0.8
ARHZ	Aropaoanui	20.72	199	P	S	03 10 35.4	-8.9
RATZ	Rangitukua	20.77	202	P	Pn	03 06 59.9	-0.9
BKZ	Black Stump Fm	20.80	200	eP	P	03 06 58.2	+0.2
	83nm,0.7s						
BKZ	Black Stump Fm	20.80	200	P	P	03 06 58.1	+0.2
BKZ	Black Stump Fm	20.80	200	P	S	03 10 36.5	-9.4
HIZ	Hauiti	20.80	204	eP	Pn	03 07 00.3	-0.8
	595nm,1.0s						
RITZ	Rihia Road	20.84	202	P	Pn	03 07 00.2	-1.4
KATZ	Kakaramea	20.90	202	P	Pn	03 07 01.8	-0.5
MCHZ	McNeill Hill	20.98	200	P	P	03 07 01.6	+1.7
MCHZ	McNeill Hill	20.98	200	P	S	03 10 44.5	-5.0
KWHZ	Kaweka Forest	21.05	200	P	P	03 07 02.6	+1.9
KWHZ	Kaweka Forest	21.05	200	P	S	03 10 42.3	-8.7
CKHZ	Cape Kidnapper	21.06	199	P	P	03 07 04.0	+3.3
CKHZ	Cape Kidnapper	21.06	199	P	S	03 10 44.9	-6.1
TWVZ	Taurewa	21.07	203	P	P	03 07 03.6	+2.6
NGZ	Ngauruhoe	21.11	202	P	P	03 07 03.2	+1.8
COVZ	Chateau Observ	21.15	202	P	P	03 07 03.7	+1.9
TUVZ	Tukino	21.17	202	P	P	03 07 03.5	+1.4
BHHZ	Black Hill Sta	21.23	201	P	S	03 10 45.2	-9.3
KAHZ	Kahuranaki	21.25	199	P	P	03 07 04.0	+1.2
KAHZ	Kahuranaki	21.25	199	P	S	03 10 47.5	-7.3
MOVZ	Moawhango	21.26	202	P	S	03 10 48.9	-6.3
PXZ	Pawanui	21.47	199	P	P	03 07 07.4	+2.3
WPHZ	Waipukurau	21.63	199	P	S	03 10 57.4	-4.8
PRHZ	Porangahau	21.75	199	P	S	03 10 58.4	-6.3
TSZ	Takapari Road	21.78	200	P	P	03 07 10.9	+2.5
DVHZ	Dannevirke	21.93	200	P	P	03 07 11.5	+1.5
DVHZ	Dannevirke	21.93	200	P	S	03 11 02.8	-5.2
ANWZ	Angora Road	21.98	199	P	S	03 11 05.0	-3.8
POWZ	Post Office Ro	22.14	200	P	S	03 11 06.1	-5.6
PRWZ	Pori Road	22.22	200	P	S	03 11 07.0	-6.2
BFZ	Birch Farm	22.25	199	eP	P	03 07 15.1	+1.6
	93nm,0.8s						
BFZ				ePcP	PcP	03 11 08.5	+1.5
BFZ	Birch Farm	22.25	199	P	S	03 11 07.8	-5.9
TIWZ	Tintock	22.45	200	P	S	03 11 12.6	-4.5
HOWZ	Holdsworth Sta	22.68	200	P	S	03 11 15.6	-5.2
OGWZ	Otaki Gorge	22.72	201	P	S	03 11 16.6	-4.8
TMWZ	Te Maipa	22.75	199	P	S	03 11 19.3	-2.7
KIW	Kapiti Island	22.85	201	P	S	03 11 20.1	-3.5
MTW	Mount Morrison	22.92	200	P	S	03 11 20.3	-4.4
CAW	Cannon Point	23.02	201	P	S	03 11 24.8	-1.4
TRWZ	Traveller	23.08	199	P	S	03 11 25.1	-2.1
PAWZ	Paruwai Farm	23.14	200	P	S	03 11 25.7	-2.7
PAWZ				P	P	03 11 25.9	
DUWZ	D’Urville Isla	23.15	203	P	P	03 07 22.6	-0.2
DUWZ	D’Urville Isla	23.15	203	P	S	03 11 26.7	-1.6
SNZO	South Karori	23.32	201	eP	P	03 07 25.2	+0.9
	324nm,0.9s						
SNZO				eS	S	03 11 29.2	-1.8
BHW	Baring Head	23.35	201	P	S	03 11 32.0	+0.5
PLWZ	Palliser	23.37	200	P	S	03 11 32.3	+0.3
TCW	Tory Channel	23.38	202	P	P	03 07 24.5	-0.3
TBI	Tubuai	23.41	103	eP	P	03 07 24.1	-1.2
	601nm,0.9s						
TBI				eS	S	03 11 28.8	-4.0
	3µm,40.2s						
TBI				eLQ	LQ	03 12 14.2	
	3µm,30.5s						
TBI				eLR	LR	03 12 53.3	
	comp=Z,15µm,33.0s						
TBI	Tubuai	23.41	103	eT	T	03 31 32.6	
	160nm,0.3s						
PAE	Paea	23.57	89	eP	P	03 07 25.4	-1.4
	12nm,0.8s						
PAE	Paea	23.57	89	eT	T	03 31 40.2	
	75nm,0.3s						
PPT2	Papeete2	23.58	89	eP	P	03 07 25.9	-1.2
	231nm,1.5s						
PPT2				eLQ	LQ	03 12 04.5	
	8µm,25.2s						
PPT2				eLR	LR	03 12 51.3	
	comp=Z,22µm,31.0s						
PPT2	Papeete2	23.58	89	eT	T	03 31 42.3	
	45nm,0.3s						
PPT	Papeete	23.59	89	eP	P	03 07 27.1	+0.1
PPT	Papeete	23.59	89	P	P	03 07 27.7	+0.7
	66nm,0.7s,baz=18,slow=3.6,SNR=9.8						
PPT				LR	LR	03 14 42.3	
	comp=Z,1µm,19.3s,baz=253,slow=31						
PPTF	Pamatai, Papee	23.59	89	eP	P	03 07 26.3	-0.8
	1µm,1.8s						
TUWZ	Tuamarina	23.69	202	P	P	03 07 27.8	+0.1
TUWZ	Tuamarina	23.69	202	P	S	03 11 37.4	+0.3
QRZ	Quartz Range	23.71	205	P	P	03 07 28.6	+0.7
QRZ	Quartz Range	23.71	205	P	S	03 11 45.3	+7.9
NNZ	Nelson	23.71	203	P	P	03 07 28.1	+0.2
NNZ	Nelson	23.71	203	P	S	03 11 39.1	+1.7
TIAR	Tiarei	23.80	89	eP	P	03 07 27.9	-1.1
	92nm,1.4s						
TIAR	Tiarei	23.80	89	eT	T	03 31 58.0	
	8.0nm,0.2s						
TVO	Taravao	23.86	89	eP	P	03 07 28.4	-1.1
	70nm,1.4s						
TVO	Taravao	23.86	89	eT	T	03 32 02.3	
	9.4nm,0.3s						
BSWZ	Blackbirch Sta	23.96	202	P	P	03 07 32.4	+2.3
THZ	Tophouse	24.36	204	eP	P	03 07 34.8	+1.0
	618nm,1.2s						
THZ				eS	S	03 11 52.5	+4.5
THZ	Tophouse	24.36	204	P	P	03 07 34.8	+1.0
TARA	Tarawa	24.50	328	eP	P	03 07 34.3	-0.8
	480nm,1.4s						
KHZ	Kahutara	24.70	202	eP	P	03 07 37.8	+1.0
	341nm,1.2s						
KHZ				eS	S	03 11 55.4	+2.1
KHZ	Kahutara	24.70	202	P	P	03 07 38.1	+1.3
DSZ	Denniston Nort	24.77	205	P	P	03 07 39.3	+1.7
LTZ	Lake Taylor	25.48	203	eP	P	03 07 46.2	+2.2
	202nm,0.8s						
LTZ				eS	S	03 12 04.9	-0.9
LTZ	Lake Taylor	25.48	203	P	P	03 07 44.3	+0.4
AMCZ	Amberley	25.68	202	P	P	03 07 48.9	+3.1
PMOR	Pomariorio Ree	25.70	83	eP	P	03 07 45.4	-0.8
	547nm,1.4s						
PMOR	Pomariorio Ree	25.70	83	eT	T	03 34 18.5	
	13nm,0.2s						
INZ	Inchbonnie	25.75	205	P	P	03 07 47.9	+1.6
VAH	Vaihoa	25.89	84	eP	P	03 07 47.0	-0.9
	304nm,1.5s						
VAH	Vaihoa	25.89	84	eT	T	03 34 32.7	
	17nm,0.2s						
OXZ	Oxford	26.03	203	eP	P	03 07 49.2	+0.2
	555nm,1.0s						
OXZ				eS	S	03 12 17.2	+2.7
OXZ	Oxford	26.03	203	P	P	03 07 50.8	+1.8
CRLZ	Canterbury Las	26.04	202	eP	P	03 07 51.0	+2.0
	160nm,1.0s						
MQZ	McQueen’s Vall	26.14	202	eP	P	03 07 51.6	+1.7
	223nm,1.3s						
LHI	Lord Howe Isla	26.54	239	P	P	03 07 55.0	+1.4
	baz=27,SNR=4.8						
LHI	Lord Howe Isla	26.54	239	eP	P	03 07 54.8	+1.2
	130nm,1.0s						
RPZ	Rata Peaks	26.74	204	eP	P	03 07 57.1	+1.9
	370nm,1.3s						
RPZ				S	S	03 12 31.3	+5.8
RPZ	Rata Peaks	26.74	204	P	P	03 07 56.5	+1.2
	128nm,0.7s,baz=26,slow=2.5,SNR=32						
RPZ				S	S	03 12 31.3	+5.8
	7.0nm,0.6s,baz=264,slow=9.2,SNR=2.4						
HNR	Honiara	26.89	289	eP	P	03 07 55.8	-1.1
	390nm,1.0s						
HNR	Honiara	26.89	289	P	P	03 07 55.8	-1.1
	239nm,0.7s,baz=245,slow=7.0,SNR=5.0						
HNR				LR	LR	03 17 14.7	
	comp=Z,2µm,21.1s,baz=129,slow=33						
FOZ	Fox Glacier	27.07	206	eP	P	03 07 59.7	+1.4
	764nm,1.1s						
LBZ	Lake Benmore	27.64	204	eP	P	03 08 05.0	+1.6
	163nm,1.2s						
ODZ	Otahua Downs	28.02	203	eP	P	03 08 08.8	+2.1
	126nm,1.3s						
WKZ	Wanaka	28.47	205	eP	P	03 08 12.2	+1.5
	199nm,1.0s						
MLZ	Mavora Lakes	29.27	206	eP	P	03 08 19.4	+1.5
	155nm,1.2s						
DCZ	Deep Cove	29.75	207	eP	P	03 08 23.9	+1.8
	111nm,1.0s						
WHZ	Wether Hill Ro	29.77	205	eP	P	03 08 23.8	+1.5
	108nm,0.7s						
EIDS	Eidsvold	32.30	254	P	P	03 08 44.6	-0.3
	baz=32,SNR=10						
EIDS	Eidsvold	32.30	254	eP	P	03 08 44.5	-0.3
	81nm,1.3s						
ARMA	Armidale	32.42	244	P	P	03 08 46.1	+0.3
	baz=32,SNR=42						
ARMA	Armidale	32.42	244	eP	P	03 08 46.2	+0.3
	128nm,1.1s						
MGCD	Mangrove Creek	33.47	240	P	P	03 08 55.6	+0.8
	baz=34,SNR=44						
RMQ	Roma	34.45	252	P	P	03 09 03.9	+0.4
	baz=34,SNR=12						
TAOE	Nuku Hiva Isla	34.83	77	eLR	LR	03 18 00.3	
	comp=Z,9µm,30.7s						
TAOE	Nuku Hiva Isla	34.83	77	eT	T	03 45 32.9	
	224nm,0.2s						
CNB	Canberra Magne	35.42	237	P	P	03 09 12.3	+0.5
	baz=36,SNR=34						
CAN	Canberra	35.70	237	eP	P	03 09 14.6	+0.3
	196nm,1.0s						
CAN	Canberra	35.70	237	eP	P	03 09 14.6	+0.3
CAN				pmax	pmax		
	comp=Z,200nm,1.0s						
YNG	Young	35.92	239	P	P	03 09 16.2	+0.2
	baz=36,SNR=34						
MILA	Mila	36.09	234	P	P	03 09 17.8	+0.3
	baz=36,SNR=3.6						
RKT	Rikitea	36.72	102	eP	P	03 09 22.5	-0.5
	comp=Z,118nm,1.0s						
RKT				eS	S	03 15 01.6	+0.2
	comp=Z,426nm,24.8s						
RKT				eLQ	LQ	03 17 43.0	
	comp=Z,2µm,25.5s						
RKT				eLR	LR	03 18 51.4	
	comp=Z,11µm,32.0s						
RKT	Rikitea	36.72	102	eT	T	03 48 10.3	
	comp=Z,27nm,0.2s						
CTA	Charters Tower	36.95	263	P	P	03 09 24.6	-0.4
	comp=Z,198nm,0.6s,baz=90,slow=11,SNR=108						
CTA				ScP	ScP	03 15 29.6	+4.2
	comp=Z,22nm,1.1s,baz=114,slow=4.6,SNR=9.5						
CTA				LR	LR	03 23 30.6	
	comp=Z,4µm,19.9s,baz=96,slow=34						
CTAO	Charters Tower	36.95	263	eP	P	03 09 24.6	-0.4
	comp=Z,238nm,0.8s						
CTAO	Charters Tower	36.95	263	eP	P	03 09 24.6	-0.4
CTAO				pmax	pmax		
	comp=Z,240nm,0.9s						
CMSA	Cobar Meteorol	37.63	244	P	P	03 09 30.2	-0.4
	baz=38,SNR=35						
TOO	Toolangi	39.03	234	P	P	03 09 42.4	0.0
	baz=39,SNR=39						
TOO	Toolangi	39.03	234	eP	P	03 09 42.3	0.0
	comp=Z,157nm,0.9s						
TOO	Toolangi	39.03	234	eP	P	03 09 42.3	0.0
TOO				pmax	pmax		
	comp=Z,160nm,0.9s						
MTSU	Mount Surprise	39.04	265	P	P	03 09 42.1	-0.5
	baz=39,SNR=64						
MOO	Moorlands	39.40	226	P	P	03 09 46.1	+0.8
	baz=40,SNR=8.9						
TAU	Tasmania Unive	39.49	226	eP	P	03 09 47.1	+1.1
	comp=Z,80nm,1.4s						
TAU	Tasmania Unive	39.49	226	eP	P	03 09 47.1	+1.1
TAU				pmax	pmax		
	comp=Z,80nm,1.3s						
COEN	Coen	40.96	271	P	P	03 09 58.2	-0.3
	baz=41,SNR=123						
COEN	Coen	40.96	271	eP	P	03 09 58.3	-0.3
	comp=Z,171nm,0.8s						
STKA	Stephens Creek	41.14	244	P	P	03 09 59.4	-0.3
	baz=41,SNR=30						
STKA	Stephens Creek	41.14	244	eP	P	03 09 59.5	-0.3
	comp=Z,25nm,0.9s						
STKA				P'P'ab	P'P'ab	03 43 28.1	-3.1
STKA	Stephens Creek	41.14	244	P	P	03 09 59.5	-0.3
	comp=Z,88nm,1.1s,baz=89,slow=9.4,SNR=70						
STKA				LR	LR	03 25 07.6	
	comp=Z,2µm,19.0s,baz=79,slow=33						
STKA				PKP2ab		03 43 28.1	
	comp=Z,0.5nm,0.3s,baz=33,slow=3.2,SNR=3.0						
MANU	Manus Island	41.37	291	eP	P	03 10 01.9	+0.1
	comp=Z,285nm,1.3s						
ARPS	Mount Arapiles	41.68	237	P	P	03 10 04.1	-0.1
	baz=42,SNR=28						
QIS	Mount Isa	43.09	261	P	P	03 10 15.0	-0.9
	baz=43,SNR=17						
WAKE	Wake Island	43.12	333	eP	P	03 10 14.8	-1.1
PUH	Pauahi	43.28	27	eP	P	03 10 15.6	-1.7
	comp=Z,186nm,1.0s						
HMH	Humu‘ula Sheep	43.37	26	eP	P	03 10 17.9	-0.4
	comp=Z,226nm,0.8s						
POHA	Pohakuloa	43.48	26	eP	P	03 10 18.4	-0.7
	comp=Z,162nm,0.8s						
HTT	Hallett	43.54	242	P	P	03 10 18.6	-0.7
	baz=44,SNR=78						
HPAH	Hawaii Prepara	43.66	26	eP	P	03 10 19.9	-0.5
	comp=Z,211nm,0.9s						
KEKH	Kekaha	43.98	20	eP	P	03 10 22.3	-0.5
	comp=Z,301nm,1.3s						
KIP	Kipapa	44.04	22	eP	P	03 10 22.0	-1.3
	comp=Z,294nm,1.2s						

KIP	**Kipapa**	**44.04**	**22**	d*e*P	**P**	**03 10 23.1**	**-0.2**
KIP				pmax	pmax		
	comp=Z,177nm,1.3s						
HLK	**Haleakala**	**44.09**	**25**	*e*P	**P**	**03 10 23.9**	**-0.1**
	comp=Z,224nm,1.0s						
KHLH	**Kahului Airpor**	**44.15**	**24**	*e*P	**P**	**03 10 24.3**	**+0.2**
	comp=Z,171nm,1.0s						
BBOO	**Buckleboo**	**45.88**	**243**	P	**P**	**03 10 36.9**	**-1.0**
	baz=46,SNR=77						
BBOO	**Buckleboo**	**45.88**	**243**	*e*P	**P**	**03 10 37.0**	**-1.0**
	comp=Z,125nm,0.9s						
JAY	**Jayapura**	**47.12**	**286**	P	**P**	**03 10 47.0**	**-0.9**
JAY				pmax	pmax		
	comp=Z,156nm,0.6s						
JAY				MLR	MLR		
	comp=Z,476nm,19.7s						
JAY	**Jayapura**	**47.12**	**286**	P	**P**	**03 10 47.6**	**-0.3**
JAY	**Jayapura**	**47.12**	**286**	P	**P**	**03 10 47.0**	**-0.9**
	comp=Z,156nm,0.6s,baz=137,slow=3.6,SNR=59						
JAY				LR	LR	03 30 19.4	
	comp=Z,476nm,19.7s,baz=170,slow=36						
GENI	**Genyem**	**47.57**	**285**	P	**P**	**03 10 52.0**	**+0.7**
AS01	**Alice Springs**	**47.94**	**256**	*e*P	**P**	**03 10 52.3**	**-1.9**
AS31	**Alice Springs**	**47.98**	**256**	*e*P	**P**	**03 10 53.5**	**-1.0**
	comp=Z,33nm,0.9s						
AS31				*e*S	**S**	**03 17 49.4**	**+2.2**
ASAR	**Alice Springs**	**47.98**	**256**	P	**P**	**03 10 53.5**	**-1.0**
	comp=Z,124nm,0.8s,baz=87,slow=8.4,SNR=380						
ASAR				PcP	**PcP**	**03 12 22.5**	**+0.8**
	comp=Z,22nm,0.7s,baz=101,slow=4.8,SNR=6.5						
ASAR				ScP	**ScP**	**03 16 12.9**	**+3.2**
	comp=Z,5.8nm,1.0s,baz=107,slow=5.0,SNR=4.6						
ASAR				S	**S**	**03 17 40.8**	**-6.4**
	comp=Z,6.6nm,0.9s,baz=92,slow=16,SNR=10						
ASAR				LR	LR	03 29 38.4	
	comp=Z,2µm,20.9s,baz=98,slow=34						
ASAR				PKP2ab		03 43 01.6	
	comp=Z,1.0nm,0.9s,baz=293,slow=3.2,SNR=4.9						
WC3	**Warramunga Arr**	**48.04**	**261**	*e*P	**P**	**03 10 52.8**	**-2.1**
	comp=Z,109nm,0.9s						
WB2	**Warramunga Arr**	**48.06**	**261**	*e*P	**P**	**03 10 53.3**	**-1.8**
	comp=Z,115nm,0.9s						
WRAB	**Tennant Creek**	**48.06**	**261**	*e*P	**P**	**03 10 53.5**	**-1.6**
	comp=Z,101nm,0.9s						
WRAB				*e*S	**S**	**03 17 47.4**	**-0.9**
WRAB	**Tennant Creek**	**48.06**	**261**	*c i*P	**P**	**03 10 53.2**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,178nm,1.3s						
WRA	**Warramunga Arr**	**48.07**	**261**	P	**P**	**03 10 53.9**	**-1.3**
WRA						03 12 22.4	
WRA				S	**S**	**03 17 43.0**	**-5.4**
WRA				pmax	pmax		
	comp=Z,32nm,0.5s						
WRA				smax	smax		
	comp=N,6.0nm,0.9s						
WRA				MLR	MLR		
	comp=Z,3µm,19.5s						
WRA	**Warramunga Arr**	**48.07**	**261**	P	**P**	**03 10 53.9**	**-1.3**
	comp=Z,93nm,0.9s,baz=96,slow=5.3,SNR=398						
WRA				PcP	**PcP**	**03 12 22.4**	**+0.4**
	comp=Z,26nm,1.0s,baz=102,slow=3.7,SNR=5.4						
WRA				ScP	**ScP**	**03 16 13.5**	**+3.5**
	comp=Z,8.3nm,1.0s,baz=101,slow=3.9,SNR=10						
WRA				S	**S**	**03 17 43.0**	**-5.4**
	comp=Z,5.7nm,0.9s,baz=94,slow=16,SNR=9.1						
WRA				LR	LR	03 30 28.1	
	comp=Z,3µm,19.5s,baz=100,slow=35						
KDU	**Kakadu**	**51.36**	**269**	P	**P**	**03 11 19.0**	**-1.1**
	baz=51,SNR=77						
GUMO	**Guam**	**52.10**	**306**	P	**P**	**03 11 25.0**	**-0.6**
GUMO				pmax	pmax		
	comp=Z,189nm,0.8s						
GUMO	**Guam**	**52.10**	**306**	P	**P**	**03 11 25.0**	**-0.6**
	comp=Z,200nm,0.8s,baz=175,slow=12,SNR=6.0						
GUMO				LR	LR	03 31 54.8	
	comp=Z,521nm,20.8s,baz=114,slow=34						
MTN	**Manton Dam**	**52.58**	**269**	P	**P**	**03 11 28.1**	**-1.1**
	baz=52,SNR=28						
MTN	**Manton Dam**	**52.58**	**269**	*e*P	**P**	**03 11 27.3**	**-1.9**
	comp=Z,148nm,0.6s						
FORT	**Forrest**	**52.67**	**246**	P	**P**	**03 11 28.7**	**-1.1**
	baz=53,SNR=26						
FORT	**Forrest**	**52.67**	**246**	*e*P	**P**	**03 11 28.6**	**-1.2**
	comp=Z,84nm,0.6s						
FORT				*e*S	**S**	**03 18 48.9**	**-3.1**
WRKA	**Warakurna**	**52.92**	**253**	P	**P**	**03 11 30.7**	**-1.0**
	baz=53,SNR=144						
RKPI	**Ransiki, Papua**	**53.48**	**283**	P	**P**	**03 11 36.4**	**+0.5**
SAUI	**Saumlaki**	**53.83**	**275**	*e*P	**P**	**03 11 37.9**	**-0.5**
	comp=Z,418nm,1.0s						
SAUI	**Saumlaki**	**53.83**	**275**	P	**P**	**03 11 38.5**	**0.0**
KNRA	**Kununurra**	**54.11**	**265**	P	**P**	**03 11 39.5**	**-1.0**
	baz=54,SNR=34						
FAKI	**Fak Fak**	**54.71**	**281**	*e*P	**P**	**03 11 43.2**	**-1.6**
	comp=Z,319nm,1.4s						
FAKI	**Fak Fak**	**54.71**	**281**	P	**P**	**03 11 44.2**	**-0.6**
SIJI	**Sorong**	**56.40**	**283**	P	**P**	**03 11 56.7**	**-0.3**
	comp=Z,790nm,0.8s,baz=90,slow=5.7,SNR=168						
SIJI				LR	LR	03 33 38.4	
	comp=Z,743nm,19.4s,baz=98,slow=33						
FITZ	**Fitzroy Crossi**	**56.50**	**261**	P	**P**	**03 11 56.9**	**-0.7**
	baz=56,SNR=46						
FITZ	**Fitzroy Crossi**	**56.50**	**261**	*e*P	**P**	**03 11 56.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**56.50**	**261**	P	**P**	**03 11 57.0**	**-0.7**
	comp=Z,51nm,1.0s,baz=82,slow=3.2,SNR=84						
SBA	**Scott Base**	**58.75**	**185**	P	**P**	**03 12 15.9**	**+3.4**
SBA				pmax	pmax		
	comp=Z,206nm,2.9s						
VNDA	**Vanda**	**58.87**	**186**	*e*P	**P**	**03 12 14.9**	**+1.6**
	comp=Z,35nm,0.9s						
VNDA	**Vanda**	**58.87**	**186**	*e*P	P	03 12 18.2	+4.9
VNDA				pmax	pmax		
	comp=Z,35nm,0.9s						
VNDA	**Vanda**	**58.87**	**186**	P	**P**	**03 12 16.6**	**+3.2**
	comp=Z,25nm,0.8s,baz=5.1,slow=6.4,SNR=23						
VNDA				LR	LR	03 34 05.8	
	comp=Z,193nm,20.9s,baz=28,slow=32						
NLAI	**Namlea**	**59.37**	**278**	P	**P**	**03 12 17.9**	**+0.1**
SOEI	**Soe**	**59.90**	**270**	*e*P	**P**	**03 12 21.4**	**-0.1**
	comp=Z,792nm,1.1s						
BATI	**Baumata**	**60.34**	**269**	P	**P**	**03 12 25.2**	**+0.8**
	comp=Z,128nm,0.7s,baz=42,slow=0.6,SNR=32						
TNTI	**Ternate**	**60.63**	**283**	*e*P	**P**	**03 12 25.6**	**-0.8**
	comp=Z,325nm,0.9s						
TNTI	**Ternate**	**60.63**	**283**	P	**P**	**03 12 26.2**	**-0.2**
SANI	**Sanana**	**60.83**	**279**	P	**P**	**03 12 26.8**	**-1.0**
MBWA	**Marble Bar**	**61.32**	**256**	*e*P	**P**	**03 12 30.3**	**-0.7**
	comp=Z,122nm,0.8s						
MEEK	**Meekatharra**	**61.35**	**250**	P	**P**	**03 12 30.3**	**-0.9**
	baz=61,SNR=7.0						
KLBR	**Kellerberrin**	**61.41**	**244**	P	**P**	**03 12 31.1**	**-0.4**
	baz=61,SNR=17						
NWAO	**Narrogin (SRO)**	**61.70**	**243**	P	**P**	**03 12 33.6**	**+0.2**
	baz=62,SNR=3.6						
NWAO	**Narrogin (SRO)**	**61.70**	**243**	*e*P	**P**	**03 12 33.1**	**-0.3**
	comp=Z,89nm,1.1s						
NWAO	**Narrogin (SRO)**	**61.70**	**243**	*e*P	**P**	**03 12 33.6**	**+0.2**
NWAO				pmax	pmax		
	comp=Z,89nm,1.1s						
NWAO	**Narrogin (SRO)**	**61.70**	**243**	P	**P**	**03 12 33.2**	**-0.2**
	comp=Z,56nm,1.0s,baz=332,slow=6.5,SNR=11						
RKGY	**Rocky Gully**	**61.74**	**241**	P	**P**	**03 12 33.7**	**+0.1**
	baz=62,SNR=11						
MMRI	**Maumere**	**62.15**	**271**	*e*P	**P**	**03 12 35.7**	**-1.0**
	comp=Z,253nm,0.9s						
BLDU	**Ballidu**	**62.42**	**245**	P	**P**	**03 12 37.7**	**-0.5**
	baz=62,SNR=25						
MUN	**Mundaring**	**62.67**	**244**	P	**P**	**03 12 40.2**	**+0.3**
	baz=63,SNR=15						
MORW	**Morawa**	**63.22**	**247**	P	**P**	**03 12 42.8**	**-0.8**
	baz=63,SNR=13						
MORW	**Morawa**	**63.22**	**247**	*e*P	**P**	**03 12 43.0**	**-0.6**
	comp=Z,128nm,1.4s						
KMSI	**Cibinong**	**63.67**	**281**	P	**P**	**03 12 45.6**	**-1.1**
LUWI	**Luwuk**	**64.19**	**279**	*e*P	**P**	**03 12 49.4**	**-0.7**
	comp=Z,339nm,1.0s						
LUWI	**Luwuk**	**64.19**	**279**	P	**P**	**03 12 48.7**	**-1.5**
BKSI	**Bulukumba**	**65.19**	**273**	P	**P**	**03 12 53.3**	**-3.4**
KCP	**Kidapawan**	**65.26**	**288**	⇑*i*P	**P**	**03 12 56.2**	**-1.0**
APSI	**Ampana**	**65.28**	**278**	P	**P**	**03 12 57.6**	**+0.3**
BNSI	**Bone**	**65.51**	**274**	P	**P**	**03 12 58.6**	**-0.1**
MRSI	**Marisa**	**65.52**	**280**	P	**P**	**03 12 58.2**	**-0.6**
SKMP	**Bagumbayan, Su**	**65.54**	**287**	*e*P	**P**	**03 12 58.7**	**-0.2**
BUKP	**Musuan**	**65.66**	**289**	*e*P	**P**	**03 12 59.7**	**0.0**
SPSI	**Sidrap Palu**	**65.97**	**275**	P	**P**	**03 13 00.4**	**-1.3**
CASY	**Casey**	**66.00**	**205**	*e*P	**P**	**03 13 02.5**	**+1.5**
	comp=Z,67nm,1.0s						
GIRL	**Giralia**	**66.01**	**253**	P	**P**	**03 13 03.2**	**+1.4**
	baz=66,SNR=6.9						
GIRL	**Giralia**	**66.01**	**253**	*e*P	**P**	**03 13 01.7**	**-0.1**
	comp=Z,457nm,1.3s						
CTBH	**Cotabato--PC H**	**66.11**	**288**	⇓*i*P	**P**	**03 13 02.7**	**+0.1**
TTSI	**Tana Toraja**	**66.24**	**276**	P	**P**	**03 13 02.4**	**-1.0**
MSLP	**Maasin**	**66.83**	**291**	*e*P	**P**	**03 13 06.9**	**-0.3**
PCI	**Palu**	**66.97**	**278**	P	**P**	**03 13 09.3**	**+1.2**
BESP	**Borongan**	**66.99**	**293**	*e*P	**P**	**03 13 08.9**	**+0.8**
PAGZ	**Pagadian**	**67.15**	**288**	*e*P	**P**	**03 13 09.3**	**+0.1**
MPSI	**Mapaga**	**67.37**	**279**	P	**P**	**03 13 10.1**	**-0.5**
OCLP	**Ormoc**	**67.46**	**292**	*e*P	**P**	**03 13 10.9**	**-0.2**
DNP	**Denpasar**	**68.75**	**268**	P	**P**	**03 13 18.4**	**-0.9**
SRBI	**Singaraja**	**68.93**	**269**	P	**P**	**03 13 19.5**	**-0.9**
PVCP	**Virac**	**69.02**	**294**	*e*P	**P**	**03 13 21.3**	**+0.4**
KBKI	**Kotabaru**	**69.58**	**274**	P	**P**	**03 13 24.4**	**0.0**
SMKI	**Samarinda**	**69.59**	**277**	P	**P**	**03 13 26.8**	**+2.3**
JAGI	**Jajag, Banyuwa**	**69.81**	**268**	*e*P	**P**	**03 13 24.3**	**-1.6**
	comp=Z,271nm,1.0s						
JAGI	**Jajag, Banyuwa**	**69.81**	**268**	P	**P**	**03 13 24.3**	**-1.6**
AUQP	**San Andres**	**70.17**	**293**	*e*P	**P**	**03 13 29.3**	**+1.3**
QSPA	**South Pole Qui**	**70.21**	**180**	*e*P	**P**	**03 13 29.2**	**+1.6**
OTRP	**Odiongan**	**70.31**	**292**	*e*P	**P**	**03 13 28.1**	**-0.7**
KMMI	**Kalianget**	**70.43**	**269**	P	**P**	**03 13 28.8**	**-0.8**
GMJI	**Gumukmas**	**70.54**	**268**	P	**P**	**03 13 29.4**	**-0.9**
BOAC	**Boac**	**70.95**	**293**	*e*P	**P**	**03 13 32.9**	**+0.2**
SJMP	**San Jose**	**71.14**	**291**	*e*P	**P**	**03 13 34.0**	**+0.1**
KIWB	**Kanaga Island**	**71.44**	**358**	*e*P	**P**	**03 13 34.9**	**0.0**
ADK	**Adak**	**71.46**	**358**	*e*P	**P**	**03 13 34.8**	**-0.1**
	comp=Z,113nm,1.4s						
ADK	**Adak**	**71.46**	**358**	*e*P	**P**	**03 13 35.6**	**+0.6**
ADK				pmax	pmax		
	comp=Z,110nm,1.3s						
MTKI	**Muara Teweh, K**	**71.58**	**276**	P	**P**	**03 13 37.2**	**+0.6**
INU	**Inuyama**	**71.69**	**320**	*e*P	**P**	**03 13 36.3**	**-0.5**
	comp=Z,45nm,1.1s						
BUSP	**Coron**	**71.75**	**290**	*e*P	**P**	**03 13 37.4**	**-0.2**
MJAR	**Matsushiro Arr**	**71.78**	**321**	P	**P**	**03 13 37.0**	**-0.3**
	comp=Z,73nm,0.8s,baz=166,slow=6.1,SNR=116						
MJAR				LR	LR	03 40 21.3	
	comp=Z,420nm,21.9s,baz=135,slow=32						
MAJO	**Matsushiro**	**71.78**	**321**	*e*P	**P**	**03 13 36.6**	**-0.7**
	comp=Z,74nm,0.8s						
MAJO	**Matsushiro**	**71.78**	**321**	*c i*P	**P**	**03 13 37.2**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,73nm,0.8s						
MAT	**Matsushiro**	**71.78**	**321**	P	**P**	**03 13 37.2**	**-0.1**
MAT				S	**S**	**03 22 49.8**	**-2.1**
MJB9	**Matsu-Tunnel**	**71.79**	**321**	*e*P	**P**	**03 13 36.6**	**-0.8**
	comp=Z,75nm,0.8s						
GRJI	**Gresik**	**71.87**	**269**	P	**P**	**03 13 38.4**	**+0.1**
TGY	**Tagaytay City**	**72.03**	**293**	P	**P**	**03 13 39.9**	**+0.6**
	comp=Z,124nm,0.3s,baz=150,slow=17,SNR=4.4						
BALP	**Baler**	**72.21**	**295**	*e*P	**P**	**03 13 40.2**	**-0.1**
JOW	**Kunigami**	**72.42**	**308**	*e*P	**P**	**03 13 41.6**	**+0.2**
	comp=Z,80nm,1.0s						
BATP	**Bataraza**	**72.56**	**286**	*e*P	**P**	**03 13 42.7**	**+0.3**
KKM	**Kota Kinabalu**	**72.92**	**283**	*e*P	**P**	**03 13 44.7**	**0.0**
	comp=Z,74nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**73.27**	**331**	*e*P	**P**	**03 13 44.9**	**-1.0**
YUK				*e*		03 14 01.2	
YUK				*e*		03 16 29.2	
YUK				*e*PPP	PPP	03 18 14.3	
YUK				*e*S	**S**	**03 23 04.4**	**-4.1**
YUK				*e*		03 23 48.0	
YUK				*e*SS	**SS**	**03 27 46.3**	**-5.9**
KUR	**Kuril'sk**	**73.33**	**333**	⇑*e*P	**P**	**03 13 44.7**	**-1.6**
UGM	**Wanagama**	**73.39**	**267**	*e*P	**P**	**03 13 47.0**	**-0.5**
	comp=Z,193nm,0.8s						
APYP	**Conner**	**73.47**	**296**	*e*P	**P**	**03 13 47.7**	**0.0**
SMRI	**Semarang**	**73.74**	**268**	*e*P	**P**	**03 13 49.4**	**-0.1**
	comp=Z,262nm,1.0s						
ABRA	**Dolores**	**73.82**	**296**	*e*P	**P**	**03 13 50.5**	**+0.8**
JNU	**Nakatsue**	**74.21**	**315**	*e*P	**P**	**03 13 51.8**	**0.0**
	comp=Z,147nm,1.2s						
SNCC	**San Nicolas Is**	**74.34**	**45**	*e*P	**P**	**03 13 53.0**	**+0.5**
	comp=Z,146nm,1.4s						
SNCC	**San Nicolas Is**	**74.34**	**45**	P	**P**	**03 13 53.5**	**+1.0**
	baz=233						
SCZ2	**Santa Cruz Isl**	**74.72**	**45**	P	**P**	**03 13 55.5**	**+0.8**
	baz=233,SNR=7.0						
SCI2	**San Clemente I**	**74.84**	**46**	P	**P**	**03 13 55.8**	**+0.5**
	baz=234						
SBC	**Santa Barbara**	**74.94**	**44**	P	**P**	**03 13 56.9**	**+1.0**
	baz=233						
PKM	**Mcpherson Peak**	**75.14**	**44**	P	**P**	**03 13 58.2**	**+0.9**
	baz=232,SNR=15						
BLG	**Laguna Peak, P**	**75.16**	**45**	P	**P**	**03 13 57.6**	**+0.4**
	baz=233						
CIS	**Catalina Islan**	**75.18**	**46**	P	**P**	**03 13 57.5**	**+0.2**
	baz=234						
YOJ	**Yonaguni jima**	**75.20**	**303**	*e*P	**P**	**03 13 57.1**	**-0.6**
	comp=Z,296nm,1.0s						
YOJ	**Yonaguni jima**	**75.20**	**303**	*e*P	**P**	**03 13 58.9**	**+1.3**
YOJ				pmax	pmax		
	comp=Z,300nm,1.0s						
SAO	**San Andreas Ge**	**75.26**	**41**	*e*P	**P**	**03 13 57.9**	**+0.2**
	comp=Z,99nm,1.2s						
SAO	**San Andreas Ge**	**75.26**	**41**	*e*P	**P**	**03 13 58.6**	**+0.9**
SAO				pmax	pmax		
	comp=Z,99nm,1.2s						
SBUM	**Sibu**	**75.28**	**278**	*e*P	**P**	**03 13 59.0**	**+0.6**
	comp=Z,29nm,1.0s						
SMMC	**Simmler**	**75.28**	**43**	P	**P**	**03 13 59.0**	**+1.1**
	baz=232,SNR=16						
PAGB	**Antelope Grade**	**75.37**	**43**	*e*P	**P**	**03 13 58.8**	**+0.3**
	comp=Z,384nm,1.9s						
FMP	**Fort Macarthur**	**75.44**	**46**	P	**P**	**03 13 59.2**	**+0.4**
	baz=234						
OSI	**Osito Audit: C**	**75.69**	**45**	*e*P	**P**	**03 14 00.9**	**+0.7**
	comp=Z,60nm,0.7s						
OSI	**Osito Audit: C**	**75.69**	**45**	P	**P**	**03 14 01.0**	**+0.7**
	baz=233						
HOPS	**Hopland Field**	**75.70**	**39**	*e*P	**P**	**03 14 00.9**	**+0.7**
	comp=Z,184nm,1.4s						
DECC	**Green Verdugo**	**75.74**	**45**	P	**P**	**03 14 00.7**	**+0.2**
	baz=234						
GDXM	**Geysers**	**75.74**	**39**	*e*P	**P**	**03 14 01.1**	**+0.6**
	comp=Z,125nm,1.6s						
109C	**Camp Elliot, M**	**75.77**	**47**	P	**P**	**03 14 01.3**	**+0.6**
	baz=235						
CPE	**Camp Elliot**	**75.77**	**47**	*e*P	**P**	**03 14 00.9**	**+0.2**
	comp=Z,249nm,1.8s						
PAS	**Pasadena**	**75.78**	**45**	P	**P**	**03 14 01.3**	**+0.5**
PAS				pmax	pmax		
	comp=Z,136nm,1.6s						
PASC	**Pasadena Art C**	**75.79**	**45**	*e*P	**P**	**03 14 00.8**	**0.0**
	comp=Z,136nm,1.5s						
KCPM	**Cahto Peak**	**75.85**	**38**	*e*P	**P**	**03 14 01.8**	**+0.6**
	comp=Z,355nm,1.8s						
MWC	**Mount Wilson**	**75.90**	**45**	*e*P	**P**	**03 14 01.6**	**0.0**
	comp=Z,157nm,1.5s						
MWC	**Mount Wilson**	**75.90**	**45**	*e*P	**P**	**03 14 02.1**	**+0.4**
MWC				pmax	pmax		
	comp=Z,160nm,1.5s						
ARVC	**Arvin**	**75.93**	**44**	P	**P**	**03 14 02.2**	**+0.6**
	baz=233,SNR=15						
TWG	**Pinlang**	**75.95**	**301**	*e*P	**P**	**03 14 00.6**	**-1.3**
	comp=Z,181nm,0.7s						
BAR	**Barrett**	**75.95**	**47**	*e*P	**P**	**03 14 02.1**	**+0.3**
	comp=Z,282nm,2.0s						
YULB	**Yu-li**	**76.04**	**301**	*e*P	**P**	**03 14 01.6**	**-0.9**
	comp=Z,45nm,1.0s						
CISI	**Cisompet, Garu**	**76.05**	**267**	*e*P	**P**	**03 14 01.6**	**-1.3**
	comp=Z,160nm,0.9s						
MURC	**Murrieta**	**76.12**	**46**	P	**P**	**03 14 03.3**	**+0.6**
	baz=235,SNR=20						
KMRM	**Mail Ridge**	**76.13**	**38**	*e*P	**P**	**03 14 03.1**	**+0.4**
	comp=Z,146nm,1.1s						
LPIG	**La Paz**	**76.17**	**58**	P	**P**	**03 14 03.8**	**+0.7**
	comp=Z,60nm,1.0s,baz=228,slow=2.8,SNR=6.2						
BFSC	**Mount Baldy Ra**	**76.18**	**45**	P	**P**	**03 14 03.4**	**+0.2**
	baz=234,SNR=15						
NACB	**Ninganchiao**	**76.18**	**302**	*e*P	**P**	**03 14 02.2**	**-1.0**
	comp=Z,196nm,0.9s						
VES	**Vestal, Richgr**	**76.19**	**43**	P	**P**	**03 14 03.5**	**+0.5**
	baz=233,SNR=38						
MONP2	**Monument Peak**	**76.25**	**47**	P	**P**	**03 14 04.4**	**+0.7**
	baz=235,SNR=30						
SLBS	**Sierra La Lagu**	**76.25**	**58**	*e*P	**P**	**03 14 04.3**	**+0.6**
	comp=Z,241nm,1.7s						
SRIG	**Santa Rosalia**	**76.27**	**54**	*e*P	**P**	**03 14 04.0**	**+0.4**
	comp=Z,214nm,1.2s						
VOG	**Valley Oaks Go**	**76.29**	**43**	P	**P**	**03 14 03.9**	**+0.4**
	baz=233						
IKP	**In-Ko-Pah, Jac**	**76.32**	**48**	P	**P**	**03 14 04.7**	**+0.8**
	baz=236,SNR=22						
EDW2	**Edwards Air Fo**	**76.33**	**45**	P	**P**	**03 14 04.6**	**+0.6**
	baz=234,SNR=64						
LEM	**Lembang**	**76.47**	**268**	P	**P**	**03 14 05.9**	**+0.6**
	comp=Z,378nm,0.9s,baz=103,slow=5.4,SNR=32						
ISA	**Isabella, Lake**	**76.48**	**44**	*e*P	**P**	**03 14 05.1**	**+0.3**
	comp=Z,173nm,1.4s						
ISA	**Isabella, Lake**	**76.48**	**44**	*e*P	**P**	**03 14 05.6**	**+0.8**
ISA				pmax	pmax		
	comp=Z,170nm,1.3s						
ISA	**Isabella, Lake**	**76.48**	**44**	P	**P**	**03 14 05.7**	**+0.8**
	baz=233,SNR=77						
SSLB	**Suanglung**	**76.51**	**302**	*e*P	**P**	**03 14 04.7**	**-0.4**
	comp=Z,103nm,1.1s						
TPUB	**Ta-pu**	**76.53**	**301**	*e*P	**P**	**03 14 03.8**	**-1.5**
	comp=Z,346nm,1.2s						
KHMM	**Horse Mountain**	**76.55**	**37**	*e*P	**P**	**03 14 05.9**	**+0.7**
	comp=Z,105nm,1.5s						
PEA0B	**Petropavlovsk-**	**76.59**	**343**	*e*P	**P**	**03 14 05.2**	**+0.3**
	comp=Z,83nm,1.1s						
PETK	**Petropavlovsk-**	**76.59**	**343**	*e*P	**P**	**03 14 04.2**	**-0.7**
PETK	**Petropavlovsk-**	**76.59**	**343**	P	**P**	**03 14 05.2**	**+0.3**
PETK				pmax	pmax		
	comp=Z,35nm,0.8s						
PETK	**Petropavlovsk-**	**76.59**	**343**	P	**P**	**03 14 05.2**	**+0.3**
	comp=Z,36nm,0.7s,baz=142,slow=9.2,SNR=43						
PETK				LR	LR	03 41 34.7	
	comp=Z,606nm,21.7s,baz=150,slow=31						
YHNB	**Yeheng**	**76.60**	**303**	*e*P	**P**	**03 14 04.8**	**-0.9**
	comp=Z,191nm,1.2s						
PFO	**Pinyon Flats O**	**76.63**	**47**	*e*P	**P**	**03 14 06.0**	**+0.2**
	comp=Z,135nm,1.5s						
PFO	**Pinyon Flats O**	**76.63**	**47**	P	**P**	**03 14 06.4**	**+0.6**
	baz=235,SNR=22						
PFO	**Pinyon Flats O**	**76.63**	**47**	P	**P**	**03 14 06.3**	**+0.6**
	comp=Z,47nm,1.2s,baz=244,slow=3.6,SNR=35						
XPFO	**Pion Flat**	**76.63**	**47**	*e*P	**P**	**03 14 05.8**	**0.0**
	comp=Z,144nm,1.5s						
O02D	**Mt. Diablo Mer**	**76.64**	**38**	P	**P**	**03 14 06.8**	**+1.3**
	baz=229,SNR=17						
TATO	**Taipei**	**76.66**	**303**	*e*P	**P**	**03 14 05.6**	**-0.3**
	comp=Z,303nm,1.1s						
BBRC	**Big Bear Solar**	**76.69**	**46**	P	**P**	**03 14 06.7**	**+0.5**
	baz=235						
SWSC	**Sam W. Stewart**	**76.71**	**47**	P	**P**	**03 14 06.6**	**+0.6**
	baz=236,SNR=18						
CMB	**Columbia Colle**	**76.71**	**41**	*e*P	**P**	**03 14 06.4**	**+0.4**
	comp=Z,62nm,1.1s						
CMB	**Columbia Colle**	**76.71**	**41**	*e*P	**P**	**03 14 06.4**	**+0.4**
CMB				pmax	pmax		
	comp=Z,62nm,1.1s						
KSM	**Kuching**	**76.72**	**276**	*e*P	**P**	**03 14 07.0**	**+0.5**
	comp=Z,118nm,0.9s						
SPIA	**Saint Paul Isl**	**76.82**	**2**	*e*P	**P**	**03 14 06.6**	**+0.6**
	comp=Z,100nm,1.2s						
LRMC	**Laurel Mtn Rad**	**76.89**	**44**	P	**P**	**03 14 07.6**	**+0.5**
	baz=234,SNR=9.0						
YSS	**Yuzh-Sakhalins**	**76.91**	**331**	*e*P	**P**	**03 14 06.8**	**-0.1**
	comp=Z,67nm,0.9s						
YSS	**Yuzh-Sakhalins**	**76.91**	**331**	*e*P	**P**	**03 14 08.3**	**+1.5**
YSS				*e*		03 14 16.8	
YSS				*e*		03 17 01.0	
YSS				*e*PPP	PPP	03 18 43.6	
YSS				*e*S	**S**	**03 23 48.3**	**-0.5**
YSS				*e*		03 24 13.8	
YSS				*e*PS	**PnS**	**03 24 25.3**	**-12**
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
AFDM	**Forest Hills D**	**76.92**	**40**	*e*P	**P**	**03 14 07.6**	**+0.4**
	comp=Z,86nm,1.5s						
ORV	**Oroville**	**76.99**	**39**	*e*P	**P**	**03 14 08.0**	**+0.5**
	comp=Z,151nm,1.8s						
ORV	**Oroville**	**76.99**	**39**	*e*P	**P**	**03 14 08.0**	**+0.5**
ORV				pmax	pmax		
	comp=Z,150nm,1.7s						
RRX	**Edison Barstow**	**76.99**	**45**	P	**P**	**03 14 08.1**	**+0.5**
	baz=234						
WDC	**Whiskeytown Da**	**77.04**	**38**	*e*P	**P**	**03 14 08.4**	**+0.7**
	comp=Z,200nm,1.6s						
WDC	**Whiskeytown Da**	**77.04**	**38**	*e*P	**P**	**03 14 08.4**	**+0.7**
WDC				pmax	pmax		
	comp=Z,200nm,1.6s						
BELC	**Belle Mtn. Jos**	**77.17**	**47**	P	**P**	**03 14 09.4**	**+0.7**
	baz=235,SNR=40						
XMIS	**Christmas Isla**	**77.17**	**263**	*e*P	**P**	**03 14 08.5**	**-0.5**
	comp=Z,140nm,0.9s						
N02D	**Trinity Center**	**77.20**	**38**	P	**P**	**03 14 09.7**	**+1.0**
	baz=229,SNR=18						
MDPB	**Devils Postpil**	**77.28**	**42**	*e*P	**P**	**03 14 09.7**	**+0.2**
	comp=Z,64nm,1.0s						
O03E	**Paynes Creek**	**77.29**	**39**	P	**P**	**03 14 09.5**	**+0.3**
	baz=230,SNR=18						
OMMB	**Old Mammoth Mi**	**77.32**	**42**	*e*P	**P**	**03 14 10.4**	**+0.7**
	comp=Z,157nm,1.6s						
BC3	**Big Chuckawall**	**77.34**	**47**	P	**P**	**03 14 10.8**	**+1.1**
	baz=236,SNR=28						
MPMC	**Manual Prospec**	**77.36**	**44**	P	**P**	**03 14 10.8**	**+0.9**
	baz=234,SNR=80						
GSC	**Goldstone, Bar**	**77.37**	**45**	*e*P	**P**	**03 14 10.2**	**+0.4**
	comp=Z,222nm,1.8s						
GSC	**Goldstone, Bar**	**77.37**	**45**	*e*P	**P**	**03 14 10.2**	**+0.4**
GSC				pmax	pmax		
	comp=Z,220nm,1.7s						
GSC	**Goldstone, Bar**	**77.37**	**45**	P	**P**	**03 14 10.6**	**+0.8**
	baz=234,SNR=41						
M02C	**Callahan**	**77.39**	**37**	P	**P**	**03 14 10.9**	**+1.1**
	baz=229,SNR=16						
HEC	**Hector,Ludlow**	**77.41**	**46**	P	**P**	**03 14 10.5**	**+0.4**
	baz=235,SNR=31						
DAC	**Darwin (Calif)**	**77.42**	**44**	*e*P	**P**	**03 14 10.5**	**+0.3**
	comp=Z,224nm,1.8s						
DAC	**Darwin (Calif)**	**77.42**	**44**	*e*P	**P**	**03 14 10.9**	**+0.7**
DAC				pmax	pmax		
	comp=Z,220nm,1.7s						
MLAC	**Mammoth, Mammo**	**77.43**	**42**	P	**P**	**03 14 11.4**	**+1.1**
	baz=233,SNR=11						
GLA	**Glamis**	**77.44**	**48**	*e*P	**P**	**03 14 10.8**	**+0.6**
	comp=Z,193nm,1.4s						
GLA	**Glamis**	**77.44**	**48**	*e*P	**P**	**03 14 11.4**	**+1.2**
GLA				pmax	pmax		
	comp=Z,190nm,1.3s						
GLA	**Glamis**	**77.44**	**48**	P	**P**	**03 14 11.3**	**+1.2**
	baz=236,SNR=16						
TIN	**Tinemaha, Big**	**77.47**	**43**	P	**P**	**03 14 11.3**	**+0.9**
	baz=233						
L02E	**Cave Junction**	**77.48**	**36**	P	**P**	**03 14 11.2**	**+1.1**
	baz=228,SNR=6.0						
KEBM	**Edson Butte**	**77.55**	**35**	*e*P	**P**	**03 14 11.3**	**+0.7**
	comp=Z,367nm,1.8s						
WAKR	**Walker**	**77.59**	**41**	*e*P	**P**	**03 14 11.2**	**+0.1**
	comp=Z,272nm,1.6s						
YBH	**Yreka Blue Hor**	**77.70**	**37**	*e*P	**P**	**03 14 12.1**	**+0.6**
	comp=Z,207nm,1.7s						
YBH	**Yreka Blue Hor**	**77.70**	**37**	*e*P	**P**	**03 14 12.5**	**+1.0**
YBH				pmax	pmax		
	comp=Z,210nm,1.7s						
YBH	**Yreka Blue Hor**	**77.70**	**37**	P	**P**	**03 14 11.9**	**+0.5**
	comp=Z,26nm,1.1s,baz=170,slow=2.7,SNR=24						
K02D	**Willamette Mer**	**77.80**	**36**	P	**P**	**03 14 12.8**	**+0.8**
	baz=228,SNR=6.9						
IRM	**Iron Mountain**	**77.84**	**47**	P	**P**	**03 14 13.4**	**+1.0**
	baz=236,SNR=37						
GMRC	**Granite Mounta**	**77.84**	**46**	P	**P**	**03 14 13.1**	**+0.6**
	baz=235,SNR=27						
PNTR	**Pine Nut**	**77.85**	**41**	*e*P	**P**	**03 14 12.5**	**-0.1**
	comp=Z,148nm,1.2s						
BEKR	**Beckworth**	**77.87**	**40**	*e*P	**P**	**03 14 13.1**	**+0.5**
	comp=Z,236nm,1.7s						
VCNR	**Virginia City**	**77.94**	**40**	*e*P	**P**	**03 14 13.8**	**+0.8**
	comp=Z,178nm,1.5s						
J01E	**Myrtle Point**	**77.97**	**35**	P	**P**	**03 14 13.7**	**+0.9**
	baz=228						
GRAC	**Grapevine Rang**	**77.99**	**43**	P	**P**	**03 14 14.4**	**+1.2**
	baz=234,SNR=99						
YERR	**Yerington**	**78.00**	**41**	*e*P	**P**	**03 14 13.4**	**0.0**
	comp=Z,286nm,1.6s						
FURC	**Furnace Creek,**	**78.01**	**44**	P	**P**	**03 14 13.9**	**+0.7**
	baz=234,SNR=27						
113A	**Mohawk Valley,**	**78.03**	**49**	*e*P	**P**	**03 14 13.5**	**+0.1**
	comp=Z,389nm,1.9s						
TUQ	**Turquoise Moun**	**78.03**	**45**	P	**P**	**03 14 14.2**	**+0.6**
	baz=235,SNR=21						
Y12C	**Blythe**	**78.04**	**47**	*e*P	**P**	**03 14 14.0**	**+0.6**
	comp=Z,74nm,1.0s						
Y12C	**Blythe**	**78.04**	**47**	P	**P**	**03 14 14.4**	**+0.9**
	baz=236,SNR=23						
SHOC	**Shoshone, Teco**	**78.07**	**45**	P	**P**	**03 14 14.1**	**+0.5**
	baz=235,SNR=6.5						

HUMO	Hull Mountain	78.13	36	*e*P	P	03 14 13.9	+0.1
	comp=Z,230nm,1.8s						
M04C	Macdoel	78.22	37	P	P	03 14 15.2	+0.8
	baz=230,SNR=21						
RYN	Ryan	78.23	41	*e*P	P	03 14 14.5	-0.1
	comp=Z,233nm,1.6s						
L04D	Klamath Falls	78.24	37	P	P	03 14 15.2	+0.7
	baz=229,SNR=18						
NV01	Mina Array Sit	78.25	42	*e*P	P	03 14 14.6	-0.2
NVAR	Mina Array Bea	78.25	42	P	P	03 14 15.5	+0.7
	comp=Z,31nm,0.7s,baz=224,slow=8.7,SNR=179						
NVAR				LR	LR	03 40 41.4	
	comp=Z,397nm,21.1s,baz=238,slow=29						
214A	Organ Pipe Nat	78.28	50	P	P	03 14 15.9	+1.0
	baz=238						
NV11	Mina Array Sit	78.34	42	*e*P	P	03 14 16.0	+0.7
	comp=Z,16nm,1.4s						
PAHR	Pah Rah Range	78.36	40	*e*P	P	03 14 15.9	+0.6
	comp=Z,208nm,1.6s						
LDFC	Landfair	78.38	46	*e*P	P	03 14 15.6	+0.1
	comp=Z,180nm,1.0s						
TJN	Taejon	78.46	316	⇓*e*P	P	03 14 16.7	+1.0
TEY	Ternei	78.50	327	⇓*e*P	P	03 14 21.8	+6.1
TEY				pmax	pmax		
	comp=Z,20nm,0.9s						
TEY				pmax	pmax		
	comp=E,20nm,0.6s						
NEE2	Needles Airpor	78.54	47	P	P	03 14 17.2	+1.0
	baz=236						
PDMCI	Parker Dam,Lak	78.61	47	P	P	03 14 17.6	+1.0
	baz=236,SNR=28						
I03D	Drain, OR	78.64	35	P	P	03 14 17.3	+0.8
	baz=228,SNR=7.5						
I02D	Swisshome	78.64	35	P	P	03 14 17.5	+0.9
	baz=228						
TPNV	Topopah Spring	78.69	44	*e*P	P	03 14 17.0	-0.1
	comp=E,168nm,1.5s						
TPNV	Topopah Spring	78.69	44	*e*P	P	03 14 18.0	+0.8
TPNV				pmax	pmax		
	comp=Z,170nm,1.5s						
TPNV	Topopah Spring	78.69	44	P	P	03 14 18.1	+0.9
	baz=235,SNR=34						
KSRS	Korea Array	78.72	317	P	P	03 14 18.6	+1.5
	comp=Z,20nm,0.9s,baz=135,slow=6.1,SNR=34						
KSRS				LR	LR	03 43 38.7	
	comp=Z,409nm,21.6s,baz=124,slow=32						
KS15	Wonju Array Si	78.74	317	*e*P	P	03 14 17.6	+0.4
KSAR	Wonju Array Be	78.74	317	P	P	03 14 18.6	+1.4
KVN	Kaiserville	78.75	41	*e*P	P	03 14 18.1	+0.6
	comp=Z,182nm,1.6s						
KVN	Kaiserville	78.75	41	*e*P	P	03 14 18.1	+0.6
KVN				pmax	pmax		
	comp=Z,180nm,1.5s						
KS01	Wonju Array Si	78.75	317	*e*P	P	03 14 17.1	-0.2
K04D	Chiloquin, OR	78.82	37	P	P	03 14 18.3	+0.6
	baz=230,SNR=5.6						
QZH	Quanzhou	78.95	302	⇑*i*P	P	03 14 19.4	+0.8
QZH				S	S	03 24 10.9	-0.7
QZH				pmax	pmax		
	comp=Z,120nm,1.2s						
QZH				pmax	pmax		
	comp=Z,370nm,3.1s						
QZH				LR	LR		
	comp=Z,950nm,35.5s						
J04D	Umpqua Nationa	79.02	36	P	P	03 14 19.7	+0.8
	baz=229,SNR=14						
SHPR	Sheep Range	79.15	45	*e*P	P	03 14 19.8	0.0
	comp=Z,82nm,1.1s						
MOD	Modoc Plateau	79.18	38	*e*P	P	03 14 20.0	+0.2
	comp=Z,211nm,1.6s						
Y14A	Wickenburg	79.20	48	*e*P	P	03 14 20.5	+0.6
	comp=Z,70nm,1.0s						
I04A	Tendick Farm,	79.21	35	P	P	03 14 20.0	+0.2
	baz=229,SNR=8.4						
W13A	Hualapai Mount	79.22	47	*e*P	P	03 14 20.2	-0.1
	comp=Z,125nm,1.5s						
KDAK	Kodiak Island	79.45	12	*e*P	P	03 14 20.4	-0.2
	comp=Z,46nm,0.6s						
KDAK	Kodiak Island	79.45	12	P	P	03 14 20.8	+0.2
	comp=Z,21nm,0.6s,baz=185,slow=5.8						
H04D	Lebanon	79.52	35	P	P	03 14 22.1	+0.8
	baz=229,SNR=9.7						
J05D	Fort Rock, OR	79.53	36	P	P	03 14 22.5	+0.8
	baz=230,SNR=38						
G03D	McMinnville, O	79.69	34	P	P	03 14 22.9	+0.7
	baz=228,SNR=8.7						
VLA	Vladivostok	79.77	323	*ce*P	P	03 14 24.2	+1.5
VLA				pmax	pmax		
	comp=Z,21nm,0.4s						
MSHR	Mys Shultsa	79.85	322	⇓*e*P	P	03 14 24.3	+1.2
TYV	Tymovskoe	79.91	334	*e*P	P	03 14 23.9	+0.6
TYV				*e*S	S	03 24 20.8	+0.1
TYV				pmax	pmax		
	comp=Z,200nm,2.6s						
TYV				pmax	pmax		
	comp=Z,30nm,1.1s						
TYV				smax	smax		
	comp=E,700nm,7.7s						
H04A	Detroit Lake	79.92	35	*e*P	P	03 14 23.7	+0.2
	comp=E,251nm,1.8s						
TUC	Tucson	79.92	50	*e*P	P	03 14 24.5	+0.6
	comp=E,130nm,1.1s						
TUC	Tucson	79.92	50	*e*P	P	03 14 25.2	+1.3
TUC				pmax	pmax		
	comp=Z,130nm,1.1s						
TUC	Tucson	79.92	50	P	P	03 14 25.3	+1.3
	baz=239						
R11A	Troy Canyon, C	79.93	43	*e*P	P	03 14 24.2	+0.3
	comp=Z,187nm,1.9s						
R11A	Troy Canyon, C	79.93	43	P	P	03 14 24.5	+0.5
	baz=235,SNR=46						
SSE	Sheshan	79.94	308	*e*P	P	03 14 24.1	+0.2
	comp=Z,85nm,0.9s						
PINE	Pine Mountain	80.02	36	*e*P	P	03 14 24.2	-0.1
	comp=Z,364nm,1.8s						
I05D	Terrebonne, OR	80.15	36	P	P	03 14 25.4	+0.6
	baz=230,SNR=14						
USA0B	Ussuriysk Arra	80.41	324	*e*P	P	03 14 26.4	+0.3
	comp=Z,36nm,1.3s						
USRK	Ussuriysk Ar.	80.41	324	P	P	03 14 27.0	+0.9
	comp=Z,7.5nm,0.7s,baz=104,slow=3.9,SNR=14						
USRK				LR	LR	03 46 12.0	
	comp=Z,339nm,19.8s,baz=112,slow=33						
F04D	Rainier, OR	80.41	33	P	P	03 14 27.1	+1.0
	baz=228						
WVOR	Wild Horse Val	80.48	38	*e*P	P	03 14 27.0	+0.3
	comp=Z,161nm,1.6s						
WVOR	Wild Horse Val	80.48	38	*e*P	P	03 14 27.2	+0.5
WVOR				pmax	pmax		
	comp=Z,160nm,1.6s						
319A	Douglas	80.55	52	*e*P	P	03 14 28.4	+1.0
	comp=Z,213nm,1.2s						
X16A	Lo Mia Camp, P	80.55	48	*e*P	P	03 14 28.0	+0.6
	comp=Z,109nm,1.1s						
G05D	Wamic, OR	80.75	35	P	P	03 14 28.5	+0.5
	baz=230,SNR=11						
NLWA	Neilton Lookou	80.85	32	*e*P	P	03 14 29.1	+0.6
	comp=Z,178nm,1.9s						
CCUT	Cedar City	80.93	45	*e*P	P	03 14 29.8	+0.4
	comp=Z,141nm,1.5s						
E04D	Cinebar	80.95	33	P	P	03 14 30.0	+1.0
	baz=229						
KNB	Kanab	81.00	45	*e*P	P	03 14 30.3	+0.7
	comp=Z,549nm,2.0s						
KNB	Kanab	81.00	45	*e*P	P	03 14 31.1	+1.4
KNB				pmax	pmax		
	comp=Z,550nm,1.9s						
I07A	Izee	81.01	37	*e*P	P	03 14 30.0	+0.5
	comp=Z,276nm,1.9s						
U15A	North Rim	81.03	46	*e*P	P	03 14 30.4	+0.4
	comp=Z,170nm,1.4s						
F05D	White Salmon	81.09	34	P	P	03 14 30.3	+0.5
	baz=230						
SZCU	Shurtz Canyon	81.14	45	*e*P	P	03 14 30.8	+0.3
	comp=Z,125nm,1.4s						
J08A	Circle Bar Ran	81.14	38	*e*P	P	03 14 30.6	+0.4
	comp=Z,162nm,1.5s						
PSUT	Pine Spring	81.15	44	*e*P	P	03 14 30.5	0.0
	comp=Z,92nm,1.5s						
WUAZ	Wupatki	81.18	47	*e*P	P	03 14 31.3	+0.7
	comp=Z,165nm,1.4s						
WUAZ	Wupatki	81.18	47	P	P	03 14 31.9	+1.3
	baz=238						
HPIG		81.20	57	*e*P	P	03 14 31.0	+0.1
	comp=Z,45nm,0.8s						
D03D	Eldon	81.34	32	P	P	03 14 31.8	+0.8
	baz=228,SNR=10.0						
LON	Longmire	81.47	34	*e*P	P	03 14 31.9	+0.2
	comp=Z,116nm,1.8s						
LON	Longmire	81.47	34	*e*P	P	03 14 32.0	+0.2
LON				pmax	pmax		
	comp=Z,120nm,1.8s						
ELK	Elko	81.52	41	*e*P	P	03 14 32.9	+0.4
	comp=Z,70nm,1.5s						
ELK	Elko	81.52	41	*e*P	P	03 14 32.9	+0.4
ELK				pmax	pmax		
	comp=Z,70nm,1.5s						
PKCU	Pink Cliffs	81.57	45	*e*P	P	03 14 33.2	+0.3
	comp=Z,954nm,2.0s						
BRLK	Bradley Lake	81.63	12	*e*P	P	03 14 32.2	-0.1
	comp=Z,299nm,1.8s						
MNAI	Manna	81.66	268	*e*P	P	03 14 33.4	-0.1
	comp=Z,216nm,0.9s						
X18A	Snowflake	81.66	49	*e*P	P	03 14 33.9	+0.6
	comp=Z,168nm,1.5s						
D05A	Enumclaw	81.67	33	*e*P	P	03 14 33.0	+0.2
	comp=Z,388nm,1.6s						
F07A	Phinny Hill Vi	81.92	35	*e*P	P	03 14 34.3	+0.2
	comp=Z,206nm,1.9s						
RSO	Redoubt South	81.94	11	*e*P	P	03 14 34.7	+0.6
MTPU	Mount Pierson	81.98	45	*e*P	P	03 14 35.7	+0.6
	comp=Z,186nm,1.5s						
MDJ	Mudanjiang	82.00	323	P	P	03 14 36.0	+1.4
MDJ				sP	sP	03 14 59.6	-3.0
MDJ				S	S	03 24 47.3	+4.5
MDJ				pmax	pmax		
	comp=Z,46nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,420nm,4.8s						
MDJ				LR	LR		
	comp=Z,280nm,15.2s						
MDJ				LR	LR		
	comp=Z,420nm,27.4s						
MDJ				LR	LR		
	comp=Z,610nm,25.5s						
MDJ	Mudanjiang	82.00	323	*e*P	P	03 14 35.0	+0.5
	comp=Z,47nm,1.0s						
GO10	Punta Arenas	82.01	144	*e*P	P	03 14 38.1	+3.4
	comp=Z,349nm,1.5s						
G08A	Pilot Rock	82.07	36	*e*P	P	03 14 35.5	+0.4
	comp=Z,306nm,1.8s						
W18A	Petrified Fore	82.11	48	*e*P	P	03 14 36.3	+0.6
	comp=Z,423nm,1.8s						
W18A	Petrified Fore	82.11	48	P	P	03 14 36.8	+1.2
	baz=239						
NJ2	Nanjing	82.14	308	⇑*i*P	P	03 14 37.3	+1.8
NJ2				S	S	03 24 49.3	+4.6
NJ2				pmax	pmax		
	comp=Z,59nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,710nm,3.8s						
NJ2				LR	LR		
	comp=Z,310nm,20.1s						
NJ2				LR	LR		
	comp=Z,690nm,22.8s						
NJ2				LR	LR		
	comp=Z,1µm,19.0s						
121A	Cookes Peak, D	82.23	51	P	P	03 14 37.8	+1.6
	baz=241,SNR=68						
MSU	Marysvale	82.24	44	*e*P	P	03 14 36.7	+0.5
MSU	Marysvale	82.24	44	*e*P	P	03 14 37.6	+1.4
A04D	Lummi Island	82.32	32	P	P	03 14 37.0	+0.9
	baz=228,SNR=5.8						
B05A	Bryant	82.32	32	P	P	03 14 36.8	+0.7
	baz=229,SNR=9.1						
LTY	Liberty	82.39	34	*e*P	P	03 14 36.7	+0.1
	comp=Z,87nm,1.5s						
GZH	Guangzhou	82.42	298	*e*P	P	03 14 35.4	-1.8
GZH				S	S	03 24 43.8	-4.0
GZH				LR	LR		
	comp=Z,410nm,26.3s						
GZH				LR	LR		
	comp=Z,480nm,27.9s						
NKL	Nikolayevsk	82.44	335	*e*P	P	03 14 36.0	-0.6
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
HAWA	Hanford	82.45	35	*e*P	P	03 14 36.9	0.0
	comp=Z,283nm,1.7s						
GRNR	Gornyy	82.56	331	*e*P	P	03 14 38.8	+1.5
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
C06D	Leavenworth	82.71	33	P	P	03 14 38.2	0.0
	baz=230						
BMO	Blue Mountains	82.72	37	*e*P	P	03 14 38.7	+0.3
	comp=Z,246nm,1.8s						
BMO	Blue Mountains	82.72	37	*e*P	P	03 14 38.7	+0.3
BMO				pmax	pmax		
	comp=Z,250nm,1.8s						
DUG	Dugway, Tooele	82.74	43	*e*P	P	03 14 39.2	+0.5
	comp=Z,100nm,1.7s						
DUG	Dugway, Tooele	82.74	43	*e*P	P	03 14 39.2	+0.5
DUG				pmax	pmax		
	comp=Z,100nm,1.7s						
DUG	Dugway, Tooele	82.74	43	P	P	03 14 39.2	+0.5
	baz=237						
E08A	Dider Farm, El	82.76	35	*e*P	P	03 14 39.0	+0.6
	comp=Z,275nm,1.8s						
B06A	Marblemount	82.80	32	*e*P	P	03 14 38.8	+0.2
	comp=Z,76nm,1.7s						
MYKOM	Kota Tinggi	82.88	274	*e*P	P	03 14 41.0	+1.1
	comp=Z,69nm,1.0s						
BGU	Big Grassy Mou	83.01	42	*e*P	P	03 14 40.5	+0.4
	comp=Z,166nm,1.9s						
RC01	Rabbit Creek A	83.07	12	*e*P	P	03 14 39.7	-0.1
	comp=Z,90nm,1.3s						
NLU	North Lily Min	83.08	43	*e*P	P	03 14 40.6	0.0
	comp=Z,104nm,1.8s						
Q16A	Castle Valley	83.12	45	*e*P	P	03 14 41.3	+0.5
	comp=Z,273nm,1.9s						
D08A	Wollman Farm,	83.19	35	*e*P	P	03 14 40.9	+0.2
	comp=Z,368nm,1.8s						
SUA	Susitna One	83.23	11	*e*P	P	03 14 40.8	+0.1
	comp=Z,52nm,0.9s						
E09A	Wood Farm, Sta	83.27	35	*e*P	P	03 14 41.3	+0.2
	comp=Z,251nm,1.8s						
TMUT	Trail Mountain	83.30	44	*e*P	P	03 14 42.5	+0.7
	comp=Z,407nm,1.7s						
MAW	Mawson	83.30	199	P	P	03 14 42.8	+1.9
	comp=Z,16nm,0.7s,baz=133,slow=9.2,SNR=6.2						
MAW				LR	LR	03 51 09.6	
	comp=Z,396nm,18.9s,baz=122,slow=35						
GAMB	Gambell	83.39	1	*e*P	P	03 14 42.3	+1.0
	comp=Z,157nm,1.8s						
MPU	Maple Canyon	83.40	43	*e*P	P	03 14 42.5	+0.3
	comp=Z,84nm,1.5s						
F10A	Beach Ranch, E	83.45	36	*e*P	P	03 14 42.1	0.0
	comp=Z,329nm,1.8s						
SPUT	South Promonto	83.59	42	*e*P	P	03 14 43.6	+0.6
	comp=Z,230nm,1.7s						
Y22D	IRIS PASSCAL I	83.61	50	P	P	03 14 45.1	+1.8
	baz=241						
LAZ	Ladron	83.61	50	*e*P	P	03 14 43.9	+0.5
LENM	Lemitar	83.61	50	*e*P	P	03 14 43.7	+0.3
MNTX	Cornudas Mount	83.62	53	*e*P	P	03 14 43.9	+0.7
	comp=Z,225nm,1.4s						
MNTX	Cornudas Mount	83.62	53	P	P	03 14 44.5	+1.2
	baz=242,SNR=105						
KNK	Knik Glacier	83.62	12	*e*P	P	03 14 42.5	0.0
	comp=Z,47nm,0.9s						
HVU	Hansel Valley	83.64	41	*e*P	P	03 14 43.9	+0.6
	comp=Z,193nm,1.7s						
HVU	Hansel Valley	83.64	41	*e*P	P	03 14 43.9	+0.6
HVU				pmax	pmax		
	comp=Z,190nm,1.7s						
HLID	Hailey	83.64	39	*e*P	P	03 14 43.7	+0.4
	comp=Z,213nm,1.6s						
HLID	Hailey	83.64	39	P	P	03 14 44.3	+1.0
	baz=235						
DL2	Dalian	83.65	315	⇑P	P	03 14 44.1	+0.9
DL2				pP	pP	03 15 06.1	+2.7
DL2				PP	PP	03 17 57.8	+0.7
DL2				S	S	03 24 58.4	-1.3
DL2				pmax	pmax		
	comp=Z,39nm,0.8s						
DL2				pmax	pmax		
	comp=Z,430nm,4.9s						
DL2				LR	LR		
	comp=Z,510nm,20.1s						
DL2				LR	LR		
	comp=Z,410nm,20.8s						
DL2				LR	LR		
	comp=Z,620nm,23.0s						
SRU	San Rafael Swe	83.65	45	*e*P	P	03 14 43.8	+0.3
	comp=Z,298nm,1.5s						
SRU	San Rafael Swe	83.65	45	*e*P	P	03 14 44.5	+1.0
SRU				pmax	pmax		
	comp=Z,300nm,1.4s						
PMR	Palmer	83.65	12	*e*P	P	03 14 42.4	-0.3
	comp=Z,58nm,1.3s						
PMR	Palmer	83.65	12	*e*P	P	03 14 42.4	-0.3
PMR				pmax	pmax		
	comp=Z,58nm,1.2s						
CTU	Camp Tracy	83.69	43	*e*P	P	03 14 44.0	+0.3
	comp=Z,94nm,1.5s						
P17A	Butcher Ranch,	83.70	44	*e*P	P	03 14 44.2	+0.5
	comp=Z,321nm,1.6s						
QIZ	Qiongzhong	83.73	293	P	P	03 14 44.5	+0.4
QIZ				S	S	03 25 01.0	-0.4
QIZ				pmax	pmax		
	comp=Z,37nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,330nm,3.1s						
QIZ				LR	LR		
	comp=Z,250nm,40.2s						
QIZ				LR	LR		
	comp=Z,270nm,33.3s						
QIZ				LR	LR		
	comp=Z,690nm,32.4s						
QIZ	Qiongzhong	83.73	293	*e*P	P	03 14 43.6	-0.5
	comp=Z,44nm,1.0s						
KLR	Kul'dur	83.76	328	⇓*e*P	P	03 14 45.0	+1.5
B08A	Colville Reser	83.79	33	*e*P	P	03 14 43.6	-0.2
	comp=Z,201nm,1.8s						
JLU	Jordanelle	83.84	43	*e*P	P	03 14 45.0	+0.5
	comp=Z,235nm,1.9s						
TXAR	Lajitas Array	83.86	56	P	P	03 14 45.6	+1.0
	comp=Z,39nm,1.0s,baz=216,slow=6.2,SNR=186						
TXAR				PKKP	PKKPdf	03 32 54.7	+1.8
	comp=Z,0.3nm,0.8s,baz=111,slow=6.9,SNR=3.7						
TXAR				LR	LR	03 46 01.5	
	comp=Z,200nm,18.8s,baz=0.0,slow=31						
BNM	Barren Site	83.86	51	*e*P	P	03 14 45.3	+0.6
DIV	Divide	83.93	14	*e*P	P	03 14 44.3	+0.1
	comp=Z,50nm,1.0s						
LPM	Los Pinos Moun	83.93	50	*e*P	P	03 14 45.7	+0.6
LLLB	Lillooet	83.98	31	*e*P	P	03 14 45.0	+0.3
	comp=Z,231nm,2.0s						
C09A	Chrisman Ranch	84.00	34	*e*P	P	03 14 45.2	+0.4
	comp=Z,264nm,1.8s						
MVCO	Mesa Verde	84.04	47	*e*P	P	03 14 46.0	+0.4
	comp=Z,169nm,1.7s						
MVCO	Mesa Verde	84.04	47	P	P	03 14 46.4	+0.8
	baz=240						
PV05	Paradox Valley	84.07	46	*e*P	P	03 14 46.4	+0.7
	comp=Z,266nm,1.3s						
P18A	Preston Nutter	84.10	44	*e*P	P	03 14 46.0	0.0
MA2	Magadan	84.13	343	*e*P	P	03 14 44.6	-0.5
	comp=Z,33nm,1.1s						
MA2	Magadan	84.13	343	⇓*i*P	P	03 14 44.3	-0.9
MA2				pmax	pmax		
	comp=Z,25nm,1.3s						
MA2	Magadan	84.13	343	P	P	03 14 45.1	0.0
	comp=Z,12nm,0.7s,baz=155,slow=8.6						
TCUT	Toone Canyon	84.14	43	*e*P	P	03 14 46.1	+0.1
	comp=Z,494nm,1.5s						
KLU	Klutina	84.22	13	*e*P	P	03 14 46.1	+0.4
	comp=Z,68nm,1.4s						
SCM	Sheep Creek Mo	84.23	13	*e*P	P	03 14 45.8	+0.1
	comp=Z,62nm,0.8s						
SCM	Sheep Creek Mo	84.23	13	*e*P	P	03 14 46.1	+0.4
SCM				pmax	pmax		
	comp=Z,62nm,0.8s						
PV09	Paradox Valley	84.26	46	*e*P	P	03 14 46.9	+0.2
PV10	Paradox Valley	84.26	46	*e*P	P	03 14 46.4	-0.3
	comp=Z,202nm,1.2s						
PV17	East Wray Mesa	84.26	46	*e*P	P	03 14 46.8	+0.1
	comp=Z,247nm,1.3s						
PV19	Morning Glory	84.26	46	*e*P	P	03 14 47.3	+0.6
	comp=Z,207nm,1.3s						
PV14	Lion Creek, Pa	84.27	46	*e*P	P	03 14 46.6	-0.1
	comp=Z,218nm,1.3s						
PV20	West Nyswonger	84.29	46	*e*P	P	03 14 46.9	+0.1
	comp=Z,226nm,1.3s						
PV13	Radium Mtn., P	84.30	46	*e*P	P	03 14 47.3	+0.4
	comp=Z,282nm,1.4s						
PV16	Nyswonger Mesa	84.31	46	*e*P	P	03 14 47.7	+0.8
	comp=Z,338nm,1.6s						
PV23	Carpenter Ridg	84.32	46	*e*P	P	03 14 47.4	+0.4
	comp=Z,198nm,1.3s						
PV03	Paradox Valley	84.33	46	*e*P	P	03 14 47.7	+0.7
	comp=Z,311nm,1.5s						
PV11	David Mesa, Pa	84.33	46	*e*P	P	03 14 47.9	+0.9
	comp=Z,419nm,1.5s						
PV04	Paradox Valley	84.36	46	*e*P	P	03 14 48.1	+1.0
	comp=Z,268nm,1.5s						
ANMO	Albuquerque	84.36	50	*e*P	P	03 14 47.7	+0.5
	comp=Z,277nm,1.3s						
ANMO	Albuquerque	84.36	50	*d i*P	P	03 14 48.2	+1.0
ANMO				pmax	pmax		
	comp=Z,255nm,1.2s						
ANMO	Albuquerque	84.36	50	P	P	03 14 48.5	+1.3
	baz=241						
PV02	Paradox Valley	84.38	46	*e*P	P	03 14 47.2	-0.1
	comp=Z,250nm,1.4s						
PV12	Saucer Basin,	84.39	46	*e*P	P	03 14 47.4	+0.1
	comp=Z,351nm,1.4s						
PV21	Cone Mtn., Par	84.40	46	*e*P	P	03 14 47.6	+0.2
	comp=Z,189nm,1.3s						
ANM	Nome	84.44	4	*e*P	P	03 14 46.6	0.0
	comp=Z,21nm,1.1s						
ANM	Nome	84.44	4	*e*P	P	03 14 47.4	+0.8
ANM				pmax	pmax		
	comp=Z,21nm,1.0s						
PV01	Paradox Valley	84.45	46	*e*P	P	03 14 48.3	+0.7
	comp=Z,158nm,1.3s						
PV07	Paradox Valley	84.56	46	*e*P	P	03 14 49.0	+0.9
	comp=Z,174nm,1.4s						
GDL2	Guadalupe Moun	84.62	53	*e*P	P	03 14 49.2	+0.7
PV15	Paradox Valley	84.62	46	*e*P	P	03 14 48.8	+0.2
	comp=Z,163nm,1.3s						
CAST	Castle Rocks	84.82	10	*e*P	P	03 14 47.4	-1.3
	comp=Z,82nm,1.6s						
WHN	Wuhan	84.85	305	⇑P	P	03 14 51.0	+1.5
WHN				pmax	pmax		
	comp=Z,160nm,1.0s						
WHN				LR	LR		
	comp=Z,5µm,48.0s						
NEW	Newport	84.89	34	*e*P	P	03 14 49.2	-0.2
	comp=Z,126nm,1.9s						
NEW	Newport	84.89	34	*e*P	P	03 14 49.2	-0.2
NEW				pmax	pmax		
	comp=Z,130nm,1.9s						
NEW	Newport	84.89	34	P	P	03 14 49.3	-0.1
	baz=233,SNR=14						
BKNI	Bangkinang	85.02	272	*e*P	P	03 14 50.6	-0.1
	comp=Z,362nm,1.5s						
TRF	Thorofare Moun	85.15	11	*e*P	P	03 14 50.2	-0.3
	comp=Z,86nm,0.9s						
AHID	Auburn Hatcher	85.22	41	*e*P	P	03 14 51.9	+0.5
	comp=Z,158nm,1.4s						
SKAG	Skagway	85.24	19	*e*P	P	03 14 51.3	+0.6
	comp=Z,120nm,1.4s						
LNIG	Linares	85.34	62	*e*P	P	03 14 51.8	-0.3
	comp=Z,132nm,1.0s						
DHY	Denali Highway	85.35	12	*e*P	P	03 14 51.3	-0.1
	comp=Z,82nm,1.4s						
RND	Reindeer	85.37	11	*e*P	P	03 14 51.4	0.0
	comp=Z,103nm,0.9s						
RND	Reindeer	85.37	11	*e*P	P	03 14 51.4	0.0
RND				pmax	pmax		
	comp=Z,100nm,0.9s						
TIA	Tai'an	85.40	311	P	P	03 14 53.3	+1.2
TIA				pP	pP	03 15 15.8	+3.4
TIA				sP	sP	03 15 23.1	+2.7
TIA				SKS	S	03 25 11.6	-5.7
TIA				S	SKKSac	03 25 21.5	+3.9
TIA				pmax	pmax		
	comp=Z,170nm,3.7s						
TIA				LR	LR		
	comp=Z,220nm,16.9s						
TIA				LR	LR		
	comp=Z,160nm,20.2s						
TIA				LR	LR		
	comp=Z,260nm,20.4s						
S22A	4UR Ranch, Cre	85.46	47	*e*P	P	03 14 53.0	+0.2
	comp=Z,285nm,1.5s						
S22A	4UR Ranch, Cre	85.46	47	P	P	03 14 54.0	+1.2
	baz=241,SNR=93						
BPAW	Bear Paw Mtn.	85.64	10	*e*P	P	03 14 52.1	-0.6
	comp=Z,113nm,2.0s						
MCK	McKinley	85.65	11	*e*P	P	03 14 52.7	-0.1

	comp=Z,134nm,1.0s						
MCK	McKinley	85.65	11	eP	P	03 14 52.7	-0.1
MCK				pmax	pmax		
	comp=Z,130nm,1.0s						
O20A	White River Ci	85.69	45	eP	P	03 14 54.2	+0.5
	comp=Z,121nm,1.5s						
O20A	White River Ci	85.69	45	P	P	03 14 54.2	+0.5
	baz=240,SNR=37						
REDW	Red Top Meadow	85.69	41	eP	P	03 14 52.8	-0.9
	comp=Z,168nm,1.5s						
TPAW	Teton Pass	85.70	41	eP	P	03 14 53.6	-0.2
	comp=Z,147nm,1.6s						
HYT	Haines Junctio	85.72	17	eP	P	03 14 53.5	+0.2
	comp=Z,48nm,1.2s						
FXWY	Fox Creek	85.73	41	eP	P	03 14 54.4	+0.5
	comp=Z,121nm,1.6s						
DLMT	Dillon	85.73	39	eP	P	03 14 54.4	+0.6
	comp=Z,151nm,1.6s						
MSO	Missoula	85.79	37	eP	P	03 14 53.5	-0.4
	comp=Z,150nm,1.8s						
MSO	Missoula	85.79	37	P	P	03 14 53.7	-0.3
	baz=235,SNR=22						
SNOW	Snow King Moun	85.81	41	eP	P	03 14 54.3	-0.1
	comp=Z,102nm,1.4s						
LVIG	Laguna Verde	85.88	67	eP	P	03 14 55.3	+0.4
	comp=Z,58nm,1.0s						
IMW	Indian Meadow	85.93	40	eP	P	03 14 55.5	+0.5
	comp=Z,107nm,1.5s						
MOOW	Moose Ponds	85.97	41	eP	P	03 14 55.6	+0.5
	comp=Z,151nm,2.0s						
LOHW	Long Hollow	85.98	41	eP	P	03 14 55.4	+0.3
	comp=Z,119nm,1.7s						
MENT	Mentasta	85.98	14	eP	P	03 14 54.6	+0.1
	comp=Z,58nm,1.0s						
SMCO	Snowmass	86.06	46	eP	P	03 14 55.7	-0.1
	comp=Z,77nm,1.4s						
QLMT	Earthquake Lak	86.13	39	eP	P	03 14 56.2	+0.3
DLBC	Dease Lake	86.17	22	eP	P	03 14 55.8	+0.3
	comp=Z,33nm,1.0s						
FLWY	Flagg Ranch	86.17	40	eP	P	03 14 55.9	-0.1
	comp=Z,160nm,1.5s						
BW06	Boulder Array	86.18	42	eP	P	03 14 56.1	-0.1
	comp=Z,68nm,1.4s						
BW06	Boulder Array	86.18	42	P	P	03 14 56.2	+0.1
	baz=239,SNR=27						
PD31	Pinedale Array	86.19	42	eP	P	03 14 56.4	+0.2
PDAR	Pinedale Array	86.19	42	eP	P	03 14 55.0	-1.1
PDAR				PKKPbc	PKKPbc	03 32 54.9	-1.5
PDAR	Pinedale Array	86.19	42	P	P	03 14 56.0	-0.1
	comp=Z,8.7nm,0.9s,baz=208,slow=2.9,SNR=56						
PDAR				PKKPbc	PKKPbc	03 32 54.9	-1.5
	comp=Z,0.7nm,0.9s,baz=48,slow=2.2,SNR=4.8						
PDAR				LR	LR	03 45 45.8	
	comp=Z,278nm,21.2s,baz=242,slow=30						
YPP	Pitchstone Pla	86.21	40	eP	P	03 14 56.7	+0.3
	comp=Z,84nm,1.7s						
YHB	Horse Butte	86.23	40	eP	P	03 14 56.6	+0.3
	comp=Z,157nm,1.6s						
YFT	Old Faithful	86.29	40	eP	P	03 14 57.2	+0.6
	comp=Z,74nm,1.5s						
YMR	Madison River	86.33	40	eP	P	03 14 57.1	+0.3
	comp=Z,203nm,1.7s						
WHY	Whitehorse	86.34	18	eP	P	03 14 56.7	+0.3
	comp=Z,179nm,1.9s						
SDCO	Great Sand Dun	86.38	48	eP	P	03 14 57.7	+0.4
	comp=Z,157nm,1.9s						
SDCO	Great Sand Dun	86.38	48	P	P	03 14 57.7	+0.4
	baz=242,SNR=29						
H17A	Grant Village	86.41	40	eP	P	03 14 58.0	+0.7
	comp=Z,85nm,1.7s						
H17A	Grant Village	86.41	40	P	P	03 14 58.8	+1.5
	baz=238,SNR=13						
BOZ	Bozeman (W)	86.43	39	eP	P	03 14 57.7	+0.5
	comp=Z,171nm,1.6s						
BOZ	Bozeman (W)	86.43	39	eP	P	03 14 57.7	+0.5
BOZ				pmax	pmax		
	comp=Z,170nm,1.6s						
BOZ	Bozeman (W)	86.43	39	P	P	03 14 57.9	+0.6
	baz=237,SNR=53						
IPM	Ipoh	86.45	276	eP	P	03 14 57.8	-0.1
	comp=Z,151nm,1.0s						
RIDG	Independ'e Rid	86.45	13	eP	P	03 14 56.8	+0.1
	comp=Z,60nm,1.1s						
YHH	Holmes Hill	86.46	40	eP	P	03 14 57.5	0.0
	comp=Z,169nm,1.8s						
WRH	Wood River Hil	86.48	11	eP	P	03 14 56.8	0.0
	comp=Z,140nm,1.0s						
YNR	Norris Junctio	86.52	40	eP	P	03 14 58.2	+0.4
	comp=Z,144nm,2.0s						
MLY	Manley	86.55	10	eP	P	03 14 56.8	-0.4
	comp=Z,40nm,1.0s						
SEY	Seymchan	86.57	345⇑	eP	P	03 14 57.6	+0.3
SEY	Seymchan	86.57	345	PKKPbc	PKKPbc	03 32 53.8	-2.3
	comp=Z,1.3nm,0.6s,baz=323,slow=1.8,SNR=5.5						
MSTX	Muleshoe	86.61	52	eP	P	03 14 58.8	+0.5
	comp=Z,148nm,0.9s						
MSTX	Muleshoe	86.61	52	P	P	03 14 59.0	+0.7
	baz=244,SNR=71						
HDA	Harding Lake	86.64	12	eP	P	03 14 57.6	0.0
	comp=Z,54nm,0.7s						
HDA	Harding Lake	86.64	12	P	P	03 14 57.6	0.0
	baz=206						
833A	Chaparral WMA,	86.80	59	eP	P	03 14 59.7	+0.5
	comp=Z,104nm,1.0s						
833A	Chaparral WMA,	86.80	59	P	P	03 14 59.6	+0.4
	baz=246,SNR=12						
SCRK	Sand Creek	86.84	13	eP	P	03 14 58.6	-0.2
	comp=Z,39nm,0.9s						
T25A	Trinidad	86.86	49	eP	P	03 14 59.9	+0.3
	comp=Z,184nm,2.0s						
T25A	Trinidad	86.86	49	P	P	03 14 59.9	+0.3
	baz=242,SNR=14						
TCOL	CIGO, UAF Yank	86.89	11	P	P	03 14 58.8	0.0
	baz=205						
COLA	College	86.89	11	eP	P	03 14 58.9	+0.1
	comp=Z,99nm,0.9s						
COLA	College	86.89	11	d iP	P	03 14 58.3	-0.5
COLA				pmax	pmax		
	comp=Z,94nm,1.1s						
MDM	Murphy Dome	86.90	11	eP	P	03 14 58.5	-0.4
	comp=Z,98nm,1.1s						
HRY	Holter Researc	86.92	38	eP	P	03 14 59.9	+0.3
IL1	Eielson Array	86.98	11	eP	P	03 14 58.1	-1.1
ILAR	Eielson Array	86.98	11	P	P	03 14 58.9	-0.3
	comp=Z,6.6nm,0.6s,baz=232,slow=6.4,SNR=94						
ILAR				PKKPbc	PKKPbc	03 32 52.6	-2.5
	comp=Z,0.5nm,0.5s,baz=339,slow=2.3,SNR=12						
ILAR				LR	LR	03 46 05.7	
	comp=Z,200nm,21.6s,baz=222,slow=30						
ILB	Eielson Array	86.98	11	eP	P	03 14 58.9	-0.3
IM3	Indian Mountai	87.00	8	eP	P	03 14 59.0	-0.2
GO06	Curarrehue	87.02	131	eP	P	03 15 01.8	+1.4
	comp=Z,28nm,0.9s						
KULM	Kulim	87.08	277	eP	P	03 15 01.0	+0.1
	comp=Z,84nm,1.0s						
RWWY	Rawlins	87.14	44	eP	P	03 14 59.9	-1.0
	comp=Z,80nm,1.4s						
POKR	Poker Plat Res	87.19	11	P	P	03 15 00.2	-0.1
	baz=205						
Q24A	Divide	87.20	47	P	P	03 15 01.8	+0.5
	baz=242,SNR=7.4						
PLCA	Paso Flores	87.21	132	eP	P	03 15 02.8	+1.6
	comp=Z,52nm,1.5s						
PLCA	Paso Flores	87.21	132	eP	P	03 15 02.8	+1.6
PLCA				pmax	pmax		
	comp=Z,52nm,1.5s						
ISCO	Idaho Springs	87.28	46	eP	P	03 15 01.9	+0.3
	comp=Z,40nm,1.6s						
ISCO	Idaho Springs	87.28	46	eP	P	03 15 02.0	+0.3
ISCO				pmax	pmax		
	comp=Z,40nm,1.6s						
ISCO	Idaho Springs	87.28	46	P	P	03 15 02.0	+0.3
	baz=242,SNR=14						
JCT	Junction City	87.37	56	eP	P	03 15 02.1	+0.1
	comp=Z,54nm,1.1s						
JCT	Junction City	87.37	56	eP	P	03 15 02.1	+0.1
JCT				pmax	pmax		
	comp=Z,54nm,1.1s						
JCT	Junction City	87.37	56	P	P	03 15 02.0	+0.1
	baz=245						
N23A	Red Feather La	87.58	45	eP	P	03 15 03.4	+0.4
	comp=Z,38nm,1.1s						
N23A	Red Feather La	87.58	45	P	P	03 15 03.6	+0.5
	baz=241,SNR=19						
RLMT	Red Lodge	87.59	40	eP	P	03 15 02.5	-0.4
	comp=Z,71nm,1.8s						
RLMT	Red Lodge	87.59	40	P	P	03 15 03.6	+0.7
	baz=239,SNR=9.2						
GCMT	Greycliff	87.70	39	eP	P	03 15 03.6	+0.2
AMTX	Amarillo	87.82	52	eP	P	03 15 04.6	+0.5
	comp=Z,155nm,1.3s						
AMTX	Amarillo	87.82	52	P	P	03 15 04.5	+0.5
	baz=244						
PSI	Prapat	87.85	274	eP	P	03 15 04.4	-0.4
	comp=Z,131nm,1.1s						
PSI	Prapat	87.85	274	P	P	03 15 04.5	-0.2
	comp=Z,72nm,1.0s,baz=180,slow=4.6,SNR=50						
BJT	Baijiatuau	87.87	314	eP	P	03 15 03.9	-0.2
	comp=Z,138nm,1.8s						
BJT	Baijiatuau	87.87	314	eP	P	03 15 03.9	-0.2
BJT				pmax	pmax		
	comp=Z,138nm,1.8s						
BJI	Beijing	87.87	314	P	P	03 15 04.9	+0.8
BJI				pmax	pmax		
	comp=Z,25nm,1.8s						
BJI				LR	LR		
	comp=Z,330nm,19.0s						
BJI				LR	LR		
	comp=Z,500nm,20.2s						
BJI				LR	LR		
	comp=Z,610nm,24.0s						
PRP	Porcupine Dome	87.90	12	eP	P	03 15 04.0	+0.2
	comp=Z,74nm,1.3s						
DAWY	Dawson	87.95	15	eP	P	03 15 03.8	-0.2
	comp=Z,62nm,1.0s						
K22A	Casper	88.06	43	eP	P	03 15 05.3	+0.2
	comp=Z,56nm,1.4s						
K22A	Casper	88.06	43	P	P	03 15 05.1	0.0
	baz=241,SNR=14						
RDOG	Red Dog Mine	88.06	4	eP	P	03 15 04.8	+0.5
	comp=Z,57nm,1.8s						
SYO	Syowa Base	88.07	192⇑	eP	P	03 15 04.0	-0.6
SYO	Syowa Base	88.07	192⇑	epP	pP	03 15 25.4	+0.7
PHWY	Pilot Hill	88.10	45	eP	P	03 15 06.0	+0.5
	comp=Z,105nm,1.9s						
SKNT	Sakolnakorn	88.12	289	P	P	03 15 06.8	+1.0
EGAK	Eagle	88.15	14	eP	P	03 15 04.6	-0.2
	comp=Z,305nm,0.5s						
CCIG	Comitan	88.39	72	eP	P	03 15 07.8	+0.5
	comp=Z,142nm,1.7s						
ABTX	Abilene, Hawle	88.39	55	eP	P	03 15 07.2	+0.4
	comp=Z,234nm,1.3s						
ABTX	Abilene, Hawle	88.39	55	P	P	03 15 07.3	+0.5
	baz=245						
VNA3	Neumayer Olymp	88.52	175	P	P	03 15 08.4	+1.6
SNAA	Sanae	88.52	177	P	P	03 15 08.2	+1.4
SNAA	Sanae	88.52	177	eP	P	03 15 07.4	+0.6
	comp=Z,39nm,1.1s						
SNAA	Sanae	88.52	177	d iP	P	03 15 07.2	+0.4
ENH	Enshi	88.53	303	eP	P	03 15 07.5	0.0
	comp=Z,204nm,1.1s						
GSI	Gunungsitoli	88.61	272	eP	P	03 15 07.9	-0.3
	comp=Z,200nm,1.0s						
COLD	Coldfoot	88.67	9	eP	P	03 15 07.3	0.0
	comp=Z,6.3nm,0.8s						
ZEA	Zeya	88.77	330	eP	P	03 15 09.4	+1.4
ZEA				eS	SKSac	03 25 30.5	0.0
ZEA				pmax	pmax		
	comp=N,58nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,71nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,400nm,5.0s						
ZEA				smax	smax		
	comp=N,900nm,10.0s						
BILL	Bilibino	88.79	353	eP	P	03 15 07.4	-0.4
	comp=N,32nm,1.2s						
BILL	Bilibino	88.79	353	deP	P	03 15 08.6	+0.8
BILL				pmax	pmax		
	comp=Z,27nm,1.7s						
SRAK	Srakaew	88.81	285	P	P	03 15 08.6	-0.5
EGMT	Eagleton	88.82	37	eP	P	03 15 09.0	+0.5
	comp=Z,162nm,1.9s						
EGMT	Eagleton	88.82	37	P	P	03 15 08.6	+0.1
	baz=238,SNR=10						
TRTT	Trang	88.84	279	P	P	03 15 11.3	+2.0
KSCO	Kaye Shedlock'	88.97	48	eP	P	03 15 10.0	+0.5
	comp=Z,113nm,1.4s						
KSCO	Kaye Shedlock'	88.97	48	P	P	03 15 10.0	+0.5
	baz=243						
VNA2	Neumayer--Watz	89.00	176	P	P	03 15 10.4	+1.4
	baz=188,slow=3.2						
435B	Jarrell	89.24	57	eP	P	03 15 11.1	+0.4
	comp=Z,134nm,1.5s						
435B	Jarrell	89.24	57	P	P	03 15 11.2	+0.4
	baz=246						
GYA	Guiyang	89.33	298⇑	iP	P	03 15 12.8	+1.4
GYA				pP	pP	03 15 32.4	+0.6
GYA				sP	sP	03 15 40.0	+0.1
GYA				PP	PP	03 18 46.3	+2.9
GYA				SKS	SKSac	03 25 33.6	-1.8
GYA				S	S	03 25 56.3	+0.7
GYA				sS	sS	03 26 28.0	-1.5
GYA				SS	SS	03 31 53.3	+1.0
GYA				pmax	pmax		
	comp=Z,30nm,1.3s						
GYA				pmax	pmax		
	comp=Z,150nm,3.2s						
GYA				LR	LR		
	comp=Z,710nm,24.9s						
GYA				LR	LR		
	comp=Z,660nm,25.6s						
GYA				LR	LR		
	comp=Z,690nm,23.5s						
TIY	Taiyuan	89.42	311	eP	P	03 15 13.0	+1.4
TIY				pP	pP	03 15 35.6	+3.7
TIY				SKS	SKSac	03 25 35.9	+0.6
TIY				S	SKKSac	03 25 49.8	+1.9
TIY				pmax	pmax		
	comp=Z,400nm,6.1s						
TIY				LR	LR		
	comp=Z,310nm,11.7s						
TIY				LR	LR		
	comp=Z,350nm,11.1s						
TIY				LR	LR		
	comp=Z,1µm,20.2s						
NVL	N'lazarevskaya	89.51	182⇓	iP	P	03 15 19.6	+8.3
NVL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
EFI	East Falkland	89.74	146	eP	P	03 15 14.2	+1.4
	comp=Z,133nm,1.2s						
EFI	East Falkland	89.74	146	eP	P	03 15 14.2	+1.4
EFI				pmax	pmax		
	comp=Z,130nm,1.2s						
WHTX	Lake Whitney,	89.82	56	eP	P	03 15 14.2	+0.8
	comp=Z,211nm,1.8s						
WHTX	Lake Whitney,	89.82	56	P	P	03 15 13.6	+0.1
	baz=246						
WMOK	Wichita Mounta	89.92	53	eP	P	03 15 14.3	+0.4
	comp=Z,62nm,1.5s						
WMOK	Wichita Mounta	89.92	53	eP	P	03 15 14.3	+0.4
WMOK				pmax	pmax		
	comp=Z,62nm,1.5s						
WMOK	Wichita Mounta	89.92	53	P	P	03 15 13.7	-0.2
	baz=246						
TOLK	Toolik Lake Re	90.07	9	eP	P	03 15 13.2	-0.7
	comp=Z,24nm,1.1s						
TOLK	Toolik Lake Re	90.07	9	P	P	03 15 14.4	+0.6
	baz=203						
PEL	Peldehue	90.17	125	eP	P	03 15 16.2	+0.9
	comp=Z,74nm,1.1s						
PEL	Peldehue	90.17	125	eP	P	03 15 16.2	+0.9
PEL				pmax	pmax		
	comp=Z,74nm,1.1s						
LAO	LASA Array	90.21	40	eP	P	03 15 15.1	0.0
	comp=Z,293nm,1.8s						
LAO	LASA Array	90.21	40	P	P	03 15 16.1	+1.1
	baz=241						
OGNE	Ogallala	90.23	46	P	P	03 15 15.4	+0.1
	baz=244						
HKT	Hockley	90.31	58	eP	P	03 15 16.4	+0.7
	comp=Z,161nm,1.7s						
HKT	Hockley	90.31	58	eP	P	03 15 16.4	+0.7
HKT				pmax	pmax		
	comp=Z,160nm,1.7s						
RSSD	Black Hills	90.35	43	eP	P	03 15 15.9	0.0
	comp=Z,70nm,1.3s						
RSSD	Black Hills	90.35	43	eP	P	03 15 15.9	0.0
RSSD				pmax	pmax		
	comp=Z,70nm,1.2s						
RSSD	Black Hills	90.35	43	P	P	03 15 15.9	0.0
	baz=242						
U32A	Winter Ranch,	90.43	51	eP	P	03 15 16.9	+0.7
	comp=Z,174nm,1.1s						
XAN	Xi'an	90.49	306	P	P	03 15 17.3	+0.7
XAN				pP	pP	03 15 36.6	-0.4
XAN				sP	sP	03 15 45.8	+0.8
XAN				SKS	SKSac	03 25 40.5	-1.1
XAN				S	ScS	03 26 09.3	-0.1
XAN				sS	sS	03 26 42.3	+2.3
XAN				pmax	pmax		
	comp=Z,39nm,1.8s						
XAN				pmax	pmax		
	comp=Z,340nm,3.7s						
XAN				LR	LR		
	comp=Z,300nm,18.4s						
XAN				LR	LR		
	comp=Z,300nm,16.3s						
XAN	Xi'an	90.49	306	eP	P	03 15 16.7	+0.1
	comp=Z,63nm,1.3s						
XAN	Xi'an	90.49	306	eP	P	03 15 16.7	+0.1
XAN				pmax	pmax		
	comp=Z,63nm,1.3s						
EPYK	Eagle Plains	90.50	14	eP	P	03 15 15.5	-0.3
	comp=Z,110nm,1.4s						
EPYK	Eagle Plains	90.50	14	P	P	03 15 16.4	+0.6
	baz=215						
LHMI	Lhok Sumawe	90.52	275	eP	P	03 15 16.8	-0.3
	comp=Z,146nm,0.8s						
PHET	Kaeng Krachan	90.63	283	P	P	03 15 20.2	+2.6
PBKT	Sadao Pong	90.67	287	eP	P	03 15 17.6	-0.2
	comp=Z,127nm,1.1s						
PBKT	Sadao Pong	90.67	287	P	P	03 15 19.6	+1.9
CBKS	Cedar Bluff	90.91	49	eP	P	03 15 18.8	+0.3
	comp=Z,80nm,1.2s						
CBKS	Cedar Bluff	90.91	49	eP	P	03 15 18.8	+0.3
CBKS				pmax	pmax		
	comp=Z,80nm,1.2s						
CBKS	Cedar Bluff	90.91	49	P	P	03 15 18.7	+0.3
	baz=245						
GO04	Tololo Observa	91.28	123	eP	P	03 15 22.0	+1.2
	comp=Z,142nm,1.3s						
HHC	Hu-ho-hao-te	91.38	313	eP	P	03 15 22.8	+2.2
HHC				pP	pP	03 15 43.3	+2.3
HHC				sP	sP	03 15 52.5	+3.5
HHC				SKS	SKSac	03 25 48.3	+1.7
HHC				S	ScS	03 26 19.5	+2.9
HHC				sS	sS	03 26 48.9	+1.0
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,290nm,4.2s						
HHC				LR	LR		
	comp=Z,340nm,17.1s						
HHC				LR	LR		
	comp=Z,470nm,16.5s						
HHC				LR	LR		
	comp=Z,990nm,19.0s						
SRDT	SRDT	91.59	285	P	P	03 15 24.7	+2.7
NANT	Nan	91.69	289	P	P	03 15 24.1	+1.7
UTHA	Uthaitani	91.70	286	P	P	03 15 24.6	+2.1
LCO	Las Campanas	91.82	122	eP	P	03 15 23.7	+0.4
	comp=Z,83nm,1.1s						
LCO	Las Campanas	91.82	122	eP	P	03 15 25.0	+1.7
LCO				pmax	pmax		
	comp=Z,83nm,1.1s						
NATX	Nacogdoches	91.93	57	eP	P	03 15 23.4	+0.2
	comp=Z,89nm,1.3s						
NATX	Nacogdoches	91.93	57	P	P	03 15 23.8	+0.6
	baz=248						
KMI	Kunming	92.12	296	P	P	03 15 26.4	+1.8
KMI				pP	pP	03 15 48.5	+3.5
KMI				sP	sP	03 15 57.3	+4.2
KMI				SKS	SKSac	03 25 51.9	+0.2
KMI				S	S	03 26 19.9	-1.6
KMI				pmax	pmax		
	comp=Z,75nm,1.2s						
KMI				pmax	pmax		
	comp=Z,410nm,3.5s						
KMI	Kunming	92.12	296	eP	P	03 15 24.0	-0.6
	comp=Z,72nm,1.0s						
KMI	Kunming	92.12	296	eP	P	03 15 24.0	-0.6
KMI				pmax	pmax		
	comp=Z,73nm,1.0s						
SUKH	Sukhothai	92.19	288	P	P	03 15 26.8	+2.1
DGMT	Dagmar	92.27	39	eP	P	03 15 24.7	+0.3
	comp=Z,370nm,1.5s						
DGMT	Dagmar	92.27	39	P	P	03 15 25.4	+0.9
	baz=242						
BTO	Baotou	92.34	312	eP	P	03 15 26.9	+1.8
TUL1	Leonard	92.63	53	eP	P	03 15 27.0	+0.6
	comp=Z,149nm,1.4s						
TUL1	Leonard	92.63	53	P	P	03 15 26.8	+0.4
	baz=248						
INK	Inuvik	92.80	14	eP	P	03 15 26.2	-0.2
	comp=Z,38nm,1.0s						
INK	Inuvik	92.80	14	eP	P	03 15 26.6	+0.2
INK				pmax	pmax		
	comp=Z,38nm,1.0s						
JTS	JuntasAbangare	92.89	80	eP	P	03 15 28.6	+0.4
	comp=Z,103nm,1.1s						
JTS	JuntasAbangare	92.89	80	d iP	P	03 15 28.9	+0.8
NNA	Nana	92.92	104	i P	P	03 15 30.3	+2.0
BGNE	Belgrade	93.09	47	eP	P	03 15 29.1	+0.7
	comp=Z,245nm,1.3s						
BGNE	Belgrade	93.09	47	P	P	03 15 29.2	+0.7
	baz=246						
CM01	Chiang Mai Arr	93.11	288	eP	P	03 15 29.1	+0.1
CM31	Chiang Mai Arr	93.14	288	eP	P	03 15 29.2	+0.1
CMAR	Chiang Mai Arr	93.14	288	P	P	03 15 31.1	+1.9
CMAR						03 19 17.0	
CMAR				pmax	pmax		
	comp=Z,75nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,130nm,20.3s						
CMAR	Chiang Mai Arr	93.14	288	P	P	03 15 31.1	+1.9
	comp=Z,70nm,1.0s,baz=115,slow=2.9,SNR=180						
CMAR				PP	PP	03 19 17.0	+3.5
	comp=Z,4.1nm,1.0s,baz=133,slow=6.9,SNR=6.5						
CMAR				PKKP	PKKPdf	03 32 35.8	-0.4
	comp=Z,1.0nm,0.4s,baz=287,slow=5.2,SNR=5.8						
CMAR				LR	LR	03 56 14.2	
	comp=Z,130nm,20.3s,baz=127,slow=35						
CMMT	Chiang Mai	93.25	289	P	P	03 15 31.1	+1.4
CHTO	Chiang Mai	93.25	289	eP	P	03 15 29.6	0.0
	comp=Z,72nm,0.9s						
CHTO	Chiang Mai	93.25	289	eP	P	03 15 31.1	+1.4
CHTO				pmax	pmax		
	comp=Z,72nm,0.9s						
CHTO	Chiang Mai	93.25	289	P	P	03 15 31.2	+1.5
	comp=Z,411nm,1.1s,comp=Z,4µm						
KSU1	Kansas State U	93.26	50	eP	P	03 15 29.4	+0.2
	comp=Z,85nm,1.3s						
KSU1	Kansas State U	93.26	50	P	P	03 15 29.8	+0.6
	baz=247						
CD2	Chengdu	93.34	302	P	P	03 15 29.4	-0.5
CD2				pP	pP	03 15 50.6	+0.3
CD2				sP	sP	03 15 59.3	+1.0
CD2				SKS	SKSac	03 25 56.0	-1.8
CD2				S	S	03 26 30.3	-1.4
CD2				SS	SS	03 32 49.1	-0.8
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2				pmax	pmax		
	comp=Z,560nm,6.1s						
CD2				LR	LR		
	comp=Z,720nm,13.7s						
CD2				LR	LR		
	comp=Z,730nm,12.3s						
CD2				LR	LR		
	comp=Z,870nm,13.7s						
SUSD	Miller	93.78	44	P	P	03 15 31.5	0.0
	baz=246						
MIAR	Mount Ida	93.80	55	eP	P	03 15 32.5	+0.6
	comp=Z,76nm,1.5s						
MIAR	Mount Ida	93.80	55	eP	P	03 15 32.5	+0.6
MIAR				pmax	pmax		
	comp=Z,76nm,1.5s						
MIAR	Mount Ida	93.80	55	P	P	03 15 31.7	-0.1
	baz=249,SNR=10						
W39A	Magazine	93.88	54	eP	P	03 15 32.5	+0.4
	comp=Z,89nm,1.3s						
W39A	Magazine	93.88	54	P	P	03 15 32.8	+0.6
	baz=249,SNR=18						
Z41A	Richland Creek	93.94	56	P	P	03 15 33.0	+0.5
	baz=249						
Y41A	Eaglette Beard	94.31	56	P	P	03 15 34.5	+0.3
	baz=249,SNR=9.4						
X40A	Basin Creek Fa	94.35	55	eP	P	03 15 34.6	+0.2
	comp=Z,42nm,1.9s						
X40A	Basin Creek Fa	94.35	55	P	P	03 15 34.4	0.0

	baz=249						
YKA	Yellowknife Ar	94.53	24	P	P	03 15 34.5	+0.1
	comp=Z,4.2nm,0.7s,baz=238,slow=4.3,SNR=60						
YKA				PP	PP	03 19 27.0	+3.6
	comp=Z,1.1nm,0.9s,baz=231,slow=7.9,SNR=4.7						
YKA				PKKP	PKKPdf	03 32 33.5	-1.8
	comp=Z,0.3nm,0.5s,baz=49,slow=2.1,SNR=9.3						
YKA				LR	LR	03 49 46.8	
	comp=Z,22nm,21.9s,baz=245,slow=30						
YKB5	Yellowknife Ar	94.53	24	eP	P	03 15 33.8	-0.7
YKW3	Yellowknife Ar	94.57	24	eP	P	03 15 34.8	+0.1
	comp=Z,15nm,1.0s						
X41A	Kaden, Bauxite	94.60	55	P	P	03 15 35.5	0.0
	baz=249						
MDND	Maddock	94.76	41	eP	P	03 15 36.5	+0.5
	comp=Z,262nm,1.4s						
MDND	Maddock	94.76	41	P	P	03 15 35.8	-0.1
	baz=246						
UALR	University of	94.83	55	eP	P	03 15 36.6	+0.1
	comp=Z,68nm,1.8s						
Y42A	Garnett, Star	94.93	56	P	P	03 15 37.9	+0.9
	baz=250						
U40A	Yellville	95.00	53	P	P	03 15 37.0	-0.3
	baz=249,SNR=15						
ECSD	EROS Data Cent	95.04	45	eP	P	03 15 37.5	+0.1
	comp=Z,137nm,1.3s						
ECSD	EROS Data Cent	95.04	45	P	P	03 15 37.5	+0.1
	baz=248						
W41B	Gary Mavity, V	95.05	55	eP	P	03 15 38.2	+0.7
	comp=Z,81nm,1.8s						
W41B	Gary Mavity, V	95.05	55	P	P	03 15 37.9	+0.4
	baz=250,SNR=8.1						
LZH	Lanzhou	95.12	306	eP	P	03 15 39.6	+1.5
LZH				pP	pP	03 15 59.5	+1.1
LZH				sP	sP	03 16 07.4	+0.9
LZH				PP	PP	03 19 31.5	+2.6
LZH				SKS	SKSac	03 26 06.5	-1.0
LZH				S	S	03 26 46.0	-1.2
LZH				sS	sS	03 27 20.6	-0.8
LZH				SS	SS	03 33 14.1	-1.1
LZH				pmax	pmax		
	comp=Z,48nm,1.4s						
LZH				pmax	pmax		
	comp=Z,500nm,9.0s						
LZH				LR	LR		
	comp=Z,670nm,17.0s						
LZH				LR	LR		
	comp=Z,610nm,17.3s						
LZH				LR	LR		
	comp=Z,2µm,20.3s						
Z43A	Armstrong Fami	95.14	57	P	P	03 15 38.2	+0.2
	baz=250						
X42A	Stuttgart	95.31	55	P	P	03 15 38.8	0.0
	baz=250						
V41A	Mountainview	95.33	54	P	P	03 15 38.5	-0.3
	baz=250,SNR=5.4						
VBMS	Vicksburg	95.38	58	P	P	03 15 39.7	+0.6
	baz=250						
Y43A	Makayla and Ka	95.63	56	P	P	03 15 40.8	+0.6
	baz=250						
W42A	Bald Knob	95.64	55	P	P	03 15 40.8	+0.6
	baz=250						
OTAV	Otavalo	95.65	92	P	P	03 15 42.9	+1.5
OTAV				pmax	pmax		
	comp=Z,26nm,1.7s						
U41A	Viola	95.70	54	P	P	03 15 40.5	0.0
	baz=250,SNR=9.6						
LVC	Limon Verde	95.89	116	eP	P	03 15 42.8	+0.6
	comp=Z,50nm,1.5s						
LVC	Limon Verde	95.89	116	eP	P	03 15 45.0	+2.7
LVC				pmax	pmax		
	comp=Z,50nm,1.5s						
V42A	Cord	95.92	54	P	P	03 15 41.3	-0.2
	baz=250						
145A	Houston Renfro	95.97	58	P	P	03 15 42.3	+0.4
	baz=250						
PB01	IPOC Station P	96.04	115	eP	P	03 15 43.7	+1.1
	comp=Z,20nm,0.9s						
T41A	Mountain View	96.06	53	P	P	03 15 41.9	-0.2
	baz=250,SNR=7.7						
U42A	Revenden	96.22	54	P	P	03 15 42.7	-0.1
	baz=250						
S41A	Jillco Farms,	96.26	52	P	P	03 15 42.9	-0.2
	baz=250,SNR=23						
FFC	Flin Flon	96.31	34	eP	P	03 15 42.8	+0.1
	comp=Z,64nm,1.8s						
FFC	Flin Flon	96.31	34	i P	P	03 15 42.9	+0.1
PB11	IPOC Station P	96.41	114	eP	P	03 15 45.3	+1.0
	comp=Z,24nm,0.9s						
T42A	Van Buren	96.56	53	eP	P	03 15 44.4	0.0
	comp=Z,44nm,1.6s						
T42A	Van Buren	96.56	53	P	P	03 15 44.1	-0.3
	baz=250,SNR=5.3						
MNMC	Minye Minye	96.71	113	eP	P	03 15 47.0	+1.1
	comp=Z,37nm,0.9s						
R41A	Rosebud	96.78	52	P	P	03 15 44.8	-0.6
	baz=250,SNR=11						
CCM	Cathedral Cave	96.80	52	eP	P	03 15 45.3	-0.1
	comp=Z,41nm,1.4s						
CCM	Cathedral Cave	96.80	52	eP	P	03 15 45.3	-0.1
CCM				pmax	pmax		
	comp=Z,41nm,1.3s						
CCM	Cathedral Cave	96.80	52	P	P	03 15 44.6	-0.8
	baz=250						
U43A	Rector	96.86	54	P	P	03 15 45.6	-0.1
	baz=251						
W44A	Shelby Farms P	96.91	55	P	P	03 15 45.6	-0.4
	baz=251						
OXF	Oxford	97.02	56	P	P	03 15 45.4	-1.0
	baz=251						
S42A	Caledonia	97.03	53	P	P	03 15 46.2	-0.3
	baz=251,SNR=7.7						
Q41A	Truxton	97.11	51	P	P	03 15 46.7	-0.1
	baz=250,SNR=7.9						
ULN	Ulaanbaatar	97.13	318	eP	P	03 15 46.2	-0.7
	comp=Z,11nm,1.3s						
ULN	Ulaanbaatar	97.13	318⇓	eP	Pdif	03 15 47.5	+0.5
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
T43A	Greenville	97.19	53	P	P	03 15 46.9	-0.3
	baz=251						
R42A	Luebbering	97.20	52	P	P	03 15 47.0	-0.3
	baz=251						
M39A	Webster	97.28	49	P	P	03 15 47.5	0.0
	baz=250						
147A	Livingston	97.32	58	P	P	03 15 47.9	0.0
	baz=251						
FVM	French Village	97.38	52	eP	Pdif	03 15 48.5	+0.3
	comp=Z,61nm,1.4s						
FVM	French Village	97.38	52	eP	Pdif	03 15 48.5	+0.3
FVM				pmax	pmax		
	comp=Z,61nm,1.4s						
W45A	Hickory Valley	97.40	55	P	Pdif	03 15 48.4	+0.1
	baz=251						
P41A	Barry, Barry	97.47	51	P	P	03 15 48.3	-0.1
	baz=251,SNR=6.8						
N40A	Mertquake, Sal	97.50	49	P	P	03 15 47.9	-0.6
	baz=250						
S43A	Fulton Ridge,	97.51	53	P	P	03 15 48.4	-0.3
	baz=251						
SONA1	Songino Array	97.53	318	eP	P	03 15 48.6	-0.1
SONM	Songino Array	97.54	318	P	Pdif	03 15 49.0	+0.3
	comp=Z,2.2nm,0.9s,baz=128,slow=3.9,SNR=14						
SONM				PP	PP	03 19 45.1	-2.2
	comp=Z,5.2nm,1.1s,baz=131,slow=6.7,SNR=8.3						
449A	Pace	97.56	60	P	P	03 15 48.9	-0.1
	baz=252						
Q42A	Golden Eagle	97.61	51	P	Pdif	03 15 49.2	+0.1
	baz=251						
L39A	Vinton	97.62	48	P	P	03 15 48.9	-0.2
	baz=250						
U44B	Burton Farm, H	97.66	54	P	Pdif	03 15 49.8	+0.4
	baz=251						
M40A	Post Highland	97.73	49	P	P	03 15 49.5	0.0
	baz=251,SNR=5.6						
O41A	Passleys Farm,	97.75	50	P	P	03 15 49.4	-0.3
	baz=251,SNR=5.9						
R43A	Red Bud	97.84	52	P	Pdif	03 15 50.3	+0.1
	baz=251						
K39A	Oelwein	97.90	48	P	P	03 15 50.1	-0.2
	baz=250						
ULM	Lac du Bonnet	97.95	39	eP	P	03 15 49.6	-0.7
	comp=Z,121nm,1.8s						
ULM	Lac du Bonnet	97.95	39	eP	P	03 15 49.7	-0.7
ULM	Lac du Bonnet	97.95	39	P	P	03 15 49.5	-0.9
	comp=Z,3.8nm,0.7s,baz=249,slow=5.4,SNR=13						
ULM				LR	LR	03 53 30.7	
	comp=Z,846nm,21.4s,baz=264,slow=31						
N41A	Harden Midland	97.96	50	P	P	03 15 50.0	-0.7
	baz=251						
P42A	Winchester	97.97	51	eP	Pdif	03 15 50.9	+0.2
	comp=Z,78nm,1.5s						
P42A	Winchester	97.97	51	P	Pdif	03 15 50.8	+0.1
	baz=251,SNR=7.2						
249A	Camden	98.02	59	P	Pdif	03 15 51.1	0.0
	baz=252						
450A	Crestview	98.09	60	Pdiff	P	03 15 50.6	-0.8
	baz=252						
U45A	Rockin P Farm,	98.11	54	Pdiff	P	03 15 51.3	-0.1
	baz=252						
SPMN	Marine on St.	98.12	45	eP	P	03 15 51.2	0.0
	comp=Z,145nm,1.5s						
SPMN	Marine on St.	98.12	45	Pdiff	P	03 15 51.2	0.0
	baz=250						
L40A	Anamosa	98.15	48	eP	Pdif	03 15 51.7	+0.2
	comp=Z,44nm,1.2s						
L40A	Anamosa	98.15	48	Pdiff	P	03 15 51.1	-0.3
	baz=251						
S44A	Carbondale	98.16	53	Pdiff	Pdif	03 15 51.7	+0.1
	baz=251						
Q43A	New Douglas	98.23	52	Pdiff	Pdif	03 15 51.9	0.0
	baz=251						
X47A	Russelville	98.23	56	Pdiff	P	03 15 51.2	-0.7
	baz=252						
J39A	Decorah	98.23	47	Pdiff	Pdif	03 15 51.8	0.0
	baz=251						
H38A	Maiden Rock	98.29	46	Pdiff	Pdif	03 15 52.2	+0.2
	baz=250						
O42A	Bath	98.36	50	Pdiff	P	03 15 51.9	-0.5
	baz=251						
M41A	Milan	98.41	49	Pdiff	P	03 15 52.0	-0.6
	baz=251						
F37A	Hinrichs Farm,	98.41	44	Pdiff	Pdif	03 15 52.7	+0.1
	baz=250						
K40A	Colesburg	98.42	48	Pdiff	P	03 15 52.0	-0.6
	baz=251						
V46A	Holladay	98.43	55	Pdiff	P	03 15 52.4	-0.4
	baz=252						
LRAL	Lakeview Retre	98.45	58	Pdiff	P	03 15 52.6	-0.4
	baz=252						
R44A	Waltonville	98.47	52	Pdiff	P	03 15 52.5	-0.4
	baz=252						
149A	Jones	98.48	59	Pdiff	P	03 15 52.7	-0.5
	baz=252						
I39A	Houston	98.53	47	eP	Pdif	03 15 53.6	+0.5
	comp=Z,45nm,1.1s						
I39A	Houston	98.53	47	Pdiff	P	03 15 52.5	-0.6
	baz=251						
U46A	Springville	98.56	55	Pdiff	P	03 15 52.8	-0.6
	baz=252						
P43A	Skaggs, Pawnee	98.59	51	Pdiff	P	03 15 53.3	-0.1
	baz=252						
N42A	Yates City	98.59	50	Pdiff	P	03 15 53.3	-0.2
	baz=251						
W47A	Westpoint	98.67	56	Pdiff	P	03 15 53.2	-0.8
	baz=252						
S45A	Carrier Mills	98.67	53	Pdiff	Pdif	03 15 53.9	0.0
	baz=252						
250A	Grady	98.71	59	Pdiff	P	03 15 53.4	-0.8
	baz=252						
451A	Vernon	98.72	61	Pdiff	P	03 15 53.6	-0.6
	baz=252						
Q44A	Meyer Farm, Va	98.72	52	Pdiff	P	03 15 53.6	-0.5
	baz=252						
G38A	Ridgeland	98.74	45	Pdiff	P	03 15 53.5	-0.5
	baz=251						
WVT	Waverly	98.75	55	Pdiff	P	03 15 53.7	-0.5
	baz=252						
X48A	Hartselle	98.85	57	Pdiff	P	03 15 53.9	-0.9
	baz=252						
Z49A	Columbiana	98.87	58	Pdiff	P	03 15 54.0	-0.8
	baz=252						
V47A	Nunnelly	98.90	55	Pdiff	P	03 15 54.2	-0.8
	baz=252						
J40A	Soldiers Grove	98.92	47	Pdiff	P	03 15 54.6	-0.3
	baz=251						
O43A	Sugar Creek Fa	98.94	50	Pdiff	P	03 15 54.9	-0.1
	baz=252						
552A	Lynn Haven	98.94	61	Pdiff	P	03 15 55.2	-0.1
	baz=252						
H39A	Augusta	98.96	46	Pdiff	Pdif	03 15 55.2	+0.2
	baz=251						
K41A	Shullsburg	98.97	48	Pdiff	P	03 15 54.6	-0.5
	baz=252						
F38A	Pierce - Schro	98.98	44	Pdiff	Pdif	03 15 55.3	+0.2
	baz=251						
T46A	Princeton	98.99	54	Pdiff	Pdif	03 15 55.4	+0.1
	baz=252						
M42A	Sheffield	98.99	49	Pdiff	P	03 15 55.2	0.0
	baz=252						
150A	Eclectic	99.10	59	Pdiff	Pdif	03 15 55.1	-0.8
	baz=252						
JFWS	Jewell Farm	99.11	48	Pdiff	Pdif	03 15 54.9	-0.8
	baz=252						
LPAZ	La Paz	99.13	111	eP	Pdif	03 15 58.2	+1.0
	comp=Z,16nm,1.6s						
LPAZ	La Paz	99.13	111	eP	Pdif	03 15 59.2	+2.0
LPAZ				pmax	pmax		
	comp=Z,16nm,1.6s						
LPAZ	La Paz	99.13	111	P	Pdif	03 15 58.5	+1.3
	comp=Z,2.9nm,0.9s,baz=223,slow=3.3,SNR=6.8						
LPAZ				LR	LR	03 51 40.0	
	comp=Z,276nm,20.8s,baz=270,slow=30						
W48A	Pulaski	99.15	56	Pdiff	Pdif	03 15 55.6	-0.4
	baz=252						
I40A	Norwalk	99.16	47	Pdiff	Pdif	03 15 55.4	-0.5
	baz=252						
Y49A	Blount Mountai	99.17	57	Pdiff	Pdif	03 15 54.9	-1.3
	baz=252						
L42A	Oliver, Polo	99.23	49	Pdiff	Pdif	03 15 55.3	-1.0
	baz=252						
GTA	Gaotai	99.23	308	⇑P	Pdif	03 16 00.0	+3.5
GTA				PP	PP	03 20 05.3	+4.9
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,130nm,8.3s						
GTA				LR	LR		
	comp=Z,220nm,22.2s						
GTA				LR	LR		
	comp=Z,300nm,22.9s						
GTA				LR	LR		
	comp=Z,690nm,24.1s						
G39A	Holcombe	99.23	45	Pdiff	Pdif	03 15 55.5	-0.7
	baz=251						
452A	Marianna	99.25	61	Pdiff	Pdif	03 15 54.9	-1.8
	baz=253						
U47A	Clarksville	99.27	55	Pdiff	Pdif	03 15 55.9	-0.6
	baz=252						
Z50A	Ashland	99.38	58	Pdiff	Pdif	03 15 56.6	-0.5
	baz=253						
J41A	Loganville	99.41	47	Pdiff	Pdif	03 15 56.4	-0.6
	baz=252						
V48A	Smith Brothers	99.42	55	Pdiff	Pdif	03 15 56.5	-0.8
	baz=252						
X49A	Woodville	99.43	57	Pdiff	Pdif	03 15 56.7	-0.7
	baz=253						
H40A	Chili	99.55	46	Pdiff	Pdif	03 15 57.4	-0.3
	baz=252						
M43A	Waltham Townsh	99.56	49	Pdiff	Pdif	03 15 57.2	-0.5
	baz=252						
T47A	Sharon Grove	99.57	54	Pdiff	Pdif	03 15 57.3	-0.6
	baz=252						
F39A	Loretta	99.60	45	Pdiff	Pdif	03 15 57.4	-0.5
	baz=252						
K42A	Prairie Point,	99.69	48	Pdiff	Pdif	03 15 58.0	-0.3
	baz=252						
I41A	Arkdale	99.73	47	Pdiff	Pdif	03 15 57.7	-0.7
	baz=252						
EYMN	Ely	99.87	43	Pdiff	Pdif	03 15 58.5	-0.5
	baz=252						
G40A	Rib Lake	99.88	45	Pdiff	Pdif	03 15 58.6	-0.5
	baz=252						
S47A	Hartford	99.93	54	Pdiff	Pdif	03 15 59.0	-0.4
	baz=253						
L43A	Garden Prairie	99.94	49	Pdiff	Pdif	03 15 59.7	+0.3
	baz=252						
X50B	Fort Payne	99.95	57	Pdiff	Pdif	03 15 58.7	-1.0
	baz=253						
E39A	Mellen	99.99	44	Pdiff	Pdif	03 15 58.7	-0.9
	baz=252						
J42A	Columbus	100.01	48	Pdiff	Pdif	03 15 59.0	-0.8
	baz=252						
H41A	Junction City	100.05	46	Pdiff	Pdif	03 15 60.0	+0.2
	baz=252						
F40A	Park Falls	100.13	45	Pdiff	Pdif	03 15 59.3	-0.9
	baz=252						
V49A	McMinnville	100.14	56	Pdiff	Pdif	03 15 59.1	-1.4
	baz=253						
T48A	Bowling Green	100.15	54	Pdiff	Pdif	03 15 59.9	-0.6
	baz=253						
152A	Waverly Hall	100.17	59	Pdiff	Pdif	03 15 59.6	-1.1
	baz=253						
ZAK	Zakamensk	100.33	320	eP	Pdif	03 15 59.0	-2.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
U49A	Red Boiling Sp	100.45	55	Pdiff	Pdif	03 16 01.6	-0.2
	baz=253						
253A	Americus	100.47	60	Pdiff	Pdif	03 16 01.5	-0.5
	baz=253						
V50A	Pikevile	100.73	56	Pdiff	Pdif	03 16 02.4	-0.7
	baz=253						
F41A	Three Lakes	100.76	45	Pdiff	Pdif	03 16 02.9	-0.1
	baz=253						
M45A	Boilermakers S	100.77	50	Pdiff	Pdif	03 16 02.4	-0.7
	baz=253						
T49A	Edmonton	100.81	54	Pdiff	Pdif	03 16 02.5	-0.9
	baz=253						
I43A	Langenfeld Bro	100.86	47	Pdiff	Pdif	03 16 02.4	-1.1
	baz=253						
Y52A	Lilburn	101.04	58	Pdiff	Pdif	03 16 03.8	-0.7
	baz=254						
254A	Abbeville	101.12	60	Pdiff	Pdif	03 16 04.6	-0.3
	baz=254						
S49A	Springfield	101.19	54	Pdiff	Pdif	03 16 04.9	-0.2
	baz=254						
X53A	Estanollee	101.82	58	Pdiff	Pdif	03 16 06.5	-1.4
	baz=254						
FCC	Fort Churchill	101.85	32	ePdif	Pdif	03 16 07.7	+0.2
FCC	Fort Churchill	101.85	32	eP	Pdif	03 16 07.7	+0.2
CPUP	Villa Florida	103.59	125	Pdiff	Pdif	03 16 16.6	+0.4
	comp=Z,1.2nm,0.8s,baz=260,slow=6.1,SNR=2.2						
SDV	Santo Domingo	105.82	86	ePKP	PKiKP	03 20 39.4	+0.4
NRIK	Noril'sk	111.27	338	PP	PP	03 21 24.9	-3.4
	comp=Z,1.2nm,0.3s,baz=111,slow=7.0,SNR=5.4						
ZALV	Zalesovo Beam	112.14	321	PKiKP	PKiKP	03 20 49.1	-0.3
	comp=Z,2.8nm,0.6s,baz=125,slow=1.9,SNR=13						
ZALV				PP	PP	03 21 31.4	-3.6
	comp=Z,4.7nm,1.0s,baz=89,slow=7.6,SNR=8.4						
ZALV				PKKPbc	PKKPbc	03 31 41.4	-1.1
	comp=Z,0.9nm,0.6s,baz=256,slow=6.0,SNR=4.1						
NVS	Novosibirsk	113.10	322	ePKIKP	PKiKP	03 20 51.6	+0.4
MKAR	Makanchi Array	113.24	313	Pdiff	Pdif	03 16 59.9	+1.4
	comp=Z,0.3nm,0.6s,baz=105,slow=4.0,SNR=3.5						
MKAR				PKiKP	PKiKP	03 20 51.4	-0.4
	comp=Z,3.1nm,0.7s,baz=68,slow=1.2,SNR=25						
MKAR				PP	PP	03 21 39.7	-3.5
	comp=Z,0.9nm,0.6s,baz=91,slow=5.9,SNR=4.0						
MKAR				PKKPbc	PKKPbc	03 31 37.6	-1.1
	comp=Z,1.7nm,0.8s,baz=280,slow=3.2,SNR=9.7						
KURK	Kurchatov	115.83	318	ePKPdf	PKPdf	03 20 55.7	-0.9
KURK				PP	PP	03 21 58.9	-2.4
KURK				PKKPbc	PKKPbc	03 31 29.9	+0.1
KURK	Kurchatov	115.83	318d	iPKIKP	PKPdf	03 20 56.4	-0.2
KURBB	Kurchatov Arra	115.89	317	PKP	PKPdf	03 20 56.5	-0.1
	comp=Z,3.4nm,0.7s,baz=91,slow=1.9,SNR=23						
KURBB				PP	PP	03 21 58.9	-2.8
	comp=Z,8.4nm,1.1s,baz=88,slow=7.3,SNR=6.3						
KURBB				PKKPbc	PKKPbc	03 31 29.9	+0.3
	comp=Z,3.1nm,0.9s,baz=268,slow=4.3,SNR=12						
SCHQ	Schefferville	116.07	38	PKKPbc	PKKPbc	03 31 26.8	-2.3
	comp=Z,1.4nm,0.6s,baz=313,slow=2.4,SNR=4.0						
BDFB	Brasilia	116.55	120	PKP	PKiKP	03 20 59.7	+0.5
	comp=Z,2.5nm,0.9s,baz=318,slow=11,SNR=3.7						
BDFB				PKKPbc	PKKPbc	03 31 26.7	+0.1
	comp=Z,3.2nm,1.0s,baz=2.2,slow=8.1,SNR=3.4						
KSH	Kashi	117.32	305	PKP	PKPdf	03 20 58.5	-1.5
KSH				sPKP		03 21 35.8	
KSH				SKKS		03 28 58.4	
KSH				AMB	AMB		
	comp=Z,570nm,5.0s						
KSH				LR	LR		
	comp=Z,200nm,5.0s						
KSH				LR	LR		
	comp=Z,360nm,5.5s						
KSH				LR	LR		
	comp=Z,460nm,6.2s						
NRN	Naryn	117.42	307	ePKPdf	PKiKP	03 21 00.4	0.0
NRN	Naryn	117.42	307	ePKIKP	PKiKP	03 21 00.4	0.0
TKM2	Tokmak 2	117.78	309	P	PKPdf	03 21 00.9	0.0
	SNR=10						
KBK	Karagaybulak	118.25	308	P	PKiKP	03 21 01.8	0.0
	SNR=6.7						
FRU	Bishkek	118.50	309	ePKIKP	PKPdf	03 21 02.0	0.0
UCH	Uchtor	118.56	308	P	PKiKP	03 21 03.4	+0.6
	SNR=9.7						
AAK	Ala-Archa	118.58	308	ePKPdf	PKPdf	03 21 02.1	-0.3
AAK	Ala-Archa	118.58	308d	iPKIKP	PKiKP	03 21 02.5	+0.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
USP	Ospenovka	118.59	309	P	PKPdf	03 21 02.1	-0.1
	SNR=6.5						
EKS2	Erkin-Say	119.11	308	P	PKiKP	03 21 03.8	+0.4
	SNR=5.4						
AML	Almayashu	119.16	308	P	PKiKP	03 21 04.3	+0.4
	SNR=7.9						
BVAR	Borovoye Array	120.77	321	PKP	PKPdf	03 21 06.0	0.0
	comp=Z,5.2nm,0.5s,baz=128,slow=0.6,SNR=28						
BVAR				PP	PP	03 22 30.9	-4.4
	comp=Z,3.8nm,0.9s,baz=93,slow=5.8,SNR=3.1						
BRVK	Borovoye	120.83	321	ePKPdf	PKPdf	03 21 06.0	-0.2
BRVK	Borovoye	120.83	321⇓	iPKIKP	PKiKP	03 21 06.5	+0.2
BTK	Batken	121.31	305	ePKPdf	PKiKP	03 21 08.2	+0.4
SPITS	Spitsbergen Ar	121.41	357	PKP	PKiKP	03 21 06.8	0.0
	comp=Z,6.5nm,0.7s,baz=99,slow=5.2,SNR=8.9						
KK31	Karatay Array	121.51	309	ePKPdf	PKPdf	03 21 07.8	0.0
KK31	Karatay Array	121.51	309	ePKIKP	PKPdf	03 21 07.8	0.0
KKAR	Karatay Array	121.51	309	ePKPdf	PKiKP	03 21 08.0	0.0
KKAR	Karatay Array	121.51	309	ePKIKP	PKiKP	03 21 08.0	0.0
MDP	Montagnes des	121.52	96	PKP	PKPdf	03 21 08.7	0.0
	comp=Z,22nm,1.0s,baz=304,slow=3.6,SNR=1.8						
SUMG	Summit	121.72	14	ePKPdf	PKiKP	03 21 08.3	+0.3
SUMG	Summit	121.72	14	ePKIKP	PKiKP	03 21 08.3	+0.3
KBL	Kabul	122.58	299	ePKPdf	PKPdf	03 21 10.3	-0.1
KBL	Kabul	122.58	299	ePKIKP	PKPdf	03 21 10.3	-0.1
SVE	Sverdlovsk	125.37	326	ePKIKP	PKiKP	03 21 15.8	+0.7
SVE				pmax	pmax		
	comp=Z,18nm,0.9s						
ARU	Arti	126.59	326	ePKPdf	PKiKP	03 21 17.4	-0.2
ARU	Arti	126.59	326	i PKIKP	PKiKP	03 21 17.9	+0.4
ARU						03 28 22.8	
ARU				SP	SP	03 33 06.6	-2.3
ARU				PS	PS	03 33 14.9	-3.9
ARU				SS	SS	03 40 10.1	-3.4
SCO	Scoresbysund	126.76	11	ePKPdf	PKiKP	03 21 17.3	-0.2
SCO	Scoresbysund	126.76	11	ePKIKP	PKiKP	03 21 17.3	-0.2
ABKAR	Akbulak array	127.95	318	ePKPdf	PKiKP	03 21 20.4	-0.1
BOSA	Boshof	128.21	202	PKP	PKiKP	03 21 22.9	+0.9
	comp=Z,2.0nm,0.6s,baz=95,slow=2.5,SNR=7.7						
AKTO	Aktyubinsk	128.83	319	PKP	PKiKP	03 21 22.2	0.0
	comp=Z,2.6nm,0.7s,baz=85,slow=4.2,SNR=9.6						
ARCES	ARCESS Array B	128.86	351	PKP	PKiKP	03 21 21.8	0.0
	comp=Z,7.7nm,0.7s,baz=17,slow=1.4,SNR=30						
APA	Apatity	129.16	347⇓	iPKIKP	PKiKP	03 21 26.7	+4.3
APA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PRGR	Permogore	129.87	336	ePKIKP	PKPdf	03 21 23.0	-0.2
PRGR				e		03 23 36.1	
PRGR				pmax	pmax		
	comp=Z,14nm,1.0s						
KIRV	Kirov	130.06	332	PKP	PKiKP	03 21 24.8	+0.4
	comp=Z,11nm,0.7s,baz=82,slow=2.7,SNR=7.7						
GEYT	Alibeck	131.30	303	PKP	PKPdf	03 21 26.9	+0.2
	comp=Z,4.5nm,0.7s,baz=256,slow=4.4,SNR=7.4						
GEYT				PP	PP	03 23 42.5	-3.3
	comp=Z,4.5nm,1.0s,baz=17,slow=1.5,SNR=4.3						
KLMR	Klimovskoe	132.61	338	ePKIKP	PKPdf	03 21 27.3	-1.1
KLMR				pmax	pmax		
	comp=Z,24nm,1.4s						
KLMR	Klimovskoe	132.61	338	ePKPdf	PKPdf	03 21 27.3	-1.1
KLMR				AMP		03 21 40.6	
	comp=Z,24nm,1.4s						
KLMR				eSKP		03 24 58.1	
FIA1	FINESS Array S	136.05	346	ePKPdf	PKPdf	03 21 34.4	-0.4
FIA1				ePKPdf	PKiKP	03 21 34.7	-1.8
FINES	FINESS Array B	136.05	346	PKhKP	PKPpre	03 21 22.9	
	comp=Z,2.7nm,1.1s,baz=63,slow=0.3,SNR=4.3						
FINES				PKP	PKPdf	03 21 34.5	-0.3
	comp=Z,6.8nm,0.7s,baz=56,slow=3.2,SNR=12						
OBN	Obninsk	137.75	334⇑	iPKIKP	PKiKP	03 21 39.9	-0.2
OBN				i		03 21 49.7	
OBN				e		03 24 22.3	

OBN				*i* SS	SS	03 42 31.8	+3.2
OBN				pmax	pmax		
	comp=Z,36nm,1.2s						
OBN				MLR	MLR		
	comp=Z,279nm,20.0s						
VRH	**Novokhopyorsk**	**137.82**	**327**	*e*PKIKP	**PKPdf**	**03 21 38.1**	**-0.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAK	**Makhachkala**	**138.06**	**313**	*i* P	**Pdif**	**03 18 49.5**	**+0.6**
MAK				*i*		03 21 40.3	
MAK				*e*		03 24 27.4	
LPSR	**Galich'ya Gora**	**138.37**	**330**	*e*PKIKP	**PKPdf**	**03 21 38.8**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSU	**Vasula**	**138.49**	**343**	⇓*i*PKIKP	**PKiKP**	**03 21 40.7**	**-0.8**
VSU	**Vasula**	**138.49**	**343**	*e*P	PKPpre	03 21 34.1	
LSZ	**Lusaka**	**138.63**	**214**	*e*PKPdf	**PKPdf**	**03 21 41.0**	**-0.1**
NB2	**NORSAR Subarra**	**138.67**	**356**	PKPdf	PKPpre	03 21 32.5	
	comp=Z,0.3nm,0.6s,baz=14,slow=1.8						
NOA	**NORSAR Array B**	**138.67**	**356**	PKIKP	**PKPdf**	**03 21 39.0**	**-0.8**
NOA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NOA	**NORSAR Array B**	**138.67**	**356**	PKP	**PKPdf**	**03 21 39.0**	**-0.8**
	comp=Z,3.2nm,1.0s,baz=16,slow=5.0,SNR=5.3						
VSR	**Storozhevoye**	**139.12**	**328**	⇓*e*PKIKP	**PKPdf**	**03 21 41.2**	**+0.4**
HFS	**Hagfors**	**139.36**	**354**	PKhKP	PKPpre	03 21 31.4	
	comp=Z,3.2nm,0.7s,baz=29,slow=3.3,SNR=16						
HFS				PKP	**PKPdf**	**03 21 41.2**	**+0.3**
	comp=Z,6.4nm,0.8s,baz=35,slow=3.5,SNR=6.7						
GOF	**Gofitskoye**	**140.19**	**318**	*e*PKIKP	PKiKP	03 21 56.8	+11
GOF				pmax	pmax		
	comp=Z,20nm,0.6s						
NCK	**Nalchik**	**140.50**	**315**	⇑*i*PKIKP	**PKiKP**	**03 21 48.3**	**+2.1**
ZEI	**Tsey**	**140.59**	**314**	*i* PKIKP	**PKPdf**	**03 21 45.2**	**+1.2**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	**Khabaz**	**140.87**	**316**	PKP	**PKPdf**	**03 21 42.4**	**-1.7**
	comp=Z,0.9nm,0.7s,baz=219,slow=6.5,SNR=3.2						
KBZ				PP	**PP**	**03 24 42.2**	**-3.1**
	comp=Z,5.1nm,0.9s,baz=75,slow=4.4,SNR=5.6						
KIV	**Kislovodsk**	**140.91**	**316**	*i* PKIKP	**PKPdf**	**03 21 44.7**	**+0.3**
KIV				*e*		03 24 42.9	
KIV				*e*SS	SS	03 43 04.5	-2.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
IZAR	**Zarasai**	**140.96**	**342**	*e*P	PKPpre	03 21 40.7	
GNI	**Garni**	**140.96**	**310**	*e*PKPdf	**PKPdf**	**03 21 42.8**	**-2.0**
GNI	**Garni**	**140.96**	**310**	⇓*e*PKIKP	**PKPdf**	**03 21 44.0**	**-0.7**
IDID	**Didziasalis**	**141.18**	**341**	*e*P	PKPpre	03 21 38.5	
IIGN	**Ignalina**	**141.30**	**341**	*e*P	PKPpre	03 21 40.2	
TASB	**TASBURUN-IGDIR**	**141.38**	**310**	*e*P	PKPpre	03 21 41.8	
AGRB	**Hanur-Agry**	**142.42**	**310**	*e*P	**PKPdf**	**03 21 48.2**	**+0.8**
AGRB	**Hanur-Agry**	**142.42**	**310**	*e*P	PKPpre	03 21 43.7	
KMBO	**Kilima Mbogo**	**142.63**	**240**	PKP	**PKPdf**	**03 21 47.5**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=31,slow=2.6,SNR=8.1						
KMBO				PP	**PP**	**03 24 56.6**	**-0.3**
	comp=Z,2.8nm,1.0s,baz=126,slow=10,SNR=2.8						
BCA	**Borcka**	**142.68**	**313**	*e*P	PKPpre	03 21 44.2	
BCA	**Borcka**	**142.68**	**313**	*e*P	PKPpre	03 21 44.2	
CUKT	**Cukurca**	**142.71**	**306**	*e*P	PKPpre	03 21 44.2	
CUKT	**Cukurca**	**142.71**	**306**	*e*P	PKPpre	03 21 44.2	
AKDM	**Akdamar-Van**	**142.85**	**308**	*e*P	PKPpre	03 21 45.7	
AKDM	**Akdamar-Van**	**142.85**	**308**	*e*P	PKPpre	03 21 45.7	
SOC	**Sochi**	**142.99**	**317**	*e*PKHKP	PKPpre	03 21 36.6	
SUW	**Suwalki**	**143.35**	**343**	*e*PKP	**PKiKP**	**03 21 56.3**	**+4.7**
SUW	**Suwalki**	**143.35**	**343**	*e*PKPdf	PKPbc	03 21 46.3	+0.8
SUW	**Suwalki**	**143.35**	**343**	*e*PKIKP	PKPbc	03 21 46.3	+0.7
IDGL	**Inch Island, C**	**143.46**	**13**	*e*P	**PKiKP**	**03 21 55.9**	**+4.1**
GURO	**Guroymak-BITLI**	**143.48**	**309**	*e*P	PKPbc	03 21 47.6	+0.9
GURO	**Guroymak-BITLI**	**143.48**	**309**	*e*P	PKPab	03 21 46.1	+0.5
SIRT	**Sirnak**	**143.52**	**307**	*e*P	PKPbc	03 21 47.1	+0.3
SIRT	**Sirnak**	**143.52**	**307**	*e*P	PKPbc	03 21 47.1	+0.3
KLNR	**Kaliningrad**	**143.58**	**346**	⇑*e*PKIKP	**PKPdf**	**03 21 50.2**	**+1.6**
ANN	**Anapa**	**143.77**	**321**	*i* PKIKP	**PKiKP**	**03 21 56.3**	**+3.5**
ANN				*e*		03 25 03.1	
ANN				pmax	pmax		
	comp=Z,56nm,1.3s						
ESK	**Eskdalemuir**	**143.97**	**9**	*i* PKIKP	**PKiKP**	**03 21 51.7**	**-1.2**
AKASG	**Malin Array Be**	**144.01**	**334**	PKP	PKPbc	03 21 47.6	0.0
	comp=Z,6.8nm,0.6s,baz=40,slow=4.6,SNR=58						
AKBB	**Malin Array Si**	**144.01**	**334**	*e*PKPdf	PKPbc	03 21 48.0	+0.4
KIEV	**Kiev**	**144.03**	**334**	*e*PKPdf	**PKPab**	**03 21 47.0**	**-0.1**
KIEV	**Kiev**	**144.03**	**334**	⇓*i*P	PKPbc	03 21 47.7	0.0
KIEV	**Kiev**	**144.03**	**334**	*d* *i*PKIKP	PKPbc	03 21 47.4	-0.3
AK11	**Malin Array Si**	**144.06**	**334**	*e*PKPdf	PKPbc	03 21 47.8	0.0
BSD	**Bornholm Skovb**	**144.11**	**351**	*i* P	PKPbc	03 21 48.3	+0.5
BSD	**Bornholm Skovb**	**144.11**	**351**	*i* PKIKP	PKPbc	03 21 48.3	+0.5
BAYT	**Aydıntepe-Bayb**	**144.13**	**312**	*e*P	**PKPdf**	**03 21 50.0**	**-0.4**
BAYT	**Aydıntepe-Bayb**	**144.13**	**312**	*e*P	**PKPdf**	**03 21 50.0**	**-0.4**
SVAN	**Silvan-Diyarba**	**144.23**	**308**	*e*P	**PKPdf**	**03 21 49.9**	**-0.5**
SVAN	**Silvan-Diyarba**	**144.23**	**308**	*e*P	PKPbc	03 21 49.3	+0.5
BNGB	**Bingl**	**144.31**	**310**	*e*P	**PKPdf**	**03 21 50.5**	**-0.1**
BNGB	**Bingl**	**144.31**	**310**	*e*P	PKPbc	03 21 49.4	+0.3
ERZN	**Erzincan**	**144.76**	**311**	*e*P	**PKPdf**	**03 21 52.2**	**+0.8**
ERZN	**Erzincan**	**144.76**	**311**	*e*P	**PKPdf**	**03 21 51.9**	**+0.5**
MAZI	**Mazidag**	**145.03**	**308**	*e*P	**PKPdf**	**03 21 52.5**	**+0.6**
MAZI	**Mazidag**	**145.03**	**308**	*e*P	**PKPbc**	**03 21 51.3**	**-0.2**
PTK	**Pertek**	**145.27**	**310**	*i* P	**PKPab**	**03 21 54.3**	**+1.8**
PTK	**Pertek**	**145.27**	**310**	*i* P	**PKPab**	**03 21 54.2**	**+1.8**
DSB	**Dublin**	**145.41**	**13**	*e*P	**PKPab**	**03 21 52.1**	**-0.1**
DSB	**Dublin**	**145.41**	**13**	*e*PKPbc	**PKPab**	**03 21 52.4**	**+0.2**
GKP	**Gorka Klasztor**	**145.47**	**348**	*e*PKP	**PKPab**	**03 21 52.2**	**-0.2**
GKP	**Gorka Klasztor**	**145.47**	**348**	*e*PKIKP	**PKPab**	**03 21 52.2**	**-0.2**
SIM	**Simferopol'**	**145.62**	**323**	*e*PKIKP	**PKiKP**	**03 21 55.5**	**-1.1**
SIM				*e*		03 22 02.5	
SIM				pmax	pmax		
	comp=Z,137nm,0.9s						
VAL	**Valentia**	**145.66**	**17**	*e*P	**PKPab**	**03 21 53.4**	**+0.3**
BEL	**Belsk**	**145.95**	**343**	*e*PKP	**PKPab**	**03 21 55.1**	**+0.8**
BEL	**Belsk**	**145.95**	**343**	*e*PKP2	**PKPab**	**03 21 55.1**	**+0.8**
RSDY	**Resadiye-TOKAT**	**146.06**	**314**	*e*P	**PKPab**	**03 21 56.1**	**+0.9**
RSDY	**Resadiye-TOKAT**	**146.06**	**314**	*e*P	**PKPab**	**03 21 55.5**	**+0.3**
URFA	**Urfa**	**146.25**	**308**	*e*P	**PKPab**	**03 21 56.7**	**+0.7**
URFA	**Urfa**	**146.25**	**308**	*e*P	**PKPab**	**03 21 55.8**	**-0.2**
SVSK	**Karacayir**	**146.51**	**313**	*e*P	**PKiKP**	**03 21 57.7**	**-0.9**
SVSK	**Karacayir**	**146.51**	**313**	*e*P	**PKPab**	**03 21 57.0**	**+0.2**
KVT	**Kavak**	**146.59**	**316**	*e*P	**PKPab**	**03 21 57.4**	**+0.2**
KVT	**Kavak**	**146.59**	**316**	*e*P	**PKPbc**	**03 21 55.9**	**-0.1**
TOKT	**Tokat**	**146.63**	**314**	*e*P	**PKPab**	**03 21 57.2**	**-0.2**
TOKT	**Tokat**	**146.63**	**314**	*e*P	**PKPab**	**03 21 57.2**	**-0.2**
SNOP	**Sinop**	**146.64**	**318**	*e*P	**PKPab**	**03 21 57.4**	**+0.1**
SNOP	**Sinop**	**146.64**	**318**	*e*P	**PKPab**	**03 21 57.6**	**+0.3**
LVV	**L'vov**	**146.70**	**338**	*i* PKP2	**PKPbc**	**03 21 56.5**	**+0.5**
DARE	**Darende-Malaty**	**146.76**	**311**	*e*P	**PKiKP**	**03 21 58.7**	**-0.6**
DARE	**Darende-Malaty**	**146.76**	**311**	*e*P	**PKiKP**	**03 21 58.7**	**-0.6**
DIKM	**Dikmen**	**146.80**	**317**	*e*P	**PKPab**	**03 21 57.7**	**-0.2**
DIKM	**Dikmen**	**146.80**	**317**	*e*P	**PKPab**	**03 21 57.7**	**-0.2**
KIS	**Kishinev**	**146.97**	**330**	*e*PKP	**PKPbc**	**03 21 56.0**	**-0.8**
KIS				*e*SKSP		03 34 04.0	
KIS				*e*L	L	04 11 30.0	
KIS				LRM	MLR	04 23 00.0	
	comp=Z,900nm,24.0s						
KIS	**Kishinev**	**146.97**	**330**	*e*PKP2	**PKPbc**	**03 21 56.0**	**-0.8**
KWP	**Kalwaria Pacla**	**147.31**	**339**	*e*PKP	**PKPab**	**03 21 59.4**	**-0.3**
KWP	**Kalwaria Pacla**	**147.31**	**339**	*e*PKP2	**PKPab**	**03 21 59.4**	**-0.3**
BZK	**Bozkurt**	**147.42**	**319**	*e*P	**PKPab**	**03 21 59.5**	**-0.8**
BZK	**Bozkurt**	**147.42**	**319**	*e*P	**PKPab**	**03 21 59.5**	**-0.8**
GAZ	**Gaziantep**	**147.53**	**309**	*e*P	**PKiKP**	**03 22 00.1**	**-0.8**
GAZ	**Gaziantep**	**147.53**	**309**	*e*P	**PKiKP**	**03 21 59.9**	**-1.0**
KMRS	**Kahramanmaras**	**147.63**	**310**	*e*P	**PKiKP**	**03 22 00.1**	**-0.9**
KMRS	**Kahramanmaras**	**147.63**	**310**	*e*P	**PKiKP**	**03 22 00.1**	**-0.9**
LEOM	**Leova**	**147.63**	**330**	⇓*i*P	**PKiKP**	**03 21 59.8**	**-0.8**
LEOM	**Leova**	**147.63**	**330**	⇓PKP2	**PKiKP**	**03 21 59.8**	**-0.8**
OJC	**Ojcow**	**147.68**	**343**	*e*PKP	**PKPdf**	**03 21 57.1**	**+1.2**
OJC	**Ojcow**	**147.68**	**343**	*e*PKPbc	**PKiKP**	**03 21 59.8**	**-0.9**
OJC	**Ojcow**	**147.68**	**343**	*e*PKIKP	**PKPdf**	**03 21 57.1**	**+1.2**
BNN	**Bunyan**	**147.79**	**313**	*e*P	**PKiKP**	**03 22 00.6**	**-0.9**
BNN	**Bunyan**	**147.79**	**313**	*e*P	**PKiKP**	**03 22 00.6**	**-0.9**
PRAR	**RASCA**	**147.85**	**333**	⇑*i*P	**PKiKP**	**03 22 00.5**	**-0.6**
WTSB	**Winterswijk**	**147.94**	**359**	*e*PKP	**PKPbc**	**03 21 59.7**	**+0.4**
KSP	**Ksiaz**	**147.95**	**347**	*e*PKP	**PKPdf**	**03 21 56.9**	**+0.6**
KSP	**Ksiaz**	**147.95**	**347**	*e*PKIKP	**PKPdf**	**03 21 56.9**	**+0.6**
BUR08	**Bucovina Ar. S**	**148.05**	**335**	*e*PKPbc	**PKiKP**	**03 22 00.9**	**-0.8**
BUR04	**Bucovina Ar. S**	**148.07**	**335**	*e*PKPbc	**PKiKP**	**03 22 01.4**	**-0.3**
BURAR	**Bucovina Array**	**148.07**	**335**	⇓*i*P	**PKPbc**	**03 22 00.6**	**+0.6**
BURAR	**Bucovina Array**	**148.07**	**335**	⇓PKP2	**PKPbc**	**03 22 00.6**	**+0.6**
MBAR	**Mbarara**	**148.08**	**233**	*e*PKPbc	**PKiKP**	**03 22 02.7**	**-0.1**
CLL	**Collm**	**148.09**	**351**	*e*PKPbc	**PKPbc**	**03 21 59.7**	**0.0**
CLL	**Collm**	**148.09**	**351**	*e*PKPdf	**PKPdf**	**03 21 57.0**	**+0.5**
	comp=Z,34nm,1.7s						
CLL				*i* PKPbc	**PKPbc**	**03 22 00.0**	**+0.3**
	comp=Z,161nm,1.5s						
CLL				*i* PKPab	**PKPab**	**03 22 03.3**	**+0.7**
	comp=Z,50nm,1.1s						
CLL				*i*		03 22 08.4	
	comp=Z,132nm,1.2s						
CLL				*e*pPKPab	**sPKPdf**	**03 22 25.0**	**-0.6**
CLL				*e*PP	PP	03 25 18.0	-9.4
CLL				*e*SS	SS	03 44 26.0	-1.2
CLL				*e*SSS	SSS	03 49 42.0	
CLL				*e*SSSS		03 53 48.0	
CLL	**Collm**	**148.09**	**351**	*e*PKIKP	**PKPdf**	**03 21 57.0**	**+0.5**
CLL				*i*		03 22 00.0	
CLL				pmax	pmax		
	comp=Z,34nm,1.7s						
ILGA	**Ilgaz**	**148.10**	**318**	*e*PKPbc	**PKiKP**	**03 22 02.0**	**-0.2**
BIZ	**Bicaz**	**148.23**	**333**	⇓*i*P	**PKiKP**	**03 22 02.1**	**+0.2**
NIE	**Niedzica**	**148.26**	**342**	*e*PKP	**PKPbc**	**03 21 58.8**	**-1.5**
NIE	**Niedzica**	**148.26**	**342**	*e*PKIKP	**PKPbc**	**03 21 58.8**	**-1.5**
TLCR		**148.28**	**328**	⇓*i*P	**PKiKP**	**03 22 01.4**	**-0.7**
TLCR		**148.28**	**328**	⇓PKP2	**PKiKP**	**03 22 01.4**	**-0.7**
UZH	**Uzhgorod**	**148.31**	**339**	⇑*i*PKP2	**PKPbc**	**03 22 00.2**	**-0.2**
TESR	**Tescani**	**148.33**	**332**	⇑*i*P	**PKiKP**	**03 22 02.1**	**0.0**
UPC	**Upice**	**148.33**	**347**	⇑*e*PKP	**PKiKP**	**03 22 01.9**	**-0.1**
UPC				*e*PKPAB	**PKPab**	**03 22 04.5**	**+0.8**
UPC				*e*x	x	03 38 17.8	
UPC				AMS	AMS	04 26 10.0	
	comp=Z,500nm,21.3s						
UPC	**Upice**	**148.33**	**347**	*e*PKP2	**PKiKP**	**03 22 01.9**	**-0.1**
UPC				*e*		03 38 17.8	
UPC				MLR	MLR		
	comp=Z,500nm,21.3s						
BRG	**Berggiesshubel**	**148.36**	**350**	*e*PKP	**PKPdf**	**03 21 58.0**	**+1.1**
	comp=Z,27nm,1.4s						
BRG	**Berggiesshubel**	**148.36**	**350**	*i* PKP	**PKiKP**	**03 22 01.7**	**-0.3**
	comp=Z,84nm,1.3s						
BRG				*i* pPKP	**sPKPdf**	**03 22 26.5**	**+0.4**
	comp=Z,34nm,1.1s						
BRG				*e*		03 25 34.7	
	comp=Z,63nm,2.2s						
BRG				SS	SS	03 44 30.0	-0.3
	comp=N,568nm,26.8s						
	comp=E,269nm,18.7s						
	comp=Z,532nm,29.8s						
BRG	**Berggiesshubel**	**148.36**	**350**	*e*PKIKP	**PKPdf**	**03 21 58.0**	**+1.1**
BRG				*i*		03 22 01.7	
BRG				*e*		03 25 34.7	
BRG				SS	SS	03 44 30.0	-0.3
BRG				pmax	pmax		
	comp=Z,27nm,1.5s						
BRG				MLR	MLR		
	comp=N,568nm,26.8s						
BRG				MLR	MLR		
	comp=E,269nm,18.7s						
BRG				MLR	MLR		
	comp=Z,532nm,27.0s						
KOZT	**Kozan**	**148.41**	**310**	*e*P	**PKiKP**	**03 22 01.9**	**-0.7**
KOZT	**Kozan**	**148.41**	**310**	*e*P	**PKiKP**	**03 22 01.9**	**-0.7**
DPC	**Dobruska-Polom**	**148.41**	**347**	⇑*e*PKP	**PKiKP**	**03 22 02.1**	**-0.2**
DPC				*e*PKPAB	**PKPab**	**03 22 05.6**	**+1.5**
DPC				*e*SS	SS	03 44 26.6	-4.5
DPC				AMS	AMS	04 25 50.0	
	comp=Z,500nm,19.0s						
DPC	**Dobruska-Polom**	**148.41**	**347**	*e*PKP2	**PKiKP**	**03 22 02.1**	**-0.2**
DPC				*e*SS	SS	03 44 26.6	-4.5
DPC				MLR	MLR		
	comp=Z,500nm,19.0s						
OKC	**Ostrava-Krasne**	**148.47**	**344**	*e*SS	SS	03 44 31.5	-0.2
PVCC	**Panska Ves**	**148.59**	**349**	⇑*e*PKP	**PKiKP**	**03 22 02.1**	**-0.4**
PVCC				*e*PKPAB	**PKPab**	**03 22 06.0**	**+1.3**
PVCC	**Panska Ves**	**148.59**	**349**	*e*PKP2	**PKiKP**	**03 22 02.1**	**-0.4**
TAHT	**Tahtakopru-Hat**	**148.60**	**308**	*e*P	**PKiKP**	**03 22 02.8**	**-0.2**
TAHT	**Tahtakopru-Hat**	**148.60**	**308**	*e*P	**PKiKP**	**03 22 02.8**	**-0.2**
CFR	**Carcaliu**	**148.63**	**329**	⇑*i*P	**PKiKP**	**03 22 02.1**	**-0.7**
CFR	**Carcaliu**	**148.63**	**329**	⇑PKP2	**PKiKP**	**03 22 02.1**	**-0.7**
TRPA	**Tarpa**	**148.65**	**338**	⇑*i*P	**PKiKP**	**03 22 02.3**	**-0.4**
TRPA	**Tarpa**	**148.65**	**338**	⇓*e*PKPdf	**PKiKP**	**03 22 02.0**	**-0.7**
PETR	**Petresti**	**148.66**	**330**	⇓*i*P	**PKiKP**	**03 22 03.1**	**+0.3**
MORC	**Moravsky Berou**	**148.67**	**345**	*e*PKPdf	**PKPdf**	**03 21 58.0**	**+0.5**
MORC				*e*PKPbc	**PKiKP**	**03 22 03.1**	**+0.3**
MORC	**Moravsky Berou**	**148.67**	**345**	⇑*i*P	**PKiKP**	**03 22 03.3**	**+0.5**
MORC	**Moravsky Berou**	**148.67**	**345**	*e*PKIKP	**PKPdf**	**03 21 58.0**	**+0.5**
MORC				*e*		03 22 03.1	
MORC	**Moravsky Berou**	**148.67**	**345**	*e*PKP	**PKPdf**	**03 21 58.3**	**+0.7**
MORC				*e*		03 22 02.8	
BMR	**Baia Mare**	**148.69**	**336**	⇑*i*P	**PKiKP**	**03 22 03.0**	**+0.2**
BMR	**Baia Mare**	**148.69**	**336**	⇑PKP2	**PKiKP**	**03 22 03.0**	**+0.2**
ODBI	**Odobesti**	**148.71**	**331**	⇑*i*P	**PKiKP**	**03 22 03.7**	**+0.8**
LANS	**Liptovska Anna**	**148.74**	**342**	*e*PKIKP	**PKPbc**	**03 22 00.2**	**-1.4**
LANS				*e*		03 22 03.9	
LANS	**Liptovska Anna**	**148.74**	**342**	*e*PKP	**PKPbc**	**03 22 00.2**	**-1.4**
LANS				*e*		03 22 03.9	
VRI	**Vrincioaia**	**148.78**	**331**	⇑*i*P	**PKiKP**	**03 22 03.1**	**0.0**
VRI	**Vrincioaia**	**148.78**	**331**	⇑PKP2	**PKiKP**	**03 22 03.1**	**0.0**
YURE	**YUREGIR**	**148.83**	**309**	*e*P	**PKiKP**	**03 22 03.5**	**0.0**
YURE	**YUREGIR**	**148.83**	**309**	*e*P	**PKiKP**	**03 22 03.5**	**0.0**
PLOR	**Plostina**	**148.83**	**331**	⇓*i*P	**PKiKP**	**03 22 02.8**	**-0.5**
PLOR	**Plostina**	**148.83**	**331**	⇓PKP2	**PKiKP**	**03 22 02.8**	**-0.5**
ARCR	**ARCALIA**	**148.84**	**335**	⇓*i*P	**PKiKP**	**03 22 03.4**	**+0.2**
BR131	**Keskin Array S**	**148.86**	**316**	*e*PKPbc	**PKPbc**	**03 22 02.6**	**+0.3**
BRTR	**Keskin Array B**	**148.86**	**316**	PKP	**PKPdf**	**03 21 59.3**	**+1.0**
	comp=Z,21nm,0.8s,baz=133,slow=2.4,SNR=52						
BRTR				PKPbc	**PKPbc**	**03 22 02.9**	**+0.6**
	comp=Z,21nm,0.8s,baz=128,slow=2.4,SNR=81						
OZUR		**149.03**	**332**	⇓*i*P	**PKiKP**	**03 22 03.9**	**+0.2**
KARA	**Karaisali**	**149.06**	**310**	*e*P	**PKiKP**	**03 22 03.4**	**-0.6**
KARA	**Karaisali**	**149.06**	**310**	*e*P	**PKiKP**	**03 22 03.4**	**-0.6**
TLB	**Topalu**	**149.10**	**328**	⇑*i*P	**PKPbc**	**03 22 03.1**	**+0.6**
TLB	**Topalu**	**149.10**	**328**	⇑PKP2	**PKPbc**	**03 22 03.1**	**+0.6**
PRU	**Pruhonice**	**149.11**	**349**	⇑*e*PKP	**PKiKP**	**03 22 03.4**	**-0.2**
PRU				*e*PKPAB	**PKPab**	**03 22 07.9**	**+1.1**
PRU				*e*SS	SS	03 44 37.0	-1.8
PRU				AMS	AMS	04 30 40.0	
	comp=Z,500nm,23.8s						
PRU	**Pruhonice**	**149.11**	**349**	*e*PKP2	**PKiKP**	**03 22 03.4**	**-0.2**
PRU				*e*SS	SS	03 44 37.0	-1.8
PRU				MLR	MLR		
	comp=Z,500nm,23.8s						
UCC	**Uccle**	**149.11**	**2**	*e*PKPbc	**PKiKP**	**03 22 03.0**	**-0.5**
UCC	**Uccle**	**149.11**	**2**	⇓PKP	**PKPbc**	**03 22 02.6**	**+0.2**
UCC				⇑pPKP	**pPKPab**	**03 22 27.6**	**+0.2**
KRTS	**Karatas**	**149.12**	**309**	*e*P	**PKiKP**	**03 22 04.2**	**+0.1**
KRTS	**Karatas**	**149.12**	**309**	*e*P	**PKiKP**	**03 22 04.2**	**+0.1**
BEBN	**Eben Emael**	**149.13**	**360**	⇑PKP	**PKiKP**	**03 22 03.6**	**0.0**
BEBN				⇑pPKP	**pPKPab**	**03 22 27.8**	**+0.3**
GOPC	**GO Pecny, Ondr**	**149.14**	**348**	⇑*e*PKP	**PKiKP**	**03 22 03.4**	**-0.3**
GOPC	**GO Pecny, Ondr**	**149.14**	**348**	*e*PKP2	**PKiKP**	**03 22 03.4**	**-0.3**
YAYX	**Yaylak**	**149.14**	**314**	*e*P	**PKPbc**	**03 22 03.5**	**+0.5**
YAYX	**Yaylak**	**149.14**	**314**	*e*P	**PKPbc**	**03 22 03.5**	**+0.5**
HGN	**Heimansgroeve**	**149.16**	**360**	*e*PKPdf	**PKPdf**	**03 21 58.5**	**+0.3**
HGN				*e*PKPbc	**PKPbc**	**03 22 02.5**	**+0.1**
HGN				*e*PKPab	**PKPab**	**03 22 11.4**	**+4.4**
NKC	**Novy Kostel**	**149.21**	**351**	⇑*e*PKP	**PKiKP**	**03 22 03.7**	**-0.2**
NKC	**Novy Kostel**	**149.21**	**351**	*e*PKP2	**PKiKP**	**03 22 03.7**	**-0.2**
DOPR	**Dopca**	**149.30**	**332**	⇑*i*P	**PKiKP**	**03 22 04.7**	**+0.5**
MEM	**Membach**	**149.32**	**360**	⇑PKP	**PKiKP**	**03 22 04.2**	**+0.2**
MEM				⇑pPKP	**pPKPab**	**03 22 28.3**	**0.0**
VRAC	**Vranov**	**149.33**	**346**	⇑*i*P	**PKiKP**	**03 22 04.9**	**+0.8**
VRAC	**Vranov**	**149.33**	**346**	⇑PKP2	**PKiKP**	**03 22 04.9**	**+0.8**
VRAC	**Vranov**	**149.33**	**346**	*e*PKP	**PKPdf**	**03 21 59.4**	**+0.8**
VRAC				*e*		03 22 04.7	
ANTO	**Ankara**	**149.34**	**316**	*e*PKPbc	**PKPbc**	**03 22 03.6**	**+0.2**
ANTO	**Ankara**	**149.34**	**316**	PKP2	**PKiKP**	**03 22 05.0**	**+0.5**
BR231	**Keskin MP Arra**	**149.36**	**316**	*e*PKPbc	**PKiKP**	**03 22 04.7**	**0.0**
AFSR	**Afar-Bala (An**	**149.38**	**316**	*e*P	**PKiKP**	**03 22 04.5**	**-0.2**
AFSR	**Afar-Bala (An**	**149.38**	**316**	*e*P	**PKiKP**	**03 22 04.5**	**-0.2**
MLR	**Muntele Rosu**	**149.43**	**331**	*e*PKPdf	**PKPdf**	**03 21 58.9**	**-0.1**
MLR				*e*PKPbc	**PKiKP**	**03 22 04.6**	**0.0**
MLR	**Muntele Rosu**	**149.43**	**331**	⇓*i*P	**PKiKP**	**03 22 05.2**	**+0.6**
MLR	**Muntele Rosu**	**149.43**	**331**	⇓PKP2	**PKiKP**	**03 22 05.2**	**+0.6**
CJR	**Cluj-Napoca**	**149.44**	**335**	⇓*i*P	**PKiKP**	**03 22 04.9**	**+0.4**
CJR	**Cluj-Napoca**	**149.44**	**335**	⇓PKP2	**PKiKP**	**03 22 04.9**	**+0.4**
BCLA	**Clavier**	**149.51**	**0**	⇑PKP	**PKiKP**	**03 22 04.4**	**0.0**
BCLA				⇓pPKP	**pPKPbc**	**03 22 23.6**	**-0.8**
VYHS	**Vyhne**	**149.51**	**343**	*e*PKP	**PKPdf**	**03 22 00.0**	**+1.1**
VYHS				*e*		03 22 04.6	
VYHS				*e*		03 22 09.4	
LTVH	**Ltavrtes, Hu**	**149.51**	**338**	⇓*e*PKPdf	**PKiKP**	**03 22 04.0**	**-0.5**
KOLL	**Kolacno**	**149.55**	**343**	*e*PKP2	**PKiKP**	**03 22 04.6**	**0.0**
KOLL	**Kolacno**	**149.55**	**343**	*e*PKP	**PKiKP**	**03 22 04.6**	**0.0**
KOLL				*e*		03 22 09.6	
TREC	**Trest**	**149.59**	**347**	⇑*e*PKP	**PKPbc**	**03 22 04.1**	**+0.4**
TREC				*e*SS	SS	03 44 38.2	-6.0
TREC				AMS	AMS	04 26 50.0	
	comp=Z,400nm,21.2s						
TREC	**Trest**	**149.59**	**347**	*e*PKP2	**PKPbc**	**03 22 04.1**	**+0.4**
TREC				MLR	MLR		
	comp=Z,400nm,21.2s						
KRUC	**Moravsky**	**149.61**	**346**	*e*PKP	**PKPdf**	**03 21 59.6**	**+0.6**
KRUC				*e*		03 22 05.2	
KULU	**Kulu**	**149.63**	**315**	*e*P	**PKiKP**	**03 22 05.3**	**+0.1**
KULU	**Kulu**	**149.63**	**315**	*e*P	**PKiKP**	**03 22 05.3**	**+0.1**
PSZ	**Piszkesteto**	**149.72**	**341**	*e*PKPdf	**PKPdf**	**03 21 58.7**	**-0.6**
PSZ				*e*PKPbc	**PKiKP**	**03 22 05.6**	**+0.5**
PSZ	**Piszkesteto**	**149.72**	**341**	⇓*i*P	**PKiKP**	**03 22 04.7**	**-0.4**
PSZ	**Piszkesteto**	**149.72**	**341**	*e*PKIKP	**PKPdf**	**03 21 58.7**	**-0.6**
PSZ				*e*		03 22 05.6	
PSZ	**Piszkesteto**	**149.72**	**341**	*e*PKPdf	**PKPbc**	**03 22 04.0**	**-0.1**
SECR		**149.72**	**331**	⇓*i*P	**PKiKP**	**03 22 05.3**	**+0.2**
DRGR		**149.72**	**336**	⇑*i*P	**PKiKP**	**03 22 05.7**	**+0.6**
DRGR		**149.72**	**336**	⇑PKP2	**PKiKP**	**03 22 05.7**	**+0.6**
LEHL	**Lehliu**	**149.78**	**329**	⇓*i*P	**PKiKP**	**03 22 06.1**	**+0.9**
DOU	**Dourbes**	**149.82**	**1**	⇓PKP	**PKPbc**	**03 22 04.6**	**+0.4**
DOU				⇑pPKP	**pPKPab**	**03 22 29.8**	**-0.5**
VOIR		**149.87**	**332**	⇑*i*P	**PKiKP**	**03 22 05.9**	**+0.4**
VOIR		**149.87**	**332**	⇑PKP2	**PKiKP**	**03 22 05.9**	**+0.4**
SMOL	**Smolenice**	**149.87**	**344**	*e*PKP2	**PKiKP**	**03 22 06.5**	**+1.2**
SMOL	**Smolenice**	**149.87**	**344**	*e*PKP	**PKiKP**	**03 22 06.4**	**+1.2**
GRA1	**Grafenberg Arr**	**149.90**	**353**	*e*PKPbc	**PKiKP**	**03 22 05.4**	**+0.1**
GRFO	**Grafenberg**	**149.90**	**353**	*e*PKPbc	**PKiKP**	**03 22 05.2**	**0.0**
BHL	**Bhannes**	**149.92**	**304**	*e*P	**PKiKP**	**03 22 06.3**	**+0.4**
CHBY	**Cihanbeyli**	**149.94**	**314**	P	**PKPbc**	**03 22 05.2**	**+0.2**
CHBY	**Cihanbeyli**	**149.94**	**314**	P	**PKPbc**	**03 22 05.2**	**+0.2**
MDUB	**Mudurnu**	**150.01**	**319**	*e*P	**PKiKP**	**03 22 05.8**	**-0.1**
MDUB	**Mudurnu**	**150.01**	**319**	*e*P	**PKiKP**	**03 22 05.8**	**-0.1**
MTUR	**Matau**	**150.02**	**332**	⇑*i*P	**PKiKP**	**03 22 05.6**	**-0.2**
MTUR	**Matau**	**150.02**	**332**	⇑PKP2	**PKiKP**	**03 22 05.6**	**-0.2**
MODS	**Modra-Piesok**	**150.04**	**344**	*e*PKP2	**PKiKP**	**03 22 06.5**	**+0.8**
MODS	**Modra-Piesok**	**150.04**	**344**	*e*PKP	**PKiKP**	**03 22 06.4**	**+0.8**
HSUJ	**Al Zarqa**	**150.05**	**300**	P	**PKiKP**	**03 22 07.0**	**+0.8**
	comp=Z,222nm,1.1s						
ARR	**Arges**	**150.10**	**333**	⇓*i*P	**PKiKP**	**03 22 07.2**	**+1.3**
KHC	**Kasperske Hory**	**150.11**	**350**	*e*PKPdf	**PKPdf**	**03 22 00.2**	**+0.3**
KHC				*e*PKPbc	**PKiKP**	**03 22 06.4**	**+0.6**
KHC	**Kasperske Hory**	**150.11**	**350**	⇑*e*PKP	**PKiKP**	**03 22 05.9**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**03 22 10.9**	**-0.1**
KHC				*e*SS	SS	03 44 42.6	-7.3
KHC				AMS	AMS	04 24 50.0	
	comp=Z,500nm,19.2s						
KHC	**Kasperske Hory**	**150.11**	**350**	*e*PKHKP	PKPpre	03 22 00.2	
KHC				*e*		03 22 06.4	
KSDI	**Kefar Szold**	**150.15**	**303**	P	**PKiKP**	**03 22 07.3**	**+1.0**
	comp=Z,209nm,1.2s						
ZST	**Bratislava**	**150.25**	**344**	*e*PKIKP	**PKiKP**	**03 22 05.8**	**-0.2**
ZST	**Bratislava**	**150.25**	**344**	*e*PKP	**PKiKP**	**03 22 05.8**	**-0.2**
WLF	**Walferdange**	**150.26**	**359**	*e*PKPbc	**PKiKP**	**03 22 06.2**	**+0.2**
WLF				*e*ScS		03 37 43.1	
WLF	**Walferdange**	**150.26**	**359**	⇓PKP	**PKiKP**	**03 22 06.7**	**+0.7**
WLF				⇑pPKP	**pPKPab**	**03 22 32.3**	**+0.1**
GEC2	**GERESS Array S**	**150.36**	**349**	*e*PKPdf	**PKPdf**	**03 22 00.3**	**-0.1**
GEC2				*e*PKPbc	**PKiKP**	**03 22 07.1**	**+0.7**
GEC2	**GERESS Array S**	**150.36**	**349**	*e*PKIKP	**PKPdf**	**03 22 00.3**	**-0.1**
GEC2				*e*		03 22 07.1	
GERES	**GERESS Array B**	**150.36**	**349**	PKIKP	**PKPdf**	**03 22 01.4**	**+1.1**
GERES						03 22 07.1	
GERES						03 22 13.9	
GERES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GERES	**GERESS Array B**	**150.36**	**349**	PKP	**PKPdf**	**03 22 01.4**	**+1.1**
	comp=Z,1.4nm,0.9s,baz=42,slow=2.2,SNR=20						
GERES				PKPbc	**PKiKP**	**03 22 07.0**	**+0.7**
	comp=Z,23nm,1.0s,baz=40,slow=2.3,SNR=68						
GERES				PKPab	**PKPab**	**03 22 13.9**	**+1.8**
	comp=Z,21nm,0.9s,baz=14,slow=2.8,SNR=13						
BUD	**Budapest**	**150.37**	**341**	*e*PKPdf	**PKiKP**	**03 22 07.1**	**+0.8**
GEA0	**GERESS Array S**	**150.37**	**349**	*e*PKPdf	**PKPdf**	**03 22 00.3**	**0.0**
GEA0				*e*PKPbc	**PKiKP**	**03 22 06.6**	**+0.2**
KEBE	**Keben-Mersin**	**150.38**	**310**	*e*P	**PKiKP**	**03 22 07.7**	**+0.9**
KEBE	**Keben-Mersin**	**150.38**	**310**	*e*P	**PKiKP**	**03 22 07.7**	**+0.9**
SWQJ	**Swaqa**	**150.40**	**299**	P	**PKiKP**	**03 22 07.9**	**+0.9**
LADK	**Ladik-KONYA**	**150.49**	**314**	*e*P	**PKPbc**	**03 22 06.5**	**+0.2**
LADK	**Ladik-KONYA**	**150.49**	**314**	*e*P	**PKPbc**	**03 22 06.5**	**+0.2**
IKL	**Isikli**	**150.50**	**309**	*e*P	**PKiKP**	**03 22 06.7**	**-0.2**
IKL	**Isikli**	**150.50**	**309**	*e*P	**PKiKP**	**03 22 06.7**	**-0.2**
WALJ	**Wala**	**150.52**	**299**	P	**PKiKP**	**03 22 07.9**	**+0.8**
	comp=Z,162nm,0.7s						
SIRR	**Siria**	**150.55**	**337**	⇑*i*P	**PKiKP**	**03 22 07.0**	**+0.2**
HUMR	**Humele**	**150.60**	**331**	⇓*i*P	**PKiKP**	**03 22 06.8**	**-0.1**
AKKU	**Akkuyu-Mersin**	**150.63**	**309**	*e*P	**PKiKP**	**03 22 06.9**	**-0.3**
AKKU	**Akkuyu-Mersin**	**150.63**	**309**	*e*P	**PKiKP**	**03 22 06.9**	**-0.3**
BERE	**Bereket-Mersin**	**150.78**	**310**	*e*P	**PKiKP**	**03 22 07.7**	**0.0**
BERE	**Bereket-Mersin**	**150.78**	**310**	*e*P	**PKiKP**	**03 22 07.7**	**0.0**
GHAJ	**Ghor Haditha**	**150.79**	**299**	P	**PKiKP**	**03 22 08.5**	**+0.9**
	comp=Z,96nm,0.9s						
CONA	**Conrad Observa**	**150.80**	**346**	*i* PKPdf	**PKPdf**	**03 22 01.3**	**+0.2**
	comp=Z,13nm,1.6s						
CONA				*i* PKiKP	**PKiKP**	**03 22 08.5**	**+1.2**
	comp=Z,88nm,1.4s,SNR=14						
GZR	**Gura Zlata**	**150.86**	**335**	⇑*i*P	**PKiKP**	**03 22 07.3**	**-0.2**
GZR	**Gura Zlata**	**150.86**	**335**	⇑PKIKP	**PKiKP**	**03 22 07.3**	**-0.2**
JDRJ	**Daraweish**	**150.86**	**298**	P	**PKiKP**	**03 22 09.6**	**+1.6**
	comp=Z,252nm,1.0s						
SOP	**Sopron**	**150.86**	**345**	⇓*e*PKPdf	**PKPbc**	**03 22 06.1**	**-0.6**
LISJ	**El Lisan**	**150.88**	**299**	P	**PKiKP**	**03 22 09.0**	**+1.2**
	comp=Z,99nm,1.0s						
TEKE	**Tekeli-Mersin**	**150.95**	**310**	*e*P	**PKPbc**	**03 22 07.5**	**+0.2**
TEKE	**Tekeli-Mersin**	**150.95**	**310**	*e*P	**PKPbc**	**03 22 07.5**	**+0.2**
HSNJ	**Maan**	**150.96**	**297**	P	**PKiKP**	**03 22 09.8**	**+1.6**
	comp=Z,332nm,0.9s						
STU	**Stuttgart**	**151.01**	**355**	*e*PKPbc	**PKiKP**	**03 22 08.6**	**+1.0**
STU				*e*ScS		03 37 18.6	
BZS	**Buzias**	**151.12**	**336**	⇑*i*P	**PKiKP**	**03 22 08.2**	**+0.3**
BZS	**Buzias**	**151.12**	**336**	⇑PKIKP	**PKiKP**	**03 22 08.2**	**+0.3**
MOA	**Molln**	**151.21**	**348**	*i* PKPdf	**PKPdf**	**03 22 02.3**	**+0.7**
	comp=Z,8.9nm,1.7s						
MOA				*i* PKiKP	**PKiKP**	**03 22 08.8**	**+0.8**
	comp=Z,23nm,1.2s,SNR=6.9						
MOA				*i* PKPab	**PKPab**	**03 22 16.0**	**+0.4**
	comp=Z,15nm,0.8s						
TIH	**Tihany**	**151.23**	**342**	⇓*e*PKPdf	**PKPbc**	**03 22 07.1**	**-0.5**
AMAZ	**Amatzia**	**151.26**	**300**	P	**PKiKP**	**03 22 09.8**	**+1.1**
VLAD	**Vladila**	**151.27**	**331**	⇓*i*P	**PKiKP**	**03 22 09.0**	**+0.7**
SRE	**Strehaia**	**151.28**	**333**	⇓*i*P	**PKiKP**	**03 22 09.3**	**+1.0**
SRE	**Strehaia**	**151.28**	**333**	⇓PKIKP	**PKiKP**	**03 22 09.3**	**+1.0**
CSS	**Mathiatis**	**151.30**	**307**	*e*PKPbc	**PKiKP**	**03 22 08.7**	**+0.1**
CSS	**Mathiatis**	**151.30**	**307**	P	**PKiKP**	**03 22 09.1**	**+0.4**
HERR	**Herculane**	**151.42**	**335**	⇑*i*P	**PKiKP**	**03 22 08.9**	**+0.3**
BANR	**Banloc**	**151.50**	**337**	⇑*i*P	**PKiKP**	**03 22 09.9**	**+1.2**
ARSA	**Arzberg**	**151.51**	**346**	*i* PKPdf	**PKPdf**	**03 22 03.5**	**+1.4**
	comp=Z,4.6nm,1.4s						
ARSA				*i* PKiKP	**PKiKP**	**03 22 09.2**	**+0.5**
	comp=Z,21nm,1.1s,SNR=7.8						
BFO	**Black Forest**	**151.51**	**356**	*e*PKPbc	**PKiKP**	**03 22 08.6**	**-0.1**
BFO	**Black Forest**	**151.51**	**356**	*i* PKIKP	**PKiKP**	**03 22 09.0**	**+0.3**
HRFI	**Mount Harif**	**151.55**	**297**	P	**PKiKP**	**03 22 10.3**	**+0.9**
	comp=Z,95nm,1.2s						
AQBJ	**Aqaba**	**151.62**	**296**	P	**PKiKP**	**03 22 10.5**	**+1.1**
	comp=Z,122nm,0.9s						
MORH	**Mrgy, Hungar**	**151.62**	**341**	*e*PKPdf	**PKiKP**	**03 22 09.0**	**+0.1**
MORH	**Mrgy, Hungar**	**151.62**	**341**	*e*P	**PKPbc**	**03 22 08.5**	**0.0**
ECH	**Echery**	**151.69**	**358**	*e*PKPbc	**PKPbc**	**03 22 08.2**	**-0.5**
ECH				*e*PKPab	**PKPab**	**03 22 17.5**	**0.0**
EIL	**Elat**	**151.71**	**296**	P	**PKiKP**	**03 22 10.7**	**+1.0**
	comp=Z,68nm,1.1s						
SZAC	**Souni**	**151.72**	**307**	P	**PKiKP**	**03 22 10.1**	**+0.5**
ALFC	**Alefka**	**151.76**	**308**	P	**PKiKP**	**03 22 09.8**	**+0.2**
CLF	**Chambon-Foret**	**151.77**	**5**	*e*PKPbc	**PKPbc**	**03 22 08.7**	**-0.1**
CLF				*e*PKPab	**PKPab**	**03 22 18.5**	**+0.7**
MDVR	**Moldovita**	**151.78**	**335**	⇑*i*P	**PKiKP**	**03 22 09.5**	**+0.1**
KZIT	**Kziot**	**151.86**	**299**	P	**PKPdf**	**03 22 03.8**	**+0.7**
BEHE	**Becsehely**	**151.93**	**344**	⇓*e*PKPdf	**PKPbc**	**03 22 08.1**	**-1.1**
BEHE	**Becsehely**	**151.93**	**344**	*e*P	**PKPbc**	**03 22 09.1**	**-0.1**
KOGS	**Kog**	**152.09**	**344**	*i* PKPdf	**PKPdf**	**03 22 02.6**	**-0.3**
KOGS				*e*PKPbc	**PKPbc**	**03 22 09.5**	**-0.1**
RETA	**Reutte**	**152.13**	**353**	*i* PKPdf	**PKPdf**	**03 22 03.9**	**+0.8**
	comp=Z,11nm,1.7s						
RETA				*i* PKiKP	**PKiKP**	**03 22 10.4**	**+0.3**
	comp=Z,38nm,1.6s,SNR=6.4						
KBA	**Koelnbreinsper**	**152.13**	**349**	*i* PKPdf	**PKPdf**	**03 22 03.5**	**+0.3**
	comp=Z,9.8nm,1.5s						
KBA				*i* PKiKP	**PKiKP**	**03 22 10.7**	**+0.5**
	comp=Z,9.1nm,0.6s,SNR=5.6						
KBA				*i* pPKPdf	**PKPab**	**03 22 21.6**	**+2.0**
	comp=Z,37nm,1.0s						
SOKA	**Soboth**	**152.16**	**346**	*i* PKPdf	**PKPdf**	**03 22 04.1**	**+0.9**
	comp=Z,9.1nm,1.3s						

SOKA				*i* PKiKP	PKiKP	03 22 10.2	0.0
	comp=Z,35nm,1.1s,SNR=8.6						
SOKA				*i* PKPab	PKPab	03 22 18.8	-0.8
	comp=Z,56nm,1.1s						
WATA	Walderalm	152.17	351	*i* PKiKP	PKiKP	03 22 10.3	+0.1
	comp=Z,11nm,0.4s,SNR=16						
FRGS	Fruska Gora	152.17	338	⇓*i*P	PKiKP	03 22 10.6	+0.5
PERS	Pernice	152.19	346	*e*PKPdf	PKPdf	03 22 02.7	-0.4
PERS				*e*PKPbc	PKPbc	03 22 09.6	-0.3
MOTA	Moosalm	152.22	352	*i* PKPdf	PKPdf	03 22 03.8	+0.5
	comp=Z,8.4nm,1.3s						
MOTA				*i* PKiKP	PKiKP	03 22 11.6	+1.2
	comp=Z,30nm,1.1s,SNR=10						
WTTA	Wattenberg	152.23	351	*i* PKPdf	PKPdf	03 22 00.5	-2.9
	comp=Z,9.4nm,1.2s						
WTTA				*i* PKiKP	PKiKP	03 22 10.9	+0.5
	comp=Z,15nm,0.5s,SNR=6.7						
SQTA	Sankt Quirin	152.33	352	*i* PKPdf	PKPdf	03 22 04.4	+1.0
	comp=Z,11nm,1.5s						
SQTA				*i* PKiKP	PKiKP	03 22 11.5	+1.0
	comp=Z,45nm,1.5s,SNR=8.4						
SQTA				*i* PKPab	PKPab	03 22 21.3	+0.9
	comp=Z,49nm,1.1s						
DAVA	Damuels	152.43	354	*i* PKPdf	PKPdf	03 22 03.8	+0.2
	comp=Z,16nm,2.0s						
DAVA				*i* PKiKP	PKiKP	03 22 11.3	+0.6
	comp=Z,44nm,1.2s,SNR=7.7						
OBKA	Obir	152.43	347	*i* PKiKP	PKiKP	03 22 11.1	+0.4
	comp=Z,28nm,1.7s						
OBKA				*i* pPKPdf	PKPab	03 22 21.8	+1.0
	comp=Z,27nm,1.0s						
OBKA				*i* pPKPbc	pPKPbc	03 22 30.6	-1.0
	comp=Z,26nm,0.9s						
MYKA	Terra Mystica	152.50	348	*i* PKiKP	PKiKP	03 22 10.8	-0.1
	comp=Z,26nm,1.4s						
FETA	Feichten	152.59	352	*i* PKPdf	PKPdf	03 22 04.4	+0.6
	comp=Z,13nm,1.5s						
FETA				*i* PKiKP	PKiKP	03 22 11.8	+0.7
	comp=Z,41nm,1.3s						
ABTA	Abfaltersbach	152.60	350	*i* PKPdf	PKPdf	03 22 04.8	+1.0
	comp=Z,12nm,1.0s						
ABTA				*i* PKiKP	PKiKP	03 22 11.4	+0.3
	comp=Z,46nm,1.1s						
ABTA				*i* PKPab	PKPab	03 22 21.3	-0.1
	comp=Z,38nm,1.0s						
MANT	Manisa	152.83	318	*e*PKPbc	PKPbc	03 22 11.8	0.0
CRES	Cresnjev	152.87	345	⇓*i*P	PKPbc	03 22 11.2	-0.2
LJU	Ljubljana	152.88	346	*e*PKPdf	PKPdf	03 22 04.0	-0.1
LJU				*e*PKPbc	PKiKP	03 22 11.5	0.0
LJU				*e*PKPab	PKPab	03 22 21.2	-1.4
LJU	Ljubljana	152.88	346	⇓*i*P	PKiKP	03 22 11.5	0.0
VTS	Vitosha	152.88	331	*e*PKPdf	PKPdf	03 22 03.9	-0.5
VTS				*e*PKPbc	PKiKP	03 22 11.9	0.0
VTS	Vitosha	152.88	331	⇑*i*P	PKiKP	03 22 12.4	+0.5
VTS	Vitosha	152.88	331	*e*PKIKP	PKPdf	03 22 03.9	-0.5
VTS				*e*		03 22 11.9	
DIVS	Divibare	153.02	337	*e*PKPdf	PKPdf	03 22 04.5	0.0
DIVS				*e*PKPbc	PKiKP	03 22 12.4	+0.4
DIVS	Divibare	153.02	337	*e*P	PKPbc	03 22 11.8	-0.1
FUORN	Ofenpass-Fuorn	153.04	353	*e*PKPdf	PKPdf	03 22 04.7	0.0
FUORN				*e*PKPbc	PKiKP	03 22 13.0	+0.8
CEY	Cerknica	153.19	346	⇓*i*P	PKPbc	03 22 11.8	-0.3
TUE	Stuetta	153.28	354	*e*PKPbc	PKiKP	03 22 13.5	+0.8
TUE				*e*PKPab	PKPab	03 22 22.0	-2.6
BLY	Banja Luka	153.39	341	*e*PKPbc	PKiKP	03 22 13.4	+0.8
BLY	Banja Luka	153.39	341	⇓*i*P	PKiKP	03 22 14.4	+1.8
BLY	Banja Luka	153.39	341	*e*P	PKiKP	03 22 12.7	+0.1
HAPS	Han Pijesak,BI	153.41	338	*e*P	PKPab	03 22 24.7	-0.3
BBLS	Lazići	153.44	337	*e*P	PKiKP	03 22 13.2	+0.3
SENIN	Lac Senin/Sane	153.53	357	*e*PKPdf	PKPdf	03 22 04.7	-0.6
SENIN				*e*PKPbc	PKiKP	03 22 13.2	0.0
STIP	Stip	154.09	331	*i* Pn	PKiKP	03 22 14.2	0.0
KRUS	Krusevo	154.78	332	*e*Pn	PKPbc	03 22 14.4	-1.4
BNI	Bardonecchia	154.86	358	*e*PKPbc	PKiKP	03 22 17.0	+1.2
DRME	Dracevica, Mon	154.96	336	*e*P	PKPab	03 22 24.2	-7.3
OHR	Ohrid	155.18	332	*e*Pn	PKPdf	03 22 08.4	+0.8
PCAB	Cabril	155.32	25	*e*PKPdf	PKPdf	03 22 06.3	-1.4
POLO	Lamas de Olo	155.70	25	*e*PKPab	PKPab	03 22 33.9	-1.0
PBRG	Braganca	155.73	23	*e*PKPab	PKPab	03 22 35.2	+0.3
PVRL	Vila Real	155.81	25	*e*PKPab	PKPab	03 22 35.9	+0.6
MVO	Moncorvo	156.18	24	*e*PKPdf	PKPdf	03 22 11.4	+2.5
MVO	Moncorvo	156.18	24	*e*PKPab	PKPab	03 22 37.6	+0.7
PVIS	Viseu	156.21	26	*e*PKPab	PKPab	03 22 37.4	+0.4
PMPS	Porto Santo	156.41	52	*e*PKPdf	PKPdf	03 22 03.8	-5.6
PMPS	Porto Santo	156.41	52	*e*PKPab	PKPab	03 22 36.2	-1.9
PCAS	Casmilo, Conde	156.50	28	*e*PKPab	PKPab	03 22 38.8	+0.6
MTE	Manteigas	156.62	26	*e*PKPdf	PKPdf	03 22 03.4	-6.1
MTE	Manteigas	156.62	26	*e*PKPab	PKPab	03 22 39.7	+0.9
MTE	Manteigas	156.62	26	*e*PKPab	PKPab	03 22 39.1	+0.3
AQU	L'Aquila	156.63	345	*e*PKPab	PKPab	03 22 39.0	+0.2
PTOM	Tomar	156.90	29	*e*PKPdf	PKPdf	03 22 10.6	+0.8
PTOM	Tomar	156.90	29	*e*PKPab	PKPab	03 22 40.3	+0.4
PMAFR	Mafra	157.02	31	*e*PKPab	PKPab	03 22 41.0	+0.5
PCBR	Castelo Branco	157.12	27	*e*PKPdf	PKPdf	03 22 09.9	-0.2
PCBR	Castelo Branco	157.12	27	*e*PKPab	PKPab	03 22 36.8	-4.1
PMST	Lisbon--Monsan	157.24	31	*e*PKPab	PKPab	03 22 41.8	+0.4
LIS	Lisbon	157.27	31	*e*PKPdf	PKPdf	03 22 10.1	-0.3
LIS				AMS	AMS	04 31 13.1	
	comp=E,2µm,33.6s						
LIS	Lisbon	157.27	31	*e*PKIKP	PKPdf	03 22 10.0	-0.3
PMTG	Montargil	157.42	29	*e*PKPab	PKPab	03 22 42.5	+0.3
PESTR	Estremoz	157.88	28	*e*PKPdf	PKPdf	03 22 10.8	-0.3
PESTR	Estremoz	157.88	28	*e*PKPab	PKPab	03 22 43.4	-0.8
PESTR	Estremoz	157.88	28	*e*PKPab	PKPab	03 22 44.5	+0.3
PNCL	Nicolau / Gran	158.04	31	*e*PKPdf	PKPdf	03 22 11.9	+0.6
PNCL	Nicolau / Gran	158.04	31	*e*PKPab	PKPab	03 22 45.6	+0.7
PTEO	Sao Teotonio	158.39	32	*e*PKPab	PKPab	03 22 47.0	+0.6
MESJ	Messejana	158.41	31	*e*PKPdf	PKPdf	03 22 11.2	-0.5
MESJ				*e*PP	PP	03 26 27.0	+0.8
MESJ				AMS	AMS	04 24 54.3	
	comp=Z,165nm,24.0s						
MESJ	Messejana	158.41	31	*e*PKPdf	PKPdf	03 22 11.1	-0.6
MESJ	Messejana	158.41	31	*e*PKPab	PKPab	03 22 47.4	+0.9
MESJ	Messejana	158.41	31	*e*PKIKP	PKPdf	03 22 11.2	-0.5
MESJ				*e*		03 26 26.9	
PBEJ	Beja	158.43	30	*e*PKPdf	PKPdf	03 22 14.5	+2.7
PBEJ	Beja	158.43	30	*e*PKPab	PKPab	03 22 47.8	+1.2
PAB	San Pablo	158.58	22	*e*PKPdf	PKPdf	03 22 11.4	-0.6
PAB	San Pablo	158.58	22	*e*PKIKP	PKPdf	03 22 11.4	-0.6
ES19	SONSECA Array	158.59	20	*e*PKPdf	PKPdf	03 22 11.8	-0.2
ES19				*e*PKPab	PKPab	03 22 47.2	-0.1
ESDC	Sonseca Array	158.59	21	PKP	PKPdf	03 22 13.3	+1.3
	comp=Z,1.5nm,1.0s,baz=340,slow=2.5,SNR=6.5						
ESDC				PKPab	PKPab	03 22 47.5	+0.2
	comp=Z,5.8nm,1.0s,baz=326,slow=3.8,SNR=11						
ESLA	Sonseca Array	158.59	21	*e*PKPdf	PKPdf	03 22 12.3	+0.3
ESLA				*e*PKPab	PKPab	03 22 48.0	+0.7
MORF	Marmelete	158.61	33	*e*PKPdf	PKPdf	03 22 11.6	-0.5
MORF				AMS	AMS	04 22 07.8	
	comp=E,190nm,19.3s						
MORF	Marmelete	158.61	33	*e*PKPdf	PKPdf	03 22 13.6	+1.5
MORF	Marmelete	158.61	33	*e*PKPab	PKPab	03 22 47.3	-0.2
MORF	Marmelete	158.61	33	*e*PKIKP	PKPdf	03 22 11.6	-0.5
PFVI	Vila Bisbo	158.65	33	*e*PKPab	PKPab	03 22 47.8	+0.2
PVAQ	Vaqueiros	159.00	31	*e*PKPdf	PKPdf	03 22 12.8	+0.3
PVAQ	Vaqueiros	159.00	31	*e*PKPab	PKPab	03 22 50.1	+1.0
PBDV	Barranco-do-Ve	159.02	32	*e*PKPdf	PKPdf	03 22 11.8	-0.7
LIC	Lamto	162.94	141	*e*PKIKP	PKPdf	03 22 17.8	+0.4
	comp=E,120nm,2.1s						
LIC	Lamto	162.94	141	*e*P	PKPab	03 23 06.8	-0.1
	comp=E,72nm,0.9s						
KIC	Kosan Boka	163.22	142	*e*PKIKP	PKPdf	03 22 17.6	-0.1
	comp=E,34nm,1.1s						
KIC	Kosan Boka	163.22	142	*e*P	PKPab	03 23 07.2	-0.9
	comp=E,44nm,0.9s						
TIC	Toumodi	163.28	140	*e*PKIKP	PKPdf	03 22 17.9	+0.2
TIC	Toumodi	163.28	140	*e*P	PKPab	03 23 05.2	-3.2
DBIC	Dimbokro	163.40	141	*e*PKPdf	PKPdf	03 22 16.9	-1.0
DBIC				*e*PKPab	PKPab	03 23 09.6	+0.7
DBIC	Dimbokro	163.40	141	PKP	PKPdf	03 22 17.3	-0.5
	comp=E,5.4nm,1.0s,baz=255,slow=2.3,SNR=5.2						
DBIC				PKPab	PKPab	03 23 09.6	+0.7
	comp=E,19nm,0.9s,baz=189,slow=3.5,SNR=15						
KEST	Kesra	163.85	349	PKPab	PKPab	03 23 08.9	-1.4
	comp=E,6.4nm,0.8s,baz=282,slow=5.4,SNR=3.7						
MDT	Midelt	164.18	33	P	PKPdf	03 22 20.1	+2.0
FIGM	Figuig	166.30	25	P	PKPdf	03 22 22.0	+2.0
TOA0	Torodi Ar. Sit	172.33	150	*e*PKPdf	PKPdf	03 22 23.1	-0.8
TOA0				*e*PKPab	PKPab	03 23 47.9	-0.3
TORD	Torodi Ar. Bea	172.33	150	PKP	PKPdf	03 22 23.1	-0.9
	comp=E,3.1nm,1.1s,baz=110,slow=0.4,SNR=14						
TORD				PKPab	PKPab	03 23 48.5	+0.2
	comp=E,11nm,1.0s,baz=220,slow=3.5,SNR=15						
TORD				PP	PP	03 27 41.3	+2.8
	comp=E,4.0nm,1.1s,baz=245,slow=3.1,SNR=4.0						
TAM	Tamanrasset	177.08	2	*e*PKPdf	PKPdf	03 22 25.7	+0.3
TAM				*e*PKPab	PKPab	03 24 09.2	-0.1
TAM	Tamanrasset	177.08	2	*e*PKIKP	PKPdf	03 22 25.7	+0.3
TAM				*e*		03 24 09.2	

NEIC ***15*** *03:06:04.8±0.0, 16°.25N×98°.20W, h3^{km}, MD4.0(MEX), After MEX.*

MEX 15 03:06:00.7±0.5**, 16°.11N×98°.16W, h3**^{km}±4^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.29	7	*e*P	Pg	03 06 05.9	-0.3
PNIG				*e*S	Sg	03 06 10.5	+0.5
PNIG	Pinotepa	0.29	7	*e*P	Pg	03 06 05.9	-0.3
PNIG				*e*S	Sg	03 06 10.5	+0.5
VHO	Vista Hermosa	1.67	55	*e*P	Pn	03 06 31.2	+0.1
VHO				*e*S	Sn	03 06 51.7	-1.6
VHO	Vista Hermosa	1.67	55	*i* P	Pn	03 06 27.3	-3.9
VHO				*i* S	Sn	03 06 48.1	-5.1
CAIG	El Cayaco	2.23	295	*e*P	Pn	03 06 38.1	-0.4
CAIG				*e*S	Sn	03 07 03.9	-2.6
CAIG	El Cayaco	2.23	295	*e*P	Pn	03 06 38.1	-0.4
CAIG				*e*S	Sn	03 07 03.9	-2.6
CMIG	Matias Romero	3.29	72	*e*P	Pn	03 06 54.6	+1.3
CMIG				*e*S	Sn	03 07 33.4	+0.5
CMIG	Matias Romero	3.29	72	*e*P	Pn	03 06 52.0	-1.2
CMIG				*e*S	Sn	03 07 28.5	-4.4

SJA 15 03:21:20.8±0.5**, 31°.59S×69°.66W, h113**^{km}±3^{km}**, ML3.8, MW4.0, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	Leoncito	0.37	124	*i* P	Pn	03 21 38.5	+0.9
RTLS				*i* S	Sn	03 21 51.8	+1.6
RTLS				IAML		03 21 51.9	
	comp=Z,4µm,0.3s						
AUSP	Uspallata	0.67	160	*i* P	Pn	03 21 40.3	+0.7
RTCV	Cerro Valdivia	0.99	106	*i* P	Pn	03 21 43.1	+0.9
RTCV				*i* S	Sn	03 21 59.5	+1.2
RTLL	Cerro Villicun	1.05	76	*i* P	Pn	03 21 43.3	+0.6
RTLL				*i* S	Sn	03 22 00.5	+1.2
RTLL				IAML		03 22 01.8	
	comp=Z,865nm,0.3s						
ACCO	Cerro Coronel	1.12	27	*i* P	Pn	03 21 45.1	+1.2
ACCO				*i* S	Sn	03 22 03.6	+2.3
AMOG	MOGNA	1.19	57	*i* P	Pn	03 21 45.3	+1.0
CFA	Coronel Fontan	1.21	91	*i* P	Pn	03 21 45.3	+0.8
CFA				*i* S	Sn	03 22 03.4	+0.9
ASAL	Salagasta	1.22	145	*i* P	Pn	03 21 45.7	+1.1
ASAL				*i* S	Sn	03 22 04.0	+1.3
ARCO	CERRO ARCO	1.39	154	*i* P	Pn	03 21 47.9	+1.2
ARCO				IAML		03 22 09.3	
	comp=Z,712nm,0.2s						
AROD	Rodeo	1.43	6	*i* P	Pn	03 21 49.0	+1.6
AROD				*i* S	Sn	03 22 09.3	+1.9
AAGR	Agrelo	1.65	155	*i* P	Pn	03 21 50.8	+1.1

NEIC ***15*** *03:20:26.0±0.0, 55°.15N×61°.41E, h0^{km}, MN4.2, Special solution.*

NEIC Chelyabinsk, Russia meteor explosion [bolide] which occurred at approximately 03:20:26 UTC or 9:20:26 AM local time. At least 1,000 people were injured and over 4,000 buildings damaged when windows were blown out by the shock waves. Location and times of the explosion are approximate, and the station arrival times are for the ground-coupled surface wave. The magnitude represents only the energy in those surface waves, and therefore greatly underestimates the actual energy released by the atmospheric event. It is estimated that the meteor was 15-17 meters in diameter and weighed between 7,000 and 10,000 tons. The energy released in the explosion is estimated to be equivalent to 300-500 kilotons of TNT. This is believed to be the largest bolide event since the Tunguska, Siberia blast in 1908. For more information on the meteor visit the NASA webpage: http://www.jpl.nasa.gov/news/.

MIRAS ***15*** *03:20:32.0±0.0, 54°.77N×61°.30E, h-20^{km}*

IDC ***15*** *03:22:06.9±3.3, 54°.06N×61°.81E, h0^{km}, mb1 3.0/3, mb1mx2.9/51, mbtmp3.0/3, ML2.2/2, Error ellipse: s-maj=50.8km s-min=12.7km az=160.0*

ISC 15 03:22:08.3±4.6**, 54°.5N**±0°.4×**62°.2E**±0°.2**, h0**^{km}**, n39,** σ1^{s}**63**/6**, 3C-1D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARU	Arti	2.86	315	Lg	Lg	03 21 56.2	
ARU	Arti	2.86	315	I	I	03 23 12.5	
	baz=318						
PR3R	Kungur	4.17	317	I	I	03 23 54.8	
	baz=320						
AKTO	Aktyubinsk	4.80	214	⇑Pg	Pn	03 23 22.3	+0.5
	1.8nm,0.8s						
AKTO				⇓Lg	Lg	03 24 25.0	
	14nm,0.8s						
AKTO	Aktyubinsk	4.80	214	Pn	Pn	03 23 14.5	-7.3
	0.1nm,0.3s,baz=45,slow=10.0,SNR=1.7						
AKTO				Lg	Lg	03 24 24.9	
	0.2nm,0.3s,baz=72,slow=19,SNR=4.9						
I31KZ	AKTYUBINSK INF	4.82	214	*i*		03 48 40.0	
	baz=29,slow=318,SNR=140						
I31KZ				*i* x	x	04 03 50.0	
	baz=348,slow=310,SNR=2.4						
BRVK	Borovoye	4.99	103	Lg	Lg	03 23 48.0	
PR4R	Vlasy	5.02	316	I	I	03 24 17.7	
	baz=318						
BVAR	Borovoye Array	5.06	103	Pn	Pn	03 23 27.2	+1.8
	0.1nm,0.3s,baz=316,slow=6.0,SNR=3.3						
BVAR				Sn	Sn	03 24 25.6	+1.1
	0.3nm,0.3s,baz=303,slow=22,SNR=5.9						
BVAR				Lg	Lg	03 24 56.5	
	0.4nm,0.3s,baz=273,slow=29,SNR=2.8						
AB31	Akbulak array	5.42	196	⇑Pg	Pn	03 23 30.3	0.0
	6.0nm,1.0s,baz=18,slow=12,SNR=5.2						
AB31				⇑Lg	Lg	03 24 49.0	
	6.6nm,0.7s,baz=13,slow=27,SNR=5.3						
ABKAR	Akbulak array	5.42	196	Lg	Lg	03 24 11.7	
KURBB	Kurchatov Arra	10.65	105	Pn	Pn	03 24 40.5	-1.5
	baz=299,slow=14,SNR=3.5						
KURBB				Lg	Lg	03 27 51.4	
	0.0nm,0.3s,baz=296,slow=32,SNR=2.0						
KURK	Kurchatov	10.66	104	Lg	Lg	03 27 05.7	
KK31	Karatay Array	12.62	151	Lg	Lg	03 28 34.5	
KKAR	Karatay Array	12.62	151	Lg	Lg	03 28 29.9	
I46RU	ZALESOVO INFRA	13.22	83	*i* x	x	04 40 00.0	
	baz=280,slow=261,SNR=0.9						
I46RU				*i*		04 44 25.0	
	baz=270,slow=305,SNR=51						
ZAA0	Zalesovo Array	13.22	83	Lg	Lg	03 28 18.4	
FRU1	Bishkek	14.24	140	Lg	Lg	03 29 41.0	
I43RU	DUBNA INFRASON	14.29	289	*i*		05 00 08.0	
	baz=87,slow=328,SNR=2.5						
I43RU				*i* x	x	05 05 00.0	
	baz=66,slow=237,SNR=0.8						
I43RU				*i* x	x	05 06 20.0	
	baz=87,slow=329,SNR=2.5						
I43RU				*i* x	x	05 12 20.0	
	baz=85,slow=299,SNR=2.3						
I43RU				*i* x	x	05 12 40.0	
	baz=85,slow=344,SNR=1.3						
I43RU				*i* x	x	05 17 40.0	
	baz=84,slow=294,SNR=1.9						
I43RU				*i* x	x	05 31 00.0	
	baz=84,slow=277,SNR=2.8						
AAK	Ala-Archa	14.34	141	Lg	Lg	03 29 10.2	
MAKZ	Makanchi	14.66	114	Lg	Lg	03 29 17.1	
OBN	Obninsk	14.79	283	Lg	Lg	03 28 45.1	
MKAR	Makanchi Array	14.84	113	Pn	Pn	03 25 38.3	-0.9
	baz=303,slow=14,SNR=3.0						
MKAR				Lg	Lg	03 30 06.0	
	0.0nm,0.3s,baz=322,slow=23,SNR=3.5						
I34MN	SONGINO INFRAS	28.13	85	*i*		06 13 10.0	
	baz=296,slow=324,SNR=6.1						
I34MN				*i* x	x	06 22 50.0	
	baz=286,slow=329,SNR=0.5						
I26DE	FREYUNG INFRAS	30.11	279	*i*		07 07 50.0	
	baz=60,slow=320,SNR=5.1						
I26DE				*i* x	x	07 10 10.0	
	baz=53,slow=325,SNR=19						
I26DE				*i* x	x	07 20 00.0	
	baz=53,slow=325,SNR=15						
I26DE				*i* x	x	07 28 20.0	
	baz=56,slow=318,SNR=6.7						
I26DE				*i* x	x	07 33 30.0	
	baz=66,slow=302,SNR=8.3						
I26DE				*i* x	x	07 35 00.0	
	baz=50,slow=307,SNR=8.4						
I26DE				*i* x	x	07 36 50.0	
	baz=42,slow=308,SNR=5.2						
I26DE				*i* x	x	07 40 30.0	
	baz=50,slow=266,SNR=10						
I45RU	USSURIYSK INFR	44.81	73	*i*		07 54 15.0	
	baz=302,slow=336,SNR=5.9						
I18DK	QAANAAQ INFRAS	44.92	347	*i*		08 15 20.0	
	baz=22,slow=347,SNR=43						
I18DK				*i* x	x	08 30 25.0	
	baz=15,slow=340,SNR=18						
I18DK				*i* x	x	08 41 30.0	
	baz=28,slow=312,SNR=36						
I18DK				*i* x	x	08 44 20.0	
	baz=23,slow=319,SNR=35						
I44RU	PETROPAVLOVSK	52.10	50	*i*		08 52 55.0	
	baz=310,slow=331,SNR=18						
I44RU				*i* x	x	09 10 00.0	
	baz=307,slow=314,SNR=12						
I53US	FAIRBANKS INFR	58.75	14	*i*		09 30 20.0	
	baz=339,slow=325,SNR=61						
I53US				*i* x	x	10 00 20.0	
	baz=332,slow=320,SNR=3.3						
I32KE	NAIROBI INFRAS	59.37	210	*i*		09 42 50.0	
	baz=24,slow=307,SNR=0.7						
I32KE				*i* x	x	09 58 10.0	
	baz=28,slow=287,SNR=0.4						
I32KE				*i* x	x	10 04 00.0	
	baz=26,slow=283,SNR=0.6						
I32KE				*i* x	x	10 10 30.0	
	baz=33,slow=273,SNR=0.6						
I52GB	DIEGO GARCIA I	62.23	168	*i*		09 46 41.4	
	baz=343,slow=289,SNR=0.5						
I10CA	LAC DU BONNET	74.10	346	*i*		11 16 15.0	
	baz=358,slow=336,SNR=12						
I10CA				*i* x	x	11 30 00.0	
	baz=355,slow=322,SNR=41						
I10CA				*i* x	x	11 55 40.0	
	baz=351,slow=280,SNR=17						
I10CA				*i* x	x	12 02 10.0	
	baz=360,slow=313,SNR=5.3						
I33MG	ANTANANARIVO I	74.31	195	*i*		11 16 40.0	
	baz=16,slow=308,SNR=8.3						
I33MG				*i* x	x	11 29 50.0	
	baz=15,slow=290,SNR=16						
I33MG				*i* x	x	11 37 00.0	
	baz=6.1,slow=290,SNR=7.5						
I33MG				*i* x	x	11 40 50.0	
	baz=27,slow=299,SNR=13						
I33MG				*i* x	x	11 41 00.0	
	baz=8.6,slow=287,SNR=10						
I33MG				*i* x	x	11 44 00.0	
	baz=18,slow=296,SNR=15						
I56US	NEWPORT INFRAS	77.62	360	*i*		11 34 55.0	
	baz=356,slow=315,SNR=30						
I56US				*i* x	x	11 50 00.0	
	baz=354,slow=299,SNR=7.0						
I56US				*i* x	x	11 53 40.0	
	baz=352,slow=284,SNR=6.4						
I56US				*i* x	x	11 55 00.0	
	baz=341,slow=280,SNR=8.1						
I56US				*i* x	x	11 57 00.0	
	baz=1.3,slow=283,SNR=10						
I56US				*i* x	x	12 03 40.0	
	baz=351,slow=296,SNR=10						
I57US	PINON FLAT INF	92.26	359	*i*		13 10 25.0	
	baz=355,slow=306,SNR=2.2						
I59US	HAWAII INFRASO	99.33	36	*i*		13 38 46.6	
	baz=346,slow=275						
I05AU	HOBART INFRASO	120.82	121	*i*		16 35 10.8	
	baz=320,slow=392						
I21FR	MARQUESAS ISLA	131.11	30	*i* x	x	03 53 59.8	
	baz=155,slow=254						
I27DE	GEORG VON NEUM	134.53	206	*i* x	x	03 06 00.0	
	baz=235,slow=336,SNR=24						
I27DE				*i* x	x	03 20 30.0	
	baz=239,slow=334,SNR=41						
I27DE				*i*		17 42 40.2	
	baz=52,slow=347						

NEIC ***15*** *03:23:29.6±3.3, 10°.74S×165°.25E, h14^{km}±21^{km}, mb4.3/8, Error ellipse: s-maj=10.8km s-min=6.1km az=163.0*

ISCJB ***15*** *03:23:30.3±0.4, 10°.87S±0°.08×165°.26E±0°.05, h31^{km}, mb4.0/16, Error ellipse: s-maj=11.9km s-min=7.4km az=171.6*

IDC ***15*** *03:23:35.7±3.4, 10°.84S×165°.17E, h63^{km}±30^{km}, mb3.6/11, mb1 3.9/13, mb1mx3.7/42, mbtmp3.9/13, ML4.6/2, MS3.5/1, Ms1 3.5/1, ms1mx3.1/21, Error ellipse: s-maj=22.0km s-min=20.6km az=159.0*

ISC 15 03:23:32.1±0.6**, 10°.8S**±0°.1×**165°.30E**±0°.07**, h31**^{km}**, n31,** σ1^{s}**05**/32**, mb3.8**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.43	283	*e*Pn	Pn	03 24 49.1	-1.8
HNR				*e*Sn	Sn	03 25 54.0	+1.6
HNR	Honiara	5.43	283	P	Pn	03 24 51.9	+0.9
	49nm,0.3s,baz=137,slow=5.5,SNR=4.4						
HNR				S	Sn	03 25 54.0	+1.6
	16nm,0.3s,baz=270,slow=4.0,SNR=2.0						
HNR				LR	LR	03 27 06.4	
	comp=Z,461nm,19.4s,baz=98,slow=40						
DZM	Mont Dzumac	11.31	175	*e*Pn	Pn	03 26 11.3	-0.5
DZM	Mont Dzumac	11.31	175	P	Pn	03 26 13.8	+2.1
	1.7nm,0.3s,baz=305,slow=15,SNR=21						
FUNA	Funafuti	13.88	82	*e*Pn	Pn	03 26 46.8	0.0
CTA	Charters Tower	20.55	241	P	P	03 28 07.1	-1.2
	2.0nm,0.7s,baz=68,slow=11,SNR=2.4						
CTAO	Charters Tower	20.55	241	*e*P	Pn	03 28 08.0	-2.7
COEN	Coen	21.84	259	*e*P	P	03 28 21.7	-0.6
	10nm,1.2s						
STKA	Stephens Creek	30.36	223	*e*P	P	03 29 41.5	+0.2
	1.4nm,1.3s						
STKA	Stephens Creek	30.36	223	P	P	03 29 42.0	+0.8
	1.9nm,0.9s,baz=38,slow=14,SNR=3.8						
WRAB	Tennant Creek	31.16	249	*e*P	P	03 29 48.5	-0.1
	1.1nm,0.7s						
WR1	Warramunga Arr	31.18	249	*e*P	P	03 29 47.1	-1.6
	6.3nm,1.2s						
WRA	Warramunga Arr	31.18	249	P	P	03 29 47.1	-1.6
	0.6nm,0.7s,baz=78,slow=9.1,SNR=6.2						
ASAR	Alice Springs	32.53	243	P	P	03 29 59.5	-1.0
	0.6nm,0.6s,baz=69,slow=9.6,SNR=9.4						
BBOO	Buckleboo	34.71	226	*e*P	P	03 30 20.0	+0.6
	9.2nm,0.7s						
FITZ	Fitzroy Crossi	39.03	255	*e*P	P	03 30 55.9	-0.4
	19nm,1.8s						
FITZ	Fitzroy Crossi	39.03	255	P	P	03 30 54.4	-1.9
	3.9nm,1.2s,baz=44,slow=8.6,SNR=5.8						
ULN	Ulaanbaatar	77.81	324	*e*P	P	03 35 27.4	+0.8
	1.1nm,0.4s						
SONA0	Songino Array	78.17	324	*e*P	P	03 35 29.4	+0.9
SONM	Songino Array	78.17	324	P	P	03 35 29.4	+0.9
	0.8nm,0.8s,baz=138,slow=6.7,SNR=5.3						
SONA1	Songino Array	78.17	324	*e*P	P	03 35 28.7	+0.1
ILAR	Eielson Array	83.37	19	P	P	03 35 56.6	+0.7
	0.7nm,0.7s,baz=240,slow=4.6,SNR=8.9						
NV01	Mina Array Sit	86.17	50	*e*P	P	03 36 11.1	+0.2
NVAR	Mina Array Bea	86.17	50	P	P	03 36 11.6	+0.8
	0.5nm,0.7s,baz=250,slow=9.5,SNR=2.9						
PFO	Pinyon Flats O	86.27	55	*e*P	P	03 36 11.7	+0.4
	1.5nm,0.5s						
MK32	Makanchi Array	93.01	317	*e*P	P	03 36 41.8	-0.8
MKAR	Makanchi Array	93.01	317	P	P	03 36 41.8	-0.8
	0.2nm,0.6s,baz=101,slow=6.3,SNR=4.4						
YKA	Yellowknife Ar	94.91	27	P	P	03 36 50.3	-0.6
	0.3nm,0.8s,baz=259,slow=5.0,SNR=5.8						
YKB5	Yellowknife Ar	94.91	27	*e*P	P	03 36 50.4	-0.6
LTX	Lajitas	96.07	61	*e*P	P	03 36 57.0	-0.2
TXAR	Lajitas Array	96.07	61	P	P	03 36 57.0	-0.2
	0.2nm,0.8s,baz=214,slow=6.4,SNR=2.4						

IGIL ***15*** *03:41:00.6, 32°.02N×12°.12W, h10^{km}, ML2.4*

CNRM ***15*** *03:41:02.2, 32°.03N×12°.07W, h50^{km}, ml2.9*

MDD ***15*** *03:41:02.4±0.7, 31.°96N×11.°99W, h50^{km}, mb4.4/5, Error ellipse: s-maj=18.1km s-min=5.9km az=127.0, PRXIMO*

INMG ***15*** *03:41:06.2±2.0, 32.°04N×12.°12W, h10^{km}, ML2.7, Error ellipse: s-maj=4.7km s-min=2.6km az=132.0*

ISC 15 03:40:56.9±1.0**, 32.°09N**±0.°05×**12.°06W**±0.°05**, h10^{km}, n50, σ3^{s}38**/83**, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFAM	Famara	3.21	204	P	Pn	03 41 48.1	+0.7
	4.4nm,0.2s,SNR=7.9						
EFAM				S	Sn	03 42 22.4	-3.3
	9.7nm,0.3s,SNR=7.9						
TTIG	Tnine Tigouga,	3.46	115	P	Pn	03 41 51.7	+0.7
TTIG				S	Sn	03 42 31.8	-0.3
SRHM	Skhour des Reh	3.55	83	P	Pn	03 41 56.0	+3.8
SRHM				S	Sn	03 42 33.7	-0.5
OUK	Oukaimeden	3.69	103	P	Pn	03 41 58.0	+3.7
OUK				S	Sn	03 42 38.3	+0.3
PMPS	Porto Santo	3.73	286	*e*Pn	Pn	03 41 57.7	+3.1
PMPS				*e*Sn	Sn	03 42 35.9	-2.7
PMPS				A	A	03 42 43.5	
	18nm,0.6s						
CFUE	Fuerteventura	3.79	206	P	Pn	03 41 55.8	+0.4
	4.1nm,0.2s,SNR=7.9						
CFUE				S	Sn	03 42 37.1	-2.9
	9.2nm,0.1s,SNR=7.9						
CFTV	Fuerteventura	4.06	206	P	Pn	03 41 57.6	-1.5
	1.5nm,0.3s,SNR=7.9						
CFTV				S	Sn	03 42 42.9	-3.8
	2.2nm,0.2s,SNR=7.9						
AVE	Averroes	4.10	72	*e*P	Pn	03 42 04.0	+4.3
AVE				*e*S	Sn	03 42 48.7	+0.9
FUL	Funchal	4.12	279	*e*Pn	Pn	03 42 03.4	+3.4
FUL				*e*Sn	Sn	03 42 44.5	-3.8
FUL				A	A	03 42 53.5	
	26nm,0.4s						
PMAR	Madeira	4.15	280	*e*Pn	Pn	03 42 04.4	+3.9
PMAR				*e*Sn	Sn	03 42 46.3	-2.9
PMAR				A	A	03 42 53.2	
	38nm,0.2s						
PMAR	Madeira	4.15	280	P	Pn	03 42 01.8	+1.3
PMAR				S	Sn	03 42 50.7	+1.5
PMOZ	Porto Moniz, M	4.40	281	*e*Pn	Pn	03 42 08.1	+4.2
PMOZ				*e*Sn	Sn	03 42 51.8	-3.5
PMOZ				A	A	03 43 07.5	
	27nm,0.6s						
PMOZ	Porto Moniz, M	4.40	281	P	Pn	03 42 07.5	+3.6
	16nm,0.3s,SNR=7.9						
PMOZ				S	Sn	03 42 55.7	+0.4
	155nm,0.8s,SNR=7.9						
OUZM	OUZ	4.68	103	P	Pn	03 42 11.6	+3.8
OUZM				S	Sn	03 43 01.8	-0.4
EOSO	Osorio	5.01	218	S	Sn	03 43 05.4	-5.0
	1.6nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	5.70	27	*e*Pn	Pn	03 42 23.6	+2.0
PFVI				*e*Sn	Sn	03 43 24.6	-2.5
PFVI				A	A	03 43 27.2	
	3.4nm,0.2s						
PFVI	Vila Bisbo	5.70	27	P	Pn	03 42 23.7	+2.0
	3.3nm,0.3s,SNR=7.2						
PFVI				S	Sn	03 43 24.6	-2.5
	0.3nm,0.2s,SNR=7.9						
MORF	Marmelete	5.92	27	*e*P	Pn	03 42 27.3	+2.6
MORF				*e*S	Sn	03 43 30.1	-2.5
MORF				AML	AML	03 43 32.3	
	comp=N,4.9nm,0.2s						
MORF	Marmelete	5.92	27	*e*Pn	Pn	03 42 27.0	+2.3
MORF				*e*Sn	Sn	03 43 29.1	-3.5
MORF				A	A	03 43 31.4	
	comp=N,4.7nm,0.1s						
MORF	Marmelete	5.92	27	P	Pn	03 42 27.3	+2.6
MORF				S	Sn	03 43 30.1	-2.5
	comp=N,4.9nm,0.2s						
PTEO	Sao Teotonio	6.10	26	*e*Pn	Pn	03 42 31.8	+4.7
PTEO				*e*Sn	Sn	03 43 35.2	-1.8
PTEO				A	A	03 43 38.7	
	comp=N,5.0nm,0.6s						
PBDV	Barranco-do-Ve	6.17	32	*e*Pn	Pn	03 42 31.8	+3.7
PBDV				*e*Sn	Sn	03 43 36.4	-2.3
PBDV				A	A	03 43 41.2	
	comp=N,2.4nm,1.0s						
MD31	MD31	6.22	81	S	Sn	03 43 40.2	0.0
LCRM	LCR	6.27	73	S	Sn	03 43 41.5	+0.1
MDT	Midelt	6.34	81	P	Pn	03 42 32.6	+2.0
MDT				S	Sn	03 43 43.8	+0.6
PVAQ	Vaqueiros	6.40	33	*e*Pn	Pn	03 42 35.0	+3.8
PVAQ				*e*Sn	Sn	03 43 42.0	-2.3
PVAQ				A	A	03 43 49.4	
	comp=N,1.6nm,0.2s						
MESJ	Messejana	6.55	28	*e*S	Sn	03 43 45.1	-2.9
MESJ				AML	AML	03 43 50.1	
	comp=N,2.6nm,0.3s						
MESJ	Messejana	6.55	28	*e*Pn	Pn	03 42 37.6	+4.3
MESJ				*e*Sn	Sn	03 43 45.1	-2.9
MESJ				A	A	03 43 50.1	
	comp=N,1.8nm,0.5s						
MESJ	Messejana	6.55	28	S	Sn	03 43 45.1	-2.9
	comp=N,2.6nm,0.3s						
EGRO	El Granado	6.61	33	P	Pn	03 42 38.2	+4.0
	comp=N,3.3nm,0.3s,SNR=12						
EGRO				S	Sn	03 43 46.8	-2.8
	comp=N,1.5nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	6.67	25	*e*Pn	Pn	03 42 38.6	+3.6
PNCL				*e*Sn	Sn	03 43 48.5	-2.6
PNCL				A	A	03 43 50.3	
	comp=N,2.4nm,0.4s						
PBEJ	Beja	6.85	29	*e*Sn	Sn	03 43 54.5	-1.0
PBEJ				A	A	03 43 57.2	
	comp=N,2.3nm,0.4s						
ESPR	Espera	7.00	45	P	Pn	03 42 43.1	+3.6
	comp=N,0.5nm,0.1s,SNR=7.9						
ESPR				S	Sn	03 43 56.0	-3.2
	comp=N,3.2nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	7.19	37	P	Pn	03 42 46.7	+4.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	03 43 59.9	-3.9
	comp=N,0.9nm,0.2s,SNR=7.9						
PMAFR	Mafra	7.22	18	*e*Pn	Pn	03 42 47.9	+5.4
PMAFR				*e*Sn	Sn	03 44 01.0	-3.6
PMAFR				A	A	03 44 03.9	
	comp=N,13nm,0.6s						
PMAFR	Mafra	7.22	18	S	Sn	03 44 00.6	-3.9
	comp=N,17nm,0.4s,SNR=7.9						
EMIJ	Mijas	7.50	51	S	Sn	03 44 06.7	-5.0
	comp=N,2.4nm,0.3s,SNR=7.9						
PMTG	Montargil	7.64	23	*e*Pn	Pn	03 42 52.1	+3.9
PMTG				*e*Sn	Sn	03 44 10.7	-4.1
PMTG				A	A	03 44 16.9	
	comp=N,1.2nm,0.2s						
PESTR	Estremoz	7.69	27	*e*Sn	Sn	03 44 11.0	-5.1
EBAD	Badajoz	7.83	30	P	Pn	03 42 54.6	+3.8
	comp=N,0.8nm,0.2s,SNR=5.3						
EBAD				S	Sn	03 44 16.6	-2.9
	comp=N,1.4nm,0.2s						
ECAB	El Cabril	8.08	41	P	Pn	03 42 58.1	+3.7
	comp=N,0.3nm,0.2s,SNR=7.9						
ECAB				S	Sn	03 44 20.5	-5.3
	comp=N,1.2nm,0.4s,SNR=7.9						
PMRV	Marv??o	8.25	26	*e*Pn	Pn	03 43 00.0	+3.3
PMRV				*e*Sn	Sn	03 44 26.4	-3.5
PMRV				A	A	03 44 32.8	
	comp=N,1.1nm,0.3s						
EGOR	Sierra Gorda,	8.25	50	S	Sn	03 44 25.6	-4.6
	comp=N,1.4nm,0.4s,SNR=7.9						
JBK	JBK	8.27	72	P	Pn	03 42 59.2	+2.0
JBK				S	Sn	03 44 28.0	-2.6
ELGU	Los Guajares,	8.44	53	S	Sn	03 44 28.1	-6.6
	comp=N,0.5nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	8.46	19	*e*Sn	Sn	03 44 30.8	-4.2
EADA	Adamuz	8.62	43	P	Pn	03 43 05.3	+3.5
	comp=N,0.4nm,0.2s,SNR=7.9						
EADA				S	Sn	03 44 33.1	-6.1
	comp=N,1.1nm,0.1s,SNR=7.9						
EQES	Quesada	9.32	50	P	Pn	03 43 15.4	+3.9
	comp=N,0.6nm,0.4s,SNR=7.9						
EQES				S	Sn	03 44 50.1	-6.5
	comp=N,1.1nm,0.3s,SNR=7.9						
SESP	Santiago Espad	9.85	50	S	Sn	03 45 02.4	-7.0
	comp=N,1.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	10.79	50	S	Sn	03 45 24.3	-8.1
	comp=N,1.7nm,0.4s,SNR=7.9						

ISCJB ***15*** *03:46:19.3±0.9, 10.°9S±0.°1×165.°7E±0.°2, h10^{km}, mb3.5/6, Error ellipse: s-maj=27.9km s-min=17.2km az=8.2*

IDC ***15*** *03:46:19.3±1.3, 10.°90S×165.°78E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.7/32, mbtmp3.7/7, ML4.0/1, Error ellipse: s-maj=46.3km s-min=25.1km az=126.0*

ISC 15 03:46:21.0±1.0**, 10.°8S**±0.°1×**165.°8E**±0.°2**, h10^{km}, n13, σ1^{s}33**/7**, mb3.5**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.19	177	Pn	Pn	03 49 01.6	+0.5
	1.1nm,0.3s,baz=17,slow=3.5,SNR=14						
H11S2	WAKE ISLAND Hy	29.16	2	T	T	04 22 46.0	
	baz=181,slow=76,SNR=4.4						
H11S3	WAKE ISLAND Hy	29.17	2	T	T	04 22 46.3	
	baz=181,slow=76,SNR=6.1						
H11S1	WAKE ISLAND Hy	29.18	2	T	T	04 22 47.4	
	baz=181,slow=76,SNR=5.5						
H11N1	WAKE ISLAND Hy	30.38	2	T	T	04 24 21.2	
	baz=182,slow=76,SNR=7.2						
H11N3	WAKE ISLAND Hy	30.39	2	T	T	04 24 18.0	
	baz=182,slow=76,SNR=5.3						
H11N2	WAKE ISLAND Hy	30.40	2	T	T	04 24 19.3	
	baz=182,slow=76,SNR=6.7						
WRA	Warramunga Arr	31.55	250	P	P	03 52 43.1	-0.8
	0.4nm,0.5s,baz=81,slow=9.1,SNR=7.4						
ASAR	Alice Springs	32.88	243	P	P	03 52 55.0	-0.6
	0.3nm,0.5s,baz=74,slow=10.0,SNR=3.8						
SONM	Songino Array	78.50	324	P	P	03 58 24.4	+1.8
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.6						
ILAR	Eielson Array	83.32	19	P	P	03 58 48.2	+0.5
	0.7nm,0.7s,baz=236,slow=5.2,SNR=14						
MKAR	Makanchi Array	93.38	317	P	P	03 59 36.4	-0.2
	0.2nm,0.6s,baz=93,slow=5.9,SNR=2.9						
YKA	Yellowknife Ar	94.79	27	P	P	03 59 41.1	-1.6
	0.1nm,0.6s,baz=243,slow=5.5,SNR=3.0						

IDC 15 03:55:34.0±1.7**, 10.°79S**×**165.°64E, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.5**/38**, mbtmp3.7**/4**, ML3.8**/1**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.9**/31**, Error ellipse: s-maj=56.8km s-min=34.9km az=113.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.24	176	Pn	Pn	03 58 15.9	-0.2
	0.6nm,0.3s,baz=335,slow=17,SNR=9.0						
WRA	Warramunga Arr	31.47	249	P	P	04 01 57.9	+0.2
	0.3nm,0.7s,baz=80,slow=9.3,SNR=3.4						
RPZ	Rata Peaks	33.13	173	LR	LR	04 12 48.0	
	comp=Z,146nm,21.1s,baz=244,slow=31						
ILAR	Eielson Array	83.31	19	P	P	04 08 02.5	+0.2
	0.6nm,0.8s,baz=227,slow=5.7,SNR=7.9						
MKAR	Makanchi Array	93.27	317	P	P	04 08 50.1	-0.6
	0.3nm,0.8s,baz=102,slow=6.5,SNR=2.1						

KRNET ***15*** *03:58:43.0±0.1, 42.°49N×78.°45E, h21^{km}, mb2.9*

SOME ***15*** *03:58:44.0, 42.°52N×78.°38E, h15^{km}*

NNC 15 03:58:44.5±0.9**, 42.°59N**×**78.°41E, h0^{km}, mb3.2, mpv3.1, 20C-11D, Error ellipse: s-maj=7.9km s-min=2.5km az=168.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.11	184	⇑*i*P	Pg	03 58 45.8	-0.7
	baz=52						
PRZ				⇑*i*S	Sg	03 58 47.6	-0.3
	baz=52						
SATY	Saty	0.47	360	P	Pn	03 59 04.3	+5.7
	28nm,0.2s						
SATY				S	Sb	03 59 12.2	+9.0
	221nm,0.2s						
UZB	Uzynbulak	0.71	39	P	Pg	03 58 58.0	-0.2
	3.4nm,0.1s						
UZB				S	Sg	03 59 08.6	+1.2
	79nm,0.1s						
UZB	Uzynbulak	0.71	39	*e*P	Pg	03 58 58.0	-0.2
	baz=32						
UZB				*e*S	Sg	03 59 07.8	+0.4
	baz=32						
UZB	Uzynbulak	0.71	39	*e*P	Pg	03 58 58.0	-0.2
	3.4nm,0.1s						
UZB				*e*S	Sg	03 59 07.8	+0.3
	79nm,0.1s						
TARG	Taragay, Kyrgy	0.97	208	⇓*i*P	Pg	03 58 59.4	-3.7
	baz=13						
TARG				⇓*i*S	Sg	03 59 11.9	-3.8
	baz=13						
KDJ	Kajisay	1.02	244	⇑*i*P	Pg	03 59 02.3	-1.8
	baz=49						
KDJ				⇑*i*S	Sg	03 59 15.6	-1.7
	baz=49						
PDGK	Podgornoye	1.08	47	P	Pg	03 59 04.3	-0.9
	1.4nm,0.1s						
PDGK				S	Sg	03 59 19.3	0.0
	11nm,0.1s						
PDGK	Podgornoye	1.08	47	⇑P	Pn	03 59 07.1	+0.1
	2.1nm,0.3s						
PDGK				⇑S	Sg	03 59 18.8	-0.5
	7.2nm,0.4s						
PDGK	Podgornoye	1.08	47	⇑*i*P	Pg	03 59 04.2	-1.0
	baz=42						
PDGK				⇑*i*S	Sg	03 59 19.1	-0.1
	baz=42						
KOTS	Kotyrbulak	1.15	304	P	Pg	03 59 06.0	-0.5
	5.9nm,0.1s						
KOTS				S	Sb	03 59 22.2	-0.7
	113nm,0.3s						
KOTS	Kotyrbulak	1.15	304	*e*P	Pg	03 59 06.2	-0.3
	baz=7.0						
KOTS				*e*S	Sb	03 59 22.2	-0.7
	baz=7.0						
KOTS	Kotyrbulak	1.15	304	*e*P	Pg	03 59 06.2	-0.3
	3.9nm,0.3s						
KOTS				*e*S	Sb	03 59 22.2	-0.7
	113nm,0.3s						
MDOK	Medeo	1.15	300	P	Pg	03 59 06.1	-0.5
	5.0nm,0.5s						
MDOK				S	Sg	03 59 21.3	-0.2
	35nm,0.5s						
MDOK	Medeo	1.15	300	Pg	Pg	03 59 05.8	-0.7
	7.2nm,0.2s						
MDOK				Lg	Lg	03 59 22.0	
	52nm,0.5s						
MDOK	Medeo	1.15	300	⇓*i*P	Pg	03 59 05.9	-0.7
	baz=3.0						
MDOK				⇓*e*S	Sg	03 59 21.8	+0.3
	baz=3.0						
MDOK	Medeo	1.15	300	⇓*i*P	Pg	03 59 05.8	-0.7
	7.2nm,0.2s						
MDOK				*e*S	Sg	03 59 21.7	+0.2
	52nm,0.5s						
TNSS	Tian-Shan	1.17	293	P	Pg	03 59 06.2	-0.6
	6.2nm,0.2s						
TNSS				S	Sg	03 59 22.1	+0.2
	31nm,0.2s						
TNSS	Tian-Shan	1.17	293	*e*P	Pg	03 59 06.2	-0.6
	2.5nm,0.2s						
TNSS				*e*S	Sg	03 59 21.8	-0.1
	30nm,0.3s						
IZV	Izvestkoviy	1.40	289	P	Pg	03 59 10.7	-0.5
	9.8nm,0.2s						
IZV				S	Sg	03 59 29.4	+0.1
	67nm,0.3s						
IZV	Izvestkoviy	1.40	289	*e*P	Pg	03 59 10.7	-0.5
	baz=92						
IZV				*e*S	Sg	03 59 29.4	+0.1
	baz=92						
IZV	Izvestkoviy	1.40	289	*e*P	Pg	03 59 10.7	-0.5
	9.8nm,0.2s						
IZV				*e*S	Sg	03 59 29.4	+0.1
	67nm,0.3s						
MNBS	Baschi	1.49	360	P	Pn	03 59 12.7	+0.1
	8.8nm,0.3s						
MNBS				S	Sn	03 59 33.7	+1.0
	100nm,0.3s						
MTBS	Maitube	1.55	291	P	Pn	03 59 12.7	-0.8
	9.3nm,0.4s						
MTBS				S	Sn	03 59 33.4	-0.9
	30nm,0.3s						
MTBS	Maitube	1.55	291	*e*P	Pn	03 59 12.8	-0.7
	baz=94						
MTBS				⇑*i*S	Sn	03 59 33.4	-1.0
	baz=94						
MTBS	Maitube	1.55	291	*e*P	Pn	03 59 12.8	-0.6
	2.5nm,0.2s						
MTBS				⇑*i*S	Sn	03 59 33.4	-0.9
	27nm,0.4s						
CHKK	Chushkaly	1.64	321	P	Pb	03 59 15.6	+0.1
	14nm,0.2s						
CHKK				S	Sg	03 59 37.8	+0.8
	169nm,0.3s						
CHKK	Chushkaly	1.64	321	*e*P	Pb	03 59 15.6	+0.1
	14nm,0.2s						
CHKK				*e*S	Sg	03 59 37.8	+0.8
	169nm,0.3s						
ULHL	Ulahol	1.64	259	⇑*i*P	Pn	03 59 13.1	-1.7
	baz=62						
ULHL				⇑*i*S	Sn	03 59 35.3	-1.5
	baz=62						
KTMS	Ketmen	1.66	58	P	Pn	03 59 15.1	+0.1
	9.5nm,0.1s						
KTMS				S	Sn	03 59 36.9	-0.2
	18nm,0.2s						
KTMS	Ketmen	1.66	58	*e*P	Pn	03 59 15.1	+0.1
	9.5nm,0.1s						
KTMS				*e*S	Sn	03 59 36.9	-0.2
	18nm,0.2s						
ARXS	Arharly	1.68	345	P	Pb	03 59 16.2	0.0
	8.8nm,0.4s						
ARXS				S	Sg	03 59 39.6	+1.3
	45nm,0.3s						
ARXS	Arharly	1.68	345	*e*P	Pb	03 59 16.2	0.0
	8.8nm,0.4s						
ARXS				*e*S	Sg	03 59 39.6	+1.3
	45nm,0.3s						
KTBS	Karatobe	1.69	312	P	Pb	03 59 16.0	-0.5
	11nm,0.3s						
KTBS				S	Sg	03 59 39.3	+0.5
	65nm,0.2s						
KTBS	Karatobe	1.69	312	*e*P	Pb	03 59 16.0	-0.5
	11nm,0.3s						
KTBS				*e*S	Sg	03 59 38.7	-0.1
	65nm,0.2s						
BOOM	Boomskoye usch	1.83	268	⇑*i*P	Pn	03 59 16.3	-1.0
	baz=71						
BOOM				⇑*i*S	Sn	03 59 40.8	-0.5
	baz=71						
KST	Kastek	1.86	285	P	Pn	03 59 17.8	+0.1
	15nm,0.3s						
KST				S	Sn	03 59 41.9	0.0
	40nm,0.3s						
KST	Kastek	1.86	285	⇓*i*P	Pn	03 59 17.8	+0.1
	baz=88						
KST				⇓*e*S	Sn	03 59 41.9	0.0
	baz=88						
KST	Kastek	1.86	285	⇓*i*P	Pn	03 59 17.8	+0.1
	15nm,0.3s						
KST				*e*S	Sn	03 59 41.9	0.0
	40nm,0.3s						
KUU	Kurty	2.00	311	Pg	Pb	03 59 20.8	-0.9
	11nm,0.2s						
KUU				Lg	Lg	03 59 47.4	
	44nm,0.3s						
KUU	Kurty	2.00	311	⇑*i*P	Pb	03 59 20.8	-0.9
	11nm,0.2s						
KUU				*e*S	Sb	03 59 47.4	+0.3
	44nm,0.3s						
DJR	Jarkent	2.01	30	Pg	Pb	03 59 21.8	-0.1
	1.9nm,0.2s						
DJR				Lg	Lg	03 59 48.7	
	23nm,0.2s						
DJR	Jarkent	2.01	30	*e*P	Pb	03 59 21.8	-0.1
	1.9nm,0.2s						
DJR				*e*S	Sg	03 59 48.7	-0.3
	23nm,0.2s						
DGS	Degeres	2.04	289	Pg	Pb	03 59 21.6	-0.9
	12nm,0.5s						
DGS				Lg	Lg	03 59 48.9	
	59nm,0.4s						
DGS	Degeres	2.04	289	*e*P	Pb	03 59 21.6	-0.9
	12nm,0.5s						
DGS				*e*S	Sb	03 59 48.9	+0.3
	59nm,0.4s						
TKM2	Tokmak 2	2.10	280	⇓Pn	Pn	03 59 21.7	+0.6
	2.7nm,0.4s						
TKM2				⇑Sn	Sb	03 59 49.5	-0.7
	13nm,0.5s						
TKM2	Tokmak 2	2.10	280	⇑*i*P	Pn	03 59 21.6	+0.5
	baz=82						
TKM2				⇑*i*S	Sb	03 59 49.5	-0.7
	baz=82						
NRN	Naryn	2.14	238	⇑*i*P	Pn	03 59 20.2	-1.5
	baz=41						
NRN				⇑*i*S	Sn	03 59 47.6	-1.5
	baz=41						
KAPS	Kapalarasan	2.78	14	Pg	Pb	03 59 34.9	-0.1
	0.8nm,0.3s						
KAPS				Lg	Lg	04 00 11.3	
	12nm,0.2s						
KAPS	Kapalarasan	2.78	14	*e*P	Pb	03 59 34.9	-0.1
	0.8nm,0.3s						
KAPS				*e*S	Sb	04 00 11.2	+1.6
	12nm,0.2s						
AAK	Ala-Archa	2.89	272	Pn	Pn	03 59 32.4	+0.5
	2.1nm,0.6s						
AAK				Lg	Lg	04 00 15.1	
	2.6nm,0.3s						
ARLS	Aral	3.12	258	⇓*e*P	Pn	03 59 34.1	-1.0
	baz=60						
ARLS				⇓*i*S	Sn	04 00 12.1	-1.1
	baz=60						
MRKS	Merke	3.83	274	Pg	Pb	03 59 53.8	+0.8
	2.1nm,0.3s						
MRKS				Lg	Lg	04 00 43.4	
	4.3nm,0.3s						
MRKS	Merke	3.83	274	*e*P	Pb	03 59 53.8	+0.8
	2.1nm,0.3s						
MRKS				*e*S	Sb	04 00 43.4	+3.5
	4.3nm,0.3s						
MAKZ	Makanchi	4.92	30	Pn	Pn	04 00 00.6	+0.9
	0.7nm,0.4s						
MAKZ				Sn	Sn	04 00 58.9	+1.5
	0.5nm,0.7s						
MAKZ				Lg	Lg	04 01 15.7	
	0.5nm,0.5s						
MK31	Makanchi Array	5.03	32	Pn	Pn	04 00 03.1	+1.9
	0.1nm,0.3s,baz=209,slow=15,SNR=12						
MK31				Sn	Sn	04 01 01.5	+1.5
	0.4nm,0.5s						
MK31				Lg	Lg	04 01 19.7	
	0.8nm,0.5s,baz=215,slow=29,SNR=6.1						
KK31	Karatay Array	5.83	278	Pg	Pg	04 00 34.9	-1.2
	0.3nm,0.5s						
KK31				Lg	Lg	04 01 48.3	
	0.3nm,0.3s,baz=95,slow=25,SNR=4.1						

ISCJB ***15*** *04:04:45.8±0.5, 67.°61N±0.°05×142.°8E±0.°1, h10^{km}, mb3.4/10, Error ellipse: s-maj=7.8km s-min=6.2km az=40.9*

IDC ***15*** *04:04:47.2±0.9, 68.°02N×142.°27E, h0^{km}, mb3.5/10, mb1 3.7/12, mb1mx3.6/51, mbtmp3.5/12, ML3.0/2, Error ellipse: s-maj=27.3km s-min=17.1km az=172.0*

YARS ***15*** *04:04:47.2±0.2, 67.°59N±0.°01×142.°92E±0.°03, h6^{km}*

ISC 15 04:04:47.4±0.6**, 67.°57N**±0.°06×**142.°98E**±0.°04**, h10^{km}, n16, σ1^{s}97**/19**, mb3.6**/10**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.11	175	*e*P	Pb	04 05 07.2	-1.5
MOMR				Pmax		04 05 07.2	
	comp=Z,121nm,0.2s						
MOMR				*e*S	Sb	04 05 22.5	-0.7
MOMR				Smax		04 05 22.5	
	comp=N,861nm,0.5s						
YBGR	Belaya Gora	1.55	50	*e*P	Pn	04 05 14.6	-0.3
YBGR				Pmax		04 05 14.6	
	comp=Z,273nm,0.3s						
YBGR				*e*S	Sb	04 05 35.6	0.0
YBGR				Smax		04 05 35.6	
	comp=N,751nm,0.2s						
BTGS	Batagay	3.19	275	*e*P	Pn	04 05 38.0	+0.5
BTGS				*e*P	Pb	04 05 44.3	+0.2
BTGS				Pmax		04 05 44.3	
	comp=Z,17nm,0.5s						
BTGS				*e*S	Sn	04 06 14.8	-0.8
BTGS				*e*S	Sb	04 06 25.3	+2.3
BTGS				Smax		04 06 25.3	
	comp=N,285nm,0.5s						
SEY	Seymchan	6.10	135	Pn	Pn	04 06 25.7	+8.2
	comp=N,0.4nm,0.3s,baz=329,slow=13,SNR=4.8						
SEY				Lg	Lg	04 07 54.5	
	comp=N,0.6nm,0.3s,baz=20,slow=24,SNR=4.7						
MA2	Magadan	8.74	153	Lg	Lg	04 09 25.9	

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
	comp=N,1.9nm,0.3s,baz=95,slow=21,SNR=6.3						
PETK	Petropavlovsk-	16.16	147	Pn	P	04 08 42.6	+5.1
	comp=N,0.2nm,0.3s,baz=339,slow=12,SNR=3.4						
ILAR	Eielson Array	27.10	62	P	P	04 10 30.2	+0.5
	comp=N,1.2nm,0.9s,baz=293,slow=7.8,SNR=11						
SONM	Songino Array	27.13	242	P	P	04 10 30.5	+0.2
	comp=N,0.3nm,0.8s,baz=52,slow=9.3,SNR=2.6						
MKAR	Makanchi Array	36.87	267	P	P	04 11 53.8	-1.7
	comp=N,0.6nm,0.6s,baz=53,slow=8.1,SNR=4.3						
YKA	Yellowknife Ar	38.78	46	P	P	04 12 11.4	0.0
	comp=N,0.2nm,0.6s,baz=322,slow=8.2,SNR=7.4						
AAK	Ala-Archa	43.36	271	P	P	04 12 49.4	-0.2
	comp=N,1.0nm,0.5s,baz=35,slow=18,SNR=3.6						
FINES	FINESS Array B	43.41	321	P	P	04 12 47.0	-2.5
	comp=N,0.6nm,0.4s,baz=45,slow=11,SNR=6.0						
AKASG	Malin Array Be	52.09	312	P	P	04 13 55.0	-1.9
	comp=N,0.4nm,0.4s,baz=30,slow=8.3,SNR=2.2						
PDAR	Pinedale Array	57.32	57	P	P	04 14 35.8	+0.6
	comp=N,0.4nm,0.7s,baz=20,slow=4.7,SNR=4.0						
ESDC	Sonseca Array	70.18	333	P	P	04 15 58.2	-1.6
	comp=N,0.2nm,0.6s,baz=356,slow=8.4,SNR=3.7						
TXAR	Lajitas Array	71.50	58	P	P	04 16 11.3	+3.3
	comp=N,0.2nm,0.6s,baz=343,slow=2.8,SNR=2.5						

MEX 15 04:09:03.0±0.4, 15°.48N×93°.30W, h105^{km}±7^{km}, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.24	19	*e*P	Pn	04 09 16.8	-1.1
PCIG				*e*S	Sn	04 09 27.2	-1.9
CCIG	Comitan	1.37	54	*e*P	Pn	04 09 25.8	-2.4
CCIG				*i* S	Sn	04 09 46.1	-1.1

*IDC **15** 04:22:45.8±337.0, 37°.46N×136°.55E, h0^{km}, Error ellipse: s-maj=144.3km s-min=77.9km az=126.0*

JMA 15 04:20:03.9±0.5, 36°.47N×144°.25E, h47^{km}, M3.3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	2.84	284	P	Pn	04 20 48.3	+1.5
JIKH	Ishinomakikobu	2.88	310	P	Pn	04 20 48.7	+1.4
JIKH				*e*S	Sn	04 21 22.5	+1.9
JFT	Otama	3.30	290	P	Pn	04 20 55.2	+2.1
I30JP	ISUMI INFRASON	3.40	251	*i*		04 47 20.0	
	baz=305,slow=302,SNR=0.7						
JMK	Ichinoseki	3.45	317	P	Pn	04 20 56.5	+1.4
JMK				*e*S	Sn	04 21 36.5	+1.8
JOM	Ohasama	3.80	323	P	Pn	04 21 01.6	+1.7
JOM				S	Sn	04 21 44.2	+0.9
I45RU	USSURIYSK INFR	12.13	313	*i*		05 10 30.0	
	baz=150,slow=361						
I44RU	PETROPAVLOVSK	19.13	25	*i*		06 32 35.6	
	baz=230,slow=328,SNR=0.5						

*ISCJB **15** 04:21:03.0±0.6, 9°.32N±0°.03×122°.29E±0°.04, h10^{km}, mb3.8/10, Error ellipse: s-maj=5.9km s-min=4.1km az=159.7*

*MAN **15** 04:21:07.0, 9°.34N×122°.49E, h15^{km}, MS3.4*

MAN INTENSITY II - BAYAWAN CITY NEGROS ORIENTAL; SIPALAY CITY & HINOBAAN NEGROS OCCIDENTAL.

*IDC **15** 04:21:12.4±7.3, 9°.36N×122°.78E, h93^{km}±67^{km}, mb3.5/10, mb1 3.7/10, mb1mx3.4/54, mbtmp3.8/10, MS3.1/1, Ms1 3.1/1, ms1mx2.5/45, Error ellipse: s-maj=45.6km s-min=14.8km az=72.0*

ISC 15 04:21:04.0±0.7, **9°.36N**±0°.03×**122°.39E**±0°.05, **h10^{km}, n26, σ2^{s}.53**/36, **mb3.8**/10, **3C-3D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	Sibulan	0.84	91	⇓*i*P	Pg	04 21 21.3	+1.2
SNPH				*i* S	Sb	04 21 31.9	-0.1
GUIM	Jordan	1.28	9	*e*P	Pn	04 21 28.7	+0.8
GUIM				*e*S	Sb	04 21 45.6	+1.0
JAP	San Jose, Anti	1.45	343	⇓*e*P	Pn	04 21 32.8	+2.6
TBP	Tagbilaran	1.49	77	*e*P	Pn	04 21 31.3	+0.5
TBP				*i* S	Sn	04 21 50.6	+0.2
IPIL	Ipil	1.57	173	*e*P	Pn	04 21 32.6	+0.7
IPIL				*e*S	Sn	04 21 50.4	-1.9
PAGZ	Pagadian	1.79	147	*e*P	Pn	04 21 37.0	+2.0
PAGZ				*e*S	Sn	04 21 57.9	+0.1
RCP	Roxas	2.22	9	⇑*e*P	Pn	04 21 44.6	+3.7
RCP				*e*S	Sn	04 22 11.8	+3.5
CGP	Cagayan de Oro	2.45	111	⇑*e*P	Pn	04 21 45.2	+1.2
CGP				*e*S	Sn	04 22 13.8	-0.3
MSLP	Maasin	2.56	72	*e*P	Pn	04 21 46.9	+1.4
MSLP				*e*S	Sn	04 22 15.8	-0.9
OCLP	Ormoc	2.76	52	*e*P	Pn	04 21 49.0	+0.7
OCLP				*e*S	Sn	04 22 15.1	-6.6
CTBH	Cotabato--PC H	2.81	139	⇑*i*P	Pn	04 21 50.9	+2.0
CTBH				*i* S	Sn	04 22 24.3	+1.4
BUKP	Musuan	3.02	119	*e*P	Pn	04 21 54.6	+2.7
BUKP				*e*S	Sb	04 22 32.3	-2.8
BUTP	Butuan	3.22	97	*e*P	Pn	04 21 56.2	+1.6
BUTP				*e*S	Sb	04 22 37.0	-3.4
KCP	Kidapawan	3.55	131	⇓*e*P	Pb	04 22 10.3	+3.3
KCP				*i* S	Sg	04 23 04.0	+5.9
DAV	Davao City (W)	3.89	125	LR	LR	04 23 57.2	
	comp=Z,283nm,19.5s,baz=353,slow=46						
WRA	Warramunga Arr	31.40	158	P	P	04 27 23.3	-2.1
	1.3nm,0.8s,baz=341,slow=9.3,SNR=12						
WRA				PcP	PcP	04 30 15.4	-3.7
	0.4nm,0.7s,baz=349,slow=3.4,SNR=3.7						
ASAR	Alice Springs	34.70	161	P	P	04 27 52.9	-1.3
	2.0nm,0.6s,baz=344,slow=7.3,SNR=22						
ASAR				PcP	PcP	04 30 25.0	-3.2
	0.3nm,0.6s,baz=15,slow=3.8,SNR=3.2						
KLR	Kul'dur	40.51	9	P	P	04 28 41.8	-1.3
	1.1nm,0.7s,baz=222,slow=4.5,SNR=5.4						
SONM	Songino Array	40.66	343	P	P	04 28 44.1	-0.4
	0.3nm,0.6s,baz=169,slow=8.5,SNR=3.4						
STKA	Stephens Creek	44.93	157	P	P	04 29 16.5	-2.7
	0.7nm,0.3s,baz=342,slow=13,SNR=3.9						
MKAR	Makanchi Array	50.50	325	P	P	04 30 02.6	+0.3
	0.4nm,0.7s,baz=130,slow=7.2,SNR=5.6						
AKTO	Aktyubinsk	66.60	321	P	P	04 31 54.5	0.0
	1.3nm,0.6s,baz=95,slow=7.0,SNR=6.0						
ILAR	Eielson Array	81.92	26	P	P	04 33 20.2	-3.4
	0.3nm,0.7s,baz=257,slow=5.0,SNR=5.0						
FINES	FINESS Array B	84.86	331	P	P	04 33 37.2	-1.6
	1.7nm,1.0s,baz=54,slow=7.1,SNR=1.4						
YKA	Yellowknife Ar	96.12	23	P	P	04 34 29.3	-2.5
	0.1nm,0.3s,baz=314,slow=3.5,SNR=6.0						
TORD	Torodi Ar. Bea	117.01	290	PKP	PKPdf	04 39 48.2	-2.0
	0.5nm,0.7s,baz=27,slow=2.6,SNR=3.8						

*ISCJB **15** 04:26:42.3±5.8, 30°.5S±0°.1×176°.6W±0°.8, h33^{km}, mb4.5/9, MS3.8/1, Error ellipse: s-maj=101.2km s-min=14.0km az=171.5*

*IDC **15** 04:26:45.0±1.1, 30°.35S×177°.36W, h0^{km}, mb4.5/5, mb1 4.5/7, mb1mx4.1/37, mbtmp4.4/7, ML3.9/2, MS3.8/1, Ms1 3.8/1, ms1mx2.9/33, Error ellipse: s-maj=28.7km s-min=22.1km az=109.0*

*NEIC **15** 04:26:50.4±0.5, 30°.42S×177°.46W, h35^{km}, mb4.3/5, Error ellipse: s-maj=12.3km s-min=8.1km az=107.0*

ISC 15 04:26:49.8±0.9, **30°.34S**±0°.07×**177°.5W**±0°.2, **h33^{km}, n37, σ1^{s}.22**/39, **mb4.5**/9, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.15	341	*e*Pn	Pn	04 27 08.8	-0.7
RAO				*e*Sn	Sn	04 27 21.5	-2.5
RAO	Raoul Island	1.15	341	Pn	Pn	04 27 09.1	-0.4
	407nm,0.3s,baz=22,slow=16,SNR=26						
RAO				Sn	Sn	04 27 21.5	-2.5
	4µm,0.3s,baz=127,slow=20,SNR=30						
URZ	Urewera	9.07	208	Pn	Pn	04 28 57.6	-0.7
	0.7nm,0.3s,baz=276,slow=4.4,SNR=9.8						
URZ				Sn	Sn	04 30 36.2	-3.0
	6.4nm,0.3s,baz=209,slow=19,SNR=11						
BFZ	Birch Farm	11.50	205	*e*Pn	Pn	04 29 29.0	-2.6
RPZ	Rata Peaks	16.16	211	Pn	Pn	04 30 33.9	-0.4
	0.7nm,0.3s,baz=33,slow=17,SNR=3.8						
CTA	Charters Tower	34.22	279	P	P	04 33 34.9	+2.3
	10nm,0.6s,baz=104,slow=10,SNR=12						
CTAO	Charters Tower	34.22	279	*e*P	P	04 33 34.3	+1.8
STKA	Stephens Creek	34.91	257	*e*P	P	04 33 39.9	+1.4
	1.0nm,0.6s						
STKA	Stephens Creek	34.91	257	P	P	04 33 40.5	+2.0
	5.7nm,0.8s,baz=108,slow=12,SNR=11						
BBOO	Buckleboo	39.40	254	*e*P	P	04 34 17.9	+1.4
	6.5nm,0.7s						
AS01	Alice Springs	43.51	267	*e*P	P	04 34 50.7	+0.3
AS31	Alice Springs	43.55	267	*e*P	P	04 34 51.7	+1.0
	1.0nm,0.8s						
ASAR	Alice Springs	43.55	267	P	P	04 34 51.7	+1.0
	1.6nm,0.5s,baz=104,slow=7.5,SNR=25						
WB2	Warramunga Arr	44.52	272	*e*P	P	04 34 58.5	+0.1
WRAB	Tennant Creek	44.52	272	*e*P	P	04 34 59.5	+1.0
	2.7nm,0.4s						
WR1	Warramunga Arr	44.53	272	*e*P	P	04 34 58.3	-0.2
	53nm,1.8s						
WRA	Warramunga Arr	44.53	272	P	P	04 34 58.3	-0.2
	4.6nm,0.3s,baz=110,slow=8.1,SNR=105						
FITZ	Fitzroy Crossi	52.79	270	*e*P	P	04 36 02.4	+0.3
	21nm,1.6s						
FITZ	Fitzroy Crossi	52.79	270	P	P	04 36 02.4	+0.3
	1.9nm,0.6s,baz=169,slow=8.4,SNR=9.8						
BATI	Baumata	58.07	277	LR	LR	05 00 13.8	
	comp=Z,70nm,18.8s,baz=163,slow=34						
MK32	Makanchi Array	118.07	310	*e*PKPdf	PKiKP	04 45 33.0	0.0
MKAR	Makanchi Array	118.07	310	PKP	PKiKP	04 45 33.0	0.0
	1.2nm,1.1s,baz=245,slow=1.8,SNR=4.3						
BRVK	Borovoye	126.73	316	*e*PKPdf	PKiKP	04 45 50.5	+0.7
FIA1	FINESS Array S	145.24	340	*e*PKPbc	PKPdf	04 46 23.6	+0.4
FIA0	FINESS Array S	145.24	340	*e*PKPbc	PKPdf	04 46 23.6	+0.4
FINES	FINESS Array B	145.24	340	PKPbc	PKPdf	04 46 23.6	+0.4
	6.2nm,0.6s,baz=57,slow=3.4,SNR=60						
NB2	NORSAR Subarra	148.76	352	PKP	PKiKP	04 46 34.0	-0.5
	comp=Z,0.5nm,0.5s,baz=9.3,slow=2.5						
NB200	NORSAR Array S	148.76	352	*e*PKPbc	PKiKP	04 46 33.8	-0.8
NOA	NORSAR Array B	148.76	352	PKPbc	PKiKP	04 46 33.8	-0.8
	comp=Z,0.7nm,0.6s,baz=16,slow=4.2,SNR=3.4						
AKASG	Malin Array Be	151.51	323	PKPbc	PKiKP	04 46 40.9	+0.5
	comp=Z,1.7nm,0.5s,baz=51,slow=2.9,SNR=10						
AKBB	Malin Array Si	151.51	323	*e*PKPbc	PKiKP	04 46 40.8	+0.3
AK11	Malin Array Si	151.56	323	*e*PKPbc	PKiKP	04 46 40.4	-0.1
BR101	Keskin Array S	152.95	299	*e*PKPbc	PKiKP	04 46 44.3	+0.3
BRTR	Keskin Array B	152.95	299	PKPbc	PKiKP	04 46 44.3	+0.3
	comp=Z,0.4nm,0.4s,baz=144,slow=5.5,SNR=6.9						
DAVOX	Davos/Dischmat	162.62	343	PKPab	PKPab	04 47 35.9	-0.7
	comp=Z,1.5nm,0.7s,baz=3.5,slow=9.5,SNR=4.4						
TORD	Torodi Ar. Bea	162.87	177	PKPab	PKPab	04 47 38.6	+0.5
	comp=Z,0.2nm,0.6s,baz=185,slow=3.3,SNR=5.5						
TOA1	Torodi Ar. Sit	162.88	177	*e*PKPab	PKPab	04 47 38.6	+0.4

*NNC **15** 04:32:19.5±0.8, 44°.70N×81°.17E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=7.3km s-min=4.2km az=124.0*

*SOME **15** 04:32:20.6, 44°.65N×81°.25E, h20^{km}*

ISC 15 04:32:18.4±1.4, **44°.62N**±0°.04×**81°.29E**±0°.04, **h1^{km}**±11^{km}, **n49, σ1^{s}.58**/71, **11C-10D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.11	255	P	Pb	04 32 40.3	-0.2
DJR				S	Sb	04 32 55.1	-0.5
DJR	Jarkent	1.11	255	*e*P	Pb	04 32 40.3	-0.2
	1.2nm,0.2s						
DJR				*e*S	Sg	04 32 54.6	+0.5
	28nm,0.1s						
KTMS	Ketmen	1.36	210	P	Pb	04 32 45.3	+0.6
	186nm,0.1s						
KTMS				S	Sn	04 33 03.7	+0.4
	125nm,0.2s						
KTMS	Ketmen	1.36	210	*e*P	Pb	04 32 45.3	+0.6
	149nm,0.1s						
KTMS				*e*S	Sn	04 33 03.2	-0.1
	136nm,0.4s						
KAPS	Kapalarasan	1.53	296	P	Pg	04 32 47.8	+0.2
	31nm,0.2s						
KAPS				S	Sg	04 33 07.6	+0.2
	132nm,0.3s						
KAPS	Kapalarasan	1.53	296	*e*P	Pg	04 32 47.8	+0.2
	31nm,0.2s						
KAPS				*e*S	Sg	04 33 07.6	+0.2
	132nm,0.3s						
PDGK	Podgornoye	1.83	226	P	Pg	04 32 53.5	0.0
	8.9nm,0.2s						
PDGK				S	Sg	04 33 17.4	+0.1
	108nm,0.5s						
PDGK	Podgornoye	1.83	226	⇓Pn	Pb	04 32 52.5	-0.3
	13nm,0.4s						
PDGK				⇑Lg	Lg	04 33 17.4	
	47nm,0.4s						
MNBS	Baschi	2.15	256	Pg	Pb	04 32 58.8	+0.8
	31nm,0.2s						
MNBS				Lg	Lg	04 33 26.2	
	209nm,0.3s						
MNBS	Baschi	2.15	256	*e*P	Pb	04 32 58.8	+0.8
	31nm,0.2s						
MNBS				*e*S	Sb	04 33 26.2	+1.0
	209nm,0.3s						
UZB	Uzynbulak	2.21	229	Pg	Pb	04 32 59.2	0.0
	12nm,0.2s						
UZB				Lg	Lg	04 33 26.9	
	128nm,0.4s						
UZB	Uzynbulak	2.21	229	*e*P	Pb	04 32 59.2	0.0
	12nm,0.2s						
UZB				*e*S	Sb	04 33 26.9	-0.1
	128nm,0.4s						
MAKZ	Makanchi	2.24	12	⇑Pg	Pn	04 32 56.8	+0.3
	5.1nm,0.3s						
MAKZ				⇓Lg	Lg	04 33 25.4	
	7.6nm,0.3s						
MK31	Makanchi Array	2.28	17	Pn	Pn	04 32 57.0	-0.2
	4.5nm,0.3s,baz=202,slow=13,SNR=504						
MK31				Pg	Pg	04 33 03.6	+1.6
	7.4nm,0.3s,baz=198,slow=15,SNR=17						
MK31				⇓Lg	Lg	04 33 27.4	
	2.2nm,0.2s,baz=204,slow=26,SNR=9.7						
ARXS	Arharly	2.52	262	Pg	Pb	04 33 04.9	+0.5
	21nm,0.3s						
ARXS				Lg	Lg	04 33 37.1	
	129nm,0.4s						
ARXS	Arharly	2.52	262	*e*P	Pb	04 33 04.9	+0.5
	21nm,0.3s						
ARXS				*e*S	Sb	04 33 37.1	+1.2
	129nm,0.4s						
KURS	Kuram	2.52	244	Pg	Pb	04 33 05.0	+0.6
	8.4nm,0.3s						
KURS				Lg	Lg	04 33 36.8	
	93nm,0.4s						
KURS	Kuram	2.52	244	*e*P	Pb	04 33 05.0	+0.6
	8.4nm,0.3s						
KURS				*e*S	Sb	04 33 36.8	+0.8
	93nm,0.4s						
SATY	Saty	2.61	234	Pg	Pg	04 33 07.4	-1.0
	21nm,0.2s						
SATY				Lg	Lg	04 33 41.0	
	592nm,0.3s						
SATY	Saty	2.61	234	*e*P	Pg	04 33 07.4	-1.0
	21nm,0.2s						
SATY				*e*S	Sg	04 33 41.0	-1.1
	592nm,0.3s						
CHKK	Chushkaly	3.19	258	Pg	Pb	04 33 16.9	+1.1
	5.9nm,0.2s						
CHKK				Lg	Lg	04 33 57.6	
	147nm,0.2s						
CHKK	Chushkaly	3.19	258	*e*P	Pb	04 33 16.9	+1.1
	5.9nm,0.2s						
CHKK				*e*S	Sb	04 33 57.6	+2.4
	147nm,0.2s						
KOTS	Kotyrbulak	3.32	247	Pg	Pb	04 33 19.0	+0.8
	6.4nm,0.3s						
KOTS				Lg	Lg	04 34 01.3	
	151nm,0.4s						
KOTS	Kotyrbulak	3.32	247	*e*P	Pb	04 33 19.0	+0.8
	6.4nm,0.3s						
KOTS				*e*S	Sb	04 34 01.3	+2.1
	151nm,0.4s						
MDOK	Medeo	3.40	246	⇓Pg	Pg	04 33 22.8	-0.7
	5.6nm,0.6s						
MDOK				⇑Lg	Lg	04 34 03.4	
	18nm,0.4s						
MDOK	Medeo	3.40	246	Pg	Pb	04 33 20.9	+1.5
	7.6nm,0.4s						
MDOK				Lg	Lg	04 34 04.2	
	37nm,0.3s						
MDOK	Medeo	3.40	246	*e*P	Pb	04 33 20.9	+1.5
	7.6nm,0.4s						
MDOK				⇑*i*S	Sb	04 34 04.2	+2.9
	37nm,0.3s						
KNDC	Almaty	3.43	247	⇓Pg	Pb	04 33 18.1	-1.8
	11nm,0.4s						
KNDC				⇓Lg	Lg	04 34 03.9	
	20nm,0.3s						
KTBS	Karatobe	3.44	256	Pg	Pb	04 33 21.1	+1.0
	7.7nm,0.4s						
KTBS				Lg	Lg	04 34 04.7	
	71nm,0.3s						
KTBS	Karatobe	3.44	256	*e*P	Pb	04 33 21.1	+1.0
	7.7nm,0.4s						
KTBS				*e*S	Sb	04 34 04.7	+2.3
	71nm,0.3s						
TNSS	Tian-Shan	3.52	245	Pg	Pb	04 33 23.3	+1.6
	6.6nm,0.4s						
TNSS				Lg	Lg	04 34 08.3	
	26nm,0.3s						
TNSS	Tian-Shan	3.52	245	*e*P	Pb	04 33 23.3	+1.6
	6.6nm,0.4s						
TNSS				⇑*i*S	Sb	04 34 08.3	+3.2
	26nm,0.3s						
KUU	Kurty	3.63	260	Pg	Pb	04 33 24.0	+0.7
	11nm,0.5s						
KUU				Lg	Lg	04 34 09.5	
	67nm,0.4s						
KUU	Kurty	3.63	260	*e*P	Pb	04 33 24.0	+0.7
	11nm,0.5s						
KUU				⇓*i*S	Sb	04 34 09.5	+1.6
	67nm,0.4s						
IZV	Izvestkoviy	3.74	247	Pg	Pb	04 33 27.4	+2.1
	6.6nm,0.5s						
IZV				Lg	Lg	04 34 15.2	
	40nm,0.6s						
IZV	Izvestkoviy	3.74	247	*e*P	Pb	04 33 27.4	+2.1
	6.6nm,0.5s						
IZV				*e*S	Sg	04 34 15.2	-3.3
	40nm,0.6s						
ZSN	Zaisan	3.77	40	Pg	Pb	04 33 25.4	-0.3
	3.8nm,0.3s						
ZSN				Lg	Lg	04 34 11.9	
	22nm,0.6s						
ZSN	Zaisan	3.77	40	*e*P	Pb	04 33 25.4	-0.3
	3.8nm,0.3s						
ZSN				*e*S	Sb	04 34 11.9	+0.1
	22nm,0.6s						
MTBS	Maitube	3.82	249	Pg	Pb	04 33 27.5	+0.9
	5.9nm,0.3s						
MTBS				Lg	Lg	04 34 15.5	
	58nm,0.4s						
MTBS	Maitube	3.82	249	*e*P	Pb	04 33 27.5	+0.9
	5.9nm,0.3s						
MTBS				⇑*i*S	Sb	04 34 15.5	+2.1
	58nm,0.4s						
KST	Kastek	4.17	250	Pg	Pg	04 33 36.1	-2.1
	8.1nm,0.5s						
KST				Lg	Lg	04 34 30.3	
	28nm,0.6s						
KST	Kastek	4.17	250	*e*P	Pg	04 33 36.1	-2.1
	8.1nm,0.5s						
KST				*e*S	Sg	04 34 30.3	-1.9
	28nm,0.6s						
DGS	Degeres	4.22	253	Pg	Pb	04 33 35.1	+1.6
	3.4nm,0.7s						
DGS				Lg	Lg	04 34 28.7	
	47nm,0.5s						
DGS	Degeres	4.22	253	*e*P	Pb	04 33 35.1	+1.6
	3.4nm,0.7s						
DGS				*e*S	Sb	04 34 28.7	+3.8
	47nm,0.5s						
TKM2	Tokmak 2	4.46	250	⇑Pg	Pb	04 33 39.2	+1.6
	2.1nm,0.4s						
TKM2				⇓Lg	Lg	04 34 36.3	
	11nm,0.5s						
AAK	Ala-Archa	5.32	250	⇑Pg	Pb	04 33 54.7	+2.5
	2.1nm,0.6s						
AAK				⇑Lg	Lg	04 35 04.2	
	8.4nm,0.7s						
KURBB	Kurchatov Arra	6.29	344	⇑Lg	Lg	04 35 30.0	
	22nm,0.6s						
KURK	Kurchatov	6.36	344	⇓Lg	Lg	04 35 33.9	
	5.3nm,0.6s						
OTUK	Ortayu	7.17	304	⇓Sn	Sn	04 35 20.8	-5.5
	0.3nm,0.3s						
OTUK				⇑Lg	Lg	04 36 00.2	
	4.0nm,0.4s						

*IDC **15** 04:32:42.3±3.1, 39°.26N×142°.89E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.2/53, mbtmp3.4/3, ML2.4/1, Error ellipse: s-maj=71.1km s-min=39.7km az=64.0*

*ISCJB **15** 04:32:45.7±1.6, 39°.13N±0°.05×142°.5E±0°.1, h21^{km}±9^{km}, mb3.4/2, Error ellipse: s-maj=13.2km s-min=7.8km az=1.0*

*JMA **15** 04:32:47.9±0.1, 39°.17N×142°.42E, h29^{km}±1^{km}, M3.4*

ISC 15 04:32:47.1±2.3, **39°.20N**±0°.06×**142°.5E**±0°.1, **h26^{km}**±14^{km}, **n18, σ1^{s}.08**/20, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	0.61	308	P	Pn	04 32 59.7	-0.5
MIYJ				S	Sb	04 33 07.9	+0.3
OFUJ	Ofunato	0.62	259	P	Pn	04 32 59.5	-0.7
OFUJ				S	Sb	04 33 07.6	0.0
JKMT	Kesennumamotoy	0.85	243	P	Pn	04 33 02.9	-0.5
JKMT				S	Sn	04 33 13.4	-1.6
JOM	Ohasama	0.94	287	P	Pb	04 33 04.8	+0.1
JOM				S	Sn	04 33 17.2	0.0
JMK	Ichinoseki	0.99	256	P	Pb	04 33 05.2	-0.3
JMK				S	Sn	04 33 17.7	-0.7
JIO	Ouri	1.14	229	P	Pn	04 33 06.6	-0.7
JIO				S	Sn	04 33 19.8	-2.2
JKZ	Kuzumaki	1.17	313	P	Pb	04 33 08.1	-0.6
JANG	Nango	1.38	329	P	Pb	04 33 11.7	-0.5
JANG				S	Sb	04 33 29.0	-0.3
JRG	Rokugo	1.42	279	P	Pb	04 33 12.9	0.0
JRG				S	Sb	04 33 31.9	+1.3
MJAR	Matsushiro Arr	4.28	233	Pn	Pn	04 33 52.8	+2.3
	0.2nm,0.3s,baz=45,slow=9.9,SNR=12						
H11N2	WAKE ISLAND Hy	28.65	126	T	T	05 09 04.0	
	baz=318,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	28.66	126	T	T	05 09 05.5	
	baz=318,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	28.67	126	T	T	05 09 06.4	
	baz=318,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	29.44	128	T	T	05 10 13.9	
	baz=318,slow=76,SNR=5.1						
H11S3	WAKE ISLAND Hy	29.44	128	T	T	05 10 09.4	
	baz=318,slow=76,SNR=5.9						
H11S2	WAKE ISLAND Hy	29.46	128	T	T	05 10 09.4	
	baz=318,slow=76,SNR=5.2						
MKAR	Makanchi Array	43.69	300	P	P	04 40 51.0	+1.2
	0.8nm,1.0s,baz=88,slow=7.6,SNR=3.5						
WRA	Warramunga Arr	59.32	189	P	P	04 42 46.6	-0.1
	0.2nm,0.5s,baz=7.3,slow=7.2,SNR=4.3						

*ISCJB **15** 04:54:09.8±0.6, 18°.4S±0°.2×177°.8W±0°.1, h600^{km}, mb3.5/8, Error ellipse: s-maj=23.5km s-min=12.7km az=154.2*

*IDC **15** 04:54:11.9±3.6, 18°.39S×177°.78W, h615^{km}±49^{km}, mb3.0/9, mb1 3.3/11, mb1mx3.1/37, mbtmp4.0/11, Error ellipse: s-maj=39.9km s-min=15.6km az=167.0*

ISC 15 04:54:10.9±0.7, **18°.3S**±0°.2×**177°.8W**±0°.1, **h600^{km}, n14, σ1^{s}.15**/15, **mb3.5**/8, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.28	253	P	P	04 57 22.3	+0.6
	0.5nm,0.3s,baz=95,slow=7.6,SNR=4.9						
RAR	Rarotonga	17.17	103	P	P	04 57 38.4	-0.5
	1.1nm,0.3s,baz=302,slow=9.5,SNR=2.5						
URZ	Urewera	20.36	192	P	P	04 58 07.0	-0.6
	3.6nm,0.6s,baz=348,slow=9.3,SNR=5.1						
STKA	Stephens Creek	38.97	242	P	P	05 00 47.5	+0.3
	0.4nm,0.4s,baz=90,slow=10,SNR=1.7						
WRA	Warramunga Arr	45.16	260	P	P	05 01 35.6	-0.2
	1.6nm,0.5s,baz=95,slow=7.6,SNR=48						
ASAR	Alice Springs	45.27	255	P	P	05 01 36.5	-0.1
	3.1nm,0.6s,baz=91,slow=7.7,SNR=36						
ASAR				PcP	PcP	05 03 02.5	-0.9
	0.3nm,0.5s,baz=96,slow=3.1,SNR=3.0						
NVAR	Mina Array Bea	79.30	44	P	P	05 05 16.5	+0.8
	0.7nm,0.7s,baz=221,slow=8.3,SNR=6.2						
TXAR	Lajitas Array	85.70	57	P	P	05 05 49.5	+1.7
	1.1nm,0.7s,baz=218,slow=6.4,SNR=17						
ILAR	Eielson Array	86.16	13	P	P	05 05 47.9	-1.2
	0.3nm,0.4s,baz=219,slow=4.8,SNR=8.7						
PDAR	Pinedale Array	87.24	43	P	P	05 05 55.4	+0.4
	0.4nm,0.6s,baz=220,slow=1.2,SNR=4.8						
YKA	Yellowknife Ar	94.46	25	P	P	05 06 25.9	-1.5
	0.2nm,0.6s,baz=239,slow=4.6,SNR=3.9						

ARCES	ARCESS Array B	126.84	350	PKP	PKPdf	05 12 05.8	-0.9
	2.2nm,0.7s,baz=0.0,slow=1.8,SNR=3.7						
BRTR	Keskin Array B	145.51	315	PKPbc	PKPdf	05 12 42.2	+0.2
	0.5nm,0.6s,baz=121,slow=1.4,SNR=3.6						
GERES	GERESS Array B	148.17	346	PKPbc	PKPdf	05 12 48.5	+2.4
	0.7nm,0.8s,baz=9.5,slow=4.1,SNR=4.8						

IDC 15 04:59:59.9±24.0**, 52°.10N×158°.61E, h0^{km}, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.2**/50**, mbtmp3.6**/2**, Error ellipse: s-maj=1038.0km s-min=25.7km az=76.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	1.16	331	Pn	Pn	05 00 23.3	0.0
	1.6nm,0.3s,baz=64,slow=14,SNR=11						
WRA	Warramunga Arr	74.80	204	P	P	05 11 43.4	+1.7
	0.5nm,0.7s,baz=19,slow=8.1,SNR=3.2						
ASAR	Alice Springs	78.48	203	P	P	05 12 01.3	-1.2
	0.1nm,0.5s,baz=8.6,slow=6.8,SNR=5.4						

RSNC 15 05:03:40.5±1.7**, 6°.20N×77°.47W, h0^{km}**±9^{km}**, ML2.8, Mw3.6, 1D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOLC	Bahia Solano	0.07	65	⇓ *i*P	Pg	05 03 41.0	-0.8
SOLC				*e*Pg	Pg	05 03 41.5	-0.4
SOLC				*e*Sg	Sg	05 03 43.2	+0.5
SOLC				*e*S		05 03 43.9	
SOLC				*i*		05 03 44.4	
	comp=Z,15µm,0.2s						
PLMC	San Jos del P	1.75	137	*e*P	Pn	05 04 08.1	-4.1
PLMC				*i*		05 04 34.5	
	comp=Z,38nm,0.2s						
HELC	Santa Helena	1.93	90	*e*P	Pn	05 04 13.1	-1.9
HELC				*e*S	Sn	05 04 39.9	-0.2
HELC				*i*		05 04 47.7	
	comp=N,70nm,0.6s						
UPD2	Meteti	2.40	347	*e*P	Pn	05 04 20.5	-0.6
UPD2				*e*S	Sb	05 04 53.1	-1.6
UREC	San Jos de Ur	2.47	51	*e*P	Pn	05 04 20.4	-1.7
RREF	El Recreo	2.48	121	*e*P	Pn	05 04 22.6	-0.1
ZARC	Zaragoza, Cauc	2.90	63	*e*P	Pn	05 04 27.9	0.0
ZARC				*e*S	Sn	05 05 04.5	+1.0
ZARC				*i*		05 05 18.6	
	comp=N,36nm,0.6s						
PTBC	PUERTO BERRIO,	3.01	83	*e*P	Pn	05 04 29.6	0.0
PTBC				*e*S	Sn	05 05 07.5	+1.0
PTBC				*i*		05 05 15.8	
	comp=Z,15nm,0.5s						
AZU	Azuero	3.20	300	*e*P	Pn	05 04 25.3	-6.8
AZU				*e*S	Sn	05 05 00.3	-11
AZU				*i*		05 05 05.3	
	comp=N,46nm,0.3s						

SKHL ***15*** *05:21:06.7±0.8, 47°.54N×152°.84E, h140^{km}±10^{km}, mb4.5/2, msh5.3/4*

ISCJB ***15*** *05:21:07.5±0.5, 47°.86N±0°.07×152°.56E±0°.09, h150^{km}, mb3.5/17, Error ellipse: s-maj=12.8km s-min=4.4km az=139.9*

MOS ***15*** *05:21:08.2±1.2, 47°.84N×152°.55E, h160^{km}, mb4.1/3, Error ellipse: s-maj=13.4km s-min=8.1km az=67.7*

IDC ***15*** *05:21:09.9±2.2, 48°.03N×152°.39E, h150^{km}±19^{km}, mb3.3/17, mb1 3.5/22, mb1mx3.4/47, mbtmp3.8/22, Error ellipse: s-maj=21.4km s-min=11.3km az=154.0*

ISC 15 05:21:08.7±0.6**, 47°.80N**±0°.08×**152°.57E**±0°.08**, h150^{km}, n59, σ1^{s}45**/62**, mb3.5**/17**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	3.70	38	*e*P	Pn	05 22 04.4	-0.5
SKR				AMB	AMB	05 22 05.8	
	70nm,1.0s						
SKR				*e*S	Sn	05 22 47.4	-1.2
SKR				A	A	05 22 53.2	
	120nm,0.9s						
SKR				A	A	05 22 53.2	
	170nm,0.9s						
SKR	Severo-Kuril's	3.70	38	*e*PN	Pn	05 22 04.5	-0.5
SKR				*e*S	Sn	05 22 47.5	-1.2
SKR				pmax	pmax		
	comp=Z,6.0nm,0.2s						
SKR				smax	smax		
	comp=N,50nm,0.5s						
SKR				smax	smax		
	comp=E,53nm,0.4s						
KUR	Kuril'sk	4.14	233	*i* P	Pn	05 22 09.4	-1.3
KUR				*e*S	Sn	05 22 56.0	-3.0
KUR				A	A	05 23 06.1	
	comp=E,80nm,0.4s						
KUR				A	A	05 23 06.1	
	comp=E,50nm,0.4s						
KUR	Kuril'sk	4.14	233	*i* PN	Pn	05 22 10.4	-0.3
KUR				*e*S	Sn	05 22 59.4	+0.4
KUR				smax	smax		
	comp=N,51nm,0.3s						
KUR				smax	smax		
	comp=E,42nm,0.3s						
PAU	Pauzhetka	4.59	35	*e*P	Pn	05 22 15.7	-0.8
PAU				AMB	AMB	05 22 16.2	
	comp=E,60nm,1.0s						
PAU				*e*S	Sn	05 23 07.4	-2.0
PAU				A	A	05 23 09.3	
	comp=E,320nm,1.0s						
PAU	Pauzhetka	4.59	35	*e*PN	Pn	05 22 15.7	-0.8
PAU				*e*S	Sn	05 23 07.4	-2.0
PAU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PAU				smax	smax		
	comp=N,170nm,0.6s						
SHO	Shikotan	5.62	228	*e*P	Pn	05 22 26.9	-3.3
SHO				*e*S	Sn	05 23 27.9	-6.0
SHO				A	A	05 23 31.0	
	comp=N,40nm,0.3s						
SHO				A	A	05 23 31.0	
	comp=N,50nm,0.3s						
SHO	Shikotan	5.62	228	*e*PN	Pn	05 22 24.9	-5.3
YUK	Yuzh-Kuril'sk	6.01	234	*e*P	Pn	05 22 33.5	-1.9
YUK	Yuzh-Kuril'sk	6.01	234	*i* PN	Pn	05 22 37.1	+1.7
PETK	Petropavlovsk-	6.24	30	P	Pn	05 22 37.6	-0.8
	comp=N,1.2nm,0.3s,baz=201,slow=15,SNR=16						
PET	Petropavlovsk	6.51	34	*e*P	Pn	05 22 41.7	-0.3
PET	Petropavlovsk	6.51	34	*i* PN	Pn	05 22 42.4	+0.4
YSS	Yuzh-Sakhalins	6.72	266	*e*P	Pn	05 22 44.9	0.0
YSS	Yuzh-Sakhalins	6.72	266	*e*PN	Pn	05 22 51.2	+6.3
TYV	Tymovskoe	7.17	299	*e*P	Pn	05 22 52.6	+1.8
TYV	Tymovskoe	7.17	299	*e*PN	Pn	05 22 52.6	+1.8
JKA	Kamikawa-asahi	7.87	246	*e*P	Pn	05 23 01.1	+0.9
ASAJ	Asahikawa	7.87	246	P	Pn	05 23 01.1	+0.8
	comp=N,3.1nm,0.3s,baz=67,slow=13,SNR=17						
ERM	Erimo	8.84	233	*i* PN	Pn	05 23 12.2	-0.9
EKMR	Ekimchan	13.56	300	*e*P	Pn	05 24 14.5	-0.3
KLR	Kul'dur	13.87	284	*e*P	Pn	05 24 19.6	+0.8
KLR	Kul'dur	13.87	284	*i* P	Pn	05 24 19.6	+0.8
KLR	Kul'dur	13.87	284	P	Pn	05 24 19.4	+0.6
	comp=N,0.1nm,0.3s,baz=85,slow=12,SNR=2.5						
USRK	Ussuriysk Ar.	14.74	263	P	Pn	05 24 29.8	0.0
	comp=N,0.7nm,0.3s,baz=64,slow=10,SNR=16						
SEY	Seymchan	15.17	360	*e*P	P	05 24 36.8	+0.4
SEY	Seymchan	15.17	360	*i* P	P	05 24 36.8	+0.4
SEY	Seymchan	15.17	360	P	Pn	05 24 32.5	-2.4
	comp=N,0.2nm,0.3s,baz=0.0,slow=20,SNR=3.0						
KSRS	Korea Array	20.79	249	P	P	05 25 39.1	+1.1
	comp=N,2.1nm,0.9s,baz=49,slow=12,SNR=3.7						
BILL	Bilibino	21.45	14	*e*P	P	05 25 45.6	+0.9
BILL	Bilibino	21.45	14	*i* P	P	05 25 45.6	+0.9
BILL				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H11N2	WAKE ISLAND Hy	30.32	153	T	T	05 58 60.0	
	baz=338						
H11N1	WAKE ISLAND Hy	30.34	153	T	T	05 59 01.6	
	baz=338,slow=74						
H11N3	WAKE ISLAND Hy	30.34	152	T	T	05 59 01.9	
	baz=338,slow=74						
SONM	Songino Array	30.65	288	P	P	05 27 09.8	+1.0
	comp=Z,0.2nm,0.6s,baz=72,slow=9.4,SNR=1.8						
H11S1	WAKE ISLAND Hy	31.41	154	T	T	06 00 18.7	
	baz=341,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	31.42	154	T	T	06 00 19.2	
	baz=341,slow=76,SNR=25						
H11S2	WAKE ISLAND Hy	31.43	154	T	T	06 00 20.0	
	baz=341,slow=76,SNR=14						
ILAR	Eielson Array	35.96	39	P	P	05 27 54.9	+0.4
	comp=Z,0.6nm,0.6s,baz=263,slow=6.5,SNR=17						
ZALV	Zalesovo Beam	41.70	305	P	P	05 28 40.2	-2.1
	comp=Z,0.4nm,0.5s,baz=69,slow=7.9,SNR=2.0						
ZALV				PcP	PcP	05 30 36.0	+0.2
	comp=Z,0.5nm,0.4s,baz=48,slow=4.3,SNR=3.5						
MKAR	Makanchi Array	46.14	296	P	P	05 29 17.1	-0.7
	comp=Z,0.1nm,0.3s,baz=69,slow=8.2,SNR=3.9						
MKAR				PcP	PcP	05 30 51.5	+0.3
	comp=Z,0.3nm,0.7s,baz=50,slow=2.5,SNR=1.9						
KURK	Kurchatov	46.48	303	*e*P	P	05 29 19.9	-0.4
KURK	Kurchatov	46.48	303	P	P	05 29 19.9	-0.4
KURBB	Kurchatov Arra	46.57	303	P	P	05 29 19.9	-1.1
	comp=Z,0.8nm,0.8s,baz=69,slow=8.8,SNR=4.0						
BVAR	Borovoye Array	49.91	309	P	P	05 29 46.0	-0.7
	comp=Z,0.2nm,0.3s,baz=33,slow=5.8,SNR=2.9						
BVAR				PcP	PcP	05 31 05.2	+0.6
	comp=Z,0.6nm,0.5s,baz=46,slow=4.2,SNR=4.2						
YKA	Yellowknife Ar	50.30	37	P	P	05 29 50.4	+1.0
	comp=Z,0.9nm,0.6s,baz=297,slow=7.1,SNR=13						
YKA				PcP	PcP	05 31 06.5	+0.6
	comp=Z,0.2nm,0.5s,baz=310,slow=3.8,SNR=5.0						
CMAR	Chiang Mai Arr	52.27	255	P	P	05 30 05.8	+1.1
	comp=Z,1.2nm,0.3s,baz=42,slow=6.9,SNR=4.8						
ARCES	ARCESS Array B	56.74	340	P	P	05 30 35.5	-0.7
	comp=Z,4.6nm,0.9s,baz=28,slow=8.3,SNR=3.0						
FINES	FINESS Array B	62.93	334	*e*P	P	05 31 17.7	-0.8
FINES	FINESS Array B	62.93	334	*e*P	P	05 31 17.7	-0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	62.93	334	P	P	05 31 17.3	-1.2
	comp=Z,1.8nm,0.8s,baz=20,slow=6.1,SNR=4.9						
PDAR	Pinedale Array	64.42	54	P	P	05 31 30.0	+1.0
	comp=Z,0.6nm,0.8s,baz=276,slow=2.4,SNR=5.6						
NOA	NORSAR Array B	67.11	341	*e*P	P	05 31 45.9	+0.3
NOA	NORSAR Array B	67.11	341	P	P	05 31 45.7	+0.1
	comp=Z,0.3nm,0.6s,baz=28,slow=6.5,SNR=3.8						
AKASG	Malin Array Be	70.47	326	P	P	05 32 05.5	-0.9
	comp=Z,0.3nm,0.3s,baz=35,slow=6.5,SNR=3.8						
SCHQ	Schefferville	72.48	23	P	P	05 32 18.5	0.0
	comp=Z,1.4nm,0.4s,baz=319,slow=4.6,SNR=13						
ASAR	Alice Springs	73.09	198	*e*P	P	05 32 24.8	+2.4
ASAR	Alice Springs	73.09	198	P	P	05 32 24.1	+1.7
	comp=Z,0.3nm,0.6s,baz=0.0,slow=0.5,SNR=4.3						
TXAR	Lajitas Array	77.29	60	P	P	05 32 47.5	+0.8
	comp=Z,0.9nm,0.6s,baz=300,slow=4.4,SNR=13						

IDC ***15*** *05:38:12.8±1.4, 0°.54S×98°.47E, h0^{km}, mb3.9/7, mb1 4.0/9, mb1mx3.8/43, mbtmp3.8/9, ML3.9/2, Error ellipse: s-maj=57.0km s-min=16.4km az=61.0*

ISCJB ***15*** *05:38:15.7±0.6, 0°.47S±0°.06×98°.44E±0°.08, h32^{km}, mb4.1/13, Error ellipse: s-maj=13.3km s-min=4.9km az=143.2*

DJA ***15*** *05:38:16.2±0.6, 0°S±5°×9°8E±°, h10^{km}, M3.9/8, mb4.1/1, MLv3.9/8*

NEIC ***15*** *05:38:18.4±1.0, 0°.48S×98°.58E, h38^{km}±7^{km}, mb4.2/7, Error ellipse: s-maj=18.1km s-min=4.8km az=58.0*

ISC 15 05:38:17.5±0.7**, 0°.43S**±0°.06×**98°.47E**±0°.06**, h32^{km}, n48, σ1^{s}21**/44**, mb4.0**/13**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	Pulau Batu	0.42	333	P	Pb	05 38 24.1	-2.7
PBSI				S	Sb	05 38 31.5	-1.6
SISI	Saibi	1.09	145	P	Pn	05 38 35.5	-1.1
MNSI	Mandailing Nat	1.65	42	P	Pn	05 38 43.3	-1.0
PPI	Padang Panjang	1.93	91	P	Pn	05 38 44.3	-3.9
GSI	Gunungsitoli	1.94	333	*e*Pn	Pn	05 38 49.7	+1.4
GSI	Gunungsitoli	1.94	333	P	Pb	05 38 50.8	-1.5
PDSI	Padang	2.05	104	P	Pn	05 38 49.7	-0.2
PDSI				S	Sn	05 39 15.7	+1.3
BKNI	Bangkinang	2.68	74	*e*Pn	Pb	05 39 04.6	-0.3
BKNI	Bangkinang	2.68	74	P	Pb	05 39 04.6	-0.3
PSI	Prapat	3.24	8	*e*Pn	Pn	05 39 05.8	-0.5
PSI	Prapat	3.24	8	Pn	Pn	05 39 06.0	-0.3
	2.1nm,0.3s,baz=180,slow=8.2,SNR=7.3						
KRJI	Kerinci	3.42	119	P	Pb	05 39 23.2	+5.7
KCSI	Kotacane, Aceh	3.99	350	P	Pb	05 39 27.2	+0.1
MNAI	Manna	5.95	131	*e*Pn	Pn	05 39 42.9	-0.5
MDSI	Maura Dua	6.99	125	P	Pn	05 39 59.2	+1.5
SBUM	Sibu	14.04	78	*e*P	P	05 41 43.3	+1.4
CMAR	Chiang Mai Arr	18.77	1	P	P	05 42 34.5	+0.2
	0.4nm,0.3s,baz=190,slow=10,SNR=3.5						
H08S2	Diego Garcia H	26.86	254	T	T	06 11 40.2	
	baz=76,slow=76,SNR=24						
H08S3	Diego Garcia H	26.87	254	T	T	06 11 40.3	
	baz=76,slow=76,SNR=146						
H08S1	Diego Carcia H	26.88	254	T	T	06 11 40.0	
	baz=76,slow=76,SNR=6.9						
FITZ	Fitzroy Crossi	31.96	125	*e*P	P	05 44 39.7	-1.1
	2.5nm,1.0s						
XAN	Xi'an	35.66	15	*e*P	P	05 45 12.6	-0.3
	9.2nm,0.9s						
WR1	Warramunga Arr	40.11	121	*e*P	P	05 45 49.0	-1.6
	1.9nm,0.7s						
WRA	Warramunga Arr	40.11	121	P	P	05 45 49.0	-1.6
	1.4nm,0.6s,baz=302,slow=9.0,SNR=16						
WB2	Warramunga Arr	40.12	121	*e*P	P	05 45 50.0	-0.7
	1.9nm,0.6s						
ASAR	Alice Springs	41.41	127	P	P	05 46 01.0	-0.4
	1.2nm,0.6s,baz=304,slow=7.9,SNR=16						
AS01	Alice Springs	41.45	126	*e*P	P	05 46 01.3	-0.3
SONA0	Songino Array	48.56	7	*e*P	P	05 46 59.1	+1.2
SONM	Songino Array	48.56	7	P	P	05 46 59.1	+1.2
	0.8nm,0.5s,baz=189,slow=9.3,SNR=7.7						
MK01	Makanchi Array	49.10	345	*e*P	P	05 47 03.1	+1.2
MK31	Makanchi Array	49.12	345	*e*P	P	05 47 03.3	+1.2
	1.4nm,0.9s						
MK32	Makanchi Array	49.12	345	*e*P	P	05 47 03.2	+1.1
MKAR	Makanchi Array	49.12	345	*e*P	P	05 47 03.3	+1.1
	8.2nm,0.6s						
MKAR	Makanchi Array	49.12	345	P	P	05 47 03.2	+1.1
	1.0nm,0.5s,baz=147,slow=8.6,SNR=17						
STKA	Stephens Creek	51.33	132	P	P	05 47 19.4	+0.2
	0.7nm,0.6s,baz=318,slow=9.8,SNR=2.8						
ZALV	Zalesovo Beam	55.36	350	*e*P	P	05 47 49.5	+1.1
ZALV	Zalesovo Beam	55.36	350	P	P	05 47 48.6	+0.3
	1.9nm,0.8s,baz=183,slow=6.6,SNR=7.8						
ZAA1	Zalesovo Array	55.37	350	*e*P	P	05 47 48.6	+0.2
CAN	Canberra	58.40	132	*e*P	P	05 48 10.4	+0.1
	4.3nm,1.0s						
FIA1	FINESS Array S	82.02	332	*e*P	P	05 50 35.2	+0.9
FIA0	FINESS Array S	82.02	332	*e*P	P	05 50 35.0	+0.7
FINES	FINESS Array B	82.02	332	P	P	05 50 35.0	+0.7
	0.6nm,0.4s,baz=98,slow=3.9,SNR=5.8						
PTCN	Pitcairn Islan	126.66	122	*e*PKPdf	PKPdf	05 57 17.3	-1.3
LCMT	Little Creek M	133.27	35	*e*PKPdf	PKPdf	05 57 30.6	-0.4
SDMD	Soldier's Deli	140.97	354	*e*PKPdf	PKPdf	05 57 44.7	-0.3
LTX	Lajitas	144.34	34	*e*PKPdf	PKPbc	05 57 50.5	+0.8
TXAR	Lajitas Array	144.34	34	PKP	PKPbc	05 57 50.5	+0.8
	0.1nm,0.5s,baz=329,slow=1.1,SNR=3.5						
CPUP	Villa Florida	144.61	219	PKP	PKPdf	05 57 52.0	+0.2
	2.0nm,1.1s,baz=22,slow=5.4,SNR=3.6						

IDC 15 05:39:53.8±78.0**, 20°.18S×171°.74E, h0^{km}, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.7**/27**, mbtmp3.8**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/22**, Error ellipse: s-maj=1320.0km s-min=145.2km az=77.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	18.61	167	LR	LR	05 50 25.8	
	comp=Z,70nm,18.4s,baz=74,slow=34						
STKA	Stephens Creek	29.39	241	P	P	05 45 59.2	+0.4
	0.7nm,0.4s,baz=67,slow=11,SNR=1.8						
WRA	Warramunga Arr	35.08	264	P	P	05 46 50.2	+1.3
	0.4nm,0.8s,baz=94,slow=9.9,SNR=2.2						
ASAR	Alice Springs	35.20	257	P	P	05 46 48.8	-1.2
	1.7nm,0.8s,baz=88,slow=8.5,SNR=15						

IDC ***15*** *05:48:18.7±1.0, 0°.56S×98°.41E, h0^{km}, mb4.2/10, mb1 4.2/12, mb1mx4.0/44, mbtmp4.1/12, ML4.0/2, MS3.1/1, Ms1 3.3/1, ms1mx2.5/53, Error ellipse: s-maj=37.4km s-min=15.1km az=61.0*

ISCJB ***15*** *05:48:22.1±0.4, 0°.52S±0°.04×98°.39E±0°.06, h32^{km}, mb4.3/23, Error ellipse: s-maj=9.8km s-min=5.1km az=153.8*

DJA ***15*** *05:48:22.7±0.5, 0°S±5°×9°8E±°, h10^{km}, M3.8/5, MLv3.8/5*

NEIC ***15*** *05:48:25.1±1.2, 0°.50S×98°.43E, h42^{km}±9^{km}, mb4.3/14, Error ellipse: s-maj=15.6km s-min=5.7km az=59.0*

ISC 15 05:48:23.9±0.5**, 0°.50S**±0°.05×**98°.38E**±0°.08**, h32^{km}, n61, σ1^{s}24**/59**, mb4.3**/23**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	Pulau Batu	0.45	347	P	Pb	05 48 30.6	-3.0
SISI	Saibi	1.09	139	P	Pn	05 48 41.8	-1.1
MNSI	Mandailing Nat	1.76	43	P	Pn	05 48 49.8	-2.3
GSI	Gunungsitoli	1.96	336	*e*Pn	Pn	05 48 55.2	+0.3
GSI	Gunungsitoli	1.96	336	P	Pn	05 48 55.4	+0.5
PPI	Padang Panjang	2.02	89	P	Pn	05 48 54.5	-1.2
PDSI	Padang	2.12	101	P	Pn	05 48 56.5	-0.7
PPSI	Pulau Pagai	2.78	144	P	Pb	05 49 10.9	-2.0
BKNI	Bangkinang	2.79	73	*e*Pn	Pn	05 49 07.8	+1.6
BKNI	Bangkinang	2.79	73	P	Pn	05 49 08.8	+2.6
PSI	Prapat	3.32	9	Pn	Pn	05 49 10.2	-3.5
	3.1nm,0.3s,baz=180,slow=12,SNR=8.7						
PSI				Sn	Sn	05 49 53.4	+1.2
	4.7nm,0.3s,baz=180,slow=5.4,SNR=3.6						
IPM	Ipoh	5.61	28	*e*Pn	Pn	05 49 47.6	+2.5
MNAI	Manna	5.97	130	*e*Pn	Pn	05 49 51.0	+1.0
KULM	Kulim	6.18	22	*e*Pn	Pn	05 49 55.1	+2.1
TRTT	Trang	8.38	9	P	Pn	05 50 29.6	+6.4
UTHA	Uthaitani	15.99	4	P	P	05 52 18.2	+8.5
CMAR	Chiang Mai Arr	18.84	2	P	P	05 52 40.2	-1.2
	0.5nm,0.3s,baz=185,slow=10,SNR=6.2						
CMAR				LR	LR	06 00 26.1	
	comp=Z,55nm,20.0s,baz=191,slow=38						
H08S2	Diego Garcia H	26.76	254	T	T	06 21 46.8	
	baz=76,slow=76,SNR=200						
H08S3	Diego Garcia H	26.77	254	T	T	06 21 47.0	
	baz=76,slow=76,SNR=902						
H08S1	Diego Carcia H	26.78	254	T	T	06 21 49.4	
	baz=76,slow=76,SNR=44						
FITZ	Fitzroy Crossi	31.99	125	*e*P	P	05 54 46.6	-0.9
	3.0nm,1.0s						
ENH	Enshi	32.38	18	*e*P	P	05 54 49.8	-1.0
	9.2nm,0.7s						
XAN	Xi'an	35.75	15	*e*P	P	05 55 19.5	-0.5
	14nm,0.8s						
NWAO	Narrogin (SRO)	36.82	153	*e*P	P	05 55 30.0	+0.9
	14nm,1.1s						
WRA	Warramunga Arr	40.15	121	P	P	05 55 55.6	-1.6
	2.6nm,0.6s,baz=303,slow=9.0,SNR=33						
WRA				PcP	PcP	05 58 01.6	+0.1
	0.3nm,0.6s,baz=319,slow=2.4,SNR=3.5						
WR1	Warramunga Arr	40.15	121	*e*P	P	05 55 55.6	-1.6
	3.3nm,0.6s						
WR1				*e*PcP	PcP	05 58 01.6	+0.1
WRAB	Tennant Creek	40.16	121	*e*P	P	05 55 56.5	-0.8
	7.4nm,0.9s						
WB2	Warramunga Arr	40.16	121	*e*P	P	05 55 56.1	-1.3
	3.3nm,0.6s						
ASAR	Alice Springs	41.44	126	P	P	05 56 07.1	-0.8
	1.9nm,0.6s,baz=303,slow=8.1,SNR=24						
AS31	Alice Springs	41.44	126	*e*P	P	05 56 07.4	-0.5
	0.9nm,0.8s						
AS01	Alice Springs	41.48	126	*e*P	P	05 56 07.4	-0.9
SONA0	Songino Array	48.64	7	*e*P	P	05 57 05.3	+0.4
SONA0				*e*PcP	PcP	05 58 30.7	+0.7
SONM	Songino Array	48.64	7	P	P	05 57 05.3	+0.4
	1.7nm,0.5s,baz=190,slow=9.4,SNR=13						
SONM				PcP	PcP	05 58 30.7	+0.7
	0.3nm,0.7s,baz=159,slow=4.3,SNR=1.6						
SONA1	Songino Array	48.65	7	*e*P	P	05 57 05.5	+0.5
ULN	Ulaanbaatar	48.76	8	*e*P	P	05 57 06.7	+0.9
	2.2nm,0.8s						
MK01	Makanchi Array	49.14	345	*e*P	P	05 57 09.2	+0.6
MK31	Makanchi Array	49.16	345	*e*P	P	05 57 09.5	+0.8
	1.9nm,0.6s						
MK32	Makanchi Array	49.16	345	*e*P	P	05 57 09.3	+0.6
MKAR	Makanchi Array	49.16	345	*e*P	P	05 57 09.7	+0.9
	20nm,0.5s						
MKAR	Makanchi Array	49.16	345	P	P	05 57 09.3	+0.6
	2.3nm,0.5s,baz=155,slow=8.6,SNR=42						
MAKZ	Makanchi	49.26	345	*e*P	P	05 57 10.5	+1.0
	1.4nm,0.6s						
STKA	Stephens Creek	51.35	132	*e*P	P	05 57 26.5	+0.8
	0.4nm,0.6s						
STKA	Stephens Creek	51.35	132	P	P	05 57 24.9	-0.8
	1.9nm,0.5s,baz=307,slow=6.9,SNR=5.9						
USRK	Ussuriysk Ar.	53.63	30	P	P	05 57 41.7	-0.6
	1.6nm,0.6s,baz=242,slow=4.0,SNR=7.0						
ZAA0	Zalesovo Array	55.41	350	*e*P	P	05 57 55.8	+0.8
	3.8nm,0.9s						
ZALV	Zalesovo Beam	55.41	350	*e*P	P	05 57 55.8	+0.8
ZALV	Zalesovo Beam	55.41	350	P	P	05 57 55.1	+0.1
	2.8nm,0.6s,baz=184,slow=6.4,SNR=11						
ZAA1	Zalesovo Array	55.42	350	*e*P	P	05 57 55.1	+0.1
BR101	Keskin Array S	71.12	313	*e*P	P	05 59 38.7	-0.9
BRTR	Keskin Array B	71.12	313	P	P	05 59 38.7	-0.9
	0.5nm,0.7s,baz=108,slow=4.6,SNR=3.5						
BUR04	Bucovina Ar. S	79.07	319	*e*P	P	06 00 27.0	+1.7
BKZ	Black Stump Fm	80.47	130	*e*P	P	06 00 33.7	+0.7
	5.5nm,1.0s						
FIA1	FINESS Array S	82.04	332	*e*P	P	06 00 41.4	+0.7
FIA0	FINESS Array S	82.04	332	*e*P	P	06 00 40.9	+0.2
FINES	FINESS Array B	82.04	332	P	P	06 00 40.9	+0.2
	1.2nm,0.4s,baz=115,slow=5.5,SNR=19						
ARA0	ARCESS Array S	84.52	340	*e*P	P	06 00 54.0	+0.6
ARCES	ARCESS Array B	84.52	340	P	P	06 00 54.0	+0.6
	2.1nm,0.8s,baz=105,slow=7.0,SNR=3.0						
QSPA	South Pole Qui	89.46	180	*e*P	P	06 01 18.3	+0.8
LTX	Lajitas	144.44	34	*e*PKPdf	PKPbc	06 07 56.6	+0.3
TXAR	Lajitas Array	144.44	34	PKP	PKPbc	06 07 56.6	+0.3
	0.2nm,0.6s,baz=176,slow=0.8,SNR=4.7						
CPUP	Villa Florida	144.50	219	*e*PKPdf	PKPdf	06 07 58.5	+0.6

NEIC ***15*** *05:49:12.0±0.0, 17°.35N×94°.93W, h134^{km}, MD4.2(MEX), After MEX.*

MEX 15 05:49:09.9±0.9**, 17°.35N×94°.81W, h147^{km}**±10^{km}**, MD4.2, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.27	196	*e*Pn	Pn	05 49 28.8	-1.2
CMIG				*e*Sn	Sn	05 49 42.5	-2.8
CMIG	Matias Romero	0.27	196	*i* P	Pn	05 49 28.8	-1.2
CMIG				*i* S	Sn	05 49 42.9	-2.4
VHO	Vista Hermosa	1.86	262	*e*Pn	Pn	05 49 42.9	-0.6
VHO				*e*Sn	Sn	05 50 08.2	-1.0
VHO	Vista Hermosa	1.86	262	*e*P	Pn	05 49 42.9	-0.6
VHO				*i* S	Sn	05 50 08.0	-1.2
HUIG	Huatulco	2.01	219	*e*Pn	Pn	05 49 42.6	-2.4
HUIG				*e*Sn	Sn	05 50 10.3	-1.7
HUIG	Huatulco	2.01	219	*i* P	Pn	05 49 42.7	-2.3
HUIG				*i* S	Sn	05 50 10.5	-1.4
CCIG	Comitan	2.77	112	*e*Pn	Pn	05 49 54.9	+0.5
PNIG	Pinotepa	3.32	254	*e*Pn	Pn	05 49 55.4	-5.9
PNIG				*e*Sn	Sn	05 50 37.2	-3.8
PNIG	Pinotepa	3.32	254	*i* P	Pn	05 49 58.5	-2.8
PNIG				*e*S	Sn	05 50 37.2	-3.8

IDC ***15*** *06:08:25.5±1.5, 12°.11S×164°.39E, h0^{km}, mb4.0/5, mb1 4.2/7, mb1mx3.8/40, mbtmp4.1/7, ML4.3/2, Error ellipse: s-maj=35.5km s-min=30.3km az=155.0*

ISCJB ***15*** *06:08:28.8±1.1, 12°.3S±0°.1×164°.3E±0°.2, h33^{km}, mb3.9/5, Error ellipse: s-maj=24.6km s-min=16.4km az=144.7*

ISC 15 06:08:30.6±1.2**, 12°.2S**±0°.1×**164°.4E**±0°.2**, h35^{km}, n7, σ0^{s}75**/7**, mb4.0**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.12	302	Pn	Pn	06 09 44.3	-0.6
	21nm,0.3s,baz=185,slow=12,SNR=2.9						
DZM	Mont Dzumac	10.03	169	Pn	Pn	06 10 51.9	-0.4
	1.1nm,0.3s,baz=323,slow=16,SNR=19						
WRA	Warramunga Arr	29.82	251	P	P	06 14 35.3	+0.7
	1.8nm,0.7s,baz=81,slow=9.3,SNR=13						
ASAR	Alice Springs	31.06	244	P	P	06 14 46.5	+0.8
	0.3nm,0.5s,baz=60,slow=10,SNR=4.4						
FITZ	Fitzroy Crossi	37.77	256	P	P	06 15 43.3	-0.4
	2.1nm,0.8s,baz=102,slow=9.3,SNR=4.2						
NVAR	Mina Array Bea	87.80	50	P	P	06 21 16.6	-0.1
	0.6nm,0.7s,baz=224,slow=6.2,SNR=4.1						
ZALV	Zalesovo Beam	93.69	324	P	P	06 21 44.0	+0.6
	0.3nm,0.4s,baz=87,slow=4.2,SNR=1.8						

IDC ***15*** *06:08:35.6±1.8, 11°.36S×167°.07E, h0^{km}, mb4.1/13,* *mb1 4.2/13, mb1mx4.0/39, mbtmp4.1/13, MS3.6/5, Ms1 3.6/5, ms1mx3.1/30, Error ellipse: s-maj=59.3km s-min=18.2km az=130.0*

*ISCJB **15** 06:08:36.6±0.6, 11°.27S±0°.10×167°.0E±0°.1, h10km, mb4.2/23, MS3.5/4, Error ellipse: s-maj=18.5km s-min=8.9km az=40.8*

*NEIC **15** 06:08:37.8±0.4, 11°.34S×167°.13E, h10km, mb4.3/15, Error ellipse: s-maj=12.0km s-min=7.9km az=136.0*

ISC 15 06:08:37.5±0.6, **11°.4S**±0°.1×**167°.16E**±0°.10, **h10km, n47,** σ1s.**05**/38, **mb4.2**/23, **MS3.4**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.35	284	ePn	Pn	06 10 25.5	+0.5
HNR	Honiara	7.35	284	LR	LR	06 13 13.7	
	comp=Z,607nm,20.1s,baz=132,slow=38						
MSVF	Nonsavu	12.30	122	ePn	Pn	06 11 32.1	-0.8
EIDS	Eidsvold	20.63	225	eP	Pn	06 13 19.9	+0.3
	15nm,0.9s						
CTA	Charters Tower	21.89	244	P	P	06 13 30.8	-0.2
	3.9nm,0.6s,baz=70,slow=11,SNR=5.9						
CTAO	Charters Tower	21.89	244	eP	P	06 13 31.9	+1.0
	5.7nm,0.9s						
ARMA	Armidale	23.82	215	eP	P	06 13 52.9	+2.0
	12nm,1.1s						
H11S2	WAKE ISLAND Hy	29.66	359	T	T	06 44 35.5	
	baz=181,slow=76,SNR=37						
H11S3	WAKE ISLAND Hy	29.67	359	T	T	06 44 35.7	
	baz=181,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	29.68	359	T	T	06 44 36.9	
	baz=181,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	30.88	360	T	T	06 46 07.1	
	baz=182,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	30.88	360	T	T	06 46 05.6	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.89	360	T	T	06 46 08.4	
	baz=182,slow=76,SNR=14						
STKA	Stephens Creek	31.19	225	eP	P	06 14 58.2	+1.2
	0.3nm,0.9s						
STKA	Stephens Creek	31.19	225	P	P	06 14 57.6	+0.6
	0.8nm,0.2s,baz=55,slow=12,SNR=4.0						
STKA				LR	LR	06 26 31.0	
	comp=Z,82nm,21.8s,baz=28,slow=35						
WR1	Warramunga Arr	32.68	251	eP	P	06 15 08.7	-1.6
	2.5nm,0.8s						
WRA	Warramunga Arr	32.68	251	P	P	06 15 08.7	-1.6
	1.9nm,0.8s,baz=82,slow=9.1,SNR=10						
WRA				LR	LR	06 28 49.2	
	comp=Z,44nm,18.4s,baz=310,slow=37						
RAR	Rarotonga	33.16	111	LR	LR	06 24 55.8	
	comp=Z,299nm,21.6s,baz=318,slow=30						
AS31	Alice Springs	33.90	244	eP	P	06 15 20.0	-0.9
	0.9nm,0.9s						
ASAR	Alice Springs	33.90	244	P	P	06 15 19.5	-1.4
	1.8nm,0.7s,baz=74,slow=9.4,SNR=17						
ASAR				LR	LR	06 27 50.2	
	comp=Z,80nm,19.2s,baz=94,slow=34						
BBOO	Buckleboo	35.64	228	eP	P	06 15 36.1	+0.3
	3.8nm,0.9s						
FITZ	Fitzroy Crossi	40.64	255	eP	P	06 16 17.4	-0.7
	3.3nm,1.1s						
FITZ	Fitzroy Crossi	40.64	255	P	P	06 16 15.7	-2.5
	1.4nm,0.7s,baz=89,slow=8.8,SNR=2.9						
USRK	Ussuriysk Ar.	63.86	333	P	P	06 19 10.4	+0.2
	2.1nm,0.8s,baz=134,slow=11,SNR=5.6						
PETK	Petropavlovsk-	64.72	354	P	P	06 19 16.4	+0.7
	3.0nm,0.9s,baz=155,slow=10,SNR=3.0						
PEA1	Petropavlovsk-	64.72	354	eP	P	06 19 16.4	+0.6
CMAR	Chiang Mai Arr	73.51	293	P	P	06 20 10.4	-0.7
	0.6nm,0.3s,baz=86,slow=3.9,SNR=5.5						
SEY	Seymchan	74.94	353	P	P	06 20 18.4	-0.1
	0.9nm,0.7s,baz=164,slow=5.4,SNR=5.1						
GAMB	Gambell	76.64	9	eP	P	06 20 29.7	+1.6
	3.4nm,1.1s						
QSPA	South Pole Qui	78.65	180	eP	P	06 20 40.6	+1.0
	7.4nm,1.1s						
SONA0	Songino Array	79.74	323	eP	P	06 20 45.1	-0.7
SONM	Songino Array	79.74	323	P	P	06 20 45.1	-0.7
	0.9nm,1.0s,baz=134,slow=4.3,SNR=5.4						
IM3	Indian Mountai	82.36	15	eP	P	06 20 59.7	+0.4
HDA	Harding Lake	83.10	18	eP	P	06 21 04.3	+1.1
	9.1nm,1.0s						
IL1	Eielson Array	83.37	18	eP	P	06 21 05.2	+0.7
ILAR	Eielson Array	83.37	18	P	P	06 21 04.5	0.0
	1.7nm,0.8s,baz=227,slow=6.4,SNR=13						
ILB	Eielson Array	83.37	18	eP	P	06 21 05.3	+0.7
	1.4nm,0.8s						
DOT	Dot Lake	83.50	20	eP	P	06 21 06.9	+1.6
	8.8nm,1.2s						
SCRK	Sand Creek	83.74	20	eP	P	06 21 07.6	+1.0
	7.7nm,1.2s						
YKA	Yellowknife Ar	94.62	27	P	P	06 21 57.2	-1.1
	0.5nm,0.8s,baz=257,slow=4.8,SNR=7.6						
YKB5	Yellowknife Ar	94.62	27	eP	P	06 21 57.1	-1.2
MK01	Makanchi Array	94.69	317	eP	P	06 21 58.7	-0.3
MK31	Makanchi Array	94.70	317	eP	P	06 21 59.3	+0.2
	0.8nm,1.1s						
MK32	Makanchi Array	94.70	317	eP	P	06 21 58.3	-0.8
MKAR	Makanchi Array	94.70	317	eP	P	06 21 59.4	+0.3
	4.1nm,0.8s						
MKAR	Makanchi Array	94.70	317	P	P	06 21 58.3	-0.8
	1.0nm,0.8s,baz=91,slow=7.8,SNR=10						
MANT	Manisa	134.31	314	ePKPdf	PKiKP	06 27 58.4	+0.6

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*MOS **15** 06:09:31.6±0.9, 67°.64N×142°.66E, h8km, mb4.2/16, Error ellipse: s-maj=18.0km s-min=9.8km az=93.2*

*ISCJB **15** 06:09:32.0±0.2, 67°.67N±0°.04×142°.42E±0°.08, h10km, mb3.9/41, MS3.2/6, Error ellipse: s-maj=5.5km s-min=4.2km az=164.9*

*IDC **15** 06:09:32.2±0.7, 67°.72N×142°.42E, h0km, mb3.9/23, mb1 4.0/24, mb1mx3.9/48, mbtmp3.9/24, ML2.9/1, MS3.3/6, Ms1 3.3/6, ms1mx2.8/44, Error ellipse: s-maj=18.9km s-min=11.9km az=169.0*

*YARS **15** 06:09:32.9±0.2, 67°.65N±0°.01×142°.67E±0°.03, h3km*

*NEIC **15** 06:09:34.5±0.3, 67°.78N×142°.20E, h10km, mb4.1/14, Error ellipse: s-maj=8.8km s-min=5.2km az=167.0*

ISC 15 06:09:33.5±0.4, **67°.65N**±0°.05×**142°.56E**±0°.04, **h10km, n101,** σ1s.**71**/104, **mb4.0**/46, **MS3.1**/6, **3C, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.21	167	eP	Pn	06 09 54.2	-2.2
MOMR				eS	Sb	06 10 10.2	-1.9
MOMR				pmax	pmax		
	comp=Z,1μm,0.6s						
MOMR				smax	smax		
	comp=N,4μm,0.7s						
MOMR	Moma	1.21	167	eP	Pn	06 09 54.2	-2.2
MOMR				Pmax		06 09 54.2	
	comp=Z,1μm,0.6s						
MOMR				eS	Sb	06 10 10.2	-1.9
MOMR				Smax		06 10 10.2	
	comp=N,4μm,0.7s						
YBGR	Belaya Gora	1.63	55	eP	Pn	06 10 00.9	-1.3
YBGR				Pmax		06 10 00.9	
	comp=Z,893nm,0.4s						
YBGR				eS	Sn	06 10 22.6	-0.6
YBGR				Smax		06 10 22.6	
	comp=N,6μm,0.6s						
BTGS	Batagay	3.02	274	eP	Pn	06 10 22.5	+1.2
BTGS				eS	Sn	06 10 58.3	+0.7
BTGS				pmax	pmax		
	comp=Z,107nm,0.4s						
BTGS	Batagay	3.02	274	eP	Pn	06 10 22.5	+1.2
BTGS				eP	Pb	06 10 28.5	+1.2
BTGS				Pmax		06 10 28.5	
	comp=Z,107nm,0.4s						
BTGS				eS	Sn	06 10 58.3	+0.7
BTGS				eS	Sb	06 11 07.6	+3.3
BTGS				Smax		06 11 07.6	
	comp=N,2μm,0.9s						
SEY	Seymchan	6.27	134	ceP	Pn	06 11 06.8	+0.9
SEY	Seymchan	6.27	134	Pn	Pn	06 11 05.0	-0.8
	comp=N,0.3nm,0.3s,baz=327,slow=17,SNR=3.9						
SEY				Pg	Pb	06 11 16.7	-5.8
	comp=N,0.7nm,0.3s,baz=286,slow=17,SNR=9.3						
SEY				Lg	Lg	06 12 49.0	
	comp=N,1.5nm,0.3s,baz=30,slow=18,SNR=7.0						
YAK	Yakutsk	7.85	230	eP	Pn	06 11 23.8	-3.7
YAK				e		06 12 52.2	
YAK				pmax	pmax		
	comp=Z,55nm,0.4s						
YAK				pmax	pmax		
	comp=E,16nm,0.3s						
YAK				pmax	pmax		
	comp=N,21nm,0.4s						
YAK				smax	smax		
	comp=E,245nm,0.7s						
YAK				smax	smax		
	comp=N,242nm,0.6s						
YAK				smax	smax		
	comp=Z,502nm,15.1s						
MA2	Magadan	8.88	152	ePn	Pn	06 11 45.2	+3.5
MA2				Lg	Lg	06 14 13.0	
MA2	Magadan	8.88	152	i P	Pn	06 11 42.4	+0.8
MA2	Magadan	8.88	152	Lg	Lg	06 14 13.0	
	comp=Z,0.4nm,0.3s,baz=67,slow=18,SNR=6.5						
BILL	Bilibino	8.95	77	i P	Pn	06 11 45.6	+3.0
BILL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZEA	Zeya	15.76	215	eP	P	06 13 20.7	+1.6
ZEA				pmax	pmax		
	comp=Z,15nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,9.0s						
ZEA				MLR	MLR		
	comp=N,300nm,8.0s						
BOD	Bodaibo	16.19	247	eP	Pn	06 13 15.5	-5.3
BOD				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PETK	Petropavlovsk-	16.31	146	ePn	P	06 13 29.0	+3.7
PETK	Petropavlovsk-	16.31	146	eP	P	06 13 29.0	+3.7
GAMB	Gambell	18.85	80	eP	Pn	06 13 56.6	+2.8
	comp=Z,2.2nm,0.9s						
KLR	Kul'dur	19.26	202	i P	P	06 13 54.4	-3.4
KLR	Kul'dur	19.26	202	Lg	Lg	06 19 34.9	
	comp=Z,0.1nm,0.3s,baz=264,slow=16,SNR=5.3						
NRIK	Noril'sk	19.67	300	Lg	Lg	06 19 53.2	
	comp=Z,0.2nm,0.3s,baz=155,slow=19,SNR=2.3						
ANM	Nome	20.79	74	eP	Pn	06 14 17.6	+0.8
	comp=Z,3.0nm,0.8s						
ANM	Nome	20.79	74	eP	Pn	06 14 17.6	+0.8
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HIA	Hailar	21.71	223	i P	P	06 14 23.4	-0.9
HIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TOLK	Toolik Lake Re	24.15	56	eP	P	06 14 50.0	+0.8
	comp=Z,4.7nm,0.9s						
IM3	Indian Mountai	24.16	64	eP	P	06 14 50.1	+0.8
USRK	Ussuriysk Ar.	24.16	199	P	P	06 14 48.9	-0.6
	comp=Z,3.7nm,0.9s,baz=14,slow=12,SNR=6.3						
COLD	Coldfoot	24.68	59	eP	P	06 14 57.5	+3.4
	comp=Z,3.4nm,1.0s						
MOY	Mondy	25.69	252	eP	P	06 15 05.0	+1.6
MOY				pmax	pmax		
	comp=Z,18nm,2.1s						
ZAK	Zakamensk	25.93	248	eP	P	06 15 05.3	-0.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ULN	Ulaanbaatar	26.77	240	i P	P	06 15 13.2	-0.1
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
COLA	College	26.82	62	i P	P	06 15 18.1	+4.8
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONA1	Songino Array	27.01	241	eP	P	06 15 17.1	+1.7
SONA0	Songino Array	27.02	241	eP	P	06 15 15.6	+0.1
SONM	Songino Array	27.02	241	P	P	06 15 15.6	+0.1
	comp=Z,1.0nm,0.8s,baz=24,slow=10,SNR=7.0						
SONM				Lg	Lg	06 23 54.1	
	comp=Z,0.6nm,1.0s,baz=35,slow=24,SNR=3.9						
ILAR	Eielson Array	27.21	62	eP	P	06 15 19.2	+2.3
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	27.21	62	P	P	06 15 17.9	+1.0
	comp=Z,1.5nm,0.9s,baz=296,slow=7.9,SNR=15						
ILAR				LR	LR	06 26 58.9	
	comp=Z,54nm,20.8s,baz=70,slow=38						
SUA	Susitna One	27.98	70	eP	P	06 15 26.1	+2.1
	comp=Z,2.4nm,1.0s						
INK	Inuvik	29.22	49	LR	LR	06 29 45.2	
	comp=Z,38nm,19.0s,baz=278,slow=42						
ZAA1	Zalesovo Array	30.00	272	eP	P	06 15 41.8	0.0
ZALV	Zalesovo Beam	30.01	272	P	P	06 15 41.8	0.0
	comp=Z,0.6nm,0.5s,baz=46,slow=8.3,SNR=2.3						
KSRS	Korea Array	31.35	203	LR	LR	06 29 14.5	
	comp=Z,27nm,20.8s,baz=5.0,slow=38						
RES	Resolute Bay	33.28	24	eP	P	06 16 10.7	+0.4
RES	Resolute Bay	33.28	24	eP	P	06 16 10.7	+0.4
TULEG	Thule	34.74	12	eP	P	06 16 24.1	+1.0
	comp=Z,1.9nm,0.7s						
KURK	Kurchatov	34.91	274	eP	P	06 16 25.4	+0.6
KURK				ePP	PnPn	06 17 41.4	+0.3
KURK	Kurchatov	34.91	274	i P	P	06 16 23.6	-1.2
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	Kurchatov Arra	35.02	274	P	P	06 16 25.4	-0.3
	comp=Z,1.3nm,0.5s,baz=36,slow=8.7,SNR=17						
KURBB				PP	PnPn	06 17 41.4	-1.0
	comp=Z,0.9nm,0.8s,baz=43,slow=11,SNR=3.2						
BVAR	Borovoye Array	36.19	283	P	P	06 16 35.4	-0.3
	comp=Z,1.8nm,0.6s,baz=64,slow=6.8,SNR=11						
BVAR				LR	LR	06 32 02.0	
	comp=Z,28nm,18.6s,baz=22,slow=37						
BRVK	Borovoye	36.20	283	c iP	P	06 16 34.6	-1.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK31	Makanchi Array	36.71	266	eP	P	06 16 39.7	-0.6
	comp=Z,3.0nm,0.8s						
MK31	Makanchi Array	36.71	266	eP	P	06 16 39.7	-0.6
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK32	Makanchi Array	36.71	266	eP	P	06 16 39.7	-0.6
MK32				ePP	PnPn	06 18 02.6	-0.8
MKAR	Makanchi Array	36.71	266	eP	P	06 16 39.9	-0.4
	comp=Z,23nm,0.8s						
MKAR				PP	PnPn	06 18 02.6	-0.8
MKAR	Makanchi Array	36.71	266	eP	P	06 16 39.9	-0.4
MKAR						06 18 02.7	
MKAR				pmax	pmax		
	comp=Z,23nm,0.8s						
MKAR	Makanchi Array	36.71	266	P	P	06 16 39.7	-0.6
	comp=Z,3.8nm,0.7s,baz=47,slow=7.2,SNR=45						
MKAR				PP	PnPn	06 18 02.6	-0.8
	comp=Z,2.4nm,0.9s,baz=49,slow=7.5,SNR=4.9						
MK01	Makanchi Array	36.72	266	eP	P	06 16 39.6	-0.8
MAKZ	Makanchi	36.82	267	eP	P	06 16 40.6	-0.6
	comp=Z,2.3nm,0.8s						
MAKZ	Makanchi	36.82	267	eP	P	06 16 40.6	-0.6
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	Arti	37.77	296	i P	P	06 16 47.2	-1.9
ARU				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YKA	Yellowknife Ar	38.84	46	P	P	06 16 58.3	+0.2
	comp=Z,0.3nm,0.8s,baz=320,slow=8.3,SNR=8.0						
SCO	Scoresbysund	41.73	352	i P	P	06 17 17.7	-4.2
SCO	Scoresbysund	41.73	352	eP	P	06 17 17.7	-4.2
AKTO	Aktyubinsk	42.81	290	P	P	06 17 30.6	-0.4
	comp=Z,1.6nm,0.4s,baz=39,slow=8.4,SNR=6.8						
ABKAR	Akbulak array	43.09	288	eP	P	06 17 33.0	-0.2
	comp=Z,3.7nm,1.1s						
AAK	Ala-Archa	43.20	270	eP	P	06 17 35.6	+1.3
	comp=Z,4.7nm,0.6s						
AAK	Ala-Archa	43.20	270	ceP	P	06 17 34.0	-0.3
AAK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
AAK	Ala-Archa	43.20	270	P	P	06 17 35.2	+0.9
	comp=Z,3.7nm,0.6s,baz=120,slow=2.4,SNR=13						
FIA1	FINESS Array S	43.25	321	eP	P	06 17 33.9	-0.4
FIA0	FINESS Array S	43.25	321	eP	P	06 17 33.9	-0.5
FIA0	FINESS Array S	43.25	321	eP	P	06 17 33.9	-0.5
FINES	FINESS Array B	43.25	321	P	P	06 17 33.9	-0.5
	comp=Z,1.3nm,0.5s,baz=29,slow=8.3,SNR=12						
NB200	NORSAR Array S	46.83	330	eP	P	06 18 01.7	-1.2
NOA	NORSAR Array B	46.83	330	P	P	06 18 01.7	-1.2
	comp=Z,1.2nm,0.8s,baz=24,slow=7.8,SNR=2.9						
FRB	Frobisher Bay	47.01	18	P	P	06 18 02.8	-1.3
	comp=Z,0.9nm,0.6s,baz=345,slow=12,SNR=2.9						
AKASG	Malin Array Be	51.92	312	P	P	06 18 40.5	-1.3
	comp=Z,1.4nm,0.6s,baz=27,slow=8.4,SNR=3.4						
JIRN	Jiri	52.08	249	eP	P	06 18 44.4	+0.7
	comp=Z,19nm,0.8s						
KKN	Kakani	52.29	250	eP	P	06 18 45.9	+0.9
	comp=Z,5.3nm,0.2s						
DANN	Dangsing	52.33	252	eP	P	06 18 46.3	+0.9
	comp=Z,14nm,0.7s						
PYUN	Piuthan	52.84	253	eP	P	06 18 49.4	+0.3
	comp=Z,18nm,0.9s						
KOLN	Koldanda	52.91	252	eP	P	06 18 50.3	+0.6
	comp=Z,21nm,1.0s						
GEYT	Alibeck	53.50	282	P	P	06 18 54.3	+0.7
	comp=Z,1.7nm,0.5s,baz=20,slow=4.6,SNR=2.1						
KBZ	Khabaz	53.85	298	P	P	06 18 55.7	-0.4
	comp=Z,2.9nm,0.9s,baz=32,slow=13,SNR=3.4						
TGY	Tagaytay City	55.34	206	LR	LR	06 43 22.9	
	comp=Z,140nm,20.9s,baz=132,slow=37						
CLL	Collm	55.50	324	i P	P	06 19 07.2	-0.8
	comp=Z,6.0nm,0.9s						
BUR04	Bucovina Ar. S	55.84	313	eP	P	06 19 10.5	-0.1
SCHQ	Schefferville	55.89	20	P	P	06 19 08.7	-2.1
	comp=Z,1.5nm,0.9s,baz=0.0,slow=14,SNR=3.5						
CMAR	Chiang Mai Arr	56.38	232	LR	LR	06 45 49.5	
	comp=Z,22nm,20.2s,baz=55,slow=39						
PDAR	Pinedale Array	57.41	56	P	P	06 19 21.1	-0.9
	comp=Z,0.3nm,0.5s,baz=15,slow=3.7,SNR=4.6						
MLR	Muntele Rosu	57.58	312	eP	P	06 19 23.7	+0.7
	comp=Z,3.6nm,0.9s						
GERES	GERESS Array B	57.65	322	P	P	06 19 23.3	-0.1
	comp=Z,0.7nm,0.6s,baz=27,slow=6.3,SNR=7.1						
NVAR	Mina Array Bea	58.39	66	P	P	06 19 31.2	+2.3
	comp=Z,0.4nm,0.7s,baz=335,slow=6.0,SNR=2.2						
BR101	Keskin Array S	60.49	303	eP	P	06 19 43.4	0.0
BRTR	Keskin Array B	60.49	303	P	P	06 19 43.4	0.0
	comp=Z,1.1nm,0.6s,baz=31,slow=4.1,SNR=5.5						
CCUT	Cedar City	60.87	62	eP	P	06 19 44.0	-2.1
	comp=Z,1.3nm,1.1s						
ESDC	Sonseca Array	70.05	333	P	P	06 20 44.2	-0.9
	comp=Z,0.8nm,0.7s,baz=5.9,slow=5.9,SNR=5.7						
RAYN	Ar Rayn	71.12	286	eP	P	06 20 52.1	+0.2
	comp=Z,2.6nm,0.7s						
RAYN	Ar Rayn	71.12	286	eP	P	06 20 52.1	+0.2
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LTX	Lajitas	71.60	57	eP	P	06 20 55.8	+1.0
LTX	Lajitas	71.60	57	eP	P	06 20 55.8	+1.0
TXAR	Lajitas Array	71.60	57	P	P	06 20 55.8	+1.0
	comp=Z,0.2nm,0.6s,baz=326,slow=4.4,SNR=2.9						
GO09	Cerro Castillo	156.35	64	ePKPdf	PKPdf	06 29 29.8	+2.9

YARS 15 06:22:00.2±0.2, **67°.58N**±0°.01×**142°.61E**±0°.03, **h10km, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.14	168	eP	Pb	06 22 20.9	-1.1
MOMR				Pmax		06 22 20.9	
	comp=Z,10.0nm,0.1s						
MOMR				eS	Sb	06 22 35.8	-1.1
MOMR				Smax		06 22 35.8	
	comp=N,66nm,0.3s						
YBGR	Belaya Gora	1.65	53	eP	Pn	06 22 29.3	+0.1
YBGR				Pmax		06 22 29.3	
	comp=Z,6.0nm,0.1s						
YBGR				eS	Sb	06 22 51.5	0.0
YBGR				Smax		06 22 51.5	
	comp=E,56nm,0.3s						
BTGS	Batagay	3.05	275	eP	Pb	06 22 54.8	+0.3
BTGS				Pmax		06 22 54.8	
	comp=Z,2.0nm,0.3s						
BTGS				eS	Sg	06 23 34.9	-3.2
BTGS				Smax		06 23 34.9	
	comp=E,8.0nm,0.3s						

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*MOS **15** 06:22:59.3±0.9, 67°.66N×142°.71E, h8km, mb4.5/33, Error ellipse: s-maj=14.6km s-min=6.3km az=94.3*

*IDC **15** 06:22:59.5±0.5, 67°.57N×142°.74E, h0km, mb4.0/28, mb1 4.2/31, mb1mx4.1/53, mbtmp4.0/31, ML3.6/3, MS3.0/7, Ms1 3.0/7, ms1mx2.8/37, Error ellipse: s-maj=13.5km s-min=11.2km az=172.0*

*NEIC **15** 06:23:01.8±0.2, 67°.66N×142°.56E, h10km, mb4.4/54, Error ellipse: s-maj=5.0km s-min=3.3km az=177.0*

*YARS **15** 06:23:01.0±0.3, 67°.60N±0°.02×142°.74E±0°.04, h3km*

ISC 15 06:23:00.4±0.8, **67°.60N**±0°.04×**142°.82E**±0°.03, **h4km**±5km, **n204,** σ1s.**19**/221, **mb4.4**/94, **MS3.0**/6, **1C-2D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.15	172	eP	Pg	06 23 21.3	-1.0
MOMR				eS	Sg	06 23 36.9	-0.3
MOMR				pmax	pmax		
	comp=Z,2μm,0.7s						
MOMR				smax	smax		
	comp=E,3μm,0.6s						
MOMR	Moma	1.15	172	eP	Pg	06 23 21.3	-1.0
MOMR				Pmax		06 23 21.3	
	comp=Z,2μm,0.7s						
MOMR				eS	Sg	06 23 36.9	-0.3
MOMR				Smax		06 23 36.9	
	comp=E,3μm,0.6s						
YBGR	Belaya Gora	1.57	52	eP	Pn	06 23 28.9	-0.1
YBGR				Pmax		06 23 28.9	
	comp=Z,444nm,0.3s						
YBGR				eS	Sg	06 23 51.1	+0.2
YBGR				Smax		06 23 51.1	
	comp=N,6μm,0.5s						
BTGS	Batagay	3.13	275	eP	Pn	06 23 51.1	+0.7
BTGS				eS	Sn	06 24 26.9	-1.3
BTGS				pmax	pmax		
	comp=Z,43nm,0.2s						
BTGS	Batagay	3.13	275	eP	Pn	06 23 51.1	+0.7
BTGS				eP	Pb	06 23 56.9	+0.4
BTGS				Pmax		06 23 56.9	
	comp=Z,43nm,0.2s						
BTGS				eS	Sn	06 24 26.9	-1.3
BTGS				eS	Sb	06 24 36.9	+2.0
BTGS				Smax		06 24 36.9	
	comp=N,796nm,0.3s						
SEY	Seymchan	6.16	135	⇓eP	Pn	06 24 32.2	+0.2
SEY	Seymchan	6.16	135	Pn	Pn	06 24 32.5	+0.5
	comp=N,0.9nm,0.3s,baz=316,slow=12,SNR=14						
SEY				Pg	Pb	06 24 44.4	-3.7
	comp=N,1.9nm,0.3s,baz=315,slow=15,SNR=13						
SEY				Lg	Lg	06 26 14.1	
	comp=N,6.3nm,0.3s,baz=191,slow=22,SNR=7.9						
YAK	Yakutsk	7.90	231	eP	Pn	06 24 50.6	-5.2
YAK				e		06 26 19.2	
YAK				pmax	pmax		
	comp=Z,74nm,0.3s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.4s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.3s						
YAK				smax	smax		
	comp=E,702nm,0.6s						
YAK				smax	smax		
	comp=N,237nm,0.4s						
MA2	Magadan	8.79	153	i P	Pn	06 25 10.7	+2.6
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MA2	Magadan	8.79	153	Pn	Pn	06 25 10.2	+2.2
	comp=Z,0.2nm,0.3s,baz=356,slow=19,SNR=4.0						
MA2				Lg	Lg	06 27 40.4	
	comp=Z,1.5nm,0.3s,baz=53,slow=15,SNR=9.1						
MA2				LR	LR	06 27 51.2	
	comp=Z,28nm,21.2s,baz=357,slow=33						
BILL	Bilibino	8.86	76	ePn	Pn	06 25 11.6	+2.6
BILL	Bilibino	8.86	76	i P	Pn	06 25 11.4	+2.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZEA	Zeya	15.78	216	eP	Pn	06 26 45.1	+2.0
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=N,400nm,8.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,8.0s						
PEA1	Petropavlovsk-	16.21	146	ePn	P	06 26 53.5	+1.6
PEA0B	Petropavlovsk-	16.21	146	ePn	P	06 26 53.5	+1.5
	comp=Z,25nm,1.1s						
PETK	Petropavlovsk-	16.21	146	ePn	P	06 26 54.2	+2.3
PETK	Petropavlovsk-	16.21	146	eP	P	06 26 54.2	+2.3
PETK	Petropavlovsk-	16.21	146	Pn	P	06 26 53.5	+1.5
	comp=Z,0.3nm,0.3s,baz=311,slow=5.5,SNR=4.6						
BOD	Bodaibo	16.27	247	eP	Pn	06 26 44.1	-5.3
BOD				pmax	pmax		
	comp=Z,5.0nm,1.6s						
GAMB	Gambell	18.76	80	eP	Pn	06 27 21.6	+1.3
	comp=Z,4.6nm,0.8s						
KLR	Kul'dur	19.25	202	i P	Pn	06 27 26.3	-0.1

KLR	Kul'dur	19.25	202	P	P	06 27 25.4	-0.1
	comp=Z,0.1nm,0.3s,baz=0.9,slow=14,SNR=3.7						
KLR				Lg	Lg	06 33 04.7	
	comp=Z,0.1nm,0.3s,baz=297,slow=17,SNR=3.2						
KLR				LR	LR	06 34 25.5	
	comp=Z,32nm,18.7s,baz=314,slow=36						
NRIK	Noril'sk	19.78	300	P	Pn	06 27 32.5	0.0
	comp=Z,0.4nm,0.3s,baz=58,slow=6.5,SNR=4.6						
NRIK				Lg	Lg	06 33 22.3	
	comp=Z,0.7nm,0.3s,baz=347,slow=18,SNR=2.4						
RDOG	Red Dog Mine	19.94	63	eP	Pn	06 27 34.0	-0.5
	comp=Z,18nm,1.2s						
ANM	Nome	20.70	74	eP	Pn	06 27 42.5	-1.0
	comp=Z,6.0nm,0.7s						
ANM	Nome	20.70	74	eP	Pn	06 27 42.5	-1.0
ANM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HIA	Hailar	21.74	224	iP	P	06 27 54.5	+2.0
HIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ASAJ	Asahikawa	23.54	180	P	P	06 28 13.2	+1.9
	comp=Z,3.8nm,0.6s,baz=99,slow=3.2,SNR=4.5						
TOLK	Toolik Lake Re	24.09	56	eP	P	06 28 17.1	+0.7
	comp=Z,9.9nm,0.9s						
IM3	Indian Mountai	24.09	64	eP	P	06 28 17.1	+0.7
USRK	Ussuriysk Ar.	24.15	199	P	P	06 28 16.6	-0.6
	comp=Z,1.4nm,0.5s,baz=23,slow=6.7,SNR=4.3						
COLD	Coldfoot	24.61	59	eP	P	06 28 22.6	+1.3
	comp=Z,7.1nm,0.9s						
MLY	Manley	25.67	64	eP	P	06 28 31.8	+1.0
	comp=Z,15nm,1.4s						
MOY	Mondy	25.78	253	eP	P	06 28 33.0	+1.0
MOY				pmax	pmax		
	comp=Z,15nm,1.3s						
ZAK	Zakamensk	26.00	248	eP	P	06 28 34.5	+0.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BPAW	Bear Paw Mtn.	26.14	66	eP	P	06 28 38.6	+3.5
	comp=Z,14nm,1.4s						
CAST	Castle Rocks	26.17	68	eP	P	06 28 36.6	+1.2
	comp=Z,13nm,1.2s						
PPLA	Purkeypile	26.46	69	eP	P	06 28 39.4	+1.3
MDM	Murphy Dome	26.57	63	eP	P	06 28 39.8	+0.8
	comp=Z,5.8nm,0.8s						
FYU	Fort Yukon	26.61	58	eP	P	06 28 39.3	0.0
	comp=Z,8.8nm,0.9s						
COLA	College	26.75	63	iP	P	06 28 41.6	+1.1
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TRF	Thorofare Moun	26.78	67	eP	P	06 28 42.6	+1.5
	comp=Z,9.0nm,1.0s						
WRH	Wood River Hil	26.91	63	eP	P	06 28 42.9	+0.9
SONA1	Songino Array	27.07	241	eP	P	06 28 45.0	+1.1
MCK	McKinley	27.08	65	eP	P	06 28 44.4	+0.8
	comp=Z,10nm,1.1s						
MCK	McKinley	27.08	65	P	P	06 28 44.4	+0.8
SONA0	Songino Array	27.09	241	eP	P	06 28 43.8	-0.2
SONM	Songino Array	27.09	241	P	P	06 28 43.8	-0.2
	comp=Z,0.6nm,0.8s,baz=41,slow=9.8,SNR=5.1						
IL1	Eielson Array	27.14	62	eP	P	06 28 45.0	+1.0
ILAR	Eielson Array	27.14	62	P	P	06 28 44.3	+0.2
	comp=Z,4.2nm,0.8s,baz=298,slow=8.1,SNR=54						
ILB	Eielson Array	27.14	62	eP	P	06 28 45.0	+0.9
PRP	Porcupine Dome	27.14	60	eP	P	06 28 45.0	+0.8
	comp=Z,2.9nm,1.0s						
RSO	Redoubt South	27.84	73	eP	P	06 28 52.2	+1.6
SUA	Susitna One	27.90	70	eP	P	06 28 51.2	+0.2
	comp=Z,6.0nm,1.3s						
DHY	Denali Highway	28.04	65	eP	P	06 28 52.6	+0.2
	comp=Z,11nm,1.5s						
DOT	Dot Lake	28.81	62	eP	P	06 28 59.7	+0.7
	comp=Z,8.2nm,1.4s						
BRLK	Bradley Lake	29.00	73	eP	P	06 29 01.1	+0.3
	comp=Z,14nm,0.8s						
INK	Inuvik	29.17	49	eP	P	06 29 02.6	+0.5
INK	Inuvik	29.17	49	eP	P	06 29 02.6	+0.5
INK	Inuvik	29.17	49	P	P	06 29 02.4	+0.3
	comp=Z,0.6nm,0.8s,baz=297,slow=3.2,SNR=3.2						
INK				LR	LR	06 42 01.0	
	comp=Z,16nm,18.3s,baz=50,slow=39						
SEW	Seward	29.29	71	eP	P	06 29 02.8	-0.4
	comp=Z,52nm,1.5s						
EPYK	Eagle Plains	29.44	54	eP	P	06 29 05.4	+0.8
	comp=Z,18nm,1.5s						
KDAK	Kodiak Island	29.77	77	LR	LR	06 41 21.0	
	comp=Z,130nm,19.5s,baz=20,slow=37						
DAWY	Dawson	30.09	59	eP	P	06 29 10.6	+0.1
	comp=Z,8.7nm,1.5s						
ZAA1	Zalesovo Array	30.11	272	eP	P	06 29 09.6	-0.9
ZAA1				ePcP	PcP	06 32 11.2	-0.5
ZALV	Zalesovo Beam	30.11	272	eP	P	06 29 10.5	-0.1
ZALV				PcP	PcP	06 32 11.2	-0.5
ZALV	Zalesovo Beam	30.11	272	eP	P	06 29 10.5	-0.1
ZALV						06 32 11.2	
ZALV	Zalesovo Beam	30.11	272	P	P	06 29 09.6	-0.9
	comp=Z,0.4nm,0.4s,baz=44,slow=11,SNR=3.1						
ZALV				PcP	PcP	06 32 11.2	-0.5
	comp=Z,0.5nm,0.4s,baz=47,slow=5.1,SNR=3.1						
SPITS	Spitsbergen Ar	31.04	341	P	P	06 29 19.0	+0.4
	comp=Z,7.7nm,0.9s,baz=49,slow=12,SNR=5.2						
SPITS				PcP	PcP	06 32 13.7	-0.1
	comp=Z,9.1nm,0.9s,baz=90,slow=5.9,SNR=10						
MJAR	Matsushiro Arr	31.22	187	LR	LR	06 40 57.9	
	comp=Z,32nm,18.1s,baz=350,slow=35						
KSRS	Korea Array	31.34	203	LR	LR	06 42 47.5	
	comp=Z,26nm,18.1s,baz=90,slow=38						
HHC	Hu-ho-hao-te	31.75	228	eP	P	06 29 27.3	+2.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.1s						
DGZ	Jazzator, Alta	32.46	265	iP	P	06 29 31.9	+0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.4s						
RES	Resolute Bay	33.28	24	P	P	06 29 38.5	+0.3
	comp=Z,1.2nm,0.8s,baz=293,slow=9.3,SNR=6.8						
KURK	Kurchatov	35.01	274	eP	P	06 29 53.8	+0.3
KURK				ePP	PP	06 31 14.5	+1.9
KURK	Kurchatov	35.01	274	iP	P	06 29 52.5	-1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURBB	Kurchatov Arra	35.12	274	P	P	06 29 53.8	-0.6
	comp=Z,1.1nm,0.5s,baz=38,slow=8.7,SNR=10						
KURBB				PP	PP	06 31 14.5	+0.7
	comp=Z,1.4nm,1.0s,baz=42,slow=11,SNR=4.9						
LVZ	Lovozero	35.93	322	eP	P	06 30 00.7	-0.6
	comp=Z,17nm,1.0s						
LVZ	Lovozero	35.93	322	eP	P	06 30 00.7	-0.6
LVZ				pmax	pmax		
	comp=Z,17nm,1.0s						
BVAR	Borovoye Array	36.30	283	P	P	06 30 04.1	-0.4
	comp=Z,1.3nm,0.6s,baz=39,slow=9.6,SNR=6.9						
BVAR				PcP	PcP	06 32 28.7	-0.4
	comp=Z,0.5nm,0.5s,baz=60,slow=4.0,SNR=3.5						
BRVK	Borovoye	36.31	284c	iP	P	06 30 03.2	-1.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARA0	ARCESS Array S	36.60	328	eP	P	06 30 06.0	-0.9
ARA0				ePcP	PcP	06 32 29.5	-0.2
ARCES	ARCESS Array B	36.60	328	eP	P	06 30 06.4	-0.5
ARCES				PcP	PcP	06 32 29.5	-0.2
ARCES	ARCESS Array B	36.60	328	eP	P	06 30 06.2	-0.7
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	36.60	328	P	P	06 30 06.0	-0.9
	comp=Z,1.5nm,0.6s,baz=37,slow=11,SNR=11						
ARCES				PcP	PcP	06 32 29.5	-0.2
	comp=Z,3.4nm,1.0s,baz=12,slow=4.6,SNR=11						
GTA	Gaotai	36.76	242	eP	P	06 30 12.3	+3.6
GTA				pP	sP	06 30 16.6	+6.1
GTA				sP	pP	06 30 19.5	+10
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	Makanchi Array	36.81	267	eP	P	06 30 08.3	-0.6
MK31	Makanchi Array	36.81	267	eP	P	06 30 08.4	-0.6
MK32	Makanchi Array	36.81	267	eP	P	06 30 08.1	-0.9
MK32				ePP	PP	06 31 31.3	-1.1
MKAR	Makanchi Array	36.81	267	eP	P	06 30 08.3	-0.6
	comp=Z,16nm,0.6s						
MKAR				PP	PP	06 31 31.3	-1.1
MKAR	Makanchi Array	36.81	267	P	P	06 30 08.1	-0.9
	comp=Z,2.0nm,0.5s,baz=29,slow=6.9,SNR=34						
MKAR				PP	PP	06 31 31.3	-1.1
	comp=Z,1.0nm,0.6s,baz=42,slow=8.6,SNR=4.5						
MKAR				LR	LR	06 48 04.4	
	comp=Z,27nm,18.9s,baz=10,slow=41						
MK01	Makanchi Array	36.82	267	eP	P	06 30 08.1	-1.0
WMQ	Urumqi	37.26	259	eP	P	06 30 15.8	+2.9
DLBC	Dease Lake	37.29	60	eP	P	06 30 14.8	+1.8
	comp=Z,14nm,1.4s						
ARU	Arti	37.88	296	iP	P	06 30 16.8	-1.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TMCR	Tamitsa	38.06	317	eP	P	06 30 17.5	-1.8
TMCR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	Lanzhou	38.47	235	eP	P	06 30 23.5	+0.3
LZH				pP	sP	06 30 27.8	+2.8
LZH				sP	pP	06 30 30.3	+5.8
LZH				ePP	PnPn	06 31 54.6	+1.9
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				pmax	pmax		
	comp=Z,47nm,5.0s						
LZH				LR	LR		
	comp=N,170nm,13.2s						
LZH				LR	LR		
	comp=E,170nm,13.5s						
LZH				LR	LR		
	comp=Z,250nm,16.8s						
YKA	Yellowknife Ar	38.80	46	P	P	06 30 25.7	+0.1
	comp=Z,1.2nm,0.7s,baz=321,slow=7.9,SNR=20						
YKB5	Yellowknife Ar	38.80	46	eP	P	06 30 25.7	+0.1
ABKAR	Akbulak array	43.21	288	eP	P	06 31 01.8	-0.1
AAK	Ala-Archa	43.30	271	eP	P	06 31 04.1	+1.1
	comp=Z,3.1nm,0.6s						
AAK	Ala-Archa	43.30	271	iP	P	06 31 02.7	-0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FIA1	FINESS Array S	43.35	321	eP	P	06 31 02.6	-0.3
	comp=Z,5.2nm,0.5s						
FIA0	FINESS Array S	43.35	321	eP	P	06 31 02.7	-0.3
FIA0	FINESS Array S	43.35	321	eP	P	06 31 02.7	-0.3
FINES	FINESS Array B	43.35	321	P	P	06 31 02.7	-0.3
	comp=Z,3.9nm,0.4s,baz=29,slow=9.2,SNR=56						
OBN	Obninsk	46.02	310	eP	P	06 31 26.8	+2.5
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NC405	NORSAR Array S	46.76	330	eP	P	06 31 30.5	+0.4
NC204	NORSAR Array S	46.79	331	eP	P	06 31 30.2	-0.2
NB2	NORSAR Subarra	46.92	330	P	P	06 31 30.7	-0.7
	comp=Z,2.0nm,0.8s,baz=24,slow=7.9						
NB2	NORSAR Subarra	46.92	330	P	P	06 31 30.6	-0.8
NB2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NB200	NORSAR Array S	46.92	330	eP	P	06 31 30.4	-1.0
NOA	NORSAR Array B	46.92	330	P	P	06 31 30.4	-1.0
	comp=Z,2.9nm,0.8s,baz=24,slow=7.8,SNR=7.1						
NBO00	NORSAR Array S	47.01	330	eP	P	06 31 31.8	-0.3
NORES	NORESS Array B	47.14	330	P	P	06 31 32.4	-0.7
FCC	Fort Churchill	47.22	37	eP	P	06 31 33.2	-0.4
	comp=Z,7.4nm,1.5s						
FCC	Fort Churchill	47.22	37	eP	P	06 31 33.2	-0.4
FCC				pmax	pmax		
	comp=Z,7.0nm,1.5s						
LPSR	Galich'ya Gora	47.48	307	eP	P	06 31 35.8	0.0
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GAR	Garm	48.03	272	eP	P	06 31 41.0	+0.5
	comp=Z,5.5nm,0.7s						
GAR	Garm	48.03	272	eP	P	06 31 41.0	+0.5
GAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VSR	Storozhevoye	48.61	305	iP	P	06 31 43.9	-0.6
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHGR	Chuyangaron	48.78	273	eP	P	06 31 46.1	0.0
	comp=Z,21nm,1.2s						
FFC	Flin Flon	48.88	44	eP	P	06 31 46.5	-0.1
	comp=Z,5.1nm,0.9s						
FFC	Flin Flon	48.88	44	iP	P	06 31 46.7	+0.1
LTY	Liberty	49.71	63	eP	P	06 31 56.5	+3.3
	comp=Z,1.9nm,1.1s						
AKASG	Malin Array Be	52.03	312	P	P	06 32 09.5	-0.9
	comp=Z,3.2nm,0.6s,baz=28,slow=8.4,SNR=5.1						
AKBB	Malin Array Si	52.03	312	eP	P	06 32 09.9	-0.5
	comp=Z,3.1nm,0.8s						
AKBB	Malin Array Si	52.03	312	eP	P	06 32 09.9	-0.5
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIEV	Kiev	52.04	312	eP	P	06 32 09.9	-0.6
	comp=Z,3.0nm,0.8s						
KIEV	Kiev	52.04	312	iP	P	06 32 08.7	-1.8
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GUN	Gumba	52.04	250	eP	P	06 32 12.1	+0.9
	comp=Z,8.6nm,0.5s						
AK11	Malin Array Si	52.06	312	eP	P	06 32 09.6	-1.1
JIRN	Jiri	52.16	250	eP	P	06 32 12.4	+0.3
	comp=Z,34nm,1.0s						
KKN	Kakani	52.37	251	eP	P	06 32 14.0	+0.5
	comp=Z,8.8nm,0.4s						
DANN	Dangsing	52.41	253	eP	P	06 32 14.6	+0.7
	comp=Z,8.2nm,0.5s						
PINE	Pine Mountain	52.64	65	eP	P	06 32 16.6	+1.2
	comp=Z,4.4nm,1.0s						
RAMN	Ramite	52.66	249	eP	P	06 32 15.8	+0.1
	comp=Z,13nm,0.8s						
PYUN	Piuthan	52.92	253	eP	P	06 32 17.6	0.0
	comp=Z,18nm,1.0s						
KOLN	Koldanda	53.00	252	eP	P	06 32 18.3	+0.2
	comp=Z,31nm,1.2s						
GEYT	Alibeck	53.60	282	P	P	06 32 21.7	-0.6
	comp=Z,1.2nm,0.5s,baz=27,slow=13,SNR=2.7						
KIV	Kislovodsk	53.83	298	eP	P	06 32 25.4	+1.4
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KBZ	Khabaz	53.96	298	P	P	06 32 25.4	+0.6
	comp=Z,2.9nm,0.8s,baz=236,slow=10,SNR=4.3						
KWP	Kalwaria Pacla	54.78	316	eP	P	06 32 31.3	+0.6
	comp=Z,65nm,0.8s						
KWP	Kalwaria Pacla	54.78	316	eP	P	06 32 31.3	+0.6
EKA	Eskdalemuir Ar	54.80	337	P	P	06 32 30.0	-0.7
OJC	Ojcow	54.99	319	eP	P	06 32 32.6	+0.4
	comp=Z,7.5nm,0.5s						
OJC	Ojcow	54.99	319	eP	P	06 32 32.6	+0.4
OJC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CLL	Collm	55.60	324	eP	P	06 32 36.4	-0.1
	comp=Z,11nm,1.0s						
CLL	Collm	55.60	324	⇓iP	P	06 32 36.1	-0.4
	comp=Z,11nm,1.0s						
CLL				ipP	sP	06 32 38.9	+0.6
CLL	Collm	55.60	324	eP	P	06 32 36.4	-0.1
CLL				pmax	pmax		
	comp=Z,11nm,1.0s						
FLWY	Flagg Ranch	55.81	57	eP	P	06 32 40.9	+2.4
	comp=Z,3.3nm,0.8s						
SCHQ	Schefferville	55.90	20	eP	P	06 32 37.6	-1.0
SCHQ	Schefferville	55.90	20	P	P	06 32 37.4	-1.3
	comp=Z,2.3nm,0.6s,baz=354,slow=6.0,SNR=7.8						
BUR04	Bucovina Ar. S	55.94	314	eP	P	06 32 38.8	-0.4
MORC	Moravsky Berou	55.96	320	eP	P	06 32 39.4	+0.2
	comp=Z,5.5nm,1.1s						
MORC	Moravsky Berou	55.96	320	eP	P	06 32 39.4	+0.2
MORC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LANS	Liptovska Anna	56.06	319	eP	P	06 32 40.8	+0.8
LANS	Liptovska Anna	56.06	319	eP	P	06 32 40.8	+0.8
REDW	Red Top Meadow	56.40	57	eP	P	06 32 44.9	+2.2
	comp=Z,2.9nm,0.9s						
HVU	Hansel Valley	57.19	60	eP	P	06 32 50.3	+2.0
	comp=Z,1.1nm,0.8s						
HVU	Hansel Valley	57.19	60	eP	P	06 32 50.3	+2.0
HVU				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	57.35	56	P	P	06 32 49.7	+0.2
	comp=Z,1.1nm,0.6s,baz=7.8,slow=2.5,SNR=14						
YERR	Yerington	57.49	66	eP	P	06 32 51.6	+1.2
	comp=Z,5.0nm,1.2s						
MLR	Muntele Rosu	57.68	312	eP	P	06 32 52.7	+1.1
	comp=Z,14nm,1.5s						
MLR	Muntele Rosu	57.68	312	P	P	06 32 52.7	+1.1
GERES	GERESS Array B	57.75	323	P	P	06 32 52.0	+0.1
	comp=Z,1.4nm,0.8s,baz=38,slow=6.8,SNR=9.2						
GEA0	GERESS Array S	57.75	323	eP	P	06 32 52.4	+0.4
EYMN	Ely	57.76	40	eP	P	06 32 50.7	-1.3
	comp=Z,16nm,1.4s						
KVN	Kaiserville	57.83	65	eP	P	06 32 54.6	+1.8
	comp=Z,4.5nm,1.3s						
KVN	Kaiserville	57.83	65	eP	P	06 32 54.6	+1.8
KVN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WAKR	Walker	57.85	67	eP	P	06 32 54.5	+1.5
	comp=Z,5.5nm,1.3s						
NV01	Mina Array Sit	58.31	66	eP	P	06 32 57.9	+1.6
NVAR	Mina Array Bea	58.31	66	P	P	06 32 56.7	+0.4
	comp=Z,0.8nm,0.6s,baz=310,slow=4.5,SNR=7.6						
NV11	Mina Array Sit	58.36	66	eP	P	06 32 57.9	+1.4
	comp=Z,0.2nm,1.3s						
NLU	North Lily Min	59.07	60	eP	P	06 33 03.3	+1.8
	comp=Z,2.6nm,0.9s						
R11A	Troy Canyon, C	59.33	64	eP	P	06 33 04.4	+1.2
	comp=Z,1.3nm,0.8s						
BFO	Black Forest	59.42	326	eP	P	06 33 04.0	+0.4
	comp=Z,3.8nm,0.7s						
BFO	Black Forest	59.42	326	eP	P	06 33 04.0	+0.4
BFO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PSUT	Pine Spring	59.75	62	eP	P	06 33 07.7	+1.4
	comp=Z,2.4nm,0.9s						
ECH	Echery	59.78	327	eP	P	06 33 06.0	0.0
	comp=Z,3.8nm,0.8s						
ECH	Echery	59.78	327	eP	P	06 33 06.0	0.0
ECH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BR101	Keskin Array S	60.60	303	eP	P	06 33 11.1	-0.8
BRTR	Keskin Array B	60.60	303	eP	P	06 33 11.9	-0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	60.60	303	P	P	06 33 11.1	-0.8
	comp=Z,1.4nm,0.7s,baz=40,slow=4.5,SNR=5.4						
WMOK	Wichita Mounta	68.05	51	eP	P	06 34 01.4	+0.8
	comp=Z,5.8nm,1.2s						
WMOK	Wichita Mounta	68.05	51	eP	P	06 34 01.5	+0.8
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
W41B	Gary Mavity, V	69.52	46	eP	P	06 34 08.3	-1.5
	comp=Z,4.6nm,0.7s						
ES19	SONSECA Array	70.09	333	eP	P	06 34 13.3	0.0
ESDC	Sonseca Array	70.13	333	P	P	06 34 12.8	-0.8
	comp=Z,1.1nm,0.6s,baz=2.1,slow=6.4,SNR=11						
RAYN	Ar Rayn	71.23	286	eP	P	06 34 20.0	-0.4
	comp=Z,3.6nm,0.9s						
RAYN	Ar Rayn	71.23	286	eP	P	06 34 20.0	-0.4
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LTX	Lajitas	71.54	58	eP	P	06 34 22.3	0.0
LTX	Lajitas	71.54	58	eP	P	06 34 22.3	0.0
TXAR	Lajitas Array	71.54	58	P	P	06 34 22.3	0.0
	comp=Z,0.2nm,0.5s,baz=318,slow=1.2,SNR=4.8						
FITZ	Fitzroy Crossi	86.38	196	P	P	06 35 42.8	-0.6
	comp=Z,1.9nm,0.9s,baz=9.5,slow=6.1,SNR=3.1						
WR1	Warramunga Arr	87.51	188	eP	P	06 35 47.1	-1.8
WRA	Warramunga Arr	87.51	188	P	P	06 35 47.1	-1.8
	comp=Z,0.3nm,0.5s,baz=3.1,slow=6.2,SNR=3.6						
ASAR	Alice Springs	91.23	188	P	P	06 36 04.4	-2.0
	comp=Z,0.3nm,0.6s,baz=4.9,slow=4.2,SNR=3.0						
TOA1	Torodi Ar. Sit	94.69	322	eP	P	06 36 22.6	0.0
TORD	Torodi Ar. Bea	94.70	322	P	P	06 36 22.6	0.0
	comp=Z,0.5nm,0.8s,baz=16,slow=2.1,SNR=3.9						
TRQA	Tornquist	147.31	38	ePKPbc	PKPab	06 42 45.9	-0.1
TRQA	Tornquist	147.31	38	ePKP2	PKPab	06 42 45.9	-0.1
PLCA	Paso Flores	147.52	51	ePKPbc	PKPab	06 42 46.4	-0.4
PLCA	Paso Flores	147.52	51	ePKP2	PKPab	06 42 46.4	-0.4

IDC 15 06:26:29.7±2.2, 15°.01S×174°.53W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/36, mbtmp3.7/5, MS3.5/16, Ms1 3.5/16, ms1mx3.4/31, Error ellipse: s-maj=132.6km s-min=26.6km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	Rarotonga	15.32	116	LR	LR	06 35 01.7	
	comp=Z,91nm,19.9s,baz=272,slow=33						
DZM	Mont Dzumac	19.35	246	eLR	LR	06 35 10.9	
	comp=Z,192nm,27.4s						
DZM	Mont Dzumac	19.35	246	LR	LR	06 36 37.5	
	comp=Z,63nm,18.9s,baz=253,slow=31						
PPT	Papeete	24.08	99	LR	LR	06 39 47.4	
	comp=Z,43nm,18.1s,baz=278,slow=33						
PAE	Paea	24.08	100	eT	T	06 56 11.6	
	4.6nm,0.3s						
PPT2	Papeete2	24.08	100	eLQ	LQ	06 36 27.6	
	434nm,25.0s						
PPT2				eLR	LR	06 37 28.8	
	comp=Z,92nm,27.5s						
PPT2	Papeete2	24.08	100	eT	T	06 56 12.3	
	3.4nm,0.3s						
URZ	Urewera	24.31	196	LR	LR	06 40 34.6	
	comp=Z,170nm,18.4s,baz=14,slow=35						
TVO	Taravao	24.40	100	eT	T	06 56 36.3	
	1.6nm,0.4s						
TBI	Tubuai	25.06	113	eT	T	06 57 45.9	
	9.2nm,0.2s						
HNR	Honiara	25.54	280	LR	LR	06 40 30.8	
	comp=Z,81nm,19.8s,baz=132,slow=33						
RPZ	Rata Peaks	31.15	200	LR	LR	06 44 47.2	
	comp=Z,100nm,18.1s,baz=22,slow=35						
TAOE	Nuku Hiva Isla	34.16	84	eT	T	07 08 22.2	
	19nm,0.2s						
H11S2	WAKE ISLAND Hy	38.08	330	T	T	07 14 09.2	
	baz=149,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	38.09	330	T	T	07 14 09.2	
	baz=149,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	38.09	330	T	T	07 14 14.6	
	baz=149,slow=76,SNR=9.6						
RKT	Rikitea	38.15	108	eT	T	07 13 59.0	
	8.7nm,0.4s						
H11N3	WAKE ISLAND Hy	39.04	332	T	T	07 15 23.5	
	baz=151,slow=76,SNR=29						
H11N1	WAKE ISLAND Hy	39.05	332	T	T	07 15 23.8	
	baz=151,slow=76,SNR=29						
H11N2	WAKE ISLAND Hy	39.06	332	T	T	07 15 24.9	
	baz=151,slow=76,SNR=32						
STKA	Stephens Creek	43.29	239	LR	LR	06 50 13.3	
	comp=Z,39nm,20.4s,baz=27,slow=33						
WRA	Warramunga Arr	48.87	257	P	P	06 35 18.1	+0.4
	0.6nm,1.0s,baz=88,slow=8.6,SNR=2.8						
ASAR	Alice Springs	49.20	252	P	P	06 35 19.6	-0.5
	2.3nm,0.9s,baz=84,slow=7.8,SNR=16						
MJAR	Matsushiro Arr	67.94	320	LR	LR	07 01 22.5	
	comp=Z,38nm,22.0s,baz=55,slow=31						
NVAR	Mina Array Bea	74.78	43	P	P	06 38 12.6	+0.5
	0.4nm,0.7s,baz=235,slow=14,SNR=3.0						
NVAR				LR	LR	07 04 37.4	
	comp=Z,85nm,19.8s,baz=315,slow=31						
KSRS	Korea Array	75.12	316	LR	LR	07 04 18.2	
	comp=Z,28nm,21.7s,baz=123,slow=30						
USRK	Ussuriysk Ar.	76.42	324	LR	LR	07 05 46.7	
	comp=Z,43nm,21.5s,baz=37,slow=31						
MA2	Magadan	79.47	343	LR	LR	07 10 42.9	
	comp=Z,19nm,20.8s,baz=156,slow=33						
KLR	Kul'dur	79.60	328	LR	LR	07 08 44.6	
	comp=Z,16nm,20.5s,baz=266,slow=32						
TXAR	Lajitas Array	81.31	57	P	P	06 38 48.3	-0.2
	0.1nm,0.4s,baz=215,slow=7.7,SNR=1.8						
ILAR	Eielson Array	82.28	12	P	P	06 38 52.3	-0.3
	0.7nm,0.9s,baz=226,slow=5.6,SNR=2.3						
PDAR	Pinedale Array	82.71	42	LR	LR	07 09 00.5	
	comp=Z,28nm,20.5s,baz=274,slow=31						
CMAR	Chiang Mai Arr	91.46	289	LR	LR	07 15 15.7	
	comp=Z,25nm,21.0s,baz=120,slow=32						
ULM	Lac du Bonnet	94.32	39	LR	LR	07 15 04.1	
	comp=Z,45nm,18.7s,baz=308,slow=31						
BRTR	Keskin Array B	145.16	320	PKPbc	PKPbc	06 46 08.6	-0.8
	2.1nm,0.9s,baz=71,slow=1.2,SNR=4.7						

IDC 15 06:36:54.6±8.1, 14°.38S×167°.17E, h92km±84km, mb3.6/6, mb1 3.8/7, mb1mx3.5/37, mbtmp4.0/7, ML4.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/22, Error ellipse: s-maj=84.3km s-min=34.3km az=155.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.69	185	P	Pn	06 38 43.6	-0.3
	8.9nm,0.3s,baz=110,slow=20,SNR=42						
CTA	Charters Tower	20.76	251	P	Pn	06 41 30.2	-1.2
	1.0nm,0.3s,baz=90,slow=6.1,SNR=3.6						
STKA	Stephens Creek	29.15	229	P	P	06 42 47.7	+0.6
	2.4nm,0.7s,baz=40,slow=7.6,SNR=5.8						
WRA	Warramunga Arr	31.82	255	P	P	06 43 09.2	-1.6
	0.3nm,0.3s,baz=83,slow=7.5,SNR=4.2						
ASAR	Alice Springs	32.71	249	P	P	06 43 17.8	-0.8
	0.7nm,0.5s,baz=76,slow=9.3,SNR=11						
ASAR				LR	LR	06 54 20.3	
	comp=Z,63nm,21.9s,baz=88,slow=32						

FITZ	**Fitzroy Crossi**	**39.99**	**259**	P	P	06 44 21.2	+0.6
	1.7nm,0.8s,baz=72,slow=10,SNR=2.3						
ILAR	**Eielson Array**	**86.22**	**18**	P	P	06 49 25.6	+0.2
	0.3nm,0.8s,baz=226,slow=4.8,SNR=1.9						

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*ISCJB **15** 06:53:31.6±0.4, 37°.78N±0°.02×140°.01E±0°.03, h9^{km}±4^{km}, mb3.3/4, Error ellipse: s-maj=4.2km s-min=3.8km az=136.2*

*JMA **15** 06:53:31.9, 37°.79N×140°.00E, h8^{km}±1^{km}, M3.1*

*IDC **15** 06:53:42.0±3.2, 37°.57N×139°.50E, h84^{km}±29^{km}, mb3.0/4, mb1 3.2/4, mb1mx2.9/38, mbtmp3.4/4, Error ellipse: s-maj=41.0km s-min=31.7km az=76.0*

ISC 15 06:53:31.9±1.0**, 37°.77N**±0°.03×**139°.99E**±0°.02**, h6**^{km}±8^{km}**, n18, σ0^{s}.81**/31**, mb3.3**/4**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYAR	**Yonezawaarcadi**	**0.19**	**42**	P	**Pg**	**06 53 35.5**	**-0.1**
JYAR				S	**Sg**	**06 53 38.2**	**+0.1**
JFT	**Otama**	**0.38**	**132**	P	**Pg**	**06 53 39.4**	**+0.2**
JFT				S	**Sg**	**06 53 44.3**	**+0.1**
JFY	**Yanaizu**	**0.43**	**211**	P	**Pg**	**06 53 40.6**	**+0.4**
JFY				S	**Sg**	**06 53 46.5**	**+0.7**
JYS	**Shirataka**	**0.45**	**8**	P	**Pg**	**06 53 40.6**	**0.0**
JYS				S	**Sg**	**06 53 46.8**	**+0.3**
JNS	**Sasagawa**	**0.53**	**275**	P	**Pg**	**06 53 42.2**	**+0.1**
JNS				S	**Sg**	**06 53 49.3**	**+0.2**
JMM	**Marumori**	**0.65**	**82**	P	**Pg**	**06 53 44.0**	**-0.3**
JMM				S	**Sg**	**06 53 52.4**	**-0.3**
JOU	**Okura**	**0.80**	**42**	P	**Pg**	**06 53 47.0**	**-0.2**
JFK	**Kawauchi**	**0.81**	**120**	P	**Pg**	**06 53 47.2**	**-0.3**
JFK				S	**Sg**	**06 53 57.6**	**-0.5**
JYA	**Atsumi**	**0.84**	**345**	P	**Pg**	**06 53 47.8**	**-0.3**
JYA				S	**Sg**	**06 53 59.0**	**-0.1**
JAW	**Awa shima**	**0.90**	**320**	P	**Pg**	**06 53 49.1**	**0.0**
JAW				S	**Sb**	**06 54 01.5**	**-0.6**
JHK	**Hiroka**	**0.93**	**236**	P	**Pg**	**06 53 49.5**	**-0.3**
JHK				S	**Sg**	**06 54 01.6**	**-0.3**
JIZZ	**Izumozaki**	**1.04**	**257**	P	**Pg**	**06 53 51.7**	**-0.2**
JIZZ				S	**Sn**	**06 54 07.9**	**0.0**
MAT	**Matsushiro**	**1.88**	**230**	P	**Pn**	**06 54 04.2**	**-0.4**
MAT				S	**Sn**	**06 54 28.5**	**-0.2**
MJAR	**Matsushiro Arr**	**1.88**	**230**	P	**Pb**	**06 54 06.5**	**-0.1**
	1.2nm,0.3s,baz=68,slow=14,SNR=9.0						
MJAR				S	**Sb**	**06 54 30.5**	**+0.1**
	2.5nm,0.3s,baz=25,slow=33,SNR=7.4						
MKAR	**Makanchi Array**	**42.76**	**301**	P	**P**	**07 01 28.9**	**-1.2**
	0.6nm,1.1s,baz=64,slow=6.6,SNR=2.6						
KURBB	**Kurchatov Arra**	**44.65**	**307**	P	**P**	**07 01 44.5**	**-0.6**
	0.4nm,0.7s,baz=85,slow=8.5,SNR=5.1						
ILAR	**Eielson Array**	**49.48**	**33**	P	**P**	**07 02 26.2**	**+3.5**
	0.2nm,0.8s,baz=250,slow=7.4,SNR=1.8						
WRA	**Warramunga Arr**	**57.65**	**186**	P	**P**	**07 03 21.8**	**-1.3**
	0.4nm,0.8s,baz=4.9,slow=7.5,SNR=3.0						

JMA 15 06:53:50.4, 37°.79N×139°.99E, h9^{km}±1^{km}**, M2.7, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYAR	**Yonezawaarcadi**	**0.17**	**45**	S	Sg	06 53 56.8	+0.2
JNS	**Sasagawa**	**0.53**	**273**	P	Pg	06 54 00.8	0.0
JMM	**Marumori**	**0.64**	**83**	S	Sg	06 54 11.0	-0.2

NNC 15 07:02:59.2±1.9**, 41°.75N×78°.21E, h12**^{km}±10^{km}**, mb3.3, mpv2.8, 3C-3D, Error ellipse: s-maj=14.0km s-min=9.1km az=171.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**1.31**	**6**	P	Pn	07 03 22.8	-0.7
	4.3nm,0.4s						
SATY				S	Sb	07 03 40.8	+0.1
	3.8nm,0.3s						
MDOK	**Medeo**	**1.65**	**329**	Pg	Pb	07 03 30.1	+0.5
	3.6nm,0.5s						
MDOK				Lg	Lg	07 03 53.4	
	6.1nm,0.6s						
PDGK	**Podgornoye**	**1.84**	**31**	Pg	Pb	07 03 33.5	+0.7
	1.4nm,0.5s						
PDGK				Lg	Lg	07 03 59.2	
	1.8nm,0.5s						
PDGK	**Podgornoye**	**1.84**	**31**	⇑P	Pb	07 03 32.9	+0.1
	2.7nm,0.7s						
PDGK				⇑S	Sn	07 03 53.0	-0.9
	2.9nm,0.6s						
KST	**Kastek**	**2.10**	**309**	Pg	Pb	07 03 36.7	-0.7
	3.9nm,0.3s						
KST				Lg	Lg	07 04 04.9	
	9.1nm,0.6s						
KTBS	**Karatobe**	**2.26**	**331**	Pg	Pb	07 03 40.9	+1.0
	6.5nm,0.3s						
KTBS				Lg	Lg	07 04 12.2	
	19nm,0.8s						
TKM2	**Tokmak 2**	**2.26**	**302**	⇓Pg	Pb	07 03 40.1	+0.1
	2.9nm,0.7s						
TKM2				⇓Lg	Lg	07 04 11.4	
	5.0nm,0.7s						
CHKK	**Chushkaly**	**2.28**	**337**	Pg	Pb	07 03 41.0	+0.7
	9.4nm,0.4s						
CHKK				Lg	Lg	07 04 12.2	
	11nm,0.5s						
DGS	**Degeres**	**2.34**	**310**	Pg	Pb	07 03 41.1	-0.2
	11nm,0.6s						
DGS				Lg	Lg	07 04 12.6	
	4.6nm,0.5s						
ARXS	**Arharly**	**2.47**	**354**	Pg	Pb	07 03 43.7	+0.1
	6.0nm,0.3s						
ARXS				Lg	Lg	07 04 16.9	
	9.9nm,0.7s						
KUU	**Kurty**	**2.54**	**328**	Pg	Pb	07 03 45.0	+0.2
	5.3nm,0.6s						
KUU				Lg	Lg	07 04 19.0	
	12nm,0.8s						
DJR	**Jarkent**	**2.83**	**24**	Pg	Pb	07 03 50.6	+1.0
	1.9nm,0.9s						
DJR				Lg	Lg	07 04 27.0	
	3.6nm,0.7s						
AAK	**Ala-Archa**	**2.90**	**289**	⇑Pg	Pb	07 03 49.6	-1.3
	1.5nm,0.6s						
AAK				⇓Lg	Lg	07 04 30.7	
	6.0nm,0.8s						

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*NNC **15** 07:06:46.0±0.8, 50°.02N×78°.79E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=16.1km s-min=4.0km az=72.0, Suspected Mining explosion.*

*IDC **15** 07:06:47.4±1.0, 50°.05N×78°.73E, h0^{km}, mb1 2.7/2, mb1mx2.6/41, mbtmp2.7/2, ML2.1/2, Error ellipse: s-maj=14.4km s-min=6.2km az=66.0*

ISC 15 07:06:42.7±1.1**, 50°.16N**±0°.07×**79°.39E**±0°.07**, h0**^{km}**, n11, σ1^{s}.39**/14**, 5C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**0.72**	**311**	⇑P	**Pb**	**07 06 58.2**	**0.0**
	18nm,0.7s						
KURBB				⇓S	**Sb**	**07 07 07.5**	**-1.2**
	49nm,0.6s						
KURBB	**Kurchatov Arra**	**0.72**	**311**	Pg	**Pb**	**07 06 58.5**	**+0.3**
	0.9nm,0.3s,baz=166,slow=19,SNR=43						
KURBB				Lg	Lg	07 07 07.7	
	1.3nm,0.3s,baz=167,slow=31,SNR=29						
KURK	**Kurchatov**	**0.75**	**319**	⇑P	**Pb**	**07 06 59.3**	**+0.7**
	6.1nm,0.6s						
KURK				⇓S	**Sb**	**07 07 09.8**	**+0.4**
	33nm,0.8s						
MAKZ	**Makanchi**	**3.76**	**152**	⇑Pg	**Pg**	**07 07 56.9**	**+2.1**
	1.7nm,0.8s						
MAKZ				⇓Lg	Lg	07 08 46.3	
	2.8nm,0.6s						
MK31	**Makanchi Array**	**3.88**	**149**	⇓Pn	**Pb**	**07 07 50.3**	**-1.6**
	0.1nm,0.3s,baz=0.3,slow=3.7,SNR=16						
MK31				⇓Pg	**Pg**	**07 07 59.1**	**+2.2**
	0.4nm,0.3s,baz=322,slow=14,SNR=14						
MK31				⇑Lg	Lg	07 08 53.0	
	0.7nm,0.3s,baz=329,slow=27,SNR=11						
MKAR	**Makanchi Array**	**3.88**	**149**	Pn	**Pb**	**07 07 50.8**	**-1.1**
	0.1nm,0.3s,baz=326,slow=11,SNR=16						
MKAR				Pg	**Pg**	**07 07 57.0**	**0.0**
	0.2nm,0.3s,baz=320,slow=13,SNR=13						
MKAR				Sn	**Sb**	**07 08 40.2**	**+0.8**
	0.3nm,0.3s,baz=329,slow=14,SNR=4.4						
MKAR				Lg	Lg	07 08 51.9	
	0.7nm,0.3s,baz=328,slow=29,SNR=12						
OTUK	**Ortayu**	**5.00**	**250**	⇑Pg	**Pb**	**07 08 10.6**	**-0.6**
	1.8nm,0.7s						
OTUK				⇓Lg	Lg	07 09 10.0	
	2.7nm,0.7s						
I46RU	**ZALESOVO INFRA**	**5.06**	**39**	*i*		07 42 10.0	
	baz=219,slow=332,SNR=1.0						
ZALV	**Zalesovo Beam**	**5.06**	**39**	Pn	**Pb**	**07 08 11.0**	**-1.1**
	0.3nm,0.3s,baz=251,slow=14,SNR=4.6						
ZALV				Lg	Lg	07 09 41.9	
	0.2nm,0.3s,baz=232,slow=29,SNR=3.0						
BVAR	**Borovoye Array**	**6.30**	**301**	Sn	**Sn**	**07 09 27.5**	**-2.0**
	0.3nm,0.3s,baz=113,slow=22,SNR=6.2						
BVAR				Lg	Lg	07 09 58.0	
	0.2nm,0.3s,baz=115,slow=26,SNR=3.2						
AAK	**Ala-Archa**	**8.24**	**206**	Lg	Lg	07 11 02.3	
	0.1nm,0.3s,baz=202,slow=19,SNR=2.0						

IDC 15 07:21:15.4±2.2**, 6°.10S×130°.00E, h0**^{km}**, mb3.8**/1**, mb1 3.7**/4**, mb1mx3.4**/48**, mbtmp3.5**/4**, ML3.4**/3**, Error ellipse: s-maj=99.0km s-min=27.0km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.67**	**199**	Pn	Pn	07 24 18.4	+1.5
	0.2nm,0.3s,baz=29,slow=10,SNR=12						
FITZ				Sn	Sn	07 26 25.5	-13
	0.3nm,0.3s,baz=241,slow=16,SNR=6.9						
WRA	**Warramunga Arr**	**14.40**	**163**	Pn	Pn	07 24 39.4	-1.2
	0.2nm,0.3s,baz=343,slow=12,SNR=5.5						
WRA				Sn	Sn	07 27 06.7	-14
	0.6nm,0.3s,baz=340,slow=22,SNR=10.0						
ASAR	**Alice Springs**	**17.87**	**168**	P	Pn	07 25 25.4	-0.3
	0.2nm,0.3s,baz=342,slow=9.4,SNR=12						
ASAR				S	Sn	07 28 33.4	-12
	0.1nm,0.3s,baz=353,slow=27,SNR=3.4						
MKAR	**Makanchi Array**	**67.47**	**327**	P	P	07 32 13.2	0.0
	0.5nm,0.5s,baz=117,slow=7.4,SNR=14						

IDC 15 07:30:07.4±84.0**, 17°.30S×176°.56E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/31**, mbtmp3.8**/3**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.7**/25**, Error ellipse: s-maj=1480.0km s-min=157.8km az=75.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**20.88**	**179**	LR	LR	07 40 58.0	
	comp=Z,65nm,18.4s,baz=34,slow=31						
STKA	**Stephens Creek**	**34.78**	**239**	P	P	07 37 00.3	+0.5
	0.9nm,0.3s,baz=75,slow=8.1,SNR=4.7						
WRA	**Warramunga Arr**	**40.03**	**259**	P	P	07 37 44.9	+0.5
	0.5nm,0.9s,baz=93,slow=9.1,SNR=4.2						
ASAR	**Alice Springs**	**40.35**	**254**	P	P	07 37 46.1	-1.0
	1.1nm,0.7s,baz=88,slow=8.5,SNR=14						
KSRS	**Korea Array**	**71.14**	**321**	LR	LR	08 07 06.4	
	comp=Z,13nm,22.0s,baz=37,slow=31						

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*IDC **15** 07:46:08.8±5.9, 7°.85S×117°.27E, h194^{km}±55^{km}, mb3.2/6, mb1 3.4/8, mb1mx3.2/46, mbtmp3.8/8, Error ellipse: s-maj=76.9km s-min=17.9km az=62.0*

*DJA **15** 07:46:10.4±0.5, 8°S±16°×11°7E±°, h199^{km}±5^{km}, M3.5/11, mb3.7/2, MLv3.4/11*

ISC 15 07:46:09.0±0.8**, 8°.1S**±0°.1×**117°.16E**±0°.08**, h200**^{km}**, n17, σ1^{s}.36**/20**, mb3.5**/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.95**	**140**	P	**Pn**	**07 46 39.8**	**+1.4**
PLAI				S	**Sn**	**07 47 02.5**	**+1.2**
SRBI	**Singaraja**	**1.93**	**270**	P	**Pn**	**07 46 47.2**	**+0.4**
JAGI	**Jajag, Banyuwa**	**3.00**	**263**	P	**Pn**	**07 46 58.6**	**-0.1**
KMMI	**Kalianget**	**3.33**	**288**	P	**Pn**	**07 47 04.8**	**+2.2**
GMJI	**Gumukmas**	**3.69**	**267**	P	**Pn**	**07 47 06.7**	**-0.2**
BASI	**Baing, Sumba**	**3.98**	**122**	P	**Pn**	**07 47 11.8**	**+1.3**
EDFI	**Ende, Flores**	**4.53**	**99**	P	**Pn**	**07 47 18.5**	**+1.0**
PWJI	**Pagerwojo**	**5.31**	**270**	P	**Pn**	**07 47 29.7**	**+2.4**
PCJI	**Pacitan**	**5.93**	**269**	P	**Pn**	**07 47 34.9**	**-0.4**
BATI	**Baumata**	**6.75**	**109**	P	**Pn**	**07 47 45.5**	**-0.6**
	12nm,0.3s,baz=330,slow=3.0,SNR=5.8						
BATI				S	**Sn**	**07 49 02.3**	**-0.8**
	4.4nm,0.3s,baz=121,slow=18,SNR=3.0						
FITZ	**Fitzroy Crossi**	**12.92**	**141**	P	**P**	**07 49 08.6**	**-0.3**
	0.3nm,0.3s,baz=328,slow=7.6,SNR=7.8						
FITZ				S	**S**	**07 51 27.0**	**-2.7**
	0.3nm,0.3s,baz=181,slow=17,SNR=3.9						
WRA	**Warramunga Arr**	**20.38**	**127**	P	**P**	**07 50 31.0**	**+0.4**
	2.0nm,0.4s,baz=300,slow=12,SNR=43						
ASAR	**Alice Springs**	**22.30**	**136**	P	**P**	**07 50 51.2**	**+1.1**
	1.9nm,0.7s,baz=309,slow=8.6,SNR=25						
STKA	**Stephens Creek**	**32.81**	**139**	P	**P**	**07 52 25.3**	**+1.7**
	0.8nm,0.4s,baz=317,slow=9.8,SNR=5.1						
SONM	**Songino Array**	**56.50**	**351**	P	**P**	**07 55 30.0**	**-0.4**
	0.7nm,0.6s,baz=167,slow=7.9,SNR=5.0						
MKAR	**Makanchi Array**	**62.84**	**334**	P	**P**	**07 56 12.4**	**-1.1**
	0.3nm,0.6s,baz=148,slow=6.1,SNR=7.3						
BVAR	**Borovoye Array**	**72.66**	**333**	P	**P**	**07 57 13.7**	**-0.9**
	0.4nm,0.6s,baz=103,slow=6.2,SNR=3.1						

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*NNC **15** 07:46:38.9±4.5, 53°.47N×88°.01E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=35.7km s-min=18.0km az=63.0, Suspected Mining explosion.*

KRAR 15 07:46:39.9±0.1**, 53°.63N×87°.99E, M2.2, 5C-9D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.91**	**281**	⇓Pn	Pn	07 47 13.3	-0.4
	5.4nm,0.7s						
ZAA0				⇓Sn	Sb	07 47 39.3	-0.6
	17nm,0.8s						
KURK	**Kurchatov**	**6.46**	**247**	⇓Pn	Pn	07 48 13.5	-2.7
	5.1nm,0.9s						
KURK				⇑Sn	Sn	07 49 28.6	-1.9
	1.5nm,0.9s						
KURK				⇓Lg	Lg	07 50 01.7	
	3.9nm,0.8s						
KURBB	**Kurchatov Arra**	**6.56**	**246**	⇑Pn	Pn	07 48 17.1	-0.4
	1.7nm,0.6s						
KURBB				⇓Sn	Sn	07 49 30.2	-2.7
	3.8nm,0.6s						
KURBB				⇑Lg	Lg	07 50 05.4	
	4.6nm,0.7s						
MK31	**Makanchi Array**	**7.76**	**210**	⇓Pn	Pn	07 48 32.1	-1.9
	0.5nm,0.8s,baz=31,slow=14,SNR=7.1						
MK31				⇓Sn	Sn	07 50 01.1	-1.4
	0.4nm,0.6s						
MK31				⇑Lg	Lg	07 50 37.9	
	0.7nm,0.6s,baz=35,slow=29						
MAKZ	**Makanchi**	**7.84**	**212**	⇓Pn	Pn	07 48 34.6	-0.6
	1.0nm,1.1s						
MAKZ				⇓Sn	Sn	07 50 01.4	-3.1
	0.7nm,0.8s						
MAKZ				⇑Lg	Lg	07 50 42.5	
	1.5nm,0.9s						

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*ISCJB **15** 07:57:35.8±0.7, 10°.9S±0°.1×165°.8E±0°.1, h10^{km}, mb3.8/8, MS3.2/3, Error ellipse: s-maj=16.9km s-min=15.7km az=35.0*

*IDC **15** 07:57:35.9±1.1, 10°.87S×165°.78E, h0^{km}, mb3.8/8, mb1 4.1/10, mb1mx3.9/36, mbtmp3.9/10, ML4.6/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/27, Error ellipse: s-maj=37.6km s-min=21.7km az=141.0*

ISC 15 07:57:37.6±0.8**, 10°.8S**±0°.1×**165°.8E**±0°.1**, h10**^{km}**, n20, σ1^{s}.38**/11**, mb3.7**/8**, MS3.2**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.94**	**283**	Pn	**Pn**	**07 59 07.0**	**+1.3**
	32nm,0.3s,baz=149,slow=8.7,SNR=4.7						
HNR				LR	LR	08 01 31.0	
	comp=Z,420nm,18.2s,baz=153,slow=40						
DZM	**Mont Dzumac**	**11.19**	**177**	Pn	**Pn**	**08 00 18.8**	**+1.0**
	1.8nm,0.3s,baz=314,slow=15,SNR=42						
DZM				LR	LR	08 04 19.4	
	comp=Z,66nm,19.3s,baz=100,slow=36						
URZ	**Urewera**	**29.12**	**162**	LR	LR	08 14 37.1	
	comp=Z,66nm,18.4s,baz=24,slow=35						
H11S2	**WAKE ISLAND Hy**	**29.16**	**2**	T	T	08 33 48.3	
	baz=181,slow=76,SNR=76						
H11S3	**WAKE ISLAND Hy**	**29.16**	**2**	T	T	08 34 01.1	
	baz=181,slow=76,SNR=49						
H11S1	**WAKE ISLAND Hy**	**29.17**	**2**	T	T	08 33 49.7	
	baz=181,slow=76,SNR=50						
H11N1	**WAKE ISLAND Hy**	**30.38**	**2**	T	T	08 35 19.2	
	baz=182,slow=76,SNR=40						
H11N3	**WAKE ISLAND Hy**	**30.38**	**2**	T	T	08 35 20.2	
	baz=182,slow=76,SNR=25						
H11N2	**WAKE ISLAND Hy**	**30.39**	**2**	T	T	08 35 20.6	
	baz=182,slow=76,SNR=17						
WRA	**Warramunga Arr**	**31.62**	**250**	P	**P**	**08 03 59.5**	**-1.5**
	1.1nm,0.7s,baz=82,slow=8.9,SNR=5.9						
ASAR	**Alice Springs**	**32.94**	**243**	P	**P**	**08 04 11.3**	**-1.4**
	2.1nm,0.7s,baz=65,slow=10,SNR=14						
RAR	**Rarotonga**	**34.57**	**112**	LR	LR	08 14 53.8	
	comp=Z,49nm,20.8s,baz=255,slow=30						
FITZ	**Fitzroy Crossi**	**39.50**	**255**	P	**P**	**08 05 08.1**	**-0.7**
	1.3nm,0.8s,baz=111,slow=11,SNR=2.1						
PPT	**Papeete**	**43.68**	**104**	LR	LR	08 20 11.9	
	comp=Z,28nm,19.4s,baz=228,slow=31						
SONM	**Songino Array**	**78.54**	**324**	P	**P**	**08 09 40.4**	**+1.0**
	0.2nm,0.4s,baz=126,slow=7.3,SNR=2.5						
ILAR	**Eielson Array**	**83.30**	**18**	P	**P**	**08 10 04.2**	**-0.1**
	0.9nm,0.8s,baz=236,slow=5.3,SNR=15						
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**08 10 18.2**	**+0.2**
	0.2nm,0.4s,baz=236,slow=6.4,SNR=3.0						
MKAR	**Makanchi Array**	**93.42**	**317**	P	**P**	**08 10 53.1**	**-0.2**
	0.3nm,0.7s,baz=110,slow=4.6,SNR=3.7						
YKA	**Yellowknife Ar**	**94.76**	**27**	P	**P**	**08 10 57.4**	**-1.7**
	0.1nm,0.5s,baz=258,slow=4.7,SNR=3.5						
ARCES	**ARCESS Array B**	**116.15**	**346**	PKP	**PKPdf**	**08 16 22.6**	**+2.0**
	3.5nm,0.9s,baz=77,slow=2.0,SNR=2.7						

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*SOME **15** 07:59:34.8, 42°.48N×79°.72E, h30^{km}*

*KRNET **15** 07:59:34.7±0.1, 42°.56N×79°.66E, h14^{km}, mb3.0*

NNC 15 07:59:35.1±0.9**, 42°.59N×79°.62E, h0**^{km}**, mb3.3, mpv3.0, 18C-6D, Error ellipse: s-maj=6.2km s-min=3.3km az=135.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**0.71**	**322**	P	Pg	07 59 49.0	+0.3
	6.0nm,0.2s						
UZB				S	Sg	07 59 59.4	+1.4
	32nm,0.2s						
UZB	**Uzynbulak**	**0.71**	**322**	*e*P	Pg	07 59 49.0	+0.3
	baz=21						
UZB				*e*S	Sg	07 59 59.4	+1.4
	baz=21						
UZB	**Uzynbulak**	**0.71**	**322**	*e*P	Pg	07 59 49.0	+0.3
	6.0nm,0.2s						
UZB				*e*S	Sg	07 59 59.4	+1.4
	32nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**353**	P	Pg	07 59 49.7	+0.3
	8.0nm,0.2s						
PDGK				S	Sg	08 00 00.5	+1.3
	16nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**353**	⇓P	Pg	07 59 49.5	+0.1
	5.3nm,0.4s						
PDGK				S	Sg	08 00 00.2	+1.0
	16nm,0.6s						
PDGK	**Podgornoye**	**0.75**	**353**	⇑*i*P	Pg	07 59 49.7	+0.3
	baz=51						
PDGK				⇑*i*S	Sg	08 00 00.3	+1.2
	baz=51						
PRZ	**Przheval'sk**	**0.91**	**264**	⇑*i*P	Pg	07 59 52.1	-0.4
	baz=65						
PRZ				⇑*i*S	Sg	08 00 05.0	+0.7
	baz=65						
KTMS	**Ketmen**	**1.01**	**32**	P	Pg	07 59 54.3	-0.2
	16nm,0.1s						
KTMS				S	Sg	08 00 08.2	+0.6
	22nm,0.3s						
KTMS	**Ketmen**	**1.01**	**32**	*e*P	Pg	07 59 54.3	-0.2
	baz=29						
KTMS				*e*S	Sg	08 00 08.2	+0.6
	baz=29						
KTMS	**Ketmen**	**1.01**	**32**	*e*P	Pg	07 59 54.3	-0.2
	16nm,0.1s						
KTMS				*e*S	Sg	08 00 08.2	+0.6
	22nm,0.3s						
SATY	**Saty**	**1.01**	**298**	P	Pb	07 59 55.4	-0.2
	7.3nm,0.1s						
SATY				S	Sb	08 00 10.5	+1.0
	37nm,0.1s						
SATY	**Saty**	**1.01**	**298**	*e*P	Pb	07 59 55.4	-0.2
	7.3nm,0.1s						
SATY				*e*S	Sb	08 00 10.5	+1.0
	37nm,0.1s						
DJR	**Jarkent**	**1.75**	**4**	P	Pb	08 00 07.6	-0.5
	2.2nm,0.2s						
DJR				S	Sg	08 00 32.1	+0.8
	6.2nm,0.2s						
DJR	**Jarkent**	**1.75**	**4**	*e*P	Pn	08 00 07.4	+0.6
	2.2nm,0.2s						
DJR				*e*S	Sb	08 00 30.7	+0.1
	5.9nm,0.2s						
KDJ	**Kajisay**	**1.87**	**257**	⇑*i*P	Pb	08 00 09.8	-0.4
	baz=57						
KDJ				⇑*i*S	Sb	08 00 34.6	+0.5
	baz=57						
KOTS	**Kotyrbulak**	**1.95**	**290**	Pg	Pb	08 00 11.0	-0.7
	11nm,0.3s						
KOTS				Lg	Lg	08 00 36.6	
	51nm,0.4s						
KOTS	**Kotyrbulak**	**1.95**	**290**	*e*P	Pb	08 00 11.3	-0.4
	baz=90						
KOTS				*e*S	Sg	08 00 37.9	0.0
	baz=90						
KOTS	**Kotyrbulak**	**1.95**	**290**	*e*P	Pb	08 00 11.3	-0.3
	4.0nm,0.2s						
KOTS				*e*S	Sg	08 00 37.9	0.0
	51nm,0.4s						
MDOK	**Medeo**	**1.98**	**288**	Pn	Pn	08 00 10.5	+0.5
	3.0nm,0.5s						
MDOK				Sn	Sb	08 00 37.5	+0.2
	16nm,0.6s						
MDOK	**Medeo**	**1.98**	**288**	Pg	Pn	08 00 10.9	+1.0
	5.1nm,0.3s						
MDOK				Lg	Lg	08 00 37.8	
	16nm,0.6s						
MDOK	**Medeo**	**1.98**	**288**	⇑*e*P	Pn	08 00 10.9	+0.9
	baz=88						
MDOK				⇑*e*S	Sb	08 00 36.9	-0.4
	baz=88						
MDOK	**Medeo**	**1.98**	**288**	⇑*e*P	Pn	08 00 10.9	+1.0
	3.3nm,0.2s						
MDOK				*e*S	Sb	08 00 36.9	-0.4
	19nm,0.5s						
TNSS	**Tian-Shan**	**2.02**	**284**	Pg	Pn	08 00 11.6	+0.8
	11nm,0.4s						
TNSS				Lg	Lg	08 00 38.2	
	11nm,0.5s						
TNSS	**Tian-Shan**	**2.02**	**284**	*i* P	Pn	08 00 11.6	+0.8
	baz=84						
TNSS				*e*S	Sb	08 00 38.2	-0.5
	baz=84						
TNSS	**Tian-Shan**	**2.02**	**284**	*i* P	Pn	08 00 11.6	+0.8
	11nm,0.4s						
TNSS				*e*S	Sb	08 00 38.2	-0.5
	11nm,0.5s						
ARXS	**Arharly**	**2.08**	**322**	Pg	Pb	08 00 13.3	-0.5
	2.5nm,0.3s						
ARXS				Lg	Lg	08 00 40.8	
	23nm,0.4s						
ARXS	**Arharly**	**2.08**	**322**	*e*P	Pb	08 00 13.3	-0.5
	2.5nm,0.3s						
ARXS				*e*S	Sb	08 00 40.8	+0.4
	23nm,0.4s						
IZV	**Izvestkoviy**	**2.26**	**282**	Pg	Pb	08 00 16.2	-0.7
	8.3nm,0.2s						
IZV				Lg	Lg	08 00 45.7	
	19nm,0.3s						
IZV	**Izvestkoviy**	**2.26**	**282**	*e*P	Pb	08 00 16.0	-0.9
	baz=83						
IZV				*e*S	Sb	08 00 45.8	+0.4
	baz=83						
IZV	**Izvestkoviy**	**2.26**	**282**	*e*P	Pb	08 00 16.0	-0.9
	3.2nm,0.2s						
IZV				*e*S	Sb	08 00 45.7	+0.3
	19nm,0.3s						
MTBS	**Maitube**	**2.41**	**284**	Pg	Pb	08 00 18.0	-1.4

	7.2nm,0.5s						
MTBS				Lg	Lg	08 00 50.2	
	12nm,0.4s						
MTBS	Maitube	2.41	284	⇓iP	Pb	08 00 18.0	-1.4
	baz=84						
MTBS				⇓eS	Sb	08 00 49.0	-0.7
	baz=84						
MTBS	Maitube	2.41	284	⇓iP	Pb	08 00 18.0	-1.4
	2.8nm,0.2s						
MTBS				eS	Sb	08 00 49.0	-0.7
	11nm,0.3s						
KTBS	Karatobe	2.43	299	Pg	Pb	08 00 19.2	-0.5
	2.5nm,0.2s						
KTBS				Lg	Lg	08 00 51.2	
	33nm,0.5s						
KTBS	Karatobe	2.43	299	eP	Pb	08 00 19.2	-0.5
	baz=98						
KTBS				eS	Sb	08 00 51.2	+1.1
	baz=98						
KTBS	Karatobe	2.43	299	eP	Pb	08 00 19.2	-0.5
	2.5nm,0.2s						
KTBS				eS	Sb	08 00 51.2	+1.1
	33nm,0.5s						
ULHL	Ulahol	2.53	263	⇓iP	Pn	08 00 19.2	+1.6
	baz=64						
ULHL				⇓iS	Sb	08 00 51.7	-1.5
	baz=64						
KAPS	Kapalarasan	2.70	356	Pg	Pb	08 00 22.9	-1.4
	1.2nm,0.2s						
KAPS				Lg	Lg	08 00 57.6	
	6.7nm,0.2s						
KAPS	Kapalarasan	2.70	356	eP	Pb	08 00 22.9	-1.4
	1.2nm,0.2s						
KAPS				eS	Sb	08 00 57.6	-0.5
	6.7nm,0.2s						
BOOM	Boomskoye usch	2.72	269	⇑iP	Pn	08 00 21.8	+1.5
	baz=70						
BOOM				⇑iS	Sn	08 00 55.9	+1.9
	baz=70						
KST	Kastek	2.73	281	Pg	Pb	08 00 22.9	-2.0
	6.5nm,0.3s						
KST				Lg	Lg	08 00 58.7	
	7.2nm,0.5s						
KST	Kastek	2.73	281	eP	Pb	08 00 23.8	-1.1
	baz=81						
KST				eS	Sb	08 00 59.1	+0.2
	baz=81						
KST	Kastek	2.73	281	eP	Pb	08 00 23.8	-1.1
	4.4nm,0.2s						
KST				eS	Sb	08 00 59.1	+0.2
	5.5nm,0.4s						
KUU	Kurty	2.73	300	Pg	Pb	08 00 23.7	-1.1
	0.6nm,0.3s						
KUU				Lg	Lg	08 00 59.7	
	9.7nm,0.2s						
KUU	Kurty	2.73	300	⇑iP	Pb	08 00 23.7	-1.1
	baz=0.0						
KUU				⇑eS	Sb	08 00 59.1	+0.3
	baz=0.0						
KUU	Kurty	2.73	300	⇑iP	Pb	08 00 23.7	-1.1
	0.5nm,0.2s						
KUU				eS	Sb	08 00 59.0	+0.2
	0.3nm,0.1s						
DGS	Degeres	2.90	284	Pg	Pb	08 00 27.2	-0.6
	4.0nm,0.3s						
DGS				Lg	Lg	08 01 04.4	
	16nm,0.5s						
DGS	Degeres	2.90	284	eP	Pb	08 00 27.2	-0.6
	baz=85						
DGS				eS	Sb	08 01 04.9	+1.0
	baz=85						
DGS	Degeres	2.90	284	eP	Pb	08 00 27.2	-0.6
	4.0nm,0.3s						
DGS				eS	Sb	08 01 04.8	+1.0
	16nm,0.5s						
NRN	Naryn	2.94	248	⇑iP	Pn	08 00 25.3	+2.0
	baz=49						
NRN				⇑eS	Sn	08 01 01.3	+1.9
	baz=49						
TKM2	Tokmak 2	2.98	278	Pg	Pb	08 00 27.3	-1.9
	1.2nm,0.6s						
TKM2				Lg	Lg	08 01 06.8	
	1.4nm,0.3s						
TKM2	Tokmak 2	2.98	278	⇑iP	Pn	08 00 26.0	+2.1
	baz=78						
TKM2				⇑iS	Sn	08 01 03.0	+2.6
	baz=78						
AAK	Ala-Archa	3.79	272	Pn	Pn	08 00 36.7	+1.9
	2.8nm,0.9s						
AAK				Lg	Lg	08 01 37.6	
	1.1nm,0.4s						
MAKZ	Makanchi	4.54	21	Pn	Pn	08 00 45.5	+0.4
	0.5nm,0.3s						
MAKZ				Lg	Lg	08 02 02.0	
	0.7nm,0.8s						
MK31	Makanchi Array	4.62	23	Pn	Pn	08 00 46.9	+0.7
	0.1nm,0.3s,baz=206,slow=13,SNR=19						
MK31				Lg	Lg	08 01 59.3	
	0.4nm,0.5s,baz=213,slow=27						

TRN 15 08:00:31.9,11°.11N×62°.11W,h123km,MD3.6,1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.83	123	⇑iP	Pn	08 00 52.8	+0.2
TRN				eS	Sn	08 01 06.8	-1.4
TPP	Pointe-a-Pierr	1.02	141	eP	Pn	08 00 54.9	+0.6
TPP				eS	Sn	08 01 10.9	-0.5
TBH	Brigand Hill	1.20	121	eP	Pn	08 00 56.9	+0.7
TBH				eS	Sn	08 01 14.1	-0.5
GRHS	Sauteurs	1.20	22	eP	Pn	08 00 56.1	-0.1
GRHS				eS	Sn	08 01 13.5	-1.2
GRSS	Sisters	1.28	22	eP	Pn	08 00 57.2	+0.2
GRSS				eS	Sn	08 01 16.2	0.0
TPR	Prospect	1.31	87	eP	Pn	08 00 58.1	+0.7
TPR				eS	Sn	08 01 16.6	-0.1
BOT	Bacolet	1.36	87	eP	Pn	08 00 58.5	+0.6
BOT				eS	Sn	08 01 17.3	-0.4
TOSP	Speyside	1.55	83	eP	Pn	08 00 59.5	-0.6
TOSP				eS	Sn	08 01 20.2	-1.4
FCV	Fort Charlotte	2.20	22	eP	Pn	08 01 07.9	-0.2
FCV				eS	Sn	08 01 35.6	-0.2
SVB	Belmont	2.31	21	eP	Pn	08 01 09.1	-0.3
SVB				eS	Sn	08 01 37.3	-0.9
SVCV	St. Vincent, C	2.35	24	eP	Pn	08 01 10.9	+1.1
SVCV				eS	Sn	08 01 37.8	-1.3
SVV	Soufriere Volc	2.36	22	eP	Pn	08 01 10.3	+0.3
SVV				eS	Sn	08 01 38.9	-0.5
SSV	Crater Summit	2.38	22	eS	Sn	08 01 37.9	-2.0
MCLT	Moule a Chique	2.82	24	eP	Pn	08 01 16.3	+0.3
MCLT				eS	Sn	08 01 48.4	-1.6
SLB	Belfond	2.90	21	eP	Pn	08 01 16.4	-0.6
SLB				eS	Sn	08 01 49.6	-2.1
FDF	Fort de France	3.72	14	eP	Pn	08 01 26.9	-0.9
BBL	Barber's Block	4.43	8	eP	Pn	08 01 38.2	+0.8
MGG	Marie-Galante	4.84	9	eP	Pn	08 01 42.0	-0.7

IDC 15 08:04:49.4±1.5,10°.38S×163°.46E,h0km,mb3.5/4, mb1 3.8/6,mb1mx3.6/33,mbtmp3.7/6,ML3.8/2,Error ellipse: s-maj=38.1km s-min=29.8km az=130.0

ISCJB 15 08:04:50.2±1.2,10°.5S±0°.1×163°.4E±0°.2,h16km,mb3.5/4, Error ellipse: s-maj=26.0km s-min=17.8km az=141.1

ISC 15 08:04:51.9±1.3,10°.4S±0°.2×163°.4E±0°.2,h16km,n6, σ1ˢ.14/6,mb3.4/4,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.54	285	Pn	Pn	08 05 45.7	-0.5
	19nm,0.3s,baz=11,slow=5.2,SNR=2.9						
DZM	Mont Dzumac	11.97	166	Pn	Pn	08 07 42.0	-0.1
	0.2nm,0.3s,baz=61,slow=19,SNR=3.8						
WRA	Warramunga Arr	29.57	248	P	P	08 10 58.0	+1.7
	0.2nm,0.7s,baz=80,slow=9.2,SNR=2.7						
ASAR	Alice Springs	31.06	241	P	P	08 11 08.7	-0.8
	0.4nm,0.8s,baz=66,slow=10,SNR=3.7						
ILAR	Eielson Array	83.64	19	P	P	08 17 19.2	-0.2
	1.7nm,1.2s,baz=239,slow=4.3,SNR=6.0						
MKAR	Makanchi Array	91.48	317	P	P	08 17 58.0	+0.3
	0.2nm,0.8s,baz=87,slow=3.8,SNR=2.4						

ISK 15 09:06:38.2,37°.81N×44°.56E,h5km±1km,ML2.7/5

DDA 15 09:06:42.8,37°.83N×44°.20E,h7km±2km,ML2.3

ISC 15 09:06:36.8±2.1,37°.74N±0°.06×44°.7E±0°.1,h6km,n9, σ0ˢ.75/13,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOVA	Hakkari_Yksek	0.38	246	i P	Pb	09 06 46.2	+0.2
YOVA				i S	Sb	09 06 52.6	+0.3
BASK	Baskale_VAN	0.65	299	i P	Pg	09 06 49.1	-0.2
BASK				i S	Sg	09 06 56.0	-1.8
BASK				IAML_P			
	comp=Z,2μm,0.2s						
CUKT	Cukurca	1.01	241	PG	Pb	09 06 57.0	+0.1
CUKT	Cukurca	1.01	241	i P	Pn	09 06 57.7	0.0
CUKT				IAML_P			
	comp=Z,1μm,0.2s						
AKDM	Akdamar-Van	1.49	294	PN	Pn	09 07 04.2	-0.2
AKDM				SN	Sg	09 07 25.3	+0.4
CLDR	Caldiran	1.53	336	PN	Pb	09 07 06.4	+0.6
CLDR				SN	Sb	09 07 26.4	+0.8
SIRT	Sirnak	1.83	263	PN	Pb	09 07 10.8	+0.1
AGRB	Hanur-Agry	2.28	324	PN	Pn	09 07 15.9	+0.7
GNI	Garni	2.40	0	PN	Pb	09 07 19.9	-0.7

IDC 15 09:10:37.9±1.3,12°.57N×125°.80E,h0km,mb3.8/7, mb1 4.0/7,mb1mx3.6/58,mbtmp3.8/7,Error ellipse: s-maj=61.6km s-min=16.8km az=67.0

ISCJB 15 09:10:40.9±0.9,12°.76N±0°.05×125°.96E±0°.08,h40km, mb3.7/7,Error ellipse: s-maj=11.2km s-min=6.8km az=177.3

MAN 15 09:10:42.7,12°.66N×125°.67E,h16km,MS3.4

ISC 15 09:10:43.2±1.1,12°.76N±0°.06×125°.9E±0°.1,h40km,n12, σ1ˢ.62/15,mb3.8/7,2C,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	Palo	1.81	209	⇑eP	Pn	09 11 09.9	-1.9
PLP				i S	Sn	09 11 32.0	-1.6
PVCP	Virac	1.86	297	eP	Pn	09 11 10.7	-1.9
PVCP				eS	Sn	09 11 35.0	+0.2
OCLP	Ormoc	2.10	216	eP	Pn	09 11 24.5	+8.7
OCLP				eS	Sn	09 11 42.6	+1.9
MSLP	Maasin	2.79	201	eP	Pn	09 11 26.9	+1.5
MSLP				eS	Sn	09 11 58.6	+0.8
RCP	Roxas	3.27	249	⇑eP	Pn	09 11 32.2	+0.2
CMAR	Chiang Mai Arr	26.52	286	P	P	09 16 16.7	-0.6
	1.2nm,0.4s,baz=96,slow=8.4,SNR=5.7						
FITZ	Fitzroy Crossi	30.66	180	P	P	09 16 53.7	-0.4
	2.5nm,0.6s,baz=10,slow=9.4,SNR=10						
WRA	Warramunga Arr	33.55	165	P	P	09 17 17.1	-2.4
	0.3nm,0.4s,baz=346,slow=9.2,SNR=4.6						
ASAR	Alice Springs	37.05	168	P	P	09 17 48.2	-1.3
	1.0nm,0.7s,baz=348,slow=6.8,SNR=15						
SONM	Songino Array	38.56	339	P	P	09 18 03.4	+1.2
	0.2nm,0.5s,baz=148,slow=8.5,SNR=2.7						
MKAR	Makanchi Array	49.83	322	P	P	09 19 34.1	+1.8
	0.6nm,0.6s,baz=113,slow=8.8,SNR=8.3						
KURBB	Kurchatov Arra	53.82	325	P	P	09 20 03.3	+1.5
	0.8nm,0.8s,baz=115,slow=8.9,SNR=2.7						

NIED 15 09:18:00,35°.80N×138°.00E,h8km,Mw4.0 Best double couple: $M_0$1.02000×10^{15} NP1:ϕ_s57.00000°,δ84.00000°, λ-174.00000°. NP2:ϕ_s326.00000°,δ84.00000°, λ-6.00000°.

IDC 15 09:18:49.5±0.9,35°.84N×137°.66E,h0km,mb3.5/6, mb1 3.8/7,mb1mx3.5/65,mbtmp3.6/7,ML3.9/1,MS2.7/5, Ms1 2.7/5,ms1mx2.5/42,Error ellipse: s-maj=13.4km s-min=9.8km az=114.0

ISCJB 15 09:18:51.4±0.4,35°.80N±0°.02×138°.02E±0°.04,h26km±3km, mb3.8/10,MS2.9/2,Error ellipse: s-maj=5.0km s-min=4.0km az=1.0

NEIC 15 09:18:51.4±0.5,35°.80N×138°.10E,h10km,mb4.4/4,Error ellipse: s-maj=10.6km s-min=7.3km az=109.0

NEIC Recorded [3 JMA] in Nagano.

JMA 15 09:18:52.2,35°.78N×138°.04E,h11km,M4.2 Broadband fault plane solution: P waves. NP1:ϕ_s248.00000°, δ80.00000°,λ-155.00000°. NP2:ϕ_s153.00000°, δ65.00000°,λ-11.00000°. Principal axes: T Plg10.0000°, Azm18.0000°; N Plg63.0000°, Azm268.0000°; P Plg25.0000°, Azm113.0000°;

JMA Felt III J1.

ISC 15 09:18:51.5±0.9,35°.79N±0°.02×138°.02E±0°.03,h16km±6km, n36,σ1ˢ.58/49,mb3.8/10,2C-3D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNT	Takato	0.12	49	⇑P	Pg	09 18 55.1	-0.2
JNT				S	Sg	09 18 57.3	-0.4
JYN	Shimob	0.52	125	⇓P	Pb	09 19 02.0	-0.3
JYN				S	Sb	09 19 09.1	-0.5
SHZ3	Shizuoka 3	0.74	168	P	Pg	09 19 05.5	-0.5
SHZ3				S	Sg	09 19 14.8	-1.0
JRY	Ryogami san	0.75	72	⇓P	Pb	09 19 06.0	-0.2
JRY				S	Sg	09 19 15.3	-0.7
MAJO	Matsushiro	0.76	11	ePn	Pb	09 19 06.7	+0.2
MAJO				eSn	Sb	09 19 16.5	0.0
MAT	Matsushiro	0.76	11	P	Pb	09 19 06.6	+0.1
MAT				S	Sb	09 19 16.9	+0.3
MAT	Matsushiro	0.76	11	P	Pb	09 19 06.5	+0.1
MAT				S	Sb	09 19 16.9	+0.3
MJAR	Matsushiro Arr	0.76	11	Pg	Pg	09 19 06.1	-0.3
	260nm,0.3s,baz=226,slow=15,SNR=6436						
MJAR				Lg	Lg	09 19 16.6	
	164nm,0.3s,baz=214,slow=30,SNR=37						
MJB9	Matsu-Tunnel	0.76	11	ePn	Pb	09 19 06.6	+0.2
MJB9				eSn	Sb	09 19 16.6	-0.1
JFNN	Fujinakano	0.81	138	P	Pb	09 19 07.3	+0.1
JFNN				S	Sb	09 19 18.5	+0.7
INU	Inuyama	0.93	242	ePg	Pg	09 19 09.4	-0.2
INU				eSg	Sg	09 19 21.2	-0.6
JTT	Ttatey	0.98	326	⇑P	Pn	09 19 11.6	+0.9
JOD2	Odawara 2	1.02	121	⇓P	Pg	09 19 10.6	-0.6
JOD2				S	Sg	09 19 23.9	-0.6
JHJ	Hachijo jima 2	3.04	151	Pn	Pn	09 19 42.2	+3.2
	31nm,0.3s,baz=60,slow=20,SNR=4.6						
JHJ				Sn	Sb	09 20 22.6	+0.5
	18nm,0.3s,baz=22,slow=19,SNR=2.6						
JHJ2	Mitsune	3.06	151	ePn	Pn	09 19 41.2	+2.0
JNU	Nakatsue	6.48	248	ePn	Pn	09 20 28.5	+2.3
JNU				eSn	Sn	09 21 36.0	-3.8
JNU				Lg	Lg	09 22 17.1	
JNU	Nakatsue	6.48	248	Pn	Pn	09 20 28.5	+2.3
	1.3nm,0.3s,baz=119,slow=4.4,SNR=33						
JNU				Sn	Sn	09 21 39.1	-0.7
	baz=112,slow=19,SNR=1.6						
JNU				Lg	Lg	09 22 17.1	
	1.1nm,0.3s,baz=99,slow=19,SNR=2.9						
JNU				LR	LR	09 22 24.3	
	comp=Z,16nm,18.1s,baz=22,slow=34						
ERM	Erimo	7.39	31	ePn	Pn	09 20 39.9	+1.2
ERM				eSn	Sn	09 22 00.6	-1.6
KSRS	Korea Array	8.29	284	Pn	Pn	09 20 54.2	+3.2
	0.6nm,0.3s,baz=103,slow=14,SNR=5.0						
KSRS				LR	LR	09 24 01.7	
	comp=Z,36nm,19.5s,baz=115,slow=39						
KS15	Wonju Array Si	8.32	284	ePn	Pn	09 20 54.5	+3.1
KSAR	Wonju Array Be	8.32	284	Pn	Pn	09 20 54.2	+2.8
ASAJ	Asahikawa	9.02	21	LR	LR	09 25 15.8	
	comp=Z,43nm,21.0s,baz=309,slow=42						
PETK	Petropavlovsk-	22.17	33	LR	LR	09 32 34.7	
	comp=Z,38nm,19.3s,baz=189,slow=37						
MA2	Magadan	25.20	15	P	P	09 24 17.4	+1.2
	1.1nm,0.3s,baz=224,slow=10,SNR=5.1						
MA2				LR	LR	09 35 00.8	
	comp=Z,41nm,21.1s,baz=204,slow=38						
SONA0	Songino Array	26.27	307	eP	P	09 24 23.8	-2.4
SONM	Songino Array	26.27	307	P	P	09 24 23.8	-2.4
	0.4nm,0.8s,baz=99,slow=8.9,SNR=2.2						
ZALV	Zalesovo Beam	40.76	314	eP	P	09 26 27.6	-3.9
KURK	Kurchatov	44.56	309	eP	P	09 27 01.7	-0.8
KURBB	Kurchatov Arra	44.62	309	P	P	09 27 01.7	-1.3
	0.4nm,0.6s,baz=84,slow=7.1,SNR=2.8						
WRAB	Tennant Creek	55.53	184	eP	P	09 28 26.1	+0.1
	6.6nm,0.8s						
WB2	Warramunga Arr	55.54	184	eP	P	09 28 26.0	-0.1
	6.2nm,1.4s						
WR1	Warramunga Arr	55.54	184	eP	P	09 28 26.0	-0.1
	5.5nm,1.3s						
WRA	Warramunga Arr	55.54	184	P	P	09 28 26.0	-0.1
	0.6nm,0.5s,baz=0.2,slow=7.7,SNR=8.4						
ASAR	Alice Springs	59.27	184	P	P	09 28 53.1	+0.7
	0.4nm,0.8s,baz=19,slow=6.4,SNR=4.1						
YKA	Yellowknife Ar	66.23	29	P	P	09 29 39.7	+1.4
	0.3nm,0.8s,baz=304,slow=6.3,SNR=6.9						
STKA	Stephens Creek	67.40	177	eP	P	09 29 47.7	+1.6
	0.5nm,0.7s						

IDC 15 09:23:38.6±1.4,10°.94S×164°.99E,h0km,mb3.9/5, mb1 4.2/6,mb1mx3.8/38,mbtmp4.1/6,ML4.5/1,MS3.0/6, Ms1 3.0/6,ms1mx2.8/28,Error ellipse: s-maj=47.7km s-min=26.1km az=130.0

ISCJB 15 09:23:41.3±1.4,11°.31S±0°.10×165°.1E±0°.2,h31km, mb3.9/4,MS3.1/4,Error ellipse: s-maj=25.1km s-min=12.6km az=162.2

ISC 15 09:23:43.3±1.4,11°.2S±0°.1×165°.1E±0°.2,h31km,n8, σ1ˢ.40/9,mb4.0/4,MS3.0/4,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.40	288	LR	LR	09 27 18.5	
	comp=Z,102nm,18.4s,baz=174,slow=42						
DZM	Mont Dzumac	10.89	174	Pn	Pn	09 26 18.9	+1.7
	3.1nm,0.3s,baz=346,slow=8.4,SNR=27						
DZM				Sn	Sn	09 28 15.8	-2.3
	0.2nm,0.3s,baz=127,slow=20,SNR=2.6						
DZM				LR	LR	09 30 14.9	
	comp=Z,80nm,18.7s,baz=20,slow=36						
CTA	Charters Tower	20.21	242	P	P	09 28 16.0	+0.2
	4.1nm,0.8s,baz=80,slow=11,SNR=3.6						
STKA	Stephens Creek	29.93	223	P	P	09 29 49.8	+1.1
	2.6nm,0.7s,baz=50,slow=8.3,SNR=9.1						
STKA				LR	LR	09 41 09.5	
	comp=Z,53nm,18.7s,baz=26,slow=35						
WRA	Warramunga Arr	30.88	250	P	P	09 29 56.3	-0.9
	1.6nm,0.6s,baz=79,slow=9.2,SNR=11						
WRA				PcP	PcP	09 32 54.1	+0.4
	0.4nm,0.9s,baz=82,slow=2.9,SNR=3.8						
WRA				LR	LR	09 40 20.0	
	comp=Z,40nm,21.7s,baz=95,slow=32						
ASAR	Alice Springs	32.20	243	P	P	09 30 07.8	-1.0
	2.1nm,0.9s,baz=64,slow=10,SNR=19						
ASAR				PcP	PcP	09 32 57.4	+0.1
	0.3nm,0.6s,baz=68,slow=2.7,SNR=6.3						
ASAR				LR	LR	09 42 09.5	
	comp=Z,26nm,19.0s,baz=82,slow=34						
ILAR	Eielson Array	83.84	19	P	P	09 36 08.8	-0.6
	0.2nm,0.7s,baz=223,slow=5.1,SNR=3.1						
YKA	Yellowknife Ar	95.37	27	LR	LR	10 13 51.1	
	comp=Z,5.4nm,18.8s,baz=276,slow=32						

HEL 15 09:23:58.9±0.4,67°.64N×34°.33E,h0km,ML2.4,Explosion

KOLA 15 09:24:00.8,67°.62N×34°.05E,h0km

ISCJB 15 09:24:01.4±1.0,67°.58N±0°.03×33°.5E±0°.1,h0km,Error ellipse: s-maj=8.2km s-min=5.0km az=1.3

UPP 15 09:24:02.3±3.1,67°.73N×33°.99E,h0km,ML2.0,Suspected explosion

NAO 15 09:24:03.4±1.3,67°.66N×33°.63E,ML2.7

ISC 15 09:24:00.8±1.7,67°.63N±0°.04×34°.03E±0°.08,h0km,n37, σ1ˢ.34/63,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.25	256	P	Pg	09 24 05.3	-0.2
APA				S	Sg	09 24 08.6	0.0
APA0	Apatity Array	0.40	267	Pg	Pg	09 24 07.9	-0.4
APA0				Lg	Lg	09 24 12.5	
	baz=82,slow=37						
APA0	Apatity Array	0.40	267	P	Pg	09 24 08.0	-0.4
APA0				S	Sg	09 24 13.3	-0.2
APA0	Apatity Array	0.40	267	Pg	Pg	09 24 07.9	-0.4
APA0				Sg	Sg	09 24 12.5	-1.0
	baz=82,slow=37						
VRF	Varrio	1.69	276	PG	Pn	09 24 30.9	-0.6
	baz=89						
VRF				MSG		09 24 52.8	
	comp=Z,36nm,0.2s						
VRF				SG	Sb	09 24 54.4	-0.1
KU6	Riekki	2.30	227	PG	Pn	09 24 41.3	+1.4
	baz=46						
KU6				MSG		09 25 09.6	
	comp=Z,14nm,0.2s						
KU6				SG	Sb	09 25 12.6	+0.7
MSF	Maaselka	2.62	231	PG	Pb	09 24 47.4	-1.2
	baz=52						
MSF				SG	Sb	09 25 23.0	+1.7
SGF	Sodankyl	2.89	270	PB	Pn	09 24 48.8	+0.9
	baz=77						
SGF				SG	Sb	09 25 29.6	+0.7
RNF	Rovaniemi	3.29	256	PN	Pn	09 24 53.6	+0.1
	baz=66						
KEV	Kevo	3.34	313	Pn	Pn	09 24 54.8	+0.7
KEV				Sn	Sn	09 25 35.7	+1.4
KEV				Lg	Lg	09 25 43.5	
KEV	Kevo	3.34	313	Pn	Pn	09 24 54.8	+0.7
KEV				Sn	Sn	09 25 35.7	+1.4
KEV				Sg	Sb	09 25 43.5	+1.7
KEV	Kevo	3.34	313	PN	Pn	09 24 54.8	+0.7
KEV				SN	Sn	09 25 35.3	+1.0
ARA0	ARCESS Array S	3.67	305	Pn	Pn	09 24 58.3	-0.3
	baz=122,slow=16						
ARA0				Sn	Sn	09 25 42.0	-0.5
	baz=117,slow=28						
ARA0				Lg	Lg	09 25 52.9	
	baz=116,slow=37						
ARA0	ARCESS Array S	3.67	305	Pn	Pn	09 24 58.3	-0.3
	baz=122,slow=16						
ARA0				Sn	Sn	09 25 42.0	-0.5
	baz=117,slow=28						
ARA0				Sg	Sb	09 25 52.9	+1.7
	baz=116,slow=37						
ARE0	ARCESS Array S	3.67	305	eP	Pn	09 24 58.8	+0.1
ARE0				eS	Sn	09 25 41.6	-0.9
ARE0	ARCESS Array S	3.67	305	PN	Pn	09 24 58.3	-0.3
	baz=118						
ARE0				SN	Sn	09 25 42.9	+0.4
HEF	Hetta	3.98	286	Pn	Pn	09 25 03.9	+1.0
HEF				Sn	Sn	09 25 49.4	-0.8
HEF				Lg	Lg	09 26 03.1	
HEF	Hetta	3.98	286	Pn	Pn	09 25 03.9	+1.0
HEF				Sn	Sn	09 25 49.4	-0.8
HEF				Sg	Sb	09 26 03.1	+3.0
HEF	Hetta	3.98	286	PN	Pn	09 25 04.1	+1.2
	baz=99						
OUL	Oulu	4.15	236	PG	Pb	09 25 13.2	-1.4
	baz=51						
KTK1	Kautokeino	4.24	294	eP	Pn	09 25 07.2	+0.8
KTK1				eS	Sn	09 25 54.1	-2.5
KTK1				IAML		09 26 12.7	
	comp=Z,7.3nm,0.2s						
LANU	Lannavaara	4.58	281	PN	Pn	09 25 10.7	-0.5
LANU				SG	Sb	09 26 22.4	+4.8
KALU	Kalix	4.59	252	P	Pn	09 25 12.2	+0.9
KALU				S	Sn	09 26 05.8	+0.7
KALU	Kalix	4.59	252	PN	Pn	09 25 12.5	+1.2
KIF	Kilpisjarvi	5.09	292	Pn	Pn	09 25 19.3	+1.1
KIF				Sn	Sn	09 26 16.5	-1.1
KIF				Lg	Lg	09 26 36.5	
KIF	Kilpisjarvi	5.09	292	Pn	Pn	09 25 19.3	+1.1
KIF				Sn	Sn	09 26 16.5	-1.1
KIF				Sg	Sb	09 26 36.5	+4.2
KUA	Kurravaara	5.21	280	P	Pn	09 25 19.4	-0.3
KUA				S	Sn	09 26 18.6	-1.7
RATU	Laukkuluspa	5.50	279	P	Pn	09 25 23.6	-0.2
NIKU	Nikkaluokta	5.70	279	P	Pn	09 25 26.4	-0.1
SALU	Saltoluokta	5.96	275	P	Pn	09 25 30.8	+0.6
BURU	Burvik	5.98	245	P	Pn	09 25 30.9	+0.6
FIA0	FINESS Array S	7.09	213	Pn	Pn	09 25 46.9	+1.3
	baz=21,slow=14						
FIA0				Lg	Lg	09 27 39.2	
	baz=18,slow=28						
FIA0	FINESS Array S	7.09	213	Pn	Pn	09 25 46.9	+1.3
	baz=21,slow=14						
FIA0				Sg	Sb	09 27 39.2	+10
	baz=18,slow=28						
SPA0	Spitsbergen Ar	11.71	342	Pn	Pn	09 26 48.0	-0.8
	baz=146,slow=14						
SPA0	Spitsbergen Ar	11.71	342	Pn	Pn	09 26 48.0	-0.8
	baz=146,slow=14						
NRA0	NORESS Array S	11.93	245	Pn	Pn	09 26 50.3	-1.5
	baz=50,slow=16						
NRA0	NORESS Array S	11.93	245	Pn	Pn	09 26 50.3	-1.5

baz=50,slow=16

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*SOME **15** 09:30:15.4, 42°.72N×79°.58E, h15km*
*KRNET **15** 09:30:16.2±0.1, 42°.73N×79°.49E, h14km, mb2.4*
*NNC **15** 09:30:16.4±0.7, 42°.77N×79°.51E, h1km±4km, mb2.9, mpv2.5, Error ellipse: s-maj=5.4km s-min=2.8km az=151.0*
ISC 15 09:30:14.2±1.5**, 42°.72N**±0°.05×**79°.53E**±0°.04**, h7**km±11km**, n29, σ0^s.71**/52**, 11C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.57	319	P	Pb	09 30 26.8	+0.2
	2.2nm,0.1s						
UZB				S	Sb	09 30 34.8	-0.2
	11nm,0.2s						
UZB	Uzynbulak	0.57	319	eP	Pb	09 30 26.8	+0.2
	baz=21						
UZB				eS	Sb	09 30 34.9	0.0
	baz=21						
UZB	Uzynbulak	0.57	319	eP	Pb	09 30 26.8	+0.2
	2.2nm,0.1s						
UZB				eS	Sb	09 30 34.9	0.0
	11nm,0.2s						
PDGK	Podgornoye	0.61	357	P	Pb	09 30 27.7	+0.3
	1.0nm,0.1s						
PDGK				S	Sb	09 30 36.1	-0.1
	6.7nm,0.3s						
PDGK	Podgornoye	0.61	357	⇑P	Pb	09 30 28.0	+0.7
	1.6nm,0.5s						
PDGK				⇑S	Sb	09 30 35.3	-0.9
	1.3nm,0.4s						
PDGK	Podgornoye	0.61	357	⇑iP	Pb	09 30 27.6	+0.3
	baz=60						
PDGK				⇑iS	Sb	09 30 35.9	-0.3
	baz=60						
PRZ	Przheval'sk	0.87	255	⇑iP	Pb	09 30 32.0	+0.4
	baz=53						
PRZ				⇑iS	Sb	09 30 42.9	-0.6
	baz=53						
SATY	Saty	0.90	293	P	Pn	09 30 32.7	-0.6
	3.9nm,0.3s						
SATY				S	Sn	09 30 45.9	-0.6
	11nm,0.1s						
SATY	Saty	0.90	293	eP	Pn	09 30 33.1	-0.2
	1.2nm,0.1s						
SATY				eS	Sn	09 30 45.7	-0.8
	8.8nm,0.2s						
KTMS	Ketmen	0.95	39	P	Pn	09 30 33.9	-0.1
	3.7nm,0.1s						
KTMS				S	Sn	09 30 47.2	-0.6
	3.3nm,0.2s						
DJR	Jarkent	1.63	7	P	Pg	09 30 45.1	-0.3
	0.5nm,0.2s						
DJR				S	Sg	09 31 06.7	+0.2
	2.5nm,0.3s						
DJR	Jarkent	1.63	7	eP	Pg	09 30 45.1	-0.3
	0.5nm,0.2s						
DJR				eS	Sg	09 31 06.7	+0.2
	2.5nm,0.3s						
KDJ	Kajisay	1.83	252	⇓iP	Pg	09 30 49.8	+0.5
	baz=51						
KDJ				⇓iS	Sg	09 31 13.3	+0.2
	baz=51						
KOTS	Kotyrbulak	1.85	287	Pg	Pg	09 30 49.7	+0.1
	3.1nm,0.2s						
KOTS				Lg	Lg	09 31 15.0	
	10nm,0.3s						
KOTS	Kotyrbulak	1.85	287	eP	Pg	09 30 50.0	+0.4
	baz=87						
KOTS				eS	Sg	09 31 14.9	+1.3
	baz=87						
KOTS	Kotyrbulak	1.85	287	eP	Pg	09 30 50.0	+0.4
	3.1nm,0.2s						
KOTS				eS	Sg	09 31 14.8	+1.3
	10nm,0.3s						
IZV	Izvestkoviy	2.17	280	Pg	Pg	09 30 55.3	-0.4
	1.7nm,0.3s						
IZV				Lg	Lg	09 31 24.6	
	3.5nm,0.3s						
IZV	Izvestkoviy	2.17	280	eP	Pg	09 30 55.5	-0.2
	baz=79						
IZV				eS	Sg	09 31 24.5	+0.7
	baz=79						
IZV	Izvestkoviy	2.17	280	eP	Pg	09 30 55.5	-0.2
	0.1nm,0.1s						
IZV				eS	Sg	09 31 24.6	+0.7
	3.5nm,0.3s						
KTBS	Karatobe	2.31	297	Pg	Pg	09 30 57.5	-0.9
	1.1nm,0.4s						
KTBS				Lg	Lg	09 31 27.9	
	9.4nm,0.2s						
KTBS	Karatobe	2.31	297	eP	Pg	09 30 57.5	-0.9
	baz=96						
KTBS				eS	Sg	09 31 27.9	-0.4
	baz=96						
KTBS	Karatobe	2.31	297	eP	Pg	09 30 57.5	-0.9
	1.1nm,0.4s						
KTBS				eS	Sg	09 31 27.9	-0.4
	9.4nm,0.2s						
ULHL	Ulahol	2.48	260	⇑iP	Pb	09 30 59.6	+0.5
	baz=60						
ULHL				⇑iS	Sg	09 31 31.9	-1.8
	baz=60						
KAPS	Kapalarasan	2.57	357	Pg	Pg	09 31 02.6	-0.8
	1.6nm,0.4s						
KAPS				Lg	Lg	09 31 36.6	
	4.1nm,0.4s						
KAPS	Kapalarasan	2.57	357	eP	Pg	09 31 02.6	-0.8
	1.6nm,0.4s						
KAPS				eS	Sg	09 31 36.6	-0.1
	4.1nm,0.4s						
BOOM	Boomskoye usch	2.66	266	⇓iP	Pb	09 31 01.6	-0.6
	baz=66						
BOOM				⇓iS	Sb	09 31 34.5	-0.6
	baz=66						
TKM2	Tokmak 2	2.90	275	⇑Pg	Pb	09 31 06.6	+0.3
	1.2nm,0.8s						
TKM2				⇓Lg	Lg	09 31 45.7	
	1.6nm,0.6s						
NRN	Naryn	2.92	245	⇓eP	Pb	09 31 06.3	-0.5
	baz=45						
NRN				⇓iS	Sb	09 31 42.1	-0.7
	baz=45						
AKTO	Aktyubinsk	16.65	305	⇑Pn	P	09 34 12.7	+2.5
	1.5nm,0.8s						
AKTO				⇑Lg	Lg	09 34 53.9	
	4.6nm,1.0s						

OTT 15 09:30:31.9±0.7**, 57°.68N×58°.48W, h18**km**, ML3.5**/2**, LAlbertaRADOR Sea Seismic Zone. 204km east from Nutak, Nl, Labrador Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANL	Nain	2.09	238	PN	Pn	09 31 06.0	-0.1
NANL				SN	Sn	09 31 30.9	-0.8
NANL				Trac		09 31 32.3	
	comp=Z,1.7nm,0.0s						
MKVL	Makkovik	2.63	189	PN	Pn	09 31 13.5	+0.1
MKVL				SN	Sn	09 31 43.2	-1.5
MKVL				Trac		09 31 47.7	
	comp=Z,2.3nm,0.1s						
KAJQ	Kangiqsualujju	4.07	288	PN	Pn	09 31 33.5	+0.2
KAJQ				SN	Sn	09 32 17.8	-2.6
KAJQ				Trac		09 32 25.2	
	comp=Z,0.2nm,0.1s						
SCHQ	Schefferville	5.46	242	PN	Pn	09 31 52.3	-0.1
SCHQ				SN	Sn	09 32 51.7	-3.0
SCHQ				Trac		09 32 54.9	
	comp=Z,18nm,0.8s						
NATG	Natashquan Que	7.84	201	PN	Pn	09 32 24.8	-0.1
NATG				SN	Sn	09 33 48.7	-4.3
NATG				Trac		09 33 51.4	
	comp=Z,64nm,1.3s						
DRLN	Deer Lake	8.46	176	SN	Sn	09 34 01.5	-7.0
DRLN				SN	Sn	09 34 02.1	-6.3
DRLN				Trac		09 34 06.2	
	comp=Z,2.4nm,0.5s						

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*ISCJB **15** 09:31:30.5±0.3, 36°.97N±0°.02×4°.14E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=3.4km az=166.6*
*LDG **15** 09:31:30.3±0.3, 36°.95N×4°.23E, h10km, Ml3.3/6, Error ellipse: s-maj=6.6km s-min=6.2km az=63.0*
*MDD **15** 09:31:31.7±0.4, 36°.86N×4°.23E, h0km, mb4.3/11, Error ellipse: s-maj=5.5km s-min=4.4km az=60.0, PRXIMO*
*CRAAG **15** 09:31:33.2, 36°.63N×4°.10E, Ml3.3*
ISC 15 09:31:29.9±0.9**, 36°.96N**±0°.04×**4°.27E**±0°.03**, h10**km**, n74, σ3^s.10**/97**, 2D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKET	Djebel Ketaf	0.96	199	P	Pg	09 31 47.5	-0.9
AKET	Djebel Ketaf	0.96	199	Pg	Pg	09 31 47.5	-0.9
ABA	Alger-Bouzarea	1.00	261	P	Pg	09 31 48.5	-0.7
ABA	Alger-Bouzarea	1.00	261	Pg	Pg	09 31 48.5	-0.7
ADJB	Djebel Djouab	1.04	220	P	Pg	09 31 49.2	-0.8
ADJB	Djebel Djouab	1.04	220	Pg	Pg	09 31 49.2	-0.8
ATAF	Djebel Tarf	1.08	180	P	Pg	09 31 49.8	-0.9
ATAF	Djebel Tarf	1.08	180	Pg	Pg	09 31 49.8	-0.9
SET	Setif	1.18	129	P	Pn	09 31 53.0	+0.4
SET	Setif	1.18	129	Pg	Pn	09 31 53.0	+0.4
DFRA	Djebel Bou Aff	1.35	107	P	Pg	09 31 56.2	+0.3
DFRA	Djebel Bou Aff	1.35	107	Pn	Pg	09 31 56.2	+0.3
CASM	Ain Smara	1.92	111	P	Pg	09 32 06.8	+0.2
CASM	Ain Smara	1.92	111	Pg	Pg	09 32 06.8	+0.2
CAEH	'Ain El Ouahch	2.07	94	P	Pn	09 32 06.4	+1.6
CAEH	'Ain El Ouahch	2.07	94	Pn	Pn	09 32 06.4	+1.6
CMAH	Djebel Manchou	2.55	97	P	Pn	09 32 12.9	+1.5
CMAH	Djebel Manchou	2.55	97	Pn	Pn	09 32 12.9	+1.5
MAHO	Mahon	2.93	360	Pn	Pn	09 32 18.6	+2.0
MAHO				Sn	Sn	09 32 49.0	-2.8
MAHO	Mahon	2.93	360	i P	Pn	09 32 18.6	+2.0
MAHO				eS	Sn	09 32 49.0	-2.8
MAHO				e		09 35 10.0	
ETOS	Mallorca	3.03	338	Pn	Pn	09 32 20.3	+2.4
	4.3nm,0.1s,SNR=49						
ETOS				Sn	Sn	09 32 53.9	-0.4
	4.0nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.10	313	Pn	Pn	09 32 20.8	+1.9
	1.4nm,0.1s,SNR=12						
EIBI				Sn	Sn	09 32 55.0	-1.0
	10nm,0.2s,SNR=7.9						
EMUR	La Murta	4.48	283	Pn	Pn	09 32 40.6	+2.7
	0.1nm,0.1s,SNR=4.0						
EMUR				Sn	Sn	09 33 29.2	-0.9
	0.5nm,0.1s,SNR=7.9						
ECHE	Chera	4.89	304	Pn	Pn	09 32 46.3	+2.8
	1.6nm,0.1s,SNR=7.9						
ETOB	Tobarra	4.91	292	Pn	Pn	09 32 46.0	+2.2
	1.3nm,0.2s,SNR=4.0						
ETOB				Sn	Sn	09 33 39.7	-1.0
	2.6nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.00	344	⇓Pn	Pn	09 32 47.6	+2.5
	8.5nm,0.2s,SNR=18						
CFON				Sn	Sn	09 33 43.1	0.0
	0.8nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	5.04	314	Pn	Pn	09 32 47.7	+2.0
	0.3nm,0.1s,SNR=9.6						
EMOS				Sn	Sn	09 33 42.5	-1.5
	0.5nm,0.1s,SNR=7.9						
EPOB	Poblet	5.04	331	Pn	Pn	09 32 47.5	+1.8
	0.2nm,0.1s,SNR=8.2						
EPOB				Sn	Sn	09 33 41.1	-2.9
	0.3nm,0.1s,SNR=4.0						
EMIR	Miracle	5.39	338	⇓Pn	Pn	09 32 54.1	+3.7
	2.8nm,0.1s,SNR=18						
EMIR				Sn	Sn	09 33 53.7	+1.2
	0.9nm,0.1s,SNR=7.9						
SESP	Santiago Espad	5.54	284	Pn	Pn	09 32 54.3	+1.7
	3.1nm,0.4s,SNR=7.9						
SESP	Santiago Espad	5.54	284	P	Pn	09 32 56.1	+3.5
SESP				S	Sn	09 33 58.7	+2.3
EJON	La Jonquera	5.59	349	Pn	Pn	09 32 56.3	+3.2
	5.6nm,0.1s,SNR=22						
EJON				Sn	Sn	09 33 56.8	-0.5
	4.5nm,0.3s						
SJAF	Saint Jean de	5.62	349	Pn	Pn	09 32 56.6	+3.0
	1.7nm,0.1s,SNR=7.9						
SJAF				Sn	Sn	09 33 58.9	+0.7
	1.6nm,0.0s,SNR=7.9						
CLLI	Llivia	5.79	343	Pn	Pn	09 33 00.3	+4.3
	1.7nm,0.1s,SNR=7.9						
CLLI				Sn	Sn	09 34 03.1	+0.6
	0.3nm,0.1s,SNR=7.9						
EQES	Quesada	5.91	280	Pn	Pn	09 33 00.3	+2.7
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	Sn	09 34 04.9	-0.5
	0.3nm,0.2s,SNR=7.9						
CSOR	Sort	5.93	337	Pn	Pn	09 33 01.4	+3.6
	0.6nm,0.1s,SNR=4.0						
CSOR				Sn	Sn	09 34 06.4	+0.5
	1.8nm,0.2s,SNR=7.9						
JBK	JBK	6.15	247	P	Pn	09 33 01.3	+0.3
JBK				S	Sn	09 34 09.9	-1.7
MTLF	Montolieu	6.57	347	eP	Pn	09 33 10.0	+3.5
MTLF	Montolieu	6.57	347	Pn	Pn	09 33 10.0	+3.5
LMR	La Mourre	6.59	14	eP	Pn	09 33 09.2	+2.3
LMR				eSn	Sn	09 34 14.4	-7.7
	2.6nm,0.2s						
LMR	La Mourre	6.59	14	Pn	Pn	09 33 09.2	+2.3
LMR				Sn	Sn	09 34 14.4	-7.7
	1.3nm,0.2s						
FIGM	Figuig	6.63	225	P	Pn	09 33 09.7	+2.1
FIGM				S	Sn	09 34 20.6	-2.7
PGF	Pioggiola	6.67	32	eP	Pn	09 33 11.4	+3.5
PGF				eSn	Sn	09 34 18.3	-5.7
	7.4nm,0.4s						
PGF	Pioggiola	6.67	32	Pn	Pn	09 33 11.4	+3.5
PGF				Sn	Sn	09 34 18.3	-5.7
	3.7nm,0.4s						
EPF	Esparros	6.78	335	eP	Pn	09 33 13.2	+3.8
EPF				eSn	Sn	09 34 20.0	-6.6
	2.1nm,0.3s						
EPF	Esparros	6.78	335	Pn	Pn	09 33 13.2	+3.8
EPF				Sn	Sn	09 34 20.0	-6.6
	1.1nm,0.3s						
FRF	La Foret Royal	6.84	15	eP	Pn	09 33 12.8	+2.5
FRF				eSn	Sn	09 34 20.7	-7.5
	5.1nm,0.3s						
FRF	La Foret Royal	6.84	15	Pn	Pn	09 33 12.8	+2.5
FRF				Sn	Sn	09 34 20.7	-7.5
	2.6nm,0.3s						
ETSF	Etsaut	7.00	329	eP	Pn	09 33 16.9	+4.4
ETSF				eSn	Sn	09 34 25.0	-7.2
	2.0nm,0.4s						
ETSF	Etsaut	7.00	329	Pn	Pn	09 33 16.9	+4.4
ETSF				Sn	Sn	09 34 25.0	-7.2
	1.0nm,0.4s						
AKLM	AKL	7.05	252	P	Pn	09 33 14.6	+1.3
AKLM				S	Sn	09 34 28.3	-5.2
LASF	Ste Croix	7.12	358	eP	Pn	09 33 16.2	+2.1
LASF	Ste Croix	7.12	358	Pn	Pn	09 33 16.2	+2.1
ATE	Arette	7.21	330	Pn	Pn	09 33 19.1	+3.7
	0.3nm,0.1s,SNR=4.0						
IELO	Elcoad	7.24	326	Pn	Pn	09 33 19.3	+3.5
	0.4nm,0.1s,SNR=7.9						
SBF	Sospel	7.31	18	eSn	Sn	09 34 33.1	-6.6
	4.6nm,0.4s						
SBF				eT	T	09 40 28.0	
SBF	Sospel	7.31	18	Sn	Sn	09 34 33.1	-6.6
	2.3nm,0.4s						
EALK	Alkurruntz	7.66	326	Pn	Pn	09 33 24.9	+3.3
	1.2nm,0.1s,SNR=11						
VIVF	Saint-Julien-l	7.90	2	eP	Pn	09 33 27.6	+2.8
VIVF	Saint-Julien-l	7.90	2	Pn	Pn	09 33 27.6	+2.8
MBDF	Montbardon	7.99	13	eP	Pn	09 33 30.3	+4.1
MBDF	Montbardon	7.99	13	Pn	Pn	09 33 30.3	+4.1
CAF	Calviac	8.13	349	eP	Pn	09 33 31.8	+3.8
CAF	Calviac	8.13	349	Pn	Pn	09 33 31.8	+3.8
MDT	Midelt	8.38	243	P	Pn	09 33 32.7	+1.1
LFF	La Frestale	8.41	343	eP	Pn	09 33 36.8	+5.0
LFF	La Frestale	8.41	343	Pn	Pn	09 33 36.8	+5.0
RJF	Les Rejaudoux	8.59	347	eP	Pn	09 33 38.1	+3.8
RJF	Les Rejaudoux	8.59	347	Pn	Pn	09 33 38.1	+3.8
TCF	Toulx Ste Croi	9.45	351	eP	Pn	09 33 48.9	+2.8
TCF	Toulx Ste Croi	9.45	351	Pn	Pn	09 33 48.9	+2.8
HAU	Haudompre	11.15	7	eP	Pn	09 34 10.2	+0.9
HAU	Haudompre	11.15	7	Pn	Pn	09 34 10.2	+0.9
LDF	La Druitiere	12.07	346	eP	Pn	09 34 25.3	+3.5

IDC 15 10:01:27.4±1.2**, 11°.58S×165°.10E, h0**km**, mb3.7**/5**, mb1 4.0**/6**, mb1mx3.7**/27**, mbtmp3.8**/6**, ML4.0**/1**, MS3.3**/3**, Ms1 3.3**/3**, ms1mx2.8**/32**, Error ellipse: s-maj=44.6km s-min=25.5km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.51	173	Pn	Pn	10 04 00.1	+0.5
	1.1nm,0.3s,baz=294,slow=18,SNR=23						
DZM				Sn	Sn	10 05 49.0	-9.1
	0.1nm,0.3s,baz=189,slow=19,SNR=1.7						
DZM				LR	LR	10 07 27.5	
	comp=Z,72nm,20.2s,baz=195,slow=34						
STKA	Stephens Creek	29.61	223	LR	LR	10 18 24.9	
	comp=Z,30nm,18.0s,baz=26,slow=34						
WRA	Warramunga Arr	30.70	250	P	P	10 07 44.6	+0.3
	2.3nm,1.0s,baz=82,slow=8.7,SNR=13						
ASAR	Alice Springs	31.98	244	P	P	10 07 54.9	-0.7
	0.5nm,0.8s,baz=69,slow=10.0,SNR=5.5						
KDAK	Kodiak Island	77.31	22	LR	LR	10 41 52.7	
	comp=Z,78nm,19.3s,baz=102,slow=31						
ILAR	Eielson Array	84.22	19	P	P	10 14 00.2	-0.2
	0.3nm,0.5s,baz=242,slow=4.6,SNR=7.1						
NVAR	Mina Array Bea	86.86	50	P	P	10 14 14.5	0.0
	0.2nm,0.4s,baz=241,slow=5.0,SNR=2.6						
MKAR	Makanchi Array	93.47	317	P	P	10 14 45.5	+0.4
	0.3nm,0.8s,baz=101,slow=6.3,SNR=3.6						

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*IDC **15** 10:04:29.0±2.2, 28°.54N×52°.34E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.5/36, mbtmp3.6/9, ML3.6/1, Error ellipse: s-maj=48.0km s-min=25.4km az=155.0*
*ISCJB **15** 10:04:29.8±0.9, 28°.44N±0°.08×52°.25E±0°.06, h16km, mb3.6/8, Error ellipse: s-maj=11.8km s-min=7.1km az=11.0*
*THR **15** 10:04:31.5, 28°.62N×52°.41E, h6km, ML3.4*
*TEH **15** 10:04:31.9, 28°.55N×52°.35E, h22km, ML3.4*
ISC 15 10:04:31.2±1.1**, 28°.5N**±0°.1×**52°.26E**±0°.06**, h16**km**, n27, σ0^s.75**/28**, mb3.7**/8**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.68	107	eAML	AML	10 05 02.4	
	comp=N,2µm,0.6s						
GHIR				ePg	Pg	10 04 43.4	-1.1
GHIR				eAML	AML	10 05 02.4	
	comp=E,2µm,0.4s						
JHRM	Jahrom	1.16	89	ePg	Pg	10 04 54.4	+0.7
JHRM				IAMB	IAmb	10 05 15.1	
	comp=E,0.0nm,0.4s						
SHI	Shiraz	1.17	11	ePg	Pn	10 04 52.3	-0.9
SHI				IAMB	IAmb	10 05 14.5	
	comp=E,12µm,0.4s						
IKAZ	Kazeroun	1.34	344	ePg	Pn	10 04 56.2	+0.6
IKAZ				IAMB	IAmb	10 05 20.9	
	comp=Z,15µm,0.4s						
IPAR	Pars	1.52	27	ePn	Pb	10 04 59.0	-0.2
IRAM	Ramesheh	3.31	2	ePn	Pn	10 05 23.1	+0.4
IRAM				IAMB	IAmb	10 05 36.9	
	comp=Z,427nm,0.5s						
ISAD	Sadrabad	3.63	20	ePn	Pn	10 05 27.9	+0.8
ISAD				IAMB	IAmb	10 05 30.8	
	comp=Z,665nm,0.2s						
ZNGN	Zangian	3.82	342	ePn	Pn	10 05 29.8	+0.1
ROKH	ROKH	3.99	345	ePn	Pn	10 05 32.3	+0.3
ROKH				IAMB	IAmb	10 06 58.7	
	comp=Z,0.0nm,0.9s						
KHGB	Koh Gabri	4.14	62	ePn	Pn	10 05 34.2	+0.2
KHGB				IAMB	IAmb	10 06 27.1	
	comp=Z,0.0nm,0.3s						
KRBR	Kerman	4.21	68	ePn	Pn	10 05 36.0	+0.9
KRBR	Kerman	4.21	68	ePn	Pn	10 05 36.0	+0.9
KRBR				eS	Sn	10 06 23.5	-0.6
YZKH	Yazd	4.38	27	ePn	Pn	10 05 38.4	+1.2
YZKH	Yazd	4.38	27	ePn	Pn	10 05 38.4	+1.2
IZEF	Zefreh	4.40	1	ePn	Pn	10 05 38.2	+0.6
IZEF				IAMB	IAmb	10 06 37.4	
	comp=N,157nm,0.6s						
TKDS	Koohdasht(Taba	6.60	38	ePn	Pn	10 06 08.4	+0.7
TABS	Tabas	6.62	38	ePn	Pn	10 06 08.9	+0.8
TABS	Tabas	6.62	38	ePn	Pn	10 06 08.9	+0.8
BRTR	Keskin Array B	19.02	311	P	Pn	10 08 53.8	+0.5
	comp=N,0.2nm,0.3s,baz=134,slow=13,SNR=7.0						
AKTO	Aktyubinsk	22.35	10	P	P	10 09 28.2	-0.2
	comp=N,0.8nm,0.4s,baz=198,slow=9.6,SNR=3.9						
MKAR	Makanchi Array	29.73	44	P	P	10 10 37.0	+0.2
	comp=N,0.3nm,0.6s,baz=228,slow=7.2,SNR=4.4						
ZALV	Zalesovo Beam	34.79	34	P	P	10 11 19.5	-1.4
	comp=N,0.5nm,0.4s,baz=232,slow=8.7,SNR=2.5						
FINES	FINESS Array B	37.28	340	P	P	10 11 41.8	-0.3
	comp=N,1.0nm,0.5s,baz=141,slow=12,SNR=9.7						
NOA	NORSAR Array B	42.47	332	P	P	10 12 24.8	-0.5
	comp=N,0.4nm,0.7s,baz=122,slow=8.0,SNR=2.7						
ARCES	ARCESS Array B	43.90	347	P	P	10 12 36.6	-0.1
	comp=N,0.9nm,0.6s,baz=143,slow=9.1,SNR=6.7						
TORD	Torodi Ar. Bea	49.31	263	P	P	10 13 20.6	+0.8
	comp=N,0.3nm,0.3s,baz=60,slow=8.7,SNR=8.4						
YKA	Yellowknife Ar	88.73	354	P	P	10 17 24.0	+0.3
	comp=N,0.2nm,0.6s,baz=11,slow=5.2,SNR=4.1						

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*SOME **15** 10:23:51.2, 42°.58N×79°.62E, h10km*
*NNC **15** 10:23:51.2±1.3, 42°.61N×79°.60E, h6km±31km, mb2.7, mpv2.2, Error ellipse: s-maj=14.0km s-min=7.8km az=177.0*
*KRNET **15** 10:23:53.3±0.1, 42°.72N×79°.14E, h11km, mb2.2*
ISC 15 10:23:50.5±2.0**, 42°.50N**±0°.09×**79°.5E**±0°.1**, h17**km±14km**, n12, σ1^s.49**/23**, 8C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.74	331	P	Pb	10 24 05.1	+0.1
	3.8nm,0.3s						
UZB				S	Sb	10 24 15.2	+0.2
	7.1nm,0.2s						
UZB	Uzynbulak	0.74	331	eP	Pb	10 24 05.1	+0.1
	0.4nm,0.1s						
UZB				eS	Sb	10 24 15.2	+0.2
	7.9nm,0.3s						
PRZ	Przheval'sk	0.82	269	⇓iP	Pb	10 24 04.8	-1.6
	baz=46						
PRZ				⇓iS	Sb	10 24 13.3	-4.0
	baz=46						
PDGK	Podgornoye	0.83	359	P	Pb	10 24 05.7	-0.9
	0.8nm,0.1s						
PDGK				S	Sb	10 24 16.2	-1.3
	1.0nm,0.2s						
PDGK	Podgornoye	0.83	359	⇓P	Pb	10 24 05.7	-0.9
	0.3nm,0.3s						
PDGK				⇑S	Sb	10 24 16.2	-1.3
	0.9nm,0.6s						
PDGK	Podgornoye	0.83	359	⇑iP	Pb	10 24 05.6	-0.9
	baz=23						
PDGK				⇑iS	Sb	10 24 15.8	-1.7
	baz=23						
SATY	Saty	0.99	305	P	Pn	10 24 10.4	+0.7
	2.6nm,0.2s						
SATY				S	Sn	10 24 24.2	+0.8
	6.5nm,0.1s						
SATY	Saty	0.99	305	eP	Pn	10 24 10.3	+0.7
	1.0nm,0.1s						
SATY				eS	Sn	10 24 24.1	+0.8
	5.4nm,0.1s						
TARG	Taragay, Kyrgy	1.49	239	⇓iP	Pg	10 24 19.4	+0.3
	baz=25						
TARG				⇓iS	Sg	10 24 40.2	+1.7
	baz=25						
KDJ	Kajisay	1.77	259	⇑iP	Pb	10 24 23.1	+0.6
	baz=48						
KDJ				⇑iS	Sb	10 24 43.8	-0.7
	baz=48						
BOOM	Boomskoye usch	2.64	271	⇑iP	Pb	10 24 35.5	-1.9
	baz=65						
BOOM				⇑iS	Sn	10 25 06.4	+2.2
	baz=65						
TKM2	Tokmak 2	2.92	280	⇑Pg	Pg	10 24 45.9	-0.5
	1.0nm,0.7s						
TKM2				⇓Lg	Lg	10 25 21.5	
	1.0nm,0.6s						

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*KRNET **15** 10:32:10.7±0.1, 39°.78N×70°.13E, h15km, mb3.2*
*SOME **15** 10:32:11.7, 39°.92N×70°.13E, h15km*
*ISCJB **15** 10:32:12.5±1.1, 39°.78N±0°.06×70°.20E±0°.05, h10km, Error ellipse: s-maj=8.6km s-min=5.2km az=27.3*
*NNC **15** 10:32:17.7±2.1, 40°.09N×70°.42E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=16.9km s-min=11.4km az=51.0*
ISC 15 10:32:10.6±1.8**, 39°.72N**±0°.07×**70°.11E**±0°.06**, h10**km**, n22, σ1^s.87**/37**, 26C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

BTK	**Batken**	0.64	58	⇑iP	Pg	10 32 22.6	-0.3
	baz=62						
BTK				⇑iS	Sg	10 32 30.5	-0.8
	baz=62						
DRK	**Karamyk**	1.33	100	⇑iP	Pn	10 32 35.0	-0.4
	baz=2.0						
DRK				⇑iS	Sn	10 32 53.5	+0.2
	baz=2.0						
TAS	**Tashkent**	1.72	339	⇑eP	Pn	10 32 41.4	+0.8
	baz=38						
TAS				⇑eS	Sb	10 33 04.0	0.0
	baz=38						
IUG	**Iuzhnay**	2.42	359	eP	Pb	10 32 52.7	-1.6
	32nm,0.4s						
IUG				eS	Sn	10 33 22.0	+1.9
	69nm,0.5s						
ARK	**Arkit**	2.50	34	⇑iP	Pn	10 32 52.8	+1.4
	baz=35						
ARK				⇑iS	Sn	10 33 23.5	+1.4
	baz=35						
SFK	**Sufi-Kurgan**	2.62	83	⇑Pn	Pg	10 33 00.1	-0.8
	1.8nm,0.3s						
SFK				⇑Lg	Lg	10 33 32.6	
	14nm,0.5s						
SFK	**Sufi-Kurgan**	2.62	83	Pg	Pb	10 32 58.5	+0.7
SFK				Lg	Lg	10 33 32.1	
SFK	**Sufi-Kurgan**	2.62	83	⇑iP	Pn	10 32 55.2	+2.0
	baz=84						
SFK				⇑iS	Sn	10 33 26.6	+1.3
	baz=84						
ARSB	**Arslanbob**	2.71	53	⇑iP	Pn	10 32 55.9	+1.6
	baz=54						
ARSB				⇑iS	Sn	10 33 28.6	+1.4
	baz=54						
MNAS	**Manas**	3.30	32	⇑Pg	Pb	10 33 09.2	0.0
	3.6nm,0.4s						
MNAS				⇑Lg	Lg	10 33 50.6	
	21nm,0.6s						
MNAS	**Manas**	3.30	32	Pg	Pb	10 33 08.4	-0.9
	3.5nm,0.4s						
MNAS				Lg	Lg	10 33 49.1	
	13nm,0.3s						
MNAS	**Manas**	3.30	32	⇑iP	Pn	10 33 04.1	+1.7
	baz=33						
MNAS				⇑iS	Sn	10 33 43.4	+1.6
	baz=33						
KK31	**Karatay Array**	3.39	5	⇓Pn	Pn	10 33 06.6	+3.0
	2.2nm,0.3s,baz=179,slow=17,SNR=70						
KK31				⇑Lg	Lg	10 33 53.7	
	7.7nm,0.6s,baz=189,slow=31,SNR=6.5						
AML	**Almayashu**	3.62	47	i P	Pn	10 33 08.9	+1.8
	baz=48						
AML				i S	Sn	10 33 51.3	+1.1
	baz=48						
MRKS	**Merke**	3.82	37	Pg	Pb	10 33 18.4	+0.2
	8.9nm,0.4s						
MRKS				Lg	Lg	10 34 07.0	
	24nm,0.4s						
MRKS	**Merke**	3.82	37	eP	Pb	10 33 18.6	+0.4
	3.6nm,0.3s						
MRKS				eS	Sb	10 34 07.0	+2.4
	24nm,0.4s						
ARLS	**Aral**	3.84	55	⇑eP	Pn	10 33 11.9	+2.0
	baz=55						
ARLS				⇑iS	Sn	10 33 56.5	+1.3
	baz=55						
UCH	**Uchtor**	4.17	52	⇑eP	Pn	10 33 16.1	+1.5
	baz=52						
UCH				⇑iS	Sn	10 34 04.6	+1.0
	baz=52						
AAK	**Ala-Archa**	4.40	47	⇑Pn	Pn	10 33 20.6	+3.0
	4.0nm,0.9s						
AAK				⇓Lg	Lg	10 34 26.1	
	5.4nm,0.8s						
KZA	**Kyzart**	4.55	57	⇑eP	Pn	10 33 21.8	+2.0
	baz=58						
KZA				⇑iS	Sn	10 34 13.2	+0.3
	baz=58						
TKM2	**Tokmak 2**	5.22	51	⇓Pn	Pn	10 33 30.9	+2.0
	1.7nm,0.6s						
TKM2				⇓Sn	Sn	10 34 29.8	+0.6
	2.4nm,0.7s						
KST	**Kastek**	5.51	51	eP	Pg	10 33 51.3	-4.7
	0.1nm,0.0s						
KST				eS	Sg	10 35 02.7	-4.7
	5.5nm,0.7s						

KRNET 15 10:33:55.5±0.1, 42.°56N×79.°66E, h17^{km}, mb3.1
SOME 15 10:33:57.0, 42.°60N×79.°67E, h20^{km}
NNC 15 10:33:56.7±0.8, 42.°61N×79.°65E, h0^{km}, mb3.3, mpv3.1, 14C-8D, Error ellipse: s-maj=5.3km s-min=3.0km az=138.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	0.71	320	P	Pg	10 34 10.7	+0.5
	4.9nm,0.1s						
UZB				S	Sg	10 34 20.8	+1.4
	97nm,0.2s						
UZB	**Uzynbulak**	0.71	320	eP	Pg	10 34 10.7	+0.5
	baz=22						
UZB				eS	Sg	10 34 20.8	+1.4
	baz=22						
UZB	**Uzynbulak**	0.71	320	eP	Pg	10 34 10.7	+0.5
	3.3nm,0.1s						
UZB				eS	Sg	10 34 20.8	+1.4
	97nm,0.2s						
PDGK	**Podgornoye**	0.73	351	P	Pg	10 34 10.8	+0.2
	12nm,0.1s						
PDGK				S	Sg	10 34 21.1	+1.1
	17nm,0.1s						
PDGK	**Podgornoye**	0.73	351	⇓P	Pg	10 34 10.3	-0.3
	7.4nm,0.3s						
PDGK				⇑S	Sg	10 34 21.1	+1.1
	20nm,0.5s						
PDGK	**Podgornoye**	0.73	351	⇓iP	Pg	10 34 10.8	+0.2
	baz=51						
PDGK				⇓iS	Sg	10 34 21.3	+1.3
	baz=51						
PRZ	**Przheval'sk**	0.93	263	⇑iP	Pg	10 34 13.4	-1.1
	baz=66						
PRZ				⇑iS	Sg	10 34 24.8	-1.8
	baz=66						
KTMS	**Ketmen**	0.98	31	P	Pg	10 34 15.2	-0.3
	19nm,0.1s						
KTMS				S	Sg	10 34 28.5	+0.3
	69nm,0.2s						
KTMS	**Ketmen**	0.98	31	eP	Pg	10 34 15.2	-0.3
	baz=29						
KTMS				eS	Sg	10 34 28.5	+0.3
	baz=29						
KTMS	**Ketmen**	0.98	31	eP	Pg	10 34 15.2	-0.3
	19nm,0.1s						
KTMS				eS	Sg	10 34 28.5	+0.3
	69nm,0.2s						
SATY	**Saty**	1.02	297	P	Pg	10 34 16.1	-0.1
	8.5nm,0.1s						
SATY				S	Sg	10 34 30.0	+0.6
	71nm,0.2s						
SATY	**Saty**	1.02	297	eP	Pg	10 34 16.1	-0.1
	8.5nm,0.1s						
SATY				eS	Sg	10 34 29.9	+0.6
	71nm,0.2s						
KURS	**Kuram**	1.39	309	P	Pg	10 34 22.7	-0.6
	2.2nm,0.2s						
KURS				S	Sg	10 34 41.4	-0.1
	8.1nm,0.3s						
KURS	**Kuram**	1.39	309	eP	Pg	10 34 22.8	-0.6
	baz=11						
KURS				eS	Sg	10 34 41.4	0.0
	baz=11						
KURS	**Kuram**	1.39	309	eP	Pg	10 34 22.8	-0.6
	2.2nm,0.2s						
KURS				eS	Sg	10 34 41.4	-0.1
	8.1nm,0.3s						
DJR	**Jarkent**	1.72	3	P	Pb	10 34 29.3	+0.1
	5.4nm,0.2s						
DJR				S	Sg	10 34 52.7	+0.6
	7.7nm,0.3s						
DJR	**Jarkent**	1.72	3	eP	Pb	10 34 29.3	+0.1
	5.4nm,0.2s						
DJR				eS	Sg	10 34 52.7	+0.6
	7.7nm,0.3s						
MNBS	**Baschi**	1.73	329	P	Pn	10 34 28.7	+0.6
	7.0nm,0.2s						
MNBS				S	Sb	10 34 51.6	0.0
	34nm,0.4s						
KDJ	**Kajisay**	1.89	256	⇓iP	Pn	10 34 30.7	+0.3
	baz=58						
KDJ				⇓iS	Sn	10 34 54.9	-0.1
	baz=58						
KOTS	**Kotyrbulak**	1.96	289	Pg	Pb	10 34 32.8	-0.6
	5.2nm,0.2s						
KOTS				Lg	Lg	10 34 58.6	
	58nm,0.4s						
KOTS	**Kotyrbulak**	1.96	289	eP	Pb	10 34 32.8	-0.6
	baz=91						
KOTS				eS	Sb	10 34 58.6	+0.1
	baz=91						
KOTS	**Kotyrbulak**	1.96	289	eP	Pb	10 34 32.8	-0.6
	5.2nm,0.2s						
KOTS				eS	Sb	10 34 58.6	+0.1
	58nm,0.4s						
MDOK	**Medeo**	1.99	287	Pn	Pb	10 34 34.0	+0.1
	2.4nm,0.5s						
MDOK				Sn	Sn	10 34 57.4	0.0
	5.6nm,0.5s						
MDOK	**Medeo**	1.99	287	Pg	Pb	10 34 33.2	-0.6
	4.7nm,0.3s						
MDOK				Lg	Lg	10 34 59.4	
	8.3nm,0.3s						
MDOK	**Medeo**	1.99	287	eP	Pb	10 34 33.3	-0.5
	baz=88						
MDOK				eS	Sb	10 34 59.4	+0.2
	baz=88						
MDOK	**Medeo**	1.99	287	eP	Pb	10 34 33.2	-0.6
	4.7nm,0.3s						
MDOK				eS	Sb	10 34 59.4	+0.2
	8.3nm,0.3s						
TNSS	**Tian-Shan**	2.03	283	Pg	Pb	10 34 34.2	-0.5
	5.6nm,0.3s						
TNSS				Lg	Lg	10 35 01.0	
	13nm,0.2s						
TNSS	**Tian-Shan**	2.03	283	eP	Pb	10 34 34.2	-0.5
	baz=84						
TNSS				eS	Sb	10 35 01.0	+0.3
	baz=84						
TNSS	**Tian-Shan**	2.03	283	eP	Pb	10 34 34.2	-0.5
	5.6nm,0.3s						
TNSS				eS	Sb	10 35 01.0	+0.3
	13nm,0.2s						
ARXS	**Arharly**	2.08	321	Pg	Pb	10 34 35.4	+0.1
	4.1nm,0.3s						
ARXS				Lg	Lg	10 35 02.9	
	43nm,0.4s						
ARXS	**Arharly**	2.08	321	eP	Pb	10 34 35.4	0.0
	4.1nm,0.3s						
ARXS				eS	Sg	10 35 02.9	-0.6
	43nm,0.4s						
IZV	**Izvestkoviy**	2.27	282	Pg	Pb	10 34 38.4	-0.3
	6.7nm,0.3s						
IZV				Lg	Lg	10 35 08.0	
	31nm,0.2s						
IZV	**Izvestkoviy**	2.27	282	eP	Pb	10 34 38.4	-0.3
	baz=83						
IZV				eS	Sb	10 35 08.0	+0.6
	baz=83						
IZV	**Izvestkoviy**	2.27	282	eP	Pb	10 34 38.4	-0.3
	6.7nm,0.3s						
IZV				eS	Sb	10 35 08.0	+0.6
	31nm,0.2s						
CHKK	**Chushkaly**	2.31	303	Pg	Pb	10 34 39.0	-0.2
	1.9nm,0.2s						
CHKK				Lg	Lg	10 35 09.0	
	29nm,0.3s						
CHKK	**Chushkaly**	2.31	303	eP	Pb	10 34 39.0	-0.2
	baz=5.0						
CHKK				eS	Sb	10 35 09.0	+0.8
	baz=5.0						
CHKK	**Chushkaly**	2.31	303	eP	Pb	10 34 39.0	-0.2
	1.9nm,0.2s						
CHKK				eS	Sb	10 35 09.0	+0.8
	29nm,0.3s						
KTBS	**Karatobe**	2.43	298	Pg	Pb	10 34 41.2	-0.1
	2.7nm,0.2s						
KTBS				Lg	Lg	10 35 12.8	
	31nm,0.3s						
KTBS	**Karatobe**	2.43	298	eP	Pb	10 34 41.2	-0.1
	baz=98						
KTBS				eS	Sb	10 35 12.8	+0.9
	baz=98						
KTBS	**Karatobe**	2.43	298	eP	Pb	10 34 41.2	-0.1
	2.7nm,0.2s						
KTBS				eS	Sb	10 35 12.8	+0.9
	31nm,0.3s						
ULHL	**Ulahol**	2.55	263	⇑iP	Pn	10 34 41.3	+1.8
	baz=64						
ULHL				⇑iS	Sb	10 35 14.1	-1.3
	baz=64						
KAPS	**Kapalarasan**	2.68	356	Pg	Pb	10 34 45.7	+0.1
	2.2nm,0.1s						
KAPS				Lg	Lg	10 35 20.7	
	5.4nm,0.2s						
KAPS	**Kapalarasan**	2.68	356	eP	Pb	10 34 45.7	+0.1
	2.2nm,0.1s						
KAPS				eS	Sb	10 35 20.7	+1.6
	5.4nm,0.2s						
KUU	**Kurty**	2.74	299	Pg	Pb	10 34 46.0	-0.5
	1.3nm,0.1s						
KUU				Lg	Lg	10 35 21.2	
	18nm,0.2s						
KUU	**Kurty**	2.74	299	eP	Pb	10 34 46.0	-0.5
	baz=0.0						
KUU				eS	Sb	10 35 21.2	+0.6
	baz=0.0						
KUU	**Kurty**	2.74	299	eP	Pb	10 34 46.0	-0.5
	1.3nm,0.1s						
KUU				eS	Sb	10 35 21.2	+0.6
	18nm,0.2s						
BOOM	**Boomskoye usch**	2.74	269	⇑iP	Pn	10 34 43.3	+1.2
	baz=70						
BOOM				⇑iS	Sn	10 35 16.9	+0.9
	baz=70						
KST	**Kastek**	2.75	280	Pg	Pb	10 34 47.1	+0.4
	6.3nm,0.4s						
KST				Lg	Lg	10 35 23.1	
	10nm,0.4s						
KST	**Kastek**	2.75	280	eP	Pb	10 34 47.1	+0.4
	baz=81						
KST				eS	Sg	10 35 23.1	-1.8
	baz=81						
KST	**Kastek**	2.75	280	eP	Pb	10 34 47.1	+0.4
	2.8nm,0.3s						
KST				eS	Sg	10 35 23.1	-1.8
	7.8nm,0.2s						
DGS	**Degeres**	2.92	284	Pg	Pb	10 34 49.8	+0.2
	5.4nm,0.4s						
DGS				Lg	Lg	10 35 27.7	
	26nm,0.5s						
DGS	**Degeres**	2.92	284	eP	Pb	10 34 49.8	+0.2
	baz=85						
DGS				eS	Sb	10 35 27.6	+1.8
	baz=85						
DGS	**Degeres**	2.92	284	eP	Pb	10 34 49.8	+0.2
	5.4nm,0.4s						
DGS				eS	Sb	10 35 27.7	+1.8
	26nm,0.5s						
NRN	**Naryn**	2.96	248	⇑iP	Pn	10 34 46.7	+1.5
	baz=49						
NRN				⇑iS	Sn	10 35 22.8	+1.1
	baz=49						
TKM2	**Tokmak 2**	3.00	277	⇑Pg	Pb	10 34 51.0	-0.1
	3.9nm,0.6s						
TKM2				⇑Lg	Lg	10 35 29.9	
	7.2nm,0.7s						
MAKZ	**Makanchi**	4.51	21	⇓Pn	Pn	10 35 06.5	+0.3
	1.5nm,0.8s						
MAKZ				⇑Sn	Sn	10 35 59.8	+0.4
	0.6nm,0.6s						
MAKZ				⇓Lg	Lg	10 36 18.0	
	0.8nm,0.7s						
MK31	**Makanchi Array**	4.59	23	⇑Pn	Pn	10 35 07.8	+0.5
	0.2nm,0.4s,baz=210,slow=15,SNR=12						
MK31				⇑Sn	Sn	10 36 01.4	+0.1
	0.2nm,0.3s,baz=204,slow=25,SNR=6.2						
MK31				⇓Lg	Lg	10 36 19.5	
	0.4nm,0.5s						

IDC 15 10:35:43.1±1.4, 6.°38S×151.°16E, h0^{km}, mb4.0/6, mb1 4.3/6, mb1mx3.8/53, mbtmp4.1/6, MS3.0/4, Ms1 3.0/4, ms1mx2.7/29, Error ellipse: s-maj=56.6km s-min=22.4km az=116.0
NEIC 15 10:35:45.3±0.9, 6.°42S×151.°14E, h10^{km}, mb4.1/5, Error ellipse: s-maj=36.1km s-min=11.0km az=122.0
ISCJB 15 10:35:47.1±0.9, 6.°4S±0.°1×151.°1E±0.°2, h36^{km}, mb3.9/8, MS3.0/3, Error ellipse: s-maj=36.2km s-min=10.8km az=32.3
ISC 15 10:35:48.4±1.1, 6.°4S±0.°2×151.°2E±0.°3, h36^{km}, n17, σ1^{s}13/16, mb3.9/8, MS3.1/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	2.40	24	ePn	Pn	10 36 24.8	-0.4
HNR	**Honiara**	9.20	110	LR	LR	10 41 21.1	
	comp=Z,28nm,20.9s,baz=284,slow=37						
MTN	**Manton Dam**	20.76	251	eP	P	10 40 25.7	-0.7
	22nm,1.2s						
WR1	**Warramunga Arr**	21.18	229	eP	P	10 40 29.9	-0.9
	13nm,1.0s						
WRA	**Warramunga Arr**	21.18	229	P	P	10 40 29.9	-0.9
	12nm,1.0s,baz=53,slow=11,SNR=79						
AS01	**Alice Springs**	23.85	222	eP	P	10 40 57.6	-0.9
AS31	**Alice Springs**	23.88	222	eP	P	10 40 58.3	-0.5
	3.3nm,1.4s						
ASAR	**Alice Springs**	23.89	222	P	P	10 40 58.4	-0.5
	1.8nm,0.4s,baz=54,slow=9.0,SNR=65						
ASAR				LR	LR	10 51 02.4	
	comp=Z,62nm,18.3s,baz=75,slow=38						
STKA	**Stephens Creek**	26.89	198	eP	P	10 41 27.4	+1.5
	1.4nm,0.8s						
STKA	**Stephens Creek**	26.89	198	P	P	10 41 26.9	+0.9
	6.4nm,0.9s,baz=340,slow=7.5,SNR=14						
STKA				LR	LR	10 52 08.4	
	comp=Z,31nm,19.0s,baz=27,slow=37						
FITZ	**Fitzroy Crossi**	27.48	243	eP	P	10 41 30.3	-1.2
	5.8nm,0.8s						
FITZ	**Fitzroy Crossi**	27.48	243	P	P	10 41 30.2	-1.2
	2.5nm,0.7s,baz=102,slow=7.4,SNR=7.9						
FITZ				LR	LR	10 53 38.3	
	comp=Z,45nm,18.6s,baz=54,slow=39						
MK32	**Makanchi Array**	80.47	319	eP	P	10 47 58.4	+1.7
MKAR	**Makanchi Array**	80.47	319	P	P	10 47 58.4	+1.7
	0.2nm,0.6s,baz=109,slow=7.9,SNR=2.5						
ILAR	**Eielson Array**	84.24	22	P	P	10 48 15.3	-0.6
	0.7nm,0.7s,baz=245,slow=5.1,SNR=9.5						
TORD	**Torodi Ar. Bea**	149.20	285	PKPbc	PKPbc	10 55 33.7	-0.5
	1.5nm,0.9s,baz=83,slow=2.4,SNR=5.4						
TOA1	**Torodi Ar. Sit**	149.20	285	ePKPbc	PKPbc	10 55 33.7	-0.5

IDC 15 10:37:30.2±8.0, 36.°72N×95.°04E, h0^{km}, mb3.5/1, mb1 3.5/5, mb1mx3.3/67, mbtmp3.5/5, ML3.2/4, Error ellipse: s-maj=112.9km s-min=54.0km az=179.0
BJI 15 10:37:32.8, 36.°69N×94.°41E, h5^{km}, ML3.7/6
ISC 15 10:37:25.0±3.9, 36.°1N±0.°4×95.°3E±0.°1, h10^{km}, n8, σ1^{s}95/10, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	4.87	46	Pn	Pn	10 38 37.9	-0.5
GTA				Pg	Pb	10 38 50.4	-0.1
GTA				Sn	Sn	10 39 32.6	-2.4
GTA				Sg	Sb	10 39 50.4	+1.2
GTA				smax	smax		
	comp=N,18nm,1.5s						
GTA				smax	smax		
	comp=E,12nm,1.6s						
LZH	**Lanzhou**	6.95	88	Pg	Pg	10 39 52.3	+14
LZH				Sg	Sg	10 41 31.3	+23
LZH				smax	smax		
	comp=E,61nm,1.0s						
LZH				smax	smax		
	comp=E,69nm,1.0s						
WMQ	**Urumqi**	9.62	325	P	Pn	10 39 45.5	+2.0
WMQ				S	Sn	10 41 33.3	+1.6
WMQ				smax	smax		
	comp=E,15nm,0.6s						
WMQ				smax	smax		
	comp=E,24nm,0.9s						
SONM	**Songino Array**	14.31	32	Pn	Pn	10 40 48.7	+1.0
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	14.40	322	Pn	Pn	10 40 45.5	-3.4
	comp=E,0.7nm,0.3s,baz=138,slow=14,SNR=16						
MKAR				Sn	Sn	10 43 10.2	-18
	comp=E,0.2nm,0.3s,baz=130,slow=25,SNR=3.5						
KURBB	**Kurchatov Arra**	18.84	325	P	P	10 41 44.4	-0.5
	comp=E,0.2nm,0.3s,baz=141,slow=10,SNR=3.4						
ZALV	**Zalesovo Beam**	19.24	341	P	Pn	10 41 49.1	-1.1
	comp=E,0.1nm,0.3s,baz=152,slow=9.5,SNR=2.9						
BVAR	**Borovoye Array**	24.28	322	P	P	10 42 43.5	+1.2
	comp=E,1.2nm,0.7s,baz=116,slow=10,SNR=4.9						

MEX 15 10:37:46.8±0.7, 14.°82N×92.°68W, h90^{km}±8^{km}, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.41	77	eP	Pn	10 37 59.9	-1.0
THIG				eS	Sn	10 38 10.2	-1.2
PCIG		1.02	330	eP	Pn	10 38 05.5	-1.3
PCIG				eS	Sn	10 38 20.1	-1.8
CCIG	**Comitan**	1.55	20	eP	Pn	10 38 12.7	-0.7
CCIG				eS	Sn	10 38 32.0	-1.4

ISCJB 15 10:42:50.9±0.3, 8.°71S±0.°04×116.°38E±0.°02, h132^{km}±3^{km}, mb4.1/36, Error ellipse: s-maj=6.3km s-min=3.2km az=18.8
IDC 15 10:42:50.4±1.8, 8.°74S×116.°21E, h119^{km}±15^{km}, mb3.8/16, mb1 3.9/18, mb1mx3.7/42, mbtmp4.2/18, Error ellipse: s-maj=21.9km s-min=11.3km az=68.0
NEIC 15 10:42:51.8±0.6, 8.°68S×116.°37E, h125^{km}±6^{km}, mb4.4/25, Error ellipse: s-maj=7.3km s-min=5.0km az=216.0
DJA 15 10:42:53.1±0.3, 9°S±6°×11°6E±°, h100^{km}±5^{km}, M4.4/16, mb4.6/7, mB4.8/5, MLv4.5/16, Mw(mB)4.0/5
ISC 15 10:42:51.6±0.6, 8.°86S±0.°05×116.°39E±0.°04, h124^{km}±5^{km}, n115, σ2^{s}06/135, mb4.2/36, 1C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	**Denpasar**	1.18	279	P	Pn	10 43 15.9	+0.2
DNP				S	Sn	10 43 34.6	+0.5
PLAI	**Plampang**	1.37	89	P	Pn	10 43 19.5	+1.7
PLAI				S	Sn	10 43 39.7	+2.1
SRBI	**Singaraja**	1.40	303	P	Pn	10 43 18.1	0.0
SRBI				S	Sn	10 43 37.0	-1.2
JAGI	**Jajag, Banyuwa**	2.25	280	ePn	Pn	10 43 28.1	-0.3
JAGI				eSn	Sn	10 43 54.5	-2.0
JAGI	**Jajag, Banyuwa**	2.25	280	P	Pn	10 43 28.4	+0.1
JAGI				S	Sn	10 43 54.6	-1.9
GMJI	**Gumukmas**	2.97	281	P	Pn	10 43 37.7	+0.1
GMJI				S	Sn	10 44 11.8	-1.4
KMMI	**Kalianget**	3.00	307	P	Pn	10 43 39.9	+1.9
BASI	**Baing, Sumba**	4.34	108	P	Pn	10 43 57.4	+1.6
PWJI	**Pagerwojo**	4.62	280	P	Pn	10 44 00.7	+1.3
NGJI	**Ngawi**	5.10	287	P	Pn	10 44 09.3	+3.3
BKSI	**Bulukumba**	5.10	47	P	Pn	10 44 07.4	+1.4
PCJI	**Pacitan**	5.20	277	P	Pn	10 44 08.2	+0.9
	166nm,0.6s,2μm						
EDFI	**Ende, Flores**	5.24	89	P	Pn	10 44 08.1	+0.2
KBKI	**Kotabaru**	5.53	358	P	Pn	10 44 13.6	+1.9
BNSI	**Bone**	5.76	40	P	Pn	10 44 18.5	+3.6
	52nm,0.7s,836nm						
MMRI	**Maumere**	5.78	88	ePn	Pn	10 44 15.7	+0.5
MMRI				eSn	Sn	10 45 21.2	+0.9
MMRI	**Maumere**	5.78	88	P	Pn	10 44 16.1	+1.0
UGM	**Wanagama**	5.88	279	ePn	Pn	10 44 16.9	+0.4
UGM				eSn	Sn	10 45 23.6	+0.8
UGM	**Wanagama**	5.88	279	P	Pn	10 44 17.1	+0.6
	73nm,0.7s						
SMRI	**Semarang**	6.16	287	ePn	Pn	10 44 23.3	+3.0
SMRI				eSn	Sn	10 45 31.2	+1.6
TTSI	**Tana Toraja**	6.71	31	P	Pn	10 44 31.4	+3.8
BATI	**Baumata**	7.29	101	P	Pn	10 44 36.7	+1.1
BATI	**Baumata**	7.29	101	P	Pn	10 44 36.2	+0.6
	10nm,0.3s,baz=321,slow=4.3,SNR=6.5						
BATI				S	Sn	10 45 54.7	-2.3
	11nm,0.3s,baz=153,slow=21,SNR=3.9						
SOEI	**Soe**	7.82	97	ePn	Pn	10 44 42.4	-0.4
SOEI				eSn	Sn	10 46 09.0	-0.9
CISI	**Cisompet, Garu**	8.59	278	ePn	Pn	10 44 52.7	-0.4
CISI				eSn	Sn	10 46 27.0	-1.4
LUWI	**Luwuk**	10.03	40	ePn	Pn	10 45 10.4	-2.1
XMIS	**Christmas Isla**	10.71	260	ePn	Pn	10 45 19.4	-2.2
MBWA	**Marble Bar**	12.64	166	ePn	Pn	10 45 45.5	-1.7

MBWA				eSn	Sn	10 47 54.8	-12
FITZ	Fitzroy Crossi	12.85	137	P	Pn	10 45 47.6	-2.1
	baz=13,SNR=14						
FITZ	Fitzroy Crossi	12.85	137	ePn	Pn	10 45 49.6	-0.2
FITZ				eSn	Sn	10 48 10.0	-1.4
FITZ	Fitzroy Crossi	12.85	137	P	Pn	10 45 49.5	-0.3
	1.6nm,0.3s,baz=345,slow=9.7,SNR=30						
FITZ				S	Sn	10 48 05.1	-6.3
	1.4nm,0.3s,baz=161,slow=17,SNR=7.0						
FITZ				ScP	ScP	10 54 35.9	-1.1
	baz=315,slow=5.7						
KNRA	Kununurra	13.85	120	P	Pn	10 46 02.6	-0.2
	baz=14,SNR=6.8						
GIRL	Giralia	13.86	188	P	Pn	10 46 01.4	-1.4
	baz=14,SNR=6.1						
GIRL	Giralia	13.86	188	ePn	Pn	10 46 04.3	+1.5
MNAI	Manna	14.07	288	ePn	Pn	10 46 04.1	-1.6
SAUI	Saumlaki	14.77	88	ePn	Pn	10 46 15.3	+0.8
MTN	Manton Dam	15.01	107	ePn	Pn	10 46 15.8	-1.7
	10nm,0.4s						
MTN				eSn	Sn	10 48 54.3	-9.3
KDU	Kakadu	16.25	105	P	Pn	10 46 32.2	-0.6
	baz=16,SNR=7.9						
FAKI	Fak Fak	16.83	70	ePn	Pn	10 46 37.9	-2.1
	17nm,0.9s						
MEEK	Meekatharra	17.81	173	P	Pn	10 46 52.4	+0.7
	baz=18,SNR=12						
WRKA	Warakurna	19.68	146	P	P	10 47 12.7	+1.5
	baz=20,SNR=22						
MORW	Morawa	20.11	181	P	Pn	10 47 26.5	+7.8
	baz=20,SNR=5.2						
MORW	Morawa	20.11	181	eP	Pn	10 47 18.3	-0.4
	16nm,0.9s						
WR1	Warramunga Arr	20.55	124	eP	P	10 47 21.7	+1.1
	7.6nm,0.4s						
WR1				eS	S	10 50 59.3	-4.6
WR1				eScP	ScP	10 54 50.7	-1.7
WRA	Warramunga Arr	20.55	124	P	P	10 47 21.7	+1.1
	3.2nm,0.4s,baz=298,slow=12,SNR=48						
WRA				S	S	10 50 59.3	-4.6
	0.6nm,0.6s,baz=293,slow=21,SNR=3.4						
WRA				ScP	ScP	10 54 50.7	-1.7
	0.7nm,0.5s,baz=316,slow=2.2,SNR=5.8						
WRAB	Tennant Creek	20.56	124	eP	P	10 47 22.6	+1.9
	13nm,0.6s						
WB2	Warramunga Arr	20.57	124	eP	P	10 47 21.9	+1.1
ASAR	Alice Springs	22.30	133	P	P	10 47 40.9	+1.8
	7.6nm,0.6s,baz=309,slow=9.3,SNR=97						
ASAR				S	S	10 51 37.0	+1.0
	1.4nm,0.9s,baz=314,slow=20,SNR=2.9						
ASAR				ScP	ScP	10 54 55.8	-0.9
	0.7nm,0.6s,baz=330,slow=2.4,SNR=5.9						
AS31	Alice Springs	22.31	133	eP	P	10 47 40.1	+1.0
	2.2nm,0.6s						
AS01	Alice Springs	22.34	133	eP	P	10 47 39.9	+0.4
MUN	Mundaring	23.00	180	P	P	10 47 35.3	-11
	baz=23,SNR=5.9						
NWAO	Narrogin (SRO)	23.96	178	eP	P	10 47 56.3	+1.7
NWAO	Narrogin (SRO)	23.96	178	P	P	10 47 54.0	-0.6
	5.9nm,0.5s,baz=226,slow=7.1,SNR=8.1						
FORT	Forrest	24.38	155	eP	P	10 48 01.5	+3.2
	28nm,0.8s						
COEN	Coen	26.73	103	P	P	10 48 20.0	+0.3
	baz=27,SNR=5.2						
COEN	Coen	26.73	103	eP	P	10 48 21.3	+1.6
	2.9nm,0.8s						
MTSU	Mount Surprise	28.64	112	P	P	10 48 39.5	+2.7
	baz=29,SNR=4.9						
BBOO	Buckleboo	29.98	145	P	P	10 48 50.7	+2.2
	baz=30,SNR=11						
BBOO	Buckleboo	29.98	145	eP	P	10 48 50.6	+2.1
	5.8nm,1.0s						
CTAO	Charters Tower	30.93	114	eP	P	10 49 00.3	+3.3
	7.4nm,1.1s						
HTT	Hallett	32.09	143	P	P	10 49 09.8	+2.8
	baz=32,SNR=11						
CMAR	Chiang Mai Arr	32.15	328	ScP	ScP	10 55 24.9	-1.5
	0.5nm,0.3s,baz=170,slow=3.0,SNR=4.5						
TPUB	Ta-pu	32.23	7	eP	P	10 49 10.0	+1.7
	18nm,1.0s						
STKA	Stephens Creek	32.74	138	P	P	10 49 15.3	+2.6
	baz=33,SNR=4.1						
STKA	Stephens Creek	32.74	138	eP	P	10 49 15.3	+2.6
	0.7nm,1.0s						
STKA	Stephens Creek	32.74	138	P	P	10 49 13.9	+1.2
	1.7nm,0.4s,baz=309,slow=8.2,SNR=6.1						
STKA				ScP	ScP	10 55 28.1	-0.1
	2.5nm,0.6s,baz=332,slow=2.3,SNR=2.9						
YHNB	Yeheng	33.68	8	eP	P	10 49 21.1	+0.1
	34nm,1.1s						
ARPS	Mount Arapiles	36.12	144	P	P	10 49 44.9	+3.1
	baz=36,SNR=14						
YNG	Young	38.77	136	P	P	10 50 07.7	+3.5
	baz=39,SNR=22						
TOO	Toolangi	38.83	142	eP	P	10 50 08.4	+3.7
	11nm,0.9s						
ARMA	Armidale	39.26	128	P	P	10 50 11.4	+3.0
	baz=39,SNR=6.9						
ARMA	Armidale	39.26	128	eP	P	10 50 11.8	+3.4
CAN	Canberra	39.75	136	eP	P	10 50 12.5	+0.2
	4.2nm,1.1s						
LZH	Lanzhou	46.24	346	⇑P	P	10 51 05.1	+0.4
LZH				pP	pP	10 51 31.0	-1.7
LZH				sP	sP	10 51 43.8	-2.6
LZH				PP	PP	10 52 55.3	-0.2
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,54nm,5.4s						
MAJO	Matsushiro	49.60	23	eP	P	10 51 30.4	0.0
	comp=Z,3.4nm,0.6s						
MJAR	Matsushiro Arr	49.60	23	P	P	10 51 29.4	-1.0
	comp=Z,1.7nm,0.6s,baz=202,slow=8.9,SNR=5.1						
MJB9	Matsu-Tunnel	49.60	23	eP	P	10 51 30.2	-0.1
	comp=Z,0.4nm,0.2s						
HHC	Hu-ho-hao-te	49.66	355	eP	P	10 51 32.8	+1.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,81nm,3.5s						
GTA	Gaotai	50.43	343	eP	P	10 51 36.1	-0.6
GTA				pP	pP	10 52 02.0	-3.5
GTA				sP	sP	10 52 14.1	-5.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
USRK	Ussuriysk Ar.	54.67	14	P	P	10 52 07.2	-0.5
	comp=Z,1.4nm,0.6s,baz=208,slow=8.6,SNR=5.1						
ULN	Ulaanbaatar	57.08	353	eP	P	10 52 24.8	-0.2
	comp=Z,1.0nm,0.9s						
SONA0	Songino Array	57.14	352	eP	P	10 52 23.6	-1.7
SONM	Songino Array	57.14	352	P	P	10 52 23.6	-1.7
	comp=Z,0.9nm,0.6s,baz=169,slow=8.8,SNR=11						
SONA1	Songino Array	57.15	352	eP	P	10 52 24.1	-1.4
WHZ	Wether Hill Ro	57.41	140	eP	P	10 52 29.8	+2.5
	comp=Z,7.0nm,0.9s						
ASAJ	Asahikawa	57.83	22	P	P	10 52 30.0	-0.1
	comp=Z,4.6nm,0.8s,baz=292,slow=16,SNR=3.8						
WMQ	Urumqi	58.54	336	eP	P	10 52 37.3	+2.1
KLR	Kul'dur	59.39	12	P	P	10 52 39.5	-1.4
	comp=Z,0.6nm,0.5s,baz=197,slow=9.3,SNR=5.6						
BKZ	Black Stump Fm	61.37	130	eP	P	10 52 54.6	0.0
	comp=Z,5.9nm,1.2s						
BFZ	Birch Farm	61.52	132	eP	P	10 52 57.7	+2.1
	comp=Z,9.9nm,1.0s						
MK01	Makanchi Array	63.17	334	eP	P	10 53 04.8	-1.6
MK31	Makanchi Array	63.19	334	eP	P	10 53 05.3	-1.2
MK32	Makanchi Array	63.19	334	eP	P	10 53 04.4	-2.2
MKAR	Makanchi Array	63.19	334	eP	P	10 53 05.3	-1.2
	comp=Z,6.0nm,0.8s						
MKAR	Makanchi Array	63.19	334	P	P	10 53 04.4	-2.2
	comp=Z,0.9nm,0.4s,baz=149,slow=7.1,SNR=19						
UOSS	Minazif	67.55	302	eP	P	10 53 35.8	+0.7
	comp=Z,8.8nm,0.9s						
KURK	Kurchatov	67.76	335	eP	P	10 53 34.4	-1.4
	comp=Z,4.8nm,0.8s						
ZALV	Zalesovo Beam	68.02	341	P	P	10 53 34.7	-2.6
	comp=Z,0.8nm,0.6s,baz=151,slow=3.3,SNR=3.2						
ZAA1	Zalesovo Array	68.03	341	eP	P	10 53 34.7	-2.7
PETK	Petropavlovsk-	71.01	25	P	P	10 53 54.9	-0.9
	comp=Z,1.1nm,0.7s,baz=238,slow=4.4,SNR=2.2						
PEA1	Petropavlovsk-	71.01	25	eP	P	10 53 54.9	-0.9
BVAR	Borovoye Array	72.98	333	P	P	10 54 04.2	-3.4
	comp=Z,0.7nm,0.7s,baz=148,slow=8.5,SNR=4.1						
ABKAR	Akbulak array	75.98	326	eP	P	10 54 23.0	-2.0
	comp=Z,1.4nm,0.8s						
AKTO	Aktyubinsk	77.66	326	P	P	10 54 32.2	-2.2
	comp=Z,1.2nm,0.5s,baz=90,slow=7.1,SNR=5.7						
BOSA	Boshof	86.81	242	P	P	10 55 23.3	+0.5
	comp=Z,2.9nm,0.7s,baz=117,slow=4.1,SNR=4.9						
BR101	Keskin Array S	90.07	310	eP	P	10 55 36.5	-1.5
BRTR	Keskin Array B	90.07	310	P	P	10 55 36.5	-1.5
	comp=Z,0.6nm,0.6s,baz=103,slow=6.5,SNR=3.8						
SNAA	Sanae	90.43	196	P	P	10 55 41.7	+2.8
VNA2	Neumayer--Watz	92.07	196	P	P	10 55 49.4	+2.9
YKA	Yellowknife Ar	115.11	23	PKiKP	PKiKP	11 01 17.3	-0.5
	comp=Z,0.1nm,0.5s,baz=308,slow=1.7,SNR=2.8						
TORD	Torodi Ar. Bea	115.90	280	PKiKP	PKPdf	11 01 20.5	-0.2
	comp=Z,0.3nm,0.7s,baz=112,slow=2.8,SNR=2.8						
TOA1	Torodi Ar. Sit	115.90	280	ePKPdf	PKPdf	11 01 20.5	-0.2
CPUP	Villa Florida	144.49	190	ePKPdf	PKPdf	11 02 15.2	+1.1
CPUP	Villa Florida	144.49	190	PKP	PKPbc	11 02 13.3	+0.4
	comp=Z,9.8nm,0.6s,baz=174,slow=2.4,SNR=21						
LPAZ	La Paz	154.62	170	PKPab	PKPab	11 02 54.9	+0.3
	comp=Z,1.7nm,0.5s,baz=153,slow=2.0,SNR=8.7						

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*ISCJB **15** 10:45:17.3±0.5, 67°.49N±0°.05×142°.7E±0°.1, h10^{km}, mb3.5/8, MS3.2/1, Error ellipse: s-maj=7.3km s-min=6.7km az=44.7*

*IDC **15** 10:45:17.3±1.0, 67°.59N×142°.73E, h0^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.5/55, mbtmp3.6/9, ML3.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/44, Error ellipse: s-maj=39.2km s-min=15.6km az=166.0*

*YARS **15** 10:45:18.9±0.1, 67°.500N±0°.008×142°.80E±0°.02, h10^{km}*

ISC 15 10:45:18.4±0.7**, 67°.49N**±0°.05×**142°.83E**±0°.04**, h10^{km}, n13, σ1^{s}.26**/17**, mb3.6**/8**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.04	171	eP	Pb	10 45 37.7	-0.7
MOMR				Pmax		10 45 37.7	
	comp=Z,79nm,0.3s						
MOMR				eS	Sg	10 45 51.2	-0.6
MOMR				Smax		10 45 51.2	
	comp=N,833nm,0.4s						
YBGR	Belaya Gora	1.64	49	eP	Pb	10 45 48.2	-0.5
YBGR				Pmax		10 45 48.2	
	comp=Z,547nm,0.2s						
YBGR				eS	Sg	10 46 10.1	-1.0
YBGR				Smax		10 46 10.1	
	comp=N,1µm,0.4s						
BTGS	Batagay	3.15	277	eP	Pn	10 46 08.8	+0.9
BTGS				eP	Pb	10 46 15.6	+1.3
BTGS				Pmax		10 46 15.6	
	comp=Z,52nm,0.6s						
BTGS				eS	Sn	10 46 45.0	-0.4
BTGS				eS	Sg	10 46 55.6	-3.6
BTGS				Smax		10 46 55.6	
	comp=N,170nm,0.5s						
SEY	Seymchan	6.08	134	Pn	Pn	10 46 48.9	+0.7
	comp=N,0.5nm,0.3s,baz=306,slow=14,SNR=6.9						
SEY				Lg	Lg	10 48 25.8	
	comp=N,0.9nm,0.3s,baz=197,slow=20,SNR=2.6						
MA2	Magadan	8.69	152	Lg	Lg	10 49 51.7	
	comp=N,0.3nm,0.3s,baz=0.0,slow=20,SNR=3.3						
SONM	Songino Array	27.04	242	P	P	10 51 01.6	+1.1
	comp=N,1.0nm,0.8s,baz=28,slow=9.1,SNR=6.8						
ILAR	Eielson Array	27.19	62	P	P	10 51 02.0	+0.4
	comp=N,1.0nm,0.8s,baz=301,slow=8.4,SNR=13						
ZALV	Zalesovo Beam	30.12	272	P	P	10 51 28.2	+0.5
	comp=N,0.5nm,0.4s,baz=40,slow=9.4,SNR=2.5						
ZALV				LR	LR	11 04 23.2	
	comp=N,50nm,18.5s,baz=62,slow=38						
KURBB	Kurchatov Arra	35.13	274	P	P	10 52 11.2	-0.4
	comp=N,0.8nm,0.6s,baz=34,slow=8.9,SNR=6.4						
BVAR	Borovoye Array	36.33	284	P	P	10 52 22.6	+0.8
	comp=N,0.5nm,0.6s,baz=72,slow=9.3,SNR=2.8						
MKAR	Makanchi Array	36.80	267	P	P	10 52 24.9	-1.1
	comp=N,1.1nm,0.8s,baz=27,slow=6.0,SNR=11						
YKA	Yellowknife Ar	38.88	46	P	P	10 52 43.0	-0.2
	comp=N,0.2nm,0.6s,baz=322,slow=8.4,SNR=6.0						
PDAR	Pinedale Array	57.41	56	P	P	10 55 07.2	+0.2
	comp=N,0.4nm,0.6s,baz=327,slow=6.5,SNR=4.5						

TRN 15 10:48:25.5, 17°.73N×62°.88W, h111^{km}, MD3.8, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEUS	St. Eustatius	0.25	203	eP	Pn	10 48 42.6	+1.3
SEUS				eS	Sn	10 48 54.5	+1.5
SMRT	St. Maarten	0.37	330	eP	Pn	10 48 43.3	+1.4
SMRT				eS	Sn	10 48 55.3	+1.2
ANWB	Willy Bob	1.04	93	eP	Pn	10 48 49.0	+1.8
ANWB				eS	Sn	10 49 05.1	+1.5
MLYT	Lee's Yard	1.19	147	eP	Pn	10 48 50.4	+1.5
MLYT				eS	Sn	10 49 08.4	+1.7
TBG	Guadaloupe-3	2.20	147	eP	Pn	10 49 01.9	+0.7
TBG				eS	Sn	10 49 30.5	+2.0
MGG	Marie-Galante	2.34	140	⇑iP	Pn	10 49 04.2	+1.3
MGG				eS	Sn	10 49 32.3	+0.8
MDPV	Dominica, Penn	2.51	146	eP	Pn	10 49 06.5	+1.4
MDPV				eS	Sn	10 49 35.7	+0.1
MDPO	Dominica; Chan	2.54	147	eP	Pn	10 49 06.6	+1.1
MDPO				eS	Sn	10 49 37.7	+1.6
BBL	Barber's Block	2.57	148	eP	Pn	10 49 06.9	+0.9
BBL				eS	Sn	10 49 38.4	+1.4
DWS	Wesley	2.62	145	eP	Pn	10 49 07.4	+0.9
DWS				eS	Sn	10 49 38.6	+0.6
MDN	Morne-Daniel	2.79	149	eP	Pn	10 49 10.6	+1.9

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*IDC **15** 10:54:26.9±0.6, 67°.58N×142°.37E, h0^{km}, mb3.8/17, mb1 4.0/20, mb1mx3.8/51, mbtmp3.8/20, ML2.9/3, MS3.2/5, Ms1 3.2/5, ms1mx2.7/46, Error ellipse: s-maj=16.6km s-min=13.6km az=165.0*

*ISCJB **15** 10:54:27.1±0.3, 67°.61N±0°.04×142°.35E±0°.09, h10^{km}, mb4.0/30, MS3.4/3, Error ellipse: s-maj=5.4km s-min=5.0km az=169.5*

*YARS **15** 10:54:28.7±0.1, 67°.620N±0°.006×142°.55E±0°.01, h11^{km}*

*NEIC **15** 10:54:28.8±0.2, 67°.60N×142°.33E, h10^{km}, mb4.1/15, Error ellipse: s-maj=5.1km s-min=4.1km az=180.0*

ISC 15 10:54:28.4±0.4**, 67°.59N**±0°.05×**142°.40E**±0°.04**, h10^{km}, n59, σ0^{s}.78**/58**, mb3.9**/30**, MS3.3**/3**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.17	164	eP	Pb	10 54 49.9	-0.8
MOMR				Pmax		10 54 49.9	
	comp=Z,355nm,0.3s						
MOMR				eS	Sb	10 55 05.2	-0.7
MOMR				Smax		10 55 05.2	
	comp=N,2µm,0.2s						
YBGR	Belaya Gora	1.71	55	eP	Pn	10 54 58.2	0.0
YBGR				Pmax		10 54 58.2	
	comp=Z,290nm,0.3s						
YBGR				eS	Sn	10 55 19.8	-0.3
YBGR				Smax		10 55 19.8	
	comp=N,5µm,0.3s						
BTGS	Batagay	2.97	275	eP	Pn	10 55 17.1	+1.6
BTGS				eP	Pg	10 55 23.5	-1.7
BTGS				Pmax		10 55 23.5	
	comp=Z,78nm,0.5s						
BTGS				eS	Sn	10 55 52.3	+1.2
BTGS				eS	Sg	10 56 02.2	-1.5
BTGS				Smax		10 56 02.2	
	comp=E,563nm,0.3s						
SEY	Seymchan	6.27	133	Pn	Pn	10 56 01.6	+0.8
	comp=E,0.8nm,0.3s,baz=323,slow=18,SNR=5.2						
SEY				Lg	Lg	10 57 39.2	
	comp=E,1.6nm,0.3s,baz=30,slow=6.4,SNR=3.9						
MA2	Magadan	8.86	151	Lg	Lg	10 59 03.5	
	comp=E,0.6nm,0.3s,baz=269,slow=17,SNR=5.5						
MA2				LR	LR	11 00 12.0	
	comp=E,99nm,18.1s,baz=340,slow=39						
PEA1	Petropavlovsk-	16.29	145	ePn	Pn	10 58 18.4	+1.5
PETK	Petropavlovsk-	16.30	145	Pn	Pn	10 58 18.4	+1.4
	comp=E,0.0nm,0.3s,baz=338,slow=13,SNR=3.0						
PETK				LR	LR	11 04 50.8	
	comp=E,44nm,20.7s,baz=84,slow=38						
KLR	Kul'dur	19.18	202	P	P	10 58 52.2	+0.4
	comp=E,0.1nm,0.3s,baz=0.0,slow=19,SNR=3.1						
ANM	Nome	20.86	73	eP	Pn	10 59 11.8	-0.7
	comp=E,1.7nm,0.8s						
USRK	Ussuriysk Ar.	24.09	199	P	P	10 59 42.4	-1.4
	comp=E,1.5nm,0.6s,baz=4.6,slow=10.0,SNR=6.7						
USRK				LR	LR	11 09 43.9	
	comp=E,94nm,19.0s,baz=37,slow=38						
TOLK	Toolik Lake Re	24.23	56	eP	P	10 59 45.4	+0.5
	comp=E,6.8nm,0.8s						
IM3	Indian Mountai	24.24	63	eP	P	10 59 45.6	+0.6
MLY	Manley	25.82	64	eP	P	10 59 60.0	+0.6
	comp=E,2.6nm,1.0s						
PPLA	Purkeypile	26.61	68	eP	P	11 00 06.4	-0.2
	comp=E,1.8nm,1.2s						
MDM	Murphy Dome	26.72	62	eP	P	11 00 08.1	+0.7
	comp=E,4.4nm,1.2s						
IL1	Eielson Array	27.29	62	eP	P	11 00 13.7	+1.2
ILAR	Eielson Array	27.29	62	P	P	11 00 12.5	0.0
	comp=E,1.4nm,0.7s,baz=297,slow=8.1,SNR=21						
ILB	Eielson Array	27.29	62	eP	P	11 00 13.5	+1.0
	comp=E,2.5nm,1.0s						
INK	Inuvik	29.30	49	eP	P	11 00 31.0	+0.6
INK	Inuvik	29.30	49	P	P	11 00 30.8	+0.5
	comp=E,0.4nm,0.5s,baz=315,slow=9.4,SNR=4.0						
ZAA1	Zalesovo Array	29.95	272	eP	P	11 00 37.1	+0.9
ZALV	Zalesovo Beam	29.95	272	P	P	11 00 37.1	+0.8
	comp=E,0.2nm,0.3s,baz=41,slow=8.9,SNR=2.2						
KSRS	Korea Array	31.27	203	LR	LR	11 14 17.1	
	comp=E,44nm,21.0s,baz=23,slow=38						
ARA0	ARCESS Array S	36.53	328	eP	P	11 01 33.5	+0.1
ARCES	ARCESS Array B	36.53	328	P	P	11 01 33.5	+0.1
	comp=E,3.1nm,0.8s,baz=38,slow=8.8,SNR=4.9						
MK31	Makanchi Array	36.65	266	eP	P	11 01 35.6	+0.9
	comp=E,1.4nm,0.8s						
MK32	Makanchi Array	36.65	266	eP	P	11 01 35.1	+0.5
MKAR	Makanchi Array	36.65	266	eP	P	11 01 35.6	+0.9
	comp=E,11nm,0.9s						
MKAR	Makanchi Array	36.65	266	P	P	11 01 35.1	+0.5
	comp=E,0.8nm,0.5s,baz=35,slow=7.2,SNR=15						
MK01	Makanchi Array	36.66	266	eP	P	11 01 35.1	+0.3
YKA	Yellowknife Ar	38.93	46	P	P	11 01 53.9	+0.2
	comp=E,0.7nm,0.7s,baz=322,slow=8.2,SNR=17						
ABKAR	Akbulak array	43.05	288	eP	P	11 02 28.6	+0.8
	comp=E,1.1nm,0.6s						
FIA1	FINESS Array S	43.26	321	eP	P	11 02 29.7	+0.4
FIA0	FINESS Array S	43.26	321	eP	P	11 02 29.8	+0.4
FINES	FINESS Array B	43.26	321	P	P	11 02 29.8	+0.4
	comp=E,2.0nm,0.5s,baz=31,slow=8.9,SNR=20						
NB2	NORSAR Subarra	46.85	330	P	P	11 02 57.8	-0.1
	comp=Z,1.2nm,0.8s,baz=25,slow=7.9						
NB200	NORSAR Array S	46.85	330	eP	P	11 02 57.7	-0.3
NOA	NORSAR Array B	46.85	330	P	P	11 02 57.7	-0.3
	comp=Z,1.7nm,0.8s,baz=24,slow=7.8,SNR=4.7						
FCC	Fort Churchill	47.32	36	eP	P	11 03 01.4	-0.2
	comp=Z,0.6nm,0.8s						
GAR	Garm	47.87	271	eP	P	11 03 11.6	+5.4
	comp=Z,4.9nm,0.9s						
FFC	Flin Flon	49.00	44	eP	P	11 03 14.9	+0.3
	comp=Z,4.5nm,0.7s						
CLL	Collm	55.51	324	i P	P	11 04 03.3	+0.3
	comp=Z,4.0nm,0.6s						
BRG	Berggiesshubel	55.71	323	eP	P	11 04 19.8	+15
	comp=Z,63nm,0.5s						
SCHQ	Schefferville	55.97	20	eP	P	11 04 05.6	-0.7
	comp=Z,1.9nm,0.9s						
SCHQ	Schefferville	55.97	20	P	P	11 04 05.1	-1.1
	comp=Z,1.7nm,0.6s,baz=359,slow=5.5,SNR=8.6						
PDAR	Pinedale Array	57.49	56	eP	P	11 04 18.1	+0.6
PDAR	Pinedale Array	57.49	56	P	P	11 04 17.9	+0.4
	comp=Z,1.1nm,0.6s,baz=3.6,slow=2.8,SNR=13						
GERES	GERESS Array B	57.66	322	P	P	11 04 19.0	+0.6
	comp=Z,0.4nm,0.5s,baz=38,slow=6.7,SNR=3.6						
NV01	Mina Array Sit	58.47	65	eP	P	11 04 25.2	+0.8
NVAR	Mina Array Bea	58.47	65	P	P	11 04 25.1	+0.7
	comp=Z,0.5nm,0.6s,baz=327,slow=5.9,SNR=4.4						
BR101	Keskin Array S	60.48	303	eP	P	11 04 37.7	-0.4
BRTR	Keskin Array B	60.48	303	P	P	11 04 37.7	-0.4
	comp=Z,0.6nm,0.7s,baz=5.4,slow=4.6,SNR=3.5						
LMN	Caledonia Moun	65.03	21	eP	P	11 05 08.5	+0.3
	comp=Z,9.3nm,1.1s						
ESDC	Sonseca Array	70.07	333	P	P	11 05 40.1	-0.1
	comp=Z,0.2nm,0.3s,baz=359,slow=7.2,SNR=6.7						
LTX	Lajitas	71.68	57	eP	P	11 05 50.4	+0.1
TXAR	Lajitas Array	71.68	57	P	P	11 05 50.3	+0.1
	comp=Z,0.3nm,0.6s,baz=350,slow=4.6,SNR=3.2						
BATI	Baumata	78.76	199	LR	LR	11 38 54.3	
	comp=Z,34nm,21.6s,baz=271,slow=34						
WR1	Warramunga Arr	87.48	188	eP	P	11 07 14.6	-1.1
	comp=Z,2.0nm,1.1s						
WRA	Warramunga Arr	87.48	188	P	P	11 07 14.6	-1.1
	comp=Z,0.3nm,0.9s,baz=6.1,slow=5.4,SNR=2.5						

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*ISK **15** 11:04:37.8, 38°.36N×30°.06E, h5^{km}, ML2.0/3*

*DDA **15** 11:04:39.8, 38°.34N×30°.15E, h6^{km}±3^{km}, ML2.5*

ISC 15 11:04:39.1±1.0**, 38°.33N**±0°.04×**30°.16E**±0°.03**, h18^{km}**±5^{km}**, n9, σ0^{s}.75**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZIL	AFYON_Kizioren	0.08	193	i P	Pg	11 04 42.9	+0.2
KZIL				i S	Sg	11 04 44.7	-0.3
KZIL				IAML_P			
	comp=Z,17µm,0.1s						
SHUT	Suhut-Afyon	0.38	54	PG	Pb	11 04 46.8	-0.6
SHUT				SG	Sb	11 04 53.4	+0.5
KHAL	Karahalli	0.53	274	i P	Pb	11 04 49.3	-0.6
KHAL				i S	Sb	11 04 57.6	+0.4
KHAL				IAML_P			
	comp=Z,833nm,0.1s						
ISP	Isparta	0.58	151	PG	Pb	11 04 50.9	+0.1
ISP				SG	Sn	11 05 00.4	-1.4
BRDR	BURDUR-Merkez	0.64	187	i P	Pn	11 04 53.7	+0.4
BRDR				i S	Sn	11 05 04.0	+0.8
BOLV	Bolvadin	0.73	58	i P	Pn	11 04 54.3	-0.3
BOLV				i S	Sn	11 05 05.7	+0.3
BOLV				IAML_P			
	comp=Z,946nm,0.1s						
GDZ	Gediz	0.92	325	i P	Pn	11 04 58.3	+1.0
GDZ				i S	Sn	11 05 10.2	-0.1
KULA	Kula-Manisa	1.19	279	PN	Pn	11 04 59.6	-1.4
MANT	Manisa	1.27	278	i P	Pg	11 05 04.3	+0.6
MANT				i S	Sg	11 05 20.3	0.0
MANT				IAML_P			
	comp=Z,293nm,0.1s						

IDC 15 11:08:41.5±8.8**, 10°.12S**×**155°.60E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/25**, mbtmp3.3**/3**, MS3.2**/3**, Ms1 3.1**/3**, ms1mx2.7**/17**, Error ellipse: s-maj=266.9km s-min=42.9km az=120.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.79	140	LR	LR	11 17 38.0	
	comp=Z,86nm,18.2s,baz=170,slow=34						
WRA	Warramunga Arr	22.71	242	P	P	11 13 45.1	0.0
	1.1nm,0.9s,baz=68,slow=10,SNR=6.6						
ASAR	Alice Springs	24.70	234	P	P	11 14 04.6	0.0
	0.5nm,0.9s,baz=65,slow=9.7,SNR=4.1						
STKA	Stephens Creek	25.23	209	LR	LR	11 22 48.5	
	comp=Z,34nm,19.8s,baz=22,slow=34						
RPZ	Rata Peaks	36.06	161	LR	LR	11 28 01.8	
	comp=Z,49nm,21.0s,baz=250,slow=32						
MKAR	Makanchi Array	86.13	319	P	P	11 21 24.6	0.0
	0.1nm,0.4s,baz=108,slow=4.7,SNR=3.0						

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*NEIC **15** 11:42:43.8±0.0, 17°.15N×101°.20W, h17^{km}, MD4.0(MEX), After MEX.*

MEX 15 11:42:44.0±0.3**, 17°.21N**×**101°.14W, h14^{km}**±4^{km}**, MD3.4, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.50	321	ePg	Pg	11 42 52.7	-1.3
ZIIG				eSg	Sg	11 42 59.8	-0.9
ZIIG	Zihuatanejo	0.50	321	i P	Pg	11 42 52.6	-1.4
ZIIG				eS	Sg	11 42 59.4	-1.4
CAIG	El Cayaco	0.85	101	ePg	Pg	11 42 57.5	-3.0
CAIG				ePn	Pn	11 43 03.3	+1.9
CAIG	El Cayaco	0.85	101	i P	Pg	11 42 57.5	-2.9
CAIG				eS	Sg	11 43 08.0	-3.6
ARIG	Puente Sto Nin	1.30	35	eP	Pn	11 43 03.9	-3.9
ARIG				eS	Sb	11 43 19.8	-5.1
ARIG	Puente Sto Nin	1.30	35	eP	Pn	11 43 03.9	-3.8
ARIG				i S	Sb	11 43 19.7	-5.1
MEIG	Mezcala	1.61	64	ePn	Pn	11 43 09.5	-2.6
MEIG				eSn	Sn	11 43 29.4	-3.3
MEIG	Mezcala	1.61	64	eP	Pn	11 43 08.8	-3.2
PLIG	Platanillo	1.95	53	ePn	Pn	11 43 14.8	-1.9
PLIG				eSn	Sn	11 43 40.3	-0.8

PLIG	Platanillo	1.95	53	eP	Pn	11 43 13.6	-3.1

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*IDC **15** 11:44:01.7±1.3, 41°.94N×20°.36E, h0^{km}, mb3.5/8, mb1 3.6/15, mb1mx3.5/44, mbtmp3.5/15, ML3.2/7, Error ellipse: s-maj=21.5km s-min=10.5km az=23.0*
*PDG **15** 11:44:03.4±0.7, 41°.93N×20°.27E, h7^{km}±1^{km}, MD3.6/12, ML3.5/11, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*TIR **15** 11:44:03.2, 41°.91N×20°.32E, h20^{km}, Md3.4/4*
*ISCJB **15** 11:44:03.3±0.3, 41°.97N±0°.01×20°.28E±0°.02, h7^{km}±2^{km}, mb3.5/7, Error ellipse: s-maj=2.6km s-min=1.8km az=142.7*
*SAR **15** 11:44:03.0±0.7, 41°.91N×20°.32E, h5^{km}±4^{km}, ML3.6/1*
*SKO **15** 11:44:03.5, 41°.85N×20°.31E, h21^{km}, M3.1, ML3.4*
*BEO **15** 11:44:04.6±0.3, 41°.94N×20°.26E, h10^{km}±2^{km}, ML3.4/15*
*PRU **15** 11:44:04.5±0.0, 41°.71N×20°.30E, h10^{km}*
ISC 15 11:44:03.7±0.9**, 41°.93N**±0°.02×**20°.27E**±0°.02**, h10**^{km}±7^{km}**, n151, σ1^{s}.48**/214**, mb3.6**/7**, 18C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.27	152	P	Pg	11 44 08.9	-0.3
PHP	Peshkopia	0.27	152	i PG	Pg	11 44 08.8	-0.3
PHP				i SG	Sg	11 44 13.8	+0.8
BCI	Bajram Curri	0.47	341	i PG	Pg	11 44 12.4	-0.3
BCI				i SG	Sb	11 44 21.4	+0.4
TIR	Tirane	0.65	208	ePg	Pg	11 44 16.1	-0.2
TIR				eSg	Sb	11 44 27.1	+0.9
TIR	Tirane	0.65	208	⇑iP	Pg	11 44 16.2	-0.1
TIR	Tirane	0.65	208	S	Sb	11 44 26.7	+0.5
TIR	Tirane	0.65	208	P	Pg	11 44 16.1	-0.2
TIR	Tirane	0.65	208	i Pg	Pg	11 44 16.1	-0.2
TIR	Tirane	0.65	208	i PG	Pg	11 44 16.3	+0.1
TIR				i SG	Sb	11 44 26.5	+0.3
PVY	Plav	0.71	341	⇑iPg	Pg	11 44 16.7	-0.6
PVY				i Sg	Sg	11 44 27.1	+0.5
ULC	Ulcinj	0.76	273	⇓iPg	Pg	11 44 17.5	-0.9
ULC				eSg	Sg	11 44 28.9	+0.5
ULC	Ulcinj	0.76	273	i Pg	Pg	11 44 17.2	-1.2
DRME	Dracevica, Mon	0.85	288	⇑iPg	Pg	11 44 18.5	-1.5
DRME				i Sg	Sb	11 44 32.1	+0.2
DRME	Dracevica, Mon	0.85	288	⇑iPg	Pg	11 44 18.4	-1.5
DRME				eSg	Sg	11 44 31.4	+0.4
PDG	Podgorica	0.91	304	ePg	Pg	11 44 19.6	-1.5
PDG				eSg	Sb	11 44 33.6	+0.1
PDG	Podgorica	0.91	304	⇑iP	Pg	11 44 19.6	-1.5
PDG	Podgorica	0.91	304	S	Sb	11 44 33.6	+0.1
PDG	Podgorica	0.91	304	i Pg	Pg	11 44 19.6	-1.5
PDG				i Sg	Sb	11 44 33.7	+0.1
PDG	Podgorica	0.91	304	ePg	Pg	11 44 19.5	-1.5
PDG				eSg	Sb	11 44 33.6	+0.1
TTG	Podgorica	0.91	304	⇓iPg	Pg	11 44 20.2	-0.9
TTG				eSg	Sb	11 44 34.4	+0.9
OHR	Ohrid	0.91	154	i Pg	Pg	11 44 20.0	-1.1
OHR				i Sg	Sb	11 44 34.0	+0.4
OHR				eLg	Lg	11 44 34.9	
	comp=E,1µm,0.7s						
OHR				eLg	Lg	11 44 36.0	
	comp=N,883nm,0.3s						
KRUS	Krusevo	0.92	127	i Pg	Pg	11 44 20.2	-1.2
KRUS				i Sg	Sb	11 44 34.0	-0.2
BEY	Berane	0.98	344	i Pg	Pg	11 44 21.4	-1.2
IVA	Berane	0.98	344	⇑iPg	Pg	11 44 21.9	-0.7
IVA				i Sg	Sn	11 44 37.2	-0.5
KOME	Kolasin	1.08	329	⇑iPg	Pg	11 44 23.1	-1.3
KOME				i Sg	Sn	11 44 40.5	+0.5
BUM	Brajici-Budva	1.09	291	⇑iPg	Pg	11 44 23.2	-1.4
BUM				eSg	Sn	11 44 40.3	+0.1
BIA	Bitola	1.20	138	i Pg	Pb	11 44 25.5	-1.0
BIA				i Sg	Sn	11 44 44.2	+1.2
NKME	Niksic	1.29	311	⇑iPg	Pn	11 44 27.0	-0.7
NKME				i Sg	Sn	11 44 47.1	+2.1
NKY	Niksic	1.29	314	⇓iPg	Pn	11 44 27.3	-0.6
NKY				i Sg	Sn	11 44 47.6	+2.3
SJES	Sjenica	1.35	351	ePg	Pn	11 44 28.9	+0.2
SJES				eSg	Sg	11 44 47.3	+0.1
HCY	Herceg Novi	1.42	292	⇓iPg	Pn	11 44 28.5	-1.0
HCY				eSg	Sg	11 44 51.6	+2.4
HCY	Herceg Novi	1.42	292	⇓iPg	Pn	11 44 28.5	-1.0
HCY				eSg	Sg	11 44 49.6	+0.4
SELS	Selova	1.44	26	ePg	Pn	11 44 29.9	+0.1
SELS				eSg	Sg	11 44 50.2	+0.3
BARS	Barje	1.45	52	ePg	Pb	11 44 30.7	-0.1
BARS	Barje	1.45	52	ePn	Sn	11 44 44.7	-4.4
BARS				eSg	Sg	11 44 51.2	+0.8
BARS	Barje	1.45	52	i Pg	Pb	11 44 30.7	-0.1
BARS				i Sg	Sg	11 44 50.4	0.0
STIP	Stip	1.45	99	i Pg	Pg	11 44 33.0	+1.5
STIP				i Sg	Sg	11 44 54.7	+4.3
PLE	Pljevlja	1.55	336	⇑iPg	Pb	11 44 32.1	-0.3
PLE				eSg	Sg	11 44 55.2	+1.8
BRY	Bratogost	1.61	308	⇑iPn	Pn	11 44 32.4	+0.2
BRY				eSn	Sg	11 44 56.9	+1.5
NEST	Nestorio	1.62	158	P	Pb	11 44 33.5	-0.2
UPM	Unac-Piva	1.62	322	⇓iPn	Pn	11 44 33.2	+0.7
UPM				eSn	Sg	11 44 57.4	+1.4
TREB	Trebinje	1.63	300	ePn	Pn	11 44 33.1	+0.7
TREB				eSn	Sb	11 44 54.8	+0.5
TREB	Trebinje	1.63	300	ePn	Pn	11 44 32.3	-0.1
TREB				eSn	Sb	11 44 55.2	+0.9
TPE	Tepelena	1.64	187	P	Pg	11 44 35.9	+0.8
TPE	Tepelena	1.64	187	i PN	Pg	11 44 34.9	-0.2
TPE				i SN	Sg	11 44 57.1	+0.7
IVAS	Ivanjica	1.65	357	ePg	Pn	11 44 33.3	+0.5
IVAS				eSg	Sg	11 44 57.1	+0.3
VAY	Valandovo	1.83	109	i Pg	Pn	11 44 35.9	+0.8
VAY				i Sg	Sb	11 44 60.0	-0.1
VAY				eLg	Lg	11 45 04.3	
	comp=N,257nm,0.5s						
VAY				eLg	Lg	11 45 04.5	
	comp=E,272nm,0.8s						
PENT	Pentalofos	1.85	159	P	Pg	11 44 39.0	-0.1
GRG	Griva	1.87	120	P	Pn	11 44 36.8	+1.0
GRG	Griva	1.87	120	i Pn	Pn	11 44 36.8	+1.0
GRG				i Sg	Sb	11 45 01.8	+0.3
KZN	Kozani	1.98	144	P	Pb	11 44 38.7	-1.0
GRUS	Gruza	1.99	9	ePn	Pn	11 44 38.1	+0.8
BOVS	Bovan	2.01	31	ePn	Pn	11 44 38.6	+1.0
BBLS	Lazići	2.04	342	ePn	Pn	11 44 39.4	+1.3
BBLS	Lazići	2.04	342	ePn	Pn	11 44 39.0	+0.9
BBLS				eSn	Sn	11 45 04.3	+0.6
SRN	Sarande	2.05	186	P	Pb	11 44 41.4	+0.4
KNT	Kendrikon	2.12	110	P	Pn	11 44 40.0	+0.9
KNT	Kendrikon	2.12	110	i Pn	Pn	11 44 40.1	+1.0
STON	Ston	2.12	297	ePn	Pn	11 44 40.8	+1.7
STON				Sn	Sb	11 45 09.6	+1.1
KPRO	Kipourio	2.14	157	P	Pb	11 44 41.8	-0.7
DIVS	Divibare	2.18	355	ePn	Pn	11 44 40.7	+0.6
DIVS	Divibare	2.18	355	i Pn	Pn	11 44 40.7	+0.6
DIVS	Divibare	2.18	355	ePn	Pn	11 44 40.5	+0.4
DIVS				eSn	Sn	11 45 07.6	+0.4
ZAPS	Zavoj	2.21	52	ePn	Pn	11 44 41.6	+1.2
KEK	Kerkira	2.24	189	P	Pn	11 44 42.5	+1.7
TRUS	Trudelj	2.30	3	ePn	Pn	11 44 43.3	+1.7
VTS	Vitosha	2.31	72	ePn	Pn	11 44 43.0	+1.1
JAN	Janina	2.31	169	P	Pg	11 44 46.9	-1.0
HAPS	Han Pijesak,BI	2.37	336	ePn	Pn	11 44 43.1	+0.5
HAPS	Han Pijesak,BI	2.37	336	⇓iPn	Pn	11 44 42.8	+0.2
HAPS				eSn	Sn	11 45 13.0	+1.3
ZAGS	Zajecar	2.38	37	ePn	Pn	11 44 43.6	+1.0
IGT	Igoumenitsa	2.39	179	P	Pb	11 44 45.8	-1.0
THE	Thessaloniki	2.41	122	ePn	Pn	11 44 43.4	+0.3
SVIS	Svilajnac	2.44	16	ePn	Pn	11 44 44.5	+1.0
LIT	Litokhoron	2.48	137	P	Pb	11 44 46.3	-2.0
LIT	Litokhoron	2.48	137	ePn	Pb	11 44 46.4	-2.0
KUBS	Kucevo	2.69	22	ePn	Pn	11 44 47.5	+0.5
THL	Klokotos Trika	2.71	150	P	Pn	11 44 47.1	-0.1
NVR	Nevrokopi	2.75	101	P	Pn	11 44 49.5	+1.6
PLG	Polygyros	2.86	122	P	Pn	11 44 50.6	+1.3
MDVR	Moldovita	3.04	20	⇑iP	Pn	11 44 53.1	+1.2
MDVR	Moldovita	3.04	20	S	Sn	11 45 30.7	+2.3
DOB	Doboj	3.22	331	ePn	Pn	11 44 55.3	+1.1
EVR	Evrytania	3.23	158	P	Pb	11 44 58.7	-2.4
FRGS	Fruska Gora	3.25	354	ePn	Pn	11 44 55.5	+0.8
FRGS				eSn	Sn	11 45 33.1	-0.3
FRGS	Fruska Gora	3.25	354	ePn	Pn	11 44 55.3	+0.6
FRGS				eSn	Sn	11 45 33.4	0.0
AGG	Agios Georgios	3.30	151	P	Pn	11 44 52.8	-2.6
KAVA	Kavala	3.32	105	P	Pn	11 44 57.1	+1.4
HERR	Herculane	3.34	27	⇓iP	Pn	11 44 57.2	+1.3
HERR	Herculane	3.34	27	S	Sn	11 45 37.3	+1.6
SRE	Strehaia	3.48	37	⇓iP	Pn	11 44 58.7	+0.9
ANX	Ano Chora	3.56	159	P	Pn	11 45 02.2	+3.2
BLY	Banja Luka	3.61	322	ePn	Pn	11 45 01.6	+2.0
BLY	Banja Luka	3.61	322	⇑iP	Pn	11 45 02.5	+2.9
BLY	Banja Luka	3.61	322	S	Sn	11 45 45.1	+2.9
BLY	Banja Luka	3.61	322	ePn	Pn	11 45 00.2	+0.6
BLY				eSn	Sn	11 45 42.6	+0.4
VLAD	Vladila	3.68	54	S	Sn	11 45 45.0	+1.1
VLS	Valsamata	3.75	176	P	Pn	11 45 03.1	+1.5
BZS	Buzias	3.82	14	ePn	Pn	11 45 02.9	+0.4
BZS	Buzias	3.82	14	⇑iP	Pn	11 45 02.9	+0.4
TIP	Timpagrande	3.83	225	⇑iP	Pn	11 45 02.7	0.0
TIP	Timpagrande	3.83	225	P	Pn	11 45 02.6	-0.1
GZR	Gura Zlata	3.92	27	⇑iP	Pn	11 45 04.5	+0.6
GZR	Gura Zlata	3.92	27	S	Sn	11 45 51.3	+1.4
RDO	Rodhopi	4.03	99	P	Pn	11 45 06.6	+1.2
UDBI	Udbina	4.19	310	ePn	Pn	11 45 10.2	+2.5
MORH	Mrgy, Hungar	4.45	345	ePn	Pn	11 45 11.5	+0.4
MORH				eSn	Sn	11 46 02.4	-0.4
MORH	Mrgy, Hungar	4.45	345	ePn	Pn	11 45 10.0	-1.0
MORH				Sn	Sn	11 46 03.1	+0.2
SIRR	Siria	4.46	13	⇑iP	Pn	11 45 11.7	+0.5
SIRR	Siria	4.46	13	S	Sn	11 46 03.5	+0.4
NVLJ	Novalja	4.74	306	ePn	Pn	11 45 16.3	+1.2
DRGR		5.17	19	⇓iP	Pn	11 45 21.2	+0.1
DRGR		5.17	19	S	Sn	11 46 19.0	-1.8
BEHE	Becsehely	5.19	332	ePn	Pn	11 45 21.5	+0.2
BEHE				eSn	Sn	11 46 19.6	-1.6
CRES	Cresnjev	5.22	320	ePn	Pn	11 45 21.9	+0.1
CRES				eSn	Sn	11 46 21.1	-1.0
TIH	Tihany	5.26	342	ePn	Pn	11 45 26.0	+3.8
TIH				Sn	Sn	11 46 25.1	+2.3
MLR	Muntele Rosu	5.44	47	⇑iP	Pn	11 45 26.2	+1.3
MLR	Muntele Rosu	5.44	47	S	Sn	11 46 29.5	+1.8
MLR	Muntele Rosu	5.44	47	Pn	Pn	11 45 24.7	-0.2
	comp=E,0.5nm,0.3s,baz=151,slow=16,SNR=2.5						
MLR				Sn	Sn	11 46 27.5	-0.1
	comp=E,0.6nm,0.3s,baz=121,slow=9.4,SNR=3.1						
MLR				Lg	Lg	11 46 59.2	
	comp=E,0.4nm,0.3s,baz=151,slow=19,SNR=2.5						
CEY	Cerknica	5.69	314	ePn	Pn	11 45 28.1	-0.1
CEY				eSn	Sn	11 46 32.2	-1.3
PSZ	Piszkesteto	6.00	358	ePn	Pn	11 45 33.0	+0.5
PSZ				Sn	Sn	11 46 41.0	-0.2
SOKA	Soboth	6.05	323	ePn	Pn	11 45 36.0	+2.7
	comp=E,7.1nm,0.5s						
SOKA				i Sn	Sn	11 46 44.5	+1.9
	comp=E,3.0nm,0.5s						
OBKA	Obir	6.15	320	ePn	Pn	11 45 37.8	+3.2
	comp=E,3.3nm,0.2s						
ARSA	Arzberg	6.31	329	ePn	Pn	11 45 39.4	+2.7
	comp=E,4.8nm,0.3s						
ARSA				i Sn	Sn	11 46 49.4	+0.6
	comp=E,6.0nm,0.5s						
VYHS	Vyhne	6.65	352	ePN	Pn	11 45 43.2	+1.9
VYHS				eSN	Sn	11 46 59.0	+1.9
MYKA	Terra Mystica	6.69	317	ePn	Pn	11 45 44.1	+2.2
	comp=E,4.0nm,0.4s						
CONA	Conrad Observa	6.77	334	ePn	Pn	11 45 47.2	+4.2
	comp=E,1.8nm,0.4s						
CONA				i Sn	Sn	11 47 02.5	+2.3
	comp=E,3.3nm,0.4s						
MODS	Modra-Piesok	6.79	343	ePN	Pn	11 45 45.7	+2.5
MODS				eSN	Sn	11 47 01.1	+0.6
KBA	Koelnbreinsper	7.14	319	ePn	Pn	11 45 51.0	+2.7
	comp=E,1.7nm,0.3s						
MOA	Molln	7.29	326	ePn	Pn	11 45 53.7	+3.4
	comp=E,1.4nm,0.2s						
MOA				eSn	Sn	11 47 16.2	+3.2
	comp=E,5.8nm,0.6s						
ABTA	Abfaltersbach	7.36	314	ePn	Pn	11 45 53.0	+1.9
	comp=E,6.0nm,0.4s,SNR=12						
ABTA				eSn	Sn	11 47 19.5	+4.8
	comp=E,6.4nm,0.7s						
WTTA	Wattenberg	8.15	314	i Pn	Pn	11 46 05.8	+3.8
	comp=E,2.1nm,0.2s						
WTTA				eSn	Sn	11 47 35.3	+1.0
	comp=E,7.4nm,0.5s						
WATA	Walderalm	8.22	314	ePn	Pn	11 46 06.6	+3.5
	comp=E,3.3nm,0.2s						
GERES	GERESS Array B	8.32	329	Pn	Pn	11 46 04.6	+0.3
	comp=E,0.3nm,0.3s,baz=151,slow=12,SNR=9.8						
GERES				Sn	Sn	11 47 38.4	+0.1
	comp=E,0.3nm,0.3s,baz=140,slow=25,SNR=3.3						
SQTA	Sankt Quirin	8.35	312	i Pn	Pn	11 46 08.2	+3.3
	comp=E,3.6nm,0.3s						
MOTA	Moosalm	8.48	313	ePn	Pn	11 46 09.5	+2.9
	comp=E,4.8nm,0.4s						
FETA	Feichten	8.51	310	Pn	Pn	11 46 08.3	+1.3
	comp=E,4.0nm,0.7s						
FETA				i Sn	Sn	11 47 45.1	+2.0
	comp=E,4.0nm,0.7s						
KHC	Kasperske Hory	8.60	329	ePN	Pn	11 46 12.0	+3.9
KHC				eSN	Sn	11 47 45.9	+0.8
DAVOX	Davos/Dischmat	8.88	307	Pn	Pn	11 46 13.0	+0.8
	comp=E,1.0nm,0.3s,baz=126,slow=10.0,SNR=9.2						
DAVOX				Sn	Sn	11 47 53.2	+0.9
	comp=E,0.3nm,0.3s,baz=90,slow=20,SNR=3.2						
BRTR	Keskin Array B	10.37	98	Pn	Pn	11 46 31.8	-0.7
	comp=E,0.1nm,0.3s,baz=297,slow=13,SNR=2.6						
HFS	Hagfors	18.68	350	P	P	11 48 21.7	+0.1
	comp=E,0.1nm,0.3s,baz=157,slow=7.8,SNR=3.0						
FINES	FINESS Array B	19.86	8	P	P	11 48 33.3	-1.3
	comp=E,0.1nm,0.3s,baz=184,slow=9.6,SNR=6.4						
NOA	NORSAR Array B	19.92	347	P	P	11 48 35.3	0.0
	comp=E,0.0nm,0.3s,baz=146,slow=8.3,SNR=2.8						
EKA	Eskdalemuir Ar	20.36	319	P	P	11 48 40.3	+0.3
	comp=E,0.4nm,0.4s,baz=115,slow=10,SNR=4.6						
BVAR	Borovoye Array	34.96	54	P	P	11 50 54.1	-1.6
	comp=E,1.1nm,0.8s,baz=270,slow=7.2,SNR=5.8						
ZALV	Zalesovo Beam	43.41	51	P	P	11 52 06.1	0.0
	comp=E,1.7nm,0.6s,baz=273,slow=9.9,SNR=5.0						
MKAR	Makanchi Array	43.60	62	P	P	11 52 07.9	+0.1
	comp=E,0.4nm,0.7s,baz=291,slow=6.0,SNR=3.7						
SONM	Songino Array	58.27	52	P	P	11 53 56.8	-1.6
	comp=E,0.3nm,0.7s,baz=298,slow=6.1,SNR=2.8						
YKA	Yellowknife Ar	69.81	339	P	P	11 55 13.6	-0.2
	comp=E,0.3nm,0.7s,baz=32,slow=5.2,SNR=6.8						
ILAR	Eielson Array	73.16	354	P	P	11 55 34.5	+0.5
	comp=E,0.1nm,0.7s,baz=1.9,slow=5.4,SNR=3.5						
PDAR	Pinedale Array	84.35	325	P	P	11 56 35.8	-0.4
	comp=E,0.3nm,0.6s,baz=46,slow=6.4,SNR=3.9						

IDC 15 12:01:17.1±1.7**, 10°.99S**×**165°.44E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.6**/26**, mbtmp3.7**/4**, ML3.7**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/27**, Error ellipse: s-maj=51.5km s-min=30.3km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.62	285	LR	LR	12 05 04.0	
	comp=Z,141nm,18.5s,baz=118,slow=40						
DZM	Mont Dzumac	11.06	175	Pn	Pn	12 03 56.8	0.0
	0.6nm,0.3s,baz=14,slow=8.3,SNR=12						
WRA	Warramunga Arr	31.22	250	P	P	12 07 38.9	+0.2
	1.4nm,0.8s,baz=81,slow=9.0,SNR=15						
ASAR	Alice Springs	32.55	243	P	P	12 07 50.0	-0.3
	0.3nm,0.6s,baz=61,slow=10,SNR=8.0						
ILAR	Eielson Array	83.55	19	P	P	12 13 46.7	0.0
	0.2nm,0.6s,baz=238,slow=5.0,SNR=2.9						

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*IDC **15** 12:10:51.5±2.4, 29°.16N×53°.95E, h0^{km}, mb3.5/8, mb1 3.6/9, mb1mx3.5/38, mbtmp3.5/9, ML3.4/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/39, Error ellipse: s-maj=51.4km s-min=24.7km az=159.0*
*ISCJB **15** 12:10:54.5±0.5, 29°.33N±0°.04×53°.71E±0°.05, h10^{km}, mb3.4/8, MS3.7/1, Error ellipse: s-maj=6.5km s-min=5.1km az=135.6*
*TEH **15** 12:10:54.8, 29°.38N×53°.79E, h10^{km}, ML3.3*
*THR **15** 12:10:56.2, 29°.29N×53°.80E, h18^{km}, ML3.2*
ISC 15 12:10:54.2±0.7**, 29°.33N**±0°.04×**53°.85E**±0°.05**, h10**^{km}**, n34, σ1^{s}.46**/31**, mb3.5**/8**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPAR	Pars	0.86	306	ePg	Pg	12 11 10.5	-0.4
SHI	Shiraz	1.21	285	ePg	Pn	12 11 17.7	+0.4
SHI				IAMB	IAmb	12 11 45.5	
	comp=E,5µm,0.5s						
GHIR	Ghir-Karzin	1.29	216	ePg	Pn	12 11 19.1	+0.7
GHIR	Ghir-Karzin	1.29	216	eAML	AML	12 11 43.6	
	comp=E,331nm,0.4s						
GHIR				eAML	AML	12 11 45.7	
	comp=N,360nm,0.4s						
GHIR	Ghir-Karzin	1.29	216	ePg	Pn	12 11 19.1	+0.7
GHIR				eSg	Sb	12 11 35.8	+0.5
IKAZ	Kazeroun	1.81	285	ePg	Pn	12 11 27.3	+1.6
IKAZ				IAMB	IAmb	12 12 05.5	
	comp=Z,5µm,0.6s						
IMEH	Mehriz	2.16	18	ePn	Pb	12 11 32.5	-1.0
IMEH				IAMB	IAmb	12 12 13.1	
	comp=Z,1µm,0.4s						
KHGB	Koh Gabri	2.51	65	ePn	Pb	12 11 37.4	-2.1
KHGB				IAMB	IAmb	12 12 17.6	
	comp=Z,0.0nm,0.7s						
NGRK	Negar Kerman	2.53	82	ePn	Pb	12 11 38.5	-1.5
NGRK				IAMB	IAmb	12 12 30.7	
	comp=Z,0.0nm,0.6s						
KRBR	Kerman	2.62	75	ePn	Pb	12 11 40.5	-0.9
KRBR	Kerman	2.62	75	eAML	AML	12 12 27.6	
	comp=N,169nm,0.8s						
KRBR	Kerman	2.62	75	ePn	Pb	12 11 40.5	-0.9
TVBK	TV Kerman	2.62	75	ePn	Pb	12 11 39.3	-2.1
TVBK				IAMB	IAmb	12 12 31.4	
	comp=Z,0.0nm,0.3s						
IRAM	Ramesheh	2.77	333	ePn	Pn	12 11 40.8	+1.9
IRAM				IAMB	IAmb	12 11 44.8	
	comp=Z,627nm,0.3s						
GENO	Geno	2.81	133	ePn	Pb	12 11 44.5	-0.1
GENO				IAMB	IAmb	12 13 14.8	
	comp=N,0.0nm,0.2s						
ICHK	Chekchek	2.94	9	IAMB	IAmb	12 12 45.6	
	comp=N,979nm,0.6s						
YZKH	Yazd	3.12	12	ePn	Pb	12 11 47.5	-2.3
YZKH	Yazd	3.12	12	ePn	Pb	12 11 47.5	-2.3
YZKH				eSg	Sg	12 12 35.0	+0.7
IGAR	Gharneh	3.43	334	ePn	Pn	12 11 50.4	+2.4
IGAR				IAMB	IAmb	12 12 12.1	
	comp=Z,462nm,0.4s						
IZEF	Zefreh	3.79	340	ePn	Pn	12 11 54.7	+1.8
IZEF				IAMB	IAmb	12 12 11.8	
	comp=Z,250nm,0.6s						
ANAR	Anarak	3.85	358	ePn	Pn	12 11 55.2	+1.6
TPRV	Parvadeh(Tabas	4.41	33	ePn	Pn	12 12 03.2	+1.8
IKLH	Kolahrood	4.42	335	IAMB	IAmb	12 12 22.9	
	comp=Z,181nm,0.5s						
IKLH				ePn	Pn	12 12 03.3	+1.6
GNI	Garni	13.13	328	LR	LR	12 19 51.5	
	comp=Z,20nm,20.8s,baz=48,slow=41						
BRTR	Keskin Array B	19.57	307	P	P	12 15 23.3	+0.9
	comp=Z,0.1nm,0.3s,baz=125,slow=13,SNR=2.4						
AKTO	Aktyubinsk	21.31	7	P	P	12 15 40.8	-0.2
	comp=Z,0.6nm,0.6s,baz=194,slow=12,SNR=2.2						
BVAR	Borovoye Array	26.62	23	P	P	12 16 32.5	-0.2
	comp=Z,0.7nm,0.6s,baz=200,slow=7.1,SNR=3.7						
MKAR	Makanchi Array	28.16	44	P	P	12 16 46.8	+0.2
	comp=Z,0.1nm,0.4s,baz=233,slow=9.8,SNR=3.0						
ZALV	Zalesovo Beam	33.31	34	P	P	12 17 30.7	-1.3
	comp=Z,0.4nm,0.3s,baz=251,slow=10.0,SNR=3.8						
FINES	FINESS Array B	37.00	338	P	P	12 18 05.8	+2.2
	comp=Z,1.1nm,0.8s,baz=125,slow=12,SNR=3.3						
NOA	NORSAR Array B	42.41	331	P	P	12 18 47.4	-1.3
	comp=Z,0.3nm,0.4s,baz=121,slow=8.1,SNR=2.6						
TORD	Torodi Ar. Bea	50.80	263	P	P	12 19 54.3	-0.8
	comp=Z,0.5nm,0.6s,baz=77,slow=6.8,SNR=3.9						
SFJD	Kangerlussuaq	68.75	336	LR	LR	12 51 43.0	
	comp=Z,38nm,18.0s,baz=296,slow=36						
YKA	Yellowknife Ar	88.03	355	P	P	12 23 44.1	-0.2
	comp=Z,0.2nm,0.6s,baz=4.4,slow=4.6,SNR=7.3						

IDC 15 12:12:21.6±4.5**, 19°.57S**×**178°.06W, h465**^{km}±47^{km}**, mb2.5**/2**, mb1 3.0**/3**, mb1mx2.7**/24**, mbtmp3.7**/3**, Error ellipse: s-maj=48.3km s-min=20.8km az=75.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	19.09	192	P	P	12 16 13.6	0.0
	0.4nm,0.3s,baz=5.3,slow=18,SNR=3.2						
URZ				S	S	12 19 23.9	+0.9
	0.4nm,0.3s,baz=128,slow=18,SNR=5.2						
WRA	Warramunga Arr	44.68	261	P	P	12 19 52.0	-0.2
	0.2nm,0.3s,baz=97,slow=7.4,SNR=9.7						
ASAR	Alice Springs	44.69	256	P	P	12 19 52.2	0.0
	0.3nm,0.6s,baz=88,slow=8.3,SNR=7.5						
AKASG	Malin Array Be	142.18	332	PKP	PKPdf	12 30 59.5	-0.6
	0.7nm,0.5s,baz=39,slow=3.9,SNR=2.6						

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*IDC **15** 12:12:52.6±2.5, 29°.22N×53°.84E, h0^{km}, mb3.7/7, mb1 3.7/8, mb1mx3.5/41, mbtmp3.6/8, ML3.5/1, Error ellipse: s-maj=57.6km s-min=25.8km az=159.0*
*ISCJB **15** 12:12:55.5±0.5, 29°.34N±0°.05×53°.72E±0°.05, h10^{km}, mb3.5/7, Error ellipse: s-maj=7.4km s-min=5.4km az=140.8*
*TEH **15** 12:12:55.8, 29°.35N×53°.80E, h10^{km}, ML3.1*
*THR **15** 12:12:56.6, 29°.36N×53°.81E, h14^{km}, ML3.3*
ISC 15 12:12:55.4±0.7**, 29°.37N**±0°.04×**53°.86E**±0°.04**, h10**^{km}**, n27, σ1^{s}.86**/26**, mb3.6**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPAR	Pars	0.85	304	ePg	Pg	12 13 11.3	-0.6
IPAR				IAMB	IAmb	12 13 38.4	
	comp=Z,5µm,0.7s						
SHI	Shiraz	1.21	283	ePg	Pb	12 13 18.2	-0.3
SHI				IAMB	IAmb	12 13 41.9	
	comp=E,4µm,0.4s						
GHIR	Ghir-Karzin	1.32	216	ePg	Pg	12 13 20.4	-0.4
GHIR	Ghir-Karzin	1.32	216	eAML	AML	12 13 42.5	
	comp=N,530nm,0.4s						
GHIR	Ghir-Karzin	1.32	216	ePg	Pg	12 13 20.4	-0.4
GHIR				eSg	Sn	12 13 38.2	+0.4
IKAZ	Kazeroun	1.81	284	ePg	Pb	12 13 28.8	0.0
IKAZ				IAMB	IAmb	12 14 05.9	
	comp=Z,3µm,0.6s						
IMEH	Mehriz	2.12	18	ePn	Pb	12 13 33.8	-0.3
IMEH				IAMB	IAmb	12 14 09.3	
	comp=Z,2µm,0.6s						
KHGB	Koh Gabri	2.48	66	ePn	Pn	12 13 37.7	+1.5
KHGB				IAMB	IAmb	12 14 18.2	
	comp=Z,0.0nm,0.6s						
NGRK	Negar Kerman	2.52	83	ePn	Pn	12 13 39.2	+2.4
ISAD	Sadrabad	2.54	357	ePn	Pb	12 13 40.0	-1.3
ISAD				IAMB	IAmb	12 14 26.2	
	comp=Z,939nm,0.6s						
KRBR	Kerman	2.60	76	ePn	Pn	12 13 41.1	+3.3
KRBR	Kerman	2.60	76	eAML	AML	12 14 31.1	
	comp=N,125nm,0.8s						
KRBR	Kerman	2.60	76	ePn	Pn	12 13 41.1	+3.3
TVBK	TV Kerman	2.60	76	ePn	Pb	12 13 41.3	-1.0
TVBK				IAMB	IAmb	12 13 45.3	
	comp=Z,0.0nm,0.2s						
IRAM	Ramesheh	2.75	333	ePn	Pn	12 13 42.5	+2.7
IRAM				IAMB	IAmb	12 13 45.5	
	comp=Z,566nm,0.4s						
ICHK	Chekchek	2.91	9	IAMB	IAmb	12 14 35.2	
	comp=Z,1µm,0.8s						
YZKH	Yazd	3.08	12	ePn	Pn	12 13 47.4	+3.2
YZKH	Yazd	3.08	12	ePn	Pn	12 13 47.4	+3.2
YZKH				eSg	Sg	12 14 33.3	-1.0
IGAR	Gharneh	3.41	333	ePn	Pn	12 13 51.7	+2.9
IGAR				IAMB	IAmb	12 13 53.1	
	comp=Z,356nm,0.2s						
BRTR	Keskin Array B	19.56	307	P	P	12 17 23.3	-0.2
	comp=Z,0.1nm,0.3s,baz=147,slow=8.7,SNR=3.5						
BVAR	Borovoye Array	26.58	23	P	P	12 18 33.4	-0.1
	comp=Z,1.0nm,0.7s,baz=201,slow=7.7,SNR=5.4						
MKAR	Makanchi Array	28.12	44	P	P	12 18 48.8	+1.2
	comp=Z,0.1nm,0.5s,baz=242,slow=8.1,SNR=2.9						
ZALV	Zalesovo Beam	33.28	34	P	P	12 19 31.6	-1.3
	comp=Z,0.6nm,0.3s,baz=245,slow=9.9,SNR=4.0						
FINES	FINESS Array B	36.97	338	P	P	12 20 03.4	-1.1
	comp=Z,0.7nm,0.6s,baz=129,slow=11,SNR=3.3						
ARCES	ARCESS Array B	43.37	346	P	P	12 20 58.5	+0.9
	comp=Z,1.8nm,0.8s,baz=134,slow=7.7,SNR=2.3						
TORD	Torodi Ar. Bea	50.81	263	P	P	12 21 54.9	-1.5
	comp=Z,0.5nm,0.5s,baz=76,slow=7.6,SNR=3.9						
YKA	Yellowknife Ar	87.99	355	P	P	12 25 44.4	-1.0
	comp=Z,0.2nm,0.7s,baz=6.8,slow=5.0,SNR=5.6						

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*NEIC **15** 12:23:50.4±0.3, 10°.58S×165°.52E, h10^{km}, mb4.8/24, Error*

ellipse: s-maj=7.4km s-min=4.4km az=73.0
*ISCJB **15** 12:23:51.8±0.3, 10°.69S±0°.03×165°.48E±0°.05, h31km, mb4.6/48, MS4.0/25, Error ellipse: s-maj=8.0km s-min=4.2km az=163.9*
*GCMT **15** 12:23:51.4±0.3, 10°.54S±0°.02×165°.40E±0°.02, h18km±2km, MW4.8/71, Moment Tensor Solution. s20,c25; s71,c94; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.56±.14; Mθθ2.37±.10; Mφφ-1.81±.10; Mrθ0.23±.23; Mθφ-0.19±.09; Mφr-0.94±.32; Best double couple: M0 2.36000×10¹⁶ NP1:φs314.00000°, δ75.00000°, λ-25.00000°. NP2: φs51.00000°, δ66.00000°, λ-163.00000°. Principal axes: T 2.4060, Plg6.0000°, Azm4.0000°; N -0.0900, Plg61.0000°, Azm104.0000°; P -2.3140, Plg28.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **15** 12:23:52.4, 10°.70S×165°.50E, h35km, mB5.1/26, mb4.8/42, Ms4.9/7, Ms7 4.6/8*
*IDC **15** 12:23:56.6±3.2, 10°.68S×165°.41E, h56km±29km, mb4.1/21, mb1 4.2/22, mb1mx4.1/47, mbtmp4.4/22, ML5.1/2, MS3.9/22, Ms1 3.9/22, ms1mx3.8/31, Error ellipse: s-maj=18.9km s-min=15.5km az=95.0*

ISC 15 12:23:53.6±0.5**, 10°.68S**±0°.05×**165°.58E**±0°.07**, h31**km**, n96, σ1s.48**/98**, mb4.8**/48**, MS4.0**/26**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.68	282	iP	Pn	12 25 17.0	+1.0
HNR				eS	Sn	12 26 23.0	+2.7
HNR	Honiara	5.68	282	ePn	Pn	12 25 15.1	-0.9
HNR				eSn	Sn	12 26 19.2	-1.1
HNR	Honiara	5.68	282	P	Pn	12 25 16.7	+0.7
	157nm,0.3s,baz=177,slow=4.1,SNR=25						
HNR				S	Sn	12 26 19.2	-1.1
	baz=155,slow=19,SNR=1.4						
HNR				LR	LR	12 27 34.7	
	comp=Z,4µm,19.0s,baz=110,slow=40						
MARNC	Mare, Loyalty	11.00	168	ePn	Pn	12 26 29.5	+0.6
DZM	Mont Dzumac	11.36	176	ePn	Pn	12 26 35.7	+1.7
	101nm,0.6s						
DZM				eSn	Sn	12 28 33.1	-6.9
	72nm,0.7s						
DZM				eLR	LR	12 29 07.3	
	comp=Z,982nm,24.1s						
DZM	Mont Dzumac	11.36	176	ePn	Pn	12 26 34.1	+0.1
DZM				eSn	Sn	12 28 41.8	+1.8
DZM	Mont Dzumac	11.36	176	P	Pn	12 26 35.7	+1.7
	4.1nm,0.3s,baz=308,slow=11,SNR=59						
DZM				S	Sn	12 28 39.2	-0.8
	0.6nm,0.3s,baz=288,slow=19,SNR=3.4						
ONTNC	Ouen Toro	11.60	176	ePn	Pn	12 26 36.9	-0.2
ONTNC				eSn	Sn	12 28 47.9	+2.2
OUENC	Ouen Island, N	11.74	174	ePn	Pn	12 26 39.9	+0.8
OUENC				eSn	Sn	12 28 53.0	+3.8
PINNC	Pines Island,	12.01	172	ePn	Pn	12 26 43.4	+0.7
EIDS	Eidsvold	20.06	221	eP	P	12 28 24.6	0.0
	31nm,1.0s						
CTA	Charters Tower	20.83	241	P	P	12 28 33.4	+0.5
	13nm,0.9s,baz=64,slow=11,SNR=9.0						
CTA				LR	LR	12 36 58.5	
	comp=Z,435nm,18.9s,baz=64,slow=38						
CTAO	Charters Tower	20.83	241	eP	P	12 28 32.4	-0.5
	35nm,0.9s						
COEN	Coen	22.13	259	eP	P	12 28 45.9	-1.0
	58nm,1.5s						
ARMA	Armidale	23.55	211	eP	P	12 29 02.2	+0.7
	25nm,1.3s						
OUZ	Omahuta	25.50	165	eP	P	12 29 20.3	+1.0
	47nm,1.1s						
JAY	Jayapura	25.99	286	P	P	12 29 23.1	-0.9
	51nm,1.0s,baz=90,slow=2.0,SNR=4.9						
JAY				LR	LR	12 40 51.5	
	comp=Z,343nm,18.1s,baz=57,slow=39						
H11S2	WAKE ISLAND Hy	29.00	2	T	T	12 59 57.1	
	baz=181						
H11S3	WAKE ISLAND Hy	29.00	2	T	T	12 59 56.8	
	baz=181,slow=74						
H11S1	WAKE ISLAND Hy	29.02	2	T	T	12 59 57.9	
	baz=181,slow=74						
URZ	Urewera	29.35	161	P	P	12 29 54.1	+0.4
	15nm,0.7s,baz=263,slow=3.4,SNR=11						
URZ				LR	LR	12 39 54.3	
	comp=Z,514nm,20.3s,baz=346,slow=33						
BKZ	Black Stump Fm	30.00	163	eP	P	12 30 00.2	+0.7
	67nm,1.3s						
H11N1	WAKE ISLAND Hy	30.22	2	T	T	13 01 28.3	
	baz=182,slow=76,SNR=268						
H11N3	WAKE ISLAND Hy	30.23	2	T	T	13 01 30.1	
	baz=182,slow=76,SNR=244						
H11N2	WAKE ISLAND Hy	30.24	2	T	T	13 01 29.4	
	baz=182,slow=76,SNR=177						
STKA	Stephens Creek	30.60	223	eP	P	12 30 05.2	+0.2
	1.3nm,0.7s						
STKA	Stephens Creek	30.60	223	P	P	12 30 06.0	+1.0
	4.8nm,0.8s,baz=31,slow=13,SNR=12						
STKA				LR	LR	12 41 58.4	
	comp=Z,460nm,18.1s,baz=40,slow=36						
BFZ	Birch Farm	31.34	164	eP	P	12 30 10.2	-1.2
	35nm,0.9s						
WB2	Warramunga Arr	31.45	249	eP	P	12 30 12.0	-0.6
WR1	Warramunga Arr	31.46	249	eP	P	12 30 10.8	-1.9
	8.2nm,0.9s						
WR1				ePcP	PcP	12 33 05.8	+0.1
WRA	Warramunga Arr	31.46	249	P	P	12 30 10.8	-2.0
	4.3nm,0.8s,baz=80,slow=9.1,SNR=19						
WRA				PcP	PcP	12 33 05.8	+0.1
	0.6nm,0.9s,baz=73,slow=3.1,SNR=2.6						
WRA				LR	LR	12 43 09.2	
	comp=Z,320nm,18.6s,baz=60,slow=37						
SNZO	South Karori	31.56	167	eP	P	12 30 13.6	+0.4
	73nm,1.4s						
THZ	Tophouse	31.63	170	eP	P	12 30 15.4	+1.4
	20nm,1.0s						
GUMO	Guam	31.68	319	LR	LR	12 42 03.1	
	comp=Z,166nm,20.8s,baz=132,slow=34						
TOO	Toolangi	32.30	211	eP	P	12 30 20.5	+0.6
	15nm,1.1s						
KHZ	Kahutara	32.38	169	eP	P	12 30 21.1	+0.7
	54nm,1.5s						
LTZ	Lake Taylor	32.51	171	eP	P	12 30 24.1	+2.4
	16nm,0.8s						
AS01	Alice Springs	32.77	243	eP	P	12 30 23.2	-1.0
AS31	Alice Springs	32.81	243	eP	P	12 30 23.1	-1.5
	1.4nm,0.8s						
ASAR	Alice Springs	32.82	243	P	P	12 30 22.8	-1.8
	5.8nm,1.0s,baz=72,slow=9.4,SNR=24						
ASAR				PcP	PcP	12 33 08.8	-0.6
	1.1nm,1.1s,baz=70,slow=3.3,SNR=4.4						
ASAR				LR	LR	12 41 51.2	
	comp=Z,248nm,21.2s,baz=72,slow=33						
RAR	Rarotonga	34.84	112	LR	LR	12 41 51.9	
	comp=Z,118nm,21.9s,baz=268,slow=31						
BBOO	Buckleboo	34.96	226	eP	P	12 30 43.0	-0.1
	10nm,0.8s						
SIJI	Sorong	35.46	284	P	P	12 30 45.5	-2.1
	9.8nm,0.7s,baz=135,slow=2.9,SNR=5.9						
FITZ	Fitzroy Crossi	39.32	255	eP	P	12 31 19.7	-0.6
	13nm,1.6s						
FITZ	Fitzroy Crossi	39.32	255	P	P	12 31 19.5	-0.8
	2.9nm,0.8s,baz=89,slow=6.4,SNR=5.9						
PPT	Papeete	43.94	104	LR	LR	12 45 39.9	
	comp=Z,178nm,20.9s,baz=269,slow=30						
PPT2	Papeete2	43.94	104	eLR	LR	12 44 35.8	
	comp=Z,312nm,22.5s,baz=262						
TBI	Tubuai	44.62	112	eS	S	12 38 56.5	+19
	92nm,26.0s						
TBI				eLR	LR	12 44 50.2	
	comp=Z,369nm,30.0s,baz=289						
TAOE	Nuku Hiva Isla	53.46	93	eS	S	12 40 57.7	+15
	74nm,26.3s						
TAOE				eLR	LR	12 48 36.5	
	comp=Z,190nm,26.1s						
MJAR	Matsushiro Arr	53.57	333	LR	LR	12 53 51.1	
	comp=Z,53nm,21.8s,baz=195,slow=34						
RKT	Rikitea	57.87	111	eLR	LR	12 50 43.3	
	comp=Z,304nm,32.5s						
ASAJ	Asahikawa	58.39	341	P	P	12 33 46.5	+0.4
	11nm,1.0s,baz=226,slow=14,SNR=3.5						
KSRS	Korea Array	59.48	326	P	P	12 33 54.0	+0.2
	1.5nm,0.7s,baz=125,slow=5.2,SNR=4.6						
KSRS				LR	LR	12 57 18.4	
	comp=Z,50nm,20.3s,baz=135,slow=34						
NJ2	Nanjing	61.64	315	eP	P	12 34 09.1	+0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	62.55	333	P	P	12 34 13.9	-0.6
	4.3nm,0.9s,baz=145,slow=7.0,SNR=4.9						
PETK	Petropavlovsk-	63.89	355	P	P	12 34 23.6	+0.3
	2.4nm,0.8s,baz=171,slow=10,SNR=3.2						
PETK				LR	LR	12 58 14.2	
	comp=Z,55nm,21.3s,baz=149,slow=32						
PEA1	Petropavlovsk-	63.89	355	eP	P	12 34 23.6	+0.3
KLR	Kul'dur	66.66	337	P	P	12 34 41.2	0.0
	4.9nm,1.0s,baz=175,slow=0.9,SNR=13						
VNDA	Vanda	66.86	181	LR	LR	13 00 32.7	
	comp=Z,80nm,19.8s,baz=10.0,slow=33						
GYA	Guiyang	68.08	304	⇑iP	P	12 34 51.1	+0.2
GYA				pP	pwP	12 35 02.8	+0.1
GYA				PP	PP	12 37 24.3	+2.8
GYA				S	S	12 43 53.8	+4.9
GYA				sS	sS	12 44 05.0	+2.1
GYA				SKS	SKiKP	12 44 43.3	-1.4
GYA				SS	SS	12 48 12.4	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.7s						
GYA				LR	LR		
	comp=N,430nm,18.0s						
GYA				LR	LR		
	comp=E,470nm,18.6s						
GYA				LR	LR		
	comp=Z,460nm,18.2s						
XAN	Xi'an	69.75	312	P	P	12 35 00.8	-0.3
XAN				pP	sP	12 35 15.8	+2.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				LR	LR		
	comp=Z,220nm,13.0s						
KMI	Kunming	70.79	301	P	P	12 35 09.1	+1.3
KMI				pP	pP	12 35 15.8	-1.0
KMI				sP	pwP	12 35 19.6	-0.1
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
KMI				pmax	pmax		
	comp=Z,92nm,5.9s						
HHC	Hu-ho-hao-te	71.45	320	eP	P	12 35 12.3	+1.0
HHC				pP	pP	12 35 18.4	-2.2
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,78nm,4.2s						
CMAR	Chiang Mai Arr	71.82	293	P	P	12 35 13.6	-0.3
	1.5nm,0.5s,baz=310,slow=26,SNR=4.1						
CMAR				LR	LR	13 08 36.0	
	comp=Z,36nm,18.0s,baz=110,slow=37						
CHTO	Chiang Mai	71.93	294	eP	P	12 35 14.8	+0.2
	8.6nm,1.2s						
CHTO	Chiang Mai	71.93	294	P	P	12 35 15.5	+0.9
	31nm,1.7s						
CD2	Chengdu	72.25	307	eP	P	12 35 16.0	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	Seymchan	74.09	354	P	P	12 35 25.8	-0.6
	0.7nm,0.5s,baz=120,slow=5.2,SNR=4.8						
LZH	Lanzhou	74.39	312	eP	P	12 35 29.3	+0.3
LZH				pP	sP	12 35 40.5	-1.2
LZH				sP	PcP	12 35 44.6	+1.0
LZH				ePP	PP	12 38 17.5	+1.9
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,7.5s						
LZH				LR	LR		
	comp=N,230nm,16.2s						
LZH				LR	LR		
	comp=E,240nm,16.5s						
LZH				LR	LR		
	comp=Z,310nm,18.6s						
GAMB	Gambell	76.23	10	eP	P	12 35 38.3	-0.4
	11nm,1.1s						
ULN	Ulaanbaatar	77.91	324	eP	P	12 35 49.2	+0.5
	9.0nm,1.1s						
SONA0	Songino Array	78.27	324	eP	P	12 35 50.6	-0.1
SONM	Songino Array	78.27	324	P	P	12 35 50.6	-0.1
	2.6nm,1.0s,baz=141,slow=6.9,SNR=15						
SONM				LR	LR	13 07 19.4	
	comp=Z,66nm,21.7s,baz=212,slow=33						
SONA1	Songino Array	78.28	324	eP	P	12 35 49.2	-1.5
BILL	Bilibino	78.51	0	eP	P	12 35 51.5	+0.1
	12nm,1.3s						
GTA	Gaotai	78.69	314	eP	P	12 35 53.5	+0.3
GTA				S	S	12 45 50.8	+2.2
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,62nm,7.3s						
GTA				LR	LR		
	comp=N,120nm,19.4s						
GTA				LR	LR		
	comp=E,200nm,18.4s						
GTA				LR	LR		
	comp=Z,230nm,19.0s						
QSPA	South Pole Qui	79.33	180	eP	P	12 35 56.7	+0.4
	7.8nm,0.9s						
ILAR	Eielson Array	83.22	19	P	P	12 36 16.6	0.0
	2.6nm,1.1s,baz=213,slow=6.5,SNR=5.3						
ILAR				LR	LR	13 05 51.8	
	comp=Z,56nm,21.2s,baz=176,slow=30						
MAW	Mawson	85.00	202	LR	LR	13 09 08.5	
	comp=Z,77nm,20.9s,baz=140,slow=32						
NVAR	Mina Array Bea	85.91	50	P	P	12 36 33.2	+2.1
	1.2nm,0.9s,baz=232,slow=7.4,SNR=3.9						
WMQ	Urumqi	88.72	315	eP	P	12 36 43.8	-0.6
WMQ				LR	LR		
	comp=N,190nm,15.3s						
WMQ				LR	LR		
	comp=E,220nm,28.5s						
WMQ				LR	LR		
	comp=Z,140nm,34.1s						
MK01	Makanchi Array	93.13	317	eP	P	12 37 03.4	-1.3
MK31	Makanchi Array	93.14	317	eP	P	12 37 03.7	-1.1
	4.5nm,1.2s						
MK32	Makanchi Array	93.14	317	eP	P	12 37 03.9	-0.9
MKAR	Makanchi Array	93.14	317	eP	P	12 37 03.7	-1.1
MKAR				ePcP	P	12 37 03.8	-1.0
MKAR	Makanchi Array	93.14	317	P	P	12 37 03.9	-1.0
	1.1nm,0.8s,baz=96,slow=6.6,SNR=10						
MKAR				LR	LR	13 21 41.8	
	comp=Z,48nm,18.1s,baz=49,slow=37						
ZALV	Zalesovo Beam	93.16	324	P	P	12 37 03.7	-1.0
	0.4nm,0.3s,baz=101,slow=4.6,SNR=4.1						
ZALV				LR	LR	13 18 26.1	
	comp=Z,24nm,20.2s,baz=70,slow=35						
ZAA1	Zalesovo Array	93.16	324	eP	P	12 37 03.7	-1.0
MAKZ	Makanchi	93.36	317	eP	P	12 37 05.2	-0.6
	8.0nm,1.3s						
YKA	Yellowknife Ar	94.72	27	P	P	12 37 10.3	-1.3
	0.1nm,0.6s,baz=260,slow=4.6,SNR=3.8						
NRIK	Noril'sk	95.72	340	LR	LR	13 19 34.3	
	comp=Z,58nm,20.9s,baz=56,slow=35						
TXAR	Lajitas Array	95.80	61	LR	LR	13 13 22.9	
	comp=Z,62nm,20.0s,baz=0.0,slow=31						
ARA0	ARCESS Array S	115.94	345	ePKPdf	PKiKP	12 42 31.6	-1.3
ARCES	ARCESS Array B	115.94	345	PKP	PKiKP	12 42 31.6	-1.3
	1.9nm,0.8s,baz=66,slow=2.3,SNR=3.4						
TORD	Torodi Ar. Bea	164.04	280	PKP	PKPdf	12 43 54.1	-0.9
	0.5nm,0.9s,baz=60,slow=3.5,SNR=2.4						
TORD				PKPab	PKPab	12 44 45.8	-2.4
	0.7nm,0.9s,baz=72,slow=4.7,SNR=4.1						
TOA1	Torodi Ar. Sit	164.04	280	ePKPdf	PKPdf	12 43 54.1	-0.9
TOA1				ePKPab	PKPab	12 44 45.8	-2.4

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*KRNET **15** 12:24:11.8±0.1, 40°.32N×71°.86E, h16km, mb2.6*
*ISCJB **15** 12:24:12.4±0.4, 40°.29N±0°.03×71°.86E±0°.04, h10km, Error ellipse: s-maj=4.5km s-min=3.4km az=42.7*
*SOME **15** 12:24:13.7, 40°.42N×71°.93E, h20km*
*NNC **15** 12:24:17.0±2.6, 40°.55N×72°.24E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=25.1km s-min=8.7km az=57.0*

ISC 15 12:24:11.8±0.8**, 40°.36N**±0°.03×**71°.96E**±0°.03**, h10**km**, n36, σ2s.44**/61**, 28C-20D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.89	188	⇑iP	Pg	12 24 27.8	-1.2
	baz=83						
DRK				⇑iS	Sg	12 24 38.7	-1.9
	baz=83						
BTK	Batken	0.92	251	⇑iP	Pg	12 24 27.9	-1.7
	baz=52						
BTK				⇑iS	Sg	12 24 39.2	-2.5
	baz=52						
SFK	Sufi-Kurgan	1.23	106	⇑P	Pg	12 24 35.9	+0.3
	4.0nm,0.7s						
SFK				⇑S	Sn	12 24 55.0	+2.7
	18nm,0.3s						
SFK	Sufi-Kurgan	1.23	106	Pg	Pg	12 24 36.7	+1.1
	3.2nm,0.2s						
SFK				Lg	Lg	12 24 52.8	
	31nm,0.2s						
SFK	Sufi-Kurgan	1.23	106	⇓iP	Pg	12 24 35.9	+0.3
	baz=3.0						
SFK				⇓iS	Sn	12 24 52.8	+0.6
	baz=3.0						
ARSB	Arslanbob	1.24	39	⇓iP	Pg	12 24 35.4	-0.2
	baz=40						
ARSB				⇓iS	Sn	12 24 54.2	+2.0
	baz=40						
ARK	Arkit	1.43	0	⇑eP	Pg	12 24 38.6	-0.8
	baz=4.0						
ARK				⇑iS	Sg	12 24 58.5	+0.5
	baz=4.0						
MNAS	Manas	2.16	11	⇓Pn	Pb	12 24 51.6	+0.4
	5.3nm,0.4s						
MNAS				⇓Lg	Lg	12 25 19.0	
	29nm,0.5s						
MNAS	Manas	2.16	11	Pg	Pb	12 24 51.2	0.0
	5.8nm,0.3s						
MNAS				Lg	Lg	12 25 18.8	
	22nm,0.4s						
MNAS	Manas	2.16	11	⇑iP	Pb	12 24 50.8	-0.4
	baz=12						
MNAS				⇑iS	Sb	12 25 19.1	+1.0
	baz=12						
AML	Almayashu	2.20	36	⇑iP	Pb	12 24 51.8	-0.1
	baz=37						
AML				⇑iS	Sb	12 25 20.4	+1.0
	baz=37						
IUG	Iuzhnay	2.30	321	eP	Pb	12 24 52.5	-0.9
	27nm,0.3s						
IUG				eS	Sb	12 25 20.4	-1.6
	66nm,0.5s						
ARLS	Aral	2.33	49	⇑iP	Pb	12 24 53.4	-0.7
	baz=49						
ARLS				⇑iS	Sb	12 25 24.1	+1.1
	baz=49						
MRKS	Merke	2.56	21	Pg	Pg	12 24 59.5	-1.5
	11nm,0.3s						
MRKS				Lg	Lg	12 25 33.6	
	13nm,0.5s						
MRKS	Merke	2.56	21	eP	Pg	12 25 00.0	-0.9
	3.5nm,0.3s						
MRKS				eS	Sg	12 25 33.6	-0.6
	8.8nm,0.3s						
EKS2	Erkin-Say	2.67	30	⇓eP	Pb	12 24 58.0	-1.9
	baz=31						
EKS2				⇓iS	Sb	12 25 31.5	-1.3
	baz=31						
UCH	Uchtor	2.68	45	⇑iP	Pb	12 24 58.7	-1.5
	baz=45						
UCH				⇑iS	Sb	12 25 32.4	-0.9
	baz=45						
KK31	Karatay Array	2.94	339	⇑Pg	Pg	12 25 08.9	+0.6
	2.2nm,0.3s,baz=144,slow=16,SNR=18						
KK31				⇓Lg	Lg	12 25 46.2	
	6.7nm,0.6s,baz=138,slow=31,SNR=5.7						
AAK	Ala-Archa	2.97	39	⇑Pn	Pb	12 25 03.8	-1.1
	2.7nm,0.3s						
AAK				⇑Lg	Lg	12 25 44.2	
	6.1nm,0.4s						
AAK	Ala-Archa	2.97	39	⇑iP	Pb	12 25 02.4	-2.5
	baz=40						
AAK				⇑iS	Sb	12 25 39.0	-2.2
	baz=40						
KZA	Kyzart	3.02	54	⇓iP	Pb	12 25 03.0	-2.9
	baz=54						
KZA				⇓iS	Sb	12 25 40.7	-2.3
	baz=54						
KBK	Karagaybulak	3.21	43	⇓iP	Pb	12 25 05.9	-3.1
	baz=44						
KBK				⇓iS	Sb	12 25 44.8	-3.4
	baz=44						
NRN	Naryn	3.25	69	⇑iP	Pn	12 25 06.0	+2.9
	baz=69						
NRN				⇑iS	Sn	12 25 45.2	+3.2
	baz=69						
CHMS	Chumysh	3.36	38	⇓iP	Pb	12 25 07.9	-3.7
	baz=38						
CHMS				⇓iS	Sn	12 25 48.2	+3.7
	baz=38						
USP	Ospenovka	3.47	32	⇑iP	Pb	12 25 09.3	-4.1
	baz=33						
USP				⇑iS	Sn	12 25 50.6	+3.5
	baz=33						
ULHL	Ulahol	3.74	58	⇓iP	Pn	12 25 13.2	+3.4
	baz=58						
ULHL				⇓iS	Sn	12 25 57.9	+4.0
	baz=58						
TKM2	Tokmak 2	3.74	46	⇑Pn	Pn	12 25 12.1	+2.3
	2.0nm,0.6s						
TKM2				⇑Lg	Lg	12 26 07.5	
	3.2nm,0.5s						
TKM2	Tokmak 2	3.74	46	⇓eP	Pn	12 25 12.8	+3.0
	baz=46						
TKM2				⇓eS	Sn	12 25 58.0	+4.0
	baz=46						
KST	Kastek	4.02	47	Pg	Pg	12 25 26.2	-2.6
	8.0nm,1.7s						
KST				Lg	Lg	12 26 18.8	
	7.2nm,0.7s						
KST	Kastek	4.02	47	⇑iP	Pg	12 25 26.2	-2.6
	8.0nm,1.7s						
KST				⇓iS	Sg	12 26 18.8	-2.1
	7.2nm,0.7s						
DGS	Degeres	4.05	43	Pg	Pb	12 25 26.1	+2.8
	4.5nm,0.5s						
DGS				Lg	Lg	12 26 19.4	
	7.5nm,0.5s						
DGS	Degeres	4.05	43	eP	Pb	12 25 25.9	+2.6
	4.5nm,0.5s						
DGS				eS	Sg	12 26 18.0	-3.9
	7.5nm,0.5s						
KTBS	Karatobe	4.86	45	Pg	Pg	12 25 40.9	-4.0
	1.3nm,0.6s						
KTBS				Lg	Lg	12 26 43.5	
	8.8nm,0.5s						
KTBS	Karatobe	4.86	45	eP	Pg	12 25 40.9	-4.0
	1.3nm,0.6s						
KTBS				eS	Sg	12 26 43.5	-4.2
	8.8nm,0.5s						
CHKK	Chushkaly	5.12	45	Pg	Pg	12 25 47.1	-2.7
	1.0nm,0.3s						
CHKK				Lg	Lg	12 26 53.7	
	3.8nm,0.3s						
CHKK	Chushkaly	5.12	45	eP	Pg	12 25 46.9	-2.9
	1.0nm,0.3s						
CHKK				eS	Sg	12 26 53.7	-2.3
	3.8nm,0.3s						

IDC 15 12:24:35.0±5.7**, 5°.05S**×**153°.22E, h0**km**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/48**, mbtmp3.5**/4**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx2.9**/21**, Error ellipse: s-maj=174.0km s-min=28.8km az=107.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.60	230	P	P	12 29 48.7	+0.9
	1.4nm,0.7s,baz=54,slow=9.8,SNR=7.8						
ASAR	Alice Springs	26.25	223	P	P	12 30 11.4	-0.7
	0.2nm,0.4s,baz=54,slow=9.3,SNR=9.9						
NWAO	Narrogin (SRO)	43.51	226	LR	LR	12 51 30.0	
	comp=Z,464nm,19.0s,baz=338,slow=37						
SONM	Songino Array	66.76	328	P	P	12 35 28.9	+0.5
	0.2nm,0.5s,baz=136,slow=7.2,SNR=3.8						
MKAR	Makanchi Array	80.79	319	P	P	12 36 50.0	-0.7
	0.4nm,0.8s,baz=106,slow=4.7,SNR=3.6						

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*ISCJB **15** 12:39:53.0±1.7, 67°.65N±0°.03×142°.44E±0°.06, h12km±11km, mb4.5/123, MS3.9/7, Error ellipse: s-maj=4.9km s-min=3.5km az=157.2*
*IDC **15** 12:39:52.4±0.5, 67°.59N×142°.53E, h0km, mb4.3/32, mb1 4.4/35, mb1mx4.3/53, mbtmp4.2/35, ML3.8/3, MS3.5/4, Ms1 3.5/4, ms1mx2.9/42, Error ellipse: s-maj=12.3km s-min=11.1km az=150.0*

MOS **15** *12:39:53.1±0.9, 67.°66N×142.°49E, h15^{km}, mb4.7/45, Error ellipse: s-maj=12.3km s-min=5.2km az=97.1*
YARS **15** *12:39:54.3±0.3, 67.°60N±0.°02×142.°66E±0.°05, h19^{km}*
NEIC **15** *12:39:54.5±0.2, 67.°66N×142.°36E, h10^{km}, mb4.6/75, Error ellipse: s-maj=4.5km s-min=3.1km az=175.0*
ISC 15 12:39:53.7±0.8**, 67.°61N**±0.°04×**142.°50E**±0.°03**, h8**^{km}±5^{km}**, n276, σ1.^{s}00**/293**, mb4.6**/127**, MS3.9**/7**, 19C-4D, Eastern Siberia**

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Code  Station Name        Δ°    AZ°    Phase ID         Time       Res
                                      Op      ISC      h  m  s    ISC
MOMR  Moma               1.18  166   eP      Pg       12 40 14.9  -1.3
MOMR                                 eS      Sg       12 40 30.3  -1.2
MOMR                                  pmax   pmax
      comp=Z,1µm,0.2s
MOMR                                  smax   smax
      comp=E,5µm,0.4s
MOMR  Moma               1.18  166   i P     Pg       12 40 14.9  -1.3
MOMR                                  Pmax            12 40 14.9
      comp=Z,1µm,0.2s
MOMR                                 eS      Sg       12 40 30.3  -1.2
MOMR                                  Smax            12 40 30.3
      comp=E,5µm,0.4s
YBGR  Belaya Gora        1.67   54   i P     Pn       12 40 23.2  +0.1
YBGR                                  Pmax            12 40 23.2
      comp=Z,3µm,0.4s
YBGR                                 eS      Sn       12 40 45.1  +0.4
YBGR                                  Smax            12 40 45.1
      comp=N,9µm,0.3s
BTGS  Batagay            3.01  274   eP      Pn       12 40 42.5  +0.9
BTGS                                 eS      Sn       12 41 19.4  +1.7
BTGS                                  pmax   pmax
      comp=Z,386nm,0.6s
BTGS  Batagay            3.01  274   eP      Pn       12 40 42.5  +0.9
BTGS                                 eP      Pb       12 40 48.6  +1.2
BTGS                                  Pmax            12 40 48.6
      comp=Z,386nm,0.6s
BTGS                                 eS      Sn       12 41 19.4  +1.7
BTGS                                 eS      Sg       12 41 30.1  -0.1
BTGS                                  Smax            12 41 30.1
      comp=N,2µm,0.5s
SEY   Seymchan           6.25  134 ceP      Pn       12 41 26.0  -0.1
SEY   Seymchan           6.25  134    Pn     Pn       12 41 26.1   0.0
      comp=N,1.7nm,0.3s,baz=312,slow=18,SNR=16
SEY                                   Lg     Lg       12 43 07.3
      comp=N,7.1nm,0.3s,baz=351,slow=19,SNR=9.2
YAK   Yakutsk            7.81  230   eP      Pn       12 41 44.4  -3.0
YAK                                  e                12 43 11.2
YAK                                   pmax   pmax
      comp=Z,61nm,0.3s
YAK                                   pmax   pmax
      comp=E,22nm,0.3s
YAK                                   smax   smax
      comp=N,604nm,0.4s
YAK                                   smax   smax
      comp=E,317nm,0.3s
MA2   Magadan            8.85  152   ePn     Pn       12 42 04.8  +3.0
MA2   Magadan            8.85  152   i P     Pn       12 42 05.1  +3.4
MA2   Magadan            8.85  152    Pn     Pn       12 42 03.4  +1.7
      comp=E,0.4nm,0.3s,baz=342,slow=20,SNR=2.8
MA2                                   Lg     Lg       12 44 32.1
      comp=E,2.0nm,0.3s,baz=37,slow=20,SNR=7.2
MA2                                   LR     LR       12 45 46.1
      comp=E,157nm,21.2s,baz=336,slow=40
BILL  Bilibino           8.98   76   ePn     Pn       12 42 05.2  +1.8
BILL  Bilibino           8.98   76 ceP      Pn       12 42 05.1  +1.7
BILL                                  pmax   pmax
      comp=Z,9.0nm,1.0s
ZEA   Zeya              15.71  215   eP      Pn       12 43 35.6  +0.5
ZEA                                   pmax   pmax
      comp=N,18nm,1.0s
ZEA                                   pmax   pmax
      comp=Z,23nm,1.0s
ZEA                                   MLR    MLR
      comp=N,700nm,9.0s
ZEA                                   MLR    MLR
      comp=Z,800nm,9.0s
PEA0B Petropavlovsk-    16.29  146   ePn     P        12 43 44.7  -0.9
      comp=Z,36nm,1.2s
PETK  Petropavlovsk-    16.29  146   ePn     P        12 43 46.6  +1.1
PETK  Petropavlovsk-    16.29  146   eP      P        12 43 46.6  +1.1
PET   Petropavlovsk     16.58  144   ePn     P        12 43 47.5  -1.1
      comp=Z,94nm,1.4s
PET   Petropavlovsk     16.58  144   i P     Pn       12 43 46.8  +0.7
PET                                   pmax   pmax
      comp=Z,39nm,1.1s
GAMB  Gambell           18.88   80   eP      Pn       12 44 15.6  +1.0
      comp=Z,7.4nm,0.9s
KLR   Kul'dur           19.21  202   i P     Pn       12 44 19.5  +0.8
KLR   Kul'dur           19.21  202    P      P        12 44 18.2  +0.5
      comp=Z,0.1nm,0.3s,baz=3.7,slow=9.0,SNR=5.1
NRIK  Noril'sk          19.67  300    P      Pn       12 44 23.8  -0.2
      comp=Z,0.9nm,0.3s,baz=71,slow=10,SNR=5.3
NRIK                                  S      S        12 48 00.1  -4.1
      comp=Z,0.4nm,0.3s,baz=60,slow=20,SNR=2.2
NRIK                                  Lg     Lg       12 50 13.1
      comp=Z,0.5nm,0.3s,baz=18,slow=20,SNR=4.2
NRIK                                  LR     LR       12 52 29.7
      comp=Z,79nm,19.8s,baz=76,slow=38
RDOG  Red Dog Mine      20.05   63   eP      Pn       12 44 28.1  -0.5
      comp=Z,14nm,1.1s
ANM   Nome              20.82   74   eP      Pn       12 44 36.4  -1.1
      comp=Z,6.0nm,0.8s
ANM   Nome              20.82   74   eP      Pn       12 44 36.4  -1.2
ANM                                   pmax   pmax
      comp=Z,6.0nm,0.8s
HIA   Hailar            21.66  223   eP      P        12 44 44.9  +0.5
      comp=Z,22nm,0.8s
HIA   Hailar            21.66  223   eP      P        12 44 44.9  +0.5
HIA                                   pmax   pmax
      comp=Z,22nm,0.8s
ASAJ  Asahikawa         23.55  180    P      P        12 45 03.0  -1.1
ASAJ  Asahikawa         23.55  180    P      P        12 45 03.0  -1.1
      comp=Z,3.5nm,0.7s,baz=6.3,slow=9.2,SNR=4.8
MDJ   Mudanjiang        24.04  203    P      P        12 45 08.9  +0.1
MDJ                                   pmax   pmax
      comp=Z,12nm,1.1s
MDJ                                   pmax   pmax
      comp=Z,320nm,9.2s
MDJ   Mudanjiang        24.04  203   eP      P        12 45 09.2  +0.4
      comp=Z,31nm,1.5s
USRK  Ussuriysk Ar.     24.12  199    P      P        12 45 09.3  -0.3
      comp=Z,2.5nm,0.6s,baz=13,slow=11,SNR=11
TOLK  Toolik Lake Re    24.19   56   eP      P        12 45 11.0  +0.9
      comp=Z,8.7nm,0.8s
IM3   Indian Mountai    24.20   64   eP      P        12 45 10.5  +0.4
TLY   Talaya            24.69  249   i P     P        12 45 16.2  +1.4
COLD  Coldfoot          24.72   59   eP      P        12 45 16.0  +1.2
      comp=Z,8.1nm,0.8s
CN2   Changchun         25.53  210   eP      P        12 45 22.0  -0.4
MOY   Mondy             25.66  252   eP      P        12 45 25.2  +1.5
MOY                                   pmax   pmax
      comp=Z,31nm,1.3s
MLY   Manley            25.77   64   eP      P        12 45 26.6  +2.1
      comp=Z,5.5nm,0.9s
ZAK   Zakamensk         25.89  248   eP      P        12 45 26.5  +0.7
ZAK                                   pmax   pmax
      comp=Z,4.0nm,1.1s
PPLA  Purkeypile        26.57   69   eP      P        12 45 33.8  +2.0
      comp=Z,26nm,1.6s
MDM   Murphy Dome       26.67   62   eP      P        12 45 33.2  +0.6
      comp=Z,6.7nm,0.8s
FYU   Fort Yukon        26.71   58   eP      P        12 45 32.7  -0.2
      comp=Z,34nm,1.4s
ULN   Ulaanbaatar       26.74  240   i P     P        12 45 34.2  +0.7
ULN                                   pmax   pmax
      comp=Z,1.0nm,0.9s
COLA  College           26.85   62   i P     P        12 45 36.5  +2.3
COLA                                  pmax   pmax
      comp=Z,7.0nm,0.9s
TRF   Thorofare Moun    26.89   66   eP      P        12 45 35.5  +0.7
      comp=Z,11nm,1.0s
SONA1 Songino Array     26.97  241   eP      P        12 45 36.2  +0.6
SONA0 Songino Array     26.98  241   eP      P        12 45 37.2  +1.5
SONA0                                ePcP    PcP      12 48 55.7  -1.2
SONM  Songino Array     26.98  241    P      P        12 45 37.2  +1.5
      comp=Z,1.0nm,0.5s,baz=26,slow=9.2,SNR=14
SONM                                  PcP    PcP      12 48 55.7  -1.2
      comp=Z,0.3nm,0.6s,baz=6.5,slow=2.3,SNR=3.4
WRH   Wood River Hil    27.02   63   eP      P        12 45 37.1  +1.4
      comp=Z,14nm,1.6s
IL1   Eielson Array     27.24   62   eP      P        12 45 38.6  +0.9
ILAR  Eielson Array     27.24   62    P      P        12 45 38.0  +0.4
      comp=Z,6.0nm,0.9s,baz=295,slow=8.0,SNR=26
ILB   Eielson Array     27.24   62   eP      P        12 45 38.1  +0.4
PRP   Porcupine Dome    27.24   60   eP      P        12 45 38.9  +1.0
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      comp=Z,8.0nm,1.5s
SUA   Susitna One       28.01   70   eP      P        12 45 44.8  +0.1
      comp=Z,8.8nm,0.6s
GHO   Glory Hole Cre    28.46   68   eP      P        12 45 49.4  +0.7
      comp=Z,20nm,1.2s
SML   Sawmill           28.64   68   eP      P        12 45 50.2  -0.1
      comp=Z,49nm,1.6s
SML   Sawmill           28.64   68   eP      P        12 45 50.2  -0.1
SML                                   pmax   pmax
      comp=Z,49nm,1.6s
EGAK  Eagle             29.15   59   eP      P        12 45 54.9  +0.3
      comp=Z,20nm,1.6s
INK   Inuvik            29.26   49   eP      P        12 45 56.3  +0.7
      comp=Z,9.5nm,1.6s
INK   Inuvik            29.26   49   eP      P        12 45 56.3  +0.7
INK                                   pmax   pmax
      comp=Z,10.0nm,1.6s
INK   Inuvik            29.26   49    P      P        12 45 56.2  +0.7
      comp=Z,0.6nm,0.8s,baz=311,slow=9.3,SNR=4.3
NVS   Novosibirsk       29.92  275   i P     P        12 46 01.7  +0.1
ZAA1  Zalesovo Array    29.99  272   eP      P        12 46 02.1   0.0
ZALV  Zalesovo Beam     29.99  272    P      P        12 46 02.1  -0.1
      comp=Z,0.7nm,0.4s,baz=46,slow=6.2,SNR=6.1
SPA0  Spitsbergen Ar    30.99  341   eP      P        12 46 11.0  +0.2
SPITS Spitsbergen Ar    30.99  341    P      P        12 46 11.2  +0.3
      comp=Z,19nm,0.9s,baz=49,slow=6.5,SNR=12
HHC   Hu-ho-hao-te      31.66  228   eP      P        12 46 18.4  +1.2
HHC                                   pmax   pmax
      comp=Z,12nm,0.8s
HHC                                   pmax   pmax
      comp=Z,200nm,4.1s
DGZ   Jazzator, Alta    32.34  264   i P     P        12 46 23.5  +0.4
DGZ                                   pmax   pmax
      comp=Z,2.0nm,0.8s
RES   Resolute Bay      33.32   24   eP      P        12 46 31.9  +0.7
      comp=Z,5.0nm,1.3s
RES   Resolute Bay      33.32   24   eP      P        12 46 31.9  +0.7
RES                                   pmax   pmax
      comp=Z,5.0nm,1.3s
KURK  Kurchatov         34.89  274   eP      P        12 46 44.8  -0.3
      comp=Z,14nm,1.3s
KURK  Kurchatov         34.89  274 ceP      P        12 46 45.3  +0.2
KURK                                  pmax   pmax
      comp=Z,12nm,1.7s
DAG   Danmarks Havn     35.38  353   i P     P        12 46 48.7  -0.3
      comp=Z,7.6nm,0.7s
DAG   Danmarks Havn     35.38  353   i P     P        12 46 48.7  -0.3
DAG                                   pmax   pmax
      comp=Z,5.0nm,0.7s
KEV   Kevo              36.05  328   eP      P        12 46 54.7  -0.2
      comp=Z,36nm,1.5s
KEV   Kevo              36.05  328   eP      P        12 46 54.7  -0.2
KEV                                   pmax   pmax
      comp=Z,37nm,1.5s
BVAR  Borovoye Array    36.18  283    P      P        12 46 56.2   0.0
      comp=Z,4.5nm,0.7s,baz=52,slow=7.8,SNR=18
BVAR                                  PP     PP       12 48 17.2  -0.9
      comp=Z,1.6nm,0.7s,baz=28,slow=13,SNR=3.6
BRVK  Borovoye          36.19  283   eP      P        12 46 55.7  -0.5
      comp=Z,5.8nm,0.9s
BRVK  Borovoye          36.19  283 ceP      P        12 46 57.0  +0.7
BRVK                                  pmax   pmax
      comp=Z,8.0nm,1.3s
ARA0  ARCESS Array S    36.53  328   eP      P        12 46 58.6  -0.5
ARA0                                 ePcP    PcP      12 49 22.1  -0.1
ARCES ARCESS Array B    36.53  328   eP      P        12 46 59.1   0.0
ARCES ARCESS Array B    36.53  328   eP      P        12 46 58.4  -0.7
ARCES ARCESS Array B    36.53  328    P      P        12 46 58.6  -0.5
      comp=Z,3.3nm,0.7s,baz=47,slow=7.9,SNR=17
ARCES                                 PcP    PcP      12 49 22.1  -0.1
      comp=Z,1.7nm,0.8s,baz=48,slow=1.3,SNR=3.8
GTA   Gaotai            36.65  242   eP      P        12 47 02.3  +1.8
GTA                                   pP     sP       12 47 05.9  +1.8
GTA                                   sP     pP       12 47 08.6  +5.5
GTA                                   S      S        12 52 42.6  -1.0
GTA                                   pmax   pmax
      comp=Z,2.0nm,0.7s
GTA                                   pmax   pmax
      comp=Z,56nm,5.4s
GTA                                   LR     LR
      comp=N,180nm,15.6s
GTA                                   LR     LR
      comp=E,220nm,16.5s
GTA                                   LR     LR
      comp=Z,130nm,17.1s
MK31  Makanchi Array    36.69  266   eP      P        12 46 60.0  -0.6
MK31  Makanchi Array    36.69  266   eP      P        12 47 00.0  -0.6
MK32  Makanchi Array    36.69  266   eP      P        12 47 00.3  -0.3
MK32                                 ePP     PP       12 48 22.1  -1.7
MKAR  Makanchi Array    36.69  266   eP      P        12 46 60.0  -0.7
      comp=Z,49nm,0.6s
MKAR  Makanchi Array    36.69  266    P      P        12 47 00.3  -0.3
      comp=Z,6.2nm,0.7s,baz=48,slow=7.2,SNR=71
MKAR                                  PP     PP       12 48 22.1  -1.7
      comp=Z,2.8nm,0.8s,baz=50,slow=12,SNR=4.1
MK01  Makanchi Array    36.70  266   eP      P        12 47 00.2  -0.5
MAKZ  Makanchi          36.79  267   eP      P        12 47 01.0  -0.5
      comp=Z,6.3nm,0.6s
MAKZ  Makanchi          36.79  267   eP      P        12 47 01.0  -0.5
WMQ   Urumqi            37.14  258   eP      P        12 47 05.9  +1.4
WMQ                                   pP     sP       12 47 11.1  +3.0
WMQ                                   sP     pP       12 47 15.0  +7.9
WMQ                                   pmax   pmax
      comp=Z,20nm,1.5s
WMQ                                   pmax   pmax
      comp=Z,210nm,3.8s
WMQ                                   LR     LR
      comp=N,140nm,16.1s
WMQ                                   LR     LR
      comp=E,220nm,23.7s
WMQ                                   LR     LR
      comp=Z,120nm,17.1s
ARU   Arti              37.77  296 d iP     P        12 47 09.2  -0.4
ARU                                                   12 48 32.4
ARU                                   S      S        12 53 00.4  +0.4
ARU                                   SS     SnSn     12 55 40.3  +1.0
ARU                                   pmax   pmax
      comp=Z,4.0nm,0.8s
NJ2   Nanjing           38.20  213   eP      P        12 47 15.1  +1.6
NJ2                                   pmax   pmax
      comp=Z,8.0nm,0.5s
LZH   Lanzhou           38.37  235   eP      P        12 47 14.9  -0.2
LZH                                   pP     pP       12 47 18.1  +0.5
LZH                                   sP     sP       12 47 19.6  +0.9
LZH                                  ePP     PnPn     12 48 46.0  +1.7
LZH                                   pmax   pmax
      comp=Z,20nm,1.1s
LZH                                   pmax   pmax
      comp=Z,62nm,5.4s
LZH                                   LR     LR
      comp=N,200nm,13.3s
LZH                                   LR     LR
      comp=E,220nm,13.4s
LZH                                   LR     LR
      comp=Z,310nm,16.6s
YKA   Yellowknife Ar    38.89   46    P      P        12 47 18.9  -0.1
      comp=Z,1.0nm,0.7s,baz=324,slow=7.7,SNR=13
YKB5  Yellowknife Ar    38.89   46   eP      P        12 47 19.3  +0.3
OTUK  Ortayu            39.29  277    P      P        12 47 23.2  +0.6
SUMG  Summit            40.06    0   eP      P        12 47 29.9  +0.8
      comp=Z,4.7nm,0.8s
SUMG  Summit            40.06    0   i P     P        12 47 29.5  +0.4
SUMG  Summit            40.06    0   i P     P        12 47 29.5  +0.4
KLMR  Klimovskoe        40.24  312   eP      P        12 47 29.3  -1.0
KLMR                                  pmax   pmax
      comp=Z,10.0nm,1.3s
KLMR  Klimovskoe        40.24  312   eP      P        12 47 29.3  -1.0
KLMR                                  AMP             12 47 31.4
      comp=Z,10.0nm,1.2s
SCO   Scoresbysund      41.76  352   eP      P        12 47 42.5  -0.1
      comp=Z,19nm,1.5s
SCO   Scoresbysund      41.76  352   eP      P        12 47 42.5  -0.1
SCO                                   pmax   pmax
      comp=Z,19nm,1.5s
SUF   Sumiainen         42.15  322    P      P        12 47 46.7  +0.8
SUF                                   pmax   pmax
      comp=Z,18nm,1.2s
AKTO  Aktyubinsk        42.81  290    P      P        12 47 51.3  -0.1
      comp=Z,3.2nm,0.4s,baz=52,slow=6.7,SNR=14
ABKAR Akbulak array     43.09  288   eP      P        12 47 54.0  +0.3
      comp=Z,6.3nm,0.9s
AAK   Ala-Archa         43.18  270   eP      P        12 47 56.4  +1.7
      comp=Z,14nm,0.6s
AAK   Ala-Archa         43.18  270 ceP      P        12 47 56.3  +1.6
AAK                                   pmax   pmax
      comp=Z,8.0nm,0.7s
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FIA1  FINESS Array S    43.27  321   eP      P        12 47 51.5  -3.5
      comp=Z,26nm,1.4s
FIA0  FINESS Array S    43.27  321   eP      P        12 47 55.0   0.0
FIA0  FINESS Array S    43.27  321   eP      P        12 47 55.0   0.0
FINES FINESS Array B    43.27  321    P      P        12 47 55.0   0.0
      comp=Z,6.7nm,0.5s,baz=29,slow=9.5,SNR=38
NRN   Naryn             43.63  268   eP      P        12 47 59.5  +1.0
      comp=Z,6.9nm,0.6s
NRN   Naryn             43.63  268   eP      P        12 47 59.6  +1.0
NRN                                   pmax   pmax
      comp=Z,7.0nm,0.6s
MNAS  Manas             44.07  272    P      P        12 48 03.4  +1.5
MNAS                                  pmax   pmax
      comp=Z,19nm,1.0s
KK31  Karatay Array     44.30  274   eP      P        12 48 04.2  +0.6
      comp=Z,12nm,1.4s
KK31  Karatay Array     44.30  274   eP      P        12 48 04.2  +0.6
KK31                                  pmax   pmax
      comp=Z,12nm,1.4s
KKAR  Karatay Array     44.30  274   eP      P        12 48 04.2  +0.6
KKAR  Karatay Array     44.30  274   eP      P        12 48 04.2  +0.6
KSH   Kashi             45.30  267    P      P        12 48 16.5  +4.8
KSH                                   pP     sP       12 48 21.9  +6.6
KSH                                   pmax   pmax
      comp=Z,6.0nm,0.5s
KSH                                   pmax   pmax
      comp=Z,200nm,4.6s
VSU   Vasula            45.71  319   i P     P        12 48 15.1  +0.6
VSU                                   pmax   pmax
      comp=Z,58nm,1.0s
OBN   Obninsk           45.93  310   eP      P        12 48 15.3  -0.9
OBN                                   pmax   pmax
      comp=Z,5.0nm,1.1s
NC204 NORSAR Array S    46.72  330   eP      P        12 48 22.9  +0.3
      comp=Z,46nm,1.6s
BTK   Batken            46.80  272   eP      P        12 48 26.5  +3.0
      comp=Z,13nm,0.9s
NB2   NORSAR Subarra    46.85  330    P      P        12 48 23.0  -0.6
      comp=Z,3.3nm,0.7s,baz=24,slow=7.9
NB2   NORSAR Subarra    46.85  330    P      P        12 48 22.9  -0.6
NB200 NORSAR Array S    46.85  330   eP      P        12 48 23.3  -0.3
NOA   NORSAR Array B    46.85  330    P      P        12 48 23.3  -0.3
      comp=Z,5.0nm,0.7s,baz=24,slow=7.8,SNR=13
NBO00 NORSAR Array S    46.95  330   eP      P        12 48 23.9  -0.4
FRB   Frobisher Bay     47.05   18    P      P        12 48 24.3  -0.7
FRB                                   pmax   pmax
      comp=Z,11nm,0.8s
NC602 NORSAR Array S    47.07  330   eP      P        12 48 25.3  +0.1
      comp=Z,9.9nm,0.9s
NORES NORESS Array B    47.07  330    P      P        12 48 24.8  -0.4
NORES                                 pmax   pmax
      comp=Z,3.0nm,0.6s
NAO01 NORSAR Array S    47.10  330   eP      P        12 48 25.3  -0.1
      comp=Z,12nm,1.1s
FCC   Fort Churchill    47.28   36   eP      P        12 48 25.7  -1.1
      comp=Z,6.8nm,1.3s
FCC   Fort Churchill    47.28   36   eP      P        12 48 25.7  -1.1
FCC                                   pmax   pmax
      comp=Z,7.0nm,1.3s
LPSR  Galich'ya Gora    47.38  306   eP      P        12 48 27.5  -0.2
LPSR                                  pmax   pmax
      comp=Z,10.0nm,1.0s
VRH   Novokhopyorsk     47.71  303   eP      P        12 48 28.5  -1.8
VRH                                   pmax   pmax
      comp=Z,9.0nm,0.9s
GAR   Garm              47.91  272   eP      P        12 48 33.2  +1.0
      comp=Z,34nm,1.2s
GAR   Garm              47.91  272   eP      P        12 48 33.2  +1.0
GAR                                   pmax   pmax
      comp=Z,34nm,1.2s
VSR   Storozhevoye      48.51  305   eP      P        12 48 34.5  -1.9
VSR                                   pmax   pmax
      comp=Z,10.0nm,0.7s
CHGR  Chuyangaron       48.66  272   eP      P        12 48 37.2  -0.6
      comp=Z,36nm,0.6s
KMI   Kunming           48.93  230    P      P        12 48 39.1  -1.1
KMI                                   sP     sP       12 48 45.8  +1.9
KMI                                   pmax   pmax
      comp=Z,14nm,1.0s
KMI                                   pmax   pmax
      comp=Z,120nm,5.0s
KMI                                   LR     LR
      comp=N,200nm,16.2s
KMI                                   LR     LR
      comp=E,210nm,15.8s
KMI                                   LR     LR
      comp=Z,190nm,21.3s
FFC   Flin Flon         48.96   44   eP      P        12 48 40.1  +0.2
      comp=Z,6.3nm,0.8s
FFC   Flin Flon         48.96   44   i P     P        12 48 39.7  -0.2
NIL   Nilore            51.49  265   eP      P        12 48 59.6  +0.2
      comp=Z,13nm,0.9s
NIL   Nilore            51.49  265   eP      P        12 48 59.6  +0.2
NIL                                   pmax   pmax
      comp=Z,13nm,0.9s
GUN   Gumba             51.93  250   eP      P        12 49 03.8  +0.7
      comp=Z,34nm,0.9s
AKASG Malin Array Be    51.93  312    P      P        12 49 01.6  -0.7
      comp=Z,3.6nm,0.6s,baz=28,slow=7.9,SNR=12
AKASG                                 PP     PP       12 50 56.2  -3.7
      comp=Z,0.5nm,0.3s,baz=28,slow=8.9,SNR=4.8
KIEV  Kiev              51.95  312   eP      P        12 49 02.0  -0.5
      comp=Z,8.2nm,1.1s
KIEV  Kiev              51.95  312   i P     P        12 49 01.4  -1.1
KIEV                                  pmax   pmax
      comp=Z,5.0nm,1.0s
AK11  Malin Array Si    51.97  312   eP      P        12 49 01.9  -0.7
SHL   Shillong          51.97  242   eP      P        12 49 02.1  -1.0
      comp=Z,13nm,1.3s
SHL   Shillong          51.97  242   eP      P        12 49 02.2  -1.0
SHL                                   pmax   pmax
      comp=Z,13nm,1.3s
JIRN  Jiri              52.05  249   eP      P        12 49 04.8  +0.8
      comp=Z,66nm,0.9s
KKN   Kakani            52.25  250   eP      P        12 49 06.5  +1.2
      comp=Z,48nm,0.9s
DANN  Dangsing          52.30  252   eP      P        12 49 06.8  +1.1
      comp=Z,42nm,0.6s
KBL   Kabul             52.31  270   eP      P        12 49 05.4  -0.3
      comp=Z,5.0nm,0.8s
KBL   Kabul             52.31  270   eP      P        12 49 05.4  -0.3
KBL                                   pmax   pmax
      comp=Z,5.0nm,0.8s
PKIN  Phulchoki         52.41  250   eP      P        12 49 07.2  +0.7
      comp=Z,14nm,0.7s
PKI   Pulchoki          52.41  250   eP      P        12 49 07.0  +0.4
      comp=Z,6.6nm,0.4s
DMN   Daman             52.48  250   eP      P        12 49 08.2  +1.1
      comp=Z,28nm,0.9s
PYUN  Piuthan           52.80  253   eP      P        12 49 09.9  +0.5
      comp=Z,38nm,0.9s
GEYT  Alibeck           53.48  282    P      P        12 49 14.8  +0.7
      comp=Z,5.7nm,1.0s,baz=350,slow=6.4,SNR=4.9
GYA0B ALIBECK ARRAY     53.48  282   eP      P        12 49 15.5  +1.4
      comp=Z,6.6nm,0.7s
KIV   Kislovodsk        53.72  298   eP      P        12 49 16.9  +1.1
      comp=Z,17nm,1.1s
KIV   Kislovodsk        53.72  298 ⇑iP      P        12 49 15.5  -0.3
KIV   Kislovodsk        53.72  298   eP      P        12 49 16.5  +0.7
KIV                                   pmax   pmax
      comp=Z,14nm,1.1s
KIV                                   MLR    MLR
      comp=Z,31nm,16.0s
KBZ   Khabaz            53.85  298    P      P        12 49 17.1  +0.4
      comp=Z,6.8nm,0.9s,baz=331,slow=4.4,SNR=6.7
ULM   Lac du Bonnet     54.60   42    P      P        12 49 21.4  -0.7
      comp=Z,1.6nm,0.7s,baz=346,slow=4.2,SNR=3.0
ULM                                   LR     LR       13 17 07.2
      comp=Z,57nm,18.6s,baz=337,slow=41
EKA   Eskdalemuir Ar    54.74  337    P      P        12 49 23.1  +0.1
      comp=Z,5.5nm,0.8s,baz=16,slow=8.1,SNR=11
OJC   Ojcow             54.91  319   eP      P        12 49 24.0  -0.3
      comp=Z,13nm,1.0s
OJC   Ojcow             54.91  319   eP      P        12 49 24.0  -0.3
OJC                                   pmax   pmax
      comp=Z,13nm,1.0s
YHH   Holmes Hill       55.23   56   eP      P        12 49 28.9  +1.9
      comp=Z,2.3nm,0.9s
RLMT  Red Lodge         55.42   55   eP      P        12 49 29.4  +1.1
      comp=Z,6.0nm,0.8s
NIE   Niedzica          55.52  318    P      P        12 49 29.7  +1.0
NIE                                   pmax   pmax
      comp=Z,4.0nm,1.0s
CLL   Collm             55.52  324   eP      P        12 49 28.2  -0.5
      comp=Z,14nm,0.8s
CLL   Collm             55.52  324 ⇑iP      P        12 49 28.4  -0.3
      comp=Z,16nm,0.9s
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CLL				i pP	sP	12 49 32.6	+0.3
CLL				ePcP	PcP	12 50 28.0	-0.5
CLL				LmV		13 39 00.0	
	comp=Z,100nm,19.3s						
CLL	Collm	55.52	324	⇑iP	P	12 49 28.4	-0.3
CLL				i		12 49 32.6	
CLL				e		12 50 28.0	
CLL				pmax	pmax		
	comp=Z,16nm,0.9s						
YFT	Old Faithful	55.53	56	eP	P	12 49 30.5	+1.4
	comp=Z,3.8nm,1.0s						
LKWY	Lake	55.57	56	eP	P	12 49 32.5	+3.0
	comp=Z,4.6nm,0.8s						
DPC	Dobruska-Polom	55.64	321	eP	P	12 49 30.1	+0.5
DPC	Dobruska-Polom	55.64	321	eP	P	12 49 30.1	+0.5
BRG	Berggiesshubel	55.72	323	eP	P	12 49 30.0	0.0
	comp=Z,3.4nm,0.8s						
BRG	Berggiesshubel	55.72	323	eP	P	12 49 30.0	0.0
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KRLC	Kraliky	55.79	321	eP	P	12 49 31.2	+0.5
KRLC	Kraliky	55.79	321	eP	P	12 49 31.2	+0.5
BUR08	Bucovina Ar. S	55.83	313	eP	P	12 49 31.0	0.0
	comp=Z,9.0nm,1.4s						
BUR04	Bucovina Ar. S	55.85	313	eP	P	12 49 30.6	-0.6
BURAR	Bucovina Array	55.85	313	⇑iP	P	12 49 31.0	-0.2
BURAR	Bucovina Array	55.85	313	P	P	12 49 31.0	-0.2
MORC	Moravsky Berou	55.88	320	eP	P	12 49 30.9	-0.3
	comp=Z,5.9nm,0.8s						
MORC	Moravsky Berou	55.88	320	⇑iP	P	12 49 31.9	+0.6
MORC	Moravsky Berou	55.88	320	eP	P	12 49 31.0	-0.3
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MORC	Moravsky Berou	55.88	320	eP	P	12 49 31.6	+0.3
SCHQ	Schefferville	55.94	20	eP	P	12 49 30.6	-1.0
	comp=Z,6.0nm,0.8s						
SCHQ	Schefferville	55.94	20	P	P	12 49 30.2	-1.4
	comp=Z,5.0nm,0.6s,baz=2.8,slow=6.9,SNR=14						
TRPA	Tarpa	56.11	316	⇑iP	P	12 49 33.4	+0.5
CMAR	Chiang Mai Arr	56.34	232	P	P	12 49 34.6	-0.3
	comp=Z,0.6nm,0.3s,baz=0.3,slow=7.6,SNR=5.6						
TESR	Tescani	56.45	312	⇑iP	P	12 49 35.2	-0.2
MOX	Moxa	56.45	325	P	P	12 49 35.8	+0.4
UTTA	Uttaradit	56.54	230	P	P	12 49 42.5	+6.2
VRAC	Vranov	56.55	321	⇑iP	P	12 49 36.5	+0.5
VRAC	Vranov	56.55	321	eP	P	12 49 36.3	+0.3
VRAC	Vranov	56.55	321	P	P	12 49 36.2	+0.1
	comp=Z,4.1nm,0.6s,baz=13,slow=9.1,SNR=5.7						
VYHS	Vyhne	56.74	319	eP	P	12 49 37.9	+0.4
VYHS	Vyhne	56.74	319	eP	P	12 49 37.9	+0.4
KRUC	Moravsky	56.82	321	eP	P	12 49 38.4	+0.4
TREC	Trest	56.83	321	eP	P	12 49 38.5	+0.5
TREC	Trest	56.83	321	eP	P	12 49 38.5	+0.5
AHID	Auburn Hatcher	56.96	57	eP	P	12 49 38.0	-1.3
	comp=Z,7.5nm,0.6s						
PSZ	Piszkesteto	57.00	318	eP	P	12 49 38.3	-1.1
	comp=Z,8.8nm,0.9s						
PSZ	Piszkesteto	57.00	318	⇓iP	P	12 49 39.7	+0.3
PSZ	Piszkesteto	57.00	318	eP	P	12 49 38.3	-1.1
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CFR	Carcaliu	57.24	310	⇓iP	P	12 49 41.1	+0.1
CFR	Carcaliu	57.24	310	P	P	12 49 41.0	+0.1
DRGR		57.30	315	⇑iP	P	12 49 41.6	+0.1
DRGR		57.30	315	P	P	12 49 41.6	+0.1
KHC	Kasperske Hory	57.43	323	eP	P	12 49 42.7	+0.4
KHC	Kasperske Hory	57.43	323	eP	P	12 49 42.7	+0.4
BW06	Boulder Array	57.45	56	eP	P	12 49 43.2	+0.4
	comp=Z,5.2nm,1.6s						
PD31	Pinedale Array	57.45	56	eP	P	12 49 43.5	+0.6
	comp=Z,4.4nm,1.6s						
PDAR	Pinedale Array	57.45	56	P	P	12 49 42.9	+0.1
	comp=Z,1.3nm,0.7s,baz=18,slow=2.4,SNR=12						
PDAR				LR	LR	13 16 14.8	
	comp=Z,67nm,18.9s,baz=311,slow=38						
PBKT	Sadao Pong	57.53	229	eP	P	12 49 43.6	+0.3
MLR	Muntele Rosu	57.59	312	⇓iP	P	12 49 43.7	+0.1
MLR	Muntele Rosu	57.59	312	P	P	12 49 43.9	+0.3
	comp=Z,3.4nm,0.5s,baz=332,slow=6.0,SNR=5.0						
YERR	Yerington	57.60	66	eP	P	12 49 43.9	0.0
	comp=Z,3.1nm,0.8s						
GEC2	GERESS Array S	57.67	322	eP	P	12 49 43.9	-0.2
	comp=Z,7.4nm,1.1s						
GEC2	GERESS Array S	57.67	322	eP	P	12 49 43.9	-0.2
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GERES	GERESS Array B	57.67	322	P	P	12 49 44.1	0.0
	comp=Z,2.5nm,0.7s,baz=30,slow=6.2,SNR=14						
GEA0	GERESS Array S	57.67	322	eP	P	12 49 44.6	+0.5
EYMN	Ely	57.84	40	eP	P	12 49 43.9	-1.3
	comp=Z,10nm,1.1s						
KVN	Kaiserville	57.94	65	eP	P	12 49 47.6	+1.4
	comp=Z,1.4nm,0.7s						
KVN	Kaiserville	57.94	65	eP	P	12 49 47.6	+1.4
KVN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CONA	Conrad Observa	58.01	320	i pP	P	12 49 47.4	+0.9
	comp=Z,4.0nm,1.2s						
SIRR	Siria	58.06	315	⇑iP	P	12 49 47.3	+0.5
ARR	Arges	58.07	313	⇑iP	P	12 49 46.7	-0.2
NV01	Mina Array Sit	58.42	66	eP	P	12 49 50.4	+0.8
NVAR	Mina Array Bea	58.42	66	P	P	12 49 50.8	+1.2
	comp=Z,1.2nm,0.8s,baz=327,slow=6.5,SNR=8.1						
MOA	Molln	58.47	322	i pP	P	12 49 49.8	+0.2
	comp=Z,8.1nm,1.5s						
GZR	Gura Zlata	58.56	314	⇑iP	P	12 49 50.5	+0.1
GZR	Gura Zlata	58.56	314	P	P	12 49 50.5	+0.1
BZS	Buzias	58.67	315	⇑iP	P	12 49 51.1	+0.1
BFO	Black Forest	59.35	326	eP	P	12 49 56.1	+0.4
	comp=Z,6.5nm,0.9s						
BFO	Black Forest	59.35	326	i P	P	12 49 56.0	+0.2
KBA	Koelnbreinsper	59.41	322	P	P	12 49 58.7	+2.4
KBA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDVR	Moldovita	59.42	315	⇑iP	P	12 49 56.2	-0.1
R11A	Troy Canyon, C	59.43	63	eP	P	12 49 56.9	+0.2
	comp=Z,3.0nm,1.1s						
OBKA	Obir	59.65	321	i pP	P	12 49 58.8	+0.8
	comp=Z,8.0nm,0.7s						
ECH	Echery	59.71	327	eP	P	12 49 58.5	+0.3
	comp=Z,4.7nm,0.8s						
ECH	Echery	59.71	327	eP	P	12 49 58.5	+0.3
ECH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PSUT	Pine Spring	59.85	62	eP	P	12 49 60.0	+0.4
	comp=Z,2.6nm,0.8s						
ABTA	Abfaltersbach	59.91	322	i pP	P	12 50 00.8	+1.1
	comp=Z,1.9nm,0.6s						
ECSD	EROS Data Cent	60.41	46	eP	P	12 50 02.6	-0.5
	comp=Z,3.6nm,0.9s						
DAVOX	Davos/Dischmat	60.48	324	P	P	12 50 04.1	+0.4
	comp=Z,2.7nm,0.7s,baz=23,slow=7.7,SNR=3.5						
BR101	Keskin Array S	60.50	303	eP	P	12 50 04.2	+0.3
BRTR	Keskin Array B	60.50	303	i P	P	12 50 04.1	+0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	60.50	303	P	P	12 50 04.2	+0.3
	comp=Z,1.9nm,0.7s,baz=43,slow=4.7,SNR=8.7						
KNB	Kanab	61.57	62	eP	P	12 50 12.9	+1.6
	comp=Z,6.1nm,1.2s						
KNB	Kanab	61.57	62	eP	P	12 50 12.9	+1.6
KNB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PV14	Lion Creek, Pa	61.60	58	eP	P	12 50 11.3	-0.3
	comp=Z,4.9nm,0.9s						
W41B	Gary Mavity, V	69.60	46	eP	P	12 51 01.1	-1.8
	comp=Z,6.3nm,0.6s						
ES19	SONSECA Array	70.03	333	eP	P	12 51 05.6	0.0
ESDC	Sonseca Array	70.07	333	P	P	12 51 05.3	-0.5
	comp=Z,1.8nm,0.6s,baz=6.9,slow=6.0,SNR=13						
RAYN	Ar Rayn	71.11	286	eP	P	12 51 12.5	+0.1
	comp=Z,5.8nm,0.8s						
RAYN	Ar Rayn	71.11	286	eP	P	12 51 12.5	+0.1
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WR1	Warramunga Arr	87.50	188	eP	P	12 52 39.7	-1.8
	comp=Z,8.0nm,1.5s						
WRA	Warramunga Arr	87.50	188	P	P	12 52 39.7	-1.8
	comp=Z,0.4nm,0.6s,baz=4.8,slow=5.4,SNR=7.9						
ASAR	Alice Springs	91.22	188	P	P	12 52 57.6	-1.3
	comp=Z,0.3nm,0.7s,baz=12,slow=6.2,SNR=4.1						
TOA1	Torodi Ar. Sit	94.61	322	eP	P	12 53 15.0	+0.1
TORD	Torodi Ar. Bea	94.62	322	P	P	12 53 15.0	+0.1
	comp=Z,0.9nm,1.1s,baz=358,slow=4.3,SNR=3.1						
RPN	Rapa Nui	121.69	84	i PKIKP	PKiKP	12 58 48.2	+0.7

MEX 15 12:45:34.0±0.5, 16°.30N×97°.42W, h5^{km}, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.68	278	eP	Pg	12 45 45.9	-1.2
PNIG				eS	Sg	12 45 55.9	0.0
VHO	Vista Hermosa	1.01	41	eP	Pg	12 45 50.7	-2.7
VHO				i S	Sg	12 46 03.8	-2.8
HUIG	Huatulco	1.37	113	eP	Pn	12 45 55.9	-4.0
HUIG				eS	Sb	12 46 11.6	-6.5
CMIG	Matias Romero	2.56	72	eP	Pn	12 46 18.0	+1.9
CMIG				eS	Sb	12 46 53.0	+0.8

HEL 15 12:45:51.7±0.2, 60°.49N×29°.24E, h0^{km}, ML1.2, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	Virojoki	0.83	274	eS	Sg	12 46 17.2	-1.3
PVF	Pernaja	1.67	274	eP	Pn	12 46 21.4	-0.7
PVF				eS	Sn	12 46 42.8	-1.5
PVF				MSG		12 46 47.4	
	comp=Z,1.8nm,0.1s						
FIA0	FINESS Array S	1.82	303	eP	Pn	12 46 23.9	-0.3
FIA0				eS	Sn	12 46 46.9	-0.9
FIA0				MSG		12 46 48.6	
	comp=Z,0.8nm,0.1s						
KAF	Kangasniemi	2.16	320	ePB	Pn	12 46 29.8	+0.9
KAF				eSG	Sb	12 46 58.1	-0.8
KAF				MSG		12 46 59.2	
	comp=Z,0.8nm,0.1s						
JOF	Joensuu	2.63	21	ePG	Pb	12 46 38.8	-0.9
SUF	Sumiainen	2.68	328	ePG	Pb	12 46 39.6	-0.9
SUF				eSB	Sb	12 47 12.5	-1.5

IDC 15 12:45:55.2±4.8, 17°.13S×175°.37W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/29, mbtmp3.7/3, Error ellipse: s-maj=166.8km s-min=91.9km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.55	241	P	P	12 53 44.5	-0.3
	1.0nm,0.7s,baz=76,slow=8.3,SNR=3.2						
WRA	Warramunga Arr	47.63	258	P	P	12 54 33.7	+0.2
	0.4nm,0.4s,baz=95,slow=7.7,SNR=26						
WRA				PcP	PcP	12 56 02.9	-0.4
	0.3nm,0.7s,baz=91,slow=3.3,SNR=4.0						
ASAR	Alice Springs	47.79	253	P	P	12 54 34.6	-0.2
	0.6nm,0.5s,baz=88,slow=7.9,SNR=13						

ISCJB 15 12:57:51.9±0.5, 67°.60N±0°.05×142°.5E±0°.1, h10^{km}, mb3.5/9, MS2.7/1, Error ellipse: s-maj=7.2km s-min=6.6km az=29.3

IDC 15 12:57:51.8±0.8, 67°.62N×142°.44E, h0^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.6/45, mbtmp3.5/10, ML2.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/31, Error ellipse: s-maj=24.3km s-min=16.8km az=158.0

YARS 15 12:57:52.8±0.1, 67°.610N±0°.007×142°.54E±0°.02, h4^{km}

ISC 15 12:57:53.1±0.7, 67°.56N±0°.05×142°.62E±0°.04, h10^{km}, n15, σ0^{s}.76/19, mb3.6/9, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.13	168	eP	Pb	12 58 13.9	-0.7
MOMR				Pmax		12 58 13.9	
	comp=Z,159nm,0.2s						
MOMR				eS	Sb	12 58 29.2	-0.1
MOMR				Smax		12 58 29.2	
	comp=N,963nm,0.2s						
YBGR	Belaya Gora	1.66	52	eP	Pn	12 58 22.3	+0.2
YBGR				Pmax		12 58 22.3	
	comp=Z,253nm,0.2s						
YBGR				eS	Sb	12 58 44.3	-0.2
YBGR				Smax		12 58 44.3	
	comp=N,701nm,0.2s						
BTGS	Batagay	3.06	275	eP	Pn	12 58 41.7	+0.3
BTGS				eP	Pb	12 58 47.4	-0.1
BTGS				Pmax		12 58 47.4	
	comp=Z,87nm,0.7s						
BTGS				eS	Sn	12 59 17.2	-0.8
BTGS				eS	Sb	12 59 26.1	+1.3
BTGS				Smax		12 59 26.1	
	comp=N,524nm,0.5s						
SEY	Seymchan	6.19	134	Pn	Pn	12 59 25.5	+1.1
	comp=N,0.2nm,0.3s,baz=334,slow=15,SNR=5.6						
SEY				Lg	Lg	13 01 05.2	
	comp=N,0.7nm,0.3s,baz=8.9,slow=19,SNR=5.2						
MA2	Magadan	8.79	152	Lg	Lg	13 02 28.5	
	comp=N,0.4nm,0.3s,baz=300,slow=20,SNR=4.2						
USRK	Ussuriysk Ar.	24.09	199	P	P	13 03 08.0	-0.4
	comp=N,2.0nm,0.7s,baz=323,slow=5.7,SNR=5.4						
SONM	Songino Array	27.00	241	P	P	13 03 36.0	+1.0
	comp=N,0.5nm,0.7s,baz=32,slow=6.5,SNR=3.5						
ILAR	Eielson Array	27.22	62	P	P	13 03 37.0	+0.3
	comp=N,1.0nm,0.8s,baz=291,slow=8.0,SNR=8.7						
KSRS	Korea Array	31.28	203	LR	LR	13 17 29.6	
	comp=N,19nm,21.6s,baz=40,slow=38						
MKAR	Makanchi Array	36.73	267	P	P	13 04 59.3	-0.7
	comp=N,1.2nm,0.6s,baz=39,slow=6.8,SNR=13						
MKAR				PP	PP	13 06 22.1	-1.4
	comp=N,1.2nm,0.9s,baz=46,slow=8.7,SNR=5.9						
YKA	Yellowknife Ar	38.88	46	P	P	13 05 18.1	+0.2
	comp=N,0.2nm,0.6s,baz=320,slow=8.0,SNR=5.1						
FINES	FINESS Array B	43.33	321	P	P	13 05 53.9	-0.7
	comp=N,0.7nm,0.4s,baz=22,slow=12,SNR=6.9						
NOA	NORSAR Array B	46.91	330	P	P	13 06 22.8	-0.3
	comp=N,0.5nm,0.7s,baz=24,slow=7.3,SNR=2.7						
PDAR	Pinedale Array	57.44	56	P	P	13 07 42.4	+0.6
	comp=N,0.4nm,0.7s,baz=127,slow=2.2,SNR=4.4						
NVAR	Mina Array Bea	58.40	66	P	P	13 07 49.2	+0.7
	comp=N,0.2nm,0.6s,baz=311,slow=8.2,SNR=2.4						

NNC 15 13:00:14.8±1.1, 43°.38N×78°.61E, h0^{km}, mb2.7, mpv2.2, Error ellipse: s-maj=10.2km s-min=3.8km az=161.0

KRNET 15 13:00:17.6±0.1, 42°.88N×79°.13E, h11^{km}, mb2.1

ISC 15 13:00:17.1±1.1, 43°.17N±0°.09×78°.76E±0°.05, h13^{km}±9^{km}, n9, σ1^{s}.52/17, 6C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.19	98	P	Pb	13 00 22.3	-0.2
	2.7nm,0.1s						
UZB				S	Sg	13 00 27.1	+2.6
	10.0nm,0.1s						
SATY	Saty	0.28	246	P	Pg	13 00 21.6	-1.4
SATY				S	Sg	13 00 26.2	-0.8
PDGK	Podgornoye	0.56	74	P	Pg	13 00 27.3	-0.7
	0.7nm,0.1s						
PDGK				S	Sg	13 00 35.8	+0.5
PDGK	Podgornoye	0.56	74	⇓P	Pg	13 00 27.1	-0.9
	1.0nm,0.7s						
PDGK				⇓S	Sb	13 00 36.2	-0.5
	0.2nm,0.3s						
PDGK	Podgornoye	0.56	74	⇓iP	Pg	13 00 27.3	-0.7
	baz=30						
PDGK				⇓iS	Sg	13 00 35.7	+0.3
	baz=30						
PRZ	Przheval'sk	0.74	201	⇑iP	Pb	13 00 30.3	-1.6
	baz=33						
PRZ				⇑iS	Sb	13 00 40.1	-1.9
	baz=33						
KDJ	Kajisay	1.56	229	⇑iP	Pg	13 00 48.0	+0.9
	baz=43						
KDJ				⇑iS	Sg	13 01 10.3	+2.9
	baz=43						
TARG	Taragay, Kyrgy	1.61	206	⇑iP	Pn	13 00 45.7	+0.1
	baz=21						
TARG				⇑iS	Sb	13 01 07.9	+0.7
	baz=21						
TKM2	Tokmak 2	2.33	265	⇓Pg	Pn	13 00 56.9	+1.6
	2.0nm,1.1s						
TKM2				⇓Lg	Lg	13 01 24.1	
	2.5nm,1.2s						

IDC 15 13:01:03.7±1.8, 30°.04S×177°.31W, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.9/29, mbtmp4.0/5, ML2.9/1, Error ellipse: s-maj=38.3km s-min=26.4km az=95.0

ISC 15 13:01:09.2±1.9, 29°.9S±0°.2×177°.3W±0°.3, h35^{km}, n8, σ0^{s}.81/9, mb4.0/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.82	320	Pn	Pn	13 01 23.8	-0.4
	493nm,0.3s,baz=142,slow=17,SNR=24						
RAO				Sn	Sn	13 01 35.5	+0.4
	674nm,0.3s,baz=189,slow=19,SNR=14						
URZ	Urewera	9.55	207	Pn	Pn	13 03 18.3	-5.8
	0.1nm,0.3s,baz=339,slow=17,SNR=3.4						
URZ				Sn	Sn	13 05 01.0	-9.1
	0.4nm,0.3s,baz=120,slow=20,SNR=4.8						
CTA	Charters Tower	34.31	278	P	P	13 07 53.3	+0.8
	1.5nm,0.5s,baz=107,slow=14,SNR=5.0						
STKA	Stephens Creek	35.17	256	P	P	13 08 00.1	+0.3
	1.3nm,0.7s,baz=88,slow=11,SNR=3.5						
ASAR	Alice Springs	43.73	266	P	P	13 09 10.4	-0.9
	0.4nm,0.4s,baz=104,slow=7.5,SNR=36						
ASAR				PcP	PcP	13 10 58.9	+1.0
	0.1nm,0.6s,baz=101,slow=4.8,SNR=3.1						
WRA	Warramunga Arr	44.67	271	P	P	13 09 17.8	-1.1
	1.0nm,0.3s,baz=110,slow=8.1,SNR=30						
FINES	FINESS Array B	144.86	341	PKPbc	PKPab	13 20 40.9	0.0
	1.7nm,0.6s,baz=60,slow=3.4,SNR=10						
AKASG	Malin Array Be	151.24	324	PKPbc	PKPbc	13 20 58.3	-0.2
	0.2nm,0.3s,baz=63,slow=2.4,SNR=3.0						

JMA 15 13:12:55.6±0.2, 33°.05N×138°.17E, h361^{km}, M3.2

ISCJB 15 13:12:58.7±0.8, 33°.3N±0°.1×138°.11E±0°.09, h341^{km}, mb2.5/2, Error ellipse: s-maj=18.1km s-min=8.5km az=158.3

IDC 15 13:12:59.3±4.8, 33°.05N×137°.40E, h292^{km}±113^{km}, mb2.6/2, mb1 2.7/3, mb1mx2.5/47, mbtmp3.1/3, Error ellipse: s-maj=216.0km s-min=28.0km az=61.0

ISC 15 13:12:58.3±2.0, 33°.2N±0°.2×138°.14E±0°.10, h341^{km}, n16, σ0^{s}.59/17, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKN2	Miekihoku	1.89	305	P	Pn	13 13 47.9	-0.1
JTNC	Tanabenakahech	2.21	288	P	Pn	13 13 50.1	-0.3
JOD2	Odawara 2	2.25	20	P	Pn	13 13 51.0	+0.4
JOD2				eS	S	13 14 33.7	+1.1
JWY	Kouya	2.37	297	P	Pn	13 13 51.8	+0.1
BSO3	Boso 3	2.57	50	P	Pn	13 13 52.8	-0.1
BSO3				eS	S	13 14 36.5	-0.2
BSO4	Boso 4	2.59	44	P	Pn	13 13 53.8	+0.6
BSO4				eS	S	13 14 38.1	+0.8
BSO1	Boso 1	2.80	57	P	Pn	13 13 54.7	+0.2
BSO1				eS	S	13 14 38.9	-0.9
JHU	Hanno	2.86	19	P	Pn	13 13 55.5	-0.1
JRY	Ryogami san	2.93	12	P	Pn	13 13 57.0	+0.7
JWT	Wachi	3.11	314	P	Pn	13 13 57.6	-0.3
JAI	Aioi	3.14	283	P	Pn	13 13 58.1	-0.2
MJAR	Matsushiro Arr	3.38	1	P	Pn	13 14 00.0	-0.5
	0.1nm,0.3s,baz=182,slow=12,SNR=7.3						
JAG	Ashikaga	3.44	18	P	Pn	13 14 00.4	-0.7
JYT	Yasato	3.51	28	P	Pn	13 14 01.0	-0.7
MKAR	Makanchi Array	44.02	305	P	P	13 20 34.8	+1.6
	0.1nm,0.3s,baz=83,slow=8.6,SNR=4.7						
WRA	Warramunga Arr	52.92	184	P	P	13 21 45.0	+4.5
	0.4nm,1.1s,baz=0.3,slow=7.7,SNR=6.3						

IDC 15 13:17:06.1±1.6, 10°.84S×165°.70E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.7/34, mbtmp3.9/6, ML4.5/2, Error ellipse: s-maj=41.5km s-min=30.4km az=127.0

ISCJB 15 13:17:09.0±1.2, 11°.0S±0°.1×165°.6E±0°.2, h30^{km}, mb3.6/4, Error ellipse: s-maj=23.8km s-min=17.4km az=151.8

ISC 15 13:17:10.8±1.3, 10°.9S±0°.1×165°.7E±0°.2, h30^{km}, n12, σ0^{s}.59/6, mb3.6/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.83	284	Pn	Pn	13 18 35.8	+0.5
	16nm,0.3s,baz=167,slow=7.7,SNR=5.6						
DZM	Mont Dzumac	11.15	176	Pn	Pn	13 19 48.7	+0.3
	2.1nm,0.3s,baz=312,slow=9.7,SNR=31						
H11S2	WAKE ISLAND Hy	29.20	2	T	T	13 53 30.1	
	baz=181,slow=76,SNR=9.1						
H11S3	WAKE ISLAND Hy	29.20	2	T	T	13 53 30.4	
	baz=181,slow=76,SNR=5.6						
H11S1	WAKE ISLAND Hy	29.22	2	T	T	13 53 31.6	
	baz=181,slow=76,SNR=6.1						
H11N1	WAKE ISLAND Hy	30.42	2	T	T	13 54 59.4	
	baz=182,slow=76,SNR=6.7						
H11N3	WAKE ISLAND Hy	30.43	2	T	T	13 54 57.8	
	baz=182,slow=76,SNR=6.6						
H11N2	WAKE ISLAND Hy	30.44	2	T	T	13 54 58.3	
	baz=182,slow=76,SNR=7.0						
WRA	Warramunga Arr	31.49	250	P	P	13 23 29.6	-0.6
	0.6nm,1.0s,baz=81,slow=8.6,SNR=5.1						
ASAR	Alice Springs	32.82	243	P	P	13 23 41.4	-0.5
	0.7nm,0.8s,baz=65,slow=10,SNR=10						
ILAR	Eielson Array	83.37	19	P	P	13 29 34.6	-0.1
	0.3nm,0.7s,baz=233,slow=5.0,SNR=5.1						
MKAR	Makanchi Array	93.36	317	P	P	13 30 23.3	+0.2
	0.3nm,0.7s,baz=86,slow=6.2,SNR=3.8						

ISCJB 15 13:40:02.7±1.1, 47°.5N±0°.2×152°.3E±0°.2, h150^{km}, mb3.3/7, Error ellipse: s-maj=28.0km s-min=12.8km az=146.8

IDC 15 13:40:05.8±2.7, 47°.57N×152°.12E, h164^{km}±24^{km}, mb3.1/7, mb1 3.3/10, mb1mx3.1/37, mbtmp3.5/10, Error ellipse: s-maj=38.7km s-min=17.3km az=160.0

ISC 15 13:40:04.6±1.3, 47°.6N±0°.2×152°.2E±0°.2, h150^{km}, n16, σ0^{s}.86/10, mb3.3/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.58	30	P	Pn	13 41 39.5	+0.7
	0.6nm,0.3s,baz=204,slow=14,SNR=5.6						
ASAJ	Asahikawa	7.54	246	P	Pn	13 41 52.6	+0.9
	0.5nm,0.3s,baz=66,slow=10,SNR=8.0						
SEY	Seymchan	15.42	0	P	Pn	13 43 34.6	+0.8
	0.1nm,0.3s,baz=160,slow=11,SNR=5.1						
H11N2	WAKE ISLAND Hy	30.21	152	T	T	14 17 34.9	
	baz=340,slow=75,SNR=3.5						
H11N1	WAKE ISLAND Hy	30.23	152	T	T	14 17 50.3	
	baz=340,slow=75,SNR=4.3						
H11N3	WAKE ISLAND Hy	30.23	152	T	T	14 17 35.9	
	baz=340,slow=75,SNR=3.3						
H11S1	WAKE ISLAND Hy	31.30	153	T	T	14 19 03.1	
	baz=341,slow=76,SNR=5.1						
H11S3	WAKE ISLAND Hy	31.31	153	T	T	14 19 08.8	
	baz=341,slow=76,SNR=5.2						
H11S2	WAKE ISLAND Hy	31.32	153	T	T	14 19 10.4	
	baz=341,slow=76,SNR=5.0						
ILAR	Eielson Array	36.31	39	P	P	13 46 53.2	-0.1
	0.3nm,0.5s,baz=258,slow=7.1,SNR=10						
INK	Inuvik	41.31	33	P	P	13 47 35.4	+0.6
	0.4nm,0.3s,baz=296,slow=9.6,SNR=13						
MKAR	Makanchi Array	46.03	296	P	P	13 48 12.2	-0.6
	0.1nm,0.4s,baz=66,slow=7.0,SNR=2.9						
YKA	Yellowknife Ar	50.65	37	P	P	13 48 47.9	+0.1
	0.3nm,0.5s,baz=301,slow=7.1,SNR=6.0						
NVAR	Mina Array Bea	62.61	62	P	P	13 50 12.8	-0.2
	0.2nm,0.5s,baz=289,slow=5.5,SNR=2.9						
FINES	FINESS Array B	63.05	334	P	P	13 50 13.8	-1.4
	2.0nm,0.9s,baz=35,slow=5.1,SNR=4.6						
PDAR	Pinedale Array	64.77	54	P	P	13 50 26.4	-0.7
	0.4nm,0.8s,baz=330,slow=1.5,SNR=3.6						

ISCJB 15 13:50:36.8±0.9, 30°.88S±0°.03×71°.48W±0°.10, h84^{km}±7^{km}, mb4.0/5, Error ellipse: s-maj=13.8km s-min=5.5km az=171.9

SJA 15 13:50:36.6±0.7, 30°.89S×71°.41W, h38^{km}±5^{km}, ML3.9, MW4.0

IDC 15 13:50:37.0±1.1, 30°.92S×71°.27W, h63^{km}±6^{km}, mb3.9/5, mb1 3.8/9, mb1mx3.6/27, mbtmp4.0/9, MS2.7/2, Ms1 2.8/2, ms1mx2.6/17, Error ellipse: s-maj=39.0km s-min=17.6km az=107.0

GUC 15 13:50:36.6±0.7, 30°.97S×70°.93W, h64^{km}±3^{km}, ML4.3

ISC 15 13:50:37.4±0.8, 30°.88S±0°.04×71°.38W±0°.07, h70^{km}±5^{km}, n38, σ1^{s}.92/41, mb4.0/5, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	Combarbala	0.44	132	⇓iP	Pn	13 50 47.5	-2.2
CMCH				i S	Sn	13 50 55.3	-3.4
GO04	Tololo Observa	0.87	36	eP	Pn	13 50 54.2	-0.3
GO04				eS	Sn	13 51 07.4	+0.2

GO04	**Tololo Observa**	0.87	36	⇑*i*P	Pn	13 50 54.2	-0.3
GO04				*i*S	Sn	13 51 07.2	+0.1
LCO	**Las Campanas**	1.96	18	*e*P	Pn	13 51 09.6	+0.8
LCO				*e*S	Sn	13 51 34.1	+1.6
LCO	**Las Campanas**	1.96	18	⇑*i*P	Pn	13 51 09.5	+0.8
LCO				*i*S	Sn	13 51 34.6	+2.1
LCO				IAML		13 51 41.2	
	comp=E,3µm,0.3s						
RTLS	**Leoncito**	2.00	118	*e*P	Pn	13 51 10.8	+1.5
RTLS				IAML		13 51 39.7	
	comp=Z,468nm,0.2s						
ACCO	**Cerro Coronel**	2.02	82	*e*P	Pn	13 51 11.6	+2.1
ACDV	**Cuesta del Vie**	2.08	71	*e*P	Pn	13 51 12.0	+1.8
ROCH	**El Roble**	2.11	171	IAML		13 51 43.5	
	comp=E,3µm,0.5s						
ROC1	**El Roble**	2.11	172	*e*S	Sn	13 51 37.9	+1.8
AUSP	**Uspallata**	2.17	129	*e*P	Pn	13 51 12.8	+1.2
AUSP				*e*S	Sn	13 51 39.8	+2.3
PEL	**Peldehue**	2.33	165	*e*P	Pn	13 51 12.0	-1.6
PEL				IAML		13 51 47.1	
	comp=N,1µm,0.6s						
VACH	**Vallenar**	2.36	13	⇓*i*P	Pn	13 51 15.3	+1.3
VACH				*i*S	Sn	13 51 44.2	+2.2
AMOG	**MOGNA**	2.48	92	*e*P	Pn	13 51 17.5	+1.8
RTLL	**Cerro Villicun**	2.53	101	*e*P	Pn	13 51 17.6	+1.3
RTLL				*e*S	Sn	13 51 48.5	+2.3
CLCH	**Cerro Calan**	2.61	164	IAML		13 52 00.5	
	comp=E,3µm,0.4s						
FCH	**Farellones**	2.61	159	IAML		13 51 55.4	
	comp=E,2µm,0.4s						
ASAL	**Salagasta**	2.76	129	*e*P	Pn	13 51 21.2	+1.8
ARCO	**CERRO ARCO**	2.86	134	IAML		13 52 07.2	
	comp=Z,714nm,0.5s						
AAGR	**Agrelo**	3.09	136	*e*P	Pn	13 51 25.6	+1.7
LVC	**Limon Verde**	8.53	16	P	Pn	13 52 37.7	-0.8
	comp=Z,1.0nm,0.3s,baz=172,slow=6.7,SNR=13						
LVC				LR	LR	13 55 46.7	
	comp=Z,43nm,18.8s,baz=218,slow=36						
CPUP	**Villa Florida**	13.15	73	P	Pn	13 53 39.1	-2.1
	comp=Z,0.2nm,0.3s,baz=259,slow=10,SNR=2.3						
CPUP				S	Sn	13 56 00.8	-4.8
	comp=Z,0.4nm,0.3s,baz=287,slow=17,SNR=2.2						
CPUP				LR	LR	13 59 26.4	
	comp=Z,41nm,19.1s,baz=240,slow=40						
LPAZ	**La Paz**	14.83	12	P	Pn	13 54 05.6	+1.7
	comp=Z,0.2nm,0.3s,baz=211,slow=12,SNR=5.4						
SIV	**San Ignacio**	17.57	35	P	Pn	13 54 37.3	-0.4
	comp=Z,0.3nm,0.3s,baz=225,slow=12,SNR=9.3						
BDFB	**Brasilia**	26.21	60	P	P	13 56 05.8	-0.1
	comp=Z,4.7nm,0.8s,baz=294,slow=3.1,SNR=5.3						
SNAA	**Sanae**	54.27	159	P	P	13 59 55.1	-0.8
	comp=Z,3.3nm,0.9s,baz=277,slow=8.3,SNR=6.6						
SNAA				pP	pP	14 00 12.7	-1.4
	comp=Z,1.3nm,0.7s,baz=265,slow=11,SNR=1.5						
QSPA	**South Pole Qui**	59.34	180	P	P	14 00 32.4	+0.4
	comp=Z,1.1nm,0.9s,baz=158,slow=3.3,SNR=3.8						
DBIC	**Dimbokro**	73.67	72	P	P	14 02 04.4	+0.5
	comp=Z,1.2nm,0.5s,baz=233,slow=7.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	82.63	70	P	P	14 02 52.2	-1.3
	comp=Z,1.2nm,0.6s,baz=249,slow=4.0,SNR=8.1						
TORD				pP	pP	14 03 11.5	-1.3
	comp=Z,0.5nm,0.5s,baz=258,slow=5.6,SNR=2.0						
WRA	**Warramunga Arr**	123.74	209	PKP	PKPdf	14 09 27.4	-0.5
	comp=Z,0.2nm,0.6s,baz=151,slow=1.6,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	126.32	271	T	T	16 28 26.2	
	baz=115,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	126.33	271	T	T	16 28 33.2	
	baz=115,slow=75,SNR=50						
H11S3	**WAKE ISLAND Hy**	126.34	271	T	T	16 28 33.6	
	baz=115,slow=75,SNR=48						
H11N3	**WAKE ISLAND Hy**	126.66	273	T	T	16 28 59.0	
	baz=117,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	126.67	273	T	T	16 28 58.7	
	baz=117,slow=75,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	126.67	273	T	T	16 29 00.8	
	baz=117,slow=75,SNR=24						
ZALV	**Zalesovo Beam**	151.28	30	PKPbc	PKPbc	14 10 22.9	+0.4
	comp=Z,0.8nm,0.5s,baz=293,slow=2.1,SNR=4.3						
ZALV				PKPab	PKPab	14 10 30.2	-0.4
	comp=Z,0.8nm,0.5s,baz=307,slow=5.2,SNR=3.4						
ZALV				pPKPbc	pPKPdf	14 10 40.0	+3.6
	comp=Z,1.1nm,0.4s,baz=303,slow=4.0,SNR=5.5						
MKAR	**Makanchi Array**	154.23	44	PKPab	PKPab	14 10 44.7	+1.3
	comp=Z,0.2nm,0.7s,baz=306,slow=4.8,SNR=3.1						
MKAR				pPKPab	sPKPbc	14 11 01.1	+4.3
	comp=Z,0.5nm,0.7s,baz=298,slow=3.4,SNR=4.5						

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*IDC **15** 13:55:45.8±1.5, 38.°04N×42.°43E, h0^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.3/46, mbtmp3.5/6, ML1.9/2, MS2.4/3, Ms1 2.5/3, ms1mx2.2/46, Error ellipse: s-maj=29.6km s-min=15.1km az=161.0*

*AZER **15** 13:55:46.7±1.9, 37.°99N×42.°21E, h6^{km}, ml3.5/7, Error ellipse: s-maj=21.3km s-min=12.0km az=115.0*

*NSSP **15** 13:55:46.7, 38.°28N×42.°45E, h8^{km}, Ms3.5*

*ISK **15** 13:55:46.6, 38.°33N×42.°50E, h6^{km}, ML3.7/14*

*DDA **15** 13:55:47.0, 38.°32N×42.°53E, h9^{km}±2^{km}, ML3.6*

*TEH **15** 13:55:47.1, 38.°33N×42.°47E, h10^{km}, ML3.5*

ISC 15 13:55:47.3±1.1, **38.°31N**±0.°02×**42.°49E**±0.°02, **h6**^{km}±8^{km}, **n77**, σ1^{s}**16**/94, **mb3.5**/4, **5C-9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKDM	**Akdamar-Van**	0.39	88	PG	Pg	13 55 54.3	-0.7
AKDM				SG	Sg	13 56 00.2	+0.1
AKDM	**Akdamar-Van**	0.39	88	*e*Pg	Pg	13 55 54.2	-0.7
GURO	**Guroymak-BITLI**	0.43	304	PG	Pg	13 55 55.6	-0.1
GURO				SG	Sg	13 56 01.6	+0.3
GURO	**Guroymak-BITLI**	0.43	304	*e*Pg	Pg	13 55 55.5	-0.1
GEVA	**Gevas**	0.45	90	*i*P	Pg	13 55 56.1	0.0
GEVA				*i*S	Sb	13 56 04.1	-0.7
GEVA				IAML_P			
	comp=Z,323µm,0.2s						
ADCV	**BITLIS_Adilcev**	0.53	21	*i*P	Pb	13 55 58.9	-0.2
ADCV				*i*S	Sb	13 56 06.7	-0.4
ADCV				IAML_P			
	comp=Z,25µm,0.1s						
SRTM	**Siirt_Merkez**	0.55	234	*i*P	Pb	13 55 59.0	-0.4
SRTM				*i*S	Sb	13 56 06.5	-1.0
SRTM				IAML_P			
	comp=Z,16µm,0.1s						
TVAN	**Van**	0.76	73	*i*P	Pg	13 56 01.2	-0.7
TVAN				*i*S	Sg	13 56 12.4	+0.7
TVAN				IAML_P			
	comp=Z,18µm,0.2s						
SIRT	**Sirnak**	0.81	183	PG	Pg	13 56 03.1	+0.2
SIRT	**Sirnak**	0.81	183	*e*Pg	Pg	13 56 03.2	+0.3
SIRN	**Sırnak**	0.82	184	*i*P	Pb	13 56 03.8	-0.2
SIRN				IAML_P			
	comp=Z,25µm,0.1s						
MLAZ	**Malazgirt-MUS**	0.83	3	PG	Pg	13 56 02.6	-0.7
MLAZ	**Malazgirt-MUS**	0.83	3	*e*Pg	Pg	13 56 03.4	+0.1
SVAN	**Silvan-Diyarba**	1.03	261	PG	Pg	13 56 06.9	-0.1
SVAN	**Silvan-Diyarba**	1.03	261	*i*P	Pb	13 56 07.6	+0.1
SVAN				IAML_P			
	comp=Z,2µm,0.3s						
SVAN	**Silvan-Diyarba**	1.03	261	*e*Pg	Pb	13 56 07.2	-0.3
SVAN				*e*Pg	Pb	13 56 07.2	-0.3
BTMN	**Batman**	1.05	247	*i*P	Pn	13 56 08.8	+0.2
BTMN				*i*S	Sn	13 56 23.2	-0.3
BTMN				IAML_P			
	comp=Z,21µm,0.2s						
VMUR	**Van-Muradiye**	1.09	51	*i*P	Pg	13 56 08.2	0.0
VMUR				*i*S	Sn	13 56 24.8	+0.1
VMUR				IAML_P			
	comp=Z,10µm,0.3s						
TUTA	**Tutak**	1.12	13	*i*P	Pg	13 56 08.8	0.0
TUTA				*i*S	Sb	13 56 24.3	+0.3
TUTA				IAML_P			
	comp=Z,26µm,0.2s						
BASK	**Baskale_VAN**	1.23	102	*i*P	Pg	13 56 09.6	-1.2
BASK				IAML_P			
	comp=Z,10µm,0.1s						
AGRB	**Hanur-Agry**	1.32	17	PN	Pn	13 56 12.1	-0.4
AGRB	**Hanur-Agry**	1.32	17	*e*Pg	Pn	13 56 12.1	-0.4
CUKT	**Cukurca**	1.39	140	PN	Pn	13 56 13.2	-0.1
CUKT	**Cukurca**	1.39	140	*i*P	Pg	13 56 13.9	0.0
CUKT				IAML_P			
	comp=Z,21µm,0.2s						
CUKT	**Cukurca**	1.39	140	*e*Pg	Pn	13 56 13.1	-0.2
CLDR	**Caldiran**	1.39	53	PN	Pn	13 56 12.5	-0.9
CLDR	**Caldiran**	1.39	53	*i*P	Pb	13 56 13.6	-0.2
CLDR				IAML_P			
	comp=Z,8µm,0.2s						
CLDR	**Caldiran**	1.39	53	*e*Pn	Pn	13 56 12.6	-0.9
DYDN	**Diyadin**	1.55	37	*i*P	Pg	13 56 16.9	-0.1
DYDN				IAML_P			
	comp=Z,3µm,0.2s						
EATA	**Eleskirt**	1.55	0	*i*P	Pg	13 56 16.6	-0.4
EATA				IAML_P			
	comp=Z,3µm,0.4s						
BNGB	**Bingl**	1.57	296	PN	Pn	13 56 15.7	-0.1
BGOL	**Bingol**	1.57	296	*i*P	Pg	13 56 17.8	+0.4
BGOL				IAML_P			
	comp=Z,3µm,0.3s						
YOVA	**Hakkari_Yksek**	1.60	116	*i*P	Pb	13 56 16.9	-0.5
YOVA				IAML_P			
	comp=Z,1µm,0.2s						
HANI	**Diyarbakir_Han**	1.64	274	*i*P	Pn	13 56 16.7	0.0
HANI				*i*S	Sg	13 56 39.5	-0.6
HANI				IAML_P			
	comp=Z,9µm,0.4s						
BINT	**Bingol**	1.66	290	*e*Pn	Pn	13 56 16.0	-1.1
MARD	**Mardin**	1.68	234	*i*P	Pn	13 56 17.6	+0.3
KOPR	**Koprukoy-ERZUR**	1.75	344	PN	Pn	13 56 18.1	-0.2
ECAT	**Cat-ERZURUM**	1.75	318	*i*P	Pg	13 56 20.6	-0.2
ECAT				*i*S	Sg	13 56 45.6	+2.1
HOMI	**Horasan**	1.79	346	*i*P	Pg	13 56 21.4	-0.2
HOMI				*i*S	Sg	13 56 46.4	+1.6
HOMI				IAML_P			
	comp=Z,3µm,0.3s						
MAZI	**Mazidag**	1.82	243	PN	Pn	13 56 18.6	-0.7
MAZI	**Mazidag**	1.82	243	*e*Pn	Pn	13 56 19.9	+0.6
DIYA	**Diyarbakir**	1.91	259	*i*P	Pn	13 56 20.6	+0.3
DIYA				IAML_P			
	comp=Z,16µm,0.2s						
IGDI	**IGDIR**	1.99	38	*i*P	Pb	13 56 23.4	-0.5
IGDI				IAML_P			
	comp=Z,368nm,0.5s						
TASB	**TASBURUN-IGDIR**	2.15	39	PN	Pn	13 56 23.7	-0.1
TASB	**TASBURUN-IGDIR**	2.15	39	*e*Pn	Pn	13 56 24.6	+0.8
DIGO	**Kars**	2.21	18	*i*P	Pb	13 56 26.4	-1.5
DIGO				IAML_P			
	comp=Z,389nm,0.3s						
SENK	**Senkaya-Erzuru**	2.25	357	PN	Pn	13 56 25.3	+0.1
SENK	**Senkaya-Erzuru**	2.25	357	*e*Pn	Pn	13 56 26.1	+0.9
KOPT	**Kop Dagi**	2.30	318	*i*P	Pg	13 56 32.0	+0.6
HYR	**Heyderabad**	2.32	52	⇓P	Pb	13 56 29.8	+0.2
HYR				⇓S	Sg	13 57 06.5	+4.7
KARS	**Kars**	2.36	11	PN	Pn	13 56 26.5	-0.2
KARS	**Kars**	2.36	11	*e*Pn	Pn	13 56 27.1	+0.4
TNCL	**Tunceli-Merkez**	2.44	290	*i*P	Pg	13 56 32.6	-1.4
TNCL				IAML_P			
	comp=Z,68nm,0.3s						
NAX	**Nakhchivan**	2.51	69	⇓P	Pb	13 56 32.7	-0.1
	SNR=6.7						
NAX				⇓S	Sg	13 57 07.6	-0.3
GNI	**Garni**	2.54	43	PN	Pn	13 56 29.2	+0.1
GNI	**Garni**	2.54	43	⇑*i*P	Pb	13 56 34.2	+0.8
GNI				⇑*i*S	Sg	13 57 10.2	+1.4
GNI	**Garni**	2.54	43	*e*Pn	Pn	13 56 30.1	+1.0
GNI	**Garni**	2.54	43	Pn	Pb	13 56 34.3	+1.0
	comp=Z,3.9nm,0.3s,baz=226,slow=8.5,SNR=15						
GNI				Lg	Lg	13 57 12.5	
	comp=Z,1.7nm,0.3s,baz=306,slow=19,SNR=2.5						
GNI				LR	LR	13 57 34.1	
	comp=Z,55nm,21.9s,baz=322,slow=39						
IMRD	**Marand**	2.56	80	*e*Pn	Pb	13 56 32.0	-1.7
IMRD				IAMB	IAmb	13 57 19.8	
	comp=E,8µm,0.8s						
BAYB	**BAYBURT**	2.60	319	*i*P	Pg	13 56 36.0	-1.1
BAYB				IAML_P			
	comp=Z,370nm,0.5s						
SBZ	**Shahbuz**	2.63	65	⇓P	Pb	13 56 35.2	+0.3
SBZ				⇑S	Sg	13 57 11.2	-0.6
DBAD	**Bademkaya**	2.77	348	*i*P	Pb	13 56 35.5	-1.7
DBAD				IAML_P			
	comp=Z,370nm,0.2s						
DAGI	**Agillar**	2.80	351	*i*P	Pb	13 56 35.4	-2.3
DAGI				IAML_P			
	comp=Z,127nm,0.3s						
ORD	**Ordubad**	2.82	76	⇓P	Pb	13 56 35.9	-2.2
ORD				⇓S	Sb	13 57 13.8	+1.0
QZX	**Qazax, Azerbai**	3.53	38	⇑P	Pb	13 56 47.8	-2.4
	SNR=5.0						
QZX				⇓S	Sb	13 57 34.2	+0.8
IBST	**Bostanabad**	3.54	99	*e*Pn	Pn	13 56 44.0	+1.1
IBST				IAMB	IAmb	13 57 02.7	
	comp=Z,364nm,0.6s						
IHRS	**Heris**	3.58	89	*e*Pn	Pn	13 56 45.6	+2.0
IHRS				IAMB	IAmb	13 57 03.0	
	comp=Z,550nm,0.6s						
GANJ	**Ganja**	3.77	51	⇓P	Pb	13 56 50.4	-3.9
	SNR=4.8						
ISRB	**Sarab**	4.12	95	*e*Pn	Pn	13 56 53.2	+2.3
ISRB				IAMB	IAmb	13 57 06.5	
	comp=Z,380nm,0.9s						
LRK	**Lerik**	4.61	84	⇑P	Pn	13 57 00.7	+3.1
	SNR=3.9						
BRTR	**Keskin Array B**	7.03	284	Pn	Pn	13 57 33.3	+2.5
	comp=Z,0.0nm,0.3s,baz=118,slow=12,SNR=4.6						
AKTO	**Aktyubinsk**	16.39	37	LR	LR	14 08 12.3	
	comp=Z,18nm,18.6s,baz=235,slow=45						
FINES	**FINESS Array B**	25.30	341	P	P	14 01 15.0	+0.7
	comp=Z,1.0nm,0.8s,baz=141,slow=14,SNR=2.7						
NOA	**NORSAR Array B**	29.94	330	LR	LR	14 14 05.1	
	comp=Z,9.9nm,21.6s,baz=345,slow=36						
MKAR	**Makanchi Array**	30.25	61	P	P	14 01 59.5	+0.7
	comp=Z,0.4nm,0.7s,baz=270,slow=8.6,SNR=5.3						
CMAR	**Chiang Mai Arr**	52.64	96	P	P	14 05 01.8	-0.6
	comp=Z,0.5nm,0.6s,baz=294,slow=8.8,SNR=5.3						
YKA	**Yellowknife Ar**	77.86	349	P	P	14 07 45.1	-0.2
	comp=Z,0.3nm,0.8s,baz=20,slow=5.9,SNR=3.9						

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*IDC **15** 13:55:56.7±0.6, 9.°65N×125.°30E, h0^{km}, mb4.0/17, mb1 4.2/19, mb1mx4.0/51, mbtmp4.0/19, ML4.2/2, MS3.1/4, Ms1 3.2/4, ms1mx2.7/54, Error ellipse: s-maj=26.7km s-min=11.5km az=81.0*

*MAN **15** 13:55:58.3, 9.°64N×125.°35E, h4^{km}, MS3.7*

MAN INTENSITY III - MALIMONO SURIGAO DEL NORTE; INTENSITY II - SURIGAO CITY.

*ISCJB **15** 13:55:59.3±0.8, 9.°70N±0.°03×125.°45E±0.°03, h29^{km}±6^{km}, mb3.9/19, MS3.0/3, Error ellipse: s-maj=5.9km s-min=4.1km az=165.0*

*NEIC **15** 13:56:06.4±1.8, 9.°62N×125.°32E, h80^{km}±18^{km}, mb4.0/2, Error ellipse: s-maj=22.1km s-min=9.7km az=83.0*

NEIC Felt [III PIVS] at Malimono and [II PIVS] at Surigao.

ISC 15 13:55:58.7±1.2, **9.°70N**±0.°02×**125.°36E**±0.°04, **h12**^{km}±8^{km}, **n53**, σ1^{s}**56**/64, **mb4.0**/19, **MS2.9**/3, **2C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	0.66	311	*e*P	Pb	13 56 12.5	+0.4
MSLP				*e*S	Sn	13 56 24.0	-0.1
BUTP	**Butuan**	0.77	160	*e*P	Pg	13 56 12.0	-1.6
BUTP				*e*S	Sn	13 56 26.8	-0.1
CGP	**Cagayan de Oro**	1.40	208	⇓*i*P	Pn	13 56 22.7	-1.4
CGP				*i*S	Sg	13 56 43.4	-0.4
TBP	**Tagbilaran**	1.48	270	*e*P	Pn	13 56 24.4	-0.7
TBP				*i*S	Sg	13 56 45.9	-0.4
PLP	**Palo**	1.50	346	⇑*e*P	Pn	13 56 26.1	+0.6
PLP				*i*S	Sg	13 56 48.4	+1.2
OCLP	**Ormoc**	1.53	331	*e*P	Pb	13 56 27.0	-0.1
OCLP				*e*S	Sg	13 56 49.1	+1.0
BIPH	**Bislig**	1.80	147	⇓*e*P	Pn	13 56 28.6	-0.9
BIPH				*e*S	Sn	13 56 51.2	-1.2
BUKP	**Musuan**	1.83	189	*e*P	Pn	13 56 28.9	-1.1
BUKP				*e*S	Sb	13 56 54.2	-0.9
SNPH	**Sibulan**	2.12	261	*i*P	Pb	13 56 35.7	-1.5
DMPH	**Davao City--Mi**	2.60	177	⇓*e*P	Pg	13 56 47.8	-0.8
DMPH				*e*S	Sg	13 57 22.0	-0.4
DAV	**Davao City (W)**	2.62	175	Pn	Pb	13 56 46.6	+1.0
	81nm,0.3s,baz=349,slow=3.7,SNR=5.8						
DAV				Lg	Lg	13 57 19.3	
	baz=294,slow=19,SNR=4.3						
PAGZ	**Pagadian**	2.68	227	*e*P	Pn	13 56 42.0	+0.3
PAGZ				*e*S	Sn	13 57 15.4	+1.2
KCP	**Kidapawan**	2.69	186	⇓*i*P	Pn	13 56 41.4	-0.4
KCP				*i*S	Sn	13 57 15.3	+1.0
CTBH	**Cotabato--PC H**	2.70	204	⇓*i*P	Pn	13 56 41.8	-0.1
MATI	**Mati**	2.88	162	*e*P	Pn	13 56 46.4	+2.0
MATI				*e*S	Sb	13 57 24.6	-0.5
CNP	**Catarman**	2.88	346	*e*P	Pb	13 56 51.6	+1.6
CNP				*e*S	Sn	13 57 22.6	+3.6
GUIM	**Jordan**	2.88	289	*e*P	Pn	13 56 44.5	0.0
GUIM				*e*S	Sn	13 57 20.5	+1.5
RCP	**Roxas**	3.17	306	⇑*e*P	Pn	13 56 49.4	+1.0
SKMP	**Bagumbayan, Su**	3.26	194	*e*P	Pb	13 56 57.0	+0.5
SKMP				*e*S	Sg	13 57 50.4	+6.9
IPIL	**Ipil**	3.35	236	*e*P	Pn	13 56 53.3	+2.4
IPIL				*e*S	Sn	13 57 30.3	-0.3
DDMP	**Don Marcelino,**	3.59	174	*e*P	Pb	13 57 03.6	+1.5
PVCP	**Virac**	4.05	343	*e*P	Pb	13 57 07.1	-2.9
PVCP				*e*S	Sb	13 57 59.0	+0.1
SIJI	**Sorong**	12.03	150	Pn	Pn	13 58 51.1	+1.0
	1.4nm,0.3s,baz=339,slow=16,SNR=5.7						
BATI	**Baumata**	19.85	185	P	P	14 00 30.1	+0.4
	0.8nm,0.3s,baz=324,slow=16,SNR=4.6						
BATI				LR	LR	14 08 41.4	
	comp=Z,68nm,19.2s,baz=1.0,slow=39						
CMAR	**Chiang Mai Arr**	27.03	292	P	P	14 01 41.9	+0.8
	1.0nm,0.9s,baz=106,slow=7.5,SNR=6.4						
CMAR				LR	LR	14 12 04.7	
	comp=Z,36nm,19.4s,baz=104,slow=36						
FITZ	**Fitzroy Crossi**	27.62	179	P	P	14 01 44.1	-2.1
	2.5nm,0.6s,baz=0.9,slow=7.6,SNR=13						
KSAR	**Wonju Array Be**	27.72	4	P	P	14 01 46.9	-0.1
KSRS	**Korea Array**	27.73	4	P	P	14 01 46.9	-0.2
	0.6nm,0.6s,baz=187,slow=10,SNR=3.1						
KSRS				LR	LR	14 12 08.1	
	comp=Z,27nm,20.6s,baz=210,slow=35						
MAJO	**Matsushiro**	29.16	22	*e*P	P	14 01 56.0	-3.9
	2.3nm,0.3s						
MJAR	**Matsushiro Arr**	29.16	22	LR	LR	14 11 54.5	
	comp=Z,51nm,21.7s,baz=210,slow=33						
WRAB	**Tennant Creek**	30.75	163	*e*P	P	14 02 13.3	-0.7
	0.9nm,0.6s						
WRA	**Warramunga Arr**	30.75	163	P	P	14 02 12.9	-1.2
	0.6nm,0.5s,baz=349,slow=9.3,SNR=16						
ASAR	**Alice Springs**	34.20	166	P	P	14 02 43.4	-0.9
	1.0nm,0.5s,baz=349,slow=7.3,SNR=34						
ASAR				PcP	PcP	14 05 19.7	-1.5
	0.2nm,0.5s,baz=350,slow=3.5,SNR=3.6						
USRK	**Ussuriysk Ar.**	34.85	8	P	P	14 02 50.5	+0.9
	2.7nm,0.7s,baz=191,slow=10,SNR=5.7						
ASAJ	**Asahikawa**	37.41	21	P	P	14 03 11.4	-0.2
	4.6nm,0.8s,baz=253,slow=19,SNR=3.2						
KLR	**Kul'dur**	39.77	7	P	P	14 03 31.3	0.0
	0.9nm,0.5s,baz=193,slow=6.4,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	40.94	73	T	T	14 46 40.5	
	baz=261						
H11S1	**WAKE ISLAND Hy**	40.96	73	T	T	14 46 47.6	
	baz=261,slow=76						
H11S2	**WAKE ISLAND Hy**	40.96	73	T	T	14 47 02.0	
	baz=261,slow=76						
SONM	**Songino Array**	41.25	341	P	P	14 03 44.3	+0.5
	0.2nm,0.5s,baz=153,slow=9.3,SNR=2.7						
H11N1	**WAKE ISLAND Hy**	41.29	71	T	T	14 47 09.2	
	baz=265,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	41.29	71	T	T	14 47 06.7	
	baz=265,slow=74,SNR=8.9						
H11N3	**WAKE ISLAND Hy**	41.30	71	T	T	14 47 08.0	
	baz=265,slow=74,SNR=10						
STKA	**Stephens Creek**	44.16	160	P	P	14 04 08.4	+1.0
	4.8nm,0.5s,baz=344,slow=9.4,SNR=16						
PETK	**Petropavlovsk-**	50.53	25	P	P	14 04 57.9	+1.1
	3.6nm,0.9s,baz=194,slow=7.4,SNR=3.0						
MKAR	**Makanchi Array**	51.94	323	P	P	14 05 07.9	+0.3
	0.6nm,0.6s,baz=124,slow=7.6,SNR=12						
KURK	**Kurchatov**	56.03	326	P	P	14 05 36.8	-0.6
KURBB	**Kurchatov Arra**	56.04	326	P	P	14 05 36.8	-0.6
	1.3nm,0.6s,baz=124,slow=7.0,SNR=4.2						
ILAR	**Eielson Array**	80.34	26	P	P	14 08 10.1	+0.5
	0.6nm,0.8s,baz=250,slow=6.1,SNR=8.2						
ARCES	**ARCESS Array B**	84.42	340	P	P	14 08 29.0	-1.8
	2.4nm,0.8s,baz=79,slow=6.6,SNR=3.6						
FINES	**FINESS Array B**	85.97	332	P	P	14 08 36.8	-1.9
	1.0nm,0.6s,baz=90,slow=5.7,SNR=4.4						
YKA	**Yellowknife Ar**	94.64	24	P	P	14 09 20.5	+1.1
	0.4nm,0.7s,baz=303,slow=4.6,SNR=9.5						
TORD	**Torodi Ar. Bea**	119.64	291	PKP	PKiKP	14 14 50.7	+1.0
	0.4nm,0.6s,baz=61,slow=1.9,SNR=3.0						

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*ISCJB **15** 14:16:09.1±1.0, 10.°80S±0.°08×165.°52E±0.°09, h10^{km}, mb3.6/5, MS3.6/3, Error ellipse: s-maj=15.9km s-min=8.3km az=140.0*

*IDC **15** 14:16:17.6±3.6, 10.°86S×165.°40E, h66^{km}±32^{km}, mb3.1/4, mb1 3.6/6, mb1mx3.3/40, mbtmp3.7/6, ML4.3/2, MS3.6/4, Ms1 3.6/4, ms1mx3.0/22, Error ellipse: s-maj=31.8km s-min=16.8km az=49.0*

ISC 15 14:16:10.9±1.2, **10.°7S**±0.°1×**165.°6E**±0.°1, **h10**^{km}, **n16**, σ1^{s}**25**/9, **mb3.5**/5, **MS3.4**/3, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.70	282	*e*P	Pn	14 17 36.0	+0.4
HNR				*e*S	Sg	14 19 36.0	+22
HNR	**Honiara**	5.70	282	P	Pn	14 17 36.7	+1.1
	16nm,0.3s,baz=136,slow=4.1,SNR=7.0						
HNR				S	Sn	14 18 41.6	+0.4
	5.3nm,0.3s,baz=202,slow=19,SNR=1.7						
HNR				LR	LR	14 19 54.3	
	comp=Z,331nm,18.8s,baz=54,slow=39						
DZM	**Mont Dzumac**	11.35	176	P	Pn	14 18 55.0	+1.8
	1.3nm,0.3s,baz=342,slow=19,SNR=12						
DZM				S	Sn	14 20 59.5	-0.8
	0.1nm,0.3s,baz=336,slow=20,SNR=2.4						
H11S2	**WAKE ISLAND Hy**	29.01	2	T	T	14 52 18.3	
	baz=181,slow=76,SNR=183						
H11S3	**WAKE ISLAND Hy**	29.02	2	T	T	14 52 16.4	
	baz=181,slow=76,SNR=94						
H11S1	**WAKE ISLAND Hy**	29.03	2	T	T	14 52 18.3	
	baz=181,slow=76,SNR=123						
URZ	**Urewera**	29.33	161	P	P	14 22 13.4	-0.4
	12nm,1.0s,baz=0.0,slow=8.1,SNR=4.5						
URZ				LR	LR	14 32 41.5	
	comp=Z,90nm,18.4s,baz=347,slow=34						
H11N1	**WAKE ISLAND Hy**	30.24	2	T	T	14 53 49.9	
	baz=182,slow=76,SNR=124						
H11N3	**WAKE ISLAND Hy**	30.24	2	T	T	14 53 49.2	
	baz=182,slow=76,SNR=137						
H11N2	**WAKE ISLAND Hy**	30.25	2	T	T	14 53 51.3	
	baz=182,slow=76,SNR=103						
WRA	**Warramunga Arr**	31.46	249	P	P	14 22 31.1	-1.8
	0.5nm,0.9s,baz=81,slow=9.3,SNR=5.5						
ASAR	**Alice Springs**	32.82	243	P	P	14 22 42.5	-2.3
	0.3nm,0.8s,baz=66,slow=10,SNR=7.1						
JHJ	**Hachijo jima 2**	50.03	332	LR	LR	14 44 12.0	
	comp=Z,164nm,19.3s,baz=102,slow=33						
ASAJ	**Asahikawa**	58.41	341	LR	LR	14 47 01.7	
	comp=Z,30nm,19.9s,baz=154,slow=32						
ILAR	**Eielson Array**	83.22	19	P	P	14 28 37.6	+0.5
	0.3nm,0.8s,baz=231,slow=5.7,SNR=3.5						
MKAR	**Makanchi Array**	93.16	317	P	P	14 29 24.8	-0.7
	0.1nm,0.5s,baz=92,slow=4.3,SNR=2.5						

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*ISCJB **15** 14:17:04.5±0.7, 7.°49N±0.°03×73.°41W±0.°04, h120^{km}±7^{km}, Error ellipse: s-maj=5.9km s-min=4.9km az=14.5*

*RSNC **15** 14:17:05.4±1.0, 7.°44N×73.°42W, h118^{km}±5^{km}, ML3.6, Mw3.6*

*IDC **15** 14:17:06.4±4.9, 7.°26N×73.°03W, h138^{km}±52^{km}, mb1 3.2/2, mb1mx2.8/37, mbtmp3.6/2, Error ellipse: s-maj=245.4km s-min=8.6km az=132.0*

ISC 15 14:17:04.6±1.0, **7.°48N**±0.°04×**73.°40W**±0.°04, **h120**^{km}±7^{km}, **n18**, σ1^{s}**06**/32, **1C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRRC	**Barranca, Sant**	0.48	220	⇓*i*P	Pn	14 17 22.4	0.0
BRRC				*e*S	Sn	14 17 35.6	-0.3
PAMC	**Pamplona, Colo**	0.70	101	*e*P	Pn	14 17 25.2	+0.6
PAMC				*e*S	Sn	14 17 40.2	+0.7
OCAC	**Ocana**	0.76	6	⇓*e*P	Pn	14 17 25.2	+0.5
OCAC				*e*S	Sn	14 17 40.3	+0.5
BARC	**Barichara**	0.90	166	*e*P	Pn	14 17 25.9	-0.1
BARC				*e*S	Sn	14 17 42.1	0.0
BARC				*i* L	L	14 17 42.5	
	comp=Z,744nm,0.4s						
PTBC	**PUERTO BERRIO,**	1.40	229	⇓*e*P	Pn	14 17 30.2	-0.8
PTBC				*e*S	Sn	14 17 49.5	-1.5
PTBC				*i*		14 17 50.8	
	comp=N,688nm,0.5s						
ZARC	**Zaragoza, Cauc**	1.45	271	⇑*e*P	Pn	14 17 31.7	+0.3
ZARC				*e*S	Sn	14 17 52.4	+0.6
ZARC				*i*		14 17 55.4	
	comp=N,642nm,0.1s						
SMLC	**San Martn de**	1.48	333	*e*P	Pn	14 17 31.8	0.0
SMLC				*e*S	Sn	14 17 52.6	+0.1

SMLC				*i*		14 17 58.2	
	comp=N,2µm,0.1s						
RUSC	La Rusia	1.60	169	⇓*e*P	Pn	14 17 32.9	-0.9
RUSC				*e*S	Sn	14 17 55.3	-0.6
TAMC	Tame, Arauca	1.90	123	*e*P	Pn	14 17 37.1	+0.2
TAMC				*e*S	Sn	14 18 01.8	+0.3
TAMC				*i*		14 18 03.0	
	comp=N,247nm,0.4s						
CODC	Agustn Codazz	2.44	359	*e*P	Pn	14 17 44.4	+0.7
CODC				*e*S	Sn	14 18 15.8	+2.1
CODC				*i*		14 18 19.1	
	comp=N,146nm,0.3s						
HELC	Santa Helena	2.47	239	*e*P	Pn	14 17 44.8	+0.4
HELC				*e*S	Sn	14 18 15.0	+0.1
HELC				*i*		14 18 24.4	
	comp=N,139nm,0.2s						
ROSC	El Rosal	2.77	199	P	Pn	14 17 49.7	+1.3
	comp=N,14nm,0.3s,baz=9.5,slow=6.1,SNR=12						
ROSC				S	Sn	14 18 24.4	+2.4
	comp=N,29nm,0.3s,baz=328,slow=23,SNR=7.8						
CHIC	Chingaza	2.85	187	*e*P	Pn	14 17 49.5	+0.2
CHIC				*i*		14 18 29.8	
	comp=N,153nm,0.4s						
SJCC	San Jacinto, C	2.98	324	*e*S	Sn	14 18 24.4	-1.9
SDV	Santo Domingo	3.07	63	P	Pn	14 17 52.7	+0.6
	comp=N,3.0nm,0.3s,baz=264,slow=6.1,SNR=20						
SDV				S	Sn	14 18 27.2	-1.5
	comp=N,7.5nm,0.3s,baz=253,slow=19,SNR=6.3						
RREF	El Recreo	3.21	217	*e*P	Pn	14 17 55.4	+1.1
RREF				*e*S	Sn	14 18 33.8	+1.3
RREF				*i*		14 18 43.3	
	comp=Z,81nm,0.3s						
ASAR	Alice Springs	149.26	235	PKPbc	PKPbc	14 36 38.4	-1.9
	comp=Z,0.3nm,0.9s,baz=116,slow=3.2,SNR=3.3						
WRA	Warramunga Arr	150.40	242	PKPbc	PKiKP	14 36 44.2	+0.5
	comp=Z,0.1nm,0.3s,baz=103,slow=3.0,SNR=5.6						

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*AZER **15** 14:31:59.5±2.5, 37°.76N×42°.20E, h1^{km}, ml3.3/7, Error ellipse: s-maj=38.4km s-min=16.6km az=163.0*

*DDA **15** 14:32:03.2, 38°.33N×42°.49E, h5^{km}±1^{km}, ML3.6*

*NSSP **15** 14:32:03.1, 38°.28N×42°.43E, h6^{km}, Ms3.5*

*ISK **15** 14:32:03.2, 38°.31N×42°.51E, h5^{km}, ML3.6/19*

ISC 15 14:32:04.3±1.0**, 38°.31N**±0°.02×**42°.50E**±0°.02**, h8**^{km}±9^{km}**, n55, σ1^s.28**/80**, 7C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.38	87	PG	Pg	14 32 10.8	-0.9
AKDM				SG	Sg	14 32 16.5	-0.2
GURO	Guroymak-BITLI	0.44	303	PG	Pg	14 32 12.2	-0.6
GURO				SG	Sg	14 32 18.7	+0.1
GEVA	Gevas	0.44	90	*i* P	Pg	14 32 12.5	-0.3
GEVA				*i* S	Sb	14 32 21.6	+0.4
GEVA				IAML_P			
	comp=Z,232µm,0.2s						
ADCV	BITLIS_Adilcev	0.53	20	*i* P	Pb	14 32 15.2	-0.7
ADCV				*i* S	Sb	14 32 23.9	+0.2
ADCV				IAML_P			
	comp=Z,15µm,0.1s						
SRTM	Siirt_Merkez	0.56	235	*i* P	Pb	14 32 15.6	-0.7
SRTM				*i* S	Sb	14 32 24.8	+0.4
SRTM				IAML_P			
	comp=Z,9µm,0.1s						
TVAN	Van	0.74	73	*i* P	Pg	14 32 18.4	-0.2
TVAN				IAML_P			
	comp=Z,10µm,0.2s						
SIRT	Sirnak	0.81	183	PG	Pg	14 32 19.4	-0.5
SIRN	Sırnak	0.82	185	*i* P	Pb	14 32 20.6	-0.1
SIRN				*i* S	Sb	14 32 32.6	+0.7
SIRN				IAML_P			
	comp=Z,17µm,0.1s						
MLAZ	Malazgirt-MUS	0.83	3	PG	Pg	14 32 19.7	-0.5
MLAZ				SG	Sb	14 32 31.6	-0.8
SVAN	Silvan-Diyarba	1.04	261	PG	Pg	14 32 23.9	-0.3
SVAN	Silvan-Diyarba	1.04	261	*i* P	Pn	14 32 24.7	-0.5
SVAN				*i* S	Sn	14 32 39.1	-0.7
SVAN				IAML_P			
	comp=Z,24µm,0.5s						
BTMN	Batman	1.06	247	*i* P	Pn	14 32 25.0	-0.4
BTMN				*i* S	Sn	14 32 40.8	+0.4
BTMN				IAML_P			
	comp=Z,18µm,0.2s						
VMUR	Van-Muradiye	1.08	51	*i* P	Pg	14 32 24.5	-0.5
VMUR				*i* S	Sn	14 32 41.1	+0.1
VMUR				IAML_P			
	comp=Z,6µm,0.3s						
TUTA	Tutak	1.11	13	*i* P	Pg	14 32 25.1	-0.6
TUTA				*i* S	Sb	14 32 40.2	-0.5
TUTA				IAML_P			
	comp=Z,11µm,0.2s						
BASK	Baskale_VAN	1.21	102	*i* P	Pb	14 32 26.6	-1.0
BASK				*i* S	Sn	14 32 43.8	-0.6
BASK				IAML_P			
	comp=Z,7µm,0.2s						
AGRB	Hanur-Agry	1.32	17	PN	Pn	14 32 28.8	-0.4
CUKT	Cukurca	1.38	140	PN	Pn	14 32 29.7	-0.2
CUKT	Cukurca	1.38	140	*i* P	Pb	14 32 29.9	-0.4
CUKT				IAML_P			
	comp=Z,23µm,0.3s						
CLDR	Caldiran	1.39	53	PN	Pn	14 32 29.3	-0.8
CLDR	Caldiran	1.39	53	*i* P	Pn	14 32 29.9	-0.2
CLDR				*i* S	Sb	14 32 47.4	-1.1
CLDR				IAML_P			
	comp=Z,6µm,0.2s						
DYDN	Diyadin	1.54	37	*i* P	Pb	14 32 33.0	-0.2
DYDN				IAML_P			
	comp=Z,3µm,0.4s						
EATA	Eleskirt	1.55	360	*i* P	Pb	14 32 32.9	-0.4
EATA				*i* S	Sg	14 32 55.7	+1.6
EATA				IAML_P			
	comp=Z,2µm,0.5s						
BNGB	Bingl	1.58	296	PN	Pn	14 32 32.7	+0.1
BGOL	Bingol	1.58	296	*i* P	Pb	14 32 33.6	-0.3
BGOL				*i* S	Sg	14 32 56.1	+0.9
BGOL				IAML_P			
	comp=Z,4µm,0.3s						
YOVA	Hakkari_Yksek	1.59	117	*i* P	Pg	14 32 34.5	-0.3
YOVA				*i* S	Sg	14 32 59.2	+3.8
YOVA				IAML_P			
	comp=Z,6µm,0.3s						
HANI	Diyarbakir_Han	1.65	274	*i* P	Pb	14 32 33.9	-1.1
HANI				*i* S	Sb	14 32 56.0	-0.1
HANI				IAML_P			
	comp=Z,8µm,0.2s						
MARD	Mardin	1.69	234	*i* P	Pb	14 32 34.6	-1.0
MARD				*i* S	Sn	14 32 55.6	-0.5
MARD				IAML_P			
	comp=Z,30µm,0.5s						
KOPR	Koprukoy-ERZUR	1.75	344	PN	Pn	14 32 35.1	0.0
ECAT	Cat-ERZURUM	1.76	318	*i* P	Pb	14 32 37.0	+0.1
ECAT				*i* S	Sg	14 33 02.8	+2.1
HOMI	Horasan	1.79	345	*i* P	Pg	14 32 38.2	-0.4
HOMI				*i* S	Sg	14 33 02.5	+0.6
HOMI				IAML_P			
	comp=Z,3µm,0.3s						
MAZI	Mazidag	1.83	243	PN	Pn	14 32 35.3	-0.9
DIYA	Diyarbakir	1.92	259	*i* P	Pn	14 32 37.6	+0.4
DIYA				*i* S	Sn	14 33 01.6	0.0
TASB	TASBURUN-IGDIR	2.15	38	PN	Pn	14 32 40.6	+0.2
SENK	Senkaya-Erzuru	2.25	357	PN	Pn	14 32 42.1	+0.1
KOPT	Kop Dagi	2.31	318	*i* P	Pb	14 32 46.5	+0.2
KOPT				IAML_P			
	comp=Z,107nm,0.1s						
HYR	Heyderabad	2.31	52	⇓P	Pb	14 32 45.7	-0.5
HYR				⇑S	Sg	14 33 22.9	+4.5
TNCL	Tunceli-Merkez	2.45	290	*i* P	Pg	14 32 50.5	-0.7
TNCL				IAML_P			
	comp=Z,271nm,0.4s						
NAX	Nakhchivan	2.50	69	⇓P	Pb	14 32 47.6	-1.8
NAX				⇓S	Sg	14 33 24.0	-0.4
PTK	Pertek	2.50	284	PN	Pn	14 32 45.9	+0.5
ERZN	Erzincan	2.51	301	PN	Pn	14 32 46.0	+0.5
EAK	Akyaka	2.52	20	*i* P	Pg	14 32 54.4	+1.8
GNI	Garni	2.53	43	PN	Pn	14 32 46.0	+0.2
GNI	Garni	2.53	43	⇑*i*P	Pb	14 32 50.6	+0.6
GNI				⇑*i*S	Sg	14 33 26.8	+1.3
BAYB	BAYBURT	2.61	319	*i* P	Pg	14 32 53.9	-0.4
SBZ	Shahbuz	2.62	65	⇑P	Pb	14 32 50.3	-1.2
BAYT	Aydıntepe-Bayb	2.77	319	PN	Pn	14 32 50.4	+1.3
DBAD	Bademkaya	2.77	347	*i* P	Pb	14 32 52.5	-1.6
DBAD				IAML_P			
	comp=Z,142nm,0.2s						
DAGI	Agillar	2.80	351	*i* P	Pb	14 32 52.3	-2.3
DAGI				IAML_P			
	comp=Z,99nm,0.3s						
ORD	Ordubad	2.81	76	⇓P	Pn	14 32 50.7	+1.3
ORD				⇓S	Sg	14 33 32.5	-1.9
URFA	Urfa	3.04	254	PN	Pn	14 32 53.7	+1.0
CHOM	Cayeli-Rize	3.09	335	PN	Pn	14 32 54.1	+0.8
BCA	Borcka	3.20	348	PN	Pn	14 32 56.1	+1.2
GDB	GEDABAY	3.48	45	⇑P	Pb	14 33 02.9	-3.3
QZX	Qazax, Azerbai	3.53	38	⇑P	Pb	14 33 03.4	-3.5
GANJ	Ganja	3.77	51	⇑P	Pn	14 33 06.5	+3.8

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*ISCJB **15** 14:36:25.9±0.6, 67°.58N±0°.05×142°.7E±0°.1, h10^{km}, mb3.2/4, Error ellipse: s-maj=8.4km s-min=7.0km az=28.7*

*IDC **15** 14:36:25.3±2.4, 67°.54N×142°.71E, h0^{km}, mb3.3/4, mb1 3.6/4, mb1mx3.3/64, mbtmp3.3/4, Error ellipse: s-maj=77.6km s-min=24.4km az=167.0*

*YARS **15** 14:36:27.1±0.2, 67°.570N±0°.009×142°.82E±0°.02, h9^{km}*

ISC 15 14:36:27.0±0.8**, 67°.51N**±0°.06×**142°.90E**±0°.05**, h10**^{km}**, n7, σ0^s.93**/12**, mb3.2**/4**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.06	173	*e*P	Pg	14 36 47.3	0.0
MOMR				Pmax		14 36 47.3	
	comp=Z,58nm,0.3s						
MOMR				*e*S	Sb	14 37 01.9	+0.7
MOMR				Smax		14 37 01.9	
	comp=E,591nm,0.5s						
YBGR	Belaya Gora	1.61	49	*e*P	Pn	14 36 55.3	-0.1
YBGR				Pmax		14 36 55.3	
	comp=Z,47nm,0.2s						
YBGR				*e*S	Sn	14 37 16.6	+0.5
YBGR				Smax		14 37 16.6	
	comp=E,496nm,0.4s						
BTGS	Batagay	3.17	276	*e*P	Pn	14 37 17.1	+0.3
BTGS				*e*P	Pb	14 37 23.8	+0.5
BTGS				Pmax		14 37 23.8	
	comp=Z,11nm,0.2s						
BTGS				*e*S	Sn	14 37 53.3	-1.3
BTGS				*e*S	Sb	14 38 03.8	+1.9
BTGS				Smax		14 38 03.8	
	comp=E,122nm,0.3s						
ILAR	Eielson Array	27.15	62	P	P	14 42 10.2	+0.3
	comp=E,0.5nm,0.7s,baz=295,slow=7.2,SNR=8.6						
MKAR	Makanchi Array	36.83	267	P	P	14 43 34.0	-0.8
	comp=E,0.2nm,0.6s,baz=24,slow=6.6,SNR=5.6						
YKA	Yellowknife Ar	38.84	46	P	P	14 43 51.6	+0.1
	comp=E,0.1nm,0.4s,baz=322,slow=8.0,SNR=4.7						
FINES	FINESS Array B	43.44	321	P	P	14 44 28.5	-0.9
	comp=E,0.5nm,0.5s,baz=20,slow=8.9,SNR=6.1						

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*ISCJB **15** 14:38:12.1±0.7, 6°.24S±0°.06×128°.64E±0°.07, h322^{km}, mb3.2/2, Error ellipse: s-maj=9.4km s-min=8.4km az=174.2*

*IDC **15** 14:38:12.8±3.2, 6°.14S×128°.71E, h311^{km}±27^{km}, mb3.0/2, mb1 3.5/6, mb1mx3.1/44, mbtmp4.1/6, Error ellipse: s-maj=49.4km s-min=20.0km az=62.0*

*DJA **15** 14:38:16.1±0.8, 6°S±4°×12°9E±°, h206^{km}±21^{km}, M4.0/6, mb3.6/3, mB4.4/1, MLv4.3/6, Mw(mB)3.5/1*

ISC 15 14:38:12.1±0.8**, 6°.18S**±0°.06×**128°.68E**±0°.06**, h322**^{km}**, n11, σ3^s.00**/20**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.16	125	P	Pn	14 39 11.8	+0.8
SAUI				S	S	14 39 52.9	-5.2
FAKI	Fak Fak	4.81	48	P	Pn	14 39 28.7	+0.3
FAKI				S	S	14 40 25.0	-4.9
SANI	Sanana	4.90	327	P	Pn	14 39 30.4	+1.0
SOEI	Soe	5.63	231	P	Pn	14 39 38.5	+0.6
	16nm,1.1s,0.2nm						
SOEI				S	S	14 40 42.6	-4.5
	16nm,1.1s,0.2nm						
BATI	Baumata	6.38	231	P	Pn	14 39 46.4	-0.1
BATI				S	S	14 40 59.5	-3.4
BATI	Baumata	6.38	231	P	Pn	14 39 47.0	+0.5
	9.2nm,0.3s,baz=37,slow=2.7,SNR=7.3						
BATI				S	S	14 40 58.2	-4.7
	13nm,0.3s,baz=76,slow=17,SNR=7.2						
FITZ	Fitzroy Crossi	12.21	194	P	P	14 40 58.5	+1.1
	0.3nm,0.3s,baz=19,slow=9.4,SNR=24						
FITZ				S	S	14 43 15.8	+3.0
	0.1nm,0.3s,baz=54,slow=19,SNR=3.5						
WRA	Warramunga Arr	14.75	159	P	P	14 41 26.6	+1.3
	1.7nm,0.3s,baz=333,slow=12,SNR=97						
WRA				S	S	14 44 02.1	-3.7
	0.1nm,0.3s,baz=337,slow=20,SNR=6.7						
ASAR	Alice Springs	18.10	164	P	P	14 42 03.5	+1.7
	2.1nm,0.3s,baz=345,slow=12,SNR=255						
ASAR				S	S	14 45 09.9	-2.4
	0.2nm,0.3s,baz=334,slow=17,SNR=12						
ASAR				ScP	ScP	14 49 26.1	+2.2
	0.1nm,0.3s,baz=357,slow=1.8,SNR=6.1						
STKA	Stephens Creek	28.28	156	P	P	14 43 38.1	+1.5
	1.3nm,0.5s,baz=346,slow=10,SNR=5.3						
MKAR	Makanchi Array	66.82	327	P	P	14 48 31.7	+1.8
	0.1nm,0.4s,baz=117,slow=8.0,SNR=5.6						

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*IDC **15** 14:42:09.4±1.7, 8°.96S×113°.27E, h0^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.5/44, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=68.4km s-min=22.8km az=42.0*

*ISCJB **15** 14:42:16.6±0.7, 9°.39S±0°.06×113°.00E±0°.04, h63^{km}, mb3.5/4, Error ellipse: s-maj=8.7km s-min=5.9km az=5.9*

*DJA **15** 14:42:17.0±1.0, 9°S±4°×11°3E±°, h18^{km}±9^{km}, M3.7/4, MLv3.7/4*

ISC 15 14:42:17.1±1.0**, 9°.35S**±0°.09×**113°.01E**±0°.05**, h63**^{km}**, n15, σ1^s.81**/19**, mb3.5**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.15	22	P	Pn	14 42 37.7	+0.5
GMJI				S	Sn	14 42 52.2	+0.1
JAGI	Jajag, Banyuwa	1.42	52	P	Pn	14 42 41.7	+0.9
JAGI				S	Sn	14 42 59.7	+1.0
PWJI	Pagerwojo	1.78	318	P	Pn	14 42 46.5	+0.9
PWJI				S	Sn	14 43 07.7	+0.5
PCJI	Pacitan	2.14	302	P	Pn	14 42 51.4	+0.8
DNP	Denpasar	2.27	73	P	Pn	14 42 54.9	+2.6
KMMI	Kalianget	2.47	23	P	Pn	14 42 56.0	+1.0
SRBI	Singaraja	2.51	60	P	Pn	14 42 57.1	+1.6
SRBI				S	Sn	14 43 26.4	+1.4
UGM	Wanagama	2.84	300	P	Pn	14 43 01.7	+1.6
PLAI	Plampang	4.73	84	P	Pn	14 43 27.5	+1.5
CISI	Cisompet, Garu	5.44	289	P	Pn	14 43 36.3	+0.6
BATI	Baumata	10.53	96	Pn	Pn	14 44 38.8	-6.6
	1.4nm,0.3s,baz=297,slow=2.3,SNR=2.6						
BATI				Sn	Sn	14 46 36.6	-5.3
	1.1nm,0.3s,baz=346,slow=19,SNR=3.1						
WRA	Warramunga Arr	23.14	119	P	P	14 47 17.3	-0.9
	0.4nm,0.6s,baz=301,slow=11,SNR=3.5						
ASAR	Alice Springs	24.53	128	P	P	14 47 31.4	+0.5
	0.3nm,0.3s,baz=301,slow=9.2,SNR=5.7						
STKA	Stephens Creek	34.71	134	P	P	14 49 02.0	+0.9
	0.4nm,0.4s,baz=329,slow=12,SNR=3.1						
MKAR	Makanchi Array	62.24	337	P	P	14 52 31.2	-1.1
	2.0nm,1.0s,baz=157,slow=8.0,SNR=3.6						

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*BJI **15** 14:42:51.7, 40°.40N×23°.90E, h5^{km}, mB5.2/27, mb4.6/41, Ms4.9/10, Ms7 4.6/9*

*PRU **15** 14:42:52.7±0.0, 40°.98N×25°.45E, h0^{km}, M4.7*

*ISK **15** 14:42:53.1, 40°.32N×23°.96E, h10^{km}, ML4.8/47*

*IDC **15** 14:42:53.7±0.4, 40°.43N×23°.91E, h0^{km}, mb4.4/29, mb1 4.4/42, mb1mx4.4/55, mbtmp4.4/42, ML4.1/11, MS3.7/39, Ms1 3.7/39, ms1mx3.7/55, Error ellipse: s-maj=9.0km s-min=8.5km az=56.0*

*SOF **15** 14:42:53.8, 40°.35N×24°.04E, h5^{km}*

*MOS **15** 14:42:53.9±1.1, 40°.43N×23°.99E, h12^{km}, mb4.9/51, Error ellipse: s-maj=3.8km s-min=2.5km az=92.7*

*ATH **15** 14:42:54.1, 40°.33N×23°.95E, h24^{km}±1^{km}, ML4.6/17, Error ellipse: s-maj=1.2km s-min=0.8km az=325.0*

*PDG **15** 14:42:54.3±0.6, 40°.35N×23°.95E, h15^{km}, MD4.7/2, ML4.7/9, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*ISCJB **15** 14:42:54.5±0.2, 40°.373N±0°.009×23°.98E±0°.01, h16^{km}±2^{km}, mb4.6/91, MS3.9/36, Error ellipse: s-maj=1.5km s-min=1.3km az=36.8*

*GII **15** 14:42:55.0±0.0, 40°.40N×23°.93E, h10^{km}*

*THE **15** 14:42:55.0, 40°.33N×23°.93E, h9^{km}, ML4.7/8, Error ellipse: s-maj=0.7km s-min=0.4km az=4.0*

*NEIC **15** 14:42:55.0±0.0, 40°.33N×23°.93E, h9^{km}, mb4.7/23, MW4.5, ML4.7(THE), Moment Tensor Solution. s18 Moment tensor: Scale 10^{15}Nm; M_{rr}3.79; $M_{\theta\theta}$0.76; $M_{\phi\phi}$-4.55; $M_{r\theta}$2.71; $M_{\theta\phi}$-5.98; $M_{\phi r}$-1.54; Best double couple: $M_0$8.00000×10^{15} NP1:ϕ_s176.00000°, δ62.00000°, λ31.00000°. NP2:ϕ_s70.00000°, δ63.00000°, λ148.00000°. Principal axes: T 7.3600, Plg41.0000°, Azm32.0000°; N 1.0800, Plg49.0000°, Azm214.0000°; P -8.4400, Plg1.0000°, Azm123.0000°; After THE.*

NEIC Felt at Alexandroupoli, Eleftheroupolis, Kalamaria, Kassandreia, Kavala, Nea Michaniona, Thasos and Thessaloniki.

*BEO **15** 14:42:55.5±0.5, 40°.39N×23°.93E, h5^{km}, ML4.8/14*

*GCMT **15** 14:42:57.0±0.4, 40°.24N±0°.03×23°.87E±0°.03, h26^{km}±1^{km}, MW4.7/59, Moment Tensor Solution. s13,c16; s59,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.70±.13; $M_{\theta\theta}$0.17±.10; $M_{\phi\phi}$-0.87±.09; $M_{r\theta}$0.23±.17; $M_{\theta\phi}$-1.51±.07; $M_{\phi r}$0.19±.17; Best double couple: $M_0$1.61800×10^{16} NP1:ϕ_s80.00000°, δ89.00000°, λ170.00000°. NP2: ϕ_s170.00000°, δ80.00000°, λ2.00000°. Principal axes: T 1.2550, Plg8.0000°, Azm35.0000°; N 0.7250, Plg80.0000°, Azm252.0000°; P -1.9800, Plg6.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DDA **15** 14:43:17.4, 40°.38N×23°.93E, h8^{km}±1^{km}, ML4.8*

ISC 15 14:42:55.0±0.6**, 40°.36N**±0°.01×**23°.94E**±0°.01**, h9**^{km}±3^{km}**, n787, σ1^s.42**/881**, mb4.7**/91**, MS3.8**/36**, 73C-19D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.04	130	P	Pg	14 42 56.8	+0.1
OUR				S	Sg	14 42 57.8	-0.1
OUR	Ouranopolis	0.04	130	P	Pg	14 42 56.8	+0.1
OUR				S	Sg	14 42 57.8	-0.1
OUR	Ouranopolis	0.04	130	P	Pg	14 42 56.8	+0.1
OUR				S	Sg	14 42 57.8	-0.1
PLG	Polygyros	0.38	272	P	Pg	14 43 02.3	-0.2
PLG	Polygyros	0.38	272	P	Pg	14 43 02.5	-0.1
PLG				S	Sg	14 43 07.7	+0.1
PLG				AML	AML	14 43 08.7	
PLG				AML	AML	14 43 08.7	
PLG	Polygyros	0.38	272	P	Pg	14 43 02.3	-0.2
PLG				S	Sg	14 43 07.4	-0.2
PLG	Polygyros	0.38	272	P	Pg	14 43 02.3	-0.2
PAIG	Paliouri	0.48	205	P	Pg	14 43 03.8	-0.5
PAIG				S	Sg	14 43 10.0	-0.5
PAIG	Paliouri	0.48	205	P	Pg	14 43 03.9	-0.5
PAIG				S	Sg	14 43 10.0	-0.5
PAIG				AML	AML	14 43 14.3	
	comp=N,89845µm,0.5s						
PAIG				AML	AML	14 43 15.4	
	comp=E,95392µm,0.3s						
PAIG	Paliouri	0.48	205	P	Pg	14 43 03.8	-0.5
PAIG				S	Sg	14 43 10.0	-0.5
PAIG	Paliouri	0.48	205	P	Pg	14 43 03.8	-0.5
PAIG				S	Sg	14 43 10.0	-0.5
THAS	Thassos island	0.64	67	P	Pg	14 43 07.3	-0.1
THAS				S	Sb	14 43 16.5	-0.9
THAS				AML	AML	14 43 18.7	
THAS				AML	AML	14 43 19.1	
THAS	Thassos island	0.64	67	P	Pg	14 43 07.1	-0.3
THAS				S	Sb	14 43 18.3	+0.8
SOH	Sokhos	0.65	316	P	Pg	14 43 07.3	-0.2
SOH				S	Sb	14 43 16.7	-1.0
SOH	Sokhos	0.65	316	P	Pg	14 43 07.3	-0.2
SOH				S	Sb	14 43 16.5	-1.2
SOH	Sokhos	0.65	316	P	Pg	14 43 07.3	-0.2
SOH				S	Sb	14 43 16.7	-1.0
SOH	Sokhos	0.65	316	P	Pg	14 43 07.3	-0.2
SOH				S	Sb	14 43 16.7	-1.0
HORT	Hortiatis	0.69	291	PG	Pg	14 43 07.4	-0.9
HORT				SG	Sb	14 43 17.6	-1.3
HORT	Hortiatis	0.69	291	P	Pg	14 43 07.5	-0.9
HORT				S	Sb	14 43 18.9	0.0
HORT	Hortiatis	0.69	291	P	Pg	14 43 07.4	-0.9
HORT				S	Sb	14 43 18.5	-0.4
HORT				AML	AML	14 43 20.8	
	comp=N,45064µm,0.3s						
HORT				AML	AML	14 43 22.5	
	comp=E,70664µm,0.5s						
HORT	Hortiatis	0.69	291	P	Pg	14 43 07.5	-0.9
HORT				S	Sb	14 43 18.9	0.0
KAVA	Kavala	0.77	34	P	Pg	14 43 09.7	-0.2
KAVA				S	Sb	14 43 20.9	-0.3
KAVA	Kavala	0.77	34	P	Pb	14 43 10.3	-0.3
KAVA				S	Sb	14 43 20.7	-0.5
KAVA				AML	AML	14 43 22.2	
	comp=N,78024µm,0.3s						
KAVA				AML	AML	14 43 22.3	
	comp=E,64774µm,0.3s						
KAVA	Kavala	0.77	34	P	Pg	14 43 09.7	-0.2
KAVA				S	Sb	14 43 20.9	-0.3
THE	Thessaloniki	0.80	290	P	Pg	14 43 08.9	-1.4
THE	Thessaloniki	0.80	290	P	Pg	14 43 09.3	-1.0
THE				S	Sg	14 43 20.5	-0.2
THE	Thessaloniki	0.80	290	P	Pg	14 43 08.9	-1.4
THE	Thessaloniki	0.80	290	P	Pg	14 43 08.9	-1.4
NVR	Nevrokopi	0.99	356	P	Pg	14 43 13.8	-0.3
NVR				S	Sn	14 43 29.9	+0.5
NVR	Nevrokopi	0.99	356	P	Pb	14 43 14.3	-0.2
NVR				S	Sb	14 43 27.8	+0.1
NVR	Nevrokopi	0.99	356	P	Pg	14 43 13.8	-0.3
NVR				S	Sn	14 43 29.9	+0.5
LIA	Limnos Island	1.05	115	P	Pg	14 43 14.5	-0.8
LIA				S	Sb	14 43 30.3	+0.9
LIA	Limnos Island	1.05	115	P	Pg	14 43 14.5	-0.8
LIA				S	Sg	14 43 27.3	-1.7
LIA				AML	AML	14 43 32.9	
	comp=E,79785µm,0.8s						
LIA				AML	AML	14 43 35.0	
	comp=N,80490µm,0.8s						
LIA	Limnos Island	1.05	115	P	Pg	14 43 14.5	-0.8
LIA				S	Sb	14 43 30.3	+0.9
KNT	Kendrikon	1.13	316	PN	Pg	14 43 15.8	-1.0
KNT				SN	Sn	14 43 32.4	-0.3
KNT	Kendrikon	1.13	316	P	Pg	14 43 15.7	-1.0
KNT				S	Sn	14 43 32.9	+0.2
KNT	Kendrikon	1.13	316	P	Pg	14 43 16.1	-0.6
KNT				S	Sn	14 43 31.9	-0.9
KNT				AML	AML	14 43 34.1	
	comp=E,29593µm,0.4s						
KNT				AML	AML	14 43 34.3	
	comp=N,54024µm,0.5s						
KNT	Kendrikon	1.13	316	P	Pg	14 43 15.7	-1.0
KNT				S	Sn	14 43 32.9	+0.2
KNT	Kendrikon	1.13	316	P	Pg	14 43 15.7	-1.0
KNT				S	Sn	14 43 32.9	+0.2
LIT	Litokhoron	1.14	257	*e*Pg	Pg	14 43 15.7	-1.3
LIT				*e*Sn	Sn	14 43 32.9	-0.2
LIT	Litokhoron	1.14	257	P	Pg	14 43 15.6	-1.3
LIT				S	Sg	14 43 31.3	-0.5
LIT	Litokhoron	1.14	257	P	Pg	14 43 15.7	-1.3
LIT	Litokhoron	1.14	257	P	Pg	14 43 15.7	-1.3
XOR	Xorichti	1.15	211	P	Pg	14 43 16.1	-1.0
XOR				S	Sg	14 43 31.8	-0.2
XOR	Xorichti	1.15	211	P	Pg	14 43 16.3	-0.8
XOR				S	Sg	14 43 30.5	-1.4
XOR				AML	AML	14 43 34.9	
	comp=E,27241µm,0.7s						
XOR				AML	AML	14 43 38.5	
	comp=N,48558µm,0.7s						
XOR	Xorichti	1.15	211	P	Pg	14 43 16.1	-1.0
XOR				S	Sg	14 43 31.8	-0.2
AOS	Alonnisos	1.19	182	PN	Pb	14 43 15.6	-2.1
AOS				SN	Sg	14 43 32.1	-1.1
AOS	Alonnisos	1.19	182	P	Pb	14 43 16.2	-1.5
AOS				S	Sg	14 43 32.8	-0.4
AOS	Alonnisos	1.19	182	P	Pb	14 43 16.2	-1.5
AOS				S	Sg	14 43 32.2	-1.0
AOS				AML	AML	14 43 35.4	
	comp=N,54793µm,0.6s						
AOS				AML	AML	14 43 36.7	
	comp=E,73866µm,0.8s						
AOS	Alonnisos	1.19	182	P	Pb	14 43 16.2	-1.5

AOS				S	Sg	14 43 32.8	-0.4
NEO	Neokhori	1.19	208	P	Pg	14 43 16.4	-1.4
NEO				S	Sg	14 43 32.4	-0.9
NEO	Neokhori	1.19	208	P	Pg	14 43 16.9	-1.0
NEO				S	Sg	14 43 33.0	-0.3
NEO				AML	AML	14 43 34.6	
	comp=N,47708μm,0.7s						
NEO				AML	AML	14 43 37.4	
	comp=E,47983μm,0.7s						
NEO	Neokhori	1.19	208	P	Pg	14 43 16.4	-1.4
NEO				S	Sg	14 43 32.4	-0.9
SMTH	Samothraki Isl	1.22	84	P	Pb	14 43 16.4	-1.8
SMTH				S	Sn	14 43 34.7	-0.2
SMTH	Samothraki Isl	1.22	84	P	Pb	14 43 17.2	-1.0
SMTH				S	Sg	14 43 33.6	-0.5
SMTH	Samothraki Isl	1.22	84	P	Pb	14 43 16.4	-1.8
SMTH				S	Sn	14 43 34.7	-0.2
FYTO	Fytoko, Volos	1.22	219	P	Pb	14 43 17.0	-1.3
FYTO				S	Sg	14 43 33.1	-1.3
FYTO	Fytoko, Volos	1.22	219	P	Pb	14 43 17.3	-1.0
FYTO				S	Sg	14 43 32.9	-1.5
FYTO				AML	AML	14 43 35.6	
	comp=E,13912μm,0.4s						
FYTO				AML	AML	14 43 37.3	
	comp=N,27143μm,0.8s						
FYTO	Fytoko, Volos	1.22	219	P	Pb	14 43 17.0	-1.3
FYTO				S	Sg	14 43 33.1	-1.3
MMB	Musomiste	1.24	352	P	Pb	14 43 17.4	-1.3
MMB	Musomiste	1.24	352	P	Pb	14 43 17.3	-1.4
SKIA	Skiathos	1.25	197	P	Pn	14 43 17.2	-1.5
SKIA				S	Sb	14 43 33.7	-1.2
SKIA				AML	AML	14 43 37.4	
	comp=E,47694μm,1.1s						
SKIA				AML	AML	14 43 40.1	
	comp=N,40139μm,0.6s						
SKIA	Skiathos	1.25	197	P	Pn	14 43 17.2	-1.5
SKIA				S	Sb	14 43 33.5	-1.4
GRG	Griva	1.32	297	PN	Pn	14 43 18.3	-1.4
GRG	Griva	1.32	297	P	Pn	14 43 18.2	-1.4
GRG	Griva	1.32	297	P	Pn	14 43 19.4	-0.3
GRG				S	Sn	14 43 37.9	+0.5
GRG				AML	AML	14 43 42.7	
	comp=N,42826μm,0.5s						
GRG				AML	AML	14 43 44.1	
	comp=E,30673μm,0.5s						
GRG	Griva	1.32	297	P	Pn	14 43 18.2	-1.4
GRG	Griva	1.32	297	P	Pn	14 43 18.2	-1.4
LRSO	Larissa Observ	1.38	241	P	Pb	14 43 20.9	-0.1
LRSO				S	Sb	14 43 37.9	-0.7
LRSO	Larissa Observ	1.38	241	P	Pn	14 43 19.7	-0.7
VAY	Valandovo	1.42	313	iPn	Pn	14 43 20.9	-0.1
VAY				iSn	Sg	14 43 42.7	+2.1
RDO	Rodhopi	1.44	56	PN	Pn	14 43 20.1	-1.3
RDO	Rodhopi	1.44	56	P	Pn	14 43 19.9	-1.5
RDO	Rodhopi	1.44	56	P	Pn	14 43 20.0	-1.3
RDO				AML	AML	14 43 44.0	
	comp=N,32336μm,0.7s						
RDO				AML	AML	14 43 46.0	
	comp=E,19148μm,0.3s						
RDO	Rodhopi	1.44	56	P	Pn	14 43 19.9	-1.5
RZN	Rozhen	1.45	23	P	Pn	14 43 21.0	-0.7
SKY	Skiros Island	1.55	162	P	Pn	14 43 21.7	-1.2
SKY	Skiros Island	1.55	162	P	Pn	14 43 21.7	-1.2
SKY	Skiros Island	1.55	162	P	Pn	14 43 21.7	-1.2
SMIA	Simia	1.58	201	P	Pn	14 43 22.4	-0.9
KKB	Krupnik	1.64	337	P	Pn	14 43 23.6	-0.5
KZN	Kozani	1.66	269	P	Pn	14 43 24.1	-0.4
KZN	Kozani	1.66	269	P	Pn	14 43 24.3	-0.1
KZN	Kozani	1.66	269	P	Pn	14 43 24.1	-0.4
MRKA	Markates	1.67	190	P	Pn	14 43 23.2	-1.4
THL	Klokotos Trika	1.68	242	P	Pn	14 43 24.0	-0.6
THL				S	Sn	14 43 45.0	-1.3
THL				AML	AML	14 43 51.6	
	comp=N,12496μm,0.6s						
THL				AML	AML	14 43 54.4	
	comp=E,8398μm,1.0s						
THL	Klokotos Trika	1.68	242	P	Pn	14 43 24.0	-0.6
ALN	Alexandroupoli	1.69	71	PN	Pn	14 43 23.1	-1.6
ALN	Alexandroupoli	1.69	71	ePn	Pn	14 43 23.2	-1.4
ALN				eSn	Sg	14 43 49.0	-0.3
ALN	Alexandroupoli	1.69	71	P	Pn	14 43 23.7	-1.0
ALN				S	Sb	14 43 47.5	-0.1
ALN				AML	AML	14 43 51.2	
	comp=N,64074μm,0.7s						
ALN				AML	AML	14 43 51.8	
	comp=E,35154μm,1.0s						
ALN	Alexandroupoli	1.69	71	P	Pn	14 43 23.4	-1.3
ALN				S	Sg	14 43 48.6	-0.7
ALN	Alexandroupoli	1.69	71	eP	Pn	14 43 23.3	-1.4
ALN				e		14 43 49.0	
BOZC	Bozcaada	1.70	107	PN	Pn	14 43 23.6	-1.3
BOZC	Bozcaada	1.70	107	iP	Pn	14 43 23.5	-1.4
KDZ	Kurdzhali	1.71	40	P	Pg	14 43 27.2	-0.5
ENEZ	Enez	1.73	77	PN	Pn	14 43 24.0	-1.2
ATAL	Atalanti	1.81	204	P	Pn	14 43 25.1	-1.3
ATAL	Atalanti	1.81	204	P	Pn	14 43 25.1	-1.3
AGG	Agios Georgios	1.83	224	PN	Pn	14 43 25.9	-0.8
AGG	Agios Georgios	1.83	224	ePn	Pn	14 43 26.1	-0.5
AGG				eSn	Sb	14 43 51.6	0.0
AGG	Agios Georgios	1.83	224	P	Pn	14 43 26.1	-0.5
AGG	Agios Georgios	1.83	224	P	Pn	14 43 25.8	-0.9
AGG	Agios Georgios	1.83	224	eP	Pn	14 43 26.2	-0.5
AGG				e		14 43 51.6	
PLD	Plovdiv	1.84	18	PN	Pn	14 43 26.6	-0.2
PLD	Plovdiv	1.84	18	ePn	Pn	14 43 27.0	+0.2
PLD				eSn	Sb	14 43 51.5	-0.4
PLD	Plovdiv	1.84	18	P	Pn	14 43 26.6	-0.2
PLD	Plovdiv	1.84	18	P	Pn	14 43 26.9	+0.2
PLD				Pg	Pg	14 43 30.6	+0.4
SIGR	SIGRI	1.87	127	PN	Pn	14 43 25.7	-1.5
SIGR	SIGRI	1.87	127	P	Pn	14 43 26.3	-0.9
SIGR	SIGRI	1.87	127	P	Pn	14 43 26.5	-0.7
SIGR	SIGRI	1.87	127	P	Pn	14 43 26.3	-0.9
STIP	Stip	1.88	316	iPn	Pn	14 43 26.1	-1.3
STIP				iSn	Sb	14 43 52.5	-0.8
EZN	Ezine	1.90	105	PN	Pn	14 43 26.5	-1.2
EZN	Ezine	1.90	105	P	Pn	14 43 26.7	-0.9
EZN	Ezine	1.90	105	P	Pn	14 43 26.7	-0.9
EZN	Ezine	1.90	105	P	Pn	14 43 26.8	-0.9
GELI	Tayfur-Gelibol	1.93	88	PN	Pn	14 43 26.7	-1.4
EREA	Eretria	1.94	180	P	Pn	14 43 27.2	-1.0
ERIK	Erikli-Kesan	1.98	80	PN	Pn	14 43 27.8	-1.0
KPRO	Kipourio	2.02	259	P	Pn	14 43 29.4	0.0
KPRO	Kipourio	2.02	259	P	Pn	14 43 29.3	0.0
DIM	Dimitrovgrad	2.07	35	P	Pn	14 43 29.7	-0.3
DIM	Dimitrovgrad	2.07	35	P	Pn	14 43 29.5	-0.5
BAYC	CANAKKALE_Bayr	2.09	106	iP	Pn	14 43 30.3	0.0
BIA	Bitola	2.10	289	iPn	Pn	14 43 31.4	+0.9
PRK	Paraskevi	2.11	121	P	Pn	14 43 30.9	+0.4
PRK	Paraskevi	2.11	121	P	Pn	14 43 27.8	-2.7
PRK				AML	AML	14 44 08.7	
	comp=N,29182μm,0.8s						
PRK				AML	AML	14 44 09.8	
	comp=E,51629μm,0.8s						
PRK	Paraskevi	2.11	121	P	Pn	14 43 30.9	+0.4
PRK	Paraskevi	2.11	121	P	Pn	14 43 30.9	+0.4
KESN	Edirne-Kesan	2.13	76	iP	Pn	14 43 30.2	-1.0
LPK	Lapseki	2.15	89	PN	Pn	14 43 29.9	-1.2
PENT	Pentalofos	2.15	267	P	Pn	14 43 31.8	+0.5
PENT	Pentalofos	2.15	267	P	Pn	14 43 31.9	+0.7
EVR	Evrytania	2.19	230	P	Pn	14 43 31.5	-0.2
EVR	Evrytania	2.19	230	P	Pn	14 43 31.7	0.0
EVR	Evrytania	2.19	230	P	Pn	14 43 31.5	-0.2
PGB	Panagyurishte	2.20	4	P	Pn	14 43 31.0	-0.8
DSF	Desfina	2.23	210	P	Pn	14 43 31.0	-1.3
DSF	Desfina	2.23	210	P	Pn	14 43 31.0	-1.3
VILL	Villia	2.25	193	P	Pn	14 43 31.5	-1.0
KRUS	Krusevo	2.28	297	iPn	Pn	14 43 33.0	+0.1
PTL	Penteli	2.31	182	P	Pn	14 43 32.3	-1.0
PTL	Penteli	2.31	182	P	Pn	14 43 32.3	-1.0
PTL	Penteli	2.31	182	P	Pn	14 43 32.3	-1.0
VTS	Vitosha	2.32	347	ePn	Pn	14 43 33.7	+0.1
VTS				eSn	Sn	14 44 02.1	-0.2
VTS	Vitosha	2.32	347	ePn	Pn	14 43 33.2	-0.3
VTS				eSn	Sn	14 44 03.2	+0.9
VTS	Vitosha	2.32	347	⇑iP	Pn	14 43 33.6	0.0
VTS	Vitosha	2.32	347	S	Sn	14 44 02.6	+0.3
VTS	Vitosha	2.32	347	P	Pn	14 43 33.7	+0.1
VTS	Vitosha	2.32	347	eP	Pn	14 43 33.2	-0.3
VTS				e		14 44 03.2	
ANX	Ano Chora	2.36	222	P	Pn	14 43 33.9	-0.1
AYVA	Ayvalik	2.36	116	iP	Pn	14 43 34.5	+0.5
AYVA				IAML_P			
	comp=Z,6μm,0.2s						
SOF	Sofiya	2.37	349	P	Pn	14 43 34.4	+0.3
ATH	Athens Observa	2.39	184	P	Pn	14 43 33.6	-0.8
ATH	Athens Observa	2.39	184	P	Pn	14 43 33.3	-1.0
ATH	Athens Observa	2.39	184	P	Pn	14 43 33.6	-0.8
ATH	Athens Observa	2.39	184	P	Pn	14 43 33.6	-0.8
ATHU	Athens Univers	2.39	183	P	Pn	14 43 33.4	-1.0
ATHU	Athens Univers	2.39	183	P	Pn	14 43 33.4	-1.0
KALE	Kalithea	2.41	216	P	Pn	14 43 34.1	-0.7
KALE	Kalithea	2.41	216	P	Pn	14 43 34.1	-0.7
SERG	Sergoula	2.43	218	P	Pn	14 43 34.4	-0.6
LTK	Loutraki	2.45	198	P	Pn	14 43 34.3	-1.0
LTK	Loutraki	2.45	198	P	Pn	14 43 34.3	-1.0
TRIZ	Trizonia	2.46	217	P	Pn	14 43 34.7	-0.7
JAN	Janina	2.48	255	P	Pn	14 43 36.0	+0.4
JAN	Janina	2.48	255	P	Pn	14 43 36.4	+0.8
JAN	Janina	2.48	255	P	Pn	14 43 36.0	+0.4
JAN	Janina	2.48	255	P	Pn	14 43 36.0	+0.4
LOUT	Loutraki	2.48	198	P	Pn	14 43 34.8	-0.9
RKY	Sarkoy-Tekirda	2.49	81	PN	Pn	14 43 34.7	-1.1
SART	Tekirdag	2.49	81	iP	Pn	14 43 33.8	-2.0
EFP	Efpalio	2.49	220	P	Pn	14 43 35.7	-0.1
OHR	Ohrid	2.51	288	iPn	Pn	14 43 36.6	+0.6
OHR				iSn	Sn	14 44 02.9	-3.8
VLY	Voula,Athens	2.51	183	P	Pn	14 43 34.9	-1.1
VLY	Voula,Athens	2.51	183	P	Pn	14 43 35.1	-0.9
VLY	Voula,Athens	2.51	183	P	Pn	14 43 34.9	-1.1
ALIK	Aliki, Aigiali	2.53	215	P	Pn	14 43 37.0	+0.7
PVO	Paravola	2.56	228	P	Pn	14 43 36.9	+0.2
CHOS	Chios island	2.56	140	PN	Pn	14 43 35.9	-0.9
CHOS	Chios island	2.56	140	P	Pn	14 43 36.4	-0.4
CHOS	Chios island	2.56	140	P	Pn	14 43 36.4	-0.4
KRBG	Karabiga-Canak	2.56	88	PN	Pn	14 43 35.7	-1.0
TRAZ	Trapeza	2.57	212	P	Pn	14 43 36.6	-0.3
EDRB	Edirne	2.59	54	PN	Pn	14 43 36.4	-0.7
EDRB	Edirne	2.59	54	P	Pn	14 43 37.0	-0.1
EDRB	Edirne	2.59	54	P	Pn	14 43 37.0	-0.1
LAKA	Lakka	2.61	216	P	Pn	14 43 37.7	+0.3
LAKA	Lakka	2.61	216	P	Pn	14 43 37.7	+0.3
KRBN	Karaburun	2.68	130	PN	Pn	14 43 36.8	-1.6
KLV	Kalavryta, Ach	2.70	212	P	Pn	14 43 37.9	-0.8
KLV	Kalavryta, Ach	2.70	212	P	Pn	14 43 38.1	-0.6
KLV	Kalavryta, Ach	2.70	212	P	Pn	14 43 37.9	-0.8
FOCM	Foa	2.71	126	PN	Pn	14 43 37.5	-1.3
GUR	Goura	2.72	208	P	Pn	14 43 38.2	-0.8
GUR	Goura	2.72	208	P	Pn	14 43 38.2	-0.8
KIRK	Kırklareli	2.77	58	iP	Pn	14 43 39.6	-0.1
TKR	Tekirdag	2.80	76	PN	Pn	14 43 39.6	-0.5
URLA	Izmir	2.87	133	PN	Pn	14 43 40.3	-0.6
URLA	Izmir	2.87	133	iP	Pn	14 43 41.1	+0.2
GONE	Gonen-Balikesi	2.88	95	PN	Pn	14 43 41.0	-0.1
BALY	Balya	2.89	101	iP	Pn	14 43 41.5	+0.2
JMB	Yambol	2.89	42	ePn	Pn	14 43 43.0	+1.7
JMB				eSn	Sn	14 44 17.7	+1.5
IGT	Igoumenitsa	2.90	255	ePn	Pn	14 43 43.1	+1.7
IGT	Igoumenitsa	2.90	255	P	Pn	14 43 43.8	+2.4
IGT	Igoumenitsa	2.90	255	P	Pn	14 43 43.8	+2.4
IGT	Igoumenitsa	2.90	255	P	Pn	14 43 43.8	+2.4
ZEY	zmir	2.90	136	iP	Pn	14 43 41.9	+0.5
BARS	Barje	2.93	328	ePn	Pn	14 43 42.1	+0.3
BARS	Barje	2.93	328	ePn	Pg	14 43 54.8	+3.7
BARS				eSg	Sg	14 44 28.2	-0.9
DRO	Drossia	2.96	217	P	Pn	14 43 43.1	+0.8
CRLT	Corlu	2.98	74	PN	Pn	14 43 42.3	-0.2
LKD2	Lefkada island	2.98	239	P	Pn	14 43 44.9	+2.3
LKD2	Lefkada island	2.98	239	P	Pn	14 43 44.9	+2.3
PHSR	Pinarhisar	2.99	64	PN	Pn	14 43 42.3	-0.4
EDC	Edincik	3.00	89	PN	Pn	14 43 42.0	-0.7
RLS	Riolos of Patr	3.00	221	P	Pn	14 43 45.3	+2.6
RLS	Riolos of Patr	3.00	221	P	Pn	14 43 45.3	+2.6
MPEP	Malo Peshtene	3.00	357	P	Pn	14 43 43.0	+0.2
TPE	Tepelena	3.01	270	P	Pn	14 43 45.4	+2.5
TPE	Tepelena	3.01	270	P	Pn	14 43 45.4	+2.5
KRND	KRANIDI	3.04	192	P	Pn	14 43 42.9	-0.4
PVL	Pavlikeni	3.04	20	P	Pn	14 43 41.4	-1.9
SRN	Sarande	3.06	262	P	Pn	14 43 45.5	+1.9
SRN	Sarande	3.06	262	P	Pn	14 43 45.5	+1.9
STEP	BALIKESIR_Sava	3.06	107	iP	Pn	14 43 43.2	-0.5
ZAPS	Zavoj	3.07	342	ePn	Pn	14 43 44.7	+0.9
EVGI	Lefkada island	3.08	237	P	Pn	14 43 45.8	+1.9
BLCB	Balcova	3.11	128	PN	Pn	14 43 43.8	-0.4
TRIP	Tripoli	3.11	205	P	Pn	14 43 44.1	-0.3
VLX	Vlachokerasia	3.23	203	P	Pn	14 43 45.8	-0.2
VLX	Vlachokerasia	3.23	203	P	Pn	14 43 45.8	-0.2
DGB	zmir	3.24	134	iP	Pn	14 43 45.5	-0.6
KEK	Kerkira	3.25	260	P	Pn	14 43 48.6	+2.4
KEK	Kerkira	3.25	260	P	Pn	14 43 48.6	+2.4
TIR	Tirane	3.25	289	ePn	Pn	14 43 48.9	+2.7
TIR	Tirane	3.25	289	⇑iP	Pn	14 43 49.1	+2.9
TIR	Tirane	3.25	289	P	Pn	14 43 48.9	+2.7
TIR	Tirane	3.25	289	P	Pn	14 43 48.9	+2.7
AMT	Artemida-Makis	3.32	212	P	Pn	14 43 48.6	+1.4
AKS	Akhisar	3.33	115	PN	Pn	14 43 46.6	-0.8
SLVT	Silivri	3.35	74	PN	Pn	14 43 47.1	-0.5
KCTX	Karacabey (Bur	3.38	90	PN	Pn	14 43 47.2	-0.8
VLS	Valsamata	3.40	231	P	Pn	14 43 49.5	+1.3
VLS	Valsamata	3.40	231	P	Pn	14 43 49.5	+1.3
ZIMR		3.46	17	⇑iP	Pn	14 43 49.0	-0.1
SMG	Samos	3.48	139	P	Pn	14 43 48.9	-0.4
SMG	Samos	3.48	139	P	Pn	14 43 48.6	-0.7
SMG	Samos	3.48	139	P	Pn	14 43 48.9	-0.4
CTYL	Yalikoy Yolu	3.48	70	PN	Pn	14 43 48.5	-0.8
GOMA	Golmarmara-Man	3.49	117	PN	Pn	14 43 48.7	-0.7
APE	Apeiranthos	3.51	159	PN	Pn	14 43 48.5	-1.4
APE	Apeiranthos	3.51	159	P	Pn	14 43 48.7	-1.1
APE	Apeiranthos	3.51	159	P	Pn	14 43 48.4	-1.5
APE	Apeiranthos	3.51	159	⇑iP	Pn	14 43 48.8	-1.1
APE	Apeiranthos	3.51	159	P	Pn	14 43 48.7	-1.1
APE	Apeiranthos	3.51	159	d iP	Pn	14 43 48.7	-1.1
ITM	Ithomi	3.54	207	PN	Pn	14 43 49.5	-0.8
ITM	Ithomi	3.54	207	ePn	Pn	14 43 52.4	+2.1
ITM	Ithomi	3.54	207	P	Pn	14 43 51.3	+1.0
SELS	Selova	3.55	324	iPn	Pn	14 43 50.1	-0.3
SELS				eSn	Sn	14 44 33.0	+0.4
DURS	Dursunbey	3.56	101	iP	Pn	14 43 51.1	+0.5
CTKS	Kestanelik-??a	3.57	74	PN	Pn	14 43 50.9	+0.3
MHLA	Plaka, Milos I	3.63	174	P	Pn	14 43 50.5	-0.9
VLAD	Vladila	3.65	5	⇑iP	Pn	14 43 52.0	+0.3
VLAD	Vladila	3.65	5	S	Sn	14 44 36.5	+1.6
BOVS	Bovan	3.67	334	ePn	Pn	14 43 51.8	-0.2
ZAGS	Zajecar	3.68	340	ePn	Pn	14 43 51.8	-0.3
GCAM	G?zelcaml?	3.69	135	PN	Pn	14 43 51.1	-1.1
GCAM	G?zelcaml?	3.69	135	iP	Pn	14 43 52.3	+0.1
VLI	Veliai	3.72	193	P	Pn	14 43 51.9	-0.8
VLI	Veliai	3.72	193	P	Pn	14 43 52.0	-0.6
VLI	Veliai	3.72	193	P	Pn	14 43 51.9	-0.8
PVY	Plav	3.74	308	⇓iPn	Pn	14 43 54.0	+1.0
PVY				iSn	Sn	14 44 37.3	+0.1
ROIA	ROIAK	3.75	42	P	Pn	14 43 53.3	+0.2
ARMT	Armutlu	3.76	85	PN	Pn	14 43 52.9	-0.3
BGKT	Bogazkoy	3.76	76	PN	Pn	14 43 52.9	-0.3
MDNY	Mudanya-Bursa	3.77	88	PN	Pn	14 43 53.0	-0.4
ORLT	Orhaneli	3.81	93	PN	Pn	14 43 53.0	-0.9
AMGA	Amorgos Island	3.84	156	P	Pn	14 43 53.5	-0.8
ULC	Ulcinj	3.89	296	⇓iPn	Pn	14 43 56.6	+1.5
ULC				iSn	Sn	14 44 41.0	+0.1
AYDB	Zeytinkoy-Aydi	3.90	127	PN	Pn	14 43 54.5	-0.8
DEMI	Demirci	3.91	108	iP	Pn	14 43 54.9	-0.4
AVR	AVREN	3.92	44	P	Pn	14 43 54.7	-0.7
IVA	Berane	3.94	311	⇑iPn	Pn	14 43 56.8	+1.0
IVA				iSn	Sn	14 44 41.8	-0.4
ISK	Istanbul-Kandi	3.95	78	PN	Pn	14 43 55.2	-0.6
ISK	Istanbul-Kandi	3.95	78	P	Pn	14 43 56.5	+0.7
KAVV	Kandilli-Istan	3.95	78	PN	Pn	14 43 55.3	-0.5
KLYT	Kilyos	3.97	75	PN	Pn	14 43 55.9	-0.2
PUNG	Punghina	3.99	349	⇑iP	Pn	14 43 55.6	-0.7
PUNG	Punghina	3.99	349	S	Sn	14 44 45.1	+1.9
GEMT	Gemlik	4.01	87	PN	Pn	14 43 56.2	-0.4
DRME	Dracevica, Mon	4.03	299	⇑iPn	Pn	14 43 57.1	+0.2
DRME				iSn	Sn	14 44 44.6	+0.4
DRME	Dracevica, Mon	4.03	299	⇑iPn	Pn	14 43 59.3	+2.4
MANT	Manisa	4.03	116	ePn	Pn	14 43 57.6	+0.5
MANT				eSn	Sn	14 44 44.5	-0.2
MANT	Manisa	4.03	116	iP	Pn	14 43 58.0	+0.9
THR2	Thira island,	4.08	163	P	Pn	14 43 57.0	-0.6
THR2	Thira island,	4.08	163	P	Pn	14 43 57.0	-0.6
AYDN	Tasoluk	4.08	130	iP	Pn	14 43 57.9	+0.2
THT2	Imerovigli	4.09	163	P	Pn	14 43 57.0	-0.7
THR5	Thira Island,	4.09	164	P	Pn	14 43 57.0	-0.7
PDG	Podgorica	4.09	302	ePn	Pn	14 43 59.5	+1.8
PDG	Podgorica	4.09	302	⇑iP	Pn	14 43 59.8	+2.1
PDG	Podgorica	4.09	302	S	Sn	14 44 46.8	+1.1
PDG	Podgorica	4.09	302	⇑iPn	Pn	14 43 59.6	+1.8
TTG	Podgorica	4.09	302	⇑iPn	Pn	14 43 57.9	+0.2
TTG				iSn	Sn	14 44 46.1	+0.4
TTG	Podgorica	4.09	302	ePn	Pn	14 43 59.5	+1.8
TTG	Podgorica	4.09	302	eP	Pn	14 43 59.5	+1.8
KULA	Kula-Manisa	4.09	115	PN	Pn	14 43 56.8	-1.0
KULA	Kula-Manisa	4.09	115	P	Pn	14 43 58.5	+0.7
KULA	Kula-Manisa	4.09	115	P	Pn	14 43 58.5	+0.7
THR3	Thira Island,	4.11	163	P	Pn	14 43 57.4	-0.6
THR3	Thira Island,	4.11	163	P	Pn	14 43 57.4	-0.6
SGRR	Singureni	4.14	21	⇑iP	Pn	14 43 58.1	-0.4
SGRR	Singureni	4.14	21	S	Sn	14 44 49.3	+2.2
SJES	Sjenica	4.15	316	ePn	Pn	14 43 59.6	+0.9
KOME	Kolasin	4.15	308	⇑iPn	Pn	14 43 59.1	+0.4
KOME				iSn	Sn	14 44 47.9	+0.5
YKAV	Yalikavak-Bodr	4.15	140	PN	Pn	14 43 57.5	-1.1
SANT	Santorini	4.16	163	PN	Pn	14 43 57.6	-1.1
SANT	Santorini	4.16	163	ePg	Pg	14 44 15.1	+0.5
SANT				eSn	Sn	14 44 51.6	+4.2
SANT	Santorini	4.16	163	⇑iP	Pn	14 43 57.8	-0.9
THR6	Thira Island,	4.16	164	P	Pn	14 43 58.1	-0.6
THR6	Thira Island,	4.16	164	P	Pn	14 43 58.1	-0.6
KTHR	Kythira	4.16	191	P	Pn	14 44 00.3	+1.6
BODT	Bodrum	4.21	140	PN	Pn	14 43 59.1	-0.4
BODT	Bodrum	4.21	140	P	Pn	14 43 59.5	0.0
BODT	Bodrum	4.21	140	P	Pn	14 43 59.5	0.0
IZI	Iznik	4.22	89	PN	Pn	14 43 59.8	+0.1
HUMR	Humele	4.24	10	⇑iP	Pn	14 43 59.7	-0.1
GRUS	Gruza	4.27	327	ePn	Pn	14 44 00.0	-0.2
BUC1	Bucharest	4.28	20	S	Sn	14 44 50.7	+0.4
MLSB	Milas	4.28	134	PN	Pn	14 43 59.9	-0.5
IVAS	Ivanjica	4.28	320	iPn	Pn	14 44 00.3	-0.1
SHAP	Saphane-Kutahy	4.28	106	PN	Pn	14 44 00.4	-0.1
SRE	Strehaia	4.33	353	⇑iP	Pn	14 44 00.8	-0.3
SRE	Strehaia	4.33	353	P	Pn	14 44 00.8	-0.3
TVSB	Tavsanli	4.34	100	PN	Pn	14 44 01.6	+0.3
KUBS	Kucevo	4.38	338	ePn	Pn	14 44 00.9	-0.9
SILT	Sile	4.40	78	PN	Pn	14 44 02.2	+0.2
GEDZ	Gediz	4.42	106	PN	Pn	14 44 01.7	-0.6
NKY	Niksic	4.45	305	⇑iPn	Pn	14 44 04.4	+1.6
NKY				iSn	Sn	14 44 55.0	+0.2
NKME	Niksic	4.45	304	⇑iPn	Pn	14 44 05.4	+2.6
NKME				iSn	Sn	14 44 54.8	+0.1
GDZ	Gediz	4.45	105	iP	Pn	14 44 03.8	+0.9
PLE	Pljevlja	4.51	313	⇑iPn	Pn	14 44 05.2	+1.5
PLE				iSn	Sn	14 44 56.2	-0.2
GOLR		4.54	9	⇑iP	Pn	14 44 04.5	+0.6
HCY	Herceg Novi	4.60	299	⇓iPn	Pn	14 44 05.2	+0.4
HCY				iSn	Sn	14 44 58.2	-0.1
HCY	Herceg Novi	4.60	299	ePn	Pn	14 44 06.8	+2.0
DAT	Datca	4.61	141	PN	Pn	14 44 04.2	-0.8
DATC	Datca-Mugla	4.63	140	PN	Pn	14 44 04.5	-0.6
SULR		4.64	21	⇑iP	Pn	14 44 05.6	+0.3
HERR	Herculane	4.66	346	⇑iP	Pn	14 44 04.5	-1.1
TRUS	Trudelj	4.67	327	iPn	Pn	14 44 05.4	-0.3
YER	Yerkesik	4.68	132	PN	Pn	14 44 05.4	-0.5
YER	Yerkesik	4.68	132	P	Pn	14 44 06.3	+0.4
YER	Yerkesik	4.68	132	P	Pn	14 44 06.3	+0.4
YER	Yerkesik	4.68	132	P	Pn	14 44 06.3	+0.4
MDVR	Moldovita	4.72	340	⇓iP	Pn	14 44 06.0	-0.4
ICOR	Ion Corvin	4.72	36	⇑iP	Pn	14 44 06.2	-0.2
KHAL	Karahalli	4.74	113	iP	Pn	14 44 07.2	+0.5
DIVS	Divibare	4.75	323	ePn	Pn	14 44 06.9	0.0
DIVS	Divibare	4.75	323	ePn	Pn	14 44 06.8	0.0
DIVS	Divibare	4.75	323	⇑iPn	Pn	14 44 06.7	-0.2
KHL	Karahalli	4.78	113	PN	Pn	14 44 07.0	-0.3
TREB	Trebinje	4.81	301	ePn	Pn	14 44 08.7	+1.0
TREB	Trebinje	4.81	301	⇑iPn	Pn	14 44 09.5	+1.8
TAVA	DENIZLI_Tavas	4.83	125	iP	Pn	14 44 08.7	+0.7
BBLS	Lazići	4.87	318	ePn	Pn	14 44 09.0	+0.5
BBLS	Lazići	4.87	318	⇑iPn	Pn	14 44 08.8	+0.3
IMMV	Iera Moni Meta	4.89	180	PN	Pn	14 44 08.9	+0.1
IMMV	Iera Moni Meta	4.89	180	P	Pn	14 44 09.5	+0.7
SECR		4.93	18	⇑iP	Pn	14 44 10.1	+0.8
MTUR	Matau	4.93	9	⇓iP	Pn	14 44 10.1	+0.7
MTUR	Matau	4.93	9	P	Pn	14 44 10.1	+0.7
CGL1	Ceglie Messapi	4.94	276	ePn	Pn	14 44 08.9	-0.5
CGL1				Sn	Sg	14 45 44.1	+10
ARR	Arges	5.03	6	⇑iP	Pn	14 44 11.0	+0.2
FASA	Fasano	5.04	277	ePn	Pn	14 44 10.4	-0.4
TURN	Turunc	5.04	132	PN	Pn	14 44 08.9	-1.9
TAR1	Taranto	5.08	274	ePn	Pn	14 44 11.1	-0.3
LOT	Lotru	5.09	359	⇑iP	Pn	14 44 11.4	-0.2
GZR	Gura Zlata	5.10	351	⇑iP	Pn	14 44 10.7	-1.1
GZR	Gura Zlata	5.10	351	P	Pn	14 44 10.6	-1.2
DALY	Dalyan (Mula)	5.11	132	PN	Pn	14 44 11.8	0.0
IDI	Anoyia	5.12	171	PN	Pn	14 44 11.2	-0.7
IDI	Anoyia	5.12	171	⇓iP	Pn	14 44 11.0	-0.9
IDI	Anoyia	5.12	171	Pn	Pn	14 44 11.3	-0.7
	comp=Z,9.7nm,0.3s,baz=358,slow=12,SNR=21						
IDI				Lg	Lg	14 45 36.6	
	comp=Z,3.0nm,0.3s,baz=298,slow=17,SNR=1.4						
ISR	Istrita	5.13	21	⇓iP	Pn	14 44 12.9	+0.8
ISR	Istrita	5.13	21	P	Pn	14 44 12.6	+0.5
ISR				pmax	pmax		
	comp=Z,432nm,0.8s						
VOIR		5.14	9	⇑iP	Pn	14 44 12.7	+0.4
VOIR		5.14	9	P	Pn	14 44 12.1	-0.2
VOIR				pmax	pmax		
	comp=Z,279nm,1.0s						
MASS	Massafra	5.19	275	ePn	Pn	14 44 12.6	-0.3
TLB	Topalu	5.20	34	⇑iP	Pn	14 44 12.7	-0.2
TLB	Topalu	5.20	34	P	Pn	14 44 12.7	-0.2
HAPS	Han Pijesak,BI	5.25	317	ePn	Pn	14 44 13.7	-0.2
HAPS	Han Pijesak,BI	5.25	317	ePn	Pn	14 44 13.5	-0.4
TIRR	Tirgusor	5.26	37	ePn	Pn	14 44 13.5	-0.4
TIRR	Tirgusor	5.26	37	⇓iP	Pn	14 44 13.2	-0.7
TIRR	Tirgusor	5.26	37	eP	Pn	14 44 13.5	-0.4
ARG	Arkhangelos	5.28	140	PN	Pn	14 44 14.1	-0.1
STON	Ston	5.31	300	P	Pn	14 44 17.1	+2.6
MLR	Muntele Rosu	5.33	15	ePn	Pn	14 44 15.5	+0.5
MLR				eSn	Sn	14 45 08.2	-8.4
MLR				Lg	Lg	14 45 43.8	
MLR	Muntele Rosu	5.33	15	⇑iP	Pn	14 44 15.8	+0.8
MLR	Muntele Rosu	5.33	15	eP	Pn	14 44 15.5	+0.5
MLR				e		14 45 08.2	
MLR	Muntele Rosu	5.33	15	Pn	Pn	14 44 15.7	+0.7
	comp=Z,11nm,0.3s,baz=217,slow=4.7,SNR=87						
MLR				Lg	Lg	14 45 43.8	
	comp=Z,12nm,0.3s,baz=220,slow=6.2,SNR=4.2						
BAI	Bari	5.42	280	ePn	Pn	14 44 15.6	-0.4
KARP	Karpathos	5.43	151	PN	Pn	14 44 15.8	-0.5
KARP	Karpathos	5.43	151	ePn	Pn	14 44 18.2	+1.9
KARP				eSn	Sn	14 45 20.4	+1.5
FETY	Fethiye	5.48	131	PN	Pn	14 44 16.1	-0.8
BZS	Buzias	5.53	343	ePn	Pn	14 44 16.3	-1.2
BZS	Buzias	5.53	343	⇓iP	Pn	14 44 16.4	-1.1
BZS	Buzias	5.53	343	S	Sn	14 45 22.4	+1.3
ZKR	Zakros	5.54	160	PN	Pn	14 44 17.6	0.0
SG1	Sgolgore (BA)	5.55	277	ePn	Pn	14 44 17.4	-0.5
DEV	Deva	5.57	352	P	Pn	14 44 18.4	+0.3
DEV				pmax	pmax		
	comp=Z,233nm,0.9s						
TIP	Timpagrande	5.66	260	ePn	Pn	14 44 19.8	+0.4
TIP				eSn	Sn	14 45 23.6	-1.0
TIP	Timpagrande	5.66	260	⇑iP	Pn	14 44 19.0	-0.4
TIP	Timpagrande	5.66	260	S	Sn	14 45 23.4	-1.2
TIP	Timpagrande	5.66	260	P	Pn	14 44 19.2	-0.2
FRGS	Fruska Gora	5.68	329	ePn	Pn	14 44 18.7	-0.9
FRGS	Fruska Gora	5.68	329	⇑iPn	Pn	14 44 18.7	-0.9
DOPR	Dopca	5.70	10	⇑iP	Pn	14 44 20.4	+0.4
ISP	Isparta	5.71	114	ePn	Pn	14 44 20.8	+0.7
ISP	Isparta	5.71	114	⇑iP	Pn	14 44 20.4	+0.3
ISP	Isparta	5.71	114	P	Pn	14 44 19.8	-0.3
ISP	Isparta	5.71	114	eP	Pn	14 44 20.8	+0.7
ISP	Isparta	5.71	114	Pn	Pn	14 44 21.0	+0.9
CFR	Carcaliu	5.72	31	⇓iP	Pn	14 44 19.6	-0.5
CFR	Carcaliu	5.72	31	P	Pn	14 44 20.2	+0.1
CFR				pmax	pmax		
	comp=Z,71nm,0.9s						
AUMIH	MIHALICIK	5.80	92	iP	Pn	14 44 21.9	+0.5
PLOR	Plostina	5.83	19	⇓iP	Pn	14 44 23.0	+1.2
PLOR	Plostina	5.83	19	P	Pn	14 44 23.0	+1.2
VRI	Vrincioaia	5.87	19	⇑iP	Pn	14 44 23.3	+1.0
VRI	Vrincioaia	5.87	19	P	Pn	14 44 23.2	+1.0

PETR	Petresti	5.88	23	⇑iP	Pn	14 44 23.4	+1.1
OZUR		5.89	13	⇓iP	Pn	14 44 23.3	+0.8
TLCR		6.01	35	⇑iP	Pn	14 44 23.9	-0.2
TLCR		6.01	35	P	Pn	14 44 23.8	-0.3
AKAS	Kas	6.07	131	PN	Pn	14 44 24.8	-0.2
SIRR	Siria	6.14	345	⇓iP	Pn	14 44 25.4	-0.5
DOB	Doboj	6.14	317	ePn	Pn	14 44 26.1	+0.2
CUC	Castrocucco	6.24	269	ePn	Pn	14 44 28.5	+1.2
CUC				eSn	Sn	14 45 38.3	-0.4
TESR	Tescani	6.46	17	⇑iP	Pn	14 44 30.9	+0.6
DRGR		6.49	352	⇓iP	Pn	14 44 30.0	-0.9
DRGR		6.49	352	P	Pn	14 44 29.9	-0.9
DRGR				pmax	pmax		
	comp=Z,138nm,1.0s						
CEL	Celeste	6.58	254	ePn	Pn	14 44 31.0	-1.1
CEL				eSn	Sn	14 45 47.4	0.0
BLY	Banja Luka	6.64	314	ePn	Pn	14 44 34.2	+1.4
BLY	Banja Luka	6.64	314	⇓iP	Pn	14 44 33.6	+0.8
BLY	Banja Luka	6.64	314	⇑iPn	Pn	14 44 33.9	+1.1
ARCR	ARCALIA	6.73	2	⇑iP	Pn	14 44 34.5	+0.5
ANTO	Ankara	6.80	91	ePn	Pn	14 44 36.6	+1.6
ANTO	Ankara	6.80	91	⇑iP	Pn	14 44 35.0	-0.1
ANTO	Ankara	6.80	91	eP	Pn	14 44 36.7	+1.6
MORH	Mrgy, Hungar	7.01	328	⇑iPn	Pn	14 44 36.6	-1.3
MORH	Mrgy, Hungar	7.01	328	ePn	Pn	14 44 38.0	+0.2
MORH				Sn	Sn	14 46 00.1	+2.4
MORH				eSg	Sg	14 46 42.1	+2.0
LTVH	Ltavrtes, Hu	7.18	349	ePn	Pb	14 44 59.0	-0.7
PRAR	RASCA	7.19	12	⇓iP	Pn	14 44 41.5	+1.1
BURAR	Bucovina Array	7.31	7	⇑iP	Pn	14 44 42.4	+0.3
BURAR	Bucovina Array	7.31	7	P	Pn	14 44 42.4	+0.3
BUR04	Bucovina Ar. S	7.32	7	ePn	Pn	14 44 41.6	-0.5
BUR08	Bucovina Ar. S	7.34	7	ePn	Pn	14 44 42.6	+0.1
UDBI	Udbina	7.34	307	P	Pn	14 44 44.5	+2.1
MILM	Milestii Mici	7.45	27	⇑iP	Pn	14 44 43.8	0.0
BR131	Keskin Array S	7.47	92	ePn	Pn	14 44 44.7	+0.4
BRTR	Keskin Array B	7.47	92	i P	Pn	14 44 44.5	+0.2
BRTR				pmax	pmax		
	comp=Z,12nm,0.6s						
BRTR	Keskin Array B	7.47	92	Pn	Pn	14 44 44.6	+0.4
	comp=Z,2.4nm,0.3s,baz=258,slow=11,SNR=34						
BRTR				Sn	Sn	14 46 01.8	-7.4
	baz=269,slow=27,SNR=2.0						
BRTR				Lg	Lg	14 46 54.1	
	baz=262,slow=25,SNR=5.2						
KIS	Kishinev	7.52	26	eP	Pn	14 44 43.0	-1.8
KIS				eS	Pg	14 45 13.0	-5.9
KIS				LRM	MLR	14 47 52.0	
	comp=Z,2μm,10.0s						
KIS	Kishinev	7.52	26	eP	Pn	14 44 43.0	-1.8
KIS				MLR	MLR		
	comp=Z,2μm,12.0s						
KIS				MLR	MLR		
	comp=N,2μm,10.0s						
TRPA	Tarpa	7.83	353	ePn	Pn	14 44 54.0	+4.9
TRPA				Sn	Sn	14 46 18.0	+0.1
TRPA				eSg	Sg	14 47 05.1	-1.3
TIH	Tihany	7.87	328	ePn	Pn	14 44 49.0	-0.6
TIH				eSg	Sg	14 47 05.1	-2.5
NVLJ	Novalja	7.91	305	P	Pn	14 44 52.0	+1.8
BUD	Budapest	7.96	335	ePn	Pn	14 44 52.1	+1.3
BUD				Sn	Sn	14 46 23.0	+2.1
VAE	Valguarnera	7.97	252	Pn	Pn	14 44 52.0	+1.0
	comp=N,0.5nm,0.3s,baz=95,slow=7.2,SNR=2.0						
VAE				Sn	Sn	14 46 21.1	-0.3
	comp=N,4.1nm,0.3s,baz=125,slow=16,SNR=3.2						
BEHE	Becsehely	8.03	322	⇑iPn	Pn	14 44 52.9	+1.0
BEHE	Becsehely	8.03	322	ePn	Pn	14 44 52.1	+0.2
BEHE				Sn	Sn	14 46 25.1	+2.3
BEHE				eSg	Sg	14 47 16.1	+3.4
PSZ	Piszkesteto	8.10	340	ePn	Pn	14 44 51.8	-1.0
PSZ	Piszkesteto	8.10	340	eP	Pn	14 44 51.8	-1.0
PSZ	Piszkesteto	8.10	340	ePn	Pn	14 44 54.1	+1.2
PSZ				Sn	Sn	14 46 20.1	-4.5
OZLJ	Ozalj	8.13	313	P	Pn	14 44 53.9	+0.7
AQU	L'Aquila	8.18	288	ePn	Pn	14 44 56.0	+2.1
AQU				eSn	Sn	14 46 36.9	+10
AQU	L'Aquila	8.18	288	eP	Pn	14 44 56.0	+2.1
AQU				e		14 46 36.9	
AQU	L'Aquila	8.18	288	⇑iPn	Pn	14 44 55.6	+1.7
BOJS	Bojanci	8.19	312	ePn	Pn	14 44 55.1	+1.1
BOJS				e		14 45 31.7	
BOJS				eSn	Sn	14 46 27.0	+0.3
BOJS				e		14 46 47.6	
	comp=Z,4μm,6.7s						
CRES	Cresnjev	8.27	314	⇑iPn	Pn	14 44 55.4	+0.3
SEV	Sevastopol'	8.32	57	eP	Pn	14 44 54.6	-1.1
SEV				eS	Sn	14 46 23.8	-5.9
UZH	Uzhgorod	8.35	352	eP	Pn	14 44 58.5	+2.2
UZH				eS	Sn	14 46 34.8	+4.1
UZH				MLR	MLR		
	comp=N,350nm,11.0s						
UZH				MLR	MLR		
	comp=Z,120nm,11.0s						
YAL	Yalta	8.60	58	eP	Pn	14 44 58.6	-1.1
YAL				eS	Sn	14 46 30.8	-6.0
WDD	Wied Dalam	8.69	242	ePn	Pn	14 45 02.7	+1.8
SIM	Simferopol'	8.79	55	eP	Pn	14 45 01.0	-1.2
SIM				S	Sn	14 46 35.5	-5.8
SIM				pmax	pmax		
	comp=Z,16nm,0.9s						
SIM				MLR	MLR		
	comp=Z,400nm,12.0s						
CEY	Cerknica	8.80	311	⇑iPn	Pn	14 45 03.0	+0.6
ALU	Alushta	8.85	57	eP	Pn	14 45 01.6	-1.4
ALU				eS	Sn	14 46 44.7	+1.9
VYHS	Vyhne	8.91	338	eP	Pn	14 45 03.3	-0.7
VYHS	Vyhne	8.91	338	ePN	Pn	14 45 03.2	-0.7
VYHS	Vyhne	8.91	338	eSG	Sg	14 47 34.9	-6.0
LJU	Ljubljana	8.92	313	ePn	Pn	14 45 05.2	+1.2
LJU	Ljubljana	8.92	313	ePn	Pn	14 45 04.4	+0.4
SOKA	Soboth	9.04	317	i Pn	Pn	14 45 06.4	+0.6
	comp=Z,62nm,0.8s,SNR=25						
SOP	Sopron	9.05	326	P	Pn	14 45 05.7	-0.1
SOP				pmax	pmax		
	comp=Z,41nm,0.8s						
SOP	Sopron	9.05	326	ePn	Pn	14 44 59.1	-6.7
SOP				Sn	Sn	14 46 49.0	+1.3
SOP				eSg		14 47 44.0	
CSS	Mathiatis	9.18	123	Pn	Pn	14 45 09.1	+1.4
OBKA	Obir	9.19	315	i Pn	Pn	14 45 09.3	+1.5
	comp=Z,56nm,0.6s,SNR=29						
ARSA	Arzberg	9.19	321	i Pn	Pn	14 45 07.8	+0.1
	comp=Z,50nm,0.8s,SNR=27						
ARSA				eSn	Sn	14 46 45.9	-5.4
	comp=Z,16nm,0.8s						
SUDU	Sudak	9.32	57	eP	Pn	14 45 06.8	-2.7
SUDU				eS	Sn	14 46 50.3	-4.1
MODS	Modra-Piesok	9.32	331	eP	Pn	14 45 09.9	+0.3
MODS	Modra-Piesok	9.32	331	ePN	Pn	14 45 09.9	+0.3
MODS	Modra-Piesok	9.32	331	eSG	Sn	14 47 53.1	+59
NIE	Niedzica	9.42	345	eP	Pn	14 45 08.9	-2.0
NIE				eS		14 47 59.4	
NIE	Niedzica	9.42	345	P	Pn	14 45 11.7	+0.8
NIE				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LVV	L'vov	9.46	0	eP	Pn	14 45 04.1	-7.3
LVV				MLR	MLR		
	comp=N,800nm,13.0s						
LVV				MLR	MLR		
	comp=E,200nm,13.0s						
LVV				MLR	MLR		
	comp=Z,900nm,13.0s						
CONA	Conrad Observa	9.54	325	i Pn	Pn	14 45 13.1	+0.6
	comp=Z,23nm,1.0s,SNR=13						
MYKA	Terra Mystica	9.76	313	i Pn	Pn	14 45 17.4	+1.8
	comp=Z,58nm,0.8s,SNR=24						
KBA	Koelnbreinsper	10.19	315	i Pn	Pn	14 45 23.4	+1.8
	comp=Z,79nm,0.9s,SNR=20						
KBA	Koelnbreinsper	10.19	315	P	Pn	14 45 22.9	+1.3
KBA				pmax	pmax		
	comp=Z,78nm,1.0s						
MOA	Molln	10.22	320	i Pn	Pn	14 45 23.0	+1.2
	comp=Z,29nm,1.0s,SNR=9.6						
MOA				eSn	Sn	14 47 13.1	-3.4
	comp=Z,13nm,0.7s						
KRUC	Moravsky	10.22	331	P	Pn	14 45 21.3	-0.6
KRUC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KRUC	Moravsky	10.22	331	ePN	Pn	14 45 21.8	-0.1
OJC	Ojcow	10.28	345	eP	Pn	14 45 23.4	+0.7
OJC				eS	Sn	14 47 48.9	+31
OJC	Ojcow	10.28	345	eP	Pn	14 45 23.4	+0.7
OKC	Ostrava-Krasne	10.32	339	AMS	AMS	14 50 00.0	
	comp=Z,2μm,11.3s						
VRAC	Vranov	10.35	332	ePN	Pn	14 45 24.4	+0.7
VRAC	Vranov	10.35	332	Pn	Pn	14 45 21.9	-1.8
	comp=Z,0.2nm,0.3s,baz=154,slow=14,SNR=2.4						
VRAC				LR	LR	14 49 22.6	
	comp=Z,295nm,20.0s,baz=137,slow=38						
MORC	Moravsky Berou	10.44	336	P	Pn	14 45 26.0	+1.0
MORC				pmax	pmax		
	comp=Z,32nm,1.5s						
MORC	Moravsky Berou	10.44	336	ePN	Pn	14 45 25.3	+0.3
ABTA	Abfaltersbach	10.46	311	i Pn	Pn	14 45 26.8	+1.5
	comp=Z,26nm,0.6s,SNR=22						
TREC	Trest	10.76	329	AMS	AMS	14 50 50.0	
	comp=Z,800nm,9.8s						
TREC	Trest	10.76	329	P	Pn	14 45 28.8	-0.4
TREC				pmax	pmax		
	comp=Z,4.0nm,2.4s						
KRLC	Kraliky	10.94	335	eP	Pn	14 45 36.9	+5.1
KRLC	Kraliky	10.94	335	eP	Pn	14 45 36.9	+5.1
AK11	Malin Array Si	10.95	18	ePn	Pn	14 45 30.3	-1.4
KIEV	Kiev	10.97	18	ePn	Pn	14 45 31.8	-0.3
KIEV	Kiev	10.97	18	i P	Pn	14 45 31.6	-0.5
AKASG	Malin Array Be	10.98	18	i P	Pn	14 45 30.8	-1.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	10.98	18	Pn	Pn	14 45 30.4	-1.8
	comp=Z,5.5nm,0.3s,baz=202,slow=11,SNR=14						
AKASG				Lg	Lg	14 48 39.5	
	baz=199,slow=29,SNR=2.9						
AKASG				LR	LR	14 49 51.0	
	comp=Z,198nm,21.4s,baz=195,slow=38						
AKBB	Malin Array Si	10.98	18	ePn	Pn	14 45 31.8	-0.4
AKBB	Malin Array Si	10.98	18	eP	Pn	14 45 31.8	-0.4
GEA0	GERESS Array S	11.18	323	ePn	Pn	14 45 35.6	+0.6
GEC2	GERESS Array S	11.18	323	ePn	Pn	14 45 36.5	+1.4
GEC2	GERESS Array S	11.18	323	eP	Pn	14 45 36.5	+1.4
GERES	GERESS Array B	11.18	323	Pn	Pn	14 45 35.7	+0.6
	comp=Z,0.6nm,0.3s,baz=145,slow=13,SNR=16						
GERES				LR	LR	14 49 39.5	
	comp=Z,373nm,21.8s,baz=141,slow=36						
WTTA	Wattenberg	11.25	312	i Pn	Pn	14 45 39.2	+3.1
	comp=Z,58nm,1.1s,SNR=14						
WATA	Walderalm	11.32	312	i Pn	Pn	14 45 39.1	+2.0
	comp=Z,66nm,0.9s,SNR=12						
DPC	Dobruska-Polom	11.33	334	eP	Pn	14 45 46.2	+9.1
DPC				AMS	AMS	14 50 40.0	
	comp=Z,1μm,8.3s						
DPC	Dobruska-Polom	11.33	334	eP	Pn	14 45 46.2	+9.1
DPC				MLR	MLR		
	comp=Z,1μm,8.3s						
KHC	Kasperske Hory	11.45	323	ePn	Pn	14 45 39.3	+0.6
KHC	Kasperske Hory	11.45	323	eP	Pn	14 45 40.7	+2.0
KHC				AMS	AMS	14 50 20.0	
	comp=Z,2μm,9.4s						
KHC	Kasperske Hory	11.45	323	eP	Pn	14 45 40.7	+2.0
KHC				MLR	MLR		
	comp=Z,2μm,9.4s						
SQTA	Sankt Quirin	11.47	311	i Pn	Pn	14 45 40.5	+1.4
	comp=Z,97nm,1.2s,SNR=26						
GOPC	GO Pecny, Ondr	11.53	329	AMS	AMS	14 50 50.0	
	comp=Z,900nm,8.1s						
UPC	Upice	11.57	334	AMS	AMS	14 50 50.0	
	comp=Z,1μm,10.4s						
MOTA	Moosalm	11.60	311	i Pn	Pn	14 45 42.2	+1.3
	comp=Z,27nm,0.6s,SNR=16						
FETA	Feichten	11.65	309	i Pn	Pn	14 45 43.7	+2.1
	comp=Z,48nm,1.3s,SNR=13						
PRU	Pruhonice	11.68	329	AMS	AMS	14 50 20.0	
	comp=Z,1μm,9.3s						
PRU	Pruhonice	11.68	329	P	Pn	14 45 41.9	+0.1
PRU				pmax	pmax		
	comp=Z,3.0nm,1.4s						
FUORN	Ofenpass-Fuorn	11.74	307	ePn	Pn	14 45 44.4	+1.5
MMA0B	Mount Meron ar	11.75	125	Pn	Pn	14 45 43.3	+0.3
MMAI	Mount Meron Ar	11.75	125	Pn	Pn	14 45 42.0	-1.0
	comp=Z,3.5nm,0.3s,baz=319,slow=11,SNR=14						
MMAI				LR	LR	14 51 07.6	
	comp=Z,260nm,19.3s,baz=325,slow=42						
WET	Wettzell	11.78	322	P	Pn	14 45 43.6	+0.4
WET				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RETA	Reutte	11.87	311	ePn	Pn	14 45 46.7	+2.2
	comp=Z,34nm,1.3s						
FUR	Furstenfeldbru	11.96	315	P	Pn	14 45 48.7	+3.0
FUR				pmax	pmax		
	comp=Z,53nm,0.9s						
DAVOX	Davos/Dischmat	12.04	307	Pn	Pn	14 45 47.1	+0.1
	comp=Z,1.3nm,0.3s,baz=152,slow=16,SNR=22						
DAVOX				LR	LR	14 50 41.3	
	comp=Z,829nm,18.9s,baz=113,slow=39						
PVCC	Panska Ves	12.10	330	AMS	AMS	14 50 20.0	
	comp=Z,800nm,9.1s						
SOC	Sochi	12.17	69	eP	Pn	14 45 43.4	-5.2
SOC				e		14 47 59.9	
SOC				MLR	MLR		
	comp=Z,186nm,10.0s						
TUE	Stuetta	12.24	305	ePn	Pn	14 45 53.9	+4.2
DAVA	Damuels	12.28	309	ePn	Pn	14 45 52.9	+2.7
	comp=Z,14nm,0.5s						
HMDT	Nahal Hemdat	12.35	127	Pn	Pn	14 45 51.8	+0.8
KEST	Kesra	12.40	253	ePn	Pn	14 45 55.8	+4.0
KEST	Kesra	12.40	253	Pn	Pn	14 45 55.0	+3.3
	comp=Z,0.3nm,0.3s,baz=22,slow=5.4,SNR=9.3						
BRG	Berggiesshubel	12.62	330	eP	Pn	14 46 01.4	+6.8
	comp=Z,7.6nm,1.3s						
BRG				e		14 49 43.5	
	comp=Z,23nm,1.8s						
BRG	Berggiesshubel	12.62	330	eP	Pn	14 46 01.4	+6.8
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KZIT	Kziot	12.69	135	P	Pn	14 45 55.0	-0.7
	comp=Z,120nm,0.8s						
NKC	Novy Kostel	12.75	325	AMS	AMS	14 51 00.0	
	comp=Z,2μm,9.8s						
ASF	Jabal al Asfar	13.25	124	P	P	14 46 10.8	-2.7
ASF	Jabal al Asfar	13.25	124	Pn	Pn	14 46 03.8	+0.3
	comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=2.1						
CLL	Collm	13.33	329	eP	Pn	14 46 03.0	-1.3
CLL				esP	P	14 46 11.0	-3.0
CLL				i PP	PnPn	14 46 16.6	+4.5
	comp=Z,30nm,1.7s						
CLL				e		14 46 32.0	
CLL				e(S)	S	14 48 47.0	-10
CLL				LmV		14 50 00.0	
	comp=Z,300nm,20.1s						
CLL				Lmax		14 51 00.0	
CLL	Collm	13.33	329	eP	Pn	14 46 03.0	-1.3
CLL				MLR	MLR		
	comp=Z,300nm,20.1s						
SLE	Schleitheim	13.34	309	P	Pn	14 46 05.1	+0.6
SLE				pmax	pmax		
	comp=Z,21nm,0.9s						
MOX	Moxa	13.42	324	P	Pn	14 46 06.1	+0.6
MOX				pmax	pmax		
	comp=Z,10.0nm,1.6s						
PRNI	Paran	13.45	135	Pn	Pn	14 46 05.7	-0.4
STU	Stuttgart	13.45	314	P	Pn	14 46 06.4	+0.4
STU				pmax	pmax		
	comp=Z,43nm,0.8s						
SENIN	Lac Senin/Sane	13.51	302	ePn	Pn	14 46 07.8	+0.9
SUW	Suwalki	13.67	358	eP	Pn	14 46 08.9	0.0
SUW	Suwalki	13.67	358	ePn	Pn	14 46 08.6	-0.3
SUW	Suwalki	13.67	358	eP	Pn	14 46 08.9	0.0
BFO	Black Forest	13.71	311	ePn	Pn	14 46 09.7	+0.2
BFO	Black Forest	13.71	311	ceP	P	14 46 14.1	-4.2
HRFI	Mount Harif	13.71	135	P	Pn	14 46 10.1	+0.4
	comp=Z,48nm,1.4s						
HRFI	Mount Harif	13.71	135	Pn	Pn	14 46 10.9	+1.2
EIL	Elat	13.95	136	Pn	Pn	14 46 12.5	-0.5
EIL	Elat	13.95	136	Pn	Pn	14 46 12.4	-0.5
	comp=Z,0.6nm,0.3s,baz=352,slow=14,SNR=5.9						
EIL				LR	LR	14 52 47.3	
	comp=Z,116nm,20.8s,baz=277,slow=42						
ORIF	Oris-en-Rattie	14.05	295	eP	Pn	14 46 17.4	+3.1
ORIF				pmax	pmax		
	comp=Z,14nm,0.8s						
ECH	Echery	14.34	309	ePn	Pn	14 46 19.2	+1.0
ECH	Echery	14.34	309	eP	Pn	14 46 19.2	+1.0
KIV	Kislovodsk	14.36	69	eP	Pn	14 46 19.7	+1.2
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,83nm,13.0s						
MICGM	Minsk	14.40	9	e	Pn	14 46 16.0	-2.9
MICGM				eLR	LR	14 52 08.0	
MNK	Minsk	14.40	9	eP	Pn	14 46 16.0	-2.9
KBZ	Khabaz	14.48	70	LR	LR	14 52 57.2	
	comp=Z,144nm,18.1s,baz=270,slow=42						
NACGM	Naroch	14.68	6	e	Pn	14 46 20.0	-2.7
NACGM				eLQ	LQ	14 50 36.0	
NACGM				eLR	LR	14 52 04.0	
SIRT	Sirnak	14.68	95	ePn	Pn	14 46 23.1	+0.2
GOF	Gofitskoye	14.80	65	eP	P	14 46 30.8	+0.4
GOF				pmax	pmax		
	comp=Z,60nm,1.1s						
IIGN	Ignalina	15.08	5	eP	Pn	14 46 24.4	-3.7
IIGN				IAmb	IAmb	14 46 27.2	
	comp=Z,17nm,1.2s						
IDID	Didziasalis	15.08	6	eP	Pn	14 46 26.1	-2.1
IDID				IAmb	IAmb	14 46 27.2	
	comp=Z,5.7nm,0.6s						
ZEI	Tsey	15.13	74	eP	Pn	14 46 26.1	-3.0
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VSR	Storozhevoye	15.15	39	d iP	Pn	14 46 26.1	-3.0
VSR				pmax	pmax		
	comp=Z,51nm,1.1s						
ISAL	Salakas	15.29	5	eP	Pn	14 46 28.3	-2.6
ISAL				IAmb	IAmb	14 46 30.8	
	comp=Z,14nm,1.1s						
IZAR	Zarasai	15.48	5	eP	Pn	14 46 28.9	-4.5
IZAR				IAmb	IAmb	14 46 31.0	
	comp=Z,13nm,0.6s						
WLF	Walferdange	15.62	312	P	P	14 46 38.0	-1.5
WLF				pmax	pmax		
	comp=Z,107nm,1.7s						
WLF	Walferdange	15.62	312	⇑P	P	14 46 40.8	+1.3
SMF	Signal de Mont	15.86	300	eP	Pn	14 46 39.0	+0.5
SMF				pmax	pmax		
	comp=Z,20nm,0.9s						
GNI	Garni	15.88	84	ePn	Pn	14 46 39.0	0.0
	comp=Z,12nm,1.0s						
GNI	Garni	15.88	84	i P	Pn	14 46 39.1	+0.2
GNI				pmax	pmax		
	comp=Z,14nm,1.0s						
GNI	Garni	15.88	84	Pn	P	14 46 42.4	-0.3
	comp=Z,0.5nm,0.3s,baz=270,slow=6.1,SNR=8.2						
GNI				LR	LR	14 52 50.4	
	comp=Z,364nm,18.6s,baz=151,slow=38						
LPSR	Galich'ya Gora	15.97	35	eP	Pn	14 46 39.0	-0.8
LPSR				pmax	pmax		
	comp=Z,80nm,1.1s						
LPSR				MLR	MLR		
	comp=Z,550nm,12.0s						
LOR	Lormes	16.04	302	eP	Pn	14 46 41.1	+0.4
LOR				pmax	pmax		
	comp=Z,13nm,0.8s						
SSF	Saint Saulge	16.20	301	eP	Pn	14 46 44.0	+1.2
SSF				pmax	pmax		
	comp=Z,19nm,1.1s						
AVF	Avril sur Loir	16.23	300	eP	Pn	14 46 43.3	+0.2
AVF				pmax	pmax		
	comp=Z,39nm,1.0s						
VRH	Novokhopyorsk	16.43	43	eP	Pn	14 46 42.9	-2.7
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
VRH				MLR	MLR		
	comp=Z,450nm,14.0s						
BEBN	Eben Emael	16.46	315	⇑P	P	14 46 49.2	+0.4
BCLA	Clavier	16.47	314	⇑P	P	14 46 50.4	+1.5
DOU	Dourbes	16.70	312	⇑P	P	14 46 55.0	+3.5
CAF	Calviac	16.72	293	eP	P	14 46 53.9	+2.1
CAF				pmax	pmax		
	comp=Z,73nm,1.5s						
TCF	Toulx Ste Croi	16.87	298	eP	P	14 46 54.4	+1.0
TCF				pmax	pmax		
	comp=Z,141nm,1.8s						
OBN	Obninsk	16.99	25	ePn	Pn	14 46 49.5	-3.2
	comp=Z,50nm,1.0s						
OBN	Obninsk	16.99	25	ceP	Pn	14 46 48.8	-3.9
OBN				eS	S	14 50 07.0	-4.6
OBN				pmax	pmax		
	comp=Z,78nm,1.2s						
OBN				MLR	MLR		
	comp=Z,415nm,16.0s						
OBN	Obninsk	16.99	25	Pn	Pn	14 46 48.3	-4.4
	comp=Z,1.1nm,0.3s,baz=239,slow=1.9,SNR=14						
OBN				LR	LR	14 53 22.2	
	comp=Z,72nm,18.3s,baz=190,slow=37						
UCC	Uccle	17.18	314	⇑P	P	14 46 58.0	+1.3
LFF	La Frestale	17.65	293	eP	P	14 47 03.7	+1.6
LFF				pmax	pmax		
	comp=Z,37nm,1.2s						
MOS	Moscow	17.85	26	eP	Pn	14 46 59.7	-3.7
MOS				pmax	pmax		
	comp=Z,226nm,1.6s						
MOS				pmax	pmax		
	comp=Z,400nm,1.7s						
VSU	Vasula	18.21	5	ceP	Pn	14 47 05.4	-2.4
VSU				pmax	pmax		
	comp=Z,210nm,1.3s						
VSU	Vasula	18.21	5	eP	Pn	14 47 04.0	-3.8
VSU				IAmb	IAmb	14 47 06.7	
	comp=Z,210nm,1.4s						
SGMF	Saint Gilles	20.47	301	eP	P	14 47 32.5	-0.4
SGMF				pmax	pmax		
	comp=Z,63nm,1.2s						
QUIF	Quistinic	20.80	300	eP	Pn	14 47 38.9	0.0
QUIF				pmax	pmax		
	comp=Z,35nm,1.8s						
HFS	Hagfors	20.81	345	P	P	14 47 35.5	-0.9
	comp=Z,2.6nm,0.5s,baz=140,slow=7.8,SNR=12						
HFS				LR	LR	14 57 04.0	
	comp=Z,435nm,19.0s,baz=162,slow=41						
ROSF	Rostrenen	20.95	301	eP	Pn	14 47 40.3	-0.4
ROSF				pmax	pmax		
	comp=Z,72nm,1.5s						
FINES	FINESS Array B	21.15	3	i P	P	14 47 38.5	-1.6
FINES				pmax	pmax		
	comp=Z,26nm,1.1s						
FINES	FINESS Array B	21.15	3	P	P	14 47 38.0	-2.1
	comp=Z,26nm,1.1s,baz=178,slow=10,SNR=33						
FINES				PcP	PcP	14 51 44.0	-1.5
	comp=Z,1.1nm,0.8s,baz=217,slow=2.6,SNR=4.2						
FINES				LR	LR	14 56 31.6	
	comp=Z,720nm,18.7s,baz=184,slow=39						
FIA1	FINESS Array S	21.15	3	eP	P	14 47 38.0	-2.1
	comp=Z,27nm,1.0s						
ES19	SONSECA Array	21.30	277	eP	P	14 47 44.9	+2.9
ESDC	Sonseca Array	21.36	277	P	P	14 47 42.6	0.0
	comp=Z,5.0nm,0.8s,baz=69,slow=11,SNR=26						
ESDC				LR	LR	14 57 53.3	
	comp=Z,123nm,19.4s,baz=60,slow=42						
ESLA	Sonseca Array	21.36	277	eP	P	14 47 44.6	+2.0
	comp=Z,10.0nm,0.9s						
NC602	NORSAR Array S	21.80	343	eP	P	14 47 45.3	-1.8
NORES	NORESS Array B	21.80	343	P	P	14 47 45.7	-1.4
NORES				pmax	pmax		
	comp=Z,46nm,0.9s						
NAO01	NORSAR Array S	22.04	343	eP	P	14 47 49.2	-0.5
NC405	NORSAR Array S	22.10	344	eP	P	14 47 48.6	-1.8
NB201	NORSAR Array S	22.13	344	eP	P	14 47 49.7	-1.1
NB2	NORSAR Subarra	22.14	343	P	P	14 47 49.2	-1.6
	comp=Z,53nm,1.2s,baz=150,slow=11						
NOA	NORSAR Array B	22.14	343	P	P	14 47 49.1	-1.8
NOA				pmax	pmax		
	comp=Z,19nm,1.0s						
NOA				MLR	MLR		
	comp=Z,145nm,18.4s						
NOA	NORSAR Array B	22.14	343	P	P	14 47 49.1	-1.8
	comp=Z,16nm,1.0s,baz=149,slow=10,SNR=19						
NOA				LR	LR	14 56 40.2	
	comp=Z,145nm,18.4s,baz=155,slow=38						
NBO00	NORSAR Array S	22.23	343	eP	P	14 47 50.7	-1.1
SUF	Sumiainen	22.43	3	P	P	14 47 51.9	-2.0
SUF				pmax	pmax		
	comp=Z,49nm,1.4s						
NC204	NORSAR Array S	22.45	343	eP	P	14 47 52.9	-1.3
KLMR	Klimovskoe	22.66	20	eP	P	14 47 53.3	-3.0
KLMR				pmax	pmax		
	comp=Z,56nm,1.1s						
KLMR	Klimovskoe	22.66	20	eP	P	14 47 53.4	-2.9
KLMR				AMP		14 47 56.4	
	comp=Z,56nm,1.1s						
VAF	Ylistaro	22.73	358	P	P	14 47 55.1	-1.9
VAF				pmax	pmax		
	comp=Z,67nm,1.1s						
JOF	Joensuu	23.02	9	P	P	14 47 58.0	-2.1
EKA	Eskdalemuir Ar	23.36	319	P	P	14 48 01.9	-1.7

	comp=Z,13nm,0.7s,baz=115,slow=10.0,SNR=21						
ESK	**Eskdalemuir**	**23.37**	**319**	*i* P	**P**	**14 48 06.7**	**+3.0**
MVO	**Moncorvo**	**23.42**	**282**	*e*P	**P**	**14 48 07.0**	**+2.6**
	comp=Z,28nm,2.0s						
MTE	**Manteigas**	**23.93**	**280**	*e*P	**P**	**14 48 12.2**	**+2.8**
	comp=Z,54nm,1.5s						
POLO	**Lamas de Olo**	**23.96**	**283**	*e*P	**P**	**14 48 12.3**	**+2.6**
	comp=Z,16nm,1.4s						
PMRV	**Marv??o**	**24.00**	**278**	*e*P	**P**	**14 48 13.6**	**+3.6**
	comp=Z,37nm,1.6s						
MDT	**Midelt**	**24.06**	**261**	P	**P**	**14 48 11.2**	**+0.5**
	comp=Z,5.6nm,0.8s,baz=81,slow=10,SNR=12						
MDT				LR	LR	14 57 56.7	
	comp=Z,98nm,19.5s,baz=18,slow=38						
PGAV	**Gavieira, Arco**	**24.23**	**284**	*e*P	**P**	**14 48 15.5**	**+3.2**
	comp=Z,62nm,1.7s						
KIRV	**Kirov**	**24.38**	**33**	P	**P**	**14 48 12.6**	**-0.7**
	comp=Z,39nm,0.9s,baz=209,slow=10,SNR=12						
KIRV				LR	LR	14 58 06.5	
	comp=Z,364nm,18.8s,baz=167,slow=38						
PBEJ	**Beja**	**24.70**	**275**	*e*P	**P**	**14 48 19.5**	**+3.1**
	comp=Z,22nm,1.2s						
PMTG	**Montargil**	**24.71**	**278**	*e*P	**P**	**14 48 19.1**	**+2.6**
	comp=Z,25nm,1.8s						
PVAQ	**Vaqueiros**	**24.75**	**273**	*e*P	**P**	**14 48 18.5**	**+1.6**
	comp=Z,27nm,1.3s						
OUL	**Oulu**	**24.80**	**2**	*e*P	**P**	**14 48 15.6**	**-1.4**
OUL				pmax	pmax		
	comp=Z,27nm,1.2s						
PBDV	**Barranco-do-Ve**	**24.96**	**273**	*e*P	**P**	**14 48 21.6**	**+2.7**
	comp=Z,40nm,1.1s						
PRGR	**Permogore**	**25.06**	**25**⇓	*i*P	**P**	**14 48 19.2**	**-0.2**
PRGR				pmax	pmax		
	comp=Z,42nm,0.9s						
PNCL	**Nicolau / Gran**	**25.18**	**275**	*e*P	**P**	**14 48 23.0**	**+2.3**
	comp=Z,22nm,1.3s						
TMCR	**Tamitsa**	**25.23**	**14**	*e*P	**P**	**14 48 20.1**	**-0.8**
TMCR				pmax	pmax		
	comp=Z,71nm,1.2s						
AKTO	**Aktyubinsk**	**25.75**	**56**	P	**P**	**14 48 25.6**	**-0.2**
	comp=Z,16nm,1.1s,baz=255,slow=10,SNR=19						
AKTO				LR	LR	15 00 31.6	
	comp=Z,152nm,18.1s,baz=264,slow=41						
MSF	**Maaselka**	**25.76**	**5**	*e*P	**P**	**14 48 24.5**	**-1.3**
MSF				pmax	pmax		
	comp=Z,42nm,1.4s						
GEYT	**Alibeck**	**26.52**	**84**	P	**P**	**14 48 33.5**	**+0.5**
	comp=Z,6.7nm,1.1s,baz=269,slow=13,SNR=6.9						
GEYT				LR	LR	15 01 22.8	
	comp=Z,148nm,19.4s,baz=260,slow=42						
ABKAR	**Akbulak array**	**26.83**	**59**	*e*P	**P**	**14 48 35.7**	**+0.2**
SGF	**Sodankyl**	**27.17**	**2**	*e*P	**P**	**14 48 37.8**	**-0.7**
SGF				pmax	pmax		
	comp=Z,21nm,1.2s						
ARU	**Arti**	**27.66**	**43**	*e*P	**P**	**14 48 42.9**	**-0.1**
	comp=Z,20nm,1.1s						
ARU	**Arti**	**27.66**	**43***c*	*i*P	**P**	**14 48 42.8**	**-0.1**
ARU						14 49 29.1	
ARU				S	**S**	**14 53 26.2**	**+1.4**
ARU				pmax	pmax		
	comp=Z,30nm,1.4s						
ARU				MLR	MLR		
	comp=Z,359nm,13.0s						
APA	**Apatity**	**27.76**	**8**⇑	*i*P	**P**	**14 48 42.8**	**-0.9**
APA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
APA				MLR	MLR		
	comp=Z,1μm,10.0s						
LVZ	**Lovozero**	**28.21**	**9***c*	*e*P	**P**	**14 48 49.0**	**+1.2**
LVZ				pmax	pmax		
	comp=Z,74nm,1.7s						
SVE	**Sverdlovsk**	**28.88**	**43**	*e*P	**P**	**14 48 54.0**	**+0.2**
SVE				pmax	pmax		
	comp=Z,32nm,1.3s						
SVE				MLR	MLR		
	comp=Z,397nm,12.0s						
ARCES	**ARCESS Array B**	**29.25**	**1**	P	**P**	**14 48 55.7**	**-1.3**
	comp=Z,7.0nm,0.9s,baz=186,slow=9.8,SNR=14						
TOA0	**Torodi Ar. Sit**	**33.41**	**222**	*e*P	**P**	**14 49 34.0**	**-0.1**
	comp=Z,7.7nm,0.8s						
TOA0				*e*PcP	**PcP**	**14 52 15.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**33.41**	**222**	P	**P**	**14 49 33.5**	**-0.6**
	comp=Z,3.7nm,0.7s,baz=7.7,slow=12,SNR=28						
TORD				PcP	**PcP**	**14 52 14.4**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=47,slow=4.2,SNR=5.0						
TORD				LR	LR	15 03 49.2	
	comp=Z,113nm,21.5s,baz=355,slow=38						
BRVK	**Borovoye**	**33.62**	**52**	*e*P	**P**	**14 49 36.6**	**+1.0**
	comp=Z,21nm,1.0s						
BRVK	**Borovoye**	**33.62**	**52***c*	*i*P	**P**	**14 49 36.1**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,25nm,1.1s						
BVAR	**Borovoye Array**	**33.68**	**52**	LR	LR	15 04 53.8	
	comp=Z,67nm,20.6s,baz=268,slow=39						
WSAR	**Wadi Sarin**	**33.80**	**110**	LR	LR	15 06 50.5	
	comp=Z,86nm,18.9s,baz=340,slow=42						
KK31	**Karatay Array**	**34.52**	**70**	*e*P	**P**	**14 49 44.6**	**+1.1**
KK31	**Karatay Array**	**34.52**	**70**	*e*P	**P**	**14 49 44.7**	**+1.1**
KKAR	**Karatay Array**	**34.52**	**70**	*e*P	**P**	**14 49 44.6**	**+1.1**
KKAR	**Karatay Array**	**34.52**	**70**	*e*P	**P**	**14 49 44.7**	**+1.1**
OTUK	**Ortayu**	**35.02**	**61**	P	**P**	**14 49 48.8**	**+0.9**
OTUK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GAR	**Garm**	**35.40**	**77**	*e*P	**P**	**14 49 52.7**	**+1.4**
	comp=Z,32nm,1.0s						
GAR	**Garm**	**35.40**	**77**	*e*P	**P**	**14 49 52.7**	**+1.4**
GAR				pmax	pmax		
	comp=Z,32nm,1.0s						
MNAS	**Manas**	**36.08**	**70**	P	**P**	**14 49 57.0**	**-0.2**
MNAS				pmax	pmax		
	comp=Z,3.0nm,1.7s						
SFK	**Sufi-Kurgan**	**37.46**	**74**	P	**P**	**14 50 09.8**	**+0.8**
SFK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	**37.47**	**69**	*e*P	**P**	**14 50 09.9**	**+0.8**
	comp=Z,6.3nm,1.1s						
AAK	**Ala-Archa**	**37.47**	**69***c*	*e*P	**P**	**14 50 09.3**	**+0.2**
AAK				pmax	pmax		
	comp=Z,14nm,1.7s						
AAK	**Ala-Archa**	**37.47**	**69**	LR	LR	15 08 12.1	
	comp=Z,82nm,18.6s,baz=274,slow=40						
FRU	**Bishkek**	**37.52**	**69**	*i* P	**P**	**14 50 10.5**	**+1.3**
KURK	**Kurchatov**	**38.85**	**56**	*e*P	**P**	**14 50 20.6**	**+0.3**
	comp=Z,7.8nm,1.1s						
KURK	**Kurchatov**	**38.85**	**56***c*	*e*P	**P**	**14 50 21.2**	**+0.9**
KURK				pmax	pmax		
	comp=Z,22nm,1.7s						
KSH	**Kashi**	**39.42**	**74**	P	**P**	**14 50 25.4**	**0.0**
KSH				pP	sP	14 50 30.8	+1.6
KSH				pmax	pmax		
	comp=Z,100nm,5.1s						
NIL	**Nilore**	**39.52**	**84**	*e*P	**P**	**14 50 27.9**	**+1.7**
	comp=Z,7.6nm,0.8s						
NIL	**Nilore**	**39.52**	**84**	*e*P	**P**	**14 50 27.9**	**+1.7**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MBAR	**Mbarara**	**41.23**	**170**	P	**P**	**14 50 42.9**	**+2.3**
	comp=Z,3.1nm,0.2s,baz=328,slow=6.7,SNR=8.5						
NVS	**Novosibirsk**	**41.24**	**49**⇑	*i*P	**P**	**14 50 41.5**	**+1.4**
NVS				pmax	pmax		
	comp=N,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,10.0nm,0.9s						
MAKZ	**Makanchi**	**41.70**	**61**	*e*P	**P**	**14 50 44.8**	**+0.8**
	comp=E,9.2nm,1.0s						
MAKZ	**Makanchi**	**41.70**	**61**	*e*P	**P**	**14 50 44.8**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MK31	**Makanchi Array**	**41.91**	**61**	*e*P	**P**	**14 50 46.5**	**+0.8**
MK31	**Makanchi Array**	**41.91**	**61**	*e*P	**P**	**14 50 46.5**	**+0.8**
MKAR	**Makanchi Array**	**41.91**	**61**	*e*P	**P**	**14 50 46.5**	**+0.7**
	comp=Z,57nm,0.8s						
MKAR				PcP	**PcP**	**14 52 39.5**	**-1.7**
MKAR	**Makanchi Array**	**41.91**	**61**	P	**P**	**14 50 46.5**	**+0.7**
	comp=Z,9.8nm,0.8s,baz=284,slow=6.5,SNR=80						
MKAR				PcP	**PcP**	**14 52 39.5**	**-1.7**
	comp=Z,1.9nm,0.7s,baz=298,slow=5.2,SNR=3.7						
MKAR				LR	LR	15 12 18.6	
	comp=Z,111nm,19.2s,baz=271,slow=42						
MK01	**Makanchi Array**	**41.92**	**61**	*e*P	**P**	**14 50 46.5**	**+0.6**
ZALV	**Zalesovo Beam**	**42.26**	**50**	P	**P**	**14 50 49.0**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,11nm,0.5s						
ZALV				MLR	MLR		
	comp=Z,96nm,19.4s						
ZALV	**Zalesovo Beam**	**42.26**	**50**	P	**P**	**14 50 49.0**	**+0.5**
	comp=Z,12nm,0.6s,baz=252,slow=8.6,SNR=39						
ZALV				LR	LR	15 09 52.2	
	comp=Z,96nm,19.4s,baz=257,slow=38						
DBIC	**Dimbokro**	**42.30**	**225**	P	**P**	**14 50 49.8**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=12,slow=9.3,SNR=8.0						
DBIC				PcP	**PcP**	**14 52 44.0**	**+1.1**
	comp=Z,5.0nm,0.9s,baz=64,slow=3.8,SNR=3.8						
DBIC				LR	LR	15 10 06.3	
	comp=Z,89nm,18.4s,baz=8.5,slow=39						
TIC	**Toumodi**	**42.41**	**225**	*e*P	**P**	**14 50 51.0**	**+0.9**
KIC	**Kosan Boka**	**42.50**	**225**	*e*P	**P**	**14 50 52.6**	**+1.8**
	comp=Z,22nm,1.0s						
LIC	**Lamto**	**42.77**	**225**	*e*P	**P**	**14 50 54.5**	**+1.5**
	comp=Z,30nm,0.9s						
KMBO	**Kilima Mbogo**	**43.04**	**160**	*i* P	**P**	**14 50 58.7**	**+3.3**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	**Kilima Mbogo**	**43.04**	**160**	P	**P**	**14 50 57.9**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=263,slow=8.2,SNR=3.4						
NRIK	**Noril'sk**	**43.65**	**27**	P	**P**	**14 51 00.1**	**+0.6**
	comp=Z,4.0nm,0.4s,baz=266,slow=7.0,SNR=9.5						
NRIK				PcP	**PcP**	**14 52 46.6**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=220,slow=4.3,SNR=4.3						
NRIK				LR	LR	15 11 00.4	
	comp=Z,128nm,18.9s,baz=246,slow=39						
DGZ	**Jazzator, Alta**	**44.60**	**56***c*	*i*P	**P**	**14 51 08.5**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMQ	**Urumqi**	**46.39**	**64**	P	**P**	**14 51 23.1**	**+1.3**
WMQ				pP	sP	14 51 29.0	+3.4
WMQ				pmax	pmax		
	comp=Z,24nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.9s						
WMQ				LR	LR		
	comp=Z,270nm,34.3s						
WMQ				LR	LR		
	comp=Z,250nm,31.5s						
TULEG	**Thule**	**51.80**	**343**	*e*P	**P**	**14 52 01.9**	**-0.7**
	comp=Z,9.4nm,1.1s						
TLY	**Talaya**	**53.85**	**49**	*e*P	**P**	**14 52 19.8**	**+1.5**
	comp=Z,20nm,1.1s						
TLY	**Talaya**	**53.85**	**49***c*	*e*P	**P**	**14 52 20.0**	**+1.8**
ZAK	**Zakamensk**	**54.12**	**51**	*e*P	**P**	**14 52 20.7**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA	**Gaotai**	**56.47**	**64**	⇑P	**P**	**14 52 37.4**	**0.0**
GTA				pP	sP	14 52 42.8	+1.6
GTA				sP	pP	14 52 46.0	+5.8
GTA				S	**S**	**15 00 29.0**	**+0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,6.8s						
GTA				LR	LR		
	comp=Z,170nm,18.7s						
GTA				LR	LR		
	comp=Z,190nm,20.6s						
GTA				LR	LR		
	comp=Z,370nm,19.7s						
BOD	**Bodaibo**	**57.01**	**40**	*e*P	**P**	**14 52 40.0**	**-0.8**
BOD				pmax	pmax		
	comp=Z,12nm,1.1s						
SONA1	**Songino Array**	**57.02**	**53**	*e*P	**P**	**14 52 41.8**	**+0.5**
SONM	**Songino Array**	**57.02**	**53**	P	**P**	**14 52 41.5**	**+0.3**
	comp=Z,2.8nm,0.9s,baz=285,slow=9.0,SNR=17						
SONM				LR	LR	15 19 32.4	
	comp=Z,140nm,19.8s,baz=2.0,slow=39						
ULN	**Ulaanbaatar**	**57.41**	**53**	*e*P	**P**	**14 52 44.4**	**+0.5**
	comp=Z,3.6nm,0.9s						
ULN	**Ulaanbaatar**	**57.41**	**53***c*	*e*P	**P**	**14 52 42.7**	**-1.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
RES	**Resolute Bay**	**58.41**	**344**	*e*P	**P**	**14 52 49.2**	**-1.1**
	comp=Z,4.4nm,1.0s						
RES	**Resolute Bay**	**58.41**	**344**	*e*P	**P**	**14 52 49.2**	**-1.1**
RES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SCHQ	**Schefferville**	**58.66**	**317**	P	**P**	**14 52 51.7**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=63,slow=6.8,SNR=4.9						
SCHQ				LR	LR	15 16 37.7	
	comp=Z,78nm,19.9s,baz=328,slow=34						
PALK	**Pallekele**	**60.22**	**107**	*i* P	**P**	**14 53 07.6**	**+3.8**
PALK	**Pallekele**	**60.22**	**107**	P	**P**	**14 53 03.9**	**+0.1**
	comp=Z,12nm,1.0s,baz=297,slow=6.8,SNR=3.8						
LZH	**Lanzhou**	**60.87**	**66**	*e*P	**P**	**14 53 08.8**	**+0.7**
LZH				pP	sP	14 53 12.0	0.0
LZH				sP	pP	14 53 13.5	+2.6
LZH				*e*PP	**PP**	**14 55 24.6**	**+2.7**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,83nm,7.8s						
LZH				LR	LR		
	comp=Z,310nm,15.0s						
LZH				LR	LR		
	comp=Z,320nm,15.3s						
LZH				LR	LR		
	comp=Z,460nm,17.8s						
BATG	**Bathurst New B**	**61.81**	**309**	*e*P	**P**	**14 53 14.2**	**0.0**
	comp=Z,22nm,1.2s						
YAK	**Yakutsk**	**61.89**	**31**	*e*P	**P**	**14 53 12.6**	**-1.8**
YAK				pmax	pmax		
	comp=Z,48nm,0.9s						
YAK				pmax	pmax		
	comp=E,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
CD2	**Chengdu**	**63.52**	**71**	*e*P	**P**	**14 53 25.0**	**-0.9**
CD2				pmax	pmax		
	comp=N,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**63.62**	**58**	*e*P	**P**	**14 53 26.6**	**+0.2**
HHC				pmax	pmax		
	comp=N,13nm,0.8s						
HHC				pmax	pmax		
	comp=N,140nm,3.9s						
LBTB	**Lobatse**	**65.06**	**178**	*e*P	**P**	**14 53 37.1**	**+1.4**
	comp=N,12nm,0.7s						
LBTB	**Lobatse**	**65.06**	**178**	*e*P	**P**	**14 53 37.2**	**+1.4**
LBTB				pmax	pmax		
	comp=Z,12nm,0.7s						
XAN	**Xi'an**	**65.48**	**65**	P	**P**	**14 53 38.3**	**-0.4**
XAN				pP	sP	14 53 48.1	+5.6
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA	**Zeya**	**65.52**	**39**	*e*P	**P**	**14 53 38.8**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
KMI	**Kunming**	**65.99**	**77**	P	**P**	**14 53 40.5**	**-1.7**
KMI				pP	pP	14 53 44.9	-0.2
KMI				sP	sP	14 53 46.5	+0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,24nm,3.1s						
CHTO	**Chiang Mai**	**66.79**	**85**	*e*P	**P**	**14 53 46.6**	**-0.6**
	comp=Z,9.1nm,1.1s						
CHTO	**Chiang Mai**	**66.79**	**85**	*e*P	**P**	**14 53 46.6**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CHTO	**Chiang Mai**	**66.79**	**85**	P	**P**	**14 53 47.0**	**-0.2**
	comp=Z,35nm,1.1s						
CMMT	**Chiang Mai**	**66.79**	**85**	P	**P**	**14 53 46.9**	**-0.3**
	comp=Z,7.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**67.00**	**85**	P	**P**	**14 53 48.0**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=304,slow=7.8,SNR=25						
CMAR				LR	LR	15 31 04.8	
	comp=Z,25nm,18.3s,baz=294,slow=43						
CM01	**Chiang Mai Arr**	**67.03**	**85**	*e*P	**P**	**14 53 47.7**	**-1.1**
BILL	**Bilibino**	**68.27**	**14***c*	*e*P	**P**	**14 53 54.6**	**-1.2**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SEY	**Seymchan**	**69.13**	**23***c*	*e*P	**P**	**14 54 02.2**	**+1.0**
INK	**Inuvik**	**70.34**	**351**	*e*P	**P**	**14 54 08.6**	**+0.1**
	comp=Z,3.6nm,1.0s						
INK	**Inuvik**	**70.34**	**351**	*e*P	**P**	**14 54 08.6**	**+0.1**
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CN2	**Changchun**	**70.45**	**49**	*e*P	**P**	**14 54 09.9**	**+0.2**
KLR	**Kul'dur**	**70.49**	**41**	*i* P	**P**	**14 54 10.0**	**+0.2**
MA2	**Magadan**	**71.21**	**25**	*i* P	**P**	**14 54 13.3**	**-0.7**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YKA	**Yellowknife Ar**	**72.22**	**341**	P	**P**	**14 54 19.5**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=32,slow=5.6,SNR=18						
NJ2	**Nanjing**	**73.43**	**62**	*e*P	**P**	**14 54 27.8**	**0.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
USRK	**Ussuriysk Ar.**	**73.86**	**45**	P	**P**	**14 54 29.3**	**-0.8**
	comp=Z,4.4nm,0.9s,baz=266,slow=4.6,SNR=7.6						
USRK				LR	LR	15 30 09.6	
	comp=Z,62nm,19.0s,baz=335,slow=38						
IM3	**Indian Mountai**	**73.98**	**359**	*e*P	**P**	**14 54 30.5**	**+0.2**
IL1	**Eielson Array**	**74.96**	**356**	*e*P	**P**	**14 54 36.5**	**+0.4**
ILAR	**Eielson Array**	**74.96**	**356**	P	**P**	**14 54 36.2**	**+0.1**
	comp=Z,2.1nm,1.0s,baz=3.1,slow=4.5,SNR=14						
ILAR				LR	LR	15 30 30.4	
	comp=Z,38nm,19.1s,baz=120,slow=38						
DAWY	**Dawson**	**75.08**	**353**	*e*P	**P**	**14 54 37.3**	**+0.4**
	comp=Z,5.4nm,0.9s						
ULM	**Lac du Bonnet**	**75.48**	**325**	P	**P**	**14 54 38.7**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=52,slow=8.9,SNR=4.6						
ULM				LR	LR	15 27 56.9	
	comp=Z,96nm,18.4s,baz=6.5,slow=36						
KS01	**Wonju Array Si**	**75.86**	**53**	*e*P	**P**	**14 54 40.6**	**-1.1**
KSAR	**Wonju Array Be**	**75.88**	**53**	P	**P**	**14 54 41.5**	**-0.4**
KSAR	**Wonju Array Be**	**75.88**	**53**	P	**P**	**14 54 41.5**	**-0.4**
KSRS	**Korea Array**	**75.89**	**53**	P	**P**	**14 54 41.5**	**-0.4**
KSRS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KSRS				MLR	MLR		
	comp=Z,50nm,19.8s						
KSRS	**Korea Array**	**75.89**	**53**	P	**P**	**14 54 41.5**	**-0.4**
	comp=Z,7.7nm,1.0s,baz=313,slow=5.1,SNR=10						
KSRS				LR	LR	15 30 32.5	
	comp=Z,50nm,19.8s,baz=304,slow=38						
MCK	**McKinley**	**76.10**	**357**	*e*P	**P**	**14 54 41.7**	**-1.0**
	comp=Z,18nm,1.2s						
MCK	**McKinley**	**76.10**	**357**	*e*P	**P**	**14 54 41.7**	**-1.0**
MCK				pmax	pmax		
	comp=Z,18nm,1.2s						
PSI	**Prapat**	**76.75**	**98**	LR	LR	15 31 49.0	
	comp=Z,41nm,19.3s,baz=82,slow=38						
YSS	**Yuzh-Sakhalins**	**77.43**	**38**	*e*P	**P**	**14 54 50.7**	**+0.3**
PETK	**Petropavlovsk-**	**78.69**	**26**	LR	LR	15 32 07.3	
	comp=Z,89nm,19.2s,baz=302,slow=38						
JNU	**Nakatsue**	**80.56**	**54**	LR	LR	15 32 53.7	
	comp=Z,40nm,18.1s,baz=354,slow=37						
BDFB	**Brasilia**	**86.84**	**247**	P	**P**	**14 55 41.3**	**+1.0**
	comp=Z,8.9nm,0.8s,baz=29,slow=2.0,SNR=10						
BDFB				LR	LR	15 36 07.9	
	comp=Z,72nm,18.1s,baz=218,slow=37						
PDAR	**Pinedale Array**	**87.19**	**328**	P	**P**	**14 55 42.0**	**+0.1**
	comp=Z,0.6nm,1.0s,baz=33,slow=2.2,SNR=3.5						
PDAR				LR	LR	15 36 20.0	
	comp=Z,88nm,18.1s,baz=15,slow=37						
ROSC	**El Rosal**	**93.17**	**279**	LR	LR	15 33 07.5	
	comp=Z,27nm,18.9s,baz=92,slow=32						
TXAR	**Lajitas Array**	**95.33**	**316**	P	**P**	**14 56 19.1**	**-0.8**
TXAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR				MLR	MLR		
	comp=Z,40nm,18.1s						
TXAR	**Lajitas Array**	**95.33**	**316**	P	**P**	**14 56 19.1**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=343,slow=3.9,SNR=4.6						
TXAR				LR	LR	15 40 03.3	
	comp=Z,40nm,18.1s,baz=0.0,slow=36						
ASAR	**Alice Springs**	**119.78**	**97**	PKP	**PKPdf**	**15 01 43.8**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=312,slow=1.5,SNR=10.0						

MEX 15 14:46:07.9±1.0**, 19°.09N**×**104°.10W, h13**km±4km**, MD3.6,**
Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		**0.14**	**54**	*e*P	Pg	14 46 10.2	-1.2
R15V				*i* S	Sg	14 46 13.7	-0.3
CJM	**Chamela**	**0.98**	**295**	*e*P	Pb	14 46 23.5	-3.3
CJM				*i* S	Sb	14 46 36.1	-3.5

IDC ***15*** *14:55:27.9±2.1, 40°.33N×23°.78E, h0km, mb3.4/4, mb1 3.5/7, mb1mx3.2/45, mbtmp3.5/7, ML3.3/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/34, Error ellipse: s-maj=34.9km s-min=18.0km az=73.0*

ISK ***15*** *14:55:28.8, 40°.30N×23°.90E, h10km, ML3.6/17*

SOF ***15*** *14:55:28.6, 40°.35N×24°.01E, h3km*

ISCJB ***15*** *14:55:29.2±0.3, 40°.37N±0°.01×23°.93E±0°.02, h10km±2km, mb3.4/3, Error ellipse: s-maj=2.1km s-min=2.1km az=31.1*

ATH ***15*** *14:55:29.0, 40°.33N×23°.95E, h24km±1km, ML3.4/18, Error ellipse: s-maj=1.3km s-min=0.7km az=351.0*

THE ***15*** *14:55:29.7, 40°.35N×23°.94E, h8km, ML3.4/17, Error ellipse: s-maj=0.8km s-min=0.4km az=350.0*

BEO ***15*** *14:55:30.7±0.7, 40°.42N×23°.91E, h5km±8km, ML3.4/12*

ISC 15 14:55:29.6±0.7**, 40°.35N**±0°.01×**23°.94E**±0°.01**, h11**km±4km**,**
n185, σ0s.93/233**, mb3.3**/3**, 16C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.03**	**110**	PG	**Pg**	**14 55 31.7**	**+0.2**
OUR				SG	**Sg**	**14 55 32.9**	**0.0**
OUR	**Ouranopolis**	**0.03**	**110**	P	**Pg**	**14 55 31.7**	**+0.2**
OUR				S	**Sg**	**14 55 32.7**	**-0.2**
PLG	**Polygyros**	**0.38**	**274**	P	**Pg**	**14 55 37.3**	**+0.2**
PLG				S	**Sg**	**14 55 42.4**	**+0.2**
PLG				AML	AML	14 55 43.5	
	comp=E,27688μm,0.3s						
PLG				AML	AML	14 55 43.5	
	comp=N,18399μm,0.2s						
PLG	**Polygyros**	**0.38**	**274**	P	**Pg**	**14 55 37.3**	**+0.2**
PLG				S	**Sg**	**14 55 42.8**	**+0.6**
PAIG	**Paliouri**	**0.46**	**206**	P	**Pg**	**14 55 38.6**	**0.0**
PAIG				S	**Sg**	**14 55 44.2**	**-0.5**
PAIG				AML	AML	14 55 45.2	
	comp=E,6366μm,0.2s						
PAIG				AML	AML	14 55 47.9	
	comp=N,5422μm,0.3s						
PAIG	**Paliouri**	**0.46**	**206**	P	**Pg**	**14 55 38.6**	**0.0**
PAIG				S	**Sg**	**14 55 45.0**	**+0.3**
THAS	**Thassos island**	**0.65**	**66**	P	**Pg**	**14 55 42.4**	**+0.3**
THAS				S	**Sg**	**14 55 50.8**	**+0.2**
THAS				AML	AML	14 55 53.7	
	comp=N,67329μm,0.2s						
THAS				AML	AML	14 55 53.7	
	comp=E,41421μm,0.2s						
THAS	**Thassos island**	**0.65**	**66**	P	**Pg**	**14 55 42.2**	**+0.1**
THAS				S	**Sg**	**14 55 50.6**	**0.0**
SOH	**Sokhos**	**0.65**	**317**	P	**Pg**	**14 55 42.5**	**+0.2**
SOH				S	**Sg**	**14 55 51.0**	**+0.2**
SOH				AML	AML	14 55 52.9	
	comp=N,9682μm,0.5s						
SOH				AML	AML	14 55 56.3	
	comp=E,11832μm,0.5s						
SOH	**Sokhos**	**0.65**	**317**	P	**Pg**	**14 55 42.4**	**+0.2**
SOH				S	**Sg**	**14 55 50.7**	**-0.2**
KVLA	**Kavala**	**0.68**	**30**	P	**Pb**	**14 55 43.3**	**-0.2**
KVLA				S	**Sb**	**14 55 52.6**	**-0.3**
KVLA				AML	AML	14 55 54.9	
	comp=N,20007μm,0.3s						
KVLA				AML	AML	14 55 55.1	
	comp=E,16180μm,0.1s						
HORT	**Hortiatis**	**0.69**	**292**	PG	**Pg**	**14 55 42.5**	**-0.4**
HORT				SG	**Sg**	**14 55 52.1**	**+0.1**
HORT	**Hortiatis**	**0.69**	**292**	P	**Pg**	**14 55 42.7**	**-0.3**
HORT				S	**Sb**	**14 55 52.6**	**-0.7**
HORT				AML	AML	14 55 56.7	
	comp=N,5859μm,0.3s						
HORT				AML	AML	14 55 57.3	
	comp=E,5946μm,0.3s						
HORT	**Hortiatis**	**0.69**	**292**	P	**Pg**	**14 55 42.5**	**-0.4**
HORT				S	**Sg**	**14 55 52.1**	**+0.1**
KAVA	**Kavala**	**0.78**	**34**	P	**Pb**	**14 55 45.1**	**-0.1**
KAVA				S	**Sb**	**14 55 55.7**	**-0.1**
KAVA				AML	AML	14 55 57.5	
	comp=N,15616μm,0.2s						
KAVA				AML	AML	14 55 58.0	
	comp=E,9435μm,0.3s						
KAVA	**Kavala**	**0.78**	**34**	P	**Pb**	**14 55 45.0**	**-0.2**
KAVA				S	**Sb**	**14 55 55.7**	**-0.1**
THE	**Thessaloniki**	**0.80**	**291**	P	**Pg**	**14 55 44.1**	**-0.9**
THE				S	**Sb**	**14 55 55.9**	**-0.4**
THE				AML	AML	14 55 59.4	
	comp=E,1903μm,0.3s						
THE				AML	AML	14 56 00.3	
	comp=N,1696μm,0.3s						
THE	**Thessaloniki**	**0.80**	**291**	P	**Pg**	**14 55 44.0**	**-0.9**
NVR	**Nevrokopi**	**1.01**	**357**	P	**Pg**	**14 55 48.9**	**0.0**
NVR				S	**Sb**	**14 56 02.6**	**+0.3**
NVR				AML	AML	14 56 05.5	

	comp=E,4322μm,0.2s						
NVR				AML	AML	14 56 05.5	
	comp=N,2960μm,0.3s						
NVR	Nevrokopi	1.01	357	P	Pg	14 55 48.6	-0.3
NVR				S	Sb	14 56 02.6	+0.3
LIA	Limnos Island	1.05	115	P	Pb	14 55 49.3	-0.4
LIA				S	Sg	14 56 03.2	-0.2
LIA				AML	AML	14 56 07.0	
	comp=E,2349μm,0.3s						
LIA				AML	AML	14 56 07.0	
	comp=N,3591μm,0.3s						
LIA	Limnos Island	1.05	115	P	Pb	14 55 49.4	-0.4
LIA				S	Sn	14 56 04.8	-0.1
XOR	Xorichti	1.14	211	P	Pn	14 55 51.4	-0.1
XOR				S	Sg	14 56 06.2	0.0
XOR				AML	AML	14 56 07.7	
	comp=E,2195μm,0.4s						
XOR				AML	AML	14 56 07.7	
	comp=N,4350μm,0.4s						
XOR	Xorichti	1.14	211	P	Pn	14 55 51.3	-0.1
XOR				S	Sn	14 56 07.2	+0.1
KNT	Kendrikon	1.14	316	P	Pb	14 55 50.9	-0.4
KNT				S	Sb	14 56 05.9	-0.2
KNT				AML	AML	14 56 08.3	
	comp=E,4109μm,0.4s						
KNT				AML	AML	14 56 09.4	
	comp=N,5380μm,0.5s						
KNT	Kendrikon	1.14	316	P	Pb	14 55 51.1	-0.2
LIT	Litokhoron	1.14	258	P	Pb	14 55 50.5	-0.7
LIT				S	Sb	14 56 05.4	-0.7
LIT				AML	AML	14 56 08.4	
	comp=E,1145μm,0.3s						
LIT				AML	AML	14 56 08.8	
	comp=N,1585μm,0.6s						
LIT	Litokhoron	1.14	258	P	Pb	14 55 50.6	-0.7
LIT				S	Sn	14 56 07.3	+0.2
AOS	Alonnisos	1.17	182	PN	Pb	14 55 51.1	-0.8
AOS	Alonnisos	1.17	182	P	Pb	14 55 50.8	-1.1
AOS				S	Sb	14 56 07.1	0.0
AOS				AML	AML	14 56 09.9	
	comp=N,2208μm,0.4s						
AOS				AML	AML	14 56 11.9	
	comp=E,2025μm,0.7s						
AOS	Alonnisos	1.17	182	P	Pb	14 55 50.9	-1.0
AOS				S	Sn	14 56 08.4	+0.4
NEO	Neokhori	1.18	208	P	Pb	14 55 51.4	-0.5
NEO				S	Sb	14 56 06.4	-0.8
NEO				AML	AML	14 56 08.8	
	comp=E,3080μm,0.2s						
NEO				AML	AML	14 56 09.8	
	comp=N,4257μm,0.4s						
NEO	Neokhori	1.18	208	P	Pb	14 55 51.4	-0.5
NEO				S	Sn	14 56 08.0	-0.1
ALNA	Alonissos	1.20	183	P	Pn	14 55 51.2	-1.0
FYTO	Fytoko, Volos	1.21	220	P	Pn	14 55 52.1	-0.3
FYTO				S	Sn	14 56 09.0	+0.1
FYTO				AML	AML	14 56 09.8	
	comp=N,1199μm,0.5s						
FYTO				AML	AML	14 56 10.1	
	comp=E,696μm,0.7s						
FYTO	Fytoko, Volos	1.21	220	P	Pn	14 55 52.2	-0.3
SMTH	Samothraki Isl	1.22	84	P	Pn	14 55 51.9	-0.7
SMTH				S	Sn	14 56 09.2	+0.1
SMTH				AML	AML	14 56 10.2	
	comp=N,3165μm,0.4s						
SMTH				AML	AML	14 56 10.8	
	comp=E,4022μm,0.3s						
SMTH	Samothraki Isl	1.22	84	P	Pn	14 55 51.6	-1.0
SMTH				S	Sn	14 56 09.3	+0.2
SKIA	Skiathos	1.23	197	P	Pn	14 55 52.1	-0.7
SKIA				S	Sg	14 56 08.9	-0.4
SKIA				AML	AML	14 56 12.0	
	comp=E,1419μm,0.4s						
SKIA				AML	AML	14 56 15.5	
	comp=N,1157μm,0.5s						
SKIA	Skiathos	1.23	197	P	Pn	14 55 52.3	-0.5
SKIA				S	Sn	14 56 09.2	-0.2
MMB	Musomiste	1.25	353	P	Pn	14 55 52.5	-0.6
GRG	Griva	1.32	298	P	Pn	14 55 54.1	0.0
GRG				S	Sg	14 56 13.3	+1.2
GRG	Griva	1.32	298	P	Pn	14 55 53.9	-0.1
VAY	Valandovo	1.43	314	*i* Pn	Pb	14 55 56.0	-0.2
VAY				*i* Sn	Sg	14 56 16.0	+0.5
RDO	Rodhopi	1.45	56	PN	Pn	14 55 55.6	-0.2
RDO	Rodhopi	1.45	56	P	Pn	14 55 55.1	-0.7
RDO	Rodhopi	1.45	56	P	Pn	14 55 54.9	-0.9
RDO				S	Sg	14 56 15.9	-0.4
RZN	Rozhen	1.46	23	P	Pn	14 55 56.1	0.0
SMIA	Simia	1.57	201	P	Pn	14 55 57.0	-0.4
SMIA	Simia	1.57	201	P	Pn	14 55 57.3	-0.1
KKB	Krupnik	1.65	337	P	Pn	14 55 58.6	0.0
MRKA	Markates	1.66	190	P	Pn	14 55 58.7	0.0
KZN	Kozani	1.66	269	P	Pb	14 55 59.4	-0.8
KZN	Kozani	1.66	269	P	Pb	14 55 59.4	-0.8
THL	Klokotos Trika	1.67	243	P	Pn	14 55 58.8	0.0
THL	Klokotos Trika	1.67	243	P	Pn	14 55 58.6	-0.2
ALN	Alexandroupoli	1.69	70	PN	Pn	14 55 59.4	+0.3
ALN	Alexandroupoli	1.69	70	P	Pn	14 55 58.5	-0.6
ALN	Alexandroupoli	1.69	70	P	Pn	14 55 58.3	-0.8
ALN				S	Sb	14 56 22.4	+0.4
BOZC	Bozcaada	1.69	107	PN	Pn	14 55 59.5	+0.3
BOZC	Bozcaada	1.69	107	*i* P	Pn	14 55 59.4	+0.3
BOZC				IAML_P			
	comp=Z,5μm,0.2s						
ENEZ	Enez	1.73	76	PN	Pn	14 56 00.2	+0.6
ATAL	Atalanti	1.80	204	P	Pn	14 56 00.0	-0.5
ATAL	Atalanti	1.80	204	P	Pn	14 56 00.3	-0.2
AGG	Agios Georgios	1.81	224	P	Pn	14 56 00.8	0.0
AGG	Agios Georgios	1.81	224	P	Pn	14 56 00.9	+0.1
PLD	Plovdiv	1.85	18	PN	Pb	14 56 02.8	-0.6
PLD	Plovdiv	1.85	18	*e*Pn	Pn	14 56 02.0	+0.8
PLD				*e*Sn	Sb	14 56 25.9	-0.7
PLD	Plovdiv	1.85	18	P	Pn	14 56 02.2	+0.9
PLD				Pg	Pg	14 56 05.9	+0.9
SIGR	SIGRI	1.86	127	PN	Pn	14 56 01.5	+0.1
SIGR	SIGRI	1.86	127	P	Pn	14 56 01.4	+0.1
STIP	Stip	1.89	316	*i* Pn	Pn	14 56 01.3	-0.5
EZN	Ezine	1.90	105	PN	Pn	14 56 02.9	+1.0
EZN	Ezine	1.90	105	P	Pn	14 56 01.8	-0.1
EREA	Eretria	1.92	180	P	Pn	14 56 01.7	-0.6
EREA	Eretria	1.92	180	P	Pn	14 56 01.9	-0.4
GELI	Tayfur-Gelibol	1.94	88	PN	Pb	14 56 03.9	-0.9
ERIK	Erikli-Kesan	1.99	80	PN	Pn	14 56 04.2	+1.1
KPRO	Kipourio	2.02	260	P	Pn	14 56 04.5	+1.0
KPRO	Kipourio	2.02	260	P	Pn	14 56 04.6	+1.0
DIM	Dimitrovgrad	2.08	35	P	Pn	14 56 05.1	+0.6
BAYC	CANAKKALE_Bayr	2.09	106	*i* P	Pn	14 56 04.6	+0.1
BIA	Bitola	2.10	290	*i* Pn	Pb	14 56 06.7	-1.0
KESN	Edirne-Kesan	2.14	76	*i* P	Pn	14 56 06.3	+0.7
PENT	Pentalofos	2.15	267	P	Pn	14 56 06.5	+1.0
LPK	Lapseki	2.15	88	PN	Pn	14 56 05.9	+0.5
PGB	Panagyurishte	2.21	4	P	Pn	14 56 06.4	+0.1
PGB				Pg	Pg	14 56 10.7	-1.2
NEST	Nestorio	2.21	273	P	Pn	14 56 07.2	+0.9
DSF	Desfina	2.22	210	P	Pn	14 56 06.4	-0.1
DSF	Desfina	2.22	210	P	Pn	14 56 06.3	-0.1
KRUS	Krusevo	2.29	297	*i* Pn	Pn	14 56 08.4	+1.1
VTS	Vitosha	2.33	347	*e*Pn	Pn	14 56 08.8	+0.8
VTS				*e*Sn	Sn	14 56 36.0	-0.8
VTS	Vitosha	2.33	347	⇑*i*P	Pn	14 56 08.6	+0.5
VTS	Vitosha	2.33	347	S	Sn	14 56 33.7	-3.1
VTS	Vitosha	2.33	347	P	Pn	14 56 08.5	+0.5
VTS	Vitosha	2.33	347	P	Pn	14 56 08.8	+0.8
ANX	Ano Chora	2.35	222	P	Pn	14 56 08.9	+0.7
ANX	Ano Chora	2.35	222	P	Pn	14 56 09.0	+0.8
AYVA	Ayvalik	2.36	115	*i* P	Pn	14 56 09.0	+0.8
AYVA				IAML_P			
	comp=Z,347nm,0.2s						
KALE	Kalithea	2.40	216	P	Pn	14 56 08.8	-0.1
SERG	Sergoula	2.42	218	P	Pn	14 56 09.4	+0.3
LOUT	Loutraki	2.47	198	P	Pn	14 56 09.9	+0.1
EFP	Efpalio	2.48	220	P	Pn	14 56 10.9	+1.0
RKY	Sarkoy-Tekirda	2.49	81	PN	Pn	14 56 11.1	+1.0
SART	Tekirdag	2.49	81	*i* P	Pn	14 56 10.1	0.0
SART				IAML_P			
	comp=Z,2μm,0.2s						
OHR	Ohrid	2.51	289	*i* Pn	Pn	14 56 11.0	+0.6
CHOS	Chios island	2.55	139	PN	Pn	14 56 11.1	+0.1
KRBG	Karabiga-Canak	2.56	88	PN	Pn	14 56 13.1	+2.0
EDRB	Edirne	2.59	54	PN	Pb	14 56 14.2	-1.9
EDRB	Edirne	2.59	54	P	Pn	14 56 10.8	-0.7
GUR	Goura	2.71	208	P	Pn	14 56 13.0	-0.2
KIRK	Kırklareli	2.78	58	*i* P	Pn	14 56 15.8	+1.7
URLA	Izmir	2.86	133	PN	Pn	14 56 14.3	-0.8
URLA	Izmir	2.86	133	*i* P	Pn	14 56 15.2	0.0
URLA				IAML_P			
	comp=Z,884nm,0.3s						
BALY	Balya	2.89	101	*i* P	Pn	14 56 13.8	-1.8
DID	Didima	2.89	191	P	Pn	14 56 15.1	-0.4
IGT	Igoumenitsa	2.89	255	*e*Sn	Pn	14 56 17.6	+2.0
IGT	Igoumenitsa	2.89	255	*e*Pn	Sn	14 56 51.8	+1.4
BARS	Barje	2.94	328	*e*Pn	Pn	14 56 17.1	+0.8
BARS	Barje	2.94	328	*e*Pn	Pg	14 56 29.9	+4.0
BARS				*e*Sn	Sn	14 56 51.9	+0.3
EDC	Edincik	3.00	89	PN	Pn	14 56 19.1	+2.1
MPEP	Malo Peshtene	3.01	357	P	Pn	14 56 18.5	+1.2
PVL	Pavlikeni	3.05	19	P	Pn	14 56 16.6	-1.2
STEP	BALIKESIR_Sava	3.06	107	*i* P	Pn	14 56 19.2	+1.2
STEP				IAML_P			
	comp=Z,512nm,0.3s						
ZAPS	Zavoj	3.08	342	*e*Pn	Pn	14 56 19.1	+0.8
ZAPS				*e*Sn	Sn	14 56 54.5	-0.7
TIR	Tirane	3.25	289	*e*Pn	Pn	14 56 21.9	+1.4
TIR				*e*Sn	Sn	14 56 59.7	+0.5
TIR	Tirane	3.25	289	⇑*i*P	Pb	14 56 24.5	-2.8
SLVT	Silivri	3.36	73	PN	Pn	14 56 23.9	+1.9
DURS	Dursunbey	3.56	101	*i* P	Pb	14 56 33.1	+0.5
DURS				IAML_P			
	comp=Z,22nm,0.1s						
SELS	Selova	3.56	325	*e*Pn	Pn	14 56 25.1	+0.2
SELS				*e*Sn	Sn	14 57 06.8	-0.2
VLAD	Vladila	3.67	5	⇓*i*P	Pn	14 56 27.4	+1.2
BOVS	Bovan	3.69	334	*e*Pn	Pn	14 56 27.2	+0.7
ZAGS	Zajecar	3.69	340	*e*Pn	Pn	14 56 26.3	-0.3
AYDB	Zeytinkoy-Aydi	3.89	127	PN	Pn	14 56 30.4	+0.9
DEMI	Demirci	3.91	108	*i* P	Pb	14 56 37.1	-1.4
DEMI				IAML_P			
	comp=Z,361nm,0.1s						
PUNG	Punghina	4.00	350	⇓*i*P	Pn	14 56 31.0	+0.2
MANT	Manisa	4.03	116	*i* P	Pn	14 56 30.4	-1.0
MANT				IAML_P			
	comp=Z,76nm,0.1s						
KULA	Kula-Manisa	4.08	115	PN	Pn	14 56 33.6	+1.5
PDG	Podgorica	4.09	302	*e*Pn	Pn	14 56 33.7	+1.6
PDG	Podgorica	4.09	302	⇑*i*P	Pn	14 56 35.0	+2.9
SJES	Sjenica	4.16	316	*e*Pn	Pn	14 56 34.5	+1.4
HUMR	Humele	4.25	10	⇑*i*P	Pn	14 56 34.8	+0.6
HUMR	Humele	4.25	10	S	Sn	14 57 22.0	-1.9
GRUS	Gruza	4.28	327	*e*Pn	Pn	14 56 34.9	+0.3
IVAS	Ivanjica	4.29	320	*e*Pn	Pn	14 56 34.7	-0.2
TVSB	Tavsanli	4.34	100	PN	Pn	14 56 37.0	+1.4
SRE	Strehaia	4.35	353	⇑*i*P	Pn	14 56 35.8	+0.2
SRE	Strehaia	4.35	353	S	Sn	14 57 24.1	-2.2
KUBS	Kucevo	4.40	338	*e*Pn	Pn	14 56 35.6	-0.7
GDZ	Gediz	4.45	105	*i* P	Pn	14 56 37.0	-0.1
GDZ				IAML_P			
	comp=Z,161nm,0.2s						
SULR		4.66	21	S	Sn	14 57 31.3	-2.5
HERR	Herculane	4.67	347	⇑*i*P	Pn	14 56 39.7	-0.3
TRUS	Trudelj	4.68	327	*e*Pn	Pn	14 56 40.4	+0.2
MDVR	Moldovita	4.73	340	⇓*i*P	Pn	14 56 40.8	-0.1
MDVR	Moldovita	4.73	340	S	Sn	14 57 34.3	-1.5
DIVS	Divibare	4.76	323	*e*Pn	Pn	14 56 41.7	+0.3
DIVS				*e*Sn	Sn	14 57 35.0	-1.6
TREB	Trebinje	4.82	301	*e*Pn	Pn	14 56 42.1	0.0
BBLS	Lazići	4.88	318	*e*Pn	Pn	14 56 43.7	+0.8
ARR	Arges	5.04	6	⇑*i*P	Pn	14 56 46.0	+0.8
IDI	Anoyia	5.10	171	Pn	Pn	14 56 46.5	+0.4
	comp=Z,0.5nm,0.3s,baz=342,slow=9.6,SNR=3.3						
GZR	Gura Zlata	5.12	351	⇑*i*P	Pn	14 56 45.9	-0.3
GZR	Gura Zlata	5.12	351	S	Sn	14 57 42.1	-3.2
ISR	Istrita	5.14	21	⇑*i*P	Pn	14 56 46.9	+0.4
VOIR		5.15	9	⇓*i*P	Pn	14 56 47.8	+1.1
HAPS	Han Pijesak,Bl	5.26	317	*e*Pn	Pn	14 56 48.8	+0.5
MLR	Muntele Rosu	5.35	15	⇓*i*P	Pn	14 56 50.9	+1.4
MLR	Muntele Rosu	5.35	15	Pn	Pn	14 56 50.8	+1.3
	comp=Z,1.7nm,0.3s,baz=193,slow=2.3,SNR=20						
MLR				Lg	Lg	14 58 20.7	
	comp=Z,0.6nm,0.3s,baz=112,slow=16,SNR=2.7						
BZS	Buzias	5.54	343	*e*Pn	Pn	14 56 52.1	+0.2
BZS	Buzias	5.54	343	⇑*i*P	Pn	14 56 51.6	-0.3
BZS	Buzias	5.54	343	S	Sn	14 57 54.3	-1.3
FRGS	Fruska Gora	5.69	329	*e*Pn	Pn	14 56 54.3	+0.2
DOPR	Dopca	5.72	10	⇑*i*P	Pn	14 56 55.8	+1.4
PLOR	Plostina	5.85	19	⇑*i*P	Pn	14 56 57.6	+1.4
VRI	Vrincioaia	5.88	19	⇑*i*P	Pn	14 56 58.3	+1.6
DRGR		6.51	353	⇑*i*P	Pn	14 57 05.1	-0.2
BLY	Banja Luka	6.65	314	*e*Pn	Pn	14 57 08.0	+0.8
BLY	Banja Luka	6.65	314	⇑*i*P	Pn	14 57 09.6	+2.4
MORH	Mrgy, Hungar	7.03	328	*e*P	Pn	14 57 12.0	-0.3
MORH				Sn	Sn	14 58 32.0	-0.2
BURAR	Bucovina Array	7.33	7	⇑*i*P	Pn	14 57 17.9	+1.3
BRTR	Keskin Array B	7.47	92	Pn	Pn	14 57 19.9	+1.3
	comp=Z,0.2nm,0.3s,baz=272,slow=12,SNR=6.6						
OBN	Obninsk	17.00	25	LR	LR	15 05 37.3	
	comp=Z,27nm,19.4s,baz=186,slow=36						
HFS	Hagfors	20.82	345	P	P	15 00 09.9	-0.9
	comp=Z,1.5nm,0.8s,baz=166,slow=8.6,SNR=3.1						
FINES	FINESS Array B	21.17	3	P	P	15 00 13.4	-1.1
	comp=Z,0.7nm,0.6s,baz=181,slow=12,SNR=4.5						
MKAR	Makanchi Array	41.92	61	P	P	15 03 21.4	+1.3
	comp=Z,0.4nm,0.6s,baz=280,slow=8.7,SNR=4.6						
ZALV	Zalesovo Beam	42.27	50	P	P	15 03 24.1	+1.4
	comp=Z,1.0nm,0.5s,baz=284,slow=8.8,SNR=4.1						

IDC 15 14:56:47.1±2.9, 14°.96S×177°.48W, h0^{km}, mb3.7/4, mb1 4.1/4, mb1mx3.6/26, mbtmp3.7/4, Error ellipse: s-maj=173.5km s-min=25.4km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	46.11	257	P	P	15 05 13.4	-0.1
	0.4nm,0.4s,baz=91,slow=6.7,SNR=20						
ASAR	Alice Springs	46.51	251	P	P	15 05 16.5	-0.1
	2.3nm,0.5s,baz=87,slow=7.8,SNR=85						
NVAR	Mina Array Bea	76.69	44	P	P	15 08 40.8	+0.3
	0.6nm,0.8s,baz=231,slow=5.6,SNR=3.0						
ILAR	Eielson Array	82.83	13	P	P	15 09 12.7	-0.3
	0.3nm,0.6s,baz=211,slow=5.9,SNR=4.9						

IDC ***15*** *14:59:29.3±6.8, 36°.21N×71°.18E, h118^{km}±34^{km}, mb3.1/4, mb1 3.1/10, mb1mx2.9/49, mbtmp3.5/10, Error ellipse: s-maj=86.1km s-min=27.3km az=160.0*

NNC ***15*** *14:59:34.8±2.9, 36°.72N×70°.84E, h124^{km}±60^{km}, mb3.1, mpv3.8, Error ellipse: s-maj=28.2km s-min=22.1km az=77.0*

ISC 15 14:59:32.0±1.5, 36°.6N±0°.1×70°.82E±0°.08, h100^{km}, n24, σ1^{s}88/33, mb3.2/3, 9C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	4.00	31	⇓P	Pn	15 00 33.2	+1.9
	2.9nm,0.3s						
SFK				⇓S	Sn	15 01 18.5	+1.2
	14nm,0.4s						
AML	Almayashu	5.94	21	P	Pn	15 00 58.3	+0.5
	SNR=73						
MNAS	Manas	6.01	12	⇑P	Pn	15 00 59.6	+1.1
	5.7nm,0.7s						
MNAS				⇑S	Sn	15 02 08.1	+2.1
	22nm,0.8s						
UCH	Uchtor	6.29	26	P	Pn	15 01 04.6	+1.9
	SNR=10						
EKS2	Erkin-Say	6.46	20	P	Pn	15 01 05.5	+1.0
	SNR=26						
KK31	Karatay Array	6.49	358	⇓P	Pn	15 01 06.3	+1.5
	5.1nm,0.4s,baz=182,slow=12,SNR=48						
KK31				⇓S	Sn	15 02 20.7	+3.3
	2.1nm,0.5s,baz=181,slow=19,SNR=5.2						
AAK	Ala-Archa	6.65	24	P	Pn	15 01 09.1	+1.9
	SNR=8.0						
AAK	Ala-Archa	6.65	24	⇑P	Pn	15 01 08.6	+1.4
	5.6nm,0.8s						
AAK				⇑S	Sn	15 02 21.1	-0.4
	8.5nm,0.6s						
AAK	Ala-Archa	6.65	24	P	Pn	15 01 07.9	+0.7
	2.3nm,0.3s,baz=164,slow=4.6,SNR=35						
AAK				S	Sn	15 02 20.6	-1.0
	0.7nm,0.3s,baz=325,slow=22,SNR=9.8						
CHMS	Chumysh	7.06	24	P	Pn	15 01 14.1	+1.5
	SNR=5.8						
USP	Ospenovka	7.22	22	P	Pn	15 01 14.8	0.0
	SNR=12						
TKM2	Tokmak 2	7.29	29	P	Pn	15 01 19.5	+3.5
	SNR=7.1						
TKM2	Tokmak 2	7.29	29	⇑P	Pn	15 01 18.9	+2.9
	3.8nm,0.5s						
TKM2				⇓S	Sn	15 02 38.7	+1.4
	3.4nm,0.7s						
GEYT	Alibeck	10.21	281	P	Pn	15 01 57.7	+2.2
	0.4nm,0.3s,baz=97,slow=12,SNR=4.1						
GEYT				S	Sn	15 03 48.5	+0.4
	0.4nm,0.3s,baz=103,slow=23,SNR=2.8						
MKAR	Makanchi Array	13.28	36	P	Pn	15 02 35.3	-1.2
	0.0nm,0.3s,baz=208,slow=10,SNR=3.2						
AB31	Akbulak array	14.91	331	⇑P	Pn	15 02 58.3	+0.8
	0.5nm,0.4s						
AB31				⇑S	Sn	15 05 37.5	-4.4
	0.4nm,0.5s,baz=151,slow=24,SNR=2.5						
KURBB	Kurchatov Arra	15.06	19	P	Pn	15 02 59.8	+0.4
	0.1nm,0.3s,baz=210,slow=11,SNR=3.5						
BVAR	Borovoye Array	16.41	359	P	P	15 03 17.9	+0.7
	0.2nm,0.3s,baz=163,slow=9.1,SNR=6.6						
AKTO	Aktyubinsk	16.61	330	⇑P	P	15 03 19.8	+0.4
	2.5nm,0.9s						
AKTO				⇑S	Sn	15 06 20.4	-2.3
	1.1nm,0.8s						
AKTO	Aktyubinsk	16.61	330	P	P	15 03 20.7	+1.3
	0.2nm,0.3s,baz=152,slow=9.1,SNR=4.3						
ZALV	Zalesovo Beam	19.87	25	P	P	15 03 53.3	-1.7
	1.2nm,0.4s,baz=224,slow=12,SNR=3.5						
ARCES	ARCESS Array B	40.98	338	P	P	15 07 04.1	-0.5
	2.4nm,0.9s,baz=115,slow=10.0,SNR=5.8						
NOA	NORSAR Array B	44.20	323	P	P	15 07 29.6	-1.2
	0.2nm,0.5s,baz=99,slow=7.2,SNR=3.3						
YKA	Yellowknife Ar	81.14	3	P	P	15 11 33.4	-2.6
	0.1nm,0.3s,baz=353,slow=5.4,SNR=3.2						

MEX 15 15:04:14.6±0.7, 17°.19N×99°.91W, h30^{km}±16^{km}, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.37	247	*e*P	Pb	15 04 21.0	-2.0
CAIG				*e*S	Sb	15 04 27.4	-1.3
MEIG	Mezcala	0.78	21	*e*P	Pn	15 04 26.9	-2.8
MEIG				*i* S	Sb	15 04 37.5	-2.5
ARIG	Puente Sto Nin	1.16	339	*e*P	Pn	15 04 32.5	-2.4
ARIG				*i* S	Sn	15 04 46.4	-3.4
PLIG	Platanillo	1.25	18	*e*P	Pn	15 04 34.3	-2.0
PLIG				*e*S	Sn	15 04 48.6	-3.6
ZIIG	Zihuatanejo	1.54	286	*e*P	Pn	15 04 38.2	-1.9

MAN 15 15:17:28.0, 6°.38N×126°.38E, h17^{km}, MS3.5, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.58	348	*e*P	Pg	15 17 38.3	-1.3
MATI				*e*S	Sb	15 17 49.0	+1.3
DDMP	Don Marcelino,	0.72	248	*e*P	Pb	15 17 42.0	-0.1
DDMP				*e*S	Sn	15 17 54.8	+0.7
DMPH	Davao City--Mi	1.12	309	⇓*e*P	Pg	15 17 54.5	+4.9
DMPH				*e*S	Sg	15 18 12.8	+8.5
KCP	Kidapawan	1.43	296	⇓*i*P	Pn	15 17 52.1	-1.2
SKMP	Bagumbayan, Su	1.83	275	*e*P	Pn	15 17 59.8	+1.0
SKMP				*e*S	Sn	15 18 22.4	+0.8
BUKP	Musuan	1.99	319	*e*P	Pn	15 18 00.4	-0.5
BUKP				*e*S	Sb	15 18 26.9	-1.4
CTBH	Cotabato--PC H	2.28	292	⇓*i*P	Pn	15 18 04.5	-0.4
BUTP	Butuan	2.69	344	*e*P	Pn	15 18 11.7	+1.2
BUTP				*e*S	Sb	15 18 47.1	-1.2

IDC 15 15:24:42.3±2.8, 20°.54S×169°.82E, h289^{km}±34^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.2/31, mbtmp3.8/5, Error ellipse: s-maj=152.2km s-min=27.5km az=162.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.50	244	P	Pn	15 25 42.4	-0.1
	12nm,0.3s,baz=61,slow=19,SNR=244						
CTA	Charters Tower	22.11	267	P	P	15 29 15.2	+1.0
	4.6nm,1.1s,baz=87,slow=10,SNR=2.7						
WRA	Warramunga Arr	33.26	265	P	P	15 30 52.1	-1.1
	0.4nm,0.3s,baz=95,slow=9.3,SNR=36						
ASAR	Alice Springs	33.37	258	P	P	15 30 54.5	+0.3
	0.9nm,0.6s,baz=89,slow=9.2,SNR=14						
NVAR	Mina Array Bea	89.25	48	P	P	15 37 06.1	0.0
	0.6nm,0.8s,baz=240,slow=7.1,SNR=3.6						
GERES	GERESS Array B	145.89	332	PKPbc	PKPdf	15 43 47.1	+0.4
	0.5nm,0.5s,baz=44,slow=3.0,SNR=4.3						

MEX 15 15:36:04.6±0.3, 17°.97N×102°.45W, h16^{km}±238^{km}, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	1.00	111	*e*P	Pb	15 36 20.2	-3.4
ZIIG				*e*S	Sb	15 36 32.2	-4.4
ARIG	Puente Sto Nin	2.02	81	*e*P	Pn	15 36 34.4	-3.7
ARIG				*e*S	Sn	15 36 58.4	-4.7
CAIG	El Cayaco	2.27	114	*i* P	Pn	15 36 38.6	-2.9
CAIG				*e*S	Sn	15 37 04.6	-4.6
MEIG	Mezcala	2.69	91	*e*P	Pn	15 36 44.6	-2.7
PLIG	Platanillo	2.83	81	*e*P	Pn	15 36 46.1	-3.1

IDC 15 15:58:40.0±1.7, 11°.49S×165°.09E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.6/26, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=52.7km s-min=35.4km az=111.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.60	173	Pn	Pn	16 01 13.0	-0.4
	0.8nm,0.3s,baz=291,slow=14,SNR=13						
WRA	Warramunga Arr	30.72	250	P	P	16 04 57.1	0.0
	1.2nm,1.0s,baz=78,slow=9.3,SNR=5.3						
ILAR	Eielson Array	84.14	19	P	P	16 11 12.7	0.0
	0.4nm,0.5s,baz=237,slow=4.3,SNR=5.2						
MKAR	Makanchi Array	93.40	317	P	P	16 11 57.3	0.0
	0.1nm,0.5s,baz=96,slow=5.5,SNR=2.3						

IDC ***15*** *16:09:29.0±1.3, 11°.14S×164°.96E, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.7/29, mbtmp3.8/7, ML3.6/2, Error ellipse: s-maj=31.5km s-min=26.2km az=155.0*

ISCJB ***15*** *16:09:32.1±1.1, 11°.43S±0°.09×165°.0E±0°.1, h31^{km}, mb3.6/5, Error ellipse: s-maj=18.1km s-min=8.7km az=142.9*

ISC 15 16:09:33.4±1.2, 11°.3S±0°.1×165°.0E±0°.1, h31^{km}, n10, σ1^{s}65/9, mb3.6/5, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.29	290	Pn	Pn	16 10 47.8	-2.6
	2.1nm,0.3s,baz=146,slow=3.6,SNR=2.3						
HNR				Sn	Sn	16 11 52.2	+1.8
	7.8nm,0.3s,baz=96,slow=10,SNR=5.0						
DZM	Mont Dzumac	10.82	173	Pn	Pn	16 12 06.9	+0.6
	0.5nm,0.3s,baz=293,slow=18,SNR=27						
DZM				Sn	Sn	16 14 04.6	-1.8
	0.1nm,0.3s,baz=32,slow=13,SNR=2.0						
H11S2	WAKE ISLAND Hy	29.63	3	T	T	16 46 03.5	
	baz=181,slow=76,SNR=6.9						
H11S3	WAKE ISLAND Hy	29.64	3	T	T	16 46 03.8	
	baz=181,slow=76,SNR=5.3						
H11S1	WAKE ISLAND Hy	29.65	3	T	T	16 46 04.6	
	baz=181,slow=76,SNR=7.9						
STKA	Stephens Creek	29.76	223	P	P	16 15 38.8	+1.5
	1.0nm,0.7s,baz=53,slow=9.7,SNR=3.2						
WRA	Warramunga Arr	30.71	250	P	P	16 15 46.1	+0.3
	0.8nm,0.7s,baz=82,slow=9.0,SNR=10						
ASAR	Alice Springs	32.02	243	P	P	16 15 57.8	+0.4
	1.0nm,0.7s,baz=64,slow=10,SNR=25						
NVAR	Mina Array Bea	86.74	50	P	P	16 22 15.5	+0.5
	0.1nm,0.3s,baz=250,slow=5.3,SNR=2.7						
MKAR	Makanchi Array	93.19	317	P	P	16 22 44.3	-0.5
	0.1nm,0.5s,baz=93,slow=4.3,SNR=2.5						

IDC 15 16:26:00.2±3.0, 15°.14S×173°.50W, h0^{km}, mb3.4/4,

mb1 3.7/4,**mb1mx3.6**/40,**mbtmp3.4**/4,**Error ellipse: s-maj=174.1km s-min=27.6km az=147.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11S2	**WAKE ISLAND Hy**	**38.69**	**329**	T	T	17 14 12.8	
	baz=142						
H11S3	**WAKE ISLAND Hy**	**38.71**	**329**	T	T	17 14 13.0	
	baz=142						
H11S1	**WAKE ISLAND Hy**	**38.71**	**329**	T	T	17 14 15.8	
	baz=142						
H11N3	**WAKE ISLAND Hy**	**39.64**	**330**	T	T	17 15 21.3	
	baz=174						
H11N1	**WAKE ISLAND Hy**	**39.65**	**330**	T	T	17 15 09.7	
	baz=174						
H11N2	**WAKE ISLAND Hy**	**39.66**	**330**	T	T	17 15 15.0	
	baz=174						
WRA	**Warramunga Arr**	**49.81**	**257**	P	P	16 34 55.1	-0.2
	0.2nm,0.6s,baz=90,slow=7.0,SNR=8.9						
ASAR	**Alice Springs**	**50.10**	**252**	P	P	16 34 57.4	-0.1
	0.6nm,0.5s,baz=87,slow=7.9,SNR=26						
PDAR	**Pinedale Array**	**82.14**	**42**	P	P	16 38 23.0	-0.2
	0.2nm,0.5s,baz=235,slow=3.2,SNR=3.2						
ILAR	**Eielson Array**	**82.21**	**11**	P	P	16 38 23.2	+0.4
	0.2nm,0.7s,baz=225,slow=4.7,SNR=4.1						

BJI ***15*** *16:32:53.6, 67°.66N×142°.39E, h6^{km}, mB5.1/43, mb4.9/57, Ms4.9/46, Ms7 4.7/46*

IDC ***15*** *16:32:54.7±0.4, 67°.60N×142°.28E, h0^{km}, mb4.5/29, mb1 4.6/34, mb1mx4.5/57, mbtmp4.4/34, ML3.8/4, MS3.8/25, Ms1 3.8/25, ms1mx3.7/41, Error ellipse: s-maj=10.4km s-min=10.1km az=110.0*

ISCJB ***15*** *16:32:55.8±0.1, 67°.69N±0°.02×142°.27E±0°.05, h14^{km}, mb4.7/152, MS4.0/35, Error ellipse: s-maj=3.2km s-min=2.8km az=151.2*

GCMT ***15*** *16:32:55.7±0.4, 67°.77N±0°.04×142°.3E±0°.1, h19^{km}±1^{km}, MW4.7/68, Moment Tensor Solution.   s21,c24;   s68,c82; Duration: 0   Moment tensor: Scale 10^{16}Nm; M_{rr}1.42±.13; $M_{\theta\theta}$-0.72±.09; $M_{\phi\phi}$-0.69±.09; $M_{r\theta}$-0.08±.20; $M_{\theta\phi}$0.79±.07; $M_{\phi r}$-0.03±.22;   Best double couple: $M_0$1.46200×10^{16} NP1:ϕ_s311.00000°,δ46.00000°,λ86.00000°.   NP2: ϕ_s138.00000°,δ44.00000°,λ95.00000°.   Principal axes: T 1.4250, Plg87.0000°, Azm148.0000°; N 0.0770, Plg3.0000°, Azm314.0000°; P -1.4990, Plg1.0000°, Azm44.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***15*** *16:32:55.1±0.9, 67°.67N×142°.33E, h12^{km}, mb5.0/80, MS4.2/6 Error ellipse: s-maj=10.9km s-min=4.4km az=98.1*

NEIC ***15*** *16:32:56.6±0.2, 67°.66N×142°.11E, h10^{km}, mb4.9/55, Error ellipse: s-maj=5.5km s-min=3.8km az=161.0*

YARS ***15*** *16:32:56.3±0.3, 67°.66N±0°.02×142°.44E±0°.04, h8^{km}*

ISC 15 16:32:56.9±1.0**, 67°.63N**±0°.04×**142°.40E**±0°.03**, h11**^{km}±6^{km}**, n390,** σ1^{s}**40**/417**, mb4.8**/177**, MS3.9**/37**, 42C-11D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	**Moma**	**1.21**	**164**	*e*P	**Pn**	**16 33 18.2**	**-1.5**
MOMR				*e*S	**Sb**	**16 33 34.8**	**-0.6**
MOMR				pmax	pmax		
	comp=Z,5μm,0.6s						
MOMR				smax	smax		
	comp=N,31μm,0.7s						
MOMR	**Moma**	**1.21**	**164**	*e*P	**Pn**	**16 33 18.2**	**-1.5**
MOMR				Pmax		16 33 18.2	
	comp=Z,5μm,0.6s						
MOMR				*e*S	**Sb**	**16 33 34.8**	**-0.6**
MOMR				Smax		16 33 34.8	
	comp=N,590nm,0.7s						
YBGR	**Belaya Gora**	**1.69**	**56**	*e*P	**Pn**	**16 33 25.3**	**-1.0**
YBGR				Pmax		16 33 25.3	
	comp=E,1μm,0.2s						
YBGR				Pmax		16 33 25.3	
	comp=Z,890nm,0.2s						
YBGR				*e*S	**Sn**	**16 33 48.2**	**+0.3**
YBGR				Smax		16 33 48.2	
	comp=N,9μm,0.4s						
BTGS	**Batagay**	**2.97**	**274**	*e*P	**Pn**	**16 33 44.3**	**+0.5**
BTGS				*e*S	**Sn**	**16 34 18.8**	**-0.5**
BTGS				pmax	pmax		
	comp=Z,673nm,0.7s						
BTGS	**Batagay**	**2.97**	**274**	*e*P	**Pn**	**16 33 44.3**	**+0.5**
BTGS				*e*P	**Pb**	**16 33 50.0**	**+0.4**
BTGS				Pmax		16 33 50.0	
	comp=Z,673nm,0.7s						
BTGS				*e*S	**Sn**	**16 34 18.8**	**-0.5**
BTGS				*e*S	**Sb**	**16 34 28.6**	**+2.8**
BTGS				Smax		16 34 28.6	
	comp=E,9μm,0.5s						
SEY	**Seymchan**	**6.30**	**134**	*ce*P	**Pn**	**16 34 30.1**	**+0.5**
SEY	**Seymchan**	**6.30**	**134**	Pn	**Pn**	**16 34 29.8**	**+0.2**
	comp=E,1.4nm,0.3s,baz=322,slow=12,SNR=36						
SEY				Pg	Pb	16 34 43.0	-3.4
	comp=E,4.7nm,0.3s,baz=324,slow=14,SNR=27						
SEY				Lg	Lg	16 36 13.9	
	comp=E,11nm,0.3s,baz=360,slow=19,SNR=5.3						
YAK	**Yakutsk**	**7.79**	**230**	*e*P	Pn	16 34 35.6	-14
YAK				pmax	pmax		
	comp=Z,54nm,0.4s						
YAK				pmax	pmax		
	comp=N,20nm,0.4s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.4s						
MA2	**Magadan**	**8.89**	**151**	*e*Pn	**Pn**	**16 35 07.9**	**+2.8**
MA2				Lg	Lg	16 37 35.8	
MA2	**Magadan**	**8.89**	**151**	*ce*P	**Pn**	**16 35 06.5**	**+1.4**
MA2				pmax	pmax		
	comp=Z,22nm,1.3s						
MA2	**Magadan**	**8.89**	**151**	Pn	**Pn**	**16 35 03.3**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=342,slow=20,SNR=2.0						
MA2				Lg	Lg	16 37 35.8	
	comp=Z,2.4nm,0.3s,baz=313,slow=19,SNR=14						
MA2				LR	LR	16 38 50.4	
	comp=Z,344nm,21.6s,baz=336,slow=40						
BILL	**Bilibino**	**9.01**	**76**	*e*Pn	**Pn**	**16 35 09.0**	**+2.2**
BILL	**Bilibino**	**9.01**	**76**	*ce*P	**Pn**	**16 35 08.4**	**+1.7**
BILL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NKL	**Nikolayevsk**	**14.55**	**184**	*e*P	**Pn**	**16 36 26.0**	**+3.6**
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
NKL				MLR	MLR		
	comp=Z,1μm,10.0s						
ZEA	**Zeya**	**15.71**	**215**	*e*P	**Pn**	**16 36 37.8**	**0.0**
ZEA				pmax	pmax		
	comp=N,27nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
ZEA				MLR	MLR		
	comp=N,3μm,9.0s						
ZEA				MLR	MLR		
	comp=E,600nm,9.0s						
ZEA				MLR	MLR		
	comp=Z,3μm,9.0s						
BOD	**Bodaibo**	**16.13**	**246**	*e*P	**Pn**	**16 36 38.2**	**-5.0**
BOD				pmax	pmax		
	comp=Z,25nm,0.8s						
PEA0B	**Petropavlovsk-**	**16.33**	**146**	*e*Pn	**P**	**16 36 47.8**	**-1.0**
	comp=Z,54nm,0.9s						
PETK	**Petropavlovsk-**	**16.33**	**146**	*e*Pn	**P**	**16 36 49.4**	**+0.7**
PETK	**Petropavlovsk-**	**16.33**	**146**	*e*P	**P**	**16 36 49.4**	**+0.7**
PETK	**Petropavlovsk-**	**16.33**	**146**	Pn	**Pn**	**16 36 46.9**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=333,slow=15,SNR=6.9						
PETK				LR	LR	16 43 37.1	
	comp=Z,223nm,19.8s,baz=333,slow=39						
PET	**Petropavlovsk**	**16.62**	**144**	*e*Pn	**P**	**16 36 54.4**	**+2.4**
	comp=Z,116nm,0.9s						
PET	**Petropavlovsk**	**16.62**	**144**	*e*P	**P**	**16 36 54.3**	**+2.4**
PET				pmax	pmax		
	comp=Z,142nm,1.1s						
TYV	**Tymovskoe**	**16.82**	**179**	*e*P	**P**	**16 36 53.7**	**-0.5**
TYV				*e*S	**Sn**	**16 40 03.8**	**+5.2**
TYV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TYV				smax	smax		
	comp=E,500nm,6.1s						
GRNR	**Gornyy**	**17.17**	**193**	*e*P	**Pn**	**16 36 56.8**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
GAMB	**Gambell**	**18.91**	**80**	*e*P	**Pn**	**16 37 18.4**	**+0.6**
	comp=Z,17nm,0.8s						
KLR	**Kul'dur**	**19.22**	**202**	*e*P	**Pn**	**16 37 21.8**	**+0.2**
KLR	**Kul'dur**	**19.22**	**202**	P	**P**	**16 37 21.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=4.5,slow=11,SNR=13						
NRIK	**Noril'sk**	**19.62**	**300**	P	**P**	**16 37 25.2**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=78,slow=10,SNR=12						
NRIK				LR	LR	16 46 40.0	
	comp=Z,108nm,20.2s,baz=54,slow=42						
RDOG	**Red Dog Mine**	**20.08**	**63**	*e*P	**P**	**16 37 30.5**	**+0.7**
	comp=Z,51nm,1.1s						
YSS	**Yuzh-Sakhalins**	**20.73**	**179**	*e*P	**P**	**16 37 36.4**	**-0.6**
	comp=Z,30nm,1.1s						
YSS	**Yuzh-Sakhalins**	**20.73**	**179**	*e*P	**P**	**16 37 36.7**	**-0.4**
YSS				*e*		16 37 44.9	
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
ANM	**Nome**	**20.85**	**74**	*e*P	**P**	**16 37 39.4**	**+1.1**
	comp=Z,19nm,0.9s						
ANM	**Nome**	**20.85**	**74**	*e*P	**P**	**16 37 39.4**	**+1.1**
ANM				pmax	pmax		
	comp=Z,19nm,0.9s						
HIA	**Hailar**	**21.65**	**223**	*e*P	**P**	**16 37 44.3**	**-2.7**
	comp=Z,41nm,1.1s						
HIA	**Hailar**	**21.65**	**223**	*e*P	**P**	**16 37 44.3**	**-2.7**
HIA				pmax	pmax		
	comp=Z,41nm,1.1s						
KUR	**Kuril'sk**	**22.64**	**170**	*ce*P	**P**	**16 37 59.2**	**+1.7**
ASAJ	**Asahikawa**	**23.57**	**180**	P	**P**	**16 38 06.0**	**-1.1**
	comp=Z,10nm,0.8s,baz=14,slow=2.5,SNR=8.7						
ASAJ				LR	LR	16 47 40.9	
	comp=Z,283nm,18.5s,baz=20,slow=38						
SPIA	**Saint Paul Isl**	**23.65**	**93**	*e*P	**P**	**16 38 09.6**	**+1.9**
	comp=Z,54nm,1.1s						
IRK	**Irkutsk**	**23.98**	**249**	*e*P	**P**	**16 38 10.3**	**-0.7**
IRK				*e*S	**S**	**16 42 32.4**	**+5.1**
IRK				pmax	pmax		
	comp=Z,113nm,3.2s						
MDJ	**Mudanjiang**	**24.04**	**203**	P	**P**	**16 38 11.8**	**+0.2**
MDJ				sP	sP	16 38 17.4	+1.0
MDJ				pP	pP	16 38 20.8	+5.8
MDJ				pmax	pmax		
	comp=Z,56nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,260nm,3.6s						
MDJ				LR	LR		
	comp=Z,570nm,8.6s						
MDJ				LR	LR		
	comp=Z,140nm,4.0s						
MDJ				LR	LR		
	comp=Z,560nm,9.3s						
MDJ	**Mudanjiang**	**24.04**	**203**	*e*P	**P**	**16 38 11.2**	**-0.5**
	comp=Z,72nm,1.2s						
USRK	**Ussuriysk Ar.**	**24.13**	**199**	P	**P**	**16 38 12.5**	**+0.1**
	comp=Z,17nm,0.8s,baz=14,slow=10,SNR=31						
USRK				LR	LR	16 46 33.8	
	comp=Z,260nm,19.8s,baz=0.9,slow=34						
IM3	**Indian Mountai**	**24.22**	**64**	*e*P	**P**	**16 38 13.6**	**+0.5**
TLY	**Talaya**	**24.66**	**249**	*e*P	**P**	**16 38 17.0**	**-0.3**
	comp=Z,25nm,0.9s						
TLY	**Talaya**	**24.66**	**249**	*e*P	**P**	**16 38 17.3**	**0.0**
TLY				pmax	pmax		
	comp=Z,20nm,0.9s						
TLY				MLR	MLR		
	comp=Z,2μm,12.0s						
COLD	**Coldfoot**	**24.74**	**59**	*e*P	**P**	**16 38 19.0**	**+1.2**
	comp=Z,28nm,1.0s						
CN2	**Changchun**	**25.53**	**209**	*e*P	**P**	**16 38 24.0**	**-1.2**
CN2				*e*S	**S**	**16 42 55.8**	**+3.5**
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				pmax	pmax		
	comp=Z,310nm,4.0s						
CN2				LR	LR		
	comp=Z,2μm,9.0s						
CN2				LR	LR		
	comp=Z,1μm,9.0s						
CN2				LR	LR		
	comp=Z,2μm,9.0s						
MOY	**Mondy**	**25.63**	**252**	*e*P	**P**	**16 38 27.1**	**+1.0**
MOY				pmax	pmax		
	comp=Z,83nm,1.8s						
MLY	**Manley**	**25.80**	**64**	*e*P	**P**	**16 38 28.4**	**+0.9**
	comp=Z,28nm,1.2s						
ZAK	**Zakamensk**	**25.86**	**248**	*e*P	**P**	**16 38 28.4**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,16nm,1.1s						
MDM	**Murphy Dome**	**26.70**	**62**	*e*P	**P**	**16 38 37.1**	**+1.5**
	comp=Z,17nm,1.0s						
ULN	**Ulaanbaatar**	**26.71**	**240**	*e*P	**P**	**16 38 36.9**	**+0.9**
	comp=Z,3.9nm,1.1s						
ULN	**Ulaanbaatar**	**26.71**	**240**	*ce*P	**P**	**16 38 35.2**	**-0.8**
ULN				pmax	pmax		
	comp=Z,13nm,1.7s						
COLA	**College**	**26.88**	**62**	*e*P	**P**	**16 38 34.4**	**-2.8**
	comp=Z,21nm,0.9s						
COLA	**College**	**26.88**	**62**	*d i*P	**P**	**16 38 39.2**	**+2.1**
COLA				pmax	pmax		
	comp=Z,15nm,1.0s						
SONA1	**Songino Array**	**26.95**	**241**	*e*P	**P**	**16 38 39.2**	**+1.2**
SONM	**Songino Array**	**26.96**	**241**	P	**P**	**16 38 37.8**	**-0.4**
	comp=Z,8.0nm,1.1s,baz=24,slow=9.5,SNR=26						
SONM				PcP	**PcP**	**16 41 59.9**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=38,slow=2.6,SNR=3.5						
SONM				LR	LR	16 49 52.7	
	comp=Z,374nm,18.4s,baz=0.5,slow=38						
IL1	**Eielson Array**	**27.27**	**62**	*e*P	**P**	**16 38 41.0**	**+0.4**
ILAR	**Eielson Array**	**27.27**	**62**	P	**P**	**16 38 41.2**	**+0.5**
	comp=Z,11nm,0.9s,baz=299,slow=7.7,SNR=42						
ILAR				LR	LR	16 51 39.3	
	comp=Z,158nm,20.0s,baz=308,slow=41						
ILB	**Eielson Array**	**27.27**	**62**	*e*P	**P**	**16 38 41.2**	**+0.5**
KNGR	**Kungurtug, Tuv**	**27.77**	**255**	*d i*P	**P**	**16 38 46.3**	**+0.9**
RSO	**Redoubt South**	**27.99**	**73**	*e*P	**P**	**16 38 47.9**	**+0.5**
SUA	**Susitna One**	**28.04**	**70**	*e*P	**P**	**16 38 47.9**	**+0.1**
	comp=Z,28nm,1.2s						
INK	**Inuvik**	**29.27**	**49**	P	**P**	**16 38 59.5**	**+1.1**
	comp=Z,2.8nm,1.1s,baz=323,slow=4.8,SNR=4.9						
INK				LR	LR	16 52 22.9	
	comp=Z,249nm,20.7s,baz=260,slow=40						
NVS	**Novosibirsk**	**29.88**	**274**	*e*P	**P**	**16 39 03.7**	**-0.2**
NVS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,1.0nm,0.3s						
KDAK	**Kodiak Island**	**29.92**	**77**	LR	LR	16 51 11.3	
	comp=E,421nm,20.4s,baz=325,slow=37						
ZAA0	**Zalesovo Array**	**29.95**	**272**	*e*P	**P**	**16 39 04.1**	**-0.5**
	comp=E,5.8nm,0.9s						
ZALV	**Zalesovo Beam**	**29.95**	**272**	*e*P	**P**	**16 39 02.6**	**-1.9**
ZALV				PcP	**PcP**	**16 42 06.0**	**-0.6**
ZALV	**Zalesovo Beam**	**29.95**	**272**	P	**P**	**16 39 04.4**	**-0.2**
	comp=E,4.4nm,0.9s,baz=38,slow=7.5,SNR=15						
ZALV				PcP	**PcP**	**16 42 06.0**	**-0.6**
	comp=E,1.1nm,0.7s,baz=1.9,slow=4.3,SNR=2.6						
ZALV				LR	LR	16 51 39.2	
	comp=E,184nm,19.7s,baz=70,slow=38						
BJT	**Baijiatuau**	**31.19**	**221**	*e*P	**P**	**16 39 15.1**	**-0.6**
	comp=E,7.4nm,0.8s						
MJAR	**Matsushiro Arr**	**31.23**	**187**	LR	LR	16 52 56.1	
	comp=E,114nm,18.4s,baz=0.0,slow=38						
KS01	**Wonju Array Si**	**31.29**	**203**	*e*P	**P**	**16 39 15.2**	**-1.3**
KSRS	**Korea Array**	**31.31**	**203**	P	**P**	**16 39 14.3**	**-2.4**
	comp=E,3.1nm,0.9s,baz=359,slow=9.0,SNR=5.7						
KSRS				LR	LR	16 52 25.2	
	comp=E,190nm,19.6s,baz=19,slow=37						
KSAR	**Wonju Array Be**	**31.32**	**203**	P	**P**	**16 39 14.3**	**-2.5**
KSAR	**Wonju Array Be**	**31.32**	**203**	P	**P**	**16 39 14.3**	**-2.5**
HHC	**Hu-ho-hao-te**	**31.65**	**228**	*e*P	**P**	**16 39 20.6**	**+0.8**
HHC				S	**S**	**16 44 26.3**	**-2.4**
HHC				pmax	pmax		
	comp=E,13nm,0.9s						
HHC				pmax	pmax		
	comp=E,190nm,5.4s						
HHC				LR	LR		
	comp=E,1μm,10.0s						
HHC				LR	LR		
	comp=E,360nm,6.7s						
HHC				LR	LR		
	comp=E,1μm,9.2s						
DGZ	**Jazzator, Alta**	**32.30**	**264**	*d i*P	**P**	**16 39 25.7**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RES	**Resolute Bay**	**33.32**	**24**	*e*P	**P**	**16 39 34.0**	**0.0**
	comp=Z,9.4nm,0.9s						
RES	**Resolute Bay**	**33.32**	**24**	*e*P	**P**	**16 39 34.0**	**0.0**
RES				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RES	**Resolute Bay**	**33.32**	**24**	P	**P**	**16 39 33.8**	**-0.2**
	comp=Z,9.6nm,1.0s,baz=301,slow=5.9,SNR=20						
KURK	**Kurchatov**	**34.85**	**274**	*e*P	**P**	**16 39 47.3**	**-0.2**
	comp=Z,12nm,1.0s						
KURK	**Kurchatov**	**34.85**	**274**	*ce*P	**P**	**16 39 47.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,23nm,1.3s						
DAG	**Danmarks Havn**	**35.35**	**353**	*i* P	**P**	**16 39 50.7**	**-0.8**
	comp=Z,6.9nm,0.8s						
DAG	**Danmarks Havn**	**35.35**	**353**	*i* P	**P**	**16 39 50.7**	**-0.8**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVA0	**Borovoye Array**	**36.13**	**283**	*i* P	**P**	**16 39 58.0**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	**Borovoye**	**36.14**	**283**	*e*P	**P**	**16 39 58.1**	**-0.5**
	comp=Z,12nm,0.9s						
BRVK	**Borovoye**	**36.14**	**283**	*ce*P	**P**	**16 39 58.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,18nm,1.3s						
ARCES	**ARCESS Array B**	**36.49**	**328**	P	**P**	**16 40 00.3**	**-1.2**
	comp=Z,5.2nm,1.0s,baz=35,slow=9.3,SNR=9.2						
ARCES				PcP	**PcP**	**16 42 24.7**	**0.0**
	comp=Z,2.8nm,0.9s,baz=26,slow=5.8,SNR=5.9						
ARCES				LR	LR	16 58 56.8	
	comp=Z,130nm,19.6s,baz=314,slow=43						
GTA	**Gaotai**	**36.63**	**241**	⇑P	**P**	**16 40 03.8**	**+0.8**
GTA				pP	pP	16 40 08.4	+1.9
GTA				sP	sP	16 40 11.0	+3.1
GTA				PcP	**PcP**	**16 42 25.5**	**-0.3**
GTA				S	**S**	**16 45 45.0**	**-0.7**
GTA				sS	sS	16 45 52.9	+1.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,57nm,5.2s						
GTA				LR	LR		
	comp=Z,400nm,14.0s						
GTA				LR	LR		
	comp=Z,490nm,15.9s						
GTA				LR	LR		
	comp=Z,620nm,13.7s						
MK31	**Makanchi Array**	**36.65**	**266**	*e*P	**P**	**16 40 02.1**	**-0.9**
MK31	**Makanchi Array**	**36.65**	**266**	*i* P	**P**	**16 40 02.4**	**-0.6**
MKAR	**Makanchi Array**	**36.65**	**266**	*e*P	**P**	**16 40 02.1**	**-0.8**
	comp=Z,91nm,0.8s						
MKAR	**Makanchi Array**	**36.65**	**266**	*i* P	**P**	**16 40 02.5**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,14nm,0.7s						
MKAR	**Makanchi Array**	**36.65**	**266**	P	**P**	**16 40 02.2**	**-0.8**
	comp=Z,14nm,0.7s,baz=47,slow=7.1,SNR=184						
MKAR				LR	LR	16 57 08.5	
	comp=Z,63nm,18.4s,baz=17,slow=40						
MK01	**Makanchi Array**	**36.66**	**266**	*e*P	**P**	**16 40 01.8**	**-1.3**
SVE	**Sverdlovsk**	**36.69**	**294**	*e*P	**P**	**16 40 04.3**	**+1.1**
MAKZ	**Makanchi**	**36.75**	**267**	*e*P	**P**	**16 40 02.9**	**-1.0**
	comp=Z,17nm,1.0s						
MAKZ	**Makanchi**	**36.75**	**267**	*e*P	**P**	**16 40 02.9**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,17nm,1.0s						
WMQ	**Urumqi**	**37.10**	**258**	P	**P**	**16 40 08.3**	**+1.3**
WMQ				pP	pP	16 40 12.4	+2.0
WMQ				sP	sP	16 40 16.6	+4.8
WMQ				pmax	pmax		
	comp=Z,52nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,370nm,4.5s						
WMQ				LR	LR		
	comp=Z,300nm,22.7s						
WMQ				LR	LR		
	comp=Z,490nm,26.5s						
WMQ				LR	LR		
	comp=Z,370nm,16.5s						
WMQ	**Urumqi**	**37.10**	**258**	*e*P	**P**	**16 40 06.9**	**-0.1**
WMQ	**Urumqi**	**37.10**	**258**	*e*P	**P**	**16 40 06.9**	**-0.1**
ARU	**Arti**	**37.72**	**295**	*e*P	**P**	**16 40 12.1**	**+0.1**
	comp=Z,6.3nm,1.0s						
ARU	**Arti**	**37.72**	**295**	*c i*P	**P**	**16 40 11.9**	**-0.1**
ARU						16 41 34.8	
ARU				S	**S**	**16 46 02.3**	**+0.6**
ARU				SS	**SnSn**	**16 48 42.4**	**+1.6**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ARU				MLR	MLR		
	comp=Z,147nm,15.0s						
PRGR	**Permogore**	**37.80**	**309**	*e*P	P	16 40 07.4	-5.2
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TMCR	**Tamitsa**	**37.92**	**316**	*e*P	**P**	**16 40 13.0**	**-0.6**
TMCR				pmax	pmax		
	comp=Z,24nm,1.3s						
NJ2	**Nanjing**	**38.20**	**213**	*e*P	**P**	**16 40 16.0**	**-0.2**
NJ2				S	**S**	**16 46 12.3**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,12nm,1.0s						
NJ2				LR	LR		
	comp=Z,1μm,9.8s						
NJ2				LR	LR		
	comp=Z,250nm,15.4s						
NJ2				LR	LR		
	comp=Z,550nm,10.3s						
LZH	**Lanzhou**	**38.35**	**234**	⇑P	**P**	**16 40 19.4**	**+1.7**
LZH				pP	sP	16 40 24.0	+1.5
LZH				sP	pP	16 40 26.6	+5.5
LZH				PP	**PnPn**	**16 41 50.0**	**+3.1**
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,7.0s						
LZH				LR	LR		
	comp=Z,760nm,12.5s						
LZH				LR	LR		
	comp=Z,720nm,13.6s						
LZH				LR	LR		
	comp=Z,880nm,17.9s						
MSF	**Maaselka**	**38.73**	**323**	P	**P**	**16 40 21.0**	**+0.7**
MSF				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	**Xi'an**	**38.75**	**227**	P	**P**	**16 40 21.6**	**+0.7**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				LR	LR		
	comp=Z,720nm,10.1s						
XAN				LR	LR		
	comp=Z,540nm,9.1s						
XAN				LR	LR		
	comp=Z,720nm,10.0s						
XAN	**Xi'an**	**38.75**	**227**	*e*P	**P**	**16 40 20.4**	**-0.5**
	comp=Z,98nm,1.4s						
XAN	**Xi'an**	**38.75**	**227**	*e*P	**P**	**16 40 20.4**	**-0.5**
XAN				pmax	pmax		
	comp=Z,98nm,1.4s						
YKW3	**Yellowknife Ar**	**38.84**	**46**	*e*P	**P**	**16 40 24.0**	**+2.7**
	comp=Z,10.0nm,1.0s						
YKA	**Yellowknife Ar**	**38.90**	**46**	P	**P**	**16 40 22.1**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=321,slow=8.3,SNR=45						
YKA				PcP	**PcP**	**16 42 33.7**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=306,slow=2.2,SNR=2.8						
YKA				LR	LR	16 59 02.3	
	comp=Z,9.8nm,19.8s,baz=300,slow=40						
YKB5	**Yellowknife Ar**	**38.90**	**46**	*e*P	**P**	**16 40 24.0**	**+2.2**
OTUK	**Ortayu**	**39.25**	**277**	P	**P**	**16 40 23.0**	**-2.0**
OTUK				pmax	pmax		
	comp=Z,24nm,1.4s						
SUMG	**Summit**	**40.04**	**0**	*i* P	**P**	**16 40 33.5**	**+1.8**
SUMG	**Summit**	**40.04**	**0**	*e*P	**P**	**16 40 33.5**	**+1.8**
KLMR	**Klimovskoe**	**40.20**	**312**	*e*P	**P**	**16 40 30.5**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
KLMR	**Klimovskoe**	**40.20**	**312**	*e*P	**P**	**16 40 30.5**	**-2.1**
KLMR				AMP		16 40 33.5	
	comp=Z,12nm,1.2s						
PDGK	**Podgornoye**	**40.63**	**266**	P	**P**	**16 40 34.9**	**-1.7**
PDGK				pmax	pmax		
	comp=Z,12nm,0.9s						
JOF	**Joensuu**	**40.68**	**319**	P	**P**	**16 40 36.8**	**+0.2**
JOF				pmax	pmax		
	comp=Z,23nm,1.0s						
SUF	**Sumiainen**	**42.11**	**322**	P	**P**	**16 40 49.3**	**+1.0**
SUF				pmax	pmax		
	comp=Z,16nm,1.0s						
TKM2	**Tokmak 2**	**42.47**	**269**	P	**P**	**16 40 52.7**	**+0.9**

	SNR=7.7						
USP	Ospenovka	42.59	271	P	P	16 40 53.8	+1.2
	SNR=12						
VAF	Ylistaro	42.62	324	P	P	16 40 53.0	+0.5
VAF				pmax	pmax		
	comp=Z,16nm,2.4s						
CHMS	Chumysh	42.73	270	P	P	16 40 54.8	+1.2
	SNR=20						
AKTO	Aktyubinsk	42.76	290	P	P	16 40 53.1	-0.7
FRU	Bishkek	42.92	270	⇑*i*P	P	16 40 56.5	+1.3
FRU				*e*		16 41 01.0	
FRU				*e*		16 42 38.0	
FRU				pmax	pmax		
	comp=Z,49nm,1.8s						
KBK	Karagaybulak	42.94	270	P	P	16 40 57.2	+1.6
	SNR=17						
AB31	Akbulak array	43.04	288	P	P	16 40 52.6	-3.4
ABKAR	Akbulak array	43.04	288	*e*P	P	16 40 55.9	-0.1
AAK	Ala-Archa	43.13	270	P	P	16 40 58.2	+1.1
	SNR=17						
AAK	Ala-Archa	43.13	270	*e*P	P	16 40 58.4	+1.3
	comp=Z,20nm,0.8s						
AAK	Ala-Archa	43.13	270	*ce*P	P	16 40 58.2	+1.1
AAK				pmax	pmax		
	comp=Z,47nm,1.7s						
CD2	Chengdu	43.18	232	*e*P	P	16 40 56.5	-0.9
CD2				S	S	16 47 22.5	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
CD2				LR	LR		
	comp=Z,660nm,8.0s						
CD2				LR	LR		
	comp=Z,890nm,9.4s						
FINES	FINESS Array B	43.23	321	*i* P	P	16 40 57.0	-0.4
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FINES	FINESS Array B	43.23	321	P	P	16 40 56.6	-0.8
	comp=Z,5.1nm,0.7s,baz=32,slow=11,SNR=18						
FINES				PcP	PcP	16 42 44.4	-1.9
	comp=Z,1.8nm,0.7s,baz=100,slow=7.2,SNR=3.8						
KZA	Kyzart	43.32	269	P	P	16 41 00.2	+1.3
	SNR=12						
EKS2	Erkin-Say	43.39	271	P	P	16 41 00.2	+1.1
	SNR=9.3						
UCH	Uchtor	43.48	270	P	P	16 41 01.5	+1.3
	SNR=6.7						
NRN	Naryn	43.59	268	*e*P	P	16 41 02.2	+1.2
	comp=Z,12nm,0.8s						
NRN	Naryn	43.59	268	*e*P	P	16 41 02.2	+1.2
NRN				pmax	pmax		
	comp=Z,12nm,0.8s						
AML	Almayashu	43.87	271	P	P	16 41 04.2	+0.9
	SNR=17						
MNAS	Manas	44.02	272	P	P	16 41 05.4	+1.2
MNAS				pmax	pmax		
	comp=Z,30nm,0.9s						
KK31	Karatay Array	44.26	274	*e*P	P	16 41 06.7	+0.7
KK31	Karatay Array	44.26	274	*e*P	P	16 41 06.7	+0.7
KKAR	Karatay Array	44.26	274	*e*P	P	16 41 06.7	+0.7
KKAR	Karatay Array	44.26	274	*e*P	P	16 41 06.7	+0.7
KSH	Kashi	45.26	267	P	P	16 41 19.0	+4.9
KSH				pP	sP	16 41 23.8	+4.8
KSH				PP	PP	16 43 05.5	+5.9
KSH				S	S	16 47 58.5	+4.5
KSH				sS	sS	16 48 08.0	+8.2
KSH				SS	SS	16 51 13.3	-2.9
KSH				pmax	pmax		
	comp=Z,17nm,0.8s						
KSH				pmax	pmax		
	comp=Z,430nm,4.3s						
KSH				LR	LR		
	comp=Z,340nm,5.0s						
KSH				LR	LR		
	comp=Z,250nm,6.9s						
KSH				LR	LR		
	comp=Z,230nm,10.3s						
VSU	Vasula	45.67	319	*ce*P	P	16 41 17.7	+0.8
VSU				pmax	pmax		
	comp=Z,47nm,1.3s						
SFK	Sufi-Kurgan	45.77	269	*i* P	P	16 41 18.3	0.0
SFK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	Obninsk	45.88	310	*ce*P	P	16 41 16.4	-2.2
OBN				*e*		16 43 06.1	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,101nm,16.0s						
GYA	Guiyang	46.53	226	⇑*i*P	P	16 41 24.1	-0.1
GYA				PP	PP	16 43 15.0	+1.6
GYA				S	S	16 48 13.4	+0.9
GYA				SS	SS	16 51 31.3	-6.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=Z,450nm,16.2s						
GYA				LR	LR		
	comp=Z,420nm,16.7s						
GYA				LR	LR		
	comp=Z,400nm,16.2s						
BTK	Batken	46.76	272	*e*P	P	16 41 21.4	-4.5
	comp=Z,28nm,0.9s						
BTK	Batken	46.76	272	*e*P	P	16 41 21.4	-4.5
BTK				pmax	pmax		
	comp=Z,28nm,0.9s						
NB2	NORSAR Subarra	46.81	330	P	P	16 41 24.9	-1.0
	comp=Z,2.4nm,0.7s,baz=25,slow=7.9						
NOA	NORSAR Array B	46.81	330	P	P	16 41 25.0	-1.0
NOA	NORSAR Array B	46.81	330	P	P	16 41 25.0	-1.0
	comp=Z,5.7nm,0.9s,baz=24,slow=7.8,SNR=12						
NORES	NORESS Array B	47.03	329	P	P	16 41 30.7	+3.1
FRB	Frobisher Bay	47.05	18	P	P	16 41 26.7	-0.9
FCC	Fort Churchill	47.29	36	*e*P	P	16 41 28.9	-0.7
	comp=Z,13nm,1.0s						
FCC	Fort Churchill	47.29	36	*e*P	P	16 41 28.9	-0.7
FCC				pmax	pmax		
	comp=Z,13nm,1.0s						
LPSR	Galich'ya Gora	47.34	306	*e*P	P	16 41 28.4	-1.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRH	Novokhopyorsk	47.66	303	*e*P	P	16 41 31.1	-1.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA	Lhasa	48.40	245	*e*P	P	16 41 36.5	-2.6
	comp=Z,28nm,1.3s						
LSA	Lhasa	48.40	245	*e*P	P	16 41 36.6	-2.6
LSA				pmax	pmax		
	comp=Z,28nm,1.3s						
VSR	Storozhevoye	48.46	305	*i* P	P	16 41 37.8	-1.0
VSR				pmax	pmax		
	comp=Z,49nm,1.4s						
CHGR	Chuyangaron	48.61	272	*e*P	P	16 41 41.0	+0.8
	comp=Z,58nm,0.7s						
KMI	Kunming	48.91	230	P	P	16 41 42.8	0.0
KMI				pP	pP	16 41 47.3	+0.9
KMI				sP	sP	16 41 49.1	+1.4
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
KMI				pmax	pmax		
	comp=Z,150nm,3.3s						
KMI				LR	LR		
	comp=Z,330nm,13.1s						
KMI				LR	LR		
	comp=Z,370nm,12.8s						
KMI				LR	LR		
	comp=Z,500nm,12.8s						
FFC	Flin Flon	48.97	44	*e*P	P	16 41 42.3	-0.4
	comp=Z,23nm,0.8s						
FFC	Flin Flon	48.97	44	*i* P	P	16 41 42.5	-0.2
SUW	Suwalki	50.54	318	*e*P	P	16 41 53.0	-1.6
	comp=Z,36nm,1.1s						
SUW	Suwalki	50.54	318	*e*P	P	16 41 53.0	-1.6
SUW				pmax	pmax		
	comp=Z,36nm,1.1s						
NIL	Nilore	51.45	265	*e*P	P	16 42 00.5	-1.3
	comp=Z,28nm,1.0s						
NIL	Nilore	51.45	265	*e*P	P	16 42 00.5	-1.3
NIL				pmax	pmax		
	comp=Z,28nm,1.0s						
AKASG	Malin Array Be	51.89	312	P	P	16 42 03.8	-0.9
	comp=Z,6.6nm,0.8s,baz=28,slow=8.4,SNR=18						
AKASG				PcP	PcP	16 43 16.3	-1.0
	comp=Z,0.5nm,0.6s,baz=26,slow=6.8,SNR=2.4						
AKASG				LR	LR	17 06 33.4	
	comp=Z,60nm,18.4s,baz=290,slow=39						
AKBB	Malin Array Si	51.89	312	*e*P	P	16 42 03.9	-0.9
	comp=Z,10nm,0.9s						
AKBB	Malin Array Si	51.89	312	*e*P	P	16 42 03.9	-0.9
AKBB				pmax	pmax		
	comp=Z,11nm,0.9s						
GUN	Gumba	51.90	250	*e*P	P	16 42 06.3	+0.7
	comp=Z,132nm,1.0s						
KIEV	Kiev	51.90	312	*e*P	P	16 42 04.0	-0.8
	comp=Z,9.4nm,0.9s						
KIEV	Kiev	51.90	312	⇓*i*P	P	16 42 04.0	-0.8
KIEV	Kiev	51.90	312	*i* P	P	16 42 03.9	-0.9
KIEV				pmax	pmax		
	comp=Z,14nm,1.1s						
AK11	Malin Array Si	51.92	312	*e*P	P	16 42 02.8	-2.3
SHL	Shillong	51.95	242	*e*P	P	16 42 08.5	+2.8
JIRN	Jiri	52.01	249	*e*P	P	16 42 07.1	+0.6
	comp=Z,177nm,1.1s						
KKN	Kakani	52.22	250	*e*P	P	16 42 08.5	+0.7
	comp=Z,142nm,0.9s						
DANN	Dangsing	52.27	252	*e*P	P	16 42 09.0	+0.8
	comp=Z,119nm,1.0s						
KBL	Kabul	52.27	270	P	P	16 42 07.8	-0.3
PKIN	Phulchoki	52.38	250	*e*P	P	16 42 09.2	+0.2
	comp=Z,64nm,1.2s						
PKI	Pulchoki	52.38	250	*e*P	P	16 42 09.7	+0.6
	comp=Z,54nm,0.9s						
DMN	Daman	52.45	250	*e*P	P	16 42 10.3	+0.7
	comp=Z,122nm,1.2s						
RAMN	Ramite	52.52	248	*e*P	P	16 42 10.1	+0.1
	comp=Z,89nm,1.1s						
PYUN	Piuthan	52.77	253	*e*P	P	16 42 12.1	+0.2
	comp=Z,84nm,1.0s						
KOLN	Koldanda	52.85	252	*e*P	P	16 42 13.2	+0.7
	comp=Z,121nm,1.0s						
GEYT	Alibeck	53.44	282	P	P	16 42 16.3	-0.2
	comp=Z,11nm,0.9s,baz=351,slow=4.5,SNR=19						
GEYT				LR	LR	17 06 24.5	
	comp=Z,109nm,19.3s,baz=5.0,slow=38						
GYA0B	ALIBECK ARRAY	53.44	282	*e*P	P	16 42 16.9	+0.4
	comp=Z,18nm,1.0s						
KIV	Kislovodsk	53.67	298	P	P	16 42 15.1	-3.2
	comp=Z,22nm,1.1s						
KIV	Kislovodsk	53.67	298	⇑*i*P	P	16 42 18.9	+0.7
KIV	Kislovodsk	53.67	298	*e*P	P	16 42 19.0	+0.7
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
NCK	Nalchik	53.77	297	*i* P	P	16 42 18.3	-0.5
NCK				pmax	pmax		
	comp=Z,11nm,0.9s						
KBZ	Khabaz	53.80	298	P	P	16 42 19.1	+0.1
	comp=Z,16nm,1.0s,baz=48,slow=7.2,SNR=14						
KBZ				LR	LR	17 08 07.0	
	comp=Z,81nm,18.4s,baz=320,slow=39						
NEY	Neytrino	54.29	297	*i* P	P	16 42 24.1	+1.3
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZEI	Tsey	54.29	296	*e*P	P	16 42 21.1	-1.8
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MCMT	McKenzie Canyo	54.57	58	*e*P	P	16 42 24.8	-0.2
ULM	Lac du Bonnet	54.61	42	P	P	16 42 23.8	-1.1
	comp=Z,3.5nm,0.7s,baz=337,slow=10,SNR=7.7						
ULM				LR	LR	17 08 40.6	
	comp=Z,83nm,19.6s,baz=350,slow=39						
KWP	Kalwaria Pacla	54.65	316	*e*P	P	16 42 25.7	+0.6
KWP	Kalwaria Pacla	54.65	316	*e*P	P	16 42 25.7	+0.6
OJC	Ojcow	54.86	319	*e*P	P	16 42 26.8	+0.2
OJC	Ojcow	54.86	319	*e*P	P	16 42 26.8	+0.2
KSP	Ksiaz	55.15	321	*e*P	P	16 42 28.4	-0.3
KSP	Ksiaz	55.15	321	*e*P	P	16 42 28.4	-0.3
YHH	Holmes Hill	55.25	56	*e*P	P	16 42 29.8	-0.1
	comp=Z,10nm,1.0s						
MILM	Milestii Mici	55.41	310	⇑*i*P	P	16 42 29.8	-0.8
RLMT	Red Lodge	55.45	55	*e*P	P	16 42 31.9	+0.7
	comp=Z,21nm,0.8s						
NIE	Niedzica	55.47	318	*e*P	P	16 42 31.7	+0.6
NIE	Niedzica	55.47	318	*e*P	P	16 42 31.7	+0.6
CLL	Collm	55.48	324	*e*P	P	16 42 29.0	-2.1
	comp=Z,18nm,0.9s						
CLL	Collm	55.48	324	⇓*i*P	P	16 42 30.7	-0.4
	comp=Z,21nm,0.9s						
CLL				*i* pP	pP	16 42 35.2	+0.6
CLL				*e*PcP	PcP	16 43 31.0	0.0
CLL				*e*S	S	16 50 18.0	+2.5
CLL				*e*		16 54 56.0	
CLL				*e*(SSS)		16 56 06.0	
CLL				*e*		16 57 00.0	
CLL	Collm	55.48	324	⇓*i*P	P	16 42 30.7	-0.4
CLL				*i*		16 42 35.2	
CLL				*e*		16 43 31.0	
CLL				*e*S	S	16 50 29.0	+13
CLL				pmax	pmax		
	comp=Z,21nm,0.9s						
LKWY	Lake	55.59	56	*e*P	P	16 42 31.4	-0.9
	comp=Z,18nm,0.9s						
LKWY	Lake	55.59	56	*e*P	P	16 42 31.4	-0.9
LKWY				pmax	pmax		
	comp=Z,18nm,0.9s						
DPC	Dobruska-Polom	55.60	321	*e*P	P	16 42 32.0	0.0
DPC	Dobruska-Polom	55.60	321	*e*P	P	16 42 32.0	0.0
BRG	Berggiesshubel	55.67	323	*e*P	P	16 42 31.9	-0.6
	comp=Z,7.2nm,1.1s						
	comp=N,183nm,15.2s						
	comp=E,194nm,10.4s						
	comp=Z,300nm,15.4s						
BRG	Berggiesshubel	55.67	323	*e*P	P	16 42 31.9	-0.6
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,183nm,15.2s						
BRG				MLR	MLR		
	comp=E,194nm,10.4s						
BRG				MLR	MLR		
	comp=Z,300nm,15.4s						
KRLC	Kraliky	55.74	321	*e*P	P	16 42 33.2	+0.1
KRLC	Kraliky	55.74	321	*e*P	P	16 42 33.2	+0.1
BUR08	Bucovina Ar. S	55.78	313	*e*P	P	16 42 31.8	-1.7
BUR04	Bucovina Ar. S	55.80	313	*e*P	P	16 42 31.9	-1.8
BURAR	Bucovina Array	55.81	313	⇑*i*P	P	16 42 33.1	-0.5
BURAR	Bucovina Array	55.81	313	P	P	16 42 33.1	-0.5
MORC	Moravsky Berou	55.84	320	⇑*i*P	P	16 42 33.6	-0.2
MORC	Moravsky Berou	55.84	320	P	P	16 42 33.5	-0.2
MORC	Moravsky Berou	55.84	320	*e*P	P	16 42 33.3	-0.4
PVCC	Panska Ves	55.85	322	*e*P	P	16 42 34.6	+0.9
PVCC	Panska Ves	55.85	322	*e*P	P	16 42 34.6	+0.9
SCHQ	Schefferville	55.93	20	P	P	16 42 32.8	-1.5
	comp=Z,6.7nm,0.8s,baz=358,slow=11,SNR=6.4						
SCHQ				LR	LR	17 07 33.8	
	comp=Z,100nm,19.8s,baz=330,slow=37						
LANS	Liptovska Anna	55.93	318	*e*P	P	16 42 35.3	+0.9
LANS	Liptovska Anna	55.93	318	*e*P	P	16 42 35.3	+0.9
CMMT	Chiang Mai	55.99	232	P	P	16 42 35.3	+0.2
	comp=Z,9.1nm,1.2s						
CMMT	Chiang Mai	55.99	232	P	P	16 42 35.3	+0.2
CHTO	Chiang Mai	55.99	232	*e*P	P	16 42 33.4	-1.7
	comp=Z,11nm,1.1s						
CHTO	Chiang Mai	55.99	232	*e*P	P	16 42 33.4	-1.7
CHTO				pmax	pmax		
	comp=Z,11nm,1.1s						
CHTO	Chiang Mai	55.99	232	P	P	16 42 35.4	+0.3
	comp=Z,41nm,1.2s						
CHTO	Chiang Mai	55.99	232	P	P	16 42 35.4	+0.3
	comp=Z,41nm,1.2s						
TRPA	Tarpa	56.07	316	⇑*i*P	P	16 42 35.3	0.0
TRPA	Tarpa	56.07	316	*e*P	P	16 42 34.1	-1.2
BIZ	Bicaz	56.17	312	⇑*i*P	P	16 42 36.2	+0.1
SKNT	Sakolnakorn	56.28	226	P	P	16 42 41.6	+4.4
	comp=Z,11nm,1.9s						
CMAR	Chiang Mai Arr	56.32	232	P	P	16 42 36.6	-0.9
	comp=Z,3.1nm,0.9s,baz=4.0,slow=8.9,SNR=13						
CMAR				LR	LR	17 09 11.1	
	comp=Z,150nm,19.1s,baz=28,slow=39						
GNI	Garni	56.34	294	*i* P	P	16 42 36.8	-0.8
GNI				pmax	pmax		
	comp=Z,34nm,1.1s						
CM01	Chiang Mai Arr	56.35	232	*e*P	P	16 42 37.1	-0.6
PRU	Pruhonice	56.36	322	P	P	16 42 38.1	+0.7
TESR	Tescani	56.41	312	⇓*i*P	P	16 42 37.4	-0.4
VRAC	Vranov	56.50	320	⇑*i*P	P	16 42 38.3	-0.2
VRAC	Vranov	56.50	320	P	P	16 42 38.3	-0.2
VRAC	Vranov	56.50	320	*e*P	P	16 42 38.1	-0.4
UTTA	Uttaradit	56.52	230	P	P	16 42 39.7	+0.8
	comp=Z,8.1nm,0.9s,comp=Z,66nm						
UTTA	Uttaradit	56.52	230	P	P	16 42 39.7	+0.8
ARCR	ARCALIA	56.53	314	⇑*i*P	P	16 42 39.7	+1.0
NKC	Novy Kostel	56.61	324	*e*P	P	16 42 39.8	+0.6
NKC	Novy Kostel	56.61	324	*e*P	P	16 42 39.8	+0.6
VYHS	Vyhne	56.70	318	*e*P	P	16 42 40.1	+0.2
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VYHS	Vyhne	56.70	318	*e*P	P	16 42 40.1	+0.2
KRUC	Moravsky	56.78	320	*e*P	P	16 42 40.2	-0.2
PSZ	Piszkesteto	56.96	317	⇓*i*P	P	16 42 42.5	+0.7
PSZ	Piszkesteto	56.96	317	P	P	16 42 42.5	+0.7
PSZ	Piszkesteto	56.96	317	⇑*e*P	P	16 42 41.1	-0.7
VRI	Vrincioaia	56.97	311	⇑*i*P	P	16 42 42.4	+0.6
VRI	Vrincioaia	56.97	311	P	P	16 42 42.4	+0.6
PLOR	Plostina	57.01	311	⇑*i*P	P	16 42 42.6	+0.5
PLOR	Plostina	57.01	311	P	P	16 42 42.6	+0.5
OZUR		57.03	312	⇑*i*P	P	16 42 42.6	+0.3
SUKH	Sukhothai	57.04	231	P	P	16 42 47.3	+4.7
	comp=Z,7.1nm,1.0s						
SUKH	Sukhothai	57.04	231	P	P	16 42 47.3	+4.7
CFR	Carcaliu	57.19	310	⇑*i*P	P	16 42 43.5	+0.2
CFR	Carcaliu	57.19	310	P	P	16 42 43.5	+0.2
MODS	Modra-Piesok	57.20	320	*e*P	P	16 42 43.5	+0.1
MODS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MODS	Modra-Piesok	57.20	320	*e*P	P	16 42 43.5	+0.1
DRGR		57.25	315	⇑*i*P	P	16 42 43.7	-0.2
DOPR	Dopca	57.26	312	⇑*i*P	P	16 42 44.8	+0.9
HVU	Hansel Valley	57.32	59	*e*P	P	16 42 45.4	+0.8
	comp=Z,10nm,0.8s						
HVU	Hansel Valley	57.32	59	*e*P	P	16 42 45.4	+0.8
HVU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KHC	Kasperske Hory	57.39	323	*e*P	P	16 42 44.9	+0.2
KHC	Kasperske Hory	57.39	323	*e*P	P	16 42 44.9	+0.2
BW06	Boulder Array	57.47	56	*e*P	P	16 42 46.0	+0.3
	comp=Z,7.1nm,0.8s						
PD31	Pinedale Array	57.47	56	*e*P	P	16 42 46.0	+0.3
PDAR	Pinedale Array	57.47	56	*e*P	P	16 42 45.3	-0.4
PDAR	Pinedale Array	57.47	56	P	P	16 42 45.5	-0.2
	comp=Z,4.9nm,0.7s,baz=9.6,slow=3.1,SNR=23						
PDAR				LR	LR	17 10 42.6	
	comp=Z,134nm,18.2s,baz=338,slow=39						
PBKT	Sadao Pong	57.51	229	P	P	16 42 46.5	+0.6
	comp=Z,14nm,1.1s						
WET	Wettzell	57.53	323	P	P	16 42 48.0	+2.2
MLR	Muntele Rosu	57.54	312	⇑*i*P	P	16 42 47.3	+1.3
MLR	Muntele Rosu	57.54	312	P	P	16 42 47.3	+1.3
GERES	GERESS Array B	57.62	322	P	P	16 42 46.0	-0.5
	comp=Z,4.5nm,0.8s,baz=28,slow=6.0,SNR=28						
GERES				LR	LR	17 11 01.9	
	comp=Z,77nm,18.7s,baz=28,slow=40						
MEM	Membach	57.63	329	⇑P	P	16 42 46.9	+0.6
	comp=Z,14nm,1.1s						
GEA0	GERESS Array S	57.63	322	*e*P	P	16 42 46.0	-0.5
TLB	Topalu	57.76	310	⇑*i*P	P	16 42 47.7	+0.4
TLB	Topalu	57.76	310	P	P	16 42 47.7	+0.4
TIRR	Tirgusor	57.77	309	⇑*i*P	P	16 42 47.2	-0.2
TIRR	Tirgusor	57.77	309	P	P	16 42 47.2	-0.2
VOIR		57.84	312	⇑*i*P	P	16 42 48.2	+0.1
VOIR		57.84	312	P	P	16 42 48.1	0.0
BCLA	Clavier	57.95	329	⇓P	P	16 42 48.6	0.0
	comp=Z,14nm,1.2s						
KVN	Kaiserville	57.96	65	*e*P	P	16 42 50.5	+1.4
	comp=Z,7.1nm,0.9s						
KVN	Kaiserville	57.96	65	*e*P	P	16 42 50.5	+1.4
KVN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CONA	Conrad Observa	57.97	320	*e*pP	P	16 42 49.5	+0.6
	comp=Z,11nm,1.5s						
WAKR	Walker	57.99	66	*e*P	P	16 42 50.7	+1.4
	comp=Z,4.0nm,0.8s						
SIRR	Siria	58.02	315	⇑*i*P	P	16 42 49.4	+0.2
ARR	Arges	58.02	313	⇓*i*P	P	16 42 50.4	+1.1
DOU	Dourbes	58.39	329	⇓P	P	16 42 51.5	-0.2
MOA	Molln	58.42	322	*e*pP	P	16 42 52.3	+0.3
	comp=Z,5.2nm,0.9s						
NV01	Mina Array Sit	58.45	65	*e*P	P	16 42 53.3	+0.7
NVAR	Mina Array Bea	58.45	65	P	P	16 42 53.3	+0.7
	comp=Z,5.2nm,0.9s,baz=321,slow=6.1,SNR=20						
NVAR				LR	LR	17 09 03.0	
	comp=Z,93nm,21.4s,baz=340,slow=37						
UMPA	Umpang Tak	58.48	231	P	P	16 42 59.0	+6.3
	comp=Z,5.2nm,1.0s						
UMPA	Umpang Tak	58.48	231	P	P	16 42 59.0	+6.3
BAIF	Baives	58.50	330	*e*P	P	16 42 51.9	-0.6
BAIF				pmax	pmax		
	comp=Z,21nm,1.3s						
GZR	Gura Zlata	58.52	314	⇑*i*P	P	16 42 52.5	-0.3
GZR	Gura Zlata	58.52	314	P	P	16 42 52.5	-0.3
BZS	Buzias	58.63	315	⇑*i*P	P	16 42 53.0	-0.5
BZS	Buzias	58.63	315	P	P	16 42 52.9	-0.5
ARSA	Arzberg	58.68	320	*i* pP	P	16 42 53.7	-0.2
	comp=Z,4.4nm,0.9s						
MORH	Mrgy, Hungar	58.86	318	*e*P	P	16 42 56.0	+1.0
UTHA	Uthaitani	58.91	230	P	P	16 42 57.4	+1.7
HERR	Herculane	59.09	314	⇑*i*P	P	16 42 56.3	-0.4
NLU	North Lily Min	59.19	60	*e*P	P	16 42 59.0	+1.3
	comp=Z,12nm,0.9s						
BFO	Black Forest	59.31	326	*i* P	P	16 42 58.4	+0.2
SOKA	Soboth	59.34	320	*e*pP	P	16 42 58.5	+0.1
	comp=Z,7.0nm,1.3s						
KBA	Koelnbreinsper	59.37	322	*i* pP	P	16 42 59.2	+0.4
	comp=Z,19nm,1.4s						
MDVR	Moldovita	59.37	315	⇑*i*P	P	16 42 58.0	-0.7
CDF	Champ du Feu	59.46	327	*e*P	P	16 42 58.6	-0.7
R11A	Troy Canyon, C	59.46	63	*e*P	P	16 43 00.4	+0.8
	comp=Z,9.0nm,1.0s						
WATA	Walderalm	59.53	323	*e*pP	P	16 43 00.4	+0.5
	comp=Z,5.9nm,0.6s						
RETA	Reutte	59.58	324	*i* pP	P	16 42 59.9	-0.1
	comp=Z,4.3nm,1.1s						
WTTA	Wattenberg	59.59	323	*i* pP	P	16 43 00.9	+0.6
	comp=Z,20nm,1.3s						
OBKA	Obir	59.61	321	*e*pP	P	16 43 01.2	+0.8
	comp=Z,15nm,0.8s						
MOTA	Moosalm	59.63	324	*i* pP	P	16 43 00.9	+0.3
	comp=Z,3.7nm,0.9s						
MYKA	Terra Mystica	59.72	322	*i* pP	P	16 43 00.8	-0.2
	comp=Z,1.5nm,0.4s						
SQTA	Sankt Quirin	59.73	324	*i* pP	P	16 43 01.6	+0.4
	comp=Z,9.8nm,1.0s						
ABTA	Abfaltersbach	59.87	322	*e*pP	P	16 43 02.1	-0.1
	comp=Z,4.7nm,0.9s						
PSUT	Pine Spring	59.88	62	*e*P	P	16 43 03.9	+1.4
	comp=Z,11nm,0.9s						
DAVA	Damuels	59.96	325	*i* pP	P	16 43 02.9	+0.1
	comp=Z,5.4nm,1.1s						
FETA	Feichten	60.02	324	*i* pP	P	16 43 03.6	+0.3
	comp=Z,5.3nm,1.1s						
HAU	Haudompre	60.03	327	P	P	16 43 02.3	-0.9
HAU				pmax	pmax		
	comp=Z,15nm,1.2s						
HINF	Hinteralfeld	60.11	327	*e*P	P	16 43 02.7	-1.0
HINF				pmax	pmax		
	comp=Z,13nm,1.1s						
ECSD	EROS Data Cent	60.43	46	*e*P	P	16 43 04.9	-1.0
	comp=Z,16nm,0.9s						
BRTR	Keskin Array B	60.45	303	P	P	16 43 06.0	-0.3
BRTR	Keskin Array B	60.45	303	P	P	16 43 06.0	-0.3
	comp=Z,3.5nm,0.8s,baz=45,slow=4.0,SNR=16						
BRTR				LR	LR	17 12 27.8	
	comp=Z,24nm,19.6s,baz=44,slow=39						
FLN	La Foliniere	60.61	333	*e*P	P	16 43 05.8	-1.3
FLN				pmax	pmax		
	comp=Z,18nm,1.3s						
MTPU	Mount Pierson	60.89	61	*e*P	P	16 43 11.2	+1.7
	comp=Z,4.5nm,0.8s						
VTS	Vitosha	60.98	313	⇑*i*P	P	16 43 09.6	-0.3
GRR	Gorron	61.04	333	*e*P	P	16 43 08.9	-1.1
GRR				pmax	pmax		
	comp=Z,28nm,1.4s						
LOR	Lormes	61.24	329	*e*P	P	16 43 10.2	-1.2
LOR				pmax	pmax		
	comp=Z,24nm,1.3s						
KNB	Kanab	61.60	62	*e*P	P	16 43 15.5	+1.3
	comp=Z,11nm,0.9s						
KNB	Kanab	61.60	62	*e*P	P	16 43 15.5	+1.3
KNB				pmax	pmax		
	comp=Z,11nm,0.9s						
AVF	Avril sur Loir	61.80	329	*e*P	P	16 43 14.0	-1.1
AVF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SMF	Signal de Mont	61.84	329	*e*P	P	16 43 15.1	-0.3

SMF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
QUIF	Quistinic	61.89	334	eP	P	16 43 14.9	-0.8
QUIF				pmax	pmax		
	comp=Z,167nm,2.4s						
LPL	La Plagne	62.33	326	eP	P	16 43 18.7	-0.3
LPL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LPG	La Plagne	62.34	326	eP	P	16 43 18.9	-0.3
LPG				pmax	pmax		
	comp=Z,21nm,1.1s						
TCF	Toulx Ste Croi	62.50	330	eP	P	16 43 18.9	-1.0
TCF				pmax	pmax		
	comp=Z,14nm,1.2s						
MFF	Saint Martin d	62.64	332	eP	P	16 43 20.1	-0.7
MFF				pmax	pmax		
	comp=Z,21nm,1.3s						
MBDF	Montbardon	63.07	326	eP	P	16 43 26.7	+2.8
MBDF				pmax	pmax		
	comp=Z,35nm,1.6s						
ORIF	Oris-en-Rattie	63.08	327	eP	P	16 43 23.3	-0.5
ORIF				pmax	pmax		
	comp=Z,11nm,0.9s						
SDCO	Great Sand Dun	63.32	55	eP	P	16 43 26.1	+0.3
	comp=Z,4.9nm,1.0s						
VIVF	Saint-Julien-l	63.39	328	eP	P	16 43 25.4	-0.4
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RJF	Les Rejaudoux	63.58	330	eP	P	16 43 25.6	-1.5
RJF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CAF	Calviac	63.84	330	eP	P	16 43 28.5	-0.3
CAF				pmax	pmax		
	comp=Z,17nm,1.1s						
LFF	La Frestale	64.08	331	eP	P	16 43 29.8	-0.5
LFF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HYB	Hyderabad	64.15	252	i P	P	16 43 30.0	-1.2
MTLF	Montolieu	65.33	329	eP	P	16 43 38.4	-0.1
MTLF				pmax	pmax		
	comp=Z,16nm,1.1s						
TIP	Timpagrande	65.93	316	⇑iP	P	16 43 42.7	+0.2
EPF	Esparros	66.00	330	eP	P	16 43 41.7	-1.2
EPF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
POLO	Lamas de Olo	69.00	336	eP	P	16 44 01.7	-0.3
	comp=Z,10nm,1.4s						
MVO	Moncorvo	69.09	336	eP	P	16 44 02.4	-0.1
	comp=Z,17nm,1.7s						
MTE	Manteigas	69.92	336	eP	P	16 44 07.5	-0.1
	comp=Z,16nm,1.3s						
ESDC	Sonseca Array	70.03	333	P	P	16 44 07.7	-0.6
	comp=Z,6.7nm,0.9s,baz=8.7,slow=6.2,SNR=24						
PCAS	Casmilo, Conde	70.40	337	eP	P	16 44 10.4	-0.1
	comp=Z,25nm,1.7s						
PCBR	Castelo Branco	70.45	336	eP	P	16 44 10.6	-0.2
	comp=Z,12nm,1.5s						
PMTG	Montargil	71.32	336	eP	P	16 44 15.4	-0.7
	comp=Z,11nm,1.5s						
TXAR	Lajitas Array	71.66	57	P	P	16 44 18.4	+0.1
	comp=Z,1.2nm,0.6s,baz=351,slow=6.3,SNR=8.0						
TXAR				LR	LR	17 18 11.2	
	comp=Z,91nm,19.4s,baz=0.0,slow=38						
PNCL	Nicolau / Gran	72.31	336	eP	P	16 44 21.6	-0.4
	comp=Z,20nm,1.6s						
PVAQ	Vaqueiros	72.87	335	eP	P	16 44 25.2	-0.2
	comp=Z,13nm,1.6s						
FITZ	Fitzroy Crossi	86.37	196	P	P	16 45 37.2	-1.4
	comp=Z,4.5nm,1.0s,baz=5.8,slow=7.5,SNR=4.8						
WRA	Warramunga Arr	87.52	188	P	P	16 45 42.6	-1.7
	comp=Z,1.1nm,0.8s,baz=2.9,slow=5.6,SNR=11						
ASAR	Alice Springs	91.24	188	P	P	16 46 00.0	-1.7
ASAR	Alice Springs	91.24	188	P	P	16 45 60.0	-1.7
	comp=Z,0.8nm,0.8s,baz=5.5,slow=5.0,SNR=15						
TORD	Torodi Ar. Bea	94.58	322	P	P	16 46 15.0	-2.4
	comp=Z,1.6nm,1.0s,baz=3.9,slow=2.2,SNR=7.2						
BDFB	Brasilia	127.61	13	PKP	PKPdf	16 52 00.1	-1.7
	comp=Z,1.0nm,0.3s,baz=53,slow=5.1,SNR=2.5						
CPUP	Villa Florida	136.97	26	PKP	PKPdf	16 52 16.1	-2.9
	comp=Z,1.1nm,0.6s,baz=28,slow=0.3,SNR=2.3						
NVL	N'lazarevskaya	162.58	237	ePKIKP	PKPdf	16 52 55.6	-1.1
NVL				pmax	pmax		
	comp=Z,3.0nm,0.7s						

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*NNC **15** 16:36:20.7±0.6, 42°.95N×78°.18E, h0^{km}±4^{km}, mb2.1, mpv2.4, Error ellipse: s-maj=7.6km s-min=2.2km az=178.0*

*SOME **15** 16:36:21.3, 42°.97N×78°.18E, h10^{km}*

KRNET 15 16:36:21.1±0.1, 42°.99N×78°.16E, h25^{km}, mb2.1, 14C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	0.19	69	P	Pb	16 36 25.7	-1.1
	12nm,0.1s						
SATY				S	Sb	16 36 28.8	-1.8
	107nm,0.1s						
SATY	Saty	0.19	69	⇑iP	Pb	16 36 25.7	-1.1
	11nm,0.1s						
SATY				eS	Sb	16 36 28.8	-1.8
	124nm,0.1s						
KURS	Kuram	0.50	1	P	Pb	16 36 31.7	+0.4
	1.0nm,0.1s						
KURS				S	Sb	16 36 38.9	+0.7
	5.8nm,0.2s						
KURS	Kuram	0.50	1	eP	Pb	16 36 31.7	+0.4
	baz=0.0						
KURS				eS	Sb	16 36 39.0	+0.8
	baz=0.0						
KURS	Kuram	0.50	1	eP	Pb	16 36 31.7	+0.4
	1.0nm,0.1s						
KURS				eS	Sb	16 36 38.9	+0.7
	5.8nm,0.2s						
PRZ	Przheval'sk	0.54	161	⇑eP	Pb	16 36 32.0	0.0
	baz=60						
PRZ				⇑iS	Sb	16 36 39.8	+0.4
	baz=60						
UZB	Uzynbulak	0.65	76	P	Pb	16 36 33.6	-0.3
	2.2nm,0.0s						
UZB				S	Sb	16 36 42.2	-0.3
	11nm,0.1s						
UZB	Uzynbulak	0.65	76	eP	Pb	16 36 33.6	-0.3
	baz=76						
UZB				eS	Sb	16 36 42.2	-0.4
	baz=76						
UZB	Uzynbulak	0.65	76	eP	Pb	16 36 33.6	-0.3
	2.2nm,0.0s						
UZB				eS	Sb	16 36 42.2	-0.3
	11nm,0.1s						
KOTS	Kotyrbulak	0.81	288	P	Pn	16 36 36.9	-0.1
	1.0nm,0.1s						
KOTS				S	Sb	16 36 47.4	+0.3
	12nm,0.1s						
KOTS	Kotyrbulak	0.81	288	eP	Pb	16 36 36.7	+0.2
	baz=88						
KOTS				eS	Sb	16 36 47.4	+0.3
	baz=88						
KOTS	Kotyrbulak	0.81	288	eP	Pb	16 36 36.7	+0.2
	0.7nm,0.2s						
KOTS				eS	Sb	16 36 47.4	+0.3
	12nm,0.1s						
TNSS	Tian-Shan	0.89	273	P	Pn	16 36 38.5	+0.1
	0.4nm,0.1s						
TNSS				S	Sn	16 36 50.3	-0.4
	2.3nm,0.2s						
TNSS	Tian-Shan	0.89	273	eP	Pn	16 36 38.5	+0.1
	baz=73						
TNSS				eS	Sn	16 36 50.4	-0.4
	baz=73						
TNSS	Tian-Shan	0.89	273	eP	Pn	16 36 38.5	+0.1
	0.4nm,0.1s						
TNSS				eS	Sn	16 36 50.3	-0.4
	2.3nm,0.2s						
PDGK	Podgornoye	1.03	70	P	Pb	16 36 40.3	+0.1
	0.8nm,0.1s						
PDGK				S	Sb	16 36 53.5	+0.1
	1.1nm,0.2s						
PDGK	Podgornoye	1.03	70	⇑P	Pb	16 36 40.2	0.0
	0.7nm,0.5s						
PDGK				⇓S	Sn	16 36 54.2	+0.5
	1.5nm,0.6s						
PDGK	Podgornoye	1.03	70	⇑iP	Pb	16 36 40.3	0.0
	baz=70						
PDGK				⇑iS	Sn	16 36 53.9	+0.2
	baz=70						
KDJ	Kajisay	1.13	221	⇑iP	Pb	16 36 42.4	+0.4
	baz=20						
KDJ				⇑iS	Sb	16 36 56.8	+0.5
	baz=20						
TARG	Taragay, Kyrgy	1.29	192	⇑iP	Pb	16 36 44.6	-0.3
	baz=92						
TARG				⇑iS	Sn	16 37 00.6	+0.1
	baz=92						
KTBS	Karatobe	1.30	304	P	Pb	16 36 45.8	+1.0
	0.8nm,0.2s						
KTBS				S	Sb	16 37 02.6	+1.5
	6.5nm,0.3s						
KTBS	Karatobe	1.30	304	eP	Pb	16 36 45.8	+1.0
	baz=2.0						
KTBS				eS	Sb	16 37 03.4	+2.3
	baz=2.0						
KTBS	Karatobe	1.30	304	eP	Pb	16 36 45.8	+1.0
	0.8nm,0.2s						
KTBS				eS	Sb	16 37 03.4	+2.3
	5.3nm,0.5s						
ULHL	Ulahol	1.60	243	⇓iP	Pb	16 36 50.6	+0.5
	baz=43						
ULHL				⇓iS	Sb	16 37 11.1	+1.1
	baz=43						
BOOM	Boomskoye usch	1.71	254	⇓iP	Pb	16 36 52.2	+0.3
	baz=54						
BOOM				⇓iS	Sb	16 37 13.8	+0.7
	baz=54						
DJR	Jarkent	1.79	41	P	Pb	16 36 54.2	+1.0
DJR				S	Sb	16 37 18.6	+3.5
DJR	Jarkent	1.79	41	eP	Pb	16 36 54.2	+1.0
	0.3nm,0.2s						
DJR				eS	Sb	16 37 17.7	+2.5
	1.0nm,0.4s						
TKM2	Tokmak 2	1.89	269	⇓Pn	Pb	16 36 54.9	0.0
	0.9nm,0.7s						
TKM2				⇓Sn	Sb	16 37 21.4	+3.3
	0.7nm,0.6s						
TKM2	Tokmak 2	1.89	269	⇑iP	Pb	16 36 55.1	+0.2
	baz=69						
TKM2				⇑iS	Sb	16 37 18.7	+0.6
	baz=69						
NRN	Naryn	2.24	227	⇑iP	Pb	16 36 59.1	-1.9
	baz=27						
NRN				⇑iS	Sb	16 37 26.3	-2.0
	baz=27						
KAPS	Kapalarasan	2.45	20	Pg	Pb	16 37 05.8	+1.3
	0.6nm,0.4s						
KAPS				Lg	Lg	16 37 38.9	
	1.9nm,0.6s						
KAPS	Kapalarasan	2.45	20	eP	Pb	16 37 05.8	+1.3
	0.6nm,0.4s						
KAPS				eS	Sb	16 37 37.5	+3.4
	0.9nm,0.1s						

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*IDC **15** 16:36:57.9±1.5, 10°.72S×164°.27E, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.7/41, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=37.5km s-min=26.9km az=125.0*

*ISCJB **15** 16:36:59.8±1.1, 10°.9S±0°.1×164°.3E±0°.2, h25^{km}, mb3.6/6, Error ellipse: s-maj=22.8km s-min=16.3km az=148.5*

ISC 15 16:37:02.1±1.2, 10°.8S±0°.1×164°.1E±0°.1, h25^{km}, n11, σ1^{s}59/9, mb3.8/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.30	287	Pn	Pn	16 38 07.3	+1.3
	3.8nm,0.3s,baz=99,slow=19,SNR=3.0						
HNR				Sn	Sb	16 39 05.9	-2.6
	3.6nm,0.3s,baz=73,slow=19,SNR=2.1						
DZM	Mont Dzumac	11.48	169	Pn	Pn	16 39 43.0	-1.6
	0.4nm,0.3s,baz=319,slow=22,SNR=15						
STKA	Stephens Creek	29.57	221	P	P	16 43 06.3	+1.2
	1.0nm,0.7s,baz=38,slow=12,SNR=2.1						
WRA	Warramunga Arr	30.08	249	P	P	16 43 10.9	+1.1
	0.2nm,0.4s,baz=79,slow=9.2,SNR=4.1						
H11N1	WAKE ISLAND Hy	30.39	5	T	T	17 16 11.5	
	baz=183,slow=75						
H11N3	WAKE ISLAND Hy	30.40	5	T	T	17 15 57.6	
	baz=183						
H11N2	WAKE ISLAND Hy	30.41	5	T	T	17 16 11.5	
	baz=183,slow=75						
ASAR	Alice Springs	31.50	242	P	P	16 43 22.8	+0.5
	0.2nm,0.7s,baz=66,slow=10,SNR=7.0						
FITZ	Fitzroy Crossi	37.90	254	P	P	16 44 18.5	+0.8
	1.5nm,0.8s,baz=84,slow=9.2,SNR=3.8						
ILAR	Eielson Array	83.75	19	P	P	16 49 28.4	-0.3
	1.0nm,0.8s,baz=231,slow=5.8,SNR=8.4						
MKAR	Makanchi Array	92.21	317	P	P	16 50 09.3	-0.6
	0.5nm,0.8s,baz=102,slow=4.9,SNR=3.4						

IDC 15 17:13:33.9±2.9, 10°.06S×166°.52E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.4/41, mbtmp3.3/4, Error ellipse: s-maj=126.2km s-min=33.2km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	32.54	249	P	P	17 20 06.9	-0.1
	0.6nm,1.0s,baz=78,slow=9.1,SNR=5.3						
ASAR	Alice Springs	33.91	242	P	P	17 20 18.6	-0.4
	0.1nm,0.4s,baz=64,slow=10,SNR=9.1						
MKAR	Makanchi Array	93.33	317	P	P	17 26 51.8	+0.9
	0.1nm,0.6s,baz=90,slow=3.3,SNR=2.2						
YKA	Yellowknife Ar	93.76	27	P	P	17 26 51.9	-0.6
	0.1nm,0.4s,baz=257,slow=5.6,SNR=2.7						

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*NEIC **15** 17:13:58.9±0.6, 3°.99N×82°.17W, h10^{km}, mb4.6/14, Error ellipse: s-maj=15.9km s-min=9.4km az=53.0*

*IDC **15** 17:13:59.0±1.3, 4°.16N×81°.99W, h0^{km}, mb3.6/3, mb1 4.2/5, mb1mx3.7/33, mbtmp4.0/5, ML4.1/2, MS3.6/18, Ms1 3.6/18, ms1mx3.5/35, Error ellipse: s-maj=126.8km s-min=21.3km az=63.0*

ISC 15 17:13:59.7±0.6, 4°.15N±0°.06×81°.94W±0°.08, h10^{km}, n64, σ2^{s}28/52, mb4.4/14, MS3.6/11, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRGC	Isla de Gorgon	3.93	107	eP	Pb	17 15 11.6	+2.5
GRGC	Isla de Gorgon	3.93	107	eP	Pb	17 15 11.6	+2.5
OTAV	Otavalo	5.21	138	ePn	Pn	17 15 19.0	+0.8
OTAV				eSn	Sn	17 16 19.5	+0.7
UPA	Univ. de Panam	5.36	26	eP	Pb	17 15 34.2	+0.6
UPA	Univ. de Panam	5.36	26	eP	Pb	17 15 34.2	+0.6
BCIP	Isla Barro Col	5.41	23	ePg	Pb	17 15 33.2	-1.1
YOTC	Yotoco, Valle	5.58	91	eP	Pb	17 15 38.2	+0.8
YOTC	Yotoco, Valle	5.58	91	eP	Pb	17 15 38.2	+0.8
PCON	Cinco Dias	5.82	108	eP	Pb	17 15 40.2	-1.5
PCON	Cinco Dias	5.82	108	eP	Pb	17 15 40.2	-1.5
HDC	Heredia	6.21	340	ePn	Pn	17 15 30.0	-1.6
ANIL	Santa Ana	6.52	87	eP	Pb	17 15 52.8	-0.7
ANIL	Santa Ana	6.52	87	eP	Pb	17 15 52.8	-0.7
RREF	El Recreo	6.61	83	eP	Pb	17 15 54.8	-0.4
RREF	El Recreo	6.61	83	eP	Pb	17 15 54.8	-0.4
HELC	Santa Helena	6.70	72	eP	Pb	17 15 55.5	-1.1
HELC	Santa Helena	6.70	72	eP	Pb	17 15 55.5	-1.1
JTS	JuntasAbangare	6.80	334	ePn	Pn	17 15 39.3	-0.3
JTS				eSn	Sn	17 17 00.1	+2.9
JTS				eSg	Sn	17 17 00.2	+3.0
JTS	JuntasAbangare	6.80	334	Pn	Pn	17 15 39.8	+0.1
	4.7nm,0.3s,baz=189,slow=16,SNR=11						
JTS				Sn	Sn	17 16 59.9	+2.7
	1.1nm,0.3s,baz=163,slow=19,SNR=2.9						
JTS				LR	LR	17 17 49.3	
	comp=Z,346nm,21.7s,baz=200,slow=34						
NORC	Norcasia	7.18	78	eP	Pb	17 16 00.1	-4.5
NORC	Norcasia	7.18	78	eP	Pb	17 16 00.1	-4.5
ROSC	El Rosal	7.62	85	ePn	Pn	17 15 52.5	+1.2
ROSC	El Rosal	7.62	85	LR	LR	17 18 40.2	
	comp=Z,80nm,21.8s,baz=270,slow=37						
PTBC	PUERTO BERRIO,	7.82	72	eP	Pb	17 16 10.8	-4.7
PTBC	PUERTO BERRIO,	7.82	72	eP	Pb	17 16 10.8	-4.7
CHIC	Chingaza	8.20	86	eP	Pb	17 16 19.4	-2.7
CHIC	Chingaza	8.20	86	eP	Pb	17 16 19.4	-2.7
TGUH	Tegucigalpa,Un	11.17	332	ePn	Pn	17 16 41.5	+2.0
ATAH	Atahualpa	11.75	162	LR	LR	17 20 59.6	
	comp=Z,848nm,19.6s,baz=335,slow=36						
SDV	Santo Domingo	12.18	67	ePn	Pn	17 16 56.1	+2.6
SDV	Santo Domingo	12.18	67	LR	LR	17 21 57.7	
	comp=Z,444nm,21.7s,baz=254,slow=39						
APG	El Apazote	13.67	323	LR	LR	17 21 30.9	
	comp=Z,407nm,21.2s,baz=140,slow=33						
NNA	Nana	16.81	163	ePn	Pn	17 17 52.6	-2.9
	34nm,1.1s						
NNA	Nana	16.81	163	Pn	P	17 17 57.3	-0.3
	0.6nm,0.3s,baz=313,slow=19,SNR=2.6						
NNA				LR	LR	17 23 50.5	
	comp=Z,178nm,18.7s,baz=322,slow=35						
GTBY	Guantanamo Bay	17.04	22	ePn	P	17 17 59.1	-0.9
	94nm,1.9s						
CMIG	Matias Romero	18.08	316	LR	LR	17 23 42.5	
	comp=Z,243nm,21.4s,baz=146,slow=32						
CRPR	Cabo Rojo, PR	20.01	45	eP	Pn	17 18 37.6	+3.1
	74nm,1.2s						
SJG	San Juan	20.77	47	LR	LR	17 27 04.8	
	comp=Z,146nm,21.1s,baz=268,slow=38						
PTGA	Pitinga	22.48	102	eP	P	17 19 05.5	+5.9
	37nm,1.8s						
PTGA	Pitinga	22.48	102	LR	LR	17 28 15.5	
	comp=Z,150nm,19.6s,baz=284,slow=38						
LPAZ	La Paz	24.47	146	eP	P	17 19 19.8	-0.1
LPAZ	La Paz	24.47	146	P	P	17 19 20.8	+0.9
	1.1nm,0.7s,baz=346,slow=9.6,SNR=4.1						
LPAZ				LR	LR	17 29 45.3	
	comp=Z,140nm,20.0s,baz=310,slow=39						
SIV	San Ignacio	28.75	135	LR	LR	17 32 38.1	
	comp=Z,285nm,18.6s,baz=300,slow=39						
LVC	Limon Verde	29.48	155	LR	LR	17 32 43.2	
	comp=Z,90nm,18.2s,baz=329,slow=38						
TXAR	Lajitas Array	32.43	323	LR	LR	17 33 13.0	
	comp=Z,59nm,18.5s,baz=0.0,slow=36						
MSTX	Muleshoe	35.45	329	eP	P	17 20 55.7	-0.7
	6.3nm,1.1s						
HDIL	Hopedale	36.85	351	eP	P	17 21 09.6	+1.4
	26nm,1.2s						
CPUP	Villa Florida	38.54	143	LR	LR	17 40 33.3	
	comp=Z,96nm,18.9s,baz=20,slow=41						
T25A	Trinidad	38.77	331	eP	P	17 21 24.6	-0.2
	12nm,1.4s						
BDFB	Brasilia	38.91	121	LR	LR	17 39 59.5	
	comp=Z,105nm,18.1s,baz=254,slow=40						
JFWS	Jewell Farm	39.31	350	eP	P	17 21 28.4	-0.5
	74nm,2.0s						
KSCO	Kaye Shedlock'	39.47	334	eP	P	17 21 28.9	-1.7
	30nm,1.7s						
SDCO	Great Sand Dun	39.78	330	eP	P	17 21 34.8	+1.4
	6.5nm,1.2s						
H43A	Windswept, Lux	40.49	354	eP	P	17 21 36.2	-2.5
	24nm,0.9s						
PV02	Paradox Valley	41.79	328	eP	P	17 21 46.1	-3.8
	4.7nm,0.9s						
PV13	Radium Mtn., P	41.80	328	eP	P	17 21 48.5	-1.5
	8.8nm,1.3s						
PDAR	Pinedale Array	45.62	331	LR	LR	17 42 50.6	
	comp=Z,80nm,18.3s,baz=294,slow=38						
NVAR	Mina Array Bea	47.53	321	P	P	17 22 35.7	0.0
	0.7nm,0.7s,baz=125,slow=7.8,SNR=4.5						
NVAR				LR	LR	17 41 59.4	
	comp=Z,73nm,19.4s,baz=184,slow=36						
CMB	Columbia Colle	48.63	319	eP	P	17 22 41.9	-2.2
	12nm,1.8s						
YKA	Yellowknife Ar	63.04	344	P	P	17 24 27.8	+1.0
	0.5nm,0.8s,baz=138,slow=6.4,SNR=8.7						
PPT	Papeete	70.10	250	LR	LR	17 48 21.3	
	comp=Z,73nm,20.5s,baz=194,slow=29						
ASAR	Alice Springs	140.36	237	PKP	PKiKP	17 33 30.8	-1.8
	0.3nm,0.8s,baz=103,slow=2.0,SNR=3.6						
WR1	Warramunga Arr	141.34	243	ePKPdf	PKPdf	17 33 29.5	-2.4
WRA	Warramunga Arr	141.34	243	PKhKP	PKPpre	17 33 29.5	
	0.5nm,0.8s,baz=106,slow=2.3,SNR=3.2						

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*IDC **15** 17:27:20.1±2.4, 23°.59N×94°.28E, h95^{km}±26^{km}, mb3.5/10, mb1 3.6/12, mb1mx3.3/60, mbtmp3.8/12, Error ellipse: s-maj=24.3km s-min=12.5km az=54.0*

*NDI **15** 17:27:20.8±1.7, 23°.84N×94°.32E, h39^{km}±17^{km}, ML3.7*

*ISCJB **15** 17:27:21.5±0.7, 23°.94N±0°.04×94°.00E±0°.05, h96^{km}±6^{km}, mb3.8/10, Error ellipse: s-maj=7.3km s-min=6.3km az=24.1*

ISC 15 17:27:21.9±1.5, 23°.92N±0°.06×94°.07E±0°.08, h86^{km}±13^{km}, n30, σ1^{s}49/41, mb3.9/10, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	SAIHA	1.74	215	eP	Pn	17 27 49.2	-1.4
SAIH				eS	Sn	17 28 10.9	-1.6
SAIH				IAML		17 28 13.8	
	comp=E,788nm,0.2s						
SAIH				IAML		17 28 13.9	
	comp=N,396nm,0.4s						
KOHI	KOHIMA	1.79	1	eP	Pn	17 27 51.1	-0.3
KOHI				eS	Sn	17 28 12.2	-1.6
KOHI				IAML		17 28 17.9	
	comp=N,278nm,0.4s						
KOHI				IAML		17 28 18.0	
	comp=E,382nm,0.2s						
MOKO	MOKOCHONG	2.43	9	eP	Pn	17 27 59.4	-0.4
BRDH	Bariadhala	2.55	242	P	Pn	17 28 01.2	-0.1
	comp=E,87nm,0.3s,baz=49,slow=20,SNR=3.1						
BRDH				S	Sn	17 28 31.6	0.0
	comp=E,61nm,0.3s,baz=72,slow=19,SNR=12						
SHL	Shillong	2.58	310	eP	Pn	17 28 03.5	+1.7
SHL				eS	Sn	17 28 34.0	+1.5
SHL				IAML		17 28 34.3	
	comp=E,585nm,0.1s						
SHL				IAML		17 28 34.3	
	comp=N,1μm,0.2s						
TEZP	TEZPUR	2.92	337	eP	Pn	17 28 06.6	+0.3
TEZP				eS	Sn	17 28 39.8	-0.7
TEZP				IAML		17 28 42.3	
	comp=E,619nm,0.1s						
TEZP				IAML		17 28 42.4	
	comp=N,487nm,0.2s						
ZIRO	ZIRO	3.60	357	eP	Pn	17 28 14.7	-0.9
TAWA	Tawang	4.17	332	eP	Pn	17 28 25.1	+1.6
TAWA				eS	Sn	17 29 10.8	-0.4
GTK	Tadong	5.99	306	eP	Pn	17 28 49.5	+1.5
GTK				eS	Sn	17 29 55.5	+0.2
CMAR	Chiang Mai Arr	7.08	139	P	Pn	17 28 56.5	-6.4
	comp=N,0.2nm,0.3s,baz=312,slow=13,SNR=6.7						
RAMN	Ramite	7.40	296	ePn	Pn	17 29 09.1	+1.7
JIRN	Jiri	8.02	299	ePn	Pn	17 29 17.1	+1.1
JIRN				eSn	Sn	17 30 45.0	-0.3
	comp=N,180nm,0.4s						
GUN	Gumba	8.38	300	ePn	Pn	17 29 21.8	+0.9
GUN				eSn	Sn	17 30 53.5	-0.5
	comp=N,87nm,0.4s						
PKI	Pulchoki	8.61	297	ePn	Pn	17 29 25.5	+1.4
PKI				eSn	Sn	17 30 58.7	-1.1
	comp=N,32nm,0.3s						
PKIN	Phulchoki	8.63	297	ePn	Pn	17 29 25.3	+1.1
PKIN				eSn	Sn	17 30 58.5	-1.5
	comp=N,36nm,0.2s						
DMN	Daman	8.88	296	ePn	Pn	17 29 28.7	+1.1
DMN				eSn	Sn	17 31 03.6	-2.5
	comp=N,40nm,0.3s						
GKN	Gorkha	9.41	298	eSn	Sn	17 31 16.0	-3.0
	comp=N,0.6nm,0.2s						
KOLN	Koldanda	10.18	294	eSn	Sn	17 31 34.7	-3.1
	comp=N,42nm,0.4s						
DANN	Dangsing	10.26	298	ePn	Pn	17 29 47.1	+0.6
DANN				eSn	Sn	17 31 37.5	-2.4
	comp=N,54nm,0.5s						
PYUN	Piuthan	10.80	295	ePn	Pn	17 29 55.1	+1.3
PYUN				eSn	Sn	17 31 49.5	-3.4
	comp=N,42nm,0.5s						
MKAR	Makanchi Array	24.71	340	P	P	17 32 36.1	+1.2
	comp=N,3.9nm,0.5s,baz=154,slow=9.1,SNR=64						
AAK	Ala-Archa	24.72	324	P	P	17 32 37.1	+1.8
	comp=N,0.9nm,0.6s,baz=140,slow=4.6,SNR=5.0						
SONM	Songino Array	25.81	19	P	P	17 32 44.3	-0.7
	comp=N,0.2nm,0.3s,baz=181,slow=10,SNR=3.3						
KURBB	Kurchatov Arra	29.26	340	P	P	17 33 16.3	+0.6
	comp=N,0.7nm,0.3s,baz=144,slow=8.3,SNR=12						
ZALV	Zalesovo Beam	30.79	349	P	P	17 33 29.1	0.0
	comp=N,0.5nm,0.4s,baz=182,slow=9.0,SNR=4.5						
BVAR	Borovoye Array	34.16	334	P	P	17 33 57.9	-0.7
	comp=N,0.5nm,0.8s,baz=134,slow=8.5,SNR=4.4						
WRA	Warramunga Arr	58.65	135	P	P	17 37 04.8	-5.7
	comp=N,0.7nm,0.5s,baz=324,slow=7.3,SNR=20						
FINES	FINESS Array B	58.78	329	P	P	17 37 10.5	-0.3
	comp=N,1.3nm,0.9s,baz=100,slow=6.9,SNR=2.7						
ARCES	ARCESS Array B	60.33	338	P	P	17 37 21.7	+0.4
	comp=N,2.9nm,1.0s,baz=93,slow=7.2,SNR=2.9						
ASAR	Alice Springs	61.09	138	P	P	17 37 22.1	-5.1
	comp=N,0.6nm,0.5s,baz=318,slow=6.8,SNR=21						

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*ISK **15** 17:29:02.5, 38°.79N×43°.49E, h18^{km}, ML2.1/5*

*ISCJB **15** 17:29:03.5±1.1, 38°.82N±0°.06×43°.6E±0°.1, h29^{km}±7^{km},*

Error ellipse: s-maj=18.0km s-min=6.9km az=27.0

DDA ***15*** *17:29:04.4, 38.°85N×43.°49E, h7^{km}±6^{km}, ML2.5*

ISC 15 17:29:01.9±1.3, **38.°77N**±0.°05×**43.°66E**±0.°07, **h25**^{km}±9^{km}, **n10**, σ**0^{s}52**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.23	343	*i* P	Pb	17 29 08.1	-0.1
VMUR				*i* S	Sb	17 29 12.7	+0.3
VMUR				IAML_P			
	comp=Z,3μm,0.1s						
TVAN	Van	0.31	219	*i* P	Pn	17 29 11.1	0.0
TVAN				*i* S	Sn	17 29 17.3	+0.3
TVAN				IAML_P			
	comp=Z,3μm,0.2s						
CLDR	Caldiran	0.42	29	PG	Pn	17 29 12.4	-0.2
CLDR				SG	Sn	17 29 20.2	+0.5
CLDR	Caldiran	0.42	29	*i* P	Pn	17 29 12.1	-0.6
CLDR				*i* S	Sn	17 29 20.6	+0.9
CLDR				IAML_P			
	comp=Z,1μm,0.1s						
AKDM	Akdamar-Van	0.69	230	PG	Pb	17 29 15.2	-0.3
ADCV	BITLIS_Adilcev	0.73	273	*i* P	Pn	17 29 16.9	+0.1
ADCV				IAML_P			
	comp=Z,418nm,0.2s						
TUTA	Tutak	0.91	314	*i* P	Pn	17 29 19.9	+0.6
TUTA				IAML_P			
	comp=Z,753nm,0.2s						
MLAZ	Malazgirt-MUS	0.94	293	PG	Pb	17 29 18.8	-0.8
AGRB	Hanur-Agry	0.95	327	PG	Pb	17 29 19.6	-0.3
AGRB				SG	Sn	17 29 32.6	-0.2
GURO	Guroymak-BITLI	1.29	261	PN	Pn	17 29 24.5	0.0

ISCJB ***15*** *17:29:15.7±0.5, 45.°1S±0.°1×35.°2E±0.°2, h10^{km}, mb4.3/12, MS3.5/5, Error ellipse: s-maj=19.6km s-min=9.9km az=141.6*

IDC ***15*** *17:29:16.3±0.9, 45.°15S×35.°21E, h0^{km}, mb4.1/7, mb1 4.3/8, mb1mx3.9/42, mbtmp4.2/8, ML4.6/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/24, Error ellipse: s-maj=45.1km s-min=18.0km az=58.0*

NEIC ***15*** *17:29:17.3±0.5, 45.°13S×35.°16E, h10^{km}, mb4.7/8, Error ellipse: s-maj=18.0km s-min=9.4km az=52.0*

ISC 15 17:29:17.4±0.7, **45.°1S**±0.°1×**35.°2E**±0.°1, **h10**^{km}, **n28**, σ**1^{s}13**/19, **mb4.3**/12, **MS3.4**/5, **Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRZF	Crozet Islands	11.74	102	*e*Pn	Pn	17 32 04.2	-0.5
SUR	Sutherland	16.91	314	*e*Pn	Pn	17 33 14.1	-0.1
	117nm,1.8s						
SUR				*e*Sn	Sn	17 36 07.6	-15
SUR	Sutherland	16.91	314	Pn	Pn	17 33 13.7	-0.5
	2.3nm,0.3s,baz=152,slow=10,SNR=41						
SUR				Sn	Sn	17 36 08.1	-14
	0.9nm,0.3s,baz=167,slow=14,SNR=3.5						
SUR				LR	LR	17 38 23.5	
	comp=Z,202nm,19.6s,baz=163,slow=32						
LBTB	Lobatse	21.49	336	*e*P	P	17 34 07.3	+1.0
	12nm,0.9s						
LBTB				*e*S	S	17 37 53.9	-11
LBTB	Lobatse	21.49	336	P	P	17 34 07.5	+1.2
	8.4nm,0.8s,baz=158,slow=9.5,SNR=12						
LBTB				S	S	17 37 51.1	-14
	2.0nm,0.7s,baz=204,slow=20,SNR=1.8						
LBTB				LR	LR	17 41 25.5	
	comp=Z,146nm,19.1s,baz=178,slow=34						
MATP	Matopo	25.23	345	P	P	17 34 44.1	+0.6
	4.9nm,0.8s,baz=175,slow=10.0,SNR=12						
MATP				LR	LR	17 43 00.2	
	comp=Z,119nm,18.3s,baz=138,slow=33						
MAW	Mawson	26.82	157	LR	LR	17 43 33.2	
	comp=Z,79nm,19.4s,baz=302,slow=32						
TSUM	Tsumeb	29.68	325	LR	LR	17 46 02.8	
	comp=Z,103nm,18.6s,baz=145,slow=34						
LSZ	Lusaka	30.32	347	*e*P	P	17 35 26.6	-2.4
	5.4nm,0.8s						
SNAA	Sanae	32.19	201	*e*P	P	17 35 43.5	-1.5
	27nm,1.7s						
QSPA	South Pole Qui	45.11	180	P	P	17 37 33.6	+0.1
	2.6nm,0.8s,baz=246,slow=0.9,SNR=13						
VNDA	Vanda	53.34	167	*e*P	P	17 38 37.0	+0.9
VNDA	Vanda	53.34	167	LR	LR	17 59 52.4	
	comp=Z,84nm,19.5s,baz=218,slow=34						
H10S2	ASCENSION HYDR	55.90	294	T	T	18 39 45.2	
	baz=139,slow=75,SNR=211						
H10S1	ASCENSION HYDR	55.91	294	T	T	18 39 46.3	
	baz=139,slow=75,SNR=173						
H10S3	ASCENSION HYDR	55.91	294	T	T	18 39 46.4	
	baz=139,slow=75,SNR=171						
DBIC	Dimbokro	62.79	314	*e*P	P	17 39 43.9	+0.8
	30nm,1.6s						
TOA0	Torodi Ar. Sit	65.43	324	*e*P	P	17 39 59.3	-1.0
	20nm,2.0s						
TORD	Torodi Ar. Bea	65.43	324	P	P	17 40 01.8	+1.5
	1.6nm,0.7s,baz=152,slow=6.5,SNR=8.1						
TOA1	Torodi Ar. Sit	65.43	324	*e*P	P	17 40 01.8	+1.4
STKA	Stephens Creek	78.42	124	*e*P	P	17 41 18.4	+0.1
	0.8nm,0.9s						
STKA	Stephens Creek	78.42	124	P	P	17 41 19.3	+1.0
	2.0nm,0.8s,baz=207,slow=2.3,SNR=5.0						
ASAR	Alice Springs	79.44	113	P	P	17 41 23.6	-0.5
	0.7nm,0.8s,baz=226,slow=3.7,SNR=4.9						
WR1	Warramunga Arr	82.34	110	*e*P	P	17 41 40.2	+0.7
	14nm,1.8s						
WRA	Warramunga Arr	82.34	110	P	P	17 41 40.2	+0.6
	0.8nm,1.0s,baz=212,slow=4.4,SNR=3.8						
S51A	Beattyville	134.42	283	*e*PKPpre	PKPpre	17 48 23.4	
LTX	Lajitas	144.06	258	*e*PKPdf	PKPbc	17 48 52.2	+1.0
TXAR	Lajitas Array	144.06	258	PKP	PKPbc	17 48 52.2	+1.0
	0.3nm,0.7s,baz=134,slow=5.2,SNR=2.8						

IDC ***15*** *17:37:06.8±2.5, 8.°04S×114.°78E, h0^{km}, mb3.1/3, mb1 3.4/4, mb1mx3.3/38, mbtmp3.2/4, ML3.0/1, Error ellipse: s-maj=155.7km s-min=24.1km az=50.0*

DJA ***15*** *17:37:10.9±0.3, 8°S±8°×11°5E±°, h16^{km}±4^{km}, M3.0/6, MLv3.0/6*

ISCJB ***15*** *17:37:11.6±0.6, 8.°46S±0.°08×114.°67E±0.°04, h33^{km}, mb3.1/3, Error ellipse: s-maj=11.5km s-min=5.6km az=0.4*

ISC 15 17:37:10.7±0.9, **8.°52S**±0.°08×**114.°69E**±0.°04, **h35**^{km}, **n9**, σ**1^{s}98**/13, **mb3.1**/3, **Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	0.53	275	P	Pn	17 37 21.7	-0.1
JAGI				S	Sn	17 37 28.9	-0.7
DNP	Denpasar	0.54	107	P	Pn	17 37 23.6	+1.7
SRBI	Singaraja	0.68	50	P	Pn	17 37 23.7	-0.1
SRBI				S	Sn	17 37 33.0	-0.1
GMJI	Gumukmas	1.25	281	P	Pn	17 37 32.9	+1.1
GMJI				S	Sn	17 37 48.9	+1.5
KMMI	Kalianget	1.63	334	P	Pn	17 37 38.4	+1.5
FITZ	Fitzroy Crossi	14.28	133	Pn	P	17 40 34.1	-3.2
	0.1nm,0.3s,baz=319,slow=20,SNR=3.7						
FITZ				Sn	Sn	17 43 07.5	-0.3
	0.0nm,0.3s,baz=300,slow=20,SNR=2.4						
WRA	Warramunga Arr	22.14	123	P	P	17 42 05.9	+2.3
	0.4nm,0.5s,baz=298,slow=11,SNR=6.7						
ASAR	Alice Springs	23.78	132	P	P	17 42 23.9	+3.6
	0.2nm,0.5s,baz=309,slow=8.7,SNR=3.7						
MKAR	Makanchi Array	62.17	335	P	P	17 47 27.3	-1.2
	0.2nm,0.6s,baz=132,slow=8.0,SNR=3.5						

ISCJB ***15*** *17:42:19.2±0.8, 34.°14N±0.°03×35.°54E±0.°07, h6^{km}±4^{km}, Error ellipse: s-maj=9.9km s-min=5.0km az=16.9*

GII ***15*** *17:42:19.1±0.0, 34.°13N×35.°61E, h2^{km}, MD2.2/6*

GRAL ***15*** *17:42:21.5±0.2, 34.°11N×35.°75E, h26^{km}±1^{km}, MD3.0*

ISC 15 17:42:19.9±1.6, **34.°14N**±0.°04×**35.°65E**±0.°06, **h14**^{km}±12^{km}, **n20**, σ**0^{s}57**/35, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	Bhannes	0.23	180	*e*P	Pb	17 42 27.1	+1.1
BHL				*e*S	Sb	17 42 31.3	+1.3
HWQ	Hawqa	0.28	60	*e*P	Pb	17 42 27.3	+0.5
HWQ				*e*S	Sb	17 42 31.5	0.0
BEYL	Beirut	0.30	207	*e*P	Pb	17 42 28.3	+1.3
DQRL	Deir Qamar	0.44	189	*e*P	Pb	17 42 30.1	+0.6
DQRL				*e*S	Sb	17 42 36.3	+0.4
QRWL	Qaraoun	0.59	178	*e*P	Pb	17 42 32.0	0.0
QRWL				*e*S	Sb	17 42 39.8	-0.4
RCY	Rachaya	0.66	167	*e*P	Pg	17 42 32.8	0.0
RCY				*e*S	Sg	17 42 41.3	-0.2
NATI	Neve Ativ	0.88	175	Pg	Pb	17 42 36.1	-0.8
NATI				Sg	Sb	17 42 48.2	-0.2
KSDI	Kefar Szold	0.94	180	Pg	Pb	17 42 37.3	-0.7
KSDI				Sg	Sb	17 42 50.3	-0.1
HNTI	Hanita	1.13	201	Pg	Pb	17 42 40.5	-0.6
HNTI				Sg	Sn	17 42 56.4	-0.1
MMA0B	Mount Meron ar	1.14	191	Pg	Pb	17 42 40.5	-0.9
MMA0B				Sg	Sb	17 42 56.0	-0.1
KSHT	Keshet	1.16	173	Pg	Pn	17 42 41.2	-0.6
KSHT				Sg	Sg	17 42 57.5	+0.1
BLGI	Bet Lehem HaGe	1.45	196	Pn	Pn	17 42 45.8	+0.1
BLGI				Sn	Sb	17 43 05.3	+0.2
OFRI	\`Ofer	1.61	200	Pn	Pn	17 42 47.8	-0.2
OFRI				Sn	Sb	17 43 10.2	+0.5
MMLI	Mount Malkishu	1.71	187	Pn	Pn	17 42 49.2	-0.1
MMLI				Sn	Sb	17 43 11.9	-0.5
HMDT	Nahal Hemdat	1.88	183	Pn	Pn	17 42 51.7	0.0
HMDT				Sn	Sb	17 43 17.6	+0.2
SLTI	Sal'it	1.96	195	Pn	Pn	17 42 52.6	-0.1
SLTI				Sn	Sb	17 43 19.3	-0.4
CSS	Mathiatis	2.09	294	Pn	Pn	17 42 54.0	-0.5
DSI	Dead Sea	2.57	185	Pn	Pn	17 43 01.0	-0.1
AMAZ	Amatzia	2.67	194	Pn	Pn	17 43 03.0	+0.5
GHAJ	Ghor Haditha	2.83	182	Pn	Pn	17 43 05.3	+0.7

IDC 15 17:43:31.1±13.0, **19.°60S**×**178.°53W**, **h426**^{km}±151^{km}, **mb2.9**/3, **mb1 3.2**/3, **mb1mx2.9**/26, **mbtmp3.7**/3, **Error ellipse: s-maj=236.7km s-min=40.7km az=157.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	44.24	261	P	P	17 51 01.2	+0.1
	0.4nm,0.3s,baz=96,slow=7.6,SNR=32						
ASAR	Alice Springs	44.24	256	P	P	17 51 00.8	-0.3
	1.1nm,0.6s,baz=97,slow=7.6,SNR=21						
NVAR	Mina Array Bea	80.72	44	P	P	17 54 59.0	+0.1
	0.1nm,0.3s,baz=226,slow=4.9,SNR=2.4						
AKASG	Malin Array Be	141.99	331	PKP	PKPdf	18 02 12.7	-0.6
	0.5nm,0.5s,baz=45,slow=3.2,SNR=4.9						
GERES	GERESS Array B	149.20	344	PKPbc	PKPbc	18 02 29.8	-0.7
	0.5nm,0.6s,baz=44,slow=3.0,SNR=4.1						

GUC ***15*** *17:49:37.0±0.3, 38.°29S×75.°37W, h40^{km}±29^{km}, ML4.1*

ISC 15 17:49:39.2±3.5, **38.°26S**±0.°08×**75.°2W**±0.°2, **h35**^{km}, **n19**, σ**1^{s}14**/27, **1D**, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCHI	Chillan	2.98	57	*e*P	Pn	17 50 24.2	+0.2
CCHI				*e*S	Sn	17 51 00.2	+1.7
CCHI				IAML		17 51 06.9	
	comp=N,365nm,0.5s						
GO06	Curarrehue	3.19	116	*e*P	Pn	17 50 26.5	-0.5
GO06				*e*S	Sn	17 51 04.0	+0.1
GO06				IAML		17 51 06.2	
	comp=N,447nm,0.6s						
PLCA	Paso Flores	4.36	126	*e*P	Pn	17 50 42.9	-0.1
PLCA				*e*S	Sn	17 51 33.0	+0.4
CHPI	Pichilemu	4.64	35	*e*P	Pn	17 50 46.6	-0.2
CHPI				*i* S	Sn	17 51 38.8	-0.6
LMEL	Las Melosas	5.97	44	*e*P	Pn	17 51 05.2	-0.1
ROC1	El Roble	6.27	34	*e*P	Pn	17 51 09.1	-0.4
ROC1				*e*S	Sn	17 52 21.5	+1.5
PEL	Peldehue	6.28	37	*e*P	Pn	17 51 09.3	-0.2
PEL				*e*S	Sn	17 52 20.5	+0.5
FCH	Farellones	6.33	40	*e*P	Pn	17 51 09.6	-0.8
FCH				*e*S	Sn	17 52 21.3	-0.2
AUSP	Uspallata	7.67	40	*e*P	Pn	17 51 29.1	+0.4
ASAL	Salagasta	7.67	44	*e*P	Pn	17 51 29.1	+0.5
RTLS	Leoncito	8.05	39	*e*P	Pn	17 51 34.8	+0.8
RTLS				IAML		17 51 35.7	
	comp=Z,27nm,0.5s						
RTCV	Cerro Valdivia	8.39	42	*e*P	Pn	17 51 37.5	-0.9
RTLL	Cerro Villicun	8.85	41	*e*P	Pn	17 51 43.8	-0.8
RTLL				IAML		17 51 46.5	
	comp=N,35nm,0.3s						
RTLL				⇓*e*S	Sn	17 53 23.8	+0.7
AMOG	MOGNA	9.15	39	*e*P	Pn	17 51 47.7	-1.1
ACCO	Cerro Coronel	9.17	35	*e*P	Pn	17 51 48.9	-0.4
AROD	Rodeo	9.35	32	*e*P	Pn	17 51 53.0	+1.2
AGUA	GUANDACOL	10.37	34	*e*P	Pn	17 52 05.1	-0.4
APLL	PUNTA DE LOS L	10.62	45	*e*P	Pn	17 52 05.8	-3.1
APLL				IAML		17 52 08.5	
	comp=Z,4.9nm,0.2s						
ACLC	CERRO LA CRUZ	11.15	40	*e*P	Pn	17 52 13.5	-2.8

BJI ***15*** *17:50:32.2, 52.°56N×34.°94W, h9^{km}, mB5.1/7, mb4.7/12, Ms4.9/5, Ms7 4.8/5*

MOS ***15*** *17:50:33.9±0.8, 52.°72N×34.°54W, h10^{km}, mb4.7/39, Error ellipse: s-maj=10.0km s-min=7.3km az=67.1*

IDC ***15*** *17:50:34.3±0.6, 52.°73N×34.°50W, h0^{km}, mb4.1/18, mb1 4.3/21, mb1mx4.1/40, mbtmp4.1/21, ML3.5/3, MS3.6/24, Ms1 3.6/24, ms1mx3.5/43, Error ellipse: s-maj=17.8km s-min=11.7km az=1.0*

NEIC ***15*** *17:50:35.8±0.1, 52.°66N×34.°52W, h10^{km}, mb4.7/101, Error ellipse: s-maj=4.3km s-min=2.2km az=174.0*

ISCJB ***15*** *17:50:35.7±0.2, 52.°75N±0.°04×34.°57W±0.°03, h20^{km}, mb4.6/130, MS3.7/27, Error ellipse: s-maj=5.9km s-min=3.0km az=178.0*

GCMT ***15*** *17:50:37.8±0.4, 52.°58N±0.°03×34.°48W±0.°03, h26^{km}±1^{km}, MW4.8/62, Moment Tensor Solution. s18,c21; s62,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.67±.13; M$_{\theta\theta}$-0.11±.09; M$_{\phi\phi}$0.77±.10; M$_{r\theta}$0.51±.17; M$_{\theta\phi}$-1.45±.06; M$_{\phi r}$0.64±.17; Best double couple: M$_0$1.81100×10^{16} NP1:φ$_s$182.00000°, δ69.00000°, λ-31.00000°. NP2: φ$_s$284.00000°, δ61.00000°, λ-156.00000°. Principal axes: T 1.8670, Plg5.0000°, Azm235.0000°; N -0.1120, Plg53.0000°, Azm332.0000°; P -1.7560, Plg36.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 17:50:37.6±0.4, **52.°71N**±0.°07×**34.°64W**±0.°04, **h20**^{km}, **n244**, σ**1^{s}13**/240, **mb4.6**/130, **MS3.6**/27, **6C-1D**, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	Narsarsuaq	10.30	330	*e*Pn	Pn	17 53 04.3	+0.3
NRS	Narsarsuaq	10.30	330	*e*P	Pn	17 53 04.4	+0.3
IVI	Ivigtut	11.25	325	*e*Pn	Pn	17 53 17.1	+0.1
BORG	Borgarnes	13.87	24	LR	LR	17 57 23.4	
	comp=Z,139nm,19.0s,baz=244,slow=30						
DRLN	Deer Lake	14.79	266	*e*Pn	Pn	17 54 01.2	-4.2
DRLN				*e*Sn	Sn	17 56 34.0	-15
SFJD	Kangerlussuaq	16.34	337	P	Pn	17 54 25.3	-0.1
SFJD				pmax	pmax		
	comp=Z,34nm,1.2s						
SFJD	Kangerlussuaq	16.34	337	Pn	Pn	17 54 25.3	-0.1
	comp=Z,0.1nm,0.3s,baz=162,slow=10,SNR=4.6						
ESK	Eskdalemuir	18.57	69	*e*P	P	17 54 52.4	-0.7
	comp=Z,76nm,1.6s						
ESK	Eskdalemuir	18.57	69	*ce*P	Pn	17 54 54.4	+1.1
EKA	Eskdalemuir Ar	18.60	69	P	P	17 54 52.8	-0.6
	baz=275,slow=8.7,SNR=25						
GBN	Guysborough	18.98	258	*e*P	P	17 54 57.1	-0.5
	comp=Z,66nm,1.7s						
GBN				*e*Sn	Sn	17 58 15.4	-15
SCHQ	Schefferville	19.06	289	*e*P	P	17 54 58.0	-0.4
	comp=Z,45nm,1.8s						
SCHQ				*e*Sn	Sn	17 58 26.5	-5.4
SCHQ	Schefferville	19.06	289	P	P	17 54 58.0	-0.4
	comp=Z,0.2nm,0.3s,baz=94,slow=7.5,SNR=8.2						
SCHQ				LR	LR	18 01 30.6	
	comp=Z,216nm,18.3s,baz=140,slow=34						
SUMG	Summit	20.01	357	*e*P	P	17 55 08.2	-0.8
	comp=Z,14nm,1.0s						
SUMG	Summit	20.01	357	*e*P	P	17 55 08.2	-0.8
SUMG				pmax	pmax		
	comp=Z,14nm,1.0s						
FRB	Frobisher Bay	20.71	315	P	P	17 55 16.9	+0.7
FRB				pmax	pmax		
	comp=Z,28nm,1.4s						
FRB	Frobisher Bay	20.71	315	P	P	17 55 16.5	+0.3
	comp=Z,15nm,1.0s,baz=105,slow=12,SNR=20						
FRB				LR	LR	18 02 18.0	
	comp=Z,97nm,18.0s,baz=327,slow=34						
LMN	Caledonia Moun	20.73	263	*e*P	P	17 55 15.2	-1.5
	comp=Z,16nm,1.0s						
LMN				*e*S	S	17 58 55.3	-12
BATG	Bathurst New B	20.81	267	*e*P	P	17 55 17.2	-0.3
	comp=Z,27nm,1.3s						
BATG				*e*S	S	17 58 56.6	-12
POLO	Lamas de Olo	21.39	111	*e*P	P	17 55 26.5	+2.6
	comp=Z,14nm,1.5s						
JMIC	Jan Mayen	21.75	23	LR	LR	18 01 39.1	
	comp=Z,248nm,19.9s,baz=242,slow=31						
MVO	Moncorvo	21.96	111	*e*P	P	17 55 32.1	+2.1
	comp=Z,17nm,0.3s						
GGN	Saint George	22.34	263	*e*P	P	17 55 32.9	-1.0
	comp=Z,32nm,1.0s						
PCBR	Castelo Branco	22.60	114	*e*P	P	17 55 37.7	+0.9
	comp=Z,31nm,1.5s						
PMTG	Montargil	22.73	116	*e*P	P	17 55 42.2	+4.1
	comp=Z,10nm,1.3s						
PMRV	Marv??o	22.94	114	*e*P	P	17 55 41.6	+1.3
	comp=Z,18nm,1.5s						
PNCL	Nicolau / Gran	23.26	118	*e*P	P	17 55 43.7	+0.1
	comp=Z,16nm,1.3s						
ESDC	Sonseca Array	24.70	110	P	P	17 55 56.5	-0.7
	comp=Z,1.3nm,0.7s,baz=315,slow=9.1,SNR=11						
ESDC				LR	LR	18 03 35.8	
	comp=Z,153nm,18.7s,baz=310,slow=32						
ESLA	Sonseca Array	24.70	110	*e*P	P	17 55 56.3	-1.0
	comp=Z,5.5nm,1.1s						
ES19	SONSECA Array	24.72	109	*e*P	P	17 55 57.3	-0.1
WLF	Walferdange	25.51	80	*e*P	P	17 56 03.5	-0.8
	comp=Z,88nm,1.3s						
WLF	Walferdange	25.51	80	*e*P	P	17 56 03.5	-0.8
WLF				pmax	pmax		
	comp=Z,88nm,1.3s						
MOQ	Mont Orford	25.52	268	*e*P	P	17 56 03.4	-1.2
NBO00	NORSAR Array S	25.70	53	*e*P	P	17 56 03.9	-2.1
NB2	NORSAR Subarra	25.91	53	P	P	17 56 07.0	-0.9
	comp=Z,12nm,1.1s,baz=272,slow=9.3						
NB200	NORSAR Array S	25.91	53	*e*P	P	17 56 07.0	-0.9
NOA	NORSAR Array B	25.91	53	P	P	17 56 07.0	-0.9
	comp=Z,2.4nm,0.8s,baz=272,slow=9.0,SNR=5.0						
NOA				LR	LR	18 05 06.7	
	comp=Z,85nm,18.6s,baz=275,slow=34						
NC303	NORSAR Array S	25.98	53	*e*P	P	17 56 08.9	+0.4
NC602	NORSAR Array S	26.08	54	*e*P	P	17 56 09.7	+0.3
NC405	NORSAR Array S	26.15	53	*e*P	P	17 56 10.2	+0.1
FRNY	Flat Rock	26.58	269	*e*P	P	17 56 14.8	+0.7
	comp=Z,65nm,1.9s						
HFS	Hagfors	27.19	55	P	P	17 56 17.2	-2.3
	comp=Z,9.6nm,1.2s,baz=259,slow=13,SNR=3.8						
HFS				LR	LR	18 04 56.1	
	comp=Z,132nm,21.5s,baz=267,slow=32						
CLL	Collm	28.95	73	*e*P	P	17 56 33.5	-1.7
	comp=Z,24nm,1.8s						
CLL	Collm	28.95	73	*e*P	P	17 56 34.0	-1.2
	comp=Z,3.0nm,0.8s						
CLL				*e*(sP)	pP	17 56 41.0	+0.8
CLL				*i*		17 56 46.8	
CLL				*e*SS	SS	18 02 42.0	-45
CLL				Lmax		18 05 00.0	
CLL	Collm	28.95	73	*e*P	P	17 56 33.5	-1.7
CLL				pmax	pmax		
	comp=Z,24nm,1.8s						
DAVOX	Davos/Dischmat	29.00	84	LR	LR	18 07 23.3	
	comp=Z,88nm,18.9s,baz=290,slow=35						
MDT	Midelt	29.36	121	LR	LR	18 05 30.6	
	comp=Z,62nm,19.4s,baz=360,slow=31						
BRG	Berggiesshubel	29.66	74	*e*P	P	17 56 41.0	-0.5
	comp=Z,4.0nm,1.1s						
	comp=N,164nm,10.4s						
	comp=E,202nm,14.6s						
	comp=Z,185nm,13.8s						
BRG	Berggiesshubel	29.66	74	*e*P	P	17 56 41.0	-0.5
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,164nm,10.4s						
BRG				MLR	MLR		
	comp=E,202nm,14.6s						
BRG				MLR	MLR		
	comp=Z,185nm,13.8s						
N59A	State Game Lan	30.11	264	*e*P	P	17 56 45.8	+0.2
	comp=Z,22nm,1.3s						
MMNY	Mt. Morris Dam	30.34	268	*e*P	P	17 56 46.6	-1.1
	comp=Z,23nm,1.0s						
GEC2	GERESS Array S	30.35	78	*e*P	P	17 56 46.8	-1.0
	comp=Z,9.9nm,1.6s						
GEC2	GERESS Array S	30.35	78	*e*P	P	17 56 46.8	-1.0
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.6s						
GERES	GERESS Array B	30.35	78	P	P	17 56 47.1	-0.8
	comp=Z,1.2nm,0.6s,baz=301,slow=9.0,SNR=12						
GERES				LR	LR	18 08 00.0	
	comp=Z,47nm,19.1s,baz=298,slow=35						
GEA0	GERESS Array S	30.36	78	*e*P	P	17 56 47.0	-0.8
KBS	Kingsbay	30.74	16	*e*P	P	17 56 52.2	+1.4
	comp=Z,30nm,1.1s						
KBS	Kingsbay	30.74	16	*e*P	P	17 56 52.2	+1.4
KBS				pmax	pmax		
	comp=Z,30nm,1.1s						
PAGS	Pennsylvania G	31.10	263	*e*P	P	17 56 53.8	-0.6
	comp=Z,6.9nm,0.8s						
ARA0	ARCESS Array S	31.85	35	*e*P	P	17 56 59.9	-0.9
ARCES	ARCESS Array B	31.85	35	P	P	17 56 59.9	-0.9
	comp=Z,2.5nm,0.6s,baz=261,slow=7.2,SNR=16						
RES	Resolute Bay	32.30	334	*e*P	P	17 57 04.7	+0.2
	comp=Z,3.8nm,0.9s						
RES	Resolute Bay	32.30	334	*e*P	P	17 57 04.7	+0.2
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FIA0	FINESS Array S	32.97	50	*e*P	P	17 57 09.8	-0.8
FIA0	FINESS Array S	32.97	50	*e*P	P	17 57 09.8	-0.8
FINES	FINESS Array B	32.97	50	P	P	17 57 09.8	-0.8
	comp=Z,3.4nm,0.7s,baz=297,slow=8.4,SNR=9.7						
FINES				LR	LR	18 08 37.9	
	comp=Z,139nm,21.3s,baz=281,slow=33						
FCC	Fort Churchill	33.02	305	*e*P	P	17 57 11.5	+0.6
	comp=Z,19nm,1.8s						
FCC	Fort Churchill	33.02	305	*e*P	P	17 57 11.5	+0.6
FCC				pmax	pmax		
	comp=Z,19nm,1.8s						
VSU	Vasula	34.07	55	*i* P	P	17 57 18.9	-1.2
VSU				pmax	pmax		
	comp=Z,18nm,1.0s						
KEST	Kesra	35.16	101	P	P	17 57 28.9	-1.0
	comp=Z,2.5nm,0.4s,baz=348,slow=16,SNR=3.0						
KEST				LR	LR	18 09 48.0	
	comp=Z,112nm,19.3s,baz=294,slow=33						
P51A	Williamsport	35.40	268	*e*P	P	17 57 32.4	+0.6
	comp=Z,17nm,0.4s						
BUR04	Bucovina Ar. S	37.71	73	*e*P	P	17 57 51.7	+0.1
KIEV	Kiev	38.47	67	*i* P	P	17 57 55.3	-2.5
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKASG	Malin Array Be	38.47	67	*ce*P	P	17 57 56.9	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	38.47	67	P	P	17 57 56.4	-1.5
	comp=Z,1.3nm,0.6s,baz=303,slow=8.3,SNR=5.5						
AKASG				LR	LR	18 12 48.8	
	comp=Z,52nm,18.4s,baz=280,slow=35						
AKBB	Malin Array Si	38.47	67	*e*P	P	17 57 58.3	+0.5
	comp=Z,18nm,1.6s						
AKBB	Malin Array Si	38.47	67	*e*P	P	17 57 58.3	+0.5
AKBB				pmax	pmax		
	comp=Z,18nm,1.6s						
W52A	Murphy	38.77	263	*e*P	P	17 58 00.9	+0.3
	comp=Z,30nm,0.3s						
KLMR	Klimovskoe	39.35	48	*e*P	P	17 58 02.9	-2.1
KLMR				pmax	pmax		
	comp=Z,19nm,1.3s						
KLMR	Klimovskoe	39.35	48	*e*P	P	17 58 03.0	-2.1
KLMR				AMP		17 58 05.8	
	comp=Z,19nm,1.3s						
SIUC	Southern Illin	40.26	271	*e*P	P	17 58 13.1	+0.2
	comp=Z,20nm,0.9s						
OBN	Obninsk	40.35	57	*ce*P	P	17 58 12.2	-1.2
OBN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,80nm,15.0s						
ECSD	EROS Data Cent	41.07	283	*e*P	P	17 58 20.3	+0.8
	comp=Z,4.1nm,0.9s						
YKA	Yellowknife Ar	41.23	316	P	P	17 58 20.2	-0.3
	comp=Z,1.2nm,0.8s,baz=62,slow=8.9,SNR=15						

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YKB5  Yellowknife Ar     41.23 316  eP      P       17 58 20.6  0.0
CCM   Cathedral Cave     41.27 272  eP      P       17 58 21.7 +0.4
      comp=Z,7.8nm,0.8s
CCM   Cathedral Cave     41.27 272  eP      P       17 58 21.7 +0.4
CCM                                 pmax    pmax
      comp=Z,8.0nm,0.8s
T42A  Van Buren          41.84 271  eP      P       17 58 25.8 -0.1
      comp=Z,4.6nm,0.8s
LPSR  Galich'ya Gora     42.79  59  eP      P       17 58 32.6 -0.8
LPSR                                pmax    pmax
      comp=Z,9.0nm,0.5s
VSR   Storozhevoye       43.64  61  iP      P       17 58 37.8 -2.5
VSR                                 pmax    pmax
      comp=Z,10.0nm,0.9s
W41B  Gary Mavity, V     43.77 270  eP      P       17 58 41.4 -0.1
      comp=Z,7.7nm,0.8s
X40A  Basin Creek Fa     44.59 270  eP      P       17 58 47.9 -0.3
      comp=Z,9.3nm,0.8s
W39A  Magazine           44.69 271  eP      P       17 58 48.8 -0.1
      comp=Z,12nm,1.0s
MIAR  Mount Ida          45.00 270  eP      P       17 58 51.0 -0.4
      comp=Z,10nm,1.0s
MIAR  Mount Ida          45.00 270  eP      P       17 58 51.0 -0.4
MIAR                                pmax    pmax
      comp=Z,10.0nm,1.0s
VRH   Novokhopyorsk      45.00  60  eP      P       17 58 49.9 -1.3
VRH                                 pmax    pmax
      comp=Z,10.0nm,0.7s
BR101 Keskin Array S     47.25  77  eP      P       17 59 08.4 -0.8
BR131 Keskin Array S     47.25  77  eP      P       17 59 07.9 -1.4
BRTR  Keskin Array B     47.25  77  iP      P       17 59 09.5 +0.2
BRTR                                pmax    pmax
      comp=Z,2.0nm,0.8s
BRTR  Keskin Array B     47.25  77  P       P       17 59 08.4 -0.8
      comp=Z,2.1nm,0.7s,baz=297,slow=5.4,SNR=8.7
EPYK  Eagle Plains       47.55 328  eP      P       17 59 11.2 +0.1
      comp=Z,11nm,1.0s
N23A  Red Feather La     48.28 286  eP      P       17 59 17.8 +0.3
      comp=Z,6.5nm,0.8s
LKWY  Lake               48.55 292  eS      S       18 06 22.1 +2.2
TOA1  Torodi Ar. Sit     48.94 130  eP      P       17 59 21.0 -1.3
TOA0  Torodi Ar. Sit     48.94 130  eP      P       17 59 20.8 -1.6
TORD  Torodi Ar. Bea     48.94 130  P       P       17 59 21.0 -1.4
      comp=Z,2.2nm,1.0s,baz=331,slow=10,SNR=10.0
TORD                                LR      LR      18 18 08.9
      comp=Z,56nm,18.2s,baz=340,slow=34
PD31  Pinedale Array     49.19 290  eP      P       17 59 23.7 -0.7
PDAR  Pinedale Array     49.19 290  eP      P       17 59 23.7 -0.7
PDAR  Pinedale Array     49.19 290  P       P       17 59 23.9 -0.4
      comp=Z,0.9nm,0.6s,baz=51,slow=8.0,SNR=12
PDAR                                LR      LR      18 18 30.8
      comp=Z,93nm,19.3s,baz=38,slow=34
AMTX  Amarillo           49.69 277  eP      P       17 59 28.1  0.0
      comp=Z,10nm,1.0s
KIV   Kislovodsk         49.81  67  eP      P       17 59 27.4 -1.5
KIV                                 pmax    pmax
      comp=Z,6.0nm,1.1s
TOLK  Toolik Lake Re     49.87 334  eP      P       17 59 29.3 +0.4
      comp=Z,38nm,1.9s
EGAK  Eagle              49.99 328  eP      P       17 59 30.1 +0.3
      comp=Z,20nm,1.6s
ARU   Arti               50.13  46  eP      P       17 59 30.4 -0.6
      comp=Z,3.9nm,0.8s
ARU   Arti               50.13  46d iP      P       17 59 30.0 -1.0
ARU                                                 18 01 23.8
ARU                                 S       S       18 06 42.5 +1.3
ARU                                 SS      SS      18 10 15.7 +1.9
ARU                                 pmax    pmax
      comp=Z,5.0nm,0.8s
COLD  Coldfoot           51.04 333  eP      P       17 59 38.3 +0.6
      comp=Z,4.1nm,1.0s
HWUT  Hardware Ranch     51.08 290  eP      P       17 59 39.4 +0.7
      comp=Z,4.4nm,0.8s
NRIK  Noril'sk           51.18  23  LR      LR      18 21 35.8
      comp=Z,41nm,18.2s,baz=266,slow=36
SCRK  Sand Creek         51.44 328  eP      P       17 59 41.7 +0.8
      comp=Z,9.2nm,0.8s
PV12  Saucer Basin,      51.64 285  eP      P       17 59 44.0 +1.2
      comp=Z,11nm,1.2s
PV11  David Mesa, Pa     51.69 285  eP      P       17 59 44.9 +1.6
      comp=Z,12nm,1.0s
PV03  Paradox Valley     51.70 285  eP      P       17 59 44.6 +1.2
      comp=Z,7.0nm,1.1s
PV16  Nyswonger Mesa     51.71 285  eP      P       17 59 44.7 +1.3
      comp=Z,12nm,0.9s
PV20  West Nyswonger     51.72 285  eP      P       17 59 44.4 +1.0
      comp=Z,7.9nm,0.9s
PV14  Lion Creek, Pa     51.73 285  eP      P       17 59 45.0 +1.4
      comp=Z,10nm,1.1s
PV10  Paradox Valley     51.74 285  eP      P       17 59 45.0 +1.3
      comp=Z,14nm,0.9s
PV19  Morning Glory      51.75 285  eP      P       17 59 44.9 +1.2
      comp=Z,5.8nm,0.9s
PV13  Radium Mtn., P     51.75 285  eP      P       17 59 45.3 +1.6
      comp=Z,5.4nm,1.1s
PV17  East Wray Mesa     51.75 285  eP      P       17 59 45.2 +1.5
      comp=Z,10nm,0.8s
SPUT  South Promonto     51.78 290  eP      P       17 59 44.3 +0.5
      comp=Z,11nm,1.4s
IL1   Eielson Array      51.81 330  eP      P       17 59 44.0 +0.6
IL1                                 ePcP    PcP     18 00 56.2 -0.1
ILAR  Eielson Array      51.81 330  P       P       17 59 43.9 +0.4
      comp=Z,2.1nm,0.9s,baz=43,slow=5.6,SNR=24
ILB   Eielson Array      51.81 330  eP      P       17 59 44.5 +1.0
      comp=Z,21nm,1.7s
DBIC  Dimbokro           51.97 141  LR      LR      18 18 44.7
      comp=Z,87nm,21.2s,baz=320,slow=33
HDA   Harding Lake       52.08 329  eP      P       17 59 46.4 +0.8
      comp=Z,7.8nm,0.9s
MDM   Murphy Dome        52.08 330  eP      P       17 59 46.0 +0.4
      comp=Z,7.5nm,1.1s
SRU   San Rafael Swe     52.12 287  eP      P       17 59 47.0 +0.6
      comp=Z,3.3nm,0.8s
SRU   San Rafael Swe     52.12 287  eP      P       17 59 47.0 +0.6
SRU                                 pmax    pmax
      comp=Z,3.0nm,0.8s
TMUT  Trail Mountain     52.39 288  eP      P       17 59 49.9 +1.4
      comp=Z,16nm,1.0s
ANMO  Albuquerque        52.52 280ceP       P       17 59 50.0 +0.6
ANMO                                pmax    pmax
      comp=Z,7.0nm,2.5s
DUG   Dugway, Tooele     52.72 290  eP      P       17 59 52.2 +1.5
      comp=Z,27nm,0.9s
DUG   Dugway, Tooele     52.72 290  eP      P       17 59 52.3 +1.5
DUG                                 pmax    pmax
      comp=Z,27nm,0.9s
IM3   Indian Mountai     52.92 333  eP      P       17 59 52.3 +0.6
MTPU  Mount Pierson      53.80 287  eP      P       18 00 00.6 +1.6
      comp=Z,18nm,1.8s
SIRT  Sirnak             53.90  74  eP      P       18 00 00.5 +1.1
      comp=Z,42nm,1.4s
NLWA  Neilton Lookou     53.99 303  eP      P       18 00 01.1 +1.1
      comp=Z,46nm,1.8s
PKCU  Pink Cliffs        54.28 287  eP      P       18 00 02.9 +0.4
      comp=Z,5.0nm,0.8s
CAST  Castle Rocks       54.36 331  eP      P       18 00 01.9 -0.4
      comp=Z,14nm,1.3s
PSUT  Pine Spring        54.43 289  eP      P       18 00 04.6 +1.1
      comp=Z,5.8nm,0.9s
WVOR  Wild Horse Val     54.50 295  eP      P       18 00 04.8 +1.0
      comp=Z,23nm,1.9s
WVOR  Wild Horse Val     54.50 295  eP      P       18 00 04.8 +1.0
WVOR                                pmax    pmax
      comp=Z,23nm,1.9s
SZCU  Shurtz Canyon      54.62 287  eP      P       18 00 05.2 +0.3
      comp=Z,3.4nm,0.8s
KNK   Knik Glacier       54.72 327  eP      P       18 00 05.3 +0.4
      comp=Z,106nm,2.0s
LTX   Lajitas            54.76 273  eP      P       18 00 05.8  0.0
LTX   Lajitas            54.76 273  eP      P       18 00 05.8  0.0
TXAR  Lajitas Array      54.76 273  P       P       18 00 05.8  0.0
      comp=Z,0.7nm,0.7s,baz=64,slow=8.5,SNR=5.8
TXAR                                LR      LR      18 22 14.0
      comp=Z,89nm,18.3s,baz=0.0,slow=35
PPLA  Purkeypile         54.79 330  eP      P       18 00 05.3 -0.3
      comp=Z,58nm,1.8s
CCUT  Cedar City         54.81 288  eP      P       18 00 07.5 +1.2
      comp=Z,3.0nm,0.5s
KNB   Kanab              54.87 287  eP      P       18 00 07.5 +0.9
      comp=Z,3.9nm,1.0s
KNB   Kanab              54.87 287  eP      P       18 00 07.5 +0.9
KNB                                 pmax    pmax
      comp=Z,4.0nm,1.0s
LCMT  Little Creek M     55.11 287  eP      P       18 00 08.7 +0.4
      comp=Z,10nm,1.9s
ABKAR Akbulak array      55.41  52  eP      P       18 00 09.2 -0.9
SUA   Susitna One        55.42 328  eP      P       18 00 11.1 +1.0
      comp=Z,70nm,2.0s
LNIG  Linares            55.44 266  eP      P       18 00 11.1 +0.5
      comp=Z,8.8nm,1.5s
R11A  Troy Canyon, C     55.55 290  eP      P       18 00 11.7 +0.2
      comp=Z,3.3nm,1.4s
X16A  Lo Mia Camp, P     55.85 283  eP      P       18 00 15.1 +1.4
      comp=Z,3.9nm,0.9s
KVN   Kaiserville        56.50 292  eP      P       18 00 18.9 +0.6
      comp=Z,3.0nm,0.8s
KVN   Kaiserville        56.50 292  eP      P       18 00 18.9 +0.6
KVN                                 pmax    pmax
      comp=Z,3.0nm,0.8s
PAHR  Pah Rah Range      56.77 293  eP      P       18 00 20.9 +0.8
      comp=Z,7.4nm,1.2s
W13A  Hualapai Mount     56.81 286  eP      P       18 00 21.0 +0.4
      comp=Z,14nm,1.9s
RSO   Redoubt South      56.82 329  eP      P       18 00 21.1 +0.9
TPNV  Topopah Spring     56.90 289  eP      P       18 00 20.8 -0.3
      comp=Z,16nm,1.8s
TPNV  Topopah Spring     56.90 289  eP      P       18 00 20.8 -0.3
TPNV                                pmax    pmax
      comp=Z,16nm,1.8s
NV11  Mina Array Sit     56.96 291  eP      P       18 00 21.8 +0.2
      comp=Z,0.4nm,0.6s
ANM   Nome               57.02 337  eP      P       18 00 21.7 +0.3
      comp=Z,4.1nm,1.0s
ANM   Nome               57.02 337  eP      P       18 00 21.7 +0.3
ANM                                 pmax    pmax
      comp=Z,4.0nm,1.0s
PNTR  Pine Nut           57.32 293  eP      P       18 00 24.6 +0.4
      comp=Z,5.2nm,0.7s
PTGA  Pitinga            57.33 211  eP      P       18 00 23.9 -0.1
      comp=Z,6.4nm,0.9s
BRVK  Borovoye           57.44  44  eP      P       18 00 23.7 -0.8
      comp=Z,4.1nm,1.2s
BRVK  Borovoye           57.44  44ceP       P       18 00 25.1 +0.6
BRVK                                pmax    pmax
      comp=Z,5.0nm,1.7s
CCIG  Comitan            57.65 253  eP      P       18 00 26.6  0.0
      comp=Z,47nm,1.6s
ROSC  El Rosal           57.78 229  eP      P       18 00 29.2 +1.5
      comp=Z,30nm,0.8s
ROSC  El Rosal           57.78 229  P       P       18 00 29.2 +1.5
      comp=Z,32nm,0.7s,baz=91,slow=9.7,SNR=16
ROSC                                LR      LR      18 23 43.9
      comp=Z,27nm,20.7s,baz=226,slow=34
ORV   Oroville           58.05 295  eP      P       18 00 30.3 +1.3
      comp=Z,8.4nm,1.7s
ORV   Oroville           58.05 295  eP      P       18 00 30.3 +1.3
ORV                                 pmax    pmax
      comp=Z,8.0nm,1.7s
Y12C  Blythe             58.13 285  eP      P       18 00 30.2 +0.6
      comp=Z,8.6nm,1.0s
DAC   Darwin (Calif)     58.14 289  eP      P       18 00 30.6 +0.7
      comp=Z,10nm,1.4s
DAC   Darwin (Calif)     58.14 289  eP      P       18 00 30.6 +0.7
DAC                                 pmax    pmax
      comp=Z,10.0nm,1.4s
AFDM  Forest Hills D     58.18 294  eP      P       18 00 30.9 +0.9
      comp=Z,17nm,1.9s
BILL  Bilibino           58.56 351  eP      P       18 00 31.0 -1.1
BILL                                pmax    pmax
      comp=Z,1.0nm,1.0s
ZAIG  Zacatecas          58.91 267  eP      P       18 00 35.6 +0.1
ISA   Isabella, Lake     59.08 289  eP      P       18 00 36.8 +0.5
      comp=Z,19nm,1.8s
ISA   Isabella, Lake     59.08 289  eP      P       18 00 36.8 +0.5
ISA                                 pmax    pmax
      comp=Z,19nm,1.8s
XPFO  Pion Flat          59.37 286  eP      P       18 00 40.1 +1.7
      comp=Z,24nm,1.8s
PFO   Pinyon Flats O     59.37 286  eP      P       18 00 40.0 +1.6
      comp=Z,23nm,1.8s
PFO   Pinyon Flats O     59.37 286  eP      P       18 00 40.0 +1.6
PFO                                 pmax    pmax
      comp=Z,23nm,1.8s
MOIG  Morelia            60.41 264  eP      P       18 00 47.5 +1.7
OTUK  Ortayu             61.87  46  P       P       18 00 55.7 +0.6
OTUK                                pmax    pmax
      comp=Z,3.0nm,0.8s
ZALV  Zalesovo Beam      62.40  36  LR      LR      18 28 30.2
      comp=Z,50nm,19.7s,baz=254,slow=36
KURK  Kurchatov          62.62  41  eP      P       18 00 59.8 -0.3
      comp=Z,15nm,1.8s
KURK  Kurchatov          62.62  41ceP       P       18 01 00.2 +0.1
KURK                                pmax    pmax
      comp=Z,4.0nm,1.3s
KK31  Karatay Array      64.92  51  eP      P       18 01 14.4 -1.0
KK31  Karatay Array      64.92  51  eP      P       18 01 14.4 -1.0
KKAR  Karatay Array      64.92  51  eP      P       18 01 14.2 -1.2
KKAR  Karatay Array      64.92  51  eP      P       18 01 14.2 -1.2
MAKZ  Makanchi           67.08  42  eP      P       18 01 28.8 -0.4
      comp=Z,3.1nm,1.1s
MAKZ  Makanchi           67.08  42  eP      P       18 01 28.8 -0.4
MAKZ                                pmax    pmax
      comp=Z,3.0nm,1.1s
MK31  Makanchi Array     67.22  42  eP      P       18 01 29.7 -0.4
      comp=Z,2.7nm,1.1s
MK31  Makanchi Array     67.22  42  eP      P       18 01 29.7 -0.4
MK31                                pmax    pmax
      comp=Z,3.0nm,1.1s
MK32  Makanchi Array     67.22  42  eP      P       18 01 29.6 -0.4
MKAR  Makanchi Array     67.22  42  eP      P       18 01 29.8 -0.3
      comp=Z,14nm,0.6s
MKAR  Makanchi Array     67.22  42  eP      P       18 01 29.8 -0.3
MKAR                                pmax    pmax
      comp=Z,14nm,0.6s
MKAR  Makanchi Array     67.22  42  P       P       18 01 29.6 -0.4
      comp=Z,1.2nm,0.5s,baz=332,slow=4.7,SNR=29
MK01  Makanchi Array     67.24  42  eP      P       18 01 29.3 -0.9
BTK   Batken             67.40  53  eP      P       18 01 31.4  0.0
      comp=Z,7.1nm,0.3s
BTK   Batken             67.40  53  eP      P       18 01 31.5  0.0
BTK                                 pmax    pmax
      comp=Z,7.0nm,0.3s
ARSB  Arslanbob          67.46  51  eP      P       18 01 31.2 -0.7
      comp=Z,17nm,1.6s
GAR   Garm               67.97  54  eP      P       18 01 35.1  0.0
      comp=Z,12nm,0.9s
GAR   Garm               67.97  54  eP      P       18 01 35.1  0.0
GAR                                 pmax    pmax
      comp=Z,12nm,0.9s
BDFB  Brasilia           69.04 194  LR      LR      18 26 55.8
      comp=Z,55nm,18.8s,baz=244,slow=32
KSH   Kashi              70.29  50  P       P       18 01 51.6 +2.1
KSH                                 pP      pP      18 01 54.9 +0.1
KSH                                 PP      PP      18 04 27.9 +3.3
KSH                                 S       S       18 10 58.0 -2.3
KSH                                 pmax    pmax
      comp=Z,160nm,5.2s
KSH                                 LR      LR
      comp=Z,150nm,5.2s
KSH                                 LR      LR
      comp=Z,120nm,4.7s
KSH                                 LR      LR
      comp=Z,390nm,5.6s
WMQ   Urumqi             71.82  40  eP      P       18 02 00.9 +2.3
WMQ                                 LR      LR
      comp=Z,110nm,25.1s
WMQ                                 LR      LR
      comp=Z,110nm,21.1s
PETK  Petropavlovsk-     74.05 352  LR      LR      18 36 06.2
      comp=Z,77nm,18.1s,baz=43,slow=37
SONA1 Songino Array      74.46  26  eP      P       18 02 14.1 -0.1
SONA0 Songino Array      74.47  26  eP      P       18 02 14.6 +0.3
SONM  Songino Array      74.47  26  P       P       18 02 14.6 +0.3
      comp=Z,0.5nm,0.7s,baz=306,slow=5.2,SNR=3.2
LPAZ  La Paz             74.57 213  eP      P       18 02 14.8 -0.8
      comp=Z,8.7nm,1.4s
LPAZ  La Paz             74.57 213  eP      P       18 02 14.8 -0.8
LPAZ                                pmax    pmax
      comp=Z,9.0nm,1.4s
LPAZ  La Paz             74.57 213  P       P       18 02 15.5 -0.1
      comp=Z,1.5nm,0.7s,baz=57,slow=3.1,SNR=3.8
ULN   Ulaanbaatar        74.62  26  eP      P       18 02 14.9 -0.3
      comp=Z,8.7nm,1.7s
ULN   Ulaanbaatar        74.62  26  eP      P       18 02 14.9 -0.3
ULN                                 pmax    pmax
      comp=Z,9.0nm,1.7s
SPB   Sao Paulo          76.79 192  eP      P       18 02 27.8 +0.4
      comp=Z,45nm,1.7s
MNMC  Minye Minye        77.70 214  eP      P       18 02 32.2 -0.8
      comp=Z,36nm,1.8s
KLR   Kul'dur            77.78   9  LR      LR      18 34 44.6
      comp=Z,25nm,19.7s,baz=6.0,slow=34
GTA   Gaotai             80.11  34  eP      P       18 02 50.3 +4.3
GTA                                 pP      pwP     18 02 56.6 +0.2
GTA                                 sP      sP      18 02 59.5 +6.2
GTA                                 pmax    pmax
      comp=Z,120nm,5.7s
GTA                                 LR      LR
      comp=Z,130nm,17.1s
GTA                                 LR      LR
      comp=Z,160nm,18.4s
GTA                                 LR      LR
      comp=Z,80nm,19.0s
LVC   Limon Verde        80.72 212  eP      P       18 02 48.5 -1.0
      comp=Z,22nm,1.4s
LVC   Limon Verde        80.72 212  eP      P       18 02 48.6 -1.0
LVC                                 pmax    pmax
      comp=Z,21nm,1.4s
HHC   Hu-ho-hao-te       82.33  25  eP      P       18 02 56.6 -1.1
HHC                                 pmax    pmax
      comp=Z,7.0nm,0.9s
HHC                                 pmax    pmax
      comp=Z,63nm,3.9s
ASAJ  Asahikawa          83.52   2  LR      LR      18 40 21.3
      comp=Z,54nm,18.4s,baz=22,slow=36
LZH   Lanzhou            84.47  33  eP      P       18 03 07.5 -1.4
LZH                                 pP      PcP     18 03 12.4 -0.1
LZH                                 sP      pP      18 03 14.6  0.0
LZH                                 ePP     PP      18 06 23.8 +0.4
LZH                                 pmax    pmax
      comp=Z,20nm,1.3s
LZH                                 pmax    pmax
      comp=Z,78nm,8.0s
LZH                                 LR      LR
      comp=Z,260nm,17.0s
LZH                                 LR      LR
      comp=Z,270nm,17.2s
LZH                                 LR      LR
      comp=Z,370nm,19.3s
NJ2   Nanjing            92.48  22  eP      P       18 03 47.8 +0.8
NJ2                                 pmax    pmax
      comp=Z,10.0nm,0.5s
KMI   Kunming            94.06  38  P       P       18 03 52.0 -2.7
KMI                                 pmax    pmax
      comp=Z,6.0nm,1.7s
WRA   Warramunga Arr    146.19  19  PKPbc   PKPdf   18 10 16.2 +0.8
      comp=Z,1.1nm,0.9s,baz=343,slow=3.3,SNR=8.2
WR1   Warramunga Arr    146.19  19  ePKPdf  PKPdf   18 10 16.2 +0.8
ASAR  Alice Springs     149.72  21  PKPbc   PKPbc   18 10 25.4 -0.3
      comp=Z,0.8nm,0.9s,baz=329,slow=2.0,SNR=6.4
```

IDC 15 17:50:39.9±56.0**, 23°.13S**×**178°.46W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/23**, mbtmp3.9**/3**, Error ellipse: s-maj=1021.0km s-min=159.3km az=86.0, South of Fiji Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                     Op      ISC        h  m  s   ISC
STKA  Stephens Creek     36.32 247  P       P       17 57 44.0 -1.6
      0.8nm,0.5s,baz=87,slow=10,SNR=4.1
ASAR  Alice Springs      43.56 259  P       P       17 58 45.6 -0.3
      0.7nm,0.4s,baz=91,slow=7.4,SNR=29
WRA   Warramunga Arr     43.87 265  P       P       17 58 49.5 +1.0
      0.8nm,0.3s,baz=99,slow=7.5,SNR=42
```

IDC ***15*** *18:08:44.1±0.8, 15°.11S×173°.63W, h0^{km}, mb4.1/8, mb1 4.4/8, mb1mx4.1/24, mbtmp4.1/8, MS3.6/9, Ms1 3.6/9, ms1mx3.3/34, Error ellipse: s-maj=47.3km s-min=17.5km az=140.0*

NEIC ***15*** *18:08:45.8±0.2, 15°.17S×173°.63W, h10^{km}, mb4.8/29, Error ellipse: s-maj=8.1km s-min=4.9km az=125.0*

ISCJB ***15*** *18:08:47.4±0.3, 15°.20S±0°.07×173°.71W±0°.08, h30^{km}, mb4.7/40, MS3.6/8, Error ellipse: s-maj=13.9km s-min=6.4km az=41.1*

ISC 15 18:08:48.9±0.6**, 15°.07S**±0°.09×**173°.7W**±0°.1**, h30^{km}, n63, $\sigma 0^{s}.85$**/54**, mb4.7**/40**, MS3.6**/9**, Tonga Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                     Op      ISC        h  m  s   ISC
NIUE  Niue                5.38 138  ePn     Pn      18 10 01.7 -5.4
NIUE                                eSn     Sn      18 10 52.6  -15
FUNA  Funafuti            9.51 312  ePn     Pn      18 11 03.8 -0.2
KNTN  Kanton             12.37   9  ePn     Pn      18 11 41.1 -1.9
RAR   Rarotonga          14.58 117  ePn     Pn      18 12 06.5 -6.7
DZM   Mont Dzumac        20.06 247  LR      LR      18 19 55.1
      comp=Z,189nm,19.7s,baz=20,slow=33
XMAS  Kiritimati         23.41  45  eP      P       18 13 56.6 +1.1
      163nm,1.1s
MXZ   Matakaoa Point     23.50 196  eP      P       18 13 56.4 +0.2
      60nm,1.4s
URZ   Urewera            24.49 198  eP      P       18 14 04.2 -1.2
      20nm,1.1s
URZ   Urewera            24.49 198  P       P       18 14 04.6 -0.8
      4.3nm,0.5s,baz=316,slow=3.5,SNR=6.7
URZ                                 LR      LR      18 22 58.0
      comp=Z,105nm,18.6s,baz=37,slow=35
BFZ   Birch Farm         26.98 197  eP      P       18 14 29.8 +1.8
      63nm,1.9s
THZ   Tophouse           29.02 201  eP      P       18 14 46.4 +0.2
      69nm,1.8s
KHZ   Kahutara           29.39 199  eP      P       18 14 47.5 -1.9
      24nm,1.1s
LTZ   Lake Taylor        30.14 201  eP      P       18 14 56.0 -0.1
      108nm,1.8s
OXZ   Oxford             30.70 201  eP      P       18 14 59.5 -1.5
      64nm,1.7s
FOZ   Fox Glacier        31.68 203  eP      P       18 15 07.9 -1.7
      27nm,1.1s
MLZ   Mavora Lakes       33.88 203  eP      P       18 15 27.7 -1.2
      43nm,1.4s
DCZ   Deep Cove          34.33 204  eP      P       18 15 31.6 -1.1
      103nm,1.8s
WHZ   Wether Hill Ro     34.38 203  eP      P       18 15 32.5 -0.8
      151nm,1.8s
H11S2 WAKE ISLAND Hy     38.53 329  T       T       18 56 55.1
      baz=147,slow=74
H11S3 WAKE ISLAND Hy     38.54 329  T       T       18 56 53.8
      baz=147,slow=74
H11S1 WAKE ISLAND Hy     38.55 329  T       T       18 56 56.4
      baz=147
CAN   Canberra           39.00 232  eP      P       18 16 12.5 -0.4
      68nm,2.0s
H11N3 WAKE ISLAND Hy     39.48 331  T       T       18 58 53.6
      baz=148,slow=80
H11N1 WAKE ISLAND Hy     39.48 331  T       T       18 58 53.1
      baz=148,slow=80
H11N2 WAKE ISLAND Hy     39.49 331  T       T       18 58 46.2
      baz=148,slow=80
COEN  Coen               41.71 266  eP      P       18 16 37.1 +1.6
      6.0nm,1.0s
TOO   Toolangi           42.45 230  eP      P       18 16 41.3  0.0
      26nm,1.6s
STKA  Stephens Creek     43.95 240  eP      P       18 16 53.2 -0.2
      0.9nm,0.9s
STKA  Stephens Creek     43.95 240  P       P       18 16 53.2 -0.2
      1.5nm,0.4s,baz=96,slow=10,SNR=9.5
STKA                                LR      LR      18 32 54.4
      comp=Z,47nm,19.3s,baz=26,slow=33
MCQ   Macquarie Isla     44.73 202  eP      P       18 16 58.4 -0.9
      545nm,1.7s
BBOO  Buckleboo          48.73 239  eP      P       18 17 31.0 +0.1
      42nm,1.9s
WB2   Warramunga Arr     49.62 257  eP      P       18 17 37.6 -0.4
WRAB  Tennant Creek      49.62 257  eP      P       18 17 38.8 +0.8
      13nm,1.7s
WR1   Warramunga Arr     49.63 257  eP      P       18 17 38.2 +0.1
      8.0nm,1.3s
WR1                                 ePcP    PcP     18 18 59.1 -0.2
WRA   Warramunga Arr     49.63 257  P       P       18 17 38.2 +0.1
      1.2nm,0.8s,baz=95,slow=6.8,SNR=18
WRA                                 PcP     PcP     18 18 59.1 -0.2
      0.4nm,0.8s,baz=93,slow=3.4,SNR=2.8
AS01  Alice Springs      49.89 252  eP      P       18 17 39.8 -0.3
AS31  Alice Springs      49.94 252  eP      P       18 17 40.6 +0.3
      1.6nm,0.8s
ASAR  Alice Springs      49.94 252  P       P       18 17 40.5 +0.1
      3.8nm,0.5s,baz=89,slow=7.7,SNR=104
ASAR                                LR      LR      18 37 21.1
      comp=Z,61nm,19.7s,baz=90,slow=34
FORT  Forrest            55.30 243  eP      P       18 18 20.1 +0.1
      16nm,0.9s
FITZ  Fitzroy Crossi     57.99 258  LR      LR      18 41 44.8
      comp=Z,45nm,18.0s,baz=108,slow=34
TNTI  Ternate            60.33 280  eP      P       18 18 56.2 +0.7
      18nm,1.1s
KMRM  Mail Ridge         71.98  38  eP      P       18 20 11.3 +1.5
      36nm,1.4s
```

NV01	**Mina Array Sit**	**74.28**	**42**	*e*P	**P**	**18 20 24.3**	**+0.6**
NVAR	**Mina Array Bea**	**74.28**	**42**	P	**P**	**18 20 24.0**	**+0.3**
	1.9nm,0.6s,baz=229,slow=9.3,SNR=15						
NVAR				LR	LR	18 47 01.2	
	comp=Z,42nm,21.8s,baz=178,slow=31						
KVN	**Kaiserville**	**74.76**	**42**	*e*P	**P**	**18 20 26.9**	**+0.5**
	14nm,1.9s						
QSPA	**South Pole Qui**	**74.98**	**180**	*e*P	**P**	**18 20 27.5**	**+0.3**
	6.9nm,0.8s						
PINE	**Pine Mountain**	**75.81**	**36**	*e*P	**P**	**18 20 33.4**	**+1.1**
	5.9nm,0.8s						
319A	**Douglas**	**77.12**	**52**	*e*P	**P**	**18 20 40.5**	**+0.6**
	4.9nm,0.8s						
G08A	**Pilot Rock**	**77.84**	**36**	*e*P	**P**	**18 20 44.7**	**+1.1**
	6.3nm,1.3s						
TMUT	**Trail Mountain**	**79.44**	**44**	*e*P	**P**	**18 20 53.7**	**+0.9**
	3.3nm,0.9s						
HLID	**Hailey**	**79.56**	**39**	*e*P	**P**	**18 20 53.7**	**+0.5**
	2.7nm,0.8s						
TCUT	**Toone Canyon**	**80.20**	**43**	*e*P	**P**	**18 20 57.6**	**+0.7**
	9.1nm,0.7s						
LTX	**Lajitas**	**80.67**	**56**	*e*P	**P**	**18 20 59.5**	**+0.1**
TXAR	**Lajitas Array**	**80.67**	**56**	P	**P**	**18 20 59.5**	**0.0**
	1.4nm,1.0s,baz=240,slow=4.2,SNR=6.6						
TXAR				LR	LR	18 49 34.1	
	comp=Z,41nm,19.3s,baz=0.0,slow=30						
S22A	**4UR Ranch, Cre**	**81.76**	**47**	*e*P	**P**	**18 21 06.5**	**+1.2**
	18nm,1.9s						
YHB	**Horse Butte**	**82.15**	**40**	*e*P	**P**	**18 21 07.0**	**-0.1**
	3.7nm,0.7s						
ILAR	**Eielson Array**	**82.18**	**11**	P	**P**	**18 21 06.1**	**-0.4**
	0.5nm,0.7s,baz=229,slow=6.8,SNR=7.5						
PD31	**Pinedale Array**	**82.21**	**42**	*e*P	**P**	**18 21 07.5**	**-0.1**
PDAR	**Pinedale Array**	**82.21**	**42**	P	**P**	**18 21 06.9**	**-0.6**
	0.9nm,0.8s,baz=202,slow=3.2,SNR=6.7						
PDAR				LR	LR	18 51 10.3	
	comp=Z,44nm,20.3s,baz=314,slow=31						
ULM	**Lac du Bonnet**	**93.86**	**39**	LR	LR	18 57 46.9	
	comp=Z,46nm,20.4s,baz=302,slow=31						
BR101	**Keskin Array S**	**145.71**	**321**	*e*PKPdf	**PKPbc**	**18 28 25.3**	**-0.1**
BRTR	**Keskin Array B**	**145.72**	**321**	PKPbc	**PKPbc**	**18 28 25.3**	**-0.1**
	1.0nm,0.8s,baz=123,slow=2.9,SNR=4.0						
GERES	**GERESS Array B**	**145.77**	**351**	PKPbc	**PKPdf**	**18 28 24.8**	**+0.1**
	0.7nm,0.7s,baz=18,slow=4.6,SNR=5.3						

*KRNET **15** 18:12:29.2±0.1, 40°.71N×78°.39E, h14^{km}, mb2.4*
*NNC **15** 18:12:29.2±2.7, 40°.73N×78°.35E, h0^{km}, mb3.1, mpv2.8,*
Error ellipse: s-maj=18.3km s-min=13.9km az=158.0
*SOME **15** 18:12:30.9, 40°.83N×78°.22E, h0^{km}*
ISC 15 18:12:28.6±2.5**, 40°.71N**±0°.09×**78°.39E**±0°.06**, h0**^{km}±13^{km},
n26, σ1^{s}.**42**/42**, 17C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.11**	**337**	⇑*i*P	**Pg**	**18 12 50.3**	**+0.5**
	baz=37						
TARG				⇑*i*S	**Sn**	**18 13 06.2**	**-1.7**
	baz=37						
KDJ	**Kajisay**	**1.68**	**328**	⇑*e*P	**Pg**	**18 13 01.1**	**+0.3**
	baz=28						
KDJ				⇑*i*S	**Sg**	**18 13 23.8**	**+1.2**
	baz=28						
NRN	**Naryn**	**1.94**	**292**	⇑*i*P	**Pg**	**18 13 05.8**	**0.0**
	baz=92						
NRN				⇑*i*S	**Sg**	**18 13 32.2**	**+1.2**
	baz=92						
ULHL	**Ulahol**	**2.22**	**314**	⇑*i*P	**Pb**	**18 13 10.0**	**+0.2**
	baz=14						
ULHL				⇑*i*S	**Sg**	**18 13 39.3**	**-0.7**
	baz=14						
SATY	**Saty**	**2.34**	**0**	Pg	**Pg**	**18 13 13.9**	**+0.4**
	4.3nm,0.5s						
SATY				Lg	Lg	18 13 44.3	
	8.3nm,0.5s						
SATY	**Saty**	**2.34**	**0**	*e*P	**Pg**	**18 13 13.6**	**+0.1**
	3.2nm,0.3s						
SATY				*e*S	**Sg**	**18 13 44.3**	**+0.5**
	8.4nm,0.4s						
UZB	**Uzynbulak**	**2.48**	**11**	Pg	**Pb**	**18 13 14.8**	**+0.8**
	0.9nm,0.4s						
UZB				Lg	Lg	18 13 47.1	
	4.6nm,0.4s						
UZB	**Uzynbulak**	**2.48**	**11**	*e*P	**Pb**	**18 13 15.2**	**+1.1**
	0.9nm,0.4s						
UZB				*e*S	**Sg**	**18 13 47.1**	**-1.0**
	4.6nm,0.4s						
BOOM	**Boomskoye usch**	**2.55**	**315**	⇑*i*P	**Pb**	**18 13 14.2**	**-1.2**
	baz=15						
BOOM				⇑*i*S	**Sb**	**18 13 46.5**	**-0.9**
	baz=15						
TNSS	**Tian-Shan**	**2.56**	**336**	Pg	**Pb**	**18 13 16.7**	**+1.1**
	3.8nm,0.3s						
TNSS				Lg	Lg	18 13 50.3	
	3.0nm,0.5s						
TNSS	**Tian-Shan**	**2.56**	**336**	*e*P	**Pb**	**18 13 16.7**	**+1.1**
	3.8nm,0.3s						
TNSS				*e*S	**Sg**	**18 13 49.5**	**-1.3**
	3.0nm,0.5s						
MDOK	**Medeo**	**2.64**	**338**	Pg	**Pb**	**18 13 17.0**	**+0.1**
	3.9nm,0.8s						
MDOK				Lg	Lg	18 13 53.4	
	3.6nm,0.4s						
MDOK	**Medeo**	**2.64**	**338**	Pg	**Pb**	**18 13 18.1**	**+1.2**
	2.2nm,0.3s						
MDOK				Lg	Lg	18 13 53.5	
	6.3nm,0.5s						
MDOK	**Medeo**	**2.64**	**338**	*e*P	**Pg**	**18 13 18.6**	**-0.6**
	1.3nm,0.1s						
MDOK				*e*S	**Sg**	**18 13 52.9**	**-0.7**
	6.3nm,0.5s						
KOTS	**Kotyrbulak**	**2.69**	**340**	Pg	**Pb**	**18 13 19.1**	**+1.4**
	2.7nm,0.2s						
KOTS				Lg	Lg	18 13 52.5	
	6.9nm,0.4s						
KOTS	**Kotyrbulak**	**2.69**	**340**	*e*P	**Pb**	**18 13 19.1**	**+1.4**
	2.7nm,0.2s						
KOTS				*e*S	**Sg**	**18 13 53.8**	**-1.3**
	6.9nm,0.4s						
KZA	**Kyzart**	**2.73**	**301**	⇓*i*P	**Pb**	**18 13 17.7**	**-0.8**
	baz=1.0						
KZA				⇓*i*S	**Sb**	**18 13 52.7**	**+0.1**
	baz=1.0						
PDGK	**Podgornoye**	**2.74**	**17**	⇑Pg	**Pb**	**18 13 16.6**	**-1.9**
	1.7nm,1.0s						
PDGK				⇓Lg	Lg	18 13 52.9	
	5.5nm,0.5s						
PDGK	**Podgornoye**	**2.74**	**17**	⇓*i*P	**Pb**	**18 13 16.9**	**-1.6**
	baz=17						
PDGK				⇓*i*S	**Sb**	**18 13 51.3**	**-1.4**
	baz=17						
KURS	**Kuram**	**2.78**	**357**	Pg	**Pb**	**18 13 20.7**	**+1.6**
	1.5nm,0.4s						
KURS				Lg	Lg	18 13 56.2	
	1.8nm,0.4s						
KURS	**Kuram**	**2.78**	**357**	*e*P	**Pb**	**18 13 20.7**	**+1.6**
	1.5nm,0.4s						
KURS				*e*S	**Sg**	**18 13 56.6**	**-1.2**
	1.8nm,0.4s						
KST	**Kastek**	**2.95**	**323**	*e*P	**Pb**	**18 13 23.2**	**+1.1**
	3.4nm,0.4s						
KST				*e*S	**Sb**	**18 14 00.7**	**+2.0**
	1.9nm,0.7s						
TKM2	**Tokmak 2**	**3.04**	**317**	⇑Pg	**Pb**	**18 13 24.5**	**+0.9**
	1.5nm,0.4s						
TKM2				⇑Lg	Lg	18 14 03.0	
	1.6nm,0.7s						
ARLS	**Aral**	**3.27**	**292**	⇑*i*P	**Pn**	**18 13 23.9**	**+2.7**
	baz=92						
ARLS				⇑*i*S	**Sb**	**18 14 03.9**	**-4.1**
	baz=92						
CHKK	**Chushkaly**	**3.31**	**342**	*e*P	**Pg**	**18 13 30.7**	**-1.2**
	0.9nm,0.1s						
CHKK				*e*S	**Sg**	**18 13 13.8**	**-0.9**
	7.2nm,0.3s						
AAK	**Ala-Archa**	**3.49**	**305**	⇑Pg	**Pb**	**18 13 29.1**	**-2.3**
	1.2nm,0.7s						
AAK				⇑Lg	Lg	18 14 18.5	
	2.7nm,0.8s						

*IDC **15** 18:27:42.4±0.7, 32°.72N×94°.83E, h0^{km}, mb4.1/20, mb1 4.2/24, mb1mx4.0/55, mbtmp4.0/24, ML3.7/4, MS3.3/7, Ms1 3.3/7, ms1mx3.1/38, Error ellipse: s-maj=20.6km s-min=14.3km az=42.0*
*MOS **15** 18:27:44.9±1.6, 32°.75N×95°.04E, h25^{km}, mb4.7/50, Error ellipse: s-maj=8.0km s-min=3.8km az=125.7*
*ISCJB **15** 18:27:45.9±0.2, 32°.66N±0°.03×94°.89E±0°.03, h33^{km}, mb4.5/76, MS3.2/6, Error ellipse: s-maj=4.1km s-min=3.6km az=27.1*
*NEIC **15** 18:27:45.9±1.5, 32°.82N×95°.02E, h22^{km}±12^{km}, mb4.4/36, Error ellipse: s-maj=7.1km s-min=4.9km az=59.0*
*BJI **15** 18:27:48.1, 32°.82N×94°.88E, h25^{km}, mB4.5/6, mb4.4/18, ML4.1/4, Ms4.0/26, Ms7 4.0/24*
ISC 15 18:27:47.7±0.3**, 32°.65N**±0°.04×**94°.94E**±0°.04**, h35**^{km}**, n270,**
σ**2**^{s}.**12**/278**, mb4.6**/76**, MS3.2**/6**, 20C-16D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**4.38**	**229**	Pn	**Pn**	**18 28 56.9**	**+4.8**
LSA				LR	LR		
	comp=N,520nm,7.0s						
LSA				LR	LR		
	comp=E,450nm,7.0s						
LSA				LR	LR		
	comp=Z,2μm,6.3s						
LSA	**Lhasa**	**4.38**	**229**	*e*Pn	**Pn**	**18 28 56.5**	**+4.4**
LSA	**Lhasa**	**4.38**	**229**	*e*P	**Pn**	**18 28 56.5**	**+4.4**
SHL	**Shillong**	**7.54**	**202**	*e*Pn	**Pn**	**18 29 37.3**	**+1.9**
SHL				*e*Sn	**Sn**	**18 30 57.5**	**-2.3**
SHL	**Shillong**	**7.54**	**202**	*e*P	**Pn**	**18 29 37.3**	**+1.9**
SHL				*e*		18 30 57.5	
SHL	**Shillong**	**7.54**	**202**	*e*P	**Pn**	**18 29 40.0**	**+4.6**
SHL				*e*x	x	18 30 07.5	
CD2	**Chengdu**	**7.71**	**101**	Pn	**Pn**	**18 29 39.0**	**+1.6**
CD2				Sn	**Sn**	**18 31 09.3**	**+5.8**
GTA	**Gaotai**	**7.82**	**29**	*e*Pn	**Pn**	**18 29 40.0**	**+1.0**
GTA				Sn	**Sn**	**18 31 12.0**	**+5.6**
GTA				LR	LR		
	comp=N,580nm,11.1s						
GTA				LR	LR		
	comp=E,600nm,13.3s						
GTA				LR	LR		
	comp=Z,750nm,11.1s						
LZH	**Lanzhou**	**8.12**	**63**	*e*P	**Pn**	**18 29 46.6**	**+3.4**
LZH				smax	smax		
	comp=N,76nm,1.2s						
LZH				smax	smax		
	comp=E,82nm,1.2s						
LZH				LR	LR		
	comp=N,2μm,6.0s						
LZH				LR	LR		
	comp=E,2μm,7.1s						
LZH				LR	LR		
	comp=Z,2μm,7.9s						
JIRN	**Jiri**	**9.06**	**239**	*e*P	**Pn**	**18 29 56.3**	**0.0**
	21nm,0.5s						
GUN	**Gumba**	**9.14**	**241**	*e*P	**Pn**	**18 29 57.4**	**-0.1**
	32nm,0.7s						
RAMN	**Ramite**	**9.20**	**234**	*e*P	**Pn**	**18 29 58.0**	**-0.2**
	22nm,0.5s						
PKI	**Pulchoki**	**9.68**	**241**	*e*P	**Pn**	**18 30 04.0**	**-0.8**
	27nm,0.5s						
PKIN	**Phulchoki**	**9.68**	**241**	*e*P	**Pn**	**18 30 04.1**	**-0.7**
	28nm,0.4s						
DMN	**Daman**	**9.88**	**242**	*e*P	**Pn**	**18 30 06.6**	**-0.9**
	14nm,0.5s						
KMI	**Kunming**	**10.14**	**136**	P	**Pn**	**18 30 14.8**	**+3.8**
KMI				pP		18 30 25.8	
KMI				sP		18 30 30.3	
KMI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KMI				LR	LR		
	comp=N,740nm,7.3s						
KMI				LR	LR		
	comp=E,570nm,7.8s						
KMI				LR	LR		
	comp=Z,600nm,8.9s						
KMI	**Kunming**	**10.14**	**136**	*e*Pn	**Pn**	**18 30 11.3**	**+0.3**
KMI	**Kunming**	**10.14**	**136**	*e*P	**Pn**	**18 30 11.3**	**+0.3**
DANN	**Dangsing**	**10.55**	**249**	*e*P	**Pn**	**18 30 16.0**	**-0.7**
	46nm,0.6s						
KOLN	**Koldanda**	**10.94**	**247**	*e*P	**Pn**	**18 30 20.9**	**-1.1**
	19nm,0.7s						
PYUN	**Piuthan**	**11.27**	**249**	*e*P	**Pn**	**18 30 25.0**	**-1.4**
	57nm,0.9s						
XAN	**Xi'an**	**11.78**	**79**	P	**Pn**	**18 30 35.9**	**+2.7**
XAN				pP		18 30 49.3	
XAN				pmax	pmax		
	comp=Z,5.0nm,1.6s						
XAN				LR	LR		
	comp=N,510nm,14.2s						
XAN				LR	LR		
	comp=E,570nm,14.5s						
XAN				LR	LR		
	comp=Z,510nm,15.4s						
XAN	**Xi'an**	**11.78**	**79**	*e*Pn	**Pn**	**18 30 30.2**	**-3.0**
XAN	**Xi'an**	**11.78**	**79**	*e*P	**Pn**	**18 30 30.2**	**-3.0**
GYA	**Guiyang**	**11.92**	**118**	⇑*i*P	**Pn**	**18 30 32.3**	**-3.0**
GYA				pP		18 30 41.0	
GYA				S	**Sn**	**18 32 42.3**	**-4.8**
GYA				sS		18 32 56.8	
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,110nm,4.2s						
GYA				LR	LR		
	comp=N,350nm,9.4s						
GYA				LR	LR		
	comp=E,500nm,10.7s						
GYA				LR	LR		
	comp=Z,410nm,11.0s						
WMQ	**Urumqi**	**12.52**	**335**	*e*P	**Pn**	**18 30 41.1**	**-2.2**
WMQ				PP	**PnPn**	**18 30 51.8**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ	**Urumqi**	**12.52**	**335**	*e*Pn	**Pn**	**18 30 40.2**	**-3.0**
WMQ	**Urumqi**	**12.52**	**335**	*e*P	**Pn**	**18 30 40.3**	**-3.0**
ENH	**Enshi**	**12.64**	**97**	*e*Pn	**Pn**	**18 30 47.2**	**+2.1**
CHTO	**Chiang Mai**	**14.24**	**164**	*e*Pn	**Pn**	**18 31 09.2**	**+2.4**
CHTO	**Chiang Mai**	**14.24**	**164**	*e*P	**Pn**	**18 31 09.2**	**+2.4**
CMAR	**Chiang Mai Arr**	**14.58**	**165**	Pn	**Pn**	**18 31 10.6**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=114,slow=28,SNR=5.6						
CM01	**Chiang Mai Arr**	**14.62**	**165**	*e*Pn	**Pn**	**18 31 13.2**	**+1.1**
HHC	**Hu-ho-hao-te**	**15.62**	**54**	*e*P	**P**	**18 31 33.0**	**+3.9**
HHC				S	**Sn**	**18 34 19.3**	**+2.0**
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,41nm,3.9s						
HHC				LR	LR		
	comp=Z,380nm,6.7s						
HHC				LR	LR		
	comp=Z,240nm,6.3s						
HHC				LR	LR		
	comp=Z,210nm,6.2s						
UTTA	**Uttaradit**	**15.68**	**160**	P	**P**	**18 31 34.1**	**+4.4**
	comp=Z,3.7nm,1.2s,comp=Z,41nm						
PDGK	**Podgornoye**	**16.16**	**316**	P	**Pn**	**18 31 33.4**	**+1.2**
PDGK				pmax	pmax		
	comp=Z,12nm,1.0s						
PRZ	**Przheval'sk**	**16.36**	**312**	*e*Pn	**P**	**18 31 36.1**	**-1.2**
	comp=Z,73nm,0.9s						
PRZ	**Przheval'sk**	**16.36**	**312**	*e*P	**P**	**18 31 36.1**	**-1.2**
PRZ				pmax	pmax		
	comp=Z,73nm,0.9s						
TARG	**Taragay, Kyrgy**	**16.37**	**309**	*e*Pn	**P**	**18 31 36.6**	**-1.1**
	comp=Z,17nm,0.8s						
KSH	**Kashi**	**16.78**	**299**	P	**P**	**18 31 43.3**	**+1.3**
KSH				pP	pP	18 31 53.3	+0.8
KSH				PP	**sP**	**18 32 00.9**	**+3.3**
KSH				S	**Sn**	**18 34 47.8**	**+2.4**
KSH				pmax	pmax		
	comp=Z,37nm,1.0s						
KSH				LR	LR		
	comp=Z,320nm,7.3s						
KSH				LR	LR		
	comp=Z,430nm,5.6s						
KSH				LR	LR		
	comp=Z,350nm,5.8s						
PBKT	**Sadao Pong**	**16.91**	**160**	*e*Pn	**P**	**18 31 43.7**	**+0.3**
	comp=Z,8.1nm,1.1s						
PBKT	**Sadao Pong**	**16.91**	**160**	P	P	18 31 52.3	+8.9
	comp=Z,7.1nm,1.3s						
KDJ	**Kajisay**	**16.97**	**309**	*e*Pn	**P**	**18 31 43.3**	**-0.7**
	comp=Z,26nm,0.8s						
KDJ	**Kajisay**	**16.97**	**309**	P	**Pn**	**18 31 43.0**	**+0.6**
KDJ				pmax	pmax		
	comp=Z,26nm,0.9s						
MK01	**Makanchi Array**	**17.10**	**329**	*e*Pn	**Pn**	**18 31 39.9**	**-4.0**
MK31	**Makanchi Array**	**17.12**	**329**	*e*Pn	**Pn**	**18 31 40.7**	**-3.5**
	comp=Z,4.7nm,0.9s						
MK31	**Makanchi Array**	**17.12**	**329**	*e*P	**Pn**	**18 31 40.7**	**-3.5**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK32	**Makanchi Array**	**17.12**	**329**	*e*Pn	**Pn**	**18 31 40.8**	**-3.4**
MKAR	**Makanchi Array**	**17.12**	**329**	*e*Pn	**Pn**	**18 31 40.6**	**-3.6**
	comp=Z,30nm,0.9s						
MKAR	**Makanchi Array**	**17.12**	**329**	P	**Pn**	**18 31 40.8**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=134,slow=13,SNR=12						
MKAR				LR	LR	18 37 44.0	
	comp=Z,47nm,19.9s,baz=148,slow=35						
MAKZ	**Makanchi**	**17.27**	**329**	*e*Pn	**Pn**	**18 31 43.9**	**-2.1**
	comp=Z,13nm,1.4s						
MAKZ	**Makanchi**	**17.27**	**329**	*e*P	**Pn**	**18 31 43.9**	**-2.1**
MAKZ				pmax	pmax		
	comp=Z,13nm,1.4s						
NRN	**Naryn**	**17.45**	**306**	*e*Pn	**Pn**	**18 31 48.9**	**+0.3**
	comp=Z,19nm,1.0s						
NRN	**Naryn**	**17.45**	**306**	*e*P	**Pn**	**18 31 48.9**	**+0.3**
NRN				pmax	pmax		
	comp=Z,19nm,1.0s						
SONA0	**Songino Array**	**17.48**	**26**	*e*Pn	**Pn**	**18 31 47.1**	**-1.7**
SONM	**Songino Array**	**17.48**	**26**	P	**Pn**	**18 31 47.1**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=215,slow=12,SNR=16						
SONA1	**Songino Array**	**17.49**	**26**	*e*Pn	**Pn**	**18 31 45.9**	**-3.0**
ULHL	**Ulahol**	**17.64**	**308**	P	**P**	**18 31 52.9**	**+1.4**
	SNR=6.2						
ULN	**Ulaanbaatar**	**17.76**	**28**	*e*Pn	**Pn**	**18 31 51.2**	**-1.0**
	comp=Z,3.8nm,0.9s						
ULN	**Ulaanbaatar**	**17.76**	**28**	*e*P	**Pn**	**18 31 51.2**	**-1.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DGZ	**Jazzator, Alta**	**17.93**	**344**	*i* P	**Pn**	**18 31 49.4**	**-4.9**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NIL	**Nilore**	**18.19**	**279**	*e*P	**P**	**18 31 54.2**	**-3.3**
	comp=Z,12nm,0.8s						
NIL	**Nilore**	**18.19**	**279**	*e*P	**P**	**18 31 54.2**	**-3.3**
NIL				pmax	pmax		
	comp=Z,12nm,0.8s						
KZA	**Kyzart**	**18.23**	**307**	P	**Pn**	**18 32 00.8**	**+2.5**
	SNR=6.2						
TKM2	**Tokmak 2**	**18.37**	**309**	P	**Pn**	**18 32 00.5**	**+0.7**
	SNR=7.0						
BJT	**Baijiatuau**	**18.59**	**61**	*e*P	**Pn**	**18 32 03.3**	**+1.0**
	comp=Z,10nm,1.2s						
BJT	**Baijiatuau**	**18.59**	**61**	*e*P	**Pn**	**18 32 03.3**	**+1.0**
BJT				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KBK	**Karagaybulak**	**18.68**	**308**	P	**Pn**	**18 32 07.5**	**+4.0**
	SNR=16						
SFK	**Sufi-Kurgan**	**18.75**	**299**	P	**Pn**	**18 32 04.2**	**-0.2**
SFK				pmax	pmax		
	comp=Z,20nm,0.9s						
UCH	**Uchtor**	**18.79**	**306**	P	**Pn**	**18 32 07.3**	**+2.2**
	SNR=10						
FRU1	**Bishkek**	**18.96**	**308**	*e*P	**Pn**	**18 32 06.6**	**-0.1**
	comp=Z,11nm,0.8s						
FRU1	**Bishkek**	**18.96**	**308**	P	**Pn**	**18 32 06.6**	**-0.1**
FRU1				pmax	pmax		
	comp=Z,11nm,0.8s						
CHMS	**Chumysh**	**18.96**	**309**	P	**Pn**	**18 32 08.3**	**+1.5**
	SNR=5.2						
AAK	**Ala-Archa**	**18.97**	**308**	P	**Pn**	**18 32 09.5**	**+2.5**
	SNR=6.3						
AAK	**Ala-Archa**	**18.97**	**308**	*ce*P	**P**	**18 32 06.3**	**+0.1**
AAK				pmax	pmax		
	comp=Z,29nm,2.5s						
AAK	**Ala-Archa**	**18.97**	**308**	P	**P**	**18 32 05.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=127,slow=9.4,SNR=18						
AAK				LR	LR	18 40 32.4	
	comp=Z,276nm,19.8s,baz=104,slow=41						
QIZ	**Qiongzhong**	**19.04**	**132**	P	**P**	**18 32 04.8**	**-2.1**
QIZ				S	**Sn**	**18 35 36.3**	**-3.9**
QIZ				pmax	pmax		
	comp=Z,170nm,6.4s						
QIZ				LR	LR		
	comp=N,250nm,16.7s						
QIZ				LR	LR		
	comp=E,360nm,22.6s						
QIZ				LR	LR		
	comp=Z,350nm,17.7s						
AML	**Almayashu**	**19.31**	**305**	P	**Pn**	**18 32 14.5**	**+3.2**
	SNR=7.1						
EKS2	**Erkin-Say**	**19.46**	**307**	P	**Pn**	**18 32 17.1**	**+4.2**
	SNR=15						
ARSB	**Arslanbob**	**19.52**	**303**	*e*P	**P**	**18 32 10.6**	**-1.6**
	comp=Z,8.3nm,0.8s						
NJ2	**Nanjing**	**20.21**	**85**	*e*P	**P**	**18 32 14.8**	**-4.7**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MNAS	**Manas**	**20.27**	**305**	P	**P**	**18 32 20.6**	**+0.4**
MNAS				pmax	pmax		
	comp=Z,15nm,1.2s						
BTK	**Batken**	**20.75**	**298**	*e*P	**P**	**18 32 25.1**	**-0.4**
	comp=Z,19nm,0.9s						
BTK	**Batken**	**20.75**	**298**	P	**P**	**18 32 26.0**	**+0.6**
BTK				pmax	pmax		
	comp=Z,19nm,1.0s						
GAR	**Garm**	**20.92**	**295**	*e*P	**P**	**18 32 24.9**	**-2.4**
	comp=Z,19nm,0.8s						
GAR	**Garm**	**20.92**	**295**	*e*P	**P**	**18 32 24.9**	**-2.4**
GAR				pmax	pmax		
	comp=Z,19nm,0.8s						
HYB	**Hyderabad**	**21.18**	**228**	*i* P	**P**	**18 32 33.0**	**+2.9**
KBL	**Kabul**	**21.64**	**282**	*e*P	**P**	**18 32 34.0**	**-1.2**
	comp=Z,59nm,1.1s						
KBL	**Kabul**	**21.64**	**282**	*e*P	**P**	**18 32 34.0**	**-1.2**
KBL				pmax	pmax		
	comp=Z,59nm,1.1s						
KURBB	**Kurchatov Arra**	**21.66**	**331**	P	**P**	**18 32 33.0**	**-2.0**
	comp=Z,22nm,0.8s,baz=138,slow=11,SNR=40						
KURK	**Kurchatov**	**21.70**	**331**	*e*P	**P**	**18 32 32.8**	**-2.6**
	comp=Z,27nm,0.8s						
KURK	**Kurchatov**	**21.70**	**331**	*ce*P	**P**	**18 32 33.5**	**-1.9**
KURK				pmax	pmax		
	comp=Z,28nm,0.8s						
CHGR	**Chuyangaron**	**21.75**	**293**	*e*P	**P**	**18 32 34.2**	**-2.0**
	comp=Z,24nm,0.7s						
KK31	**Karatay Array**	**21.86**	**306**	*e*P	**P**	**18 32 35.1**	**-2.1**
KK31	**Karatay Array**	**21.86**	**306**	*e*P	**P**	**18 32 35.1**	**-2.1**
KKAR	**Karatay Array**	**21.86**	**306**	*e*P	**P**	**18 32 35.2**	**-2.0**
KKAR	**Karatay Array**	**21.86**	**306**	*e*P	**P**	**18 32 35.2**	**-2.0**
ZAA0	**Zalesovo Array**	**22.49**	**344**	*e*P	**P**	**18 32 39.3**	**-4.5**
ZALV	**Zalesovo Beam**	**22.49**	**344**	*e*P	**P**	**18 32 40.2**	**-3.6**
ZALV	**Zalesovo Beam**	**22.49**	**344**	P	**P**	**18 32 42.4**	**-1.4**
	comp=Z,4.8nm,0.8s,baz=168,slow=10,SNR=14						
ZALV				LR	LR	18 40 51.4	
	comp=Z,23nm,18.3s,baz=258,slow=35						
ZAA1	**Zalesovo Array**	**22.49**	**344**	*e*P	**P**	**18 32 42.4**	**-1.5**
OTUK	**Ortayu**	**23.08**	**319**	P	**P**	**18 32 51.0**	**+0.8**
OTUK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NVS	**Novosibirsk**	**23.68**	**343**	*e*P	**P**	**18 32 56.5**	**+0.6**
BVAR	**Borovoye Array**	**26.95**	**326**	P	**P**	**18 33 24.2**	**-1.4**
	comp=Z,1.4nm,0.7s,baz=126,slow=9.3,SNR=11						
BVAR				LR	LR	18 44 30.4	
	comp=Z,69nm,21.4s,baz=98,slow=38						
BRVK	**Borovoye**	**27.02**	**326**	*e*P	**P**	**18 33 26.3**	**0.0**
	comp=Z,4.1nm,0.8s						
BRVK	**Borovoye**	**27.02**	**326**	*i* P	**P**	**18 33 26.9**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KS15	**Wonju Array Si**	**27.31**	**71**	*e*P	**P**	**18 33 24.4**	**-4.7**
	comp=Z,65nm,1.5s						
KS01	**Wonju Array Si**	**27.32**	**71**	*e*P	**P**	**18 33 23.5**	**-5.7**
KSRS	**Korea Array**	**27.34**	**71**	LR	LR	18 45 45.8	
	comp=Z,64nm,19.9s,baz=270,slow=40						
JNU	**Nakatsue**	**30.09**	**79**	LR	LR	18 46 26.0	
	comp=Z,72nm,18.8s,baz=322,slow=37						
GEYT	**Alibeck**	**30.38**	**290**	P	**P**	**18 33 56.6**	**+0.1**
	comp=Z,4.1nm,0.8s,baz=109,slow=8.0,SNR=6.6						
GEYT				LR	LR	18 48 11.4	
	comp=Z,109nm,19.6s,baz=65,slow=41						
GYA0B	**ALIBECK ARRAY**	**30.38**	**290**	*e*P	**P**	**18 33 56.8**	**+0.4**
	comp=Z,6.2nm,0.8s						
ABKAR	**Akbulak array**	**30.86**	**313**	*e*P	**P**	**18 34 00.9**	**+0.4**
	comp=Z,3.0nm,0.9s						
KLR	**Kul'dur**	**31.98**	**48**	P	**P**	**18 34 10.8**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=263,slow=9.2,SNR=3.9						
AKTO	**Aktyubinsk**	**32.43**	**314**	P	**P**	**18 34 13.5**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=97,slow=8.1,SNR=4.1						
ARU	**Arti**	**34.54**	**324**	*e*P	**P**	**18 34 31.5**	**-1.0**
	comp=Z,4.7nm,0.7s						
ARU	**Arti**	**34.54**	**324**	*e*P	**P**	**18 34 34.1**	**+1.6**
ARU						18 35 50.0	

ARU				S	S	18 40 03.4	+4.6
ARU				SS	SnSn	18 42 17.3	+5.6
NRIK	Noril'sk	36.98	356	P	P	18 34 53.0	-0.3
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NRIK	Noril'sk	36.98	356	P	P	18 34 53.0	-0.3
	comp=Z,3.2nm,0.6s,baz=148,slow=13,SNR=4.0						
KIV	Kislovodsk	41.90	301	eP	P	18 35 35.0	+0.2
	comp=Z,8.4nm,1.1s						
KIV	Kislovodsk	41.90	301	eP	P	18 35 35.3	+0.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,29nm,16.0s						
VRH	Novokhopyorsk	42.68	312	eP	P	18 35 39.9	-1.0
VRH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PRGR	Permogore	42.75	328	eP	P	18 35 41.5	+0.3
PRGR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VSR	Storozhevoye	44.29	312	i P	P	18 35 54.2	+0.4
VSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LPSR	Galich'ya Gora	44.51	314	eP	P	18 35 55.0	-0.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DGAR	Diego Garcia	45.23	212	eP	P	18 36 00.3	-1.3
	comp=Z,106nm,1.0s						
DGAR	Diego Garcia	45.23	212	eP	P	18 36 00.3	-1.3
DGAR				pmax	pmax		
	comp=Z,106nm,1.0s						
KLMR	Klimovskoe	45.37	326	eP	P	18 36 00.4	-1.8
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLMR	Klimovskoe	45.37	326	eP	P	18 36 00.5	-1.8
KLMR				AMP		18 36 05.6	
	comp=Z,8.0nm,0.9s						
OBN	Obninsk	46.08	317	eP	P	18 36 06.9	-1.1
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SEY	Seymchan	46.76	32	P	P	18 36 13.2	0.0
	comp=Z,1.7nm,0.7s,baz=252,slow=11,SNR=9.0						
BR101	Keskin Array S	49.14	297	eP	P	18 36 31.1	-1.0
BRTR	Keskin Array B	49.14	297	ceP	P	18 36 33.2	+1.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	49.14	297	P	P	18 36 31.1	-1.0
	comp=Z,1.7nm,0.8s,baz=108,slow=7.5,SNR=8.6						
AKASG	Malin Array Be	50.58	311	P	P	18 36 41.2	-1.5
	comp=Z,4.1nm,0.8s,baz=74,slow=6.9,SNR=12						
AKBB	Malin Array Si	50.58	311	eP	P	18 36 44.2	+1.5
	comp=Z,8.0nm,1.0s						
KIEV	Kiev	50.59	311	eP	P	18 36 43.8	+1.0
	comp=Z,6.6nm,0.9s						
KIEV	Kiev	50.59	311	⇓iP	P	18 36 44.4	+1.6
KIEV	Kiev	50.59	311	i P	P	18 36 43.6	+0.8
KIEV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AK11	Malin Array Si	50.62	311	eP	P	18 36 44.2	+1.2
VSU	Vasula	51.58	321	i P	P	18 36 48.3	-1.8
VSU				pmax	pmax		
	comp=Z,17nm,1.2s						
FIA1	FINESS Array S	51.90	325	eP	P	18 36 51.6	-0.8
FIA0	FINESS Array S	51.90	325	eP	P	18 36 51.3	-1.2
FIA0	FINESS Array S	51.90	325	eP	P	18 36 51.3	-1.2
FINES	FINESS Array B	51.90	325	ceP	P	18 36 51.5	-1.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	51.90	325	P	P	18 36 51.3	-1.2
	comp=Z,1.7nm,0.8s,baz=85,slow=8.2,SNR=4.3						
CFR	Carcaliu	52.08	305	⇓iP	P	18 36 56.0	+2.0
CFR	Carcaliu	52.08	305	⇓P	P	18 36 56.0	+2.0
ARA0	ARCESS Array S	52.64	336	eP	P	18 36 56.9	-1.0
ARCES	ARCESS Array B	52.64	336	P	P	18 36 56.9	-1.0
	comp=Z,1.7nm,0.8s,baz=96,slow=8.3,SNR=3.0						
VRI	Vrincioaia	52.92	306	⇓iP	P	18 37 01.5	+1.2
VRI	Vrincioaia	52.92	306	⇓P	P	18 37 01.5	+1.2
PLOR	Plostina	52.98	306	⇓iP	P	18 37 01.4	+0.6
PLOR	Plostina	52.98	306	⇓P	P	18 37 01.4	+0.6
BIZ	Bicaz	53.15	307	⇑iP	P	18 37 03.5	+1.5
ISR	Istrita	53.20	305	⇑iP	P	18 37 04.0	+1.6
ISR	Istrita	53.20	305	⇑P	P	18 37 04.0	+1.6
BILL	Bilibino	53.20	26	eP	P	18 37 00.1	-1.9
	comp=Z,2.9nm,0.8s						
BILL	Bilibino	53.20	26	i P	P	18 37 01.3	-0.7
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MLR	Muntele Rosu	53.53	305	eP	P	18 37 05.4	+0.4
	comp=Z,13nm,0.9s						
MLR	Muntele Rosu	53.53	305	⇓iP	P	18 37 06.0	+1.0
MLR	Muntele Rosu	53.53	305	eP	P	18 37 05.4	+0.4
MLR				pmax	pmax		
	comp=Z,13nm,0.9s						
BURAR	Bucovina Array	53.62	308	⇑iP	P	18 37 07.1	+1.6
BURAR	Bucovina Array	53.62	308	⇑P	P	18 37 07.1	+1.6
BUR04	Bucovina Ar. S	53.62	308	eP	P	18 37 05.1	-0.5
BUR08	Bucovina Ar. S	53.62	308	eP	P	18 37 06.3	+0.8
DOPR	Dopca	53.82	306	⇑iP	P	18 37 08.0	+1.1
SUW	Suwalki	53.90	316	eP	P	18 37 06.4	-0.9
	comp=Z,36nm,1.0s						
SUW	Suwalki	53.90	316	eP	P	18 37 06.4	-0.9
SUW				pmax	pmax		
	comp=Z,36nm,1.0s						
VOIR		54.16	305	⇓iP	P	18 37 10.7	+1.2
VOIR		54.16	305	⇓P	P	18 37 10.7	+1.2
MTUR	Matau	54.20	305	⇑iP	P	18 37 11.8	+2.0
MTUR	Matau	54.20	305	⇑P	P	18 37 11.8	+2.0
ARCR	ARCALIA	54.30	307	⇑iP	P	18 37 12.4	+2.0
ARR	Arges	54.46	305	⇑iP	P	18 37 13.3	+1.6
UZH	Uzhgorod	55.34	310	⇓iP	P	18 37 20.3	+2.4
UZH				e		18 37 28.4	
DRGR		55.46	307	⇑iP	P	18 37 18.7	-0.2
DRGR		55.46	307	⇑P	P	18 37 18.7	-0.2
GZR	Gura Zlata	55.73	306	⇓iP	P	18 37 20.9	+0.1
HERR	Herculane	56.10	305	⇓iP	P	18 37 23.7	+0.3
VTS	Vitosha	56.10	302	⇓iP	P	18 37 25.5	+1.8
VTS	Vitosha	56.10	302	⇓P	P	18 37 25.5	+1.8
NIE	Niedzica	56.46	311	P	P	18 37 29.8	+3.9
OJC	Ojcow	56.60	312	eP	P	18 37 27.0	+0.1
	comp=Z,6.6nm,0.8s						
OJC	Ojcow	56.60	312	eP	P	18 37 27.0	+0.1
OJC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDVR	Moldovita	56.61	305	⇓iP	P	18 37 26.9	-0.2
LIT	Litokhoron	57.34	300	eP	P	18 37 33.5	+1.2
	comp=Z,14nm,1.2s						
LIT	Litokhoron	57.34	300	eP	P	18 37 33.5	+1.2
LIT				pmax	pmax		
	comp=Z,14nm,1.2s						
VYHS	Vyhne	57.61	310	eP	P	18 37 33.2	-0.9
VYHS				e		18 37 37.0	
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VYHS	Vyhne	57.61	310	eP	P	18 37 33.2	-0.9
VYHS				epP	P	18 37 37.0	+2.9
MORC	Moravsky Berou	58.12	312	eP	P	18 37 37.4	-0.3
	comp=Z,4.1nm,0.8s						
MORC	Moravsky Berou	58.12	312	⇑iP	P	18 37 37.5	-0.2
MORC	Moravsky Berou	58.12	312	⇑P	P	18 37 37.5	-0.2
MORC	Moravsky Berou	58.12	312	eP	P	18 37 39.8	+2.1
KRLC	Kraliky	58.52	312	eP	P	18 37 43.5	+3.0
KRLC	Kraliky	58.52	312	eP	P	18 37 43.5	+3.0
DPC	Dobruska-Polom	58.74	313	eP	P	18 37 44.9	+2.9
DPC	Dobruska-Polom	58.74	313	eP	P	18 37 44.9	+2.9
VRAC	Vranov	58.84	311	P	P	18 37 46.7	+4.1
VRAC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VRAC	Vranov	58.84	311	eP	P	18 37 45.5	+2.9
UPC	Upice	58.89	313	eP	P	18 37 45.9	+2.9
UPC	Upice	58.89	313	eP	P	18 37 45.9	+2.9
NC303	NORSAR Array S	58.97	326	eP	P	18 37 42.4	-0.9
NORES	NORESS Array B	58.98	325	P	P	18 37 42.2	-1.2
KRUC	Moravsky	59.03	311	P	P	18 37 47.6	+3.7
KRUC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KRUC	Moravsky	59.03	311	eP	P	18 37 47.1	+3.2
NB201	NORSAR Array S	59.04	326	eP	P	18 37 42.6	-1.3
NB2	NORSAR Subarra	59.08	326	P	P	18 37 42.5	-1.6
	comp=Z,5.1nm,0.8s,baz=78,slow=7.4						
NB2	NORSAR Subarra	59.08	326	P	P	18 37 45.7	+1.6
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB200	NORSAR Array S	59.08	326	eP	P	18 37 42.7	-1.4
NOA	NORSAR Array B	59.08	326	P	P	18 37 42.7	-1.4
	comp=Z,3.7nm,0.8s,baz=78,slow=6.9,SNR=15						
NC204	NORSAR Array S	59.24	326	eP	P	18 37 44.4	-0.9
NAO01	NORSAR Array S	59.28	325	eP	P	18 37 44.2	-1.2
CONA	Conrad Observa	59.68	310	i P	P	18 37 48.3	-0.3
	comp=Z,5.5nm,0.8s						
GOPC	GO Pecny, Ondr	59.81	313	eP	P	18 37 52.6	+3.3
GOPC	GO Pecny, Ondr	59.81	313	eP	P	18 37 52.6	+3.3
PRU	Pruhonice	59.94	313	eP	P	18 37 53.1	+2.9
PRU	Pruhonice	59.94	313	eP	P	18 37 53.1	+2.9
BRG	Berggiesshubel	60.06	314	eP	P	18 37 53.5	+2.5
	comp=Z,4.3nm,0.7s						
BRG	Berggiesshubel	60.06	314	eP	P	18 37 53.5	+2.5
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ARSA	Arzberg	60.09	309	i P	P	18 37 51.5	+0.2
	comp=Z,4.0nm,0.9s						
CLL	Collm	60.51	314	eP	P	18 37 55.5	+1.5
	comp=Z,4.6nm,0.9s						
CLL	Collm	60.51	314	i P	P	18 37 56.7	+2.6
	comp=Z,6.0nm,1.1s						
CLL	Collm	60.51	314	i P	P	18 37 56.7	+2.6
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MOA	Molln	60.73	310	eP	P	18 37 55.0	-0.6
	comp=Z,3.7nm,0.8s						
KHC	Kasperske Hory	60.79	312	eP	P	18 37 58.8	+2.7
KHC	Kasperske Hory	60.79	312	eP	P	18 37 58.8	+2.7
GEC2	GERESS Array S	60.79	312	eP	P	18 37 55.9	-0.3
	comp=Z,3.8nm,1.0s						
GEC2	GERESS Array S	60.79	312	eP	P	18 37 55.9	-0.3
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	60.79	312	P	P	18 37 55.4	-0.8
	comp=Z,2.7nm,0.8s,baz=76,slow=5.6,SNR=19						
GEA0	GERESS Array S	60.80	312	eP	P	18 37 55.5	-0.7
MOTA	Moosalm	62.92	311	i P	P	18 38 10.4	-0.2
	comp=Z,3.5nm,0.8s						
RETA	Reutte	63.09	311	eP	P	18 38 10.9	-0.7
	comp=Z,6.7nm,1.0s						
FETA	Feichten	63.27	310	i P	P	18 38 11.9	-1.0
	comp=Z,6.6nm,0.8s						
WR1	Warramunga Arr	64.45	139	eP	P	18 38 21.7	+1.0
	comp=Z,14nm,1.6s						
WRA	Warramunga Arr	64.45	139	P	P	18 38 21.7	+1.0
	comp=Z,0.9nm,0.8s,baz=338,slow=6.2,SNR=3.8						
RDOG	Red Dog Mine	64.48	24	ePcP	PcP	18 38 55.7	+1.4
CDF	Champ du Feu	64.96	313	eP	P	18 38 25.5	+1.6
CDF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WLF	Walferdange	65.19	314	eP	P	18 38 24.5	-0.7
	comp=Z,48nm,0.9s						
WLF	Walferdange	65.19	314	eP	P	18 38 24.5	-0.7
WLF				pmax	pmax		
	comp=Z,48nm,0.9s						
HINF	Hinteralfeld	65.44	312	eP	P	18 38 28.9	+1.9
HINF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HAU	Haudompre	65.69	313	eP	P	18 38 30.0	+1.5
HAU				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LPG	La Plagne	66.40	310	eP	P	18 38 35.7	+2.2
LPG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPL	La Plagne	66.40	310	eP	P	18 38 34.8	+1.4
LPL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ORIF	Oris-en-Rattie	67.19	310	eP	P	18 38 40.6	+2.3
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AS31	Alice Springs	67.22	141	eP	P	18 38 38.9	+0.4
	comp=Z,0.8nm,1.0s						
ASAR	Alice Springs	67.22	141	P	P	18 38 39.5	+0.9
	comp=Z,0.4nm,0.9s,baz=324,slow=6.3,SNR=11						
SMF	Signal de Mont	67.79	312	eP	P	18 38 43.5	+1.6
SMF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SSF	Saint Saulge	67.83	312	eP	P	18 38 43.7	+1.5
SSF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AVF	Avril sur Loir	68.04	312	eP	P	18 38 44.3	+0.8
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
EKA	Eskdalemuir Ar	68.12	322	P	P	18 38 45.5	+1.7
BGF	Bois d'Agland	68.45	312	eP	P	18 38 47.7	+1.6
BGF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LDF	La Druitiere	69.39	315	eP	P	18 38 52.6	+0.8
LDF				pmax	pmax		
	comp=Z,58nm,2.1s						
CAF	Calviac	69.65	311	eP	P	18 38 55.9	+2.3
CAF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RJF	Les Rejaudoux	69.83	311	eP	P	18 38 57.2	+2.5
RJF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRR	Gorron	69.92	315	eP	P	18 38 54.1	-1.0
GRR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LFF	La Frestale	70.48	311	eP	P	18 39 00.8	+2.2
LFF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ILAR	Eielson Array	71.68	23	P	P	18 39 05.5	-0.1
	comp=Z,0.5nm,0.7s,baz=305,slow=5.0,SNR=10						
ILB	Eielson Array	71.68	23	eP	P	18 39 04.9	-0.7
ETSF	Etsaut	72.26	310	eP	P	18 39 12.7	+3.2
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SJPF	Ste Jean	72.59	310	eP	P	18 39 10.7	-0.7
SJPF				pmax	pmax		
	comp=Z,38nm,1.8s						
KDAK	Kodiak Island	73.71	31	ceP	P	18 39 18.5	+0.8
HNR	Honiara	74.67	112	eP	P	18 39 30.0	+6.0
ES19	SONSECA Array	76.02	308	eP	P	18 39 30.8	-0.7
ESDC	Sonseca Array	76.08	308	P	P	18 39 31.3	-0.5
	comp=Z,2.5nm,0.9s,baz=51,slow=6.3,SNR=14						
YKA	Yellowknife Ar	82.26	13	P	P	18 40 04.8	-0.2
	comp=Z,0.9nm,0.8s,baz=325,slow=4.8,SNR=11						
YKB5	Yellowknife Ar	82.26	13	eP	P	18 40 02.9	-2.2
TOA1	Torodi Ar. Sit	85.71	283	eP	P	18 40 22.7	-0.8
TOA0	Torodi Ar. Sit	85.71	283	eP	P	18 40 22.9	-0.6
TORD	Torodi Ar. Bea	85.71	283	P	P	18 40 22.7	-0.8
	comp=Z,1.7nm,0.8s,baz=53,slow=4.4,SNR=11						

IDC 15 18:28:05.9±2.9, 6°.17S×130°.51E, h75^{km}±38^{km}, mb2.9/1, mb1 3.2/5, mb1mx3.0/48, mbtmp3.3/5, ML3.2/4, Error ellipse: s-maj=76.3km s-min=22.6km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.32	8	P	Pn	18 29 22.9	+0.1
	2.3nm,0.3s,baz=209,slow=18,SNR=23						
SIJI				S	Sn	18 30 18.6	-4.3
	2.5nm,0.3s,baz=208,slow=22,SNR=16						
FITZ	Fitzroy Crossi	12.77	201	P	Pn	18 31 05.1	+0.5
	0.2nm,0.3s,baz=21,slow=12,SNR=12						
FITZ				S	Sn	18 33 20.1	-4.9
	0.1nm,0.3s,baz=159,slow=17,SNR=3.1						
WRA	Warramunga Arr	14.19	165	P	Pn	18 31 21.5	-1.8
	0.1nm,0.3s,baz=348,slow=13,SNR=5.9						
WRA				S	Sn	18 33 50.7	-8.8
	0.2nm,0.3s,baz=352,slow=24,SNR=6.4						
ASAR	Alice Springs	17.70	170	P	Pn	18 32 08.2	+0.6
	0.1nm,0.3s,baz=344,slow=8.9,SNR=7.8						
ASAR				S	Sn	18 35 19.2	-5.3
	0.0nm,0.3s,baz=257,slow=10,SNR=3.9						
MKAR	Makanchi Array	67.81	326	P	P	18 38 56.0	0.0
	0.1nm,0.5s,baz=116,slow=6.6,SNR=3.0						

KRSC 15 18:29:06.2±0.8, 51°.92N×158°.93E, h50^{km}±10^{km}, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.54	258	eP	Pn	18 29 18.7	+0.8
KDTR				eS	Sn	18 29 26.9	+0.6
RUS	Russkaya	0.57	334	eP	Pn	18 29 19.2	+0.9
RUS				eS	Sn	18 29 27.9	+0.8
MTVR	Mutnovka	0.73	321	eP	Pn	18 29 21.7	+1.3
MTVR				eS	Sn	18 29 32.4	+1.7
GRL	Gorelyy	0.82	321	eP	Pn	18 29 23.5	+1.8
KRMR	Karymshinskiy	1.03	332	eP	Pn	18 29 25.9	+1.5
KRMR				eS	Sn	18 29 39.9	+2.1
DALK	Dalny	1.12	355	eP	Pn	18 29 26.5	+1.0
DALK				eS	Sn	18 29 40.5	+0.7
PET	Petropavlovsk	1.12	351	eP	Pn	18 29 26.5	+1.0
PET				eS	Sn	18 29 40.8	+1.0
UGLR	Uglovaya	1.29	357	eP	Pn	18 29 29.2	+1.2
SMAR	Somma	1.35	357	eP	Pn	18 29 29.8	+1.0
AVH	Avacha	1.35	355	eP	Pn	18 29 30.3	+1.5
SPN	Mys Shipunski	1.36	29	eP	Pn	18 29 30.7	+2.0
SPN				eS	Sn	18 29 48.5	+2.9
SDLR	Sedlovina	1.36	359	eP	Pn	18 29 29.7	+0.8
KOK	Koryaka	1.39	353	eP	Pn	18 29 30.9	+1.7
PAU	Pauzhetka	1.39	252	eS	Sn	18 29 49.0	+2.5
KRX	Arik	1.45	353	eP	Pn	18 29 31.6	+1.4
APC	Apacha	1.48	314	eP	Pn	18 29 32.8	+2.4
GNL	Ganaly	1.88	342	eP	Pn	18 29 38.3	+2.3
SKR	Severo-Kuril’s	2.16	236	eS	Sn	18 30 07.1	+2.0

DJA ***15*** *18:33:40.8±2.2, 5°N±6°×9°5E±2°1, h10^{km}, M4.7/7, mb4.7/2, mB5.2/2, MLv4.7/7, Mw(mB)4.5/2*

BJI ***15*** *18:33:41.2, 4°.33N×94°.97E, h34^{km}, mB5.0/33, mb4.5/44, Ms4.5/20, Ms7 4.2/22*

ISCJB ***15*** *18:33:44.4±0.2, 4°.50N±0°.03×94°.94E±0°.03, h48^{km}, mb4.6/68, MS3.8/26, Error ellipse: s-maj=5.9km s-min=3.2km az=43.6*

NEIC ***15*** *18:33:44.9±0.2, 4°.60N×95°.00E, h35^{km}, mb4.8/40, Error ellipse: s-maj=7.5km s-min=3.5km az=222.0*

NEIC Felt at Banda Aceh.

IDC ***15*** *18:33:48.3±2.6, 4°.66N×95°.09E, h65^{km}±25^{km}, mb4.1/25, mb1 4.2/27, mb1mx4.0/52, mbtmp4.4/27, MS3.7/24, Ms1 3.7/24, ms1mx3.5/51, Error ellipse: s-maj=20.0km s-min=10.6km az=49.0*

GCMT ***15*** *18:33:49.1±0.5, 4°.61N±0°.04×95°.01E±0°.03, h43^{km}±2^{km}, MW4.8/49, Moment Tensor Solution. s35,c50; s49,c73; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.00±.17; $M_{\theta\theta}$-1.10±.10; $M_{\phi\phi}$-0.89±.12; $M_{r\theta}$0.94±.08; $M_{\theta\phi}$0.72±.08; $M_{\phi r}$-1.04±.10; Best double couple: $M_0$2.33100×10^{16} NP1:ϕ_s135.00000°, δ63.00000°, λ93.00000°. NP2: ϕ_s308.00000°, δ27.00000°, λ84.00000°. Principal axes: T 2.4720, Plg71.0000°, Azm51.0000°; N -0.2780, Plg3.0000°, Azm314.0000°; P -2.1890, Plg18.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 18:33:45.8±0.4, 4°.55N±0°.04×94°.86E±0°.05, h48^{km}, n179, $\sigma 2^{s}08$/183, mb4.7/76, MS3.8/27, 10C-4D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.18	72	ePn	Pn	18 34 18.8	-0.8
LHMI	Lhok Sumawe	2.18	72	P	Pn	18 34 19.3	-0.3
SNSI	Sinabang, Aceh	2.58	146	P	Pn	18 34 24.7	-0.4
KCSI	Kotacane, Aceh	3.08	109	P	Pn	18 34 33.2	+1.3
TSI	Tuntungan	3.84	106	P	Pn	18 34 44.4	+2.1
GSI	Gunungsitoli	4.21	140	ePn	Pn	18 34 46.0	-1.5
GSI	Gunungsitoli	4.21	140	P	Pn	18 34 48.2	+0.7
PSI	Prapat	4.41	113	ePn	Pn	18 34 51.2	+0.9
PSI				S	Sn	18 35 41.0	+0.5
PSI	Prapat	4.41	113	P	Pn	18 34 51.6	+1.3
	4.5nm,0.3s,baz=360,slow=8.4,SNR=18						
PSI				S	Sn	18 35 41.0	+0.5
	8.4nm,0.3s,baz=0.0,slow=16,SNR=4.5						
PSI				LR	LR	18 36 53.1	
	comp=Z,2μm,19.9s,baz=270,slow=43						
PKDT	Phuket	4.79	46	P	Pn	18 34 54.9	-0.5
	98nm,0.7s,4μm0.7nm						
TRTT	Trang	5.80	56	P	Pn	18 35 08.4	-1.0
	20nm,0.6s,0.1nm						
KULM	Kulim	5.81	83	ePn	Pn	18 35 07.6	-1.9
MNSI	Mandailing Nat	6.01	128	P	Pn	18 35 12.7	+0.5
IPM	Ipoh	6.14	90	ePn	Pn	18 35 11.2	-2.8
PBA	Port Blair	7.36	344	ePn	Pn	18 35 32.2	+1.4
BKNI	Bangkinang	7.46	124	ePn	Pn	18 35 31.9	-0.2
MYKOM	Kota Tinggi	9.38	107	ePn	Pn	18 35 57.8	-0.7
PHET	Kaeng Krachan	9.55	29	P	Pn	18 36 06.2	+5.5
	7.2nm,0.8s,173nm						
SRAK	Srakaew	11.77	36	P	Pn	18 36 38.2	+7.1
	172nm,0.5s,3μm						
UTHA	Uthaitani	11.83	22	P	Pn	18 36 35.3	+3.4
	4.6nm,0.7s,61nm						
MNAI	Manna	11.99	137	ePn	Pn	18 36 32.7	-1.4
UMPA	Umpang Tak	12.23	18	P	Pn	18 36 40.0	+2.6
	5.5nm,0.7s,71nm						
MDSI	Maura Dua	12.93	134	P	P	18 36 57.5	+1.1
PBKT	Sadao Pong	13.36	26	ePn	Pn	18 36 55.3	+2.4
PBKT	Sadao Pong	13.36	26	P	P	18 36 57.2	-3.9
	15nm,0.7s,745nm						
SUKH	Sukhothai	13.67	20	P	P	18 37 08.1	+3.5
UTTA	Uttaradit	14.25	23	P	P	18 37 09.1	-1.9
	2.7nm,0.7s						
PALK	Pallekele	14.34	282	ePn	Pn	18 37 09.3	+3.1
PALK				eSn	Sn	18 39 36.0	-8.0
PALK	Pallekele	14.34	282	P	P	18 37 10.8	-1.3
	0.2nm,0.3s,baz=115,slow=15,SNR=2.7						
PALK				S	Sn	18 39 37.9	-6.1
	2.2nm,0.3s,baz=297,slow=5.6,SNR=7.5						
PALK				LR	LR	18 42 27.9	
	comp=Z,385nm,19.6s,baz=115,slow=36						
CM01	Chiang Mai Arr	14.35	16	eP	P	18 37 09.4	-2.8
CM31	Chiang Mai Arr	14.38	16	eP	P	18 37 10.4	-2.1
CMAR	Chiang Mai Arr	14.38	16	P	P	18 37 10.8	-1.7
	1.2nm,0.3s,baz=208,slow=11,SNR=129						
CMAR				LR	LR	18 42 44.1	
	comp=Z,373nm,18.0s,baz=222,slow=38						
CHTO	Chiang Mai	14.72	15	ePn	P	18 37 14.8	-1.5
CHTO	Chiang Mai	14.72	15	P	P	18 37 15.6	-0.7
	73nm,0.7s						
CMMT	Chiang Mai	14.72	15	P	P	18 37 15.6	-0.7
	17nm,0.7s						
KSM	Kuching	15.72	101	ePn	P	18 37 26.3	-1.2
	17nm,1.0s						
LEM	Lembang	17.02	132	LR	LR	18 45 51.5	
	comp=Z,238nm,19.0s,baz=324,slow=43						
CISI	Cisompet, Garu	17.65	133	ePn	Pn	18 37 44.6	-3.8
	22nm,1.0s						
KMI	Kunming	21.81	20	P	P	18 38 36.6	+2.4
KMI				pP	pP	18 38 47.0	+2.1
KMI				sP	sP	18 38 51.6	+0.9
KMI				S	S	18 42 30.3	-2.7
KMI				sS	Sn	18 42 46.3	+1.7
KMI				SS	SnSn	18 43 10.8	+10
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,190nm,4.9s						
KMI				LR	LR		
	comp=N,470nm,11.5s						
KMI				LR	LR		
	comp=E,210nm,11.9s						
KMI				LR	LR		
	comp=Z,580nm,22.5s						
RAMN	Ramite	23.63	341	eP	P	18 38 54.9	+1.9
	20nm,0.6s						
JIRN	Jiri	24.42	341	eP	P	18 39 00.8	+0.4
	30nm,0.5s						
GYA	Guiyang	24.54	26	eP	P	18 39 00.6	-0.6
GYA				pP	pP	18 39 13.3	+0.3
GYA				PP	PnPn	18 39 41.4	+7.2
GYA				S	S	18 43 16.1	-2.7
GYA				sS	sS	18 43 37.8	-0.8
GYA				SS	SnSn	18 44 18.0	+11
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,110nm,4.1s						
GYA				LR	LR		
	comp=N,430nm,18.7s						
GYA				LR	LR		
	comp=E,400nm,15.5s						
GYA				LR	LR		
	comp=Z,390nm,20.0s						
PKI	Pulchoki	24.60	339	eP	P	18 39 02.5	+0.5
	8.1nm,0.6s						
PKIN	Phulchoki	24.61	339	eP	P	18 39 02.4	+0.4
	9.1nm,0.6s						
DMN	Daman	24.74	339	ePn	P	18 39 04.4	+1.2
GUN	Gumba	24.75	341	eP	P	18 39 03.6	+0.2
	21nm,0.5s						
LSA	Lhasa	25.26	352	eP	P	18 39 08.3	+0.2
	5.9nm,0.7s						
MPSI	Mapaga	25.35	99	P	P	18 39 10.7	+2.1

H08S2	**Diego Garcia H**	**25.40**	**242**	T	T	19 06 14.9	
	baz=62,slow=75,SNR=262						
H08S3	**Diego Garcia H**	**25.40**	**242**	T	T	19 06 18.4	
	baz=62,slow=75,SNR=7.1						
H08S1	**Diego Carcia H**	**25.41**	**242**	T	T	19 06 18.3	
	baz=62,slow=75,SNR=6.5						
KOLN	**Koldanda**	**25.46**	**336**	*e*P	**P**	**18 39 11.0**	**+1.3**
	39nm,0.6s						
DANN	**Dangsing**	**25.91**	**337**	*e*P	**P**	**18 39 14.8**	**+0.9**
	34nm,0.6s						
PYUN	**Piuthan**	**26.00**	**336**	*e*P	**P**	**18 39 15.5**	**+0.9**
	27nm,0.5s						
TGY	**Tagaytay City**	**27.39**	**68**	LR	LR	18 50 21.8	
	comp=Z,136nm,18.6s,baz=112,slow=37						
CD2	**Chengdu**	**27.52**	**17**	P	**P**	**18 39 26.3**	**-1.8**
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
LUWI	**Luwuk**	**28.43**	**101**	*e*P	**P**	**18 39 36.6**	**+0.3**
	46nm,0.9s						
YULB	**Yu-li**	**31.65**	**51**	*e*P	**P**	**18 40 05.7**	**+1.0**
	112nm,2.0s						
XAN	**Xi'an**	**32.12**	**22**	P	**P**	**18 40 06.8**	**-1.9**
XAN				pP	pP	18 40 17.6	-3.0
XAN				*e*S	**S**	**18 45 10.0**	**-8.0**
XAN				pmax	pmax		
	comp=Z,18nm,0.7s						
XAN				pmax	pmax		
	comp=Z,62nm,3.7s						
XAN				LR	LR		
	comp=N,320nm,5.6s						
XAN				LR	LR		
	comp=E,190nm,6.8s						
XAN				LR	LR		
	comp=Z,360nm,15.8s						
XAN	**Xi'an**	**32.12**	**22**	*e*P	**P**	**18 40 06.6**	**-2.2**
	22nm,0.8s						
BATI	**Baumata**	**32.22**	**117**	P	**P**	**18 40 08.8**	**-1.0**
	7.0nm,0.5s,baz=318,slow=6.9,SNR=3.3						
LZH	**Lanzhou**	**32.45**	**14**	*e*P	**P**	**18 40 16.5**	**+4.7**
LZH				pP	pwP	18 40 27.1	+0.7
LZH				sP	sP	18 40 31.6	+2.4
LZH				*e*PP	**PP**	**18 41 25.8**	**0.0**
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,76nm,5.2s						
LZH				LR	LR		
	comp=N,370nm,13.0s						
LZH				LR	LR		
	comp=E,370nm,13.2s						
LZH				LR	LR		
	comp=Z,480nm,16.5s						
SOEI	**Soe**	**32.56**	**116**	*e*P	**P**	**18 40 12.7**	**-0.2**
	12nm,0.9s						
GTA	**Gaotai**	**34.99**	**7**	⇑P	**P**	**18 40 32.3**	**-1.4**
GTA				pP	pP	18 40 42.8	-2.8
GTA				sP	pwP	18 40 46.5	-2.3
GTA				S	**S**	**18 46 02.6**	**+0.1**
GTA				sS	sS	18 46 19.3	-3.4
GTA				SS	**SnSn**	**18 48 18.6**	**-2.8**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,120nm,5.6s						
GTA				LR	LR		
	comp=N,160nm,19.7s						
GTA				LR	LR		
	comp=E,170nm,19.0s						
GTA				LR	LR		
	comp=Z,160nm,19.0s						
NJ2	**Nanjing**	**35.41**	**37**	*e*P	**P**	**18 40 38.3**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**37.79**	**127**	*e*P	**P**	**18 40 56.9**	**-0.8**
	11nm,1.3s						
FITZ	**Fitzroy Crossi**	**37.79**	**127**	P	**P**	**18 40 57.1**	**-0.5**
	4.1nm,1.1s,baz=326,slow=7.5,SNR=7.0						
FAKI	**Fak Fak**	**38.09**	**101**	*e*P	**P**	**18 40 59.0**	**-1.3**
	18nm,1.0s						
KSH	**Kashi**	**38.78**	**336**	P	**P**	**18 41 06.0**	**+0.1**
KSH				pP	pP	18 41 19.3	+1.3
KSH				S	**S**	**18 47 01.5**	**+1.3**
KSH				sS	sS	18 47 21.4	+0.8
KSH				SS	**SS**	**18 49 47.1**	**-5.4**
KSH				pmax	pmax		
	comp=Z,34nm,0.6s						
KSH				pmax	pmax		
	comp=Z,190nm,4.7s						
KSH				LR	LR		
	comp=N,220nm,4.6s						
KSH				LR	LR		
	comp=E,180nm,4.4s						
KSH				LR	LR		
	comp=Z,220nm,6.6s						
JOW	**Kunigami**	**38.84**	**52**	*e*P	**P**	**18 41 07.1**	**+0.7**
	71nm,1.3s						
HHC	**Hu-ho-hao-te**	**39.13**	**20**	*e*P	**P**	**18 41 09.1**	**+0.3**
HHC				sP	pP	18 41 22.8	+1.8
HHC				S	**S**	**18 47 06.8**	**+1.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.1s						
HHC				LR	LR		
	comp=N,390nm,11.8s						
HHC				LR	LR		
	comp=E,270nm,9.6s						
HHC				LR	LR		
	comp=Z,280nm,8.1s						
WSAR	**Wadi Sarin**	**39.59**	**301**	LR	LR	18 57 05.7	
	comp=Z,55nm,20.7s,baz=114,slow=35						
WMQ	**Urumqi**	**39.62**	**352**	*e*P	**P**	**18 41 13.5**	**+0.7**
WMQ				pP	pP	18 41 24.4	-0.4
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.7s						
WMQ				LR	LR		
	comp=N,150nm,27.9s						
WMQ				LR	LR		
	comp=E,430nm,34.1s						
WMQ				LR	LR		
	comp=Z,180nm,32.7s						
TARG	**Taragay, Kyrgy**	**40.04**	**340**	*e*P	**P**	**18 41 18.6**	**+1.9**
	14nm,0.7s						
BJT	**Baijiatuau**	**40.20**	**26**	*e*P	**P**	**18 41 17.8**	**+0.2**
	15nm,0.8s						
NRN	**Naryn**	**40.42**	**338**	*e*P	**P**	**18 41 20.3**	**+0.5**
	9.9nm,0.6s						
KDJ	**Kajisay**	**40.61**	**340**	*e*P	**P**	**18 41 23.8**	**+2.6**
	24nm,0.6s						
GAR	**Garm**	**40.89**	**330**	*e*P	**P**	**18 41 24.0**	**+0.5**
CHGR	**Chuyangaron**	**41.21**	**329**	*e*P	**P**	**18 41 26.2**	**+0.1**
KZA	**Kyzart**	**41.26**	**338**	P	**P**	**18 41 28.5**	**+1.7**
	SNR=6.4						
BTK	**Batken**	**41.47**	**332**	*e*P	**P**	**18 41 30.0**	**+1.8**
	22nm,1.3s						
ARSB	**Arslanbob**	**41.53**	**335**	*e*P	**P**	**18 41 30.2**	**+1.4**
	30nm,0.6s						
UCH	**Uchtor**	**41.67**	**337**	P	**P**	**18 41 32.0**	**+1.8**
	SNR=15						
TKM2	**Tokmak 2**	**41.86**	**339**	P	**P**	**18 41 32.9**	**+1.4**
	SNR=12						
KBK	**Karagaybulak**	**41.87**	**338**	P	**P**	**18 41 33.7**	**+2.2**
	SNR=26						
AML	**Almayashu**	**41.91**	**336**	P	**P**	**18 41 33.8**	**+1.7**
	SNR=21						
AAK	**Ala-Archa**	**42.03**	**337**	P	**P**	**18 41 35.9**	**+3.1**
	SNR=8.0						
AAK	**Ala-Archa**	**42.03**	**337**	*e*P	**P**	**18 41 32.3**	**-0.5**
	9.9nm,0.8s						
AAK	**Ala-Archa**	**42.03**	**337**	P	**P**	**18 41 34.5**	**+1.7**
	8.2nm,0.7s,baz=121,slow=5.7,SNR=35						
FRU1	**Bishkek**	**42.12**	**338**	*e*P	**P**	**18 41 34.4**	**+0.9**
	9.5nm,0.8s						
EKS2	**Erkin-Say**	**42.33**	**337**	P	**P**	**18 41 36.9**	**+1.7**
	SNR=10						
USP	**Ospenovka**	**42.56**	**338**	P	**P**	**18 41 38.7**	**+1.7**
	SNR=7.2						
MK01	**Makanchi Array**	**43.44**	**347**	*e*P	**P**	**18 41 43.6**	**-0.4**
MK31	**Makanchi Array**	**43.47**	**347**	*e*P	**P**	**18 41 44.3**	**+0.1**
MK32	**Makanchi Array**	**43.47**	**347**	*e*P	**P**	**18 41 44.0**	**-0.2**
MKAR	**Makanchi Array**	**43.47**	**347**	P	**P**	**18 41 44.0**	**-0.2**
	2.6nm,0.3s,baz=164,slow=8.2,SNR=96						
MKAR				LR	LR	19 02 46.5	
	comp=Z,92nm,20.4s,baz=150,slow=40						
MAKZ	**Makanchi**	**43.55**	**347**	*e*P	**P**	**18 41 44.2**	**-0.6**
	4.5nm,0.7s						
KK31	**Karatay Array**	**44.04**	**334**	*e*P	**P**	**18 41 50.1**	**+1.2**
KK31				*e*PP	**PP**	**18 43 29.1**	**-3.1**
KKAR	**Karatay Array**	**44.04**	**334**	*e*P	**P**	**18 41 50.1**	**+1.2**
KKAR				*e*PP	**PP**	**18 43 29.1**	**-3.1**
SONA0	**Songino Array**	**44.25**	**11**	*e*P	**P**	**18 41 49.3**	**-1.3**
SONM	**Songino Array**	**44.25**	**11**	P	**P**	**18 41 49.3**	**-1.3**
	0.3nm,0.3s,baz=196,slow=8.1,SNR=8.6						
SONM				PcP	**PcP**	**18 43 34.9**	**+0.4**
	1.3nm,0.5s,baz=209,slow=3.9,SNR=7.8						
SONM				LR	LR	19 02 35.6	
	comp=Z,97nm,19.2s,baz=196,slow=39						
SONA1	**Songino Array**	**44.26**	**11**	*e*P	**P**	**18 41 49.1**	**-1.6**
KS15	**Wonju Array Si**	**44.52**	**38**	*e*P	**P**	**18 41 51.1**	**-1.6**
KSAR	**Wonju Array Be**	**44.52**	**38**	P	**P**	**18 41 51.9**	**-0.9**
KSRS	**Korea Array**	**44.55**	**38**	P	**P**	**18 41 51.9**	**-1.1**
	2.8nm,0.7s,baz=220,slow=10,SNR=9.1						
KSRS				LR	LR	19 04 22.5	
	comp=Z,109nm,18.1s,baz=200,slow=41						
WR1	**Warramunga Arr**	**45.80**	**123**	*e*P	**P**	**18 42 02.9**	**-0.3**
	9.4nm,0.8s						
WRA	**Warramunga Arr**	**45.80**	**123**	P	**P**	**18 42 02.9**	**-0.3**
	6.3nm,0.5s,baz=302,slow=9.2,SNR=88						
WRA				LR	LR	19 02 22.7	
	comp=Z,88nm,21.4s,baz=245,slow=38						
WRAB	**Tennant Creek**	**45.80**	**123**	*e*P	**P**	**18 42 02.9**	**-0.3**
	9.3nm,0.7s						
WB2	**Warramunga Arr**	**45.81**	**123**	*e*P	**P**	**18 42 02.0**	**-1.3**
GEYT	**Alibeck**	**47.16**	**320**	P	**P**	**18 42 15.2**	**+1.5**
	5.7nm,0.7s,baz=147,slow=8.9,SNR=10						
GYA0B	**ALIBECK ARRAY**	**47.16**	**320**	*e*P	**P**	**18 42 15.4**	**+1.7**
	6.0nm,0.8s						
AS31	**Alice Springs**	**47.28**	**128**	*e*P	**P**	**18 42 14.0**	**-0.8**
	1.6nm,0.9s						
ASAR	**Alice Springs**	**47.28**	**128**	P	**P**	**18 42 14.6**	**-0.2**
	2.3nm,0.6s,baz=298,slow=7.8,SNR=50						
ASAR				LR	LR	19 02 42.7	
	comp=Z,68nm,21.6s,baz=292,slow=37						
AS01	**Alice Springs**	**47.31**	**128**	*e*P	**P**	**18 42 14.4**	**-0.7**
AS01				*e*PcP	**PcP**	**18 43 46.3**	**+0.8**
FORT	**Forrest**	**47.33**	**140**	*e*P	**P**	**18 42 14.8**	**-0.2**
	13nm,0.7s						
KURBB	**Kurchatov Arra**	**47.92**	**346**	P	**P**	**18 42 19.7**	**+0.4**
	7.4nm,0.7s,baz=170,slow=7.0,SNR=44						
KURK	**Kurchatov**	**47.99**	**346**	*e*P	**P**	**18 42 20.2**	**+0.4**
	5.8nm,0.8s						
INU	**Inuyama**	**49.49**	**46**	*e*P	**P**	**18 42 30.2**	**-1.5**
	45nm,1.4s						
ZALV	**Zalesovo Beam**	**49.92**	**352**	*e*P	**P**	**18 42 33.9**	**-0.7**
ZALV	**Zalesovo Beam**	**49.92**	**352**	P	**P**	**18 42 34.4**	**-0.2**
	5.3nm,0.6s,baz=188,slow=7.6,SNR=33						
ZALV				LR	LR	19 07 01.0	
	comp=Z,64nm,21.7s,baz=242,slow=40						
ZAA1	**Zalesovo Array**	**49.93**	**352**	*e*P	**P**	**18 42 34.4**	**-0.2**
MJAR	**Matsushiro Arr**	**50.91**	**45**	LR	LR	19 05 19.8	
	comp=Z,93nm,21.4s,baz=255,slow=37						
USA0B	**Ussuriysk Arra**	**51.21**	**34**	*e*P	**P**	**18 42 43.9**	**-0.5**
	24nm,1.5s						
USRK	**Ussuriysk Ar.**	**51.21**	**34**	P	**P**	**18 42 43.3**	**-1.1**
	2.8nm,0.7s,baz=248,slow=8.1,SNR=10						
USRK				LR	LR	19 04 43.3	
	comp=Z,151nm,20.6s,baz=206,slow=36						
COEN	**Coen**	**51.33**	**112**	*e*P	**P**	**18 42 44.3**	**-1.6**
	17nm,1.4s						
BVAR	**Borovoye Array**	**52.35**	**342**	P	**P**	**18 42 53.3**	**+0.5**
	9.6nm,0.6s,baz=140,slow=8.7,SNR=87						
BVAR				LR	LR	19 08 21.0	
	comp=Z,43nm,18.2s,baz=144,slow=40						
BRVK	**Borovoye**	**52.41**	**342**	*e*P	**P**	**18 42 53.7**	**+0.5**
	10nm,0.7s						
ABKAR	**Akbulak array**	**53.48**	**332**	*e*P	**P**	**18 43 01.5**	**+0.3**
KLR	**Kul'dur**	**54.39**	**29**	P	**P**	**18 43 07.2**	**-0.7**
	3.3nm,0.7s,baz=258,slow=5.0,SNR=16						
STKA	**Stephens Creek**	**57.32**	**133**	P	**P**	**18 43 29.4**	**+0.3**
	1.4nm,0.8s,baz=225,slow=3.8,SNR=3.9						
STKA				LR	LR	19 11 27.9	
	comp=Z,50nm,20.2s,baz=13,slow=40						
SIRT	**Sirnak**	**57.91**	**312**	*e*P	**P**	**18 43 33.5**	**+0.2**
	31nm,1.3s						
ARU	**Arti**	**59.21**	**337**	*e*P	**P**	**18 43 41.9**	**0.0**
	12nm,1.4s						
KBZ	**Khabaz**	**60.03**	**319**	P	**P**	**18 43 49.2**	**+1.5**
	1.7nm,0.9s,baz=189,slow=11,SNR=4.5						
KIV	**Kislovodsk**	**60.26**	**319**	*e*P	**P**	**18 43 49.4**	**-0.1**
	8.1nm,1.0s						
CAN	**Canberra**	**64.39**	**133**	*e*P	**P**	**18 44 18.0**	**+0.8**
	38nm,1.6s						
NRIK	**Noril'sk**	**64.87**	**357**	P	**P**	**18 44 20.3**	**+0.7**
	2.0nm,0.3s,baz=148,slow=4.7,SNR=3.7						
NRIK				LR	LR	19 15 37.8	
	comp=Z,60nm,19.4s,baz=130,slow=39						
BR101	**Keskin Array S**	**65.15**	**312**	*e*P	**P**	**18 44 22.7**	**+0.5**
BR131	**Keskin Array S**	**65.15**	**312**	*e*P	**P**	**18 44 23.1**	**+0.9**
	20nm,1.8s						
BRTR	**Keskin Array B**	**65.15**	**312**	P	**P**	**18 44 22.7**	**+0.5**
	1.8nm,0.6s,baz=133,slow=7.1,SNR=14						
BRTR				LR	LR	19 15 17.6	
	comp=Z,23nm,19.4s,baz=101,slow=38						
PETK	**Petropavlovsk-**	**70.29**	**35**	P	**P**	**18 44 53.4**	**-0.8**
	2.2nm,0.8s,baz=236,slow=6.6,SNR=3.2						
PETK				LR	LR	19 15 47.2	
	comp=Z,78nm,21.9s,baz=227,slow=36						
PEA1	**Petropavlovsk-**	**70.29**	**35**	*e*P	**P**	**18 44 53.4**	**-0.8**
MILM	**Milestii Mici**	**70.44**	**318**	⇑*i*P	**P**	**18 44 55.5**	**+0.3**
CFR	**Carcaliu**	**70.47**	**316**	⇑*i*P	**P**	**18 44 56.6**	**+1.2**
AKASG	**Malin Array Be**	**71.20**	**322**	P	**P**	**18 44 59.8**	**+0.1**
	1.1nm,0.4s,baz=94,slow=5.1,SNR=18						
AKBB	**Malin Array Si**	**71.20**	**322**	*e*P	**P**	**18 44 59.6**	**0.0**
	4.1nm,0.8s						
KIEV	**Kiev**	**71.20**	**322**	*e*P	**P**	**18 44 59.4**	**-0.3**
	3.7nm,0.7s						
KIEV	**Kiev**	**71.20**	**322**	⇑*i*P	**P**	**18 44 59.5**	**-0.2**
AK11	**Malin Array Si**	**71.22**	**322**	*e*P	**P**	**18 44 59.7**	**-0.2**
VRI	**Vrincioaia**	**71.59**	**317**	⇑*i*P	**P**	**18 45 03.9**	**+1.7**
PLOR	**Plostina**	**71.64**	**317**	⇑*i*P	**P**	**18 45 04.2**	**+1.7**
TESR	**Tescani**	**71.79**	**318**	⇑*i*P	**P**	**18 45 04.9**	**+1.5**
MLR	**Muntele Rosu**	**72.05**	**316**	⇑*i*P	**P**	**18 45 07.3**	**+2.2**
BIZ	**Bicaz**	**72.25**	**318**	⇓*i*P	**P**	**18 45 07.7**	**+1.6**
VOIR		**72.65**	**316**	⇓*i*P	**P**	**18 45 10.1**	**+1.4**
ARR	**Arges**	**72.92**	**316**	⇓*i*P	**P**	**18 45 11.4**	**+1.1**
BURAR	**Bucovina Array**	**72.98**	**318**	⇑*i*P	**P**	**18 45 12.5**	**+1.9**
BUR04	**Bucovina Ar. S**	**72.99**	**318**	*e*P	**P**	**18 45 11.8**	**+1.2**
BUR08	**Bucovina Ar. S**	**73.00**	**318**	*e*P	**P**	**18 45 12.2**	**+1.5**
	13nm,1.6s						
LIT	**Litokhoron**	**73.61**	**310**	*e*P	**P**	**18 45 15.3**	**+0.9**
	14nm,1.1s						
DRGR		**74.50**	**317**	⇓*i*P	**P**	**18 45 20.9**	**+1.4**
TRPA	**Tarpa**	**74.85**	**319**	⇑*i*P	**P**	**18 45 22.9**	**+1.6**
MAW	**Mawson**	**75.45**	**192**	P	**P**	**18 45 25.7**	**+1.4**
	42nm,1.1s,baz=333,slow=9.0,SNR=1.7						
MAW				LR	LR	19 15 57.3	
	comp=Z,63nm,18.6s,baz=291,slow=33						
FIA0	**FINESS Array S**	**75.97**	**333**	*e*P	**P**	**18 45 27.9**	**+0.5**
FINES	**FINESS Array B**	**75.97**	**333**	P	**P**	**18 45 27.9**	**+0.5**
	2.3nm,0.3s,baz=107,slow=5.3,SNR=60						
FINES				LR	LR	19 21 14.7	
	comp=Z,35nm,19.6s,baz=68,slow=38						
MORC	**Moravsky Berou**	**78.35**	**320**	*e*P	**P**	**18 45 42.3**	**+1.1**
	17nm,1.7s						
ARA0	**ARCESS Array S**	**78.61**	**340**	*e*P	**P**	**18 45 42.5**	**+0.3**
ARCES	**ARCESS Array B**	**78.61**	**340**	P	**P**	**18 45 42.5**	**+0.3**
	1.6nm,0.4s,baz=93,slow=6.0,SNR=32						
GEA0	**GERESS Array S**	**80.77**	**319**	*e*P	**P**	**18 45 55.9**	**+1.4**
GEC2	**GERESS Array S**	**80.77**	**319**	*e*P	**P**	**18 45 55.9**	**+1.5**
	12nm,1.7s						
GERES	**GERESS Array B**	**80.77**	**319**	P	**P**	**18 45 56.1**	**+1.6**
	0.9nm,0.4s,baz=111,slow=4.8,SNR=14						
NOA	**NORSAR Array B**	**82.96**	**331**	LR	LR	19 26 40.8	
	comp=Z,11nm,20.1s,baz=75,slow=38						
KEST	**Kesra**	**83.73**	**305**	P	**P**	**18 46 12.8**	**+2.6**
	4.8nm,1.2s,baz=270,slow=1.0,SNR=4.4						
GAMB	**Gambell**	**87.47**	**26**	*e*S	**P**	**18 46 27.7**	**-0.3**
VNDA	**Vanda**	**89.55**	**168**	LR	LR	19 22 04.3	
	comp=Z,59nm,18.8s,baz=272,slow=32						
TORD	**Torodi Ar. Bea**	**92.06**	**283**	LR	LR	19 27 11.1	
	comp=Z,44nm,18.8s,baz=335,slow=35						
IM3	**Indian Mountai**	**94.41**	**22**	*e*P	**P**	**18 47 00.3**	**0.0**
LTX	**Lajitas**	**141.90**	**27**	*e*PKPpre	PKPpre	18 53 08.2	
TXAR	**Lajitas Array**	**141.90**	**27**	PKhKP	PKPpre	18 53 08.1	
	0.2nm,0.5s,baz=340,slow=4.8,SNR=3.5						
LNIG	**Linares**	**147.58**	**25**	*e*PKPdf	**PKPdf**	**18 53 24.4**	**+1.3**

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*ISCJB **15** 18:54:24.7±0.3, 40°.35N±0°.01×23°.97E±0°.02, h8^{km}±2^{km},*
Error ellipse: s-maj=2.0km s-min=1.8km az=27.2

*ATH **15** 18:54:24.9, 40°.34N×23°.95E, h24^{km}±1^{km}, ML3.1/25, Error ellipse: s-maj=1.0km s-min=0.6km az=14.0*
*ISK **15** 18:54:24.5, 40°.34N×23°.96E, h13^{km}, ML3.5/23*
*SOF **15** 18:54:25.0, 40°.39N×24°.00E, h2^{km}*
*THE **15** 18:54:25.1, 40°.32N×23°.95E, h3^{km}, ML3.0/28, Error ellipse: s-maj=0.7km s-min=0.3km az=356.0*
*BEO **15** 18:54:29.4±0.6, 40°.57N×23°.67E, h0^{km}, ML3.4/7*
*DDA **15** 18:54:44.7, 40°.34N×25°.86E, h7^{km}±2^{km}, ML2.7*
ISC 15 18:54:25.1±0.8**, 40°.35N**±0°.01×**23°.97E**±0°.01**, h11**^{km}±5^{km}**,**
n186, σ1°.00/244**, 14C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.01**	**139**	PG	**Pg**	**18 54 27.4**	**+0.3**
OUR				SG	**Sg**	**18 54 28.5**	**+0.1**
OUR	**Ouranopolis**	**0.01**	**139**	P	**Pg**	**18 54 26.2**	**-0.9**
OUR				S	**Pg**	**18 54 27.4**	**+0.3**
PLG	**Polygyros**	**0.40**	**274**	P	**Pg**	**18 54 33.3**	**+0.2**
PLG				S	**Sg**	**18 54 38.7**	**+0.3**
PLG				AML	AML	18 54 39.3	
	comp=E,56021µm,0.2s						
PLG				AML	AML	18 54 39.5	
	comp=N,36376µm,0.2s						
PLG	**Polygyros**	**0.40**	**274**	P	**Pg**	**18 54 33.1**	**0.0**
PLG				S	**Sg**	**18 54 38.5**	**+0.1**
PAIG	**Paliouri**	**0.47**	**208**	P	**Pg**	**18 54 34.7**	**+0.3**
PAIG				S	**Sg**	**18 54 41.2**	**+0.6**
PAIG				AML	AML	18 54 42.4	
	comp=E,7265µm,0.2s						
PAIG				AML	AML	18 54 44.5	
	comp=N,5950µm,0.3s						
PAIG	**Paliouri**	**0.47**	**208**	P	**Pg**	**18 54 33.3**	**-1.1**
PAIG				S	**Sg**	**18 54 40.1**	**-0.6**
THAS	**Thassos island**	**0.63**	**65**	P	**Pb**	**18 54 37.9**	**-0.3**
THAS				S	**Sb**	**18 54 46.6**	**-0.3**
THAS				AML	AML	18 54 49.5	
	comp=N,48585µm,0.3s						
THAS				AML	AML	18 54 49.6	
	comp=E,23234µm,0.3s						
THAS	**Thassos island**	**0.63**	**65**	P	**Pb**	**18 54 37.8**	**-0.3**
THAS				S	**Sg**	**18 54 46.3**	**+0.7**
SOH	**Sokhos**	**0.67**	**316**	P	**Pg**	**18 54 38.3**	**+0.1**
SOH				S	**Sg**	**18 54 47.2**	**+0.4**
SOH				AML	AML	18 54 48.4	
	comp=E,6312µm,0.2s						
SOH				AML	AML	18 54 48.8	
	comp=N,9142µm,0.3s						
SOH	**Sokhos**	**0.67**	**316**	P	**Pg**	**18 54 38.2**	**+0.1**
SOH				S	**Sg**	**18 54 46.7**	**-0.2**
KVLA	**Kavala**	**0.67**	**28**	P	**Pb**	**18 54 38.8**	**0.0**
KVLA				S	**Sg**	**18 54 47.6**	**+0.6**
HORT	**Hortiatis**	**0.71**	**291**	PG	**Pg**	**18 54 38.8**	**-0.1**
HORT				SG	**Sg**	**18 54 48.7**	**+0.5**
HORT	**Hortiatis**	**0.71**	**291**	P	**Pg**	**18 54 38.5**	**-0.4**
HORT				S	**Sg**	**18 54 48.4**	**+0.2**
HORT				AML	AML	18 54 53.2	
	comp=N,2668µm,0.3s						
HORT				AML	AML	18 54 53.4	
	comp=E,2664µm,0.2s						
HORT	**Hortiatis**	**0.71**	**291**	P	**Pg**	**18 54 38.2**	**-0.7**
HORT				S	**Sg**	**18 54 48.6**	**+0.4**
KAVA	**Kavala**	**0.77**	**32**	P	**Pb**	**18 54 40.6**	**0.0**
KAVA				S	**Sb**	**18 54 51.1**	**0.0**
KAVA				AML	AML	18 54 53.7	
	comp=N,7207µm,0.1s						
KAVA				AML	AML	18 54 53.8	
	comp=E,8808µm,0.1s						
KAVA	**Kavala**	**0.77**	**32**	P	**Pb**	**18 54 40.5**	**0.0**
KAVA				S	**Sn**	**18 54 52.6**	**-1.0**
THE	**Thessaloniki**	**0.82**	**291**	P	**Pg**	**18 54 41.0**	**+0.1**
THE				S	**Sg**	**18 54 51.9**	**+0.3**
NVR	**Nevrokopi**	**1.01**	**355**	P	**Pg**	**18 54 44.6**	**+0.1**
NVR				S	**Sb**	**18 54 58.6**	**+0.7**
NVR				AML	AML	18 55 01.1	
	comp=N,1758µm,0.2s						
NVR				AML	AML	18 55 01.2	
	comp=E,1897µm,0.3s						
NVR	**Nevrokopi**	**1.01**	**355**	P	**Pg**	**18 54 44.7**	**+0.2**
NVR				S	**Sb**	**18 54 58.6**	**+0.7**
LIA	**Limnos Island**	**1.03**	**115**	P	**Pg**	**18 54 45.3**	**+0.3**
LIA				S	**Sn**	**18 54 59.5**	**-0.4**
LIA				AML	AML	18 55 02.1	
	comp=E,2617µm,0.3s						
LIA				AML	AML	18 55 02.6	
	comp=N,1949µm,0.3s						
LIA	**Limnos Island**	**1.03**	**115**	P	**Pg**	**18 54 45.3**	**+0.3**
LIA				S	**Sb**	**18 54 58.8**	**+0.2**
XOR	**Xorichti**	**1.15**	**212**	P	**Pn**	**18 54 47.2**	**0.0**
XOR				AML	AML	18 55 03.9	
	comp=N,2261µm,0.3s						
XOR				AML	AML	18 55 04.7	
	comp=E,1127µm,0.3s						
XOR	**Xorichti**	**1.15**	**212**	P	**Pb**	**18 54 45.7**	**-1.3**
XOR				S	**Sg**	**18 55 02.1**	**0.0**
KNT	**Kendrikon**	**1.15**	**315**	PN	**Pb**	**18 54 46.9**	**-0.2**
KNT	**Kendrikon**	**1.15**	**315**	P	**Pb**	**18 54 46.8**	**-0.3**
KNT				S	**Sb**	**18 55 01.9**	**-0.2**
KNT				AML	AML	18 55 06.1	
	comp=N,2832µm,0.3s						
KNT				AML	AML	18 55 06.5	
	comp=E,2174µm,0.3s						
KNT	**Kendrikon**	**1.15**	**315**	P	**Pb**	**18 54 46.3**	**-0.8**
KNT				S	**Sn**	**18 55 03.0**	**0.0**
LIT	**Litokhoron**	**1.16**	**258**	P	**Pb**	**18 54 46.2**	**-1.0**
LIT				AML	AML	18 55 05.3	
	comp=E,692µm,0.4s						
LIT				AML	AML	18 55 07.0	
	comp=N,726µm,0.3s						
LIT	**Litokhoron**	**1.16**	**258**	P	**Pb**	**18 54 46.2**	**-1.0**
LIT				S	**Sg**	**18 55 02.7**	**+0.2**
AOS	**Alonnisos**	**1.18**	**183**	PN	**Pb**	**18 54 47.2**	**-0.3**
AOS	**Alonnisos**	**1.18**	**183**	P	**Pb**	**18 54 47.0**	**-0.5**
AOS				S	**Sn**	**18 55 03.4**	**-0.2**
AOS				AML	AML	18 55 06.0	
	comp=N,1928µm,0.5s						
AOS				AML	AML	18 55 07.3	
	comp=E,2048µm,0.5s						
AOS	**Alonnisos**	**1.18**	**183**	P	**Pb**	**18 54 46.9**	**-0.5**
AOS				S	**Sg**	**18 55 03.0**	**0.0**
NEO	**Neokhori**	**1.19**	**209**	P	**Pb**	**18 54 47.4**	**-0.3**
NEO				S	**Sg**	**18 55 03.5**	**+0.1**
NEO				AML	AML	18 55 04.6	
	comp=E,1867µm,0.3s						
NEO				AML	AML	18 55 05.2	
	comp=N,1754µm,0.4s						
NEO	**Neokhori**	**1.19**	**209**	P	**Pb**	**18 54 46.0**	**-1.7**
NEO				S	**Sb**	**18 55 02.7**	**-0.3**
ALNA	**Alonissos**	**1.20**	**184**	P	**Pn**	**18 54 47.3**	**-0.5**
ALNA				S	**Sn**	**18 55 04.1**	**0.0**
SMTH	**Samothraki Isl**	**1.20**	**84**	P	**Pn**	**18 54 47.3**	**-0.6**
SMTH				S	**Sn**	**18 55 05.4**	**+1.3**
SMTH				AML	AML	18 55 05.9	
	comp=N,2086µm,0.4s						
SMTH				AML	AML	18 55 06.3	
	comp=E,2305µm,0.3s						
SMTH	**Samothraki Isl**	**1.20**	**84**	P	**Pn**	**18 54 47.4**	**-0.5**
SMTH				S	**Sn**	**18 55 05.2**	**+1.1**
FYTO	**Fytoko, Volos**	**1.23**	**221**	P	**Pn**	**18 54 47.9**	**-0.3**
FYTO				AML	AML	18 55 05.5	
	comp=E,435µm,0.3s						
FYTO				AML	AML	18 55 07.0	
	comp=N,538µm,0.3s						
FYTO	**Fytoko, Volos**	**1.23**	**221**	P	**Pn**	**18 54 47.5**	**-0.7**
FYTO				S	**Sn**	**18 55 04.9**	**+0.1**
SKIA	**Skiathos**	**1.24**	**198**	P	**Pn**	**18 54 48.3**	**-0.2**
SKIA				S	**Sg**	**18 55 05.3**	**+0.2**
SKIA				AML	AML	18 55 08.2	
	comp=N,1469µm,0.6s						
SKIA				AML	AML	18 55 11.1	
	comp=E,955µm,0.4s						
SKIA	**Skiathos**	**1.24**	**198**	P	**Pn**	**18 54 47.9**	**-0.5**
SKIA				S	**Sb**	**18 55 04.4**	**-0.2**
MMB	**Musomiste**	**1.25**	**352**	P	**Pn**	**18 54 48.3**	**-0.4**
GRG	**Griva**	**1.34**	**298**	PN	**Pn**	**18 54 49.8**	**0.0**
GRG	**Griva**	**1.34**	**298**	P	**Pn**	**18 54 50.0**	**+0.1**
GRG				S	**Sg**	**18 55 08.9**	**+0.6**
GRG				AML	AML	18 55 13.4	
	comp=N,1126µm,0.4s						
GRG				AML	AML	18 55 15.0	
	comp=E,1181µm,0.4s						
GRG	**Griva**	**1.34**	**298**	P	**Pn**	**18 54 49.9**	**+0.1**
GRG				S	**Sg**	**18 55 09.1**	**+0.8**
RDO	**Rodhopi**	**1.44**	**56**	PN	**Pn**	**18 54 50.8**	**-0.3**

RDO	Rodhopi	1.44	56	P	Pn	18 54 50.7	-0.3
RDO				AML	AML	18 55 18.1	
	comp=N,1028μm,0.3s						
RDO				AML	AML	18 55 18.5	
	comp=E,1170μm,0.3s						
RDO	Rodhopi	1.44	56	P	Pn	18 54 50.7	-0.3
RDO				S	Sg	18 55 12.1	+0.8
VAY	Valandovo	1.44	313	*i* Pn	Pg	18 54 52.6	-0.2
RZN	Rozhen	1.46	23	P	Pn	18 54 51.9	+0.3
SKY	Skiros Island	1.53	163	P	Pn	18 54 52.6	+0.1
SKY	Skiros Island	1.53	163	P	Pn	18 54 51.9	-0.6
SMIA	Simia	1.58	202	P	Pn	18 54 53.3	+0.2
SMIA				AML	AML	18 55 20.5	
	comp=E,1929μm,0.7s						
SMIA				AML	AML	18 55 23.6	
	comp=N,1801μm,0.7s						
SMIA	Simia	1.58	202	P	Pn	18 54 53.3	+0.2
SMIA				S	Sb	18 55 14.4	+0.1
MRKA	Markates	1.66	190	P	Pn	18 54 54.2	-0.1
MRKA				AML	AML	18 55 30.1	
	comp=E,689μm,0.6s						
MRKA				AML	AML	18 55 32.0	
	comp=N,497μm,0.4s						
MRKA	Markates	1.66	190	P	Pn	18 54 54.1	-0.1
ALN	Alexandroupoli	1.67	70	PN	Pn	18 54 54.2	-0.2
ALN	Alexandroupoli	1.67	70	P	Pn	18 54 54.8	+0.4
ALN				AML	AML	18 55 21.3	
	comp=E,761μm,0.8s						
ALN				AML	AML	18 55 22.1	
	comp=N,1509μm,0.7s						
ALN	Alexandroupoli	1.67	70	P	Pn	18 54 54.6	+0.2
ALN				S	Sg	18 55 18.4	-0.6
BOZC	Bozcaada	1.68	107	PN	Pn	18 54 54.6	+0.2
BOZC	Bozcaada	1.68	107	*i* P	Pb	18 54 55.6	-0.4
BOZC				*i* S	Sn	18 55 15.5	-0.4
BOZC				IAML_P			
	comp=Z,3μm,0.2s						
KZN	Kozani	1.68	269	P	Pn	18 54 55.4	+0.8
KZN				AML	AML	18 55 22.2	
	comp=N,272μm,0.6s						
KZN				AML	AML	18 55 29.3	
	comp=E,441μm,0.4s						
THL	Klokotos Trika	1.69	243	P	Pn	18 54 54.9	+0.3
THL				S	Sn	18 55 16.6	+0.4
THL				AML	AML	18 55 18.3	
	comp=N,439μm,0.6s						
THL				AML	AML	18 55 22.1	
	comp=E,236μm,0.4s						
THL	Klokotos Trika	1.69	243	P	Pn	18 54 54.9	+0.3
THL				S	Sb	18 55 17.0	-0.6
ENEZ	Enez	1.71	76	PN	Pn	18 54 54.9	0.0
ATAL	Atalanti	1.81	204	P	Pn	18 54 56.1	-0.2
ATAL	Atalanti	1.81	204	P	Pn	18 54 55.9	-0.3
ATAL				S	Sn	18 55 19.1	0.0
AGG	Agios Georgios	1.83	224	PN	Pn	18 54 56.4	-0.1
AGG	Agios Georgios	1.83	224	P	Pn	18 54 56.6	0.0
AGG				AML	AML	18 55 38.8	
	comp=N,291μm,1.1s						
AGG				AML	AML	18 55 42.2	
	comp=E,271μm,0.9s						
AGG	Agios Georgios	1.83	224	P	Pn	18 54 56.5	-0.1
AGG				S	Sn	18 55 20.2	+0.5
PLD	Plovdiv	1.84	17	PN	Pn	18 54 57.1	+0.4
PLD	Plovdiv	1.84	17	*e*Pn	Pg	18 55 01.1	+0.6
PLD				*e*Sn	Sg	18 55 23.6	-0.8
SIGR	SIGRI	1.84	127	PN	Pn	18 54 56.9	+0.2
SIGR	SIGRI	1.84	127	P	Pn	18 54 57.2	+0.5
SIGR	SIGRI	1.84	127	P	Pn	18 54 57.1	+0.5
SIGR				S	Sb	18 55 21.4	-0.5
EZN	Ezine	1.88	105	PN	Pn	18 54 57.4	+0.2
EZN	Ezine	1.88	105	P	Pn	18 54 57.7	+0.5
STIP	Stip	1.91	316	*i* Pn	Pn	18 54 57.4	-0.2
GELI	Tayfur-Gelibol	1.92	88	PN	Pn	18 54 57.7	0.0
EREA	Eretria	1.92	181	P	Pn	18 54 58.0	+0.1
EREA	Eretria	1.92	181	P	Pn	18 54 57.9	+0.1
ERIK	Erikli-Kesan	1.97	80	PN	Pn	18 54 58.8	+0.4
BAYC	CANAKKALE_Bayr	2.07	106	*i* P	Pn	18 55 00.8	+0.9
BAYC				*i* S	Sn	18 55 26.0	+0.3
BAYC				IAML_P			
	comp=Z,1μm,0.2s						
KESN	Edirne-Kesan	2.12	76	*i* P	Pn	18 55 00.8	-0.1
KESN				IAML_P			
	comp=Z,140nm,0.1s						
BIA	Bitola	2.12	289	*i* Pn	Pb	18 55 04.2	+0.6
LPK	Lapseki	2.13	88	PN	Pn	18 55 01.0	+0.3
PENT	Pentalofos	2.17	267	P	Pn	18 55 02.1	+0.8
EVR	Evrytania	2.19	230	P	Pn	18 55 02.4	+0.8
EVR	Evrytania	2.19	230	P	Pn	18 55 01.0	-0.7
VIL2	Platees	2.20	195	P	Pn	18 55 02.4	+0.8
VIL2				AML	AML	18 55 41.5	
	comp=N,244μm,0.5s						
VIL2				AML	AML	18 55 46.2	
	comp=E,412μm,0.8s						
PGB	Panagyurishte	2.21	4	P	Pn	18 55 02.2	+0.4
PGB				Pg	Pb	18 55 06.4	+1.3
NEST	Nestorio	2.23	273	P	Pn	18 55 03.2	+1.0
DSF	Desfina	2.23	210	P	Pn	18 55 02.0	-0.2
DSF	Desfina	2.23	210	P	Pn	18 55 01.4	-0.7
DSF				S	Sn	18 55 30.6	+0.9
PROD	Prodromos	2.24	202	P	Pn	18 55 02.1	-0.2
PROD	Prodromos	2.24	202	P	Pn	18 55 01.9	-0.3
PROD				S	Sn	18 55 31.1	+1.2
KRUS	Krusevo	2.30	297	*i* Pn	Pn	18 55 04.3	+1.2
VTS	Vitosha	2.34	347	*e*Pn	Pn	18 55 04.7	+1.1
VTS				*e*Sn	Sn	18 55 30.8	-1.6
VTS	Vitosha	2.34	347	⇑*i*P	Pn	18 55 04.7	+1.1
VTS	Vitosha	2.34	347	S	Sn	18 55 29.9	-2.5
VTS	Vitosha	2.34	347	P	Pn	18 55 04.2	+0.6
VTS				S	Sb	18 55 35.8	-0.5
VTS	Vitosha	2.34	347	P	Pn	18 55 04.6	+1.0
AYVA	Ayvalik	2.34	115	*i* P	Pn	18 55 04.8	+1.3
ANX	Ano Chora	2.36	223	P	Pn	18 55 04.6	+0.6
ANX	Ano Chora	2.36	223	P	Pn	18 55 04.5	+0.6
KALE	Kalithea	2.41	217	P	Pn	18 55 05.1	+0.5
SERG	Sergoula	2.43	218	P	Pn	18 55 04.6	-0.3
SERG	Sergoula	2.43	218	P	Pn	18 55 04.6	-0.3
LTK	Loutraki	2.45	199	P	Pn	18 55 05.4	+0.4
TRIZ	Trizonia	2.46	217	P	Pn	18 55 05.9	+0.7
RKY	Sarkoy-Tekirda	2.47	81	PN	Pn	18 55 05.9	+0.5
LOUT	Loutraki	2.48	198	P	Pn	18 55 05.8	+0.3
LOUT	Loutraki	2.48	198	P	Pn	18 55 05.7	+0.3
VLY	Voula,Athens	2.49	183	P	Pn	18 55 05.9	+0.2
EFP	Efpalio	2.50	220	P	Pn	18 55 06.2	+0.5
ALIK	Aliki, Aigiali	2.53	215	P	Pn	18 55 06.0	-0.2
CHOS	Chios island	2.54	140	PN	Pn	18 55 06.7	+0.4
CHOS	Chios island	2.54	140	P	Pn	18 55 07.1	+0.8
KRBG	Karabiga-Canak	2.54	88	PN	Pn	18 55 06.3	0.0
PVO	Paravola	2.56	228	P	Pn	18 55 08.0	+1.4
EDRB	Edirne	2.58	54	PN	Pn	18 55 07.6	+0.8
EDRB	Edirne	2.58	54	P	Pn	18 55 07.2	+0.4
LAKA	Lakka	2.61	217	P	Pn	18 55 08.0	+0.7
KLV	Kalavryta, Ach	2.70	212	P	Pn	18 55 09.0	+0.4
GUR	Goura	2.72	208	P	Pn	18 55 09.4	+0.6
GUR	Goura	2.72	208	P	Pn	18 55 08.3	-0.6
KIRK	Kırklareli	2.77	58	*i* P	Pg	18 55 17.7	-0.4
TKR	Tekirdag	2.79	76	PN	Pn	18 55 09.8	+0.1
URLA	Izmir	2.84	133	PN	Pn	18 55 10.6	+0.1
GONE	Gonen-Balikesi	2.86	95	PN	Pn	18 55 11.6	+0.9
JMB	Yambol	2.89	42	P	Pn	18 55 11.4	+0.3
DID	Didima	2.89	192	P	Pn	18 55 11.3	+0.1
DID	Didima	2.89	192	P	Pn	18 55 11.2	+0.1
DID				S	Sn	18 55 47.0	+1.0
IGT	Igoumenitsa	2.91	255	*e*Pn	Pb	18 55 15.1	-2.0
IGT				*e*Sn	Sn	18 55 49.2	+2.8
BARS	Barje	2.95	328	*e*Pn	Pn	18 55 12.8	+0.9
BARS				*e*Sn	Sn	18 55 46.7	-0.7
DRO	Drossia	2.97	217	P	Pn	18 55 12.8	+0.6
CRLT	Corlu	2.97	73	PN	Pn	18 55 12.3	+0.1
EDC	Edincik	2.98	89	PN	Pn	18 55 12.9	+0.6
PHSR	Pinarhisar	2.98	63	PN	Pn	18 55 13.4	+1.0
ZAPS	Zavoj	3.09	342	*e*Pn	Pn	18 55 15.7	+1.8
ZAPS				*e*Sn	Sn	18 55 50.7	-0.2
TRIP	Tripoli	3.11	206	P	Pn	18 55 15.0	+0.8
SZH	Strazhica	3.27	26	P	Pn	18 55 18.8	+2.5
SLVT	Silivri	3.34	73	PN	Pn	18 55 17.8	+0.5
KCTX	Karacabey (Bur	3.36	90	PN	Pn	18 55 17.9	+0.4
SMG	Samos	3.45	139	P	Pn	18 55 19.6	+0.7
APE	Apeiranthos	3.49	159	PN	Pn	18 55 19.7	+0.3
CTKS	Kestanelik-??a	3.56	74	PN	Pn	18 55 20.6	+0.3
SELS	Selova	3.58	324	*e*Pn	Pn	18 55 20.9	+0.3
SELS				*e*Sn	Sn	18 56 00.7	-2.1
VLAD	Vladila	3.66	5	⇓*i*P	Pn	18 55 21.9	+0.2
VLAD	Vladila	3.66	5	S	Sn	18 56 02.0	-2.9
BOVS	Bovan	3.69	334	*e*Pn	Pn	18 55 22.7	+0.5
DEMI	Demirci	3.89	108	*i* P	Pn	18 55 26.3	+1.4
PUNG	Punghina	4.00	349	⇑*i*P	Pn	18 55 28.0	+1.6
PDG	Podgorica	4.11	302	*e*Pn	Pn	18 55 30.4	+2.5
PDG	Podgorica	4.11	302	⇓*i*P	Pn	18 55 32.5	+4.6
PDG	Podgorica	4.11	302	S	Sn	18 56 18.5	+2.5
SJES	Sjenica	4.17	316	*e*Pn	Pn	18 55 29.6	+0.8
HUMR	Humele	4.25	10	⇑*i*P	Pn	18 55 30.6	+0.9
GRUS	Gruza	4.29	327	*e*Pn	Pn	18 55 31.0	+0.7
IVAS	Ivanjica	4.30	320	*e*Pn	Pn	18 55 31.1	+0.5
SRE	Strehaia	4.35	353	⇑*i*P	Pn	18 55 31.9	+0.7
SULR		4.65	21	S	Sn	18 56 26.3	-2.8
HERR	Herculane	4.67	346	⇑*i*P	Pn	18 55 35.4	-0.2
HERR	Herculane	4.67	346	S	Sn	18 56 26.2	-3.6
TRUS	Trudelj	4.69	327	*e*Pn	Pn	18 55 36.4	+0.6
MDVR	Moldovita	4.74	340	⇑*i*P	Pn	18 55 37.1	+0.6
DIVS	Divibare	4.77	323	*e*Pn	Pn	18 55 37.8	+0.7
BBLS	Lazići	4.89	318	*e*Pn	Pn	18 55 39.3	+0.7
MTUR	Matau	4.94	9	⇑*i*P	Pn	18 55 40.4	+1.0
ARR	Arges	5.04	5	⇑*i*P	Pn	18 55 41.9	+1.1
LOT	Lotru	5.10	358	⇓*i*P	Pn	18 55 42.6	+1.0
LOT	Lotru	5.10	358	S	Sn	18 56 37.3	-3.2
GZR	Gura Zlata	5.12	351	⇑*i*P	Pn	18 55 41.8	0.0
GZR	Gura Zlata	5.12	351	S	Sn	18 56 37.7	-3.2
VOIR		5.15	9	⇑*i*P	Pn	18 55 43.4	+1.2
MLR	Muntele Rosu	5.34	15	⇓*i*P	Pn	18 55 46.6	+1.7
BANR	Banloc	5.45	338	S	Sn	18 56 47.1	-1.7
BZS	Buzias	5.54	343	*e*Pn	Pn	18 55 47.3	-0.2
BZS	Buzias	5.54	343	⇓*i*P	Pn	18 55 47.6	+0.1
BZS	Buzias	5.54	343	S	Sn	18 56 48.3	-2.9
DOPR	Dopca	5.71	10	⇓*i*P	Pn	18 55 51.4	+1.5
PLOR	Plostina	5.84	19	⇑*i*P	Pn	18 55 54.6	+2.9
VRI	Vrincioaia	5.88	19	⇑*i*P	Pn	18 55 54.3	+2.2
OZUR		5.90	12	⇓*i*P	Pn	18 55 53.6	+1.1
SIRR	Siria	6.15	345	⇓*i*P	Pn	18 55 56.5	+0.5
TESR	Tescani	6.46	17	⇑*i*P	Pn	18 56 01.4	+1.2
BLY	Banja Luka	6.67	314	⇑*i*P	Pn	18 56 06.7	+3.7

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*ISCJB **15** 18:55:49.3±0.4, 35°.86N±0°.04×71°.20E±0°.06, h102^{km}, mb3.6/11, Error ellipse: s-maj=7.5km s-min=5.0km az=147.1*

*IDC **15** 18:55:50.7±2.8, 36°.01N×71°.19E, h82^{km}±25^{km}, mb3.5/12, mb1 3.6/16, mb1mx3.4/43, mbtmp3.8/16, Error ellipse: s-maj=20.0km s-min=15.3km az=18.0*

*NNC **15** 18:55:55.5±2.9, 36°.41N×70°.80E, h170^{km}±37^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=28.8km s-min=19.2km az=144.0*

ISC 15 18:55:51.1±0.6**, 35°.93N**±0°.05×**71°.05E**±0°.05**, h102^{km}, n41,** σ**3^{s}00**/45**, mb3.6**/11**, 8C-8D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.51	25	⇓P	Pn	18 56 58.6	+1.2
	3.8nm,0.3s						
SFK				⇑S	Sn	18 57 50.5	+1.7
	19nm,0.7s						
AML	Almayashu	6.52	18	P	Pn	18 57 24.4	-0.4
	SNR=20						
MNAS	Manas	6.64	9	⇓P	Pn	18 57 25.5	-0.7
	15nm,0.8s						
MNAS				⇓S	Sn	18 58 35.8	-4.6
	9.2nm,0.4s						
UCH	Uchtor	6.84	22	P	Pn	18 57 28.7	-0.4
	SNR=8.4						
EKS2	Erkin-Say	7.04	17	P	Pn	18 57 31.6	0.0
	SNR=11						
KK31	Karatay Array	7.17	357	⇓P	Pn	18 57 32.8	-0.5
	13nm,0.3s,baz=178,slow=12,SNR=382						
KK31				⇑S	Sn	18 58 49.1	-4.1
	19nm,0.5s,baz=184,slow=22,SNR=11						
AAK	Ala-Archa	7.21	21	P	Pn	18 57 34.0	+0.1
	SNR=10						
AAK	Ala-Archa	7.21	21	⇑P	Pn	18 57 33.6	-0.2
	5.6nm,0.6s						
AAK				⇑S	Sn	18 58 49.7	-4.4
	10nm,0.9s						
AAK	Ala-Archa	7.21	21	P	Pn	18 57 33.6	-0.2
	2.3nm,0.3s,baz=177,slow=6.6,SNR=49						
AAK				S	Sn	18 58 50.5	-3.7
	0.6nm,0.3s,baz=304,slow=17,SNR=6.6						
USP	Ospenovka	7.79	19	P	Pn	18 57 41.6	-0.1
	SNR=5.7						
TKM2	Tokmak 2	7.81	25	P	Pn	18 57 42.1	0.0
	SNR=6.2						
TKM2	Tokmak 2	7.81	25	⇓P	Pn	18 57 41.4	-0.7
	4.3nm,0.8s						
TKM2				⇑S	Sn	18 59 01.9	-7.1
	4.9nm,1.1s						
GEYT	Alibeck	10.55	285	P	Pn	18 58 18.8	-0.4
	0.7nm,0.3s,baz=104,slow=12,SNR=5.3						
GEYT				S	Sn	19 00 10.3	-5.0
	1.0nm,0.3s,baz=145,slow=23,SNR=7.1						
GYA0B	ALIBECK ARRAY	10.55	285	⇓P	Pn	18 58 17.8	-1.4
	3.3nm,0.9s						
GYA0B				⇑S	Sn	19 00 09.3	-6.0
	9.8nm,0.6s						
PYUN	Piuthan	12.78	124	*e*P	Pn	18 58 45.4	-3.8
	22nm,0.4s						
DANN	Dangsing	13.15	122	*e*P	Pn	18 58 50.5	-3.6
	14nm,0.3s						
KOLN	Koldanda	13.40	124	*e*P	Pn	18 58 53.7	-3.7
	6.7nm,0.3s						
MKAR	Makanchi Array	13.73	34	P	Pn	18 58 59.7	-1.6
	0.0nm,0.3s,baz=212,slow=8.0,SNR=2.2						
DMN	Daman	14.54	121	*e*P	Pn	18 59 08.5	-3.6
	11nm,0.4s						
PKIN	Phulchoki	14.76	120	*e*P	Pn	18 59 11.9	-3.1
	11nm,0.3s						
PKI	Pulchoki	14.77	120	*e*P	Pn	18 59 12.1	-3.1
	11nm,0.3s						
GUN	Gumba	14.90	118	*e*P	Pn	18 59 13.2	-3.6
	20nm,0.4s						
JIRN	Jiri	15.27	118	*e*P	Pn	18 59 18.1	-3.4
	54nm,0.4s						
AB31	Akbulak array	15.60	332	⇓P	Pn	18 59 23.6	-1.5
	0.9nm,0.3s,baz=148,slow=12,SNR=56						
AB31				⇑S	Sn	19 02 07.6	-10
	1.4nm,0.4s,baz=149,slow=22,SNR=8.9						
RAMN	Ramite	15.99	120	*e*P	Pn	18 59 28.0	-2.4
	14nm,0.4s						
BVAR	Borovoye Array	17.10	359	P	Pn	18 59 42.5	-1.0
	0.3nm,0.3s,baz=164,slow=12,SNR=9.1						
AKTO	Aktyubinsk	17.29	331	⇓P	P	18 59 42.3	-3.6
	6.2nm,0.9s						
AKTO				⇑S	Sn	19 02 46.7	-12
	6.0nm,1.2s						
AKTO	Aktyubinsk	17.29	331	P	Pn	18 59 46.7	+0.7
	0.7nm,0.3s,baz=137,slow=11,SNR=14						
AKTO				S	Sn	19 02 47.2	-11
	0.2nm,0.3s,baz=180,slow=20,SNR=3.5						
ZALV	Zalesovo Beam	20.41	24	P	P	19 00 19.1	-0.7
	2.9nm,0.4s,baz=213,slow=11,SNR=20						
GNI	Garni	21.12	289	P	P	19 00 29.8	+2.1
	7.1nm,0.8s,baz=116,slow=14,SNR=3.8						
KBZ	Khabaz	22.90	298	P	P	19 00 48.0	+1.9
	2.0nm,1.0s,baz=90,slow=5.1,SNR=2.5						
CMAR	Chiang Mai Arr	30.15	118	P	P	19 01 53.4	+1.9
	0.5nm,0.6s,baz=286,slow=8.8,SNR=5.2						
FINES	FINESS Array B	37.98	327	P	P	19 03 00.5	+1.9
	0.6nm,0.4s,baz=120,slow=11,SNR=5.8						
ARCES	ARCESS Array B	41.68	338	P	P	19 03 30.8	+1.5
	2.2nm,0.6s,baz=106,slow=8.1,SNR=15						
NB2	NORSAR Subarra	44.86	323	P	P	19 03 56.4	+1.5
	comp=Z,0.6nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.86	323	P	P	19 03 56.4	+1.5
	comp=Z,1.1nm,0.6s,baz=96,slow=7.8,SNR=5.9						
TORD	Torodi Ar. Bea	65.75	269	P	P	19 06 27.6	+2.2
	comp=Z,0.5nm,0.7s,baz=56,slow=5.9,SNR=4.6						
INK	Inuvik	74.46	9	P	P	19 07 18.9	+1.3
	comp=Z,0.7nm,0.5s,baz=343,slow=6.0,SNR=4.9						
WRA	Warramunga Arr	81.66	122	P	P	19 07 59.3	+1.1
	comp=Z,0.4nm,0.9s,baz=325,slow=5.1,SNR=8.6						
YKA	Yellowknife Ar	81.81	3	P	P	19 07 59.6	+1.3
	comp=Z,0.6nm,0.6s,baz=348,slow=5.2,SNR=15						
ASAR	Alice Springs	83.89	125	P	P	19 08 10.9	+1.2
	comp=Z,0.2nm,0.6s,baz=308,slow=4.6,SNR=2.9						

IDC 15 19:03:15.5±1.7**, 10°.44S**×**165°.47E, h0^{km}, mb3.4**/3**, mb1 3.9**/4**, mb1mx3.5**/27**, mbtmp3.7**/4**, ML3.7**/1**, Error ellipse: s-maj=54.3km s-min=30.4km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.61	175	Pn	Pn	19 06 02.8	+0.1
	0.5nm,0.3s,baz=9.0,slow=19,SNR=4.1						
WRA	Warramunga Arr	31.44	249	P	P	19 09 39.1	+0.2
	0.4nm,0.7s,baz=81,slow=9.0,SNR=4.9						
ASAR	Alice Springs	32.82	242	P	P	19 09 50.9	-0.3
	0.4nm,0.6s,baz=63,slow=10,SNR=12						
ILAR	Eielson Array	83.03	19	P	P	19 15 42.5	0.0
	0.2nm,0.7s,baz=230,slow=5.6,SNR=3.2						

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*TIF **15** 19:13:20.5, 39°.74N×40°.51E, h24^{km}±3^{km}*

*DDA **15** 19:13:21.4, 39°.84N×40°.54E, h17^{km}±1^{km}, ML3.7*

*ISK **15** 19:13:22.1, 39°.93N×40°.59E, h2^{km}, ML3.5/30*

*IDC **15** 19:13:25.7±1.3, 40°.15N×40°.41E, h0^{km}, mb3.7/3, mb1 3.4/8, mb1mx3.2/45, mbtmp3.3/8, ML2.2/4, MS2.3/2, Ms1 2.3/2, ms1mx2.0/50, Error ellipse: s-maj=22.5km s-min=13.0km az=179.0*

ISC 15 19:13:22.7±0.9**, 39°.88N**±0°.02×**40°.57E**±0°.02**, h10^{km}**±7^{km}**, n66,** σ**1^{s}64**/76**, mb3.8**/3**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.15	338	*i* P	Pg	19 13 26.4	+0.2
KOPT				*i* S	Sg	19 13 30.2	+1.5
KOPT				IAML_P			
	comp=Z,235μm,0.2s						
ECAT	Cat-ERZURUM	0.41	131	*i* P	Pg	19 13 30.3	-0.6
ECAT				*i* S	Sg	19 13 36.5	+0.1
BAYB	BAYBURT	0.45	328	*i* P	Pb	19 13 31.7	-1.2
BAYB				*i* S	Sb	19 13 39.6	-0.2
BAYB				IAML_P			
	comp=Z,72μm,0.2s						
BAYT	Aydıntepe-Bayb	0.61	328	PG	Pb	19 13 34.2	-1.4
BAYT				SG	Sb	19 13 42.6	-1.8
EUZM	Uzumlu	0.69	256	*i* P	Pg	19 13 34.1	-2.0
EUZM				*i* S	Sg	19 13 44.2	-1.0
BGOL	Bingol	0.89	175	*i* P	Pg	19 13 38.7	-1.2
BGOL				*i* S	Sg	19 13 51.2	-0.3
BGOL				IAML_P			
	comp=Z,4μm,0.1s						
KOPR	Koprukoy-ERZUR	0.99	83	PG	Pb	19 13 41.3	-0.8
KOPR				SG	Sn	19 13 55.9	-1.2
HOMI	Horasan	1.04	80	*i* P	Pn	19 13 42.9	-0.6
HOMI				IAML_P			
	comp=Z,5μm,0.4s						
KELT	Kelkit	1.04	285	*i* P	Pg	19 13 41.5	-1.3
KELT				*i* S	Sb	19 13 56.6	-0.2
KELT				IAML_P			
	comp=Z,22μm,0.2s						
TNCL	Tunceli-Merkez	1.10	227	*i* P	Pn	19 13 44.5	+0.2
TNCL				*i* S	Sb	19 13 59.1	+0.7
CHOM	Cayeli-Rize	1.23	7	PN	Pg	19 13 45.7	-0.5
CHOM				SN	Sn	19 14 02.9	+0.3
MACK	Trabzon	1.23	330	*i* P	Pg	19 13 46.1	-0.1
MACK				*i* S	Sn	19 14 02.2	-0.5
KTUT	Trabzon	1.27	331	PN	Pg	19 13 46.2	-0.8
DDEM	Demirkent	1.36	41	*i* P	Pg	19 13 48.2	-0.5
DBAD	Bademkaya	1.43	37	*i* P	Pg	19 13 49.9	-0.1
DBAD				IAML_P			
	comp=Z,14μm,0.5s						
HANI	Diyarbakir_Han	1.47	185	*i* P	Pn	19 13 49.0	-0.3
REFA	Refahiye_ERZN	1.48	252	*i* P	Pn	19 13 47.1	-2.4
REFA				IAML_P			
	comp=Z,7μm,0.5s						
EATA	Eleskirt	1.48	90	*i* P	Pg	19 13 51.2	+0.1
EATA				IAML_P			
	comp=Z,9μm,0.5s						
SENK	Senkaya-Erzuru	1.52	63	PN	Pg	19 13 50.4	-1.5
DAGI	Agillar	1.58	40	*i* P	Pg	19 13 51.7	-1.2
ARTV	Artvin	1.67	38	*i* P	Pg	19 13 53.8	-0.8
DBOC	Borcka	1.69	29	*i* P	Pg	19 13 53.4	-1.6
DBOC				IAML_P			
	comp=Z,5μm,0.2s						
MLAZ	Malazgirt-MUS	1.70	115	PN	Pb	19 13 53.9	-0.2
KEMA	Kemaliye	1.72	250	*i* P	Pn	19 13 52.2	-0.6
KEMA				IAML_P			
	comp=Z,6μm,0.2s						
GURO	Guroymak-BITLI	1.75	139	PN	Pb	19 13 54.7	-0.2
BCA	Borcka	1.76	27	PN	Pb	19 13 53.8	-1.3
SVAN	Silvan-Diyarba	1.79	164	PN	Pb	19 13 55.1	-0.6
SVAN	Silvan-Diyarba	1.79	164	*i* P	Pb	19 13 55.9	+0.2
SUSE	Susehri	1.85	281	*i* P	Pb	19 13 55.7	-0.9
SUSE				IAML_P			
	comp=Z,9μm,0.3s						
ELZG	Elazig	1.85	222	*i* P	Pn	19 13 55.4	+0.8
AGRB	Hanur-Agry	1.89	98	PN	Pb	19 13 56.3	-1.1
BATM	Batumi	1.92	26	PN	Pb	19 13 55.9	-2.0
BATM	Batumi	1.92	26	P	Pb	19 13 57.2	-0.7
BATM				S	Sg	19 14 23.2	-1.3
DIYA	Diyarbakir	1.98	190	*i* P	Pb	19 13 58.1	-0.9
KARS	Kars	2.06	68	PN	Pn	19 13 57.7	+0.2
CUZAR	Zara_SIVAS	2.15	271	*i* P	Pb	19 14 00.8	-1.1
MAZI	Mazidag	2.42	182	PN	Pb	19 14 05.0	-1.4
AKDM	Akdamar-Van	2.43	129	PN	Pb	19 14 04.6	-2.0
CUKAN	kangal_SIVAS	2.46	258	*i* P	Pb	19 14 06.5	-0.6
RSDY	Resadiye-TOKAT	2.54	283	PN	Pb	19 14 05.8	-2.6
BGD	Bogdanovka	2.69	58	P	Pg	19 14 12.6	-1.6
CLDR	Caldiran	2.69	105	PN	Pn	19 14 07.9	+1.6
DARE	Darende-Malaty	2.73	242	PN	Pn	19 14 08.5	+1.8
SVSK	Karacayir	2.75	272	PN	Pn	19 14 08.5	+1.7
SIRT	Sirnak	2.79	148	PN	Pn	19 14 09.4	+1.9
URFA	Urfa	2.79	210	PN	Pn	19 14 07.7	+0.2
TASB	TASBURUN-IGDIR	2.82	87	PN	Pn	19 14 09.3	+1.4
TOKT	Tokat	3.12	279	PN	Pn	19 14 14.3	+2.3
TRLG	Trialeti	3.16	57	P	Pg	19 14 21.3	-1.9
GNI	Garni	3.21	84	PN	Pn	19 14 14.9	+1.5
GNI	Garni	3.21	84	Pn	Pb	19 14 20.8	+0.8
	comp=Z,3.1nm,0.3s,baz=291,slow=4.5,SNR=8.0						
GNI				LR	LR	19 15 16.8	
	comp=Z,39nm,19.3s,baz=264,slow=34						
CUKT	Cukurca	3.54	137	PN	Pn	19 14 20.2	+2.3
KVT	Kavak	3.65	291	PN	Pn	19 14 21.8	+2.5
KMRS	Kahramanmaras	3.72	232	PN	Pn	19 14 23.6	+3.3
GAZ	Gaziantep	3.77	225	PN	Pn	19 14 24.2	+3.2
BNN	Bunyan	3.80	256	PN	Pn	19 14 24.5	+3.0
YOZ	Yozgat	4.05	268	PN	Pn	19 14 27.9	+3.0
KBZ	Khabaz	4.22	24	Pn	Pn	19 14 30.6	+3.5
	comp=Z,0.1nm,0.3s,baz=204,slow=10.0,SNR=3.0						
KBZ				LR	LR	19 16 09.4	
	comp=Z,48nm,20.9s,baz=176,slow=41						
KVAR	Kislovodsk Arr	4.37	21	Pn	Pn	19 14 31.9	+2.7
	baz=263,slow=19,SNR=3.8						
DIKM	Dikmen	4.41	295	PN	Pn	19 14 32.5	+2.9
KOZT	Kozan	4.42	239	PN	Pn	19 14 33.4	+3.6
BRTR	Keskin Array B	5.34	271	Pn	Pn	19 14 46.9	+4.3
	comp=Z,0.2nm,0.3s,baz=88,slow=14,SNR=5.0						
AKASG	Malin Array Be	13.43	327	Pn	Pn	19 16 32.4	-0.8
	comp=Z,0.6nm,0.3s,baz=135,slow=13,SNR=4.3						
FINES	FINESS Array B	23.36	342	P	P	19 18 32.6	+1.6
	comp=Z,2.1nm,0.6s,baz=144,slow=10,SNR=8.9						
HFS	Hagfors	26.31	329	P	P	19 18 59.9	+1.7
	comp=Z,2.1nm,0.9s,baz=134,slow=10,SNR=3.2						
MKAR	Makanchi Array	30.83	63	P	P	19 19 43.9	+5.1
	comp=Z,0.2nm,0.7s,baz=280,slow=7.7,SNR=3.3						

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*ISCJB **15** 19:14:05.5±0.8, 27°.92N±0°.05×53°.07E±0°.07, h14^{km}, mb3.6/7, Error ellipse: s-maj=10.9km s-min=5.5km az=145.3*

*IDC **15** 19:14:05.5±1.5, 28°.01N×53°.12E, h0^{km}, mb3.7/7, mb1 3.6/9, mb1mx3.4/48, mbtmp3.6/9, ML3.0/2, Error ellipse: s-maj=31.5km s-min=23.7km az=167.0*

*TEH **15** 19:14:08.1, 28°.12N×53°.28E, h10^{km}, ML3.3*

*THR **15** 19:14:10.0, 28°.29N×53°.21E, h14^{km}, ML2.9*

ISC 15 19:14:07.5±1.0**, 28°.02N**±0°.07×**53°.16E**±0°.06**, h14^{km}, n29,** σ**1^{s}50**/29**, mb3.7**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.31	330	*e*Sg	Sg	19 14 17.9	-0.6
JHRM	Jahrom	0.61	37	*e*Pg	Pg	19 14 16.8	-2.7
JHRM				IAMB	IAmb	19 14 34.1	
	comp=Z,0.0nm,0.4s						
ISRV	Sarvestan	1.36	358	*e*Pg	Pg	19 14 33.2	-0.6
ISRV				IAMB	IAmb	19 14 59.8	
	comp=N,20μm,0.7s						
SHI	Shiraz	1.72	341	*e*Pg	Pg	19 14 40.1	-0.5
SHI				IAMB	IAmb	19 15 11.6	
	comp=N,1μm,0.4s						

IKAZ	Kazeroun	2.11	327	*e*Pn	Pb	19 14 44.2	-1.5
IKAZ				IAMB	IAmb	19 15 55.0	
	comp=Z,1µm,0.6s						
GENO	Geno	2.74	102	IAMB	IAmb	19 13 00.3	
	comp=Z,0.0nm,1.0s						
NIAN	Nian	3.28	97	*e*Pn	Pn	19 15 00.3	+1.7
NIAN				IAMB	IAmb	19 16 03.2	
	comp=N,0.0nm,0.4s						
NGRK	Negar Kerman	3.52	62	*e*Pn	Pn	19 15 03.1	+0.8
IMEH	Mehriz	3.59	20	*e*Pn	Pn	19 15 05.8	+2.7
IMEH				IAMB	IAmb	19 16 05.4	
	comp=Z,305nm,0.7s						
KRBR	Kerman	3.71	57	*e*Pn	Pn	19 15 06.6	+1.8
KRBR	Kerman	3.71	57	*e*AML	AML	19 16 10.8	
	comp=E,26nm,0.6s						
KRBR				*e*AML	AML	19 16 14.6	
	comp=N,23nm,0.5s						
KRBR	Kerman	3.71	57	*e*Pn	Pn	19 15 06.6	+1.8
KRBR				*e*Sg	Sb	19 16 00.2	+2.2
TVBK	TV Kerman	3.71	57	*e*Pn	Pn	19 15 06.9	+2.1
TVBK				IAMB	IAmb	19 16 17.1	
	comp=Z,0.0nm,0.3s						
KHGB	Koh Gabri	3.73	50	*e*Pn	Pn	19 15 06.1	+1.1
IRAM	Ramesheh	3.84	350	*e*Pn	Pn	19 15 08.1	+1.6
IRAM				IAMB	IAmb	19 16 34.6	
	comp=Z,185nm,0.6s						
CHMN	Cheshme madani	4.25	63	*e*Pn	Pn	19 15 15.2	+3.0
CHMN				IAMB	IAmb	19 16 33.2	
	comp=Z,0.0nm,0.6s						
YZKH	Yazd	4.53	15	*e*Pn	Pn	19 15 16.8	+1.0
YZKH	Yazd	4.53	15	*e*Pn	Pn	19 15 16.8	+1.0
IZEF	Zefreh	4.92	352	*e*Pn	Pn	19 15 23.1	+1.8
IZEF				IAMB	IAmb	19 16 40.2	
	comp=Z,80nm,0.6s						
TNSJ	Nastanj	6.62	26	*e*Pn	Pn	19 15 45.2	+0.6
WSAR	Wadi Sarin	6.85	133	Pn	Pn	19 15 48.1	+0.4
	comp=Z,0.3nm,0.3s,baz=304,slow=11,SNR=5.5						
WSAR				Sn	Sn	19 17 04.5	-1.0
	comp=Z,0.6nm,0.3s,baz=42,slow=14,SNR=3.4						
GEYT	Alibeck	10.72	22	Pn	Pn	19 16 41.6	+0.9
	comp=Z,0.1nm,0.3s,baz=217,slow=12,SNR=2.2						
MKAR	Makanchi Array	29.52	43	P	P	19 20 11.9	+0.4
	comp=Z,0.5nm,0.6s,baz=230,slow=8.5,SNR=6.4						
KURBB	Kurchatov Arra	29.65	33	P	P	19 20 12.7	+0.1
	comp=Z,0.3nm,0.6s,baz=234,slow=8.2,SNR=4.1						
ZALV	Zalesovo Beam	34.74	33	P	P	19 20 57.1	0.0
	comp=Z,1.6nm,0.6s,baz=240,slow=9.4,SNR=7.7						
FINES	FINESS Array B	38.00	339	P	P	19 21 24.2	-0.6
	comp=Z,0.9nm,0.6s,baz=138,slow=11,SNR=4.3						
HFS	Hagfors	41.74	331	P	P	19 21 56.5	+0.5
	comp=Z,1.6nm,1.0s,baz=120,slow=8.5,SNR=2.5						
SONM	Songino Array	45.42	49	P	P	19 22 26.1	+0.1
	comp=Z,0.3nm,0.8s,baz=262,slow=8.6,SNR=2.7						
TORD	Torodi Ar. Bea	50.05	264	P	P	19 23 01.8	-0.3
	comp=Z,0.5nm,0.6s,baz=61,slow=8.6,SNR=5.3						

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*ISCJB **15** 19:16:16.9±0.8, 10°.83S±0°.09×164°.68E±0°.08, h31^{km}, Error ellipse: s-maj=15.2km s-min=9.0km az=34.6*

*IDC **15** 19:16:16.1±2.3, 11°.01S×164°.50E, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.7/35, mbtmp3.8/7, ML4.3/2, Error ellipse: s-maj=49.4km s-min=32.6km az=124.0*

*NEIC **15** 19:16:18.1±1.0, 10°.90S×164°.47E, h10^{km}, mb4.4/8, Error ellipse: s-maj=20.2km s-min=12.4km az=57.0*

ISC 15 19:16:18.9±0.8**, 10°.8S**±0°.1×**164°.77E**±0°.08**, h31^{km}, n25, σ1^{s}83**/27**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.93	285	*e*P	Pn	19 17 31.0	+0.1
HNR				*e*S	Sn	19 18 29.0	+2.1
HNR	Honiara	4.93	285	*e*Pn	Pn	19 17 30.8	-0.1
HNR				*e*Sn	Sn	19 18 24.6	-2.4
HNR	Honiara	4.93	285	Pn	Pn	19 17 30.8	-0.1
	52nm,0.3s,baz=135,slow=13,SNR=12						
HNR				Sn	Sn	19 18 25.6	-1.4
	10nm,0.3s,baz=66,slow=20,SNR=3.0						
DZM	Mont Dzumac	11.35	172	*e*Pn	Pn	19 19 01.0	+1.9
DZM	Mont Dzumac	11.35	172	Pn	Pn	19 19 00.4	+1.3
	1.2nm,0.3s,baz=316,slow=23,SNR=11						
PINNC	Pines Island,	12.05	168	*e*Pn	Pn	19 19 10.2	+1.6
CTA	Charters Tower	20.09	240	P	P	19 20 49.7	-0.4
	0.2nm,0.3s,baz=71,slow=13,SNR=4.7						
CTAO	Charters Tower	20.09	240	*e*P	P	19 20 49.8	-0.4
	17nm,1.1s						
COEN	Coen	21.33	259	*e*P	P	19 21 03.0	-0.6
	6.5nm,1.1s						
NIUE	Niue	25.78	112	*e*P	P	19 21 44.2	-3.1
	282nm,1.3s						
WB2	Warramunga Arr	30.67	249	*e*P	P	19 22 28.9	-2.1
	5.7nm,1.1s						
WR1	Warramunga Arr	30.68	249	*e*P	P	19 22 29.4	-1.7
	18nm,1.8s						
WRA	Warramunga Arr	30.68	249	P	P	19 22 29.4	-1.7
	0.4nm,0.7s,baz=78,slow=9.0,SNR=6.8						
AS31	Alice Springs	32.06	242	*e*P	P	19 22 41.2	-2.1
	1.2nm,1.4s						
ASAR	Alice Springs	32.06	242	P	P	19 22 41.4	-1.9
	0.2nm,0.6s,baz=64,slow=10,SNR=7.2						
FOZ	Fox Glacier	32.93	173	*e*P	P	19 22 49.9	-0.6
	39nm,1.2s						
BBOO	Buckleboo	34.32	226	*e*P	P	19 23 03.8	+1.0
	16nm,1.4s						
JOHN	Johnston Islan	37.32	43	*e*P	P	19 23 27.1	-1.5
	194nm,0.9s						
FITZ	Fitzroy Crossi	38.53	255	*e*P	P	19 23 37.2	-1.7
	14nm,1.5s						
FITZ	Fitzroy Crossi	38.53	255	P	P	19 23 37.1	-1.8
	1.8nm,0.8s,baz=98,slow=8.7,SNR=5.1						
SONA0	Songino Array	77.88	324	*e*P	P	19 28 16.6	+2.8
SONM	Songino Array	77.88	324	P	P	19 28 16.6	+2.8
	0.2nm,0.3s,baz=114,slow=6.5,SNR=3.8						
MK32	Makanchi Array	92.67	317	*e*P	P	19 29 29.8	+1.9
MKAR	Makanchi Array	92.67	317	P	P	19 29 29.8	+1.9
	0.3nm,0.8s,baz=108,slow=4.0,SNR=3.6						
ZALV	Zalesovo Beam	92.78	324	*e*pP	pP	19 29 39.2	+2.7

IDC 15 19:21:17.6±1.5**, 1°.72S**×**139°.07E, h0^{km}, mb3.2**/2**, mb1 3.5**/3**, mb1mx3.2**/41**, mbtmp3.3**/3**, ML3.5**/1**, Error ellipse: s-maj=33.1km s-min=23.0km az=47.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.81	116	Pn	Pn	19 21 49.6	-0.6
	0.9nm,0.3s,baz=248,slow=10,SNR=4.9						
JAY				Sn	Sg	19 22 15.7	-0.3
	2.2nm,0.3s,baz=150,slow=21,SNR=5.6						
WRA	Warramunga Arr	18.69	194	P	P	19 25 37.5	0.0
	0.2nm,0.3s,baz=16,slow=12,SNR=13						
ASAR	Alice Springs	22.38	193	P	P	19 26 18.1	+0.4
	0.5nm,0.5s,baz=13,slow=10,SNR=14						
H11S3	WAKE ISLAND Hy	33.79	52	T	T	20 03 47.9	
	baz=236,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	33.80	52	T	T	20 03 49.5	
	baz=236,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	33.81	52	T	T	20 03 49.6	
	baz=236,slow=75,SNR=25						
MKAR	Makanchi Array	69.23	322	P	P	19 32 26.3	-0.1
	0.3nm,0.8s,baz=128,slow=6.3,SNR=2.5						

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*IDC **15** 19:32:42.5±0.8, 54°.58N×161°.77W, h0^{km}, mb3.9/23, mb1 4.0/26, mb1mx3.9/56, mbtmp3.8/26, ML3.7/3, MS3.3/4, Ms1 3.3/4, ms1mx2.7/58, Error ellipse: s-maj=20.7km s-min=12.4km az=167.0*

*NEIC **15** 19:32:46.9±0.0, 54°.43N×161°.59W, h13^{km}, mb4.2/12, ML3.7(AEIC), After AEIC.*

*ISCJB **15** 19:32:47.0±0.5, 54°.52N±0°.05×161°.47W±0°.04, h47^{km}±3^{km}, mb4.2/40, MS3.6/4, Error ellipse: s-maj=9.0km s-min=2.9km az=157.5*

ISC 15 19:32:48.5±1.2**, 54°.48N**±0°.08×**161°.56W**±0°.04**, h43^{km}**±10^{km}**, n157, σ1^{s}38**/155**, mb4.2**/40**, MS3.7**/4**, 2C-1D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRIA	Deer Island	0.64	321	P	Pn	19 33 00.1	-1.1
DOL	Dolgoi Island	0.70	346	P	Pn	19 33 01.1	-0.8
DT1	Dutton Round H	0.76	327	*e*Pg	Pn	19 33 01.8	-0.9
PS4A	Pavlof South-4	0.89	349	P	Pn	19 33 04.4	-0.1
PVV	Pavlof Volcano	0.91	352	P	Pn	19 33 04.7	-0.1
PVV				S	Sn	19 33 18.4	+1.6
SDPT	Sand Point	1.08	35	*e*Pg	Pn	19 33 07.3	+0.2
SDPT				*e*Sn	Sn	19 33 22.2	+1.4
FALS	False Pass	1.14	290	*e*Pg	Pn	19 33 07.1	-0.9
FALS				*e*Sg	Sn	19 33 23.3	+0.8
BRPK	Brown Peak	1.28	279	P	Pn	19 33 09.6	-0.3
SSBA	Shishaldin	1.52	282	P	Pn	19 33 13.4	+0.2
SSBA				S	Sn	19 33 33.7	+1.9
WESE	West Dahl East	1.77	271	*e*Pn	Pn	19 33 16.8	+0.2
WESP	Westdahl Peak	1.84	272	*e*Pn	Pn	19 33 18.3	+0.6
WESP				*e*Sn	Sn	19 33 41.9	+2.1
WECS	Westdahl Cape	1.88	273	P	Pn	19 33 19.0	+0.9
VNSS	Veniaminof 8	2.13	34	P	Pn	19 33 23.6	+1.9
VNFG	Veniaminof 2	2.15	31	P	Pn	19 33 23.9	+2.0
AKSA	Akutan Strait	2.45	264	*e*Pn	Pn	19 33 26.1	+0.3
AKSA				*e*Sn	Sn	19 33 55.6	+1.1
AKUT	Akutan	2.49	264	*e*Pn	Pn	19 33 26.3	-0.1
AKUT				*e*Sn	Sn	19 33 56.0	+0.4
AHB	Akutan Harbor	2.52	263	P	Pn	19 33 27.5	+0.7
CHGN	Chignik	2.56	43	*e*Pn	Pn	19 33 28.9	+1.5
CHGN				*e*Sn	Sn	19 34 02.1	+4.8
ZRO	Akutan Zero	2.62	263	*e*Pn	Pn	19 33 28.7	+0.5
UNV	Unalaska Valle	2.97	260	*e*Pn	Pn	19 33 32.8	-0.3
MTBL	Makushin Table	3.05	262	*e*Pn	Pn	19 33 34.2	0.0
MSW	Makushin Switc	3.12	262	*e*Pn	Pn	19 33 34.7	-0.4
MREP	Makushin Rep’t	3.12	260	P	Pn	19 33 35.0	-0.2
MCIR	Makushin Cirqu	3.17	263	*e*Pn	Pn	19 33 36.0	+0.1
PLK1	Peulik 1	4.33	38	P	Pn	19 33 53.5	+1.7
NIKH	Nikolski High	4.58	254	*e*Pn	Pn	19 33 54.5	-0.7
SII	Sitkinak Islan	4.69	61	*e*Pn	Pn	19 33 54.6	-2.0
CAHL	Cahill	5.00	42	P	Pn	19 34 02.2	+1.2
KABU	Katmai Buttres	5.16	40	P	Pn	19 34 06.0	+2.8
OHAK	Old Harbor	5.41	56	*e*Pn	Pn	19 34 06.1	-0.4
OHAK				*e*Sg	Sn	19 35 30.9	+23
SPIA	Saint Paul Isl	5.59	302	*e*Pn	Pn	19 34 07.6	-1.4
KDAK	Kodiak Island	6.01	53	*e*Pn	Pn	19 34 13.6	-1.2
KDAK				*e*Sn	Sn	19 35 20.6	-1.7
KDAK				*e*Lg	Lg	19 35 45.1	
KDAK	Kodiak Island	6.01	53	Pn	Pn	19 34 14.0	-0.7
	2.6nm,0.3s,baz=194,slow=5.2,SNR=28						
KDAK				Sn	Sn	19 35 20.6	-1.7
	0.5nm,0.3s,baz=319,slow=20,SNR=2.1						
KDAK				Lg	Lg	19 35 45.3	
	1.6nm,0.3s,baz=51,slow=17,SNR=7.8						
SVW2	Sparrevohn	7.37	23	*e*Pn	Pn	19 34 33.6	+0.2
HOM	Homer	7.49	42	*e*Pn	Pn	19 34 38.8	+3.7
RSO	Redoubt South	7.65	35	*e*Pn	Pn	19 34 39.3	+1.9
BRLK	Bradley Lake	7.86	43	*e*Pn	Pn	19 34 40.2	+0.1
SEW	Seward	8.64	44	*e*Pn	Pn	19 34 50.8	0.0
SUA	Susitna One	9.05	35	*e*Pn	Pn	19 34 56.4	-0.1
RC01	Rabbit Creek A	9.15	39	*e*Pn	Pn	19 34 57.9	+0.2
PPLA	Purkeypile	9.74	26	*e*Pn	Pn	19 35 09.3	+3.4
KNK	Knik Glacier	9.83	40	*e*Pn	Pn	19 35 07.0	-0.1
GHO	Glory Hole Cre	9.89	37	*e*Pn	Pn	19 35 07.0	-1.0
SML	Sawmill	10.13	38	*e*Pn	Pn	19 35 10.4	-0.8
CAST	Castle Rocks	10.21	25	*e*Pn	Pn	19 35 14.4	+2.2
ANM	Nome	10.30	351	*e*Pn	Pn	19 35 15.0	+1.5
EYAK	Cordova Ski Ar	10.44	48	*e*Pn	Pn	19 35 14.8	-0.6
SCM	Sheep Creek Mo	10.51	40	*e*Pn	Pn	19 35 15.4	-1.1
GAMB	Gambell	10.67	335	*e*Pn	Pn	19 35 18.9	+0.5
TRF	Thorofare Moun	10.70	28	*e*Pn	Pn	19 35 19.4	+0.3
DIV	Divide	10.72	45	*e*Pn	Pn	19 35 18.8	-0.6
KLU	Klutina	10.86	43	*e*Pn	Pn	19 35 20.4	-0.7
HMT	Hamilton	11.01	51	*e*Pn	Pn	19 35 23.0	-0.2
BPAW	Bear Paw Mtn.	11.04	25	*e*Pn	Pn	19 35 24.6	+0.9
RND	Reindeer	11.08	31	*e*Pn	Pn	19 35 23.2	-0.9
DHY	Denali Highway	11.31	35	*e*Pn	Pn	19 35 25.2	-2.1
HARP	HAARP	11.68	41	*e*Pn	Pn	19 35 30.5	-1.8
MLY	Manley	11.88	23	*e*Pn	Pn	19 35 36.5	+1.4
PAX	Paxson	11.90	38	*e*Pn	Pn	19 35 35.0	-0.4
WRH	Wood River Hil	12.11	29	*e*Pn	Pn	19 35 35.7	-2.4
IM3	Indian Mountai	12.16	15	*e*Pn	Pn	19 35 38.7	-0.2
HDA	Harding Lake	12.39	31	*e*Pn	Pn	19 35 39.4	-2.6
MDM	Murphy Dome	12.45	27	*e*Pn	Pn	19 35 40.2	-2.6
MENT	Mentasta	12.52	40	*e*Pn	Pn	19 35 43.5	-0.3
RIDG	Independ’e Rid	12.61	36	*e*Pn	Pn	19 35 42.9	-2.1
ILAR	Eielson Array	12.67	30	Pn	Pn	19 35 37.9	-8.0
	0.1nm,0.3s,baz=222,slow=13,SNR=5.9						
ILAR				Sn	Sn	19 37 55.2	-10
	baz=202,slow=8.2,SNR=2.7						
ILAR				LR	LR	19 39 47.5	
	comp=Z,50nm,21.6s,baz=303,slow=34						
ILB	Eielson Array	12.67	30	*e*Pn	Pn	19 35 37.5	-8.4
IL1	Eielson Array	12.68	30	*e*Pn	Pn	19 35 39.2	-6.6
PCA	Pinnacle	12.79	55	*e*Pn	Pn	19 35 46.6	-1.0
DOT	Dot Lake	12.82	37	*e*Pn	Pn	19 35 46.1	-1.7
SCRK	Sand Creek	13.05	36	*e*Pn	Pn	19 35 47.6	-3.5
PRP	Porcupine Dome	13.62	29	*e*Pn	Pn	19 35 56.0	-2.8
RDOG	Red Dog Mine	13.64	358	*e*Pn	Pn	19 35 55.8	-3.3
HYT	Haines Junctio	14.31	54	*e*Pn	Pn	19 36 08.8	+0.7
DAWY	Dawson	14.77	41	*e*Pn	Pn	19 36 13.2	-1.1
TOLK	Toolik Lake Re	15.27	17	*e*Pn	Pn	19 36 21.3	+0.6
	5.8nm,0.6s						
EPYK	Eagle Plains	16.94	36	*e*Pn	Pn	19 36 42.0	0.0
	8.6nm,0.8s						
INK	Inuvik	19.03	32	*e*P	P	19 37 04.6	-1.8
	2.2nm,0.6s						
INK	Inuvik	19.03	32	P	P	19 37 05.3	-1.2
	0.3nm,0.3s,baz=231,slow=15,SNR=10						
PEA1	Petropavlovsk-	23.87	284	*e*P	P	19 37 56.3	-1.3
PEA0B	Petropavlovsk-	23.87	284	*e*P	P	19 37 57.4	-0.3
	39nm,1.5s						
PETK	Petropavlovsk-	23.87	284	*e*P	P	19 37 57.2	-0.4
PETK	Petropavlovsk-	23.87	284	P	P	19 37 56.3	-1.3
	2.9nm,0.4s,baz=84,slow=13,SNR=41						
SEY	Seymchan	24.86	308	P	P	19 38 05.0	-1.5
	0.2nm,0.3s,baz=25,slow=8.0,SNR=2.6						
YKW3	Yellowknife Ar	25.28	52	*e*P	P	19 38 10.1	-0.2
	6.9nm,1.7s						
YKA	Yellowknife Ar	25.29	53	P	P	19 38 10.6	+0.1
	0.4nm,0.5s,baz=271,slow=8.6,SNR=10.0						
YKB5	Yellowknife Ar	25.29	53	*e*P	P	19 38 08.8	-1.7
NVAR	Mina Array Bea	33.23	101	P	P	19 39 23.2	+1.7
	0.2nm,0.5s,baz=280,slow=8.1,SNR=3.1						
PDAR	Pinedale Array	35.52	87	P	P	19 39 42.3	+1.1
	0.2nm,0.5s,baz=335,slow=4.0,SNR=2.3						
ULM	Lac du Bonnet	39.03	68	P	P	19 40 10.2	-0.3
	1.3nm,0.5s,baz=311,slow=11,SNR=4.2						
H11N2	WAKE ISLAND Hy	42.18	227	T	T	20 25 26.2	
	baz=27,slow=76,SNR=46						
H11N3	WAKE ISLAND Hy	42.18	227	T	T	20 25 26.7	
	baz=27,slow=76,SNR=57						
H11N1	WAKE ISLAND Hy	42.20	227	T	T	20 25 27.8	
	baz=27,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	43.35	227	T	T	20 26 54.0	
	baz=26,slow=76,SNR=78						
H11S2	WAKE ISLAND Hy	43.36	227	T	T	20 26 55.1	
	baz=26,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	43.36	227	T	T	20 26 53.0	
	baz=26,slow=76,SNR=36						
LTX	Lajitas	48.19	97	*e*P	P	19 41 25.7	+1.1
TXAR	Lajitas Array	48.19	97	P	P	19 41 25.7	+1.1
	0.4nm,0.7s,baz=295,slow=5.6,SNR=4.5						
KSRS	Korea Array	49.71	280	P	P	19 41 35.4	-0.6
	1.9nm,0.9s,baz=44,slow=7.0,SNR=3.3						
KSAR	Wonju Array Be	49.74	280	P	P	19 41 35.4	-0.9
P51A	Williamsport	52.82	72	*e*P	P	19 42 01.1	+1.8
	13nm,0.9s						
SONA0	Songino Array	54.12	304	*e*P	P	19 42 08.6	-0.3
SONM	Songino Array	54.12	304	P	P	19 42 08.6	-0.3
	1.5nm,0.7s,baz=47,slow=6.4,SNR=12						
ARA0	ARCESS Array S	56.19	357	*e*P	P	19 42 22.3	-1.0
ARCES	ARCESS Array B	56.19	357	P	P	19 42 22.3	-1.0
	2.2nm,0.9s,baz=8.8,slow=8.2,SNR=3.2						
HHC	Hu-ho-hao-te	56.41	295	*e*P	P	19 42 26.0	+0.6
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.1s						
GTA	Gaotai	63.53	301	*e*P	P	19 43 14.1	-0.2
GTA				pP	pP	19 43 17.6	-9.1
GTA				sP	sP	19 43 20.1	-12
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
LZH	Lanzhou	64.00	296	*e*P	P	19 43 20.8	+3.3
LZH				pP	pP	19 43 24.0	-5.9
LZH				sP	sP	19 43 25.5	-9.3
LZH				*e*PP	PP	19 45 43.0	+4.8
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,43nm,8.2s						
LZH				LR	LR		
	comp=N,65nm,16.0s						
LZH				LR	LR		
	comp=E,73nm,16.2s						
LZH				LR	LR		
	comp=Z,86nm,18.3s						
FIA1	FINESS Array S	64.27	356	*e*P	P	19 43 18.0	-0.5
FIA0	FINESS Array S	64.27	356	*e*P	P	19 43 17.9	-0.7
FINES	FINESS Array B	64.27	356	P	P	19 43 17.9	-0.7
	comp=Z,4.1nm,0.8s,baz=2.3,slow=9.5,SNR=11						
NC204	NORSAR Array S	64.43	4	*e*P	P	19 43 20.3	+0.5
BVAR	Borovoye Array	64.54	328	P	P	19 43 19.9	-0.7
	comp=Z,1.3nm,0.7s,baz=36,slow=7.5,SNR=13						
BRVK	Borovoye	64.55	328	*e*P	P	19 43 21.3	+0.7
	comp=Z,1.7nm,0.9s						
NC405	NORSAR Array S	64.63	4	*e*P	P	19 43 21.3	+0.3
NB200	NORSAR Array S	64.69	4	*e*P	P	19 43 20.8	-0.6
NOA	NORSAR Array B	64.69	4	P	P	19 43 20.8	-0.6
	comp=Z,1.1nm,0.9s,baz=357,slow=6.5,SNR=3.1						
MK31	Makanchi Array	65.59	317	*e*P	P	19 43 26.1	-1.4
MK32	Makanchi Array	65.59	317	*e*P	P	19 43 26.4	-1.1
MKAR	Makanchi Array	65.59	317	*e*P	P	19 43 26.6	-0.9
	comp=Z,5.4nm,1.1s						
MKAR	Makanchi Array	65.59	317	P	P	19 43 26.4	-1.1
	comp=Z,0.3nm,0.4s,baz=37,slow=6.1,SNR=7.6						
MK01	Makanchi Array	65.60	317	*e*P	P	19 43 26.5	-1.1
HFS	Hagfors	65.68	3	P	P	19 43 27.4	-0.4
	comp=Z,2.2nm,0.6s,baz=25,slow=4.9,SNR=17						
MAKZ	Makanchi	65.70	318	*e*P	P	19 43 27.1	-1.1
	comp=Z,4.4nm,1.7s						
WMQ	Urumqi	65.75	312	*e*P	P	19 43 33.3	+4.6
EKA	Eskdalemuir Ar	69.12	13	P	P	19 43 49.8	+0.1
	comp=Z,0.8nm,0.5s,baz=343,slow=4.2,SNR=9.3						
AKTO	Aktyubinsk	70.33	334	P	P	19 43 56.9	-0.3
	comp=Z,1.8nm,0.6s,baz=38,slow=4.9,SNR=7.5						
ABKAR	Akbulak array	70.91	333	*e*P	P	19 44 00.5	-0.1
PPT	Papeete	72.48	168	LR	LR	20 09 10.9	
	comp=Z,14nm,20.7s,baz=353,slow=30						
KSH	Kashi	74.20	317	P	P	19 44 23.8	+3.2
KSH				pP	pP	19 44 27.4	-5.8
KSH				pmax	pmax		
	comp=Z,170nm,6.1s						
AKASG	Malin Array Be	74.81	353	P	P	19 44 22.9	-0.8
	comp=Z,2.6nm,0.6s,baz=11,slow=5.9,SNR=8.8						
AKBB	Malin Array Si	74.81	353	*e*P	P	19 44 22.5	-1.2
	comp=Z,3.9nm,0.8s						
KIEV	Kiev	74.81	353	⇑*i*P	P	19 44 23.1	-0.7
STU	Stuttgart	76.83	6	*e*P	P	19 44 35.8	+0.4
	comp=Z,13nm,0.8s						
GEC2	GERESS Array S	76.97	3	*e*P	P	19 44 36.6	+0.3
	comp=Z,1.2nm,0.7s						
GERES	GERESS Array B	76.97	3	P	P	19 44 36.5	+0.3
	comp=Z,0.6nm,0.6s,baz=358,slow=4.0,SNR=7.8						
GEA0	GERESS Array S	76.98	3	*e*P	P	19 44 35.9	-0.4
CHGR	Chuyangaron	77.53	322	*e*P	P	19 44 38.8	-0.8
	comp=Z,6.5nm,0.7s						
CONA	Conrad Observa	77.95	2	*i* P	P	19 44 41.6	-0.1
ARSA	Arzberg	78.62	2	*i* P	P	19 44 45.0	-0.3
	comp=Z,2.5nm,0.8s						
KBA	Koelnbreinsper	78.73	4	*i* P	P	19 44 46.8	+0.6
	comp=Z,4.3nm,1.1s						
OBKA	Obir	79.34	3	*i* P	P	19 44 50.6	+1.2
	comp=Z,10nm,0.9s						
ARR	Arges	80.39	356	⇓*i*P	P	19 44 56.2	+1.1
GZR	Gura Zlata	80.44	357	⇑*i*P	P	19 44 55.6	+0.3
CMAR	Chiang Mai Arr	80.55	288	P	P	19 44 55.7	-0.5
	comp=Z,1.3nm,0.8s,baz=15,slow=5.1,SNR=9.8						
CM01	Chiang Mai Arr	80.57	288	*e*P	P	19 44 55.8	-0.5
SEUS	St. Eustatius	80.82	73	*e*P	P	19 44 57.6	-0.1
	comp=Z,375nm,1.4s						
KBL	Kabul	81.23	320	*e*P	P	19 44 58.9	-1.0
	comp=Z,2.3nm,0.9s						
ES19	SONSECA Array	84.25	17	*e*P	P	19 45 16.1	+0.8
ESDC	Sonseca Array	84.27	17	P	P	19 45 15.4	0.0
	comp=Z,0.2nm,0.5s,baz=334,slow=5.4,SNR=4.4						
BR101	Keskin Array S	85.27	348	*e*P	P	19 45 20.7	+0.2
BR131	Keskin Array S	85.27	348	*e*P	P	19 45 20.9	+0.4
	comp=Z,14nm,1.6s						
BRTR	Keskin Array B	85.27	348	P	P	19 45 20.7	+0.2
	comp=Z,1.7nm,0.8s,baz=7.2,slow=4.3,SNR=6.3						
BATI	Baumata	89.55	252	LR	LR	20 23 40.0	
	comp=Z,37nm,18.7s,baz=312,slow=34						
MMAI	Mount Meron Ar	91.64	346	LR	LR	20 29 42.3	
	comp=Z,19nm,21.9s,baz=315,slow=37						
WR1	Warramunga Arr	92.03	238	*e*P	P	19 45 51.5	-1.2
	comp=Z,5.5nm,1.4s						
WRA	Warramunga Arr	92.03	238	P	P	19 45 51.5	-1.2
	comp=Z,0.3nm,0.8s,baz=36,slow=5.6,SNR=3.7						

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*ISCJB **15** 19:55:29.6±0.1, 17°.76S±0°.02×178°.91W±0°.02, h539^{km}, mb5.0/381, Error ellipse: s-maj=3.3km s-min=2.1km az=139.7*

*IDC **15** 19:55:30.4±0.8, 17°.67S×178°.86W, h534^{km}±8^{km}, mb4.5/24, mb1 4.6/27, mb1mx4.5/34, mbtmp5.3/27, Error ellipse: s-maj=10.3km s-min=8.6km az=134.0*

*BJI **15** 19:55:30.4, 17°.57S×178°.71W, h543^{km}, mB5.0/37, mb4.8/54*

*MOS **15** 19:55:31.7±1.2, 17°.54S×178°.94W, h553^{km}, mb5.1/61, Error ellipse: s-maj=7.9km s-min=6.9km az=62.0*

*NEIC **15** 19:55:32.3±0.1, 17°.75S×178°.89W, mb5.0/293, MW5.4, Error ellipse: s-maj=3.7km s-min=2.3km az=141.0 Best double couple: NP1:φ$_s$116.00000°, δ88.00000°, λ36.00000°. NP2:φ$_s$25.00000°, δ54.00000°, λ177.00000°. Principal axes: T 1.5400, Plg26.0000°, Azm347.0000°; N -0.2700, Plg54.0000°, Azm119.0000°; P -1.2600, Plg23.0000°, Azm245.0000°;*

NEIC Felt at Suva.

*GCMT **15** 19:55:34.3±0.3, 17°.72S±0°.04×178°.76W±0°.03, h561^{km}±2^{km}, MW5.4/72, Moment Tensor Solution. s72,c99; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.12±.03; M$_{\theta\theta}$1.01±.05; M$_{\phi\phi}$-1.14±.05; M$_{r\theta}$0.88±.05; M$_{\theta\phi}$0.79±.05; M$_{\phi r}$0.15±.05; Best double couple: M$_0$1.58400×10^{17} NP1:φ$_s$120.00000°, δ75.00000°, λ25.00000°. NP2:φ$_s$23.00000°, δ66.00000°, λ163.00000°. Principal axes: T 1.7530, Plg29.0000°, Azm343.0000°; N -0.3440, Plg61.0000°, Azm149.0000°; P -1.4150, Plg6.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 15 19:55:30.2±0.2**, 17°.69S**±0°.04×**178°.81W**±0°.04**, h539^{km}, n1059, σ1^{s}21**/1123**, mb5.0**/381**, 107C-25D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.00	269	*e*P	P	19 56 48.0	+3.6
MSVF				*e*S	S	19 57 50.9	+6.1
MSVF	Nonsavu	3.00	269	*e*P	P	19 56 48.0	+3.6
MSVF				*e*S	S	19 57 50.9	+6.1
NIUE	Niue	8.54	101	P	P	19 57 34.8	+1.7
	baz=8.3,SNR=4.3						
NIUE	Niue	8.54	101	*e*P	P	19 57 34.6	+1.5
NIUE				*e*S	S	19 59 14.6	+0.7
FUNA	Funafuti	9.32	348	*e*P	P	19 57 40.7	-0.4
RAO	Raoul Island	11.53	176	P	P	19 58 03.6	-0.1
	60nm,0.3s,baz=356,slow=19,SNR=2.5						
RAO				S	S	20 00 10.8	+0.6
	33nm,0.3s,baz=270,slow=20,SNR=2.8						
MARNC	Mare, Loyalty	12.96	251	*e*P	P	19 58 17.9	-0.9
PINNC	Pines Island,	13.80	247	*e*P	P	19 58 27.6	+0.2
OUENC	Ouen Island, N	14.28	248	*e*P	P	19 58 31.8	-0.6
DZM	Mont Dzumac	14.54	250	*e*P	P	19 58 35.2	0.0
	649nm,1.2s						
DZM	Mont Dzumac	14.54	250	P	P	19 58 34.9	-0.4
	12nm,0.3s,baz=74,slow=13,SNR=55						
DZM				S	S	20 01 07.6	-0.2
	1.2nm,0.3s,baz=183,slow=18,SNR=3.5						
KNTN	Kanton	16.38	26	*e*P	P	19 58 53.0	-0.9
	506nm,1.4s						
NFK	Norfolk Island	16.59	225	P	P	19 58 57.7	+2.1
	baz=17,SNR=5.0						
RAR	Rarotonga	18.28	104	P	P	19 59 11.9	+0.6
	1.6nm,0.3s,baz=238,slow=5.3,SNR=3.6						
OUZ	Omahuta	18.72	200	*e*P	P	19 59 17.3	+2.2
	202nm,1.2s						
MXZ	Matakaoa Point	19.95	187	*e*P	P	19 59 25.1	-1.2
	49nm,1.1s						
TARA	Tarawa	20.61	336	*e*P	P	19 59 31.9	-0.6
	452nm,0.7s						
URZ	Urewera	20.80	189	P	P	19 59 31.3	-2.6
	12nm,0.3s,baz=282,slow=2.7,SNR=5.9						
URZ				S	S	20 02 44.2	-6.9
	29nm,0.8s,baz=143,slow=19,SNR=5.2						
RAHZ	Arahi	21.45	189	P	P	19 59 40.3	+0.5

RAHZ				S	S	20 02 58.4	-3.0
HIZ	Hauiti	21.47	194	*e*P	P	19 59 41.6	+1.6
	215nm,1.7s						
BKZ	Black Stump Fm	21.78	190	*e*P	P	19 59 41.0	-1.8
	13nm,1.0s						
BKZ				*e*S	S	20 03 00.8	-6.0
BKZ	Black Stump Fm	21.78	190	P	P	19 59 41.5	-1.3
BKZ				S	S	20 03 03.1	-3.6
TWVZ	Taurewa	21.88	192	P	P	19 59 43.7	-0.1
COVZ	Chateau Observ	21.99	192	P	P	19 59 43.1	-1.6
KWHZ	Kaweka Forest	22.05	190	P	P	19 59 43.8	-1.4
KWHZ				S	S	20 03 07.0	-4.0
VRZ	Vera Road	22.08	193	P	P	19 59 47.9	+2.5
BHHZ	Black Hill Sta	22.17	191	P	P	19 59 44.3	-2.1
BHHZ				S	S	20 03 07.6	-5.3
HNR	Honiara	22.21	289	P	P	19 59 46.9	0.0
	77nm,0.5s,baz=210,slow=2.6,SNR=4.1						
KAHZ	Kahuranaki	22.34	189	P	P	19 59 46.7	-1.1
PXZ	Pawanui	22.57	189	P	P	19 59 48.5	-1.3
DVHZ	Dannevirke	22.94	190	P	P	19 59 53.1	-0.1
BFZ	Birch Farm	23.30	190	*e*P	P	19 59 55.9	-0.4
	23nm,1.0s						
BFZ				*e*S	S	20 03 27.9	-2.8
BFZ	Birch Farm	23.30	190	P	P	19 59 54.8	-1.5
MRZ	Mangatainoka R	23.39	191	P	P	19 59 56.0	-1.2
OGWZ	Otaki Gorge	23.62	191	P	P	19 59 58.5	-0.7
HOWZ	Holdsworth Sta	23.64	191	P	P	19 59 58.3	-1.0
KIW	Kapiti Island	23.71	192	P	P	19 59 59.1	-0.9
DUWZ	D'Urville Isla	23.87	194	P	P	20 00 01.1	-0.3
MTW	Mount Morrison	23.89	191	P	P	20 00 01.3	-0.3
CAW	Cannon Point	23.92	191	P	P	20 00 01.2	-0.6
TRWZ	Traveller	24.09	190	P	P	20 00 02.6	-0.7
SNZO	South Karori	24.19	192	*e*P	P	20 00 03.4	-0.8
	131nm,1.4s						
BHW	Baring Head	24.25	192	P	P	20 00 04.1	-0.6
LHI	Lord Howe Isla	24.32	231	P	P	20 00 07.1	+1.6
	baz=24,SNR=9.5						
LHI	Lord Howe Isla	24.32	231	*e*P	P	20 00 06.0	+0.5
	200nm,1.0s						
PLWZ	Palliser	24.34	191	P	P	20 00 04.4	-1.1
THZ	Tophouse	25.02	195	*e*P	P	20 00 10.8	-0.8
	29nm,0.9s						
THZ				*e*S	S	20 03 52.1	-5.6
KHZ	Kahutara	25.49	193	*e*P	P	20 00 14.4	-1.2
	38nm,0.8s						
KHZ				*e*S	S	20 04 01.0	-3.9
LTZ	Lake Taylor	26.13	195	*e*P	P	20 00 19.9	-1.5
	96nm,1.1s						
LTZ				*e*S	S	20 04 13.1	-2.1
OXZ	Oxford	26.70	195	*e*P	P	20 00 25.3	-1.0
	120nm,0.9s						
MQZ	McQueen's Vall	26.92	194	*e*P	P	20 00 27.1	-1.1
	30nm,0.9s						
RPZ	Rata Peaks	27.32	196	P	P	20 00 30.6	-1.2
	15nm,0.4s,baz=339,slow=0.4,SNR=8.8						
FOZ	Fox Glacier	27.50	198	*e*P	P	20 00 32.4	-0.9
	105nm,0.7s						
PAE	Paea	27.83	94	*e*P	P	20 00 37.5	+0.9
PPT2	Papeete2	27.84	94	*e*P	P	20 00 37.8	+1.0
	69nm,1.4s						
PPT	Papeete	27.84	94	*e*P	P	20 00 36.2	-0.6
PPT	Papeete	27.84	94	P	P	20 00 37.7	+0.9
	23nm,0.5s,baz=232,slow=16,SNR=4.5						
PPTF	Pamatai, Papee	27.85	94	*e*P	P	20 00 37.5	+0.6
	112nm,1.2s						
TIAR	Tiarei	28.07	94	*e*P	P	20 00 39.8	+1.1
	12nm,1.0s						
TVO	Taravao	28.14	95	*e*P	P	20 00 40.0	+0.6
	9.3nm,1.0s						
LBZ	Lake Benmore	28.18	197	*e*P	P	20 00 37.9	-1.4
	52nm,1.2s						
ODZ	Otahua Downs	28.66	196	*e*P	P	20 00 42.5	-1.0
	121nm,2.0s						
XMAS	Kiritimati	28.77	49	*e*P	P	20 00 44.5	-0.3
	676nm,1.9s						
WKZ	Wanaka	28.91	198	*e*P	P	20 00 45.0	-0.7
	123nm,1.1s						
EIDS	Eidsvold	28.99	249	P	P	20 00 46.6	0.0
	baz=29,SNR=65						
EIDS	Eidsvold	28.99	249	*e*P	P	20 00 46.7	+0.1
	220nm,1.0s						
KWAJ	Kwajalein Atol	29.55	332	*e*P	P	20 00 52.2	+0.6
	757nm,1.2s						
KWAJ	Kwajalein Atol	29.55	332	*e*P	P	20 00 52.2	+0.6
MLZ	Mavora Lakes	29.68	199	*e*P	P	20 00 52.9	+0.6
	168nm,0.8s						
ARMA	Armidale	29.72	239	P	P	20 00 54.3	+1.2
	baz=30,SNR=178						
ARMA	Armidale	29.72	239	*e*P	P	20 00 54.3	+1.2
	234nm,1.0s						
PMOR	Pomariorio Ree	29.77	89	*e*P	P	20 00 54.6	+1.2
	137nm,1.2s						
VAH	Vaihoa	29.98	90	*e*P	P	20 00 56.0	+0.7
	53nm,1.1s						
DCZ	Deep Cove	30.07	200	*e*P	P	20 00 55.8	+0.2
	58nm,1.0s						
WHZ	Wether Hill Ro	30.20	199	*e*P	P	20 00 56.9	+0.1
	170nm,1.1s						
PYZ	Puysegur Point	30.84	200	*e*P	P	20 01 02.3	0.0
	123nm,1.3s						
MGCD	Mangrove Creek	31.11	234	P	P	20 01 06.1	+1.3
	baz=31,SNR=137						
RMQ	Roma	31.23	248	P	P	20 01 07.0	+1.0
	baz=31,SNR=68						
RIV	Riverview	31.31	233	P	P	20 01 08.0	+1.5
	baz=32,SNR=5.7						
RABL	Rabaul	31.43	292	*e*P	P	20 01 06.9	-1.0
	60nm,0.4s						
CTA	Charters Tower	33.11	260	P	P	20 01 22.0	-0.1
CTA				pmax	pmax		
	comp=Z,95nm,0.8s						
CTA	Charters Tower	33.11	260	P	P	20 01 22.0	-0.1
	comp=Z,95nm,0.8s,baz=89,slow=11,SNR=73						
CTA				ScP	ScP	20 06 43.8	+1.1
	comp=Z,21nm,1.0s,baz=95,slow=3.3,SNR=7.0						
CTAO	Charters Tower	33.11	260	*e*P	P	20 01 21.9	-0.1
	comp=Z,141nm,0.9s						
CTAO	Charters Tower	33.11	260	*e*P	P	20 01 21.9	-0.1
CTAO				pmax	pmax		
	comp=Z,141nm,0.9s						
PATS	Pohnpei	33.24	315	*e*P	P	20 01 24.3	+1.2
	comp=Z,312nm,1.2s						
CNB	Canberra Magne	33.26	232	P	P	20 01 24.4	+1.3
	baz=34,SNR=157						
CAN	Canberra	33.53	232	*e*P	P	20 01 26.4	+0.9
	comp=Z,142nm,1.0s						
CAN	Canberra	33.53	232	*e*P	P	20 01 26.4	+0.9
CAN				pmax	pmax		
	comp=Z,143nm,1.0s						
YNG	Young	33.61	234	P	P	20 01 27.0	+0.9
	baz=34,SNR=15						
MILA	Mila	34.13	229	P	P	20 01 31.3	+0.9
	baz=34,SNR=7.1						
CMSA	Cobar Meteorol	34.93	240	P	P	20 01 37.8	+0.7
	baz=35,SNR=110						
MTSU	Mount Surprise	35.06	263	P	P	20 01 38.4	0.0
	baz=35,SNR=52						
JOHN	Johnston Islan	35.41	15	*e*P	P	20 01 41.4	+0.2
	comp=Z,242nm,0.8s						
MANU	Manus Island	36.67	291	*e*P	P	20 01 52.8	+1.0
	comp=Z,86nm,1.1s						
COEN	Coen	36.73	270	P	P	20 01 52.7	+0.5
	baz=37,SNR=70						
COEN	Coen	36.73	270	*e*P	P	20 01 52.8	+0.5
	comp=Z,96nm,0.8s						
TOO	Toolangi	37.01	230	P	P	20 01 55.3	+1.0
	baz=37,SNR=105						
TOO	Toolangi	37.01	230	*e*P	P	20 01 55.2	+0.9
	comp=Z,378nm,0.9s						
TOO	Toolangi	37.01	230	*e*P	P	20 01 55.2	+0.9
TOO				pmax	pmax		
	comp=Z,378nm,0.9s						
MOO	Moorlands	37.99	222	P	P	20 02 03.2	+1.0
	baz=38,SNR=41						
TAU	Tasmania Unive	38.15	222	*e*P	P	20 02 04.0	+0.6
	comp=Z,137nm,1.0s						
TAU	Tasmania Unive	38.15	222	*e*P	P	20 02 04.0	+0.6
TAU				pmax	pmax		
	comp=Z,137nm,1.0s						
STKA	Stephens Creek	38.40	241	P	P	20 02 06.8	+1.0
	baz=39,SNR=567						
STKA	Stephens Creek	38.40	241	*e*P	P	20 02 06.7	+1.0
	comp=Z,42nm,0.7s						
STKA	Stephens Creek	38.40	241	*e*P	P	20 02 06.7	+1.0
STKA				pmax	pmax		
	comp=Z,42nm,0.7s						
STKA	Stephens Creek	38.40	241	P	P	20 02 06.6	+0.9
	comp=Z,157nm,0.7s,baz=83,slow=10.0,SNR=536						
STKA				ScP	ScP	20 07 03.1	+1.0
	comp=Z,9.9nm,0.8s,baz=71,slow=4.4,SNR=4.4						
WAKE	Wake Island	39.43	338	*e*P	P	20 02 13.8	-0.3
	comp=Z,582nm,1.3s						
ARPS	Mount Arapiles	39.47	233	P	P	20 02 14.8	+0.6
	baz=40,SNR=39						
HTT	Hallett	40.93	239	P	P	20 02 26.7	+0.6
	baz=41,SNR=287						
JAY	Jayapura	42.48	286	P	P	20 02 38.6	0.0
JAY				pmax	pmax		
	comp=Z,38nm,0.9s						
JAY	Jayapura	42.48	286	P	P	20 02 38.3	-0.3
	comp=Z,499nm,1.2s						
GENI	Genyem	42.95	286	P	P	20 02 42.7	+0.6
	comp=Z,181nm,1.2s,comp=Z,3μm						
BBOO	Buckleboo	43.18	241	*e*P	P	20 02 44.0	+0.3
	comp=Z,337nm,0.8s						
BBOO				*e*S	S	20 08 30.2	-1.2
KHLU	Kahalu`u	43.35	32	*e*P	P	20 02 45.3	+0.1
	comp=Z,212nm,1.0s						
MWH	Moku'aweowe	43.41	33	*e*P	P	20 02 46.8	+0.5
	comp=Z,211nm,1.4s						
HUH	Hualalai	43.46	32	*e*P	P	20 02 47.0	+0.7
	comp=Z,168nm,1.1s						
MLOA	Mauna Loa Obse	43.47	33	*e*P	P	20 02 47.0	+0.5
	comp=Z,135nm,1.0s						
MLH	Mauna Loa	43.53	33	*e*P	P	20 02 47.0	+0.2
	comp=Z,186nm,1.4s						
MLH	Mauna Loa	43.53	33	*e*P	P	20 02 47.0	+0.2
MLH				pmax	pmax		
	comp=Z,186nm,1.4s						
HMH	Humu'ula Sheep	43.57	33	*e*P	P	20 02 47.8	+0.7
	comp=Z,305nm,1.0s						
POHA	Pohakuloa	43.67	33	*e*P	P	20 02 48.5	+0.6
	comp=Z,194nm,1.3s						
HPAH	Hawaii Prepara	43.82	32	*e*P	P	20 02 49.9	+1.1
	comp=Z,189nm,1.1s						
MHA	Mahukona	43.85	32	*e*P	P	20 02 49.7	+0.8
MHA	Mahukona	43.85	32	*e*P	P	20 02 49.7	+0.8
KIP	Kipapa	43.89	28	*ce*P	P	20 02 50.5	+1.2
KIP				pmax	pmax		
	comp=Z,161nm,1.3s						
HLK	Haleakala	44.16	31	*e*P	P	20 02 52.0	+0.3
	comp=Z,209nm,1.0s						
KHLH	Kahului Airpor	44.19	31	*e*P	P	20 02 52.4	+0.8
	comp=Z,132nm,0.9s						
WB2	Warramunga Arr	44.29	259	*e*P	P	20 02 51.0	-1.5
WRAB	Tennant Creek	44.29	259	*e*P	P	20 02 51.7	-0.9
	comp=Z,94nm,0.9s						
WRAB	Tennant Creek	44.29	259	*de*P	P	20 02 51.6	-0.9
WRAB				pmax	pmax		
	comp=Z,86nm,1.0s						
WR1	Warramunga Arr	44.30	259	*e*P	P	20 02 51.9	-0.7
	comp=Z,128nm,0.9s						
WR1				*e*PcP	PcP	20 04 25.6	+0.5
WR1				*e*PP	PP	20 04 45.9	-0.5
WR1				*e*ScP	ScP	20 07 26.9	+0.9
WRA	Warramunga Arr	44.30	259	P	P	20 02 51.9	-0.7
	comp=Z,44nm,0.6s,baz=94,slow=7.9,SNR=344						
WRA				PcP	PcP	20 04 25.6	+0.4
	comp=Z,6.8nm,0.7s,baz=86,slow=4.1,SNR=3.9						
WRA				PP	PP	20 04 45.9	-0.5
	comp=Z,3.7nm,0.9s,baz=98,slow=9.4,SNR=4.6						
WRA				ScP	ScP	20 07 26.9	+0.9
	comp=Z,8.2nm,0.7s,baz=86,slow=4.2,SNR=10.0						
AS01	Alice Springs	44.44	254	*e*P	P	20 02 53.0	-0.7
AS31	Alice Springs	44.48	254	*e*P	P	20 02 53.5	-0.6
	comp=Z,123nm,0.7s						
AS31				*e*ScP	ScP	20 07 27.8	+1.1
ASAR	Alice Springs	44.49	254	P	P	20 02 54.2	+0.2
ASAR						20 04 25.7	
ASAR				pmax	pmax		
	comp=Z,262nm,0.4s						
ASAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ASAR				pmax	pmax		
	comp=N,15nm,0.7s						
ASAR	Alice Springs	44.49	254	P	P	20 02 54.2	+0.2
	comp=N,259nm,0.4s,baz=89,slow=8.2,SNR=5780						
ASAR				PcP	PcP	20 04 25.7	-0.1
	comp=N,10nm,0.8s,baz=95,slow=5.7,SNR=3.4						
ASAR				ScP	ScP	20 07 27.8	+1.1
	comp=N,15nm,0.7s,baz=98,slow=4.3,SNR=12						
PTCN	Pitcairn Islan	45.75	108	*e*P	P	20 03 03.6	-0.1
	comp=N,1μm,1.8s						
KDU	Kakadu	47.18	269	P	P	20 03 14.4	-0.2
	baz=47,SNR=296						
GUMO	Guam	47.45	309	P	P	20 03 16.8	+0.3
	comp=N,526nm,1.2s,baz=182,slow=8.7,SNR=5.8						
MTN	Manton Dam	48.43	268	*e*P	P	20 03 23.2	-0.7
	comp=N,101nm,0.8s						
MTN				*e*S	S	20 09 42.7	-2.5
SAUI	Saumlaki	49.47	275	*e*P	P	20 03 32.8	+1.2
	comp=N,170nm,0.7s						
WRKA	Warakurna	49.55	252	P	P	20 03 32.3	+0.1
	baz=50,SNR=1000						
FORT	Forrest	49.76	244	*e*P	P	20 03 33.3	-0.2
	comp=N,351nm,0.8s						
KNRA	Kununurra	50.13	264	P	P	20 03 36.2	-0.2
	baz=50,SNR=54						
FAKI	Fak Fak	50.17	281	*e*P	P	20 03 36.7	-0.1
	comp=N,55nm,1.3s						
FITZ	Fitzroy Crossi	52.69	260	*e*P	P	20 03 55.1	+0.2
	comp=N,50nm,1.0s						
NLAI	Namlea	54.89	279	P	P	20 04 11.0	+0.4
	comp=N,70nm,1.2s,comp=N,1μm						
SOEI	Soe	55.69	270	*e*P	P	20 04 17.9	+1.6
	comp=N,252nm,0.9s						
SOEI	Soe	55.69	270	P	P	20 04 17.5	+1.2
TNTI	Ternate	56.05	283	*e*P	P	20 04 18.8	+0.2
	comp=N,42nm,0.8s						
TNTI	Ternate	56.05	283	P	P	20 04 19.4	+0.8
	comp=N,60nm,0.9s						
BATI	Baumata	56.16	269	P	P	20 04 20.5	+1.1
	comp=N,41nm,0.8s						
SANI	Sanana	56.34	280	P	P	20 04 20.5	-0.1
	comp=N,86nm,0.9s,comp=N,669nm						
MBWA	Marble Bar	57.76	256	*e*P	P	20 04 29.9	-0.4
	comp=N,90nm,0.8s						
MMRI	Maumere	57.92	271	*e*P	P	20 04 30.9	-0.5
	comp=N,77nm,0.8s						
MMRI	Maumere	57.92	271	P	P	20 04 31.0	-0.4
	comp=N,111nm,1.0s,comp=N,1μm						
EDFI	Ende, Flores	58.41	271	P	P	20 04 34.3	-0.6
	comp=N,84nm,1.0s,comp=N,1μm						
NWAO	Narrogin (SRO)	58.98	242	*e*P	P	20 04 38.1	-0.2
	comp=N,129nm,1.4s						
NWAO	Narrogin (SRO)	58.98	242	*e*P	P	20 04 38.1	-0.2
NWAO				pmax	pmax		
	comp=Z,129nm,1.4s						
LUWI	Luwuk	59.70	279	*e*P	P	20 04 44.1	+0.7
	comp=Z,121nm,1.2s						
LUWI	Luwuk	59.70	279	P	P	20 04 43.6	+0.2
	comp=Z,86nm,1.2s,comp=Z,1μm						
MORW	Morawa	60.22	246	*e*P	P	20 04 45.8	-0.9
	comp=Z,47nm,0.8s						
SBA	Scott Base	60.61	183	*e*P	P	20 04 50.7	+2.4
	comp=Z,429nm,1.9s						
VNDA	Vanda	60.62	185	*e*P	P	20 04 49.9	+1.5
	comp=Z,171nm,2.0s						
VNDA				*e*ScP	ScP	20 08 37.0	+1.4
VNDA	Vanda	60.62	185	P	P	20 04 49.9	+1.5
	comp=Z,6.9nm,0.7s,baz=353,slow=7.4,SNR=10						
VNDA				ScP	ScP	20 08 37.0	+1.4
	comp=Z,6.3nm,0.9s,baz=339,slow=3.8,SNR=4.8						
APSI	Ampana	60.80	279	P	P	20 04 49.8	-0.9
	comp=Z,78nm,1.1s,comp=Z,933nm						
MRSI	Marisa	61.00	281	P	P	20 04 51.7	-0.3
	comp=Z,18nm,0.8s						
BNSI	Bone	61.15	275	P	P	20 04 53.9	+0.9
	comp=Z,78nm,1.1s,comp=Z,788nm						
SPSI	Sidrap Palu	61.60	275	P	P	20 04 55.7	-0.2
	comp=Z,33nm,0.9s						
PLAI	Plampang	62.12	269	P	P	20 04 59.1	-0.2
	comp=Z,151nm,0.9s,comp=Z,2μm						
PCI	Palu	62.51	278	P	P	20 05 03.5	+1.6
PCI	Palu	62.51	278	P	P	20 05 03.4	+1.6
GIRL	Giralia	62.59	253	*e*P	P	20 05 02.1	-0.1
	comp=Z,157nm,0.8s						
MPSI	Mapaga	62.87	280	P	P	20 05 04.3	+0.2
	comp=Z,26nm,0.9s,comp=Z,356nm						
JHJ2	Mitsune	64.14	322	*e*P	P	20 05 12.9	+1.0
	comp=Z,5μm,2.0s						
SRBI	Singaraja	64.76	269	P	P	20 05 16.1	-0.1
	comp=Z,55nm,1.0s,comp=Z,720nm						
JAGI	Jajag, Banyuwa	65.67	269	*e*P	P	20 05 20.8	-1.2
	comp=Z,108nm,0.9s						
JAGI	Jajag, Banyuwa	65.67	269	P	P	20 05 19.8	-2.1
GMJI	Gumukmas	66.40	269	P	P	20 05 25.8	-0.6
	comp=Z,58nm,0.6s						
INU	Inuyama	67.36	322	*e*P	P	20 05 33.2	+1.3
	comp=Z,50nm,1.2s						
MJAR	Matsushiro Arr	67.51	324	P	P	20 05 32.7	-0.1
	comp=Z,38nm,0.7s,baz=167,slow=6.2,SNR=69						
MAJO	Matsushiro	67.51	324	*e*P	P	20 05 33.2	+0.3
	comp=Z,56nm,0.6s						
MAJO	Matsushiro	67.51	324	*i* P	P	20 05 31.8	-1.1
MAJO				pmax	pmax		
	comp=Z,40nm,0.8s						
MJB9	Matsu-Tunnel	67.52	324	*e*P	P	20 05 33.0	+0.1
	comp=Z,56nm,0.6s						
PWJI	Pagerwojo	68.03	268	P	P	20 05 36.4	-0.1
	comp=Z,79nm,0.8s						
KKM	Kota Kinabalu	68.32	284	*e*P	P	20 05 38.8	+0.5
	comp=Z,39nm,1.2s						
PCJI	Pacitan	68.58	268	P	P	20 05 39.9	+0.1
	comp=Z,200nm,1.2s,comp=Z,2μm						
WOJI	Wonogiri, Jawa	68.92	268	P	P	20 05 41.3	-0.5
	comp=Z,100nm,0.9s						
ERM	Erimo	69.02	331	*e*P	P	20 05 42.7	+0.9
	comp=Z,190nm,1.9s						
ERM	Erimo	69.02	331	*e*P	P	20 05 42.7	+0.9
ERM				pmax	pmax		
	comp=Z,190nm,1.9s						
UGM	Wanagama	69.28	268	*e*P	P	20 05 44.1	+0.1
	comp=Z,112nm,0.9s						
UGM	Wanagama	69.28	268	P	P	20 05 44.3	+0.2
ADK	Adak	69.31	1	*e*P	P	20 05 43.1	-0.2
	comp=Z,172nm,1.0s						
ADK	Adak	69.31	1	*e*P	P	20 05 43.1	-0.2
ADK				pmax	pmax		
	comp=Z,172nm,1.0s						
KUR	Kuril'sk	69.57	336	*ce*P	P	20 05 46.0	+1.0
JNU	Nakatsue	69.72	316	*e*P	P	20 05 46.6	+0.3
	comp=Z,86nm,1.4s						
SBUM	Sibu	70.80	279	*e*P	P	20 05 53.4	+0.3
	comp=Z,5.4nm,0.8s						
NIKH	Nikolski High	70.90	6	*e*P	P	20 05 52.6	-0.2
	comp=Z,203nm,1.0s						
KPJI	Karang Pucung	70.95	268	P	P	20 05 54.3	+0.3
TWG	Pinlang	71.24	302	*e*P	P	20 05 54.8	-0.6
	comp=Z,362nm,1.6s						
CMJI	Cimerak	71.29	268	P	P	20 05 55.4	-0.5
YULB	Yu-li	71.34	303	*e*P	P	20 05 55.5	-0.5
	comp=Z,80nm,1.5s						
NACB	Ninganchiao	71.48	304	*e*P	P	20 05 58.0	+1.1
	comp=Z,59nm,1.1s						
SKR	Severo-Kuril's	71.57	343	*e*P	P	20 05 55.3	-1.4
SKR				*e*		20 06 19.9	
SKR				pmax	pmax		
	comp=Z,179nm,1.1s						
SSLB	Suanglung	71.80	303	*e*P	P	20 05 58.1	-0.7
	comp=Z,195nm,2.0s						
TPUB	Ta-pu	71.83	303	*e*P	P	20 05 58.2	-0.7
	comp=Z,172nm,1.7s						
YHNB	Yeheng	71.90	304	*e*P	P	20 05 59.8	+0.4
	comp=Z,212nm,1.8s						
CISI	Cisompet, Garu	71.95	268	*e*P	P	20 05 59.0	-0.9
	comp=Z,79nm,0.9s						
CISI	Cisompet, Garu	71.95	268	P	P	20 05 59.3	-0.6
TATO	Taipei	71.97	304	*e*P	P	20 05 58.5	-1.1
	comp=Z,359nm,1.5s						
UNV	Unalaska Valle	72.03	8	*e*P	P	20 05 58.5	-0.8
	comp=Z,283nm,1.7s						
KSM	Kuching	72.28	277	*e*P	P	20 06 02.7	+0.9
	comp=Z,50nm,0.9s						
LEM	Lembang	72.34	268	P	P	20 06 01.5	-0.8
QSPA	South Pole Qui	72.36	180	*e*P	P	20 06 02.4	+1.1
	comp=Z,57nm,0.9s						
QSPA	South Pole Qui	72.36	180	P	P	20 06 02.5	+1.1
	comp=Z,50nm,0.8s,baz=11,slow=1.0,SNR=100						
AKUT	Akutan	72.41	8	*e*P	P	20 06 00.5	-1.0
	comp=Z,86nm,1.0s						
YSS	Yuzh-Sakhalins	73.06	334	*e*P	P	20 06 07.0	+1.6
	comp=Z,84nm,1.1s						
YSS	Yuzh-Sakhalins	73.06	334	⇑*e*P	P	20 06 06.5	+1.1
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
PET	Petropavlovsk	73.08	346	*e*P	P	20 06 04.8	-0.5
	comp=Z,118nm,1.3s						
PET	Petropavlovsk	73.08	346	*i* P	P	20 06 03.6	-1.8
PET				pmax	pmax		
	comp=Z,51nm,1.1s						
XMIS	Christmas Isla	73.22	264	*e*P	P	20 06 05.9	-1.2
	comp=Z,46nm,1.0s						
PEA0B	Petropavlovsk-	73.38	345	*e*P	P	20 06 07.1	-0.1
	comp=Z,133nm,1.0s						
PETK	Petropavlovsk-	73.38	345	*e*P	P	20 06 07.1	-0.1
PETK	Petropavlovsk-	73.38	345	P	P	20 06 07.2	+0.1
	comp=Z,84nm,0.9s,baz=131,slow=8.6,SNR=143						
PEA1	Petropavlovsk-	73.38	345	*e*P	P	20 06 07.2	0.0
KSRS	Korea Array	74.29	319	P	P	20 06 13.7	+1.0
	comp=Z,6.7nm,0.8s,baz=131,slow=5.9,SNR=18						
KS15	Wonju Array Si	74.31	318	*e*P	P	20 06 13.1	+0.3
KSAR	Wonju Array Be	74.31	318	P	P	20 06 13.7	+0.9
KSAR	Wonju Array Be	74.31	318	P	P	20 06 13.7	+0.9
KS01	Wonju Array Si	74.32	319	*e*P	P	20 06 13.6	+0.8
SDPT	Sand Point	74.40	11	*e*P	P	20 06 11.6	-1.2
	comp=Z,87nm,0.9s						
SPIA	Saint Paul Isl	74.93	5	*e*P	P	20 06 15.8	+0.1
	comp=Z,224nm,1.0s						
SSE	Sheshan	75.31	310	*e*P	P	20 06 18.7	+0.1
	comp=Z,39nm,0.9s						
CHGN	Chignik	75.69	12	*e*P	P	20 06 19.6	-0.4
	comp=Z,105nm,1.1s						
KASI	Kota Agung	75.69	269	P	P	20 06 19.9	-1.1
SNCC	San Nicolas Is	75.92	48	P	P	20 06 22.4	+0.5
	baz=238						
TYV	Tymovskoe	76.18	336	*e*P	P	20 06 23.6	+0.7
TYV				pmax	pmax		
	comp=Z,107nm,1.0s						
USA0B	Ussuriysk Arra	76.23	326	*e*P	P	20 06 24.7	+1.4
	comp=Z,161nm,1.8s						
USRK	Ussuriysk Ar.	76.23	326	P	P	20 06 24.3	+1.0
	comp=Z,14nm,0.7s,baz=128,slow=3.3,SNR=33						
SCZ2	Santa Cruz Isl	76.25	47	P	P	20 06 25.1	+1.4
	baz=237						
SCI2	San Clemente I	76.48	49	P	P	20 06 26.4	+1.4
	baz=238						
SAO	San Andreas Ge	76.53	44	*e*P	P	20 06 26.6	+1.4
	comp=Z,38nm,0.9s						
SAO	San Andreas Ge	76.53	44	*e*P	P	20 06 26.6	+1.4
SAO				pmax	pmax		
	comp=Z,38nm,0.9s						
PKM	Mcpherson Peak	76.60	46	P	P	20 06 27.3	+1.5
	baz=237,SNR=6.7						
SMMC	Simmler	76.71	46	P	P	20 06 27.7	+1.5
	baz=237						
PAGB	Antelope Grade	76.76	45	*e*P	P	20 06 28.3	+1.8
	comp=Z,17nm,0.9s						
HOPS	Hopland Field	76.76	41	*e*P	P	20 06 27.2	+0.9
	comp=Z,70nm,1.7s						
CIS	Catalina Islan	76.79	48	P	P	20 06 27.5	+0.8
	baz=238						
SII	Sitkinak Islan	76.81	14	*e*P	P	20 06 26.6	+0.4
	comp=Z,116nm,0.8s						
KCPM	Cahto Peak	76.85	41	*e*P	P	20 06 27.2	+0.2
	comp=Z,95nm,1.7s						
FMP	Fort Macarthur	77.04	48	P	P	20 06 29.2	+1.2
	baz=238						
KMRM	Mail Ridge	77.09	40	*e*P	P	20 06 30.3	+2.0
	comp=Z,63nm,0.8s						
OSI	Osito Audit: C	77.21	47	P	P	20 06 30.1	+1.1
	baz=238						
DECC	Green Verdugo	77.30	48	P	P	20 06 30.0	+0.6
	baz=238						
PASC	Pasadena Art C	77.36	48	*e*P	P	20 06 30.6	+0.9
	comp=Z,23nm,0.8s						
ARVC	Arvin	77.41	47	P	P	20 06 31.1	+1.1
	baz=238						
109C	Camp Elliot, M	77.47	49	P	P	20 06 31.5	+1.1
	baz=239						
KHMM	Horse Mountain	77.47	40	*e*P	P	20 06 32.0	+1.6
	comp=Z,33nm,1.1s						
MWC	Mount Wilson	77.47	48	*e*P	P	20 06 31.4	+0.8
	comp=Z,31nm,0.9s						
MWC	Mount Wilson	77.47	48	*e*P	P	20 06 31.4	+0.8
MWC				pmax	pmax		
	comp=Z,31nm,0.9s						
MNAI	Manna	77.49	269	*e*P	P	20 06 31.0	0.0
	comp=Z,273nm,1.1s						
NJ2	Nanjing	77.51	310	⇑*i*P	P	20 06 31.8	+1.2

NJ2				pmax	pmax	
	comp=Z,33nm,1.0s					
OHAK	Old Harbor	77.62	14	eP	P	20 06 30.8 +0.3
	comp=Z,93nm,0.9s					
VES	Vestal, Richgr	77.62	46	P	P	20 06 31.9 +0.8
	baz=237,SNR=14					
O02D	Mt. Diablo Mer	77.64	41	P	P	20 06 33.0 +1.7
	baz=234,SNR=12					
VOG	Valley Oaks Go	77.67	45	P	P	20 06 32.3 +1.0
	baz=237					
BFSC	Mount Baldy Ra	77.77	48	P	P	20 06 33.0 +0.8
	baz=239,SNR=8.5					
MURC	Murrieta	77.77	49	P	P	20 06 33.1 +1.1
	baz=239					
MDJ	Mudanjiang	77.80	325	P	P	20 06 33.3 +1.4
MDJ				pmax	pmax	
	comp=Z,95nm,0.8s					
MDJ				pmax	pmax	
	comp=Z,320nm,4.8s					
MDJ	Mudanjiang	77.80	325	eP	P	20 06 33.2 +1.4
	comp=Z,78nm,0.8s					
EDW2	Edwards Air Fo	77.86	47	P	P	20 06 33.8 +1.3
	baz=238,SNR=27					
ISA	Isabella, Lake	77.94	46	eP	P	20 06 34.1 +1.1
	comp=Z,37nm,1.0s					
ISA	Isabella, Lake	77.94	46	eP	P	20 06 34.1 +1.1
ISA				pmax	pmax	
	comp=Z,37nm,1.0s					
ISA	Isabella, Lake	77.94	46	P	P	20 06 34.5 +1.5
	baz=238,SNR=35					
CMB	Columbia Colle	77.94	43	eP	P	20 06 33.9 +1.0
	comp=Z,27nm,0.9s					
CMB	Columbia Colle	77.94	43	eP	P	20 06 33.9 +1.0
CMB				pmax	pmax	
	comp=Z,27nm,0.9s					
MONP2	Monument Peak	77.96	50	P	P	20 06 34.8 +1.5
	baz=240,SNR=24					
WDC	Whiskeytown Da	78.03	40	eP	P	20 06 34.2 +1.0
	comp=Z,35nm,1.4s					
WDC	Whiskeytown Da	78.03	40	eP	P	20 06 34.2 +1.0
WDC				pmax	pmax	
	comp=Z,35nm,1.4s					
IKP	In-Ko-Pah, Jac	78.07	50	P	P	20 06 35.3 +1.5
	baz=240,SNR=11					
AFDM	Forest Hills D	78.08	42	eP	P	20 06 34.8 +1.2
	comp=Z,26nm,1.0s					
N02D	Trinity Center	78.16	40	P	P	20 06 35.6 +1.6
	baz=234,SNR=15					
KDAK	Kodiak Island	78.29	14	eP	P	20 06 34.8 +0.7
	comp=Z,89nm,0.9s					
KDAK	Kodiak Island	78.29	14	ceP	P	20 06 34.3 +0.2
KDAK	Kodiak Island	78.29	14	P	P	20 06 34.6 +0.5
	comp=Z,57nm,0.9s,baz=184,slow=1.5,SNR=23					
PFO	Pinyon Flats O	78.30	49	eP	P	20 06 35.4 +0.4
	comp=Z,9.7nm,1.0s					
PFO	Pinyon Flats O	78.30	49	P	P	20 06 36.3 +1.3
	baz=240					
PFO	Pinyon Flats O	78.30	49	P	P	20 06 35.8 +0.8
	comp=Z,5.0nm,0.7s,baz=263,slow=4.4,SNR=6.7					
XPFO	Pion Flat	78.30	49	eP	P	20 06 35.6 +0.6
	comp=Z,10nm,1.0s					
M02C	Callahan	78.31	40	P	P	20 06 36.6 +1.8
	baz=234,SNR=14					
L02E	Cave Junction	78.32	39	P	P	20 06 36.3 +1.5
	baz=233					
O03E	Paynes Creek	78.32	41	P	P	20 06 35.7 +0.8
	baz=235					
KEBM	Edson Butte	78.32	38	eP	P	20 06 35.2 +0.5
	comp=Z,61nm,1.2s					
LRMC	Laurel Mtn Rad	78.39	47	P	P	20 06 36.5 +1.0
	baz=238					
SWSC	Sam W. Stewart	78.44	50	P	P	20 06 36.9 +1.3
	baz=240,SNR=5.9					
SRIG	Santa Rosalia	78.50	56	eP	P	20 06 36.5 +0.5
	comp=Z,36nm,0.9s					
MYKOM	Kota Tinggi	78.50	276	eP	P	20 06 35.4 -1.0
	comp=Z,40nm,1.3s					
RRX	Edison Barstow	78.56	48	P	P	20 06 37.4 +1.2
	baz=239					
MDPB	Devils Postpil	78.59	44	eP	P	20 06 37.4 +0.8
	comp=Z,38nm,0.9s					
YBH	Yreka Blue Hor	78.60	39	eP	P	20 06 37.6 +1.3
	comp=Z,24nm,0.9s					
YBH	Yreka Blue Hor	78.60	39	eP	P	20 06 37.6 +1.3
YBH				pmax	pmax	
	comp=Z,25nm,0.9s					
YBH	Yreka Blue Hor	78.60	39	P	P	20 06 37.7 +1.3
	comp=Z,17nm,0.7s,baz=182,slow=2.3,SNR=42					
K02D	Willamette Mer	78.60	38	P	P	20 06 37.6 +1.3
	baz=233,SNR=5.3					
CWC	Cottonwood Cre	78.62	46	P	P	20 06 37.7 +1.0
	baz=238					
OMMB	Old Mammoth Mi	78.63	44	eP	P	20 06 37.5 +0.6
	comp=Z,36nm,1.3s					
GRNR	Gornyy	78.68	333	⇑iP	P	20 06 38.5 +2.1
GRNR				pmax	pmax	
	comp=N,80nm,1.0s					
GRNR				pmax	pmax	
	comp=E,80nm,1.0s					
GRNR				pmax	pmax	
	comp=Z,210nm,1.0s					
J01E	Myrtle Point	78.73	38	P	P	20 06 38.0 +1.2
	baz=233					
NKL	Nikolayevsk	78.73	336	i P	P	20 06 37.0 +0.4
NKL				pmax	pmax	
	comp=Z,82nm,1.0s					
MLAC	Mammoth, Mammo	78.75	44	P	P	20 06 38.6 +1.1
	baz=237,SNR=5.2					
WAKR	Walker	78.83	43	eP	P	20 06 38.9 +1.1
	comp=Z,34nm,0.9s					
BELC	Belle Mtn. Jos	78.83	49	P	P	20 06 39.1 +1.3
	baz=240,SNR=8.6					
MPMC	Manual Prospec	78.83	46	P	P	20 06 39.2 +1.3
	baz=238,SNR=19					
TIN	Tinemaha, Big	78.85	45	P	P	20 06 39.4 +1.6
	baz=238					
DAC	Darwin (Calif)	78.87	46	eP	P	20 06 38.7 +0.6
	comp=Z,50nm,1.7s					
DAC	Darwin (Calif)	78.87	46	eP	P	20 06 38.7 +0.6
DAC				pmax	pmax	
	comp=Z,50nm,1.7s					
GSC	Goldstone, Bar	78.91	47	eP	P	20 06 39.2 +1.0
	comp=Z,41nm,1.6s					
GSC	Goldstone, Bar	78.91	47	eP	P	20 06 39.2 +1.0
GSC				pmax	pmax	
	comp=Z,41nm,1.6s					
GSC	Goldstone, Bar	78.91	47	P	P	20 06 39.3 +1.2
	baz=239,SNR=8.3					
HUMO	Hull Mountain	78.97	38	eP	P	20 06 39.6 +1.4
	comp=Z,29nm,1.0s					
BEKR	Beckworth	78.98	42	eP	P	20 06 39.8 +1.2
	comp=Z,30nm,0.6s					
HEC	Hector,Ludlow	79.00	48	P	P	20 06 39.7 +1.0
	baz=239,SNR=14					
PNTR	Pine Nut	79.04	43	eP	P	20 06 40.2 +1.3
	comp=Z,58nm,0.8s					
BC3	Big Chuckawall	79.05	49	P	P	20 06 40.3 +1.3
	baz=240					
L04D	Klamath Falls	79.13	39	P	P	20 06 40.3 +1.1
	baz=234,SNR=12					
M04C	Macdoel	79.16	40	P	P	20 06 40.7 +1.3
	baz=234,SNR=11					
DL2	Dalian	79.18	317	P	P	20 06 40.3 +1.0
DL2				S	S	20 15 58.3 +3.2
DL2				pmax	pmax	
	comp=Z,33nm,0.8s					
GLA	Glamis	79.21	50	P	P	20 06 41.4 +1.7
	baz=241					
YERR	Yerington	79.22	43	eP	P	20 06 41.0 +1.2
	comp=Z,36nm,0.8s					
I02D	Swisshome	79.35	37	P	P	20 06 41.5 +1.4
	baz=232					
I03D	Drain, OR	79.39	37	P	P	20 06 41.6 +1.2
	baz=233					
GRAC	Grapevine Rang	79.40	46	P	P	20 06 42.0 +1.3
	baz=238,SNR=5.1					
GMRC	Granite Mounta	79.46	48	P	P	20 06 42.2 +1.0
	baz=240,SNR=11					
FURC	Furnace Creek,	79.47	46	P	P	20 06 42.4 +1.5
	baz=239,SNR=7.0					
RYN	Ryan	79.49	44	eP	P	20 06 42.4 +1.1
	comp=Z,18nm,0.9s					
IRM	Iron Mountain	79.52	49	P	P	20 06 42.9 +1.6
	baz=240,SNR=10.0					
PAHR	Pah Rah Range	79.52	42	eP	P	20 06 42.3 +1.0
	comp=Z,25nm,0.9s					
NV01	Mina Array Sit	79.53	44	eP	P	20 06 42.6 +1.1
NVAR	Mina Array Bea	79.53	44	P	P	20 06 42.8 +1.2
	comp=Z,21nm,0.8s,baz=225,slow=9.0,SNR=152					
SHOC	Shoshone, Teco	79.59	47	P	P	20 06 42.6 +1.0
	baz=239					
TUQ	Turquoise Moun	79.60	48	P	P	20 06 42.8 +0.9
	baz=240					
CN2	Changchun	79.62	323	eP	P	20 06 41.9 +0.3
CN2				pmax	pmax	
	comp=Z,70nm,1.2s					
NV11	Mina Array Sit	79.63	44	eP	P	20 06 43.1 +1.1
	comp=Z,2.9nm,1.1s					
K04D	Chiloquin, OR	79.70	39	P	P	20 06 43.2 +1.0
	baz=234					
KLR	Kul'dur	79.74	330	c iP	P	20 06 42.8 +0.7
Y12C	Blythe	79.77	50	P	P	20 06 44.0 +1.4
	baz=241					
J04D	Umpqua Nationa	79.85	38	P	P	20 06 44.3 +1.2
	baz=234,SNR=11					
COR	Corvallis	79.95	37	eP	P	20 06 45.4 +2.1
	comp=Z,77nm,1.5s					
I04A	Tendick Farm,	79.99	38	P	P	20 06 44.5 +0.8
	baz=234,SNR=9.9					
KVN	Kaiserville	80.00	44	eP	P	20 06 44.9 +1.0
	comp=Z,20nm,0.8s					
KVN	Kaiserville	80.00	44	eP	P	20 06 44.9 +1.0
KVN				pmax	pmax	
	comp=Z,20nm,0.8s					
TPNV	Topopah Spring	80.14	46	eP	P	20 06 46.1 +1.4
	comp=Z,61nm,1.6s					
TPNV	Topopah Spring	80.14	46	eP	P	20 06 46.1 +1.4
TPNV				pmax	pmax	
	comp=Z,61nm,1.6s					
TPNV	Topopah Spring	80.14	46	P	P	20 06 46.1 +1.4
	baz=239,SNR=16					
MOD	Modoc Plateau	80.17	40	eP	P	20 06 45.8 +1.0
	comp=Z,30nm,0.9s					
WHN	Wuhan	80.17	306	⇓P	P	20 06 46.3 +1.5
214A	Organ Pipe Nat	80.18	52	P	P	20 06 46.0 +1.2
	baz=242					
NEE2	Needles Airpor	80.20	49	P	P	20 06 46.0 +1.1
	baz=240					
H04D	Lebanon	80.24	37	P	P	20 06 46.0 +1.2
	baz=233					
PDMCI	Parker Dam,Lak	80.31	49	P	P	20 06 47.0 +1.6
	baz=241					
G03D	McMinnville, O	80.35	36	P	P	20 06 46.5 +1.2
	baz=233					
J05D	Fort Rock, OR	80.39	39	P	P	20 06 47.3 +1.5
	baz=235,SNR=56					
BRLK	Bradley Lake	80.46	14	eP	P	20 06 45.2 -0.5
	comp=Z,90nm,0.9s					
F03A	Seaside	80.62	36	eP	P	20 06 47.1 +0.4
	comp=Z,82nm,1.3s					
H04A	Detroit Lake	80.65	37	eP	P	20 06 47.6 +0.6
	comp=Z,79nm,1.5s					
SHPR	Sheep Range	80.67	47	eP	P	20 06 48.7 +1.2
	comp=Z,27nm,1.2s					
RSO	Redoubt South	80.68	13	eP	P	20 06 46.3 -0.7
SVW2	Sparrevohn	80.70	11	eP	P	20 06 46.3 -0.5
	comp=Z,23nm,0.9s					
BKNI	Bangkinang	80.72	273	eP	P	20 06 48.0 0.0
	comp=Z,55nm,0.8s					
TIA	Tai'an	80.83	313	P	P	20 06 48.8 +0.7
TIA				pmax	pmax	
	comp=Z,7.0nm,1.1s					
PINE	Pine Mountain	80.86	38	eP	P	20 06 49.5 +1.2
	comp=Z,61nm,1.0s					
W13A	Hualapai Mount	80.89	49	eP	P	20 06 49.9 +1.2
	comp=Z,9.0nm,0.9s					
MA2	Magadan	80.89	345	eP	P	20 06 47.1 -0.7
	comp=Z,49nm,1.0s					
MA2	Magadan	80.89	345	ceP	P	20 06 47.2 -0.7
MA2				pmax	pmax	
	comp=Z,55nm,1.1s					
I05D	Terrebonne, OR	80.94	38	P	P	20 06 49.7 +1.1
	baz=234,SNR=11					
Y14A	Wickenburg	80.97	50	eP	P	20 06 49.6 +0.7
	comp=Z,13nm,0.9s					
COCO	West Island	81.08	260	eP	P	20 06 50.7 +0.8
	comp=Z,246nm,1.5s					
COCO	West Island	81.08	260	eP	P	20 06 50.7 +0.8
COCO				pmax	pmax	
	comp=Z,246nm,1.5s					
SEW	Seward	81.10	14	eP	P	20 06 48.1 -0.8
	comp=Z,45nm,0.9s					
BMN	Battle Mountai	81.31	43	eP	P	20 06 51.8 +1.1
	comp=Z,36nm,0.9s					
BMN	Battle Mountai	81.31	43	eP	P	20 06 51.8 +1.1
BMN				pmax	pmax	
	comp=Z,36nm,0.9s					
R11A	Troy Canyon, C	81.31	45	eP	P	20 06 51.6 +0.8
	comp=Z,11nm,1.0s					
R11A	Troy Canyon, C	81.31	45	P	P	20 06 51.6 +0.8
	baz=239,SNR=14					
NLWA	Neilton Lookou	81.35	34	eP	P	20 06 51.4 +0.8
	comp=Z,46nm,1.2s					
GAMB	Gambell	81.39	3	eP	P	20 06 50.7 +0.4
	comp=Z,41nm,0.8s					
G05D	Wamic, OR	81.48	37	P	P	20 06 52.2 +0.9
	baz=234					
WVOR	Wild Horse Val	81.49	40	eP	P	20 06 52.3 +0.8
	comp=Z,49nm,1.0s					
WVOR	Wild Horse Val	81.49	40	eP	P	20 06 52.3 +0.8
WVOR				pmax	pmax	
	comp=Z,49nm,1.0s					
E04D	Cinebar	81.55	35	P	P	20 06 52.7 +1.2
	baz=233					
F05D	White Salmon	81.77	36	P	P	20 06 53.6 +0.9
	baz=234					
D03D	Eldon	81.85	34	P	P	20 06 54.2 +1.1
	baz=233,SNR=11					
TUC	Tucson	81.87	52	eP	P	20 06 55.3 +1.7
	comp=Z,32nm,1.0s					
TUC	Tucson	81.87	52	P	P	20 06 55.6 +2.0
	baz=243					
I07A	Izee	81.88	39	eP	P	20 06 54.3 +0.9
	comp=Z,35nm,0.9s					
RC01	Rabbit Creek A	81.90	14	eP	P	20 06 52.3 -0.7
	comp=Z,85nm,1.1s					
SUA	Susitna One	82.01	13	eP	P	20 06 53.0 -0.7
	comp=Z,100nm,1.0s					
IPM	Ipoh	82.02	277	eP	P	20 06 53.9 -0.8
	comp=Z,27nm,0.8s					
LON	Longmire	82.08	36	eP	P	20 06 54.6 +0.2
	comp=Z,10nm,0.9s					
LON	Longmire	82.08	36	eP	P	20 06 54.6 +0.2
LON				pmax	pmax	
	comp=Z,11nm,0.9s					
J08A	Circle Bar Ran	82.10	40	eP	P	20 06 55.4 +0.9
	comp=Z,55nm,1.1s					
D05A	Enumclaw	82.25	35	eP	P	20 06 56.2 +1.1
	comp=Z,120nm,1.4s					
LCMT	Little Creek M	82.26	47	eP	P	20 06 56.8 +1.2
X16A	Lo Mia Camp, P	82.34	50	eP	P	20 06 57.9 +1.8
	comp=Z,35nm,0.9s					
PGC	Sidney	82.34	33	eP	P	20 06 56.1 +0.7
	comp=Z,48nm,1.3s					
CCUT	Cedar City	82.44	47	eP	P	20 06 58.0 +1.4
	comp=Z,29nm,1.1s					
KNK	Knik Glacier	82.48	14	eP	P	20 06 55.5 -0.4
	comp=Z,53nm,0.8s					
PMR	Palmer	82.48	14	eP	P	20 06 55.3 -0.6
	comp=Z,93nm,1.4s					
PMR	Palmer	82.48	14	eP	P	20 06 55.3 -0.6
PMR				pmax	pmax	
	comp=Z,93nm,1.4s					
KNB	Kanab	82.56	48	eP	P	20 06 58.5 +1.3
	comp=Z,24nm,1.0s					
PSUT	Pine Spring	82.58	46	eP	P	20 06 57.7 +0.5
	comp=Z,19nm,0.8s					
319A	Douglas	82.61	54	eP	P	20 06 59.5 +2.0
	comp=Z,36nm,0.9s					
HMT	Hamilton	82.62	17	eP	P	20 06 57.1 +0.5
	comp=Z,326nm,2.0s					
KULM	Kulim	82.63	278	eP	P	20 06 58.3 +0.6
	comp=Z,11nm,0.9s					
ANM	Nome	82.65	6	eP	P	20 06 56.8 +0.1
	comp=Z,49nm,1.4s					
ANM	Nome	82.65	6	eP	P	20 06 56.8 +0.1
ANM				pmax	pmax	
	comp=Z,49nm,1.4s					
F07A	Phinny Hill Vi	82.65	37	eP	P	20 06 58.0 +0.8
	comp=Z,18nm,0.8s					
SZCU	Shurtz Canyon	82.65	47	eP	P	20 06 58.9 +1.2
	comp=Z,41nm,1.3s					
GHO	Glory Hole Cre	82.69	14	eP	P	20 06 57.1 0.0
	comp=Z,108nm,0.8s					
ELK	Elko	82.76	43	eP	P	20 06 59.0 +0.8
	comp=Z,21nm,0.9s					
A04D	Lummi Island	82.78	34	P	P	20 06 58.8 +1.2
	baz=233,SNR=16					
B05A	Bryant	82.83	34	P	P	20 06 58.8 +0.9
	baz=233,SNR=12					
SML	Sawmill	82.86	14	eP	P	20 06 57.1 -0.7
	comp=Z,152nm,1.8s					
SML	Sawmill	82.86	14	eP	P	20 06 57.1 -0.7
SML				pmax	pmax	
	comp=Z,152nm,1.8s					
G08A	Pilot Rock	82.87	38	eP	P	20 06 59.3 +0.8
	comp=Z,36nm,1.1s					
WUAZ	Wupatki	82.89	49	eP	P	20 07 00.1 +1.3
	comp=Z,32nm,1.0s					
WUAZ	Wupatki	82.89	49	P	P	20 07 00.5 +1.7
	baz=242					
DIV	Divide	82.89	15	eP	P	20 06 57.7 -0.4
	comp=Z,79nm,0.8s					
PPLA	Purkeypile	83.00	12	eP	P	20 06 57.0 -1.6
	comp=Z,95nm,1.8s					
LTY	Liberty	83.01	36	eP	P	20 06 58.9 -0.2
	comp=Z,23nm,1.0s					
E07A	Sunnyside	83.07	37	eP	P	20 07 00.1 +0.8
	comp=Z,45nm,1.1s					
SCM	Sheep Creek Mo	83.12	14	eP	P	20 06 59.0 -0.2
	comp=Z,128nm,0.8s					
SCM	Sheep Creek Mo	83.12	14	eP	P	20 06 59.0 -0.2
SCM				pmax	pmax	
	comp=Z,128nm,0.8s					
PKCU	Pink Cliffs	83.12	47	eP	P	20 07 02.1 +2.0
	comp=Z,65nm,1.1s					
HAWA	Hanford	83.16	37	eP	P	20 07 00.3 +0.6
	comp=Z,44nm,1.0s					
KLU	Klutina	83.17	15	eP	P	20 06 59.1 -0.4
	comp=Z,31nm,1.0s					
C06D	Leavenworth	83.28	35	P	P	20 07 00.6 +0.3
	baz=234					
B06A	Marblemount	83.31	34	eP	P	20 06 59.8 -0.5
	comp=Z,18nm,0.5s					
BJT	Baijiatuau	83.36	316	eP	P	20 07 01.4 +0.5
	comp=Z,96nm,1.5s					
SKNT	Sakolnakorn	83.44	290	P	P	20 07 03.6 +1.9
WRAK	Wrangell Islan	83.47	24	eP	P	20 07 01.8 +0.9
	comp=Z,76nm,1.1s					
SEY	Seymchan	83.48	347	ceP	P	20 07 00.7 -0.2
E08A	Dider Farm, El	83.49	37	eP	P	20 07 01.8 +0.5
	comp=Z,124nm,1.8s					
PSI	Prapat	83.49	275	eP	P	20 07 01.0 -1.3
	comp=Z,24nm,0.9s					
PSI	Prapat	83.49	275	eP	P	20 07 01.0 -1.3
PSI				pmax	pmax	
	comp=Z,24nm,0.9s					
MTPU	Mount Pierson	83.50	47	eP	P	20 07 03.4 +1.4
	comp=Z,32nm,1.1s					
CAST	Castle Rocks	83.50	12	eP	P	20 06 59.2 -1.8
	comp=Z,96nm,0.8s					
PCA	Pinnacle	83.56	18	eP	P	20 07 01.5 0.0
	comp=Z,123nm,1.5s					
BMO	Blue Mountains	83.61	39	eP	P	20 07 02.1 0.0
	comp=Z,13nm,0.9s					
BMO	Blue Mountains	83.61	39	eP	P	20 07 02.1 0.0
BMO				pmax	pmax	
	comp=Z,13nm,0.9s					
HPIG		83.64	59	eP	P	20 07 03.7 +0.9
	comp=Z,30nm,1.7s					
MSU	Marysvale	83.72	46	eP	P	20 07 04.4 +1.4
ENH	Enshi	83.84	304	eP	P	20 07 03.8 +0.3
	comp=Z,52nm,0.9s					
D08A	Wollman Farm,	83.88	36	eP	P	20 07 04.0 +0.7
	comp=Z,28nm,0.9s					
TRF	Thorofare Moun	83.88	12	eP	P	20 07 01.8 -1.3
	comp=Z,85nm,0.7s					
W18A	Petrified Fore	83.91	50	eP	P	20 07 04.8 +0.9
	comp=Z,19nm,1.1s					
W18A	Petrified Fore	83.91	50	P	P	20 07 05.1 +1.2
	baz=244					
E09A	Wood Farm, Sta	84.02	37	eP	P	20 07 04.0 +0.1
	comp=Z,74nm,1.7s					
DUG	Dugway, Tooele	84.09	45	eP	P	20 07 04.9 +0.2
	comp=Z,20nm,1.6s					
DUG	Dugway, Tooele	84.09	45	P	P	20 07 05.6 +0.9
	baz=241					
BESE	Bessie Mountai	84.13	21	eP	P	20 07 04.7 +0.4
	comp=Z,57nm,1.1s					
HARP	HAARP	84.14	15	eP	P	20 07 04.3 +0.1
	comp=Z,89nm,0.8s					
RND	Reindeer	84.15	13	eP	P	20 07 03.8 -0.5
	comp=Z,122nm,0.9s					
RND	Reindeer	84.15	13	eP	P	20 07 03.8 -0.5
RND				pmax	pmax	
	comp=Z,122nm,0.9s					
DHY	Denali Highway	84.19	14	eP	P	20 07 03.9 -0.7
	comp=Z,74nm,1.4s					
121A	Cookes Peak, D	84.25	53	P	P	20 07 07.2 +1.6
	baz=245					
F10A	Beach Ranch, E	84.27	38	eP	P	20 07 05.2 -0.1
	comp=Z,51nm,1.0s					
BGU	Big Grassy Mou	84.30	44	eP	P	20 07 06.2 +0.5
	comp=Z,5.7nm,1.1s					
GSI	Gunungsitoli	84.31	273	eP	P	20 07 07.1 +0.9
	comp=Z,45nm,0.9s					
BPAW	Bear Paw Mtn.	84.33	12	eP	P	20 07 03.5 -1.6
	comp=Z,12nm,0.8s					
LLLB	Lillooet	84.34	32	eP	P	20 07 05.3 -0.2
	comp=Z,30nm,1.3s					
TRTT	Trang	84.34	280	P	P	20 07 08.4 +2.1
B08A	Colville Reser	84.38	35	eP	P	20 07 05.2 -0.5
	comp=Z,21nm,0.8s					
MCK	McKinley	84.42	13	eP	P	20 07 04.9 -0.7
	comp=Z,78nm,1.0s					
MCK	McKinley	84.42	13	eP	P	20 07 04.9 -0.7
MCK				pmax	pmax	
	comp=Z,78nm,1.0s					
NLU	North Lily Min	84.48	45	eP	P	20 07 07.2 +0.5
	comp=Z,3.7nm,1.0s					
PAX	Paxson	84.54	15	eP	P	20 07 05.3 -0.9
	comp=Z,25nm,0.9s					
PAX	Paxson	84.54	15	eP	P	20 07 05.3 -0.9
PAX				pmax	pmax	
	comp=Z,25nm,0.9s					
GYA	Guiyang	84.60	300	P	P	20 07 08.4 +0.9
GYA				pP	pP	20 09 07.6 +3.1
GYA				sP	sP	20 10 01.0 +1.7
GYA				PP	PP	20 10 35.4 +2.1
GYA				SKS	SKSac	20 16 37.5 -3.0
GYA				S	S	20 16 49.8 -0.4
GYA				sS	sS	20 20 19.0 +1.8
GYA				pmax	pmax	
	comp=Z,30nm,0.9s					
GYA				pmax	pmax	
	comp=Z,140nm,5.9s					
Q16A	Castle Valley	84.61	46	eP	P	20 07 08.8 +1.5
	comp=Z,22nm,1.2s					
SKAG	Skagway	84.63	21	eP	P	20 07 05.4 -1.2
	comp=Z,99nm,1.7s					
C09A	Chrisman Ranch	84.66	36	eP	P	20 07 07.3 +0.2
	comp=Z,27nm,1.0s					
BWN	Browne	84.69	12	eP	P	20 07 06.7 -0.1
	comp=Z,139nm,1.2s					
HLID	Hailey	84.72	41	eP	P	20 07 08.8 +1.1
	comp=Z,19nm,0.8s					
HLID	Hailey	84.72	41	P	P	20 07 09.1 +1.4
	baz=240					
TMUT	Trail Mountain	84.76	46	eP	P	20 07 09.4 +1.2
	comp=Z,15nm,0.9s					
MPU	Maple Canyon	84.80	45	eP	P	20 07 09.2 +1.0
	comp=Z,7.5nm,1.0s					
ZEA	Zeya	84.82	331	eP	P	20 07 08.2 +0.5
ZEA				pmax	pmax	
	comp=E,22nm,0.9s					
ZEA				pmax	pmax	
	comp=N,59nm,1.0s					
ZEA				pmax	pmax	
	comp=Z,76nm,1.0s					
SPUT	South Promonto	84.87	44	eP	P	20 07 09.5 +1.0
	comp=Z,17nm,1.2s					
HVU	Hansel Valley	84.89	43	eP	P	20 07 09.6 +1.1
	comp=Z,61nm,1.7s					
HVU	Hansel Valley	84.89	43	eP	P	20 07 09.6 +1.1
HVU				pmax	pmax	
	comp=Z,61nm,1.7s					
MENT	Mentasta	84.94	15	eP	P	20 07 08.1 0.0
	comp=Z,33nm,0.9s					
HYT	Haines Junctio	84.98	19	eP	P	20 07 09.1 +0.6
	comp=Z,27nm,1.0s					
CTU	Camp Tracy	85.04	45	eP	P	20 07 09.9 +0.6
	comp=Z,9.6nm,1.0s					
SRU	San Rafael Swe	85.14	46	eP	P	20 07 10.6 +0.7

	comp=Z,14nm,0.8s						
P17A	Butcher Ranch,	85.16	46	*e*P	P	20 07 10.9	+1.0
	comp=Z,12nm,0.9s						
JLU	Jordanelle	85.20	45	*e*P	P	20 07 11.1	+0.9
	comp=Z,8.4nm,1.0s						
MLY	Manley	85.21	12	*e*P	P	20 07 07.9	-1.5
	comp=Z,29nm,1.1s						
WRH	Wood River Hil	85.25	13	*e*P	P	20 07 08.8	-0.8
	comp=Z,155nm,1.5s						
RIDG	Independ’e Rid	85.35	14	*e*P	P	20 07 09.8	-0.3
	comp=Z,62nm,1.0s						
HDA	Harding Lake	85.44	13	*e*P	P	20 07 09.7	-0.8
	comp=Z,33nm,0.8s						
HDA	Harding Lake	85.44	13	P	P	20 07 10.0	-0.5
	baz=210,SNR=19						
DOT	Dot Lake	85.45	15	*e*P	P	20 07 09.9	-0.7
	comp=Z,44nm,0.8s						
TCUT	Toone Canyon	85.47	44	*e*P	P	20 07 12.4	+0.9
	comp=Z,150nm,1.8s						
LAZ	Ladron	85.52	52	*e*P	P	20 07 12.8	+0.9
IM3	Indian Mountai	85.54	10	*e*P	P	20 07 10.0	-0.9
LENM	Lemitar	85.55	52	*e*P	P	20 07 12.9	+1.0
NEW	Newport	85.56	36	*e*P	P	20 07 11.5	0.0
	comp=Z,15nm,0.9s						
NEW	Newport	85.56	36	P	P	20 07 11.8	+0.3
	baz=237,SNR=10						
P18A	Preston Nutter	85.57	46	*e*P	P	20 07 12.2	+0.1
HWUT	Hardware Ranch	85.60	44	*e*P	P	20 07 12.1	+0.1
	comp=Z,16nm,0.9s						
MDM	Murphy Dome	85.64	13	*e*P	P	20 07 10.3	-1.2
	comp=Z,64nm,1.2s						
TCOL	CIGO, UAF Yank	85.65	13	P	P	20 07 10.6	-0.8
	baz=210,SNR=6.6						
COLA	College	85.65	13	*e*P	P	20 07 10.3	-1.1
	comp=Z,141nm,1.4s						
COLA	College	85.65	13*c*	*i*P	P	20 07 10.1	-1.3
COLA				pmax	pmax		
	comp=Z,48nm,1.1s						
PV05	Paradox Valley	85.68	48	*e*P	P	20 07 13.7	+1.2
	comp=Z,37nm,1.6s						
WHY	Whitehorse	85.69	20	*e*P	P	20 07 12.0	+0.1
	comp=Z,39nm,1.1s						
MVCO	Mesa Verde	85.72	49	*e*P	P	20 07 13.2	+0.4
	comp=Z,17nm,1.4s						
MVCO	Mesa Verde	85.72	49	P	P	20 07 13.5	+0.7
	baz=244						
SCRK	Sand Creek	85.75	15	*e*P	P	20 07 11.7	-0.4
	comp=Z,28nm,1.0s						
MNTX	Cornudas Mount	85.76	55	*e*P	P	20 07 13.8	+1.0
	comp=Z,9.6nm,0.9s						
MNTX	Cornudas Mount	85.76	55	P	P	20 07 14.3	+1.5
	baz=246,SNR=14						
ILAR	Eielson Array	85.77	13	P	P	20 07 11.4	-0.6
	comp=Z,18nm,0.7s,baz=224,slow=5.3,SNR=208						
ILAR				PP	PP	20 10 32.3	-9.3
	comp=Z,1.6nm,1.0s,baz=217,slow=7.4,SNR=3.0						
ILB	Eielson Array	85.77	13	*e*P	P	20 07 11.0	-1.0
	comp=Z,38nm,1.0s						
ILB				*e*PP	PP	20 10 32.3	-9.3
IL1	Eielson Array	85.77	13	*e*P	P	20 07 10.8	-1.2
DLBC	Dease Lake	85.78	23	*e*P	P	20 07 12.6	+0.2
	comp=Z,72nm,1.4s						
BNM	Barren Site	85.80	52	*e*P	P	20 07 14.1	+0.9
BNM				*e*pP	pwP	20 09 15.8	+2.3
XAN	Xi'an	85.83	308	P	P	20 07 14.4	+1.3
XAN				S	S	20 17 04.0	+2.4
XAN				pmax	pmax		
	comp=Z,44nm,1.0s						
XAN	Xi'an	85.83	308	*e*P	P	20 07 14.1	+0.9
	comp=Z,54nm,0.9s						
PV09	Paradox Valley	85.84	48	*e*P	P	20 07 14.2	+0.8
PV10	Paradox Valley	85.85	48	*e*P	P	20 07 13.3	0.0
	comp=Z,27nm,1.3s						
PV14	Lion Creek, Pa	85.86	48	*e*P	P	20 07 14.3	+0.9
	comp=Z,14nm,1.0s						
PV19	Morning Glory	85.86	48	*e*P	P	20 07 14.5	+1.2
	comp=Z,12nm,0.9s						
PV17	East Wray Mesa	85.86	48	*e*P	P	20 07 14.4	+1.0
	comp=Z,74nm,1.8s						
LPM	Los Pinos Moun	85.87	52	*e*P	P	20 07 14.6	+1.1
PV20	West Nyswonger	85.89	48	*e*P	P	20 07 14.4	+0.9
	comp=Z,12nm,1.1s						
PV23	Carpenter Ridg	85.90	48	*e*P	P	20 07 14.6	+1.0
	comp=Z,23nm,1.1s						
PV16	Nyswonger Mesa	85.91	48	*e*P	P	20 07 14.1	+0.5
	comp=Z,12nm,0.9s						
PV13	Radium Mtn., P	85.91	48	*e*P	P	20 07 14.5	+0.9
	comp=Z,17nm,1.4s						
PV03	Paradox Valley	85.93	48	*e*P	P	20 07 14.6	+0.9
	comp=Z,43nm,2.0s						
PV11	David Mesa, Pa	85.93	48	*e*P	P	20 07 14.6	+0.9
	comp=Z,13nm,0.8s						
POKR	Poker Plat Res	85.95	13	P	P	20 07 12.0	-0.9
	baz=210,SNR=14						
PV04	Paradox Valley	85.95	48	*e*P	P	20 07 14.7	+0.9
	comp=Z,24nm,1.3s						
HIA	Hailar	85.98	325	*e*P	P	20 07 14.1	+0.7
	comp=Z,29nm,1.2s						
PV21	Cone Mtn., Par	85.98	48	*e*P	P	20 07 15.0	+1.0
	comp=Z,57nm,2.0s						
PV02	Paradox Valley	85.99	48	*e*P	P	20 07 14.6	+0.6
	comp=Z,9.9nm,1.0s						
PV12	Saucer Basin,	85.99	48	*e*P	P	20 07 14.6	+0.6
	comp=Z,24nm,1.3s						
PBKT	Sadao Pong	86.01	289	*e*P	P	20 07 15.6	+1.4
	comp=Z,4.5nm,1.0s						
PBKT	Sadao Pong	86.01	289	P	P	20 07 17.2	+3.0
PHET	Kaeng Krachan	86.03	285	P	P	20 07 17.6	+3.2
PV01	Paradox Valley	86.08	48	*e*P	P	20 07 15.2	+0.7
	comp=Z,12nm,1.1s						
PV07	Paradox Valley	86.15	48	*e*P	P	20 07 15.2	+0.5
	comp=Z,5.9nm,0.8s						
BILL	Bilibino	86.18	354	*e*P	P	20 07 13.7	-0.2
	comp=Z,55nm,0.9s						
BILL	Bilibino	86.18	354*c*	*e*P	P	20 07 13.7	-0.2
BILL				pmax	pmax		
	comp=Z,69nm,1.0s						
LTX	Lajitas	86.20	58	*e*P	P	20 07 17.1	+2.1
TXAR	Lajitas Array	86.20	58	P	P	20 07 17.1	+2.1
	comp=Z,15nm,0.8s,baz=220,slow=6.1,SNR=132						
PV15	Paradox Valley	86.23	48	*e*P	P	20 07 15.7	+0.5
	comp=Z,7.2nm,0.8s						
ANMO	Albuquerque	86.26	52	*e*P	P	20 07 16.1	+0.8
	comp=Z,15nm,1.1s						
ANMO				*e*pP	pwP	20 09 18.8	+3.6
ANMO	Albuquerque	86.26	52*c*	*e*P	P	20 07 16.2	+0.8
ANMO				pmax	pmax		
	comp=Z,15nm,1.2s						
ANMO	Albuquerque	86.26	52	P	P	20 07 16.3	+1.0
	baz=246						
RDOG	Red Dog Mine	86.29	6	*e*P	P	20 07 14.3	-0.2
	comp=Z,34nm,1.3s						
MCMT	McKenzie Canyo	86.32	41	*e*P	P	20 07 16.1	+0.7
AHID	Auburn Hatcher	86.45	43	*e*P	P	20 07 17.0	+1.0
	comp=Z,70nm,1.7s						
MSO	Missoula	86.65	39	*e*P	P	20 07 16.7	0.0
	comp=Z,19nm,1.4s						
MSO	Missoula	86.65	39	P	P	20 07 16.9	+0.1
	baz=240,SNR=5.3						
PRP	Porcupine Dome	86.70	13	*e*P	P	20 07 15.7	-0.9
	comp=Z,16nm,1.0s						
DLMT	Dillon	86.74	40	*e*P	P	20 07 18.4	+1.1
	comp=Z,21nm,0.9s						
GDL2	Guadalupe Moun	86.76	55	*e*P	P	20 07 17.4	-0.3
HHC	Hu-ho-hao-te	86.85	315	*e*P	P	20 07 19.3	+1.4
HHC				S	S	20 17 12.1	+1.0
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.4s						
TPAW	Teton Pass	86.88	42	*e*P	P	20 07 18.1	-0.1
	comp=Z,24nm,1.0s						
REDW	Red Top Meadow	86.89	43	*e*P	P	20 07 19.1	+0.9
	comp=Z,42nm,1.0s						
FXWY	Fox Creek	86.90	42	*e*P	P	20 07 19.3	+1.1
	comp=Z,16nm,0.9s						
DAWY	Dawson	86.99	16	*e*P	P	20 07 17.3	-0.6
	comp=Z,21nm,1.0s						
SNOW	Snow King Moun	87.00	43	*e*P	P	20 07 20.1	+1.4
	comp=Z,47nm,1.1s						
LRM	Limekiln Ridge	87.05	40	*e*P	P	20 07 19.6	+0.8
LRM				*e*pP	pwP	20 09 22.6	+3.4
IMW	Indian Meadow	87.08	42	*e*P	P	20 07 20.0	+0.9
	comp=Z,32nm,0.8s						
EGAK	Eagle	87.11	15	*e*P	P	20 07 18.1	-0.2
	comp=Z,19nm,0.8s						
MOOW	Moose Ponds	87.14	42	*e*P	P	20 07 20.0	+0.7
	comp=Z,11nm,0.9s						
S22A	4UR Ranch, Cre	87.15	49	*e*P	P	20 07 20.6	+1.0
	comp=Z,14nm,1.0s						
S22A	4UR Ranch, Cre	87.15	49	P	P	20 07 20.9	+1.3
	baz=245,SNR=13						
LOHW	Long Hollow	87.16	42	*e*P	P	20 07 20.4	+0.9
	comp=Z,14nm,0.8s						
O20A	White River Ci	87.18	46	*e*P	P	20 07 20.7	+1.2
	comp=Z,43nm,1.3s						
O20A	White River Ci	87.18	46	P	P	20 07 20.5	+0.9
	baz=244						
QLMT	Earthquake Lak	87.21	41	*e*P	P	20 07 21.0	+1.4
COLD	Coldfoot	87.28	11	*e*P	P	20 07 19.5	+0.4
	comp=Z,13nm,1.0s						
YHB	Horse Butte	87.32	41	*e*P	P	20 07 21.8	+1.7
	comp=Z,37nm,1.1s						
FLWY	Flagg Ranch	87.32	42	*e*P	P	20 07 21.4	+1.2
	comp=Z,67nm,1.4s						
YPP	Pitchstone Pla	87.34	42	*e*P	P	20 07 21.6	+1.3
	comp=Z,13nm,1.2s						
KMI	Kunming	87.40	297	P	P	20 07 22.6	+1.7
KMI				pP	pP	20 09 21.3	+2.3
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
KMI				pmax	pmax		
	comp=Z,41nm,3.7s						
KMI	Kunming	87.40	297	*e*P	P	20 07 22.4	+1.5
	comp=Z,16nm,1.1s						
YFT	Old Faithful	87.41	42	*e*P	P	20 07 23.0	+2.4
	comp=Z,22nm,0.9s						
YMR	Madison River	87.42	41	*e*P	P	20 07 22.0	+1.4
	comp=Z,89nm,1.7s						
BOZ	Bozeman (W)	87.45	40	*e*P	P	20 07 21.5	+0.9
	comp=Z,24nm,1.2s						
BOZ	Bozeman (W)	87.45	40	*e*P	P	20 07 21.5	+0.9
BOZ				pmax	pmax		
	comp=Z,24nm,1.2s						
BOZ	Bozeman (W)	87.45	40	P	P	20 07 21.7	+1.1
	baz=242,SNR=18						
BW06	Boulder Array	87.46	44	*e*P	P	20 07 20.9	+0.1
BW06	Boulder Array	87.46	44	P	P	20 07 21.3	+0.4
	baz=243,SNR=16						
PD31	Pinedale Array	87.46	44	*e*P	P	20 07 21.2	+0.4
PDAR	Pinedale Array	87.46	44	P	P	20 07 21.5	+0.7
	comp=Z,9.5nm,0.7s,baz=212,slow=3.2,SNR=80						
PDAR				PP	PP	20 10 53.2	-2.6
	comp=Z,1.3nm,1.0s,baz=225,slow=6.1,SNR=4.7						
CPRX	Cap Rock	87.47	54	*e*P	P	20 07 21.8	+0.8
H17A	Grant Village	87.54	42	*e*P	P	20 07 23.5	+2.3
	comp=Z,24nm,0.9s						
H17A	Grant Village	87.54	42	P	P	20 07 23.5	+2.3
	baz=242,SNR=18						
YHH	Holmes Hill	87.55	41	*e*P	P	20 07 22.7	+1.4
	comp=Z,35nm,1.5s						
YNR	Norris Junctio	87.63	41	*e*P	P	20 07 23.1	+1.5
	comp=Z,18nm,1.2s						
SMCO	Snowmass	87.65	48	*e*P	P	20 07 22.4	+0.3
	comp=Z,17nm,1.3s						
FYU	Fort Yukon	87.66	13	*e*P	P	20 07 20.1	-0.8
	comp=Z,13nm,0.8s						
LKWY	Lake	87.73	42	*e*P	P	20 07 24.1	+2.0
	comp=Z,20nm,0.9s						
LKWY	Lake	87.73	42	*e*P	P	20 07 24.1	+2.0
LKWY				pmax	pmax		
	comp=Z,20nm,0.9s						
WALA	Waterton Lakes	87.79	37	*e*P	P	20 07 22.6	+0.5
	comp=Z,20nm,0.8s						
HRY	Holter Researc	87.86	39	*e*P	P	20 07 23.1	+0.6
LNIG	Linares	88.07	63	*e*P	P	20 07 24.8	+1.0
	comp=Z,21nm,1.0s						
SDCO	Great Sand Dun	88.11	49	*e*P	P	20 07 24.8	+0.8
	comp=Z,18nm,1.6s						
SDCO	Great Sand Dun	88.11	49	P	P	20 07 24.9	+0.8
	baz=246,SNR=8.0						
CM01	Chiang Mai Arr	88.43	290	*e*P	P	20 07 26.9	+1.3
CMAR	Chiang Mai Arr	88.46	290	P	P	20 07 27.1	+1.3
	comp=Z,3.7nm,0.9s,baz=106,slow=3.0,SNR=27						
CMAR				PP	PP	20 11 03.6	-0.3
	comp=Z,0.4nm,0.7s,baz=120,slow=5.9,SNR=2.5						
CM31	Chiang Mai Arr	88.46	290	*e*P	P	20 07 27.3	+1.6
	comp=Z,8.0nm,1.0s						
RWWY	Rawlins	88.55	45	*e*P	P	20 07 25.2	-0.8
	comp=Z,46nm,1.0s						
CMMT	Chiang Mai	88.57	290	P	P	20 07 27.8	+1.5
CHTO	Chiang Mai	88.57	290	*e*P	P	20 07 27.3	+1.0
	comp=Z,8.0nm,1.2s						
CHTO	Chiang Mai	88.57	290	*e*P	P	20 07 27.3	+1.0
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CHTO	Chiang Mai	88.57	290	P	P	20 07 27.9	+1.6
	comp=Z,31nm,1.3s						
CD2	Chengdu	88.64	303	*e*P	P	20 07 26.0	-0.4
TOLK	Toolik Lake Re	88.64	10	*e*P	P	20 07 25.2	-0.3
	comp=Z,72nm,1.8s						
TOLK	Toolik Lake Re	88.64	10	P	P	20 07 25.6	0.0
	baz=208						
T25A	Trinidad	88.66	50	*e*P	P	20 07 27.4	+0.8
	comp=Z,10nm,1.0s						
T25A	Trinidad	88.66	50	P	P	20 07 27.0	+0.5
	baz=247,SNR=5.2						
MSTX	Muleshoe	88.67	54	*e*P	P	20 07 27.3	+0.8
	comp=Z,20nm,0.9s						
MSTX	Muleshoe	88.67	54	P	P	20 07 27.3	+0.8
	baz=248						
RLMT	Red Lodge	88.71	42	*e*P	P	20 07 28.4	+1.8
	comp=Z,22nm,0.9s						
RLMT	Red Lodge	88.71	42	P	P	20 07 27.0	+0.4
	baz=243,SNR=5.2						
Q24A	Divide	88.86	48	*e*P	P	20 07 28.8	+1.3
	comp=Z,17nm,1.1s						
Q24A	Divide	88.86	48	P	P	20 07 28.3	+0.8
	baz=246						
ISCO	Idaho Springs	88.87	48	*e*P	P	20 07 28.6	+1.0
	comp=Z,9.8nm,0.9s						
ISCO	Idaho Springs	88.87	48	*e*P	P	20 07 28.6	+1.0
ISCO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ISCO	Idaho Springs	88.87	48	P	P	20 07 28.6	+1.0
	baz=246						
N23A	Red Feather La	89.09	46	*e*P	P	20 07 29.8	+1.2
	comp=Z,51nm,0.8s						
N23A	Red Feather La	89.09	46	P	P	20 07 29.6	+1.1
	baz=246						
YAK	Yakutsk	89.24	338	*e*P	P	20 07 26.0	-2.3
YAK				pmax	pmax		
	comp=Z,71nm,0.9s						
833A	Chaparral WMA,	89.32	60	*e*P	P	20 07 30.9	+1.3
	comp=Z,9.5nm,0.7s						
833A	Chaparral WMA,	89.32	60	P	P	20 07 30.9	+1.3
	baz=250						
K22A	Casper	89.42	45	P	P	20 07 30.3	+0.4
	baz=245						
EPYK	Eagle Plains	89.50	16	*e*P	P	20 07 29.2	-0.4
	comp=Z,40nm,1.0s						
EPYK	Eagle Plains	89.50	16	P	P	20 07 29.5	-0.1
	baz=220						
PHWY	Pilot Hill	89.59	46	*e*P	P	20 07 31.5	+0.7
	comp=Z,58nm,1.2s						
EGMT	Eagleton	89.72	39	*e*P	P	20 07 31.7	+0.7
EGMT	Eagleton	89.72	39	P	P	20 07 31.6	+0.5
	baz=243						
JCT	Junction City	89.74	58	*e*P	P	20 07 32.4	+0.9
	comp=Z,9.7nm,0.8s						
JCT	Junction City	89.74	58	*e*P	P	20 07 32.4	+0.9
JCT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JCT	Junction City	89.74	58	P	P	20 07 32.0	+0.5
	baz=249						
AMTX	Amarillo	89.85	53	*e*P	P	20 07 32.6	+0.6
	comp=Z,20nm,1.1s						
AMTX	Amarillo	89.85	53	P	P	20 07 32.4	+0.5
	baz=248						
LZH	Lanzhou	90.46	308	⇑P	P	20 07 36.4	+1.5
LZH				pP	pP	20 09 36.8	+3.1
LZH				sP	sP	20 10 31.5	+3.6
LZH				PP	PP	20 11 23.5	+4.0
LZH				*e*SKS	SKSac	20 17 16.0	+1.0
LZH				S	S	20 17 44.3	-0.1
LZH				sS	sS	20 21 16.1	+0.2
LZH				SS	SS	20 24 07.5	+5.5
LZH				pmax	pmax		
	comp=Z,61nm,1.1s						
LZH				pmax	pmax		
	comp=Z,310nm,5.2s						
ABTX	Abilene, Hawle	90.62	56	*e*P	P	20 07 36.5	+0.9
	comp=Z,25nm,0.9s						
ABTX	Abilene, Hawle	90.62	56	P	P	20 07 36.3	+0.8
	baz=249						
SNAA	Sanae	90.82	179	*e*P	P	20 07 35.2	-0.6
	comp=Z,50nm,1.8s						
SNAA	Sanae	90.82	179	*e*P	P	20 07 35.2	-0.6
SNAA				pmax	pmax		
	comp=Z,50nm,1.8s						
LAO	LASA Array	91.30	41	P	P	20 07 39.6	+1.3
	baz=245						
INK	Inuvik	91.78	15	*e*P	P	20 07 39.1	-0.8
	comp=Z,37nm,1.0s						
INK	Inuvik	91.78	15	P	P	20 07 39.7	-0.2
	comp=Z,24nm,0.9s,baz=208,slow=5.5,SNR=67						
WMOK	Wichita Mounta	92.03	54	P	P	20 07 42.5	+0.5
	baz=250						
WHTX	Lake Whitney,	92.14	57	P	P	20 07 43.9	+1.4
	baz=250						
CBKS	Cedar Bluff	92.71	50	P	P	20 07 45.8	+0.8
	baz=250						
ULN	Ulaanbaatar	92.75	320	*e*P	P	20 07 45.0	-0.1
	comp=Z,13nm,1.0s						
ULN	Ulaanbaatar	92.75	320*c*	*e*P	P	20 07 45.5	+0.4
ULN				pmax	pmax		
	comp=Z,25nm,1.7s						
SONA1	Songino Array	93.14	319	*e*P	P	20 07 46.1	-0.8
SONA0	Songino Array	93.14	319	*e*P	P	20 07 46.8	-0.1
SONA0				*e*PP	PP	20 11 30.2	-10
SONM	Songino Array	93.14	319	P	P	20 07 46.8	-0.1
	comp=Z,4.1nm,1.0s,baz=128,slow=3.6,SNR=21						
SONM				PP	PP	20 11 30.2	-10
	comp=Z,1.5nm,1.0s,baz=116,slow=3.4,SNR=5.1						
DGMT	Dagmar	93.27	40	*e*P	P	20 07 48.2	+0.9
	comp=Z,47nm,0.9s						
DGMT	Dagmar	93.27	40	P	P	20 07 48.1	+0.7
	baz=247						
BOD	Bodaibo	93.29	330	*e*P	P	20 07 43.0	-4.1
BOD				pmax	pmax		
	comp=Z,9.0nm,1.5s						
YKB5	Yellowknife Ar	94.30	25	*e*P	P	20 07 51.2	-0.4
YKB5				*e*PP	PP	20 11 41.5	-6.7
YKA	Yellowknife Ar	94.30	25	P	P	20 07 51.5	0.0
	comp=Z,7.1nm,0.8s,baz=245,slow=4.4,SNR=104						
YKA				PP	PP	20 11 42.9	-5.3
	comp=Z,1.3nm,1.0s,baz=243,slow=7.6,SNR=5.1						
YKW3	Yellowknife Ar	94.33	25	*e*P	P	20 07 51.1	-0.6
	comp=Z,9.3nm,0.9s						
GTA	Gaotai	94.61	310	⇑P	P	20 07 54.0	+0.2
GTA				sP	sP	20 10 52.9	+5.9
GTA				S	S	20 18 13.3	-7.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,220nm,7.0s						
TUL1	Leonard	94.72	54	P	P	20 07 55.1	+0.9
	baz=252						
BGNE	Belgrade	94.74	48	P	P	20 07 55.0	+0.9
	baz=251						
KSU1	Kansas State U	95.11	51	*e*P	P	20 07 56.4	+0.6
	comp=Z,19nm,0.7s						
KSU1	Kansas State U	95.11	51	P	P	20 07 56.9	+1.0
	baz=251						
ZAK	Zakamensk	95.99	321	*e*P	P	20 07 59.2	-0.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
ECSD	EROS Data Cent	96.56	46	*e*P	P	20 08 02.5	+0.2
	comp=Z,9.1nm,1.0s						
ECSD	EROS Data Cent	96.56	46	P	P	20 08 02.4	+0.1
	baz=252						
U40A	Yellville	97.12	54	P	Pdif	20 08 05.3	+0.3
	baz=253						
W41B	Gary Mavity, V	97.26	56	P	P	20 08 06.3	+0.7
	baz=254						
T41A	Mountain View	98.15	54	P	P	20 08 10.5	+0.9
	baz=254						
S41A	Jillco Farms,	98.32	53	P	P	20 08 11.3	+1.0
	baz=254						
CCM	Cathedral Cave	98.82	53	P	P	20 08 13.6	+1.0
	baz=254						
Q41A	Truxton	99.07	52	P	Pdif	20 08 14.7	+1.2
	baz=255						
L39A	Vinton	99.34	49	P	Pdif	20 08 15.5	+0.8
	baz=255						
J39A	Decorah	99.87	48	P	Pdif	20 08 17.9	+0.9
	baz=255						
NRIK	Noril'sk	107.69	338	PP	PP	20 13 23.3	-4.0
	comp=Z,3.2nm,0.7s,baz=98,slow=8.8,SNR=5.6						
ZAA1	Zalesovo Array	107.83	322	*e*Pdif	Pdif	20 08 51.4	-0.8
ZAA1				*e*PKiKP	PKiKP	20 12 55.1	-1.0
ZAA1				*e*PP	PP	20 13 24.3	-4.5
ZAA1				*e*		20 15 40.6	
ZALV	Zalesovo Beam	107.83	322	Pdiff	Pdif	20 08 51.4	-0.8
	comp=Z,0.4nm,0.3s,baz=357,slow=3.0,SNR=3.7						
ZALV				PKiKP	PKiKP	20 12 55.1	-1.0
	comp=Z,1.5nm,0.5s,baz=156,slow=2.2,SNR=7.5						
ZALV				PP	PP	20 13 24.3	-4.5
	comp=Z,3.7nm,1.0s,baz=108,slow=9.8,SNR=5.7						
ZALV				SKP		20 15 40.6	
	comp=Z,0.3nm,0.3s,baz=96,slow=1.5,SNR=3.6						
MK32	Makanchi Array	108.72	314	*e*Pdif	Pdif	20 08 57.0	+0.7
MK32				*e*PKiKP	PKiKP	20 12 57.0	-1.1
MK32				*e*PP	PP	20 13 30.6	-4.9
MK32				*e*		20 15 41.9	
MKAR	Makanchi Array	108.72	314	Pdiff	Pdif	20 08 57.0	+0.7
	comp=Z,0.4nm,0.7s,baz=84,slow=5.0,SNR=3.7						
MKAR				PKiKP	PKiKP	20 12 57.0	-1.1
	comp=Z,1.6nm,0.6s,baz=118,slow=0.3,SNR=19						
MKAR				PP	PP	20 13 30.6	-4.9
	comp=Z,2.4nm,1.1s,baz=84,slow=11,SNR=4.0						
MKAR				SKP		20 15 41.9	
	comp=Z,0.4nm,0.5s,baz=253,slow=0.9,SNR=6.3						
KURK	Kurchatov	111.42	318	*e*PKiKP	PKiKP	20 13 01.9	-1.1
KURK				*e*PP	PP	20 13 44.6	-10
KURK				*e*SKPdf	SKPdf	20 15 46.8	-0.7
KURK	Kurchatov	111.42	318	*i* PKIKP	PKiKP	20 13 01.9	-1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK				pmax	pmax		
	comp=N,1.0nm,0.7s						
KURBB	Kurchatov Arra	111.47	318	PKiKP	PKiKP	20 13 01.9	-1.2
	comp=N,2.5nm,0.8s,baz=94,slow=1.8,SNR=22						
KURBB				PP	PP	20 13 44.6	-10
	comp=N,3.0nm,1.1s,baz=90,slow=6.0,SNR=6.9						
KURBB				SKP		20 15 46.8	
	comp=N,0.8nm,0.7s,baz=85,slow=2.0,SNR=7.0						
KSH	Kashi	112.65	306	PKP	PKiKP	20 13 03.8	-2.1
KSH				sPKP		20 16 05.1	
KSH				SKS	SKSdf	20 19 25.5	-1.6
KSH				SKKS	SKKSac	20 20 06.1	-3.1
KSH				SS	SS	20 29 10.0	+5.0
KSH				AMB	AMB		
	comp=N,300nm,4.8s						
AAK	Ala-Archa	113.96	309	PKiKP	PKiKP	20 13 07.7	-0.7
	comp=N,0.8nm,0.5s,baz=120,slow=4.5,SNR=4.0						
BVAR	Borovoye Array	116.44	321	PKP	PKPdf	20 13 11.8	-0.9
	comp=N,2.3nm,0.3s,baz=106,slow=2.9,SNR=25						
BVAR				PP	PP	20 14 26.7	-2.6
	comp=N,1.1nm,0.6s,baz=126,slow=9.3,SNR=3.9						
BVAR				SKP		20 15 56.7	
	comp=N,1.0nm,0.5s,baz=347,slow=1.9,SNR=4.4						
BRVK	Borovoye	116.50	321	*e*PKPdf	PKPdf	20 13 11.9	-0.8
BRVK	Borovoye	116.50	321	*e*PKIKP	PKPdf	20 13 11.9	-0.8
KK31	Karatay Array	116.89	310	*e*PKPdf	PKPdf	20 13 12.8	-1.0
KK31	Karatay Array	116.89	310	*e*PKIKP	PKPdf	20 13 12.8	-1.0
KKAR	Karatay Array	116.89	310	*e*PKPdf	PKPdf	20 13 12.9	-0.9
KKAR	Karatay Array	116.89	310	*e*PKIKP	PKPdf	20 13 12.9	-0.9
GAR	Garm	117.00	305	*e*PKPdf	PKPdf	20 13 13.7	-0.6
GAR	Garm	117.00	305	*e*PKIKP	PKPdf	20 13 13.7	-0.6
CHGR	Chuyangaron	117.90	305	*e*PKPdf	PKPdf	20 13 15.7	-0.3
SPA0	Spitsbergen Ar	119.03	356	*e*PKPdf	PKPdf	20 13 16.7	-0.3
SPITS	Spitsbergen Ar	119.03	356	PKIKP	PKPdf	20 13 16.7	-0.3
SPITS				pmax	pmax		
	comp=Z,12nm,0.8s						
SPITS	Spitsbergen Ar	119.03	356	PKP	PKPdf	20 13 16.7	-0.3
	comp=Z,11nm,0.8s,baz=119,slow=1.8,SNR=8.8						
SVE	Sverdlovsk	121.25	326	*e*PKIKP	PKPdf	20 13 21.6	-0.1
SVE				pmax	pmax		
	comp=Z,14nm,0.9s						
ARU	Arti	122.46	326	*e*PKPdf	PKPdf	20 13 23.4	-0.7
ARU				*e*PP	PP	20 15 04.8	-5.0
ARU	Arti	122.46	326	*i* PKIKP	PKPdf	20 13 23.6	-0.5
ARU						20 19 43.0	
ARU				SS	SS	20 31 05.5	-3.6
ABKAR	Akbulak array	123.52	318	*e*PKPdf	PKPdf	20 13 25.4	-0.9

ABKAR				*e*PP	PP	20 15 11.9	-5.2
AKTO	Aktyubinsk	124.46	320	PKP	PKPdf	20 13 28.1	0.0
	comp=Z,5.3nm,0.9s,baz=64,slow=2.6,SNR=12						
ARA0	ARCESS Array S	126.04	350	*e*PKPpre	PKPpre	20 13 20.3	
ARA0				*e*PKPdf	PKPdf	20 13 30.8	+0.2
ARCES	ARCESS Array B	126.04	350	PKPpre	PKPpre	20 13 20.3	
ARCES				*e*PKPdf	PKPdf	20 13 30.2	-0.4
ARCES	ARCESS Array B	126.04	350	PKhKP	PKPpre	20 13 20.3	
	comp=Z,3.8nm,1.1s,baz=28,slow=2.1,SNR=3.7						
ARCES				PKP	PKPdf	20 13 30.8	+0.2
	comp=Z,12nm,0.8s,baz=96,slow=1.3,SNR=16						
KIRV	Kirov	126.16	331	PKP	PKiKP	20 13 31.3	-0.2
	comp=Z,16nm,0.7s,baz=244,slow=0.7,SNR=11						
GEYT	Alibeck	126.61	304	PKP	PKiKP	20 13 33.0	-0.2
	comp=Z,5.3nm,0.8s,baz=215,slow=1.8,SNR=11						
GEYT				PP	PP	20 15 35.0	-2.9
	comp=Z,0.9nm,0.5s,baz=90,slow=0.3,SNR=3.9						
TMCR	Tamitsa	127.29	341	*e*PKIKP	PKPdf	20 13 32.4	-0.6
KLMR	Klimovskoe	129.01	337	*e*PKIKP	PKPdf	20 13 35.8	-0.6
KLMR				pmax	pmax		
	comp=Z,16nm,1.3s						
KLMR	Klimovskoe	129.01	337	*e*PKPdf	PKPdf	20 13 35.8	-0.6
KLMR				AMP		20 13 37.6	
	comp=Z,16nm,1.2s						
KLMR				*e*SKP		20 16 03.7	
FIA0	FINESS Array S	132.88	344	*e*PKPpre	PKPpre	20 13 35.7	
FIA0				*e*PKPdf	PKPdf	20 13 43.7	0.0
FIA0				*e*PP	SKPbc	20 16 21.6	+0.6
FIA0	FINESS Array S	132.88	344	*e*PKHKP	PKPpre	20 13 35.7	
FIA0				*e*		20 13 43.7	
FIA0				*e*		20 16 21.7	
FINES	FINESS Array B	132.88	344	PKhKP	PKPpre	20 13 35.7	
	comp=Z,1.2nm,0.6s,baz=31,slow=2.2,SNR=8.0						
FINES				PKP	PKPdf	20 13 43.7	0.0
	comp=Z,4.7nm,0.8s,baz=100,slow=2.3,SNR=12						
FINES				SKPbc	SKPbc	20 16 21.6	+0.6
	comp=Z,29nm,0.8s,baz=62,slow=4.5,SNR=48						
VRH	Novokhopyorsk	133.68	326	*e*PKIKP	PKPdf	20 13 43.1	-2.4
VRH				*e*		20 16 23.3	
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	Obninsk	133.94	332	*e*SKPbc	SKPbc	20 16 20.1	-4.5
OBN	Obninsk	133.94	332	*i* PKIKP	PKPdf	20 13 45.5	-0.4
OBN				*i*		20 16 24.6	
OBN				*e*SS	SS	20 33 22.4	-6.3
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	Obninsk	133.94	332	SKPbc	SKPbc	20 16 24.7	0.0
	comp=Z,3.8nm,0.5s,baz=28,slow=5.0,SNR=11						
LPSR	Galich'ya Gora	134.37	329	*e*PKIKP	PKPdf	20 13 46.3	-0.5
LPSR				*e*		20 16 26.0	
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	135.03	327	*e*PKIKP	PKPdf	20 13 47.0	-1.1
VSR				*e*		20 16 27.1	
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSU	Vasula	135.16	341	*i* PKIKP	PKPdf	20 13 47.7	-0.4
ZEI	Tsey	136.07	314	*i* PKIKP	PKiKP	20 13 53.1	+0.7
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NB2	NORSAR Subarra	136.12	353	PKPdf	PKPpre	20 13 39.1	
	comp=Z,22nm,2.0s,baz=14,slow=1.8						
NB2	NORSAR Subarra	136.12	353	PKPdf	PKPpre	20 13 39.1	
	baz=14,slow=1.8						
NB200	NORSAR Array S	136.12	353	*e*PKPpre	PKPpre	20 13 39.0	
NB200				*e*PKPdf	PKPdf	20 13 49.4	-0.4
NB200				*e*SKPbc	SKPbc	20 16 31.9	+0.4
NOA	NORSAR Array B	136.12	353	PKhKP	PKPpre	20 13 39.0	
	comp=Z,1.8nm,0.8s,baz=37,slow=2.2,SNR=6.8						
NOA				PKP	PKPdf	20 13 49.4	-0.4
	comp=Z,2.4nm,0.7s,baz=13,slow=4.1,SNR=8.8						
NOA				SKPbc	SKPbc	20 16 31.9	+0.4
	comp=Z,12nm,1.0s,baz=16,slow=4.5,SNR=13						
KBZ	Khabaz	136.39	316	PKhKP	PKPpre	20 13 46.5	
	comp=Z,2.8nm,1.1s,baz=170,slow=6.1,SNR=2.5						
KBZ				SKPbc	SKPbc	20 16 33.0	+0.3
	comp=Z,3.3nm,0.9s,baz=180,slow=3.0,SNR=3.8						
KIV	Kislovodsk	136.44	316	*e*PKIKP	PKiKP	20 13 53.2	+0.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KMBO	Kilima Mbogo	139.87	246	*e*SKPbc	SKPbc	20 16 43.8	0.0
KMBO	Kilima Mbogo	139.87	246	SKPbc	SKPbc	20 16 44.2	+0.5
	comp=Z,9.3nm,1.0s,baz=72,slow=5.2,SNR=13						
AKASG	Malin Array Be	140.20	332	PKhKP	PKPpre	20 13 48.6	
	comp=Z,0.7nm,0.2s,baz=42,slow=4.0,SNR=10.0						
AKASG				PKP	PKPdf	20 13 57.8	+0.2
	comp=Z,5.1nm,0.6s,baz=42,slow=2.6,SNR=10.0						
AKASG				SKPbc	SKPbc	20 16 43.1	+0.1
	comp=Z,2.0nm,0.6s,baz=40,slow=3.1,SNR=13						
AKASG				SKPab	SKPab	20 16 56.2	+0.1
	comp=Z,1.0nm,0.6s,baz=43,slow=5.3,SNR=6.4						
AKBB	Malin Array Si	140.20	332	*e*PKPpre	PKPpre	20 13 50.1	
AKBB				*e*SKPbc	SKPbc	20 16 43.2	+0.2
KIEV	Kiev	140.21	332	*e*PKPpre	PKPpre	20 13 49.9	
KIEV	Kiev	140.21	332	*i* PKIKP	PKPdf	20 13 56.3	-1.3
AK11	Malin Array Si	140.24	332	*e*PKPpre	PKPpre	20 13 50.4	
BEL	Belsk	142.57	340	*e*PKP	PKPdf	20 13 59.7	-2.1
BEL	Belsk	142.57	340	*e*PKIKP	PKPdf	20 13 59.7	-2.1
GAL1	Galloway	142.62	6	*e*P	PKPdf	20 13 58.2	-3.5
KESW	Keswick, Cumbr	143.03	4	*e*P	PKPab	20 14 00.0	0.0
LVV	L'vov	143.06	335	*e*PKIKP	PKPab	20 14 00.3	0.0
WIM	Isle of Man	143.34	6	*e*P	PKPab	20 14 00.9	-0.3
IAS	Iasi	143.46	329	⇑*i*P	PKPbc	20 14 02.4	+0.3
IAS	Iasi	143.46	329	⇑PKIKP	PKPbc	20 14 02.4	+0.3
LEOM	Leova	143.62	328	⇑*i*P	PKPbc	20 14 02.9	+0.3
LEOM	Leova	143.62	328	⇑PKIKP	PKPbc	20 14 02.9	+0.3
ILGA	Ilgaz	143.66	317	*e*PKPbc	PKPbc	20 14 03.7	+0.5
KWP	Kalwaria Pacla	143.72	336	*e*PKP	PKPbc	20 14 03.2	+0.3
KWP	Kalwaria Pacla	143.72	336	*e*PKIKP	PKPbc	20 14 03.2	+0.3
HPK	Haverah Park	143.74	3	⇑*e*P	PKPab	20 14 02.4	-0.3
PRAR	RASCA	143.97	331	⇓*i*P	PKPab	20 14 03.9	0.0
DSB	Dublin	144.03	8	*e*PKPbc	PKPbc	20 14 03.2	-0.5
BIR	Birlad	144.07	328	⇑*i*P	PKPdf	20 14 05.4	+0.8
BIR	Birlad	144.07	328	⇑PKIKP	PKPdf	20 14 05.4	+0.8
WPS	Cemaes, Angles	144.09	6	*e*P	PKPbc	20 14 02.8	-1.0
WME	Myndd Eilian	144.11	6	⇑*e*P	PKPbc	20 14 03.5	-0.4
TLCR		144.19	326	⇓*i*P	PKPdf	20 14 04.8	0.0
TLCR		144.19	326	⇓PKIKP	PKPdf	20 14 04.8	0.0
WLF1	Llynfaes	144.21	6	⇑*e*P	PKPbc	20 14 03.7	-0.5
YRC	Rhoscolyn	144.23	6	⇑*e*P	PKPbc	20 14 03.9	-0.3
BUR08	Bucovina Ar. S	144.23	332	*e*PKPbc	PKPdf	20 14 05.0	+0.1
BUR04	Bucovina Ar. S	144.25	332	*e*PKPbc	PKPbc	20 14 04.1	-0.6
BURAR	Bucovina Array	144.25	332	⇑*i*P	PKPab	20 14 05.3	+0.3
BURAR	Bucovina Array	144.25	332	⇑PKIKP	PKPab	20 14 05.3	+0.3
OJC	Ojcow	144.28	339	*e*PKP	PKPdf	20 14 04.8	0.0
OJC	Ojcow	144.28	339	*e*PKPbc	PKPbc	20 14 04.5	-0.1
OJC	Ojcow	144.28	339	*e*PKIKP	PKPdf	20 14 04.9	0.0
LMK	Market Rasen	144.29	2	*e*P	PKPbc	20 14 04.4	0.0
LBWR	Ladybower, Pea	144.29	3	*e*P	PKPbc	20 14 04.1	-0.4
BIZ	Bicaz	144.34	330	⇑*i*P	PKPab	20 14 05.7	+0.4
BR101	Keskin Array S	144.36	315	*e*PKPbc	PKPdf	20 14 05.5	-0.1
BR101				*e*SKPbc	SKPbc	20 16 53.8	-0.1
BR101				*e*PP	SKPab	20 17 15.3	
BR131	Keskin Array S	144.37	315	*e*PKPbc	PKPbc	20 14 05.2	-0.2
BRTR	Keskin Array B	144.37	315	PKP	PKPdf	20 14 05.5	-0.1
	comp=Z,15nm,0.8s,baz=125,slow=3.6,SNR=78						
BRTR				SKPbc	SKPbc	20 16 53.8	-0.1
	comp=Z,1.1nm,0.5s,baz=150,slow=5.6,SNR=4.6						
BRTR				SKPab	SKPab	20 17 15.3	
	comp=Z,2.2nm,0.7s,baz=84,slow=5.5,SNR=4.7						
YLL	Llanberis	144.38	6	⇑*e*P	PKPbc	20 14 04.2	-0.6
TESR	Tescani	144.38	329	⇑*i*P	PKPab	20 14 05.4	0.0
CFR	Carcaliu	144.55	326	⇓*i*P	PKPab	20 14 05.9	-0.2
CFR	Carcaliu	144.55	326	⇓PKIKP	PKPab	20 14 05.9	-0.2
STNC	Stoke	144.58	4	*e*P	PKPab	20 14 05.8	-0.1
PETR	Petresti	144.65	328	⇑*i*P	PKPab	20 14 07.2	+0.8
UZH	Uzhgorod	144.69	336	⇑*i*PKIKP	PKPbc	20 14 05.8	-0.1
ODBI	Odobesti	144.71	328	⇑*i*P	PKPab	20 14 07.4	+0.7
FOEL	Foel Wylfa	144.71	5	⇑*e*P	PKPbc	20 14 05.9	+0.1
LLW	Llanuwychllyn	144.71	5	⇑*e*P	PKPdf	20 14 05.5	0.0
ASF	Jabal al Asfar	144.74	301	PKP	PKPdf	20 14 06.3	0.0
	comp=Z,16nm,0.9s,baz=47,slow=1.5,SNR=12						
NIE	Niedzica	144.79	338	*e*PKP	PKPab	20 14 07.0	+0.1
NIE	Niedzica	144.79	338	*e*PKIKP	PKPab	20 14 07.0	+0.1
KSP	Ksiaz	144.80	343	*e*PKP	PKPab	20 14 07.0	+0.1
KSP	Ksiaz	144.80	343	*e*PKIKP	PKPab	20 14 07.0	+0.1
VRI	Vrincioaia	144.80	329	⇓*i*P	PKPab	20 14 06.8	-0.3
VRI	Vrincioaia	144.80	329	⇓PKIKP	PKPab	20 14 06.8	-0.3
PLOR	Plostina	144.85	329	⇑*i*P	PKPbc	20 14 06.8	+0.3
PLOR	Plostina	144.85	329	⇑PKIKP	PKPbc	20 14 06.8	+0.3
ANTO	Ankara	144.86	316	*e*PKPdf	PKPbc	20 14 06.9	+0.1
ANTO	Ankara	144.86	316	⇓*i*P	PKPbc	20 14 06.9	+0.1
ANTO	Ankara	144.86	316	⇓PKIKP	PKPbc	20 14 06.9	+0.1
TIRR	Tirgusor	144.88	325	*e*PKPdf	PKPbc	20 14 06.4	-0.2
TIRR	Tirgusor	144.88	325	⇑*i*P	PKPab	20 14 07.6	+0.2
TIRR	Tirgusor	144.88	325	*e*PKIKP	PKPbc	20 14 06.4	-0.2
BR231	Keskin MP Arra	144.89	315	*e*PKPdf	PKPbc	20 14 06.7	-0.2
BMR	Baia Mare	144.96	333	⇑*i*P	PKPab	20 14 07.3	-0.3
BMR	Baia Mare	144.96	333	⇑PKIKP	PKPab	20 14 07.3	-0.3
CWF	Charnwood Fore	144.97	3	⇑*e*P	PKPdf	20 14 06.0	+0.1
HARR	Harsova	144.98	326	⇓*i*P	PKPab	20 14 07.4	-0.4
HARR	Harsova	144.98	326	⇓PKIKP	PKPab	20 14 07.4	-0.4
TLB	Topalu	144.99	326	⇑*i*P	PKPab	20 14 07.5	-0.3
TLB	Topalu	144.99	326	⇑PKIKP	PKPab	20 14 07.5	-0.3
TRPA	Tarpa	145.00	335	⇑*i*P	PKPbc	20 14 07.1	+0.3
TRPA	Tarpa	145.00	335	⇑*e*PKiKP	PKPbc	20 14 07.0	+0.2
ARCR	ARCALIA	145.03	332	⇑*i*P	PKPab	20 14 07.9	0.0
WACR	West Acre	145.04	1	*e*P	PKPdf	20 14 05.5	-0.6
MFTR	Murfatlar	145.05	325	⇑*i*P	PKPbc	20 14 07.0	-0.1
OZUR		145.10	330	⇓*i*P	PKPab	20 14 08.1	-0.2
OKC	Ostrava-Krasne	145.15	341	*e*PKP	PKPbc	20 14 07.3	+0.1
OKC	Ostrava-Krasne	145.15	341	*e*PKIKP	PKPbc	20 14 07.3	+0.1
CLL	Collm	145.17	347	*e*PKPdf	PKPdf	20 14 06.7	+0.4
CLL	Collm	145.17	347	⇑*i*PKPbc	PKPbc	20 14 07.4	+0.2
	comp=Z,96nm,0.8s						
CLL				*i* PKPab	PKPab	20 14 08.6	+0.3
	comp=Z,73nm,0.9s						
CLL				*e*(pPKPdf)		20 16 12.0	
CLL				*e*SKPbc	SKPbc	20 16 55.0	-0.1
	comp=Z,15nm,1.1s						
CLL	Collm	145.17	347	*e*PKIKP	PKPdf	20 14 06.7	+0.4
UPC	Upice	145.18	343	*e*PKP	PKPab	20 14 08.0	-0.4
UPC	Upice	145.18	343	*e*PKIKP	PKPab	20 14 08.0	-0.4
DPC	Dobruska-Polom	145.24	343	*e*PKP	PKPab	20 14 08.3	-0.3
DPC	Dobruska-Polom	145.24	343	*e*PKP2	PKPab	20 14 08.3	-0.3
LANS	Liptovska Anna	145.31	339	*e*PKP2	PKPab	20 14 09.0	+0.1
LANS	Liptovska Anna	145.31	339	*e*PKP	PKPab	20 14 09.0	+0.1
PGOR	Pogoanele	145.33	327	⇓*i*P	PKPab	20 14 08.9	-0.2
KRLC	Kraliky	145.35	342	*e*PKP	PKPbc	20 14 08.4	+0.5
KRLC	Kraliky	145.35	342	*e*PKP2	PKPbc	20 14 08.4	+0.5
AMRR	Amara	145.35	326	⇓*i*P	PKPab	20 14 09.3	+0.1
AMRR	Amara	145.35	326	⇓PKP2	PKPab	20 14 09.3	+0.1
BRG	Berggiesshubel	145.37	346	*i* PKP	PKPbc	20 14 07.7	-0.2
	comp=Z,58nm,0.9s						
BRG				*e*SKP		20 16 56.9	
	comp=Z,20nm,1.5s						
BRG	Berggiesshubel	145.37	346	*i* PKIKP	PKPbc	20 14 07.7	-0.1
BRG				pmax	pmax		
	comp=Z,58nm,0.9s						
BRG				pmax	pmax		
	comp=N,21nm,1.5s						
DOPR	Dopca	145.38	330	⇓*i*P	PKPab	20 14 09.1	-0.2
MORC	Moravsky Berou	145.39	341	*e*PKPdf	PKPbc	20 14 07.7	-0.3
MORC	Moravsky Berou	145.39	341	⇑*i*P	PKPbc	20 14 08.5	+0.5
MORC	Moravsky Berou	145.39	341	*e*PKIKP	PKPbc	20 14 07.7	-0.3
MORC	Moravsky Berou	145.39	341	*e*PKP	PKPbc	20 14 08.2	+0.2
LPW	Lampeter	145.41	6	⇑*e*P	PKPbc	20 14 07.6	-0.2
ISR	Istrita	145.42	328	⇓*i*P	PKPbc	20 14 08.8	+0.5
ISR	Istrita	145.42	328	⇓PKP2	PKPbc	20 14 08.8	+0.5
MLR	Muntele Rosu	145.46	329	*e*PKPdf	PKPbc	20 14 08.4	-0.1
MLR	Muntele Rosu	145.46	329	⇑*i*P	PKPbc	20 14 08.5	0.0
MLR	Muntele Rosu	145.46	329	*e*PKIKP	PKPbc	20 14 08.4	-0.1
RSBS	Rosebush, Pemb	145.50	6	*e*P	PKPdf	20 14 07.5	+0.6
WTSB	Winterswijk	145.52	354	*e*PKP	PKPbc	20 14 08.2	0.0
PVCC	Panska Ves	145.54	345	*e*PKP	PKPab	20 14 09.1	-0.6
PVCC	Panska Ves	145.54	345	*e*PKP2	PKPab	20 14 09.1	-0.6
MCH1	Michaelchurch	145.61	5	⇑*e*P	PKPbc	20 14 08.2	-0.3
CJR	Cluj-Napoca	145.65	332	⇑*i*P	PKPbc	20 14 09.5	+0.6
CJR	Cluj-Napoca	145.65	332	⇑PKP2	PKPbc	20 14 09.5	+0.6
MBAR	Mbarara	145.70	241	*e*PKPdf	PKPbc	20 14 10.4	+0.2
MMAI	Mount Meron Ar	145.71	303	PKPbc	PKPbc	20 14 09.9	+0.4
	comp=N,30nm,0.8s,baz=59,slow=4.1,SNR=18						
SECR		145.72	328	⇑*i*P	PKPbc	20 14 09.4	+0.3
LEHL	Lehliu	145.72	327	⇓*i*P	PKPab	20 14 10.1	-0.5
SSW	Stow on the Wo	145.72	3	⇑*e*P	PKPbc	20 14 09.2	+0.4
MONM	Monmouth	145.78	4	*e*P	PKPbc	20 14 08.9	-0.1
PLAR	PLOIESTI	145.82	328	⇑*i*P	PKPab	20 14 10.4	-0.6
LTVH	Ltavrtes, Hu	145.85	335	⇑*e*PKiKP	PKPbc	20 14 09.1	-0.3
SULR		145.87	327	⇓*i*P	PKPbc	20 14 10.0	+0.5
STRD	Stroud	145.89	4	*e*P	PKPbc	20 14 08.5	-0.8
VOIR		145.93	329	⇑*i*P	PKPbc	20 14 10.5	+0.7
VOIR		145.93	329	⇑PKP2	PKPbc	20 14 10.5	+0.7
DRGR		145.98	333	⇑*i*P	PKPbc	20 14 10.2	+0.4
DRGR		145.98	333	⇑PKP2	PKPbc	20 14 10.2	+0.4
PRU	Pruhonice	146.04	345	*e*PKP	PKPbc	20 14 10.3	+0.5
PRU				*e*x	x	20 14 12.4	
PRU	Pruhonice	146.04	345	*e*PKP2	PKPbc	20 14 10.3	+0.5
GOPC	GO Pecny, Ondr	146.05	344	*e*PKP	PKPbc	20 14 10.6	+0.7
GOPC	GO Pecny, Ondr	146.05	344	*e*PKP2	PKPbc	20 14 10.6	+0.7
MTUR	Matau	146.08	329	⇑*i*P	PKiKP	20 14 12.8	+0.1
MTUR	Matau	146.08	329	⇑PKP2	PKiKP	20 14 12.8	+0.1
VYHS	Vyhne	146.08	339	*e*PKP2	PKPbc	20 14 10.6	+0.6
VYHS	Vyhne	146.08	339	*e*PKP	PKPbc	20 14 10.5	+0.6
VYHS				*e*		20 14 12.9	
VRAC	Vranov	146.09	342	⇓*i*P	PKPbc	20 14 10.5	+0.5
VRAC	Vranov	146.09	342	⇓PKP2	PKPbc	20 14 10.5	+0.5
VRAC	Vranov	146.09	342	*e*PKP	PKPbc	20 14 10.4	+0.5
KOLL	Kolacno	146.16	339	*e*PKP2	PKPbc	20 14 11.0	+0.8
KOLL	Kolacno	146.16	339	*e*PKP	PKPbc	20 14 11.0	+0.8
SWN1	Swindon	146.17	3	*e*P	PKPbc	20 14 09.4	-0.7
ARR	Arges	146.18	330	⇑*i*P	PKPbc	20 14 11.5	+1.1
PSZ	Piszkesteto	146.19	337	*e*PKPdf	PKPdf	20 14 08.9	+0.7
PSZ				*e*PKPbc	PKPbc	20 14 10.7	+0.3
PSZ	Piszkesteto	146.19	337	⇑*i*P	PKPbc	20 14 10.7	+0.3
PSZ	Piszkesteto	146.19	337	⇑PKP2	PKPbc	20 14 10.7	+0.3
PSZ	Piszkesteto	146.19	337	*e*PKiKP	PKPbc	20 14 10.1	-0.3
BATH	Bath	146.21	4	*e*P	PKPbc	20 14 09.9	-0.3
NKC	Novy Kostel	146.30	347	*e*PKP	PKPbc	20 14 11.2	+0.6
NKC				*e*x	x	20 14 13.9	
NKC	Novy Kostel	146.30	347	*e*PKP2	PKPbc	20 14 11.2	+0.6
SGRR	Singureni	146.33	327	⇑*i*P	PKPbc	20 14 11.2	+0.4
KRUC	Moravsky	146.37	342	*e*PKP	PKPbc	20 14 11.1	+0.4
WOL	Wolverton	146.40	3	*e*P	PKPbc	20 14 10.3	-0.4
TREC	Trest	146.42	343	*e*PKP	PKPbc	20 14 11.5	+0.6
TREC	Trest	146.42	343	*e*PKP2	PKPbc	20 14 11.5	+0.6
HTL	Hartland	146.47	7	*e*P	PKPbc	20 14 10.9	0.0
SMOL	Smolenice	146.53	340	*e*PKP2	PKiKP	20 14 12.3	-1.1
SMOL	Smolenice	146.53	340	*e*PKP	PKiKP	20 14 12.3	-1.1
HUMR	Humele	146.62	328	⇑*i*P	PKPbc	20 14 11.4	-0.2
ELSH	Elham, Standar	146.62	0	⇑*e*P	PKPbc	20 14 11.7	+0.4
CSS	Mathiatis	146.65	307	*e*PKPbc	PKPbc	20 14 11.3	-0.7
MODS	Modra-Piesok	146.71	340	*e*PKP2	PKPbc	20 14 12.7	+1.0
MODS	Modra-Piesok	146.71	340	*e*PKP	PKPbc	20 14 12.7	+1.0
MODS				*e*		20 14 16.0	
HGN	Heimansgroeve	146.79	355	*e*PKPdf	PKPdf	20 14 08.8	-0.2
HGN				*e*PKPbc	PKPbc	20 14 12.0	+0.2
HGN				*e*PKPab	PKPab	20 14 14.5	-0.2
SIRR	Siria	146.84	334	⇑*i*P	PKPbc	20 14 12.6	+0.5
SRO	Srobarova	146.85	339	*e*PKP2	PKPbc	20 14 12.7	+0.6
SRO	Srobarova	146.85	339	*e*PKP	PKPbc	20 14 12.7	+0.6
UCC	Uccle	146.88	356	*e*PKPbc	PKPbc	20 14 12.4	+0.4
UCC	Uccle	146.88	356	⇑PKP	PKPbc	20 14 12.1	+0.1
BUD	Budapest	146.88	338	*e*PKiKP	PKPbc	20 14 12.0	-0.1
ZST	Bratislava	146.92	340	*e*PKP2	PKPbc	20 14 12.0	-0.2
ZST	Bratislava	146.92	340	*e*PKP	PKPbc	20 14 12.0	-0.2
MEM	Membach	146.94	354	⇓PKPbc	PKPdf	20 14 09.7	+0.3
MEM				⇑PKPab	PKPbc	20 14 12.3	+0.1
EIL	Elat	146.99	297	PKPbc	PKPbc	20 14 13.1	+0.1
	comp=N,18nm,1.1s,baz=25,slow=3.7,SNR=7.2						
GZR	Gura Zlata	147.03	332	⇑*i*P	PKPbc	20 14 12.6	-0.1
GZR	Gura Zlata	147.03	332	⇑PKHKP	PKPbc	20 14 12.7	0.0
ZIMR		147.04	327	⇑*i*P	PKiKP	20 14 14.4	-0.1
ZIMR		147.04	327	⇑PKP2	PKiKP	20 14 14.4	-0.1
GRA1	Grafenberg Arr	147.07	348	*e*PKPdf	PKPbc	20 14 13.0	+0.4
GRFO	Grafenberg	147.07	348	*e*PKPbc	PKPbc	20 14 13.2	+0.6
KHC	Kasperske Hory	147.07	345	*e*PKPdf	PKPdf	20 14 08.9	-0.8
KHC				*e*PKPbc	PKPbc	20 14 12.7	0.0
KHC	Kasperske Hory	147.07	345	*e*PKP	PKPdf	20 14 10.3	+0.6
KHC				*e*x	x	20 14 13.3	
KHC				*e*x	x	20 14 16.5	
KHC	Kasperske Hory	147.07	345	*e*PKIKP	PKPdf	20 14 08.9	-0.8
KHC				*e*		20 14 12.7	
BCLA	Clavier	147.19	355	⇑PKPbc	PKPbc	20 14 12.8	0.0
BCLA				⇑PKPab	PKPab	20 14 15.8	-0.5
VLAD	Vladila	147.29	328	⇑*i*P	PKPbc	20 14 14.0	+0.7
GEC2	GERESS Array S	147.31	345	*e*PKPdf	PKPdf	20 14 10.1	0.0
GEC2				*e*PKPbc	PKPbc	20 14 13.1	-0.3
GEC2	GERESS Array S	147.31	345	*e*PKIKP	PKPdf	20 14 10.1	0.0
GERES	GERESS Array B	147.31	345	PKPbc	PKPbc	20 14 13.5	+0.1
	comp=N,23nm,0.7s,baz=22,slow=3.0,SNR=37						
GEA0	GERESS Array S	147.31	345	*e*PKPdf	PKPdf	20 14 09.3	-0.8
GEA0				*e*PKPbc	PKPbc	20 14 13.7	+0.3
BZS	Buzias	147.37	333	⇑*i*P	PKPbc	20 14 13.6	+0.1
BZS	Buzias	147.37	333	⇑PKP2	PKPbc	20 14 13.6	+0.1
SRE	Strehaia	147.39	330	⇑*i*P	PKPbc	20 14 14.1	+0.5
SRE	Strehaia	147.39	330	⇑PKP2	PKPbc	20 14 14.1	+0.5
CONA	Conrad Observa	147.54	342	*i* PKiKP	PKPbc	20 14 14.7	+0.7
	comp=N,55nm,0.9s,SNR=34						
SOP	Sopron	147.54	341	⇑*e*PKiKP	PKPbc	20 14 14.0	+0.1
DOU	Dourbes	147.56	356	⇑PKP	PKPbc	20 14 14.2	+0.3
HERR	Herculane	147.59	331	⇑*i*P	PKPbc	20 14 14.0	-0.1
BANR	Banloc	147.76	333	⇑*i*P	PKiKP	20 14 15.5	-0.5
TIH	Tihany	147.78	338	⇑*e*PKiKP	PKPbc	20 14 14.1	-0.5
PUNG	Punghina	147.80	330	⇑*i*P	PKPbc	20 14 14.5	-0.2
WLF	Walferdange	147.86	354	*e*PKPdf	PKPdf	20 14 11.8	+1.0
WLF				*e*PKPbc	PKiKP	20 14 15.4	-0.7
MDVR	Moldovita	147.98	332	⇑*i*P	PKPbc	20 14 15.2	0.0
MOA	Molln	148.07	343	*i* PKiKP	PKPbc	20 14 15.5	+0.2
	comp=N,30nm,1.1s,SNR=15						
MORH	Mrgy, Hungar	148.09	337	⇑*i*P	PKPbc	20 14 15.1	-0.2
MORH	Mrgy, Hungar	148.09	337	*e*PKiKP	PKPbc	20 14 14.0	-1.3
ARSA	Arzberg	148.25	341	*i* PKiKP	PKPbc	20 14 15.8	0.0
	comp=N,22nm,1.3s,SNR=6.8						
STU	Stuttgart	148.33	350	*e*PKPdf	PKPdf	20 14 12.1	+0.4
STU				*e*PKPbc	PKPbc	20 14 16.4	+0.5
MANT	Manisa	148.39	317	*e*PKPbc	PKPbc	20 14 16.6	-0.1
JSA	Saint Aubin	148.47	4	⇑*e*P	PKPbc	20 14 16.3	+0.2
FRGS	Fruska Gora	148.50	334	⇑*i*P	PKPbc	20 14 16.6	+0.2
ALN	Alexandroupoli	148.51	322	*e*PKPbc	PKPbc	20 14 16.1	-0.5
BEHE	Becsehely	148.54	339	⇑*i*P	PKPbc	20 14 16.6	+0.2
BEHE	Becsehely	148.54	339	⇑*e*PKiKP	PKPbc	20 14 16.1	-0.4
KOGS	Kog	148.73	340	*i* PKPbc	PKPbc	20 14 16.7	-0.2
VTS	Vitosha	148.88	328	*e*PKPbc	PKPbc	20 14 17.6	0.0
VTS				*e*PKPab	PKPab	20 14 24.6	+0.8
VTS	Vitosha	148.88	328	⇑*i*P	PKPbc	20 14 17.9	+0.3
BFO	Black Forest	148.89	351	*e*PKPbc	PKPbc	20 14 16.7	-0.6
BFO				*e*PKPab	PKPab	20 14 22.9	-0.5
SOKA	Soboth	148.91	341	*i* PKPbc	PKPbc	20 14 17.2	-0.3
	comp=N,40nm,1.3s,SNR=17						
PERS	Pernice	148.93	341	*i* PKPbc	PKPbc	20 14 17.1	-0.3
KBA	Koelnbreinsper	149.03	344	*i* PKPbc	PKPbc	20 14 17.3	-0.6
	comp=N,20nm,0.6s,SNR=12						
ECH	Echery	149.17	352	*e*PKPdf	PKPdf	20 14 12.1	-1.0
ECH				*e*PKPbc	PKPbc	20 14 17.7	-0.3
ECH				*e*PKPab	PKPab	20 14 23.5	-1.0
ECH	Echery	149.17	352	*e*PKIKP	PKPdf	20 14 12.1	-1.0
ECH				*e*		20 14 23.5	
OBKA	Obir	149.21	342	*i* PKPbc	PKPbc	20 14 17.8	-0.4
	comp=N,21nm,1.1s,SNR=5.8						
WATA	Walderalm	149.23	346	*i* PKiKP	PKPbc	20 14 18.2	-0.1
	comp=N,16nm,0.6s,SNR=14						
RETA	Reutte	149.26	347	*i* PKiKP	PKPbc	20 14 18.4	+0.1
	comp=N,24nm,0.9s,SNR=10.0						
DIVS	Divibare	149.28	333	*e*PKPbc	PKPbc	20 14 18.6	+0.1
DIVS	Divibare	149.28	333	⇑*i*P	PKPbc	20 14 18.6	+0.1
WTTA	Wattenberg	149.28	346	*i* PKiKP	PKPbc	20 14 18.7	+0.2
	comp=N,22nm,0.4s,SNR=13						
MOTA	Moosalm	149.33	347	*i* PKiKP	PKPbc	20 14 18.5	-0.1
	comp=N,44nm,1.0s,SNR=17						
MYKA	Terra Mystica	149.36	343	*i* PKPbc	PKPbc	20 14 17.9	-0.6
	comp=N,38nm,0.9s,SNR=10						
SQTA	Sankt Quirin	149.42	347	*i* PKiKP	PKPbc	20 14 18.9	+0.1
	comp=N,48nm,0.8s,SNR=14						
CRES	Cresnjev	149.54	340	⇑*i*P	PKPbc	20 14 18.9	0.0
ABTA	Abfaltersbach	149.55	345	*i* PKPbc	PKPbc	20 14 18.6	-0.5
	comp=N,55nm,0.8s,SNR=18						
DAVA	Damuels	149.63	348	*i* PKiKP	PKPbc	20 14 19.5	+0.2
	comp=N,57nm,1.1s,SNR=16						
LJU	Ljubljana	149.64	341	*e*PKPbc	PKPbc	20 14 19.3	+0.1
LJU	Ljubljana	149.64	341	⇑*i*P	PKPbc	20 14 19.0	-0.1
FETA	Feichten	149.71	347	*i* PKiKP	PKPbc	20 14 19.7	+0.2
	comp=N,39nm,0.9s,SNR=11						
BBLS	Lazići	149.72	333	⇑*i*P	PKiKP	20 14 19.9	-0.3
HAPS	Han Pijesak,Bl	149.73	334	*e*P	PKPbc	20 14 19.0	-0.6
CLF	Chambon-Foret	149.74	359	*e*PKPbc	PKiKP	20 14 19.7	-0.2
CLF				*e*PKPab	PKPab	20 14 27.0	+0.1
BLY	Banja Luka	149.88	337	*e*PKPbc	PKPbc	20 14 19.8	+0.1
BLY	Banja Luka	149.88	337	⇑*i*P	PKiKP	20 14 20.1	-0.3
BLY	Banja Luka	149.88	337	⇑*i*P	PKPbc	20 14 19.8	+0.1
CEY	Cerknica	149.94	341	⇑*i*P	PKPbc	20 14 19.9	0.0
STIP	Stip	150.08	327	*i* PKP	PKPbc	20 14 19.2	-1.1
VAY	Valandovo	150.15	327	*i* PKP	PKPbc	20 14 19.8	-0.7
FUORN	Ofenpass-Fuorn	150.19	347	*e*PKPdf	PKPdf	20 14 14.7	-0.3
FUORN				*e*PKPbc	PKiKP	20 14 21.1	-0.2
TUE	Stuetta	150.52	349	*e*PKPdf	PKPdf	20 14 15.9	+0.4
TUE				*e*PKPbc	PKPbc	20 14 21.5	0.0
UDBI	Udbina	150.58	339	P	PKPbc	20 14 21.5	0.0
KRUS	Krusevo	150.80	328	*i* PKP	PKPbc	20 14 21.6	-0.5
NVLJ	Novalja	150.85	340	P	PKPbc	20 14 21.7	-0.3
PDG	Podgorica	150.93	332	⇑*i*P	PKPbc	20 14 21.9	-0.3
PDG	Podgorica	150.93	332	⇑*i*P	PKPbc	20 14 22.0	-0.3
TTG	Podgorica	150.93	332	*e*PKPbc	PKPbc	20 14 21.7	-0.5
SENIN	Lac Senin/Sane	150.97	351	*e*PKPbc	PKiKP	20 14 22.9	0.0
SENIN				*e*PKPab	PKPab	20 14 32.4	0.0
BIA	Bitola	151.02	327	*i* PKP	PKPbc	20 14 22.3	-0.2
LIT	Litokhoron	151.06	325	*e*PKPbc	PKPbc	20 14 21.6	-1.0
LIT				*e*PKPab	PKPab	20 14 32.8	0.0
LIT	Litokhoron	151.06	325	*e*PKIKP	PKPbc	20 14 21.6	-1.0
LIT				*e*		20 14 32.8	
TREB	Trebinje	151.10	333	*e*P	PKPbc	20 14 21.8	-0.8
DRME	Dracevica, Mon	151.16	332	⇑*i*P	PKPbc	20 14 22.6	-0.2
OHR	Ohrid	151.22	328	*i* PKP	PKiKP	20 14 23.3	-0.1
STON	Ston	151.25	334	P	PKPbc	20 14 22.1	-0.8
AGG	Agios Georgios	151.89	323	*e*PKPbc	PKPbc	20 14 23.4	-1.2
AGG	Agios Georgios	151.89	323	*e*PKIKP	PKPbc	20 14 23.4	-1.2
BNI	Bardonecchia	152.34	352	*e*PKPbc	PKiKP	20 14 25.7	+0.1
BNI				*e*PKPab	PKPab	20 14 38.1	0.0
SSB	Saint Sauveur	152.35	355	*e*PKPbc	PKiKP	20 14 25.6	+0.1
SSB				*e*PKPab	PKPab	20 14 37.4	-0.6
IDI	Anoyia	152.60	314	*e*PKPbc	PKiKP	20 14 26.9	+0.5
IDI	Anoyia	152.60	314	PKPbc	PKiKP	20 14 27.3	+0.8
	comp=N,13nm,0.7s,baz=307,slow=5.0,SNR=7.5						
AQU	L'Aquila	153.31	340	*e*PKPbc	PKPbc	20 14 27.2	-0.4
AQU				*e*PKPab	PKPab	20 14 43.0	+0.8
AQU	L'Aquila	153.31	340	*e*P	PKPab	20 14 42.7	+0.5
PGAV	Gavieira, Arco	154.49	17	*e*PKPab	PKPab	20 14 47.5	+0.2
PBRG	Braganca	155.03	14	*e*PKPab	PKPab	20 14 49.5	0.0
POLO	Lamas de Olo	155.17	16	*e*PKPab	PKPab	20 14 50.8	+0.6
PVRL	Vila Real	155.28	16	*e*PKPab	PKPab	20 14 51.4	+0.7
MVO	Moncorvo	155.56	15	*e*PKPdf	PKPdf	20 14 23.7	+1.0
MVO	Moncorvo	155.56	15	*e*PKPab	PKPab	20 14 52.7	+0.8
PVIS	Viseu	155.75	17	*e*PKPab	PKPab	20 14 52.9	+0.2
MTE	Manteigas	156.15	17	*e*PKPdf	PKPdf	20 14 24.3	+0.9
MTE	Manteigas	156.15	17	*e*PKPab	PKPab	20 14 54.8	+0.4
MTE	Manteigas	156.15	17	*e*PKPdf	PKPdf	20 14 23.5	0.0
MTE				*e*PKPab	PKPab	20 14 54.0	-0.5
PCAS	Casmilo, Conde	156.19	19	*e*PKPab	PKPab	20 14 54.8	+0.2
PTOM	Tomar	156.62	19	*e*PKPab	PKPab	20 14 56.6	+0.2
PCBR	Castelo Branco	156.69	17	*e*PKPdf	PKPdf	20 14 24.7	+0.7
PCBR	Castelo Branco	156.69	17	*e*PKPab	PKPab	20 14 56.9	+0.2
PMAFR	Mafra	156.93	21	*e*PKPab	PKPab	20 14 57.9	+0.1
PMRV	Marv??o	157.09	17	*e*PKPab	PKPab	20 14 58.5	0.0
PMTG	Montargil	157.18	19	*e*PKPab	PKPab	20 14 58.6	-0.2
PESTR	Estremoz	157.56	18	*e*PKPab	PKPab	20 15 00.3	-0.2
PESTR	Estremoz	157.56	18	*e*PKPdf	PKPdf	20 14 25.4	+0.2
PESTR				*e*PKPab	PKPab	20 14 60.0	-0.6
ES19	SONSECA Array	157.63	10	*e*PKPdf	PKPdf	20 14 25.7	+0.4
ES19				*e*PKPab	PKPab	20 15 00.5	-0.4
ESDC	Sonseca Array	157.65	11	PKP	PKPdf	20 14 25.8	+0.4
	comp=N,0.7nm,0.8s,baz=1.1,slow=2.6,SNR=5.9						
ESDC				PKPab	PKPab	20 15 00.8	-0.1
	comp=N,5.0nm,0.8s,baz=345,slow=4.1,SNR=27						
ESDC				PP	PP	20 18 39.8	-1.7
	comp=N,0.9nm,0.8s,baz=344,slow=5.4,SNR=5.9						
ESLA	Sonseca Array	157.65	11	*e*PKPab	PKPab	20 15 00.5	-0.5
PAB	San Pablo	157.70	11	*e*PKPdf	PKPdf	20 14 25.6	+0.1
PAB				*e*PKPab	PKPab	20 15 00.6	-0.7
PAB	San Pablo	157.70	11	*e*PKIKP	PKPdf	20 14 25.6	+0.1
PAB				*e*		20 15 00.6	
PNCL	Nicolau / Gran	157.95	21	*e*PKPab	PKPab	20 15 02.4	+0.2
PBEJ	Beja	158.24	20	*e*PKPab	PKPab	20 15 04.4	+0.9
MESJ	Messejana	158.30	20	*e*PKPdf	PKPdf	20 14 24.6	-1.5
MESJ	Messejana	158.30	20	*e*PKPdf	PKPdf	20 14 25.7	-0.4
MESJ	Messejana	158.30	20	*e*PKPab	PKPab	20 15 03.9	+0.2
MORF	Marmelete	158.63	22	*e*PKPdf	PKPdf	20 14 25.1	-1.4
MORF	Marmelete	158.63	22	*e*PKPdf	PKPdf	20 14 27.8	+1.2
MORF	Marmelete	158.63	22	*e*PKPab	PKPab	20 15 05.6	+0.3
PVAQ	Vaqueiros	158.86	20	*e*PKPab	PKPab	20 15 06.6	+0.4
PBDV	Barranco-do-Ve	158.93	21	*e*PKPab	PKPab	20 15 06.9	+0.3
HORN	Hornachuelos	159.14	14	P	PKPab	20 15 08.0	+0.6
KEST	Kesra	160.63	340	PKPab	PKPab	20 15 14.3	+0.2
	comp=N,5.9nm,0.7s,baz=268,slow=2.8,SNR=6.1						
CHEFC	Chefchaouen	161.71	17	P	PKPab	20 15 20.3	+1.5

RSA	**Sarsar**	**161.77**	**19**	P	**PKPab**	**20 15 21.0**	**+1.9**
SICH	**Sidi Chahed**	**162.65**	**18**	P	**PKPab**	**20 15 25.0**	**+2.1**
JBK	**JBK**	**163.09**	**11**	P	**PKPab**	**20 15 25.3**	**+0.2**
MDT	**Midelt**	**164.06**	**18**	P	**PKPab**	**20 15 30.5**	**+1.2**
TOA0	**Torodi Ar. Sit**	**175.45**	**186**	*e*PKPdf	**PKPdf**	**20 14 38.1**	**-1.2**
TOA0				*e*PKPab	**PKPab**	**20 16 19.3**	**-0.6**
TORD	**Torodi Ar. Bea**	**175.45**	**186**	PKP	**PKPdf**	**20 14 38.7**	**-0.6**
	comp=N,1.6nm,0.9s,baz=329,slow=5.6,SNR=8.8						
TORD				PKPab	**PKPab**	**20 16 20.1**	**+0.2**
	comp=N,1.3nm,0.7s,baz=193,slow=2.6,SNR=6.5						
TOA1	**Torodi Ar. Sit**	**175.46**	**186**	*e*PKPdf	**PKPdf**	**20 14 38.7**	**-0.6**
TOA1				*e*PKPab	**PKPab**	**20 16 20.1**	**+0.2**

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*DDA **15** 20:04:22.1, 39°.82N×40°.50E, h7^{km}±3^{km}, ML2.8*
*ISK **15** 20:04:22.8, 39°.93N×40°.58E, h5^{km}, ML2.3/9*
*ISCJB **15** 20:04:23.7±0.6, 39°.88N±0°.03×40°.59E±0°.04, h5^{km}±5^{km}, Error ellipse: s-maj=5.9km s-min=4.1km az=139.9*
ISC 15 20:04:23.3±1.0**, 39°.87N**±0°.03×**40°.52E**±0°.03**, h12**^{km}±7^{km}**, n21, σ0^{s}.99**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.15**	**353**	*i* P	**Pg**	**20 04 27.7**	**+0.7**
KOPT				*i* S	**Sg**	**20 04 30.4**	**+0.6**
KOPT				IAML_P			
	comp=Z,24μm,0.2s						
ECAT	**Cat-ERZURUM**	**0.44**	**127**	*i* P	**Pg**	**20 04 31.6**	**-0.3**
ECAT				*i* S	**Sg**	**20 04 37.1**	**-0.6**
BAYB	**BAYBURT**	**0.44**	**333**	*i* P	**Pb**	**20 04 32.6**	**-0.6**
BAYB				*i* S	**Sb**	**20 04 39.5**	**-0.4**
BAYB				IAML_P			
	comp=Z,2μm,0.2s						
BAYT	**Aydıntepe-Bayb**	**0.60**	**331**	PG	**Pg**	**20 04 34.7**	**-0.3**
BAYT				SG	**Sb**	**20 04 44.2**	**-0.2**
EUZM	**Uzumlu**	**0.65**	**256**	*i* P	**Pg**	**20 04 34.6**	**-1.4**
KELT	**Kelkit**	**1.01**	**287**	*i* P	**Pg**	**20 04 41.4**	**-1.4**
KOPR	**Koprukoy-ERZUR**	**1.03**	**83**	PG	**Pb**	**20 04 42.4**	**-0.8**
TNCL	**Tunceli-Merkez**	**1.07**	**226**	*i* P	**Pn**	**20 04 45.0**	**+0.8**
TNCL				*i* S	**Sn**	**20 05 01.5**	**+2.4**
TNCL				IAML_P			
	comp=Z,424nm,0.2s						
MACK	**Trabzon**	**1.22**	**332**	*i* P	**Pn**	**20 04 47.7**	**+1.4**
MACK				*i* S	**Sn**	**20 05 03.8**	**+1.0**
CHOM	**Cayeli-Rize**	**1.24**	**8**	PN	**Pn**	**20 04 46.7**	**+0.2**
CHOM				SN	**Sn**	**20 05 03.6**	**+0.3**
KTUT	**Trabzon**	**1.26**	**333**	PN	**Pg**	**20 04 47.2**	**-0.3**
DBAD	**Bademkaya**	**1.46**	**38**	*i* P	**Pg**	**20 04 50.4**	**-0.9**
DBAD				IAML_P			
	comp=Z,1μm,0.5s						
SENK	**Senkaya-Erzuru**	**1.56**	**63**	PN	**Pb**	**20 04 51.8**	**-0.5**
DAGI	**Agillar**	**1.61**	**41**	*i* P	**Pb**	**20 04 52.3**	**-0.8**
KEMA	**Kemaliye**	**1.68**	**250**	*i* P	**Pb**	**20 04 53.7**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.73**	**114**	PN	**Pb**	**20 04 54.9**	**-0.2**
BCA	**Borcka**	**1.79**	**28**	PN	**Pb**	**20 04 54.9**	**-1.1**
SUSE	**Susehri**	**1.81**	**282**	*i* P	**Pb**	**20 04 56.5**	**0.0**
SUSE				IAML_P			
	comp=Z,288nm,0.3s						
AGRB	**Hanur-Agry**	**1.93**	**98**	PN	**Pb**	**20 04 58.1**	**-0.4**
BATM	**Batumi**	**1.95**	**27**	PN	**Pb**	**20 04 57.6**	**-1.2**
SVSK	**Karacayir**	**2.71**	**272**	PN	**Pb**	**20 05 10.1**	**-1.6**

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*ISK **15** 20:10:55.8, 40°.33N×23°.93E, h15^{km}, ML2.9/13*
*SOF **15** 20:10:56.6, 40°.31N×24°.00E, h15^{km}*
*ISCJB **15** 20:10:56.3±0.3, 40°.33N±0°.02×23°.94E±0°.02, h11^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=2.3km az=142.1*
*ATH **15** 20:10:56.6, 40°.32N×23°.93E, h12^{km}±1^{km}, ML2.6/17, Error ellipse: s-maj=1.8km s-min=0.7km az=280.0*
*THE **15** 20:10:56.6, 40°.33N×23°.93E, h11^{km}, ML2.5/22, Error ellipse: s-maj=0.7km s-min=0.4km az=351.0*
*BEO **15** 20:10:58.1±0.9, 40°.48N×24°.19E, h5^{km}, ML2.7/3*
ISC 15 20:10:56.7±0.8**, 40°.32N**±0°.02×**23°.94E**±0°.01**, h13**^{km}±4^{km}**, n100, σ0^{s}.72**/143**, 5C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.04**	**65**	PG	**Pg**	**20 10 59.2**	**+0.2**
OUR				SG	**Sg**	**20 11 00.6**	**-0.1**
OUR	**Ouranopolis**	**0.04**	**65**	P	**Pg**	**20 10 59.2**	**+0.2**
OUR				S	**Sg**	**20 11 00.6**	**-0.1**
OUR				AML	AML	20 11 00.9	
	comp=E,13940μm,0.1s						
OUR				AML	AML	20 11 01.1	
	comp=N,15997μm,0.2s						
OUR	**Ouranopolis**	**0.04**	**65**	P	**Pg**	**20 10 59.0**	**0.0**
OUR				S	**Sg**	**20 11 00.4**	**-0.3**
PLG	**Polygyros**	**0.38**	**279**	P	**Pg**	**20 11 04.4**	**+0.1**
PLG				S	**Sg**	**20 11 09.4**	**-0.1**
PLG				AML	AML	20 11 09.9	
	comp=N,4285μm,0.2s						
PLG				AML	AML	20 11 10.2	
	comp=E,4076μm,0.1s						
PLG	**Polygyros**	**0.38**	**279**	P	**Pg**	**20 11 04.4**	**+0.1**
PLG				S	**Sg**	**20 11 09.3**	**-0.1**
PAIG	**Paliouri**	**0.44**	**207**	P	**Pg**	**20 11 05.5**	**+0.2**
PAIG				S	**Sg**	**20 11 11.7**	**+0.5**
PAIG				AML	AML	20 11 14.2	
	comp=N,902μm,0.2s						
PAIG				AML	AML	20 11 14.3	
	comp=E,1106μm,0.2s						
PAIG	**Paliouri**	**0.44**	**207**	P	**Pg**	**20 11 05.5**	**+0.2**
PAIG				S	**Sg**	**20 11 11.2**	**0.0**
THAS	**Thassos island**	**0.66**	**64**	P	**Pg**	**20 11 09.4**	**-0.1**
THAS				S	**Sg**	**20 11 18.2**	**-0.1**
THAS				AML	AML	20 11 21.1	
	comp=E,1985μm,0.3s						
THAS				AML	AML	20 11 21.4	
	comp=N,2354μm,0.3s						
THAS	**Thassos island**	**0.66**	**64**	P	**Pg**	**20 11 09.4**	**-0.1**
THAS				S	**Sg**	**20 11 17.9**	**-0.4**
SOH	**Sokhos**	**0.67**	**319**	P	**Pg**	**20 11 09.6**	**-0.1**
SOH				S	**Sg**	**20 11 18.6**	**0.0**
SOH				AML	AML	20 11 22.2	
	comp=E,1919μm,0.4s						
SOH				AML	AML	20 11 22.5	
	comp=N,2392μm,0.3s						
SOH	**Sokhos**	**0.67**	**319**	P	**Pg**	**20 11 09.6**	**-0.1**
SOH				S	**Sg**	**20 11 18.5**	**-0.1**
HORT	**Hortiatis**	**0.70**	**294**	PG	**Pg**	**20 11 09.7**	**-0.5**
HORT				SG	**Sb**	**20 11 19.7**	**-0.6**
HORT	**Hortiatis**	**0.70**	**294**	P	**Pg**	**20 11 09.7**	**-0.5**
HORT				S	**Sg**	**20 11 19.6**	**+0.2**
HORT				AML	AML	20 11 23.5	
	comp=N,1408μm,0.2s						
HORT				AML	AML	20 11 23.9	
	comp=E,1049μm,0.2s						
HORT	**Hortiatis**	**0.70**	**294**	P	**Pg**	**20 11 09.3**	**-0.9**
HORT				S	**Sg**	**20 11 19.3**	**-0.1**
KVLA	**Kavala**	**0.71**	**29**	P	**Pb**	**20 11 10.7**	**-0.1**
KVLA				S	**Sb**	**20 11 20.0**	**-0.4**
THE	**Thessaloniki**	**0.81**	**293**	P	**Pb**	**20 11 12.3**	**-0.2**
THE				S	**Sg**	**20 11 22.7**	**-0.1**
KAVA	**Kavala**	**0.81**	**33**	P	**Pg**	**20 11 12.2**	**-0.1**
KAVA				S	**Sg**	**20 11 22.9**	**0.0**
KAVA				AML	AML	20 11 24.5	
	comp=N,1534μm,0.2s						
KAVA				AML	AML	20 11 24.8	
	comp=E,1441μm,0.2s						
KAVA	**Kavala**	**0.81**	**33**	P	**Pg**	**20 11 12.1**	**-0.2**
KAVA				S	**Sb**	**20 11 23.4**	**0.0**
NVR	**Nevrokopi**	**1.03**	**357**	P	**Pg**	**20 11 16.5**	**-0.1**
NVR				S	**Sg**	**20 11 30.4**	**+0.3**
NVR				AML	AML	20 11 30.9	
	comp=E,513μm,0.3s						
NVR				AML	AML	20 11 32.1	
	comp=N,614μm,0.2s						
NVR	**Nevrokopi**	**1.03**	**357**	P	**Pb**	**20 11 16.3**	**-0.1**
NVR				S	**Sg**	**20 11 30.1**	**0.0**
LIA	**Limnos Island**	**1.04**	**113**	P	**Pb**	**20 11 16.3**	**-0.3**
LIA				S	**Sb**	**20 11 30.3**	**+0.1**
LIA				AML	AML	20 11 33.2	
	comp=E,309μm,0.3s						
LIA				AML	AML	20 11 34.1	
	comp=N,353μm,0.6s						
LIA	**Limnos Island**	**1.04**	**113**	P	**Pb**	**20 11 16.1**	**-0.5**
LIA				S	**Sn**	**20 11 31.7**	**+0.3**
XOR	**Xorichti**	**1.11**	**211**	P	**Pb**	**20 11 17.5**	**-0.2**
XOR	**Xorichti**	**1.11**	**211**	P	**Pb**	**20 11 17.3**	**-0.5**
XOR				S	**Sg**	**20 11 32.7**	**+0.2**
LIT	**Litokhoron**	**1.13**	**259**	P	**Pb**	**20 11 17.5**	**-0.6**
LIT				AML	AML	20 11 35.6	
	comp=N,269μm,0.3s						
LIT				AML	AML	20 11 36.2	
	comp=E,283μm,0.2s						
LIT	**Litokhoron**	**1.13**	**259**	P	**Pb**	**20 11 17.1**	**-1.0**
LIT				S	**Sn**	**20 11 33.5**	**-0.1**
AOS	**Alonnisos**	**1.15**	**182**	PN	**Pb**	**20 11 17.7**	**-0.7**
AOS	**Alonnisos**	**1.15**	**182**	P	**Pb**	**20 11 17.9**	**-0.5**
AOS				S	**Sn**	**20 11 34.6**	**+0.6**
AOS				AML	AML	20 11 37.5	
	comp=E,493μm,0.4s						
AOS				AML	AML	20 11 40.1	
	comp=N,360μm,0.6s						
AOS	**Alonnisos**	**1.15**	**182**	P	**Pb**	**20 11 17.4**	**-1.0**
AOS				S	**Sn**	**20 11 34.8**	**+0.8**
NEO	**Neokhori**	**1.15**	**209**	P	**Pb**	**20 11 17.9**	**-0.6**
NEO				S	**Sn**	**20 11 34.5**	**+0.4**
NEO				AML	AML	20 11 35.0	
	comp=E,442μm,0.3s						
NEO				AML	AML	20 11 39.0	
	comp=N,507μm,0.7s						
NEO	**Neokhori**	**1.15**	**209**	P	**Pb**	**20 11 18.0**	**-0.4**
NEO				S	**Sg**	**20 11 33.7**	**-0.1**
KNT	**Kendrikon**	**1.15**	**317**	PN	**Pb**	**20 11 17.8**	**-0.7**
KNT	**Kendrikon**	**1.15**	**317**	P	**Pb**	**20 11 18.1**	**-0.4**
KNT				S	**Sn**	**20 11 34.5**	**+0.3**
KNT				AML	AML	20 11 37.4	
	comp=N,474μm,0.2s						
KNT				AML	AML	20 11 38.0	
	comp=E,549μm,0.3s						
KNT	**Kendrikon**	**1.15**	**317**	P	**Pb**	**20 11 18.0**	**-0.5**
KNT				S	**Sg**	**20 11 33.7**	**-0.2**
FYTO	**Fytoko, Volos**	**1.19**	**221**	P	**Pb**	**20 11 19.1**	**0.0**
FYTO				S	**Sn**	**20 11 35.2**	**+0.2**
FYTO	**Fytoko, Volos**	**1.19**	**221**	P	**Pn**	**20 11 18.5**	**-0.5**
FYTO				S	**Sn**	**20 11 35.2**	**+0.2**
SKIA	**Skiathos**	**1.21**	**198**	P	**Pn**	**20 11 19.0**	**-0.3**
SKIA				AML	AML	20 11 38.7	
	comp=N,280μm,0.5s						
SKIA				AML	AML	20 11 41.0	
	comp=E,244μm,0.5s						
SMTH	**Samothraki Isl**	**1.23**	**82**	P	**Pb**	**20 11 19.8**	**+0.1**
SMTH				S	**Sg**	**20 11 37.2**	**+1.0**
SMTH				AML	AML	20 11 38.0	
	comp=N,557μm,0.4s						
SMTH				AML	AML	20 11 39.0	
	comp=E,389μm,0.4s						
SMTH	**Samothraki Isl**	**1.23**	**82**	P	**Pn**	**20 11 18.9**	**-0.6**
SMTH				S	**Sg**	**20 11 37.0**	**+0.8**
MMB	**Musomiste**	**1.28**	**353**	P	**Pn**	**20 11 19.7**	**-0.6**
GRG	**Griva**	**1.33**	**299**	PN	**Pn**	**20 11 21.0**	**0.0**
GRG	**Griva**	**1.33**	**299**	P	**Pb**	**20 11 21.4**	**-0.1**
GRG				AML	AML	20 11 47.9	
	comp=E,357μm,0.6s						
GRG				AML	AML	20 11 47.9	
	comp=N,475μm,0.6s						
GRG	**Griva**	**1.33**	**299**	P	**Pn**	**20 11 20.5**	**-0.5**
GRG				S	**Sg**	**20 11 39.4**	**-0.2**
VAY	**Valandovo**	**1.44**	**314**	*i* Pg	**Pn**	**20 11 22.7**	**+0.2**
RDO	**Rodhopi**	**1.47**	**55**	PN	**Pn**	**20 11 22.0**	**-0.9**
RDO	**Rodhopi**	**1.47**	**55**	P	**Pn**	**20 11 22.2**	**-0.7**
RDO				S	**Sb**	**20 11 42.8**	**+0.3**
RZN	**Rozhen**	**1.49**	**23**	P	**Pn**	**20 11 23.2**	**-0.1**
SMIA	**Simia**	**1.54**	**202**	P	**Pn**	**20 11 23.9**	**0.0**
THL	**Klokotos Trika**	**1.66**	**244**	P	**Pn**	**20 11 25.4**	**-0.1**
THL				S	**Sn**	**20 11 46.3**	**-0.3**
BOZC	**Bozcaada**	**1.69**	**106**	PN	**Pn**	**20 11 25.9**	**0.0**
ALN	**Alexandroupoli**	**1.71**	**70**	PN	**Pn**	**20 11 25.5**	**-0.7**
ALN	**Alexandroupoli**	**1.71**	**70**	P	**Pg**	**20 11 28.9**	**-0.5**
ALN				S	**Sg**	**20 11 51.5**	**-0.1**
ALN				AML	AML	20 11 53.4	
	comp=E,315μm,0.7s						
ALN				AML	AML	20 11 53.8	
	comp=N,312μm,0.6s						
ALN	**Alexandroupoli**	**1.71**	**70**	P	**Pn**	**20 11 25.4**	**-0.7**
ALN				S	**Sn**	**20 11 47.7**	**-0.1**
KDZ	**Kurdzhali**	**1.74**	**40**	P	**Pg**	**20 11 32.0**	**+2.0**
ENEZ	**Enez**	**1.74**	**75**	PN	**Pn**	**20 11 26.4**	**-0.2**
ATAL	**Atalanti**	**1.77**	**204**	P	**Pn**	**20 11 26.5**	**-0.5**
AGG	**Agios Georgios**	**1.79**	**224**	PN	**Pn**	**20 11 27.2**	**-0.1**
AGG	**Agios Georgios**	**1.79**	**224**	P	**Pn**	**20 11 27.2**	**-0.1**
AGG				S	**Sn**	**20 11 49.8**	**-0.2**
SIGR	**SIGRI**	**1.85**	**126**	PN	**Pn**	**20 11 28.2**	**+0.2**
PLD	**Plovdiv**	**1.88**	**18**	PN	**Pn**	**20 11 28.4**	**0.0**
PLD	**Plovdiv**	**1.88**	**18**	*e*Pn	**Pn**	**20 11 28.5**	**0.0**
PLD				*e*Sn	**Sn**	**20 11 49.6**	**-2.4**
EZN	**Ezine**	**1.90**	**104**	PN	**Pn**	**20 11 28.7**	**0.0**
STIP	**Stip**	**1.91**	**317**	*i* Pg	**Pn**	**20 11 28.9**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.94**	**87**	PN	**Pn**	**20 11 28.9**	**-0.4**
ERIK	**Erikli-Kesan**	**2.00**	**79**	PN	**Pn**	**20 11 30.2**	**+0.1**
LPK	**Lapseki**	**2.16**	**88**	PN	**Pn**	**20 11 31.9**	**-0.4**
DSF	**Desfina**	**2.20**	**210**	P	**Pn**	**20 11 32.5**	**-0.4**
PGB	**Panagyurishte**	**2.24**	**4**	P	**Pb**	**20 11 36.6**	**-0.4**
KRUS	**Krusevo**	**2.29**	**298**	*i* Pg	**Pn**	**20 11 34.9**	**+0.6**
VTS	**Vitosha**	**2.36**	**347**	*e*Pn	**Pn**	**20 11 35.9**	**+0.7**
VTS				*e*Sn	**Sn**	**20 12 04.0**	**-0.1**
VTS	**Vitosha**	**2.36**	**347**	⇑*i*P	**Pn**	**20 11 35.9**	**+0.7**
VTS	**Vitosha**	**2.36**	**347**	S	**Sn**	**20 12 02.7**	**-1.4**
VTS	**Vitosha**	**2.36**	**347**	P	**Pn**	**20 11 35.8**	**+0.6**
VTS	**Vitosha**	**2.36**	**347**	P	**Pn**	**20 11 35.8**	**+0.6**
SERG	**Sergoula**	**2.40**	**218**	P	**Pn**	**20 11 35.7**	**+0.1**
RKY	**Sarkoy-Tekirda**	**2.50**	**80**	PN	**Pn**	**20 11 37.3**	**+0.2**
KRBG	**Karabiga-Canak**	**2.57**	**87**	PN	**Pn**	**20 11 38.5**	**+0.5**
EDRB	**Edirne**	**2.61**	**53**	PN	**Pn**	**20 11 38.6**	**0.0**
GUR	**Goura**	**2.68**	**208**	P	**Pn**	**20 11 39.4**	**-0.3**
IGT	**Igoumenitsa**	**2.88**	**255**	*e*Pn	**Pb**	**20 11 48.7**	**+0.8**
JMB	**Yambol**	**2.93**	**42**	P	**Pn**	**20 11 43.3**	**+0.4**
BARS	**Barje**	**2.96**	**328**	*e*Pn	**Pn**	**20 11 45.9**	**+2.5**
BARS				*e*Sn	**Sn**	**20 12 21.4**	**+2.6**
SELS	**Selova**	**3.58**	**325**	*e*Pn	**Pn**	**20 11 54.9**	**+2.9**
BOVS	**Bovan**	**3.71**	**334**	*e*Pn	**Pn**	**20 11 55.0**	**+1.4**
PRD	**Provadia**	**3.87**	**41**	P	**Pn**	**20 11 55.6**	**-0.3**
PUNG	**Punghina**	**4.03**	**350**	S	**Sn**	**20 12 43.6**	**-1.4**
SJES	**Sjenica**	**4.17**	**316**	*e*Pn	**Pn**	**20 12 02.1**	**+1.9**
HUMR	**Humele**	**4.28**	**10**	⇓*i*P	**Pn**	**20 12 02.0**	**+0.5**
GRUS	**Gruza**	**4.30**	**327**	*e*Pn	**Pn**	**20 12 02.2**	**+0.5**
IVAS	**Ivanjica**	**4.31**	**320**	*e*Pn	**Pn**	**20 12 02.8**	**+0.8**
MDVR	**Moldovita**	**4.75**	**341**	⇑*i*P	**Pn**	**20 12 07.9**	**-0.2**
MDVR	**Moldovita**	**4.75**	**341**	S	**Sn**	**20 13 01.3**	**-1.7**
DIVS	**Divibare**	**4.78**	**323**	*e*Pn	**Pn**	**20 12 09.2**	**+0.7**
ARR	**Arges**	**5.07**	**6**	⇓*i*P	**Pn**	**20 12 13.2**	**+0.7**
VOIR		**5.18**	**9**	⇓*i*P	**Pn**	**20 12 14.7**	**+0.7**
DOPR	**Dopca**	**5.75**	**10**	⇓*i*P	**Pn**	**20 12 22.5**	**+0.8**
VRI	**Vrincioaia**	**5.91**	**19**	⇑*i*P	**Pn**	**20 12 24.5**	**+0.6**
OZUR		**5.93**	**13**	⇑*i*P	**Pn**	**20 12 25.4**	**+1.2**
SIRR	**Siria**	**6.17**	**345**	⇓*i*P	**Pn**	**20 12 28.4**	**+0.9**
TESR	**Tescani**	**6.50**	**17**	⇑*i*P	**Pn**	**20 12 33.3**	**+1.3**

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*SOME **15** 20:12:40.8, 42°.57N×79°.75E, h15^{km}*
*KRNET **15** 20:12:42.2±0.1, 42°.56N×79°.61E, h10^{km}, mb2.2*
*NNC **15** 20:12:42.4±2.3, 42°.57N×79°.65E, h0^{km}, mb3.1, mpv2.2, Error ellipse: s-maj=14.7km s-min=9.0km az=132.0*
ISC 15 20:12:41.5±2.0**, 42°.52N**±0°.06×**79°.62E**±0°.06**, h8**^{km}±12^{km}**, n16, σ0^{s}.70**/32**, 8C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.77**	**325**	P	**Pg**	**20 12 55.6**	**-0.8**
	0.7nm,0.1s						
UZB				S	**Sg**	**20 13 06.9**	**+0.5**
	7.6nm,0.2s						
UZB	**Uzynbulak**	**0.77**	**325**	*e*P	**Pg**	**20 12 55.6**	**-0.8**
	baz=24						
UZB				*e*S	**Sg**	**20 13 06.9**	**+0.5**
	baz=24						
UZB	**Uzynbulak**	**0.77**	**325**	*e*P	**Pg**	**20 12 55.6**	**-0.8**
	0.3nm,0.2s						
UZB				*e*S	**Sg**	**20 13 06.9**	**+0.5**
	7.6nm,0.2s						
PDGK	**Podgornoye**	**0.82**	**353**	⇓P	**Pg**	**20 12 57.2**	**-0.1**
	0.8nm,0.4s						
PDGK				⇓S	**Sg**	**20 13 08.0**	**0.0**
	2.5nm,0.7s						
PDGK	**Podgornoye**	**0.82**	**353**	⇑*i*P	**Pg**	**20 12 57.4**	**+0.1**
	baz=53						
PDGK				⇑*i*S	**Sg**	**20 13 08.0**	**0.0**
	baz=53						
PRZ	**Przheval'sk**	**0.91**	**268**	⇓*i*P	**Pg**	**20 12 59.7**	**+0.7**
	baz=66						
PRZ				⇓*i*S	**Sg**	**20 13 11.5**	**+0.8**
	baz=66						
SATY	**Saty**	**1.05**	**302**	*e*P	**Pg**	**20 13 01.4**	**-0.3**
	4.5nm,1.0s						
SATY				*e*S	**Sb**	**20 13 16.4**	**+0.5**
	10nm,0.2s						
KTMS	**Ketmen**	**1.07**	**30**	P	**Pb**	**20 13 02.2**	**-0.2**
KTMS				S	**Sn**	**20 13 18.1**	**0.0**
KURS	**Kuram**	**1.44**	**313**	P	**Pb**	**20 13 08.5**	**-0.1**
KURS				S	**Sg**	**20 13 28.2**	**+0.3**
	2.6nm,0.3s						
MNBS	**Baschi**	**1.80**	**331**	P	**Pb**	**20 13 14.8**	**0.0**
MNBS				S	**Sg**	**20 13 39.6**	**+0.2**
KDJ	**Kajisay**	**1.85**	**259**	⇑*i*P	**Pg**	**20 13 17.0**	**-0.1**
	baz=57						
KDJ				⇑*i*S	**Sg**	**20 13 41.5**	**+0.4**
	baz=57						
MDOK	**Medeo**	**2.00**	**290**	Pn	**Pn**	**20 13 16.6**	**+0.8**
	5.4nm,1.0s						
MDOK				Sn	**Sg**	**20 13 45.1**	**-0.7**
	3.1nm,0.8s						
IZV	**Izvestkoviy**	**2.28**	**284**	*e*P	**Pb**	**20 13 23.9**	**+0.9**
	baz=83						
IZV				*e*S	**Sg**	**20 13 54.7**	**0.0**
	baz=83						
IZV	**Izvestkoviy**	**2.28**	**284**	*e*P	**Pb**	**20 13 23.9**	**+0.9**
	0.9nm,0.2s						
IZV				*e*S	**Sg**	**20 13 54.7**	**0.0**
	2.9nm,0.2s						
ULHL	**Ulahol**	**2.52**	**265**	⇑*i*P	**Pb**	**20 13 26.2**	**-0.9**
	baz=64						
ULHL				⇑*i*S	**Sb**	**20 13 57.8**	**-0.6**
	baz=64						
BOOM	**Boomskoye usch**	**2.72**	**271**	⇑*i*P	**Pb**	**20 13 29.0**	**-1.6**
	baz=70						
BOOM				⇑*i*S	**Sb**	**20 14 02.6**	**-1.6**
	baz=70						

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*NEIC **15** 20:13:05.5±0.0, 18°.59N×68°.45W, h135^{km}, MD3.2(RSPR), After RSPR.*
RSPR 15 20:13:05.5, 18°.59N×68°.45W, h135^{km}±6^{km}**, MD3.2**/8**, 6C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.90**	**283**	⇓*e*P	Pn	20 13 26.9	-1.1
DR12				*e*S	Sn	20 13 45.1	0.0
DR12	**Loma Pena Alta**	**0.90**	**283**	*e*Pn	Pn	20 13 26.9	-1.1
DR12				*e*Sn	Sn	20 13 45.1	0.0
IDE	**Isla Desecheo**	**0.95**	**102**	⇑*e*P	Pn	20 13 28.5	+0.1
IDE	**Isla Desecheo**	**0.95**	**102**	*e*S	Sn	20 13 44.1	-1.7
AGP	**Aguadilla**	**1.26**	**98**	*e*Pn	Pn	20 13 32.5	+1.2
AGP				*e*Sn	Sn	20 13 47.5	-3.6
AGPR	**Aguadilla, PR**	**1.28**	**95**	⇑*e*P	Pn	20 13 32.9	+1.3
AGPR	**Aguadilla, PR**	**1.28**	**95**	*e*S	Sn	20 13 52.0	+0.6
AGPR	**Aguadilla, PR**	**1.28**	**95**	⇑*e*P	Pn	20 13 32.9	+1.3
AGPR				*e*S	Sn	20 13 52.0	+0.6
MPR	**Mayaguez**	**1.30**	**107**	*e*Pn	Pn	20 13 30.6	-1.1
LSP	**Las Mesas**	**1.36**	**108**	⇑*e*P	Pn	20 13 32.4	-0.1
LSP	**Las Mesas**	**1.36**	**108**	*e*S	Sn	20 13 54.8	+1.7
LSP	**Las Mesas**	**1.36**	**108**	*e*Pn	Pn	20 13 32.4	-0.1
LSP				*e*Sn	Sn	20 13 54.8	+1.7
SDD	**Santo Domingo**	**1.39**	**265**	*e*Pn	Pn	20 13 32.4	-0.3
CRPR	**Cabo Rojo, PR**	**1.41**	**114**	⇑*e*P	Pn	20 13 31.5	-1.3
CRPR	**Cabo Rojo, PR**	**1.41**	**114**	*e*S	Sn	20 13 49.9	-3.8
CRPR	**Cabo Rojo, PR**	**1.41**	**114**	*e*Pn	Pn	20 13 31.4	-1.5
CRPR				*e*Sn	Sn	20 13 47.7	-6.0
BANI	**BANI**	**1.82**	**264**	*e*Pn	Pn	20 13 38.2	+0.5
EMPR	**Esperanza - Ma**	**1.83**	**93**	⇓*e*P	Pn	20 13 39.1	+1.4
EMPR	**Esperanza - Ma**	**1.83**	**93**	*e*S	Sn	20 14 02.3	0.0
EMPR	**Esperanza - Ma**	**1.83**	**93**	*e*Pn	Pn	20 13 39.4	+1.8
OBIP	**Obispado Ponce**	**1.84**	**107**	*e*Pn	Pn	20 13 37.0	-0.8
CELP	**Cerrillos**	**1.85**	**106**	⇓*e*P	Pn	20 13 37.0	-1.0
CELP				*e*S	Sn	20 14 03.4	+0.5
CELP	**Cerrillos**	**1.85**	**106**	*e*Sn	Sn	20 14 03.4	+0.5
CBYP	**Canovanas**	**2.49**	**97**	*e*Pn	Pn	20 13 42.3	-3.5
HUMP	**Col San Antoni**	**2.51**	**100**	*e*Pn	Pn	20 13 45.1	-1.0
SDDR	**Presa de Saban**	**2.71**	**279**	*e*Pn	Pn	20 13 47.0	-1.6
MTP	**Monte Pirata**	**2.80**	**100**	*e*Pn	Pn	20 13 49.6	-0.1
CUPR	**Culebra, Puert**	**3.02**	**95**	⇑*e*P	Pn	20 13 52.5	0.0
CUPR	**Culebra, Puert**	**3.02**	**95**	*e*S	Sn	20 14 28.1	-0.8
CUPR	**Culebra, Puert**	**3.02**	**95**	*e*Pn	Pn	20 13 53.3	+0.8
STVI	**Saint Thomas**	**3.33**	**94**	*e*Pn	Pn	20 13 57.4	+0.8

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*ISK **15** 20:22:32.8, 38°.72N×25°.47E, h18^{km}, ML4.0/38*
*IDC **15** 20:22:32.0±0.9, 38°.69N×25°.55E, h0^{km}, mb3.4/8, mb1 3.6/12, mb1mx3.4/48, mbtmp3.5/12, ML3.5/4, MS3.0/2, Ms1 3.0/2, ms1mx2.4/32, Error ellipse: s-maj=17.2km s-min=13.6km az=119.0*
*ATH **15** 20:22:33.1, 38°.70N×25°.51E, h36^{km}±2^{km}, ML3.9/10, Error ellipse: s-maj=2.4km s-min=1.0km az=79.0*
*ISCJB **15** 20:22:33.9±0.3, 38°.72N±0°.01×25°.48E±0°.02, h25^{km}±3^{km}, mb3.3/9, MS3.2/1, Error ellipse: s-maj=2.4km s-min=2.3km az=179.3*
*THE **15** 20:22:33.9, 38°.72N×25°.49E, h14^{km}, ML3.7/8, Error ellipse: s-maj=0.8km s-min=0.4km az=78.0*
*DDA **15** 20:22:34.3, 38°.77N×25°.61E, h38^{km}±1^{km}, ML3.9*
ISC 15 20:22:33.4±1.0**, 38°.70N**±0°.02×**25°.47E**±0°.02**, h14**^{km}±7^{km}**, n191, σ0^{s}.75**/215**, mb3.4**/9**, 14C-5D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSRA	**Psara**	**0.17**	**155**	P	**Pb**	**20 22 39.0**	**+0.6**
PSRA				S	**Sb**	**20 22 41.7**	**+0.1**
PSRA				AML	AML	20 22 42.8	
PSRA				AML	AML	20 22 42.9	
CHOS	**Chios island**	**0.55**	**124**	PG	**Pb**	**20 22 44.8**	**-0.2**
CHOS				SG	**Sb**	**20 22 52.6**	**-0.2**
CHOS	**Chios island**	**0.55**	**124**	P	**Pb**	**20 22 44.9**	**-0.1**
CHOS				S	**Sb**	**20 22 52.6**	**-0.2**
CHOS				AML	AML	20 22 55.9	
	comp=E,62772μm,0.3s						
CHOS				AML	AML	20 22 55.9	
	comp=N,97808μm,0.4s						
CHOS	**Chios island**	**0.55**	**124**	P	**Pb**	**20 22 44.7**	**-0.2**
CHOS				S	**Sb**	**20 22 52.5**	**-0.2**
SIGR	**SIGRI**	**0.59**	**30**	PG	**Pg**	**20 22 44.8**	**-0.3**
SIGR				SG	**Sb**	**20 22 53.3**	**-0.5**
SIGR	**SIGRI**	**0.59**	**30**	P	**Pg**	**20 22 44.8**	**-0.3**
SIGR				S	**Sg**	**20 22 53.0**	**0.0**
SIGR				AML	AML	20 22 57.3	
	comp=E,21556μm,0.6s						
SIGR				AML	AML	20 22 59.3	
	comp=N,18612μm,0.5s						
SIGR	**SIGRI**	**0.59**	**30**	P	**Pg**	**20 22 44.7**	**-0.3**
SIGR				S	**Sg**	**20 22 53.0**	**0.0**
SKY	**Skiros Island**	**0.74**	**284**	P	**Pn**	**20 22 49.3**	**-0.2**
SKY	**Skiros Island**	**0.74**	**284**	P	**Pn**	**20 22 48.8**	**-0.7**
SKY				S	**Sn**	**20 22 59.1**	**-1.5**
PRK	**Paraskevi**	**0.83**	**49**	P	**Pb**	**20 22 49.9**	**+0.3**
PRK				S	**Sb**	**20 23 01.1**	**+0.4**
PRK				AML	AML	20 23 05.0	
	comp=E,40006μm,0.4s						
PRK				AML	AML	20 23 05.1	
	comp=N,46437μm,0.5s						
PRK	**Paraskevi**	**0.83**	**49**	P	**Pb**	**20 22 49.9**	**+0.3**
PRK				S	**Sb**	**20 23 01.3**	**+0.7**
KRBN	**Karaburun**	**0.85**	**97**	PG	**Pb**	**20 22 49.9**	**-0.1**
KRBN				SG	**Sb**	**20 23 01.5**	**+0.2**
EFSA	**Agios Efstrati**	**0.92**	**336**	P	**Pn**	**20 22 52.0**	**+0.1**
EFSA				S	**Sn**	**20 23 04.2**	**-0.8**
EFSA				AML	AML	20 23 06.7	
	comp=N,12965μm,0.6s						
EFSA				AML	AML	20 23 07.1	
	comp=E,13023μm,0.7s						
ZEY	**zmir**	**0.93**	**119**	*i* P	**Pn**	**20 22 51.9**	**-0.2**
URLA	**Izmir**	**0.94**	**111**	PG	**Pg**	**20 22 51.8**	**+0.1**
URLA	**Izmir**	**0.94**	**111**	*i* P	**Pn**	**20 22 52.4**	**+0.1**
URLA				IAML_P			
	comp=Z,55μm,0.2s						
FOCM	**Foa**	**0.99**	**89**	PG	**Pb**	**20 22 51.8**	**-0.5**
AYVA	**Ayvalik**	**1.13**	**57**	*i* P	**Pb**	**20 22 54.1**	**-0.7**
AYVA				*i* S	**Sn**	**20 23 10.4**	**+0.4**
TNSA	**Tinos**	**1.18**	**192**	P	**Pg**	**20 22 55.8**	**-0.4**
TNSA				S	**Sg**	**20 23 11.4**	**-0.3**
TNSA				AML	AML	20 23 12.8	
	comp=E,1974μm,0.3s						
TNSA				AML	AML	20 23 17.1	
	comp=N,4692μm,0.4s						
LIA	**Limnos Island**	**1.22**	**350**	P	**Pn**	**20 22 55.4**	**-0.6**
LIA				S	**Sb**	**20 23 10.9**	**-0.9**
LIA				AML	AML	20 23 14.7	
	comp=E,6761μm,1.2s						

LIA				AML	AML	20 23 14.9	
	comp=N,3479µm,0.5s						
LIA	Limnos Island	1.22	350	P	Pn	20 22 55.3	-0.7
LIA				S	Sb	20 23 11.8	0.0
BOZC	Bozcaada	1.23	21	PN	Pn	20 22 55.1	-1.1
BOZC	Bozcaada	1.23	21	*i* P	Pn	20 22 56.0	-0.1
BOZC				*i* S	Sb	20 23 12.1	0.0
EREA	Eretria	1.24	257	P	Pn	20 22 56.1	-0.2
EREA	Eretria	1.24	257	P	Pn	20 22 56.0	-0.4
BLCB	Balcova	1.27	104	PN	Pn	20 22 56.6	-0.2
DGB	zmir	1.28	120	*i* P	Pb	20 22 57.3	-0.1
DGB				IAML_P			
	comp=Z,11µm,0.3s						
GMLD	Gumuldur	1.29	118	PN	Pn	20 22 56.7	-0.4
EZN	Ezine	1.31	30	PN	Pn	20 22 56.2	-1.0
EZN	Ezine	1.31	30	P	Pn	20 22 56.1	-1.1
AOS	Alonnisos	1.33	291	PN	Pn	20 22 57.2	-0.3
AOS	Alonnisos	1.33	291	P	Pb	20 22 57.7	-0.4
AOS				S	Sg	20 23 16.4	+0.1
AOS				AML	AML	20 23 23.6	
	comp=E,1098µm,0.4s						
AOS				AML	AML	20 23 29.6	
	comp=N,1620µm,0.6s						
AOS	Alonnisos	1.33	291	P	Pb	20 22 57.7	-0.4
AOS				S	Sg	20 23 15.3	-1.0
ALNA	Alonissos	1.33	290	P	Pb	20 22 57.9	-0.3
BAYC	CANAKKALE_Bayr	1.33	38	*i* P	Pn	20 22 57.1	-0.6
BAYC				*i* S	Sg	20 23 16.6	+0.1
BAYC				IAML_P			
	comp=Z,6µm,0.1s						
PTL	Penteli	1.42	243	P	Pn	20 22 58.5	-0.3
PTL	Penteli	1.42	243	P	Pn	20 22 58.6	-0.3
SMG	Samos	1.46	132	P	Pn	20 22 59.3	-0.1
SMG				S	Sn	20 23 18.0	-0.3
SMG				AML	AML	20 23 21.5	
	comp=N,6862µm,0.4s						
SMG				AML	AML	20 23 22.4	
	comp=E,7340µm,0.4s						
SMG	Samos	1.46	132	P	Pn	20 22 59.0	-0.4
SMG				S	Sn	20 23 18.1	-0.2
MRKA	Markates	1.47	271	P	Pn	20 22 59.7	+0.1
ATHU	Athens Univers	1.52	242	P	Pn	20 22 59.9	-0.2
ATHU	Athens Univers	1.52	242	P	Pn	20 22 59.8	-0.3
VLY	Voula,Athens	1.57	238	P	Pn	20 23 00.3	-0.5
VLY				S	Sb	20 23 21.8	-0.1
VLY				AML	AML	20 23 29.1	
	comp=E,2210µm,0.6s						
VLY				AML	AML	20 23 30.9	
	comp=N,2622µm,0.7s						
VLY	Voula,Athens	1.57	238	P	Pn	20 23 00.5	-0.3
APE	Apeiranthos	1.63	178	PN	Pn	20 23 00.8	-1.0
APE	Apeiranthos	1.63	178	P	Pn	20 23 00.6	-1.2
APE	Apeiranthos	1.63	178	⇑*i*P	Pn	20 23 00.9	-0.8
APE	Apeiranthos	1.63	178	S	Sb	20 23 23.7	0.0
APE	Apeiranthos	1.63	178	P	Pn	20 23 00.7	-1.0
SKIA	Skiathos	1.63	287	P	Pn	20 23 01.8	+0.1
SKIA	Skiathos	1.63	287	P	Pn	20 23 01.7	-0.1
GCAM	G?zelcaml?	1.71	125	PN	Pn	20 23 02.7	-0.1
GCAM	G?zelcaml?	1.71	125	*i* P	Pb	20 23 03.9	-0.7
SMTH	Samothraki Isl	1.77	1	P	Pn	20 23 03.6	0.0
SMTH	Samothraki Isl	1.77	1	P	Pn	20 23 02.5	-1.2
SMTH				S	Sn	20 23 25.2	-0.8
SMIA	Simia	1.78	277	P	Pn	20 23 03.9	+0.2
VILL	Villia	1.78	253	P	Pn	20 23 04.1	+0.3
VIL2	Platees	1.80	255	P	Pn	20 23 04.1	+0.1
AKHS	Akhisar	1.84	84	*i* P	Pn	20 23 05.5	+0.9
AKS	Akhisar	1.84	84	PN	Pn	20 23 04.9	+0.3
NEO	Neokhori	1.85	290	P	Pn	20 23 04.5	-0.3
NEO	Neokhori	1.85	290	P	Pn	20 23 04.7	-0.1
PAIG	Paliouri	1.85	312	P	Pn	20 23 04.3	-0.5
PAIG	Paliouri	1.85	312	P	Pn	20 23 04.5	-0.3
GELI	Tayfur-Gelibol	1.87	24	PN	Pn	20 23 04.5	-0.4
STEP	BALIKESIR_Sava	1.88	68	*i* P	Pn	20 23 05.1	0.0
STEP				IAML_P			
	comp=Z,7µm,0.1s						
AMGA	Amorgos Island	1.89	170	P	Pn	20 23 05.1	-0.3
AMGA	Amorgos Island	1.89	170	P	Pn	20 23 04.9	-0.5
XOR	Xorichti	1.90	291	P	Pn	20 23 05.0	-0.4
XOR	Xorichti	1.90	291	P	Pn	20 23 05.7	+0.3
GOMA	Golmarmara-Man	1.91	89	PN	Pn	20 23 05.7	+0.1
ATAL	Atalanti	1.92	271	P	Pn	20 23 05.8	+0.1
ATAL	Atalanti	1.92	271	P	Pn	20 23 05.7	+0.1
LPK	Lapseki	1.95	30	PN	Pn	20 23 05.7	-0.4
THAS	Thassos island	1.99	343	P	Pn	20 23 05.8	-0.8
THAS	Thassos island	1.99	343	P	Pn	20 23 05.9	-0.8
OUR	Ouranopolis	2.00	325	PN	Pn	20 23 06.6	-0.1
OUR	Ouranopolis	2.00	325	P	Pn	20 23 06.6	-0.1
AYDB	Zeytinkoy-Aydi	2.05	111	PN	Pn	20 23 07.4	-0.1
LTK	Loutraki	2.08	252	P	Pn	20 23 08.4	+0.5
LOUT	Loutraki	2.09	251	P	Pn	20 23 08.5	+0.5
ENEZ	Enez	2.10	14	PN	Pn	20 23 07.9	-0.3
DID	Didima	2.13	237	P	Pn	20 23 08.5	-0.1
ERIK	Erikli-Kesan	2.13	22	PN	Pn	20 23 08.2	-0.3
AYDN	Tasoluk	2.16	118	*i* P	Pb	20 23 11.7	-0.7
MHLO	Agia Marina, M	2.18	203	P	Pn	20 23 09.5	+0.3
GONE	Gonen-Balikesi	2.18	51	PN	Pn	20 23 09.3	0.0
BODT	Bodrum	2.19	138	PN	Pn	20 23 09.6	+0.1
BODT	Bodrum	2.19	138	P	Pn	20 23 09.5	+0.1
KRBG	Karabiga-Canak	2.20	39	PN	Pn	20 23 09.1	-0.5
ALN	Alexandroupoli	2.24	11	PN	Pn	20 23 09.2	-0.9
ALN	Alexandroupoli	2.24	11	P	Pn	20 23 09.6	-0.5
ALN	Alexandroupoli	2.24	11	P	Pn	20 23 09.2	-0.9
THR2	Thira island,	2.25	181	P	Pn	20 23 09.4	-0.8
THR2	Thira island,	2.25	181	P	Pn	20 23 09.5	-0.8
KRND	KRANIDI	2.25	235	P	Pn	20 23 09.6	-0.7
SAP3	Santorini-Thir	2.26	183	P	Pn	20 23 10.0	-0.4
SAP3	Santorini-Thir	2.26	183	P	Pn	20 23 09.8	-0.6
THR5	Thira Island,	2.28	183	P	Pn	20 23 09.9	-0.7
THR5	Thira Island,	2.28	183	P	Pn	20 23 10.2	-0.4
THR3	Thira Island,	2.29	181	P	Pn	20 23 10.2	-0.5
THR3	Thira Island,	2.29	181	P	Pn	20 23 10.7	0.0
PLG	Polygyros	2.29	318	P	Pn	20 23 11.1	+0.2
MLSB	Milas	2.30	127	PN	Pn	20 23 11.1	+0.2
KESN	Edirne-Kesan	2.32	23	*i* P	Pn	20 23 11.5	0.0
KESN				*i* S	Sn	20 23 39.7	-0.3
KESN				IAML_P			
	comp=Z,2µm,0.4s						
SANT	Santorini	2.32	180	PN	Pn	20 23 10.5	-0.8
SANT	Santorini	2.32	180	⇑*i*P	Pn	20 23 12.0	+0.7
SANT	Santorini	2.32	180	S	Sb	20 23 41.9	-1.8
DSF	Desfina	2.33	264	P	Pn	20 23 11.3	0.0
RKY	Sarkoy-Tekirda	2.38	33	PN	Pn	20 23 12.1	0.0
SART	Tekirdag	2.38	33	*i* P	Pb	20 23 15.5	-0.7
KVLA	Kavala	2.39	340	P	Pn	20 23 11.9	-0.2
KAVA	Kavala	2.41	342	P	Pn	20 23 11.8	-0.6
KAVA	Kavala	2.41	342	P	Pn	20 23 11.9	-0.6
MANT	Manisa	2.43	94	*i* P	Pn	20 23 13.3	+0.5
RDO	Rodhopi	2.44	1	PN	Pn	20 23 12.3	-0.7
RDO	Rodhopi	2.44	1	P	Pn	20 23 12.0	-0.9
RDO	Rodhopi	2.44	1	P	Pn	20 23 12.2	-0.7
AGG	Agios Georgios	2.47	278	PN	Pn	20 23 12.8	-0.5
AGG	Agios Georgios	2.47	278	P	Pn	20 23 13.9	+0.6
EDC	Edincik	2.48	48	PN	Pn	20 23 13.1	-0.3
DURS	Dursunbey	2.50	68	*i* P	Pn	20 23 14.4	+0.7
DURS				IAML_P			
	comp=Z,1µm,0.1s						
KULA	Kula-Manisa	2.51	93	PN	Pn	20 23 13.9	+0.1
KULA	Kula-Manisa	2.51	93	P	Pn	20 23 14.1	+0.3
DEMI	Demirci	2.56	81	*i* P	Pn	20 23 15.6	+1.1
DAT	Datca	2.58	139	PN	Pn	20 23 14.9	0.0
HORT	Hortiatis	2.64	317	P	Pn	20 23 16.0	+0.3
ALIK	Aliki, Aigiali	2.67	262	P	Pn	20 23 16.9	+0.9
SOH	Sokhos	2.67	323	P	Pn	20 23 16.3	+0.2
SOH	Sokhos	2.67	323	P	Pn	20 23 16.4	+0.2
TRIZ	Trizonia	2.69	264	P	Pn	20 23 16.9	+0.7
YER	Yerkesik	2.72	124	PN	Pn	20 23 16.7	0.0
KCTX	Karacabey (Bur	2.73	54	PN	Pn	20 23 16.4	-0.4
VLX	Vlachokerasia	2.78	242	P	Pn	20 23 17.4	-0.2
ANX	Ano Chora	2.78	269	P	Pn	20 23 18.7	+1.1
TKR	Tekirdag	2.79	34	PN	Pn	20 23 17.2	-0.4
VLI	Veliai	2.82	226	P	Pn	20 23 17.9	-0.2
THL	Klokotos Trika	2.82	289	P	Pn	20 23 18.5	+0.4
NVR	Nevrokopi	2.92	335	P	Pn	20 23 19.4	-0.1
ORLT	Orhaneli	2.98	62	PN	Pn	20 23 20.4	+0.1
CRLT	Corlu	2.99	35	PN	Pn	20 23 20.2	-0.2
DRO	Drossia	3.05	257	P	Pn	20 23 22.8	+1.5
TURN	Turunc	3.08	125	PN	Pn	20 23 19.7	-1.9
GEDZ	Gediz	3.09	82	PN	Pn	20 23 22.4	+0.5
MDNY	Mudanya-Bursa	3.12	57	PN	Pn	20 23 22.3	+0.1
DALY	Dalyan (Mula)	3.15	126	PN	Pn	20 23 22.9	+0.4
KNT	Kendrikon	3.16	322	P	Pn	20 23 23.5	+0.8
TVSB	Tavsanli	3.19	75	PN	Pn	20 23 24.1	+0.8
ARMT	Armutlu	3.21	53	PN	Pn	20 23 23.6	+0.1
ARG	Arkhangelos	3.26	139	PN	Pn	20 23 24.5	+0.4
KIRK	Kırklareli	3.32	21	*i* P	Pn	20 23 24.9	0.0
KARP	Karpathos	3.42	156	PN	Pn	20 23 26.6	+0.2
IDI	Anoyia	3.44	188	⇑*i*P	Pn	20 23 26.4	-0.2
IDI	Anoyia	3.44	188	Pn	Pn	20 23 26.5	-0.1
	comp=Z,3.4nm,0.3s,baz=350,slow=9.8,SNR=15						
IDI				Lg	Lg	20 24 21.7	
	comp=Z,2.3nm,0.3s,baz=290,slow=18,SNR=1.8						
VAY	Valandovo	3.44	321	*i* Pn	Pn	20 23 27.9	+1.3
VAY	Valandovo	3.44	321	*i* Pn	Pn	20 23 27.5	+0.9
FETY	Fethiye	3.53	125	PN	Pn	20 23 28.9	+1.0
STIP	Stip	3.91	321	*i* Pn	Pn	20 23 32.5	-0.6
STIP	Stip	3.91	321	*i* Pn	Pn	20 23 33.2	+0.1
KRUS	Krusevo	4.20	311	*i* Pn	Pn	20 23 37.8	+0.7
KRUS	Krusevo	4.20	311	*i* Pn	Pn	20 23 36.8	-0.3
VTS	Vitosha	4.27	337	⇑*i*P	Pn	20 23 39.0	+0.9
TLB	Topalu	6.19	17	⇑*i*P	Pn	20 24 04.5	+0.2
BRTR	Keskin Array B	6.42	78	Pn	Pn	20 24 09.1	+1.3
	comp=Z,0.4nm,0.3s,baz=254,slow=13,SNR=16						
BRTR				Lg	Lg	20 25 55.5	
	baz=261,slow=24,SNR=2.4						
HERR	Herculane	6.58	341	⇓*i*P	Pn	20 24 09.1	-0.7
ARR	Arges	6.69	355	⇑*i*P	Pn	20 24 11.8	+0.5
MDVR	Moldovita	6.70	336	⇓*i*P	Pn	20 24 11.7	+0.3
VOIR		6.74	357	⇓*i*P	Pn	20 24 12.3	+0.3
MLR	Muntele Rosu	6.80	3	⇑*i*P	Pn	20 24 13.6	+0.8
MLR	Muntele Rosu	6.80	3	Pn	Pn	20 24 14.2	+1.4
	comp=Z,0.4nm,0.3s,baz=130,slow=17,SNR=7.9						
GZR	Gura Zlata	6.98	344	⇓*i*P	Pn	20 24 15.3	0.0
PLOR	Plostina	7.20	7	⇓*i*P	Pn	20 24 19.6	+1.3
VRI	Vrincioaia	7.22	7	⇑*i*P	Pn	20 24 20.5	+1.9
DOPR	Dopca	7.26	360	⇑*i*P	Pn	20 24 20.1	+1.0
OZUR		7.40	2	⇑*i*P	Pn	20 24 21.6	+0.6
TESR	Tescani	7.86	6	⇑*i*P	Pn	20 24 29.0	+1.8
BIZ	Bicaz	8.25	3	⇑*i*P	Pn	20 24 33.8	+1.2
DRGR		8.34	347	⇑*i*P	Pn	20 24 34.0	+0.1
BURAR	Bucovina Array	8.91	359	⇑*i*P	Pn	20 24 43.2	+1.4
MMAI	Mount Meron Ar	9.85	122	Pn	Pn	20 24 54.2	-0.5
	comp=Z,0.8nm,0.3s,baz=306,slow=11,SNR=8.0						
MMAI				Sn	Sn	20 26 39.5	-5.6
	comp=Z,0.7nm,0.3s,baz=284,slow=25,SNR=3.3						
GNI	Garni	14.97	78	LR	LR	20 32 01.7	
	comp=Z,42nm,18.3s,baz=315,slow=38						
HFS	Hagfors	22.71	345	P	P	20 27 35.1	+0.6
	comp=Z,1.1nm,0.8s,baz=148,slow=11,SNR=3.3						
FINES	FINESS Array B	22.77	1	P	P	20 27 36.1	+1.0
	comp=Z,1.0nm,0.7s,baz=167,slow=13,SNR=3.8						
ESDC	Sonseca Array	22.79	282	P	P	20 27 37.3	+1.6
	comp=Z,0.5nm,0.5s,baz=82,slow=10,SNR=8.2						
NB2	NORSAR Subarra	24.07	343	P	P	20 27 48.4	+0.3
	comp=Z,1.1nm,0.8s,baz=147,slow=10						
MDT	Midelt	25.04	266	P	P	20 27 59.4	+2.1
	comp=Z,0.6nm,0.6s,baz=102,slow=12,SNR=3.6						
TORD	Torodi Ar. Bea	33.04	226	P	P	20 29 09.4	+0.9
	comp=Z,0.5nm,0.7s,baz=44,slow=9.3,SNR=4.0						
MKAR	Makanchi Array	41.70	60	P	P	20 30 21.9	+0.3
	comp=Z,0.4nm,0.6s,baz=280,slow=7.9,SNR=5.8						
ZALV	Zalesovo Beam	42.43	49	P	P	20 30 28.0	+0.5
	comp=Z,0.4nm,0.5s,baz=292,slow=7.6,SNR=2.4						
NRIK	Noril'sk	44.59	27	LR	LR	20 51 28.7	
	comp=Z,28nm,19.1s,baz=47,slow=39						
YKA	Yellowknife Ar	74.17	342	P	P	20 34 09.1	+0.1
	comp=Z,0.2nm,0.6s,baz=29,slow=5.1,SNR=5.0						

IDC 15 20:24:34.2±19.0**,65°.94S**×**133°.58E,h0**km**,mb3.1**/2**, mb1 3.7**/3**,mb1mx3.6**/32**,mbtmp3.4**/3**,ML3.4**/1**,Error ellipse: s-maj=1255.0km s-min=41.2km az=75.0,South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	14.35	155	Pn	Pn	20 27 58.2	0.0
	0.2nm,0.3s,baz=302,slow=16,SNR=4.5						
VNDA				Sn	Sn	20 30 33.6	-4.2
	0.2nm,0.3s,baz=213,slow=17,SNR=3.2						
H01W2	Cape Leeuwin H	33.15	330	T	T	21 06 08.7	
	baz=165,slow=76,SNR=6.9						
H01W1	Cape Leeuwin H	33.15	330	T	T	21 06 07.4	
	baz=165,slow=76,SNR=7.6						
H01W3	Cape Leeuwin H	33.16	330	T	T	21 06 07.8	
	baz=165,slow=76,SNR=5.8						
ASAR	Alice Springs	42.27	0	P	P	20 32 29.5	+0.4
	0.1nm,0.5s,baz=172,slow=7.5,SNR=4.4						
WRA	Warramunga Arr	45.98	1	P	P	20 32 58.2	-0.6
	0.3nm,0.8s,baz=181,slow=6.7,SNR=5.0						

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*IDC **15** 20:27:39.6±5.5,22°.49S×68°.06W,h0km,mb4.0/1, mb1 4.0/2,mb1mx3.6/22,mbtmp3.9/2,ML3.9/1,Error ellipse: s-maj=159.7km s-min=53.1km az=65.0*
*ISCJB **15** 20:27:55.5±0.8,21°.40S±0°.04×68°.7W±0°.1,h137km±11km, mb3.6/1,Error ellipse: s-maj=22.3km s-min=6.1km az=3.6*
*GUC **15** 20:27:55.1±0.6,21°.38S×68°.64W,h133km±5km,ML3.4*
ISC 15 20:27:55.9±1.1**,21°.40S**±0°.04×**68°.7W**±0°.1**,h137**km±11km**, n16,**σ**0ˢ65**/26**,8C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.65	233	⇑*i*P	Pn	20 28 16.5	-0.3
PB09				*e*S	Sn	20 28 32.9	+0.1
PB09				IAML		20 28 35.0	
	comp=E,506nm,0.3s						
PB01	IPOC Station P	0.83	295	⇑*i*P	Pn	20 28 17.6	-0.5
PB01				*i* S	Sn	20 28 34.1	-0.7
PB01				IAML		20 28 36.5	
	comp=E,2µm,0.2s						
PB02	IPOC Station P	1.13	274	⇑*i*P	Pn	20 28 21.0	+0.3
PB02				*i* S	Sn	20 28 40.5	+0.8
PB02				IAML		20 28 46.1	
	comp=E,2µm,0.2s						
PB07	IPOC Station P	1.17	254	⇑*i*P	Pn	20 28 21.5	+0.3
PB07				*i* S	Sn	20 28 41.0	+0.6
PB07				IAML		20 28 42.4	
	comp=N,980nm,0.1s						
PB03	IPOC Station P	1.19	237	⇑*i*P	Pn	20 28 21.5	+0.2
PB03				*i* S	Sn	20 28 41.3	+0.6
PB03				IAML		20 28 42.2	
	comp=N,1µm,0.4s						
PB08	IPOC Station P	1.33	341	⇑*i*P	Pn	20 28 23.1	0.0
PB08				*i* S	Sn	20 28 43.4	-0.2
PB08				IAML		20 28 46.6	
	comp=N,363nm,0.7s						
PB06	IPOC Station P	1.54	212	⇑*i*P	Pn	20 28 25.1	+0.1
PB06				*i* S	Sn	20 28 47.6	+0.3
PB06				IAML		20 28 49.1	
	comp=E,424nm,0.2s						
PB04	IPOC Station P	1.65	235	*e*P	Pn	20 28 26.5	+0.3
PB04				IAML		20 28 57.5	
	comp=N,407nm,0.1s						
PB11	IPOC Station P	1.87	331	*e*P	Pn	20 28 28.6	-0.2
PB11				*i* S	Sn	20 28 54.3	+0.3
PB11				IAML		20 28 59.2	
	comp=E,315nm,0.2s						
PB15	IPOC Station P	1.94	202	*e*P	Pn	20 28 29.8	0.0
PB15				*i* S	Sn	20 28 57.0	+1.3
PB05	IPOC Station P	2.02	224	*e*P	Pn	20 28 30.9	+0.3
PB05				IAML		20 29 07.8	
	comp=E,183nm,0.4s						
PSGC	Pisagua	2.24	323	*e*P	Pn	20 28 33.0	-0.3
PSGC				IAML		20 29 07.3	
	comp=E,115nm,0.2s						
MNMC	Minye Minye	2.41	339	⇑*i*P	Pn	20 28 36.1	+0.5
MNMC				*i* S	Sn	20 29 06.9	+0.8
MNMC				IAML		20 29 14.5	
	comp=E,296nm,0.5s						
LPAZ	La Paz	5.11	6	Pn	Pn	20 29 12.6	+1.4
	comp=E,1.5nm,0.3s,baz=179,slow=5.3,SNR=20						
TORD	Torodi Ar. Bea	77.12	70	P	P	20 39 34.5	-0.3
	comp=E,1.0nm,0.6s,baz=250,slow=5.3,SNR=12						
MKAR	Makanchi Array	145.43	36	PKPbc	PKiKP	20 47 20.3	-1.3
	comp=E,0.2nm,0.6s,baz=318,slow=2.7,SNR=3.9						

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*DJA **15** 20:27:58.4±1.1,5°N±7°×9°6E±°,h10km,M4.0/4,MLv4.0/4*
*ISCJB **15** 20:28:02.5±0.6,4°.98N±0°.06×95°.83E±0°.06,h29km, mb3.7/9,MS3.2/1,Error ellipse: s-maj=10.5km s-min=6.9km az=135.3*
*IDC **15** 20:28:08.0±3.2,4°.95N×96°.04E,h67km±28km,mb3.5/9, mb1 3.6/11,mb1mx3.4/50,mbtmp3.7/11,ML3.4/2,MS2.9/3, Ms1 3.0/3,ms1mx2.7/30,Error ellipse: s-maj=47.4km s-min=13.2km az=53.0*
ISC 15 20:28:04.3±0.7**,5°.00N**±0°.07×**95°.91E**±0°.07**,h29**km**,n20,** σ**1ˢ47**/20**,mb3.9**/9**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.06	78	P	Pn	20 28 20.8	-2.4
LHMI				S	Sb	20 28 37.5	0.0
KCSI	Kotacane, Aceh	2.37	128	P	Pn	20 28 42.6	+1.4
KCSI				S	Sb	20 29 14.9	-0.2
SNSI	Sinabang, Aceh	2.61	171	P	Pn	20 28 43.6	-0.9
TSI	Tuntungan	3.04	119	P	Pb	20 28 57.3	-0.4
PSI	Prapat	3.72	126	P	Pn	20 29 02.0	+2.1
	3.8nm,0.3s,baz=360,slow=11,SNR=18						
PSI				S	Sn	20 29 44.6	+1.8
	5.1nm,0.3s,baz=0.3,slow=4.2,SNR=4.0						
PSI				LR	LR	20 30 26.2	
	comp=Z,96nm,21.0s,baz=91,slow=38						
GSI	Gunungsitoli	4.03	156	P	Pn	20 29 04.6	+0.5
CMAR	Chiang Mai Arr	13.70	12	P	Pn	20 31 19.5	+2.8
	0.1nm,0.3s,baz=199,slow=10,SNR=3.4						
CMAR				LR	LR	20 36 59.2	
	comp=Z,43nm,19.9s,baz=170,slow=39						
PALK	Pallekele	15.29	279	S	Sn	20 34 16.8	-10
	0.4nm,0.3s,baz=118,slow=2.6,SNR=4.3						
H08S2	Diego Garcia H	26.53	242	T	T	21 00 47.1	
	baz=62,slow=74,SNR=4.1						
H08S3	Diego Garcia H	26.53	242	T	T	21 00 44.9	
	baz=62,slow=74,SNR=37						
H08S1	Diego Carcia H	26.54	242	T	T	21 00 45.8	
	baz=62						
FITZ	Fitzroy Crossi	37.24	129	P	P	20 35 11.5	-2.1
	1.6nm,0.8s,baz=349,slow=10,SNR=4.7						
MKAR	Makanchi Array	43.27	346	P	P	20 36 03.2	-0.1
	0.1nm,0.4s,baz=166,slow=8.0,SNR=7.4						
SONM	Songino Array	43.62	10	P	P	20 36 06.0	-0.1
	0.4nm,0.7s,baz=186,slow=7.7,SNR=4.3						
WRA	Warramunga Arr	45.18	124	P	P	20 36 17.4	-1.6
	0.8nm,0.7s,baz=302,slow=9.4,SNR=19						
WRA				PcP	PcP	20 37 57.7	-1.4
	0.2nm,0.6s,baz=314,slow=2.7,SNR=2.9						
ASAR	Alice Springs	46.74	129	P	P	20 36 30.0	-1.3
	2.3nm,0.6s,baz=300,slow=7.8,SNR=35						
GEYT	Alibeck	47.50	319	P	P	20 36 38.3	+1.2
	1.0nm,0.5s,baz=146,slow=10,SNR=3.0						
GEYT				LR	LR	20 57 35.6	
	comp=Z,29nm,19.5s,baz=15,slow=37						
BRTR	Keskin Array B	65.63	311	P	P	20 38 45.9	-0.3
	0.4nm,0.7s,baz=121,slow=5.4,SNR=3.0						
FINES	FINESS Array B	76.06	332	P	P	20 39 48.3	-0.6
	1.2nm,0.9s,baz=96,slow=7.1,SNR=3.8						
ARCES	ARCESS Array B	78.55	340	P	P	20 40 02.6	0.0
	1.0nm,0.7s,baz=101,slow=4.9,SNR=3.9						

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*ISCJB **15** 20:43:10.0±1.0,28°.59S±0°.04×71°.18W±0°.10,h52km±10km, Error ellipse: s-maj=14.7km s-min=6.5km az=13.0*
*GUC **15** 20:43:10.5±0.6,28°.73S×70°.58W,h56km±6km,ML3.1*
*SJA **15** 20:43:11.2±0.4,28°.71S×71°.05W,h51km±4km,ML2.7, MW2.9*
ISC 15 20:43:12.2±1.5**,28°.65S**±0°.04×**71°.1W**±0°.1**,h46**km±12km**, n18,**σ**1ˢ26**/23**,1C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	Vallenar	0.27	75	*e*P	Pn	20 43 20.6	-0.2
VACH				*i* S	Sn	20 43 27.4	+0.7
VACH				IAML		20 43 27.9	
	comp=E,4µm,0.1s						
LCO	Las Campanas	0.48	140	*e*P	Pn	20 43 22.9	-0.4
LCO				*e*S	Sn	20 43 31.3	+0.2
LCO	Las Campanas	0.48	140	⇑*i*P	Pn	20 43 22.7	-0.5
LCO				*e*S	Sn	20 43 31.1	0.0
LCO				IAML		20 43 31.4	
	comp=E,1µm,0.4s						
GO03	Copiap	1.27	35	*e*P	Pn	20 43 32.4	-1.3
GO03				*e*S	Sn	20 43 48.3	-1.3
GO03				IAML		20 43 52.8	
	comp=E,275nm,0.2s						
GO04	Tololo Observa	1.54	172	*e*P	Pn	20 43 36.8	-0.7
GO04				*e*S	Sn	20 43 56.1	-0.2
GO04	Tololo Observa	1.54	172	*e*P	Pn	20 43 36.8	-0.7
GO04				*i* S	Sn	20 43 56.2	-0.2
GO04				IAML		20 43 59.8	
	comp=E,762nm,0.5s						
AROD	Rodeo	2.05	138	*e*P	Pn	20 43 45.0	+0.5
AGUA	GUANDACOL	2.40	111	*e*P	Pn	20 43 50.4	+1.4
AGUA				*e*S	Sn	20 44 19.9	+2.6
CMCH	Combarbala	2.52	179	*i* P	Pn	20 43 50.0	-0.7
CMCH				*e*S	Sn	20 44 20.2	-0.1
CMCH				IAML		20 44 27.6	
	comp=E,208nm,0.6s						
ACCO	Cerro Coronel	2.60	139	*e*P	Pn	20 43 52.9	+0.9
AMOG	MOGNA	3.19	136	*e*P	Pn	20 44 00.5	+0.5
RTLS	Leoncito	3.49	155	*e*P	Pn	20 44 05.7	+1.4
RTLS				IAML		20 44 09.1	
	comp=Z,13nm,0.2s						
GO02	Mina Guanaco	3.71	21	*i* P	Pn	20 44 06.6	-0.7
GO02				*e*S	Sn	20 44 53.9	+4.1
AUSP	Uspallata	3.84	158	*e*P	Pn	20 44 10.6	+1.4
ROCH	El Roble	4.31	180	*e*P	Pn	20 44 14.7	-0.7
APLL	PUNTA DE LOS L	4.31	115	*e*P	Pn	20 44 14.1	-1.2
APLL				IAML		20 45 09.2	
	comp=Z,7.6nm,0.4s						
ASAL	Salagasta	4.37	155	*e*P	Pn	20 44 17.3	+1.2
CYA	Choya	4.63	89	*e*P	Pn	20 44 18.4	-1.3
CYA				IAML		20 45 16.8	
	comp=Z,6.1nm,0.3s						

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*SOME **15** 20:43:14.3,42°.57N×79°.65E,h15km*
*KRNET **15** 20:43:14.7±0.1,42°.60N×79°.66E,h19km,mb2.7*
NNC 15 20:43:14.3±1.2**,42°.59N**×**79°.66E,h0**km**,mb2.7,mpv2.5, 10C-6D,Error ellipse: s-maj=7.8km s-min=4.5km az=130.0,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.73	320	P	Pg	20 43 28.3	0.0
	3.8nm,0.1s						
UZB				S	Sg	20 43 38.5	+0.7
	17nm,0.2s						
UZB	Uzynbulak	0.73	320	*e*P	Pg	20 43 28.3	-0.1
	baz=20						
UZB				*e*S	Sg	20 43 38.5	+0.7
	baz=20						
UZB	Uzynbulak	0.73	320	*e*P	Pg	20 43 28.3	0.0
	3.8nm,0.1s						
UZB				*e*S	Sg	20 43 38.5	+0.7
	17nm,0.2s						
PDGK	Podgornoye	0.75	350	P	Pg	20 43 28.9	+0.2
	2.6nm,0.2s						
PDGK				S	Sg	20 43 39.4	+0.9
	5.6nm,0.2s						
PDGK	Podgornoye	0.75	350	⇓P	Pg	20 43 28.9	+0.2
	2.9nm,0.9s						
PDGK				⇓S	Sg	20 43 39.5	+1.0
	6.6nm,0.5s						
PDGK	Podgornoye	0.75	350	⇑*i*P	Pg	20 43 28.9	+0.2
	baz=50						
PDGK				⇑*i*S	Sg	20 43 39.5	+1.0
	baz=50						
PRZ	Przheval'sk	0.94	264	⇑*i*P	Pg	20 43 32.5	+0.2
	baz=63						
PRZ				⇑*i*S	Sg	20 43 44.8	+0.3
	baz=63						
KTMS	Ketmen	1.00	30	P	Pg	20 43 33.4	0.0
	4.0nm,0.1s						
KTMS				S	Sg	20 43 47.2	+0.8
	8.4nm,0.1s						
KTMS	Ketmen	1.00	30	*e*P	Pg	20 43 33.4	0.0
	baz=30						
KTMS				*e*S	Sg	20 43 47.2	+0.9
	baz=30						
KTMS	Ketmen	1.00	30	*e*P	Pg	20 43 33.4	0.0
	1.3nm,0.1s						
KTMS				*e*S	Sg	20 43 47.2	+0.8
	8.4nm,0.1s						
SATY	Saty	1.04	297	*e*P	Pg	20 43 34.0	-0.3
	20nm,1.2s						
SATY				*e*S	Sg	20 43 48.0	+0.3
	5.7nm,0.2s						
DJR	Jarkent	1.75	3	P	Pn	20 43 46.5	+0.5
	0.6nm,0.3s						
DJR				S	Sg	20 44 10.4	0.0

	3.0nm,0.3s						
DJR	Jarkent	1.75	3	eP	Pb	20 43 46.9	-0.4
	0.3nm,0.1s						
DJR				eS	Sg	20 44 10.4	0.0
	1.9nm,0.3s						
MNBS	Baschi	1.75	329	P	Pn	20 43 46.7	+0.6
	2.0nm,0.2s						
MNBS				S	Sn	20 44 09.4	+0.2
KDJ	Kajisay	1.90	257	⇑iP	Pb	20 43 49.4	-0.5
	baz=56						
KDJ				⇑iS	Sb	20 44 14.4	+0.2
	baz=56						
KOTS	Kotyrbulak	1.98	290	Pg	Pb	20 43 50.5	-0.8
	2.3nm,0.3s						
KOTS				Lg	Lg	20 44 16.6	
	4.6nm,0.4s						
KOTS	Kotyrbulak	1.98	290	eP	Pb	20 43 50.6	-0.8
	baz=90						
KOTS				eS	Sb	20 44 16.7	0.0
	baz=90						
KOTS	Kotyrbulak	1.98	290	eP	Pb	20 43 50.5	-0.8
	2.3nm,0.3s						
KOTS				eS	Sb	20 44 16.6	-0.1
	4.6nm,0.4s						
MDOK	Medeo	2.01	288	⇓Pn	Pn	20 43 50.2	+0.6
	1.9nm,0.6s						
MDOK				⇑Sn	Sb	20 44 17.2	-0.1
	3.7nm,0.8s						
TNSS	Tian-Shan	2.05	284	Pg	Pn	20 43 51.1	+0.7
	1.7nm,0.2s						
TNSS				Lg	Lg	20 44 17.8	
	2.3nm,0.2s						
TNSS	Tian-Shan	2.05	284	eP	Pn	20 43 51.1	+0.7
	baz=83						
TNSS				eS	Sn	20 44 17.7	+0.8
	baz=83						
TNSS	Tian-Shan	2.05	284	eP	Pn	20 43 51.1	+0.7
	1.7nm,0.2s						
TNSS				eS	Sn	20 44 17.8	+0.9
	2.3nm,0.2s						
IZV	Izvestkoviy	2.29	282	Pg	Pn	20 43 55.0	+1.4
IZV				Lg	Lg	20 44 23.9	
IZV	Izvestkoviy	2.29	282	eP	Pb	20 43 55.4	-1.2
	baz=82						
IZV				eS	Sb	20 44 25.1	-0.4
	baz=82						
IZV	Izvestkoviy	2.29	282	eP	Pb	20 43 55.4	-1.2
	4.2nm,0.2s						
IZV				eS	Sb	20 44 25.1	-0.4
	4.2nm,0.4s						
ULHL	Ulahol	2.56	263	⇑iP	Pn	20 43 58.9	+1.7
	baz=63						
ULHL				⇑iS	Sb	20 44 31.5	-1.8
	baz=63						
KAPS	Kapalarasan	2.71	355	Pg	Pb	20 44 02.2	-1.4
	0.7nm,0.9s						
KAPS				Lg	Lg	20 44 36.3	
	2.2nm,0.5s						
BOOM	Boomskoye usch	2.75	269	⇓iP	Pn	20 44 01.2	+1.3
	baz=69						
BOOM				⇓iS	Sn	20 44 35.9	+2.0
	baz=69						
TKM2	Tokmak 2	3.01	278	⇓Pg	Pb	20 44 08.1	-0.8
	0.4nm,0.5s						
TKM2				⇑Lg	Lg	20 44 47.3	
	1.0nm,0.6s						

IDC 15 21:10:26.6±3.3**,6°.55S×148°.15E,h0^{km},mb3.2**/2**,**
mb1 3.5/3**,mb1mx3.2**/30**,mbtmp3.3**/3**,ML3.4**/1**,Error**
ellipse: s-maj=107.7km s-min=29.2km az=107.0,New
Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.90	224	P	P	21 14 47.6	-1.4
	0.1nm,0.3s,baz=50,slow=11,SNR=9.7						
ASAR	Alice Springs	21.85	217	P	P	21 15 21.4	+0.5
	0.5nm,0.5s,baz=52,slow=8.6,SNR=12						
SONM	Songino Array	65.44	330	P	P	21 21 11.3	-0.2
	0.2nm,0.5s,baz=121,slow=6.4,SNR=3.2						
TORD	Torodi Ar. Bea	146.33	284	PKPbc	PKPbc	21 30 10.2	-0.3
	0.2nm,0.6s,baz=71,slow=4.0,SNR=3.5						

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*ISCJB **15** 21:10:46.0±0.3,43°.80N±0°.02×105°.25W±0°.03,h0^{km},*
mb3.8/3,Error ellipse: s-maj=3.5km s-min=3.0km az=17.9
*NEIC **15** 21:10:47.5±0.3,43°.82N×105°.24W,h0^{km},ML3.2,Error*
ellipse: s-maj=4.9km s-min=4.1km az=99.0,Suspected
Mining explosion.
NEIC 56 km [35 miles] SSE of Gillette.
*IDC **15** 21:10:50.9±2.7,43°.93N×105°.78W,h26^{km}±20^{km},mb3.5/3,*
mb1 3.6/8,mb1mx3.4/45,mbtmp3.5/8,ML3.3/5,Error
ellipse: s-maj=44.3km s-min=10.0km az=146.0
ISC 15 21:10:46.9±0.6**,43°.81N**±0°.03×**105°.32W**±0°.04**,h0^{km},n84,**
σ1^{s}**55**/92**,mb3.7**/3**,Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.97	71	ePg	Pg	21 11 06.4	+0.9
RSSD				eSg	Sg	21 11 17.1	-1.1
K22A	Casper	1.46	218	ePn	Pn	21 11 13.1	-1.6
K22A				eSg	Sg	21 11 33.2	-0.6
PHWY	Pilot Hill	2.51	182	ePn	Pn	21 11 30.3	+1.0
PHWY				eSn	Sn	21 12 00.2	-0.6
RWWY	Rawlins	2.54	214	ePn	Pn	21 11 30.1	+0.4
RWWY				eSn	Sn	21 12 01.4	0.0
LAO	LASA Array	2.94	348	ePn	Pn	21 11 36.9	+1.8
LAO				eSn	Sn	21 12 12.3	+1.2
N23A	Red Feather La	2.95	189	ePn	Pn	21 11 36.3	+0.9
N23A				eSn	Sn	21 12 11.3	-0.3
RLMT	Red Lodge	3.12	296	ePn	Pn	21 11 38.3	+0.8
RLMT				eSn	Sn	21 12 16.8	+1.3
BW06	Boulder Array	3.27	253	ePn	Pn	21 11 41.5	+1.9
BW06				eSn	Sn	21 12 20.4	+1.0
PD31	Pinedale Array	3.27	253	ePn	Pn	21 11 40.9	+1.2
PD31				eLg	Lg	21 12 23.7	
PDAR	Pinedale Array	3.27	253	ePn	Pn	21 11 40.5	+0.9
PDAR				eSn	Sn	21 12 20.4	+1.1
PDAR	Pinedale Array	3.27	253	Pn	Pn	21 11 40.5	+0.9
	4.7nm,0.3s,baz=73,slow=15,SNR=42						
PDAR				Lg	Lg	21 12 23.7	
	6.8nm,0.3s,baz=76,slow=29,SNR=5.8						
GCMT	Greycliff	3.67	304	ePn	Pn	21 11 47.3	+2.2
OGNE	Ogallala	3.76	139	ePn	Pn	21 11 47.3	+1.1
H17A	Grant Village	3.83	281	ePn	Pn	21 11 50.1	+2.7
H17A				eSn	Sn	21 12 32.7	-0.6
LOHW	Long Hollow	3.84	269	ePn	Pn	21 11 49.3	+1.9
FLWY	Flagg Ranch	3.90	276	ePn	Pn	21 11 50.2	+1.9
MOOW	Moose Ponds	3.93	271	ePn	Pn	21 11 51.8	+3.1
SNOW	Snow King Moun	3.96	267	ePn	Pn	21 11 49.4	+0.2
YPP	Pitchstone Pla	3.98	278	ePn	Pn	21 11 50.8	+1.2
ISCO	Idaho Springs	4.02	183	ePn	Pn	21 11 51.3	+1.3
YFT	Old Faithful	4.02	281	ePb	Pb	21 11 58.4	-0.4
REDW	Red Top Meadow	4.05	266	ePb	Pb	21 11 59.0	-0.2
IMW	Indian Meadow	4.07	273	ePn	Pn	21 11 53.2	+2.6
YHH	Holmes Hill	4.09	286	ePn	Pn	21 11 54.5	+3.5
TPAW	Teton Pass	4.10	267	ePn	Pn	21 11 53.2	+2.1
FXWY	Fox Creek	4.14	270	ePn	Pn	21 11 53.5	+1.8
YMR	Madison River	4.15	284	ePb	Pb	21 12 02.5	+1.5
O20A	White River Ci	4.27	212	ePn	Pn	21 11 54.5	+1.1
QLMT	Earthquake Lak	4.50	285	ePn	Pn	21 11 57.1	+0.6
DGMT	Dagmar	4.72	9	ePn	Pn	21 12 02.4	+3.0
SMCO	Snowmass	4.80	196	ePb	Pb	21 12 13.2	+1.1
BOZ	Bozeman (W)	4.84	294	ePn	Pn	21 12 03.8	+2.7
Q24A	Divide	4.85	178	ePn	Pn	21 12 02.1	+0.7
HWUT	Hardware Ranch	5.11	247	ePn	Pn	21 12 05.2	+0.4
KSCO	Kaye Shedlock’	5.21	156	ePn	Pn	21 12 03.4	-2.7
EGMT	Eagleton	5.23	325	ePn	Pn	21 12 07.9	+1.5
TCUT	Toone Canyon	5.25	241	ePn	Pn	21 12 07.5	+0.6
DLMT	Dillon	5.42	289	ePn	Pn	21 12 09.4	+0.2
HRY	Holter Researc	5.43	304	ePn	Pn	21 12 09.3	0.0
LRM	Limekiln Ridge	5.46	294	ePn	Pn	21 12 13.2	+3.5
JLU	Jordanelle	5.57	237	ePn	Pn	21 12 12.7	+1.4
MDND	Maddock	5.67	43	ePn	Pn	21 12 10.5	-2.0
SPUT	South Promonto	5.83	247	ePn	Pn	21 12 15.6	+0.8
HVU	Hansel Valley	5.85	252	ePn	Pn	21 12 16.5	+1.5
PV21	Cone Mtn., Par	5.93	209	ePn	Pn	21 12 17.9	+1.7
PV07	Paradox Valley	5.93	206	ePn	Pn	21 12 18.0	+1.8
PV23	Carpenter Ridg	6.04	209	ePn	Pn	21 12 18.6	+0.8
PV09	Paradox Valley	6.04	210	ePn	Pn	21 12 19.1	+1.3
MPU	Maple Canyon	6.05	233	ePn	Pn	21 12 18.1	+0.2
PV04	Paradox Valley	6.05	208	ePn	Pn	21 12 20.0	+2.1
SDCO	Great Sand Dun	6.06	181	ePn	Pn	21 12 19.1	+1.0
PV12	Saucer Basin,	6.09	207	ePb	Pb	21 12 38.6	+4.6
SRU	San Rafael Swe	6.11	222	ePn	Pn	21 12 18.7	+0.1
PV14	Lion Creek, Pa	6.11	208	ePn	Pn	21 12 20.1	+1.4
PV10	Paradox Valley	6.12	209	ePn	Pn	21 12 20.6	+1.8
PV20	West Nyswonger	6.12	208	ePn	Pn	21 12 19.9	+1.1
PV11	David Mesa, Pa	6.13	207	ePn	Pn	21 12 19.0	+0.1
PV16	Nyswonger Mesa	6.13	208	ePn	Pn	21 12 19.6	+0.6
PV19	Morning Glory	6.16	208	ePn	Pn	21 12 19.0	-0.3
PV03	Paradox Valley	6.16	207	ePn	Pn	21 12 19.9	+0.6
PV02	Paradox Valley	6.17	206	ePn	Pn	21 12 21.0	+1.6
PV17	East Wray Mesa	6.18	208	ePn	Pn	21 12 19.3	-0.2
PV01	Paradox Valley	6.18	205	ePn	Pn	21 12 21.7	+2.0
PV13	Radium Mtn., P	6.24	206	ePn	Pn	21 12 21.6	+1.1
ECSD	EROS Data Cent	6.30	88	ePn	Pn	21 12 22.4	+1.3
TMUT	Trail Mountain	6.32	226	ePn	Pn	21 12 23.3	+1.7
PV05	Paradox Valley	6.41	208	ePn	Pn	21 12 23.0	+0.3
DUG	Dugway, Tooele	6.65	240	ePn	Pn	21 12 26.6	+0.6
DUG				eSn	Sn	21 13 41.1	-1.5
T25A	Trinidad	6.70	174	ePb	Pg	21 12 50.8	-4.6
MTPU	Mount Pierson	7.76	224	ePn	Pn	21 12 43.0	+1.6
ELK	Elko	7.97	251	Pn	Pn	21 12 45.2	+1.0
	0.2nm,0.3s,baz=7.1,slow=8.1,SNR=3.6						
ULM	Lac du Bonnet	9.11	42	Pn	Pn	21 13 00.1	+0.6
	2.4nm,0.3s,baz=234,slow=11,SNR=20						
ULM				Pg		21 13 31.8	
	0.5nm,0.3s,baz=355,slow=13,SNR=2.4						
ULM				Lg	Lg	21 15 28.9	
	0.7nm,0.3s,baz=338,slow=3.1,SNR=2.3						
NV01	Mina Array Sit	11.17	246	ePn	Pn	21 13 27.1	-0.9
NVAR	Mina Array Bea	11.17	246	Pn	Pn	21 13 27.1	-1.0
	0.1nm,0.3s,baz=49,slow=14,SNR=4.1						
LTX	Lajitas	14.51	174	eP	P	21 15 18.8	+58
TXAR	Lajitas Array	14.51	174	Pg	P	21 15 18.8	+58
	0.1nm,0.3s,baz=19,slow=12,SNR=5.2						
TXAR				Lg	Lg	21 18 33.0	
	0.0nm,0.3s,baz=313,slow=13,SNR=3.5						
YKA	Yellowknife Ar	19.48	347	P	P	21 15 14.4	-0.8
	0.1nm,0.3s,baz=163,slow=12,SNR=5.8						
YKB5	Yellowknife Ar	19.48	347	eP	P	21 15 14.4	-0.8
ARA0	ARCESS Array S	61.35	18	eP	P	21 21 03.2	-0.7
ARCES	ARCESS Array B	61.35	18	P	P	21 21 03.2	-0.7
	1.2nm,0.9s,baz=339,slow=7.2,SNR=3.0						
SONA0	Songino Array	84.56	339	eP	P	21 23 19.5	-2.4
SONM	Songino Array	84.56	339	P	P	21 23 19.5	-2.4
	0.3nm,0.9s,baz=31,slow=5.2,SNR=2.5						
MK32	Makanchi Array	89.53	355	eP	P	21 23 45.4	-0.5
MKAR	Makanchi Array	89.53	355	P	P	21 23 45.4	-0.5
	0.4nm,0.7s,baz=346,slow=2.5,SNR=4.9						

IDC 15 21:18:24.3±2.2**,10°.25S×161°.11E,h0^{km},mb3.2**/3**,**
mb1 3.6/3**,mb1mx3.3**/40**,mbtmp3.2**/3**,Error ellipse:**
s-maj=42.1km s-min=35.5km az=125.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.40	306	i P	Pn	21 18 51.0	-0.2
HNR				i S	Sg	21 19 05.0	-4.5
HNR	Honiara	1.40	306	Pn	Pn	21 18 51.0	-0.2
	122nm,0.3s,baz=144,slow=8.2,SNR=18						
HNR				Sn	Sg	21 19 09.1	-0.4
	227nm,0.3s,baz=353,slow=22,SNR=15						
WRA	Warramunga Arr	27.54	246	P	P	21 24 13.9	+0.8
	0.2nm,0.6s,baz=76,slow=9.4,SNR=4.6						
ASAR	Alice Springs	29.16	239	P	P	21 24 26.8	-0.8
	0.1nm,0.3s,baz=72,slow=9.1,SNR=3.1						
ILAR	Eielson Array	84.27	20	P	P	21 30 57.7	0.0
	0.3nm,1.0s,baz=226,slow=5.2,SNR=3.5						

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*IDC **15** 21:20:47.8±0.6,19°.14S×176°.25W,h0^{km},mb4.6/20,*
mb1 4.8/21,mb1mx4.6/38,mbtmp4.6/21,ML3.6/1,MS4.3/23,
Ms1 4.3/23,ms1mx4.1/33,Error ellipse: s-maj=23.6km
s-min=14.2km az=155.0
*ISCJB **15** 21:20:49.7±0.2,19°.37S±0°.05×176°.17W±0°.03,h20^{km},*
mb4.9/178,MS4.4/24,Error ellipse: s-maj=7.6km
s-min=3.8km az=156.6
*BJI **15** 21:20:50.7,18°.55S×176°.10W,h9^{km},mB5.3/15,mb4.8/22,*
Ms5.1/3,Ms7 4.8/4
*NEIC **15** 21:20:51.5±2.8,19°.35S×176°.20W,h22^{km}±19^{km},*
mb5.0/148,Error ellipse: s-maj=8.2km s-min=4.7km
az=157.0
*GCMT **15** 21:20:54.5±0.2,19°.28S±0°.01×176°.10W±0°.01,h12^{km},*
MW5.1/100,Moment Tensor Solution. s53,c68;
s100,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M_{rr}-0.30±.11; $M_{\theta\theta}$-4.24±.11; $M_{\phi\phi}$4.54±.09; $M_{r\theta}$-0.95±.33;
$M_{\theta\phi}$-1.72±.10; $M_{\phi r}$2.38±.27; Best double couple:
$M_0$5.26200×10^{16} NP1:ϕ_s303.00000°,δ80.00000°,
λ158.00000°. NP2:ϕ_s37.00000°,δ69.00000°,λ11.00000°.
Principal axes: T 5.8910, Plg22.0000°, Azm258.0000°; N
-1.2590, Plg66.0000°, Azm99.0000°; P -4.6320,
Plg8.0000°, Azm351.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
*MOS **15** 21:20:54.9±1.9,18°.60S×176°.44W,h34^{km},mb5.1/34 Error*
ellipse: s-maj=11.2km s-min=9.2km az=140.4
ISC 15 21:20:49.8±0.5**,19°.38S**±0°.08×**175°.98W**±0°.05**,h12**^{km}±2^{km}**,**
h12^{km}:pP-P,n461,σ1^{s}**40**/462**,mb5.0**/178**,MS4.3**/24**,**
15C-8D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.72	88	P	Pn	21 22 10.9	-3.8
	baz=5.5,SNR=42						
NIUE	Niue	5.72	88	ePn	Pn	21 22 13.2	-1.5
MSVF	Nonsavu	5.90	285	ePn	Pn	21 22 16.9	-0.3
MSVF	Nonsavu	5.90	285	i P	Pn	21 22 16.2	-1.0
RAO	Raoul Island	9.98	190	LR	LR	21 26 41.6	
	comp=Z,3μm,19.9s,baz=5.0,slow=35						
RAR	Rarotonga	15.31	100	ePn	Pn	21 24 24.6	-1.2
	94nm,0.8s						
RAR	Rarotonga	15.31	100	eP	Pn	21 24 24.6	-1.2
RAR				pmax	pmax		
	comp=Z,94nm,0.8s						
RAR	Rarotonga	15.31	100	Pn	Pn	21 24 23.7	-2.1
	comp=Z,4.4nm,0.3s,baz=263,slow=8.1,SNR=11						
RAR				LR	LR	21 28 50.9	
	comp=Z,1μm,21.7s,baz=260,slow=31						
DZM	Mont Dzumac	16.66	258	ePn	Pn	21 24 40.5	-2.9
	comp=Z,179nm,1.4s						
DZM				eLQ	LQ	21 27 51.9	
	comp=Z,2μm,28.2s						
DZM				eLR	LR	21 28 31.6	
	comp=Z,6μm,24.9s						
DZM	Mont Dzumac	16.66	258	ePn	Pn	21 24 39.9	-3.4
	comp=Z,89nm,1.3s						
DZM	Mont Dzumac	16.66	258	Pn	Pn	21 24 39.6	-3.8
	comp=Z,0.2nm,0.3s,baz=283,slow=14,SNR=2.2						
DZM				LR	LR	21 29 57.6	
	comp=Z,3μm,20.2s,baz=92,slow=33						
OUZ	Omahuta	18.27	208	ePn	P	21 25 08.6	+5.2
	comp=Z,42nm,1.2s						
URZ	Urewera	19.75	196	eP	P	21 25 17.0	-2.5
	comp=Z,28nm,1.1s						
URZ	Urewera	19.75	196	P	P	21 25 16.5	-3.0
	comp=Z,0.5nm,0.3s,baz=10,slow=8.1,SNR=7.6						
URZ				LR	LR	21 32 10.6	
	comp=Z,1μm,21.8s,baz=22,slow=34						
BKZ	Black Stump Fm	20.76	197	eP	P	21 25 26.9	-3.7
	comp=Z,7.2nm,1.1s						
BFZ	Birch Farm	22.25	196	eP	P	21 25 47.7	+1.2
	comp=Z,29nm,1.0s						
TBI	Tubuai	24.99	104	eS	S	21 30 37.4	0.0
	comp=Z,93nm,25.5s						
TBI				eLQ	LQ	21 31 17.7	
	comp=Z,3μm,28.2s						
TBI				eLR	LR	21 32 24.3	
	comp=Z,1μm,28.0s,baz=276						
PAE	Paea	25.08	90	eP	P	21 26 14.3	-0.1
	comp=Z,12nm,1.1s						
PPT2	Papeete2	25.09	90	eP	P	21 26 14.8	+0.2
PPT2				eS	S	21 30 36.6	-2.6
	comp=Z,198nm,25.9s						
PPT2				eLQ	LQ	21 31 15.8	
	comp=Z,2μm,26.5s						
PPT2				eLR	LR	21 32 24.8	
	comp=Z,4μm,26.8s,baz=256						
PPT	Papeete	25.10	90	P	P	21 26 16.0	+1.4
	comp=Z,105nm,1.0s,baz=3.9,slow=2.1,SNR=7.8						
PPT				LR	LR	21 33 31.7	
	comp=Z,858nm,20.7s,baz=256,slow=30						
PPTF	Pamatai, Papee	25.10	90	eP	P	21 26 15.2	+0.4
	comp=Z,187nm,1.3s						
HNR	Honiara	25.30	290	LR	LR	21 34 15.6	
	comp=Z,669nm,21.9s,baz=131,slow=32						
TIAR	Tiarei	25.32	90	eP	P	21 26 16.7	+0.1
	comp=Z,42nm,1.2s						
TVO	Taravao	25.37	91	eP	P	21 26 17.0	-0.2
	comp=Z,33nm,1.2s						
OXZ	Oxford	25.91	200	eP	P	21 26 22.7	+1.0
	comp=Z,62nm,1.3s						
PMOR	Pomariorio Ree	27.16	85	eP	P	21 26 33.3	0.0
	comp=Z,140nm,1.4s						
VAH	Vaihoa	27.36	86	eP	P	21 26 34.7	-0.4
	comp=Z,86nm,1.4s						
ODZ	Otahua Downs	27.90	201	eP	P	21 26 38.7	-0.9
	comp=Z,14nm,1.1s						
CAN	Canberra	34.71	236	eP	P	21 27 41.5	+1.7
	comp=Z,50nm,1.3s						
CAN	Canberra	34.71	236	eP	P	21 27 41.5	+1.7
CAN				pmax	pmax		
	comp=Z,50nm,1.3s						
CTA	Charters Tower	35.51	262	P	P	21 27 45.1	-1.6
	comp=Z,8.8nm,1.1s,baz=107,slow=12,SNR=3.9						
CTAO	Charters Tower	35.51	262	eP	P	21 27 44.4	-2.4
	comp=Z,44nm,1.3s						
CTAO	Charters Tower	35.51	262	eP	P	21 27 44.4	-2.4
CTAO				pmax	pmax		
	comp=Z,44nm,1.3s						
TAOE	Nuku Hiva Isla	36.21	78	eLR	LR	21 37 26.2	
	comp=Z,1μm,25.8s						
CMSA	Cobar Meteorol	36.49	243	P	P	21 27 55.3	+0.2
	baz=37,SNR=26						
TOO	Toolangi	38.09	233	P	P	21 28 08.1	-0.5
	baz=38,SNR=5.6						
TOO	Toolangi	38.09	233	eP	P	21 28 09.2	+0.6
	comp=Z,39nm,1.1s						
TOO	Toolangi	38.09	233	eP	P	21 28 09.2	+0.6
TOO				pmax	pmax		
	comp=Z,39nm,1.1s						
RKT	Rikitea	38.31	103	eLQ	LQ	21 36 58.2	
	comp=Z,324nm,26.2s						
RKT				eLR	LR	21 38 34.5	
	comp=Z,740nm,27.8s,baz=270						
COEN	Coen	39.44	271	P	P	21 28 18.3	-1.8
	baz=40,SNR=4.4						
COEN	Coen	39.44	271	eP	P	21 28 19.2	-0.9
	comp=Z,28nm,1.0s						
MANU	Manus Island	39.78	291	eP	P	21 28 22.0	-1.0
	comp=Z,78nm,0.9s						
STKA	Stephens Creek	39.99	243	P	P	21 28 24.1	-0.4
	baz=40,SNR=23						
STKA	Stephens Creek	39.99	243	P	P	21 28 23.1	-1.4
	comp=Z,28nm,1.0s,baz=82,slow=9.3,SNR=10						
STKA				LR	LR	21 43 25.6	
	comp=Z,601nm,18.4s,baz=71,slow=34						
ARPS	Mount Arapiles	40.69	236	P	P	21 28 29.5	-0.7
	baz=41,SNR=5.3						
HTT	Hallett	42.43	241	P	P	21 28 44.1	-0.5
	baz=43,SNR=4.8						
PTCN	Pitcairn Islan	42.69	106	eP	P	21 28 47.1	+0.3
	comp=Z,279nm,1.2s						
BBOO	Buckleboo	44.75	243	P	P	21 29 01.5	-1.8
	baz=45,SNR=18						
BBOO	Buckleboo	44.75	243	eP	P	21 29 01.8	-1.5
	comp=Z,43nm,1.0s						
JAY	Jayapura	45.53	286	P	P	21 29 07.3	-2.5
	comp=Z,17nm,0.9s,baz=32,slow=2.6,SNR=3.8						
AS01	Alice Springs	46.59	255	eP	P	21 29 16.3	-1.8
AS31	Alice Springs	46.63	255	eP	P	21 29 17.2	-1.2
	comp=Z,0.9nm,1.1s						
ASAR	Alice Springs	46.63	255	P	P	21 29 17.4	-1.1
	comp=Z,36nm,1.0s,baz=88,slow=8.0,SNR=81						
ASAR				LR	LR	21 48 17.5	
	comp=Z,369nm,18.4s,baz=95,slow=36						
WB2	Warramunga Arr	46.64	261	eP	P	21 29 17.7	-0.8
	comp=Z,46nm,1.1s						
WRAB	Tennant Creek	46.64	261	eP	P	21 29 16.9	-1.5
	comp=Z,40nm,1.1s						
WRAB	Tennant Creek	46.64	261	i P	P	21 29 16.8	-1.7
WRAB				pmax	pmax		
	comp=Z,39nm,1.2s						
WR1	Warramunga Arr	46.65	261	eP	P	21 29 16.6	-2.0
	comp=Z,4.6nm,1.4s						
WRA	Warramunga Arr	46.65	261	P	P	21 29 16.6	-2.0
	comp=Z,13nm,1.0s,baz=95,slow=6.8,SNR=20						
WRA				LR	LR	21 47 49.5	
	comp=Z,1μm,19.6s,baz=95,slow=35						
FORT	Forrest	51.48	246	P	P	21 29 53.9	-1.5
	baz=52,SNR=7.5						
FORT	Forrest	51.48	246	eP	P	21 29 55.6	+0.2
	comp=Z,75nm,1.0s						
WRKA	Warakurna	51.61	253	P	P	21 29 56.2	-0.3
	baz=52,SNR=16						
FITZ	Fitzroy Crossi	55.07	261	P	P	21 30 21.8	-0.2
	baz=55,SNR=3.6						
FITZ	Fitzroy Crossi	55.07	261	eP	P	21 30 25.3	+3.3
	comp=Z,18nm,1.1s						
SOEI	Soe	58.38	270	eP	P	21 30 49.7	+3.9
	comp=Z,50nm,0.8s						
BATI	Baumata	58.83	270	LR	LR	21 54 09.9	
	comp=Z,510nm,21.8s,baz=140,slow=34						
VNDA	Vanda	59.19	185	LR	LR	21 52 04.3	
	comp=Z,88nm,20.4s,baz=8.0,slow=32						
MBWA	Marble Bar	59.96	256	eP	P	21 30 54.5	-2.0
	comp=Z,71nm,1.2s						
MEEK	Meekatharra	60.09	250	P	P	21 30 55.7	-1.6
	baz=60,SNR=3.6						
KLBR	Kellerberrin	60.25	244	P	P	21 30 57.7	-0.7
	baz=60,SNR=8.2						
NWAO	Narrogin (SRO)	60.57	243	eP	P	21 31 06.3	+5.9
	comp=Z,25nm,1.0s						
NWAO	Narrogin (SRO)	60.57	243	eP	P	21 31 06.3	+5.8
NWAO				pmax	pmax		
	comp=Z,25nm,1.0s						
BLDU	Ballidu	61.25	245	P	P	21 31 04.6	-0.5
	baz=61,SNR=4.5						
MORW	Morawa	62.01	247	P	P	21 31 09.4	-0.9
	baz=62,SNR=8.0						
MORW	Morawa	62.01	247	eP	P	21 31 09.5	-0.8
	comp=Z,46nm,1.1s						
MJAR	Matsushiro Arr	70.47	322	P	P	21 32 00.7	-3.6
	comp=Z,5.7nm,1.1s,baz=170,slow=5.4,SNR=5.0						
MAJO	Matsushiro	70.47	322	eP	P	21 32 00.7	-3.6
MAJO	Matsushiro	70.47	322	eP	P	21 32 00.7	-3.6
QSPA	South Pole Qui	70.68	180	P	P	21 32 07.0	+1.6
	comp=Z,9.1nm,1.2s,baz=106,slow=16,SNR=5.3						
LEM	Lembang	74.97	268	P	P	21 32 31.6	-0.2
LEM				pmax	pmax		
	comp=Z,26nm,1.2s						
LEM	Lembang	74.97	268	LR	LR	22 04 43.4	
	comp=Z,190nm,21.8s,baz=136,slow=35						
PETK	Petropavlovsk-	75.71	344	P	P	21 32 32.9	-2.0
	comp=Z,6.5nm,1.0s,baz=139,slow=7.9,SNR=3.5						
PETK				LR	LR	21 59 45.5	
	comp=Z,140nm,21.1s,baz=147,slow=31						
PEA1	Petropavlovsk-	75.71	344	eP	P	21 32 32.9	-2.0
YSS	Yuzh-Sakhalins	75.78	332	eP	P	21 32 34.9	-0.5
YSS				e		21 42 32.7	
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
KMRM	Mail Ridge	76.69	38	eP	P	21 32 39.7	-1.2
	comp=Z,32nm,1.1s						
MONP2	Monument Peak	77.05	48	P	P	21 32 43.7	+0.5
	baz=237						
EDW2	Edwards Air Fo	77.08	46	P	P	21 32 43.7	+0.5
	baz=235,SNR=6.0						
IKP	In-Ko-Pah, Jac	77.13	48	P	P	21 32 44.6	+1.0
	baz=237						
ISA	Isabella, Lake	77.20	45	eP	P	21 32 45.0	+1.1
	comp=Z,24nm,1.4s						
ISA	Isabella, Lake	77.20	45	eP	P	21 32 45.0	+1.1
ISA				pmax	pmax		
	comp=Z,24nm,1.4s						
ISA	Isabella, Lake	77.20	45	P	P	21 32 44.5	+0.6
	baz=235						
O02D	Mt. Diablo Mer	77.21	39	P	P	21 32 44.7	+0.8
	baz=231						
KSRS	Korea Array	77.34	317	LR	LR	22 01 09.7	
	comp=Z,84nm,20.2s,baz=130,slow=32						
CMB	Columbia Colle	77.36	42	eP	P	21 32 45.4	+0.7
	comp=Z,5.7nm,1.1s						
CMB	Columbia Colle	77.36	42	eP	P	21 32 45.4	+0.7
CMB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PFO	Pinyon Flats O	77.42	47	eP	P	21 32 46.3	+1.1
	comp=Z,18nm,1.5s						
PFO	Pinyon Flats O	77.42	47	eP	P	21 32 46.3	+1.1

PFO				pmax	pmax		
	comp=Z,18nm,1.5s						
PFO	Pinyon Flats O	77.42	47	P	P	21 32 46.1	+0.9
	baz=236						
XPFO	Pion Flat	77.42	47	eP	P	21 32 46.3	+1.1
	comp=Z,20nm,1.5s						
SWSC	Sam W. Stewart	77.51	48	P	P	21 32 46.4	+0.8
	baz=237						
AFDM	Forest Hills D	77.55	41	eP	P	21 32 47.0	+1.3
	comp=Z,7.2nm,1.2s						
ORV	Oroville	77.59	40	eP	P	21 32 46.7	+0.8
	comp=Z,6.0nm,1.1s						
ORV	Oroville	77.59	40	eP	P	21 32 46.7	+0.8
ORV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WDC	Whiskeytown Da	77.61	39	eP	P	21 32 47.6	+1.7
	comp=Z,15nm,1.4s						
WDC	Whiskeytown Da	77.61	39	eP	P	21 32 47.6	+1.7
WDC				pmax	pmax		
	comp=Z,15nm,1.4s						
N02D	Trinity Center	77.76	38	P	P	21 32 47.5	+0.6
	baz=231						
O03E	Paynes Creek	77.87	39	P	P	21 32 47.6	+0.1
	baz=232						
CWC	Cottonwood Cre	77.91	44	P	P	21 32 48.5	+0.5
	baz=235						
M02C	Callahan	77.94	38	P	P	21 32 48.5	+0.6
	baz=231						
BELC	Belle Mtn. Jos	77.95	47	P	P	21 32 48.8	+0.6
	baz=237						
MDPB	Devils Postpil	77.95	43	eP	P	21 32 49.3	+1.1
	comp=Z,7.6nm,1.2s						
OMMB	Old Mammoth Mi	77.99	43	eP	P	21 32 49.6	+1.0
	comp=Z,9.2nm,1.4s						
MPMC	Manual Prospec	78.08	45	P	P	21 32 49.6	+0.7
	baz=235,SNR=10						
GSC	Goldstone, Bar	78.12	46	eP	P	21 32 50.0	+1.0
	comp=Z,13nm,1.3s						
GSC	Goldstone, Bar	78.12	46	P	P	21 32 49.6	+0.6
	baz=236						
BC3	Big Chuckawall	78.14	48	P	P	21 32 50.4	+1.2
	baz=237						
HEC	Hector,Ludlow	78.17	46	P	P	21 32 49.9	+0.5
	baz=236						
WAKR	Walker	78.24	42	eP	P	21 32 51.0	+1.2
	comp=Z,11nm,1.1s						
YBH	Yreka Blue Hor	78.24	38	P	P	21 32 49.9	+0.3
	comp=Z,3.3nm,0.9s,baz=262,slow=3.7,SNR=4.8						
PNTR	Pine Nut	78.48	41	eP	P	21 32 52.7	+1.6
	comp=Z,16nm,1.1s						
GMRC	Granite Mounta	78.61	47	P	P	21 32 52.3	+0.5
	baz=237						
IRM	Iron Mountain	78.63	48	P	P	21 32 52.6	+0.8
	baz=237						
YERR	Yerington	78.65	42	eP	P	21 32 52.9	+0.9
	comp=Z,16nm,1.3s						
HUMO	Hull Mountain	78.66	37	eP	P	21 32 53.6	+1.9
	comp=Z,9.1nm,1.3s						
FURC	Furnace Creek,	78.73	45	P	P	21 32 52.9	+0.7
	baz=236						
M04C	Macdoel	78.78	38	P	P	21 32 52.6	+0.1
	baz=231						
L04D	Klamath Falls	78.78	38	P	P	21 32 52.9	+0.3
	baz=231						
TYV	Tymovskoe	78.83	335	eP	P	21 32 51.1	-1.3
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
RYN	Ryan	78.89	42	eP	P	21 32 54.4	+1.1
	comp=Z,5.7nm,1.1s						
NV01	Mina Array Sit	78.91	43	eP	P	21 32 53.3	-0.2
NVAR	Mina Array Bea	78.91	43	P	P	21 32 53.9	+0.3
	comp=Z,4.0nm,0.8s,baz=224,slow=9.0,SNR=23						
NVAR				LR	LR	22 01 29.0	
	comp=Z,222nm,18.4s,baz=203,slow=31						
PAHR	Pah Rah Range	78.99	41	eP	P	21 32 54.8	+1.0
	comp=Z,14nm,1.4s						
NV11	Mina Array Sit	79.01	43	eP	P	21 32 55.0	+1.0
	comp=Z,1.6nm,1.4s						
214A	Organ Pipe Nat	79.14	51	P	P	21 32 55.3	+0.7
	baz=239						
USRK	Ussuriysk Ar.	79.14	325	LR	LR	22 04 35.9	
	comp=Z,53nm,18.5s,baz=133,slow=33						
KVN	Kaiserville	79.41	42	eP	P	21 32 57.0	+0.8
	comp=Z,8.8nm,1.3s						
KVN	Kaiserville	79.41	42	eP	P	21 32 57.0	+0.8
KVN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PDMCI	Parker Dam,Lak	79.41	48	P	P	21 32 57.0	+1.0
	baz=238						
TPNV	Topopah Spring	79.41	45	eP	P	21 32 57.0	+0.9
	comp=Z,5.2nm,0.9s						
TPNV	Topopah Spring	79.41	45	eP	P	21 32 57.1	+0.9
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TPNV	Topopah Spring	79.41	45	P	P	21 32 56.8	+0.6
	baz=236,SNR=5.5						
MOD	Modoc Plateau	79.75	39	eP	P	21 32 58.9	+1.0
	comp=Z,14nm,1.2s						
SHPR	Sheep Range	79.89	46	eP	P	21 33 00.2	+1.4
	comp=Z,6.3nm,1.0s						
W13A	Hualapai Mount	80.01	47	eP	P	21 33 01.0	+1.5
	comp=Z,8.3nm,1.2s						
Y14A	Wickenburg	80.02	49	eP	P	21 33 00.5	+1.1
	comp=Z,11nm,1.0s						
J05D	Fort Rock, OR	80.06	37	P	P	21 33 00.1	+0.5
	baz=232						
H04A	Detroit Lake	80.41	36	eP	P	21 33 01.6	+0.4
	comp=Z,16nm,1.4s						
PINE	Pine Mountain	80.55	37	eP	P	21 33 03.4	+1.2
	comp=Z,15nm,1.0s						
R11A	Troy Canyon, C	80.62	44	eP	P	21 33 03.5	+0.7
	comp=Z,2.9nm,1.1s						
R11A	Troy Canyon, C	80.62	44	P	P	21 33 03.0	+0.2
	baz=236,SNR=5.4						
NJ2	Nanjing	80.66	309	eP	P	21 33 03.8	+1.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
I05D	Terrebonne, OR	80.66	36	P	P	21 33 03.0	+0.4
	baz=231						
TUC	Tucson	80.80	51	eP	P	21 33 05.7	+2.0
	comp=Z,22nm,1.5s						
TUC	Tucson	80.80	51	eP	P	21 33 05.7	+2.0
TUC				pmax	pmax		
	comp=Z,22nm,1.5s						
TUC	Tucson	80.80	51	P	P	21 33 05.0	+1.3
	baz=240						
WVOR	Wild Horse Val	81.06	39	eP	P	21 33 05.8	+0.9
	comp=Z,10nm,1.1s						
WVOR	Wild Horse Val	81.06	39	eP	P	21 33 05.8	+0.9
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
G05D	Wamic, OR	81.24	36	P	P	21 33 06.1	+0.4
	baz=231						
NKL	Nikolayevsk	81.36	335	eP	P	21 33 04.0	-2.0
X16A	Lo Mia Camp, P	81.38	49	eP	P	21 33 08.4	+1.5
	comp=Z,12nm,1.0s						
E04D	Cinebar	81.40	34	P	P	21 33 06.9	+0.5
	baz=230						
319A	Douglas	81.46	53	eP	P	21 33 08.4	+1.1
	comp=Z,30nm,1.4s						
LCMT	Little Creek M	81.46	46	eP	P	21 33 08.5	+1.3
	comp=Z,6.3nm,1.2s						
I07A	Izee	81.54	37	eP	P	21 33 08.1	+0.7
	comp=Z,7.4nm,1.0s						
CCUT	Cedar City	81.67	45	eP	P	21 33 09.9	+1.6
	comp=Z,6.7nm,1.1s						
J08A	Circle Bar Ran	81.71	38	eP	P	21 33 09.2	+0.9
	comp=Z,15nm,1.3s						
KNB	Kanab	81.75	46	eP	P	21 33 10.4	+1.6
	comp=Z,7.1nm,1.1s						
KNB	Kanab	81.75	46	eP	P	21 33 10.4	+1.6
KNB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
D03D	Eldon	81.76	33	P	P	21 33 08.6	+0.2
	baz=230						
WUAZ	Wupatki	81.98	48	eP	P	21 33 11.8	+1.8
	comp=Z,22nm,1.4s						
WUAZ	Wupatki	81.98	48	P	P	21 33 11.0	+1.0
	baz=240						
ELK	Elko	82.18	42	eP	P	21 33 11.9	+0.9
	comp=Z,5.9nm,1.2s						
KLR	Kul'dur	82.56	328	i P	P	21 33 11.7	-0.8
KLR	Kul'dur	82.56	328	P	P	21 33 11.8	-0.6
	comp=Z,2.4nm,1.1s,baz=143,slow=11,SNR=2.4						
G08A	Pilot Rock	82.58	37	eP	P	21 33 13.7	+0.8
	comp=Z,18nm,1.1s						
MTPU	Mount Pierson	82.72	46	eP	P	21 33 16.2	+2.1
	comp=Z,15nm,1.3s						
B05A	Bryant	82.74	33	P	P	21 33 13.5	+0.1
	baz=230						
HAWA	Hanford	82.93	36	eP	P	21 33 15.5	+1.0
	comp=Z,29nm,1.4s						
W18A	Petrified Fore	82.94	49	P	P	21 33 15.9	+0.8
	baz=241						
GAMB	Gambell	82.95	2	eP	P	21 33 15.2	+1.1
	comp=Z,5.3nm,1.0s						
MSU	Marysvale	82.97	45	eP	P	21 33 17.0	+1.8
121A	Cookes Peak, D	83.13	52	P	P	21 33 17.6	+1.6
	baz=242						
MA2	Magadan	83.24	344	ceP	P	21 33 13.3	-2.4
MA2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MAW	Mawson	83.25	199	LR	LR	22 07 54.1	
	comp=Z,159nm,21.6s,baz=126,slow=34						
BMO	Blue Mountains	83.27	38	eP	P	21 33 16.9	+0.5
	comp=Z,14nm,1.3s						
BMO	Blue Mountains	83.27	38	eP	P	21 33 16.9	+0.5
BMO				pmax	pmax		
	comp=Z,14nm,1.3s						
DUG	Dugway, Tooele	83.43	43	eP	P	21 33 18.2	+0.8
	comp=Z,7.6nm,1.2s						
DUG	Dugway, Tooele	83.43	43	eP	P	21 33 18.2	+0.8
DUG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DUG	Dugway, Tooele	83.43	43	P	P	21 33 18.0	+0.5
	baz=238						
D08A	Wollman Farm,	83.67	35	eP	P	21 33 19.1	+0.8
	comp=Z,18nm,1.1s						
BGU	Big Grassy Mou	83.68	43	eP	P	21 33 19.5	+0.8
	comp=Z,2.5nm,1.1s						
E09A	Wood Farm, Sta	83.77	36	eP	P	21 33 19.5	+0.7
	comp=Z,14nm,1.2s						
Q16A	Castle Valley	83.85	45	eP	P	21 33 21.5	+1.9
	comp=Z,16nm,1.5s						
F10A	Beach Ranch, E	83.97	37	eP	P	21 33 19.9	0.0
	comp=Z,24nm,1.1s						
TMUT	Trail Mountain	84.02	45	eP	P	21 33 18.2	-2.5
	comp=Z,23nm,1.1s						
ANM	Nome	84.08	5	eP	P	21 33 19.8	-0.2
	comp=Z,9.2nm,1.4s						
ANM	Nome	84.08	5	eP	P	21 33 19.8	-0.2
ANM				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MPU	Maple Canyon	84.11	44	eP	P	21 33 22.7	+1.7
	comp=Z,8.1nm,1.0s						
B08A	Colville Reser	84.24	34	eP	P	21 33 20.9	-0.3
	comp=Z,12nm,1.1s						
HLID	Hailey	84.25	40	eP	P	21 33 22.8	+1.2
	comp=Z,14nm,1.1s						
HLID	Hailey	84.25	40	P	P	21 33 22.0	+0.4
	baz=237						
SPUT	South Promonto	84.26	43	eP	P	21 33 22.6	+0.9
	comp=Z,18nm,1.3s						
HVU	Hansel Valley	84.30	42	eP	P	21 33 22.5	+0.7
	comp=Z,20nm,1.4s						
HVU	Hansel Valley	84.30	42	eP	P	21 33 22.5	+0.7
HVU				pmax	pmax		
	comp=Z,20nm,1.4s						
SRU	San Rafael Swe	84.38	45	eP	P	21 33 23.5	+1.1
	comp=Z,17nm,0.9s						
SRU	San Rafael Swe	84.38	45	eP	P	21 33 23.5	+1.1
SRU				pmax	pmax		
	comp=Z,17nm,0.9s						
LAZ	Ladron	84.48	51	eP	P	21 33 25.2	+2.2
JLU	Jordanelle	84.53	44	eP	P	21 33 24.1	+0.9
	comp=Z,10nm,1.1s						
MNTX	Cornudas Mount	84.56	54	eP	P	21 33 24.7	+1.5
	comp=Z,49nm,1.3s						
MNTX	Cornudas Mount	84.56	54	P	P	21 33 24.2	+1.0
	baz=244,SNR=34						
BNM	Barren Site	84.73	51	eP	P	21 33 25.8	+1.5
TCUT	Toone Canyon	84.83	43	eP	P	21 33 25.8	+1.1
	comp=Z,35nm,1.0s						
PV05	Paradox Valley	84.84	47	eP	P	21 33 25.7	+0.9
	comp=Z,21nm,1.1s						
LTX	Lajitas	84.85	57	eP	P	21 33 26.5	+1.7
TXAR	Lajitas Array	84.85	57	P	P	21 33 26.5	+1.7
	comp=Z,15nm,1.1s,baz=218,slow=5.9,SNR=54						
TXAR				LR	LR	22 02 30.1	
	comp=Z,97nm,21.8s,baz=0.0,slow=30						
IPM	Ipoh	84.89	277	eP	P	21 33 25.1	-0.2
	comp=Z,21nm,0.9s						
TRF	Thorofare Moun	84.98	11	eP	P	21 33 23.6	-1.2
	comp=Z,17nm,1.2s						
PV09	Paradox Valley	85.02	46	eP	P	21 33 26.6	+0.8
PV10	Paradox Valley	85.03	47	eP	P	21 33 26.2	+0.5
	comp=Z,22nm,1.1s						
PV19	Morning Glory	85.03	47	eP	P	21 33 26.9	+1.2
	comp=Z,19nm,1.1s						
PV17	East Wray Mesa	85.03	47	eP	P	21 33 26.7	+1.0
	comp=Z,14nm,1.0s						
PV14	Lion Creek, Pa	85.04	47	eP	P	21 33 26.8	+1.1
	comp=Z,20nm,1.1s						
PV20	West Nyswonger	85.06	47	eP	P	21 33 26.9	+1.1
	comp=Z,21nm,1.1s						
PV13	Radium Mtn., P	85.07	47	eP	P	21 33 27.0	+1.1
	comp=Z,19nm,1.3s						
PV16	Nyswonger Mesa	85.08	47	eP	P	21 33 26.1	+0.2
	comp=Z,15nm,1.3s						
PV23	Carpenter Ridg	85.08	46	eP	P	21 33 27.2	+1.2
	comp=Z,18nm,1.0s						
PV03	Paradox Valley	85.10	47	eP	P	21 33 26.6	+0.6
	comp=Z,17nm,1.4s						
PV11	David Mesa, Pa	85.10	47	eP	P	21 33 27.2	+1.2
	comp=Z,20nm,1.2s						
PV04	Paradox Valley	85.13	47	eP	P	21 33 26.6	+0.5
	comp=Z,10nm,1.0s						
PV02	Paradox Valley	85.15	47	eP	P	21 33 28.0	+1.7
	comp=Z,14nm,1.2s						
PV12	Saucer Basin,	85.16	47	eP	P	21 33 27.6	+1.2
	comp=Z,20nm,1.1s						
PV21	Cone Mtn., Par	85.16	46	eP	P	21 33 27.9	+1.5
	comp=Z,14nm,1.1s						
RND	Reindeer	85.21	12	eP	P	21 33 25.7	-0.1
	comp=Z,20nm,1.1s						
RND	Reindeer	85.21	12	eP	P	21 33 25.7	-0.1
RND				pmax	pmax		
	comp=Z,20nm,1.1s						
ANMO	Albuquerque	85.22	51	eP	P	21 33 27.9	+1.2
	comp=Z,19nm,1.2s						
ANMO	Albuquerque	85.22	51	ceP	P	21 33 27.9	+1.2
ANMO				pmax	pmax		
	comp=Z,26nm,1.7s						
ANMO	Albuquerque	85.22	51	P	P	21 33 26.7	0.0
	baz=243						
PV01	Paradox Valley	85.23	47	eP	P	21 33 27.7	+1.0
	comp=Z,8.0nm,1.0s						
PV07	Paradox Valley	85.33	47	eP	P	21 33 28.3	+1.1
	comp=Z,17nm,1.3s						
NEW	Newport	85.36	35	eP	P	21 33 27.1	+0.2
	comp=Z,4.3nm,1.0s						
NEW	Newport	85.36	35	P	P	21 33 26.6	-0.3
	baz=234						
NEW	Newport	85.36	35	P	P	21 33 23.5	-3.4
	comp=Z,2.2nm,0.9s,baz=319,slow=19,SNR=3.0						
MCK	McKinley	85.49	12	eP	P	21 33 26.3	-0.8
	comp=Z,20nm,1.0s						
MCK	McKinley	85.49	12	eP	P	21 33 26.3	-0.8
MCK				pmax	pmax		
	comp=Z,20nm,1.0s						
KULM	Kulim	85.51	277	eP	P	21 33 27.9	-0.5
	comp=Z,28nm,1.3s						
GDL2	Guadalupe Moun	85.55	54	eP	P	21 33 29.4	+1.1
SEY	Seymchan	85.74	346	ceP	P	21 33 28.3	0.0
SEY	Seymchan	85.74	346	P	P	21 33 26.5	-1.8
	comp=Z,5.3nm,0.9s,baz=162,slow=4.8,SNR=13						
AHID	Auburn Hatcher	85.87	42	eP	P	21 33 30.6	+0.8
	comp=Z,17nm,1.4s						
MCMT	McKenzie Canyo	85.88	40	eP	P	21 33 29.9	+0.1
S22A	4UR Ranch, Cre	86.26	48	eP	P	21 33 33.4	+1.4
	comp=Z,17nm,1.4s						
S22A	4UR Ranch, Cre	86.26	48	P	P	21 33 31.7	-0.3
	baz=242						
DLBC	Dease Lake	86.29	22	eP	P	21 33 30.7	-0.6
	comp=Z,5.2nm,1.0s						
DLBC	Dease Lake	86.29	22	P	P	21 33 30.7	-0.6
	comp=Z,1.9nm,0.7s,baz=278,slow=5.3,SNR=3.3						
PSI	Prapat	86.30	274	eP	P	21 33 34.9	+2.4
	comp=Z,24nm,1.0s						
DLMT	Dillon	86.32	39	eP	P	21 33 32.8	+0.9
	comp=Z,12nm,1.3s						
WRH	Wood River Hil	86.32	12	eP	P	21 33 30.5	-0.7
	comp=Z,16nm,1.1s						
MSO	Missoula	86.33	37	eP	P	21 33 31.9	+0.1
	comp=Z,9.4nm,1.2s						
MSO	Missoula	86.33	37	P	P	21 33 32.3	+0.5
	baz=237						
RIDG	Independ'e Rid	86.33	13	eP	P	21 33 31.3	0.0
	comp=Z,12nm,1.2s						
REDW	Red Top Meadow	86.34	42	eP	P	21 33 32.9	+0.9
	comp=Z,14nm,1.4s						
MLY	Manley	86.35	10	eP	P	21 33 30.6	-0.8
	comp=Z,9.1nm,1.2s						
FXWY	Fox Creek	86.37	41	eP	P	21 33 33.0	+0.8
	comp=Z,11nm,1.4s						
O20A	White River Ci	86.42	45	P	P	21 33 32.6	0.0
	baz=241						
LNIG	Linares	86.45	62	eP	P	21 33 33.1	+0.3
	comp=Z,23nm,1.1s						
HDA	Harding Lake	86.48	12	eP	P	21 33 31.3	-0.7
	comp=Z,12nm,1.0s						
HDA	Harding Lake	86.48	12	P	P	21 33 31.6	-0.4
	baz=208						
IMW	Indian Meadow	86.56	41	eP	P	21 33 34.2	+0.9
	comp=Z,6.8nm,1.3s						
MOOW	Moose Ponds	86.60	41	eP	P	21 33 34.0	+0.6
	comp=Z,6.4nm,1.4s						
TCOL	CIGO, UAF Yank	86.72	12	P	P	21 33 33.0	-0.1
	baz=207						
COLA	College	86.72	12	eP	P	21 33 32.5	-0.6
	comp=Z,15nm,0.9s						
COLA	College	86.72	12	eP	P	21 33 31.4	-1.7
COLA				pmax	pmax		
	comp=Z,12nm,1.0s						
SCRK	Sand Creek	86.73	14	eP	P	21 33 33.5	+0.1
	comp=Z,5.5nm,1.0s						
MDM	Murphy Dome	86.73	11	eP	P	21 33 32.6	-0.6
	comp=Z,11nm,1.2s						
QLMT	Earthquake Lak	86.74	40	eP	P	21 33 35.5	+1.5
IM3	Indian Mountai	86.75	9	eP	P	21 33 32.3	-0.9
FLWY	Flagg Ranch	86.80	41	eP	P	21 33 34.6	+0.3
	comp=Z,6.8nm,1.1s						
IL1	Eielson Array	86.82	12	eP	P	21 33 31.9	-1.7
ILAR	Eielson Array	86.82	12	P	P	21 33 32.6	-1.1
	comp=Z,4.7nm,1.0s,baz=222,slow=5.4,SNR=20						
ILAR				LR	LR	22 04 24.4	
	comp=Z,75nm,19.5s,baz=200,slow=30						
ILB	Eielson Array	86.82	12	eP	P	21 33 33.0	-0.6
	comp=Z,12nm,1.3s						
SMCO	Snowmass	86.83	47	eP	P	21 33 35.7	+0.8
	comp=Z,8.7nm,1.2s						
YPP	Pitchstone Pla	86.83	41	eP	P	21 33 37.7	+3.1
	comp=Z,3.8nm,1.2s						
YHB	Horse Butte	86.84	40	eP	P	21 33 36.6	+2.1
	comp=Z,18nm,1.3s						
BW06	Boulder Array	86.85	43	P	P	21 33 34.0	-0.7
	baz=240						
PD31	Pinedale Array	86.85	43	eP	P	21 33 34.8	+0.1
PDAR	Pinedale Array	86.85	43	eP	P	21 33 34.3	-0.4
PDAR	Pinedale Array	86.85	43	P	P	21 33 34.8	+0.1
	comp=Z,0.8nm,0.7s,baz=223,slow=3.5,SNR=6.9						
PDAR				LR	LR	22 06 31.1	
	comp=Z,197nm,19.7s,baz=261,slow=32						
ENH	Enshi	87.00	303	eP	P	21 33 38.5	+3.1
	comp=Z,24nm,1.4s						
BOZ	Bozeman (W)	87.02	39	eP	P	21 33 33.5	-1.8
BOZ	Bozeman (W)	87.02	39	eP	P	21 33 33.5	-1.8
BOZ	Bozeman (W)	87.02	39	P	P	21 33 34.9	-0.3
	baz=238						
POKR	Poker Plat Res	87.02	12	P	P	21 33 34.6	0.0
	baz=207						
H17A	Grant Village	87.04	41	eP	P	21 33 39.0	+3.5
	comp=Z,7.9nm,1.3s						
YHH	Holmes Hill	87.07	40	eP	P	21 33 37.1	+1.3
	comp=Z,9.8nm,1.4s						
SDCO	Great Sand Dun	87.19	48	eP	P	21 33 37.2	+0.7
	comp=Z,3.5nm,1.1s						
SDCO	Great Sand Dun	87.19	48	P	P	21 33 36.2	-0.3
	baz=243						
HRY	Holter Researc	87.48	38	eP	P	21 33 38.3	+0.8
MSTX	Muleshoe	87.52	53	eP	P	21 33 39.2	+1.3
	comp=Z,31nm,1.4s						
MSTX	Muleshoe	87.52	53	P	P	21 33 37.7	-0.2
	baz=245						
ZEA	Zeya	87.60	330	eP	P	21 33 36.8	-0.9
T25A	Trinidad	87.69	49	P	P	21 33 38.4	-0.4
	baz=244						
PRP	Porcupine Dome	87.75	12	eP	P	21 33 38.2	-0.1
	comp=Z,8.4nm,1.4s						
GYA	Guiyang	87.77	299	eP	P	21 33 39.8	+0.5
GYA				PP	PP	21 37 06.4	+1.1
GYA				SKS	SKSac	21 44 04.0	-3.8
GYA				S	SKKSac	21 44 18.8	+1.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.6s						
DAWY	Dawson	87.88	15	eP	P	21 33 38.9	+0.1
	comp=Z,4.4nm,1.0s						
Q24A	Divide	87.99	47	eP	P	21 33 41.1	+0.8
	comp=Z,58nm,0.3s						
BILL	Bilibino	88.14	353	eP	P	21 33 39.7	-0.2
	comp=Z,5.0nm,1.0s						
BILL	Bilibino	88.14	353	ceP	P	21 33 37.9	-2.0
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RLMT	Red Lodge	88.21	41	eP	P	21 33 42.8	+1.7
	comp=Z,4.2nm,1.1s						
RLMT	Red Lodge	88.21	41	P	P	21 33 40.7	-0.4
	baz=240						
GCMT	Greycliff	88.30	40	eP	P	21 33 45.1	+3.7
N23A	Red Feather La	88.32	45	P	P	21 33 41.4	-0.4
	baz=243						
AMTX	Amarillo	88.72	52	P	P	21 33 44.0	+0.4
	baz=245						
XAN	Xi'an	88.99	307	P	P	21 33 50.8	+6.0
XAN				pP	pwP	21 33 58.3	+6.6
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN	Xi'an	88.99	307	eP	P	21 33 46.2	+1.4
	comp=Z,5.2nm,1.0s						
XAN	Xi'an	88.99	307	eP	P	21 33 46.2	+1.4
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SNAA	Sanae	89.06	178	P	P	21 33 45.6	+1.0
VNA3	Neumayer Olymp	89.11	176	P	P	21 33 44.4	-0.4
ABTX	Abilene, Hawle	89.36	55	eP	P	21 33 48.0	+1.4
	comp=Z,22nm,1.0s						
ABTX	Abilene, Hawle	89.36	55	P	P	21 33 47.3	+0.7
	baz=247						
EGMT	Eagleton	89.37	38	eP	P	21 33 47.1	+0.8
	comp=Z,12nm,1.3s						
EGMT	Eagleton	89.37	38	P	P	21 33 46.6	+0.3
	baz=240						
VNA2	Neumayer--Watz	89.58	176	P	P	21 33 47.2	+0.2
TOLK	Toolik Lake Re	89.84	9	eP	P	21 33 48.5	+0.5
	comp=Z,3.9nm,0.8s						
NVL	N'lazarevskaya	89.92	183	eP	P	21 33 51.6	+3.1
NVL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC	Hu-ho-hao-te	89.95	314	eP	P	21 33 50.6	+1.4
HHC				S	S	21 44 39.4	-2.5
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,68nm,3.8s						
KMI	Kunming	90.55	296	P	P	21 33 54.0	+1.4
KMI				pP	pwP	21 33 59.6	+0.1
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,130nm,5.8s						
KMI				LR	LR		
	comp=Z,130nm,29.2s						
LAO	LASA Array	90.83	40	P	P	21 33 53.9	+0.8
	baz=242						
WMOK	Wichita Mounta	90.85	53	eP	P	21 33 53.9	+0.4
	comp=Z,12nm,1.4s						
WMOK	Wichita Mounta	90.85	53	eP	P	21 33 53.9	+0.4
WMOK				pmax	pmax		
	comp=Z,12nm,1.4s						
WMOK	Wichita Mounta	90.85	53	P	P	21 33 53.6	+0.2
	baz=247						
RSSD	Black Hills	91.04	43	eP	P	21 33 54.8	+0.4
	comp=Z,13nm,1.3s						
RSSD	Black Hills	91.04	43	eP	P	21 33 54.8	+0.4
RSSD				pmax	pmax		
	comp=Z,13nm,1.3s						
RSSD	Black Hills	91.04	43	P	P	21 33 54.3	-0.1
	baz=244						
CM01	Chiang Mai Arr	91.52	289	eP	P	21 33 59.1	+2.2
CM31	Chiang Mai Arr	91.55	289	eP	P	21 33 56.1	-0.9

CMAR	Chiang Mai Arr	91.55	289	P	P	21 33 56.1	-0.9
	comp=Z,0.3nm,0.7s,baz=116,slow=5.7,SNR=3.1						
CMAR				LR	LR	22 15 09.7	
	comp=Z,30nm,20.2s,baz=135,slow=36						
CD2	Chengdu	91.80	302	eP	P	21 33 57.4	-0.6
INK	Inuvik	92.71	15	eP	P	21 34 01.1	-0.1
	comp=Z,6.3nm,1.2s						
INK	Inuvik	92.71	15	eP	P	21 34 01.1	-0.1
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	Inuvik	92.71	15	P	P	21 34 00.3	-0.9
	comp=Z,3.7nm,1.1s,baz=207,slow=6.6,SNR=6.2						
INK				LR	LR	22 14 22.0	
	comp=Z,69nm,18.4s,baz=240,slow=35						
DGMT	Dagmar	92.86	39	eP	P	21 34 04.2	+1.7
	comp=Z,37nm,1.1s						
DGMT	Dagmar	92.86	39	P	P	21 34 03.0	+0.5
	baz=244						
LZH	Lanzhou	93.62	307	eP	P	21 34 07.3	+0.9
LZH				pP	pwP	21 34 12.1	-1.2
LZH				sP	sP	21 34 14.3	+3.7
LZH				ePP	PP	21 37 54.5	+2.9
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,83nm,9.3s						
LZH				LR	LR		
	comp=Z,260nm,17.0s						
LZH				LR	LR		
	comp=Z,270nm,17.2s						
LZH				LR	LR		
	comp=Z,360nm,19.6s						
YKA	Yellowknife Ar	94.71	24	P	P	21 34 10.0	-0.5
	comp=Z,1.1nm,1.0s,baz=236,slow=4.2,SNR=10						
YKB5	Yellowknife Ar	94.71	24	eP	P	21 34 08.7	-1.9
YKB5				epP	pwP	21 34 16.0	-1.4
MIAR	Mount Ida	94.77	55	P	P	21 34 12.3	+0.8
	baz=250						
W39A	Magazine	94.83	55	P	P	21 34 12.5	+0.7
	baz=250						
MDND	Maddock	95.39	41	P	P	21 34 14.9	+0.8
	baz=247						
ULN	Ulaanbaatar	95.78	319	ceP	P	21 34 14.6	-1.4
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ECSD	EROS Data Cent	95.79	46	eP	P	21 34 15.9	-0.1
	comp=Z,16nm,1.4s						
ECSD	EROS Data Cent	95.79	46	P	P	21 34 15.8	-0.3
	baz=249						
W41B	Gary Mavity, V	96.01	55	P	P	21 34 18.2	+1.0
	baz=251						
T41A	Mountain View	96.99	53	P	P	21 34 22.0	+0.4
	baz=251						
S41A	Jillco Farms,	97.18	53	P	Pdif	21 34 23.0	+0.5
	baz=251						
T42A	Van Buren	97.50	54	P	Pdif	21 34 24.5	+0.5
	baz=252						
R41A	Rosebud	97.68	52	P	P	21 34 24.5	-0.2
	baz=252						
CCM	Cathedral Cave	97.70	52	P	P	21 34 24.9	+0.1
	baz=252						
Q41A	Truxton	98.00	52	P	P	21 34 26.2	+0.1
	baz=252						
L39A	Vinton	98.44	48	P	P	21 34 28.3	+0.3
	baz=252						
ULM	Lac du Bonnet	98.56	40	LR	LR	22 11 39.3	
	comp=Z,232nm,21.9s,baz=270,slow=31						
O41A	Passleys Farm,	98.62	51	P	P	21 34 29.3	+0.5
	baz=252						
L40A	Anamosa	98.97	49	P	Pdif	21 34 30.8	+0.4
	baz=252						
J39A	Decorah	99.02	47	P	Pdif	21 34 30.9	+0.3
	baz=252						
H38A	Maiden Rock	99.04	46	P	Pdif	21 34 30.6	0.0
	baz=252						
J40A	Soldiers Grove	99.71	47	P	Pdif	21 34 34.1	+0.4
	baz=253						
G39A	Holcombe	99.98	46	P	Pdif	21 34 34.9	+0.1
	baz=253						
J41A	Loganville	100.21	48	P	Pdif	21 34 36.6	+0.7
	baz=253						
H40A	Chili	100.31	46	P	Pdif	21 34 36.7	+0.4
	baz=253						
KSH	Kashi	115.81	305	PKP	PKiKP	21 39 37.8	+5.1
KSH				PP	PP	21 40 43.4	+7.1
KSH				SKS	SKSdf	21 46 44.3	-0.6
BRVK	Borovoye	119.50	321	i PKIKP	PKPdf	21 39 38.9	-0.3
ARU	Arti	125.35	326	i PKIKP	PKiKP	21 39 51.0	+0.3
ARU						21 41 43.5	
ARU						21 46 59.3	
KLMR	Klimovskoe	131.60	338	ePKIKP	PKiKP	21 40 05.6	+2.6
KLMR				pmax	pmax		
	comp=Z,11nm,1.4s						
KLMR	Klimovskoe	131.60	338	ePKPdf	PKiKP	21 40 05.6	+2.6
KLMR				AMP		21 40 09.4	
	comp=Z,11nm,1.4s						
FIA0	FINESS Array S	135.21	345	ePKPdf	PKPdf	21 40 08.0	-0.8
FIA0	FINESS Array S	135.21	345	ePKIKP	PKPdf	21 40 08.0	-0.8
FINES	FINESS Array B	135.21	345	PKIKP	PKPdf	21 40 08.0	-0.8
FINES	FINESS Array B	135.21	345	PKP	PKPdf	21 40 08.0	-0.8
	comp=Z,1.6nm,0.9s,baz=86,slow=2.6,SNR=3.1						
LVV	L'vov	145.68	337	ePKIKP	PKPab	21 40 29.0	+0.3
KWP	Kalwaria Pacla	146.32	338	ePKPdf	PKPab	21 40 31.6	+0.4
OJC	Ojcow	146.76	341	ePKP	PKPdf	21 40 30.2	+0.2
OJC	Ojcow	146.76	341	ePKPdf	PKPdf	21 40 29.8	-0.2
OJC	Ojcow	146.76	341	ePKIKP	PKPdf	21 40 30.2	+0.2
BUR04	Bucovina Ar. S	146.97	333	ePKPdf	PKPab	21 40 33.8	-0.1
BURAR	Bucovina Array	146.98	333	⇓PKP2	PKPbc	21 40 33.1	+0.6
MBAR	Mbarara	147.12	236	ePKPdf	PKPab	21 40 35.2	-0.3
MBAR	Mbarara	147.12	236	PKP2	PKPab	21 40 35.2	-0.3
MBAR	Mbarara	147.12	236	PKPbc	PKPdf	21 40 32.8	+0.9
	baz=225,slow=5.7						
KSP	Ksiaz	147.14	346	ePKP	PKPbc	21 40 33.3	+0.6
KSP	Ksiaz	147.14	346	ePKP2	PKPbc	21 40 33.3	+0.6
UZH	Uzhgorod	147.31	337	ePKP2	PKPbc	21 40 34.0	+0.8
NIE	Niedzica	147.31	340	ePKP	PKPab	21 40 34.8	-0.2
NIE	Niedzica	147.31	340	ePKP2	PKPab	21 40 34.8	-0.2
CLL	Collm	147.36	350	ePKPdf	PKPbc	21 40 32.7	-0.6
CLL	Collm	147.36	350	⇓iPKPdf	PKPbc	21 40 32.9	-0.4
	comp=Z,12nm,1.2s						
CLL				i PKPbc	sPKPdf	21 40 34.8	-0.4
	comp=Z,25nm,1.2s						
CLL				i pPKPdf	sPKPab	21 40 39.1	-0.3
CLL				i pPKPbc	pPKPab	21 40 41.8	+3.5
CLL				LmV		22 46 00.0	
	comp=Z,100nm,19.0s						
CLL				LmH		22 47 00.0	
	comp=N,100nm,21.1s						
CLL				LmH		22 47 00.0	
	comp=E,100nm,19.7s						
CLL	Collm	147.36	350	ePKP2	PKPbc	21 40 32.7	-0.6
BR101	Keskin Array S	147.45	315	ePKPdf	PKPdf	21 40 32.0	+0.4
BRTR	Keskin Array B	147.45	315	PKIKP	PKPdf	21 40 32.0	+0.4
BRTR	Keskin Array B	147.45	315	PKPbc	PKPdf	21 40 32.0	+0.4
	comp=E,1.1nm,0.9s,baz=0.0,slow=0.0,SNR=3.3						
UPC	Upice	147.51	346	epPKP	PKiKP	21 40 40.0	+4.1
UPC	Upice	147.51	346	ePKP2	PKiKP	21 40 40.0	+4.1
DPC	Dobruska-Polom	147.59	345	ePKP	PKPbc	21 40 34.0	0.0
DPC				epPKP	sPKPbc	21 40 37.8	-0.5
DPC	Dobruska-Polom	147.59	345	ePKP2	PKPbc	21 40 34.0	0.0
BRG	Berggiesshubel	147.61	348	ePKP	PKPbc	21 40 34.3	+0.3
	comp=E,5.4nm,1.1s						
BRG				i		21 40 36.5	
	comp=E,22nm,1.4s						
BRG	Berggiesshubel	147.61	348	ePKP2	PKPbc	21 40 34.3	+0.3
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,22nm,1.4s						
VRI	Vrincioaia	147.62	330	⇓PKP2	PKPab	21 40 39.9	+3.5
KRLC	Kraliky	147.73	345	ePKP	PKPab	21 40 37.8	+1.1
KRLC	Kraliky	147.73	345	ePKP2	PKPab	21 40 37.8	+1.1
MORC	Moravsky Berou	147.81	343	ePKPbc	PKiKP	21 40 36.0	-0.6
MORC	Moravsky Berou	147.81	343	⇑PKP2	PKPbc	21 40 34.3	-0.3
MORC	Moravsky Berou	147.81	343	ePKP	PKPbc	21 40 35.8	+1.2
LANS	Liptovska Anna	147.81	341	ePKP2	PKPbc	21 40 35.5	+0.8
LANS	Liptovska Anna	147.81	341	ePKP	PKPbc	21 40 35.5	+0.8
PVCC	Panska Ves	147.81	347	ePKP	PKPbc	21 40 34.1	-0.4
PVCC				epPKP	sPKPbc	21 40 38.6	-0.2
PVCC	Panska Ves	147.81	347	ePKP2	PKPbc	21 40 34.1	-0.4
HARR	Harsova	147.87	327	⇑PKP2	PKPab	21 40 44.3	+7.0
MLR	Muntele Rosu	148.27	330	⇑PKP2	PKPbc	21 40 35.6	-0.5
PRU	Pruhonice	148.33	347	AMS	AMS	22 45 50.0	
	comp=Z,200nm,20.7s						
GOPC	GO Pecny, Ondr	148.35	347	AMS	AMS	22 46 10.0	
	comp=Z,300nm,19.4s						
CJR	Cluj-Napoca	148.37	334	⇓PKP2	PKiKP	21 40 37.4	-0.5
VRAC	Vranov	148.48	344	⇑PKP2	PKPab	21 40 40.2	+0.5
VRAC	Vranov	148.48	344	ePKP	PKPbc	21 40 37.0	+0.6
VYHS	Vyhne	148.59	341	ePKP2	PKiKP	21 40 38.1	-0.1
VYHS	Vyhne	148.59	341	ePKP	PKiKP	21 40 38.1	-0.1
DRGR		148.66	335	⇑PKP2	PKPbc	21 40 36.8	-0.2
VOIR		148.72	331	⇓PKP2	PKPab	21 40 41.1	+0.2
PSZ	Piszkesteto	148.75	339	⇑PKP2	PKiKP	21 40 40.0	+1.4
KRUC	Moravsky	148.76	344	ePKP	PKPbc	21 40 36.2	-0.9
MEM	Membach	148.80	358	⇑PKP	PKiKP	21 40 40.0	+1.4
BCLA	Clavier	149.02	358	⇓pPKP	PKPab	21 40 42.6	+0.8
MODS	Modra-Piesok	149.15	343	ePKP2	PKiKP	21 40 39.6	+0.2
MODS	Modra-Piesok	149.15	343	ePKP	PKiKP	21 40 39.5	+0.2
KHC	Kasperske Hory	149.34	348	ePKPdf	PKPdf	21 40 34.3	+0.1
KHC				ePKPdf	sPKPdf	21 40 37.7	-0.8
KHC	Kasperske Hory	149.34	348	ePKP	PKPbc	21 40 37.1	-1.5
KHC				epPKP	pPKPbc	21 40 41.6	-0.2
KHC	Kasperske Hory	149.34	348	ePKIKP	PKPdf	21 40 34.3	+0.1
KHC				e		21 40 37.7	
DOU	Dourbes	149.35	359	⇑PKP	PKPbc	21 40 39.2	+0.7
GEC2	GERESS Array S	149.59	347	ePKPbc	PKPbc	21 40 38.5	-0.8
GEC2	GERESS Array S	149.59	347	ePKP2	PKPbc	21 40 38.5	-0.8
GERES	GERESS Array B	149.59	347	PKPbc	PKPbc	21 40 38.5	-0.8
	comp=Z,1.2nm,0.6s,baz=48,slow=2.0,SNR=11						
WLF	Walferdange	149.74	357	ePKPbc	PKPbc	21 40 39.8	+0.3
WLF	Walferdange	149.74	357	ePKP2	PKPbc	21 40 39.8	+0.3
WLF	Walferdange	149.74	357	⇑PKP	PKPbc	21 40 39.1	-0.4
GZR	Gura Zlata	149.76	333	⇓PKP2	PKiKP	21 40 41.7	+0.9
CONA	Conrad Observa	149.94	344	ePKiKP	PKPbc	21 40 40.6	+0.4
	comp=Z,13nm,1.3s						
BZS	Buzias	150.06	335	⇑PKP2	PKPbc	21 40 40.2	-0.2
MOA	Molln	150.41	346	ePKPbc	PKPbc	21 40 41.0	-0.2
	comp=Z,7.6nm,1.3s						
BFO	Black Forest	150.91	354	ePKPbc	PKPbc	21 40 42.6	+0.2
BFO	Black Forest	150.91	354	ePKIKP	PKPbc	21 40 42.6	+0.2
SOKA	Soboth	151.32	344	ePKPbc	PKPbc	21 40 42.9	-0.6
	comp=Z,7.8nm,1.1s						
RETA	Reutte	151.43	350	ePKiKP	PKPbc	21 40 43.5	-0.2
	comp=Z,3.1nm,0.8s						
WATA	Walderalm	151.44	349	ePKPbc	PKPbc	21 40 43.4	-0.4
	comp=Z,2.2nm,0.6s						
MOTA	Moosalm	151.52	350	ePKPbc	PKPbc	21 40 43.5	-0.5
	comp=Z,5.7nm,1.1s						
OBKA	Obir	151.60	345	ePKPbc	PKPbc	21 40 43.2	-1.0
	comp=Z,14nm,1.9s						
SQTA	Sankt Quirin	151.62	350	ePKiKP	PKPbc	21 40 44.2	-0.1
	comp=Z,5.7nm,0.8s						
VTS	Vitosha	151.71	329	⇓PKIKP	PKPbc	21 40 44.8	+0.2
DAVA	Damuels	151.76	352	ePKPbc	PKPbc	21 40 43.5	-1.1
	comp=Z,8.3nm,1.1s						
ABTA	Abfaltersbach	151.83	348	ePKPbc	PKPbc	21 40 44.1	-0.6
	comp=Z,12nm,0.9s						
FETA	Feichten	151.89	350	ePKPbc	PKPbc	21 40 43.3	-1.7
	comp=Z,8.6nm,1.0s						
DIVS	Divibare	151.97	335	ePKPbc	PKPbc	21 40 44.7	-0.4
FUORN	Ofenpass-Fuorn	152.36	351	ePKPbc	PKPbc	21 40 46.0	-0.1
TOA0	Torodi Ar. Sit	173.41	160	ePKPdf	PKPdf	21 40 58.3	-1.7
TOA0				ePKPab	sPKPab	21 42 33.8	+1.4
TORD	Torodi Ar. Bea	173.41	160	PKP	PKPdf	21 40 57.9	-2.1
	comp=Z,1.2nm,1.1s,baz=208,slow=2.9,SNR=5.6						
TORD				PKPab	PKPab	21 42 29.2	+1.0
	comp=Z,0.8nm,1.1s,baz=176,slow=3.9,SNR=2.2						
TOA1	Torodi Ar. Sit	173.41	160	ePKPdf	PKPdf	21 40 57.9	-2.2
TOA1				ePKPab	PKPab	21 42 29.2	+0.9

*ISCJB **15** 21:39:14.0±1.1, 10°.0S±0°.2×66°.7E±0°.2, h10^{km}, mb3.7/11, MS3.5/6, Error ellipse: s-maj=37.4km s-min=17.8km az=38.8*

*IDC **15** 21:39:14.0±1.2, 10°.08S×66°.59E, h0^{km}, mb3.7/11, mb1 3.8/11, mb1mx3.7/51, mbtmp3.7/11, MS3.5/6, Ms1 3.5/6, ms1mx3.1/45, Error ellipse: s-maj=41.7km s-min=18.9km az=40.0*

ISC 15 21:39:15.9±1.3, **10°.0S**±0°.3×**66°.6E**±0°.2, **h10**^{km}, **n23**, σ**0^{s}.79**/13, **mb4.0**/11, **MS3.5**/6, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N3	Diego Garcia H	5.68	50	T	T	21 47 03.1	
	baz=228,slow=75,SNR=88						
H08N1	Diego Carcia H	5.70	50	T	T	21 47 04.0	
	baz=228,slow=75,SNR=95						
H08N2	Diego Garcia H	5.70	50	T	T	21 47 02.5	
	baz=228,slow=75,SNR=103						
OPO	Ambohidratompo	20.63	244	LR	LR	21 49 33.2	
	comp=Z,225nm,21.8s,baz=26,slow=30						
BRDH	Bariadhala	40.72	37	LR	LR	22 03 47.2	
	comp=Z,95nm,18.2s,baz=198,slow=36						
CMAR	Chiang Mai Arr	42.65	49	P	P	21 47 13.8	+0.8
	0.2nm,0.3s,baz=241,slow=9.2,SNR=3.2						
CMAR				LR	LR	22 04 50.7	
	comp=Z,28nm,18.4s,baz=85,slow=36						
H01W3	Cape Leeuwin H	49.80	127	T	T	22 41 42.1	
	baz=288,slow=75,SNR=4.4						
H01W2	Cape Leeuwin H	49.80	127	T	T	22 41 42.9	
	baz=288,slow=75,SNR=4.7						
H01W1	Cape Leeuwin H	49.82	127	T	T	22 41 36.0	
	baz=288,slow=75,SNR=5.4						
FITZ	Fitzroy Crossi	57.61	105	P	P	21 49 07.2	+0.5
	2.3nm,0.9s,baz=311,slow=9.3						
FITZ				LR	LR	22 08 57.2	
	comp=Z,56nm,19.9s,baz=284,slow=31						
BRTR	Keskin Array B	58.20	330	P	P	21 49 10.8	+0.3
	0.5nm,0.8s,baz=132,slow=6.6,SNR=2.9						
MKAR	Makanchi Array	58.29	13	P	P	21 49 09.8	-1.0
	0.3nm,0.6s,baz=207,slow=7.9,SNR=4.6						
ASAR	Alice Springs	65.30	111	P	P	21 49 57.9	-0.8
	0.8nm,0.8s,baz=278,slow=7.0,SNR=9.4						
ZALV	Zalesovo Beam	65.59	12	P	P	21 49 59.4	-0.4
	1.3nm,0.9s,baz=226,slow=7.9,SNR=4.2						
WRA	Warramunga Arr	65.80	107	P	P	21 50 01.7	-0.3
	0.9nm,0.7s,baz=278,slow=5.5,SNR=10						
SONM	Songino Array	67.54	28	P	P	21 50 12.5	-0.2
	1.1nm,0.9s,baz=213,slow=5.0,SNR=9.3						
AKASG	Malin Array Be	68.66	336	P	P	21 50 18.5	-0.8
	0.6nm,0.4s,baz=138,slow=5.5,SNR=4.2						
KSRS	Korea Array	74.25	46	LR	LR	22 23 30.1	
	comp=Z,27nm,19.5s,baz=90,slow=36						
MJAR	Matsushiro Arr	81.50	51	LR	LR	22 28 49.1	
	comp=Z,20nm,18.4s,baz=195,slow=36						
ESDC	Sonseca Array	81.80	313	P	P	21 51 35.4	0.0
	0.1nm,0.3s,baz=104,slow=6.3,SNR=4.4						
NOA	NORSAR Array B	83.06	336	P	P	21 51 42.8	+1.3
	0.4nm,0.7s,baz=124,slow=5.3,SNR=2.8						
PDAR	Pinedale Array	147.23	355	PKPbc	PKPdf	21 58 58.6	+0.7
	0.2nm,0.5s,baz=341,slow=4.8,SNR=3.3						
NVAR	Mina Array Bea	151.39	8	PKPbc	PKPbc	21 59 10.1	-0.7
	0.9nm,0.7s,baz=339,slow=2.3,SNR=2.9						

*ISCJB **15** 21:53:30.4±0.6, 33°.64N±0°.02×5°.62W±0°.03, h31^{km}±5^{km}, Error ellipse: s-maj=4.4km s-min=3.5km az=147.2*

*MDD **15** 21:53:30.6±2.2, 33°.66N×5°.54W, h0^{km}, mb3.7/6, Error ellipse: s-maj=20.4km s-min=13.1km az=170.0, PRXIMO*

*CNRM **15** 21:53:30.4, 33°.40N×5°.70W, h7^{km}, ml2.6*

*SFS **15** 21:53:31.0, 33°.75N×5°.61W, ML3.1, SW. MEKNES (MARRUECOS)*

*IGIL **15** 21:53:31.5, 33°.48N×5°.70W, h21^{km}*

*INMG **15** 21:53:32.4±1.4, 33°.58N×5°.59W, h30^{km}±12^{km}, ML1.9, Error ellipse: s-maj=4.6km s-min=3.3km az=90.0*

ISC 15 21:53:31.2±1.0, **33°.54N**±0°.02×**5°.64W**±0°.02, **h30**^{km}±10^{km}, **n53**, σ**2^{s}.12**/89, **1C**, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IFR	Ifrane	0.42	93	⇑iP	Pb	21 53 39.6	-1.0
IFR				i S	Sb	21 53 45.3	-1.7
SICH	Sidi Chahed	0.62	25	S	Sn	21 53 55.3	+2.3
LCRM	LCR	0.67	77	S	Sn	21 53 54.6	+0.3
ZHG	ZHG	0.85	264	P	Pb	21 53 47.1	-0.4
ZHG				S	Sb	21 53 58.5	0.0
MD31	MD31	0.99	132	P	Pb	21 53 49.6	-0.4
MDT	Midelt	1.12	130	P	Pn	21 53 51.4	+0.3
MDT				S	Sb	21 54 06.4	-0.1
RSA	Sarsar	1.35	353	P	Pb	21 53 57.1	+1.1
RSA				S	Sb	21 54 17.5	+4.6
AVE	Averroes	1.51	261	eP	Pb	21 53 58.1	-0.4
AVE				eS	Sn	21 54 08.9	-5.9
AVE	Averroes	1.51	261	P	Pn	21 53 56.7	+0.6
AVE				S	Sb	21 54 17.9	+0.6
CHEFC	Chefchaouen	1.58	9	P	Pb	21 54 02.1	+2.2
CHEFC				S	Sb	21 54 25.8	+6.2
GOLM	Goulmima	1.92	162	P	Pn	21 54 01.4	-0.6
GOLM				S	Sn	21 54 25.8	+0.6
SMIR	Smir Dam	2.15	6	S	Sb	21 54 39.0	+3.3
SRHM	Skhour des Reh	2.18	241	S	Sb	21 54 36.2	-0.5
PALE	Palemas	2.18	39	P	Pb	21 54 09.3	-0.8
PALE				S	Sb	21 54 37.6	+0.8
JBK	JBK	2.67	72	P	Pn	21 54 12.9	+0.5
JBK				S	Sn	21 54 45.1	+1.3
GOG	Mont Gurugu	2.75	52	P	Pb	21 54 16.8	-3.0
GOG				S	Sb	21 54 54.1	+0.9
OUZM	OUZ	2.79	200	S	Sn	21 54 51.2	+4.6
OUK	Oukaimeden	3.00	220	S	Sn	21 54 54.1	+2.1
EMIJ	Mijas	3.10	13	Pn	Pn	21 54 17.1	-1.1
	0.0nm,0.0s,SNR=7.9						
EMIJ				Sn	Sn	21 54 51.7	-2.5
	0.3nm,0.1s,SNR=7.9						
ELGU	Los Guajares,	3.71	26	Pn	Pn	21 54 26.3	-0.2
	0.1nm,0.1s,SNR=7.9						
ELGU				Sn	Sn	21 55 06.2	-3.0
	1.2nm,0.1s,SNR=7.9						
TTIG	Tnine Tigouga,	3.82	219	P	Pn	21 54 29.0	+0.9
TTIG				S	Sn	21 55 13.8	+1.8
FIGM	Figuig	3.94	110	P	Pn	21 54 30.4	+0.7
FIGM				S	Sn	21 55 18.8	+3.8
EBER	Berja	4.04	33	Sn	Sn	21 55 15.3	-2.2
	0.1nm,0.1s,SNR=7.9						
PBDV	Barranco-do-Ve	4.14	334	ePn	Pn	21 54 33.4	+0.9
PBDV				eSn	Sn	21 55 20.4	+0.5
PBDV				A	A	21 55 26.5	
	1.5nm,0.4s						
PBDV	Barranco-do-Ve	4.14	334	Pn	Pn	21 54 33.4	+0.9
PBDV				Sn	Sn	21 55 20.4	+0.5
	1.5nm,0.4s						
PVAQ	Vaqueiros	4.21	337	ePn	Pn	21 54 34.5	+1.1
PVAQ				eSn	Sn	21 55 21.8	+0.2
PVAQ				A	A	21 55 36.1	
	1.0nm,0.6s						
PVAQ	Vaqueiros	4.21	337	Pn	Pn	21 54 34.5	+1.1
PVAQ				Sn	Sn	21 55 21.8	+0.2
	1.0nm,0.6s						
EGRO	El Granado	4.26	340	Pn	Pn	21 54 34.2	+0.1
	0.3nm,0.1s,SNR=22						
EGRO				Sn	Sn	21 55 19.9	-2.8
	0.9nm,0.1s						
EMIN	Mina Concepcio	4.30	349	Pn	Pn	21 54 34.6	0.0
	0.1nm,0.0s,SNR=11						
EMIN				Sn	Sn	21 55 18.5	-5.3
	0.3nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.43	325	ePn	Pn	21 54 36.2	-0.2
PFVI				eSn	Sn	21 55 28.1	+1.1
PFVI	Vila Bisbo	4.43	325	Pn	Pn	21 54 36.2	-0.2
	0.3nm,0.0s,SNR=7.4						
PFVI				Sn	Sn	21 55 26.2	-0.8
	0.1nm,0.2s,SNR=7.9						
MORF	Marmelete	4.49	328	eP	Pn	21 54 37.1	-0.1
MORF	Marmelete	4.49	328	ePn	Pn	21 54 37.2	-0.1
MORF				eSn	Sn	21 55 27.8	-0.8
MORF				A	A	21 55 28.8	
	1.9nm,0.4s						
MORF	Marmelete	4.49	328	Pn	Pn	21 54 37.2	-0.1
MORF				Sn	Sn	21 55 27.8	-0.8
	1.9nm,0.4s						
ECAB	El Cabril	4.53	2	Pn	Pn	21 54 37.9	+0.1
	0.1nm,0.0s,SNR=11						
ECAB				Sn	Sn	21 55 27.1	-2.3
	1.9nm,0.1s,SNR=12						
EADA	Adamuz	4.70	10	Pn	Pn	21 54 41.0	+0.9
	0.3nm,0.1s,SNR=7.9						
EADA				Sn	Sn	21 55 29.4	-4.2
	1.1nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	4.72	329	ePn	Pn	21 54 40.4	0.0
PTEO	Sao Teotonio	4.72	329	Pn	Pn	21 54 40.4	0.0
EQES	Quesada	4.74	25	Pn	Pn	21 54 40.9	+0.2
	0.0nm,0.0s,SNR=7.9						
EQES				Sn	Sn	21 55 33.8	-0.9
	0.1nm,0.2s,SNR=7.9						
MESJ	Messejana	4.78	335	eP	Pn	21 54 41.0	-0.2
MESJ	Messejana	4.78	335	ePn	Pn	21 54 41.9	+0.7
MESJ				eSn	Sn	21 55 36.1	+0.6
MESJ				A	A	21 55 36.6	
	1.2nm,0.5s						
MESJ	Messejana	4.78	335	Pn	Pn	21 54 41.9	+0.7
MESJ				Sn	Sn	21 55 36.1	+0.6
	1.2nm,0.5s						
PNCL	Nicolau / Gran	5.13	334	ePn	Pn	21 54 46.4	+0.4
PNCL				eSn	Sn	21 55 43.2	-1.0
PNCL				A	A	21 56 02.2	
	1.3nm,0.8s						
PNCL	Nicolau / Gran	5.13	334	Pn	Pn	21 54 46.4	+0.4
PNCL				Sn	Sn	21 55 43.2	-1.0
	1.3nm,0.8s						
EBAD	Badajoz	5.32	348	Pn	Pn	21 54 48.7	+0.1
	0.4nm,0.1s,SNR=13						
EBAD				Sn	Sn	21 55 46.2	-2.8
	1.5nm,0.1s,SNR=5.7						
PESTR	Estremoz	5.55	344	ePn	Pn	21 54 52.3	+0.5
PMRV	Marv??o	6.05	347	ePn	Pn	21 54 58.7	+0.1
PMRV	Marv??o	6.05	347	Pn	Pn	21 54 58.7	+0.1
PAB	San Pablo	6.08	9	Pn	Pn	21 54 58.2	-1.0
	0.0nm,0.0s,SNR=7.9						
PAB				Sn	Sn	21 56 02.3	-5.5
	0.1nm,0.2s,SNR=7.9						
PMAFR	Mafra	6.16	332	Pn	Pn	21 54 59.6	-0.5
	0.1nm,0.0s,SNR=7.9						
ESDC	Sonseca Array	6.27	12	Pn	Pn	21 55 01.5	-0.2
	0.0nm,0.3s,baz=60,slow=27,SNR=3.5						
ESDC				Sn	Sn	21 56 07.5	-4.8
	0.2nm,0.3s,baz=196,slow=23,SNR=4.9						
EPLA	Plasencia	6.52	357	Pn	Pn	21 55 04.2	-1.0
	0.2nm,0.0s,SNR=7.9						
EPLA				Sn	Sn	21 56 11.9	-6.7
	0.1nm,0.2s,SNR=7.9						
MVO	Moncorvo	7.69	352	ePn	Pn	21 55 21.9	+0.7

*IDC **15** 22:02:13.7±0.6, 11°.84N×125°.71E, h0^{km}, mb4.1/16, mb1 4.2/16, mb1mx4.0/48, mbtmp4.1/16, Error ellipse: s-maj=37.9km s-min=13.7km az=68.0*

*NEIC **15** 22:02:18.7±0.3, 11°.79N×125°.69E, h35^{km}, mb4.5/25, Error ellipse: s-maj=12.4km s-min=5.1km az=68.0*

*MAN **15** 22:02:19.7, 11°.89N×125°.51E, h11^{km}, MS3.2*

ISC 15 22:02:13.9±1.9, **11°.84N**±0°.04×**125°.70E**±0°.06, **h3**^{km}±12^{km}, **n79**, σ**1^{s}.52**/87, **mb4.5**/46, **2C-3D**, **Samar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.35	227	eP	Pn	22 02 27.4	+1.5
BESP				eS	Sb	22 02 33.0	+4.2
PLP	Palo	0.97	226	⇑eP	Pn	22 02 35.5	+1.0
PLP				i S	Sn	22 02 49.1	+0.2
CNP	Catarman	1.21	303	eP	Pn	22 02 38.9	+1.1
CNP				eS	Sn	22 02 54.9	+0.2
OCLP	Ormoc	1.32	234	eP	Pn	22 02 42.1	+2.7
OCLP				eS	Sn	22 03 02.0	+4.4
MSLP	Maasin	1.89	206	eP	Pg	22 02 50.6	+0.5
MSLP				eS	Sg	22 03 18.2	+3.6
MMPH	Masbate	2.09	284	e	Pb	22 02 53.0	+0.5
LLP	Lapu-Lapu	2.28	228	⇑eP	Pb	22 02 55.1	-0.6
LLP				eS	Sg	22 03 24.7	-2.4
TBP	Tagbilaran	2.80	220	eP	Pb	22 03 03.5	-1.0
BUTP	Butuan	2.86	181	eP	Pb	22 03 06.4	+0.8
BUTP				eS	Sg	22 03 45.7	-0.1
RCP	Roxas	2.90	265	⇓eP	Pb	22 03 04.3	-2.1
GUIM	Jordan	3.28	249	eP	Pn	22 03 08.1	+1.8
GUIM				eS	Sb	22 03 49.1	-4.1
CGP	Cagayan de Oro	3.51	196	⇓eP	Pb	22 03 14.5	-2.2
CGP				eS	Sb	22 03 54.9	-4.9
BUKP	Musuan	3.99	189	eP	Pb	22 03 22.6	-2.3
BUKP				eS	Sb	22 04 12.6	-1.0
PAGZ	Pagadian	4.58	210	eP	Pb	22 03 30.2	-4.7
KCP	Kidapawan	4.84	187	⇓eP	Pb	22 03 40.6	+1.1
ENH	Enshi	23.72	323	eP	P	22 07 27.0	-0.4
	13nm,1.2s						
MYKOM	Kota Tinggi	23.86	247	eP	P	22 07 27.5	-1.3
	24nm,1.3s						
CM31	Chiang Mai Arr	26.63	288	eP	P	22 07 54.8	+0.7
	10nm,0.3s						
CMAR	Chiang Mai Arr	26.63	288	P	P	22 07 54.8	+0.7
	1.6nm,0.3s,baz=103,slow=7.7,SNR=8.9						
XAN	Xi'an	26.88	328	eP	P	22 07 56.7	+0.4
	7.8nm,1.0s						
FITZ	Fitzroy Crossi	29.75	180	P	P	22 08 21.5	-0.4
	2.6nm,0.8s,baz=30,slow=3.3,SNR=3.7						
WRAB	Tennant Creek	32.70	165	eP	P	22 08 45.7	-2.3

	3.3nm,1.1s						
WR1	**Warramunga Arr**	**32.71**	**165**	eP	**P**	**22 08 47.2**	**-0.8**
	5.3nm,1.3s						
WR1				ePcP	**PcP**	**22 11 34.1**	**+0.2**
WRA	**Warramunga Arr**	**32.71**	**165**	P	**P**	**22 08 47.2**	**-0.8**
	0.9nm,1.1s,baz=346,slow=9.0,SNR=4.1						
WRA				PcP	**PcP**	**22 11 34.1**	**+0.2**
	0.8nm,0.7s,baz=342,slow=3.1,SNR=7.2						
AS31	**Alice Springs**	**36.19**	**167**	eP	**P**	**22 09 19.2**	**+1.1**
	0.5nm,0.7s						
AS31				ePcP	**PcP**	**22 11 43.0**	**-0.9**
ASAR	**Alice Springs**	**36.19**	**167**	P	**P**	**22 09 19.2**	**+1.1**
	0.7nm,0.6s,baz=346,slow=7.5,SNR=10.0						
ASAR				PcP	**PcP**	**22 11 43.9**	**0.0**
	0.6nm,0.6s,baz=348,slow=3.1,SNR=4.9						
AS01	**Alice Springs**	**36.20**	**167**	eP	**P**	**22 09 18.9**	**+0.7**
LSA	**Lhasa**	**36.67**	**304**	eP	**P**	**22 09 23.1**	**+0.3**
	3.0nm,0.9s						
SONA0	**Songino Array**	**39.36**	**339**	eP	**P**	**22 09 45.4**	**+0.6**
SONM	**Songino Array**	**39.36**	**339**	P	**P**	**22 09 45.4**	**+0.6**
	0.4nm,0.5s,baz=154,slow=9.2,SNR=3.8						
SONA1	**Songino Array**	**39.37**	**339**	eP	**P**	**22 09 45.7**	**+0.8**
RAMN	**Ramite**	**39.63**	**298**	eP	**P**	**22 09 47.8**	**+0.2**
	18nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**40.04**	**75**	T	T	22 52 49.8	
	baz=272,slow=74						
H11S1	**WAKE ISLAND Hy**	**40.06**	**75**	T	T	22 52 43.0	
	baz=272,slow=74						
H11S2	**WAKE ISLAND Hy**	**40.06**	**75**	T	T	22 53 03.3	
	baz=272,slow=74						
JIRN	**Jiri**	**40.17**	**299**	eP	**P**	**22 09 52.4**	**+0.3**
	31nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**40.33**	**74**	T	T	22 53 20.0	
	baz=265,slow=75,SNR=54						
H11N2	**WAKE ISLAND Hy**	**40.33**	**73**	T	T	22 53 20.0	
	baz=265,slow=75,SNR=41						
H11N3	**WAKE ISLAND Hy**	**40.34**	**74**	T	T	22 53 23.7	
	baz=265,slow=75,SNR=40						
GUN	**Gumba**	**40.50**	**299**	eP	**P**	**22 09 55.0**	**+0.1**
	34nm,0.9s						
PKI	**Pulchoki**	**40.82**	**299**	eP	**P**	**22 09 56.9**	**-0.6**
	16nm,0.9s						
PKIN	**Phulchoki**	**40.83**	**299**	eP	**P**	**22 09 57.0**	**-0.5**
	8.5nm,0.6s						
DMN	**Daman**	**41.09**	**299**	eP	**P**	**22 09 59.4**	**-0.2**
	18nm,0.9s						
DANN	**Dangsing**	**42.42**	**299**	eP	**P**	**22 10 10.1**	**-0.5**
	26nm,0.8s						
FORT	**Forrest**	**42.44**	**177**	eP	**P**	**22 10 09.5**	**-0.6**
	12nm,0.8s						
PYUN	**Piuthan**	**43.02**	**299**	eP	**P**	**22 10 15.3**	**-0.1**
	30nm,0.9s						
BBOO	**Buckleboo**	**45.49**	**168**	eP	**P**	**22 10 35.0**	**+0.3**
	7.6nm,1.1s						
STKA	**Stephens Creek**	**46.06**	**161**	P	**P**	**22 10 39.4**	**+0.2**
	0.9nm,0.3s,baz=338,slow=6.9,SNR=5.8						
PEA0B	**Petropavlovsk-**	**48.46**	**25**	eP	**P**	**22 10 56.1**	**-1.5**
	25nm,1.1s						
MK01	**Makanchi Array**	**50.43**	**322**	eP	**P**	**22 11 13.9**	**+1.0**
MK31	**Makanchi Array**	**50.45**	**322**	eP	**P**	**22 11 14.3**	**+1.3**
	5.1nm,0.9s						
MK32	**Makanchi Array**	**50.45**	**322**	eP	**P**	**22 11 14.3**	**+1.3**
MKAR	**Makanchi Array**	**50.45**	**322**	P	**P**	**22 11 14.3**	**+1.3**
	5.7nm,0.8s,baz=122,slow=8.2,SNR=56						
MAKZ	**Makanchi**	**50.64**	**322**	eP	**P**	**22 11 15.3**	**+0.8**
	6.0nm,1.0s						
NIL	**Nilore**	**52.40**	**303**	eP	**P**	**22 11 27.9**	**0.0**
	9.4nm,1.0s						
ZALV	**Zalesovo Beam**	**52.99**	**331**	P	**P**	**22 11 31.5**	**-0.3**
	0.7nm,0.5s,baz=117,slow=8.3,SNR=4.7						
ZAA1	**Zalesovo Array**	**52.99**	**331**	eP	**P**	**22 11 31.5**	**-0.3**
KURK	**Kurchatov**	**54.46**	**325**	eP	**P**	**22 11 43.9**	**+1.2**
	15nm,0.8s						
KK31	**Karatay Array**	**56.76**	**314**	eP	**P**	**22 11 59.4**	**-0.1**
	3.6nm,0.8s						
KKAR	**Karatay Array**	**56.76**	**314**	eP	**P**	**22 11 59.5**	**+0.1**
	3.6nm,0.8s						
BVAR	**Borovoye Array**	**60.06**	**325**	P	**P**	**22 12 23.3**	**+1.0**
	3.4nm,0.7s,baz=116,slow=10,SNR=18						
BRVK	**Borovoye**	**60.13**	**325**	eP	**P**	**22 12 24.1**	**+1.3**
	8.1nm,0.9s						
ABKAR	**Akbulak array**	**65.33**	**319**	eP	**P**	**22 12 57.9**	**+0.4**
	3.8nm,0.8s						
ARU	**Arti**	**67.61**	**326**	eP	**P**	**22 13 11.7**	**-0.3**
	4.7nm,0.6s						
RAYN	**Ar Rayn**	**76.47**	**292**	eP	**P**	**22 14 05.0**	**-0.8**
	6.3nm,0.9s						
ILAR	**Eielson Array**	**78.28**	**26**	P	**P**	**22 14 15.7**	**+0.6**
	0.3nm,0.7s,baz=263,slow=5.6,SNR=3.2						
ILB	**Eielson Array**	**78.28**	**26**	eP	**P**	**22 14 15.7**	**+0.6**
	4.3nm,1.5s						
ARA0	**ARCESS Array S**	**82.53**	**340**	eP	**P**	**22 14 38.1**	**+0.2**
ARCES	**ARCESS Array B**	**82.53**	**340**	P	**P**	**22 14 38.1**	**+0.2**
	3.3nm,0.8s,baz=82,slow=8.7,SNR=7.2						
BR101	**Keskin Array S**	**84.11**	**309**	eP	**P**	**22 14 45.9**	**-1.0**
BRTR	**Keskin Array B**	**84.11**	**309**	P	**P**	**22 14 45.9**	**-1.0**
	1.0nm,0.7s,baz=125,slow=3.8,SNR=7.0						
FIA1	**FINESS Array S**	**84.25**	**332**	eP	**P**	**22 14 47.4**	**+0.6**
FIA0	**FINESS Array S**	**84.25**	**332**	eP	**P**	**22 14 47.4**	**+0.6**
FINES	**FINESS Array B**	**84.25**	**332**	P	**P**	**22 14 47.4**	**+0.6**
	3.8nm,0.8s,baz=76,slow=4.6,SNR=18						
AKASG	**Malin Array Be**	**85.00**	**321**	P	**P**	**22 14 50.5**	**-0.4**
	1.2nm,0.5s,baz=64,slow=5.3,SNR=4.7						
AKBB	**Malin Array Si**	**85.00**	**321**	eP	**P**	**22 14 50.5**	**-0.4**
	5.2nm,1.0s						
HFS	**Hagfors**	**90.40**	**332**	P	**P**	**22 15 16.0**	**-0.7**
	1.5nm,0.7s,baz=98,slow=7.6,SNR=7.2						
NB200	**NORSAR Array S**	**91.11**	**334**	eP	**P**	**22 15 18.5**	**-1.5**
NOA	**NORSAR Array B**	**91.11**	**334**	P	**P**	**22 15 18.5**	**-1.5**
	0.5nm,0.8s,baz=63,slow=4.8,SNR=2.8						

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*ISCJB **15** 22:03:46.1±0.2, 46°.83N±0°.01×6°.58E±0°.02, h10km±2km, Error ellipse: s-maj=2.0km s-min=1.8km az=24.6*

*ZUR **15** 22:03:48.1, 46°.85N×6°.71E, h7km±1km, MLh2.5/24, Error ellipse: s-maj=2.2km s-min=0.8km az=205.0*

*STR **15** 22:03:49.0±0.5, 47°N±3°×°±°, h5km±3km, M2.6/7, MLv2.6/7, MLv2.5/7*

*LDG **15** 22:03:48.3±0.0, 46°.86N×6°.67E, h6km, Md3.0/2, Ml3.0/33, Error ellipse: s-maj=0.9km s-min=0.8km az=55.0*

*PRU **15** 22:03:51.3±0.0, 46°.89N×6°.83E, h13km*

ISC 15 22:03:47.7±0.8, **46°.88N**±0°.01×**6°.65E**±0°.01, **h16**km±5km, **n98**, σ1s.**41**/169, **12C-5D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYVP	**Yverdon-les-Ba**	**0.10**	**182**	Pn	**Pg**	**22 03 50.0**	**-1.3**
BRANT	**Les Verrieres**	**0.13**	**296**	⇓Pg	**Pb**	**22 03 52.0**	**+0.1**
BRANT				Sg	**Sg**	**22 03 55.4**	**+1.1**
TORNY	**Torny/Romont**	**0.24**	**116**	⇑Pg	**Pg**	**22 03 52.3**	**-0.9**
TORNY				Sg	**Sg**	**22 03 55.8**	**-1.0**
SCOU	**Cournillens**	**0.31**	**95**	⇑Pg	**Pg**	**22 03 53.9**	**-0.4**
SCOU				Sg	**Sg**	**22 03 58.7**	**-0.3**
STAF	**Tafers**	**0.40**	**101**	⇑Pg	**Pg**	**22 03 55.4**	**-0.4**
GIMEL	**St. Georges /**	**0.43**	**217**	⇑Pg	**Pg**	**22 03 56.7**	**+0.2**
GIMEL				Sg	**Sb**	**22 04 03.6**	**+0.3**
CABF	**La Chapelle**	**0.47**	**235**	ePg	**Pg**	**22 03 57.6**	**+0.4**
	SNR=1.0						
CABF	**La Chapelle**	**0.47**	**235**	eP	**Pb**	**22 03 58.8**	**+1.2**
CABF				eSg	**Sg**	**22 04 04.0**	**+0.5**
	400nm,0.7s,SNR=1.0						
LOMF	**Lomont**	**0.49**	**15**	Pg	**Pb**	**22 03 58.3**	**+0.4**
LOMF				Sg	**Sb**	**22 04 05.7**	**+0.8**
NOV1	**NOV1**	**0.51**	**167**	⇑Pg	**Pg**	**22 03 57.5**	**-0.3**
AIGLE	**Aigle**	**0.58**	**158**	⇓Pg	**Pg**	**22 03 58.8**	**-0.4**
BOURR	**Bourrignon**	**0.65**	**38**	⇑Pg	**Pb**	**22 04 00.9**	**+0.2**
SENIN	**Lac Senin/Sane**	**0.69**	**139**	⇑Pg	**Pg**	**22 04 00.7**	**-0.5**
GRYON	**Gryon**	**0.71**	**153**	⇓Pg	**Pg**	**22 04 00.8**	**-0.8**
SALAN	**Lac Salanfe**	**0.77**	**163**	Pg	**Pg**	**22 04 02.2**	**-0.6**
OG02	**Monnetier-Morn**	**0.78**	**202**	Pg	**Pb**	**22 04 03.6**	**+0.7**
BALST	**Balsthal**	**0.85**	**57**	⇑Pg	**Pb**	**22 04 04.3**	**+0.2**
HINF	**Hinteralfeld**	**0.95**	**8**	ePn	**Pn**	**22 04 07.0**	**+0.6**
	SNR=1.0						
HINF				eSg	**Sb**	**22 04 19.1**	**+1.0**
	76nm,0.2s,SNR=1.0						
DIX	**Grande Dixence**	**0.96**	**146**	Pg	**Pg**	**22 04 05.7**	**-0.6**
MOF	**Molkenrain**	**1.03**	**19**	Pg	**Pn**	**22 04 08.2**	**+0.7**
MOF				Sg	**Sn**	**22 04 22.6**	**+0.9**
HASLI	**Hasliberg/Brie**	**1.04**	**96**	⇑Pg	**Pg**	**22 04 07.5**	**-0.4**
ROTHE	**Rothenfluh**	**1.05**	**55**	⇑Pg	**Pn**	**22 04 08.3**	**+0.4**
EMMET	**Emmethof**	**1.09**	**59**	⇑Pg	**Pn**	**22 04 08.6**	**+0.4**
REMY	**Saint-Rhmy-en**	**1.10**	**161**	P	**Pb**	**22 04 08.6**	**+0.1**
REMY				S	**Sn**	**22 04 25.5**	**+1.9**
OG35	**Corcelles**	**1.12**	**222**	⇑Pn	**Pg**	**22 04 09.5**	**+0.2**
HAU	**Haudompre**	**1.14**	**350**	ePg	**Pn**	**22 04 10.2**	**+1.1**
	SNR=1.0						
HAU	**Haudompre**	**1.14**	**350**	eP	**Pn**	**22 04 11.0**	**+1.9**
HAU				eSg	**Sn**	**22 04 25.5**	**+1.1**
	73nm,0.2s,SNR=1.0						
MRGE	**Morge**	**1.15**	**165**	⇓Pn	**Pb**	**22 04 09.2**	**0.0**
BNALP	**Bannalp**	**1.22**	**90**	Pg	**Pb**	**22 04 10.9**	**+0.4**
LPL	**La Plagne**	**1.36**	**177**	eP	**Pn**	**22 04 13.4**	**+1.1**
LPL				eSg	**Sb**	**22 04 30.7**	**+0.4**
	24nm,0.4s						
KIZ	**Kirchzarten**	**1.38**	**38**	Pn	**Pn**	**22 04 12.5**	**+0.2**
KIZ				Sn	**Sg**	**22 04 32.2**	**-0.1**
ECH	**Echery**	**1.38**	**14**	Pg	**Pb**	**22 04 13.4**	**+0.2**
ECH				Sn	**Sg**	**22 04 33.3**	**+1.0**
LPG	**La Plagne**	**1.38**	**177**	eP	**Pb**	**22 04 14.0**	**+0.6**
LPG				eSg	**Sb**	**22 04 31.3**	**+0.4**
	46nm,0.4s,SNR=1.0						
THEF	**They Montfort**	**1.42**	**342**	Pg	**Pg**	**22 04 15.7**	**+0.6**
THEF				Sg	**Sg**	**22 04 34.9**	**+1.3**
SLE	**Schleitheim**	**1.54**	**54**	⇓Pn	**Pn**	**22 04 14.4**	**-0.1**
CDF	**Champ du Feu**	**1.59**	**15**	ePn	**Pn**	**22 04 15.2**	**-0.1**
	SNR=1.0						
CDF	**Champ du Feu**	**1.59**	**15**	eP	**Pb**	**22 04 17.0**	**+0.2**
CDF	**Champ du Feu**	**1.59**	**15**	ePg	**Pg**	**22 04 18.0**	**-0.3**
CDF				eSn	**Sn**	**22 04 35.1**	**-0.4**
	SNR=1.0						
CDF				eSg	**Sg**	**22 04 38.9**	**-0.1**
	47nm,0.4s						
WLS	**Welschbruch**	**1.61**	**17**	Pn	**Pb**	**22 04 16.6**	**-0.4**
SFTF	**Sexfontaines**	**1.72**	**321**	ePn	**Pn**	**22 04 17.4**	**+0.5**
	baz=145						
SFTF	**Sexfontaines**	**1.72**	**321**	eP	**Pb**	**22 04 19.0**	**+0.1**
SFTF	**Sexfontaines**	**1.72**	**321**	ePg	**Pg**	**22 04 20.9**	**+0.2**
	baz=139						
SFTF				eSn	**Sn**	**22 04 38.9**	**+0.4**
SFTF				eSg	**Sg**	**22 04 43.7**	**+0.7**
	73nm,0.3s						
PAGF	**Fort de Pagny**	**1.79**	**340**	ePn	**Pn**	**22 04 18.2**	**+0.3**
	baz=161						
PAGF	**Fort de Pagny**	**1.79**	**340**	ePg	**Pg**	**22 04 21.9**	**-0.2**
	baz=159						
PAGF				eSn	**Sn**	**22 04 40.2**	**-0.1**
PAGF				eSg	**Sg**	**22 04 45.7**	**+0.4**
	118nm,0.5s,baz=157						
SMF	**Signal de Mont**	**1.94**	**264**	ePn	**Pn**	**22 04 20.3**	**+0.3**
	SNR=1.0						
SMF	**Signal de Mont**	**1.94**	**264**	ePg	**Pg**	**22 04 24.7**	**-0.3**
SMF				eSn	**Sn**	**22 04 44.0**	**-0.1**
	SNR=1.0						
SMF				eSg	**Sg**	**22 04 50.5**	**+0.3**
	16nm,0.2s,SNR=1.0						
LOR	**Lormes**	**1.94**	**283**	ePn	**Pn**	**22 04 20.4**	**+0.3**
	baz=104,SNR=1.0						
LOR	**Lormes**	**1.94**	**283**	ePg	**Pg**	**22 04 25.5**	**+0.5**
	baz=103,SNR=1.0						
LOR				eSg	**Sg**	**22 04 50.7**	**+0.4**
	28nm,0.2s,baz=101						
LOR	**Lormes**	**1.94**	**283**	Pn	**Pb**	**22 04 23.1**	**+0.4**
LOR				Sn	**Sg**	**22 04 50.6**	**+0.3**
MEZF	**Maizieres J'vi**	**1.95**	**327**	ePn	**Pn**	**22 04 20.5**	**+0.4**
	baz=143,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.95**	**327**	ePg	**Pg**	**22 04 25.0**	**-0.1**
	baz=146,SNR=1.0						
MEZF				eSn	**Sn**	**22 04 44.2**	**0.0**
MEZF				eSg	**Sg**	**22 04 51.2**	**+0.8**
	17nm,0.2s,baz=144,SNR=1.0						
ORIF	**Oris-en-Rattie**	**2.03**	**196**	ePn	**Pn**	**22 04 21.0**	**-0.4**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**2.03**	**196**	ePg	**Pb**	**22 04 25.5**	**+1.2**
ORIF				eSn	**Sn**	**22 04 44.7**	**-1.7**
	SNR=1.0						
ORIF				eSg	**Sb**	**22 04 51.4**	**+2.0**
	34nm,0.5s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**2.03**	**196**	Pn	**Pn**	**22 04 23.3**	**+2.0**
MBDF	**Montbardon**	**2.15**	**178**	ePn	**Pn**	**22 04 22.4**	**-0.7**
MBDF	**Montbardon**	**2.15**	**178**	ePg	**Pb**	**22 04 28.0**	**+1.6**
	SNR=1.0						
MBDF				eSg	**Sb**	**22 04 55.1**	**+2.2**
	13nm,0.5s,SNR=1.0						
SSF	**Saint Saulge**	**2.16**	**276**	ePn	**Pn**	**22 04 23.3**	**+0.3**
	SNR=1.0						
SSF	**Saint Saulge**	**2.16**	**276**	eP	**Pb**	**22 04 25.7**	**-0.7**
SSF	**Saint Saulge**	**2.16**	**276**	ePg	**Pg**	**22 04 29.3**	**+0.2**
	SNR=1.0						
SSF				eSg	**Sg**	**22 04 57.3**	**+0.2**
	24nm,0.3s						
DAVA	**Damuels**	**2.25**	**78**	ePg	**Pg**	**22 04 30.2**	**-0.6**
	5.3nm,0.2s,SNR=7.4						
DAVA				eSg	**Sg**	**22 05 00.2**	**+0.2**
	13nm,0.3s						
AVF	**Avril sur Loir**	**2.26**	**269**	ePn	**Pn**	**22 04 24.1**	**-0.3**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.26**	**269**	ePg	**Pg**	**22 04 31.1**	**0.0**
AVF				eSn	**Sn**	**22 04 51.1**	**-0.8**
	7.0nm,0.2s						
AVF				eSg	**Sg**	**22 05 00.3**	**-0.2**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.45**	**215**	ePn	**Pn**	**22 04 26.4**	**-0.6**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.45**	**215**	ePg	**Pb**	**22 04 33.5**	**+2.1**
	SNR=1.0						
VIVF				eSn	**Sn**	**22 04 54.9**	**-1.7**
	SNR=1.0						
VIVF				eSg	**Sb**	**22 05 03.6**	**+2.3**
	26nm,0.3s						
AGO	**Saint Agoulin**	**2.57**	**252**	Pn	**Pn**	**22 04 29.6**	**+1.0**
AGO				Pg	**Pg**	**22 04 37.1**	**+0.2**
BGF	**Bois d'Agland**	**2.63**	**264**	ePn	**Pn**	**22 04 29.6**	**+0.1**
	SNR=1.0						
BGF	**Bois d'Agland**	**2.63**	**264**	ePg	**Pg**	**22 04 37.5**	**-0.7**
	SNR=1.0						
BGF				eSn	**Sn**	**22 05 00.5**	**-0.6**
	SNR=1.0						
BGF				eSg	**Sg**	**22 05 11.8**	**-0.6**
	22nm,0.3s,SNR=1.0						
PYM	**Petit Puy Mans**	**2.76**	**247**	Pn	**Pn**	**22 04 31.4**	**+0.1**
PYM				Pg	**Pg**	**22 04 40.2**	**-0.5**
HYF	**Humbligny**	**2.77**	**280**	ePn	**Pn**	**22 04 30.9**	**-0.4**
HYF	**Humbligny**	**2.77**	**280**	ePg	**Pg**	**22 04 39.5**	**-1.2**
HYF				eSn	**Sn**	**22 05 03.9**	**-0.5**
HYF				eSg	**Sg**	**22 05 16.4**	**-0.2**
FETA	**Feichten**	**2.80**	**86**	ePg	**Pg**	**22 04 40.3**	**-1.1**
	1.0nm,0.3s,SNR=5.5						
FETA				Sg	**Sg**	**22 05 18.3**	**+0.6**
	0.9nm,0.2s						
RETA	**Reutte**	**2.87**	**76**	ePg	**Pg**	**22 04 40.9**	**-1.9**
	1.2nm,0.3s,SNR=5.0						
RETA				eSg	**Sg**	**22 05 19.2**	**-0.8**
	3.7nm,0.3s						
SBF	**Sospel**	**3.07**	**169**	ePn	**Pn**	**22 04 34.7**	**-0.8**
SBF	**Sospel**	**3.07**	**169**	ePg	**Pb**	**22 04 44.6**	**+2.7**
SBF				eSn	**Sn**	**22 05 08.7**	**-3.2**
SBF				eSg	**Sb**	**22 05 23.1**	**+4.0**
	2.3nm,0.3s						
MOTA	**Moosalm**	**3.08**	**80**	i Pn	**Pn**	**22 04 38.7**	**+2.9**
	0.5nm,0.2s						
MOTA				eSg	**Sg**	**22 05 26.4**	**-0.3**
	2.4nm,0.3s						
TCF	**Toulx Ste Croi**	**3.12**	**261**	ePn	**Pn**	**22 04 37.1**	**+0.9**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.12**	**261**	ePg	**Pg**	**22 04 46.3**	**-1.1**
TCF				eSn	**Sn**	**22 05 11.5**	**-1.6**
	SNR=1.0						
TCF				eSg	**Sg**	**22 05 26.6**	**-1.2**
	12nm,0.5s,SNR=1.0						
SQTA	**Sankt Quirin**	**3.14**	**82**	i Pn	**Pn**	**22 04 39.4**	**+2.8**
	0.6nm,0.1s						
SQTA				ePg	**Pg**	**22 04 46.2**	**-1.6**
	1.4nm,0.3s						
SQTA				eSg	**Sg**	**22 05 28.1**	**-0.4**
	5.2nm,0.4s						
FRF	**La Foret Royal**	**3.32**	**180**	ePn	**Pn**	**22 04 38.3**	**-0.6**
FRF	**La Foret Royal**	**3.32**	**180**	ePg	**Pb**	**22 04 49.0**	**+2.8**
FRF				eSn	**Sn**	**22 05 15.3**	**-2.7**
FRF				eSg	**Sb**	**22 05 30.9**	**+4.6**
	1.1nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**3.42**	**216**	ePg	**Pg**	**22 04 51.5**	**-1.8**
LASF				eSn	**Sn**	**22 05 18.0**	**-2.6**
LASF				eSg	**Sg**	**22 05 35.7**	**-1.9**
	31nm,0.6s						
GIVF	**Givet**	**3.44**	**340**	ePn	**Pn**	**22 04 41.2**	**+0.5**
GIVF	**Givet**	**3.44**	**340**	ePg	**Pg**	**22 04 52.1**	**-1.6**
GIVF				eSn	**Sn**	**22 05 18.9**	**-2.2**
	3.7nm,0.3s,SNR=1.0						
GIVF				eSg	**Sg**	**22 05 36.6**	**-1.7**
	SNR=1.0						
BAIF	**Baives**	**3.57**	**334**	ePn	**Pn**	**22 04 42.6**	**+0.2**
	SNR=1.0						
BAIF				eSn	**Sn**	**22 05 22.7**	**-1.5**
BAIF				eSg	**Sg**	**22 05 41.6**	**-0.8**
	5.0nm,0.4s,SNR=1.0						
CAF	**Calviac**	**3.75**	**240**	ePn	**Pn**	**22 04 44.7**	**-0.2**
CAF	**Calviac**	**3.75**	**240**	ePg	**Pg**	**22 04 57.7**	**-1.8**
CAF				eSn	**Sn**	**22 05 26.7**	**-2.0**
CAF				eSg	**Sg**	**22 05 46.3**	**-1.8**
	8.2nm,0.4s						
RJF	**Les Rejaudoux**	**3.90**	**248**	ePn	**Pn**	**22 04 46.5**	**-0.4**
RJF				eSg	**Sg**	**22 05 51.2**	**-1.8**
	4.5nm,0.3s,SNR=1.0						
LFF	**La Frestale**	**4.56**	**247**	ePn	**Pn**	**22 04 56.0**	**+0.1**
LFF	**La Frestale**	**4.56**	**247**	ePg	**Pg**	**22 05 12.1**	**-2.8**
LFF				eSn	**Sn**	**22 05 45.2**	**-3.3**
LFF				eSg	**Sg**	**22 06 11.6**	**-2.3**
	13nm,0.5s						
MFF	**Saint Martin d**	**4.68**	**269**	ePn	**Pn**	**22 04 56.9**	**-0.7**
	SNR=1.0						
MFF				eSn	**Sn**	**22 05 48.3**	**-3.2**
	0.9nm,0.3s,SNR=1.0						
MFF				eSg	**Sg**	**22 06 15.6**	**-2.2**
	1.4nm,0.2s						
LDF	**La Druitiere**	**4.88**	**293**	eP	**Pn**	**22 05 04.0**	**+3.7**
LDF				eSg	**Sg**	**22 06 23.0**	**-1.2**
	4.3nm,0.3s,SNR=1.0						
NKC	**Novy Kostel**	**5.11**	**47**	eSG	**Sg**	**22 06 30.9**	**-0.7**
	comp=Z,4.3nm,0.4s						
FLN	**La Foliniere**	**5.16**	**294**	eSg	**Sg**	**22 06 31.4**	**-1.8**
	8.3nm,0.4s,SNR=1.0						
KHC	**Kasperske Hory**	**5.17**	**62**	ePG	**Pg**	**22 05 22.4**	**-4.2**
KHC				eSN	**Sn**	**22 06 02.2**	**-1.4**
KHC				eSG	**Sg**	**22 06 31.7**	**-1.8**
	comp=Z,2.4nm,0.6s						
GRR	**Gorron**	**5.29**	**289**	ePn	**Pn**	**22 05 06.0**	**0.0**
	SNR=1.0						
GRR	**Gorron**	**5.29**	**289**	ePg	**Pg**	**22 05 26.4**	**-2.6**
GRR				eSn	**Sn**	**22 06 04.4**	**-2.2**
GRR				eSg	**Sg**	**22 06 35.4**	**-2.1**
	1.5nm,0.2s						
CLL	**Collm**	**6.09**	**41**	eSg	**Sg**	**22 07 03.0**	**+0.1**
BRG	**Berggiesshubel**	**6.25**	**48**	SG	**Sg**	**22 07 04.3**	**-3.9**
	1.9nm,0.8s						

MEX 15 22:19:21.0±0.4, **15°.36N**×**94°.02W**, **h16**km±724km, **MD3.6**, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.85**	**66**	eP	Pb	22 19 34.3	-3.1
PCIG				i S	Sb	22 19 44.6	-3.9

IDC 15 22:22:46.1±46.0, **15°.89S**×**175°.25W**, **h0**km, **mb4.1**/3, **mb1 4.3**/3, **mb1mx3.7**/28, **mbtmp4.1**/3, **Error ellipse: s-maj=878.5km s-min=166.0km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.25**	**240**	P	P	22 30 41.4	+0.1
	1.4nm,0.6s,baz=101,slow=10,SNR=4.8						
WRA	**Warramunga Arr**	**48.00**	**257**	P	P	22 31 27.0	-0.3
	0.5nm,0.5s,baz=93,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**48.27**	**252**	P	P	22 31 29.2	-0.1
	3.9nm,0.4s,baz=88,slow=8.1,SNR=64						

IDC 15 22:24:06.6±3.4, **10°.81S**×**166°.08E**, **h0**km, **mb3.9**/3, **mb1 4.1**/4, **mb1mx3.7**/32, **mbtmp3.9**/4, **ML3.7**/1, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.6**/28, **Error ellipse: s-maj=69.6km s-min=44.2km az=85.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.19**	**282**	LR	LR	22 28 00.5	
	comp=Z,171nm,18.8s,baz=165,slow=38						
DZM	**Mont Dzumac**	**11.20**	**178**	Pn	Pn	22 26 48.5	+0.3
	0.5nm,0.3s,baz=137,slow=18,SNR=6.9						
WRA	**Warramunga Arr**	**31.87**	**250**	P	P	22 30 34.1	+0.3
	2.3nm,0.7s,baz=82,slow=8.9,SNR=29						
ASAR	**Alice Springs**	**33.19**	**243**	P	P	22 30 45.0	-0.4
	0.6nm,0.6s,baz=65,slow=10,SNR=11						
MKAR	**Makanchi Array**	**93.58**	**317**	P	P	22 37 24.6	-0.2
	0.2nm,0.6s,baz=121,slow=5.8,SNR=3.6						

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*IDC **15** 22:30:26.0±0.9, 19°.15S×176°.34W, h0km, mb4.2/9, mb1 4.5/10, mb1mx4.2/25, mbtmp4.2/10, ML4.1/1, MS3.9/14, Ms1 3.9/14, ms1mx3.7/28, Error ellipse: s-maj=45.6km s-min=18.0km az=146.0*

*ISCJB **15** 22:30:39.0±0.4, 18°.8S±0°.1×176°.71W±0°.08, h100km, mb4.3/28, Error ellipse: s-maj=19.6km s-min=7.7km az=154.2*

*NEIC **15** 22:30:39.4±2.2, 18°.76S×176°.64W, h92km±18km, mb4.5/21, Error ellipse: s-maj=22.8km s-min=9.5km az=144.0*

ISC 15 22:30:40.2±0.6, **18°.8S**±0°.2×**176°.6W**±0°.1, **h100**km, **n77**, σ**2s.06**/69, **mb4.4**/28, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.15**	**281**	ePn	**Pn**	**22 31 55.4**	**+0.4**
OUENC	**Ouen Island, N**	**15.89**	**254**	ePn	**Pn**	**22 34 15.2**	**-2.9**
	64nm,1.3s						
RAR	**Rarotonga**	**16.04**	**102**	LR	LR	22 40 35.4	
	comp=Z,150nm,18.5s,baz=305,slow=39						
DZM	**Mont Dzumac**	**16.19**	**255**	eP	**P**	**22 34 28.7**	**+5.3**
	60nm,1.4s						
DZM				eLR	LR	22 38 20.0	
	comp=Z,1µm,24.9s						
DZM	**Mont Dzumac**	**16.19**	**255**	LR	LR	22 39 37.0	
	comp=Z,1µm,19.4s,baz=74,slow=34						
URZ	**Urewera**	**20.18**	**194**	P	P	22 34 58.6	-8.1
	0.5nm,0.3s,baz=2.3,slow=6.7,SNR=5.0						
URZ				LR	LR	22 41 49.2	
	comp=Z,418nm,21.3s,baz=23,slow=34						
PPT2	**Papeete2**	**25.73**	**92**	eLQ	LQ	22 41 07.8	
	446nm,26.0s						
PPT2				eLR	LR	22 42 02.9	
	comp=Z,885nm,26.5s,baz=272						
PPT	**Papeete**	**25.73**	**92**	LR	LR	22 43 09.2	
	comp=Z,243nm,20.4s,baz=250,slow=30						
TBI	**Tubuai**	**25.75**	**105**	eLQ	LQ	22 40 53.3	
	783nm,29.2s						
TBI				eLR	LR	22 42 05.0	
	comp=Z,284nm,27.2s						
DCZ	**Deep Cove**	**29.84**	**203**	eP	P	22 36 41.9	+4.0
	30nm,1.2s						
CTA	**Charters Tower**	**34.97**	**262**	P	**P**	**22 37 21.1**	**-2.0**
	4.7nm,0.9s,baz=69,slow=14,SNR=2.4						
TAOE	**Nuku Hiva Isla**	**36.71**	**79**	eLR	LR	22 47 17.2	
	comp=Z,375nm,25.4s						
TOO	**Toolangi**	**37.96**	**232**	eP	**P**	**22 37 50.6**	**+2.3**
	12nm,1.1s						
COEN	**Coen**	**38.80**	**271**	eP	**P**	**22 37 53.5**	**-2.1**
	6.0nm,0.9s						
STKA	**Stephens Creek**	**39.71**	**242**	eP	**P**	**22 38 04.7**	**+1.7**
	3.2nm,1.0s						
STKA	**Stephens Creek**	**39.71**	**242**	P	**P**	**22 38 00.6**	**-2.4**
	5.6nm,1.0s,baz=135,slow=6.1,SNR=3.7						
STKA				LR	LR	22 52 55.9	
	comp=Z,180nm,18.4s,baz=35,slow=34						
WAKE	**Wake Island**	**41.21**	**336**	eP	**P**	**22 38 16.1**	**+0.7**
	162nm,1.3s						
BBOO	**Buckleboo**	**44.48**	**242**	eP	**P**	**22 38 43.3**	**+1.5**
	6.9nm,0.9s						
WB2	**Warramunga Arr**	**46.12**	**260**	eP	**P**	**22 38 54.6**	**-0.3**
WRAB	**Tennant Creek**	**46.13**	**260**	eP	**P**	**22 38 54.7**	**-0.2**
	7.8nm,1.0s						
WR1	**Warramunga Arr**	**46.13**	**260**	eP	**P**	**22 38 54.8**	**-0.2**
	6.5nm,0.9s						
WR1				ePcP	**PcP**	**22 40 27.9**	**-1.7**
WRA	**Warramunga Arr**	**46.13**	**260**	P	**P**	**22 38 54.8**	**-0.2**
	5.5nm,1.1s,baz=95,slow=6.4,SNR=20						
WRA				PcP	**PcP**	**22 40 27.9**	**-1.7**
	0.2nm,0.3s,baz=88,slow=4.3,SNR=2.3						
WRA				LR	LR	22 57 38.4	
	comp=Z,338nm,19.0s,baz=100,slow=35						
AS01	**Alice Springs**	**46.14**	**255**	eP	**P**	**22 38 54.6**	**-0.5**
AS31	**Alice Springs**	**46.18**	**255**	eP	**P**	**22 38 55.8**	**+0.4**
	4.2nm,0.8s						
AS31				ePcP	**PcP**	**22 40 29.1**	**-0.6**
ASAR	**Alice Springs**	**46.19**	**255**	P	**P**	**22 38 55.5**	**+0.1**
	6.9nm,0.7s,baz=87,slow=8.2,SNR=78						
ASAR				PcP	**PcP**	**22 40 29.1**	**-0.6**
	0.4nm,0.7s,baz=88,slow=5.7,SNR=2.5						

ASAR				LR	LR	22 58 06.6	
	comp=Z,107nm,18.6s,baz=96,slow=36						
MJAR	Matsushiro Arr	69.60	322	LR	LR	23 06 16.1	
	comp=Z,19nm,21.7s,baz=80,slow=31						
QSPA	South Pole Qui	71.30	180	eP	P	22 41 48.6	-0.2
	9.7nm,1.4s						
PETK	Petropavlovsk-	74.94	344	LR	LR	23 07 18.3	
	comp=Z,143nm,21.8s,baz=134,slow=29						
KSRS	Korea Array	76.46	318	LR	LR	23 10 01.8	
	comp=Z,33nm,19.9s,baz=96,slow=31						
NV01	Mina Array Sit	78.89	43	eP	P	22 42 32.8	-0.1
NVAR	Mina Array Bea	78.89	43	P	P	22 42 32.5	-0.4
	0.9nm,0.8s,baz=231,slow=9.8,SNR=5.9						
NVAR				LR	LR	23 10 17.4	
	comp=Z,114nm,18.9s,baz=243,slow=30						
KNB	Kanab	81.78	47	eP	P	22 42 52.3	+3.9
	4.9nm,0.7s						
G08A	Pilot Rock	82.47	37	eP	P	22 42 52.6	+0.9
	6.8nm,1.5s						
BMO	Blue Mountains	83.17	38	eP	P	22 42 55.8	+0.5
	6.0nm,1.5s						
TMUT	Trail Mountain	84.03	45	eP	P	22 43 00.7	+0.6
	5.6nm,1.0s						
SRU	San Rafael Swe	84.40	46	eP	P	22 43 02.3	+0.5
	2.6nm,0.8s						
MNTX	Cornudas Mount	84.70	54	eP	P	22 43 03.1	-0.2
	14nm,1.4s						
TCUT	Toone Canyon	84.81	44	eP	P	22 43 04.5	+0.5
	7.5nm,0.9s						
LTX	Lajitas	85.04	57	eP	P	22 43 04.1	-1.1
TXAR	Lajitas Array	85.04	57	P	P	22 43 04.1	-1.1
	2.3nm,1.1s,baz=216,slow=6.2,SNR=13						
ANMO	Albuquerque	85.32	51	eP	P	22 43 06.7	+0.1
	6.1nm,1.4s						
WRH	Wood River Hil	85.84	12	eP	P	22 43 10.6	+2.4
	7.4nm,1.1s						
ILAR	Eielson Array	86.35	12	P	P	22 43 10.0	-0.7
	0.6nm,0.8s,baz=224,slow=5.0,SNR=4.6						
ILAR				LR	LR	23 16 33.1	
	comp=Z,49nm,19.3s,baz=184,slow=32						
ILB	Eielson Array	86.35	12	eP	P	22 43 10.0	-0.7
	7.4nm,1.5s						
IL1	Eielson Array	86.35	12	eP	P	22 43 10.5	-0.2
PDAR	Pinedale Array	86.82	43	LR	LR	23 16 36.7	
	comp=Z,63nm,18.7s,baz=314,slow=32						
CM31	Chiang Mai Arr	90.75	289	eP	P	22 43 32.4	-0.3
	3.3nm,1.0s						
CMAR	Chiang Mai Arr	90.75	289	P	P	22 43 32.4	-0.3
	0.5nm,0.3s,baz=92,slow=2.7,SNR=3.2						
YKA	Yellowknife Ar	94.41	24	P	P	22 43 47.9	-0.5
	0.2nm,0.7s,baz=246,slow=4.5,SNR=4.1						
YKB5	Yellowknife Ar	94.41	24	eP	P	22 43 47.9	-0.5
SONM	Songino Array	95.29	319	LR	LR	23 23 33.8	
	comp=Z,29nm,18.7s,baz=146,slow=33						
MK32	Makanchi Array	110.93	314	ePKiKP	PKiKP	22 49 02.0	+0.2
MKAR	Makanchi Array	110.93	314	PKiKP	PKiKP	22 49 02.0	+0.2
	0.3nm,0.9s,baz=90,slow=0.4,SNR=2.3						
AKASG	Malin Array Be	142.09	333	PKP	PKPdf	22 50 00.0	-0.5
	0.3nm,0.4s,baz=38,slow=3.5,SNR=2.3						
AKBB	Malin Array Si	142.09	333	ePKPdf	PKPdf	22 50 00.0	-0.5
BR101	Keskin Array S	146.57	315	ePKPbc	PKiKP	22 50 12.6	-0.7
BRTR	Keskin Array B	146.57	315	PKPbc	PKiKP	22 50 12.6	-0.7
	1.8nm,1.0s,baz=123,slow=3.7,SNR=6.2						
CLL	Collm	146.64	349	ePKPbc	PKPab	22 50 11.0	-0.4
	comp=Z,21nm,2.0s						
CLL				i PKiKP	PKiKP	22 50 14.4	+1.5
	comp=Z,19nm,1.7s						
CLL				i		22 50 17.5	
	comp=Z,15nm,1.3s						
CLL				i		22 50 20.4	
CLL				e		22 50 28.0	
CLL				Lm	MLR	23 52 00.0	
	comp=Z,100nm,18.0s						
UPC	Upice	146.76	345	ePKP	PKiKP	22 50 18.3	+5.1
OKC	Ostrava-Krasne	146.81	342	ePKP	PKiKP	22 50 18.2	+4.9
DPC	Dobruska-Polom	146.83	345	ePKP	PKiKP	22 50 17.2	+3.8
DPC				ex	x	22 50 21.2	
BRG	Berggiesshubel	146.87	348	ePKP	PKiKP	22 50 14.1	+0.7
	comp=Z,1.7nm,0.8s						
BRG				e		22 50 17.3	
	comp=Z,3.5nm,0.9s						
PVCC	Panska Ves	147.07	347	ePKP	PKiKP	22 50 19.3	+5.5
PRU	Pruhonice	147.58	346	ePKP	PKPab	22 50 19.6	+4.4
KHC	Kasperske Hory	148.60	347	ePKP	PKPab	22 50 19.7	+0.4
KHC				ex	x	22 50 26.5	
GERES	GERESS Array B	148.85	347	PKPbc	PKiKP	22 50 17.1	-0.6
	comp=Z,1.4nm,0.8s,baz=60,slow=3.2,SNR=10						
CONA	Conrad Observa	149.18	343	ePKPab	PKPab	22 50 19.8	-2.0
	comp=Z,7.1nm,1.1s						
MOA	Molln	149.65	345	ePKPab	PKPab	22 50 24.5	+0.8
	comp=Z,3.1nm,0.9s						
SOKA	Soboth	150.55	344	ePKiKP	PKiKP	22 50 22.6	+1.4
	comp=Z,5.0nm,1.1s						
KBA	Koelnbreinsper	150.59	346	ePKPab	PKPab	22 50 24.4	-3.3
	comp=Z,6.1nm,0.9s						
MOTA	Moosalm	150.79	349	ePKPab	PKPab	22 50 26.3	-2.2
	comp=Z,6.2nm,1.1s						
OBKA	Obir	150.83	344	ePKPab	PKPab	22 50 27.6	-1.0
	comp=Z,9.6nm,1.4s						
SQTA	Sankt Quirin	150.90	349	ePKiKP	PKiKP	22 50 24.0	+2.1
	comp=Z,4.6nm,1.1s						
MYKA	Terra Mystica	150.95	345	ePKPab	PKPab	22 50 25.2	-3.9
	comp=Z,6.6nm,1.0s						
DAVA	Damuels	151.05	351	ePKPab	PKPab	22 50 26.5	-3.1
	comp=Z,8.4nm,1.1s						
ABTA	Abfaltersbach	151.09	347	ePKPab	PKPab	22 50 27.0	-2.7
	comp=Z,9.2nm,1.1s						
FETA	Feichten	151.17	350	ePKPab	PKPab	22 50 28.1	-2.1
	comp=Z,6.3nm,1.1s						

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*ISCJB **15** 22:51:43.0±1.1, 47°.2N±0°.1×144°.8E±0°.3, h350^{km}, mb3.1/10, Error ellipse: s-maj=27.7km s-min=14.0km az=175.0*

*IDC **15** 22:51:47.3±4.1, 47°.15N×144°.38E, h372^{km}±37^{km}, mb2.9/10, mb1 3.0/12, mb1mx2.7/54, mbtmp3.7/12, Error ellipse: s-maj=38.2km s-min=14.0km az=80.0*

ISC 15 22:51:45.0±1.5, **47°.2N**±0°.1×**144°.5E**±0°.2, **h350**^{km}**, n12, σ0^{s}.89**/12**, mb3.1**/10**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLR	Kul'dur	8.76	288	P	P	22 53 50.9	+0.4
	0.2nm,0.3s,baz=93,slow=12,SNR=3.7						
MJAR	Matsushiro Arr	11.60	206	P	Pn	22 54 21.9	-0.2
	0.1nm,0.3s,baz=8.7,slow=13,SNR=6.6						
MKAR	Makanchi Array	41.43	293	P	P	22 58 57.2	-1.2
	0.5nm,0.6s,baz=70,slow=6.6,SNR=8.6						
KURBB	Kurchatov Arra	42.22	300	P	P	22 59 03.0	-1.6
	0.4nm,0.4s,baz=74,slow=8.6,SNR=5.7						
BVAR	Borovoye Array	45.94	306	P	P	22 59 33.9	+0.2
	0.2nm,0.3s,baz=64,slow=9.2,SNR=3.0						
CMAR	Chiang Mai Arr	46.88	248	P	P	22 59 42.5	+1.1
	0.4nm,0.4s,baz=29,slow=8.1,SNR=5.0						
ARCES	ARCESS Array B	55.38	338	P	P	23 00 44.2	+0.9
	3.3nm,1.0s,baz=46,slow=6.9,SNR=3.9						
FINES	FINESS Array B	60.98	331	P	P	23 01 22.5	+0.7
	1.1nm,0.8s,baz=47,slow=8.4,SNR=7.6						
NOA	NORSAR Array B	65.73	337	P	P	23 01 52.6	-0.1
	0.4nm,0.8s,baz=176,slow=13,SNR=2.5						
HFS	Hagfors	65.81	335	P	P	23 01 53.0	-0.2
	1.7nm,0.9s,baz=90,slow=3.3,SNR=4.1						
WRA	Warramunga Arr	67.42	190	P	P	23 02 03.1	-0.6
	0.2nm,0.5s,baz=5.3,slow=6.0,SNR=3.6						
ASAR	Alice Springs	71.15	190	P	P	23 02 26.6	+0.3
	0.2nm,0.6s,baz=11,slow=4.7,SNR=3.0						

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*IDC **15** 22:59:40.5±1.0, 11°.34S×164°.97E, h0^{km}, mb4.1/11, mb1 4.2/13, mb1mx4.1/32, mbtmp4.1/13, ML4.6/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/20, Error ellipse: s-maj=27.4km s-min=20.3km az=98.0*

*NEIC **15** 22:59:42.4±0.5, 11°.27S×164°.90E, h10^{km}, mb4.4/14, Error ellipse: s-maj=11.9km s-min=9.1km az=92.0*

*ISCJB **15** 22:59:44.5±0.5, 11°.34S±0°.06×164°.77E±0°.07, h34^{km}, mb4.2/22, MS3.2/3, Error ellipse: s-maj=10.7km s-min=8.2km az=145.3*

ISC 15 22:59:46.1±0.7, **11°.39S**±0°.07×**164°.8E**±0°.1, **h34**^{km}**, n36, σ1^{s}.31**/42**, mb4.3**/22**, MS3.2**/3**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.18	292	Pn	Pn	23 00 59.9	-1.3
	58nm,0.3s,baz=143,slow=5.8,SNR=5.6						
HNR				Sn	Sn	23 01 58.7	-1.1
	14nm,0.3s,baz=198,slow=20,SNR=3.7						
HNR				LR	LR	23 03 11.8	
	comp=Z,463nm,19.3s,baz=120,slow=40						
DZM	Mont Dzumac	10.74	172	ePn	Pn	23 02 19.8	+2.1
DZM				eSn	Sn	23 04 13.7	-3.1
DZM	Mont Dzumac	10.74	172	Pn	Pn	23 02 19.3	+1.6
	5.4nm,0.3s,baz=340,slow=10,SNR=44						
DZM				Sn	Sn	23 04 13.7	-3.1
	0.1nm,0.3s,baz=168,slow=20,SNR=1.6						
CTA	Charters Tower	19.84	242	P	Pn	23 04 15.8	-0.3
	0.5nm,0.3s,baz=78,slow=14,SNR=6.5						
CTAO	Charters Tower	19.84	242	eP	P	23 04 14.6	+0.3
	28nm,1.5s						
COEN	Coen	21.28	261	eP	P	23 04 30.6	+0.8
	7.4nm,0.8s						
URZ	Urewera	28.93	160	eP	P	23 05 41.0	-1.1
	7.7nm,1.0s						
URZ	Urewera	28.93	160	P	P	23 05 42.5	+0.4
	2.4nm,0.5s,baz=196,slow=19,SNR=4.8						
BKZ	Black Stump Fm	29.55	161	eP	P	23 05 49.0	+1.3
	7.8nm,1.1s						
STKA	Stephens Creek	29.58	223	LR	LR	23 16 04.8	
	comp=Z,32nm,21.5s,baz=28,slow=33						
WRAB	Tennant Creek	30.51	250	eP	P	23 05 56.5	+0.1
	13nm,1.4s						
WB2	Warramunga Arr	30.51	250	eP	P	23 05 56.1	-0.3
WR1	Warramunga Arr	30.52	250	eP	P	23 05 56.5	0.0
	14nm,1.4s						
WR1				ePcP	PcP	23 08 54.6	-0.6
WRA	Warramunga Arr	30.52	250	P	P	23 05 56.5	0.0
	2.5nm,0.6s,baz=80,slow=9.1,SNR=41						
WRA				PcP	PcP	23 08 54.6	-0.6
	0.9nm,0.8s,baz=75,slow=3.0,SNR=5.0						
WRA				LR	LR	23 18 29.6	
	comp=Z,86nm,18.6s,baz=330,slow=37						
AS31	Alice Springs	31.83	243	eP	P	23 06 07.7	-0.4
	0.7nm,0.5s						
AS31				ePcP	PcP	23 08 58.9	+0.2
ASAR	Alice Springs	31.84	243	P	P	23 06 07.7	-0.4
	1.7nm,0.7s,baz=64,slow=10,SNR=19						
ASAR				PcP	PcP	23 08 58.9	+0.2
	0.9nm,0.7s,baz=79,slow=2.0,SNR=6.8						
ASAR				LR	LR	23 18 42.9	
	comp=Z,43nm,18.6s,baz=103,slow=36						
BBOO	Buckleboo	33.94	227	eP	P	23 06 26.9	+0.6
	14nm,1.4s						
FITZ	Fitzroy Crossi	38.42	255	eP	P	23 07 05.7	+0.9
	5.8nm,0.8s						
MJAR	Matsushiro Arr	53.86	333	P	P	23 09 05.6	-0.3
	3.4nm,0.9s,baz=160,slow=7.9,SNR=4.1						
MAJO	Matsushiro	53.86	333	eP	P	23 09 05.6	-0.3
ASAJ	Asahikawa	58.82	341	P	P	23 09 41.6	+0.4
	5.0nm,0.7s,baz=18,slow=20,SNR=2.8						
KSRS	Korea Array	59.65	326	P	P	23 09 48.4	+1.4
	1.2nm,0.6s,baz=146,slow=6.7,SNR=3.7						
KS15	Wonju Array Si	59.66	326	eP	P	23 09 48.4	+1.3
	31nm,1.4s						
KSAR	Wonju Array Be	59.66	326	P	P	23 09 48.4	+1.3
CM31	Chiang Mai Arr	71.42	294	eP	P	23 11 05.4	+1.9
	3.3nm,1.0s						
CMAR	Chiang Mai Arr	71.42	294	P	P	23 11 05.4	+1.9
	0.4nm,0.5s,baz=127,slow=5.7,SNR=4.1						
ULN	Ulaanbaatar	78.05	324	eP	P	23 11 41.7	+0.2
	4.3nm,1.2s						
SONA0	Songino Array	78.41	324	eP	P	23 11 42.9	-0.6
SONM	Songino Array	78.41	324	P	P	23 11 42.9	-0.6
	1.0nm,1.0s,baz=123,slow=5.9,SNR=5.0						
QSPA	South Pole Qui	78.62	180	eP	P	23 11 45.7	+1.3
	19nm,1.4s						
ILAR	Eielson Array	84.12	19	P	P	23 12 10.8	-2.4
	0.6nm,0.9s,baz=221,slow=8.0,SNR=4.5						
ILB	Eielson Array	84.12	19	eP	P	23 12 10.8	-2.4
	2.6nm,1.3s						
MK32	Makanchi Array	93.15	317	eP	P	23 12 56.1	-0.7
MKAR	Makanchi Array	93.15	317	P	P	23 12 56.1	-0.8
	0.5nm,0.8s,baz=102,slow=5.9,SNR=3.8						
ZALV	Zalesovo Beam	93.30	324	P	P	23 12 55.9	-1.4
	0.2nm,0.3s,baz=111,slow=3.9,SNR=2.9						
ZAA1	Zalesovo Array	93.30	324	eP	P	23 12 55.9	-1.4

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*ISCJB **15** 23:00:14.3±0.6, 12°.48N±0°.05×88°.18W±0°.04, h49^{km}±10^{km}, Error ellipse: s-maj=9.3km s-min=3.5km az=32.0*

*UCR **15** 23:00:14.8±1.4, 12°.52N×88°.19W, h36^{km}±325^{km}, ML3.9, mb4.2(NEIC)*

*NEIC **15** 23:00:15.0±0.0, 12°.54N×88°.19W, h36^{km}, mb4.2/4, MD4.0(SNET), After SNET.*

NEIC Felt [I] at San Miguel.

ISC 15 23:00:15.0±1.2, **12°.54N**±0°.07×**88°.14W**±0°.04, **h60**^{km}±13^{km}**, n37, σ1^{s}.37**/54**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.79	22	eP	Pn	23 00 30.4	0.0
CNCH				eS	Sn	23 00 41.5	-0.2
LCND	La Caada	0.80	17	eP	Pn	23 00 30.4	-0.1
LCND				eS	Sn	23 00 41.8	-0.1
LCY	Lacayo	0.89	350	eP	Pn	23 00 31.6	-0.2
LCY				eS	Sn	23 00 43.9	-0.2
VSM	San Miguel	0.89	351	eP	Pn	23 00 31.8	-0.1
BLLM	Bellamira	0.90	354	eP	Pn	23 00 31.8	0.0
PACA	Pacayal	0.94	349	eP	Pn	23 00 32.3	-0.1
PACA				eS	Sn	23 00 45.3	+0.1
TECA	Tecapa	1.01	339	eP	Pn	23 00 33.2	-0.2
CRIN	San Cristobal	1.07	81	eP	Pn	23 00 34.5	+0.5
CRIN				eS	Sn	23 00 50.2	+2.0
CAHU	Cacacuatique	1.22	357	eP	Pn	23 00 36.8	+0.6
TEL3	Telica 3	1.26	88	eP	Pn	23 00 36.3	-0.2
TELN	Telica	1.28	87	eP	Pn	23 00 36.7	0.0
PAVA	Las Pavas	1.40	326	eP	Pn	23 00 38.8	+0.3
PAVA				eS	Sn	23 00 55.6	-0.5
LFRS	El Faro	1.40	320	eP	Pn	23 00 38.0	-0.5
LFRS				eS	Sn	23 00 55.1	-1.0
CNGN	Cerro Negro	1.41	92	eP	Pn	23 00 38.5	0.0
CNGN				eS	Sn	23 00 57.4	+1.3
LBRS	Las Brisas	1.48	324	eP	Pn	23 00 39.7	+0.2
VICT	Victoria	1.49	341	eP	Pn	23 00 40.0	+0.3
VICT				eS	Sn	23 00 58.6	+0.3
LOMA	San Marcos	1.50	318	eP	Pn	23 00 39.3	-0.3
LOMA				eS	Sn	23 00 57.4	-0.8
LFU	La Fuente	1.53	322	eP	Pn	23 00 40.2	0.0
LFU				eS	Sn	23 00 58.7	-0.5
COPN	Copaltepe	1.55	103	eP	Pn	23 00 40.1	-0.3
MOMN	Momotombo	1.56	95	eP	Pn	23 00 40.3	-0.3
BOQS	Boqueron	1.63	317	eP	Pn	23 00 41.5	-0.1
BOQS				eS	Sn	23 01 02.1	+0.4
TGUH	Tegucigalpa,Un	1.73	29	ePn	Pn	23 00 43.9	+1.2
TGUH				eSn	Sn	23 01 04.5	+0.7
BRAN	Las Pilas	1.75	84	eP	Pn	23 00 43.7	+0.6
ESTN	Estel	1.81	72	ePn	Pn	23 00 44.6	+0.6
ESTN				eSn	Sn	23 00 58.2	-7.8
ESTN	Estel	1.81	72	eP	Pn	23 00 44.7	+0.7
MGAN	Managua	1.89	102	eP	Pn	23 00 45.0	+0.1
MGAN				eS	Sn	23 01 08.0	+0.4
CEVE	Cerro Verde	1.93	312	eP	Pn	23 00 46.0	+0.2
CEVE				eS	Sn	23 01 09.1	-0.1
CEVE				IAML		23 01 22.9	
	comp=Z,922nm,0.3s						
SBLS	San Blas	1.94	312	eP	Pn	23 00 46.0	+0.2
SNJE	San Jose	1.95	313	eP	Pn	23 00 46.3	+0.4
MATN	Matagalpa	2.19	80	eP	Pn	23 00 49.3	+0.2
BOAB	BOACO BROADBAN	2.41	92	ePn	Pn	23 00 51.7	-0.4
BOAB	BOACO BROADBAN	2.41	92	eP	Pn	23 00 52.0	-0.1
JTS	JuntasAbangare	3.84	125	ePn	Pn	23 01 12.9	+1.2
JTS				eS	Sn	23 01 54.9	-0.7
V51A	Loudon	23.41	8	eP	P	23 05 20.9	+2.1
	comp=Z,2.4nm,0.8s						
T47A	Sharon Grove	24.36	2	eP	P	23 05 25.8	-1.6
	comp=Z,15nm,1.0s						
T49A	Edmonton	24.57	5	eP	P	23 05 32.2	+2.9
	comp=Z,19nm,0.9s						
319A	Douglas	27.04	317	eP	P	23 05 50.3	-1.6
	comp=Z,2.5nm,0.8s						

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*NEIC **15** 23:00:56.2±0.0, 16°.87N×94°.42W, h133^{km}, MD4.0(MEX), After MEX.*

MEX 15 23:00:55.9±0.7, **16°.88N**×**94°.43W, h136**^{km}±8^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.48	296	i P	Pn	23 01 14.6	-1.0
CMIG				i S	Sn	23 01 28.2	-2.2
CMIG	Matias Romero	0.48	296	i P	Pn	23 01 14.6	-1.0
CMIG				i S	Sn	23 01 28.2	-2.2
TUIG	Tuzandepetl	1.15	0	i P	Pn	23 01 19.3	-1.4
TUIG				i S	Sn	23 01 37.6	-2.0
TUIG	Tuzandepetl	1.15	0	i P	Pn	23 01 19.3	-1.4
TUIG				i S	Sn	23 01 37.6	-2.0
PCIG		1.65	135	eP	Pn	23 01 25.2	-0.9
PCIG				eS	Sn	23 01 47.1	-2.0
PCIG		1.65	135	eP	Pn	23 01 25.2	-0.9
PCIG				eS	Sn	23 01 47.1	-2.0
HUIG	Huatulco	1.96	236	eP	Pn	23 01 27.8	-1.9
HUIG				eS	Sn	23 01 54.2	-1.4
HUIG	Huatulco	1.96	236	eP	Pn	23 01 27.8	-1.9
HUIG				eS	Sn	23 01 54.2	-1.4
VHO	Vista Hermosa	2.22	275	eP	Pn	23 01 34.2	+1.2
VHO				i S	Sn	23 02 03.2	+1.8
VHO	Vista Hermosa	2.22	275	eP	Pn	23 01 34.2	+1.2
VHO				eS	Sn	23 02 02.3	+0.8
CCIG	Comitan	2.27	105	ePn	Pn	23 01 32.9	-0.9
CCIG	Comitan	2.27	105	eP	Pn	23 01 32.7	-1.0
CCIG				eS	Sn	23 02 00.1	-2.7
CCIG	Comitan	2.27	105	eP	Pn	23 01 32.7	-1.0
CCIG				eS	Sn	23 02 00.1	-2.7

KRSC 15 23:17:36.9±1.1, **51°.95N**×**158°.78E, h53**^{km}±13^{km}**, ML4.0, FELT [II] at lighthouse Krugliy., Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	Khodutka, Kamc	0.46	253	eP	Pn	23 17 49.4	+1.6
KDTR				eS	Sn	23 17 57.1	+1.4
RUS	Russkaya	0.51	341	eP	Pn	23 17 49.7	+1.2
RUS				eS	Sn	23 17 57.7	+0.9
MTVR	Mutnovka	0.65	326	eP	Pn	23 17 51.7	+1.4
MTVR				eS	Sn	23 18 01.2	+1.2
KRMR	Karymshinskiy	0.97	336	eP	Pn	23 17 55.7	+1.4
KRMR				eS	Sn	23 18 08.7	+1.6
PET	Petropavlovsk	1.08	356	eP	Pn	23 17 57.0	+1.3
PET				eS	Sn	23 18 10.4	+0.7
DALK	Dalny	1.08	359	eP	Pn	23 17 57.0	+1.2
DALK				eS	Sn	23 18 10.9	+1.1
UGLR	Uglovaya	1.26	1	eP	Pn	23 17 59.7	+1.4
NLC	Nalytchevo	1.27	15	eP	Pn	23 17 58.5	+0.2
NLC				eS	Sn	23 18 13.1	-1.2
SMAR	Somma	1.32	0	eP	Pn	23 18 01.4	+2.2
PAU	Pauzhetka	1.32	249	eP	Pn	23 18 00.7	+1.8
PAU				eS	Sn	23 18 17.2	+1.8
AVH	Avacha	1.32	359	eP	Pn	23 18 01.8	+2.7
SDLR	Sedlovina	1.33	3	eP	Pn	23 18 00.2	+0.9
KOK	Koryaka	1.35	356	eP	Pn	23 18 01.3	+1.8
KOK				eS	Sn	23 18 19.3	+2.9
SPN	Mys Shipunski	1.38	33	eP	Pn	23 18 01.8	+2.0
SPN				eS	Sn	23 18 18.8	+1.9
KRX	Arik	1.42	357	eP	Pn	23 18 02.1	+1.7
GNL	Ganaly	1.82	344	eP	Pn	23 18 07.9	+2.0
SKR	Severo-Kuril's	2.10	234	eP	Pn	23 18 11.1	+1.5
SKR				eS	Sn	23 18 35.7	+1.2
ALID	Alaid	2.29	243	eP	Pn	23 18 14.4	+2.0
TUMD	Tumrok D	3.40	16	eP	Pn	23 18 32.5	+5.1
TUMR	Tumrok	3.44	13	eP	Pn	23 18 32.3	+4.3
KBTR	Krutoberegovo	4.88	28	eP	Pn	23 18 50.6	+2.9

IDC 15 23:27:53.5±3.3, **5°.31S**×**149°.88E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/29**, mbtmp3.6**/3**, Error ellipse: s-maj=107.5km s-min=44.7km az=118.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.98	225	P	P	23 32 39.0	+0.3
	1.1nm,0.4s,baz=49,slow=10,SNR=16						
ASAR	Alice Springs	23.88	219	P	P	23 33 07.8	-1.2
	0.3nm,0.4s,baz=56,slow=9.0,SNR=11						
FITZ	Fitzroy Crossi	26.88	240	P	P	23 33 36.9	+0.5
	0.7nm,0.5s,baz=66,slow=10,SNR=5.3						
TORD	Torodi Ar. Bea	147.67	286	PKPbc	PKPbc	23 47 40.8	-0.4
	0.1nm,0.3s,baz=65,slow=2.8,SNR=4.8						

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*SOME **15** 23:33:37.5, 42°.52N×78°.47E, h10^{km}*

*NNC **15** 23:33:39.6±1.8, 42°.66N×78°.47E, h6^{km}±9^{km}, mb2.4, mpv2.0, Error ellipse: s-maj=16.2km s-min=4.4km az=176.0*

KRNET 15 23:33:35.8±0.1, **42°.42N**×**78°.52E, h26**^{km}**, mb2.3, 10C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	0.64	352	P	Pb	23 33 47.7	-0.8
	1.8nm,0.1s						
SATY				S	Sb	23 33 55.1	-2.2
	9.4nm,0.1s						
SATY	Saty	0.64	352	eP	Pb	23 33 47.7	-0.8
	1.8nm,0.1s						
SATY				eS	Sb	23 33 55.1	-2.2
	9.4nm,0.1s						
UZB	Uzynbulak	0.81	27	P	Pb	23 33 51.5	+0.1
	0.4nm,0.1s						
UZB				S	Sb	23 34 01.8	-0.3
	2.9nm,0.1s						
UZB	Uzynbulak	0.81	27	eP	Pb	23 33 51.5	+0.1
	baz=27						
UZB				eS	Sb	23 34 01.8	-0.3
	baz=27						
UZB	Uzynbulak	0.81	27	eP	Pb	23 33 51.5	+0.1
	0.4nm,0.1s						
UZB				eS	Sb	23 34 01.8	-0.3
	2.9nm,0.1s						
TARG	Taragay, Kyrgy	0.87	218	⇑iP	Pn	23 33 52.8	0.0
	baz=18						
TARG				⇑iS	Sb	23 34 04.1	0.0
	baz=18						
KDJ	Kajisay	1.04	254	⇑iP	Pn	23 33 54.5	-0.4
	baz=54						
KDJ				⇑iS	Sb	23 34 08.5	0.0
	baz=54						
PDGK	Podgornoye	1.15	38	P	Pb	23 33 57.9	+0.7
	0.1nm,0.1s						
PDGK				S	Sb	23 34 12.8	+1.0
	0.6nm,0.3s						
PDGK	Podgornoye	1.15	38	⇑P	Pb	23 33 59.7	+2.5
	1.4nm,1.0s						
PDGK				⇓S	Sb	23 34 12.7	+0.9
	2.4nm,1.0s						
PDGK	Podgornoye	1.15	38	⇓iP	Pb	23 33 57.3	+0.1
	baz=38						
PDGK				⇓iS	Sb	23 34 12.4	+0.6
	baz=38						
IZV	Izvestkoviy	1.54	294	eP	Pb	23 34 04.7	+1.0
	baz=94						
IZV				eS	Sb	23 34 24.2	+1.4
	baz=94						
IZV	Izvestkoviy	1.54	294	eP	Pb	23 34 04.7	+1.0
	1.1nm,0.1s						
IZV				eS	Sb	23 34 24.1	+1.4
	3.4nm,0.1s						
ULHL	Ulahol	1.70	265	⇑iP	Pb	23 34 06.1	-0.4
	baz=65						
ULHL				⇑iS	Sb	23 34 28.1	+0.6
	baz=65						
BOOM	Boomskoye usch	1.91	273	⇑iP	Pb	23 34 09.1	-1.0
	baz=73						
BOOM				⇑iS	Sb	23 34 33.2	-0.4
	baz=73						
DJR	Jarkent	2.12	25	eP	Pb	23 34 15.3	+1.7
	0.2nm,0.1s						
DJR				eS	Sb	23 34 42.4	+2.8
	0.5nm,0.1s						
TKM2	Tokmak 2	2.21	284	⇓Pn	Pb	23 34 16.0	+0.8
	0.7nm,0.7s						
TKM2				⇑Sn	Sb	23 34 43.8	+1.5
	0.6nm,0.5s						

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*ISCJB **15** 23:43:11.0±1.2, 24°.5S±0°.1×179°.2E±0°.1, h550^{km}, mb3.5/4, Error ellipse: s-maj=18.8km s-min=13.3km az=153.4*

*IDC **15** 23:43:11.2±1.8, 24°.40S×179°.22E, h544^{km}±17^{km}, mb2.9/4, mb1 3.2/6, mb1mx3.0/42, mbtmp4.0/6, Error ellipse: s-maj=41.9km s-min=14.6km az=165.0*

ISC 15 23:43:11.3±0.9, **24°.6S**±0°.1×**179°.3E**±0°.1, **h550**^{km}**, n13,**

σ1^{s}28/19, mb3.5/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	12.08	279	P	**P**	23 45 51.0	+0.2
	0.9nm,0.3s,baz=62,slow=20,SNR=7.6						
URZ	**Urewera**	13.77	187	P	**P**	23 46 08.4	+0.4
	0.6nm,0.3s,baz=97,slow=1.0,SNR=12						
URZ				S	**S**	23 48 32.2	-1.1
	0.6nm,0.3s,baz=204,slow=20,SNR=5.6						
STKA	**Stephens Creek**	33.89	249	P	**P**	23 49 09.6	+0.8
	0.5nm,0.2s,baz=142,slow=7.3,SNR=3.7						
ASAR	**Alice Springs**	41.30	262	P	**P**	23 50 10.2	+0.6
	0.8nm,0.7s,baz=97,slow=8.3,SNR=9.1						
ASAR				PcP	**PcP**	23 51 55.2	+0.2
	0.5nm,0.7s,baz=91,slow=4.9,SNR=5.1						
ASAR				ScP	**ScP**	23 54 55.1	+2.4
	0.2nm,0.5s,baz=100,slow=5.4,SNR=3.0						
ASAR				S	**S**	23 55 44.2	-0.4
	0.3nm,0.7s,baz=100,slow=17,SNR=4.2						
WRA	**Warramunga Arr**	41.73	267	P	**P**	23 50 12.1	-0.8
	1.0nm,0.4s,baz=97,slow=8.4,SNR=62						
WRA				PcP	**PcP**	23 51 57.3	+0.9
	0.5nm,0.8s,baz=97,slow=2.7,SNR=3.9						
WRA				ScP	**ScP**	23 54 56.7	+2.2
	0.3nm,0.8s,baz=102,slow=3.5,SNR=2.7						
WRA				S	**S**	23 55 48.9	-1.8
	0.5nm,0.8s,baz=101,slow=13,SNR=3.8						
TXAR	**Lajitas Array**	91.32	58	P	**P**	23 55 19.1	+0.2
	0.1nm,0.4s,baz=219,slow=7.0,SNR=2.5						
ARCES	**ARCESS Array B**	132.41	348	PKP	**PKPdf**	00 01 22.2	-0.3
	3.0nm,0.9s,baz=55,slow=5.0,SNR=3.9						
FINES	**FINESS Array B**	138.87	341	PKhKP	PKPpre	00 01 28.3	
	2.0nm,1.0s,baz=72,slow=4.5,SNR=4.4						
FINES				PKP	**PKPdf**	00 01 33.9	-0.8
	0.6nm,0.7s,baz=4.0,slow=9.9,SNR=2.7						
NOA	**NORSAR Array B**	142.64	350	PKhKP	PKPpre	00 01 38.1	
	0.3nm,0.5s,baz=62,slow=1.9,SNR=3.8						
HFS	**Hagfors**	143.07	348	PKP	**PKPdf**	00 01 39.6	-2.6
	3.8nm,0.4s,baz=64,slow=3.4,SNR=40						
AKASG	**Malin Array Be**	145.18	326	PKPbc	**PKPdf**	00 01 46.0	-0.2
	1.8nm,0.5s,baz=46,slow=4.5,SNR=6.2						
BRTR	**Keskin Array B**	147.47	306	PKPbc	**PKPbc**	00 01 54.4	+0.3
	2.0nm,0.6s,baz=110,slow=3.0,SNR=6.7						
EKA	**Eskdalemuir Ar**	149.22	3	PKPbc	**PKPbc**	00 01 57.1	-0.6
	0.4nm,0.3s,baz=353,slow=3.1,SNR=9.0						

NIED ***15*** *23:48:00,28°.80N×139°.80E,h440^{km},Mw4.3 Best double couple: M$_0$3.34000×10^{15} NP1:φ$_s$42.00000°, δ28.00000°,λ-118.00000°. NP2:φ$_s$253.00000°, δ66.00000°,λ-76.00000°.*

JMA ***15*** *23:48:28.9±0.1,28°.83N×139°.80E,h490^{km},M4.3*

MOS ***15*** *23:48:28.6±0.8,28°.78N×139°.40E,h466^{km},mb4.1/43, Error ellipse: s-maj=10.4km s-min=5.8km az=111.5*

IDC ***15*** *23:48:29.5±0.5,28°.80N×139°.52E,h462^{km}±5^{km},mb3.5/32, mb1 3.6/40,mb1mx3.6/58,mbtmp4.3/40,Error ellipse: s-maj=10.1km s-min=7.4km az=81.0*

NEIC ***15*** *23:48:30.0±0.6,28°.76N×139°.45E,h465^{km}±6^{km},mb4.3/42, Error ellipse: s-maj=6.6km s-min=5.0km az=99.0*

ISCJB ***15*** *23:48:29.0±0.2,28°.78N±0°.03×139°.52E±0°.04, h471^{km}±2^{km},mb4.0/84,Error ellipse: s-maj=5.6km s-min=4.1km az=170.7*

ISC 15 23:48:29.8±0.5**,28°.82N**±0°.05×**139°.53E**±0°.06**,h466**^{km}±5^{km}**, n183,**σ1^{s}**27**/221**,mb4.2**/91**,15C-1D,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	2.91	125	P	**P**	23 49 37.6	+0.1
CBIJ				S	**S**	23 50 30.8	-1.6
JCJ	**Chichijima**	2.91	125	P	**P**	23 49 38.0	+0.5
	206nm,0.3s,baz=28,slow=3.2,SNR=60						
JCJ				S	**S**	23 50 30.8	-1.6
	773nm,0.3s,baz=312,slow=19,SNR=37						
JHHJ	**Haha-jima-NKT**	3.20	132	P	**P**	23 49 40.1	+0.5
JHHJ				S	**S**	23 50 35.8	-0.5
JHJ	**Hachijo jima 2**	4.30	3	P	**P**	23 49 49.1	+0.8
	86nm,0.3s,baz=258,slow=22,SNR=7.5						
JHJ				S	**S**	23 50 51.1	-1.4
	40nm,0.3s,baz=117,slow=22,SNR=4.4						
TK01	**Tokai 1**	5.21	342	P	**P**	23 49 59.3	+2.9
TK01				*e*S	**S**	23 51 09.9	+2.6
TK02	**Tokai 2**	5.33	344	P	**P**	23 50 00.8	+3.0
TTO1	**TONANKAI O.B.S**	5.34	335	P	**P**	23 50 01.2	+3.5
BSO1	**Boso 1**	5.95	12	P	**P**	23 50 04.4	+0.9
BSO1				*e*S	**S**	23 51 18.4	-1.8
JTNC	**Tanabenakahech**	6.01	327	P	**P**	23 50 06.5	+1.8
JIE	**Ise**	6.06	337	P	**P**	23 50 07.7	+2.6
JIE				S	**S**	23 51 25.0	+1.8
JOD2	**Odawara 2**	6.44	357	P	**P**	23 50 09.9	+0.8
JOD2				S	**S**	23 51 28.2	-2.1
INU	**Inuyama**	6.85	343	*e*P	**P**	23 50 15.0	+1.8
JTO	**Tosashimizu**	7.05	307	P	**P**	23 50 17.6	+2.3
JRY	**Ryogami san**	7.20	356	P	**P**	23 50 17.0	+0.1
JRY				*e*S	**S**	23 51 41.7	-3.0
MJAR	**Matsushiro Arr**	7.78	352	P	**P**	23 50 22.7	-0.3
	0.9nm,0.3s,baz=278,slow=10,SNR=34						
MJAR				S	**S**	23 51 54.2	-1.8
	0.2nm,0.3s,baz=174,slow=17,SNR=6.8						
MAJO	**Matsushiro**	7.79	352	*e*P	**P**	23 50 22.9	-0.1
MAJO				*e*S	**S**	23 51 57.1	+1.1
MAJO	**Matsushiro**	7.79	352	*d i*P	**P**	23 50 23.2	+0.2
MAT	**Matsushiro**	7.79	352	P	**P**	23 50 23.2	+0.2
MAT				S	**S**	23 51 50.5	-5.5
MJB9	**Matsu-Tunnel**	7.79	352	*e*P	**P**	23 50 23.3	+0.2
MJB9				*e*S	**S**	23 51 56.1	0.0
JHS	**Saijyo**	8.22	320	P	**P**	23 50 29.8	+2.1
JNU	**Nakatsue**	8.57	302	*e*P	**P**	23 50 33.2	+1.7
JNU				*e*S	**S**	23 52 07.3	-4.3
JNU	**Nakatsue**	8.57	302	P	**P**	23 50 32.5	+1.0
	2.0nm,0.3s,baz=80,slow=6.6,SNR=13						
JSJ	**Shimokoshiki**	8.95	291	P	**P**	23 50 37.4	+1.8
JOW	**Kunigami**	10.15	261	P	**P**	23 50 49.2	+0.6
	0.7nm,0.3s,baz=120,slow=15,SNR=4.7						
JMK	**Ichinoseki**	10.21	7	P	**P**	23 50 50.1	+1.1
JMK				S	**S**	23 52 42.0	-1.6
JOT	**Ohata**	12.60	5	P	**P**	23 51 15.6	+0.9
TJN	**Taejon**	12.72	309	*ce*P	**P**	23 51 15.6	-0.5
KSRS	**Korea Array**	12.98	315	P	**P**	23 51 19.1	+0.2
	1.1nm,0.3s,baz=127,slow=11,SNR=34						
KS15	**Wonju Array Si**	13.00	314	*e*P	**P**	23 51 19.5	+0.4
KS01	**Wonju Array Si**	13.01	315	*e*P	**P**	23 51 18.6	-0.7
JKB	**Kayabe**	13.10	5	P	**P**	23 51 20.9	+0.8
JOSM	**Okushiri--Mats**	13.24	360	P	**P**	23 51 22.8	+1.2
ERM	**Erimo**	13.50	12	*ce*P	**P**	23 51 25.6	+1.3
ERM				pmax	pmax		
	comp=Z,137nm,2.5s						
ASAJ	**Asahikawa**	15.47	8	P	**P**	23 51 46.2	+1.0
	comp=Z,0.9nm,0.3s,baz=233,slow=12,SNR=4.2						
USA0B	**Ussuriysk Arra**	16.49	341	*e*P	**P**	23 51 56.0	-0.1
	comp=Z,20nm,0.8s						
USRK	**Ussuriysk Ar.**	16.49	341	P	**P**	23 51 56.6	+0.5
	comp=Z,1.2nm,0.3s,baz=157,slow=7.9,SNR=38						
YULB	**Yu-li**	17.23	256	*e*P	**P**	23 52 03.4	-0.8
	comp=Z,8.8nm,0.9s						
SSLB	**Suanglung**	17.38	258	*e*P	**P**	23 52 05.6	-0.2
	comp=Z,28nm,1.0s						
MDJ	**Mudanjiang**	17.64	336	*e*P	**P**	23 52 07.8	-0.2
	comp=Z,16nm,1.1s						
YSS	**Yuzh-Sakhalins**	18.28	7	⇑*e*P	**P**	23 52 15.4	+1.2
YSS				pmax	pmax		
	comp=Z,14nm,0.8s						
TIA	**Tai'an**	20.25	297	P	**P**	23 52 33.1	+0.6
TIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KLR	**Kul'dur**	21.24	346	*c i*P	**P**	23 52 41.9	+0.6
KLR	**Kul'dur**	21.24	346	P	**P**	23 52 42.2	+0.9
	comp=Z,13nm,0.6s,baz=168,slow=7.4,SNR=81						
BJT	**Baijiatuau**	22.21	306	*e*P	**P**	23 52 48.8	-1.4
	comp=Z,8.6nm,0.8s						
BJT	**Baijiatuau**	22.21	306	*e*P	**P**	23 52 48.8	-1.4
BJT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI	**Beijing**	22.21	306	P	**P**	23 52 48.8	-1.4
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NKL	**Nikolayevsk**	24.33	2	*e*P	**P**	23 53 10.0	+1.1
NKL				pmax	pmax		
	comp=Z,18nm,0.9s						
HIA	**Hailar**	25.42	329	*e*P	**P**	23 53 19.1	+0.4
	comp=Z,8.6nm,0.9s						
HIA	**Hailar**	25.42	329	*i* P	**P**	23 53 18.9	+0.2
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ENH	**Enshi**	26.14	281	*e*P	**P**	23 53 25.0	-0.4
	comp=Z,28nm,0.7s						
ZEA	**Zeya**	26.48	344	*e*P	**P**	23 53 28.6	+0.6
ZEA				pmax	pmax		
	comp=N,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
XAN	**Xi'an**	26.57	289	*e*P	**P**	23 53 29.1	-0.1
	comp=Z,11nm,0.6s						
XAN	**Xi'an**	26.57	289	*e*P	**P**	23 53 29.1	-0.1
XAN				pmax	pmax		
	comp=Z,11nm,0.6s						
PETK	**Petropavlovsk-**	27.72	24	P	**P**	23 53 40.2	+1.3
	comp=Z,4.2nm,1.1s,baz=188,slow=4.2,SNR=4.2						
LZH	**Lanzhou**	30.84	293	⇑P	**P**	23 54 07.3	+0.6
LZH				pP	pP	23 55 29.1	+2.3
LZH				sP	pwP	23 55 33.4	+0.5
LZH				PP	**sP**	23 56 21.5	+1.0
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
ULN	**Ulaanbaatar**	31.46	316	*e*P	**P**	23 54 12.4	+0.6
	comp=Z,3.5nm,0.8s						
ULN	**Ulaanbaatar**	31.46	316	*ce*P	**P**	23 54 12.3	+0.6
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MA2	**Magadan**	31.70	11	*e*P	**P**	23 54 13.9	+0.5
	comp=Z,10nm,0.9s						
MA2	**Magadan**	31.70	11	*ce*P	**P**	23 54 14.2	+0.7
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	31.70	11	P	**P**	23 54 13.6	+0.2
	comp=Z,5.7nm,0.5s,baz=209,slow=7.2,SNR=10						
SONA1	**Songino Array**	31.85	316	*e*P	**P**	23 54 14.8	-0.3
SONM	**Songino Array**	31.85	316	P	**P**	23 54 15.4	+0.3
SONM						23 56 51.8	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				pmax	pmax		
	comp=N,1.0nm,0.7s						
SONM	**Songino Array**	31.85	316	P	**P**	23 54 15.4	+0.3
	comp=N,1.8nm,0.3s,baz=125,slow=8.2,SNR=63						
SONM				PcP	**PcP**	23 56 51.8	-0.5
	comp=N,0.8nm,0.7s,baz=140,slow=2.4,SNR=4.7						
SONM				ScP	**ScP**	23 59 49.7	-1.3
	comp=N,0.8nm,0.7s,baz=153,slow=4.8,SNR=6.4						
KMI	**Kunming**	32.91	272	P	**P**	23 54 25.5	+0.9
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
KMI	**Kunming**	32.91	272	*e*P	**P**	23 54 24.0	-0.6
	comp=Z,8.8nm,0.8s						
KMI	**Kunming**	32.91	272	*e*P	**P**	23 54 24.0	-0.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA	**Gaotai**	34.29	299	⇑P	**P**	23 54 36.3	+0.3
GTA				pP	pP	23 55 58.8	+1.2
GTA				sP	sP	23 56 49.3	-1.5
GTA				PcP	**PcP**	23 57 00.1	+0.7
GTA				S	**S**	23 59 31.5	+2.2
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,49nm,6.5s						
SEY	**Seymchan**	35.14	10	*ce*P	**P**	23 54 43.8	+1.2
SEY	**Seymchan**	35.14	10	P	**P**	23 54 43.1	+0.6
	comp=Z,2.9nm,0.6s,baz=200,slow=6.8,SNR=13						
SEY				S	S	23 59 25.6	-15
	comp=Z,3.9nm,0.8s,baz=208,slow=22,SNR=5.4						
UTTA	**Uttaradit**	37.30	262	P	**P**	23 55 01.8	+0.6
	comp=Z,4.0nm,0.9s						
PBKT	**Sadao Pong**	37.44	259	*e*P	**P**	23 55 02.5	+0.2
	comp=Z,7.8nm,0.7s						
PBKT	**Sadao Pong**	37.44	259	P	**P**	23 55 03.1	+0.8
SRAK	**Srakaew**	37.70	255	P	**P**	23 55 01.4	-3.0
CMMT	**Chiang Mai**	38.27	264	P	**P**	23 55 09.4	+0.2
	comp=Z,16nm,0.9s						
CHTO	**Chiang Mai**	38.28	264	*e*P	**P**	23 55 09.4	+0.2
	comp=Z,12nm,0.8s						
CHTO	**Chiang Mai**	38.28	264	*e*P	**P**	23 55 09.4	+0.2
CHTO				pmax	pmax		
	comp=Z,12nm,0.8s						
CHTO	**Chiang Mai**	38.28	264	P	**P**	23 55 09.5	+0.3
	comp=Z,72nm,0.9s						
CMAR	**Chiang Mai Arr**	38.42	264	P	**P**	23 55 10.7	+0.3
	comp=Z,3.7nm,0.8s,baz=48,slow=9.3,SNR=25						
CMAR				PcP	**PcP**	23 57 13.0	+0.8
	comp=Z,0.6nm,0.3s,baz=80,slow=1.7,SNR=4.3						
CM01	**Chiang Mai Arr**	38.42	264	*e*P	**P**	23 55 09.8	-0.5
SOEI	**Soe**	41.08	203	*e*P	**P**	23 55 29.5	-2.5
	comp=Z,15nm,0.8s						
MTN	**Manton Dam**	42.20	192	*e*P	**P**	23 55 40.1	-0.6
	comp=Z,21nm,0.6s						
SHL	**Shillong**	42.28	277	*e*P	**P**	23 55 40.6	-1.0
	comp=Z,14nm,1.0s						
SHL	**Shillong**	42.28	277	*e*P	**P**	23 55 40.6	-1.0
SHL				pmax	pmax		
	comp=Z,14nm,1.0s						
BILL	**Bilibino**	42.35	15	*e*P	**P**	23 55 42.1	+0.9
	comp=Z,10nm,0.9s						
BILL	**Bilibino**	42.35	15	*ce*P	**P**	23 55 42.0	+0.8
BILL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
COEN	**Coen**	42.67	175	*e*P	**P**	23 55 45.4	+1.0
	comp=Z,4.5nm,0.6s						
KULM	**Kulim**	43.60	245	*e*P	**P**	23 55 51.3	-0.5
	comp=Z,18nm,0.8s						
WMQ	**Urumqi**	43.66	304	*e*P	**P**	23 55 52.5	+0.5
WMQ				LR	LR		
	comp=Z,67nm,27.1s						
DGZ	**Jazzator, Alta**	44.38	313	*i* P	**P**	23 55 58.1	+0.5
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PSI	**Prapat**	46.47	244	*e*P	**P**	23 56 14.8	+0.7
	comp=Z,10nm,0.9s						
PSI	**Prapat**	46.47	244	*e*P	**P**	23 56 14.8	+0.7
PSI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAMN	**Ramite**	46.50	281	*e*P	**P**	23 56 14.7	+0.3
	comp=Z,36nm,0.8s						
ZALV	**Zalesovo Beam**	46.65	318	P	**P**	23 56 13.5	-1.3
	comp=Z,0.9nm,0.3s,baz=107,slow=7.8,SNR=5.3						
ZALV				PcP	**PcP**	23 57 38.1	-1.3
	comp=Z,2.5nm,0.8s,baz=123,slow=5.5,SNR=5.9						
JIRN	**Jiri**	46.67	282	*e*P	**P**	23 56 16.6	+0.8
	comp=Z,80nm,0.7s						
GUN	**Gumba**	46.87	282	*e*P	**P**	23 56 17.9	+0.6
PKI	**Pulchoki**	47.36	282	*e*P	**P**	23 56 20.9	-0.1
	comp=Z,26nm,1.0s						
PKIN	**Phulchoki**	47.37	282	*e*P	**P**	23 56 20.9	-0.1
	comp=Z,5.3nm,0.5s						
MK01	**Makanchi Array**	47.56	308	*e*P	**P**	23 56 21.8	0.0
MK01				*e*PcP	**PcP**	23 57 42.5	-0.4
MK31	**Makanchi Array**	47.57	308	*e*P	**P**	23 56 22.0	+0.1
MK31				*e*PcP	**PcP**	23 57 42.1	-0.8
MK31	**Makanchi Array**	47.57	308	*e*P	**P**	23 56 22.0	+0.1
MK31				*e*		23 57 42.1	
MKAR	**Makanchi Array**	47.57	308	*e*P	**P**	23 56 21.8	-0.1
	comp=Z,17nm,0.6s						
MKAR				*e*PcP	**PcP**	23 57 41.8	-1.1
MKAR	**Makanchi Array**	47.57	308	P	**P**	23 56 21.9	0.0
	comp=Z,2.2nm,0.5s,baz=88,slow=9.6,SNR=55						
MKAR				PcP	**PcP**	23 57 42.1	-0.9
	comp=Z,0.9nm,0.5s,baz=81,slow=7.5,SNR=7.8						
MKAR				ScP	**ScP**	00 00 50.0	-2.1
	comp=Z,1.3nm,0.8s,baz=80,slow=4.5,SNR=8.6						
DMN	**Daman**	47.61	282	*e*P	**P**	23 56 23.3	+0.5
	comp=Z,12nm,0.6s						
MAKZ	**Makanchi**	47.78	308	*e*P	**P**	23 56 23.7	+0.2
	comp=Z,2.7nm,0.6s						
MAKZ				*e*PcP	**PcP**	23 57 41.2	-2.5
MAKZ	**Makanchi**	47.78	308	*e*P	**P**	23 56 23.7	+0.2
MAKZ				*e*		23 57 41.2	
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GSI	**Gunungsitoli**	48.45	243	*e*P	**P**	23 56 28.8	-0.1
	comp=Z,34nm,0.9s						
FITZ	**Fitzroy Crossi**	48.53	198	*e*P	**P**	23 56 29.6	+0.3
	comp=Z,6.3nm,0.6s						
DANN	**Dangsing**	48.58	284	*e*P	**P**	23 56 30.8	+0.7
	comp=Z,43nm,0.8s						
WRAB	**Tennant Creek**	48.72	186	*e*P	**P**	23 56 29.4	-1.3
	comp=Z,6.8nm,0.6s						
WRAB				*e*PcP	**PcP**	23 57 47.1	-0.2
WRAB	**Tennant Creek**	48.72	186	*ce*P	**P**	23 56 30.7	-0.1
WRAB				pmax	pmax		
	comp=Z,17nm,1.4s						
WB2	**Warramunga Arr**	48.73	186	*e*P	**P**	23 56 29.9	-1.0
WB2				*e*PcP	**PcP**	23 57 47.9	+0.5
WRA	**Warramunga Arr**	48.73	186	P	**P**	23 56 30.7	-0.1
	comp=Z,8.5nm,0.5s,baz=2.9,slow=7.8,SNR=198						
WRA				PcP	**PcP**	23 57 48.0	+0.6
	comp=Z,1.8nm,0.5s,baz=360,slow=3.8,SNR=7.4						
KOLN	**Koldanda**	48.86	283	*e*P	**P**	23 56 32.5	+0.4
PYUN	**Piuthan**	49.30	284	*e*P	**P**	23 56 35.8	+0.5
	comp=Z,32nm,0.6s						
KURK	**Kurchatov**	50.10	314	*e*P	**P**	23 56 40.4	-0.3
	comp=Z,4.5nm,0.5s						
KURK	**Kurchatov**	50.10	314	*e*P	**P**	23 56 40.4	-0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NRIK	**Noril'sk**	50.20	339	P	**P**	23 56 40.9	-0.2
	comp=Z,2.2nm,0.4s,baz=106,slow=11,SNR=6.9						
TARG	**Taragay, Kyrgy**	51.01	302	*e*P	**P**	23 56 49.6	+1.6
	comp=Z,3.4nm,0.9s						
NRN	**Naryn**	52.39	302	*e*P	**P**	23 56 58.5	+0.6
	comp=Z,1.6nm,0.6s						
NRN	**Naryn**	52.39	302	*e*P	**P**	23 56 58.5	+0.6
NRN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AS01	**Alice Springs**	52.45	186	*e*P	**P**	23 56 57.9	-0.2
AS31	**Alice Springs**	52.46	187	*e*P	**P**	23 56 58.4	+0.2
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	52.46	187	P	**P**	23 56 58.3	+0.1
	comp=Z,2.4nm,0.6s,baz=15,slow=13,SNR=46						
ASAR				PcP	**PcP**	23 58 02.1	+0.8
	comp=Z,1.1nm,0.9s,baz=20,slow=4.0,SNR=6.3						
KSH	**Kashi**	52.68	299	P	**P**	23 57 03.8	+4.0
KSH				pP	pwP	23 58 33.4	-2.4
KSH				pmax	pmax		
	comp=Z,12nm,0.6s						
KSH				pmax	pmax		
	comp=Z,130nm,4.5s						
MBWA	**Marble Bar**	53.23	203	*e*P	**P**	23 57 03.3	-0.4
	comp=Z,9.1nm,0.8s						
AAK	**Ala-Archa**	53.35	304	*e*P	**P**	23 57 05.1	+0.5
	comp=Z,2.2nm,0.8s						
AAK	**Ala-Archa**	53.35	304	*i* P	**P**	23 57 03.8	-0.8
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KDAK	**Kodiak Island**	54.42	38	P	**P**	23 57 11.4	-0.3
	comp=Z,6.0nm,0.8s,baz=210,slow=5.1,SNR=5.5						
IM3	**Indian Mountai**	54.59	27	*e*P	**P**	23 57 13.1	+0.4
IM3				*e*PcP	**PcP**	23 58 10.3	+1.4
ARSB	**Arslanbob**	54.65	302	*e*P	**P**	23 57 14.3	+0.5
	comp=Z,4.2nm,0.9s						
BRVK	**Borovoye**	55.25	317	*ce*P	**P**	23 57 19.1	+1.5
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
NIL	**Nilore**	56.01	293	*e*P	**P**	23 57 23.5	+0.2
	comp=Z,8.0nm,0.8s						
NIL	**Nilore**	56.01	293	*e*P	**P**	23 57 23.5	+0.2
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KK31	**Karatay Array**	56.17	305	*e*P	**P**	23 57 24.8	+0.5
	comp=Z,9.8nm,0.8s						
KK31	**Karatay Array**	56.17	305	*e*P	**P**	23 57 24.8	+0.5
KK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KKAR	**Karatay Array**	56.17	305	*e*P	**P**	23 57 24.5	+0.2
KKAR	**Karatay Array**	56.17	305	*e*P	**P**	23 57 24.5	+0.2
GAR	**Garm**	57.09	300	*e*P	**P**	23 57 30.8	0.0
	comp=Z,15nm,0.8s						
GAR	**Garm**	57.09	300	*e*P	**P**	23 57 30.8	0.0
GAR				pmax	pmax		
	comp=Z,15nm,0.8s						
ILAR	**Eielson Array**	57.35	29	P	**P**	23 57 31.9	-0.1
	comp=Z,0.3nm,0.4s,baz=252,slow=5.6,SNR=8.8						
CHGR	**Chuyangaron**	58.05	300	*e*P	**P**	23 57 37.0	-0.4
	comp=Z,33nm,0.7s						
KBL	**Kabul**	59.16	295	*e*P	**P**	23 57 45.3	+0.2
	comp=Z,5.0nm,0.8s						
KBL	**Kabul**	59.16	295	*e*P	**P**	23 57 45.3	+0.2
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PALK	**Pallekele**	59.27	261	*i* P	**P**	23 57 46.9	+1.0
STKA	**Stephens Creek**	60.39	178	P	**P**	23 57 52.4	-0.5
	comp=Z,0.5nm,0.4s,baz=355,slow=12,SNR=3.7						
ARU	**Arti**	61.62	321	*e*P	**P**	23 58 00.2	-0.6
	comp=Z,5.8nm,0.9s						
ARU	**Arti**	61.62	321	*c i*P	**P**	23 58 00.5	-0.3
ARU						23 58 36.0	
ARU						00 00 21.5	
ARU				S	**S**	00 05 45.3	-0.6
ARU				SS	**SS**	00 09 53.1	-3.9
ARU				pmax	pmax		
	comp=Z,14nm,1.8s						
ABKAR	**Akbulak array**	62.21	313	*e*P	**P**	23 58 04.7	-0.1
	comp=Z,5.3nm,0.7s						
INK	**Inuvik**	62.45	25	P	**P**	23 58 06.6	+0.6
	comp=Z,0.7nm,0.3s,baz=272,slow=6.5,SNR=6.1						
GEYT	**Alibeck**	66.60	302	P	**P**	23 58 33.2	+0.2
	comp=Z,2.1nm,0.7s,baz=23,slow=4.8,SNR=4.3						
PRGR	**Permogore**	66.87	329	*e*P	**P**	23 58 33.6	-0.5
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TMCR	**Tamitsa**	69.24	333	*e*P	**P**	23 58 47.9	-0.7
TMCR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES	**ARCESS Array B**	71.14	340	P	**P**	23 59 00.2	+0.3
	comp=Z,1.6nm,0.4s,baz=78,slow=8.7,SNR=27						
YKA	**Yellowknife Ar**	71.74	28	P	**P**	23 59 03.3	-0.2
	comp=Z,0.7nm,0.3s,baz=296,slow=6.0,SNR=12						
VRH	**Novokhopyorsk**	72.68	319	*e*P	**P**	23 59 08.2	-0.9
VRH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LPSR	**Galich'ya Gora**	73.65	321	*e*P	**P**	23 59 12.1	-2.6
LPSR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN	**Obninsk**	73.78	324	*ce*P	**P**	23 59 15.1	-0.2
OBN				*e**PP	**pwP**	00 00 57.1	-2.3
OBN				*e*		00 02 07.4	
OBN				*e*S	**S**	00 08 10.5	+2.5
OBN				*e*SS	**SS**	00 13 07.7	+4.8
OBN				pmax	pmax		
	comp=Z,14nm,1.1s						
VSR	**Storozhevoye**	74.12	320	*i* P	**P**	23 59 16.5	-0.9
VSR				pmax	pmax		
	comp=Z,13nm,1.1s						
KBZ	**Khabaz**	75.12	312	P	**P**	23 59 23.9	+0.7
	comp=Z,5.1nm,0.8s,baz=93,slow=4.3,SNR=8.6						
FINES	**FINESS Array B**	75.36	333	P	**P**	23 59 24.0	-0.2
	comp=Z,2.9nm,0.3s,baz=70,slow=4.7,SNR=79						
PINE	**Pine Mountain**	76.97	47	*e*P	**P**	23 59 36.2	+2.4
	comp=Z,5.2nm,0.9s						
RPZ	**Rata Peaks**	77.75	157	P	**P**	23 59 37.4	-0.1
	comp=Z,6.1nm,0.8s,baz=180,slow=7.1,SNR=2.4						
AKASG	**Malin Array Be**	79.84	323	*i* P	**P**	23 59 49.2	+0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	79.84	323	P	**P**	23 59 47.3	-1.4
	comp=Z,1.2nm,0.5s,baz=51,slow=6.1,SNR=4.3						
NB2	**NORSAR Subarra**	81.14	337	P	**P**	23 59 54.2	-1.2
	comp=Z,2.3nm,0.6s,baz=48,slow=5.1						
NOA	**NORSAR Array B**	81.14	337	P	**P**	23 59 54.9	-0.5
	comp=Z,2.2nm,0.8s,baz=55,slow=6.6,SNR=9.0						
NV01	**Mina Array Sit**	81.29	51	*e*P	**P**	23 59 57.2	+0.4
NVAR	**Mina Array Bea**	81.29	51	P	**P**	23 59 57.8	+0.9
	comp=Z,1.9nm,0.7s,baz=293,slow=5.5,SNR=11						
ELK	**Elko**	82.15	48	P	**P**	00 00 02.5	+1.2
	comp=Z,0.8nm,0.5s,baz=302,slow=10,SNR=4.2						
RAYN	**Ar Rayn**	82.31	292	*e*P	**P**	00 00 02.7	+0.5
	comp=Z,12nm,0.9s						
BRTR	**Keskin Array B**	83.11	312	P	**P**	00 00 06.0	0.0
	comp=Z,1.3nm,0.7s,baz=98,slow=4.1,SNR=7.2						
TPNV	**Topopah Spring**	83.44	51	*e*P	**P**	00 00 09.2	+1.4
	comp=Z,2.2nm,0.7s						
PDAR	**Pinedale Array**	84.62	44	*e*P	**P**	00 00 14.5	+0.9
PDAR	**Pinedale Array**	84.62	44	P	**P**	00 00 13.8	+0.2
	comp=Z,0.5nm,0.7s,baz=5.0,slow=3.4,SNR=4.8						
FRB	**Frobisher Bay**	85.12	12	P	**P**	00 00 15.4	+0.2
	comp=Z,2.4nm,0.6s,baz=1.1,slow=6.0,SNR=10						
GERES	**GERESS Array B**	88.81	328	P	**P**	00 00 31.9	-1.3
	comp=Z,0.6nm,0.7s,baz=29,slow=6.1,SNR=7.0						
EKA	**Eskdalemuir Ar**	90.30	340	P	**P**	00 00 38.9	-1.0
	comp=Z,0.2nm,0.3s,baz=46,slow=3.6,SNR=4.9						
ANMO	**Albuquerque**	91.14	49	*ce*P	**P**	00 00 45.4	+0.9
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ANMO	**Albuquerque**	91.14	49	P	**P**	00 00 45.1	+0.6

	comp=Z,0.7nm,0.5s,baz=314,slow=4.2,SNR=3.8						
TXAR	**Lajitas Array**	**96.42**	**52**	P	**P**	**00 01 10.1**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=261,slow=4.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**121.68**	**310**	PKP	**PKPdf**	**00 06 29.2**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=50,slow=1.2,SNR=12						
LPAZ	**La Paz**	**151.66**	**70**	*e*PKPbc	**PKiKP**	**00 07 33.2**	**+0.8**
LPAZ	**La Paz**	**151.66**	**70**	PKPbc	**PKPbc**	**00 07 30.9**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=200,slow=1.2,SNR=8.7						

IDC ***15*** *23:59:32.2±0.6, 52°.68N×34°.51W, h0^{km}, mb4.0/24, mb1 4.2/27, mb1mx4.0/54, mbtmp4.0/27, ML3.5/3, MS3.4/26, Ms1 3.4/26, ms1mx3.3/52, Error ellipse: s-maj=17.3km s-min=10.0km az=1.0*

ISCJB ***15*** *23:59:33.9±0.2, 52°.77N±0°.05×34°.57W±0°.05, h20^{km}, mb4.3/47, MS3.4/24, Error ellipse: s-maj=7.0km s-min=4.0km az=7.4*

NEIC ***15*** *23:59:33.7±0.8, 52°.64N×34°.47W, h10^{km}±4^{km}, mb4.5/35, Error ellipse: s-maj=7.5km s-min=4.0km az=175.0*

ISC 15 23:59:35.1±0.5**, 52°.67N**±0°.09×**34°.65W**±0°.05**, h20**^{km}**, n133, σ1^{s}.30**/121**, mb4.3**/47**, MS3.4**/24**, 11C-1D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**13.90**	**24**	Pn	**Pn**	**00 02 50.6**	**-0.1**
	0.2nm,0.3s,baz=52,slow=1.6,SNR=2.8						
BORG				LR	LR	00 06 21.4	
	comp=Z,87nm,19.0s,baz=249,slow=30						
DRLN	**Deer Lake**	**14.78**	**266**	*e*Pn	**Pn**	**00 02 59.3**	**-3.5**
DRLN				*e*Sn	Sn	00 05 34.6	-11
SFJD	**Kangerlussuaq**	**16.37**	**337**	⇑*i*P	**P**	**00 03 26.9**	**+0.8**
	16nm,1.1s						
SFJD	**Kangerlussuaq**	**16.37**	**337**	Pn	**P**	**00 03 26.2**	**+0.1**
	0.3nm,0.3s,baz=140,slow=5.6,SNR=4.6						
SFJD				LR	LR	00 08 32.5	
	comp=Z,131nm,18.5s,baz=145,slow=33						
ESK	**Eskdalemuir**	**18.59**	**69**	*e*P	**P**	**00 03 48.0**	**-2.7**
	35nm,1.3s						
EKA	**Eskdalemuir Ar**	**18.62**	**69**	P	**Pn**	**00 03 51.1**	**-0.3**
	baz=277,slow=8.9,SNR=25						
SCO	**Scoresbysund**	**18.79**	**13**	*i* P	**Pn**	**00 03 54.0**	**+0.7**
GBN	**Guysborough**	**18.97**	**258**	*e*P	**P**	**00 03 54.7**	**-0.3**
	18nm,1.2s						
SCHQ	**Schefferville**	**19.07**	**289**	*e*P	**P**	**00 03 55.6**	**-0.4**
	51nm,1.8s						
SCHQ	**Schefferville**	**19.07**	**289**	P	**P**	**00 03 55.6**	**-0.4**
	0.2nm,0.3s,baz=89,slow=9.1,SNR=5.3						
SUMG	**Summit**	**20.05**	**357**	*e*P	**P**	**00 04 07.4**	**+0.5**
	32nm,1.7s						
SUMG	**Summit**	**20.05**	**357**	*i* P	**P**	**00 04 07.5**	**+0.5**
FRB	**Frobisher Bay**	**20.74**	**316**	P	**P**	**00 04 14.1**	**+0.1**
	7.2nm,0.7s,baz=106,slow=11,SNR=23						
FRB				LR	LR	00 10 03.7	
	comp=Z,85nm,21.5s,baz=142,slow=30						
BATG	**Bathurst New B**	**20.80**	**268**	*e*P	**P**	**00 04 12.1**	**-2.8**
	32nm,1.6s						
POLO	**Lamas de Olo**	**21.38**	**111**	*e*P	**P**	**00 04 22.0**	**+0.7**
PBRG	**Braganca**	**21.70**	**109**	*e*P	**P**	**00 04 27.9**	**+3.2**
PVIS	**Viseu**	**21.76**	**113**	*e*P	**P**	**00 04 25.4**	**+0.1**
JMIC	**Jan Mayen**	**21.79**	**23**	P	**P**	**00 04 26.4**	**+1.1**
	223nm,0.5s,baz=266,slow=2.1,SNR=7.2						
PCAS	**Casmilo, Conde**	**21.88**	**115**	*e*P	**P**	**00 04 30.6**	**+4.1**
MVO	**Moncorvo**	**21.95**	**111**	*e*P	**P**	**00 04 30.2**	**+2.8**
MTE	**Manteigas**	**22.17**	**113**	*e*P	**P**	**00 04 30.6**	**+0.9**
PMAFR	**Mafra**	**22.23**	**118**	*e*P	**P**	**00 04 31.6**	**+1.3**
PTOM	**Tomar**	**22.23**	**115**	*e*P	**P**	**00 04 30.3**	**0.0**
PCBR	**Castelo Branco**	**22.59**	**114**	*e*P	**P**	**00 04 36.0**	**+1.9**
PMTG	**Montargil**	**22.72**	**116**	*e*P	**P**	**00 04 37.9**	**+2.4**
PMRV	**Marv??o**	**22.92**	**114**	*e*P	**P**	**00 04 37.3**	**-0.4**
PESTR	**Estremoz**	**23.21**	**116**	*e*P	**P**	**00 04 40.1**	**-0.5**
PESTR	**Estremoz**	**23.21**	**116**	*e*P	**P**	**00 04 39.8**	**-0.8**
	23nm,1.7s						
PNCL	**Nicolau / Gran**	**23.24**	**118**	*e*P	**P**	**00 04 41.5**	**+0.6**
MESJ	**Messejana**	**23.61**	**118**	*e*P	**P**	**00 04 44.9**	**+0.4**
ESDC	**Sonseca Array**	**24.69**	**109**	P	**P**	**00 04 53.9**	**-0.7**
	1.3nm,0.7s,baz=316,slow=8.6,SNR=16						
ESDC				LR	LR	00 12 43.2	
	comp=Z,90nm,18.1s,baz=330,slow=32						
DAG	**Danmarks Havn**	**24.95**	**9**	*i* P	**P**	**00 04 56.7**	**+0.1**
DAG				*i*		00 06 06.1	
NB2	**NORSAR Subarra**	**25.93**	**53**	P	**P**	**00 05 05.1**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=272,slow=10						
NB200	**NORSAR Array S**	**25.93**	**53**	*e*P	**P**	**00 05 05.1**	**-0.6**
NOA	**NORSAR Array B**	**25.93**	**53**	P	**P**	**00 05 05.1**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=273,slow=9.0,SNR=5.2						
NOA				LR	LR	00 13 45.1	
	comp=Z,54nm,18.6s,baz=270,slow=33						
HFS	**Hagfors**	**27.22**	**55**	P	**P**	**00 05 16.6**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=266,slow=20,SNR=4.6						
HFS				LR	LR	00 13 53.9	
	comp=Z,86nm,21.9s,baz=263,slow=32						
CLL	**Collm**	**28.96**	**73**	*e*P	**P**	**00 05 33.0**	**+0.2**
DAVOX	**Davos/Dischmat**	**29.01**	**84**	LR	LR	00 16 30.7	
	comp=Z,71nm,19.1s,slow=35						
MDT	**Midelt**	**29.34**	**121**	LR	LR	00 14 29.1	
	comp=Z,52nm,20.3s,baz=5.0,slow=31						
BRG	**Berggiesshubel**	**29.67**	**74**	*e*P	**P**	**00 05 40.0**	**+0.8**
	comp=Z,4.2nm,0.9s						
SADO	**Sadowa**	**29.99**	**273**	LR	LR	00 17 48.4	
	comp=Z,60nm,19.0s,baz=83,slow=36						
GEC2	**GERESS Array S**	**30.36**	**78**	*e*P	**P**	**00 05 45.3**	**-0.1**
	comp=Z,9.9nm,1.6s						
GERES	**GERESS Array B**	**30.36**	**78**	P	**P**	**00 05 45.3**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=304,slow=7.9,SNR=11						
GERES				LR	LR	00 17 34.0	
	comp=Z,31nm,19.9s,baz=298,slow=36						
GEA0	**GERESS Array S**	**30.37**	**78**	*e*P	**P**	**00 05 45.0**	**-0.4**
ARA0	**ARCESS Array S**	**31.89**	**35**	*e*P	**P**	**00 05 58.0**	**-0.5**
ARCES	**ARCESS Array B**	**31.89**	**35**	P	**P**	**00 05 58.0**	**-0.5**
	comp=Z,4.0nm,0.6s,baz=260,slow=7.3,SNR=31						
RES	**Resolute Bay**	**32.33**	**334**	*e*P	**P**	**00 06 02.0**	**-0.3**
	comp=Z,2.5nm,0.9s						
RES	**Resolute Bay**	**32.33**	**334**	P	**P**	**00 06 02.0**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=97,slow=9.8,SNR=9.4						
FIA0	**FINESS Array S**	**33.00**	**50**	*e*P	**P**	**00 06 07.1**	**-1.2**
FINES	**FINESS Array B**	**33.00**	**50**	P	**P**	**00 06 07.1**	**-1.2**
	comp=Z,2.9nm,0.7s,baz=290,slow=7.0,SNR=13						
FINES				LR	LR	00 17 36.8	
	comp=Z,105nm,21.1s,baz=287,slow=33						
FIA1	**FINESS Array S**	**33.00**	**50**	*e*P	**P**	**00 06 07.7**	**-0.6**
SUW	**Suwalki**	**33.73**	**64**	*e*P	**P**	**00 06 14.9**	**+0.2**
	comp=Z,16nm,0.9s						
KEST	**Kesra**	**35.15**	**101**	*e*P	**P**	**00 06 27.1**	**-0.3**
	comp=Z,16nm,1.4s						
KEST	**Kesra**	**35.15**	**101**	P	**P**	**00 06 27.1**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=251,slow=3.3,SNR=6.2						
TRPA	**Tarpa**	**35.91**	**74**	⇑*i*P	**P**	**00 06 33.8**	**+0.2**
BZS	**Buzias**	**36.64**	**78**	⇑*i*P	**P**	**00 06 40.0**	**+0.1**
DRGR		**36.68**	**76**	⇓*i*P	**P**	**00 06 41.2**	**+0.9**
ULM	**Lac du Bonnet**	**37.22**	**292**	LR	LR	00 21 31.6	
	comp=Z,65nm,18.3s,baz=314,slow=35						
GZR	**Gura Zlata**	**37.45**	**78**	⇑*i*P	**P**	**00 06 46.5**	**-0.4**
ARCR	**ARCALIA**	**37.49**	**74**	⇑*i*P	**P**	**00 06 47.8**	**+0.6**
BURAR	**Bucovina Array**	**37.73**	**73**	⇑*i*P	**P**	**00 06 50.0**	**+0.8**
TKL	**Tuckaleechee C**	**38.29**	**264**	LR	LR	00 21 46.7	
	comp=Z,119nm,18.7s,baz=330,slow=35						
KIEV	**Kiev**	**38.49**	**67**	⇑*i*P	**P**	**00 06 54.7**	**-0.7**
AKASG	**Malin Array Be**	**38.49**	**67**	P	**P**	**00 06 53.6**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=299,slow=8.1,SNR=4.2						
AKASG				LR	LR	00 21 46.5	
	comp=Z,37nm,18.2s,baz=15,slow=35						
AKBB	**Malin Array Si**	**38.49**	**67**	*e*P	**P**	**00 06 53.6**	**-1.9**
	comp=Z,7.6nm,1.3s						
BIZ	**Bicaz**	**38.59**	**73**	⇑*i*P	**P**	**00 06 57.7**	**+1.3**
VOIR		**38.78**	**76**	⇑*i*P	P	00 07 06.2	+8.1
MLR	**Muntele Rosu**	**39.28**	**75**	⇑*i*P	P	00 07 10.9	+8.6
OBN	**Obninsk**	**40.37**	**57**	⇑*i*P	**P**	**00 07 10.6**	**-0.5**
ECSD	**EROS Data Cent**	**41.07**	**283**	*e*P	**P**	**00 07 19.1**	**+2.0**
	comp=Z,3.4nm,0.9s						
YKA	**Yellowknife Ar**	**41.25**	**316**	P	**P**	**00 07 18.3**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=62,slow=8.9,SNR=8.6						
YKA				PcP	**PcP**	**00 09 17.6**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=46,slow=3.6,SNR=3.1						
YKB5	**Yellowknife Ar**	**41.25**	**316**	*e*P	**P**	**00 07 18.3**	**+0.1**
YKB5				*e*PcP	**PcP**	**00 09 17.6**	**+1.0**
CCM	**Cathedral Cave**	**41.27**	**273**	*e*P	**P**	**00 07 20.0**	**+1.2**
	comp=Z,5.4nm,0.8s						
PBMO	**Poplar Bluff**	**41.60**	**270**	*e*P	**P**	**00 07 23.0**	**+1.6**
	comp=Z,25nm,1.7s						
WHAR	**Wooly Hollow**	**43.71**	**270**	*e*P	**P**	**00 07 39.3**	**+0.7**
	comp=Z,5.8nm,0.8s						
W41B	**Gary Mavity, V**	**43.76**	**270**	*e*P	**P**	**00 07 39.8**	**+0.7**
	comp=Z,5.5nm,0.8s						
HHAR	**Hobbs**	**44.06**	**273**	*e*P	**P**	**00 07 42.6**	**+1.2**
	comp=Z,7.2nm,1.1s						
X40A	**Basin Creek Fa**	**44.58**	**270**	*e*P	**P**	**00 07 46.3**	**+0.7**
	comp=Z,6.9nm,0.7s						
W39A	**Magazine**	**44.68**	**271**	*e*P	**P**	**00 07 47.5**	**+1.1**
	comp=Z,9.3nm,1.0s						
KIRV	**Kirov**	**44.88**	**48**	LR	LR	00 25 18.8	
	comp=Z,62nm,20.2s,baz=227,slow=34						
MIAR	**Mount Ida**	**44.99**	**270**	*e*P	**P**	**00 07 49.9**	**+1.0**
	comp=Z,7.4nm,0.9s						
INK	**Inuvik**	**45.46**	**329**	*e*P	**P**	**00 07 51.8**	**-0.3**
	comp=Z,3.7nm,1.0s						
INK	**Inuvik**	**45.46**	**329**	P	**P**	**00 07 51.8**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=31,slow=8.4,SNR=5.1						
INK				LR	LR	00 24 59.1	
	comp=Z,56nm,19.0s,baz=82,slow=34						
BR101	**Keskin Array S**	**47.26**	**77**	*e*P	**P**	**00 08 06.0**	**-0.8**
BRTR	**Keskin Array B**	**47.26**	**77**	P	**P**	**00 08 06.0**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=305,slow=4.2,SNR=7.7						
GCMT	**Greycliff**	**47.40**	**293**	*e*P	**P**	**00 08 05.4**	**-2.5**
N23A	**Red Feather La**	**48.29**	**286**	*e*P	**P**	**00 08 17.5**	**+2.5**
	comp=Z,7.7nm,0.9s						
N23A				*e*PcP	**PcP**	**00 09 41.9**	**+0.3**
TOA1	**Torodi Ar. Sit**	**48.91**	**130**	*e*P	**P**	**00 08 18.9**	**-0.8**
TOA0	**Torodi Ar. Sit**	**48.92**	**130**	*e*P	**P**	**00 08 18.8**	**-0.9**
TORD	**Torodi Ar. Bea**	**48.92**	**130**	P	**P**	**00 08 18.9**	**-0.8**
	comp=Z,3.1nm,1.0s,baz=333,slow=9.7,SNR=13						
TORD				LR	LR	00 26 40.7	
	comp=Z,35nm,19.6s,baz=340,slow=33						
PD31	**Pinedale Array**	**49.20**	**290**	*e*P	**P**	**00 08 21.3**	**-0.6**
	comp=Z,8.4nm,1.5s						
PDAR	**Pinedale Array**	**49.20**	**290**	*e*P	**P**	**00 08 22.0**	**+0.1**
PDAR	**Pinedale Array**	**49.20**	**290**	P	**P**	**00 08 21.3**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=52,slow=8.3,SNR=4.1						
MDP	**Montagnes des**	**49.68**	**204**	LR	LR	00 24 57.6	
	comp=Z,34nm,18.4s,baz=326,slow=31						
KBZ	**Khabaz**	**50.09**	**67**	LR	LR	00 28 53.7	
	comp=Z,39nm,21.1s,baz=328,slow=35						
MSTX	**Muleshoe**	**50.97**	**277**	*e*P	**P**	**00 08 36.5**	**+1.2**
	comp=Z,6.5nm,1.0s						
NRIK	**Noril'sk**	**51.22**	**23**	LR	LR	00 28 37.1	
	comp=Z,28nm,21.8s,baz=26,slow=34						
ILAR	**Eielson Array**	**51.84**	**330**	P	**P**	**00 08 42.7**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=45,slow=6.5,SNR=1.2						
ILB	**Eielson Array**	**51.84**	**330**	*e*P	**P**	**00 08 42.7**	**+1.5**
	comp=Z,3.5nm,0.9s						
DBIC	**Dimbokro**	**51.94**	**141**	LR	LR	00 28 03.7	
	comp=Z,41nm,18.4s,baz=328,slow=33						
ANMO	**Albuquerque**	**52.52**	**280**	*e*P	**P**	**00 08 48.7**	**+1.7**
	comp=Z,2.9nm,1.1s						
ANMO	**Albuquerque**	**52.52**	**280**	P	**P**	**00 08 48.7**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=63,slow=9.0,SNR=3.4						
IM3	**Indian Mountai**	**52.95**	**333**	*e*P	**P**	**00 08 50.0**	**+0.5**
ELK	**Elko**	**53.75**	**292**	P	**P**	**00 08 57.9**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=40,slow=7.9,SNR=3.0						
LTX	**Lajitas**	**54.76**	**273**	*e*P	**P**	**00 09 02.7**	**-0.6**
TXAR	**Lajitas Array**	**54.76**	**273**	P	**P**	**00 09 02.7**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=58,slow=7.5,SNR=6.6						
X16A	**Lo Mia Camp, P**	**55.85**	**283**	*e*P	**P**	**00 09 13.9**	**+2.7**
	comp=Z,4.5nm,0.8s						
KVN	**Kaiserville**	**56.51**	**292**	*e*P	**P**	**00 09 17.7**	**+1.9**
	comp=Z,3.3nm,1.0s						
NV01	**Mina Array Sit**	**57.05**	**292**	*e*P	**P**	**00 09 19.6**	**-0.2**
NVAR	**Mina Array Bea**	**57.05**	**292**	P	**P**	**00 09 19.6**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=56,slow=6.7,SNR=2.4						
PNTR	**Pine Nut**	**57.33**	**293**	*e*P	**P**	**00 09 25.2**	**+3.5**
	comp=Z,9.6nm,1.1s						
ROSC	**El Rosal**	**57.75**	**229**	*e*P	**P**	**00 09 27.7**	**+2.6**
	comp=Z,20nm,0.7s						
ROSC	**El Rosal**	**57.75**	**229**	P	**P**	**00 09 26.6**	**+1.5**
	comp=Z,22nm,0.7s,baz=98,slow=8.0,SNR=14						
Y12C	**Blythe**	**58.14**	**285**	*e*P	**P**	**00 09 29.9**	**+2.7**
	comp=Z,9.9nm,0.9s						
PFO	**Pinyon Flats O**	**59.38**	**286**	*e*P	**P**	**00 09 37.9**	**+1.9**
	comp=Z,4.6nm,0.9s						
PFO	**Pinyon Flats O**	**59.38**	**286**	P	**P**	**00 09 37.9**	**+1.9**
	comp=Z,1.6nm,0.7s,baz=236,slow=7.3,SNR=2.4						
ZAA1	**Zalesovo Array**	**62.44**	**35**	*e*P	**P**	**00 09 56.4**	**+0.1**
ZALV	**Zalesovo Beam**	**62.44**	**35**	P	**P**	**00 09 56.4**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=302,slow=8.3,SNR=4.1						
ZALV				LR	LR	00 37 46.7	
	comp=Z,39nm,18.2s,baz=62,slow=37						
GEYT	**Alibeck**	**62.47**	**63**	LR	LR	00 37 15.6	
	comp=Z,24nm,18.4s,baz=25,slow=36						
KURK	**Kurchatov**	**62.66**	**41**	*e*P	**P**	**00 09 57.9**	**+0.1**
	comp=Z,3.4nm,0.6s						
MK31	**Makanchi Array**	**67.25**	**42**	*e*P	**P**	**00 10 27.9**	**+0.1**
	comp=Z,2.0nm,0.6s						
MK32	**Makanchi Array**	**67.25**	**42**	*e*P	**P**	**00 10 27.9**	**+0.1**
MKAR	**Makanchi Array**	**67.25**	**42**	P	**P**	**00 10 27.9**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=333,slow=5.0,SNR=75						
MKAR				LR	LR	00 41 34.8	
	comp=Z,26nm,18.2s,baz=358,slow=38						
MK01	**Makanchi Array**	**67.27**	**42**	*e*P	**P**	**00 10 27.9**	**0.0**
GAR	**Garm**	**68.00**	**54**	*e*P	**P**	**00 10 34.0**	**+1.2**
	comp=Z,10.0nm,0.8s						
SONA0	**Songino Array**	**74.51**	**26**	*e*P	**P**	**00 11 12.2**	**+0.2**
SONM	**Songino Array**	**74.51**	**26**	P	**P**	**00 11 12.2**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=325,slow=6.1,SNR=6.1						
CPUP	**Villa Florida**	**81.12**	**201**	LR	LR	00 43 47.8	
	comp=Z,22nm,19.2s,baz=208,slow=33						
CMAR	**Chiang Mai Arr**	**98.57**	**44**	LR	LR	00 57 56.2	
	comp=Z,27nm,21.2s,baz=200,slow=36						
WR1	**Warramunga Arr**	**146.23**	**19**	*e*PKPdf	**PKPdf**	**00 19 13.2**	**+0.3**
WRA	**Warramunga Arr**	**146.23**	**19**	PKPbc	**PKPdf**	**00 19 13.2**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=341,slow=3.2,SNR=12						
AS31	**Alice Springs**	**149.75**	**21**	*e*pPKPdf	**PKPbc**	**00 19 22.4**	**-0.9**
ASAR	**Alice Springs**	**149.75**	**21**	PKPbc	**PKPbc**	**00 19 22.4**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=356,slow=2.3,SNR=8.4						

NNC ***16*** *00:08:41.8±2.6, 42°.76N×78°.36E, h0^{km}, mb2.2, mpv2.2, Error ellipse: s-maj=25.2km s-min=6.8km az=171.0*

SOME ***16*** *00:08:43.7, 42°.78N×78°.42E, h10^{km}*

KRNET 16 00:08:35.9±0.1**, 42°.44N**×**78°.49E, h25**^{km}**, mb2.2, 13C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.09**	**305**	⇑*i*P	Pb	00 08 38.9	-1.8
	baz=11						
PRZ				⇑*i*S	Sb	00 08 40.9	-3.0
	baz=11						
SATY	**Saty**	**0.63**	**354**	P	Pn	00 08 50.1	+0.8
	0.8nm,0.1s						
SATY				S	Sb	00 08 55.0	-1.8
	7.5nm,0.1s						
SATY	**Saty**	**0.63**	**354**	*e*P	Pn	00 08 50.0	+0.6
	3.1nm,0.1s						
SATY				*e*S	Sb	00 08 54.5	-2.3
	8.4nm,0.1s						
UZB	**Uzynbulak**	**0.81**	**28**	P	Pn	00 08 54.1	+2.2
	0.3nm,0.1s						
UZB				S	Sb	00 09 01.8	-0.3
	2.8nm,0.1s						
UZB	**Uzynbulak**	**0.81**	**28**	*e*P	Pn	00 08 54.0	+2.1
	0.3nm,0.1s						
UZB				*e*S	Sb	00 09 01.3	-0.8
	2.8nm,0.1s						
TARG	**Taragay, Kyrgy**	**0.87**	**216**	⇓*i*P	Pb	00 08 52.5	-0.1
	baz=16						
TARG				⇓*i*S	Sb	00 09 04.1	+0.1
	baz=16						
KDJ	**Kajisay**	**1.02**	**253**	⇓*i*P	Pb	00 08 54.9	-0.1
	baz=53						
KDJ				⇓*i*S	Sn	00 09 08.8	+0.4
	baz=53						
PDGK	**Podgornoye**	**1.16**	**39**	⇓P	Pb	00 09 02.2	+5.0
	5.3nm,1.4s						
PDGK				⇑S	Sb	00 09 14.0	+2.1
	6.7nm,1.4s						
PDGK	**Podgornoye**	**1.16**	**39**	⇑*i*P	Pb	00 08 57.4	+0.1
	baz=39						
PDGK				⇑*i*S	Sb	00 09 12.8	+0.9
	baz=39						
MDOK	**Medeo**	**1.29**	**305**	⇑P	Pb	00 09 03.1	+3.5
	9.4nm,1.5s						
MDOK				⇓S	Sn	00 09 15.0	0.0
	13nm,1.3s						
ULHL	**Ulahol**	**1.68**	**264**	⇑*i*P	Pb	00 09 06.7	+0.5
	baz=64						
ULHL				⇑*i*S	Sb	00 09 28.9	+1.9
	baz=64						
CHKK	**Chushkaly**	**1.80**	**323**	*e*P	Pb	00 09 11.0	+2.9
	0.5nm,0.1s						
CHKK				*e*S	Sb	00 09 30.8	+0.6
	3.6nm,0.3s						
BOOM	**Boomskoye usch**	**1.89**	**273**	⇑*i*P	Pb	00 09 09.5	-0.3
	baz=73						
BOOM				⇑*i*S	Sb	00 09 33.7	+0.7
	baz=73						
DJR	**Jarkent**	**2.12**	**26**	*e*P	Pb	00 09 17.1	+3.5
	0.2nm,0.1s						
DJR				*e*S	Sb	00 09 41.2	+1.6
	0.9nm,0.2s						
TKM2	**Tokmak 2**	**2.19**	**284**	⇓P	Pb	00 09 20.4	+5.5
	4.1nm,1.2s						
TKM2				⇑S	Sb	00 09 43.9	+2.2
	5.1nm,1.3s						
TKM2	**Tokmak 2**	**2.19**	**284**	⇑*i*P	Pb	00 09 14.2	-0.7
	baz=84						
TKM2				⇑*i*S	Sb	00 09 42.2	+0.5
	baz=84						
KAPS	**Kapalarasan**	**2.92**	**12**	*e*P	Pb	00 09 31.4	+4.2
	0.3nm,0.1s						
KAPS				*e*S	Sb	00 10 05.7	+3.2
	0.5nm,0.1s						

IDC 16 00:23:31.5±2.8**, 4°.53S**×**133°.64E, h0**^{km}**, mb3.2**/1**, mb1 3.7**/5**, mb1mx3.5**/30**, mbtmp3.5**/5**, ML3.5**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.5**/17**, Error ellipse: s-maj=106.5km s-min=22.8km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.34**	**327**	Pn	Pn	00 24 40.4	+1.7
	1.4nm,0.3s,baz=184,slow=19,SNR=3.8						
SIJI				Sn	Sn	00 25 29.0	-1.1
	1.2nm,0.3s,baz=163,slow=19,SNR=3.0						
WRA	**Warramunga Arr**	**15.34**	**178**	Pn	Pn	00 27 07.3	-2.2
	0.1nm,0.3s,baz=356,slow=12,SNR=7.3						
WRA				Sn	Sn	00 29 50.4	-10
	baz=359,slow=22,SNR=3.1						
FITZ	**Fitzroy Crossi**	**15.60**	**209**	Pn	Pn	00 27 12.4	-0.3
	0.3nm,0.3s,baz=38,slow=12,SNR=6.4						
FITZ				Sn	Sn	00 30 02.6	-3.8
	0.2nm,0.3s,baz=169,slow=12,SNR=4.7						
ASAR	**Alice Springs**	**19.03**	**179**	P	Pn	00 27 56.3	+0.4
	0.2nm,0.3s,baz=6.1,slow=11,SNR=26						
BRDH	**Bariadhala**	**49.14**	**305**	LR	LR	00 56 17.8	
	comp=Z,38nm,18.3s,baz=251,slow=40						
MKAR	**Makanchi Array**	**68.23**	**325**	P	P	00 34 33.8	-0.3
	0.2nm,0.6s,baz=110,slow=7.3,SNR=3.0						

DDA ***16*** *00:24:16.8, 38°.28N×26°.51E, h22^{km}±1^{km}, ML3.8*

ATH ***16*** *00:24:17.7, 38°.27N×26°.54E, h31^{km}±2^{km}, ML3.2/4, Error ellipse: s-maj=3.2km s-min=1.4km az=245.0*

ISK ***16*** *00:24:17.6, 38°.31N×26°.58E, h17^{km}, ML3.2/32*

ISCJB ***16*** *00:24:18.2±0.2, 38°.29N±0°.02×26°.53E±0°.02, h22^{km}±2^{km}, Error ellipse: s-maj=3.3km s-min=2.5km az=157.2*

THE ***16*** *00:24:18.9, 38°.26N×26°.52E, h16^{km}±1^{km}, ML3.0/6, Error ellipse: s-maj=1.2km s-min=0.5km az=232.0*

ISC 16 00:24:18.2±0.8**, 38°.27N**±0°.02×**26°.56E**±0°.02**, h16**^{km}±4^{km}**, n93, σ0^{s}.69**/116**, 6C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEY	**zmir**	**0.06**	**233**	*i* P	**Pg**	**00 24 21.5**	**+0.3**
ZEY				*i* S	**Sg**	**00 24 23.9**	**+0.7**
URLA	**Izmir**	**0.09**	**18**	PG	**Pg**	**00 24 21.1**	**-0.5**
URLA				SG	**Sg**	**00 24 22.9**	**-1.0**
URLA	**Izmir**	**0.09**	**18**	*i* P	**Pg**	**00 24 21.9**	**+0.3**
URLA				*i* S	**Sg**	**00 24 23.9**	**+0.1**
KRBN	**Karaburun**	**0.32**	**359**	PG	**Pg**	**00 24 23.9**	**-1.1**
KRBN				SG	**Sg**	**00 24 28.9**	**-0.7**
DGB	**zmir**	**0.34**	**131**	*i* P	**Pb**	**00 24 26.0**	**+0.1**
DGB				*i* S	**Sb**	**00 24 31.5**	**+0.5**
GMLD	**Gumuldur**	**0.34**	**125**	PG	**Pg**	**00 24 25.5**	**+0.2**
GMLD				SG	**Sb**	**00 24 30.9**	**-0.2**
BLCB	**Balcova**	**0.40**	**73**	PG	**Pg**	**00 24 26.1**	**-0.2**
CHOS	**Chios island**	**0.41**	**286**	PG	**Pg**	**00 24 26.9**	**+0.3**
CHOS				SG	**Sg**	**00 24 33.4**	**+1.0**
CHOS	**Chios island**	**0.41**	**286**	P	**Pg**	**00 24 27.0**	**+0.3**
CHOS				S	**Sg**	**00 24 33.1**	**+0.7**
CHOS				AML	AML	00 24 33.8	
	comp=E,8577µm,0.3s						
CHOS				AML	AML	00 24 34.6	
	comp=N,7737µm,0.4s						
CHOS	**Chios island**	**0.41**	**286**	P	**Pg**	**00 24 26.9**	**+0.3**
CHOS				S	**Sg**	**00 24 33.0**	**+0.7**
FOCM	**Foa**	**0.46**	**17**	PG	**Pg**	**00 24 26.2**	**-1.3**
SMG	**Samos**	**0.60**	**159**	P	**Pb**	**00 24 30.3**	**-0.1**
SMG				S	**Sn**	**00 24 39.9**	**-1.8**
SMG				AML	AML	00 24 42.0	
	comp=N,6979µm,0.3s						
SMG				AML	AML	00 24 42.2	
	comp=E,6206µm,0.3s						
SMG	**Samos**	**0.60**	**159**	P	**Pb**	**00 24 30.3**	**-0.1**
SMG				S	**Sn**	**00 24 39.8**	**-1.8**
GCAM	**G?zelcaml?**	**0.78**	**137**	PG	**Pg**	**00 24 33.6**	**+0.1**
GCAM	**G?zelcaml?**	**0.78**	**137**	*i* P	**Pn**	**00 24 34.4**	**-0.2**
GCAM				*i* S	**Sn**	**00 24 45.2**	**-0.7**
GCAM				IAML_P			
	comp=Z,15µm,0.1s						
PSRA	**Psara**	**0.83**	**289**	P	**Pg**	**00 24 35.3**	**+1.0**
PSRA				S	**Sn**	**00 24 47.0**	**0.0**
PRK	**Paraskevi**	**1.00**	**347**	P	**Pb**	**00 24 37.5**	**+0.3**
PRK				S	**Sb**	**00 24 51.2**	**+1.1**
PRK				AML	AML	00 24 53.1	
	comp=E,4303µm,0.4s						
PRK				AML	AML	00 24 53.4	
	comp=N,5097µm,0.4s						
PRK	**Paraskevi**	**1.00**	**347**	P	**Pb**	**00 24 37.4**	**+0.3**
PRK				S	**Sb**	**00 24 51.4**	**+1.4**
AYVA	**Ayvalik**	**1.04**	**6**	*i* P	**Pb**	**00 24 37.6**	**-0.2**
AYVA				*i* S	**Sb**	**00 24 52.7**	**+1.5**
AYVA				IAML_P			
	comp=Z,2µm,0.2s						
DIDI	**Didim-Aydin**	**1.04**	**149**	PG	**Pg**	**00 24 38.4**	**0.0**
SIGR	**SIGRI**	**1.09**	**330**	PG	**Pn**	**00 24 38.2**	**-0.6**
SIGR	**SIGRI**	**1.09**	**330**	P	**Pn**	**00 24 38.0**	**-0.8**
SIGR				S	**Sb**	**00 24 51.7**	**-0.9**
SIGR				AML	AML	00 24 52.4	
	comp=N,902µm,0.4s						
SIGR				AML	AML	00 24 52.5	
	comp=E,916µm,0.4s						
SIGR	**SIGRI**	**1.09**	**330**	P	**Pn**	**00 24 38.0**	**-0.8**
SIGR				S	**Sb**	**00 24 52.3**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.10**	**107**	PN	**Pb**	**00 24 38.9**	**0.0**
GOMA	**Golmarmara-Man**	**1.15**	**67**	PN	**Pn**	**00 24 39.5**	**-0.2**
AKHS	**Akhisar**	**1.15**	**58**	*i* P	**Pn**	**00 24 39.2**	**-0.5**
AKS	**Akhisar**	**1.15**	**58**	PN	**Pn**	**00 24 39.5**	**-0.2**
AYDN	**Tasoluk**	**1.21**	**120**	*i* P	**Pn**	**00 24 40.8**	**+0.3**
AYDN				*i* S	**Sg**	**00 24 58.3**	**+0.9**
AYDN				IAML_P			
	comp=Z,6µm,0.1s						
TNSA	**Tinos**	**1.32**	**237**	P	**Pb**	**00 24 42.7**	**0.0**
TNSA				S	**Sn**	**00 24 58.7**	**-0.6**
BODT	**Bodrum**	**1.35**	**154**	PN	**Pb**	**00 24 42.9**	**-0.2**
BODT	**Bodrum**	**1.35**	**154**	P	**Pn**	**00 24 41.4**	**-1.0**
MLSB	**Milas**	**1.37**	**135**	PN	**Pn**	**00 24 42.9**	**+0.2**
BDRM	**Kayabasi**	**1.40**	**150**	*i* P	**Pn**	**00 24 43.4**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.43**	**39**	*i* P	**Pn**	**00 24 43.0**	**-0.5**
STEP				IAML_P			
	comp=Z,12µm,0.3s						
APE	**Apeiranthos**	**1.45**	**215**	PN	**Pn**	**00 24 43.7**	**-0.2**
APE	**Apeiranthos**	**1.45**	**215**	P	**Pn**	**00 24 42.9**	**-1.0**
APE	**Apeiranthos**	**1.45**	**215**	⇑*i*P	**Pn**	**00 24 43.1**	**-0.8**
APE	**Apeiranthos**	**1.45**	**215**	S	**Sn**	**00 25 01.1**	**-1.5**
APE	**Apeiranthos**	**1.45**	**215**	P	**Pn**	**00 24 43.0**	**-0.8**
APE				S	**Sn**	**00 25 01.6**	**-1.0**
BAYC	**CANAKKALE_Bayr**	**1.47**	**360**	*i* P	**Pn**	**00 24 43.8**	**-0.2**
BAYC				IAML_P			
	comp=Z,5µm,0.2s						
AMGA	**Amorgos Island**	**1.53**	**200**	P	**Pn**	**00 24 44.1**	**-0.8**
AMGA	**Amorgos Island**	**1.53**	**200**	P	**Pn**	**00 24 44.1**	**-0.8**
EZN	**Ezine**	**1.56**	**353**	PN	**Pn**	**00 24 45.4**	**+0.1**
EZN	**Ezine**	**1.56**	**353**	P	**Pn**	**00 24 44.5**	**-0.8**
MANT	**Manisa**	**1.58**	**81**	*i* P	**Pb**	**00 24 48.3**	**+1.0**
MANT				IAML_P			
	comp=Z,4µm,0.2s						
BOZC	**Bozcaada**	**1.62**	**346**	PN	**Pn**	**00 24 45.3**	**-0.8**
BOZC	**Bozcaada**	**1.62**	**346**	*i* P	**Pn**	**00 24 46.7**	**+0.6**
BOZC				IAML_P			
	comp=Z,3µm,0.2s						
KULA	**Kula-Manisa**	**1.67**	**81**	PN	**Pn**	**00 24 47.1**	**+0.2**
KULA	**Kula-Manisa**	**1.67**	**81**	P	**Pn**	**00 24 47.3**	**+0.4**
KULA				S	**Sn**	**00 25 08.9**	**+0.9**
DAT	**Datca**	**1.74**	**152**	PN	**Pn**	**00 24 47.8**	**-0.1**
YER	**Yerkesik**	**1.78**	**129**	PN	**Pn**	**00 24 48.8**	**+0.5**

YER	Yerkesik	1.78	129	P	Pn	00 24 48.5	+0.2
LIA	Limnos Island	1.94	327	P	Pn	00 24 50.3	-0.2
LIA	Limnos Island	1.94	327	P	Pn	00 24 50.1	-0.5
LIA				S	Sn	00 25 15.2	+0.5
GONE	Gonen-Balikesi	1.98	26	PN	Pn	00 24 50.9	-0.1
SERI	Serifos	1.98	237	P	Pn	00 24 51.1	-0.1
THR2	Thira island,	2.03	207	P	Pn	00 24 51.3	-0.5
THT2	Imerovigli	2.05	207	P	Pn	00 24 51.4	-0.6
SANT	Santorini	2.09	205	PN	Pn	00 24 53.3	+0.6
SANT	Santorini	2.09	205	⇑iP	Pn	00 24 52.9	+0.2
SANT	Santorini	2.09	205	S	Sn	00 25 18.2	-0.2
LPK	Lapseki	2.10	4	PN	Pn	00 24 52.9	+0.1
GELI	Tayfur-Gelibol	2.12	358	PN	Pn	00 24 52.5	-0.6
THR6	Thira Island,	2.13	206	P	Pn	00 24 52.8	-0.3
PTL	Penteli	2.14	265	P	Pn	00 24 52.9	-0.4
TURN	Turunc	2.14	130	PN	Pn	00 24 51.9	-1.4
KRBG	Karabiga-Canak	2.19	15	PN	Pn	00 24 54.3	+0.3
DALY	Dalyan (Mula)	2.21	130	PN	Pn	00 24 55.6	+1.4
VLY	Voula,Athens	2.22	260	P	Pn	00 24 54.3	-0.1
AOS	Alonnisos	2.28	294	PN	Pn	00 24 55.6	+0.4
EDC	Edincik	2.31	26	PN	Pn	00 24 55.2	-0.4
SMTH	Samothraki Isl	2.34	340	P	Pn	00 24 55.5	-0.5
SMTH	Samothraki Isl	2.34	340	P	Pn	00 24 55.4	-0.6
GEDZ	Gediz	2.36	70	PN	Pn	00 24 56.4	0.0
ERIK	Erikli-Kesan	2.40	359	PN	Pn	00 24 55.9	-0.9
ARG	Arkhangelos	2.40	148	PN	Pn	00 24 57.8	+0.9
KCTX	Karacabey (Bur	2.43	34	PN	Pn	00 24 56.4	-0.9
RKY	Sarkoy-Tekirda	2.46	11	PN	Pn	00 24 57.4	-0.3
ENEZ	Enez	2.48	353	PN	Pn	00 24 58.1	+0.1
TVSB	Tavsanli	2.55	62	PN	Pn	00 24 58.8	-0.2
FETY	Fethiye	2.59	128	PN	Pn	00 25 00.1	+0.6
ALN	Alexandroupoli	2.65	352	PN	Pn	00 25 00.7	+0.4
DID	Didima	2.74	255	P	Pn	00 25 01.3	-0.2
MDNY	Mudanya-Bursa	2.76	40	PN	Pn	00 25 01.7	-0.1
ARMT	Armutlu	2.90	37	PN	Pn	00 25 04.4	+0.6
RDO	Rodhopi	2.98	345	PN	Pn	00 25 04.9	+0.1
IDI	Anoyia	3.27	205	⇑iP	Pn	00 25 07.7	-1.1
STIP	Stip	4.79	317	i Pn	Pn	00 25 29.2	-0.5
VTS	Vitosha	5.01	330	⇓iP	Pn	00 25 33.7	+0.8
VTS	Vitosha	5.01	330	S	Sn	00 26 29.3	-1.3
MDVR	Moldovita	7.45	332	⇑iP	Pn	00 26 06.2	-0.1
GZR	Gura Zlata	7.65	340	⇑iP	Pn	00 26 09.9	+0.8
BZS	Buzias	8.21	335	⇑iP	Pn	00 26 15.8	-0.8

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*NEIC **16** 00:42:40.6±0.0, 17°.37N×101°.24W, h27km, MD4.0(MEX), After MEX.*
*MEX **16** 00:42:40.7±0.6, 17°.37N×101°.24W, h28km±12km, MD4.0*
*IDC **16** 00:42:45.3±4.8, 17°.38N×100°.88W, h87km±95km, mb3.3/4, mb1 3.6/6, mb1mx3.3/31, mbtmp3.7/6, ML3.7/2, MS2.9/4, Ms1 2.9/4, ms1mx2.7/14, Error ellipse: s-maj=165.3km s-min=35.5km az=6.0*
ISC 16 00:42:37.1±1.8**, 17°.41N**±0°.07×**101°.19W**±0°.04**, h13**km±14km**, n22, σ1ˢ11**/33**, mb3.6**/4**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.33	307	i P	Pn	00 42 46.6	-1.1
ZIIG				i S	Sb	00 42 51.9	+1.7
ZIIG	Zihuatanejo	0.33	307	i P	Pn	00 42 46.6	-1.1
ZIIG				i S	Sb	00 42 51.9	+1.7
CAIG	El Cayaco	0.95	112	eP	Pn	00 42 56.2	+0.1
CAIG				eS	Sg	00 43 07.6	-0.2
CAIG	El Cayaco	0.95	112	eP	Pn	00 42 56.2	+0.1
CAIG				eS	Sg	00 43 07.6	-0.2
ARIG	Puente Sto Nin	1.18	42	eP	Pn	00 43 00.1	+0.7
ARIG				eS	Sb	00 43 14.3	-0.4
ARIG	Puente Sto Nin	1.18	42	eP	Pn	00 43 00.1	+0.7
ARIG				eS	Sb	00 43 14.3	-0.4
MEIG	Mezcala	1.58	71	eP	Pb	00 43 06.0	-0.3
MEIG				eS	Sn	00 43 24.1	-1.2
MEIG	Mezcala	1.58	71	eP	Pb	00 43 06.0	-0.3
MEIG				eS	Sn	00 43 24.1	-1.2
PLIG	Platanillo	1.88	58	eP	Pb	00 43 10.4	-1.0
PLIG				i S	Sn	00 43 32.7	-0.1
PLIG	Platanillo	1.88	58	eP	Pb	00 43 10.4	-1.0
PLIG				i S	Sn	00 43 32.7	-0.1
YAIG	Yautepec	2.48	54	eP	Pn	00 43 17.9	+0.5
YAIG				i S	Sn	00 43 47.5	-0.2
YAIG	Yautepec	2.48	54	eP	Pn	00 43 17.9	+0.5
YAIG				i S	Sn	00 43 47.5	-0.2
CJM	Chamela	4.21	300	i P	Pn	00 43 40.1	-0.9
CJM	Chamela	4.21	300	i P	Pn	00 43 40.1	-0.9
CMIG	Matias Romero	6.03	92	P	Pn	00 44 07.9	+1.8
	1.7nm,0.3s,baz=259,slow=12,SNR=35						
CMIG				S	Sn	00 45 12.9	-2.1
	2.3nm,0.3s,baz=301,slow=9.9,SNR=3.8						
CMIG				Lg	Lg	00 45 50.8	
	5.2nm,0.3s,baz=355,slow=22,SNR=3.7						
CMIG				LR	LR	00 46 57.6	
	comp=Z,82nm,20.6s,baz=261,slow=44						
APG	El Apazote	10.57	102	P	Pn	00 45 10.1	+1.5
	0.9nm,0.3s,baz=237,slow=13,SNR=3.5						
APG				LR	LR	00 49 23.9	
	comp=Z,47nm,21.4s,baz=292,slow=39						
TXAR	Lajitas Array	12.09	350	P	Pn	00 45 41.9	+13
	0.1nm,0.3s,baz=159,slow=10,SNR=4.6						
TXAR				S	Sn	00 48 05.0	+21
	0.1nm,0.3s,baz=274,slow=40,SNR=3.0						
TXAR				LR	LR	00 50 48.4	
	comp=Z,65nm,20.0s,baz=0.0,slow=40						
ANMO	Albuquerque	18.09	346	LR	LR	00 54 16.1	
	comp=Z,88nm,21.1s,baz=177,slow=38						
NVAR	Mina Array Bea	25.75	328	P	P	00 48 10.3	+2.5
	0.9nm,0.6s,baz=147,slow=10,SNR=7.5						
PDAR	Pinedale Array	26.27	346	P	P	00 48 13.7	+1.2
	0.2nm,0.5s,baz=142,slow=10,SNR=3.6						
SCHQ	Schefferville	45.69	27	P	P	00 50 57.1	-0.6
	1.0nm,0.5s,baz=225,slow=7.3,SNR=6.3						
YKA	Yellowknife Ar	46.01	351	P	P	00 50 59.1	-0.9
	0.6nm,0.8s,baz=162,slow=7.1,SNR=7.0						

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*ISCJB **16** 00:51:29.1±0.6, 12°.63S±0°.07×166°.9E±0°.1, h220km, mb3.6/11, Error ellipse: s-maj=18.7km s-min=9.5km az=5.2*
*IDC **16** 00:51:31.9±4.8, 12°.78S×166°.89E, h238km±47km, mb3.4/11, mb1 3.6/12, mb1mx3.5/33, mbtmp3.9/12, Error ellipse: s-maj=29.3km s-min=19.2km az=1.0*
ISC 16 00:51:30.1±0.7**, 12°.68S**±0°.09×**166°.9E**±0°.2**, h220**km**, n15, σ0ˢ89**/17**, mb3.7**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.35	183	P	Pn	00 53 42.5	+1.8
	0.5nm,0.3s,baz=294,slow=20,SNR=5.9						
DZM				S	S	00 55 24.6	-1.4
	0.1nm,0.3s,baz=356,slow=19,SNR=2.1						
CTA	Charters Tower	21.13	247	P	P	00 55 57.9	-0.3
	0.8nm,0.3s,baz=76,slow=12,SNR=5.1						
RPZ	Rata Peaks	31.13	174	P	P	00 57 28.1	0.0
	4.7nm,0.5s,baz=324,slow=19,SNR=4.6						
WRA	Warramunga Arr	32.05	253	P	P	00 57 36.3	-0.2
	0.3nm,0.5s,baz=85,slow=9.1,SNR=8.8						
ASAR	Alice Springs	33.13	246	P	P	00 57 45.0	-0.9
	0.5nm,0.6s,baz=72,slow=9.2,SNR=8.5						
SONM	Songino Array	80.66	324	P	P	01 03 19.6	+1.0
	0.2nm,0.5s,baz=118,slow=4.2,SNR=3.4						
ILAR	Eielson Array	84.70	18	P	P	01 03 38.5	-0.3
	1.8nm,0.5s,baz=244,slow=5.0,SNR=43						
NVAR	Mina Array Bea	86.20	49	P	P	01 03 47.1	0.0
	0.5nm,0.7s,baz=241,slow=7.0,SNR=3.6						
PDAR	Pinedale Array	93.82	47	P	P	01 04 22.8	+0.1
	0.2nm,0.5s,baz=204,slow=2.0,SNR=2.8						
MKAR	Makanchi Array	95.49	317	P	P	01 04 30.5	+0.5
	0.6nm,0.6s,baz=95,slow=7.2,SNR=7.6						
ZALV	Zalesovo Beam	95.55	324	P	P	01 04 30.1	+0.2
	0.2nm,0.3s,baz=102,slow=3.4,SNR=3.1						
YKA	Yellowknife Ar	95.89	27	P	P	01 04 30.1	-1.3
	0.3nm,0.7s,baz=256,slow=5.0,SNR=4.5						
ARCES	ARCESS Array B	118.19	346	PKP	PKiKP	01 09 50.0	-0.4
	1.2nm,0.7s,baz=72,slow=2.9,SNR=18						
FINES	FINESS Array B	123.70	339	PKP	PKiKP	01 10 01.1	-0.4
	0.5nm,0.7s,baz=72,slow=4.8,SNR=4.5						
ESDC	Sonseca Array	151.93	345	PKPbc	PKiKP	01 10 59.1	-0.6
	0.1nm,0.3s,baz=12,slow=4.0,SNR=3.7						
ESDC				PKPab	PKPab	01 11 10.4	+1.1
	0.1nm,0.4s,baz=358,slow=5.2,SNR=4.9						

IDC 16 01:07:22.6±5.2**, 20°.60S×176°.24W, h0**km**, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.5**/25**, mbtmp3.5**/2**, Error ellipse: s-maj=274.8km s-min=57.5km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.10	257	P	P	01 15 49.0	+0.2
	0.7nm,0.8s,baz=92,slow=8.3,SNR=6.0						
WRA	Warramunga Arr	46.22	262	P	P	01 15 49.3	-0.5
	0.2nm,0.4s,baz=99,slow=10.0,SNR=6.9						
AKASG	Malin Array Be	143.88	332	PKP	PKPbc	01 26 57.2	-0.2
	0.2nm,0.3s,baz=43,slow=4.5,SNR=4.3						
BRTR	Keskin Array B	148.11	313	PKPbc	PKPbc	01 27 10.7	-0.1
	0.6nm,0.5s,baz=145,slow=5.3,SNR=6.0						

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*IDC **16** 01:09:05.9±1.2, 50°.16N×19°.03E, h0km, mb1 3.3/4, mb1mx3.0/47, mbtmp3.2/4, ML2.5/4, Error ellipse: s-maj=17.3km s-min=6.9km az=133.0*
*ISCJB **16** 01:09:05.1±0.4, 50°.40N±0°.03×18°.78E±0°.02, h0km, Error ellipse: s-maj=3.8km s-min=1.9km az=13.1*
*BGR **16** 01:09:06.5±0.5, 50°.39N×18°.86E, h1km, ML3.1/8, Error ellipse: s-maj=8.9km s-min=4.4km az=10.0*
*SIGU **16** 01:09:06.5±0.2, 50°N±2°×18°.9E±0°.9, h10km*
*PRU **16** 01:09:06.7±0.0, 50°.45N×18°.83E, h0km*
*VIE **16** 01:09:07.0±0.7, 50°.25N×18°.96E, h0km, mb2.3/4, ml2.9/5, Error ellipse: s-maj=8.9km s-min=4.5km az=134.0, Suspected Mining induced.*
ISC 16 01:09:05.6±0.7**, 50°.38N**±0°.03×**18°.83E**±0°.02**, h0**km**, n69, σ1ˢ77**/102**, 3C-10D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	Chorzow	0.14	131	i Pg	Pg	01 09 09.4	+1.2
CHZP				eSg	Sg	01 09 11.2	+1.3
OJC	Ojcow	0.64	104	ePg	Pg	01 09 18.5	+0.6
OJC				eSg	Sg	01 09 27.2	+1.0
OJC	Ojcow	0.64	104	ePg	Pg	01 09 18.5	+0.6
OKC	Ostrava-Krasne	0.70	219	ePG	Pb	01 09 21.0	+0.3
OKC				eSG	Sb	01 09 30.6	-0.2
OKC	Ostrava-Krasne	0.70	219	ePg	Pb	01 09 21.2	+0.5
MORC	Moravsky Berou	1.03	235	⇑iP	Pn	01 09 27.6	+0.3
MORC	Moravsky Berou	1.03	235	S	Sb	01 09 40.4	+0.1
MORC	Moravsky Berou	1.03	235	ePG	Pb	01 09 26.9	+0.6
MORC				eSG	Sb	01 09 41.1	+0.8
MORC	Moravsky Berou	1.03	235	ePg	Pb	01 09 26.8	+0.5
MORC				eSg	Sb	01 09 41.0	+0.6
LANS	Liptovska Anna	1.30	161	ePG	Pn	01 09 31.4	+0.4
LANS				eSG	Sn	01 09 48.9	-0.2
NIE	Niedzica	1.35	135	ePg	Pn	01 09 32.0	+0.3
NIE				eSg	Sn	01 09 50.6	+0.2
NIE	Niedzica	1.35	135	ePg	Pn	01 09 32.1	+0.3
KRLC	Kraliky	1.35	258	ePG	Pb	01 09 32.3	+0.4
KRLC				eSG	Sn	01 09 50.8	+0.3
	comp=Z,25nm,0.3s						
DPC	Dobruska-Polom	1.61	270	ePG	Pb	01 09 36.6	+0.4
DPC				eSG	Sg	01 09 59.0	+1.7
	comp=Z,46nm,0.4s						
DPC	Dobruska-Polom	1.61	270	eSg	Sg	01 09 58.9	+1.6
KSP	Ksiaz	1.68	287	ePb	Pn	01 09 37.4	+1.1
KSP				i Pg	Pg	01 09 39.5	+1.6
KSP				eSb	Sg	01 10 00.5	+0.9
KSP				eSg	Sb	01 10 02.8	+3.6
KSP	Ksiaz	1.68	287	ePg	Pb	01 09 37.6	+0.1
VRAC	Vranov	1.80	234	⇓iP	Pg	01 09 40.1	-0.1
VRAC	Vranov	1.80	234	S	Sb	01 10 02.4	-0.2
VRAC	Vranov	1.80	234	ePN	Pb	01 09 39.1	-0.4
VRAC				eSG	Sg	01 10 04.4	+0.9
VRAC	Vranov	1.80	234	Pg	Pb	01 09 39.1	-0.4
	3.2nm,0.3s,baz=57,slow=14,SNR=36						
VRAC				Lg	Lg	01 10 03.7	
	14nm,0.3s,baz=138,slow=21,SNR=29						
UPC	Upice	1.81	275	ePG	Pb	01 09 39.7	+0.1
UPC				eSG	Sg	01 10 04.6	+0.9
	comp=Z,41nm,0.5s						
VYHS	Vyhne	1.89	180	ePN	Pn	01 09 39.6	+0.5
VYHS				eSN	Sn	01 10 03.6	0.0
VYHS				eLG	Lg	01 10 11.3	
KRUC	Moravsky	2.06	231	ePN	Pn	01 09 42.4	+0.9
KRUC				eSG	Sg	01 10 11.7	0.0
TREC	Trest	2.42	245	ePG	Pb	01 09 51.1	+1.0
TREC				eSG	Sg	01 10 23.1	-0.3
	comp=Z,20nm,0.3s						
PSZ	Piszkesteto	2.56	164	⇓iP	Pn	01 09 48.8	+0.4
PSZ	Piszkesteto	2.56	164	S	Sn	01 10 14.8	-5.5
PSZ	Piszkesteto	2.56	164	Sn	Sn	01 10 21.1	+0.8
PSZ				⇓ePn	Pn	01 09 49.1	+0.6
PSZ				eSg	Pg	01 09 55.1	+0.4
GOPC	GO Pecny, Ondr	2.64	261	ePG	Pb	01 09 54.8	+0.9
PVCC	Panska Ves	2.73	275	ePN	Pn	01 09 51.9	+1.2
PRU	Pruhonice	2.79	264	ePN	Pn	01 09 53.6	+2.1
PRU				ePG	Pb	01 09 57.9	+1.6
PRU				eSG	Sg	01 10 34.9	-0.2
	comp=Z,17nm,0.4s						
UZH	Uzhgorod	2.85	126	Pn	Pn	01 09 54.7	+2.3
CONA	Conrad Observa	3.13	220	i Pn	Pn	01 09 56.9	+0.5
	0.3nm,0.1s						
CONA				i Sn	Sn	01 10 35.6	+1.2
	6.1nm,0.4s						
BRG	Berggiesshubel	3.15	281	PG	Pg	01 10 05.5	-0.5
BRG				SG	Sg	01 10 49.4	+2.5
	24nm,0.4s						
BRG	Berggiesshubel	3.15	281	ePg	Pg	01 10 05.4	-0.6
BRG				eSg	Sg	01 10 47.3	+0.4
MUKU	Mukachevo	3.17	126	Pn	Pn	01 09 58.3	+1.6
TRPA	Tarpa	3.31	131	⇓iP	Pn	01 09 58.0	-0.7
TRPA	Tarpa	3.31	131	S	Sn	01 10 38.6	-0.1
BRIU	Brid	3.42	125	Pn	Pn	01 10 03.4	+3.3
MORS	Morshin	3.51	109	Pn	Pn	01 10 04.4	+3.0
MEZ	Mezhgor'ye	3.58	120	Pn	Pn	01 10 04.8	+2.4
KORU	Korolevo	3.59	127	Pn	Pn	01 10 02.3	-0.2
KHC	Kasperske Hory	3.63	252	ePN	Pn	01 10 04.4	+1.3
KHC				ePG	Pb	01 10 11.9	+1.2
KHC				eSG	Sg	01 11 00.5	-1.7
	comp=Z,25nm,0.4s						
GEC2	GERESS Array S	3.67	247	eSg	Sg	01 11 03.0	-0.5
GERES	GERESS Array B	3.67	247	Pn	Pn	01 10 05.4	+1.6
	0.3nm,0.3s,baz=64,slow=14,SNR=7.0						
GERES				Pg	Pb	01 10 13.2	+1.7
	1.0nm,0.3s,baz=66,slow=15,SNR=17						
GERES				Sn	Sn	01 10 47.3	-0.5
	1.1nm,0.3s,baz=65,slow=23,SNR=7.5						
GERES				Lg	Lg	01 11 02.9	
	2.2nm,0.3s,baz=66,slow=20,SNR=7.1						
CLL	Collm	3.81	286	ePg	Pg	01 10 20.0	+1.4
CLL				e		01 11 03.0	
CLL				eSg	Sg	01 11 09.0	+1.0
	comp=Z,99nm,1.8s						
ARSA	Arzberg	3.82	216	ePn	Pn	01 10 08.2	+2.5
	comp=Z,0.4nm,0.2s						
ARSA				eSg	Sg	01 11 11.5	+3.2
	comp=Z,3.8nm,0.4s						
MOA	Molln	3.92	232	i Pn	Pn	01 10 08.8	+1.6
	comp=Z,0.2nm,0.1s						
MOA				eSn	Sn	01 10 54.5	+0.6
	comp=Z,1.6nm,0.3s						
TANN	Tannenbergstha	4.08	273	eSg	Sg	01 11 15.8	-0.7
NKC	Novy Kostel	4.09	270	eSG	Sg	01 11 17.9	+0.8
	comp=Z,15nm,0.4s						
NSLU	Nyzhne Selyshc	4.28	119	Pn	Pn	01 10 07.6	-4.4
DRGR		4.42	143	⇑iP	Pn	01 10 15.0	+1.0
DRGR		4.42	143	S	Sn	01 11 03.7	-2.4
SIRR	Siria	4.53	154	⇓iP	Pn	01 10 16.0	+0.6
ARCR	ARCALIA	4.92	130	⇑iP	Pn	01 10 23.3	+2.5
BURAR	Bucovina Array	5.03	121	⇓iP	Pn	01 10 24.2	+1.8
BZS	Buzias	5.12	158	⇓iP	Pn	01 10 24.0	+0.5
BSD	Bornholm Skovb	5.31	335	i P	Pn	01 10 26.9	+0.9
BSD				i S	Sn	01 11 23.6	-4.2
GZR	Gura Zlata	5.65	151	⇓iP	Pn	01 10 32.4	+1.5
DOPR	Dopca	6.22	133	⇓iP	Pn	01 10 41.0	+2.3
VOIR		6.47	137	⇓iP	Pn	01 10 43.7	+1.5
AKASG	Malin Array Be	6.63	83	Pg	Pb	01 10 59.2	-2.5
	comp=Z,0.2nm,0.3s,baz=272,slow=14,SNR=2.3						
AKASG				Lg	Lg	01 12 31.7	
	comp=Z,0.8nm,0.3s,baz=266,slow=25,SNR=3.8						
IIGN	Ignalina	6.69	39	eP	Sn	01 12 07.2	+5.2
IIGN				IAML		01 12 44.3	
	comp=Z,1.5nm,0.4s						
ISAL	Salakas	6.81	37	eP	Sn	01 12 07.3	+2.4
ISAL				IAML		01 12 47.1	
	comp=Z,1.9nm,0.3s						
IDID	Didziasalis	6.88	41	eP	Sn	01 12 09.4	+2.9
IDID				IAML		01 12 44.8	
	comp=Z,1.1nm,0.4s						
IZAR	Zarasai	6.99	37	eP	Sn	01 12 08.0	-1.2
IZAR				IAML		01 12 45.4	
	comp=Z,1.2nm,0.4s						
HFS	Hagfors	10.20	345	Pn	Pn	01 11 32.6	-0.6
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=4.3						
HFS				Sn	Sn	01 13 23.9	-4.3
	comp=Z,0.1nm,0.3s,baz=168,slow=24,SNR=2.8						
NOA	NORSAR Array B	11.51	341	Pn	Pn	01 11 47.9	-3.2
	comp=Z,0.0nm,0.3s,baz=151,slow=13,SNR=2.5						
FINES	FINESS Array B	11.80	17	Pn	Pn	01 11 51.6	-3.4
	comp=Z,0.3nm,0.3s,baz=203,slow=16,SNR=12						
FINES				Sn	Sn	01 13 58.0	-9.3
	comp=Z,0.2nm,0.3s,baz=203,slow=21,SNR=4.7						

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*ISCJB **16** 01:17:36.1±0.8, 13°.51S±0°.07×166°.9E±0°.2, h200km, Error ellipse: s-maj=23.8km s-min=9.8km az=3.4*
*IDC **16** 01:17:38.0±3.9, 13°.65S×167°.10E, h207km±37km, mb3.6/9, mb1 3.7/10, mb1mx3.5/42, mbtmp4.1/10, Error ellipse: s-maj=33.2km s-min=18.8km az=142.0*
ISC 16 01:17:37.1±0.8**, 13°.57S**±0°.09×**167°.1E**±0°.2**, h200**km**, n16, σ0ˢ83**/20**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.48	184	P	Pn	01 19 38.1	+1.3
	0.4nm,0.3s,baz=142,slow=22,SNR=4.7						
DZM				S	Sn	01 21 11.6	-0.5
	0.3nm,0.3s,baz=151,slow=19,SNR=2.4						
STKA	Stephens Creek	29.63	228	P	P	01 23 23.4	-0.5
	4.8nm,0.4s,baz=52,slow=8.0,SNR=16						
WRA	Warramunga Arr	31.96	254	P	P	01 23 44.0	-0.6
	1.1nm,0.6s,baz=86,slow=9.1,SNR=26						
WRA				PcP	PcP	01 26 30.4	+0.5
	0.1nm,0.4s,baz=85,slow=4.0,SNR=5.8						
ASAR	Alice Springs	32.95	247	P	P	01 23 52.6	-0.5
	3.3nm,0.5s,baz=74,slow=9.2,SNR=67						
ASAR				PcP	PcP	01 26 32.3	-0.3
	0.5nm,0.6s,baz=80,slow=2.5,SNR=4.9						
NWAO	Narrogin (SRO)	49.21	238	P	P	01 26 04.7	-0.7
	5.8nm,0.7s,baz=38,slow=19,SNR=5.3						
SEY	Seymchan	77.12	353	P	P	01 29 09.1	+1.0
	1.3nm,0.7s,baz=139,slow=11,SNR=4.8						
SONM	Songino Array	81.47	324	P	P	01 29 33.1	+1.1
	0.2nm,0.5s,baz=150,slow=7.3,SNR=3.8						
ILAR	Eielson Array	85.48	18	P	P	01 29 51.2	-0.8
	0.2nm,0.7s,baz=210,slow=5.2,SNR=3.0						
MKAR	Makanchi Array	96.25	317	P	P	01 30 43.3	+0.6
	0.8nm,0.7s,baz=94,slow=5.7,SNR=8.6						
YKA	Yellowknife Ar	96.60	27	P	P	01 30 42.3	-1.6
	0.1nm,0.5s,baz=272,slow=4.8,SNR=3.3						
ARCES	ARCESS Array B	119.09	346	PKP	PKPdf	01 36 01.4	-0.2
	2.4nm,0.9s,baz=79,slow=1.9,SNR=7.8						
FINES	FINESS Array B	124.59	338	PKP	PKPdf	01 36 12.4	+0.2
	1.0nm,0.8s,baz=81,slow=2.5,SNR=4.2						
GERES	GERESS Array B	138.54	333	PKP	PKPdf	01 36 39.7	+0.6
	0.2nm,0.5s,baz=74,slow=4.2,SNR=3.4						
KEST	Kesra	150.21	322	PKPbc	PKiKP	01 37 06.1	+0.5
	3.1nm,0.6s,baz=346,slow=0.9,SNR=6.5						
ESDC	Sonseca Array	152.83	345	PKPbc	PKPbc	01 37 10.0	-0.8
	0.1nm,0.3s,baz=45,slow=2.0,SNR=3.3						
TORD	Torodi Ar. Bea	165.79	270	PKP	PKPdf	01 37 18.3	-0.6
	0.6nm,0.9s,baz=135,slow=1.9,SNR=3.6						
TORD				PKPab	PKPab	01 38 20.5	+0.9
	0.5nm,0.8s,baz=87,slow=5.0,SNR=5.9						

IDC 16 01:17:37.7±1.5**, 30°.54S×60°.27E, h0**km**, mb3.8**/5**, mb1 3.9**/5**, mb1mx3.7**/43**, mbtmp3.8**/5**, Error ellipse: s-maj=71.5km s-min=26.4km az=28.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	64.87	104	P	P	01 28 18.9	-0.2
	0.9nm,0.7s,baz=240,slow=6.0,SNR=13						
WRA	Warramunga Arr	66.79	100	P	P	01 28 31.6	+0.2
	2.2nm,0.9s,baz=245,slow=5.4,SNR=10.0						
TORD	Torodi Ar. Bea	71.10	299	P	P	01 28 58.0	-0.2
	0.2nm,0.7s,baz=110,slow=6.1,SNR=3.0						
MKAR	Makanchi Array	79.50	15	P	P	01 29 46.5	+0.5
	0.5nm,0.9s,baz=198,slow=7.3,SNR=3.8						
ZALV	Zalesovo Beam	86.78	14	P	P	01 30 22.5	-0.9
	0.5nm,0.6s,baz=215,slow=4.6,SNR=2.8						
YKA	Yellowknife Ar	147.86	356	PKPbc	PKPbc	01 37 24.1	+0.1
	0.6nm,0.7s,baz=358,slow=2.9,SNR=12						

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*BJI **16** 01:20:19.4, 26°.93S×70°.90E, h10km, mB5.2/32, mb4.8/42, Ms5.0/21, Ms7 4.7/21*
*ISCJB **16** 01:20:24.9±0.3, 26°.31S±0°.05×71°.59E±0°.05, h10km, mb4.7/54, MS4.4/18, Error ellipse: s-maj=7.4km s-min=6.6km az=160.5*
*IDC **16** 01:20:24.9±0.5, 26°.26S×71°.51E, h0km, mb4.4/19, mb1 4.5/19, mb1mx4.3/46, mbtmp4.4/19, MS4.1/11, Ms1 4.2/11, ms1mx3.9/26, Error ellipse: s-maj=16.5km s-min=13.5km az=166.0*
*NEIC **16** 01:20:26.4±0.2, 26°.32S×71°.55E, h10km, mb5.0/34, Error ellipse: s-maj=6.0km s-min=4.8km az=185.0*
*GCMT **16** 01:20:28.4±0.3, 26°.06S±0°.02×71°.42E±0°.02, h15km±1km, MW5.0/88, Moment Tensor Solution. s35,c42; s88,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.57±.21; $M_{\theta\theta}$1.45±.14; $M_{\phi\phi}$2.12±.14; $M_{r\theta}$0.53±.26; $M_{\theta\phi}$-2.19±.09; $M_{\phi r}$2.37±.29; Best double couple: $M_0$4.49900×10^{16} NP1:ϕ_s163.00000°, δ60.00000°, λ-63.00000°. NP2: ϕ_s298.00000°, δ39.00000°, λ-128.00000°. Principal axes: T 4.2990, Plg12.0000°, Azm234.0000°; N 0.4010, Plg23.0000°, Azm329.0000°; P -4.7000, Plg64.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 01:20:26.5±0.4**, 26°.41S**±0°.08×**71°.44E**±0°.07**, h10**km**, n159, σ1ˢ54**/161**, mb4.9**/63**, MS4.5**/18**, 13C-8D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.69	3	T	T	01 43 48.0	
	baz=183,slow=76						
H08S2	Diego Garcia H	18.69	3	T	T	01 43 43.3	
	baz=183,slow=76						
H08S3	Diego Garcia H	18.70	3	T	T	01 43 55.7	
	baz=183,slow=76						
OPO	Ambohidratompo	23.70	284	P	P	01 25 39.6	+0.7
	14nm,0.9s,baz=107,slow=13,SNR=6.6						
OPO				LR	LR	01 32 34.1	
	comp=Z,808nm,19.4s,baz=117,slow=31						
PALK	Pallekele	34.66	16	eP	P	01 27 15.8	-0.6
	27nm,1.2s						
PALK	Pallekele	34.66	16	P	P	01 27 15.5	-1.0
	10nm,1.0s,baz=117,slow=1.3,SNR=4.9						
H01W2	Cape Leeuwin H	37.46	114	T	T	02 07 17.9	
	baz=272,slow=75,SNR=32						
H01W3	Cape Leeuwin H	37.46	114	T	T	02 07 24.7	
	baz=272,slow=75,SNR=40						
H01W1	Cape Leeuwin H	37.48	114	T	T	02 07 27.9	
	baz=272,slow=75,SNR=35						
PSI	Prapat	39.35	47	eP	P	01 27 56.3	-0.2
	11nm,1.1s						
MORW	Morawa	39.39	104	eP	P	01 27 56.2	-0.4
	18nm,1.3s						
NWAO	Narrogin (SRO)	40.07	111	eP	P	01 28 02.1	-0.1
BOSA	Boshof	40.83	256	eP	P	01 28 09.2	+0.6
BOSA				epP	P	01 28 09.6	+0.9
BOSA	Boshof	40.83	256	P	P	01 28 08.8	+0.1
	17nm,0.9s,baz=99,slow=7.4,SNR=15						
BOSA				LR	LR	01 41 41.5	
	comp=Z,654nm,19.2s,baz=96,slow=31						
LBTB	Lobatse	41.16	261	eP	P	01 28 12.1	+0.7
	88nm,2.0s						
LBTB	Lobatse	41.16	261	P	P	01 28 11.8	+0.3
	2.3nm,0.8s,baz=146,slow=6.3,SNR=5.4						
KMBO	Kilima Mbogo	41.38	302	eP	P	01 28 14.8	+1.4
	6.3nm,1.1s						
KMBO	Kilima Mbogo	41.38	302	P	P	01 28 14.5	+1.0
	0.9nm,0.7s,baz=74,slow=16,SNR=3.3						
MAW	Mawson	41.55	185	LR	LR	01 41 51.8	
	comp=Z,1μm,18.1s,baz=334,slow=31						
LSZ	Lusaka	41.74	277	eP	P	01 28 16.7	+0.4
	23nm,1.4s						
LSZ	Lusaka	41.74	277	P	P	01 28 15.8	-0.5
	3.9nm,0.7s,baz=114,slow=6.7,SNR=4.7						

KULM	**Kulim**	**42.35**	**46**	*e*P	**P**	**01 28 19.8**	**-1.3**
	15nm,1.1s						
HYB	**Hyderabad**	**44.11**	**10**	*i* P	**P**	**01 28 36.0**	**+0.8**
SUR	**Sutherland**	**44.19**	**250**	*e*P	**P**	**01 28 37.2**	**+1.2**
	28nm,0.8s						
SUR	**Sutherland**	**44.19**	**250**	P	**P**	**01 28 36.6**	**+0.5**
	16nm,0.8s,baz=93,slow=17,SNR=11						
ATD	**Arta Tunnel**	**46.85**	**320**	*e*P	**P**	**01 28 58.1**	**+1.0**
	20nm,1.1s						
SBUM	**Sibu**	**48.72**	**60**	*e*P	**P**	**01 29 11.2**	**-0.4**
	13nm,1.4s						
UTHA	**Uthaitani**	**49.81**	**36**	P	P	01 29 27.9	+8.1
TSUM	**Tsumeb**	**49.87**	**267**	*e*P	**P**	**01 29 21.4**	**+0.9**
	4.7nm,0.9s						
UMPA	**Umpang Tak**	**50.05**	**35**	P	P	01 29 29.0	+7.4
SUKH	**Sukhothai**	**51.51**	**35**	P	P	01 29 40.3	+7.7
CM01	**Chiang Mai Arr**	**51.96**	**34**	*e*P	**P**	**01 29 34.8**	**-1.2**
CMAR	**Chiang Mai Arr**	**51.98**	**34**	P	**P**	**01 29 35.9**	**-0.2**
	3.2nm,0.5s,baz=221,slow=7.5,SNR=25						
CMAR				LR	LR	01 49 35.3	
	comp=Z,215nm,18.4s,baz=202,slow=34						
UTTA	**Uttaradit**	**52.21**	**36**	P	**P**	**01 29 38.4**	**+0.6**
CHTO	**Chiang Mai**	**52.29**	**34**	*e*P	**P**	**01 29 37.0**	**-1.4**
	17nm,1.1s						
CHTO	**Chiang Mai**	**52.29**	**34**	P	**P**	**01 29 38.5**	**+0.1**
CMMT	**Chiang Mai**	**52.29**	**34**	P	**P**	**01 29 38.4**	**0.0**
RAMN	**Ramite**	**55.02**	**17**	*e*P	**P**	**01 29 58.5**	**-0.1**
	70nm,1.2s						
KOLN	**Koldanda**	**55.12**	**13**	*e*P	**P**	**01 29 58.7**	**-0.6**
	80nm,1.2s						
DMN	**Daman**	**55.29**	**15**	*e*P	**P**	**01 30 00.0**	**-0.6**
	58nm,1.0s						
PYUN	**Piuthan**	**55.32**	**12**	*e*P	**P**	**01 30 00.1**	**-0.6**
	116nm,1.3s						
PKI	**Pulchoki**	**55.32**	**15**	*e*P	**P**	**01 30 00.1**	**-0.8**
	50nm,1.2s						
PKIN	**Phulchoki**	**55.33**	**15**	*e*P	**P**	**01 29 59.9**	**-0.9**
	28nm,1.1s						
JIRN	**Jiri**	**55.60**	**16**	*e*P	**P**	**01 30 02.3**	**-0.6**
	101nm,1.2s						
DANN	**Dangsing**	**55.72**	**13**	*e*P	**P**	**01 30 02.8**	**-0.8**
	93nm,1.0s						
GUN	**Gumba**	**55.76**	**15**	*e*P	**P**	**01 30 03.7**	**-0.3**
	247nm,1.5s						
BBOO	**Buckleboo**	**55.78**	**113**	*e*P	**P**	**01 30 03.8**	**-0.1**
	24nm,1.4s						
ASAR	**Alice Springs**	**56.17**	**102**	P	**P**	**01 30 06.8**	**-0.1**
	4.2nm,1.0s,baz=250,slow=6.6,SNR=22						
AS31	**Alice Springs**	**56.17**	**102**	*e*P	**P**	**01 30 05.3**	**-1.6**
	1.6nm,1.0s						
AS01	**Alice Springs**	**56.21**	**102**	*e*P	**P**	**01 30 05.9**	**-1.2**
WRA	**Warramunga Arr**	**57.70**	**98**	P	**P**	**01 30 17.4**	**-0.3**
	11nm,1.1s,baz=253,slow=7.1,SNR=30						
WB2	**Warramunga Arr**	**57.71**	**98**	*e*P	**P**	**01 30 16.9**	**-0.9**
WRAB	**Tennant Creek**	**57.71**	**98**	*e*P	**P**	**01 30 16.8**	**-1.0**
	7.1nm,0.9s						
QIZ	**Qiongzhong**	**58.56**	**44**	P	**P**	**01 30 25.1**	**+1.5**
QIZ				S	**S**	**01 38 31.9**	**+4.2**
QIZ				LR	LR		
	comp=N,360nm,20.6s						
QIZ				LR	LR		
	comp=E,230nm,22.4s						
QIZ				LR	LR		
	comp=Z,390nm,25.0s						
LSA	**Lhasa**	**58.90**	**20**	*e*P	**P**	**01 30 25.4**	**-0.9**
	16nm,1.2s						
KMI	**Kunming**	**59.48**	**33**	P	**P**	**01 30 30.8**	**+0.7**
KMI				pP	pwP	01 30 36.4	-0.2
KMI				sP	sP	01 30 37.5	+4.4
KMI				S	**S**	**01 38 44.1**	**+4.3**
KMI				SS	**SS**	**01 42 45.3**	**+10**
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
KMI				pmax	pmax		
	comp=Z,210nm,4.9s						
KMI				LR	LR		
	comp=N,340nm,23.1s						
KMI				LR	LR		
	comp=E,280nm,24.5s						
KMI				LR	LR		
	comp=Z,500nm,23.3s						
KMI	**Kunming**	**59.48**	**33**	*e*P	**P**	**01 30 29.8**	**-0.4**
	28nm,1.3s						
SNAA	**Sanae**	**60.23**	**201**	P	**P**	**01 30 36.0**	**+1.4**
SNAA	**Sanae**	**60.23**	**201**	*e*P	**P**	**01 30 35.6**	**+1.0**
	8.3nm,0.8s						
SNAA	**Sanae**	**60.23**	**201**	P	**P**	**01 30 35.8**	**+1.3**
	4.1nm,0.7s,baz=107,slow=8.0,SNR=14						
STKA	**Stephens Creek**	**60.56**	**113**	*e*P	**P**	**01 30 37.2**	**-0.1**
	3.4nm,1.4s						
STKA	**Stephens Creek**	**60.56**	**113**	P	**P**	**01 30 37.6**	**+0.3**
	1.0nm,0.3s,baz=293,slow=7.0,SNR=5.9						
KBL	**Kabul**	**60.66**	**358**	*e*P	**P**	**01 30 37.1**	**-1.0**
	25nm,1.1s						
VNA2	**Neumayer--Watz**	**61.65**	**202**	P	**P**	**01 30 46.3**	**+2.1**
	baz=74,slow=6.6						
VNA1	**Neumayer--Stat**	**61.93**	**202**	P	**P**	**01 30 47.9**	**+1.9**
VNA3	**Neumayer Olymp**	**62.39**	**201**	P	**P**	**01 30 51.3**	**+2.1**
GYA	**Guiyang**	**62.56**	**36**	⇑*i*P	**P**	**01 30 51.0**	**0.0**
GYA				PP	**PP**	**01 33 14.3**	**+5.4**
GYA				S	**S**	**01 39 20.6**	**+1.6**
GYA				SKS	**ScS**	**01 40 43.8**	**0.0**
GYA				SS	**SS**	**01 43 26.4**	**+2.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.6s						
GYA				LR	LR		
	comp=N,530nm,18.9s						
GYA				LR	LR		
	comp=E,550nm,19.0s						
GYA				LR	LR		
	comp=Z,510nm,18.6s						
QSPA	**South Pole Qui**	**63.73**	**180**	P	**P**	**01 30 59.0**	**+0.8**
	5.2nm,0.9s,baz=297,slow=3.5,SNR=9.3						
VNDA	**Vanda**	**64.51**	**166**	LR	LR	01 56 38.4	
	comp=Z,183nm,18.5s,baz=226,slow=34						
CHGR	**Chuyangaron**	**64.76**	**358**	*e*P	**P**	**01 31 04.6**	**-0.6**
	23nm,1.2s						
CD2	**Chengdu**	**64.83**	**31**	P	**P**	**01 31 04.3**	**-1.4**
CD2				pP	pwP	01 31 14.4	+2.1
CD2				sP	sP	01 31 18.5	+10
CD2				S	**S**	**01 39 44.5**	**-2.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=E,620nm,13.7s						
CD2				LR	LR		
	comp=Z,560nm,14.2s						
GAR	**Garm**	**65.08**	**359**	*e*P	**P**	**01 31 06.2**	**-1.1**
	20nm,1.3s						
KSH	**Kashi**	**65.72**	**4**	P	**P**	**01 31 08.3**	**-3.1**
KSH				pP	sP	01 31 15.0	+0.6
KSH				S	S	01 39 47.9	-10
KSH				sS	sS	01 40 06.1	+4.9
KSH				SS	**SS**	**01 44 09.6**	**-3.0**
KSH				pmax	pmax		
	comp=Z,37nm,1.4s						
KSH				pmax	pmax		
	comp=Z,410nm,4.1s						
KSH				LR	LR		
	comp=N,160nm,6.3s						
KSH				LR	LR		
	comp=E,150nm,4.6s						
KSH				LR	LR		
	comp=Z,430nm,5.6s						
BTK	**Batken**	**66.13**	**359**	*e*P	**P**	**01 31 13.8**	**-0.2**
	15nm,1.1s						
ENH	**Enshi**	**67.10**	**35**	*e*P	**P**	**01 31 19.8**	**-0.5**
ARSB	**Arslanbob**	**67.40**	**1**	*e*P	**P**	**01 31 21.4**	**-0.8**
	22nm,1.1s						
NRN	**Naryn**	**67.63**	**4**	*e*P	**P**	**01 31 22.7**	**-1.1**
	16nm,1.0s						
CTAO	**Charters Tower**	**68.17**	**102**	*e*P	**P**	**01 31 27.6**	**+0.2**
AAK	**Ala-Archa**	**68.76**	**2**	*e*P	**P**	**01 31 29.8**	**-0.9**
	13nm,1.2s						
KK31	**Karatay Array**	**69.17**	**359**	*e*P	**P**	**01 31 32.5**	**-0.6**
KKAR	**Karatay Array**	**69.17**	**359**	*e*P	**P**	**01 31 32.5**	**-0.6**
LZH	**Lanzhou**	**69.27**	**28**	*e*P	**P**	**01 31 33.8**	**-0.2**
LZH				pP	sP	01 31 36.8	-0.2
LZH				sP	pwP	01 31 38.5	-2.1
LZH				PP	**PP**	**01 34 07.8**	**+0.3**
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,8.7s						
LZH				LR	LR		
	comp=N,400nm,15.2s						
LZH				LR	LR		
	comp=E,560nm,16.3s						
LZH				LR	LR		
	comp=Z,690nm,18.1s						
NACB	**Ninganchiao**	**69.83**	**48**	*e*P	**P**	**01 31 35.6**	**-1.9**
	112nm,1.8s						
XAN	**Xi'an**	**69.85**	**33**	P	**P**	**01 31 36.3**	**-1.2**
XAN				pP	pwP	01 31 43.0	-1.0
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
XAN				pmax	pmax		
	comp=Z,130nm,6.3s						
XAN	**Xi'an**	**69.85**	**33**	*e*P	**P**	**01 31 36.0**	**-1.5**
	15nm,1.1s						
WHN	**Wuhan**	**69.94**	**39**	⇑P	**P**	**01 31 38.3**	**+0.3**
GTA	**Gaotai**	**70.63**	**23**	⇓P	**P**	**01 31 41.5**	**-0.8**
GTA				pP	sP	01 31 46.3	+1.0
GTA				sP	pwP	01 31 48.8	-0.1
GTA				S	**S**	**01 40 56.0**	**-0.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,210nm,7.9s						
GTA				LR	LR		
	comp=N,280nm,20.0s						
GTA				LR	LR		
	comp=E,260nm,19.7s						
GTA				LR	LR		
	comp=Z,290nm,19.0s						
WMQ	**Urumqi**	**71.46**	**12**	P	**P**	**01 31 47.0**	**-0.1**
WMQ				pP	pwP	01 31 53.8	+0.1
WMQ				S	**S**	**01 41 06.6**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,36nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,490nm,6.9s						
WMQ				LR	LR		
	comp=N,700nm,15.1s						
WMQ				LR	LR		
	comp=E,390nm,15.1s						
WMQ				LR	LR		
	comp=Z,580nm,23.1s						
WMQ	**Urumqi**	**71.46**	**12**	*e*P	**P**	**01 31 46.4**	**-0.8**
	22nm,1.1s						
MAKZ	**Makanchi**	**73.49**	**8**	*e*P	**P**	**01 31 58.2**	**-0.9**
	13nm,1.4s						
MK01	**Makanchi Array**	**73.49**	**8**	*e*P	**P**	**01 31 57.8**	**-1.4**
MK31	**Makanchi Array**	**73.52**	**8**	*e*P	**P**	**01 31 58.0**	**-1.3**
MKAR	**Makanchi Array**	**73.52**	**8**	P	**P**	**01 31 57.7**	**-1.5**
	6.2nm,0.8s,baz=196,slow=6.1,SNR=52						
NJ2	**Nanjing**	**73.63**	**41**	*e*P	**P**	**01 32 00.8**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BRTR	**Keskin Array B**	**74.64**	**331**	P	**P**	**01 32 05.6**	**-0.6**
	1.2nm,0.8s,baz=145,slow=8.8,SNR=6.0						
BRTR				LR	LR	02 02 06.7	
	comp=Z,56nm,20.5s,baz=104,slow=34						
KIV	**Kislovodsk**	**74.82**	**339**	*e*P	**P**	**01 32 06.4**	**-0.6**
	27nm,1.4s						
KIV	**Kislovodsk**	**74.82**	**339**	⇓*i*P	**P**	**01 32 03.0**	**-4.0**
HHC	**Hu-ho-hao-te**	**76.58**	**30**	*e*P	**P**	**01 32 18.9**	**+1.7**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,280nm,5.1s						
KURK	**Kurchatov**	**77.04**	**5**	*e*P	**P**	**01 32 19.2**	**-0.2**
TOA0	**Torodi Ar. Sit**	**78.32**	**291**	*e*P	**P**	**01 32 26.9**	**-0.5**
TORD	**Torodi Ar. Bea**	**78.32**	**291**	P	**P**	**01 32 27.3**	**-0.1**
	1.5nm,1.1s,baz=154,slow=4.3,SNR=5.4						
TORD				LR	LR	02 06 25.0	
	comp=Z,103nm,19.0s,baz=15,slow=35						
BRVK	**Borovoye**	**79.13**	**359**	*e*P	**P**	**01 32 30.5**	**-0.5**
SONM	**Songino Array**	**80.31**	**23**	P	**P**	**01 32 36.6**	**-1.0**
	6.4nm,1.1s,baz=214,slow=4.3,SNR=26						
SONA1	**Songino Array**	**80.32**	**23**	*e*P	**P**	**01 32 37.1**	**-0.7**
ULN	**Ulaanbaatar**	**80.57**	**23**	*e*P	**P**	**01 32 37.9**	**-1.2**
	16nm,1.2s						
DBIC	**Dimbokro**	**80.80**	**282**	LR	LR	02 06 42.6	
	comp=Z,254nm,19.1s,baz=106,slow=34						
ZALV	**Zalesovo Beam**	**80.86**	**8**	P	**P**	**01 32 38.8**	**-1.5**
	5.5nm,0.9s,baz=190,slow=7.4,SNR=16						
CFR	**Carcaliu**	**81.44**	**331**	⇑*i*P	**P**	**01 32 41.5**	**-2.1**
SGRR	**Singureni**	**81.68**	**329**	⇑*i*P	**P**	**01 32 44.9**	**0.0**
VTS	**Vitosha**	**81.79**	**326**	⇑*i*P	**P**	**01 32 48.8**	**+3.1**
VRI	**Vrincioaia**	**82.60**	**330**	⇑*i*P	**P**	**01 32 50.5**	**+0.8**
PLOR	**Plostina**	**82.62**	**330**	⇓*i*P	**P**	**01 32 49.8**	**0.0**
MLR	**Muntele Rosu**	**82.66**	**330**	*e*P	**P**	**01 32 49.8**	**-0.3**
	21nm,1.1s						
MLR	**Muntele Rosu**	**82.66**	**330**	⇓*i*P	**P**	**01 32 47.0**	**-3.2**
KS01	**Wonju Array Si**	**82.74**	**42**	*e*P	**P**	**01 32 49.5**	**-1.1**
VOIR		**83.03**	**329**	⇓*i*P	**P**	**01 32 50.8**	**-1.2**
ARR	**Arges**	**83.17**	**329**	⇑*i*P	**P**	**01 32 52.2**	**-0.5**
ARU	**Arti**	**83.23**	**353**	*e*P	**P**	**01 32 51.3**	**-1.4**
	7.7nm,1.0s						
DOPR	**Dopca**	**83.28**	**330**	⇑*i*P	P	01 33 00.3	+7.1
GZR	**Gura Zlata**	**84.06**	**328**	⇑*i*P	**P**	**01 32 58.8**	**+1.5**
MDVR	**Moldovita**	**84.13**	**327**	⇓*i*P	P	01 33 05.3	+7.6
ARCR	**ARCALIA**	**84.59**	**330**	⇑*i*P	**P**	**01 33 01.0**	**+1.1**
BURAR	**Bucovina Array**	**84.61**	**331**	⇑*i*P	**P**	**01 33 03.3**	**+3.2**
BZS	**Buzias**	**84.78**	**327**	⇓*i*P	**P**	**01 33 00.9**	**0.0**
DRGR		**85.12**	**329**	⇑*i*P	**P**	**01 33 03.2**	**+0.5**
KEST	**Kesra**	**85.17**	**314**	LR	LR	02 09 51.0	
	comp=Z,107nm,19.7s,baz=282,slow=35						
AKASG	**Malin Array Be**	**85.36**	**335**	P	**P**	**01 33 03.0**	**-0.6**
AKASG	**Malin Array Be**	**85.36**	**335**	P	**P**	**01 33 03.0**	**-0.6**
	0.8nm,0.5s,baz=136,slow=4.3,SNR=3.2						
KIEV	**Kiev**	**85.36**	**335**	*e*P	**P**	**01 33 05.0**	**+1.5**
	3.4nm,0.7s						
KIEV	**Kiev**	**85.36**	**335**	⇓*i*P	**P**	**01 33 05.1**	**+1.5**
TRPA	**Tarpa**	**86.19**	**330**	⇑*i*P	**P**	**01 33 07.9**	**+0.1**
OBN	**Obninsk**	**86.52**	**341**	LR	LR	02 10 19.6	
	comp=Z,17nm,18.3s,baz=166,slow=35						
VYHS	**Vyhne**	**88.17**	**328**	*e*P	**P**	**01 33 17.5**	**+0.1**
VYHS				*e*sP	**pwP**	**01 33 24.7**	**+0.5**
CLL	**Collm**	**92.85**	**328**	*e*P	**P**	**01 33 40.0**	**+0.8**
CLL				*e*(PP)		01 37 26.0	
NOA	**NORSAR Array B**	**99.77**	**335**	LR	LR	02 21 33.8	
	comp=Z,17nm,18.1s,baz=35,slow=37						
YKA	**Yellowknife Ar**	**143.69**	**5**	PKhKP	PKPpre	01 39 57.2	
	0.7nm,0.8s,baz=338,slow=3.3,SNR=6.6						
FCC	**Fort Churchill**	**146.11**	**346**	*e*PKPdf	**PKPdf**	**01 40 05.0**	**-0.4**
FFC	**Flin Flon**	**151.30**	**352**	*e*PKPbc	**PKPbc**	**01 40 19.5**	**-0.5**
FFC				*e*PKPab	**PKPab**	**01 40 26.7**	**-1.2**
R58B	**Mineral**	**151.72**	**302**	*e*PKPab	**PKPab**	**01 40 28.9**	**-1.4**
LLLB	**Lillooet**	**153.76**	**19**	*e*PKPab	**PKPab**	**01 40 39.0**	**+0.5**
B08A	**Colville Reser**	**156.52**	**18**	*e*PKPab	**PKPab**	**01 40 50.1**	**-0.2**
C09A	**Chrisman Ranch**	**157.32**	**17**	*e*PKPab	**PKPab**	**01 40 53.6**	**-0.1**
E08A	**Dider Farm, El**	**158.29**	**20**	*e*PKPab	**PKPab**	**01 40 57.7**	**-0.2**
E09A	**Wood Farm, Sta**	**158.53**	**18**	*e*PKPab	**PKPab**	**01 40 59.0**	**0.0**
F10A	**Beach Ranch, E**	**159.28**	**17**	*e*PKPab	**PKPab**	**01 41 02.3**	**-0.1**
PINE	**Pine Mountain**	**159.95**	**27**	*e*PKPdf	**PKPdf**	**01 40 25.6**	**-0.6**
PINE				*e*PKPab	**PKPab**	**01 41 04.5**	**-1.1**
BMO	**Blue Mountains**	**160.29**	**19**	*e*PKPab	**PKPab**	**01 41 05.9**	**-0.9**
ORV	**Oroville**	**163.00**	**36**	*e*PKPab	**PKPab**	**01 41 18.8**	**+0.1**
BEKR	**Beckworth**	**163.35**	**33**	*e*PKPdf	**PKPdf**	**01 40 29.8**	**0.0**
BEKR				*e*PKPab	**PKPab**	**01 41 20.5**	**0.0**
ELK	**Elko**	**164.66**	**20**	*e*PKPab	**PKPab**	**01 41 26.2**	**-0.1**
NV01	**Mina Array Sit**	**165.47**	**32**	*e*PKPdf	**PKPdf**	**01 40 31.1**	**-0.7**
NV01				*e*PKPab	**PKPab**	**01 41 29.7**	**-0.2**
NVAR	**Mina Array Bea**	**165.47**	**32**	PKPab	**PKPab**	**01 41 27.6**	**-2.4**
	0.4nm,0.7s,baz=303,slow=4.0,SNR=4.5						
DUG	**Dugway, Tooele**	**165.80**	**13**	*e*PKPdf	**PKPdf**	**01 40 30.3**	**-1.6**
DUG				*e*PKPab	**PKPab**	**01 41 29.2**	**-1.9**
R11A	**Troy Canyon, C**	**166.70**	**25**	*e*PKPdf	**PKPdf**	**01 40 30.7**	**-2.0**
R11A				*e*PKPab	**PKPab**	**01 41 34.8**	**-0.5**
WMOK	**Wichita Mounta**	**168.18**	**317**	*e*PKPab	**PKPab**	**01 41 43.8**	**+2.0**
SZCU	**Shurtz Canyon**	**168.20**	**18**	*e*PKPab	**PKPab**	**01 41 42.0**	**+0.1**
KNB	**Kanab**	**168.82**	**18**	*e*PKPab	**PKPab**	**01 41 43.8**	**-0.8**
WUAZ	**Wupatki**	**170.60**	**14**	*e*PKPab	**PKPab**	**01 41 52.2**	**-0.3**
Y14A	**Wickenburg**	**171.57**	**26**	*e*PKPdf	**PKPdf**	**01 40 36.5**	**+0.8**

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*NIED **16** 01:30:00, 38°.20N×141°.80E, h59^{km}, Mw4.2 Best double couple: $M_0$2.64000×10^{15} NP1:ϕ_s33.00000°, δ51.00000°, λ132.00000°. NP2:ϕ_s157.00000°, δ55.00000°, λ50.00000°.*

*ISCJB **16** 01:30:05.8±0.3, 38°.25N±0°.02×141°.90E±0°.03, h64^{km}±2^{km}, mb4.5/104, Error ellipse: s-maj=5.0km s-min=3.6km az=35.3*

*MOS **16** 01:30:05.6±0.9, 38°.48N×141°.86E, h52^{km}, mb4.8/47, Error ellipse: s-maj=7.1km s-min=4.7km az=94.6*

*NEIC **16** 01:30:07.5±0.4, 38°.27N×141°.86E, h66^{km}±3^{km}, mb4.5/56, Error ellipse: s-maj=4.2km s-min=3.1km az=140.0*

NEIC Felt at Ichinoseki, Ishinomaki, Koriyama and Sendai. Recorded [3 JMA] in Miyagi.

*JMA **16** 01:30:07.1, 38°.25N×141°.85E, h58^{km}±1^{km}, M4.3 Broadband fault plane solution: P waves. NP1: ϕ_s142.00000°, δ77.00000°, λ40.00000°. NP2:ϕ_s41.00000°, δ51.00000°, λ164.00000°. Principal axes: T Plg37.0000°, Azm9.0000°; N Plg48.0000°, Azm156.0000°; P Plg17.0000°, Azm266.0000°;*

JMA Felt III J1.

*IDC **16** 01:30:07.3±0.4, 38°.21N×141°.87E, h66^{km}±3^{km}, mb4.2/28, mb1 4.3/36, mb1mx4.2/51, mbtmp4.5/36 Error ellipse: s-maj=11.6km s-min=9.4km az=121.0*

ISC 16 01:30:07.1±0.4**, 38°.27N**±0°.04×**141°.94E**±0°.04**, h62**^{km}±3^{km}**, h62**^{km}**:pP-P, n307,** σ1^s**40**/354**, mb4.5**/117**, 19C-20D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.38**	**277**	P	**Pn**	**01 30 17.2**	**-0.8**
JIKH				S	**Sn**	**01 30 24.3**	**-1.7**
JIO	**Ouri**	**0.50**	**292**	⇓P	**Pn**	**01 30 18.4**	**-0.8**
JIO				S	**Sn**	**01 30 26.4**	**-1.6**
JKMT	**Kesennumamotoy**	**0.66**	**326**	P	**Pn**	**01 30 20.6**	**-0.3**
JKMT				S	**Sn**	**01 30 30.0**	**-1.0**
OFUJ	**Ofunato**	**0.84**	**345**	⇑P	**Pn**	**01 30 23.0**	**-0.2**
OFUJ				S	**Sn**	**01 30 34.5**	**-0.5**
JOFO	**Osakifurukawao**	**0.88**	**293**	P	**Pn**	**01 30 23.0**	**-0.6**
JOFO				*e*S	**Sn**	**01 30 34.3**	**-1.5**
JMK	**Ichinoseki**	**0.89**	**321**	⇓P	**Pn**	**01 30 23.5**	**-0.2**
JMK				S	**Sn**	**01 30 35.3**	**-0.7**
JMM	**Marumori**	**0.99**	**247**	⇓P	**Pn**	**01 30 23.7**	**-1.4**
JMM				S	**Sn**	**01 30 35.9**	**-2.5**
JOU	**Okura**	**1.01**	**276**	⇓P	**Pn**	**01 30 24.5**	**-0.8**
JOU				S	**Sn**	**01 30 37.3**	**-1.6**
JFK	**Kawauchi**	**1.23**	**224**	⇑P	**Pn**	**01 30 27.2**	**-1.1**
JFK				S	**Sn**	**01 30 42.1**	**-2.0**
JOM	**Ohasama**	**1.31**	**337**	⇑P	**Pn**	**01 30 29.2**	**0.0**
JOM				S	**Sn**	**01 30 45.8**	**0.0**
JYK	**Kaneyama**	**1.40**	**298**	⇓P	**Pn**	**01 30 30.0**	**-0.5**
JYK				S	**Sn**	**01 30 47.0**	**-1.0**
JFT	**Otama**	**1.47**	**240**	⇓P	**Pn**	**01 30 31.0**	**-0.5**
JFT				S	**Sn**	**01 30 48.3**	**-1.5**
JYS	**Shirataka**	**1.48**	**269**	⇓P	**Pn**	**01 30 30.9**	**-0.6**
JYS				*e*S	**Sn**	**01 30 49.0**	**-0.9**
JRG	**Rokugo**	**1.52**	**318**	P	**Pn**	**01 30 32.0**	**-0.1**
JRG				S	**Sn**	**01 30 51.7**	**+0.8**
JYA	**Atsumi**	**1.78**	**281**	⇓P	**Pn**	**01 30 35.1**	**-0.5**
JYA				*e*S	**Sn**	**01 30 56.5**	**-0.7**
MJA0	**Matsu Arr-Jizo**	**3.41**	**241**	*e*P	**Pn**	**01 30 58.9**	**+1.1**
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR	**Matsushiro Arr**	**3.44**	**241**	P	**Pn**	**01 30 58.5**	**+0.4**
	comp=Z,3.7nm,0.3s,baz=55,slow=10,SNR=82						
MJAR				S	**Sn**	**01 31 37.5**	**-0.2**
	comp=Z,2.3nm,0.3s,baz=204,slow=29,SNR=5.1						
MAJO	**Matsushiro**	**3.44**	**241**	*e*Pn	**Pn**	**01 30 58.5**	**+0.3**
MAJO	**Matsushiro**	**3.44**	**241**	*i* P	**Pn**	**01 30 58.9**	**+0.7**
MAT	**Matsushiro**	**3.44**	**241**	P	**Pn**	**01 30 59.0**	**+0.8**
MAT				*e*S	**Sn**	**01 31 41.6**	**+3.9**
MJB9	**Matsu-Tunnel**	**3.44**	**241**	*e*Pn	**Pn**	**01 30 58.5**	**+0.3**
ERM	**Erimo**	**3.86**	**14**	*e*Pn	**Pn**	**01 31 02.8**	**-1.1**
ERM				*e*Sn	**Sn**	**01 31 43.2**	**-4.7**
ERM	**Erimo**	**3.86**	**14**	*e*P	**Pn**	**01 31 02.8**	**-1.1**
ERM				*e*		01 31 43.2	
INU	**Inuyama**	**4.91**	**235**	*e*Pn	**Pn**	**01 31 18.3**	**0.0**
JHJ2	**Mitsune**	**5.43**	**199**	*e*Pn	**Pn**	**01 31 25.1**	**-0.3**
JHJ2				*e*Sn	**Sn**	**01 32 21.5**	**-5.0**
JHJ	**Hachijo jima 2**	**5.43**	**200**	P	**Pn**	**01 31 24.5**	**-0.9**
	comp=Z,54nm,0.3s,baz=262,slow=24,SNR=5.0						
JHJ				S	**Sn**	**01 32 20.9**	**-5.6**
	comp=Z,103nm,0.3s,baz=54,slow=24,SNR=8.3						
ASAJ	**Asahikawa**	**5.87**	**5**	P	**Pn**	**01 31 30.4**	**-0.9**
	comp=Z,9.8nm,0.3s,baz=212,slow=9.6,SNR=35						
ASAJ				S	**Sn**	**01 32 32.8**	**-4.4**
	comp=Z,2.7nm,0.3s,baz=107,slow=20,SNR=2.7						
YUK	**Yuzh-Kuril'sk**	**6.48**	**26**	*e*P	**Pn**	**01 31 37.1**	**-2.6**
YUK				*e*S	**Sn**	**01 32 46.0**	**-6.1**
YUK				pmax	pmax		
	comp=Z,180nm,0.4s						
YUK				pmax	pmax		
	comp=N,86nm,0.3s						
YUK				pmax	pmax		
	comp=E,74nm,0.3s						
YUK				smax	smax		
	comp=N,529nm,0.4s						
YUK				smax	smax		
	comp=E,621nm,0.4s						
SHO	**Shikotan**	**6.71**	**32**	*e*P	**Pn**	**01 31 40.1**	**-2.7**
SHO				*e*S	**Sn**	**01 32 50.6**	**-7.1**
SHO				pmax	pmax		
	comp=Z,26nm,0.5s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.4s						
SHO				pmax	pmax		
	comp=E,23nm,0.4s						
KUR	**Kuril'sk**	**8.25**	**31**	*e*P	**Pn**	**01 32 02.8**	**-1.1**
KUR				*i* S	**Sn**	**01 33 31.1**	**-4.4**
KUR				pmax	pmax		
	comp=Z,50nm,0.5s						
KUR				smax	smax		
	comp=E,233nm,0.4s						
KUR				smax	smax		
	comp=N,94nm,0.2s						
YSS	**Yuzh-Sakhalins**	**8.70**	**4**	*e*P	**Pn**	**01 32 08.3**	**-1.8**
YSS				*e*S	**Sn**	**01 33 42.9**	**-3.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USA0B	**Ussuriysk Arra**	**9.55**	**311**	*e*Pn	**Pn**	**01 32 21.2**	**-0.6**
USRK	**Ussuriysk Ar.**	**9.55**	**311**	P	**Pn**	**01 32 22.4**	**+0.6**
	comp=Z,4.4nm,0.3s,baz=126,slow=14,SNR=75						
JNU	**Nakatsue**	**10.36**	**244**	P	**Pn**	**01 32 32.4**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=53,slow=6.8,SNR=5.3						
KSRS	**Korea Array**	**11.12**	**270**	*e*P	**Pn**	**01 32 45.8**	**+2.7**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**11.12**	**270**	P	**Pn**	**01 32 44.9**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=80,slow=14,SNR=11						
KSAR	**Wonju Array Be**	**11.15**	**270**	P	**Pn**	**01 32 44.9**	**+1.3**
KSAR	**Wonju Array Be**	**11.15**	**270**	P	**Pn**	**01 32 44.9**	**+1.3**
MDJ	**Mudanjiang**	**11.22**	**308**	P	**Pn**	**01 32 49.4**	**+4.8**
MDJ				pP		01 32 57.0	
MDJ				PP	**PnPn**	**01 32 57.3**	**+4.7**
MDJ				sP		01 33 02.3	
MDJ				S	**Sn**	**01 34 48.3**	**-0.1**
MDJ				sS		01 34 57.6	
MDJ				SS	**SnSn**	**01 34 59.3**	**-1.5**
MDJ				PcP	PcP	01 38 52.9	+17
MDJ				ScP	ScP	01 42 22.4	+20
MDJ				PcS	PcS	01 42 26.6	+17
MDJ	**Mudanjiang**	**11.22**	**308**	ScS	ScS	01 45 57.4	+19
MDJ				pmax	pmax		
	comp=Z,14nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.7s						
MDJ				LR	LR		
	comp=N,460nm,18.3s						
MDJ				LR	LR		
	comp=E,470nm,21.9s						
MDJ				LR	LR		
	comp=Z,600nm,21.9s						
TYV	**Tymovskoe**	**12.60**	**2**	*e*P	**Pn**	**01 32 59.9**	**-3.5**
TYV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KLR	**Kul'dur**	**13.19**	**329**	*i* P	**Pn**	**01 33 09.5**	**-1.9**
KLR	**Kul'dur**	**13.19**	**329**	P	**Pn**	**01 33 10.4**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=161,slow=12,SNR=5.9						
PETK	**Petropavlovsk-**	**18.41**	**31**	P	**Pn**	**01 34 18.6**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=222,slow=11,SNR=4.1						
ZEA	**Zeya**	**18.48**	**332**	*e*P	**P**	**01 34 17.2**	**-0.5**
SSE	**Sheshan**	**18.49**	**253**	*e*P	**P**	**01 34 16.4**	**-1.7**
	comp=Z,38nm,0.9s						
NJ2	**Nanjing**	**19.84**	**259**	*e*P	**P**	**01 34 33.0**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MA2	**Magadan**	**22.06**	**12**	*e*P	**P**	**01 34 55.7**	**-0.8**
	comp=Z,15nm,0.6s						
MA2	**Magadan**	**22.06**	**12**	P	**P**	**01 34 56.8**	**+0.3**
	comp=Z,15nm,0.7s,baz=205,slow=9.9,SNR=16						
HHC	**Hu-ho-hao-te**	**23.51**	**286**	*e*P	**P**	**01 35 10.1**	**-1.5**

HHC				PP	PnPn	01 35 43.8	+3.0
HHC				S	S	01 39 15.3	-5.4
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.0s						
HHC				LR	LR		
	comp=N,180nm,8.6s						
HHC				LR	LR		
	comp=E,230nm,5.1s						
HHC				LR	LR		
	comp=Z,390nm,10.4s						
SEY	Seymchan	25.50	11	i P	P	01 35 30.2	+0.9
SEY	Seymchan	25.50	11	P	P	01 35 30.5	+1.2
	comp=Z,12nm,0.9s,baz=198,slow=7.0,SNR=34						
BOD	Bodaibo	26.73	326	eP	P	01 35 39.0	-1.4
BOD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN	Xi'an	26.91	271	P	P	01 35 41.4	-1.0
XAN				pP	pP	01 35 49.4	-8.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,230nm,6.2s						
XAN	Xi'an	26.91	271	eP	P	01 35 41.7	-0.7
	comp=Z,5.4nm,0.8s						
XAN	Xi'an	26.91	271	eP	P	01 35 41.7	-0.7
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULN	Ulaanbaatar	27.03	302	eP	P	01 35 43.1	-0.4
	comp=Z,1.7nm,0.8s						
ULN	Ulaanbaatar	27.03	302	eP	P	01 35 43.1	-0.4
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONA1	Songino Array	27.46	302	eP	P	01 35 46.2	-1.1
SONM	Songino Array	27.47	302	eP	P	01 35 48.6	+1.2
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	27.47	302	P	P	01 35 46.2	-1.1
	comp=Z,1.0nm,0.5s,baz=105,slow=9.8,SNR=6.8						
ENH	Enshi	27.88	263	eP	P	01 35 49.0	-2.0
H11N2	WAKE ISLAND Hy	28.45	123	T	T	02 06 13.5	
	baz=316,slow=75,SNR=477						
H11N1	WAKE ISLAND Hy	28.46	123	T	T	02 06 21.1	
	baz=316,slow=75,SNR=559						
H11N3	WAKE ISLAND Hy	28.46	123	T	T	02 06 14.9	
	baz=316,slow=75,SNR=364						
H11S1	WAKE ISLAND Hy	29.20	125	T	T	02 07 13.3	
	baz=317,slow=76,SNR=328						
H11S3	WAKE ISLAND Hy	29.21	126	T	T	02 07 13.4	
	baz=317,slow=76,SNR=290						
H11S2	WAKE ISLAND Hy	29.22	125	T	T	02 07 13.6	
	baz=317,slow=76,SNR=192						
TLY	Talaya	29.86	309	eP	P	01 36 08.2	-0.2
	comp=Z,5.2nm,0.7s						
TLY	Talaya	29.86	309	i P	P	01 36 09.1	+0.7
LZH	Lanzhou	30.29	278	eP	P	01 36 14.5	+1.9
LZH				pP	pP	01 36 25.1	-2.7
LZH				sP	sP	01 36 29.6	-5.5
LZH				ePP	PnPn	01 37 14.0	+1.3
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,71nm,5.0s						
LZH				LR	LR		
	comp=N,310nm,12.9s						
LZH				LR	LR		
	comp=E,320nm,13.2s						
LZH				LR	LR		
	comp=Z,430nm,16.5s						
CD2	Chengdu	32.11	268	eP	P	01 36 27.0	-1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	32.62	285	eP	P	01 36 32.4	-0.6
GTA				pP	pP	01 36 41.8	-6.5
GTA				sP	sP	01 36 45.8	-10
GTA				S	S	01 41 44.8	+0.3
GTA				sS	sS	01 42 01.0	-9.3
GTA				SS	SnSn	01 43 42.9	-1.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,69nm,7.1s						
GTA				LR	LR		
	comp=N,170nm,17.1s						
GTA				LR	LR		
	comp=E,230nm,18.1s						
GTA				LR	LR		
	comp=Z,250nm,17.8s						
BILL	Bilibino	32.73	17	i P	P	01 36 32.2	-1.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KNGR	Kungurtug, Tuv	33.53	306	i P	P	01 36 41.4	+0.6
KMI	Kunming	35.57	260	P	P	01 36 58.9	+0.1
KMI				pP	pP	01 37 13.3	-0.9
KMI				sP	sP	01 37 18.1	-3.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ	Urumqi	40.67	296	P	P	01 37 41.4	+0.1
WMQ				sP	sP	01 38 01.8	-2.3
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.1s						
WMQ				LR	LR		
	comp=N,700nm,15.5s						
WMQ				LR	LR		
	comp=E,390nm,15.1s						
WMQ				LR	LR		
	comp=Z,570nm,23.3s						
WMQ	Urumqi	40.67	296	eP	P	01 37 40.2	-1.1
	comp=Z,9.8nm,0.6s						
WMQ	Urumqi	40.67	296	eP	P	01 37 40.2	-1.1
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZALV	Zalesovo Beam	41.41	311	P	P	01 37 46.4	-0.7
	comp=Z,2.3nm,0.4s,baz=102,slow=8.6,SNR=11						
ZALV				pP	pP	01 38 03.6	+1.0
	comp=Z,2.9nm,0.5s,baz=101,slow=7.7,SNR=3.9						
ZALV				PcP	PcP	01 39 43.8	-0.3
	comp=Z,1.4nm,0.3s,baz=93,slow=2.9,SNR=4.6						
SDPT	Sand Point	41.64	47	eP	P	01 37 48.6	-0.4
	comp=Z,45nm,1.0s						
NVS	Novosibirsk	42.30	313	eP	P	01 37 54.0	-0.4
MK01	Makanchi Array	43.83	301	eP	P	01 38 05.8	-1.1
MK31	Makanchi Array	43.83	301	eP	P	01 38 05.8	-1.1
MK31	Makanchi Array	43.83	301	eP	P	01 38 05.8	-1.1
MKAR	Makanchi Array	43.83	301	P	P	01 38 06.7	-0.2
	comp=Z,3.9nm,0.7s,baz=83,slow=9.8,SNR=58						
MAKZ	Makanchi	44.04	301	eP	P	01 38 08.0	-0.6
	comp=Z,3.1nm,0.6s						
MAKZ	Makanchi	44.04	301	eP	P	01 38 08.0	-0.6
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
IM3	Indian Mountai	45.38	31	eP	P	01 38 18.6	-0.4
KURK	Kurchatov	45.51	307	eP	P	01 38 18.7	-1.5
KURK	Kurchatov	45.51	307	i P	P	01 38 18.9	-1.3
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KDAK	Kodiak Island	45.91	43	i P	P	01 38 23.9	+0.7
KDAK	Kodiak Island	45.91	43	P	P	01 38 23.4	+0.2
	comp=Z,7.1nm,0.6s,baz=324,slow=5.2,SNR=12						
SML	Sawmill	47.75	37	eP	P	01 38 38.6	+1.0
	comp=Z,2.6nm,0.8s						
SML	Sawmill	47.75	37	eP	P	01 38 38.6	+1.0
SML				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	48.23	33	eP	P	01 38 42.2	+1.0
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	48.23	33	P	P	01 38 41.3	+0.1
	comp=Z,2.8nm,0.7s,baz=268,slow=6.3,SNR=31						
ILAR				pP	pP	01 38 58.9	+1.9
	comp=Z,1.6nm,0.8s,baz=280,slow=7.5,SNR=6.0						
ILAR				PcP	PcP	01 40 07.1	-0.2
	comp=Z,0.5nm,0.8s,baz=294,slow=2.8,SNR=3.0						
ILB	Eielson Array	48.23	33	eP	P	01 38 41.4	+0.1
IL1	Eielson Array	48.23	33	eP	P	01 38 41.4	+0.2
BRVK	Borovoye	50.12	312	eP	P	01 38 54.6	-1.1
BRVK	Borovoye	50.12	312	i P	P	01 38 54.3	-1.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
AAK	Ala-Archa	50.28	298	eP	P	01 38 56.0	-1.4
	comp=Z,2.7nm,0.8s						
AAK	Ala-Archa	50.28	298	eP	P	01 38 56.0	-1.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH	Kashi	50.29	293	P	P	01 39 03.1	+5.6
KSH				sP	sP	01 39 23.8	+3.2
KSH				PP	PP	01 40 56.1	+3.0
KSH				pmax	pmax		
	comp=Z,130nm,5.2s						
EPYK	Eagle Plains	52.25	30	eP	P	01 39 12.6	+1.0
	comp=Z,8.5nm,0.7s						
INK	Inuvik	53.10	28	eP	P	01 39 18.6	+0.8
	comp=Z,14nm,1.4s						
INK				pP	pP	01 39 34.6	+0.8
INK	Inuvik	53.10	28	eP	P	01 39 18.6	+0.8
INK				*PP	pP	01 39 34.6	+0.8
INK				pmax	pmax		
	comp=Z,14nm,1.4s						
INK	Inuvik	53.10	28	P	P	01 39 18.0	+0.3
	comp=Z,2.8nm,0.6s,baz=288,slow=6.4,SNR=14						
INK				pP	pP	01 39 34.6	+0.8
	comp=Z,1.0nm,0.5s,baz=319,slow=3.5,SNR=2.9						
JAGI	Jajag, Banyuwa	53.23	215	eP	P	01 39 20.1	+0.7
	comp=Z,23nm,1.0s						
SVE	Sverdlovsk	54.51	318	eP	P	01 39 28.0	-0.2
SVE				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GAR	Garm	54.55	295	eP	P	01 39 29.1	+0.1
	comp=Z,5.8nm,1.0s						
GAR	Garm	54.55	295	eP	P	01 39 29.1	+0.1
GAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NIL	Nilore	54.63	288	eP	P	01 39 29.6	0.0
NIL	Nilore	54.63	288	eP	P	01 39 29.6	0.0
CHGR	Chuyangaron	55.52	295	eP	P	01 39 35.5	-0.4
	comp=Z,15nm,0.9s						
CHGR				epP	pP	01 39 48.4	-3.8
ARU	Arti	55.72	318	eP	P	01 39 36.1	-0.8
	comp=Z,7.3nm,0.7s						
ARU	Arti	55.72	318	c iP	P	01 39 36.7	-0.2
ARU						01 41 39.0	
ARU				S	S	01 47 22.9	+4.3
ARU				SS	SS	01 51 07.5	+3.4
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBL	Kabul	57.37	290	eP	P	01 39 48.6	-0.7
	comp=Z,3.5nm,0.8s						
KBL	Kabul	57.37	290	eP	P	01 39 48.6	-0.7
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ABKAR	Akbulak array	57.47	310	eP	P	01 39 49.1	-0.3
WRAB	Tennant Creek	58.33	188	eP	P	01 39 54.5	-1.2
	comp=Z,1.6nm,0.5s						
WRAB	Tennant Creek	58.33	188	i P	P	01 39 55.2	-0.5
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WB2	Warramunga Arr	58.34	188	eP	P	01 39 54.5	-1.2
WRA	Warramunga Arr	58.34	188	eP	P	01 39 55.2	-0.6
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WRA	Warramunga Arr	58.34	188	P	P	01 39 54.9	-0.9
	comp=Z,3.3nm,0.5s,baz=6.3,slow=7.0,SNR=87						
WRA				pP	pP	01 40 11.8	-0.2
	comp=Z,4.0nm,0.7s,baz=4.7,slow=7.3,SNR=12						
WRA				sP	sP	01 40 19.8	+0.8
	comp=Z,1.6nm,0.6s,baz=4.1,slow=7.3,SNR=3.4						
PRGR	Permogore	59.96	327	eP	P	01 40 05.9	-0.7
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RES	Resolute Bay	61.30	15	eP	P	01 40 15.3	-0.2
RES				pP	pP	01 40 33.5	+1.7
RES	Resolute Bay	61.30	15	P	P	01 40 15.7	+0.2
	comp=Z,7.2nm,0.4s,baz=306,slow=8.4,SNR=41						
RES				pP	pP	01 40 33.5	+1.7
	comp=Z,0.6nm,0.4s,baz=309,slow=7.4,SNR=3.0						
TMCR	Tamitsa	61.87	331	eP	P	01 40 20.1	+0.7
TMCR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AS01	Alice Springs	62.06	188	eP	P	01 40 20.9	-0.3
AS31	Alice Springs	62.06	188	eP	P	01 40 21.4	+0.1
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	62.07	188	P	P	01 40 20.8	-0.4
	comp=Z,2.2nm,0.7s,baz=12,slow=6.6,SNR=24						
ASAR				pP	pP	01 40 37.7	0.0
	comp=Z,2.8nm,0.7s,baz=8.5,slow=6.4,SNR=12						
ASAR				sP	sP	01 40 44.2	-0.4
	comp=Z,0.8nm,0.7s,baz=357,slow=6.5,SNR=2.7						
KEV	Kevo	62.44	339	eP	P	01 40 23.1	-0.1
	comp=Z,6.4nm,0.7s						
KEV	Kevo	62.44	339	eP	P	01 40 23.1	-0.1
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YKA	Yellowknife Ar	62.53	31	P	P	01 40 24.4	+0.5
	comp=Z,1.2nm,0.7s,baz=299,slow=6.7,SNR=17						
YKA				sP	sP	01 40 48.6	+1.4
	comp=Z,0.5nm,0.6s,baz=304,slow=6.7,SNR=2.8						
KLMR	Klimovskoe	62.94	328	eP	P	01 40 22.7	-3.9
KLMR				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	Klimovskoe	62.94	328	eP	P	01 40 22.8	-3.9
KLMR				AMP		01 40 24.0	
	comp=Z,12nm,1.4s						
ARCES	ARCESS Array B	62.99	339	eP	P	01 40 26.8	-0.1
ARCES	ARCESS Array B	62.99	339	P	P	01 40 27.1	+0.2
	comp=Z,4.0nm,0.6s,baz=53,slow=7.9,SNR=46						
TULEG	Thule	63.82	8	eP	P	01 40 32.1	-0.2
	comp=Z,9.5nm,1.0s						
MSF	Maaselka	64.11	335	P	P	01 40 35.8	+1.5
MSF				pmax	pmax		
	comp=Z,12nm,1.8s						
DAG	Danmarks Havn	64.58	355	i P	P	01 40 31.7	-5.5
DAG	Danmarks Havn	64.58	355	P	P	01 40 37.0	-0.2
DAG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LLLB	Lillooet	65.08	44	eP	P	01 40 42.7	+1.8
	comp=Z,6.8nm,1.0s						
MOS	Moscow	66.51	323	eP	P	01 40 47.1	-2.9
VRH	Novokhopyorsk	66.95	318	eP	P	01 40 52.0	-0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SUF	Sumiainen	67.07	333	P	P	01 40 53.8	+0.4
SUF				pmax	pmax		
	comp=Z,17nm,0.8s						
OBN	Obninsk	67.36	323	i P	P	01 40 53.9	-1.4
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LTY	Liberty	67.50	47	eP	P	01 40 58.0	+1.5
	comp=Z,3.4nm,0.9s						
LPSR	Galich'ya Gora	67.63	320	eP	P	01 40 56.4	-0.7
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
B08A	Colville Reser	67.67	45	eP	P	01 40 56.7	-0.8
	comp=Z,8.6nm,1.1s						
FIA1	FINESS Array S	67.92	332	eP	P	01 40 58.0	-0.7
FINES	FINESS Array B	67.92	332	P	P	01 40 58.6	-0.1
	comp=Z,8.0nm,0.6s,baz=40,slow=8.5,SNR=39						
VSR	Storozhevoye	68.28	319	eP	P	01 41 00.1	-1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NEW	Newport	68.96	45	P	P	01 41 05.7	+0.1
	comp=Z,2.3nm,0.7s,baz=319,slow=4.4,SNR=4.9						
E09A	Wood Farm, Sta	69.36	47	eP	P	01 41 06.1	-2.0
	comp=Z,14nm,1.1s						
SUMG	Summit	69.45	0	eP	P	01 41 08.8	+0.1
	comp=Z,10nm,0.9s						
SUMG	Summit	69.45	0	i P	P	01 41 09.1	+0.4
SUMG	Summit	69.45	0	i P	P	01 41 09.1	+0.4
VSU	Vasula	69.61	330	eP	P	01 41 09.4	+0.1
VSU				IAmb	IAmb	01 41 09.8	
	comp=Z,19nm,0.7s						
KIV	Kislovodsk	70.42	311	eP	P	01 41 15.4	+0.7
	comp=Z,15nm,1.0s						
KIV	Kislovodsk	70.42	311	⇑iP	P	01 41 15.6	+0.9
KIV	Kislovodsk	70.42	311	eP	P	01 41 15.0	+0.3
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KBZ	Khabaz	70.42	311	P	P	01 41 14.3	-0.2
	comp=Z,7.5nm,0.9s,baz=64,slow=2.7,SNR=8.2						
ORV	Oroville	71.23	54	eP	P	01 41 20.2	+0.6
ORV	Oroville	71.23	54	eP	P	01 41 20.3	+0.6
IZAR	Zarasai	71.59	328	eP	P	01 41 21.7	+0.3
IZAR				IAmb	IAmb	01 41 22.2	
	comp=Z,3.5nm,0.5s						
IDID	Didziasalis	71.67	327	eP	P	01 41 22.3	+0.4
IDID				IAmb	IAmb	01 41 23.3	
	comp=Z,4.9nm,0.7s						
ISAL	Salakas	71.76	327	eP	P	01 41 22.9	+0.4
ISAL				IAmb	IAmb	01 41 24.0	
	comp=Z,7.4nm,0.6s						
IIGN	Ignalina	71.87	327	eP	P	01 41 23.6	+0.5
IIGN				IAmb	IAmb	01 41 24.6	
	comp=Z,6.6nm,0.5s						
FFC	Flin Flon	72.44	33	eP	P	01 41 26.6	0.0
	comp=Z,3.0nm,0.7s						
FFC	Flin Flon	72.44	33	i P	P	01 41 28.1	+1.5
PAHR	Pah Rah Range	72.49	53	eP	P	01 41 27.9	+0.6
	comp=Z,4.7nm,1.0s						
VCNR	Virginia City	72.56	54	eP	P	01 41 28.0	+0.2
	comp=Z,2.9nm,0.8s						
PNTR	Pine Nut	72.71	54	eP	P	01 41 28.6	-0.2
	comp=Z,6.3nm,1.2s						
HRY	Holter Researc	72.77	44	eP	P	01 41 29.5	+0.6
NC405	NORSAR Array S	73.00	337	eP	P	01 41 30.0	+0.2
NC303	NORSAR Array S	73.02	337	eP	P	01 41 30.2	+0.3
EGMT	Eagleton	73.07	42	eP	P	01 41 30.8	+0.2
	comp=Z,8.0nm,1.0s						
NC204	NORSAR Array S	73.16	338	eP	P	01 41 29.9	-0.9
NB2	NORSAR Subarra	73.21	337	P	P	01 41 31.2	+0.1
	comp=Z,12nm,0.9s,baz=36,slow=6.2						
NB2	NORSAR Subarra	73.21	337	P	P	01 41 30.4	-0.7
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	73.21	337	eP	P	01 41 31.1	0.0
NOA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NOA	NORSAR Array B	73.21	337	P	P	01 41 30.6	-0.5
	comp=Z,4.6nm,0.7s,baz=38,slow=6.0,SNR=27						
NOA				pP	pP	01 41 49.5	+1.5
	comp=Z,2.3nm,1.0s,baz=39,slow=6.0,SNR=3.2						
NORES	NORESS Array B	73.35	337	P	P	01 41 31.6	-0.2
AKASG	Malin Array Be	73.58	322	eP	P	01 41 33.0	-0.3
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKASG	Malin Array Be	73.58	322	P	P	01 41 32.7	-0.6
	comp=Z,7.4nm,0.6s,baz=45,slow=6.0,SNR=14						
AKASG				pP	pP	01 41 51.2	+1.0
	comp=Z,2.0nm,0.7s,baz=47,slow=6.0,SNR=2.4						
AKBB	Malin Array Si	73.58	322	eP	P	01 41 33.1	-0.2
	comp=Z,8.4nm,0.8s						
KIEV	Kiev	73.59	322	eP	P	01 41 33.1	-0.3
	comp=Z,7.8nm,0.8s						
KIEV	Kiev	73.59	322	⇓iP	P	01 41 33.2	-0.3
KIEV	Kiev	73.59	322	eP	P	01 41 33.1	-0.3
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KVN	Kaiserville	73.68	53	eP	P	01 41 35.0	+0.6
	comp=Z,2.4nm,0.8s						
KVN	Kaiserville	73.68	53	eP	P	01 41 35.0	+0.6
KVN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NV01	Mina Array Sit	73.92	54	eP	P	01 41 35.4	-0.5
NVAR	Mina Array Bea	73.92	54	P	P	01 41 36.1	+0.3
	comp=Z,2.0nm,0.8s,baz=290,slow=5.0,SNR=14						
H17A	Grant Village	74.90	45	eP	P	01 41 42.3	+0.8
	comp=Z,5.0nm,0.9s						
IMW	Indian Meadow	75.01	46	eP	P	01 41 42.8	+0.6
	comp=Z,3.2nm,0.8s						
FRB	Frobisher Bay	75.48	13	P	P	01 41 44.5	+0.4
FRB				pmax	pmax		
	comp=Z,11nm,2.1s						
DAC	Darwin (Calif)	75.65	55	eP	P	01 41 44.9	-1.0
	comp=Z,3.5nm,1.0s						
DAC	Darwin (Calif)	75.65	55	eP	P	01 41 44.9	-1.0
DAC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TPNV	Topopah Spring	76.11	54	eP	P	01 41 49.2	+0.7
	comp=Z,3.9nm,1.0s						
TPNV	Topopah Spring	76.11	54	eP	P	01 41 49.2	+0.7
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BW06	Boulder Array	76.51	46	eP	P	01 41 50.7	0.0
	comp=Z,2.8nm,0.6s						
PD31	Pinedale Array	76.51	46	eP	P	01 41 50.4	-0.3
PDAR	Pinedale Array	76.51	46	eP	P	01 41 50.9	+0.2
PDAR				pP	pP	01 42 09.5	+1.9
PDAR	Pinedale Array	76.51	46	P	P	01 41 51.7	+1.0
	comp=Z,2.2nm,0.6s,baz=282,slow=1.2,SNR=30						
PDAR				pP	pP	01 42 09.5	+1.9
	comp=Z,1.1nm,0.5s,baz=277,slow=1.9,SNR=6.0						
NLU	North Lily Min	76.83	49	eP	P	01 41 51.9	-0.6
	comp=Z,2.6nm,0.9s						
MPU	Maple Canyon	77.05	49	eP	P	01 41 56.0	+2.2
	comp=Z,3.4nm,1.0s						
BUR08	Bucovina Ar. S	77.59	322	eP	P	01 41 56.2	-0.3
BUR04	Bucovina Ar. S	77.60	322	eP	P	01 41 56.1	-0.5
BURAR	Bucovina Array	77.60	322	⇑iP	P	01 41 56.5	-0.1
BURAR	Bucovina Array	77.60	322	P	P	01 41 56.4	-0.1
BIZ	Bicaz	77.63	321	⇓iP	P	01 41 57.5	+0.9
CFR	Carcaliu	77.80	319	⇑iP	P	01 41 57.2	-0.3
CFR	Carcaliu	77.80	319	P	P	01 41 57.2	-0.3
PFO	Pinyon Flats O	78.01	57	P	P	01 41 58.0	-1.1
	comp=Z,5.0nm,0.5s,baz=109,slow=5.2,SNR=8.5						
ULM	Lac du Bonnet	78.25	34	P	P	01 41 59.6	-0.3
	comp=Z,2.4nm,0.8s,baz=270,slow=5.5,SNR=5.1						
OJC	Ojcow	78.25	326	eP	P	01 41 59.7	-0.3
OJC	Ojcow	78.25	326	eP	P	01 41 59.7	-0.3
	comp=Z,4.3nm,0.7s						
OJC	Ojcow	78.25	326	eP	P	01 41 59.7	-0.3
SRU	San Rafael Swe	78.29	49	eP	P	01 42 00.9	+0.2
	comp=Z,3.9nm,0.7s						
SRU	San Rafael Swe	78.29	49	eP	P	01 42 00.9	+0.2
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRTR	Keskin Array B	78.35	312	eP	P	01 42 01.1	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	Keskin Array B	78.35	312	P	P	01 42 00.8	-0.1
	comp=Z,1.0nm,0.4s,baz=113,slow=3.4,SNR=20						
OZUR		78.38	320	⇑iP	P	01 42 01.7	+0.9
ARCR	ARCALIA	78.39	322	⇓iP	P	01 42 02.4	+1.6
TRPA	Tarpa	78.52	323	⇑iP	P	01 42 02.3	+0.8
NIE	Niedzica	78.61	325	eP	P	01 42 03.2	+1.2
NIE	Niedzica	78.61	325	eP	P	01 42 03.2	+1.2
DOPR	Dopca	78.66	320	⇑iP	P	01 42 03.9	+1.5
ICOR	Ion Corvin	78.70	318	⇓iP	P	01 42 03.5	+1.0
VOIR		79.20	320	⇓iP	P	01 42 06.6	+1.2
VOIR		79.20	320	P	P	01 42 06.6	+1.2
KSP	Ksiaz	79.27	328	eP	P	01 42 06.6	+1.0
KSP	Ksiaz	79.27	328	eP	P	01 42 06.6	+1.0
DRGR		79.40	322	⇑iP	P	01 42 06.3	-0.1
DRGR		79.40	322	P	P	01 42 06.3	-0.1
ARR	Arges	79.46	320	⇓iP	P	01 42 08.3	+1.5
MORC	Moravsky Berou	79.55	327	eP	P	01 42 07.2	0.0
	comp=Z,4.1nm,0.9s						
MORC	Moravsky Berou	79.55	327	⇑iP	P	01 42 07.8	+0.6
MORC	Moravsky Berou	79.55	327	eP	P	01 42 07.2	0.0
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DPC	Dobruska-Polom	79.64	328	eP	P	01 42 08.7	+1.1
DPC	Dobruska-Polom	79.64	328	eP	P	01 42 08.7	+1.1
PV14	Lion Creek, Pa	79.66	49	eP	P	01 42 08.7	+0.5
	comp=Z,5.2nm,0.8s						
PV17	East Wray Mesa	79.76	49	eP	P	01 42 07.8	-0.9
	comp=Z,8.2nm,0.9s						
PV05	Paradox Valley	79.81	49	eP	P	01 42 09.4	+0.3
	comp=Z,9.0nm,0.9s						
PSZ	Piszkesteto	79.90	325	⇑iP	P	01 42 10.0	+0.8
PSZ	Piszkesteto	79.90	325	P	P	01 42 09.9	+0.8
PV13	Radium Mtn., P	79.92	49	eP	P	01 42 10.0	+0.3
	comp=Z,5.5nm,1.0s						
VYHS	Vyhne	79.95	326	eP	P	01 42 10.2	+0.9
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.8s						
VYHS	Vyhne	79.95	326	eP	P	01 42 10.2	+0.9
BRG	Berggiesshubel	80.20	330	eP	P	01 42 10.6	0.0
	comp=Z,4.6nm,0.9s						
BRG	Berggiesshubel	80.20	330	eP	P	01 42 10.6	0.0
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PVCC	Panska Ves	80.22	329	eP	P	01 42 11.6	+0.9
PVCC	Panska Ves	80.22	329	eP	P	01 42 11.6	+0.9
CLL	Collm	80.24	330	eP	P	01 42 10.8	0.0
	comp=Z,5.5nm,0.8s						
CLL	Collm	80.24	330	⇑iP	P	01 42 10.8	0.0
	comp=Z,8.0nm,0.9s						
CLL				e		01 42 21.0	
CLL				e(pP)	sP	01 42 32.0	-2.7
CLL	Collm	80.24	330	⇑iP	P	01 42 10.8	0.0
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SIRR	Siria	80.28	323	⇑iP	P	01 42 10.7	-0.4
VRAC	Vranov	80.31	327	⇓iP	P	01 42 12.5	+1.2
VRAC	Vranov	80.31	327	P	P	01 42 12.4	+1.2
GZR	Gura Zlata	80.37	321	⇑iP	P	01 42 11.9	+0.2

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GZR   Gura Zlata        80.37 321   P       P        01 42 11.9 +0.2
VLAD  Vladila           80.54 320⇓iP        P        01 42 12.6 +0.1
PRU   Pruhonice         80.65 329  eP       P        01 42 13.6 +0.6
PRU   Pruhonice         80.65 329  eP       P        01 42 13.6 +0.6
BZS   Buzias            80.77 322⇑iP        P        01 42 13.4 -0.3
BZS   Buzias            80.77 322   P       P        01 42 13.3 -0.4
TREC  Trest             80.79 328  eP       P        01 42 14.7 +0.9
TREC  Trest             80.79 328  eP       P        01 42 14.7 +0.9
PUNG  Punghina          81.09 321⇓iP        P        01 42 15.4  0.0
MDVR  Moldovita         81.33 322⇑iP        P        01 42 16.5 -0.3
SOP   Sopron            81.56 326   P       P        01 42 20.1 +2.2
SOP                                 pmax    pmax
      comp=Z,7.0nm,1.4s
CONA  Conrad Observa    81.68 327  eP       P        01 42 19.5 +0.8
      comp=Z,3.1nm,0.8s
KHC   Kasperske Hory    81.71 329  eP       P        01 42 18.6 -0.2
      comp=Z,1.7nm,1.0s
KHC   Kasperske Hory    81.71 329  eP       P        01 42 19.3 +0.6
KHC   Kasperske Hory    81.71 329  eP       P        01 42 19.3 +0.6
GERES GERESS Array B    81.88 328  eP       P        01 42 19.7  0.0
GERES                               pmax    pmax
      comp=Z,1.0nm,0.6s
GERES GERESS Array B    81.88 328   P       P        01 42 19.1 -0.6
      comp=Z,1.2nm,0.6s,baz=40,slow=6.4,SNR=12
GEA0  GERESS Array S    81.89 328  eP       P        01 42 19.7 -0.1
VTS   Vitosha           82.12 319  eP       P        01 42 21.3 +0.1
      comp=Z,3.6nm,0.7s
VTS   Vitosha           82.12 319⇓iP        P        01 42 21.9 +0.7
VTS   Vitosha           82.12 319  eP       P        01 42 21.3 +0.1
VTS                                 pmax    pmax
      comp=Z,4.0nm,0.7s
SOKA  Soboth            83.00 326  i PcP    P        01 42 26.1 +0.5
      comp=Z,10nm,1.4s
KBA   Koelnbreinsper    83.42 327  i PcP    P        01 42 28.6 +0.8
      comp=Z,3.5nm,0.8s
ANMO  Albuquerque       83.47  50   P       P        01 42 28.9 +0.6
      comp=Z,1.0nm,0.7s,baz=305,slow=1.0,SNR=4.4
BLY   Banja Luka        83.51 324⇓iP        P        01 42 28.9 +0.8
WATA  Walderalm         83.95 329  i PcP    P        01 42 30.7 +0.2
      comp=Z,1.8nm,0.6s
WTTA  Wattenberg        83.98 329  i PcP    P        01 42 30.9 +0.2
      comp=Z,3.3nm,0.5s
SCHQ  Schefferville     84.04  16   P       P        01 42 30.1 -0.6
      comp=Z,3.7nm,0.9s,baz=15,slow=8.9,SNR=4.6
MOTA  Moosalm           84.14 329  i PcP    P        01 42 31.6 +0.1
      comp=Z,1.7nm,0.7s
RETA  Reutte            84.16 329  i PcP    P        01 42 31.8 +0.3
      comp=Z,2.9nm,0.6s
PDG   Podgorica         84.27 321⇓iP        P        01 42 31.8 -0.2
BFO   Black Forest      84.43 331  i P      P        01 42 33.5 +0.7
FETA  Feichten          84.55 329  i PcP    P        01 42 33.9 +0.3
      comp=Z,2.4nm,0.6s
DAVA  Damuels           84.68 329  i PcP    P        01 42 34.6 +0.4
      comp=Z,3.8nm,0.7s
FUORN Ofenpass-Fuorn    85.06 329  eP       P        01 42 35.5 -0.8
      comp=Z,8.3nm,0.6s
P42A  Winchester        88.89  38  eP       P        01 42 54.5 -0.1
      comp=Z,5.5nm,0.8s
TXAR  Lajitas Array     89.04  53   P       P        01 42 56.5 +0.8
      comp=Z,1.8nm,0.6s,baz=299,slow=3.2,SNR=16
CCM   Cathedral Cave    89.64  39  eP       P        01 42 58.0 -0.2
      comp=Z,5.1nm,0.9s
CCM   Cathedral Cave    89.64  39  eP       P        01 42 58.0 -0.2
CCM                                 pmax    pmax
      comp=Z,5.0nm,0.9s
TKL   Tuckaleechee C    95.14  36   P       P        01 43 23.8 +0.1
      comp=Z,2.3nm,0.7s,baz=346,slow=4.2,SNR=2.6
TORD  Torodi Ar. Bea   116.75 316   PKP     PKPdf    01 48 43.5 -1.4
      comp=Z,0.1nm,0.4s,baz=15,slow=3.1,SNR=4.5
SDV   Santo Domingo    124.11  40  ePKPdf   PKiKP    01 48 59.4 -0.2
LPAZ  La Paz           145.70  59   PKPbc   PKPbc    01 49 40.2 +0.1
      comp=Z,4.6nm,0.6s,baz=354,slow=3.4,SNR=17
LCO   Las Campanas     151.42  81  ePKPbc   PKiKP    01 49 54.9 +0.1
LCO   Las Campanas     151.42  81  ePKIKP   PKiKP    01 49 54.9 +0.1
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NIED ***16*** *01:32:00, 37°.30N×141°.60E, h41km, Mw4.6 Best double couple: $M_0$9.73000×10^{15} NP1:ϕ_s194.00000°, δ13.00000°, λ83.00000°. NP2:ϕ_s21.00000°, δ77.00000°, λ92.00000°.*
BJI ***16*** *01:32:44.9, 37°.14N×141°.68E, h38km, mB5.0/42, mb5.0/66, Ms4.4/44, Ms7 4.1/44*
MOS ***16*** *01:32:46.6±1.0, 37°.38N×141°.70E, h43km, mb5.2/87, Error ellipse: s-maj=7.3km s-min=5.1km az=102.8*
JMA ***16*** *01:32:48.5±0.1, 37°.34N×141°.58E, h45km±2km, M4.7 Broadband fault plane solution: P waves. NP1: ϕ_s3.00000°, δ73.00000°, λ84.00000°. NP2:ϕ_s204.00000°, δ18.00000°, λ110.00000°. Principal axes: T Plg61.0000°, Azm264.0000°; N Plg6.0000°, Azm5.0000°; P Plg28.0000°, Azm98.0000°;*
JMA Felt III J1.
ISCJB ***16*** *01:32:48.0±0.4, 37°.34N±0°.02×141°.56E±0°.03, h47km±2km, mb4.8/214, MS4.0/17 Error ellipse: s-maj=4.2km s-min=3.0km az=43.9*
IDC ***16*** *01:32:49.5±0.5, 37°.38N×141°.57E, h46km±3km, mb4.3/33, mb1 4.5/41, mb1mx4.4/51, mbtmp4.6/41, MS3.8/14, Ms1 3.8/14, ms1mx3.5/43, Error ellipse: s-maj=11.6km s-min=7.5km az=153.0*
NEIC ***16*** *01:32:49.7±0.3, 37°.35N×141°.51E, h49km±3km, mb4.7/118, Error ellipse: s-maj=3.3km s-min=2.2km az=149.0*
NEIC Felt [III] at Sendai. Felt widely in eastern Honshu. Recorded [3 JMA] in Fukushima and Miyagi.

ISC 16 01:32:48.9±0.4**, 37°.34N**±0°.04×**141°.61E**±0°.04**, h46**km±3km**, h46km:pP-P, n573, σ1.25**/621**, mb4.8**/232**, MS4.0**/17**, 61C-29D, Near east coast of eastern Honshu**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC      h  m  s    ISC
JFK   Kawauchi          0.58 273 ⇓P         Pn       01 33 00.2 -0.8
JFK                                 S       Sn       01 33 08.0 -1.7
ONAJ  Iwakimizuishiy    0.69 250 ⇓P         Pn       01 33 01.6 -0.8
ONAJ                                S       Sn       01 33 10.5 -1.6
JMM   Marumori          0.83 309 ⇓P         Pn       01 33 03.6 -0.7
JMM                                eS       Sn       01 33 14.4 -1.1
JFFD  Fukushimafurud    0.87 254 ⇓P         Pn       01 33 04.1 -0.7
JFFD                                S       Sn       01 33 14.6 -1.8
JFT   Otama             1.03 280 ⇓P         Pn       01 33 07.1 +0.2
JFT                                eS       Sn       01 33 20.0 -0.2
JHO   Hitachi           1.10 229 ⇓P         Pn       01 33 06.9 -1.1
JHO                                 S       Sn       01 33 20.1 -2.0
JIO   Ouri              1.13 350 ⇓P         Pn       01 33 07.9 -0.4
JIO                                 S       Sn       01 33 21.2 -1.5
JOU   Okura             1.27 324 ⇓P         Pn       01 33 10.1 -0.1
JOU                                 S       Sn       01 33 26.1  0.0
JYS   Shirataka         1.50 306 ⇓P         Pn       01 33 13.8 +0.4
JFY   Yanaizu           1.52 273 ⇓P         Pn       01 33 13.7 +0.1
JFY                                eS       Sn       01 33 31.4 -0.8
JMK   Ichinoseki        1.64 349 ⇓P         Pn       01 33 15.5 +0.2
JMK                                 S       Sn       01 33 35.0 -0.1
MJAR  Matsushiro Arr    2.84 255    P       Pn       01 33 32.6 +0.9
      20nm,0.3s,baz=221,slow=30,SNR=29
MJAR                                S       Sn       01 34 07.1 +2.5
      12nm,0.3s,baz=45,slow=8.4,SNR=5.4
MJAR                                LR      LR       01 34 54.7
      comp=Z,2µm,19.4s,baz=70,slow=45
MAJO  Matsushiro        2.84 255   ePn      Pn       01 33 32.5 +0.7
MAJO  Matsushiro        2.84 255d iP        Pn       01 33 32.4 +0.7
MAT   Matsushiro        2.84 255    P       Pn       01 33 32.9 +1.2
MAT                                eS       Sn       01 34 07.5 +2.8
MJB9  Matsu-Tunnel      2.84 255   ePn      Pn       01 33 32.1 +0.4
INU   Inuyama           4.20 243   ePn      Pn       01 33 51.8 +1.3
JHJ2  Mitsune           4.46 200   ePn      Pn       01 33 53.6 -0.4
JHJ2                               eSn      Sn       01 34 43.0 -1.7
JHJ   Hachijo jima 2    4.47 200    P       Pn       01 33 54.8 +0.7
      137nm,0.3s,baz=332,slow=20,SNR=6.9
JHJ                                 S       Sn       01 34 43.2 -1.6
      359nm,0.3s,baz=86,slow=21,SNR=9.1
ERM   Erimo             4.82  14   ePn      Pn       01 33 58.8 -0.1
ERM                                eSn      Sn       01 34 54.0 +0.5
ERM   Erimo             4.82  14   i P      Pn       01 33 59.6 +0.7
ASAJ  Asahikawa         6.81   6    P       Pn       01 34 25.5 -0.7
      8.5nm,0.3s,baz=222,slow=13,SNR=9.5
ASAJ                                S       Sn       01 35 41.4 -1.0
      8.3nm,0.3s,baz=45,slow=20,SNR=3.4
YUK   Yuzh-Kuril'sk     7.43  24d iP        Pn       01 34 32.7 -1.9
YUK                                eS       Sn       01 35 51.2 -6.3
YUK                                 pmax    pmax
      comp=Z,215nm,0.3s
YUK                                 pmax    pmax
      comp=N,59nm,0.2s
YUK                                 pmax    pmax
      comp=E,99nm,0.2s
SHO   Shikotan          7.64  30   eP       Pn       01 34 34.6 -2.9
SHO                                eS       Sn       01 35 54.4 -8.2
SHO                                 pmax    pmax
      comp=Z,27nm,0.5s
SHO                                 pmax    pmax
      comp=N,31nm,0.2s
SHO                                 pmax    pmax
      comp=E,31nm,0.4s
TEY   Ternei            8.56 335⇑eP         Pn       01 34 53.5 +3.3
TEY                                 pmax    pmax
      comp=Z,10.0nm,0.8s
TEY                                 pmax    pmax
      comp=N,40nm,0.9s
TEY                                 MLR     MLR
      comp=Z,20nm,2.0s
KUR   Kuril'sk          9.18  29   eP       Pn       01 34 56.2 -2.5
KUR                                eS       Sn       01 36 33.0 -7.6
KUR                                 pmax    pmax
      comp=Z,47nm,0.5s
KUR                                 pmax    pmax
      comp=N,39nm,0.4s
KUR                                 smax    smax
      comp=N,157nm,0.4s
KUR                                 smax    smax
      comp=E,151nm,0.6s
YSS   Yuzh-Sakhalins    9.64   5   ePn      Pn       01 35 04.5 -0.5
YSS   Yuzh-Sakhalins    9.64   5⇑eP         Pn       01 35 05.8 +0.8
YSS                                eS       Sn       01 36 55.7 +3.8
YSS                                 pmax    pmax
      comp=Z,30nm,0.8s
YSS                                 MLR     MLR
      comp=Z,100nm,14.0s
JNU   Nakatsue          9.73 248   ePn      Pn       01 35 07.9 +1.6
JNU   Nakatsue          9.73 248    P       Pn       01 35 07.2 +0.8
      comp=Z,1.8nm,0.3s,baz=57,slow=8.9,SNR=13
JNU                                 LR      LR       01 39 16.5
      comp=Z,504nm,19.9s,baz=53,slow=40
USA0B Ussuriysk Arra   10.00 316   ePn      Pn       01 35 10.4 +0.5
USRK  Ussuriysk Ar.    10.00 316    P       Pn       01 35 10.7 +0.7
      comp=Z,1.7nm,0.3s,baz=124,slow=14,SNR=33
USRK                                LR      LR       01 38 47.2
      comp=Z,646nm,19.4s,baz=128,slow=36
KSRS  Korea Array      10.89 275    P       Pn       01 35 24.6 +2.5
      comp=Z,1.6nm,0.3s,baz=89,slow=14,SNR=39
KSRS                                LR      LR       01 39 17.6
      comp=Z,624nm,19.1s,baz=88,slow=36
KS15  Wonju Array Si   10.92 275   ePn      Pn       01 35 20.8 -1.7
KSAR  Wonju Array Be   10.92 275    P       Pn       01 35 24.6 +2.1
KSAR  Wonju Array Be   10.92 275    P       Pn       01 35 24.6 +2.1
MDJ   Mudanjiang       11.62 312    P       Pn       01 35 36.0 +3.9
MDJ                                 pP               01 35 43.6
MDJ                                 sP               01 35 48.8
MDJ                                 S       Sn       01 37 44.0 +3.6
MDJ                                 pmax    pmax
      comp=Z,26nm,1.0s
MDJ                                 pmax    pmax
      comp=Z,190nm,5.0s
MDJ                                 LR      LR
      comp=Z,460nm,17.1s
MDJ                                 LR      LR
      comp=Z,470nm,23.5s
MDJ                                 LR      LR
      comp=Z,780nm,24.7s
MDJ   Mudanjiang       11.62 312   ePn      Pn       01 35 30.2 -1.9
TYV   Tymovskoe        13.54   3   eP       Pn       01 35 56.5 -1.7
TYV                                 pmax    pmax
      comp=Z,9.0nm,0.8s
CN2   Changchun        13.87 303   eP       Pn       01 36 03.3 +0.6
CN2                                ePP      PnPn     01 36 14.6 +4.0
CN2                                eS       Sn       01 38 34.3 -0.8
CN2                                 pmax    pmax
      comp=Z,10.0nm,1.5s
CN2                                 pmax    pmax
      comp=Z,200nm,5.0s
CN2                                 LR      LR
      comp=Z,360nm,14.0s
CN2                                 LR      LR
      comp=Z,390nm,14.0s
CN2                                 LR      LR
      comp=Z,450nm,16.0s
KLR   Kul'dur          13.87 332   i P      Pn       01 36 03.1 +0.4
KLR   Kul'dur          13.87 332    P       Pn       01 36 02.1 -0.6
      comp=Z,0.5nm,0.3s,baz=153,slow=14,SNR=7.5
KLR                                 LR      LR       01 41 21.2
      comp=Z,374nm,18.2s,baz=147,slow=37
GRNR  Gornyy           13.93 346   eP       Pn       01 36 02.4 -1.1
DL2   Dalian           15.80 282    P       Pn       01 36 28.8 +0.6
DL2                                eS       Sn       01 39 25.1 +2.9
DL2                                 pmax    pmax
      comp=Z,51nm,0.6s
DL2                                 pmax    pmax
      comp=Z,140nm,6.5s
DL2                                 LR      LR
      comp=Z,250nm,14.5s
DL2                                 LR      LR
      comp=Z,340nm,16.6s
DL2                                 LR      LR
      comp=Z,470nm,20.4s
NKL   Nikolayevsk      15.82 358   eP       Pn       01 36 25.0 -3.3
OKH   Okha             16.24   3deP         Pn       01 36 30.4 -3.2
OKH                                eS       Sn       01 39 26.6 -5.9
OKH                                 smax    smax
      comp=N,600nm,16.0s
OKH                                 MLR     MLR
      comp=Z,200nm,16.0s
SSE   Sheshan          17.98 256   ePn      Pn       01 36 54.9 -0.6
      comp=Z,62nm,1.0s
ZEA   Zeya             19.17 333   eP       P        01 37 06.8 -1.6
ZEA                                 pmax    pmax
      comp=N,39nm,0.6s
ZEA                                 pmax    pmax
      comp=E,20nm,0.6s
ZEA                                 pmax    pmax
      comp=Z,53nm,0.6s
ZEA                                 MLR     MLR
      comp=Z,400nm,14.0s
ZEA                                 MLR     MLR
      comp=N,400nm,15.0s
PETK  Petropavlovsk-   19.35  30    P       P        01 37 11.3 +1.0
      comp=N,0.2nm,0.3s,baz=215,slow=7.2,SNR=4.4
PETK                                LR      LR       01 44 18.4
      comp=N,138nm,21.9s,baz=221,slow=36
NJ2   Nanjing          19.42 261   eP       P        01 37 10.9 -0.4
NJ2                                 pmax    pmax
      comp=N,11nm,0.6s
TIA   Tai'an           19.64 274    P       P        01 37 12.3 -1.3
TIA                                 pmax    pmax
      comp=N,42nm,1.5s
TIA                                 LR      LR
      comp=N,130nm,13.5s
TIA                                 LR      LR
      comp=N,160nm,18.5s
TIA                                 LR      LR
      comp=N,170nm,17.1s
BJI   Beijing          20.02 286    P       P        01 37 16.0 -1.7
BJI                                 pmax    pmax
      comp=N,18nm,1.1s
BJT   Baijiatuau       20.02 286   eP       P        01 37 16.2 -1.6
      comp=N,24nm,1.0s
BJT   Baijiatuau       20.02 286   eP       P        01 37 16.2 -1.6
BJT                                 pmax    pmax
      comp=Z,24nm,1.0s
YHNB  Yeheng           21.40 240   eP       P        01 37 31.1 -1.8
      comp=Z,112nm,1.5s
NACB  Ninganchiao      21.58 238   eP       P        01 37 32.0 -2.6
      comp=Z,41nm,1.2s
MA2   Magadan          23.02  12   eP       P        01 37 49.8 +0.1
      comp=Z,16nm,0.9s
MA2   Magadan          23.02  12ceP         P        01 37 50.7 +1.0
MA2                                 pmax    pmax
      comp=Z,16nm,0.8s
MA2   Magadan          23.02  12    P       P        01 37 49.5 -0.2
      comp=Z,14nm,0.8s,baz=191,slow=9.4,SNR=15
MA2                                 LR      LR       01 46 17.4
      comp=Z,104nm,20.1s,baz=186,slow=35
TIY   Taiyuan          23.10 280   eP       P        01 37 50.6 -0.2
HHC   Hu-ho-hao-te     23.52 288   eP       P        01 37 53.4 -1.5
HHC                                 pmax    pmax
      comp=Z,9.0nm,0.5s
HHC                                 pmax    pmax
      comp=Z,250nm,5.8s
WHN   Wuhan            23.56 261 ⇓P         P        01 37 55.8 +0.6
WHN                                 S       S        01 42 00.9 -5.1
WHN                                 LR      LR
      comp=Z,1µm,22.3s
GUMO  Guam             23.83 172    LR      LR       01 48 03.6
      comp=Z,75nm,19.3s,baz=73,slow=38
BTO   Baotou           24.70 287   eP       P        01 38 05.1 -0.7
YAK   Yakutsk          25.81 347c iP        P        01 38 14.9 -0.5
YAK                                e*PP     sP       01 38 34.1 +1.3
YAK                                e                 01 38 57.4
YAK                                e                 01 41 41.2
YAK                                eS       S        01 42 39.4 -1.9
YAK                                 pmax    pmax
      comp=Z,349nm,0.9s
YAK                                 pmax    pmax
      comp=E,38nm,0.9s
YAK                                 pmax    pmax
      comp=N,85nm,1.0s
YAK                                 pmax    pmax
      comp=Z,91nm,0.8s
YAK                                 pmax    pmax
      comp=N,71nm,0.8s
YAK                                 pmax    pmax
      comp=E,36nm,0.9s
YAK                                 smax    smax
      comp=N,245nm,1.5s
YAK                                 smax    smax
      comp=E,203nm,1.4s
SEY   Seymchan         26.46  11ceP         P        01 38 22.9 +1.6
SEY   Seymchan         26.46  11    P       P        01 38 21.9 +0.6
      comp=E,5.0nm,0.6s,baz=188,slow=7.7,SNR=10
XAN   Xi'an            26.68 273    P       P        01 38 22.8 -0.9
XAN                                 pP      pP       01 38 32.3 -3.3
XAN                                 PP      PnPn     01 39 06.8 +0.7
XAN                                 PcP     PcP      01 41 43.0 -3.4
XAN                                 S       S        01 42 45.4  -10
XAN                                 pmax    pmax
      comp=E,39nm,0.6s
XAN                                 pmax    pmax
      comp=E,220nm,10.0s
XAN                                 LR      LR
      comp=E,310nm,11.1s
XAN                                 LR      LR
      comp=E,120nm,6.7s
XAN                                 LR      LR
      comp=E,230nm,15.7s
XAN   Xi'an            26.68 273   eP       P        01 38 22.4 -1.2
      comp=E,32nm,0.5s
XAN   Xi'an            26.68 273   eP       P        01 38 22.4 -1.2
XAN                                 pmax    pmax
      comp=Z,32nm,0.5s
ULN   Ulaanbaatar      27.31 304   eP       P        01 38 28.8 -0.6
      comp=Z,15nm,0.9s
ULN   Ulaanbaatar      27.31 304ceP         P        01 38 29.4 +0.1
ULN                                 pmax    pmax
      comp=Z,23nm,1.3s
BOD   Bodaibo          27.35 327   eP       P        01 38 28.6 -0.8
BOD                                 pmax    pmax
      comp=Z,14nm,1.1s
ENH   Enshi            27.51 265   eP       P        01 38 31.0 -0.2
SONA1 Songino Array    27.74 303   eP       P        01 38 32.7 -0.4
SONM  Songino Array    27.74 303    P       P        01 38 32.7 -0.4
      comp=Z,14nm,0.6s,baz=101,slow=9.0,SNR=84
SONM                                PcP     PcP      01 41 49.1 +0.3
      comp=Z,1.0nm,0.5s,baz=123,slow=2.2,SNR=5.4
SONM                                LR      LR       01 49 29.4
      comp=Z,102nm,19.7s,baz=168,slow=36
H11N2 WAKE ISLAND Hy   28.17 122    T       T        02 08 54.8
      baz=314,slow=75,SNR=35
H11N1 WAKE ISLAND Hy   28.18 122    T       T        02 08 58.0
      baz=314,slow=75,SNR=26
H11N3 WAKE ISLAND Hy   28.19 122    T       T        02 08 58.7
      baz=314,slow=75,SNR=22
H11S1 WAKE ISLAND Hy   28.90 124    T       T        02 09 45.2
      baz=316,slow=76,SNR=27
H11S3 WAKE ISLAND Hy   28.90 124    T       T        02 09 49.7
      baz=316,slow=76,SNR=20
H11S2 WAKE ISLAND Hy   28.91 124    T       T        02 09 51.9
      baz=316,slow=76,SNR=16
LZH   Lanzhou          30.17 279   eP       P        01 38 54.5 -0.4
LZH                                 pP      pP       01 39 05.1 -1.9
LZH                                 sP      sP       01 39 09.6 -2.8
LZH                                ePP      PnPn     01 39 53.0 -0.5
LZH                                 pmax    pmax
      comp=Z,25nm,1.3s
LZH                                 pmax    pmax
      comp=Z,79nm,5.2s
LZH                                 LR      LR
      comp=Z,350nm,13.0s
LZH                                 LR      LR
      comp=Z,370nm,13.3s
LZH                                 LR      LR
      comp=Z,500nm,16.6s
ZAK   Zakamensk        30.20 308   eP       P        01 38 55.1 +0.2
ZAK                                 pmax    pmax
      comp=Z,10.0nm,1.2s
TLY   Talaya           30.25 311   eP       P        01 38 55.4 +0.2
      comp=Z,26nm,0.7s
TLY   Talaya           30.25 311ceP         P        01 38 55.7 +0.5
CD2   Chengdu          31.83 270    P       P        01 39 08.4 -1.0
CD2                                 pP      pP       01 39 20.8 -0.7
CD2                                 sP      sP       01 39 26.6 -0.4
CD2                                 PP      PP       01 40 20.5 -1.3
CD2                                 S       S        01 44 15.3 -1.5
CD2                                 pmax    pmax
      comp=Z,10.0nm,0.5s
CD2                                 pmax    pmax
      comp=Z,120nm,4.6s
CD2                                 LR      LR
      comp=Z,620nm,13.7s
CD2                                 LR      LR
      comp=Z,560nm,14.2s
MOY   Mondy            31.86 310   eP       P        01 39 09.6 +0.1
MOY                                 pmax    pmax
      comp=Z,6.0nm,1.0s
GTA   Gaotai           32.62 287 ⇑P         P        01 39 15.5 -0.9
GTA                                 pP      pP       01 39 25.0 -3.5
GTA                                 sP      sP       01 39 29.3 -4.6
GTA                                 PcP     PcP      01 42 02.8 +1.1
GTA                                 S       S        01 44 27.0 -2.1
GTA                                 sS      sS       01 44 44.3 -5.1
GTA                                 ScP     ScP      01 45 42.8 +1.1
GTA                                 SS      SnSn     01 46 25.1 -1.5
GTA                                 pmax    pmax
      comp=Z,4.0nm,1.0s
GTA                                 pmax    pmax
      comp=Z,94nm,6.8s
GTA                                 LR      LR
      comp=Z,170nm,17.1s
GTA                                 LR      LR
      comp=Z,230nm,17.8s
GTA                                 LR      LR
      comp=Z,190nm,18.7s
BILL  Bilibino         33.69  16   eP       P        01 39 25.4 +0.2
      comp=Z,6.7nm,1.1s
BILL  Bilibino         33.69  16   eP       P        01 39 26.0 +0.8
BILL                                pmax    pmax
      comp=Z,6.0nm,1.0s
KMI   Kunming          35.16 261    P       P        01 39 38.1 -0.6
KMI                                 pP      pP       01 39 48.4 -2.5
KMI                                 sP      sP       01 39 53.6 -2.7
KMI                                 pmax    pmax
      comp=Z,59nm,0.9s
KMI                                 pmax    pmax
      comp=Z,89nm,3.1s
KMI                                 LR      LR
      comp=Z,210nm,15.5s
KMI                                 LR      LR
      comp=Z,310nm,17.2s
KMI                                 LR      LR
      comp=Z,220nm,18.3s
KMI   Kunming          35.16 261   eP       P        01 39 38.7 +0.1
      comp=Z,46nm,0.8s
KMI   Kunming          35.16 261   eP       P        01 39 38.7 +0.1
KMI                                 pmax    pmax
      comp=Z,47nm,0.8s
SKNT  Sakolnakorn      38.80 249    P       P        01 40 10.3 +0.9
      comp=Z,8.9nm,1.0s,comp=Z,597nm
PAYA  Payao            40.49 255    P       P        01 40 30.4 +7.0
WMQ   Urumqi           40.84 297⇑iP         P        01 40 27.9 +1.8
WMQ                                 pP      pP       01 40 36.5 -2.0
WMQ                                 PP      PnPn     01 42 05.8 +0.6
WMQ                                 pmax    pmax
      comp=Z,57nm,1.1s
WMQ                                 pmax    pmax
      comp=Z,310nm,6.3s
WMQ                                 LR      LR
      comp=Z,700nm,16.3s
WMQ                                 LR      LR
      comp=Z,390nm,21.3s
WMQ                                 LR      LR
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	comp=Z,570nm,22.5s						
WMQ	**Urumqi**	**40.84**	**297**	*e*P	**P**	**01 40 27.0**	**+0.9**
	comp=Z,30nm,1.0s						
WMQ	**Urumqi**	**40.84**	**297**	*e*P	**P**	**01 40 27.0**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,30nm,1.0s						
UTTA	**Uttaradit**	**40.91**	**253**	P	**P**	**01 40 27.6**	**+0.7**
	comp=Z,4.1nm,0.9s						
CMMT	**Chiang Mai**	**41.51**	**256**	P	**P**	**01 40 32.8**	**+0.9**
	comp=Z,6.6nm,2.0s						
CHTO	**Chiang Mai**	**41.52**	**256**	*e*P	**P**	**01 40 31.9**	**0.0**
	comp=Z,2.9nm,0.6s						
CHTO	**Chiang Mai**	**41.52**	**256**	*e*P	**P**	**01 40 31.9**	**0.0**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CHTO	**Chiang Mai**	**41.52**	**256**	P	**P**	**01 40 32.9**	**+1.0**
	comp=Z,29nm,1.9s						
CMAR	**Chiang Mai Arr**	**41.72**	**255**	*ce*P	**P**	**01 40 34.5**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.72**	**255**	P	**P**	**01 40 32.6**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=50,slow=7.0,SNR=22						
CMAR				PcP	**PcP**	**01 42 30.3**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=18,slow=3.0,SNR=4.8						
CMAR				LR	LR	01 58 53.1	
	comp=Z,134nm,19.0s,baz=25,slow=38						
CM01	**Chiang Mai Arr**	**41.73**	**255**	*e*P	**P**	**01 40 33.6**	**-0.1**
SUKH	**Sukhothai**	**41.77**	**253**	P	**P**	**01 40 34.9**	**+1.0**
	comp=Z,7.4nm,0.9s						
ZALV	**Zalesovo Beam**	**41.82**	**312**	P	**P**	**01 40 34.1**	**+0.1**
	comp=Z,12nm,0.4s,baz=101,slow=7.9,SNR=41						
ZALV				PcP	**PcP**	**01 42 29.2**	**0.0**
	comp=Z,3.4nm,0.6s,baz=129,slow=3.4,SNR=4.8						
ZALV				LR	LR	01 58 46.8	
	comp=Z,168nm,18.2s,baz=68,slow=37						
SRAK	**Srakaew**	**42.12**	**247**	P	**P**	**01 40 35.0**	**-1.8**
	comp=Z,72nm,0.8s,comp=Z,678nm						
LSA	**Lhasa**	**42.34**	**275**	*e*P	**P**	**01 40 39.2**	**+0.2**
	comp=Z,12nm,0.6s						
LSA	**Lhasa**	**42.34**	**275**	*e*P	**P**	**01 40 39.2**	**+0.2**
LSA				pmax	pmax		
	comp=Z,11nm,0.6s						
NVS	**Novosibirsk**	**42.74**	**313**	*e*P	**P**	**01 40 41.7**	**+0.3**
NVS				pmax	pmax		
	comp=N,5.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,14nm,0.8s						
NVS				pmax	pmax		
	comp=Z,21nm,0.8s						
NRIK	**Noril'sk**	**43.05**	**335**	P	**P**	**01 40 43.5**	**-0.3**
	comp=Z,2.6nm,0.3s,baz=91,slow=9.6,SNR=5.7						
UTHA	**Uthaitani**	**43.08**	**251**	P	**P**	**01 40 46.9**	**+2.3**
	comp=Z,3.5nm,0.8s						
UMPA	**Umpang Tak**	**43.13**	**253**	P	**P**	**01 40 47.3**	**+2.3**
	comp=Z,5.5nm,0.9s						
RDOG	**Red Dog Mine**	**43.16**	**27**	*e*P	**P**	**01 40 45.9**	**+1.3**
	comp=Z,14nm,1.2s						
SHL	**Shillong**	**43.56**	**269**	*e*P	**P**	**01 40 47.9**	**-0.7**
	comp=Z,25nm,0.5s						
SHL	**Shillong**	**43.56**	**269**	*e*P	**P**	**01 40 47.9**	**-0.7**
SHL				pmax	pmax		
	comp=Z,25nm,0.5s						
SHL	**Shillong**	**43.56**	**269**	*e*P	**P**	**01 40 51.0**	**+2.3**
MK01	**Makanchi Array**	**44.09**	**302**	*e*P	**P**	**01 40 52.0**	**-0.4**
MK31	**Makanchi Array**	**44.09**	**302**	*e*P	**P**	**01 40 52.6**	**+0.2**
MK31	**Makanchi Array**	**44.09**	**302**	*e*P	**P**	**01 40 52.6**	**+0.2**
MKAR	**Makanchi Array**	**44.09**	**302**	*e*P	**P**	**01 40 52.6**	**+0.2**
	comp=Z,155nm,0.6s						
MKAR	**Makanchi Array**	**44.09**	**302**	P	**P**	**01 40 52.6**	**+0.2**
	comp=Z,19nm,0.6s,baz=87,slow=9.9,SNR=105						
MAKZ	**Makanchi**	**44.30**	**302**	*e*P	**P**	**01 40 54.4**	**+0.3**
	comp=Z,18nm,0.6s						
MAKZ	**Makanchi**	**44.30**	**302**	*e*P	**P**	**01 40 54.4**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,18nm,0.6s						
PHET	**Kaeng Krachan**	**44.62**	**248**	P	**P**	**01 40 58.7**	**+1.8**
	comp=Z,12nm,0.6s						
KURK	**Kurchatov**	**45.87**	**308**	*e*P	**P**	**01 41 05.9**	**-0.5**
KURK	**Kurchatov**	**45.87**	**308**	*ce*P	**P**	**01 41 06.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,70nm,1.0s						
IM3	**Indian Mountai**	**46.31**	**31**	*e*P	**P**	**01 41 10.8**	**+1.0**
PDGK	**Podgornoye**	**46.77**	**298**	P	**P**	**01 41 14.0**	**+0.2**
PDGK				pmax	pmax		
	comp=Z,23nm,1.0s						
KDAK	**Kodiak Island**	**46.77**	**42**	*ce*P	**P**	**01 41 14.3**	**+0.9**
KDAK	**Kodiak Island**	**46.77**	**42**	P	**P**	**01 41 14.1**	**+0.7**
	comp=Z,7.8nm,0.6s,baz=16,slow=2.6,SNR=6.1						
RAMN	**Ramite**	**47.14**	**274**	*e*P	**P**	**01 41 17.4**	**+0.4**
	comp=Z,68nm,0.6s						
JIRN	**Jiri**	**47.14**	**275**	*e*P	**P**	**01 41 17.8**	**+0.6**
	comp=Z,63nm,0.5s						
GUN	**Gumba**	**47.28**	**275**	*e*P	**P**	**01 41 18.7**	**+0.5**
	comp=Z,86nm,0.5s						
MLY	**Manley**	**47.51**	**32**	*e*P	**P**	**01 41 19.9**	**+0.8**
	comp=Z,5.7nm,1.0s						
SUA	**Susitna One**	**47.52**	**37**	*e*P	**P**	**01 41 20.9**	**+1.5**
	comp=Z,17nm,1.2s						
PKI	**Pulchoki**	**47.80**	**275**	*e*P	**P**	**01 41 22.3**	**0.0**
	comp=Z,22nm,0.5s						
PKIN	**Phulchoki**	**47.81**	**275**	*e*P	**P**	**01 41 22.2**	**-0.1**
	comp=Z,22nm,0.5s						
DMN	**Daman**	**48.03**	**276**	*e*P	**P**	**01 41 24.3**	**+0.4**
	comp=Z,29nm,0.6s						
TOLK	**Toolik Lake Re**	**48.13**	**27**	*e*P	**P**	**01 41 25.6**	**+1.7**
	comp=Z,4.7nm,0.8s						
MCK	**McKinley**	**48.29**	**34**	*e*P	**P**	**01 41 26.1**	**+0.9**
	comp=Z,7.0nm,0.9s						
MCK	**McKinley**	**48.29**	**34**	*e*P	**P**	**01 41 26.1**	**+0.9**
MCK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDM	**Murphy Dome**	**48.58**	**32**	*e*P	**P**	**01 41 28.7**	**+1.3**
	comp=Z,7.4nm,1.0s						
DANN	**Dangsing**	**48.76**	**277**	*e*P	**P**	**01 41 30.4**	**+0.7**
	comp=Z,244nm,0.8s						
HDA	**Harding Lake**	**49.14**	**33**	*e*P	**P**	**01 41 32.3**	**+0.6**
	comp=Z,8.8nm,0.9s						
KOLN	**Koldanda**	**49.15**	**277**	*e*P	**P**	**01 41 33.0**	**+0.5**
	comp=Z,62nm,0.8s						
IL1	**Eielson Array**	**49.15**	**32**	*e*P	**P**	**01 41 31.9**	**+0.1**
ILAR	**Eielson Array**	**49.15**	**32**	P	**P**	**01 41 32.2**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=269,slow=6.2,SNR=34						
ILB	**Eielson Array**	**49.15**	**32**	*e*P	**P**	**01 41 32.2**	**+0.4**
PYUN	**Piuthan**	**49.48**	**277**	*e*P	**P**	**01 41 35.6**	**+0.5**
	comp=Z,183nm,0.9s						
TKM2	**Tokmak 2**	**49.62**	**298**	P	**P**	**01 41 37.0**	**+1.1**
	SNR=23						
PRP	**Porcupine Dome**	**49.70**	**31**	*e*P	**P**	**01 41 37.1**	**+1.0**
	comp=Z,5.7nm,0.9s						
NRN	**Naryn**	**49.78**	**296**	*e*P	**P**	**01 41 37.7**	**+0.4**
	comp=Z,5.4nm,0.8s						
NRN	**Naryn**	**49.78**	**296**	*e*P	**P**	**01 41 37.7**	**+0.4**
NRN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KZA	**Kyzart**	**50.12**	**297**	P	**P**	**01 41 41.7**	**+1.8**
	SNR=7.1						
KBK	**Karagaybulak**	**50.16**	**298**	P	**P**	**01 41 40.7**	**+0.8**
	SNR=25						
CHMS	**Chumysh**	**50.19**	**299**	P	**P**	**01 41 40.5**	**+0.5**
	SNR=6.4						
USP	**Ospenovka**	**50.28**	**299**	P	**P**	**01 41 41.2**	**+0.4**
	SNR=9.8						
OTUK	**Ortayu**	**50.37**	**306**	P	**P**	**01 41 41.5**	**+0.2**
OTUK				pmax	pmax		
	comp=Z,30nm,0.8s						
KSH	**Kashi**	**50.42**	**294**	P	**P**	**01 41 46.3**	**+4.4**
KSH				pP	sP	01 41 57.9	-2.0
KSH				PP	**PP**	**01 43 40.3**	**+2.6**
KSH				S	**S**	**01 48 57.3**	**+5.1**
KSH				sS	sS	01 49 12.6	-0.8
KSH				SS	**SS**	**01 52 28.8**	**+2.7**
KSH				pmax	pmax		
	comp=Z,17nm,0.6s						
KSH				pmax	pmax		
	comp=Z,250nm,6.4s						
KSH				LR	LR		
	comp=Z,120nm,4.9s						
KSH				LR	LR		
	comp=Z,140nm,4.5s						
KSH				LR	LR		
	comp=Z,320nm,6.3s						
SCRK	**Sand Creek**	**50.47**	**33**	*e*P	**P**	**01 41 42.7**	**+0.8**
	comp=Z,7.9nm,1.0s						
AAK	**Ala-Archa**	**50.48**	**298**	P	**P**	**01 41 42.8**	**+0.4**
	SNR=6.3						
AAK	**Ala-Archa**	**50.48**	**298**	*e*P	**P**	**01 41 42.8**	**+0.4**
	comp=Z,7.9nm,0.6s						
AAK	**Ala-Archa**	**50.48**	**298**	*i* P	**P**	**01 41 42.6**	**+0.2**
	SNR=6.7						
AAK	**Ala-Archa**	**50.48**	**298**	*ce*P	**P**	**01 41 42.9**	**+0.4**
AAK				pmax	pmax		
	comp=Z,12nm,1.7s						
AAK	**Ala-Archa**	**50.48**	**298**	LR	LR	02 04 11.4	
	comp=Z,282nm,20.6s,baz=110,slow=37						
BRVK	**Borovoye**	**50.54**	**312**	*e*P	**P**	**01 41 42.7**	**+0.3**
	comp=Z,21nm,1.0s						
BRVK	**Borovoye**	**50.54**	**312**	*ce*P	**P**	**01 41 42.8**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,15nm,0.7s						
MENT	**Mentasta**	**50.70**	**35**	*e*P	**P**	**01 41 45.0**	**+1.5**
	comp=Z,12nm,1.1s						
EKS2	**Erkin-Say**	**50.98**	**298**	P	**P**	**01 41 46.5**	**+0.4**
	SNR=5.3						
AML	**Almayashu**	**51.20**	**298**	P	**P**	**01 41 49.1**	**+1.0**
	SNR=21						
EGAK	**Eagle**	**51.60**	**32**	*e*P	**P**	**01 41 50.6**	**+0.4**
	comp=Z,2.7nm,0.8s						
MNAS	**Manas**	**51.92**	**299**	P	**P**	**01 41 53.8**	**+0.6**
MNAS				pmax	pmax		
	comp=Z,29nm,0.8s						
ARSB	**Arslanbob**	**51.97**	**297**	*e*P	**P**	**01 41 53.9**	**+0.3**
	comp=Z,20nm,0.8s						
SFK	**Sufi-Kurgan**	**52.04**	**295**	P	**P**	**01 41 54.6**	**+0.4**
SFK				pmax	pmax		
	comp=Z,23nm,1.1s						
KK31	**Karatay Array**	**53.10**	**300**	*e*P	**P**	**01 42 01.7**	**-0.1**
KK31	**Karatay Array**	**53.10**	**300**	*e*P	**P**	**01 42 01.7**	**-0.1**
KKAR	**Karatay Array**	**53.10**	**300**	*e*P	**P**	**01 42 01.7**	**0.0**
KKAR	**Karatay Array**	**53.10**	**300**	*e*P	**P**	**01 42 01.7**	**0.0**
EPYK	**Eagle Plains**	**53.19**	**30**	*e*P	**P**	**01 42 03.7**	**+1.7**
	comp=Z,24nm,0.8s						
BTK	**Batken**	**53.95**	**296**	*e*P	**P**	**01 42 07.9**	**-0.2**
	comp=Z,14nm,1.2s						
BTK	**Batken**	**53.95**	**296**	*e*P	**P**	**01 42 07.9**	**-0.2**
BTK				pmax	pmax		
	comp=Z,14nm,1.2s						
INK	**Inuvik**	**54.05**	**27**	*e*P	**P**	**01 42 08.2**	**+0.1**
	comp=Z,6.7nm,0.8s						
INK	**Inuvik**	**54.05**	**27**	P	**P**	**01 42 09.1**	**+0.9**
	comp=Z,6.6nm,0.9s,baz=292,slow=6.4,SNR=21						
GSI	**Gunungsitoli**	**54.09**	**239**	*e*P	**P**	**01 42 08.3**	**-0.9**
	comp=Z,42nm,0.9s						
NIL	**Nilore**	**54.67**	**288**	*e*P	**P**	**01 42 13.3**	**0.0**
NIL	**Nilore**	**54.67**	**288**	*e*P	**P**	**01 42 13.3**	**0.0**
GAR	**Garm**	**54.71**	**295**	*e*P	**P**	**01 42 13.4**	**-0.3**
	comp=Z,65nm,1.4s						
GAR	**Garm**	**54.71**	**295**	*e*P	**P**	**01 42 13.4**	**-0.3**
GAR				pmax	pmax		
	comp=Z,65nm,1.4s						
SVE	**Sverdlovsk**	**55.02**	**318**	*d i*P	**P**	**01 42 16.1**	**+0.6**
SVE				pmax	pmax		
	comp=Z,52nm,0.8s						
CHGR	**Chuyangaron**	**55.67**	**295**	*e*P	**P**	**01 42 20.7**	**+0.1**
	comp=Z,109nm,0.7s						
ARU	**Arti**	**56.23**	**318**	*e*P	**P**	**01 42 24.2**	**0.0**
ARU	**Arti**	**56.23**	**318**	*ce*P	**P**	**01 42 24.5**	**+0.3**
ARU				pmax	pmax		
	comp=Z,58nm,1.0s						
WRAB	**Tennant Creek**	**57.37**	**188**	*e*P	**P**	**01 42 32.8**	**+0.2**
	comp=Z,3.0nm,0.3s						
WRAB	**Tennant Creek**	**57.37**	**188**	*ce*P	**P**	**01 42 33.1**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,16nm,2.5s						
WB2	**Warramunga Arr**	**57.38**	**188**	*e*P	**P**	**01 42 31.9**	**-0.8**
WRA	**Warramunga Arr**	**57.38**	**188**	P	**P**	**01 42 32.5**	**-0.2**
	comp=Z,5.0nm,0.5s,baz=6.3,slow=7.3,SNR=35						
KBL	**Kabul**	**57.45**	**291**	*e*P	**P**	**01 42 33.1**	**-0.3**
	comp=Z,16nm,1.0s						
KBL	**Kabul**	**57.45**	**291**	P	**P**	**01 42 33.2**	**-0.2**
KBL				pmax	pmax		
	comp=Z,15nm,1.1s						
ABKAR	**Akbulak array**	**57.86**	**310**	*e*P	**P**	**01 42 35.4**	**-0.4**
DLBC	**Dease Lake**	**58.29**	**38**	*e*P	**P**	**01 42 39.8**	**+1.1**
	comp=Z,4.8nm,0.7s						
HYB	**Hyderabad**	**58.37**	**268**	*i* P	**P**	**01 42 39.0**	**-0.8**
HYB	**Hyderabad**	**58.37**	**268**	*i* P	**P**	**01 42 39.0**	**-0.8**
PRGR	**Permogore**	**60.59**	**327**	*e*P	**P**	**01 42 53.7**	**-0.7**
PRGR				*e*		01 45 06.1	
PRGR				pmax	pmax		
	comp=Z,20nm,0.9s						
AS01	**Alice Springs**	**61.10**	**188**	*e*P	**P**	**01 42 58.5**	**+0.2**
AS31	**Alice Springs**	**61.11**	**188**	*e*P	**P**	**01 42 59.0**	**+0.6**
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**61.11**	**188**	P	**P**	**01 42 58.6**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=10,slow=7.1,SNR=17						
LVZ	**Lovozero**	**61.90**	**336**	*e*P	**P**	**01 43 03.8**	**+0.6**
LVZ	**Lovozero**	**61.90**	**336**	*e*P	**P**	**01 43 03.8**	**+0.6**
RES	**Resolute Bay**	**62.27**	**14**	*e*P	**P**	**01 43 06.0**	**+0.5**
	comp=Z,9.2nm,1.0s						
RES	**Resolute Bay**	**62.27**	**14**	*e*P	**P**	**01 43 06.0**	**+0.5**
RES				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RES	**Resolute Bay**	**62.27**	**14**	P	**P**	**01 43 05.8**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=312,slow=6.7,SNR=18						
TMCR	**Tamitsa**	**62.55**	**331**	*e*P	**P**	**01 43 07.6**	**0.0**
TMCR				pmax	pmax		
	comp=Z,20nm,1.5s						
YKW3	**Yellowknife Ar**	**63.43**	**30**	*e*P	**P**	**01 43 14.3**	**+0.8**
	comp=Z,2.7nm,0.8s						
YKA	**Yellowknife Ar**	**63.47**	**30**	P	**P**	**01 43 14.4**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=302,slow=6.9,SNR=29						
YKB5	**Yellowknife Ar**	**63.47**	**30**	*e*P	**P**	**01 43 12.4**	**-1.3**
DZM	**Mont Dzumac**	**63.56**	**154**	*e*LR	LR	02 02 14.6	
	comp=Z,292nm,22.5s						
KLMR	**Klimovskoe**	**63.58**	**328**	*e*P	**P**	**01 43 13.4**	**-1.1**
KLMR				*e*		01 45 34.8	
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KLMR	**Klimovskoe**	**63.58**	**328**	*e*P	**P**	**01 43 13.4**	**-1.1**
KLMR				AMP		01 43 15.4	
	comp=Z,7.0nm,0.7s						
KLMR				*e*PP	**PP**	**01 45 34.8**	**+0.6**
ARCES	**ARCESS Array B**	**63.77**	**339**	*e*P	**P**	**01 43 15.3**	**-0.3**
ARCES	**ARCESS Array B**	**63.77**	**339**	P	**P**	**01 43 15.9**	**+0.3**
	comp=Z,4.0nm,0.5s,baz=60,slow=7.6,SNR=25						
GEYT	**Alibeck**	**63.82**	**299**	P	**P**	**01 43 16.4**	**-0.1**
	comp=Z,5.6nm,0.6s,baz=47,slow=2.6,SNR=11						
GYA0B	**ALIBECK ARRAY**	**63.82**	**299**	*e*P	**P**	**01 43 16.1**	**-0.4**
	comp=Z,12nm,0.9s						
SGF	**Sodankyl**	**64.73**	**337**	P	**P**	**01 43 22.5**	**+0.6**
SGF				pmax	pmax		
	comp=Z,29nm,0.8s						
TULEG	**Thule**	**64.78**	**8**	*e*P	**P**	**01 43 22.4**	**+0.3**
	comp=Z,9.5nm,0.9s						
DAG	**Danmarks Havn**	**65.48**	**355**	⇑*i*P	**P**	**01 43 26.9**	**+0.2**
	comp=Z,11nm,0.8s						
DAG				*i*		01 43 39.8	
DAG	**Danmarks Havn**	**65.48**	**355**	⇑*i*P	**P**	**01 43 26.9**	**+0.2**
DAG				*i*		01 43 39.8	
DAG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OUL	**Oulu**	**66.38**	**335**	P	**P**	**01 43 33.1**	**+0.5**
OUL				pmax	pmax		
	comp=Z,19nm,0.8s						
VRH	**Novokhopyorsk**	**67.46**	**318**	*e*P	**P**	**01 43 39.0**	**-0.7**
VRH				*e**SP	**pP**	**01 43 51.2**	**-1.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SUF	**Sumiainen**	**67.78**	**333**	P	**P**	**01 43 41.8**	**+0.3**
SUF				pmax	pmax		
	comp=Z,20nm,0.9s						
OBN	**Obninsk**	**67.94**	**323**	*e*P	**P**	**01 43 42.4**	**-0.2**
	comp=Z,25nm,1.2s						
OBN	**Obninsk**	**67.94**	**323**	*i* P	**P**	**01 43 42.0**	**-0.6**
OBN				*i*		01 43 54.4	
OBN				*i*		01 44 13.1	
OBN				*i*		01 46 10.7	
OBN				pmax	pmax		
	comp=Z,12nm,1.0s						
OBN				MLR	MLR		
	comp=Z,63nm,17.0s						
LPSR	**Galich'ya Gora**	**68.17**	**320**	*e*P	**P**	**01 43 43.7**	**-0.4**
LPSR				*e**SP	**pP**	**01 43 56.2**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FIA1	**FINESS Array S**	**68.61**	**332**	*e*P	**P**	**01 43 46.4**	**-0.4**
	comp=Z,15nm,0.7s						
FINES	**FINESS Array B**	**68.61**	**332**	P	**P**	**01 43 46.9**	**+0.2**
	comp=Z,12nm,0.7s,baz=55,slow=7.7,SNR=37						
H04A	**Detroit Lake**	**68.79**	**50**	*e*P	**P**	**01 43 50.4**	**+2.1**
	comp=Z,14nm,1.4s						
VSR	**Storozhevoye**	**68.80**	**319**	*c i*P	**P**	**01 43 47.5**	**-0.6**
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
STKA	**Stephens Creek**	**68.86**	**180**	*e*P	**P**	**01 43 48.8**	**+0.3**
	comp=Z,1.6nm,1.2s						
STKA	**Stephens Creek**	**68.86**	**180**	P	**P**	**01 43 49.1**	**+0.6**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**68.86**	**180**	P	**P**	**01 43 49.1**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=358,slow=6.4,SNR=6.1						
FORT	**Forrest**	**68.94**	**192**	*e*P	**P**	**01 43 49.2**	**+0.2**
	comp=Z,40nm,0.8s						
NEW	**Newport**	**69.80**	**44**	P	**P**	**01 43 55.5**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=311,slow=8.3,SNR=3.9						
PINE	**Pine Mountain**	**70.02**	**50**	*e*P	**P**	**01 43 57.5**	**+1.4**
	comp=Z,11nm,0.8s						
YBH	**Yreka Blue Hor**	**70.03**	**52**	P	**P**	**01 43 56.2**	**+0.1**
	comp=Z,2.0nm,1.0s,baz=297,slow=4.2,SNR=4.0						
VSU	**Vasula**	**70.27**	**330**	*ce*P	**P**	**01 43 58.1**	**+1.1**
VSU				pmax	pmax		
	comp=Z,19nm,1.0s						
VSU	**Vasula**	**70.27**	**330**	*e*P	**P**	**01 43 57.0**	**+0.1**
VSU				IAmb	IAmb	01 43 57.8	
	comp=Z,23nm,0.7s						
SUMG	**Summit**	**70.38**	**0**	*e*P	**P**	**01 43 58.9**	**+0.9**
	comp=Z,12nm,1.0s						
SUMG	**Summit**	**70.38**	**0**	*i* P	**P**	**01 43 59.1**	**+1.1**
	comp=Z,22nm,0.9s						
SUMG				*i*		01 44 12.3	
SUMG	**Summit**	**70.38**	**0**	*i* P	**P**	**01 43 59.1**	**+1.1**
SUMG				*i*		01 44 12.3	
SUMG				pmax	pmax		
	comp=Z,22nm,0.9s						
ZEI	**Tsey**	**70.72**	**309**	*e*P	**P**	**01 43 58.9**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBZ	**Khabaz**	**70.82**	**311**	P	**P**	**01 44 00.9**	**+0.2**
	comp=Z,9.6nm,0.9s,baz=35,slow=2.7,SNR=13						
KBZ				pP	**pP**	**01 44 14.3**	**+0.4**
	comp=Z,16nm,0.8s,baz=40,slow=9.7,SNR=13						
KIV	**Kislovodsk**	**70.82**	**311**	*e*P	**P**	**01 44 00.5**	**-0.3**
	comp=Z,48nm,0.9s						
KIV	**Kislovodsk**	**70.82**	**311**	⇑*i*P	**P**	**01 44 00.8**	**0.0**
KIV	**Kislovodsk**	**70.82**	**311**	*e*P	**P**	**01 44 01.7**	**+0.9**
KIV				pmax	pmax		
	comp=Z,36nm,1.1s						
BANOM	**Banah**	**71.26**	**289**	*i* P	**P**	**01 44 05.7**	**+2.0**
	SNR=6.2						
SHME	**Shamm**	**71.31**	**289**	*i* P	**P**	**01 44 04.1**	**+0.2**
	SNR=8.9						
MOD	**Modoc Plateau**	**71.45**	**51**	*e*P	**P**	**01 44 05.3**	**+0.5**
	comp=Z,2.7nm,0.9s						
BMO	**Blue Mountains**	**71.61**	**47**	*e*P	**P**	**01 44 06.9**	**+1.3**
	comp=Z,3.2nm,0.8s						
GNI	**Garni**	**71.65**	**307**	*e*P	**P**	**01 44 05.8**	**-0.2**
GNI	**Garni**	**71.65**	**307**	*e*P	**P**	**01 44 05.8**	**-0.2**
MSFE	**Esma-Masafi**	**71.67**	**288**	P	**P**	**01 44 06.6**	**+0.4**
J08A	**Circle Bar Ran**	**71.76**	**49**	*e*P	**P**	**01 44 07.2**	**+0.7**
	comp=Z,3.7nm,0.8s						
SCO	**Scoresbysund**	**71.82**	**354**	*e*P	**P**	**01 44 06.8**	**+0.6**
	comp=Z,9.4nm,1.1s						
SCO	**Scoresbysund**	**71.82**	**354**	*i* P	**P**	**01 44 06.2**	**0.0**
SCO	**Scoresbysund**	**71.82**	**354**	*e*P	**P**	**01 44 06.8**	**+0.6**
SCO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
UOSS	**Minazif**	**71.86**	**288**	*e*P	**P**	**01 44 07.6**	**+0.4**
	comp=Z,14nm,0.9s						
UOSS	**Minazif**	**71.86**	**288**	P	**P**	**01 44 07.4**	**+0.1**
HATD	**Hatta, Dubai**	**71.98**	**288**	*i* P	**P**	**01 44 08.3**	**+0.3**
	SNR=10						
ASHO	**Ashiyiah**	**72.11**	**288**	P	**P**	**01 44 08.9**	**+0.1**
WVOR	**Wild Horse Val**	**72.18**	**50**	*e*P	**P**	**01 44 10.5**	**+1.4**
	comp=Z,2.7nm,0.9s						
WVOR	**Wild Horse Val**	**72.18**	**50**	*e*P	**P**	**01 44 10.5**	**+1.4**
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
IZAR	**Zarasai**	**72.23**	**328**	*e*P	**P**	**01 44 09.6**	**+0.6**
IZAR				IAmb	IAmb	01 44 25.5	
	comp=Z,4.4nm,0.6s						
IDID	**Didziasalis**	**72.30**	**327**	*e*P	**P**	**01 44 10.0**	**+0.6**
IDID				IAmb	IAmb	01 44 10.4	
	comp=Z,7.2nm,0.9s						
ISAL	**Salakas**	**72.40**	**327**	*e*P	**P**	**01 44 10.6**	**+0.6**
ISAL				IAmb	IAmb	01 44 11.9	
	comp=Z,9.2nm,1.0s						
IIGN	**Ignalina**	**72.50**	**327**	*e*P	**P**	**01 44 11.2**	**+0.6**
IIGN				IAmb	IAmb	01 44 12.4	
	comp=Z,5.3nm,0.6s						
BEKR	**Beckworth**	**72.55**	**53**	*e*P	**P**	**01 44 12.2**	**+0.8**
	comp=Z,3.9nm,0.9s						
NACGM	**Naroch**	**72.55**	**327**	*e*	**P**	**01 44 11.0**	**+0.1**
ALNE	**Al Ain**	**72.69**	**287**	*i* P	**P**	**01 44 12.4**	**+0.2**
	SNR=7.3						
ASUD	**Al Ashush, Dub**	**72.70**	**288**	*i* P	**P**	**01 44 12.7**	**+0.4**
	SNR=9.4						
FFC	**Flin Flon**	**73.36**	**33**	*e*P	**P**	**01 44 16.6**	**+0.9**
	comp=Z,8.8nm,0.9s						
FFC	**Flin Flon**	**73.36**	**33**	*ce*P	**P**	**01 44 16.9**	**+1.2**
CMB	**Columbia Colle**	**73.57**	**55**	*e*P	**P**	**01 44 17.5**	**+0.3**
	comp=Z,20nm,1.0s						
CMB	**Columbia Colle**	**73.57**	**55**	*e*P	**P**	**01 44 17.5**	**+0.3**
CMB				pmax	pmax		
	comp=Z,20nm,1.0s						
HRY	**Holter Researc**	**73.63**	**43**	*e*P	**P**	**01 44 18.4**	**+0.8**
FCC	**Fort Churchill**	**73.66**	**27**	*e*P	**P**	**01 44 17.8**	**+0.5**
	comp=Z,10nm,0.9s						
FCC	**Fort Churchill**	**73.66**	**27**	*e*P	**P**	**01 44 17.8**	**+0.5**
FCC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NC405	**NORSAR Array S**	**73.75**	**337**	*e*P	**P**	**01 44 18.1**	**+0.2**
YERR	**Yerington**	**73.76**	**53**	*e*P	**P**	**01 44 18.7**	**+0.1**
	comp=Z,5.6nm,1.0s						
NC204	**NORSAR Array S**	**73.92**	**338**	*e*P	**P**	**01 44 19.6**	**+0.7**
NB201	**NORSAR Array S**	**73.93**	**337**	*e*P	**P**	**01 44 19.2**	**+0.2**
EGMT	**Eagleton**	**73.94**	**41**	*e*P	**P**	**01 44 19.7**	**+0.4**
	comp=Z,7.2nm,0.9s						
NB2	**NORSAR Subarra**	**73.96**	**337**	P	**P**	**01 44 19.2**	**+0.1**
	comp=Z,2.7nm,0.5s,baz=39,slow=6.2						
NB2	**NORSAR Subarra**	**73.96**	**337**	P	**P**	**01 44 16.2**	**-3.0**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NOA	**NORSAR Array B**	**73.96**	**337**	P	**P**	**01 44 19.3**	**+0.2**
	comp=Z,6.0nm,0.8s,baz=39,slow=6.0,SNR=21						
NOA				pP	**pP**	**01 44 32.0**	**-0.4**
	comp=Z,5.6nm,0.7s,baz=39,slow=5.9,SNR=11						
DLMT	**Dillon**	**74.02**	**45**	*e*P	**P**	**01 44 21.0**	**+1.1**
	comp=Z,7.4nm,1.0s						
HLID	**Hailey**	**74.05**	**47**	*e*P	**P**	**01 44 21.2**	**+1.1**
	comp=Z,2.6nm,1.0s						
NORES	**NORESS Array B**	**74.10**	**337**	P	**P**	**01 44 19.9**	**0.0**
AKASG	**Malin Array Be**	**74.15**	**322**	P	**P**	**01 44 20.3**	**-0.1**
	comp=Z,16nm,0.6s,baz=47,slow=6.0,SNR=26						
AKBB	**Malin Array Si**	**74.15**	**322**	*e*P	**P**	**01 44 20.2**	**-0.1**
	comp=Z,15nm,0.8s						
KIEV	**Kiev**	**74.16**	**322**	*e*P	**P**	**01 44 20.0**	**-0.4**
	comp=Z,14nm,0.8s						
KIEV	**Kiev**	**74.16**	**322**	⇑*i*P	**P**	**01 44 20.4**	**0.0**
KIEV	**Kiev**	**74.16**	**322**	P	**P**	**01 44 20.4**	**0.0**
KIEV	**Kiev**	**74.16**	**322**	*e*P	**P**	**01 44 20.0**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,14nm,0.8s						
AK11	**Malin Array Si**	**74.19**	**322**	*e*P	**P**	**01 44 20.3**	**-0.3**
NAO01	**NORSAR Array S**	**74.22**	**337**	*e*P	**P**	**01 44 20.3**	**-0.2**
BOZ	**Bozeman (W)**	**74.42**	**44**	*e*P	**P**	**01 44 21.2**	**-1.0**
	comp=Z,8.9nm,0.7s						
BOZ	**Bozeman (W)**	**74.42**	**44**	*e*P	**P**	**01 44 21.2**	**-1.0**
BOZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KVN	**Kaiserville**	**74.45**	**53**	*e*P	**P**	**01 44 23.7**	**+1.1**
	comp=Z,4.0nm,0.9s						
KVN	**Kaiserville**	**74.45**	**53**	*e*P	**P**	**01 44 23.7**	**+1.1**
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SIRT	**Sirnak**	**74.62**	**305**	*e*P	**P**	**01 44 24.1**	**+0.7**
	comp=Z,48nm,0.9s						
NV01	**Mina Array Sit**	**74.68**	**53**	*e*P	**P**	**01 44 24.6**	**+0.6**
NVAR	**Mina Array Bea**	**74.68**	**53**	P	**P**	**01 44 25.4**	**+1.4**
	comp=Z,3.1nm,0.9s,baz=280,slow=5.5,SNR=15						
NVAR				pP	**pP**	**01 44 37.9**	**+0.7**
	comp=Z,3.4nm,0.8s,baz=282,slow=6.3,SNR=11						
YHB	**Horse Butte**	**75.18**	**45**	*e*P	**P**	**01 44 27.4**	**+0.7**
	comp=Z,4.7nm,0.8s						
SIM	**Simferopol'**	**75.22**	**316**	*e*P	**P**	**01 44 27.5**	**+0.9**
SIM				*e*		01 44 40.0	
SIM				pmax	pmax		
	comp=Z,15nm,0.9s						
SIM				MLR	MLR		
	comp=Z,120nm,16.0s						

ELK	Elko	75.23	50	P	P	01 44 28.9	+1.8
	comp=Z,1.3nm,0.9s,baz=317,slow=5.8,SNR=6.2						
ELK				pP	pP	01 44 41.0	+0.6
	comp=Z,1.3nm,0.8s,baz=301,slow=8.8,SNR=4.0						
YHH	Holmes Hill	75.35	45	*e*P	P	01 44 28.4	+0.6
	comp=Z,1.7nm,0.8s						
YFT	Old Faithful	75.56	45	*e*P	P	01 44 29.8	+0.8
	comp=Z,6.9nm,1.0s						
H17A	Grant Village	75.74	45	*e*P	P	01 44 31.0	+0.9
	comp=Z,6.1nm,0.8s						
IMW	Indian Meadow	75.85	45	*e*P	P	01 44 31.4	+0.7
	comp=Z,5.1nm,0.8s						
FXWY	Fox Creek	75.96	46	*e*P	P	01 44 32.5	+1.3
	comp=Z,3.3nm,0.9s						
RLMT	Red Lodge	76.02	44	*e*P	P	01 44 32.2	+0.7
	comp=Z,2.3nm,0.8s						
MOOW	Moose Ponds	76.05	45	*e*P	P	01 44 32.2	+0.5
	comp=Z,4.7nm,1.3s						
MOOW				*e*pP	pP	01 44 46.3	+1.3
HVU	Hansel Valley	76.09	48	*e*P	P	01 44 33.0	+1.1
HVU	Hansel Valley	76.09	48	*e*P	P	01 44 33.0	+1.1
R11A	Troy Canyon, C	76.45	52	*e*P	P	01 44 34.9	+0.8
	comp=Z,3.2nm,0.8s						
LAO	LASA Array	76.64	41	*e*P	P	01 44 35.0	+0.1
	comp=Z,6.8nm,0.9s						
TPNV	Topopah Spring	76.87	54	*e*P	P	01 44 36.9	+0.5
	comp=Z,5.4nm,0.8s						
TPNV	Topopah Spring	76.87	54	*e*P	P	01 44 36.9	+0.5
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DUG	Dugway, Tooele	77.04	49	*e*P	P	01 44 37.2	-0.1
	comp=Z,3.4nm,0.7s						
DUG	Dugway, Tooele	77.04	49	*e*P	P	01 44 37.2	-0.1
DUG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
IAS	Iasi	77.28	320	⇑*i*P	P	01 44 38.8	+0.5
BW06	Boulder Array	77.34	46	*e*P	P	01 44 39.7	+0.6
	comp=Z,2.1nm,0.8s						
PD31	Pinedale Array	77.34	46	*e*P	P	01 44 39.4	+0.3
PDAR	Pinedale Array	77.34	46	P	P	01 44 40.1	+1.0
	comp=Z,1.4nm,0.8s,baz=269,slow=1.9,SNR=12						
PDAR				pP	pP	01 44 53.2	+0.8
	comp=Z,1.3nm,0.7s,baz=246,slow=1.9,SNR=7.4						
LEOM	Leova	77.40	319	⇓*i*P	P	01 44 39.6	+0.6
LEOM	Leova	77.40	319	P	P	01 44 39.6	+0.6
PSUT	Pine Spring	77.42	51	*e*P	P	01 44 40.3	+0.7
	comp=Z,3.3nm,1.1s						
NLU	North Lily Min	77.63	49	*e*P	P	01 44 42.0	+1.3
KWP	Kalwaria Pacla	77.97	324	*e*P	P	01 44 43.5	+1.4
KWP	Kalwaria Pacla	77.97	324	*e*P	P	01 44 43.5	+1.4
BUR08	Bucovina Ar. S	78.16	322	*e*P	P	01 44 44.1	+0.7
BUR04	Bucovina Ar. S	78.17	322	*e*P	P	01 44 43.8	+0.4
BURAR	Bucovina Array	78.17	322	⇓*i*P	P	01 44 43.8	+0.4
BURAR	Bucovina Array	78.17	322	P	P	01 44 43.8	+0.4
BIZ	Bicaz	78.19	321	⇓*i*P	P	01 44 44.3	+0.9
TESR	Tescani	78.20	320	⇑*i*P	P	01 44 44.1	+0.7
PETR	Petresti	78.43	319	⇓*i*P	P	01 44 46.4	+1.7
ODBI	Odobesti	78.49	319	⇑*i*P	P	01 44 46.5	+1.4
VRI	Vrincioaia	78.59	320	⇑*i*P	P	01 44 47.0	+1.3
VRI	Vrincioaia	78.59	320	P	P	01 44 47.0	+1.3
PLOR	Plostina	78.64	320	⇑*i*P	P	01 44 47.5	+1.5
PLOR	Plostina	78.64	320	P	P	01 44 47.5	+1.5
LCMT	Little Creek M	78.74	52	*e*P	P	01 44 47.1	+0.3
	comp=Z,5.2nm,1.1s						
MTPU	Mount Pierson	78.76	51	*e*P	P	01 44 47.5	+0.4
	comp=Z,3.0nm,0.8s						
BR131	Keskin Array S	78.76	312	*e*P	P	01 44 47.0	+0.1
BRTR	Keskin Array B	78.76	312	*ce*P	P	01 44 47.2	+0.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRTR	Keskin Array B	78.76	312	P	P	01 44 47.0	+0.1
	comp=Z,2.4nm,0.7s,baz=92,slow=3.4,SNR=14						
BRTR				pP	pP	01 45 00.3	+0.1
	comp=Z,3.6nm,0.8s,baz=92,slow=2.8,SNR=6.9						
TLB	Topalu	78.76	318	⇑*i*P	P	01 44 47.0	+0.4
TLB	Topalu	78.76	318	P	P	01 44 47.0	+0.4
OJC	Ojcow	78.87	326	*e*P	P	01 44 48.0	+0.9
OJC	Ojcow	78.87	326	*e*P	P	01 44 47.3	+0.2
	comp=Z,20nm,1.0s						
OJC	Ojcow	78.87	326	*e*P	P	01 44 48.0	+0.9
OZUR		78.92	320	⇑*i*P	P	01 44 48.7	+1.2
ARCR	ARCALIA	78.96	322	⇑*i*P	P	01 44 49.2	+1.6
SRU	San Rafael Swe	79.09	49	*e*P	P	01 44 49.2	+0.5
	comp=Z,4.9nm,0.7s						
SRU	San Rafael Swe	79.09	49	P	P	01 44 50.4	+1.6
TRPA	Tarpa	79.11	323	⇑*i*P	P	01 44 49.4	+1.0
TRPA	Tarpa	79.11	323	⇑*e*P	P	01 44 49.0	+0.6
ULM	Lac du Bonnet	79.16	33	P	P	01 44 48.9	+0.2
	comp=Z,4.0nm,0.9s,baz=277,slow=4.6,SNR=7.0						
ICOR	Ion Corvin	79.21	318	⇑*i*P	P	01 44 50.0	+1.0
DOPR	Dopca	79.21	320	⇓*i*P	P	01 44 50.7	+1.7
NIE	Niedzica	79.23	325	*e*P	P	01 44 50.4	+1.3
NIE	Niedzica	79.23	325	*e*P	P	01 44 50.4	+1.3
MLR	Muntele Rosu	79.25	320	⇑*i*P	P	01 44 49.9	+0.5
MLR	Muntele Rosu	79.25	320	P	P	01 44 49.9	+0.5
RSSD	Black Hills	79.50	42	*e*P	P	01 44 51.8	+0.9
	comp=Z,2.8nm,0.7s						
RSSD	Black Hills	79.50	42	*e*P	P	01 44 51.8	+0.9
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CJR	Cluj-Napoca	79.59	322	⇑*i*P	P	01 44 52.4	+1.3
CJR	Cluj-Napoca	79.59	322	P	P	01 44 52.3	+1.2
SULR		79.64	319	⇑*i*P	P	01 44 52.3	+0.9
VOIR		79.75	320	⇑*i*P	P	01 44 52.6	+0.5
VOIR		79.75	320	P	P	01 44 52.6	+0.5
LANS	Liptovska Anna	79.80	326	*e*P	P	01 44 53.7	+1.5
LANS	Liptovska Anna	79.80	326	*e*P	P	01 44 53.7	+1.5
OKC	Ostrava-Krasne	79.88	327	*e*P	P	01 44 53.4	+0.8
OKC	Ostrava-Krasne	79.88	327	*e*P	P	01 44 53.4	+0.8
MTUR	Matau	79.89	320	⇑*i*P	P	01 44 52.9	+0.1
KSP	Ksiaz	79.92	328	*e*P	P	01 44 53.8	+1.0
KSP	Ksiaz	79.92	328	*e*P	P	01 44 53.8	+1.0
DRGR		79.97	322	⇑*i*P	P	01 44 53.9	+0.7
DRGR		79.97	322	P	P	01 44 53.8	+0.6
ARR	Arges	80.01	320	⇓*i*P	P	01 44 54.8	+1.4
MORC	Moravsky Berou	80.19	327	*e*P	P	01 44 54.6	+0.3
	comp=Z,9.9nm,1.0s						
MORC	Moravsky Berou	80.19	327	⇑*i*P	P	01 44 55.3	+1.0
MORC	Moravsky Berou	80.19	327	*e*P	P	01 44 54.6	+0.3
MORC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MORC	Moravsky Berou	80.19	327	*e*P	P	01 44 55.1	+0.8
DPC	Dobruska-Polom	80.28	328	*e*P	P	01 44 55.6	+0.8
DPC				*e*pP	pP	01 45 08.6	+0.4
DPC	Dobruska-Polom	80.28	328	*e*P	P	01 44 55.6	+0.8
DPC				*e*		01 45 08.6	
KRLC	Kraliky	80.29	328	*e*P	P	01 44 54.8	-0.1
KRLC	Kraliky	80.29	328	*e*P	P	01 44 54.8	-0.1
UPC	Upice	80.29	328	*e*P	P	01 44 55.5	+0.7
UPC				*e*pP	pP	01 45 08.8	+0.6
UPC	Upice	80.29	328	*e*P	P	01 44 55.5	+0.7
UPC				*e*		01 45 08.8	
PV09	Paradox Valley	80.32	49	*e*P	P	01 44 56.0	+0.5
PV14	Lion Creek, Pa	80.47	49	*e*P	P	01 44 57.0	+0.7
	comp=Z,20nm,1.3s						
PSZ	Piszkesteto	80.50	325	*e*P	P	01 44 56.4	+0.3
	comp=Z,12nm,1.0s						
PSZ	Piszkesteto	80.50	325	⇓*i*P	P	01 44 57.1	+1.1
PSZ	Piszkesteto	80.50	325	*e*P	P	01 44 56.4	+0.3
PSZ				pmax	pmax		
	comp=Z,12nm,1.0s						
PSZ	Piszkesteto	80.50	325	⇑*e*P	P	01 44 56.0	0.0
VYHS	Vyhne	80.56	325	*e*P	P	01 44 57.0	+0.7
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VYHS	Vyhne	80.56	325	*e*P	P	01 44 57.0	+0.7
PV17	East Wray Mesa	80.57	49	*e*P	P	01 44 57.4	+0.6
	comp=Z,5.2nm,0.8s						
PV16	Nyswonger Mesa	80.57	49	*e*P	P	01 44 57.2	+0.4
	comp=Z,4.3nm,0.8s						
AGMN	Agassiz Nation	80.60	35	*e*P	P	01 44 56.4	-0.1
	comp=Z,3.4nm,0.8s						
PV03	Paradox Valley	80.65	49	*e*P	P	01 44 58.0	+0.7
	comp=Z,9.1nm,1.3s						
RAYN	Ar Rayn	80.68	292	*e*P	P	01 44 57.4	0.0
	comp=Z,21nm,1.4s						
RAYN	Ar Rayn	80.68	292	*e*P	P	01 44 57.4	0.0
RAYN				pmax	pmax		
	comp=Z,21nm,1.4s						
PV13	Radium Mtn., P	80.73	49	*e*P	P	01 44 58.4	+0.7
	comp=Z,8.2nm,1.1s						
SIRR	Siria	80.85	322	⇑*i*P	P	01 44 58.3	+0.4
BRG	Berggiesshubel	80.87	329	*e*P	P	01 44 58.2	+0.3
	comp=Z,7.6nm,0.9s						
BRG				*e*		01 45 11.0	
	comp=Z,12nm,1.4s						
BRG	Berggiesshubel	80.87	329	*e*P	P	01 44 58.2	+0.3
BRG				*e*		01 45 11.0	
BRG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PVCC	Panska Ves	80.88	329	*e*P	P	01 44 59.2	+1.3
PVCC	Panska Ves	80.88	329	*e*P	P	01 44 59.2	+1.3
CLL	Collm	80.91	330	*e*P	P	01 44 58.1	+0.1
	comp=Z,14nm,0.9s						
CLL	Collm	80.91	330	⇑*i*P	P	01 44 58.4	+0.3
	comp=Z,14nm,0.9s						
CLL				*e*pP	pP	01 45 11.0	-0.5
CLL				*i*		01 45 13.6	
CLL				*e*PP	PP	01 48 01.0	-1.2
CLL	Collm	80.91	330	⇑*i*P	P	01 44 58.4	+0.3
CLL				*e*		01 45 11.0	
CLL				*i*		01 45 13.6	
CLL				pmax	pmax		
	comp=Z,14nm,0.9s						
GZR	Gura Zlata	80.92	321	⇓*i*P	P	01 44 58.8	+0.4
GZR	Gura Zlata	80.92	321	P	P	01 44 58.8	+0.4
VRAC	Vranov	80.95	327	⇓*i*P	P	01 44 59.6	+1.3
VRAC	Vranov	80.95	327	P	P	01 44 59.6	+1.3
VRAC	Vranov	80.95	327	*e*P	P	01 44 59.3	+1.0
VLAD	Vladila	81.08	319	⇓*i*P	P	01 44 59.3	+0.2
KRUC	Moravsky	81.22	327	*e*P	P	01 45 00.5	+0.7
SRE	Strehaia	81.22	321	⇑*i*P	P	01 44 59.8	-0.1
SRE	Strehaia	81.22	321	P	P	01 44 59.8	-0.1
GOPC	GO Pecny, Ondr	81.26	328	*e*pP	pP	01 45 14.0	+0.6
PRU	Pruhonice	81.30	329	*e*P	P	01 45 01.2	+1.0
PRU				*e*pP	pP	01 45 14.0	+0.4
PRU	Pruhonice	81.30	329	*e*P	P	01 45 01.2	+1.0
PRU				*e*		01 45 14.0	
BZS	Buzias	81.34	322	⇓*i*P	P	01 45 00.3	-0.2
BZS	Buzias	81.34	322	P	P	01 45 00.2	-0.2
MODS	Modra-Piesok	81.35	326	*e*P	P	01 45 01.8	+1.3
MODS				pmax	pmax		
	comp=Z,14nm,1.2s						
MODS	Modra-Piesok	81.35	326	*e*P	P	01 45 01.8	+1.3
TREC	Trest	81.43	328	*e*P	P	01 45 01.9	+1.0
TREC	Trest	81.43	328	*e*P	P	01 45 01.9	+1.0
PUNG	Punghina	81.63	320	⇑*i*P	P	01 45 02.6	+0.6
MDVR	Moldovita	81.89	321	⇓*i*P	P	01 45 03.5	0.0
SOP	Sopron	82.19	326	⇑*e*P	P	01 45 06.0	+1.1
SOP	Sopron	82.19	326	P	P	01 45 06.3	+1.4
S22A	4UR Ranch, Cre	82.19	48	*e*P	P	01 45 06.2	+0.8
	comp=Z,2.6nm,0.9s						
CONA	Conrad Observa	82.31	327	*e*P	P	01 45 06.6	+1.0
	comp=Z,9.1nm,1.0s						
MORH	Mrgy, Hungar	82.33	324	*e*P	P	01 45 05.0	-0.6
MORH	Mrgy, Hungar	82.33	324	*e*P	P	01 45 05.3	-0.3
KHC	Kasperske Hory	82.36	329	*e*P	P	01 45 06.0	+0.1
	comp=Z,4.7nm,0.9s						
KHC	Kasperske Hory	82.36	329	*e*P	P	01 45 06.7	+0.8
KHC				*e*pP	pP	01 45 19.5	+0.2
KHC	Kasperske Hory	82.36	329	*e*P	P	01 45 06.7	+0.8
KHC				*e*		01 45 19.5	
GEC2	GERESS Array S	82.53	328	*e*P	P	01 45 07.2	+0.4
	comp=Z,7.4nm,1.0s						
GEC2	GERESS Array S	82.53	328	*e*P	P	01 45 07.2	+0.4
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GERES	GERESS Array B	82.53	328	P	P	01 45 06.8	0.0
	comp=Z,3.2nm,0.6s,baz=35,slow=5.6,SNR=31						
GERES				pP	pP	01 45 20.1	-0.1
	comp=Z,2.3nm,0.7s,baz=35,slow=5.8,SNR=8.2						
GEA0	GERESS Array S	82.54	328	*e*P	P	01 45 07.0	+0.2
FRGS	Fruska Gora	82.55	323	⇑*i*P	P	01 45 07.1	+0.2
VTS	Vitosha	82.65	319	*e*P	P	01 45 08.0	+0.4
	comp=Z,8.3nm,0.7s						
VTS	Vitosha	82.65	319	⇑*i*P	P	01 45 08.8	+1.2
VTS	Vitosha	82.65	319	*e*P	P	01 45 08.0	+0.4
VTS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GRA1	Grafenberg Arr	82.88	330	*e*P	P	01 45 08.2	-0.3
	comp=Z,18nm,1.0s						
GRF	Grafenberg Arr	82.88	330	*e*P	P	01 45 08.2	-0.3
GRF				pmax	pmax		
	comp=Z,18nm,1.0s						
GRFO	Grafenberg	82.88	330	*e*P	P	01 45 09.1	+0.6
	comp=Z,20nm,1.1s						
GRFO	Grafenberg	82.88	330	*e*P	P	01 45 09.1	+0.6
GRFO				pmax	pmax		
	comp=Z,20nm,1.1s						
EKA	Eskdalemuir Ar	82.89	341	P	P	01 45 10.1	+1.7
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKA	Eskdalemuir Ar	82.89	341	LR	LR	02 25 26.3	
	comp=Z,56nm,19.9s,baz=110,slow=38						
SDCO	Great Sand Dun	82.97	47	*e*P	P	01 45 10.3	+0.8
	comp=Z,1.9nm,0.9s						
ARSA	Arzberg	82.97	326	*e*P	P	01 45 09.7	+0.7
	comp=Z,7.2nm,1.0s						
MOA	Molln	83.06	327	*e*PcP	P	01 45 11.2	+1.7
	comp=Z,6.0nm,1.2s						
DIVS	Divibare	83.23	322	*e*P	P	01 45 10.8	+0.3
	comp=Z,13nm,1.4s						
DIVS	Divibare	83.23	322	*e*P	P	01 45 10.4	-0.1
ECSD	EROS Data Cent	83.58	38	*e*P	P	01 45 13.2	+0.9
	comp=Z,4.1nm,0.9s						
GROS	Grobnik	83.58	326	*i* P	P	01 45 12.4	+0.2
SOKA	Soboth	83.63	326	*e*P	P	01 45 12.9	+0.4
	comp=Z,17nm,1.1s,SNR=7.5						
HPK	Haverah Park	83.69	339	*e*P	P	01 45 13.2	+0.7
HPK				IAmb	IAmb	01 45 14.4	
	comp=Z,18nm,1.0s						
BBLS	Lazići	83.69	322	⇑*i*P	P	01 45 13.6	+0.7
HAPS	Han Pijesak,Bl	83.75	322	⇑*i*P	P	01 45 13.0	-0.2
STIP	Stip	83.86	319	*i* P	P	01 45 13.2	-0.4
GOLS	Golise	83.87	325	*i* P	P	01 45 13.8	+0.1
VAY	Valandovo	83.92	319	*i* P	P	01 45 14.5	+0.5
OBKA	Obir	83.97	326	*i* PcP	P	01 45 15.0	+0.8
	comp=Z,5.1nm,0.8s						
T25A	Trinidad	84.02	47	*e*P	P	01 45 15.6	+0.7
	comp=Z,4.4nm,0.8s						
KBA	Koelnbreinsper	84.06	327	*i* PcP	P	01 45 15.5	+0.7
	comp=Z,6.6nm,0.8s						
CRES	Cresnjev	84.09	325	*e*P	P	01 45 14.0	-0.8
BLY	Banja Luka	84.11	324	*e*P	P	01 45 14.7	-0.2
	comp=Z,5.8nm,1.0s						
BLY	Banja Luka	84.11	324	⇓*i*P	P	01 45 15.4	+0.6
BLY	Banja Luka	84.11	324	*e*P	P	01 45 14.5	-0.3
MEM	Membach	84.11	333	⇑P	P	01 45 14.8	0.0
	comp=Z,4.8nm,0.9s						
PMOR	Pomariorio Ree	84.16	114	*e*T	T	03 18 03.5	
	comp=Z,19nm,0.2s						
LBWR	Ladybower, Pea	84.21	339	*e*P	P	01 45 15.4	+0.2
LBWR				IAmb	IAmb	01 45 18.0	
	comp=Z,16nm,0.9s						
ANMO	Albuquerque	84.27	50	*e*P	P	01 45 16.5	+0.4
	comp=Z,5.8nm,1.2s						
ANMO				pP	pP	01 45 31.9	+2.3
ANMO	Albuquerque	84.27	50	P	P	01 45 18.0	+1.8
	comp=Z,1.1nm,0.7s,baz=290,slow=2.7,SNR=6.0						
ANMO				pP	pP	01 45 31.9	+2.3
	comp=Z,2.7nm,1.0s,baz=302,slow=5.3,SNR=4.8						
BCLA	Clavier	84.51	334	⇑P	P	01 45 16.1	-0.7
KRUS	Krusevo	84.58	319	*i* P	P	01 45 17.9	+0.5
WATA	Walderalm	84.60	328	*i* PcP	P	01 45 18.2	+0.7
	comp=Z,5.0nm,1.0s						
PPT	Papeete	84.63	117	LR	LR	02 18 39.4	
	comp=Z,63nm,20.9s,baz=268,slow=32						
PPT2	Papeete2	84.65	117	*e*LR	LR	02 11 41.4	
	comp=Z,114nm,24.2s						
ABTA	Abfaltersbach	84.67	328	*i* P	P	01 45 17.8	+0.1
	comp=Z,8.8nm,1.2s						
MOTA	Moosalm	84.79	329	*e*PcP	P	01 45 18.6	+0.2
	comp=Z,4.2nm,0.7s,SNR=5.3						
RETA	Reutte	84.82	329	*e*PcP	P	01 45 19.0	+0.5
	comp=Z,9.0nm,0.8s,SNR=5.7						
PDG	Podgorica	84.82	321	⇑*i*P	P	01 45 18.7	+0.2
PDG	Podgorica	84.82	321	⇑*i*P	P	01 45 18.6	+0.1
TTG	Podgorica	84.82	321	*e*P	P	01 45 18.8	+0.3
	comp=Z,28nm,1.0s						
LIT	Litokhoron	84.83	318	*e*P	P	01 45 18.8	+0.1
	comp=Z,19nm,0.8s						
LIT	Litokhoron	84.83	318	*e*P	P	01 45 18.8	+0.1
LIT				pmax	pmax		
	comp=Z,19nm,0.8s						
SQTA	Sankt Quirin	84.85	329	*i* PcP	P	01 45 19.0	+0.3
	comp=Z,3.8nm,0.7s						
OHR	Ohrid	85.00	319	*i* P	P	01 45 14.6	-5.0
SCHQ	Schefferville	85.00	16	P	P	01 45 19.3	+0.1
	comp=Z,5.0nm,0.7s,baz=359,slow=6.1,SNR=12						
DRME	Dracevica, Mon	85.04	321	⇑*i*P	P	01 45 20.0	+0.4
FOEL	Foel Wylfa	85.08	339	*e*P	P	01 45 21.2	+1.5
FOEL				IAmb	IAmb	01 45 21.9	
	comp=Z,16nm,0.8s						
BFO	Black Forest	85.11	331	*e*P	P	01 45 19.9	0.0
	comp=Z,17nm,0.9s						
BFO	Black Forest	85.11	331	*ce*P	P	01 45 20.4	+0.5
BAIF	Baives	85.20	334	*e*P	P	01 45 19.9	-0.4
BAIF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FETA	Feichten	85.20	329	*i* PcP	P	01 45 20.8	+0.2
	comp=Z,8.4nm,1.0s						
TIR	Tirane	85.31	320	⇑*i*P	P	01 45 21.6	+0.6
DAVA	Damuels	85.34	329	*i* PcP	P	01 45 21.9	+0.6
	SNR=7.9						
CDF	Champ du Feu	85.45	331	*e*P	P	01 45 21.4	-0.3
CDF				pmax	pmax		
	comp=Z,13nm,1.0s						
ECH	Echery	85.66	331	*e*P	P	01 45 22.6	0.0
	comp=Z,9.6nm,0.9s						
ECH	Echery	85.66	331	*e*P	P	01 45 22.6	0.0
ECH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FUORN	Ofenpass-Fuorn	85.72	329	*e*P	P	01 45 23.5	+0.3
	comp=Z,14nm,0.8s						
STRD	Stroud	85.77	338	*e*P	P	01 45 23.4	+0.3
STRD				IAmb	IAmb	01 45 24.5	
	comp=Z,19nm,0.8s						
MCH1	Michaelchurch	85.81	339	*e*P	P	01 45 23.9	+0.6
MCH1				IAmb	IAmb	01 45 24.4	
	comp=Z,16nm,0.8s						
MONM	Monmouth	85.90	339	*e*P	P	01 45 23.9	+0.2
MONM				IAmb	IAmb	01 45 24.0	
	comp=Z,25nm,1.0s						
LPW	Lampeter	86.01	340	*e*P	P	01 45 24.1	-0.1
TAOE	Nuku Hiva Isla	86.10	104	*e*LR	LR	02 12 24.4	
	comp=Z,171nm,25.0s						
HINF	Hinteralfeld	86.10	331	*e*P	P	01 45 24.2	-0.7
HINF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HAU	Haudompre	86.14	332	*e*P	P	01 45 24.4	-0.6
HAU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AMTX	Amarillo	87.17	47	*e*P	P	01 45 30.9	+0.5
	comp=Z,6.0nm,0.8s						
MATE	Matera	87.42	321	⇑*i*P	P	01 45 31.5	+0.2
LOR	Lormes	87.68	333	*e*P	P	01 45 33.1	+0.6
LOR				pmax	pmax		
	comp=Z,11nm,1.0s						
FLN	La Foliniere	87.89	336	*e*P	P	01 45 33.1	-0.3
FLN				pmax	pmax		
	comp=Z,32nm,1.5s						
LDF	La Druitiere	87.92	336	*e*P	P	01 45 33.2	-0.4
LDF				pmax	pmax		
	comp=Z,16nm,1.6s						
SSF	Saint Saulge	87.98	333	*e*P	P	01 45 34.7	+0.8
SSF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LPL	La Plagne	88.05	330	*e*P	P	01 45 34.7	+0.1
LPL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LPG	La Plagne	88.05	330	*e*P	P	01 45 34.9	+0.2
LPG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VLDQ	Val d'Or	88.08	25	*e*P	P	01 45 34.3	0.0
	comp=Z,7.6nm,0.8s						
SMF	Signal de Mont	88.21	332	*e*P	P	01 45 35.9	+0.9
SMF				pmax	pmax		
	comp=Z,13nm,1.3s						
AVF	Avril sur Loir	88.27	333	*e*P	P	01 45 35.1	-0.2
AVF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRR	Gorron	88.34	336	*e*P	P	01 45 35.6	0.0
GRR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TBI	Tubuai	88.55	121	*e*LR	LR	02 13 37.4	
	comp=Z,150nm,26.2s						
TBI	Tubuai	88.55	121	*e*T	T	03 23 34.7	
	comp=Z,55nm,0.3s						
MBDF	Montbardon	88.68	330	*e*P	P	01 45 36.2	-1.3
MBDF				pmax	pmax		
	comp=Z,33nm,1.9s						
LPIG	La Paz	88.90	60	P	P	01 45 39.9	+1.2
	comp=Z,41nm,0.5s,baz=37,slow=5.6,SNR=4.1						
SGMF	Saint Gilles	89.00	337	*e*P	P	01 45 38.6	-0.1
SGMF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ROSF	Rostrenen	89.15	337	*e*P	P	01 45 39.5	+0.1
ROSF				pmax	pmax		
	comp=Z,14nm,0.9s						
QUIF	Quistinic	89.49	337	*e*P	P	01 45 40.7	-0.3
QUIF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MFF	Saint Martin d	89.66	335	*e*P	P	01 45 41.9	+0.1
MFF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TXAR	Lajitas Array	89.81	52	P	P	01 45 44.1	+1.1
	comp=Z,1.1nm,0.5s,baz=301,slow=3.2,SNR=12						
TXAR				pP	pP	01 45 57.0	+0.5
	comp=Z,1.3nm,0.7s,baz=301,slow=2.7,SNR=6.8						
RJF	Les Rejaudoux	90.20	333	*e*P	P	01 45 44.5	+0.1
RJF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CAF	Calviac	90.33	333	*e*P	P	01 45 45.4	+0.4
CAF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LFF	La Frestale	90.80	333	*e*P	P	01 45 47.3	+0.2
MIAR	Mount Ida	91.99	43	*e*P	P	01 45 53.5	+0.6
	comp=Z,4.3nm,0.8s						
MIAR	Mount Ida	91.99	43	*e*P	P	01 45 53.5	+0.6
MIAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WHAR	Wooly Hollow	92.11	41	*e*P	P	01 45 54.6	+1.2
	comp=Z,8.6nm,1.0s						
ETSF	Etsaut	93.03	333	*e*P	P	01 45 58.7	+1.1
ETSF				pmax	pmax		
	comp=Z,24nm,1.7s						
ES19	SONSECA Array	97.04	334	*e*P	P	01 46 16.1	+0.1
ESDC	Sonseca Array	97.08	334	P	P	01 46 15.2	-1.0
	comp=Z,0.9nm,0.8s,baz=25,slow=4.1,SNR=7.5						
ESDC				pP	pP	01 46 29.4	-0.4
	comp=Z,0.1nm,0.4s,baz=21,slow=4.0,SNR=3.7						
TORD	Torodi Ar. Bea	117.22	315	PKP	PKPdf	01 51 28.1	-1.6
	comp=Z,0.5nm,0.5s,baz=7.2,slow=2.1,SNR=8.1						
TORD				PP	PP	01 52 38.1	-1.6
	comp=Z,1.5nm,0.9s,baz=26,slow=6.6,SNR=6.2						
LSZ	Lusaka	117.64	271	*e*PKPdf	PKPdf	01 51 30.8	+0.3
LSZ	Lusaka	117.64	271	*e*PKIKP	PKPdf	01 51 30.8	+0.3
SDV	Santo Domingo	124.99	40	*e*PKPdf	PKPdf	01 51 45.2	+0.3
OTAV	Otavalo	127.41	54	*e*PKPdf	PKiKP	01 51 51.0	+0.6
OTAV	Otavalo	127.41	54	*e*PKIKP	PKiKP	01 51 51.0	+0.6
LPAZ	La Paz	146.41	59	*e*PKPdf	PKPbc	01 52 26.1	0.0
LPAZ	La Paz	146.41	59	PKPbc	PKPbc	01 52 26.7	+0.6
	comp=Z,2.3nm,0.5s,baz=30,slow=4.9,SNR=14						
MNMC	Minye Minye	147.28	65	*e*PKPbc	PKPbc	01 52 29.3	+1.3
LCO	Las Campanas	151.82	82	*e*PKPbc	PKPbc	01 52 39.8	+0.7
LCO	Las Campanas	151.82	82	*e*PKIKP	PKPbc	01 52 39.8	+0.7

TAP 16 01:34:53.2, 24°.32N×121°.34E, h12km, ML2.4, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NNSB	Datong	0.11	19	P	Pg	01 34 56.9	+0.5
	baz=19						
NNSB				*e*S	Sg	01 34 58.6	0.0
	baz=19						
NNS	Nan Shan	0.12	13	P	Pb	01 34 57.1	-0.5
	baz=17						
NNS				S	Sg	01 34 59.0	+0.1
	baz=17						
TWT	Tachien	0.17	245	*e*P	Pb	01 34 57.8	-0.5
	baz=245						
TWT				*e*S	Sg	01 35 00.4	+0.4
	baz=245						
ETLH	Xiulin Townshi	0.17	133	P	Pb	01 34 58.5	+0.1
	baz=132						
ETLH				*e*S	Sg	01 35 01.4	+1.4
	baz=132						
TDCB	Techi	0.18	247	P	Pg	01 34 57.9	+0.5
	baz=247						
TDCB				*e*S	Sg	01 35 00.1	-0.3
	baz=247						
WHF	Hehuan Shan	0.19	202	P	Pg	01 34 58.3	+0.5
	baz=199						
WHF				*e*S	Sg	01 35 01.7	+0.8

	baz=199						
NACB	**Ninganchiao**	**0.27**	**123**	P	Pb	01 35 00.3	+0.2
	baz=123						
NACB				*e*S	Sb	01 35 04.3	-0.4
	baz=123						
CHGB	**Renai**	**0.30**	**210**	P	Pg	01 35 00.0	+0.5
	baz=210						
NDT	**Datong Townshi**	**0.32**	**29**	P	Pb	01 35 00.6	-0.2
	baz=29						
NDT				*e*S	Sg	01 35 04.8	+0.7
	baz=29						
TWD	**Chiawan**	**0.34**	**136**	*e*P	Pb	01 35 01.1	0.0
	baz=135						
TWD				*e*S	Sb	01 35 06.2	-0.2
	baz=135						
YHNB	**Yeheng**	**0.34**	**5**	P	Pb	01 35 01.0	-0.3
	baz=4.0						
YHNB				*e*S	Sg	01 35 05.5	+0.5
	baz=4.0						
NSK	**Sanguang**	**0.35**	**2**	P	Pb	01 35 01.2	-0.2
	baz=3.0						
NSK				*e*S	Sg	01 35 05.8	+0.7
	baz=3.0						
WHP	**Taichung City**	**0.36**	**263**	P	Pb	01 35 01.7	0.0
	baz=262						
WHP				*e*S	Sg	01 35 06.3	+0.8
	baz=262						
ENTT	**Nioudou**	**0.38**	**33**	P	Pb	01 35 01.8	0.0
	baz=33						
ENTT				*e*S	Sg	01 35 06.7	+0.9
	baz=33						
ENA	**Nanau**	**0.38**	**74**	*e*P	Pb	01 35 01.9	0.0
	baz=74						
ENA				*e*S	Sb	01 35 06.9	-0.7
	baz=74						
NANB	**Nanao**	**0.39**	**74**	P	Pb	01 35 02.0	+0.1
	baz=74						
NANB				S	Sb	01 35 07.3	-0.6
	baz=74						
OWD	**Renai**	**0.40**	**203**	*e*P	Pg	01 35 01.4	+0.1
	baz=202						
OWD				*e*S	Sb	01 35 09.0	+0.6
	baz=202						
NSTT	**Nanjuang**	**0.44**	**315**	*e*P	Pb	01 35 03.1	+0.2
	baz=315						
NSTT				*e*S	Sb	01 35 09.3	-0.1
	baz=315						
LIOB	**Emei**	**0.44**	**317**	*e*P	Pg	01 35 02.4	+0.4
	baz=317						
LIOB				S	Sb	01 35 09.7	+0.3
	baz=317						
NWLT	**Wulai**	**0.47**	**18**	P	Pb	01 35 03.5	0.0
	baz=17						
NWLT				*e*S	Sg	01 35 09.2	+0.3
	baz=17						
TWE	**Neicheng**	**0.49**	**37**	P	Pb	01 35 04.1	+0.3
	baz=38						
TWE				*e*S	Sb	01 35 10.9	0.0
	baz=38						
SLBB	**Yuanshan**	**0.50**	**32**	*e*P	Pb	01 35 04.3	+0.2
	baz=31						
SLBB				*e*S	Sb	01 35 10.8	-0.5
	baz=31						
ESL	**Shilin**	**0.51**	**171**	*e*P	Pb	01 35 04.0	-0.2
	baz=169						
ESL				S	Sb	01 35 11.1	-0.5
	baz=169						
TWQ1	**Liyutan**	**0.52**	**273**	*e*P	Pg	01 35 03.8	+0.4
	baz=272						
TWQ1				S	Sb	01 35 12.3	+0.6
	baz=272						
WLTB	**Daxi**	**0.53**	**351**	*e*P	Pg	01 35 03.8	+0.2
	baz=351						
WLTB				*e*S	Sb	01 35 13.6	+1.5
	baz=351						
TWC	**Suao**	**0.54**	**58**	P	Pb	01 35 04.8	+0.2
	baz=58						
TWC				*e*S	Sb	01 35 13.0	+0.6
	baz=58						
NMLH	**Miaoli**	**0.55**	**293**	*e*S	Sb	01 35 13.2	+0.7
	baz=292						
SMLT	**Sun Moon Lake**	**0.60**	**223**	P	Pb	01 35 05.6	0.0
	baz=222						
SMLT				*e*S	Sb	01 35 13.7	-0.4
	baz=222						
VWDT	**VWDT**	**0.60**	**198**	P	Pg	01 35 05.1	+0.2
	baz=197						
VWDT				*e*S	Sb	01 35 13.9	-0.1
	baz=197						
TYC	**Yuchr**	**0.61**	**227**	*e*P	Pb	01 35 05.8	+0.1
	baz=226						
TYC				*e*S	Sb	01 35 13.8	-0.5
	baz=226						
SSLB	**Suanglung**	**0.64**	**214**	*e*P	Pg	01 35 05.5	-0.2
	20nm,0.7s						
SSLB	**Suanglung**	**0.64**	**214**	P	Pg	01 35 06.0	+0.2
	baz=213						
EGFH	**Guangfu**	**0.66**	**173**	*e*P	Pb	01 35 06.5	-0.1
	baz=173						
EGFH				S	Sb	01 35 15.7	0.0
	baz=173						
TATO	**Taipei**	**0.66**	**11**	*e*S	Sb	01 35 15.6	-0.2
	baz=12						
TWA	**Mucha**	**0.69**	**18**	*e*S	Sb	01 35 16.5	-0.2
	baz=19						
EOS1	**EOS1**	**0.75**	**72**	P	Pn	01 35 09.3	-0.2
	baz=72						
EOS1				*e*S	Sn	01 35 19.7	-1.1
	baz=72						
WHYT	**Xinyi Township**	**0.77**	**216**	*e*P	Pb	01 35 08.4	-0.1
	baz=215						
WHYT				*e*S	Sn	01 35 21.1	-0.3
	baz=215						
TIPB	**Shuangxi**	**0.78**	**34**	P	Pb	01 35 09.0	+0.3
	baz=34						
TIPB				S	Sg	01 35 18.6	0.0
	baz=34						
EHY	**Hungye**	**0.81**	**181**	P	Pb	01 35 09.8	+0.5
	baz=180						
EHY				*e*S	Sb	01 35 21.2	+0.9
	baz=180						
HGSD	**Ruisui**	**0.83**	**175**	*e*P	Pb	01 35 09.6	0.0
	baz=174						
NWF	**Wu-fen Shan**	**0.84**	**28**	*e*P	Pb	01 35 10.3	+0.4
	baz=28						
NWF				*e*S	Sb	01 35 21.1	-0.1
	baz=28						
WFSB	**Wu-fen Shan**	**0.84**	**28**	*e*P	Pb	01 35 10.2	+0.4
	baz=28						
TWB1	**Santiao Chiao**	**0.90**	**41**	*e*S	Sn	01 35 26.2	+1.7
	baz=41						
YULB	**Yu-li**	**0.93**	**183**	P	Pb	01 35 11.5	+0.3
	baz=182						
YULB				S	Sn	01 35 24.6	-0.7
	baz=182						
TWF1	**Yuli**	**0.97**	**183**	*e*P	Pb	01 35 11.9	0.0
	baz=182						
TWF1				*e*S	Sn	01 35 25.6	-0.7
	baz=182						
ELDTW	**Lidau**	**1.17**	**195**	*e*P	Pb	01 35 15.4	0.0
	baz=194						
ELDTW				*e*S	Sg	01 35 31.2	+0.2
	baz=194						
CHN4	**Tsaushan**	**1.19**	**215**	*e*P	Pg	01 35 17.3	+1.2
	baz=215						
TWK	**Hsinying**	**1.31**	**217**	*e*P	Pn	01 35 17.5	+0.1
	baz=216						
CHN1	**Nanshi**	**1.36**	**214**	*e*P	Pg	01 35 20.4	+1.0
	baz=213						
SLGT	**Liugui**	**1.47**	**206**	*e*P	Pg	01 35 22.2	+0.7
	baz=205						
TWGBT	**Beinan**	**1.52**	**189**	*e*P	Pn	01 35 20.3	+0.1
	baz=189						

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*IDC **16** 02:01:13.9±0.4, 67°.63N×142°.53E, h0^{km}, mb4.5/35, mb1 4.6/40, mb1mx4.6/47, mbtmp4.5/40, ML4.3/5, MS4.0/30, Ms1 4.0/30, ms1mx3.8/58, Error ellipse: s-maj=9.4km s-min=9.2km az=10.0*

*YARS **16** 02:01:15.3±0.1, 67°.650N±0°.005×142°.53E±0°.01, h10^{km}±2^{km}*

*NEIC **16** 02:01:15.3±0.1, 67°.64N×142°.44E, h10^{km}, mb4.9/237, Error ellipse: s-maj=3.0km s-min=1.9km az=167.0*

*BJI **16** 02:01:16.6, 67°.27N×141°.70E, h8^{km}, mB5.0/48, mb4.7/62, Ms4.9/54, Ms7 4.6/52*

*GCMT **16** 02:01:16.3±0.3, 67°.64N±0°.02×142°.48E±0°.05, h23^{km}±1^{km}, MW4.8/90, Moment Tensor Solution. s20,c24; s90,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.85±.15; M$_{\theta\theta}$-0.44±.10; M$_{\phi\phi}$-0.41±.11; M$_{r\theta}$0.62±.15; M$_{\theta\phi}$2.28±.09; M$_{\phi r}$-0.64±.16; Best double couple: M$_0$2.38500×10^{16} NP1:ϕ_s1.00000°, δ81.00000°, λ-170.00000°. NP2: ϕ_s269.00000°, δ80.00000°, λ-9.00000°. Principal axes: T 1.8560, Plg1.0000°, Azm135.0000°; N 1.0590, Plg77.0000°, Azm40.0000°; P -2.9150, Plg13.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **16** 02:01:17.3±0.6, 67°.68N±0°.02×142°.69E±0°.04, h37^{km}±5^{km}, mb4.8/351, MS4.2/44 Error ellipse: s-maj=3.8km s-min=2.2km az=162.8*

*MOS **16** 02:01:17.2±1.1, 67°.56N×142°.53E, h15^{km}, mb5.0/120, MS4.2/6, Error ellipse: s-maj=9.5km s-min=3.9km az=95.0*

ISC 16 02:01:14.9±0.5, **67°.63N**±0°.03×**142°.63E**±0°.03, **h7**^{km}±3^{km}, **h7**^{km}**:pP-P, n929,** σ1^{s}.**43**/973, **mb4.9**/359, **MS4.2**/45, **34C-14D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.19**	**169**	⇑*i*P	**Pg**	**02 01 36.9**	**-0.8**
MOMR				*e*S	**Sg**	**02 01 52.9**	**-0.3**
MOMR				pmax	pmax		
	comp=Z,2μm,0.5s						
MOMR				smax	smax		
	comp=E,11μm,0.5s						
MOMR	**Moma**	**1.19**	**169**	*i* P	**Pg**	**02 01 36.9**	**-0.8**
MOMR				*e*S	**Sg**	**02 01 52.9**	**-0.3**
YBGR	**Belaya Gora**	**1.62**	**54**	*i* P	**Pn**	**02 01 44.3**	**+0.5**
YBGR				*e*P	**Pb**	**02 01 44.7**	**-0.3**
YBGR				*e*S	**Sb**	**02 02 05.4**	**-0.2**
YBGR				*e*S	**Sg**	**02 02 05.9**	**-0.9**
BTGS	**Batagay**	**3.05**	**274**	*e*P	**Pn**	**02 02 03.5**	**-0.1**
BTGS				*e*S	**Sn**	**02 02 38.5**	**-1.8**
BTGS				pmax	pmax		
	comp=Z,850nm,0.7s						
BTGS	**Batagay**	**3.05**	**274**	*e*P	**Pn**	**02 02 03.5**	**-0.1**
BTGS				*e*P	**Pb**	**02 02 09.4**	**-0.1**
BTGS				*e*S	**Sn**	**02 02 38.5**	**-1.8**
BTGS				*e*S	**Sb**	**02 02 48.5**	**+1.5**
ATKR	**Artyk**	**3.62**	**162**	*e*P	**Pn**	**02 02 12.5**	**+1.2**
ATKR				*e*S	**Sn**	**02 02 54.0**	**-0.3**
ATKR				pmax	pmax		
	comp=Z,641nm,0.6s						
ATKR	**Artyk**	**3.62**	**162**	*e*P	**Pn**	**02 02 12.5**	**+1.2**
ATKR				*e*P	**Pb**	**02 02 21.2**	**+2.1**
ATKR				*e*S	**Sn**	**02 02 54.0**	**-0.3**
ATKR				*e*S	**Sg**	**02 03 08.3**	**-2.6**
SEY	**Seymchan**	**6.24**	**134**	*ce*P	**Pn**	**02 02 48.0**	**+0.7**
SEY	**Seymchan**	**6.24**	**134**	Pn	**Pn**	**02 02 47.5**	**+0.3**
	comp=Z,6.0nm,0.3s,baz=321,slow=13,SNR=74						
SEY				Lg	Lg	02 04 32.6	
	comp=Z,25nm,0.3s,baz=17,slow=21,SNR=7.6						
YAK	**Yakutsk**	**7.86**	**231**	*e*P	**Pn**	**02 03 06.9**	**-2.6**
YAK				*e*		02 04 33.8	
YAK				pmax	pmax		
	comp=Z,82nm,0.4s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.4s						
YAK				pmax	pmax		
	comp=E,12nm,0.3s						
YAK				smax	smax		
	comp=E,812nm,0.5s						
YAK				smax	smax		
	comp=N,603nm,0.5s						
YAK	**Yakutsk**	**7.86**	**231**	*e*P	**Pb**	**02 03 36.1**	**+4.8**
YAK				*e*S	**Sn**	**02 04 34.5**	**-4.1**
YAK				*e*S	Sg	02 05 17.7	-9.2
MA2	**Magadan**	**8.85**	**152**	*e*Pn	**Pn**	**02 03 23.5**	**+0.4**
MA2				*e*Lg	Lg	02 05 58.4	
MA2	**Magadan**	**8.85**	**152**	*ce*P	**Pn**	**02 03 24.2**	**+1.1**
MA2				pmax	pmax		
	comp=Z,55nm,1.3s						
MA2	**Magadan**	**8.85**	**152**	Pn	**Pn**	**02 03 24.6**	**+1.5**
	comp=Z,2.0nm,0.3s,baz=342,slow=9.7,SNR=20						
MA2				Lg	Lg	02 05 55.4	
	comp=Z,5.0nm,0.3s,baz=64,slow=20,SNR=10						
MA2				LR	LR	02 07 13.8	
	comp=Z,556nm,21.4s,baz=338,slow=41						
BILL	**Bilibino**	**8.93**	**76**	*e*Pn	**Pn**	**02 03 26.3**	**+2.2**
BILL				*e*Sn	**Sn**	**02 05 01.8**	**-3.0**
BILL				*e*Lg	Lg	02 05 59.3	
BILL	**Bilibino**	**8.93**	**76**	*ce*P	**Pn**	**02 03 27.0**	**+2.9**
BILL				pmax	pmax		
	comp=Z,13nm,1.0s						
CGD	**Chagda**	**10.41**	**217**	*e*S	Sn	02 06 36.9	+56
YVAM	**Verhnyaya Amga**	**10.54**	**228**	*e*S	Sn	02 06 40.3	+56
NKL	**Nikolayevsk**	**14.56**	**185**	*e*P	**P**	**02 04 46.0**	**-1.7**
NKL				pmax	pmax		
	comp=Z,12nm,0.8s						
NKL				MLR	MLR		
	comp=N,1μm,11.0s						
NKL				MLR	MLR		
	comp=Z,2μm,11.0s						
ZEA	**Zeya**	**15.76**	**215**	*e*P	**Pn**	**02 04 54.8**	**-2.3**
ZEA				pmax	pmax		
	comp=N,47nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,64nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,2μm,8.0s						
ZEA				MLR	MLR		
	comp=N,2μm,7.0s						
BOD	**Bodaibo**	**16.21**	**247**	*e*P	**Pn**	**02 04 57.1**	**-5.8**
BOD				*e*		02 07 51.9	
BOD				pmax	pmax		
	comp=Z,51nm,1.5s						
PEA0B	**Petropavlovsk-**	**16.28**	**146**	*e*Pn	**P**	**02 05 05.6**	**-1.3**
	comp=Z,111nm,1.0s						
PETK	**Petropavlovsk-**	**16.28**	**146**	*e*Pn	**Pn**	**02 05 05.1**	**+1.3**
PETK	**Petropavlovsk-**	**16.28**	**146**	Pn	**P**	**02 05 05.8**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=345,slow=4.3,SNR=13						
PETK				LR	LR	02 11 57.0	
	comp=Z,450nm,19.1s,baz=329,slow=40						
PET	**Petropavlovsk**	**16.57**	**144**	*e*Pn	**Pn**	**02 05 06.7**	**-0.8**
	comp=Z,313nm,0.8s						
PET	**Petropavlovsk**	**16.57**	**144**	*e*P	**P**	**02 05 13.4**	**+3.4**
PET				pmax	pmax		
	comp=Z,482nm,0.9s						
PET				MLR	MLR		
	comp=Z,500nm,21.0s						
GAMB	**Gambell**	**18.83**	**80**	*e*P	**Pn**	**02 05 36.2**	**+0.9**
	comp=Z,24nm,0.9s						
KLR	**Kul'dur**	**19.25**	**202**	*i* P	**P**	**02 05 39.1**	**-0.6**
KLR	**Kul'dur**	**19.25**	**202**	P	**Pn**	**02 05 40.2**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=14,slow=11,SNR=13						
KLR				Lg	Lg	02 11 22.8	
	comp=Z,0.1nm,0.3s,baz=69,slow=21,SNR=8.8						
KLR				LR	LR	02 13 43.3	
	comp=Z,305nm,21.1s,baz=351,slow=39						
NRIK	**Noril'sk**	**19.70**	**300**	P	**P**	**02 05 44.2**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=71,slow=13,SNR=9.5						
NRIK				Lg	Lg	02 11 35.9	
	comp=Z,0.6nm,0.3s,baz=165,slow=20,SNR=3.6						
RDOG	**Red Dog Mine**	**20.00**	**63**	*e*P	**Pn**	**02 05 48.9**	**-0.5**
	comp=Z,41nm,1.0s						
YSS	**Yuzh-Sakhalins**	**20.73**	**180**	*e*P	**P**	**02 05 55.3**	**-0.5**
	comp=Z,14nm,0.5s						
YSS	**Yuzh-Sakhalins**	**20.73**	**180**	*e*P	Pn	02 06 00.6	+2.5
YSS				*e*		02 06 12.3	
YSS				*e*S	**S**	**02 09 48.3**	**+1.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
ANM	**Nome**	**20.77**	**74**	*e*P	**P**	**02 05 57.0**	**+1.1**
	comp=Z,92nm,1.3s						
ANM	**Nome**	**20.77**	**74**	*e*P	**P**	**02 05 57.1**	**+1.1**
ANM				pmax	pmax		
	comp=Z,92nm,1.3s						
HIA	**Hailar**	**21.71**	**224**	*e*P	**P**	**02 06 06.1**	**-0.3**
	comp=Z,26nm,0.7s						
HIA	**Hailar**	**21.71**	**224**	*e*P	**P**	**02 06 06.1**	**-0.3**
HIA				pmax	pmax		
	comp=Z,26nm,0.7s						
TEY	**Ternei**	**22.87**	**191**	⇑*e*P	**P**	**02 06 18.8**	**+0.1**
TEY				*e*		02 06 34.8	
TEY				pmax	pmax		
	comp=N,30nm,0.6s						
TEY				pmax	pmax		
	comp=Z,50nm,0.6s						
SPIA	**Saint Paul Isl**	**23.56**	**93**	*e*P	**P**	**02 06 26.5**	**+1.0**
	comp=Z,69nm,1.0s						
ASAJ	**Asahikawa**	**23.57**	**180**	P	**P**	**02 06 24.8**	**-1.0**
	comp=Z,12nm,0.6s,baz=24,slow=10,SNR=13						
ASAJ				LR	LR	02 15 57.1	
	comp=Z,660nm,18.3s,baz=150,slow=38						
IRK	**Irkutsk**	**24.06**	**249**	*e*P	**P**	**02 06 28.5**	**-1.9**
IRK				*e*S	**S**	**02 10 50.3**	**+2.6**
IRK				pmax	pmax		
	comp=Z,75nm,2.7s						
MDJ	**Mudanjiang**	**24.08**	**203**	P	**P**	**02 06 29.6**	**-1.1**
MDJ				sP	sP	02 06 36.8	+3.2
MDJ				PP	**PnPn**	**02 07 00.4**	**+1.1**
MDJ				S	**S**	**02 10 49.1**	**+1.0**
MDJ				PcS	**PcS**	**02 13 47.9**	**-3.3**
MDJ				ScS	**ScS**	**02 17 33.4**	**-3.7**
MDJ				pmax	pmax		
	comp=Z,45nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,390nm,4.4s						
MDJ				LR	LR		
	comp=Z,730nm,8.8s						
MDJ				LR	LR		
	comp=Z,1μm,8.0s						
MDJ	**Mudanjiang**	**24.08**	**203**	*e*P	**P**	**02 06 29.3**	**-1.4**
	comp=Z,97nm,1.4s						
TOLK	**Toolik Lake Re**	**24.13**	**56**	*e*P	**P**	**02 06 31.3**	**+0.3**
	comp=Z,40nm,0.9s						
TOLK	**Toolik Lake Re**	**24.13**	**56**	P	**P**	**02 06 31.6**	**+0.6**
	baz=300						
IM3	**Indian Mountai**	**24.14**	**64**	*e*P	**P**	**02 06 31.6**	**+0.5**
USA0B	**Ussuriysk Arra**	**24.16**	**199**	*e*P	**P**	**02 06 30.9**	**-0.5**
	comp=Z,15nm,0.7s						
USRK	**Ussuriysk Ar.**	**24.16**	**199**	P	**P**	**02 06 30.8**	**-0.6**
	comp=Z,16nm,0.7s,baz=8.9,slow=10,SNR=43						
USRK				Lg	Lg	02 14 04.1	
	comp=Z,1.0nm,0.8s,baz=11,slow=25,SNR=5.9						
USRK				LR	LR	02 16 46.8	
	comp=Z,380nm,20.2s,baz=4.9,slow=39						
COLD	**Coldfoot**	**24.66**	**59**	*e*P	**P**	**02 06 36.7**	**+0.8**
	comp=Z,29nm,0.9s						
TLY	**Talaya**	**24.74**	**249**	*ce*P	**P**	**02 06 38.0**	**+1.3**
CN2	**Changchun**	**25.58**	**210**	*e*P	**P**	**02 06 42.3**	**-2.0**
CN2				*e*sP	sP	02 06 49.3	+2.1
CN2				*e*PP	**PnPn**	**02 07 21.0**	**+1.2**
CN2				*e*S	**S**	**02 11 07.4**	**-4.7**
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,1μm,8.0s						
CN2				LR	LR		
	comp=Z,2μm,8.0s						
MOY	**Mondy**	**25.71**	**252**	*e*P	**P**	**02 06 45.4**	**-0.2**
MOY				pmax	pmax		
	comp=Z,73nm,1.7s						
MLY	**Manley**	**25.72**	**64**	*e*P	**P**	**02 06 45.3**	**-0.2**
	comp=Z,14nm,0.9s						
ZAK	**Zakamensk**	**25.95**	**248**	*e*P	**P**	**02 06 47.4**	**-0.3**
ZAK				*e*		02 12 37.3	
ZAK				pmax	pmax		
	comp=Z,12nm,1.4s						
BPAW	**Bear Paw Mtn.**	**26.19**	**66**	*e*P	**P**	**02 06 50.3**	**+0.5**
	comp=Z,32nm,1.3s						
CAST	**Castle Rocks**	**26.23**	**68**	*e*P	**P**	**02 06 50.6**	**+0.5**
	comp=Z,14nm,0.8s						
SVW2	**Sparrevohn**	**26.44**	**74**	*e*P	**P**	**02 06 53.1**	**+1.1**
	comp=Z,15nm,1.0s						
PPLA	**Purkeypile**	**26.52**	**69**	*e*P	**P**	**02 06 53.5**	**+0.7**
	comp=Z,34nm,1.4s						
MDM	**Murphy Dome**	**26.62**	**63**	*e*P	**P**	**02 06 54.4**	**+0.8**
	comp=Z,17nm,0.9s						
FYU	**Fort Yukon**	**26.66**	**58**	*e*P	**P**	**02 06 54.4**	**+0.5**
	comp=Z,72nm,1.3s						
ULN	**Ulaanbaatar**	**26.79**	**240**	*e*P	**P**	**02 06 55.5**	**0.0**
	comp=Z,9.7nm,1.3s						
ULN	**Ulaanbaatar**	**26.79**	**240**	*ce*P	**P**	**02 06 55.2**	**-0.2**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
POKR	**Poker Plat Res**	**26.79**	**62**	P	**P**	**02 06 55.9**	**+0.8**
	baz=307						
TCOL	**CIGO, UAF Yank**	**26.80**	**63**	P	**P**	**02 06 55.7**	**+0.6**
	baz=307						
COLA	**College**	**26.80**	**63**	*e*P	**P**	**02 06 56.4**	**+1.3**
	comp=Z,18nm,0.8s						
COLA	**College**	**26.80**	**63**	*e*P	**P**	**02 06 56.4**	**+1.3**
COLA				pmax	pmax		
	comp=Z,18nm,0.8s						
TRF	**Thorofare Moun**	**26.84**	**66**	*e*P	**P**	**02 06 56.6**	**+0.9**
	comp=Z,44nm,1.2s						
WRH	**Wood River Hil**	**26.97**	**63**	*e*P	**P**	**02 06 56.5**	**-0.1**
	comp=Z,18nm,1.3s						
SONA1	**Songino Array**	**27.02**	**241**	*e*P	**P**	**02 06 57.5**	**0.0**
SONM	**Songino Array**	**27.04**	**241**	P	**P**	**02 06 58.5**	**+0.9**
	comp=Z,4.2nm,0.8s,baz=26,slow=8.4,SNR=14						
SONM				Lg	Lg	02 15 26.2	
	comp=Z,3.2nm,1.1s,baz=22,slow=24,SNR=6.1						
SONM				LR	LR	02 17 26.1	
	comp=Z,135nm,20.3s,baz=22,slow=36						
MCK	**McKinley**	**27.13**	**65**	*e*P	**P**	**02 06 58.9**	**+0.7**
	comp=Z,14nm,0.8s						
MCK	**McKinley**	**27.13**	**65**	*e*P	**P**	**02 06 58.9**	**+0.7**
MCK				pmax	pmax		
	comp=Z,14nm,0.8s						
IL1	**Eielson Array**	**27.19**	**62**	*e*P	**P**	**02 06 58.3**	**-0.3**
ILAR	**Eielson Array**	**27.19**	**62**	P	**P**	**02 06 59.5**	**+0.7**
	comp=Z,13nm,0.8s,baz=297,slow=8.0,SNR=157						
ILAR				LR	LR	02 18 11.3	
	comp=Z,302nm,18.2s,baz=308,slow=37						
ILB	**Eielson Array**	**27.19**	**62**	*e*P	**P**	**02 06 59.4**	**+0.7**
PRP	**Porcupine Dome**	**27.19**	**60**	*e*P	**P**	**02 06 59.4**	**+0.5**
	comp=Z,7.6nm,0.9s						
HDA	**Harding Lake**	**27.39**	**63**	*e*P	**P**	**02 07 00.2**	**-0.3**
	comp=Z,15nm,1.1s						
HDA	**Harding Lake**	**27.39**	**63**	P	**P**	**02 07 00.4**	**-0.1**
	baz=308,SNR=6.8						
UNV	**Unalaska Valle**	**27.46**	**95**	*e*P	**P**	**02 07 02.1**	**+0.9**
	comp=Z,70nm,1.0s						
SNY	**Shenyang**	**27.84**	**211**	⇓P	**P**	**02 07 06.3**	**+1.6**
SNY				pmax	pmax		
	comp=Z,16nm,1.9s						
SNY				LR	LR		
	comp=Z,880nm,10.3s						
SNY				LR	LR		
	comp=Z,2μm,10.3s						
KNGR	**Kungurtug, Tuv**	**27.86**	**255**	*i* P	**P**	**02 07 05.8**	**+0.9**
RSO	**Redoubt South**	**27.90**	**73**	*e*P	**P**	**02 07 06.2**	**+0.9**
SUA	**Susitna One**	**27.96**	**70**	*e*P	**P**	**02 07 05.8**	**+0.1**
	comp=Z,20nm,0.6s						
DHY	**Denali Highway**	**28.10**	**65**	*e*P	**P**	**02 07 07.5**	**+0.5**
	comp=Z,6.1nm,0.9s						
GHO	**Glory Hole Cre**	**28.41**	**68**	*e*P	**P**	**02 07 09.3**	**-0.3**
	comp=Z,18nm,1.0s						
RIDG	**Independ'e Rid**	**28.54**	**63**	*e*P	**P**	**02 07 11.2**	**+0.5**
	comp=Z,4.9nm,1.0s						
SML	**Sawmill**	**28.59**	**68**	*e*P	**P**	**02 07 11.8**	**+0.5**
	comp=Z,20nm,1.0s						
SML	**Sawmill**	**28.59**	**68**	*e*P	**P**	**02 07 11.8**	**+0.5**
SML				pmax	pmax		
	comp=Z,20nm,1.0s						
KNK	**Knik Glacier**	**28.81**	**69**	*e*P	**P**	**02 07 12.9**	**-0.3**
	comp=Z,12nm,0.9s						
SCM	**Sheep Creek Mo**	**28.93**	**67**	*e*P	**P**	**02 07 16.1**	**+1.8**
	comp=Z,15nm,1.0s						
SCM	**Sheep Creek Mo**	**28.93**	**67**	*e*P	**P**	**02 07 16.1**	**+1.8**
SCM				pmax	pmax		
	comp=Z,15nm,1.0s						
BRLK	**Bradley Lake**	**29.06**	**73**	*e*P	**P**	**02 07 15.6**	**+0.2**
	comp=Z,38nm,0.8s						
INK	**Inuvik**	**29.21**	**49**	*e*P	**P**	**02 07 17.6**	**+1.0**
	comp=Z,13nm,1.4s						
INK	**Inuvik**	**29.21**	**49**	*e*P	**P**	**02 07 17.6**	**+1.0**
INK				pmax	pmax		
	comp=Z,13nm,1.4s						
INK	**Inuvik**	**29.21**	**49**	P	**P**	**02 07 17.5**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=316,slow=11,SNR=6.3						
INK				LR	LR	02 20 49.8	
	comp=Z,443nm,18.9s,baz=298,slow=40						
SEW	**Seward**	**29.35**	**71**	*e*P	**P**	**02 07 18.2**	**+0.3**
	comp=Z,40nm,0.9s						
MENT	**Mentasta**	**29.45**	**63**	*e*P	**P**	**02 07 18.8**	**-0.1**
	comp=Z,8.7nm,0.9s						
EPYK	**Eagle Plains**	**29.48**	**54**	*e*P	**P**	**02 07 20.1**	**+1.0**
	comp=Z,8.2nm,1.0s						

EPYK	**Eagle Plains**	**29.48**	**54**	P	**P**	**02 07 19.3**	**+0.2**
	baz=310						
KLU	**Klutina**	**29.66**	**67**	eP	**P**	**02 07 20.4**	**-0.4**
	comp=Z,9.5nm,1.0s						
KDAK	**Kodiak Island**	**29.84**	**77**	P	**P**	**02 07 21.6**	**-0.7**
	comp=Z,14nm,1.0s,baz=31,slow=3.0,SNR=4.6						
KDAK				LR	LR	02 20 27.9	
	comp=Z,591nm,18.4s,baz=331,slow=39						
NVS	**Novosibirsk**	**29.96**	**275**	eP	**P**	**02 07 22.8**	**-0.6**
NVS				pmax	pmax		
	comp=N,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZALV	**Zalesovo Beam**	**30.04**	**272**	P	**P**	**02 07 22.8**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=46,slow=6.0,SNR=5.8						
ZALV				LR	LR	02 19 45.4	
	comp=Z,185nm,18.1s,baz=248,slow=37						
DAWY	**Dawson**	**30.14**	**59**	eP	**P**	**02 07 25.9**	**+0.9**
	comp=Z,5.7nm,1.3s						
SPA0	**Spitsbergen Ar**	**30.98**	**341**	eP	**P**	**02 07 33.3**	**+1.0**
SPITS	**Spitsbergen Ar**	**30.98**	**341**	P	**P**	**02 07 32.6**	**+0.4**
	comp=Z,11nm,0.8s,baz=54,slow=11,SNR=31						
SPITS				PcP	**PcP**	**02 10 27.8**	**0.0**
	comp=Z,3.3nm,0.5s,baz=88,slow=4.5,SNR=11						
HMT	**Hamilton**	**31.05**	**67**	eP	**P**	**02 07 33.7**	**+0.7**
	comp=Z,73nm,1.3s						
BJI	**Beijing**	**31.23**	**221**	P	**P**	**02 07 35.3**	**+0.6**
MJAR	**Matsushiro Arr**	**31.24**	**187**	P	**P**	**02 07 35.1**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=314,slow=54,SNR=3.7						
MJAR				LR	LR	02 19 32.9	
	comp=Z,209nm,18.3s,baz=45,slow=35						
KS01	**Wonju Array Si**	**31.32**	**203**	eP	**P**	**02 07 34.8**	**-0.8**
KSRS	**Korea Array**	**31.34**	**203**	P	**P**	**02 07 34.8**	**-0.9**
	comp=Z,2.3nm,0.7s,baz=10,slow=9.4,SNR=7.2						
KSRS				LR	LR	02 20 51.0	
	comp=Z,319nm,18.6s,baz=22,slow=38						
KSAR	**Wonju Array Be**	**31.36**	**203**	P	**P**	**02 07 34.8**	**-1.1**
KSAR	**Wonju Array Be**	**31.36**	**203**	P	**P**	**02 07 34.8**	**-1.1**
HHC	**Hu-ho-hao-te**	**31.71**	**228**	eP	**P**	**02 07 40.4**	**+1.3**
HHC				PP	**PnPn**	**02 08 44.9**	**+2.1**
HHC				S	**S**	**02 12 47.8**	**-1.1**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC				LR	LR		
	comp=Z,650nm,10.2s						
HHC				LR	LR		
	comp=Z,810nm,9.9s						
HHC				LR	LR		
	comp=Z,1µm,13.0s						
DGZ	**Jazzator, Alta**	**32.38**	**265**	i P	**P**	**02 07 45.0**	**0.0**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BTO	**Baotou**	**32.39**	**230**	eP	P	02 07 38.8	-6.2
TJN	**Taejon**	**32.48**	**203**	ceP	**P**	**02 07 45.7**	**0.0**
RES	**Resolute Bay**	**33.28**	**24**	eP	**P**	**02 07 52.5**	**+0.1**
	comp=Z,21nm,1.3s						
RES	**Resolute Bay**	**33.28**	**24**	eP	**P**	**02 07 52.5**	**+0.1**
RES				pmax	pmax		
	comp=Z,21nm,1.3s						
TULEG	**Thule**	**34.75**	**12**	eP	**P**	**02 08 05.6**	**+0.5**
	comp=Z,7.8nm,1.0s						
KURK	**Kurchatov**	**34.94**	**274**	eP	**P**	**02 08 08.2**	**+1.3**
KURK				PP	**PP**	**02 09 22.6**	**-3.3**
KURK	**Kurchatov**	**34.94**	**274**	ceP	**P**	**02 08 08.0**	**+1.0**
KURK				pmax	pmax		
	comp=Z,18nm,1.3s						
KURBB	**Kurchatov Arra**	**35.05**	**274**	P	**P**	**02 08 07.5**	**-0.4**
	comp=Z,4.8nm,0.5s,baz=36,slow=8.6,SNR=59						
KURBB				PP	**PP**	**02 09 22.6**	**-4.5**
	comp=Z,5.6nm,0.8s,baz=42,slow=11,SNR=5.2						
BVAR	**Borovoye Array**	**36.22**	**283**	P	**P**	**02 08 17.4**	**-0.6**
	comp=Z,4.7nm,0.6s,baz=50,slow=7.8,SNR=39						
BVAR				PP	**PP**	**02 09 39.1**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=49,slow=12,SNR=6.0						
BRVK	**Borovoye**	**36.23**	**283**	eP	**P**	**02 08 17.0**	**-1.1**
BRVK	**Borovoye**	**36.23**	**283**	ceP	**P**	**02 08 18.5**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,15nm,1.7s						
APA	**Apatity**	**36.41**	**322**	i P	P	02 08 32.2	+13
APA				MLR	MLR		
	comp=Z,300nm,12.0s						
ARCES	**ARCESS Array B**	**36.54**	**328**	eP	**P**	**02 08 19.2**	**-1.3**
ARCES				PcP	**PcP**	**02 10 43.6**	**0.0**
ARCES	**ARCESS Array B**	**36.54**	**328**	P	**P**	**02 08 19.9**	**-0.7**
	comp=Z,4.3nm,0.7s,baz=27,slow=9.7,SNR=14						
ARCES				PcP	**PcP**	**02 10 43.6**	**0.0**
	comp=Z,1.9nm,0.6s,baz=35,slow=4.4,SNR=6.7						
GTA	**Gaotai**	**36.71**	**242**	eP	**P**	**02 08 22.8**	**+0.4**
GTA				pP	sP	02 08 27.3	+1.9
GTA				sP	pP	02 08 29.8	+5.3
GTA				PcP	**PcP**	**02 10 42.1**	**-2.7**
GTA				S	**S**	**02 14 06.5**	**+0.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,110nm,7.5s						
GTA				LR	LR		
	comp=Z,570nm,14.3s						
GTA				LR	LR		
	comp=Z,1µm,17.1s						
GTA				LR	LR		
	comp=Z,680nm,14.6s						
MK31	**Makanchi Array**	**36.73**	**267**	eP	**P**	**02 08 21.4**	**-1.1**
MK31	**Makanchi Array**	**36.73**	**267**	eP	**P**	**02 08 21.4**	**-1.1**
MKAR	**Makanchi Array**	**36.73**	**267**	P	**P**	**02 08 21.3**	**-1.1**
	comp=Z,14nm,0.8s,baz=29,slow=7.3,SNR=137						
MKAR				PP	**PP**	**02 09 43.6**	**-2.2**
	comp=Z,7.0nm,0.9s,baz=44,slow=8.6,SNR=4.7						
MKAR				LR	LR	02 25 05.5	
	comp=Z,164nm,20.5s,baz=12,slow=39						
MK01	**Makanchi Array**	**36.75**	**267**	eP	**P**	**02 08 21.1**	**-1.5**
SVE	**Sverdlovsk**	**36.77**	**295**	eP	**P**	**02 08 22.7**	**+0.1**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAKZ	**Makanchi**	**36.84**	**267**	eP	**P**	**02 08 22.2**	**-1.2**
	comp=Z,11nm,0.9s						
MAKZ	**Makanchi**	**36.84**	**267**	eP	**P**	**02 08 22.2**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ	**Urumqi**	**37.19**	**259**	P	**P**	**02 08 26.8**	**+0.4**
WMQ				pP	sP	02 08 30.6	+1.2
WMQ				sP	pP	02 08 40.3	+12
WMQ				eS	**S**	**02 14 12.0**	**-1.2**
WMQ				ScS	**ScS**	**02 18 40.3**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,42nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,350nm,4.1s						
WMQ				LR	LR		
	comp=Z,3µm,10.3s						
WMQ				LR	LR		
	comp=Z,1µm,9.3s						
WMQ				LR	LR		
	comp=Z,490nm,16.7s						
WMQ	**Urumqi**	**37.19**	**259**	eP	**P**	**02 08 26.4**	**0.0**
	comp=Z,25nm,1.1s						
WMQ	**Urumqi**	**37.19**	**259**	eP	**P**	**02 08 26.4**	**0.0**
WMQ				pmax	pmax		
	comp=Z,25nm,1.1s						
DLBC	**Dease Lake**	**37.34**	**60**	eP	**P**	**02 08 28.9**	**+1.4**
	comp=Z,20nm,1.4s						
ARU	**Arti**	**37.80**	**296**	eP	**P**	**02 08 30.4**	**-0.9**
	comp=Z,20nm,1.5s						
ARU	**Arti**	**37.80**	**296**	P	**P**	**02 08 30.8**	**-0.5**
ARU						02 09 54.8	
ARU				S	**S**	**02 14 21.7**	**-0.3**
ARU				SS	**SnSn**	**02 16 56.3**	**-5.3**
PRGR	**Permogore**	**37.87**	**309**	eP	**P**	**02 08 31.5**	**-0.3**
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TMCR	**Tamitsa**	**37.98**	**316**	eP	**P**	**02 08 36.0**	**+3.2**
TMCR				pmax	pmax		
	comp=Z,15nm,1.0s						
SGF	**Sodankyl**	**38.06**	**326**	P	**P**	**02 08 36.9**	**+3.5**
SGF				pmax	pmax		
	comp=Z,15nm,1.0s						
NJ2	**Nanjing**	**38.25**	**214**	eP	**P**	**02 08 36.6**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LZH	**Lanzhou**	**38.42**	**235**	⇓P	**P**	**02 08 38.3**	**+1.3**
LZH				pP	sP	02 08 42.8	+2.8
LZH				sP	pP	02 08 45.6	+6.5
LZH				PP	**PnPn**	**02 10 07.0**	**+0.6**
LZH				SS	SS	02 17 08.5	-12
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,15.3s						
LZH				LR	LR		
	comp=Z,1µm,15.0s						
LZH				LR	LR		
	comp=Z,1µm,17.2s						
MSF	**Maaselka**	**38.78**	**323**	P	**P**	**02 08 42.3**	**+2.8**
MSF				pmax	pmax		
	comp=Z,25nm,1.0s						
YKW3	**Yellowknife Ar**	**38.78**	**46**	eP	**P**	**02 08 40.3**	**+0.8**
	comp=Z,8.4nm,1.0s						
XAN	**Xi'an**	**38.81**	**227**	P	**P**	**02 08 39.8**	**-0.4**
XAN				pP	sP	02 08 44.0	+0.9
XAN				PP	**PnPn**	**02 10 12.0**	**+1.0**
XAN				S	**S**	**02 14 37.4**	**-0.5**
XAN				SS	SS	02 17 08.8	-20
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,150nm,8.0s						
XAN				LR	LR		
	comp=Z,660nm,8.6s						
XAN				LR	LR		
	comp=Z,720nm,10.4s						
XAN				LR	LR		
	comp=Z,510nm,10.3s						
XAN	**Xi'an**	**38.81**	**227**	eP	**P**	**02 08 39.5**	**-0.7**
	comp=Z,3.9nm,0.9s						
XAN	**Xi'an**	**38.81**	**227**	eP	**P**	**02 08 39.5**	**-0.7**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	**Yellowknife Ar**	**38.84**	**46**	P	**P**	**02 08 40.7**	**+0.8**
	comp=Z,5.0nm,0.8s,baz=322,slow=8.2,SNR=99						
YKA				LR	LR	02 26 49.2	
	comp=Z,13nm,21.3s,baz=325,slow=40						
YKB5	**Yellowknife Ar**	**38.84**	**46**	eP	**P**	**02 08 39.8**	**-0.1**
OTUK	**Ortayu**	**39.34**	**277**	P	**P**	**02 08 44.7**	**+0.3**
OTUK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SUMG	**Summit**	**40.04**	**1**	eP	**P**	**02 08 50.9**	**+0.5**
	comp=Z,6.0nm,0.8s						
SUMG	**Summit**	**40.04**	**1**	eP	**P**	**02 08 50.9**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLMR	**Klimovskoe**	**40.26**	**312**	eP	**P**	**02 08 53.7**	**+1.8**
KLMR				e		02 10 27.7	
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KLMR	**Klimovskoe**	**40.26**	**312**	eP	**P**	**02 08 53.7**	**+1.8**
KLMR				AMP		02 09 04.6	
	comp=Z,10.0nm,1.4s						
KLMR				ePP	**PP**	**02 10 27.8**	**+3.7**
JCJ	**Chichijima**	**40.56**	**181**	LR	LR	02 27 37.7	
	comp=Z,64nm,21.7s,baz=294,slow=39						
PDGK	**Podgornoye**	**40.72**	**266**	P	**P**	**02 09 00.1**	**+4.0**
PDGK				pmax	pmax		
	comp=Z,11nm,1.3s						
JOF	**Joensuu**	**40.74**	**319**	P	**P**	**02 08 58.7**	**+2.9**
JOF				pmax	pmax		
	comp=Z,15nm,1.3s						
SUF	**Sumiainen**	**42.16**	**322**	P	**P**	**02 09 10.2**	**+2.8**
SUF				pmax	pmax		
	comp=Z,26nm,0.8s						
ENH	**Enshi**	**42.21**	**225**	eP	**P**	**02 09 07.1**	**-1.2**
VAF	**Ylistaro**	**42.67**	**324**	P	**P**	**02 09 14.7**	**+3.1**
VAF				pmax	pmax		
	comp=Z,26nm,0.8s						
AKTO	**Aktyubinsk**	**42.84**	**291**	P	**P**	**02 09 13.0**	**-0.2**
AKTO	**Aktyubinsk**	**42.84**	**291**	P	**P**	**02 09 12.9**	**-0.2**
	comp=Z,4.1nm,0.3s,baz=49,slow=6.2,SNR=25						
ABKAR	**Akbulak array**	**43.12**	**288**	eP	**P**	**02 09 14.8**	**-0.7**
AAK	**Ala-Archa**	**43.22**	**270**	eP	**P**	**02 09 16.4**	**-0.2**
	comp=Z,16nm,0.8s						
AAK	**Ala-Archa**	**43.22**	**270**	i P	**P**	**02 09 17.1**	**+0.6**
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AAK	**Ala-Archa**	**43.22**	**270**	P	**P**	**02 09 17.3**	**+0.8**
	comp=Z,11nm,0.5s,baz=111,slow=4.1,SNR=55						
CD2	**Chengdu**	**43.25**	**232**	P	**P**	**02 09 16.4**	**-0.3**
CD2				pP	sP	02 09 19.6	-0.1
CD2				PP	**PP**	**02 10 56.8**	**-0.2**
CD2				S	**S**	**02 15 43.5**	**-0.4**
CD2				sS	sS	02 15 48.8	+1.4
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,140nm,4.8s						
CD2				LR	LR		
	comp=Z,690nm,8.2s						
CD2				LR	LR		
	comp=Z,540nm,9.8s						
CD2				LR	LR		
	comp=Z,1µm,10.2s						
FIA1	**FINESS Array S**	**43.28**	**321**	eP	**P**	**02 09 16.1**	**-0.5**
FINES	**FINESS Array B**	**43.28**	**321**	P	**P**	**02 09 16.0**	**-0.5**
	comp=Z,7.2nm,0.7s,baz=29,slow=8.7,SNR=44						
FINES				LR	LR	02 33 06.4	
	comp=Z,170nm,18.8s,baz=24,slow=44						
NRN	**Naryn**	**43.68**	**268**	eP	**P**	**02 09 20.3**	**-0.1**
	comp=Z,7.2nm,0.7s						
NRN	**Naryn**	**43.68**	**268**	eP	**P**	**02 09 20.3**	**-0.1**
NRN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNAS	**Manas**	**44.11**	**272**	P	**P**	**02 09 24.9**	**+1.2**
MNAS				pmax	pmax		
	comp=Z,12nm,0.8s						
KK31	**Karatay Array**	**44.35**	**274**	eP	**P**	**02 09 25.5**	**+0.1**
KK31	**Karatay Array**	**44.35**	**274**	eP	**P**	**02 09 25.5**	**+0.1**
KKAR	**Karatay Array**	**44.35**	**274**	eP	**P**	**02 09 25.1**	**-0.3**
KKAR	**Karatay Array**	**44.35**	**274**	eP	**P**	**02 09 25.1**	**-0.3**
SFJD	**Kangerlussuaq**	**45.33**	**7**	eP	**P**	**02 09 31.8**	**-1.0**
	comp=Z,8.0nm,0.8s						
SFJD	**Kangerlussuaq**	**45.33**	**7**	eP	**P**	**02 09 31.8**	**-1.0**
SFJD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH	**Kashi**	**45.35**	**267**	P	P	02 09 39.8	+6.3
KSH				sP	sP	02 09 49.1	+13
KSH				PP	**PP**	**02 11 26.3**	**+7.1**
KSH				S	**S**	**02 16 23.0**	**+8.6**
KSH				sS	sS	02 16 27.5	+10
KSH				ScS	**ScS**	**02 19 31.3**	**+1.0**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,310nm,5.3s						
KSH				LR	LR		
	comp=Z,250nm,4.5s						
KSH				LR	LR		
	comp=Z,290nm,5.1s						
KSH				LR	LR		
	comp=Z,960nm,9.4s						
VSU	**Vasula**	**45.73**	**319**	ceP	**P**	**02 09 38.9**	**+2.8**
VSU				pmax	pmax		
	comp=Z,48nm,2.5s						
OBN	**Obninsk**	**45.95**	**310**	i P	**P**	**02 09 38.3**	**+0.4**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GYA	**Guiyang**	**46.60**	**226**	⇑iP	**P**	**02 09 43.0**	**-0.5**
GYA				PP	**PP**	**02 11 34.3**	**+1.5**
GYA				S	**S**	**02 16 32.0**	**-0.5**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=Z,430nm,16.9s						
GYA				LR	LR		
	comp=Z,450nm,17.0s						
GYA				LR	LR		
	comp=Z,410nm,16.6s						
NC303	**NORSAR Array S**	**46.66**	**330**	eP	**P**	**02 09 43.0**	**-0.5**
NC405	**NORSAR Array S**	**46.69**	**330**	eP	**P**	**02 09 43.4**	**-0.3**
NC204	**NORSAR Array S**	**46.73**	**330**	eP	**P**	**02 09 44.0**	**-0.1**
NB2	**NORSAR Subarra**	**46.86**	**330**	P	**P**	**02 09 44.0**	**-1.0**
	comp=Z,4.4nm,0.7s,baz=24,slow=7.9						
NB2	**NORSAR Subarra**	**46.86**	**330**	P	**P**	**02 09 43.2**	**-1.8**
NB2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NOA	**NORSAR Array B**	**46.86**	**330**	P	**P**	**02 09 44.0**	**-1.0**
	comp=Z,8.7nm,0.8s,baz=24,slow=7.8,SNR=21						
NOA				LR	LR	02 34 06.1	
	comp=Z,93nm,18.8s,baz=15,slow=42						
NBO00	**NORSAR Array S**	**46.95**	**330**	eP	**P**	**02 09 45.2**	**-0.5**
NC602	**NORSAR Array S**	**47.08**	**330**	eP	**P**	**02 09 46.1**	**-0.6**
NORES	**NORESS Array B**	**47.08**	**330**	P	**P**	**02 09 46.4**	**-0.3**
NAO01	**NORSAR Array S**	**47.10**	**330**	eP	**P**	**02 09 46.6**	**-0.3**
HFS	**Hagfors**	**47.20**	**328**	LR	LR	02 33 55.0	
	comp=Z,210nm,18.1s,baz=22,slow=42						
FCC	**Fort Churchill**	**47.23**	**36**	eP	**P**	**02 09 48.1**	**+0.2**
	comp=Z,20nm,1.1s						
FCC	**Fort Churchill**	**47.23**	**36**	eP	**P**	**02 09 48.1**	**+0.2**
FCC				pmax	pmax		
	comp=Z,20nm,1.1s						
PGC	**Sidney**	**47.62**	**64**	eP	**P**	**02 09 52.0**	**+1.0**
	comp=Z,28nm,1.5s						
A04D	**Lummi Island**	**47.81**	**63**	P	**P**	**02 09 52.7**	**+0.2**
	baz=329						
GAR	**Garm**	**47.96**	**272**	eP	**P**	**02 09 53.8**	**-0.2**
	comp=Z,39nm,1.2s						
GAR	**Garm**	**47.96**	**272**	eP	**P**	**02 09 53.8**	**-0.2**
GAR				pmax	pmax		
	comp=Z,39nm,1.2s						
B05A	**Bryant**	**48.41**	**63**	P	**P**	**02 09 57.7**	**+0.5**
	baz=330						
KONO	**Kongsberg**	**48.45**	**330**	eP	**P**	**02 09 56.9**	**-0.5**
	comp=Z,14nm,0.9s						
KONO	**Kongsberg**	**48.45**	**330**	eP	**P**	**02 09 56.9**	**-0.5**
KONO				pmax	pmax		
	comp=Z,14nm,0.9s						
LSA	**Lhasa**	**48.48**	**245**	eP	**P**	**02 09 58.7**	**+0.2**
	comp=Z,14nm,1.3s						
LSA	**Lhasa**	**48.48**	**245**	eP	**P**	**02 09 58.7**	**+0.2**
LSA				pmax	pmax		
	comp=Z,14nm,1.3s						
VSR	**Storozhevoye**	**48.53**	**305**	i P	**P**	**02 09 58.9**	**+0.8**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
D03D	**Eldon**	**48.70**	**64**	P	**P**	**02 10 00.4**	**+1.0**
	baz=330						
CHGR	**Chuyangaron**	**48.70**	**272**	eP	**P**	**02 09 59.6**	**0.0**
FFC	**Flin Flon**	**48.91**	**44**	eP	**P**	**02 10 00.7**	**-0.3**
	comp=Z,25nm,0.8s						
FFC	**Flin Flon**	**48.91**	**44**	ceP	**P**	**02 10 00.9**	**0.0**
KMI	**Kunming**	**48.98**	**230**	P	**P**	**02 10 00.5**	**-1.6**
KMI				pP	sP	02 10 05.5	+0.4
KMI				sP	pP	02 10 08.0	+3.7
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI				pmax	pmax		
	comp=Z,93nm,4.3s						
KMI				LR	LR		
	comp=Z,230nm,14.8s						
KMI				LR	LR		
	comp=Z,340nm,11.6s						
KMI				LR	LR		
	comp=Z,470nm,10.1s						
C06D	**Leavenworth**	**49.11**	**62**	P	**P**	**02 10 03.2**	**+0.6**
	baz=330						
B08A	**Colville Reser**	**49.26**	**61**	eP	**P**	**02 10 04.1**	**+0.3**
	comp=Z,7.1nm,0.9s						
D05A	**Enumclaw**	**49.37**	**63**	eP	**P**	**02 10 05.9**	**+1.3**
	comp=Z,12nm,0.8s						
E04D	**Cinebar**	**49.72**	**64**	P	**P**	**02 10 07.9**	**+0.7**
	baz=330						
LTY	**Liberty**	**49.76**	**62**	eP	**P**	**02 10 08.4**	**+0.7**
	comp=Z,7.6nm,0.8s						
LON	**Longmire**	**49.81**	**64**	eP	**P**	**02 10 08.9**	**+0.9**
	comp=Z,6.1nm,0.9s						
LON	**Longmire**	**49.81**	**64**	eP	**P**	**02 10 08.9**	**+0.9**
LON				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEW	**Newport**	**50.07**	**59**	P	**P**	**02 10 10.2**	**+0.3**
	baz=331						
G03D	**McMinnville, O**	**50.65**	**66**	P	**P**	**02 10 15.3**	**+1.0**
	baz=331						
F05D	**White Salmon**	**50.69**	**64**	P	**P**	**02 10 15.5**	**+0.8**
	baz=331						
HAWA	**Hanford**	**50.90**	**62**	eP	**P**	**02 10 16.0**	**-0.2**
	comp=Z,3.9nm,1.3s						
E08A	**Dider Farm, El**	**50.98**	**62**	eP	**P**	**02 10 17.6**	**+0.9**
	comp=Z,9.7nm,1.0s						
F07A	**Phinny Hill Vi**	**51.20**	**63**	eP	**P**	**02 10 18.9**	**+0.5**
	comp=Z,11nm,0.7s						
E09A	**Wood Farm, Sta**	**51.26**	**61**	eP	**P**	**02 10 19.7**	**+0.8**
	comp=Z,7.2nm,1.0s						
G05D	**Wamic, OR**	**51.30**	**64**	P	**P**	**02 10 19.7**	**+0.5**
	baz=331						
I02D	**Swisshome**	**51.41**	**67**	P	**P**	**02 10 20.7**	**+0.8**
	baz=331						
H04A	**Detroit Lake**	**51.48**	**65**	eP	**P**	**02 10 21.0**	**+0.4**
	comp=Z,9.7nm,0.9s						
NIL	**Nilore**	**51.54**	**266**	eP	**P**	**02 10 21.0**	**-0.1**
NIL	**Nilore**	**51.54**	**266**	eP	**P**	**02 10 21.0**	**-0.1**
AKASG	**Malin Array Be**	**51.95**	**312**	P	**P**	**02 10 23.3**	**-0.7**
	comp=Z,3.9nm,0.5s,baz=28,slow=8.4,SNR=12						
AKASG				LR	LR	02 35 55.7	
	comp=Z,130nm,20.4s,baz=65,slow=40						
AKBB	**Malin Array Si**	**51.95**	**312**	eP	**P**	**02 10 24.2**	**+0.2**
	comp=Z,6.8nm,0.8s						
KIEV	**Kiev**	**51.96**	**312**	eP	**P**	**02 10 22.6**	**-1.5**
	comp=Z,5.0nm,0.9s						
KIEV	**Kiev**	**51.96**	**312**	⇓iP	**P**	**02 10 24.3**	**+0.2**
KIEV	**Kiev**	**51.96**	**312**	i P	**P**	**02 10 23.7**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GUN	**Gumba**	**51.98**	**250**	eP	**P**	**02 10 25.6**	**+0.7**
F10A	**Beach Ranch, E**	**52.04**	**61**	eP	**P**	**02 10 25.5**	**+0.6**
	comp=Z,5.7nm,0.8s						
G08A	**Pilot Rock**	**52.06**	**62**	eP	**P**	**02 10 25.6**	**+0.6**
	comp=Z,5.7nm,0.8s						
JIRN	**Jiri**	**52.10**	**250**	eP	**P**	**02 10 26.3**	**+0.5**
	comp=Z,109nm,1.0s						
I04A	**Tendick Farm,**	**52.18**	**66**	P	**P**	**02 10 26.6**	**+0.7**
	baz=331						
J01E	**Myrtle Point**	**52.20**	**68**	P	**P**	**02 10 27.2**	**+1.2**
	baz=331						
KKN	**Kakani**	**52.31**	**251**	eP	**P**	**02 10 27.1**	**-0.1**
	comp=Z,144nm,1.3s						
DANN	**Dangsing**	**52.35**	**252**	eP	**P**	**02 10 28.0**	**+0.4**
	comp=Z,83nm,0.7s						
KBL	**Kabul**	**52.36**	**270**	eP	**P**	**02 10 26.9**	**-0.6**
	comp=Z,4.9nm,0.6s						
KBL	**Kabul**	**52.36**	**270**	eP	**P**	**02 10 26.9**	**-0.6**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MSO	**Missoula**	**52.37**	**57**	eP	**P**	**02 10 28.0**	**+0.7**
	comp=Z,13nm,1.4s						
MSO	**Missoula**	**52.37**	**57**	P	**P**	**02 10 28.0**	**+0.7**
	baz=332						
PKIN	**Phulchoki**	**52.46**	**250**	eP	**P**	**02 10 28.4**	**0.0**
	comp=Z,67nm,1.4s						
PKI	**Pulchoki**	**52.46**	**250**	eP	**P**	**02 10 28.2**	**-0.2**
	comp=Z,60nm,1.2s						
DMN	**Daman**	**52.53**	**251**	eP	**P**	**02 10 28.6**	**-0.3**
	comp=Z,66nm,1.1s						
RAMN	**Ramite**	**52.60**	**249**	eP	**P**	**02 10 29.3**	**-0.1**
	comp=Z,72nm,1.1s						
EGMT	**Eagleton**	**52.63**	**54**	eP	**P**	**02 10 28.8**	**-0.4**
	comp=Z,5.5nm,0.9s						
EGMT	**Eagleton**	**52.63**	**54**	P	**P**	**02 10 29.6**	**+0.4**
	baz=333						
PINE	**Pine Mountain**	**52.70**	**65**	eP	**P**	**02 10 30.9**	**+1.0**
	comp=Z,15nm,0.8s						
J04D	**Umpqua Nationa**	**52.77**	**66**	P	**P**	**02 10 31.2**	**+0.8**
	baz=332						
QIZ	**Qiongzhong**	**52.85**	**220**	P	**P**	**02 10 34.1**	**+3.1**
QIZ				S	**S**	**02 18 02.4**	**+2.5**
QIZ				LR	LR		
	comp=Z,230nm,10.0s						
QIZ				LR	LR		
	comp=Z,410nm,12.7s						
QIZ				LR	LR		
	comp=Z,280nm,9.8s						
PYUN	**Piuthan**	**52.86**	**253**	eP	**P**	**02 10 31.0**	**-0.2**
	comp=Z,71nm,1.1s						
I07A	**Izee**	**52.94**	**63**	eP	**P**	**02 10 32.1**	**+0.6**
	comp=Z,6.1nm,0.9s						
BMO	**Blue Mountains**	**53.00**	**61**	eP	**P**	**02 10 32.5**	**+0.5**
	comp=Z,3.0nm,0.9s						
BMO	**Blue Mountains**	**53.00**	**61**	eP	**P**	**02 10 32.5**	**+0.5**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HUMO	**Hull Mountain**	**53.03**	**67**	eP	**P**	**02 10 33.0**	**+0.9**
	comp=Z,9.0nm,1.3s						
J05D	**Fort Rock, OR**	**53.04**	**65**	P	**P**	**02 10 33.2**	**+0.9**
	baz=332,SNR=8.3						

K04D	Chiloquin, OR	53.44	66	P	P	02 10 36.0	+0.7
	baz=332						
GEYT	Alibeck	53.52	282	P	P	02 10 35.9	0.0
	comp=Z,5.3nm,0.6s,baz=0.0,slow=5.9,SNR=10						
GEYT				LR	LR	02 35 58.9	
	comp=Z,314nm,18.2s,baz=10.0,slow=39						
GYA0B	ALIBECK ARRAY	53.52	282	*e*P	P	02 10 35.8	-0.1
	comp=Z,7.3nm,0.8s						
L04D	Klamath Falls	53.60	67	P	P	02 10 37.2	+0.7
	baz=332,SNR=5.4						
KIV	Kislovodsk	53.75	298	*e*P	P	02 10 37.2	-0.3
	comp=Z,20nm,0.9s						
KIV	Kislovodsk	53.75	298	⇑*i*P	P	02 10 38.3	+0.8
KIV	Kislovodsk	53.75	298	*e*P	P	02 10 39.2	+1.7
KIV				*e*S	S	02 18 14.6	+2.8
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
KIV				MLR	MLR		
	comp=Z,133nm,16.0s						
NCK	Nalchik	53.85	297	*i* P	P	02 10 39.1	+1.0
NCK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBZ	Khabaz	53.88	298	P	P	02 10 38.9	+0.6
	comp=Z,11nm,0.9s,baz=40,slow=4.3,SNR=13						
KBZ				LR	LR	02 34 56.1	
	comp=Z,185nm,19.4s,baz=26,slow=38						
DGMT	Dagmar	53.89	49	*e*P	P	02 10 39.2	+0.8
	comp=Z,14nm,0.9s						
DGMT	Dagmar	53.89	49	P	P	02 10 38.6	+0.2
	baz=334						
J08A	Circle Bar Ran	53.93	63	*e*P	P	02 10 39.9	+1.1
	comp=Z,6.0nm,1.1s						
DLMT	Dillon	54.10	57	*e*P	P	02 10 40.3	+0.2
	comp=Z,8.3nm,1.1s						
M02C	Callahan	54.14	68	P	P	02 10 41.8	+1.4
	baz=332						
M04C	Macdoel	54.15	67	P	P	02 10 41.3	+0.8
	baz=332,SNR=6.0						
BOZ	Bozeman (W)	54.20	56	*e*P	P	02 10 41.7	+0.8
	comp=Z,4.1nm,0.8s						
BOZ	Bozeman (W)	54.20	56	*e*P	P	02 10 41.7	+0.8
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	Bozeman (W)	54.20	56	P	P	02 10 41.5	+0.6
	baz=333						
NEY	Neytrino	54.37	298	*i* P	P	02 10 44.4	+2.3
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZEI	Tsey	54.37	296	*e*P	P	02 10 42.7	+0.5
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MCMT	McKenzie Canyo	54.49	58	*e*P	P	02 10 43.7	+0.6
ULM	Lac du Bonnet	54.55	42	*e*P	P	02 10 42.4	-0.7
	comp=Z,5.7nm,0.8s						
ULM	Lac du Bonnet	54.55	42	*e*P	P	02 10 42.4	-0.7
ULM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULM	Lac du Bonnet	54.55	42	P	P	02 10 42.2	-0.9
	comp=Z,3.4nm,0.6s,baz=320,slow=6.7,SNR=10						
ULM				LR	LR	02 36 36.6	
	comp=Z,242nm,18.6s,baz=358,slow=39						
N02D	Trinity Center	54.56	68	P	P	02 10 44.7	+1.3
	baz=332,SNR=6.2						
MOD	Modoc Plateau	54.58	65	*e*P	P	02 10 44.7	+1.0
	comp=Z,14nm,1.3s						
WVOR	Wild Horse Val	54.69	64	*e*P	P	02 10 45.1	+0.7
	comp=Z,5.4nm,1.1s						
WVOR	Wild Horse Val	54.69	64	*e*P	P	02 10 45.1	+0.7
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KWP	Kalwaria Pacla	54.71	316	P	P	02 10 47.5	+3.2
KWP				pmax	pmax		
	comp=Z,25nm,1.0s						
EKA	Eskdalemuir Ar	54.74	337	P	P	02 10 43.5	-0.9
ESK	Eskdalemuir	54.76	337	*e*P	P	02 10 44.5	-0.1
ESK	Eskdalemuir	54.76	337	*e*P	P	02 10 44.5	-0.1
LAO	LASA Array	54.90	52	P	P	02 10 46.2	+0.4
	baz=334						
OJC	Ojcow	54.92	319	*e*P	P	02 10 45.9	+0.1
OJC	Ojcow	54.92	319	*e*P	P	02 10 45.2	-0.6
	comp=Z,16nm,1.0s						
OJC	Ojcow	54.92	319	*e*P	P	02 10 45.9	+0.1
WDC	Whiskeytown Da	54.97	68	*e*P	P	02 10 47.1	+0.8
	comp=Z,9.5nm,0.8s						
WDC	Whiskeytown Da	54.97	68	*e*P	P	02 10 47.1	+0.8
WDC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HLID	Hailey	55.11	60	*e*P	P	02 10 47.7	+0.2
	comp=Z,2.0nm,0.8s						
HLID	Hailey	55.11	60	P	P	02 10 47.9	+0.4
	baz=333						
KSP	Ksiaz	55.20	322	*e*P	P	02 10 47.6	-0.2
KSP	Ksiaz	55.20	322	*e*P	P	02 10 47.6	-0.2
O02D	Mt. Diablo Mer	55.23	68	P	P	02 10 49.4	+1.1
	baz=332						
PAYA	Payao	55.27	231	P	P	02 10 51.7	+3.0
	comp=Z,9.1nm,0.9s						
RLMT	Red Lodge	55.37	55	*e*P	P	02 10 50.2	+0.8
	comp=Z,35nm,0.9s						
RLMT	Red Lodge	55.37	55	P	P	02 10 49.8	+0.4
	baz=334,SNR=40						
O03E	Paynes Creek	55.48	68	P	P	02 10 50.2	+0.1
	baz=333,SNR=7.3						
LKWY	Lake	55.52	56	*e*P	P	02 10 52.7	+2.2
	comp=Z,19nm,0.8s						
NIE	Niedzica	55.53	318	*e*P	P	02 10 50.7	+0.4
NIE	Niedzica	55.53	318	*e*P	P	02 10 50.7	+0.4
CLL	Collm	55.53	324	*e*P	P	02 10 49.5	-0.6
	comp=Z,19nm,0.8s						
CLL	Collm	55.53	324	*e*P	P	02 10 49.0	-1.2
	comp=Z,11nm,1.0s						
CLL				*i* Pmax		02 10 52.0	
	comp=Z,22nm,0.9s						
CLL	Collm	55.53	324	*e*P	P	02 10 49.6	-0.6
CLL				pmax	pmax		
	comp=Z,19nm,0.8s						
UPC	Upice	55.58	322	AMS	AMS	02 37 30.0	
	comp=Z,300nm,15.1s						
H17A	Grant Village	55.61	56	*e*P	P	02 10 52.6	+1.4
	comp=Z,19nm,1.1s						
H17A	Grant Village	55.61	56	P	P	02 10 53.3	+2.1
	baz=334,SNR=11						
DPC	Dobruska-Polom	55.65	321	*e*P	P	02 10 50.8	-0.4
DPC				*e*pP	pP	02 10 53.8	+0.5
DPC				AMS	AMS	02 37 20.0	
	comp=Z,300nm,15.8s						
DPC	Dobruska-Polom	55.65	321	*e*P	P	02 10 50.8	-0.4
DPC				MLR	MLR		
	comp=Z,300nm,15.8s						
OKC	Ostrava-Krasne	55.69	320	*e*P	P	02 10 53.6	+2.3
OKC	Ostrava-Krasne	55.69	320	*e*P	P	02 10 53.6	+2.3
BRG	Berggiesshubel	55.73	323	*e*P	P	02 10 53.6	+2.0
	comp=Z,5.6nm,0.9s						
BRG	Berggiesshubel	55.73	323	*e*P	P	02 10 53.6	+2.0
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDND	Maddock	55.76	46	*e*P	P	02 10 52.5	+0.7
	comp=Z,38nm,0.9s						
MDND	Maddock	55.76	46	P	P	02 10 51.7	-0.2
	baz=336,SNR=5.0						
KRLC	Kraliky	55.80	321	*e*P	P	02 10 52.1	-0.1
KRLC				*e*pP	sP	02 10 55.3	+0.1
KRLC	Kraliky	55.80	321	*e*P	P	02 10 52.1	-0.1
BUR08	Bucovina Ar. S	55.85	314	*e*P	P	02 10 51.8	-0.9
FLWY	Flagg Ranch	55.85	57	*e*P	P	02 10 54.2	+1.3
	comp=Z,17nm,0.8s						
BUR04	Bucovina Ar. S	55.87	313	*e*P	P	02 10 52.4	-0.4
BURAR	Bucovina Array	55.87	313	⇓*i*P	P	02 10 53.0	+0.1
BURAR	Bucovina Array	55.87	313	P	P	02 10 52.9	+0.1
MORC	Moravsky Berou	55.89	320	*e*P	P	02 10 52.5	-0.3
	comp=Z,8.7nm,0.8s						
MORC	Moravsky Berou	55.89	320	⇓*i*P	P	02 10 52.9	0.0
MORC	Moravsky Berou	55.89	320	*e*P	P	02 10 52.5	-0.3
MORC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MORC	Moravsky Berou	55.89	320	*e*P	P	02 10 52.5	-0.3
SCHQ	Schefferville	55.90	20	*e*P	P	02 10 51.9	-0.9
	comp=Z,9.4nm,0.8s						
SCHQ	Schefferville	55.90	20	P	P	02 10 51.5	-1.3
	comp=Z,9.0nm,0.7s,baz=3.6,slow=7.3,SNR=15						
SCHQ				LR	LR	02 36 03.4	
	comp=Z,183nm,19.2s,baz=331,slow=37						
IMW	Indian Meadow	55.94	57	*e*P	P	02 10 54.3	+0.7
	comp=Z,7.9nm,1.0s						
LANS	Liptovska Anna	55.99	318	*e*P	P	02 10 54.7	+1.1
LANS	Liptovska Anna	55.99	318	*e*P	P	02 10 54.7	+1.1
CHTO	Chiang Mai	56.06	232	*e*P	P	02 10 54.5	+0.1
	comp=Z,11nm,1.4s						
CHTO	Chiang Mai	56.06	232	*e*P	P	02 10 54.5	+0.1
CHTO				pmax	pmax		
	comp=Z,11nm,1.4s						
CHTO	Chiang Mai	56.06	232	P	P	02 10 57.8	+3.5
	comp=Z,33nm,1.2s						
CMMT	Chiang Mai	56.06	232	P	P	02 10 57.8	+3.4
	comp=Z,7.4nm,1.2s						
TRPA	Tarpa	56.13	316	⇑*i*P	P	02 10 54.4	-0.1
TRPA	Tarpa	56.13	316	*e*P	P	02 10 53.1	-1.4
MOOW	Moose Ponds	56.14	57	*e*P	P	02 10 55.6	+0.6
	comp=Z,9.6nm,0.9s						
FXWY	Fox Creek	56.15	57	*e*P	P	02 10 55.6	+0.6
	comp=Z,11nm,1.2s						
BIZ	Bicaz	56.24	312	⇓*i*P	P	02 10 56.0	+0.7
TPAW	Teton Pass	56.30	57	*e*P	P	02 10 56.8	+0.6
	comp=Z,14nm,0.8s						
LOHW	Long Hollow	56.30	57	*e*P	P	02 10 57.1	+1.0
	comp=Z,17nm,1.4s						
SKNT	Sakolnakorn	56.35	226	P	P	02 10 58.1	+1.7
	comp=Z,8.4nm,1.1s						
AGMN	Agassiz Nation	56.35	43	*e*P	P	02 10 54.7	-1.4
	comp=Z,11nm,1.0s						
BEKR	Beckworth	56.37	67	*e*P	P	02 10 57.1	+0.6
	comp=Z,8.3nm,0.9s						
SNOW	Snow King Moun	56.39	57	*e*P	P	02 10 57.9	+1.1
	comp=Z,14nm,1.0s						
CMAR	Chiang Mai Arr	56.40	232	P	P	02 10 57.5	+0.8
	comp=Z,1.6nm,0.4s,baz=7.5,slow=7.5,SNR=14						
CMAR				LR	LR	02 38 47.5	
	comp=Z,39nm,20.7s,baz=36,slow=40						
PRU	Pruhonice	56.41	322	*e*P	P	02 10 59.4	+2.9
PRU	Pruhonice	56.41	322	*e*P	P	02 10 59.4	+2.9
GNI	Garni	56.42	294	*e*P	P	02 10 56.2	-0.7
GNI	Garni	56.42	294	*e*P	P	02 10 56.2	-0.7
GDXM	Geysers	56.45	69	*e*P	P	02 10 58.2	+1.2
	comp=Z,20nm,1.3s						
REDW	Red Top Meadow	56.45	57	*e*P	P	02 10 58.0	+0.8
	comp=Z,14nm,0.8s						
TESR	Tescani	56.47	312	⇑*i*P	P	02 10 57.3	+0.3
VRAC	Vranov	56.56	321	⇓*i*P	P	02 10 58.5	+0.9
VRAC	Vranov	56.56	321	P	P	02 11 00.0	+2.4
VRAC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRAC	Vranov	56.56	321	*e*P	P	02 10 58.1	+0.5
UTTA	Uttaradit	56.59	230	P	P	02 10 58.7	+0.6
	comp=Z,6.9nm,1.1s,comp=Z,61nm						
ARCR	ARCALIA	56.59	314	⇑*i*P	P	02 10 59.5	+1.6
VYHS	Vyhne	56.76	319	*e*P	P	02 11 01.6	+2.6
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VYHS	Vyhne	56.76	319	*e*P	P	02 11 01.6	+2.6
KRUC	Moravsky	56.83	321	P	P	02 11 00.5	+1.0
KRUC				pmax	pmax		
	comp=Z,12nm,1.0s						
KRUC	Moravsky	56.83	321	*e*P	P	02 10 59.3	-0.2
TREC	Trest	56.84	321	AMS	AMS	02 38 20.0	
	comp=Z,300nm,19.8s						
PAHR	Pah Rah Range	56.85	66	*e*P	P	02 11 00.9	+0.9
	comp=Z,11nm,1.2s						
BMN	Battle Mountai	56.95	64	*e*P	P	02 11 01.6	+0.9
	comp=Z,5.3nm,1.0s						
BMN	Battle Mountai	56.95	64	*e*P	P	02 11 01.6	+0.9
BMN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AFDM	Forest Hills D	56.97	68	*e*P	P	02 11 00.9	+0.3
	comp=Z,2.8nm,1.0s						
PSZ	Piszkesteto	57.02	318	*e*P	P	02 11 00.3	-0.7
	comp=Z,15nm,1.0s						
PSZ	Piszkesteto	57.02	318	⇑*i*P	P	02 11 02.3	+1.4
PSZ	Piszkesteto	57.02	318	*e*P	P	02 11 00.3	-0.7
PSZ				pmax	pmax		
	comp=Z,15nm,1.0s						
VRI	Vrincioaia	57.04	311	⇓*i*P	P	02 11 02.2	+1.2
VRI	Vrincioaia	57.04	311	P	P	02 11 02.2	+1.2
PLOR	Plostina	57.08	312	⇑*i*P	P	02 11 02.0	+0.6
PLOR	Plostina	57.08	312	P	P	02 11 01.9	+0.6
OZUR		57.10	312	⇑*i*P	P	02 11 03.4	+1.9
SUKH	Sukhothai	57.11	231	P	P	02 11 05.5	+3.7
	comp=Z,4.5nm,1.1s						
VCNR	Virginia City	57.12	66	*e*P	P	02 11 02.7	+0.7
	comp=Z,9.3nm,1.1s						
CFR	Carcaliu	57.26	310	⇓*i*P	P	02 11 04.4	+1.9
CFR	Carcaliu	57.26	310	P	P	02 11 04.4	+1.9
MODS	Modra-Piesok	57.26	320	*e*P	P	02 11 03.3	+0.7
MODS				pmax	pmax		
	comp=Z,12nm,1.5s						
MODS	Modra-Piesok	57.26	320	*e*P	P	02 11 03.3	+0.7
DRGR		57.31	315	⇑*i*P	P	02 11 04.4	+1.4
DRGR		57.31	315	P	P	02 11 04.3	+1.3
PNTR	Pine Nut	57.33	66	*e*P	P	02 11 04.6	+1.1
	comp=Z,5.7nm,0.9s						
DOPR	Dopca	57.33	313	⇓*i*P	P	02 11 04.7	+1.6
ELK	Elko	57.35	62	*e*P	P	02 11 04.4	+0.8
	comp=Z,6.0nm,0.9s						
ELK	Elko	57.35	62	*e*P	P	02 11 04.4	+0.8
ELK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BW06	Boulder Array	57.40	56	*e*P	P	02 11 04.3	+0.4
	comp=Z,7.8nm,0.8s						
BW06	Boulder Array	57.40	56	P	P	02 11 04.1	+0.1
	baz=334,SNR=16						
PD31	Pinedale Array	57.40	56	*e*P	P	02 11 04.3	+0.5
PDAR	Pinedale Array	57.40	56	*e*P	P	02 11 04.2	+0.3
PDAR	Pinedale Array	57.40	56	P	P	02 11 04.4	+0.5
	comp=Z,6.6nm,0.7s,baz=9.5,slow=2.8,SNR=72						
PDAR				LR	LR	02 37 44.0	
	comp=Z,177nm,19.8s,baz=350,slow=38						
KHC	Kasperske Hory	57.44	323	*e*P	P	02 11 03.9	+0.1
	comp=Z,1.8nm,0.9s						
KHC	Kasperske Hory	57.44	323	*e*P	P	02 11 03.8	-0.1
KHC				*e*pP	sP	02 11 06.7	-0.2
KHC				AMS	AMS	02 38 30.0	
	comp=Z,200nm,18.6s						
KHC	Kasperske Hory	57.44	323	*e*P	P	02 11 03.8	-0.1
KHC				MLR	MLR		
	comp=Z,200nm,18.6s						
GRA1	Grafenberg Arr	57.45	325	*e*P	P	02 11 04.0	+0.1
	comp=Z,7.1nm,0.8s						
GRF	Grafenberg Arr	57.45	325	*e*P	P	02 11 04.0	+0.1
GRF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GRFO	Grafenberg	57.45	325	*e*P	P	02 11 02.2	-1.7
	comp=Z,5.0nm,0.9s						
GRFO	Grafenberg	57.45	325	*e*P	P	02 11 02.2	-1.7
GRFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YERR	Yerington	57.55	66	*e*P	P	02 11 05.6	+0.7
	comp=Z,14nm,1.0s						
PBKT	Sadao Pong	57.58	229	P	P	02 11 07.0	+1.9
WET	Wettzell	57.59	323	P	P	02 11 08.1	+3.2
MLR	Muntele Rosu	57.60	312	*e*P	P	02 11 04.9	-0.3
	comp=Z,9.2nm,0.7s						
MLR	Muntele Rosu	57.60	312	⇓*i*P	P	02 11 06.8	+1.6
MLR	Muntele Rosu	57.60	312	*e*P	P	02 11 04.9	-0.3
MLR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BUD	Budapest	57.64	318	P	P	02 11 09.5	+4.2
MEM	Membach	57.67	329	P	P	02 11 06.9	+1.5
MEM				pmax	pmax		
	comp=Z,22nm,1.0s						
MEM	Membach	57.67	329	⇑P	P	02 11 05.1	-0.3
MEM				⇓pP	P	02 11 06.9	+1.5
MEM				⇑sP	sP	02 11 08.5	0.0
	comp=Z,13nm,1.0s						
GEC2	GERESS Array S	57.68	323	*e*P	P	02 11 05.9	+0.3
	comp=Z,6.6nm,0.9s						
GEC2	GERESS Array S	57.68	323	*e*P	P	02 11 05.9	+0.3
GEC2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GERES	GERESS Array B	57.68	323	P	P	02 11 05.1	-0.5
	comp=Z,4.8nm,0.8s,baz=38,slow=6.8,SNR=26						
GERES				LR	LR	02 39 19.0	
	comp=Z,158nm,18.6s,baz=20,slow=40						
GEA0	GERESS Array S	57.69	323	*e*P	P	02 11 05.0	-0.7
EYMN	Ely	57.79	40	*e*P	P	02 11 05.3	-1.0
	comp=Z,11nm,0.9s						
EYMN	Ely	57.79	40	P	P	02 11 05.4	-1.0
	baz=339						
RSSD	Black Hills	57.88	51	*e*P	P	02 11 07.5	+0.2
RSSD	Black Hills	57.88	51	*e*P	P	02 11 07.5	+0.2
RSSD	Black Hills	57.88	51	P	P	02 11 07.3	+0.1
	baz=336						
KVN	Kaiserville	57.88	65	*e*P	P	02 11 08.3	+1.0
	comp=Z,9.0nm,0.8s						
KVN	Kaiserville	57.88	65	*e*P	P	02 11 08.3	+1.0
KVN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WAKR	Walker	57.91	67	*e*P	P	02 11 08.3	+0.8
	comp=Z,9.7nm,0.9s						
VOIR		57.91	313	⇑*i*P	P	02 11 09.2	+1.9
VOIR		57.91	313	P	P	02 11 09.1	+1.8
BCLA	Clavier	57.99	329	⇑P	P	02 11 08.2	+0.6
BCLA				⇑sP	sP	02 11 10.6	-0.1
	comp=Z,11nm,1.2s						
CONA	Conrad Observa	58.02	321	*e*pP	P	02 11 09.0	+0.9
	comp=Z,7.5nm,1.5s						
SIRR	Siria	58.08	316	⇓*i*P	P	02 11 08.8	+0.4
SOP	Sopron	58.08	320	P	P	02 11 11.6	+3.3
SOP	Sopron	58.08	320	*e*P	P	02 11 07.0	-1.3
ARR	Arges	58.09	313	⇑*i*P	P	02 11 09.5	+1.0
RYN	Ryan	58.11	66	*e*P	P	02 11 09.5	+0.6
	comp=Z,5.0nm,0.8s						
NV01	Mina Array Sit	58.37	66	*e*P	P	02 11 11.8	+1.0
NVAR	Mina Array Bea	58.37	66	P	P	02 11 12.4	+1.7
	comp=Z,7.3nm,0.8s,baz=318,slow=5.5,SNR=44						
GIVF	Givet	58.39	329	*e*P	P	02 11 12.8	+2.4
GIVF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NV11	Mina Array Sit	58.42	66	*e*P	P	02 11 11.6	+0.6
	comp=Z,0.3nm,0.9s						
DOU	Dourbes	58.44	330	⇑sP	P	02 11 13.3	+2.6
K22A	Casper	58.46	54	*e*P	P	02 11 11.4	+0.1
	comp=Z,16nm,0.9s						
K22A	Casper	58.46	54	P	P	02 11 11.0	-0.3
	baz=335,SNR=9.4						
MOA	Molln	58.48	322	*e*pP	P	02 11 10.9	-0.2
	comp=Z,4.6nm,0.8s						
BAIF	Baives	58.55	330	*e*P	P	02 11 12.0	+0.5
UMPA	Umpang Tak	58.55	231	P	P	02 11 17.8	+5.9
	comp=Z,4.2nm,1.5s						
GZR	Gura Zlata	58.58	314	⇑*i*P	P	02 11 11.6	-0.3
GZR	Gura Zlata	58.58	314	P	P	02 11 11.6	-0.3
DUG	Dugway, Tooele	58.66	60	*e*P	P	02 11 13.3	+0.7
	comp=Z,14nm,0.9s						
DUG	Dugway, Tooele	58.66	60	*e*P	P	02 11 13.3	+0.7
DUG				pmax	pmax		
	comp=Z,14nm,0.9s						
DUG	Dugway, Tooele	58.66	60	P	P	02 11 13.7	+1.0
	baz=334,SNR=20						
BZS	Buzias	58.69	315	⇓*i*P	P	02 11 12.4	-0.2
BZS	Buzias	58.69	315	P	P	02 11 12.3	-0.3
ARSA	Arzberg	58.73	321	*e*pP	P	02 11 14.3	+1.3
	comp=Z,4.9nm,0.9s						
SAO	San Andreas Ge	58.75	69	*e*P	P	02 11 14.1	+0.9
	comp=Z,8.6nm,0.8s						
SAO	San Andreas Ge	58.75	69	*e*P	P	02 11 14.1	+0.9
SAO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDPB	Devils Postpil	58.81	67	*e*P	P	02 11 15.0	+1.1
	comp=Z,13nm,0.9s						
OMMB	Old Mammoth Mi	58.85	67	*e*P	P	02 11 14.9	+0.7
	comp=Z,8.8nm,0.9s						
MORH	Mrgy, Hungar	58.92	318	*e*P	P	02 11 12.0	-2.2
UTHA	Uthaitani	58.98	230	P	P	02 11 18.6	+3.7
E38A	The Farm, Brul	59.02	41	P	P	02 11 15.1	+0.2
	baz=339						
SUSD	Miller	59.06	47	P	P	02 11 14.8	-0.4
	baz=337						
MATQ	Matagami	59.08	29	P	P	02 11 14.6	-0.7
	baz=343						
RWWY	Rawlins	59.12	55	*e*P	P	02 11 16.0	0.0
	comp=Z,14nm,1.1s						
SRE	Strehaia	59.14	314	⇑*i*P	P	02 11 17.6	+1.9
SRE	Strehaia	59.14	314	P	P	02 11 17.6	+1.9
BFO	Black Forest	59.36	326	*e*P	P	02 11 16.4	-0.9
	comp=Z,9.5nm,0.8s						
BFO	Black Forest	59.36	326	*c**e*P	P	02 11 18.9	+1.6
R11A	Troy Canyon, C	59.38	63	*e*P	P	02 11 18.4	+0.6
	comp=Z,12nm,1.0s						
R11A	Troy Canyon, C	59.38	63	P	P	02 11 18.4	+0.6
	baz=334,SNR=19						
SOKA	Soboth	59.39	321	*e*P	P	02 11 19.6	+2.0
	comp=Z,10nm,1.4s						
KBA	Koelnbreinsper	59.42	322	*e*pP	P	02 11 19.0	+1.2
	comp=Z,16nm,1.2s,SNR=5.1						
MDVR	Moldovita	59.44	315	⇑*i*P	P	02 11 18.9	+1.0
CDF	Champ du Feu	59.50	327	*e*P	P	02 11 18.7	+0.4
CDF				pmax	pmax		
	comp=Z,13nm,0.9s						
CHGQ	Chibougamau	59.52	27	P	P	02 11 16.9	-1.5
	baz=345						
F38A	Pierce - Schro	59.54	41	P	P	02 11 17.2	-1.3
	baz=339,SNR=6.7						
E40A	Wakefield	59.58	40	P	P	02 11 17.3	-1.5
	baz=340						
WATA	Walderalm	59.59	324	*i* P	P	02 11 20.9	+1.9
	comp=Z,9.5nm,0.9s						
SIRT	Sirnak	59.59	295	*e*P	P	02 11 19.2	+0.1
	comp=Z,44nm,1.4s						
RETA	Reutte	59.63	324	*i* P	P	02 11 21.8	+2.6
	comp=Z,9.6nm,1.8s						
WTTA	Wattenberg	59.64	323	*i* pP	P	02 11 20.2	+0.8
	comp=Z,12nm,0.9s						
OBKA	Obir	59.66	321	*i* pP	P	02 11 20.4	+0.9
	comp=Z,14nm,0.8s						
MOTA	Moosalm	59.68	324	*i* P	P	02 11 22.0	+2.3
	comp=Z,4.2nm,0.8s						
ECH	Echery	59.71	327	*e*P	P	02 11 18.8	-0.9
	comp=Z,11nm,0.9s						
ECH	Echery	59.71	327	*e*P	P	02 11 18.8	-0.9
ECH				pmax	pmax		
	comp=Z,11nm,0.9s						
MYKA	Terra Mystica	59.77	322	*i* P	P	02 11 23.3	+3.2
	comp=Z,9.2nm,1.0s						
SQTA	Sankt Quirin	59.78	324	*e*pP	P	02 11 21.7	+1.4
	comp=Z,7.7nm,0.9s						
F39A	Loretta	59.82	41	P	P	02 11 19.0	-1.4
	baz=339						
LSQQ	Lebel-sur-Quev	59.88	29	P	P	02 11 19.4	-1.4
	baz=344						
ABTA	Abfaltersbach	59.92	323	*e*P	P	02 11 23.3	+2.0
	comp=Z,3.4nm,0.7s						
GRAC	Grapevine Rang	59.98	66	P	P	02 11 22.9	+1.2
	baz=334						
DAVA	Damuels	60.01	325	*e*P	P	02 11 24.1	+2.1
	comp=Z,7.4nm,1.1s						
F40A	Park Falls	60.02	40	P	P	02 11 20.6	-1.3
	baz=340						
E42A	Champion	60.07	38	P	P	02 11 20.9	-1.3
	baz=340						
HAU	Haudompre	60.08	328	*e*P	P	02 11 24.5	+2.3
HAU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PAGB	Antelope Grade	60.10	69	*e*P	P	02 11 23.2	+0.7
	comp=Z,17nm,1.1s						
HINF	Hinteralfeld	60.16	327	*e*P	P	02 11 23.4	+0.6
HINF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
O20A	White River Ci	60.20	57	*e*P	P	02 11 23.6	+0.3
	comp=Z,11nm,1.3s						
O20A	White River Ci	60.20	57	P	P	02 11 23.5	+0.1
	baz=336						
CWC	Cottonwood Cre	60.23	66	P	P	02 11 24.4	+0.8
	baz=334						
N23A	Red Feather La	60.23	54	*e*P	P	02 11 24.3	+0.6
	comp=Z,10nm,1.0s						
N23A	Red Feather La	60.23	54	P	P	02 11 23.8	+0.1
	baz=336,SNR=6.8						
G38A	Ridgeland	60.28	42	P	P	02 11 22.9	-0.7
	baz=339						
G39A	Holcombe	60.35	41	P	P	02 11 22.1	-1.9
	baz=339						
ECSD	EROS Data Cent	60.36	46	*e*P	P	02 11 23.3	-0.9
	comp=Z,13nm,0.8s						
ECSD	EROS Data Cent	60.36	46	P	P	02 11 23.1	-1.1
	baz=338,SNR=15						
SRU	San Rafael Swe	60.39	59	*e*P	P	02 11 25.3	+0.6
	comp=Z,10nm,0.8s						
SRU	San Rafael Swe	60.39	59	*e*P	P	02 11 25.3	+0.6
SRU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TPNV	Topopah Spring	60.41	65	*e*P	P	02 11 25.3	+0.5
	comp=Z,8.3nm,1.2s						
TPNV	Topopah Spring	60.41	65	*e*P	P	02 11 25.3	+0.5
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TPNV	Topopah Spring	60.41	65	P	P	02 11 25.9	+1.1
	baz=335,SNR=6.4						
DAVOX	Davos/Dischmat	60.49	325	LR	LR	02 42 46.3	
	comp=Z,136nm,18.0s,slow=41						

D46A	Sault St. Mari	60.52	35	P	P	02 11 24.0	-1.2
	baz=342						
BRTR	Keskin Array B	60.53	303	P	P	02 11 25.5	0.0
	comp=Z,2.4nm,0.8s,baz=21,slow=3.0,SNR=9.7						
BRTR				LR	LR	02 41 10.0	
	comp=Z,52nm,19.2s,baz=6.5,slow=40						
FUORN	Ofenpass-Fuorn	60.56	324	*e*P	P	02 11 25.3	-0.5
	comp=Z,9.2nm,1.0s						
D47A	Chapleau	60.56	34	P	P	02 11 24.4	-1.1
	baz=342						
G40A	Rib Lake	60.61	40	*e*P	P	02 11 24.8	-1.1
	comp=Z,16nm,1.0s						
G40A	Rib Lake	60.61	40	P	P	02 11 24.3	-1.6
	baz=340,SNR=5.2						
H38A	Maiden Rock	60.64	42	P	P	02 11 24.6	-1.5
	baz=339						
FLN	La Foliniere	60.65	333	*e*P	P	02 11 26.1	0.0
FLN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
D49A	Beulah Townshi	60.73	33	P	P	02 11 25.6	-1.0
	baz=342						
LDF	La Druitiere	60.75	333	*e*P	P	02 11 25.3	-1.5
LDF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MPMC	Manual Prospec	60.78	66	P	P	02 11 28.2	+0.8
	baz=334,SNR=11						
ISA	Isabella, Lake	60.79	67	*e*P	P	02 11 27.6	+0.3
	comp=Z,9.8nm,1.4s						
ISA	Isabella, Lake	60.79	67	*e*P	P	02 11 27.6	+0.3
ISA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ISA	Isabella, Lake	60.79	67	P	P	02 11 27.7	+0.3
	baz=334						
CLF	Chambon-Foret	60.87	331	*e*P	P	02 11 26.6	-0.9
	comp=Z,35nm,1.2s						
PKM	Mcpherson Peak	61.01	69	P	P	02 11 30.0	+1.1
	baz=334						
VTS	Vitosha	61.01	313⇑	*i*P	P	02 11 30.3	+1.5
E47A	Iron Bridge	61.10	35	P	P	02 11 27.2	-1.9
	baz=342						
H40A	Chili	61.16	41	P	P	02 11 27.9	-1.7
	baz=340						
SHPR	Sheep Range	61.19	64	*e*P	P	02 11 30.6	+0.5
	comp=Z,12nm,1.1s						
LRMC	Laurel Mtn Rad	61.23	67	P	P	02 11 30.6	+0.2
	baz=335						
LOR	Lormes	61.28	329	*e*P	P	02 11 30.2	-0.2
LOR				pmax	pmax		
	comp=Z,19nm,1.0s						
D51A	Lot 18 Range I	61.30	31	P	P	02 11 28.9	-1.6
	baz=343						
ISCO	Idaho Springs	61.34	55	*e*P	P	02 11 31.8	+0.5
	comp=Z,6.3nm,1.1s						
ISCO	Idaho Springs	61.34	55	*e*P	P	02 11 31.8	+0.5
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ISCO	Idaho Springs	61.34	55	P	P	02 11 30.4	-0.8
	baz=336						
SHOC	Shoshone, Teco	61.35	65	P	P	02 11 32.3	+1.3
	baz=335						
H41A	Junction City	61.35	40	P	P	02 11 28.9	-2.0
	baz=340						
OGNE	Ogallala	61.38	51	*e*P	P	02 11 31.1	-0.1
	comp=Z,29nm,1.1s						
OGNE	Ogallala	61.38	51	P	P	02 11 31.0	-0.3
	baz=337,SNR=5.7						
PV21	Cone Mtn., Par	61.39	58	*e*P	P	02 11 32.2	+0.6
	comp=Z,16nm,1.2s						
PV09	Paradox Valley	61.40	58	*e*P	P	02 11 32.0	+0.4
F46A	Macinaw City C	61.41	36	P	P	02 11 30.2	-1.1
	baz=341						
CABF	La Chapelle	61.47	327	*e*P	P	02 11 32.0	+0.2
CABF				pmax	pmax		
	comp=Z,13nm,0.9s						
SMCO	Snowmass	61.47	56	*e*P	P	02 11 32.5	+0.2
	comp=Z,11nm,1.0s						
PV23	Carpenter Ridg	61.48	58	*e*P	P	02 11 32.6	+0.4
	comp=Z,30nm,1.1s						
SGMF	Saint Gilles	61.50	334	*e*P	P	02 11 31.4	-0.4
SGMF				pmax	pmax		
	comp=Z,16nm,1.2s						
ROSF	Rostrenen	61.53	335	*e*P	P	02 11 32.2	+0.1
ROSF				pmax	pmax		
	comp=Z,16nm,0.9s						
PV10	Paradox Valley	61.54	58	*e*P	P	02 11 33.9	+1.3
	comp=Z,24nm,1.0s						
PV14	Lion Creek, Pa	61.55	58	*e*P	P	02 11 32.7	+0.1
	comp=Z,26nm,1.1s						
SSF	Saint Saulge	61.55	329	*e*P	P	02 11 34.3	+2.1
DAV	Davao City (W)	61.56	199	LR	LR	02 37 38.9	
	comp=Z,82nm,20.8s,baz=31,slow=36						
PV04	Paradox Valley	61.57	58	*e*P	P	02 11 33.0	+0.4
	comp=Z,19nm,1.1s						
PV20	West Nyswonger	61.59	58	*e*P	P	02 11 33.4	+0.5
	comp=Z,17nm,1.1s						
D52A	ZEK Kipawa Sen	61.60	31	P	P	02 11 31.1	-1.4
	baz=344,SNR=5.7						
PV07	Paradox Valley	61.61	58	*e*P	P	02 11 33.6	+0.6
	comp=Z,16nm,1.2s						
PV19	Morning Glory	61.62	58	*e*P	P	02 11 33.4	+0.3
	comp=Z,20nm,1.2s						
PV16	Nyswonger Mesa	61.64	58	*e*P	P	02 11 33.8	+0.6
	comp=Z,17nm,1.1s						
PV17	East Wray Mesa	61.65	58	*e*P	P	02 11 33.9	+0.6
	comp=Z,22nm,1.1s						
EDW2	Edwards Air Fo	61.66	67	P	P	02 11 34.0	+0.8
	baz=335,SNR=7.4						
PV11	David Mesa, Pa	61.66	58	*e*P	P	02 11 34.0	+0.6
	comp=Z,21nm,1.2s						
PV12	Saucer Basin,	61.67	58	*e*P	P	02 11 33.9	+0.4
	comp=Z,15nm,1.2s						
GSC	Goldstone, Bar	61.70	66	*e*P	P	02 11 34.4	+0.9
	comp=Z,4.9nm,0.9s						
GSC	Goldstone, Bar	61.70	66	*e*P	P	02 11 34.4	+0.9
GSC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GSC	Goldstone, Bar	61.70	66	P	P	02 11 34.5	+0.9
	baz=335						
PV03	Paradox Valley	61.71	58	*e*P	P	02 11 34.2	+0.5
	comp=Z,14nm,1.1s						
PV15	Paradox Valley	61.75	58	*e*P	P	02 11 34.6	+0.6
	comp=Z,18nm,1.0s						
PV02	Paradox Valley	61.79	58	*e*P	P	02 11 34.9	+0.6
	comp=Z,11nm,1.0s						
PV05	Paradox Valley	61.79	58	*e*P	P	02 11 34.4	+0.1
	comp=Z,18nm,1.3s						
I40A	Norwalk	61.79	41	P	P	02 11 32.6	-1.3
	baz=340						
PV13	Radium Mtn., P	61.81	58	*e*P	P	02 11 35.0	+0.6
	comp=Z,9.5nm,1.1s						
G46A	Petoskey	61.82	36	P	P	02 11 32.4	-1.6
	baz=342						
AVF	Avril sur Loir	61.84	329	*e*P	P	02 11 36.3	+2.1
AVF				pmax	pmax		
	comp=Z,11nm,1.0s						
SMF	Signal de Mont	61.88	329	*e*P	P	02 11 36.3	+1.8
SMF				pmax	pmax		
	comp=Z,11nm,1.2s						
PV01	Paradox Valley	61.91	58	*e*P	P	02 11 35.7	+0.6
	comp=Z,15nm,1.1s						
QUIF	Quistinic	61.92	335	*e*P	P	02 11 35.0	+0.3
QUIF				pmax	pmax		
	comp=Z,14nm,0.9s						
J40A	Soldiers Grove	62.23	41	P	P	02 11 35.4	-1.4
	baz=340						
MWC	Mount Wilson	62.23	68	*e*P	P	02 11 37.7	+0.5
	comp=Z,16nm,1.3s						
MWC	Mount Wilson	62.23	68	*e*P	P	02 11 37.7	+0.5
MWC				pmax	pmax		
	comp=Z,16nm,1.3s						
Q24A	Divide	62.24	55	P	P	02 11 35.8	-1.6
	baz=336						
HEC	Hector,Ludlow	62.29	66	P	P	02 11 37.7	+0.2
	baz=335						
E53A	Dumoine, Ponti	62.32	30	P	P	02 11 35.8	-1.6
	baz=344						
GLMI	Grayling	62.35	36	P	P	02 11 36.1	-1.5
	baz=342						
E54A	Lac Daplat, Po	62.36	30	P	P	02 11 36.0	-1.6
	baz=344						
BFSC	Mount Baldy Ra	62.36	67	P	P	02 11 38.7	+0.7
	baz=335,SNR=5.3						
LPL	La Plagne	62.37	326	*e*P	P	02 11 40.9	+2.9
LPL				pmax	pmax		
	comp=Z,12nm,1.0s						
LPG	La Plagne	62.39	326	*e*P	P	02 11 38.1	-0.1
LPG				pmax	pmax		
	comp=Z,18nm,1.0s						
J41A	Loganville	62.44	41	P	P	02 11 34.6	-3.6
	baz=340						
TCF	Toulx Ste Croi	62.55	330	*e*P	P	02 11 41.0	+2.1
TCF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GMRC	Granite Mounta	62.57	65	P	P	02 11 40.1	+0.7
	baz=335,SNR=5.5						
K39A	Oelwein	62.58	43	P	P	02 11 36.7	-2.4
	baz=340						
ALGO	Algonquin Park	62.65	31	P	P	02 11 38.0	-1.6
	baz=344						
MFF	Saint Martin d	62.68	332	*e*P	P	02 11 40.1	+0.3
MFF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
J42A	Columbus	62.70	40	P	P	02 11 37.9	-2.1
	baz=340						
K40A	Colesburg	62.78	42	P	P	02 11 38.7	-1.8
	baz=340						
KLBO	Killbear Provi	62.79	33	P	P	02 11 38.9	-1.7
	baz=343						
J43A	Natural Harves	62.82	40	P	P	02 11 38.8	-2.0
	baz=341						
S22A	4UR Ranch, Cre	62.83	57	*e*P	P	02 11 41.8	+0.5
	comp=Z,12nm,1.4s						
S22A	4UR Ranch, Cre	62.83	57	P	P	02 11 41.8	+0.5
	baz=336						
W13A	Hualapai Mount	62.90	64	*e*P	P	02 11 42.3	+0.6
	comp=Z,4.3nm,0.9s						
KSCO	Kaye Shedlock’	62.98	53	*e*P	P	02 11 41.8	-0.2
	comp=Z,16nm,1.0s						
KSCO	Kaye Shedlock’	62.98	53	P	P	02 11 41.8	-0.2
	baz=337						
PEMO	Pembroke	63.08	30	P	P	02 11 40.4	-2.0
	baz=344						
K41A	Shullsburg	63.08	41	P	P	02 11 41.5	-1.0
	baz=340						
L39A	Vinton	63.09	43	P	P	02 11 41.0	-1.6
	baz=340						
MBDF	Montbardon	63.12	326	*e*P	P	02 11 45.1	+2.2
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ORIF	Oris-en-Rattie	63.12	327	*e*P	P	02 11 43.2	+0.3
ORIF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
K42A	Prairie Point,	63.16	41	P	P	02 11 42.9	-0.1
	baz=340						
BELC	Belle Mtn. Jos	63.16	66	P	P	02 11 43.9	+0.6
	baz=335,SNR=5.3						
SDCO	Great Sand Dun	63.25	55	*e*P	P	02 11 44.4	+0.3
	comp=Z,6.4nm,0.9s						
SDCO	Great Sand Dun	63.25	55	P	P	02 11 44.4	+0.3
	baz=337,SNR=11						
IRM	Iron Mountain	63.31	65	P	P	02 11 45.3	+1.1
	baz=335,SNR=5.4						
PFO	Pinyon Flats O	63.35	66	*e*P	P	02 11 44.6	0.0
	comp=Z,11nm,1.4s						
PFO	Pinyon Flats O	63.35	66	*e*P	P	02 11 44.6	0.0
PFO				pmax	pmax		
	comp=Z,11nm,1.4s						
PFO	Pinyon Flats O	63.35	66	P	P	02 11 45.2	+0.6
	baz=335						
XPFO	Pion Flat	63.35	66	*e*P	P	02 11 44.8	+0.2
	comp=Z,12nm,1.4s						
L40A	Anamosa	63.35	42	*e*P	P	02 11 42.7	-1.6
	comp=Z,20nm,1.2s						
L40A	Anamosa	63.35	42	P	P	02 11 42.4	-1.9
	baz=340						
WUAZ	Wupatki	63.37	61	*e*P	P	02 11 44.6	-0.2
	comp=Z,7.1nm,1.0s						
WUAZ	Wupatki	63.37	61	P	P	02 11 45.7	+1.0
	baz=336						
VIVF	Saint-Julien-l	63.43	328	*e*P	P	02 11 47.0	+2.1
VIVF				pmax	pmax		
	comp=Z,29nm,1.8s						
L41A	Preston	63.53	42	P	P	02 11 43.7	-1.8
	baz=340						
PDMCI	Parker Dam,Lak	63.53	64	P	P	02 11 45.5	0.0
	baz=336						
ALFO	Alfred	63.57	28	P	P	02 11 44.1	-1.6
	baz=345						
BANO	Bancroft	63.58	31	P	P	02 11 44.3	-1.5
	baz=344						
RJF	Les Rejaudoux	63.62	330	*e*P	P	02 11 48.5	+2.4
RJF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
M39A	Webster	63.65	43	P	P	02 11 44.4	-1.9
	baz=340						
BC3	Big Chuckawall	63.66	66	P	P	02 11 47.0	+0.4
	baz=335						
J47A	Sunmer	63.80	37	P	P	02 11 45.9	-1.3
	baz=342						
L42A	Oliver, Polo	63.80	41	P	P	02 11 45.8	-1.5
	baz=340						
CAF	Calviac	63.88	330	*e*P	P	02 11 48.5	+0.7
CAF				pmax	pmax		
	comp=Z,14nm,0.9s						
M40A	Post Highland	63.89	43	P	P	02 11 46.1	-1.8
	baz=340						
Y12C	Blythe	63.90	65	*e*P	P	02 11 48.6	+0.6
	comp=Z,10nm,0.8s						
Y12C	Blythe	63.90	65	P	P	02 11 48.7	+0.6
	baz=336						
J48A	Bridge Port	63.98	36	P	P	02 11 48.2	-0.3
	baz=342						
MONP2	Monument Peak	64.01	67	P	P	02 11 49.6	+0.5
	baz=335						
CBKS	Cedar Bluff	64.02	50	*e*P	P	02 11 48.3	-0.6
	comp=Z,26nm,1.0s						
CBKS	Cedar Bluff	64.02	50	*e*P	P	02 11 48.3	-0.6
CBKS				pmax	pmax		
	comp=Z,26nm,1.0s						
CBKS	Cedar Bluff	64.02	50	P	P	02 11 47.4	-1.4
	baz=338						
LFF	La Frestale	64.12	331	*e*P	P	02 11 50.2	+0.9
LFF				pmax	pmax		
	comp=Z,12nm,0.7s						
M41A	Milan	64.17	42	P	P	02 11 47.6	-2.2
	baz=340						
HYB	Hyderabad	64.24	252	*i* P	P	02 11 50.0	-0.5
Y14A	Wickenburg	64.25	63	*e*P	P	02 11 52.1	+1.6
	comp=Z,7.7nm,1.0s						
IKP	In-Ko-Pah, Jac	64.34	67	P	P	02 11 51.1	0.0
	baz=336						
X16A	Lo Mia Camp, P	64.35	62	*e*P	P	02 11 52.1	+0.9
	comp=Z,11nm,1.3s						
GLA	Glamis	64.43	65	P	P	02 11 51.6	+0.1
	baz=336						
DRWO	Darlington Wes	64.52	32	P	P	02 11 50.5	-1.4
	baz=344						
K49A	Clarkson	64.55	36	P	P	02 11 51.1	-1.1
	baz=342						
KSU1	Kansas State U	64.66	48	*e*P	P	02 11 52.0	-1.0
	comp=Z,19nm,0.8s						
KSU1	Kansas State U	64.66	48	P	P	02 11 51.4	-1.5
	baz=339,SNR=5.2						
PKME	Peaks-Kenny Pk	64.87	24	P	P	02 11 52.7	-1.5
	baz=347						
L47A	Sherwood	64.92	38	P	P	02 11 53.1	-1.4
	baz=342						
M45A	Boilermakers S	64.98	39	P	P	02 11 54.8	-0.2
	baz=341						
L48A	N Adams	65.12	37	P	P	02 11 54.2	-1.7
	baz=342						
O41A	Passleys Farm,	65.27	43	P	P	02 11 55.4	-1.5
	baz=340						
N44A	Piper City	65.33	40	P	P	02 11 54.7	-2.5
	baz=341						
MTLF	Montolieu	65.38	329	*e*P	P	02 11 57.2	-0.4
MTLF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ANMO	Albuquerque	65.51	57	*e*P	P	02 11 59.4	+0.6
	comp=Z,4.4nm,1.4s						
ANMO	Albuquerque	65.51	57	*ce*P	P	02 12 00.0	+1.2
ANMO				pmax	pmax		
	comp=Z,7.0nm,2.5s						
ANMO	Albuquerque	65.51	57	P	P	02 11 58.0	-0.8
	baz=337						
O43A	Sugar Creek Fa	65.51	41	P	P	02 11 56.5	-2.0
	baz=341						
N46A	Monticello	65.58	39	P	P	02 11 56.8	-2.0
	baz=342						
P41A	Barry, Barry	65.64	43	P	P	02 11 57.5	-1.8
	baz=340,SNR=7.4						
P42A	Winchester	65.91	43	*e*P	P	02 11 59.1	-1.9
	comp=Z,13nm,0.8s						
P42A	Winchester	65.91	43	P	P	02 11 58.9	-2.2
	baz=341,SNR=5.2						
O45A	Potomac	65.94	40	P	P	02 11 59.2	-2.0
	baz=341						
TIP	Timpagrande	65.99	316	*e*P	P	02 12 01.5	-0.1
	comp=Z,8.9nm,0.9s						
EPF	Esparros	66.04	331	*e*P	P	02 12 01.9	0.0
EPF				pmax	pmax		
	comp=Z,13nm,0.6s						
P43A	Skaggs, Pawnee	66.07	42	P	P	02 11 59.5	-2.5
	baz=341						
214A	Organ Pipe Nat	66.12	64	P	P	02 12 03.0	+0.5
	baz=336						
N49A	Columbus Grove	66.15	37	*e*P	P	02 12 01.1	-1.5
	comp=Z,12nm,1.0s						
N49A	Columbus Grove	66.15	37	P	P	02 12 00.4	-2.2
	baz=342						
M52A	Chesterland	66.20	35	P	P	02 12 01.1	-1.8
	baz=343						
M51A	Elyria	66.22	35	P	P	02 12 01.5	-1.5
	baz=343						
Q41A	Truxton	66.27	43	P	P	02 12 01.3	-2.0
	baz=340,SNR=6.2						
ETSF	Etsaut	66.33	331	*e*P	P	02 12 04.7	+0.9
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
O47A	Sheridan	66.33	39	P	P	02 12 01.5	-2.3
	baz=342						
ITM	Ithomi	66.43	311	*e*P	P	02 12 03.4	-1.1
	comp=Z,53nm,1.5s						
M53A	WI Miller and	66.44	34	P	P	02 12 02.1	-2.4
	baz=344						
Q42A	Golden Eagle	66.49	43	P	P	02 12 02.9	-1.8
	baz=341,SNR=7.1						
TUC	Tucson	66.49	62	P	P	02 12 05.4	+0.4
	baz=337						
O48A	Farmland	66.56	38	P	P	02 12 02.9	-2.3
	baz=342						
M54A	Oil Creek Stat	66.59	33	P	P	02 12 03.6	-1.8
	baz=344						
BINY	Binghamton	66.67	30	P	P	02 12 04.7	-1.2
	baz=345						
Q43A	New Douglas	66.68	42	P	P	02 12 04.5	-1.5
	baz=341						
O49A	Covington	66.82	38	P	P	02 12 04.8	-2.1
	baz=342						
M55A	Ridgway	66.82	33	P	P	02 12 05.3	-1.5
	baz=344						
N52A	McGinn’s Farm,	66.82	35	P	P	02 12 04.9	-2.0
	baz=343						
R41A	Rosebud	66.85	44	P	P	02 12 05.2	-1.8
	baz=340						
Q44A	Meyer Farm, Va	66.89	42	P	P	02 12 05.6	-1.7
	baz=341						
N53A	Lisbon	67.01	35	P	P	02 12 06.5	-1.6
	baz=344						
R42A	Luebbering	67.02	43	P	P	02 12 06.1	-2.1
	baz=341						
O50A	Cable	67.02	37	P	P	02 12 06.2	-2.0
	baz=343						
P47A	Martinsville	67.02	39	P	P	02 12 05.7	-2.4
	baz=342						
N54A	Moraine State	67.05	34	P	P	02 12 06.0	-2.3
	baz=344						
AMTX	Amarillo	67.07	54	*e*P	P	02 12 07.8	-0.9
	comp=Z,5.3nm,0.7s						
AMTX	Amarillo	67.07	54	P	P	02 12 07.3	-1.4
	baz=338						
ACSO	Alum Creek Sta	67.08	36	*e*P	P	02 12 07.3	-1.3
	comp=Z,14nm,0.9s						
ACSO	Alum Creek Sta	67.08	36	P	P	02 12 06.5	-2.1
	baz=343						
CCM	Cathedral Cave	67.11	44	*e*P	P	02 12 07.2	-1.5
	comp=Z,9.9nm,0.8s						
CCM	Cathedral Cave	67.11	44	*e*P	P	02 12 07.2	-1.5
CCM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CCM	Cathedral Cave	67.11	44	P	P	02 12 06.8	-1.9
	baz=340						
Q45A	Warren Harvey,	67.12	41	P	P	02 12 07.0	-1.7
	baz=341						
R43A	Red Bud	67.25	43	P	P	02 12 07.5	-2.1
	baz=341						
P48A	Milroy	67.25	39	P	P	02 12 07.1	-2.6
	baz=342						
O51A	Pataskala	67.25	36	P	P	02 12 07.8	-1.8
	baz=343						
121A	Cookes Peak, D	67.29	60	P	P	02 12 08.1	-2.1
	baz=337						
P49A	Miami Univ. Ec	67.35	38	P	P	02 12 07.8	-2.4
	baz=342						
FVM	French Village	67.39	43	*e*P	P	02 12 08.6	-1.9
	comp=Z,19nm,1.2s						
FVM	French Village	67.39	43	*e*P	P	02 12 08.6	-1.9
FVM				pmax	pmax		
	comp=Z,19nm,1.2s						
S41A	Jillco Farms,	67.42	44	P	P	02 12 08.6	-2.1
	baz=340,SNR=9.9						
N55A	Marion Center	67.43	33	P	P	02 12 08.6	-2.2
	baz=344						
O52A	Adamsville	67.45	36	*e*P	P	02 12 08.3	-2.6
	comp=Z,9.8nm,0.8s						
O52A	Adamsville	67.45	36	P	P	02 12 08.9	-2.0
	baz=343						
O53A	New Philadelph	67.46	35	P	P	02 12 09.2	-1.7
	baz=343						
P50A	Jamestown	67.49	37	P	P	02 12 09.1	-2.1
	baz=343						
R44A	Waltonville	67.49	42	P	P	02 12 09.3	-1.8
	baz=341						
S42A	Caledonia	67.50	44	P	P	02 12 09.1	-2.1
	baz=341,SNR=6.0						
Q47A	Bedord North L	67.51	40	P	P	02 12 09.4	-1.9
	baz=342						
MSTX	Muleshoe	67.58	55	*e*P	P	02 12 11.6	-0.4
	comp=Z,17nm,1.3s						
MSTX	Muleshoe	67.58	55	P	P	02 12 10.4	-1.5
	baz=338						
R45A	Skylar, Fairfi	67.66	41	P	P	02 12 10.9	-1.3
	baz=341						
Q48A	North Vernon	67.68	39	P	P	02 12 10.5	-1.9
	baz=342						
O54A	Avella	67.71	34	P	P	02 12 10.7	-1.9
	baz=344						
319A	Douglas	67.85	61	*e*P	P	02 12 13.6	-0.1
	comp=Z,14nm,0.8s						
TUL1	Leonard	67.87	48	*e*P	P	02 12 12.6	-1.0
	comp=Z,11nm,0.8s						
TUL1	Leonard	67.87	48	P	P	02 12 11.9	-1.7
	baz=340						
S43A	Fulton Ridge,	67.87	43	P	P	02 12 11.5	-2.1
	baz=341						
O55A	Ligonier	67.92	34	P	P	02 12 12.0	-1.9
	baz=344						
T41A	Mountain View	67.92	45	P	P	02 12 12.2	-1.7
	baz=340,SNR=16						
N59A	State Game Lan	67.95	31	*e*P	P	02 12 14.6	+0.6
	comp=Z,16nm,1.4s						
S44A	Carbondale	67.97	42	P	P	02 12 12.6	-1.6
	baz=341						
O56A	Blue Knob Stat	68.01	33	P	P	02 12 12.5	-1.9
	baz=344						
HHAR	Hobbs	68.04	47	*e*P	P	02 12 13.7	-1.0
	comp=Z,4.4nm,0.9s						
WMOK	Wichita Mounta	68.09	51	*e*P	P	02 12 13.8	-1.2
	comp=Z,7.1nm,0.8s						
WMOK	Wichita Mounta	68.09	51	*e*P	P	02 12 13.8	-1.2
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WMOK	Wichita Mounta	68.09	51	P	P	02 12 13.6	-1.4
	baz=339,SNR=10						
R47A	Wooly Knot Far	68.09	40	P	P	02 12 12.9	-2.0
	baz=342						
T42A	Van Buren	68.12	44	*e*P	P	02 12 13.4	-1.7
	comp=Z,8.7nm,0.9s						
T42A	Van Buren	68.12	44	P	P	02 12 13.0	-2.1
	baz=341,SNR=7.3						
Q51A	Peebles	68.15	37	P	P	02 12 13.4	-1.9
	baz=343						
P53A	Whipple	68.16	35	*e*P	P	02 12 14.0	-1.3
	comp=Z,22nm,1.4s						
P53A	Whipple	68.16	35	P	P	02 12 13.5	-1.8
	baz=344						
WCI	Wyandotte Cave	68.21	40	*e*P	P	02 12 13.9	-1.7
	comp=Z,24nm,0.7s						
WCI	Wyandotte Cave	68.21	40	*e*P	P	02 12 14.0	-1.7
WCI				pmax	pmax		
	comp=Z,24nm,0.7s						
WCI	Wyandotte Cave	68.21	40	P	P	02 12 13.9	-1.7
	baz=342						

PAL	**Palisades**	**68.22**	**29**	P	**P**	**02 12 14.4**	**-1.2**
	baz=346						
P54A	**Burton**	**68.24**	**35**	P	**P**	**02 12 13.7**	**-2.2**
	baz=344						
U40A	**Yellville**	**68.27**	**46**	P	**P**	**02 12 13.8**	**-2.3**
	baz=340,SNR=8.5						
T43A	**Greenville**	**68.28**	**43**	P	**P**	**02 12 13.9**	**-2.2**
	baz=341						
R49A	**Shelbyville**	**68.42**	**39**	P	**P**	**02 12 15.5**	**-1.5**
	baz=342						
PBRG	**Braganca**	**68.45**	**336**	*e*P	**P**	**02 12 19.6**	**+2.4**
	comp=Z,12nm,1.7s						
Q52A	**Bidwell**	**68.46**	**36**	P	**P**	**02 12 15.2**	**-2.1**
	baz=343						
PBMO	**Poplar Bluff**	**68.53**	**44**	*e*P	**P**	**02 12 16.1**	**-1.5**
	comp=Z,9.8nm,1.1s						
U41A	**Viola**	**68.54**	**45**	P	**P**	**02 12 15.8**	**-2.0**
	baz=341,SNR=6.0						
U42A	**Revenden**	**68.72**	**44**	P	**P**	**02 12 17.0**	**-1.8**
	baz=341,SNR=7.2						
R51A	**Hillsboro**	**68.79**	**38**	P	**P**	**02 12 17.9**	**-1.4**
	baz=343						
S48A	**Wiedeman Farm,**	**68.81**	**40**	P	**P**	**02 12 17.6**	**-1.9**
	baz=342						
MNTX	**Cornudas Mount**	**68.84**	**58**	*e*P	**P**	**02 12 20.2**	**+0.5**
	comp=Z,7.3nm,1.0s						
MNTX	**Cornudas Mount**	**68.84**	**58**	P	**P**	**02 12 19.4**	**-0.4**
	baz=338,SNR=10						
S49A	**Springfield**	**68.88**	**39**	P	**P**	**02 12 18.8**	**-1.1**
	baz=342						
Q55A	**Buckhannon**	**68.91**	**35**	P	**P**	**02 12 18.4**	**-1.8**
	baz=344						
U43A	**Rector**	**68.92**	**44**	P	**P**	**02 12 18.5**	**-1.6**
	baz=341						
V41A	**Mountainview**	**69.00**	**45**	P	**P**	**02 12 18.4**	**-2.3**
	baz=341,SNR=6.4						
W39A	**Magazine**	**69.11**	**47**	P	**P**	**02 12 19.5**	**-1.8**
	baz=340						
MVO	**Moncorvo**	**69.12**	**336**	*e*P	**P**	**02 12 24.4**	**+3.0**
	comp=Z,22nm,1.0s						
R53A	**Hurricane**	**69.14**	**36**	P	**P**	**02 12 19.7**	**-1.8**
	baz=343						
T47A	**Sharon Grove**	**69.19**	**41**	*e*P	**P**	**02 12 20.4**	**-1.3**
	comp=Z,17nm,1.1s						
T47A	**Sharon Grove**	**69.19**	**41**	P	**P**	**02 12 19.9**	**-1.8**
	baz=342						
S50A	**Richmond**	**69.19**	**38**	P	**P**	**02 12 19.9**	**-1.9**
	baz=343						
T48A	**Bowling Green**	**69.25**	**40**	P	**P**	**02 12 20.4**	**-1.7**
	baz=342						
U45A	**Rockin P Farm,**	**69.37**	**42**	P	**P**	**02 12 21.4**	**-1.5**
	baz=342						
WHAR	**Wooly Hollow**	**69.43**	**46**	*e*P	**P**	**02 12 21.8**	**-1.5**
	comp=Z,17nm,1.0s						
T49A	**Edmonton**	**69.46**	**39**	P	**P**	**02 12 21.6**	**-1.9**
	baz=342						
R54A	**Victor**	**69.49**	**35**	P	**P**	**02 12 22.0**	**-1.7**
	baz=344						
U46A	**Springville**	**69.51**	**42**	P	**P**	**02 12 22.3**	**-1.5**
	baz=342						
W41B	**Gary Mavity, V**	**69.55**	**46**	*e*P	**P**	**02 12 22.9**	**-1.1**
	comp=Z,17nm,0.8s						
W41B	**Gary Mavity, V**	**69.55**	**46**	P	**P**	**02 12 22.5**	**-1.6**
	baz=341,SNR=13						
W42A	**Bald Knob**	**69.66**	**45**	P	**P**	**02 12 23.4**	**-1.3**
	baz=341						
U47A	**Clarksville**	**69.66**	**41**	P	**P**	**02 12 23.3**	**-1.4**
	baz=342						
PVIS	**Viseu**	**69.69**	**336**	*e*P	**P**	**02 12 28.4**	**+3.4**
T50A	**Nancy**	**69.71**	**39**	P	**P**	**02 12 23.0**	**-2.0**
	baz=343						
MIAR	**Mount Ida**	**69.77**	**47**	P	**P**	**02 12 23.9**	**-1.6**
	baz=340						
U48A	**Cassie Pea, Po**	**69.78**	**41**	P	**P**	**02 12 23.5**	**-2.0**
	baz=342						
ABTX	**Abilene, Hawle**	**69.79**	**53**	*e*P	**P**	**02 12 25.3**	**-0.4**
	comp=Z,21nm,1.0s						
ABTX	**Abilene, Hawle**	**69.79**	**53**	P	**P**	**02 12 24.5**	**-1.1**
	baz=339						
WVT	**Waverly**	**69.82**	**42**	*e*P	**P**	**02 12 24.4**	**-1.3**
	comp=Z,18nm,1.0s						
WVT	**Waverly**	**69.82**	**42**	*e*P	**P**	**02 12 24.4**	**-1.3**
WVT				pmax	pmax		
	comp=Z,18nm,1.0s						
WVT	**Waverly**	**69.82**	**42**	P	**P**	**02 12 24.3**	**-1.3**
	baz=342						
V45A	**Humboldt**	**69.89**	**43**	P	**P**	**02 12 24.3**	**-1.9**
	baz=342						
MTE	**Manteigas**	**69.95**	**336**	*e*P	**P**	**02 12 28.4**	**+1.9**
	comp=Z,15nm,1.6s						
U49A	**Red Boiling Sp**	**69.97**	**40**	P	**P**	**02 12 24.2**	**-2.4**
	baz=342						
T51A	**Gray**	**69.98**	**38**	P	**P**	**02 12 24.2**	**-2.5**
	baz=343						
S55A	**Lewisburg**	**69.99**	**35**	P	**P**	**02 12 25.0**	**-1.9**
	baz=344						
ES19	**SONSECA Array**	**70.03**	**333**	*e*P	**P**	**02 12 26.8**	**-0.3**
X40A	**Basin Creek Fa**	**70.03**	**46**	*e*P	**P**	**02 12 26.0**	**-1.0**
	comp=Z,9.4nm,0.8s						
X40A	**Basin Creek Fa**	**70.03**	**46**	P	**P**	**02 12 25.0**	**-2.0**
	baz=340,SNR=8.3						
V46A	**Holladay**	**70.05**	**42**	P	**P**	**02 12 25.6**	**-1.5**
	baz=342,SNR=6.4						
T52A	**Hallie**	**70.07**	**37**	P	**P**	**02 12 25.5**	**-1.8**
	baz=343						
ESDC	**Sonseca Array**	**70.07**	**333**	P	**P**	**02 12 26.8**	**-0.5**
	comp=Z,5.0nm,0.6s,baz=7.0,slow=6.4,SNR=35						
ESLA	**Sonseca Array**	**70.07**	**333**	*e*P	**P**	**02 12 26.9**	**-0.4**
	comp=Z,7.9nm,0.8s						
V47A	**Nunnelly**	**70.18**	**42**	P	**P**	**02 12 26.4**	**-1.5**
	baz=342						
PAB	**San Pablo**	**70.26**	**333**	*e*P	**P**	**02 12 28.4**	**-0.1**
	comp=Z,7.5nm,0.8s						
PAB	**San Pablo**	**70.26**	**333**	*e*P	**P**	**02 12 28.4**	**-0.1**
PAB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
U50A	**Jamestown**	**70.29**	**39**	P	**P**	**02 12 27.4**	**-1.2**
	baz=343						
W45A	**Hickory Valley**	**70.39**	**43**	P	**P**	**02 12 28.0**	**-1.2**
	baz=342						
T54A	**Tazewell**	**70.44**	**36**	P	**P**	**02 12 28.0**	**-1.6**
	baz=344						
PCAS	**Casmilo, Conde**	**70.44**	**337**	*e*P	**P**	**02 12 31.3**	**+1.9**
	comp=Z,22nm,1.5s						
V48A	**Smith Brothers**	**70.44**	**41**	*e*P	**P**	**02 12 28.5**	**-1.1**
	comp=Z,16nm,1.4s						
V48A	**Smith Brothers**	**70.44**	**41**	P	**P**	**02 12 28.0**	**-1.6**
	baz=342						
TZTN	**Tazewell**	**70.47**	**38**	P	**P**	**02 12 28.4**	**-1.4**
	baz=343						
PCBR	**Castelo Branco**	**70.49**	**336**	*e*P	**P**	**02 12 29.7**	**0.0**
	comp=Z,20nm,1.4s						
U51A	**La Follette**	**70.52**	**38**	P	**P**	**02 12 28.7**	**-1.4**
	baz=343						
X43A	**Marvell**	**70.54**	**45**	P	**P**	**02 12 28.3**	**-1.8**
	baz=341						
BLA	**Blacksburg**	**70.55**	**35**	P	**P**	**02 12 28.8**	**-1.5**
	baz=344						
W46A	**Michie**	**70.62**	**42**	P	**P**	**02 12 28.8**	**-1.8**
	baz=342						
V49A	**McMinnville**	**70.64**	**40**	P	**P**	**02 12 29.1**	**-1.7**
	baz=342						
W47A	**Westpoint**	**70.71**	**42**	P	**P**	**02 12 29.4**	**-1.8**
	baz=342,SNR=7.0						
U53A	**Fall Branch**	**70.87**	**37**	P	**P**	**02 12 30.5**	**-1.7**
	baz=343						
PMRV	**Marv??o**	**70.88**	**336**	*e*P	**P**	**02 12 32.3**	**+0.1**
	comp=Z,13nm,1.6s						
V50A	**Pikevile**	**70.93**	**40**	P	**P**	**02 12 31.0**	**-1.6**
	baz=343						
Y42A	**Garnett, Star**	**70.94**	**46**	P	**P**	**02 12 31.2**	**-1.3**
	baz=341						
OXF	**Oxford**	**70.94**	**44**	*e*P	**P**	**02 12 31.4**	**-1.1**
	comp=Z,39nm,1.1s						
OXF	**Oxford**	**70.94**	**44**	*e*P	**P**	**02 12 31.4**	**-1.1**
OXF				pmax	pmax		
	comp=Z,39nm,1.1s						
OXF	**Oxford**	**70.94**	**44**	P	**P**	**02 12 31.5**	**-1.1**
	baz=342						
W48A	**Pulaski**	**70.98**	**41**	P	**P**	**02 12 31.3**	**-1.5**
	baz=342						
V51A	**Loudon**	**70.99**	**39**	P	**P**	**02 12 31.3**	**-1.6**
	baz=343						
WHTX	**Lake Whitney,**	**71.04**	**51**	P	**P**	**02 12 32.2**	**-1.1**
	baz=340						
X46A	**Booneville**	**71.11**	**43**	P	**P**	**02 12 31.4**	**-2.3**
	baz=342						
KEST	**Kesra**	**71.12**	**321**	P	**P**	**02 12 35.3**	**+1.5**
	comp=Z,2.5nm,0.6s,baz=287,slow=2.1,SNR=6.4						
V52A	**Sevierville**	**71.13**	**38**	P	**P**	**02 12 31.5**	**-2.2**
	baz=343						
RAYN	**Ar Rayn**	**71.15**	**286**	*e*P	**P**	**02 12 33.1**	**-1.0**
	comp=Z,11nm,1.0s						
RAYN	**Ar Rayn**	**71.15**	**286**	*e*P	**P**	**02 12 33.1**	**-1.0**
RAYN				pmax	pmax		
	comp=Z,11nm,1.0s						
SWET	**Sewanee**	**71.16**	**40**	*e*P	**P**	**02 12 32.7**	**-1.2**
	comp=Z,12nm,1.0s						
W49A	**Belvidere**	**71.17**	**41**	P	**P**	**02 12 32.2**	**-1.8**
	baz=342						
Z41A	**Richland Creek**	**71.20**	**47**	P	**P**	**02 12 32.6**	**-1.5**
	baz=341						
PSI	**Prapat**	**71.26**	**227**	*e*P	**P**	**02 12 33.7**	**-1.2**
	comp=Z,17nm,1.1s						
PSI	**Prapat**	**71.26**	**227**	*e*P	**P**	**02 12 33.7**	**-1.2**
PSI				pmax	pmax		
	comp=Z,17nm,1.1s						
TKL	**Tuckaleechee C**	**71.27**	**39**	*e*P	**P**	**02 12 33.5**	**-1.1**
	comp=Z,7.0nm,0.9s						
TKL	**Tuckaleechee C**	**71.27**	**39**	*e*P	**P**	**02 12 33.5**	**-1.1**
TKL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CPCT	**Cooper Cave**	**71.28**	**39**	*e*P	**P**	**02 12 34.0**	**-0.7**
	comp=Z,11nm,1.2s						
X47A	**Russelville**	**71.34**	**42**	P	**P**	**02 12 33.1**	**-1.9**
	baz=342,SNR=6.3						
PMTG	**Montargil**	**71.36**	**336**	*e*P	**P**	**02 12 35.9**	**+0.9**
W51A	**Cleveland**	**71.50**	**39**	P	**P**	**02 12 34.4**	**-1.6**
	baz=343						
TXAR	**Lajitas Array**	**71.58**	**57**	P	**P**	**02 12 37.2**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=357,slow=6.6,SNR=13						
TXAR				LR	LR	02 47 41.5	
	comp=Z,170nm,18.6s,baz=0.0,slow=39						
X48A	**Hartselle**	**71.61**	**42**	*e*P	**P**	**02 12 35.3**	**-1.3**
	comp=Z,9.9nm,1.0s						
X48A	**Hartselle**	**71.61**	**42**	P	**P**	**02 12 34.6**	**-2.0**
	baz=342						
X49A	**Woodville**	**71.73**	**41**	P	**P**	**02 12 35.7**	**-1.6**
	baz=342						
JCT	**Junction City**	**71.74**	**54**	*e*P	**P**	**02 12 37.3**	**-0.2**
	comp=Z,21nm,0.9s						
JCT	**Junction City**	**71.74**	**54**	*e*P	**P**	**02 12 37.3**	**-0.2**
JCT				pmax	pmax		
	comp=Z,21nm,0.9s						
JCT	**Junction City**	**71.74**	**54**	P	**P**	**02 12 37.0**	**-0.5**
	baz=339,SNR=9.8						
W52A	**Murphy**	**71.77**	**39**	*e*P	**P**	**02 12 36.5**	**-1.1**
	comp=Z,11nm,0.9s						
W52A	**Murphy**	**71.77**	**39**	P	**P**	**02 12 36.0**	**-1.6**
	baz=343						
X50B	**Fort Payne**	**71.95**	**40**	P	**P**	**02 12 37.1**	**-1.6**
	baz=343						
Y48A	**Jasper**	**72.09**	**42**	P	**P**	**02 12 37.8**	**-1.7**
	baz=342						
435B	**Jarrell**	**72.13**	**52**	P	**P**	**02 12 39.0**	**-0.8**
	baz=340						
KMSC	**Kings Mountain**	**72.33**	**37**	*e*P	**P**	**02 12 39.8**	**-1.2**
	comp=Z,23nm,1.4s						
KMSC	**Kings Mountain**	**72.33**	**37**	P	**P**	**02 12 38.3**	**-2.6**
	baz=344						
Y49A	**Blount Mountai**	**72.33**	**41**	*e*P	**P**	**02 12 39.6**	**-1.4**
	comp=Z,8.9nm,1.0s						
Y49A	**Blount Mountai**	**72.33**	**41**	P	**P**	**02 12 39.2**	**-1.8**
	baz=342						
Y50A	**Piedmont**	**72.47**	**41**	P	**P**	**02 12 40.4**	**-1.4**
	baz=343						
X53A	**Estanollee**	**72.48**	**38**	P	**P**	**02 12 40.2**	**-1.7**
	baz=343						
145A	**Houston Renfro**	**72.60**	**45**	P	**P**	**02 12 41.0**	**-1.5**
	baz=342						
Y51A	**Rockmart**	**72.63**	**40**	P	**P**	**02 12 40.7**	**-2.1**
	baz=343						
X55A	**Gracelyn & Ava**	**72.90**	**37**	P	**P**	**02 12 42.5**	**-1.8**
	baz=344						
Y52A	**Lilburn**	**72.91**	**39**	*e*P	**P**	**02 12 43.3**	**-1.1**
	comp=Z,5.4nm,0.7s						
Y52A	**Lilburn**	**72.91**	**39**	P	**P**	**02 12 42.7**	**-1.7**
	baz=343						
PVAQ	**Vaqueiros**	**72.91**	**336**	*e*P	**P**	**02 12 47.3**	**+3.0**
	comp=Z,16nm,1.7s						
Z49A	**Columbiana**	**72.93**	**42**	P	**P**	**02 12 42.7**	**-1.9**
	baz=342						
LRAL	**Lakeview Retre**	**72.96**	**42**	P	**P**	**02 12 42.8**	**-2.0**
	baz=342						
Z50A	**Ashland**	**73.03**	**41**	P	**P**	**02 12 43.0**	**-2.2**
	baz=343						
Y53A	**Monroe**	**73.03**	**39**	P	**P**	**02 12 43.6**	**-1.5**
	baz=343						
MORF	**Marmelete**	**73.15**	**336**	*e*P	**P**	**02 12 44.6**	**-1.2**
	comp=Z,27nm,1.5s						
Y54A	**Tignall**	**73.24**	**38**	P	**P**	**02 12 44.7**	**-1.7**
	baz=344						
149A	**Jones**	**73.43**	**42**	P	**P**	**02 12 45.5**	**-2.0**
	baz=342						
HKT	**Hockley**	**73.43**	**51**	*e*P	**P**	**02 12 47.1**	**-0.4**
	comp=Z,6.8nm,0.6s						
HKT	**Hockley**	**73.43**	**51**	*e*P	**P**	**02 12 47.1**	**-0.4**
HKT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
Z52A	**Williamson**	**73.46**	**40**	P	**P**	**02 12 46.1**	**-1.6**
	baz=343						
GOGA	**Godfrey**	**73.48**	**39**	P	**P**	**02 12 46.3**	**-1.5**
	baz=343						
Z53A	**Monticello**	**73.58**	**39**	P	**P**	**02 12 46.8**	**-1.6**
	baz=343						
150A	**Eclectic**	**73.62**	**41**	P	**P**	**02 12 46.6**	**-2.0**
	baz=343,SNR=5.3						
Z54A	**Sparta**	**73.80**	**38**	P	**P**	**02 12 48.0**	**-1.6**
	baz=344						
151A	**Opelika**	**73.87**	**41**	P	**P**	**02 12 48.1**	**-2.0**
	baz=343						
833A	**Chaparral WMA,**	**73.88**	**54**	*e*P	**P**	**02 12 50.0**	**-0.1**
	comp=Z,12nm,0.9s						
833A	**Chaparral WMA,**	**73.88**	**54**	P	**P**	**02 12 49.7**	**-0.4**
	baz=340						
152A	**Waverly Hall**	**73.89**	**40**	P	**P**	**02 12 48.7**	**-1.5**
	baz=343						
249A	**Camden**	**73.94**	**42**	P	**P**	**02 12 48.8**	**-1.7**
	baz=342						
250A	**Grady**	**74.16**	**42**	*e*P	**P**	**02 12 50.3**	**-1.5**
	comp=Z,20nm,1.2s						
250A	**Grady**	**74.16**	**42**	P	**P**	**02 12 49.9**	**-1.8**
	baz=343						
251A	**Midway**	**74.26**	**41**	P	**P**	**02 12 50.7**	**-1.7**
	baz=343,SNR=6.2						
154A	**Montrose**	**74.33**	**39**	*e*P	**P**	**02 12 52.6**	**-0.2**
	comp=Z,36nm,1.0s						
154A	**Montrose**	**74.33**	**39**	P	**P**	**02 12 51.7**	**-1.1**
	baz=344						
155A	**Kite**	**74.48**	**38**	P	**P**	**02 12 52.5**	**-1.1**
	baz=344						
252A	**Lumpkin**	**74.52**	**40**	P	**P**	**02 12 51.9**	**-2.0**
	baz=343						
NHSC	**New Hope**	**74.54**	**36**	P	**P**	**02 12 52.3**	**-1.6**
	baz=344						
253A	**Americus**	**74.61**	**40**	P	**P**	**02 12 52.8**	**-1.6**
	baz=343						
SLBS	**Sierra La Lagu**	**74.70**	**65**	*e*P	**P**	**02 12 55.4**	**+0.2**
	comp=Z,32nm,1.5s						
254A	**Abbeville**	**74.93**	**39**	P	**P**	**02 12 54.6**	**-1.6**
	baz=344						
255A	**Hazlehurst**	**75.14**	**39**	*e*P	**P**	**02 12 56.8**	**-0.7**
	comp=Z,27nm,0.9s						
255A	**Hazlehurst**	**75.14**	**39**	P	**P**	**02 12 56.2**	**-1.2**
	baz=344						
256A	**Glennville**	**75.23**	**38**	P	**P**	**02 12 56.2**	**-1.7**
	baz=344						
353A	**Camilla**	**75.27**	**40**	P	**P**	**02 12 56.5**	**-1.7**
	baz=343						
TIGA	**Tifton**	**75.34**	**40**	P	**P**	**02 12 57.3**	**-1.3**
	baz=344						
556A	**Lake Butler**	**77.00**	**39**	P	**P**	**02 13 07.8**	**-0.2**
	baz=344						
LNIG	**Linares**	**77.05**	**55**	*e*P	**P**	**02 13 08.3**	**-0.2**
	comp=Z,5.8nm,1.0s						
657A	**Interlachen**	**77.53**	**39**	P	**P**	**02 13 10.3**	**-0.8**
	baz=344						
COEN	**Coen**	**81.36**	**179**	*e*P	**P**	**02 13 31.3**	**-0.7**
	comp=Z,6.6nm,0.9s						
WRAB	**Tennant Creek**	**87.52**	**188**	*e*P	**P**	**02 14 02.0**	**-1.1**
	comp=Z,1.4nm,0.5s						
WB2	**Warramunga Arr**	**87.53**	**188**	*e*P	**P**	**02 14 01.4**	**-1.7**
WRA	**Warramunga Arr**	**87.53**	**188**	P	**P**	**02 14 01.3**	**-1.8**
	comp=Z,1.4nm,0.7s,baz=6.0,slow=5.6,SNR=21						
APG	**El Apazote**	**89.11**	**51**	P	**P**	**02 14 10.1**	**-1.0**
	baz=330,slow=12						
ASAR	**Alice Springs**	**91.25**	**188**	P	**P**	**02 14 18.7**	**-1.8**
	comp=Z,0.8nm,0.6s,baz=6.4,slow=4.5,SNR=12						
TOA0	**Torodi Ar. Sit**	**94.63**	**322**	*e*P	**P**	**02 14 35.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**94.63**	**322**	P	**P**	**02 14 35.9**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=358,slow=4.5,SNR=6.1						
TORD				LR	LR	03 04 05.9	
	comp=Z,50nm,18.1s,baz=345,slow=40						
VNDA	**Vanda**	**145.40**	**173**	PKPbc	**PKPdf**	**02 20 50.8**	**-0.6**
	comp=Z,6.8nm,0.9s,baz=319,slow=3.1,SNR=6.5						
PLCA	**Paso Flores**	**147.56**	**51**	*e*PKPbc	**PKPbc**	**02 20 59.4**	**+0.4**
PLCA	**Paso Flores**	**147.56**	**51**	*e*PKP2	**PKPbc**	**02 20 59.4**	**+0.4**

IDC ***16*** *02:16:04.2±0.6, 52°.73N×34°.57W, h0^{km}, mb3.8/21, mb1 4.0/24, mb1mx3.8/66, mbtmp3.9/24, ML3.3/3, Error ellipse: s-maj=18.5km s-min=11.3km az=4.0*

ISCJB ***16*** *02:16:05.4±0.4, 52°.73N±0°.07×34°.58W±0°.07, h20^{km}, mb4.0/32, Error ellipse: s-maj=10.4km s-min=5.8km az=8.1*

NEIC ***16*** *02:16:05.7±0.2, 52°.70N×34°.57W, h10^{km}, mb4.4/19, Error ellipse: s-maj=6.2km s-min=3.4km az=186.0*

ISC 16 02:16:07.1±0.5**, 52°.7N**±0°.1×**34°.61W**±0°.06**, h20^{km}, n65,** σ**0^{s}.70**/65**, mb4.1**/32**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRLN	**Deer Lake**	**14.81**	**266**	*e*Pn	**Pn**	**02 19 33.0**	**-2.2**
SFJD	**Kangerlussuaq**	**16.36**	**337**	Pn	**Pn**	**02 19 55.4**	**+0.1**
	0.2nm,0.3s,baz=135,slow=5.4,SNR=4.3						
EKA	**Eskdalemuir Ar**	**18.59**	**69**	P	**Pn**	**02 20 22.4**	**-0.5**
	baz=278,slow=8.9,SNR=11						
SCHQ	**Schefferville**	**19.08**	**289**	*e*P	**Pn**	**02 20 28.9**	**-0.1**
	45nm,1.9s						
SCHQ	**Schefferville**	**19.08**	**289**	P	**P**	**02 20 27.5**	**-0.6**
	0.2nm,0.3s,baz=66,slow=9.0,SNR=6.0						
FRB	**Frobisher Bay**	**20.74**	**315**	P	**P**	**02 20 46.1**	**+0.1**
	4.0nm,0.7s,baz=107,slow=11,SNR=13						
PESTR	**Estremoz**	**23.20**	**116**	*e*P	**P**	**02 21 11.3**	**-1.1**
	4.1nm,0.9s						
ESDC	**Sonseca Array**	**24.68**	**110**	P	**P**	**02 21 26.3**	**-0.2**
	0.4nm,0.6s,baz=319,slow=8.5,SNR=6.9						
NB200	**NORSAR Array S**	**25.90**	**53**	*e*P	**P**	**02 21 37.2**	**-0.2**
NOA	**NORSAR Array B**	**25.90**	**53**	P	**P**	**02 21 37.2**	**-0.2**
	1.4nm,0.8s,baz=273,slow=9.0,SNR=3.1						
HFS	**Hagfors**	**27.18**	**55**	P	**P**	**02 21 47.2**	**-1.7**
	1.7nm,0.8s,baz=248,slow=10,SNR=2.8						
SADO	**Sadowa**	**30.01**	**273**	*e*P	**P**	**02 22 14.9**	**+0.7**
	16nm,1.0s						
GEC2	**GERESS Array S**	**30.33**	**78**	*e*P	**P**	**02 22 17.2**	**0.0**
	11nm,1.9s						
GERES	**GERESS Array B**	**30.33**	**78**	P	**P**	**02 22 17.2**	**0.0**
	0.5nm,0.5s,baz=309,slow=8.4,SNR=6.0						
GEA0	**GERESS Array S**	**30.34**	**78**	*e*P	**P**	**02 22 16.9**	**-0.2**
ARA0	**ARCESS Array S**	**31.85**	**35**	*e*P	**P**	**02 22 29.4**	**-0.8**
ARCES	**ARCESS Array B**	**31.85**	**35**	P	**P**	**02 22 29.4**	**-0.8**
	1.3nm,0.5s,baz=259,slow=7.4,SNR=16						
RES	**Resolute Bay**	**32.32**	**334**	P	**P**	**02 22 34.7**	**+0.4**
	1.1nm,0.8s,baz=122,slow=16,SNR=6.7						
FIA0	**FINESS Array S**	**32.96**	**50**	*e*P	**P**	**02 22 39.6**	**-0.3**
FINES	**FINESS Array B**	**32.96**	**50**	P	**P**	**02 22 39.6**	**-0.3**
	2.1nm,0.8s,baz=279,slow=7.9,SNR=7.4						
FCC	**Fort Churchill**	**33.04**	**305**	*e*P	**P**	**02 22 40.8**	**+0.1**
	1.1nm,0.5s						
KEST	**Kesra**	**35.13**	**101**	*e*P	**P**	**02 22 58.9**	**-0.2**
	37nm,1.6s						
KEST	**Kesra**	**35.13**	**101**	P	**P**	**02 22 58.9**	**-0.2**
	5.1nm,1.1s,baz=72,slow=9.1,SNR=2.9						
TKL	**Tuckaleechee C**	**38.32**	**264**	*e*P	**P**	**02 23 25.8**	**-0.4**
	16nm,1.5s						
TKL	**Tuckaleechee C**	**38.32**	**264**	P	**P**	**02 23 25.3**	**-0.9**
	3.2nm,0.9s,baz=168,slow=14,SNR=2.2						
YKA	**Yellowknife Ar**	**41.25**	**316**	P	**P**	**02 23 50.4**	**+0.1**
	1.1nm,1.0s,baz=63,slow=8.9,SNR=7.7						
YKB5	**Yellowknife Ar**	**41.25**	**316**	*e*P	**P**	**02 23 50.4**	**+0.1**
X40A	**Basin Creek Fa**	**44.61**	**270**	*e*P	**P**	**02 24 18.0**	**+0.2**
	3.0nm,0.8s						
INK	**Inuvik**	**45.45**	**329**	*e*P	**P**	**02 24 23.9**	**-0.1**
	0.8nm,0.6s						
INK	**Inuvik**	**45.45**	**329**	P	**P**	**02 24 23.8**	**-0.2**
	1.1nm,0.8s,baz=30,slow=6.4,SNR=6.5						
BR101	**Keskin Array S**	**47.23**	**77**	*e*P	**P**	**02 24 39.2**	**+0.6**
BRTR	**Keskin Array B**	**47.23**	**77**	P	**P**	**02 24 39.2**	**+0.6**
	0.9nm,0.7s,baz=285,slow=23,SNR=4.6						
TOA1	**Torodi Ar. Sit**	**48.91**	**130**	*e*P	**P**	**02 24 52.1**	**+0.5**
TOA0	**Torodi Ar. Sit**	**48.92**	**130**	*e*P	**P**	**02 24 52.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**48.92**	**130**	P	**P**	**02 24 52.1**	**+0.4**
	1.3nm,1.0s,baz=331,slow=9.3,SNR=6.3						
PD31	**Pinedale Array**	**49.22**	**290**	*e*P	**P**	**02 24 54.5**	**+0.5**
	3.0nm,1.3s						
PDAR	**Pinedale Array**	**49.22**	**290**	*e*P	**P**	**02 24 53.0**	**-1.0**
PDAR	**Pinedale Array**	**49.22**	**290**	P	**P**	**02 24 52.7**	**-1.3**
	0.3nm,0.5s,baz=58,slow=7.4,SNR=5.3						
ARU	**Arti**	**50.13**	**46**	*e*P	**P**	**02 25 00.6**	**+0.1**
SCRK	**Sand Creek**	**51.47**	**328**	*e*P	**P**	**02 25 11.3**	**+0.7**
	4.3nm,1.0s						
PV17	**East Wray Mesa**	**51.78**	**285**	*e*P	**P**	**02 25 14.2**	**+0.8**
	8.7nm,1.0s						
IL1	**Eielson Array**	**51.83**	**330**	*e*P	**P**	**02 25 13.7**	**+0.5**
ILAR	**Eielson Array**	**51.83**	**330**	P	**P**	**02 25 14.2**	**+1.0**
	0.7nm,0.8s,baz=38,slow=5.5,SNR=9.2						
COLA	**College**	**52.05**	**330**	*e*P	**P**	**02 25 15.2**	**+0.4**
	1.4nm,0.5s						
NV01	**Mina Array Sit**	**57.07**	**292**	*e*P	**P**	**02 25 52.9**	**+1.0**
NVAR	**Mina Array Bea**	**57.07**	**292**	P	**P**	**02 25 52.8**	**+1.0**
	0.1nm,0.3s,baz=46,slow=6.4,SNR=2.8						
PNTR	**Pine Nut**	**57.34**	**293**	*e*P	**P**	**02 25 55.3**	**+1.5**
	5.6nm,0.9s						
BRVK	**Borovoye**	**57.44**	**44**	*e*P	**P**	**02 25 54.0**	**0.0**
BVAR	**Borovoye Array**	**57.51**	**44**	P	**P**	**02 25 55.3**	**+0.8**
	2.1nm,0.6s,baz=305,slow=7.0,SNR=5.8						
ROSC	**El Rosal**	**57.79**	**229**	*e*P	**P**	**02 25 58.2**	**+0.9**
	11nm,0.8s						
ROSC	**El Rosal**	**57.79**	**229**	P	**P**	**02 25 58.7**	**+1.4**
	12nm,0.6s,baz=104,slow=8.0,SNR=9.7						
KURK	**Kurchatov**	**62.62**	**41**	*e*P	**P**	**02 26 29.9**	**+0.3**
KURBB	**Kurchatov Arra**	**62.66**	**41**	P	**P**	**02 26 29.9**	**+0.2**
	1.3nm,0.7s,baz=322,slow=7.3,SNR=12						
RAYN	**Ar Rayn**	**65.74**	**83**	*e*P	**P**	**02 26 50.6**	**+0.1**
	0.5nm,0.4s						
MK31	**Makanchi Array**	**67.21**	**42**	*e*P	**P**	**02 26 59.9**	**+0.3**
	11nm,1.9s						
MK32	**Makanchi Array**	**67.21**	**42**	*e*P	**P**	**02 26 59.6**	**+0.1**
MKAR	**Makanchi Array**	**67.21**	**42**	P	**P**	**02 26 59.6**	**+0.1**
	0.9nm,0.5s,baz=333,slow=5.0,SNR=22						
MK01	**Makanchi Array**	**67.24**	**42**	*e*P	**P**	**02 26 59.5**	**-0.2**
GAR	**Garm**	**67.97**	**54**	*e*P	**P**	**02 27 05.2**	**+0.7**
	8.2nm,0.9s						
SONA0	**Songino Array**	**74.48**	**26**	*e*P	**P**	**02 27 43.8**	**+0.1**
SONM	**Songino Array**	**74.48**	**26**	P	**P**	**02 27 43.8**	**+0.1**
	0.6nm,1.0s,baz=330,slow=5.0,SNR=3.3						
WRAB	**Tennant Creek**	**146.19**	**19**	*e*PKPbc	**PKPab**	**02 35 45.8**	**-0.8**
WR1	**Warramunga Arr**	**146.20**	**19**	*e*PKPdf	**PKPbc**	**02 35 45.4**	**-0.4**
WRA	**Warramunga Arr**	**146.20**	**19**	PKPbc	**PKPbc**	**02 35 45.4**	**-0.4**
	0.6nm,0.8s,baz=347,slow=3.0,SNR=5.9						
ASAR	**Alice Springs**	**149.72**	**21**	PKPbc	**PKPbc**	**02 35 54.4**	**-0.8**
	0.4nm,0.8s,baz=350,slow=2.5,SNR=4.2						

ISCJB ***16*** *02:17:05.4±0.6, 33°.63N±0°.09×137°.4E±0°.1, h352^{km}, mb3.4/5, Error ellipse: s-maj=14.2km s-min=8.7km az=44.4*

JMA ***16*** *02:17:05.1±0.5, 33°.69N×137°.28E, h367^{km}±5^{km}, M3.1*

IDC ***16*** *02:17:06.5±0.9, 33°.69N×137°.25E, h353^{km}±10^{km}, mb3.1/5, mb1 3.2/9, mb1mx2.9/47, mbtmp3.8/9, Error ellipse: s-maj=29.4km s-min=13.6km az=92.0*

ISC 16 02:17:06.2±1.0**, 33°.7N**±0°.1×**137°.35E**±0°.09**, h352^{km}, n24,** σ**1^{s}.06**/27**, mb3.4**/5**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	**Ise**	**0.88**	**322**	P	**Pn**	**02 17 52.5**	**+0.9**
JHMK	**Hamakita**	**1.17**	**17**	P	**Pn**	**02 17 53.6**	**+1.0**
JTNC	**Tanabenakahech**	**1.46**	**275**	P	**Pn**	**02 17 54.4**	**+0.1**
JTNC				*e*S	**S**	**02 18 31.9**	**-1.0**
JAO	**Obara**	**1.57**	**357**	P	**Pn**	**02 17 55.8**	**+0.9**
JNY	**Yasuok**	**1.71**	**14**	P	**Pn**	**02 17 56.7**	**+0.9**
JYTA	**Yamagatataniai**	**1.96**	**345**	P	**Pn**	**02 17 57.9**	**+0.6**
JOD2	**Odawara 2**	**2.12**	**42**	P	**Pn**	**02 17 59.9**	**+1.4**
JWT	**Wachi**	**2.26**	**315**	P	**Pn**	**02 17 59.6**	**+0.2**
JAI	**Aioi**	**2.42**	**273**	P	**Pn**	**02 18 00.4**	**-0.3**
JHU	**Hanno**	**2.67**	**36**	P	**Pn**	**02 18 03.4**	**+0.6**
JMN	**Monobe**	**2.90**	**272**	P	**Pn**	**02 18 04.7**	**-0.1**
MJAR	**Matsushiro Arr**	**2.92**	**14**	P	**Pn**	**02 18 05.3**	**+0.3**
	0.6nm,0.3s,baz=195,slow=10.0,SNR=23						

MJAR				S	S	02 18 53.4	+1.2
	baz=100,slow=7.4,SNR=2.2						
MAT	Matsushiro	2.92	14	P	Pn	02 18 05.2	+0.3
MAT	Matsushiro	2.92	14	P	Pn	02 18 05.3	+0.3
JHO	Hitachi	3.92	41	P	Pn	02 18 14.1	-0.3
JHO				S	S	02 19 05.6	-3.9
JFK	Kawauchi	4.65	37	P	Pn	02 18 21.4	-0.7
JNU	Nakatsue	5.44	266	P	Pn	02 18 30.7	-0.2
	1.0nm,0.3s,baz=63,slow=4.7,SNR=5.3						
USRK	Ussuriysk Ar.	11.28	340	P	P	02 19 39.2	-0.3
	0.3nm,0.3s,baz=151,slow=9.8,SNR=7.3						
KLR	Kul'dur	16.07	347	P	P	02 20 33.0	+0.9
	0.1nm,0.3s,baz=171,slow=13,SNR=3.5						
WRA	Warramunga Arr	53.42	184	P	P	02 25 50.8	-0.2
	1.6nm,0.3s,baz=359,slow=7.6,SNR=55						
ASAR	Alice Springs	57.14	184	P	P	02 26 17.5	+0.2
	0.7nm,0.5s,baz=359,slow=4.7,SNR=16						
ARCES	ARCESS Array B	65.93	339	P	P	02 27 15.0	+0.1
	1.8nm,0.9s,baz=79,slow=9.3,SNR=2.6						
YKA	Yellowknife Ar	68.33	28	P	P	02 27 30.9	+0.9
	0.1nm,0.3s,baz=297,slow=6.1,SNR=4.5						
FINES	FINESS Array B	70.19	332	P	P	02 27 40.8	-0.4
	0.3nm,0.4s,baz=46,slow=5.5,SNR=9.6						

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*IDC **16** 02:17:40.8±5.6, 7°.88N×85°.78W, h0^{km}, mb3.4/4, mb1 3.9/5, mb1mx3.6/37, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=112.6km s-min=38.5km az=135.0*

*ISCJB **16** 02:17:59.0±0.8, 10°.31N±0°.07×86°.41W±0°.04, h10^{km}, mb3.4/4, Error ellipse: s-maj=10.3km s-min=4.6km az=16.2*

*UCR **16** 02:18:00.5±1.5, 10°.32N×86°.37W, h13^{km}±10^{km}, MD4.3, ML3.0*

ISC 16 02:18:01.0±1.1, 10°.44N±0°.07×86°.32W±0°.05, h10^{km}, n41, σ1ˢ.17/47, mb3.4/4, 8C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NY14	Universidad de	0.80	75	iP	Pg	02 18 17.5	+1.0
NY14				iS	Sb	02 18 30.1	+2.1
GBS3	Finca Las Img	0.92	68	iP	Pg	02 18 18.8	+0.1
LAPC	Finca la Perla	0.93	69	iP	Pg	02 18 18.9	-0.1
PLVR	Palo Verde	0.96	95	⇑eP	Pg	02 18 18.6	-0.9
PLVR				eS	Sg	02 18 31.8	-0.1
BUEV	Buena Vista	0.97	68	⇑eP	Pg	02 18 19.6	0.0
GB1A	Borinquen Arri	0.98	67	⇑iP	Pg	02 18 19.8	-0.1
GPS3	Bodega del ICE	0.99	71	iP	Pg	02 18 19.9	-0.1
GPS3				iS	Sb	02 18 35.5	+2.0
GPS2	Hotel Rincn d	1.00	72	⇑iP	Pg	02 18 20.1	-0.2
GPS2				eS	Sg	02 18 34.6	+1.2
GPS1	Guardaparques	1.01	71	iP	Pg	02 18 20.2	-0.3
BUAI	Buenos Aires	1.07	66	iP	Pb	02 18 21.4	-0.1
LIM1	Limonal	1.08	76	iP	Pb	02 18 21.1	-0.7
GUAB	Guayabo de Bag	1.11	76	iP	Pb	02 18 21.4	-0.8
COLC	Colonia	1.12	78	iP	Pb	02 18 21.5	-1.0
MESS	Mesas	1.15	75	iP	Pn	02 18 22.1	-1.1
MESS				⇑iP	Pb	02 18 22.2	-0.8
HORNC	Hornillas	1.16	76	iP	Pn	02 18 22.4	-1.0
CUI	Cuipilapa	1.16	79	⇑eP	Pn	02 18 22.2	-1.1
CUI				eS	Sb	02 18 39.0	+0.7
ACAL	Aguas Claras	1.28	81	iP	Pn	02 18 24.1	-0.9
CONN	Concepcion	1.31	31	eP	Pn	02 18 25.3	-0.1
CONN				IAML		02 18 32.4	
	comp=Z,159nm,1.1s						
AMAS	Alto Masis	1.32	82	iP	Pn	02 18 24.4	-1.2
PTEN	Parque Tenorio	1.34	78	iP	Pn	02 18 25.2	-0.6
JTS	JuntasAbangare	1.35	96	Pn	Pn	02 18 24.4	-1.6
	comp=Z,9.4nm,0.3s,baz=0.0,slow=20,SNR=34						
JTS				Sn	Sg	02 18 55.2	+11
	comp=Z,28nm,0.3s,baz=272,slow=16,SNR=11						
JTS	JuntasAbangare	1.35	96	⇑iP	Pn	02 18 24.5	-1.5
ARE1	Arenal 1	1.58	89	⇑eP	Pn	02 18 28.8	-0.3
CEDE	Laguna Cedeo	1.59	88	eP	Pn	02 18 28.6	-0.7
FORC	Fortuna	1.62	89	iP	Pn	02 18 29.4	-0.3
COPN	Copaltepe	1.75	351	eP	Pn	02 18 31.6	+0.2
COPN				IAML		02 19 03.6	
	comp=Z,230nm,0.9s						
ACON	Acoyapa	1.89	36	eP	Pn	02 18 33.3	0.0
MOMN	Momotombo	1.97	354	eP	Pn	02 18 34.5	0.0
CNGN	Cerro Negro	2.08	350	eP	Pn	02 18 36.0	0.0
BOAB	BOACO BROADBAN	2.10	18	eP	Pn	02 18 36.0	-0.2
TEL3	Telica 3	2.18	346	eP	Pn	02 18 37.9	+0.5
HDC	Heredia	2.22	101	eP	Pn	02 18 39.3	+1.4
CRIN	San Cristobal	2.36	342	eP	Pn	02 18 40.1	+0.2
LCR2	La Lucha 2	2.38	107	eP	Pn	02 18 39.7	-0.7
MATN	Matagalpa	2.51	9	eP	Pn	02 18 42.3	+0.3
ESPN	Las Esperanzas	2.64	48	eP	Pn	02 18 43.8	+0.1
BRU2	Volcan	3.94	114	eP	Pn	02 19 05.6	+4.0
TXAR	Lajitas Array	24.83	322	P	P	02 23 24.7	+1.1
	comp=Z,0.7nm,0.8s,baz=148,slow=14,SNR=4.7						
NVAR	Mina Array Bea	39.94	320	P	P	02 25 38.0	+2.1
	comp=Z,0.7nm,0.8s,baz=139,slow=7.0,SNR=6.4						
YKA	Yellowknife Ar	55.83	345	P	P	02 27 36.1	-2.2
	comp=Z,0.2nm,0.6s,baz=143,slow=6.8,SNR=5.9						
ILAR	Eielson Array	68.30	336	P	P	02 28 59.9	-2.1
	comp=Z,0.3nm,0.7s,baz=116,slow=6.3,SNR=2.7						

WEL 16 02:25:02.2, 41°S±2°×17°4E±°, h55^{km}±1^{km}, ML3.7/14, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUWZ	Tuamarina	0.14	98	P	Pn	02 25 11.2	+0.4
TUWZ				S	Sn	02 25 17.0	+0.1
BSWZ	Blackbirch Sta	0.32	164	P	Pn	02 25 12.5	+0.5
BSWZ				S	Sn	02 25 19.8	+0.7
NNZ	Nelson	0.34	304	P	Pn	02 25 12.3	+0.2
NNZ				S	Sn	02 25 19.5	+0.1
TCW	Tory Channel	0.44	63	P	Pn	02 25 13.9	+0.8
TCW				S	Sn	02 25 21.2	+0.2
CMWZ	Cape Campbell	0.48	135	P	Pn	02 25 15.4	+1.7
DUWZ	D’Urville Isla	0.62	12	P	Pn	02 25 15.4	+0.1
THZ	Tophouse	0.73	241	P	Pn	02 25 16.7	+0.1
BHW	Baring Head	0.84	90	P	Pn	02 25 18.4	+0.5
BHW				S	Sn	02 25 29.9	+0.5
KHZ	Kahutara	1.02	189	P	Pn	02 25 21.0	+0.7
KIW	Kapiti Island	1.03	58	P	Pn	02 25 21.4	+1.0
CAW	Cannon Point	1.03	73	P	Pn	02 25 21.1	+0.6
QRZ	Quartz Range	1.10	302	P	Pn	02 25 22.2	+0.8
MSWZ	Moikau Station	1.12	91	P	Pn	02 25 21.7	0.0
PLWZ	Palliser	1.14	99	P	Pn	02 25 21.8	-0.1
OGWZ	Otaki Gorge	1.22	61	P	Pn	02 25 23.6	+0.6
PAWZ	Paruwai Farm	1.26	89	P	Pn	02 25 23.2	-0.3
MTW	Mount Morrison	1.34	80	P	Pn	02 25 24.4	-0.2
HOWZ	Holdsworth Sta	1.42	69	P	Pn	02 25 25.7	-0.1
TRWZ	Traveller	1.45	90	P	Pn	02 25 25.9	-0.3
DSZ	Denniston Nort	1.50	256	P	Pn	02 25 27.2	+0.3
MRZ	Mangatainoka R	1.57	62	P	Pn	02 25 27.7	0.0
TMWZ	Te Maipa	1.64	80	P	Pn	02 25 28.1	-0.6
OHWZ	Ohakea	1.69	45	P	Pn	02 25 31.0	+1.7
TIWZ	Tintock	1.73	69	P	Pn	02 25 29.5	-0.4
LTZ	Lake Taylor	1.76	218	P	Pn	02 25 30.6	+0.2
POWZ	Post Office Ro	1.83	57	P	Pn	02 25 31.6	+0.3
PRWZ	Pori Road	1.88	64	P	Pn	02 25 31.6	-0.3
WAZ	Wanganui	1.90	30	P	Pn	02 25 34.3	+2.1
AMCZ	Amberley	1.95	205	P	Pn	02 25 32.4	-0.5
NMEZ	Namu Road	2.00	3	P	Pn	02 25 35.9	+2.4
LREZ	Lake Rotokare	2.01	14	P	Pn	02 25 37.3	+3.6
BFZ	Birch Farm	2.02	70	P	Pn	02 25 32.8	-1.0
PREZ	Palmer Road	2.09	9	P	Pn	02 25 37.7	+2.9
KHEZ	Kahui Hut	2.12	5	P	Pn	02 25 37.6	+2.2
DVHZ	Dannevirke	2.14	60	P	Pn	02 25 34.6	-0.9
NBEZ	Newall Road No	2.14	2	P	Pn	02 25 37.8	+2.3
TSZ	Takapari Road	2.15	52	P	Pn	02 25 35.4	-0.2
INZ	Inchbonnie	2.17	232	P	Pn	02 25 36.3	+0.4
PKE	Pukeiti	2.22	5	P	Pn	02 25 38.9	+2.3
OXZ	Oxford	2.30	213	P	Pn	02 25 36.5	-1.2
CRLZ	Canterbury Las	2.32	201	P	Pn	02 25 36.4	-1.5
OKCZ	Okains Bay	2.37	192	P	Pn	02 25 37.5	-1.2
MHEZ	Mangahewa	2.37	11	P	Pn	02 25 41.4	+2.8
VRZ	Vera Road	2.41	19	P	Pn	02 25 41.5	+2.4
MTVZ	Mangateitei	2.41	33	P	Pn	02 25 40.6	+1.4
MQZ	McQueen’s Vall	2.44	199	P	Pn	02 25 37.7	-1.8
PKVZ	Pokaka	2.44	30	P	Pn	02 25 41.9	+2.2
TRVZ	Turoa	2.51	34	P	Pn	02 25 42.1	+1.3
MOVZ	Moawhango	2.51	38	P	Pn	02 25 41.3	+0.7
AKCZ	Akaroa Harbour	2.54	194	P	Pn	02 25 39.6	-1.3
DRZ	Dome Shelter	2.54	34	P	Pn	02 25 43.0	+1.7
WHVZ	Whangaehu Hut	2.54	34	P	Pn	02 25 42.6	+1.4
FWVZ	Far West T-bar	2.55	33	P	Pn	02 25 42.7	+1.4
TUVZ	Tukino	2.58	35	P	Pn	02 25 44.7	+2.9
COVZ	Chateau Observ	2.59	32	P	Pn	02 25 44.6	+2.8
BHHZ	Black Hill Sta	2.60	43	P	Pn	02 25 42.0	+0.1
NGZ	Ngauruhoe	2.64	33	P	Pn	02 25 44.2	+1.7
TWVZ	Taurewa	2.67	29	P	Pn	02 25 44.8	+2.0
WTVZ	West Tongariro	2.69	32	P	Pn	02 25 45.2	+2.1
KRVZ	Karewarewa	2.73	33	P	Pn	02 25 45.8	+2.2
WVZ	Waitaha Valley	2.79	232	P	Pn	02 25 46.1	+1.7
KWHZ	Kaweka Forest	2.84	47	P	Pn	02 25 46.4	+1.2
KAHZ	Kahuranaki	2.87	57	P	Pn	02 25 44.5	-1.0
HIZ	Hauiti	3.01	17	P	Pn	02 25 49.5	+2.0
RPZ	Rata Peaks	3.05	220	P	Pn	02 25 47.5	-0.5
BKZ	Black Stump Fm	3.07	44	P	Pn	02 25 47.4	-0.9
NMHZ	Naumai	3.28	46	P	Pn	02 25 52.4	+1.2
MTHZ	Maungataniwha	3.48	44	P		02 25 54.3	
MTHZ				P	Pn	02 25 54.3	+0.4
FOZ	Fox Glacier	3.61	233	P	Pn	02 25 56.1	+0.6
MUGZ	Murupara	3.73	39	P	Pn	02 25 56.2	-1.2
TOZ	Tahuroa Road	3.91	21	P	Pn	02 26 00.7	+0.9
LBZ	Lake Benmore	3.97	220	P	Pn	02 25 59.6	-0.9
PRGZ	Paritu Road	4.02	53	P	Pn	02 26 01.2	0.0
RAGZ	Rawiri	4.05	45	P	Pn	02 26 01.9	+0.2
URZ	Urewera	4.07	40	P	Pn	02 26 01.3	-0.6
URZ				P		02 26 01.3	
RIGZ	Rimuhau	4.09	50	P	Pn	02 26 01.6	-0.6
MWZ	Matawai	4.22	45	P	Pn	02 26 03.5	-0.6
ODZ	Otahua Downs	4.29	211	P	Pn	02 26 03.0	-1.8
AWAZ	Awhitu Peninsu	4.39	9	P	Pn	02 26 08.4	+2.1
MKAZ	Moumakai	4.43	15	P	Pn	02 26 08.8	+1.9
JCZ	Jackson Bay	4.53	232	P	Pn	02 26 07.9	-0.3
RUGZ	Raukumara Rang	4.58	43	P	Pn	02 26 08.0	-1.0

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*KRNET **16** 02:41:24.9±0.1, 42°.56N×79°.60E, h21^{km}, mb2.7*

*NNC **16** 02:41:24.4±1.1, 42°.59N×79°.60E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=7.2km s-min=3.7km az=131.0*

*SOME **16** 02:41:25.1, 42°.55N×79°.63E, h15^{km}*

ISC 16 02:41:24.4±1.7, 42°.54N±0°.05×79°.61E±0°.05, h1^{km}±10^{km}, n41, σ0ˢ.75/72, 16C-16D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.74	325	P	Pg	02 41 38.8	+0.1
	8.5nm,0.1s						
UZB				S	Sg	02 41 48.8	+0.5
	24nm,0.2s						
UZB	Uzynbulak	0.74	325	eP	Pg	02 41 38.8	+0.1
	baz=25						
UZB				eS	Sg	02 41 48.8	+0.5
	baz=25						
UZB	Uzynbulak	0.74	325	eP	Pg	02 41 38.8	+0.1
	8.5nm,0.1s						
UZB				eS	Sg	02 41 48.8	+0.5
	24nm,0.2s						
PDGK	Podgornoye	0.79	354	P	Pg	02 41 39.4	-0.1
	7.5nm,0.1s						
PDGK				S	Sg	02 41 49.9	0.0
	2.8nm,0.1s						
PDGK	Podgornoye	0.79	354	⇑P	Pg	02 41 39.1	-0.5
	3.0nm,0.2s						
PDGK				⇑S	Sg	02 41 49.3	-0.6
	4.3nm,0.4s						
PDGK	Podgornoye	0.79	354	⇓iP	Pg	02 41 39.5	-0.1
	baz=54						
PDGK				⇓iS	Sg	02 41 50.4	+0.5
	baz=54						
PRZ	Przheval'sk	0.89	267	⇑iP	Pg	02 41 41.6	+0.1
	baz=66						
PRZ				⇑iS	Sg	02 41 54.0	+0.9
	baz=66						
SATY	Saty	1.02	301	P	Pg	02 41 44.3	+0.3
	1.7nm,0.1s						
SATY				S	Sg	02 41 58.0	+0.7
	22nm,0.1s						
SATY	Saty	1.02	301	eP	Pg	02 41 44.3	+0.3
	1.7nm,0.1s						
SATY				eS	Sg	02 41 58.0	+0.7
	22nm,0.1s						
TARG	Taragay, Kyrgy	1.57	239	⇑iP	Pn	02 41 53.2	-0.5
	baz=39						
TARG				⇑iS	Sg	02 42 13.9	-0.8
	baz=39						
DJR	Jarkent	1.79	4	eP	Pn	02 41 57.1	+0.6
	1.1nm,0.2s						
DJR				eS	Sn	02 42 20.1	0.0
	3.3nm,0.3s						
KDJ	Kajisay	1.84	258	⇑iP	Pb	02 41 58.4	-0.6
	baz=57						
KDJ				⇑iS	Sb	02 42 22.7	0.0
	baz=57						
KOTS	Kotyrbulak	1.96	292	Pg	Pg	02 42 01.3	-0.6
	5.9nm,0.2s						
KOTS				Lg	Lg	02 42 27.8	
	19nm,0.3s						
KOTS	Kotyrbulak	1.96	292	eP	Pg	02 42 01.3	-0.6
	5.9nm,0.2s						
KOTS				eS	Sg	02 42 27.8	+0.4
	19nm,0.3s						
MDOK	Medeo	1.98	289	⇓Pg	Pn	02 41 56.0	-3.2
	21nm,1.5s						
MDOK				⇑Lg	Lg	02 42 26.2	
	19nm,1.2s						
TNSS	Tian-Shan	2.02	285	Pg	Pb	02 42 01.9	-0.2
	2.2nm,0.4s						
TNSS				Lg	Lg	02 42 28.6	
	8.8nm,0.4s						
TNSS	Tian-Shan	2.02	285	eP	Pb	02 42 01.9	-0.2
	2.2nm,0.4s						
TNSS				eS	Sg	02 42 28.6	-0.7
	8.8nm,0.4s						
ARXS	Arharly	2.12	323	Pg	Pb	02 42 03.0	-0.6
	6.0nm,0.6s						
ARXS				Lg	Lg	02 42 30.2	
	6.3nm,0.4s						
ARXS	Arharly	2.12	323	eP	Pb	02 42 03.0	-0.6
	6.0nm,0.6s						
ARXS				eS	Sb	02 42 30.2	-0.1
	6.3nm,0.4s						
IZV	Izvestkoviy	2.26	284	Pg	Pb	02 42 05.7	-0.4
	3.6nm,0.2s						
IZV				Lg	Lg	02 42 35.6	
	13nm,0.3s						
IZV	Izvestkoviy	2.26	284	eP	Pb	02 42 05.8	-0.2
	3.6nm,0.2s						
IZV				eS	Sb	02 42 35.3	+0.7
	13nm,0.3s						
CHKK	Chushkaly	2.32	305	eP	Pb	02 42 06.8	-0.3
	1.4nm,0.2s						
CHKK				eS	Sb	02 42 36.6	+0.4
	6.2nm,0.3s						
MTBS	Maitube	2.41	285	Pg	Pb	02 42 08.0	-0.6
	7.0nm,0.2s						
MTBS				Lg	Lg	02 42 38.8	
	7.6nm,0.2s						
MTBS	Maitube	2.41	285	eP	Pb	02 42 08.0	-0.6
	7.0nm,0.2s						
MTBS				eS	Sb	02 42 38.9	0.0
	7.6nm,0.2s						
KTBS	Karatobe	2.44	300	Pg	Pb	02 42 08.2	-0.9
	1.4nm,0.1s						
KTBS				Lg	Lg	02 42 39.1	
	16nm,0.3s						
KTBS	Karatobe	2.44	300	eP	Pb	02 42 08.2	-0.9
	baz=98						
KTBS				eS	Sb	02 42 39.1	-0.5
	baz=98						
KTBS	Karatobe	2.44	300	eP	Pb	02 42 08.2	-0.9
	1.4nm,0.1s						
KTBS				eS	Sb	02 42 39.1	-0.5
	16nm,0.3s						
ULHL	Ulahol	2.51	264	⇑eP	Pn	02 42 07.4	+0.9
	baz=64						
ULHL				⇑iS	Sn	02 42 38.3	+0.4
	baz=64						
BOOM	Boomskoye usch	2.71	270	⇑iP	Pn	02 42 10.1	+0.8
	baz=70						
BOOM				⇑iS	Sn	02 42 43.6	+0.8
	baz=70						
KST	Kastek	2.73	282	Pg	Pb	02 42 15.2	+1.1
	1.5nm,0.2s						
KST				Lg	Lg	02 42 51.1	
	7.3nm,0.4s						
KST	Kastek	2.73	282	eP	Pb	02 42 15.2	+1.1
	1.5nm,0.2s						
KST				eS	Sg	02 42 51.1	-0.9
	7.3nm,0.4s						
KUU	Kurty	2.74	301	eP	Pb	02 42 13.7	-0.6
	0.4nm,0.1s						
KUU				eS	Sb	02 42 48.4	0.0
	5.5nm,0.3s						
DGS	Degeres	2.90	285	Pg	Pb	02 42 17.1	+0.1
	2.6nm,0.3s						
DGS				Lg	Lg	02 42 54.8	
	11nm,0.5s						
DGS	Degeres	2.90	285	eP	Pb	02 42 17.1	+0.1
	2.6nm,0.3s						
DGS				eS	Sb	02 42 54.8	+1.7
	11nm,0.5s						
TKM2	Tokmak 2	2.98	279	⇓Pg	Pb	02 42 17.5	-0.9
	6.5nm,1.4s						
TKM2				⇑Lg	Lg	02 42 57.5	
	2.5nm,0.6s						
TKM2	Tokmak 2	2.98	279	⇓eP	Pn	02 42 13.8	+0.8
	baz=78						
TKM2				⇓iS	Sn	02 42 49.2	-0.2
	baz=78						
KZA	Kyzart	3.26	263	⇓eP	Pn	02 42 18.2	+1.1
	baz=63						
KZA				⇓eS	Sn	02 42 56.8	+0.1
	baz=63						
CHMS	Chumysh	3.60	279	⇓iP	Pn	02 42 22.2	+0.8
	baz=79						
CHMS				⇓iS	Sn	02 43 03.9	-0.7
	baz=79						
USP	Ospenovka	3.82	283	⇓eP	Pn	02 42 25.1	+0.7
	baz=82						
USP				⇓iS	Sn	02 43 09.3	-0.7
	baz=82						
MAKZ	Makanchi	4.59	21	⇓Pn	Pn	02 42 35.0	+0.1
	2.1nm,1.2s						
MAKZ				⇑Sn	Sn	02 43 28.1	-0.8
	0.2nm,0.3s						
MAKZ				⇑Lg	Lg	02 43 50.7	
	0.8nm,0.6s						
MK31	Makanchi Array	4.66	23	⇓Pn	Pn	02 42 37.2	+1.2
	0.3nm,0.6s,baz=199,slow=14,SNR=7.4						
MK31				⇓Sn	Sn	02 43 30.8	+0.2
	0.5nm,0.6s,baz=208,slow=25,SNR=4.5						
MK31				⇓Lg	Lg	02 43 50.3	
	0.1nm,0.3s,baz=197,slow=28,SNR=3.6						

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*IDC **16** 02:58:10.4±0.8, 11°.34S×163°.03E, h0^{km}, mb4.3/15, mb1 4.3/18, mb1mx4.2/43, mbtmp4.3/18, ML4.0/3, MS3.4/4, Ms1 3.4/4, ms1mx3.0/23, Error ellipse: s-maj=22.9km s-min=17.5km az=113.0*

*ISCJB **16** 02:58:13.1±0.4, 11°.44S±0°.06×163°.05E±0°.06, h33^{km}, mb4.3/23, MS3.4/2, Error ellipse: s-maj=9.0km s-min=8.2km az=16.3*

*NEIC **16** 02:58:16.2±1.0, 11°.38S×163°.00E, h42^{km}±9^{km}, mb4.4/10, Error ellipse: s-maj=8.6km s-min=6.5km az=120.0*

ISC 16 02:58:15.2±0.5, 11°.42S±0°.07×163°.09E±0°.09, h35^{km}, n54, σ0ˢ.88/52, mb4.4/23, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.67	302	Pn	Pn	02 59 09.0	-0.4
	26nm,0.3s,baz=165,slow=8.2,SNR=3.7						
HNR				Sn	Sn	02 59 52.4	+0.9
	88nm,0.3s,baz=179,slow=12,SNR=4.8						
HNR				LR	LR	03 00 36.0	
	comp=Z,335nm,18.9s,baz=108,slow=41						
DZM	Mont Dzumac	11.07	164	Pn	Pn	03 00 52.7	+1.6
	2.3nm,0.3s,baz=17,slow=11,SNR=17						
DZM				Sn	Sn	03 02 51.2	-2.6
	0.3nm,0.3s,baz=229,slow=19,SNR=2.7						
DZM				LR	LR	03 04 19.5	
	comp=Z,202nm,19.2s,baz=20,slow=33						
CTA	Charters Tower	18.34	240	P	Pn	03 02 28.0	+1.1
	0.1nm,0.3s,baz=47,slow=17,SNR=5.6						
CTAO	Charters Tower	18.34	240	eP	Pn	03 02 27.6	+0.7
COEN	Coen	19.59	260	eP	Pn	03 02 41.3	-0.7
	14nm,1.2s						
KWAJ	Kwajalein Atol	20.59	13	eP	P	03 02 51.5	+0.2
	126nm,0.5s						
STKA	Stephens Creek	28.41	221	eP	P	03 04 07.6	+1.0
	3.7nm,2.0s						
STKA	Stephens Creek	28.41	221	P	P	03 04 08.0	+1.4
	1.6nm,0.7s,baz=55,slow=13,SNR=4.1						
WRAB	Tennant Creek	28.89	249	eP	P	03 04 09.8	-1.3
	0.8nm,0.4s						
WB2	Warramunga Arr	28.90	249	eP	P	03 04 09.2	-1.9
WR1	Warramunga Arr	28.91	249	eP	P	03 04 09.9	-1.3
	5.5nm,1.3s						
WR1				ePcP	PcP	03 07 21.0	+1.0
WRA	Warramunga Arr	28.91	249	P	P	03 04 09.9	-1.3
	1.1nm,0.5s,baz=78,slow=9.2,SNR=25						
WRA				PcP	PcP	03 07 21.0	+1.0
	0.4nm,0.5s,baz=76,slow=3.2,SNR=10.0						
URZ	Urewera	29.52	157	LR	LR	03 13 48.3	
	comp=Z,87nm,18.5s,baz=230,slow=32						
H11S2	WAKE ISLAND Hy	29.94	7	T	T	03 35 46.3	
	baz=191						
H11S3	WAKE ISLAND Hy	29.94	7	T	T	03 35 49.8	
	baz=191,slow=74						
H11S1	WAKE ISLAND Hy	29.95	7	T	T	03 35 50.9	
	baz=191,slow=74						
AS31	Alice Springs	30.30	242	eP	P	03 04 23.1	-0.4
ASAR	Alice Springs	30.30	242	P	P	03 04 22.4	-1.1
	1.8nm,0.5s,baz=63,slow=9.9,SNR=36						
ASAR				PcP	PcP	03 07 23.9	+0.4
	0.3nm,0.6s,baz=76,slow=3.9,SNR=3.9						
H11N1	WAKE ISLAND Hy	31.16	7	T	T	03 37 20.6	
	baz=188,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	31.17	7	T	T	03 37 22.5	
	baz=188,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	31.18	7	T	T	03 37 21.1	
	baz=188,slow=76,SNR=15						
BBOO	Buckleboo	32.69	225	eP	P	03 04 44.7	+0.3
	25nm,1.8s						
FITZ	Fitzroy Crossi	36.76	255	eP	P	03 05 19.1	-0.6
	17nm,1.7s						
JNU	Nakatsue	53.90	326	P	P	03 07 34.9	-0.4
	5.3nm,0.9s,baz=163,slow=11,SNR=3.1						
SSE	Sheshan	58.34	318	eP	P	03 08 06.8	-0.2
	3.8nm,0.5s						
KSRS	Korea Array	58.75	328	P	P	03 08 09.5	-0.3
	2.4nm,0.8s,baz=141,slow=7.8,SNR=6.8						
KSRS				LR	LR	03 31 45.7	
	comp=Z,28nm,19.3s,baz=100,slow=34						
KS15	Wonju Array Si	58.77	328	eP	P	03 08 09.5	-0.4
KSAR	Wonju Array Be	58.77	328	P	P	03 08 09.5	-0.4
KS01	Wonju Array Si	58.79	328	eP	P	03 08 09.7	-0.3
USRK	Ussuriysk Ar.	62.15	335	P	P	03 08 33.5	+0.6
	6.2nm,1.0s,baz=137,slow=5.6,SNR=7.9						
KLR	Kul'dur	66.40	338	P	P	03 09 01.0	+0.4
	1.6nm,0.7s,baz=135,slow=1.7,SNR=6.4						
CM31	Chiang Mai Arr	69.88	295	eP	P	03 09 22.9	-0.2
CMAR	Chiang Mai Arr	69.88	295	P	P	03 09 22.9	-0.2
	1.0nm,0.3s,baz=112,slow=3.2,SNR=4.5						
ULN	Ulaanbaatar	77.09	325	eP	P	03 10 05.0	-0.2
	12nm,1.4s						
SONA0	Songino Array	77.45	325	eP	P	03 10 07.9	+0.8
SONM	Songino Array	77.45	325	P	P	03 10 07.9	+0.8
	3.1nm,0.8s,baz=146,slow=5.9,SNR=16						
SONA1	Songino Array	77.45	325	eP	P	03 10 07.4	+0.3
BILL	Bilibino	79.29	1	eP	P	03 10 16.6	0.0
	3.9nm,0.9s						
ILAR	Eielson Array	84.71	19	P	P	03 10 44.7	-0.5
	0.4nm,0.6s,baz=241,slow=6.0,SNR=7.3						
ILB	Eielson Array	84.71	19	eP	P	03 10 44.7	-0.5
NV01	Mina Array Sit	88.27	50	eP	P	03 11 03.3	-0.3
NVAR	Mina Array Bea	88.27	50	P	P	03 11 05.3	+1.7
	0.3nm,0.7s,baz=226,slow=9.6,SNR=3.5						
MK01	Makanchi Array	92.00	317	eP	P	03 11 20.2	-0.3
MK31	Makanchi Array	92.02	317	eP	P	03 11 20.6	+0.1
	1.9nm,0.8s						
MK32	Makanchi Array	92.02	317	eP	P	03 11 20.4	-0.2
MKAR	Makanchi Array	92.02	317	P	P	03 11 20.4	-0.2
	2.0nm,0.6s,baz=94,slow=6.3,SNR=22						
ZALV	Zalesovo Beam	92.34	325	P	P	03 11 20.9	-1.0
	0.3nm,0.3s,baz=84,slow=5.9,SNR=3.7						
ZAA1	Zalesovo Array	92.34	325	eP	P	03 11 20.9	-1.0
NRIK	Noril'sk	95.57	340	P	P	03 11 35.7	-0.6
	2.0nm,0.3s,baz=153,slow=14,SNR=2.2						
YKA	Yellowknife Ar	96.51	28	P	P	03 11 40.1	-0.6
	0.2nm,0.5s,baz=259,slow=4.7,SNR=6.9						
YKB5	Yellowknife Ar	96.51	28	eP	P	03 11 40.1	-0.6
BOSA	Boshof	123.04	225	PKP	PKiKP	03 17 10.0	+0.9
	1.9nm,0.7s,baz=158,slow=1.5,SNR=7.1						
SDV	Santo Domingo	127.12	87	ePKPdf	PKiKP	03 17 18.0	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	Lusaka	128.05	240	*e*PKPdf	PKiKP	03 17 19.2	-0.2

IDC 16 03:10:24.9±1.2**, 21°.94N×143°.18E, h0^{km}, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.4**/30**, mbtmp3.5**/5**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx2.7**/36**, Error ellipse: s-maj=52.7km s-min=28.6km az=92.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.51	192	P	P	03 18 22.2	-0.1
	0.1nm,0.4s,baz=16,slow=9.3,SNR=3.9						
DZM	Mont Dzumac	49.27	151	LR	LR	03 37 33.6	
	comp=Z,110nm,18.4s,baz=208,slow=33						
MKAR	Makanchi Array	54.54	313	P	P	03 19 55.6	+0.8
	0.2nm,0.8s,baz=90,slow=8.6,SNR=2.3						
YKA	Yellowknife Ar	76.24	28	P	P	03 22 15.8	+0.7
	0.2nm,0.6s,baz=294,slow=6.1,SNR=3.6						
ARCES	ARCESS Array B	78.69	341	P	P	03 22 28.3	-0.4
	2.4nm,1.0s,baz=70,slow=8.8,SNR=4.8						
FINES	FINESS Array B	82.96	334	P	P	03 22 50.3	-1.3
	0.8nm,0.6s,baz=49,slow=6.3,SNR=5.3						

IDC 16 03:13:29.0±3.3**, 49°.41S×115°.99E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.5**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=121.6km s-min=63.5km az=131.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.56	354	T	T	03 32 08.3	
	baz=174,slow=74,SNR=25						
H01W1	Cape Leeuwin H	14.57	354	T	T	03 32 09.9	
	baz=174,slow=74,SNR=25						
H01W3	Cape Leeuwin H	14.58	354	T	T	03 32 14.1	
	baz=174,slow=74,SNR=22						
STKA	Stephens Creek	25.96	57	P	P	03 19 03.1	0.0
	0.5nm,0.4s,baz=225,slow=10.0,SNR=2.6						
ASAR	Alice Springs	29.29	35	P	P	03 19 33.1	0.0
	0.2nm,0.6s,baz=207,slow=8.1,SNR=3.2						
WRA	Warramunga Arr	32.86	33	P	P	03 20 04.4	0.0
	0.5nm,0.7s,baz=202,slow=8.5,SNR=5.9						
YKA	Yellowknife Ar	149.67	45	PKPbc	PKPbc	03 33 18.8	-0.4
	0.2nm,0.7s,baz=279,slow=2.1,SNR=3.0						

NNC 16 03:33:50.2±5.4**, 37°.14N×70°.47E, h0^{km}, mb3.6, mpv3.2, 6C-2D, Error ellipse: s-maj=41.3km s-min=35.0km az=166.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.73	39	⇑Pn	Pn	03 34 49.9	+0.7
	1.9nm,0.3s						
SFK				⇑Sn	Sn	03 35 35.4	+1.5
	11nm,0.6s						
MNAS	Manas	5.57	16	⇓Pn	Pn	03 35 14.9	+0.4
	2.6nm,1.0s						
MNAS				⇓Sn	Sn	03 36 20.7	+1.5
	8.4nm,0.5s						
KK31	Karatay Array	5.96	0	⇑Pn	Pn	03 35 21.1	+1.4
	2.6nm,1.2s,baz=178,slow=13,SNR=8.3						
KK31				⇑Sn	Sn	03 36 30.8	+2.1
	1.7nm,0.4s,baz=185,slow=24,SNR=19						
AAK	Ala-Archa	6.30	28	⇑Pn	Pn	03 35 21.6	-2.9
	5.0nm,1.2s						
AAK				⇑Sn	Sn	03 36 36.2	-1.2
	5.9nm,1.2s						

DJA 16 03:35:33.3±1.1**, 6°S**±5°**×10°4E**±°**, h19^{km}**±9^{km}**, M3.7**/4**, MLv3.7**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	0.64	41	P	Pn	03 35 46.8	-0.6
LWLI				S	Sg	03 35 55.8	+1.3
KASI	Kota Agung	0.85	92	P	Pg	03 35 49.8	-0.2
KASI				S	Sg	03 36 01.8	+0.5
MDSI	Maura Dua	1.14	28	P	Pn	03 35 54.3	0.0
MDSI				S	Sn	03 36 09.6	+0.2
MNAI	Manna	1.32	329	P	Pn	03 35 56.3	-0.5

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*IDC **16** 03:40:53.1±1.4, 11°.56S×165°.35E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/32, mbtmp3.6/6, ML3.2/1, Error ellipse: s-maj=45.7km s-min=25.6km az=128.0*

*ISCJB **16** 03:40:54.9±0.9, 11°.7S±0°.1×165°.3E±0°.2, h24^{km}, mb3.4/5, Error ellipse: s-maj=27.2km s-min=17.8km az=7.9*

ISC 16 03:40:56.8±1.0**, 11°.6S**±0°.1**×165°.4E**±0°.2**, h24^{km}, n12, σ0^{s}60**/6**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.48	174	Pn	**Pn**	**03 43 25.9**	**+0.2**
	0.2nm,0.3s,baz=280,slow=22,SNR=6.6						
H11S2	WAKE ISLAND Hy	29.91	3	T	T	04 18 14.6	
	baz=181,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	29.92	3	T	T	04 18 16.3	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.93	3	T	T	04 18 16.2	
	baz=181,slow=76,SNR=17						
WRA	Warramunga Arr	30.94	251	P	**P**	**03 47 11.9**	**-0.3**
	1.3nm,0.8s,baz=83,slow=8.7,SNR=12						
H11N1	WAKE ISLAND Hy	31.14	3	T	T	04 19 46.2	
	baz=182,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	31.14	3	T	T	04 19 46.6	
	baz=182,slow=76,SNR=6.3						
H11N2	WAKE ISLAND Hy	31.16	3	T	T	04 19 47.6	
	baz=182,slow=76,SNR=8.6						
ASAR	Alice Springs	32.21	244	P	**P**	**03 47 23.2**	**-0.2**
	0.1nm,0.5s,baz=60,slow=11,SNR=3.3						
SONM	Songino Array	78.87	324	P	**P**	**03 52 58.8**	**+0.6**
	0.2nm,0.6s,baz=119,slow=5.1,SNR=2.6						
ILAR	Eielson Array	84.14	19	P	**P**	**03 53 25.8**	**+0.3**
	0.3nm,0.5s,baz=242,slow=5.2,SNR=7.9						
YKA	Yellowknife Ar	95.62	27	P	**P**	**03 54 19.2**	**-0.7**
	0.1nm,0.4s,baz=260,slow=4.8,SNR=2.7						

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*IDC **16** 03:42:51.3±0.6, 47°.21N×27°.38W, h0^{km}, mb3.8/21, mb1 4.0/23, mb1mx3.8/68, mbtmp3.8/23, ML4.4/2, MS3.6/30, Ms1 3.6/30, ms1mx3.5/66, Error ellipse: s-maj=20.3km s-min=11.4km az=17.0*

*ISCJB **16** 03:42:52.1±0.2, 47°.10N±0°.06×27°.29W±0°.04, h19^{km}, mb4.3/73, MS3.6/28, Error ellipse: s-maj=8.9km s-min=3.4km az=18.3*

*NEIC **16** 03:42:52.8±0.2, 47°.13N×27°.31W, h10^{km}, mb4.6/60, Error ellipse: s-maj=6.9km s-min=3.0km az=195.0*

*INMG **16** 03:43:09.7, 46°.77N×25°.41W, h14^{km}*

ISC 16 03:42:53.9±0.5**, 47°.15N**±0°.09**×27°.30W**±0°.06**, h19^{km}, n141, σ0^{s}92**/118**, mb4.5**/73**, MS3.6**/28**, 2C-3D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGAV	Gavieira, Arco	14.51	104	*e*P	**Pn**	**03 46 16.3**	**-1.9**
	39nm,1.5s						
DSB	Dublin	14.70	58	*e*Pn	**Pn**	**03 46 21.9**	**+1.3**
PMAFR	Mafra	15.48	115	*e*P	**Pn**	**03 46 29.8**	**-1.3**
	58nm,1.2s						
PBRG	Braganca	15.60	103	*e*P	**Pn**	**03 46 30.5**	**-2.2**
MVO	Moncorvo	15.71	105	*e*P	**Pn**	**03 46 31.8**	**-2.3**
	8.3nm,2.1s						
MTE	Manteigas	15.76	108	*e*P	**Pn**	**03 46 32.5**	**-2.3**
MTE	Manteigas	15.76	108	*e*Pn	**Pn**	**03 46 33.5**	**-1.3**
	12nm,1.1s						
PMTG	Montargil	16.07	113	*e*P	**Pn**	**03 46 37.0**	**-1.7**
	13nm,1.9s						
PMRV	Marv??o	16.39	111	*e*P	**P**	**03 46 46.5**	**+0.9**
	12nm,1.5s						
PNCL	Nicolau / Gran	16.47	116	*e*P	**Pn**	**03 46 42.8**	**-1.0**
	24nm,1.0s						
PESTR	Estremoz	16.59	113	*e*Pn	**Pn**	**03 46 44.4**	**-0.9**
	16nm,1.7s						
PTEO	Sao Teotonio	16.71	118	*e*P	Pn	03 46 38.2	-8.7
MESJ	Messejana	16.83	117	*e*P	**Pn**	**03 46 47.3**	**-1.1**
	13nm,1.9s						
MORF	Marmelete	16.91	119	*e*P	**Pn**	**03 46 49.2**	**-0.3**
PFVI	Vila Bisbo	16.92	120	*e*Pn	**Pn**	**03 46 47.0**	**-2.5**
	26nm,1.1s						
EKA	Eskdalemuir Ar	17.12	53	P	**Pn**	**03 46 50.0**	**-1.9**
EKA	Eskdalemuir Ar	17.12	53	P	**Pn**	**03 46 50.0**	**-1.9**
	baz=250,slow=13,SNR=3.6						
PVAQ	Vaqueiros	17.41	117	*e*P	**Pn**	**03 46 54.7**	**-1.0**
	6.2nm,2.2s						
BORG	Borgarnes	17.94	8	LR	LR	03 51 56.1	
	comp=Z,141nm,18.4s,baz=246,slow=30						
PAB	San Pablo	18.30	106	*e*Pn	**P**	**03 47 07.5**	**+0.8**
	5.4nm,1.0s						
ESDC	Sonseca Array	18.48	105	P	**Pn**	**03 47 09.3**	**+0.4**
	0.9nm,0.3s,baz=293,slow=13,SNR=22						
ESDC				LR	LR	03 52 55.1	
	comp=Z,200nm,18.7s,baz=295,slow=32						
ESLA	Sonseca Array	18.48	105	*e*P	**Pn**	**03 47 09.1**	**+0.2**
	15nm,1.5s						
ES19	SONSECA Array	18.51	105	*e*P	**Pn**	**03 47 10.1**	**+0.8**
ANGG	Ammassalik, Gr	19.33	347	*e*P	**P**	**03 47 18.0**	**+0.3**
	59nm,1.5s						
UCC	Uccle	21.01	68	*e*P	**P**	**03 47 36.7**	**+0.6**
	16nm,0.9s						
UCC	Uccle	21.01	68	⇑P	**P**	**03 47 36.9**	**+0.8**
	comp=Z,8.0nm,1.0s						
DOU	Dourbes	21.20	70	⇓P	**P**	**03 47 39.0**	**+0.8**
BCLA	Clavier	21.63	69	⇑P	**P**	**03 47 43.5**	**+0.7**
MEM	Membach	22.07	69	⇓P	**P**	**03 47 48.5**	**+1.0**
	comp=Z,8.6nm,0.9s						
WLF	Walferdange	22.24	71	⇓P	**P**	**03 47 49.8**	**+0.4**
MDT	Midelt	22.41	122	P	**P**	**03 47 52.8**	**+1.3**
	comp=Z,2.1nm,1.0s,baz=328,slow=12,SNR=3.3						
MDT				LR	LR	03 55 04.3	
	comp=Z,91nm,19.2s,baz=323,slow=33						
SFJD	Kangerlussuaq	23.31	337	LR	LR	03 55 06.3	
	comp=Z,192nm,18.3s,baz=148,slow=32						
SENIN	Lac Senin/Sane	23.61	79	*e*P	**P**	**03 48 04.0**	**+0.3**
	comp=Z,4.6nm,0.9s						
DAVOX	Davos/Dischmat	25.22	77	P	**P**	**03 48 20.3**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=180,slow=20						
DAVOX				LR	LR	03 56 59.8	
	comp=Z,129nm,21.9s,baz=284,slow=34						
JMIC	Jan Mayen	25.55	14	LR	LR	03 56 33.9	
	comp=Z,57nm,20.8s,baz=168,slow=32						
SCHQ	Schefferville	25.76	302	P	**P**	**03 48 22.8**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=58,slow=9.7,SNR=4.2						
SCHQ				LR	LR	03 56 56.2	
	comp=Z,149nm,18.2s,baz=324,slow=33						
NOA	NORSAR Array B	26.05	44	LR	LR	03 57 29.5	
	comp=Z,57nm,20.8s,baz=260,slow=34						
HFS	Hagfors	27.06	46	LR	LR	03 57 38.1	
	comp=Z,84nm,19.6s,baz=243,slow=33						
GERES	GERESS Array B	27.26	71	P	**P**	**03 48 38.3**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=243,slow=15,SNR=2.1						
GERES				LR	LR	03 59 04.1	
	comp=Z,209nm,18.7s,baz=274,slow=36						
FRB	Frobisher Bay	28.02	321	P	**P**	**03 48 41.9**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=90,slow=10,SNR=3.0						
FRB				LR	LR	03 57 19.4	
	comp=Z,69nm,19.3s,baz=38,slow=31						
VRAC	Vranov	29.01	69	LR	LR	04 00 11.6	
	comp=Z,213nm,18.9s,baz=273,slow=36						
KEST	Kesra	29.48	99	LR	LR	03 59 54.0	
	comp=Z,205nm,18.8s,baz=205,slow=35						
FINES	FINESS Array B	33.22	45	LR	LR	04 01 28.3	
	comp=Z,70nm,20.0s,baz=302,slow=34						
AKASG	Malin Array Be	36.54	63	P	**P**	**03 49 57.4**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=285,slow=8.5,SNR=2.6						
AKASG				LR	LR	04 06 07.8	
	comp=Z,69nm,18.1s,baz=310,slow=38						
RES	Resolute Bay	39.32	337	*e*P	**P**	**03 50 22.0**	**+0.9**
	comp=Z,1.1nm,0.8s						
RES	Resolute Bay	39.32	337	P	**P**	**03 50 21.2**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=100,slow=6.8,SNR=5.6						
FCC	Fort Churchill	40.19	312	*e*P	**P**	**03 50 28.9**	**+0.3**
	comp=Z,2.9nm,1.0s						
TOA0	Torodi Ar. Sit	41.69	135	*e*P	**P**	**03 50 41.7**	**+0.3**
TORD	Torodi Ar. Bea	41.69	135	P	**P**	**03 50 41.7**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=335,slow=10,SNR=17						
TORD				LR	LR	04 06 35.4	
	comp=Z,206nm,20.0s,baz=330,slow=34						
L42A	Oliver, Polo	43.68	287	*e*P	**P**	**03 50 57.2**	**-0.2**
	comp=Z,56nm,1.8s						
BRTR	Keskin Array B	43.87	77	P	**P**	**03 50 59.9**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=305,slow=7.3,SNR=5.0						
BRTR				LR	LR	04 09 16.4	
	comp=Z,52nm,20.8s,baz=272,slow=36						
ULM	Lac du Bonnet	43.91	300	*e*P	**P**	**03 50 59.5**	**+0.3**
	comp=Z,4.4nm,0.8s						
ULM	Lac du Bonnet	43.91	300	P	**P**	**03 50 58.9**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=76,slow=7.8,SNR=8.1						
ULM				LR	LR	04 07 18.6	
	comp=Z,106nm,18.5s,baz=353,slow=34						
DBIC	Dimbokro	44.68	147	LR	LR	04 07 14.8	
	comp=Z,86nm,21.3s,baz=293,slow=33						
FFC	Flin Flon	45.58	308	*e*P	**P**	**03 51 12.8**	**+0.5**
	comp=Z,5.4nm,1.0s						
KBZ	Khabaz	47.85	67	LR	LR	04 13 25.8	
	comp=Z,56nm,18.4s,baz=216,slow=38						
YKA	Yellowknife Ar	48.54	322	P	**P**	**03 51 34.9**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=64,slow=7.3,SNR=5.7						
YKA				PcP	**PcP**	**03 53 00.7**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=60,slow=3.8,SNR=6.0						
GNI	Garni	50.90	70	LR	LR	04 17 09.6	
	comp=Z,50nm,18.1s,baz=278,slow=40						
INK	Inuvik	52.59	333	*e*P	**P**	**03 52 06.0**	**+0.2**
	comp=Z,1.7nm,0.9s						
INK	Inuvik	52.59	333	P	**P**	**03 52 05.5**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=45,slow=5.6,SNR=3.5						
EGMT	Eagleton	53.00	304	*e*P	**P**	**03 52 10.4**	**+1.2**
	comp=Z,6.3nm,0.9s						
AKTO	Aktyubinsk	53.31	53	P	**P**	**03 52 12.1**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=152,slow=14,SNR=2.4						
AKTO				LR	LR	04 13 48.9	
	comp=Z,44nm,21.9s,baz=312,slow=35						
K22A	Casper	54.02	296	*e*P	**P**	**03 52 17.5**	**+0.6**
	comp=Z,7.1nm,0.9s						
RLMT	Red Lodge	54.29	300	*e*P	**P**	**03 52 19.6**	**+0.7**
	comp=Z,34nm,1.9s						
N23A	Red Feather La	54.66	294	*e*P	**P**	**03 52 22.9**	**+1.2**
	comp=Z,8.4nm,1.1s						
WALA	Waterton Lakes	54.76	306	*e*P	**P**	**03 52 22.4**	**+0.2**
	comp=Z,10nm,1.0s						
HRY	Holter Researc	54.90	303	*e*P	**P**	**03 52 23.5**	**+0.3**
LKWY	Lake	55.27	300	*e*P	**P**	**03 52 26.7**	**+0.6**
	comp=Z,4.7nm,0.9s						
YMR	Madison River	55.55	301	*e*P	**P**	**03 52 26.3**	**-1.7**
	comp=Z,20nm,1.9s						
BW06	Boulder Array	55.80	298	*e*P	**P**	**03 52 29.8**	**0.0**
	comp=Z,2.9nm,0.9s						
PD31	Pinedale Array	55.80	298	*e*P	**P**	**03 52 29.2**	**-0.6**
PDAR	Pinedale Array	55.80	298	*e*P	**P**	**03 52 29.3**	**-0.6**
PDAR	Pinedale Array	55.80	298	P	**P**	**03 52 29.6**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=60,slow=8.8,SNR=16						
PDAR				LR	LR	04 13 41.4	
	comp=Z,75nm,19.5s,baz=36,slow=33						
H10N2	ASCENSION HYDR	55.90	165	T	T	04 52 32.4	
	baz=350,slow=75,SNR=4.6						
H10N3	ASCENSION HYDR	55.91	165	T	T	04 52 34.5	
	baz=350,slow=75,SNR=5.2						
H10N1	ASCENSION HYDR	55.92	165	T	T	04 52 33.5	
	baz=350,slow=75,SNR=4.7						
LOHW	Long Hollow	55.94	299	*e*P	**P**	**03 52 31.7**	**+0.9**
	comp=Z,20nm,1.9s						
MOOW	Moose Ponds	55.94	300	*e*P	**P**	**03 52 31.8**	**+0.9**
	comp=Z,4.3nm,1.0s						
IMW	Indian Meadow	55.97	300	*e*P	**P**	**03 52 31.5**	**+0.3**
	comp=Z,3.0nm,0.9s						
DLMT	Dillon	56.10	302	*e*P	**P**	**03 52 32.4**	**+0.5**
	comp=Z,8.4nm,1.3s						
FXWY	Fox Creek	56.17	300	*e*P	**P**	**03 52 33.1**	**+0.5**
	comp=Z,3.6nm,0.9s						
TPAW	Teton Pass	56.22	300	*e*P	**P**	**03 52 32.8**	**-0.1**
	comp=Z,3.4nm,0.8s						
REDW	Red Top Meadow	56.23	299	*e*P	**P**	**03 52 33.1**	**+0.2**
	comp=Z,20nm,1.5s						
H10S1	ASCENSION HYDR	56.96	165	T	T	04 53 50.5	
	baz=348						
NEW	Newport	56.97	307	*e*P	**P**	**03 52 38.4**	**+0.5**
	comp=Z,6.1nm,1.2s						
NEW	Newport	56.97	307	P	**P**	**03 52 38.1**	**+0.3**
	comp=Z,2.7nm,1.1s,baz=40,slow=10,SNR=3.7						
H10S3	ASCENSION HYDR	56.97	165	T	T	04 53 51.8	
	baz=348						
H10S2	ASCENSION HYDR	56.98	165	T	T	04 53 51.0	
	baz=348						
PV12	Saucer Basin,	57.96	293	*e*P	**P**	**03 52 45.7**	**+0.4**
	comp=Z,35nm,1.9s						
PV04	Paradox Valley	57.98	294	*e*P	**P**	**03 52 46.1**	**+0.8**
	comp=Z,16nm,1.5s						
PV23	Carpenter Ridg	58.01	294	*e*P	**P**	**03 52 46.2**	**+0.5**
	comp=Z,6.3nm,0.9s						
PV14	Lion Creek, Pa	58.06	294	*e*P	**P**	**03 52 46.2**	**+0.3**
	comp=Z,21nm,1.6s						
BRVK	Borovoye	58.11	45	*e*P	**P**	**03 52 46.6**	**+0.9**
B08A	Colville Reser	58.11	308	*e*P	**P**	**03 52 46.4**	**+0.5**
	comp=Z,3.9nm,0.9s						
BVAR	Borovoye Array	58.18	45	LR	LR	04 16 49.1	
	comp=Z,64nm,19.2s,baz=324,slow=35						
HLID	Hailey	58.21	301	*e*P	**P**	**03 52 47.8**	**+1.0**
	comp=Z,6.2nm,1.4s						
ROSC	El Rosal	58.34	239	LR	LR	04 19 17.4	
	comp=Z,13nm,18.1s,baz=50,slow=38						
SPUT	South Promonto	58.40	298	*e*P	**P**	**03 52 48.9**	**+0.7**
	comp=Z,7.1nm,1.3s						
P17A	Butcher Ranch,	58.46	296	*e*P	**P**	**03 52 49.2**	**+0.5**
	comp=Z,17nm,1.9s						
SRU	San Rafael Swe	58.55	295	*e*P	**P**	**03 52 50.1**	**+0.8**
	comp=Z,2.9nm,0.9s						
TMUT	Trail Mountain	58.86	296	*e*P	**P**	**03 52 52.5**	**+0.9**
	comp=Z,5.0nm,1.0s						
IL1	Eielson Array	58.95	334	*e*P	**P**	**03 52 51.4**	**0.0**
ILAR	Eielson Array	58.95	334	P	**P**	**03 52 50.0**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=34,slow=6.6,SNR=4.3						
Q16A	Castle Valley	59.07	295	*e*P	**P**	**03 52 53.4**	**+0.5**
	comp=Z,17nm,1.9s						
DUG	Dugway, Tooele	59.29	297	*e*P	**P**	**03 52 54.8**	**+0.4**
	comp=Z,4.1nm,0.9s						
LENM	Lemitar	59.34	289	*e*P	**P**	**03 52 53.4**	**-1.5**
LTY	Liberty	59.49	308	*e*P	**P**	**03 52 55.8**	**+0.2**
	comp=Z,13nm,1.3s						
G08A	Pilot Rock	59.76	305	*e*P	**P**	**03 52 58.9**	**+1.4**
	comp=Z,3.0nm,0.8s						
MSU	Marysvale	59.94	295	*e*P	**P**	**03 52 59.6**	**+0.6**
TXAR	Lajitas Array	60.22	282	P	**P**	**03 53 01.0**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=83,slow=7.4,SNR=3.3						
TXAR				LR	LR	04 17 46.0	
	comp=Z,92nm,20.8s,baz=0.0,slow=35						
ELK	Elko	60.41	299	*e*P	**P**	**03 53 02.4**	**+0.2**
	comp=Z,2.3nm,0.9s						
J08A	Circle Bar Ran	60.68	303	*e*P	**P**	**03 53 04.0**	**+0.1**
	comp=Z,6.9nm,1.3s						
PSUT	Pine Spring	60.95	296	*e*P	**P**	**03 53 06.3**	**+0.4**
	comp=Z,3.7nm,0.9s						
SZCU	Shurtz Canyon	61.07	295	*e*P	**P**	**03 53 07.4**	**+0.7**
	comp=Z,4.0nm,1.0s						
CCUT	Cedar City	61.27	295	*e*P	**P**	**03 53 08.4**	**+0.3**
	comp=Z,3.9nm,0.9s						
WVOR	Wild Horse Val	61.35	303	*e*P	**P**	**03 53 09.0**	**+0.6**
	comp=Z,10nm,1.3s						
R11A	Troy Canyon, C	62.12	297	*e*P	**P**	**03 53 14.0**	**+0.3**
	comp=Z,11nm,1.8s						
MOD	Modoc Plateau	62.64	303	*e*P	**P**	**03 53 17.5**	**+0.4**
	comp=Z,10.0nm,1.5s						
KVN	Kaiserville	63.19	299	*e*P	**P**	**03 53 21.1**	**+0.3**
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	63.57	43	*e*P	**P**	**03 53 23.6**	**+0.7**
NV11	Mina Array Sit	63.62	299	*e*P	**P**	**03 53 24.1**	**+0.5**
	comp=Z,0.4nm,1.4s						
NV01	Mina Array Sit	63.71	299	*e*P	**P**	**03 53 24.4**	**+0.1**
NVAR	Mina Array Bea	63.71	299	P	**P**	**03 53 24.8**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=57,slow=6.6,SNR=3.9						
ZALV	Zalesovo Beam	64.05	38	LR	LR	04 21 19.1	
	comp=Z,53nm,18.9s,baz=254,slow=36						
PNTR	Pine Nut	64.05	300	*e*P	**P**	**03 53 26.3**	**-0.3**
	comp=Z,28nm,1.8s						
OTAV	Otavalo	64.46	240	*e*P	**P**	**03 53 29.1**	**-0.6**
	comp=Z,1.1nm,0.6s						
BDFB	Brasilia	65.21	202	P	**P**	**03 53 34.9**	**+0.8**
	comp=Z,2.7nm,0.7s,baz=299,slow=7.0,SNR=5.4						
ISA	Isabella, Lake	65.62	297	*e*P	**P**	**03 53 37.3**	**+0.6**
	comp=Z,13nm,1.6s						
XPFO	Pion Flat	65.73	294	*e*P	**P**	**03 53 38.5**	**+1.0**
	comp=Z,23nm,1.9s						
PFO	Pinyon Flats O	65.73	294	*e*P	**P**	**03 53 38.8**	**+1.3**
	comp=Z,21nm,1.9s						
PFO	Pinyon Flats O	65.73	294	LR	LR	04 19 18.9	
	comp=Z,101nm,19.3s,baz=46,slow=33						
MKAR	Makanchi Array	68.05	44	P	**P**	**03 53 52.6**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=324,slow=5.1,SNR=5.6						
LPIG	La Paz	68.12	282	LR	LR	04 23 27.5	
	comp=Z,89nm,19.8s,baz=10,slow=36						
SONM	Songino Array	77.15	30	P	**P**	**03 54 46.9**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=297,slow=6.3,SNR=4.5						
ULN	Ulaanbaatar	77.35	30	*e*P	**P**	**03 54 47.6**	**+0.3**
	comp=Z,0.7nm,0.4s						
CPUP	Villa Florida	78.00	207	LR	LR	04 24 36.1	
	comp=Z,45nm,20.8s,baz=169,slow=32						
LVC	Limon Verde	78.92	219	*e*P	**P**	**03 54 55.7**	**-0.7**
	comp=Z,3.5nm,0.9s						
CD2	Chengdu	90.67	40	*e*P	**P**	**03 55 54.5**	**-0.9**
WRA	Warramunga Arr	149.01	35	PKPbc	**PKPbc**	**04 02 40.0**	**-0.7**
WRA	Warramunga Arr	149.01	35	PKPbc	**PKPbc**	**04 02 40.0**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=327,slow=2.9,SNR=10						
ASAR	Alice Springs	152.15	39	PKPbc	**PKPbc**	**04 02 47.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=335,slow=2.2,SNR=6.9						

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*IDC **16** 03:55:55.2±4.5, 36°.26N×70°.92E, h183^{km}±38^{km}, mb3.1/5, mb1 3.1/10, mb1mx2.9/54, mbtmp3.6/10, Error ellipse: s-maj=33.3km s-min=25.7km az=29.0*

*ISCJB **16** 03:55:58.0±1.1, 36°.66N±0°.09×70°.7E±0°.1, h188^{km}, mb3.2/4, Error ellipse: s-maj=16.9km s-min=9.7km az=40.0*

*NNC **16** 03:56:01.1±5.3, 37°.10N×70°.46E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=42.1km s-min=35.7km az=155.0*

ISC 16 03:55:56.9±1.2**, 36°.5N**±0°.1**×70°.9E**±0°.1**, h188^{km}, n24, σ1^{s}65**/30**, mb3.3**/4**, 9C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.07	30	⇑Pn	**Pn**	**03 57 01.3**	**+1.9**
	12nm,0.3s						
SFK				⇑Sn	**Sn**	**03 57 47.6**	**-0.8**
	238nm,0.8s						
AML	Almayashu	6.03	21	P	**Pn**	**03 57 25.9**	**+1.1**
	SNR=39						
MNAS	Manas	6.11	12	⇑Pn	**Pn**	**03 57 26.8**	**+1.3**
	3.7nm,0.4s						
MNAS				⇑Sn	**Sn**	**03 58 33.0**	**-2.4**
	24nm,0.5s						
UCH	Uchtor	6.38	25	P	**Pn**	**03 57 30.6**	**+1.3**
	SNR=15						
KZA	Kyzart	6.52	30	P	**Pn**	**03 57 31.8**	**+0.7**
	SNR=10						
EKS2	Erkin-Say	6.55	19	P	**Pn**	**03 57 33.0**	**+1.8**
	SNR=22						
KK31	Karatay Array	6.59	358	⇑Pn	**Pn**	**03 57 33.0**	**+1.4**
	0.5nm,0.2s,baz=178,slow=12,SNR=24						
KK31				⇑Sn	**Sn**	**03 58 42.7**	**-4.0**
	8.6nm,0.3s,baz=186,slow=24						
AAK	Ala-Archa	6.74	24	P	**Pn**	**03 57 35.3**	**+1.6**
	SNR=7.8						
AAK	Ala-Archa	6.74	24	⇓Pn	**Pn**	**03 57 34.2**	**+0.5**
	9.4nm,0.8s						
AAK				⇑Sn	**Sn**	**03 58 48.3**	**-2.0**
	10.0nm,0.6s						
AAK	Ala-Archa	6.74	24	P	**Pn**	**03 57 35.2**	**+1.6**
	3.2nm,0.3s,baz=179,slow=7.2,SNR=30						
AAK				S	**Sn**	**03 58 48.5**	**-1.7**
	0.9nm,0.3s,baz=141,slow=23,SNR=14						
KBK	Karagaybulak	6.91	26	P	**Pn**	**03 57 38.2**	**+2.2**
	SNR=6.3						
ULHL	Ulahol	7.09	34	P	**Pn**	**03 57 39.4**	**+1.1**
	SNR=6.2						
USP	Ospenovka	7.31	21	P	**Pn**	**03 57 42.1**	**+1.0**
	SNR=7.4						
TKM2	Tokmak 2	7.37	28	P	**Pn**	**03 57 43.2**	**+1.1**
	SNR=13						
TKM2	Tokmak 2	7.37	28	⇑Pn	**Pn**	**03 57 43.4**	**+1.3**
	17nm,0.9s						
TKM2				⇑Sn	**Sn**	**03 59 04.8**	**-0.6**
	3.8nm,0.8s						
MKAR	Makanchi Array	13.35	36	P	**Pn**	**03 58 58.2**	**-0.9**
	0.1nm,0.3s,baz=210,slow=12,SNR=3.6						
KURBB	Kurchatov Arra	15.15	19	P	**Pn**	**03 59 22.5**	**+1.2**
	0.1nm,0.3s,baz=209,slow=12,SNR=2.9						
BVAR	Borovoye Array	16.52	359	P	**P**	**03 59 39.0**	**+1.9**
	0.4nm,0.3s,baz=161,slow=11,SNR=8.2						
AKTO	Aktyubinsk	16.72	330	P	**P**	**03 59 41.0**	**+1.8**
	0.5nm,0.3s,baz=142,slow=11,SNR=8.5						
ZALV	Zalesovo Beam	19.96	25	P	**P**	**04 00 15.1**	**+0.7**
	0.9nm,0.3s,baz=212,slow=12,SNR=4.1						
ARCES	ARCESS Array B	41.09	338	P	**P**	**04 03 22.6**	**+0.8**
	0.8nm,0.6s,baz=114,slow=8.3,SNR=7.8						
TORD	Torodi Ar. Bea	65.60	269	P	**P**	**04 06 19.8**	**-1.1**
	0.4nm,0.8s,baz=46,slow=5.7,SNR=4.5						
YKA	Yellowknife Ar	81.24	3	P	**P**	**04 07 51.6**	**+0.2**
	0.2nm,0.4s,baz=351,slow=5.4,SNR=12						
WRA	Warramunga Arr	82.09	122	P	**P**	**04 07 54.9**	**-1.7**
	0.1nm,0.4s,baz=324,slow=4.9,SNR=6.5						

ISCJB ***16*** *04:08:52.4±0.5, 36°.95N±0°.04×71°.64E±0°.07, h106^{km}, mb3.4/7, Error ellipse: s-maj=8.0km s-min=5.7km az=165.1*

IDC ***16*** *04:08:52.7±4.0, 36°.99N×71°.54E, h75^{km}±29^{km}, mb3.1/7, mb1 3.4/14, mb1mx3.2/66, mbtmp3.7/14, Error ellipse: s-maj=43.2km s-min=19.4km az=162.0*

NNC ***16*** *04:08:57.1±2.8, 37°.68N×71°.14E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=21.9km s-min=16.3km az=167.0*

ISC 16 04:08:54.2±0.8**, 37°.07N**±0°.08×**71°.48E**±0°.06**, h106^{km}, n36, σ2^{s}28**/42**, mb3.4**/7**, 6C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.34	28	⇑P	Pn	04 09 45.9	+1.0
	14nm,0.3s						
SFK				⇓S	Sn	04 10 24.4	+0.5
	43nm,0.5s						
AML	Almayashu	5.34	18	P	Pn	04 10 12.3	+0.5
	SNR=156						
MNAS	Manas	5.47	8	⇓P	Pn	04 10 13.2	-0.2
	5.2nm,0.4s						
MNAS				⇑S	Sn	04 11 11.3	-3.9
	10nm,0.5s						
UCH	Uchtor	5.66	23	P	Pn	04 10 16.4	+0.2
	SNR=10						
KZA	Kyzart	5.79	29	P	Pn	04 10 17.7	-0.3
	SNR=12						
EKS2	Erkin-Say	5.86	17	P	Pn	04 10 19.9	+1.2
	SNR=40						
AAK	Ala-Archa	6.02	22	P	Pn	04 10 21.8	+0.8
	SNR=9.7						
AAK	Ala-Archa	6.02	22	⇑P	Pn	04 10 21.3	+0.3
	7.3nm,0.5s						
AAK				⇓S	Sn	04 11 25.6	-3.0
	17nm,0.9s						
AAK	Ala-Archa	6.02	22	P	Pn	04 10 21.9	+0.8
	2.9nm,0.3s,baz=161,slow=6.0,SNR=33						
AAK				S	Sn	04 11 25.3	-3.4
	2.7nm,0.3s,baz=325,slow=21,SNR=11						
KK31	Karatay Array	6.07	353	⇓P	Pn	04 10 21.2	-0.3
	1.7nm,0.3s,baz=176,slow=13,SNR=85						
KK31				⇑S	Sn	04 11 25.0	-4.6
	8.8nm,0.6s,baz=158,slow=21,SNR=6.7						
ULHL	Ulahol	6.34	34	P	Pn	04 10 25.7	+0.4
	SNR=7.4						
CHMS	Chumysh	6.43	22	P	Pn	04 10 26.7	+0.3
	SNR=11						
USP	Ospenovka	6.61	20	P	Pn	04 10 29.0	+0.2
	SNR=21						
TKM2	Tokmak 2	6.64	27	P	Pn	04 10 29.6	+0.2
	SNR=5.9						
TKM2	Tokmak 2	6.64	27	⇑P	Pn	04 10 29.1	-0.3
	6.0nm,0.8s						
TKM2				⇓S	Sn	04 11 42.0	-1.7
	5.0nm,0.6s						
GEYT	Alibeck	10.66	279	P	Pn	04 11 22.7	-1.1
	0.9nm,0.3s,baz=93,slow=12,SNR=5.1						
GEYT				S	Sn	04 13 16.1	-4.9
	1.6nm,0.3s,baz=108,slow=14,SNR=4.4						
MKAR	Makanchi Array	12.60	36	P	Pn	04 11 48.5	-1.1
	0.2nm,0.3s,baz=227,slow=17,SNR=16						
PYUN	Piuthan	13.19	129	eP	Pn	04 11 53.7	-3.9
	11nm,0.3s						
DANN	Dangsing	13.50	127	eP	Pn	04 11 57.3	-4.4
	8.0nm,0.4s						
KOLN	Koldanda	13.80	129	eP	Pn	04 12 02.3	-3.2
KURBB	Kurchatov Arra	14.46	18	P	Pn	04 12 16.2	+2.5
	0.1nm,0.3s,baz=207,slow=11,SNR=4.5						
AB31	Akbulak array	14.78	329	P	Pn	04 12 15.7	-2.1
	1.1nm,0.5s,baz=136,slow=15,SNR=48						
AB31				⇓S	Sn	04 14 55.1	-5.7
	0.8nm,0.5s,baz=145,slow=24,SNR=5.7						
PKI	Pulchoki	15.09	125	eP	Pn	04 12 18.9	-3.3
	7.6nm,0.5s						
GUN	Gumba	15.18	123	eP	Pn	04 12 19.2	-4.1
	7.1nm,0.3s						
JIRN	Jiri	15.55	123	eP	Pn	04 12 24.7	-3.3
	12nm,0.4s						
BVAR	Borovoye Array	15.97	358	P	Pn	04 12 32.5	-0.2
	0.4nm,0.3s,baz=161,slow=10.0,SNR=7.4						
AKTO	Aktyubinsk	16.49	328	⇑P	Pn	04 12 40.4	+1.4
	16nm,1.0s						
AKTO	Aktyubinsk	16.49	328	P	Pn	04 12 39.1	0.0
	1.7nm,0.3s,baz=140,slow=11,SNR=26						
ZALV	Zalesovo Beam	19.24	24	P	P	04 13 09.8	-0.2
	0.4nm,0.3s,baz=223,slow=11,SNR=5.5						
SONM	Songino Array	27.70	56	P	P	04 14 34.2	+1.8
	0.3nm,0.7s,baz=257,slow=10,SNR=3.3						
FINES	FINESS Array B	37.23	326	P	P	04 15 57.8	+2.7
	0.5nm,0.6s,baz=114,slow=12,SNR=2.8						
ARCES	ARCESS Array B	40.77	337	P	P	04 16 26.5	+2.0
	0.9nm,0.6s,baz=116,slow=10,SNR=3.7						
NOA	NORSAR Array B	44.16	323	P	P	04 16 54.0	+2.0
	0.5nm,0.7s,baz=95,slow=7.7,SNR=3.1						
ESDC	Sonseca Array	57.53	298	P	P	04 18 35.8	+3.2
	0.2nm,0.5s,baz=63,slow=6.1,SNR=3.5						
TORD	Torodi Ar. Bea	66.12	269	P	P	04 19 32.1	+1.6
	0.3nm,0.6s,baz=51,slow=5.7,SNR=6.1						
YKA	Yellowknife Ar	80.66	3	P	P	04 20 56.8	+1.8
	0.1nm,0.4s,baz=352,slow=5.6,SNR=4.1						

ISCJB ***16*** *04:13:57.8±0.3, 19°.59S±0°.03×69°.34W±0°.05, h110^{km}±3^{km}, mb4.0/11, Error ellipse: s-maj=7.5km s-min=4.4km az=170.9*

IDC ***16*** *04:13:59.7±0.7, 19°.60S×69°.13W, h109^{km}±6^{km}, mb4.0/10, mb1 4.1/13, mb1mx3.8/41, mbtmp4.3/13, MS3.1/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=19.1km s-min=9.8km az=86.0*

GUC ***16*** *04:13:59.3±0.5, 19°.63S×69°.36W, h97^{km}±3^{km}, ML4.5*

NEIC ***16*** *04:13:59.0±0.0, 19°.63S×69°.36W, h97^{km}, mb4.4/5, ML4.5(GUC), After GUC.*

NEIC Felt [II] at Alto Hospicio, Camina, Huara and Iquique.

VAO ***16*** *04:14:00.9±1.1, 19°.54S×69°.24W, h118^{km}±14^{km}, mb4.5*

ISC 16 04:13:58.6±0.5**, 19°.60S**±0°.03×**69°.37W**±0°.06**, h100^{km}**±4^{km}**, h100^{km}:pP-P, n82, σ1^{s}48**/96**, mb4.0**/11**, 8C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.32	240	ePn	Pn	04 14 13.2	-0.2
PB11	IPOC Station P	0.32	240	⇑iP	Pn	04 14 14.0	+0.5
PB11				eS	Sn	04 14 25.2	+0.7
PB11				IAML		04 14 26.0	
	comp=N,46μm,0.2s						
MNMC	Minye Minye	0.52	335	ePn	Pn	04 14 15.5	+0.6
MNMC	Minye Minye	0.52	335	⇑iP	Pn	04 14 15.9	+1.1
MNMC				eS	Sn	04 14 28.4	+1.4
MNMC				IAML		04 14 29.2	
	comp=N,37μm,0.3s						
PB08	IPOC Station P	0.57	160	⇓iP	Pn	04 14 16.3	+0.9
PB08				eS	Sn	04 14 28.9	+1.0
PB08				IAML		04 14 29.9	
	comp=E,30μm,0.2s						
PSGC	Pisagua	0.71	270	⇑iP	Pn	04 14 16.6	+0.4
PSGC				eS	Sn	04 14 30.0	+0.6
PB12	IPOC Station P	1.34	317	eP	Pn	04 14 23.7	+0.7
PB12				eS	Sn	04 14 41.2	-0.2
PB12	IPOC Station P	1.34	317	⇑iP	Pn	04 14 23.4	+0.4
PB12				eS	Sn	04 14 41.7	+0.3
PB01	IPOC Station P	1.44	185	ePn	Pn	04 14 24.5	+0.3
PB01	IPOC Station P	1.44	185	eP	Pn	04 14 25.1	+0.9
PB01				eS	Sn	04 14 44.3	+0.7
PB01	IPOC Station P	1.44	185	⇑iP	Pn	04 14 24.7	+0.5
PB01				eS	Sn	04 14 44.4	+0.8
PB01				IAML		04 14 45.9	
	comp=E,9μm,0.4s						
PB02	IPOC Station P	1.78	196	eP	Pn	04 14 28.9	+0.4
PB02				⇓eS	Sn	04 14 50.6	-0.6
PB02	IPOC Station P	1.78	196	⇑eP	Pn	04 14 28.8	+0.4
PB02				eS	Sn	04 14 52.1	+1.0
PB02				IAML		04 14 54.5	
	comp=E,5μm,0.2s						
PB07	IPOC Station P	2.17	193	eP	Pn	04 14 35.1	+1.5
PB07	IPOC Station P	2.17	193	⇑eP	Pn	04 14 33.7	+0.1
PB07				eS	Sn	04 14 59.7	-0.5
PB09	IPOC Station P	2.19	177	eP	Pn	04 14 34.8	+1.0
PB09				eS	Sn	04 15 01.7	+1.1
PB09				IAML		04 15 08.5	
	comp=E,2μm,0.2s						
PB03	IPOC Station P	2.46	188	eP	Pn	04 14 39.1	+1.7
PB03	IPOC Station P	2.46	188	⇑eP	Pn	04 14 37.3	0.0
PB03				eS	Sn	04 15 05.6	-1.4
PB04	IPOC Station P	2.82	195	ePn	Pn	04 14 42.6	+0.6
PB04	IPOC Station P	2.82	195	eP	Pn	04 14 43.4	+1.3
LVC	Limon Verde	3.02	172	ePn	Pn	04 14 46.0	+0.9
LVC	Limon Verde	3.02	172	⇓eP	Pn	04 14 48.2	+3.2
LVC	Limon Verde	3.02	172	P	Pn	04 14 46.2	+1.2
	comp=E,14nm,0.3s,baz=3.9,slow=10,SNR=84						
LVC				S	Sn	04 15 21.8	+1.1
	comp=E,80nm,0.3s,baz=170,slow=23,SNR=14						
PB05	IPOC Station P	3.33	193	⇓eP	Pn	04 14 49.1	+0.2
LPAZ	La Paz	3.50	20	eP	Pn	04 14 54.4	+2.8
LPAZ	La Paz	3.50	20	P	Pn	04 14 54.0	+2.3
	comp=E,8.0nm,0.3s,baz=194,slow=4.6,SNR=184						
LPAZ				S	Sn	04 15 29.4	-3.1
	comp=E,2.3nm,0.3s,baz=186,slow=3.4,SNR=3.6						
LPAZ	La Paz	3.50	20	eP	Pn	04 14 52.6	+1.0
PB10	IPOC Station P	4.05	196	ePn	Pn	04 14 57.0	-1.4
PB10	IPOC Station P	4.05	196	⇓eP	Pn	04 14 57.7	-0.7
YJA	Yavi	4.42	126	⇓eP	Pn	04 15 06.3	+2.5
YJA				IAML		04 15 07.3	
	comp=Z,12nm,0.6s						
HJA	Humahuaca	5.14	135	⇓eP	Pn	04 15 15.7	+2.1
GO02	Mina Guanaco	5.54	182	ePn	Pn	04 15 17.6	-1.3
GO03	Copiap	8.00	186	ePn	Pn	04 15 48.0	-4.1
AHML	Horco Molle	8.05	153	eP	Pn	04 15 56.0	+3.2
AHML				eS	Sn	04 16 25.4	-57
AHML				IAML		04 16 52.5	
	comp=Z,2.4nm,0.5s						
LCO	Las Campanas	9.45	187	ePn	Pn	04 16 10.0	-2.0
GO04	Tololo Observa	10.61	187	ePn	Pn	04 16 23.8	-4.0
CPUP	Villa Florida	12.95	123	ePn	Pn	04 16 56.9	-1.9
CPUP	Villa Florida	12.95	123	P	Pn	04 16 57.4	-1.4
	comp=Z,0.4nm,0.3s,baz=319,slow=10.0,SNR=11						
SALV	Santo Antonio	13.53	76	eP	Pn	04 17 06.2	-0.3
TRCB	Terra Rica	15.92	104	eP	Pn	04 17 36.1	-0.9
PTGB	Pitanga	16.81	111	eP	P	04 17 49.4	+0.9
ITAB	Concordia	17.54	119	eP	P	04 17 55.6	-0.8
ITRB	Iturama	17.90	94	eP	Pn	04 18 00.5	-0.8
FRTB	Fartura	18.80	105	eP	Pn	04 18 10.4	-1.6
TRQA	Tornquist	19.48	162	eP	P	04 18 18.7	+1.0
BB19B	Bebedouro	19.60	98	eP	P	04 18 18.9	-0.2
RCLB	Rio Claro- Sao	20.57	102	eP	P	04 18 29.5	-0.2
BDFB	Brasilia	20.72	82	eP	P	04 18 29.4	-2.0
	comp=Z,11nm,0.6s						
BDFB	Brasilia	20.72	82	P	P	04 18 30.2	-1.2
	comp=Z,11nm,0.5s,baz=250,slow=10,SNR=19						
BDFB				LR	LR	04 26 37.7	
	comp=Z,57nm,21.1s,baz=257,slow=37						
PTGA	Pitinga	20.89	27	P	P	04 18 30.8	-2.2
	comp=Z,15nm,0.4s,baz=321,slow=22,SNR=40						
OTAV	Otavalo	21.64	335	eP	P	04 18 43.9	+2.4
	comp=Z,2.2nm,0.9s						
JANB	Januaria	24.33	83	eP	P	04 19 06.3	-1.0
MCI7	Montes Claros	24.42	88	eP	P	04 19 07.4	-0.7
SDV	Santo Domingo	28.34	357	P	P	04 19 43.8	+0.4
	comp=Z,1.0nm,0.4s,baz=315,slow=2.9,SNR=3.0						
MDP	Montagnes des	29.55	36	P	P	04 19 52.5	-1.5
	comp=Z,34nm,1.0s,baz=207,slow=9.0,SNR=4.1						
DBIC	Dimbokro	68.62	74	eP	P	04 24 50.5	-1.0
	comp=Z,17nm,1.3s						
DBIC	Dimbokro	68.62	74	P	P	04 24 50.5	-1.0
	comp=Z,3.8nm,0.6s,baz=218,slow=3.8,SNR=27						
PD31	Pinedale Array	72.26	330	eP	P	04 25 14.0	+0.7
	comp=Z,8.9nm,1.9s						
PDAR	Pinedale Array	72.26	330	P	P	04 25 14.0	+0.7
	comp=Z,0.2nm,0.5s,baz=107,slow=6.0,SNR=3.2						
ULM	Lac du Bonnet	73.39	343	P	P	04 25 18.8	-0.6
	comp=Z,1.4nm,0.6s,baz=159,slow=5.9,SNR=4.8						
NV01	Mina Array Sit	73.74	322	eP	P	04 25 23.0	+0.8
NVAR	Mina Array Bea	73.74	322	P	P	04 25 23.5	+1.4
	comp=Z,0.8nm,0.8s,baz=146,slow=6.9,SNR=6.9						
TOA0	Torodi Ar. Sit	77.13	71	eP	P	04 25 40.5	-1.2
TOA1	Torodi Ar. Sit	77.13	71	eP	P	04 25 40.4	-1.4
TORD	Torodi Ar. Bea	77.13	71	P	P	04 25 40.4	-1.4
	comp=Z,1.4nm,0.3s,baz=265,slow=5.5,SNR=39						
ESDC	Sonseca Array	84.79	45	P	P	04 26 26.2	+4.3
	comp=Z,0.2nm,0.4s,baz=255,slow=5.4,SNR=3.1						
YKA	Yellowknife Ar	89.26	341	P	P	04 26 43.3	+0.4
	comp=Z,2.2nm,0.7s,baz=134,slow=4.7,SNR=62						
YKA				pP	pP	04 27 10.5	+0.2
	comp=Z,0.5nm,0.5s,baz=132,slow=4.9,SNR=3.8						
YKB5	Yellowknife Ar	89.26	341	eP	P	04 26 43.0	+0.1
YKW3	Yellowknife Ar	89.32	341	eP	P	04 26 43.8	+0.6
	comp=Z,10nm,1.8s						
H11S2	WAKE ISLAND Hy	127.19	279	T	T	06 52 39.2	
	baz=101,slow=75,SNR=48						
H11S1	WAKE ISLAND Hy	127.20	279	T	T	06 52 24.9	
	baz=101,slow=75,SNR=80						
H11S3	WAKE ISLAND Hy	127.21	279	T	T	06 52 28.2	
	baz=101,slow=75,SNR=62						
H11N3	WAKE ISLAND Hy	127.22	280	T	T	06 52 46.1	
	baz=101,slow=74,SNR=19						
H11N2	WAKE ISLAND Hy	127.24	280	T	T	06 52 29.7	
	baz=101,slow=74,SNR=27						
H11N1	WAKE ISLAND Hy	127.24	280	T	T	06 52 49.1	
	baz=101,slow=74,SNR=15						
AS31	Alice Springs	131.38	209	ePKPdf	PKPdf	04 33 00.2	+0.1
ASAR	Alice Springs	131.38	209	PKP	PKPdf	04 33 00.2	+0.1
	comp=Z,0.2nm,0.5s,baz=132,slow=2.1,SNR=3.2						
MK32	Makanchi Array	144.33	34	ePKPdf	PKPab	04 33 21.6	+0.4
MK32				epPKPdf	pPKPdf	04 33 52.1	+0.6
MKAR	Makanchi Array	144.33	34	PKP	PKPab	04 33 21.6	+0.4
	comp=Z,0.1nm,0.5s,baz=331,slow=4.0,SNR=3.6						
MKAR				pPKP	pPKPdf	04 33 52.1	+0.6
	comp=Z,0.2nm,0.5s,baz=298,slow=3.1,SNR=2.3						
KLR	Kul'dur	145.93	335	PKPbc	PKPdf	04 33 26.5	+0.8
	comp=Z,0.5nm,0.4s,baz=63,slow=5.9,SNR=4.3						
SONA0	Songino Array	151.63	6	ePKPbc	PKPbc	04 33 42.2	+0.8
SONA0				epPKPab	sPKPdf	04 34 11.4	-2.6
SONM	Songino Array	151.63	6	PKPbc	PKPbc	04 33 42.2	+0.8
	comp=Z,0.7nm,0.6s,baz=315,slow=1.2,SNR=5.7						
SONM				pPKPbc	sPKPdf	04 34 11.4	-2.6
	comp=Z,0.5nm,0.5s,baz=274,slow=1.5,SNR=3.4						

ISCJB ***16*** *04:29:03.9±0.5, 67°.58N±0°.04×142°.9E±0°.1, h10^{km}, mb3.4/8, Error ellipse: s-maj=7.0km s-min=5.6km az=22.4*

IDC ***16*** *04:29:03.9±0.9, 67°.60N×142°.78E, h0^{km}, mb3.5/8, mb1 3.7/9, mb1mx3.5/43, mbtmp3.5/9, ML2.8/1, Error ellipse: s-maj=24.2km s-min=17.0km az=7.0*

YARS ***16*** *04:29:05.6±0.1, 67°.570N±0°.004×143°.07E±0°.01, h10^{km}±2^{km}*

ISC 16 04:29:05.2±0.6**, 67°.53N**±0°.04×**142°.91E**±0°.04**, h10^{km}, n15, σ1^{s}87**/24**, mb3.5**/8**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.07	173	eP	Pg	04 29 25.6	-0.2
MOMR				eS	Sg	04 29 39.9	+0.1
YBGR	Belaya Gora	1.59	49	eP	Pn	04 29 32.7	-0.7
YBGR				eS	Sn	04 29 52.7	-1.3
BTGS	Batagay	3.17	276	eP	Pn	04 29 56.6	+1.6
BTGS				eP	Pb	04 30 03.5	+2.0
BTGS				eS	Sn	04 30 33.9	+1.1
BTGS				eS	Sg	04 30 45.3	-1.6
ATKR	Artyk	3.49	164	eP	Pn	04 30 00.6	+1.2
ATKR				eP	Pb	04 30 08.5	+1.6
ATKR				eS	Sn	04 30 40.8	+0.1
ATKR				eS	Sg	04 30 54.3	-2.7
SEY	Seymchan	6.09	135	Pn	Pn	04 30 35.5	+0.4
	0.2nm,0.3s,baz=180,slow=20,SNR=5.0						
SEY				Lg	Lg	04 32 18.9	
	1.6nm,0.3s,baz=359,slow=17,SNR=7.1						
YAK	Yakutsk	7.88	232	eP	Pn	04 31 02.3	+2.6
YAK				eP	Pb	04 31 28.9	+7.2
YAK				eS	Sn	04 32 27.8	-1.0
YAK				eS	Sg	04 33 11.5	-6.3
MA2	Magadan	8.71	153	Lg	Lg	04 33 42.3	
	0.7nm,0.3s,baz=308,slow=9.1,SNR=9.0						
SONM	Songino Array	27.08	242	P	P	04 34 48.5	+0.7
	0.9nm,1.0s,baz=36,slow=6.3,SNR=4.0						
ILAR	Eielson Array	27.14	62	P	P	04 34 48.4	+0.5
	1.3nm,0.8s,baz=299,slow=7.6,SNR=13						
MKAR	Makanchi Array	36.84	267	P	P	04 36 12.7	-0.4
	0.7nm,0.7s,baz=42,slow=9.0,SNR=8.3						
YKA	Yellowknife Ar	38.83	46	P	P	04 36 29.6	-0.1
	0.3nm,0.7s,baz=324,slow=8.3,SNR=7.4						
NOA	NORSAR Array B	47.00	330	P	P	04 37 35.4	-0.5
	0.4nm,0.7s,baz=12,slow=6.4,SNR=2.6						
AKASG	Malin Array Be	52.10	312	P	P	04 38 14.4	-0.4
	0.4nm,0.6s,baz=26,slow=8.4,SNR=3.5						
PDAR	Pinedale Array	57.36	56	P	P	04 38 53.9	+0.6
	0.2nm,0.6s,baz=336,slow=2.0,SNR=3.1						
ESDC	Sonseca Array	70.21	333	P	P	04 40 17.2	-0.6
	0.4nm,0.6s,baz=6.6,slow=7.6,SNR=5.7						

BJI ***16*** *04:37:27.9, 5°.07N×126°.01E, h98^{km}, mb5.5/53, mB5.8/76*

MAN ***16*** *04:37:34.3, 5°.45N×125°.84E, h110^{km}, MS6.2*

MAN INTENSITY IV - MATI & TARAGONA DAVAO ORIENTAL; GENERAL SANTOS CITY; DIGOS CITY; SULOP MALALAG SANTA MARIA DAVAO DEL SUR; INTENSITY III - DAVAO CITY; INTENSITY II - VALENCIA CITY; BUTUAN CITY; BUKIDNON; PRESIDENT ROXAS NORTH COTABATO; PALIMBANG SULTAN KUDARAT; MAGPET COTABATO; INTENSITY I - CAGAYAN DE ORO CITY; MALAYBALAY BUKIDNON.

NEIC ***16*** *04:37:36.2±0.1, 5°.81N×125°.75E, h105^{km}, mb5.9/225, ME6.0, MW6.2, MW6.1, Error ellipse: s-maj=2.5km s-min=1.9km az=71.0, Moment Tensor Solution. s57 Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.28; M$_{\theta\theta}$-0.62; M$_{\phi\phi}$-1.66; M$_{r\theta}$-0.90; M$_{\theta\phi}$0.17; M$_{\phi r}$1.49; Best double couple: M$_0$2.70000×10^{18} NP1:φ$_s$175.00000°, δ25.00000°, λ106.00000°. NP2:φ$_s$337.00000°, δ66.00000°, λ83.00000°. Principal axes: T 2.9600, Plg69.0000°, Azm233.0000°; N -0.6700, Plg7.0000°, Azm340.0000°; P -2.2900, Plg20.0000°, Azm73.0000°; Broadband fault plane solution: P waves. NP1:φ$_s$165.00000°, δ25.00000°, λ90.00000°. NP2:φ$_s$345.00000°, δ65.00000°, λ90.00000°. Principal axes: T Plg70.0000°, Azm255.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm75.0000°; Apparent Stress 0.57 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV PIVS] at Digos, General Santos, Malalag, Mati, Santa Maria, Sulop and Tarragona; [III PIVS] at Davao; [II PIVS] at Butuan, Magpet, Palimbang, President Roxas and Valencia; [I PIVS] at Cagayan de Oro and Malaybalay. Also felt at Maco and Panabo. Felt at Samal, Mawes Island.

NEIC ***16*** *04:37:36.0±0.0, 5°.86N×125°.94E, h120^{km}, Moment Tensor Solution. s31 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.48; M$_{\theta\theta}$-0.10; M$_{\phi\phi}$-1.38; M$_{r\theta}$-0.71; M$_{\theta\phi}$0.28; M$_{\phi r}$1.32; Best double couple: M$_0$2.10000×10^{18} NP1:φ$_s$337.00000°, δ68.00000°, λ82.00000°. NP2:φ$_s$178.00000°, δ23.00000°, λ109.00000°. Principal axes: T 2.1400, Plg65.0000°, Azm232.0000°; N -0.1000, Plg7.0000°, Azm339.0000°; P -2.0400, Plg22.0000°, Azm72.0000°;*

KLM ***16*** *04:37:37.8, 5°.78N×125°.98E, h117^{km}, mb6.2*

ISCJB ***16*** *04:37:38.3±0.2, 5°.83N±0°.01×125°.78E±0°.02, h139^{km}±2^{km}, mb5.6/344, Error ellipse: s-maj=2.9km s-min=2.1km az=165.7*

IDC ***16*** *04:37:38.8±0.6, 5°.76N×125°.60E, h127^{km}±4^{km}, mb4.9/53, mb1 5.0/55, mb1mx5.0/58, mbtmp5.3/55, MS5.2/36, Ms1 5.2/36, ms1mx5.1/52, Error ellipse: s-maj=10.2km s-min=7.2km az=77.0*

MOS ***16*** *04:37:38.6±1.1, 5°.73N×125°.57E, h118^{km}, mb5.7/96, Error ellipse: s-maj=7.6km s-min=3.9km az=111.7*

DJA ***16*** *04:37:39.5±0.3, 6°N±2°×12°6E±°, h121^{km}±3^{km}, M6.0/84, mb6.0/84, mB6.3/80, MLv6.5/13, Mw(mB)6.0/80, Mwp6.1/42*

GCMT ***16*** *04:37:40.2±0.1, 5°.77N×125°.95E, h107^{km}, MW6.2/153, Moment Tensor Solution. s151,c368; s153,c570; Duration: 3^{s}0 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.67±.01; M$_{\theta\theta}$0.24±.01; M$_{\phi\phi}$-1.90±.01; M$_{r\theta}$-0.81±.01; M$_{\theta\phi}$0.07±.01; M$_{\phi r}$1.42±.01; Best double couple: M$_0$2.43100×10^{18} NP1:φ$_s$340.00000°, δ67.00000°, λ73.00000°. NP2:φ$_s$197.00000°, δ28.00000°, λ124.00000°. Principal axes: T 2.4230, Plg64.0000°, Azm222.0000°; N 0.0220, Plg15.0000°, Azm346.0000°; P -2.4390, Plg20.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 16 04:37:37.3±0.2**, 5°.78N**±0°.02×**125°.78E**±0°.03**, h116^{km}**±1^{km}**, h117^{km}:pP-P, n1794, σ1^{s}61**/1992**, mb5.8**/357**, 96C-36D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.33	348	eP	Pn	04 37 54.1	+0.1
DDMP				eS	Sn	04 38 04.6	-1.9
DAV	Davao City (W)	1.30	351	ePn	Pn	04 38 02.5	+0.3
DAV				S	Sn	04 38 24.6	+3.4
DAV	Davao City (W)	1.30	351	P	Pn	04 38 00.5	-1.8
DAV	Davao City (W)	1.30	351	P	Pn	04 38 03.2	+1.0
	1μm,0.3s,baz=104,slow=1.9,SNR=118						
DAV				S	Sn	04 38 24.6	+3.4
	10μm,0.3s,baz=139,slow=19,SNR=20						
DAV				LR	LR	04 38 37.9	
	comp=Z,180μm,19.3s,baz=216,slow=45						
DMPH	Davao City--Mi	1.32	348	⇑eP	Pn	04 38 09.1	+6.6
DMPH				eS	Sn	04 38 39.9	+18
KCP	Kidapawan	1.40	331	⇑iP	Pn	04 38 04.7	+1.2
KCP				i S	Sn	04 38 40.2	+17
SKMP	Bagumbayan, Su	1.43	301	eP	Pn	04 38 04.1	+0.3
SKMP				eS	Sn	04 38 25.4	+1.6
SGSI	Sangihe	2.09	187	P	Pn	04 38 13.4	+1.6
BUKP	Musuan	2.21	341	eP	Pn	04 38 14.7	+1.4
BUKP				eS	Sn	04 38 54.3	+13
BIPH	Bislig	2.46	14	⇓eP	Pn	04 38 12.3	-4.1
BIPH				i S	Sn	04 38 35.5	-11
BIPH	Bislig	2.46	14	⇓iP	Pn	04 38 18.1	+1.7
BIPH				i S	Sn	04 38 52.1	+5.6
CGP	Cagayan de Oro	2.87	338	⇑iP	Pn	04 38 26.7	+4.9
CGP				i S	Sn	04 39 11.1	+15
PAGZ	Pagadian	3.15	311	eP	Pn	04 38 26.7	+1.2
BUTP	Butuan	3.17	357	eP	Pn	04 38 27.7	+1.9
BUTP				eS	Sn	04 39 27.4	+24
DCPH	Dipolog City	3.68	319	⇑eP	Pn	04 38 40.5	+8.0
IPIL	Ipil	3.76	302	eP	Pn	04 38 35.5	+1.9
IPIL				eS	Sn	04 39 20.3	+3.1
SCPH	Surigao	3.99	356	⇑eP	Pn	04 38 36.2	-0.5
SCPH				eS	Sn	04 39 32.4	+10
TBP	Tagbilaran	4.33	334	eP	Pn	04 38 43.8	+2.6
SNPH	Sibulan	4.35	325	⇓eP	Pn	04 38 48.1	+6.6
MNI	Manado	4.41	192	P	Pn	04 38 44.0	+1.7
MSLP	Maasin	4.42	348	eP	Pn	04 38 44.9	+2.4
MSLP				eS	Sn	04 39 52.1	+19
LLP	Lapu-Lapu	4.85	338	⇑iP	Pn	04 38 50.8	+2.5
LLP				eS	Sn	04 39 56.0	+12
TNTI	Ternate	5.22	162	ePn	Pn	04 38 53.3	0.0
TNTI	Ternate	5.22	162	P	Pn	04 38 54.1	+0.9
	4μm,0.8s,51μm41μm36nm						
PLP	Palo	5.41	352	⇑eP	Pn	04 38 58.4	+2.6
KMSI	Cibinong	5.47	199	P	Pn	04 38 58.8	+2.2
	12μm,0.8s,132μm88μm66nm						
GUIM	Jordan	5.76	327	eP	Pn	04 39 02.7	+2.2
GUIM				eS	Sn	04 39 43.6	-22
BESP	Borongan	5.79	357	eP	Pn	04 39 04.0	+3.0
BESP				eS	Sn	04 40 11.6	+5.3
JAP	San Jose, Anti	6.22	323	⇑eP	Pn	04 39 10.9	+4.1
RCP	Roxas	6.48	333	⇑eP	Pn	04 39 13.3	+3.0
MRSI	Marisa	6.51	216	P	Pn	04 39 13.3	+2.6
	3μm,0.8s,33μm38μm18nm						
LUWI	Luwuk	7.41	204	ePn	Pn	04 39 26.6	+3.7
LUWI	Luwuk	7.41	204	P	Pn	04 39 28.1	+5.2
	9μm,1.1s,91μm84μm36nm						
SANI	Sanana	7.78	178	P	Pn	04 39 25.5	-2.4
	2μm,1.1s,38μm86μm10.0nm						
APSI	Ampana	7.82	212	P	Pn	04 39 34.1	+5.7
	3μm,1.3s,31μm66μm12nm						
PVCP	Virac	7.93	348	eP	Pn	04 39 34.3	+4.4
MPSI	Mapaga	7.98	228	P	Pn	04 39 31.5	+0.9
	534nm,1.6s,6μm46μm2.2nm						
PPR	Puerto Princes	8.03	300	eP	Pn	04 39 39.2	+7.9
SJMP	San Jose	8.08	326	eP	Pn	04 39 34.9	+3.0
SIJI	Sorong	8.58	140	P	Pn	04 39 38.1	-0.6
	29nm,0.3s,baz=333,slow=10.0,SNR=48						
SIJI				S	Sn	04 41 12.3	-1.6
	51nm,0.3s,baz=34,slow=22,SNR=6.2						
GQP	Guinayangan	8.72	338	⇑eP	Pn	04 39 46.7	+6.2
PALU	Palau	8.78	79	P	Pn	04 39 39.9	-1.5
	baz=8.8,SNR=58						
I39PW	PALAU INFRASON	8.88	78	P	Pn	04 39 44.0	+1.2
	baz=189,slow=12						
I39PW				S	Sn	04 41 16.8	-4.4
	baz=183,slow=386						
I39PW				i		05 30 00.0	

	baz=269,slow=310,SNR=0.7						
PCI	Palu	8.90	222	P	Pn	04 39 46.8	+3.7
	2µm,1.3s,20µm						
NLAI	Namlea	9.05	172	P	Pn	04 39 43.8	-1.3
	2µm,0.6s,36µm15nm						
KKM	Kota Kinabalu	9.52	272	*e*Pn	Pn	04 39 55.7	+4.2
TGY	Tagaytay City	9.55	330	P	Pn	04 39 53.8	+1.9
	65nm,0.3s,baz=114,slow=10.0,SNR=2.0						
KDI	Kendari	10.17	198	P	Pn	04 40 01.6	+1.3
	501nm,0.8s,9µm						
SGKI	Sangatta, Kali	10.29	233	P	Pn	04 39 59.1	-2.8
	666nm,0.9s,10µm52µm						
SMKI	Samarinda	10.56	234	P	Pn	04 40 09.0	+3.5
TTSI	Tana Toraja	10.60	214	P	Pn	04 40 08.7	+2.7
FAKI	Fak Fak	10.79	143	*e*Pn	Pn	04 40 08.3	-0.3
FAKI	Fak Fak	10.79	143	P	Pn	04 40 09.2	+0.6
	1µm,1.0s,12µm59µm						
RKPI	Ransiki, Papua	11.08	131	P	Pn	04 40 14.7	+2.2
	2µm,1.5s,23µm						
BKB	Balikpapan	11.29	232	P	Pn	04 40 17.4	+2.0
SPSI	Sidrap Palu	11.39	212	P	Pn	04 40 19.2	+2.6
BNSI	Bone	11.59	209	P	Pn	04 40 21.7	+2.4
BBSI	Bau Bau	11.64	196	P	Pn	04 40 22.0	+2.0
BKSI	Bulukumba	12.39	207	P	Pn	04 40 32.4	+2.6
	554nm,1.3s,6µm31µm						
MTKI	Muara Teweh, K	12.75	239	P	P	04 40 38.1	-3.0
SRPI	Serui, Papua	12.92	126	P	Pn	04 40 38.1	+1.4
KBKI	Kotabaru	13.17	227	P	P	04 40 43.1	-2.6
SBUM	Sibu	13.92	257	*e*Pn	P	04 40 53.6	-0.5
SAUI	Saumlaki	14.74	158	*e*Pn	Pn	04 40 59.2	-0.9
SAUI				*e*S	S	04 43 54.8	+1.2
SAUI	Saumlaki	14.74	158	P	Pn	04 41 00.9	+0.8
	2µm,0.7s,19µm36µm						
MMRI	Maumere	14.75	194	*e*Pn	Pn	04 40 59.9	-0.3
MMRI	Maumere	14.75	194	P	Pn	04 41 01.8	+1.6
	1µm,0.8s,18µm51µm						
EDFI	Ende, Flores	15.00	196	P	Pn	04 41 04.4	+0.9
	660nm,0.8s,9µm						
SOEI	Soe	15.51	186	*e*Pn	Pn	04 41 10.4	+0.5
	2µm,0.8s						
SOEI	Soe	15.51	186	P	P	04 41 11.9	+0.2
	2µm,1.0s,26µm47µm						
KSM	Kuching	16.02	255	*e*Pn	P	04 41 20.2	+2.9
	1µm,1.2s						
BATI	Baumata	16.02	188	P	P	04 41 17.7	+0.4
BATI	Baumata	16.02	188	P	P	04 41 18.2	+0.9
	72nm,0.3s,baz=13,slow=0.3,SNR=36						
WSI	Waingapu	16.29	200	P	P	04 41 35.3	+15
PLAI	Plampang	16.56	209	P	P	04 41 24.6	+1.3
	1µm,0.8s,26µm55µm						
GENI	Genyem	16.60	120	P	P	04 41 24.7	+0.9
BASI	Baing, Sumba	16.71	198	P	P	04 41 26.0	+1.0
	1µm,0.9s,23µm						
JAY	Jayapura	17.03	119	P	Pn	04 41 29.9	+1.3
	5.9nm,0.3s,baz=226,slow=11,SNR=14						
SRBI	Singaraja	17.34	218	P	Pn	04 41 33.9	+1.6
	276nm,0.9s,5µm32µm						
KMMI	Kalianget	17.36	223	P	Pn	04 41 34.9	+2.4
TWG	Pinlang	17.54	345	*e*P	P	04 41 32.4	-1.7
	353nm,0.6s						
DNP	Denpasar	17.81	216	P	Pn	04 41 40.6	+2.6
DNP				pmax	pmax		
	comp=Z,3µm,1.4s						
DNP	Denpasar	17.81	216	P	Pn	04 41 39.4	+1.4
YULB	Yu-li	18.04	347	*e*P	P	04 41 39.3	-0.2
	comp=Z,100nm,0.8s						
TPUB	Ta-pu	18.11	345	*e*P	P	04 41 39.0	-1.3
	comp=Z,218nm,0.8s						
JAGI	Jajag, Banyuwa	18.30	219	*e*P	P	04 41 43.1	+0.7
	comp=Z,479nm,0.9s						
GRJI	Gresik	18.31	227	P	Pn	04 41 45.1	+1.2
SSLB	Suanglung	18.50	346	*e*P	P	04 41 44.3	-0.3
	comp=Z,283nm,1.0s						
GMJI	Gumukmas	18.61	222	P	Pn	04 41 47.9	+0.5
	comp=Z,754nm,1.5s,comp=Z,12µm						
NACB	Ninganchiao	18.73	348	*e*P	P	04 41 47.1	+0.1
	comp=Z,89nm,0.9s						
YOJ	Yonaguni jima	18.77	352	*e*P	P	04 41 47.3	-0.1
	comp=Z,265nm,0.9s						
YOJ	Yonaguni jima	18.77	352	*e*P	P	04 41 47.3	-0.1
YOJ				pmax	pmax		
	comp=Z,265nm,0.9s						
MTN	Manton Dam	19.25	164	P	P	04 41 53.2	+0.4
	baz=19,SNR=187						
MTN	Manton Dam	19.25	164	*e*P	P	04 41 52.2	-0.6
	comp=Z,602nm,0.6s						
YHNB	Yeheng	19.25	348	*e*P	P	04 41 53.1	+0.2
	comp=Z,379nm,1.1s						
NGJI	Ngawi	19.36	228	P	Pn	04 41 56.6	+0.4
KDU	Kakadu	19.51	160	P	P	04 41 56.5	+0.9
	baz=20,SNR=108						
TATO	Taipei	19.53	348	*e*P	P	04 41 55.4	-0.3
PWJI	Pagerwojo	19.55	226	P	Pn	04 41 58.8	+0.3
	comp=Z,360nm,0.9s,comp=Z,9µm						
HKC	Hong Kong Obse	19.89	327	⇑P	Pn	04 42 03.0	+0.6
SMRI	Semarang	19.92	230	*e*P	P	04 42 01.2	+1.1
	comp=Z,1µm,1.1s						
SMRI	Semarang	19.92	230	P	Pn	04 42 02.7	-0.1
WOJI	Wonogiri, Jawa	20.06	228	P	Pn	04 42 04.2	-0.3
MCO	Taipa Grande	20.09	325	P	Pn	04 42 05.0	+0.3
QZH	Quanzhou	20.27	341	⇑*i*P	P	04 42 04.0	+0.3
QZH				pP	pP	04 42 22.0	-3.5
QZH				PP	PnPn	04 42 29.5	+2.0
QZH				S	S	04 45 43.3	-1.4
QZH				pmax	pmax		
	comp=Z,160nm,1.1s						
QZH				pmax	pmax		
	comp=Z,2µm,6.6s						
QZH				LR	LR		
	comp=Z,6µm,16.1s						
QZH				LR	LR		
	comp=Z,4µm,16.1s						
QZH				LR	LR		
	comp=Z,8µm,15.4s						
GUMO	Guam	20.34	66	*e*P	P	04 42 03.9	-0.7
	comp=Z,2µm,1.1s						
GUMO	Guam	20.34	66	P	P	04 42 05.2	+0.6
	comp=Z,373nm,1.0s,baz=151,slow=10,SNR=5.3						
QIZ	Qiongzhong	20.36	312	P	P	04 42 06.4	+1.6
QIZ				S	S	04 45 49.8	+3.1
QIZ				sS	sS	04 46 20.4	-0.8
QIZ				SS	SS	04 46 30.9	
QIZ				pmax	pmax		
	comp=Z,3µm,6.9s						
QIZ				LR	LR		
	comp=Z,9µm,16.5s						
QIZ				LR	LR		
	comp=Z,6µm,18.2s						
QIZ				LR	LR		
	comp=Z,11µm,16.2s						
QIZ	Qiongzhong	20.36	312	*e*P	P	04 42 05.8	+1.0
	comp=Z,598nm,1.4s						
UGM	Wanagama	20.41	228	*e*P	P	04 42 05.7	+0.3
	comp=Z,1µm,1.1s						
GZH	Guangzhou	20.97	326	P	P	04 42 12.3	+1.0
GZH				sP	sP	04 42 48.8	+1.1
GZH				S	S	04 46 01.3	+2.7
GZH				pmax	pmax		
	comp=Z,3µm,10.0s						
GZH				LR	LR		
	comp=Z,8µm,16.1s						
GZH				LR	LR		
	comp=Z,7µm,15.6s						
JOW	Kunigami	21.07	6	*e*P	P	04 42 12.5	+0.2
	comp=Z,496nm,1.1s						
JOW	Kunigami	21.07	6	P	P	04 42 13.9	+1.5
	comp=Z,9.4nm,0.5s,baz=175,slow=14,SNR=9.3						
PPBI	Pangkal Pinang	21.14	249	P	P	04 42 15.6	+2.3
	comp=Z,235nm,1.2s,comp=Z,6µmcomp=Z,36µm						
KPJI	Karang Pucung	21.27	232	P	P	04 42 17.3	+2.8
JCJI	Jatiwangi	21.31	235	P	P	04 42 19.3	+4.3
KNRA	Kununurra	21.52	172	P	P	04 42 18.1	+0.9
	baz=22,SNR=248						
TPRI	Tanjung Pinang	21.75	258	P	P	04 42 23.0	+3.2
	comp=Z,780nm,1.5s,comp=Z,34µmcomp=Z,73µm						
CMJI	Cimerak	21.92	232	P	P	04 42 22.6	+1.1
	comp=Z,724nm,1.7s,comp=Z,13µm						
LEM	Lembang	22.03	236	P	P	04 42 26.1	+3.2
	comp=Z,344nm,0.8s,baz=76,slow=9.4,SNR=55						
DSRI	Dabo	22.06	254	P	P	04 42 26.4	+3.4
MYKOM	Kota Tinggi	22.23	261	*e*P	P	04 42 25.9	+1.2
	comp=Z,3µm,1.8s						
CISI	Cisompet, Garu	22.29	234	*e*P	P	04 42 26.0	+0.7
	comp=Z,2µm,1.5s						
CISI	Cisompet, Garu	22.29	234	P	P	04 42 26.8	+1.5
	comp=Z,796nm,1.2s,comp=Z,13µmcomp=Z,45µm						
SARN	Sarigan	22.39	59	*e*P	P	04 42 26.5	+0.1
	comp=Z,539nm,1.2s						
DBJI	Dramaga	22.60	237	P	P	04 42 31.4	+2.9
PMBI	Palembang	22.69	248	P	P	04 42 33.1	+3.7
KGM	Kluang	22.71	261	P	P	04 42 32.5	+2.9
MANU	Manus Island	22.92	109	*e*P	P	04 42 31.7	+0.1
	comp=Z,2µm,1.6s						
SKJI	Sukabumi	23.00	237	P	P	04 42 35.1	+2.7
BLSI	Bandar Lampung	23.30	242	P	P	04 42 37.9	+2.7
JMBI	JAMBI	23.30	252	P	P	04 42 38.2	+3.0
KLI	Kotabumi	23.41	244	P	P	04 42 38.8	+2.6
FITZ	Fitzroy Crossi	23.73	180	P	P	04 42 39.2	+0.3
	baz=24,SNR=348						
FITZ	Fitzroy Crossi	23.73	180	*e*P	P	04 42 39.2	+0.3
	comp=Z,436nm,1.0s						
FITZ	Fitzroy Crossi	23.73	180	P	P	04 42 39.2	+0.3
	comp=Z,232nm,0.5s,baz=9.7,slow=8.4,SNR=209						
MDSI	Maura Dua	23.86	245	P	P	04 42 42.5	+2.3
	comp=Z,819nm,1.4s,comp=Z,12µm						
KASI	Kota Agung	24.03	243	P	P	04 42 43.7	+1.9
	comp=Z,845nm,0.9s,comp=Z,10µmcomp=Z,41µm						
LHSI	Lahat	24.19	247	P	P	04 42 46.2	+3.0
LWLI	Liwa	24.20	244	P	P	04 42 46.0	+2.6
	comp=Z,861nm,1.6s,comp=Z,18µm						
IPM	Ipoh	24.69	268	*e*P	P	04 42 48.5	+0.7
	comp=Z,438nm,1.1s						
IPM	Ipoh	24.69	268	P	P	04 42 49.8	+2.1
MNAI	Manna	24.92	247	*e*P	P	04 42 50.5	+0.6
	comp=Z,3µm,1.3s						
MNAI	Manna	24.92	247	P	P	04 42 52.8	+2.9
KULM	Kulim	25.02	270	*e*P	P	04 42 51.3	+0.6
	comp=Z,347nm,1.0s						
KULM	Kulim	25.02	270	P	P	04 42 52.8	+2.0
SKLT	Songkhla	25.04	275	P	P	04 42 53.1	+2.2
	comp=Z,204nm,0.8s,comp=Z,9µm						
MASI	Maura Aman, Be	25.12	250	P	P	04 42 54.7	+2.9
SDSI	Sungai Dareh	25.21	255	P	P	04 42 54.5	+2.0
	comp=Z,572nm,1.5s,comp=Z,15µm						
BKNI	Bangkinang	25.28	258	*e*P	P	04 42 54.2	+1.1
	comp=Z,836nm,1.0s						
BKNI	Bangkinang	25.28	258	P	P	04 42 55.1	+1.9
	comp=Z,846nm,0.9s,comp=Z,10µmcomp=Z,41µm						
CHAI	Chaiyaphum	25.41	295	P	P	04 42 57.1	+2.8
	comp=Z,43nm,0.8s,comp=Z,421nm						
KRJI	Kerinci	25.51	253	P	P	04 42 58.2	+2.8
	comp=Z,590nm,1.4s,comp=Z,11µmcomp=Z,23µm						
SSE	Sheshan	25.55	351	P	P	04 42 59.0	+3.7
SSE				S	S	04 47 15.8	+1.3
SSE				pmax	pmax		
	comp=Z,890nm,4.7s						
SSE				LR	LR		
	comp=Z,4µm,16.5s						
SSE				LR	LR		
	comp=Z,6µm,14.9s						
SSE	Sheshan	25.55	351	*e*P	P	04 42 56.3	+1.0
	comp=Z,660nm,1.3s						
PATY	Pattaya	25.57	288	P	P	04 42 58.2	+2.5
	comp=Z,52nm,0.8s						
XMIS	Christmas Isla	25.74	231	*e*P	P	04 42 58.8	+1.5
	comp=Z,264nm,1.2s						
TRTT	Trang	25.98	276	P	P	04 43 01.3	+1.8
	comp=Z,61nm,1.1s,comp=Z,3µm						
COEN	Coen	26.13	139	P	P	04 43 01.0	+0.3
	baz=26,SNR=107						
COEN	Coen	26.13	139	*e*P	P	04 43 00.9	+0.1
	comp=Z,657nm,1.2s						
PDSI	Padang	26.14	256	P	P	04 43 01.7	+0.8
	comp=Z,433nm,1.1s,comp=Z,8µmcomp=Z,33µm						
CBIJ	Chichi jima	26.34	35	P	P	04 43 02.2	-0.3
JCJ	Chichijima	26.34	35	P	P	04 43 02.2	-0.3
	comp=Z,192nm,0.4s,baz=270,slow=7.1,SNR=17						
PBKT	Sadao Pong	26.56	296	*e*P	P	04 43 05.3	+0.7
PBKT	Sadao Pong	26.56	296	P	P	04 43 05.9	+1.3
	comp=Z,140nm,1.1s,comp=Z,5µm						
MNSI	Mandailing Nat	26.61	260	P	P	04 43 05.9	+0.8
	comp=Z,110nm,0.8s,comp=Z,6µmcomp=Z,28µm						
PHET	Kaeng Krachan	26.74	287	P	P	04 43 08.1	+1.8
	comp=Z,81nm,0.9s,comp=Z,670nm						
WHN	Wuhan	26.88	338	⇑P	P	04 43 08.3	+1.0
WHN				LR	LR		
	comp=Z,10µm,11.6s						
WHN				LR	LR		
	comp=Z,5µm,6.8s						
WHN				LR	LR		
	comp=Z,22µm,22.7s						
WRAB	Tennant Creek	26.91	162	*e*P	P	04 43 07.2	-0.5
	comp=Z,630nm,1.3s						
WRAB	Tennant Creek	26.91	162	*ce*P	P	04 43 07.1	-0.6
WRAB				pmax	pmax		
	comp=Z,295nm,1.4s						
WRA	Warramunga Arr	26.91	162	P	P	04 43 07.1	-0.6
	comp=Z,84nm,1.0s,baz=336,slow=10,SNR=113						
WRA				S	S	04 47 32.7	-3.5
	comp=Z,99nm,1.3s,baz=332,slow=15,SNR=5.6						
WRA				P3KPbc		05 15 38.6	
	comp=Z,0.5nm,0.7s,baz=158,slow=3.7,SNR=3.4						
WB2	Warramunga Arr	26.91	162	*e*P	P	04 43 06.6	-1.1
NJ2	Nanjing	26.93	347	*e*P	P	04 43 14.3	+6.6
NJ2				pP	pP	04 43 35.3	+2.7
NJ2				S	S	04 47 43.1	+6.9
NJ2				sS	sS	04 48 14.6	-4.5
NJ2				pmax	pmax		
	comp=Z,34nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,2µm,5.1s						
NJ2				LR	LR		
	comp=N,4µm,14.6s						
NJ2				LR	LR		
	comp=E,4µm,10.8s						
NJ2				LR	LR		
	comp=Z,7µm,13.7s						
PSI	Prapat	26.94	265	*e*P	P	04 43 09.0	+0.8
	comp=Z,170nm,1.1s						
TSI	Tuntungan	27.22	266	P	P	04 43 14.0	+3.4
PKDT	Phuket	27.33	276	P	P	04 43 13.4	+1.9
	comp=Z,109nm,0.9s,comp=Z,2µm						
UTTA	Uttaradit	27.36	298	P	P	04 43 14.1	+2.3
	comp=Z,29nm,1.0s,comp=Z,300nm						
MBWA	Marble Bar	27.42	192	*e*P	P	04 43 12.4	+0.1
	comp=Z,306nm,0.8s						
MBWA	Marble Bar	27.42	192	P	P	04 43 12.3	+0.1
	SNR=26						
MBWA				P	P	04 43 12.3	+0.1
	SNR=26						
GYA	Guiyang	27.49	321	⇑*i*P	P	04 43 13.3	+0.3
GYA				pP	pP	04 43 39.0	+0.4
GYA				sP	sP	04 43 50.5	-1.7
GYA				S	S	04 47 44.9	-0.6
GYA				sS	sS	04 48 27.0	-1.4
GYA				ScS	ScS	04 53 52.0	+1.2
GYA				pmax	pmax		
	comp=Z,2µm,9.9s						
GYA				LR	LR		
	comp=Z,5µm,19.5s						
GYA				LR	LR		
	comp=Z,10µm,18.3s						
GYA				LR	LR		
	comp=Z,12µm,17.7s						
SISI	Saibi	27.57	256	P	P	04 43 14.3	+0.6
	comp=Z,881nm,1.6s,comp=Z,9µm						
UTHA	Uthaitani	27.61	293	P	P	04 43 15.6	+1.6
	comp=Z,24nm,1.0s,comp=Z,399nm						
JNU	Nakatsue	27.62	9	*e*P	P	04 43 13.9	-0.1
	comp=Z,237nm,0.9s						
JNU	Nakatsue	27.62	9	P	P	04 43 14.5	+0.6
	comp=Z,102nm,0.9s,baz=168,slow=5.4,SNR=28						
NANT	Nan	27.66	300	P	P	04 43 17.0	+2.5
	comp=Z,26nm,0.9s,comp=Z,1µm						
KCSI	Kotacane, Aceh	28.00	267	P	P	04 43 17.9	+0.3
	comp=Z,316nm,1.1s,comp=Z,4µmcomp=Z,30µm						
SUKH	Sukhothai	28.08	297	P	P	04 43 21.1	+2.9
	comp=Z,23nm,0.8s,comp=Z,375nm						
RABL	Rabaul	28.15	110	*e*P	P	04 43 19.4	+0.5
	comp=Z,694nm,1.0s						
UMPA	Umpang Tak	28.34	294	P	P	04 43 22.3	+1.7
	comp=Z,34nm,0.9s,comp=Z,969nm						
GSI	Gunungsitoli	28.49	262	*e*P	P	04 43 22.3	+0.4
	comp=Z,635nm,0.9s						
GSI	Gunungsitoli	28.49	262	P	P	04 43 22.4	+0.4
	comp=Z,738nm,0.8s,comp=Z,8µm						
PAYA	Payao	28.61	300	P	P	04 43 24.8	+1.9
	comp=Z,33nm,0.7s,comp=Z,356nm						
TPTI		28.62	266	P	P	04 43 23.7	+0.7
	comp=Z,57nm,0.8s,comp=Z,2µm						
LHMI	Lhok Sumawe	28.70	270	*e*P	P	04 43 24.2	+0.4
	comp=Z,397nm,1.1s						
ENH	Enshi	28.79	330	*e*P	P	04 43 24.6	+0.1
	comp=Z,206nm,0.8s						
CM01	Chiang Mai Arr	29.02	298	*e*P	P	04 43 26.7	+0.1
CM31	Chiang Mai Arr	29.05	298	*e*P	P	04 43 27.3	+0.5
CM31	Chiang Mai Arr	29.05	298	P	P	04 43 28.7	+1.9
	SNR=25						
CMAR	Chiang Mai Arr	29.05	298	P	P	04 43 27.2	+0.4
	comp=Z,15nm,0.9s,baz=124,slow=7.7,SNR=29						
CMAR				ScP	ScP	04 50 03.4	-0.1
	comp=Z,16nm,1.0s,baz=125,slow=1.6,SNR=5.8						
CMAR				LR	LR	04 55 54.8	
	comp=Z,5µm,18.4s,baz=100,slow=38						
CMAR				P3KPbc		05 15 37.2	
	comp=Z,0.6nm,0.4s,baz=293,slow=5.1,SNR=6.4						
CMMT	Chiang Mai	29.18	299	P	P	04 43 29.0	+1.0
	comp=Z,84nm,0.9s,comp=Z,2µm						
CHTO	Chiang Mai	29.19	299	*e*P	P	04 43 28.5	+0.5
	comp=Z,130nm,1.2s						
CHTO				*e*ScP	ScP	04 50 02.0	-2.0
CHTO	Chiang Mai	29.19	299	*e*P	P	04 43 28.5	+0.5
CHTO				pmax	pmax		
	comp=Z,130nm,1.2s						
CHTO	Chiang Mai	29.19	299	P	P	04 43 28.9	+0.8
	SNR=32						
CHTO				P	P	04 43 28.9	+0.8
	SNR=32						
CHTO	Chiang Mai	29.19	299	P	P	04 43 29.1	+1.1
	comp=Z,381nm,0.9s,comp=Z,10µmcomp=Z,71µm						
KMI	Kunming	29.28	314	P	P	04 43 30.3	+1.2
KMI				S	S	04 48 10.9	-3.0
KMI				sS	sS	04 48 57.3	+0.4
KMI				ScP	ScP	04 50 04.6	+0.1
KMI				pmax	pmax		
	comp=Z,30nm,0.9s						
KMI				pmax	pmax		
	comp=Z,1µm,8.4s						
KMI				LR	LR		
	comp=Z,6µm,18.7s						
KMI				LR	LR		
	comp=Z,8µm,15.6s						
KMI				LR	LR		
	comp=Z,12µm,17.0s						
KMI	Kunming	29.28	314	*e*P	P	04 43 29.4	+0.4
	comp=Z,385nm,1.6s						
KMI	Kunming	29.28	314	*e*P	P	04 43 29.4	+0.4
KMI				pmax	pmax		
	comp=Z,385nm,1.6s						
QIS	Mount Isa	29.49	153	P	P	04 43 31.3	+0.7
	baz=30,SNR=66						
SNSI	Sinabang, Aceh	29.56	265	P	P	04 43 32.7	+1.3
	comp=Z,366nm,0.9s,comp=Z,5µm						
MTSU	Mount Surprise	29.99	143	P	P	04 43 36.3	+1.2
	baz=30,SNR=66						
JHJ	Hachijo jima 2	30.17	24	LR	LR	04 54 11.8	
	comp=Z,5µm,21.4s,baz=263,slow=33						
AS31	Alice Springs	30.32	165	*e*P	P	04 43 38.3	+0.3
	comp=Z,40nm,0.8s						
ASAR	Alice Springs	30.32	165	P	P	04 43 38.0	0.0
ASAR	Alice Springs	30.32	165	P	P	04 43 38.0	0.0
	comp=Z,31nm,0.9s,baz=344,slow=7.5,SNR=142						
ASAR				ScP	ScP	04 50 06.4	-1.1
	comp=Z,13nm,0.9s,baz=336,slow=2.0,SNR=3.7						
ASAR				LR	LR	04 57 08.9	
	comp=Z,3µm,18.9s,baz=324,slow=39						
ASAR				P3KPbc		05 15 27.7	
	comp=Z,0.9nm,1.1s,baz=164,slow=3.7,SNR=4.9						
AS01	Alice Springs	30.33	165	*e*P	P	04 43 37.0	-1.1
GIRL	Giralia	30.42	201	P	P	04 43 40.3	+1.5
	baz=31,SNR=24						
GIRL	Giralia	30.42	201	*e*P	P	04 43 39.6	+0.7
	comp=Z,623nm,0.9s						
TJN	Taejon	30.49	3	*ce*P	P	04 43 42.1	+2.8
WRKA	Warakurna	30.73	176	P	P	04 43 42.1	+0.5
	baz=31,SNR=105						
INU	Inuyama	31.20	18	*e*P	P	04 43 46.0	+0.4
	comp=Z,120nm,0.7s						
TIA	Tai'an	31.31	346	P	P	04 43 49.1	+2.5
TIA				pmax	pmax		
	comp=Z,260nm,6.4s						
TIA				LR	LR		
	comp=Z,2µm,13.5s						
TIA				LR	LR		
	comp=Z,2µm,10.7s						
TIA				LR	LR		
	comp=Z,2µm,27.1s						
KS15	Wonju Array Si	31.57	3	*e*P	P	04 43 49.5	+0.7
KSAR	Wonju Array Be	31.57	3	P	P	04 43 50.1	+1.3
KSAR				ScP	ScP	04 50 11.6	+0.2
KSAR	Wonju Array Be	31.57	3	P	P	04 43 50.1	+1.3
KSRS	Korea Array	31.59	3	P	P	04 43 50.1	+1.1
	comp=Z,21nm,0.5s,baz=184,slow=9.8,SNR=34						
KSRS				ScP	ScP	04 50 11.6	+0.1
	comp=Z,4.7nm,0.8s,baz=188,slow=3.0,SNR=5.0						
KSRS				LR	LR	04 57 30.7	
	comp=Z,4µm,20.4s,baz=179,slow=38						
KS01	Wonju Array Si	31.61	3	*e*P	P	04 43 49.5	+0.4
CMBY	CAMPBELL BAY	31.68	274	*e*P	P	04 43 48.8	-1.2
CMBY				IAmb	IAmb	04 43 52.2	
	comp=Z,162nm,0.7s						
XAN	Xi'an	32.17	333	P	P	04 43 53.3	-0.9
XAN				pP	pP	04 44 18.5	-1.4
XAN				PP	PnPn	04 45 05.0	+0.1
XAN				pmax	pmax		
	comp=Z,690nm,10.6s						
XAN				LR	LR		
	comp=Z,4µm,18.8s						
XAN				LR	LR		
	comp=Z,4µm,18.6s						
XAN				LR	LR		
	comp=Z,6µm,17.1s						
XAN	Xi'an	32.17	333	*e*P	P	04 43 53.6	-0.6
	comp=Z,624nm,1.1s						
XAN				*e*ScP	ScP	04 50 12.1	-1.5
XAN	Xi'an	32.17	333	*e*P	P	04 43 53.6	-0.6
XAN				pmax	pmax		
	comp=Z,624nm,1.1s						
CD2	Chengdu	32.44	323	⇑P	P	04 43 56.6	0.0
CD2				pP	pP	04 44 21.9	-0.5
CD2				sP	sP	04 44 35.5	-0.3
CD2				PP	PP	04 45 12.3	+0.1
CD2				S	S	04 49 03.8	+0.9
CD2				sS	sS	04 49 48.8	+2.7
CD2				pmax	pmax		
	comp=Z,100nm,0.9s						
CD2				pmax	pmax		
	comp=Z,3µm,6.7s						
CD2				LR	LR		
	comp=Z,16µm,17.2s						
CD2				LR	LR		
	comp=Z,20µm,19.6s						
CD2				LR	LR		
	comp=Z,24µm,17.2s						
CTAO	Charters Tower	32.65	142	*e*P	P	04 43 58.8	+0.3
	comp=Z,152nm,1.0s						
CTAO				*e*ScP	ScP	04 50 15.7	+0.2
CTAO	Charters Tower	32.65	142	*e*P	P	04 43 58.8	+0.3
CTAO				pmax	pmax		
	comp=Z,152nm,1.0s						
MAJO	Matsushiro	32.67	19	*e*P	P	04 43 58.1	-0.4
	comp=Z,152nm,1.1s						
MAJO	Matsushiro	32.67	19	*i* P	P	04 43 58.5	0.0
MAJO				pmax	pmax		
	comp=Z,63nm,0.9s						
MAT	Matsushiro	32.67	19	P	P	04 43 57.8	-0.7
MAT				S	S	04 49 01.2	-5.0
MJAR	Matsushiro Arr	32.67	19	P	P	04 43 57.8	-0.7
	comp=Z,35nm,0.8s,baz=202,slow=10,SNR=30						
MJAR				ScP	ScP	04 50 15.4	+0.2
	comp=Z,12nm,1.1s,baz=204,slow=5.8,SNR=4.1						
MJAR				LR	LR	04 55 50.1	
	comp=Z,5µm,21.2s,baz=205,slow=33						
MJB9	Matsu-Tunnel	32.67	19	*e*P	P	04 43 58.1	-0.3
	comp=Z,148nm,1.1s						
MEEK	Meekatharra	32.96	192	P	P	04 44 01.3	+0.2
	baz=33,SNR=156						
PBA	Port Blair	33.15	282	*e*P	P	04 44 03.6	+0.7
PBA	Port Blair	33.15	282	*e*P	P	04 44 02.4	-0.5
DL2	Dalian	33.19	354	⇑P	P	04 44 03.3	+0.4
DL2				pP	pP	04 44 26.6	-1.6
DL2				S	S	04 49 17.3	+3.2
DL2				sS	sS	04 49 58.8	+1.5
DL2				pmax	pmax		
	comp=Z,1µm,6.2s						
DL2				LR	LR		
	comp=Z,5µm,18.2s						
DL2				LR	LR		
	comp=Z,7µm,16.6s						

DL2				LR	LR		
	comp=Z,6µm,12.0s						
COCO	**West Island**	**33.87**	**238**	*e*P	**P**	**04 44 08.9**	**-0.2**
	comp=Z,399nm,1.4s						
COCO	**West Island**	**33.87**	**238**	*e*P	**P**	**04 44 08.9**	**-0.2**
COCO				pmax	pmax		
	comp=Z,399nm,1.4s						
TIY	**Taiyuan**	**34.03**	**341**	*e*P	**P**	**04 44 13.4**	**+3.0**
TIY				S	**S**	**04 49 28.1**	**+0.7**
TIY				sS	**ScP**	**04 50 16.8**	**-3.2**
TIY				pmax	pmax		
	comp=Z,22nm,0.5s						
TIY				pmax	pmax		
	comp=Z,730nm,8.1s						
TIY				LR	LR		
	comp=Z,2µm,10.6s						
TIY				LR	LR		
	comp=Z,4µm,14.6s						
TIY				LR	LR		
	comp=Z,5µm,16.7s						
BJT	**Baijiatuau**	**35.17**	**347**	*e*P	**P**	**04 44 19.9**	**-0.1**
	comp=Z,638nm,1.3s						
BJT	**Baijiatuau**	**35.17**	**347**	*e*P	**P**	**04 44 19.9**	**-0.1**
BJT				pmax	pmax		
	comp=Z,638nm,1.3s						
BJI	**Beijing**	**35.19**	**347**	P	**P**	**04 44 20.3**	**+0.1**
BJI				S	**S**	**04 49 53.8**	**+8.9**
BJI				pmax	pmax		
	comp=Z,35nm,1.7s						
BJI				LR	LR		
	comp=Z,2µm,17.5s						
BJI				LR	LR		
	comp=Z,2µm,16.2s						
BJI				LR	LR		
	comp=Z,2µm,20.4s						
MORW	**Morawa**	**35.89**	**195**	P	**P**	**04 44 26.7**	**+0.4**
	baz=36,SNR=96						
MORW	**Morawa**	**35.89**	**195**	*e*P	**P**	**04 44 26.2**	**-0.1**
	comp=Z,227nm,0.8s						
SNY	**Shenyang**	**35.95**	**357**	⇓P	**P**	**04 44 27.8**	**+1.2**
SNY				pP	**pP**	**04 44 50.4**	**-1.8**
SNY				S	**S**	**04 49 56.6**	**+0.2**
SNY				sS	**sS**	**04 50 40.3**	**+0.3**
SNY				pmax	pmax		
	comp=Z,83nm,0.9s						
SNY				LR	LR		
	comp=Z,5µm,19.6s						
SNY				LR	LR		
	comp=Z,3µm,14.9s						
SNY				LR	LR		
	comp=Z,6µm,15.3s						
LZH	**Lanzhou**	**36.27**	**329**	⇑P	**P**	**04 44 30.3**	**+0.6**
LZH				pP	pP	04 44 54.3	-1.5
LZH				sP	sP	04 45 06.1	-3.1
LZH				PP	**PnPn**	**04 45 56.0**	**+0.6**
LZH				S	**S**	**04 50 02.0**	**+0.1**
LZH				sS	sS	04 50 42.8	-2.7
LZH				pmax	pmax		
	comp=Z,2µm,6.0s						
LZH				LR	LR		
	comp=Z,11µm,14.2s						
LZH				LR	LR		
	comp=Z,9µm,14.3s						
LZH				LR	LR		
	comp=Z,12µm,17.0s						
FORT	**Forrest**	**36.42**	**177**	P	**P**	**04 44 31.1**	**+0.4**
	baz=37,SNR=163						
FORT	**Forrest**	**36.42**	**177**	*e*P	**P**	**04 44 31.1**	**+0.4**
	comp=Z,345nm,0.8s						
MSHR	**Mys Shultsa**	**36.96**	**7**	*c i*P	**P**	**04 44 37.5**	**+2.3**
BRDH	**Bariadhala**	**36.97**	**300**	P	**P**	**04 44 36.6**	**+1.0**
	comp=Z,105nm,0.6s,baz=82,slow=10,SNR=21						
HHC	**Hu-ho-hao-te**	**37.17**	**342**	*e*P	**P**	**04 44 40.1**	**+2.9**
HHC				PP	**PnPn**	**04 46 10.4**	**+4.2**
HHC				S	**S**	**04 50 18.3**	**+3.0**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1µm,7.3s						
HHC				LR	LR		
	comp=N,4µm,15.6s						
HHC				LR	LR		
	comp=E,2µm,13.8s						
HHC				LR	LR		
	comp=Z,4µm,13.8s						
HHC	**Hu-ho-hao-te**	**37.17**	**342**	*e*P	**P**	**04 44 37.6**	**+0.4**
HHC				S	**S**	**04 50 15.4**	**+0.1**
HHC				pmax	pmax		
	comp=Z,940nm,7.3s						
HHC				LR	LR		
	comp=Z,3µm,15.6s						
HHC				LR	LR		
	comp=Z,3µm,16.3s						
BLDU	**Ballidu**	**37.22**	**193**	P	**P**	**04 44 37.9**	**+0.4**
	baz=37,SNR=18						
HNR	**Honiara**	**37.25**	**114**	*e*P	**P**	**04 44 38.3**	**+0.2**
	comp=Z,427nm,0.9s						
HNR	**Honiara**	**37.25**	**114**	*e*P	**P**	**04 44 38.3**	**+0.2**
HNR				pmax	pmax		
	comp=Z,427nm,0.9s						
HNR	**Honiara**	**37.25**	**114**	LR	LR	04 59 25.0	
	comp=Z,4µm,21.5s,baz=290,slow=35						
BTO	**Baotou**	**37.45**	**340**	*e*P	**P**	**04 44 42.1**	**+2.6**
VLA	**Vladivostok**	**37.58**	**7**	*i* P	**P**	**04 44 42.5**	**+2.1**
VLA				pmax	pmax		
	comp=Z,522nm,1.4s						
CN2	**Changchun**	**37.87**	**360**	*e*P	**P**	**04 44 42.0**	**-0.9**
CN2				*e*pP	pP	04 45 04.6	-3.8
CN2				*e*PP	**PnPn**	**04 46 15.0**	**+0.6**
CN2				*e*S	**S**	**04 50 24.8**	**-0.8**
CN2				pmax	pmax		
	comp=Z,820nm,6.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,8µm,19.0s						
CN2				LR	LR		
	comp=Z,4µm,20.0s						
SHL	**Shillong**	**37.92**	**305**	*e*P	**P**	**04 44 44.1**	**+0.3**
SHL	**Shillong**	**37.92**	**305**	*e*P	**P**	**04 44 44.1**	**+0.3**
SHL	**Shillong**	**37.92**	**305**	⇑*i*P	**P**	**04 44 44.0**	**+0.2**
SHL				IAmb	IAmb	04 44 45.0	
	comp=Z,54nm,0.6s						
SHL				*e*S	**S**	**04 50 28.0**	**+0.8**
KLBR	**Kellerberrin**	**37.94**	**191**	P	**P**	**04 44 44.1**	**+0.5**
	baz=38,SNR=127						
MUN	**Mundaring**	**38.64**	**193**	P	**P**	**04 44 50.2**	**+0.7**
	baz=39,SNR=70						
USA0B	**Ussuriysk Arra**	**38.65**	**7**	*e*P	**P**	**04 44 49.2**	**-0.2**
	comp=Z,239nm,1.0s						
USRK	**Ussuriysk Ar.**	**38.65**	**7**	P	**P**	**04 44 51.1**	**+1.7**
	comp=Z,43nm,0.8s,baz=194,slow=7.1,SNR=81						
MDJ	**Mudanjiang**	**38.83**	**4**	P	**P**	**04 44 52.0**	**+1.1**
MDJ				pP	pP	04 45 14.8	-1.7
MDJ				sP	sP	04 45 26.3	-3.2
MDJ				PP	**PP**	**04 46 24.3**	**+2.1**
MDJ				PcP	**PcP**	**04 46 58.6**	**-1.2**
MDJ				ScP	**ScP**	**04 50 38.1**	**+0.6**
MDJ				S	**S**	**04 50 45.1**	**+5.1**
MDJ				PcS	**PcS**	**04 50 48.5**	**-0.8**
MDJ				sS	sS	04 51 25.8	+1.9
MDJ				pmax	pmax		
	comp=Z,140nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,960nm,4.7s						
MDJ				LR	LR		
	comp=Z,3µm,19.9s						
MDJ				LR	LR		
	comp=Z,5µm,17.5s						
MDJ				LR	LR		
	comp=Z,8µm,34.2s						
MDJ	**Mudanjiang**	**38.83**	**4**	*e*P	**P**	**04 44 51.3**	**+0.4**
	comp=Z,433nm,1.0s						
RMQ	**Roma**	**39.05**	**146**	P	**P**	**04 44 53.2**	**+0.1**
	baz=39,SNR=11						
ERM	**Erimo**	**39.26**	**21**	*e*P	**P**	**04 44 53.8**	**-0.7**
	comp=Z,283nm,1.2s						
ERM	**Erimo**	**39.26**	**21**	*i* P	**P**	**04 44 57.5**	**+3.0**
ERM				pmax	pmax		
	comp=Z,45nm,0.8s						
NWAO	**Narrogin (SRO)**	**39.34**	**191**	P	**P**	**04 44 55.8**	**+0.5**
	baz=40,SNR=209						
NWAO	**Narrogin (SRO)**	**39.34**	**191**	*e*P	**P**	**04 44 55.9**	**+0.6**
	comp=Z,573nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.34**	**191**	*e*P	**P**	**04 44 55.9**	**+0.6**
NWAO				pmax	pmax		
	comp=Z,573nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.34**	**191**	P	**P**	**04 44 56.0**	**+0.7**
	SNR=36						
NWAO				P	**P**	**04 44 56.0**	**+0.7**
	SNR=36						
EIDS	**Eidsvold**	**39.54**	**143**	P	**P**	**04 44 57.6**	**+0.5**
	baz=40,SNR=11						
EIDS	**Eidsvold**	**39.54**	**143**	*e*P	**P**	**04 44 57.6**	**+0.5**
	comp=Z,174nm,0.8s						
BBOO	**Buckleboo**	**39.60**	**166**	P	**P**	**04 44 58.1**	**+0.6**
	baz=40,SNR=620						
BBOO	**Buckleboo**	**39.60**	**166**	*e*P	**P**	**04 44 58.0**	**+0.6**
	comp=Z,686nm,1.4s						
TEY	**Ternei**	**40.23**	**12**	⇑*e*P	**P**	**04 45 03.4**	**+0.9**
TEY				*e*		04 45 35.6	
TEY				*e*S	**S**	**04 51 02.2**	**+1.3**
TEY				pmax	pmax		
	comp=Z,140nm,1.0s						
TEY				pmax	pmax		
	comp=N,110nm,1.3s						
TEY				smax	smax		
	comp=E,9µm,8.1s						
TEY				smax	smax		
	comp=N,7µm,17.8s						
STKA	**Stephens Creek**	**40.37**	**159**	P	**P**	**04 45 04.6**	**+0.8**
	baz=40,SNR=143						
STKA	**Stephens Creek**	**40.37**	**159**	*e*P	**P**	**04 45 04.6**	**+0.8**
	comp=N,90nm,0.9s						
STKA	**Stephens Creek**	**40.37**	**159**	P	**P**	**04 45 04.7**	**+0.8**
	comp=N,172nm,0.7s,baz=332,slow=8.3,SNR=491						
STKA				LR	LR	05 02 57.8	
	comp=N,3µm,18.2s,baz=324,slow=38						
LSA	**Lhasa**	**40.39**	**310**	P	**P**	**04 45 05.4**	**+0.7**
LSA				pmax	pmax		
	comp=N,19nm,0.8s						
LSA				LR	LR		
	comp=N,1µm,24.9s						
LSA				LR	LR		
	comp=N,1µm,20.5s						
LSA				LR	LR		
	comp=N,4µm,32.2s						
LSA	**Lhasa**	**40.39**	**310**	*e*P	**P**	**04 45 04.8**	**+0.1**
	comp=N,123nm,1.1s						
LSA	**Lhasa**	**40.39**	**310**	P	**P**	**04 45 05.7**	**+1.0**
GTA	**Gaotai**	**40.87**	**329**	⇑P	**P**	**04 45 07.6**	**-0.4**
GTA				pP	pP	04 45 31.8	-2.8
GTA				sP	sP	04 45 42.6	-5.2
GTA				ScP	**ScP**	**04 50 44.8**	**-1.0**
GTA				S	**S**	**04 51 12.9**	**+2.0**
GTA				sS	sS	04 51 54.0	-1.1
GTA				ScS	**ScS**	**04 54 58.3**	**-2.9**
GTA				pmax	pmax		
	comp=N,940nm,8.4s						
GTA				LR	LR		
	comp=N,4µm,15.9s						
GTA				LR	LR		
	comp=N,4µm,18.4s						
GTA				LR	LR		
	comp=N,6µm,16.2s						
HTT	**Hallett**	**40.94**	**163**	P	**P**	**04 45 09.5**	**+0.9**
	baz=41,SNR=124						
ASAJ	**Asahikawa**	**40.94**	**19**	P	**P**	**04 45 10.1**	**+1.7**
	comp=N,84nm,0.8s,baz=230,slow=14,SNR=23						
ASAJ				LR	LR	05 03 16.0	
	comp=N,3µm,18.6s,baz=214,slow=38						
RKGY	**Rocky Gully**	**41.02**	**191**	P	**P**	**04 45 10.7**	**+1.6**
	baz=41,SNR=169						
CMSA	**Cobar Meteorol**	**41.69**	**154**	P	**P**	**04 45 15.7**	**+1.0**
	baz=42,SNR=47						
H11S3	**WAKE ISLAND Hy**	**41.83**	**69**	T	T	05 29 40.7	
	baz=258,slow=75,SNR=75						
H11S1	**WAKE ISLAND Hy**	**41.84**	**69**	T	T	05 29 41.8	
	baz=258,slow=75,SNR=85						
H11S2	**WAKE ISLAND Hy**	**41.84**	**69**	T	T	05 29 35.3	
	baz=258,slow=75,SNR=15						
H01W3	**Cape Leeuwin H**	**41.91**	**194**	P	**P**	**04 45 18.5**	**+2.4**
	baz=18,slow=5.8,SNR=16						
H01W1	**Cape Leeuwin H**	**41.91**	**194**	P	**P**	**04 45 18.6**	**+2.5**
	baz=18,slow=5.8,SNR=18						
H01W2	**Cape Leeuwin H**	**41.92**	**194**	P	**P**	**04 45 18.8**	**+2.5**
	baz=18,slow=5.8,SNR=16						
YUK	**Yuzh-Kuril'sk**	**41.99**	**22**	*d i*P	**P**	**04 45 19.2**	**+2.3**
YUK				*e*		04 47 02.6	
YUK				*i* S	**S**	**04 51 28.2**	**+1.2**
YUK				*e*SSS	SSS	04 55 09.1	
YUK				pmax	pmax		
	comp=Z,775nm,1.3s						
YUK				pmax	pmax		
	comp=E,377nm,1.0s						
YUK				pmax	pmax		
	comp=N,293nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**42.29**	**67**	T	T	05 30 38.9	
	baz=265,slow=75,SNR=8.4						
H11N2	**WAKE ISLAND Hy**	**42.30**	**67**	T	T	05 30 15.8	
	baz=265,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**42.30**	**67**	T	T	05 30 33.4	
	baz=265,slow=75,SNR=9.2						
BOK	**Bokaro**	**42.32**	**299**	*e*P	**P**	**04 45 20.8**	**+0.8**
RAMN	**Ramite**	**42.81**	**304**	*e*P	**P**	**04 45 25.0**	**+0.8**
	comp=N,32nm,0.2s						
JIRN	**Jiri**	**43.42**	**305**	*e*P	**P**	**04 45 29.7**	**+0.4**
	comp=N,732nm,1.0s						
YSS	**Yuzh-Sakhalins**	**43.55**	**17**	*e*P	**P**	**04 45 29.7**	**+0.3**
	comp=N,330nm,1.2s						
YSS	**Yuzh-Sakhalins**	**43.55**	**17**	⇓*e*P	**P**	**04 45 30.7**	**+1.2**
YSS				e*SP	**sP**	**04 46 06.6**	**-1.9**
YSS				*e*		04 46 24.5	
YSS				*e*S	**S**	**04 51 50.8**	**+1.0**
YSS				*e*SS	**SS**	**04 55 07.0**	**-2.1**
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,400nm,3.0s						
YSS				smax	smax		
	comp=N,4µm,13.7s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=E,2µm,16.0s						
KLR	**Kul'dur**	**43.59**	**6**	*c i*P	**P**	**04 45 29.9**	**+0.1**
KLR	**Kul'dur**	**43.59**	**6**	P	**P**	**04 45 31.0**	**+1.2**
	comp=E,14nm,0.5s,baz=206,slow=5.1,SNR=63						
KLR				LR	LR	05 04 25.1	
	comp=E,2µm,20.6s,baz=178,slow=37						
HIA	**Hailar**	**43.64**	**354**	*e*P	**P**	**04 45 30.4**	**+0.2**
	comp=E,387nm,1.3s						
HIA	**Hailar**	**43.64**	**354**	*e*P	**P**	**04 45 30.4**	**+0.2**
HIA				pmax	pmax		
	comp=Z,387nm,1.3s						
ARMA	**Armidale**	**43.69**	**147**	P	**P**	**04 45 32.6**	**+1.6**
	baz=44,SNR=14						
ARMA	**Armidale**	**43.69**	**147**	*e*P	**P**	**04 45 31.6**	**+0.6**
	comp=Z,278nm,1.0s						
KUR	**Kuril'sk**	**43.76**	**23**	*e*P	**P**	**04 45 33.7**	**+2.5**
KUR				*i* S	**S**	**04 51 57.1**	**+4.2**
KUR				*e*SS	**SS**	**04 55 13.8**	**+0.6**
KUR				pmax	pmax		
	comp=Z,2µm,6.5s						
KUR				pmax	pmax		
	comp=E,144nm,1.3s						
KUR				pmax	pmax		
	comp=Z,434nm,1.3s						
KUR				pmax	pmax		
	comp=N,195nm,1.6s						
KUR				MLR	MLR		
	comp=Z,2µm,16.0s						
GUN	**Gumba**	**43.77**	**305**	*e*P	**P**	**04 45 32.6**	**+0.6**
	comp=Z,503nm,0.7s						
PKI	**Pulchoki**	**44.03**	**304**	*e*P	**P**	**04 45 34.0**	**-0.1**
	comp=Z,141nm,0.8s						
PKIN	**Phulchoki**	**44.04**	**304**	*e*P	**P**	**04 45 34.2**	**+0.1**
	comp=Z,112nm,0.6s						
KKN	**Kakani**	**44.22**	**304**	*e*P	**P**	**04 45 35.7**	**+0.3**
	comp=Z,155nm,0.8s						
DMN	**Daman**	**44.29**	**304**	*e*P	**P**	**04 45 36.4**	**+0.3**
	comp=Z,231nm,0.9s						
PALK	**Pallekele**	**44.80**	**274**	*e*P	**P**	**04 45 40.6**	**+0.6**
	comp=Z,246nm,1.6s						
PALK	**Pallekele**	**44.80**	**274**	P	**P**	**04 45 40.3**	**+0.2**
PALK	**Pallekele**	**44.80**	**274**	*i* P	**P**	**04 45 44.5**	**+4.5**
ULN	**Ulaanbaatar**	**44.89**	**342**	*e*P	**P**	**04 45 39.8**	**-0.6**
	comp=Z,92nm,0.9s						
ULN				*e*ScP	**ScP**	**04 51 01.0**	**-0.8**
ULN	**Ulaanbaatar**	**44.89**	**342**	*c e*P	**P**	**04 45 39.9**	**-0.4**
ULN				pmax	pmax		
	comp=Z,32nm,1.2s						
ULN	**Ulaanbaatar**	**44.89**	**342**	P	**P**	**04 45 40.0**	**-0.4**
	SNR=43						
ULN				P	**P**	**04 45 40.0**	**-0.4**
	SNR=43						
ARPS	**Mount Arapiles**	**44.91**	**162**	P	**P**	**04 45 41.7**	**+1.2**
	baz=45,SNR=106						
SONM	**Songino Array**	**45.07**	**342**	P	**P**	**04 45 41.6**	**-0.1**
	comp=Z,3.8nm,0.5s,baz=162,slow=9.0,SNR=24						
SONM				PcP	**PcP**	**04 47 19.3**	**-1.3**
	comp=Z,33nm,0.9s,baz=151,slow=5.9,SNR=2.2						
SONM				ScP	**ScP**	**04 51 02.6**	**0.0**
	comp=Z,15nm,1.1s,baz=236,slow=2.6,SNR=4.5						
SONM				LR	LR	05 07 00.0	
	comp=Z,4µm,18.8s,baz=152,slow=39						
SONA1	**Songino Array**	**45.08**	**342**	*e*P	**P**	**04 45 41.1**	**-0.8**
YNG	**Young**	**45.23**	**153**	P	**P**	**04 45 45.2**	**+2.1**
	baz=45,SNR=7.9						
MDRS	**Chennai**	**45.44**	**283**	*e*P	**P**	**04 45 45.8**	**+0.7**
MDRS				IAmb	IAmb	04 45 48.8	
	comp=Z,62nm,0.8s						
KOLN	**Koldanda**	**45.60**	**304**	*e*P	**P**	**04 45 46.8**	**+0.4**
	comp=Z,236nm,0.6s						
MGCD	**Mangrove Creek**	**45.62**	**150**	P	**P**	**04 45 47.8**	**+1.7**
	baz=46,SNR=4.5						
DANN	**Dangsing**	**45.67**	**304**	*e*P	**P**	**04 45 46.8**	**-0.3**
	comp=Z,527nm,0.6s						
GRNR	**Gornyy**	**45.72**	**9**	*e*P	**P**	**04 45 48.0**	**+1.3**
GRNR				*e*		04 48 22.2	
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
RIV	**Riverview**	**46.14**	**150**	P	**P**	**04 45 52.4**	**+2.3**
	baz=46,SNR=4.5						
PYUN	**Piuthan**	**46.22**	**304**	*e*P	**P**	**04 45 51.7**	**+0.5**
	comp=Z,789nm,0.9s						
CAN	**Canberra**	**46.36**	**154**	*e*P	**P**	**04 45 52.8**	**+0.8**
	comp=Z,164nm,0.9s						
CAN	**Canberra**	**46.36**	**154**	*e*P	**P**	**04 45 52.8**	**+0.8**
CAN				pmax	pmax		
	comp=Z,164nm,0.9s						
CNB	**Canberra Magne**	**46.51**	**153**	P	**P**	**04 45 55.2**	**+2.0**
	baz=47,SNR=23						
TOO	**Toolangi**	**46.88**	**158**	P	**P**	**04 45 58.0**	**+2.1**
	baz=47,SNR=61						
TOO	**Toolangi**	**46.88**	**158**	*e*P	**P**	**04 45 56.9**	**+0.9**
	comp=Z,438nm,1.4s						
TOO	**Toolangi**	**46.88**	**158**	*e*P	**P**	**04 45 56.9**	**+0.9**
TOO				pmax	pmax		
	comp=Z,439nm,1.4s						
TYV	**Tymovskoe**	**47.10**	**15**	*e*P	**P**	**04 45 59.6**	**+2.2**
TYV				*e*S	**S**	**04 52 46.6**	**+5.9**
TYV				pmax	pmax		
	comp=Z,900nm,4.3s						
TYV				pmax	pmax		
	comp=Z,23nm,1.3s						
TYV				smax	smax		
	comp=E,3µm,6.5s						
CIT	**Chita**	**47.19**	**350**	*e*P	**P**	**04 46 01.6**	**+3.4**
CIT				*e*		04 47 30.5	
CIT				*e*		04 47 48.0	
CIT				pmax	pmax		
	comp=Z,210nm,1.4s						
JBP	**Jabalpur**	**47.35**	**296**	⇑*e*P	**P**	**04 46 00.6**	**+0.7**
HYB	**Hyderabad**	**47.56**	**288**	⇓*i*P	**P**	**04 46 01.5**	**-0.1**
	comp=Z,130nm,1.0s						
HYB				*e*sP	**sP**	**04 46 37.5**	**-4.3**
HYB				*e*PP	**PP**	**04 47 56.0**	**+1.9**
HYB				*e*		04 48 36.0	
HYB				*e*S	**S**	**04 52 50.0**	**+1.7**
HYB				*e*		04 53 36.0	
HYB				*e*		04 57 16.0	
HYB	**Hyderabad**	**47.56**	**288**	*e*P	**P**	**04 46 01.3**	**-0.3**
HYB				IAmb	IAmb	04 46 04.8	
	comp=Z,55nm,0.6s						
NGP	**Nagpur**	**47.74**	**293**	⇑*i*P	**P**	**04 46 02.5**	**-0.5**
ZEA	**Zeya**	**47.83**	**1**	*e*P	**P**	**04 46 02.6**	**-0.4**
ZEA				*e*S	**S**	**04 52 47.0**	**-4.0**
ZEA				*e*		04 55 45.0	
ZEA				pmax	pmax		
	comp=N,500nm,7.0s						
ZEA				pmax	pmax		
	comp=Z,700nm,7.0s						
ZEA				pmax	pmax		
	comp=E,83nm,1.0s						
ZEA				pmax	pmax		
	comp=N,230nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,290nm,1.2s						
ZEA				smax	smax		
	comp=E,2µm,16.0s						
ZEA				smax	smax		
	comp=N,1µm,16.0s						
ZEA				MLR	MLR		
	comp=N,2µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,15.0s						
MILA	**Mila**	**47.88**	**155**	P	**P**	**04 46 05.7**	**+1.9**
	baz=48,SNR=3.6						
ZAK	**Zakamensk**	**48.29**	**341**	*e*P	**P**	**04 46 07.9**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,49nm,1.3s						
DZM	**Mont Dzumac**	**48.49**	**126**	*e*P	**P**	**04 46 10.0**	**+1.2**
	comp=Z,319nm,1.1s						
DZM	**Mont Dzumac**	**48.49**	**126**	*e*P	**P**	**04 46 09.1**	**+0.3**
	comp=Z,123nm,0.9s						
TRD	**Trivandrum**	**48.49**	**276**	*e*P	**P**	**04 46 07.4**	**-1.4**
ONTNC	**Ouen Toro**	**48.62**	**126**	*e*P	**P**	**04 46 07.8**	**-1.8**
	comp=Z,172nm,1.1s						
NKL	**Nikolayevsk**	**48.78**	**12**	*e*P	**P**	**04 46 11.0**	**+0.7**
NKL				*e*S	**S**	**04 53 06.0**	**+1.7**
NKL				*e*		04 55 52.0	
NKL				pmax	pmax		
	comp=N,36nm,1.0s						
NKL				pmax	pmax		
	comp=Z,120nm,1.0s						
NKL				pmax	pmax		
	comp=Z,1µm,6.0s						
NKL				smax	smax		
	comp=N,3µm,10.0s						
NKL				smax	smax		
	comp=E,5µm,10.0s						
NKL				MLR	MLR		
	comp=N,2µm,16.0s						
NKL				MLR	MLR		
	comp=E,1µm,16.0s						
NKL				MLR	MLR		
	comp=Z,3µm,16.0s						
LHI	**Lord Howe Isla**	**48.83**	**141**	*e*P	**P**	**04 46 11.8**	**+0.8**
	comp=Z,218nm,1.1s						
TLY	**Talaya**	**49.30**	**342**	*e*P	**P**	**04 46 14.7**	**+0.3**
	comp=Z,441nm,1.1s						
TLY	**Talaya**	**49.30**	**342**	*c i*P	**P**	**04 46 15.7**	**+1.3**
TLY				*e*S	**S**	**04 53 14.1**	**+2.3**
TLY				pmax	pmax		
	comp=Z,228nm,1.0s						
TLY				MLR	MLR		
	comp=Z,5µm,17.0s						
TLY	**Talaya**	**49.30**	**342**	P	**P**	**04 46 14.1**	**-0.3**
	SNR=20						
TLY				P	**P**	**04 46 14.1**	**-0.3**
	SNR=20						
MARNC	**Mare, Loyalty**	**49.49**	**125**	*e*P	**P**	**04 46 17.0**	**+0.7**
	comp=Z,300nm,1.1s						
PINNC	**Pines Island,**	**49.57**	**126**	*e*P	**P**	**04 46 17.4**	**+0.6**
	comp=Z,717nm,1.6s						
IRK	**Irkutsk**	**49.60**	**343**	*e*P	**P**	**04 46 17.5**	**+0.8**
IRK				pmax	pmax		
	comp=Z,195nm,2.1s						
BHPL	**Bhopal**	**49.65**	**296**	*e*P	**P**	**04 46 17.1**	**-0.5**
BHPL				IAmb	IAmb	04 46 35.1	
	comp=Z,225nm,1.2s						
MOY	**Mondy**	**50.15**	**340**	*e*P	**P**	**04 46 19.2**	**-1.7**
MOY				pmax	pmax		
	comp=Z,70nm,2.1s						
WMQ	**Urumqi**	**50.52**	**325**	P	**P**	**04 46 23.8**	**0.0**
WMQ				sP	sP	04 47 02.0	-2.3
WMQ				ScP	**ScP**	**04 51 26.3**	**+0.7**
WMQ				S	**S**	**04 53 32.3**	**+3.2**
WMQ				sS	sS	04 54 17.8	+3.2
WMQ				pmax	pmax		
	comp=Z,130nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,2µm,10.5s						
WMQ				LR	LR		
	comp=Z,17µm,16.7s						
WMQ				LR	LR		

	comp=Z,9µm,16.7s						
WMQ				LR	LR		
	comp=Z,7µm,25.9s						
WMQ	Urumqi	50.52	325	eP	P	04 46 24.0	+0.2
	comp=Z,225nm,1.2s						
WMQ	Urumqi	50.52	325	eP	P	04 46 24.0	+0.2
WMQ				pmax	pmax		
	comp=Z,225nm,1.2s						
KNGR	Kungurtug, Tuv	50.54	337	i P	P	04 46 23.5	-0.4
DDI	Dehra Dun	51.02	305	eP	P	04 46 28.0	+0.2
DDI				IAmb	IAmb	04 46 46.6	
	comp=Z,751nm,1.2s						
NDI	New Delhi	51.22	302	eP	P	04 46 29.0	-0.3
SKR	Severo-Kuril’s	51.43	24	eP	P	04 46 27.1	-3.3
SKR				eS	S	04 53 36.1	-5.1
SKR				pmax	pmax		
	comp=Z,115nm,1.3s						
SKR				pmax	pmax		
	comp=Z,2µm,4.1s						
SKR				pmax	pmax		
	comp=Z,800nm,7.6s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,2µm,19.0s						
MOO	Moorlands	51.80	160	P	P	04 46 35.5	+2.3
	baz=52,SNR=8.5						
GOA	Goa	51.85	285	eP	P	04 46 35.5	+1.5
GOA				IAmb	IAmb	04 46 37.3	
	comp=Z,46nm,0.7s						
SMLA	Simla	52.01	305	eP	P	04 46 34.8	-0.2
POO	Poona	52.14	289	eP	P	04 46 35.7	-0.6
POO				IAmb	IAmb	04 46 53.1	
TAU	Tasmania Unive	52.26	160	eP	P	04 46 37.7	+1.1
	comp=Z,150nm,1.1s						
TAU	Tasmania Unive	52.26	160	eP	P	04 46 37.7	+1.1
TAU				pmax	pmax		
	comp=Z,150nm,1.1s						
MNCI	Minicoy	52.35	276	eP	P	04 46 38.0	+0.2
	comp=Z,331nm,1.2s						
MNCY	Minicoy	52.38	276	eP	P	04 46 36.1	-1.9
BOD	Bodaibo	52.72	352	eP	P	04 46 39.4	-0.4
BOD				pmax	pmax		
	comp=Z,196nm,1.2s						
DHRM	DHARAMSHALA	53.07	306	eP	P	04 46 42.9	-0.3
PEA0B	Petropavlovsk-	53.92	23	eP	P	04 46 48.9	+0.2
	comp=Z,296nm,1.0s						
PETK	Petropavlovsk-	53.92	23	eP	P	04 46 49.4	+0.7
PETK	Petropavlovsk-	53.92	23	P	P	04 46 50.4	+1.7
	comp=Z,43nm,0.8s,baz=187,slow=4.5,SNR=33						
PET	Petropavlovsk	54.23	24	eP	P	04 46 51.6	+0.7
	comp=Z,379nm,1.4s						
PET	Petropavlovsk	54.23	24	eP	P	04 46 52.2	+1.3
PET				e*SP	sP	04 47 27.7	-3.1
PET				i S	S	04 54 21.3	+2.1
PET				eSS	SS	04 58 02.7	-0.1
PET				pmax	pmax		
	comp=Z,164nm,1.2s						
ZSN	Zaisan	54.28	327	deP	P	04 46 50.0	-1.5
ZSN				pmax	pmax		
	comp=Z,55nm,1.5s						
ZSN				MLR	MLR		
	comp=Z,357nm,15.0s						
ZSN	Zaisan	54.28	327	⇓eP	P	04 46 50.0	-1.5
	comp=Z,55nm,1.5s						
ZSN				eLR	LR	05 11 11.2	
	comp=Z,357nm,14.7s						
DGZ	Jazzator, Alta	54.36	330	d iP	P	04 46 50.9	-1.2
DGZ				pmax	pmax		
	comp=Z,13nm,1.2s						
FUNA	Funafuti	55.12	105	eP	P	04 46 58.5	+0.4
	comp=Z,802nm,1.4s						
PDGK	Podgornoye	55.24	320	P	P	04 46 57.7	-0.9
PDGK				pmax	pmax		
	comp=Z,172nm,1.0s						
MK01	Makanchi Array	55.33	325	eP	P	04 46 57.6	-1.4
MK31	Makanchi Array	55.34	325	eP	P	04 46 58.2	-1.0
MK31	Makanchi Array	55.34	325	i P	P	04 46 58.8	-0.4
MK31				pmax	pmax		
	comp=Z,49nm,0.8s						
MKAR	Makanchi Array	55.34	325	eP	P	04 46 58.1	-1.0
	comp=Z,565nm,1.0s						
MKAR				ScP	ScP	04 51 44.7	-1.8
MKAR				⇑e		05 17 22.3	
MKAR	Makanchi Array	55.34	325	P	P	04 46 58.9	-0.3
	comp=Z,16nm,0.5s,baz=124,slow=6.8,SNR=194						
MKAR				ScP	ScP	04 51 44.7	-1.8
	comp=Z,6.5nm,0.9s,baz=130,slow=3.5,SNR=2.3						
MKAR				LR	LR	05 12 43.0	
	comp=Z,3µm,19.2s,baz=99,slow=38						
MKAR				PKP2bc		05 17 22.3	
	comp=Z,4.0nm,1.0s,baz=280,slow=2.2,SNR=6.3						
UZB	Uzynbulak	55.45	320	ceP	P	04 46 58.1	-2.1
UZB				eS	S	04 54 28.8	-7.5
UZB				pmax	pmax		
	comp=Z,317nm,1.1s						
UZB				MLR	MLR		
	comp=Z,636nm,16.0s						
UZB	Uzynbulak	55.45	320	⇑eP	P	04 46 58.1	-2.1
	comp=Z,317nm,1.1s						
UZB				eS	S	04 54 28.9	-7.5
UZB				eLR	LR	05 12 02.9	
	comp=Z,636nm,16.0s						
MAKZ	Makanchi	55.53	325	eP	P	04 46 59.6	-0.9
	comp=Z,132nm,1.0s						
MAKZ	Makanchi	55.53	325	eP	P	04 46 59.6	-0.9
MAKZ				pmax	pmax		
	comp=Z,132nm,1.0s						
TARG	Taragay, Kyrgy	55.60	318	eP	P	04 47 01.5	-0.1
	comp=Z,146nm,1.1s						
SATY	Saty	55.81	319	eP	P	04 47 01.7	-1.0
SATY				pmax	pmax		
	comp=Z,664nm,0.8s						
SATY				MLR	MLR		
	comp=Z,655nm,14.0s						
SATY	Saty	55.81	319	eP	P	04 47 01.8	-1.0
	comp=Z,664nm,0.8s						
SATY				eLR	LR	05 12 31.7	
	comp=Z,655nm,14.3s						
KPKS	Kokpek	55.82	320	deP	P	04 47 00.9	-1.8
KPKS				pmax	pmax		
	comp=Z,574nm,1.1s						
KPKS				MLR	MLR		
	comp=Z,667nm,13.0s						
KPKS	Kokpek	55.82	320	⇓eP	P	04 47 00.9	-1.8
	comp=Z,574nm,1.1s						
KPKS				eLR	LR	05 11 15.7	
	comp=Z,667nm,13.2s						
ZHN	Zhinishke	55.84	319	d iP	P	04 47 01.5	-1.4
ZHN				pmax	pmax		
	comp=Z,297nm,1.2s						
ZHN				MLR	MLR		
	comp=Z,594nm,13.0s						
ZHN	Zhinishke	55.84	319	⇓iP	P	04 47 01.6	-1.4
	comp=Z,296nm,1.2s						
ZHN				eLR	LR	05 12 17.1	
	comp=Z,594nm,13.2s						
KSH	Kashi	55.94	314	P	P	04 47 05.0	+1.3
KSH				pP	pP	04 47 32.1	+0.4
KSH				PP	PP	04 49 15.1	+5.5
KSH				S	S	04 54 41.8	-1.0
KSH				sS	sS	04 55 31.8	+1.3
KSH				ScS	ScS	04 56 44.9	+3.1
KSH				SS	SS	04 58 35.6	+5.1
KSH				pmax	pmax		
	comp=Z,110nm,1.3s						
KSH				pmax	pmax		
	comp=Z,1µm,5.9s						
KSH				LR	LR		
	comp=Z,4µm,15.3s						
KSH				LR	LR		
	comp=Z,3µm,13.5s						
KSH				LR	LR		
	comp=Z,4µm,16.0s						
NIL	Nilore	55.94	307	eP	P	04 47 03.9	+0.3
	comp=Z,535nm,0.9s						
NIL	Nilore	55.94	307	eP	P	04 47 03.9	+0.3
NIL				pmax	pmax		
	comp=Z,535nm,0.9s						
KDJ	Kajisay	56.20	318	eP	P	04 47 06.2	+0.6
	comp=Z,114nm,0.9s						
KDJ	Kajisay	56.20	318	eP	P	04 47 06.2	+0.6
KDJ				pmax	pmax		
	comp=Z,114nm,0.9s						
YAK	Yakutsk	56.21	2	eP	P	04 47 05.1	+0.2
YAK				e		04 48 03.2	
YAK				e		04 49 08.5	
YAK				eS	S	04 54 45.6	+0.4
YAK				e*SS	sS	04 55 02.9	-30
YAK				e		04 56 42.6	
YAK				eSS	SS	04 58 27.6	-5.9
YAK				pmax	pmax		
	comp=Z,2µm,1.0s						
YAK				pmax	pmax		
	comp=E,243nm,1.1s						
YAK				pmax	pmax		
	comp=N,1µm,1.1s						
YAK				pmax	pmax		
	comp=Z,2µm,1.4s						
YAK				pmax	pmax		
	comp=N,1µm,1.5s						
YAK				pmax	pmax		
	comp=E,447nm,1.5s						
YAK				smax	smax		
	comp=E,9µm,4.3s						
YAK				smax	smax		
	comp=N,5µm,4.2s						
YAK				MLR	MLR		
	comp=E,5µm,18.0s						
MSVF	Nonsavu	56.63	116	eP	P	04 47 09.2	+0.3
	comp=E,317nm,1.0s						
MSVF	Nonsavu	56.63	116	i P	P	04 47 09.8	+1.0
MSVF				pmax	pmax		
	comp=Z,5.0nm,0.3s						
BHJ	Bhuj	56.68	294	eP	P	04 47 07.7	-1.4
BHJ				IAmb	IAmb	04 47 11.0	
	comp=Z,68nm,0.5s						
NRN	Naryn	56.70	317	eP	P	04 47 09.3	0.0
	comp=Z,85nm,1.0s						
NRN	Naryn	56.70	317	P	P	04 47 09.3	0.0
TDK	Taldyqorghan	56.73	321	eP	P	04 47 07.9	-1.2
TDK				eS	S	04 54 49.4	-3.5
TDK				pmax	pmax		
	comp=Z,810nm,1.1s						
TDK				smax	smax		
	comp=E,678nm,6.8s						
TDK				MLR	MLR		
	comp=Z,3µm,19.0s						
TDK	Taldyqorghan	56.73	321	eP	P	04 47 07.9	-1.2
	comp=Z,810nm,1.1s						
TDK				eS	S	04 54 49.4	-3.5
	comp=Z,678nm,6.8s						
TDK				eLR	LR	05 11 53.4	
	comp=Z,3µm,19.4s						
MDOK	Medeo	56.74	319	eP	P	04 47 07.5	-1.8
MDOK				i S	S	04 54 53.2	-0.2
MDOK				pmax	pmax		
	comp=Z,146nm,1.2s						
MDOK				MLR	MLR		
	comp=Z,989nm,14.0s						
MDOK	Medeo	56.74	319	eP	P	04 47 07.6	-1.8
	comp=Z,146nm,1.2s						
MDOK				⇑iS	S	04 54 53.3	-0.2
	comp=Z,832nm,7.9s						
MDOK				eLR	LR	05 14 10.3	
	comp=Z,990nm,14.3s						
TNSS	Tian-Shan	56.75	319	⇑eP	P	04 47 09.1	-0.6
TNSS				pmax	pmax		
	comp=Z,392nm,1.1s						
TNSS	Tian-Shan	56.75	319	⇑eP	P	04 47 09.2	-0.6
	comp=Z,392nm,1.1s						
AAA	Alma-Ata	56.85	319	eP	P	04 47 09.3	-0.7
AAA				pmax	pmax		
	comp=Z,387nm,1.5s						
AAA	Alma-Ata	56.85	319	eP	P	04 47 09.3	-0.7
	comp=Z,387nm,1.5s						
MA2	Magadan	56.97	15	eP	P	04 47 10.9	+0.5
	comp=Z,125nm,0.8s						
MA2				ScP	ScP	04 51 52.6	-0.7
MA2	Magadan	56.97	15	ceP	P	04 47 12.0	+1.6
MA2				pmax	pmax		
	comp=Z,41nm,0.8s						
MA2	Magadan	56.97	15	P	P	04 47 12.1	+1.7
	comp=Z,27nm,0.7s,baz=204,slow=7.0,SNR=32						
MA2				ScP	ScP	04 51 52.6	-0.7
	comp=Z,6.0nm,0.7s,baz=183,slow=16,SNR=2.4						
CHKK	Chushkaly	57.09	320	⇓eP	P	04 47 09.5	-2.1
CHKK				pmax	pmax		
	comp=Z,182nm,1.0s						
CHKK	Chushkaly	57.09	320	⇓eP	P	04 47 09.6	-2.1
	comp=Z,182nm,1.0s						
MTBS	Maitube	57.14	319	eP	P	04 47 11.2	-0.8
MTBS				pmax	pmax		
	comp=Z,136nm,0.9s						
MTBS	Maitube	57.14	319	eP	P	04 47 11.3	-0.8
	comp=Z,136nm,0.9s						
KZA	Kyzart	57.48	317	P	P	04 47 15.2	+0.4
	SNR=18						
KUU	Kurty	57.53	319	ceP	P	04 47 12.4	-2.3
KUU				eS	S	04 55 01.3	-2.1
KUU				pmax	pmax		
	comp=Z,577nm,1.6s						
KUU				smax	smax		
	comp=E,505nm,8.1s						
KUU	Kurty	57.53	319	⇑eP	P	04 47 12.5	-2.3
	comp=E,577nm,1.6s						
KUU				eS	S	04 55 01.3	-2.1
	comp=E,505nm,8.1s						
TKM2	Tokmak 2	57.60	318	P	P	04 47 15.6	+0.1
	SNR=14						
SFK	Sufi-Kurgan	57.88	314	i P	P	04 47 17.1	-0.4
SFK				pmax	pmax		
	comp=Z,101nm,1.0s						
KBK	Karagaybulak	57.92	318	P	P	04 47 18.1	+0.5
	SNR=18						
UCH	Uchtor	58.04	317	P	P	04 47 19.0	+0.2
	SNR=30						
CHMS	Chumysh	58.19	318	P	P	04 47 19.2	-0.2
	SNR=12						
FRU	Bishkek	58.21	318	eP	P	04 47 18.0	-1.5
FRU				e		04 55 16.0	
FRU				MLR	MLR		
	comp=E,4µm,16.0s						
AAK	Ala-Archa	58.22	317	P	P	04 47 20.1	+0.3
	SNR=9.9						
AAK	Ala-Archa	58.22	317	eP	P	04 47 20.0	+0.3
	comp=E,99nm,1.2s						
AAK				⇑e		05 17 11.7	
AAK	Ala-Archa	58.22	317	i P	P	04 47 19.2	-0.5
	SNR=13						
AAK	Ala-Archa	58.22	317	c iP	P	04 47 18.9	-0.8
AAK				pmax	pmax		
	comp=Z,53nm,1.5s						
AAK	Ala-Archa	58.22	317	P	P	04 47 19.6	-0.1
	SNR=17						
AAK	Ala-Archa	58.22	317	P	P	04 47 20.1	+0.3
	comp=Z,5.5nm,0.4s,baz=106,slow=5.0,SNR=17						
AAK				LR	LR	05 14 58.1	
	comp=Z,3µm,21.7s,baz=94,slow=38						
AAK				PKP2bc		05 17 11.7	
	comp=Z,13nm,1.2s,baz=222,slow=2.7,SNR=6.8						
ZAA0	Zalesovo Array	58.34	333	eP	P	04 47 18.4	-1.8
	comp=Z,269nm,1.1s						
ZALV	Zalesovo Beam	58.34	333	eP	P	04 47 17.9	-2.3
ZALV				⇑e		05 17 07.5	
ZALV	Zalesovo Beam	58.34	333	P	P	04 47 19.2	-0.9
	comp=Z,5.7nm,0.4s,baz=127,slow=6.4,SNR=31						
ZALV				LR	LR	05 15 34.3	
	comp=Z,2µm,18.9s,baz=137,slow=39						
ZALV				PKP2bc		05 17 07.5	
	comp=Z,5.0nm,0.9s,baz=316,slow=4.0,SNR=7.8						
USP	Ospenovka	58.47	318	P	P	04 47 21.4	+0.1
	SNR=25						
SEM	Semipalatinsk	58.48	328	deP	P	04 47 18.8	-2.6
SEM				pmax	pmax		
	comp=Z,159nm,1.1s						
SEM	Semipalatinsk	58.48	328	⇓eP	P	04 47 18.8	-2.6
	comp=Z,159nm,1.1s						
AML	Almayashu	58.56	317	P	P	04 47 22.7	+0.4
	SNR=24						
EKS2	Erkin-Say	58.71	317	P	P	04 47 23.5	+0.4
	SNR=22						
BTLS	Baital	59.51	320	c iP	P	04 47 25.8	-2.6
BTLS				eS	S	04 55 24.3	-4.6
BTLS				pmax	pmax		
	comp=Z,211nm,1.1s						
BTLS				MLR	MLR		
	comp=Z,663nm,18.0s						
BTLS	Baital	59.51	320	⇑iP	P	04 47 25.9	-2.6
	comp=Z,211nm,1.1s						
BTLS				eS	S	04 55 24.4	-4.6
BTLS				eLR	LR	05 14 10.7	
	comp=Z,663nm,18.3s						
MNAS	Manas	59.51	317	i P	P	04 47 26.8	-1.8
MNAS				pmax	pmax		
	comp=Z,121nm,1.1s						
KURBB	Kurchatov Arra	59.52	327	P	P	04 47 27.8	-0.5
	comp=Z,33nm,0.8s,baz=125,slow=6.3,SNR=119						
KURBB				PKP2bc		05 17 08.3	
	comp=Z,1.1nm,0.5s,baz=269,slow=3.4,SNR=5.7						
KURK	Kurchatov	59.52	327	eP	P	04 47 26.9	-1.3
KURK				⇑e		05 17 08.3	
KURK	Kurchatov	59.52	327	ceP	P	04 47 26.8	-1.5
KURK				pmax	pmax		
	comp=Z,63nm,0.9s						
KURK	Kurchatov	59.52	327	P	P	04 47 27.0	-1.3
	SNR=47						
KURK				P	P	04 47 27.0	-1.3
	SNR=47						
KBL	Kabul	59.54	307	eP	P	04 47 28.9	-0.2
	comp=Z,142nm,0.8s						
KBL	Kabul	59.54	307	eP	P	04 47 28.9	-0.2
KBL				pmax	pmax		
	comp=Z,142nm,0.8s						
NVS	Novosibirsk	59.63	333	⇑iP	P	04 47 28.0	-1.0
NVS				eS	S	04 55 47.2	+17
NVS				pmax	pmax		
	comp=N,162nm,1.2s						
NVS				pmax	pmax		
	comp=E,258nm,1.2s						
NVS				pmax	pmax		
	comp=Z,408nm,1.2s						
NVS				smax	smax		
	comp=N,130nm,2.6s						
NVS				smax	smax		
	comp=E,130nm,2.6s						
BTK	Batken	59.83	313	eP	P	04 47 31.6	+0.8
	comp=E,651nm,1.8s						
BTK	Batken	59.83	313	P	P	04 47 32.1	+1.3
GAR	Garm	59.85	312	eP	P	04 47 30.5	-0.5
	comp=E,578nm,1.0s						
GAR	Garm	59.85	312	eP	P	04 47 30.5	-0.5
GAR				pmax	pmax		
	comp=Z,578nm,1.0s						
SEY	Seymchan	60.27	14	ceP	P	04 47 34.7	+1.5
SEY	Seymchan	60.27	14	P	P	04 47 35.4	+2.1
	comp=Z,46nm,1.0s,baz=228,slow=5.8,SNR=43						
SEY				LR	LR	05 16 34.4	
	comp=Z,854nm,18.2s,baz=154,slow=39						
SEY				PKP2bc		05 17 06.2	
	comp=Z,3.4nm,0.8s,baz=184,slow=19,SNR=2.3						
DZA	Taraz	60.46	317	deP	P	04 47 33.4	-1.5
DZA				pmax	pmax		
	comp=Z,706nm,1.5s						
DZA	Taraz	60.46	317	⇓eP	P	04 47 33.5	-1.5
	comp=Z,706nm,1.5s						
CHGR	Chuyangaron	60.61	311	eP	P	04 47 35.8	-0.3
	comp=Z,240nm,0.8s						
OUZ	Omahuta	60.68	136	eP	P	04 47 37.3	+0.8
	comp=Z,192nm,1.6s						
IUG	Iuzhnay	61.10	315	d iP	P	04 47 37.8	-1.6
IUG				pmax	pmax		
	comp=Z,784nm,1.8s						
IUG	Iuzhnay	61.10	315	⇓iP	P	04 47 37.9	-1.5
	comp=Z,784nm,1.8s						
KK31	Karatay Array	61.10	317	eP	P	04 47 38.9	-0.4
KK31	Karatay Array	61.10	317	eP	P	04 47 38.9	-0.4
KKAR	Karatay Array	61.10	317	eP	P	04 47 38.9	-0.4
KKAR	Karatay Array	61.10	317	eP	P	04 47 38.9	-0.4
CHM	Chimkent	61.45	315	eP	P	04 47 40.7	-1.0
CHM				pmax	pmax		
	comp=Z,493nm,1.0s						
CHM	Chimkent	61.45	315	eP	P	04 47 40.8	-1.0
	comp=Z,493nm,1.0s						
OTUK	Ortayu	61.93	323	P	P	04 47 43.7	-1.1
OTUK				pmax	pmax		
	comp=Z,213nm,1.4s						
DCZ	Deep Cove	62.98	149	eP	P	04 47 52.4	+0.8
	comp=Z,170nm,0.8s						
QRZ	Quartz Range	63.11	142	P	P	04 47 55.4	+2.8
FOZ	Fox Glacier	63.15	145	eP	P	04 47 53.4	+0.5
	comp=Z,55nm,0.9s						
DSZ	Denniston Nort	63.22	143	P	P	04 47 55.4	+2.0
HIZ	Hauiti	63.30	138	eP	P	04 47 55.0	+1.0
	comp=Z,168nm,1.1s						
MLZ	Mavora Lakes	63.41	148	eP	P	04 47 55.3	+0.7
	comp=Z,110nm,1.1s						
WKZ	Wanaka	63.54	147	eP	P	04 47 56.3	+0.8
	comp=Z,224nm,1.2s						
INZ	Inchbonnie	63.59	144	P	P	04 47 58.8	+3.0
WHZ	Wether Hill Ro	63.67	148	eP	P	04 47 57.3	+1.1
	comp=Z,127nm,1.1s						
NNZ	Nelson	63.87	142	P	P	04 47 57.7	+0.1
THZ	Tophouse	63.89	142	eP	P	04 47 58.5	+0.6
	comp=Z,110nm,0.7s						
THZ	Tophouse	63.89	142	P	P	04 47 58.5	+0.6
LBZ	Lake Benmore	63.90	146	eP	P	04 47 58.8	+1.0
	comp=Z,208nm,0.9s						
DUWZ	D’Urville Isla	63.97	141	P	P	04 48 02.6	+4.2
RPZ	Rata Peaks	63.97	145	eP	P	04 47 59.1	+0.8
	comp=Z,173nm,1.0s						
LTZ	Lake Taylor	64.11	144	eP	P	04 47 59.8	+0.6
	comp=Z,191nm,1.2s						
LTZ	Lake Taylor	64.11	144	P	P	04 47 59.3	+0.1
RAO	Raoul Island	64.29	126	LR	LR	05 14 53.7	
	comp=Z,907nm,20.1s,baz=331,slow=35						
OXZ	Oxford	64.30	144	eP	P	04 48 01.0	+0.5
	comp=Z,73nm,0.9s						
ODZ	Otahua Downs	64.57	146	eP	P	04 48 02.8	+0.7
	comp=Z,145nm,1.4s						
KHZ	Kahutara	64.65	143	eP	P	04 48 03.2	+0.5
	comp=Z,62nm,0.6s						
KHZ	Kahutara	64.65	143	P	P	04 48 03.0	+0.3
URZ	Urewera	64.68	137	eP	P	04 48 03.9	+0.9
	comp=Z,97nm,1.1s						
BKZ	Black Stump Fm	64.73	138	eP	P	04 48 04.4	+1.0
	comp=Z,141nm,0.6s						
SNZO	South Karori	64.74	141	eP	P	04 48 03.5	+0.2
	comp=Z,146nm,0.9s						
OGWZ	Otaki Gorge	64.76	140	P	P	04 48 03.6	+0.1
CRLZ	Canterbury Las	64.79	144	eP	P	04 48 04.4	+0.9
	comp=Z,330nm,1.7s						
MQZ	McQueen’s Vall	64.89	144	eP	P	04 48 04.9	+0.7
	comp=Z,84nm,1.0s						
MQZ	McQueen’s Vall	64.89	144	P	P	04 48 05.8	+1.6
BVA0	Borovoye Array	65.10	327	P	P	04 48 04.6	-0.9
BVA0				pmax	pmax		
	comp=Z,376nm,1.4s						
BVAR	Borovoye Array	65.10	327	P	P	04 48 04.7	-0.8
	comp=Z,11nm,0.7s,baz=127,slow=9.4,SNR=69						
BVAR				PKP2bc		05 16 52.8	
	comp=Z,3.6nm,1.1s,baz=270,slow=5.5,SNR=6.8						
BVAR				LR	LR	05 19 28.7	
	comp=Z,2µm,19.1s,baz=108,slow=39						
MXZ	Matakaoa Point	65.14	136	eP	P	04 48 05.9	-0.1
	comp=Z,72nm,0.9s						
BRVK	Borovoye	65.17	327	eP	P	04 48 04.6	-1.4
	comp=Z,441nm,1.2s						
BRVK	Borovoye	65.17	327	c iP	P	04 48 04.1	-1.8
BRVK				pmax	pmax		
	comp=Z,40nm,1.1s						
BRVK	Borovoye	65.17	327	P	P	04 48 04.8	-1.2
	SNR=46						
BRVK				P	P	04 48 04.8	-1.2
	SNR=46						
BFZ	Birch Farm	65.37	140	eP	P	04 48 07.7	+0.2
	comp=Z,73nm,0.9s						
WSAR	Wadi Sarin	66.75	293	P	P	04 48 16.6	-0.1
BIDO	Bidbid	67.23	293	P	P	04 48 18.3	-1.4
	SNR=9.8						
BILL	Bilibino	67.83	15	eP	P	04 48 22.5	-0.1
	comp=Z,253nm,1.4s						
BILL	Bilibino	67.83	15	eP	P	04 48 22.5	-0.1
BILL				pmax	pmax		
	comp=Z,253nm,1.4s						
NIUE	Niue	67.93	113	eP	P	04 48 24.4	+0.3
	comp=Z,331nm,0.9s						
NRIK	Noril'sk	68.23	346	P	P	04 48 24.8	-0.2
	comp=Z,40nm,0.7s,baz=137,slow=5.8,SNR=30						
NRIK				PKPPKP	P'P'df	05 16 46.1	+4.0
	comp=Z,1.7nm,0.4s,baz=113,slow=1.0,SNR=3.5						
NRIK				LR	LR	05 21 48.6	
	comp=Z,3µm,18.4s,baz=141,slow=39						
GEYT	Alibeck	68.88	308	P	P	04 48 30.1	+0.3
	comp=Z,23nm,0.8s,baz=134,slow=4.3,SNR=35						
GEYT				LR	LR	05 21 35.3	
	comp=Z,1µm,20.8s,baz=105,slow=38						
GYA0B	ALIBECK ARRAY	68.88	308	eP	P	04 48 30.1	+0.3
	comp=Z,185nm,1.2s						
MDH	Madha	69.01	295	P	P	04 48 28.4	-2.4

BANOM	Banah	69.05	295	i P	P	04 48 29.7	-1.4
	SNR=6.7						
UOSS	Minazif	69.07	294	eP	P	04 48 31.6	+0.5
	comp=Z,47nm,0.9s						
UOSS	Minazif	69.07	294	P	P	04 48 29.1	-2.1
HATD	Hatta, Dubai	69.13	294	i P	P	04 48 29.7	-1.9
	SNR=7.4						
MSFE	Esma-Masafi	69.14	295	i P	P	04 48 30.1	-1.5
	SNR=5.5						
ASHO	Ashiyiah	69.19	294	i P	P	04 48 30.8	-1.2
	SNR=7.7						
ASHO	Ashiyiah	69.19	294	P	P	04 48 31.8	-0.1
	SNR=8.9						
ALNE	Al Ain	69.44	293	i P	P	04 48 32.8	-0.6
	SNR=8.3						
NAZ	Nazwa, Dubai	69.57	294	P	P	04 48 33.4	-0.8
FAQ	Al Faqa, Dubai	69.62	294	P	P	04 48 32.8	-1.7
ASUD	Al Ashush, Dub	69.85	294	i P	P	04 48 34.8	-1.1
	SNR=7.2						
AB31	Akbulak array	69.98	320	i P	P	04 48 35.1	-1.1
AB31				pmax	pmax		
	comp=Z,153nm,1.3s						
ABKAR	Akbulak array	69.98	320	eP	P	04 48 34.9	-1.4
DMTO	DMTO	70.02	287	P	P	04 48 35.9	-1.2
	SNR=8.3						
SPIA	Saint Paul Isl	71.24	31	eP	P	04 48 44.0	+0.3
	comp=Z,278nm,1.1s						
AKTO	Aktyubinsk	71.48	321	P	P	04 48 44.7	-0.6
	comp=Z,24nm,0.7s,baz=101,slow=7.7,SNR=59						
AKTO				LR	LR	05 22 48.2	
	comp=Z,3µm,20.2s,baz=108,slow=38						
SVE	Sverdlovsk	71.73	328	deP	P	04 48 44.5	-2.2
SVE				eS	S	04 57 51.7	-5.6
SVE				pmax	pmax		
	comp=Z,472nm,1.1s						
SVE				MLR	MLR		
	comp=Z,2µm,19.0s						
MRIV	Mauritius Mete	71.87	247	eP	P	04 48 48.5	+0.2
	comp=Z,131nm,1.3s						
UNV	Unalaska Valle	72.30	35	eP	P	04 48 50.5	+0.4
	comp=Z,198nm,0.9s						
ARU	Arti	72.71	328	eP	P	04 48 50.8	-1.8
	comp=Z,327nm,1.3s						
ARU	Arti	72.71	328	c iP	P	04 48 50.6	-1.9
ARU						04 49 07.0	
ARU						04 51 32.2	
ARU				PPP	PPP	04 53 15.2	
ARU				S	S	04 58 05.4	-3.1
ARU						04 58 47.8	
ARU				pmax	pmax		
	comp=Z,70nm,1.6s						
ARU				MLR	MLR		
	comp=Z,2µm,20.0s						
CASY	Casey	72.73	186	eP	P	04 48 53.0	+0.6
	comp=Z,141nm,0.9s						
AKUT	Akutan	72.79	35	eP	P	04 48 53.5	+0.5
	comp=Z,284nm,1.0s						
GAMB	Gambell	72.93	24	eP	P	04 48 54.1	+0.5
	comp=Z,131nm,1.0s						
FALS	False Pass	74.29	35	eP	P	04 49 02.1	+0.3
	comp=Z,227nm,0.8s						
HON	Honolulu	75.10	70	eP	P	04 49 07.4	+0.3
	comp=Z,628nm,1.2s						
HON	Honolulu	75.10	70	eP	P	04 49 07.4	+0.3
HON				pmax	pmax		
	comp=Z,628nm,1.2s						
ANM	Nome	75.80	25	eP	P	04 49 11.1	+0.8
	comp=Z,94nm,1.0s						
ANM	Nome	75.80	25	eP	P	04 49 11.1	+0.8
ANM				pmax	pmax		
	comp=Z,94nm,1.0s						
SDPT	Sand Point	76.04	34	eP	P	04 49 11.8	0.0
	comp=Z,326nm,1.0s						
KHLH	Kahului Airpor	76.58	70	eP	P	04 49 14.8	-0.8
	comp=Z,798nm,1.7s						
CHGN	Chignik	77.35	34	eP	P	04 49 19.0	-0.1
	comp=Z,118nm,0.8s						
MAK	Makhachkala	77.50	313	eP	P	04 49 17.5	-2.8
MAK				e*SP	pP	04 49 54.0	+4.0
MAK				e		04 52 13.3	
MAK				eS	S	04 59 01.1	-0.9
MAK				eSS	SS	05 04 00.5	-3.0
MAK				pmax	pmax		
	comp=Z,296nm,1.3s						
AIN	Ainahou	77.52	72	eP	P	04 49 20.1	-1.0
	comp=Z,546nm,1.3s						
MLH	Mauna Loa	77.59	71	eP	P	04 49 20.6	-0.9
	comp=Z,493nm,1.2s						
MLH	Mauna Loa	77.59	71	eP	P	04 49 20.6	-0.9
MLH				pmax	pmax		
	comp=Z,493nm,1.2s						
HLP	Hilina Pali	77.67	72	eP	P	04 49 21.9	+0.1
	comp=Z,550nm,1.2s						
RAR	Rarotonga	77.71	113	LR	LR	05 20 29.8	
	comp=Z,1µm,20.2s,baz=236,slow=33						
RDOG	Red Dog Mine	77.73	21	eP	P	04 49 21.8	+0.7
	comp=Z,180nm,0.8s						
PUH	Pauahi	77.75	71	eP	P	04 49 20.7	-1.6
	comp=Z,277nm,1.0s						
KIRV	Kirov	77.99	329	P	P	04 49 21.9	-0.8
	comp=Z,92nm,0.7s,baz=134,slow=1.6,SNR=26						
GROC	Groznyy	78.77	313	eP	P	04 49 23.3	-4.0
GROC				e		04 49 35.6	
GROC				e*SP	sP	04 50 03.7	-5.9
GROC				eS	S	04 59 08.3	-7.3
GROC				pmax	pmax		
	comp=Z,105nm,1.2s						
GNI	Garni	79.45	310	eP	P	04 49 32.1	+0.8
	comp=Z,141nm,0.9s						
GNI	Garni	79.45	310	i P	P	04 49 31.4	+0.1
	SNR=5.6						
GNI	Garni	79.45	310	c iP	P	04 49 30.7	-0.6
GNI				pmax	pmax		
	comp=Z,138nm,1.3s						
GNI	Garni	79.45	310	P	P	04 49 31.9	+0.6
	comp=Z,38nm,1.2s,baz=47,slow=1.6,SNR=7.2						
SVW2	Sparrevohn	79.48	29	eP	P	04 49 31.8	+0.9
	comp=Z,150nm,1.1s						
TBLG	Delisi	79.50	311	eP	P	04 49 31.2	-0.1
	comp=Z,144nm,0.8s						
TBLG	Delisi	79.50	311	eP	P	04 49 31.2	-0.1
TBLG				pmax	pmax		
	comp=Z,144nm,0.8s						
SII	Sitkinak Islan	79.71	34	eP	P	04 49 33.0	+0.8
	comp=Z,227nm,1.0s						
DAMY	Dhamar	80.25	284	eP	P	04 49 36.6	+0.3
	comp=Z,78nm,1.1s						
OHAK	Old Harbor	80.26	33	eP	P	04 49 35.8	+0.7
	comp=Z,174nm,0.9s						
PRGR	Permogore	80.26	331	⇓iP	P	04 49 33.8	-1.2
PRGR				eS	S	04 59 29.8	-0.8
PRGR				pmax	pmax		
	comp=Z,107nm,0.8s						
KDAK	Kodiak Island	80.68	32	eP	P	04 49 38.0	+0.7
	comp=Z,239nm,1.1s						
KDAK	Kodiak Island	80.68	32	P	P	04 49 38.4	+1.1
	comp=Z,56nm,0.6s,baz=254,slow=2.2,SNR=21						
KARS	Kars	80.73	310	eP	P	04 49 38.5	+0.3
	comp=Z,721nm,1.0s						
RSO	Redoubt South	80.79	30	eP	P	04 49 38.6	+0.5
GOF	Gofitskoye	80.81	315	eP	P	04 49 37.4	-0.9
GOF				pmax	pmax		
	comp=Z,90nm,1.8s						
IM3	Indian Mountai	80.87	24	eP	P	04 49 38.0	-0.2
KBZ	Khabaz	80.89	313	P	P	04 49 37.7	-1.0
	comp=Z,5.7nm,0.8s,baz=90,slow=4.4,SNR=8.5						
KVAR	Kislovodsk Arr	81.04	313	P	P	04 49 39.4	-0.3
	comp=Z,2.4nm,0.5s,baz=270,slow=20,SNR=4.5						
KIV	Kislovodsk	81.05	313	eP	P	04 49 39.8	+0.1
	comp=Z,120nm,0.9s						
KIV	Kislovodsk	81.05	313	eP	P	04 49 38.4	-1.3
KIV				eS	S	04 59 38.7	-1.1
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
ABPO	Ambohimpanom	81.11	250	eP	P	04 49 41.0	+0.4
	comp=Z,42nm,0.9s						
ABPO	Ambohimpanom	81.11	250	eP	P	04 49 41.0	+0.4
ABPO				pmax	pmax		
	comp=Z,42nm,0.9s						
SIRT	Sirnak	81.23	307	eP	P	04 49 40.4	-0.4
	comp=Z,767nm,1.0s						
PPLA	Purkeypile	81.25	27	eP	P	04 49 41.4	+0.9
	comp=Z,170nm,1.0s						
CAST	Castle Rocks	81.34	27	eP	P	04 49 41.7	+0.9
	comp=Z,241nm,0.8s						
BRLK	Bradley Lake	81.68	31	eP	P	04 49 43.2	+0.6
	comp=Z,342nm,1.2s						
VRH	Novokhopyorsk	81.81	321	eP	P	04 49 41.3	-2.1
VRH				eS	sS	05 00 46.3	+7.9
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
VRH				MLR	MLR		
	comp=Z,1µm,17.0s						
SUA	Susitna One	81.84	29	eP	P	04 49 44.0	+0.5
	comp=Z,459nm,0.9s						
MLY	Manley	82.04	25	eP	P	04 49 45.1	+0.7
	comp=Z,344nm,1.0s						
TRF	Thorofare Moun	82.15	27	eP	P	04 49 45.1	-0.1
	comp=Z,340nm,1.1s						
RC01	Rabbit Creek A	82.31	29	eP	P	04 49 45.9	+0.1
	comp=Z,159nm,0.9s						
COLD	Coldfoot	82.39	23	eP	P	04 49 47.1	+1.0
	comp=Z,96nm,0.8s						
SEW	Seward	82.42	30	eP	P	04 49 46.3	-0.1
	comp=Z,336nm,1.2s						
PMR	Palmer	82.61	29	eP	P	04 49 47.7	+0.3
	comp=Z,370nm,1.2s						
PMR	Palmer	82.61	29	eP	P	04 49 47.7	+0.3
PMR				pmax	pmax		
	comp=Z,371nm,1.2s						
TOLK	Toolik Lake Re	82.70	22	eP	P	04 49 48.1	+0.3
	comp=Z,204nm,1.0s						
TOLK	Toolik Lake Re	82.70	22	P	P	04 49 47.9	+0.1
	baz=267						
MCK	McKinley	82.76	27	eP	P	04 49 48.3	+0.1
	comp=Z,896nm,1.2s						
MCK	McKinley	82.76	27	eP	P	04 49 48.3	+0.1
MCK				pmax	pmax		
	comp=Z,896nm,1.2s						
RND	Reindeer	82.79	27	eP	P	04 49 48.7	+0.3
	comp=Z,350nm,1.1s						
RND	Reindeer	82.79	27	eP	P	04 49 48.7	+0.3
RND				pmax	pmax		
	comp=Z,350nm,1.1s						
KNK	Knik Glacier	82.93	29	eP	P	04 49 49.8	+0.7
	comp=Z,422nm,1.0s						
SML	Sawmill	83.00	29	eP	P	04 49 50.1	+0.7
	comp=Z,721nm,1.1s						
SML	Sawmill	83.00	29	P	P	04 49 50.5	+1.0
MDM	Murphy Dome	83.10	25	eP	P	04 49 50.6	+0.7
	comp=Z,424nm,1.2s						
WRH	Wood River Hil	83.15	26	eP	P	04 49 50.6	+0.5
	comp=Z,332nm,1.0s						
KLMR	Klimovskoe	83.17	331	eP	P	04 49 47.5	-2.7
KLMR				eS	S	04 59 55.0	-5.4
KLMR				pmax	pmax		
	comp=Z,276nm,1.0s						
KLMR	Klimovskoe	83.17	331	eP	P	04 49 47.5	-2.7
KLMR				AMP		04 50 01.9	
	comp=Z,276nm,1.1s						
KLMR				eS	S	04 59 55.1	-5.4
KLMR				eS	S	04 59 55.1	-5.4
SOC	Sochi	83.20	313	eP	P	04 49 49.2	-1.6
SOC				e*SP	pP	04 50 24.6	+3.8
SOC				e		04 53 06.2	
SOC				eS	S	05 00 00.6	-1.0
SOC				e*SS	pS	05 00 44.5	+5.6
SOC				eSS	SS	05 05 22.5	-6.0
SOC				eSSS	SSS	05 08 56.5	
SOC				pmax	pmax		
	comp=Z,66nm,1.0s						
TCOL	CIGO, UAF Yank	83.26	25	P	P	04 49 50.6	0.0
	baz=269						
COLA	College	83.26	25	eP	P	04 49 49.9	-0.8
	comp=Z,132nm,0.9s						
COLA	College	83.26	25	i P	P	04 49 50.4	-0.2
COLA				pmax	pmax		
	comp=Z,164nm,1.0s						
VORR	Voronezh	83.38	321	eP	P	04 49 50.0	-1.5
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
VSR	Storozhevoye	83.41	321	eP	P	04 49 49.3	-2.4
VSR				eS	sS	05 00 52.0	-2.9
VSR				pmax	pmax		
	comp=Z,30nm,0.7s						
VSR				MLR	MLR		
	comp=Z,2µm,21.0s						
POKR	Poker Plat Res	83.44	25	P	P	04 49 52.5	+0.8
	baz=270						
DHY	Denali Highway	83.46	27	eP	P	04 49 52.3	+0.4
	comp=Z,120nm,1.0s						
SCM	Sheep Creek Mo	83.47	28	eP	P	04 49 52.4	+0.5
	comp=Z,608nm,1.1s						
LPSR	Galich'ya Gora	83.53	322	eP	P	04 49 50.4	-1.9
LPSR				pmax	pmax		
	comp=Z,60nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,1µm,17.0s						
HDA	Harding Lake	83.65	26	eP	P	04 49 52.8	+0.1
	comp=Z,224nm,1.0s						
HDA	Harding Lake	83.65	26	P	P	04 49 52.8	+0.1
	baz=270						
ILAR	Eielson Array	83.67	26	P	P	04 49 52.4	-0.5
	comp=Z,12nm,0.8s,baz=240,slow=4.7,SNR=62						
ILAR				PKKPbc	PKKPbc	05 08 07.8	-4.4
	comp=Z,2.1nm,1.0s,baz=57,slow=2.0,SNR=7.6						
ILAR				PKPPKP		05 16 12.2	
	comp=Z,2.6nm,1.2s,baz=64,slow=1.7,SNR=7.1						
ILAR				LR	LR	05 26 14.5	
	comp=Z,857nm,22.0s,baz=277,slow=35						
ILB	Eielson Array	83.67	26	eP	P	04 49 52.5	-0.4
IL1	Eielson Array	83.67	26	eP	P	04 49 51.8	-1.0
TMCR	Tamitsa	83.85	334	eP	P	04 49 51.6	-2.1
TMCR				pmax	pmax		
	comp=Z,189nm,0.8s						
KLU	Klutina	84.15	29	eP	P	04 49 55.9	+0.5
	comp=Z,184nm,1.0s						
MOS	Moscow	84.23	325	eP	P	04 49 53.4	-2.3
MOS				e		04 50 47.1	
MOS				eS	S	05 00 06.4	-4.9
MOS				pmax	pmax		
	comp=Z,121nm,1.4s						
MOS				pmax	pmax		
	comp=Z,600nm,2.9s						
MOS				MLR	MLR		
	comp=Z,2µm,19.0s						
DIV	Divide	84.23	29	eP	P	04 49 56.6	+0.8
	comp=Z,922nm,1.3s						
PRP	Porcupine Dome	84.24	25	eP	P	04 49 55.8	-0.1
	comp=Z,71nm,1.0s						
EYAK	Cordova Ski Ar	84.26	30	eP	P	04 49 56.9	+1.1
	comp=Z,516nm,1.2s						
FYU	Fort Yukon	84.34	24	eP	P	04 49 57.1	+1.0
	comp=Z,519nm,1.1s						
HARP	HAARP	84.49	28	eP	P	04 49 58.2	+1.2
	comp=Z,283nm,1.0s						
RIDG	Independ'e Rid	84.58	27	eP	P	04 49 57.7	+0.2
	comp=Z,470nm,1.1s						
ANN	Anapa	84.80	314	eP	P	04 49 56.6	-2.3
ANN				e		04 53 21.4	
ANN				eS	S	05 00 09.6	-7.8
ANN				e*SS	pS	05 01 00.9	+5.6
ANN				pmax	pmax		
	comp=Z,81nm,0.9s						
ANN				MLR	MLR		
	comp=Z,1µm,20.0s						
ANN				MLR	MLR		
	comp=N,1µm,20.0s						
OBN	Obninsk	84.85	325	eP	P	04 49 58.0	-0.9
	comp=N,431nm,1.1s						
OBN	Obninsk	84.85	325	c iP	P	04 49 57.0	-1.9
OBN				i *PP	sP	04 50 48.6	+7.0
OBN				pmax	pmax		
	comp=Z,165nm,1.2s						
OBN	Obninsk	84.85	325	P	P	04 49 58.0	-0.9
	comp=Z,16nm,0.8s,baz=68,slow=5.5,SNR=24						
OBN				LR	LR	05 31 40.2	
	comp=Z,375nm,18.3s,baz=94,slow=38						
SCRK	Sand Creek	84.95	26	eP	P	04 49 59.8	+0.3
	comp=Z,186nm,1.2s						
HMT	Hamilton	85.00	30	eP	P	04 50 00.5	+0.9
	comp=Z,226nm,0.9s						
LVZ	Lovozero	85.11	338	eP	P	04 49 59.6	-0.5
	comp=Z,187nm,1.4s						
LVZ	Lovozero	85.11	338	i P	P	04 50 00.6	+0.5
LVZ				pmax	pmax		
	comp=Z,42nm,1.2s						
MENT	Mentasta	85.13	27	eP	P	04 50 01.5	+1.3
	comp=Z,177nm,1.0s						
VNDA	Vanda	85.56	173	eP	P	04 50 02.8	+0.8
	comp=Z,83nm,1.1s						
VNDA	Vanda	85.56	173	eP	P	04 50 02.8	+0.8
VNDA				pmax	pmax		
	comp=Z,83nm,1.1s						
VNDA	Vanda	85.56	173	P	P	04 50 02.5	+0.5
	comp=Z,6.6nm,0.6s,baz=318,slow=5.6,SNR=14						
VNDA				LR	LR	05 27 52.8	
	comp=Z,2µm,20.2s,baz=340,slow=35						
APA	Apatity	85.61	337	⇑iP	P	04 50 01.0	-1.4
APA				i		04 53 23.0	
APA				i S	S	05 00 21.0	-3.6
APA				i SS	SS	05 06 07.0	+4.3
APA				pmax	pmax		
	comp=Z,33nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
ASF	Jabal al Asfar	86.02	302	P	P	04 50 05.3	-0.1
	comp=Z,15nm,0.8s,baz=6.3,slow=3.3,SNR=12						
EGAK	Eagle	86.12	25	eP	P	04 50 05.2	+0.2
	comp=Z,111nm,1.1s						
PPT	Papeete	86.64	108	P	P	04 50 10.4	+1.9
	comp=Z,12nm,0.7s,baz=252,slow=20,SNR=2.8						
PPT				LR	LR	05 24 09.6	
	comp=Z,806nm,19.7s,baz=256,slow=32						
PPT2	Papeete2	86.64	108	eP	P	04 50 10.4	+1.8
	comp=Z,112nm,1.4s						
PPT2	Papeete2	86.64	108	ePP	PP	04 53 32.0	-0.4
	comp=Z,321nm,22.8s						
PPT2				eS	S	05 00 35.5	-1.1
	comp=Z,6µm,27.2s						
PPT2				eSS	SS	05 06 17.6	-3.0
	comp=Z,3µm,25.5s						
PPT2				eLQ	LQ	05 13 55.5	
	comp=Z,8µm,41.8s						
PPT2				eLR	LR	05 17 35.0	
	comp=Z,6µm,30.5s,baz=268						
PAE	Paea	86.65	108	eP	P	04 50 10.3	+1.8
	comp=Z,12nm,1.1s						
SWQJ	Swaqa	86.80	301	P	P	04 50 08.4	-0.8
TIAR	Tiarei	86.86	108	eP	P	04 50 11.6	+2.0
	comp=Z,18nm,0.9s						
HOPEN	Hopen	86.93	347	eP	P	04 50 08.2	-0.5
DAWY	Dawson	86.96	26	eP	P	04 50 09.5	+0.2
	comp=Z,103nm,1.1s						
TVO	Taravao	86.97	108	eP	P	04 50 12.1	+1.9
	comp=Z,25nm,1.0s						
WALJ	Wala	86.99	301	P	P	04 50 11.7	+1.7
SIM	Simferopol'	87.14	315	eP	P	04 50 09.0	-1.4
SIM				e		04 53 31.0	
SIM				eS	S	05 00 34.0	-6.3
SIM				ePS	PS	05 02 09.0	+12
SIM				pmax	pmax		
	comp=Z,290nm,10.6s						
KARJ		87.16	301	P	P	04 50 23.7	+13
JDRJ	Daraweish	87.18	300	P	P	04 50 11.9	+0.8
HSNJ	Maan	87.20	300	P	P	04 50 11.3	+0.1
MMAI	Mount Meron Ar	87.21	303	P	P	04 50 10.2	-0.9
	comp=Z,13nm,1.0s,baz=109,slow=12,SNR=6.2						
TBI	Tubuai	87.47	114	ePP	PP	04 53 37.9	-1.0
	comp=Z,398nm,25.0s						
TBI				eS	S	05 00 42.9	-1.3
	comp=Z,5µm,29.0s						
TBI				eSS	SS	05 06 32.7	+0.3
	comp=Z,4µm,25.8s						
TBI				eLQ	LQ	05 14 27.5	
	comp=Z,3µm,29.0s						
TBI				eLR	LR	05 17 58.0	
	comp=Z,4µm,31.2s						
KEV	Kevo	87.65	340	eP	P	04 50 11.5	-0.8
	comp=Z,56nm,1.0s						
KEV	Kevo	87.65	340	eP	P	04 50 11.5	-0.8
KEV				pmax	pmax		
	comp=Z,56nm,1.0s						
EPYK	Eagle Plains	87.75	24	eP	P	04 50 12.9	-0.1
	comp=Z,162nm,1.0s						
EPYK	Eagle Plains	87.75	24	P	P	04 50 13.1	+0.1
	baz=279						
HRFI	Mount Harif	87.79	300	P	P	04 50 13.0	-0.9
PUL	Pulkovo	87.80	330	ceP	P	04 50 12.2	-1.0
PUL				pmax	pmax		
	comp=Z,92nm,0.4s						
PUL	Pulkovo	87.80	330	eP	P	04 50 12.2	-1.0
EIL	Elat	87.89	299	P	P	04 50 14.4	0.0
EIL	Elat	87.89	299	P	P	04 50 12.8	-1.5
	comp=Z,7.6nm,1.0s,baz=57,slow=13,SNR=7.5						
PMOR	Pomariorio Ree	87.94	105	eP	P	04 50 17.0	+2.2
	comp=Z,354nm,1.2s						
PMOR	Pomariorio Ree	87.94	105	eT	T	06 27 10.0	
	comp=Z,6.3nm,0.2s						
BR131	Keskin Array S	87.99	310	eP	P	04 50 12.9	-1.9
BRTR	Keskin Array B	87.99	310	P	P	04 50 12.8	-2.1
	comp=Z,6.8nm,0.8s,baz=116,slow=4.5,SNR=30						
BRTR				LR	LR	05 34 33.2	
	comp=Z,434nm,20.2s,baz=72,slow=39						
ARCES	ARCESS Array B	88.21	340	P	P	04 50 13.9	-1.2
	comp=Z,26nm,0.7s,baz=81,slow=3.8,SNR=50						
ARCES				PKKPbc	PKKPdf	05 07 58.0	+3.0
	comp=Z,1.2nm,0.7s,baz=262,slow=3.6,SNR=7.9						
ARCES				LR	LR	05 36 16.6	
	comp=Z,2µm,18.6s,baz=80,slow=40						
ARE0	ARCESS Array S	88.21	340	eP	P	04 50 14.0	-1.1
VAH	Vaihoa	88.23	105	eP	P	04 50 18.3	+2.2
	comp=Z,170nm,1.1s						
VAH	Vaihoa	88.23	105	eT	T	06 27 31.5	
	comp=Z,4.2nm,0.2s						
HYT	Haines Junctio	88.27	29	eP	P	04 50 16.3	+0.6
	comp=Z,60nm,0.9s						
SPA0	Spitsbergen Ar	88.30	349	eP	P	04 50 15.4	+0.1
SPA0	Spitsbergen Ar	88.30	349	eP	P	04 50 15.0	-0.3
SPITS	Spitsbergen Ar	88.30	349	P	P	04 50 14.6	-0.7
	comp=Z,8.0nm,0.4s,baz=92,slow=8.6,SNR=58						
HAMF	Hammerfest	88.58	341	eP	P	04 50 15.1	-1.6
INK	Inuvik	88.62	21	eP	P	04 50 17.0	+0.1
	comp=Z,149nm,1.3s						
INK				PKKPbc	PKKPdf	05 07 57.2	+3.0
INK	Inuvik	88.62	21	eP	P	04 50 17.0	+0.1
INK				pmax	pmax		
	comp=Z,149nm,1.3s						
INK	Inuvik	88.62	21	P	P	04 50 16.6	-0.2
	comp=Z,39nm,1.3s,baz=273,slow=5.3,SNR=33						
INK				PKKPbc	PKKPdf	05 07 57.2	+3.0
	comp=Z,1.4nm,0.5s,baz=52,slow=3.1,SNR=7.0						
INK				LR	LR	05 31 38.5	
	comp=Z,698nm,21.4s,baz=260,slow=36						
ANTO	Ankara	88.63	310	eP	P	04 50 17.0	-0.7
	comp=Z,150nm,0.9s						
ANTO	Ankara	88.63	310	⇑iP	P	04 50 16.5	-1.2
ANTO	Ankara	88.63	310	eP	P	04 50 17.0	-0.7
ANTO				pmax	pmax		
	comp=Z,149nm,0.9s						
KMBO	Kilima Mbogo	88.65	269	eP	P	04 50 18.0	-0.5
	comp=Z,155nm,1.8s						
KMBO	Kilima Mbogo	88.65	269	i P	P	04 50 17.3	-1.2
	SNR=15						
KMBO	Kilima Mbogo	88.65	269	P	P	04 50 17.9	-0.7
	comp=Z,4.5nm,0.8s,baz=52,slow=6.0,SNR=17						
KMBO				LR	LR	05 28 17.8	
	comp=Z,523nm,20.5s,baz=88,slow=34						
KBS	Kingsbay	88.83	350	eP	P	04 50 17.6	-0.2
	comp=Z,35nm,0.8s						
KBS	Kingsbay	88.83	350	eP	P	04 50 17.6	-0.2
KBS				pmax	pmax		
	comp=Z,35nm,0.8s						
KBS	Kingsbay	88.83	350	eP	P	04 50 16.9	-0.9
BJO	Bjornoya	88.86	345	eP	P	04 50 18.5	+0.6
HSPB	Hornsund (broa	88.88	348	eP	P	04 50 18.2	+0.2
HSPB				eS	SKSac	05 00 37.2	+0.7
HSPB	Hornsund (broa	88.88	348	eP	P	04 50 17.4	-0.7
KTK1	Kautokeino	89.11	339	eP	P	04 50 17.9	-1.4
WHY	Whitehorse	89.57	29	eP	P	04 50 22.0	+0.3
	comp=Z,92nm,1.1s						
FIA1	FINESS Array S	89.59	332	eP	P	04 50 20.3	-1.3
	comp=Z,161nm,1.3s						
FINES	FINESS Array B	89.59	332	P	P	04 50 20.2	-1.4
	comp=Z,16nm,0.6s,baz=84,slow=5.9,SNR=86						
FINES				LR	LR	05 33 02.9	
	comp=Z,2µm,21.8s,baz=82,slow=37						
AKASG	Malin Array Be	89.72	321	P	P	04 50 20.4	-2.0
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG				MLR	MLR		
	comp=Z,768nm,22.0s						
AKASG	Malin Array Be	89.72	321	P	P	04 50 20.4	-2.0
	comp=Z,4.3nm,0.6s,baz=67,slow=4.5,SNR=19						
AKASG				LR	LR	05 31 33.6	
	comp=Z,768nm,21.9s,baz=65,slow=36						
AKBB	Malin Array Si	89.72	321	eP	P	04 50 20.4	-2.0
	comp=Z,82nm,1.0s						

KIEV	Kiev	89.73	321	eP	P	04 50 20.4	-2.1
	comp=Z,87nm,1.1s						
KIEV	Kiev	89.73	321	⇑iP	P	04 50 20.0	-2.5
KIEV	Kiev	89.73	321	i P	P	04 50 19.8	-2.7
	SNR=5.4						
KIEV	Kiev	89.73	321	c iP	P	04 50 20.5	-2.0
KIEV				pmax	pmax		
	comp=Z,22nm,1.7s						
AK11	Malin Array Si	89.75	321	eP	P	04 50 20.6	-2.1
VSU	Vasula	89.83	329	eP	P	04 50 21.5	-1.3
VSU				pmax	pmax		
	comp=Z,68nm,1.0s						
VSU	Vasula	89.83	329	eP	P	04 50 20.8	-2.0
VSU				IAmb	IAmb	04 50 52.6	
	comp=Z,356nm,1.1s						
MICGM	Minsk	89.91	325	eP	P	04 50 21.0	-2.3
MICGM				eP	PcP	04 50 24.0	-0.5
MICGM				epP	pP	04 50 46.0	-7.8
MICGM				ePP	PP	04 54 26.0	+29
MICGM				eSKS	SKSac	05 00 38.0	-5.3
MICGM				eS	S	05 01 00.0	-6.0
MICGM				esS	pS	05 01 40.0	-4.5
MICGM				eSP	ScS	05 02 10.0	+60
MICGM				eSS	SS	05 05 10.0	-116
MICGM				eSSS	SSS	05 09 10.0	
MICGM				eLQ	LQ	05 25 10.0	
MICGM				eLR	LR	05 28 38.0	
MICGM				LRM	MLR	05 30 38.0	
	comp=Z,3.8nm,24.0s						
MNK	Minsk	89.91	325	eP	P	04 50 21.0	-2.3
MNK				e		05 00 38.0	
MNK				eS	S	05 01 00.0	-6.0
MNK				e		05 02 10.0	
MNK				MLR	MLR		
	comp=Z,4µm,16.0s						
BESE	Bessie Mountai	89.98	31	eP	P	04 50 23.9	+0.3
	comp=Z,58nm,1.2s						
JIS	Juneau Island	90.28	31	eP	P	04 50 25.2	+0.3
	comp=Z,62nm,1.2s						
TRO	Tromso	90.42	340	eP	P	04 50 24.6	-0.7
TRO				ePP	PP	04 54 01.9	+1.0
IDID	Didziasalis	90.42	326	eP	P	04 50 24.1	-1.5
IDID				IAmb	IAmb	04 50 55.7	
	comp=Z,34nm,0.9s						
NACGM	Naroch	90.47	325	eP	P	04 50 24.0	-1.9
NACGM				eP	P	04 50 24.0	-1.9
NACGM				epP	sP	04 51 10.0	+1.2
NACGM				ePP	PP	04 54 06.0	+4.3
NACGM				eSKS	S	05 01 06.0	-5.1
NACGM				esS	pS	05 01 40.0	-10
NACGM				ePS	PS	05 02 16.0	-17
NACGM				eSS	SS	05 07 12.0	-1.9
NACGM				eLQ	LQ	05 21 50.0	
NACGM				eLR	LR	05 30 19.0	
NACGM				LRM	MLR	05 34 41.0	
	comp=Z,3.7nm,17.0s						
KIS	Kishinev	90.55	317	eP	P	04 50 25.0	-1.4
KIS				epP	pP	04 50 52.0	-5.0
KIS	Kishinev	90.55	317	ePP	PP	04 54 04.0	+1.4
KIS	Kishinev	90.55	317	ePS	PS	05 02 32.0	-2.4
KIS				eSS	SS	05 07 05.0	-11
KIS				eL	L	05 24 00.0	
KIS				LRM	MLR	05 35 00.0	
	comp=Z,1µm,19.0s						
KIS	Kishinev	90.55	317	eP	P	04 50 25.0	-1.4
KIS				e		04 51 21.0	
KIS				e		04 54 04.0	
KIS				ePPP	PPP	04 55 58.0	
KIS				e		05 00 46.0	
KIS				eS	S	05 01 12.0	-0.2
KIS				e		05 02 14.0	
KIS				ePS	PS	05 02 32.0	-2.4
KIS				eSS	SS	05 07 05.0	-11
KIS				MLR	MLR		
	comp=Z,2µm,22.0s						
IZAR	Zarasai	90.61	326	eP	P	04 50 24.9	-1.6
IZAR				IAmb	IAmb	04 50 56.5	
	comp=Z,28nm,0.9s						
ISAL	Salakas	90.71	326	eP	P	04 50 25.7	-1.3
ISAL				IAmb	IAmb	04 50 56.9	
	comp=Z,19nm,0.8s						
TLCR		90.84	315	⇑iP	P	04 50 27.1	-0.7
LEOM	Leova	91.02	317	⇓iP	P	04 50 27.2	-1.4
LEOM	Leova	91.02	317	P	P	04 50 27.2	-1.4
TIRR	Tirgusor	91.23	315	⇓iP	P	04 50 28.5	-1.1
TIRR	Tirgusor	91.23	315	P	P	04 50 28.5	-1.1
CFR	Carcaliu	91.31	315	⇑iP	P	04 50 28.5	-1.5
CFR	Carcaliu	91.31	315	P	P	04 50 28.5	-1.5
TLB	Topalu	91.47	315	⇑iP	P	04 50 29.5	-1.3
TLB	Topalu	91.47	315	P	P	04 50 29.4	-1.3
HARR	Harsova	91.54	315	⇑iP	P	04 50 29.6	-1.5
HARR	Harsova	91.54	315	P	P	04 50 29.5	-1.5
ICOR	Ion Corvin	91.72	314	⇓iP	P	04 50 31.0	-0.9
WRAK	Wrangell Islan	91.75	33	eP	P	04 50 32.2	+0.4
	comp=Z,102nm,1.4s						
PETR	Petresti	91.85	316	⇑iP	P	04 50 31.7	-0.7
ODBI	Odobesti	91.96	316	⇑iP	P	04 50 32.3	-0.7
MANT	Manisa	92.07	309	eP	P	04 50 34.0	0.0
TESR	Tescani	92.10	317	⇓iP	P	04 50 32.4	-1.3
PRD	Provadia	92.17	314	P	P	04 50 35.3	+1.3
VRI	Vrincioaia	92.17	316	⇑iP	P	04 50 33.4	-0.6
VRI	Vrincioaia	92.17	316	P	P	04 50 33.4	-0.6
PLOR	Plostina	92.22	316	⇑iP	P	04 50 33.5	-0.8
PLOR	Plostina	92.22	316	P	P	04 50 33.4	-0.8
STEI	Steigen	92.25	339	eP	P	04 50 32.3	-1.5
SLIT	Slitere, Latvi	92.32	328	eP	P	04 50 31.9	-2.5
SLIT				IAmb	IAmb	04 51 03.1	
	comp=Z,161nm,0.9s						
LEHL	Lehliu	92.36	315	⇑iP	P	04 50 33.3	-1.5
BIZ	Bicaz	92.39	317	⇑iP	P	04 50 33.9	-1.1
ISR	Istrita	92.43	316	⇑iP	P	04 50 33.2	-2.1
DLBC	Dease Lake	92.48	31	eP	P	04 50 36.1	+1.0
	comp=Z,38nm,1.0s						
DLBC	Dease Lake	92.48	31	P	P	04 50 36.2	+1.0
	comp=Z,21nm,1.2s,baz=265,slow=8.4,SNR=5.3						
SUW	Suwalki	92.71	325	eP	P	04 50 34.8	-1.5
SUW	Suwalki	92.71	325	eP	P	04 50 34.8	-1.5
LOF	Lofoten	92.77	340	eP	P	04 50 36.4	+0.1
MLR	Muntele Rosu	92.78	316	eP	P	04 50 35.5	-1.5
	comp=Z,80nm,1.0s						
MLR	Muntele Rosu	92.78	316	⇑iP	P	04 50 35.9	-1.0
MLR	Muntele Rosu	92.78	316	P	P	04 50 35.9	-1.0
	comp=Z,7.2nm,0.6s,baz=314,slow=5.5,SNR=12						
MLR				LR	LR	05 37 54.3	
	comp=Z,3µm,21.8s,baz=76,slow=39						
SECR		92.78	316	⇑iP	P	04 50 36.4	-0.4
BURAR	Bucovina Array	92.85	318	⇑iP	P	04 50 36.1	-1.1
BURAR	Bucovina Array	92.85	318	P	P	04 50 36.1	-1.1
BUR04	Bucovina Ar. S	92.85	318	eP	P	04 50 35.4	-1.9
BUR08	Bucovina Ar. S	92.86	318	eP	P	04 50 36.1	-1.1
JMB	Yambol	92.89	313	P	P	04 50 33.7	-3.7
PBUR	Paburg	92.92	327	eP	P	04 50 35.0	-2.2
PBUR				IAmb	IAmb	04 51 06.7	
	comp=Z,177nm,1.5s						
DOPR	Dopca	93.07	317	⇑iP	P	04 50 36.2	-1.9
LVV	L'vov	93.15	321	eP	P	04 50 37.1	-1.3
LVV				e		05 00 58.2	
LVV				eS	S	05 01 30.3	-5.1
MOR8	Moi Rana	93.19	338	eP	P	04 50 36.1	-2.2
SZH	Strazhica	93.21	314	P	P	04 50 48.6	+10
VOIR		93.41	316	⇓iP	P	04 50 38.0	-1.8
VOIR		93.41	316	P	P	04 50 38.0	-1.8
MTUR	Matau	93.44	316	⇑iP	P	04 50 41.6	+1.6
KONS	Konsvik	93.56	338	eP	P	04 50 40.1	+0.2
GOLR		93.59	316	⇑iP	P	04 50 42.7	+2.2
HUMR	Humele	93.64	315	⇑iP	P	04 50 39.2	-1.6
KARP	Karpathos	93.65	306	eP	P	04 50 41.1	+0.1
	comp=Z,142nm,1.0s						
KARP				epP	pP	04 51 08.8	-2.7
ARR	Arges	93.71	316	⇑iP	P	04 50 39.0	-2.2
KDZ	Kurdzhali	93.89	312	P	P	04 50 45.4	+3.4
BMR	Baia Mare	93.98	319	⇓iP	P	04 50 40.1	-2.1
SYO	Syowa Base	93.98	201	⇑iP	P	04 50 41.2	-0.5
SYO	Syowa Base	93.98	201	⇓iPcP	PcP	04 50 42.4	+0.3
CJR	Cluj-Napoca	94.12	318	⇓iP	P	04 50 41.9	-1.1
CJR	Cluj-Napoca	94.12	318	P	P	04 50 41.9	-1.1
VLAD	Vladila	94.15	315	⇑iP	P	04 50 42.0	-1.1
LOT	Lotru	94.28	316	⇑iP	P	04 50 42.5	-1.4
RZN	Rozhen	94.40	313	P	P	04 50 40.4	-4.2
TRPA	Tarpa	94.50	319	⇑iP	P	04 50 43.4	-1.2
TRPA	Tarpa	94.50	319	eP	P	04 50 43.1	-1.5
UZH	Uzhgorod	94.54	320	⇓iP	P	04 50 43.2	-1.6
UZH				e		05 01 03.9	
UZH				eS	S	05 01 44.2	-3.3
UZH				e		05 03 02.9	
UZH				MLR	MLR		
	comp=N,130nm,16.0s						
UZH				MLR	MLR		
	comp=E,180nm,16.0s						
UZH				MLR	MLR		
	comp=Z,100nm,16.0s						
BEL	Belsk	94.66	323	eP	P	04 50 44.8	-0.4
BEL	Belsk	94.66	323	eP	P	04 50 44.8	-0.4
DRGR		94.70	318	⇑iP	P	04 50 44.6	-1.1
NSS	Namsos	94.79	337	eP	P	04 50 43.6	-2.0
SRE	Strehaia	94.85	316	⇑iP	P	04 50 46.2	-0.1
SRE	Strehaia	94.85	316	P	P	04 50 46.1	-0.2
TAOE	Nuku Hiva Isla	94.88	98	ePP	PP	04 54 35.8	-2.0
	comp=Z,354nm,23.0s						
TAOE				eSKSac	SKSac	05 01 12.7	-0.1
	comp=Z,2µm,27.0s						
TAOE				eSP	SP	05 03 07.3	-1.7
	comp=Z,3µm,27.0s						
TAOE				eSS	SS	05 08 17.7	-2.0
	comp=Z,1µm,24.9s						
TAOE				eLQ	LQ	05 17 24.8	
	comp=Z,3µm,36.8s						
TAOE				eLR	LR	05 21 24.2	
	comp=Z,6µm,27.5s,baz=280						
TAOE	Nuku Hiva Isla	94.88	98	eT	T	06 35 47.3	
	comp=Z,34nm,0.2s						
GZR	Gura Zlata	94.98	316	⇑iP	P	04 50 45.8	-1.2
GZR	Gura Zlata	94.98	316	P	P	04 50 45.8	-1.2
DAG	Danmarks Havn	95.11	352	i P	P	04 50 46.4	-0.4
DAG	Danmarks Havn	95.11	352	i P	P	04 50 46.4	-0.4
PUNG	Punghina	95.12	315	⇓iP	P	04 50 46.3	-1.3
MMB	Musomiste	95.15	313	P	P	04 50 43.8	-4.0
VTS	Vitosha	95.28	314	eP	P	04 50 46.6	-2.0
	comp=Z,26nm,1.0s						
VTS	Vitosha	95.28	314	⇑iP	P	04 50 47.2	-1.3
VTS	Vitosha	95.28	314	eP	P	04 50 46.6	-2.0
VTS				pmax	pmax		
	comp=Z,26nm,1.0s						
VTS	Vitosha	95.28	314	P	P	04 50 46.1	-2.4
IDI	Anoyia	95.52	306	eP	P	04 50 50.2	+0.5
	comp=Z,56nm,1.1s						
IDI				epP	pP	04 51 17.0	-3.2
IDI	Anoyia	95.52	306	⇑iP	P	04 50 51.6	+1.9
IDI	Anoyia	95.52	306	P	P	04 50 50.9	+1.2
	comp=Z,5.0nm,0.8s,baz=41,slow=20,SNR=3.0						
IDI				LR	LR	05 42 09.7	
	comp=Z,323nm,19.4s,baz=67,slow=41						
SIRR	Siria	95.53	317	⇓iP	P	04 50 48.3	-1.1
NIE	Niedzica	95.61	321	eP	P	04 50 47.9	-1.8
NIE	Niedzica	95.61	321	eP	P	04 50 47.9	-1.8
QSPA	South Pole Qui	95.67	180	eP	P	04 50 49.8	+0.1
	comp=Z,75nm,1.1s						
OJC	Ojcow	95.70	322	eP	P	04 50 50.3	+0.2
OJC	Ojcow	95.70	322	eP	P	04 50 50.7	+0.6
	comp=Z,34nm,0.9s						
OJC	Ojcow	95.70	322	eP	P	04 50 50.3	+0.2
BZS	Buzias	95.72	317	⇑iP	P	04 50 48.7	-1.6
BZS	Buzias	95.72	317	P	P	04 50 48.6	-1.7
HFS	Hagfors	95.78	332	P	P	04 50 48.3	-1.9
	comp=Z,5.3nm,0.5s,baz=101,slow=4.7,SNR=46						
MDVR	Moldovita	95.86	316	⇑iP	P	04 50 49.8	-1.2
RES	Resolute Bay	95.98	10	eP	P	04 50 51.1	+0.3
	comp=Z,51nm,1.1s						
RES				PP	PP	04 54 49.2	+5.1
RES	Resolute Bay	95.98	10	eP	P	04 50 51.1	+0.3
RES						04 54 49.3	
RES				pmax	pmax		
	comp=Z,51nm,1.1s						
RES	Resolute Bay	95.98	10	P	P	04 50 50.8	0.0
	comp=Z,9.6nm,1.0s,baz=313,slow=5.2,SNR=26						
RES				PP	PP	04 54 49.2	+5.1
	comp=Z,9.0nm,1.0s,baz=272,slow=8.0,SNR=3.8						
LANS	Liptovska Anna	96.20	321	eP	P	04 50 56.2	+3.8
LANS	Liptovska Anna	96.20	321	eP	P	04 50 56.2	+3.8
LANS				epP	pP	04 51 17.1	-5.9
STIP	Stip	96.25	313	eP	P	04 50 47.9	-4.9
PSZ	Piszkesteto	96.27	319	eP	P	04 50 53.2	+0.4
	comp=Z,40nm,1.1s						
PSZ	Piszkesteto	96.27	319	⇑iP	P	04 50 51.0	-1.8
PSZ	Piszkesteto	96.27	319	eP	P	04 50 52.0	-0.8
NC405	NORSAR Array S	96.29	334	eP	P	04 50 50.8	-1.8
GKP	Gorka Klasztor	96.32	325	eP	P	04 50 51.7	-1.1
GKP	Gorka Klasztor	96.32	325	eP	P	04 50 51.7	-1.1
NC303	NORSAR Array S	96.40	334	eP	P	04 50 51.3	-1.7
NC602	NORSAR Array S	96.52	333	eP	P	04 50 51.8	-1.8
NC602	NORSAR Array S	96.52	333	eP	P	04 50 52.8	-0.7
NORES	NORESS Array B	96.52	333	P	P	04 50 54.6	+1.0
NB2	NORSAR Subarra	96.54	334	P	P	04 50 51.2	-2.5
	comp=Z,32nm,1.0s,baz=66,slow=4.6						
NB2	NORSAR Subarra	96.54	334	P	P	04 50 51.2	-2.5
	baz=66,slow=4.6						
NOA	NORSAR Array B	96.54	334	P	P	04 50 51.7	-2.0
	comp=Z,9.4nm,0.8s,baz=66,slow=4.6,SNR=49						
NOA				LR	LR	05 39 07.9	
	comp=Z,2µm,18.7s,baz=65,slow=38						
NC204	NORSAR Array S	96.64	334	eP	P	04 50 52.6	-1.6
NBO00	NORSAR Array S	96.74	334	eP	P	04 50 53.1	-1.4
NAO01	NORSAR Array S	96.77	333	eP	P	04 50 52.7	-2.0
VYHS	Vyhne	96.79	320	eP	P	04 50 53.2	-1.9
VYHS				pmax	pmax		
	comp=Z,12nm,1.2s						
VYHS	Vyhne	96.79	320	eP	P	04 50 53.1	-2.0
VYHS				e		04 51 14.0	
VYHS	Vyhne	96.79	320	eS	S	05 02 39.0	+32
VYHS				eSS	SS	05 09 17.9	+34
VYHS				e		05 13 28.4	
OKC	Ostrava-Krasne	96.83	322	ePP	PP	04 54 49.7	-1.8
OKC				eS	S	05 02 04.4	-2.9
OKC				ex	x	05 09 38.5	
OKC				AMS	AMS	05 36 10.0	
	comp=Z,1µm,15.2s						
BSD	Bornholm Skovb	96.99	327	i P	P	04 50 55.0	-0.8
	comp=Z,3µm,20.0s						
BSD	Bornholm Skovb	96.99	327	eP	P	04 50 55.0	-0.8
BSD				MLR	MLR		
	comp=Z,3µm,20.0s						
DOMB	Dombas	97.04	335	eP	P	04 50 54.7	-1.2
DIVS	Divibare	97.22	316	eP	P	04 50 55.4	-1.8
MORC	Moravsky Berou	97.22	322	eP	P	04 50 56.0	-1.1
	comp=Z,36nm,1.3s						
MORC	Moravsky Berou	97.22	322	⇑iP	P	04 50 54.4	-2.6
MORC	Moravsky Berou	97.22	322	eP	P	04 50 56.0	-1.1
MORC				pmax	pmax		
	comp=Z,36nm,1.3s						
MORC	Moravsky Berou	97.22	322	eP	P	04 50 56.2	-0.8
MOL	Molde	97.43	336	eP	P	04 50 55.5	-2.1
MORH	Mrgy, Hungar	97.56	318	eP	P	04 50 57.1	-1.5
KSP	Ksiaz	97.65	323	eP	P	04 50 58.3	-0.6
KSP	Ksiaz	97.65	323	eP	P	04 50 58.3	-0.6
JMIC	Jan Mayen	97.66	346	LR	LR	05 41 47.8	
	comp=Z,566nm,18.6s,baz=52,slow=39						
DPC	Dobruska-Polom	97.79	322	eP	P	04 50 58.9	-0.7
DPC				ex	x	04 51 31.9	
DPC				ePP	PP	04 54 58.5	-0.4
DPC				eS	S	05 02 10.5	-5.1
DPC				ex	x	05 09 53.2	
DPC				AMS	AMS	05 36 50.0	
	comp=Z,2µm,19.8s						
DPC	Dobruska-Polom	97.79	322	eP	P	04 50 58.9	-0.7
DPC				e		04 54 58.5	
DPC				e		05 02 10.5	
DPC				MLR	MLR		
	comp=Z,2µm,19.8s						
MODS	Modra-Piesok	97.82	320	epP	pP	04 51 23.4	-6.9
MODS				ePP	PP	04 55 01.9	+2.8
MODS				eS	S	05 02 20.0	+4.1
MODS				eSS	SS	05 09 36.5	+38
MODS				e		05 13 30.3	
MODS				eL	L	05 29 43.6	
AKN	Aaknes	97.84	335	eP	P	04 50 58.7	-0.8
KONO	Kongsberg	97.86	333	eP	P	04 50 58.4	-1.2
UPC	Upice	97.93	323	eP	P	04 50 59.4	-0.7
UPC				epP	pP	04 51 25.9	-4.9
UPC				ePP	PP	04 55 01.4	+1.6
UPC				AMS	AMS	05 35 30.0	
	comp=Z,2µm,21.8s						
UPC	Upice	97.93	323	eP	P	04 50 59.4	-0.7
UPC				e		04 55 01.4	
UPC				MLR	MLR		
	comp=Z,2µm,21.8s						
VRAC	Vranov	97.95	321	⇑iP	P	04 50 57.9	-2.4
VRAC	Vranov	97.95	321	eP	P	04 50 59.6	-0.7
VRAC	Vranov	97.95	321	P	Pdif	04 51 00.5	+0.2
	comp=Z,2.1nm,0.4s,baz=99,slow=7.8,SNR=5.6						
VRAC				LR	LR	05 40 03.0	
	comp=Z,961nm,19.8s,baz=70,slow=38						
YKW3	Yellowknife Ar	97.99	24	eP	P	04 50 60.0	-0.1
	comp=Z,91nm,1.6s						
TIR	Tirane	98.02	313	eP	P	04 51 00.7	-0.1
	comp=Z,50nm,0.9s						
YKA	Yellowknife Ar	98.03	24	P	Pdif	04 51 00.6	+0.3
	comp=Z,5.0nm,0.8s,baz=300,slow=4.6,SNR=82						
YKA				PKiKP	PKiKP	04 55 33.5	+0.6
	comp=Z,1.0nm,0.7s,baz=302,slow=1.6,SNR=6.5						
YKA				PKKP	PKKPbc	05 07 30.7	-5.0
	comp=Z,3.0nm,0.7s,baz=122,slow=3.0,SNR=7.3						
YKA				PKPPKP		05 15 47.0	
	comp=Z,0.2nm,0.7s,baz=115,slow=2.9,SNR=3.3						
YKA				LR	LR	05 35 23.2	
	comp=Z,92nm,21.2s,baz=287,slow=35						
YKB5	Yellowknife Ar	98.03	24	eP	P	04 50 59.9	-0.4
KRUC	Moravsky	98.16	321	P	Pdif	04 51 01.6	+0.4
KRUC	Moravsky	98.16	321	eP	P	04 51 00.4	-0.8
PDG	Podgorica	98.18	314	⇑iP	P	04 51 00.3	-1.1
TREC	Trest	98.64	322	eP	P	04 51 02.7	-0.7
TREC				ex	x	04 51 15.8	
TREC				AMS	AMS	05 37 20.0	
	comp=Z,2µm,19.9s						
TREC	Trest	98.64	322	eP	P	04 51 02.7	-0.7
TREC				MLR	MLR		
	comp=Z,2µm,19.9s						
PVCC	Panska Ves	98.79	323	AMS	AMS	05 41 10.0	
	comp=Z,2µm,18.4s						
MATP	Matopo	98.80	250	PKKP	PKKPbc	05 07 33.4	+1.0
	comp=Z,1.5nm,0.7s,baz=270,slow=8.1,SNR=2.1						
LSZ	Lusaka	98.80	255	eP	P	04 51 04.6	-0.3
	comp=Z,8.2nm,1.0s						
LSZ	Lusaka	98.80	255	eP	P	04 51 04.6	-0.3
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CONA	Conrad Observa	98.86	320	ePdiff	P	04 51 04.6	+0.1
	comp=Z,5.0nm,0.9s						
GOPC	GO Pecny, Ondr	98.87	322	eP	P	04 51 03.6	-0.8
GOPC				ePP	PP	04 55 10.3	+3.3
GOPC				eS	S	05 02 20.8	-3.9
GOPC				eSS	SS	05 09 23.4	+10
GOPC				AMS	AMS	05 41 30.0	
	comp=Z,2µm,17.9s						
GOPC	GO Pecny, Ondr	98.87	322	eP	P	04 51 03.6	-0.8
GOPC				e		04 55 10.3	
GOPC				e		05 02 20.8	
GOPC				eSS	SS	05 09 23.4	+10
GOPC				MLR	MLR		
	comp=Z,2µm,17.9s						
BLY	Banja Luka	98.97	317	⇑iP	P	04 51 03.6	-1.3
PRU	Pruhonice	98.99	322	eP	P	04 51 00.7	-4.2
PRU				ex	x	04 51 37.8	
PRU				ePP	PP	04 55 02.3	-5.6
PRU				eS	S	05 02 24.1	-1.6
PRU				AMS	AMS	05 41 40.0	
	comp=Z,2µm,17.9s						
PRU	Pruhonice	98.99	322	eP	P	04 51 00.7	-4.2
PRU				e		04 51 37.8	
PRU				e		04 55 02.3	
PRU				e		05 02 24.1	
PRU				MLR	MLR		
	comp=Z,2µm,17.9s						
BRG	Berggiesshubel	99.04	323	i P	Pdif	04 51 04.3	-0.8
	comp=Z,9.3nm,0.8s						
BRG				i		04 51 14.8	
	comp=Z,23nm,1.0s						
BRG				pP	pP	04 51 29.0	-6.7
BRG				PP	PP	04 55 03.0	-5.3
BRG				S	S	05 02 23.0	-3.0
BRG				e		05 03 11.0	
BRG				SS	SS	05 09 44.0	+28
	comp=N,3µm,19.5s						
	comp=E,2µm,22.8s						
	comp=Z,1µm,25.0s						
BRG	Berggiesshubel	99.04	323	i P	Pdif	04 51 04.3	-0.8
BRG						04 55 03.0	
BRG				S	S	05 02 23.0	-3.0
BRG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRG				MLR	MLR		
	comp=N,3µm,19.5s						
BRG				MLR	MLR		
	comp=E,2µm,22.8s						
BRG				MLR	MLR		
	comp=Z,1µm,25.0s						
PGC	Sidney	99.16	39	eP	Pdif	04 51 05.8	+0.2
	comp=Z,38nm,1.4s						
ARSA	Arzberg	99.29	320	ePdiff	Pdif	04 51 04.1	-2.3
	comp=Z,11nm,1.0s						
NLWA	Neilton Lookou	99.31	40	eP	Pdif	04 51 08.0	+1.6
	comp=Z,55nm,1.4s						
BLS5	Blasjo	99.39	333	ePdif	Pdif	04 51 05.9	-0.6
BER	Bergen	99.42	334	ePdif	Pdif	04 51 05.7	-0.8
ASK	Askoy	99.43	334	ePdif	Pdif	04 51 06.3	-0.2
LLLB	Lillooet	99.43	37	ePdif	Pdif	04 51 07.7	+0.8
	comp=Z,26nm,1.1s						
CLL	Collm	99.44	324	ePdif	Pdif	04 51 05.8	-1.1
	comp=Z,36nm,1.2s						
CLL	Collm	99.44	324	ePdif	Pdif	04 51 05.0	-1.8
CLL				e		04 51 15.0	
CLL				epPdif	pP	04 51 35.0	-2.5
CLL				e		04 52 01.0	
CLL				e		04 54 22.0	
CLL				ePP	PP	04 55 13.0	+1.7
CLL				esPP		04 55 46.0	
CLL				e		04 55 56.0	
CLL				esPPP		04 57 52.0	
CLL				esPPPP		04 59 32.0	
CLL				eSKSac	SKSac	05 01 34.0	-0.6
CLL				eSdif	ScS	05 02 29.0	-0.3
CLL				esSdiff	pS	05 03 13.0	+3.9
CLL				eSP	SP	05 03 54.0	-2.3
CLL				ePPS	PPS	05 04 48.0	
CLL				ePKKPdf	PKKPbc	05 07 31.0	-0.4
CLL				eSS	SS	05 09 18.0	-3.2
CLL				esSS		05 10 01.0	
CLL				esSSS		05 13 54.0	
CLL				esSSSS		05 17 18.0	
CLL				e		05 19 24.0	
CLL				Lm	MLR	05 37 00.0	
	comp=Z,2µm,21.7s						
CLL	Collm	99.44	324	eP	Pdif	04 51 05.8	-1.1
CLL				pmax	pmax		
	comp=Z,36nm,1.2s						
D03D	Eldon	99.76	40	P	Pdif	04 51 08.5	+0.1
	baz=290						
SOKA	Soboth	99.80	319	ePdiff	Pdif	04 51 08.8	+0.1
	comp=Z,9.1nm,1.0s						
KHC	Kasperske Hory	99.88	322	ePdif	Pdif	04 51 08.1	-0.9
	comp=Z,14nm,1.4s						
KHC	Kasperske Hory	99.88	322	eP	Pdif	04 51 07.8	-1.1
KHC				epP	pP	04 51 39.3	-0.3
KHC				ePP	PP	04 55 04.9	-10
KHC				eS	S	05 02 29.1	-4.2
KHC				AMS	AMS	05 37 50.0	
	comp=Z,2µm,19.2s						
KHC	Kasperske Hory	99.88	322	eP	Pdif	04 51 07.8	-1.1
KHC				e		05 02 29.1	
KHC				MLR	MLR		
	comp=Z,2µm,19.2s						
MOA	Molln	99.89	320	ePdiff	Pdif	04 51 07.6	-1.5
	comp=Z,22nm,1.1s						
GEC2	GERESS Array S	99.90	322	ePdif	Pdif	04 51 08.9	-0.2
	comp=Z,22nm,1.1s						
GEC2	GERESS Array S	99.90	322	eP	Pdif	04 51 08.9	-0.2
GEC2				pmax	pmax		
	comp=Z,22nm,1.1s						
GERES	GERESS Array B	99.90	322	P	Pdif	04 51 08.0	-1.2
GERES	GERESS Array B	99.90	322	P	Pdif	04 51 08.0	-1.2
	comp=Z,1.9nm,0.7s,baz=88,slow=4.1,SNR=16						
GERES				PKiKP	PKiKP	04 55 36.9	+0.1
	comp=Z,2.2nm,1.0s,baz=80,slow=8.2,SNR=3.0						
GERES				PKKP	PKKPdf	05 07 40.7	+6.7
	comp=Z,1.1nm,0.8s,baz=222,slow=1.8,SNR=6.1						
GERES				LR	LR	05 38 50.8	
	comp=Z,1µm,21.8s,baz=70,slow=37						
D04E	Lakebay	100.08	40	P	Pdif	04 51 09.9	+0.1
	baz=290						
B05A	Bryant	100.14	39	P	Pdif	04 51 10.4	+0.4
	baz=291						

NKC	Novy Kostel	100.16	323	*e*P	Pdif	04 51 09.5	-0.6
NKC				*e*S	Sdif	05 02 33.0	-2.5
NKC				AMS	AMS	05 41 10.0	
	comp=Z,2µm,18.8s						
NKC	Novy Kostel	100.16	323	*e*P	Pdif	04 51 09.5	-0.6
NKC				*e*		05 02 33.0	
NKC				MLR	MLR		
	comp=Z,2µm,18.8s						
G03D	McMinnville, O	100.42	42	P	Pdif	04 51 11.4	+0.1
	baz=289						
E04D	Cinebar	100.43	41	P	Pdif	04 51 11.1	-0.2
	baz=290						
MOX	Moxa	100.50	324	P	Pdif	04 51 10.8	-0.8
COR	Corvallis	100.59	43	*e*Pdif	Pdif	04 51 12.5	+0.3
	comp=Z,25nm,0.9s						
COR	Corvallis	100.59	43	*e*P	Pdif	04 51 12.5	+0.3
COR				pmax	pmax		
	comp=Z,25nm,0.9s						
J01E	Myrtle Point	100.62	44	P	Pdif	04 51 12.6	+0.3
	baz=288						
RKT	Rikitea	100.73	112	*e*PP	PP	04 55 21.7	-0.6
	comp=Z,386nm,25.0s						
RKT				*e*SKSac	SKSac	05 01 44.2	+2.2
	comp=Z,2µm,26.8s						
RKT				*e*SP	SP	05 04 05.6	-6.3
	comp=Z,866nm,27.8s						
RKT				*e*SS	SS	05 09 41.9	+0.6
	comp=Z,2µm,28.8s						
RKT	Rikitea	100.73	112	*e*LQ	LQ	05 19 58.8	
	comp=Z,3µm,28.8s						
RKT				*e*LR	LR	05 24 07.0	
	comp=Z,3µm,36.8s						
KBA	Koelnbreinsper	100.75	320	*e*Pdiff	Pdif	04 51 12.8	-0.3
	comp=Z,10nm,1.1s						
SCO	Scoresbysund	100.87	349	*e*Pdif	Pdif	04 51 13.2	+0.4
SCO	Scoresbysund	100.87	349	*i* P	Pdif	04 51 12.8	0.0
SCO	Scoresbysund	100.87	349	*e*P	Pdif	04 51 13.2	+0.4
GRFO	Grafenberg	101.10	323	*e*Pdif	Pdif	04 51 15.1	+0.8
	comp=Z,19nm,1.3s						
SUMG	Summit	101.13	355	*e*Pdif	Pdif	04 51 14.9	+0.4
SUMG	Summit	101.13	355	*i* P	Pdif	04 51 14.0	-0.5
SUMG	Summit	101.13	355	*e*P	Pdif	04 51 14.9	+0.4
H04A	Detroit Lake	101.31	42	*e*Pdif	Pdif	04 51 16.8	+1.3
ABTA	Abfaltersbach	101.40	320	*e*Pdiff	Pdif	04 51 15.2	-0.6
	comp=Z,9.4nm,1.1s						
I04A	Tendick Farm,	101.46	43	P	Pdif	04 51 16.5	+0.4
	baz=290						
HUMO	Hull Mountain	101.47	45	*e*Pdif	Pdif	04 51 16.3	+0.1
	comp=Z,53nm,1.0s						
WTTA	Wattenberg	101.77	321	*i* Pdiff	Pdif	04 51 16.3	-1.3
	comp=Z,7.6nm,1.1s						
WATA	Walderalm	101.78	321	*e*Pdiff	Pdif	04 51 17.5	0.0
	comp=Z,3.2nm,0.5s						
B08A	Colville Reser	101.81	38	*e*Pdif	Pdif	04 51 18.3	+0.8
J04D	Umpqua Nationa	101.85	44	P	Pdif	04 51 18.6	+0.6
	baz=290						
BOSA	Boshof	101.97	242	P	Pdif	04 51 18.5	-0.3
	comp=Z,2.9nm,1.0s,baz=131,slow=20,SNR=2.0						
BOSA				PKiKP	PKiKP	04 55 41.9	+0.8
	comp=Z,4.7nm,0.9s,baz=113,slow=2.0,SNR=3.7						
BOSA				PKKP	PKKPdf	05 07 28.3	-2.0
	comp=Z,3.2nm,1.0s,baz=135,slow=2.9,SNR=2.5						
SQTA	Sankt Quirin	102.05	321	*e*Pdiff	Pdif	04 51 16.9	-1.9
	comp=Z,11nm,1.6s						
L04D	Klamath Falls	102.06	45	P	Pdif	04 51 19.3	+0.3
	baz=289						
MOTA	Moosalm	102.07	321	*e*Pdiff	Pdif	04 51 17.4	-1.5
	comp=Z,8.3nm,1.0s						
O02D	Mt. Diablo Mer	102.37	47	P	Pdif	04 51 20.0	-0.3
	baz=289						
FETA	Feichten	102.43	321	*e*Pdiff	Pdif	04 51 19.6	-0.9
	comp=Z,11nm,1.2s						
J05D	Fort Rock, OR	102.44	44	P	Pdif	04 51 21.7	+1.0
	baz=290						
PINE	Pine Mountain	102.46	43	*e*Pdif	Pdif	04 51 21.9	+1.1
M04C	Macdoel	102.53	45	P	Pdif	04 51 22.1	+1.0
	baz=290						
DAVA	Damuels	102.86	321	*e*Pdiff	Pdif	04 51 19.6	-2.8
	comp=Z,7.1nm,1.4s						
FUORN	Ofenpass-Fuorn	102.88	320	*e*Pdif	Pdif	04 51 24.3	+1.6
DAVOX	Davos/Dischmat	103.06	321	P	Pdif	04 51 22.0	-1.3
	comp=Z,1.7nm,0.7s,baz=350,slow=18						
DAVOX				PKiKP	PKiKP	04 55 42.8	+0.1
	comp=Z,4.8nm,0.9s,baz=190,slow=6.1,SNR=2.6						
DAVOX				PKKP	PKKPdf	05 07 30.9	+2.6
	baz=0.0,slow=20						
NEW	Newport	103.20	38	*e*Pdif	Pdif	04 51 25.2	+1.4
NEW	Newport	103.20	38	P	Pdif	04 51 24.5	+0.8
	baz=295						
NEW	Newport	103.20	38	Pdiff	Pdif	04 51 24.8	+1.0
	comp=Z,2.7nm,0.9s,baz=273,slow=7.5,SNR=4.4						
MEM	Membach	103.75	325	⇑Pdif	Pdif	04 51 30.1	+4.1
	comp=Z,12nm,1.1s						
WLF	Walferdange	104.10	324	⇓Pdif	Pdif	04 51 32.8	+5.1
	comp=Z,18nm,1.2s						
BCLA	Clavier	104.24	325	⇑Pdif	Pdif	04 51 29.5	+1.3
	comp=Z,12nm,1.8s						
BCLA				⇑PP	PP	04 55 44.8	-2.4
BMO	Blue Mountains	104.48	41	*e*Pdif	Pdif	04 51 29.4	-0.2
	comp=Z,7.6nm,1.1s						
BMO	Blue Mountains	104.48	41	*e*P	Pdif	04 51 29.4	-0.2
BMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WVOR	Wild Horse Val	104.53	44	*e*Pdif	Pdif	04 51 30.1	+0.2
	comp=Z,9.6nm,1.1s						
WVOR	Wild Horse Val	104.53	44	*e*P	Pdif	04 51 30.1	+0.2
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DOU	Dourbes	104.79	325	⇑Pdif	Pdif	04 51 32.0	+1.3
CMB	Columbia Colle	104.84	48	*e*Pdif	Pdif	04 51 32.4	+1.1
CMB	Columbia Colle	104.84	48	*e*P	Pdif	04 51 32.4	+1.1
BORG	Borgarnes	105.55	346	Pdiff	Pdif	04 51 33.8	+0.1
	comp=Z,12nm,1.1s,baz=348,slow=19,SNR=1.7						
MSO	Missoula	105.77	38	*e*Pdif	Pdif	04 51 36.6	+1.3
MSO	Missoula	105.77	38	P	PKiKP	04 55 48.2	+0.7
	baz=297						
EKA	Eskdalemuir Ar	105.98	332	Pdiff	Pdif	04 51 35.4	-0.4
	comp=Z,1.0nm,0.9s,baz=285,slow=18,SNR=3.4						
EKA				PKiKP	PKiKP	04 55 47.0	-0.5
	comp=Z,2.6nm,1.0s,baz=5.7,slow=1.7,SNR=4.3						
EKA				PP	PP	04 55 58.1	-1.7
	comp=Z,7.2nm,1.0s,baz=41,slow=9.0,SNR=4.0						
EKA				PKKP	PKKPdf	05 07 23.9	+1.1
	comp=Z,2.5nm,0.7s,baz=241,slow=2.7,SNR=8.5						
MLAC	Mammoth, Mammo	106.13	48	P	PKiKP	04 55 49.4	+0.7
	baz=291						
NV01	Mina Array Sit	106.24	47	*e*Pdif	Pdif	04 51 38.7	+1.0
NVAR	Mina Array Bea	106.24	47	Pdiff	Pdif	04 51 38.9	+1.2
	comp=Z,1.6nm,0.9s,baz=299,slow=3.7,SNR=6.3						
NVAR				PKiKP	PKiKP	04 55 50.5	+1.7
	comp=Z,2.2nm,0.8s,baz=272,slow=2.6,SNR=3.6						
NVAR				PP	PP	04 56 04.1	+1.3
	comp=Z,3.7nm,0.9s,baz=264,slow=1.9,SNR=5.2						
NVAR				PKKP	PKKPdf	05 07 22.1	-0.3
	comp=Z,2.9nm,0.8s,baz=130,slow=3.6,SNR=3.4						
HLID	Hailey	106.91	41	*e*Pdif	Pdif	04 51 41.0	+0.5
	comp=Z,5.6nm,1.0s						
HLID				*e*PP	PP	04 56 03.9	-3.6
SNAA	Sanae	106.94	195	PKiKP	PKiKP	04 55 46.2	-2.7
SNAA	Sanae	106.94	195	PKKPbc	PKKPbc	05 07 09.9	-0.1
	comp=Z,4.7nm,1.0s,baz=270,slow=9.1,SNR=2.8						
SNAA				PKKP	PKKPdf	05 07 22.0	+0.2
	comp=Z,2.3nm,0.8s,baz=309,slow=6.0,SNR=6.1						
KEST	Kesra	107.59	310	PKiKP	PKiKP	04 55 50.9	-0.3
	comp=Z,2.2nm,0.7s,baz=18,slow=19,SNR=2.3						
KEST				PP	PP	04 56 13.8	+1.2
	comp=Z,4.6nm,0.9s,baz=76,slow=4.2,SNR=3.1						
KEST				PKKPbc	PKKPbc	05 07 06.8	0.0
	comp=Z,5.5nm,1.1s,baz=101,slow=14,SNR=2.0						
KEST				PKKP	PKKPdf	05 07 19.2	-0.5
	comp=Z,5.9nm,1.0s,baz=328,slow=3.0,SNR=3.3						
EGMT	Eagleton	107.69	36	*e*Pdif	Pdif	04 51 44.4	+0.6
	comp=Z,3.6nm,0.9s						
FFC	Flin Flon	107.85	27	*e*Pdif	Pdif	04 51 46.2	+2.0
	comp=Z,5.7nm,0.9s						
FFC	Flin Flon	107.85	27	*e*P	Pdif	04 51 46.2	+2.0
FFC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IDGL	Inch Island, C	108.09	334	*e*P	PKiKP	04 55 56.0	+4.6
FCC	Fort Churchill	108.22	21	*e*Pdif	Pdif	04 51 46.3	+0.6
	comp=Z,23nm,1.8s						
FCC	Fort Churchill	108.22	21	*e*P	Pdif	04 51 46.3	+0.6
FCC				pmax	pmax		
	comp=Z,23nm,1.8s						
R11A	Troy Canyon, C	108.25	47	P	PKiKP	04 55 53.2	+0.7
	baz=293						
VNA2	Neumayer--Watz	108.56	195	PKiKP	PKiKP	04 55 52.9	+1.0
DSB	Dublin	108.75	332	*e*P	PKiKP	04 55 51.0	-1.7
VNA3	Neumayer Olymp	108.91	194	PKiKP	PKiKP	04 55 52.5	-0.1
VNA1	Neumayer--Stat	108.96	195	PKiKP	PKiKP	04 55 53.7	+1.1
LKWY	Lake	109.02	39	*e*Pdif	Pdif	04 51 49.7	-0.3
LKWY	Lake	109.02	39	*e*P	Pdif	04 51 49.7	-0.3
TSUM	Tsumeb	109.05	252	*e*PKP	PKiKP	04 55 54.0	-0.4
TSUM				PKKP	PKKPdf	05 07 17.3	+0.3
TSUM	Tsumeb	109.05	252	PKKP	PKKPdf	05 07 17.3	+0.3
	comp=Z,5.8nm,1.0s,baz=142,slow=18,SNR=2.2						
MAHO	Mahon	109.65	316	*i* PKP	PP	04 56 37.8	+11
MAHO				*e*SKS	SKSac	05 02 33.6	+12
IGLA	Glengowla, Co	110.01	333	*e*P	PKiKP	04 55 57.0	+1.9
PDAR	Pinedale Array	110.43	40	Pdiff	Pdif	04 51 57.4	+1.1
	comp=Z,0.1nm,0.4s,baz=51,slow=3.6,SNR=2.4						
PDAR				PKiKP	PKiKP	04 55 53.6	-2.9
	comp=Z,0.8nm,0.9s,baz=264,slow=1.7,SNR=2.6						
PDAR				PKKPbc	PKKPbc	05 06 55.5	-2.7
	comp=Z,1.2nm,0.7s,baz=114,slow=5.5,SNR=7.7						
LAO	LASA Array	110.43	35	*e*PKP	PKiKP	04 55 55.3	-0.9
LAO	LASA Array	110.43	35	P	PKiKP	04 55 57.3	+1.1
	baz=303						
VAL	Valentia	111.39	333	*e*P	PKiKP	04 55 49.0	-8.7
K22A	Casper	112.42	39	P	PKiKP	04 56 00.8	+0.6
	baz=302						
WUAZ	Wupatki	112.48	48	P	PKiKP	04 56 00.7	+0.2
	baz=295						
O20A	White River Ci	112.58	42	P	PKiKP	04 56 01.5	+0.8
	baz=299						
214A	Organ Pipe Nat	112.84	52	P	PKiKP	04 56 00.9	-0.3
	baz=293						
RSSD	Black Hills	113.14	37	*e*PKP	PKiKP	04 56 01.9	+0.2
RSSD	Black Hills	113.14	37	P	PKiKP	04 56 01.6	0.0
	baz=304						
PV15	Paradox Valley	113.28	44	*e*Pdif	Pdif	04 52 09.3	+0.2
ULM	Lac du Bonnet	113.61	28	PKiKP	PKiKP	04 56 01.8	-0.3
	comp=Z,4.0nm,0.6s,baz=89,slow=1.2,SNR=9.7						
ULM				PKKPbc	PKKPbc	05 06 44.5	-3.2
	comp=Z,6.1nm,1.0s,baz=330,slow=7.2,SNR=4.7						
MVCO	Mesa Verde	113.80	45	*e*PKP	PKiKP	04 56 04.5	+1.3
MVCO	Mesa Verde	113.80	45	P	PKiKP	04 56 03.9	+0.7
	baz=298						
CART	Cartagena	114.36	316	*i* PKP	PP	04 56 58.7	-2.2
CART	Cartagena	114.36	316	*i* PS	PS	05 06 48.4	+7.6
ISCO	Idaho Springs	114.49	41	*e*PKPdf	PKPdf	04 56 04.9	+0.4
ISCO	Idaho Springs	114.49	41	*e*PKIKP	PKPdf	04 56 04.9	+0.4
ISCO	Idaho Springs	114.49	41	P	PKiKP	04 56 04.1	-0.4
	baz=302						
UCM	Universidad Co	114.50	319	*e*PKP	PP	04 56 59.6	-2.2
UCM	Universidad Co	114.50	319	*i* PS	PS	05 07 10.3	+28
ES19	SONSECA Array	115.24	319	*e*PKPdf	PKiKP	04 56 05.2	-0.4
ESDC	Sonseca Array	115.30	319	PKP	PKiKP	04 56 05.6	-0.1
	comp=Z,0.2nm,0.3s,baz=24,slow=3.1,SNR=8.3						
ESDC				PKKPab	PKKPab	05 06 45.3	-1.9
	comp=Z,0.1nm,0.3s,baz=258,slow=3.1,SNR=4.1						
PAB	San Pablo	115.62	319	*e*PKPdf	PKiKP	04 56 06.4	+0.1
PAB	San Pablo	115.62	319	*e*PKIKP	PKiKP	04 56 06.4	+0.1
SDCO	Great Sand Dun	115.62	43	*e*PKPdf	PKPdf	04 56 07.0	+0.3
SDCO	Great Sand Dun	115.62	43	P	PKPdf	04 56 06.8	+0.1
	baz=301						
319A	Douglas	115.82	51	*e*PKPdf	PKiKP	04 56 07.6	+0.6
LAZ	Ladron	116.09	47	*e*PKPdf	PKiKP	04 56 08.3	+0.7
LENM	Lemitar	116.32	47	*e*PKPdf	PKiKP	04 56 09.9	+1.9
ANMO	Albuquerque	116.33	46	*e*PKPdf	PKiKP	04 56 08.8	+0.8
ANMO	Albuquerque	116.33	46	*e*PKIKP	PKiKP	04 56 08.8	+0.8
ANMO	Albuquerque	116.33	46	P	PKiKP	04 56 09.3	+1.3
	baz=299						
MVO	Moncorvo	116.42	322	*e*PKPdf	PKiKP	04 56 08.6	+0.8
MVO	Moncorvo	116.42	322	*e*LQ	LQ	05 25 20.4	
MVO				*e*LR	LR	05 35 14.9	
	comp=Z,960nm,20.0s						
121A	Cookes Peak, D	116.47	49	P	PKiKP	04 56 08.5	+0.2
	baz=297						
BNM	Barren Site	116.58	47	*e*PKPdf	PKiKP	04 56 09.2	+0.7
T25A	Trinidad	116.68	43	*e*PKPdf	PKiKP	04 56 09.4	+0.7
T25A	Trinidad	116.68	43	P	PKiKP	04 56 08.9	+0.2
	baz=301						
PGAV	Gavieira, Arco	116.70	323	*e*PKPdf	PKiKP	04 56 08.6	+0.2
PGAV	Gavieira, Arco	116.70	323	*e*LQ	LQ	05 21 53.5	
PGAV	Gavieira, Arco	116.70	323	*e*LR	LR	05 34 46.4	
	comp=Z,1µm,20.0s						
POLO	Lamas de Olo	116.76	322	*e*PKPdf	PKiKP	04 56 08.9	+0.4
PVRL	Vila Real	116.77	322	*e*PKPdf	PKiKP	04 56 09.2	+0.7
MELI	Melilla	116.84	314	*i* PKP	PP	04 57 20.2	+1.8
MELI	Melilla	116.84	314	*i* PS	PS	05 07 41.6	+38
KSCO	Kaye Shedlock'	116.86	41	P	PKiKP	04 56 09.2	+0.3
	baz=304						
JBK	JBK	117.04	313	P	PKiKP	04 56 10.0	+0.6
FIGM	Figuig	117.10	310	P	PKiKP	04 56 10.0	+0.5
HORN	Hornachuelos	117.13	318	P	PKiKP	04 56 10.3	+1.0
EMAL	Malaga-Limoner	117.14	316	*i* PKP	PP	04 57 25.0	+4.6
EMAL	Malaga-Limoner	117.14	316	*i* PS	PS	05 07 40.4	+34
MTE	Manteigas	117.18	321	*e*PKPdf	PKiKP	04 56 09.6	+0.3
MTE	Manteigas	117.18	321	*e*LQ	LQ	05 25 44.5	
MTE	Manteigas	117.18	321	*e*LR	LR	05 37 59.0	
	comp=Z,1µm,20.0s						
MTE	Manteigas	117.18	321	*e*PKPdf	PKiKP	04 56 09.8	+0.5
PVIS	Viseu	117.21	322	*e*PKPdf	PKiKP	04 56 09.7	+0.3
EYMN	Ely	117.28	27	P	PKiKP	04 56 09.8	+0.6
	baz=317						
PCBR	Castelo Branco	117.46	321	*e*PKPdf	PKiKP	04 56 10.2	+0.4
ECSD	EROS Data Cent	117.63	33	*e*PKPdf	PKiKP	04 56 10.2	+0.2
ECSD	EROS Data Cent	117.63	33	P	PKiKP	04 56 10.2	+0.2
	baz=311						
PMRV	Marv??o	117.64	320	*e*PKPdf	PKPdf	04 56 10.2	0.0
PMRV	Marv??o	117.64	320	*e*LR	LR	05 36 16.0	
	comp=Z,748nm,18.0s						
PCAS	Casmilo, Conde	117.97	322	*e*PKPdf	PKiKP	04 56 11.0	+0.2
PESTR	Estremoz	118.09	320	*e*PKPdf	PKPdf	04 56 11.1	+0.1
PTOM	Tomar	118.18	321	*e*PKPdf	PKiKP	04 56 11.4	+0.2
E38A	The Farm, Brul	118.23	28	P	PKiKP	04 56 11.2	+0.1
	baz=317						
BGNE	Belgrade	118.24	36	*e*PKPdf	PKiKP	04 56 11.5	+0.2
BGNE	Belgrade	118.24	36	P	PKPdf	04 56 11.0	-0.3
	baz=309						
CEU	Ceuta	118.24	316	*i* PKP	PP	04 57 23.1	-4.9
C40A	Isle Royale Na	118.34	26	*e*PKPdf	PKiKP	04 56 11.6	+0.3
C40A	Isle Royale Na	118.34	26	P	PKiKP	04 56 11.6	+0.3
	baz=320						
F37A	Hinrichs Farm,	118.35	30	P	PKiKP	04 56 11.7	+0.3
	baz=316						
PMTG	Montargil	118.38	320	*e*PKPdf	PKPdf	04 56 11.7	+0.1
F38A	Pierce - Schro	118.54	29	P	PKiKP	04 56 11.9	+0.2
	baz=316						
SPMN	Marine on St.	118.61	30	*e*PKPdf	PKPdf	04 56 11.8	0.0
SPMN	Marine on St.	118.61	30	P	PKPdf	04 56 11.9	+0.1
	baz=315						
MNTX	Cornudas Mount	118.66	49	*e*PKPdf	PKiKP	04 56 12.9	+0.5
MNTX	Cornudas Mount	118.66	49	P	PKiKP	04 56 12.9	+0.5
	baz=298						
SCHQ	Schefferville	118.70	8	PKP	PKiKP	04 56 12.0	+0.2
	comp=Z,7.3nm,0.9s,baz=20,slow=3.0,SNR=11						
SCHQ				PKKPbc	PKKPbc	05 06 28.7	-1.5
	comp=Z,4.8nm,0.9s,baz=179,slow=6.8,SNR=4.4						
PBEJ	Beja	118.75	319	*e*PKPdf	PKiKP	04 56 13.7	+1.3
CBKS	Cedar Bluff	118.83	40	*e*PKPdf	PKiKP	04 56 12.7	+0.1
CBKS	Cedar Bluff	118.83	40	*e*PKIKP	PKiKP	04 56 12.7	+0.1
CBKS	Cedar Bluff	118.83	40	P	PKiKP	04 56 12.7	+0.1
	baz=306						
E39A	Mellen	118.86	28	P	PKiKP	04 56 12.5	+0.2
	baz=318						
PVAQ	Vaqueiros	119.00	319	*e*PKPdf	PKiKP	04 56 13.5	+0.6
LCRM	LCR	119.02	314	P	PKiKP	04 56 14.1	+0.9
F39A	Loretta	119.03	29	P	PKiKP	04 56 13.0	+0.3
	baz=317						
MESJ	Messejana	119.08	319	*e*PKPdf	PKiKP	04 56 13.3	+0.3
MESJ				*e*PP	PP	04 57 34.9	+1.2
MESJ				AMS	AMS	05 53 33.5	
	comp=Z,1µm,23.8s						
MESJ	Messejana	119.08	319	*e*PKPdf	PKiKP	04 56 13.4	+0.4
MESJ	Messejana	119.08	319	*e*PKIKP	PKPdf	04 56 03.2	-10
MESJ				*e*		04 57 34.8	
E40A	Wakefield	119.12	27	P	PKiKP	04 56 13.1	+0.3
	baz=318						
G38A	Ridgeland	119.12	30	P	PKPdf	04 56 12.5	-0.4
	baz=316						
PNCL	Nicolau / Gran	119.13	320	*e*PKPdf	PKiKP	04 56 13.5	+0.4
LIS	Lisbon	119.17	321	*e*PP	PP	04 57 35.2	+1.0
LIS				AMS	AMS	06 03 18.3	
	comp=N,1µm,12.9s						
PBDV	Barranco-do-Ve	119.24	319	*e*PKPdf	PKiKP	04 56 14.3	+0.9
D41A	Chassel	119.25	26	*e*PKPdf	PKiKP	04 56 13.8	+0.8
D41A	Chassel	119.25	26	P	PKiKP	04 56 13.3	+0.2
	baz=320						
H38A	Maiden Rock	119.27	30	P	PKPdf	04 56 13.2	+0.1
	baz=316						
MDT	Midelt	119.27	313	PKP	PKiKP	04 56 13.9	+0.3
	comp=N,4.3nm,0.8s,baz=84,slow=4.2,SNR=15						
MDT				PKKPbc	PKKPbc	05 06 27.0	-0.4
	comp=N,1.3nm,0.9s,baz=250,slow=4.4,SNR=2.4						
MDT	Midelt	119.27	313	P	PKiKP	04 56 14.2	+0.5
IFR	Ifrane	119.30	314	*i* PKP	PP	04 57 26.8	-8.9
IFR	Ifrane	119.30	314	*i* PS	PS	05 08 08.0	+42
G39A	Holcombe	119.37	29	P	PKiKP	04 56 13.5	+0.1
	baz=317						
F40A	Park Falls	119.41	28	P	PKPdf	04 56 13.4	+0.1
	baz=318						
MSTX	Muleshoe	119.45	46	*e*PKPdf	PKiKP	04 56 14.2	+0.1
MSTX	Muleshoe	119.45	46	P	PKPdf	04 56 13.7	-0.2
	baz=301						
E41A	Kenton	119.53	27	P	PKiKP	04 56 14.0	+0.4
	baz=320						
MORF	Marmelete	119.67	319	*e*PKPdf	PKPdf	04 56 14.3	+0.1
MORF				*e*PP	PP	04 57 39.0	+1.2
MORF				AMS	AMS	05 56 20.6	
	comp=Z,1µm,17.3s						
MORF	Marmelete	119.67	319	*e*PKPdf	PKiKP	04 56 14.9	+0.6
MORF	Marmelete	119.67	319	*e*PKIKP	PKPdf	04 56 14.3	+0.1
MORF				*e*		04 57 38.9	
COWI	Conover	119.73	27	*e*PKPdf	PKiKP	04 56 14.3	+0.2
AMTX	Amarillo	119.74	44	*e*PKPdf	PKiKP	04 56 15.2	+0.6
AMTX	Amarillo	119.74	44	P	PKPdf	04 56 14.5	0.0
	baz=303						
H39A	Augusta	119.76	30	P	PKiKP	04 56 14.2	+0.1
	baz=316						
G40A	Rib Lake	119.85	29	*e*PKPdf	PKiKP	04 56 14.6	+0.2
G40A	Rib Lake	119.85	29	P	PKPdf	04 56 14.3	0.0
	baz=318						
PFVI	Vila Bisbo	119.89	319	*e*PKPdf	PKiKP	04 56 14.9	+0.3
F41A	Three Lakes	120.01	28	*e*PKPdf	PKiKP	04 56 15.1	+0.4
F41A	Three Lakes	120.01	28	P	PKiKP	04 56 14.8	+0.2
	baz=319						
E42A	Champion	120.02	26	P	PKPdf	04 56 14.6	+0.1
	baz=320						
GOLM	Goulmima	120.07	312	P	PKiKP	04 56 16.1	+0.8
I39A	Houston	120.23	30	*e*PKPdf	PKPdf	04 56 14.5	-0.5
I39A	Houston	120.23	30	P	PKPdf	04 56 14.6	-0.5
	baz=316						
H40A	Chili	120.24	29	P	PKPdf	04 56 15.0	0.0
	baz=317						
G41A	Antigo	120.38	28	P	PKPdf	04 56 15.1	-0.2
	baz=319						
F42A	Maple Grove Fa	120.44	27	P	PKPdf	04 56 15.3	0.0
	baz=320						
E43A	Lone Tree Farm	120.47	26	P	PKiKP	04 56 15.6	+0.1
	baz=322						
J39A	Decorah	120.51	31	P	PKPdf	04 56 14.8	-0.8
	baz=316						
HPIG		120.57	54	*e*PKPdf	PKiKP	04 56 16.7	+0.2
H41A	Junction City	120.60	29	*e*PKPdf	PKPdf	04 56 15.6	-0.1
H41A	Junction City	120.60	29	P	PKPdf	04 56 15.6	-0.1
	baz=318						
KSU1	Kansas State U	120.60	38	*e*PKPdf	PKiKP	04 56 16.4	+0.4
KSU1	Kansas State U	120.60	38	P	PKPdf	04 56 15.8	-0.1
	baz=309						
I40A	Norwalk	120.66	30	P	PKPdf	04 56 15.4	-0.5
	baz=317						
G42A	Mountain	120.70	28	P	PKPdf	04 56 15.9	+0.1
	baz=320						
SCIA	State Center	120.71	33	*e*PKPdf	PKPdf	04 56 15.8	-0.2
U32A	Winter Ranch,	120.72	41	*e*PKPdf	PKiKP	04 56 16.5	+0.2
E44A	Grand Marais A	120.73	25	P	PKiKP	04 56 16.4	+0.4
	baz=323						
F43A	Flat Rock, Esc	120.81	26	P	PKiKP	04 56 16.6	+0.4
	baz=321						
K39A	Oelwein	120.86	32	P	PKPdf	04 56 15.2	-1.0
	baz=315						
I41A	Arkdale	120.90	29	P	PKPdf	04 56 15.7	-0.5
	baz=318						
J40A	Soldiers Grove	120.96	30	P	PKPdf	04 56 15.7	-0.7
	baz=316						
G43A	Wallace	121.03	27	*e*PKPdf	PKiKP	04 56 16.8	+0.2
G43A	Wallace	121.03	27	P	PKPdf	04 56 16.0	-0.5
	baz=320						
F44A	Big Bay de Noc	121.03	26	P	PKPdf	04 56 15.4	-1.1
	baz=322						
MATQ	Matagami	121.06	18	P	PKPdf	04 56 15.8	-0.6
	baz=333						
TXAR	Lajitas Array	121.07	51	PKP	PKiKP	04 56 17.9	+0.6
	comp=Z,2.9nm,0.7s,baz=213,slow=1.6,SNR=19						
TXAR				PKKPbc	PKKPbc	05 06 19.9	-0.7
	comp=Z,1.6nm,0.8s,baz=154,slow=6.7,SNR=7.4						
H42A	Shiocton	121.21	28	P	PKPdf	04 56 16.3	-0.5
	baz=319						
L39A	Vinton	121.21	32	P	PKPdf	04 56 16.8	-0.1
	baz=315						
E45A	Wooded Hills,	121.25	25	P	PKPdf	04 56 17.0	+0.1
	baz=323						
K40A	Colesburg	121.25	31	P	PKPdf	04 56 16.5	-0.5
	baz=316						
D46A	Sault St. Mari	121.28	24	P	PKPdf	04 56 17.0	+0.1
	baz=325						
J41A	Loganville	121.34	30	P	PKPdf	04 56 17.0	-0.1
	baz=317						
TOA0	Torodi Ar. Sit	121.37	289	*e*PKPdf	PKPdf	04 56 17.3	-0.7
TORD	Torodi Ar. Bea	121.37	289	PKP	PKPdf	04 56 17.1	-0.8
	comp=Z,12nm,0.8s,baz=4.5,slow=5.3,SNR=32						
TORD				PKKPbc	PKKPab	05 06 20.9	+0.5
	comp=Z,3.1nm,0.8s,baz=250,slow=2.3,SNR=7.0						
TORD				PKKP	PKKPdf	05 06 54.3	+0.8
	comp=Z,5.6nm,0.9s,baz=279,slow=4.0,SNR=4.4						
I42A	Draeger Farm,	121.49	29	*e*PKPdf	PKPdf	04 56 17.1	-0.3
I42A	Draeger Farm,	121.49	29	P	PKPdf	04 56 17.0	-0.4
	baz=318						
D47A	Chapleau	121.51	23	P	PKPdf	04 56 17.3	-0.1
	baz=326						
JFWS	Jewell Farm	121.55	30	*e*PKPdf	PKPdf	04 56 17.3	-0.3
JFWS	Jewell Farm	121.55	30	*e*PKIKP	PKPdf	04 56 17.3	-0.3
JFWS	Jewell Farm	121.55	30	P	PKPdf	04 56 17.2	-0.3
	baz=317						
M39A	Webster	121.57	33	P	PKPdf	04 56 17.6	-0.1
	baz=314						
E46A	Sault Ste Mari	121.60	24	P	PKiKP	04 56 17.7	0.0
	baz=324						
F45A	CMU Biological	121.65	25	P	PKiKP	04 56 17.8	0.0
	baz=323						
L40A	Anamosa	121.67	32	*e*PKPdf	PKPdf	04 56 17.8	0.0
L40A	Anamosa	121.67	32	P	PKPdf	04 56 17.3	-0.5
	baz=315						
K41A	Shullsburg	121.75	31	P	PKPdf	04 56 17.6	-0.4
	baz=317						
WMOK	Wichita Mounta	121.81	43	*e*PKPdf	PKPdf	04 56 18.0	-0.4
WMOK	Wichita Mounta	121.81	43	*e*PKIKP	PKPdf	04 56 18.0	-0.4
WMOK	Wichita Mounta	121.81	43	P	PKPdf	04 56 18.2	-0.1
	baz=305						
J42A	Columbus	121.82	29	P	PKPdf	04 56 17.6	-0.5
	baz=318						
CHGQ	Chibougamau	121.84	15	P	PKPdf	04 56 17.8	-0.1
	baz=336						
I43A	Langenfeld Bro	121.86	28	P	PKPdf	04 56 18.1	0.0
	baz=319						
LSQQ	Lebel-sur-Quev	121.89	17	P	PKPdf	04 56 17.9	-0.1
	baz=333						
F46A	Macinaw City C	121.89	25	P	PKiKP	04 56 18.3	0.0
	baz=324						
D48A	Paudash Townsh	121.91	22	P	PKPdf	04 56 18.0	-0.2
	baz=327						
E47A	Iron Bridge	121.94	23	P	PKiKP	04 56 18.4	0.0
	baz=325						
M40A	Post Highland	121.97	32	P	PKPdf	04 56 18.2	-0.2
	baz=315						
D49A	Beulah Townshi	121.99	21	P	PKPdf	04 56 18.2	-0.1
	baz=328						
L41A	Preston	122.03	31	P	PKPdf	04 56 18.0	-0.5
	baz=316						
K42A	Prairie Point,	122.11	30	P	PKPdf	04 56 17.9	-0.7
	baz=318						
J43A	Natural Harves	122.11	29	P	PKiKP	04 56 18.8	0.0
	baz=319						
G46A	Petoskey	122.22	25	P	PKPdf	04 56 18.9	+0.2
	baz=323						
N40A	Mertquake, Sal	122.30	33	P	PKPdf	04 56 19.2	+0.2
	baz=315						
E48A	Lockeyer	122.35	23	P	PKiKP	04 56 19.4	+0.2
	baz=327						
ABTX	Abilene, Hawle	122.39	45	*e*PKPdf	PKPdf	04 56 19.4	-0.1
ABTX	Abilene, Hawle	122.39	45	P	PKPdf	04 56 19.7	+0.1
	baz=303						
L42A	Oliver, Polo	122.51	31	*e*PKPdf	PKPdf	04 56 18.1	-1.3
L42A	Oliver, Polo	122.51	31	P	PKPdf	04 56 18.9	-0.5
	baz=317						
M41A	Milan	122.51	32	P	PKPdf	04 56 19.2	-0.3

	baz=316						
VLDQ	Val d'Or	122.58	18	*e*PKPdf	PKPdf	04 56 18.8	-0.6
D50A	G1974 Best Tow	122.62	21	P	PKPdf	04 56 19.2	-0.3
	baz=329						
K43A	Burlington	122.66	29	P	PKPdf	04 56 19.3	-0.4
	baz=319						
H46A	Fife Lake	122.69	26	P	PKiKP	04 56 20.0	+0.1
	baz=323						
GLMI	Grayling	122.72	25	*e*PKPdf	PKPdf	04 56 19.0	-0.8
F48A	Evansville	122.72	23	P	PKPdf	04 56 19.9	+0.2
	baz=326						
G47A	Hillman	122.75	25	P	PKiKP	04 56 20.2	+0.2
	baz=324						
N41A	Harden Midland	122.82	33	*e*PKPdf	PKPdf	04 56 20.1	0.0
N41A	Harden Midland	122.82	33	P	PKPdf	04 56 20.0	-0.1
	baz=315						
D51A	Lot 18 Range I	122.85	20	P	PKPdf	04 56 19.8	-0.2
	baz=330						
L43A	Garden Prairie	122.85	30	P	PKPdf	04 56 19.7	-0.4
	baz=318						
M42A	Sheffield	122.86	31	P	PKPdf	04 56 19.5	-0.6
	baz=317						
E50A	Wahnapitae	122.93	22	P	PKiKP	04 56 20.4	+0.1
	baz=328						
F49A	Sandfield	123.00	23	P	PKiKP	04 56 20.6	+0.2
	baz=326						
I46A	Reed City	123.06	27	P	PKPdf	04 56 20.4	0.0
	baz=322						
H47A	Mio	123.07	25	P	PKiKP	04 56 20.6	0.0
	baz=324						
TUL1	Leonard	123.08	40	*e*PKPdf	PKiKP	04 56 21.6	+0.6
TUL1	Leonard	123.08	40	P	PKPdf	04 56 20.9	+0.1
	baz=308						
N42A	Yates City	123.17	32	P	PKPdf	04 56 20.2	-0.5
	baz=316						
O41A	Passleys Farm,	123.22	33	P	PKPdf	04 56 20.5	-0.3
	baz=315						
L44A	Lake County Fo	123.26	30	P	PKPdf	04 56 20.9	+0.1
	baz=319						
D52A	ZEK Kipawa Sen	123.27	20	P	PKPdf	04 56 20.9	+0.2
	baz=331						
E51A	G1948 Merrick	123.28	21	P	PKiKP	04 56 21.0	0.0
	baz=330						
M43A	Waltham Townsh	123.29	31	P	PKPdf	04 56 21.1	+0.2
	baz=317						
I47A	Gladwin	123.41	26	P	PKPdf	04 56 21.1	0.0
	baz=323						
D53A	Lac Vacive, Po	123.41	19	P	PKPdf	04 56 20.9	-0.1
	baz=332						
JCT	Junction City	123.42	48	*e*PKPdf	PKiKP	04 56 22.1	+0.3
JCT	Junction City	123.42	48	*e*PKIKP	PKiKP	04 56 22.1	+0.3
JCT	Junction City	123.42	48	P	PKPdf	04 56 21.3	-0.3
	baz=302						
J46A	Howard City	123.43	27	P	PKPdf	04 56 21.2	+0.1
	baz=322						
P41A	Barry, Barry	123.43	34	P	PKPdf	04 56 21.3	0.0
	baz=314						
N43A	Stutzman Famil	123.54	31	P	PKPdf	04 56 21.6	+0.1
	baz=317						
I48A	Sherman Twp	123.62	25	P	PKiKP	04 56 21.8	+0.1
	baz=324						
F51A	Arnstein	123.65	21	P	PKPdf	04 56 21.2	-0.3
	baz=329						
HDIL	Hopedale	123.76	32	*e*PKPdf	PKiKP	04 56 22.2	+0.1
HDIL	Hopedale	123.76	32	P	PKPdf	04 56 20.8	-1.0
	baz=317						
M44A	Midewin, Midew	123.79	30	*e*PKPdf	PKiKP	04 56 22.4	+0.2
M44A	Midewin, Midew	123.79	30	P	PKPdf	04 56 21.1	-0.8
	baz=318						
E52A	Mattawa	123.79	20	P	PKPdf	04 56 20.6	-1.1
	baz=330						
Q41A	Truxton	123.84	34	P	PKPdf	04 56 21.2	-0.8
	baz=314						
K46A	Dorr	123.89	28	P	PKPdf	04 56 21.9	-0.2
	baz=321						
J47A	Sunmer	123.89	27	P	PKPdf	04 56 21.9	-0.2
	baz=323						
P42A	Winchester	123.89	33	*e*PKPdf	PKPdf	04 56 22.2	0.0
P42A	Winchester	123.89	33	P	PKPdf	04 56 22.0	-0.1
	baz=315						
O43A	Sugar Creek Fa	123.94	32	P	PKPdf	04 56 22.1	-0.1
	baz=317						
F52A	Sundridge	123.98	21	P	PKPdf	04 56 22.0	-0.1
	baz=330						
HHAR	Hobbs	124.02	39	*e*PKPdf	PKPdf	04 56 22.5	0.0
KLBO	Killbear Provi	124.03	22	P	PKPdf	04 56 22.1	-0.1
	baz=328						
E53A	Dumoine, Ponti	124.04	19	P	PKPdf	04 56 22.3	0.0
	baz=332						
E54A	Lac Daplat, Po	124.15	19	P	PKPdf	04 56 22.3	-0.1
	baz=332						
M45A	Boilermakers S	124.18	30	P	PKPdf	04 56 22.2	-0.4
	baz=319						
N44A	Piper City	124.18	31	P	PKPdf	04 56 22.1	-0.6
	baz=318						
I49A	Point Hope	124.19	25	P	PKPdf	04 56 22.7	+0.1
	baz=325						
R41A	Rosebud	124.21	35	P	PKiKP	04 56 23.2	+0.1
	baz=314,SNR=14						
K47A	Vermontville	124.26	27	P	PKPdf	04 56 22.8	0.0
	baz=322						
Q42A	Golden Eagle	124.26	34	P	PKPdf	04 56 22.8	0.0
	baz=315						
WHTX	Lake Whitney,	124.28	45	*e*PKPdf	PKiKP	04 56 23.8	+0.4
WHTX	Lake Whitney,	124.28	45	P	PKPdf	04 56 22.9	-0.2
	baz=305						
ALGO	Algonquin Park	124.28	20	P	PKPdf	04 56 22.3	-0.4
	baz=331						
BMRO	Meriville Lake	124.29	23	P	PKPdf	04 56 22.5	-0.2
	baz=327						
P43A	Skaggs, Pawnee	124.30	33	P	PKPdf	04 56 23.0	+0.1
	baz=316						
J48A	Bridge Port	124.30	26	P	PKPdf	04 56 23.0	+0.2
	baz=324						
CCM	Cathedral Cave	124.45	35	*e*PKPdf	PKiKP	04 56 23.6	0.0
CCM	Cathedral Cave	124.45	35	*e*PKIKP	PKiKP	04 56 23.6	0.0
CCM	Cathedral Cave	124.45	35	P	PKiKP	04 56 23.8	+0.2
	baz=314						
N45A	Kentland	124.46	30	P	PKPdf	04 56 23.3	+0.1
	baz=319						
S41A	Jillco Farms,	124.48	36	P	PKPdf	04 56 23.6	+0.2
	baz=313,SNR=15						
O44A	Mansfield	124.48	32	P	PKPdf	04 56 22.8	-0.5
	baz=317						
J49A	Marlette	124.53	25	P	PKPdf	04 56 22.6	-0.6
	baz=324						
K48A	Perry	124.55	26	P	PKPdf	04 56 23.2	-0.1
	baz=323						
R42A	Luebbering	124.55	35	P	PKPdf	04 56 23.5	+0.1
	baz=314						
LATQ	La Tuque	124.58	15	P	PKiKP	04 56 23.5	0.0
	baz=338						
M46A	Old House Fiel	124.60	29	*e*PKPdf	PKiKP	04 56 24.1	+0.3
M46A	Old House Fiel	124.60	29	P	PKPdf	04 56 23.7	+0.2
	baz=320						
U40A	Yellville	124.64	38	P	PKPdf	04 56 23.7	0.0
	baz=311,SNR=18						
Q43A	New Douglas	124.70	33	P	PKPdf	04 56 23.9	+0.2
	baz=316						
L47A	Sherwood	124.71	28	P	PKiKP	04 56 24.0	0.0
	baz=322						
BWLO	Walkerton	124.72	23	P	PKiKP	04 56 24.6	+0.6
	baz=327						
O45A	Potomac	124.80	31	P	PKPdf	04 56 24.1	+0.2
	baz=318						
PEMO	Pembroke	124.80	20	P	PKPdf	04 56 23.7	0.0
	baz=332						
N46A	Monticello	124.81	30	P	PKPdf	04 56 23.7	-0.1
	baz=320						
W39A	Magazine	124.81	39	*e*PKPdf	PKiKP	04 56 24.3	-0.1
W39A	Magazine	124.81	39	P	PKPdf	04 56 23.8	-0.2
	baz=310						
G53A	Haliburton	124.81	21	P	PKPdf	04 56 23.8	+0.1
	baz=330						
833A	Chaparral WMA,	124.83	50	*e*PKPdf	PKiKP	04 56 25.1	+0.4
833A	Chaparral WMA,	124.83	50	P	PKiKP	04 56 24.9	+0.3
	baz=301						
T41A	Mountain View	124.84	36	P	PKPdf	04 56 24.1	0.0
	baz=313,SNR=9.8						
K49A	Clarkson	124.86	26	P	PKPdf	04 56 23.3	-0.7
	baz=324						
435B	Jarrell	124.86	46	*e*PKPdf	PKiKP	04 56 24.6	0.0
435B	Jarrell	124.86	46	P	PKPdf	04 56 24.4	+0.1
	baz=304						
P44A	Sand Creek, Wi	124.90	32	P	PKiKP	04 56 24.4	0.0
	baz=317						
S42A	Caledonia	124.91	35	P	PKPdf	04 56 24.3	+0.1
	baz=314,SNR=13						
SADO	Sadowa	124.93	21	*e*PKPdf	PKPdf	04 56 24.1	+0.1
F55A	Otter Lake	124.95	19	P	PKPdf	04 56 23.8	-0.2
	baz=333						
FVM	French Village	124.97	35	*e*PKPdf	PKiKP	04 56 24.8	+0.1
M47A	Cromwell	124.99	29	P	PKPdf	04 56 24.1	-0.1
	baz=321						
SFIN	Lafayette	125.02	30	*e*PKPdf	PKiKP	04 56 24.6	-0.1
SFIN	Lafayette	125.02	30	P	PKPdf	04 56 24.1	-0.1
	baz=319						
I51A	Listowel	125.03	23	P	PKiKP	04 56 24.6	0.0
	baz=327						
R43A	Red Bud	125.04	34	P	PKPdf	04 56 24.4	0.0
	baz=315						
L48A	N Adams	125.09	27	P	PKPdf	04 56 24.5	+0.1
	baz=322						
Q44A	Meyer Farm, Va	125.10	33	*e*PKPdf	PKPdf	04 56 24.7	+0.2
Q44A	Meyer Farm, Va	125.10	33	P	PKPdf	04 56 24.5	+0.1
	baz=316						
BANO	Bancroft	125.14	20	P	PKPdf	04 56 24.6	+0.2
	baz=331						
TRQ	Mont Tremblant	125.15	17	*e*PKPdf	PKiKP	04 56 25.0	+0.2
AAM	Ann Arbor	125.16	26	*e*PKPdf	PKPdf	04 56 24.5	0.0
AAM	Ann Arbor	125.16	26	*e*PKIKP	PKPdf	04 56 24.5	0.0
AAM	Ann Arbor	125.16	26	P	PKPdf	04 56 24.6	+0.1
	baz=323						
U41A	Viola	125.21	37	P	PKPdf	04 56 24.9	+0.1
	baz=312,SNR=6.6						
T42A	Van Buren	125.24	36	*e*PKPdf	PKPdf	04 56 25.0	+0.2
T42A	Van Buren	125.24	36	P	PKPdf	04 56 25.0	+0.2
	baz=313,SNR=10						
L49A	Milan	125.26	27	P	PKPdf	04 56 24.7	0.0
	baz=323						
P45A	Graceland, Par	125.32	32	*e*PKPdf	PKPdf	04 56 25.1	+0.3
P45A	Graceland, Par	125.32	32	P	PKPdf	04 56 25.2	+0.3
	baz=318						
M48A	Edgerton	125.32	28	P	PKPdf	04 56 24.8	0.0
	baz=322						
N47A	Urbana	125.33	29	P	PKPdf	04 56 24.6	-0.3
	baz=321						
G55A	Calabogie	125.35	19	P	PKPdf	04 56 24.7	0.0
	baz=332						
MIAR	Mount Ida	125.35	40	*e*PKPdf	PKiKP	04 56 25.6	+0.1
MIAR	Mount Ida	125.35	40	*e*PKIKP	PKiKP	04 56 25.6	+0.1
MIAR	Mount Ida	125.35	40	P	PKPdf	04 56 24.8	-0.3
	baz=310						
PLVO	Plevna	125.42	20	*e*PKPdf	PKiKP	04 56 25.2	0.0
PLVO	Plevna	125.42	20	P	PKPdf	04 56 24.2	-0.7
	baz=332						
V41A	Mountainview	125.44	38	P	PKPdf	04 56 25.0	-0.3
	baz=312						
S43A	Fulton Ridge,	125.45	35	P	PKPdf	04 56 25.3	+0.1
	baz=314,SNR=5.1						
P46A	Rosedale	125.53	31	P	PKiKP	04 56 25.7	0.0
	baz=318						
R44A	Waltonville	125.53	34	P	PKPdf	04 56 25.6	+0.3
	baz=316						
Q45A	Warren Harvey,	125.57	32	P	PKiKP	04 56 25.8	+0.1
	baz=317,SNR=7.8						
I53A	Kortright Cn E	125.57	22	P	PKPdf	04 56 25.4	+0.2
	baz=328						
ACTO	Acton	125.57	23	P	PKiKP	04 56 25.6	0.0
	baz=328						
O47A	Sheridan	125.59	30	P	PKPdf	04 56 25.3	0.0
	baz=320						
ALFO	Alfred	125.59	18	P	PKPdf	04 56 25.1	-0.1
	baz=334						
U42A	Revenden	125.61	37	P	PKPdf	04 56 25.7	+0.1
	baz=313,SNR=11						
PKRO	Pickering	125.64	22	P	PKPdf	04 56 25.5	+0.2
	baz=329						
N48A	Decatur	125.66	29	P	PKPdf	04 56 25.6	+0.1
	baz=321						
M49A	Liberty Center	125.67	27	P	PKPdf	04 56 25.4	-0.1
	baz=323						
T43A	Greenville	125.67	35	P	PKPdf	04 56 25.6	0.0
	baz=314,SNR=9.8						
DELO	Deloro Mine	125.69	20	P	PKPdf	04 56 25.3	-0.2
	baz=331						
OLIL	Olney	125.71	32	*e*PKPdf	PKiKP	04 56 26.2	+0.1
J52A	Paris	125.72	23	P	PKPdf	04 56 25.5	-0.1
	baz=327						
K51A	Iona Station	125.73	25	P	PKPdf	04 56 25.3	-0.3
	baz=326						
L50A	Kingsville	125.74	26	P	PKPdf	04 56 25.3	-0.3
	baz=324						
W41B	Gary Mavity, V	125.78	38	*e*PKPdf	PKPdf	04 56 25.6	-0.3
W41B	Gary Mavity, V	125.78	38	P	PKPdf	04 56 26.0	+0.1
	baz=311						
PBMO	Poplar Bluff	125.80	36	*e*PKPdf	PKiKP	04 56 26.2	0.0
H55A	Tweed	125.81	20	P	PKPdf	04 56 25.5	-0.2
	baz=332						
S44A	Carbondale	125.83	34	P	PKiKP	04 56 26.5	+0.2
	baz=315						
SIUC	Southern Illin	125.84	34	*e*PKPdf	PKPdf	04 56 26.0	0.0
DRWO	Darlington Wes	125.85	22	P	PKPdf	04 56 25.6	-0.2
	baz=330						
DRCO	St. Marys Ceme	125.86	22	P	PKiKP	04 56 26.6	+0.5
	baz=330						
WLVO	Wesleyville	125.93	21	P	PKPdf	04 56 26.2	+0.3
	baz=330						
I55A	Frankford	125.93	21	P	PKPdf	04 56 26.1	+0.2
	baz=331						
R45A	Skylar, Fairfi	125.94	33	P	PKiKP	04 56 26.6	+0.1
	baz=317,SNR=6.2						
UALR	University of	125.98	39	*e*PKPdf	PKiKP	04 56 26.8	0.0
K52A	Tillsonburg	126.01	24	P	PKPdf	04 56 26.3	+0.2
	baz=327						
N49A	Columbus Grove	126.01	28	*e*PKPdf	PKPdf	04 56 26.3	+0.1
N49A	Columbus Grove	126.01	28	P	PKPdf	04 56 26.1	0.0
	baz=322						
X41A	Kaden, Bauxite	126.06	39	P	PKPdf	04 56 26.6	+0.2
	baz=310						
O48A	Farmland	126.07	29	P	PKPdf	04 56 26.2	-0.1
	baz=321						
TYNO	Tyneside	126.08	23	P	PKPdf	04 56 26.3	0.0
	baz=328						
H56A	Elgin	126.08	19	P	PKiKP	04 56 26.6	0.0
	baz=333						
U43A	Rector	126.09	36	P	PKPdf	04 56 26.4	0.0
	baz=314						
P47A	Martinsville	126.11	31	P	PKPdf	04 56 26.6	+0.2
	baz=319,SNR=7.3						
BATG	Bathurst New B	126.15	10	*e*PKPdf	PKiKP	04 56 26.7	0.0
M50A	Fremont	126.15	27	P	PKPdf	04 56 26.4	0.0
	baz=324						
BLO	Bloomington	126.22	31	*e*PKPdf	PKPdf	04 56 26.9	+0.3
BLO	Bloomington	126.22	31	*e*PKIKP	PKPdf	04 56 26.9	+0.3
S45A	Carrier Mills	126.22	34	P	PKiKP	04 56 27.0	-0.1
	baz=316						
STCO	Saint Catharin	126.25	22	P	PKPdf	04 56 26.8	+0.3
	baz=329						
NATX	Nacogdoches	126.35	43	*e*PKPdf	PKPdf	04 56 27.1	+0.1
R46A	Gibon Southern	126.41	32	P	PKPdf	04 56 27.1	+0.1
	baz=317						
V43A	Jonesboro	126.41	37	P	PKiKP	04 56 27.4	-0.1
	baz=313						
Q47A	Bedord North L	126.44	31	P	PKiKP	04 56 27.7	+0.2
	baz=319,SNR=6.8						
LNIG	Linares	126.46	53	*e*PKPdf	PKPdf	04 56 27.6	+0.1
O49A	Covington	126.52	29	*e*PKPdf	PKPdf	04 56 27.1	0.0
O49A	Covington	126.52	29	P	PKPdf	04 56 27.3	+0.1
	baz=322,SNR=11						
P48A	Milroy	126.55	30	P	PKPdf	04 56 27.1	-0.2
	baz=320,SNR=9.1						
MEDO	Medina	126.56	22	P	PKPdf	04 56 27.0	-0.1
	baz=330						
HKT	Hockley	126.58	46	*e*PKPdf	PKiKP	04 56 28.4	+0.4
M51A	Elyria	126.59	26	P	PKPdf	04 56 27.0	-0.3
	baz=325						
LONY	Lake Ozonia	126.59	18	*e*PKPdf	PKPdf	04 56 26.8	-0.4
LONY	Lake Ozonia	126.59	18	P	PKPdf	04 56 27.3	+0.1
	baz=335						
N50A	Nevada	126.61	27	P	PKiKP	04 56 27.7	-0.1
	baz=323,SNR=10						
MOQ	Mont Orford	126.64	16	*e*PKPdf	PKiKP	04 56 27.9	+0.1
Z41A	Richland Creek	126.66	41	P	PKPdf	04 56 27.8	+0.2
	baz=310						
FRNY	Flat Rock	126.70	17	*e*PKPdf	PKPdf	04 56 27.1	-0.2
J55A	Hilton	126.71	21	P	PKPdf	04 56 27.3	-0.1
	baz=330						
U44B	Burton Farm, H	126.73	35	P	PKPdf	04 56 27.6	0.0
	baz=315						
V44A	Blytheville	126.77	36	P	PKPdf	04 56 28.1	+0.3
	baz=314						
M52A	Chesterland	126.77	25	P	PKPdf	04 56 27.8	+0.2
	baz=326						
Q48A	North Vernon	126.80	31	P	PKiKP	04 56 28.2	-0.1
	baz=320,SNR=10						
P49A	Miami Univ. Ec	126.84	29	P	PKPdf	04 56 27.7	-0.1
	baz=321,SNR=9.0						
ERPA	Erie	126.86	24	*e*PKPdf	PKPdf	04 56 27.9	+0.1
ERPA	Erie	126.86	24	P	PKPdf	04 56 27.8	+0.1
	baz=327						
R47A	Wooly Knot Far	126.87	32	P	PKiKP	04 56 28.3	-0.1
	baz=318,SNR=10						
L53A	Girard	126.89	24	P	PKPdf	04 56 27.4	-0.4
	baz=327						
O50A	Cable	126.89	28	P	PKPdf	04 56 28.0	+0.1
	baz=322,SNR=8.6						
Y42A	Garnett, Star	126.94	39	P	PKiKP	04 56 28.8	+0.1
	baz=311						
WCI	Wyandotte Cave	127.04	32	*e*PKPdf	PKPdf	04 56 28.3	+0.1
WCI	Wyandotte Cave	127.04	32	*e*PKIKP	PKPdf	04 56 28.3	+0.1
WCI	Wyandotte Cave	127.04	32	P	PKiKP	04 56 28.7	-0.1
	baz=319						
T46A	Princeton	127.05	34	P	PKiKP	04 56 29.0	+0.2
	baz=316,SNR=9.3						
U45A	Rockin P Farm,	127.06	35	P	PKPdf	04 56 28.5	+0.2
	baz=315						
X43A	Marvell	127.06	38	P	PKPdf	04 56 28.1	-0.3
	baz=312						
K55A	Perry	127.08	22	P	PKPdf	04 56 28.5	+0.3
	baz=330						
ACSO	Alum Creek Sta	127.11	28	*e*PKPdf	PKPdf	04 56 28.4	+0.1
ACSO	Alum Creek Sta	127.11	28	P	PKPdf	04 56 28.5	+0.1
	baz=323						
R48A	Northridge Ran	127.13	31	P	PKPdf	04 56 27.9	-0.5
	baz=319,SNR=8.1						
MMNY	Mt. Morris Dam	127.14	22	*e*PKPdf	PKPdf	04 56 27.8	-0.5
M53A	WI Miller and	127.14	25	P	PKPdf	04 56 28.5	+0.2
	baz=326,SNR=6.3						
Q49A	Aurora	127.16	30	P	PKPdf	04 56 28.6	+0.1
	baz=321						
S47A	Hartford	127.20	33	P	PKiKP	04 56 29.0	-0.1
	baz=318						
N52A	McGinn’s Farm,	127.23	26	P	PKPdf	04 56 28.8	+0.3
	baz=325						
P50A	Jamestown	127.23	29	P	PKPdf	04 56 28.5	0.0
	baz=322,SNR=8.8						
W44A	Shelby Farms P	127.28	37	P	PKPdf	04 56 28.8	+0.1
	baz=314						
NCB	Newcomb	127.29	18	*e*PKPdf	PKPdf	04 56 28.7	+0.2
O51A	Pataskala	127.36	27	P	PKPdf	04 56 29.1	+0.3
	baz=324,SNR=10						
V45A	Humboldt	127.37	36	P	PKPdf	04 56 28.9	0.0
	baz=315						
U46A	Springville	127.38	35	P	PKiKP	04 56 29.3	-0.1
	baz=316						
L55A	Hinsdale	127.41	23	P	PKPdf	04 56 29.2	+0.4
	baz=329,SNR=7.3						
PKME	Peaks-Kenny Pk	127.42	13	P	PKiKP	04 56 29.2	0.0
	baz=341						
Y43A	Makayla and Ka	127.43	39	P	PKiKP	04 56 29.4	-0.2
	baz=312						
M54A	Oil Creek Stat	127.50	24	*e*PKPdf	PKPdf	04 56 29.2	+0.1
M54A	Oil Creek Stat	127.50	24	P	PKPdf	04 56 29.1	+0.1
	baz=328,SNR=11						
T47A	Sharon Grove	127.53	33	*e*PKPdf	PKPdf	04 56 29.5	+0.3
T47A	Sharon Grove	127.53	33	P	PKiKP	04 56 29.8	+0.1
	baz=317						
R49A	Shelbyville	127.57	31	P	PKPdf	04 56 29.6	+0.3
	baz=320,SNR=8.1						
S48A	Wiedeman Farm,	127.59	32	P	PKiKP	04 56 29.7	-0.2
	baz=319,SNR=16						
N53A	Lisbon	127.60	25	P	PKPdf	04 56 29.6	+0.4
	baz=326,SNR=7.5						
W45A	Hickory Valley	127.65	36	P	PKPdf	04 56 29.7	+0.3
	baz=314						
P51A	Williamsport	127.68	28	*e*PKPdf	PKPdf	04 56 29.6	+0.2
P51A	Williamsport	127.68	28	P	PKPdf	04 56 29.2	-0.2
	baz=323,SNR=8.0						
LBNH	Lisbon	127.72	16	*e*PKPdf	PKiKP	04 56 29.8	-0.2
LBNH	Lisbon	127.72	16	P	PKiKP	04 56 30.0	+0.1
	baz=338						
O52A	Adamsville	127.73	27	*e*PKPdf	PKiKP	04 56 30.2	+0.1
O52A	Adamsville	127.73	27	P	PKPdf	04 56 29.8	+0.3
	baz=324,SNR=9.2						
LMN	Caledonia Moun	127.74	9	*e*PKPdf	PKPdf	04 56 29.4	+0.1
Q50A	Georgetown	127.74	29	P	PKPdf	04 56 29.8	+0.2
	baz=322						
WVT	Waverly	127.74	35	*e*PKPdf	PKPdf	04 56 29.4	-0.2
WVT	Waverly	127.74	35	*e*PKIKP	PKPdf	04 56 29.4	-0.2
WVT	Waverly	127.74	35	P	PKPdf	04 56 29.9	+0.3
	baz=316						
V46A	Holladay	127.82	35	P	PKPdf	04 56 29.7	-0.1
	baz=316						
T48A	Bowling Green	127.82	33	P	PKiKP	04 56 30.3	-0.1
	baz=318,SNR=12						
U47A	Clarksville	127.82	34	P	PKiKP	04 56 30.3	0.0
	baz=317,SNR=11						
N54A	Moraine State	127.83	25	*e*PKPdf	PKPdf	04 56 29.9	+0.2
N54A	Moraine State	127.83	25	P	PKPdf	04 56 29.9	+0.2
	baz=327,SNR=6.5						
M55A	Ridgway	127.89	23	P	PKPdf	04 56 30.1	+0.3
	baz=329,SNR=8.2						
O53A	New Philadelph	127.89	26	P	PKiKP	04 56 30.4	0.0
	baz=325,SNR=6.5						
S49A	Springfield	127.90	31	P	PKPdf	04 56 30.1	+0.2
	baz=320,SNR=8.6						
Q51A	Peebles	127.90	29	*e*PKPdf	PKPdf	04 56 30.0	+0.1
Q51A	Peebles	127.90	29	P	PKPdf	04 56 30.0	+0.1
	baz=322,SNR=6.9						
OXF	Oxford	127.96	37	*e*PKPdf	PKiKP	04 56 30.5	-0.2
OXF	Oxford	127.96	37	*e*PKIKP	PKiKP	04 56 30.5	-0.2
OXF	Oxford	127.96	37	P	PKPdf	04 56 29.9	-0.2
	baz=314						
P52A	Corning	127.98	27	P	PKPdf	04 56 30.0	+0.1
	baz=324,SNR=12						
ACCN	Adirondack Com	127.99	18	*e*PKPdf	PKPdf	04 56 30.1	+0.2
WVL	Waterville	128.00	14	*e*PKPdf	PKiKP	04 56 30.6	+0.1
R50A	Paris	128.00	30	P	PKPdf	04 56 30.1	0.0
	baz=321,SNR=7.1						
HNH	Hanover	128.11	17	*e*PKPdf	PKiKP	04 56 30.8	+0.1
V47A	Nunnelly	128.13	35	P	PKPdf	04 56 30.6	+0.3
	baz=316						
W46A	Michie	128.14	36	P	PKPdf	04 56 30.3	-0.1
	baz=315						
U48A	Cassie Pea, Po	128.18	33	P	PKPdf	04 56 30.6	+0.2
	baz=318						
T49A	Edmonton	128.28	32	*e*PKPdf	PKPdf	04 56 30.5	-0.2
T49A	Edmonton	128.28	32	P	PKPdf	04 56 30.9	+0.3
	baz=319,SNR=9.3						
BINY	Binghamton	128.29	21	*e*PKPdf	PKiKP	04 56 31.0	-0.2
BINY	Binghamton	128.29	21	P	PKiKP	04 56 31.0	-0.2
	baz=332						
O54A	Avella	128.31	25	P	PKiKP	04 56 31.2	-0.1
	baz=326,SNR=14						
R51A	Hillsboro	128.36	29	P	PKPdf	04 56 30.6	-0.1
	baz=322						
N55A	Marion Center	128.39	24	P	PKPdf	04 56 31.1	+0.3
	baz=328,SNR=8.0						
PLAL	Pickwick Lake	128.42	36	*e*PKPdf	PKiKP	04 56 31.4	-0.2
X46A	Booneville	128.42	36	P	PKPdf	04 56 30.9	-0.1
	baz=314						
S50A	Richmond	128.43	31	P	PKPdf	04 56 31.2	+0.3
	baz=320,SNR=12						
P53A	Whipple	128.44	27	*e*PKPdf	PKPdf	04 56 30.3	-0.6
P53A	Whipple	128.44	27	P	PKiKP	04 56 31.5	0.0
	baz=325,SNR=10						
Q52A	Bidwell	128.46	28	P	PKPdf	04 56 31.0	+0.1
	baz=324,SNR=7.9						
W47A	Westpoint	128.51	35	P	PKPdf	04 56 30.9	-0.2
	baz=316						
TRY	Troy	128.59	18	*e*PKPdf	PKiKP	04 56 31.5	-0.1
V48A	Smith Brothers	128.59	34	*e*PKPdf	PKPdf	04 56 30.9	-0.3
V48A	Smith Brothers	128.59	34	P	PKPdf	04 56 31.4	+0.1
	baz=317						
U49A	Red Boiling Sp	128.59	33	P	PKPdf	04 56 31.4	+0.2
	baz=318						
GBN	Guysborough	128.63	7	*e*PKPdf	PKiKP	04 56 31.8	+0.1
T50A	Nancy	128.71	31	P	PKPdf	04 56 31.7	+0.3
	baz=320						
O55A	Ligonier	128.74	25	P	PKPdf	04 56 31.8	+0.3
	baz=327,SNR=6.1						
P54A	Burton	128.75	26	P	PKiKP	04 56 32.3	+0.1
	baz=326,SNR=6.3						
R52A	Catlettsburg	128.78	29	P	PKPdf	04 56 31.8	+0.3
	baz=323						
VBMS	Vicksburg	128.80	40	P	PKiKP	04 56 32.5	+0.1
	baz=311						
S51A	Beattyville	128.87	30	*e*PKPdf	PKPdf	04 56 32.0	+0.3
S51A	Beattyville	128.87	30	P	PKPdf	04 56 32.1	+0.3
	baz=321,SNR=9.9						
X47A	Russelville	128.87	36	P	PKPdf	04 56 32.0	+0.2

	baz=315						
145A	Houston Renfro	128.93	39	P	PKPdf	04 56 32.3	+0.3
	baz=312						
KSPA	Keystone Colle	128.94	21	*e*PKPdf	PKPdf	04 56 31.9	+0.1
SSPA	Standing Stone	128.95	23	*e*PKPdf	PKPdf	04 56 32.1	+0.3
SSPA	Standing Stone	128.95	23	P	PKPdf	04 56 32.1	+0.3
	baz=329						
W48A	Pulaski	128.96	35	P	PKPdf	04 56 32.3	+0.3
	baz=316						
MCWV	Mont Chateau	128.97	25	P	PKiKP	04 56 32.6	+0.1
	baz=327						
O56A	Blue Knob Stat	128.99	24	*e*PKPdf	PKPdf	04 56 32.4	+0.5
O56A	Blue Knob Stat	128.99	24	P	PKPdf	04 56 32.5	+0.5
	baz=328,SNR=6.5						
V49A	McMinnville	129.08	33	P	PKPdf	04 56 32.2	0.0
	baz=318						
S52A	Salyersville	129.09	30	P	PKPdf	04 56 32.0	-0.2
	baz=322						
Q54A	Coxs Mills	129.10	27	P	PKiKP	04 56 32.9	0.0
	baz=325,SNR=7.9						
P55A	Reedsville	129.11	26	P	PKiKP	04 56 32.8	-0.1
	baz=326,SNR=6.6						
R53A	Hurricane	129.12	28	P	PKiKP	04 56 32.9	0.0
	baz=324,SNR=7.2						
KIC	Kosan Boka	129.16	283	*e*PKIKP	PKPdf	04 56 32.2	-0.7
	comp=Z,174nm,1.0s						
U50A	Jamestown	129.16	32	P	PKPdf	04 56 32.7	+0.3
	baz=319						
DBIC	Dimbokro	129.21	283	PKP	PKPdf	04 56 32.9	-0.1
	comp=Z,23nm,1.1s,baz=86,slow=2.8,SNR=9.6						
DBIC				SKPbc	SKPab	04 59 42.8	-0.2
	comp=Z,16nm,0.8s,baz=80,slow=3.9,SNR=4.7						
T51A	Gray	129.21	31	P	PKiKP	04 56 33.0	-0.1
	baz=321						
W49A	Belvidere	129.35	34	P	PKiKP	04 56 33.4	0.0
	baz=317						
TIC	Toumodi	129.37	283	*e*PKIKP	PKPdf	04 56 32.6	-0.7
X48A	Hartselle	129.39	35	P	PKPdf	04 56 32.2	-0.6
	baz=316						
QUA2	Belchertown	129.40	17	*e*PKPdf	PKPdf	04 56 32.9	+0.3
HRV	Adam Dziewonsk	129.42	17	*e*PKPdf	PKPdf	04 56 32.4	-0.2
HRV	Adam Dziewonsk	129.42	17	*e*PKIKP	PKPdf	04 56 32.4	-0.2
HRV	Adam Dziewonsk	129.42	17	P	PKiKP	04 56 33.9	+0.6
	baz=338						
Q55A	Buckhannon	129.42	26	P	PKiKP	04 56 33.5	0.0
	baz=326						
SWET	Sewanee	129.47	34	*e*PKPdf	PKiKP	04 56 33.5	-0.2
LIC	Lamto	129.47	283	*e*PKIKP	PKPdf	04 56 32.4	-1.1
	comp=Z,240nm,1.1s						
N59A	State Game Lan	129.50	21	*e*PKPdf	PKiKP	04 56 33.5	-0.1
N59A	State Game Lan	129.50	21	P	PKiKP	04 56 33.4	-0.2
	baz=332,SNR=7.1						
S53A	Williamson	129.55	29	P	PKiKP	04 56 33.8	0.0
	baz=323						
T52A	Hallie	129.58	30	P	PKiKP	04 56 34.3	+0.4
	baz=322						
V50A	Pikevile	129.59	33	P	PKiKP	04 56 34.3	+0.4
	baz=319						
U51A	La Follette	129.62	31	P	PKiKP	04 56 34.4	+0.4
	baz=320						
R54A	Victor	129.68	27	P	PKPdf	04 56 33.8	+0.5
	baz=325						
BCX	Boston College	129.69	16	*e*PKPdf	PKPdf	04 56 33.3	+0.2
Y48A	Jasper	129.70	36	P	PKiKP	04 56 34.2	0.0
	baz=316						
TZTN	Tazewell	129.74	31	*e*PKPdf	PKPdf	04 56 33.5	+0.1
TZTN	Tazewell	129.74	31	P	PKiKP	04 56 34.6	+0.4
	baz=321						
PAGS	Pennsylvania G	129.75	22	*e*PKPdf	PKPdf	04 56 33.3	0.0
ODNJ	Ogdensburg	129.76	20	*e*PKPdf	PKPdf	04 56 33.1	-0.2
X49A	Woodville	129.76	35	P	PKiKP	04 56 34.2	-0.1
	baz=317						
USHA	Ushuaia	129.76	169	PKP	PKPdf	04 56 33.3	+0.4
	comp=Z,7.9nm,0.6s,baz=243,slow=1.2,SNR=7.6						
USHA				SKPbc	SKPab	04 59 43.4	-0.7
	comp=Z,11nm,0.8s,baz=162,slow=3.2,SNR=3.0						
W50A	Signal Mountai	129.82	33	*e*PKPdf	PKPdf	04 56 33.8	+0.1
W50A	Signal Mountai	129.82	33	P	PKiKP	04 56 34.8	+0.3
	baz=318						
V51A	Loudon	129.89	32	*e*PKPdf	PKiKP	04 56 34.7	+0.2
V51A	Loudon	129.89	32	P	PKiKP	04 56 35.3	+0.8
	baz=320						
T53A	Wise	129.91	30	P	PKiKP	04 56 35.3	+0.7
	baz=322						
147A	Livingston	129.91	38	*e*PKPdf	PKiKP	04 56 34.7	+0.1
147A	Livingston	129.91	38	P	PKiKP	04 56 35.4	+0.7
	baz=314						
BRYW	Bryant College	129.97	17	*e*PKPdf	PKPdf	04 56 33.7	0.0
CPCT	Cooper Cave	130.06	33	*e*PKPdf	PKPdf	04 56 34.0	0.0
PAL	Palisades	130.06	19	*e*PKPdf	PKiKP	04 56 34.7	0.0
PAL	Palisades	130.06	19	P	PKiKP	04 56 35.0	+0.3
	baz=334						
MVL	Millersville	130.09	22	*e*PKPdf	PKiKP	04 56 34.6	-0.2
BRNJ	Basking Ridge	130.13	20	*e*PKPdf	PKPdf	04 56 33.8	-0.2
X50B	Fort Payne	130.18	34	P	PKiKP	04 56 35.1	-0.1
	baz=317						
Y49A	Blount Mountai	130.18	35	*e*PKPdf	PKPdf	04 56 34.2	-0.2
Y49A	Blount Mountai	130.18	35	P	PKPdf	04 56 34.9	+0.5
	baz=316						
S55A	Lewisburg	130.24	27	P	PKiKP	04 56 35.4	+0.2
	baz=325						
V52A	Sevierville	130.25	31	*e*PKPdf	PKiKP	04 56 35.5	+0.2
V52A	Sevierville	130.25	31	P	PKiKP	04 56 35.1	-0.2
	baz=320						
TKL	Tuckaleechee C	130.30	32	*e*PKPdf	PKPdf	04 56 34.1	-0.4
TKL				SKPbc	SKPab	04 59 47.0	-0.2
TKL	Tuckaleechee C	130.30	32	*e*PKIKP	PKPdf	04 56 34.2	-0.4
TKL	Tuckaleechee C	130.30	32	SKPbc	SKPab	04 59 47.0	-0.2
	comp=Z,35nm,1.0s,baz=313,slow=0.2,SNR=11						
T54A	Tazewell	130.31	29	P	PKiKP	04 56 35.2	-0.3
	baz=323						
U53A	Fall Branch	130.37	30	P	PKiKP	04 56 35.8	+0.2
	baz=322						
LRAL	Lakeview Retre	130.43	37	*e*PKPdf	PKiKP	04 56 35.4	-0.3
LRAL				*e*SKPbc	SKPab	04 59 47.3	-0.4
LRAL	Lakeview Retre	130.43	37	P	PKiKP	04 56 35.9	+0.2
	baz=315						
Z49A	Columbiana	130.59	36	P	PKiKP	04 56 35.9	-0.1
	baz=316						
W52A	Murphy	130.65	32	*e*PKPdf	PKPdf	04 56 35.3	+0.1
W52A	Murphy	130.65	32	P	PKiKP	04 56 36.2	+0.1
	baz=320						
BLA	Blacksburg	130.73	28	*e*PKPdf	PKPdf	04 56 34.6	-0.7
BLA	Blacksburg	130.73	28	*e*PKIKP	PKPdf	04 56 34.6	-0.7
BLA	Blacksburg	130.73	28	P	PKiKP	04 56 36.3	+0.1
	baz=325						
V53A	Saluda	130.79	31	*e*PKPdf	PKPdf	04 56 35.6	+0.1
V53A	Saluda	130.79	31	P	PKiKP	04 56 36.4	0.0
	baz=321						
149A	Jones	130.86	37	P	PKiKP	04 56 36.3	-0.3
	baz=315						
Z50A	Ashland	130.90	36	P	PKiKP	04 56 36.4	-0.3
	baz=316						
W53A	Cullowhee	131.00	32	P	PKiKP	04 56 37.0	0.0
	baz=321						
R58B	Mineral	131.23	25	*e*PKPdf	PKPdf	04 56 36.7	+0.5
R58B	Mineral	131.23	25	P	PKiKP	04 56 37.8	+0.7
	baz=328						
CBN	Corbin Frederi	131.23	24	*e*PKPdf	PKPdf	04 56 36.7	+0.5
CBN				*e*SKPbc	SKPbc	04 59 50.8	+0.3
CBN	Corbin Frederi	131.23	24	P	PKiKP	04 56 37.8	+0.7
	baz=329						
BG3	Lake Jocassee	131.25	32	*e*PKPdf	PKiKP	04 56 37.3	-0.1
Z51A	Franklin	131.28	35	P	PKiKP	04 56 38.4	+1.0
	baz=317						
150A	Eclectic	131.31	36	P	PKiKP	04 56 37.6	+0.1
	baz=316						
X53A	Estanollee	131.43	32	P	PKiKP	04 56 38.0	+0.3
	baz=320						
349A	Repton	131.48	38	P	PKiKP	04 56 38.7	+0.8
	baz=314						
Y52A	Lilburn	131.50	34	*e*PKPdf	PKiKP	04 56 37.6	-0.2
Y52A	Lilburn	131.50	34	P	PKiKP	04 56 38.5	+0.6
	baz=319						
250A	Grady	131.61	37	*e*PKPdf	PKPdf	04 56 37.4	+0.3
250A	Grady	131.61	37	P	PKiKP	04 56 38.5	+0.4
	baz=315						
BRAL	Brewton	131.69	38	*e*PKPdf	PKiKP	04 56 38.3	0.0
BRAL				*e*SKPbc	SKPab	04 59 53.3	+0.2
BRAL	Brewton	131.69	38	P	PKiKP	04 56 38.6	+0.4
	baz=314						
151A	Opelika	131.77	36	P	PKiKP	04 56 38.4	0.0
	baz=317						
Y53A	Monroe	131.77	33	P	PKiKP	04 56 38.5	+0.1
	baz=319						
Z52A	Williamson	131.81	34	P	PKiKP	04 56 38.7	+0.2
	baz=318						
KMSC	Kings Mountain	131.95	30	*e*PKPdf	PKPdf	04 56 38.1	+0.5
KMSC	Kings Mountain	131.95	30	P	PKPdf	04 56 38.2	+0.5
	baz=323						
PAULI	Pauline	131.96	31	*e*PKPdf	PKPdf	04 56 37.8	+0.2
152A	Waverly Hall	132.02	35	*e*PKPdf	PKiKP	04 56 38.8	-0.1
152A	Waverly Hall	132.02	35	P	PKiKP	04 56 38.5	-0.4
	baz=317						
251A	Midway	132.03	36	P	PKiKP	04 56 38.7	-0.3
	baz=316						
GOGA	Godfrey	132.17	33	*e*PKPdf	PKiKP	04 56 39.4	+0.2
GOGA				*e*SKPbc	SKPbc	04 59 53.7	-0.4
GOGA	Godfrey	132.17	33	*e*PKIKP	PKiKP	04 56 39.4	+0.2
GOGA	Godfrey	132.17	33	P	PKiKP	04 56 39.4	+0.2
	baz=319						
HODGE	Hodges	132.19	32	*e*PKPdf	PKiKP	04 56 38.8	-0.4
Z53A	Monticello	132.21	34	P	PKiKP	04 56 39.6	+0.3
	baz=319						
Y54A	Tignall	132.25	32	P	PKiKP	04 56 39.3	0.0
	baz=320						
X55A	Gracelyn & Ava	132.33	31	P	PKiKP	04 56 39.3	-0.1
	baz=322						
252A	Lumpkin	132.50	36	P	PKiKP	04 56 40.2	+0.3
	baz=317						
X56A	White Oak	132.62	30	P	PKiKP	04 56 40.0	0.0
	baz=323						
Z54A	Sparta	132.64	33	P	PKiKP	04 56 40.3	+0.1
	baz=320						
JSC	Jenkinsville	132.67	31	*e*PKPdf	PKiKP	04 56 39.8	-0.3
JSC	Jenkinsville	132.67	31	*e*PKIKP	PKiKP	04 56 39.8	-0.3
352A	Blakely	132.76	36	*e*PKPdf	PKiKP	04 56 40.0	-0.4
352A	Blakely	132.76	36	P	PKiKP	04 56 40.5	+0.1
	baz=316						
253A	Americus	132.80	35	P	PKiKP	04 56 41.1	+0.7
	baz=318						
451A	Vernon	132.88	38	P	PKiKP	04 56 40.8	+0.2
	baz=315						
Z55A	Blythe	133.04	32	P	PKiKP	04 56 41.3	+0.4
	baz=321						
X57A	Johnson Farm,	133.11	30	P	PKiKP	04 56 41.3	+0.3
	baz=324						
155A	Kite	133.31	33	P	PKiKP	04 56 41.6	+0.1
	baz=320						
254A	Abbeville	133.37	35	P	PKiKP	04 56 41.4	-0.2
	baz=318						
X58A	Rowland	133.40	29	P	PKiKP	04 56 41.7	0.0
	baz=325						
TIGA	Tifton	133.57	35	P	PKiKP	04 56 42.2	+0.2
	baz=318						
X59A	McDuffie Farm,	133.74	28	P	PKiKP	04 56 41.9	-0.3
	baz=326						
CMIG	Matias Romero	133.84	60	PKP	PKiKP	04 56 43.1	+0.1
	comp=Z,3.6nm,0.6s,baz=7.0,slow=1.3						
CMIG				SKPbc	SKPbc	05 00 00.3	+0.2
	comp=Z,14nm,1.1s,baz=227,slow=9.8,SNR=5.1						
256A	Glennville	134.12	33	P	PKiKP	04 56 42.8	-0.3
	baz=320						
EFI	East Falkland	134.14	177	*e*PKPdf	PKPdf	04 56 40.8	-0.4
EFI	East Falkland	134.14	177	*e*PKIKP	PKPdf	04 56 40.8	-0.4
NHSC	New Hope	134.15	31	P	PKiKP	04 56 42.9	-0.2
	baz=323						
356A	Blackshear	134.49	34	P	PKiKP	04 56 44.3	+0.4
	baz=319						
456A	Hilliard	135.00	35	P	PKiKP	04 56 45.1	+0.2
	baz=319						
557A	Orange Park	135.70	35	P	PKPdf	04 56 45.3	+0.5
	baz=319						
APG	El Apazote	138.57	60	PKP	PKPdf	04 56 50.9	+0.2
	comp=Z,6.3nm,0.9s,baz=312,slow=12,SNR=4.3						
APG				SKPbc	SKPbc	05 00 14.7	-0.3
	comp=Z,2.5nm,0.4s,baz=311,slow=12,SNR=4.2						
PLCA	Paso Flores	142.24	160	*e*PKPdf	PKPdf	04 56 57.8	+1.2
PLCA	Paso Flores	142.24	160	*e*PKIKP	PKPdf	04 56 57.8	+1.2
PLCA	Paso Flores	142.24	160	*e*P	PKiKP	04 56 58.4	-1.2
GO06	Curarrehue	142.92	158	*e*PKPdf	PKPdf	04 56 56.8	-1.0
MATN	Matagalpa	143.43	59	*e*P	PKPab	04 56 55.9	+0.2
BOAB	BOACO BROADBAN	143.88	60	*e*PKPdf	PKPdf	04 56 59.3	-0.7
ACON	Acoyapa	144.53	60⇑	*e*P	PKPdf	04 57 00.7	-0.5
GB1A	Borinquen Arri	144.85	62	*e*P	PKPdf	04 57 01.7	-0.2
BUEV	Buena Vista	144.86	62	*e*P	PKPdf	04 57 01.7	-0.2
GPS2	Hotel Rincn d	144.92	62	*e*P	PKPdf	04 57 02.2	+0.3
MESS	Mesas	145.07	62	*e*P	PKPdf	04 57 02.6	+0.4
PLVR	Palo Verde	145.10	63	*e*P	PKPdf	04 57 03.2	+0.8
CUI	Cuipilapa	145.13	62	*e*P	PKPdf	04 57 02.6	+0.3
JTS	JuntasAbangare	145.48	63	*e*PKPdf	PKPdf	04 57 03.0	+0.1
JTS	JuntasAbangare	145.48	63	*e*PKP2	PKPdf	04 57 03.0	+0.1
JTS	JuntasAbangare	145.48	63	PKPbc	PKPab	04 57 03.6	+0.2
	comp=Z,43nm,0.7s,baz=31,slow=2.6,SNR=36						
JTS	JuntasAbangare	145.48	63	*e*P	PKPab	04 57 03.4	0.0
ARE1	Arenal 1	145.61	62⇑	*e*P	PKPab	04 57 04.5	+0.6
CEDE	Laguna Cedeo	145.61	62	*e*P	PKPbc	04 57 03.6	0.0
HDC	Heredia	146.35	62	*e*P	PKPbc	04 57 06.0	+0.2
LCR2	La Lucha 2	146.56	63	*e*P	PKPbc	04 57 06.8	+0.2
MTDJ	Mount Denham	146.86	43	*e*PKPdf	PKPbc	04 57 06.8	-0.4
PRVC	Isla de Provid	147.00	55	*e*P	PKPab	04 57 08.8	-0.3
PRVC	Isla de Provid	147.00	55	*e*P	PKPab	04 57 08.8	-0.3
TRQA	Tornquist	147.10	169	*e*PKPbc	PKPbc	04 57 07.0	-0.2
TRQA	Tornquist	147.10	169	*e*PKP2	PKPbc	04 57 07.0	-0.2
GTBY	Guantanamo Bay	147.22	38	*e*PKPbc	PKPbc	04 57 08.5	+0.5
PTJ1	Puerto Jimnez	147.70	64	*e*P	PKPab	04 57 12.0	-0.1
BRU2	Volcan	148.14	63	*e*P	PKPdf	04 57 08.5	+1.0
GRTK	Grand Turk	148.21	31	*e*PKPbc	PKPbc	04 57 10.8	+0.2
GRTK				*e*PKPab	PKPab	04 57 13.3	-0.4
PEL	Peldehue	148.76	153	*e*PKPbc	PKPbc	04 57 11.7	-0.1
PEL	Peldehue	148.76	153	*e*PKP2	PKPbc	04 57 11.7	-0.1
SDDR	Presa de Saban	150.20	34	*e*PKPbc	PKPbc	04 57 16.0	+0.3
PNME	Penonome	150.36	62	*e*P	PKiKP	04 57 17.1	+0.2
PNME	Penonome	150.36	62	*e*P	PKiKP	04 57 17.1	+0.2
BCIP	Isla Barro Col	150.46	60	*e*PKPbc	PKPbc	04 57 16.5	+0.1
BCIP				*e*PKPab	PKPab	04 57 23.5	+0.3
BCIP	Isla Barro Col	150.46	60	*e*P	PKPbc	04 57 16.0	-0.4
ZANG	Zanguenga, Cho	150.54	60	*e*P	PKPbc	04 57 14.4	-2.2
AZU	Azuero	150.72	63	*e*P	PKPbc	04 57 16.7	-0.3
AZU	Azuero	150.72	63	*e*P	PKPbc	04 57 16.7	-0.3
AZU	Azuero	150.72	63	*e*P	PKPdf	04 57 11.6	+0.2
UPA	Univ. de Panam	150.82	60	*e*P	PKPdf	04 57 11.0	-0.5
GO04	Tololo Observa	151.14	149	*e*PKPbc	PKPbc	04 57 17.9	-0.1
LCO	Las Campanas	152.12	148	*e*PKPdf	PKPdf	04 57 13.3	-0.2
LCO				*e*PKPbc	PKiKP	04 57 21.3	+0.8
LCO				*e*PKPab	PKPab	04 57 30.3	+0.2
LCO	Las Campanas	152.12	148	*e*PKIKP	PKPdf	04 57 13.3	-0.2
LCO				*e*		04 57 30.3	
MPR	Mayaguez	152.97	28	*e*PKPbc	PKiKP	04 57 22.4	+0.3
EMPR	Esperanza - Ma	153.01	26	*e*PKPbc	PKiKP	04 57 22.8	+0.6
OBIP	Obispado Ponce	153.36	27	*e*PKPbc	PKPbc	04 57 22.5	-0.4
OBIP				*e*PKPab	PKPab	04 57 34.4	-0.7
SJG	San Juan	153.50	26	*e*PKPbc	PKiKP	04 57 24.0	+0.8
SJG				*e*PKPab	PKPab	04 57 36.6	+0.9
SJG	San Juan	153.50	26	*e*P	PKPdf	04 57 16.0	+0.6
SJG	San Juan	153.50	26	*e*P	PKPdf	04 57 16.0	+0.6
SJG	San Juan	153.50	26	PKPbc	PKiKP	04 57 23.7	+0.4
	comp=Z,13nm,0.7s,baz=121,slow=2.4,SNR=5.4						
SJG				PKPab	PKPab	04 57 38.1	+2.4
	comp=Z,36nm,0.6s,baz=107,slow=0.3,SNR=15						
HUMP	Col San Antoni	153.61	26	*e*PKPbc	PKPbc	04 57 22.9	-0.5
HUMP				*e*PKPab	PKPab	04 57 32.0	-4.1
CUPR	Culebra, Puert	153.70	24	*e*PKPbc	PKPbc	04 57 23.3	-0.2
CUPR				*e*PKPab	PKPab	04 57 37.5	+1.0
MTP	Monte Pirata	153.77	25	*e*PKPbc	PKPbc	04 57 23.7	-0.1
STVI	Saint Thomas	153.79	24	*e*PKPbc	PKiKP	04 57 23.9	+0.1
STVI				*e*PKPab	PKPab	04 57 34.4	-2.5
PLTB	Pedras Altas	154.14	181	*e*P	PKPdf	04 57 18.1	+2.0
TUMC	Tumaco	154.39	74	*e*P	PKPdf	04 57 17.9	+1.1
TUMC	Tumaco	154.39	74	*e*P	PKPdf	04 57 17.9	+1.1
DBBC	Dabeiba	154.64	60	*e*P	PKPdf	04 57 17.3	0.0
DBBC	Dabeiba	154.64	60	*e*P	PKPdf	04 57 17.3	0.0
UREC	San Jos de Ur	154.85	58	*e*P	PKPdf	04 57 18.6	+1.1
UREC	San Jos de Ur	154.85	58	*e*P	PKPdf	04 57 18.6	+1.1
MALC	Bahia Malaga	154.95	68	*e*P	PKPdf	04 57 14.2	-3.4
MALC	Bahia Malaga	154.95	68	*e*P	PKPdf	04 57 14.2	-3.4
OTAV	Otavalo	155.08	77	*e*PKPdf	PKPdf	04 57 17.1	-1.3
OTAV				*e*PKPbc	PKPbc	04 57 27.2	
OTAV				*e*PKPab	PKPab	04 57 42.5	-0.9
OTAV	Otavalo	155.08	77	*e*PKIKP	PKPdf	04 57 17.1	-1.3
OTAV				*e*		04 57 42.5	
CODC	Agustn Codazz	155.29	51	*e*P	PKPdf	04 57 18.2	+0.2
CODC	Agustn Codazz	155.29	51	*e*P	PKPdf	04 57 18.2	+0.2
SMLC	San Martn de	155.48	54	*e*P	PKPdf	04 57 18.1	-0.2
SMLC	San Martn de	155.48	54	*e*P	PKPdf	04 57 18.1	-0.2
CPSB	Cacapava Do Su	155.49	182	*e*P	PKPdf	04 57 19.5	+1.6
PLMC	San Jos del P	155.55	65	*e*P	PKPdf	04 57 17.8	-0.7
PLMC	San Jos del P	155.55	65	*e*P	PKPdf	04 57 17.8	-0.7
ZARC	Zaragoza, Cauc	155.55	58	*e*P	PKPdf	04 57 15.9	-2.5
ZARC	Zaragoza, Cauc	155.55	58	*e*P	PKPdf	04 57 15.9	-2.5
HELC	Santa Helena	155.63	61	*e*P	PKPdf	04 57 17.4	-1.6
HELC	Santa Helena	155.63	61	*e*P	PKPdf	04 57 17.4	-1.6
YOTC	Yotoco, Valle	155.87	67	*e*P	PKPdf	04 57 18.6	-0.4
YOTC	Yotoco, Valle	155.87	67	*e*P	PKPdf	04 57 18.6	-0.4
GCUF	Volcan Galeras	155.88	74	*e*P	PKPdf	04 57 19.9	+0.4
GCUF	Volcan Galeras	155.88	74	*e*P	PKPdf	04 57 19.9	+0.4
ATAH	Atahualpa	155.94	95	PKP	PKPdf	04 57 21.3	+1.8
	comp=Z,13nm,1.1s,baz=192,slow=3.5,SNR=14						
POPC	Popayan, Colom	156.10	70	*e*P	PKPdf	04 57 19.2	-0.2
POPC	Popayan, Colom	156.10	70	*e*P	PKPdf	04 57 19.2	-0.2
CNLB	Canela	156.37	187	*e*P	PKPdf	04 57 21.9	+2.8
PTBC	PUERTO BERRIO,	156.39	59	*e*P	PKPdf	04 57 17.9	-1.6
PTBC	PUERTO BERRIO,	156.39	59	*e*P	PKPdf	04 57 17.9	-1.6
RREF	El Recreo	156.39	64	*e*P	PKPdf	04 57 22.5	+2.2
RREF	El Recreo	156.39	64	*e*P	PKPdf	04 57 22.5	+2.2
OCAC	Ocana	156.41	54	*e*P	PKPdf	04 57 20.5	+0.7
OCAC	Ocana	156.41	54	*e*P	PKPdf	04 57 20.5	+0.7
PCON	Cinco Dias	156.43	71	*e*P	PKPdf	04 57 21.2	+0.9
PCON	Cinco Dias	156.43	71	*e*P	PKPdf	04 57 21.2	+0.9
ANIL	Santa Ana	156.52	65	*e*P	PKPdf	04 57 20.2	+0.2
ANIL	Santa Ana	156.52	65	*e*P	PKPdf	04 57 20.2	+0.2
MARP	Paez Belalcaza	156.66	69	*e*P	PKPdf	04 57 18.7	-1.6
MARP	Paez Belalcaza	156.66	69	*e*P	PKPdf	04 57 18.7	-1.6
BRRC	Barranca, Sant	156.72	57	*e*P	PKPdf	04 57 19.5	-0.4
BRRC	Barranca, Sant	156.72	57	*e*P	PKPdf	04 57 19.5	-0.4
NNA	Nana	156.82	107	*e*PKPdf	PKPdf	04 57 20.4	+0.4
NNA				*e*PKPab	PKPab	04 57 50.0	-0.3
NNA	Nana	156.82	107	PKP	PKPdf	04 57 20.5	+0.4
	comp=Z,20nm,1.1s,baz=238,slow=1.8,SNR=5.5						
ROSC	El Rosal	157.33	63	*e*PKPdf	PKPdf	04 57 20.7	-0.5
ROSC	El Rosal	157.33	63	*e*P	PKPdf	04 57 22.8	+1.6
ROSC	El Rosal	157.33	63	*e*P	PKPdf	04 57 22.8	+1.6
ROSC	El Rosal	157.33	63	PKP	PKPdf	04 57 21.6	+0.4
	comp=Z,17nm,1.0s,baz=288,slow=3.0,SNR=13						
FLOC	Florencia	157.38	72	*e*P	PKPdf	04 57 23.3	+2.4
FLOC	Florencia	157.38	72	*e*P	PKPdf	04 57 23.3	+2.4
PAMC	Pamplona, Colo	157.42	55	*e*P	PKPdf	04 57 21.6	+0.2
PAMC	Pamplona, Colo	157.42	55	*e*P	PKPdf	04 57 21.6	+0.2
BARC	Barichara	157.44	57	*e*P	PKPdf	04 57 30.9	+10
BARC	Barichara	157.44	57	*e*P	PKPdf	04 57 30.9	+10
RUSC	La Rusia	157.89	59	*e*P	PKPdf	04 57 20.1	-1.9
RUSC	La Rusia	157.89	59	*e*P	PKPdf	04 57 20.1	-1.9
CHIC	Chingaza	157.94	62	*e*P	PKPdf	04 57 21.0	-1.0
CHIC	Chingaza	157.94	62	*e*P	PKPdf	04 57 21.0	-1.0
LVC	Limon Verde	158.06	141	*e*PKPdf	PKPdf	04 57 21.3	-0.5
LVC				*e*PKPab	PKPab	04 57 55.8	+0.1
LVC	Limon Verde	158.06	141	*e*PKIKP	PKPdf	04 57 21.3	-0.5
LVC				*e*		04 57 55.8	
LVC	Limon Verde	158.06	141	PKP	PKPdf	04 57 23.2	+1.4
	comp=Z,4.5nm,1.0s,baz=208,slow=5.4,SNR=4.1						
LVC				PKPab	PKPab	04 57 56.8	+1.1
	comp=Z,23nm,1.0s,baz=241,slow=3.9,SNR=6.2						
SDV	Santo Domingo	158.09	48	*e*PKPdf	PKPdf	04 57 21.1	-0.8
SDV	Santo Domingo	158.09	48	PKP	PKPdf	04 57 22.2	+0.3
	comp=Z,15nm,0.9s,baz=282,slow=3.0,SNR=14						
VILC	Villavicencio,	158.21	64	*e*P	PKPdf	04 57 19.3	-2.7
VILC	Villavicencio,	158.21	64	*e*P	PKPdf	04 57 19.3	-2.7
ITAB	Concordia	158.57	185	*e*P	PKPdf	04 57 22.2	+0.3
PTLC	Puerto Leguiza	158.62	75	*e*P	PKPdf	04 57 21.6	-0.8
PTLC	Puerto Leguiza	158.62	75	*e*P	PKPdf	04 57 21.6	-0.8
PB01	IPOC Station P	158.80	137	*e*PKPdf	PKPdf	04 57 21.7	-0.7
CPUP	Villa Florida	159.35	172	*e*PKPdf	PKPdf	04 57 23.5	+0.7
CPUP				*e*PKPab	PKPab	04 58 00.3	-0.3
CPUP	Villa Florida	159.35	172	PKP	PKPdf	04 57 23.2	+0.4
	comp=Z,17nm,1.2s,baz=265,slow=0.8,SNR=12						
CPUP				PKPab	PKPab	04 58 01.2	+0.6
	comp=Z,22nm,0.9s,baz=192,slow=3.0,SNR=7.3						
CPUP	Villa Florida	159.35	172	*e*P	PKPdf	04 57 23.2	+0.4
PB11	IPOC Station P	159.54	134	*e*PKPdf	PKPdf	04 57 24.3	+0.9
TIJ01	Guaruva-PR	159.93	194	*e*P	PKPdf	04 57 26.8	+3.1
CAM01	Campos-RJ	159.94	216	*e*P	PKPdf	04 57 25.1	+1.5
MNMC	Minye Minye	159.99	133	*e*PKPdf	PKPdf	04 57 24.7	+0.7
DUB01	Friburgo-RJ	160.15	214	*e*P	PKPdf	04 57 26.5	+2.6
VAS01	Vassouras-RJ	160.57	211	*e*P	PKPdf	04 57 25.3	+1.0
RIB01	Linhares ES	160.97	224	*e*P	PKPdf	04 57 26.9	+2.1
PTGB	Pitanga	161.06	186	*e*P	PKPdf	04 57 25.1	+0.2
SPB	Sao Paulo	161.12	200	*e*PKPdf	PKPdf	04 57 25.0	+0.2
BSFB	Barra de Sao F	161.61	224	*e*P	PKPdf	04 57 25.5	+0.1
RCBR	Riachuelo	161.77	269	*e*P	PKPdf	04 57 26.1	+0.3
SJMB	Sao Joao De Ma	161.93	224	*e*P	PKPdf	04 57 25.9	+0.1
FRTB	Fartura	161.97	194	*e*P	PKPdf	04 57 27.5	+1.8
RCLB	Rio Claro- Sao	162.24	201	*e*P	PKPdf	04 57 26.8	+0.6
BSCB	Bom Sucesso	162.31	210	*e*P	PKPdf	04 57 27.2	+0.9
LPAZ	La Paz	162.82	129	*e*PKPdf	PKPdf	04 57 27.4	-0.1
LPAZ	La Paz	162.82	129	*e*PKIKP	PKPdf	04 57 27.4	-0.1
LPAZ	La Paz	162.82	129	PKP	PKPdf	04 57 28.2	+0.7
	comp=Z,39nm,1.3s,baz=11,slow=1.8,SNR=27						
LPAZ	La Paz	162.82	129	*e*P	PKPdf	04 57 29.2	+1.7
TRCB	Terra Rica	163.01	185	*e*P	PKPdf	04 57 27.2	+0.3
NBCP	Cabaceiras do	163.69	244	*e*P	PKPdf	04 57 27.4	-0.3
BB19B	Bebedouro	163.83	199	*e*P	PKPdf	04 57 28.2	+0.5
MCI7	Montes Claros	165.06	222	*e*P	PKPdf	04 57 29.6	+0.8
MCI6	Montes Claros	165.09	222	*e*P	PKPdf	04 57 30.4	+1.6
MCI9	Montes Claros	165.16	222	*e*P	PKPdf	04 57 30.6	+1.7
MCI8	Montes Claros	165.21	222	*e*P	PKPdf	04 57 30.1	+1.1
AQDB	Aquidauana	165.32	175	*e*P	PKPdf	04 57 29.4	+0.5
ITRB	Iturama	165.66	195	*e*P	PKPdf	04 57 30.0	+0.8
IPMB	Ipameri, GO	166.52	205	*e*P	PKPdf	04 57 31.7	+1.7
JANB	Januaria	166.59	226	*e*P	PKPdf	04 57 30.3	+0.2
BDFB	Brasilia	168.46	211	*e*PKPdf	PKPdf	04 57 31.6	+0.1
BDFB				*e*PKPab	PKPab	04 58 38.1	-2.9
BDFB	Brasilia	168.46	211	PKP	PKPdf	04 57 31.3	-0.2
	comp=Z,13nm,1.1s,baz=129,slow=3.0,SNR=12						
BDFB				PKPab	PKPab	04 58 41.3	+0.2
	comp=Z,14nm,0.8s,baz=211,slow=5.9,SNR=6.0						
MDP	Montagnes des	169.08	352	PKPab	PKPab	04 58 43.8	+0.2
	comp=Z,57nm,1.1s,baz=347,slow=4.5,SNR=7.7						
PTGA	Pitinga	172.38	49	*e*PKPdf	PKPdf	04 57 33.0	-0.7
PTGA				PKPab	PKPab	04 58 59.7	+1.2
PTGA	Pitinga	172.38	49	PKP	PKPdf	04 57 33.6	0.0
	comp=Z,2.4nm,0.5s,baz=342,slow=1.2,SNR=6.1						
PTGA				PKPab	PKPab	04 58 59.7	+1.2
	comp=Z,8.9nm,0.8s,baz=15,slow=8.2,SNR=1.9						

IDC **16** *04:43:22.4±1.8, 32°.45S×69°.17W, h0*^{km}*, mb3.8/2, mb1 4.0/4, mb1mx3.8/22, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=59.5km s-min=36.1km az=0.0*

SJA **16** *04:43:38.5±0.5, 31°.48S×68°.83W, h110*^{km}*±3*^{km}*, ML3.8, MW5.4*

ISCJB **16** *04:43:39.0±0.7, 31°.50S±0°.06×68°.75W±0°.10, h113*^{km}*±5*^{km}*, mb3.6/2, Error ellipse: s-maj=13.9km s-min=9.6km az=166.0*

ISC 16 04:43:39.2±0.9, **31°.48S**±0°.07×**68°.76W**±0°.07, **h108**^{km}±6^{km}, **n18, σ0^{s}.98**/20, **1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJA	San Juan	0.18	105	*i* P	Pn	04 43 54.5	+0.2
SJA				IAML		04 43 55.2	
	comp=Z,3μm,0.2s						
RTLL	Cerro Villicun	0.29	58	*i* P	Pn	04 43 54.7	+0.1
RTLL				*i* S	Sn	04 44 07.3	+1.0
RTLL				IAML		04 44 07.7	
	comp=Z,2μm,0.3s						
RTCV	Cerro Valdivia	0.42	154	*i* P	Pn	04 43 55.8	+0.5
RTLS	Leoncito	0.56	235	*i* P	Pn	04 43 56.9	+0.4
RTLS				IAML		04 44 10.8	
	comp=Z,2μm,0.1s						
AMOG	MOGNA	0.59	23	*i* P	Pn	04 43 56.9	+0.4
AUSP	Uspallata	0.91	216	*i* P	Pn	04 43 59.9	+0.3
ACCO	Cerro Coronel	0.93	344⇓	*i*P	Pn	04 44 00.2	+0.4
ACDV	Cuesta del Vie	1.34	347	IAML		04 44 24.4	
	comp=Z,1μm,0.7s						
AROD	Rodeo	1.45	335	*i* P	Pn	04 44 06.2	+0.6
AROD				*i* S	Sn	04 44 26.1	+0.6
AGUA	GUANDACOL	2.00	7	*i* S	Sn	04 44 38.4	+1.0
APLL	PUNTA DE LOS L	2.20	61	*i* P	Pn	04 44 15.8	+1.0
APLL				IAML		04 44 45.6	
	comp=Z,258nm,0.4s						
MRA	San Martin	2.75	111	*i* P	Pn	04 44 23.1	+1.2
MRA				IAML		04 45 15.2	
	comp=Z,345nm,0.5s						
CPUP	Villa Florida	11.25	66	Pn	Pn	04 46 14.5	-2.2
	comp=Z,0.1nm,0.3s,baz=243,slow=14,SNR=2.9						
CPUP				Sn	Sn	04 48 31.8	+11
	comp=Z,0.2nm,0.3s,baz=158,slow=19,SNR=2.4						
CPUP				Lg	Lg	04 49 30.1	
	comp=Z,0.2nm,0.3s,baz=182,slow=18,SNR=2.9						
LPAZ	La Paz	15.14	2	Pn	P	04 47 09.7	-0.9

	comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=3.9						
TXAR	Lajitas Array	68.99	328	P	P	04 54 34.0	+0.9
	comp=Z,0.6nm,0.7s,baz=164,slow=10.0,SNR=4.6						
TORD	Torodi Ar. Bea	80.74	68	P	P	04 55 41.5	+0.5
	comp=Z,1.1nm,1.1s,baz=237,slow=5.4,SNR=2.8						
ZALV	Zalesovo Beam	150.63	32	PKPbc	PKiKP	05 03 18.7	0.0
	comp=Z,1.4nm,0.6s,baz=307,slow=3.6,SNR=5.0						
MKAR	Makanchi Array	153.03	47	PKPbc	PKPbc	05 03 22.5	-1.3
	comp=Z,0.1nm,0.4s,baz=204,slow=3.2,SNR=3.7						
MKAR				PKPab	PKPab	05 03 36.2	+0.6
	comp=Z,0.4nm,0.7s,baz=292,slow=3.1,SNR=3.7						

ISCJB ***16*** *04:51:48.7±0.7, 37°.03N±0°.04×141°.38E±0°.06, h50^{km}±4^{km}, mb4.1/18, Error ellipse: s-maj=9.3km s-min=4.7km az=29.3*

JMA ***16*** *04:51:50.8±0.1, 37°.07N×141°.20E, h51^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s29.00000°, δ79.00000°, λ91.00000°. NP2: ϕ_s204.00000°, δ11.00000°, λ85.00000°. Principal axes: T Plg56.0000°, Azm300.0000°; N Plg1.0000°, Azm209.0000°; P Plg34.0000°, Azm118.0000°;*

JMA Felt III J1.

NEIC ***16*** *04:51:51.1±0.8, 37°.07N×141°.22E, h50^{km}±6^{km}, mb4.3/2 Error ellipse: s-maj=9.6km s-min=6.3km az=120.0*

IDC ***16*** *04:51:53.2±2.2, 37°.07N×141°.26E, h69^{km}±17^{km}, mb3.8/15, mb1 3.9/19, mb1mx3.7/67, mbtmp4.1/19, Error ellipse: s-maj=18.8km s-min=12.1km az=119.0*

ISC 16 04:51:50.1±1.2**, 37°.05N**±0°.05×**141°.29E**±0°.07**, h45^{km}**±8^{km}**, n56, σ1^s.12**/67**, mb4.1**/18**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.40	278	⇓P	Pn	04 52 00.2	+0.3
ONAJ				*e*S	Sn	04 52 06.5	-0.4
JFK	Kawauchi	0.46	314	⇓P	Pn	04 52 00.8	+0.1
JFK				S	Sn	04 52 07.7	-0.5
JFFD	Fukushimafurud	0.58	275	⇓P	Pn	04 52 02.2	0.0
JFFD				*e*S	Sn	04 52 10.2	-0.6
JHO	Hitachi	0.72	233	⇓P	Pn	04 52 04.0	0.0
JHO				S	Sn	04 52 13.3	-0.7
JFT	Otama	0.90	302	⇓P	Pn	04 52 07.1	+0.7
JFT				S	Sn	04 52 18.6	+0.4
JMM	Marumori	0.91	334	⇓P	Pn	04 52 06.6	+0.1
JMM				S	Sn	04 52 17.9	-0.6
JFY	Yanaizu	1.32	286	⇓P	Pn	04 52 12.3	+0.2
JFY				*e*S	Sn	04 52 28.3	-0.2
JIO	Ouri	1.41	2	P	Pn	04 52 13.6	+0.3
JIO				S	Sn	04 52 29.7	-1.0
JOU	Okura	1.41	340	P	Pn	04 52 13.9	+0.5
JOU				*e*S	Sn	04 52 31.3	+0.5
JYS	Shirataka	1.52	321	⇓P	Pn	04 52 15.6	+0.7
JYS				S	Sn	04 52 34.5	+0.9
JAG	Ashikaga	1.60	248	⇓P	Pn	04 52 16.2	+0.2
JAG				*e*S	Sn	04 52 35.6	+0.2
MJAR	Matsushiro Arr	2.52	259	P	Pn	04 52 29.7	+1.1
	3.3nm,0.3s,baz=84,slow=15,SNR=66						
MJAR				S	Sn	04 53 01.9	+3.7
	3.5nm,0.3s,baz=56,slow=24,SNR=8.2						
MAJO	Matsushiro	2.52	259	*e*Pn	Pn	04 52 29.6	+0.9
MAJO				*e*Sn	Sn	04 53 01.9	+3.7
MAT	Matsushiro	2.52	259	P	Pn	04 52 30.3	+1.6
MAT				*e*S	Sn	04 53 00.1	+1.9
MJB9	Matsu-Tunnel	2.53	260	*e*Pn	Pn	04 52 29.6	+0.9
INU	Inuyama	3.85	245	*e*Pn	Pn	04 52 48.4	+1.6
ERM	Erimo	5.17	16	*e*Pn	Pn	04 53 04.6	-0.3
ASAJ	Asahikawa	7.13	8	P	Pn	04 53 32.7	+0.8
	2.4nm,0.3s,baz=223,slow=7.8,SNR=8.5						
ASAJ				S	Sn	04 54 54.2	+2.7
	0.9nm,0.3s,baz=135,slow=20,SNR=2.9						
USRK	Ussuriysk Ar.	10.05	318	P	Pn	04 54 16.8	+5.0
	0.4nm,0.3s,baz=135,slow=13,SNR=12						
KSRS	Korea Array	10.66	276	P	Pn	04 54 24.6	+4.4
	0.2nm,0.3s,baz=90,slow=13,SNR=5.0						
MDJ	Mudanjiang	11.64	314	*e*Pn	Pn	04 54 31.8	-1.8
KLR	Kul'dur	14.01	333	P	P	04 55 09.9	-2.8
	0.1nm,0.3s,baz=138,slow=16,SNR=2.2						
SSE	Sheshan	17.67	256	*e*Pn	Pn	04 55 50.5	-2.4
SONA0	Songino Array	27.70	304	*e*P	P	04 57 33.9	-0.1
SONM	Songino Array	27.70	304	P	P	04 57 33.9	-0.2
	1.4nm,0.5s,baz=102,slow=9.0,SNR=11						
H11N2	WAKE ISLAND Hy	28.24	121	T	T	05 27 37.2	
	baz=313,slow=75,SNR=44						
H11N1	WAKE ISLAND Hy	28.25	121	T	T	05 27 49.3	
	baz=313,slow=75,SNR=42						
H11N3	WAKE ISLAND Hy	28.26	121	T	T	05 27 46.7	
	baz=313,slow=75,SNR=38						
ZAA1	Zalesovo Array	41.83	312	*e*P	P	04 59 35.9	+0.6
ZALV	Zalesovo Beam	41.83	312	P	P	04 59 35.9	+0.6
	3.5nm,0.5s,baz=101,slow=7.3,SNR=8.6						
MK32	Makanchi Array	44.03	302	*e*P	P	04 59 53.6	+0.3
MKAR	Makanchi Array	44.03	302	P	P	04 59 53.6	+0.3
	1.6nm,0.8s,baz=84,slow=11,SNR=15						
KURK	Kurchatov	45.85	308	*e*P	P	05 00 07.9	+0.3
KURBB	Kurchatov Arra	45.92	308	P	P	05 00 07.9	-0.3
	2.0nm,0.5s,baz=84,slow=8.2,SNR=7.5						
ILAR	Eielson Array	49.54	32	P	P	05 00 37.0	+1.0
	1.0nm,0.8s,baz=275,slow=5.3,SNR=4.5						
ILB	Eielson Array	49.54	32	*e*P	P	05 00 37.0	+1.0
BVAR	Borovoye Array	50.49	312	P	P	05 00 43.1	-0.3
	1.3nm,0.6s,baz=72,slow=9.5,SNR=5.2						
BVAR				PcP	PcP	05 02 01.4	+0.5
	1.0nm,0.7s,baz=130,slow=2.3,SNR=3.6						
BRVK	Borovoye	50.55	312	*e*P	P	05 00 44.4	+0.5
INK	Inuvik	54.42	27	P	P	05 01 13.6	+1.3
	8.0nm,1.1s,baz=90,slow=20,SNR=4.1						
ARU	Arti	56.29	319	*e*P	P	05 01 25.5	-0.4
WR1	Warramunga Arr	57.06	188	*e*P	P	05 01 32.2	+0.6
	5.0nm,0.9s						
WRA	Warramunga Arr	57.06	188	P	P	05 01 32.2	+0.6
	0.4nm,0.5s,baz=5.0,slow=7.4,SNR=7.1						
ABKAR	Akbulak array	57.86	310	*e*P	P	05 01 37.0	0.0
AKTO	Aktyubinsk	58.59	312	P	P	05 01 42.3	0.0
	2.8nm,0.8s,baz=13,slow=4.0,SNR=3.6						
AS31	Alice Springs	60.78	188	*e*P	P	05 01 57.0	-0.5
	2.7nm,1.6s						
ASAR	Alice Springs	60.79	188	P	P	05 01 57.0	-0.5
	0.6nm,0.9s,baz=17,slow=13,SNR=3.2						
ARA0	ARCESS Array S	63.95	339	*e*P	P	05 02 18.5	+0.4
ARCES	ARCESS Array B	63.95	339	P	P	05 02 18.5	+0.4
	1.4nm,0.8s,baz=62,slow=6.2,SNR=3.0						
FIA0	FINESS Array S	68.76	332	*e*P	P	05 02 49.1	+0.1
FINES	FINESS Array B	68.76	332	P	P	05 02 49.1	+0.1
	2.1nm,0.7s,baz=62,slow=6.5,SNR=3.5						
HFS	Hagfors	74.04	336	P	P	05 03 21.3	+0.5
	3.3nm,1.0s,baz=66,slow=3.5,SNR=5.0						
NB200	NORSAR Array S	74.14	337	*e*P	P	05 03 21.7	+0.2
NOA	NORSAR Array B	74.14	337	P	P	05 03 21.7	+0.2
	1.3nm,1.0s,baz=38,slow=5.8,SNR=3.2						
AKASG	Malin Array Be	74.23	322	P	P	05 03 20.9	-1.2
	0.9nm,0.5s,baz=41,slow=5.3,SNR=4.3						
AKBB	Malin Array Si	74.23	322	*e*P	P	05 03 20.9	-1.2
	21nm,1.6s						
LPAZ	La Paz	146.77	59	PKPbc	PKPab	05 11 29.7	0.0
	1.2nm,0.6s,baz=290,slow=2.6,SNR=5.3						

NNC ***16*** *05:03:13.3±4.4, 44°.68N×83°.21E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=38.1km s-min=18.2km az=121.0*

SOME ***16*** *05:03:20.5, 44°.50N×82°.75E, h5^{km}*

ISC 16 05:03:16.4±2.6**, 44°.5N**±0°.1×**83°.2E**±0°.1**, h17^{km}, n7, σ0^s.79**/11**, 4C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	2.35	345	⇑Pg	Pn	05 03 53.9	-0.4
	0.3nm,0.3s,baz=155,slow=16,SNR=46						
MK31				⇓Lg	Lg	05 04 23.3	
	3.9nm,0.5s,baz=164,slow=28,SNR=15						
MAKZ	Makanchi	2.43	340	⇑Pg	Pn	05 03 55.5	+0.1
	1.5nm,0.6s						
MAKZ				⇑Lg	Lg	05 04 25.9	
	2.8nm,0.6s						
DJR	Jarkent	2.44	266	*e*P	Pb	05 04 00.4	+0.6
	0.2nm,0.2s						
DJR				*e*S	Sb	05 04 29.4	-0.2
	4.8nm,0.2s						
KAPS	Kapalarasan	2.82	287	*e*P	Pb	05 04 06.5	+0.2
	0.4nm,0.2s						
KAPS				*e*S	Sb	05 04 39.8	-0.7
	2.0nm,0.2s						
PDGK	Podgornoye	2.92	247	⇓Pg	Pb	05 04 09.0	+0.8
	8.6nm,1.4s						
PDGK				⇑Lg	Lg	05 04 45.1	
	5.8nm,0.7s						
UZB	Uzynbulak	3.31	247	*e*P	Pb	05 04 14.6	-0.2
	0.5nm,0.2s						
UZB				*e*S	Sb	05 04 53.3	-1.5
	2.7nm,0.3s						
CHKK	Chushkaly	4.50	264	*e*P	Pb	05 04 35.7	+0.6
	1.2nm,0.1s						
CHKK				*e*S	Sb	05 05 29.8	+0.8
	2.1nm,0.3s						

MEX 16 05:03:26.4±0.4**, 16°.14N**×**93°.91W, h120^{km}**±4^{km}**, MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.79	123	*e*P	Pn	05 03 45.0	-1.5
PCIG				*e*S	Sn	05 03 60.0	-1.8
CMIG	Matias Romero	1.33	316	*e*P	Pn	05 03 50.8	-1.2
CMIG				*i* S	Sn	05 04 09.8	-1.6
CCIG	Comitan	1.71	85	*e*P	Pn	05 03 55.0	-1.5
HUIG	Huatulco	2.14	261	*i* P	Pn	05 04 00.2	-1.4
HUIG				*i* S	Sn	05 04 27.6	-1.1

KRSC 16 05:07:08.0±0.9**, 52°.24N**×**159°.82E, h28^{km}**±14^{km}**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.83	284	*e*P	Pn	05 07 23.6	0.0
RUS				*e*S	Sb	05 07 34.5	0.0
SPN	Mys Shipunski	0.86	8	*e*P	Pb	05 07 25.1	+0.7
SPN				*e*S	Sn	05 07 37.0	+1.1
NLC	Nalytchevo	0.97	343	*e*P	Pb	05 07 26.1	-0.1
NLC				*e*S	Sb	05 07 39.0	+0.3
DALK	Dalny	1.02	321	*e*P	Pb	05 07 27.0	0.0
DALK				*e*S	Sb	05 07 40.9	+0.8
MTVR	Mutnovka	1.03	284	*e*P	Pb	05 07 27.3	0.0
MTVR				*e*S	Sb	05 07 41.0	+0.5
PET	Petropavlovsk	1.06	318	*e*P	Pb	05 07 27.5	-0.1
PET				*e*S	Sb	05 07 41.4	+0.3
GRL	Gorelyy	1.12	287	*e*P	Pb	05 07 28.7	0.0
UGLR	Uglovaya	1.14	328	*e*P	Pb	05 07 29.1	0.0
UGLR				*e*S	Sb	05 07 44.0	+0.4
KDTR	Khodutka, Kamc	1.16	249	*e*P	Pn	05 07 28.7	+0.4
KDTR				*e*S	Sn	05 07 43.4	+0.2
SDLR	Sedlovina	1.18	332	*e*P	Pb	05 07 29.3	-0.5
KRMR	Karymshinskiy	1.19	300	*e*P	Pn	05 07 29.2	+0.6
SMAR	Somma	1.20	329	*e*P	Pb	05 07 29.6	-0.5
AVH	Avacha	1.22	328	*e*P	Pb	05 07 30.5	+0.1
AVH				*e*S	Sb	05 07 45.7	0.0
KOK	Koryaka	1.27	326	*e*P	Pb	05 07 31.4	0.0
KRX	Arik	1.33	328	*e*P	Pb	05 07 32.0	-0.3
APC	Apacha	1.76	294	*e*P	Pb	05 07 38.7	-0.9
APC				*e*S	Sb	05 08 00.7	-0.6
KII	Karymskiy	1.81	353	*e*P	Pb	05 07 39.7	-0.7
KII				*e*S	Sb	05 08 02.2	-0.5
GNL	Ganaly	1.85	323	*e*P	Pb	05 07 39.8	-1.3
PAU	Pauzhetka	2.02	249	*e*P	Pb	05 07 42.4	-1.6
PAU				*e*S	Sb	05 08 07.3	-1.4
MKZ	Mys Kozlova	2.58	25	*e*P	Pn	05 07 49.8	+2.0
KZV	Kizimen	2.89	5	*e*P	Pn	05 07 55.1	+2.9
TUMD	Tumrok D	2.99	6	*e*P	Pn	05 07 56.8	+3.4
TUMD				*e*S	Sn	05 08 31.6	+3.4
TUMR	Tumrok	3.05	3	*e*P	Pb	05 07 58.0	-3.6
ESO	Esso	3.75	350	*e*P	Pb	05 08 09.3	-4.1
KBTR	Krutoberegovo	4.34	23	*e*P	Pn	05 08 14.1	+2.1

IDC 16 05:07:11.3±1.6**, 11°.37S**×**164°.74E, h0^{km}, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.6**/43**, mbtmp3.6**/5**, ML3.7**/1**, Error ellipse: s-maj=48.6km s-min=30.5km az=123.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.76	172	Pn	Pn	05 09 47.4	+0.5
	0.6nm,0.3s,baz=308,slow=15,SNR=10						
WRA	Warramunga Arr	30.45	250	P	P	05 13 25.4	-0.5
	0.4nm,0.8s,baz=79,slow=8.5,SNR=2.1						
ASAR	Alice Springs	31.77	243	P	P	05 13 37.2	-0.4
	0.4nm,0.6s,baz=68,slow=9.2,SNR=9.7						
ILAR	Eielson Array	84.14	19	P	P	05 19 43.0	-1.0
	0.3nm,0.7s,baz=227,slow=4.5,SNR=5.3						
MKAR	Makanchi Array	93.08	317	P	P	05 20 28.9	+1.7
	0.3nm,0.8s,baz=99,slow=5.2,SNR=2.7						

ISCJB ***16*** *05:13:06.6±1.0, 8°.12S±0°.07×130°.2E±0°.1, h10^{km}, mb3.7/3, MS4.6/1, Error ellipse: s-maj=20.3km s-min=9.5km az=172.5*

IDC ***16*** *05:13:07.8±1.6, 8°.08S×130°.00E, h0^{km}, mb3.8/3, mb1 3.6/6, mb1mx3.4/43, mbtmp3.5/6, ML2.9/3, MS4.7/1, Ms1 4.7/1, ms1mx3.5/43, Error ellipse: s-maj=62.4km s-min=23.7km az=83.0*

ISC 16 05:13:08.1±1.3**, 8°.01S**±0°.10×**130°.3E**±0°.2**, h10^{km}, n7, σ1^s.31**/8**, mb4.0**/3**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.99	204	Pn	Pn	05 15 45.4	-0.1
	0.1nm,0.3s,baz=18,slow=13,SNR=3.7						
FITZ				Sn	Sn	05 17 48.6	+0.1
	0.0nm,0.3s,baz=236,slow=2.1,SNR=4.0						
WRA	Warramunga Arr	12.50	162	Pn	Pn	05 16 06.9	+0.8
	0.1nm,0.3s,baz=339,slow=14,SNR=6.6						
WRA				Sn	Sn	05 18 24.9	-0.7
	baz=337,slow=21,SNR=2.8						
ASAR	Alice Springs	15.95	168	Pn	Pn	05 16 52.6	-0.2
	0.0nm,0.3s,baz=339,slow=9.3,SNR=4.6						
HNR	Honiara	29.37	95	LR	LR	05 31 08.3	
	comp=Z,2μm,21.8s,baz=153,slow=36						
MKAR	Makanchi Array	69.21	327	P	P	05 24 14.8	-0.3
	0.9nm,0.8s,baz=110,slow=4.5,SNR=6.1						
KURBB	Kurchatov Arra	73.50	329	P	P	05 24 43.6	+2.7
	0.6nm,0.9s,baz=110,slow=5.4,SNR=3.2						
BVAR	Borovoye Array	79.05	328	P	P	05 25 12.3	-0.1
	1.3nm,0.9s,baz=116,slow=5.0,SNR=4.3						

BJI ***16*** *05:16:13.5, 35°.90S×178°.75E, h195^{km}, mB5.8/38, mb5.3/54*

IDC ***16*** *05:16:13.9±0.8, 36°.02S×178°.12E, h172^{km}±7^{km}, mb5.3/35, mb1 5.3/37, mb1mx5.2/43, mbtmp5.7/37, MS4.8/9, Ms1 4.8/9, ms1mx4.3/37, Error ellipse: s-maj=8.5km s-min=7.4km az=44.0*

MOS ***16*** *05:16:13.2±0.9, 36°.12S×177°.91E, h172^{km}, mb5.9/46, Error ellipse: s-maj=9.7km s-min=7.3km az=89.2*

ISCJB ***16*** *05:16:17.2±0.2, 36°.38S±0°.03×177°.89E±0°.02, h210^{km}±2^{km}, mb5.5/245, Error ellipse: s-maj=4.1km s-min=3.2km az=176.9*

NEIC ***16*** *05:16:17.1±0.4, 36°.51S×177°.93E, h207^{km}±3^{km}, mb5.7/204, MW5.8, Error ellipse: s-maj=4.7km s-min=3.7km az=165.0*

NEIC Felt at Gisborne, Omaio and Waimana.

WEL ***16*** *05:16:17.0±0.9, 36°S±8°×17°8E±°, h194^{km}±10^{km}*

NEIC ***16*** *05:16:18.0±0.0, 36°.13S×178°.17E, h180^{km}, Moment Tensor Solution. s8 Moment tensor: Scale 10^{17}Nm; M_{rr}3.67; $M_{\theta\theta}$0.60; $M_{\phi\phi}$-4.28; $M_{r\theta}$3.00; $M_{\theta\phi}$-1.90; $M_{\phi r}$2.31; Best double couple: $M_0$5.80000×10^{17} NP1: ϕ_s42.00000°, δ67.00000°, λ113.00000°. NP2: ϕ_s173.00000°, δ32.00000°, λ46.00000°. Principal axes: T 5.6200, Plg60.0000°, Azm346.0000°; N 0.4100, Plg21.0000°, Azm212.0000°; P -6.0200, Plg19.0000°, Azm114.0000°;*

GCMT ***16*** *05:16:19.1±0.1, 36°.10S±0°.01×178°.20E±0°.01, h185^{km}, MW5.8/133, Moment Tensor Solution. s94, c176; s133, c368; Duration: 2^s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}4.68±.07; $M_{\theta\theta}$-0.22±.09; $M_{\phi\phi}$-4.46±.08; $M_{r\theta}$3.57±.07; $M_{\theta\phi}$-2.23±.08; $M_{\phi r}$3.48±.07; Best double couple: $M_0$7.11900×10^{17} NP1: ϕ_s39.00000°, δ68.00000°, λ104.00000°. NP2: ϕ_s186.00000°, δ26.00000°, λ59.00000°. Principal axes: T 6.9760, Plg64.0000°, Azm333.0000°; N 0.2900, Plg13.0000°, Azm214.0000°; P -7.2630, Plg22.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 16 05:16:16.8±0.4**, 36°.24S**±0°.03×**178°.03E**±0°.04**, h198^{km}**±3^{km}**, h198^{km}:pP-P, n2052, σ1^s.54**/2169**, mb5.7**/219**, 112C-18D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.34	171	*e*Pn	Pn	05 16 48.2	-0.7
MXZ				*e*Sn	Sn	05 17 11.2	-2.8
WIZ	White Island	1.46	207	P	Pn	05 16 49.6	-0.2
WIZ				S	Sn	05 17 15.1	-0.6
MYRZ	Mayor Island	1.77	233	P	Pn	05 16 53.6	+0.8
WHRZ	Whale Island	1.82	207	P	Pn	05 16 53.7	+0.3
KUZ	Kuaotunu	1.93	254	P	Pn	05 16 54.7	+0.3
OPRZ	Ohinepanea	1.99	216	P	Pn	05 16 55.1	0.0
OPRZ				S	Sn	05 17 24.6	-0.4
MARZ	Manawahe	2.06	211	P	Pn	05 16 56.1	+0.3
MARZ				S	Sn	05 17 26.9	+0.7
TGRZ	Tauranga	2.06	223	P	Pn	05 16 56.1	+0.4
GRZ	Great Barrier	2.08	269	P	Pn	05 16 56.2	+0.2
EDRZ	Edgecumbe	2.13	208	P	Pn	05 16 56.8	+0.3
URZ	Urewera	2.15	200	*e*Pn	Pn	05 16 56.3	-0.4
URZ				*e*Sn	Sn	05 17 27.1	-0.9
URZ	Urewera	2.15	200	P	Pn	05 16 56.1	-0.6
	5μm,0.3s,baz=246,slow=0.2						
URZ				S	Sn	05 17 26.1	-1.9
	8μm,0.3s,baz=107,slow=23,SNR=24						
URZ				LR	LR	05 17 53.2	
	comp=Z,31μm,20.0s,baz=20,slow=42						
LIRZ	Lichensteins R	2.20	216	P	Pn	05 16 58.4	+1.1
TKGZ	Te Karaka	2.21	184	P	Pn	05 16 56.8	-0.4
TKGZ				S	Sn	05 17 27.7	-1.3
CNGZ	Carnagh Statio	2.25	176	P	Pn	05 16 57.6	-0.1
MKRZ	Makatiti	2.27	213	P	Pn	05 16 59.5	+1.4
KARZ	Kaharoa	2.28	218	P	Pn	05 16 58.7	+0.6
OMRZ	Omania	2.29	215	P	Pn	05 16 58.9	+0.7
RAGZ	Rawiri	2.31	192	P	Pn	05 16 58.3	-0.2
RAGZ				S	Sn	05 17 30.4	-0.7
KMRZ	Kaimai	2.32	225	P	Pn	05 16 59.3	+0.7
TARZ	Mount Tarawera	2.34	211	P	Pn	05 16 59.5	+0.6
NGRZ	Ngongotaha	2.38	218	P	Pn	05 17 00.4	+1.2
WIAZ	Waiheke Island	2.40	256	P	Pn	05 17 00.3	+0.9
HLRZ	Highlands Stat	2.42	213	P	Pn	05 17 00.4	+0.8
RRRZ	Republican Roa	2.42	209	P	Pn	05 16 60.0	+0.3
UTU	Utuhina	2.43	217	P	Pn	05 17 01.2	+1.5
MUGZ	Murupara	2.45	204	P	Pn	05 16 59.5	-0.5
MKAZ	Moumakai	2.46	249	P	Pn	05 17 01.2	+1.1
RIGZ	Rimuhau	2.48	185	P	Pn	05 16 59.6	-0.7
RIGZ				S	Sn	05 17 32.9	-1.5
HSRZ	Hossack Road	2.52	214	P	Pn	05 17 01.8	+1.2
TOZ	Tahuroa Road	2.52	233	P	Pn	05 17 02.0	+1.4
RTZ	Ruatahuna	2.52	199	P	Pn	05 16 59.8	-1.0
RTZ				S	Sn	05 17 34.1	-1.3
HRRZ	Handcock Road	2.56	212	P	Pn	05 17 01.9	+0.7
MBAZ	Motutapu North	2.58	257	P	Pn	05 17 02.7	+1.3
ETAZ	East Tamaki Re	2.60	253	P	Pn	05 17 03.1	+1.5
SNGZ	Shannon Statio	2.60	192	P	Pn	05 17 01.1	-0.6
SNGZ				S	Sn	05 17 36.2	-0.7
ABAZ	Army Bay	2.60	261	P	Pn	05 17 03.0	+1.4
GRRZ	Galatos Road	2.61	215	P	Pn	05 17 02.8	+1.0
PRRZ	Plateau Road	2.61	209	P	Pn	05 17 01.8	+0.1
KBAZ	Karaka Road Bo	2.67	250	P	Pn	05 17 04.3	+2.0
KBAZ				P	Pn	05 17 04.3	+2.0
ALRZ	Allen Road	2.68	210	P	Pn	05 17 02.7	+0.1
PRGZ	Paritu Road	2.69	182	P	Pn	05 17 01.5	-1.2
EPAZ	Eden Park BICE	2.72	255	P	Pn	05 17 04.7	+1.7
WPRZ	Whakapapatarin	2.72	213	P	Pn	05 17 03.6	+0.5
HBAZ	Herne Bay Bore	2.73	256	P	Pn	05 17 04.8	+1.7
MTHZ	Maungataniwha	2.78	200	P	Pn	05 17 02.7	-1.1
RAHZ	Arahi	2.78	195	P	Pn	05 17 03.2	-0.5
KNZ	Kokohu	2.80	186	P	Pn	05 17 02.7	-1.1
RVAZ	Riverhead Bore	2.83	258	P	Pn	05 17 05.8	+1.5
AWAZ	Awhitu Peninsu	2.85	252	P	Pn	05 17 06.1	+1.6
KUTZ	Kaahu Road	2.85	217	P	Pn	05 17 05.6	+1.0
WTAZ	Waiatarua	2.87	255	P	Pn	05 17 06.4	+1.7
TLZ	Tolley Road	2.88	223	P	Pn	05 17 06.2	+1.3
MRHZ	Matea Rd	2.89	206	P	Pn	05 17 04.3	-0.8
WHHZ	Waihua	2.91	192	P	Pn	05 17 04.5	-0.6
MHGZ	Mahia Peninsul	2.92	182	P	Pn	05 17 04.4	-0.9
MHGZ				P	Pn	05 17 04.4	-0.9
WHTZ	Whakaora	2.93	214	P	Pn	05 17 06.5	+0.9
WCZ	Waipu Caves	3.00	275	P	Pn	05 17 07.1	+0.8
NMHZ	Naumai	3.02	198	P	Pn	05 17 06.3	-0.2
HATZ	Hinemaiaia	3.07	210	P	Pn	05 17 06.7	-0.4
WATZ	Wairara	3.07	216	P	Pn	05 17 07.8	+0.6
WATZ				P	Pn	05 17 07.8	+0.6
ARHZ	Aropaoanui	3.13	195	P	Pn	05 17 07.1	-0.7
BKZ	Black Stump Fm	3.17	202	*e*Pn	Pn	05 17 07.6	-0.8
BKZ				*e*Sn	Sn	05 17 47.8	-1.0
BKZ	Black Stump Fm	3.17	202	P	Pn	05 17 07.0	-1.3
RATZ	Rangitukua	3.18	214	P	Pn	05 17 08.7	+0.3
RATZ				P	Pn	05 17 08.8	+0.3
RITZ	Rihia Road	3.23	212	P	Pn	05 17 09.3	+0.2
RITZ				P	Pn	05 17 09.3	+0.2
KATZ	Kakaramea	3.30	213	P	Pn	05 17 10.0	-0.1
MCHZ	McNeill Hill	3.37	198	P	Pn	05 17 09.9	-0.8
HIZ	Hauiti	3.40	227	*e*Pn	Pn	05 17 13.2	+2.2
HIZ				*e*Sn	Sn	05 17 54.8	+1.1
HIZ	Hauiti	3.40	227	P	Pn	05 17 12.8	+1.8
KRVZ	Karewarewa	3.43	213	P	Pn	05 17 11.3	-0.2
KWHZ	Kaweka Forest	3.43	201	P	Pn	05 17 10.1	-1.3
WTVZ	West Tongariro	3.47	213	P	Pn	05 17 11.7	-0.3
TWVZ	Taurewa	3.50	215	P	Pn	05 17 12.3	-0.1
CKHZ	Cape Kidnapper	3.50	192	P	Pn	05 17 10.9	-1.4
NGZ	Ngauruhoe	3.51	213	P	Pn	05 17 12.5	0.0
COVZ	Chateau Observ	3.56	213	P	Pn	05 17 12.8	-0.3
TUVZ	Tukino	3.56	211	P	Pn	05 17 12.6	-0.6
FWVZ	Far West T-bar	3.60	212	P	Pn	05 17 13.1	-0.6
BHHZ	Black Hill Sta	3.60	205	P	Pn	05 17 12.0	-1.5
WHVZ	Whangaehu Hut	3.60	212	P	Pn	05 17 13.1	-0.7
DRZ	Dome Shelter	3.61	212	P	Pn	05 17 13.4	-0.5
TRVZ	Turoa	3.64	212	P	Pn	05 17 13.3	-0.8
MOVZ	Moawhango	3.64	209	P	Pn	05 17 12.6	-1.5
KAHZ	Kahuranaki	3.67	194	P	Pn	05 17 13.0	-1.4
PKVZ	Pokaka	3.72	214	P	Pn	05 17 14.5	-0.5
MTVZ	Mangateitei	3.74	212	P	Pn	05 17 14.5	-0.7
OUZ	Omahuta	3.75	284	*e*Pn	Pn	05 17 15.7	+0.3
OUZ	Omahuta	3.75	284	P	Pn	05 17 15.8	+0.5
VRZ	Vera Road	3.88	221	P	Pn	05 17 17.6	+0.7
PXZ	Pawanui	3.90	193	P	Pn	05 17 15.2	-2.0
WPHZ	Waipukurau	4.02	198	P	Pn	05 17 16.7	-2.0
WPHZ	Waipukurau	4.02	198	P	Sn	05 18 00.3	-7.2
MHEZ	Mangahewa	4.09	225	P	Pn	05 17 22.2	+2.7
TSZ	Takapari Road	4.15	202	P	Pn	05 17 18.0	-2.4
PRHZ	Porangahau	4.17	195	P	Pn	05 17 18.6	-2.0
PRHZ	Porangahau	4.17	195	P	Sn	05 18 02.3	-8.5
DREZ	Durham Road	4.23	225	P	Pn	05 17 23.3	+2.0
WAZ	Wanganui	4.26	213	P	Pn	05 17 20.8	-0.9
LREZ	Lake Rotokare	4.31	221	P	Pn	05 17 23.3	+1.0
DVHZ	Dannevirke	4.31	199	P	Pn	05 17 19.7	-2.6
PKE	Pukeiti	4.36	226	P	Pn	05 17 24.9	+1.9
PKE				P	Pn	05 17 24.9	+1.9
PREZ	Palmer Road	4.36	224	P	Pn	05 17 25.2	+2.2
PREZ				P	Pn	05 17 25.2	+2.2
ANWZ	Angora Road	4.39	196	P	Pn	05 17 21.3	-2.0
KHEZ	Kahui Hut	4.41	225	P	Pn	05 17 25.1	+1.5
NBEZ	Newall Road No	4.48	226	P	Pn	05 17 26.2	+1.8
OHWZ	Ohakea	4.50	208	P	Pn	05 17 23.8	-0.9
POWZ	Post Office Ro	4.51	203	P	Pn	05 17 22.5	-2.4
NMEZ	Namu Road	4.57	225	P	Pn	05 17 27.2	+1.7
PRWZ	Pori Road	4.61	200	P	Pn	05 17 23.9	-2.1
BFZ	Birch Farm	4.66	197	*e*Pn	Pn	05 17 24.2	-2.4
BFZ				*e*Sn	Sn	05 18 17.9	-3.9
BFZ	Birch Farm	4.66	197	P	Pn	05 17 24.0	-2.6
MRZ	Mangatainoka R	4.82	203	P	Pn	05 17 25.6	-3.1
TIWZ	Tintock	4.84	200	P	Pn	05 17 26.7	-2.3
CPWZ	Castlepoint	4.88	197	P	Pn	05 17 27.5	-2.0
HOWZ	Holdsworth Sta	5.05	202	P	Pn	05 17 28.4	-3.4
OGWZ	Otaki Gorge	5.09	205	P	Pn	05 17 29.2	-3.0
TMWZ	Te Maipa	5.14	198	P	Pn	05 17 29.9	-3.0
KIW	Kapiti Island	5.23	207	P	Pn	05 17 30.8	-3.1
MTW	Mount Morrison	5.30	201	P	Pn	05 17 31.3	-3.6
CAW	Cannon Point	5.39	205	P	Pn	05 17 32.5	-3.6
TRWZ	Traveller	5.47	199	P	Pn	05 17 33.7	-3.4
PAWZ	Paruwai Farm	5.53	201	P	Pn	05 17 34.1	-3.8
DUWZ	D'Urville Isla	5.58	214	P	Pn	05 17 35.3	-3.3
MSWZ	Moikau Station	5.61	202	P	Pn	05 17 34.9	-4.0
SNZO	South Karori	5.70	206	*e*Pn	Pn	05 17 36.5	-3.4
SNZO				*e*Sn	Sn	05 18 41.6	-4.2
BHW	Baring Head	5.72	205	P	Pn	05 17 36.6	-3.7

PLWZ	Palliser	5.75	201	P	Pn	05 17 36.6	-4.1
TCW	Tory Channel	5.77	209	P	Pn	05 17 37.2	-3.7
TCW	Tory Channel	5.77	209	P	Sn	05 18 42.9	-4.6
TUWZ	Tuamarina	6.09	210	P	Pn	05 17 41.1	-3.9
TUWZ	Tuamarina	6.09	210	P	Sn	05 18 49.6	-5.4
NNZ	Nelson	6.16	215	P	Pn	05 17 42.4	-3.5
CMWZ	Cape Campbell	6.26	207	P	Pn	05 17 44.7	-2.6
CMWZ				P	Pn	05 17 44.7	-2.6
BSWZ	Blackbirch Sta	6.36	209	P	Pn	05 17 44.9	-3.7
THZ	Tophouse	6.81	214	*e*Pn	Pn	05 17 51.0	-3.5
THZ				*e*Sn	Sn	05 19 07.2	-4.8
THZ	Tophouse	6.81	214	P	Pn	05 17 50.6	-3.8
KHZ	Kahutara	7.08	208	*e*Pn	Pn	05 17 54.0	-4.0
KHZ				*e*Sn	Sn	05 19 12.7	-5.6
KHZ	Kahutara	7.08	208	P	Pn	05 17 53.6	-4.3
DSZ	Denniston Nort	7.33	219	P	Pn	05 17 56.7	-4.6
RAO	Raoul Island	7.75	27	P	Pn	05 18 02.5	-4.3
	55nm,0.3s,baz=72,slow=20,SNR=3.1						
RAO				S	Sn	05 19 22.5	-12
	696nm,0.3s,baz=77,slow=21,SNR=8.6						
LTZ	Lake Taylor	7.91	212	*e*Pn	Pn	05 18 04.3	-4.4
LTZ				*e*Sn	Sn	05 19 30.2	-7.6
LTZ	Lake Taylor	7.91	212	P	Pn	05 18 04.0	-4.7
INZ	Inchbonnie	8.24	216	P	Pn	05 18 08.1	-4.9
OKCZ	Okains Bay	8.39	205	P	Pn	05 18 10.6	-4.5
CRLZ	Canterbury Las	8.42	208	*e*Pn	Pn	05 18 10.8	-4.5
CRLZ				*e*Sn	Sn	05 19 40.2	-10
CRLZ	Canterbury Las	8.42	208	P	Pn	05 18 11.0	-4.4
OXZ	Oxford	8.45	211	*e*Pn	Pn	05 18 10.8	-5.0
OXZ				*e*Sn	Sn	05 19 41.8	-8.9
OXZ	Oxford	8.45	211	P	Pn	05 18 10.4	-5.3
MQZ	McQueen’s Vall	8.53	207	*e*Pn	Pn	05 18 11.6	-5.1
MQZ				*e*Sn	Sn	05 19 42.7	-10
CTZ	Chatham Island	8.54	153	P	Pn	05 18 17.3	+0.4
AKCZ	Akaroa Harbour	8.58	206	P	Pn	05 18 13.1	-4.4
I36NZ	CHATHAM INFRAS	8.75	153	P	Pn	05 18 13.0	-6.6
	baz=298,slow=15,SNR=0.3						
RPZ	Rata Peaks	9.19	213	P	Pn	05 18 21.3	-4.1
	105nm,0.3s,baz=24,slow=1.5,SNR=161						
RPZ				S	Sn	05 19 58.6	-10
	107nm,0.3s,baz=34,slow=19,SNR=20						
FOZ	Fox Glacier	9.64	218	*e*Pn	Pn	05 18 26.8	-4.4
FOZ				*e*Sn	Sn	05 20 09.1	-10
LBZ	Lake Benmore	10.10	214	*e*Pn	Pn	05 18 33.3	-4.0
LBZ				*e*Sn	Sn	05 20 21.8	-8.2
ODZ	Otahua Downs	10.43	210	*e*Pn	Pn	05 18 37.8	-3.6
ODZ				*e*Sn	Sn	05 20 29.9	-7.9
WKZ	Wanaka	10.98	216	*e*Pn	Pn	05 18 43.8	-4.8
MLZ	Mavora Lakes	11.81	216	*e*Pn	Pn	05 18 54.7	-4.4
WHZ	Wether Hill Ro	12.28	215	*e*Pn	Pn	05 19 00.5	-4.5
DCZ	Deep Cove	12.35	218	*e*Pn	Pn	05 19 02.0	-4.0
PYZ	Puysegur Point	13.08	217	*e*Pn	Pn	05 19 12.6	-2.6
PINNC	Pines Island,	16.39	323	*e*P	Pn	05 19 56.6	+0.8
	308nm,0.9s						
LHI	Lord Howe Isla	16.43	281	*e*P	Pn	05 19 59.2	+2.9
	212nm,1.2s						
MARNC	Mare, Loyalty	17.09	327	*e*P	Pn	05 20 04.6	+0.4
	862nm,1.1s						
ONTNC	Ouen Toro	17.14	321	*e*P	Pn	05 20 05.0	+0.2
	357nm,0.9s						
DZM	Mont Dzumac	17.34	321	*e*P	P	05 20 06.2	+0.6
	605nm,1.4s						
DZM	Mont Dzumac	17.34	321	*e*P	Pn	05 20 07.7	+0.4
	218nm,1.0s						
DZM	Mont Dzumac	17.34	321	P	P	05 20 06.3	+0.6
	6.3nm,0.3s,baz=152,slow=9.1,SNR=66						
MSVF	Nonsavu	18.43	0	*e*P	P	05 20 15.9	-1.6
	404nm,0.8s						
MSVF	Nonsavu	18.43	0	*d i*P	P	05 20 17.7	+0.2
NIUE	Niue	20.12	35	P	P	05 20 36.8	+1.2
	baz=20,SNR=4.0						
NIUE	Niue	20.12	35	*e*P	P	05 20 36.9	+1.4
	1µm,1.9s						
MGCD	Mangrove Creek	22.31	270	P	P	05 21 01.1	+3.2
	baz=22,SNR=21						
ARMA	Armidale	22.77	277	P	P	05 21 05.3	+3.0
	baz=23,SNR=34						
ARMA	Armidale	22.77	277	*e*P	P	05 21 06.9	+4.6
	381nm,1.0s						
MILA	Mila	23.15	259	P	P	05 21 08.4	+2.8
	baz=23,SNR=4.8						
CNB	Canberra Magne	23.25	264	P	P	05 21 08.6	+2.1
	baz=23,SNR=76						
CAN	Canberra	23.54	264	*e*P	P	05 21 11.9	+2.9
	139nm,1.0s						
CAN				*e*PcP	PcP	05 24 49.1	+0.5
CAN	Canberra	23.54	264	*e*P	P	05 21 12.0	+2.9
CAN				*e*		05 24 49.1	
CAN				pmax	pmax		
	comp=Z,139nm,1.0s						
YNG	Young	24.23	266	P	P	05 21 18.4	+2.9
	baz=24,SNR=25						
TAU	Tasmania Unive	24.50	245	*e*P	P	05 21 20.5	+2.8
	comp=Z,110nm,1.3s						
TAU	Tasmania Unive	24.50	245	*e*P	P	05 21 20.5	+2.8
TAU				pmax	pmax		
	comp=Z,110nm,1.3s						
MOO	Moorlands	24.56	246	P	P	05 21 20.7	+2.4
	baz=25,SNR=10						
EIDS	Eidsvold	25.48	288	P	P	05 21 28.9	+2.2
	baz=25,SNR=11						
EIDS	Eidsvold	25.48	288	*e*P	P	05 21 28.1	+1.4
	comp=Z,508nm,1.8s						
EIDS				*e*PcP	PcP	05 24 53.4	+0.4
TOO	Toolangi	25.99	257	P	P	05 21 34.1	+2.8
	baz=26,SNR=20						
TOO	Toolangi	25.99	257	*e*P	P	05 21 33.7	+2.5
	comp=Z,259nm,1.5s						
TOO				*e*PcP	PcP	05 24 54.5	+0.5
TOO	Toolangi	25.99	257	*e*P	P	05 21 33.7	+2.5
TOO				*e*		05 24 54.5	
TOO				pmax	pmax		
	comp=Z,259nm,1.5s						
RMQ	Roma	26.73	283	P	P	05 21 40.8	+2.8
	baz=27,SNR=62						
CMSA	Cobar Meteorol	27.18	270	P	P	05 21 44.4	+2.6
	baz=27,SNR=95						
FUNA	Funafuti	27.60	2	*e*P	P	05 21 43.9	-1.8
	comp=Z,129nm,1.0s						
ARPS	Mount Arapiles	28.99	258	P	P	05 22 00.9	+3.0
	baz=29,SNR=50						
STKA	Stephens Creek	30.38	267	P	P	05 22 12.4	+2.2
	baz=30,SNR=111						
STKA	Stephens Creek	30.38	267	*e*P	P	05 22 12.5	+2.2
	comp=Z,27nm,0.9s						
STKA				*e*PcP	PcP	05 25 05.6	+0.6
STKA				PKiKP	PKiKP	05 32 34.1	-1.9
STKA	Stephens Creek	30.38	267	P	P	05 22 11.8	+1.6
	comp=Z,88nm,0.8s,baz=102,slow=9.9,SNR=202						
STKA				PcP	PcP	05 25 04.5	-0.5
	comp=Z,19nm,0.9s,baz=92,slow=4.5,SNR=3.7						
STKA				PKiKP	PKiKP	05 32 34.1	-1.9
	comp=Z,1.4nm,0.8s,baz=97,slow=1.4,SNR=3.9						
TBI	Tubuai	30.85	74	*e*T	T	05 52 46.5	
	comp=Z,54nm,0.4s						
HNR	Honiara	31.34	324	*e*P	P	05 22 19.2	+0.5
	comp=Z,908nm,1.1s						
HNR	Honiara	31.34	324	*e*P	P	05 22 19.2	+0.5
HNR				pmax	pmax		
	comp=Z,908nm,1.1s						
HNR	Honiara	31.34	324	P	P	05 22 18.6	-0.1
	comp=Z,474nm,0.8s,baz=176,slow=3.4,SNR=29						
HTT	Hallett	32.08	263	P	P	05 22 27.0	+1.9
	baz=32,SNR=28						
CTA	Charters Tower	32.12	291	P	P	05 22 26.4	+0.8
	comp=Z,124nm,0.9s,baz=126,slow=9.6,SNR=99						
CTA				LR	LR	05 34 21.5	
	comp=Z,1µm,19.6s,baz=68,slow=34						
CTAO	Charters Tower	32.12	291	*e*P	P	05 22 26.6	+1.1
	comp=Z,235nm,1.0s						
CTAO	Charters Tower	32.12	291	*e*P	P	05 22 26.6	+1.1
CTAO				pmax	pmax		
	comp=Z,235nm,1.0s						
PAE	Paea	34.07	66	*e*P	P	05 22 43.4	+1.0
	comp=Z,5.1nm,0.9s						
PAE	Paea	34.07	66	*e*T	T	05 55 52.4	
	comp=Z,6.6nm,0.3s						
PPT2	Papeete2	34.12	66	*e*P	P	05 22 44.2	+1.3
	comp=Z,48nm,1.2s						
PPT2	Papeete2	34.12	66	*e*T	T	05 56 09.3	
	comp=Z,8.4nm,0.3s						
PPT	Papeete	34.13	66	*e*P	P	05 22 44.5	+1.6
PPT	Papeete	34.13	66	*e*P	P	05 22 44.5	+1.6
PPT	Papeete	34.13	66	P	P	05 22 42.3	-0.6
	comp=Z,21nm,0.7s,baz=252,slow=19,SNR=2.5						
TVO	Taravao	34.23	66	*e*P	P	05 22 45.1	+1.2
	comp=Z,12nm,0.9s						
TVO	Taravao	34.23	66	*e*T	T	05 57 03.0	
	comp=Z,3.3nm,0.3s						
TIAR	Tiarei	34.30	66	*e*P	P	05 22 45.8	+1.3
	comp=Z,22nm,0.7s						
BBOO	Buckleboo	34.56	263	P	P	05 22 47.6	+1.1
	baz=34,SNR=53						
BBOO	Buckleboo	34.56	263	*e*P	P	05 22 47.2	+0.7
	comp=Z,267nm,1.5s						
BBOO				*e*PcP	PcP	05 25 17.0	+0.5
KNTN	Kanton	34.62	18	*e*P	P	05 22 47.5	+0.4
	comp=Z,498nm,1.6s						
MTSU	Mount Surprise	34.76	292	P	P	05 22 50.3	+1.9
	baz=35,SNR=47						
QIS	Mount Isa	36.97	284	P	P	05 23 08.3	+1.2
	baz=37,SNR=147						
VAH	Vaihoa	37.05	65	*e*T	T	05 58 58.1	
	comp=Z,20nm,0.3s						
TARA	Tarawa	37.70	352	*e*P	P	05 23 11.5	-1.7
	comp=Z,631nm,1.0s						
COEN	Coen	38.26	296	P	P	05 23 19.5	+1.4
	baz=38,SNR=247						
COEN	Coen	38.26	296	*e*P	P	05 23 19.3	+1.3
	comp=Z,703nm,1.0s						
RABL	Rabaul	39.80	317	*e*P	P	05 23 31.4	+0.7
	comp=Z,3µm,1.4s						
AS01	Alice Springs	39.88	276	*e*P	P	05 23 32.2	+0.8
AS31	Alice Springs	39.91	276	*e*P	P	05 23 32.4	+0.7
	comp=Z,93nm,0.8s						
ASAR	Alice Springs	39.91	276	P	P	05 23 32.5	+0.9
	comp=Z,248nm,0.7s,baz=117,slow=7.9,SNR=1649						
ASAR				ScP	ScP	05 28 60.0	-3.2
	comp=Z,4.1nm,0.5s,baz=119,slow=3.8,SNR=5.4						
ASAR				S	S	05 29 25.4	+3.6
	comp=Z,8.9nm,0.9s,baz=119,slow=13,SNR=6.5						
ASAR				PKiKP	PKiKP	05 32 41.6	-2.0
	comp=Z,1.1nm,0.6s,baz=100,slow=1.3,SNR=5.6						
ASAR				LR	LR	05 40 57.9	
	comp=Z,2µm,18.1s,baz=121,slow=37						
WC3	Warramunga Arr	41.42	281	*e*P	P	05 23 44.6	+0.7
	comp=Z,294nm,0.9s						
WB2	Warramunga Arr	41.44	281	*e*P	P	05 23 44.8	+0.6
	comp=Z,343nm,1.0s						
WB2				*e*PcP	PcP	05 25 37.0	-1.1
WRAB	Tennant Creek	41.45	281	*e*P	P	05 23 44.8	+0.6
	comp=Z,242nm,0.8s						
WRAB				*e*PcP	PcP	05 25 37.8	-0.4
WRAB	Tennant Creek	41.45	281	*c i*P	P	05 23 44.3	+0.1
WRAB				pmax	pmax		
	comp=Z,269nm,0.8s						
WR1	Warramunga Arr	41.45	281	*e*P	P	05 23 44.4	+0.1
WR1				*e*PcP	PcP	05 25 37.8	-0.4
WR1				*e*ScP	ScP	05 29 11.3	+2.1
WR1				*e*S	S	05 29 46.0	+1.5
WR1				*e*SS	SS	05 32 42.8	-14
WRA	Warramunga Arr	41.45	281	P	P	05 23 44.4	+0.1
	comp=Z,189nm,0.6s,baz=120,slow=7.8,SNR=722						
WRA				PcP	PcP	05 25 37.8	-0.4
	comp=Z,77nm,1.0s,baz=120,slow=3.5,SNR=12						
WRA				ScP	ScP	05 29 11.3	+2.1
	comp=Z,4.2nm,0.8s,baz=130,slow=3.0,SNR=4.4						
WRA				S	S	05 29 46.0	+1.5
	comp=Z,7.8nm,1.1s,baz=119,slow=15,SNR=6.7						
WRA				PKiKP	PKiKP	05 32 42.8	-2.2
	comp=Z,1.5nm,0.6s,baz=90,slow=0.2,SNR=11						
FORT	Forrest	41.65	263	P	P	05 23 46.6	+0.9
	baz=42,SNR=60						
FORT	Forrest	41.65	263	*e*P	P	05 23 46.5	+0.8
	comp=Z,344nm,0.8s						
FORT				*e*PcP	PcP	05 25 38.0	-0.7
VNDA	Vanda	41.98	185	*e*P	P	05 23 51.1	+3.3
VNDA				*e*		05 23 51.4	
VNDA				*e*PP	PcP	05 25 40.3	+1.4
VNDA				*e*PcP	PcP	05 25 40.5	+1.5
VNDA	Vanda	41.98	185	P	P	05 23 50.5	+2.7
	comp=Z,32nm,0.9s,baz=351,slow=8.8,SNR=42						
VNDA				PcP	PcP	05 25 40.8	+1.8
	comp=Z,34nm,1.1s,baz=332,slow=4.5,SNR=4.4						
SBA	Scott Base	42.00	184	*e*P	P	05 23 53.8	+5.8
	comp=Z,446nm,1.9s						
SBA				*e*PcP	PcP	05 25 41.2	+2.2
SBA	Scott Base	42.00	184	*e*P	P	05 23 53.8	+5.9
SBA				*e*		05 25 41.2	
SBA				pmax	pmax		
	comp=Z,446nm,1.9s						
RKT	Rikitea	42.49	85	*e*T	T	06 07 14.8	
	comp=Z,1.4nm,0.2s						
WRKA	Warakurna	43.80	270	P	P	05 24 02.6	-0.6
	baz=44,SNR=447						
MANU	Manus Island	44.29	313	*e*P	P	05 24 08.0	+1.0
	comp=Z,197nm,1.0s						
KWAJ	Kwajalein Atol	45.86	346	*e*P	P	05 24 18.2	-1.0
	comp=Z,1µm,0.8s						
KWAJ	Kwajalein Atol	45.86	346	*e*P	P	05 24 18.2	-1.0
KWAJ				pmax	pmax		
	comp=Z,1µm,0.8s						
PATS	Pohnpei	46.67	333	P	P	05 24 26.4	+0.7
	baz=47,SNR=4.2						
PATS	Pohnpei	46.67	333	*e*P	P	05 24 25.9	+0.3
	comp=Z,252nm,1.0s						
KDU	Kakadu	47.09	288	P	P	05 24 28.7	-0.2
	baz=47,SNR=33						
MTN	Manton Dam	48.03	287	P	P	05 24 36.2	+0.1
	baz=48,SNR=23						
MTN	Manton Dam	48.03	287	*e*P	P	05 24 36.1	-0.1
	comp=Z,120nm,1.0s						
JAY	Jayapura	48.09	306	P	P	05 24 36.3	-0.4
	comp=Z,186nm,0.9s,baz=150,slow=3.1,SNR=38						
KNRA	Kununurra	48.22	282	P	P	05 24 38.3	+0.7
	baz=48,SNR=27						
GENI	Genyem	48.39	305	P	P	05 24 39.1	+0.2
CASY	Casey	48.44	210	*e*P	P	05 24 40.0	+1.4
	comp=Z,115nm,1.1s						
RKGY	Rocky Gully	49.04	253	P	P	05 24 46.1	+2.4
	baz=49,SNR=5.9						
FITZ	Fitzroy Crossi	49.38	277	P	P	05 24 47.1	+0.6
	baz=49,SNR=93						
FITZ	Fitzroy Crossi	49.38	277	*e*P	P	05 24 47.0	+0.6
	comp=Z,182nm,1.1s						
FITZ	Fitzroy Crossi	49.38	277	P	P	05 24 47.0	+0.6
	comp=Z,70nm,0.7s,baz=131,slow=6.4,SNR=69						
FITZ				LR	LR	05 44 25.5	
	comp=Z,1µm,21.1s,baz=114,slow=34						
NWAO	Narrogin (SRO)	49.45	255	P	P	05 24 47.5	+0.7
	baz=49,SNR=16						
NWAO	Narrogin (SRO)	49.45	255	*e*P	P	05 24 47.2	+0.4
	comp=Z,439nm,1.7s						
NWAO	Narrogin (SRO)	49.45	255	*e*P	P	05 24 47.2	+0.4
NWAO				pmax	pmax		
	comp=Z,439nm,1.7s						
NWAO	Narrogin (SRO)	49.45	255	P	P	05 24 46.8	+0.1
	SNR=8.7						
NWAO	Narrogin (SRO)	49.45	255	P	P	05 24 46.9	+0.1
	comp=Z,62nm,0.9s,baz=349,slow=7.0,SNR=26						
KLBR	Kellerberrin	49.54	257	P	P	05 24 48.0	+0.5
	baz=50,SNR=51						
MUN	Mundaring	50.61	256	P	P	05 24 56.2	+0.7
	baz=50,SNR=23						
BLDU	Ballidu	50.75	258	P	P	05 24 56.5	-0.1
	baz=51,SNR=22						
MEEK	Meekatharra	50.90	263	P	P	05 24 57.6	-0.2
	baz=51,SNR=89						
SAUI	Saumlaki	50.95	292	*e*P	P	05 24 59.1	+0.9
	comp=Z,643nm,1.1s						
SAUI	Saumlaki	50.95	292	P	P	05 24 59.0	+0.8
SRPI	Serui, Papua	51.57	302	P	P	05 25 03.0	+0.2
MORW	Morawa	51.91	259	P	P	05 25 06.3	+1.1
	baz=52,SNR=24						
MORW	Morawa	51.91	259	*e*P	P	05 25 04.8	-0.4
	comp=Z,136nm,1.1s						
MBWA	Marble Bar	52.57	270	*e*P	P	05 25 10.1	-0.1
	comp=Z,554nm,1.5s						
MBWA	Marble Bar	52.57	270	P	P	05 25 09.9	-0.3
	SNR=13						
RKPI	Ransiki, Papua	53.26	300	P	P	05 25 15.4	+0.2
FAKI	Fak Fak	53.64	297	*e*P	P	05 25 17.4	-0.6
	comp=Z,119nm,0.9s						
FAKI	Fak Fak	53.64	297	P	P	05 25 17.8	-0.2
	comp=Z,138nm,0.7s,comp=Z,3µm						
QSPA	South Pole Qui	53.89	180	*e*P	P	05 25 22.6	+3.3
	comp=Z,321nm,1.0s						
QSPA				*e*PcP	PcP	05 26 23.9	+1.8
QSPA				*e*ScP	ScP	05 30 01.9	+1.0
QSPA	South Pole Qui	53.89	180	P	P	05 25 22.2	+2.9
	comp=Z,202nm,0.8s,baz=31,slow=2.0,SNR=251						
QSPA				PcP	PcP	05 26 23.9	+1.8
	comp=Z,115nm,1.1s,baz=111,slow=3.2,SNR=4.9						
QSPA				ScP	ScP	05 30 01.9	+1.0
	comp=Z,19nm,1.0s,baz=34,slow=3.3,SNR=3.5						
JOHN	Johnston Islan	53.98	15	*e*P	P	05 25 20.1	-0.2
	comp=Z,277nm,0.9s						
SOEI	Soe	55.24	285	*e*P	P	05 25 31.6	+1.9
	comp=Z,239nm,1.0s						
SOEI	Soe	55.24	285	P	P	05 25 30.2	+0.5
BATI	Baumata	55.44	284	P	P	05 25 30.6	-0.5
	comp=Z,166nm,1.0s,baz=82,slow=7.1,SNR=4.1						
BATI				LR	LR	05 51 37.7	
	comp=Z,1µm,18.0s,baz=132,slow=38						
SIJI	Sorong	55.76	298	P	P	05 25 33.6	+0.4
	comp=Z,144nm,0.7s,baz=104,slow=4.0,SNR=93						
WAKE	Wake Island	56.26	347	*e*P	P	05 25 35.5	-1.0
	comp=Z,435nm,1.0s						
GIRL	Giralia	56.28	265	P	P	05 25 38.9	+2.0
	baz=56,SNR=15						
GIRL	Giralia	56.28	265	*e*P	P	05 25 38.2	+1.4
	comp=Z,840nm,1.4s						
NLAI	Namlea	57.19	293	P	P	05 25 43.6	+0.3
MMRI	Maumere	57.50	284	*e*P	P	05 25 45.7	+0.1
	comp=Z,616nm,1.4s						
MMRI	Maumere	57.50	284	P	P	05 25 46.0	+0.5
EDFI	Ende, Flores	57.87	284	P	P	05 25 48.3	+0.1
	comp=Z,76nm,1.4s,comp=Z,2µm						
BASI	Baing, Sumba	57.87	282	P	P	05 25 48.6	+0.5
SANI	Sanana	58.81	293	P	P	05 25 54.7	+0.1
	comp=Z,282nm,0.9s,comp=Z,5µm						
PALU	Palau	59.57	308	P	P	05 26 00.4	+0.6
	baz=60,SNR=3.9						
TNTI	Ternate	59.70	296	*e*P	P	05 26 00.7	+0.1
	comp=Z,272nm,1.6s						
KDI	Kendari	60.12	289	P	P	05 26 03.4	-0.1
	comp=Z,60nm,1.4s,comp=Z,1µm						
ANA2	Anatahan	60.56	324	*e*P	P	05 26 06.2	-0.2
	comp=Z,731nm,0.3s						
AIN	Ainahou	60.73	29	*e*P	P	05 26 09.3	+1.6
	comp=Z,492nm,1.5s						
PUH	Pauahi	60.82	29	*e*P	P	05 26 09.8	+1.6
	comp=Z,497nm,1.5s						
MLOA	Mauna Loa Obse	60.83	29	*e*P	P	05 26 09.9	+1.3
	comp=Z,379nm,1.5s						
MLH	Mauna Loa	60.87	29	*e*P	P	05 26 09.3	+0.6
	comp=Z,768nm,1.7s						
MLH	Mauna Loa	60.87	29	*e*P	P	05 26 09.3	+0.6
MLH				pmax	pmax		
	comp=Z,768nm,1.7s						
PLAI	Plampang	60.91	281	P	P	05 26 09.2	+0.3
HMH	Humu‘ula Sheep	60.93	29	*e*P	P	05 26 10.0	+0.9
	comp=Z,308nm,0.9s						
POHA	Pohakuloa	61.05	29	*e*P	P	05 26 09.7	-0.2
	comp=Z,108nm,0.8s						
BKSI	Bulukumba	61.19	286	P	P	05 26 10.9	+0.2
KEKH	Kekaha	61.61	24	*e*P	P	05 26 13.6	+0.3
	comp=Z,275nm,1.1s						
KIP	Kipapa	61.66	25	*ce*P	P	05 26 14.9	+1.3
KIP				pmax	pmax		
	comp=Z,82nm,1.1s						
BNSI	Bone	61.77	286	P	P	05 26 14.8	+0.1
LUWI	Luwuk	61.88	291	*e*P	P	05 26 15.8	+0.5
	comp=Z,384nm,1.4s						
LUWI	Luwuk	61.88	291	P	P	05 26 15.4	0.0
KMSI	Cibinong	62.05	294	P	P	05 26 16.4	-0.1
SPSI	Sidrap Palu	62.31	287	P	P	05 26 18.3	+0.1
APSI	Ampana	62.81	291	P	P	05 26 21.5	-0.1
TTSI	Tana Toraja	62.85	287	P	P	05 26 21.8	0.0
DNP	Denpasar	63.04	279	P	P	05 26 23.2	+0.1
SRBI	Singaraja	63.39	280	P	P	05 26 25.5	+0.2
MRSI	Marisa	63.50	292	P	P	05 26 25.9	-0.2
JAGI	Jajag, Banyuwa	64.01	279	*e*P	P	05 26 29.1	-0.3
	comp=Z,89nm,0.6s						
JAGI	Jajag, Banyuwa	64.01	279	P	P	05 26 29.5	+0.1
PCI	Palu	64.19	289	P	P	05 26 30.5	-0.1
GMJI	Gumukmas	64.69	279	P	P	05 26 33.8	0.0
MPSI	Mapaga	64.95	290	P	P	05 26 35.3	-0.2
KMMI	Kalianget	64.99	280	P	P	05 26 36.1	+0.3
DAV	Davao City (W)	65.35	300	*e*P	P	05 26 38.8	+0.8
	comp=Z,642nm,0.8s						
DAV	Davao City (W)	65.35	300	P	P	05 26 38.7	+0.7
	SNR=7.1						
DAV	Davao City (W)	65.35	300	P	P	05 26 37.7	-0.4
	comp=Z,542nm,0.6s,baz=103,slow=3.6,SNR=12						
KBKI	Kotabaru	65.53	285	P	P	05 26 39.1	-0.1
MAW	Mawson	65.68	202	*e*P	P	05 26 41.4	+2.1
	comp=Z,180nm,1.8s						
MAW	Mawson	65.68	202	P	P	05 26 40.3	+1.0
	comp=Z,50nm,0.9s,baz=126,slow=8.7,SNR=4.9						
PWJI	Pagerwojo	66.15	278	P	P	05 26 42.3	-0.9
BKB	Balikpapan	66.23	287	P	P	05 26 44.0	+0.3
SMKI	Samarinda	66.50	288	P	P	05 26 45.2	-0.2
PCJI	Pacitan	66.55	277	P	P	05 26 45.6	-0.1
NGJI	Ngawi	66.81	278	P	P	05 26 47.2	-0.1
WOJI	Wonogiri, Jawa	66.96	277	P	P	05 26 48.2	-0.1
UGM	Wanagama	67.24	277	*e*P	P	05 26 51.5	+1.3
	comp=Z,201nm,1.1s						
SMRI	Semarang	67.81	278	*e*P	P	05 26 54.9	+1.2
	comp=Z,109nm,0.8s						
MTKI	Muara Teweh, K	67.98	286	P	P	05 26 54.4	-0.3
PMSA	Palmer Station	68.31	156	*e*P	P	05 26 58.8	+2.9
	comp=Z,292nm,1.8s						
PMSA	Palmer Station	68.31	156	P	P	05 26 58.5	+2.5
	comp=Z,22nm,0.7s,baz=253,slow=3.1,SNR=5.0						
KPJI	Karang Pucung	68.86	277	P	P	05 26 59.8	-0.3
CMJI	Cimerak	68.98	276	P	P	05 27 00.6	-0.3
CISI	Cisompet, Garu	69.62	276	*e*P	P	05 27 04.6	-0.4
	comp=Z,216nm,0.8s						
CISI	Cisompet, Garu	69.62	276	P	P	05 27 04.5	-0.4
XMIS	Christmas Isla	69.69	272	*e*P	P	05 27 06.0	+0.7
	comp=Z,383nm,1.7s						
JCJI	Jatiwangi	69.88	277	P	P	05 27 05.2	-1.2
LEM	Lembang	70.21	276	P	P	05 27 09.3	+0.7
	comp=Z,143nm,0.7s,baz=44,slow=4.2,SNR=13						
LEM				LR	LR	05 59 57.3	
	comp=Z,790nm,19.4s,baz=198,slow=37						
DBJI	Dramaga	71.06	276	P	P	05 27 13.1	-0.5
KKM	Kota Kinabalu	71.44	292	*e*P	P	05 27 15.8	-0.1
	comp=Z,230nm,0.6s						
JCJ	Chichijima	71.48	327	P	P	05 27 14.9	-0.8
	comp=Z,348nm,0.8s,baz=289,slow=6.8,SNR=9.0						
SBUM	Sibu	72.18	287	*e*P	P	05 27 20.5	+0.3
	comp=Z,79nm,1.3s						
SNAA	Sanae	72.39	180	P	P	05 27 22.0	+1.3
SNAA				S	SKiKP	05 36 32.1	-2.8
SNAA	Sanae	72.39	180	*e*P	P	05 27 21.6	+0.9
	comp=Z,306nm,1.4s						
SNAA	Sanae	72.39	180	*d i*P	P	05 27 22.6	+1.9
SNAA	Sanae	72.39	180	P	P	05 27 22.2	+1.6
	baz=247,slow=13						
VNA3	Neumayer Olymp	72.68	177	P	P	05 27 23.8	+1.4
VNA3				S	SKiKP	05 36 35.3	0.0
NVL	N'lazarevskaya	72.84	185	*e*P	P	05 27 22.5	-0.7
NVL				*e*S	S	05 36 26.9	-5.5
NVL				pmax	pmax		
	comp=Z,177nm,1.1s						
USHA	Ushuaia	72.95	146	P	P	05 27 25.9	+1.8
	comp=Z,16nm,0.9s,baz=204,slow=10,SNR=3.3						
KSM	Kuching	73.06	285	*e*P	P	05 27 24.4	-1.0
	comp=Z,290nm,1.6s						
VNA2	Neumayer--Watz	73.07	178	P	P	05 27 26.4	+1.7
VNA2				S	SKiKP	05 36 39.4	+3.6
	baz=307,slow=7.2						
VNA2				SKS	sS	05 38 12.5	+15
	baz=314,slow=12						
GO09	Cerro Castillo	73.31	142	*e*P	P	05 27 29.1	+2.7
	comp=Z,61nm,1.0s						
VNA1	Neumayer--Stat	73.32	178	P	P	05 27 27.8	+1.7
VNA1				S	S	05 36 44.5	+6.7
KASI	Kota Agung	73.48	275	P	P	05 27 27.2	-0.7
TGY	Tagaytay City	73.52	302	P	P	05 27 28.2	+0.2
	comp=Z,781nm,0.4s,baz=259,slow=3.6,SNR=22						
PAF	Port-aux-Franc	73.53	220	*e*P	P	05 27 28.4	+0.8
	comp=Z,390nm,1.4s						
PAF	Port-aux-Franc	73.53	220	*e*P	P	05 27 28.4	+0.8
PAF				pmax	pmax		
	comp=Z,390nm,1.4s						
KLI	Kotabumi	73.57	276	P	P	05 27 27.7	-0.8
LWLI	Liwa	74.12	275	P	P	05 27 30.9	-0.9
PPBI	Pangkal Pinang	74.15	279	P	P	05 27 31.0	-0.8
MDSI	Maura Dua	74.34	276	P	P	05 27 31.9	-1.0
	comp=Z,117nm,0.9s,comp=Z,2µm						
LHSI	Lahat	75.25	276	P	P	05 27 37.3	-0.8
MASI	Maura Aman, Be	76.69	276	P	P	05 27 45.2	-1.1
TPRI	Tanjung Pinang	77.28	281	P	P	05 27 48.5	-1.0
JHJ2	Mitsune	77.69	328	*e*P	P	05 27 52.1	+0.8

	comp=Z,2µm,1.7s						
JHJ	Hachijo jima 2	77.71	328	P	P	05 27 50.6	-0.8
	comp=Z,315nm,0.7s,baz=267,slow=3.6,SNR=4.3						
KRJI	Kerinci	77.94	276	P	P	05 27 52.0	-1.3
PDSI	Padang	79.44	277	P	P	05 28 00.1	-1.3
YOJ	Yonaguni jima	79.63	311	*e*P	P	05 28 02.4	+0.3
	comp=Z,261nm,1.2s						
YOJ	Yonaguni jima	79.63	311	*e*P	P	05 28 02.4	+0.3
YOJ				pmax	pmax		
	comp=Z,261nm,1.2s						
TWG	Pinlang	79.64	308	*e*P	P	05 28 01.9	-0.3
	comp=Z,269nm,1.1s						
EFI	East Falkland	79.65	148	*e*P	P	05 28 04.1	+2.2
	comp=Z,359nm,1.7s						
EFI	East Falkland	79.65	148	*i* P	P	05 28 03.9	+2.0
EFI				pmax	pmax		
	comp=Z,50nm,1.1s						
BKNI	Bangkinang	79.71	278	*e*P	P	05 28 02.0	-0.8
	comp=Z,98nm,0.5s						
BKNI	Bangkinang	79.71	278	P	P	05 28 01.5	-1.3
YULB	Yu-li	79.91	309	*e*P	P	05 28 03.3	-0.3
	comp=Z,35nm,0.8s						
TPUB	Ta-pu	80.27	308	*e*P	P	05 28 05.7	+0.2
	comp=Z,99nm,1.0s						
NACB	Ninganchiao	80.29	309	*e*P	P	05 28 05.3	-0.3
	comp=Z,345nm,1.8s						
SISI	Saibi	80.29	275	P	P	05 28 04.6	-1.4
SSLB	Suanglung	80.42	309	*e*P	P	05 28 06.0	-0.3
	comp=Z,98nm,0.9s						
YHNB	Yeheng	80.79	310	*e*P	P	05 28 09.2	+0.8
	comp=Z,152nm,0.3s						
INU	Inuyama	80.81	327	*e*P	P	05 28 08.2	+0.1
	comp=Z,205nm,1.0s						
PLCA	Paso Flores	80.90	134	*e*P	P	05 28 11.6	+2.7
	comp=Z,41nm,0.9s						
PLCA	Paso Flores	80.90	134	*e*P	P	05 28 11.8	+2.9
GO06	Curarrehue	81.10	133	*e*P	P	05 28 12.3	+2.3
	comp=Z,33nm,1.0s						
MNSI	Mandailing Nat	81.16	278	P	P	05 28 09.1	-1.4
MJAR	Matsushiro Arr	81.30	329	P	P	05 28 10.2	-0.5
	comp=Z,85nm,0.9s,baz=166,slow=5.4,SNR=116						
MAJO	Matsushiro	81.31	329	*e*P	P	05 28 10.1	-0.7
	comp=Z,174nm,1.0s						
MAJO	Matsushiro	81.31	329	*c i*P	P	05 28 09.6	-1.1
MAJO				pmax	pmax		
	comp=Z,200nm,1.0s						
MAT	Matsushiro	81.31	329	P	P	05 28 09.4	-1.3
MJB9	Matsu-Tunnel	81.31	329	*e*P	P	05 28 10.2	-0.5
	comp=Z,178nm,1.0s						
JNU	Nakatsue	81.87	322	*e*P	P	05 28 13.8	0.0
	comp=Z,146nm,1.0s						
JNU	Nakatsue	81.87	322	P	P	05 28 13.1	-0.7
	comp=Z,80nm,0.9s,baz=93,slow=1.9,SNR=28						
IPM	Ipoh	82.21	281	*e*P	P	05 28 15.5	-0.6
	comp=Z,108nm,1.0s						
QZH	Quanzhou	82.74	308	⇑*i*P	P	05 28 18.9	+0.5
QZH				S	S	05 38 18.4	-1.1
QZH				pmax	pmax		
	comp=Z,120nm,1.9s						
QZH				pmax	pmax		
	comp=Z,2µm,6.7s						
PSI	Prapat	82.87	279	*e*P	P	05 28 17.6	-2.0
	comp=Z,72nm,1.2s						
PSI	Prapat	82.87	279	*e*P	P	05 28 17.6	-2.0
PSI				pmax	pmax		
	comp=Z,72nm,1.2s						
KULM	Kulim	82.99	282	*e*P	P	05 28 19.2	-0.9
	comp=Z,178nm,1.2s						
GSI	Gunungsitoli	83.06	277	*e*P	P	05 28 21.1	+0.6
	comp=Z,597nm,1.6s						
GSI	Gunungsitoli	83.06	277	P	P	05 28 18.8	-1.7
SKLT	Songkhla	84.15	283	P	P	05 28 27.9	+2.0
ERM	Erimo	84.15	335	*e*P	P	05 28 27.1	+1.9
	comp=Z,120nm,1.0s						
ERM	Erimo	84.15	335	*i* P	P	05 28 26.6	+1.4
ERM				pmax	pmax		
	comp=Z,74nm,0.8s						
KCSI	Kotacane, Aceh	84.22	279	P	P	05 28 24.6	-1.7
TPTI		84.54	278	P	P	05 28 26.1	-1.8
QIZ	Qiongzhong	84.64	298	P	P	05 28 29.4	+1.2
QIZ				pP	pP	05 29 16.0	+0.2
QIZ				sP	sP	05 29 34.1	-2.2
QIZ				S	S	05 38 37.9	-0.9
QIZ				sS	sS	05 40 01.3	-1.0
QIZ				pmax	pmax		
	comp=Z,89nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,980nm,3.9s						
QIZ	Qiongzhong	84.64	298	*e*P	P	05 28 29.9	+1.7
	comp=Z,94nm,1.0s						
TRTT	Trang	85.28	283	P	P	05 28 32.3	+0.7
KUR	Kuril'sk	85.56	339	*ce*P	P	05 28 33.3	+1.2
SSE	Sheshan	85.59	314	*e*P	P	05 28 32.0	-0.6
	comp=Z,120nm,1.1s						
ROC1	El Roble	85.66	128	*e*P	P	05 28 34.8	+1.2
	comp=Z,28nm,0.9s						
PEL	Peldehue	85.75	128	*e*P	P	05 28 35.9	+2.1
	comp=Z,48nm,1.0s						
PEL	Peldehue	85.75	128	*e*P	P	05 28 35.9	+2.1
PEL				pmax	pmax		
	comp=Z,48nm,1.0s						
ASAJ	Asahikawa	86.20	335	P	P	05 28 35.7	+0.4
	comp=Z,73nm,0.8s,baz=220,slow=8.6,SNR=31						
ASAJ				LR	LR	05 59 53.6	
	comp=Z,586nm,21.4s,baz=217,slow=30						
TJN	Taejon	86.21	321	*ce*P	P	05 28 36.6	+1.0
PKDT	Phuket	86.39	282	P	P	05 28 39.1	+2.1
KSRS	Korea Array	86.77	322	P	P	05 28 39.2	+0.9
KSRS						05 32 02.1	
KSRS				pmax	pmax		
	comp=Z,88nm,0.7s						
KSRS	Korea Array	86.77	322	P	P	05 28 39.1	+0.9
	comp=Z,87nm,0.7s,baz=141,slow=5.6,SNR=251						
KSRS				PP	PP	05 32 02.1	-2.1
	comp=Z,7.5nm,1.0s,baz=150,slow=8.6,SNR=6.1						
KS15	Wonju Array Si	86.78	322	*e*P	P	05 28 39.2	+0.9
KSAR	Wonju Array Be	86.78	322	P	P	05 28 39.1	+0.9
KSAR				PP	PP	05 32 02.1	-2.2
KSAR	Wonju Array Be	86.78	322	P	P	05 28 39.2	+0.9
KSAR						05 32 02.1	
KS01	Wonju Array Si	86.81	322	*e*P	P	05 28 39.1	+0.7
SRAK	Srakaew	87.22	289	P	P	05 28 39.6	-1.4
PATY	Pattaya	87.46	288	P	P	05 28 44.3	+2.2
TRQA	Tornquist	87.58	137	*e*P	P	05 28 44.6	+2.1
	comp=Z,27nm,1.2s						
NJ2	Nanjing	87.65	313	⇑*i*P	P	05 28 42.9	+0.3
NJ2				pmax	pmax		
	comp=Z,88nm,1.4s						
NJ2				pmax	pmax		
	comp=Z,810nm,3.5s						
KIWB	Kanaga Island	87.82	3	*e*P	P	05 28 43.3	+0.5
ADK	Adak	87.87	3	*e*P	P	05 28 43.3	+0.2
	comp=Z,340nm,1.4s						
ADK	Adak	87.87	3	*e*P	P	05 28 43.3	+0.2
ADK				pmax	pmax		
	comp=Z,340nm,1.4s						
PHET	Kaeng Krachan	88.40	287	P	P	05 28 48.4	+1.9
CHAI	Chaiyaphum	88.43	291	P	P	05 28 47.4	+0.8
LCO	Las Campanas	88.45	125	*e*P	P	05 28 49.4	+2.3
	comp=Z,187nm,2.0s						
YSS	Yuzh-Sakhalins	88.66	337	*e*P	P	05 28 47.5	+0.6
	comp=Z,248nm,1.0s						
YSS	Yuzh-Sakhalins	88.66	337	α*i*P	P	05 28 47.7	+0.8
YSS				pmax	pmax		
	comp=Z,200nm,0.9s						
YSS				pmax	pmax		
	comp=E,110nm,1.1s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
SMY	Shemya	88.66	358	*e*P	P	05 28 47.6	+0.8
	comp=Z,287nm,0.9s						
SMY	Shemya	88.66	358	*e*P	P	05 28 47.6	+0.8
SMY				pmax	pmax		
	comp=Z,287nm,0.9s						
SKR	Severo-Kuril's	88.68	346	*e*P	P	05 28 46.3	-0.6
SKR				*e*S	SKSac	05 39 03.5	+6.8
SKR				*e**SS	sS	05 40 48.2	+8.2
SKR				pmax	pmax		
	comp=Z,438nm,1.1s						
SKR				pmax	pmax		
	comp=Z,1µm,5.6s						
SKR				pmax	pmax		
	comp=Z,400nm,7.1s						
TEY	Ternei	89.15	332	⇓*i*P	P	05 28 49.3	0.0
TEY				pmax	pmax		
	comp=N,30nm,1.4s						
TEY				pmax	pmax		
	comp=Z,80nm,1.3s						
TEY				pmax	pmax		
	comp=E,20nm,1.3s						
WHN	Wuhan	89.33	309	⇓P	P	05 28 51.3	+0.8
MSHR	Mys Shultsa	89.34	327	*c i*P	P	05 28 50.8	+0.5
VLA	Vladivostok	89.47	328	*c i*P	P	05 28 51.0	+0.2
VLA				pmax	pmax		
	comp=Z,297nm,1.8s						
GO03	Copiap	89.69	124	*e*P	P	05 28 55.3	+2.7
	comp=Z,35nm,1.0s						
UTHA	Uthaitani	90.15	289	P	P	05 28 55.9	+1.2
USA0B	Ussuriysk Arra	90.30	329	*e*P	P	05 28 54.8	+0.1
	comp=Z,313nm,1.4s						
USRK	Ussuriysk Ar.	90.30	329	P	P	05 28 55.0	+0.3
	comp=Z,63nm,0.9s,baz=146,slow=3.6,SNR=89						
USRK				PP	PP	05 32 35.2	+3.0
	comp=Z,3.2nm,1.0s,baz=144,slow=6.8,SNR=4.4						
SLBS	Sierra La Lagu	90.36	61	*e*P	P	05 28 57.1	+1.5
	comp=Z,45nm,1.1s						
SNCC	San Nicolas Is	90.44	48	*e*P	P	05 28 56.8	+1.1
	comp=Z,243nm,1.5s						
SNCC	San Nicolas Is	90.44	48	P	P	05 28 57.5	+1.8
	baz=226						
PET	Petropavlovsk	90.47	348	*e*P	P	05 28 54.5	-0.8
	comp=Z,113nm,1.2s						
PET	Petropavlovsk	90.47	348	*i* P	P	05 28 54.3	-1.0
PET				pmax	pmax		
	comp=Z,61nm,1.0s						
UTTA	Uttaradit	90.64	292	P	P	05 28 57.9	+1.0
UNV	Unalaska Valle	90.71	9	*e*P	P	05 28 55.4	-0.9
	comp=Z,60nm,1.0s						
PEA0B	Petropavlovsk-	90.71	348	*e*P	P	05 28 56.5	+0.1
	comp=Z,453nm,1.4s						
PETK	Petropavlovsk-	90.71	348	*e*P	P	05 28 55.5	-0.9
PETK	Petropavlovsk-	90.71	348	P	P	05 28 56.2	-0.3
	comp=Z,69nm,0.9s,baz=120,slow=6.0,SNR=34						
PEA1	Petropavlovsk-	90.72	348	*e*P	P	05 28 56.2	-0.3
SCI2	San Clemente I	90.85	49	P	P	05 28 59.1	+1.6
	baz=226,SNR=8.2						
SCZ2	Santa Cruz Isl	90.90	47	P	P	05 28 59.4	+1.6
	baz=225,SNR=5.6						
UMPA	Umpang Tak	90.99	289	P	P	05 28 59.3	+0.7
AKUT	Akutan	91.09	9	*e*P	P	05 28 57.7	-0.4
	comp=Z,556nm,2.0s						
DL2	Dalian	91.09	319	P	P	05 28 59.3	+0.8
DL2				pmax	pmax		
	comp=Z,77nm,1.0s						
SBC	Santa Barbara	91.16	47	P	P	05 29 00.6	+1.6
	baz=225						
SUKH	Sukhothai	91.18	291	P	P	05 29 01.2	+1.8
CIS	Catalina Islan	91.22	49	P	P	05 29 00.7	+1.4
	baz=226,SNR=17						
BLG	Laguna Peak, P	91.31	48	P	P	05 29 00.9	+1.2
	baz=226						
PKM	Mcpherson Peak	91.41	47	P	P	05 29 02.1	+1.8
	baz=225,SNR=32						
FMP	Fort Macarthur	91.51	48	P	P	05 29 01.9	+1.4
	baz=226						
SMMC	Simmler	91.60	46	P	P	05 29 02.9	+1.9
	baz=225,SNR=16						
TIA	Tai'an	91.62	315	P	P	05 29 01.4	+0.4
TIA				pmax	pmax		
	comp=Z,32nm,1.2s						
MDJ	Mudanjiang	91.65	328	P	P	05 29 00.4	-0.6
MDJ				pP	pP	05 29 47.1	-2.2
MDJ				sP	sP	05 30 07.8	-1.9
MDJ				PP	PP	05 32 41.8	-1.1
MDJ				S	S	05 39 46.8	+3.1
MDJ				sS	sS	05 41 08.3	-0.1
MDJ				pmax	pmax		
	comp=Z,79nm,1.4s						
MDJ	Mudanjiang	91.65	328	*e*P	P	05 29 01.1	+0.1
	comp=Z,147nm,1.4s						
109C	Camp Elliot, M	91.67	50	P	P	05 29 03.0	+1.6
	baz=227,SNR=9.2						
CPE	Camp Elliot	91.67	50	*e*P	P	05 29 03.4	+2.1
	comp=Z,190nm,1.5s						
GYA	Guiyang	91.67	302	⇑*i*P	P	05 29 01.6	-0.1
GYA				pP	pP	05 29 50.0	+0.1
GYA				sP	sP	05 30 10.6	+0.3
GYA				SKS	SKSac	05 39 15.0	-0.5
GYA				S	S	05 39 44.0	-1.0
GYA				SS	SS	05 45 59.8	+2.0
GYA				pmax	pmax		
	comp=Z,50nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=Z,3µm,19.5s						
GYA				LR	LR		
	comp=Z,2µm,19.3s						
GYA				LR	LR		
	comp=Z,3µm,19.7s						
GO02	Mina Guanaco	91.72	123	*e*P	P	05 29 05.5	+3.1
	comp=Z,54nm,0.9s						
PAGB	Antelope Grade	91.75	46	*e*P	P	05 29 03.2	+1.5
	comp=Z,472nm,1.8s						
SAO	San Andreas Ge	91.79	44	*e*P	P	05 29 01.5	-0.3
	comp=Z,77nm,1.2s						
SAO	San Andreas Ge	91.79	44	*e*P	P	05 29 01.5	-0.3
SAO				pmax	pmax		
	comp=Z,77nm,1.2s						
BAR	Barrett	91.80	50	*e*P	P	05 29 04.2	+2.2
	comp=Z,226nm,1.5s						
DECC	Green Verdugo	91.85	48	P	P	05 29 03.5	+1.2
	baz=226						
OSI	Osito Audit: C	91.87	47	*e*P	P	05 29 04.6	+2.3
	comp=Z,324nm,1.8s						
OSI	Osito Audit: C	91.87	47	P	P	05 29 03.4	+1.1
	baz=226						
PAS	Pasadena	91.88	48	P	P	05 29 04.2	+1.9
PASC	Pasadena Art C	91.89	48	*e*P	P	05 29 03.2	+0.9
	comp=Z,88nm,1.4s						
MCCM	Marconi Confer	91.98	43	*e*P	P	05 29 04.0	+1.4
	comp=Z,96nm,1.0s						
MWC	Mount Wilson	92.00	48	*e*P	P	05 29 04.2	+1.1
	comp=Z,103nm,1.4s						
MWC	Mount Wilson	92.00	48	*e*P	P	05 29 04.2	+1.1
MWC				pmax	pmax		
	comp=Z,103nm,1.4s						
MONP2	Monument Peak	92.09	50	P	P	05 29 05.7	+2.1
	baz=227,SNR=32						
MURC	Murrieta	92.10	49	P	P	05 29 05.0	+1.7
	baz=227,SNR=27						
IKP	In-Ko-Pah, Jac	92.12	50	P	P	05 29 05.8	+2.2
	baz=227,SNR=28						
TYV	Tymovskoe	92.15	338	*e*P	P	05 29 02.9	-0.2
TYV				pmax	pmax		
	comp=Z,56nm,1.9s						
ARVC	Arvin	92.16	47	P	P	05 29 05.0	+1.4
	baz=226,SNR=20						
BFSC	Mount Baldy Ra	92.25	48	P	P	05 29 05.6	+1.4
	baz=226,SNR=59						
CM01	Chiang Mai Arr	92.25	291	*e*P	P	05 29 05.3	+0.9
ENH	Enshi	92.25	306	*e*P	P	05 29 03.9	-0.3
	comp=Z,152nm,1.2s						
SNY	Shenyang	92.28	323	⇑P	P	05 29 03.8	-0.1
SNY				S	S	05 39 41.3	-8.1
SNY				sS	sS	05 41 14.3	+0.3
SNY				pmax	pmax		
	comp=Z,49nm,1.5s						
SNY				LR	LR		
	comp=Z,470nm,15.3s						
SNY				LR	LR		
	comp=Z,530nm,18.9s						
SNY				LR	LR		
	comp=Z,800nm,21.4s						
CM31	Chiang Mai Arr	92.29	291	*e*P	P	05 29 06.0	+1.4
CM31	Chiang Mai Arr	92.29	291	P	P	05 29 05.4	+0.8
	SNR=49						
CMAR	Chiang Mai Arr	92.29	291	P	P	05 29 05.6	+1.0
	comp=Z,32nm,0.9s,baz=146,slow=3.1,SNR=86						
CMAR				PP	PP	05 32 46.7	-1.5
	comp=Z,16nm,1.1s,baz=142,slow=6.5,SNR=12						
CMAR				PKKPbc	PKKPbc	05 46 17.6	+0.2
	comp=Z,0.7nm,0.3s,baz=289,slow=4.3,SNR=5.8						
CMAR				LR	LR	06 15 06.5	
	comp=Z,184nm,18.6s,baz=125,slow=38						
HOPS	Hopland Field	92.48	42	*e*P	P	05 29 05.6	+0.6
	comp=Z,123nm,1.1s						
EDW2	Edwards Air Fo	92.49	48	P	P	05 29 06.6	+1.4
	baz=226,SNR=75						
CMMT	Chiang Mai	92.50	291	P	P	05 29 06.6	+1.1
GDXM	Geysers	92.50	42	*e*P	P	05 29 05.9	+0.7
	comp=Z,67nm,1.0s						
CHTO	Chiang Mai	92.50	291	*e*P	P	05 29 06.2	+0.7
	comp=Z,291nm,1.9s						
CHTO	Chiang Mai	92.50	291	*e*P	P	05 29 06.3	+0.7
CHTO				pmax	pmax		
	comp=Z,291nm,1.9s						
CHTO	Chiang Mai	92.50	291	P	P	05 29 06.3	+0.7
	SNR=33						
CHTO	Chiang Mai	92.50	291	P	P	05 29 06.7	+1.2
	comp=Z,308nm,1.8s,comp=Z,6µm						
VES	Vestal, Richgr	92.50	46	P	P	05 29 06.1	+1.0
	baz=226,SNR=19						
SWSC	Sam W. Stewart	92.52	50	P	P	05 29 07.3	+2.0
	baz=227,SNR=20						
PFO	Pinyon Flats O	92.56	49	*e*P	P	05 29 07.3	+1.7
	comp=Z,188nm,1.6s						
PFO	Pinyon Flats O	92.56	49	*e*P	P	05 29 07.3	+1.7
PFO				pmax	pmax		
	comp=Z,188nm,1.6s						
PFO	Pinyon Flats O	92.56	49	P	P	05 29 07.4	+1.8
	baz=227,SNR=36						
PFO	Pinyon Flats O	92.56	49	P	P	05 29 06.6	+1.0
	comp=Z,32nm,1.1s,baz=253,slow=2.5,SNR=39						
XPFO	Pion Flat	92.56	49	*e*P	P	05 29 07.3	+1.6
	comp=Z,200nm,1.6s						
VOG	Valley Oaks Go	92.66	46	P	P	05 29 06.7	+0.9
	baz=226						
KCPM	Cahto Peak	92.71	41	*e*P	P	05 29 07.2	+1.0
	comp=Z,78nm,0.9s						
BBRC	Big Bear Solar	92.71	49	P	P	05 29 08.1	+1.6
	baz=227						
ISA	Isabella, Lake	92.74	47	*e*P	P	05 29 07.5	+1.2
	comp=Z,129nm,1.4s						
ISA	Isabella, Lake	92.74	47	*e*P	P	05 29 07.5	+1.2
ISA				pmax	pmax		
	comp=Z,129nm,1.4s						
ISA	Isabella, Lake	92.74	47	P	P	05 29 07.9	+1.6
	baz=226,SNR=63						
CN2	Changchun	92.88	325	*e*P	P	05 29 05.8	-0.9
CN2				*e*pP	pwP	05 29 56.6	-1.3
CN2				SKS	SKSac	05 39 18.3	-2.8
CN2				*e*sS	sS	05 41 20.3	+0.8
CN2				*e*SS	SS	05 46 14.5	+0.3
CN2				pmax	pmax		
	comp=Z,60nm,1.1s						
CN2				pmax	pmax		
	comp=Z,780nm,6.0s						
CN2				LR	LR		
	comp=Z,570nm,14.0s						
CN2				LR	LR		
	comp=Z,410nm,14.0s						
CN2				LR	LR		
	comp=Z,620nm,16.0s						
KMRM	Mail Ridge	93.03	41	*e*P	P	05 29 07.5	-0.1
	comp=Z,67nm,0.9s						
PBA	Port Blair	93.04	282	*e*P	P	05 29 08.0	-0.1
	comp=Z,270nm,1.5s						
SDPT	Sand Point	93.06	12	*e*P	P	05 29 06.6	-0.5
	comp=Z,86nm,0.9s						
LRMC	Laurel Mtn Rad	93.08	47	P	P	05 29 09.4	+1.4
	baz=227,SNR=19						
RRX	Edison Barstow	93.08	48	P	P	05 29 09.2	+1.3
	baz=227						
BELC	Belle Mtn. Jos	93.10	49	P	P	05 29 10.1	+2.0
	baz=227,SNR=62						
GLA	Glamis	93.19	51	*e*P	P	05 29 10.6	+2.1
	comp=Z,377nm,1.6s						
GLA	Glamis	93.19	51	P	P	05 29 10.9	+2.4
	baz=228,SNR=19						
BC3	Big Chuckawall	93.20	50	P	P	05 29 10.8	+2.2
	baz=228,SNR=41						
CMB	Columbia Colle	93.28	44	*e*P	P	05 29 09.2	+0.4
	comp=Z,67nm,1.0s						
CMB	Columbia Colle	93.28	44	*e*P	P	05 29 09.2	+0.4
CMB				pmax	pmax		
	comp=Z,67nm,1.0s						
JCC	Jacoby Creek,	93.30	40	*e*P	P	05 29 10.1	+1.5
	comp=Z,34nm,0.8s						
HEC	Hector,Ludlow	93.45	49	P	P	05 29 11.1	+1.5
	baz=227,SNR=11						
GSC	Goldstone, Bar	93.49	48	*e*P	P	05 29 11.1	+1.3
	comp=Z,107nm,1.4s						
GSC	Goldstone, Bar	93.49	48	*e*P	P	05 29 11.1	+1.3
GSC				pmax	pmax		
	comp=Z,107nm,1.4s						
GSC	Goldstone, Bar	93.49	48	P	P	05 29 11.3	+1.5
	baz=227,SNR=28						
O02D	Mt. Diablo Mer	93.49	41	P	P	05 29 11.4	+1.7
	baz=224,SNR=71						
KHMM	Horse Mountain	93.49	40	*e*P	P	05 29 10.4	+0.6
	comp=Z,50nm,0.9s						
CWC	Cottonwood Cre	93.50	47	P	P	05 29 10.8	+0.8
	baz=226						
KMI	Kunming	93.58	299	P	P	05 29 12.3	+1.7
KMI				pP	pwP	05 30 00.6	-1.5
KMI				sP	sP	05 30 15.5	-3.8
KMI				pmax	pmax		
	comp=Z,31nm,1.7s						
KMI				pmax	pmax		
	comp=Z,290nm,5.3s						
KMI	Kunming	93.58	299	*e*P	P	05 29 12.5	+1.8
	comp=Z,52nm,1.3s						
SPIA	Saint Paul Isl	93.58	6	*e*P	P	05 29 09.7	+0.2
	comp=Z,172nm,1.5s						
MPMC	Manual Prospec	93.59	47	P	P	05 29 11.6	+1.2
	baz=227,SNR=27						
AFDM	Forest Hills D	93.60	43	*e*P	P	05 29 10.5	+0.3
	comp=Z,59nm,1.1s						
DAC	Darwin (Calif)	93.68	47	*e*P	P	05 29 11.8	+1.0
	comp=Z,50nm,1.6s						
DAC	Darwin (Calif)	93.68	47	P	P	05 29 12.0	+1.2
IRM	Iron Mountain	93.73	50	P	P	05 29 13.1	+2.2
	baz=228,SNR=43						
ORV	Oroville	93.74	42	*e*P	P	05 29 11.3	+0.6
	comp=Z,34nm,1.0s						
ORV	Oroville	93.74	42	*e*P	P	05 29 11.3	+0.6
ORV				pmax	pmax		
	comp=Z,34nm,1.0s						
MDPB	Devils Postpil	93.75	45	*e*P	P	05 29 11.9	+0.7
	comp=Z,51nm,1.3s						
214A	Organ Pipe Nat	93.75	53	P	P	05 29 13.2	+2.1
	baz=229						
OMMB	Old Mammoth Mi	93.78	45	*e*P	P	05 29 11.9	+0.5
	comp=Z,70nm,1.5s						
GMRC	Granite Mounta	93.83	49	P	P	05 29 13.2	+1.8
	baz=228,SNR=25						
TIN	Tinemaha, Big	93.84	46	P	P	05 29 12.7	+1.3
	baz=226						
Y12C	Blythe	93.85	50	*e*P	P	05 29 12.8	+1.4
	comp=Z,124nm,1.5s						
Y12C	Blythe	93.85	50	P	P	05 29 13.4	+2.0
	baz=228,SNR=14						
LVC	Limon Verde	93.88	122	P	P	05 29 14.2	+1.7
	comp=Z,2.5nm,0.7s,baz=124,slow=14,SNR=5.0						
MLAC	Mammoth, Mammo	93.88	45	P	P	05 29 13.0	+1.3
	baz=226,SNR=14						
WDC	Whiskeytown Da	93.91	41	*e*P	P	05 29 11.4	-0.1
	comp=Z,64nm,1.0s						
WDC	Whiskeytown Da	93.91	41	*e*P	P	05 29 11.4	-0.1
WDC				pmax	pmax		
	comp=Z,64nm,1.0s						
GRNR	Gornyy	94.06	335	*e*P	P	05 29 12.0	+0.1
GRNR				pmax	pmax		
	comp=Z,70nm,1.2s						
O03E	Paynes Creek	94.10	42	P	P	05 29 12.9	+0.4
	baz=224,SNR=48						
N02D	Trinity Center	94.10	41	P	P	05 29 13.8	+1.3
	baz=224,SNR=48						
TUQ	Turquoise Moun	94.11	48	P	P	05 29 14.2	+1.5
	baz=228,SNR=11						
TUQ				S	S	05 40 14.7	+8.6
	baz=228						
RUBR	Rubicon Trail	94.12	43	*e*P	P	05 29 13.5	+0.7
	comp=Z,69nm,1.0s						
WAKR	Walker	94.15	44	*e*P	P	05 29 13.7	+0.8
	comp=Z,116nm,1.3s						
SHOC	Shoshone, Teco	94.21	48	P	P	05 29 14.2	+1.2
	baz=227,SNR=14						
FURC	Furnace Creek,	94.24	47	P	P	05 29 14.3	+1.2
	baz=227,SNR=11						
GRAC	Grapevine Rang	94.30	46	P	P	05 29 14.8	+1.4
	baz=227,SNR=29						
M02C	Callahan	94.33	40	P	P	05 29 14.9	+1.4
	baz=224,SNR=43						
CHGN	Chignik	94.33	13	*e*P	P	05 29 12.6	-0.4
	comp=Z,45nm,0.7s						
LDFC	Landfair	94.36	49	*e*P	P	05 29 15.9	+2.0
	comp=Z,218nm,1.4s						

PDMCI	Parker Dam,Lak	94.45	50	P	P	05 29 16.1	+2.0
	baz=228,SNR=18						
NEE2	Needles Airpor	94.46	50	P	P	05 29 16.0	+1.8
	baz=228						
PNTR	Pine Nut	94.46	44	eP	P	05 29 15.0	+0.7
	comp=Z,80nm,1.0s						
KLR	Kul'dur	94.48	332c	iP	P	05 29 13.1	-0.8
KLR	Kul'dur	94.48	332	P	P	05 29 13.3	-0.5
	comp=Z,12nm,1.0s,baz=77,slow=2.1,SNR=15						
KLR				PP	PP	05 33 00.4	-4.5
	comp=Z,10nm,1.4s,baz=149,slow=8.4,SNR=3.6						
KLR				LR	LR	06 09 15.4	
	comp=Z,156nm,19.0s,baz=171,slow=34						
L02E	Cave Junction	94.49	39	P	P	05 29 15.4	+1.2
	baz=223,SNR=8.9						
VCNR	Virginia City	94.58	44	eP	P	05 29 15.2	+0.4
	comp=Z,48nm,1.2s						
BEKR	Beckworth	94.58	43	eP	P	05 29 15.2	+0.4
	comp=Z,32nm,1.0s						
YERR	Yerington	94.59	44	eP	P	05 29 15.0	+0.1
	comp=Z,58nm,1.2s						
KEBM	Edson Butte	94.63	39	eP	P	05 29 16.1	+1.2
	comp=Z,186nm,1.3s						
YBH	Yreka Blue Hor	94.64	40	eP	P	05 29 15.7	+0.7
	comp=Z,53nm,1.3s						
YBH	Yreka Blue Hor	94.64	40	eP	P	05 29 15.7	+0.7
YBH				pmax	pmax		
	comp=Z,53nm,1.3s						
YBH	Yreka Blue Hor	94.64	40	P	P	05 29 15.5	+0.5
	comp=Z,20nm,1.0s,baz=173,slow=2.6,SNR=35						
NV01	Mina Array Sit	94.74	45	eP	P	05 29 15.7	+0.1
NV01				ePKiKP	PKiKP	05 34 02.6	+5.7
NVAR	Mina Array Bea	94.74	45	P	P	05 29 16.2	+0.6
	comp=Z,23nm,1.0s,baz=219,slow=7.6,SNR=109						
NVAR				PKiKP	PKiKP	05 33 58.1	+1.2
	comp=Z,1.0nm,0.8s,baz=223,slow=4.7,SNR=3.3						
NVAR				PKKPbc	PKKPbc	05 46 10.6	-1.6
	comp=Z,0.6nm,0.7s,baz=166,slow=1.6,SNR=4.7						
NKL	Nikolayevsk	94.74	338	eP	P	05 29 13.0	-1.9
NKL				pmax	pmax		
	comp=Z,91nm,1.5s						
RYN	Ryan	94.75	45	eP	P	05 29 16.2	+0.6
	comp=Z,64nm,1.4s						
NV11	Mina Array Sit	94.83	45	eP	P	05 29 16.6	+0.6
	comp=Z,4.7nm,1.3s						
BJT	Baijiatuau	94.83	317	eP	P	05 29 16.4	+0.7
	comp=Z,210nm,2.0s						
BJT	Baijiatuau	94.83	317	eP	P	05 29 16.4	+0.7
BJT				pmax	pmax		
	comp=Z,210nm,2.0s						
BJI	Beijing	94.84	317	P	P	05 29 15.9	+0.2
BJI				pmax	pmax		
	comp=Z,27nm,1.8s						
K02D	Willamette Mer	94.84	39	P	P	05 29 16.8	+1.0
	baz=223,SNR=12						
Y14A	Wickenburg	94.92	51	eP	P	05 29 17.9	+1.6
	comp=Z,79nm,1.6s						
TPNV	Topopah Spring	94.93	47	eP	P	05 29 17.7	+1.2
	comp=Z,58nm,1.3s						
TPNV	Topopah Spring	94.93	47	eP	P	05 29 17.7	+1.2
TPNV				pmax	pmax		
	comp=Z,58nm,1.3s						
TPNV	Topopah Spring	94.93	47	P	P	05 29 17.8	+1.3
	baz=227,SNR=33						
PAHR	Pah Rah Range	95.01	43	eP	P	05 29 17.2	+0.5
	comp=Z,61nm,1.2s						
J01E	Myrtle Point	95.05	39	P	P	05 29 17.8	+1.2
	baz=223,SNR=7.8						
XAN	Xi'an	95.08	309	P	P	05 29 17.3	+0.2
XAN				PP	PP	05 33 12.0	+2.2
XAN				S	S	05 40 12.5	-1.9
XAN				pmax	pmax		
	comp=Z,26nm,1.6s						
XAN	Xi'an	95.08	309	eP	P	05 29 17.9	+0.8
	comp=Z,109nm,1.8s						
XAN	Xi'an	95.08	309	eP	P	05 29 17.9	+0.8
XAN				pmax	pmax		
	comp=Z,109nm,1.8s						
W13A	Hualapai Mount	95.13	50	eP	P	05 29 19.0	+1.5
	comp=Z,67nm,1.6s						
M04C	Macdoel	95.14	41	P	P	05 29 18.1	+0.9
	baz=224,SNR=23						
HUMO	Hull Mountain	95.14	39	eP	P	05 29 18.2	+1.1
	comp=Z,132nm,1.5s						
L04D	Klamath Falls	95.20	40	P	P	05 29 18.3	+0.7
	baz=224,SNR=27						
KVN	Kaiserville	95.28	45	eP	P	05 29 18.3	+0.2
	comp=Z,67nm,1.4s						
KVN	Kaiserville	95.28	45	eP	P	05 29 18.3	+0.2
KVN				pmax	pmax		
	comp=Z,67nm,1.4s						
SHPR	Sheep Range	95.28	48	eP	P	05 29 19.5	+1.4
	comp=Z,64nm,1.6s						
TUC	Tucson	95.29	54	eP	P	05 29 20.1	+1.9
	comp=Z,43nm,1.3s						
TUC	Tucson	95.29	54	P	P	05 29 20.2	+2.1
TUC	Tucson	95.29	54	P	P	05 29 20.3	+2.1
	baz=230						
HPIG		95.41	61	eP	P	05 29 19.8	+0.8
	comp=Z,16nm,1.4s						
319A	Douglas	95.69	55	eP	P	05 29 21.5	+1.4
	comp=Z,15nm,1.0s						
MNMC	Minye Minye	95.70	119	eP	P	05 29 22.7	+2.1
	comp=Z,22nm,0.7s						
I03D	Drain, OR	95.73	38	P	P	05 29 20.5	+0.8
	baz=224,SNR=9.9						
K04D	Chiloquin, OR	95.78	40	P	P	05 29 20.9	+0.8
	baz=225,SNR=8.7						
J04D	Umpqua Nationa	96.03	39	P	P	05 29 22.1	+0.7
	baz=224,SNR=12						
MOD	Modoc Plateau	96.04	41	eP	P	05 29 21.5	+0.1
	comp=Z,74nm,1.3s						
X16A	Lo Mia Camp, P	96.22	52	eP	P	05 29 24.2	+1.7
	comp=Z,120nm,1.9s						
R11A	Troy Canyon, C	96.26	46	eP	P	05 29 23.1	+0.6
	comp=Z,12nm,1.4s						
R11A	Troy Canyon, C	96.26	46	P	P	05 29 23.3	+0.7
	baz=228,SNR=10						
I04A	Tendick Farm,	96.27	39	P	P	05 29 22.6	+0.4
	baz=224,SNR=16						
COR	Corvallis	96.39	38	eP	P	05 29 23.8	+1.1
	comp=Z,38nm,1.0s						
COR	Corvallis	96.39	38	eP	P	05 29 23.8	+1.1
COR				pmax	pmax		
	comp=Z,38nm,1.0s						
CD2	Chengdu	96.46	304	P	P	05 29 24.0	+0.6
CD2				pP	pwP	05 30 14.5	-0.6
CD2				sP	sP	05 30 36.0	+3.9
CD2				PP	PP	05 33 21.1	+0.6
CD2				SKS	SKSac	05 39 40.8	-0.2
CD2				S	ScS	05 40 26.8	0.0
CD2				SS	SS	05 47 07.6	+2.1
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,900nm,8.3s						
CD2				LR	LR		
	comp=Z,4µm,14.2s						
CD2				LR	LR		
	comp=Z,3µm,11.3s						
CD2				LR	LR		
	comp=Z,2µm,12.3s						
J05D	Fort Rock, OR	96.51	40	P	P	05 29 24.3	+0.8
	baz=225,SNR=24						
H04D	Lebanon	96.63	38	P	P	05 29 24.7	+0.9
	baz=224						
BMN	Battle Mountai	96.71	44	eP	P	05 29 24.6	+0.2
BMN	Battle Mountai	96.71	44	eP	P	05 29 24.7	+0.2
LCMT	Little Creek M	96.77	49	eP	P	05 29 25.8	+1.0
	comp=Z,43nm,1.5s						
PLTB	Pedras Altas	96.84	138	eP	P	05 29 27.8	+2.5
G03D	McMinnville, O	96.86	37	P	P	05 29 25.4	+0.6
	baz=224						
WUAZ	Wupatki	96.96	51	eP	P	05 29 26.9	+1.1
	comp=Z,95nm,1.8s						
WUAZ	Wupatki	96.96	51	P	P	05 29 27.4	+1.6
	baz=230						
H04A	Detroit Lake	97.02	38	eP	P	05 29 25.4	-0.2
	comp=Z,25nm,1.1s						
PINE	Pine Mountain	97.02	40	eP	Pdif	05 29 26.1	+0.1
	comp=Z,48nm,1.1s						
KNB	Kanab	97.03	49	eP	Pdif	05 29 27.8	+1.7
	comp=Z,80nm,1.5s						
KNB	Kanab	97.03	49	P	Pdif	05 29 27.8	+1.7
CCUT	Cedar City	97.05	48	eP	Pdif	05 29 27.9	+1.6
	comp=Z,38nm,1.4s						
I05D	Terrebonne, OR	97.20	39	P	Pdif	05 29 27.4	+0.8
	baz=225						
SZCU	Shurtz Canyon	97.25	48	eP	Pdif	05 29 28.7	+1.6
	comp=Z,39nm,1.4s						
WVOR	Wild Horse Val	97.30	42	eP	Pdif	05 29 27.5	+0.4
	comp=Z,89nm,1.6s						
WVOR	Wild Horse Val	97.30	42	eP	Pdif	05 29 27.5	+0.4
WVOR				pmax	pmax		
	comp=Z,89nm,1.6s						
PSUT	Pine Spring	97.40	47	eP	Pdif	05 29 29.0	+1.3
	comp=Z,21nm,1.5s						
121A	Cookes Peak, D	97.40	55	P	Pdif	05 29 29.3	+1.4
	baz=231						
F04D	Rainier, OR	97.61	37	P	Pdif	05 29 29.3	+1.1
	baz=224						
PKCU	Pink Cliffs	97.62	49	eP	Pdif	05 29 30.6	+1.7
	comp=Z,80nm,1.5s						
W18A	Petrified Fore	97.75	52	eP	Pdif	05 29 30.8	+1.4
	comp=Z,78nm,1.8s						
W18A	Petrified Fore	97.75	52	P	Pdif	05 29 30.8	+1.5
	baz=231						
G05D	Wamic, OR	97.85	38	P	Pdif	05 29 30.0	+0.7
	baz=225						
HHC	Hu-ho-hao-te	97.96	315	eP	Pdif	05 29 32.3	+2.2
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,290nm,5.8s						
I07A	Izee	97.97	40	eP	Pdif	05 29 30.3	+0.3
	comp=Z,71nm,1.9s						
CPSB	Cacapava Do Su	97.97	137	eP	Pdif	05 29 32.0	+1.6
J08A	Circle Bar Ran	98.02	41	eP	Pdif	05 29 30.9	+0.7
	comp=Z,92nm,1.8s						
ELK	Elko	98.05	45	eP	Pdif	05 29 31.0	+0.4
	comp=Z,59nm,1.9s						
ELK	Elko	98.05	45	eP	Pdif	05 29 31.0	+0.4
ELK				pmax	pmax		
	comp=Z,59nm,1.9s						
MTPU	Mount Pierson	98.08	48	eP	Pdif	05 29 32.5	+1.5
	comp=Z,57nm,1.5s						
MA2	Magadan	98.10	346	i P	Pdif	05 29 30.7	+0.7
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MA2	Magadan	98.10	346	P	P	05 29 28.8	-1.2
	comp=Z,1.6nm,0.4s,baz=153,slow=14,SNR=2.7						
NLWA	Neilton Lookou	98.14	36	eP	Pdif	05 29 33.3	+2.8
	comp=Z,17nm,1.0s						
E04D	Cinebar	98.16	37	P	Pdif	05 29 31.4	+0.8
	baz=224						
LTX	Lajitas	98.26	60	eP	Pdif	05 29 32.0	+0.3
LTX	Lajitas	98.26	60	eP	Pdif	05 29 32.0	+0.3
TXAR	Lajitas Array	98.26	60	P	Pdif	05 29 32.0	+0.3
TXAR	Lajitas Array	98.26	60	P	Pdif	05 29 32.0	+0.3
	comp=Z,1.7nm,0.9s,baz=210,slow=7.2,SNR=14						
TXAR				PKiKP	PKiKP	05 34 03.4	+0.2
	comp=Z,0.5nm,0.8s,baz=238,slow=3.1,SNR=2.5						
TXAR				PKKPbc	PKKPbc	05 46 02.7	+0.7
	comp=Z,0.3nm,0.6s,baz=104,slow=3.0,SNR=3.2						
MSU	Marysvale	98.39	48	eP	Pdif	05 29 34.2	+2.1
MSU	Marysvale	98.39	48	eP	Pdif	05 29 34.3	+2.1
MNTX	Cornudas Mount	98.50	57	eP	Pdif	05 29 33.9	+1.3
	comp=Z,7.0nm,1.3s						
MNTX	Cornudas Mount	98.50	57	P	Pdif	05 29 33.5	+0.9
	baz=232						
D04E	Lakebay	98.50	36	P	Pdif	05 29 33.3	+1.2
	baz=224						
D03D	Eldon	98.61	36	P	Pdif	05 29 34.3	+1.8
	baz=224						
LPAZ	La Paz	98.61	117	eP	Pdif	05 29 36.3	+2.1
	comp=Z,28nm,1.8s						
LPAZ				PKKPbc	PKKPbc	05 46 01.6	+0.6
LPAZ	La Paz	98.61	117	P	Pdif	05 29 35.9	+1.7
	comp=Z,2.5nm,0.8s,baz=209,slow=5.0,SNR=8.5						
LPAZ				PKKPbc	PKKPbc	05 46 01.6	+0.6
	comp=Z,1.0nm,0.8s,baz=56,slow=6.5,SNR=3.4						
LPAZ	La Paz	98.61	117	eP	Pdif	05 29 36.9	+2.6
LNIG	Linares	98.66	66	eP	Pdif	05 29 34.2	+0.7
	comp=Z,7.4nm,1.2s						
LON	Longmire	98.67	37	P	Pdif	05 29 33.4	+0.4
CPUP	Villa Florida	98.79	132	PKKPbc	PKKPbc	05 45 59.0	-0.9
	comp=Z,3.3nm,0.8s,baz=0.1,slow=4.3,SNR=8.8						
CPUP	Villa Florida	98.79	132	eP	Pdif	05 29 38.0	+3.9
D05A	Enumclaw	98.89	37	eP	P	05 29 35.1	+1.2
	comp=Z,34nm,1.0s						
Y22D	IRIS PASSCAL I	98.92	54	P	P	05 29 35.5	+0.9
	baz=232						
LAZ	Ladron	98.98	54	eP	P	05 29 36.6	+1.7
F07A	Phinny Hill Vi	99.00	39	eP	Pdif	05 29 34.4	0.0
	comp=Z,8.2nm,1.1s						
G08A	Pilot Rock	99.08	40	eP	Pdif	05 29 35.2	+0.3
	comp=Z,68nm,1.8s						
DUG	Dugway, Tooele	99.09	46	eP	Pdif	05 29 35.9	+0.8
	comp=Z,14nm,1.5s						
DUG	Dugway, Tooele	99.09	46	eP	Pdif	05 29 35.9	+0.8
DUG				pmax	pmax		
	comp=Z,14nm,1.5s						
DUG	Dugway, Tooele	99.09	46	P	Pdif	05 29 35.5	+0.4
	baz=230						
Q16A	Castle Valley	99.25	48	ePdif	Pdif	05 29 37.5	+1.6
	comp=Z,38nm,1.8s						
NLU	North Lily Min	99.37	47	ePdif	Pdif	05 29 37.9	+1.4
	comp=Z,18nm,1.6s						
BGU	Big Grassy Mou	99.43	46	ePdif	Pdif	05 29 37.7	+1.0
	comp=Z,27nm,1.7s						
TMUT	Trail Mountain	99.47	48	ePdif	Pdif	05 29 38.5	+1.5
	comp=Z,18nm,1.2s						
E07A	Sunnyside	99.50	38	ePdif	Pdif	05 29 37.0	+0.4
	comp=Z,18nm,1.1s						
HAWA	Hanford	99.55	38	ePdif	Pdif	05 29 37.7	+0.9
	comp=Z,29nm,1.7s						
LZH	Lanzhou	99.59	308	⇑P	Pdif	05 29 38.9	+1.4
LZH				pP	pP	05 30 26.4	+0.5
LZH				sP	sP	05 30 47.0	+0.8
LZH				PP	PP	05 33 46.3	+1.8
LZH				SS	SS	05 47 50.9	+1.3
LZH				pmax	pmax		
	comp=Z,35nm,1.4s						
LZH				pmax	pmax		
	comp=Z,430nm,9.5s						
B05A	Bryant	99.60	36	P	Pdif	05 29 37.8	+0.9
	baz=225						
A04D	Lummi Island	99.63	35	P	Pdif	05 29 38.2	+1.1
	baz=225						
BMO	Blue Mountains	99.65	41	ePdif	Pdif	05 29 38.1	+0.7
	comp=Z,30nm,1.8s						
BMO	Blue Mountains	99.65	41	eP	Pdif	05 29 38.1	+0.7
BMO				pmax	pmax		
	comp=Z,30nm,1.8s						
MPU	Maple Canyon	99.67	47	ePdif	Pdif	05 29 39.2	+1.4
	comp=Z,14nm,1.6s						
ANMO	Albuquerque	99.75	54	ePdif	Pdif	05 29 39.7	+1.5
	comp=Z,14nm,1.5s						
ANMO	Albuquerque	99.75	54c	eP	Pdif	05 29 39.8	+1.5
ANMO				pmax	pmax		
	comp=Z,24nm,3.4s						
ANMO	Albuquerque	99.75	54	P	Pdif	05 29 38.8	+0.5
	baz=232						
GAMB	Gambell	100.01	5	ePdif	Pdif	05 29 38.3	-0.1
	comp=Z,7.3nm,1.0s						
SPUT	South Promonto	100.02	46	ePdif	Pdif	05 29 40.5	+1.2
	comp=Z,41nm,1.6s						
HVU	Hansel Valley	100.13	45	ePdif	Pdif	05 29 40.4	+0.6
HVU	Hansel Valley	100.13	45	eP	Pdif	05 29 40.4	+0.6
PALK	Pallekele	100.16	272	ePdif	Pdif	05 29 40.2	-0.1
PALK	Pallekele	100.16	272	i P	Pdif	05 29 42.1	+1.7
PALK	Pallekele	100.16	272	P	Pdif	05 29 39.8	-0.6
	comp=Z,3.8nm,0.6s,baz=116,slow=4.3,SNR=3.9						
PV17	East Wray Mesa	100.20	50	ePdif	Pdif	05 29 41.5	+1.3
PV13	Radium Mtn., P	100.22	50	ePdif	Pdif	05 29 41.2	+0.9
PV09	Paradox Valley	100.23	50	ePdif	Pdif	05 29 41.6	+1.1
PV16	Nyswonger Mesa	100.25	50	ePdif	Pdif	05 29 41.9	+1.4
PV03	Paradox Valley	100.26	50	ePdif	Pdif	05 29 41.1	+0.6
PV02	Paradox Valley	100.30	50	ePdif	Pdif	05 29 41.8	+1.1
D08A	Wollman Farm,	100.31	38	ePdif	Pdif	05 29 41.2	+1.0
PV12	Saucer Basin,	100.33	50	ePdif	Pdif	05 29 42.2	+1.5
E09A	Wood Farm, Sta	100.33	39	ePdif	Pdif	05 29 40.8	+0.6
HLID	Hailey	100.36	43	ePdif	Pdif	05 29 41.4	+0.7
HLID	Hailey	100.36	43	P	Pdif	05 29 41.7	+0.9
	baz=229						
PV21	Cone Mtn., Par	100.37	50	ePdif	Pdif	05 29 41.3	+0.3
F10A	Beach Ranch, E	100.44	40	ePdif	Pdif	05 29 41.3	+0.4
TCUT	Toone Canyon	100.50	46	ePdif	Pdif	05 29 42.5	+1.0
SUA	Susitna One	100.62	15	ePdif	Pdif	05 29 40.9	-0.5
SEY	Seymchan	100.95	348	P	Pdif	05 29 40.5	-2.1
	comp=Z,0.9nm,0.3s,baz=136,slow=5.2,SNR=5.0						
B08A	Colville Reser	100.99	37	ePdif	Pdif	05 29 43.4	+0.1
S22A	4UR Ranch, Cre	101.21	51	ePdif	Pdif	05 29 45.9	+1.1
S22A	4UR Ranch, Cre	101.21	51	P	Pdif	05 29 45.3	+0.5
	baz=232						
O20A	White River Ci	101.78	49	P	Pdif	05 29 47.6	+0.4
	baz=232						
SMCO	Snowmass	101.98	50	ePdif	Pdif	05 29 49.5	+1.1
NEW	Newport	102.02	38	P	Pdif	05 29 48.8	+0.9
	baz=228						
MCMT	McKenzie Canyo	102.03	43	ePdif	Pdif	05 29 48.8	+0.6
SDCO	Great Sand Dun	102.05	52	ePdif	Pdif	05 29 48.9	+0.3
SDCO	Great Sand Dun	102.05	52	P	Pdif	05 29 48.9	+0.3
	baz=233						
REDW	Red Top Meadow	102.23	45	ePdif	Pdif	05 29 49.6	+0.5
FXWY	Fox Creek	102.30	45	ePdif	Pdif	05 29 50.8	+1.4
SNOW	Snow King Moun	102.35	45	ePdif	Pdif	05 29 49.5	-0.2
T25A	Trinidad	102.39	53	P	Pdif	05 29 50.4	+0.4
	baz=234						
DLMT	Dillon	102.51	43	ePdif	Pdif	05 29 51.7	+1.4
IMW	Indian Meadow	102.51	44	ePdif	Pdif	05 29 50.5	+0.1
LOHW	Long Hollow	102.53	45	ePdif	Pdif	05 29 51.5	+1.1
MOOW	Moose Ponds	102.53	45	ePdif	Pdif	05 29 52.0	+1.5
BW06	Boulder Array	102.61	46	ePdif	Pdif	05 29 51.4	+0.6
BW06	Boulder Array	102.61	46	P	Pdif	05 29 51.4	+0.6
	baz=232						
PD31	Pinedale Array	102.61	46	ePdif	Pdif	05 29 51.6	+0.8
PDAR	Pinedale Array	102.61	46	P	Pdif	05 29 51.1	+0.2
	comp=Z,1.3nm,0.6s,baz=228,slow=5.6,SNR=10						
PDAR				PP	PP	05 34 02.6	-4.5
	comp=Z,2.2nm,1.0s,baz=256,slow=3.6,SNR=4.3						
PDAR				PKKPbc	PKKPbc	05 45 49.0	-1.3
	comp=Z,0.9nm,0.5s,baz=90,slow=1.5,SNR=4.4						
MSO	Missoula	102.72	41	P	Pdif	05 29 51.8	+0.7
	baz=230						
RND	Reindeer	102.75	15	ePdif	Pdif	05 29 52.0	+1.2
RND	Reindeer	102.75	15	eP	Pdif	05 29 52.0	+1.2
FLWY	Flagg Ranch	102.76	44	ePdif	Pdif	05 29 52.6	+1.1
QLMT	Earthquake Lak	102.82	43	ePdif	Pdif	05 29 53.5	+1.9
RLMT	Red Lodge	104.21	44	P	Pdif	05 29 58.3	+0.5
	baz=232						
COLA	College	104.27	14	ePdif	Pdif	05 30 00.8	+3.6
	comp=Z,5.0nm,0.8s						
BILL	Bilibino	104.33	355	i P	Pdif	05 29 56.0	-1.6
BILL				pmax	pmax		
	comp=Z,5.0nm,2.7s						
ILAR	Eielson Array	104.37	15	P	Pdif	05 29 58.0	+0.2
ILAR	Eielson Array	104.37	15	Pdiff	Pdif	05 29 58.0	+0.2
	comp=Z,2.2nm,0.9s,baz=222,slow=5.4,SNR=13						
ILAR				PKiKP	PKiKP	05 34 12.2	-0.8
	comp=Z,4.1nm,0.7s,baz=302,slow=2.7,SNR=34						
ILAR				PKKPbc	PKKPbc	05 45 44.0	-1.5
	comp=Z,1.9nm,0.5s,baz=16,slow=2.3,SNR=22						
SONA0	Songino Array	105.26	318	ePdif	Pdif	05 30 02.2	-0.2
SONA0				ePKiKP	PKiKP	05 34 14.8	-0.5
SONA0				ePKKPbc	PKKPbc	05 45 44.3	+1.9
SONA0				eP'P'df	P'P'df	05 54 06.1	+3.2
SONM	Songino Array	105.26	318	Pdiff	Pdif	05 30 02.2	-0.2
	comp=Z,1.1nm,0.6s,baz=134,slow=4.0,SNR=8.9						
SONM				PKiKP	PKiKP	05 34 14.8	-0.5
	comp=Z,2.0nm,0.9s,baz=141,slow=4.9,SNR=4.3						
SONM				PKKPbc	PKKPbc	05 45 44.3	+1.9
	comp=Z,3.7nm,0.9s,baz=284,slow=3.3,SNR=7.9						
SONM				PKPPKP	P'P'df	05 54 06.1	+3.2
	comp=Z,0.9nm,0.9s,baz=298,slow=3.1,SNR=5.8						
SONA1	Songino Array	105.27	318	ePdif	Pdif	05 30 01.8	-0.6
DAWY	Dawson	105.47	18	ePKPdf	PKiKP	05 34 14.8	-0.3
OGNE	Ogallala	106.09	51	P	PKiKP	05 34 17.3	+0.3
	baz=236						
CBKS	Cedar Bluff	106.38	54	P	PKiKP	05 34 17.9	+0.3
	baz=236						
RSSD	Black Hills	106.65	47	P	PKiKP	05 34 18.1	-0.1
	baz=235						
LAO	LASA Array	106.85	44	P	PKiKP	05 34 18.4	+0.2
	baz=235						
JIRN	Jiri	107.14	292	eP	PKiKP	05 34 18.7	-1.1
	comp=Z,80nm,1.4s						
TOLK	Toolik Lake Re	107.31	12	P	PKiKP	05 34 19.0	+0.6
	baz=207						
TUL1	Leonard	107.45	58	P	PKiKP	05 34 19.1	-0.5
	baz=237						
GUN	Gumba	107.51	292	eP	PKiKP	05 34 19.2	-1.2
	comp=Z,161nm,1.5s						
HYB	Hyderabad	107.59	279	i P	PP	05 34 45.0	+1.0
PKI	Pulchoki	107.68	291	eP	PKiKP	05 34 19.5	-1.2
	comp=Z,46nm,1.1s						
PKIN	Phulchoki	107.70	291	eP	PKiKP	05 34 19.3	-1.4
	comp=Z,36nm,1.1s						
DMN	Daman	107.93	291	eP	PKiKP	05 34 20.0	-1.1
	comp=Z,48nm,1.2s						
EPYK	Eagle Plains	108.01	18	P	PKiKP	05 34 20.2	+0.4
	baz=217						
W39A	Magazine	108.47	60	P	PKiKP	05 34 21.0	-0.5
	baz=238						
SUR	Sutherland	108.49	200	PKiKP	PKiKP	05 34 22.8	+0.7
	comp=Z,16nm,0.9s,baz=187,slow=0.9,SNR=10						
SUR				PKKPbc	PKKPbc	05 45 31.9	0.0
	comp=Z,11nm,0.7s,baz=321,slow=2.9,SNR=10						
KSU1	Kansas State U	108.59	55	P	PKiKP	05 34 21.4	-0.2
	baz=238						
BGNE	Belgrade	108.80	52	P	PKiKP	05 34 21.6	-0.4
	baz=238						
DGMT	Dagmar	108.98	43	P	PKiKP	05 34 22.2	+0.1
	baz=236						
X41A	Kaden, Bauxite	108.99	61	P	PKiKP	05 34 22.2	-0.3
	baz=238						
KOLN	Koldanda	109.15	291	eP	PKiKP	05 34 21.7	-1.6
Y42A	Garnett, Star	109.17	62	P	PKiKP	05 34 22.8	-0.1
	baz=238						
Z43A	Armstrong Fami	109.23	63	P	PKiKP	05 34 22.9	-0.1
	baz=239						
VBMS	Vicksburg	109.25	64	P	PKiKP	05 34 22.5	-0.5
	baz=238						
DANN	Dangsing	109.33	291	eP	PKiKP	05 34 22.4	-1.4
	comp=Z,56nm,1.1s						
W41B	Gary Mavity, V	109.53	60	P	PKiKP	05 34 23.1	-0.4
	baz=239						
X42A	Stuttgart	109.65	61	P	PKiKP	05 34 23.6	-0.1
	baz=239						
U40A	Yellville	109.71	59	P	PKiKP	05 34 23.6	-0.2
	baz=239						
Y43A	Makayla and Ka	109.82	62	P	PKiKP	05 34 23.9	-0.1
	baz=239						
145A	Houston Renfro	109.87	64	P	PKiKP	05 34 23.8	-0.5
	baz=239						
SUSD	Miller	109.89	49	P	PKiKP	05 34 23.7	-0.3
	baz=238						
V41A	Mountainview	109.91	60	P	PKiKP	05 34 23.4	-0.8
	baz=239						
W42A	Bald Knob	110.09	61	P	PKiKP	05 34 24.1	-0.5
	baz=239						
X43A	Marvell	110.16	62	P	PKiKP	05 34 24.7	0.0
	baz=239						
INK	Inuvik	110.30	17	Pdiff	Pdif	05 30 23.8	-0.3
	comp=Z,1.4nm,0.9s,baz=209,slow=8.0,SNR=5.3						
INK				PKiKP	PKiKP	05 34 23.2	-0.7
	comp=Z,7.4nm,0.6s,baz=139,slow=2.1,SNR=52						
MOY	Mondy	110.33	320	ePKIKP	PKiKP	05 34 23.9	-0.8
MOY				pmax	pmax		
	comp=Z,20nm,1.8s						
U41A	Viola	110.35	59	P	PKiKP	05 34 24.5	-0.6
	baz=239						
BOSA	Boshof	110.59	205	PKiKP	PKiKP	05 34 26.1	0.0
	comp=Z,4.0nm,0.5s,baz=172,slow=2.2,SNR=12						
BOSA				PKKPbc	PKKPbc	05 45 24.5	-0.6
	comp=Z,7.8nm,0.7s,baz=352,slow=3.0,SNR=9.0						
T41A	Mountain View	110.81	59	P	PKiKP	05 34 25.4	-0.6
	baz=240						
U42A	Revenden	110.83	60	P	PKiKP	05 34 25.2	-0.7
	baz=240						
ECSD	EROS Data Cent	110.97	51	ePKPdf	PKiKP	05 34 25.3	-0.7
ECSD	EROS Data Cent	110.97	51	P	PKiKP	05 34 25.7	-0.4
	baz=239						
S41A	Jillco Farms,	111.10	58	P	PKiKP	05 34 26.0	-0.5
	baz=240						
147A	Livingston	111.11	64	P	PKiKP	05 34 26.1	-0.5
	baz=240						
OXF	Oxford	111.21	62	ePKPdf	PKiKP	05 34 26.3	-0.4
OXF	Oxford	111.21	62	P	PKiKP	05 34 25.8	-0.9
	baz=240						
349A	Repton	111.24	66	P	PKiKP	05 34 26.0	-0.9
	baz=239						
BRAL	Brewton	111.25	66	P	PKiKP	05 34 26.5	-0.4
	baz=239						
MDND	Maddock	111.26	46	P	PKiKP	05 34 25.6	-0.8
	baz=239						
T42A	Van Buren	111.27	59	P	PKiKP	05 34 25.5	-1.2
	baz=240						
U43A	Rector	111.42	60	P	PKiKP	05 34 26.2	-0.9
	baz=240						

CCM	Cathedral Cave	111.67	58	P	PKiKP	05 34 27.1	-0.4
	baz=240						
W45A	Hickory Valley	111.69	62	P	PKiKP	05 34 26.9	-0.7
	baz=240						
R41A	Rosebud	111.70	58	P	PKiKP	05 34 26.5	-1.0
	baz=240						
X46A	Booneville	111.82	63	P	PKiKP	05 34 27.0	-0.9
	baz=240						
S42A	Caledonia	111.84	59	P	PKiKP	05 34 26.9	-0.9
	baz=240						
T43A	Greenville	111.86	59	P	PKiKP	05 34 26.9	-0.9
	baz=240						
350A	Dozier	111.91	66	P	PKiKP	05 34 27.2	-1.0
	baz=240						
R42A	Luebbering	112.09	58	P	PKiKP	05 34 27.4	-0.9
	baz=240						
Q41A	Truxton	112.12	57	P	PKiKP	05 34 27.6	-0.7
	baz=240						
YKA	Yellowknife Ar	112.13	28	Pdiff	Pdif	05 30 32.7	+0.4
	comp=Z,0.2nm,0.4s,baz=231,slow=4.8,SNR=8.3						
YKA				PKiKP	PKiKP	05 34 26.9	-0.6
	comp=Z,6.0nm,0.5s,baz=244,slow=1.6,SNR=143						
YKA				PP	PP	05 35 13.3	-2.5
	comp=Z,3.2nm,1.0s,baz=237,slow=6.9,SNR=11						
YKA				PKKPbc	PKKPbc	05 45 16.7	-3.9
	comp=Z,1.7nm,0.7s,baz=44,slow=3.5,SNR=24						
YKA				PKPPKP	P'P'df	05 53 51.7	+3.1
	comp=Z,1.2nm,1.1s,baz=33,slow=1.7,SNR=7.4						
U44B	Burton Farm, H	112.15	61	P	PKiKP	05 34 27.6	-0.9
	baz=240						
149A	Jones	112.16	65	P	PKiKP	05 34 28.2	-0.4
	baz=240,SNR=14						
LRAL	Lakeview Retre	112.22	65	P	PKiKP	05 34 28.2	-0.5
	baz=240						
250A	Grady	112.24	66	P	PKiKP	05 34 28.5	-0.2
	baz=240						
S43A	Fulton Ridge,	112.25	59	P	PKiKP	05 34 27.6	-1.0
	baz=240						
W46A	Michie	112.25	62	P	PKiKP	05 34 27.6	-1.1
	baz=240						
X47A	Russelville	112.32	63	P	PKiKP	05 34 28.6	-0.2
	baz=240,SNR=5.3						
351A	Pinckard	112.38	67	P	PKiKP	05 34 28.8	-0.2
	baz=240						
452A	Marianna	112.49	68	P	PKiKP	05 34 29.3	+0.1
	baz=240						
BDFB	Brasilia	112.52	131	PKiKP	PKiKP	05 34 30.1	+0.1
	comp=Z,5.0nm,0.7s,baz=37,slow=1.2,SNR=7.8						
BDFB				PKKPbc	PKKPbc	05 45 19.1	+0.7
	comp=Z,4.3nm,0.7s,baz=99,slow=5.4,SNR=8.3						
Y48A	Jasper	112.53	64	P	PKiKP	05 34 28.7	-0.5
	baz=240						
Q42A	Golden Eagle	112.58	58	P	PKiKP	05 34 28.7	-0.5
	baz=241						
Z49A	Columbiana	112.64	65	P	PKiKP	05 34 28.8	-0.7
	baz=240,SNR=9.1						
M39A	Webster	112.72	55	P	PKiKP	05 34 29.2	-0.2
	baz=241						
553A	Crawfordville	112.72	69	P	PKiKP	05 34 29.8	+0.1
	baz=240						
150A	Eclectic	112.73	66	P	PKiKP	05 34 28.9	-0.7
	baz=240,SNR=8.6						
V46A	Holladay	112.76	62	P	PKiKP	05 34 28.6	-1.0
	baz=241						
N40A	Mertquake, Sal	112.82	55	P	PKiKP	05 34 29.0	-0.5
	baz=241						
W47A	Westpoint	112.87	62	P	PKiKP	05 34 28.5	-1.3
	baz=241,SNR=13						
S44A	Carbondale	112.87	59	P	PKiKP	05 34 29.1	-0.7
	baz=241						
X48A	Hartselle	112.88	63	P	PKiKP	05 34 28.9	-1.0
	baz=241,SNR=11						
O41A	Passleys Farm,	112.92	56	P	PKiKP	05 34 29.0	-0.8
	baz=241						
251A	Midway	112.93	66	P	PKiKP	05 34 29.6	-0.5
	baz=240,SNR=7.8						
352A	Blakely	112.99	67	P	PKiKP	05 34 29.7	-0.4
	baz=240						
U46A	Springville	112.99	61	P	PKiKP	05 34 29.4	-0.6
	baz=241						
P42A	Winchester	113.03	57	P	PKiKP	05 34 29.4	-0.6
	baz=241						
Y49A	Blount Mountai	113.05	64	P	PKiKP	05 34 29.7	-0.6
	baz=241,SNR=6.0						
Z50A	Ashland	113.11	65	P	PKiKP	05 34 29.5	-0.9
	baz=241,SNR=8.2						
M40A	Post Highland	113.12	55	P	PKiKP	05 34 29.7	-0.4
	baz=241						
WVT	Waverly	113.12	61	P	PKiKP	05 34 29.5	-0.8
	baz=241						
453A	Whigham	113.14	68	P	PKiKP	05 34 30.2	-0.3
	baz=240						
L39A	Vinton	113.14	54	P	PKiKP	05 34 29.6	-0.6
	baz=241						
151A	Opelika	113.20	66	P	PKiKP	05 34 30.2	-0.3
	baz=240,SNR=15						
V47A	Nunnelly	113.20	62	P	PKiKP	05 34 29.6	-0.9
	baz=241						
554A	Perry	113.24	69	P	PKiKP	05 34 30.4	-0.3
	baz=240						
W48A	Pulaski	113.29	63	P	PKiKP	05 34 29.4	-1.2
	baz=241,SNR=18						
252A	Lumpkin	113.38	67	P	PKiKP	05 34 30.4	-0.5
	baz=240,SNR=6.3						
X49A	Woodville	113.43	64	P	PKiKP	05 34 30.0	-1.0
	baz=241,SNR=5.7						
FFC	Flin Flon	113.44	39	*e*PKPdf	PKiKP	05 34 29.7	-0.6
FFC	Flin Flon	113.44	39	*e*PKIKP	PKiKP	05 34 29.7	-0.6
353A	Camilla	113.45	68	P	PKiKP	05 34 31.1	0.0
	baz=240,SNR=5.5						
K39A	Oelwein	113.49	53	P	PKiKP	05 34 29.9	-0.9
	baz=242						
T46A	Princeton	113.52	61	P	PKiKP	05 34 30.2	-0.8
	baz=241						
Y50A	Piedmont	113.56	64	P	PKiKP	05 34 30.2	-1.0
	baz=241,SNR=6.9						
P43A	Skaggs, Pawnee	113.62	57	P	PKiKP	05 34 30.3	-0.9
	baz=242						
L40A	Anamosa	113.62	54	P	PKiKP	05 34 30.4	-0.6
	baz=242						
059A	Moore Haven	113.64	73	P	PKiKP	05 34 29.9	-1.7
	baz=240						
U47A	Clarksville	113.66	61	P	PKiKP	05 34 30.0	-1.3
	baz=241,SNR=11						
V48A	Smith Brothers	113.66	62	P	PKiKP	05 34 29.8	-1.6
	baz=241,SNR=6.4						
AGMN	Agassiz Nation	113.67	47	*e*PKPdf	PKiKP	05 34 29.9	-1.1
Z51A	Franklin	113.69	65	P	PKiKP	05 34 30.8	-0.7
	baz=241						
152A	Waverly Hall	113.72	66	P	PKiKP	05 34 31.0	-0.6
	baz=241,SNR=7.6						
M41A	Milan	113.75	55	P	PKiKP	05 34 30.8	-0.5
	baz=242						
LBTB	Lobatse	113.75	207	*i* PKIKP	PKiKP	05 34 32.0	-0.2
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LBTB	Lobatse	113.75	207	PKiKP	PKiKP	05 34 31.9	-0.2
	comp=Z,5.3nm,0.7s,baz=249,slow=2.9,SNR=5.5						
LBTB				PKKPbc	PKKPbc	05 45 13.8	-0.7
	comp=Z,5.7nm,0.7s,baz=322,slow=4.1,SNR=8.4						
656A	Willston	113.76	70	P	PKiKP	05 34 31.6	-0.2
	baz=240						
W49A	Belvidere	113.76	63	P	PKiKP	05 34 30.5	-1.1
	baz=241,SNR=10						
555A	McAlpin	113.80	69	P	PKiKP	05 34 30.5	-1.3
	baz=240						
N42A	Yates City	113.83	56	P	PKiKP	05 34 30.3	-1.2
	baz=242						
R45A	Skylar, Fairfi	113.83	59	P	PKiKP	05 34 30.9	-0.7
	baz=242						
X50B	Fort Payne	113.89	64	P	PKiKP	05 34 30.8	-1.1
	baz=241,SNR=7.5						
J39A	Decorah	113.90	53	P	PKiKP	05 34 30.6	-1.0
	baz=242						
TIGA	Tifton	113.97	68	P	PKiKP	05 34 31.5	-0.6
	baz=241						
K40A	Colesburg	113.97	54	P	PKiKP	05 34 30.7	-1.0
	baz=242						
T47A	Sharon Grove	114.05	61	P	PKPdf	05 34 30.9	-1.2
	baz=242,SNR=6.9						
Y51A	Rockmart	114.05	65	P	PKPdf	05 34 31.2	-0.9
	baz=241,SNR=9.2						
O43A	Sugar Creek Fa	114.06	57	P	PKPdf	05 34 31.1	-0.8
	baz=242						
SPMN	Marine on St.	114.08	51	P	PKPdf	05 34 31.1	-0.8
	baz=242						
L41A	Preston	114.10	55	P	PKPdf	05 34 31.2	-0.8
	baz=242						
P44A	Sand Creek, Wi	114.15	58	P	PKPdf	05 34 31.4	-0.8
	baz=242						
H38A	Maiden Rock	114.16	51	P	PKPdf	05 34 31.1	-0.9
	baz=242						
WMQ	Urumqi	114.17	307	*e*PKPdf	PKPdf	05 34 31.0	-1.2
WMQ	Urumqi	114.17	307	*e*PKIKP	PKPdf	05 34 31.0	-1.2
Z52A	Williamson	114.19	66	P	PKPdf	05 34 32.0	-0.5
	baz=241,SNR=9.6						
HDIL	Hopedale	114.20	57	*e*PKPdf	PKPdf	05 34 31.9	-0.3
HDIL	Hopedale	114.20	57	P	PKPdf	05 34 31.3	-1.0
	baz=242						
Q45A	Warren Harvey,	114.20	59	P	PKPdf	05 34 31.6	-0.7
	baz=242						
U48A	Cassie Pea, Po	114.22	62	P	PKPdf	05 34 31.1	-1.3
	baz=242,SNR=5.8						
I39A	Houston	114.26	53	P	PKPdf	05 34 31.2	-1.0
	baz=242						
V49A	McMinnville	114.33	63	P	PKPdf	05 34 31.5	-1.1
	baz=242,SNR=12						
657A	Interlachen	114.37	70	P	PKPdf	05 34 32.7	-0.2
	baz=240						
F37A	Hinrichs Farm,	114.42	50	P	PKPdf	05 34 31.9	-0.6
	baz=242						
254A	Abbeville	114.43	67	P	PKPdf	05 34 32.1	-0.8
	baz=241						
N43A	Stutzman Famil	114.46	56	P	PKPdf	05 34 32.0	-0.8
	baz=242						
355A	Pearson	114.47	68	P	PKPdf	05 34 32.3	-0.7
	baz=241						
K41A	Shullsburg	114.47	54	P	PKPdf	05 34 31.7	-1.0
	baz=242						
W50A	Signal Mountai	114.49	63	P	PKPdf	05 34 31.9	-1.1
	baz=242,SNR=9.5						
S47A	Hartford	114.49	60	P	PKPdf	05 34 31.9	-1.0
	baz=242						
X51A	Calhoun	114.52	64	P	PKPdf	05 34 32.4	-0.7
	baz=242,SNR=6.1						
J40A	Soldiers Grove	114.55	53	P	PKPdf	05 34 31.5	-1.3
	baz=242						
O44A	Mansfield	114.57	57	P	PKPdf	05 34 32.2	-0.7
	baz=242						
ULM	Lac du Bonnet	114.58	45	PKiKP	PKPdf	05 34 31.6	-1.1
	comp=Z,17nm,0.8s,baz=237,slow=2.4,SNR=29						
ULM				PKKPbc	PKKPbc	05 45 11.5	-0.6
	comp=Z,0.9nm,0.7s,baz=30,slow=8.6,SNR=3.1						
T48A	Bowling Green	114.61	61	P	PKPdf	05 34 31.9	-1.2
	baz=242						
L42A	Oliver, Polo	114.62	55	P	PKPdf	05 34 32.1	-0.9
	baz=242						
G38A	Ridgeland	114.65	51	P	PKPdf	05 34 32.0	-1.0
	baz=243						
JFWS	Jewell Farm	114.65	54	*e*PKPdf	PKPdf	05 34 32.2	-0.8
JFWS	Jewell Farm	114.65	54	*e*PKIKP	PKPdf	05 34 32.2	-0.8
JFWS	Jewell Farm	114.65	54	P	PKPdf	05 34 32.1	-1.0
	baz=242						
557A	Orange Park	114.68	70	P	PKPdf	05 34 32.4	-1.1
	baz=241						
U49A	Red Boiling Sp	114.76	62	P	PKPdf	05 34 32.5	-0.9
	baz=242,SNR=9.6						
Y52A	Lilburn	114.77	65	P	PKPdf	05 34 33.2	-0.4
	baz=242,SNR=13						
P45A	Graceland, Par	114.78	58	P	PKPdf	05 34 32.5	-0.9
	baz=242						
H39A	Augusta	114.79	52	P	PKPdf	05 34 32.3	-0.9
	baz=243						
M43A	Waltham Townsh	114.83	56	P	PKPdf	05 34 32.2	-1.2
	baz=242						
Z53A	Monticello	114.86	66	P	PKPdf	05 34 33.0	-0.7
	baz=242,SNR=9.5						
I40A	Norwalk	114.86	53	P	PKPdf	05 34 32.2	-1.2
	baz=243						
V50A	Pikevile	114.86	63	P	PKPdf	05 34 32.6	-1.0
	baz=242,SNR=15						
W51A	Cleveland	114.87	64	P	PKPdf	05 34 32.7	-1.0
	baz=242						
154A	Montrose	114.89	67	P	PKPdf	05 34 33.0	-0.8
	baz=241						
PTGA	Pitinga	114.90	111	PKP	PKPdf	05 34 34.8	+0.3
	comp=Z,4.4nm,1.0s,baz=117,slow=7.6,SNR=4.6						
GOGA	Godfrey	115.00	66	*e*PKPdf	PKPdf	05 34 33.7	-0.3
GOGA	Godfrey	115.00	66	P	PKPdf	05 34 33.1	-0.9
	baz=242,SNR=6.5						
F38A	Pierce - Schro	115.00	50	P	PKPdf	05 34 32.9	-0.7
	baz=243						
J41A	Loganville	115.01	54	P	PKPdf	05 34 32.6	-1.1
	baz=243						
R47A	Wooly Knot Far	115.06	60	P	PKPdf	05 34 33.0	-0.9
	baz=242,SNR=10						
N44A	Piper City	115.09	57	P	PKPdf	05 34 33.1	-0.8
	baz=243						
S48A	Wiedeman Farm,	115.10	61	P	PKPdf	05 34 32.9	-1.1
	baz=242,SNR=5.9						
Y53A	Monroe	115.12	65	P	PKPdf	05 34 33.6	-0.6
	baz=242,SNR=10						
G39A	Holcombe	115.14	51	P	PKPdf	05 34 33.1	-0.8
	baz=243						
CPCT	Cooper Cave	115.17	63	*e*PKPdf	PKPdf	05 34 33.3	-1.0
K42A	Prairie Point,	115.18	54	P	PKPdf	05 34 33.1	-0.9
	baz=243						
P46A	Rosedale	115.19	58	P	PKPdf	05 34 33.4	-0.7
	baz=243						
WCI	Wyandotte Cave	115.19	60	*e*PKPdf	PKPdf	05 34 33.4	-0.8
WCI	Wyandotte Cave	115.19	60	*e*PKIKP	PKPdf	05 34 33.4	-0.8
WCI	Wyandotte Cave	115.19	60	P	PKPdf	05 34 33.5	-0.8
	baz=242						
T49A	Edmonton	115.21	61	*e*PKPdf	PKPdf	05 34 33.3	-1.0
T49A	Edmonton	115.21	61	P	PKPdf	05 34 33.0	-1.3
	baz=242,SNR=12						
L43A	Garden Prairie	115.31	55	P	PKPdf	05 34 33.5	-0.8
	baz=243						
H40A	Chili	115.33	52	P	PKPdf	05 34 33.4	-0.9
	baz=243						
155A	Kite	115.37	67	P	PKPdf	05 34 34.2	-0.5
	baz=242,SNR=11						
Z54A	Sparta	115.38	66	P	PKPdf	05 34 34.0	-0.7
	baz=242,SNR=5.3						
U50A	Jamestown	115.39	62	P	PKPdf	05 34 33.7	-1.0
	baz=242,SNR=14						
I41A	Arkdale	115.42	53	*e*PKPdf	PKPdf	05 34 34.3	-0.1
I41A	Arkdale	115.42	53	P	PKPdf	05 34 33.4	-1.1
	baz=243						
Q47A	Bedord North L	115.42	59	P	PKPdf	05 34 34.0	-0.6
	baz=243,SNR=9.4						
M44A	Midewin, Midew	115.42	56	*e*PKPdf	PKiKP	05 34 34.6	+0.1
M44A	Midewin, Midew	115.42	56	P	PKPdf	05 34 33.7	-0.9
	baz=243						
W52A	Murphy	115.44	64	*e*PKPdf	PKiKP	05 34 35.0	+0.2
W52A	Murphy	115.44	64	P	PKPdf	05 34 34.4	-0.4
	baz=242,SNR=10						
BLO	Bloomington	115.46	59	*e*PKPdf	PKiKP	05 34 34.9	+0.2
BLO	Bloomington	115.46	59	*e*PKIKP	PKiKP	05 34 34.9	+0.2
V51A	Loudon	115.46	63	*e*PKPdf	PKPdf	05 34 34.5	-0.3
V51A	Loudon	115.46	63	P	PKPdf	05 34 34.4	-0.5
	baz=242						
E38A	The Farm, Brul	115.49	50	*e*PKPdf	PKPdf	05 34 34.4	-0.1
E38A	The Farm, Brul	115.49	50	P	PKPdf	05 34 33.4	-1.1
	baz=243						
256A	Glennville	115.50	68	P	PKPdf	05 34 34.5	-0.5
	baz=242						
N45A	Kentland	115.54	57	P	PKPdf	05 34 34.2	-0.6
	baz=243						
R48A	Northridge Ran	115.56	60	P	PKPdf	05 34 34.5	-0.4
	baz=243,SNR=6.7						
J42A	Columbus	115.57	54	P	PKPdf	05 34 34.1	-0.7
	baz=243						
F39A	Loretta	115.58	51	P	PKPdf	05 34 34.0	-0.8
	baz=243						
X53A	Estanollee	115.62	65	P	PKPdf	05 34 34.9	-0.3
	baz=242,SNR=11						
T50A	Nancy	115.67	62	P	PKPdf	05 34 34.1	-1.1
	baz=243,SNR=13						
S49A	Springfield	115.70	61	P	PKPdf	05 34 34.2	-1.1
	baz=243,SNR=15						
G40A	Rib Lake	115.74	52	*e*PKPdf	PKPdf	05 34 34.7	-0.3
G40A	Rib Lake	115.74	52	P	PKPdf	05 34 34.1	-0.9
	baz=244						
P47A	Martinsville	115.78	59	P	PKPdf	05 34 34.6	-0.7
	baz=243						
Y54A	Tignall	115.78	66	P	PKPdf	05 34 35.1	-0.4
	baz=242,SNR=18						
H41A	Junction City	115.80	52	*e*PKPdf	PKPdf	05 34 34.5	-0.7
H41A	Junction City	115.80	52	P	PKPdf	05 34 33.9	-1.3
	baz=244						
TKL	Tuckaleechee C	115.81	64	*e*PKPdf	PKiKP	05 34 35.9	+0.4
TKL	Tuckaleechee C	115.81	64	*e*PKIKP	PKiKP	05 34 35.9	+0.4
K43A	Burlington	115.82	55	*e*PKPdf	PKPdf	05 34 35.2	-0.1
K43A	Burlington	115.82	55	P	PKPdf	05 34 34.2	-1.1
	baz=243						
Q48A	North Vernon	115.90	60	P	PKPdf	05 34 34.8	-0.7
	baz=243,SNR=13						
I42A	Draeger Farm,	115.96	53	*e*PKPdf	PKPdf	05 34 34.8	-0.7
I42A	Draeger Farm,	115.96	53	P	PKPdf	05 34 35.0	-0.5
	baz=244						
U51A	La Follette	115.97	63	P	PKPdf	05 34 35.1	-0.7
	baz=243,SNR=7.4						
E39A	Mellen	116.01	50	P	PKPdf	05 34 34.9	-0.6
	baz=244						
R49A	Shelbyville	116.01	60	P	PKPdf	05 34 35.1	-0.7
	baz=243,SNR=7.6						
V52A	Sevierville	116.02	63	*e*PKPdf	PKiKP	05 34 36.0	+0.1
V52A	Sevierville	116.02	63	P	PKPdf	05 34 35.5	-0.4
	baz=243,SNR=17						
W53A	Cullowhee	116.03	64	P	PKPdf	05 34 35.7	-0.4
	baz=242,SNR=20						
F40A	Park Falls	116.08	51	P	PKPdf	05 34 35.2	-0.5
	baz=244						
N46A	Monticello	116.09	57	P	PKPdf	05 34 35.3	-0.5
	baz=243						
EYMN	Ely	116.11	48	*e*PKPdf	PKPdf	05 34 35.1	-0.6
EYMN	Ely	116.11	48	P	PKPdf	05 34 35.0	-0.7
	baz=244						
BG3	Lake Jocassee	116.12	65	*e*PKPdf	PKiKP	05 34 36.4	+0.3
O47A	Sheridan	116.18	58	P	PKPdf	05 34 35.3	-0.7
	baz=243						
HODGE	Hodges	116.27	66	*e*PKPdf	PKiKP	05 34 36.5	+0.1
S50A	Richmond	116.28	61	P	PKPdf	05 34 35.6	-0.8
	baz=243,SNR=13						
T51A	Gray	116.28	62	P	PKPdf	05 34 35.7	-0.7
	baz=243,SNR=11						
P48A	Milroy	116.35	59	P	PKPdf	05 34 35.6	-0.8
	baz=243,SNR=6.7						
TZTN	Tazewell	116.38	63	*e*PKPdf	PKiKP	05 34 36.7	+0.1
TZTN	Tazewell	116.38	63	P	PKPdf	05 34 36.3	-0.3
	baz=243,SNR=5.1						
U52A	Thorn Hill	116.44	63	P	PKPdf	05 34 36.5	-0.2
	baz=243,SNR=9.5						
E40A	Wakefield	116.44	51	P	PKPdf	05 34 35.8	-0.6
	baz=244						
I43A	Langenfeld Bro	116.46	54	P	PKPdf	05 34 35.8	-0.6
	baz=244						
H42A	Shiocton	116.48	53	P	PKPdf	05 34 35.6	-0.9
	baz=244						
V53A	Saluda	116.51	64	*e*PKPdf	PKiKP	05 34 37.0	+0.1
V53A	Saluda	116.51	64	P	PKPdf	05 34 36.6	-0.3
	baz=243,SNR=19						
Q49A	Aurora	116.52	60	P	PKPdf	05 34 36.2	-0.6
	baz=243						
M46A	Old House Fiel	116.57	57	P	PKPdf	05 34 36.1	-0.6
	baz=244						
R50A	Paris	116.60	61	P	PKPdf	05 34 36.1	-0.8
	baz=243,SNR=9.9						
F41A	Three Lakes	116.64	51	*e*PKPdf	PKPdf	05 34 36.2	-0.6
F41A	Three Lakes	116.64	51	P	PKPdf	05 34 36.2	-0.6
	baz=244						
MATP	Matopo	116.70	212	PKKPbc	PKKPbc	05 45 03.1	-1.4
	comp=Z,4.5nm,0.6s,baz=329,slow=2.2,SNR=10						
COWI	Conover	116.78	51	*e*PKPdf	PKPdf	05 34 36.6	-0.4
N47A	Urbana	116.79	58	P	PKPdf	05 34 36.5	-0.7
	baz=244						
S51A	Beattyville	116.83	62	*e*PKPdf	PKiKP	05 34 37.4	0.0
S51A	Beattyville	116.83	62	P	PKPdf	05 34 37.0	-0.4
	baz=243,SNR=8.5						
X55A	Gracelyn & Ava	116.83	66	P	PKPdf	05 34 37.3	-0.2
	baz=243,SNR=8.0						
G42A	Mountain	116.86	52	P	PKPdf	05 34 36.4	-0.8
	baz=244						
PAULI	Pauline	116.86	65	*e*PKPdf	PKiKP	05 34 37.8	+0.2
L46A	Eue Claire	116.87	56	P	PKPdf	05 34 36.6	-0.8
	baz=244						
P49A	Miami Univ. Ec	116.88	59	P	PKPdf	05 34 36.5	-0.9
	baz=244,SNR=13						
O48A	Farmland	116.89	58	P	PKPdf	05 34 36.5	-0.9
	baz=244,SNR=8.6						
DGZ	Jazzator, Alta	116.94	313	*i* PKIKP	PKPdf	05 34 36.2	-1.2
H43A	Windswept, Lux	116.95	53	P	PKPdf	05 34 36.5	-1.0
	baz=244						
U53A	Fall Branch	117.00	63	P	PKPdf	05 34 37.3	-0.5
	baz=243,SNR=21						
JSC	Jenkinsville	117.03	66	*e*PKPdf	PKiKP	05 34 38.1	+0.2
JSC	Jenkinsville	117.03	66	*e*PKIKP	PKiKP	05 34 38.1	+0.2
T52A	Hallie	117.03	62	P	PKPdf	05 34 37.8	0.0
	baz=243,SNR=13						
E41A	Kenton	117.04	51	P	PKPdf	05 34 36.7	-0.8
	baz=245						
M47A	Cromwell	117.05	57	P	PKPdf	05 34 37.1	-0.6
	baz=244						
Q50A	Georgetown	117.09	60	P	PKPdf	05 34 37.2	-0.6
	baz=244,SNR=11						
R51A	Hillsboro	117.13	61	P	PKPdf	05 34 37.2	-0.8
	baz=244,SNR=7.0						
N48A	Decatur	117.24	58	P	PKPdf	05 34 37.4	-0.7
	baz=244,SNR=7.9						
F42A	Maple Grove Fa	117.26	52	P	PKPdf	05 34 36.8	-1.2
	baz=245						
X56A	White Oak	117.29	66	P	PKPdf	05 34 38.0	-0.3
	baz=243,SNR=7.0						
NHSC	New Hope	117.30	68	*e*PKPdf	PKiKP	05 34 38.8	+0.4
NHSC	New Hope	117.30	68	P	PKPdf	05 34 38.2	-0.2
	baz=243,SNR=5.5						
T53A	Wise	117.30	63	P	PKiKP	05 34 38.4	0.0
	baz=244,SNR=11						
CSU	Charleston Sou	117.32	68	*e*PKPdf	PKiKP	05 34 38.8	+0.3
KMSC	Kings Mountain	117.36	65	*e*PKPdf	PKiKP	05 34 38.5	0.0
KMSC	Kings Mountain	117.36	65	P	PKPdf	05 34 38.0	-0.5
	baz=243,SNR=7.9						
SDDR	Presa de Saban	117.42	86	*e*PKPdf	PKiKP	05 34 39.7	+0.5
O49A	Covington	117.42	59	*e*PKPdf	PKPdf	05 34 38.0	-0.5
O49A	Covington	117.42	59	P	PKPdf	05 34 37.6	-0.9
	baz=244,SNR=8.9						
K46A	Dorr	117.50	56	P	PKPdf	05 34 38.0	-0.5
	baz=245						
C40A	Isle Royale Na	117.53	49	P	PKPdf	05 34 37.1	-1.2
	baz=245						
D41A	Chassel	117.54	50	*e*PKPdf	PKPdf	05 34 38.1	-0.4
D41A	Chassel	117.54	50	P	PKPdf	05 34 38.0	-0.4
	baz=245						
P50A	Jamestown	117.55	60	P	PKPdf	05 34 37.8	-0.9
	baz=244,SNR=8.4						
L47A	Sherwood	117.59	57	P	PKPdf	05 34 38.2	-0.6
	baz=245						
Q51A	Peebles	117.61	60	*e*PKPdf	PKPdf	05 34 38.3	-0.6
Q51A	Peebles	117.61	60	P	PKPdf	05 34 38.3	-0.6
	baz=244,SNR=25						
E42A	Champion	117.68	51	P	PKPdf	05 34 37.9	-0.9
	baz=245						
R52A	Catlettsburg	117.81	61	P	PKPdf	05 34 38.6	-0.6
	baz=244,SNR=5.5						
N49A	Columbus Grove	117.84	58	*e*PKPdf	PKPdf	05 34 39.0	-0.2
N49A	Columbus Grove	117.84	58	P	PKPdf	05 34 38.6	-0.6
	baz=245,SNR=7.3						
J46A	Howard City	117.87	55	P	PKPdf	05 34 38.9	-0.3
	baz=245						
S53A	Williamson	117.90	62	P	PKPdf	05 34 38.9	-0.6
	baz=244						
O50A	Cable	117.90	59	P	PKPdf	05 34 38.5	-0.9
	baz=244,SNR=15						
F43A	Flat Rock, Esc	117.91	52	P	PKPdf	05 34 38.7	-0.5
	baz=246						
X57A	Johnson Farm,	117.97	66	P	PKPdf	05 34 39.5	-0.2
	baz=243						
P51A	Williamsport	118.01	60	*e*PKPdf	PKPdf	05 34 39.0	-0.6
P51A	Williamsport	118.01	60	P	PKPdf	05 34 38.4	-1.2
	baz=244,SNR=11						
K47A	Vermontville	118.02	56	P	PKPdf	05 34 38.5	-1.0
	baz=245						
T54A	Tazewell	118.02	63	P	PKPdf	05 34 39.3	-0.5
	baz=244,SNR=16						
L48A	N Adams	118.10	57	P	PKPdf	05 34 39.3	-0.5
	baz=245						
M49A	Liberty Center	118.22	58	P	PKPdf	05 34 39.3	-0.7
	baz=245,SNR=6.5						
E43A	Lone Tree Farm	118.24	52	*e*PKPdf	PKPdf	05 34 39.1	-0.7
E43A	Lone Tree Farm	118.24	52	P	PKPdf	05 34 38.8	-1.0
	baz=246						
I46A	Reed City	118.25	55	P	PKPdf	05 34 39.1	-0.9
	baz=246						
R53A	Hurricane	118.30	62	P	PKPdf	05 34 39.6	-0.6
	baz=244,SNR=5.4						
Q52A	Bidwell	118.35	61	P	PKPdf	05 34 39.5	-0.8
	baz=245,SNR=16						
J47A	Sunmer	118.38	56	P	PKPdf	05 34 39.9	-0.3
	baz=246,SNR=5.9						
ACSO	Alum Creek Sta	118.38	59	*e*PKPdf	PKPdf	05 34 39.7	-0.6
ACSO	Alum Creek Sta	118.38	59	P	PKPdf	05 34 39.3	-1.0

	baz=245,SNR=17						
F44A	Big Bay de Noc	118.44	52	P	PKPdf	05 34 39.2	-1.0
	baz=246						
N50A	Nevada	118.49	59	P	PKPdf	05 34 39.7	-0.7
	baz=245,SNR=6.0						
G45A	Suttons Bay	118.56	53	P	PKPdf	05 34 39.7	-0.8
	baz=246						
X58A	Rowland	118.57	66	P	PKPdf	05 34 40.5	-0.3
	baz=244,SNR=12						
O51A	Pataskala	118.61	59	P	PKPdf	05 34 39.8	-1.0
	baz=245,SNR=9.1						
L49A	Milan	118.62	57	P	PKPdf	05 34 40.0	-0.7
	baz=245						
H46A	Fife Lake	118.65	54	P	PKPdf	05 34 40.0	-0.7
	baz=246,SNR=6.2						
K48A	Perry	118.67	56	P	PKPdf	05 34 40.3	-0.4
	baz=246,SNR=5.4						
P52A	Corning	118.72	60	P	PKPdf	05 34 40.1	-0.8
	baz=245,SNR=14						
AAM	Ann Arbor	118.77	57	P	PKPdf	05 34 40.4	-0.6
	baz=246						
M50A	Fremont	118.82	58	P	PKPdf	05 34 40.4	-0.7
	baz=245						
MK01	Makanchi Array	118.88	309	*e*PKPdf	PKPdf	05 34 39.0	-2.1
MK31	Makanchi Array	118.89	309	*e*PKPdf	PKPdf	05 34 39.0	-2.1
MK31	Makanchi Array	118.89	309	*i* PKIKP	PKPdf	05 34 39.3	-1.8
MK31				pmax	pmax		
	comp=Z,25nm,0.8s						
MK32	Makanchi Array	118.89	309	*e*PKPdf	PKPdf	05 34 39.2	-1.9
MK32				*e*PP	PP	05 36 02.0	-1.6
MK32				*e*PKKPbc	PKKPab	05 44 58.5	+1.1
MKAR	Makanchi Array	118.89	309	*e*PKPdf	PKPdf	05 34 38.8	-2.3
MKAR				PP	PP	05 36 02.0	-1.6
MKAR				PKKPbc	PKKPab	05 44 58.5	+1.1
MKAR	Makanchi Array	118.89	309	PKP	PKPdf	05 34 39.2	-1.9
	comp=Z,34nm,0.8s,baz=167,slow=1.0,SNR=174						
MKAR				PP	PP	05 36 02.0	-1.6
	comp=Z,8.1nm,0.9s,baz=106,slow=5.1,SNR=5.3						
MKAR				PKKPbc	PKKPab	05 44 58.5	+1.1
	comp=Z,2.2nm,0.8s,baz=302,slow=3.0,SNR=17						
I47A	Gladwin	118.90	55	P	PKPdf	05 34 40.4	-0.8
	baz=246						
BLA	Blacksburg	118.92	63	*e*PKPdf	PKiKP	05 34 41.6	0.0
BLA	Blacksburg	118.92	63	P	PKPdf	05 34 41.2	-0.3
	baz=244,SNR=15						
R54A	Victor	118.92	62	P	PKPdf	05 34 40.6	-0.9
	baz=245,SNR=6.5						
E44A	Grand Marais A	119.02	52	P	PKPdf	05 34 40.7	-0.6
	baz=247						
J48A	Bridge Port	119.09	56	P	PKPdf	05 34 41.0	-0.5
	baz=246,SNR=7.2						
MAKZ	Makanchi	119.09	309	*e*PKPdf	PKPdf	05 34 39.5	-2.0
S55A	Lewisburg	119.10	63	P	PKPdf	05 34 41.1	-0.7
	baz=245						
K49A	Clarkson	119.11	56	P	PKPdf	05 34 41.0	-0.6
	baz=246,SNR=7.1						
X59A	McDuffie Farm,	119.12	67	P	PKPdf	05 34 40.8	-1.1
	baz=244						
FCC	Fort Churchill	119.12	37	*e*PKPdf	PKPdf	05 34 39.4	-1.7
FCC	Fort Churchill	119.12	37	*e*PKIKP	PKPdf	05 34 39.4	-1.7
O52A	Adamsville	119.13	60	*e*PKPdf	PKPdf	05 34 41.2	-0.5
O52A	Adamsville	119.13	60	P	PKPdf	05 34 40.8	-1.0
	baz=245,SNR=14						
GLMI	Grayling	119.15	54	P	PKPdf	05 34 40.7	-0.9
	baz=246						
P53A	Whipple	119.18	61	*e*PKPdf	PKPdf	05 34 41.7	-0.2
P53A	Whipple	119.18	61	P	PKPdf	05 34 41.1	-0.8
	baz=245,SNR=14						
G46A	Petoskey	119.19	53	P	PKPdf	05 34 40.6	-1.0
	baz=246,SNR=5.8						
L50A	Kingsville	119.24	57	P	PKPdf	05 34 41.2	-0.6
	baz=246						
H47A	Mio	119.33	54	P	PKPdf	05 34 40.9	-1.1
	baz=246						
PDGK	Podgornoye	119.34	304	PKIKP	PKPdf	05 34 39.8	-2.4
PDGK				pmax	pmax		
	comp=Z,73nm,1.1s						
Q54A	Coxs Mills	119.37	61	P	PKPdf	05 34 41.7	-0.5
	baz=245,SNR=16						
M51A	Elyria	119.39	58	P	PKPdf	05 34 41.4	-0.8
	baz=246						
E45A	Wooded Hills,	119.39	52	P	PKPdf	05 34 41.3	-0.7
	baz=247						
F46A	Macinaw City C	119.43	53	P	PKPdf	05 34 41.2	-0.9
	baz=247						
I48A	Sherman Twp	119.50	55	P	PKPdf	05 34 41.7	-0.6
	baz=246						
N52A	McGinn’s Farm,	119.52	59	P	PKPdf	05 34 41.7	-0.8
	baz=246,SNR=7.2						
J49A	Marlette	119.55	56	P	PKPdf	05 34 41.5	-0.9
	baz=246						
R55A	Marlinton	119.59	62	P	PKPdf	05 34 42.2	-0.6
	baz=245,SNR=12						
O53A	New Philadelph	119.62	60	P	PKPdf	05 34 42.1	-0.5
	baz=246,SNR=12						
NIL	Nilore	119.78	292	*e*PKPdf	PKPdf	05 34 42.0	-1.3
G47A	Hillman	119.78	54	P	PKPdf	05 34 41.8	-1.0
	baz=247						
TARG	Taragay, Kyrgy	119.85	302	*e*PKPdf	PKPdf	05 34 42.6	-1.0
P54A	Burton	119.87	61	P	PKPdf	05 34 42.6	-0.6
	baz=246,SNR=18						
Q55A	Buckhannon	119.91	62	P	PKPdf	05 34 42.8	-0.5
	baz=246,SNR=12						
CNNC	Cliffs of the	119.94	66	*e*PKPdf	PKiKP	05 34 43.5	0.0
CNNC	Cliffs of the	119.94	66	P	PKPdf	05 34 42.8	-0.6
	baz=244						
H48A	Harrisville	119.95	54	P	PKPdf	05 34 42.6	-0.6
	baz=247						
E46A	Sault Ste Mari	119.95	52	P	PKPdf	05 34 42.1	-1.0
	baz=247,SNR=6.0						
I49A	Point Hope	119.98	55	P	PKPdf	05 34 42.7	-0.5
	baz=247						
M52A	Chesterland	120.04	58	P	PKPdf	05 34 42.8	-0.7
	baz=246,SNR=9.3						
NBCP	Cabaceiras do	120.07	137	*e*P	PKiKP	05 34 46.0	+1.6
ZAA0	Zalesovo Array	120.10	317	*e*PKPdf	PKPdf	05 34 40.8	-2.3
ZALV	Zalesovo Beam	120.10	317	PKP	PKPdf	05 34 40.9	-2.2
	comp=Z,5.0nm,0.4s,baz=175,slow=1.4,SNR=42						
ZALV				PKKPbc	PKKPbc	05 44 52.6	+0.2
	comp=Z,0.5nm,0.5s,baz=264,slow=1.5,SNR=3.9						
ZALV				PKKP	PKKPdf	05 45 25.2	+0.4
	comp=Z,0.9nm,0.6s,baz=294,slow=1.5,SNR=4.4						
ZAA1	Zalesovo Array	120.10	317	*e*PKPdf	PKPdf	05 34 40.9	-2.2
ZAA1				*e*PKKPbc	PKKPbc	05 44 52.6	+0.2
ZAA1				*e*SP	PKKPdf	05 45 25.2	+0.4
N53A	Lisbon	120.11	59	P	PKPdf	05 34 43.2	-0.4
	baz=246,SNR=16						
O54A	Avella	120.18	60	P	PKPdf	05 34 43.3	-0.5
	baz=246,SNR=24						
KSH	Kashi	120.24	299	PKP	PKPdf	05 34 44.0	-0.1
KSH				PP	PP	05 36 21.4	+8.3
KSH				AMB	AMB		
	comp=Z,360nm,5.0s						
P55A	Reedsville	120.30	61	P	PKPdf	05 34 43.2	-0.9
	baz=246,SNR=8.8						
D46A	Sault St. Mari	120.32	52	P	PKPdf	05 34 43.0	-0.8
	baz=248,SNR=5.5						
MCWV	Mont Chateau	120.34	61	*e*PKPdf	PKPdf	05 34 43.3	-0.8
MCWV	Mont Chateau	120.34	61	P	PKPdf	05 34 43.3	-0.8
	baz=246,SNR=9.3						
K51A	Iona Station	120.40	57	P	PKPdf	05 34 43.2	-0.8
	baz=247,SNR=7.1						
M53A	WI Miller and	120.47	59	P	PKPdf	05 34 43.5	-0.8
	baz=247,SNR=7.7						
E47A	Iron Bridge	120.64	53	P	PKPdf	05 34 43.7	-0.8
	baz=248,SNR=5.9						
OBIP	Obispado Ponce	120.71	89	*e*PKPdf	PKPdf	05 34 44.2	-1.2
N54A	Moraine State	120.76	60	*e*PKPdf	PKPdf	05 34 44.6	-0.3
N54A	Moraine State	120.76	60	P	PKPdf	05 34 44.3	-0.6
	baz=247,SNR=15						
BASO	Ashfield	120.79	56	P	PKPdf	05 34 44.0	-0.8
	baz=248						
F48A	Evansville	120.84	53	P	PKPdf	05 34 43.9	-0.9
	baz=248						
O55A	Ligonier	120.94	61	P	PKPdf	05 34 44.9	-0.4
	baz=247,SNR=9.3						
L53A	Girard	120.96	58	P	PKPdf	05 34 44.5	-0.7
	baz=247,SNR=12						
K52A	Tillsonburg	120.96	57	P	PKPdf	05 34 44.6	-0.6
	baz=247						
D47A	Chapleau	120.97	52	P	PKPdf	05 34 44.3	-0.8
	baz=248,SNR=13						
NRN	Naryn	120.98	301	*e*PKPdf	PKPdf	05 34 45.0	-0.7
NRN	Naryn	120.98	301	*e*PKIKP	PKPdf	05 34 45.0	-0.7
BRCO	Bruce Peninsul	121.02	56	P	PKPdf	05 34 44.6	-0.6
	baz=248						
R58B	Mineral	121.07	64	*e*PKPdf	PKPdf	05 34 45.3	-0.2
R58B	Mineral	121.07	64	P	PKPdf	05 34 44.9	-0.6
	baz=246						
SJG	San Juan	121.11	90	*e*PKPdf	PKPdf	05 34 46.1	-0.1
SJG	San Juan	121.11	90	*e*PKIKP	PKPdf	05 34 46.1	-0.1
ULHL	Ulahol	121.12	302	P	PKPdf	05 34 45.4	-0.4
	SNR=7.7						
I51A	Listowel	121.14	56	P	PKPdf	05 34 44.9	-0.6
	baz=248						
F49A	Sandfield	121.19	54	P	PKPdf	05 34 44.7	-0.8
	baz=248						
M54A	Oil Creek Stat	121.20	59	*e*PKPdf	PKPdf	05 34 45.4	-0.3
M54A	Oil Creek Stat	121.20	59	P	PKPdf	05 34 45.1	-0.6
	baz=247,SNR=9.4						
ERPA	Erie	121.20	58	*e*PKPdf	PKPdf	05 34 45.3	-0.4
ERPA	Erie	121.20	58	P	PKPdf	05 34 44.9	-0.8
	baz=247,SNR=5.0						
NVS	Novosibirsk	121.28	318	⇑*i*PKIKP	PKPdf	05 34 43.8	-1.6
NVS				*e*		05 36 23.3	
NVS				pmax	pmax		
	comp=N,19nm,1.5s						
NVS				pmax	pmax		
	comp=E,34nm,1.5s						
NVS				pmax	pmax		
	comp=Z,58nm,1.5s						
J52A	Paris	121.30	57	P	PKPdf	05 34 45.1	-0.7
	baz=248						
TOBO	Tobermory, Bru	121.33	54	P	PKPdf	05 34 45.1	-0.6
	baz=248						
E48A	Lockeyer	121.37	53	P	PKPdf	05 34 44.9	-0.9
	baz=249,SNR=5.9						
LSZ	Lusaka	121.37	215	*e*PKPdf	PKiKP	05 34 47.5	+0.3
LSZ				PKKPab	PKKPbc	05 44 49.1	+1.6
LSZ	Lusaka	121.37	215	PKP	PKPdf	05 34 46.9	-0.1
	comp=Z,27nm,0.8s,baz=148,slow=2.2,SNR=24						
LSZ				PKKPab	PKKPbc	05 44 49.1	+1.6
	comp=Z,8.3nm,0.6s,baz=5.1,slow=3.1,SNR=11						
HUMP	Col San Antoni	121.37	90	*e*PKPdf	PKPdf	05 34 46.7	+0.1
N55A	Marion Center	121.39	60	P	PKPdf	05 34 45.2	-0.9
	baz=247,SNR=11						
CBYP	Canovanas	121.44	90	*e*PKPdf	PKiKP	05 34 47.2	+0.2
O56A	Blue Knob Stat	121.49	61	*e*PKPdf	PKPdf	05 34 46.4	0.0
O56A	Blue Knob Stat	121.49	61	P	PKPdf	05 34 46.1	-0.2
	baz=247,SNR=22						
CBN	Corbin Frederi	121.53	63	*e*PKPdf	PKPdf	05 34 46.4	0.0
CBN	Corbin Frederi	121.53	63	P	PKPdf	05 34 45.8	-0.6
	baz=246						
MTP	Monte Pirata	121.59	90	*e*PKPdf	PKPdf	05 34 47.1	+0.1
TYNO	Tyneside	121.65	57	P	PKPdf	05 34 46.0	-0.5
	baz=248						
ACTO	Acton	121.71	57	P	PKPdf	05 34 46.0	-0.6
	baz=248						
KZA	Kyzart	121.74	301	P	PKPdf	05 34 46.6	-0.7
	SNR=28						
M55A	Ridgway	121.81	59	P	PKPdf	05 34 46.3	-0.6
	baz=248,SNR=16						
TKM2	Tokmak 2	121.81	302	P	PKPdf	05 34 46.2	-0.9
	SNR=13						
TSUM	Tsumeb	121.84	202	*e*PKPdf	PKPdf	05 34 47.6	-0.2
TSUM				PKKPbc	PKKPbc	05 44 44.7	-1.2
TSUM	Tsumeb	121.84	202	PKKPbc	PKKPbc	05 44 44.7	-1.2
	comp=Z,3.2nm,0.9s,baz=154,slow=2.8,SNR=3.7						
D48A	Paudash Townsh	121.84	52	P	PKPdf	05 34 45.7	-1.0
	baz=249,SNR=7.8						
SSPA	Standing Stone	122.11	61	*e*PKPdf	PKPdf	05 34 47.1	-0.3
SSPA	Standing Stone	122.11	61	P	PKPdf	05 34 46.8	-0.7
	baz=248						
I53A	Kortright Cn E	122.11	57	P	PKPdf	05 34 46.8	-0.6
	baz=248						
KBK	Karagaybulak	122.16	302	P	PKPdf	05 34 47.1	-0.6
	SNR=28						
D49A	Beulah Townshi	122.17	52	P	PKPdf	05 34 46.5	-0.8
	baz=250						
STCO	Saint Catharin	122.17	57	P	PKPdf	05 34 46.9	-0.5
	baz=248						
SFK	Sufi-Kurgan	122.18	299	PKIKP	PKPdf	05 34 46.4	-1.5
SFK				pmax	pmax		
	comp=Z,106nm,1.1s						
KLBO	Killbear Provi	122.24	55	P	PKPdf	05 34 46.6	-0.9
	baz=249						
E50A	Wahnapitae	122.27	53	P	PKPdf	05 34 47.0	-0.6
	baz=249,SNR=10						
L55A	Hinsdale	122.30	59	P	PKPdf	05 34 47.3	-0.5
	baz=248,SNR=13						
UCH	Uchtor	122.30	301	P	PKPdf	05 34 47.6	-0.8
	SNR=39						
CHMS	Chumysh	122.42	302	P	PKPdf	05 34 46.8	-1.2
	SNR=35						
FRU1	Bishkek	122.44	302	*e*PKPdf	PKPdf	05 34 47.6	-0.5
AAK	Ala-Archa	122.47	302	P	PKPdf	05 34 47.3	-1.0
	SNR=23						
AAK	Ala-Archa	122.47	302	*e*PKPdf	PKPdf	05 34 47.2	-1.0
AAK	Ala-Archa	122.47	302	*i* PKPdf	PKPdf	05 34 47.3	-1.0
	SNR=27						
AAK	Ala-Archa	122.47	302	*i* PKIKP	PKPdf	05 34 47.0	-1.3
AAK	Ala-Archa	122.47	302	PKPdf	PKPdf	05 34 47.2	-1.0
	SNR=13						
AAK	Ala-Archa	122.47	302	PKP	PKPdf	05 34 47.3	-1.0
	comp=Z,25nm,0.9s,baz=158,slow=2.4,SNR=46						
PKRO	Pickering	122.51	57	P	PKPdf	05 34 47.5	-0.6
	baz=249,SNR=7.1						
KURK	Kurchatov	122.57	312	*e*PKPdf	PKPdf	05 34 46.2	-1.7
KURK				*e*PP	PP	05 36 27.1	-1.3
KURK				PKKPbc	PKKPbc	05 44 44.7	+1.6
KURK				PKKP	PKKPdf	05 45 21.1	+1.2
KURK				SKKPbc	SKKPbc	05 48 15.6	+0.9
KURK	Kurchatov	122.57	312	*e*PKIKP	PKPdf	05 34 46.3	-1.7
KURK				*e*		05 36 27.1	
KURK	Kurchatov	122.57	312	PKPdf	PKPdf	05 34 46.3	-1.7
	SNR=44						
KURBB	Kurchatov Arra	122.59	312	PKP	PKPdf	05 34 46.3	-1.7
	comp=Z,69nm,0.9s,baz=111,slow=2.0,SNR=232						
KURBB				PP	PP	05 36 27.1	-1.5
	comp=Z,3.1nm,0.8s,baz=113,slow=5.1,SNR=4.6						
KURBB				PKKPbc	PKKPbc	05 44 44.7	+1.7
	comp=Z,3.0nm,0.8s,baz=287,slow=4.4,SNR=12						
KURBB				PKKP	PKKPdf	05 45 21.1	+1.2
	comp=Z,1.4nm,0.8s,baz=308,slow=2.8,SNR=5.3						
KURBB				SKKPbc	SKKPbc	05 48 15.6	+1.0
	comp=Z,0.9nm,0.8s,baz=268,slow=4.3,SNR=4.5						
F51A	Arnstein	122.64	54	P	PKPdf	05 34 47.3	-1.0
	baz=250,SNR=5.2						
MEDO	Medina	122.64	58	P	PKPdf	05 34 47.7	-0.7
	baz=249						
USP	Ospenovka	122.69	302	P	PKPdf	05 34 47.4	-1.2
	SNR=24						
DRWO	Darlington Wes	122.71	57	P	PKPdf	05 34 47.8	-0.6
	baz=249						
DRCO	St. Marys Ceme	122.73	57	P	PKPdf	05 34 47.9	-0.6
	baz=249						
SADO	Sadowa	122.75	56	*e*PKPdf	PKPdf	05 34 48.0	-0.5
K55A	Perry	122.75	58	P	PKPdf	05 34 47.9	-0.7
	baz=249						
PAGS	Pennsylvania G	122.78	61	*e*PKPdf	PKPdf	05 34 48.3	-0.4
AML	Almayashu	122.84	301	P	PKPdf	05 34 48.5	-0.8
	SNR=53						
MMNY	Mt. Morris Dam	122.86	58	*e*PKPdf	PKiKP	05 34 48.9	-0.1
WLVO	Wesleyville	122.95	57	P	PKPdf	05 34 48.4	-0.5
	baz=249,SNR=5.2						
MVL	Millersville	122.96	62	*e*PKPdf	PKiKP	05 34 49.2	-0.1
EKS2	Erkin-Say	122.97	302	P	PKPdf	05 34 48.5	-0.8
	SNR=30						
F52A	Sundridge	122.98	54	P	PKPdf	05 34 48.1	-0.8
	baz=250						
ARSB	Arslanbob	123.04	300	*e*PKPdf	PKPdf	05 34 48.7	-0.7
D50A	G1974 Best Tow	123.10	53	P	PKPdf	05 34 48.3	-0.8
	baz=250,SNR=16						
J55A	Hilton	123.11	58	P	PKPdf	05 34 48.2	-1.1
	baz=249						
E51A	G1948 Merrick	123.12	54	P	PKPdf	05 34 48.4	-0.8
	baz=250,SNR=15						
G53A	Haliburton	123.21	55	P	PKPdf	05 34 48.7	-0.7
	baz=250,SNR=11						
KBL	Kabul	123.32	291	*e*PKPdf	PKPdf	05 34 49.4	-0.9
D51A	Lot 18 Range I	123.38	53	P	PKPdf	05 34 48.8	-0.9
	baz=251,SNR=14						
I55A	Frankford	123.54	57	P	PKPdf	05 34 49.1	-1.0
	baz=250						
NRIK	Noril'sk	123.54	335	PKP	PKPdf	05 34 48.2	-1.1
	comp=Z,27nm,0.8s,baz=103,slow=1.5,SNR=30						
NRIK				PP	PP	05 36 31.8	-2.7
	comp=Z,6.0nm,0.8s,baz=109,slow=8.5,SNR=4.3						
E52A	Mattawa	123.58	54	P	PKPdf	05 34 49.4	-0.7
	baz=250,SNR=20						
BANO	Bancroft	123.64	56	P	PKPdf	05 34 49.7	-0.6
	baz=250,SNR=13						
DELO	Deloro Mine	123.68	56	P	PKPdf	05 34 49.5	-0.8
	baz=250,SNR=5.5						
N59A	State Game Lan	123.70	61	*e*PKPdf	PKPdf	05 34 49.9	-0.7
N59A	State Game Lan	123.70	61	P	PKPdf	05 34 50.2	-0.3
	baz=249						
MNAS	Manas	123.79	301	PKIKP	PKPdf	05 34 49.4	-1.4
MNAS				pmax	pmax		
	comp=Z,120nm,1.2s						
RES	Resolute Bay	123.81	19	*e*PKPdf	PKPdf	05 34 48.0	-1.7
ALGO	Algonquin Park	123.87	55	P	PKPdf	05 34 49.7	-0.9
	baz=251,SNR=17						
LUPA	Lehigh Univers	123.87	62	*e*PKPdf	PKPdf	05 34 50.4	-0.4
KSPA	Keystone Colle	123.93	60	*e*PKPdf	PKiKP	05 34 51.3	+0.1
D52A	ZEK Kipawa Sen	123.97	53	P	PKPdf	05 34 50.2	-0.6
	baz=251						
H55A	Tweed	123.99	56	P	PKPdf	05 34 50.2	-0.7
	baz=250,SNR=8.5						
BINY	Binghamton	124.01	60	*e*PKPdf	PKPdf	05 34 50.9	-0.2
BINY	Binghamton	124.01	60	P	PKPdf	05 34 51.0	-0.1
	baz=249						
GAR	Garm	124.09	296	*e*PKPdf	PKPdf	05 34 50.6	-0.9
BTK	Batken	124.12	298	*e*PKPdf	PKiKP	05 34 52.0	+0.2
PLVO	Plevna	124.22	56	*e*PKPdf	PKPdf	05 34 51.2	-0.1
PLVO	Plevna	124.22	56	P	PKPdf	05 34 50.8	-0.6
	baz=251,SNR=7.8						
E53A	Dumoine, Ponti	124.26	54	P	PKPdf	05 34 50.9	-0.5
	baz=251,SNR=15						
PEMO	Pembroke	124.31	55	P	PKPdf	05 34 50.7	-0.8
	baz=251,SNR=19						
D53A	Lac Vacive, Po	124.46	53	P	PKPdf	05 34 51.0	-0.7
	baz=252,SNR=50						
BRNJ	Basking Ridge	124.48	62	*e*PKPdf	PKiKP	05 34 52.2	-0.1
G55A	Calabogie	124.53	56	P	PKPdf	05 34 51.2	-0.7
	baz=251						
ODNJ	Ogdensburg	124.59	61	*e*PKPdf	PKPdf	05 34 51.8	-0.4
E54A	Lac Daplat, Po	124.59	54	P	PKPdf	05 34 51.2	-0.9
	baz=252,SNR=29						
H56A	Elgin	124.62	57	P	PKPdf	05 34 51.6	-0.5
	baz=251						
CHGR	Chuyangaron	124.81	296	*e*PKPdf	PKPdf	05 34 52.0	-0.8
VLDQ	Val d'Or	124.93	52	*e*PKPdf	PKPdf	05 34 51.4	-1.2
CPNY	Central Park	124.94	62	*e*PKPdf	PKPdf	05 34 53.0	+0.2
F55A	Otter Lake	124.96	55	P	PKPdf	05 34 51.8	-0.9
	baz=252						
PAL	Palisades	125.06	62	*e*PKPdf	PKPdf	05 34 52.8	-0.2
PAL	Palisades	125.06	62	P	PKPdf	05 34 52.7	-0.4
	baz=250						
D54A	Lac Fusel, La	125.16	54	P	PKPdf	05 34 52.1	-1.0
	baz=252						
MATQ	Matagami	125.29	50	P	PKPdf	05 34 51.8	-1.4
	baz=253						
KK31	Karatay Array	125.38	301	*e*PKPdf	PKPdf	05 34 52.7	-1.0
KK31	Karatay Array	125.38	301	PKIKP	PKPdf	05 34 51.8	-1.9
KK31				pmax	pmax		
	comp=Z,47nm,0.8s						
KKAR	Karatay Array	125.38	301	*e*PKPdf	PKPdf	05 34 52.8	-0.9
LSQQ	Lebel-sur-Quev	125.51	51	P	PKPdf	05 34 52.7	-1.0
	baz=253						
OTUK	Ortayu	125.72	308	PKIKP	PKPdf	05 34 52.0	-2.2
OTUK				pmax	pmax		
	comp=Z,116nm,1.2s						
LONY	Lake Ozonia	125.77	57	*e*PKPdf	PKPdf	05 34 53.8	-0.5
LONY	Lake Ozonia	125.77	57	P	PKPdf	05 34 53.9	-0.5
	baz=252						
TRY	Troy	125.80	60	*e*PKPdf	PKPdf	05 34 54.3	-0.2
NCB	Newcomb	125.81	58	*e*PKPdf	PKPdf	05 34 54.0	-0.5
YLE	Yale	125.85	61	*e*PKPdf	PKiKP	05 34 54.9	-0.1
ALFO	Alfred	125.87	56	P	PKPdf	05 34 54.0	-0.5
	baz=252						
ACCN	Adirondack Com	126.01	59	*e*PKPdf	PKPdf	05 34 54.5	-0.3
MHTO	MHTO	126.02	271	PKPdf	PKPdf	05 34 54.2	-1.3
	SNR=5.9						
TRQ	Mont Tremblant	126.27	55	*e*PKPdf	PKPdf	05 34 54.7	-0.7
FRNY	Flat Rock	126.51	57	*e*PKPdf	PKPdf	05 34 55.1	-0.6
QUA2	Belchertown	126.58	61	*e*PKPdf	PKPdf	05 34 55.9	-0.1
WSAR	Wadi Sarin	126.58	274	PKPdf	PKPdf	05 34 55.0	-1.6
WSAR	Wadi Sarin	126.58	274	PKP	PKPdf	05 34 56.2	-0.3
	comp=Z,13nm,1.0s,baz=164,slow=7.5,SNR=3.9						
VT1	Waterbury	126.93	58	*e*PKPdf	PKiKP	05 34 56.9	-0.2
BRYW	Bryant College	127.04	61	*e*PKPdf	PKPdf	05 34 57.1	+0.2
HNH	Hanover	127.06	59	*e*PKPdf	PKPdf	05 34 56.9	0.0
HRV	Adam Dziewonsk	127.21	60	*e*PKPdf	PKPdf	05 34 57.4	+0.3
HRV	Adam Dziewonsk	127.21	60	P	PKPdf	05 34 57.1	0.0
	baz=252						
WES	Weston	127.34	61	*e*PKPdf	PKPdf	05 34 57.6	+0.2
CHGQ	Chibougamau	127.37	51	P	PKPdf	05 34 56.1	-1.1
	baz=256						
BCX	Boston College	127.43	61	*e*PKPdf	PKiKP	05 34 57.9	-0.2
FFD	Franklin Falls	127.43	59	*e*PKPdf	PKPdf	05 34 57.7	+0.2
RCBR	Riachuelo	127.45	136	*e*PKPdf	PKiKP	05 35 00.3	+1.2
RCBR	Riachuelo	127.45	136	*e*P	PKiKP	05 35 00.4	+1.2
LBNH	Lisbon	127.47	58	*e*PKPdf	PKPdf	05 34 57.4	-0.2
LBNH	Lisbon	127.47	58	P	PKPdf	05 34 57.9	+0.3
	baz=253						
MOQ	Mont Orford	127.55	57	*e*PKPdf	PKPdf	05 34 57.8	0.0
M65A	Busby, Falmout	127.56	62	P	PKPdf	05 34 58.0	+0.2
	baz=252						
LATQ	La Tuque	127.76	54	P	PKPdf	05 34 57.3	-0.8
	baz=255						
KMBO	Kilima Mbogo	127.93	233	*e*PKPdf	PKiKP	05 35 00.2	-0.2
KMBO	Kilima Mbogo	127.93	233	*i* PKiKP	PKiKP	05 35 00.3	-0.1
	SNR=17						
KMBO	Kilima Mbogo	127.93	233	PKIKP	PKiKP	05 35 00.1	-0.2
KMBO				pmax	pmax		
	comp=Z,18nm,1.1s						
KMBO	Kilima Mbogo	127.93	233	PKP	PKPdf	05 35 00.1	+0.3
	comp=Z,16nm,1.0s,baz=160,slow=0.5,SNR=30						
SHEL	Horse Pasture	127.97	175	*i* PKIKP	PKiKP	05 35 01.8	+1.7
BVAR	Borovoye Array	128.10	313	PKhKP	PKPpre	05 34 47.3	
	comp=Z,2.3nm,0.6s,baz=146,slow=2.9,SNR=8.8						
BVAR				PKP	PKPdf	05 34 57.7	-0.9
	comp=Z,38nm,0.8s,baz=101,slow=3.0,SNR=68						
BRVK	Borovoye	128.17	313	*e*PKPdf	PKPdf	05 34 57.4	-1.2
BRVK	Borovoye	128.17	313	*i* PKIKP	PKPdf	05 34 57.0	-1.6
BRVK	Borovoye	128.17	313	PKPdf	PKPdf	05 34 57.5	-1.2
	SNR=30						
SOHO	SOHO	128.69	274	PKPdf	PKPdf	05 34 58.9	-1.7
	SNR=22						
WVL	Waterville	129.12	58	*e*PKPdf	PKPdf	05 35 00.7	-0.1
ALNE	Al Ain	129.29	273	*i* PKPdf	PKPdf	05 35 01.0	-0.7
	SNR=7.4						
ASHO	Ashiyiah	129.33	274	*i* PKPdf	PKPdf	05 35 00.5	-1.3
	SNR=15						
ASHO	Ashiyiah	129.33	274	PKPdf	PKPdf	05 35 01.4	-0.5
	SNR=14						
UOSS	Minazif	129.34	274	*e*PKPdf	PKPdf	05 35 01.2	-0.6
UOSS	Minazif	129.34	274	*i* PKPdf	PKPdf	05 35 00.4	-1.3
	SNR=6.3						
UOSS	Minazif	129.34	274	PKPdf	PKPdf	05 34 59.8	-2.0
	SNR=8.0						
HATD	Hatta, Dubai	129.34	274	*i* PKPdf	PKPdf	05 35 01.3	-0.5
	SNR=8.4						
MDH	Madha	129.42	275	*i* PKPdf	PKPdf	05 35 01.1	-0.8
	SNR=7.1						
MDH	Madha	129.42	275	PKPdf	PKPdf	05 34 59.4	-2.5
	SNR=6.6						
PKME	Peaks-Kenny Pk	129.55	58	*e*PKPdf	PKiKP	05 35 02.0	-0.3
PKME	Peaks-Kenny Pk	129.55	58	P	PKPdf	05 35 01.6	+0.1
	baz=255						
MSFE	Esma-Masafi	129.56	275	*i* PKPdf	PKPdf	05 35 01.2	-1.0
	SNR=9.1						
NAZ	Nazwa, Dubai	129.79	274	*i* PKPdf	PKPdf	05 35 01.8	-0.8
	SNR=5.6						
ASUD	Al Ashush, Dub	129.90	273	*i* PKPdf	PKPdf	05 35 01.9	-1.0
	SNR=7.9						
TULEG	Thule	130.28	16	*e*PKPdf	PKPdf	05 35 01.4	-0.6
GGN	Saint George	131.20	58	*e*PKPdf	PKiKP	05 35 05.5	-0.1
BATG	Bathurst New B	132.19	56	*e*PKPdf	PKPdf	05 35 06.3	-0.1
MBAR	Mbarara	132.38	227	PKP	PKPdf	05 35 07.7	-0.5
	comp=Z,4.8nm,0.2s,baz=85,slow=2.0,SNR=9.6						
SCHQ	Schefferville	132.74	45	PKPpre	PKPpre	05 34 51.6	
SCHQ				*e*PKPdf	PKiKP	05 35 08.2	-0.3
SCHQ	Schefferville	132.74	45	PKhKP	PKPpre	05 34 51.6	
	comp=Z,1.7nm,0.7s,baz=262,slow=4.2,SNR=5.2						
SCHQ				PKP	PKPdf	05 35 06.3	-1.0
	comp=Z,22nm,0.9s,baz=295,slow=1.1,SNR=22						
LMN	Caledonia Moun	132.76	58	*e*PKPdf	PKPdf	05 35 06.9	-0.7
ATD	Arta Tunnel	132.76	250	PKP	PKPdf	05 35 09.1	+0.4
	comp=Z,10nm,0.7s,baz=33,slow=4.7,SNR=7.8						
GEYT	Alibeck	132.77	291	PKhKP	PKPpre	05 34 53.2	
	comp=Z,3.7nm,0.6s,baz=48,slow=2.2,SNR=4.9						
GEYT				PKP	PKPdf	05 35 07.5	-0.4
	comp=Z,26nm,0.8s,baz=236,slow=1.6,SNR=17						
GYA0B	ALIBECK ARRAY	132.77	291	*e*PKPdf	PKPdf	05 35 07.1	-0.8
HAL	Halifax	133.35	60	*e*PKPdf	PKiKP	05 35 09.6	-0.4
KULLO	Kullorsuaq	133.66	18	*i* P	PKPdf	05 35 08.8	+0.4
	comp=Z,34nm,0.6s						

KULLO	Kullorsuaq	133.66	18	*i* PKIKP	PKPdf	05 35 08.8	+0.4
KULLO				pmax	pmax		
	comp=Z,34nm,0.6s						
AB31	Akbulak array	133.95	307	PKIKP	PKPpre	05 35 05.6	
AB31				pmax	pmax		
	comp=Z,32nm,1.1s						
ABKAR	Akbulak array	133.95	307	*e*PKPdf	PKPdf	05 35 10.1	+0.4
SVE	Sverdlovsk	134.11	317	*e*PKIKP	PKPdf	05 35 08.9	-0.9
SVE				pmax	pmax		
	comp=Z,61nm,1.5s						
GBN	Guysborough	134.94	59	*e*PKPdf	PKPdf	05 35 12.1	+0.4
ARU	Arti	135.26	317	*e*PKPdf	PKPdf	05 35 11.7	-0.2
ARU	Arti	135.26	317	*i* PKIKP	PKPdf	05 35 08.6	-3.3
ARU						05 37 44.8	
ARU				PPP	PPP	05 40 43.7	
ARU				SS	SS	05 55 23.2	-6.8
AKTO	Aktyubinsk	135.32	308	PKhKP	PKPpre	05 35 01.2	
	comp=Z,5.5nm,0.7s,baz=66,slow=1.5,SNR=19						
AKTO				PKP	PKPdf	05 35 11.9	-0.4
	comp=Z,31nm,0.9s,baz=100,slow=5.8,SNR=33						
KBS	Kingsbay	136.81	356	*e*PKPpre	PKPpre	05 35 07.8	
KBS	Kingsbay	136.81	356	*e*pPKPdf	pPKPdf	05 36 08.2	+3.4
SPA0	Spitsbergen Ar	137.23	355	*e*PKPpre	PKPpre	05 35 05.8	
SPA0				*e*PKPdf	PKiKP	05 35 16.3	-0.7
SPA0	Spitsbergen Ar	137.23	355	*e*PKPdf	PKPdf	05 35 15.8	+0.7
SPITS	Spitsbergen Ar	137.23	355	PKhKP	PKPpre	05 35 04.4	
	baz=113,slow=2.2						
SPITS				PKP	PKPdf	05 35 14.0	-1.1
	comp=Z,38nm,0.7s,baz=105,slow=3.4,SNR=8.6						
RAYN	Ar Rayn	137.32	266	*e*PKPdf	PKPdf	05 35 16.4	-0.5
ILULI	Ilulissat	137.61	24	*e*PKPpre	PKPpre	05 35 06.6	
ILULI				*e*PKPdf	PKiKP	05 35 17.3	-0.6
ILULI	Ilulissat	137.61	24	*i* P	PKPdf	05 35 14.8	-1.1
ILULI	Ilulissat	137.61	24	*i* PKIKP	PKPdf	05 35 14.8	-1.1
HOPEN	Hopen	137.83	351	*e*Pdif	Pdif	05 32 27.2	+0.8
DRLN	Deer Lake	138.10	54	*e*PKPpre	PKPpre	05 35 08.5	
SFJD	Kangerlussuaq	138.68	27	*e*PKPpre	PKPpre	05 35 07.8	
SFJD				*e*PKPdf	PKiKP	05 35 19.6	-0.6
SFJD	Kangerlussuaq	138.68	27	*e*PKHKP	PKPpre	05 35 07.8	
SFJD				*e*		05 35 19.6	
SUMG	Summit	139.20	16	*e*PKPpre	PKPpre	05 35 11.7	
SUMG				*e*PKPdf	PKiKP	05 35 22.4	+0.8
SUMG	Summit	139.20	16	*e*PKHKP	PKPpre	05 35 11.7	
KIRV	Kirov	139.96	320	PKhKP	PKPpre	05 35 12.2	
	comp=Z,12nm,0.5s,baz=279,slow=3.0,SNR=7.2						
PRGR	Permogore	141.03	326	*e*PKHKP	PKPpre	05 35 12.8	
PRGR				pmax	pmax		
	comp=Z,57nm,1.1s						
MAK	Makhachkala	141.75	296	*e*P	Pdif	05 32 42.4	-2.1
MAK				*e*		05 38 32.4	
MAK				*e*PPP	PPP	05 41 39.7	
MAK				*e*SS	SS	05 56 44.7	-2.4
MAK				*e*SSS	SSS	06 02 06.0	
MAK				pmax	pmax		
	comp=Z,571nm,1.9s						
IVI	Ivigtut	141.80	34	*e*PKPpre	PKPpre	05 35 18.4	
LVZ	Lovozero	142.21	338	*e*PKPpre	PKPpre	05 35 19.1	
LVZ	Lovozero	142.21	338c	*i*PKIKP	PKPdf	05 35 22.3	-2.1
LVZ				pmax	pmax		
	comp=Z,73nm,2.5s						
APA	Apatity	142.79	338⇑	*i*PKHKP	PKPpre	05 35 19.8	
APA				pmax	pmax		
	comp=Z,26nm,0.9s						
HAMF	Hammerfest	142.92	346	*e*	PKPpre	05 35 21.2	
KEV	Kevo	142.93	344	*e*PKPpre	PKPpre	05 35 21.1	
KEV	Kevo	142.93	344	*e*PKIKP	PKPpre	05 35 21.1	
GROC	Groznyy	143.02	296	*e*PKIKP	PKPpre	05 35 22.0	
GROC				*e*		05 36 14.3	
GROC				*e*		05 42 12.9	
GROC				pmax	pmax		
	comp=Z,305nm,1.1s						
NRS	Narsarsuaq	143.06	34	*e*PKPpre	PKPab	05 35 21.7	-0.1
NRS	Narsarsuaq	143.06	34	*i* P	PKPab	05 35 21.5	-0.4
	comp=Z,93nm,0.8s						
TMCR	Tamitsa	143.16	332	*e*PKHKP	PKPab	05 35 20.7	-1.5
GNI	Garni	143.41	291	*e*PKPpre	PKPab	05 35 24.4	+0.3
GNI	Garni	143.41	291	*i* PKPdf	PKPab	05 35 25.2	+1.0
	SNR=16						
GNI	Garni	143.41	291c	*i*PKIKP	PKPab	05 35 23.9	-0.3
GNI	Garni	143.41	291	PKPdf	PKPab	05 35 24.4	+0.2
	SNR=10						
GNI	Garni	143.41	291	PKP	PKPab	05 35 25.1	+0.9
	comp=Z,66nm,0.8s,baz=114,slow=23,SNR=15						
ARCES	ARCESS Array B	143.44	344	*e*PKPpre	PKPab	05 35 22.2	-0.9
ARCES				*e*PKPdf	PKPbc	05 35 24.6	+0.3
ARCES	ARCESS Array B	143.44	344	*e*PKIKP	PKPab	05 35 22.2	-1.0
ARCES	ARCESS Array B	143.44	344	PKP	PKPab	05 35 23.7	+0.5
	comp=Z,76nm,0.7s,baz=36,slow=1.5,SNR=193						
ARE0	ARCESS Array S	143.44	344	*e*PKPpre	PKPab	05 35 22.9	-0.2
ARE0				*e*PKPdf	PKPbc	05 35 24.8	+0.5
ARE0	ARCESS Array S	143.44	344	*e*	PKPab	05 35 23.5	+0.3
TBLG	Delisi	143.63	293	*e*PKPpre	PKPab	05 35 24.9	+0.1
CUKT	Cukurca	143.73	286	P	PKPab	05 35 24.9	-0.6
TASB	TASBURUN-IGDIR	143.76	290	P	PKPab	05 35 25.5	0.0
CLDR	Caldiran	143.87	289	P	PKPab	05 35 25.9	-0.2
ANGG	Ammassalik, Gr	143.91	24	*e*PKPpre	PKPab	05 35 23.3	-1.7
KLMR	Klimovskoe	144.06	326	*e*PKPdf	PKPab	05 35 22.2	-3.6
KLMR				AMP		05 35 27.4	
	comp=Z,384nm,1.4s						
KLMR				*e*PP	PP	05 38 31.1	-13
KLMR				*e*SKKPab	SKKPab	05 46 54.6	+0.8
SCO	Scoresbysund	144.06	11	*e*PKPdf	PKPab	05 35 25.7	+0.1
SCO	Scoresbysund	144.06	11⇑	*i*P	PKPab	05 35 25.2	-0.4
	comp=Z,101nm,1.4s						
SCO	Scoresbysund	144.06	11⇑	*i*PKIKP	PKPab	05 35 25.2	-0.4
SCO				pmax	pmax		
	comp=Z,100nm,1.4s						
KTK1	Kautokeino	144.34	345	*e*PKPbc	PKPab	05 35 25.4	-1.3
AKDM	Akdamar-Van	144.44	287	P	PKPab	05 35 27.7	-0.5
NCK	Nalchik	144.64	296	*i* PKIKP	PKPab	05 35 26.1	-2.6
AGRB	Hanur-Agry	144.64	289	P	PKPab	05 35 28.6	-0.4
TRO	Tromso	144.66	348	*e*PKPbc	PKPab	05 35 26.1	-1.7
SIRT	Sirnak	144.69	286	P	PKPab	05 35 28.3	-0.8
SIRT	Sirnak	144.69	286	*e*PKPbc	PKPab	05 35 28.5	-0.6
KARS	Kars	144.73	291	P	PKPbc	05 35 28.8	-0.4
KARS	Kars	144.73	291	*e*PKPbc	PKPbc	05 35 29.1	-0.2
KARS	Kars	144.73	291	*e*PKIKP	PKPbc	05 35 29.1	-0.1
MLAZ	Malazgirt-MUS	144.91	288	P	PKPbc	05 35 29.9	0.0
GOF	Gofitskoye	145.11	299⇑	*i*PKIKP	PKPbc	05 35 28.9	-1.2
GOF				pmax	pmax		
	comp=Z,2µm,1.9s						
KBZ	Khabaz	145.16	296	PKPbc	PKPdf	05 35 29.2	-0.9
	comp=Z,81nm,0.9s,baz=116,slow=1.4,SNR=78						
GURO	Guroymak-BITLI	145.21	287	P	PKPdf	05 35 30.5	-0.2
NEY	Neytrino	145.26	296	*i* PKIKP	PKPdf	05 35 30.0	-0.6
SENK	Senkaya-Erzuru	145.27	291	P	PKPdf	05 35 30.6	-0.2
KVAR	Kislovodsk Arr	145.32	297	PKPbc	PKPab	05 35 31.4	+0.1
	comp=Z,39nm,0.9s,baz=276,slow=17,SNR=26						
KIV	Kislovodsk	145.33	297	*e*PKPdf	PKPdf	05 35 30.2	-0.4
KIV	Kislovodsk	145.33	297⇑	*i*P	PKPbc	05 35 30.8	-0.1
KIV	Kislovodsk	145.33	297	*i* PKPbc	PKPdf	05 35 29.9	-0.7
	SNR=32						
KIV	Kislovodsk	145.33	297	*e*PKIKP	PKPdf	05 35 29.3	-1.3
KIV				pmax	pmax		
	comp=Z,191nm,1.0s						
KIV	Kislovodsk	145.33	297	PKPdf	PKPdf	05 35 29.7	-0.9
	SNR=33						
KOPR	Koprukoy-ERZUR	145.57	290	P	PKPdf	05 35 31.2	-0.1
VRH	Novokhopyorsk	145.61	310	*e*PKIKP	PKPdf	05 35 29.6	-1.1
VRH				pmax	pmax		
	comp=Z,2µm,1.7s						
BTMN	Batman	145.68	286	*i* P	PKPbc	05 35 32.3	+0.1
BTMN				IAML_P			
	comp=Z,2µm,0.8s						
SVAN	Silvan-Diyarba	145.78	286	P	PKPdf	05 35 31.7	+0.2
SVAN	Silvan-Diyarba	145.78	286	*i* P	PKPab	05 35 33.1	-0.1
SVAN				IAML_P			
	comp=Z,4µm,0.9s						
BCA	Borcka	145.92	292	P	PKPdf	05 35 31.4	-0.2
MARD	Mardin	145.95	285	*i* P	PKPab	05 35 34.0	0.0
MARD				IAML_P			
	comp=Z,8µm,0.7s						
MAZI	Mazidag	146.24	285	P	PKPdf	05 35 31.7	-0.7
BNGB	Bingl	146.33	288	P	PKPdf	05 35 32.3	-0.2
HANI	Diyarbakir_Han	146.45	287	*i* P	PKPbc	05 35 34.3	-0.2
HANI				IAML_P			
	comp=Z,3µm,0.8s						
CHOM	Cayeli-Rize	146.53	292	P	PKPdf	05 35 33.3	+0.6
DIYA	Diyarbakir	146.58	286	*i* P	PKPab	05 35 35.7	-0.7
DIYA				IAML_P			
	comp=Z,9µm,0.8s						
KOPT	Kop Dagi	146.61	290	*i* P	PKPab	05 35 36.0	-0.6
KOPT				IAML_P			
	comp=Z,2µm,0.8s						
STEI	Steigen	146.79	348	*e*PKPdf	PKPdf	05 35 32.6	+0.4
BAYB	BAYBURT	146.82	290	*i* P	PKPdf	05 35 33.6	+0.1
BAYB				IAML_P			
	comp=Z,7.5nm,0.5s						
LOF	Lofoten	146.88	349	*e*PKPdf	PKPdf	05 35 32.8	+0.4
MOS	Moscow	146.90	319	*e*PKHKP	PKPpre	05 35 28.9	
MOS				*e*		05 38 52.4	
MOS				pmax	pmax		
	comp=Z,1µm,1.5s						
MOS				pmax	pmax		
	comp=Z,1µm,1.7s						
BAYT	Aydıntepe-Bayb	146.93	290	P	PKPab	05 35 36.8	-0.9
LPSR	Galich'ya Gora	147.05	313	*e*PKP2	PKPdf	05 35 33.7	+0.6
LPSR				pmax	pmax		
	comp=Z,580nm,1.1s						
VORR	Voronezh	147.08	311	*e*PKIKP	PKPdf	05 35 32.0	-1.2
VORR				pmax	pmax		
	comp=Z,2µm,1.6s						
ERZN	Erzincan	147.15	289	P	PKPbc	05 35 37.4	+1.0
VSR	Storozhevoye	147.19	310	*e*PKP2	PKPdf	05 35 33.1	-0.3
VSR				pmax	pmax		
	comp=Z,390nm,1.0s						
TNCL	Tunceli-Merkez	147.22	288	*i* P	PKPab	05 35 40.9	+2.0
TNCL				IAML_P			
	comp=Z,2µm,0.9s						
KTUT	Trabzon	147.27	291	P	PKPbc	05 35 35.9	-0.6
SANL	SANLIURFA_Merk	147.33	284	*i* P	PKPbc	05 35 37.5	+0.7
SANL				IAML_P			
	comp=Z,7µm,0.8s						
SOC	Sochi	147.46	296c	*i*PKP2	PKPbc	05 35 35.7	-1.2
SOC				*e*		05 39 01.8	
SOC				pmax	pmax		
	comp=Z,225nm,1.0s						
URFA	Urfa	147.51	285	P	PKPbc	05 35 36.6	-0.8
ELZG	Elazig	147.56	287	*i* P	PKiKP	05 35 38.8	-0.7
ELZG				IAML_P			
	comp=Z,7µm,0.7s						
SURC	SANLIURFA_SURC	147.56	283	*i* P	PKPbc	05 35 37.4	-0.1
SURC				IAML_P			
	comp=Z,2µm,0.8s						
KELT	Kelkit	147.57	290	*i* P	PKiKP	05 35 38.7	-0.9
KELT				IAML_P			
	comp=Z,7µm,0.8s						
OBN	Obninsk	147.67	318	*e*PKPdf	PKPdf	05 35 33.3	-0.7
OBN				*e*PKPbc	PKPbc	05 35 36.9	-0.1
OBN	Obninsk	147.67	318c	*i*PKIKP	PKPdf	05 35 32.7	-1.3
OBN				pmax	pmax		
	comp=Z,838nm,1.6s						
OBN	Obninsk	147.67	318	PKPbc	PKPbc	05 35 35.7	-1.4
	comp=Z,26nm,0.5s,baz=68,slow=2.1,SNR=21						
ASF	Jabal al Asfar	147.75	274	PKPbc	PKPbc	05 35 37.8	-0.4
	comp=Z,77nm,1.1s,baz=189,slow=4.2,SNR=4.8						
REFA	Refahiye_ERZN	147.85	288	*i* P	PKPbc	05 35 39.2	+0.8
REFA				IAML_P			
	comp=Z,9µm,0.8s						
ATAB	Bozova	147.93	284	*i* P	PKiKP	05 35 39.6	-0.5
ATAB				IAML_P			
	comp=Z,9µm,0.8s						
KEMA	Kemaliye	148.05	288	*i* P	PKiKP	05 35 39.6	-0.8
KEMA				IAML_P			
	comp=Z,6µm,0.8s						
AKCD	Akcadag	148.35	286	*i* P	PKiKP	05 35 40.9	-0.2
AKCD				IAML_P			
	comp=Z,5µm,0.8s						
SUSE	Susehri	148.38	290	*i* P	PKiKP	05 35 40.7	-0.5
SUSE				IAML_P			
	comp=Z,6µm,0.8s						
HEKM	Malatya_Hekimh	148.41	287	*i* P	PKiKP	05 35 40.7	-0.6
HEKM				IAML_P			
	comp=Z,3µm,0.8s						
KONS	Konsvik	148.45	348	*e*PKPbc	PKPbc	05 35 37.9	-0.9
EIL	Elat	148.47	269	PKPbc	PKPbc	05 35 39.4	-0.6
	comp=Z,128nm,1.0s,baz=128,slow=0.4,SNR=22						
GZT	Gaziantep	148.48	284	*i* P	PKPbc	05 35 40.5	+0.5
GZT				IAML_P			
	comp=Z,5µm,0.8s						
MOR8	Moi Rana	148.52	347	*e*PKPdf	PKPdf	05 35 36.6	+1.5
PUL	Pulkovo	148.59	329	*e*P	PKPbc	05 35 38.4	-1.0
CUZAR	Zara_SIVAS	148.68	289	*i* P	PKiKP	05 35 41.5	-0.2
GAZ	Gaziantep	148.72	284	P	PKPbc	05 35 39.9	-0.6
DARE	Darende-Malaty	148.73	286	P	PKPbc	05 35 40.2	-0.4
KUZU	Kuzuini	148.76	283	*i* P	PKiKP	05 35 41.9	0.0
KUZU				IAML_P			
	comp=Z,48nm,0.4s						
CUKAN	kangal_SIVAS	148.84	288	*i* P	PKiKP	05 35 41.7	-0.5
CUGUR	Gurin_SVAS	148.92	287	*i* P	PKiKP	05 35 42.0	-0.3
KMRS	Kahramanmaras	149.02	284	P	PKPbc	05 35 40.4	-0.8
RSDY	Resadiye-TOKAT	149.06	290	P	PKPbc	05 35 40.6	-0.6
ANN	Anapa	149.10	298c	*i*PKP2	PKPbc	05 35 38.9	-2.2
ANN				pmax	pmax		
	comp=Z,438nm,1.4s						
SCER	sogukcermik	149.16	289	*i* P	PKiKP	05 35 42.5	-0.2
SCER				IAML_P			
	comp=Z,195nm,0.1s						
BORG	Borgarnes	149.18	16	*e*PKPbc	PKiKP	05 35 41.4	-0.3
BORG	Borgarnes	149.18	16	*i* PKP2	PKiKP	05 35 41.5	-0.3
FIA1	FINESS Array S	149.20	334	*e*PKPdf	PKPdf	05 35 35.2	-1.2
FIA1				*e*PKPbc	PKPbc	05 35 40.3	-0.5
MMAI	Mount Meron Ar	149.20	275	PKPbc	PKPbc	05 35 42.2	+0.3
	comp=Z,113nm,0.7s,baz=74,slow=5.1,SNR=116						
FIA0	FINESS Array S	149.20	334	*e*PKPbc	PKPbc	05 35 39.6	-1.2
FIA0	FINESS Array S	149.20	334	*e*PKP2	PKPbc	05 35 39.6	-1.2
FINES	FINESS Array B	149.20	334	PKPbc	PKPbc	05 35 39.6	-1.2
	comp=Z,132nm,0.8s,baz=48,slow=1.3,SNR=150						
SVSK	Karacayir	149.27	289	P	PKPbc	05 35 41.5	-0.2
TAHT	Tahtakopru-Hat	149.38	282	P	PKPbc	05 35 41.6	-0.5
CUALT	Altinyayla-SIV	149.39	288	*i* P	PKPbc	05 35 42.0	-0.2
ANDN	Andirin	149.47	284	*i* P	PKiKP	05 35 43.2	-0.2
ANDN				IAML_P			
	comp=Z,6µm,1.0s						
ERBA	Erbaa	149.52	290	*i* P	PKPbc	05 35 42.5	+0.1
ERBA				IAML_P			
	comp=Z,2µm,0.7s						
TOKT	Tokat	149.65	290	P	PKPbc	05 35 41.6	-1.1
SAIM	ADANA	149.74	285	*i* P	PKiKP	05 35 43.7	-0.3
SAIM				IAML_P			
	comp=Z,246nm,0.4s						
CUSAR	Sarkisla-SIVAS	149.80	288	*i* P	PKPbc	05 35 43.2	0.0
CEYT	Ceyhan	149.84	283	P	PKPbc	05 35 43.0	-0.2
KOZT	Kozan	149.86	284	P	PKPbc	05 35 42.2	-1.1
YURE	YUREGIR	149.90	282	*e*P	PKPbc	05 35 43.4	0.0
YURE	YUREGIR	149.90	282	*i* P	PKiKP	05 35 44.3	+0.1
LIC	Lamto	150.00	174	*e*PKIKP	PKPdf	05 35 38.7	-0.4
	comp=Z,1µm,1.2s						
BNN	Bunyan	150.04	287	*e*P	PKPbc	05 35 43.8	0.0
KVT	Kavak	150.08	291	P	PKPbc	05 35 43.4	-0.3
KIC	Kosan Boka	150.16	174	*e*PKIKP	PKPdf	05 35 38.8	-0.6
	comp=Z,2µm,1.4s						
GUNE	Kayseri	150.22	287	*i* P	PKiKP	05 35 44.8	-0.1
GUNE				IAML_P			
	comp=Z,5µm,0.9s						
YAHY	KAYSERI_Yahyal	150.32	285	*i* P	PKPbc	05 35 44.5	0.0
YAHY				IAML_P			
	comp=Z,3µm,0.9s						
TIC	Toumodi	150.42	174	*e*PKIKP	PKPdf	05 35 39.3	-0.5
KARA	Karaisali	150.43	283	P	PKPbc	05 35 43.4	-1.2
NSS	Namsos	150.45	348	*e*PKPdf	PKPdf	05 35 38.9	+0.6
DBIC	Dimbokro	150.46	174	*e*PKPdf	PKPdf	05 35 40.0	+0.2
DBIC				*e*PKPbc	PKPbc	05 35 45.5	+0.2
DBIC	Dimbokro	150.46	174	PKP	PKPdf	05 35 40.1	+0.2
	comp=Z,36nm,1.0s,baz=149,slow=2.1,SNR=20						
DBIC				PKPbc	PKiKP	05 35 46.1	+0.2
	comp=Z,171nm,0.8s,baz=147,slow=3.4,SNR=94						
DBIC	Dimbokro	150.46	174	*e*P	PKPdf	05 35 40.6	+0.8
YOZ	Yozgat	150.53	288	*e*P	PKPbc	05 35 44.3	-0.6
SIRC	Yozgat	150.63	287	*i* P	PKPbc	05 35 44.6	-0.6
SIRC				IAML_P			
	comp=Z,4µm,1.0s						
DIKM	Dikmen	150.70	292	*e*P	PKiKP	05 35 45.6	-0.1
SNOP	Sinop	150.75	293	*e*PKPbc	PKPbc	05 35 44.9	-0.3
MERS	Mersin	150.79	282	*e*P	PKPbc	05 35 44.3	-1.2
AVNS	Nevsehir-Avano	150.81	286	*i* P	PKPbc	05 35 45.1	-0.5
AVNS				IAML_P			
	comp=Z,3µm,0.6s						
PHNC	Paralimni	150.81	278	P	PKiKP	05 35 45.9	-0.2
EREN	Erenkoy	150.81	279	*e*P	PKiKP	05 35 46.6	+0.5
VSU	Vasula	150.85	329	*e*P	PKPbc	05 35 43.4	-1.5
VSU				IAmb	IAmb	05 35 44.7	
	comp=Z,650nm,0.9s						
KIZK	Mersin	151.02	281	*e*P	PKPbc	05 35 45.1	-0.9
LFK	Lefkose	151.27	279	*e*P	PKPbc	05 35 46.5	-0.2
SACV	Santiago Islan	151.33	132	*e*PKPdf	PKPdf	05 35 41.4	+0.3
SACV				*e*PKPbc	PKiKP	05 35 48.2	+0.5
IKL	Isikli	151.34	281	*e*P	PKPbc	05 35 45.2	-1.5
KEBE	Keben-Mersin	151.35	281	*e*P	PKPbc	05 35 46.5	-0.4
CSS	Mathiatis	151.36	278	*e*PKPbc	PKPbc	05 35 46.6	-0.3
CSS	Mathiatis	151.36	278	P	PKiKP	05 35 47.1	-0.2
CSS	Mathiatis	151.36	278	P	PKPbc	05 35 45.8	-1.1
AKKU	Akkuyu-Mersin	151.43	281	*e*P	PKPab	05 35 55.4	-0.7
SIM	Simferopol'	151.44	299	*i* PKIKP	PKPbc	05 35 46.1	-0.6
MAMC	Mammari	151.50	278	P	PKiKP	05 35 47.7	+0.2
TEVE	Tevekalti-Mers	151.57	281	*e*P	PKPbc	05 35 46.7	-0.7
YAYX	Yaylak	151.63	286	*e*P	PKPbc	05 35 45.9	-1.6
SZAC	Souni	151.67	277	P	PKiKP	05 35 47.8	-0.1
BERE	Bereket-Mersin	151.72	281	*e*P	PKiKP	05 35 48.5	+0.3
LEF	Lefka	151.75	278	*e*P	PKPbc	05 35 47.1	-0.6
TEKE	Tekeli-Mersin	151.78	280	*e*P	PKPbc	05 35 46.7	-1.0
SERE	Sereflikochisa	151.82	286	*e*P	PKPbc	05 35 46.7	-1.2
BR101	Keskin Array S	151.83	288	*e*PKPdf	PKPdf	05 35 39.7	-1.6
BR101				*e*PKPbc	PKPbc	05 35 46.8	-1.2
BR131	Keskin Array S	151.83	288	*e*PKPdf	PKPdf	05 35 39.5	-1.8
BR131				*e*PKPbc	PKPbc	05 35 46.7	-1.2
BR131	Keskin Array S	151.83	288	PKPdf	PKPdf	05 35 40.2	-1.2
	SNR=21						
BRTR	Keskin Array B	151.83	288	PKP	PKPdf	05 35 39.7	-1.6
	comp=Z,8.0nm,1.1s,baz=112,slow=1.3,SNR=16						
BRTR				PKPbc	PKPbc	05 35 46.8	-1.2
	comp=Z,99nm,0.9s,baz=153,slow=3.3,SNR=238						
ILGA	Ilgaz	151.84	291	*e*PKPdf	PKPdf	05 35 40.1	-1.3
ILGA				*e*PKPbc	PKPbc	05 35 47.5	-0.5
TBLU	Trondheim	151.93	348	*e*PKPbc	PKPbc	05 35 45.8	-1.4
ALFC	Alefka	151.99	278	P	PKPbc	05 35 48.2	-0.1
AFSR	Afar-Bala (An	152.25	287	*e*P	PKPbc	05 35 47.5	-1.3
KULU	Kulu	152.26	286	*e*P	PKPbc	05 35 47.3	-1.6
CHBY	Cihanbeyli	152.31	285	*e*P	PKPbc	05 35 47.9	-1.1
ANTO	Ankara	152.49	288	*e*PKPdf	PKPdf	05 35 40.8	-1.4
ANTO				*e*PKPbc	PKPbc	05 35 49.0	-0.4
ANTO	Ankara	152.49	288⇑	*i*P	PKPdf	05 35 41.8	-0.4
ANTO	Ankara	152.49	288	PKPdf	PKPdf	05 35 40.9	-1.3
	SNR=24						
MICGM	Minsk	152.50	321	*e*PKP1	PKPdf	05 35 38.0	-3.6
MICGM				PKPM		05 35 48.0	
	comp=Z,0.7nm,1.2s						
MICGM				*e*PKP2	PKPab	05 35 58.0	-1.9
MICGM				*e*pPKP1		05 36 52.0	
MICGM				*e*PP	PP	05 39 46.0	+12
MICGM				*e*PPP	PPP	05 42 56.0	
MICGM				*e*SKKS		05 44 54.0	
MICGM				*e*PPS	PPS	05 52 16.0	
MNK	Minsk	152.50	321	*e*PKIKP	PKPdf	05 35 38.0	-3.6
MNK				*e*		05 42 56.0	
MNK				*e*		05 52 16.0	
MNK				pmax	pmax		
	comp=Z,710nm,1.2s						
BR231	Keskin MP Arra	152.50	288	*e*PKPbc	PKPbc	05 35 49.1	-0.3
IZAR	Zarasai	152.65	324	*e*P	PKPbc	05 35 48.1	-0.9
IZAR				IAmb	IAmb	05 35 49.9	
	comp=Z,85nm,1.2s						
KONT	Konya--Tatoy	152.65	284	*e*P	PKiKP	05 35 50.5	+0.6
IDID	Didziasalis	152.65	323	*e*P	PKPbc	05 35 48.2	-0.8
IDID				IAmb	IAmb	05 35 49.8	
	comp=Z,71nm,0.9s						
LADK	Ladik-KONYA	152.68	285	*e*P	PKPbc	05 35 47.5	-2.3
ISAL	Salakas	152.81	324	*e*P	PKPbc	05 35 48.7	-0.6
ISAL				IAmb	IAmb	05 35 50.2	
	comp=Z,44nm,0.9s						
NACGM	Naroch	152.85	322	*e*	PKPbc	05 35 47.0	-2.5
IIGN	Ignalina	152.88	324	*e*P	PKPbc	05 35 48.7	-0.8
IIGN				IAmb	IAmb	05 35 50.4	
	comp=Z,75nm,0.9s						
MOL	Molde	152.98	350	*e*PKPbc	PKPbc	05 35 49.0	-0.5
SLIT	Slitere, Latvi	153.21	331	*e*P	PKPbc	05 35 47.4	-2.8
SLIT				IAmb	IAmb	05 36 01.1	
	comp=Z,326nm,1.0s						
DOMB	Dombas	153.26	348	*e*PKPbc	PKPbc	05 35 50.0	-0.3
AKASG	Malin Array Be	153.38	313	PKP	PKPdf	05 35 41.2	-1.8
	comp=Z,12nm,1.2s,baz=63,slow=1.6,SNR=29						
AKASG				PKPbc	PKPbc	05 35 49.8	-0.9
	comp=Z,59nm,0.8s,baz=59,slow=2.4,SNR=79						
AKASG				PKPab	PKPab	05 36 02.8	-1.0
	comp=Z,46nm,0.8s,baz=55,slow=4.3,SNR=5.7						
AKASG				PP	PP	05 39 35.4	-3.4
	comp=Z,0.6nm,0.6s,baz=48,slow=5.5,SNR=4.5						
AKBB	Malin Array Si	153.38	313	*e*PKPdf	PKPdf	05 35 40.7	-2.3
AKBB				*e*PKPbc	PKPbc	05 35 49.7	-1.1
AKBB				*e*PKPab	PKPab	05 36 02.9	-0.9
AKBB	Malin Array Si	153.38	313	*e*PKIKP	PKPdf	05 35 40.7	-2.3
KIEV	Kiev	153.39	313	*e*PKPdf	PKPdf	05 35 40.7	-2.3
KIEV				*e*PKPbc	PKPbc	05 35 49.9	-0.9
KIEV				*e*PKPab	PKPab	05 36 03.0	-0.8
KIEV	Kiev	153.39	313⇑	*i*P	PKPdf	05 35 41.5	-1.5
KIEV	Kiev	153.39	313	*i* PKPdf	PKPdf	05 35 41.3	-1.7
	SNR=6.8						
AK11	Malin Array Si	153.42	313	*e*PKPdf	PKPdf	05 35 40.6	-2.5
AK11				*e*PKPbc	PKPbc	05 35 50.0	-0.8
AK11				*e*PKPab	PKPab	05 36 03.2	-0.8
AKN	Aaknes	153.43	351	*e*PKPbc	PKPbc	05 35 50.5	-0.1
NC303	NORSAR Array S	153.59	345	*e*PKPdf	PKPdf	05 35 42.1	-0.9
NC303				*e*PKPbc	PKPbc	05 35 50.2	-0.7
NC303				*e*PKPab	PKPab	05 36 03.4	-1.0
NC405	NORSAR Array S	153.62	345	*e*PKPdf	PKPdf	05 35 43.4	+0.3
NC405				*e*PKPbc	PKPbc	05 35 50.4	-0.6
NC405				*e*PKPab	PKPab	05 36 03.5	-1.0
NC204	NORSAR Array S	153.67	346	*e*PKPdf	PKPdf	05 35 42.3	-0.9
NC204				*e*PKPbc	PKPbc	05 35 50.5	-0.7
NC204				*e*PKPab	PKPab	05 36 03.4	-1.4
NB201	NORSAR Array S	153.77	345	*e*PKPdf	PKPdf	05 35 43.7	+0.4
NB201				*e*PKPbc	PKPbc	05 35 50.2	-1.1
NB201				*e*PKPab	PKPab	05 36 03.6	-1.5
NB2	NORSAR Subarra	153.79	345	PKP	PKPbc	05 35 49.6	-1.8
	comp=Z,73nm,1.1s,baz=26,slow=2.2						
NB2	NORSAR Subarra	153.79	345	PKPdf	PKPbc	05 35 49.6	-1.8
	baz=26,slow=2.2						
NB200	NORSAR Array S	153.79	345	*e*PKPdf	PKPdf	05 35 42.1	-1.3
NB200				*e*PKPbc	PKPbc	05 35 49.8	-1.7
NB200				*e*PP	PP	05 39 36.7	-3.8
NOA	NORSAR Array B	153.79	345	PKP	PKPdf	05 35 42.1	-1.3
	comp=Z,10nm,1.1s,baz=27,slow=1.7,SNR=13						
NOA				PKPbc	PKPbc	05 35 49.8	-1.7
	comp=Z,22nm,0.9s,baz=31,slow=2.1,SNR=30						
NOA				PP	PP	05 39 36.7	-3.8
	comp=Z,7.3nm,1.1s,baz=34,slow=5.4,SNR=3.0						
NBO00	NORSAR Array S	153.89	346	*e*PKPdf	PKPdf	05 35 42.3	-1.2
NBO00				*e*PKPbc	PKPbc	05 35 51.0	-0.6
NC602	NORSAR Array S	154.00	345	*e*PKPdf	PKPdf	05 35 42.5	-1.1
NC602				*e*PKPbc	PKPbc	05 35 50.7	-1.1
NC602	NORSAR Array S	154.00	345	*e*PKPdf	PKPdf	05 35 43.3	-0.3
NAO01	NORSAR Array S	154.04	346	*e*PKPdf	PKPdf	05 35 42.9	-0.8
NAO01				*e*PKPab	PKPab	05 36 04.7	-1.5
HFS	Hagfors	154.04	342	PKP	PKPdf	05 35 41.9	-1.8
	comp=Z,5.2nm,0.9s,baz=299,slow=3.1,SNR=6.8						
HFS				PKPbc	PKPbc	05 35 50.6	-1.3
	comp=Z,16nm,0.7s,baz=349,slow=3.0,SNR=24						
HFS				PKPab	PKPab	05 36 04.7	-1.5
	comp=Z,29nm,0.6s,baz=72,slow=4.8,SNR=20						
ISP	Isparta	154.08	283	*e*PKPbc	PKPbc	05 35 51.6	-1.3
ISP				*e*PKPab	PKPab	05 36 06.8	-0.6
FOO	Floro	154.23	352	*e*PKPbc	PKPbc	05 35 51.5	-0.7
PBUR	Paburg	154.42	328	*e*P	PKPbc	05 35 51.7	-1.2
PBUR				IAmb	IAmb	05 36 07.8	
	comp=Z,164nm,0.7s						
HYA	Hoyanger	154.51	351	*e*PKPdf	PKPdf	05 35 44.2	0.0
KIS	Kishinev	154.75	305	*e*PKP	PKPdf	05 35 40.0	-5.1
KIS	Kishinev	154.75	305	*e*PKIKP	PKPdf	05 35 40.0	-5.1
KIS				*e*		05 36 21.0	
KIS				*e*		05 36 38.0	
FETY	Fethiye	155.06	280	P	PKPdf	05 35 43.0	-2.9
FETY	Fethiye	155.06	280	P	PKPdf	05 35 43.0	-2.9
SUW	Suwalki	155.09	323	*e*PKPdf	PKPdf	05 35 44.2	-1.1
SUW				*e*PKPbc	PKPbc	05 35 53.9	
SUW				*e*PKPab	PKPab	05 36 10.4	-0.6
SUW	Suwalki	155.09	323	*e*PKPdf	PKPdf	05 35 43.8	-1.6
SUW				*e*PKPbc	PKPbc	05 35 53.8	
SUW				*e*PKPab	PKPab	05 36 10.3	-0.6
SUW	Suwalki	155.09	323	*e*PKIKP	PKPdf	05 35 44.2	-1.1
LEOM	Leova	155.25	304⇑	*i*P	PKPdf	05 35 43.6	-2.2
LEOM	Leova	155.25	304	PKIKP	PKPdf	05 35 43.5	-2.2
ASK	Askoy	155.30	351	*e*PKPdf	PKPdf	05 35 44.9	-0.4
BER	Bergen	155.38	351	*e*PKPab	PKPab	05 36 12.7	+0.8
KONO	Kongsberg	155.40	346	*e*PKPdf	PKPdf	05 35 44.6	-0.9
KONO				*e*PKPbc	PKPbc	05 35 54.2	
KONO				*e*PKPab	PKPab	05 36 10.8	-1.3
KONO	Kongsberg	155.40	346	*e*PKIKP	PKPdf	05 35 44.6	-0.9
KONO	Kongsberg	155.40	346	*e*	PKPdf	05 35 50.3	+4.8
TIRR	Tirgusor	155.54	299	*e*PKPdf	PKPdf	05 35 45.5	-0.7

TIRR				ePKPab	PKPab	05 36 13.1	-0.1
KULA	Kula-Manisa	155.60	285	P	PKPdf	05 35 43.5	-3.1
KULA	Kula-Manisa	155.60	285	P	PKPdf	05 35 43.5	-3.1
CFR	Carcaliu	155.60	301	⇑iP	PKPdf	05 35 45.3	-1.0
CFR	Carcaliu	155.60	301	PKIKP	PKPdf	05 35 45.3	-1.0
MANT	Manisa	155.68	285	ePKPdf	PKPdf	05 35 45.8	-1.1
MANT				ePKPab	PKPab	05 36 14.7	+0.3
TLB	Topalu	155.78	299	⇑iP	PKPdf	05 35 45.0	-1.5
TLB	Topalu	155.78	299	PKIKP	PKPdf	05 35 45.0	-1.5
PETR	Petresti	156.12	302	⇑iP	PKPdf	05 35 47.3	+0.4
BLS5	Blasjo	156.16	349	ePKPdf	PKPdf	05 35 46.7	+0.1
TESR	Tescani	156.31	305	⇑iP	PKPdf	05 35 47.6	+0.4
PRAR	RASCA	156.35	307	⇓iP	PKPdf	05 35 45.9	-1.3
KARP	Karpathos	156.42	277	ePKPab	PKPab	05 36 17.7	+0.3
VRI	Vrincioaia	156.43	303	⇑iP	PKPdf	05 35 43.0	-4.4
PRD	Provadia	156.44	296	P	PKPdf	05 35 44.8	-2.6
PGOR	Pogoanele	156.46	301	⇑iP	PKPdf	05 35 47.0	-0.4
PLOR	Plostina	156.48	303	⇑iP	PKPdf	05 35 46.4	-1.1
PLOR	Plostina	156.48	303	PKIKP	PKPdf	05 35 46.3	-1.2
BIZ	Bicaz	156.56	306	⇓iP	PKPdf	05 35 46.9	-0.6
TOA0	Torodi Ar. Sit	156.78	189	ePKPdf	PKPdf	05 35 48.9	+0.2
TOA0				ePKPab	PKPab	05 36 19.7	+0.6
TOA0	Torodi Ar. Sit	156.78	189	PKPdf	PKPdf	05 35 48.6	-0.1
	SNR=22						
TORD	Torodi Ar. Bea	156.78	189	PKP	PKPdf	05 35 48.0	-0.8
	comp=Z,51nm,1.0s,baz=201,slow=0.7,SNR=117						
TORD				PKPbc	PKPbc	05 35 59.4	
	comp=Z,12nm,0.5s,baz=177,slow=3.4,SNR=36						
TORD				PKPab	PKPab	05 36 19.3	+0.2
	comp=Z,94nm,0.9s,baz=181,slow=1.7,SNR=24						
TORD				PP	PP	05 40 00.4	+3.6
	comp=Z,4.9nm,0.9s,baz=178,slow=5.5,SNR=3.9						
TOA1	Torodi Ar. Sit	156.78	189	ePKPdf	PKPdf	05 35 48.0	-0.8
TOA1				ePKPdif	PKPbc	05 35 59.4	
TOA1				ePKPab	PKPab	05 36 19.3	+0.2
TOA1				ePP	PP	05 40 00.4	+3.6
LVV	L'vov	156.79	314	ePKIKP	PKPdf	05 35 46.6	-1.1
BURAR	Bucovina Array	156.92	308	⇑iP	PKPdf	05 35 47.7	-0.4
BURAR	Bucovina Array	156.92	308	PKIKP	PKPdf	05 35 47.7	-0.4
BUR08	Bucovina Ar. S	156.92	308	ePKPdf	PKPdf	05 35 47.8	-0.3
BUR08				ePKPab	PKPab	05 36 20.0	+0.7
BUR04	Bucovina Ar. S	156.92	308	ePKPdf	PKPdf	05 35 47.7	-0.4
BUR04				ePKPab	PKPab	05 36 19.3	+0.1
OZUR		157.00	304	⇓iP	PKPdf	05 35 48.1	-0.1
MLR	Muntele Rosu	157.05	302	ePKPdf	PKPdf	05 35 49.2	+0.9
MLR				ePKPab	PKPab	05 36 20.5	+0.6
MLR	Muntele Rosu	157.05	302	⇑iP	PKPdf	05 35 47.2	-1.2
MLR	Muntele Rosu	157.05	302	PKP	PKPdf	05 35 46.8	-1.6
	comp=Z,17nm,1.2s,baz=230,slow=2.7,SNR=12						
MLR				PKPab	PKPab	05 36 18.7	-1.2
	comp=Z,21nm,0.8s,baz=120,slow=2.1,SNR=8.8						
SECR		157.07	301	⇑iP	PKPdf	05 35 46.2	-2.0
SNART	Snartemo	157.07	348	ePKPab	PKPab	05 36 18.9	-0.4
JMB	Yambol	157.12	295	P	PKPdf	05 35 45.8	-2.6
DOPR	Dopca	157.30	304	⇑iP	PKPdf	05 35 47.2	-1.3
EZN	Ezine	157.47	288	P	PKPdf	05 35 46.4	-2.5
EZN	Ezine	157.47	288	P	PKPdf	05 35 46.4	-2.5
SZH	Strazhica	157.49	297	P	PKPdf	05 35 46.2	-2.6
BEL	Belsk	157.53	321	ePKPbc	PKPbc	05 35 59.6	
BEL				ePKPab	PKPab	05 36 21.9	+0.3
BEL	Belsk	157.53	321	ePKP2	PKPab	05 36 21.9	+0.3
KWP	Kalwaria Pacla	157.64	314	ePKPdf	PKPdf	05 35 47.5	-1.3
KWP				ePKPab	PKPab	05 36 22.6	+0.5
KWP	Kalwaria Pacla	157.64	314	ePKPdf	PKPdf	05 35 46.3	-2.5
KWP				ePKPab	PKPab	05 36 22.5	+0.3
KWP	Kalwaria Pacla	157.64	314	ePKIKP	PKPdf	05 35 47.5	-1.3
ALN	Alexandroupoli	157.65	291	ePKPab	PKPab	05 36 22.5	0.0
VOIR		157.67	303	PKIKP	PKPdf	05 35 48.2	-0.9
BSD	Bornholm Skovb	157.84	334	⇑iP	PKPab	05 36 20.7	-2.1
	comp=Z,132nm,1.1s						
BSD	Bornholm Skovb	157.84	334	⇑iPKP2	PKPab	05 36 20.7	-2.1
BSD				pmax	pmax		
	comp=Z,130nm,1.1s						
SANT	Santorini	157.92	279	ePKPab	PKPab	05 36 23.3	-0.5
ARR	Arges	157.97	303	⇓iP	PKPdf	05 35 48.0	-1.4
KDZ	Kurdzhali	158.07	293	P	PKPdf	05 35 51.0	+1.4
IDI	Anoyia	158.20	275	ePKPdf	PKPdf	05 35 49.2	-0.8
IDI				ePKPab	PKPab	05 36 25.8	+0.6
IDI	Anoyia	158.20	275	⇑iP	PKPdf	05 35 49.0	-1.0
IDI	Anoyia	158.20	275	PKP	PKPdf	05 35 49.3	-0.8
	comp=Z,20nm,0.8s,baz=162,slow=3.0,SNR=5.7						
IDI				PKPab	PKPab	05 36 24.8	-0.4
	comp=Z,32nm,0.7s,baz=87,slow=4.9,SNR=11						
COP	Copenhagen	158.20	338	⇑iP	PKPab	05 36 22.9	-1.4
	comp=Z,181nm,1.4s						
COP	Copenhagen	158.20	338	⇑iPKP2	PKPab	05 36 22.9	-1.4
COP				pmax	pmax		
	comp=Z,180nm,1.4s						
CJR	Cluj-Napoca	158.26	307	⇑iP	PKPdf	05 35 47.9	-1.8
CJR	Cluj-Napoca	158.26	307	PKIKP	PKPdf	05 35 47.9	-1.8
GKP	Gorka Klasztor	158.29	328	ePKPdf	PKPdf	05 35 48.5	-0.9
GKP				ePKPbc	PKPbc	05 36 01.4	
GKP				ePKPab	PKPab	05 36 24.3	-0.5
GKP	Gorka Klasztor	158.29	328	ePKIKP	PKPdf	05 35 48.5	-0.9
UZH	Uzhgorod	158.33	312	ePKIKP	PKPdf	05 35 47.0	-2.6
UZH				i		05 36 23.0	
TRPA	Tarpa	158.40	311	⇓iP	PKPdf	05 35 48.3	-1.4
TRPA	Tarpa	158.40	311	ePKPdf	PKPdf	05 35 48.0	-1.7
TRPA				ePKPab	PKPab	05 36 24.1	-1.4
MUD	Monsted U'grnd	158.41	343	⇓iP	PKPab	05 36 24.0	-1.2
MUD	Monsted U'grnd	158.41	343	⇓iPKP2	PKPab	05 36 24.0	-1.2
RZN	Rozhen	158.59	293	P	PKPdf	05 35 48.2	-2.2
KAC	Achnashellach	158.61	5	eP	PKPab	05 36 24.9	-1.1
MCD	Coleburn Disti	158.63	2	eP	PKPab	05 36 24.4	-1.6
MDO	Dochfour	158.72	4	eP	PKPab	05 36 24.8	-1.7
KPL	Plockton	158.74	6	eP	PKPab	05 36 24.6	-1.9
SERI	Serifos	158.78	280	P	PKPdf	05 35 47.4	-3.2
DRGR		158.80	307	⇑iP	PKPdf	05 35 49.4	-1.0
DRGR		158.80	307	PKIKP	PKPdf	05 35 49.3	-1.1
SKY	Skiros Island	158.83	285	P	PKPdf	05 35 48.1	-2.5
SKY	Skiros Island	158.83	285	P	PKPdf	05 35 48.1	-2.5
RGN	Rugen	158.85	335	ePKPab	PKPab	05 36 26.6	-0.5
RGN	Rugen	158.85	335	eP	PKPab	05 36 25.7	-1.4
RGN				IAmb	IAmb	05 36 28.2	
	comp=Z,390nm,1.5s						
PGB	Panagyurishte	158.88	295	P	PKPdf	05 35 45.4	-5.2
OJC	Ojcow	158.96	318	ePKPdf	PKPdf	05 35 49.2	-1.2
OJC				ePKPbc	PKPbc	05 36 02.8	
OJC				ePKPab	PKPab	05 36 27.5	-0.3
OJC	Ojcow	158.96	318	ePKPdf	PKPdf	05 35 49.0	-1.3
OJC				ePKPab	PKPab	05 36 27.5	-0.3
OJC	Ojcow	158.96	318	ePKIKP	PKPdf	05 35 49.2	-1.2
IMMV	Iera Moni Meta	158.96	276	P	PKPdf	05 35 48.9	-1.9
DEV	Deva	158.99	305	⇑iP	PKPdf	05 35 49.6	-0.9
DEV	Deva	158.99	305	PKIKP	PKPdf	05 35 49.6	-0.9
LTVH	Ltavrtes, Hu	159.09	310	ePKPdf	PKPdf	05 35 49.0	-1.5
LTVH				ePKPab	PKPab	05 36 30.0	+1.5
NIE	Niedzica	159.11	316	ePKPdf	PKPdf	05 35 49.6	-1.0
NIE				ePKPab	PKPab	05 36 29.3	+0.7
NIE	Niedzica	159.11	316	ePKIKP	PKPdf	05 35 49.6	-1.0
GZR	Gura Zlata	159.22	304	⇓iP	PKPdf	05 35 49.2	-1.7
GZR	Gura Zlata	159.22	304	PKIKP	PKPdf	05 35 49.1	-1.8
NVR	Nevrokopi	159.26	292	P	PKPdf	05 35 47.8	-3.3
NVR	Nevrokopi	159.26	292	P	PKPdf	05 35 47.8	-3.3
MMB	Musomiste	159.34	293	P	PKPdf	05 35 47.9	-3.2
ATHU	Athens Univers	159.40	283	P	PKPdf	05 35 48.2	-3.1
ATHU	Athens Univers	159.40	283	P	PKPdf	05 35 48.2	-3.1
VTS	Vitosha	159.55	296	ePKPdf	PKPdf	05 35 50.2	-1.2
VTS				ePKPab	PKPab	05 36 31.2	+0.3
VTS	Vitosha	159.55	296	⇓iP	PKPdf	05 35 50.3	-1.2
VTS	Vitosha	159.55	296	P	PKPdf	05 35 49.5	-2.0
HERR	Herculane	159.62	303	⇑iP	PKPdf	05 35 50.5	-0.8
EDU	Dundee	159.67	2	eP	PKPab	05 36 28.7	-1.9
SIRR	Siria	159.67	307	⇑iP	PKPdf	05 35 50.6	-0.7
LANS	Liptovska Anna	159.72	316	ePKIKP	PKPdf	05 35 50.7	-0.6
LANS				e		05 36 31.4	
LANS	Liptovska Anna	159.72	316	ePKP	PKPdf	05 35 50.7	-0.6
LANS				e		05 36 31.4	
INVG	Invergeldie, C	159.75	3	eP	PKPab	05 36 29.7	-1.3
LAWE	Loch Awe, Argy	159.84	6	eP	PKPab	05 36 29.5	-1.8
KRND	KRANIDI	159.87	281	P	PKPdf	05 35 48.4	-3.4
NEO	Neokhori	159.87	286	P	PKPdf	05 35 49.2	-2.6
NEO	Neokhori	159.87	286	P	PKPdf	05 35 49.2	-2.6
XOR	Xorichti	159.89	287	P	PKPdf	05 35 49.5	-2.3
XOR	Xorichti	159.89	287	P	PKPdf	05 35 49.5	-2.3
HORT	Hortiatis	159.90	290	P	PKPdf	05 35 48.7	-3.2
HORT	Hortiatis	159.90	290	P	PKPdf	05 35 48.7	-3.2
BZS	Buzias	159.92	305	⇑iP	PKPdf	05 35 50.3	-1.3
BZS	Buzias	159.92	305	PKIKP	PKPdf	05 35 50.3	-1.3
KNT	Kendrikon	160.00	292	P	PKPdf	05 35 48.4	-3.5
KNT	Kendrikon	160.00	292	P	PKPdf	05 35 48.4	-3.5
KNT	Kendrikon	160.00	292	PKIKP	PKPdf	05 35 48.4	-3.5
THE	Thessaloniki	160.00	290	P	PKPdf	05 35 51.5	-0.3
THE	Thessaloniki	160.00	290	P	PKPdf	05 35 51.5	-0.3
ATAL	Atalanti	160.03	285	P	PKPdf	05 35 48.7	-3.3
ATAL	Atalanti	160.03	285	P	PKPdf	05 35 48.7	-3.3
LKR	Lokris	160.04	284	P	PKPdf	05 35 47.1	-4.9
LKR	Lokris	160.04	284	P	PKPdf	05 35 47.1	-4.9
LOUT	Loutraki	160.04	283	P	PKPdf	05 35 48.9	-3.1
OKC	Ostrava-Krasne	160.06	319	ePKPAB	PKPab	05 36 33.1	+0.5
OKC	Ostrava-Krasne	160.06	319	ePKP2	PKPab	05 36 33.1	+0.5
PSZ	Piszkesteto	160.08	313	ePKPdf	PKPdf	05 35 49.9	-1.9
PSZ				ePKPab	PKPab	05 36 33.1	+0.2
PSZ	Piszkesteto	160.08	313	⇓iP	PKPdf	05 35 50.7	-1.1
PSZ	Piszkesteto	160.08	313	ePKPdf	PKPdf	05 35 49.0	-2.8
PSZ				ePKPab	PKPab	05 36 32.0	-0.9
MDVR	Moldovita	160.12	303	⇑iP	PKPdf	05 35 51.0	-0.9
VAY	Valandovo	160.23	292	i PKP	PKPab	05 36 32.5	-1.2
RUE	Ruedersdorf	160.31	330	eP	PKPab	05 36 32.7	-0.8
RUE				IAmb	IAmb	05 36 34.0	
	comp=Z,66nm,0.9s						
AXAR	Agios Charalam	160.31	285	P	PKPdf	05 35 51.5	-0.8
AXAR	Agios Charalam	160.31	285	P	PKPdf	05 35 51.5	-0.8
PGBU	Glenifferbraes	160.34	4	eP	PKPab	05 36 34.2	+0.7
KSP	Ksiaz	160.37	324	ePKPdf	PKPdf	05 35 50.5	-1.5
KSP				ePKPab	PKPab	05 36 34.0	+0.1
KSP	Ksiaz	160.37	324	ePKIKP	PKPdf	05 35 50.5	-1.5
GRG	Griva	160.40	291	P	PKPdf	05 35 48.9	-3.4
GRG	Griva	160.40	291	P	PKPdf	05 35 48.9	-3.4
GRG	Griva	160.40	291	PKIKP	PKPdf	05 35 48.9	-3.4
LIT	Litokhoron	160.40	289	ePKPdf	PKPdf	05 35 50.4	-1.9
LIT				ePKPab	PKPab	05 36 34.0	-0.6
DSF	Desfina	160.41	284	P	PKPdf	05 35 49.2	-3.3
DSF	Desfina	160.41	284	P	PKPdf	05 35 49.2	-3.3
MORC	Moravsky Berou	160.41	320	ePKPdf	PKPdf	05 35 50.1	-2.0
MORC				ePKPab	PKPab	05 36 34.2	0.0
MORC	Moravsky Berou	160.41	320	⇑iP	PKPdf	05 35 51.6	-0.5
MORC	Moravsky Berou	160.41	320	PKIKP	PKPdf	05 35 51.6	-0.5
MORC	Moravsky Berou	160.41	320	ePKP	PKPdf	05 35 50.6	-1.5
MORC				e		05 36 33.5	
VYHS	Vyhne	160.42	315	ePKP2	PKPab	05 36 34.4	+0.1
VYHS	Vyhne	160.42	315	ePKP	PKPab	05 36 34.4	+0.1
STIP	Stip	160.47	294	i PKP	PKPab	05 36 32.5	-2.3
GUR	Goura	160.54	282	P	PKPdf	05 35 50.0	-2.7
GUR	Goura	160.54	282	P	PKPdf	05 35 50.0	-2.7
AGG	Agios Georgios	160.56	286	ePKPdf	PKPdf	05 35 50.7	-1.9
AGG				ePKPab	PKPab	05 36 34.5	-0.8
AGG	Agios Georgios	160.56	286	P	PKPdf	05 35 49.4	-3.2
TRIP	Tripoli	160.57	281	P	PKPdf	05 35 51.6	-1.1
KOLL	Kolacno	160.62	316	ePKP2	PKPab	05 36 35.4	+0.3
KOLL	Kolacno	160.62	316	ePKP	PKPab	05 36 35.4	+0.3
KRLC	Kraliky	160.62	321	ePKPDF	PKPdf	05 35 52.3	0.0
KRLC				ePKPAB	PKPab	05 36 35.3	+0.2
KRLC	Kraliky	160.62	321	ePKIKP	PKPdf	05 35 52.3	0.0
KRLC				e		05 36 35.3	
TRAZ	Trapeza	160.65	283	P	PKPdf	05 35 51.1	-1.6
DPC	Dobruska-Polom	160.68	323	ePKPAB	PKPab	05 36 35.5	+0.1
DPC	Dobruska-Polom	160.68	323	ePKP2	PKPab	05 36 35.5	+0.1
KLV	Kalavryta, Ach	160.69	283	P	PKPdf	05 35 51.0	-1.8
KLV	Kalavryta, Ach	160.69	283	P	PKPdf	05 35 51.0	-1.8
UPC	Upice	160.72	323	ePKPAB	PKPab	05 36 35.3	-0.2
UPC	Upice	160.72	323	ePKP2	PKPab	05 36 35.3	-0.2
TRIZ	Trizonia	160.76	284	P	PKPdf	05 35 51.3	-1.4
IDGL	Inch Island, C	160.78	10	i P	PKPab	05 36 33.7	-1.8
SERG	Sergoula	160.78	284	P	PKPdf	05 35 51.3	-1.5
THL	Klokotos Trika	160.80	287	P	PKPdf	05 35 50.2	-2.5
BUD	Budapest	160.81	312	ePKPdf	PKPdf	05 35 50.0	-2.5
BUD				ePKPab	PKPab	05 36 36.0	+0.1
ITM	Ithomi	160.82	280	ePKPab	PKPab	05 36 36.8	+0.4
LAKA	Lakka	160.84	283	P	PKPdf	05 35 51.2	-1.7
LAKA	Lakka	160.84	283	P	PKPdf	05 35 51.2	-1.7
EKA	Eskdalemuir Ar	160.88	2	PKIKP	PKPdf	05 35 51.0	-1.3
EKA						05 36 34.5	
EKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
EKA				pmax	pmax		
	comp=Z,21nm,0.7s						
EKA	Eskdalemuir Ar	160.88	2	PKP	PKPdf	05 35 51.0	-1.3
	comp=Z,1.4nm,0.5s,baz=291,slow=1.0,SNR=8.4						
EKA				PKPab	PKPab	05 36 34.5	-1.4
	comp=Z,21nm,0.7s,baz=356,slow=2.7,SNR=42						
ANX	Ano Chora	160.89	284	P	PKPdf	05 35 50.2	-2.8
EFP	Efpalio	160.90	284	P	PKPdf	05 35 51.0	-1.9
ESK	Eskdalemuir	160.90	2	eP	PKPab	05 36 34.2	-1.8
CLGH	Cloghs, Cushen	160.94	7	eP	PKPab	05 36 34.9	-1.3
KZN	Kozani	160.94	289	P	PKPdf	05 35 49.5	-3.5
KZN	Kozani	160.94	289	P	PKPdf	05 35 49.5	-3.5
KZN	Kozani	160.94	289	PKIKP	PKPdf	05 35 49.5	-3.5
EVR	Evrytania	160.97	285	P	PKPdf	05 35 51.8	-1.3
EVR	Evrytania	160.97	285	P	PKPdf	05 35 51.8	-1.3
SRO	Srobarova	161.06	314	ePKIKP	PKPdf	05 35 51.4	-1.4
SRO	Srobarova	161.06	314	ePKP	PKPdf	05 35 51.4	-1.4
SRO				e		05 36 37.4	
VRAC	Vranov	161.19	320	⇑iP	PKPdf	05 35 52.5	-0.4
VRAC	Vranov	161.19	320	ePKP	PKPdf	05 35 51.1	-1.8
VRAC				e		05 36 36.9	
VRAC	Vranov	161.19	320	PKP	PKPdf	05 35 51.4	-1.5
	comp=Z,12nm,1.2s,baz=352,slow=0.7,SNR=29						
VRAC				PKPab	PKPab	05 36 37.0	-0.6
	comp=Z,38nm,0.9s,baz=54,slow=4.0,SNR=32						
VRAC				PP	PP	05 40 18.8	-2.7
	comp=Z,2.0nm,0.7s,baz=43,slow=4.3,SNR=4.7						
PVO	Paravola	161.20	284	P	PKPdf	05 35 51.5	-1.7
SMOL	Smolenice	161.20	317	ePKP2	PKPab	05 36 38.2	+0.5
SMOL	Smolenice	161.20	317	ePKP	PKPab	05 36 38.4	+0.7
BIA	Bitola	161.20	292	i PKP	PKPab	05 36 36.8	-1.2
KRUS	Krusevo	161.21	293	i PKP	PKPab	05 36 36.6	-1.5
RLS	Riolos of Patr	161.23	283	P	PKPdf	05 35 51.9	-1.4
RLS	Riolos of Patr	161.23	283	P	PKPdf	05 35 51.9	-1.4
GAL1	Galloway	161.27	5	eP	PKPab	05 36 35.5	-2.1
KPRO	Kipourio	161.28	288	P	PKPdf	05 35 50.7	-2.7
FRGS	Fruska Gora	161.28	305	⇑iP	PKPdf	05 35 51.1	-2.0
FRGS	Fruska Gora	161.28	305	⇑iP	PKPab	05 36 37.6	-0.6
MODS	Modra-Piesok	161.36	317	ePKIKP	PKPdf	05 35 51.8	-1.3
MODS	Modra-Piesok	161.36	317	ePKP	PKPdf	05 35 51.8	-1.3
MODS				e		05 36 38.5	
PVCC	Panska Ves	161.39	325	ePKPDF	PKPdf	05 35 52.8	-0.2
PVCC				ePKPAB	PKPab	05 36 38.2	-0.2
PVCC	Panska Ves	161.39	325	ePKIKP	PKPdf	05 35 52.8	-0.2
PVCC				e		05 36 38.2	
EDMD	Edmundbyers	161.40	360	eP	PKPab	05 36 36.6	-1.6
BRG	Berggiesshubel	161.43	327	i PKP	PKPdf	05 35 51.5	-1.5
	comp=Z,89nm,1.6s						
BRG	Berggiesshubel	161.43	327	i PKP	PKPab	05 36 37.6	-0.9
	comp=Z,71nm,1.2s						
BRG				i pPKP	pPKPdf	05 36 46.3	+2.2
	comp=Z,16nm,1.2s						
BRG				ePP	PP	05 40 19.6	-2.9
	comp=Z,15nm,1.5s						
BRG	Berggiesshubel	161.43	327	i PKIKP	PKPdf	05 35 51.5	-1.5
BRG				i		05 36 46.3	
BRG				e		05 40 19.6	
BRG				pmax	pmax		
	comp=Z,89nm,1.7s						
BRG				pmax	pmax		
	comp=Z,17nm,1.2s						
PENT	Pentalofos	161.43	289	P	PKPdf	05 35 51.3	-2.3
KRUC	Moravsky	161.44	319	ePKP	PKPdf	05 35 51.4	-1.7
KRUC				e		05 36 37.7	
NEST	Nestorio	161.48	290	P	PKPdf	05 35 51.8	-1.8
DIVS	Divibare	161.50	302	ePKPdf	PKPdf	05 35 51.2	-2.3
DIVS				ePKPab	PKPab	05 36 39.6	+0.3
DIVS	Divibare	161.50	302	⇑iP	PKPdf	05 35 51.5	-2.0
DIVS	Divibare	161.50	302	⇑iP	PKPab	05 36 38.2	-1.1
CLL	Collm	161.51	329	ePKPdf	PKPdf	05 35 51.8	-1.3
CLL				ePKPab	PKPab	05 36 38.1	-0.8
CLL	Collm	161.51	329	⇑iPKPdf	PKPdf	05 35 51.2	-1.9
	comp=Z,145nm,2.2s						
CLL				⇓iPKPab	PKPab	05 36 38.0	-0.8
	comp=Z,99nm,1.2s						
CLL				i (PP)		05 40 17.7	
	comp=Z,75nm,1.9s						
CLL				i		05 40 23.7	
	comp=Z,63nm,1.8s						
CLL				esSSS		06 07 59.0	
CLL	Collm	161.51	329	⇑iPKIKP	PKPdf	05 35 51.2	-1.9
CLL				pmax	pmax		
	comp=Z,145nm,2.2s						
ZST	Bratislava	161.55	316	ePKIKP	PKPdf	05 35 50.7	-2.6
ZST	Bratislava	161.55	316	ePKP	PKPdf	05 35 50.7	-2.6
ZST				e		05 36 38.0	
OHR	Ohrid	161.58	292	i PKP	PKPab	05 36 38.0	-1.8
MORH	Mrgy, Hungar	161.61	309	⇑iP	PKPdf	05 35 51.2	-2.2
MORH	Mrgy, Hungar	161.61	309	⇑iP	PKPab	05 36 37.2	-2.3
MORH	Mrgy, Hungar	161.61	309	⇑ePKPdf	PKPdf	05 35 51.0	-2.3
MORH				ePKPab	PKPab	05 36 39.0	-0.5
KESW	Keswick, Cumbr	161.63	2	eP	PKPab	05 36 37.7	-1.6
JAN	Janina	161.69	288	P	PKPdf	05 35 52.5	-1.3
JAN	Janina	161.69	288	P	PKPdf	05 35 52.5	-1.3
GOPC	GO Pecny, Ondr	161.71	324	ePKPAB	PKPab	05 36 39.7	-0.2
GOPC	GO Pecny, Ondr	161.71	324	ePKP2	PKPab	05 36 39.7	-0.2
PHP	Peshkopia	161.76	294	P	PKPdf	05 35 51.6	-2.2
PHP	Peshkopia	161.76	294	P	PKPdf	05 35 51.6	-2.2
PHP	Peshkopia	161.76	294	PKIKP	PKPdf	05 35 51.6	-2.2
TIH	Tihany	161.76	312	ePKPdf	PKPdf	05 35 50.1	-3.4
TIH				ePKPab	PKPab	05 36 40.0	-0.2
TREC	Trest	161.76	321	ePKPAB	PKPab	05 36 40.3	+0.2
TREC	Trest	161.76	321	ePKP2	PKPab	05 36 40.3	+0.2
PRU	Pruhonice	161.77	324	ePKPAB	PKPab	05 36 39.7	-0.4
PRU	Pruhonice	161.77	324	ePKP2	PKPab	05 36 39.7	-0.4
BBLS	Lazići	161.98	302	⇑iP	PKPdf	05 35 52.3	-1.7
BBLS	Lazići	161.98	302	⇑iP	PKPab	05 36 40.7	-0.7
IGLA	Glengowla, Co	162.05	14	i P	PKPab	05 36 38.7	-2.4
IGT	Igoumenitsa	162.10	287	P	PKPdf	05 35 52.0	-2.1
IGT	Igoumenitsa	162.10	287	P	PKPdf	05 35 52.0	-2.1
IGT	Igoumenitsa	162.10	287	PKIKP	PKPdf	05 35 52.0	-2.1
SOP	Sopron	162.14	316	ePKPdf	PKPdf	05 35 51.1	-2.8
SOP				ePKPab	PKPab	05 36 40.1	-1.7
HAPS	Han Pijesak,Bl	162.22	303	eP	PKPab	05 36 42.0	-0.5
TIR	Tirane	162.24	293	P	PKPdf	05 35 52.6	-1.6
TIR				ePKPab	PKPab	05 36 42.2	-0.3
TIR	Tirane	162.24	293	P	PKPdf	05 35 52.6	-1.6
HPK	Haverah Park	162.28	359	eP	PKPab	05 36 39.7	-2.3
SRN	Sarande	162.33	289	P	PKPdf	05 35 52.3	-2.0
SRN	Sarande	162.33	289	P	PKPdf	05 35 52.3	-2.0
CONA	Conrad Observa	162.39	317	i PKPdf	PKPdf	05 35 52.4	-1.9
	comp=Z,34nm,1.5s,SNR=13						
CONA				i PKPab	PKPab	05 36 43.0	-0.1
	comp=Z,86nm,0.9s,SNR=20						
PDG	Podgorica	162.47	297	⇑iP	PKPdf	05 35 51.7	-2.7
PDG	Podgorica	162.47	297	⇓iP	PKPab	05 36 42.7	-0.8
TTG	Podgorica	162.47	297	ePKPab	PKPab	05 36 43.5	+0.1
NKC	Novy Kostel	162.55	328	ePKPAB	PKPab	05 36 43.4	-0.1
NKC	Novy Kostel	162.55	328	ePKP2	PKPab	05 36 43.4	-0.1
DRME	Dracevica, Mon	162.58	296	⇑iP	PKPdf	05 35 51.6	-2.9
DRME	Dracevica, Mon	162.58	296	⇓iP	PKPab	05 36 43.3	-0.7
BEHE	Becsehely	162.64	312	⇑ePKPdf	PKPdf	05 35 52.0	-2.4
BEHE				ePKPab	PKPab	05 36 44.0	-0.1
BEHE	Becsehely	162.64	312	⇑iP	PKPdf	05 35 52.9	-1.5
BEHE	Becsehely	162.64	312	⇑iP	PKPab	05 36 43.8	-0.3
DSB	Dublin	162.71	9	i P	PKPab	05 36 42.1	-1.9
DSB	Dublin	162.71	9	ePKPab	PKPab	05 36 42.4	-1.7
KHC	Kasperske Hory	162.82	323	ePKPdf	PKPdf	05 35 52.5	-2.0
KHC				ePKPab	PKPab	05 36 44.5	-0.2
KHC	Kasperske Hory	162.82	323	ePKPDF	PKPdf	05 35 53.1	-1.5
KHC				ePKPAB	PKPab	05 36 44.7	-0.1
KHC				ePP	PP	05 40 24.0	-6.0
KHC				ex	x	05 43 20.0	
KHC	Kasperske Hory	162.82	323	ePKIKP	PKPdf	05 35 53.1	-1.5
KHC				e		05 36 44.7	
KHC				e		05 40 24.0	
LBWR	Ladybower, Pea	162.83	360	eP	PKPab	05 36 42.0	-2.6
GEC2	GERESS Array S	162.95	323	ePKPdf	PKPdf	05 35 53.4	-1.4
GEC2				ePKPab	PKPab	05 36 45.0	-0.4
GEC2	GERESS Array S	162.95	323	ePKIKP	PKPdf	05 35 53.4	-1.4
GEC2				e		05 36 45.0	
GERES	GERESS Array B	162.95	323	PKP	PKPdf	05 35 53.2	-1.6
	comp=Z,4.3nm,1.0s,baz=48,slow=2.0,SNR=23						
GERES				PKPab	PKPab	05 36 44.8	-0.6
	comp=Z,28nm,0.8s,baz=39,slow=5.1,SNR=66						
GEA0	GERESS Array S	162.96	322	ePKPdf	PKPdf	05 35 52.7	-2.1
GEA0				ePKPab	PKPab	05 36 44.8	-0.6
ARSA	Arzberg	162.97	316	i PKPdf	PKPdf	05 35 52.8	-2.0
	comp=Z,36nm,1.6s,SNR=14						
ARSA				i PKPab	PKPab	05 36 45.0	-0.5
	comp=Z,58nm,0.8s,SNR=18						
KOGS	Kog	162.97	312	i PKPdf	PKPdf	05 35 52.5	-2.2
KOGS				i PKPab	PKPab	05 36 44.8	-0.7
HCY	Herceg Novi	163.01	298	eP	PKPab	05 36 44.6	-1.3
WTSB	Winterswijk	163.08	341	ePKPdf	PKPdf	05 35 52.7	-2.0
WTSB				ePKPab	pPKPdf	05 36 43.7	-1.9
WTSB				ePP	PP	05 40 26.0	-4.9
STNC	Stoke	163.14	0	eP	PKPab	05 36 44.1	-1.8
BLY	Banja Luka	163.16	306	ePKPdf	PKPdf	05 35 54.2	-0.7
BLY				ePKPab	PKPab	05 36 47.2	+0.8
BLY	Banja Luka	163.16	306	⇑iP	PKPdf	05 35 54.3	-0.7
BLY	Banja Luka	163.16	306	⇑iP	PKPdf	05 35 53.3	-1.7
BLY	Banja Luka	163.16	306	⇑iP	PKPab	05 36 45.7	-0.7
VAL	Valentia	163.23	18	i P	PKPab	05 36 45.2	-1.1
MOA	Molln	163.30	319	i PKPdf	PKPdf	05 35 52.6	-2.5
	comp=Z,26nm,1.5s,SNR=15						
MOA				i PKPab	pPKPdf	05 36 46.4	+0.2
	comp=Z,60nm,1.8s,SNR=13						
FOEL	Foel Wylfa	163.32	3	eP	PKPab	05 36 45.6	-1.1
WACR	West Acre	163.41	354	eP	PKPab	05 36 45.2	-1.9
ZAG	Zagreb	163.44	311	eP	PKPdf	05 35 53.9	-1.3
ZAG	Zagreb	163.44	311	eP	PKPab	05 36 48.3	+0.7
GRA1	Grafenberg Arr	163.48	329	ePKPab	PKPab	05 36 47.1	-0.5
GRFO	Grafenberg	163.48	329	ePKPab	PKPab	05 36 47.2	-0.4
SOKA	Soboth	163.56	315	i PKPdf	PKPdf	05 35 53.2	-2.2
	comp=Z,45nm,1.3s,SNR=16						
SOKA				i PKPab	PKPab	05 36 47.7	-0.5
	comp=Z,80nm,1.3s,SNR=15						
CRES	Cresnjev	163.76	312	⇑iP	PKPdf	05 35 53.5	-2.0
CRES	Cresnjev	163.76	312	⇑iP	PKPab	05 36 48.8	-0.2
OBKA	Obir	163.93	315	ePKPdf	PKPdf	05 35 53.5	-2.3
	comp=Z,15nm,1.3s						
OBKA				epPKPdf	PKPab	05 36 48.8	-1.1
	comp=Z,29nm,0.9s						
RSBS	Rosebush, Pemb	164.16	6	eP	PKPab	05 36 48.1	-2.3
LJU	Ljubljana	164.20	313	i PKPdf	PKPdf	05 35 54.2	-1.8
LJU				i PKPab	PKPab	05 36 50.2	-0.7
LJU				ePP	PP	05 40 38.2	+0.7
LJU	Ljubljana	164.20	313	⇑iP	PKPdf	05 35 54.0	-1.9
LJU	Ljubljana	164.20	313	⇑iP	PKPab	05 36 50.1	-0.8
MCH1	Michaelchurch	164.22	2	eP	PKPab	05 36 49.0	-1.7
KBA	Koelnbreinsper	164.27	318	i PKPdf	PKPdf	05 35 53.7	-2.5
	comp=Z,23nm,1.5s,SNR=6.7						
KBA				ePKPab	PKPab	05 36 50.3	-1.1
	comp=Z,15nm,0.7s						
KBA	Koelnbreinsper	164.27	318	PKIKP	PKPdf	05 35 54.2	-2.0
MYKA	Terra Mystica	164.38	316	ePKPdf	PKPdf	05 35 53.8	-2.4
	comp=Z,26nm,1.9s						
MYKA				epPKPdf	PKPab	05 36 49.9	-1.9
	comp=Z,13nm,0.8s						
MONM	Monmouth	164.39	2	eP	PKPab	05 36 50.1	-1.3
HGN	Heimansgroeve	164.40	341	ePKPdf	PKPdf	05 35 53.8	-2.1
HGN				ePKPab	PKPab	05 36 50.1	-1.4
HGN				ePP	PP	05 40 32.1	-5.7
CEY	Cerknica	164.42	313	eP	PKPdf	05 35 53.2	-3.0
CEY	Cerknica	164.42	313	⇑iP	PKPab	05 36 51.0	-1.0
BEBN	Eben Emael	164.44	342	⇑PKP	PKPab	05 36 49.5	-2.1
BEBN				⇑PP	PP	05 40 32.0	-6.0
STRD	Stroud	164.46	0	eP	PKPab	05 36 50.3	-1.4
MEM	Membach	164.52	341	⇓PKP	PKPab	05 36 50.8	-1.3
MEM				⇑PP	PP	05 40 34.2	-4.3
CADS	Cadrg	164.56	315	i PKPdf	PKPdf	05 35 54.0	-2.2
CADS				i PKPab	PKPab	05 36 51.0	-1.6
UCC	Uccle	164.75	345	ePKPdf	PKPdf	05 35 55.3	-0.9
UCC				ePKPab	PKPab	05 36 50.9	-2.1
UCC	Uccle	164.75	345	⇑PKP	PKPab	05 36 50.5	-2.5
UCC				⇑PP	PP	05 40 35.6	-3.9
BCLA	Clavier	164.88	342	⇑PKP	PKPab	05 36 51.9	-1.8
BCLA				⇑PP	PP	05 40 37.5	-2.8
TIP	Timpagrande	164.89	287	ePKPdf	PKPdf	05 35 56.0	-0.8
TIP				ePKPab	PKPab	05 36 54.5	+0.2
TIP	Timpagrande	164.89	287	⇑iP	PKPdf	05 35 56.0	-0.8
TIP	Timpagrande	164.89	287	P	PKPdf	05 35 55.0	-1.8
ABTA	Abfaltersbach	164.92	319	ePKPdf	PKPdf	05 35 54.1	-2.6
	comp=Z,19nm,1.6s						
ABTA				ePKPab	PKPab	05 36 52.4	-1.8
	comp=Z,19nm,0.9s,SNR=6.3						
STU	Stuttgart	165.03	330	ePKPdf	PKPdf	05 35 54.9	-1.6
STU				ePKPab	PKPab	05 36 53.2	-1.2
STU	Stuttgart	165.03	330	ePKIKP	PKPdf	05 35 54.9	-1.6
STU				e		05 36 53.2	
WTTA	Wattenberg	165.04	322	i PKPdf	PKPdf	05 35 54.9	-2.0
	comp=Z,28nm,1.7s,SNR=8.2						
WTTA				ePKPab	PKPab	05 36 53.8	-1.0
	comp=Z,23nm,1.5s						
TAM	Tamanrasset	165.11	208	ePKPdf	PKPdf	05 35 56.6	-1.0
MOTA	Moosalm	165.25	323	i PKPdf	PKPdf	05 35 54.7	-2.3
	comp=Z,12nm,0.9s,SNR=7.9						

MOTA				*i* PKPab	PKPab	05 36 54.9	-0.8
	comp=Z,6.8nm,0.7s						
SQTA	Sankt Quirin	165.28	322	*e*PKPdf	PKPdf	05 35 54.9	-2.1
	comp=Z,15nm,1.1s,SNR=7.4						
SQTA				*e*PKPab	PKPab	05 36 54.0	-1.8
	comp=Z,15nm,0.8s,SNR=5.8						
RETA	Reutte	165.31	324	*e*PKPdf	PKPdf	05 35 54.8	-2.2
	comp=Z,12nm,1.3s						
RETA				*i* PKPab	PKPab	05 36 54.6	-1.3
	comp=Z,71nm,1.7s,SNR=14						
WLF	Walferdange	165.33	339	*e*PKPdf	PKPdf	05 35 56.4	-0.4
WLF				*e*PKPab	PKPab	05 36 55.1	-0.6
DOU	Dourbes	165.35	343	⇑PKP	PKPab	05 36 53.8	-1.9
CEL	Celeste	165.62	283	*e*PKPab	PKPab	05 36 58.5	+0.9
FETA	Feichten	165.66	323	*e*PKPdf	PKPdf	05 35 55.5	-1.9
	comp=Z,24nm,1.2s,SNR=15						
FETA				*e*PKPab	PKPab	05 36 56.0	-1.5
	comp=Z,33nm,1.0s,SNR=8.3						
BFO	Black Forest	165.73	331	*e*PKPdf	PKPdf	05 35 55.9	-1.3
BFO				*e*PKPab	PKPab	05 36 56.7	-0.9
DAVA	Damuels	165.87	325	*e*PKPdf	PKPdf	05 35 55.4	-2.1
	comp=Z,16nm,1.1s,SNR=6.8						
DAVA				*e*PKPab	PKPab	05 36 57.3	-1.1
	comp=Z,85nm,1.1s,SNR=19						
FUORN	Ofenpass-Fuorn	166.16	322	*e*PKPdf	PKPdf	05 35 56.1	-1.8
FUORN				*e*PKPab	PKPab	05 36 59.8	0.0
DAVOX	Davos/Dischmat	166.24	324	PKPab	PKPab	05 36 59.7	-0.4
	comp=Z,32nm,0.7s,baz=34,slow=3.5,SNR=26						
DAVOX				PP	PP	05 40 47.5	-0.5
	comp=Z,1.5nm,0.7s,baz=44,slow=9.1,SNR=4.4						
ECH	Echery	166.26	333	*e*PKPdf	PKPdf	05 35 55.7	-1.9
ECH				*e*PKPab	PKPab	05 36 58.6	-1.3
ECH	Echery	166.26	333	*e*PKIKP	PKPdf	05 35 55.7	-1.9
AQU	L'Aquila	166.62	302	*e*PKPdf	PKPdf	05 35 58.3	+0.2
AQU				*e*PKPab	PKPab	05 37 01.8	0.0
AQU	L'Aquila	166.62	302	*e*PKIKP	PKPdf	05 35 58.3	+0.2
AQU	L'Aquila	166.62	302	*e*P	PKPab	05 37 02.0	+0.1
TUE	Stuetta	166.72	324	*e*PKPdf	PKPdf	05 35 56.7	-1.5
TUE				*e*PKPab	PKPab	05 37 01.5	-0.7
VAE	Valguarnera	166.82	280	PKP	PKPdf	05 35 58.0	-0.4
	comp=Z,3.7nm,0.4s,baz=65,slow=3.4,SNR=3.5						
VAE				PKPab	PKPab	05 37 03.4	+0.5
	comp=Z,8.9nm,0.6s,baz=122,slow=8.6,SNR=5.1						
PMOZ	Porto Moniz, M	166.99	101	⇑*e*PKPdf	PKPdf	05 36 00.3	+1.5
PMAR	Madeira	167.18	102	*e*PKPdf	PKPdf	05 36 00.9	+1.9
VLC	Villacollemand	167.69	314	*e*PKPdf	PKPdf	05 35 57.4	-1.4
SENIN	Lac Senin/Sane	167.72	328	*e*PKPdf	PKPdf	05 35 57.2	-1.8
SENIN				*e*PKPab	PKPab	05 37 06.0	-0.7
PMPS	Porto Santo	167.75	101	*e*PKPdf	PKPdf	05 36 00.7	+1.6
CLTB	Caltabellotta	167.77	281	*e*PKPdf	PKPdf	05 35 58.0	-1.2
CLTB				*e*PKPab	PKPab	05 37 07.4	+0.2
CLF	Chambon-Foret	167.81	346	*e*PKPdf	PKPdf	05 35 58.6	-0.1
CLF				*e*PKPab	PKPab	05 37 05.7	-1.0
BNI	Bardonecchia	169.02	326	*e*PKPdf	PKPdf	05 35 59.2	-0.6
BNI				*e*PKPab	PKPab	05 37 11.5	-0.8
SSB	Saint Sauveur	169.71	333	*e*PKPdf	PKPdf	05 35 59.1	-1.0
SSB				*e*PKPab	PKPab	05 37 14.7	-0.5
SSB	Saint Sauveur	169.71	333	*e*PKIKP	PKPdf	05 35 59.1	-1.0
KEST	Kesra	170.81	270	*e*PKPdf	PKPdf	05 36 01.2	+0.1
KEST				*e*PKPab	PKPab	05 37 21.5	+0.8
KEST				PP	PP	05 41 11.4	-0.8
KEST	Kesra	170.81	270	PKP	PKPdf	05 36 00.7	-0.4
	comp=Z,13nm,1.1s,baz=51,slow=1.3,SNR=4.9						
KEST				PKPab	PKPab	05 37 21.4	+0.7
	comp=Z,59nm,1.0s,baz=242,slow=1.2,SNR=21						
KEST				PP	PP	05 41 11.4	-0.8
	comp=Z,21nm,1.3s,baz=35,slow=3.0,SNR=4.1						
PGAV	Gavieira, Arco	172.47	39	⇑*e*PKPdf	PKPdf	05 36 01.8	+0.1
PGAV	Gavieira, Arco	172.47	39	*e*PP	PP	05 41 18.8	-0.5
PCAB	Cabril	172.78	39	⇑*e*PKPdf	PKPdf	05 36 02.2	+0.5
PCAB	Cabril	172.78	39	*e*PKPab	PKPab	05 37 28.5	-0.5
PCAB	Cabril	172.78	39	*e*PP	PP	05 41 19.9	-0.8
PTO	Porto	172.87	45	⇑*e*PKPdf	PKPdf	05 36 02.2	+0.5
PTO	Porto	172.87	45	*e*PKPab	PKPab	05 37 29.0	-0.4
POLO	Lamas de Olo	173.15	40	⇑*e*PKPdf	PKPdf	05 36 02.5	+0.5
POLO	Lamas de Olo	173.15	40	*e*PKPab	PKPab	05 37 30.6	-0.1
POLO	Lamas de Olo	173.15	40	*e*PP	PP	05 41 21.7	-0.9
PVRL	Vila Real	173.26	40	⇑*e*PKPdf	PKPdf	05 36 02.4	+0.5
PVRL	Vila Real	173.26	40	*e*PKPab	PKPab	05 37 31.0	-0.2
PVRL	Vila Real	173.26	40	*e*PP	PP	05 41 22.9	-0.2
PBRG	Braganca	173.31	32	⇑*e*PKPdf	PKPdf	05 36 01.8	-0.2
PBRG	Braganca	173.31	32	*e*PKPab	PKPab	05 37 31.2	-0.2
PVIS	Viseu	173.55	44	⇑*e*PKPdf	PKPdf	05 36 02.5	+0.4
PVIS	Viseu	173.55	44	*e*PKPab	PKPab	05 37 31.9	-0.6
PVIS	Viseu	173.55	44	*e*PP	PP	05 41 24.9	+0.2
PMAFR	Mafra	173.59	63	⇑*e*PKPdf	PKPdf	05 36 02.6	+0.5
PMAFR	Mafra	173.59	63	*e*PKPab	PKPab	05 37 33.4	+0.6
PMAFR	Mafra	173.59	63	*e*PP	PP	05 41 29.8	+4.5
PCAS	Casmilo, Conde	173.60	51	⇑*e*PKPdf	PKPdf	05 36 02.6	+0.5
PCAS	Casmilo, Conde	173.60	51	*e*PKPab	PKPab	05 37 32.6	-0.1
PCAS	Casmilo, Conde	173.60	51	*e*PP	PP	05 41 26.1	+1.0
MVO	Moncorvo	173.69	37	⇑*e*PKPdf	PKPdf	05 36 02.4	+0.3
MVO	Moncorvo	173.69	37	*e*PKPab	PKPab	05 37 32.9	-0.2
MVO	Moncorvo	173.69	37	*e*PP	PP	05 41 24.2	-0.9
PMST	Lisbon--Monsan	173.75	64	⇑*e*PKPdf	PKPdf	05 36 03.0	+0.9
PMST	Lisbon--Monsan	173.75	64	*e*PKPab	PKPab	05 37 34.3	+0.8
LIS	Lisbon	173.78	64	*e*PKPdf	PKPdf	05 36 02.1	-0.1
PTOM	Tomar	173.89	55	*e*PKPdf	PKPdf	05 36 02.6	+0.4
PTOM	Tomar	173.89	55	*e*PKPab	PKPab	05 37 33.8	-0.3
PTOM	Tomar	173.89	55	*e*PP	PP	05 41 28.1	+1.5
MTE	Manteigas	173.96	45	*e*PKPdf	PKPdf	05 36 02.7	+0.4
MTE	Manteigas	173.96	45	*e*PKPab	PKPab	05 37 34.0	-0.4
MTE	Manteigas	173.96	45	*e*PP	PP	05 41 26.6	-0.1
MTE	Manteigas	173.96	45	*e*PKPdf	PKPdf	05 36 02.3	+0.1
MTE				*e*PKPab	PKPab	05 37 33.5	-0.9
PMTG	Montargil	174.29	58	⇑*e*PKPdf	PKPdf	05 36 02.3	0.0
PMTG	Montargil	174.29	58	*e*PKPab	PKPab	05 37 35.9	+0.1
PMTG	Montargil	174.29	58	*e*PP	PP	05 41 29.5	+0.9
PCBR	Castelo Branco	174.36	49	⇑*e*PKPdf	PKPdf	05 36 02.8	+0.5
PCBR	Castelo Branco	174.36	49	*e*PKPab	PKPab	05 37 35.4	-0.7
PCBR	Castelo Branco	174.36	49	*e*PP	PP	05 41 27.5	-1.1
PFVI	Vila Bisbo	174.42	79	⇑*e*PKPdf	PKPdf	05 36 03.5	+1.1
PFVI	Vila Bisbo	174.42	79	*e*PP	PP	05 41 30.7	+1.1
PFVI	Vila Bisbo	174.42	79	*e*PKPdf	PKPdf	05 36 03.2	+0.8
PTEO	Sao Teotonio	174.43	74	⇑*e*PKPdf	PKPdf	05 36 03.1	+0.7
PTEO	Sao Teotonio	174.43	74	*e*PKPab	PKPab	05 37 38.5	+1.9
PTEO	Sao Teotonio	174.43	74	*e*PP	PP	05 41 30.3	+0.7
PNCL	Nicolau / Gran	174.44	68	⇑*e*PKPdf	PKPdf	05 36 03.5	+1.1
PNCL	Nicolau / Gran	174.44	68	*e*PKPab	PKPab	05 37 37.4	+0.8
PNCL	Nicolau / Gran	174.44	68	*e*PP	PP	05 41 30.9	+1.4
MORF	Marmelete	174.53	77	*e*PKPdf	PKPdf	05 36 02.5	-0.1
MORF	Marmelete	174.53	77	⇑*e*PKPdf	PKPdf	05 36 03.7	+1.2
MORF	Marmelete	174.53	77	*e*PKPab	PKPab	05 37 41.9	+4.8
MORF	Marmelete	174.53	77	*e*PP	PP	05 41 31.1	+0.9
AVE	Averroes	174.65	122	*i* PKP	PKPdf	05 36 03.4	+0.7
PMRV	Marv??o	174.66	52	⇑*e*PKPdf	PKPdf	05 36 02.5	0.0
PMRV	Marv??o	174.66	52	*e*PKPab	PKPab	05 37 37.3	-0.2
PMRV	Marv??o	174.66	52	*e*PP	PP	05 41 30.9	+0.7
MESJ	Messejana	174.75	70	*e*PKPdf	PKPdf	05 36 02.5	0.0
MESJ	Messejana	174.75	70	⇑*e*PKPdf	PKPdf	05 36 03.8	+1.3
MESJ	Messejana	174.75	70	*e*PKPab	PKPab	05 37 39.0	+1.0
MESJ	Messejana	174.75	70	*e*PP	PP	05 41 31.8	+0.7
PESTR	Estremoz	174.82	58	⇑*e*PKPdf	PKPdf	05 36 03.0	+0.5
PESTR	Estremoz	174.82	58	*e*PKPab	PKPab	05 37 37.4	-0.9
PESTR	Estremoz	174.82	58	*e*PP	PP	05 41 32.0	+0.8
PESTR	Estremoz	174.82	58	*e*PKPdf	PKPdf	05 36 02.7	+0.2
PESTR				*e*PKPab	PKPab	05 37 37.7	-0.6
PBEJ	Beja	174.96	67	⇑*e*PKPdf	PKPdf	05 36 04.4	+1.8
PBEJ	Beja	174.96	67	*e*PP	PP	05 41 34.9	+2.8
PBDV	Barranco-do-Ve	175.11	76	⇑*e*PKPdf	PKPdf	05 36 03.8	+1.1
PBDV	Barranco-do-Ve	175.11	76	*e*PP	PP	05 41 34.2	+1.2
PVAQ	Vaqueiros	175.24	74	⇑*e*PKPdf	PKPdf	05 36 03.3	+0.6
PVAQ	Vaqueiros	175.24	74	*e*PP	PP	05 41 35.0	+1.5
RTC	Rabat Centre	175.41	118	*e*PKPdf	PKPdf	05 36 04.1	+1.3
UCM	Universidad Co	175.81	13	*i* PKP	PKPdf	05 36 03.5	+0.7
MDT	Midelt	175.95	147	PKP	PKPdf	05 36 03.7	+0.6
	comp=Z,29nm,1.0s,baz=66,slow=0.5,SNR=56						
MDT				PKPab	PKPab	05 37 45.3	+1.9
	comp=Z,9.9nm,1.0s,baz=177,slow=5.8,SNR=4.5						
PAB	San Pablo	176.20	29	*e*PKPdf	PKPdf	05 36 03.5	+0.6
PAB	San Pablo	176.20	29	*e*PKIKP	PKPdf	05 36 03.5	+0.6
ES19	SONSECA Array	176.22	23	*e*PKPdf	PKPdf	05 36 02.4	-0.5
ES19				*e*PKPab	PKPab	05 37 43.9	-0.4
ESDC	Sonseca Array	176.22	24	PKP	PKPdf	05 36 02.9	-0.1
	comp=Z,13nm,0.9s,baz=350,slow=2.5,SNR=86						
ESDC				PKPab	PKPab	05 37 44.2	-0.1
	comp=Z,12nm,0.8s,baz=336,slow=4.1,SNR=19						
ESDC				PP	PP	05 41 35.8	-1.1
	comp=Z,1.5nm,1.0s,baz=331,slow=5.5,SNR=5.4						
ESLA	Sonseca Array	176.22	24	*e*PKPdf	PKPdf	05 36 02.5	-0.5
ESLA				*e*PKPab	PKPab	05 37 44.3	0.0
IFR	Ifrane	176.25	135	*i* PKP	PKPdf	05 36 04.4	+1.2
GIBL	Gibalbin	176.73	78	*e*PKP	PKPdf	05 36 05.0	+2.0
LIJA	Lijar	177.16	75	*i* PKP	PKPdf	05 36 04.2	+1.0
CEU	Ceuta	177.22	96	*i* PKP	PKPdf	05 36 03.0	-0.1
EMAL	Malaga-Limoner	177.95	74	*i* PKP	PKPdf	05 36 02.9	-0.3
CART	Cartagena	178.44	330	*i* PKP	PKPdf	05 36 02.9	-0.3
MELI	Melilla	178.78	140	*i* PKP	PKPdf	05 36 03.6	+0.3

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*TAP **16** 05:30:49.6, 24°.51N×122°.49E, h89^{km}, ML3.6, C*
*ISCJB **16** 05:30:50.4±0.4, 24°.50N±0°.02×122°.49E±0°.02, h75^{km}±4^{km},*
Error ellipse: s-maj=3.6km s-min=2.4km az=172.3
*JMA **16** 05:30:50.0±0.1, 24°.43N×122°.43E, h81^{km}±2^{km}, M2.7*
ISC 16 05:30:50.9±1.3, **24°.50N**±0°.03×**122°.48E**±0°.02, **h75**^{km}±8^{km},
n90, σ0^s.81/163, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.33	280	*e*P	Pn	05 31 03.1	+0.3
	baz=281						
EOS1				*e*S	Sn	05 31 13.2	+1.7
	baz=281						
JYNG	Yonagunijimaku	0.42	96	P	Pn	05 31 03.7	+0.2
JYNG				S	Sn	05 31 13.6	+0.7
YOJ	Yonaguni jima	0.48	94	*e*P	Pn	05 31 04.2	+0.2
	baz=95						
YOJ				S	Sn	05 31 14.4	+0.7
	baz=95						
YOJ	Yonaguni jima	0.48	94	P	Pn	05 31 04.2	+0.2
YOJ				S	Sn	05 31 14.1	+0.4
TWC	Suao	0.59	281	P	Pn	05 31 04.5	-0.5
	baz=282						
TWC				*e*S	Sn	05 31 14.9	-0.6
	baz=282						
EGS		0.61	305	*e*S	Sn	05 31 16.3	+0.4
	baz=294						
NANB	Nanao	0.67	264	P	Pn	05 31 05.7	-0.2
	baz=261						
NANB				*e*S	Sn	05 31 16.7	-0.2
	baz=261						
ENA	Nanau	0.68	265	*e*P	Pn	05 31 05.9	0.0
	baz=260						
ENA				*e*S	Sn	05 31 17.7	+0.5
	baz=260						
TWB1	Santiao Chiao	0.68	319	*e*S	Sn	05 31 16.7	-0.4
	baz=311						
NTC	Toucheng	0.69	301	P	Pn	05 31 05.8	-0.4
	baz=299						
NTC				*e*S	Sn	05 31 17.0	-0.3
	baz=299						
ILA	Ilan	0.72	292	S	Sn	05 31 18.7	+0.8
	baz=290						
TIPB	Shuangxi	0.76	309	P	Pn	05 31 06.5	-0.4
	baz=309						
TIPB				S	Sn	05 31 18.6	-0.3
	baz=309						
TWE	Neicheng	0.78	287	P	Pn	05 31 06.7	-0.4
	baz=285						
TWE				*e*S	Sn	05 31 18.5	-0.5
	baz=285						
ENTT	Nioudou	0.85	280	*e*P	Pn	05 31 08.1	+0.2
	baz=282						
ENTT				*e*S	Sn	05 31 20.1	-0.4
	baz=282						
WFSB	Wu-fen Shan	0.86	312	P	Pn	05 31 07.9	-0.1
	baz=304						
WFSB				*e*S	Sn	05 31 20.4	-0.3
	baz=304						
NACB	Ninganchiao	0.87	249	P	Pn	05 31 07.4	-0.7
	baz=243						
NACB				*e*S	Sn	05 31 20.9	0.0
	baz=243						
NDT	Datong Townshi	0.89	277	P	Pn	05 31 08.5	+0.2
	baz=279						
NDT				*e*S	Sn	05 31 22.0	+0.6
	baz=279						
TWD	Chiawan	0.91	243	P	Pn	05 31 07.9	-0.7
	baz=236						
TWD				*e*S	Sn	05 31 21.6	-0.1
	baz=236						
NWLT	Wulai	0.93	288	P	Pn	05 31 08.8	-0.2
	baz=293						
NWLT				*e*S	Sn	05 31 22.2	-0.2
	baz=293						
TWA	Mucha	0.95	301	P	Pn	05 31 08.7	-0.4
	baz=299						
TWA				*e*S	Sn	05 31 22.2	-0.4
	baz=299						
HWA	Hwalien	0.95	237	P	Pn	05 31 08.9	-0.2
	baz=231						
HWA				*e*S	Sn	05 31 22.6	0.0
	baz=231						
ETLH	Xiulin Townshi	0.96	253	P	Pn	05 31 08.6	-0.7
	baz=252						
ETLH				*e*S	Sn	05 31 22.8	-0.1
	baz=252						
NHDH	Xindian Distri	0.99	298	P	Pn	05 31 09.1	-0.4
	baz=297						
NHDH				S	Sn	05 31 22.4	-1.0
	baz=297						
ENLB	Shoufeng	1.00	234	P	Pn	05 31 09.4	-0.3
	baz=233						
ENLB				*e*S	Sn	05 31 23.7	+0.1
	baz=233						
NNSB	Datong	1.00	266	P	Pn	05 31 09.5	-0.4
	baz=260						
NNSB				*e*S	Sn	05 31 23.8	-0.2
	baz=260						
NNS	Nan Shan	1.01	267	P	Pn	05 31 09.7	-0.3
	baz=259						
NNS				S	Sn	05 31 23.7	-0.5
	baz=259						
YHNB	Yeheng	1.02	280	P	Pn	05 31 10.0	0.0
	baz=279						
YHNB				S	Sn	05 31 24.2	-0.1
	baz=279						
NSK	Sanguang	1.04	280	P	Pn	05 31 10.0	-0.2
	baz=279						
NSK				*e*S	Sn	05 31 24.3	-0.3
	baz=279						
YM01	YM01	1.05	308	P	Pn	05 31 09.9	-0.5
	baz=299						
YM01				S	Sn	05 31 24.3	-0.6
	baz=299						
YM08	YM08	1.06	311	*e*S	Sn	05 31 23.6	-1.5
	baz=302						
YM05	YM05	1.07	309	*e*S	Sn	05 31 24.9	-0.4
	baz=300						
YM04	YM04	1.08	308	P	Pn	05 31 10.1	-0.7
	baz=299						
YM04				*e*S	Sn	05 31 24.3	-1.2
	baz=299						
TWY	Chenhua	1.12	314	S	Sn	05 31 26.1	-0.2
	baz=305						
TWS1	Kuangyinshan	1.14	302	P	Pn	05 31 11.0	-0.4
	baz=301						
TWS1				*e*S	Sn	05 31 26.6	-0.2
	baz=301						
IRIF	Iriomote-Funau	1.15	98	P	Pn	05 31 11.4	-0.1
IRIF				S	Sn	05 31 27.2	+0.2
NTST	Danshui	1.15	306	*e*S	Sn	05 31 26.4	-0.6
	baz=299						
WHF	Hehuan Shan	1.16	253	P	Pn	05 31 11.8	-0.4
	baz=252						
WHF				*e*S	Sn	05 31 27.3	-0.7
	baz=252						
ESL	Shilin	1.17	235	*e*P	Pn	05 31 11.1	-0.8
	baz=234						
ESL				*e*S	Sn	05 31 27.6	+0.1
	baz=234						
WLTB	Daxi	1.17	288	*e*P	Pn	05 31 12.8	+1.0
	baz=292						
WLTB				*e*S	Sn	05 31 28.3	+0.8
	baz=292						
TWT	Tachien	1.22	259	P	Pn	05 31 12.8	+0.2
	baz=258						
TWT				*e*S	Sn	05 31 28.9	+0.2
	baz=258						
TDCB	Techi	1.23	259	P	Pn	05 31 12.9	+0.2
	baz=258						
TDCB				*e*S	Sn	05 31 28.6	-0.5
	baz=258						
EGFH	Guangfu	1.27	230	*e*P	Pn	05 31 13.1	+0.1
	baz=229						
EGFH				*e*S	Sn	05 31 29.9	+0.2
	baz=229						
CHGB	Renai	1.27	250	P	Pn	05 31 13.1	-0.2
	baz=243						
CHGB				S	Sn	05 31 29.9	-0.1
	baz=243						
NCU	National Centr	1.27	292	S	Sn	05 31 29.7	0.0
	baz=291						
NCUH	Zhongli	1.27	292	*e*P	Pn	05 31 12.2	-0.9
	baz=291						
NCUH				*e*S	Sn	05 31 29.7	0.0
	baz=291						
HATJ	Hateruma jima	1.28	110	*e*S	Sn	05 31 30.2	+0.2
OWD	Renai	1.31	246	P	Pn	05 31 13.3	-0.4
	baz=240						
OWD				*e*S	Sn	05 31 29.9	-1.0
	baz=240						
LIOB	Emei	1.34	277	P	Pn	05 31 13.8	-0.2
	baz=276						
LIOB				S	Sn	05 31 30.7	-0.7
	baz=276						
NSTT	Nanjuang	1.35	276	*e*P	Pn	05 31 13.9	-0.3
	baz=275						
NSTT				*e*S	Sn	05 31 31.3	-0.3
	baz=275						
HGSD	Ruisui	1.39	224	*e*P	Pn	05 31 14.3	-0.3
	baz=223						
HGSD				*e*S	Sn	05 31 32.1	-0.4
	baz=223						
JKRS	Kuro-shima	1.42	100	P	Pn	05 31 15.4	+0.5
JKRS				S	Sn	05 31 34.0	+0.9
WHP	Taichung City	1.42	262	*e*P	Pn	05 31 15.9	+0.8
	baz=258						
WHP				S	Sn	05 31 33.3	+0.1
	baz=258						
VWDT	VWDT	1.43	239	P	Pn	05 31 15.0	-0.1
	baz=233						
VWDT				*e*S	Sn	05 31 32.4	-1.0
	baz=233						
EHY	Hungye	1.45	227	*i* P	Pn	05 31 14.2	-1.1
	baz=227						
EHY				S	Sn	05 31 31.9	-1.9
	baz=227						
JIJ	Ishigaki jima	1.52	95	P	Pn	05 31 16.1	-0.2
JIJ				S	Sn	05 31 34.7	-0.8
NMLH	Miaoli	1.54	272	*e*P	Pn	05 31 16.7	+0.1
	baz=271						
NMLH				S	Sn	05 31 36.0	0.0
	baz=271						
YULB	Yu-li	1.54	225	P	Pn	05 31 15.5	-1.2
	baz=232						
YULB				*e*S	Sn	05 31 33.7	-2.3
	baz=232						
SSLB	Suanglung	1.56	244	P	Pn	05 31 17.2	+0.3
	baz=239						
SSLB				S	Sn	05 31 36.4	-0.1
	baz=239						
TWQ1	Liyutan	1.56	265	P	Pn	05 31 17.2	+0.3
	baz=264						
TWQ1				*e*S	Sn	05 31 37.0	+0.5
	baz=264						
SMLT	Sun Moon Lake	1.57	247	*e*P	Pn	05 31 17.6	+0.5
	baz=241						
SMLT				*e*S	Sn	05 31 36.8	0.0
	baz=241						
NSY	Sanyi	1.57	267	P	Pn	05 31 17.2	+0.2
	baz=266						
NSY				S	Sn	05 31 37.0	+0.3
	baz=266						
TWF1	Yuli	1.57	224	*e*P	Pn	05 31 16.0	-1.0
	baz=231						
TWF1				*e*S	Sn	05 31 35.4	-1.3
	baz=231						
TYC	Yuchr	1.60	249	*e*P	Pn	05 31 17.9	+0.6
	baz=243						
TYC				*e*S	Sn	05 31 38.4	+1.1
	baz=243						
JISG	Ishigakijimahi	1.67	86	*e*S	Sn	05 31 38.6	-0.4
TCU	Taichung	1.68	259	*e*S	Sn	05 31 39.9	+0.6
	baz=267						
WHYT	Xinyi Township	1.69	242	*e*P	Pn	05 31 19.3	+0.7
	baz=240						
WHYT				*e*S	Sn	05 31 40.1	+0.5
	baz=240						
CHKT	Chengkung	1.73	217	P	Pn	05 31 17.6	-1.4
	baz=211						
CHKT				*e*S	Sn	05 31 37.8	-2.5
	baz=211						
WJS	Zhushan	1.74	248	*e*P	Pn	05 31 20.1	+0.9
	baz=259						
WJS				*e*S	Sn	05 31 42.2	+1.6
	baz=259						
WNT	Mingjian	1.75	250	*e*P	Pn	05 31 20.3	+1.0
	baz=250						
WNT				*e*S	Sn	05 31 42.2	+1.2
	baz=250						
ALS	Alishan	1.82	238	*e*P	Pn	05 31 21.2	+0.6
	baz=232						
ALS				*e*S	Sn	05 31 42.7	-0.4
	baz=232						
ELDTW	Lidau	1.87	226	*e*P	Pn	05 31 20.6	-0.4
	baz=224						
ELDTW				*e*S	Sn	05 31 42.5	-1.4
	baz=224						
CHN5	Tsauling	1.88	242	P	Pn	05 31 22.1	+1.0
	baz=234						
CHN5				*e*S	Sn	05 31 45.8	+1.7
	baz=234						
WDLH	Douliu	1.95	246	*e*P	Pn	05 31 22.6	+0.6
	baz=257						
WDLH				*e*S	Sn	05 31 47.6	+1.9
	baz=257						
JTJ	Tarama	2.03	85	S	Sn	05 31 48.0	+0.5
RLNB	Erlin	2.03	253	*e*S	Sn	05 31 48.0	+0.5
	baz=253						
CHN4	Tsaushan	2.07	237	*e*P	Pn	05 31 24.2	+0.6
	baz=238						
CHN4				*e*S	Sn	05 31 49.8	+1.3
	baz=238						
TPUB	Ta-pu	2.07	235	*e*P	Pn	05 31 23.4	-0.3
	baz=236						
TPUB				*e*S	Sn	05 31 49.7	+1.1
	baz=236						
TWGBT	Beinan	2.11	218	P	Pn	05 31 22.4	-1.7
	baz=225						
TWGBT				*e*S	Sn	05 31 47.4	-2.0
	baz=225						
TWG	Pinlang	2.11	218	*e*P	Pn	05 31 23.4	-0.8
	baz=225						
TWG				*e*S	Sn	05 31 48.0	-1.5
	baz=225						
WTP	Ta-pu	2.11	234	P	Pn	05 31 24.7	+0.4
	baz=235						
WTP				*e*S	Sn	05 31 51.4	+1.6
	baz=235						
CHY	Chiayi	2.13	243	*e*S	Sn	05 31 51.0	+1.1
	baz=254						
TWK	Hsinying	2.20	237	P	Pn	05 31 26.5	+1.1
	baz=237						
TWK				*e*S	Sn	05 31 52.1	+0.4
	baz=237						
CHN1	Nanshi	2.21	234	P	Pn	05 31 26.7	+1.1
	baz=234						
SNST	Tainan City	2.22	235	*e*P	Pn	05 31 25.8	+0.2
	baz=236						
SNST				*e*S	Sn	05 31 53.2	+1.1
	baz=236						
WSF	Szhu	2.23	248	*e*S	Sn	05 31 53.0	+0.5
	baz=257						
SGST	Jiashian	2.24	231	*e*P	Pn	05 31 27.4	+1.5
	baz=242						
SGST				*e*S	Sn	05 31 55.0	+2.3
	baz=242						
SLGT	Liugui	2.25	229	*e*P	Pn	05 31 27.1	+1.0
	baz=240						
SLGT				S	Sn	05 31 54.4	+1.4
	baz=240						
SSD	Sandimen	2.43	225	P	Pn	05 31 28.9	+0.4
	baz=225						
SSD				*e*S	Sn	05 31 57.1	-0.1
	baz=225						
JIRB	Irabujima	2.47	82	S	Sn	05 31 57.1	-1.1
MASBT	Mashibuluo	2.53	223	*e*P	Pn	05 31 30.0	+0.2
	baz=223						
MASBT				*e*S	Sn	05 32 00.7	+1.0
	baz=223						

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*MAN **16** 05:44:24.6, 8°.58N×126°.72E, h6^{km}, MS3.9*
*NEIC **16** 05:44:30.6±1.3, 8°.55N×126°.51E, h71^{km}±12^{km}, mb4.5/26,*

Error ellipse: s-maj=12.3km s-min=6.6km az=69.0
NEIC Felt [III PIVS] at Hinatuan and [II PIVS] at Bislig.
*IDC **16** 05:44:31.1±2.0, 8°.56N×126°.56E, h82km±19km, mb3.7/17, mb1 3.9/18, mb1mx3.8/39, mbtmp4.0/18, MS4.4/4, Ms1 4.4/4, ms1mx3.6/43, Error ellipse: s-maj=20.8km s-min=12.2km az=67.0*
ISC 16 05:44:24.2±1.5, **8°.63N**±0°.03×**126°.73E**±0°.05, **h15km**±9km, **n100**, σ**2s.10**/112, **mb4.5**/50, **MS4.5**/4, **6C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.57	220	⇓eP	Pg	05 44 34.2	-1.4
BIPH				eS	Sg	05 44 40.3	-2.9
BUTP	Butuan	1.15	287	eP	Pg	05 44 45.0	-1.5
BUTP				eS	Sn	05 45 05.3	+3.9
SCPH	Surigao	1.68	313	⇑eP	Pn	05 44 53.4	+0.3
BUKP	Musuan	1.81	246	eP	Pn	05 44 56.0	+0.9
BUKP				eS	Sb	05 45 20.0	+0.2
DAV	Davao City (W)	1.92	217	P	Pb	05 44 58.6	-0.4
	118nm,0.3s,baz=316,slow=8.1,SNR=6.7						
DAV				S	Sb	05 45 22.4	-0.5
	146nm,0.3s,baz=128,slow=17,SNR=4.7						
DMPH	Davao City--Mi	1.96	218	⇑eP	Pg	05 45 04.4	+2.6
DMPH				eS	Sg	05 45 30.7	+3.4
CGP	Cagayan de Oro	2.02	265	⇑iP	Pn	05 44 59.4	+1.5
CGP				i S	Sn	05 45 24.5	+1.5
KCP	Kidapawan	2.29	226	⇑iP	Pn	05 45 02.9	+1.4
KCP				i S	Sn	05 45 31.1	+1.6
MSLP	Maasin	2.38	309	eP	Pn	05 45 04.8	+2.0
MSLP				eS	Sn	05 45 34.1	+2.4
DDMP	Don Marcelino,	2.70	202	eP	Pn	05 45 08.1	+0.9
DDMP				eS	Sn	05 45 39.2	-0.5
SKMP	Bagumbayan, Su	3.02	226	eP	Pn	05 45 11.9	+0.3
SKMP				eS	Sb	05 45 54.4	0.0
TBP	Tagbilaran	3.03	291	eP	Pn	05 45 13.7	+2.0
TBP				i S	Sn	05 45 51.4	+3.7
PLP	Palo	3.06	326	⇓eP	Pn	05 45 14.3	+2.1
PLP				i S	Sb	05 45 55.5	-0.2
OCLP	Ormoc	3.19	319	eP	Pn	05 45 17.1	+3.2
OCLP				eS	Sn	05 45 56.1	+4.3
LLP	Lapu-Lapu	3.21	302	⇑eP	Pn	05 45 16.2	+2.1
LLP				eS	Sn	05 45 55.4	+3.2
DCPH	Dipolog City	3.34	270	⇓eP	Pn	05 45 18.8	+2.8
DCPH				eS	Sn	05 45 48.8	-6.7
PAGZ	Pagadian	3.41	257	eP	Pn	05 45 20.7	+3.8
PAGZ				eS	Sn	05 45 39.8	-17
SNPH	Sibulan	3.53	282	eP	Pn	05 45 21.6	+2.9
SNPH				i S	Sn	05 46 05.7	+5.5
IPIL	Ipil	4.21	259	eP	Pn	05 45 32.2	+4.3
RCP	Roxas	4.89	307	⇑eP	Pn	05 45 40.9	+3.6
SIJI	Sorong	10.46	154	P	Pn	05 46 56.9	+3.1
	5.7nm,0.3s,baz=149,slow=22,SNR=7.3						
SIJI				S	Sn	05 48 57.2	+6.4
	1.2nm,0.3s,baz=240,slow=20,SNR=3.9						
FAKI	Fak Fak	12.72	154	ePn	Pn	05 47 28.2	+3.5
MTN	Manton Dam	21.77	168	eP	P	05 49 15.6	-0.1
	23nm,0.6s						
FITZ	Fitzroy Crossi	26.58	182	eP	P	05 50 01.5	-0.5
	8.6nm,0.7s						
FITZ	Fitzroy Crossi	26.58	182	P	P	05 50 01.2	-0.8
	7.4nm,0.6s,baz=9.0,slow=6.9,SNR=28						
JHJ	Hachijo jima 2	27.20	24	LR	LR	05 58 30.2	
	comp=Z,1µm,21.3s,baz=354,slow=31						
COEN	Coen	27.74	144	eP	P	05 50 13.0	+0.5
	4.1nm,0.8s						
CM01	Chiang Mai Arr	28.67	293	eP	P	05 50 21.0	+0.1
CM31	Chiang Mai Arr	28.69	293	eP	P	05 50 21.2	+0.1
	4.3nm,0.8s						
CMAR	Chiang Mai Arr	28.69	293	P	P	05 50 20.6	-0.4
	1.4nm,0.6s,baz=104,slow=6.9,SNR=10						
WR1	Warramunga Arr	29.36	165	eP	P	05 50 28.2	+1.3
	2.2nm,0.6s						
WRA	Warramunga Arr	29.36	165	P	P	05 50 28.2	+1.3
	0.6nm,0.3s,baz=346,slow=9.7,SNR=2.8						
GSI	Gunungsitoli	29.93	258	eP	P	05 50 31.5	-0.5
	39nm,1.1s						
AS31	Alice Springs	32.85	168	eP	P	05 50 57.2	-0.5
	0.7nm,1.0s						
ASAR	Alice Springs	32.85	168	P	P	05 50 56.5	-1.2
	0.4nm,0.3s,baz=341,slow=7.0,SNR=16						
AS01	Alice Springs	32.86	168	eP	P	05 50 56.8	-1.0
USRK	Ussuriysk Ar.	35.73	6	P	P	05 51 24.0	+1.6
	1.4nm,0.7s,baz=178,slow=8.2,SNR=5.9						
FORT	Forrest	39.20	178	eP	P	05 51 51.5	-0.4
	9.1nm,0.7s						
H11S3	WAKE ISLAND Hy	39.98	72	T	T	06 35 05.8	
	baz=262,slow=75,SNR=25						
H11S1	WAKE ISLAND Hy	39.99	72	T	T	06 35 04.4	
	baz=262,slow=75,SNR=20						
H11S2	WAKE ISLAND Hy	39.99	72	T	T	06 35 04.9	
	baz=262,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	40.36	70	T	T	06 35 36.3	
	baz=265,slow=74,SNR=8.9						
H11N2	WAKE ISLAND Hy	40.37	70	T	T	06 35 39.3	
	baz=265,slow=74,SNR=5.6						
H11N3	WAKE ISLAND Hy	40.38	70	T	T	06 35 42.6	
	baz=265,slow=74,SNR=11						
RAMN	Ramite	42.10	301	eP	P	05 52 16.7	+0.4
	21nm,0.6s						
BBOO	Buckleboo	42.15	168	eP	P	05 52 15.8	-0.5
	3.7nm,0.7s						
NWAO	Narrogin (SRO)	42.30	192	eP	P	05 52 17.9	+0.3
	11nm,1.0s						
JIRN	Jiri	42.67	302	eP	P	05 52 20.6	-0.5
	45nm,0.5s						
STKA	Stephens Creek	42.71	161	eP	P	05 52 18.6	-2.3
	0.4nm,0.7s						
STKA	Stephens Creek	42.71	161	P	P	05 52 18.2	-2.6
	0.5nm,0.2s,baz=346,slow=7.9,SNR=2.0						
SONA0	Songino Array	42.71	340	eP	P	05 52 19.2	-1.7
SONM	Songino Array	42.71	340	P	P	05 52 19.2	-1.7
	0.2nm,0.4s,baz=147,slow=8.2,SNR=3.2						
SONM				LR	LR	06 12 16.8	
	comp=Z,242nm,18.2s,baz=162,slow=39						
GUN	Gumba	43.01	302	eP	P	05 52 23.8	0.0
	22nm,0.4s						
PKI	Pulchoki	43.30	301	eP	P	05 52 25.5	-0.7
	10nm,0.5s						
PKIN	Phulchoki	43.31	301	eP	P	05 52 25.6	-0.6
	10nm,0.5s						
KOLN	Koldanda	44.89	301	eP	P	05 52 38.7	-0.1
	14nm,0.4s						
DANN	Dangsing	44.92	302	eP	P	05 52 38.8	-0.4
	31nm,0.4s						
PYUN	Piuthan	45.50	301	eP	P	05 52 43.7	0.0
	14nm,0.4s						
PETK	Petropavlovsk-	50.94	24	P	P	05 53 25.5	+0.4
	3.5nm,0.9s,baz=215,slow=5.2,SNR=2.4						
PEA1	Petropavlovsk-	50.95	24	eP	P	05 53 25.5	+0.4
MK01	Makanchi Array	53.59	323	eP	P	05 53 43.8	-1.0
MK31	Makanchi Array	53.61	323	eP	P	05 53 43.8	-1.2
	1.0nm,0.7s						
MK32	Makanchi Array	53.61	323	eP	P	05 53 43.8	-1.2
MK32				ePcP	PcP	05 54 50.5	-0.9
MKAR	Makanchi Array	53.61	323	eP	P	05 53 43.8	-1.2
	8.2nm,0.6s						
MKAR				PcP	PcP	05 54 50.5	-0.9
MKAR	Makanchi Array	53.61	323	P	P	05 53 43.8	-1.2
	0.9nm,0.5s,baz=115,slow=6.1,SNR=23						
MKAR				PcP	PcP	05 54 50.5	-0.9
	1.0nm,0.5s,baz=118,slow=3.3,SNR=8.6						
MAKZ	Makanchi	53.80	323	eP	P	05 53 45.5	-0.9
	1.2nm,0.6s						
ZALV	Zalesovo Beam	56.28	332	P	P	05 54 02.0	-2.2
	0.8nm,0.3s,baz=112,slow=6.6,SNR=4.8						
ZALV				PcP	PcP	05 54 59.9	-1.6
	0.7nm,0.5s,baz=105,slow=4.6,SNR=3.6						
ZAA1	Zalesovo Array	56.28	332	eP	P	05 54 02.0	-2.2
ZAA1				ePcP	PcP	05 54 59.9	-1.6
KURK	Kurchatov	57.67	326	eP	P	05 54 12.9	-1.2
	4.0nm,0.9s						
KBL	Kabul	58.64	305	eP	P	05 54 21.2	-0.3
	3.9nm,0.6s						
GAR	Garm	58.70	311	eP	P	05 54 22.2	+0.5
	3.9nm,0.8s						
ARU	Arti	70.84	327	eP	P	05 55 39.1	-1.3
	5.2nm,0.5s						
KDAK	Kodiak Island	77.78	33	eP	P	05 56 23.7	+2.9
	30nm,1.1s						
IM3	Indian Mountai	77.90	24	eP	P	05 56 22.8	+1.5
MLY	Manley	79.08	25	eP	P	05 56 29.5	+1.6
	1.8nm,0.7s						
BWN	Browne	79.59	26	eP	P	05 56 32.1	+1.5
	13nm,1.2s						
TOLK	Toolik Lake Re	79.72	22	eP	P	05 56 33.1	+1.8
	3.2nm,1.0s						
ILAR	Eielson Array	80.71	26	P	P	05 56 36.2	-0.5
	0.4nm,0.8s,baz=234,slow=4.9,SNR=5.7						
MID	Middleton Isla	81.07	31	eP	P	05 56 38.4	-0.2
	186nm,1.0s						
EGAK	Eagle	83.16	26	eP	P	05 56 51.8	+2.3
	4.1nm,1.1s						
DAWY	Dawson	84.00	26	eP	P	05 56 55.5	+1.5
	1.7nm,1.1s						
ARA0	ARCESS Array S	85.88	340	eP	P	05 57 01.3	-1.9
ARCES	ARCESS Array B	85.88	340	eP	P	05 57 02.5	-0.8
ARCES	ARCESS Array B	85.88	340	P	P	05 57 01.3	-2.0
	1.2nm,0.5s,baz=83,slow=6.7,SNR=13						
BR101	Keskin Array S	86.92	310	eP	P	05 57 06.2	-3.0
BRTR	Keskin Array B	86.92	310	P	P	05 57 06.2	-3.0
	0.3nm,0.4s,baz=135,slow=4.2,SNR=4.9						
FIA1	FINESS Array S	87.55	332	eP	P	05 57 09.9	-1.6
FIA0	FINESS Array S	87.55	332	eP	P	05 57 09.4	-2.1
FINES	FINESS Array B	87.55	332	P	P	05 57 09.4	-2.1
	1.6nm,0.4s,baz=82,slow=4.7,SNR=30						
FINES				LR	LR	06 40 53.3	
	comp=Z,215nm,18.1s,baz=49,slow=39						
AKASG	Malin Array Be	88.12	321	P	P	05 57 11.2	-3.3
	0.3nm,0.4s,baz=67,slow=5.3,SNR=3.4						
VNDA	Vanda	88.25	173	eP	P	05 57 15.7	+1.2
	2.6nm,1.0s						
NC405	NORSAR Array S	94.17	334	eP	P	05 57 40.8	-1.7
	8.2nm,1.1s						
NC303	NORSAR Array S	94.28	334	eP	P	05 57 41.5	-1.3
	9.4nm,1.1s						
NB200	NORSAR Array S	94.43	334	eP	P	05 57 40.8	-2.8
NOA	NORSAR Array B	94.43	334	P	P	05 57 40.8	-2.8
	0.3nm,0.6s,baz=66,slow=4.4,SNR=4.8						
YKA	Yellowknife Ar	95.06	24	P	P	05 57 44.9	-1.5
	0.2nm,0.8s,baz=300,slow=4.3,SNR=3.4						
GERES	GERESS Array B	98.26	322	LR	LR	06 47 54.9	
	comp=Z,154nm,19.2s,baz=18,slow=39						
TOA0	Torodi Ar. Sit	121.29	291	ePKPdf	PKPdf	06 03 16.2	-1.7
TOA0				ePKPdf	PKiKP	06 03 16.4	-1.6
TOA1	Torodi Ar. Sit	121.29	291	ePKPdf	PKPdf	06 03 16.0	-1.9
TORD	Torodi Ar. Bea	121.29	291	PKP	PKPdf	06 03 16.0	-1.9
	0.3nm,0.3s,baz=64,slow=2.1,SNR=7.6						

TAP 16 05:48:09.0, 24°.45N×121°.96E, h10km, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.18	57	eP	Pg	05 48 13.5	+0.5
	baz=49						
EOS1				eS	Sg	05 48 17.1	+1.5
	baz=49						
TWC	Suao	0.19	327	eP	Pg	05 48 13.3	+0.2
	baz=329						
TWC				S	Sg	05 48 15.8	-0.1
	baz=329						
NANB	Nanao	0.19	263	eP	Pg	05 48 13.3	+0.1
	baz=271						
NANB				eS	Sg	05 48 16.2	+0.3
	baz=271						
TWE	Neicheng	0.38	315	P	Pg	05 48 17.1	+0.5
	baz=316						
TWE				S	Sg	05 48 22.2	+0.6
	baz=316						
ENTT	Nioudou	0.41	298	P	Pg	05 48 17.4	+0.4
	baz=298						
ENTT				eS	Sg	05 48 23.3	+0.8
	baz=298						
NACB	Ninganchiao	0.43	231	eP	Pg	05 48 17.6	+0.1
	baz=232						
NACB				eS	Sg	05 48 23.6	+0.3
	baz=232						
NDT	Datong Townshi	0.43	291	eP	Pg	05 48 18.0	+0.4
	baz=291						
NDT				S	Sg	05 48 24.2	+0.8
	baz=291						
TWD	Chiawan	0.50	222	P	Pg	05 48 19.0	+0.2
	baz=232						
TWD				eS	Sg	05 48 26.1	+0.9
	baz=232						
ETLH	Xiulin Townshi	0.50	241	eS	Sg	05 48 26.1	+0.7
	baz=243						
NNSB	Datong	0.53	268	eP	Pg	05 48 19.5	+0.1
	baz=269						
NNSB				eS	Sg	05 48 26.5	+0.1
	baz=269						
NWLT	Wulai	0.53	308	P	Pb	05 48 20.1	-0.3
	baz=308						
NWLT				eS	Sb	05 48 27.4	-0.7
	baz=308						
TIPB	Shuangxi	0.53	347	eP	Pb	05 48 20.1	-0.4
	baz=345						
TIPB				eS	Sb	05 48 27.4	-0.9
	baz=345						
NNS	Nan Shan	0.54	269	P	Pg	05 48 19.9	+0.4
	baz=270						
NNS				S	Sg	05 48 27.3	+0.7
	baz=270						
TWB1	Santiao Chiao	0.56	3	eP	Pb	05 48 20.9	0.0
	baz=351						
TWB1				eS	Sg	05 48 27.9	+0.6
	baz=351						
YHNB	Yeheng	0.57	292	eP	Pb	05 48 21.1	-0.1
	12nm,0.8s						
YHNB	Yeheng	0.57	292	eP	Pg	05 48 20.7	+0.4
	baz=285						
NSK	Sanguang	0.59	292	P	Pg	05 48 20.8	+0.2
	baz=300						
NSK				eS	Sg	05 48 28.9	+0.5
	baz=300						
TATO	Taipei	0.68	321	eS	Sg	05 48 31.6	+0.5
	baz=309						
WHF	Hehuan Shan	0.70	245	S	Sb	05 48 32.9	-0.6
	baz=245						
TWT	Tachien	0.74	255	eS	Sb	05 48 34.0	-0.4
	baz=256						
TDCB	Techi	0.76	255	eP	Pg	05 48 23.9	+0.2
	baz=256						
TDCB				S	Sg	05 48 33.6	0.0
	baz=256						
CHGB	Renai	0.82	242	eP	Pg	05 48 25.1	+0.3
	baz=254						
CHGB				eS	Sb	05 48 36.6	+0.1
	baz=254						
OWD	Renai	0.87	236	eS	Sg	05 48 37.2	0.0
	baz=237						

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*IDC **16** 05:52:19.5±3.2, 0°.26S×98°.89E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/51, mbtmp3.6/6, ML4.1/1, Error ellipse: s-maj=146.5km s-min=20.2km az=59.0*
*ISCJB **16** 05:52:21.0±0.8, 0°.42S±0°.07×98°.35E±0°.08, h32km, mb3.6/5, Error ellipse: s-maj=11.7km s-min=8.4km az=148.8*
*DJA **16** 05:52:21.2±0.6, 0°S±4°×9°8E±°, h14km±6km, M3.4/7, MLv3.4/7*
ISC 16 05:52:22.2±1.0, **0°.41S**±0°.07×**98°.37E**±0°.09, **h32km**, **n16**, σ**1s.22**/14, **mb3.7**/5, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.36	345	P	Pb	05 52 29.1	-1.6
SISI	Saibi	1.16	142	P	Pn	05 52 42.0	-0.2
MNSI	Mandailing Nat	1.70	45	P	Pn	05 52 50.0	+0.4
MNSI				S	Sn	05 53 09.8	-0.5
GSI	Gunungsitoli	1.88	335	P	Pn	05 52 52.4	+0.3
PPI	Padang Panjang	2.03	91	P	Pn	05 52 54.5	+0.4
PDSI	Padang	2.15	103	P	Pn	05 52 56.7	+0.9
BKNI	Bangkinang	2.77	75	P	Pn	05 53 04.5	+0.2
CMAR	Chiang Mai Arr	18.76	2	P	Pn	05 56 39.1	-0.3
	0.2nm,0.3s,baz=189,slow=11,SNR=2.7						
H08S2	Diego Garcia H	26.78	254	T	T	06 25 51.1	
	baz=76,slow=76,SNR=15						
H08S3	Diego Garcia H	26.79	254	T	T	06 25 51.4	
	baz=76,slow=76,SNR=82						
H08S1	Diego Carcia H	26.80	254	T	T	06 25 52.8	
	baz=76,slow=76,SNR=6.9						
WRA	Warramunga Arr	40.20	121	P	P	05 59 55.1	-0.9
	0.3nm,0.7s,baz=302,slow=9.0,SNR=3.1						
ASAR	Alice Springs	41.50	126	P	P	06 00 04.8	-2.0
	0.3nm,0.6s,baz=301,slow=7.5,SNR=4.3						
MKAR	Makanchi Array	49.08	345	P	P	06 01 08.7	+2.2
	0.4nm,0.5s,baz=158,slow=8.5,SNR=7.0						
STKA	Stephens Creek	51.42	132	P	P	06 01 25.6	+1.2
	0.7nm,0.4s,baz=333,slow=11,SNR=3.3						
ZALV	Zalesovo Beam	55.33	350	P	P	06 01 53.8	+1.1
	0.4nm,0.4s,baz=163,slow=10,SNR=2.5						

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*IDC **16** 05:55:21.6±0.8, 2°.67S×102°.82E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.7/52, mbtmp3.9/10, Error ellipse: s-maj=33.2km s-min=15.6km az=58.0*
*ISCJB **16** 05:55:26.0±0.3, 2°.45S±0°.04×103°.01E±0°.05, h33km, mb4.1/24, Error ellipse: s-maj=7.3km s-min=4.4km az=149.6*
*DJA **16** 05:55:25.3±0.2, 2°S±3°×10°3E±°, h10km, M4.3/14, MLv4.3/14*
*NEIC **16** 05:55:27.4±0.4, 2°.55S×102°.97E, h35km, mb4.1/13, Error ellipse: s-maj=14.4km s-min=6.9km az=58.0*
NEIC Felt [III] at Nibung and in Musi Rawas.
ISC 16 05:55:27.3±0.5, **2°.47S**±0°.04×**102°.99E**±0°.05, **h35km**, **n61**, σ**1s.72**/60, **mb4.1**/24, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	1.00	228	P	Pn	05 55 43.8	-1.1
JMBI	JAMBI	1.06	38	P	Pn	05 55 44.9	-0.7
LHSI	Lahat	1.45	158	P	Pn	05 55 51.0	0.0
KRJI	Kerinci	1.57	284	P	Pn	05 55 52.9	+0.1
PMBI	Palembang	1.83	104	P	Pn	05 55 57.2	+0.9
MNAI	Manna	1.88	181	ePn	Pn	05 55 58.4	+1.5
MNAI				eSn	Sn	05 56 25.2	+5.8
MNAI	Manna	1.88	181	P	Pn	05 55 58.2	+1.3
SDSI	Sungai Dareh	2.19	314	P	Pn	05 56 01.7	+0.6
RGRI	Rengat	2.21	343	P	Pn	05 56 02.1	+0.6
MDSI	Maura Dua	2.33	149	P	Pn	05 56 03.2	+0.1
DSRI	Dabo	2.54	39	P	Pn	05 56 06.5	+0.5
LWLI	Liwa	2.74	157	P	Pn	05 56 10.5	+1.6
PDSI	Padang	2.97	301	P	Pn	05 56 12.0	+0.1
PPBI	Pangkal Pinang	3.16	84	P	Pn	05 56 15.5	+1.0
KASI	Kota Agung	3.38	154	P	Pn	05 56 18.7	+1.1
BKNI	Bangkinang	3.40	325	ePn	Pn	05 56 20.8	+3.0
MYKOM	Kota Tinggi	4.32	11	ePn	Pn	05 56 31.3	+0.8
PSI	Prapat	6.63	322	ePn	Pn	05 57 05.1	+2.7
CMAR	Chiang Mai Arr	21.18	349	P	P	06 00 11.0	+1.3
	0.9nm,0.3s,baz=185,slow=8.9,SNR=5.0						
MBWA	Marble Bar	24.72	140	eP	P	06 00 46.0	+0.6
	6.7nm,1.0s						
FITZ	Fitzroy Crossi	27.10	126	eP	P	06 01 10.4	+3.4
	3.1nm,0.9s						
FITZ	Fitzroy Crossi	27.10	126	P	P	06 01 07.2	+0.1
	3.5nm,1.0s,baz=243,slow=11,SNR=3.8						
MNCI	Minicoy	31.70	290	eP	P	06 01 49.5	+1.6
	71nm,1.2s						
WRA	Warramunga Arr	35.19	122	P	P	06 02 17.5	-0.9
	0.2nm,0.3s,baz=312,slow=8.8,SNR=6.3						
WR1	Warramunga Arr	35.19	122	eP	P	06 02 17.5	-0.9
	1.4nm,0.9s						
WRAB	Tennant Creek	35.20	122	eP	P	06 02 18.2	-0.2
	3.4nm,1.1s						
WB2	Warramunga Arr	35.20	122	eP	P	06 02 19.1	+0.7
	3.7nm,1.0s						
ASAR	Alice Springs	36.58	128	P	P	06 02 29.8	-0.5
	0.7nm,0.5s,baz=301,slow=8.1,SNR=14						
AS31	Alice Springs	36.58	128	eP	P	06 02 30.1	-0.1
	0.4nm,0.5s						
AS01	Alice Springs	36.62	128	eP	P	06 02 29.8	-0.7
GTA	Gaotai	41.78	356	eP	P	06 03 13.3	-0.2
GTA				pP	pP	06 03 21.3	-2.6
GTA				sP	sP	06 03 25.6	-2.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BBOO	Buckleboo	43.27	138	eP	P	06 03 25.9	+0.2
	comp=Z,2.5nm,0.9s						
STKA	Stephens Creek	46.62	133	P	P	06 03 52.3	-0.1
	comp=Z,1.3nm,0.3s,baz=316,slow=9.5,SNR=6.1						
SONA0	Songino Array	50.19	3	eP	P	06 04 21.8	+2.2
SONM	Songino Array	50.19	3	P	P	06 04 21.8	+2.2
	comp=Z,1.5nm,0.6s,baz=184,slow=10,SNR=8.2						
SONA1	Songino Array	50.20	3	eP	P	06 04 23.4	+3.6
ARSB	Arslanbob	51.43	331	eP	P	06 04 29.4	+0.2
	comp=Z,3.0nm,0.6s						
MK01	Makanchi Array	52.31	342	eP	P	06 04 35.7	+0.2
MK31	Makanchi Array	52.34	342	eP	P	06 04 36.2	+0.5
	comp=Z,0.4nm,0.9s						
MK32	Makanchi Array	52.34	342	eP	P	06 04 35.8	+0.1
MKAR	Makanchi Array	52.34	342	eP	P	06 04 36.2	+0.5
	comp=Z,3.9nm,0.4s						
MKAR	Makanchi Array	52.34	342	P	P	06 04 35.8	+0.1
	comp=Z,0.5nm,0.7s,baz=143,slow=8.5,SNR=5.8						
KURBB	Kurchatov Arra	56.89	342	P	P	06 05 08.6	0.0
	comp=Z,0.4nm,0.3s,baz=153,slow=6.3,SNR=7.1						
KURK	Kurchatov	56.94	342	eP	P	06 05 08.6	-0.4
ZALV	Zalesovo Beam	58.23	347	P	P	06 05 18.2	+0.2
	comp=Z,0.6nm,0.4s,baz=159,slow=4.5,SNR=5.5						
ZAA1	Zalesovo Array	58.23	347	eP	P	06 05 18.2	+0.2
ABKAR	Akbulak array	63.51	330	eP	P	06 05 53.9	-0.1
	comp=Z,1.3nm,1.0s						
MAW	Mawson	70.59	195	eP	P	06 06 36.4	-2.2
	comp=Z,9.1nm,1.0s						
KIV	Kislovodsk	70.86	318	eP	P	06 06 41.2	+0.3
	comp=Z,12nm,0.4s						
BOSA	Boshof	78.05	241	P	P	06 07 22.8	-0.3
	comp=Z,3.5nm,1.0s,baz=152,slow=3.3,SNR=3.6						
FIA1	FINESS Array S	85.92	332	eP	P	06 08 03.1	-0.4
GRFO	Grafenberg	93.02	319	eP	P	06 08 37.5	+0.3
	comp=Z,2.9nm,0.6s						
G08A	Pilot Rock	123.70	35	ePKPdf	PKPdf	06 14 18.6	-3.2
RSSD	Black Hills	132.12	26	ePKPdf	PKPdf	06 14 34.4	-3.6
LENM	Lemitar	137.87	38	ePKPdf	PKPdf	06 14 47.5	-1.5
LTX	Lajitas	143.18	41	ePKPdf	PKPbc	06 14 56.8	+1.2
TXAR	Lajitas Array	143.18	41	PKP	PKPbc	06 14 56.8	+1.2
	comp=Z,0.3nm,0.8s,baz=20,slow=2.9,SNR=3.9						
CPUP	Villa Florida	145.62	212	PKPbc	PKPdf	06 14 59.0	-3.8
	comp=Z,1.0nm,0.9s,baz=166,slow=4.2,SNR=2.3						
BDFB	Brasilia	146.14	237	PKPbc	PKPdf	06 15 04.7	+0.7
	comp=Z,1.7nm,0.5s,baz=81,slow=6.3,SNR=5.9						
LRAL	Lakeview Retre	148.19	16	ePKPbc	PKPdf	06 15 08.1	+1.2
GO02	Mina Guanaco	151.60	194	ePKPdf	PKPdf	06 15 08.8	-4.1

IDC 16 06:00:16.0±1.2, **4°.05N**×**124°.45E**, **h0km**, **mb3.5**/4, **mb1 3.7**/4, **mb1mx3.3**/45, **mbtmp3.5**/4, **Error ellipse: s-maj=79.4km s-min=23.8km az=72.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.74	158	P	P	06 05 49.0	+0.5
	0.5nm,0.3s,baz=338,slow=10,SNR=13						
ASAR	Alice Springs	29.05	162	P	P	06 06 17.5	-0.7
	0.1nm,0.6s,baz=341,slow=7.9,SNR=3.3						
MKAR	Makanchi Array	56.01	326	P	P	06 09 56.3	-0.3
	0.4nm,0.8s,baz=127,slow=5.5,SNR=5.1						
ILAR	Eielson Array	85.80	25	P	P	06 12 57.4	+0.2
	0.7nm,0.9s,baz=267,slow=5.4,SNR=8.7						

UCR 16 06:00:49.0±1.4, **12°.77N**×**88°.41W**, **h52km**±12km, **ML3.5, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCY	Lacayo	0.66	10	eP	Pn	06 01 02.9	+0.5
LCY				eS	Sn	06 01 13.3	+1.2
VSM	San Miguel	0.66	11	eP	Pn	06 01 03.2	+0.6
VSM				eS	Sn	06 01 13.3	+0.8
BLLM	Bellamira	0.69	14	eP	Pn	06 01 03.1	+0.3
BLLM				eS	Sn	06 01 13.6	+0.9
PACA	Pacayal	0.70	7	eP	Pn	06 01 03.4	+0.4
PACA				eS	Sn	06 01 13.9	+0.9
TECA	Tecapa	0.72	353	eP	Pn	06 01 03.6	+0.3
TECA				eS	Sn	06 01 14.2	+0.5
LCND	La Caada	0.73	43	eP	Pn	06 01 03.2	-0.1
LCND				eS	Sn	06 01 14.7	+1.1
LCND				IAML		06 01 18.6	
	comp=Z,1µm,0.3s						
CNCH	Conchagua	0.75	48	eP	Pn	06 01 04.0	+0.4
CAHU	Cacacuatique	1.01	11	eP	Pn	06 01 07.5	+0.4
LFRS	El Faro	1.06	323	eP	Pn	06 01 07.8	+0.2
LFRS				eS	Sn	06 01 21.7	+0.3
PAVA	Las Pavas	1.07	331	eP	Pn	06 01 08.4	+0.6
PAVA				eS	Sn	06 01 22.7	+1.0
PAVA				IAML		06 01 24.6	
	comp=Z,915nm,0.3s						
LBRS	Las Brisas	1.14	327	eP	Pn	06 01 09.4	+0.7
LBRS				eS	Sn	06 01 25.1	+1.7
LOMA	San Marcos	1.15	320	eP	Pn	06 01 08.9	+0.2
LOMA				eS	Sn	06 01 23.4	0.0
VICT	Victoria	1.20	349	eP	Pn	06 01 09.8	+0.2
VICT				eS	Sn	06 01 25.8	+0.9
BOQS	Boqueron	1.28	318	eP	Pn	06 01 11.1	+0.4

BOQS				eS	Sn	06 01 27.5	+0.6
CRIN	San Cristobal	1.33	93	eP	Pn	06 01 12.1	+0.9
CRIN				eS	Sn	06 01 29.2	+1.3
TELN	Telica	1.55	96	eP	Pn	06 01 14.4	+0.1
SBLS	San Blas	1.59	312	eP	Pn	06 01 15.6	+0.6
SBLS				eS	Sn	06 01 35.4	+0.9
RTR	El Retiro	1.64	313	eP	Pn	06 01 16.6	+1.0
CNGN	Cerro Negro	1.69	99	eP	Pn	06 01 16.2	0.0
MOMN	Momotombo	1.86	101	eP	Pn	06 01 18.2	-0.3
COPN	Copaltepe	1.87	108	eP	Pn	06 01 18.2	-0.4
BRAN	Las Pilas	2.01	91	eP	Pn	06 01 22.2	+1.7
BRAN				eS	Sn	06 01 46.4	+1.9
ESTN	Estel	2.02	80	eP	Pn	06 01 21.3	+0.6
ESTN				eS	Sn	06 01 45.1	+0.4
IXG	Ixpaco	2.42	305	eP	Pn	06 01 26.8	+0.6
MATN	Matagalpa	2.43	86	eP	Pn	06 01 26.2	-0.1
MATN				eS	Sn	06 01 54.9	0.0
BOAB	BOACO BROADBAN	2.70	97	eP	Pn	06 01 29.5	-0.4

IDC 16 06:01:26.6±1.9, 18°.61S×177°.13W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/39, mbtmp3.8/4, MS4.1/2, Ms1 4.2/2, ms1mx3.4/27, Error ellipse: s-maj=141.5km s-min=29.1km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.78	255	LR	LR	06 10 40.1	
	comp=Z,389nm,18.1s,baz=40,slow=35						
STKA	Stephens Creek	39.37	242	P	P	06 08 58.8	+0.7
	5.5nm,1.2s,baz=64,slow=11,SNR=5.2						
WRA	Warramunga Arr	45.70	260	P	P	06 09 49.1	-0.7
	0.6nm,0.8s,baz=96,slow=8.6,SNR=5.4						
ASAR	Alice Springs	45.77	255	P	P	06 09 49.9	-0.5
	2.6nm,0.7s,baz=90,slow=8.4,SNR=35						
NVAR	Mina Array Bea	79.09	43	LR	LR	06 41 04.7	
	comp=Z,221nm,22.0s,baz=32,slow=30						
TXAR	Lajitas Array	85.35	57	P	P	06 14 05.8	-0.4
	0.7nm,1.0s,baz=235,slow=6.3,SNR=4.7						
GERES	GERESS Array B	148.59	346	PKPbc	PKPbc	06 21 15.7	0.0
	0.4nm,0.7s,baz=316,slow=2.7,SNR=4.1						

MEX 16 06:02:01.0±0.3, 15°.56N×93°.08W, h105km±4km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.20	316	eP	Pn	06 02 14.4	-1.3
PCIG				iS	Sn	06 02 25.0	-1.9
THIG		1.02	130	eP	Pn	06 02 20.9	-1.1
CCIG	Comitan	1.15	52	eP	Pn	06 02 22.4	-1.3

ISK 16 06:10:41.3, 38°.87N×43°.53E, h2km, ML1.9/3
ISCJB 16 06:10:42.7±0.8, 38°.87N±0°.04×43°.53E±0°.07, h11km±8km, Error ellipse: s-maj=10.3km s-min=5.8km az=22.7
DDA 16 06:10:42.6, 38°.89N×43°.52E, h7km±1km, ML2.6
ISC 16 06:10:42.4±1.1, 38°.88N±0°.04×43°.54E±0°.05, h13km±8km, n8, $\sigma 0^{s}.64$/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.12	11	iP	Pg	06 10 45.3	-0.5
VMUR				iS	Sg	06 10 49.0	+0.8
VMUR				IAML_P			
	comp=Z,7μm,0.1s						
TVAN	Van	0.36	197	iP	Pb	06 10 50.7	-0.1
TVAN				IAML_P			
	comp=Z,3μm,0.3s						
CLDR	Caldiran	0.40	47	PG	Pg	06 10 50.3	-0.1
CLDR				SG	Sb	06 10 56.9	-0.6
CLDR	Caldiran	0.40	47	iP	Pg	06 10 50.7	+0.3
CLDR				iS	Sb	06 10 58.0	+0.5
CLDR				IAML_P			
	comp=Z,3μm,0.1s						
ADCV	BITLIS_Adilcev	0.64	264	iP	Pb	06 10 55.0	-0.5
ADCV				iS	Sb	06 11 05.5	+1.1
ADCV				IAML_P			
	comp=Z,302nm,0.2s						
AKDM	Akdamar-Van	0.70	219	PG	Pg	06 10 55.9	-0.2
AKDM				SG	Sb	06 11 05.9	-0.3
TUTA	Tutak	0.77	313	iP	Pb	06 10 57.3	-0.5
TUTA				IAML_P			
	comp=Z,1μm,0.2s						
AGRB	Hanur-Agry	0.82	329	PG	Pb	06 10 58.1	-0.5
AGRB				SG	Sb	06 11 10.3	+0.7

IDC 16 06:11:59.8±2.5, 6°.10S×128°.66E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.2/38, mbtmp3.2/4, ML2.7/3, MS3.8/1, Ms1 3.8/1, ms1mx3.1/17, Error ellipse: s-maj=121.8km s-min=30.8km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.29	194	Pn	Pn	06 14 56.3	+0.1
	0.1nm,0.3s,baz=6.5,slow=12,SNR=2.1						
FITZ				Sn	Sn	06 17 05.6	-8.4
	0.1nm,0.3s,baz=338,slow=11,SNR=3.1						
WRA	Warramunga Arr	14.83	159	Pn	Pn	06 15 31.9	+1.0
	0.0nm,0.3s,baz=344,slow=12,SNR=3.0						
WRA				Sn	Sn	06 18 06.0	-10
	0.1nm,0.3s,baz=341,slow=22,SNR=4.0						
ASAR	Alice Springs	18.18	164	Pn	Pn	06 16 13.1	-0.8
	0.1nm,0.3s,baz=336,slow=10,SNR=6.6						
NWAO	Narrogin (SRO)	28.74	200	LR	LR	06 29 10.2	
	comp=Z,208nm,21.4s,baz=256,slow=36						
MKAR	Makanchi Array	66.75	327	P	P	06 22 53.1	0.0
	0.2nm,0.5s,baz=136,slow=7.0,SNR=3.5						

ISCJB 16 06:17:45.5±0.9, 5°.73N±0°.08×126°.41E±0°.09, h103km±11km, mb3.5/6, Error ellipse: s-maj=14.1km s-min=13.2km az=173.6
MAN 16 06:17:45.9, 5°.66N×126°.38E, h51km, MS3.6
IDC 16 06:17:47.6±1.6, 5°.91N×126°.45E, h114km±15km, mb3.4/6, mb1 3.5/6, mb1mx3.2/35, mbtmp3.7/6, MS4.0/1, Ms1 4.0/1, ms1mx3.1/21, Error ellipse: s-maj=55.1km s-min=14.0km az=71.0
ISC 16 06:17:46.4±1.3, 5°.72N±0°.09×126°.38E±0°.09, h99km±13km, n15, $\sigma 1^{s}.67$/23, mb3.5/6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	1.22	354	eP	Pn	06 18 08.6	-0.7
MATI				eS	Sn	06 18 24.5	-2.1
DAV	Davao City (W)	1.56	329	P	Pn	06 18 12.9	-0.5
	78nm,0.3s,baz=207,slow=18,SNR=5.9						
DAV				S	Sn	06 18 34.3	+0.5
	128nm,0.3s,baz=284,slow=21,SNR=6.1						
DMPH	Davao City--Mi	1.61	327	⇑eP	Pn	06 18 20.2	+6.2
DMPH				eS	Sn	06 18 39.0	+4.0
KCP	Kidapawan	1.81	315	⇑iP	Pn	06 18 15.7	-0.9
KCP				iS	Sn	06 18 38.9	-0.7
SKMP	Bagumbayan, Su	1.99	294	eP	Pn	06 18 17.9	-1.0
SKMP				eS	Sn	06 18 43.2	-0.4
BUKP	Musuan	2.51	329	eP	Pn	06 18 25.8	+0.1
BUKP				eS	Sn	06 18 58.4	+2.5
BUTP	Butuan	3.31	347	eP	Pn	06 18 38.2	+1.8
BUTP				eS	Sn	06 19 16.7	+1.7
PAGZ	Pagadian	3.65	306	eP	Pn	06 18 41.6	+0.6
PAGZ				eS	Sn	06 19 24.4	+1.3
FITZ	Fitzroy Crossi	23.68	182	P	P	06 22 51.1	+1.9
	0.8nm,0.4s,baz=5.8,slow=9.2,SNR=7.8						
WRA	Warramunga Arr	26.68	163	P	P	06 23 17.3	+0.9
	0.4nm,0.4s,baz=340,slow=10,SNR=13						
ASAR	Alice Springs	30.12	166	P	P	06 23 47.5	+0.6
	0.6nm,0.6s,baz=341,slow=7.0,SNR=14						
ASAR				PcP	PcP	06 26 46.2	-0.2
	0.5nm,0.8s,baz=353,slow=2.2,SNR=5.3						
CTA	Charters Tower	32.24	143	LR	LR	06 37 51.5	
	comp=Z,261nm,22.0s,baz=262,slow=37						
STKA	Stephens Creek	40.10	160	P	P	06 25 13.6	+1.1
	0.8nm,0.3s,baz=351,slow=8.8,SNR=3.8						
MKAR	Makanchi Array	55.74	325	P	P	06 27 11.5	-1.4
	0.5nm,0.4s,baz=118,slow=7.1,SNR=15						
MKAR				PcP	PcP	06 28 09.6	-1.4
	0.3nm,0.6s,baz=128,slow=3.1,SNR=3.1						
ILAR	Eielson Array	83.47	26	P	P	06 30 00.9	-1.9
	0.2nm,0.6s,baz=256,slow=5.7,SNR=6.3						

NNC 16 06:33:37.5±4.5, 36°.19N×69°.86E, h0km, mb3.9, mpv3.5, 5C-3D, Error ellipse: s-maj=39.2km s-min=32.5km az=134.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	4.78	36	⇓Pn	Pn	06 34 51.4	+0.4
	3.1nm,0.3s						
SFK				⇓Sn	Sn	06 35 49.6	+2.5
	3.1nm,0.2s						
MNAS	Manas	6.61	17	⇓Pn	Pn	06 35 16.0	-0.1
	3.3nm,1.4s						
MNAS				⇑Sn	Sn	06 36 33.7	+1.4
	2.7nm,0.5s						
KK31	Karatay Array	6.92	4	⇑Pn	Pn	06 35 20.4	+0.2
	0.8nm,0.3s,baz=191,slow=16,SNR=14						
KK31				⇑Sn	Sn	06 36 41.8	+2.1
	3.3nm,0.7s,baz=184,slow=22						
AAK	Ala-Archa	7.37	28	⇑Pn	Pn	06 35 25.7	-0.8
	7.1nm,1.5s						
AAK				⇑Sn	Sn	06 36 48.4	-2.5
	4.2nm,0.7s						

ISCJB 16 06:53:12.6±1.3, 5°.4S±0°.1×147°.3E±0°.2, h195km, mb3.9/3, Error ellipse: s-maj=22.4km s-min=15.0km az=9.7
IDC 16 06:53:14.3±2.7, 5°.38S×147°.21E, h199km±23km, mb3.5/3, mb1 3.7/6, mb1mx3.3/36, mbtmp4.1/6, Error ellipse: s-maj=36.9km s-min=16.2km az=117.0
ISC 16 06:53:13.9±1.4, 5°.4S±0°.1×147°.2E±0°.2, h195km, n7, $\sigma 1^{s}.43$/9, mb4.2/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	7.09	294	P	Pn	06 54 55.7	+0.4
	1.2nm,0.3s,baz=151,slow=10,SNR=3.8						
JAY				S	Sn	06 56 04.7	-11
	1.0nm,0.3s,baz=129,slow=14,SNR=2.6						
CTA	Charters Tower	14.61	183	P	Pn	06 56 31.8	+0.2
	0.5nm,0.3s,baz=353,slow=13,SNR=6.3						
WRA	Warramunga Arr	19.10	220	P	P	06 57 22.6	+0.6
	2.1nm,0.3s,baz=43,slow=11,SNR=26						
WRA				S	S	07 00 45.3	-3.0
	0.1nm,0.3s,baz=30,slow=17,SNR=3.8						
ASAR	Alice Springs	22.20	214	P	P	06 57 55.4	+0.8
	4.9nm,0.6s,baz=50,slow=8.5,SNR=96						
ASAR				S	S	07 01 45.9	+1.3
	1.1nm,1.0s,baz=32,slow=18,SNR=9.2						
FITZ	Fitzroy Crossi	24.53	237	P	P	06 58 16.1	+0.3
	5.1nm,0.5s,baz=46,slow=10,SNR=32						
ILAR	Eielson Array	84.88	23	P	P	07 05 25.8	-0.6
	0.2nm,0.6s,baz=261,slow=4.9,SNR=4.0						
TORD	Torodi Ar. Bea	145.13	285	PKPbc	PKPbc	07 12 28.6	-0.5
	0.5nm,0.6s,baz=61,slow=4.7,SNR=2.4						

UCR 16 06:59:20.6±1.7, 10°.29N×86°.39W, h13km±7km, MD4.2
ISCJB 16 06:59:25.5±0.6, 10°.52N±0°.05×86°.09W±0°.04, h62km±3km, mb4.4/87, Error ellipse: s-maj=9.7km s-min=5.8km az=34.4
NEIC 16 06:59:26.6±0.9, 10°.49N×86°.02W, h53km±7km, mb4.4/81, Error ellipse: s-maj=10.0km s-min=7.6km az=202.0
IDC 16 06:59:27.9±2.1, 10°.99N×85°.77W, h52km±24km, mb3.8/10, mb1 4.1/10, mb1mx3.7/32, mbtmp4.1/10, MS3.7/1, Ms1 3.7/1, ms1mx2.8/34, Error ellipse: s-maj=35.8km s-min=19.1km az=55.0
ISC 16 06:59:24.4±1.9, 10°.38N±0°.08×86°.26W±0°.08, h40km±16km, n366, $\sigma 1^{s}.12$/379, mb4.4/87, 13C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NY14	Universidad de	0.76	70	iP	Pn	06 59 37.9	-0.9
NY14				iS	Sn	06 59 52.9	+3.8
GBS3	Finca Las Img	0.89	63	iP	Pn	06 59 39.3	-1.2
PLVR	Palo Verde	0.90	92	⇑eP	Pn	06 59 39.2	-1.6
PLVR				eS	Sn	06 59 52.2	-0.4
LAPC	Finca la Perla	0.90	65	iP	Pn	06 59 39.4	-1.3
BUEV	Buena Vista	0.94	64	⇑eP	Pn	06 59 40.1	-1.2
BUEV				iS	Sn	06 59 55.3	+1.8
GB1A	Borinquen Arri	0.95	63	⇑eP	Pn	06 59 40.4	-1.0
GB1A				eS	Sn	06 59 56.0	+2.1
GPS3	Bodega del ICE	0.96	67	iP	Pn	06 59 40.4	-1.1
GPS2	Hotel Rincn d	0.97	68	⇑eP	Pn	06 59 40.7	-1.0
GPS2				eS	Sn	06 59 55.2	+1.0
GPS1	Guardaparques	0.98	67	iP	Pn	06 59 40.7	-1.1
BUAI	Buenos Aires	1.04	62	iP	Pn	06 59 41.8	-0.8
LIM1	Limonal	1.04	72	iP	Pn	06 59 41.6	-1.0
GUAB	Guayabo de Bag	1.07	72	iP	Pn	06 59 41.9	-1.1
COLC	Colonia	1.08	75	iP	Pn	06 59 42.1	-1.0
MESS	Mesas	1.11	71	iP	Pn	06 59 42.5	-1.0
MESS				⇑iP		06 59 42.8	
MESS				eS	Sn	07 00 01.2	+3.5
CUI	Cuipilapa	1.11	76	⇑eP	Pn	06 59 43.0	-0.7
HORNC	Hornillas	1.11	73	iP	Pn	06 59 42.8	-0.9
ACAL	Aguas Claras	1.23	78	iP	Pn	06 59 44.7	-0.6
AMAS	Alto Masis	1.27	80	iP	Pn	06 59 44.9	-1.0
JTS	JuntasAbangare	1.29	94	P	Pn	06 59 44.9	-1.1
	61nm,0.3s,baz=338,slow=8.2,SNR=59						
JTS				S	Sn	07 00 01.0	-1.2
	82nm,0.3s,baz=68,slow=19,SNR=12						
JTS	JuntasAbangare	1.29	94	⇑iP	Pn	06 59 45.0	-1.1
CONN	Concepcion	1.33	28	eP	Pn	06 59 45.9	-0.7
ARE1	Arenal 1	1.52	87	⇑iP	Pn	06 59 49.3	+0.1
CEDE	Laguna Cedeo	1.54	86	⇑eP	Pn	06 59 49.8	+0.3
MASN	Masaya	1.60	4	eP	Pn	06 59 49.7	-0.6
MGAN	Managua	1.75	0	eP	Pn	06 59 51.6	-0.8
COPN	Copaltepe	1.81	350	eP	Pn	06 59 52.4	-0.8
ACON	Acoyapa	1.90	34	eP	Pn	06 59 54.0	-0.5
ACON				eS	Sn	07 00 19.5	+2.3
MOMN	Momotombo	2.03	352	eP	Pn	06 59 55.3	-0.9
BOAB	BOACO BROADBAN	2.13	16	ePn	Pn	06 59 56.8	-0.9
CNGN	Cerro Negro	2.15	349	eP	Pn	06 59 57.0	-0.9
HDC	Heredia	2.15	100	ePn	Pn	06 59 57.7	-0.2
HDC	Heredia	2.15	100	⇑eP	Pn	06 59 57.8	-0.2
SJS	Escuela Geolog	2.22	101	eP	Pn	06 59 59.2	+0.3
LCR2	La Lucha 2	2.31	106	eP	Pn	06 59 59.7	-0.6
CRIN	San Cristobal	2.43	342	⇑eP	Pn	07 00 00.5	-1.2
MATN	Matagalpa	2.55	7	⇑iP	Pn	07 00 03.0	-0.4
ESPN	Las Esperanzas	2.63	47	ePn	Pn	07 00 04.1	-0.4
ESPN	Las Esperanzas	2.63	47	eP	Pn	07 00 04.3	-0.2
ESTN	Estel	2.70	358	ePn	Pn	07 00 05.2	-0.4
ESTN	Estel	2.70	358	⇑eP	Pn	07 00 04.5	-1.0
061Z	Ochoppi	16.21	18	P	Pn	07 03 09.2	-0.2
	baz=198						
059Z	Ave Maria	16.51	15	P	Pn	07 03 13.0	-0.1
	baz=196						
SDDR	Presa de Saban	16.81	58	ePn	Pn	07 03 15.5	-1.5
859A	Kempfer Cattle	18.29	15	P	Pn	07 03 34.8	-0.4
	baz=196						
ATAH	Atahualpa	19.09	155	LR	LR	07 10 07.4	
	comp=Z,197nm,19.2s,baz=27,slow=33						
LNIG	Linares	19.12	321	eP	P	07 03 44.7	+0.5
	11nm,0.9s						
555A	McAlpin	19.88	8	eP	Pn	07 03 54.4	+0.2
	19nm,0.8s						
555A	McAlpin	19.88	8	P	P	07 03 52.7	+0.3
	baz=189						
454A	Quitman	20.38	7	P	Pn	07 03 58.8	-1.3
	baz=187						
351A	Pinckard	20.80	2	P	P	07 04 03.1	+0.7
	baz=181						
349A	Repton	20.88	358	P	P	07 04 04.6	+1.3
	baz=177						
353A	Camilla	20.95	5	P	P	07 04 04.7	+0.7
	baz=185,SNR=11						
352A	Blakely	21.03	3	P	P	07 04 05.5	+0.7
	baz=183						
355A	Pearson	21.10	8	P	P	07 04 06.1	+0.6
	baz=189						
TIGA	Tifton	21.10	6	P	P	07 04 06.4	+0.8
	baz=187						
250A	Grady	21.49	360	P	P	07 04 10.1	+0.4
	baz=179						
249A	Camden	21.50	358	P	P	07 04 10.4	+0.6
	baz=177						
252A	Lumpkin	21.55	4	P	P	07 04 11.5	+1.0
	baz=183,SNR=5.4						
251A	Midway	21.62	2	P	P	07 04 12.0	+0.9
	baz=182						
254A	Abbeville	21.63	7	P	P	07 04 12.3	+1.0
	baz=187						
833A	Chaparral WMA,	21.69	327	eP	P	07 04 13.0	+1.0
	9.3nm,0.9s						
833A	Chaparral WMA,	21.69	327	P	P	07 04 13.8	+1.8
	baz=142						
255A	Hazlehurst	21.72	9	P	P	07 04 12.9	+0.6
	baz=190						
256A	Glennville	21.87	10	P	P	07 04 14.4	+0.6
	baz=191						
151A	Opelika	22.05	2	P	P	07 04 16.2	+0.3
	baz=182,SNR=10						
149A	Jones	22.11	359	P	P	07 04 16.4	0.0
	baz=178,SNR=5.6						
150A	Eclectic	22.12	1	P	P	07 04 17.1	+0.6
	baz=180,SNR=17						
152A	Waverly Hall	22.22	3	eP	P	07 04 18.6	+1.0
	33nm,0.8s						
152A	Waverly Hall	22.22	3	P	P	07 04 17.6	0.0
	baz=183,SNR=17						
147A	Livingston	22.26	356	eP	P	07 04 19.7	+1.6
	29nm,1.0s						
147A	Livingston	22.26	356	P	P	07 04 18.7	+0.7
	baz=174						
154A	Montrose	22.31	7	eP	P	07 04 20.3	+1.7
	46nm,0.9s						
154A	Montrose	22.31	7	P	P	07 04 18.4	-0.2
	baz=188,SNR=5.7						
155A	Kite	22.41	8	P	P	07 04 19.5	-0.1
	baz=189						
LRAL	Lakeview Retre	22.55	358	eP	P	07 04 21.5	+0.3
	11nm,0.8s						
LRAL	Lakeview Retre	22.55	358	P	P	07 04 21.2	+0.1
	baz=178,SNR=7.1						
156A	Sylvania	22.60	11	P	P	07 04 21.9	+0.3
	baz=192						
NATX	Nacogdoches	22.65	341	eP	P	07 04 23.7	+1.5
	19nm,0.8s						
NATX	Nacogdoches	22.65	341	P	P	07 04 22.7	+0.5
	baz=158						
Z49A	Columbiana	22.70	359	P	P	07 04 22.9	+0.1
	baz=179,SNR=11						
Z52A	Williamson	22.76	4	P	P	07 04 22.9	-0.4
	baz=184,SNR=7.8						
Z50A	Ashland	22.76	1	eP	P	07 04 23.5	0.0
	15nm,0.9s						
Z50A	Ashland	22.76	1	P	P	07 04 23.7	+0.3
	baz=180,SNR=8.5						
Z51A	Franklin	22.85	2	P	P	07 04 24.4	+0.1
	baz=182						
435B	Jarrell	22.86	334	eP	P	07 04 26.3	+1.8
	12nm,0.7s						
435B	Jarrell	22.86	334	P	P	07 04 25.6	+1.1
	baz=150						
Z53A	Monticello	22.92	6	P	P	07 04 24.9	-0.1
	baz=186,SNR=8.0						
Z54A	Sparta	22.96	7	P	P	07 04 25.4	0.0
	baz=188						
GOGA	Godfrey	23.06	6	eP	P	07 04 27.1	+0.7
	9.6nm,0.9s						
GOGA	Godfrey	23.06	6	P	P	07 04 26.4	0.0
	baz=186,SNR=5.7						
Y49A	Blount Mountai	23.36	360	eP	P	07 04 29.8	+0.3
	11nm,0.8s						
Y49A	Blount Mountai	23.36	360	P	P	07 04 29.5	0.0
	baz=179,SNR=8.0						
Y50A	Piedmont	23.40	1	P	P	07 04 29.6	-0.2
	baz=181,SNR=14						
Y51A	Rockmart	23.43	3	P	P	07 04 29.4	-0.7
	baz=182,SNR=13						
Y48A	Jasper	23.43	358	P	P	07 04 29.6	-0.5
	baz=177,SNR=7.4						
Y52A	Lilburn	23.46	5	eP	P	07 04 30.7	+0.4
	22nm,0.8s						
Y52A	Lilburn	23.46	5	P	P	07 04 30.2	-0.1
	baz=185,SNR=11						
Y53A	Monroe	23.49	6	P	P	07 04 30.1	-0.6
	baz=186,SNR=12						
Y54A	Tignall	23.60	7	P	P	07 04 31.5	-0.2
	baz=188,SNR=14						
WHTX	Lake Whitney,	23.87	336	eP	P	07 04 35.0	+0.7
	9.9nm,0.8s						
X48A	Hartselle	23.97	358	eP	P	07 04 34.9	-0.2
	7.1nm,0.8s						
X48A	Hartselle	23.97	358	P	P	07 04 34.9	-0.2
	baz=178						
X50B	Fort Payne	23.97	1	P	P	07 04 35.0	-0.2
	baz=181,SNR=6.3						
X49A	Woodville	24.02	360	P	P	07 04 35.1	-0.5
	baz=179,SNR=5.1						
HODGE	Hodges	24.02	8	eP	P	07 04 35.6	0.0
	16nm,0.8s						
X47A	Russelville	24.07	357	P	P	07 04 35.5	-0.6
	baz=176,SNR=16						
X51A	Calhoun	24.11	3	eP	P	07 04 36.2	-0.2
	18nm,0.8s						
X51A	Calhoun	24.11	3	P	P	07 04 35.9	-0.5
	baz=183,SNR=6.6						
X46A	Booneville	24.16	355	P	P	07 04 36.0	-0.8
	baz=174						
X53A	Estanollee	24.16	6	P	P	07 04 36.5	-0.5
	baz=187						
OXF	Oxford	24.19	354	eP	P	07 04 36.9	-0.3
	24nm,1.0s						
OXF	Oxford	24.19	354	P	P	07 04 36.2	-0.9
	baz=172,SNR=6.7						
JSC	Jenkinsville	24.22	10	eP	P	07 04 37.9	+0.4
	22nm,0.7s						
X55A	Gracelyn & Ava	24.35	9	P	P	07 04 37.9	-0.7
	baz=190,SNR=12						
X56A	White Oak	24.47	10	P	P	07 04 39.0	-0.8
	baz=192,SNR=8.4						
PLAL	Pickwick Lake	24.54	356	eP	P	07 04 40.8	+0.4
	8.8nm,0.8s						
W49A	Belvidere	24.62	360	P	P	07 04 40.2	-1.0
	baz=179,SNR=11						
X57A	Johnson Farm,	24.62	12	P	P	07 04 40.3	-0.9
	baz=194						
W48A	Pulaski	24.65	359	P	P	07 04 40.8	-0.6
	baz=178,SNR=19						
PAULI	Pauline	24.66	9	eP	P	07 04 41.9	+0.4
	19nm,0.8s						
W52A	Murphy	24.69	5	eP	P	07 04 42.1	+0.3
	23nm,0.8s						
W52A	Murphy	24.69	5	P	P	07 04 41.4	-0.4
	baz=185,SNR=7.5						
W51A	Cleveland	24.70	3	P	P	07 04 41.4	-0.5
	baz=183,SNR=9.6						
W50A	Signal Mountai	24.72	2	eP	P	07 04 39.9	-2.2
	10nm,0.8s						
W50A	Signal Mountai	24.72	2	P	P	07 04 41.3	-0.7
	baz=182						
SWET	Sewanee	24.72	1	eP	P	07 04 41.1	-0.9
	14nm,0.9s						
W47A	Westpoint	24.78	357	P	P	07 04 42.2	-0.4
	baz=176,SNR=15						
W53A	Cullowhee	24.83	6	P	P	07 04 42.6	-0.6
	baz=187,SNR=6.0						
LTX	Lajitas	24.90	322	eP	P	07 04 45.3	+1.4
LTX				ePcP	PcP	07 08 20.1	+1.0
TXAR	Lajitas Array	24.90	322	P	P	07 04 45.3	+1.4
	2.2nm,0.7s,baz=136,slow=9.8,SNR=25						
TXAR				PcP	PcP	07 08 20.1	+1.0
	1.0nm,1.0s,baz=134,slow=5.2,SNR=4.2						
UALR	University of	24.91	348	eP	P	07 04 43.4	-0.3
	10.0nm,0.8s						
MIAR	Mount Ida	24.96	346	eP	P	07 04 43.9	-0.3
	8.2nm,0.9s						
MIAR	Mount Ida	24.96	346	P	P	07 04 44.3	0.0
	baz=162,SNR=5.8						
CPCT	Cooper Cave	25.00	3	eP	P	07 04 44.8	+0.2
	11nm,0.7s						
KMSC	Kings Mountain	25.05	10	eP	P	07 04 45.3	+0.2
	21nm,0.9s						
KMSC	Kings Mountain	25.05	10	P	P	07 04 44.7	-0.3
	baz=191,SNR=12						
V50A	Pikevile	25.20	2	P	P	07 04 45.9	-0.5
	baz=182,SNR=6.7						
V48A	Smith Brothers	25.25	359	eP	P	07 04 45.9	-0.9
	6.7nm,0.9s						
V48A	Smith Brothers	25.25	359	P	P	07 04 46.0	-0.8
	baz=178						
TKL	Tuckaleechee C	25.26	5	eP	P	07 04 46.6	-0.3
	16nm,1.1s						
TKL	Tuckaleechee C	25.26	5	P	P	07 04 45.0	-2.0
	5.7nm,0.6s,baz=178,slow=12,SNR=11						
V49A	McMinnville	25.27	1	P	P	07 04 46.1	-0.9
	baz=180,SNR=9.6						
W41B	Gary Mavity, V	25.27	348	eP	P	07 04 46.6	-0.4
	8.2nm,1.0s						
W41B	Gary Mavity, V	25.27	348	P	P	07 04 47.1	+0.1
	baz=166						
ABTX	Abilene, Hawle	25.34	333	eP	P	07 04 49.5	+1.8

	8.8nm,0.9s						
ABTX	Abilene, Hawle baz=147,SNR=5.1	25.34	333	P	P	07 04 48.5	+0.8
V47A	Nunnelly baz=177	25.36	358	P	P	07 04 47.8	+0.1
V46A	Holladay baz=175	25.36	356	P	P	07 04 47.9	+0.1
V51A	Loudon 17nm,0.8s	25.36	4	eP	P	07 04 48.2	+0.4
V51A	Loudon baz=184,SNR=8.4	25.36	4	P	P	07 04 47.0	-0.8
V53A	Saluda 9.7nm,0.6s	25.37	7	eP	P	07 04 48.1	+0.2
V53A	Saluda baz=187,SNR=6.9	25.37	7	P	P	07 04 47.4	-0.5
WHAR	Wooly Hollow 8.8nm,0.9s	25.39	348	eP	P	07 04 47.7	-0.4
V52A	Sevierville 8.7nm,0.9s	25.46	5	eP	P	07 04 48.6	-0.1
V52A	Sevierville baz=186	25.46	5	P	P	07 04 48.3	-0.4
W39A	Magazine	25.63	346	eP	P	07 04 49.2	-1.1
W39A	Magazine baz=162	25.63	346	P	P	07 04 50.0	-0.3
V41A	Mountainview baz=166	25.85	349	P	P	07 04 51.9	-0.4
U46A	Springville baz=175	25.92	356	P	P	07 04 52.3	-0.6
U50A	Jamestown baz=183,SNR=11	25.95	3	P	P	07 04 52.3	-0.9
U47A	Clarksville baz=177	25.96	358	P	P	07 04 52.2	-1.1
U51A	La Follette baz=184	25.96	4	P	P	07 04 52.5	-0.7
U44B	Burton Farm, H baz=172	25.99	354	P	P	07 04 52.9	-0.6
U48A	Cassie Pea, Po baz=179	26.01	359	P	P	07 04 53.3	-0.4
U49A	Red Boiling Sp baz=180,SNR=6.5	26.02	1	P	P	07 04 52.9	-0.9
U52A	Thorn Hill baz=186	26.03	5	P	P	07 04 53.3	-0.5
U53A	Fall Branch baz=188,SNR=9.9	26.08	7	P	P	07 04 53.2	-1.2
TZTN	Tazewell 5.4nm,0.8s	26.16	5	eP	P	07 04 55.2	+0.1
TZTN	Tazewell baz=186	26.16	5	P	P	07 04 53.9	-1.2
U42A	Revenden baz=168	26.24	351	P	P	07 04 55.2	-0.6
U41A	Viola baz=167	26.35	350	P	P	07 04 55.8	-1.0
T47A	Sharon Grove 13nm,0.9s	26.50	358	eP	P	07 04 57.7	-0.4
T47A	Sharon Grove baz=178,SNR=5.1	26.50	358	P	P	07 04 56.9	-1.2
U40A	Yellville baz=165	26.54	348	P	P	07 04 58.1	-0.4
T51A	Gray baz=185	26.55	4	P	P	07 04 57.9	-0.7
T50A	Nancy baz=183	26.55	3	P	P	07 04 57.9	-0.6
T46A	Princeton baz=176	26.58	357	P	P	07 04 58.0	-0.8
T45A	Paducah 20nm,0.5s	26.61	356	eP	P	07 04 58.7	-0.3
T49A	Edmonton 21nm,0.3s	26.61	1	eP	P	07 04 58.6	-0.5
T53A	Wise baz=188	26.70	7	P	P	07 04 59.2	-0.7
HHAR	Hobbs 3.5nm,0.9s	26.71	346	eP	P	07 04 59.5	-0.5
T52A	Hallie baz=187	26.77	6	P	P	07 04 59.8	-0.8
WMOK	Wichita Mounta 9.6nm,1.0s	26.80	337	eP	P	07 05 03.9	+3.0
WMOK	Wichita Mounta baz=151,SNR=11	26.80	337	P	P	07 05 01.4	+0.4
T43A	Greenville baz=171	26.83	353	P	P	07 05 00.5	-0.6
T42A	Van Buren 5.7nm,1.0s	26.89	351	eP	P	07 05 00.6	-1.0
T42A	Van Buren baz=169	26.89	351	P	P	07 05 01.1	-0.5
T54A	Tazewell baz=190	26.89	8	P	P	07 05 01.2	-0.6
T41A	Mountain View baz=168	27.00	350	P	P	07 05 02.1	-0.5
S47A	Hartford baz=178	27.10	359	P	P	07 05 03.0	-0.5
S48A	Wiedeman Farm, baz=180	27.16	0	P	P	07 05 03.2	-0.8
S46A	Don Dixon Farm baz=176	27.21	357	P	P	07 05 03.5	-1.0
BLA	Blacksburg baz=192	27.23	10	P	P	07 05 03.8	-0.9
S50A	Richmond baz=184	27.23	3	P	P	07 05 04.1	-0.5
S51A	Beattyville 17nm,0.8s	27.24	5	eP	P	07 05 04.5	-0.3
S51A	Beattyville baz=185,SNR=8.0	27.24	5	P	P	07 05 04.0	-0.8
S43A	Fulton Ridge, baz=171	27.29	353	P	P	07 05 05.0	-0.2
S49A	Springfield baz=182	27.30	2	P	P	07 05 04.6	-0.7
S44A	Carbondale baz=173	27.32	355	P	P	07 05 05.3	-0.3
S53A	Williamson baz=188	27.43	7	P	P	07 05 06.0	-0.6
S42A	Caledonia baz=170	27.57	352	P	P	07 05 07.4	-0.3
MNTX	Cornudas Mount baz=136	27.63	323	P	P	07 05 09.1	+0.8
WCI	Wyandotte Cave 15nm,0.8s	27.73	360	eP	P	07 05 08.1	-1.0
WCI	Wyandotte Cave baz=179	27.73	360	P	P	07 05 08.2	-0.9
S55A	Lewisburg baz=192	27.76	10	P	P	07 05 08.7	-0.8
R47A	Wooly Knot Far baz=179	27.79	360	P	P	07 05 08.9	-0.8
R49A	Shelbyville baz=182	27.81	2	P	P	07 05 09.1	-0.7
R50A	Paris baz=184	27.83	3	P	P	07 05 09.3	-0.7
R45A	Skylar, Fairfi baz=175	27.85	357	P	P	07 05 09.0	-1.2
R44A	Waltonville baz=174	27.86	355	P	P	07 05 09.8	-0.5
R51A	Hillsboro baz=185,SNR=12	27.90	5	P	P	07 05 09.8	-0.8
CCM	Cathedral Cave 6.4nm,0.9s	27.91	352	eP	P	07 05 10.0	-0.8
CCM	Cathedral Cave baz=169	27.91	352	P	P	07 05 10.5	-0.3
MSTX	Muleshoe 3.9nm,0.8s	27.93	330	eP	P	07 05 13.0	+1.8
MSTX	Muleshoe baz=143	27.93	330	P	P	07 05 11.2	+0.1
R43A	Red Bud baz=172	27.97	354	P	P	07 05 10.2	-1.0
R52A	Catlettsburg baz=187	28.02	6	P	P	07 05 10.9	-0.8
R54A	Victor baz=191	28.08	9	P	P	07 05 11.1	-1.2
R53A	Hurricane baz=188	28.09	7	P	P	07 05 11.7	-0.8
R55A	Marlinton baz=192	28.32	10	P	P	07 05 13.9	-0.6
Q48A	North Vernon baz=181	28.43	1	P	P	07 05 14.3	-1.1
Q47A	Bedord North L baz=179,SNR=7.1	28.43	360	P	P	07 05 14.4	-1.0
Q45A	Warren Harvey, baz=176	28.44	357	P	P	07 05 14.6	-0.9
Q44A	Meyer Farm, Va baz=174	28.51	355	P	P	07 05 15.4	-0.6
Q49A	Aurora baz=182	28.53	2	P	P	07 05 15.2	-1.0
Q51A	Peebles 44nm,0.7s	28.64	5	eP	P	07 05 17.1	-0.2
Q51A	Peebles baz=186,SNR=17	28.64	5	P	P	07 05 16.5	-0.7
Q52A	Bidwell baz=188,SNR=9.9	28.68	6	P	P	07 05 16.9	-0.8
Q54A	Coxs Mills baz=191,SNR=6.3	28.89	9	P	P	07 05 18.6	-0.9
P48A	Milroy baz=181	28.97	1	P	P	07 05 19.1	-1.0
Q55A	Buckhannon baz=192	29.02	10	P	P	07 05 19.9	-0.8
P44A	Sand Creek, Wi baz=175	29.04	356	P	P	07 05 20.5	-0.3
P45A	Graceland, Par baz=176	29.05	358	P	P	07 05 20.3	-0.7
P51A	Williamsport 10nm,0.8s	29.12	5	eP	P	07 05 20.7	-0.8
P51A	Williamsport baz=186	29.12	5	P	P	07 05 20.7	-0.8
P46A	Rosedale baz=178	29.12	359	P	P	07 05 20.5	-1.0
P50A	Jamestown baz=184	29.19	4	P	P	07 05 20.8	-1.3
P53A	Whipple 22nm,0.8s	29.31	8	eP	P	07 05 23.3	+0.2
P53A	Whipple baz=189,SNR=8.4	29.31	8	P	P	07 05 22.2	-1.0
P52A	Corning baz=188,SNR=10	29.36	7	P	P	07 05 22.6	-1.0
P41A	Barry, Barry baz=170	29.48	352	P	P	07 05 22.5	-2.2
P54A	Burton baz=191	29.55	9	P	P	07 05 24.1	-1.2
P55A	Reedsville baz=192	29.57	10	P	P	07 05 24.3	-1.2
MCWV	Mont Chateau baz=192	29.71	10	P	P	07 05 25.8	-0.9
O47A	Sheridan baz=180	29.73	0	P	P	07 05 25.9	-1.1
O49A	Covington baz=183	29.73	3	P	P	07 05 25.4	-1.5
O50A	Cable baz=185,SNR=12	29.73	4	P	P	07 05 25.4	-1.6
O45A	Potomac baz=177	29.77	358	P	P	07 05 25.9	-1.3
O51A	Pataskala baz=187,SNR=5.4	29.82	6	P	P	07 05 26.3	-1.4
ACSO	Alum Creek Sta 16nm,0.6s	29.87	5	eP	P	07 05 27.6	-0.5
ACSO	Alum Creek Sta baz=186,SNR=6.3	29.87	5	P	P	07 05 26.7	-1.5
O52A	Adamsville 19nm,0.8s	29.87	7	eP	P	07 05 27.8	-0.4
O52A	Adamsville baz=188,SNR=8.7	29.87	7	P	P	07 05 26.7	-1.5
SFIN	Lafayette baz=178	29.88	359	P	P	07 05 27.1	-1.1
O53A	New Philadelph baz=190,SNR=8.7	30.08	8	P	P	07 05 28.4	-1.7
HDIL	Hopedale 20nm,0.9s	30.17	355	eP	P	07 05 29.9	-0.9
HDIL	Hopedale baz=174	30.17	355	P	P	07 05 29.1	-1.7
N48A	Decatur baz=182	30.37	2	P	P	07 05 30.9	-1.7
N50A	Nevada baz=186	30.39	5	P	P	07 05 31.3	-1.4
N46A	Monticello baz=179	30.39	359	P	P	07 05 31.3	-1.5
N49A	Columbus Grove 21nm,0.7s	30.47	3	eP	P	07 05 32.5	-0.9
N49A	Columbus Grove baz=184,SNR=7.4	30.47	3	P	P	07 05 31.7	-1.7
N43A	Stutzman Famil baz=174	30.54	356	P	P	07 05 32.5	-1.6
ANMO	Albuquerque 1.4nm,0.8s,baz=129,slow=6.0,SNR=8.8	30.61	326	P	P	07 05 35.7	+0.7
N53A	Lisbon baz=190	30.68	8	P	P	07 05 33.9	-1.4
PAGS	Pennsylvania G 18nm,0.8s	30.91	14	eP	P	07 05 37.5	+0.2
N55A	Marion Center baz=194	30.95	11	P	P	07 05 36.6	-1.1
M48A	Edgerton baz=182	31.01	2	P	P	07 05 37.1	-1.1
M50A	Fremont baz=186	31.03	5	P	P	07 05 37.3	-1.1
SSPA	Standing Stone 7.8nm,0.8s	31.03	12	eP	P	07 05 38.1	-0.3
SSPA	Standing Stone baz=196	31.03	12	P	P	07 05 37.6	-0.8
M49A	Liberty Center baz=184	31.03	3	P	P	07 05 37.5	-0.9
M53A	WI Miller and baz=190,SNR=5.7	31.32	8	P	P	07 05 40.0	-0.9
M39A	Webster baz=168	31.41	351	P	P	07 05 40.4	-1.3
L48A	N Adams baz=183	31.48	3	P	P	07 05 41.0	-1.4
L47A	Sherwood baz=182	31.48	2	P	P	07 05 41.6	-0.8
L46A	Eue Claire baz=180	31.51	360	P	P	07 05 41.1	-1.5
M54A	Oil Creek Stat baz=192	31.54	9	P	P	07 05 41.4	-1.5
L42A	Oliver, Polo 22nm,0.8s	31.64	355	eP	P	07 05 42.2	-1.5
L42A	Oliver, Polo baz=173	31.64	355	P	P	07 05 42.9	-0.8
M55A	Ridgway baz=194	31.66	11	P	P	07 05 42.6	-1.3
L49A	Milan baz=184	31.68	4	P	P	07 05 43.4	-0.7
L50A	Kingsville baz=186	31.68	5	P	P	07 05 43.4	-0.7
L41A	Preston baz=172	31.79	354	P	P	07 05 44.4	-0.7
N59A	State Game Lan 9.9nm,0.8s	31.79	15	eP	P	07 05 45.9	+0.7
N59A	State Game Lan baz=199	31.79	15	P	P	07 05 43.8	-1.4
L53A	Girard baz=191	31.89	8	P	P	07 05 45.2	-0.8
K47A	Vermontville baz=182	32.18	2	P	P	07 05 47.0	-1.5
SDCO	Great Sand Dun 2.2nm,0.8s	32.27	331	eP	P	07 05 50.1	+0.4
SDCO	Great Sand Dun baz=142,SNR=6.3	32.27	331	P	P	07 05 49.0	-0.8
K41A	Shullsburg baz=172	32.29	354	P	P	07 05 48.5	-1.0
K48A	Perry baz=184	32.35	3	P	P	07 05 48.5	-1.5
L55A	Hinsdale baz=194	32.41	11	P	P	07 05 49.4	-1.1
JFWS	Jewell Farm baz=172	32.59	355	P	P	07 05 51.4	-0.7
BINY	Binghamton 10nm,0.8s	32.95	14	eP	P	07 05 55.3	+0.1
BINY	Binghamton baz=198	32.95	14	P	P	07 05 53.8	-1.5
J40A	Soldiers Grove baz=172	33.12	354	P	P	07 05 55.9	-0.8
J39A	Decorah baz=170	33.17	353	P	P	07 05 56.0	-1.1
I43A	Langenfeld Bro baz=176	33.42	358	P	P	07 05 58.3	-1.0
ACTO	Acton baz=191	33.54	8	P	P	07 05 59.1	-1.2
I40A	Norwalk baz=172	33.60	354	P	P	07 06 00.2	-0.7
I39A	Houston baz=170	33.66	353	P	P	07 06 00.7	-0.7
I41A	Arkdale baz=173	33.70	355	P	P	07 06 00.8	-1.0
DRCO	St. Marys Ceme baz=193	34.01	10	P	P	07 06 02.9	-1.5
PV03	Paradox Valley 2.2nm,0.8s	34.35	328	eP	P	07 06 09.1	+1.3
PV12	Saucer Basin, 5.0nm,0.8s	34.38	328	eP	P	07 06 10.4	+2.4
ECSD	EROS Data Cent baz=161	34.42	347	P	P	07 06 06.3	-1.7
PV17	East Wray Mesa 4.4nm,0.7s	34.43	328	eP	P	07 06 10.7	+2.2
SADO	Sadowa 3.7nm,0.6s,baz=225,slow=6.9,SNR=4.4	34.81	9	P	P	07 06 07.5	-3.9
G39A	Holcombe baz=171	35.03	354	P	P	07 06 12.0	-1.3
H56A	Elgin baz=197	35.16	12	P	P	07 06 13.4	-1.0
LONY	Lake Ozonia 10nm,0.8s	35.57	14	eP	P	07 06 17.0	-0.9
LONY	Lake Ozonia baz=200	35.57	14	P	P	07 06 16.8	-1.1
F39A	Loretta baz=172	35.63	354	P	P	07 06 16.9	-1.5
G55A	Calabogie baz=196	35.70	12	P	P	07 06 18.0	-1.0
F38A	Pierce - Schro baz=170	35.77	353	P	P	07 06 18.3	-1.4
E39A	Mellen baz=172	36.06	355	P	P	07 06 21.9	-0.2
ALGO	Algonquin Park baz=193	36.14	10	P	P	07 06 21.6	-1.2
ALFO	Alfred baz=199	36.45	13	P	P	07 06 24.2	-1.2
E53A	Dumoine, Ponti baz=194	36.61	10	P	P	07 06 25.5	-1.3
D54A	Lac Fusel, La baz=195	37.54	11	P	P	07 06 33.3	-1.4
PKME	Peaks-Kenny Pk 12nm,0.9s	37.69	20	eP	P	07 06 36.3	+0.4
PD31	Pinedale Array	38.13	332	eP	P	07 06 40.4	+0.3
PDAR	Pinedale Array	38.13	332	eP	P	07 06 40.9	+0.9
PDAR				PcP	PcP	07 08 55.4	+1.0
PDAR	Pinedale Array 0.7nm,0.7s,baz=116,slow=11,SNR=8.6	38.13	332	P	P	07 06 40.1	0.0
PDAR	0.3nm,0.7s,baz=104,slow=3.8,SNR=3.1			PcP	PcP	07 08 55.4	+1.0
LATQ	La Tuque baz=201	38.60	15	P	P	07 06 42.3	-1.2
MDND	Maddock baz=158	39.00	346	P	P	07 06 46.2	-0.7
REDW	Red Top Meadow 2.7nm,0.8s	39.20	331	eP	P	07 06 50.5	+1.5
LSQQ	Lebel-sur-Quev baz=194	39.32	10	P	P	07 06 48.2	-1.4
MATQ	Matagami baz=193	39.90	9	P	P	07 06 52.9	-1.5
NV01	Mina Array Sit	40.02	320	eP	P	07 06 58.0	+2.2
NV01				ePcP	PcP	07 09 04.4	+4.0
NVAR	Mina Array Bea 2.5nm,0.8s,baz=135,slow=7.2,SNR=19	40.02	320	P	P	07 06 57.6	+1.7
NVAR	1.3nm,0.8s,baz=133,slow=5.0,SNR=7.4			PcP	PcP	07 09 02.9	+2.5
MDPB	Devils Postpil 5.7nm,1.1s	40.06	318	eP	P	07 06 59.7	+3.4
KVN	Kaiserville 4.3nm,1.1s	40.26	321	eP	P	07 07 00.5	+2.8
YHB	Horse Butte 5.2nm,1.1s	40.42	332	eP	P	07 07 00.9	+1.8
ULM	Lac du Bonnet 2.3nm,0.8s,baz=191,slow=4.1,SNR=6.1	40.53	351	P	P	07 06 56.3	-3.3
BATG	Bathurst New B 9.7nm,0.9s	40.55	21	eP	P	07 07 00.1	+0.2
BMN	Battle Mountai 3.7nm,0.8s	40.56	323	eP	P	07 07 02.4	+2.1
YERR	Yerington 1.9nm,0.7s	40.94	320	eP	P	07 07 06.3	+2.9
HLID	Hailey baz=135	41.10	329	P	P	07 07 05.0	+0.4
EGMT	Eagleton 3.2nm,0.8s	42.40	337	eP	P	07 07 15.8	+0.7
EGMT	Eagleton baz=144	42.40	337	P	P	07 07 15.2	+0.1
WVOR	Wild Horse Val 2.1nm,0.8s	42.65	324	eP	P	07 07 18.9	+1.7
J08A	Circle Bar Ran 0.9nm,0.8s	43.14	325	eP	P	07 07 24.6	+3.3
O03E	Paynes Creek baz=123	43.31	320	P	P	07 07 22.7	+0.1
BMO	Blue Mountains 1.5nm,0.8s	43.49	328	eP	P	07 07 25.3	+1.2
O02D	Mt. Diablo Mer baz=122	43.88	319	P	P	07 07 27.7	+0.6
M04C	Macdoel baz=124	44.16	321	P	P	07 07 30.4	+0.8
J05D	Fort Rock, OR baz=126	44.68	323	P	P	07 07 34.1	+0.5
PINE	Pine Mountain 4.1nm,0.8s	44.81	324	eP	P	07 07 35.9	+1.1
L02E	Cave Junction baz=123	45.47	321	P	P	07 07 40.0	+0.3
I04A	Tendick Farm, baz=126	45.67	323	P	P	07 07 41.8	+0.5
H04A	Detroit Lake 6.6nm,0.9s	46.07	324	eP	P	07 07 46.2	+1.8
SCHQ	Schefferville 1.3nm,0.8s	46.93	15	eP	P	07 07 48.9	-2.1
SCHQ	Schefferville 4.4nm,0.8s,baz=207,slow=8.1,SNR=8.3	46.93	15	P	P	07 07 48.0	-3.1
FCC	Fort Churchill 2.1nm,0.9s	48.64	355	eP	P	07 08 04.1	0.0
YKA	Yellowknife Ar 0.9nm,0.8s,baz=138,slow=7.2,SNR=16	55.90	345	P	P	07 08 56.1	-1.9
YKA	0.2nm,0.7s,baz=142,slow=3.9,SNR=4.0			PcP	PcP	07 09 57.1	+0.9
RES	Resolute Bay 1.4nm,0.8s	64.46	357	eP	P	07 09 54.8	-1.6
EPYK	Eagle Plains baz=123	65.39	340	P	P	07 10 02.6	0.0
HDA	Harding Lake baz=112	68.25	336	P	P	07 10 20.8	0.0
ILAR	Eielson Array 0.9nm,0.9s,baz=114,slow=5.1,SNR=7.8	68.37	336	P	P	07 10 21.1	-0.5
TOLK	Toolik Lake Re baz=111	70.82	340	P	P	07 10 36.4	-0.3
LZH	Lanzhou	132.81	349	ePKP	PKPdf	07 18 36.3	+0.3
LZH				pPKP	pPKPdf	07 18 50.6	+2.2
LZH				sPKP		07 18 56.1	
NACB	Ninganchiao	136.18	322	ePKPdf	PKPdf	07 18 43.2	+0.9
ASAR	Alice Springs 0.2nm,0.4s,baz=104,slow=1.9,SNR=4.5	139.53	246	PKP	PKPdf	07 18 49.4	+0.9
CMAR	Chiang Mai Arr 1.1nm,0.4s,baz=341,slow=3.6,SNR=6.8	150.88	350	PKPbc	PKPbc	07 19 13.2	-0.5

DJA 16 06:59:53.0±0.8, 1˚N±5˚×12˚2E±˚, h87km±7km, M2.7/5, MLv2.7/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	0.23	241	P	Pn	07 00 06.8	+1.1
MRSI				S	Sn	07 00 17.7	+2.5
APSI	Ampana	1.57	198	P	Pn	07 00 18.6	-0.9
LUWI	Luwuk	1.74	159	P	Pn	07 00 22.7	+1.0

IDC 16 07:03:40.0±4.5, 13˚92N×92˚68W, h0km, mb3.5/3, mb1 3.6/6, mb1mx3.4/37, mbtmp3.3/6, ML3.1/3, Error ellipse: s-maj=80.1km s-min=19.1km az=173.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APG	El Apazote 2.3nm,0.3s,baz=320,slow=9.8,SNR=10.0	2.40	63	Pn	Pn	07 04 21.8	+0.9
APG	5.3nm,0.3s,baz=142,slow=8.4,SNR=5.2			Lg	Lg	07 04 56.0	
CMIG	Matias Romero 0.9nm,0.3s,baz=158,slow=13,SNR=6.9	3.80	326	Pn	Pn	07 04 39.5	-0.4
CMIG	0.9nm,0.3s,baz=110,slow=12,SNR=5.7			Sn	Sn	07 05 17.3	-8.0
TXAR	Lajitas Array 0.0nm,0.3s,baz=150,slow=15,SNR=3.3	18.41	328	P	P	07 07 58.5	+1.5
ULM	Lac du Bonnet 1.1nm,0.6s,baz=198,slow=6.4,SNR=2.7	36.33	357	P	P	07 10 45.8	+0.4
YKA	Yellowknife Ar 0.5nm,0.8s,baz=152,slow=7.6,SNR=11	50.96	347	P	P	07 12 42.0	-1.1
ILAR	Eielson Array 0.2nm,0.8s,baz=118,slow=8.0,SNR=2.8	62.66	337	P	P	07 14 06.1	-0.1

IDC 16 07:04:23.0±1.7, 10˚68S×165˚26E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/26, mbtmp3.9/5, ML4.5/1, Error ellipse: s-maj=52.5km s-min=28.6km az=131.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac 3.0nm,0.3s,baz=318,slow=18,SNR=36	11.39	174	Pn	Pn	07 07 07.0	0.0
CTA	Charters Tower 3.2nm,0.8s,baz=80,slow=13,SNR=3.7	20.56	241	P	Pn	07 09 04.7	-0.9
WRA	Warramunga Arr 0.9nm,0.7s,baz=81,slow=8.4,SNR=4.7	31.17	249	P	P	07 10 43.2	-0.7
ASAR	Alice Springs 1.3nm,0.9s,baz=66,slow=10.0,SNR=14	32.54	243	P	P	07 10 55.9	-0.1
ILAR	Eielson Array 0.3nm,0.8s,baz=236,slow=6.4,SNR=3.5	83.32	19	P	P	07 16 51.5	+0.1

*IDC **16** 07:19:02.0±6.2, 34.°63S×179.°92E, h46^{km}±51^{km}, mb4.2/6, mb1 4.3/6, mb1mx3.8/36, mbtmp4.4/6, ML4.9/1, Error ellipse: s-maj=49.8km s-min=22.3km az=49.0*
*NEIC **16** 07:19:04.7±2.1, 35.°09S×179.°76E, h66^{km}±18^{km}, mb4.3/13, ML4.7(WEL), Error ellipse: s-maj=20.5km s-min=14.6km az=198.0*
*ISCJB **16** 07:19:06.7±0.5, 35.°23S±0.°04×179.°96E±0.°08, h100^{km}, mb4.4/18, Error ellipse: s-maj=10.2km s-min=4.3km az=17.5*
*WEL **16** 07:19:06.6±1.0, 35°S±11°×18°0W±1°3, h111^{km}±45^{km}*
ISC 16 07:19:07.8±0.4**, 35.°31S**±0.°05×**179.°91W**±0.°06**, h100**^{km}**, n179, σ2^{s}10**/167**, mb4.4**/18**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.67	212	*e*Pn	Pn	07 19 48.5	-0.7
MXZ	Matakaoa Point	2.67	212	P	Pn	07 19 49.2	+0.1
WMGZ	Waiomatatini S	2.84	208	P	Pn	07 19 52.7	+1.2
WMGZ				S	Sn	07 20 28.5	+3.5
PKGZ	Pakihiroa	3.04	212	P	Pn	07 19 56.1	+1.9
PKGZ				S	Sn	07 20 30.9	+1.0
HAZ	Te Kaha	3.07	217	P	Pn	07 19 54.1	-0.3
PUZ	Puketiti	3.12	208	P	Pn	07 19 55.6	+0.4
RUGZ	Raukumara Rang	3.28	216	P	Pn	07 19 57.3	-0.2
RUGZ				S	Sn	07 20 37.3	+1.6
TWGZ	Tauwhareparae	3.32	210	P	Pn	07 19 58.9	+1.0
CNGZ	Carnagh Statio	3.51	205	P	Pn	07 20 03.2	+2.8
CNGZ				S	Sn	07 20 43.5	+2.6
WHRZ	Whale Island	3.57	224	P	Pn	07 20 03.3	+2.1
TKGZ	Te Karaka	3.60	209	P	Pn	07 20 01.5	-0.1
MWZ	Matawai	3.65	214	P	Pn	07 20 01.8	-0.5
URZ	Urewera	3.79	218	P	Pn	07 20 03.5	-0.7
	68nm,0.3s,baz=274,slow=4.3,SNR=127						
URZ				S	Sn	07 20 46.2	-1.6
	50nm,0.3s,baz=20,slow=20,SNR=5.0						
URZ	Urewera	3.79	218	P	Pn	07 20 03.9	-0.2
URZ				S	Sn	07 20 54.6	+6.8
OPRZ	Ohinepanea	3.81	227	P	Pn	07 20 04.7	+0.4
MARZ	Manawahe	3.83	225	P	Pn	07 20 05.9	+1.2
RAGZ	Rawiri	3.83	213	P	Pn	07 20 04.5	-0.3
RIGZ	Rimuhau	3.87	208	P	Pn	07 20 05.4	+0.2
RIGZ				P	Pn	07 20 06.0	+0.8
RIGZ				S	Sn	07 20 50.6	+0.9
EDRZ	Edgecumbe	3.88	223	P	Pn	07 20 06.6	+1.2
TGRZ	Tauranga	3.92	231	P	Pn	07 20 05.4	-0.4
LIRZ	Lichensteins R	4.01	227	P	Pn	07 20 08.2	+1.0
PRGZ	Paritu Road	4.01	205	P	Pn	07 20 07.2	0.0
PRGZ				S	Sn	07 20 55.1	+1.9
MKRZ	Makatiti	4.05	225	P	Pn	07 20 10.4	+2.6
OMRZ	Omania	4.09	226	P	Pn	07 20 09.8	+1.6
TARZ	Mount Tarawera	4.10	224	P	Pn	07 20 09.4	+1.0
SNGZ	Shannon Statio	4.10	212	P	Pn	07 20 09.0	+0.6
SNGZ				S	Sn	07 20 55.7	+0.3
KARZ	Kaharoa	4.11	228	P	Pn	07 20 08.4	0.0
MUGZ	Murupara	4.13	219	P	Pn	07 20 07.5	-1.2
RTZ	Ruatahuna	4.13	216	P	Pn	07 20 08.3	-0.5
RRRZ	Republican Roa	4.17	222	P	Pn	07 20 09.8	+0.5
KNZ	Kokohu	4.17	207	P	Pn	07 20 09.3	0.0
KMRZ	Kaimai	4.19	232	P	Pn	07 20 09.2	-0.4
NGRZ	Ngongotaha	4.19	227	P	Pn	07 20 11.5	+1.8
HLRZ	Highlands Stat	4.20	225	P	Pn	07 20 13.8	+4.1
MHGZ	Mahia Peninsul	4.21	204	P	Pn	07 20 09.4	-0.4
UTU	Utuhina	4.24	226	P	Pn	07 20 16.4	+6.2
HSRZ	Hossack Road	4.30	225	P	Pn	07 20 14.4	+3.3
RAHZ	Arahi	4.33	213	P	Pn	07 20 12.0	+0.6
HRRZ	Handcock Road	4.33	224	P	Pn	07 20 15.7	+4.2
PRRZ	Plateau Road	4.35	222	P	Pn	07 20 11.9	+0.2
MTHZ	Maungataniwha	4.39	215	P	Pn	07 20 12.2	0.0
WHHZ	Waihua	4.39	210	P	Pn	07 20 12.7	+0.4
GRRZ	Galatos Road	4.40	225	P	Pn	07 20 16.7	+4.3
TOZ	Tahuroa Road	4.41	236	P	Pn	07 20 12.6	+0.1
ALRZ	Allen Road	4.42	222	P	Pn	07 20 13.6	+0.9
WPRZ	Whakapapatarin	4.49	223	P	Pn	07 20 14.6	+1.0
KBAZ	Karaka Road Bo	4.57	246	P	Pn	07 20 15.7	+1.0
MRHZ	Matea Rd	4.58	219	P	Pn	07 20 14.0	-0.9
NMHZ	Naumai	4.60	214	P	Pn	07 20 14.7	-0.4
ARHZ	Aropaoanui	4.65	211	P	Pn	07 20 16.3	+0.5
KUTZ	Kaahu Road	4.66	226	P	Pn	07 20 17.2	+1.2
RVAZ	Riverhead Bore	4.70	250	P	Pn	07 20 18.2	+1.8
WHTZ	Whakaora	4.71	223	P	Pn	07 20 19.6	+3.0
TLZ	Tolley Road	4.73	229	P	Pn	07 20 17.6	+0.7
HATZ	Hinemaiaia	4.79	221	P	Pn	07 20 17.9	+0.2
BKZ	Black Stump Fm	4.80	216	*e*Pn	Pn	07 20 15.7	-2.1
BKZ	Black Stump Fm	4.80	216	P	Pn	07 20 17.0	-0.9
WATZ	Wairara	4.86	225	P	Pn	07 20 19.1	+0.5
MCHZ	McNeill Hill	4.93	212	P	Pn	07 20 19.0	-0.6
RATZ	Rangitukua	4.95	223	P	Pn	07 20 20.4	+0.5
CKHZ	Cape Kidnapper	4.96	208	P	Pn	07 20 19.3	-0.6
RITZ	Rihia Road	4.98	222	P	Pn	07 20 20.6	+0.3
KWHZ	Kaweka Forest	5.04	214	P	Pn	07 20 20.1	-1.0
KATZ	Kakaramea	5.07	223	P	Pn	07 20 27.1	+5.6
KAHZ	Kahuranaki	5.15	209	P	Pn	07 20 21.3	-1.3
KAHZ	Kahuranaki	5.15	209	P	Pn	07 20 21.8	-0.8
KRVZ	Karewarewa	5.18	222	P	Pn	07 20 23.0	-0.1
WTVZ	West Tongariro	5.23	222	P	Pn	07 20 23.9	+0.2
WTVZ	West Tongariro	5.23	222	P	Pn	07 20 24.2	+0.5
BHHZ	Black Hill Sta	5.26	216	P	Pn	07 20 22.5	-1.6
NGZ	Ngauruhoe	5.26	222	P	Pn	07 20 23.6	-0.6
HIZ	Hauiti	5.27	231	*e*Pn	Pn	07 20 23.0	-1.2
HIZ	Hauiti	5.27	231	P	Pn	07 20 23.8	-0.4
TWVZ	Taurewa	5.28	223	P	Pn	07 20 24.5	+0.1
TUVZ	Tukino	5.30	221	P	Pn	07 20 25.6	+0.9
COVZ	Chateau Observ	5.31	222	P	Pn	07 20 25.1	+0.2
FWVZ	Far West T-bar	5.34	221	P	Pn	07 20 25.2	-0.2
WHVZ	Whangaehu Hut	5.35	221	P	Pn	07 20 30.1	+4.7
MOVZ	Moawhango	5.35	219	P	Pn	07 20 23.7	-1.7
DRZ	Dome Shelter	5.35	221	P	Pn	07 20 30.4	+4.8
PXZ	Pawanui	5.36	208	P	Pn	07 20 23.9	-1.5
TRVZ	Turoa	5.38	221	P	Pn	07 20 25.0	-0.8
PKVZ	Pokaka	5.48	222	P	Pn	07 20 27.3	+0.2
MTVZ	Mangateitei	5.48	221	P	Pn	07 20 28.9	+1.8
WPHZ	Waipukurau	5.56	210	P	Pn	07 20 28.2	+0.1
PRHZ	Porangahau	5.65	208	P	Pn	07 20 28.0	-1.4
VRZ	Vera Road	5.71	227	P	Pn	07 20 33.4	+3.3
TSZ	Takapari Road	5.76	213	P	Pn	07 20 29.7	-1.2
DVHZ	Dannevirke	5.87	211	P	Pn	07 20 30.0	-2.3
WAZ	Wanganui	6.01	221	P	Pn	07 20 34.4	+0.2
DREZ	Durham Road	6.08	229	P	Pn	07 20 39.8	+4.5
POWZ	Post Office Ro	6.12	213	P	Pn	07 20 35.2	-0.4
LREZ	Lake Rotokare	6.13	226	P	Pn	07 20 41.6	+5.7
BFZ	Birch Farm	6.16	208	*e*Pn	Pn	07 20 33.6	-2.6
BFZ	Birch Farm	6.16	208	P	Pn	07 20 33.3	-2.9
PRWZ	Pori Road	6.16	211	P	Pn	07 20 34.9	-1.4
PREZ	Palmer Road	6.21	228	P	Pn	07 20 41.6	+4.7
PKE	Pukeiti	6.22	230	P	Pn	07 20 42.1	+5.0
KHEZ	Kahui Hut	6.26	229	P	Pn	07 20 41.4	+3.6
NBEZ	Newall Road No	6.34	230	P	Pn	07 20 43.4	+4.8
CPWZ	Castlepoint	6.37	208	P	Pn	07 20 37.4	-1.7
MRZ	Mangatainoka R	6.42	212	P	Pn	07 20 36.8	-3.0
HOWZ	Holdsworth Sta	6.64	212	P	Pn	07 20 39.2	-3.6
TMWZ	Te Maipa	6.66	208	P	Pn	07 20 39.8	-3.3
OGWZ	Otaki Gorge	6.73	214	P	Pn	07 20 41.2	-2.7
MTW	Mount Morrison	6.86	210	P	Pn	07 20 42.4	-3.3
KIW	Kapiti Island	6.88	215	P	Pn	07 20 42.6	-3.5
CAW	Cannon Point	7.01	213	P	Pn	07 20 44.2	-3.5
SNZO	South Karori	7.33	214	*e*Pn	Pn	07 20 48.4	-3.7
THZ	Tophouse	8.55	219	*e*Pn	Pn	07 21 04.8	-4.0
THZ				*e*Sn	Sn	07 22 39.6	-3.9
KHZ	Kahutara	8.74	214	*e*Pn	Pn	07 21 06.3	-4.9
KHZ				*e*Sn	Sn	07 22 44.6	-3.4
LTZ	Lake Taylor	9.62	217	*e*Pn	Pn	07 21 17.5	-5.8
CRLZ	Canterbury Las	10.07	213	*e*Pn	Pn	07 21 25.1	-4.2
CRLZ				*e*Sn	Sn	07 23 14.3	-6.0
OXZ	Oxford	10.14	215	*e*Pn	Pn	07 21 25.0	-5.4
OXZ				*e*Sn	Sn	07 23 13.4	-8.7
MQZ	McQueen's Vall	10.16	212	*e*Pn	Pn	07 21 26.6	-3.9
MQZ				*e*Sn	Sn	07 23 13.5	-8.9
RPZ	Rata Peaks	10.91	217	*e*Pn	Pn	07 21 35.1	-5.7
RPZ				S	Sn	07 23 31.0	-10
RPZ	Rata Peaks	10.91	217	P	Pn	07 21 34.1	-6.7
	1.6nm,0.3s,baz=59,slow=3.9,SNR=6.3						
RPZ				S	Sn	07 23 31.0	-10
	2.6nm,0.3s,baz=284,slow=24,SNR=6.5						
FOZ	Fox Glacier	11.42	221	*e*Pn	Pn	07 21 43.8	-3.8
FOZ				*e*Sn	Sn	07 23 47.6	-5.4
LBZ	Lake Benmore	11.83	217	*e*Pn	Pn	07 21 47.5	-5.6
LBZ				*e*Sn	Sn	07 23 55.4	-7.6
ODZ	Otahua Downs	12.10	214	*e*Pn	Pn	07 21 50.9	-5.8
WKZ	Wanaka	12.72	218	*e*Pn	Pn	07 22 04.8	-0.3
WKZ				*e*Sn	Sn	07 24 16.4	-8.4
MLZ	Mavora Lakes	13.56	219	*e*Pn	Pn	07 22 13.7	-2.2
WHZ	Wether Hill Ro	14.01	217	*e*Pn	Pn	07 22 21.2	-0.5
WHZ				*e*Sn	Sn	07 24 50.9	-5.0
DCZ	Deep Cove	14.12	220	*e*Pn	Pn	07 22 20.5	-2.7
CTA	Charters Tower	33.39	288	P	P	07 25 34.5	-2.4
	2.4nm,0.6s,baz=90,slow=12,SNR=5.0						
CTAO	Charters Tower	33.39	288	*e*P	P	07 25 38.1	+1.3
	6.1nm,1.0s						
BBOO	Buckleboo	36.34	261	*e*P	P	07 26 02.4	+0.2
	2.3nm,0.9s						
COEN	Coen	39.40	293	*e*P	P	07 26 28.3	+0.3
	6.8nm,1.1s						
AS01	Alice Springs	41.47	273	*e*P	P	07 26 43.7	-1.4
AS31	Alice Springs	41.51	273	*e*P	P	07 26 44.0	-1.4
	1.7nm,0.6s						
ASAR	Alice Springs	41.51	273	P	P	07 26 43.5	-1.9
	4.2nm,0.6s,baz=115,slow=7.7,SNR=80						
WB2	Warramunga Arr	42.94	278	*e*P	P	07 26 56.0	-1.0
WRAB	Tennant Creek	42.94	278	*e*P	P	07 26 56.8	-0.3
	7.4nm,1.0s						
WR1	Warramunga Arr	42.95	278	*e*P	P	07 26 54.3	-2.8
	10nm,0.5s						
WRA	Warramunga Arr	42.95	278	P	P	07 26 54.3	-2.8
	5.9nm,0.6s,baz=120,slow=7.5,SNR=30						
FORT	Forrest	43.44	261	*e*P	P	07 27 00.6	-0.4
	15nm,1.0s						
FITZ	Fitzroy Crossi	50.95	275	P	P	07 27 57.4	-2.0
	3.0nm,0.8s,baz=132,slow=8.2,SNR=6.7						
QSPA	South Pole Qui	54.81	180	*e*P	P	07 28 33.0	+5.8
	12nm,0.8s						
QSPA	South Pole Qui	54.81	180	P	P	07 28 33.0	+5.8
	2.1nm,0.6s,baz=303,slow=1.7,SNR=12						
KEKH	Kekaha	60.12	22	*e*P	P	07 29 03.8	-0.9
	117nm,1.2s						
GO09	Cerro Castillo	72.98	141	*e*P	P	07 30 29.3	+2.9
	1.8nm,0.7s						
SNAA	Sanae	73.29	179	P	P	07 30 32.2	+4.2
SNAA	Sanae	73.29	179	*e*P	P	07 30 32.2	+4.3
	2.5nm,1.0s						
VNA3	Neumayer Olymp	73.52	177	P	P	07 30 33.4	+4.2
VNA2	Neumayer--Watz	73.93	177	P	P	07 30 36.2	+4.6
	baz=195,slow=3.9						
VNA1	Neumayer--Stat	74.17	177	P	P	07 30 37.6	+4.7
PLCA	Paso Flores	80.33	133	*e*P	P	07 31 14.9	+6.9
PETK	Petropavlovsk-	90.19	347	P	P	07 31 55.0	-1.4
	5.6nm,0.9s,baz=116,slow=6.9,SNR=6.3						
PEA1	Petropavlovsk-	90.19	347	*e*P	P	07 31 55.0	-1.4
MDPB	Devils Postpil	91.92	44	*e*P	P	07 32 07.5	+2.4
	0.8nm,0.8s						
MOD	Modoc Plateau	94.24	40	*e*P	P	07 32 17.7	+2.0
	1.6nm,0.8s						
LCMT	Little Creek M	94.91	48	*e*P	P	07 32 20.7	+1.9
	1.5nm,1.1s						
AAM	Ann Arbor	116.87	56	*e*PKPdf	PKiKP	07 37 43.0	+2.6
FCC	Fort Churchill	117.39	36	*e*PKPdf	PKiKP	07 37 41.9	+1.1
N54A	Moraine State	118.85	58	*e*PKPdf	PKiKP	07 37 46.8	+2.5
MK32	Makanchi Array	119.63	308	*e*PKPdf	PKPdf	07 37 44.0	-1.7
MKAR	Makanchi Array	119.63	308	PKP	PKPdf	07 37 44.0	-1.7
	0.3nm,0.7s,baz=50,slow=2.3,SNR=3.0						
LUPA	Lehigh Univers	121.96	60	*e*PKPdf	PKiKP	07 37 52.5	+2.1
RES	Resolute Bay	122.40	18	*e*PKPdf	PKiKP	07 37 51.2	+0.9
KURK	Kurchatov	123.20	312	*e*PKPdf	PKPdf	07 37 51.2	-1.1
KURBB	Kurchatov Arra	123.23	312	PKP	PKPdf	07 37 51.2	-1.1
	0.8nm,0.5s,baz=64,slow=2.2,SNR=2.7						
ARA0	ARCESS Array S	142.99	345	*e*PKPpre	PKPdf	07 38 25.9	-2.8
ARCES	ARCESS Array B	142.99	345	PKP	PKPdf	07 38 25.9	-2.8
	1.6nm,0.8s,baz=54,slow=1.8,SNR=8.5						
FIA1	FINESS Array S	149.08	336	*e*PKPdf	PKPbc	07 38 42.7	-0.8
FIA0	FINESS Array S	149.08	336	*e*PKPbc	PKPbc	07 38 42.6	-0.9
FINES	FINESS Array B	149.08	336	PKPbc	PKPbc	07 38 42.6	-0.9
	1.2nm,0.5s,baz=45,slow=5.7,SNR=8.9						
LIC	Lamto	150.67	170	*e*PKP1	PKPab	07 38 51.4	-4.5
	24nm,0.5s						
KIC	Kosan Boka	150.85	170	*e*PKP1	PKPab	07 38 51.9	-4.7
	13nm,0.7s						
TIC	Toumodi	151.08	169	*e*PKP1	PKiKP	07 38 52.4	+2.0
DBIC	Dimbokro	151.13	170	*e*PKPdf	PKPdf	07 38 43.5	-0.5
DBIC				*e*PKPbc	PKPab	07 38 53.1	-4.6
DBIC	Dimbokro	151.13	170	PKPbc	PKPab	07 38 52.9	-4.9
	5.0nm,0.6s,baz=189,slow=2.7,SNR=11						
BR101	Keskin Array S	153.12	289	*e*PKPbc	PKPbc	07 38 51.8	-2.1
BR131	Keskin Array S	153.12	289	*e*PKPbc	PKPbc	07 38 53.0	-0.9
BRTR	Keskin Array B	153.12	289	PKPbc	PKPbc	07 38 51.8	-2.1
	0.8nm,0.6s,baz=159,slow=4.7,SNR=5.1						
AKASG	Malin Array Be	153.95	315	PKPbc	PKPbc	07 38 53.9	-1.1
	1.3nm,0.5s,baz=59,slow=2.6,SNR=6.7						
AK11	Malin Array Si	153.99	315	*e*PKPbc	PKiKP	07 38 54.7	-0.4
TOA0	Torodi Ar. Sit	157.88	184	*e*PKPab	PKPab	07 39 28.7	+2.3
TORD	Torodi Ar. Bea	157.88	184	PKPab	PKPab	07 39 28.2	+1.8
	0.4nm,0.4s,baz=177,slow=4.8,SNR=4.6						
TOA1	Torodi Ar. Sit	157.89	184	*e*PKPab	PKPab	07 39 28.2	+1.8

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*BEO **16** 07:19:09.9±0.5, 43.°35N×17.°37E, h0^{km}, ML2.5/9*
*PDG **16** 07:19:10.6±0.2, 43.°33N×17.°53E, h2^{km}, ML2.7/11, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
*SAR **16** 07:19:11.3±0.4, 43.°33N×17.°53E, h3^{km}±2^{km}, ML2.6/1*
ISC 16 07:19:11.3±1.2**, 43.°34N**±0.°02×**17.°58E**±0.°02**, h2**^{km}±10^{km}**, n61, σ1^{s}22**/98**, 16C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.47	169	*i* Pg	Pg	07 19 19.9	-0.5
STON				Sg	Sg	07 19 27.1	+0.6
BRY	Bratogost	0.83	121	⇑*i*Pg	Pg	07 19 26.1	-1.1
BRY				*e*Sg	Sb	07 19 39.6	-0.5
TREB	Trebinje	0.84	137	*e*Pg	Pg	07 19 26.5	-0.9
TREB				*e*Sg	Sb	07 19 40.0	-0.3
TREB	Trebinje	0.84	137	*e*Pg	Pg	07 19 26.0	-1.4
TREB				*e*Sg	Sb	07 19 39.4	-0.9
UPM	Unac-Piva	0.98	97	⇓*i*Pg	Pg	07 19 29.3	-0.8
UPM				*e*Sg	Sb	07 19 44.9	+0.4
HCY	Herceg Novi	1.12	143	⇑*i*Pg	Pg	07 19 31.4	-1.3
HCY				*i* Sg	Sn	07 19 49.0	-0.8
HCY	Herceg Novi	1.12	143	*e*Pg	Pg	07 19 31.1	-1.6
HCY				*e*Sg	Sg	07 19 47.4	+0.3
NKY	Niksic	1.16	116	⇑*i*Pg	Pg	07 19 32.8	-0.8
NKY				*e*Sg	Sn	07 19 51.5	+0.4
HAPS	Han Pijesak,BI	1.25	53	*e*Pg	Pg	07 19 33.7	-1.5
HAPS				*e*Sg	Sb	07 19 52.7	+0.6
HAPS	Han Pijesak,BI	1.25	53	⇑*i*Pg	Pg	07 19 33.6	-1.6
HAPS				*e*Sg	Sg	07 19 51.6	+0.3
PLE	Pljevlja	1.32	90	⇓*i*Pg	Pg	07 19 35.9	-0.7
PLE				*e*Sg	Sn	07 19 57.0	+1.9
BUM	Brajici-Budva	1.42	136	⇑*i*Pg	Pn	07 19 37.0	-1.1
BUM				*e*Sg	Sn	07 19 59.5	+2.1
BBLS	Lazići	1.43	68	*e*Pg	Pn	07 19 37.2	-1.1
BBLS				*e*Sg	Sn	07 20 00.3	+2.6
BBLS	Lazići	1.43	68	*e*Pg	Pn	07 19 37.4	-0.9
BBLS				*e*Sg	Sn	07 19 58.3	+0.6
BLY	Banja Luka	1.44	349	*e*Pn	Pn	07 19 37.9	-0.4
BLY				*e*Sn	Sn	07 19 57.2	-0.6
BLY	Banja Luka	1.44	349	⇑*i*P	Pn	07 19 37.6	-0.8
BLY	Banja Luka	1.44	349	S	Sn	07 19 57.2	-0.6
BLY	Banja Luka	1.44	349	⇑*i*Pg	Pn	07 19 37.5	-0.8
BLY				*e*Sg	Sb	07 19 57.1	-0.4
KOME	Kolasin	1.50	108	⇑*i*Pg	Pn	07 19 38.9	-0.4
KOME				*i* Sg	Sg	07 20 02.4	+2.9
PDG	Podgorica	1.53	126	*e*Pg	Pg	07 19 40.7	+0.1
PDG				*e*Sg	Sg	07 20 03.5	+3.0
PDG	Podgorica	1.53	126	⇑*i*P	Pb	07 19 40.0	-0.3
PDG	Podgorica	1.53	126	S	Sg	07 20 01.5	+1.0
PDG	Podgorica	1.53	126	⇑*i*Pn	Pn	07 19 39.7	+0.1
PDG				*e*Sn	Sg	07 20 00.7	+0.2
TTG	Podgorica	1.53	126	⇓*i*Pg	Pn	07 19 39.5	-0.1
TTG				*e*Sg	Sg	07 20 03.4	+3.0
DRME	Dracevica, Mon	1.65	134	⇓*i*Pn	Pn	07 19 41.3	+0.1
DRME	Dracevica, Mon	1.65	134	⇑*i*Pn	Pb	07 19 41.7	-0.7
DRME				*e*Sn	Sb	07 20 03.3	-0.3
SJES	Sjenica	1.75	92	*e*Pn	Pb	07 19 44.2	0.0
SJES				*e*Sn	Sg	07 20 08.0	+0.4
IVA	Berane	1.76	105	⇓*i*Pn	Pb	07 19 43.9	-0.4
IVA				*i* Sn	Sg	07 20 09.8	+2.0
UDBI	Udbina	1.77	313	*e*Pn	Pg	07 19 45.5	+0.4
UDBI				Sg	Sg	07 20 11.6	+3.5
ULC	Ulcinj	1.84	138	⇓*i*Pn	Pb	07 19 44.5	-1.2
ULC				*i* Sn	Sg	07 20 11.3	+0.8
TEKS	Tekeris	1.86	49	*e*Pn	Pn	07 19 44.0	-0.1
TEKS				*e*Sn	Sn	07 20 08.8	+0.6
IVAS	Ivanjica	1.89	82	*e*Pn	Pn	07 19 44.7	+0.1
IVAS				*e*Sn	Sg	07 20 12.3	+0.3
PVY	Plav	1.90	112	⇑*i*Pn	Pg	07 19 47.5	-0.2
PVY				*e*Sn	Sg	07 20 13.7	+1.4
DIVS	Divibare	1.91	66	*e*Pn	Pn	07 19 45.7	+0.8
DIVS				*e*Sg	Sg	07 20 14.9	+2.3
DIVS	Divibare	1.91	66	*e*Pn	Pn	07 19 45.4	+0.5
DIVS				*e*Sn	Sn	07 20 10.4	+0.9
TRUS	Trudelj	2.23	66	*e*Pn	Pn	07 19 49.0	-0.3
NVLJ	Novalja	2.31	303	*e*Pn	Pb	07 19 51.5	-2.0
GRUS	Gruza	2.35	75	*e*Pn	Pn	07 19 50.8	0.0
FRGS	Fruska Gora	2.43	41	*e*Pn	Pn	07 19 51.7	-0.2
FRGS	Fruska Gora	2.43	41	*e*Pn	Pn	07 19 52.6	+0.7
FRGS				*e*Sn	Sn	07 20 22.7	+0.5
SELS	Selova	2.59	91	*e*Pn	Pn	07 19 54.3	+0.1
BOJS	Bojanci	2.73	323	*i* Pn	Pb	07 19 58.5	-2.3
BOJS				*i* Sn	Sb	07 20 33.1	-1.6
MATE	Matera	2.76	194	⇑*i*P	Pn	07 19 57.5	+1.0
MATE	Matera	2.76	194	S	Sn	07 20 29.8	-0.6
CRES	Cresnjev	2.91	329	*e*Pn	Pn	07 19 58.7	+0.1
CRES				*e*Sn	Sn	07 20 33.3	-0.8
MORH	Mrgy, Hungar	2.98	14	*e*Pn	Pn	07 19 59.7	+0.3
MORH				*e*Sn	Sn	07 20 35.8	+0.1
CEY	Cerknica	3.29	318	*e*Sn	Sn	07 20 42.6	-0.9
MDVR	Moldovita	3.31	63	⇑*i*P	Pn	07 20 04.8	+0.7
MDVR	Moldovita	3.31	63	S	Sn	07 20 43.1	-1.0
JAVS	Javornik	3.58	317	*i* Pn	Pn	07 20 09.6	+1.8
BZS	Buzias	3.68	50	⇑*i*P	Pn	07 20 09.5	+0.4
BZS	Buzias	3.68	50	S	Sn	07 20 51.4	-1.7
ZAPS	Zavoj	3.69	89	*e*Pn	Pn	07 20 10.6	+1.3
SOKA	Soboth	3.79	333	*i* Pn	Pn	07 20 12.3	+1.5
	0.6nm,0.2s						
SOKA				*i* Sn	Sn	07 20 57.3	+1.3
	1.6nm,0.3s						
HERR	Herculane	3.81	64	⇓*i*P	Pn	07 20 12.0	+1.1
HERR	Herculane	3.81	64	S	Sn	07 20 54.6	-1.7
OBKA	Obir	3.83	327	*e*Pn	Pn	07 20 12.0	+0.7
	0.3nm,0.2s						
OBKA				*e*Sn	Sn	07 20 59.3	+2.4
	4.3nm,0.5s						
ARSA	Arzberg	4.17	340	*i* Pn	Pn	07 20 16.3	+0.4
	2.7nm,0.4s						
GZR	Gura Zlata	4.26	59	⇑*i*P	Pn	07 20 16.6	-0.5
CONA	Conrad Observa	4.75	346	*i* Sn	Sn	07 21 20.3	+0.8
	0.7nm,0.2s						
MOA	Molln	5.07	334	*i* Pn	Pn	07 20 30.2	+1.9
	0.7nm,0.2s						
MOA				*i* Sn	Sn	07 21 28.7	+1.3
	5.0nm,0.4s						

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*IDC **16** 07:24:28.5±1.0, 5.°14S×152.°48E, h0^{km}, mb4.3/9, mb1 4.5/9, mb1mx4.0/43, mbtmp4.3/9, Error ellipse: s-maj=43.7km s-min=17.0km az=121.0*
*ISCJB **16** 07:24:34.5±0.3, 5.°23S±0.°06×152.°50E±0.°07, h55^{km}, mb4.6/63, Error ellipse: s-maj=12.7km s-min=5.8km az=39.0*
*NEIC **16** 07:24:34.5±1.1, 5.°23S×152.°52E, h41^{km}±9^{km}, mb4.8/53, Error ellipse: s-maj=8.8km s-min=4.1km az=124.0*
ISC 16 07:24:35.8±0.5**, 5.°20S**±0.°10×**152.°5E**±0.°1**, h55**^{km}**, n79, σ0^{s}77**/79**, mb4.7**/63**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.06	341	*e*Pn	Pn	07 24 53.5	-1.1
MTN	Manton Dam	22.42	249	*e*P	P	07 29 30.3	+0.2
	12nm,1.0s						
WRAB	Tennant Creek	22.95	229	*e*P	P	07 29 34.8	-0.8
	6.5nm,0.7s						
WB2	Warramunga Arr	22.95	229	*e*P	P	07 29 35.2	-0.5
	9.7nm,1.1s						
WR1	Warramunga Arr	22.96	229	*e*P	P	07 29 35.2	-0.6
	12nm,0.8s						
WRA	Warramunga Arr	22.96	229	P	P	07 29 35.2	-0.6
	5.1nm,0.5s,baz=53,slow=10.0,SNR=16						
AS01	Alice Springs	25.62	222	*e*P	P	07 30 00.8	+0.4
AS31	Alice Springs	25.66	222	*e*P	P	07 30 01.1	+0.4
	3.3nm,0.4s						
ASAR	Alice Springs	25.66	222	P	P	07 30 00.8	+0.2
	3.2nm,0.5s,baz=57,slow=9.1,SNR=45						
MSVF	Nonsavu	27.91	119	*e*P	P	07 30 20.4	-0.6
	12nm,1.1s						
STKA	Stephens Creek	28.44	200	*e*P	P	07 30 25.5	+0.1
	0.4nm,1.0s						
STKA	Stephens Creek	28.44	200	P	P	07 30 25.6	+0.1
	0.8nm,0.7s,baz=4.3,slow=8.1,SNR=3.4						
FITZ	Fitzroy Crossi	29.21	242	*e*P	P	07 30 31.9	-0.6
	6.2nm,0.6s						
FITZ	Fitzroy Crossi	29.21	242	P	P	07 30 31.7	-0.8
	7.2nm,0.5s,baz=56,slow=6.5,SNR=32						
FORT	Forrest	34.29	219	*e*P	P	07 31 17.4	+0.4
	9.2nm,0.6s						
MBWA	Marble Bar	35.52	240	*e*P	P	07 31 27.2	-0.5
	7.6nm,0.6s						
GIRL	Giralia	40.82	241	*e*P	P	07 32 13.0	+0.7
	55nm,1.1s						
CISI	Cisompet, Garu	44.46	265	*e*P	P	07 32 41.4	-0.7
	29nm,1.0s						
NPOC	North of Pu'u	57.04	63	*e*P	P	07 34 15.1	-1.6
	312nm,0.8s						
PPT	Papeete	57.88	107	*e*P	P	07 34 22.3	-0.4
PEA0B	Petropavlovsk-	58.26	4	*e*P	P	07 34 24.4	-0.1
	36nm,1.1s						
PETK	Petropavlovsk-	58.26	4	P	P	07 34 24.4	-0.1
	17nm,1.2s,baz=167,slow=7.5,SNR=8.0						
PEA1	Petropavlovsk-	58.26	4	*e*P	P	07 34 24.4	-0.2
SONA0	Songino Array	66.51	328	*e*P	P	07 35 20.1	+0.1
SONM	Songino Array	66.51	328	P	P	07 35 20.1	+0.1
	0.3nm,0.5s,baz=153,slow=7.1,SNR=3.5						
SDPT	Sand Point	71.70	26	*e*P	P	07 35 51.6	-0.2
	36nm,1.2s						
CHGN	Chignik	73.21	26	*e*P	P	07 36 00.6	-0.2
	12nm,1.0s						
SII	Sitkinak Islan	75.26	27	*e*P	P	07 36 13.4	+0.7
	88nm,1.2s						
OHAK	Old Harbor	76.04	27	*e*P	P	07 36 17.7	+0.6
	10nm,1.0s						
ANM	Nome	76.24	17	*e*P	P	07 36 19.2	+1.0
	1.9nm,0.8s						
SVW2	Sparrevohn	77.31	23	*e*P	P	07 36 25.6	+1.3
	4.9nm,0.9s						
BRLK	Bradley Lake	78.48	26	*e*P	P	07 36 31.1	+0.3
	16nm,1.1s						
SEW	Seward	79.27	26	*e*P	P	07 36 35.9	+0.8
	20nm,1.0s						
SUA	Susitna One	79.44	24	*e*P	P	07 36 36.0	-0.2
	11nm,0.6s						
RDOG	Red Dog Mine	79.44	16	*e*P	P	07 36 37.2	+1.3
	15nm,0.6s						
PPLA	Purkeypile	79.65	23	*e*P	P	07 36 37.2	-0.1
	3.6nm,0.9s						
RC01	Rabbit Creek A	79.66	25	*e*P	P	07 36 37.5	+0.3
	9.2nm,0.5s						
CAST	Castle Rocks	79.98	22	*e*P	P	07 36 39.2	+0.2
	9.1nm,1.0s						
MK32	Makanchi Array	80.44	319	*e*P	P	07 36 42.8	+1.1
MKAR	Makanchi Array	80.44	319	P	P	07 36 42.8	+1.1
	0.2nm,0.5s,baz=94,slow=7.3,SNR=4.3						
SML	Sawmill	80.61	24	*e*P	P	07 36 43.0	+0.6
	21nm,0.6s						
TRF	Thorofare Moun	80.68	23	*e*P	P	07 36 42.7	-0.2
	5.8nm,0.7s						
IM3	Indian Mountai	80.86	20	*e*P	P	07 36 44.3	+0.8
SCM	Sheep Creek Mo	81.03	25	*e*P	P	07 36 45.7	+1.0
	27nm,1.2s						
EYAK	Cordova Ski Ar	81.10	26	*e*P	P	07 36 45.4	+0.5
	17nm,1.2s						
RND	Reindeer	81.21	23	*e*P	P	07 36 45.5	-0.1
	9.6nm,0.7s						
MCK	McKinley	81.34	23	*e*P	P	07 36 46.0	-0.3
	12nm,0.7s						
MLY	Manley	81.36	21	*e*P	P	07 36 46.9	+0.6
	14nm,0.5s						
BWN	Browne	81.37	22	*e*P	P	07 36 46.7	+0.4
	15nm,1.2s						
KLU	Klutina	81.46	25	*e*P	P	07 36 47.9	+1.0
	8.3nm,1.0s						
DHY	Denali Highway	81.62	24	*e*P	P	07 36 48.6	+0.8
	4.8nm,0.8s						
HMT	Hamilton	81.66	27	*e*P	P	07 36 49.0	+1.0
	34nm,1.1s						
WRH	Wood River Hil	82.04	22	*e*P	P	07 36 49.3	-0.5
	5.0nm,0.7s						
HARP	HAARP	82.21	25	*e*P	P	07 36 52.0	+1.2
	6.6nm,1.0s						
MDM	Murphy Dome	82.23	22	*e*P	P	07 36 50.7	-0.2
	2.7nm,1.0s						

COLA	**College**	**82.33**	**22**	*e*P	**P**	**07 36 51.1**	**-0.2**
	12nm,0.8s						
HDA	**Harding Lake**	**82.44**	**22**	*e*P	**P**	**07 36 51.4**	**-0.6**
	3.7nm,0.8s						
ILAR	**Eielson Array**	**82.64**	**22**	P	**P**	**07 36 52.2**	**-0.8**
	5.7nm,0.7s,baz=246,slow=5.6,SNR=90						
ILB	**Eielson Array**	**82.64**	**22**	*e*P	**P**	**07 36 52.3**	**-0.6**
	6.1nm,0.6s						
IL1	**Eielson Array**	**82.64**	**22**	*e*P	**P**	**07 36 52.4**	**-0.6**
COLD	**Coldfoot**	**82.73**	**19**	*e*P	**P**	**07 36 54.4**	**+1.0**
	1.4nm,0.8s						
RIDG	**Independ'e Rid**	**82.94**	**23**	*e*P	**P**	**07 36 54.9**	**+0.3**
	6.6nm,0.9s						
MENT	**Mentasta**	**83.04**	**24**	*e*P	**P**	**07 36 56.4**	**+1.3**
	3.8nm,0.7s						
DOT	**Dot Lake**	**83.21**	**24**	*e*P	**P**	**07 36 56.7**	**+0.7**
	18nm,1.0s						
SCRK	**Sand Creek**	**83.39**	**23**	*e*P	**P**	**07 36 57.5**	**+0.5**
	3.8nm,0.8s						
PRP	**Porcupine Dome**	**83.50**	**22**	*e*P	**P**	**07 36 56.4**	**-1.2**
	0.5nm,0.7s						
TOLK	**Toolik Lake Re**	**83.69**	**18**	*e*P	**P**	**07 36 59.4**	**+1.1**
	5.2nm,0.6s						
FYU	**Fort Yukon**	**84.10**	**21**	*e*P	**P**	**07 37 01.7**	**+1.4**
	5.4nm,0.6s						
EPYK	**Eagle Plains**	**87.15**	**22**	*e*P	**P**	**07 37 16.8**	**+1.1**
	9.1nm,0.6s						
INK	**Inuvik**	**88.93**	**21**	*e*P	**P**	**07 37 24.1**	**+0.1**
	1.7nm,0.8s						
NVAR	**Mina Array Bea**	**92.56**	**52**	P	**P**	**07 37 43.6**	**+1.7**
	0.4nm,0.7s,baz=258,slow=7.0,SNR=4.2						
PFO	**Pinyon Flats O**	**93.70**	**57**	*e*P	**P**	**07 37 48.4**	**+1.2**
	0.5nm,0.8s						
XPFO	**Pion Flat**	**93.71**	**57**	*e*P	**P**	**07 37 48.4**	**+1.3**
	0.8nm,0.9s						
YKA	**Yellowknife Ar**	**95.92**	**28**	P	**P**	**07 37 56.9**	**+0.5**
	0.3nm,0.5s,baz=270,slow=5.0,SNR=13						
YKB5	**Yellowknife Ar**	**95.92**	**28**	*e*P	**P**	**07 37 57.6**	**+1.2**
TOA0	**Torodi Ar. Sit**	**150.15**	**287**	*e*PKPbc	**PKiKP**	**07 44 22.3**	**-0.2**
TORD	**Torodi Ar. Bea**	**150.15**	**287**	PKPbc	**PKPbc**	**07 44 21.4**	**-0.3**
	0.3nm,0.4s,baz=123,slow=3.2,SNR=7.0						
TOA1	**Torodi Ar. Sit**	**150.15**	**287**	*e*PKPbc	**PKPbc**	**07 44 21.4**	**-0.3**
MACI	**Morro de la Ar**	**154.81**	**337**	*e*PKPdf	**PKPdf**	**07 44 21.9**	**-1.4**

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*CNRM **16** 07:44:34.7, 37°.25N×1°.52W, h10^{km}, ml3.2*
*ISCJB **16** 07:44:35.6±0.6, 37°.38N±0°.04×2°.00W±0°.03, h12^{km}±4^{km}, Error ellipse: s-maj=6.0km s-min=4.4km az=166.3*
*SFS **16** 07:44:36.0, 37°.30N×1°.91W, h11^{km}, ML2.3, CUEVAS DE ALMANZORA (ALMERIA)*
*MDD **16** 07:44:36.8±0.3, 37°.32N×1°.95W, h4^{km}±4^{km}, mbLg2.2/16, Error ellipse: s-maj=3.5km s-min=2.4km az=135.0, PRXIMO*
MDD EMS: II INTENSIDAD MAXIMA.
ISC 16 07:44:35.7±1.1**, 37°.35N**±0°.03×**2°.01W**±0°.03**, h9**^{km}±10^{km}**, n39, σ1^{s}33**/54**, 4C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENIJ	**Nijar**	**0.41**	**203**	⇑Pg	**Pg**	**07 44 44.6**	**+0.9**
	88nm,0.1s,SNR=18						
ENIJ				Lg	Lg	07 44 49.3	
	181nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**0.78**	**51**	⇑Pg	**Pg**	**07 44 50.6**	**-0.2**
	5.8nm,0.3s,SNR=18						
EMUR				Lg	Lg	07 45 01.0	
	12nm,0.2s						
CART	**Cartagena**	**0.83**	**73**	Pg	**Pb**	**07 44 51.9**	**-0.5**
CART				Lg	Lg	07 45 02.1	
CART	**Cartagena**	**0.83**	**73**	*e*P	**Pb**	**07 44 51.9**	**-0.5**
CART				*e*S	**Sg**	**07 45 02.1**	**-0.5**
GORA	**Gorafe**	**0.83**	**279**	Lg	Lg	07 45 05.8	
	38nm,0.2s,SNR=7.9						
EBER	**Berja**	**0.84**	**238**	⇑Pg	**Pg**	**07 44 52.3**	**+0.4**
	18nm,0.2s,SNR=18						
EBER				Lg	Lg	07 45 04.6	
	31nm,0.3s						
SESP	**Santiago Espad**	**0.88**	**331**	Pg	**Pg**	**07 44 53.2**	**+0.5**
	3.7nm,0.2s,SNR=7.9						
SESP				Lg	Lg	07 45 07.8	
	35nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**0.88**	**331**	P	**Pn**	**07 44 56.9**	**+2.5**
SESP				S	**Sn**	**07 45 12.0**	**+4.5**
EQES	**Quesada**	**0.96**	**299**	Pg	**Pn**	**07 44 55.9**	**+0.4**
	4.5nm,0.2s,SNR=24						
EQES				Lg	Lg	07 45 10.4	
	15nm,0.1s,SNR=6.5						
EQUE	**Quentar**	**1.15**	**263**	Pg	**Pn**	**07 44 57.9**	**-0.1**
	7.8nm,0.2s,SNR=36						
EQUE				Lg	Lg	07 45 15.3	
	4.2nm,0.2s						
ETOB	**Tobarra**	**1.34**	**15**	Pg	**Pg**	**07 45 01.9**	**+0.4**
	1.0nm,0.1s,SNR=30						
ETOB				Lg	Lg	07 45 20.6	
	24nm,0.2s						
ELGU	**Los Guajares,**	**1.38**	**250**	⇑Pg	**Pb**	**07 45 01.8**	**+0.1**
	6.1nm,0.2s,SNR=18						
ELGU				Lg	Lg	07 45 21.2	
	6.6nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.70**	**263**	Pn	**Pb**	**07 45 07.0**	**-0.1**
	0.4nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	07 45 35.3	
	1.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.20**	**293**	Pn	**Pn**	**07 45 13.9**	**+1.5**
	2.1nm,0.1s,SNR=30						
EADA				Sn	**Sn**	**07 45 40.9**	**+1.2**
	5.1nm,0.2s,SNR=6.0						
EADA				Lg	Lg	07 45 48.6	
	13nm,0.2s						
HORN	**Hornachuelos**	**2.63**	**282**	P	**Pb**	**07 45 21.8**	**-1.2**
HORN				S	**Sg**	**07 46 01.1**	**+0.9**
ESDC	**Sonseca Array**	**2.78**	**327**	Pn	**Pn**	**07 45 22.0**	**+1.5**
	0.2nm,0.1s,baz=143,slow=13,SNR=3.6						
ESDC				Lg	Lg	07 46 06.3	
	2.1nm,0.3s,baz=144,slow=29,SNR=10						
ECAB	**El Cabril**	**2.80**	**286**	Pn	**Pn**	**07 45 21.8**	**+1.1**
	1.6nm,0.2s,SNR=35						
ECAB				Sn	**Sn**	**07 45 56.0**	**+1.3**
	6.7nm,0.3s,SNR=24						
ECAB				Lg	Lg	07 46 06.8	
	9.3nm,0.3s						
PAB	**San Pablo**	**2.86**	**321**	Pn	**Pn**	**07 45 22.6**	**+1.0**
	0.3nm,0.2s,SNR=7.9						
PAB				Sn	**Sn**	**07 45 55.5**	**-0.7**
	0.5nm,0.2s,SNR=7.9						
PAB				Lg	Lg	07 46 07.9	
	1.4nm,0.2s,SNR=7.9						
JBK	**JBK**	**3.04**	**189**	P	**Pn**	**07 45 25.7**	**+1.6**
JBK				S	**Sn**	**07 46 01.1**	**+0.3**
CEUT	**Ceuta**	**3.04**	**242**	P	**Pb**	**07 45 27.7**	**-2.3**
CEUT				S	**Sb**	**07 46 05.7**	**-1.6**
UCM	**Universidad Co**	**3.11**	**342**	*e*S	**Sg**	**07 46 15.6**	**+0.1**
EIBI	**Ibiza**	**3.13**	**57**	Sn	**Sn**	**07 46 01.4**	**-1.2**
	0.6nm,0.1s,SNR=7.9						
ETOR	**Torete**	**3.47**	**359**	Pg	**Pg**	**07 45 41.1**	**-1.0**
	0.4nm,0.1s,SNR=5.9						
ETOR				Lg	Lg	07 46 28.8	
	3.8nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**3.69**	**334**	Pg	**Pg**	**07 45 44.5**	**-1.9**
	1.1nm,1.0s,SNR=7.9						
GUD				Lg	Lg	07 46 33.2	
	2.9nm,0.4s,SNR=6.3						
EMIN	**Mina Concepcio**	**3.73**	**278**	Pn	**Pn**	**07 45 34.3**	**+0.8**
	0.1nm,0.1s,SNR=7.7						
EMIN				Sn	**Sn**	**07 46 18.6**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.20**	**291**	Pn	**Pn**	**07 45 40.2**	**+0.4**
	0.6nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**07 46 28.9**	**0.0**
	2.7nm,0.2s,SNR=5.0						
EBAD				Lg	Lg	07 46 51.1	
	3.0nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**4.36**	**274**	Pn	**Pn**	**07 45 42.7**	**+0.5**
	0.4nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**07 46 32.2**	**-0.9**
	0.2nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.55**	**272**	*e*Pn	**Pn**	**07 45 45.2**	**+0.5**
PVAQ				*e*Sg	**Sn**	**07 46 38.3**	**+0.6**
PVAQ				A	A	07 47 12.2	
	1.6nm,0.9s						
PVAQ	**Vaqueiros**	**4.55**	**272**	Pn	**Pn**	**07 45 45.2**	**+0.5**
PESTR	**Estremoz**	**4.66**	**291**	*e*Sn	**Sn**	**07 46 39.1**	**-1.3**
PESTR	**Estremoz**	**4.66**	**291**	P	Pn	07 45 51.3	+5.1
PESTR				S	**Sb**	**07 46 52.8**	**-0.9**
PMRV	**Marv??o**	**4.71**	**298**	*e*Pn	**Pn**	**07 45 49.6**	**+2.6**
PMRV				*e*Sn	**Sn**	**07 46 41.4**	**-0.4**
PMRV				*e*Sg	**Sg**	**07 47 06.6**	**-0.4**
PMRV				A	A	07 47 18.8	
	5.0nm,0.5s						
PMRV	**Marv??o**	**4.71**	**298**	Pn	**Pn**	**07 45 49.6**	**+2.6**
PMRV				Sn	**Sn**	**07 46 41.4**	**-0.4**
PMRV				Lg	Lg	07 47 06.6	
	5.0nm,0.5s						
MESJ	**Messejana**	**4.96**	**278**	*e*Pn	**Pn**	**07 45 51.9**	**+1.6**
MESJ	**Messejana**	**4.96**	**278**	Pn	**Pn**	**07 45 51.9**	**+1.6**
PMTG	**Montargil**	**5.19**	**291**	*e*Sn	**Sn**	**07 46 52.4**	**-1.1**
PMTG				*e*Sg	**Sg**	**07 47 23.2**	**+0.9**
PMTG				A	A	07 47 28.5	
	4.2nm,0.7s						
PMTG	**Montargil**	**5.19**	**291**	Sn	**Sn**	**07 46 52.4**	**-1.1**
PMTG				Lg	Lg	07 47 23.2	
	4.2nm,0.7s						
PNCL	**Nicolau / Gran**	**5.23**	**280**	*e*Pn	**Pn**	**07 45 54.9**	**+0.9**
PNCL	**Nicolau / Gran**	**5.23**	**280**	Pn	**Pn**	**07 45 54.9**	**+0.9**

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*ISCJB **16** 07:53:30.7±0.2, 28°.14N±0°.02×128°.13E±0°.04, h132^{km}±2^{km}, mb4.1/80, Error ellipse: s-maj=5.8km s-min=3.2km az=30.3*
*IDC **16** 07:53:30.9±0.7, 28°.20N×128°.11E, h122^{km}±6^{km}, mb3.8/19, mb1 3.9/21, mb1mx3.7/53, mbtmp4.1/21, MS3.2/3, Ms1 3.2/3, ms1mx2.7/48, Error ellipse: s-maj=15.4km s-min=9.3km az=89.0*
*JMA **16** 07:53:32.4±0.1, 28°.17N×128°.08E, h113^{km}±3^{km}, M3.8*
*NEIC **16** 07:53:33.1±0.6, 28°.16N×128°.00E, h140^{km}±5^{km}, mb4.3/66, Error ellipse: s-maj=6.4km s-min=4.8km az=109.0*
ISC 16 07:53:32.1±0.5**, 28°.11N**±0°.03×**128°.14E**±0°.04**, h131**^{km}±4^{km}**, n143, σ1^{s}10**/182**, mb4.3**/80**, 2C, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.78**	**114**	P	**Pn**	**07 53 52.7**	**-0.5**
JTK				S	**Sn**	**07 54 08.2**	**-0.9**
JOKE	**Okinoerabujima**	**0.84**	**153**	P	**Pn**	**07 53 53.3**	**-0.3**
JOKE				S	**Sn**	**07 54 09.3**	**-0.6**
JAMN	**Amaminishikomi**	**0.92**	**82**	P	**Pn**	**07 53 53.7**	**-0.6**
JAMN				S	**Sn**	**07 54 09.6**	**-1.5**
JIH	**Iheya**	**1.08**	**188**	P	**Pn**	**07 53 55.8**	**0.0**
JIH				S	**Sn**	**07 54 13.4**	**-0.4**
JYRO	**Yoronjima**	**1.11**	**166**	P	**Pn**	**07 53 56.0**	**-0.2**
JYRO				S	**Sn**	**07 54 13.7**	**-0.7**
JOW	**Kunigami**	**1.28**	**175**	*e*Pn	**Pn**	**07 53 57.9**	**+0.1**
JOW				*e*Sn	**Sn**	**07 54 16.8**	**-0.7**
JOW	**Kunigami**	**1.28**	**175**	P	**Pn**	**07 53 57.8**	**0.0**
JOW				S	**Sn**	**07 54 16.6**	**-0.8**
JOW	**Kunigami**	**1.28**	**175**	P	**Pn**	**07 53 57.9**	**+0.1**
	38nm,0.3s,baz=88,slow=20,SNR=301						
JOW				S	**Sn**	**07 54 16.4**	**-1.1**
	59nm,0.3s,baz=228,slow=25,SNR=43						
JAM	**Amami Oshima**	**1.32**	**77**	P	**Pn**	**07 53 57.8**	**-0.4**
JAM				S	**Sn**	**07 54 17.3**	**-0.9**
JTAJ	**Takarajima**	**1.40**	**42**	P	**Pn**	**07 53 58.4**	**-0.6**
JTAJ				S	**Sn**	**07 54 18.2**	**-1.4**
JNTH	**Nagotoyohara**	**1.59**	**184**	S	**Sn**	**07 54 23.1**	**-0.4**
JZK	**Kikaishima**	**1.63**	**82**	P	**Pn**	**07 54 02.6**	**+1.0**
JZK				*e*S	**Sn**	**07 54 25.3**	**+1.1**
JAGN	**Aguni-jima**	**1.71**	**208**	P	**Pn**	**07 54 02.9**	**+0.2**
JAGN				S	**Sn**	**07 54 25.6**	**-0.4**
JJT3	**Tamagusuku3**	**1.98**	**189**	P	**Pn**	**07 54 06.6**	**+0.7**
JJT3				S	**Sn**	**07 54 32.2**	**+0.4**
JKE	**Kume jima 2**	**2.15**	**215**	P	**Pn**	**07 54 07.8**	**-0.1**
JKE				S	**Sn**	**07 54 34.1**	**-1.3**
JNN	**Nakanoshima**	**2.30**	**41**	P	**Pn**	**07 54 09.8**	**+0.1**
JNN				*e*S	**Sn**	**07 54 38.1**	**-0.6**
JKC	**Kuchinoerabu**	**2.95**	**37**	*e*S	**Sn**	**07 54 53.3**	**-0.2**
JYAK	**Yakushimahirau**	**2.96**	**44**	*e*S	**Sn**	**07 54 51.1**	**-2.7**
JMTN	**Minamitane**	**3.32**	**46**	P	**Pn**	**07 54 23.3**	**+0.5**
JMTN				*e*S	**Sn**	**07 54 59.9**	**-2.2**
JTN	**Tanegashima 3**	**3.54**	**44**	P	**Pn**	**07 54 25.9**	**+0.1**
JTN				*e*S	**Sn**	**07 55 05.4**	**-2.0**
JMZ	**Minamidaito 2**	**3.57**	**129**	P	**Pn**	**07 54 26.2**	**0.0**
JMZ				S	**Sn**	**07 55 05.1**	**-2.9**
JNU	**Nakatsue**	**5.52**	**25**	*e*Pn	**Pn**	**07 54 53.9**	**+1.8**
JNU				S	**Sn**	**07 55 56.5**	**+1.8**
JNU	**Nakatsue**	**5.52**	**25**	P	**Pn**	**07 54 52.1**	**-0.1**
	1.7nm,0.3s,baz=300,slow=2.8,SNR=10						
JNU				S	**Sn**	**07 55 56.5**	**+1.8**
	0.6nm,0.3s,baz=200,slow=20,SNR=4.6						
SSLB	**Suanglung**	**7.77**	**238**	*e*Pn	**Pn**	**07 55 21.9**	**-0.6**
KSAR	**Wonju Array Be**	**9.31**	**359**	P	**Pn**	**07 55 42.6**	**-0.4**
KSRS	**Korea Array**	**9.32**	**359**	P	**Pn**	**07 55 42.6**	**-0.5**
	0.2nm,0.3s,baz=176,slow=13,SNR=11						
KSRS				LR	LR	07 59 02.7	
	comp=Z,81nm,20.5s,baz=160,slow=36						
MAJO	**Matsushiro**	**11.96**	**43**	*e*Pn	**Pn**	**07 56 21.6**	**+3.3**
MJAR	**Matsushiro Arr**	**11.96**	**43**	P	**Pn**	**07 56 21.6**	**+3.3**
	0.0nm,0.3s,baz=221,slow=9.4,SNR=2.5						
BJT	**Baijiatuau**	**15.46**	**323**	*e*P	**P**	**07 57 05.8**	**+1.2**
	24nm,0.9s						
BJI	**Beijing**	**15.47**	**323**	P	**P**	**07 57 05.8**	**+1.1**
BJI				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2	**Changchun**	**15.81**	**353**	*e*P	**P**	**07 57 09.1**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ENH	**Enshi**	**16.43**	**282**	*e*Pn	**P**	**07 57 16.3**	**+0.7**
	comp=Z,8.7nm,0.7s						
XAN	**Xi'an**	**17.49**	**295**	P	**Pn**	**07 57 27.8**	**-0.1**
XAN				pP	pP	07 57 45.8	-4.4
XAN				sP	sP	07 57 52.5	-14
XAN				pmax	pmax		
	comp=Z,21nm,1.1s						
XAN				pmax	pmax		
	comp=Z,110nm,4.5s						
XAN	**Xi'an**	**17.49**	**295**	*e*P	**Pn**	**07 57 27.7**	**-0.2**
	comp=Z,13nm,0.6s						
HHC	**Hu-ho-hao-te**	**18.62**	**317**	*e*P	**P**	**07 57 39.8**	**+0.2**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,5.5s						
GYA	**Guiyang**	**19.16**	**270**	*e*P	**P**	**07 57 42.3**	**-3.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LZH	**Lanzhou**	**22.03**	**297**	⇑P	**P**	**07 58 15.3**	**-0.9**
LZH				pP	pP	07 58 40.1	-0.2
LZH				PP	**PnPn**	**07 58 47.0**	**+1.1**
LZH				sP	sP	07 58 55.8	-0.7
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,56nm,4.7s						
SONA0	**Songino Array**	**25.95**	**325**	*e*P	**P**	**07 58 52.9**	**+0.5**
SONA0				*e*pP	**pP**	**07 59 20.6**	**+0.8**
SONA0				*e*PcP	**PcP**	**08 02 18.0**	**+0.5**
SONM	**Songino Array**	**25.95**	**325**	P	**P**	**07 58 52.9**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=142,slow=11,SNR=9.4						
SONM				pP	**pP**	**07 59 20.6**	**+0.8**
	comp=Z,4.2nm,1.1s,baz=137,slow=9.6,SNR=11						
SONM				PcP	**PcP**	**08 02 18.0**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=149,slow=2.0,SNR=3.0						
SONA1	**Songino Array**	**25.96**	**325**	*e*P	**P**	**07 58 53.6**	**+1.1**
GTA	**Gaotai**	**26.00**	**303**	⇑P	**P**	**07 58 51.9**	**-1.1**
GTA				pP	pP	07 59 22.0	+1.6
GTA				sP	sP	07 59 38.8	+3.3
GTA				S	**S**	**08 03 14.1**	**0.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,70nm,6.8s						
GTA				LR	LR		
	comp=N,98nm,17.8s						
GTA				LR	LR		
	comp=E,170nm,15.2s						
GTA				LR	LR		
	comp=Z,120nm,16.5s						
CMAR	**Chiang Mai Arr**	**28.43**	**257**	P	**P**	**07 59 16.1**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=66,slow=11,SNR=2.6						
SIJI	**Sorong**	**28.97**	**174**	LR	LR	08 10 57.6	
	comp=Z,40nm,18.7s,baz=66,slow=36						
FAKI	**Fak Fak**	**31.10**	**172**	*e*P	**P**	**07 59 37.8**	**-0.4**
	comp=Z,16nm,1.0s						
PETK	**Petropavlovsk-**	**33.15**	**33**	P	**P**	**07 59 56.9**	**+1.0**
	comp=Z,2.8nm,0.9s,baz=192,slow=13,SNR=4.8						
PETK				LR	LR	08 13 18.0	
	comp=Z,87nm,20.4s,baz=178,slow=36						
PEA1	**Petropavlovsk-**	**33.16**	**33**	*e*P	**P**	**07 59 56.9**	**+1.0**
WMQ	**Urumqi**	**35.91**	**307**	*e*P	**P**	**08 00 21.0**	**+1.3**
MK01	**Makanchi Array**	**40.23**	**310**	*e*P	**P**	**08 00 54.7**	**-1.2**
MK31	**Makanchi Array**	**40.24**	**310**	*e*P	**P**	**08 00 54.2**	**-1.8**
MK32	**Makanchi Array**	**40.24**	**310**	*e*P	**P**	**08 00 53.8**	**-2.2**
MK32				*e*pP	**pP**	**08 01 25.4**	**+0.6**
MK32				*e*PcP	**PcP**	**08 02 56.8**	**-0.5**
MK32				*e*ScP	**ScP**	**08 06 34.3**	**-0.1**
MKAR	**Makanchi Array**	**40.24**	**310**	*e*P	**P**	**08 00 54.2**	**-1.8**
	comp=Z,5.2nm,0.7s						
MKAR				pP	**pP**	**08 01 25.4**	**+0.6**
MKAR				PcP	**PcP**	**08 02 56.8**	**-0.5**
MKAR				ScP	**ScP**	**08 06 34.3**	**-0.1**
MKAR	**Makanchi Array**	**40.24**	**310**	P	**P**	**08 00 53.8**	**-2.2**
	comp=Z,0.5nm,0.4s,baz=97,slow=10,SNR=12						
MKAR				pP	**pP**	**08 01 25.4**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=113,slow=9.0,SNR=4.4						
MKAR				PcP	**PcP**	**08 02 56.8**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=80,slow=4.0,SNR=6.8						
MKAR				ScP	**ScP**	**08 06 34.3**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=122,slow=5.2,SNR=3.6						
ZALV	**Zalesovo Beam**	**40.72**	**322**	P	**P**	**08 00 57.5**	**-2.2**
	comp=Z,0.8nm,0.5s,baz=114,slow=8.9,SNR=4.0						
ZALV				ScP	**ScP**	**08 06 35.3**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=46,slow=4.3,SNR=5.2						
ZAA1	**Zalesovo Array**	**40.72**	**322**	*e*P	**P**	**08 00 57.5**	**-2.2**
ZAA1				*e*ScP	**ScP**	**08 06 35.3**	**-0.8**
MTN	**Manton Dam**	**40.81**	**176**	*e*P	**P**	**08 01 01.2**	**+0.4**
	comp=Z,9.5nm,0.8s						
KURK	**Kurchatov**	**43.42**	**315**	*e*P	**P**	**08 01 19.5**	**-2.2**
	comp=Z,1.2nm,1.0s						
KURK				*e*PP	**PcP**	**08 03 07.1**	**-0.5**
KURBB	**Kurchatov Arra**	**43.46**	**315**	P	**P**	**08 01 19.8**	**-2.2**
	comp=Z,1.0nm,0.3s,baz=102,slow=8.9,SNR=4.3						
KURBB				PcP	**PP**	**08 03 07.1**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=108,slow=3.7,SNR=4.7						
FITZ	**Fitzroy Crossi**	**46.00**	**183**	*e*P	**P**	**08 01 43.5**	**+1.2**
	comp=Z,6.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**46.00**	**183**	P	**P**	**08 01 42.9**	**+0.5**
	comp=Z,7.8nm,0.7s,baz=7.1,slow=7.3,SNR=13						
NRIK	**Noril'sk**	**47.45**	**342**	PcP	**PcP**	**08 03 20.8**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=143,slow=7.2,SNR=4.2						
WRAB	**Tennant Creek**	**48.14**	**172**	*e*P	**P**	**08 01 59.0**	**0.0**
	comp=Z,6.3nm,0.8s						
WR1	**Warramunga Arr**	**48.15**	**172**	*e*P	**P**	**08 01 59.5**	**+0.5**
WRA	**Warramunga Arr**	**48.15**	**172**	P	**P**	**08 01 59.5**	**+0.5**
	comp=Z,4.5nm,0.7s,baz=352,slow=8.3,SNR=34						
WB2	**Warramunga Arr**	**48.15**	**172**	*e*P	**P**	**08 01 59.5**	**+0.5**
BVAR	**Borovoye Array**	**48.84**	**317**	P	**P**	**08 02 03.4**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=89,slow=8.4,SNR=4.2						
BVAR				PcP	**PcP**	**08 03 26.2**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=113,slow=3.0,SNR=7.2						
MBWA	**Marble Bar**	**49.65**	**190**	*e*P	**P**	**08 02 11.2**	**+0.7**
	comp=Z,8.7nm,0.9s						
AS31	**Alice Springs**	**51.77**	**173**	*e*P	**P**	**08 02 27.5**	**+1.1**
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**51.77**	**173**	P	**P**	**08 02 27.4**	**+1.0**
	comp=Z,1.8nm,0.5s,baz=1.9,slow=14,SNR=50						
AS01	**Alice Springs**	**51.78**	**173**	*e*P	**P**	**08 02 27.6**	**+1.1**
ANM	**Nome**	**54.90**	**29**	*e*P	**P**	**08 02 49.2**	**+0.4**
	comp=Z,1.5nm,0.8s						
ABKAR	**Akbulak array**	**55.32**	**312**	*e*P	**P**	**08 02 50.4**	**-1.7**
CHGN	**Chignik**	**58.03**	**39**	*e*P	**P**	**08 03 09.8**	**-1.2**
	comp=Z,19nm,1.2s						
SVW2	**Sparrevohn**	**59.24**	**33**	*e*P	**P**	**08 03 20.0**	**+0.7**
	comp=Z,3.8nm,0.7s						
IM3	**Indian Mountai**	**59.86**	**28**	*e*P	**P**	**08 03 23.4**	**-0.1**
PPLA	**Purkeypile**	**60.71**	**31**	*e*P	**P**	**08 03 29.8**	**+0.3**
	comp=Z,4.7nm,1.0s						
CAST	**Castle Rocks**	**60.72**	**31**	*e*P	**P**	**08 03 29.6**	**+0.2**
	comp=Z,3.8nm,0.8s						
OHAK	**Old Harbor**	**60.76**	**38**	*e*P	**P**	**08 03 29.5**	**-0.3**
	comp=Z,20nm,1.0s						
STKA	**Stephens Creek**	**61.02**	**167**	*e*P	**P**	**08 03 32.8**	**+1.1**
	comp=Z,0.3nm,0.8s						
STKA	**Stephens Creek**	**61.02**	**167**	P	**P**	**08 03 32.4**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=352,slow=8.4,SNR=6.0						
BBOO	**Buckleboo**	**61.05**	**172**	*e*P	**P**	**08 03 33.1**	**+1.2**
	comp=Z,2.9nm,1.1s						
KDAK	**Kodiak Island**	**61.06**	**37**	*e*P	**P**	**08 03 31.6**	**-0.2**
	comp=Z,6.9nm,0.6s						
KDAK	**Kodiak Island**	**61.06**	**37**	P	**P**	**08 03 31.0**	**-0.8**
	comp=Z,3.8nm,0.5s,baz=281,slow=5.9,SNR=8.4						
MLY	**Manley**	**61.16**	**29**	*e*P	**P**	**08 03 32.8**	**+0.3**
	comp=Z,3.6nm,0.6s						
TRF	**Thorofare Moun**	**61.52**	**30**	*e*P	**P**	**08 03 36.2**	**+1.2**
	comp=Z,1.0nm,0.8s						
SUA	**Susitna One**	**61.53**	**33**	*e*P	**P**	**08 03 34.5**	**-0.6**
	comp=Z,10nm,0.8s						
RC01	**Rabbit Creek A**	**62.06**	**33**	*e*P	**P**	**08 03 37.9**	**-0.6**
	comp=Z,11nm,1.2s						
MCK	**McKinley**	**62.08**	**30**	*e*P	**P**	**08 03 38.3**	**-0.3**
	comp=Z,8.8nm,1.1s						
RND	**Reindeer**	**62.16**	**30**	*e*P	**P**	**08 03 38.4**	**-0.8**
	comp=Z,11nm,0.6s						
MDM	**Murphy Dome**	**62.23**	**29**	*e*P	**P**	**08 03 39.8**	**+0.2**
	comp=Z,11nm,0.7s						
PMR	**Palmer**	**62.28**	**32**	*e*P	**P**	**08 03 39.0**	**-0.9**
	comp=Z,0.9nm,0.4s						
WRH	**Wood River Hil**	**62.36**	**29**	*e*P	**P**	**08 03 41.1**	**+0.7**
	comp=Z,3.2nm,1.0s						
COLA	**College**	**62.40**	**29**	*e*P	**P**	**08 03 41.3**	**+0.6**
	comp=Z,5.4nm,0.4s						
SML	**Sawmill**	**62.63**	**32**	*e*P	**P**	**08 03 41.7**	**-0.6**
	comp=Z,6.5nm,0.9s						
ILAR	**Eielson Array**	**62.83**	**29**	P	**P**	**08 03 42.1**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=262,slow=3.9,SNR=20						
ILB	**Eielson Array**	**62.83**	**29**	*e*P	**P**	**08 03 42.9**	**-0.6**
IL1	**Eielson Array**	**62.83**	**29**	*e*P	**P**	**08 03 42.4**	**-1.2**
HDA	**Harding Lake**	**62.85**	**29**	*e*P	**P**	**08 03 42.7**	**-1.0**
	comp=Z,5.7nm,0.8s						
DHY	**Denali Highway**	**62.87**	**31**	*e*P	**P**	**08 03 43.7**	**-0.3**
	comp=Z,6.4nm,1.0s						
SCM	**Sheep Creek Mo**	**63.09**	**32**	*e*P	**P**	**08 03 45.5**	**+0.1**
	comp=Z,3.8nm,0.5s						
PRP	**Porcupine Dome**	**63.28**	**28**	*e*P	**P**	**08 03 46.5**	**-0.2**
	comp=Z,2.0nm,0.8s						
KLU	**Klutina**	**63.81**	**32**	*e*P	**P**	**08 03 50.1**	**0.0**
	comp=Z,3.4nm,0.8s						
RIDG	**Independ'e Rid**	**63.88**	**30**	*e*P	**P**	**08 03 49.8**	**-0.8**
	comp=Z,4.1nm,0.6s						
DIV	**Divide**	**63.95**	**33**	*e*P	**P**	**08 03 51.5**	**+0.4**
	comp=Z,4.3nm,0.5s						
HARP	**HAARP**	**63.99**	**31**	*e*P	**P**	**08 03 51.7**	**+0.4**
	comp=Z,8.9nm,0.9s						
SCRK	**Sand Creek**	**64.21**	**29**	*e*P	**P**	**08 03 52.0**	**-0.8**
	comp=Z,3.3nm,0.7s						
MENT	**Mentasta**	**64.54**	**30**	*e*P	**P**	**08 03 55.3**	**+0.5**
	comp=Z,5.4nm,0.5s						
EGAK	**Eagle**	**65.24**	**28**	*e*P	**P**	**08 03 58.8**	**-0.5**
	comp=Z,2.2nm,1.0s						
DAWY	**Dawson**	**66.16**	**29**	*e*P	**P**	**08 04 05.1**	**-0.2**
	comp=Z,1.9nm,0.8s						
EPYK	**Eagle Plains**	**66.61**	**26**	*e*P	**P**	**08 04 07.9**	**-0.2**
	comp=Z,5.9nm,0.8s						
INK	**Inuvik**	**67.20**	**24**	*e*P	**P**	**08 04 11.6**	**-0.1**
	comp=Z,1.7nm,1.0s						
INK	**Inuvik**	**67.20**	**24**	P	**P**	**08 04 09.7**	**-2.0**
	comp=Z,1.5nm,0.8s,baz=296,slow=6.7,SNR=7.4						
HYT	**Haines Junctio**	**67.93**	**32**	*e*P	**P**	**08 04 17.3**	**+0.7**
	comp=Z,3.0nm,0.7s						
WHY	**Whitehorse**	**69.20**	**32**	*e*P	**P**	**08 04 24.9**	**+0.4**
	comp=Z,1.1nm,0.9s						
FIA0	**FINESS Array S**	**71.20**	**330**	*e*P	**P**	**08 04 34.5**	**-2.0**
FINES	**FINESS Array B**	**71.20**	**330**	P	**P**	**08 04 34.5**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=64,slow=5.6,SNR=5.0						
RES	**Resolute Bay**	**73.72**	**11**	*e*P	**P**	**08 04 50.6**	**-0.6**
	comp=Z,1.0nm,1.0s						
YKW3	**Yellowknife Ar**	**76.82**	**25**	*e*P	**P**	**08 05 09.2**	**+0.1**
	comp=Z,3.8nm,1.1s						
YKA	**Yellowknife Ar**	**76.86**	**25**	P	**P**	**08 05 08.9**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=305,slow=5.7,SNR=63						
YKB5	**Yellowknife Ar**	**76.86**	**25**	*e*P	**P**	**08 05 09.0**	**-0.3**
D08A	**Wollman Farm,**	**83.88**	**39**	*e*P	**P**	**08 05 47.8**	**+0.7**
	comp=Z,2.8nm,0.8s						
HUMO	**Hull Mountain**	**83.98**	**45**	*e*P	**P**	**08 05 49.2**	**+1.4**
	comp=Z,0.9nm,0.8s						
NEW	**Newport**	**84.16**	**38**	*e*P	**P**	**08 05 49.5**	**+0.8**
	comp=Z,1.6nm,0.6s						
PINE	**Pine Mountain**	**84.56**	**43**	*e*P	**P**	**08 05 52.5**	**+1.6**
	comp=Z,4.3nm,0.9s						
G08A	**Pilot Rock**	**84.87**	**41**	*e*P	**P**	**08 05 50.4**	**-2.0**
	comp=Z,2.1nm,0.8s						
ITM	**Ithomi**	**85.12**	**310**	*e*P	**P**	**08 05 52.5**	**-1.1**
	comp=Z,17nm,1.1s						
I07A	**Izee**	**85.25**	**42**	*e*P	**P**	**08 05 55.7**	**+1.4**
	comp=Z,0.6nm,0.8s						
BMO	**Blue Mountains**	**86.08**	**40**	*e*P	**P**	**08 05 59.2**	**+0.9**
	comp=Z,1.2nm,1.0s						
J08A	**Circle Bar Ran**	**86.28**	**42**	*e*P	**P**	**08 06 00.8**	**+1.4**

	comp=Z,3.6nm,0.7s						
FCC	**Fort Churchill**	86.61	21	eP	P	08 05 59.5	-1.0
	comp=Z,3.4nm,0.7s						
FFC	**Flin Flon**	86.95	26	eP	P	08 06 02.0	-0.2
	comp=Z,2.8nm,0.6s						
HRY	**Holter Researc**	87.94	37	eP	P	08 06 08.6	+1.3
DLMT	**Dillon**	88.39	38	eP	P	08 06 10.7	+1.1
	comp=Z,2.6nm,0.7s						
HLID	**Hailey**	88.51	40	eP	P	08 06 11.9	+1.7
	comp=Z,2.6nm,0.9s						
NVAR	**Mina Array Bea**	89.26	46	P	P	08 06 13.8	0.0
	comp=Z,0.3nm,0.5s,baz=294,slow=6.9,SNR=5.4						
RLMT	**Red Lodge**	90.33	37	eP	P	08 06 20.0	+1.3
	comp=Z,0.7nm,0.8s						
R11A	**Troy Canyon, C**	91.02	45	eP	P	08 06 23.3	+1.3
	comp=Z,1.2nm,1.1s						
BW06	**Boulder Array**	91.75	39	eP	P	08 06 26.3	+0.9
	comp=Z,1.3nm,1.1s						
PDAR	**Pinedale Array**	91.75	39	eP	P	08 06 25.8	+0.5
PDAR	**Pinedale Array**	91.75	39	P	P	08 06 25.0	-0.3
	comp=Z,0.8nm,0.6s,baz=86,slow=0.7,SNR=9.3						
ULM	**Lac du Bonnet**	92.78	27	P	P	08 06 29.5	-0.1
	comp=Z,1.5nm,0.5s,baz=197,slow=2.5,SNR=4.5						
LCMT	**Little Creek M**	93.31	45	eP	P	08 06 30.4	-2.1
	comp=Z,1.0nm,0.7s						
SRU	**San Rafael Swe**	93.61	42	eP	P	08 06 35.1	+1.2
	comp=Z,1.5nm,0.7s						
PTGA	**Pitinga**	151.69	17	ePKPbc	PKPbc	08 13 11.9	0.0

ISCJB ***16*** *07:57:21.4±0.6, 67.°59N±0.°04×142.°8E±0.°1, h10^{km}, mb3.2/3, Error ellipse: s-maj=7.4km s-min=5.7km az=22.8*

IDC ***16*** *07:57:21.5±1.5, 67.°49N×142.°85E, h0^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.2/52, mbtmp3.2/4, ML2.7/1, Error ellipse: s-maj=31.9km s-min=23.9km az=19.0*

YARS ***16*** *07:57:22.3±0.1, 67.°620N±0.°002×142.°820E±0.°006, h11^{km}±1^{km}*

ISC 16 07:57:22.5±0.8**, 67.°55N**±0.°04×**142.°66E**±0.°04**, h10^{km}, n11, σ2.^{s}00**/23**, mb3.4**/3**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	1.11	168	eP	Pb	07 57 43.5	-0.2
MOMR				eS	Sb	07 57 58.4	+0.3
YBGR	**Belaya Gora**	1.65	52	eP	Pn	07 57 50.5	-1.0
YBGR				eS	Sn	07 58 10.6	-2.1
UNR	**Ust'-Nera**	3.00	175	eP	Pn	07 58 11.2	+1.2
UNR				eP	Pb	07 58 17.4	+1.5
UNR				eS	Sn	07 58 46.9	+0.9
UNR				eS	Sg	07 58 57.2	-1.5
BTGS	**Batagay**	3.07	276	eP	Pn	07 58 12.0	+1.0
BTGS				eP	Pb	07 58 18.5	+1.4
BTGS				eS	Sn	07 58 48.3	+0.6
BTGS				eS	Sg	07 58 59.1	-2.0
ATKR	**Artyk**	3.53	162	eP	Pn	07 58 18.3	+1.0
ATKR				eP	Pb	07 58 26.7	+1.7
ATKR				eS	Sn	07 58 59.1	0.0
ATKR				eS	Sg	07 59 13.1	-2.7
SEY	**Seymchan**	6.17	134	Pn	Pn	07 58 53.1	-0.4
	0.2nm,0.3s,baz=314,slow=18,SNR=2.4						
SEY				Lg	Lg	08 00 32.8	
	0.6nm,0.3s,baz=209,slow=22,SNR=3.9						
YAK	**Yakutsk**	7.82	231	eP	Pn	07 59 18.2	+2.1
YAK				eP	Pb	07 59 44.5	+6.6
YAK				eS	Sn	08 00 43.2	-1.3
YAK				eS	Sg	08 01 26.6	-6.5
MA2	**Magadan**	8.77	152	Lg	Lg	08 01 59.2	
	0.3nm,0.3s,baz=127,slow=19,SNR=3.5						
ILAR	**Eielson Array**	27.22	62	P	P	08 03 06.3	+0.4
	0.6nm,0.8s,baz=305,slow=8.5,SNR=7.7						
MKAR	**Makanchi Array**	36.74	267	P	P	08 04 30.6	+1.0
	0.4nm,0.6s,baz=51,slow=8.4,SNR=4.2						
YKA	**Yellowknife Ar**	38.88	46	P	P	08 04 47.5	+0.1
	0.2nm,0.7s,baz=322,slow=8.6,SNR=4.8						

ISCJB ***16*** *08:07:45.8±0.3, 23.°04N±0.°02×121.°47E±0.°02, h17^{km}±3^{km}, Error ellipse: s-maj=3.0km s-min=2.5km az=31.8*

JMA ***16*** *08:07:45.5±0.2, 23.°09N×121.°43E, h23^{km}±5^{km}, M3.4*

TAP ***16*** *08:07:46.6, 23.°10N×121.°36E, h20^{km}, ML3.9, B*

ISC 16 08:07:46.4±0.9**, 23.°07N**±0.°02×**121.°43E**±0.°02**, h20**^{km}±6^{km}**, n109, σ1.^{s}11**/159**, 3C-23D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung**	0.07	295	⇑iP	Pb	08 07 50.6	+0.4
	baz=111						
CHKT				i S	Sb	08 07 53.2	+0.5
	baz=111						
TWF1	**Yuli**	0.31	336	⇓iP	Pb	08 07 53.0	-0.3
	baz=335						
TWF1				S	Sb	08 07 58.0	+0.1
	baz=335						
YULB	**Yu-li**	0.34	339	⇓P	Pb	08 07 53.4	-0.4
	baz=335						
YULB				S	Sb	08 07 58.5	-0.4
	baz=335						
ELDTW	**Lidau**	0.40	287	⇓iP	Pb	08 07 53.7	-1.2
	baz=285						
ELDTW				eS	Sb	08 07 58.4	-2.2
	baz=285						
TTN	**Taitung**	0.41	220	⇑P	Pn	08 07 56.2	-1.0
	baz=209						
TTN				eS	Sn	08 08 02.5	-1.7
	baz=209						
TWGBT	**Beinan**	0.41	232	⇓P	Pb	08 07 54.7	-0.3
	baz=233						
TWGBT				S	Sb	08 08 00.4	-0.4
	baz=233						
TWG	**Pinlang**	0.42	233	⇓iP	Pb	08 07 54.7	-0.3
	baz=232						
TWG				S	Sb	08 08 00.4	-0.5
	baz=232						
HGSD	**Ruisui**	0.42	359	eP	Pb	08 07 55.3	+0.2
	baz=17						
HGSD				eS	Sn	08 08 03.6	-1.0
	baz=17						
EHY	**Hungye**	0.45	347	⇓iP	Pb	08 07 55.0	-0.6
	baz=340						
EHY				S	Sb	08 08 01.4	-0.4
	baz=340						
EGFH	**Guangfu**	0.60	359	eP	Pb	08 07 57.1	-1.1
	baz=352						
STYT	**Tauyuan**	0.63	279	⇓iP	Pb	08 07 57.7	-1.1
	baz=276						
STYT				i S	Sb	08 08 05.4	-1.8
	baz=276						
ECL	**Taimali**	0.65	223	eP	Pb	08 07 57.8	-1.2
	baz=216						
SLGT	**Liugui**	0.73	264	⇓P	Pb	08 07 59.8	-0.6
	baz=259						
VWDT	**VWDT**	0.73	339	⇓P	Pb	08 07 59.9	-0.6
	baz=351						
VWDT				S	Sb	08 08 09.2	-0.9
	baz=351						
ESL	**Shilin**	0.74	360	eP	Pb	08 07 59.5	-1.1
	baz=355						
TPUB	**Ta-pu**	0.77	287	P	Pn	08 08 00.7	-1.6
	baz=292						
TPUB				S	Sb	08 08 10.3	-1.1
	baz=292						
WTP	**Ta-pu**	0.77	283	⇓iP	Pb	08 08 00.6	-0.6
	baz=281						
SGST	**Jiashian**	0.78	271	⇓iP	Pn	08 08 01.0	-1.4
	baz=271						
SGST				S	Sb	08 08 10.8	-0.7
	baz=271						
SSD	**Sandimen**	0.81	247	eP	Pb	08 08 00.6	-1.2
	baz=242						
WHYT	**Xinyi Township**	0.82	320	⇓P	Pn	08 08 01.5	-1.4
	baz=316						
WHYT				S	Sb	08 08 11.8	-0.9
	baz=316						
CHN4	**Tsaushan**	0.82	290	⇓iP	Pn	08 08 01.7	-1.2
	baz=293						
CHN4				eS	Sn	08 08 12.8	-1.6
	baz=293						
SSLB	**Suanglung**	0.84	328	⇓P	Pb	08 08 01.5	-0.9
	baz=329						
SSLB				S	Sb	08 08 12.5	-0.7
	baz=329						
CHN1	**Nanshi**	0.84	278	⇓iP	Pn	08 08 02.2	-1.0
	baz=274						
CHN1				eS	Sn	08 08 13.5	-1.5
	baz=274						
ENLB	**Shoufeng**	0.84	11	eP	Pn	08 08 02.3	-0.8
	baz=359						
ENLB				eS	Sn	08 08 15.4	+0.4
	baz=359						
TAW	**Tawu**	0.87	215	eP	Pb	08 08 01.8	-0.9
	baz=210						
MASBT	**Mashibuluo**	0.87	238	⇓P	Pb	08 08 01.6	-1.2
	baz=226						
CHN5	**Tsauling**	0.87	307	⇓P	Pn	08 08 02.9	-0.8
	baz=307						
CHN5				eS	Sn	08 08 14.6	-1.1
	baz=307						
EAST	**Anshuo**	0.87	218	eP	Pb	08 08 01.6	-1.3
	baz=213						
SNST	**Tainan City**	0.88	280	eP	Pn	08 08 02.3	-1.2
	baz=278						
SNST				eS	Sn	08 08 15.1	-0.7
	baz=278						
TWK	**Hsinying**	0.89	283	⇓iP	Pn	08 08 02.9	-1.0
	baz=281						
TWK				eS	Sn	08 08 15.5	-0.7
	baz=281						
OWD	**Renai**	0.91	345	eP	Pb	08 08 02.1	-1.5
	baz=346						
HWA	**Hwalien**	0.92	10	eP	Pn	08 08 05.0	+0.9
	baz=358						
SGLT	**Jiouru**	0.94	249	eP	Pn	08 08 04.6	+0.2
	baz=244						
SMLT	**Sun Moon Lake**	0.95	329	⇓iP	Pn	08 08 03.7	-1.0
	baz=334						
SMLT				eS	Sn	08 08 17.6	0.0
	baz=334						
CHN3	**Shinhua**	0.98	271	eP	Pn	08 08 05.8	+0.7
	baz=278						
CHN3				eS	Sn	08 08 20.1	+1.7
	baz=278						
TYC	**Yuchr**	0.98	328	⇓eP	Pn	08 08 04.4	-0.7
	baz=337						
TYC				S	Sn	08 08 17.9	-0.5
	baz=337						
SSPT	**Xinbi**	0.99	234	eP	Pn	08 08 04.7	-0.5
	baz=226						
WJS	**Zhushan**	0.99	319	eP	Pn	08 08 05.4	+0.2
	baz=318						
WJS				eS	Sn	08 08 19.1	+0.5
	baz=318						
CHN2	**Minshiung**	0.99	298	P	Pn	08 08 05.2	0.0
	baz=296						
CHN2				S	Sn	08 08 19.1	+0.5
	baz=296						
WGK	**Gukeng**	1.01	308	P	Pn	08 08 05.2	-0.2
	baz=306						
WGK				S	Sn	08 08 19.5	+0.5
	baz=306						
CHGB	**Renai**	1.01	346	eP	Pb	08 08 04.3	-1.2
	baz=346						
CHGB				S	Sb	08 08 17.0	-1.4
	baz=346						
TWD	**Chiawan**	1.02	8	eP	Pb	08 08 04.0	-1.3
	baz=357						
CHY	**Chiayi**	1.02	295	⇓P	Pn	08 08 05.5	-0.1
	baz=293						
CHY				eS	Sn	08 08 18.8	-0.6
	baz=293						
SCZT	**Fangliau**	1.02	227	eP	Pb	08 08 04.8	-0.7
	baz=219						
WDLH	**Douliu**	1.03	307	eP	Pn	08 08 05.9	+0.2
	baz=305						
WDLH				eS	Sn	08 08 20.8	+1.3
	baz=305						
LAY	**Lan-yu**	1.03	174	eP	Pn	08 08 04.3	-1.4
	baz=162						
WNT	**Mingjian**	1.06	320	⇓iP	Pn	08 08 06.4	+0.2
	baz=318						
WNT				S	Sn	08 08 21.0	+0.7
	baz=318						
SNJT	**Kaohsiung City**	1.06	253	eP	Pn	08 08 07.9	+1.7
	baz=251						
SNJT				eS	Sn	08 08 24.8	+4.5
	baz=251						
WHF	**Hehuan Shan**	1.08	352	⇑eP	Pb	08 08 05.5	-1.2
	baz=4.0						
NACB	**Ninganchiao**	1.11	8	eP	Pn	08 08 04.8	-2.0
	baz=10.0						
ETLH	**Xiulin Townshi**	1.13	2	eP	Pn	08 08 05.9	-1.3
	baz=3.0						
SCLT	**Jiali**	1.15	275	eP	Pb	08 08 07.5	0.0
	baz=283						
SCLT				eS	Sn	08 08 24.0	+1.6
	baz=283						
TDCB	**Techi**	1.20	348	eP	Pb	08 08 07.6	-1.1
	baz=347						
WLCH	**Liuqiu**	1.21	234	eP	Pb	08 08 10.8	+2.1
	baz=213						
TWP	**Hsiaoliuchiu**	1.22	234	eP	Pb	08 08 11.6	+2.7
	baz=213						
WSF	**Szhu**	1.25	297	eP	Pb	08 08 08.9	-0.4
	baz=295						
WSF				eS	Sn	08 08 25.2	+0.2
	baz=295						
TWKBT	**Hengchun**	1.26	207	eP	Pn	08 08 08.2	-0.7
	baz=195						
TWK1	**Hengchun**	1.26	208	eP	Pb	08 08 08.9	-0.6
	baz=195						
TCU	**Taichung**	1.28	327	eP	Pb	08 08 09.3	-0.4
	baz=326						
RLNB	**Erlin**	1.28	310	eP	Pb	08 08 09.3	-0.5
	baz=308						
RLNB				eS	Sb	08 08 26.1	+0.2
	baz=308						
WHP	**Taichung City**	1.28	340	eP	Pb	08 08 10.6	+0.6
	baz=348						
WHP				eS	Sb	08 08 27.4	+1.3
	baz=348						
WCHH	**Zhanghua**	1.29	322	eP	Pb	08 08 09.9	0.0
	baz=319						
WCHH				eS	Sb	08 08 27.2	+1.2
	baz=319						
WTCT	**Ta-ch'eng**	1.32	307	eP	Pb	08 08 09.4	-1.1
	baz=305						
WTCT				eS	Sb	08 08 27.6	+0.6
	baz=305						
NNSB	**Datong**	1.35	358	eP	Pn	08 08 07.7	-2.6
	baz=16						
NNS	**Nan Shan**	1.36	358	eP	Pb	08 08 10.3	-1.1
	baz=16						
ENA	**Nanau**	1.38	12	eP	Pb	08 08 11.4	-0.1
	baz=1.0						
NANB	**Nanao**	1.38	12	eP	Pb	08 08 10.4	-1.1
	baz=1.0						
TWQ1	**Liyutan**	1.41	335	⇓iP	Pb	08 08 12.3	+0.3
	baz=332						
TWQ1				S	Sb	08 08 31.0	+1.4
	baz=332						
WDJ	**Dajia District**	1.47	330	P	Pb	08 08 13.4	+0.4
	baz=327						
WDJ				eS	Sb	08 08 32.7	+1.5
	baz=327						
NSY	**Sanyi**	1.48	335	eP	Pb	08 08 12.9	-0.3
	baz=332						
NSY				eS	Sb	08 08 33.5	+2.0
	baz=332						
NDT	**Datong Townshi**	1.53	3	eP	Pb	08 08 14.0	-0.1
	baz=19						
ENTT	**Nioudou**	1.57	4	eP	Pb	08 08 14.5	-0.3
	baz=4.0						
NMLH	**Miaoli**	1.57	338	eP	Pb	08 08 15.3	+0.4
	baz=334						
NMLH				eS	Sb	08 08 36.3	+1.9
	baz=334						
TWC	**Suao**	1.58	14	eP	Pb	08 08 13.7	-1.2
	baz=2.0						
YHNB	**Yeheng**	1.59	358	eP	Pb	08 08 13.6	-1.6
	baz=15						
NSK	**Sanguang**	1.60	358	eP	Pn	08 08 13.6	0.0
	baz=14						
NSTT	**Nanjuang**	1.60	346	eP	Pb	08 08 14.7	-0.7
	baz=352						
EOS1	**EOS1**	1.60	23	eP	Pb	08 08 14.5	-0.8
	baz=39						
LIOB	**Emei**	1.61	346	eP	Pb	08 08 13.9	-1.6
	baz=343						
WDGT	**Dungji**	1.64	277	eP	Pb	08 08 14.4	-1.6
	baz=275						
TWE	**Neicheng**	1.66	7	eP	Pb	08 08 15.8	-0.5
	baz=7.0						
NWLT	**Wulai**	1.70	2	eP	Pb	08 08 15.7	-1.4
	baz=20						
PHUB	**P'eng-hu**	1.77	285	eP	Pn	08 08 14.9	-1.0
	baz=283						
WLTB	**Daxi**	1.78	355	eP	Pb	08 08 19.1	+0.7
	baz=9.0						
PNG	**Penghu**	1.80	286	eP	Pn	08 08 15.5	-0.8
	baz=284						
VCHM	**Qimei**	1.85	275	eP	Pn	08 08 16.1	-0.9
	baz=273						
TATO	**Taipei**	1.90	1	eP	Pn	08 08 17.4	-0.2
	baz=19						
TWA	**Mucha**	1.91	4	eP	Pb	08 08 19.9	-0.6
	baz=19						
TIPB	**Shuangxi**	1.93	11	eP	Pn	08 08 18.3	+0.2
	baz=12						
JYNG	**Yonagunijimaku**	1.95	45	P	Pb	08 08 19.6	-1.7
JYNG				S	Sn	08 08 43.2	+0.9
TWB1	**Santiao Chiao**	2.00	15	eP	Pb	08 08 20.4	-1.6
YOJ	**Yonaguni jima**	2.00	46	eP	Pn	08 08 18.0	-1.0
	baz=48						
YOJ	**Yonaguni jima**	2.00	46	P	Pb	08 08 20.7	-1.4
YOJ				eS	Sn	08 08 44.3	+0.7
NWF	**Wu-fen Shan**	2.02	9	eP	Pn	08 08 19.9	+0.5
	baz=9.0						
WFSB	**Wu-fen Shan**	2.02	9	eP	Pn	08 08 19.8	+0.5
	baz=9.0						
TWS1	**Kuangyinshan**	2.02	360	eP	Pb	08 08 20.5	-2.0
	baz=18						
YM01	**YM01**	2.07	3	eP	Pb	08 08 22.1	-1.2
	baz=20						
YM04	**YM04**	2.08	3	eP	Pb	08 08 21.9	-1.5
	baz=20						
YM05	**YM05**	2.09	3	eP	Pn	08 08 21.0	+0.6
	baz=20						
HATJ	**Hateruma jima**	2.39	65	P	Pn	08 08 24.9	+0.5
HATJ				S	Sn	08 08 52.6	-0.5
IRIF	**Iriomote-Funau**	2.45	59	P	Pn	08 08 26.9	+1.6
IRIF				eS	Sn	08 08 55.3	+0.6
JKRS	**Kuro-shima**	2.63	63	P	Pn	08 08 28.9	+1.1
JKRS				eS	Sn	08 09 00.0	+0.9
VWUC	**VWUC**	2.64	317	eP	Pn	08 08 27.2	-0.6
	baz=315						
JIJ	**Ishigaki jima**	2.80	62	P	Pn	08 08 30.6	+0.6
JIJ				eS	Sn	08 09 02.1	-1.1
JISG	**Ishigakijimahi**	3.04	60	P	Pn	08 08 33.8	+0.5
JISG				S	Sn	08 09 08.2	-0.9
KNM	**Kinmen**	3.06	297	eP	Pn	08 08 34.5	+0.9
	baz=294						
KNMB	**Chin-men Tao**	3.12	297	eP	Pn	08 08 33.7	-0.7
	baz=295						
MATB	**Ma-tsu**	3.35	336	eP	Pn	08 08 37.5	-0.2
	baz=334						
JTJ	**Tarama**	3.38	62	P	Pn	08 08 38.7	+0.7
JTJ				S	Sn	08 09 17.4	-0.1

IDC 16 09:02:10.2±2.5**, 54.°28N**×**86.°25E, h0^{km}, mb1 2.7**/2**, mb1mx2.7**/67**, mbtmp2.7**/2**, ML2.6**/2**, Error ellipse: s-maj=19.8km s-min=13.0km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	0.90	249	i		09 07 11.8	
	baz=71,slow=353,SNR=4.3						
ZALV	**Zalesovo Beam**	0.90	249	Pg	Pg	09 02 26.0	-1.4
	0.8nm,0.3s,baz=66,slow=16,SNR=18						
ZALV				Lg	Lg	09 02 40.2	
	3.1nm,0.3s,baz=67,slow=26,SNR=17						
ZALV				i		09 07 21.6	
	0.6nm,0.3s,baz=55,slow=31,SNR=5.1						
KURBB	**Kurchatov Arra**	5.97	235	Pn	Pn	09 03 40.2	+0.5
	0.1nm,0.3s,baz=52,slow=14,SNR=9.0						
KURBB				Lg	Lg	09 05 23.0	
	0.0nm,0.3s,baz=51,slow=32,SNR=2.4						
MKAR	**Makanchi Array**	7.91	200	Pn	Pn	09 04 07.6	+1.3
	0.2nm,0.3s,baz=26,slow=13,SNR=8.1						
MKAR				Lg	Lg	09 06 25.0	
	0.0nm,0.3s,baz=23,slow=30,SNR=4.1						

ISCJB ***16*** *09:04:12.5±0.7, 42.°48N±0.°05×64.°87E±0.°06, h10^{km}, mb3.5/5, Error ellipse: s-maj=8.0km s-min=4.8km az=36.3*

IDC ***16*** *09:04:12.9±1.0, 42.°13N×64.°80E, h0^{km}, mb3.6/4, mb1 3.7/11, mb1mx3.5/64, mbtmp3.6/11, ML3.3/7, MS2.9/3, Ms1 2.9/3, ms1mx2.4/50, Error ellipse: s-maj=15.1km s-min=11.1km az=49.0*

NNC ***16*** *09:04:15.0±1.1, 42.°55N×64.°99E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=12.2km s-min=4.6km az=30.0*

ISC 16 09:04:15.2±0.7**, 42.°36N**±0.°07×**64.°88E**±0.°06**, h10^{km}, n22, σ1.^{s}73**/31**, mb3.6**/5**, 18C-7D, Northwestern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	4.22	78	⇓Pn	Pn	09 05 20.1	+0.6
	1.7nm,0.2s,baz=258,slow=13,SNR=25						
KK31				⇑Pg	Pb	09 05 30.4	+0.9
	4.8nm,0.5s,baz=253,slow=16,SNR=6.8						
KK31				⇑Sn	Sn	09 06 08.6	-0.3
	2.4nm,0.2s,baz=227,slow=35,SNR=3.9						
KK31				⇑Lg	Lg	09 06 25.3	
	50nm,0.8s,baz=253,slow=32,SNR=5.4						
MNAS	**Manas**	5.65	86	⇑Pn	Pn	09 05 38.4	-0.9
	1.2nm,0.4s						
MNAS				⇓Pg	Pb	09 05 57.3	+3.4
	6.6nm,0.6s						
MNAS				⇑Sn	Sn	09 06 43.9	-0.3
	3.9nm,0.5s						
MNAS				⇓Lg	Lg	09 07 12.7	
	15nm,0.7s						
GEYT	**Alibeck**	6.81	232	Pn	Pn	09 05 53.4	-1.8
	0.8nm,0.3s,baz=58,slow=12,SNR=3.7						
SFK	**Sufi-Kurgan**	6.92	107	⇑Pn	Pn	09 05 57.1	+0.2
	1.6nm,0.3s						
SFK				⇓Sn	Sn	09 07 17.1	+1.5
	4.8nm,0.3s						
SFK				⇑Lg	Lg	09 07 54.7	
	5.4nm,0.5s						
AAK	**Ala-Archa**	7.11	85	⇑Pn	Pn	09 05 57.6	-1.8
	4.5nm,1.5s						
AAK				⇑Pg	Pb	09 06 23.9	+5.0
	3.7nm,0.6s						
AAK				Lg	Lg	09 07 58.8	
	19nm,1.2s						
AAK	**Ala-Archa**	7.11	85	Pn	Pn	09 05 58.4	-1.0
	0.4nm,0.3s,baz=227,slow=14,SNR=3.8						
AAK				Lg	Lg	09 08 02.7	
	1.3nm,0.3s,baz=29,slow=18,SNR=6.6						
AB31	**Akbulak array**	7.71	335	⇑Pn	Pn	09 06 06.9	-0.6
	0.2nm,0.2s,baz=156,slow=14,SNR=21						
AB31				⇑Pg	Pb	09 06 32.4	+3.5
	2.2nm,0.6s,baz=152,slow=17,SNR=6.4						
AB31				⇑Sn	Sn	09 07 32.4	-2.4
	2.4nm,0.5s,baz=153,slow=24,SNR=4.7						
AB31				⇑Lg	Lg	09 08 16.1	
	12nm,0.8s,baz=160,slow=27,SNR=4.6						
OTUK	**Ortayu**	7.89	39	⇓Pn	Pn	09 06 10.8	+0.8
	3.3nm,0.6s						
OTUK				⇑Sn	Sn	09 07 36.9	-2.4
	2.0nm,0.4s						
OTUK				⇑Lg	Lg	09 08 17.6	
	11nm,1.0s						
TKM2	**Tokmak 2**	7.92	82	⇓Pn	Pn	09 06 10.1	-0.6
	1.9nm,0.6s						
TKM2				⇑Lg	Lg	09 08 21.7	
	15nm,0.9s						
AKTO	**Aktyubinsk**	9.36	332	⇓Pn	Pn	09 06 30.4	+0.3
	6.5nm,1.5s						
AKTO				⇑Sn	Sn	09 08 14.6	-0.8
	5.0nm,0.7s						
AKTO				⇑Lg	Lg	09 09 06.9	
	12nm,1.2s						
AKTO	**Aktyubinsk**	9.36	332	Pn	Pn	09 06 31.1	+1.0
	0.2nm,0.3s,baz=137,slow=16,SNR=4.4						
AKTO				Sn	Sn	09 08 13.6	-1.8
	0.6nm,0.3s,baz=89,slow=21,SNR=7.7						
AKTO				Lg	Lg	09 09 18.2	
	0.5nm,0.3s,baz=239,slow=22,SNR=4.0						
AKTO				LR	LR	09 10 27.1	
	comp=Z,36nm,18.4s,baz=329,slow=39						
BVAR	**Borovoye Array**	11.30	17	Pn	Pn	09 06 56.1	-0.5
	0.5nm,0.3s,baz=190,slow=11,SNR=7.8						
BVAR				Sn	Sn	09 08 59.5	-3.3
	1.3nm,0.3s,baz=202,slow=22,SNR=9.6						
KURBB	**Kurchatov Arra**	12.51	44	Pn	Pn	09 07 11.3	-1.8
	0.1nm,0.3s,baz=231,slow=14,SNR=4.5						
KURBB				Lg	Lg	09 10 59.3	
	0.0nm,0.3s,baz=234,slow=30,SNR=5.3						
MKAR	**Makanchi Array**	13.18	64	Pn	Pn	09 07 20.4	-2.0

	0.5nm,0.3s,baz=250,slow=16,SNR=27						
MKAR				Lg	Lg	09 11 19.9	
	0.0nm,0.3s,baz=256,slow=26,SNR=3.2						
GNI	Garni	15.30	268	LR	LR	09 15 46.4	
	comp=Z,28nm,18.7s,baz=301,slow=46						
ZALV	Zalesovo Beam	17.58	42	P	Pn	09 08 20.2	+0.1
	0.2nm,0.3s,baz=250,slow=11,SNR=4.3						
WSAR	Wadi Sarin	19.76	197	LR	LR	09 17 46.2	
	comp=Z,73nm,18.6s,baz=198,slow=42						
BRTR	Keskin Array B	23.64	274	P	P	09 09 29.0	+2.3
	0.3nm,0.4s,baz=62,slow=12,SNR=2.7						
CMAR	Chiang Mai Arr	37.43	119	P	P	09 11 27.4	-1.3
	0.6nm,0.3s,baz=307,slow=12,SNR=4.5						
YKA	Yellowknife Ar	75.50	360	P	P	09 15 59.6	+0.4
	0.2nm,0.6s,baz=358,slow=6.2,SNR=6.6						
WRA	Warramunga Arr	89.02	118	P	P	09 17 09.3	-1.2
	0.2nm,0.5s,baz=329,slow=4.5,SNR=3.8						
ASAR	Alice Springs	91.42	121	P	P	09 17 19.9	-1.7
	0.3nm,0.9s,baz=322,slow=7.1,SNR=3.3						

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*NNC **16** 09:10:56.3±1.8, 41°.71N×78°.36E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=12.7km s-min=7.3km az=169.0, Suspected Mining explosion.*

*KRNET **16** 09:10:60.0±0.1, 41°.81N×78°.21E, h14km, mb2.4*

*ISCJB **16** 09:11:00.9±0.9, 41°.81N±0°.05×78°.20E±0°.05, h0km, Error ellipse: s-maj=8.1km s-min=4.7km az=155.4*

ISC 16 09:10:58.9±1.4**, 41°.80N**±0°.07×**78°.32E**±0°.05**, h0km, n25, σ1s.26**/42**, 36C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.39	260	⇑*i*P	Pg	09 11 05.8	-0.6
	baz=56						
TARG				⇑*i*S	Sg	09 11 10.9	-0.6
	baz=56						
KDJ	Kajisay	0.92	292	⇑*i*P	Pg	09 11 15.6	-0.8
	baz=93						
KDJ				⇑*i*S	Sg	09 11 27.1	-1.2
	baz=93						
ULHL	Ulahol	1.61	287	⇑*i*P	Pn	09 11 28.4	-0.5
	baz=87						
ULHL				⇑*i*S	Sn	09 11 48.8	-1.7
	baz=87						
MDOK	Medeo	1.66	326	⇑Pg	Pn	09 11 27.5	-1.9
	1.8nm,0.4s						
MDOK				⇑Lg	Lg	09 11 51.9	
	7.0nm,0.6s						
KOTS	Kotyrbulak	1.69	328	P	Pn	09 11 30.0	+0.1
	1.7nm,0.2s						
KOTS				S	Sg	09 11 54.9	+1.6
	6.7nm,0.3s						
PDGK	Podgornoye	1.76	29	⇓Pg	Pn	09 11 29.4	-1.4
	3.5nm,0.7s						
PDGK				⇓Lg	Lg	09 11 55.5	
	4.6nm,0.6s						
PDGK	Podgornoye	1.76	29	⇑*i*P	Pg	09 11 33.3	+0.7
	baz=31						
PDGK				⇑*i*S	Sg	09 11 57.2	+1.9
	baz=31						
NRN	Naryn	1.78	259	⇑*i*P	Pn	09 11 31.9	+0.7
	baz=58						
NRN				⇑*i*S	Sb	09 11 55.3	-0.3
	baz=58						
BOOM	Boomskoye usch	1.90	292	⇑*i*P	Pn	09 11 33.2	+0.4
	baz=93						
BOOM				⇑*i*S	Sn	09 11 57.7	+0.2
	baz=93						
MTBS	Maitube	1.93	314	Pg	Pn	09 11 33.5	+0.3
	4.2nm,0.2s						
MTBS				Lg	Lg	09 12 00.7	
	8.1nm,0.2s						
KST	Kastek	2.15	306	Pg	Pn	09 11 36.2	+0.1
	6.9nm,0.4s						
KST				Lg	Lg	09 12 05.5	
	9.5nm,0.3s						
KZA	Kyzart	2.31	278	⇑*i*P	Pb	09 11 40.4	-1.3
	baz=78						
KZA				⇑*i*S	Sn	09 12 09.4	+1.5
	baz=78						
TKM2	Tokmak 2	2.31	300	⇓Pg	Pb	09 11 40.5	-1.1
	3.1nm,0.7s						
TKM2				⇑Lg	Lg	09 12 10.7	
	4.0nm,0.3s						
TKM2	Tokmak 2	2.31	300	⇑*i*P	Pb	09 11 40.1	-1.5
	baz=1.0						
TKM2				⇑*i*S	Sn	09 12 09.1	+1.4
	baz=1.0						
KUU	Kurty	2.55	326	Pg	Pb	09 11 44.7	-0.9
	3.2nm,0.2s						
KUU				Lg	Lg	09 12 20.1	
	18nm,0.5s						
KBK	Karagaybulak	2.65	290	⇑*i*P	Pn	09 11 44.5	+1.4
	baz=90						
KBK				⇑*i*S	Sn	09 12 17.2	+1.2
	baz=90						
DJR	Jarkent	2.75	22	Pg	Pb	09 11 47.5	-1.5
	1.4nm,0.3s						
DJR				Lg	Lg	09 12 25.2	
	3.5nm,0.5s						
UCH	Uchtor	2.87	280	⇑*i*P	Pn	09 11 48.0	+1.7
	baz=80						
UCH				⇑*i*S	Sn	09 12 23.0	+1.2
	baz=80						
CHMS	Chumysh	2.91	296	⇑*i*P	Pn	09 11 48.1	+1.7
	baz=96						
CHMS				⇑*i*S	Sn	09 12 23.2	+1.1
	baz=96						
AAK	Ala-Archa	2.97	288	Pg	Pb	09 11 51.6	-1.1
	2.6nm,0.7s						
AAK				⇑Lg	Lg	09 12 30.5	
	13nm,0.9s						
AAK	Ala-Archa	2.97	288	⇑*i*P	Pn	09 11 49.0	+1.6
	baz=88						
AAK				⇑*i*S	Sn	09 12 24.6	+0.9
	baz=88						
ARLS	Aral	2.99	273	⇑*i*P	Pn	09 11 49.3	+1.6
	baz=73						
ARLS				⇑*i*S	Sn	09 12 25.6	+1.2
	baz=73						
USP	Ospenovka	3.19	299	⇑*i*P	Pn	09 11 51.8	+1.5
	baz=99						
USP				⇑*i*S	Sn	09 12 29.4	+0.4
	baz=99						
AML	Almayashu	3.47	277	⇑*i*P	Pn	09 11 56.3	+1.8
	baz=77						
AML				⇑*i*S	Sn	09 12 37.0	+0.5
	baz=77						
EKS2	Erkin-Say	3.48	286	⇑*i*P	Pn	09 11 56.4	+1.9
	baz=86						
EKS2				⇑*i*S	Sn	09 12 36.9	+0.4
	baz=86						

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*ISCJB **16** 09:23:12.0±0.6, 67°.63N±0°.04×142°.7E±0°.1, h10km, Error ellipse: s-maj=7.5km s-min=6.2km az=17.1*

*IDC **16** 09:23:11.5±1.3, 67°.42N×142°.51E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.2/32, mbtmp3.2/5, ML2.8/1, Error ellipse: s-maj=32.1km s-min=20.3km az=22.0*

*YARS **16** 09:23:12.8±0.1, 67°.660N±0°.004×142°.790E±0°.009, h10km±2km*

ISC 16 09:23:13.1±0.8**, 67°.60N**±0°.05×**142°.71E**±0°.04**, h10km, n9, σ1s.49**/17**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.16	170	*e*P	Pb	09 23 34.6	-0.6
MOMR				*e*S	Sb	09 23 50.1	-0.1
YBGR	Belaya Gora	1.61	53	*e*P	Pn	09 23 40.8	-0.6
YBGR				*e*S	Sn	09 24 00.5	-1.7
BTGS	Batagay	3.09	275	*e*P	Pn	09 24 02.3	+0.5
BTGS				*e*P	Pb	09 24 08.7	+0.7
BTGS				*e*S	Sn	09 24 38.5	-0.2
BTGS				*e*S	Sg	09 24 49.1	-3.0
ATKR	Artyk	3.58	163	*e*P	Pn	09 24 09.6	+1.0
ATKR				*e*P	Pb	09 24 18.2	+1.8
ATKR				*e*S	Sn	09 24 50.9	0.0
ATKR				*e*S	Sg	09 25 04.9	-3.0
SEY	Seymchan	6.20	135	Pn	Pn	09 24 44.1	-0.3
	0.2nm,0.3s,baz=328,slow=19,SNR=5.2						
SEY				Lg	Lg	09 26 23.3	
	0.4nm,0.3s,baz=21,slow=16,SNR=4.0						
ILAR	Eielson Array	27.18	62	P	P	09 28 57.5	+1.4
	0.2nm,0.5s,baz=302,slow=7.9,SNR=5.2						
MKAR	Makanchi Array	36.77	267	P	P	09 30 19.7	-0.7
	0.4nm,0.8s,baz=52,slow=7.7,SNR=5.2						
YKA	Yellowknife Ar	38.83	46	P	P	09 30 39.1	+1.5
	0.1nm,0.7s,baz=326,slow=8.1,SNR=2.6						
FINES	FINESS Array B	43.32	321	P	P	09 31 14.7	+0.2
	7.3nm,1.4s,baz=44,slow=10,SNR=2.8						

IDC 16 09:23:49.9±4.0**, 11°.73S×165°.20E, h0km, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/29**, mbtmp3.5**/3**, Error ellipse: s-maj=204.5km s-min=31.7km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.75	251	P	P	09 30 07.9	+0.7
	0.4nm,0.8s,baz=80,slow=9.0,SNR=3.7						
ASAR	Alice Springs	32.01	244	P	P	09 30 17.6	-0.7
	0.7nm,0.7s,baz=72,slow=9.2,SNR=12						
ILAR	Eielson Array	84.33	19	P	P	09 36 23.5	0.0
	0.3nm,0.8s,baz=232,slow=4.4,SNR=3.9						

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*ISCJB **16** 09:26:07.9±0.6, 26°.3S±0°.1×71°.6E±0°.1, h10km, mb4.3/16, MS3.8/20, Error ellipse: s-maj=20.3km s-min=12.5km az=136.3*

*IDC **16** 09:26:08.3±0.8, 26°.27S×71°.45E, h0km, mb4.2/9, mb1 4.3/9, mb1mx3.9/40, mbtmp4.2/9, MS3.8/20, Ms1 3.8/20, ms1mx3.6/48, Error ellipse: s-maj=27.0km s-min=21.3km az=58.0*

*NEIC **16** 09:26:10.1±0.4, 26°.28S×71°.56E, h10km, mb4.5/9, Error ellipse: s-maj=13.1km s-min=9.1km az=45.0*

ISC 16 09:26:09.9±0.8**, 26°.3S**±0°.2×**71°.6E**±0°.2**, h10km, n61, σ0s.79**/34**, mb4.4**/16**, MS3.8**/20**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.59	3	T	T	09 49 16.7	
	baz=184,slow=76,SNR=7.5						
H08S2	Diego Garcia H	18.59	3	T	T	09 49 21.2	
	baz=184,slow=76,SNR=20						
H08S3	Diego Garcia H	18.61	3	T	T	09 49 27.5	
	baz=184,slow=76,SNR=66						
H08N3	Diego Garcia H	19.87	358	T	T	09 50 58.1	
	SNR=8.8						
H08N1	Diego Carcia H	19.87	358	T	T	09 50 55.3	
	SNR=7.6						
H08N2	Diego Garcia H	19.89	358	T	T	09 50 55.2	
	SNR=13						
H01W2	Cape Leeuwin H	37.41	114	T	T	10 12 55.1	
	baz=272,slow=75,SNR=32						
H01W3	Cape Leeuwin H	37.41	114	T	T	10 12 56.2	
	baz=272,slow=75,SNR=39						
H01W1	Cape Leeuwin H	37.42	114	T	T	10 13 04.0	
	baz=272,slow=75,SNR=39						
BOSA	Boshof	40.95	256	LR	LR	09 47 16.0	
	comp=Z,206nm,19.4s,baz=76,slow=31						
MAW	Mawson	41.65	185	LR	LR	09 46 54.0	
	comp=Z,510nm,21.6s,baz=303,slow=30						
CM31	Chiang Mai Arr	51.85	34	*e*P	P	09 35 19.2	+0.6
CMAR	Chiang Mai Arr	51.85	34	P	P	09 35 19.2	+0.6
	1.8nm,0.5s,baz=224,slow=7.2,SNR=9.0						
CMAR				LR	LR	09 55 08.9	
	comp=Z,54nm,18.1s,baz=214,slow=34						
BRDH	Bariadhala	52.45	24	LR	LR	09 53 49.8	
	comp=Z,149nm,21.3s,baz=184,slow=32						
ASAR	Alice Springs	56.09	102	P	P	09 35 50.4	+0.7
	2.4nm,0.9s,baz=253,slow=6.6,SNR=18						
AS31	Alice Springs	56.09	102	*e*P	P	09 35 49.9	+0.2
	0.7nm,0.6s						
AS01	Alice Springs	56.13	102	*e*P	P	09 35 49.4	-0.6
WRA	Warramunga Arr	57.61	98	P	P	09 36 01.3	+0.8
	2.6nm,0.7s,baz=253,slow=7.3,SNR=18						
WR1	Warramunga Arr	57.61	98	*e*P	P	09 36 01.3	+0.8
	6.8nm,1.1s						
WB2	Warramunga Arr	57.62	98	*e*P	P	09 35 58.4	-2.2
WRAB	Tennant Creek	57.62	98	*e*P	P	09 36 00.0	-0.6
	5.2nm,0.9s						
STKA	Stephens Creek	60.50	113	*e*P	P	09 36 19.2	-1.2
	1.4nm,1.1s						
STKA	Stephens Creek	60.50	113	P	P	09 36 21.0	+0.6
	1.9nm,0.7s,baz=316,slow=8.0,SNR=6.4						
QSPA	South Pole Qui	63.82	180	P	P	09 36 42.3	+0.1
	2.1nm,0.6s,baz=272,slow=1.2,SNR=11						
GEYT	Alibeck	65.14	348	LR	LR	10 01 41.8	
	comp=Z,27nm,19.1s,baz=215,slow=33						
NRN	Naryn	67.53	4	*e*P	P	09 37 06.7	+0.1
	6.5nm,1.0s						
GNI	Garni	70.68	339	LR	LR	10 05 35.3	
	comp=Z,58nm,18.2s,baz=172,slow=34						
MK31	Makanchi Array	73.41	8	*e*P	P	09 37 41.7	-0.4
	6.5nm,1.2s						
MK32	Makanchi Array	73.41	8	*e*P	P	09 37 41.6	-0.5
MKAR	Makanchi Array	73.41	8	*e*P	P	09 37 41.7	-0.4
	26nm,1.0s						
MKAR	Makanchi Array	73.41	8	P	P	09 37 41.6	-0.4
	2.6nm,0.7s,baz=198,slow=5.2,SNR=20						
MKAR				LR	LR	10 09 20.1	
	comp=Z,56nm,18.5s,baz=112,slow=35						
KBZ	Khabaz	74.50	339	LR	LR	10 08 46.1	
	comp=Z,41nm,19.3s,baz=163,slow=34						
BRTR	Keskin Array B	74.61	331	LR	LR	10 08 32.4	
	comp=Z,20nm,19.5s,baz=106,slow=34						
ABKAR	Akbulak array	75.94	352	*e*P	P	09 37 56.6	0.0
KURK	Kurchatov	76.94	5	*e*P	P	09 38 01.7	-0.6
	6.0nm,1.0s						
AKTO	Aktyubinsk	77.35	351	LR	LR	10 11 01.6	
	comp=Z,35nm,18.3s,baz=158,slow=35						
TORD	Torodi Ar. Bea	78.38	291	P	P	09 38 11.1	0.0
	0.7nm,1.0s,baz=132,slow=6.0,SNR=2.6						
TOA1	Torodi Ar. Sit	78.39	291	*e*P	P	09 38 11.1	0.0
BVAR	Borovoye Array	79.01	359	LR	LR	10 10 58.1	
	comp=Z,78nm,19.8s,baz=184,slow=34						
SONA0	Songino Array	80.19	23	*e*P	P	09 38 20.7	+0.3
SONM	Songino Array	80.19	23	P	P	09 38 20.7	+0.3
	1.9nm,1.1s,baz=220,slow=5.4,SNR=5.1						
ZAA0	Zalesovo Array	80.75	8	*e*P	P	09 38 22.3	-0.8
	3.6nm,0.9s						
ZALV	Zalesovo Beam	80.75	8	*e*P	P	09 38 22.6	-0.5
ZALV	Zalesovo Beam	80.75	8	P	P	09 38 22.4	-0.7
	1.9nm,0.6s,baz=193,slow=5.0,SNR=10						
ZALV				LR	LR	10 13 42.1	
	comp=Z,43nm,18.9s,baz=76,slow=35						
ZAA1	Zalesovo Array	80.75	8	*e*P	P	09 38 22.4	-0.7
DBIC	Dimbokro	80.87	282	LR	LR	10 12 37.1	
	comp=Z,46nm,19.7s,baz=112,slow=34						
KSRS	Korea Array	82.61	42	LR	LR	10 12 26.7	
	comp=Z,63nm,21.3s,baz=218,slow=34						
KIRV	Kirov	86.57	349	LR	LR	10 16 53.9	
	comp=Z,36nm,18.9s,baz=117,slow=35						
MJAR	Matsushiro Arr	88.57	48	LR	LR	10 15 16.4	
	comp=Z,20nm,20.9s,baz=145,slow=33						
USRK	Ussuriysk Ar.	89.30	39	LR	LR	10 19 01.5	
	comp=Z,35nm,18.1s,baz=83,slow=36						
FINES	FINESS Array B	94.83	340	LR	LR	10 22 35.6	
	comp=Z,36nm,18.2s,baz=116,slow=36						
NRIK	Noril'sk	96.09	6	LR	LR	10 22 33.3	
	comp=Z,88nm,20.4s,baz=182,slow=35						
NOA	NORSAR Array B	99.73	335	LR	LR	10 23 48.2	
	comp=Z,22nm,21.3s,baz=60,slow=35						
YKA	Yellowknife Ar	143.59	5	PKP	PKPbc	09 45 41.6	-0.1
	0.4nm,0.7s,baz=336,slow=3.5,SNR=9.6						
YKB5	Yellowknife Ar	143.59	5	*e*PKPdf	PKPdf	09 45 43.5	-0.8
FCC	Fort Churchill	146.04	347	*e*PKPdf	PKPab	09 45 49.5	-0.6
FFC	Flin Flon	151.22	352	*e*PKPbc	PKiKP	09 46 03.3	-0.4
ULM	Lac du Bonnet	154.22	341	PKPbc	PKPbc	09 46 09.5	-0.4
	0.7nm,0.5s,baz=116,slow=6.3,SNR=3.4						
F10A	Beach Ranch, E	159.17	17	*e*PKPab	PKPab	09 46 45.4	+0.1
LTX	Lajitas	174.81	306	*e*PKPdf	PKPdf	09 46 22.2	+1.6
TXAR	Lajitas Array	174.81	306	PKP	PKPdf	09 46 22.2	+1.6
	0.5nm,1.0s,baz=51,slow=3.6,SNR=3.9						

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*ISCJB **16** 09:46:59.0±0.3, 6°.57S±0°.03×129°.87E±0°.04, h146km, mb4.3/23, Error ellipse: s-maj=6.2km s-min=4.2km az=163.2*

*IDC **16** 09:47:02.0±2.0, 6°.50S×129°.96E, h160km±19km, mb3.7/8, mb1 3.9/11, mb1mx3.7/32, mbtmp4.3/11, Error ellipse: s-maj=24.2km s-min=12.9km az=68.0*

*DJA **16** 09:47:02.1±0.5, 7°S±4°×13°0E±°, h168km±18km, M4.9/9, mB5.4/5, mb4.8/6, MLv5.0/9, Mw(mB)4.9/5*

*NEIC **16** 09:47:02.5±0.6, 6°.56S×129°.86E, h164km±6km, mb4.5/15, Error ellipse: s-maj=8.2km s-min=6.1km az=66.0*

ISC 16 09:47:00.3±0.4**, 6°.59S**±0°.05×**129°.92E**±0°.06**, h146km, n68, σ1s.82**/72**, mb4.5**/32**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.95	135	*e*Pn	Pn	09 47 39.6	+5.0
SAUI				*e*Sn	Sn	09 48 00.4	-0.5
SAUI	Saumlaki	1.95	135	P	Pn	09 47 38.7	+4.1
FAKI	Fak Fak	4.33	33	*e*Pn	Pn	09 48 06.5	+1.7
FAKI	Fak Fak	4.33	33	P	Pn	09 48 06.1	+1.3
NLAI	Namlea	4.36	320	P	Pn	09 48 08.1	+3.0
SIJI	Sorong	5.84	13	P	Pn	09 48 25.8	+0.9
	35nm,0.3s,baz=49,slow=16,SNR=92						
SIJI				S	Sn	09 49 25.1	-6.1
	19nm,0.3s,baz=100,slow=23,SNR=13						
SANI	Sanana	5.98	319	P	Pn	09 48 29.4	+2.7
MTN	Manton Dam	6.33	169	*e*Pn	Pn	09 48 33.4	+2.1
SOEI	Soe	6.41	240	*e*Pn	Pn	09 48 35.7	+3.1
SOEI	Soe	6.41	240	P	Pn	09 48 34.3	+1.7
SOEI				S	Sn	09 49 45.7	+0.8
RKPI	Ransiki, Papua	6.60	40	P	Pn	09 48 38.3	+3.3
	671nm,0.8s,11µm3.0nm						
BATI	Baumata	7.15	239	P	Pn	09 48 43.8	+1.4
BATI	Baumata	7.15	239	P	Pn	09 48 45.1	+2.7
	15nm,0.3s,baz=201,slow=0.8,SNR=15						
BATI				S	Sn	09 50 00.9	-1.5
	36nm,0.3s,baz=225,slow=18,SNR=8.9						
MMRI	Maumere	7.88	255	*e*Pn	Pn	09 48 54.1	+2.0
LUWI	Luwuk	9.01	307	*e*Pn	Pn	09 49 00.5	-6.8
FITZ	Fitzroy Crossi	12.17	200	*e*Pn	Pn	09 49 48.3	-0.7
FITZ	Fitzroy Crossi	12.17	200	P	Pn	09 49 47.9	-1.0
	3.6nm,0.3s,baz=33,slow=11,SNR=49						
FITZ				S	Sn	09 51 57.6	-5.8
	4.1nm,0.3s,baz=15,slow=18,SNR=8.4						
WRAB	Tennant Creek	13.94	162	*e*Pn	Pn	09 50 10.0	-1.7
WRAB				*e*Sn	Sn	09 52 29.5	-17
WRA	Warramunga Arr	13.95	162	P	Pn	09 50 09.8	-2.0
	2.6nm,0.3s,baz=346,slow=13,SNR=63						
WRA				S	Sn	09 52 38.1	-8.2
	4.1nm,0.3s,baz=338,slow=22,SNR=9.3						
WB2	Warramunga Arr	13.95	162	*e*Pn	Pn	09 50 10.1	-1.7
COEN	Coen	14.95	120	*e*Pn	P	09 50 27.1	+0.7
	14nm,0.8s						
AS31	Alice Springs	17.40	168	*e*P	Pn	09 50 55.6	+1.3
	9.4nm,0.5s						
ASAR	Alice Springs	17.40	168	P	Pn	09 50 54.5	+0.1
	3.3nm,0.3s,baz=331,slow=8.5,SNR=180						
ASAR				S	S	09 54 03.2	-4.1
	1.1nm,0.3s,baz=356,slow=24,SNR=6.1						
AS01	Alice Springs	17.41	168	*e*P	Pn	09 50 55.7	+1.2
MBWA	Marble Bar	17.52	213	*e*P	Pn	09 50 55.8	+0.1
CTA	Charters Tower	20.77	132	P	P	09 51 31.1	+1.1
	6.0nm,0.7s,baz=311,slow=9.8,SNR=9.8						
CTAO	Charters Tower	20.77	132	*e*P	P	09 51 31.2	+1.3
	24nm,1.5s						
FORT	Forrest	24.12	184	*e*P	P	09 52 03.7	+1.1
	13nm,0.8s						
BBOO	Buckleboo	26.70	168	*e*P	P	09 52 26.7	+0.8
	6.1nm,0.6s						
STKA	Stephens Creek	27.42	158	*e*P	P	09 52 33.2	+0.9
	1.2nm,1.0s						
STKA	Stephens Creek	27.42	158	P	P	09 52 33.3	+0.9
	3.5nm,0.3s,baz=341,slow=9.4,SNR=20						
PSI	Prapat	32.32	286	*e*P	P	09 53 14.6	-1.4
	5.6nm,0.7s						
TOO	Toolangi	33.94	158	*e*P	P	09 53 30.5	+0.8
	19nm,1.3s						
CMAR	Chiang Mai Arr	39.41	310	P	P	09 54 15.7	-0.5
	0.7nm,0.4s,baz=135,slow=6.4,SNR=5.5						
NJ2	Nanjing	39.85	345	*e*P	P	09 54 20.6	+1.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	Chengdu	44.92	328	*e*P	P	09 55 01.0	+0.3
LZH	Lanzhou	49.01	332	⇑P	P	09 55 34.5	+2.0
LZH				pP	pwP	09 56 12.3	+2.4
LZH				sP	sP	09 56 31.8	+12
LZH				PP	PP	09 57 30.4	+2.9
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,59nm,6.3s						
HHC	Hu-ho-hao-te	50.13	342	*e*P	P	09 55 44.0	+3.1
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
USRK	Ussuriysk Ar.	50.59	2	P	P	09 55 43.0	-1.1
	comp=Z,1.1nm,0.5s,baz=173,slow=7.9,SNR=5.7						
RAMN	Ramite	53.57	310	*e*P	P	09 56 06.7	-0.1
	comp=Z,22nm,0.4s						
GTA	Gaotai	53.58	331	*e*P	P	09 56 06.8	+0.4
GTA				pP	pP	09 56 12.0	-27
GTA				sP	pwP	09 56 14.8	-30
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
JIRN	Jiri	54.26	311	*e*P	P	09 56 11.4	-0.5
	comp=Z,6.8nm,0.4s						
GUN	Gumba	54.62	311	*e*P	P	09 56 14.1	-0.4
	comp=Z,14nm,0.4s						
PKI	Pulchoki	54.80	310	*e*P	P	09 56 15.0	-0.8
	comp=Z,5.5nm,0.5s						
PKIN	Phulchoki	54.81	310	*e*P	P	09 56 15.3	-0.5
	comp=Z,5.3nm,0.5s						
KKN	Kakani	55.01	311	*e*P	P	09 56 16.3	-0.8
	comp=Z,8.0nm,0.4s						
KOLN	Koldanda	56.28	310	*e*P	P	09 56 25.8	-0.4
	comp=Z,4.1nm,0.3s						
DANN	Dangsing	56.45	310	*e*P	P	09 56 26.9	-0.6
	comp=Z,5.4nm,0.5s						
PYUN	Piuthan	56.91	310	*e*P	P	09 56 30.9	+0.3
	comp=Z,5.4nm,0.4s						
SONM	Songino Array	58.03	342	P	P	09 56 38.6	+0.6
	comp=Z,0.3nm,0.3s,baz=158,slow=5.8,SNR=4.3						
WMQ	Urumqi	63.01	327	*e*P	P	09 57 12.5	+0.7
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,460nm,4.7s						
WMQ				LR	LR		
	comp=N,310nm,19.1s						
WMQ				LR	LR		
	comp=E,220nm,20.7s						
WMQ				LR	LR		
	comp=Z,240nm,23.3s						
MK01	Makanchi Array	67.82	327	*e*P	P	09 57 43.0	+0.3
MK31	Makanchi Array	67.84	327	*e*P	P	09 57 43.0	+0.2
MKAR	Makanchi Array	67.84	327	*e*P	P	09 57 43.0	+0.2
	comp=Z,64nm,0.4s						
MKAR	Makanchi Array	67.84	327	P	P	09 57 43.1	+0.4
	comp=Z,7.5nm,0.4s,baz=114,slow=8.6,SNR=188						
MAKZ	Makanchi	68.02	327	*e*P	P	09 57 43.7	-0.2
	comp=Z,6.3nm,0.6s						
AAK	Ala-Archa	70.18	320	*e*P	P	09 57 58.2	+0.7
	comp=Z,3.6nm,0.6s						
ARSB	Arslanbob	70.54	318	*e*P	P	09 57 59.6	-0.1
	comp=Z,6.7nm,0.7s						
ZALV	Zalesovo Beam	71.18	334	*e*P	P	09 58 02.0	-1.0
ZALV	Zalesovo Beam	71.18	334	P	P	09 58 02.4	-0.6
	comp=Z,1.4nm,0.6s,baz=131,slow=4.8,SNR=7.8						
GAR	Garm	71.32	315	*e*P	P	09 58 04.4	0.0
	comp=Z,8.3nm,0.7s						
CHGR	Chuyangaron	72.00	314	*e*P	P	09 58 08.4	0.0
	comp=Z,9.2nm,0.7s						
KURK	Kurchatov	72.13	329	*e*P	P	09 58 09.0	+0.2
	comp=Z,12nm,1.7s						
QSPA	South Pole Qui	83.38	180	*e*P	P	09 59 10.8	-0.2
COLD	Coldfoot	92.13	23	*e*P	P	09 59 57.6	+4.9
	comp=Z,18nm,1.8s						
ILAR	Eielson Array	93.02	25	P	P	09 59 55.0	-1.9
	comp=Z,0.2nm,0.7s,baz=244,slow=5.9,SNR=4.2						
TORD	Torodi Ar. Bea	128.65	282	PKP	PKPdf	10 05 50.6	-0.6
	comp=Z,0.3nm,0.6s,baz=54,slow=3.1,SNR=2.6						
LPAZ	La Paz	151.09	142	PKPbc	PKiKP	10 06 38.5	+0.1
	comp=Z,0.4nm,0.3s,baz=207,slow=2.3,SNR=3.5						

KRSC 16 10:06:54.9±0.9**, 52°.88N×160°.36E, h41km**±8km**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.30	318	*e*P	Pn	10 07 03.9	+0.6
SPN				*e*S	Sn	10 07 09.9	+0.8
NLC	Nalytchevo	0.68	296	*i* P	Pn	10 07 08.6	+0.5
NLC				*e*S	Sn	10 07 18.5	+1.0
SDLR	Sedlovina	0.98	295	*e*P	Pn	10 07 13.3	+1.1
SDLR				*e*S	Sn	10 07 26.8	+1.9
DALK	Dalny	0.98	280	*e*P	Pn	10 07 12.9	+0.7
DALK				*e*S	Sn	10 07 25.6	+0.7

UGLR	**Uglovaya**	**0.98**	**290**	eP	Pn	10 07 13.4	+1.1
PET							
SMAR	**Somma**	**1.02**	**293**	eP	Pn	10 07 14.2	+1.3
PET	**Petropavlovsk**	**1.04**	**279**	iP	Pn	10 07 13.8	+0.8
PET				eS	Sn	10 07 27.4	+1.1
AVH	**Avacha**	**1.05**	**292**	eP	Pn	10 07 14.4	+1.2
AVH				eS	Sn	10 07 28.7	+1.9
KOK	**Koryaka**	**1.12**	**293**	eP	Pn	10 07 15.5	+1.3
KRX	**Arik**	**1.14**	**296**	eP	Pn	10 07 15.5	+1.0
KRX				eS	Sn	10 07 30.7	+1.7
RUS	**Russkaya**	**1.21**	**249**	eP	Pn	10 07 16.3	+1.0
RUS				eS	Sn	10 07 30.8	+0.4
KII	**Karymskiy**	**1.28**	**335**	eP	Pn	10 07 18.2	+1.8
KII				eS	Sn	10 07 35.4	+3.0
KRMR	**Karymshinskiy**	**1.35**	**269**	eP	Pn	10 07 18.2	+0.9
KRMR				eS	Sn	10 07 35.2	+1.2
MTVR	**Mutnovka**	**1.38**	**254**	eP	Pn	10 07 18.6	+0.8
MTVR				eS	Sn	10 07 36.3	+1.4
APC	**Apacha**	**1.94**	**273**	eP	Pn	10 07 27.9	+2.6
APC				eS	Sn	10 07 52.5	+4.1
KZV	**Kizimen**	**2.24**	**359**	eP	Pn	10 07 32.2	+2.6
KZV				eS	Sn	10 07 59.1	+3.0
TUMD	**Tumrok D**	**2.33**	**1**	eP	Pn	10 07 32.8	+2.0
TUMD				eS	Sn	10 08 00.8	+2.6
TUMR	**Tumrok**	**2.42**	**357**	eP	Pn	10 07 35.0	+3.0
TUMR				eS	Sn	10 08 04.6	+4.2
PAU	**Pauzhetka**	**2.60**	**239**	eP	Pn	10 07 38.7	+4.3
PAU				eS	Sn	10 08 09.1	+4.4
ZLN	**Zelenaya**	**3.16**	**5**	eP	Pn	10 07 45.7	+3.5
KLY	**Klyuchi**	**3.45**	**3**	eP	Pn	10 07 50.0	+4.0
KLY				eS	Sn	10 08 29.4	+3.8
KBTR	**Krutoberegovo**	**3.63**	**22**	eP	Pn	10 07 53.1	+4.5
BDR	**Baidarnaya**	**3.73**	**7**	eP	Pn	10 07 54.4	+4.4
SRKR	**Sorokina**	**3.81**	**7**	eP	Pn	10 07 54.1	+2.9

IDC ***16*** *10:23:23.4±1.9, 37°.35N×141°.95E, h0^{km}, mb3.1/2, mb1 3.2/4, mb1mx3.1/34, mbtmp3.1/4, ML2.4/2, Error ellipse: s-maj=36.9km s-min=29.5km az=92.0*
ISCJB ***16*** *10:23:24.1±1.2, 37°.45N±0°.04×141°.86E±0°.07, h15^{km}±7^{km}, mb3.1/2, Error ellipse: s-maj=9.6km s-min=5.4km az=21.8*
JMA ***16*** *10:23:25.0±0.1, 37°.48N×141°.82E, h26^{km}±2^{km}, M3.5*
ISC 16 10:23:22.6±1.8**, 37°.45N**±0°.04×**141°.78E**±0°.07**, h4**^{km}±11^{km}**, n17,** σ**1^{s}07**/28**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.72**	**264**	P	**Pn**	**10 23 39.2**	**-0.4**
JFK				eS	**Sn**	**10 23 49.4**	**-1.7**
ONAJ	**Iwakimizuishiy**	**0.85**	**247**	P	**Pn**	**10 23 41.5**	**+0.1**
JMM	**Marumori**	**0.89**	**299**	P	**Pn**	**10 23 41.3**	**-0.5**
JMM				eS	**Sn**	**10 23 54.0**	**-1.1**
JIKH	**Ishinomakikobu**	**0.90**	**344**	P	**Pn**	**10 23 41.1**	**-0.9**
JIKH				eS	**Sb**	**10 23 52.7**	**-0.4**
JIO	**Ouri**	**1.06**	**342**	P	**Pn**	**10 23 43.8**	**-0.5**
JIO				S	**Sg**	**10 23 56.8**	**0.0**
JFT	**Otama**	**1.15**	**274**	P	**Pg**	**10 23 46.3**	**+1.7**
JFT				eS	**Sn**	**10 24 01.5**	**-0.1**
JOU	**Okura**	**1.27**	**317**	P	**Pg**	**10 23 47.9**	**+0.9**
JOU				S	**Sg**	**10 24 04.4**	**+0.9**
JHO	**Hitachi**	**1.27**	**230**	P	**Pg**	**10 23 47.4**	**+0.3**
JHO				S	**Sn**	**10 24 03.7**	**-1.0**
JKMT	**Kesennumamotoy**	**1.38**	**350**	P	**Pg**	**10 23 48.7**	**-0.5**
JYS	**Shirataka**	**1.56**	**300**	P	**Pg**	**10 23 52.6**	**+0.1**
JYS				eS	**Sb**	**10 24 12.9**	**+0.8**
JMK	**Ichinoseki**	**1.57**	**344**	P	**Pb**	**10 23 51.7**	**-0.4**
JMK				eS	**Sn**	**10 24 11.0**	**-0.9**
JFY	**Yanaizu**	**1.65**	**269**	P	**Pg**	**10 23 54.1**	**-0.1**
JFY				eS	**Sb**	**10 24 14.9**	**+0.2**
MJAR	**Matsushiro Arr**	**3.00**	**254**	Pn	**Pb**	**10 24 14.0**	**-2.5**
	0.1nm,0.3s,baz=63,slow=14,SNR=5.4						
MJAR				Sn	**Sb**	**10 24 53.9**	**+0.5**
	0.3nm,0.3s,baz=80,slow=32,SNR=5.2						
MAT	**Matsushiro**	**3.00**	**254**	P	**Pb**	**10 24 14.7**	**-1.8**
MAT				eS	**Sb**	**10 24 53.6**	**+0.1**
ASAJ	**Asahikawa**	**6.69**	**5**	Pn	Pn	10 25 05.7	+4.1
	0.1nm,0.3s,baz=126,slow=19,SNR=2.6						
MKAR	**Makanchi Array**	**44.15**	**302**	P	**P**	**10 31 34.1**	**+1.9**
	0.3nm,0.8s,baz=86,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**57.51**	**188**	P	**P**	**10 33 13.9**	**+0.9**
	0.1nm,0.4s,baz=4.3,slow=7.2,SNR=3.7						

IDC ***16*** *10:36:09.5±1.4, 11°.75S×165°.38E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.6/25, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=48.6km s-min=26.9km az=130.0*
ISCJB ***16*** *10:36:12.8±1.0, 11°.9S±0°.1×165°.4E±0°.2, h33^{km}, mb3.6/5, Error ellipse: s-maj=29.2km s-min=19.6km az=8.8*
ISC 16 10:36:14.7±1.1**, 11°.8S**±0°.1×**165°.4E**±0°.2**, h35**^{km}**, n6,** σ**0^{s}90**/6**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.24**	**175**	Pn	**Pn**	**10 38 39.6**	**+0.2**
	0.5nm,0.3s,baz=219,slow=17,SNR=4.4						
WRA	**Warramunga Arr**	**30.91**	**251**	P	**P**	**10 42 28.2**	**-0.2**
	0.4nm,0.5s,baz=83,slow=9.3,SNR=5.2						
ASAR	**Alice Springs**	**32.15**	**244**	P	**P**	**10 42 38.8**	**-0.5**
	0.6nm,0.9s,baz=68,slow=9.6,SNR=7.5						
ILAR	**Eielson Array**	**84.35**	**19**	P	**P**	**10 48 43.3**	**+0.4**
	0.3nm,0.6s,baz=241,slow=5.4,SNR=6.8						
MKAR	**Makanchi Array**	**93.86**	**317**	P	**P**	**10 49 29.4**	**+0.9**
	0.2nm,0.5s,baz=96,slow=8.1,SNR=2.9						
YKA	**Yellowknife Ar**	**95.81**	**27**	P	**P**	**10 49 36.0**	**-1.0**
	0.2nm,0.8s,baz=264,slow=4.9,SNR=3.1						

KRSC 16 10:45:05.4±0.8**, 53°.01N×158°.09E, h172**^{km}±6^{km}**, ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRMR	**Karymshinskiy**	**0.19**	**172**	eP	Pn	10 45 29.1	+0.8
KRMR				eS	Sn	10 45 46.9	+1.1
DALK	**Dalny**	**0.40**	**87**	eP	Pn	10 45 29.6	+0.8
DALK				eS	Sn	10 45 47.7	+0.9
KOK	**Koryaka**	**0.43**	**50**	eP	Pn	10 45 30.5	+1.4
AVH	**Avacha**	**0.47**	**57**	eP	Pn	10 45 30.3	+1.1
KRX	**Arik**	**0.48**	**44**	eP	Pn	10 45 30.4	+1.1
SMAR	**Somma**	**0.50**	**60**	eP	Pn	10 45 30.8	+1.3
MTVR	**Mutnovka**	**0.54**	**174**	eP	Pn	10 45 31.1	+1.5
MTVR				eS	Sn	10 45 50.5	+2.4
APC	**Apacha**	**0.57**	**261**	eP	Pn	10 45 30.5	+1.0
APC				eS	Sn	10 45 48.7	+0.7
RUS	**Russkaya**	**0.64**	**156**	eP	Pn	10 45 30.7	+0.8
RUS				eS	Sn	10 45 49.7	+1.0
GNL	**Ganaly**	**0.69**	**353**	eP	Pn	10 45 30.9	+0.6
GNL				eS	Sn	10 45 49.8	+0.2
NLC	**Nalytchevo**	**0.77**	**78**	eP	Pn	10 45 31.8	+1.2
NLC				eS	Sn	10 45 51.6	+1.5
SPN	**Mys Shipunski**	**1.17**	**85**	eP	Pn	10 45 34.0	+0.4
SPN				eS	Sn	10 45 54.9	-0.5
KDTR	**Khodutka, Kamc**	**1.21**	**180**	eP	Pn	10 45 34.4	+0.4
KDTR				eS	Sn	10 45 56.3	+0.4
KII	**Karymskiy**	**1.31**	**38**	eP	Pn	10 45 36.2	+1.3
PAU	**Pauzhetka**	**1.74**	**207**	eP	Pn	10 45 40.7	+1.6
TUMR	**Tumrok**	**2.58**	**27**	eP	Pn	10 45 51.0	+2.4
TUMD	**Tumrok D**	**2.58**	**31**	eP	Pn	10 45 51.9	+3.4
TUMD				eS	Sn	10 46 23.1	+1.0
SKR	**Severo-Kuril's**	**2.63**	**208**	eS	Sn	10 46 25.3	+2.1
MKZ	**Mys Kozlova**	**2.66**	**53**	eP	Pn	10 45 50.3	+0.9
MKZ				eS	Sn	10 46 23.0	-0.6
KBTR	**Krutoberegovo**	**4.22**	**39**	eP	Pn	10 46 09.1	+0.2

IDC ***16*** *10:46:48.5±1.4, 40°.61N×20°.14E, h0^{km}, mb3.4/4, mb1 3.4/5, mb1mx3.2/35, mbtmp3.3/5, ML3.2/1, Error ellipse: s-maj=27.1km s-min=22.5km az=80.0*
ISCJB ***16*** *10:46:48.8±0.4, 40°.65N±0°.01×19°.68E±0°.03, h4^{km}±3^{km}, mb3.4/4, Error ellipse: s-maj=3.4km s-min=2.2km az=159.9*
TIR ***16*** *10:46:49.9, 40°.59N×19°.77E, h12^{km}, Md3.3/6*
THE ***16*** *10:46:50.0, 40°.63N×19°.78E, h1^{km}±1^{km}, ML2.9/8, Error ellipse: s-maj=1.4km s-min=0.4km az=309.0*
ATH ***16*** *10:46:50.2, 40°.64N×19°.83E, h23^{km}±8^{km}, ML2.9/3, Error ellipse: s-maj=8.2km s-min=1.0km az=287.0*
PDG ***16*** *10:46:51.1±0.8, 40°.67N×19°.62E, h7^{km}±2^{km}, ML3.3/12, Error ellipse: s-maj=1.0km s-min=1.4km az=0.0*
SKO ***16*** *10:46:51.0, 40°.65N×19°.66E, h20^{km}*
ISC 16 10:46:49.8±0.9**, 40°.62N**±0°.02×**19°.70E**±0°.02**, h14**^{km}±7^{km}**, n97,** σ**1^{s}10**/133**, mb3.3**/4**, 15C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.22**	**225**	P	**Pg**	**10 46 54.8**	**+0.2**
VLO				S	**Sb**	**10 46 59.5**	**+0.2**
VLO	**Vlora**	**0.22**	**225**	iPG	**Pg**	**10 46 54.7**	**+0.2**
VLO				iSG	**Sb**	**10 46 60.0**	**+0.7**
TPE	**Tepelena**	**0.41**	**144**	P	**Pg**	**10 46 56.7**	**-1.2**
TPE				S	**Sg**	**10 47 02.1**	**-1.3**
TPE	**Tepelena**	**0.41**	**144**	iPG	**Pg**	**10 46 56.0**	**-1.8**
TPE				iSG	**Sg**	**10 47 03.3**	**-0.1**
TIR	**Tirane**	**0.74**	**10**	P	**Pg**	**10 47 04.1**	**0.0**
TIR				S	**Sb**	**10 47 14.3**	**0.0**
TIR				AML	AML	10 47 21.5	
	comp=E,3150µm,0.4s						
TIR				AML	AML	10 47 24.5	
	comp=N,3929µm,0.6s						
TIR	**Tirane**	**0.74**	**10**	⇑iP	**Pb**	**10 47 04.6**	**+0.2**
TIR				S	**Sn**	**10 47 16.9**	**+0.2**
TIR	**Tirane**	**0.74**	**10**	P	**Pg**	**10 47 03.8**	**-0.3**
TIR	**Tirane**	**0.74**	**10**	iPg	**Pb**	**10 47 04.6**	**+0.2**
TIR	**Tirane**	**0.74**	**10**	iPG	**Pb**	**10 47 04.7**	**+0.2**
TIR				iSG	**Sn**	**10 47 16.9**	**+0.2**
SRN	**Sarande**	**0.78**	**163**	P	**Pg**	**10 47 04.0**	**-0.8**
SRN				S	**Sb**	**10 47 16.0**	**+0.6**
SRN	**Sarande**	**0.78**	**163**	iPG	**Pg**	**10 47 04.9**	**+0.1**
SRN				iSG	**Sb**	**10 47 15.9**	**+0.6**
KEK	**Kerkira**	**0.91**	**175**	P	**Pb**	**10 47 07.2**	**-0.1**
KEK				S	**Sn**	**10 47 21.8**	**+0.7**
KEK				AML	AML	10 47 24.5	
	comp=E,1965µm,0.4s						
KEK				AML	AML	10 47 25.2	
	comp=N,1579µm,0.4s						
KEK	**Kerkira**	**0.91**	**175**	P	**Pb**	**10 47 06.8**	**-0.5**
KEK				S	**Sg**	**10 47 20.2**	**+0.9**
OHR	**Ohrid**	**0.97**	**59**	iPg	**Pg**	**10 47 08.7**	**+0.2**
OHR				iSg	**Sn**	**10 47 22.4**	**-0.2**
NEST	**Nestorio**	**1.05**	**101**	P	**Pb**	**10 47 08.5**	**-1.3**
NEST				AML	AML	10 47 30.3	
	comp=E,560µm,0.6s						
NEST				AML	AML	10 47 31.2	
	comp=N,891µm,0.5s						
NEST	**Nestorio**	**1.05**	**101**	P	**Pb**	**10 47 08.5**	**-1.3**
NEST				S	**Sb**	**10 47 22.8**	**-0.6**
PENT	**Pentalofos**	**1.18**	**111**	P	**Pn**	**10 47 11.1**	**-0.8**
PENT	**Pentalofos**	**1.18**	**111**	P	**Pn**	**10 47 10.9**	**-1.0**
IGT	**Igoumenitsa**	**1.19**	**156**	P	**Pn**	**10 47 12.2**	**+0.2**
IGT	**Igoumenitsa**	**1.19**	**156**	P	**Pn**	**10 47 12.2**	**+0.2**
IGT				S	**Sg**	**10 47 28.8**	**+0.5**
IGT	**Igoumenitsa**	**1.19**	**156**	iPg	**Pg**	**10 47 13.0**	**+0.3**
IGT				iSg	**Sg**	**10 47 30.5**	**+2.2**
PHP	**Peshkopia**	**1.20**	**28**	P	**Pn**	**10 47 11.6**	**-0.6**
PHP				S	**Sg**	**10 47 28.6**	**0.0**
PHP	**Peshkopia**	**1.20**	**28**	iPN	**Pn**	**10 47 11.4**	**-0.7**
PHP				iSN	**Sg**	**10 47 32.0**	**+3.4**
BIA	**Bitola**	**1.30**	**72**	iPg	**Pg**	**10 47 14.6**	**-0.1**
BIA				iSg	**Sg**	**10 47 32.5**	**+0.9**
JAN	**Janina**	**1.31**	**137**	P	**Pn**	**10 47 14.0**	**+0.4**
JAN	**Janina**	**1.31**	**137**	P	**Pn**	**10 47 14.0**	**+0.4**
JAN				S	**Sg**	**10 47 32.3**	**+0.3**
ULC	**Ulcinj**	**1.38**	**346**	⇑iPg	**Pn**	**10 47 14.6**	**-0.1**
ULC				iSg	**Sn**	**10 47 32.6**	**-0.2**
ULC	**Ulcinj**	**1.38**	**346**	iPg	**Pb**	**10 47 15.2**	**-0.2**
KRUS	**Krusevo**	**1.39**	**57**	iPg	**Pg**	**10 47 16.4**	**-0.1**
KRUS				iSg	**Sg**	**10 47 35.8**	**+1.2**
KPRO	**Kipourio**	**1.44**	**117**	P	**Pn**	**10 47 16.0**	**+0.6**
KPRO	**Kipourio**	**1.44**	**117**	P	**Pn**	**10 47 16.0**	**+0.6**
KPRO				S	**Sb**	**10 47 35.2**	**+0.7**
DRME	**Dracevica, Mon**	**1.61**	**346**	⇓iPg	**Pb**	**10 47 18.5**	**-0.8**
DRME				iSg	**Sb**	**10 47 39.3**	**-0.2**
DRME	**Dracevica, Mon**	**1.61**	**346**	ePn	**Pn**	**10 47 17.8**	**0.0**
KZN	**Kozani**	**1.61**	**101**	P	**Pn**	**10 47 17.8**	**-0.1**
CGL1	**Ceglie Messapi**	**1.69**	**272**	ePn	**Pb**	**10 47 20.4**	**-0.2**
BCI	**Bajram Curri**	**1.77**	**9**	iPN	**Pb**	**10 47 22.0**	**+0.1**
BCI				iSN	**Sg**	**10 47 47.0**	**+0.4**
BUM	**Brajici-Budva**	**1.78**	**340**	⇓iPn	**Pb**	**10 47 21.6**	**-0.7**
BUM				iSn	**Sb**	**10 47 44.4**	**-0.1**
FASA	**Fasano**	**1.79**	**277**	ePn	**Pg**	**10 47 23.7**	**-0.5**
PDG	**Podgorica**	**1.84**	**350**	⇓iP	**Pn**	**10 47 21.8**	**+0.9**
PDG	**Podgorica**	**1.84**	**350**	S	**Sb**	**10 47 46.8**	**+0.8**
PDG	**Podgorica**	**1.84**	**350**	ePn	**Pn**	**10 47 21.6**	**+0.7**
TTG	**Podgorica**	**1.84**	**350**	⇑iPn	**Pb**	**10 47 22.3**	**-0.8**
TTG				iSn	**Sb**	**10 47 45.8**	**-0.2**
TAR1	**Taranto**	**1.84**	**268**	ePn	**Pg**	**10 47 24.3**	**-0.8**
MASS	**Massafra**	**1.94**	**271**	ePn	**Pg**	**10 47 26.1**	**-0.9**
LKD2	**Lefkada island**	**1.98**	**158**	P	**Pn**	**10 47 23.4**	**+0.6**
PVY	**Plav**	**1.98**	**6**	⇑iPn	**Pb**	**10 47 24.8**	**-0.9**
PVY				iSn	**Sb**	**10 47 50.4**	**+0.2**
HCY	**Herceg Novi**	**2.04**	**334**	⇑iPn	**Pb**	**10 47 25.1**	**-1.4**
HCY				iSn	**Sb**	**10 47 50.1**	**-1.6**
HCY	**Herceg Novi**	**2.04**	**334**	ePn	**Pn**	**10 47 24.0**	**+0.4**
THL	**Klokotos Trika**	**2.07**	**120**	P	**Pn**	**10 47 25.0**	**+1.0**
STIP	**Stip**	**2.16**	**59**	ePn	**Pb**	**10 47 29.3**	**+0.6**
BAI	**Bari**	**2.19**	**284**	ePn	**Pb**	**10 47 29.6**	**+0.5**
NKME	**Niksic**	**2.21**	**346**	⇑iPn	**Pn**	**10 47 27.8**	**+1.7**
NKME				iSn	**Sn**	**10 47 54.8**	**+1.5**
KOME	**Kolasin**	**2.23**	**357**	⇓iPn	**Pn**	**10 47 27.9**	**+1.5**
KOME				iSn	**Sb**	**10 47 55.5**	**-1.9**
NKY	**Niksic**	**2.25**	**347**	⇑iPn	**Pn**	**10 47 28.4**	**+1.7**
NKY				iSn	**Sn**	**10 47 55.8**	**+1.5**
IVA	**Berane**	**2.25**	**4**	⇑iPn	**Pb**	**10 47 28.7**	**-1.6**
IVA				iSn	**Sb**	**10 47 56.3**	**-1.7**
MATE	**Matera**	**2.28**	**272**	⇑iP	**Pb**	**10 47 30.1**	**-0.5**
MATE	**Matera**	**2.28**	**272**	S	**Sg**	**10 48 01.4**	**-1.6**
VAY	**Valandovo**	**2.29**	**71**	ePn	**Pn**	**10 47 28.1**	**+1.1**
SG1	**Sgolgore (BA)**	**2.30**	**276**	ePn	**Pn**	**10 47 26.7**	**-0.6**
TREB	**Trebinje**	**2.32**	**335**	ePn	**Pn**	**10 47 26.5**	**-1.1**
BRY	**Bratogost**	**2.44**	**340**	⇑iPn	**Pn**	**10 47 30.9**	**+1.6**
BRY				eSn	**Sn**	**10 48 00.4**	**+1.5**
PVO	**Paravola**	**2.45**	**144**	P	**Pn**	**10 47 30.0**	**+0.7**
KNT	**Kendrikon**	**2.49**	**76**	P	**Pn**	**10 47 30.2**	**+0.4**
AGG	**Agios Georgios**	**2.58**	**127**	P	**Pn**	**10 47 32.3**	**+1.2**
UPM	**Unac-Piva**	**2.65**	**347**	⇓iPn	**Pn**	**10 47 33.7**	**+1.5**
UPM				eSn	**Sn**	**10 48 05.5**	**+1.3**
ANX	**Ano Chora**	**2.66**	**139**	P	**Pn**	**10 47 33.6**	**+1.4**
TIP	**Timpagrande**	**2.68**	**238**	⇑iP	**Pn**	**10 47 31.8**	**-0.7**
STON	**Ston**	**2.70**	**327**	ePn	**Pn**	**10 47 31.9**	**-0.8**
STON				Sn	**Sn**	**10 48 04.7**	**-0.5**
EFP	**Efpalio**	**2.78**	**141**	P	**Pn**	**10 47 35.1**	**+1.3**
SERG	**Sergoula**	**2.86**	**140**	P	**Pn**	**10 47 36.3**	**+1.3**
TRIZ	**Trizonia**	**2.91**	**140**	P	**Pn**	**10 47 36.6**	**+1.0**
ATAL	**Atalanti**	**3.21**	**126**	P	**Pn**	**10 47 40.6**	**+0.9**
BBLS	**Lazići**	**3.25**	**356**	ePn	**Pn**	**10 47 41.5**	**+1.1**
VTS	**Vitosha**	**3.32**	**52**	⇑iP	**Pn**	**10 47 42.4**	**+1.0**
DIVS	**Divibare**	**3.48**	**3**	ePn	**Pn**	**10 47 43.3**	**-0.3**
HAPS	**Han Pijesak,BI**	**3.51**	**351**	ePn	**Pn**	**10 47 41.2**	**-2.7**
MDVR	**Moldovita**	**4.41**	**19**	⇓iP	**Pn**	**10 47 56.6**	**+0.3**
MDVR	**Moldovita**	**4.41**	**19**	S	**Sn**	**10 48 44.2**	**-3.4**
HERR	**Herculane**	**4.70**	**24**	⇑iP	**Pn**	**10 47 59.3**	**-1.0**
UDBI	**Udbina**	**4.87**	**325**	ePn	**Pn**	**10 48 03.7**	**+1.1**
UDBI				Sn	**Sn**	**10 48 59.6**	**+1.0**
BZS	**Buzias**	**5.19**	**15**	⇑iP	**Pn**	**10 48 06.5**	**-0.4**
BZS	**Buzias**	**5.19**	**15**	S	**Sn**	**10 49 05.1**	**-1.4**
GZR	**Gura Zlata**	**5.28**	**24**	⇓iP	**Pn**	**10 48 08.5**	**+0.3**
GZR	**Gura Zlata**	**5.28**	**24**	S	**Sn**	**10 49 08.3**	**-0.5**
NVLJ	**Novalja**	**5.31**	**319**	ePn	**Pn**	**10 48 08.1**	**-0.5**
NVLJ				Sn	**Sn**	**10 49 08.4**	**-1.1**
BOJS	**Bojanci**	**5.87**	**328**	iPn	**Pn**	**10 48 17.2**	**+1.0**
CRES	**Cresnjev**	**6.05**	**331**	ePn	**Pn**	**10 48 17.9**	**-0.9**
VISS	**Visnje**	**6.28**	**327**	iPn	**Pn**	**10 48 23.4**	**+1.6**
CEY	**Cerknica**	**6.40**	**325**	ePn	**Pn**	**10 48 23.2**	**-0.4**
JAVS	**Javornik**	**6.68**	**324**	iPn	**Pn**	**10 48 27.9**	**+0.3**
PERS	**Pernice**	**6.87**	**333**	iPn	**Pn**	**10 48 30.5**	**+0.5**
BURAR	**Bucovina Array**	**8.04**	**28**	⇑iP	Pn	10 48 40.4	-5.7
GERES	**GERESS Array B**	**9.26**	**335**	Pn	**Pn**	**10 49 06.9**	**+4.0**
	comp=N,0.1nm,0.3s,baz=158,slow=14,SNR=2.9						
FINES	**FINESS Array B**	**21.21**	**8**	P	**P**	**10 51 33.6**	**-1.2**
	comp=N,1.4nm,0.9s,baz=185,slow=9.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**31.60**	**215**	P	**P**	**10 53 14.5**	**+2.5**
	comp=N,0.3nm,0.8s,baz=27,slow=9.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**44.57**	**50**	P	**P**	**10 55 00.4**	**-0.6**
	comp=N,0.5nm,0.3s,baz=292,slow=7.6,SNR=3.2						
MKAR	**Makanchi Array**	**44.60**	**60**	P	**P**	**10 54 60.0**	**-1.5**
	comp=N,0.3nm,0.7s,baz=267,slow=9.0,SNR=3.7						

CRAAG ***16*** *10:47:58.2, 36°.87N×5°.17E, Ml3.3*
ISCJB ***16*** *10:47:59.3±0.5, 36°.85N±0°.05×5°.12E±0°.08, h10^{km}, Error ellipse: s-maj=9.9km s-min=5.2km az=145.6*
MDD ***16*** *10:48:01.0±0.7, 36°.82N×5°.20E, h0^{km}, mb4.4/1, Error ellipse: s-maj=8.0km s-min=6.4km az=47.0, PRXIMO*
LDG ***16*** *10:48:04.3, 36°.72N×5°.26E, h30^{km}*
ISC 16 10:47:59.4±0.9**, 36°.83N**±0°.04×**5°.22E**±0°.04**, h10**^{km}**, n25,** σ**2^{s}24**/30**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	**0.60**	**118**	P	**Pb**	**10 48 12.8**	**+0.7**
DFRA	**Djebel Bou Aff**	**0.60**	**118**	Pg	**Pb**	**10 48 12.8**	**+0.7**
SET	**Setif**	**0.65**	**167**	P	**Pg**	**10 48 12.0**	**+0.1**
SET	**Setif**	**0.65**	**167**	Pg	**Pg**	**10 48 12.0**	**+0.1**
CKHR	**Kef el Ahmar**	**0.84**	**164**	P	**Pn**	**10 48 17.5**	**0.0**
CKHR	**Kef el Ahmar**	**0.84**	**164**	Pg	**Pn**	**10 48 17.5**	**0.0**
CASM	**Ain Smara**	**1.17**	**119**	P	**Pg**	**10 48 22.5**	**+0.5**
CASM	**Ain Smara**	**1.17**	**119**	Pg	**Pg**	**10 48 22.5**	**+0.5**
CTEI	**Djebel Teioual**	**1.23**	**128**	P	**Pg**	**10 48 23.4**	**+0.4**
CTEI	**Djebel Teioual**	**1.23**	**128**	Pg	**Pg**	**10 48 23.4**	**+0.4**
CAEH	**'Ain El Ouahch**	**1.31**	**92**	P	**Pg**	**10 48 24.6**	**0.0**
CAEH	**'Ain El Ouahch**	**1.31**	**92**	Pg	**Pg**	**10 48 24.6**	**0.0**
AKET	**Djebel Ketaf**	**1.33**	**234**	P	**Pg**	**10 48 25.2**	**+0.2**
AKET	**Djebel Ketaf**	**1.33**	**234**	Pg	**Pg**	**10 48 25.2**	**+0.2**
ABSA	**Djebel Ababsia**	**1.90**	**106**	P	**Sg**	**10 49 01.6**	**+1.0**
ETOS	**Mallorca**	**3.49**	**328**	Pn	**Pn**	**10 48 54.1**	**+0.3**
	0.4nm,0.1s,SNR=7.9						
ETOS				Sn	**Sn**	**10 49 32.8**	**-2.3**
	0.4nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**5.83**	**332**	Pn	**Pn**	**10 49 27.6**	**+1.6**
	1.9nm,0.1s,SNR=7.9						
LMR	**La Mourre**	**6.57**	**8**	ePn	**Pn**	**10 49 38.8**	**+2.7**
LMR				eSn	**Sn**	**10 50 45.9**	**-5.2**
	0.8nm,0.3s						
LMR	**La Mourre**	**6.57**	**8**	Pn	**Pn**	**10 49 38.8**	**+2.7**
LMR				Sn	**Sn**	**10 50 45.9**	**-5.2**
	0.4nm,0.3s						
FRF	**La Foret Royal**	**6.81**	**9**	ePn	**Pn**	**10 49 41.8**	**+2.4**
FRF				eSn	**Sn**	**10 50 53.6**	**-3.4**
	0.5nm,0.2s						
FRF	**La Foret Royal**	**6.81**	**9**	Pn	**Pn**	**10 49 41.8**	**+2.4**
FRF				Sn	**Sn**	**10 50 53.6**	**-3.4**
	0.2nm,0.2s						
EPF	**Esparros**	**7.24**	**330**	ePn	**Pn**	**10 49 47.9**	**+2.6**
EPF	**Esparros**	**7.24**	**330**	Pn	**Pn**	**10 49 47.9**	**+2.6**
ETSF	**Etsaut**	**7.51**	**326**	ePn	**Pn**	**10 49 51.2**	**+2.1**
ETSF	**Etsaut**	**7.51**	**326**	Pn	**Pn**	**10 49 51.2**	**+2.1**

IDC ***16*** *10:52:16.7±1.6, 11°.55S×164°.82E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/36, mbtmp3.8/6, ML3.3/1, MS3.2/3, Ms1 3.1/3, ms1mx2.8/31, Error ellipse: s-maj=47.5km s-min=29.1km az=116.0*
ISCJB ***16*** *10:52:19.9±1.1, 11°.7S±0°.1×164°.8E±0°.2, h34^{km}, mb3.6/5, MS3.2/2, Error ellipse: s-maj=29.8km s-min=18.5km az=174.9*
ISC 16 10:52:21.7±1.2**, 11°.6S**±0°.1×**164°.8E**±0°.3**, h34**^{km}**, n9,** σ**0^{s}58**/6**, mb3.5**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.28**	**294**	LR	LR	10 55 35.0	
	comp=Z,133nm,20.4s,baz=149,slow=38						
DZM	**Mont Dzumac**	**10.50**	**172**	Pn	**Pn**	**10 54 50.2**	**+0.2**
	0.2nm,0.3s,baz=322,slow=19,SNR=3.1						
STKA	**Stephens Creek**	**29.41**	**223**	LR	LR	11 09 32.2	
	comp=Z,52nm,18.6s,baz=23,slow=35						
WRA	**Warramunga Arr**	**30.45**	**250**	P	**P**	**10 58 31.4**	**-0.1**
	0.8nm,0.9s,baz=78,slow=9.6,SNR=5.6						
ASAR	**Alice Springs**	**31.74**	**244**	P	**P**	**10 58 42.4**	**-0.4**
	0.7nm,1.0s,baz=70,slow=9.3,SNR=4.5						
FITZ	**Fitzroy Crossi**	**38.37**	**256**	LR	LR	11 15 21.1	
	comp=Z,41nm,19.6s,baz=148,slow=36						
SONM	**Songino Array**	**78.61**	**324**	P	**P**	**11 04 21.0**	**+0.8**
	0.5nm,0.8s,baz=131,slow=7.9,SNR=3.0						
ILAR	**Eielson Array**	**84.34**	**19**	P	**P**	**11 04 49.5**	**-0.4**
	0.2nm,0.6s,baz=224,slow=5.5,SNR=6.0						
MKAR	**Makanchi Array**	**93.33**	**317**	P	**P**	**11 05 33.1**	**-0.2**
	0.9nm,0.8s,baz=93,slow=6.4,SNR=9.1						

NNC ***16*** *10:55:32.6±1.4, 42°.56N×79°.64E, h0^{km}, mb3.0, mpv3.0, Error ellipse: s-maj=9.2km s-min=5.6km az=130.0*
SOME ***16*** *10:55:33.3, 42°.57N×79°.62E, h15^{km}*
KRNET 16 10:55:33.7±0.1**, 42°.59N×79°.63E, h18**^{km}**, mb2.6, 29C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.71**	**322**	P	Pb	10 55 47.2	-0.5
	8.7nm,0.1s						
UZB				S	Sg	10 55 57.5	+0.2
	14nm,0.2s						
UZB	**Uzynbulak**	**0.71**	**322**	⇓eP	Pb	10 55 47.3	-0.4
	baz=22						
UZB				⇓eS	Sg	10 55 57.5	+0.2
	baz=22						
UZB	**Uzynbulak**	**0.71**	**322**	⇓eP	Pb	10 55 47.3	-0.4
	8.8nm,0.1s						
UZB				eS	Sg	10 55 57.5	+0.2
	16nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**352**	P	Pb	10 55 47.9	-0.3
	5.1nm,0.1s						
PDGK				S	Sg	10 55 58.6	+0.3
	10nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**352**	⇓P	Pb	10 55 47.7	-0.5
	4.3nm,0.4s						
PDGK				⇑S	Sg	10 55 58.5	+0.2
	4.5nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**352**	⇑iP	Pb	10 55 47.9	-0.3
	baz=52						
PDGK				⇑iS	Sg	10 55 58.6	+0.3
	baz=52						
PRZ	**Przheval'sk**	**0.91**	**264**	⇓iP	Pg	10 55 51.3	-0.2
	baz=64						
PRZ				⇓iS	Sb	10 56 02.8	-0.2
	baz=64						
KTMS	**Ketmen**	**1.01**	**32**	P	Pb	10 55 52.7	0.0
KTMS	**Ketmen**	**1.01**	**32**	eP	Pb	10 55 52.8	+0.1
	baz=31						
KTMS				eS	Sg	10 56 06.6	0.0
	baz=31						
KTMS	**Ketmen**	**1.01**	**32**	eP	Pb	10 55 52.8	+0.1
	3.9nm,0.1s						
KTMS				eS	Sg	10 56 06.5	0.0
	6.3nm,0.1s						
SATY	**Saty**	**1.01**	**298**	P	Pb	10 55 52.3	-0.5
	0.9nm,0.1s						
SATY				S	Sb	10 56 06.2	+0.3
	27nm,0.1s						
SATY	**Saty**	**1.01**	**298**	eP	Pb	10 55 52.3	-0.5
	0.9nm,0.1s						
SATY				eS	Sb	10 56 06.0	+0.2
	27nm,0.1s						
MNBS	**Baschi**	**1.74**	**329**	P	Pb	10 56 05.5	+0.3
	9.5nm,0.2s						
MNBS				S	Sg	10 56 29.0	-0.7
	12nm,0.1s						
MNBS	**Baschi**	**1.74**	**329**	eP	Pb	10 56 06.0	+0.9
	9.5nm,0.2s						
MNBS				eS	Sg	10 56 29.6	-0.2
	18nm,0.3s						
DJR	**Jarkent**	**1.75**	**4**	eP	Pb	10 56 05.7	+0.4
	2.4nm,0.1s						
DJR				eS	Sg	10 56 28.8	-1.2
	2.8nm,0.2s						
KDJ	**Kajisay**	**1.87**	**257**	⇑iP	Pb	10 56 08.0	+0.6
	baz=56						
KDJ				⇑iS	Sg	10 56 32.5	-1.5
	baz=56						
MDOK	**Medeo**	**1.98**	**288**	Pg	Pb	10 56 09.1	-0.2
	2.2nm,0.6s						
MDOK				⇑Lg	Lg	10 56 36.7	
	5.1nm,0.4s						
MDOK	**Medeo**	**1.98**	**288**	eP	Pb	10 56 09.2	-0.1
	1.9nm,0.2s						
MDOK				eS	Sb	10 56 34.9	+1.2
	4.4nm,0.3s						
TNSS	**Tian-Shan**	**2.02**	**284**	Pg	Pb	10 56 10.0	-0.2
	2.1nm,0.1s						
TNSS				Lg	Lg	10 56 36.4	
	7.1nm,0.2s						
TNSS	**Tian-Shan**	**2.02**	**284**	eP	Pb	10 56 10.1	0.0
	baz=84						
TNSS				eS	Sb	10 56 36.8	+1.7
	baz=84						
TNSS	**Tian-Shan**	**2.02**	**284**	eP	Pb	10 56 10.1	0.0
	2.2nm,0.1s						
TNSS				eS	Sb	10 56 36.8	+1.7

	8.9nm,0.3s						
IZV	**Izvestkoviy**	**2.26**	**282**	Pg	Pb	10 56 14.7	+0.6
	2.2nm,0.1s						
IZV				Lg	Lg	10 56 44.7	
	11nm,0.1s						
IZV	**Izvestkoviy**	**2.26**	**282**	*e*P	Pb	10 56 14.7	+0.6
	2.2nm,0.1s						
IZV				*e*S	Sg	10 56 44.7	-1.8
	11nm,0.1s						
CHKK	**Chushkaly**	**2.31**	**304**	*e*P	Pb	10 56 15.0	+0.3
	1.0nm,0.1s						
CHKK				*e*S	Sb	10 56 45.2	+2.3
	15nm,0.3s						
ULHL	**Ulahol**	**2.53**	**263**	⇑*i*P	Pb	10 56 17.5	-1.2
	baz=63						
ULHL				⇑*i*S	Sb	10 56 49.6	0.0
	baz=63						
KAPS	**Kapalarasan**	**2.70**	**356**	*e*P	Pb	10 56 22.3	+0.8
	0.5nm,0.1s						
KAPS				*e*S	Sg	10 56 57.5	-3.1
	2.1nm,0.2s						
BOOM	**Boomskoye usch**	**2.73**	**269**	⇑*i*P	Pb	10 56 20.3	-1.7
	baz=69						
BOOM				⇑*i*S	Sb	10 56 53.6	-1.6
	baz=69						
DGS	**Degeres**	**2.91**	**284**	Pg	Pb	10 56 24.9	-0.1
	2.0nm,0.3s						
DGS				Lg	Lg	10 57 01.9	
	11nm,0.5s						
DGS	**Degeres**	**2.91**	**284**	*e*P	Pb	10 56 24.9	-0.1
	2.0nm,0.3s						
DGS				*e*S	Sb	10 57 01.9	+1.6
	9.2nm,0.5s						
NRN	**Naryn**	**2.94**	**248**	⇑*i*P	Pb	10 56 23.3	-2.4
	baz=48						
NRN				⇑*i*S	Sb	10 56 59.8	-1.6
	baz=48						
TKM2	**Tokmak 2**	**2.99**	**278**	⇑Pg	Pb	10 56 24.2	-2.3
	7.8nm,1.4s						
TKM2				⇑Lg	Lg	10 57 05.1	
	3.0nm,0.4s						
TKM2	**Tokmak 2**	**2.99**	**278**	⇑*i*P	Pb	10 56 24.0	-2.5
	baz=78						
TKM2				⇑*i*S	Sb	10 57 00.6	-2.1
	baz=78						
KZA	**Kyzart**	**3.29**	**263**	⇑*i*P	Pb	10 56 28.4	-3.3
	baz=63						
KZA				⇑*e*S	Sb	10 57 07.9	-3.6
	baz=63						
CHMS	**Chumysh**	**3.61**	**278**	⇑*i*P	Pn	10 56 32.4	+3.6
	baz=78						
CHMS				⇑*i*S	Sn	10 57 15.3	+4.3
	baz=78						
AAK	**Ala-Archa**	**3.79**	**272**	⇑*i*P	Pn	10 56 34.9	+3.6
	baz=72						
AAK				⇑*i*S	Sn	10 57 19.4	+3.9
	baz=72						
UCH	**Uchtor**	**3.80**	**266**	⇑*i*P	Pn	10 56 35.2	+3.4
	baz=66						
UCH				⇑*i*S	Sn	10 57 20.2	+3.9
	baz=66						
USP	**Ospenovka**	**3.83**	**282**	⇑*i*P	Pn	10 56 35.3	+3.6
	baz=82						
USP				⇑*i*S	Sn	10 57 20.3	+4.1
	baz=82						
EKS2	**Erkin-Say**	**4.32**	**273**	⇓*i*P	Pn	10 56 42.0	+3.5
	baz=73						
EKS2				⇓*i*S	Sn	10 57 32.4	+3.9
	baz=73						
AML	**Almayashu**	**4.42**	**266**	⇑*e*P	Pn	10 56 44.0	+3.8
	baz=66						
AML				⇑*i*S	Sn	10 57 34.9	+3.5
	baz=66						
MK31	**Makanchi Array**	**4.61**	**23**	⇓Pn	Pn	10 56 45.4	+2.9
	0.2nm,0.4s,baz=203,slow=13,SNR=5.0						
MK31				⇓Sn	Sn	10 57 38.7	+3.1
	0.4nm,0.6s						
MK31				⇑Lg	Lg	10 57 57.4	
	0.4nm,0.5s,baz=199,slow=27						

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*ISCJB **16** 11:11:03.3±0.7, 4°.34S±0°.08×136°.87E±0°.07, h33^{km}, mb3.6/3, Error ellipse: s-maj=12.0km s-min=8.6km az=147.5*

*IDC **16** 11:11:05.9±2.3, 4°.27S×136°.97E, h46^{km}±26^{km}, mb3.5/3, mb1 3.8/9, mb1mx3.6/26, mbtmp3.8/9, ML3.6/6, Error ellipse: s-maj=25.5km s-min=21.5km az=76.0*

ISC 16 11:11:05.1±0.8, **4°.4S**±0°.1×**136°.90E**±0°.09, **h35**^{km}, **n9**, σ**1ˢ.31**/10, **mb3.7**/3, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.21**	**65**	P	**Pn**	**11 12 06.8**	**-0.1**
	1.0nm,0.3s,baz=294,slow=9.7,SNR=5.7						
JAY				S	**Sn**	**11 12 56.6**	**+1.6**
	0.3nm,0.3s,baz=66,slow=20,SNR=1.8						
SIJI	**Sorong**	**6.60**	**301**	P	**Pn**	**11 12 40.5**	**+0.7**
	1.2nm,0.3s,baz=142,slow=17,SNR=3.0						
WRA	**Warramunga Arr**	**15.70**	**189**	P	**Pn**	**11 14 43.3**	**-0.5**
	0.3nm,0.3s,baz=8.6,slow=13,SNR=10						
FITZ	**Fitzroy Crossi**	**17.55**	**218**	P	**Pn**	**11 15 07.0**	**-0.1**
	0.1nm,0.3s,baz=45,slow=10.0,SNR=2.5						
CTA	**Charters Tower**	**18.11**	**151**	P	**Pn**	**11 15 14.1**	**+0.1**
	0.1nm,0.3s,baz=334,slow=14,SNR=2.6						
ASAR	**Alice Springs**	**19.42**	**188**	P	**Pn**	**11 15 31.1**	**+1.2**
	0.3nm,0.3s,baz=18,slow=9.5,SNR=22						
CMAR	**Chiang Mai Arr**	**43.73**	**302**	P	**P**	**11 19 07.9**	**+0.5**
	0.5nm,0.4s,baz=116,slow=6.1,SNR=2.7						
MKAR	**Makanchi Array**	**70.00**	**323**	P	**P**	**11 22 13.3**	**+0.1**
	0.2nm,0.5s,baz=111,slow=7.0,SNR=7.3						
ILAR	**Eielson Array**	**88.06**	**25**	P	**P**	**11 23 49.0**	**-2.6**
	0.9nm,0.9s,baz=241,slow=3.0,SNR=5.8						

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*GUC **16** 11:12:52.9±0.5, 33°.87S×72°.18W, h40^{km}±3^{km}, ML3.5*

*SJA **16** 11:12:52.5±1.0, 33°.54S×72°.38W, h10^{km}±15^{km}, ML3.3, MW3.2*

ISC 16 11:12:53.3±1.7, **33°.92S**±0°.05×**72°.3W**±0°.1, **h29**^{km}±15^{km}, **n20**, σ**1ˢ.72**/32, **2C-1D**, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	**Pichilemu**	**0.54**	**151**	*e*P	**Pb**	**11 13 04.1**	**-0.1**
CHPI				*e*S	**Sb**	**11 13 11.9**	**+0.3**
ROC1	**El Roble**	**1.44**	**49**	*e*P	**Pn**	**11 13 16.7**	**-0.9**
ROC1				*e*S	**Sn**	**11 13 34.7**	**-0.9**
ROCH	**El Roble**	**1.44**	**49**	⇑*e*P	**Pn**	**11 13 16.4**	**-1.2**
ROCH				*e*S	**Sn**	**11 13 34.3**	**-1.4**
ROCH				IAML		11 13 39.9	
	comp=N,1μm,0.4s						
PEL	**Peldehue**	**1.56**	**61**	*e*P	**Pn**	**11 13 18.4**	**-0.7**
PEL				*e*S	**Sn**	**11 13 39.0**	**+0.5**
PEL	**Peldehue**	**1.56**	**61**	⇑*e*P	**Pn**	**11 13 18.6**	**-0.7**
PEL				*e*S	**Sn**	**11 13 37.0**	**-1.5**
PEL				IAML		11 13 44.3	
	comp=E,1μm,0.4s						
CLCH	**Cerro Calan**	**1.57**	**71**	*e*P	**Pn**	**11 13 18.3**	**-1.0**
CLCH				*e*S	**Sn**	**11 13 37.4**	**-1.3**
CLCH				IAML		11 13 40.0	
	comp=E,962nm,0.4s						
LMEL	**Las Melosas**	**1.76**	**88**	*e*P	**Pn**	**11 13 21.1**	**-0.8**
LMEL				*e*S	**Sn**	**11 13 42.8**	**-0.6**
LMEL				IAML		11 13 47.0	
	comp=N,1μm,0.2s						
FCH	**Farellones**	**1.79**	**71**	*e*P	**Pn**	**11 13 21.6**	**-0.9**
FCH				*e*S	**Sn**	**11 13 43.0**	**-1.4**
FCH				IAML		11 13 45.1	
	comp=N,774nm,0.4s						
CMCH	**Combarbala**	**2.95**	**22**	*e*P	**Pn**	**11 13 37.9**	**-0.4**
AUSP	**Uspallata**	**2.98**	**56**	*e*P	**Pn**	**11 13 41.0**	**+2.1**
AUSP				*e*S	**Sb**	**11 14 20.4**	**-1.6**
RTLS	**Leoncito**	**3.31**	**51**	*e*P	**Pb**	**11 13 49.8**	**-1.5**
RTLS				*e*S	**Sb**	**11 14 31.9**	**+0.7**
RTLS				IAML		11 14 36.3	
	comp=Z,76nm,0.6s						
GO04	**Tololo Observa**	**3.95**	**19**	*e*P	**Pn**	**11 13 51.5**	**-0.7**
GO04				*e*S	**Sn**	**11 14 36.4**	**-1.3**
ACCO	**Cerro Coronel**	**4.31**	**41**	*e*P	**Pn**	**11 13 58.9**	**+1.6**
AMOG	**MOGNA**	**4.39**	**48**	*e*P	**Pn**	**11 13 58.7**	**+0.7**
AROD	**Rodeo**	**4.45**	**34**	*e*P	**Pn**	**11 14 00.6**	**+1.4**
AROD				*e*S	**Sb**	**11 15 07.8**	**+3.5**
ACAN	**Cantantal**	**4.60**	**71**	⇓*e*P	**Pn**	**11 14 05.2**	**+4.2**
ACDV	**Cuesta del Vie**	**4.62**	**37**	*e*P	**Pn**	**11 14 02.9**	**+1.6**
AGUA	**GUANDACOL**	**5.49**	**37**	*e*P	**Pn**	**11 14 14.0**	**+0.8**
APLL	**PUNTA DE LOS L**	**6.04**	**56**	*e*P	**Pn**	**11 14 19.9**	**-0.7**
APLL				*e*S	**Sn**	**11 15 32.9**	**+4.1**
APLL				IAML		11 15 40.1	
	comp=Z,9.3nm,0.6s						
ACLC	**CERRO LA CRUZ**	**6.40**	**47**	*e*P	Pn	11 14 32.2	+6.5

IDC 16 11:14:58.1±56.0, **16°.40S**×**174°.29W**, **h0**^{km}, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.4**/26, **mbtmp3.5**/3, **Error ellipse: s-maj=1064.0km s-min=175.0km az=79.0**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.80**	**241**	P	P	11 22 56.9	-1.1
	0.3nm,0.4s,baz=50,slow=7.9,SNR=2.4						
WRA	**Warramunga Arr**	**48.79**	**258**	P	P	11 23 45.7	+0.2
	0.3nm,0.9s,baz=90,slow=7.0,SNR=5.3						
ASAR	**Alice Springs**	**48.99**	**253**	P	P	11 23 47.4	+0.4
	0.6nm,0.5s,baz=88,slow=8.0,SNR=19						

WEL 16 11:24:27.1, **39°S**±1°×**17°4E**±°, **h10**^{km}±1^{km}, **ML3.8**/31, **Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBEZ	**Newall Road No**	**0.15**	**66**	P	Pb	11 24 31.4	-0.5
NBEZ				S	Sg	11 24 35.0	+2.2
NMEZ	**Namu Road**	**0.17**	**121**	P	Pg	11 24 31.4	+0.6
NMEZ				S	Sg	11 24 34.7	+1.5
KHEZ	**Kahui Hut**	**0.25**	**83**	P	Pb	11 24 33.1	-0.6
KHEZ				S	Sb	11 24 37.5	-0.7
PKE	**Pukeiti**	**0.27**	**60**	P	Pb	11 24 33.5	-0.5
PKE				S	Sb	11 24 38.1	-0.5
PREZ	**Palmer Road**	**0.36**	**92**	P	Pb	11 24 35.1	-0.6
PREZ				S	Sb	11 24 41.0	-0.4
DREZ	**Durham Road**	**0.42**	**71**	P	Pb	11 24 36.0	-0.5
DREZ				S	Sb	11 24 42.7	-0.3
MHEZ	**Mangahewa**	**0.55**	**63**	P	Pb	11 24 38.5	-0.3
LREZ	**Lake Rotokare**	**0.57**	**104**	P	Pb	11 24 38.7	-0.4
LREZ				S	Sb	11 24 47.4	+0.2
VRZ	**Vera Road**	**0.85**	**77**	P	Pg	11 24 43.3	-0.2
VRZ				S	Sb	11 24 56.6	+1.1
WAZ	**Wanganui**	**1.09**	**114**	P	Pg	11 24 47.2	-0.8
WAZ				S	Sn	11 25 03.5	0.0
HIZ	**Hauiti**	**1.22**	**49**	P	Pn	11 24 48.8	-1.4
HIZ				P	Pb	11 24 48.9	-1.3
HIZ				S	Sb	11 25 05.0	-1.0
PKVZ	**Pokaka**	**1.28**	**89**	P	Pb	11 24 50.4	-1.0
PKVZ				P	Pn	11 24 50.3	-0.9
PKVZ				S	Sb	11 25 07.9	0.0
MTVZ	**Mangateitei**	**1.38**	**93**	P	Pn	11 24 52.3	-0.2
MTVZ				S	Sg	11 25 11.7	+0.2
TWVZ	**Taurewa**	**1.38**	**80**	P	Pn	11 24 51.5	-1.0
TWVZ				S	Sb	11 25 09.8	-0.9
TRVZ	**Turoa**	**1.44**	**89**	P	Pn	11 24 53.0	-0.5
TRVZ				P	Pn	11 24 53.0	-0.5
COVZ	**Chateau Observ**	**1.44**	**86**	P	Pn	11 24 53.0	-0.3
FWVZ	**Far West T-bar**	**1.45**	**88**	P	Pn	11 24 53.3	-0.3
DRZ	**Dome Shelter**	**1.45**	**89**	P	Pn	11 24 53.9	+0.2
WHVZ	**Whangaehu Hut**	**1.47**	**89**	P	Pn	11 24 53.9	0.0
DUWZ	**D'Urville Isla**	**1.48**	**173**	P	Pn	11 24 53.2	-0.6
WTVZ	**West Tongariro**	**1.49**	**82**	P	Pn	11 24 53.7	-0.3
NGZ	**Ngauruhoe**	**1.49**	**85**	P	Pn	11 24 53.8	-0.3
TUVZ	**Tukino**	**1.52**	**88**	P	Pn	11 24 54.5	0.0
OHWZ	**Ohakea**	**1.53**	**126**	P	Pb	11 24 55.2	-0.3
KRVZ	**Karewarewa**	**1.53**	**82**	P	Pn	11 24 54.2	-0.4
KATZ	**Kakaramea**	**1.60**	**78**	P	Pn	11 24 55.2	-0.3
MOVZ	**Moawhango**	**1.60**	**93**	P	Pn	11 24 55.8	+0.3
RATZ	**Rangitukua**	**1.68**	**75**	P	Pn	11 24 56.3	-0.3
WATZ	**Wairara**	**1.71**	**69**	P	Pn	11 24 56.4	-0.5
RITZ	**Rihia Road**	**1.72**	**79**	P	Pb	11 24 58.2	-0.6
QRZ	**Quartz Range**	**1.74**	**210**	P	Pn	11 24 55.8	-1.5
TLZ	**Tolley Road**	**1.75**	**56**	P	Pn	11 24 56.7	-0.9
KIW	**Kapiti Island**	**1.79**	**149**	P	Pn	11 24 58.3	+0.2
BHHZ	**Black Hill Sta**	**1.84**	**96**	P	Pn	11 24 59.3	+0.4
KUTZ	**Kaahu Road**	**1.86**	**64**	P	Pn	11 24 58.9	-0.1
OGWZ	**Otaki Gorge**	**1.87**	**143**	P	Pn	11 24 59.9	+0.7
TSZ	**Takapari Road**	**1.90**	**113**	P	Pb	11 25 00.7	-1.1
NNZ	**Nelson**	**1.90**	**187**	P	Pn	11 24 59.1	-0.5
HATZ	**Hinemaiaia**	**1.92**	**78**	P	Pn	11 25 00.9	+1.1
POWZ	**Post Office Ro**	**1.92**	**124**	P	Pb	11 25 01.3	-0.9
TCW	**Tory Channel**	**1.93**	**167**	P	Pn	11 25 00.0	0.0
MRZ	**Mangatainoka R**	**1.97**	**133**	P	Pn	11 25 01.6	+1.1
CAW	**Cannon Point**	**2.07**	**150**	P	Pn	11 25 02.2	+0.4
WPRZ	**Whakapapatarin**	**2.09**	**68**	P	Pn	11 25 03.2	+1.1
HOWZ	**Holdsworth Sta**	**2.10**	**139**	P	Pb	11 25 03.9	-1.4
TUWZ	**Tuamarina**	**2.11**	**175**	P	Pn	11 25 02.4	0.0
GRRZ	**Galatos Road**	**2.13**	**63**	P	Pn	11 25 02.2	-0.5
TOZ	**Tahuroa Road**	**2.13**	**42**	P	Pn	11 25 01.9	-0.9
MRHZ	**Matea Rd**	**2.18**	**78**	P	Pn	11 25 04.4	+1.0
BKZ	**Black Stump Fm**	**2.18**	**87**	P	Pn	11 25 04.5	+1.0
MTW	**Mount Morrison**	**2.29**	**143**	P	Pn	11 25 06.6	+1.6
AWAZ	**Awhitu Peninsu**	**2.38**	**19**	P	Pn	11 25 06.0	-0.2
BSWZ	**Blackbirch Sta**	**2.39**	**177**	P	Pn	11 25 07.1	+0.8
MSWZ	**Moikau Station**	**2.40**	**151**	P	Pn	11 25 07.6	+1.1
KBAZ	**Karaka Road Bo**	**2.42**	**23**	P	Pn	11 25 06.9	+0.3
WTAZ	**Waiatarua**	**2.49**	**16**	P	Pn	11 25 07.9	+0.2
MKAZ	**Moumakai**	**2.50**	**28**	P	Pn	11 25 07.7	-0.1
THZ	**Tophouse**	**2.50**	**194**	P	Pn	11 25 08.2	+0.3
ETAZ	**East Tamaki Re**	**2.56**	**23**	P	Pn	11 25 08.4	-0.2
MBAZ	**Motutapu North**	**2.73**	**21**	P	Pn	11 25 10.8	-0.1
WIAZ	**Waiheke Island**	**2.77**	**25**	P	Pn	11 25 11.4	-0.1
DSZ	**Denniston Nort**	**2.81**	**210**	P	Pn	11 25 11.4	-0.8
KUZ	**Kuaotunu**	**3.04**	**32**	P	Pn	11 25 14.3	-0.8
KHZ	**Kahutara**	**3.09**	**182**	P	Pn	11 25 16.9	+1.0
WCZ	**Waipu Caves**	**3.42**	**9**	P	Pn	11 25 20.2	-0.3
LTZ	**Lake Taylor**	**3.61**	**197**	P	Pn	11 25 24.0	+0.9
INZ	**Inchbonnie**	**3.80**	**206**	P	Pn	11 25 25.4	-0.2
OUZ	**Omahuta**	**4.10**	**359**	P	Pn	11 25 30.0	+0.2
OXZ	**Oxford**	**4.18**	**197**	P	Pn	11 25 31.0	+0.1

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*ISCJB **16** 11:25:34.8±0.6, 48°.75S±0°.08×106°.9E±0°.2, h10^{km}, mb4.3/14, MS4.1/15, Error ellipse: s-maj=18.5km s-min=9.6km az=19.6*

*IDC **16** 11:25:34.9±0.8, 48°.75S×106°.83E, h0^{km}, mb4.1/8, mb1 4.2/8, mb1mx4.0/22, mbtmp4.0/8, MS4.0/15, Ms1 4.0/15, ms1mx3.8/30, Error ellipse: s-maj=36.0km s-min=17.9km az=108.0*

*NEIC **16** 11:25:36.3±0.3, 48°.78S×106°.88E, h10^{km}, mb4.5/10, Error ellipse: s-maj=12.8km s-min=6.4km az=112.0*

ISC 16 11:25:36.4±0.6, **48°.8S**±0°.1×**106°.9E**±0°.2, **h10**^{km}, **n66**, σ**0ˢ.65**/53, **mb4.3**/14, **MS4.0**/15, **Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.87**	**24**	T	T	11 44 13.0	
	baz=199,slow=74,SNR=37						
H01W1	**Cape Leeuwin H**	**14.88**	**24**	T	T	11 44 13.0	
	baz=199,slow=74,SNR=51						
H01W3	**Cape Leeuwin H**	**14.89**	**24**	T	T	11 44 14.2	
	baz=199,slow=74,SNR=40						
CASY	**Casey**	**17.65**	**175**	*e*Pn	**P**	**11 29 43.2**	**+0.2**
	54nm,1.4s						
MORW	**Morawa**	**20.90**	**23**	*e*P	Pn	11 30 20.3	-1.0
	22nm,1.0s						
FORT	**Forrest**	**24.11**	**50**	*e*P	**P**	**11 30 52.9**	**+0.7**
	28nm,0.8s						
BBOO	**Buckleboo**	**27.02**	**65**	*e*P	**P**	**11 31 18.9**	**+0.3**
	19nm,0.9s						
STKA	**Stephens Creek**	**31.05**	**70**	*e*P	**P**	**11 31 54.4**	**+0.1**
	1.2nm,1.2s						
STKA	**Stephens Creek**	**31.05**	**70**	P	**P**	**11 31 54.2**	**-0.1**
	1.1nm,0.8s,baz=198,slow=15,SNR=3.4						
STKA				LR	LR	11 42 07.4	
	comp=Z,350nm,21.2s,baz=209,slow=32						
ASAR	**Alice Springs**	**32.90**	**50**	P	**P**	**11 32 10.5**	**-0.1**
	2.3nm,0.7s,baz=210,slow=8.3,SNR=52						
ASAR				PcP	**PcP**	**11 34 54.7**	**-0.3**
	0.6nm,0.8s,baz=197,slow=1.9,SNR=5.7						
ASAR				LR	LR	11 43 54.8	
	comp=Z,202nm,20.1s,baz=213,slow=33						
AS31	**Alice Springs**	**32.90**	**50**	*e*P	**P**	**11 32 09.8**	**-0.9**
	1.4nm,0.8s						
AS01	**Alice Springs**	**32.92**	**50**	*e*P	**P**	**11 32 10.3**	**-0.6**
VNDA	**Vanda**	**35.45**	**162**	*e*P	**P**	**11 32 32.5**	**+0.3**
VNDA	**Vanda**	**35.45**	**162**	P	**P**	**11 32 32.7**	**+0.5**
	3.0nm,0.9s,baz=281,slow=10,SNR=2.9						
VNDA				LR	LR	11 45 57.0	
	comp=Z,421nm,18.5s,baz=284,slow=34						
WR1	**Warramunga Arr**	**36.24**	**47**	*e*P	**P**	**11 32 39.5**	**-0.1**
WRA	**Warramunga Arr**	**36.24**	**47**	P	**P**	**11 32 39.5**	**-0.1**
	3.3nm,0.7s,baz=208,slow=8.7,SNR=36						
WRA				PcP	**PcP**	**11 35 05.8**	**+1.1**
	0.6nm,0.7s,baz=221,slow=2.6,SNR=4.8						
WB2	**Warramunga Arr**	**36.25**	**47**	*e*P	**P**	**11 32 39.5**	**-0.1**
WRAB	**Tennant Creek**	**36.26**	**47**	*e*P	**P**	**11 32 39.8**	**+0.1**
	5.9nm,0.8s						
MTN	**Manton Dam**	**41.07**	**38**	*e*P	**P**	**11 33 19.9**	**-0.2**
	10nm,1.0s						
QSPA	**South Pole Qui**	**41.36**	**180**	P	**P**	**11 33 22.2**	**+0.1**
	0.8nm,0.7s,baz=283,slow=2.6,SNR=3.6						
SNAA	**Sanae**	**50.15**	**203**	*e*P	**P**	**11 34 31.1**	**-0.3**
	8.9nm,1.3s						
SNAA	**Sanae**	**50.15**	**203**	P	**P**	**11 34 31.2**	**-0.2**
	1.7nm,0.6s,baz=333,slow=16,SNR=6.7						
DZM	**Mont Dzumac**	**53.77**	**82**	*e*LR	LR	11 50 28.2	
	comp=Z,212nm,25.4s						
DZM	**Mont Dzumac**	**53.77**	**82**	LR	LR	11 55 45.1	
	comp=Z,92nm,19.6s,baz=208,slow=34						
JAY	**Jayapura**	**54.43**	**43**	LR	LR	11 57 36.8	
	comp=Z,218nm,19.3s,baz=186,slow=35						
HNR	**Honiara**	**59.05**	**67**	LR	LR	11 58 04.6	
	comp=Z,121nm,21.2s,baz=210,slow=33						
BOSA	**Boshof**	**63.77**	**256**	LR	LR	11 57 42.9	
	comp=Z,119nm,18.9s,baz=202,slow=30						
LBTB	**Lobatse**	**66.03**	**259**	LR	LR	11 59 46.4	
	comp=Z,80nm,18.3s,baz=160,slow=31						
CM31	**Chiang Mai Arr**	**67.30**	**352**	*e*P	**P**	**11 36 31.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**67.30**	**352**	P	**P**	**11 36 31.3**	**+0.1**
	0.6nm,0.3s,baz=193,slow=4.9,SNR=7.5						
CMAR				LR	LR	12 04 36.9	
	comp=Z,80nm,18.7s,baz=192,slow=35						
BRDH	**Bariadhala**	**72.42**	**345**	LR	LR	12 06 03.6	
	comp=Z,97nm,18.7s,baz=174,slow=34						
TSUM	**Tsumeb**	**75.36**	**258**	LR	LR	12 05 43.9	
	comp=Z,153nm,18.9s,baz=139,slow=32						
USHA	**Ushuaia**	**76.69**	**183**	LR	LR	12 09 37.4	
	comp=Z,127nm,20.2s,baz=148,slow=34						
TBI	**Tubuai**	**81.25**	**115**	*e*LR	LR	12 03 12.8	
	comp=Z,122nm,28.8s						
WSAR	**Wadi Sarin**	**83.63**	**316**	LR	LR	12 09 52.4	
	comp=Z,76nm,18.4s,baz=178,slow=32						
NIL	**Nilore**	**87.38**	**332**	*e*P	**P**	**11 38 22.9**	**-0.5**
	8.9nm,0.8s						
SONA0	**Songino Array**	**96.23**	**360**	*e*P	**P**	**11 39 04.2**	**0.0**
SONM	**Songino Array**	**96.23**	**360**	P	**P**	**11 39 04.2**	**0.0**
	0.6nm,0.7s,baz=211,slow=1.7,SNR=4.1						
SONM				LR	LR	12 24 33.6	
	comp=Z,42nm,18.7s,baz=187,slow=37						
GEYT	**Alibeck**	**96.56**	**323**	LR	LR	12 19 05.7	
	comp=Z,52nm,18.4s,baz=40,slow=33						
ILAR	**Eielson Array**	**139.19**	**39**	PKP	**PKPdf**	**11 45 02.5**	**+0.4**
	0.1nm,0.8s,baz=277,slow=3.2,SNR=3.4						
INK	**Inuvik**	**144.85**	**34**	*e*PKPdf	**PKPdf**	**11 45 11.7**	**-0.4**
INK	**Inuvik**	**144.85**	**34**	PKP	PKPbc	11 45 10.9	-0.3
	2.2nm,0.9s,baz=289,slow=3.1,SNR=9.2						
YBH	**Yreka Blue Hor**	**144.91**	**83**	PKP	**PKPab**	**11 45 11.9**	**-0.5**
	2.0nm,0.7s,baz=215,slow=3.6,SNR=8.0						
BEKR	**Beckworth**	**145.53**	**87**	*e*PKPdf	**PKPdf**	**11 45 12.8**	**-1.6**
PNTR	**Pine Nut**	**145.63**	**89**	*e*PKPdf	**PKPdf**	**11 45 14.0**	**-0.6**
YERR	**Yerington**	**145.81**	**89**	*e*PKPdf	**PKPdf**	**11 45 14.6**	**-0.3**
PAHR	**Pah Rah Range**	**146.09**	**88**	*e*PKPdf	**PKPdf**	**11 45 15.1**	**-0.3**
NVAR	**Mina Array Bea**	**146.14**	**91**	PKPbc	**PKPab**	**11 45 17.4**	**+0.2**
	2.2nm,0.8s,baz=226,slow=4.9,SNR=14						
KVN	**Kaiserville**	**146.60**	**90**	*e*PKPdf	**PKPdf**	**11 45 16.5**	**+0.2**
TPNV	**Topopah Spring**	**146.68**	**94**	*e*PKPdf	**PKPdf**	**11 45 16.6**	**+0.2**
PINE	**Pine Mountain**	**147.01**	**80**	*e*PKPdf	**PKPdf**	**11 45 17.0**	**+0.2**
W13A	**Hualapai Mount**	**147.15**	**99**	*e*PKPdf	**PKPdf**	**11 45 17.2**	**-0.1**
WVOR	**Wild Horse Val**	**147.92**	**84**	*e*PKPdf	**PKPdf**	**11 45 18.4**	**+0.1**
ELK	**Elko**	**149.36**	**89**	PKPbc	**PKiKP**	**11 45 25.8**	**-0.6**
	1.9nm,1.0s,baz=241,slow=6.0,SNR=4.6						
LTX	**Lajitas**	**149.65**	**119**	*e*PKPbc	**PKiKP**	**11 45 26.4**	**-0.7**
TXAR	**Lajitas Array**	**149.65**	**119**	PKPbc	**PKiKP**	**11 45 26.4**	**-0.7**
	0.8nm,0.9s,baz=195,slow=5.9,SNR=6.9						
MNTX	**Cornudas Mount**	**150.33**	**113**	*e*PKPdf	**PKPdf**	**11 45 21.4**	**-0.9**
MNTX				*e*PKPbc	**pPKPbc**	**11 45 29.2**	**-0.7**
Q16A	**Castle Valley**	**151.11**	**96**	*e*PKPdf	**PKPdf**	**11 45 22.2**	**-1.4**
P17A	**Butcher Ranch,**	**151.69**	**95**	*e*PKPdf	**PKPdf**	**11 45 23.8**	**-0.6**
ANMO	**Albuquerque**	**151.84**	**107**	*e*PKPdf	**PKPdf**	**11 45 23.8**	**-1.0**
ANMO				PKPbc	**PKiKP**	**11 45 31.1**	**-0.5**
ANMO	**Albuquerque**	**151.84**	**107**	PKPbc	**PKiKP**	**11 45 31.1**	**-0.5**
	0.5nm,0.6s,baz=198,slow=3.2,SNR=3.5						
PV12	**Saucer Basin,**	**152.34**	**99**	*e*PKPdf	**PKPdf**	**11 45 25.1**	**-0.4**
RES	**Resolute Bay**	**152.40**	**12**	*e*PKPdf	**PKPdf**	**11 45 26.3**	**+2.2**
YKA	**Yellowknife Ar**	**153.42**	**43**	PKPbc	**PKPbc**	**11 45 33.0**	**-0.6**
YKA	**Yellowknife Ar**	**153.42**	**43**	PKPbc	**PKPbc**	**11 45 33.0**	**-0.6**
	0.6nm,1.0s,baz=291,slow=2.3,SNR=5.6						
YKB5	**Yellowknife Ar**	**153.42**	**43**	*e*PKPdf	**PKPdf**	**11 45 27.2**	**+1.3**

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*ISCJB **16** 11:46:36.6±0.7, 52°.8N±0°.1×34°.6W±0°.1, h14^{km}, mb3.6/13, MS3.0/5, Error ellipse: s-maj=20.8km s-min=9.7km az=9.2*

*IDC **16** 11:46:36.5±0.9, 52°.73N×34°.57W, h0^{km}, mb3.6/14, mb1 3.9/16, mb1mx3.7/63, mbtmp3.7/16, ML3.2/2, MS3.1/5, Ms1 3.1/5, ms1mx2.8/47, Error ellipse: s-maj=26.8km s-min=14.3km az=11.0*

ISC 16 11:46:38.2±0.8, **52°.7N**±0°.2×**34°.79W**±0°.08, **h14**^{km}, **n21**, σ**1ˢ.91**/19, **mb3.7**/13, **MS3.0**/5, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**18.68**	**69**	P	**P**	**11 50 55.3**	**-0.3**
	baz=289,slow=7.8,SNR=8.3						
SCHQ	**Schefferville**	**18.96**	**289**	P	**Pn**	**11 51 00.2**	**+0.8**
	0.2nm,0.3s,baz=59,slow=3.8,SNR=4.0						
SCHQ				S	**Sn**	**11 54 24.8**	**-6.6**
	0.1nm,0.3s,baz=59,slow=19,SNR=2.0						
FRB	**Frobisher Bay**	**20.63**	**315**	P	**P**	**11 51 17.9**	**+1.1**
	3.0nm,0.8s,baz=105,slow=11,SNR=10						
JMIC	**Jan Mayen**	**21.77**	**23**	LR	LR	11 57 07.0	
	comp=Z,39nm,19.5s,baz=260,slow=29						
ESDC	**Sonseca Array**	**24.79**	**109**	P	**P**	**11 51 58.3**	**-1.2**
	0.2nm,0.4s,baz=315,slow=7.7,SNR=4.6						
NOA	**NORSAR Array B**	**25.97**	**53**	P	**P**	**11 52 08.2**	**-1.8**
	1.4nm,0.8s,baz=274,slow=9.0,SNR=2.9						
NOA				LR	LR	12 00 18.7	
	comp=Z,25nm,21.0s,baz=230,slow=32						
HFS	**Hagfors**	**27.26**	**55**	LR	LR	12 00 44.2	
	comp=Z,46nm,18.9s,baz=266,slow=31						
SADO	**Sadowa**	**29.90**	**273**	LR	LR	12 03 32.0	
	comp=Z,56nm,19.6s,baz=98,slow=34						
ARCES	**ARCESS Array B**	**31.89**	**35**	P	**P**	**11 53 02.0**	**-0.5**
	2.4nm,0.9s,baz=262,slow=6.9,SNR=8.4						
FINES	**FINESS Array B**	**33.03**	**50**	P	**P**	**11 53 11.9**	**-0.6**
	1.3nm,0.8s,baz=270,slow=7.8,SNR=4.4						
FINES				LR	LR	12 04 49.8	
	comp=Z,28nm,20.1s,baz=288,slow=33						
YKA	**Yellowknife Ar**	**41.15**	**316**	P	**P**	**11 54 22.7**	**+1.2**
	0.4nm,0.8s,baz=61,slow=8.9,SNR=5.0						
INK	**Inuvik**	**45.37**	**329**	P	**P**	**11 54 55.9**	**+0.5**
	1.8nm,1.0s,baz=48,slow=4.2,SNR=5.7						
BRTR	**Keskin Array B**	**47.33**	**77**	P	**P**	**11 55 11.4**	**0.0**
	0.7nm,0.7s,baz=296,slow=4.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**49.02**	**130**	P	**P**	**11 55 24.1**	**-0.4**
	0.9nm,1.0s,baz=337,slow=5.6,SNR=3.0						
PDAR	**Pinedale Array**	**49.10**	**290**	P	**P**	**11 55 25.7**	**+0.5**
	0.4nm,0.5s,baz=41,slow=6.1,SNR=5.5						
ILAR	**Eielson Array**	**51.75**	**330**	P	**P**	**11 55 46.4**	**+1.9**
	0.5nm,0.7s,baz=52,slow=5.8,SNR=7.3						
TXAR	**Lajitas Array**	**54.67**	**273**	P	**P**	**11 56 08.0**	**+1.4**
	0.3nm,0.7s,baz=60,slow=8.6,SNR=4.8						
KURBB	**Kurchatov Arra**	**62.71**	**41**	P	**P**	**11 57 02.2**	**+0.1**
	0.6nm,0.6s,baz=324,slow=7.3,SNR=5.3						
MKAR	**Makanchi Array**	**67.26**	**42**	P	**P**	**11 57 31.5**	**-0.4**
	0.5nm,0.7s,baz=330,slow=5.1,SNR=5.7						
WRA	**Warramunga Arr**	**146.21**	**19**	PKPbc	**PKPbc**	**12 06 17.8**	**-0.2**
	0.4nm,0.8s,baz=340,slow=2.2,SNR=2.8						
ASAR	**Alice Springs**	**149.73**	**21**	PKPbc	**PKiKP**	**12 06 28.3**	**-0.1**
	0.4nm,0.7s,baz=347,slow=2.9,SNR=3.6						

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*NEIC **16** 11:53:34.9±1.8, 55°.79S×27°.74W, h133^{km}±16^{km}, mb4.1/4, Error ellipse: s-maj=21.5km s-min=11.0km az=70.0*

*ISCJB **16** 11:53:35.1±0.6, 55°.84S±0°.08×27°.8W±0°.2, h150^{km}, mb4.1/7, Error ellipse: s-maj=17.1km s-min=10.9km az=160.7*

*IDC **16** 11:53:36.4±6.2, 55°.84S×27°.67W, h144^{km}±56^{km}, mb3.9/5, mb1 3.9/6, mb1mx3.6/24, mbtmp4.3/6, Error ellipse: s-maj=31.5km s-min=19.6km az=97.0*

ISC 16 11:53:36.7±0.6, **55°.8S**±0°.1×**28°.1W**±0°.1, **h150**^{km}, **n28**, σ**1ˢ.29**/29, **mb4.0**/7, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.04**	**284**	*e*Pn	**Pn**	**11 54 51.4**	**+1.0**

HOPE				*e*Sn	Sn	11 55 45.3	-2.7
VNA1	Neumayer--Stat	17.22	157	P	Pn	11 57 30.8	+3.1
VNA3	Neumayer Olymp	17.39	160	P	Pn	11 57 28.6	-1.3
VNA2	Neumayer--Watz	17.61	157	P	P	11 57 29.7	-1.6
	baz=319,slow=13						
SNAA	Sanae	19.18	156	P	P	11 57 46.8	-1.5
SNAA	Sanae	19.18	156	*e*P	P	11 57 46.4	-1.9
	11nm,1.0s						
SNAA	Sanae	19.18	156	P	P	11 57 46.7	-1.7
	1.0nm,0.3s,baz=322,slow=11,SNR=39						
QSPA	South Pole Qui	34.44	180	*e*P	P	12 00 10.2	+0.7
QSPA	South Pole Qui	34.44	180	P	P	12 00 09.8	+0.3
	0.6nm,0.4s,baz=18,slow=22,SNR=9.1						
VNDA	Vanda	46.78	183	*e*P	P	12 01 50.0	-0.3
LPAZ	La Paz	49.80	306	*e*P	P	12 02 15.8	+1.0
	1.0nm,0.7s						
LPAZ	La Paz	49.80	306	P	P	12 02 16.9	+2.1
	1.1nm,0.5s,baz=146,slow=7.4,SNR=4.5						
DBIC	Dimbokro	65.18	26	P	P	12 04 01.5	-0.1
	4.8nm,1.2s,baz=198,slow=9.6,SNR=2.5						
TOA0	Torodi Ar. Sit	73.12	30	*e*P	P	12 04 50.6	+0.2
	3.1nm,0.9s						
TORD	Torodi Ar. Bea	73.12	30	P	P	12 04 49.9	-0.6
	1.1nm,0.3s,baz=195,slow=6.9,SNR=18						
TOA1	Torodi Ar. Sit	73.12	30	*e*P	P	12 04 49.9	-0.6
BKZ	Black Stump Fm	83.09	199	*e*P	P	12 05 47.1	+1.8
	9.4nm,1.2s						
URZ	Urewera	83.85	200	P	P	12 05 49.3	+0.2
	14nm,1.1s,baz=211,slow=5.9,SNR=5.1						
FIA0	FINESS Array S	124.43	28	*e*PKPdf	PKPdf	12 12 15.9	-0.4
FINES	FINESS Array B	124.43	28	PKP	PKPdf	12 12 15.9	-0.4
	0.5nm,0.4s,baz=183,slow=3.8,SNR=7.7						
ARA0	ARCESS Array S	130.92	22	*e*PKPdf	PKiKP	12 12 28.7	-0.8
ARCES	ARCESS Array B	130.92	22	PKP	PKiKP	12 12 28.7	-0.8
	1.5nm,0.9s,baz=212,slow=3.3,SNR=13						
YKA	Yellowknife Ar	135.64	318	PKP	PKPdf	12 12 37.3	-0.2
	0.3nm,0.5s,baz=130,slow=2.2,SNR=5.8						
YKB5	Yellowknife Ar	135.64	318	*e*PKPdf	PKPdf	12 12 37.5	-0.1
ILAR	Eielson Array	149.56	312	PKPbc	PKPbc	12 13 07.1	+0.4
	2.4nm,0.8s,baz=130,slow=3.0,SNR=30						
ILB	Eielson Array	149.56	312	*e*PKPbc	PKPbc	12 13 07.2	+0.4
SONA0	Songino Array	151.25	87	*e*PKPbc	PKiKP	12 13 11.3	-0.6
SONM	Songino Array	151.25	87	PKPbc	PKiKP	12 13 11.3	-0.6
	1.9nm,0.4s,baz=221,slow=3.6,SNR=27						

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*ISCJB **16** 11:59:26.8±0.6, 67°.83N±0°.04×135°.9W±0°.1, h10^{km}, mb3.6/7, Error ellipse: s-maj=7.3km s-min=3.7km az=35.0*

*IDC **16** 11:59:28.6±1.0, 68°.22N×136°.13W, h0^{km}, mb3.7/7, mb1 3.9/10, mb1mx3.5/56, mbtmp3.7/10, ML3.7/3, Error ellipse: s-maj=17.0km s-min=13.5km az=51.0*

*PGC **16** 11:59:29.7±3.0, 68°.12N×136°.39W, h20^{km}, ML3.6/2, 112km Wnw of Fort McPherson, Nt Northern Yukon Territory, Canada*

ISC 16 11:59:28.3±0.7**, 67°.95N**±0°.05×**135°.93W**±0°.05**, h10**^{km}**, n33, σ3^{s}.01**/51**, mb3.6**/7**, Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	Inuvik	0.97	67	P	Pb	11 59 48.2	+1.1
INK				S	Sn	12 00 03.5	+1.8
INK	Inuvik	0.97	67	Pg	Pb	11 59 48.5	+1.3
	11nm,0.3s,baz=254,slow=19,SNR=404						
INK				Lg	Lg	12 00 03.4	
	65nm,0.3s,baz=166,slow=18,SNR=31						
DAWY	Dawson	4.15	202	Pn	Pn	12 00 31.9	+0.2
DAWY				Sn	Sn	12 01 19.2	-1.1
ILAR	Eielson Array	5.44	239	Sn	Sn	12 01 48.5	-3.4
	1.5nm,0.3s,baz=42,slow=25,SNR=3.1						
ILAR				Lg	Lg	12 02 14.1	
	1.2nm,0.3s,baz=39,slow=29,SNR=4.7						
COLD	Coldfoot	5.51	269	Pn	Pn	12 00 48.0	-2.3
COLD				Sn	Sn	12 01 44.0	-10
BVCY	Beaver Creek	5.94	203	Pn	Pn	12 00 56.4	+0.2
BVCY				Sn	Sn	12 02 01.5	-2.7
DHRN	Dharma Camp	6.37	91	Pn	Pn	12 01 04.2	+2.1
DHRN				Sn	Sn	12 02 15.2	+0.5
YUK3	Moose Creek	6.50	199	Pn	Pn	12 01 04.1	+0.1
YUK2	White River	6.54	201	Pn	Pn	12 01 05.4	+0.9
YUK2				Sn	Sn	12 02 17.2	-1.8
YUK4	Talbot Arm	6.74	191	Pn	Pn	12 01 07.5	+0.2
YUK4				Sn	Sn	12 02 20.5	-3.6
YUK5	Granite Creek	6.90	188	Pn	Pn	12 01 11.3	+1.7
YUK5				Sn	Sn	12 02 25.7	-2.4
YUK6	Outpost Mounta	7.12	190	Pn	Pn	12 01 14.5	+1.9
YUK6				Sn	Sn	12 02 31.1	-2.4
HYT	Haines Junctio	7.19	186	Pn	Pn	12 01 16.1	+2.6
HYT				Sn	Sn	12 02 34.1	-1.1
HYT				Sg	Sg	12 03 18.7	-0.1
WHY	Whitehorse	7.34	176	Pn	Pn	12 01 17.7	+2.2
WHY				Sn	Sn	12 02 36.9	-1.9
YUK7	Dusty Glacier	7.52	188	Pn	Pn	12 01 20.1	+2.1
KUKN	Kugluktuk,NWT	7.85	81	Pn	Pn	12 01 24.1	+1.7
KUKN				Sn	Sn	12 02 50.0	-1.2
DLBC	Dease Lake	9.91	162	Pn	Pn	12 01 53.8	+3.1
DLBC	Dease Lake	9.91	162	Pn	Pn	12 01 54.1	+3.4
	0.5nm,0.3s,baz=6.1,slow=9.1,SNR=12						
DLBC				Sn	Sn	12 03 42.6	+0.7
	0.2nm,0.3s,baz=282,slow=8.7,SNR=2.5						
DLBC				Lg	Lg	12 04 40.2	
	0.1nm,0.3s,baz=252,slow=9.6,SNR=2.4						
YKW3	Yellowknife Ar	10.40	111	Pn	Pn	12 01 57.9	+0.6
YKW3				Sn	Sn	12 03 48.1	-5.5
YKA	Yellowknife Ar	10.45	111	Pn	Pn	12 01 58.1	+0.2
	0.4nm,0.3s,baz=310,slow=13,SNR=28						
YKA				Sn	Sn	12 03 48.8	-6.0
	1.1nm,0.3s,baz=306,slow=22,SNR=9.8						
YKA				Lg	Lg	12 04 58.7	
	0.2nm,0.3s,baz=313,slow=30,SNR=4.0						
YKW1	Yellowknife Ar	10.48	111	Pn	Pn	12 01 58.4	+0.1
YKW1				Sn	Sn	12 03 48.9	-6.8
FNBB	Fort Nelson	10.75	142	Pn	Pn	12 02 03.1	+1.0
FNBB				Sn	Sn	12 03 58.5	-3.9
HILA	High Level	12.63	129	Sn	Sn	12 04 41.4	-6.9
FSMA	Fort Smith	13.17	116	Sn	Sn	12 04 53.7	-7.6
RES	Resolute Bay	14.44	44	Pn	Pn	12 02 50.9	-1.5
RES				Sn	Sn	12 05 20.0	-12
RES	Resolute Bay	14.44	44	Pn	Pn	12 02 51.1	-1.3
	0.5nm,0.3s,baz=257,slow=12,SNR=13						
RES				Sn	Sn	12 05 26.2	-6.1
	0.2nm,0.3s,baz=18,slow=20,SNR=4.8						
FRB	Frobisher Bay	26.62	66	P	P	12 05 08.1	+1.7
	1.2nm,0.6s,baz=312,slow=9.6,SNR=10.0						
SEY	Seymchan	28.64	295	P	P	12 05 25.1	+0.7
	0.3nm,0.3s,baz=162,slow=9.6,SNR=3.0						
PDAR	Pinedale Array	28.89	137	P	P	12 05 31.1	+3.9
	0.3nm,0.8s,baz=349,slow=8.6,SNR=3.3						
NVAR	Mina Array Bea	31.16	153	P	P	12 05 50.6	+3.4
	0.4nm,0.6s,baz=344,slow=6.0,SNR=4.4						
TXAR	Lajitas Array	43.11	137	P	P	12 07 31.8	+3.3
	0.3nm,0.6s,baz=347,slow=7.4,SNR=5.0						
FINES	FINESS Array B	50.24	11	P	P	12 08 23.6	-0.2
	2.4nm,1.0s,baz=350,slow=7.3,SNR=6.2						
AKASG	Malin Array Be	61.14	11	P	P	12 09 42.1	-0.1
	0.5nm,0.5s,baz=356,slow=6.5,SNR=4.1						

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*IDC **16** 12:01:53.2±5.6, 36°.49N×71°.43E, h216^{km}±48^{km}, mb3.1/5, mb1 3.3/11, mb1mx3.0/52, mbtmp3.8/11, MS3.2/1, Ms1 3.2/1, ms1mx2.4/17, Error ellipse: s-maj=46.6km s-min=19.0km az=38.0*

*NNC **16** 12:01:56.6±5.1, 37°.06N×70°.91E, h0^{km}, mb4.1, mpv3.6, Error ellipse: s-maj=42.2km s-min=30.5km az=157.0*

ISC 16 12:01:53.4±0.9**, 36°.58N**±0°.08×**71°.35E**±0°.10**, h200**^{km}**, n31, σ1^{s}.98**/37**, mb3.2**/5**, 4C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.83	26	⇑P	Pn	12 02 55.0	+1.8
	3.4nm,0.3s						
SFK				S	Sn	12 03 39.4	-0.8
	23nm,0.3s						
AML	Almayashu	5.84	17	P	Pn	12 03 19.8	+1.0
	SNR=42						
MNAS	Manas	5.97	8	P	Pn	12 03 21.2	+0.9
	1.9nm,0.3s						
MNAS				⇓S	Sn	12 04 26.0	-3.1
	23nm,0.6s						
UCH	Uchtor	6.15	22	P	Pn	12 03 23.9	+1.0
	SNR=20						
KZA	Kyzart	6.27	28	P	Pn	12 03 24.9	+0.5
	SNR=9.2						
EKS2	Erkin-Say	6.36	16	P	Pn	12 03 26.5	+1.2
	SNR=18						
AAK	Ala-Archa	6.52	21	P	Pn	12 03 28.7	+1.3
	SNR=6.5						
AAK	Ala-Archa	6.52	21	⇓P	Pn	12 03 28.4	+1.0
	3.8nm,0.4s						
AAK				⇑S	Sn	12 04 40.3	-1.7
	14nm,0.8s						
AAK	Ala-Archa	6.52	21	P	Pn	12 03 28.5	+1.0
	2.0nm,0.3s,baz=180,slow=4.6,SNR=19						
AAK				S	Sn	12 04 40.5	-1.5
	1.4nm,0.3s,baz=299,slow=22,SNR=12						
KK31	Karatay Array	6.55	355	⇓P	Pn	12 03 27.8	+0.1
	0.8nm,0.3s,baz=174,slow=12,SNR=50						
KK31				⇓S	Sn	12 04 38.4	-4.1
	14nm,0.5s,baz=168,slow=22,SNR=20						
TKM2	Tokmak 2	7.13	26	⇓P	Pn	12 03 36.1	+0.7
	6.9nm,0.5s						
TKM2				⇑S	Sn	12 04 58.7	+2.3
	5.9nm,0.7s						
PYUN	Piuthan	12.96	127	*e*P	P	12 04 53.5	-0.4
	18nm,0.6s						
MKAR	Makanchi Array	13.06	35	P	Pn	12 04 51.2	-0.3
	0.5nm,0.3s,baz=209,slow=11,SNR=22						
DANN	Dangsing	13.30	125	*e*P	P	12 04 57.4	-0.3
	8.8nm,0.4s						
DMN	Daman	14.68	124	*e*P	P	12 05 14.4	+1.4
	6.6nm,0.3s						
PKIN	Phulchoki	14.89	123	*e*P	P	12 05 17.4	+2.0
	8.8nm,0.4s						
PKI	Pulchoki	14.91	123	*e*P	P	12 05 17.5	+1.9
	7.7nm,0.4s						
KURBB	Kurchatov Arra	14.96	18	P	Pn	12 05 13.7	-1.2
	0.1nm,0.3s,baz=211,slow=8.6,SNR=9.5						
GUN	Gumba	15.01	121	*e*P	P	12 05 17.6	+0.8
	4.5nm,0.3s						
AB31	Akbulak array	15.15	330	⇓P	P	12 05 21.0	+3.2
	3.5nm,0.7s						
AB31				⇓S	S	12 08 04.9	-0.5
	1.9nm,0.8s						
BVAR	Borovoye Array	16.46	358	P	P	12 05 31.1	-1.1
	1.0nm,0.3s,baz=164,slow=10.0,SNR=16						
AKTO	Aktyubinsk	16.86	329	⇑P	Pn	12 05 44.3	+6.6
	7.6nm,0.8s						
AKTO	Aktyubinsk	16.86	329	P	P	12 05 36.8	+0.3
	1.2nm,0.3s,baz=146,slow=6.9,SNR=14						
ZALV	Zalesovo Beam	19.73	24	P	P	12 06 07.1	-0.4
	0.7nm,0.3s,baz=217,slow=11,SNR=11						
BRTR	Keskin Array B	29.68	288	LR	LR	12 21 39.5	
	comp=Z,44nm,18.5s,baz=132,slow=40						
FINES	FINESS Array B	37.58	326	P	P	12 08 47.5	-0.7
	0.7nm,0.6s,baz=120,slow=9.8,SNR=6.0						
ARCES	ARCESS Array B	41.18	337	P	P	12 09 17.1	-0.8
	0.7nm,0.5s,baz=115,slow=9.0,SNR=13						
NB2	NORSAR Subarra	44.49	323	P	P	12 09 43.2	-1.3
	comp=Z,0.4nm,0.6s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.49	323	P	P	12 09 43.1	-1.5
	comp=Z,1.0nm,0.8s,baz=96,slow=7.6,SNR=3.7						
WRA	Warramunga Arr	81.79	122	P	P	12 13 47.5	-2.6
	comp=Z,0.1nm,0.3s,baz=324,slow=4.5,SNR=3.8						
ASAR	Alice Springs	84.07	125	P	P	12 13 59.4	-2.3
	comp=Z,0.3nm,0.7s,baz=302,slow=5.3,SNR=5.1						

GUC 16 12:04:48.3±0.6**, 24°.11S**×**67°.68W, h215**^{km}±12^{km}**, ML3.6, 8C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	IPOC Station P	1.88	298	⇑*i*P	Pn	12 05 28.7	+1.7
PB15				*e*S	S	12 05 59.1	+2.4
GO02	Mina Guanaco	2.03	239	⇑*i*P	Pn	12 05 29.8	+1.3
GO02				*i* S	S	12 06 02.0	+2.3
GO02				IAML		12 06 03.3	
	comp=E,431nm,0.2s						
PB06	IPOC Station P	2.23	308	⇑*i*P	Pn	12 05 32.3	+1.8
PB06				*i* S	S	12 06 05.1	+2.0
PB06				IAML		12 06 07.3	
	comp=N,152nm,0.1s						
PB14	IPOC Station P	2.54	258	*e*P	Pn	12 05 35.8	+1.9
PB14				*i* S	S	12 06 11.9	+2.8
PB14				IAML		12 06 14.8	
	comp=E,140nm,0.3s						
PB05	IPOC Station P	2.64	298	⇑*i*P	Pn	12 05 36.8	+2.0
PB09	IPOC Station P	2.72	328	⇑*i*P	Pn	12 05 37.3	+1.5
PB09				*i* S	S	12 06 14.7	+2.2
PB09				IAML		12 06 16.5	
	comp=N,60nm,0.4s						
PB03	IPOC Station P	2.81	317	⇑*i*P	Pn	12 05 38.3	+1.5
PB03				*i* S	S	12 06 15.5	+1.3
PB03				IAML		12 06 19.0	
	comp=N,129nm,0.2s						
PB04	IPOC Station P	2.88	307	*e*P	Pn	12 05 39.6	+2.0
PB04				*i* S	S	12 06 18.3	+2.5
PB04				IAML		12 06 23.0	
	comp=N,84nm,0.3s						
PB07	IPOC Station P	3.13	319	⇑*i*P	Pn	12 05 41.9	+1.5
PB07				*i* S	S	12 06 22.0	+1.1
PB02	IPOC Station P	3.45	323	⇑*i*P	Pn	12 05 45.2	+1.0
PB02				*i* S	S	12 06 28.8	+1.1

WEL 16 12:06:57.2, 40°.7S±0°.7×**17°5E**±°**, h36**^{km}±1^{km}**, ML3.8**/16**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OGWZ	Otaki Gorge	0.12	174	P	Pn	12 07 03.7	-4.6
OGWZ				S	Sn	12 07 08.4	-11
KIW	Kapiti Island	0.25	228	P	Pn	12 07 04.9	-0.5
KIW				S	Sn	12 07 10.2	-2.4
MRZ	Mangatainoka R	0.33	84	P	Pn	12 07 05.5	+0.1
MRZ				S	Sn	12 07 11.5	-0.5
HOWZ	Holdsworth Sta	0.34	126	P	Pn	12 07 05.8	+0.3
HOWZ				S	Sn	12 07 12.5	+0.3
CAW	Cannon Point	0.42	189	P	Pn	12 07 06.9	+0.4
CAW				S	Sn	12 07 14.2	+1.0
OHWZ	Ohakea	0.51	14	P	Pn	12 07 08.4	+0.6
MTW	Mount Morrison	0.53	150	P	Pn	12 07 08.5	+0.2
MTW				S	Sn	12 07 17.5	+1.5
POWZ	Post Office Ro	0.56	57	P	Pn	12 07 08.6	-0.1
TIWZ	Tintock	0.56	98	P	Pn	12 07 09.0	+0.2
TIWZ				S	Sn	12 07 18.2	+1.4
PRWZ	Pori Road	0.64	78	P	Pn	12 07 10.2	+0.4
TMWZ	Te Maipa	0.69	127	P	Pn	12 07 10.4	-0.1
PAWZ	Paruwai Farm	0.72	163	P	Pn	12 07 10.8	0.0
MSWZ	Moikau Station	0.72	174	P	Pn	12 07 11.1	+0.2
BHW	Baring Head	0.74	197	P	Pn	12 07 11.0	-0.1
TRWZ	Traveller	0.81	150	P	Pn	12 07 12.8	+0.8
CPWZ	Castlepoint	0.82	105	P	Pn	12 07 12.7	+0.5
BFZ	Birch Farm	0.83	89	P	Pn	12 07 12.1	-0.2
TCW	Tory Channel	0.84	232	P	Pn	12 07 13.0	+0.5
DVHZ	Dannevirke	0.87	63	P	Pn	12 07 12.9	0.0
PLWZ	Palliser	0.88	175	P	Pn	12 07 12.9	-0.1
TSZ	Takapari Road	0.89	44	P	Pn	12 07 13.6	+0.5
DUWZ	D’Urville Isla	0.94	263	P	Pn	12 07 14.6	+0.7
WAZ	Wanganui	0.95	352	P	Pn	12 07 15.3	+1.3
ANWZ	Angora Road	1.03	77	P	Pn	12 07 14.8	-0.3
WPHZ	Waipukurau	1.17	58	P	Pn	12 07 16.9	0.0
TUWZ	Tuamarina	1.17	231	P	Pn	12 07 17.5	+0.5
PRHZ	Porangahau	1.21	70	P	Pn	12 07 17.1	-0.4
CMWZ	Cape Campbell	1.27	214	P	Pn	12 07 19.5	+1.1
MTVZ	Mangateitei	1.33	11	P	Pn	12 07 20.7	+1.4
LREZ	Lake Rotokare	1.36	335	P	Pn	12 07 21.5	+1.9
MOVZ	Moawhango	1.37	20	P	Pn	12 07 20.6	+0.9
BHHZ	Black Hill Sta	1.39	30	P	Pn	12 07 20.6	+0.5
BSWZ	Blackbirch Sta	1.40	223	P	Pn	12 07 20.6	+0.4
PKVZ	Pokaka	1.41	6	P	Pn	12 07 21.8	+1.5
TRVZ	Turoa	1.43	12	P	Pn	12 07 22.1	+1.4
NNZ	Nelson	1.44	248	P	Pn	12 07 21.5	+0.9
WHVZ	Whangaehu Hut	1.45	13	P	Pn	12 07 22.5	+1.5
DRZ	Dome Shelter	1.45	13	P	Pn	12 07 22.8	+1.6
PXZ	Pawanui	1.47	64	P	Pn	12 07 20.5	-0.5
FWVZ	Far West T-bar	1.47	12	P	Pn	12 07 22.7	+1.4
TUVZ	Tukino	1.48	15	P	Pn	12 07 22.9	+1.5
COVZ	Chateau Observ	1.52	11	P	Pn	12 07 23.6	+1.6
NGZ	Ngauruhoe	1.56	13	P	Pn	12 07 24.1	+1.7
KAHZ	Kahuranaki	1.60	56	P	Pn	12 07 22.4	-0.5
VRZ	Vera Road	1.60	349	P	Pn	12 07 24.5	+1.6
KWHZ	Kaweka Forest	1.60	38	P	Pn	12 07 23.0	+0.1
WTVZ	West Tongariro	1.61	12	P	Pn	12 07 24.8	+1.6
TWVZ	Taurewa	1.64	8	P	Pn	12 07 24.8	+1.3
KRVZ	Karewarewa	1.64	13	P	Pn	12 07 25.2	+1.6
MCHZ	McNeill Hill	1.72	44	P	Pn	12 07 24.6	0.0
RITZ	Rihia Road	1.80	18	P	Pn	12 07 26.9	+1.2
CKHZ	Cape Kidnapper	1.80	56	P	Pn	12 07 25.1	-0.5
BKZ	Black Stump Fm	1.84	34	P	Pn	12 07 26.0	-0.2
HATZ	Hinemaiaia	1.94	22	P	Pn	12 07 27.8	+0.2
QRZ	Quartz Range	2.00	265	P	Pn	12 07 28.7	+0.3
THZ	Tophouse	2.00	237	P	Pn	12 07 28.5	0.0
ARHZ	Aropaoanui	2.01	45	P	Pn	12 07 28.1	-0.5
NMHZ	Naumai	2.04	39	P	Pn	12 07 28.7	-0.3
MRHZ	Matea Rd	2.10	28	P	Pn	12 07 29.5	-0.3
KHZ	Kahutara	2.10	215	P	Pn	12 07 29.3	-0.4
HIZ	Hauiti	2.19	354	P	Pn	12 07 32.8	+1.8
HIZ				P	Pn	12 07 32.8	+1.8
MTHZ	Maungataniwha	2.25	36	P	Pn	12 07 31.2	-0.7
ALRZ	Allen Road	2.32	24	P	Pn	12 07 32.6	-0.2
TLZ	Tolley Road	2.38	7	P	Pn	12 07 35.2	+1.6
PRRZ	Plateau Road	2.39	24	P	Pn	12 07 33.5	-0.3
RTZ	Ruatahuna	2.51	35	P	Pn	12 07 34.9	-0.6
SNGZ	Shannon Statio	2.55	42	P	Pn	12 07 34.7	-1.3
MHGZ	Mahia Peninsul	2.62	55	P	Pn	12 07 35.5	-1.3
TARZ	Mount Tarawera	2.67	24	P	Pn	12 07 37.6	-0.1
DSZ	Denniston Nort	2.73	246	P	Pn	12 07 38.8	+0.3
RAGZ	Rawiri	2.81	39	P	Pn	12 07 38.1	-1.4
RAGZ				P		12 07 38.4	
RIGZ	Rimuhau	2.83	46	P	Pn	12 07 37.8	-2.0
URZ	Urewera	2.87	33	P	Pn	12 07 38.5	-1.8
MARZ	Manawahe	2.95	24	P	Pn	12 07 40.8	-0.8
MWZ	Matawai	2.99	39	P	Pn	12 07 40.1	-1.9
LTZ	Lake Taylor	3.00	225	P	Pn	12 07 41.4	-0.8
TKGZ	Te Karaka	3.07	44	P	Pn	12 07 41.3	-1.8
RUGZ	Raukumara Rang	3.36	36	P	Pn	12 07 45.8	-1.4
OKCZ	Okains Bay	3.40	207	P	Pn	12 07 45.8	-1.8
CRLZ	Canterbury Las	3.44	212	P	Pn	12 07 46.3	-1.8
INZ	Inchbonnie	3.44	233	P	Pn	12 07 47.2	-0.9
MQZ	McQueen’s Vall	3.54	211	P	Pn	12 07 46.9	-2.6
HAZ	Te Kaha	3.58	36	P	Pn	12 07 48.8	-1.2
AKCZ	Akaroa Harbour	3.58	207	P	Pn	12 07 48.5	-1.7
MKAZ	Moumakai	3.59	0	P	Pn	12 07 51.8	+1.6
ETAZ	East Tamaki Re	3.74	357	P	Pn	12 07 53.9	+1.6
WMGZ	Waiomatatini S	3.83	42	P	Pn	12 07 51.0	-2.5
RVAZ	Riverhead Bore	3.94	353	P	Pn	12 07 54.9	-0.2
FOZ	Fox Glacier	4.88	233	P	Pn	12 08 07.0	-0.9
ODZ	Otahua Downs	5.46	216	P	Pn	12 08 13.5	-2.5
JCZ	Jackson Bay	5.80	232	P	Pn	12 08 19.8	-0.9
CTZ	Chatham Island	6.82	119	P	Pn	12 08 33.6	-1.0

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*IDC **16** 12:13:48.3±2.0, 6°.95S×128°.93E, h0^{km}, mb3.6/1, mb1 3.5/3, mb1mx3.3/24, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=109.6km s-min=31.2km az=67.0*

ISC 16 12:14:04.3±1.3**, 7°.5S**±0°.1×**129°.5E**±0°.1**, h150**^{km}**, n11, σ2^{s}.68**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTN	Manton Dam	5.57	164	P	Pn	12 15 27.1	+1.8
	baz=6.0,SNR=24						
KDU	Kakadu	5.94	151	P	Pn	12 15 32.0	+1.8
	baz=6.4,SNR=61						
KNRA	Kununurra	8.19	185	P	Pn	12 16 01.7	+1.3
	baz=8.6,SNR=4.0						
FITZ	Fitzroy Crossi	11.23	199	P	Pn	12 16 40.6	+0.1
	baz=12,SNR=9.7						
WRA	Warramunga Arr	13.25	160	Pn	Pn	12 17 06.3	-0.5
	0.3nm,0.3s,baz=337,slow=13,SNR=19						
WRA				Sn	Sn	12 19 27.9	-5.6
	0.6nm,0.3s,baz=335,slow=23,SNR=10						
COEN	Coen	14.87	117	P	Pn	12 17 27.5	+0.3
	baz=15						
QIS	Mount Isa	16.26	144	P	P	12 17 47.2	+2.6
	baz=17						
ASAR	Alice Springs	16.64	166	P	Pn	12 17 52.1	+3.1
	0.1nm,0.3s,baz=334,slow=9.6,SNR=10						
ASAR				S	S	12 20 53.0	-1.1
	0.2nm,0.3s,baz=346,slow=26,SNR=5.5						
WRKA	Warakurna	17.51	184	P	Pn	12 18 02.0	+2.6
	baz=18,SNR=3.2						
GIRL	Giralia	21.08	223	P	P	12 18 37.7	+0.7
	baz=21						
MKAR	Makanchi Array	68.36	327	P	P	12 24 46.9	-2.7
	0.3nm,0.4s,baz=114,slow=7.5,SNR=7.9						

MEX 16 12:22:45.6±0.6**, 16°.26N**×**98°.23W, h8**^{km}±3^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.16	36	*e*P	Pg	12 22 48.4	-0.6
PNIG				*i* S	Sg	12 22 51.4	0.0
VHO	Vista Hermosa	1.64	60	*e*P	Pn	12 23 12.1	-2.9
VHO				*i* S	Sn	12 23 31.2	-5.2

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*NIED **16** 12:29:00, 30°.80N×139°.90E, h5^{km}, Mw4.3 Best double couple: $M_0$3.12000×10^{15} NP1:ϕ_s314.00000°, δ27.00000°, λ-128.00000°. NP2:ϕ_s174.00000°, δ69.00000°, λ-73.00000°.*

*ISCJB **16** 12:29:35.0±0.2, 30°.69N±0°.03×139°.82E±0°.04, h33^{km}, mb4.3/64, MS3.5/6, Error ellipse: s-maj=4.7km s-min=3.8km az=159.4*

*JMA **16** 12:29:35.0±0.3, 30°.76N×139°.93E, h91^{km}, M4.0*

*IDC **16** 12:29:38.7±2.1, 30°.77N×139°.76E, h47^{km}±18^{km}, mb3.9/25, mb1 4.1/29, mb1mx4.0/44, mbtmp4.1/29, ML3.0/4, MS3.3/12, Ms1 3.4/12, ms1mx3.1/53, Error ellipse: s-maj=14.7km s-min=12.4km az=123.0*

*NEIC **16** 12:29:39.5±0.5, 30°.74N×139°.79E, h58^{km}±4^{km}, mb4.4/43, Error ellipse: s-maj=3.9km s-min=3.0km az=144.0*

ISC 16 12:29:36.8±0.5**, 30°.70N**±0°.06×**139°.92E**±0°.06**, h35**^{km}**, n141, σ1^{s}.13**/135**, mb4.4**/69**, MS3.5**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	2.37	357	*e*S	Sn	12 30 39.8	-1.1
JHJ2	Mitsune	2.40	358	*e*Pn	Pn	12 30 15.7	+2.1
JHJ2				*e*Sn	Sn	12 30 40.5	-1.3
JHJ2	Mitsune	2.40	358	S	Sn	12 30 40.6	-1.3
JHJ	Hachijo jima 2	2.41	357	P	Pn	12 30 16.1	+2.3
	14nm,0.3s,baz=66,slow=20,SNR=2.6						
JHJ				S	Sn	12 30 40.5	-1.6
	82nm,0.3s,baz=258,slow=22,SNR=11						
TTO1	TONANKAI O.B.S	3.94	318	S	Sn	12 31 21.2	+1.8
JCJ	Chichijima	4.10	151	LR	LR	12 32 19.1	
	comp=Z,226nm,19.6s,baz=270,slow=38						
BSO3	Boso 3	4.12	7	P	Pn	12 30 35.3	-1.6
BSO3				S	Sn	12 31 19.5	-4.2
BSO4	Boso 4	4.29	5	S	Sn	12 31 25.1	-3.1
JIE	Ise	4.57	324	S	Sn	12 31 37.4	+2.1
JKN2	Miekihoku	4.69	320	P	Pn	12 30 44.7	-0.3
JTNC	Tanabenakahech	4.80	312	*e*S	Sn	12 31 39.8	-1.1
JAO	Obara	5.07	335	P	Pn	12 30 57.4	+7.0
JHU	Hanno	5.16	354	P	Pn	12 30 53.3	+1.7
INU	Inuyama	5.24	333	*e*Pn	Pn	12 30 54.3	+1.7
JRY	Ryogami san	5.37	351	P	Pn	12 30 57.3	+2.9
JHO	Hitachi	5.92	5	P	Pn	12 31 01.6	-0.3
JHO				*e*S	Sn	12 32 06.3	-2.2
MJAR	Matsushiro Arr	6.00	347	P	Pn	12 31 05.2	+2.1
	0.2nm,0.3s,baz=170,slow=11,SNR=33						
MJAR				LR	LR	12 33 20.1	
	comp=Z,178nm,21.2s,baz=155,slow=38						
MAJO	Matsushiro	6.00	347	*e*Pn	Pn	12 31 05.0	+1.9
MAT	Matsushiro	6.00	347	P	Pn	12 31 05.8	+2.7
MAT				*e*S	Sn	12 32 13.2	+2.7
MJB9	Matsu-Tunnel	6.00	347	*e*Pn	Pn	12 31 05.0	+1.9
JNU	Nakatsue	8.06	290	*e*Pn	Pn	12 31 31.6	+0.3
JNU				*e*Sn	Sn	12 33 00.1	-1.2
JNU	Nakatsue	8.06	290	P	Pn	12 31 29.7	-1.7
	0.2nm,0.3s,baz=66,slow=20,SNR=2.2						
JNU				S	Sn	12 32 58.6	-2.6
	0.1nm,0.3s,baz=108,slow=3.2,SNR=1.8						
JNU				LR	LR	12 34 31.5	
	comp=Z,231nm,18.8s,baz=137,slow=37						
KSRS	Korea Array	12.01	307	P	Pn	12 32 34.8	+9.4
	0.1nm,0.3s,baz=116,slow=13,SNR=13						
KSRS				LR	LR	12 36 44.5	
	comp=Z,72nm,19.8s,baz=124,slow=36						
KSAR	Wonju Array Be	12.03	307	P	Pn	12 32 34.8	+9.1
KS01	Wonju Array Si	12.04	307	*e*Pn	Pn	12 32 27.2	+1.4
ASAJ	Asahikawa	13.56	8	P	Pn	12 32 42.9	-3.6
	0.1nm,0.3s,baz=229,slow=20,SNR=2.5						
ASAJ				LR	LR	12 39 02.3	
	comp=Z,100nm,18.9s,baz=192,slow=42						
KLR	Kul'dur	19.52	344	P	P	12 34 00.1	-0.8

	0.1nm,0.3s,baz=153,slow=11,SNR=10						
KLR				LR	LR	12 40 47.9	
	comp=Z,66nm,19.6s,baz=133,slow=34						
PETK	**Petropavlovsk-**	**25.87**	**25**	LR	LR	12 45 40.6	
	comp=Z,36nm,21.3s,baz=192,slow=37						
XAN	**Xi'an**	**26.34**	**285**	*e*P	**P**	**12 35 10.0**	**+0.4**
	15nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**26.67**	**108**	T	T	13 03 01.9	
	baz=300,slow=75						
H11N1	**WAKE ISLAND Hy**	**26.67**	**108**	T	T	13 03 00.7	
	baz=300,slow=75						
H11N3	**WAKE ISLAND Hy**	**26.69**	**108**	T	T	13 03 02.4	
	baz=300,slow=75						
H11S3	**WAKE ISLAND Hy**	**27.12**	**110**	T	T	13 03 52.1	
	baz=303,slow=75						
H11S1	**WAKE ISLAND Hy**	**27.13**	**110**	T	T	13 03 54.3	
	baz=303,slow=75						
H11S2	**WAKE ISLAND Hy**	**27.14**	**110**	T	T	13 03 53.4	
	baz=303,slow=75						
MA2	**Magadan**	**29.79**	**11**	*e*P	**P**	**12 35 40.2**	**+0.2**
	4.4nm,0.8s						
MA2	**Magadan**	**29.79**	**11**	P	**P**	**12 35 39.9**	**-0.1**
	4.3nm,0.7s,baz=166,slow=4.6,SNR=6.9						
ULN	**Ulaanbaatar**	**30.38**	**314**	*e*P	**P**	**12 35 45.6**	**+0.1**
	4.3nm,1.1s						
SONA1	**Songino Array**	**30.77**	**313**	*e*P	**P**	**12 35 48.3**	**-0.7**
SONA0	**Songino Array**	**30.77**	**313**	*e*P	**P**	**12 35 47.5**	**-1.5**
SONM	**Songino Array**	**30.77**	**313**	P	**P**	**12 35 47.5**	**-1.5**
	1.0nm,0.9s,baz=107,slow=8.2,SNR=6.8						
SONM				PcP	**PcP**	**12 38 46.3**	**+0.5**
	0.5nm,0.8s,baz=100,slow=1.6,SNR=3.7						
SEY	**Seymchan**	**33.23**	**10**	P	**P**	**12 36 10.4**	**+0.2**
	2.2nm,0.8s,baz=191,slow=6.2,SNR=9.3						
CHTO	**Chiang Mai**	**38.85**	**262**	*e*P	**P**	**12 36 58.6**	**-0.2**
	2.8nm,0.9s						
CM31	**Chiang Mai Arr**	**39.01**	**262**	*e*P	**P**	**12 36 59.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**39.01**	**262**	P	**P**	**12 37 00.6**	**+0.5**
	0.9nm,0.7s,baz=55,slow=7.8,SNR=5.9						
CMAR				LR	LR	12 52 57.3	
	comp=Z,52nm,20.1s,baz=68,slow=36						
LSA	**Lhasa**	**41.90**	**282**	*e*P	**P**	**12 37 24.3**	**-0.2**
	2.2nm,0.8s						
HNR	**Honiara**	**44.29**	**151**	LR	LR	12 53 37.3	
	comp=Z,57nm,19.7s,baz=321,slow=32						
ZAA1	**Zalesovo Array**	**45.49**	**317**	*e*P	**P**	**12 37 51.8**	**-0.6**
ZALV	**Zalesovo Beam**	**45.49**	**317**	*e*P	**P**	**12 37 51.6**	**-0.8**
ZALV	**Zalesovo Beam**	**45.49**	**317**	P	**P**	**12 37 51.8**	**-0.6**
	0.7nm,0.5s,baz=96,slow=8.9,SNR=5.0						
ZALV				PcP	**PcP**	**12 39 30.9**	**0.0**
	2.6nm,0.8s,baz=96,slow=3.3,SNR=9.9						
JIRN	**Jiri**	**46.64**	**280**	*e*P	**P**	**12 38 02.9**	**+0.5**
	107nm,1.4s						
MK01	**Makanchi Array**	**46.68**	**307**	*e*P	**P**	**12 38 01.6**	**-0.4**
MK31	**Makanchi Array**	**46.69**	**307**	*e*P	**P**	**12 38 01.7**	**-0.3**
MK32	**Makanchi Array**	**46.69**	**307**	*e*P	**P**	**12 38 01.8**	**-0.3**
MKAR	**Makanchi Array**	**46.69**	**307**	*e*P	**P**	**12 38 01.8**	**-0.3**
	10nm,0.8s						
MKAR	**Makanchi Array**	**46.69**	**307**	P	**P**	**12 38 01.8**	**-0.3**
	1.6nm,0.7s,baz=91,slow=9.5,SNR=21						
GUN	**Gumba**	**46.83**	**281**	*e*P	**P**	**12 38 05.3**	**+1.5**
	52nm,1.4s						
MAKZ	**Makanchi**	**46.91**	**307**	*e*P	**P**	**12 38 03.5**	**-0.3**
	2.7nm,1.1s						
DMN	**Daman**	**47.58**	**281**	*e*P	**P**	**12 38 10.1**	**+0.6**
	22nm,1.3s						
ANM	**Nome**	**47.69**	**28**	*e*P	**P**	**12 38 10.3**	**+0.7**
	3.0nm,1.2s						
DANN	**Dangsing**	**48.49**	**282**	*e*P	P	12 38 24.3	+7.7
	18nm,0.7s						
KURK	**Kurchatov**	**49.07**	**312**	*e*P	**P**	**12 38 19.6**	**-0.8**
	7.2nm,0.9s						
KURBB	**Kurchatov Arra**	**49.13**	**312**	P	**P**	**12 38 20.1**	**-0.7**
	3.2nm,0.8s,baz=90,slow=7.4,SNR=26						
PYUN	**Piuthan**	**49.22**	**282**	*e*P	P	12 38 29.0	+6.9
	17nm,0.9s						
FITZ	**Fitzroy Crossi**	**50.43**	**198**	*e*P	**P**	**12 38 31.7**	**+0.7**
	4.4nm,1.0s						
FITZ	**Fitzroy Crossi**	**50.43**	**198**	P	**P**	**12 38 31.9**	**+0.9**
	2.4nm,0.8s,baz=21,slow=8.6,SNR=4.9						
WRAB	**Tennant Creek**	**50.63**	**187**	*e*P	**P**	**12 38 32.3**	**-0.2**
	5.2nm,1.1s						
WB2	**Warramunga Arr**	**50.64**	**187**	*e*P	**P**	**12 38 32.6**	**0.0**
WR1	**Warramunga Arr**	**50.64**	**187**	*e*P	**P**	**12 38 32.7**	**+0.1**
WRA	**Warramunga Arr**	**50.64**	**187**	P	**P**	**12 38 32.7**	**+0.1**
	3.0nm,0.9s,baz=5.2,slow=7.7,SNR=25						
KDAK	**Kodiak Island**	**52.73**	**38**	*e*P	**P**	**12 38 48.0**	**+0.3**
	38nm,1.3s						
KDAK	**Kodiak Island**	**52.73**	**38**	P	**P**	**12 38 48.0**	**+0.3**
	10nm,0.9s,baz=228,slow=16,SNR=3.0						
IM3	**Indian Mountai**	**52.77**	**28**	*e*P	**P**	**12 38 48.6**	**+0.7**
PPLA	**Purkeypile**	**53.12**	**32**	*e*P	**P**	**12 38 51.9**	**+1.1**
	20nm,1.5s						
CAST	**Castle Rocks**	**53.21**	**31**	*e*P	**P**	**12 38 52.7**	**+1.4**
	3.7nm,1.0s						
SUA	**Susitna One**	**53.73**	**34**	*e*P	**P**	**12 38 55.6**	**+0.3**
	8.1nm,1.0s						
BVAR	**Borovoye Array**	**54.07**	**316**	P	**P**	**12 38 57.3**	**-0.4**
	2.1nm,0.7s,baz=98,slow=9.1,SNR=12						
BVAR				PcP	**PcP**	**12 40 02.5**	**+0.2**
	1.7nm,0.7s,baz=90,slow=3.0,SNR=7.6						
AS01	**Alice Springs**	**54.36**	**187**	*e*P	**P**	**12 39 00.4**	**+0.3**
AS31	**Alice Springs**	**54.36**	**187**	*e*P	**P**	**12 39 00.6**	**+0.4**
	1.0nm,1.1s						
ASAR	**Alice Springs**	**54.37**	**187**	P	**P**	**12 39 00.3**	**+0.2**
	0.8nm,0.5s,baz=18,slow=13,SNR=22						
ASAR				LR	LR	13 02 07.9	
	comp=Z,77nm,18.4s,baz=74,slow=36						
TOLK	**Toolik Lake Re**	**54.69**	**25**	*e*P	**P**	**12 39 02.4**	**+0.4**
	7.4nm,1.3s						
MDM	**Murphy Dome**	**54.98**	**30**	*e*P	**P**	**12 39 04.7**	**+0.6**
	5.8nm,1.0s						
KKAR	**Karatay Array**	**55.41**	**304**	*e*P	**P**	**12 39 07.1**	**-0.5**
ILAR	**Eielson Array**	**55.54**	**30**	P	**P**	**12 39 08.1**	**-0.2**
	2.7nm,1.0s,baz=268,slow=5.8,SNR=13						
ILB	**Eielson Array**	**55.54**	**30**	*e*P	**P**	**12 39 07.8**	**-0.4**
IL1	**Eielson Array**	**55.55**	**30**	*e*P	**P**	**12 39 08.0**	**-0.3**
SCRK	**Sand Creek**	**56.82**	**31**	*e*P	**P**	**12 39 17.9**	**+0.4**
	5.5nm,1.0s						
CHGR	**Chuyangaron**	**57.44**	**299**	*e*P	**P**	**12 39 21.5**	**-0.8**
	10nm,0.9s						
EGAK	**Eagle**	**58.00**	**30**	*e*P	**P**	**12 39 25.1**	**-0.5**
	4.9nm,1.2s						
DAWY	**Dawson**	**58.83**	**30**	*e*P	**P**	**12 39 32.1**	**+0.6**
	2.7nm,1.3s						
EPYK	**Eagle Plains**	**59.66**	**28**	*e*P	**P**	**12 39 38.1**	**+0.9**
	9.7nm,0.9s						
ARU	**Arti**	**60.38**	**321**	*e*P	**P**	**12 39 41.8**	**-0.4**
	3.7nm,1.0s						
INK	**Inuvik**	**60.60**	**25**	*e*P	**P**	**12 39 43.6**	**+0.1**
	9.2nm,1.5s						
INK	**Inuvik**	**60.60**	**25**	P	**P**	**12 39 43.2**	**-0.3**
	2.4nm,0.8s,baz=296,slow=6.8,SNR=7.9						
ABKAR	**Akbulak array**	**61.19**	**313**	*e*P	**P**	**12 39 47.2**	**-0.6**
RES	**Resolute Bay**	**69.03**	**13**	*e*P	**P**	**12 40 38.6**	**+0.3**
	3.1nm,0.9s						
ARA0	**ARCESS Array S**	**69.49**	**340**	*e*P	**P**	**12 40 41.2**	**0.0**
ARCES	**ARCESS Array B**	**69.49**	**340**	*e*P	**P**	**12 40 40.9**	**-0.3**
ARCES	**ARCESS Array B**	**69.49**	**340**	P	**P**	**12 40 41.2**	**0.0**
	2.6nm,0.8s,baz=61,slow=8.5,SNR=6.1						
YKA	**Yellowknife Ar**	**69.92**	**28**	P	**P**	**12 40 44.1**	**+0.1**
	1.3nm,0.9s,baz=295,slow=5.9,SNR=20						
YKB5	**Yellowknife Ar**	**69.92**	**28**	*e*P	**P**	**12 40 43.6**	**-0.4**
FIA1	**FINESS Array S**	**73.84**	**333**	*e*P	**P**	**12 41 06.9**	**-0.7**
FIA0	**FINESS Array S**	**73.85**	**333**	*e*P	**P**	**12 41 06.7**	**-0.9**
FINES	**FINESS Array B**	**73.85**	**333**	P	**P**	**12 41 06.7**	**-0.9**
	1.3nm,0.6s,baz=76,slow=8.0,SNR=7.2						
KBZ	**Khabaz**	**74.12**	**312**	P	**P**	**12 41 09.7**	**+0.2**
	5.3nm,0.9s,baz=38,slow=3.4,SNR=7.0						
BEKR	**Beckworth**	**77.73**	**51**	*e*P	**P**	**12 41 30.7**	**+0.2**
	5.8nm,1.3s						
AKASG	**Malin Array Be**	**78.55**	**323**	P	**P**	**12 41 33.9**	**-0.6**
	4.0nm,0.7s,baz=50,slow=5.9,SNR=17						
KIEV	**Kiev**	**78.56**	**323**	*e*P	**P**	**12 41 33.5**	**-1.1**
	4.7nm,0.8s						
AK11	**Malin Array Si**	**78.59**	**323**	*e*P	**P**	**12 41 34.0**	**-0.7**
CMB	**Columbia Colle**	**78.62**	**53**	*e*P	**P**	**12 41 35.4**	**+0.2**
	3.0nm,1.0s						
HRY	**Holter Researc**	**79.45**	**42**	*e*P	**P**	**12 41 40.0**	**+0.3**
NB2	**NORSAR Subarra**	**79.53**	**337**	P	**P**	**12 41 39.0**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=42,slow=5.6						
NB200	**NORSAR Array S**	**79.53**	**337**	*e*P	**P**	**12 41 39.4**	**-0.4**
NOA	**NORSAR Array B**	**79.53**	**337**	P	**P**	**12 41 39.4**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=42,slow=5.3,SNR=5.2						
DLMT	**Dillon**	**79.75**	**43**	*e*P	**P**	**12 41 41.5**	**+0.1**
	comp=Z,7.4nm,1.4s						
NV01	**Mina Array Sit**	**79.84**	**51**	*e*P	**P**	**12 41 42.7**	**+0.6**
NVAR	**Mina Array Bea**	**79.84**	**51**	P	**P**	**12 41 43.6**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=282,slow=5.8,SNR=13						
FCC	**Fort Churchill**	**80.22**	**25**	*e*P	**P**	**12 41 43.4**	**0.0**
	comp=Z,5.8nm,1.6s						
ELK	**Elko**	**80.64**	**48**	*e*P	**P**	**12 41 47.2**	**+0.8**
	comp=Z,6.0nm,1.4s						
H17A	**Grant Village**	**81.48**	**43**	*e*P	**P**	**12 41 51.5**	**+0.7**
	comp=Z,3.9nm,0.8s						
IMW	**Indian Meadow**	**81.55**	**44**	*e*P	**P**	**12 41 52.0**	**+0.7**
	comp=Z,2.5nm,0.8s						
HVU	**Hansel Valley**	**81.63**	**46**	*e*P	**P**	**12 41 51.9**	**+0.3**
	comp=Z,2.6nm,0.9s						
TPNV	**Topopah Spring**	**82.00**	**52**	*e*P	**P**	**12 41 54.0**	**+0.4**
	comp=Z,4.1nm,0.8s						
BR101	**Keskin Array S**	**82.12**	**312**	*e*P	**P**	**12 41 54.1**	**0.0**
BRTR	**Keskin Array B**	**82.12**	**312**	P	**P**	**12 41 54.1**	**0.0**
	comp=Z,1.9nm,0.7s,baz=100,slow=4.1,SNR=9.2						
DUG	**Dugway, Tooele**	**82.48**	**48**	*e*P	**P**	**12 41 56.1**	**+0.1**
	comp=Z,2.3nm,0.8s						
GSC	**Goldstone, Bar**	**82.50**	**53**	*e*P	**P**	**12 41 56.6**	**+0.4**
	comp=Z,4.1nm,1.0s						
PDAR	**Pinedale Array**	**83.03**	**44**	P	**P**	**12 41 60.0**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=253,slow=1.5,SNR=7.3						
LCMT	**Little Creek M**	**83.98**	**50**	*e*P	**P**	**12 42 04.7**	**+0.9**
	comp=Z,8.1nm,1.6s						
P17A	**Butcher Ranch,**	**84.21**	**47**	*e*P	**P**	**12 42 05.6**	**+0.6**
	comp=Z,7.9nm,1.1s						
SRU	**San Rafael Swe**	**84.55**	**47**	*e*P	**P**	**12 42 07.1**	**+0.4**
	comp=Z,4.4nm,0.9s						
MMAI	**Mount Meron Ar**	**84.60**	**305**	LR	LR	13 22 49.6	
	comp=Z,73nm,18.7s,baz=20,slow=38						
PV14	**Lion Creek, Pa**	**85.94**	**47**	*e*P	**P**	**12 42 13.8**	**0.0**
	comp=Z,7.4nm,0.9s						
CLL	**Collm**	**85.94**	**330**	*i* P	**P**	**12 42 12.7**	**-0.5**
PV13	**Radium Mtn., P**	**86.19**	**47**	*e*P	**P**	**12 42 15.0**	**0.0**
	comp=Z,3.5nm,0.7s						
EIL	**Elat**	**86.76**	**303**	LR	LR	13 23 55.7	
	comp=Z,23nm,22.0s,baz=259,slow=38						
GERES	**GERESS Array B**	**87.41**	**328**	P	**P**	**12 42 19.9**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=355,slow=1.5,SNR=4.7						
ECSD	**EROS Data Cent**	**89.67**	**37**	*e*P	**P**	**12 42 31.2**	**0.0**
	comp=Z,5.6nm,1.1s						
LTX	**Lajitas**	**94.99**	**52**	*e*P	**P**	**12 42 57.7**	**+1.5**
TXAR	**Lajitas Array**	**94.99**	**52**	P	**P**	**12 42 57.7**	**+1.5**
	comp=Z,1.8nm,0.8s,baz=294,slow=3.1,SNR=21						
LPAZ	**La Paz**	**150.65**	**67**	PKPbc	**PKiKP**	**12 49 27.7**	**+0.5**
	comp=Z,3.3nm,0.8s,baz=351,slow=3.8,SNR=15						

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*KRNET **16** 12:32:23.6±0.1, 42°.56N×79°.65E, h10^{km}, mb2.4*
*SOME **16** 12:32:24.0, 42°.57N×79°.70E, h15^{km}*
NNC 16 12:32:23.9±1.0**, 42°.58N×79°.67E, h0^{km}, mb3.1, mpv2.5, 9C-8D, Error ellipse: s-maj=6.2km s-min=3.7km az=133.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.74**	**320**	P	Pg	12 32 37.9	-0.1
	2.4nm,0.2s						
UZB				S	Sg	12 32 48.3	+0.7
	5.1nm,0.2s						
UZB	**Uzynbulak**	**0.74**	**320**	⇓*e*P	Pg	12 32 37.9	-0.1
	baz=22						
UZB				⇓*e*S	Sg	12 32 48.2	+0.6
	baz=22						
UZB	**Uzynbulak**	**0.74**	**320**	⇓*e*P	Pg	12 32 37.9	-0.1
	2.4nm,0.2s						
UZB				*e*S	Sg	12 32 48.3	+0.7
	7.8nm,0.1s						
PDGK	**Podgornoye**	**0.76**	**350**	P	Pg	12 32 38.6	+0.1
	1.4nm,0.1s						
PDGK				S	Sg	12 32 49.4	+1.2
	4.1nm,0.4s						
PDGK	**Podgornoye**	**0.76**	**350**	⇓P	Pg	12 32 38.2	-0.2
	1.3nm,0.5s						
PDGK				⇓S	Sg	12 32 49.4	+1.2
	2.9nm,0.3s						
PDGK	**Podgornoye**	**0.76**	**350**	⇓*i*P	Pg	12 32 38.6	+0.2
	baz=51						
PDGK				⇓*i*S	Sg	12 32 49.6	+1.3
	baz=51						
PRZ	**Przheval'sk**	**0.94**	**265**	⇑*i*P	Pg	12 32 41.4	-0.5
	baz=66						
PRZ				⇑*i*S	Sg	12 32 53.2	-0.9
	baz=66						
KTMS	**Ketmen**	**1.00**	**30**	P	Pg	12 32 43.0	0.0
KTMS				S	Sb	12 32 57.2	-0.7
KTMS	**Ketmen**	**1.00**	**30**	*e*P	Pg	12 32 43.1	+0.1
	baz=29						
KTMS				*e*S	Sb	12 32 57.1	-0.8
	baz=29						
KTMS	**Ketmen**	**1.00**	**30**	*e*P	Pg	12 32 43.1	+0.1
	1.1nm,0.1s						
KTMS				*e*S	Sb	12 32 57.1	-0.8
	4.2nm,0.2s						
SATY	**Saty**	**1.04**	**298**	P	Pg	12 32 43.6	-0.3
SATY				S	Sg	12 32 57.8	+0.4
SATY	**Saty**	**1.04**	**298**	*e*P	Pg	12 32 43.8	-0.1
	2.0nm,0.3s						
SATY				*e*S	Sg	12 32 57.9	+0.4
	6.0nm,0.1s						
DJR	**Jarkent**	**1.75**	**3**	P	Pb	12 32 57.0	+0.1
DJR				S	Sg	12 33 20.9	+0.7
DJR	**Jarkent**	**1.75**	**3**	*e*P	Pb	12 32 56.6	-0.4
	0.4nm,0.1s						
DJR				*e*S	Sg	12 33 20.2	0.0
	1.2nm,0.2s						
MNBS	**Baschi**	**1.76**	**329**	*e*P	Pb	12 32 57.1	0.0
	1.2nm,0.2s						
MNBS				*e*S	Sg	12 33 21.0	+0.6
	4.0nm,0.1s						
KDJ	**Kajisay**	**1.90**	**257**	⇑*i*P	Pb	12 32 59.1	-0.4
	baz=58						
KDJ				⇑*i*S	Sb	12 33 24.0	+0.2
	baz=58						
KOTS	**Kotyrbulak**	**1.99**	**290**	Pg	Pg	12 33 02.1	+0.2
KOTS				Lg	Lg	12 33 29.6	
KOTS	**Kotyrbulak**	**1.99**	**290**	*e*P	Pb	12 33 00.1	-0.9
	baz=91						
KOTS				*e*S	Sb	12 33 25.8	-0.6
	baz=91						
KOTS	**Kotyrbulak**	**1.99**	**290**	*e*P	Pb	12 33 00.1	-0.9
	1.6nm,0.3s						
KOTS				*e*S	Sb	12 33 25.8	-0.6
	5.8nm,0.3s						
MDOK	**Medeo**	**2.01**	**288**	Pg	Pn	12 32 59.6	+0.3
	2.0nm,0.7s						
MDOK				Lg	Lg	12 33 27.5	
	1.6nm,0.4s						
MDOK	**Medeo**	**2.01**	**288**	*e*P	Pb	12 33 00.6	-0.8
	baz=88						
MDOK				*e*S	Sb	12 33 26.9	-0.2
	baz=88						
MDOK	**Medeo**	**2.01**	**288**	*e*P	Pb	12 33 00.6	-0.8
	1.1nm,0.1s						
MDOK				*e*S	Sb	12 33 27.0	-0.1
	1.7nm,0.2s						
TNSS	**Tian-Shan**	**2.05**	**284**	Pg	Pb	12 33 02.6	+0.3
	0.8nm,0.1s						
TNSS				Lg	Lg	12 33 30.5	
	1.7nm,0.2s						
TNSS	**Tian-Shan**	**2.05**	**284**	*e*P	Pb	12 33 02.2	0.0
	1.1nm,0.3s						
TNSS				*e*S	Sg	12 33 29.6	-0.2
	2.1nm,0.3s						
ARXS	**Arharly**	**2.11**	**321**	*e*P	Pb	12 33 02.5	-0.6
	0.9nm,0.3s						
ARXS				*e*S	Sb	12 33 30.1	+0.3
	3.4nm,0.3s						
ULHL	**Ulahol**	**2.56**	**264**	⇑*i*P	Pn	12 33 07.8	+1.0
	baz=64						
ULHL				⇑*i*S	Sn	12 33 40.0	+1.3
	baz=64						
KAPS	**Kapalarasan**	**2.71**	**355**	Pg	Pb	12 33 13.4	+0.1
KAPS				Lg	Lg	12 33 48.9	
KAPS	**Kapalarasan**	**2.71**	**355**	*e*P	Pb	12 33 13.3	+0.1
	0.2nm,0.2s						
KAPS				*e*S	Sb	12 33 48.9	+1.8
	1.6nm,0.4s						
KUU	**Kurty**	**2.76**	**299**	*e*P	Pb	12 33 13.5	-0.7
	0.5nm,0.1s						
KUU				*e*S	Sb	12 33 48.6	+0.1
	3.2nm,0.3s						
DGS	**Degeres**	**2.94**	**284**	Pg	Pb	12 33 16.5	-0.6
DGS				Lg	Lg	12 33 54.2	
DGS	**Degeres**	**2.94**	**284**	*e*P	Pb	12 33 16.5	-0.6
	1.1nm,0.4s						
DGS				*e*S	Sb	12 33 54.2	+0.6
	4.6nm,0.6s						
TKM2	**Tokmak 2**	**3.02**	**278**	⇓Pg	Pg	12 33 20.9	-0.8
	12nm,1.4s						
TKM2				⇑Lg	Lg	12 34 00.2	
	7.8nm,1.4s						
TKM2	**Tokmak 2**	**3.02**	**278**	⇑*i*P	Pn	12 33 14.1	+1.0
	baz=78						
TKM2				⇑*i*S	Sn	12 33 50.9	+0.8
	baz=78						

MEX 16 12:35:42.0±0.3**, 14°.51N×93°.12W, h28^{km}**±11^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.19**	**355**	*e*P	Pn	12 36 00.4	-2.3
PCIG				*i* S	Sn	12 36 14.5	-3.4
CCIG	**Comitan**	**2.00**	**28**	*e*P	Pn	12 36 12.0	-2.1
CCIG				*i* S	Sn	12 36 37.7	-0.5

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*SOME **16** 12:37:00.3, 42°.48N×79°.63E, h15^{km}*
*NNC **16** 12:37:00.7±0.6, 42°.58N×79°.60E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=3.8km s-min=2.1km az=136.0*
*KRNET **16** 12:37:01.6±0.1, 42°.60N×79°.61E, h17^{km}, mb2.8*
*ISCJB **16** 12:37:02.6±0.7, 42°.59N±0°.04×79°.67E±0°.04, h10^{km}, Error ellipse: s-maj=6.2km s-min=3.2km az=139.8*
ISC 16 12:37:02.5±1.1**, 42°.63N**±0°.04×**79°.61E**±0°.03**, h10^{km}, n56, σ1^{s}.33/98, 27C-16D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.67**	**320**	P	**Pg**	**12 37 14.9**	**-0.7**
	16nm,0.2s						
UZB				S	**Sb**	**12 37 25.3**	**-0.6**
	34nm,0.2s						
UZB	**Uzynbulak**	**0.67**	**320**	⇓*e*P	**Pg**	**12 37 14.9**	**-0.7**
	baz=22						
UZB				⇓*e*S	**Sb**	**12 37 25.3**	**-0.6**
	baz=22						
UZB	**Uzynbulak**	**0.67**	**320**	⇓*e*P	**Pg**	**12 37 14.9**	**-0.7**
	16nm,0.2s						
UZB				*e*S	**Sb**	**12 37 25.4**	**-0.6**
	35nm,0.3s						
PDGK	**Podgornoye**	**0.70**	**353**	P	**Pg**	**12 37 15.7**	**-0.5**
	8.4nm,0.1s						
PDGK				S	**Sb**	**12 37 26.6**	**-0.2**
	12nm,0.2s						
PDGK	**Podgornoye**	**0.70**	**353**	⇓P	**Pg**	**12 37 15.5**	**-0.7**
	7.0nm,0.4s						
PDGK				⇑S	**Sb**	**12 37 26.1**	**-0.7**
	7.8nm,0.2s						
PDGK	**Podgornoye**	**0.70**	**353**	⇓*i*P	**Pg**	**12 37 15.7**	**-0.5**
	baz=53						
PDGK				⇓*i*S	**Sb**	**12 37 25.7**	**-1.1**
	baz=53						
PRZ	**Przheval'sk**	**0.91**	**261**	⇑*i*P	**Pg**	**12 37 18.7**	**-1.3**
	baz=63						
PRZ				⇑*i*S	**Sg**	**12 37 30.1**	**-1.7**
	baz=63						
KTMS	**Ketmen**	**0.98**	**33**	P	**Pg**	**12 37 20.5**	**-1.0**
KTMS				S	**Sb**	**12 37 34.0**	**-0.8**
KTMS	**Ketmen**	**0.98**	**33**	*e*P	**Pg**	**12 37 20.4**	**-1.0**
	baz=32						
KTMS				*e*S	**Sb**	**12 37 34.3**	**-0.5**
	baz=32						
KTMS	**Ketmen**	**0.98**	**33**	*e*P	**Pg**	**12 37 20.4**	**-1.0**
	9.3nm,0.1s						
KTMS				*e*S	**Sb**	**12 37 34.2**	**-0.5**
	14nm,0.3s						
SATY	**Saty**	**0.98**	**296**	P	**Pg**	**12 37 19.8**	**-1.6**
SATY				S	**Sg**	**12 37 33.6**	**-0.7**
SATY	**Saty**	**0.98**	**296**	*e*P	**Pg**	**12 37 20.4**	**-1.1**
	3.0nm,0.1s						
SATY				*e*S	**Sb**	**12 37 34.2**	**-0.6**
	55nm,0.1s						
MNBS	**Baschi**	**1.69**	**329**	*e*P	**Pb**	**12 37 33.3**	**-0.6**
	14nm,0.2s						
MNBS				*e*S	**Sg**	**12 37 56.8**	**-0.2**
	17nm,0.3s						
DJR	**Jarkent**	**1.71**	**4**	P	**Pb**	**12 37 33.6**	**-0.5**
	1.5nm,0.2s						
DJR				S	**Sg**	**12 37 57.4**	**0.0**
	7.4nm,0.3s						
DJR	**Jarkent**	**1.71**	**4**	*e*P	**Pb**	**12 37 33.6**	**-0.5**
	1.5nm,0.2s						
DJR				*e*S	**Sg**	**12 37 57.4**	**0.0**
	7.4nm,0.3s						
KDJ	**Kajisay**	**1.87**	**255**	⇓*i*P	**Pb**	**12 37 35.7**	**-1.1**
	baz=56						
KDJ				⇓*i*S	**Sb**	**12 38 00.2**	**-0.1**
	baz=56						
KOTS	**Kotyrbulak**	**1.93**	**289**	Pg	**Pb**	**12 37 37.2**	**-0.7**
	4.4nm,0.3s						
KOTS				Lg	Lg	12 38 03.6	
	27nm,0.3s						
KOTS	**Kotyrbulak**	**1.93**	**289**	*e*P	**Pb**	**12 37 37.2**	**-0.7**
	baz=90						
KOTS				*e*S	**Sg**	**12 38 03.6**	**-1.0**
	baz=90						
KOTS	**Kotyrbulak**	**1.93**	**289**	*e*P	**Pb**	**12 37 37.2**	**-0.7**
	4.4nm,0.3s						
KOTS				*e*S	**Sg**	**12 38 03.6**	**-1.0**
	27nm,0.3s						
MDOK	**Medeo**	**1.96**	**287**	Pg	**Pb**	**12 37 36.7**	**-1.6**
	2.9nm,0.5s						
MDOK				Lg	Lg	12 38 03.6	
	17nm,0.8s						
MDOK	**Medeo**	**1.96**	**287**	Pg	**Pb**	**12 37 36.8**	**-1.5**
	4.2nm,0.2s						
MDOK				Lg	Lg	12 38 03.4	
	13nm,0.4s						
MDOK	**Medeo**	**1.96**	**287**	*e*P	**Pb**	**12 37 36.8**	**-1.5**
	baz=87						
MDOK				*e*S	**Sb**	**12 38 03.4**	**+0.6**
	baz=87						
MDOK	**Medeo**	**1.96**	**287**	*e*P	**Pb**	**12 37 36.8**	**-1.5**
	4.2nm,0.2s						
MDOK				*e*S	**Sb**	**12 38 03.4**	**+0.6**
	13nm,0.4s						
TNSS	**Tian-Shan**	**2.00**	**283**	Pg	**Pb**	**12 37 37.4**	**-1.8**
	6.1nm,0.2s						
TNSS				Lg	Lg	12 38 04.4	
	15nm,0.4s						
TNSS	**Tian-Shan**	**2.00**	**283**	*e*P	**Pb**	**12 37 37.4**	**-1.8**
	baz=83						
TNSS				*e*S	**Sb**	**12 38 04.4**	**+0.1**
	baz=83						
TNSS	**Tian-Shan**	**2.00**	**283**	*e*P	**Pb**	**12 37 37.4**	**-1.8**
	6.1nm,0.2s						
TNSS				*e*S	**Sb**	**12 38 04.4**	**+0.1**
	15nm,0.4s						
ARXS	**Arharly**	**2.05**	**321**	*e*P	**Pb**	**12 37 39.0**	**-0.8**
	3.8nm,0.4s						
ARXS				*e*S	**Sg**	**12 38 06.7**	**-1.6**
	16nm,0.4s						
IZV	**Izvestkoviy**	**2.24**	**281**	Pg	**Pb**	**12 37 41.8**	**-1.4**
	9.5nm,0.2s						
IZV				Lg	Lg	12 38 11.2	
	17nm,0.3s						
IZV	**Izvestkoviy**	**2.24**	**281**	*e*P	**Pb**	**12 37 41.8**	**-1.4**
	baz=82						
IZV				*e*S	**Sb**	**12 38 11.3**	**+0.2**
	baz=82						
IZV	**Izvestkoviy**	**2.24**	**281**	*e*P	**Pb**	**12 37 41.8**	**-1.4**
	9.5nm,0.2s						
IZV				*e*S	**Sb**	**12 38 11.2**	**+0.2**
	17nm,0.3s						
CHKK	**Chushkaly**	**2.27**	**303**	Pg	**Pb**	**12 37 42.9**	**-0.7**
	0.9nm,0.1s						
CHKK				Lg	Lg	12 38 13.4	
	24nm,0.2s						
CHKK	**Chushkaly**	**2.27**	**303**	*e*P	**Pb**	**12 37 42.9**	**-0.7**
	0.9nm,0.1s						
CHKK				*e*S	**Sg**	**12 38 13.4**	**-2.1**
	24nm,0.2s						
KTBS	**Karatobe**	**2.40**	**298**	Pg	**Pb**	**12 37 44.5**	**-1.3**
	1.6nm,0.2s						
KTBS				Lg	Lg	12 38 15.8	
	34nm,0.5s						
KTBS	**Karatobe**	**2.40**	**298**	*e*P	**Pb**	**12 37 44.5**	**-1.3**
	1.6nm,0.2s						
KTBS				*e*S	**Sb**	**12 38 15.8**	**+0.4**
	34nm,0.5s						
ULHL	**Ulahol**	**2.52**	**262**	⇑*i*P	**Pn**	**12 37 45.3**	**+1.5**
	baz=63						

ULHL				⇑iS	Sb	12 38 17.1	-2.1
	baz=63						
KAPS	Kapalarasan	2.66	356	Pg	Pb	12 37 50.1	-0.2
KAPS				Lg	Lg	12 38 26.2	
KAPS	Kapalarasan	2.66	356	eP	Pb	12 37 50.4	+0.1
	1.1nm,0.1s						
KAPS				eS	Sg	12 38 26.2	-1.8
	4.6nm,0.3s						
KUU	Kurty	2.70	299	Pg	Pb	12 37 50.2	-0.7
KUU				Lg	Lg	12 38 25.6	
KUU	Kurty	2.70	299	eP	Pb	12 37 49.8	-1.2
	1.0nm,0.1s						
KUU				eS	Sb	12 38 25.6	+1.4
	12nm,0.3s						
KST	Kastek	2.71	280	Pg	Pb	12 37 49.9	-1.3
	6.5nm,0.3s						
KST				Lg	Lg	12 38 25.6	
	8.1nm,0.4s						
KST	Kastek	2.71	280	eP	Pb	12 37 49.8	-1.5
	7.5nm,0.3s						
KST				eS	Sb	12 38 25.6	+1.0
	8.1nm,0.4s						
BOOM	Boomskoye usch	2.71	268	⇑iP	Pn	12 37 48.0	+1.6
	baz=69						
BOOM				⇑iS	Sb	12 38 21.7	-3.0
	baz=69						
NRN	Naryn	2.94	247	⇑iP	Pn	12 37 51.7	+2.1
	baz=48						
NRN				⇑iS	Sn	12 38 27.8	+2.6
	baz=48						
TKM2	Tokmak 2	2.97	277	⇑Pg	Pb	12 37 53.1	-2.6
	11nm,1.3s						
TKM2				⇑Lg	Lg	12 38 35.5	
	9.7nm,0.8s						
TKM2	Tokmak 2	2.97	277	⇓iP	Pn	12 37 51.6	+1.7
	baz=77						
TKM2				⇓iS	Sn	12 38 27.7	+2.0
	baz=77						
KZA	Kyzart	3.28	262	⇓iP	Pn	12 37 56.2	+1.9
	baz=62						
KZA				⇓iS	Sn	12 38 35.3	+1.7
	baz=62						
KBK	Karagaybulak	3.44	272	⇑iP	Pn	12 37 58.1	+1.8
	baz=72						
KBK				⇑iS	Sn	12 38 38.9	+1.7
	baz=72						
AAK	Ala-Archa	3.77	272	⇓Pg	Pb	12 38 10.4	+1.1
	3.3nm,1.2s						
AAK				⇑Lg	Lg	12 39 01.5	
	3.9nm,0.8s						
AAK	Ala-Archa	3.77	272	⇑iP	Pn	12 38 02.9	+2.0
	baz=72						
AAK				⇑iS	Sn	12 38 46.9	+1.4
	baz=72						
UCH	Uchtor	3.79	266	⇑iP	Pn	12 38 03.5	+2.0
	baz=66						
UCH				⇑iS	Sn	12 38 47.8	+1.4
	baz=66						
USP	Ospenovka	3.81	281	⇑iP	Pn	12 38 03.3	+2.1
	baz=82						
USP				⇑iS	Sn	12 38 47.7	+1.7
	baz=82						
ARLS	Aral	4.00	261	⇑iP	Pn	12 38 05.5	+1.5
	baz=61						
ARLS				⇑iS	Sn	12 38 51.7	+0.7
	baz=61						
EKS2	Erkin-Say	4.30	272	⇑iP	Pn	12 38 10.3	+2.2
	baz=73						
EKS2				⇑iS	Sn	12 38 59.5	+1.1
	baz=73						
AML	Almayashu	4.41	265	⇑iP	Pn	12 38 12.1	+2.2
	baz=66						
AML				⇑iS	Sn	12 39 02.8	+1.3
	baz=66						
MAKZ	Makanchi	4.50	21	⇓Pn	Pn	12 38 12.0	+1.1
	2.0nm,0.8s						
MAKZ				⇓Lg	Lg	12 39 24.2	
	1.7nm,1.1s						
MK31	Makanchi Array	4.58	24	⇑Pn	Pn	12 38 11.6	-0.3
	1.6nm,0.7s,baz=209,slow=15,SNR=18						
MK31				⇓Lg	Lg	12 39 25.5	
	0.9nm,0.5s,baz=208,slow=30						

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*ISCJB **16** 12:39:45.7±0.4, 7°.91N±0°.05×147°.46E±0°.08, h10^{km}, mb4.0/21, MS3.4/7, Error ellipse: s-maj=11.9km s-min=6.9km az=173.4*

*IDC **16** 12:39:46.9±0.7, 7°.98N×147°.40E, h0^{km}, mb3.8/12, mb1 4.0/13, mb1mx3.9/37, mbtmp3.8/13, ML4.4/1, MS3.3/9, Ms1 3.4/9, ms1mx3.2/35, Error ellipse: s-maj=27.9km s-min=16.3km az=94.0*

*NEIC **16** 12:39:47.8±0.3, 7°.94N×147°.43E, h10^{km}, mb4.4/11, Error ellipse: s-maj=8.5km s-min=4.9km az=83.0*

ISC 16 12:39:47.6±0.5, **8°.03N**±0°.07×**147°.49E**±0°.08, **h10**^{km}, **n49**, σ**1^{s}31**/43, **mb4.2**/21, **MS3.5**/7, **Eastern Caroline Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	6.10	335	ePn	Pn	12 41 16.3	-1.6
GUMO				eSn	Sn	12 42 25.4	-2.4
GUMO	Guam	6.10	335	Pn	Pn	12 41 16.5	-1.4
	9.0nm,0.3s,baz=139,slow=19,SNR=3.2						
GUMO				Sn	Sn	12 42 24.5	-3.3
	38nm,0.3s,baz=13,slow=21,SNR=5.9						
GUMO				LR	LR	12 43 46.4	
	comp=Z,105nm,21.5s,baz=146,slow=39						
MANU	Manus Island	10.00	181	ePn	Pn	12 42 09.5	-2.0
PATS	Pohnpei	10.80	96	ePn	Pn	12 42 22.6	+0.2
PATS				eSn	Sn	12 44 20.5	-2.9
RABL	Rabaul	13.00	159	ePn	Pn	12 42 51.6	-1.0
SIJI	Sorong	18.43	242	LR	LR	12 49 39.6	
	comp=Z,86nm,18.7s,baz=49,slow=32						
H11S3	WAKE ISLAND Hy	21.36	59	T	T	13 06 35.3	
	baz=246,slow=74						
H11S2	WAKE ISLAND Hy	21.38	59	T	T	13 06 36.2	
	baz=246,slow=74						
H11S1	WAKE ISLAND Hy	21.38	59	T	T	13 06 37.3	
	baz=246						
H11N1	WAKE ISLAND Hy	22.10	56	T	T	13 07 25.8	
	baz=241,slow=75						
H11N2	WAKE ISLAND Hy	22.11	56	T	T	13 07 32.8	
	baz=241,slow=75						
H11N3	WAKE ISLAND Hy	22.12	56	T	T	13 07 26.8	
	baz=241,slow=75						
JNU	Nakatsue	29.33	331	LR	LR	12 55 38.7	
	comp=Z,47nm,21.8s,baz=170,slow=32						
MJAR	Matsushiro Arr	29.62	345	LR	LR	12 56 04.7	
	comp=Z,106nm,20.7s,baz=105,slow=33						
WRAB	Tennant Creek	30.65	205	eP	P	12 46 01.5	-0.9
	4.7nm,0.9s						
WB2	Warramunga Arr	30.65	205	eP	P	12 46 02.1	-0.4
	5.8nm,0.9s						
WR1	Warramunga Arr	30.66	205	eP	P	12 46 01.4	-1.1
	7.1nm,1.1s						
WRA	Warramunga Arr	30.66	205	P	P	12 46 01.4	-1.1
	2.6nm,0.8s,baz=29,slow=9.9,SNR=11						
WRA				PcP	PcP	12 49 02.8	+2.0
	0.7nm,0.9s,baz=18,slow=2.9,SNR=3.4						
FITZ	Fitzroy Crossi	33.75	220	eP	P	12 46 28.7	-0.9
	6.9nm,1.2s						
AS01	Alice Springs	34.16	202	eP	P	12 46 33.0	-0.3
ASAR	Alice Springs	34.18	203	P	P	12 46 32.5	-1.0
	0.6nm,0.9s,baz=25,slow=7.2,SNR=5.4						
ASAR				PcP	PcP	12 49 12.5	+2.0
	0.6nm,0.9s,baz=33,slow=3.3,SNR=3.9						
KSRS	Korea Array	34.25	332	P	P	12 46 34.0	+0.2
	1.0nm,0.8s,baz=154,slow=8.2,SNR=4.3						
KSRS				LR	LR	12 59 41.4	
	comp=Z,29nm,19.4s,baz=166,slow=35						
KSAR	Wonju Array Be	34.26	332	P	P	12 46 34.0	+0.2
KS01	Wonju Array Si	34.28	332	eP	P	12 46 33.8	-0.3
STKA	Stephens Creek	40.07	188	P	P	12 47 23.4	+0.1
	1.5nm,0.9s,baz=10,slow=9.9,SNR=3.7						
BBOO	Buckleboo	42.04	194	eP	P	12 47 38.6	-1.0
	7.7nm,1.4s						
CMAR	Chiang Mai Arr	48.25	288	P	P	12 48 30.1	+1.0
	0.6nm,0.4s,baz=90,slow=6.0,SNR=3.3						
CMAR				LR	LR	13 09 50.3	
	comp=Z,24nm,18.9s,baz=144,slow=37						
SONA0	Songino Array	52.75	326	eP	P	12 49 04.1	+1.2
SONM	Songino Array	52.75	326	P	P	12 49 04.1	+1.2
	0.7nm,0.9s,baz=141,slow=5.7,SNR=4.9						
SONM				LR	LR	13 09 38.0	
	comp=Z,45nm,21.5s,baz=161,slow=34						
SONA1	Songino Array	52.75	326	eP	P	12 49 03.3	+0.4
MK01	Makanchi Array	67.27	317	eP	P	12 50 42.8	+0.2
MK31	Makanchi Array	67.28	317	eP	P	12 50 42.9	+0.2
	1.4nm,0.9s						
MK32	Makanchi Array	67.28	317	eP	P	12 50 43.8	+1.1
MKAR	Makanchi Array	67.28	317	eP	P	12 50 43.1	+0.5
	7.7nm,0.8s						
MKAR	Makanchi Array	67.28	317	P	P	12 50 43.8	+1.1
	0.6nm,0.7s,baz=106,slow=6.9,SNR=6.0						
MAKZ	Makanchi	67.50	317	eP	P	12 50 44.7	+0.7
	1.3nm,0.7s						
ZALV	Zalesovo Beam	67.63	325	eP	P	12 50 45.0	+0.3
ZALV	Zalesovo Beam	67.63	325	P	P	12 50 45.3	+0.7
	0.7nm,0.6s,baz=104,slow=6.1,SNR=3.3						
ZAA1	Zalesovo Array	67.63	325	eP	P	12 50 45.3	+0.7
IM3	Indian Mountai	70.32	22	eP	P	12 51 01.5	+0.4
KURK	Kurchatov	70.49	321	eP	P	12 51 02.9	+0.5
	4.5nm,0.9s						
ILAR	Eielson Array	72.51	24	P	P	12 51 14.8	+0.4
	1.1nm,1.0s,baz=254,slow=6.1,SNR=6.4						
BVAR	Borovoye Array	75.87	323	LR	LR	13 26 37.6	
	comp=Z,48nm,20.3s,baz=146,slow=37						
INK	Inuvik	78.52	22	eP	P	12 51 50.6	+1.8
	3.9nm,1.2s						
INK	Inuvik	78.52	22	P	P	12 51 50.3	+1.5
	1.5nm,0.9s,baz=237,slow=7.1,SNR=4.0						
AFDM	Forest Hills D	86.21	51	eP	P	12 52 30.3	+0.5
	5.5nm,1.4s						
YKA	Yellowknife Ar	86.58	27	P	P	12 52 32.1	+1.1
	0.8nm,0.9s,baz=279,slow=5.2,SNR=8.7						
NVAR	Mina Array Bea	88.35	52	P	P	12 52 42.4	+2.1
	0.1nm,0.3s,baz=246,slow=3.8,SNR=2.5						
ANMO	Albuquerque	98.39	53	LR	LR	13 33 48.9	
	comp=Z,32nm,18.9s,baz=18,slow=33						

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*ISK **16** 12:42:23.6, 38°.37N×42°.52E, h6^{km}, ML2.5/4*

*ISCJB **16** 12:42:24.6±0.4, 38°.34N±0°.04×42°.51E±0°.03, h8^{km}, Error ellipse: s-maj=5.3km s-min=3.8km az=163.4*

*DDA **16** 12:42:24.2, 38°.29N×42°.53E, h7^{km}±2^{km}, ML2.6*

ISC 16 12:42:24.0±0.9, **38°.33N**±0°.03×**42°.50E**±0°.03, **h8**^{km}, **n17**, σ**0^{s}40**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.38	91	PG	Pg	12 42 31.3	-0.3
AKDM				SG	Sg	12 42 36.7	+0.1
GURO	Guroymak-BITLI	0.42	301	PG	Pg	12 42 32.5	+0.1
GURO				SG	Sg	12 42 38.4	+0.4
GEVA	Gevas	0.44	93	i P	Pg	12 42 32.9	+0.2
ADCV	BITLIS_Adilcev	0.51	21	i P	Pb	12 42 35.4	0.0
ADCV				i S	Sb	12 42 43.3	+0.4
SRTM	Siirt_Merkez	0.57	233	i P	Pb	12 42 36.0	-0.3
SRTM				IAML_P			
	comp=Z,572nm,0.2s						
TVAN	Van	0.74	74	i P	Pb	12 42 39.7	+0.4
TVAN				IAML_P			
	comp=Z,767nm,0.2s						
MLAZ	Malazgirt-MUS	0.81	3	PG	Pg	12 42 39.0	-0.6
SIRT	Sirnak	0.83	183	PG	Pb	12 42 40.6	-0.2
SVAN	Silvan-Diyarba	1.04	260	PG	Pg	12 42 43.7	-0.3
BTMN	Batman	1.06	246	i P	Pn	12 42 45.6	+0.3
VMUR	Van-Muradiye	1.07	52	i P	Pn	12 42 45.0	-0.4
VMUR				IAML_P			
	comp=Z,331nm,0.2s						
AGRB	Hanur-Agry	1.30	17	PN	Pn	12 42 48.2	-0.5
CUKT	Cukurca	1.40	141	PN	Pg	12 42 50.9	+0.1
BNGB	Bingl	1.57	295	PN	Pn	12 42 53.2	+0.9
HANI	Diyarbakir_Han	1.65	273	i P	Pb	12 42 54.5	-0.2
HANI				IAML_P			
	comp=Z,349nm,0.3s						
MARD	Mardin	1.70	234	i P	Pb	12 42 55.2	-0.4
MARD				i S	Sg	12 43 18.4	-0.3
MARD				IAML_P			
	comp=Z,1µm,0.3s						
MAZI	Mazidag	1.84	242	PN	Pb	12 42 58.0	0.0

JMA 16 12:47:07.7±0.1, **35°.22N**×**140°.11E**, **h35**^{km}±2^{km}, **M2.5**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKUC	kamogawauchiur	0.10	129	P	Pn	12 47 13.3	-0.4
JKUC				S	Sn	12 47 18.0	+0.2
KTR	Katsuura	0.18	113	P	Pn	12 47 14.1	-0.2
KTR				eS	Sn	12 47 19.0	+0.1
JCN	Nagara	0.21	21	P	Pn	12 47 15.1	+0.5
TATJ	Tateyama 2	0.26	224	P	Pn	12 47 15.5	+0.4
BSO4	Boso 4	0.30	141	P	Pn	12 47 15.9	+0.4
JSMT	Sammumatsuo	0.50	33	P	Pn	12 47 18.8	+0.4
BSO3	Boso 3	0.53	142	P	Pn	12 47 18.4	-0.1
JIM2	Oshima 3	0.75	228	P	Pn	12 47 20.8	-1.0
JIM2				S	Sn	12 47 30.6	-1.4
JOD2	Odawara 2	0.84	273	S	Sn	12 47 33.2	-0.9
MAT	Matsushiro	2.03	311	P	Pn	12 47 41.6	+2.1
MAT				eS	Sn	12 48 05.4	+1.8

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*ISCJB **16** 13:03:39.6±0.4, 24°.02N±0°.02×122°.20E±0°.02, h18^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=2.4km az=155.1*

*JMA **16** 13:03:39.7, 24°.00N×122°.15E, h34^{km}±3^{km}, M2.6*

*TAP **16** 13:03:40.4, 24°.09N×122°.14E, h27^{km}, ML2.9, D*

ISC 16 13:03:40.0±1.1, **24°.04N**±0°.03×**122°.15E**±0°.02, **h27**^{km}±11^{km}, **n90**, σ**0^{s}70**/117, **2C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.51	357	P	Pb	13 03 49.9	-0.4
	baz=5.0						
EOS1				eS	Sb	13 03 57.1	-0.3
	baz=5.0						
HWA	Hwalien	0.51	263	eP	Pn	13 03 51.1	-0.3
	baz=245						
TWD	Chiawan	0.51	274	P	Pb	13 03 50.6	+0.1
	baz=269						
ENLB	Shoufeng	0.52	255	eP	Pn	13 03 51.3	-0.3
	baz=237						
NACB	Ninganchiao	0.53	285	P	Pb	13 03 50.8	0.0
	baz=265						
NANB	Nanao	0.53	316	P	Pb	13 03 50.7	-0.2
	baz=319						
ENA	Nanau	0.54	316	P	Pb	13 03 50.7	-0.2
	baz=318						
ENA				eS	Sn	13 03 59.8	-0.3
	baz=318						
TWC	Suao	0.63	334	P	Pb	13 03 51.7	-0.7
	baz=343						
TWC				eS	Sb	13 03 59.6	-1.3
	baz=343						
ETLH	Xiulin Townshi	0.64	285	⇑P	Pb	13 03 52.5	-0.1
	baz=270						
ETLH				eS	Sn	13 04 01.9	-0.7
	baz=270						
ESL	Shilin	0.70	251	P	Pb	13 03 53.2	-0.3
	baz=236						
EGFH	Guangfu	0.76	241	P	Pn	13 03 54.4	-0.5
	baz=228						
ENTT	Nioudou	0.80	318	P	Pn	13 03 55.1	-0.4
	baz=304						
NNSB	Datong	0.80	299	P	Pn	13 03 55.3	-0.3
	baz=296						
NNSB				eS	Sn	13 04 06.1	-0.6
	baz=296						
NDT	Datong Townshi	0.81	314	P	Pb	13 03 56.1	+0.6
	baz=311						
TWE	Neicheng	0.81	327	P	Pn	13 03 55.3	-0.3
	baz=326						
NNS	Nan Shan	0.82	299	P	Pn	13 03 55.4	-0.4
	baz=296						
NNS				eS	Sb	13 04 06.5	+0.1
	baz=296						
WHF	Hehuan Shan	0.82	277	P	Pn	13 03 55.6	-0.5
	baz=263						
WHF				eS	Sn	13 04 07.5	0.0
	baz=263						
JYNG	Yonagunijimaku	0.83	60	P	Pn	13 03 55.6	-0.2
JYNG				eS	Sn	13 04 06.3	-0.9
SLBB	Yuanshan	0.85	326	P	Pb	13 03 56.2	0.0
	baz=336						
SLBB				eS	Sb	13 04 08.3	+1.0
	baz=336						
NTC	Toucheng	0.86	340	eP	Pn	13 03 54.6	-1.7
	baz=350						
HGSD	Ruisui	0.86	231	eP	Pn	13 03 55.9	-0.5
	baz=218						
YOJ	Yonaguni jima	0.89	62	eP	Pn	13 03 56.6	-0.1
	baz=65						
YOJ				eS	Sn	13 04 08.0	-0.6
	baz=65						
YOJ	Yonaguni jima	0.89	62	P	Pn	13 03 56.2	-0.4
YOJ				S	Sn	13 04 07.8	-0.8
CHGB	Renai	0.90	271	⇑eP	Pn	13 03 56.9	-0.1
	baz=256						
CHGB				eS	Sb	13 04 09.3	+0.6
	baz=256						
OWD	Renai	0.90	265	P	Pn	13 03 56.7	-0.3
	baz=260						
OWD				eS	Sn	13 04 08.3	-0.8
	baz=260						
TWT	Tachien	0.92	283	eP	Pb	13 03 58.1	+0.7
	baz=269						
EHY	Hungye	0.93	235	P	Pn	13 03 56.8	-0.5
	baz=245						
TDCB	Techi	0.93	283	eP	Pn	13 03 57.4	-0.1
	baz=270						
TDCB				eS	Sb	13 04 10.0	+0.2
	baz=270						
NWLT	Wulai	0.94	321	eP	Pb	13 03 57.5	-0.2
	baz=319						
NWLT				eS	Sn	13 04 09.4	-0.7
	baz=319						
YHNB	Yeheng	0.95	312	eP	Pn	13 03 57.5	0.0
	baz=309						
NSK	Sanguang	0.96	311	eP	Pb	13 03 58.7	+0.6
	baz=309						
VWDT	VWDT	0.97	253	eP	Pb	13 03 58.1	-0.1
	baz=239						
TIPB	Shuangxi	0.97	342	P	Pb	13 03 58.0	-0.3
	baz=351						
TIPB				eS	Sn	13 04 10.5	-0.4
	baz=351						
YULB	Yu-li	1.02	231	P	Pn	13 03 58.1	-0.4
	baz=242						
TWF1	Yuli	1.04	229	P	Pn	13 03 58.6	-0.2
	baz=218						
TWA	Mucha	1.07	331	eP	Pb	13 04 00.3	+0.4
	baz=330						
NWF	Wu-fen Shan	1.08	342	eP	Pb	13 04 00.2	+0.1
	baz=357						
NWF				eS	Sb	13 04 14.1	+0.2
	baz=357						
WFSB	Wu-fen Shan	1.08	342	eP	Pn	13 03 59.4	+0.1
	baz=357						
WFSB				eS	Sb	13 04 14.0	+0.3
	baz=357						
NHDH	Xindian Distri	1.08	328	eP	Pb	13 04 00.1	+0.1
	baz=311						
SSLB	Suanglung	1.13	257	P	Pn	13 04 00.3	+0.3
	baz=244						
WHP	Taichung City	1.13	282	eP	Pb	13 04 01.2	+0.3
	baz=269						
WLTB	Daxi	1.15	315	eP	Pb	13 04 01.0	-0.2
	baz=302						
SMLT	Sun Moon Lake	1.16	262	P	Pb	13 04 01.0	-0.4
	baz=259						
CHKT	Chengkung	1.19	218	P	Pn	13 04 00.0	-0.7
	baz=203						
TYC	Yuchr	1.20	264	P	Pb	13 04 01.5	-0.5
	baz=261						
LIOB	Emei	1.20	300	eP	Pb	13 04 01.7	-0.3
	baz=298						
NSTT	Nanjuang	1.20	299	eP	Pb	13 04 02.2	+0.1
	baz=297						
YM01	YM01	1.22	334	eP	Pb	13 04 03.2	+0.7
	baz=333						
YM05	YM05	1.24	334	eP	Pn	13 04 01.8	+0.2
	baz=334						
WHYT	Xinyi Township	1.24	254	P	Pb	13 04 02.6	-0.1
	baz=243						
YM04	YM04	1.24	333	eP	Pb	13 04 04.1	+1.3
	baz=332						
TWS1	Kuangyinshan	1.25	328	eP	Pb	13 04 03.6	+0.7
	baz=327						
YM08	YM08	1.25	336	eP	Pb	13 04 04.0	+1.0
	baz=335						
TWQ1	Liyutan	1.30	284	eP	Pb	13 04 03.9	+0.2
	baz=281						
WJS	Zhushan	1.32	261	eP	Pb	13 04 04.4	+0.2
	baz=258						
NSY	Sanyi	1.32	287	eP	Pb	13 04 04.7	+0.5
	baz=284						
NMLH	Miaoli	1.34	292	eP	Pb	13 04 04.5	+0.1
	baz=289						
ELDTW	Lidau	1.34	231	P	Pn	13 04 02.8	-0.3
	baz=216						
TCU	Taichung	1.35	275	eP	Pb	13 04 04.9	+0.2
	baz=271						
TCU				eS	Sb	13 04 23.4	+1.8
	baz=271						
WNT	Mingjian	1.35	263	eP	Pb	13 04 05.0	+0.3
	baz=250						
CHN5	Tsauling	1.42	252	P	Pb	13 04 05.7	-0.2
	baz=249						
WCHH	Zhanghua	1.46	272	eP	Pb	13 04 06.5	+0.1
	baz=269						
IRIF	Iriomote-Funau	1.47	78	P	Pn	13 04 05.2	+0.6
IRIF				S	Sn	13 04 23.8	+0.8
WDLH	Douliu	1.52	257	eP	Pb	13 04 07.4	-0.1
	baz=240						
STYT	Tauyuan	1.55	236	P	Pb	13 04 06.9	-1.2
	baz=222						
TWGBT	Beinan	1.57	219	eP	Pn	13 04 05.7	-0.4
	baz=217						
TWG	Pinlang	1.57	219	P	Pn	13 04 05.7	-0.3
	baz=217						
TPUB	Ta-pu	1.58	242	P	Pb	13 04 08.2	-0.4
	baz=240						
CHN4	Tsaushan	1.59	245	P	Pb	13 04 08.3	-0.3
	baz=232						
CHN4				eS	Sb	13 04 30.9	+2.6
	baz=232						
WTP	Ta-pu	1.62	241	P	Pb	13 04 08.6	-0.6
	baz=238						
CHN2	Minshiung	1.62	252	P	Pb	13 04 09.3	+0.1
	baz=249						
RLNB	Erlin	1.65	265	eP	Pb	13 04 09.3	-0.4
	baz=262						
JKRS	Kuro-shima	1.71	83	P	Pn	13 04 08.8	+0.9
JKRS				eS	Sn	13 04 29.9	+1.1
TWK	Hsinying	1.71	244	P	Pb	13 04 10.1	-0.7
	baz=241						
CHN1	Nanshi	1.72	241	P	Pb	13 04 10.4	-0.5
	baz=238						
SNST	Tainan City	1.73	242	P	Pb	13 04 10.0	-1.0
	baz=240						
SGST	Jiashian	1.73	237	eP	Pb	13 04 10.4	-0.7
	baz=225						
SLGT	Liugui	1.73	233	P	Pb	13 04 09.9	-1.2
	baz=220						
JIJ	Ishigaki jima	1.84	80	P	Pn	13 04 09.8	0.0
JIJ				S	Sn	13 04 31.8	-0.4
SSD	Sandimen	1.90	228	eP	Pb	13 04 12.7	-1.3
	baz=217						
MASBT	Mashibuluo	2.00	225	P	Pn	13 04 12.8	+0.8
	baz=214						
JISG	Ishigakijimahi	2.04	74	P	Pn	13 04 12.5	0.0
JISG				eS	Sn	13 04 35.8	-1.3
EAST	Anshuo	2.04	216	eP	Pn	13 04 12.8	+0.2
	baz=214						
SCZT	Fangliau	2.18	221	eP	Pb	13 04 17.7	-1.1
	baz=213						
JTJ	Tarama	2.40	75	P	Pn	13 04 17.9	+0.5
JTJ				S	Sn	13 04 46.1	+0.2
WDGT	Dungji	2.42	252	eP	Pn	13 04 18.9	+1.2
	baz=249						
PHUB	P'eng-hu	2.42	258	eP	Pn	13 04 19.3	+1.5
	baz=254						
PHUB				eS	Sn	13 04 47.8	+1.3
	baz=254						
VWUC	VWUC	2.64	292	eP	Pn	13 04 20.4	-0.3
	baz=288						
VWUC				eS	Sn	13 04 49.6	-2.3
	baz=288						
KNMB	Chin-men Tao	3.46	278	eP	Pn	13 04 32.1	0.0
	baz=276						
AXDP	Jialang	3.91	283	eP	Pn	13 04 38.1	0.0
	baz=281						

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*TEH **16** 13:09:04.9, 28°.41N×57°.24E, h24^{km}, ML4.2*

*OMAN **16** 13:09:04.3±0.2, 28°.49N×57°.18E, h15^{km}, ml4.4/8, Error ellipse: s-maj=17.2km s-min=2.7km az=291.0*

DSN **16** *13:09:05.7±1.6, 28°.48N×57°.33E, h70^{km}, ML4.2/11, Error ellipse: s-maj=52.6km s-min=13.9km az=118.0*

THR **16** *13:09:05.1, 28°.39N×57°.35E, h14^{km}, ML4.1*

ISCJB **16** *13:09:05.0±0.2, 28°.42N±0°.02×57°.12E±0°.03, h31^{km}, mb4.2/64, MS3.3/7, Error ellipse: s-maj=4.1km s-min=2.8km az=0.3*

IDC **16** *13:09:09.2±2.7, 28°.39N×57°.07E, h60^{km}±26^{km}, mb3.8/27, mb1 3.9/30, mb1mx3.8/48, mbtmp4.0/30, ML3.9/4, MS3.2/10, Ms1 3.2/10, ms1mx3.0/40, Error ellipse: s-maj=13.0km s-min=12.0km az=164.0*

MOS **16** *13:09:14.7±1.0, 28°.47N×57°.05E, h128^{km}, mb4.3/44, Error ellipse: s-maj=9.3km s-min=5.1km az=119.9*

ISC 16 13:09:06.2±0.4**, 28°.39N**±0°.03×**57°.16E**±0°.04**, h31**^{km}**, n167,** σ**1**^{s}**54**/170**, mb4.3**/71**, MS3.3**/7**, 5C-3D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	**Nian**	0.88	199	*e*Pg	Pn	13 09 22.6	+0.2
NIAN				IAMB	IAmb	13 09 28.2	
	comp=Z,0.0nm,0.2s						
NIAN				*e*Sg	Sb	13 09 37.0	+2.7
NGRK	**Negar Kerman**	1.31	343	*e*Pg	Pn	13 09 28.3	-0.4
NGRK				IAMB	IAmb	13 09 32.9	
	comp=Z,0.0nm,0.2s						
GENO	**Geno**	1.32	222	*e*Pg	Pb	13 09 30.0	-0.5
GENO				IAMB	IAmb	13 09 54.2	
	comp=Z,0.0nm,0.4s						
CHMN	**Cheshme madani**	1.50	13	*e*Pg	Pb	13 09 32.2	-1.5
CHMN				IAMB	IAmb	13 09 37.3	
	comp=Z,0.0nm,0.2s						
CHMN				*e*Sg	Sb	13 09 52.1	-0.5
KRBR	**Kerman**	1.63	348	*e*AML	AML	13 09 59.6	
	comp=N,2µm,0.6s						
KRBR				*e*Pg	Pb	13 09 35.7	-0.1
KRBR				*e*AML	AML	13 10 08.9	
	comp=E,2µm,0.5s						
TVBK	**TV Kerman**	1.63	348	*e*Pn	Pb	13 09 34.0	-1.9
TVBK				IAMB	IAmb	13 09 40.9	
	comp=Z,0.0nm,0.2s						
KHGB	**Koh Gabri**	2.07	343	*e*Pn	Pb	13 09 41.1	-2.1
KHGB				IAMB	IAmb	13 10 15.0	
	comp=Z,0.0nm,0.8s						
SHME	**Shamm**	2.50	202	*e*P	Pn	13 09 45.0	+0.2
	SNR=64						
SHME				S	Sn	13 10 17.9	+3.6
SHME	**Shamm**	2.50	202	*e*Pn	Pn	13 09 45.2	+0.4
BANOM	**Banah**	2.57	198	*e*P	Pn	13 09 46.4	+0.6
	SNR=95						
BANOM				*e*P	Pb	13 09 48.8	-2.9
	SNR=28						
BANOM	**Banah**	2.57	198	P	Pn	13 09 46.4	+0.6
	SNR=47						
BANOM				S	Sn	13 10 20.0	+3.9
MSFE	**Esma-Masafi**	3.15	197	*i* P	Pn	13 09 54.8	+1.1
	SNR=8.3						
MSFE	**Esma-Masafi**	3.15	197	*e*Pn	Pn	13 09 54.9	+1.2
UMQ	**Umm Al-Quwin**	3.15	205	*i* P	Pn	13 09 55.7	+2.0
	SNR=7.6						
UMQ	**Umm Al-Quwin**	3.15	205	*e*Pn	Pn	13 09 56.0	+2.3
MDH	**Madha**	3.17	194	P	Pn	13 09 53.9	-0.1
MDH	**Madha**	3.17	194	P	Pn	13 09 54.1	+0.1
	SNR=11						
MDH	**Madha**	3.17	194	*e*Pn	Pn	13 09 53.6	-0.4
ZHSF	**Zahedan**	3.39	68	*e*Pn	Pn	13 09 57.8	+0.6
ZHSF	**Zahedan**	3.39	68	*e*Pn	Pn	13 09 57.8	+0.6
UOSS	**Minazif**	3.54	194	*i* P	Pn	13 09 59.9	+0.9
	SNR=11						
UOSS	**Minazif**	3.54	194	P	Pn	13 10 00.3	+1.2
	SNR=9.4						
UOSS	**Minazif**	3.54	194	*e*Pn	Pn	13 10 00.2	+1.2
NAZ	**Nazwa, Dubai**	3.64	202	*i* P	Pn	13 10 01.8	+1.3
	SNR=12						
HATD	**Hatta, Dubai**	3.67	195	P	Pn	13 10 03.0	+2.2
GHIR	**Ghir-Karzin**	3.68	269	*e*Pn	Pb	13 10 06.2	-4.5
GHIR	**Ghir-Karzin**	3.68	269	*e*Pn	Pb	13 10 06.2	-4.5
IMEH	**Mehriz**	3.72	324	IAMB	IAmb	13 10 15.3	
	comp=Z,2µm,0.3s						
IMEH				*e*Pn	Pn	13 10 04.2	+2.4
ASHO	**Ashiyiah**	3.82	195	*i* P	Pn	13 10 04.4	+1.5
	SNR=41						
ASHO	**Ashiyiah**	3.82	195	P	Pn	13 10 04.5	+1.5
	SNR=13						
ASHO	**Ashiyiah**	3.82	195	*e*Pn	Pn	13 10 04.5	+1.5
IPAR	**Pars**	3.88	293	*e*Pn	Pn	13 10 06.1	+2.1
FAQ	**Al Faqa, Dubai**	3.89	202	*i* P	Pn	13 10 04.8	+0.9
	SNR=38						
CHBR	**Chabahar**	4.06	132	*e*Pn	Pn	13 10 07.0	+0.8
CHBR	**Chabahar**	4.06	132	*e*Pn	Pn	13 10 07.0	+0.8
ASUD	**Al Ashush, Dub**	4.09	204	*i* P	Pn	13 10 08.2	+1.6
	SNR=204						
AJN	**Ajban**	4.28	208	*i* P	Pn	13 10 10.3	+1.1
	SNR=13						
AJN	**Ajban**	4.28	208	P	Pn	13 10 10.4	+1.1
	SNR=7.4						
AJN				S	Sn	13 10 59.5	+1.3
AJN	**Ajban**	4.28	208	*e*Pn	Pn	13 10 10.3	+1.1
IKOO	**Kooshah**	4.33	21	*e*Pn	Pn	13 10 12.2	+2.1
IKOO				IAMB	IAmb	13 10 24.2	
	comp=Z,4µm,0.4s						
ALNE	**Al Ain**	4.50	197	*e*Pn	Pn	13 10 13.0	+0.8
ICHK	**Chekchek**	4.52	329	*e*Pn	Pn	13 10 15.3	+2.6
ICHK				IAMB	IAmb	13 10 35.3	
	comp=Z,1µm,0.5s						
YZKH	**Yazd**	4.56	332	*e*Pn	Pn	13 10 17.1	+3.9
YZKH	**Yazd**	4.56	332	*e*Pn	Pn	13 10 17.1	+3.9
YZKH				*e*Sg	Sb	13 11 29.3	+9.1
TPRV	**Parvadeh(Tabas**	4.64	355	*e*Pn	Pn	13 10 18.5	+4.2
TPRV				IAMB	IAmb	13 11 41.4	
	comp=Z,0.0nm,1.2s						
ITEG	**Tejag**	4.70	17	*e*Pn	Pn	13 10 18.5	+3.4
ITEG				IAMB	IAmb	13 10 28.2	
	comp=Z,2µm,0.3s						
HOQ	**Hoqain**	4.79	178	P	Pn	13 10 17.2	+0.9
	SNR=6.2						
HOQ	**Hoqain**	4.79	178	*e*Pn	Pn	13 10 16.1	-0.2
IKAZ	**Kazeroun**	4.86	288	*e*Pn	Pn	13 10 19.0	+1.5
IKAZ				IAMB	IAmb	13 11 18.7	
	comp=Z,6µm,0.3s						
BIDO	**Bidbid**	4.92	170	P	Pn	13 10 17.8	-0.3
	SNR=8.1						
BIDO	**Bidbid**	4.92	170	*e*Pn	Pn	13 10 18.3	+0.2
ARQ	**Araqi**	5.06	187	P	Pn	13 10 22.1	+2.1
	SNR=6.0						
TKDS	**Koohdasht(Taba**	5.21	360	*e*Pn	Pn	13 10 25.6	+3.5
TKDS				IAMB	IAmb	13 12 08.4	
	comp=Z,0.0nm,1.5s						
TABS	**Tabas**	5.24	360	*e*Pn	Pn	13 10 25.4	+2.9
TABS	**Tabas**	5.24	360	*e*Pn	Pn	13 10 25.4	+2.9
WSAR	**Wadi Sarin**	5.30	165	P	Pn	13 10 23.8	+0.6
	SNR=6.2						
WSAR	**Wadi Sarin**	5.30	165	P	Pn	13 10 24.4	+1.2
	comp=Z,32nm,0.3s,baz=1.3,slow=6.8,SNR=247						
WSAR				S	Sn	13 11 21.1	-2.1
	comp=Z,30nm,0.3s,baz=62,slow=24,SNR=14						
WSAR				LR	LR	13 13 15.7	
	comp=Z,88nm,20.6s,baz=359,slow=46						
IRAM	**Ramesheh**	5.36	311	*e*Pn	Pn	13 10 25.9	+1.6
IRAM				IAMB	IAmb	13 11 48.8	
	comp=Z,593nm,0.6s						
SMDO	**Samad**	5.37	171	P	Pn	13 10 24.9	+0.6
	SNR=11						
KLNJ	**Kolanjah**	5.50	300	*e*Pn	Pn	13 10 28.0	+1.6
KLNJ				IAMB	IAmb	13 11 33.6	
	comp=Z,0.0nm,0.4s						
TNSJ	**Nastanj**	5.58	355	*e*Pn	Pn	13 10 31.6	+4.5
TNSJ				IAMB	IAmb	13 12 11.9	
	comp=Z,0.0nm,1.3s						
BSY	**Bisya**	5.62	180	P	Pn	13 10 29.6	+1.9
	SNR=9.6						
ANAR	**Anarak**	5.62	329	*e*Pn	Pn	13 10 29.8	+2.0
IGAR	**Gharneh**	5.96	313	*e*Pn	Pn	13 10 34.5	+1.9
IGAR				IAMB	IAmb	13 10 44.4	
	comp=Z,420nm,0.3s						
IZEF	**Zefreh**	6.12	318	*e*Pn	Pn	13 10 36.7	+1.9
IZEF				IAMB	IAmb	13 10 36.9	
	comp=Z,224nm,0.4s						
GEYT	**Alibeck**	9.55	5	P	Pn	13 11 26.6	+5.0
	comp=Z,2.1nm,0.3s,baz=187,slow=17,SNR=8.4						
GEYT				LR	LR	13 15 32.2	
	comp=Z,221nm,19.1s,baz=190,slow=40						
GNI	**Garni**	15.57	322⇓	*e*P	P	13 12 47.7	+0.1
GNI	**Garni**	15.57	322	LR	LR	13 19 45.3	
	comp=Z,29nm,20.6s,baz=82,slow=41						
ASF	**Jabal al Asfar**	17.90	287	P	P	13 13 14.6	+1.2
	comp=Z,0.3nm,0.3s,baz=59,slow=4.4,SNR=4.2						
ZEI	**Tsey**	17.93	327	*e*P	P	13 13 13.9	+0.2
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NEY	**Neytrino**	18.85	326⇑	*i*P	Pn	13 13 27.9	+3.4
KBZ	**Khabaz**	19.12	327	P	Pn	13 13 28.6	+1.1
	comp=Z,0.1nm,0.3s,baz=141,slow=14,SNR=3.1						
MMAI	**Mount Meron Ar**	19.26	289	P	Pn	13 13 29.7	+0.2
	comp=Z,0.4nm,0.3s,baz=101,slow=12,SNR=3.3						
KIV	**Kislovodsk**	19.39	327	*e*P	Pn	13 13 32.9	+2.0
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
AAK	**Ala-Archa**	19.97	40⇑	*i*P	Pn	13 13 37.8	-0.1
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	19.97	40	P	Pn	13 13 37.9	0.0
	comp=Z,2.1nm,0.7s,baz=207,slow=12,SNR=7.8						
AKTO	**Aktyubinsk**	22.03	1	P	P	13 13 58.7	+0.7
	comp=Z,6.3nm,0.5s,baz=188,slow=10,SNR=24						
AKTO				LR	LR	13 23 28.2	
	comp=Z,67nm,21.2s,baz=153,slow=39						
BRTR	**Keskin Array B**	22.46	306	P	P	13 14 03.0	+0.1
	comp=Z,7.0nm,0.9s,baz=134,slow=6.7,SNR=27						
BRTR				LR	LR	13 24 15.2	
	comp=Z,65nm,21.0s,baz=96,slow=40						
PYUN	**Piuthan**	22.75	85	*e*P	P	13 14 07.4	+1.3
	comp=Z,7.0nm,0.4s						
DANN	**Dangsing**	23.39	84	*e*P	P	13 14 14.0	+1.2
	comp=Z,51nm,0.7s						
DMN	**Daman**	24.67	85	*e*P	P	13 14 26.0	+1.4
	comp=Z,11nm,0.7s						
PKIN	**Phulchoki**	24.93	85	*e*P	P	13 14 27.8	+0.8
	comp=Z,9.8nm,0.5s						
PKI	**Pulchoki**	24.94	85	*e*P	P	13 14 27.9	+0.7
	comp=Z,9.5nm,0.5s						
GUN	**Gumba**	25.30	84	*e*P	P	13 14 31.2	+0.7
	comp=Z,15nm,0.5s						
VRH	**Novokhopyorsk**	25.58	337	*e*P	P	13 14 33.5	+1.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JIRN	**Jiri**	25.61	85	*e*P	P	13 14 34.8	+1.5
	comp=Z,11nm,0.3s						
BVAR	**Borovoye Array**	26.49	18	P	P	13 14 41.1	+0.6
	comp=Z,2.7nm,0.4s,baz=199,slow=8.4,SNR=32						
BRVK	**Borovoye**	26.49	18⇑	*i*P	P	13 14 40.5	0.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VSR	**Storozhevoye**	26.52	334	*e*P	P	13 14 41.7	+0.8
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR	**Makanchi Array**	26.91	40	P	P	13 14 45.2	+0.7
	comp=Z,1.0nm,0.6s,baz=220,slow=8.4,SNR=20						
KURBB	**Kurchatov Arra**	27.47	30	P	P	13 14 50.1	+0.8
	comp=Z,0.9nm,0.8s,baz=224,slow=9.7,SNR=4.4						
KURK	**Kurchatov**	27.58	30	P	P	13 14 50.2	-0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIRV	**Kirov**	30.66	352	LR	LR	13 30 12.8	
	comp=Z,105nm,18.9s,baz=183,slow=41						
AKASG	**Malin Array Be**	30.68	324	P	P	13 15 16.7	-1.2
	comp=Z,0.7nm,0.4s,baz=109,slow=20,SNR=5.0						
KIEV	**Kiev**	30.69	324*d*	*i*P	P	13 15 17.0	-0.9
KIEV				*i* *PP	sP	13 15 44.4	+13
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DGZ	**Jazzator, Alta**	31.37	39*d*	*e*P	P	13 15 25.2	+1.0
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	32.56	31	P	P	13 15 34.6	+0.2
	comp=Z,2.1nm,0.3s,baz=241,slow=9.5,SNR=16						
KMBO	**Kilima Mbogo**	35.01	216	P	P	13 15 56.9	+0.4
	comp=Z,0.8nm,0.3s,baz=26,slow=14,SNR=4.8						
VYHS	**Vyhne**	35.62	315	*e*P	P	13 16 00.5	-0.5
VYHS				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VYHS	**Vyhne**	35.62	315	*e*P	P	13 16 00.5	-0.5
VSU	**Vasula**	36.71	334	*i* P	P	13 16 10.4	+0.3
VSU				pmax	pmax		
	comp=Z,13nm,0.7s						
GTA	**Gaotai**	36.77	61	*e*P	P	13 16 11.8	+0.7
GTA				pP	pP	13 16 22.1	+1.4
GTA				sP	sP	13 16 26.6	+2.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
VRAC	**Vranov**	37.28	315	P	P	13 16 14.6	-0.6
	comp=Z,2.9nm,0.7s,baz=124,slow=7.3,SNR=3.9						
KNGR	**Kungurtug, Tuv**	37.59	43⇑	*e*P	P	13 16 18.8	+0.8
DPC	**Dobruska-Polom**	37.80	317	*e*P	P	13 16 19.0	-0.6
DPC	**Dobruska-Polom**	37.80	317	*e*P	P	13 16 19.0	-0.6
MOA	**Molln**	38.34	312	*i* P	P	13 16 23.9	-0.3
	comp=Z,6.0nm,1.0s						
GERES	**GERESS Array B**	38.96	314	*e*P	P	13 16 28.8	-0.7
GERES	**GERESS Array B**	38.96	314	P	P	13 16 28.6	-0.9
	comp=Z,1.4nm,0.7s,baz=114,slow=8.9,SNR=14						
GERES				PcP	PcP	13 18 39.0	-0.5
	comp=Z,0.6nm,0.7s,baz=108,slow=3.2,SNR=4.5						
FINES	**FINESS Array B**	38.98	337	*e*P	P	13 16 28.6	-0.7
FINES	**FINESS Array B**	38.98	337	P	P	13 16 28.9	-0.4
	comp=Z,1.1nm,0.5s,baz=135,slow=9.6,SNR=14						
FINES				LR	LR	13 35 30.8	
	comp=Z,45nm,18.3s,baz=322,slow=41						
KHC	**Kasperske Hory**	39.12	314	*e*P	P	13 16 30.1	-0.6
KHC				*e*x	x	13 16 40.5	
KHC	**Kasperske Hory**	39.12	314	*e*P	P	13 16 31.0	+0.3
ABTA	**Abfaltersbach**	39.25	310	*e*P	P	13 16 31.5	-0.4
	comp=Z,9.7nm,1.3s						
BRG	**Berggiesshubel**	39.40	317	*e*(P)	P	13 16 32.8	-0.2
	comp=Z,6.4nm,1.2s						
BRG	**Berggiesshubel**	39.40	317	*e*P	P	13 16 32.8	-0.2
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CLL	**Collm**	40.10	317	*i* P	P	13 16 38.6	-0.2
	comp=Z,10.0nm,1.1s						
CLL	**Collm**	40.10	317	*i* P	P	13 16 38.6	-0.2
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOTA	**Moosalm**	40.31	311	*i* P	P	13 16 39.4	-1.4
	comp=Z,1.6nm,0.4s						
FETA	**Feichten**	40.50	310	*e*P	P	13 16 41.4	-1.0
	comp=Z,5.1nm,0.7s						
DAVOX	**Davos/Dischmat**	41.03	310	P	P	13 16 45.8	-1.0
	comp=Z,2.9nm,0.5s						
DAVA	**Damuels**	41.12	310	*i* P	P	13 16 46.3	-1.2
	comp=Z,7.6nm,0.7s						
PGF	**Pioggiola**	41.15	303	*e*P	P	13 16 46.3	-1.5
PGF				pmax	pmax		
	comp=Z,15nm,1.2s						
SONM	**Songino Array**	42.51	49	P	P	13 16 59.7	+0.9
	comp=Z,1.3nm,0.8s,baz=259,slow=7.7,SNR=10						
MBDF	**Montbardon**	42.93	306	*e*P	P	13 17 01.1	-1.2
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ULN	**Ulaanbaatar**	42.95	49⇑	*e*P	P	13 17 02.6	+0.2
ULN				pmax	pmax		
	comp=Z,8.0nm,3.8s						
LPG	**La Plagne**	43.02	307	*e*P	P	13 17 02.2	-1.0
LPG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LPL	**La Plagne**	43.03	307	*e*P	P	13 17 01.4	-1.8
LPL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HFS	**Hagfors**	43.15	330	P	P	13 17 02.8	-0.9
	comp=Z,1.2nm,0.4s,baz=120,slow=8.8,SNR=15						
CABF	**La Chapelle**	43.59	309	*e*P	P	13 17 06.2	-1.3
CABF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NORES	**NORESS Array B**	44.38	330	P	P	13 17 14.4	+0.9
VIVF	**Saint-Julien-l**	44.43	306	*e*P	P	13 17 12.4	-1.8
VIVF				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NRIK	**Noril'sk**	44.61	15	LR	LR	13 39 26.3	
	comp=Z,61nm,18.1s,baz=231,slow=41						
NB2	**NORSAR Subarra**	44.66	330	P	P	13 17 15.2	-0.6
	comp=Z,0.2nm,0.5s,baz=113,slow=7.9						
NOA	**NORSAR Array B**	44.66	330	P	P	13 17 14.9	-0.9
	comp=Z,0.7nm,0.8s,baz=117,slow=7.9,SNR=3.3						
NOA				LR	LR	13 38 49.0	
	comp=Z,26nm,18.1s,baz=210,slow=40						
GIVF	**Givet**	44.88	314	*e*P	P	13 17 17.1	-0.6
GIVF				pmax	pmax		
	comp=Z,17nm,1.4s						
ARCES	**ARCESS Array B**	45.05	345	*e*P	P	13 17 18.5	-0.2
ARCES	**ARCESS Array B**	45.05	345	P	P	13 17 18.7	-0.1
	comp=Z,0.5nm,0.3s,baz=135,slow=8.4,SNR=30						
SMF	**Signal de Mont**	45.14	309	*e*P	P	13 17 18.2	-1.6
SMF				pmax	pmax		
	comp=Z,12nm,0.9s						
LOR	**Lormes**	45.18	310	*e*P	P	13 17 18.2	-1.9
LOR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BAIF	**Baives**	45.27	314	*e*P	P	13 17 20.4	-0.4
BAIF				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SSF	**Saint Saulge**	45.40	309	*e*P	P	13 17 20.2	-1.7
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AVF	**Avril sur Loir**	45.48	309	*e*P	P	13 17 20.6	-1.9
AVF				pmax	pmax		
	comp=Z,17nm,1.7s						
BGF	**Bois d'Agland**	45.81	309	*e*P	P	13 17 25.1	-0.1
MTLF	**Montolieu**	46.16	304	*e*P	P	13 17 27.1	-0.8
MTLF				pmax	pmax		
	comp=Z,13nm,1.2s						
TCF	**Toulx Ste Croi**	46.24	308	*e*P	P	13 17 27.2	-1.3
TCF				pmax	pmax		
	comp=Z,34nm,1.7s						
CAF	**Calviac**	46.29	306	*e*P	P	13 17 27.9	-1.1
CAF				pmax	pmax		
	comp=Z,11nm,1.0s						
RJF	**Les Rejaudoux**	46.69	307	*e*P	P	13 17 31.2	-0.8
RJF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LFF	**La Frestale**	47.23	306	*e*P	P	13 17 35.6	-0.6
LFF				pmax	pmax		
	comp=Z,4.0nm,0.2s						
LDF	**La Druitiere**	47.94	311	*e*P	P	13 17 39.6	-2.1
LDF				pmax	pmax		
	comp=Z,26nm,1.6s						
FLN	**La Foliniere**	48.19	311	*e*P	P	13 17 41.6	-2.1
FLN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ETSF	**Etsaut**	48.20	304	*e*P	P	13 17 47.3	+3.4
ETSF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BOD	**Bodaibo**	48.89	36	*e*P	P	13 17 47.9	-1.0
BOD				pmax	pmax		
	comp=Z,6.0nm,1.7s						
EKA	**Eskdalemuir Ar**	50.40	320	P	P	13 17 59.2	-1.2
	comp=Z,0.5nm,0.3s,baz=101,slow=7.9,SNR=10						
ESDC	**Sonseca Array**	51.01	300	P	P	13 18 05.8	+0.4
	comp=Z,0.4nm,0.4s,baz=70,slow=7.1,SNR=4.9						
SPITS	**Spitsbergen Ar**	53.10	350	P	P	13 18 19.9	-0.4
SPITS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SPITS	**Spitsbergen Ar**	53.10	350	P	P	13 18 19.9	-0.4
	comp=Z,5.0nm,0.9s,baz=131,slow=10,SNR=9.7						
TORD	**Torodi Ar. Bea**	53.60	266	P	P	13 18 22.9	-1.9
	comp=Z,1.5nm,0.7s,baz=68,slow=7.3,SNR=10						
KSRS	**Korea Array**	58.84	61	P	P	13 19 00.8	-1.0
	comp=Z,0.5nm,0.5s,baz=277,slow=7.3,SNR=4.8						
KSRS				LR	LR	13 47 44.8	
	comp=Z,21nm,18.3s,baz=10.0,slow=39						
BOSA	**Boshof**	64.39	211	P	P	13 19 38.8	-0.7
	comp=Z,1.4nm,0.6s,baz=28,slow=5.4,SNR=5.7						
SEY	**Seymchan**	67.42	30	*i* P	P	13 19 58.7	+0.3
BILL	**Bilibino**	70.75	22	*i* P	P	13 20 16.5	-2.5
BILL				*i*		13 20 32.5	
BILL				*i*		13 22 53.6	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	85.27	10	P	P	13 21 38.2	-1.4
	comp=Z,0.8nm,0.6s,baz=322,slow=4.9,SNR=17						
WRA	**Warramunga Arr**	88.65	113	*e*P	P	13 21 56.9	+0.2
WRA	**Warramunga Arr**	88.65	113	P	P	13 21 57.3	+0.6
	comp=Z,0.2nm,0.5s,baz=318,slow=3.8,SNR=7.3						
YKA	**Yellowknife Ar**	89.19	356	P	P	13 21 58.2	-0.4
	comp=Z,0.7nm,0.5s,baz=2.7,slow=5.5,SNR=31						
ASAR	**Alice Springs**	90.20	117	P	P	13 22 04.8	+0.9
	comp=Z,0.7nm,0.6s,baz=304,slow=4.7,SNR=11						

ISCJB **16** *13:17:34.5±1.4, 14°.58N±0°.09×93°.09W±0°.07, h45^{km}±12^{km}, mb3.6/6, Error ellipse: s-maj=17.4km s-min=7.4km az=30.7*

MEX **16** *13:17:34.9±0.8, 14°.61N×93°.07W, h76^{km}±43^{km}, MD4.1*

NEIC **16** *13:17:34.9±0.0, 14°.61N×93°.07W, h76^{km}, MD4.1(MEX), After MEX.*

IDC **16** *13:17:38.6±1.4, 16°.06N×92°.38W, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.7/36, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=53.2km s-min=18.5km az=34.0*

ISC 16 13:17:34.2±1.9**, 14°.62N**±0°.09×**93°.07W**±0°.06**, h27**^{km}±12^{km}**, n20,** σ**1**^{s}**84**/27**, mb3.6**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.83	70	*e*P	Pb	13 17 50.1	0.0
THIG				*i* S	Sn	13 18 02.8	+1.3
THIG		0.83	70	*e*P	Pb	13 17 50.1	0.0
THIG				*i* S	Sn	13 18 02.8	+1.3
PCIG		1.08	353	*e*P	Pb	13 17 54.1	-0.3
PCIG				*i* S	Sb	13 18 07.8	-0.3
PCIG		1.08	353	*e*P	Pb	13 17 54.1	-0.3
PCIG				*i* S	Sb	13 18 07.8	-0.3
CCIG	**Comitan**	1.88	29	*e*P	Pb	13 18 08.1	0.0
CCIG				*e*S	Sn	13 18 27.7	0.0
CCIG	**Comitan**	1.88	29	*e*P	Pb	13 18 08.1	0.0
CCIG				*e*S	Sn	13 18 27.7	0.0
APG	**El Apazote**	2.55	81	Pn	Pn	13 18 14.9	+0.8
	10nm,0.3s,baz=307,slow=8.2,SNR=56						
APG				Sn	Sn	13 18 45.5	+1.2
	9.9nm,0.3s,baz=330,slow=14,SNR=3.8						
CMIG	**Matias Romero**	3.01	325	Pn	Pn	13 18 21.3	+1.1
	12nm,0.3s,baz=145,slow=11,SNR=56						
CMIG				Sn	Sn	13 18 56.0	+0.6
	27nm,0.3s,baz=162,slow=18,SNR=7.7						
JTS	**JuntasAbangare**	9.02	118	*e*Pn	Pn	13 19 42.9	+0.1
	16nm,0.9s						
JTS				*e*Sn	Sn	13 21 21.1	-2.6
TXAR	**Lajitas Array**	17.61	328	Pn	P	13 21 40.8	+2.1
	0.1nm,0.3s,baz=150,slow=13,SNR=17						
MIAR	**Mount Ida**	19.84	359	P	P	13 21 59.5	-3.5
AMTX	**Amarillo**	21.61	340	*e*P	P	13 22 19.5	-2.8
ANMO	**Albuquerque**	23.55	332	P	P	13 22 45.0	+2.3
	1.6nm,0.7s,baz=148,slow=13,SNR=7.7						
SDCO	**Great Sand Dun**	25.54	337	*e*P	P	13 22 56.0	-5.0
	4.3nm,1.2s						
PDAR	**Pinedale Array**	31.43	336	P	P	13 23 54.7	+1.2
	0.4nm,0.6s,baz=123,slow=5.5,SNR=4.9						
NVAR	**Mina Array Bea**	32.54	322	P	P	13 24 05.7	+2.5
	0.7nm,0.8s,baz=137,slow=7.0,SNR=5.0						
YKA	**Yellowknife Ar**	50.19	347	P	P	13 26 26.0	-1.3
	0.3nm,0.4s,baz=153,slow=7.3,SNR=11						
ILAR	**Eielson Array**	61.86	337	P	P	13 27 51.4	+0.6
	0.5nm,0.6s,baz=125,slow=5.7,SNR=7.5						
WRA	**Warramunga Arr**	134.53	256	PKP	PKiKP	13 37 01.6	+9.3
	0.4nm,0.7s,baz=75,slow=2.7,SNR=8.8						
ASAR	**Alice Springs**	134.89	251	PKP	PKiKP	13 37 03.0	+10
	0.3nm,0.8s,baz=96,slow=1.9,SNR=3.9						

IDC 16 13:21:20.7±7.4**, 15°.95S**×**167°.58E, h179**^{km}±79^{km}**, mb3.0**/3**, mb1 3.2**/4**, mb1mx3.0**/28**, mbtmp3.6**/4**, Error ellipse: s-maj=75.0km s-min=40.1km az=160.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	6.18	190	P	Pn	13 22 50.5	+0.3
	2.0nm,0.3s,baz=107,slow=19,SNR=47						
DZM				S	Sn	13 24 00.6	-0.1
	1.4nm,0.3s,baz=148,slow=19,SNR=6.6						
WRA	**Warramunga Arr**	31.84	258	P	P	13 27 28.6	-0.4
	0.1nm,0.4s,baz=88,slow=9.3,SNR=6.6						
ASAR	**Alice Springs**	32.54	251	P	P	13 27 35.4	+0.3
	0.4nm,0.4s,baz=82,slow=8.8,SNR=7.6						
SONM	**Songino Array**	83.65	324	P	P	13 33 29.2	0.0
	0.3nm,0.7s,baz=140,slow=7.7,SNR=3.2						
ARCES	**ARCESS Array B**	121.50	345	PKP	PKPdf	13 39 52.0	-0.3
	2.7nm,1.0s,baz=96,slow=1.2,SNR=3.9						

MEX 16 13:22:47.1±0.4**, 14°.17N**×**92°.55W, h16**^{km}±92^{km}**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.66	337	*e*P	Pn	13 23 12.1	-3.4
PCIG				*i* S	Sn	13 23 31.4	-5.0
CCIG	**Comitan**	2.14	11	*e*P	Pn	13 23 19.5	-2.8

KRSC 16 13:23:57.2±0.8**, 55°.79N**×**163°.37E, h22**^{km}±15^{km}**, ML3.9,**

Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.52	324	*e*P	Pb	13 24 07.8	0.0
KBTR				*e*S	Sb	13 24 14.6	-0.3
KBG	Krutoberegovo	0.60	322	*i* P	Pb	13 24 08.9	-0.2
KBG				*e*S	Sb	13 24 17.0	-0.1
SMKR	Semkarok	1.33	308	*e*P	Pb	13 24 21.2	-0.3
SMKR				*e*S	Sb	13 24 38.1	0.0
BDR	Baidarnaya	1.44	304	*e*P	Pb	13 24 23.2	-0.2
BDR				*e*S	Sb	13 24 41.5	+0.2
ZLN	Zelenaya	1.46	280	*e*P	Pb	13 24 23.9	+0.1
ZLN				*e*S	Sb	13 24 42.8	+0.8
SRKR	Sorokina	1.51	306	*e*P	Pb	13 24 24.2	-0.3
SRKR				*e*S	Sb	13 24 43.2	0.0
CIRR	Tsirk	1.51	284	*e*P	Pb	13 24 25.2	+0.6
BZGR	Bezymyannyi-Gr	1.52	277	*e*P	Pb	13 24 24.9	+0.2
LGNR	Loginova	1.54	282	*e*P	Pb	13 24 25.2	0.0
MKZ	Mys Kozlova	1.55	218	*e*P	Pb	13 24 25.3	+0.1
MKZ				*e*S	Sb	13 24 45.0	+0.6
BKI	Bering	1.59	110	*e*P	Pn	13 24 24.3	+0.3
BKI				*e*S	Sb	13 24 46.2	+0.7
KLY	Klyuchi	1.61	290	*e*P	Pn	13 24 23.8	-0.5
KLY				*e*S	Sn	13 24 42.3	-2.1
BZWR	Bezymyannyi-We	1.63	277	*e*P	Pb	13 24 25.8	-0.9
BZMR	Bezymyannaya	1.63	276	*e*P	Pb	13 24 27.0	+0.3
KPT	Kopyto	1.78	277	*e*P	Pb	13 24 28.2	-1.0
TUMD	Tumrok D	1.79	252	*e*P	Pb	13 24 28.3	-1.0
TUMD				*e*S	Sb	13 24 50.5	-0.8
KZV	Kizimen	1.88	250	*e*P	Pb	13 24 29.7	-1.2
KZV				*e*S	Sb	13 24 53.4	-0.6
TUMR	Tumrok	1.90	256	*e*P	Pb	13 24 30.7	-0.6
TUMR				*e*S	Sb	13 24 54.3	-0.3
KOZ	Kozyrevsk	1.99	279	*e*P	Pb	13 24 31.5	-1.2
KOZ				*e*S	Sb	13 24 57.2	+0.2
SRDR	Sredinnyy	2.12	286	*e*P	Pb	13 24 33.3	-1.6
SRDR				*e*S	Sb	13 24 59.0	-1.7
KII	Karymskiy	2.86	234	*e*P	Pn	13 24 44.1	+2.5
KII				*e*S	Sn	13 25 18.7	+3.4
SPN	Mys Shipunski	3.33	217	*e*P	Pn	13 24 50.3	+2.4
SPN				*e*S	Sn	13 25 28.4	+1.7
SDLR	Sedlovina	3.63	228	*e*P	Pn	13 24 55.9	+3.8
KRX	Arik	3.67	230	*e*P	Pb	13 24 58.0	-3.4
SMAR	Somma	3.67	228	*e*P	Pn	13 24 57.1	+4.3
AVH	Avacha	3.70	229	*e*P	Pb	13 24 57.7	-4.1
UGLR	Uglovaya	3.70	228	*e*P	Pb	13 24 57.5	-4.4
KOK	Koryaka	3.72	230	*e*P	Pb	13 24 58.3	-4.0
GNL	Ganaly	3.78	239	*e*P	Pn	13 24 57.4	+3.2
DALK	Dalny	3.86	226	*e*P	Pn	13 24 59.2	+4.1
DALK				*e*S	Sn	13 25 43.6	+3.9
PET	Petropavlovsk	3.91	227	*e*P	Pn	13 24 59.1	+3.3
PET				*e*S	Sn	13 25 45.3	+4.4
KRMR	Karymshinskiy	4.26	228	*e*P	Pn	13 25 04.3	+3.6
KRMR				*e*S	Sn	13 25 54.1	+4.4
RUS	Russkaya	4.41	222	*e*P	Pn	13 25 08.1	+5.4

IDC 16 13:55:06.8±2.3, 5°.20N×125°.10E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.3/49, mbtmp3.6/4, Error ellipse: s-maj=261.6km s-min=23.3km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	26.59	160	P	P	14 00 47.5	+0.5
	0.4nm,0.3s,baz=341,slow=9.6,SNR=16						
ASAR	Alice Springs	29.95	164	P	P	14 01 16.6	-0.4
	0.2nm,0.4s,baz=338,slow=7.8,SNR=13						
STKA	Stephens Creek	40.09	158	P	P	14 02 43.8	-0.4
	0.3nm,0.4s,baz=323,slow=11,SNR=3.4						
MKAR	Makanchi Array	55.42	325	P	P	14 04 43.0	-0.1
	0.2nm,0.3s,baz=121,slow=7.9,SNR=10						

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*IDC **16** 14:06:59.4±0.9, 11°.86S×165°.32E, h0^{km}, mb3.9/10, mb1 4.1/12, mb1mx3.9/33, mbtmp3.9/12, ML3.8/2, Error ellipse: s-maj=32.3km s-min=18.6km az=142.0*

*ISCJB **16** 14:07:02.9±0.7, 11°.91S±0°.09×165°.14E±0°.08, h33^{km}, mb3.9/9, Error ellipse: s-maj=14.2km s-min=10.3km az=27.6*

ISC 16 14:07:04.7±0.8, 11°.9S±0°.1×165°.2E±0°.1, h35^{km}, n12, σ0^{s}.88/14, mb3.9/9, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.71	295	Pn	Pn	14 08 26.7	-0.4
	3.6nm,0.3s,baz=112,slow=19,SNR=2.3						
HNR				Sn	Sn	14 09 30.7	-0.8
	3.6nm,0.3s,baz=196,slow=20,SNR=2.3						
DZM	Mont Dzumac	10.21	174	Pn	Pn	14 09 28.5	-0.5
	0.6nm,0.3s,baz=268,slow=15,SNR=10						
CTA	Charters Tower	19.96	243	P	Pn	14 11 35.4	-0.4
	2.8nm,0.8s,baz=82,slow=13,SNR=3.6						
STKA	Stephens Creek	29.48	224	P	P	14 13 05.9	+0.3
	1.1nm,0.8s,baz=23,slow=9.9,SNR=3.6						
WRA	Warramunga Arr	30.71	251	P	P	14 13 15.9	-0.8
	2.0nm,0.8s,baz=77,slow=9.7,SNR=15						
ASAR	Alice Springs	31.96	244	P	P	14 13 28.1	+0.5
	1.6nm,0.8s,baz=72,slow=9.4,SNR=25						
ASAR				PcP	PcP	14 16 18.2	+0.8
	0.2nm,0.9s,baz=72,slow=3.0,SNR=3.2						
CMAR	Chiang Mai Arr	71.96	294	P	P	14 18 26.9	+1.6
	0.6nm,0.7s,baz=148,slow=5.3,SNR=4.0						
ILAR	Eielson Array	84.46	19	P	P	14 19 33.5	+0.1
	0.8nm,0.6s,baz=239,slow=5.2,SNR=22						
NVAR	Mina Array Bea	86.95	50	P	P	14 19 46.7	0.0
	0.7nm,0.8s,baz=232,slow=7.4,SNR=4.9						
MKAR	Makanchi Array	93.76	317	P	P	14 20 19.2	+1.0
	0.9nm,1.0s,baz=82,slow=5.7,SNR=4.3						
PDAR	Pinedale Array	94.50	47	P	P	14 20 21.3	-0.6
	0.1nm,0.4s,baz=263,slow=3.5,SNR=2.7						
YKA	Yellowknife Ar	95.94	27	P	P	14 20 26.3	-1.3
	0.2nm,0.6s,baz=261,slow=4.6,SNR=6.9						

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*TIF **16** 14:19:21.5, 42°.33N×40°.85E, h41^{km}±1^{km}*

*NORS **16** 14:19:23.6±0.0, 42°.51N×41°.17E, h4^{km}, MPVA3.3*

*MOS **16** 14:19:23.6±0.0, 42°.53N×41°.07E, h10^{km}, MPVA3.6*

*ISK **16** 14:19:25.2, 42°.19N×41°.16E, h5^{km}±1^{km}, ML2.7/4*

ISC 16 14:19:21.5±1.2, 42°.42N±0°.02×41°.16E±0°.03, h8^{km}±10^{km}, n26, σ0^{s}.53/49, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATM	Batumi	0.91	154	PG	Pn	14 19 40.3	-0.3
BATM				SG	Sb	14 19 51.5	-0.2
BATM	Batumi	0.91	154	P	Pn	14 19 40.3	-0.3
BATM				S	Sn	14 19 53.7	-0.1
BATM	Batumi	0.91	154	P	Pn	14 19 40.2	-0.3
BATM				S	Sn	14 19 53.5	-0.2
DOMR	Dombai	0.94	21	*i* Pg	Pb	14 19 40.1	0.0
DOMR				*i* Sg	Sb	14 19 52.2	-0.5
BCA	Borcka	1.03	160	PG	Pb	14 19 41.5	-0.1
BCA				SG	Sg	14 19 54.2	-0.5
DBOC	Borcka	1.14	160	*i* P	Pn	14 19 43.6	-0.1
DBOC				*i* S	Sn	14 19 59.4	-0.1
DBOC				IAML_P			
	comp=Z,2μm,0.1s						
ARXR	Arkhyz	1.15	4	*i* Pg	Pb	14 19 43.7	+0.1
ARXR				*i* Sg	Sb	14 19 58.6	-0.1
CHOM	Cayeli-Rize	1.35	193	PN	Pg	14 19 47.9	+0.5
ARTV	Artvin	1.36	155	*i* P	Pg	14 19 47.5	-0.1
ARTV				*i* S	Sn	14 20 05.7	+0.3
ARTV				IAML_P			
	comp=Z,3μm,0.2s						
NEY	Neytrino	1.42	54	*i* Pg	Pg	14 19 49.3	+0.5
NEY				*e*Sg	Sg	14 20 07.8	+0.6
RPOR	Krasnaya Polya	1.44	333	*i* Pg	Pn	14 19 47.7	-0.1
RPOR				*i* Sg	Sn	14 20 06.1	-0.8
DAGI	Agillar	1.46	157	*i* P	Pb	14 19 48.9	+0.1
DAGI				*i* S	Sg	14 20 08.3	0.0
DAGI				IAML_P			
	comp=Z,430nm,0.1s						
SOC	Sochi	1.57	318	*e*Pg	Pb	14 19 50.7	0.0
SOC				*i* Sg	Sn	14 20 09.6	-0.6
DDEM	Demirkent	1.59	163	*i* P	Pn	14 19 50.4	+0.4
DDEM				IAML_P			
	comp=Z,2μm,0.2s						
SHA1	Shidzhatmaz	1.72	39	*e*Pg	Pg	14 19 54.1	-0.3
SHA1				*i* Pg	Pb	14 19 54.7	+1.3
SHA1				*i* Sg	Sg	14 20 17.0	+0.3
SHA1				*e*Sg	Sg	14 20 17.1	+0.3
GUZR	Guzeripl'	1.75	335	*i* Pg	Pn	14 19 52.9	+0.8
GUZR				*i* Sg	Sn	14 20 14.9	+0.2
KTUT	Trabzon	1.77	216	PN	Pg	14 19 55.7	+0.3
DIGR	Digorskoe uzhe	1.85	74	*e*Pg	Pg	14 19 56.8	-0.2
DIGR				*e*Sg	Sg	14 20 21.6	+0.6
KIV	Kislovodsk	1.90	36	*e*Pg	Pg	14 19 57.5	-0.4
KIV				*i* Sg	Sg	14 20 21.8	-0.7
KIV0	Kislovodsk Arr	1.91	36	*e*Pg	Pg	14 19 57.6	-0.3
KIV0				*i* Sg	Sg	14 20 22.6	-0.1
LZRR	Lazarevskoye	2.00	320	*e*Pg	Pb	14 19 57.9	-0.1
LZRR				*i* Sg	Sn	14 20 21.8	+1.2
BEYR	Belyy Ugol+	2.00	37	*e*Pg	Pb	14 19 57.8	-0.4
BEYR				*i* Sg	Sg	14 20 24.6	-1.3
ZEI	Tsey	2.06	79	*e*Pg	Pg	14 19 59.9	-1.1
ZEI				*e*Sg	Sg	14 20 28.1	+0.4
SENK	Senkaya-Erzuru	2.06	154	PN	Pb	14 19 59.3	0.0
BAYT	Aydıntepe-Bayb	2.16	201	PN	Pb	14 20 00.7	-0.2
LACR	Lac	2.35	79	*e*Pn	Pb	14 20 05.0	+0.8
LACR				*e*Sn	Sb	14 20 33.6	+0.1

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*TIF **16** 14:24:11.9, 42°.32N×40°.88E, h41^{km}*

*MOS **16** 14:24:13.6±0.0, 42°.53N×41°.07E, h10^{km}, MPVA3.5*

*DDA **16** 14:24:13.0, 41°.85N×40°.47E, h7^{km}±6^{km}, ML2.8*

*ISK **16** 14:24:13.9, 42°.23N×41°.02E, h1^{km}±1^{km}, ML2.6/4*

*NORS **16** 14:24:14.2±0.0, 42°.53N×41°.34E, h10^{km}, MPVA3.2*

ISC 16 14:24:10.7±1.2, 42°.43N±0°.02×41°.04E±0°.03, h0^{km}±11^{km}, n24, σ0^{s}.90/45, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOMR	Dombai	0.96	26	*i* Pg	Pb	14 24 30.1	-0.2
DOMR				*i* Sg	Sg	14 24 42.2	+0.7
BATM	Batumi	0.96	149	PG	Pb	14 24 30.4	+0.2
BATM				SG	Sg	14 24 42.2	+0.7
BATM	Batumi	0.96	149	P	Pb	14 24 30.1	-0.1
BATM				S	Sb	14 24 43.1	-0.3
BCA	Borcka	1.08	156	PG	Pg	14 24 31.6	+0.3
BCA				SG	Sb	14 24 46.4	-0.4
ARXR	Arkhyz	1.14	9	*i* Pg	Pn	14 24 33.7	-0.3
ARXR				*i* Sg	Sb	14 24 48.8	0.0
DBOC	Borcka	1.18	157	*i* P	Pg	14 24 33.2	-0.2
DBOC				*i* S	Sg	14 24 49.2	+0.5
CHOM	Cayeli-Rize	1.35	189	PN	Pb	14 24 37.6	+0.8
CHOM				SN	Sg	14 24 53.4	-0.7
RPOR	Krasnaya Polya	1.39	336	*i* Pg	Pb	14 24 37.8	+0.4
RPOR				*i* Sg	Sn	14 24 56.1	-0.2
ARTV	Artvin	1.41	152	*i* P	Pn	14 24 37.2	-0.6
ARTV				*i* S	Sg	14 24 55.6	-0.4
ARTV				IAML_P			
	comp=Z,2μm,0.1s						
NEY	Neytrino	1.48	56	*e*Pg	Pb	14 24 39.1	0.0
NEY				*e*Sg	Sb	14 24 57.7	-0.9
DAGI	Agillar	1.50	154	*i* P	Pn	14 24 38.2	-0.7
DAGI				*i* S	Sn	14 24 57.5	-1.8
DAGI				IAML_P			
	comp=Z,374nm,0.2s						
SOC	Sochi	1.50	320	*e*Pg	Pg	14 24 39.6	+0.1
SOC				*i* Sg	Sg	14 24 59.6	+0.6
DDEM	Demirkent	1.63	161	*i* P	Pn	14 24 40.7	0.0
DDEM				*i* S	Sn	14 25 01.7	-0.6
GUZR	Guzeripl'	1.70	337	*i* Pg	Pg	14 24 43.0	-0.3
GUZR				*i* Sg	Sg	14 25 05.2	-0.2
SHA1	Shidzhatmaz	1.76	42	*e*Pg	Pb	14 24 44.0	0.0
SHA1				*e*Pg	Pg	14 24 44.8	+0.3
SHA1				*e*Sg	Sb	14 25 06.3	-0.4
SHA1				*e*Sg	Sg	14 25 07.2	-0.1
DIGR	Digorskoe uzhe	1.93	75	*e*Pg	Pb	14 24 46.9	+0.1
DIGR				*e*Sg	Sb	14 25 11.4	-0.1
LZRR	Lazarevskoye	1.93	322	*e*Pg	Pg	14 24 47.6	-0.1
LZRR				*e*Sg	Sg	14 25 11.8	-0.9
KIV	Kislovodsk	1.94	38	*e*Pg	Pg	14 24 47.4	-0.4
KIV				*e*Sg	Sb	14 25 11.3	-0.4
SENK	Senkaya-Erzuru	2.11	152	PN	Pb	14 24 49.1	-0.8
BAYT	Aydıntepe-Bayb	2.15	199	PN	Pb	14 24 49.6	-0.9
LACR	Lac	2.43	80	*e*Pn	Pb	14 24 55.3	0.0
LACR				*e*Sn	Sn	14 25 23.7	+1.4
HANI	Diyarbakir_Han	4.04	187	*i* P	Pg	14 25 26.6	-1.6
HANI				IAML_P			
	comp=Z,415nm,0.1s						
SVAN	Silvan-Diyarba	4.28	178	*i* P	Pn	14 25 20.2	+3.2
SVAN				IAML_P			
	comp=Z,2μm,0.1s						
SRTM	Siirt_Merkez	4.49	171	*i* P	Pb	14 25 32.9	+2.5
SRTM				IAML_P			
	comp=Z,403nm,0.2s						

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*MOS **16** 14:24:47.2±1.3, 48°.15N×156°.71E, h35^{km}, mb4.6/1, Error ellipse: s-maj=13.1km s-min=4.5km az=69.1*

*IDC **16** 14:24:48.3±0.7, 48°.58N×153°.81E, h91^{km}±5^{km}, mb3.6/20, mb1 3.7/25, mb1mx3.6/47, mbtmp3.9/25, MS2.5/1, Ms1 2.5/1, ms1mx2.1/49, Error ellipse: s-maj=15.4km s-min=9.8km az=145.0*

*SKHL **16** 14:24:48.5±0.6, 48°.39N×154°.39E, h106^{km}±7^{km}, mb4.6/7, msh5.3/4*

*KRSC **16** 14:24:48.5±1.9, 48°.16N×156°.72E, h30^{km}±29^{km}, ML4.6*

ISC 16 14:24:47.9±0.7, 48°.43N±0°.08×154°.34E±0°.08, h100^{km}, n101, σ1^{s}.79/117, mb4.0/27, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.54	26	*e*P	Pn	14 25 29.2	+1.7
SKR				*e*S	Sn	14 25 59.1	+1.3
SKR	Severo-Kuril's	2.54	26	*e*P	Pn	14 25 28.9	+1.4
SKR				AMB	AMB	14 25 31.0	
	210nm,0.7s						
SKR				*e*S	Sn	14 25 58.7	+0.9
SKR				A	A	14 26 02.9	
	230nm,0.4s						
SKR				A	A	14 26 02.9	
	390nm,0.4s						
SKR	Severo-Kuril's	2.54	26	*e*PN	Pn	14 25 28.7	+1.2
SKR				*e*S	Sn	14 25 59.1	+1.3
SKR				pmax	pmax		
	comp=Z,236nm,0.7s						
SKR				smax	smax		
	comp=N,227nm,0.4s						
SKR				smax	smax		
	comp=E,393nm,0.3s						
PAU	Pauzhetka	3.44	27	*e*P	Pn	14 25 40.8	+1.3
PAU				*e*S	Sn	14 26 19.8	+0.5
PAU	Pauzhetka	3.44	27	*e*P	Pn	14 25 40.7	+1.3
PAU				AMB	AMB	14 25 41.2	
	comp=E,50nm,0.3s						
PAU				*e*S	Sn	14 26 20.3	+1.0
PAU				A	A	14 26 22.3	
	comp=E,30nm,0.2s						
PAU				A	A	14 26 22.3	
	comp=E,60nm,0.2s						
PAU	Pauzhetka	3.44	27	PN	Pn	14 25 40.8	+1.3
PAU				S	Sn	14 26 19.8	+0.5
KDTR	Khodutka, Kamc	4.16	34	*e*P	Pn	14 25 48.9	-0.2
KDTR				*e*S	Sn	14 26 34.1	-2.4
KDTR	Khodutka, Kamc	4.16	34	PN	Pn	14 25 48.9	-0.2
KDTR				S	Sn	14 26 34.1	-2.4
MTVR	Mutnovka	4.75	30	*e*P	Pn	14 25 58.4	+1.2
MTVR				*e*S	Sn	14 26 50.9	-0.2
MTVR	Mutnovka	4.75	30	PN	Pn	14 25 58.4	+1.2
MTVR				S	Sn	14 26 50.9	-0.2
RUS	Russkaya	4.82	32	*e*P	Pn	14 25 58.3	+0.3
RUS				*e*S	Sn	14 26 49.8	-2.8
RUS	Russkaya	4.82	32	*e*P	Pn	14 25 58.3	+0.3
RUS	Russkaya	4.82	32	PN	Pn	14 25 58.3	+0.3
RUS				S	Sn	14 26 49.8	-2.8
APC	Apacha	4.85	21	*e*P	Pn	14 26 02.1	+3.7
APC	Apacha	4.85	21	PN	Pn	14 26 02.1	+3.7
KRMR	Karymshinskiy	5.03	27	*e*P	Pn	14 26 02.2	+1.3
KRMR				*e*S	Sn	14 26 57.0	-0.7
KRMR	Karymshinskiy	5.03	27	PN	Pn	14 26 02.2	+1.3
KRMR				S	Sn	14 26 57.0	-0.7
PETK	Petropavlovsk-	5.15	23	P	Pn	14 26 04.9	+2.3
	comp=E,4.8nm,0.3s,baz=191,slow=13,SNR=122						
PETK				S	Sn	14 27 09.4	+8.7
	comp=E,0.4nm,0.3s,baz=42,slow=14,SNR=2.0						
PET	Petropavlovsk	5.36	29	*e*P	Pn	14 26 07.3	+2.0
PET				*e*S	Sn	14 27 05.8	+0.1
PET	Petropavlovsk	5.36	29	*e*P	Pn	14 26 06.9	+1.6
PET				AMB	AMB	14 26 07.5	
	comp=E,10.0nm,0.2s						
PET				*e*S	Sn	14 27 05.9	+0.2
PET				A	A	14 27 07.2	
	comp=E,70nm,0.6s						
PET	Petropavlovsk	5.36	29	*e*PN	Pn	14 26 09.3	+4.0
PET				*e*S	Sn	14 27 05.6	-0.1
PET				smax	smax		
	comp=N,67nm,0.6s						
DALK	Dalny	5.40	30	*e*P	Pn	14 26 07.0	+1.1
DALK				*e*S	Sn	14 27 05.8	-0.8
DALK	Dalny	5.40	30	PN	Pn	14 26 07.0	+1.1
DALK				S	Sn	14 27 05.8	-0.8
KUR	Kuril'sk	5.47	237	*i* P	Pn	14 26 09.1	+2.2
KUR				AMB	AMB	14 26 11.7	
	comp=N,20nm,0.7s						
KUR				AMB	AMB	14 26 11.7	
	comp=N,50nm,0.7s						
KUR				*e*S	Sn	14 27 08.4	0.0
KUR				A	A	14 27 14.8	
	comp=N,50nm,0.4s						
KUR				A	A	14 27 14.8	
	comp=N,20nm,0.4s						
KUR	Kuril'sk	5.47	237	*e*PN	Pn	14 26 09.1	+2.2
KUR				*e*S	Sn	14 27 11.2	+2.8
KUR				pmax	pmax		
	comp=Z,19nm,0.1s						
KUR				smax	smax		
	comp=E,16nm,0.3s						
KUR				smax	smax		
	comp=N,44nm,0.5s						
UGLR	Uglovaya	5.57	29	*e*P	Pn	14 26 10.3	+2.0
UGLR	Uglovaya	5.57	29	PN	Pn	14 26 10.3	+2.0
KOK	Koryaka	5.58	28	*e*P	Pn	14 26 10.4	+1.9
KOK	Koryaka	5.58	28	*e*P	Pn	14 26 10.4	+1.9
KOK	Koryaka	5.58	28	PN	Pn	14 26 10.4	+1.9
AVH	Avacha	5.59	28	*e*P	Pn	14 26 10.3	+1.7
AVH	Avacha	5.59	28	PN	Pn	14 26 10.3	+1.7
SMAR	Somma	5.61	29	*e*P	Pn	14 26 11.0	+2.0
SMAR	Somma	5.61	29	PN	Pn	14 26 11.0	+2.0
KRX	Arik	5.64	27	*e*P	Pn	14 26 09.9	+0.5
KRX	Arik	5.64	27	PN	Pn	14 26 09.9	+0.5
SDLR	Sedlovina	5.65	29	*e*P	Pn	14 26 09.9	+0.5
SDLR	Sedlovina	5.65	29	PN	Pn	14 26 09.9	+0.5
NLC	Nalytchevo	5.71	32	*e*S	Sn	14 27 10.2	-4.1
GNL	Ganaly	5.75	22	*e*P	Pn	14 26 12.9	+2.2
GNL	Ganaly	5.75	22	PN	Pn	14 26 12.9	+2.2
SPN	Mys Shipunski	5.91	35	*e*P	Pn	14 26 11.1	-1.7
SPN				*e*S	Sn	14 27 12.5	-6.5
SPN	Mys Shipunski	5.91	35	PN	Pn	14 26 11.1	-1.7
KII	Karymskiy	6.47	28	P	Pn	14 26 23.3	+2.8
KII	Karymskiy	6.47	28	PN	Pn	14 26 23.3	+2.8
SHO	Shikotan	6.92	232	*e*P	Pn	14 26 27.0	+0.4
SHO				AMB	AMB	14 26 28.4	
	comp=N,40nm,0.6s						
SHO	Shikotan	6.92	232	*e*PN	Pn	14 26 24.1	-2.5
SHO				pmax	pmax		
	comp=Z,13nm,0.2s						
SHO				pmax	pmax		
	comp=N,4.0nm,0.1s						
TUMR	Tumrok	7.75	25	*e*P	Pn	14 26 40.4	+2.5
TUMR	Tumrok	7.75	25	PN	Pn	14 26 40.4	+2.5
TUMD	Tumrok D	7.76	27	*e*P	Pn	14 26 39.4	+1.5
YSS	Yuzh-Sakhalins	7.95	264	*e*P	Pn	14 26 42.5	+1.9
YSS				AMB	AMB	14 26 44.0	
	comp=N,10.0nm,0.6s						
YSS	Yuzh-Sakhalins	7.95	264⥣	*e*PN	Pn	14 26 42.7	+2.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JKA	Kamikawa-asahi	9.20	246	*e*P	Pn	14 26 59.0	+1.4
ASAJ	Asahikawa	9.20	246	P	Pn	14 26 59.0	+1.4
	comp=Z,0.5nm,0.3s,baz=83,slow=18,SNR=11						
KBTR	Krutoberegovo	9.36	30	*e*P	Pn	14 26 59.0	-0.7
KBTR	Krutoberegovo	9.36	30	PN	Pn	14 26 59.0	-0.7
NKL	Nikolayevsk	9.85	304	*e*P	Pn	14 27 06.4	0.0
NKL				AMB	AMB	14 27 07.8	
	comp=Z,7.0nm,1.0s						
NKL	Nikolayevsk	9.85	304	*e*PN	Pn	14 27 06.4	0.0
NKL				pmax	pmax		
	comp=E,24nm,1.2s						
NKL				pmax	pmax		
	comp=Z,34nm,1.2s						
BKI	Bering	9.89	42	*e*S	Sn	14 28 40.8	-15
MA2	Magadan	11.37	351	P	Pn	14 27 27.5	+0.7
	comp=Z,1.5nm,0.3s,baz=166,slow=11,SNR=25						
EKMR	Ekimchan	14.30	297	*e*P	Pn	14 28 06.0	+0.6
EKMR				AMB	AMB	14 28 12.0	
	comp=Z,6.0nm,0.6s						
SEY	Seymchan	14.58	356	P	Pn	14 28 08.8	-0.2
	comp=Z,0.4nm,0.3s,baz=33,slow=20,SNR=4.2						
KLR	Kul'dur	14.89	282	P	Pn	14 28 10.3	-2.7
	comp=Z,0.1nm,0.3s,baz=344,slow=20,SNR=2.0						
USRK	Ussuriysk Ar.	15.99	263	P	Pn	14 28 25.3	-1.6
	comp=Z,0.1nm,0.3s,baz=65,slow=11,SNR=3.7						
MJAR	Matsushiro Arr	16.77	231	P	Pn	14 28 35.8	-0.8
	comp=Z,0.0nm,0.3s,baz=27,slow=16,SNR=3.5						
MJAR				LR	LR	14 35 41.9	
	comp=Z,17nm,19.4s,baz=105,slow=39						
KROS	Kirovskiy	18.02	300	*e*P	P	14 28 50.0	-0.7
KROS				AMB	AMB	14 28 51.2	
	comp=Z,6.0nm,0.8s						
KSRS	Korea Array	22.12	250	P	P	14 29 33.4	-1.6
	comp=Z,1.2nm,0.6s,baz=53,slow=10,SNR=3.4						
H11N2	WAKE ISLAND Hy	30.37	156	T	T	15 03 15.8	
	baz=345,slow=76						
H11N1	WAKE ISLAND Hy	30.39	156	T	T	15 03 17.9	
	baz=345,slow=76						
H11N3	WAKE ISLAND Hy	30.39	156	T	T	15 03 20.3	
	baz=345,slow=76						
H11S1	WAKE ISLAND Hy	31.49	157	T	T	15 03 59.8	
	baz=346						
H11S3	WAKE ISLAND Hy	31.50	157	T	T	15 04 00.9	
	baz=346,slow=74						
H11S2	WAKE ISLAND Hy	31.51	157	T	T	15 04 01.5	
	baz=346,slow=74						
SONM	Songino Array	31.59	287	P	P	14 30 59.0	-2.0
	comp=Z,0.2nm,0.3s,baz=86,slow=7.9,SNR=4.8						
ILAR	Eielson Array	34.73	40	P	P	14 31 29.9	+2.0
	comp=Z,0.7nm,0.7s,baz=260,slow=5.8,SNR=14						
ILAR				pP	pP	14 31 50.4	0.0
	comp=Z,0.3nm,0.7s,baz=269,slow=7.3,SNR=2.4						
INK	Inuvik	39.80	34	P	P	14 32 13.0	+2.5
	comp=Z,1.7nm,0.5s,baz=295,slow=6.1,SNR=19						
ZALV	Zalesovo Beam	42.32	305	P	P	14 32 28.6	-2.8
	comp=Z,0.9nm,0.5s,baz=58,slow=7.4,SNR=5.2						
ZALV				PcP	PcP	14 34 22.7	-0.4
	comp=Z,0.8nm,0.6s,baz=68,slow=1.7,SNR=5.8						
MKAR	Makanchi Array	46.92	297	P	P	14 33 06.0	-2.2
	comp=Z,0.6nm,0.4s,baz=56,slow=6.2,SNR=23						
MKAR				pP	pP	14 33 29.1	-2.0
	comp=Z,0.3nm,0.8s,baz=72,slow=4.7,SNR=2.6						
MKAR				PcP	PcP	14 34 39.3	+0.2
	comp=Z,0.3nm,0.3s,baz=67,slow=4.9,SNR=9.4						
YKA	Yellowknife Ar	49.09	38	P	P	14 33 27.0	+2.5
	comp=Z,2.1nm,0.6s,baz=298,slow=7.3,SNR=32						
CMAR	Chiang Mai Arr	53.57	256	P	P	14 33 59.6	+1.0
	comp=Z,1.5nm,0.7s,baz=33,slow=7.2,SNR=14						
JIRN	Jiri	55.64	274	*e*P	P	14 34 13.2	-0.7
	comp=Z,4.6nm,0.4s						
GUN	Gumba	55.68	275	*e*P	P	14 34 13.7	-0.5
	comp=Z,3.8nm,0.3s						
RAMN	Ramite	55.84	273	*e*P	P	14 34 12.2	-3.0
	comp=Z,4.5nm,0.3s						
PKI	Pulchoki	56.22	275	*e*P	P	14 34 16.1	-1.9
	comp=Z,7.1nm,0.8s						
DMN	Daman	56.40	275	*e*P	P	14 34 17.4	-1.7
	comp=Z,9.4nm,0.8s						
ARCES	ARCESS Array B	56.54	341	P	P	14 34 17.6	-1.7
	comp=Z,1.3nm,0.9s,baz=45,slow=8.0,SNR=4.9						
DANN	Dangsing	56.80	277	*e*P	P	14 34 21.7	-0.3
	comp=Z,8.1nm,0.6s						
PYUN	Piuthan	57.47	277	*e*P	P	14 34 26.0	-0.7
	comp=Z,2.4nm,0.3s						
NVAR	Mina Array Bea	60.94	64	P	P	14 34 52.7	+2.2
	comp=Z,0.4nm,0.6s,baz=334,slow=6.0,SNR=2.7						
FINES	FINESS Array B	62.88	335	P	P	14 35 01.4	-1.3
	comp=Z,0.5nm,0.3s,baz=38,slow=6.7,SNR=9.8						
PDAR	Pinedale Array	63.10	55	P	P	14 35 08.3	+3.4
	comp=Z,0.8nm,0.8s,baz=321,slow=1.9,SNR=6.7						
PDAR				pP	pP	14 35 31.4	+1.8
	comp=Z,0.5nm,0.7s,baz=338,slow=2.1,SNR=3.9						
ULM	Lac du Bonnet	64.72	42	*e*P	P	14 35 16.9	+1.9
ULM	Lac du Bonnet	64.72	42	P	P	14 35 16.8	+1.8
	comp=Z,0.8nm,0.4s,baz=302,slow=6.0,SNR=3.5						
NOA	NORSAR Array B	66.91	341	P	P	14 35 28.2	-0.7
	comp=Z,0.6nm,0.7s,baz=26,slow=6.4,SNR=2.8						
WRA	Warramunga Arr	70.37	200	P	P	14 35 52.0	+1.2
WRA	Warramunga Arr	70.37	200	P	P	14 35 52.0	+1.2
	comp=Z,1.9nm,0.6s,baz=17,slow=6.6,SNR=22						
AKASG	Malin Array Be	70.61	327	P	P	14 35 50.8	-1.2

	comp=Z,0.4nm,0.4s,baz=32,slow=5.8,SNR=2.5						
SCHQ	Schefferville	71.44	24	P	P	14 35 58.4	+1.4
	comp=Z,4.2nm,0.5s,baz=340,slow=6.2,SNR=18						
ASAR	Alice Springs	74.06	199	P	P	14 36 14.7	+1.9
	comp=Z,0.8nm,0.6s,baz=14,slow=6.1,SNR=23						
ASAR				pP	pP	14 36 36.4	-1.2
	comp=Z,0.8nm,0.8s,baz=15,slow=5.5,SNR=4.3						
TXAR	Lajitas Array	75.96	62	P	P	14 36 26.9	+3.0
	comp=Z,0.3nm,0.4s,baz=301,slow=5.1,SNR=8.1						
TXAR				pP	pP	14 36 49.9	+0.4
	comp=Z,0.3nm,0.6s,baz=332,slow=3.1,SNR=2.7						
BRTR	Keskin Array B	77.73	317	P	P	14 36 34.2	+0.4
	comp=Z,0.3nm,0.3s,baz=64,slow=1.8,SNR=3.3						

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*ISCJB **16** 14:45:14.8±0.6, 25°.81S±0°.08×179°.6E±0°.1, h503^{km}, mb3.6/10, Error ellipse: s-maj=16.6km s-min=10.2km az=10.4*

*IDC **16** 14:45:16.6±1.8, 25°.79S×179°.60E, h516^{km}±19^{km}, mb3.3/10, mb1 3.5/12, mb1mx3.3/31, mbtmp4.1/12, Error ellipse: s-maj=22.3km s-min=14.2km az=153.0*

ISC 16 14:45:15.2±0.7, 25°.9S±0°.1×179°.6E±0°.1, h503^{km}, n19, σ1^{s}.22/21, mb3.5/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	12.55	189	P	P	14 48 01.6	+2.2
	2.9nm,0.3s,baz=283,slow=2.5,SNR=26						
URZ				S	S	14 50 12.0	-2.8
	0.3nm,0.3s,baz=262,slow=15,SNR=2.6						
RPZ	Rata Peaks	19.14	199	P	P	14 49 06.3	+0.7
	0.2nm,0.3s,baz=23,slow=15,SNR=2.7						
CTA	Charters Tower	31.19	274	P	P	14 50 53.9	+1.1
	2.4nm,0.8s,baz=88,slow=11,SNR=6.4						
ASAR	Alice Springs	41.41	263	P	P	14 52 18.2	+0.9
	1.0nm,0.6s,baz=94,slow=7.7,SNR=27						
ASAR				ScP	ScP	14 57 05.2	-0.4
	0.3nm,0.9s,baz=103,slow=4.2,SNR=3.5						
ASAR				S	S	14 57 55.7	-0.1
	0.1nm,0.6s,baz=93,slow=18,SNR=3.3						
WRA	Warramunga Arr	41.97	268	P	P	14 52 21.9	+0.1
	1.4nm,0.7s,baz=101,slow=6.3,SNR=16						
WRA				ScP	ScP	14 57 06.0	-2.0
	0.2nm,0.6s,baz=100,slow=3.9,SNR=2.9						
MJAR	Matsushiro Arr	73.31	326	P	P	14 55 54.3	-0.8
	2.2nm,0.7s,baz=146,slow=4.6,SNR=6.1						
KSRS	Korea Array	79.52	321	P	P	14 56 29.6	+0.4
	1.1nm,0.8s,baz=125,slow=6.7,SNR=6.7						
PETK	Petropavlovsk-	80.91	347	P	P	14 56 35.4	-0.8
	4.5nm,0.9s,baz=112,slow=9.8,SNR=4.1						
NVAR	Mina Array Bea	86.39	44	P	P	14 57 05.3	+1.2
	0.6nm,0.6s,baz=221,slow=7.4,SNR=6.4						
SEY	Seymchan	91.09	348	P	P	14 57 25.4	+0.3
	1.2nm,0.2s,baz=225,slow=8.6,SNR=3.6						
TXAR	Lajitas Array	91.75	58	P	P	14 57 29.9	+0.9
	0.1nm,0.5s,baz=218,slow=5.7,SNR=3.7						
ILAR	Eielson Array	94.00	14	P	P	14 57 37.3	-1.1
	0.3nm,0.8s,baz=210,slow=6.0,SNR=4.3						
ARCES	ARCESS Array B	133.71	348	PKP	PKiKP	15 03 34.6	-0.4
	1.8nm,1.0s,baz=31,slow=3.3,SNR=5.2						
FINES	FINESS Array B	140.17	340	PKhKP	PKPpre	15 03 38.0	
	0.3nm,0.3s,baz=35,slow=5.1,SNR=6.0						
FINES				PKP	PKiKP	15 03 47.1	-1.2
	2.0nm,1.0s,baz=93,slow=3.1,SNR=3.7						
NB2	NORSAR Subarra	143.94	350	PKP	PKPbc	15 03 50.6	-1.0
	comp=Z,2.3nm,0.6s,baz=17,slow=3.4						
NOA	NORSAR Array B	143.94	350	PKP	PKPbc	15 03 50.3	-1.3
	comp=Z,0.9nm,0.6s,baz=22,slow=3.8,SNR=19						
AKASG	Malin Array Be	146.39	325	PKPbc	PKPbc	15 03 58.3	-0.8
	comp=Z,1.1nm,0.4s,baz=41,slow=3.9,SNR=3.2						
BRTR	Keskin Array B	148.43	304	PKPbc	PKPbc	15 04 05.0	0.0
	comp=Z,0.5nm,0.6s,baz=88,slow=4.6,SNR=2.7						
EKA	Eskdalemuir Ar	150.48	3	PKPbc	PKPbc	15 04 08.6	-0.6
	comp=Z,0.5nm,0.4s,baz=344,slow=2.5,SNR=8.0						

IDC 16 14:53:21.4±2.0, 3°.40N×127°.70E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.2/29, mbtmp3.4/3, Error ellipse: s-maj=184.0km s-min=32.1km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.10	165	P	P	14 58 38.8	-0.1
	0.2nm,0.7s,baz=345,slow=10,SNR=3.2						
ASAR	Alice Springs	27.57	168	P	P	14 59 10.6	+0.2
	0.2nm,0.9s,baz=352,slow=7.7,SNR=5.1						
FINES	FINESS Array B	92.58	332	P	P	15 06 34.5	-0.1
	1.3nm,0.7s,baz=79,slow=4.1,SNR=6.7						

IDC 16 15:04:33.5±9.0, 6°.72S×147°.01E, h295^{km}±87^{km}, mb3.1/4, mb1 3.2/5, mb1mx2.9/35, mbtmp3.7/5, Error ellipse: s-maj=47.1km s-min=40.5km az=139.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.00	222	P	P	15 08 21.9	-1.7
	0.2nm,0.3s,baz=46,slow=11,SNR=15						
ASAR	Alice Springs	21.04	215	P	P	15 08 55.0	-0.2
	1.2nm,0.6s,baz=54,slow=9.0,SNR=36						
FITZ	Fitzroy Crossi	23.70	240	P	P	15 09 20.6	+1.0
	1.8nm,0.4s,baz=52,slow=9.9,SNR=19						
STKA	Stephens Creek	25.53	191	P	P	15 09 36.9	+1.0
	1.4nm,0.8s,baz=7.1,slow=8.1,SNR=3.6						
ILAR	Eielson Array	86.14	23	P	P	15 16 41.5	+0.2
	0.6nm,1.1s,baz=248,slow=4.8,SNR=2.8						
TORD	Torodi Ar. Bea	145.27	283	PKPbc	PKPdf	15 23 36.2	-1.1
	0.1nm,0.4s,baz=60,slow=2.6,SNR=3.2						

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*KRNET **16** 15:11:11.0±0.1, 42°.55N×79°.68E, h11^{km}, mb2.3*

*NNC **16** 15:11:11.4±1.0, 42°.58N×79°.67E, h0^{km}, mb2.9, mpv2.3, Error ellipse: s-maj=6.3km s-min=4.2km az=134.0*

*SOME **16** 15:11:12.3, 42°.57N×79°.68E, h15^{km}*

ISC 16 15:11:11.4±1.4, 42°.56N±0°.04×79°.64E±0°.04, h6^{km}±14^{km}, n21, σ0^{s}.75/41, 7C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.74	323	P	Pb	15 11 26.4	-0.4
	2.4nm,0.1s						
UZB				S	Sb	15 11 36.6	-0.7
	2.8nm,0.1s						
UZB	Uzynbulak	0.74	323	eP	Pb	15 11 26.3	-0.5
	baz=21						
UZB				eS	Sb	15 11 36.5	-0.7
	baz=21						
UZB	Uzynbulak	0.74	323	eP	Pb	15 11 26.3	-0.5
	2.4nm,0.1s						
UZB				eS	Sb	15 11 36.5	-0.7
	3.4nm,0.1s						
PDGK	Podgornoye	0.78	352	P	Pg	15 11 26.5	+0.2
	0.8nm,0.2s						
PDGK				S	Sg	15 11 36.9	+0.4
	1.3nm,0.3s						
PDGK	Podgornoye	0.78	352	⇑P	Pg	15 11 26.3	0.0
	0.6nm,0.4s						
PDGK				⇑S	Sg	15 11 36.9	+0.4
	2.4nm,0.6s						
PDGK	Podgornoye	0.78	352	⇓iP	Pg	15 11 26.5	+0.2
	baz=50						
PDGK				⇓iS	Sg	15 11 36.9	+0.4
	baz=50						
PRZ	Przheval'sk	0.92	266	⇓iP	Pg	15 11 29.1	+0.1
	baz=66						
PRZ				⇓iS	Sg	15 11 41.2	+0.3
	baz=66						
KTMS	Ketmen	1.03	30	P	Pg	15 11 31.0	-0.2
KTMS				S	Sg	15 11 44.2	-0.4
KTMS	Ketmen	1.03	30	eP	Pg	15 11 31.0	-0.2
	baz=28						
KTMS				eS	Sg	15 11 44.2	-0.4
	baz=28						
KTMS	Ketmen	1.03	30	eP	Pg	15 11 31.0	-0.2
	0.7nm,0.1s						
KTMS				eS	Sg	15 11 44.2	-0.4
	1.4nm,0.1s						
SATY	Saty	1.03	299	P	Pb	15 11 32.0	+0.2
SATY				S	Sb	15 11 45.9	+0.3
SATY	Saty	1.03	299	eP	Pg	15 11 31.5	+0.2
	1.2nm,0.1s						
SATY				eS	Sg	15 11 45.2	+0.5
	3.5nm,0.1s						
TARG	Taragay, Kyrgy	1.59	239	⇑iP	Pb	15 11 41.5	0.0
	baz=40						
TARG				⇑iS	Sg	15 12 03.6	+0.9
	baz=40						
DJR	Jarkent	1.78	4	eP	Pb	15 11 44.6	+0.2
	0.3nm,0.1s						
DJR				eS	Sg	15 12 07.8	-0.7
	0.9nm,0.2s						
KDJ	Kajisay	1.87	258	⇓iP	Pb	15 11 46.4	+0.3
	baz=58						
KDJ				⇓iS	Sg	15 12 12.1	+0.6
	baz=58						
MDOK	Medeo	2.00	288	⇓Pg	Pn	15 11 46.7	+0.9
	3.0nm,0.8s						
MDOK				⇑Lg	Lg	15 12 13.2	
	3.1nm,0.9s						
CHKK	Chushkaly	2.33	305	eP	Pb	15 11 54.5	+0.7
	baz=5.0						
CHKK				eS	Sg	15 12 24.9	-1.3
	baz=5.0						
CHKK	Chushkaly	2.33	305	eP	Pb	15 11 54.5	+0.7
	0.4nm,0.1s						
CHKK				eS	Sg	15 12 24.9	-1.3
	1.4nm,0.2s						
ULHL	Ulahol	2.53	264	⇓iP	Pb	15 11 55.8	-1.6
	baz=64						
ULHL				⇓iS	Sb	15 12 28.6	-0.3
	baz=64						
BOOM	Boomskoye usch	2.73	270	⇑iP	Pb	15 11 58.7	-2.1
	baz=70						
BOOM				⇑iS	Sb	15 12 33.3	-1.3
	baz=70						
KAPS	Kapalarasan	2.73	356	eP	Pb	15 12 00.8	+0.1
	0.1nm,0.1s						
KAPS				eS	Sb	15 12 35.7	+1.2
	0.3nm,0.1s						

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*KRSC **16** 15:11:11.9±1.0, 55°.78N×163°.38E, h26^{km}±17^{km}, ML4.4*

*ISCJB **16** 15:11:13.7±0.7, 55°.84N±0°.02×163°.36E±0°.04, h29^{km}±5^{km}, mb3.6/19, Error ellipse: s-maj=4.0km s-min=3.7km az=29.0*

*MOS **16** 15:11:13.6±0.8, 57°.85N×163°.37E, h28^{km}, mb4.5/1, Error ellipse: s-maj=7.3km s-min=5.0km az=69.1*

*IDC **16** 15:11:19.3±3.5, 55°.97N×162°.65E, h56^{km}±32^{km}, mb3.4/19, mb1 3.6/21, mb1mx3.4/50, mbtmp3.6/21, ML3.4/2, MS2.7/2, Ms1 2.7/2, ms1mx2.5/35, Error ellipse: s-maj=19.3km s-min=14.0km az=135.0*

ISC 16 15:11:13.5±0.6, 55°.89N±0°.03×163°.36E±0°.03, h20^{km}±5^{km}, n113, σ1^{s}.32/142, mb3.8/19, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.44	316	i P	Pb	15 11 22.6	+0.1
KBTR	Krutoberegovo	0.44	316	PN	Pb	15 11 22.6	+0.1
KBG	Krutoberegovo	0.52	315	i P	Pn	15 11 23.9	-1.8
KBG				eS	Sn	15 11 31.8	-2.1
KBG	Krutoberegovo	0.52	315	PN	Pn	15 11 23.9	-1.8
KBG				S	Sn	15 11 31.8	-2.1
SMKR	Semkarok	1.26	304	eP	Pb	15 11 36.0	-0.6
SMKR				eS	Sb	15 11 52.9	+0.4
SMKR	Semkarok	1.26	304	PN	Pb	15 11 36.0	-0.6
SMKR				S	Sb	15 11 52.9	+0.4
BDR	Baidarnaya	1.38	300	eP	Pb	15 11 38.2	-0.4
BDR				eS	Sb	15 11 56.7	+0.9
BDR	Baidarnaya	1.38	300	PN	Pb	15 11 38.2	-0.4
BDR				S	Sb	15 11 56.7	+0.9
SRKR	Sorokina	1.44	303	eP	Pb	15 11 39.2	-0.5
SRKR				eS	Sb	15 11 58.0	+0.4
SRKR	Sorokina	1.44	303	PN	Pb	15 11 39.2	-0.5
SRKR				S	Sb	15 11 58.0	+0.4
ZLN	Zelenaya	1.45	276	eP	Pn	15 11 38.2	-0.4
ZLN				eS	Sn	15 11 56.3	-0.7
ZLN	Zelenaya	1.45	276	PN	Pn	15 11 38.2	-0.4
ZLN				S	Sn	15 11 56.3	-0.7
CIRR	Tsirk	1.49	280	eP	Pn	15 11 38.8	-0.4
CIRR				eS	Sn	15 11 57.5	-0.5
CIRR	Tsirk	1.49	280	PN	Pn	15 11 38.8	-0.4
CIRR				S	Sn	15 11 57.5	-0.5
BZGR	Bezymyannyi-Gr	1.50	273	eP	Pn	15 11 38.7	-0.7
BZGR	Bezymyannyi-Gr	1.50	273	PN	Pn	15 11 38.7	-0.7
LGNR	Loginova	1.51	278	eP	Pn	15 11 39.5	-0.2
LGNR				eS	Sn	15 11 58.5	-0.4
LGNR	Loginova	1.51	278	PN	Pn	15 11 39.5	-0.2
LGNR				S	Sn	15 11 58.5	-0.4
KLY	Klyuchi	1.58	287	i P	Pn	15 11 38.6	-1.7
KLY				eS	Sn	15 11 56.9	-3.1
KLY	Klyuchi	1.58	287	PN	Pn	15 11 38.6	-1.7
KLY				S	Sn	15 11 56.9	-3.1
BZWR	Bezymyannyi-We	1.61	274	eP	Pn	15 11 40.7	-0.3
BZWR				eS	Sn	15 12 00.3	-1.0
BZWR	Bezymyannyi-We	1.61	274	PN	Pn	15 11 40.7	-0.3
BZWR				S	Sn	15 12 00.3	-1.0
BZMR	Bezymyannaya	1.62	273	eP	Pn	15 11 40.0	-1.0
BZMR	Bezymyannaya	1.62	273	PN	Pn	15 11 40.0	-1.0
BKI	Bering	1.64	114	eP	Pn	15 11 39.0	-2.1
BKI				eS	Sn	15 12 00.9	-0.6
BKI	Bering	1.64	114	PN	Pn	15 11 39.0	-2.1
BKI				S	Sn	15 12 00.9	-0.6
MKZ	Mys Kozlova	1.64	216	eP	Pn	15 11 40.1	-1.0
MKZ				eS	Sn	15 11 59.2	-2.3
MKZ	Mys Kozlova	1.64	216	PN	Pn	15 11 40.1	-1.0
MKZ				S	Sn	15 11 59.2	-2.3
KIRR	Kirishev	1.70	273	eP	Pn	15 11 42.1	0.0
KIRR				eS	Sn	15 12 02.6	-0.8
KIRR	Kirishev	1.70	273	PN	Pn	15 11 42.1	0.0
KIRR				S	Sn	15 12 02.6	-0.8
KPT	Kopyto	1.77	274	eP	Pn	15 11 43.1	+0.1
KPT				eS	Sn	15 12 03.9	-1.1
KPT	Kopyto	1.77	274	PN	Pn	15 11 43.1	+0.1
KPT				S	Sn	15 12 03.9	-1.1
TUMD	Tumrok D	1.82	249	eP	Pn	15 11 43.3	-0.4
TUMD				eS	Sn	15 12 05.0	-1.1
KZV	Kizimen	1.91	247	eP	Pn	15 11 44.6	-0.5
KZV	Kizimen	1.91	247	PN	Pn	15 11 44.6	-0.5
TUMR	Tumrok	1.93	253	eP	Pn	15 11 45.5	+0.3
TUMR				eS	Sn	15 12 09.1	+0.2
TUMR	Tumrok	1.93	253	PN	Pn	15 11 45.5	+0.3
TUMR				S	Sn	15 12 09.1	+0.2
KOZ	Kozyrevsk	1.97	276	eP	Pn	15 11 46.5	+0.8
KOZ				eS	Sb	15 12 11.7	-1.0
KOZ	Kozyrevsk	1.97	276	PN	Pn	15 11 46.5	+0.8
KOZ				S	Sb	15 12 11.7	-1.0
SRDR	Sredinnyy	2.09	283	eP	Pn	15 11 48.1	+0.8
SRDR				eS	Sn	15 12 13.5	+0.8
SRDR	Sredinnyy	2.09	283	PN	Pn	15 11 48.1	+0.8
SRDR				S	Sn	15 12 13.5	+0.8
ESO	Esso	2.63	273	eP	Pn	15 11 55.4	+0.7
ESO	Esso	2.63	273	PN	Pn	15 11 55.4	+0.7
KII	Karymskiy	2.93	232	eP	Pn	15 11 59.6	+0.7
KII	Karymskiy	2.93	232	PN	Pn	15 11 59.6	+0.7
OSSR	Ossora	3.37	357	eP	Pn	15 12 07.1	+2.2
OSSR	Ossora	3.37	357	PN	Pn	15 12 07.1	+2.2
SPN	Mys Shipunski	3.41	216	eP	Pn	15 12 04.3	-1.2
SPN				eS	Sn	15 12 42.6	-2.7
SPN	Mys Shipunski	3.41	216	PN	Pn	15 12 04.3	-1.2
NLC	Nalytchevo	3.59	222	eP	Pn	15 12 08.0	0.0
NLC				eS	Sn	15 12 48.5	-1.3
NLC	Nalytchevo	3.59	222	PN	Pn	15 12 08.0	0.0
PALN	Palana	3.69	332	eP	Pb	15 12 12.8	-5.1
PALN	Palana	3.69	332	PN	Pb	15 12 12.8	-5.1
SDLR	Sedlovina	3.70	227	eP	Pn	15 12 10.0	+0.5
SDLR				eS	Sn	15 12 53.9	+1.4
SDLR	Sedlovina	3.70	227	PN	Pn	15 12 10.0	+0.5
SDLR				S	Sn	15 12 53.9	+1.4
KRX	Arik	3.74	229	eP	Pn	15 12 12.4	+2.3
KRX	Arik	3.74	229	PN	Pn	15 12 12.4	+2.3
SMAR	Somma	3.74	227	eP	Pn	15 12 10.9	+0.7
SMAR	Somma	3.74	227	PN	Pn	15 12 10.9	+0.7
AVH	Avacha	3.77	228	eP	Pn	15 12 12.6	+2.2
AVH	Avacha	3.77	228	PN	Pn	15 12 12.6	+2.2
UGLR	Uglovaya	3.77	226	eP	Pn	15 12 11.5	+1.0
UGLR	Uglovaya	3.77	226	PN	Pn	15 12 11.5	+1.0
KOK	Koryaka	3.79	228	eP	Pn	15 12 11.8	+1.0
KOK	Koryaka	3.79	228	PN	Pn	15 12 11.8	+1.0
GNL	Ganaly	3.83	237	eP	Pn	15 12 12.5	+1.1
GNL	Ganaly	3.83	237	PN	Pn	15 12 12.5	+1.1
DALK	Dalny	3.93	225	eP	Pn	15 12 12.9	+0.3
DALK				eS	Sn	15 12 57.5	-0.6
DALK	Dalny	3.93	225	PN	Pn	15 12 12.9	+0.3
PET	Petropavlovsk	3.98	226	ePN	Pn	15 12 14.4	+1.1
PETK	Petropavlovsk-	4.32	232	P	Pn	15 12 19.2	+1.2
	2.5nm,0.3s,baz=66,slow=16,SNR=51						
PETK				S	Sn	15 13 14.2	+6.4
	1.0nm,0.3s,baz=59,slow=30,SNR=2.0						
PETK				LR	LR	15 13 45.9	
	comp=Z,56nm,20.0s,baz=25,slow=36						
KRMR	Karymshinskiy	4.33	227	eP	Pn	15 12 19.6	+1.4
KRMR				eS	Sn	15 13 09.2	+1.2
KRMR	Karymshinskiy	4.33	227	PN	Pn	15 12 19.6	+1.4
KRMR				S	Sn	15 13 09.2	+1.2
RUS	Russkaya	4.49	221	eP	Pn	15 12 20.5	+0.2
RUS				eS	Sn	15 13 12.6	+0.8
RUS	Russkaya	4.49	221	PN	Pn	15 12 20.5	+0.2
RUS				S	Sn	15 13 12.6	+0.8
MTVR	Mutnovka	4.58	224	eP	Pn	15 12 22.7	+1.1
MTVR				eS	Sn	15 13 13.8	-0.4
MTVR	Mutnovka	4.58	224	PN	Pn	15 12 22.7	+1.1
APC	Apacha	4.69	233	eP	Pn	15 12 24.6	+1.6
APC	Apacha	4.69	233	PN	Pn	15 12 24.6	+1.6
TILK	Tilichiki	4.80	17	eP	Pn	15 12 28.1	+3.6
TILK	Tilichiki	4.80	17	PN	Pn	15 12 28.1	+3.6
KDTR	Khodutka, Kamc	5.15	220	eS	Sn	15 13 30.7	+2.6
KMSK	Kamenskaya	6.75	11	eP	Pn	15 12 55.1	+3.8
KMSK	Kamenskaya	6.75	11	PN	Pn	15 12 55.1	+3.8
MA2	Magadan	7.68	304	LR	LR	15 16 15.5	
	comp=Z,114nm,19.6s,baz=182,slow=40						
ASAJ	Asahikawa	17.72	237	P	P	15 15 19.6	+0.1
	0.4nm,0.3s,baz=46,slow=12,SNR=5.6						
USRK	Ussuriysk Ar.	23.08	253	P	P	15 16 15.8	-1.8
	0.8nm,0.7s,baz=59,slow=15,SNR=3.3						
MJAR	Matsushiro Arr	25.78	232	P	P	15 16 41.7	-1.2
	0.5nm,0.4s,baz=26,slow=6.7,SNR=5.2						
INK	Inuvik	30.49	41	P	P	15 17 27.3	+2.8
	0.3nm,0.6s,baz=329,slow=8.0,SNR=4.8						
SONM	Songino Array	35.17	281	P	P	15 18 04.7	-1.1
	0.2nm,0.4s,baz=63,slow=8.0,SNR=4.9						
H11N2	WAKE ISLAND Hy	36.20	174	T	T	15 56 49.6	
	baz=356,slow=76,SNR=90						
H11N3	WAKE ISLAND Hy	36.22	174	T	T	15 56 49.8	
	baz=356,slow=76,SNR=237						
H11N1	WAKE ISLAND Hy	36.22	174	T	T	15 56 51.8	
	baz=356,slow=76,SNR=127						
H11S1	WAKE ISLAND Hy	37.41	175	T	T	15 58 22.0	
	baz=358,slow=73						
H11S3	WAKE ISLAND Hy	37.42	175	T	T	15 58 23.2	
	baz=358,slow=73,SNR=7.2						
H11S2	WAKE ISLAND Hy	37.43	175	T	T	15 58 24.3	
	baz=358,slow=73,SNR=9.0						
YKA	Yellowknife Ar	39.82	46	P	P	15 18 48.1	+3.3
	0.2nm,0.6s,baz=298,slow=7.9,SNR=4.2						
MKAR	Makanchi Array	48.67	295	P	P	15 19 54.3	-1.6
	0.4nm,0.5s,baz=55,slow=6.3,SNR=9.6						
ARCES	ARCESS Array B	51.20	342	P	P	15 20 15.0	+0.2
ARCES	ARCESS Array B	51.20	342	P	P	15 20 15.0	+0.2
	1.4nm,0.8s,baz=19,slow=7.7,SNR=5.6						
NVAR	Mina Array Bea	53.06	74	P	P	15 20 33.3	+4.0
	0.1nm,0.3s,baz=287,slow=9.2,SNR=2.8						
AAK	Ala-Archa	55.54	297	P	P	15 20 44.5	-2.6
	1.2nm,0.7s,baz=360,slow=13,SNR=6.1						
FINES	FINESS Array B	58.28	337	P	P	15 21 06.7	+0.7
	0.4nm,0.4s,baz=41,slow=6.1,SNR=5.9						
CMAR	Chiang Mai Arr	60.60	259	P	P	15 21 21.6	-1.1
	0.4nm,0.7s,baz=22,slow=7.2,SNR=4.5						
NOA	NORSAR Array B	61.35	345	P	P	15 21 27.4	+0.2
	0.7nm,0.9s,baz=20,slow=6.8,SNR=3.0						
AKASG	Malin Array Be	67.16	330	P	P	15 22 05.4	0.0
	0.7nm,0.5s,baz=28,slow=6.9,SNR=2.8						
TXAR	Lajitas Array	67.84	70	P	P	15 22 14.4	+4.2
	0.5nm,0.7s,baz=296,slow=4.4,SNR=7.0						
GERES	GERESS Array B	72.59	340	P	P	15 22 39.0	0.0
GERES	GERESS Array B	72.59	340	P	P	15 22 39.0	0.0
	0.1nm,0.4s,baz=4.6,slow=4.9,SNR=2.3						
BRTR	Keskin Array B	75.62	322	P	P	15 22 56.5	-0.3
	0.8nm,0.8s,baz=28,slow=9.5,SNR=2.9						
WRA	Warramunga Arr	79.44	208	P	P	15 23 18.6	+0.5
	0.8nm,0.7s,baz=15,slow=5.9,SNR=11						
FITZ	Fitzroy Crossi	80.29	216	P	P	15 23 22.9	+0.3
	1.1nm,0.7s,baz=25,slow=7.4,SNR=4.4						
ASAR	Alice Springs	83.11	207	P	P	15 23 38.5	+1.0
	1.0nm,0.8s,baz=16,slow=5.3,SNR=18						

IDC 16 15:11:52.2±2.6, 0°.53S×98°.64E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.3/41, mbtmp3.4/5, MS2.7/1, Ms1 2.7/1, ms1mx2.5/34, Error ellipse: s-maj=120.6km s-min=21.2km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	10.93	125	LR	LR	15 18 55.1	
	comp=Z,45nm,20.5s,baz=227,slow=39						
H08S2	Diego Garcia H	27.00	254	T	T	15 45 18.2	
	baz=76,slow=76,SNR=10.0						
H08S3	Diego Garcia H	27.01	254	T	T	15 45 19.0	
	baz=76,slow=76,SNR=26						
H08S1	Diego Carcia H	27.02	254	T	T	15 45 20.5	
	baz=76,slow=76,SNR=4.2						
WRA	Warramunga Arr	39.91	121	P	P	15 19 28.7	+0.2
	0.3nm,0.6s,baz=303,slow=9.1,SNR=3.6						
ASAR	Alice Springs	41.22	127	P	P	15 19 38.3	-0.9
	0.2nm,0.5s,baz=294,slow=8.4,SNR=6.4						
ASAR				PcP	PcP	15 21 38.6	+0.2
	0.9nm,1.2s,baz=299,slow=3.8,SNR=3.8						
SONM	Songino Array	48.64	7	P	P	15 20 38.8	+0.7
	0.6nm,0.7s,baz=180,slow=5.8,SNR=5.1						
MKAR	Makanchi Array	49.26	345	P	P	15 20 42.0	-0.8
	0.2nm,0.5s,baz=154,slow=7.4,SNR=2.7						
ZALV	Zalesovo Beam	55.49	350	P	P	15 21 28.6	-0.2
	0.5nm,0.6s,baz=169,slow=8.7,SNR=2.5						

IDC 16 15:19:18.2±1.6, 0°.67S×126°.86E, h0^{km}, mb3.0/3, mb1 3.2/4, mb1mx3.1/42, mbtmp3.1/4, ML2.9/1, Error ellipse: s-maj=51.1km s-min=27.1km az=60.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.41	93	Pn	Pn	15 20 27.4	+1.0
	0.6nm,0.3s,baz=253,slow=19,SNR=2.5						
WRA	Warramunga Arr	20.51	160	P	P	15 23 58.0	-0.1
	0.2nm,0.5s,baz=340,slow=11,SNR=5.7						
ASAR	Alice Springs	23.86	164	P	P	15 24 33.4	-0.1
	0.2nm,0.5s,baz=344,slow=11,SNR=6.7						
MKAR	Makanchi Array	61.25	327	P	P	15 29 35.0	-0.2
	0.1nm,0.3s,baz=125,slow=8.0,SNR=4.3						

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*IDC **16** 15:24:14.9±0.9, 6°.02S×148°.00E, h0^{km}, mb4.6/6, mb1 4.7/8, mb1mx4.2/45, mbtmp4.5/8, ML4.4/2, MS3.4/2, Ms1 3.4/2, ms1mx3.1/38, Error ellipse: s-maj=42.8km s-min=18.4km az=113.0*

*NEIC **16** 15:24:20.1±0.6, 6°.00S×147°.86E, h35^{km}, mb4.4/1, Error ellipse: s-maj=24.5km s-min=11.2km az=112.0*

*ISCJB **16** 15:24:21.0±0.9, 6°.1S±0°.1×147°.8E±0°.2, h60^{km}, mb4.5/6, MS3.8/1, Error ellipse: s-maj=31.7km s-min=14.5km az=22.3*

ISC 16 15:24:22.9±0.9, 6°.1S±0°.1×147°.9E±0°.3, h60^{km}, n13, σ0^{s}.84/11, mb4.6/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	12.37	106	LR	LR	15 31 27.8	
	comp=Z,80nm,19.8s,baz=339,slow=35						
CTA	Charters Tower	13.99	186	Pn	Pn	15 27 37.8	-0.5
	0.4nm,0.3s,baz=7.3,slow=14,SNR=5.2						
WRAB	Tennant Creek	19.04	223	eP	P	15 28 39.4	-0.9
	22nm,0.9s						
WRA	Warramunga Arr	19.06	223	P	P	15 28 39.7	-0.8
	3.0nm,0.3s,baz=47,slow=11,SNR=174						
ASAR	Alice Springs	22.06	216	P	P	15 29 12.8	-0.1
	18nm,0.4s,baz=52,slow=8.8,SNR=1244						
FITZ	Fitzroy Crossi	24.79	239	P	P	15 29 40.1	+0.7
	46nm,0.6s,baz=62,slow=7.9,SNR=217						
STKA	Stephens Creek	26.31	192	P	P	15 29 53.2	+0.1
	13nm,0.7s,baz=356,slow=10,SNR=24						
NWAO	Narrogin (SRO)	39.06	223	LR	LR	15 48 32.1	
	comp=Z,147nm,21.8s,baz=226,slow=37						
PETK	Petropavlovsk-	59.57	7	P	P	15 34 20.8	+0.5
	4.4nm,0.8s,baz=170,slow=8.6,SNR=8.9						
VNDA	Vanda	71.75	177	P	P	15 35 39.4	+1.0
	1.9nm,0.8s,baz=21,slow=4.2,SNR=5.7						
ILAR	Eielson Array	85.22	23	P	P	15 36 51.3	-1.4
	0.5nm,0.6s,baz=250,slow=4.7,SNR=9.3						
TORD	Torodi Ar. Bea	146.00	284	PKPbc	PKPdf	15 43 56.2	0.0
	1.1nm,0.8s,baz=58,slow=3.9,SNR=6.0						
BDFB	Brasilia	153.24	144	PKPbc	PKiKP	15 44 15.9	+0.5

2.2nm,0.5s,baz=176,slow=14,SNR=3.8

MOS ***16*** *15:25:19.5±1.0, 5°.95N×127°.25E, h34^{km}, mb5.3/65, Error ellipse: s-maj=9.3km s-min=4.4km az=108.9*

GCMT ***16*** *15:25:20.8±0.2, 5°.99N±0°.02×127°.67E±0°.01, h14^{km}, MW4.9/92, Moment Tensor Solution. s39,c43; s92,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.29±.16; M$_{\theta\theta}$0.17±.08; M$_{\phi\phi}$3.11±.11; M$_{r\theta}$-0.15±.24; M$_{\theta\phi}$0.29±.05; M$_{\phi r}$-0.52±.17; Best double couple: M$_0$3.26000×10^{16} NP1:φ$_s$7.00000°,δ50.00000°,λ-88.00000°. NP2: φ$_s$184.00000°,δ40.00000°,λ-92.00000°. Principal axes: T 3.1830, Plg5.0000°, Azm96.0000°; N 0.1470, Plg2.0000°, Azm186.0000°; P -3.3370, Plg85.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MAN ***16*** *15:25:20.2, 6°.03N×127°.58E, h70^{km}, MS4.5*

ISCJB ***16*** *15:25:21.2±0.4, 5°.92N±0°.02×127°.45E±0°.03, h50^{km}±3^{km}, mb5.1/169, MS4.2/31, Error ellipse: s-maj=4.6km s-min=2.7km az=156.7*

BJI ***16*** *15:25:22.5, 6°.07N×127°.40E, h57^{km}, mB5.1/47, mb4.8/65, Ms4.5/41, Ms7 4.3/41*

IDC ***16*** *15:25:22.4±0.3, 5°.88N×127°.47E, h46^{km}±3^{km}, mb4.8/39, mb1 4.8/43, mb1mx4.8/53, mbtmp5.0/43, MS4.1/19, Ms1 4.1/19, ms1mx3.9/43, Error ellipse: s-maj=10.1km s-min=5.4km az=63.0*

DJA ***16*** *15:25:23.1±0.8, 6°N±7°×12°8E±°, h95^{km}±14^{km}, M4.8/14, mb5.2/14, mB5.2/14, MLv5.2/8, Mw(mB)4.6/14*

NEIC ***16*** *15:25:23.8±0.7, 5°.91N×127°.35E, h58^{km}±6^{km}, mb5.3/81, Error ellipse: s-maj=5.6km s-min=3.7km az=72.0*

ISC 16 15:25:19.0±0.4**, 6°.01N**±0°.03×**127°.60E**±0°.04**, h22**^{km}±2^{km}**, h23**^{km}**:pP-P, n773,** σ1^s.**52**/874**, mb5.2**/168**, MS4.2**/32**, 43C-27D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.88**	**273**	*e*P	**Pn**	**15 25 50.4**	**+0.6**
DDMP				*e*S	**Sn**	**15 26 13.8**	**+1.0**
DAV	**Davao City (W)**	**2.27**	**298**	P	**Pn**	**15 25 57.0**	**+1.9**
	393nm,0.3s,baz=95,slow=1.5,SNR=63						
DAV				S	**Sb**	**15 26 26.3**	**-0.5**
	792nm,0.3s,baz=292,slow=22,SNR=28						
DMPH	**Davao City--Mi**	**2.33**	**297**	⇑*e*P	**Pb**	**15 26 03.7**	**+3.3**
DMPH				*e*S	**Sb**	**15 26 33.5**	**+4.6**
BIPH	**Bislig**	**2.49**	**330**	⇑*e*P	**Pn**	**15 25 58.2**	**+0.1**
BIPH				*e*S	**Sn**	**15 26 23.7**	**-4.1**
BIPH	**Bislig**	**2.49**	**330**	⇑*e*P	Pb	15 26 13.4	+10
BIPH				*i* S	Sb	15 26 56.1	+23
KCP	**Kidapawan**	**2.68**	**292**	⇑*i*P	**Pn**	**15 26 02.1**	**+1.2**
KCP				*i* S	**Sn**	**15 26 33.6**	**+0.9**
SKMP	**Bagumbayan, Su**	**3.08**	**280**	*e*P	**Pn**	**15 26 07.0**	**+0.7**
SKMP				*e*S	**Sn**	**15 26 43.0**	**+0.6**
SGSI	**Sangihe**	**3.09**	**222**	P	**Pn**	**15 26 07.8**	**+1.3**
SGSI				S	**Sn**	**15 26 44.4**	**+1.6**
BUKP	**Musuan**	**3.13**	**307**	*e*P	**Pn**	**15 26 08.5**	**+1.5**
BUKP				*e*S	**Sn**	**15 26 45.0**	**+1.2**
BUTP	**Butuan**	**3.54**	**326**	*e*P	**Pn**	**15 26 14.9**	**+2.3**
BUTP				*e*S	**Sn**	**15 26 58.0**	**+4.3**
CGP	**Cagayan de Oro**	**3.77**	**310**	⇑*e*P	**Pn**	**15 26 18.0**	**+2.2**
CGP				*e*S	**Sn**	**15 26 59.8**	**+0.4**
SCPH	**Surigao**	**4.29**	**331**	⇓*e*P	**Pn**	**15 26 24.1**	**+1.2**
PAGZ	**Pagadian**	**4.57**	**294**	*e*P	**Pn**	**15 26 27.2**	**+0.5**
PAGZ				*e*S	**Sn**	**15 27 13.3**	**-5.9**
MSLP	**Maasin**	**4.92**	**327**	*e*P	**Pn**	**15 26 32.4**	**+0.8**
DCPH	**Dipolog City**	**4.93**	**302**	⇑*e*P	**Pn**	**15 26 35.2**	**+3.5**
TNTI	**Ternate**	**5.21**	**183**	*e*Pn	**Pn**	**15 26 38.7**	**+3.1**
TNTI	**Ternate**	**5.21**	**183**	P	**Pn**	**15 26 36.5**	**+1.0**
	265nm,0.6s,3µm1.1nm						
IPIL	**Ipil**	**5.29**	**290**	*e*P	**Pn**	**15 26 39.2**	**+2.5**
IPIL				*e*S	**Sn**	**15 27 37.4**	**+0.3**
SNPH	**Sibulan**	**5.45**	**308**	⇓*e*P	**Pn**	**15 26 41.6**	**+2.7**
SNPH				*e*S	**Sn**	**15 27 43.8**	**+2.9**
ZCP	**Zamboanga City**	**5.56**	**280**	⇓*i*P	**Pn**	**15 26 42.3**	**+1.8**
LLP	**Lapu-Lapu**	**5.59**	**320**	⇑*e*P	**Pn**	**15 26 42.7**	**+1.8**
LLP				*e*S	**Sn**	**15 27 45.0**	**+0.6**
PLP	**Palo**	**5.74**	**333**	⇓*e*P	**Pn**	**15 26 43.7**	**+0.8**
OCLP	**Ormoc**	**5.82**	**330**	*e*P	**Pn**	**15 26 43.9**	**-0.1**
OCLP				*e*S	**Sn**	**15 27 51.4**	**+1.4**
BESP	**Borongan**	**5.95**	**339**	*e*P	**Pb**	**15 27 00.6**	**-1.5**
BESP				*e*S	**Sn**	**15 27 46.5**	**-6.8**
KMSI	**Cibinong**	**6.49**	**214**	P	**Pn**	**15 26 54.5**	**+1.3**
	903nm,0.8s,8µm3.5nm						
RCP	**Roxas**	**7.31**	**319**	⇓*e*P	**Pn**	**15 27 06.6**	**+2.1**
SWI	**Sorong**	**7.74**	**152**	P	**Pn**	**15 27 10.9**	**+0.5**
SIJI	**Sorong**	**7.75**	**152**	P	**Pn**	**15 27 11.7**	**+1.2**
	10nm,0.3s,baz=341,slow=15,SNR=55						
SIJI				S	**Sn**	**15 28 30.7**	**-7.0**
	3.8nm,0.3s,baz=253,slow=19,SNR=5.9						
MRSI	**Marisa**	**7.88**	**226**	P	**Pn**	**15 27 14.2**	**+1.9**
	230nm,0.6s,2µm0.8nm						
MRSI				S	**Sn**	**15 28 38.0**	**-2.8**
	230nm,0.6s,2µm0.8nm						
SANI	**Sanana**	**8.16**	**191**	P	**Pn**	**15 27 15.1**	**-1.1**
	91nm,0.9s,1µm						
SANI				S	**Sn**	**15 28 42.0**	**-5.8**
	91nm,0.9s,1µm						
LUWI	**Luwuk**	**8.50**	**215**	*e*Pn	**Pn**	**15 27 23.9**	**+3.1**
LUWI	**Luwuk**	**8.50**	**215**	P	**Pn**	**15 27 22.6**	**+1.8**
	384nm,1.0s,4µm						
APSI	**Ampana**	**9.08**	**221**	P	**Pn**	**15 27 32.5**	**+3.7**
NLAI	**Namlea**	**9.20**	**183**	P	**Pn**	**15 27 30.4**	**0.0**
MPSI	**Mapaga**	**9.53**	**234**	P	**Pn**	**15 27 37.0**	**+2.1**
	22nm,0.8s,299nm						
FAKI	**Fak Fak**	**10.01**	**152**	*e*Pn	**Pn**	**15 27 43.8**	**+2.2**
FAKI	**Fak Fak**	**10.01**	**152**	P	**Pn**	**15 27 43.0**	**+1.5**
	58nm,0.7s,774nm						
PCI	**Palu**	**10.35**	**229**	P	**Pn**	**15 27 48.2**	**+1.9**
	85nm,1.1s,2µm						
KDI	**Kendari**	**11.08**	**207**	P	**Pn**	**15 27 54.6**	**-1.5**
	68nm,0.9s,934nm						
TTSI	**Tana Toraja**	**11.88**	**221**	P	**Pn**	**15 28 09.1**	**+1.9**
	70nm,0.8s,1µm						
JAY	**Jayapura**	**15.59**	**123**	P	**P**	**15 29 01.7**	**+0.1**
	1.4nm,0.3s,baz=328,slow=4.6,SNR=3.7						
SBUM	**Sibu**	**15.74**	**258**	*e*Pn	**P**	**15 29 03.1**	**-0.1**
	66nm,1.1s						
BATI	**Baumata**	**16.58**	**194**	P	**Pn**	**15 29 11.0**	**+0.9**
	2.0nm,0.3s,baz=73,slow=2.1,SNR=7.2						
MTN	**Manton Dam**	**19.05**	**169**	P	**Pn**	**15 29 40.8**	**+0.1**
	baz=19,SNR=5.9						
KDU	**Kakadu**	**19.19**	**165**	P	**P**	**15 29 41.5**	**+0.2**
	baz=19,SNR=13						
JOW	**Kunigami**	**20.72**	**2**	*e*P	Pn	15 30 01.2	+0.9
	126nm,0.9s						
JOW	**Kunigami**	**20.72**	**2**	P	Pn	15 30 00.8	+0.4
	16nm,0.8s,baz=178,slow=14,SNR=17						
KNRA	**Kununurra**	**21.57**	**177**	P	**P**	**15 30 07.6**	**+0.4**
	baz=22,SNR=20						
QIZ	**Qiongzhong**	**21.60**	**308**	P	**P**	**15 30 08.0**	**+0.5**
QIZ				pP	**pwP**	**15 30 19.8**	**-3.2**
QIZ				S	**S**	**15 34 04.8**	**-1.2**
QIZ				pmax	pmax		
	comp=Z,22nm,1.4s						
QIZ				LR	LR		
	comp=N,630nm,16.9s						
QIZ				LR	LR		
	comp=E,530nm,17.9s						
QIZ				LR	LR		
	comp=Z,900nm,19.1s						
LEM	**Lembang**	**23.67**	**238**	LR	LR	15 43 22.5	
	comp=Z,310nm,18.4s,baz=45,slow=46						
FITZ	**Fitzroy Crossi**	**24.03**	**185**	P	**P**	**15 30 32.4**	**-0.1**
	44nm,1.1s,baz=8.4,slow=13,SNR=16						
FITZ				ScP	**ScP**	**15 37 48.9**	**-2.6**
	2.6nm,0.7s,baz=349,slow=10,SNR=5.0						
FITZ				LR	LR	15 42 42.0	
	comp=Z,229nm,18.6s,baz=43,slow=44						
COEN	**Coen**	**25.15**	**142**	P	**P**	**15 30 43.3**	**+0.6**
	baz=25,SNR=15						
COEN	**Coen**	**25.15**	**142**	*e*P	**P**	**15 30 43.0**	**+0.3**
	14nm,0.8s						
CBIJ	**Chichi jima**	**25.15**	**32**	P	**P**	**15 30 45.2**	**+2.6**
JCJ	**Chichijima**	**25.15**	**32**	P	**P**	**15 30 45.2**	**+2.6**
	129nm,0.6s,baz=239,slow=8.9,SNR=6.5						
JCJ				LR	LR	15 39 52.6	
	comp=Z,497nm,20.2s,baz=256,slow=34						
WRAB	**Tennant Creek**	**26.62**	**166**	*d i*P	**P**	**15 30 55.6**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,39nm,1.1s						
WRA	**Warramunga Arr**	**26.63**	**166**	P	**P**	**15 30 55.7**	**-0.4**
	comp=Z,18nm,0.5s,baz=343,slow=10,SNR=35						
WRA				pP	**pwP**	**15 31 09.1**	**-1.5**
	comp=Z,30nm,0.6s,baz=345,slow=10,SNR=12						
WRA				PcP	**PcP**	**15 34 20.1**	**+0.1**
	comp=Z,4.6nm,0.7s,baz=339,slow=2.9,SNR=5.0						
WRA				S	**S**	**15 35 24.1**	**-5.9**
	comp=Z,6.5nm,1.0s,baz=342,slow=14,SNR=6.2						
WRA				PKiKP	**PKiKP**	**15 41 57.7**	**-1.1**
	comp=Z,0.5nm,0.9s,baz=313,slow=1.3,SNR=4.1						
WRA				P3KPbc		16 03 38.0	
	comp=Z,0.4nm,0.8s,baz=166,slow=4.0,SNR=4.5						
WB2	**Warramunga Arr**	**26.63**	**166**	*e*P	**P**	**15 30 55.2**	**-0.9**
JNU	**Nakatsue**	**27.15**	**6**	*e*P	**P**	**15 31 01.6**	**+0.9**
	comp=Z,47nm,0.8s						
JNU	**Nakatsue**	**27.15**	**6**	P	**P**	**15 31 02.1**	**+1.4**
	comp=Z,31nm,0.6s,baz=217,slow=1.7,SNR=41						
JNU				LR	LR	15 41 03.3	
	comp=Z,237nm,21.8s,baz=182,slow=34						
NJ2	**Nanjing**	**27.17**	**344**	*e*P	**P**	**15 31 03.3**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
PBKT	**Sadao Pong**	**28.10**	**294**	*e*P	**P**	**15 31 09.3**	**-0.1**
	comp=Z,24nm,1.0s						
GYA	**Guiyang**	**28.50**	**318**	P	**P**	**15 31 16.6**	**+3.6**
GYA				pP	pwP	15 31 30.0	+2.7
GYA				PP	**PnPn**	**15 32 09.4**	**+6.6**
GYA				S	**S**	**15 35 58.3**	**-1.4**
GYA				sS	sS	15 36 23.6	+17
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,470nm,17.5s						
GYA				LR	LR		
	comp=Z,490nm,17.3s						
GYA				LR	LR		
	comp=Z,460nm,17.7s						
QIS	**Mount Isa**	**28.92**	**156**	P	**P**	**15 31 17.3**	**+0.7**
	baz=29,SNR=81						
MTSU	**Mount Surprise**	**29.11**	**146**	P	**P**	**15 31 19.6**	**+1.2**
	baz=29,SNR=21						
JHJ	**Hachijo jima 2**	**29.26**	**21**	LR	LR	15 43 12.9	
	comp=Z,481nm,20.4s,baz=262,slow=36						
ENH	**Enshi**	**29.55**	**327**	*e*P	**P**	**15 31 21.6**	**-0.6**
	comp=Z,26nm,1.1s						
SUKH	**Sukhothai**	**29.61**	**295**	P	**P**	**15 31 25.8**	**+3.0**
	comp=Z,5.1nm,1.2s						
ASAR	**Alice Springs**	**30.13**	**168**	P	**P**	**15 31 27.4**	**+0.1**
	comp=Z,54nm,1.2s,baz=3.5,slow=6.2,SNR=25						
ASAR				pP	**pwP**	**15 31 40.1**	**-1.6**
	comp=Z,10nm,0.5s,baz=354,slow=8.0,SNR=7.9						
ASAR				PcP	**PcP**	**15 34 29.1**	**+0.4**
	comp=Z,7.6nm,0.6s,baz=349,slow=2.8,SNR=9.8						
ASAR				S	**S**	**15 36 21.1**	**-4.1**
	comp=Z,1.5nm,0.7s,baz=355,slow=19,SNR=3.9						
ASAR				ScP	**ScP**	**15 38 07.4**	**-2.4**
	comp=Z,1.5nm,0.8s,baz=342,slow=3.1,SNR=5.2						
ASAR				PKiKP	**PKiKP**	**15 42 00.1**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=342,slow=2.1,SNR=3.9						
ASAR				P3KPbc		16 03 22.1	
	comp=Z,0.3nm,0.5s,baz=168,slow=4.1,SNR=14						
TJN	**Taejon**	**30.23**	**360**	⇓*e*P	**P**	**15 31 30.1**	**+2.1**
INU	**Inuyama**	**30.46**	**15**	*e*P	**P**	**15 31 32.4**	**+2.2**
	comp=Z,99nm,0.9s						
KMI	**Kunming**	**30.46**	**311**	P	**P**	**15 31 34.3**	**+3.7**
KMI				pP	pwP	15 31 44.0	-1.3
KMI				sP	sP	15 31 48.3	+12
KMI				S	**S**	**15 36 29.8**	**-1.0**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,82nm,4.4s						
KMI				LR	LR		
	comp=Z,300nm,21.4s						
KMI				LR	LR		
	comp=Z,490nm,20.0s						
KMI				LR	LR		
	comp=Z,690nm,20.6s						
CM01	**Chiang Mai Arr**	**30.53**	**296**	*e*P	**P**	**15 31 29.1**	**-1.8**
CM31	**Chiang Mai Arr**	**30.55**	**296**	*e*P	**P**	**15 31 31.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**30.55**	**296**	P	**P**	**15 31 31.4**	**+0.2**
	comp=Z,3.0nm,0.6s,baz=118,slow=7.6,SNR=34						
CMAR				PcP	**PcP**	**15 34 31.1**	**+1.2**
	comp=Z,3.3nm,0.9s,baz=124,slow=1.3,SNR=7.2						
CMAR				ScP	**ScP**	**15 38 09.7**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=132,slow=1.3,SNR=3.8						
CMAR				LR	LR	15 44 42.6	
	comp=Z,459nm,20.1s,baz=110,slow=38						
CMMT	**Chiang Mai**	**30.67**	**297**	P	**P**	**15 31 32.2**	**0.0**
	comp=Z,7.0nm,1.0s						
CHTO	**Chiang Mai**	**30.68**	**297**	*e*P	**P**	**15 31 31.8**	**-0.5**
	comp=Z,7.0nm,0.7s						
CHTO	**Chiang Mai**	**30.68**	**297**	*e*P	**P**	**15 31 31.8**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CHTO	**Chiang Mai**	**30.68**	**297**	P	**P**	**15 31 32.3**	**0.0**
	comp=Z,53nm,1.4s						
WRKA	**Warakurna**	**30.86**	**179**	P	**P**	**15 31 35.0**	**+1.2**
	baz=31,SNR=4.8						
KS15	**Wonju Array Si**	**31.29**	**0**	*e*P	**P**	**15 31 39.4**	**+2.0**
KSAR	**Wonju Array Be**	**31.29**	**0**	P	**P**	**15 31 39.0**	**+1.7**
KSAR				PcP	**PcP**	**15 34 32.4**	**+0.9**
KSAR				ScP	**ScP**	**15 38 11.5**	**-1.9**
KSAR	**Wonju Array Be**	**31.29**	**0**	P	**P**	**15 31 39.1**	**+1.7**
KSAR						15 34 32.4	
KSRS	**Korea Array**	**31.30**	**0**	P	**P**	**15 31 39.1**	**+1.6**
KSRS						15 34 32.4	
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,323nm,20.6s						
KSRS	**Korea Array**	**31.30**	**0**	P	**P**	**15 31 39.0**	**+1.6**
	comp=Z,8.8nm,0.7s,baz=176,slow=10,SNR=44						
KSRS				PcP	**PcP**	**15 34 32.4**	**+0.9**
	comp=Z,3.1nm,0.6s,baz=180,slow=2.7,SNR=10						
KSRS				ScP	**ScP**	**15 38 11.5**	**-1.9**
	comp=Z,0.6nm,0.7s,baz=190,slow=3.1,SNR=2.9						
KSRS				LR	LR	15 46 24.4	
	comp=Z,323nm,20.6s,baz=186,slow=40						
KS01	**Wonju Array Si**	**31.32**	**0**	*e*P	**P**	**15 31 39.0**	**+1.3**
KS01				*e*PcP	**PcP**	**15 34 32.3**	**+0.8**
CTA	**Charters Tower**	**31.77**	**145**	P	**P**	**15 31 43.3**	**+1.5**
	comp=Z,11nm,0.6s,baz=325,slow=11,SNR=18						
CTA				pP	**pwP**	**15 31 54.5**	**-2.0**
	comp=Z,11nm,0.8s,baz=316,slow=13,SNR=5.3						
CTAO	**Charters Tower**	**31.77**	**145**	*e*P	**P**	**15 31 43.4**	**+1.6**
	comp=Z,56nm,1.5s						
CTAO	**Charters Tower**	**31.77**	**145**	*e*P	**P**	**15 31 43.4**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,56nm,1.5s						
MAJO	**Matsushiro**	**31.91**	**16**	*e*P	**P**	**15 31 43.5**	**+0.6**
	comp=Z,48nm,1.0s						
MAJO	**Matsushiro**	**31.91**	**16**	*c i*P	**P**	**15 31 43.1**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,40nm,0.9s						
MAT	**Matsushiro**	**31.91**	**16**	P	**P**	**15 31 43.7**	**+0.8**
MJAR	**Matsushiro Arr**	**31.91**	**16**	P	**P**	**15 31 43.7**	**+0.8**
	comp=Z,17nm,0.7s,baz=191,slow=8.7,SNR=32						
MJAR				PcP	**PcP**	**15 34 34.0**	**+0.9**
	comp=Z,5.8nm,0.7s,baz=185,slow=3.2,SNR=9.7						
MJAR				LR	LR	15 43 06.9	
	comp=Z,430nm,21.1s,baz=200,slow=33						
MJB9	**Matsu-Tunnel**	**31.91**	**16**	*e*P	**P**	**15 31 43.2**	**+0.3**
	comp=Z,49nm,1.0s						
XAN	**Xi'an**	**32.83**	**331**	P	**P**	**15 31 50.5**	**-0.5**
XAN				pP	pwP	15 32 03.6	-2.0
XAN				PP	**PP**	**15 33 04.5**	**-0.9**
XAN				S	**S**	**15 37 03.8**	**-3.4**
XAN				SS	**SnSn**	**15 39 03.4**	**-1.0**
XAN				ScS	ScS	15 42 08.3	-10
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
XAN				pmax	pmax		
	comp=Z,110nm,5.8s						
XAN				LR	LR		
	comp=Z,360nm,19.2s						
XAN				LR	LR		
	comp=Z,190nm,15.5s						
XAN				LR	LR		
	comp=Z,330nm,20.2s						
CD2	**Chengdu**	**33.38**	**321**	⇑P	**P**	**15 31 55.9**	**0.0**
CD2				pP	pwP	15 32 10.4	+0.1
CD2				sP	sP	15 32 17.5	+16
CD2				PP	**PP**	**15 33 12.4**	**+0.8**
CD2				S	**S**	**15 37 13.6**	**-2.3**
CD2				sS	sS	15 37 39.0	+16
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,180nm,6.9s						
CD2				LR	LR		
	comp=Z,920nm,15.2s						
CD2				LR	LR		
	comp=Z,730nm,17.2s						
CD2				LR	LR		
	comp=Z,990nm,18.1s						
MEEK	**Meekatharra**	**33.60**	**195**	P	**P**	**15 31 57.4**	**-0.4**
	baz=34,SNR=16						
BJT	**Baijiatuau**	**35.39**	**345**	*e*P	**P**	**15 32 11.6**	**-1.5**
	comp=Z,23nm,1.0s						
BJT	**Baijiatuau**	**35.39**	**345**	*e*P	**P**	**15 32 11.6**	**-1.5**
BJT				pmax	pmax		
	comp=Z,23nm,1.0s						
BJI	**Beijing**	**35.41**	**345**	P	**P**	**15 32 14.1**	**+0.9**
BJI				pmax	pmax		
	comp=Z,14nm,1.3s						
SNY	**Shenyang**	**35.85**	**355**	⇑P	**P**	**15 32 18.1**	**+1.1**
SNY				S	**S**	**15 37 48.1**	**-5.4**
SNY				pmax	pmax		
	comp=Z,15nm,0.6s						
SNY				LR	LR		
	comp=Z,390nm,19.9s						
SNY				LR	LR		
	comp=Z,400nm,22.4s						
SNY				LR	LR		
	comp=Z,420nm,16.0s						
MSHR	**Mys Shultsa**	**36.56**	**4**	*d i*P	**P**	**15 32 25.5**	**+2.4**
FORT	**Forrest**	**36.58**	**179**	P	**P**	**15 32 23.8**	**+0.4**
	baz=37,SNR=11						
FORT	**Forrest**	**36.58**	**179**	*e*P	**P**	**15 32 22.8**	**-0.6**
	comp=Z,68nm,0.7s						
MORW	**Morawa**	**36.60**	**197**	P	**P**	**15 32 23.7**	**+0.1**
	baz=37,SNR=6.9						
MORW	**Morawa**	**36.60**	**197**	*e*P	**P**	**15 32 23.4**	**-0.3**
	comp=Z,39nm,1.0s						
LZH	**Lanzhou**	**37.03**	**327**	⇑P	**P**	**15 32 29.0**	**+1.6**
LZH				pP	pwP	15 32 43.6	+1.6
LZH				sP	sP	15 32 50.4	+17
LZH				PP	**PnPn**	**15 33 57.3**	**+5.0**
LZH				*e*S	**S**	**15 38 10.1**	**-2.0**
LZH				sS	ScP	15 38 36.1	+2.1
LZH				*e*SS	SS	15 40 39.5	-15
LZH				pmax	pmax		
	comp=Z,37nm,1.3s						
LZH				pmax	pmax		
	comp=Z,320nm,5.7s						
LZH				LR	LR		
	comp=Z,500nm,13.2s						
LZH				LR	LR		
	comp=Z,780nm,13.4s						
LZH				LR	LR		
	comp=Z,880nm,16.5s						
VLA	**Vladivostok**	**37.15**	**5**	*d i*P	**P**	**15 32 30.5**	**+2.4**
VLA				pmax	pmax		
	comp=Z,58nm,0.9s						
HHC	**Hu-ho-hao-te**	**37.55**	**340**	*e*P	**P**	**15 32 34.4**	**+2.8**
HHC				PP	**PnPn**	**15 34 04.8**	**+6.3**
HHC				S	**S**	**15 38 19.8**	**+0.1**
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,5.6s						
HHC				LR	LR		
	comp=Z,170nm,11.2s						
HHC				LR	LR		
	comp=Z,160nm,6.1s						
HHC				LR	LR		
	comp=Z,330nm,12.1s						
CN2	**Changchun**	**37.69**	**357**	*e*P	**P**	**15 32 34.3**	**+1.6**
CN2				PcP	**PcP**	**15 34 49.6**	**-0.1**
CN2				*e*S	**S**	**15 38 21.8**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
BLDU	**Ballidu**	**37.88**	**195**	P	**P**	**15 32 34.4**	**0.0**
	baz=38,SNR=14						
USA0B	**Ussuriysk Arra**	**38.23**	**5**	*e*P	**P**	**15 32 39.0**	**+1.7**
	comp=Z,25nm,0.7s						
USRK	**Ussuriysk Ar.**	**38.23**	**5**	P	**P**	**15 32 39.5**	**+2.3**
	comp=Z,23nm,0.7s,baz=180,slow=7.5,SNR=89						
USRK				pP	**pwP**	**15 32 52.1**	**+1.5**
	comp=Z,16nm,0.6s,baz=189,slow=7.4,SNR=11						
USRK				PcP	**PcP**	**15 34 51.8**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=166,slow=2.2,SNR=5.4						
USRK				LR	LR	15 49 17.9	
	comp=Z,224nm,20.9s,baz=175,slow=37						
RMQ	**Roma**	**38.26**	**149**	P	**P**	**15 32 38.2**	**+0.4**
	baz=38,SNR=6.7						
BRDH	**Bariadhala**	**38.42**	**299**	LR	LR	15 51 19.1	
	comp=Z,391nm,18.4s,baz=166,slow=41						
ERM	**Erimo**	**38.43**	**19**	*e*P	**P**	**15 32 42.6**	**+3.6**
	comp=Z,93nm,1.1s						
ERM	**Erimo**	**38.43**	**19**	⇑*e*P	**P**	**15 32 42.8**	**+3.8**
ERM				pmax	pmax		
	comp=Z,75nm,1.1s						
MDJ	**Mudanjiang**	**38.50**	**2**	P	**P**	**15 32 41.8**	**+2.3**
MDJ				pP	pwP	15 32 55.6	+2.8
MDJ				sP	sP	15 33 03.3	+17
MDJ				PP	**PnPn**	**15 34 11.3**	**+1.5**
MDJ				PcP	**PcP**	**15 34 50.3**	**-1.9**
MDJ				ScP	**S**	**15 38 33.8**	**0.0**
MDJ				S	**ScP**	**15 38 37.0**	**-2.1**
MDJ				PcS	**PcS**	**15 38 40.3**	**-1.0**
MDJ				ScS	**ScS**	**15 42 44.8**	**-4.3**
MDJ				pmax	pmax		
	comp=Z,61nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,270nm,5.3s						
MDJ				LR	LR		
	comp=Z,350nm,5.3s						
MDJ				LR	LR		
	comp=Z,530nm,16.7s						
MDJ	**Mudanjiang**	**38.50**	**2**	*e*P	**P**	**15 32 40.2**	**+0.7**
	comp=Z,74nm,1.3s						
KLBR	**Kellerberrin**	**38.55**	**194**	P	**P**	**15 32 40.5**	**+0.4**
	baz=39,SNR=7.8						
EIDS	**Eidsvold**	**38.65**	**145**	P	**P**	**15 32 41.6**	**+0.6**
	baz=39,SNR=5.6						
SHL	**Shillong**	**39.29**	**304**	*e*P	**P**	**15 32 47.5**	**+0.9**
MUN	**Mundaring**	**39.30**	**195**	P	**P**	**15 32 46.7**	**+0.3**
	baz=39,SNR=13						
BBOO	**Buckleboo**	**39.43**	**169**	P	**P**	**15 32 47.6**	**+0.2**
	baz=40,SNR=32						
BBOO	**Buckleboo**	**39.43**	**169**	*e*P	**P**	**15 32 47.6**	**+0.2**
	comp=Z,41nm,0.8s						
NWAO	**Narrogin (SRO)**	**39.95**	**194**	P	**P**	**15 32 52.4**	**+0.6**
	baz=40,SNR=8.5						
STKA	**Stephens Creek**	**39.97**	**161**	P	**P**	**15 32 52.5**	**+0.6**
	baz=40,SNR=42						
STKA	**Stephens Creek**	**39.97**	**161**	*e*P	**P**	**15 32 51.8**	**-0.2**
	comp=Z,26nm,0.7s						
STKA				pP	**pwP**	**15 33 05.7**	**-0.9**
STKA	**Stephens Creek**	**39.97**	**161**	P	**P**	**15 32 52.5**	**+0.6**
	comp=Z,126nm,0.5s,baz=337,slow=8.6,SNR=135						
STKA				pP	**pwP**	**15 33 05.7**	**-0.9**
	comp=Z,80nm,0.7s,baz=354,slow=7.5,SNR=13						
STKA				LR	LR	15 53 17.8	
	comp=Z,322nm,18.4s,baz=359,slow=42						
ASAJ	**Asahikawa**	**40.18**	**17**	P	**P**	**15 32 56.8**	**+3.2**
	comp=Z,32nm,0.7s,baz=231,slow=8.4,SNR=56						
HTT	**Hallett**	**40.67**	**165**	P	**P**	**15 32 58.3**	**+0.6**
	baz=41,SNR=16						
YUK	**Yuzh-Kuril'sk**	**41.13**	**20**	⇑*e*P	**P**	**15 33 05.0**	**+3.6**
CMSA	**Cobar Meteorol**	**41.14**	**156**	P	**P**	**15 33 02.1**	**+0.5**
	baz=41,SNR=30						
RKGY	**Rocky Gully**	**41.62**	**193**	P	**P**	**15 33 07.2**	**+1.6**
	baz=42,SNR=30						
GTA	**Gaotai**	**41.63**	**327**	*e*P	**P**	**15 33 05.9**	**+0.1**
GTA				pP	pwP	15 33 19.5	-0.9
GTA				sP	sP	15 33 24.5	+13
GTA				PcP	**PcP**	**15 35 02.6**	**0.0**
GTA				ScP	**ScP**	**15 38 51.0**	**-0.6**
GTA				S	**S**	**15 39 18.0**	**-3.2**
GTA				sS	sS	15 39 45.3	+17
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,79nm,6.4s						
GTA				LR	LR		
	comp=Z,300nm,18.7s						

GTA				LR	LR		
	comp=Z,320nm,20.3s						
GTA				LR	LR		
	comp=Z,490nm,18.7s						
LSA	Lhasa	41.64	309	P	P	15 33 05.9	-0.5
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LSA	Lhasa	41.64	309	P	P	15 33 07.3	+0.9
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS	Yuzh-Sakhalins	42.83	15	eP	P	15 33 18.0	+2.7
	comp=Z,32nm,0.8s						
YSS	Yuzh-Sakhalins	42.83	15	⇓iP	P	15 33 17.7	+2.5
YSS				e*PP	pwP	15 33 30.8	+2.0
YSS				eS	S	15 39 35.7	-2.6
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
KUR	Kuril'sk	42.88	21	⇑iP	P	15 33 18.6	+3.0
ARMA	Armidale	42.92	149	P	P	15 33 17.6	+1.3
	baz=43,SNR=24						
KLR	Kul'dur	43.22	4	d iP	P	15 33 20.0	+1.7
KLR	Kul'dur	43.22	4	P	P	15 33 20.1	+1.8
	comp=Z,27nm,0.6s,baz=202,slow=5.1,SNR=123						
KLR				PcP	PcP	15 35 07.7	+0.3
	comp=Z,5.8nm,0.7s,baz=217,slow=5.4,SNR=3.6						
HIA	Hailar	43.62	353	⇑eP	P	15 33 22.7	+1.1
HIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RAMN	Ramite	44.20	303	eP	P	15 33 26.2	-0.7
	comp=Z,80nm,0.8s						
ARPS	Mount Arapiles	44.59	164	P	P	15 33 30.5	+1.0
	baz=45,SNR=110						
YNG	Young	44.65	155	P	P	15 33 31.3	+1.2
	baz=45,SNR=15						
JIRN	Jiri	44.79	304	eP	P	15 33 31.1	-0.7
	comp=Z,148nm,0.9s						
GUN	Gumba	45.14	304	eP	P	15 33 33.6	-0.9
	comp=Z,77nm,0.7s						
GRNR	Gornyy	45.22	8	eP	P	15 33 37.2	+2.8
GRNR				pmax	pmax		
	comp=Z,14nm,0.7s						
ULN	Ulaanbaatar	45.25	341	eP	P	15 33 35.6	+0.7
	comp=Z,11nm,0.9s						
ULN	Ulaanbaatar	45.25	341	d iP	P	15 33 35.4	+0.5
ULN				pmax	pmax		
	comp=Z,12nm,1.0s						
PKI	Pulchoki	45.41	303	eP	P	15 33 35.3	-1.4
	comp=Z,76nm,1.3s						
PKIN	Phulchoki	45.42	303	eP	P	15 33 35.3	-1.4
	comp=Z,16nm,0.7s						
SONM	Songino Array	45.45	340	P	P	15 33 36.6	+0.2
	comp=Z,4.1nm,0.8s,baz=157,slow=7.0,SNR=25						
SONM				PcP	PcP	15 35 15.5	+0.2
	comp=Z,4.3nm,0.8s,baz=142,slow=3.9,SNR=6.0						
SONM				pPcP		15 35 29.6	
	comp=Z,3.7nm,0.7s,baz=154,slow=4.4,SNR=5.8						
SONM				ScP	ScP	15 39 02.2	-4.8
	comp=Z,0.6nm,0.9s,baz=145,slow=5.3,SNR=2.4						
SONA1	Songino Array	45.46	340	eP	P	15 33 36.8	+0.3
DMN	Daman	45.67	303	eP	P	15 33 37.6	-1.1
	comp=Z,72nm,1.1s						
CAN	Canberra	45.78	155	P	P	15 33 41.0	+1.9
CAN				pmax	pmax		
	comp=Z,44nm,1.2s						
CNB	Canberra Magne	45.93	155	P	P	15 33 40.4	+0.1
	baz=46,SNR=9.7						
TYV	Tymovskoe	46.44	13	eP	P	15 33 45.2	+1.2
TYV				pmax	pmax		
	comp=Z,12nm,1.7s						
TOO	Toolangi	46.46	160	P	P	15 33 45.9	+1.7
	baz=47,SNR=34						
TOO	Toolangi	46.46	160	eP	P	15 33 46.0	+1.7
	comp=Z,91nm,1.4s						
TOO	Toolangi	46.46	160	eP	P	15 33 46.0	+1.7
TOO				pmax	pmax		
	comp=Z,91nm,1.4s						
KOLN	Koldanda	46.99	303	eP	P	15 33 48.1	-0.8
	comp=Z,100nm,0.8s						
DANN	Dangsing	47.05	303	eP	P	15 33 48.4	-1.1
	comp=Z,81nm,0.8s						
DZM	Mont Dzumac	47.18	128	eLR	LR	15 47 25.0	
	comp=Z,438nm,35.0s						
DZM	Mont Dzumac	47.18	128	P	P	15 33 51.5	+1.1
	comp=Z,15nm,1.0s,baz=98,slow=22,SNR=5.9						
ZEA	Zeya	47.59	360	eP	P	15 33 53.2	+0.3
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
PYUN	Piuthan	47.60	303	eP	P	15 33 53.1	-0.6
	comp=Z,119nm,1.0s						
NKL	Nikolayevsk	48.20	11	eP	P	15 34 00.5	+2.9
NKL				pmax	pmax		
	comp=Z,220nm,1.5s						
ZAK	Zakamensk	48.69	339	eP	P	15 34 00.9	-0.7
ZAK				e		15 35 25.1	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HYB	Hyderabad	49.21	288	i P	P	15 34 05.0	-1.0
TLY	Talaya	49.66	341	eP	P	15 34 09.9	+0.9
	comp=Z,18nm,0.8s						
TLY	Talaya	49.66	341	eP	P	15 34 10.1	+1.1
TLY				pmax	pmax		
	comp=Z,23nm,1.1s						
KNGR	Kungurtug, Tuv	51.06	336	⇑eP	P	15 34 20.0	+0.3
WMQ	Urumqi	51.39	324	P	P	15 34 23.0	+0.8
WMQ				pP	pwP	15 34 37.3	-0.1
WMQ				sP	sP	15 34 42.0	+14
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.3s						
WMQ				LR	LR		
	comp=Z,640nm,23.3s						
WMQ				LR	LR		
	comp=Z,650nm,19.3s						
WMQ				LR	LR		
	comp=Z,430nm,20.5s						
MOO	Moorlands	51.41	161	P	P	15 34 23.7	+1.4
	baz=52,SNR=4.8						
BOD	Bodaibo	52.76	351	eP	P	15 34 32.5	+0.5
BOD				pmax	pmax		
	comp=Z,25nm,1.0s						
PETK	Petropavlovsk-	53.01	22	P	P	15 34 36.9	+2.9
	comp=Z,27nm,0.7s,baz=198,slow=4.3,SNR=42						
PET	Petropavlovsk	53.31	23	⇓eP	P	15 34 38.2	+2.1
PET				pmax	pmax		
	comp=Z,75nm,1.1s						
DGZ	Jazzator, Alta	55.07	329	d iP	P	15 34 49.6	+0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MSVF	Nonsavu	55.10	116	eP	P	15 34 53.4	+3.5
	comp=Z,129nm,0.9s						
MSVF	Nonsavu	55.10	116	d eP	P	15 34 53.6	+3.7
MSVF				pmax	pmax		
	comp=Z,137nm,1.0s						
YAK	Yakutsk	55.92	1	d iP	P	15 34 55.8	+0.8
YAK				e		15 35 53.2	
YAK				eS	S	15 42 39.0	-2.3
YAK				eSS	SS	15 46 20.2	-7.2
YAK				pmax	pmax		
	comp=Z,546nm,0.8s						
YAK				pmax	pmax		
	comp=N,190nm,1.0s						
YAK				pmax	pmax		
	comp=E,41nm,0.9s						
YAK				pmax	pmax		
	comp=Z,678nm,4.3s						
YAK				pmax	pmax		
	comp=E,325nm,4.3s						
YAK				pmax	pmax		
	comp=N,510nm,4.2s						
YAK				smax	smax		
	comp=E,1µm,4.7s						
YAK				smax	smax		
	comp=N,982nm,4.5s						
MK01	Makanchi Array	56.19	324	eP	P	15 34 57.4	+0.2
MK31	Makanchi Array	56.21	324	P	P	15 34 57.3	-0.1
MK31				pmax	pmax		
	comp=Z,22nm,0.9s						
MKAR	Makanchi Array	56.21	324	P	P	15 34 57.9	+0.5
	comp=Z,11nm,0.5s,baz=121,slow=8.7,SNR=36						
MKAR				ScP	ScP	15 39 50.1	-3.0
	comp=Z,2.2nm,0.9s,baz=109,slow=6.6,SNR=5.3						
MKAR				S	S	15 42 44.4	-1.4
	comp=Z,0.6nm,0.8s,baz=125,slow=14,SNR=4.7						
PDGK	Podgornoye	56.24	319	P	P	15 34 56.9	-0.9
PDGK				pmax	pmax		
	comp=Z,12nm,1.0s						
MA2	Magadan	56.30	14	eP	P	15 34 59.9	+2.2
	comp=Z,15nm,0.8s						
MA2				PcP	PcP	15 35 56.6	+1.7
MA2	Magadan	56.30	14	⇓eP	P	15 35 00.0	+2.2
MA2				pmax	pmax		
	comp=Z,41nm,1.7s						
MA2	Magadan	56.30	14	P	P	15 35 00.1	+2.4
	comp=Z,12nm,0.6s,baz=202,slow=7.0,SNR=31						
MA2				PcP	PcP	15 35 56.6	+1.7
	comp=Z,9.6nm,0.8s,baz=188,slow=2.5,SNR=4.9						
MAKZ	Makanchi	56.40	324	eP	P	15 34 59.0	+0.2
	comp=Z,20nm,1.0s						
MAKZ	Makanchi	56.40	324	eP	P	15 34 59.0	+0.2
MAKZ				pmax	pmax		
	comp=Z,20nm,1.0s						
KSH	Kashi	57.08	314	P	P	15 35 05.3	+1.5
KSH				PP	PP	15 37 16.3	+5.5
KSH				S	S	15 42 52.8	-4.9
KSH				sS	sS	15 43 23.0	+17
KSH				SS	SS	15 46 47.3	+0.6
KSH				pmax	pmax		
	comp=Z,17nm,0.6s						
KSH				pmax	pmax		
	comp=Z,160nm,4.9s						
KSH				LR	LR		
	comp=Z,380nm,5.3s						
KSH				LR	LR		
	comp=Z,190nm,5.6s						
KSH				LR	LR		
	comp=Z,500nm,4.9s						
NRN	Naryn	57.79	316	eP	P	15 35 09.1	0.0
	comp=Z,22nm,1.5s						
NRN	Naryn	57.79	316	eP	P	15 35 09.1	0.0
NRN				pmax	pmax		
	comp=Z,22nm,1.5s						
ZAA0	Zalesovo Array	58.98	332	eP	P	15 35 16.1	-0.6
	comp=Z,14nm,0.8s						
ZALV	Zalesovo Beam	58.98	332	P	P	15 35 16.2	-0.5
	comp=Z,3.5nm,0.4s,baz=117,slow=6.6,SNR=27						
ZALV				pP	pwP	15 35 28.9	-3.1
	comp=Z,10nm,0.6s,baz=118,slow=7.1,SNR=15						
ZALV				S	S	15 43 18.6	-3.2
	comp=Z,0.9nm,0.6s,baz=148,slow=14,SNR=6.6						
ZALV				LR	LR	16 03 29.3	
	comp=Z,167nm,19.6s,baz=70,slow=39						
ZALV				PKP2bc		16 05 03.9	
	comp=Z,0.9nm,0.7s,baz=323,slow=2.2,SNR=4.1						
SFK	Sufi-Kurgan	59.03	313	i P	P	15 35 17.4	-0.3
SFK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AAK	Ala-Archa	59.28	317	eP	P	15 35 19.5	+0.3
	comp=Z,27nm,1.7s						
AAK	Ala-Archa	59.28	317	d iP	P	15 35 19.4	+0.1
AAK				pmax	pmax		
	comp=Z,15nm,1.7s						
SEY	Seymchan	59.63	13	P	P	15 35 23.8	+2.7
	comp=Z,5.8nm,0.6s,baz=217,slow=6.5,SNR=30						
ARSB	Arslanbob	59.86	315	eP	P	15 35 23.5	+0.3
	comp=Z,29nm,1.3s						
NVS	Novosibirsk	60.26	332	⇑iP	P	15 35 25.3	-0.2
NVS				eS	S	15 43 36.3	-1.9
NVS				pmax	pmax		
	comp=N,12nm,1.0s						
NVS				pmax	pmax		
	comp=E,12nm,1.0s						
NVS				pmax	pmax		
	comp=Z,21nm,1.0s						
NVS				smax	smax		
	comp=N,11nm,1.4s						
NVS				smax	smax		
	comp=E,14nm,1.4s						
KURK	Kurchatov	60.31	326	d iP	P	15 35 26.0	+0.1
KURK				pmax	pmax		
	comp=Z,54nm,1.7s						
KURBB	Kurchatov Arra	60.32	326	S	S	15 43 37.2	-2.0
	comp=Z,0.4nm,0.6s,baz=120,slow=11,SNR=6.3						
MNAS	Manas	60.60	316	i P	P	15 35 27.9	-0.4
MNAS				pmax	pmax		
	comp=Z,11nm,0.7s						
KBL	Kabul	60.86	306	eP	P	15 35 29.3	-1.0
	comp=Z,23nm,0.9s						
KBL	Kabul	60.86	306	P	P	15 35 30.5	+0.2
KBL				pmax	pmax		
	comp=Z,30nm,1.2s						
BTK	Batken	61.00	313	eP	P	15 35 28.1	-2.8
	comp=Z,26nm,1.0s						
BTK	Batken	61.00	313	eP	P	15 35 28.2	-2.8
BTK				pmax	pmax		
	comp=Z,26nm,1.0s						
KK31	Karatay Array	62.19	316	eP	P	15 35 38.6	-0.2
KK31	Karatay Array	62.19	316	eP	P	15 35 38.7	-0.2
KKAR	Karatay Array	62.19	316	eP	P	15 35 38.6	-0.2
KKAR	Karatay Array	62.19	316	eP	P	15 35 38.7	-0.2
OTUK	Ortayu	62.86	322	P	P	15 35 42.1	-1.1
OTUK				pmax	pmax		
	comp=Z,15nm,1.0s						
RPZ	Rata Peaks	63.13	146	P	P	15 35 45.5	+0.5
	comp=Z,12nm,0.5s,baz=354,slow=4.2,SNR=9.1						
URZ	Urewera	63.62	138	P	P	15 35 48.4	0.0
	comp=Z,6.7nm,0.9s,baz=297,slow=2.3,SNR=3.8						
BVA0	Borovoye Array	65.91	326	P	P	15 36 02.7	-0.4
BVA0				pmax	pmax		
	comp=Z,41nm,1.4s						
BRVK	Borovoye	65.98	326	eP	P	15 36 03.6	+0.1
	comp=Z,31nm,1.0s						
BRVK	Borovoye	65.98	326	d iP	P	15 36 03.5	0.0
BRVK				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL	Bilibino	67.14	15	eP	P	15 36 11.9	+1.2
	comp=Z,9.2nm,0.6s						
BILL	Bilibino	67.14	15	i P	P	15 36 11.4	+0.7
BILL				i		15 36 35.0	
BILL				i		15 38 40.1	
BILL				pmax	pmax		
	comp=Z,13nm,1.3s						
NRIK	Noril'sk	68.44	346	P	P	15 36 19.1	+0.3
	comp=Z,28nm,0.7s,baz=122,slow=6.8,SNR=60						
NRIK				LR	LR	16 12 13.3	
	comp=Z,162nm,18.0s,baz=183,slow=41						
GEYT	Alibeck	70.17	308	P	P	15 36 30.0	-0.2
	comp=Z,5.9nm,0.7s,baz=166,slow=7.6,SNR=9.5						
GEYT				LR	LR	16 10 40.6	
	comp=Z,75nm,20.9s,baz=75,slow=39						
AB31	Akbulak array	70.96	320	eP	P	15 36 34.2	-0.5
AB31				pmax	pmax		
	comp=Z,16nm,0.9s						
ABKAR	Akbulak array	70.96	320	eP	P	15 36 34.7	-0.1
GAMB	Gambell	71.98	24	eP	P	15 36 43.0	+2.5
	comp=Z,24nm,1.0s						
SVE	Sverdlovsk	72.49	328	⇑eP	P	15 36 44.0	+0.2
SVE				pmax	pmax		
	comp=Z,42nm,1.1s						
ARU	Arti	73.49	327	eP	P	15 36 49.1	-0.6
	comp=Z,26nm,0.7s						
ARU	Arti	73.49	327	d iP	P	15 36 48.9	-0.8
ARU				pmax	pmax		
	comp=Z,21nm,0.7s						
ANM	Nome	74.85	24	eP	P	15 36 59.9	+2.4
	comp=Z,9.9nm,0.6s						
ANM	Nome	74.85	24	eP	P	15 36 59.9	+2.4
ANM				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RDOG	Red Dog Mine	76.86	21	eP	P	15 37 11.2	+2.3
	comp=Z,53nm,1.6s						
SVW2	Sparrevohn	78.40	29	eP	P	15 37 20.4	+2.7
	comp=Z,15nm,0.8s						
KDAK	Kodiak Island	79.52	32	eP	P	15 37 26.2	+2.4
	comp=Z,41nm,0.8s						
KDAK	Kodiak Island	79.52	32	i P	P	15 37 25.7	+1.9
KDAK	Kodiak Island	79.52	32	P	P	15 37 26.0	+2.2
	comp=Z,41nm,0.6s,baz=254,slow=3.7,SNR=60						
IM3	Indian Mountai	79.92	24	eP	P	15 37 28.0	+2.1
PPLA	Purkeypile	80.22	27	eP	P	15 37 29.8	+2.1
	comp=Z,20nm,0.7s						
CAST	Castle Rocks	80.32	27	eP	P	15 37 30.3	+2.1
	comp=Z,30nm,0.7s						
BRLK	Bradley Lake	80.56	30	eP	P	15 37 31.1	+1.6
	comp=Z,21nm,0.7s						
GNI	Garni	80.70	310	eP	P	15 37 33.3	+2.5
	comp=Z,82nm,1.4s						
GNI	Garni	80.70	310	⇑eP	P	15 37 31.7	+0.8
GNI				pmax	pmax		
	comp=Z,353nm,1.7s						
TBLG	Delisi	80.71	311	eP	P	15 37 31.4	+0.7
TBLG				epP	pwP	15 37 45.3	-0.8
TBLG	Delisi	80.71	311	eP	P	15 37 31.4	+0.7
TBLG				e*PP	pwP	15 37 45.3	-0.8
SUA	Susitna One	80.77	29	eP	P	15 37 31.8	+1.2
	comp=Z,44nm,0.8s						
PRGR	Permogore	80.93	331	eP	P	15 37 30.5	-0.8
PRGR				e*PP	pwP	15 37 45.8	-1.0
PRGR				pmax	pmax		
	comp=Z,27nm,0.6s						
MLY	Manley	81.06	25	eP	P	15 37 34.3	+2.2
	comp=Z,59nm,1.2s						
TRF	Thorofare Moun	81.13	27	eP	P	15 37 34.1	+1.5
	comp=Z,35nm,1.0s						
RC01	Rabbit Creek A	81.22	29	eP	P	15 37 34.4	+1.4
	comp=Z,33nm,0.6s						
SEW	Seward	81.31	30	eP	P	15 37 34.3	+0.9
	comp=Z,141nm,1.9s						
ZEI	Tsey	81.33	312	eP	P	15 37 33.0	-1.2
ZEI				pmax	pmax		
	comp=Z,16nm,0.7s						
COLD	Coldfoot	81.47	23	eP	P	15 37 37.0	+2.8
	comp=Z,16nm,0.6s						
PMR	Palmer	81.55	29	eP	P	15 37 36.0	+1.4
	comp=Z,24nm,0.7s						
PMR	Palmer	81.55	29	eP	P	15 37 36.0	+1.4
PMR				pmax	pmax		
	comp=Z,24nm,0.7s						
NCK	Nalchik	81.55	313	⇑iP	P	15 37 35.2	+0.1
NCK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MCK	McKinley	81.75	27	eP	P	15 37 37.3	+1.5
	comp=Z,59nm,0.8s						
RND	Reindeer	81.77	27	eP	P	15 37 37.0	+1.1
	comp=Z,113nm,1.6s						
RND	Reindeer	81.77	27	eP	P	15 37 37.0	+1.1
RND				pmax	pmax		
	comp=Z,113nm,1.6s						
TOLK	Toolik Lake Re	81.82	22	eP	P	15 37 38.7	+2.6
	comp=Z,33nm,0.8s						
TOLK	Toolik Lake Re	81.82	22	P	P	15 37 38.3	+2.2
	baz=266						
KNK	Knik Glacier	81.86	29	eP	P	15 37 38.3	+2.0
	comp=Z,36nm,0.9s						
SML	Sawmill	81.94	28	eP	P	15 37 38.6	+1.8
	comp=Z,43nm,0.9s						
SML	Sawmill	81.94	28	eP	P	15 37 38.6	+1.8
SML				pmax	pmax		
	comp=Z,43nm,0.9s						
KARS	Kars	81.97	310	P	P	15 37 39.0	+1.5
KBZ	Khabaz	82.06	313	P	P	15 37 37.6	0.0
	comp=Z,6.3nm,0.9s,baz=137,slow=6.2,SNR=7.8						
KBZ				LR	LR	16 18 35.0	
	comp=Z,68nm,21.0s,baz=74,slow=39						
MDM	Murphy Dome	82.12	25	eP	P	15 37 39.4	+1.7
	comp=Z,20nm,0.8s						
WRH	Wood River Hil	82.16	26	eP	P	15 37 39.3	+1.4
	comp=Z,32nm,1.2s						
NEY	Neytrino	82.19	313	⇑iP	P	15 37 38.4	-0.3
NEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TUTA	Tutak	82.20	309	i P	P	15 37 40.0	+1.1
TUTA				IAML_P			
	comp=Z,389nm,0.3s						
KIV	Kislovodsk	82.21	313	eP	P	15 37 38.8	+0.1
	comp=Z,18nm,0.7s						
KIV	Kislovodsk	82.21	313	eP	P	15 37 39.3	+0.7
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
TCOL	CIGO, UAF Yank	82.28	25	P	P	15 37 39.3	+0.9
	baz=268						
COLA	College	82.28	25	eP	P	15 37 39.5	+1.1
	comp=Z,14nm,0.7s						
COLA	College	82.28	25	c iP	P	15 37 38.9	+0.5
COLA				pmax	pmax		
	comp=Z,13nm,1.0s						
SCM	Sheep Creek Mo	82.41	28	eP	P	15 37 41.7	+2.4
	comp=Z,102nm,1.4s						
DHY	Denali Highway	82.43	27	eP	P	15 37 42.2	+2.7
	comp=Z,111nm,2.0s						
POKR	Poker Plat Res	82.47	25	P	P	15 37 41.8	+2.3
	baz=268						
HDA	Harding Lake	82.65	26	eP	P	15 37 41.2	+0.7
	comp=Z,24nm,0.6s						
HDA	Harding Lake	82.65	26	P	P	15 37 41.1	+0.6
	baz=269						
IL1	Eielson Array	82.69	26	eP	P	15 37 40.5	-0.1
ILAR	Eielson Array	82.69	26	P	P	15 37 41.2	+0.6
	comp=Z,13nm,0.6s,baz=248,slow=5.3,SNR=129						
ILAR				pP	pwP	15 37 55.3	+0.3
	comp=Z,7.4nm,0.8s,baz=247,slow=5.6,SNR=7.3						
ILAR				PP	PP	15 40 56.0	+5.6
	comp=Z,1.5nm,0.9s,baz=267,slow=7.8,SNR=4.2						
ILB	Eielson Array	82.69	26	eP	P	15 37 40.9	+0.2
VRH	Novokhopyorsk	82.77	321	eP	P	15 37 39.6	-1.7
VRH				e*PP	pwP	15 37 53.4	-3.3
VRH				pmax	pmax		
	comp=Z,40nm,1.3s						
ARTV	Artvin	82.83	311	i P	P	15 37 43.2	+1.1
ARTV				IAML_P			
	comp=Z,57nm,0.1s						
DAGI	Agillar	82.84	311	i P	P	15 37 41.7	-0.4
DAGI				IAML_P			
	comp=Z,369nm,0.6s						
DDEM	Demirkent	82.97	310	i P	P	15 37 43.6	+0.9
DDEM				IAML_P			
	comp=Z,561nm,0.3s						
DBAD	Bademkaya	83.01	311	i P	P	15 37 43.8	+0.8
DBAD				IAML_P			
	comp=Z,1µm,0.6s						
KLU	Klutina	83.08	29	eP	P	15 37 45.1	+2.3
	comp=Z,82nm,1.5s						
PRP	Porcupine Dome	83.28	25	eP	P	15 37 44.4	+0.6
	comp=Z,9.3nm,0.8s						
HARP	HAARP	83.44	28	eP	P	15 37 47.2	+2.6
	comp=Z,114nm,1.5s						
RIDG	Independ'e Rid	83.57	27	eP	P	15 37 46.9	+1.6
	comp=Z,56nm,1.0s						
KLMR	Klimovskoe	83.86	331	eP	P	15 37 44.3	-2.4
KLMR				pmax	pmax		
	comp=Z,47nm,0.8s						
KLMR	Klimovskoe	83.86	331	eP	P	15 37 44.4	-2.3
KLMR				AMP		15 37 47.3	
	comp=Z,47nm,0.8s						
HMT	Hamilton	83.90	30	eP	P	15 37 49.7	+2.7
	comp=Z,33nm,0.8s						
SCRK	Sand Creek	83.95	26	eP	P	15 37 48.8	+1.5
	comp=Z,57nm,1.6s						
MENT	Mentasta	84.09	27	eP	P	15 37 50.1	+2.2
	comp=Z,29nm,0.7s						
BAYB	BAYBURT	84.13	310	i P	P	15 37 50.0	+1.2
BAYB				IAML_P			
	comp=Z,465nm,0.6s						
VSR	Storozhevoye	84.38	321	d iP	P	15 37 47.9	-1.6
VSR				pmax	pmax		
	comp=Z,35nm,0.9s						
TMCR	Tamitsa	84.45	334	eP	P	15 37 47.7	-1.9
TMCR				pmax	pmax		
	comp=Z,56nm,0.8s						
LPSR	Galich'ya Gora	84.46	322	eP	P	15 37 49.1	-0.8
LPSR				e*PP	pwP	15 38 03.2	-2.2
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
PPT	Papeete	84.99	108	LR	LR	16 09 59.5	
	comp=Z,64nm,18.8s,baz=272,slow=32						
PPT2	Papeete2	85.00	108	eS	S	15 48 25.9	+4.1
	comp=Z,100nm,23.0s						
PPT2	Papeete2	85.00	108	eLR	LR	16 04 46.0	
	comp=Z,187nm,28.2s						
MOS	Moscow	85.07	325	eP	P	15 37 51.6	-1.3
MOS				e*PP	pwP	15 38 05.3	-3.1
MOS				eS	S	15 48 12.7	-8.3
MOS				pmax	pmax		
	comp=Z,58nm,0.9s						
EGAK	Eagle	85.14	25	eP	P	15 37 55.0	+1.9
	comp=Z,16nm,0.7s						
KEMA	Kemaliye	85.55	309	i P	P	15 37 56.6	+0.7
KEMA				IAML_P			
	comp=Z,495nm,0.7s						
VNDA	Vanda	85.56	173	eP	P	15 37 55.6	+0.7
	comp=Z,19nm,0.9s						
VNDA	Vanda	85.56	173	eP	P	15 37 55.6	+0.7
VNDA				pmax	pmax		
	comp=Z,19nm,0.9s						
VNDA	Vanda	85.56	173	P	P	15 37 55.3	+0.4
	comp=Z,14nm,0.9s,baz=309,slow=6.8,SNR=21						

OBN	Obninsk	85.71	325	c *i*P	P	15 37 55.9	-0.2
OBN				*i*		15 38 08.0	
OBN				pmax	pmax		
	comp=Z,35nm,1.1s						
OBN				MLR	MLR		
	comp=Z,80nm,18.0s						
TBI	Tubuai	85.91	114	*e*LR	LR	16 05 18.8	
	comp=Z,195nm,27.2s						
ANN	Anapa	85.93	314	*e*P	P	15 37 56.2	-1.2
ANN				*e**PP	pwP	15 38 10.7	-2.2
ANN				*e*		15 48 25.3	
ANN				pmax	pmax		
	comp=Z,94nm,1.0s						
DAWY	Dawson	85.96	26	*e*P	P	15 37 59.0	+1.7
	comp=Z,11nm,0.6s						
HEKM	Malatya_Hekimh	85.99	309	*i* P	P	15 37 59.9	+1.7
HEKM				IAML_P			
	comp=Z,46nm,0.2s						
EPYK	Eagle Plains	86.82	24	*e*P	P	15 38 02.7	+1.2
	comp=Z,17nm,0.7s						
EPYK	Eagle Plains	86.82	24	P	P	15 38 02.3	+0.8
	baz=278						
HYT	Haines Junctio	87.19	29	*e*P	P	15 38 05.7	+2.2
	comp=Z,9.1nm,0.7s						
JOF	Joensuu	87.56	333	P	P	15 38 04.5	-0.5
JOF				pmax	pmax		
	comp=Z,33nm,1.2s						
INK	Inuvik	87.74	22	*e*P	P	15 38 06.6	+0.8
	comp=Z,18nm,1.0s						
INK	Inuvik	87.74	22	*e*P	P	15 38 06.6	+0.8
INK				pmax	pmax		
	comp=Z,18nm,1.0s						
INK	Inuvik	87.74	22	P	P	15 38 06.5	+0.8
	comp=Z,12nm,0.8s,baz=281,slow=4.0,SNR=46						
MSF	Maaselka	88.05	336	P	P	15 38 06.5	-0.8
MSF				pmax	pmax		
	comp=Z,21nm,1.1s						
SPA0	Spitsbergen Ar	88.43	349	*e*P	P	15 38 08.9	0.0
SPA0	Spitsbergen Ar	88.43	349	*e*P	P	15 38 08.5	-0.5
WHY	Whitehorse	88.49	29	*e*P	P	15 38 11.8	+2.1
	comp=Z,53nm,1.9s						
ARCES	ARCESS Array B	88.62	340	P	P	15 38 09.2	-0.7
ARCES	ARCESS Array B	88.62	340	P	P	15 38 09.2	-0.7
	comp=Z,20nm,0.7s,baz=83,slow=6.2,SNR=164						
ARCES				pP	pwP	15 38 23.3	-2.3
	comp=Z,6.9nm,0.5s,baz=80,slow=6.8,SNR=6.0						
ARE0	ARCESS Array S	88.62	340	*e*P	P	15 38 09.4	-0.6
	comp=Z,1.3nm,0.9s						
ARE0	ARCESS Array S	88.62	340	*e*P	P	15 38 09.4	-0.6
SGF	Sodankyl	88.73	338	P	P	15 38 09.8	-0.7
HAMF	Hammerfest	88.95	341	*e*P	P	15 38 10.7	-0.8
BRTR	Keskin Array B	89.24	310	c*e*P	P	15 38 14.8	+1.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	89.24	310	P	P	15 38 12.5	-1.2
	comp=Z,2.9nm,0.8s,baz=104,slow=4.7,SNR=11						
BRTR				pP	pwP	15 38 25.7	-3.5
	comp=Z,4.7nm,0.9s,baz=130,slow=4.2,SNR=9.5						
BRTR				LR	LR	16 24 52.7	
	comp=Z,54nm,19.4s,baz=93,slow=40						
OUL	Oulu	89.50	335	P	P	15 38 15.2	+1.1
OUL				pmax	pmax		
	comp=Z,16nm,0.8s						
KTK1	Kautokeino	89.54	340	*e*P	P	15 38 13.3	-1.0
SUF	Sumiainen	89.92	333	P	P	15 38 15.6	-0.6
SUF				pmax	pmax		
	comp=Z,19nm,0.9s						
FIA1	FINESS Array S	90.24	332	*e*P	P	15 38 16.9	-0.8
FINES	FINESS Array B	90.25	332	P	P	15 38 16.8	-0.9
	comp=Z,3.6nm,0.6s,baz=64,slow=4.7,SNR=28						
FINES				pP	pwP	15 38 30.4	-2.8
	comp=Z,4.8nm,0.5s,baz=69,slow=3.8,SNR=8.4						
KMBO	Kilima Mbogo	90.46	269	P	P	15 38 19.8	-0.3
	comp=Z,1.2nm,0.3s,baz=98,slow=7.1,SNR=9.2						
KMBO				pP	pwP	15 38 32.0	-3.4
	comp=Z,2.5nm,0.7s,baz=54,slow=3.5,SNR=3.6						
VSU	Vasula	90.58	329	⇑*i*P	P	15 38 18.3	-1.0
VSU				pmax	pmax		
	comp=Z,75nm,1.7s						
AKASG	Malin Array Be	90.68	321	c*e*P	P	15 38 18.7	-1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	90.68	321	P	P	15 38 18.5	-1.5
	comp=Z,3.2nm,0.8s,baz=64,slow=4.6,SNR=11						
AKASG				pP	pwP	15 38 32.5	-3.1
	comp=Z,5.1nm,0.8s,baz=72,slow=4.2,SNR=4.6						
AKASG				LR	LR	16 23 52.0	
	comp=Z,80nm,18.4s,baz=80,slow=39						
AKBB	Malin Array Si	90.68	321	*e*P	P	15 38 18.9	-1.0
	comp=Z,16nm,1.3s						
KIEV	Kiev	90.69	321	*e*P	P	15 38 18.7	-1.4
	comp=Z,17nm,1.3s						
KIEV	Kiev	90.69	321	⇓*i*P	P	15 38 18.6	-1.4
KIEV	Kiev	90.69	321	⇑*i*P	P	15 38 19.0	-1.0
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AK11	Malin Array Si	90.72	321	*e*P	P	15 38 18.9	-1.3
TRO	Tromso	90.81	341	*e*P	P	15 38 18.3	-1.8
DLBC	Dease Lake	91.36	31	P	P	15 38 24.4	+1.3
	comp=Z,3.1nm,0.8s,baz=292,slow=2.2,SNR=7.0						
CFR	Carcaliu	92.42	316	⇑*i*P	P	15 38 26.4	-1.7
CFR	Carcaliu	92.42	316	⇑P	P	15 38 26.4	-1.7
STEI	Steigen	92.68	340	*e*P	P	15 38 28.1	-0.7
TESR	Tescani	93.17	317	⇓*i*P	P	15 38 30.2	-1.4
VRI	Vrincioaia	93.25	317	⇑*i*P	P	15 38 30.5	-1.5
VRI	Vrincioaia	93.25	317	⇑P	P	15 38 30.5	-1.5
PLOR	Plostina	93.31	317	⇑*i*P	P	15 38 30.9	-1.4
PLOR	Plostina	93.31	317	⇑P	P	15 38 30.9	-1.4
MOR8	Moi Rana	93.66	338	*e*P	P	15 38 33.4	-0.1
MLR	Muntele Rosu	93.86	316	⇑*i*P	P	15 38 32.8	-2.2
MLR	Muntele Rosu	93.86	316	⇑P	P	15 38 32.8	-2.2
BURAR	Bucovina Array	93.88	319	⇑*i*P	P	15 38 34.2	-0.8
BURAR	Bucovina Array	93.88	319	⇑P	P	15 38 34.2	-0.8
BUR04	Bucovina Ar. S	93.89	319	*e*P	P	15 38 34.5	-0.6
BUR08	Bucovina Ar. S	93.89	319	*e*P	P	15 38 35.1	+0.1
VOIR		94.49	316	⇑*i*P	P	15 38 35.3	-2.5
VOIR		94.49	316	⇑P	P	15 38 35.3	-2.5
ARR	Arges	94.79	316	⇑*i*P	P	15 38 37.3	-1.9
DAG	Danmarks Havn	95.12	353	⇓*i*P	P	15 38 39.2	-0.7
	comp=Z,8.4nm,0.7s						
DAG				*i*		15 38 52.9	
DAG	Danmarks Havn	95.12	353	⇓*i*P	P	15 38 39.2	-0.7
DAG				*i*		15 38 52.9	
DAG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NSS	Namsos	95.30	337	*e*P	P	15 38 39.3	-1.6
RES	Resolute Bay	95.43	10	*e*P	P	15 38 42.2	+0.8
	comp=Z,6.5nm,0.8s						
RES	Resolute Bay	95.43	10	*e*P	P	15 38 42.2	+0.8
RES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RES	Resolute Bay	95.43	10	P	P	15 38 41.7	+0.3
	comp=Z,5.9nm,0.9s,baz=314,slow=6.0,SNR=27						
DRGR		95.74	318	⇑*i*P	P	15 38 43.1	-0.4
DRGR		95.74	318	⇑P	P	15 38 43.1	-0.4
QSPA	South Pole Qui	95.90	180	*e*P	P	15 38 44.4	+0.6
	comp=Z,10nm,0.9s						
SIRR	Siria	96.58	318	⇓*i*P	P	15 38 46.5	-0.8
YKA	Yellowknife Ar	97.08	24	P	Pdif	15 38 50.1	+0.9
	comp=Z,2.5nm,0.7s,baz=301,slow=4.6,SNR=40						
YKA				pP	pwP	15 39 03.4	0.0
	comp=Z,2.2nm,0.9s,baz=298,slow=5.1,SNR=6.6						
YKA				PKiKP	PKiKP	15 43 24.6	-0.2
	comp=Z,0.3nm,0.4s,baz=302,slow=1.6,SNR=6.1						
YKA				PKKPbc	PKKPbc	15 55 27.1	-4.5
	comp=Z,0.6nm,0.5s,baz=116,slow=2.6,SNR=12						
YKB5	Yellowknife Ar	97.08	24	*e*P	P	15 38 49.5	+0.4
NC602	NORSAR Array S	97.13	334	*e*P	P	15 38 49.5	+0.1
NB2	NORSAR Subarra	97.14	334	P	P	15 38 47.6	-1.9
	comp=Z,1.3nm,0.7s,baz=65,slow=4.6						
NB2	NORSAR Subarra	97.14	334	P	P	15 38 47.6	-1.9
	baz=65,slow=4.6						
NOA	NORSAR Array B	97.14	334	P	P	15 38 48.0	-1.5
NOA	NORSAR Array B	97.14	334	P	P	15 38 48.0	-1.5
	comp=Z,2.3nm,0.8s,baz=63,slow=4.6,SNR=9.6						
NOA				LR	LR	16 27 51.0	
	comp=Z,134nm,20.3s,baz=70,slow=39						
DOMB	Dombas	97.60	335	*e*P	P	15 38 51.6	0.0
D03D	Eldon	98.42	40	P	P	15 38 55.8	+0.4
	baz=289						
KONO	Kongsberg	98.48	333	*e*PP	PP	15 42 56.0	+0.5
B05A	Bryant	98.82	39	P	P	15 38 57.6	+0.4
	baz=290						
I03D	Drain, OR	99.44	44	P	Pdif	15 39 01.3	+1.2
	baz=288						
TREC	Trest	99.58	322	P	Pdif	15 39 03.2	+2.5
TREC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRG	Berggiesshubel	99.93	324	*e*P	Pdif	15 39 02.0	-0.2
	comp=Z,10nm,1.6s						
BRG				*e*PP	PP	15 43 05.0	-1.8
	comp=Z,1.8nm,0.8s						
BRG	Berggiesshubel	99.93	324	*e*P	Pdif	15 39 02.0	-0.2
BRG				*e*		15 43 05.0	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.6s						
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
I04A	Tendick Farm,	100.05	44	P	Pdif	15 39 03.5	+0.5
	baz=288						
CLL	Collm	100.31	325	*e*Pdif	Pdif	15 39 04.0	+0.2
CLL				*e*SKKSac	SKKSac	15 50 09.0	-6.4
CLL				*e*Sdif	Sdif	15 50 32.0	-6.5
CLL				*e*PS	PS	15 52 17.0	+7.0
CLL				*e*		16 02 06.0	
CLL				*e*PPPrev		16 03 36.0	
CLL				Lm	MLR	16 30 00.0	
	comp=Z,200nm,19.5s						
CLL	Collm	100.31	325	*e*P	Pdif	15 39 04.0	+0.2
CLL				*e*S	Sdif	15 50 32.0	-6.5
L04D	Klamath Falls	100.62	45	P	Pdif	15 39 06.6	+0.9
	baz=288						
GERES	GERESS Array B	100.84	322	P	Pdif	15 39 05.8	-0.7
	comp=Z,1.2nm,0.8s,baz=64,slow=6.1,SNR=9.3						
GERES				pP	pwP	15 39 18.9	-3.2
	comp=Z,1.3nm,0.8s,baz=97,slow=5.5,SNR=6.3						
GEA0	GERESS Array S	100.84	322	*e*Pdif	Pdif	15 39 05.8	-0.5
NVAR	Mina Array Bea	104.75	48	Pdiff	Pdif	15 39 26.4	+2.2
	comp=Z,1.3nm,0.7s,baz=280,slow=5.0,SNR=9.6						
NVAR				PKiKP	PKiKP	15 43 40.1	+0.4
	comp=Z,0.8nm,0.8s,baz=274,slow=4.2,SNR=4.1						
NVAR				PKKPbc	PKKPbc	15 55 08.4	-0.6
	comp=Z,0.5nm,0.5s,baz=142,slow=3.7,SNR=5.3						
ARVC	Arvin	105.45	51	P	PKiKP	15 43 40.5	-0.3
	baz=289						
EGMT	Eagleton	106.45	36	P	PKiKP	15 43 42.3	0.0
	baz=299						
PDAR	Pinedale Array	109.08	41	PKiKP	PKiKP	15 43 47.6	0.0
	comp=Z,0.4nm,0.5s,baz=116,slow=2.1,SNR=5.4						
PDAR				PKKPbc	PKKPbc	15 54 52.4	-3.5
	comp=Z,0.2nm,0.6s,baz=132,slow=4.2,SNR=3.8						
O20A	White River Ci	111.19	43	P	PKiKP	15 43 52.3	+0.7
	baz=298						
RSSD	Black Hills	111.87	37	P	PKiKP	15 43 52.3	-0.5
	baz=303						
MDND	Maddock	112.23	32	P	PKiKP	15 43 54.0	+0.8
	baz=308						
ULM	Lac du Bonnet	112.56	29	PKiKP	PKiKP	15 43 53.6	0.0
	comp=Z,3.1nm,0.5s,baz=315,slow=0.8,SNR=8.5						
SDCO	Great Sand Dun	114.21	44	P	PKiKP	15 43 58.1	+0.5
	baz=300						
ANMO	Albuquerque	114.86	47	⇑*i*PKIKP	PKiKP	15 43 58.1	-0.7
ANMO				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ANMO	Albuquerque	114.86	47	P	PKPdf	15 43 59.9	+1.1
	baz=298						
121A	Cookes Peak, D	114.94	50	P	PKPdf	15 44 00.3	+1.3
	baz=296						
T25A	Trinidad	115.26	44	P	PKPdf	15 44 00.4	+0.9
	baz=300						
EYMN	Ely	116.23	28	P	PKPdf	15 44 01.4	+0.6
	baz=316						
ECSD	EROS Data Cent	116.43	34	*e*PKPdf	PKiKP	15 44 01.8	+0.5
ECSD	EROS Data Cent	116.43	34	P	PKPdf	15 44 01.0	-0.3
	baz=310						
BGNE	Belgrade	116.97	37	P	PKPdf	15 44 02.7	+0.3
	baz=307						
MNTX	Cornudas Mount	117.14	50	*e*PKPdf	PKiKP	15 44 04.8	+1.8
MNTX	Cornudas Mount	117.14	50	P	PKiKP	15 44 03.7	+0.7
	baz=297						
E38A	The Farm, Brul	117.16	29	P	PKPdf	15 44 02.9	+0.3
	baz=315						
F37A	Hinrichs Farm,	117.24	31	P	PKPdf	15 44 02.8	0.0
	baz=314						
C40A	Isle Royale Na	117.33	27	P	PKiKP	15 44 03.4	+0.5
	baz=318						
F38A	Pierce - Schro	117.45	30	P	PKiKP	15 44 03.8	+0.6
	baz=315						
SPMN	Marine on St.	117.50	31	P	PKiKP	15 44 03.7	+0.4
	baz=314						
E39A	Mellen	117.80	29	P	PKiKP	15 44 04.3	+0.5
	baz=316						
F39A	Loretta	117.96	29	P	PKPdf	15 44 04.4	+0.2
	baz=316						
MSTX	Muleshoe	117.99	46	P	PKiKP	15 44 05.2	+0.5
	baz=300						
G38A	Ridgeland	118.02	31	P	PKPdf	15 44 04.5	+0.2
	baz=315						
E40A	Wakefield	118.07	28	P	PKiKP	15 44 05.2	+0.8
	baz=317						
H38A	Maiden Rock	118.14	31	P	PKiKP	15 44 05.1	+0.5
	baz=314						
SCHQ	Schefferville	118.19	9	PKP	PKiKP	15 44 05.0	+0.6
	comp=Z,3.7nm,0.4s,baz=341,slow=1.8,SNR=8.2						
D41A	Chassel	118.23	27	P	PKPdf	15 44 04.9	+0.3
	baz=318						
G39A	Holcombe	118.28	30	P	PKPdf	15 44 05.0	+0.2
	baz=315						
F40A	Park Falls	118.34	29	P	PKPdf	15 44 05.1	+0.2
	baz=317						
E41A	Kenton	118.50	28	P	PKPdf	15 44 05.2	0.0
	baz=318						
H39A	Augusta	118.65	31	P	PKPdf	15 44 05.4	-0.1
	baz=315						
G40A	Rib Lake	118.77	30	P	PKPdf	15 44 05.7	0.0
	baz=316						
F41A	Three Lakes	118.96	29	P	PKPdf	15 44 06.1	0.0
	baz=318						
E42A	Champion	119.00	27	P	PKPdf	15 44 06.0	-0.1
	baz=319						
I39A	Houston	119.11	31	P	PKPdf	15 44 06.3	-0.2
	baz=314						
H40A	Chili	119.14	30	P	PKPdf	15 44 06.7	+0.2
	baz=316						
KSU1	Kansas State U	119.30	38	*e*PKPdf	PKiKP	15 44 07.9	+0.9
KSU1	Kansas State U	119.30	38	P	PKPdf	15 44 07.3	+0.3
	baz=308						
J39A	Decorah	119.37	32	P	PKPdf	15 44 06.6	-0.4
	baz=314						
F42A	Maple Grove Fa	119.41	28	P	PKPdf	15 44 06.7	-0.3
	baz=318						
H41A	Junction City	119.51	30	P	PKPdf	15 44 07.2	0.0
	baz=316						
TXAR	Lajitas Array	119.52	52	PKP	PKiKP	15 44 08.9	+1.1
	comp=Z,1.7nm,0.7s,baz=251,slow=0.6,SNR=21						
TXAR				PKKPbc	PKKPbc	15 54 18.7	-0.9
	comp=Z,0.5nm,0.8s,baz=96,slow=6.3,SNR=4.6						
I40A	Norwalk	119.55	31	P	PKPdf	15 44 07.3	0.0
	baz=315						
G42A	Mountain	119.65	29	P	PKPdf	15 44 07.6	+0.2
	baz=318						
K39A	Oelwein	119.71	33	P	PKPdf	15 44 07.3	-0.3
	baz=314						
F43A	Flat Rock, Esc	119.80	27	P	PKiKP	15 44 08.1	+0.4
	baz=320						
I41A	Arkdale	119.81	30	P	PKPdf	15 44 07.6	-0.2
	baz=316						
J40A	Soldiers Grove	119.83	31	P	PKPdf	15 44 07.9	0.0
	baz=315						
G43A	Wallace	119.99	28	P	PKiKP	15 44 08.5	+0.4
	baz=319						
L39A	Vinton	120.04	33	P	PKPdf	15 44 08.4	+0.1
	baz=313						
K40A	Colesburg	120.11	32	P	PKPdf	15 44 08.2	-0.2
	baz=314						
H42A	Shiocton	120.14	29	P	PKPdf	15 44 08.6	+0.2
	baz=318						
MATQ	Matagami	120.29	19	P	PKPdf	15 44 08.3	-0.2
	baz=331						
D46A	Sault St. Mari	120.34	25	P	PKiKP	15 44 09.1	+0.3
	baz=323						
M39A	Webster	120.39	34	P	PKPdf	15 44 09.3	+0.4
	baz=313						
WMOK	Wichita Mounta	120.41	44	*e*PKPdf	PKiKP	15 44 10.3	+1.0
WMOK	Wichita Mounta	120.41	44	*e*PKIKP	PKiKP	15 44 10.3	+1.0
WMOK	Wichita Mounta	120.41	44	P	PKiKP	15 44 09.9	+0.6
	baz=304						
I42A	Draeger Farm,	120.41	30	P	PKPdf	15 44 08.9	-0.1
	baz=317						
JFWS	Jewell Farm	120.43	32	*e*PKPdf	PKPdf	15 44 09.3	+0.3
JFWS	Jewell Farm	120.43	32	*e*PKIKP	PKPdf	15 44 09.3	+0.3
JFWS	Jewell Farm	120.43	32	P	PKPdf	15 44 08.9	-0.1
	baz=315						
L40A	Anamosa	120.51	33	P	PKPdf	15 44 09.3	+0.1
	baz=314						
D47A	Chapleau	120.59	24	P	PKPdf	15 44 09.4	+0.2
	baz=324						
K41A	Shullsburg	120.61	32	P	PKPdf	15 44 09.2	-0.2
	baz=315						
E46A	Sault Ste Mari	120.64	25	P	PKPdf	15 44 09.1	-0.2
	baz=323						
F45A	CMU Biological	120.65	26	P	PKPdf	15 44 09.3	0.0
	baz=321						
J42A	Columbus	120.72	31	P	PKPdf	15 44 09.7	+0.1
	baz=316						
I43A	Langenfeld Bro	120.79	29	P	PKPdf	15 44 09.5	-0.2
	baz=318						
M40A	Post Highland	120.80	34	P	PKPdf	15 44 09.6	-0.1
	baz=313						
L41A	Preston	120.89	32	P	PKPdf	15 44 10.1	+0.2
	baz=315						
F46A	Macinaw City C	120.92	26	P	PKPdf	15 44 10.1	+0.3
	baz=322						
K42A	Prairie Point,	120.99	31	P	PKPdf	15 44 09.9	-0.2
	baz=316						
E47A	Iron Bridge	121.00	24	P	PKiKP	15 44 10.6	+0.5
	baz=324						
D48A	Paudash Townsh	121.00	23	P	PKiKP	15 44 10.5	+0.4
	baz=326						
J43A	Natural Harves	121.02	30	P	PKPdf	15 44 10.3	+0.1
	baz=317						
D49A	Beulah Townshi	121.10	23	P	PKPdf	15 44 10.2	0.0
	baz=326						
LSQQ	Lebel-sur-Quev	121.11	19	P	PKPdf	15 44 10.2	+0.1
	baz=331						
N40A	Mertquake, Sal	121.11	34	P	PKPdf	15 44 10.7	+0.3
	baz=313						
CHGQ	Chibougamau	121.13	16	P	PKPdf	15 44 10.4	+0.3
	baz=334						
G46A	Petoskey	121.23	26	P	PKPdf	15 44 10.7	+0.3
	baz=322						
M41A	Milan	121.35	33	P	PKPdf	15 44 10.5	-0.3
	baz=314						
L42A	Oliver, Polo	121.38	32	P	PKPdf	15 44 10.7	-0.1
	baz=315						
E48A	Lockeyer	121.43	24	P	PKPdf	15 44 10.9	0.0
	baz=325						
N41A	Harden Midland	121.64	34	P	PKPdf	15 44 11.3	-0.1
	baz=314						
L43A	Garden Prairie	121.73	31	P	PKPdf	15 44 11.2	-0.4
	baz=316						
TUL1	Leonard	121.74	41	P	PKiKP	15 44 12.2	+0.3
	baz=307						
D50A	G1974 Best Tow	121.75	22	P	PKPdf	15 44 11.7	+0.3
	baz=328						
F48A	Evansville	121.78	24	P	PKiKP	15 44 12.0	+0.3
	baz=324						
G47A	Hillman	121.78	26	P	PKPdf	15 44 11.8	+0.3
	baz=323						
JCT	Junction City	121.92	48	P	PKiKP	15 44 13.0	+0.5
	baz=301						
D51A	Lot 18 Range I	121.99	21	P	PKPdf	15 44 11.3	-0.5
	baz=328						
N42A	Yates City	122.00	33	P	PKPdf	15 44 12.1	0.0
	baz=315						
O41A	Passleys Farm,	122.03	34	P	PKPdf	15 44 12.3	+0.2
	baz=313						
E50A	Wahnapitae	122.04	23	P	PKiKP	15 44 12.5	+0.3
	baz=326						
F49A	Sandfield	122.07	24	P	PKiKP	15 44 12.5	+0.3
	baz=325						
H47A	Mio	122.08	26	P	PKiKP	15 44 12.6	+0.3
	baz=322						
M43A	Waltham Townsh	122.15	32	P	PKPdf	15 44 12.4	+0.1
	baz=316						
P41A	Barry, Barry	122.23	35	P	PKPdf	15 44 12.8	+0.3
	baz=313						
H48A	Harrisville	122.38	26	P	PKPdf	15 44 12.9	+0.2
	baz=323						
J46A	Howard City	122.39	28	P	PKPdf	15 44 13.0	+0.2
	baz=320						
N43A	Stutzman Famil	122.39	32	P	PKPdf	15 44 12.6	-0.3
	baz=316						
E51A	G1948 Merrick	122.42	22	P	PKiKP	15 44 13.2	+0.3
	baz=328						
O42A	Bath	122.42	34	P	PKPdf	15 44 12.9	0.0
	baz=314						
D52A	ZEK Kipawa Sen	122.43	21	P	PKPdf	15 44 13.0	+0.2
	baz=329						
D53A	Lac Vacive, Po	122.59	20	P	PKPdf	15 44 13.3	+0.2
	baz=330						
HDIL	Hopedale	122.60	33	P	PKPdf	15 44 13.5	+0.3
	baz=315						
Q41A	Truxton	122.62	35	P	PKiKP	15 44 13.8	+0.3
	baz=312						
I48A	Sherman Twp	122.63	26	P	PKPdf	15 44 13.5	+0.3
	baz=322						
M44A	Midewin, Midew	122.66	31	P	PKPdf	15 44 13.2	-0.2
	baz=317						
P42A	Winchester	122.69	34	P	PKPdf	15 44 13.8	+0.4
	baz=314						
TOBO	Tobermory, Bru	122.72	24	P	PKPdf	15 44 13.3	0.0
	baz=325						
F51A	Arnstein	122.77	23	P	PKPdf	15 44 13.6	+0.2
	baz=327						
O43A	Sugar Creek Fa	122.78	33	P	PKPdf	15 44 13.6	+0.1
	baz=315						
K46A	Dorr	122.83	29	P	PKPdf	15 44 13.8	+0.2
	baz=320						
WHTX	Lake Whitney,	122.83	46	P	PKPdf	15 44 14.2	+0.3
	baz=303						
J47A	Sunmer	122.86	28	P	PKiKP	15 44 14.2	+0.3
	baz=321						
D54A	Lac Fusel, La	122.88	20	P	PKPdf	15 44 13.4	-0.2
	baz=331						
E52A	Mattawa	122.93	21	P	PKPdf	15 44 14.0	+0.3
	baz=329						
R41A	Rosebud	122.97	36	P	PKPdf	15 44 14.4	+0.4
	baz=312						
TORD	Torodi Ar. Bea	123.00	290	PKP	PKPdf	15 44 13.9	-0.7
	comp=Z,6.5nm,0.9s,baz=50,slow=4.6,SNR=13						
TORD				PKKPbc	PKKPab	15 54 07.0	+0.5
	comp=Z,1.0nm,0.7s,baz=288,slow=4.4,SNR=7.8						
N44A	Piper City	123.05	32	P	PKiKP	15 44 14.7	+0.4
	baz=316						
Q42A	Golden Eagle	123.05	35	P	PKiKP	15 44 14.7	+0.4
	baz=313						
L46A	Eue Claire	123.09	30	P	PKPdf	15 44 14.3	+0.2
	baz=319						
F52A	Sundridge	123.10	22	P	PKiKP	15 44 14.7	+0.4
	baz=328						
P43A	Skaggs, Pawnee	123.11	34	P	PKPdf	15 44 14.5	+0.3
	baz=314						
KLBO	Killbear Provi	123.13	23	P	PKiKP	15 44 14.7	+0.3
	baz=327						
I49A	Point Hope	123.21	26	P	PKiKP	15 44 15.0	+0.4
	baz=323						
E53A	Dumoine, Ponti	123.21	21	P	PKiKP	15 44 14.8	+0.3
	baz=330						
CCM	Cathedral Cave	123.21	36	P	PKiKP	15 44 15.1	+0.4
	baz=312						
K47A	Vermontville	123.22	28	P	PKiKP	15 44 14.9	+0.3
	baz=320						
S41A	Jillco Farms,	123.22	37	P	PKPdf	15 44 14.9	+0.3
	baz=311						
J48A	Bridge Port	123.29	27	P	PKiKP	15 44 15.4	+0.7
	baz=322						
833A	Chaparral WMA,	123.30	50	P	PKPdf	15 44 15.2	+0.2
	baz=300						
E54A	Lac Daplat, Po	123.33	20	P	PKPdf	15 44 14.6	+0.1
	baz=330						
O44A	Mansfield	123.33	33	P	PKPdf	15 44 14.8	+0.2
	baz=316						
N45A	Kentland	123.33	31	P	PKPdf	15 44 14.9	+0.3
	baz=317						
U40A	Yellville	123.34	39	P	PKPdf	15 44 15.0	+0.2
	baz=310						
435B	Jarrell	123.39	47	P	PKiKP	15 44 16.1	+0.8
	baz=303						
ALGO	Algonquin Park	123.44	21	P	PKPdf	15 44 15.1	+0.4
	baz=329						
W39A	Magazine	123.47	40	P	PKPdf	15 44 15.4	+0.3
	baz=308						
Q43A	New Douglas	123.50	35	P	PKPdf	15 44 15.1	+0.1
	baz=314						
M46A	Old House Fiel	123.51	30	P	PKiKP	15 44 15.6	+0.4
	baz=318						
K48A	Perry	123.52	28	P	PKPdf	15 44 15.2	+0.3
	baz=322						
J49A	Marlette	123.53	27	P	PKPdf	15 44 15.3	+0.4
	baz=323						

BRCO	Bruce Peninsul baz=325	123.55	25	P	PKiKP	15 44 15.5	+0.3
T41A	Mountain View baz=311	123.57	38	P	PKiKP	15 44 16.1	+0.6
BASO	Ashfield baz=325	123.64	25	P	PKPdf	15 44 15.5	+0.4
L47A	Sherwood baz=320	123.65	29	P	PKiKP	15 44 15.7	+0.2
O45A	Potomac baz=317	123.66	32	P	PKiKP	15 44 16.2	+0.7
S42A	Caledonia baz=312	123.67	36	P	PKPdf	15 44 15.6	+0.2
N46A	Monticello baz=318	123.70	31	P	PKPdf	15 44 15.7	+0.4
P44A	Sand Creek, Wi baz=315	123.73	33	P	PKiKP	15 44 16.0	+0.3
R43A	Red Bud baz=314	123.83	35	P	PKPdf	15 44 15.7	0.0
LATQ	La Tuque baz=336	123.87	17	P	PKPdf	15 44 15.5	+0.1
SFIN	Lafayette baz=317	123.89	32	P	PKiKP	15 44 16.3	+0.3
Q44A	Meyer Farm, Va baz=315	123.91	34	P	PKPdf	15 44 16.0	+0.2
M47A	Cromwell baz=319	123.91	30	P	PKPdf	15 44 16.0	+0.3
U41A	Viola baz=311	123.92	38	P	PKPdf	15 44 16.1	+0.2
G53A	Haliburton baz=328	123.94	22	P	PKPdf	15 44 16.1	+0.4
PEMO	Pembroke baz=330	123.96	21	P	PKPdf	15 44 16.0	+0.3
T42A	Van Buren baz=312	123.98	37	P	PKPdf	15 44 16.3	+0.3
MIAR	Mount Ida baz=308	124.01	41	P	PKiKP	15 44 16.7	+0.4
L48A	N Adams baz=321	124.04	29	P	PKPdf	15 44 16.5	+0.5
I51A	Listowel baz=325	124.08	25	P	PKiKP	15 44 17.0	+0.7
F55A	Otter Lake baz=331	124.14	20	P	PKPdf	15 44 16.2	+0.2
V41A	Mountainview baz=310	124.14	39	P	PKPdf	15 44 16.3	-0.1
P45A	Graceland, Par baz=316	124.16	33	P	PKPdf	15 44 16.5	+0.2
S43A	Fulton Ridge, baz=313	124.22	36	P	PKPdf	15 44 16.5	+0.1
L49A	Milan baz=322	124.23	28	P	PKPdf	15 44 16.7	+0.4
N47A	Urbana baz=319	124.24	30	P	PKPdf	15 44 16.7	+0.4
M48A	Edgerton baz=320	124.26	29	P	PKPdf	15 44 16.9	+0.5
BANO	Bancroft baz=329	124.28	22	P	PKPdf	15 44 16.6	+0.3
R44A	Waltonville baz=314	124.33	35	P	PKiKP	15 44 17.4	+0.5
U42A	Revenden baz=311	124.34	38	P	PKiKP	15 44 17.2	+0.3
P46A	Rosedale baz=317	124.39	32	P	PKPdf	15 44 17.0	+0.3
Q45A	Warren Harvey, baz=316	124.39	34	P	PKiKP	15 44 17.6	+0.6
T43A	Greenville baz=312	124.42	37	P	PKPdf	15 44 17.0	+0.2
W41B	Gary Mavity, V baz=310	124.47	40	P	PKPdf	15 44 17.4	+0.4
O47A	Sheridan baz=318	124.47	31	P	PKPdf	15 44 17.1	+0.2
G55A	Calabogie baz=330	124.51	21	P	PKPdf	15 44 16.9	+0.2
X40A	Basin Creek Fa baz=309	124.52	41	P	PKiKP	15 44 17.7	+0.3
PLVO	Plevna baz=330	124.57	21	P	PKPdf	15 44 17.3	+0.4
N48A	Decatur baz=320	124.58	30	P	PKPdf	15 44 17.5	+0.5
S44A	Carbondale baz=314	124.61	35	P	PKPdf	15 44 17.4	+0.2
M49A	Liberty Center baz=321	124.62	29	P	PKiKP	15 44 17.8	+0.4
ACTO	Acton baz=326	124.64	24	P	PKPdf	15 44 17.3	+0.2
L50A	Kingsville baz=323	124.72	27	P	PKPdf	15 44 17.7	+0.5
R45A	Skylar, Fairfi baz=315	124.75	34	P	PKiKP	15 44 18.1	+0.3
J52A	Paris baz=326	124.77	25	P	PKPdf	15 44 17.6	+0.2
ALFO	Alfred baz=333	124.81	19	P	PKiKP	15 44 17.9	+0.3
DELO	Deloro Mine baz=329	124.82	22	P	PKPdf	15 44 17.5	+0.2
U43A	Rector baz=312	124.83	37	P	PKPdf	15 44 17.8	+0.2
N49A	Columbus Grove baz=321	124.95	29	P	PKiKP	15 44 18.4	+0.3
DRWO	Darlington Wes baz=328	124.95	23	P	PKiKP	15 44 18.5	+0.5
H55A	Tweed baz=330	124.96	21	P	PKPdf	15 44 18.1	+0.5
DRCO	St. Marys Ceme baz=328	124.96	23	P	PKiKP	15 44 18.3	+0.3
O48A	Farmland baz=319	124.97	30	P	PKPdf	15 44 17.6	-0.2
P47A	Martinsville baz=318	124.98	32	P	PKPdf	15 44 18.0	+0.2
S45A	Carrier Mills baz=314	125.01	35	P	PKiKP	15 44 18.5	+0.2
WLVO	Wesleyville baz=328	125.04	23	P	PKPdf	15 44 18.2	+0.4
K52A	Tillsonburg baz=325	125.05	25	P	PKPdf	15 44 18.3	+0.5
M50A	Fremont baz=322	125.12	28	P	PKPdf	15 44 17.9	-0.1
V43A	Jonesboro baz=312	125.13	38	P	PKPdf	15 44 18.7	+0.5
TYNO	Tyneside baz=326	125.14	24	P	PKPdf	15 44 18.5	+0.5
U44A	Portageville baz=313	125.17	37	P	PKiKP	15 44 18.9	+0.3
R46A	Gibon Southern baz=316	125.23	34	P	PKPdf	15 44 18.7	+0.3
H56A	Elgin baz=331	125.25	21	P	PKPdf	15 44 18.6	+0.4
Q47A	Bedord North L baz=317	125.30	32	P	PKiKP	15 44 19.1	+0.3
P48A	Milroy baz=319	125.43	31	P	PKPdf	15 44 18.8	+0.1
O49A	Covington baz=320	125.44	30	P	PKPdf	15 44 18.9	+0.2
N50A	Nevada baz=322	125.56	29	P	PKPdf	15 44 19.1	+0.2
MEDO	Medina baz=328	125.66	23	P	PKPdf	15 44 19.4	+0.3
Q48A	North Vernon baz=318	125.67	32	P	PKPdf	15 44 19.6	+0.4
R47A	Wooly Knot Far baz=317	125.71	33	P	PKPdf	15 44 19.8	+0.5
P49A	Miami Univ. Ec baz=319	125.74	31	P	PKPdf	15 44 19.5	+0.2
M52A	Chesterland baz=324	125.78	27	P	PKPdf	15 44 19.6	+0.3
LONY	Lake Ozonia baz=333	125.80	19	P	PKPdf	15 44 19.8	+0.5
J55A	Hilton baz=329	125.82	23	P	PKPdf	15 44 19.7	+0.4
O50A	Cable baz=321	125.82	29	P	PKPdf	15 44 19.8	+0.4
T46A	Princeton baz=315	125.84	35	P	PKiKP	15 44 20.2	+0.2
WCI	Wyandotte Cave baz=317	125.88	33	P	PKPdf	15 44 19.9	+0.3
L53A	Girard baz=325	125.92	25	P	PKPdf	15 44 19.8	+0.2
R48A	Northridge Ran baz=318	125.98	32	P	PKiKP	15 44 20.5	+0.3
S47A	Hartford baz=316	126.02	34	P	PKPdf	15 44 20.4	+0.5
Q49A	Aurora baz=319	126.05	31	P	PKPdf	15 44 20.0	+0.1
ACSO	Alum Creek Sta baz=322	126.06	29	P	PKiKP	15 44 20.5	+0.2
Y43A	Makayla and Ka baz=310	126.11	40	P	PKiKP	15 44 21.2	+0.6
P50A	Jamestown baz=320	126.14	30	P	PKPdf	15 44 20.2	+0.2
U46A	Springville baz=314	126.16	36	P	PKPdf	15 44 20.7	+0.5
M53A	WI Miller and baz=325	126.16	26	P	PKPdf	15 44 19.9	-0.2
K55A	Perry baz=328	126.17	23	P	PKPdf	15 44 20.2	+0.2
N52A	McGinn's Farm, baz=323	126.21	27	P	PKPdf	15 44 20.5	+0.3
O51A	Pataskala baz=322	126.31	29	P	PKPdf	15 44 20.3	-0.1
T47A	Sharon Grove baz=316	126.33	34	P	PKPdf	15 44 20.8	+0.3
W45A	Hickory Valley baz=313	126.38	38	P	PKPdf	15 44 21.1	+0.5
S48A	Wiedeman Farm, baz=317	126.43	33	P	PKPdf	15 44 20.9	+0.3
R49A	Shelbyville baz=318	126.44	32	P	PKPdf	15 44 20.7	0.0
L55A	Hinsdale baz=327	126.49	24	P	PKPdf	15 44 20.9	+0.2
WVT	Waverly baz=314	126.52	36	P	PKPdf	15 44 21.2	+0.4
M54A	Oil Creek Stat baz=326	126.54	25	P	PKPdf	15 44 21.2	+0.4
V46A	Holladay baz=314	126.58	36	P	PKPdf	15 44 21.1	+0.1
N53A	Lisbon baz=324	126.60	27	P	PKPdf	15 44 21.2	+0.3
P51A	Williamsport baz=321	126.61	29	P	PKPdf	15 44 21.2	+0.3
U47A	Clarksville baz=315	126.61	35	P	PKPdf	15 44 21.5	+0.5
T48A	Bowling Green baz=316	126.64	34	P	PKPdf	15 44 21.4	+0.4
OXF	Oxford baz=312	126.67	38	P	PKPdf	15 44 21.4	+0.2
O52A	Adamsville baz=323	126.69	28	P	PKPdf	15 44 21.0	-0.1
S49A	Springfield baz=318	126.75	32	P	PKPdf	15 44 21.4	+0.1
Q51A	Peebles baz=321	126.82	30	P	PKPdf	15 44 21.9	+0.5
N54A	Moraine State baz=325	126.85	26	P	PKPdf	15 44 21.6	+0.2
O53A	New Philadelph baz=324	126.88	27	P	PKPdf	15 44 21.9	+0.5
W46A	Michie baz=313	126.88	37	P	PKiKP	15 44 22.3	+0.2
R50A	Paris baz=319	126.88	31	P	PKPdf	15 44 21.5	0.0
V47A	Nunnelly baz=315	126.91	36	P	PKPdf	15 44 22.2	+0.6
P52A	Corning baz=322	126.94	29	P	PKPdf	15 44 22.1	+0.5
M55A	Ridgway baz=327	126.95	25	P	PKPdf	15 44 21.9	+0.3
LBNH	Lisbon baz=336	126.98	17	P	PKPdf	15 44 22.0	+0.5
U48A	Cassie Pea, Po baz=316	126.99	34	P	PKiKP	15 44 22.9	+0.6
T49A	Edmonton baz=317	127.11	33	P	PKPdf	15 44 22.3	+0.3
X46A	Booneville baz=313	127.15	38	P	PKPdf	15 44 22.6	+0.4
R51A	Hillsboro baz=320	127.25	31	P	PKPdf	15 44 22.6	+0.3
W47A	Westpoint baz=314	127.27	36	P	PKPdf	15 44 22.8	+0.4
S50A	Richmond baz=319	127.30	32	P	PKPdf	15 44 22.7	+0.4
O54A	Avella baz=324	127.31	27	P	PKPdf	15 44 22.8	+0.5
V48A	Smith Brothers baz=315	127.37	35	P	PKPdf	15 44 23.1	+0.5
Q52A	Bidwell baz=322	127.40	29	P	PKPdf	15 44 22.6	+0.1
P53A	Whipple baz=323	127.40	28	P	PKPdf	15 44 23.0	+0.5
U49A	Red Boiling Sp baz=317	127.41	34	P	PKPdf	15 44 22.9	+0.3
BINY	Binghamton baz=330	127.42	22	P	PKPdf	15 44 22.8	+0.3
N55A	Marion Center baz=326	127.43	25	P	PKPdf	15 44 22.7	+0.2
T50A	Nancy baz=318	127.55	33	P	PKiKP	15 44 23.6	+0.2
X47A	Russelville baz=314	127.61	37	P	PKPdf	15 44 23.1	+0.1
R52A	Catlettsburg baz=321	127.70	30	P	PKPdf	15 44 23.4	+0.3
W48A	Pulaski baz=315	127.73	36	P	PKPdf	15 44 23.4	+0.2
P54A	Burton baz=324	127.73	27	P	PKPdf	15 44 23.6	+0.4
S51A	Beattyville baz=320	127.75	31	P	PKPdf	15 44 23.4	+0.2
O55A	Ligonier baz=326	127.76	26	P	PKPdf	15 44 23.4	+0.2
V49A	McMinnville baz=316	127.88	35	P	PKPdf	15 44 24.0	+0.5
MCWV	Mont Chateau baz=325	127.97	27	P	PKPdf	15 44 24.0	+0.4
S52A	Salyersville baz=320	127.98	31	P	PKPdf	15 44 24.0	+0.3
U50A	Jamestown baz=318	128.00	33	P	PKPdf	15 44 24.4	+0.6
SSPA	Standing Stone baz=327	128.01	25	P	PKPdf	15 44 24.1	+0.5
O56A	Blue Knob Stat baz=326	128.03	25	P	PKPdf	15 44 24.2	+0.5
R53A	Hurricane baz=322	128.04	30	P	PKPdf	15 44 24.1	+0.3
Q54A	Coxs Mills baz=323	128.06	28	P	PKPdf	15 44 24.1	+0.3
T51A	Gray baz=319	128.07	32	P	PKPdf	15 44 24.4	+0.6
P55A	Reedsville baz=325	128.10	27	P	PKPdf	15 44 24.3	+0.4
W49A	Belvidere baz=316	128.13	36	P	PKPdf	15 44 24.1	+0.1
X48A	Hartselle baz=314	128.14	37	P	PKPdf	15 44 24.6	+0.5
V50A	Pikevile baz=317	128.40	34	P	PKPdf	15 44 24.3	-0.2
Q55A	Buckhannon baz=324	128.40	28	P	PKPdf	15 44 24.8	+0.4
Y48A	Jasper baz=314	128.44	37	P	PKPdf	15 44 24.7	+0.1
S53A	Williamson baz=321	128.46	30	P	PKPdf	15 44 25.1	+0.5
T52A	Hallie baz=320	128.47	31	P	PKiKP	15 44 25.3	+0.1
U51A	La Follette baz=319	128.47	33	P	PKPdf	15 44 24.9	+0.3
X49A	Woodville baz=315	128.53	36	P	PKPdf	15 44 24.9	+0.2
TZTN	Tazewell baz=319	128.60	32	P	PKPdf	15 44 25.4	+0.6
147A	Livingston baz=312	128.60	39	P	PKPdf	15 44 25.2	+0.3
N59A	State Game Lan baz=330	128.61	23	P	PKPdf	15 44 25.0	+0.2
W50A	Signal Mountai baz=317	128.62	35	P	PKPdf	15 44 25.4	+0.4
R54A	Victor baz=323	128.63	29	P	PKPdf	15 44 25.2	+0.3
HRV	Adam Dziewonsk baz=336	128.66	18	P	PKPdf	15 44 25.1	+0.3
V51A	Loudon baz=318	128.72	33	P	PKPdf	15 44 25.4	+0.3
T53A	Wise baz=320	128.79	31	P	PKPdf	15 44 25.8	+0.5
U52A	Thorn Hill baz=319	128.81	32	P	PKPdf	15 44 25.8	+0.5
Y49A	Blount Mountai baz=315	128.93	37	P	PKPdf	15 44 25.7	+0.1
X50B	Fort Payne baz=316	128.96	36	P	PKPdf	15 44 24.9	-0.7
R55A	Marlinton baz=324	128.96	28	P	PKPdf	15 44 25.8	+0.2
W51A	Cleveland baz=317	128.96	34	P	PKPdf	15 44 25.8	+0.3
V52A	Sevierville baz=319	129.10	33	P	PKPdf	15 44 26.4	+0.6
LRAL	Lakeview Retre baz=314	129.15	38	P	PKiKP	15 44 26.8	+0.1
S55A	Lewisburg baz=323	129.19	29	P	PKPdf	15 44 26.3	+0.3
T54A	Tazewell baz=322	129.22	30	P	PKPdf	15 44 26.4	+0.3
PAL	Palisades baz=332	129.22	21	P	PKPdf	15 44 26.4	+0.6
U53A	Fall Branch baz=320	129.25	32	P	PKPdf	15 44 26.6	+0.4
Y50A	Piedmont baz=315	129.31	36	P	PKPdf	15 44 26.6	+0.4
Z49A	Columbiana baz=314	129.32	37	P	PKPdf	15 44 26.7	+0.4
X51A	Calhoun baz=317	129.34	35	P	PKiKP	15 44 27.1	+0.1
W52A	Murphy baz=318	129.47	34	P	PKPdf	15 44 26.7	+0.1
149A	Jones baz=314	129.57	38	P	PKPdf	15 44 27.5	+0.7
Z50A	Ashland baz=315	129.65	37	P	PKiKP	15 44 28.0	+0.3
V53A	Saluda baz=320	129.65	32	P	PKPdf	15 44 27.5	+0.6
BLA	Blacksburg baz=323	129.67	29	P	PKPdf	15 44 27.3	+0.4
Y51A	Rockmart baz=316	129.70	36	P	PKPdf	15 44 27.4	+0.3
249A	Camden baz=313	129.79	39	P	PKPdf	15 44 27.6	+0.4
W53A	Cullowhee baz=319	129.84	33	P	PKiKP	15 44 28.3	+0.1
150A	Eclectic baz=314	130.04	38	P	PKPdf	15 44 28.4	+0.7
Z51A	Franklin baz=316	130.05	36	P	PKiKP	15 44 28.6	+0.1
349A	Repton baz=312	130.16	40	P	PKiKP	15 44 29.0	+0.2
R58B	Mineral baz=326	130.24	26	P	PKPdf	15 44 28.5	+0.6
X53A	Estanollee baz=318	130.25	34	P	PKPdf	15 44 28.6	+0.6
CBN	Corbin Frederi baz=327	130.26	26	P	PKPdf	15 44 28.6	+0.6
Y52A	Lilburn baz=317	130.30	35	P	PKiKP	15 44 29.1	+0.1
250A	Grady baz=314	130.32	38	P	PKPdf	15 44 28.9	+0.7
BRAL	Brewton baz=312	130.38	40	P	PKiKP	15 44 29.1	0.0
151A	Opelika baz=315	130.51	37	P	PKPdf	15 44 29.3	+0.7
Y53A	Monroe baz=318	130.57	35	P	PKPdf	15 44 29.5	+0.8
Z52A	Williamson baz=316	130.58	36	P	PKiKP	15 44 29.9	+0.4
251A	Midway baz=315	130.77	38	P	PKPdf	15 44 29.9	+0.8
152A	Waverly Hall baz=316	130.78	37	P	PKiKP	15 44 30.3	+0.3
KMSC	Kings Mountain baz=321	130.83	32	P	PKPdf	15 44 29.8	+0.7
KIC	Kosan Boka comp=Z,20nm,0.9s	130.87	284	*e*PKP1	PKPdf	15 44 30.3	+0.5
DBIC	Dimbokro comp=Z,4.0nm,0.6s,baz=144,slow=2.5,SNR=5.5	130.91	284	PKP	PKPdf	15 44 30.4	+0.6
DBIC	comp=Z,6.3nm,0.7s,baz=82,slow=3.0,SNR=6.7			SKPbc	SKPbc	15 47 50.0	-2.9
GOGA	Godfrey baz=318	130.97	35	P	PKiKP	15 44 30.8	+0.4
Z53A	Monticello baz=317	131.00	35	P	PKiKP	15 44 31.1	+0.7
Y54A	Tignall baz=319	131.07	34	P	PKiKP	15 44 30.7	+0.2
TIC	Toumodi	131.07	284	*e*PKP1	PKPdf	15 44 29.0	-1.2
LIC	Lamto comp=Z,27nm,0.7s	131.18	284	*e*PKP1	PKPdf	15 44 29.4	-0.9
X55A	Gracelyn & Ava baz=320	131.19	32	P	PKiKP	15 44 30.8	+0.1
252A	Lumpkin baz=315	131.24	37	P	PKiKP	15 44 31.7	+0.7
Z54A	Sparta baz=318	131.45	35	P	PKiKP	15 44 31.4	+0.1
352A	Blakely baz=315	131.49	38	P	PKiKP	15 44 31.8	+0.4
X56A	White Oak baz=321	131.49	32	P	PKiKP	15 44 31.4	0.0
353A	Camilla baz=315	132.01	37	P	PKiKP	15 44 32.4	-0.1
155A	Kite baz=318	132.12	35	P	PKiKP	15 44 32.8	+0.1
254A	Abbeville baz=317	132.13	36	P	PKiKP	15 44 33.1	+0.4
453A	Whigham baz=315	132.30	38	P	PKiKP	15 44 33.9	+0.8
X58A	Rowland baz=323	132.31	30	P	PKiKP	15 44 33.7	+0.7
TIGA	Tifton baz=316	132.32	37	P	PKiKP	15 44 33.9	+0.8
256A	Glennville baz=318	132.92	35	P	PKiKP	15 44 35.1	+0.8
356A	Blackshear baz=318	133.26	36	P	PKiKP	15 44 35.1	+0.1
555A	McAlpin baz=316	133.64	38	P	PKiKP	15 44 36.5	+0.7
DWPF	Disney Wildern baz=316	136.01	38	P	PKiKP	15 44 40.7	0.0
859A	Kempfer Cattle baz=317	136.37	38	P	PKiKP	15 44 41.0	-0.4
CPUP	Villa Florida comp=Z,2.2nm,0.8s,baz=290,slow=4.6,SNR=3.5	159.25	167	PKP	PKPdf	15 45 17.1	+0.8
CPUP	comp=Z,7.4nm,0.9s,baz=192,slow=5.0,SNR=13			PKPab	PKPab	15 45 53.4	+0.2
LPAZ	La Paz comp=Z,4.4nm,0.8s,baz=270,slow=3.8,SNR=13	161.51	125	PKP	PKPdf	15 45 20.9	+1.1
LPAZ	comp=Z,5.0nm,0.8s,baz=254,slow=3.0,SNR=8.1			PKPab	PKPab	15 46 06.7	+2.3
BDFB	Brasilia comp=Z,3.4nm,0.7s,baz=144,slow=7.0,SNR=3.7	169.50	204	PKP	PKPdf	15 45 25.4	-0.4
BDFB	comp=Z,1.1nm,0.4s,baz=107,slow=3.0,SNR=3.9			PKPab	PKPab	15 46 38.2	-0.4

IDC ***16*** *15:29:02.4±0.8, 21°.76S×174°.32W, h0^{km}, mb4.2/14, mb1 4.4/15, mb1mx4.2/46, mbtmp4.2/15, ML3.4/1, MS3.7/5, Ms1 3.7/5, ms1mx3.4/36, Error ellipse: s-maj=33.7km s-min=18.9km az=142.0*

ISCJB ***16*** *15:29:04.8±0.6, 21°.86S±0°.10×174°.4W±0°.1, h27^{km}, mb4.1/15, MS3.9/3, Error ellipse: s-maj=16.4km s-min=12.7km az=39.0*

NEIC ***16*** *15:29:08.2±2.0, 21°.89S×174°.31W, h43^{km}±17^{km}, mb4.2/1, Error ellipse: s-maj=16.6km s-min=12.1km az=104.0*

ISC 16 15:29:06.6±0.7**, 21°.9S**±0°.2×**174°.3W**±0°.1**, h27**^{km}**, n38, σ2ˢ.09**/31**, mb4.3**/14**, MS4.0**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu 188nm,1.1s	8.33	299	*e*Pn	Pn	15 31 06.3	+0.6
RAR	Rarotonga 4.8nm,0.3s,baz=266,slow=9.1,SNR=16	13.52	90	Pn	Pn	15 32 10.3	-6.4
RAR	baz=344,slow=23,SNR=3.2			Sn	Sn	15 34 24.9	-21
RAR	comp=Z,127nm,19.1s,baz=283,slow=39			LR	LR	15 37 45.9	
DZM	Mont Dzumac 855nm,25.6s	17.87	266	*e*LQ	LQ	15 36 45.3	
DZM	comp=Z,358nm,22.9s			*e*LR	LR	15 37 32.9	
DZM	Mont Dzumac comp=Z,139nm,18.4s,baz=96,slow=31	17.87	266	LR	LR	15 38 13.6	
URZ	Urewera 0.1nm,0.3s,baz=336,slow=20,SNR=2.1	17.89	203	P	P	15 33 14.1	+0.1
TBI	Tubuai 502nm,26.0s	22.95	98	*e*LQ	LQ	15 38 19.2	
TBI	comp=Z,418nm,27.8s			*e*LR	LR	15 39 36.7	
PAE	Paea 1.9nm,0.3s	23.62	84	*e*T	T	15 57 26.9	
PPT2	Papeete2 292nm,25.5s	23.64	84	*e*LQ	LQ	15 38 41.3	
PPT2	comp=Z,420nm,25.8s			*e*LR	LR	15 39 49.4	
PPT2	Papeete2 2.7nm,0.4s	23.64	84	*e*T	T	15 57 27.8	
PPT	Papeete comp=Z,126nm,18.6s,baz=253,slow=36	23.65	84	LR	LR	15 43 08.0	
RPZ	Rata Peaks 8.2nm,1.0s,baz=109,slow=17,SNR=2.0	24.91	206	P	P	15 34 26.9	-0.5
TAOE	Nuku Hiva Isla comp=Z,198nm,27.2s	35.28	74	*e*LR	LR	15 45 06.7	

RKT	**Rikitea**	36.26	100	eLR	LR	15 45 39.7	
	comp=Z,299nm,28.0s						
ASAR	**Alice Springs**	47.58	257	P	P	15 37 40.1	-0.3
	3.9nm,0.8s,baz=89,slow=8.5,SNR=14						
ASAR				PcP	PcP	15 39 10.9	+0.9
	0.7nm,0.7s,baz=103,slow=4.0,SNR=2.4						
WRAB	**Tennant Creek**	47.84	263	eP	P	15 37 41.3	-1.1
	1.7nm,0.6s						
WRA	**Warramunga Arr**	47.84	262	P	P	15 37 41.9	-0.6
	2.5nm,0.6s,baz=95,slow=8.2,SNR=13						
WRA				PcP	PcP	15 39 12.5	+1.5
	0.8nm,0.6s,baz=98,slow=2.9,SNR=2.3						
SIJI	**Sorong**	56.94	284	P	P	15 38 48.8	-1.2
	10nm,0.8s,baz=74,slow=7.4,SNR=4.3						
MJAR	**Matsushiro Arr**	73.43	322	P	P	15 40 34.9	-1.6
	3.2nm,0.9s,baz=163,slow=6.1,SNR=4.5						
LEM	**Lembang**	76.47	268	LR	LR	16 14 53.0	
	comp=Z,73nm,19.1s,baz=165,slow=36						
PMSA	**Palmer Station**	78.60	156	LR	LR	16 07 15.4	
	comp=Z,160nm,21.2s,baz=360,slow=29						
NVAR	**Mina Array Bea**	79.73	41	P	P	15 41 12.1	-0.3
	2.2nm,0.6s,baz=224,slow=8.2,SNR=16						
KSRS	**Korea Array**	80.26	317	P	P	15 41 14.9	-0.1
	1.2nm,0.7s,baz=130,slow=6.6,SNR=9.6						
KSAR	**Wonju Array Be**	80.28	317	P	P	15 41 14.9	-0.2
TXAR	**Lajitas Array**	84.94	56	P	P	15 41 40.1	+0.4
	0.3nm,0.8s,baz=234,slow=3.1,SNR=3.1						
PDAR	**Pinedale Array**	87.66	42	P	P	15 41 51.8	-1.1
	0.3nm,0.6s,baz=235,slow=3.2,SNR=2.7						
SEY	**Seymchan**	88.57	345	P	P	15 41 54.8	-1.7
	0.6nm,0.5s,baz=155,slow=6.6,SNR=4.3						
ILAR	**Eielson Array**	88.97	11	P	P	15 41 56.8	-1.6
	0.4nm,0.6s,baz=211,slow=6.4,SNR=5.3						
ENH	**Enshi**	89.71	303	eP	P	15 42 02.8	+0.2
CMAR	**Chiang Mai Arr**	93.85	288	P	P	15 42 23.4	+1.4
	1.7nm,0.9s,baz=130,slow=2.9,SNR=11						
YKA	**Yellowknife Ar**	96.38	24	P	P	15 42 32.5	0.0
	0.4nm,0.7s,baz=239,slow=4.8,SNR=5.5						
SONM	**Songino Array**	99.11	318	P	Pdif	15 42 43.8	-1.6
	0.2nm,0.5s,baz=113,slow=3.7,SNR=2.2						
BVAR	**Borovoye Array**	122.39	320	PKP	PKPdf	15 47 57.9	-1.2
	0.4nm,0.6s,baz=144,slow=1.2,SNR=2.5						
AKASG	**Malin Array Be**	145.88	333	PKPbc	PKPdf	15 48 42.2	-0.5
	3.0nm,0.7s,baz=41,slow=4.3,SNR=7.5						
CLL	**Collm**	150.12	351	ePKPbc	PKiKP	15 48 55.0	-0.5
CLL				i pPKPdf	sPKPbc	15 49 04.4	0.0
	comp=Z,8.0nm,1.0s						
CLL				esPKPab	sPKPab	15 49 20.0	+10
BRTR	**Keskin Array B**	150.34	313	PKPbc	PKPbc	15 48 55.8	0.0
	comp=Z,1.4nm,0.9s,baz=129,slow=4.2,SNR=5.5						
BRG	**Berggiesshubel**	150.39	349	ePKP	PKPab	15 49 02.9	+1.1
	comp=Z,8.9nm,1.2s						
KHC	**Kasperske Hory**	152.13	349	ePKP	PKiKP	15 49 01.5	+1.6
KHC				epPKP	sPKPbc	15 49 09.5	+0.2
GERES	**GERESS Array B**	152.39	349	PKPbc	PKiKP	15 49 00.6	+0.2
	comp=Z,0.1nm,0.3s,baz=29,slow=2.2,SNR=3.4						

KRSC 16 15:36:12.8±0.7**, 55°.78N×163°.38E, h18**^{km}±12^{km}**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	0.53	324	eP	Pb	15 36 23.7	+0.1
KBTR				eS	Sg	15 36 30.5	-0.1
KBG	**Krutoberegovo**	0.61	322	i P	Pb	15 36 24.9	0.0
KBG				eS	Sb	15 36 33.1	+0.1
SMKR	**Semkarok**	1.33	308	eP	Pb	15 36 37.3	-0.1
SMKR				eS	Sb	15 36 54.3	+0.2
BDR	**Baidarnaya**	1.45	304	eP	Pb	15 36 39.2	-0.1
BDR				eS	Sb	15 36 57.6	+0.3
ZLN	**Zelenaya**	1.47	280	eP	Pb	15 36 39.7	+0.1
ZLN				eS	Sb	15 36 58.2	+0.2
SRKR	**Sorokina**	1.51	306	eP	Pb	15 36 40.2	-0.2
SRKR				eS	Sb	15 36 59.2	0.0
CIRR	**Tsirk**	1.52	284	eP	Pn	15 36 39.1	-0.1
BZGR	**Bezymyannyi-Gr**	1.52	277	eP	Pb	15 36 40.3	-0.2
MKZ	**Mys Kozlova**	1.55	218	eP	Pb	15 36 41.3	+0.4
MKZ				eS	Sb	15 36 59.9	-0.3
BKI	**Bering**	1.59	110	eP	Pn	15 36 40.0	0.0
BKI				eS	Sb	15 37 01.4	+0.1
KLY	**Klyuchi**	1.62	290	eP	Pn	15 36 39.9	-0.5
KLY				eS	Sn	15 36 58.2	-2.6
BZWR	**Bezymyannyi-We**	1.63	278	eP	Pb	15 36 43.3	+0.8
BZMR	**Bezymyannaya**	1.63	277	eP	Pn	15 36 41.4	+0.6
TUMD	**Tumrok D**	1.79	252	eP	Pb	15 36 44.4	-0.7
TUMD				eS	Sb	15 37 06.5	-0.7
TUMR	**Tumrok**	1.90	256	eP	Pb	15 36 46.8	-0.3
KOZ	**Kozyrevsk**	1.99	279	P	Pn	15 36 46.8	+1.2
SRDR	**Sredinnyy**	2.12	286	eP	Pb	15 36 49.4	-1.4
SRDR				eS	Sb	15 37 16.7	-0.1
SPN	**Mys Shipunski**	3.33	217	eS	Sn	15 37 45.0	+2.1
SDLR	**Sedlovina**	3.62	228	eP	Pn	15 37 11.9	+3.8
SMAR	**Somma**	3.67	228	eP	Pn	15 37 12.1	+3.2
AVH	**Avacha**	3.70	229	eP	Pn	15 37 11.6	+2.5
UGLR	**Uglovaya**	3.70	228	P	Pn	15 37 12.7	+3.5
GNL	**Ganaly**	3.78	239	eP	Pn	15 37 13.7	+3.4
PET	**Petropavlovsk**	3.91	227	eP	Pb	15 37 16.7	-4.4
KRMR	**Karymshinskiy**	4.26	228	eP	Pb	15 37 22.6	-4.6
KRMR				eS	Sn	15 38 11.0	+5.0

BEO 16 15:36:37.3±0.4**, 42°.49N×19°.87E, h0**^{km}**, ML1.3**/3**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDG	**Podgorica**	0.46	263	ePg	Pg	15 36 45.1	-1.0
PDG				eSg	Sg	15 36 51.3	-0.8
SJES	**Sjenica**	0.78	5	ePg	Pg	15 36 50.9	-1.3
SJES				eSg	Sg	15 37 02.5	+0.2
IVAS	**Ivanjica**	1.11	11	ePg	Pg	15 36 56.8	-1.8
IVAS				eSg	Sg	15 37 12.6	-0.3
TIR	**Tirane**	1.14	180	eSg	Sg	15 37 13.9	+0.1
TREB	**Trebinje**	1.15	282	ePg	Pg	15 36 58.6	-0.7
TREB				eSg	Sg	15 37 13.9	-0.3
SELS	**Selova**	1.17	51	eSg	Pg	15 36 57.6	-2.2
SELS	**Selova**	1.17	51	ePg	Sg	15 37 14.6	-0.4
GRUS	**Gruza**	1.53	23	ePg	Pn	15 37 04.9	-1.0
GRUS				eSg	Sg	15 37 25.6	-0.9
DIVS	**Divibare**	1.61	3	ePg	Pn	15 37 06.4	-0.7
DIVS				eSg	Sn	15 37 28.8	+0.1

ISCJB ***16*** *15:38:38.8±1.6, 8°.49S±0°.06×107°.90E±0°.04, h19*^{km}*±10*^{km}*, mb3.0/3, Error ellipse: s-maj=12.0km s-min=5.5km az=28.0*

IDC ***16*** *15:38:39.4±1.3, 6°.99S×109°.17E, h0*^{km}*, mb3.2/3, mb1 3.4/3, mb1mx3.2/45, mbtmp3.2/3, Error ellipse: s-maj=48.5km s-min=18.9km az=21.0*

DJA ***16*** *15:38:40.4±0.5, 8°S±3°×10°8E±°, h10*^{km}*, M3.9/12, MLv3.9/12*

ISC 16 15:38:37.2±2.3**, 8°.50S**±0°.09×**107°.81E**±0°.06**, h12**^{km}±12^{km}**, n19, σ1**^{s}**63**/24**, mb3.1**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	0.94	0	P	Pb	15 38 56.3	+0.9
CISI				S	Sg	15 39 07.3	-0.3
CMJI	**Cimerak**	0.95	42	P	Pg	15 38 55.8	+0.3
CMJI				S	Sg	15 39 05.5	-2.5
KPJI	**Karang Pucung**	1.60	44	P	Pn	15 39 06.3	+0.9
LEM	**Lembang**	1.67	353	Pn	Pb	15 39 09.2	+1.2
	69nm,0.3s,baz=170,slow=12,SNR=40						
LEM				Sn	Sb	15 39 29.9	+0.7
	45nm,0.3s,baz=221,slow=19,SNR=6.0						
SKJI	**Sukabumi**	1.94	320	P	Pb	15 39 12.3	-0.1
SKJI				S	Sn	15 39 35.3	+1.1
DBJI	**Dramaga**	2.20	331	P	Pn	15 39 15.8	+2.2
DBJI				S	Sb	15 39 43.5	-0.7
UGM	**Wanagama**	2.75	78	P	Pn	15 39 22.1	+1.0
SMRI	**Semarang**	2.98	61	P	Pn	15 39 26.6	+2.3
SMRI				S	Sn	15 39 59.4	-0.6
PCJI	**Pacitan**	3.34	85	P	Pn	15 39 30.7	+1.4
PCJI				S	Sn	15 40 07.0	-2.0
NGJI	**Ngawi**	3.79	73	P	Pn	15 39 36.8	+1.4
PWJI	**Pagerwojo**	3.98	83	P	Pn	15 39 39.7	+1.6
PWJI				S	Sn	15 40 25.2	+0.5
KLI	**Kotabumi**	4.65	321	P	Pn	15 39 44.8	-2.5
RGRI	**Rengat**	9.76	326	P	Pn	15 40 58.9	+1.3
WRA	**Warramunga Arr**	28.07	117	P	P	15 44 29.9	+1.1
	0.3nm,0.8s,baz=290,slow=11,SNR=4.5						
ASAR	**Alice Springs**	29.18	124	P	P	15 44 39.9	+1.1
	0.1nm,0.5s,baz=306,slow=8.0,SNR=4.6						
H08S2	**Diego Garcia H**	34.97	269	T	T	16 22 48.1	
	baz=93,slow=76,SNR=8.4						
H08S3	**Diego Garcia H**	34.98	269	T	T	16 22 44.8	
	baz=93,slow=76,SNR=10						
H08S1	**Diego Carcia H**	34.99	269	T	T	16 22 44.4	
	baz=93,slow=76,SNR=5.9						
MKAR	**Makanchi Array**	59.56	340	P	P	15 48 37.7	-3.0
	0.2nm,0.6s,baz=148,slow=8.4,SNR=4.7						

IDC ***16*** *16:04:13.8±1.6, 37°.48N×141°.87E, h0*^{km}*, mb3.5/6, mb1 3.5/8, mb1mx3.4/45, mbtmp3.4/8, ML2.5/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/40, Error ellipse: s-maj=34.5km s-min=24.3km az=94.0*

JMA ***16*** *16:04:20.7±0.1, 37°.46N×141°.58E, h45*^{km}*±2*^{km}*, M3.6*

JMA Felt I J1.

ISC 16 16:04:17.4±1.1**, 37°.42N**±0°.06×**141°.77E**±0°.10**, h21**^{km}±4^{km}**, n26, σ1**^{s}**15**/29**, mb3.4**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	0.71	266	P	Pn	16 04 32.5	+0.2
JFK				S	Sb	16 04 40.5	-0.1
ONAJ	**Iwakimizuishiy**	0.84	248	P	Pn	16 04 34.4	+0.4
ONAJ				S	Sb	16 04 43.6	-0.5
JMM	**Marumori**	0.89	300	P	Pn	16 04 34.9	+0.2
JMM				S	Sb	16 04 44.8	-0.8
JIKH	**Ishinomakikobu**	0.92	345	P	Pn	16 04 36.3	+1.2
JIKH				S	Sb	16 04 47.0	+0.6
JFFD	**Fukushimafurud**	1.02	252	P	Pn	16 04 36.8	+0.3
JFFD				S	Sb	16 04 47.8	-1.4
JIO	**Ouri**	1.08	342	P	Pb	16 04 38.5	+1.1
JIO				S	Sb	16 04 50.8	-0.3
JFT	**Otama**	1.14	275	P	Pb	16 04 39.0	+0.5
JFT				S	Sb	16 04 51.7	-1.2
JHO	**Hitachi**	1.25	230	P	Pn	16 04 40.1	+0.4
JHO				S	Sn	16 04 54.6	-1.3
JOU	**Okura**	1.29	318	P	Pb	16 04 40.8	-0.1
JOU				S	Sn	16 04 55.9	-0.9
MJAR	**Matsushiro Arr**	2.98	254	Pn	Pn	16 05 04.0	+0.5
	0.4nm,0.3s,baz=336,slow=17,SNR=34						
MJAR				Sn	Sn	16 05 41.9	+3.3
	0.3nm,0.3s,baz=27,slow=23,SNR=4.9						
MAT	**Matsushiro**	2.98	254	P	Pn	16 05 06.0	+2.5
MAT				eS	Sn	16 05 40.2	+1.6
JHJ	**Hachijo jima 2**	4.59	201	LR	LR	16 07 20.0	
	comp=Z,160nm,19.9s,baz=110,slow=40						
ASAJ	**Asahikawa**	6.72	5	Pn	Pn	16 05 54.8	0.0
	0.1nm,0.3s,baz=217,slow=14,SNR=3.3						
SONM	**Songino Array**	27.81	303	P	P	16 10 04.6	-0.5
	0.3nm,0.5s,baz=87,slow=7.3,SNR=2.7						
H11N2	**WAKE ISLAND Hy**	28.11	122	T	T	16 40 20.2	
	baz=314,slow=75,SNR=7.2						
H11N1	**WAKE ISLAND Hy**	28.11	122	T	T	16 40 20.2	
	baz=314,slow=75,SNR=8.9						
H11N3	**WAKE ISLAND Hy**	28.12	122	T	T	16 40 21.3	
	baz=314,slow=75,SNR=8.4						
H11S1	**WAKE ISLAND Hy**	28.84	124	T	T	16 41 14.2	
	baz=320,slow=74,SNR=4.0						
H11S3	**WAKE ISLAND Hy**	28.84	124	T	T	16 41 17.6	
	baz=320						
H11S2	**WAKE ISLAND Hy**	28.85	124	T	T	16 41 16.8	
	baz=320,slow=74,SNR=3.5						
SIJI	**Sorong**	39.32	197	LR	LR	16 24 06.3	
	comp=Z,32nm,19.7s,baz=83,slow=30						
ZALV	**Zalesovo Beam**	41.87	312	P	P	16 12 06.2	+0.5
	0.4nm,0.5s,baz=77,slow=11,SNR=2.4						
MKAR	**Makanchi Array**	44.16	302	P	P	16 12 23.9	-0.5
	0.3nm,0.6s,baz=88,slow=9.2,SNR=4.6						
WRA	**Warramunga Arr**	57.48	188	P	P	16 14 05.3	+0.4
	0.1nm,0.5s,baz=6.1,slow=7.5,SNR=3.3						
FINES	**FINESS Array B**	68.60	332	P	P	16 15 17.3	-1.0
	1.2nm,0.9s,baz=45,slow=8.4,SNR=3.6						
AKASG	**Malin Array Be**	74.17	322	P	P	16 15 51.6	-0.6
	0.2nm,0.3s,baz=47,slow=6.2,SNR=3.2						

MEX 16 16:06:03.3±1.3**, 18°.18N×101°.46W, h20**^{km}±502^{km}**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	0.56	181	eP	Pb	16 06 12.1	-2.5
ZIIG				i S	Sb	16 06 20.7	-1.5
ARIG	**Puente Sto Nin**	1.06	84	eP	Pb	16 06 20.0	-3.0
ARIG				eS	Sb	16 06 32.5	-3.9
CAIG	**El Cayaco**	1.59	135	eP	Pn	16 06 26.8	-3.6
MEIG	**Mezcala**	1.76	98	eP	Pn	16 06 29.1	-3.7
PLIG	**Platanillo**	1.87	83	eP	Pn	16 06 31.7	-2.6

ISCJB ***16*** *16:10:11.8±0.7, 0°.39S±0°.05×98°.46E±0°.06, h32*^{km}*, mb3.4/5, Error ellipse: s-maj=9.5km s-min=5.5km az=142.9*

IDC ***16*** *16:10:11.3±3.3, 0°.13S×99°.06E, h0*^{km}*, mb3.4/5, mb1 3.5/6, mb1mx3.3/45, mbtmp3.3/6, Error ellipse: s-maj=134.9km s-min=20.6km az=62.0*

DJA ***16*** *16:10:11.1±0.4, 0°S±3°×9°9E±°, h11*^{km}*±5*^{km}*, M3.3/6, MLv3.3/6*

ISC 16 16:10:13.0±0.9**, 0°.40S**±0°.06×**98°.48E**±0°.08**, h32**^{km}**, n16, σ1**^{s}**25**/17**, mb3.5**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	**Pulau Batu**	0.39	330	P	Pb	16 10 19.7	-2.3
PBSI				S	Sb	16 10 26.6	-1.5
SISI	**Saibi**	1.11	146	P	Pn	16 10 31.1	-1.2
SISI				S	Sb	16 10 47.4	-0.4
MNSI	**Mandailing Nat**	1.62	43	P	Pn	16 10 38.9	-0.5
MNSI				S	Sn	16 10 59.4	+0.3
GSI	**Gunungsitoli**	1.92	332	P	Pn	16 10 43.9	+0.4
PPI	**Padang Panjang**	1.92	92	P	Pn	16 10 42.8	-0.7
PPI				S	Sn	16 11 06.8	+0.2
BKNI	**Bangkinang**	2.66	74	P	Pn	16 10 53.0	-0.7
KRJI	**Kerinci**	3.42	119	P	Pn	16 11 03.6	-0.7
CMAR	**Chiang Mai Arr**	18.74	1	P	P	16 14 28.3	-1.1
	baz=199,slow=10,SNR=2.8						
H08S2	**Diego Garcia H**	26.89	254	T	T	16 43 38.3	
	baz=76,slow=76,SNR=8.3						
H08S3	**Diego Garcia H**	26.89	254	T	T	16 43 37.3	
	baz=76,slow=76,SNR=23						
H08S1	**Diego Carcia H**	26.90	254	T	T	16 43 38.4	
	baz=76,slow=76,SNR=5.2						
WRA	**Warramunga Arr**	40.12	121	P	P	16 17 45.5	-0.6
	0.2nm,0.6s,baz=302,slow=9.0,SNR=4.3						
ASAR	**Alice Springs**	41.42	127	P	P	16 17 56.6	-0.3
	0.3nm,0.7s,baz=306,slow=7.2,SNR=5.2						
SONM	**Songino Array**	48.53	7	P	P	16 18 54.6	+1.4
	0.3nm,0.6s,baz=189,slow=9.0,SNR=4.2						
MKAR	**Makanchi Array**	49.10	345	P	P	16 18 59.0	+1.6
	0.4nm,0.5s,baz=154,slow=8.0,SNR=6.3						
STKA	**Stephens Creek**	51.34	132	P	P	16 19 16.9	+2.2
	0.5nm,0.5s,baz=330,slow=16,SNR=2.5						

IDC ***16*** *16:15:13.5±5.1, 18°.40S×177°.85W, h529*^{km}*±59*^{km}*, mb3.0/9, mb1 3.3/9, mb1mx3.0/39, mbtmp3.8/9, Error ellipse: s-maj=28.3km s-min=21.7km az=167.0*

ISCJB ***16*** *16:15:14.7±0.8, 18°.5S±0°.2×178°.0W±0°.2, h557*^{km}*, mb3.3/8, Error ellipse: s-maj=27.6km s-min=17.4km az=39.6*

ISC 16 16:15:15.7±0.9**, 18°.5S**±0°.2×**177°.9W**±0°.2**, h557**^{km}**, n11, σ0**^{s}**69**/13**, mb3.4**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	20.21	191	P	P	16 19 12.2	-0.9
	8.7nm,0.9s,baz=79,slow=19,SNR=3.9						
WRA	**Warramunga Arr**	44.98	260	P	P	16 22 42.5	+0.4
	0.6nm,0.5s,baz=97,slow=6.9,SNR=18						
WRA				PcP	PcP	16 24 11.8	+0.5
	0.2nm,0.4s,baz=94,slow=4.0,SNR=2.6						
ASAR	**Alice Springs**	45.08	255	P	P	16 22 43.7	+0.9
	2.1nm,0.7s,baz=88,slow=8.7,SNR=32						
ASAR				PcP	PcP	16 24 12.1	+0.4
	0.3nm,0.5s,baz=109,slow=3.9,SNR=6.8						
MJAR	**Matsushiro Arr**	68.61	323	P	P	16 25 23.0	-0.5
	0.8nm,0.6s,baz=153,slow=5.7,SNR=3.7						
SEY	**Seymchan**	84.40	347	P	P	16 26 49.1	-0.2
	0.7nm,0.5s,baz=207,slow=16,SNR=5.1						
TXAR	**Lajitas Array**	85.91	57	P	P	16 26 58.1	+0.7
	0.5nm,0.7s,baz=224,slow=5.0,SNR=7.0						
ILAR	**Eielson Array**	86.31	13	P	P	16 26 58.1	-0.4
	0.3nm,0.4s,baz=219,slow=5.0,SNR=17						
PDAR	**Pinedale Array**	87.44	43	P	P	16 27 05.3	+0.7
	0.2nm,0.5s,baz=266,slow=5.4,SNR=1.9						
YKA	**Yellowknife Ar**	94.63	25	P	P	16 27 36.7	-0.2
	0.1nm,0.6s,baz=238,slow=3.5,SNR=2.5						
BRTR	**Keskin Array B**	145.48	315	PKPbc	PKPbc	16 33 52.5	0.0
	0.7nm,0.7s,baz=102,slow=3.9,SNR=3.2						
GERES	**GERESS Array B**	148.25	345	PKPbc	PKPbc	16 33 58.4	-1.1
	0.3nm,0.4s,baz=35,slow=4.9,SNR=4.2						

IDC 16 16:16:53.5±5.2**, 15°.97S×12°.82W, h0**^{km}**, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.6**/30**, mbtmp3.8**/4**, MS3.7**/11**, Ms1 3.7**/11**, ms1mx3.5**/25**, Error ellipse: s-maj=245.5km s-min=30.1km az=136.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	7.19	345	T	T	16 25 27.8	
	baz=169,slow=74,SNR=57						
H10S3	**ASCENSION HYDR**	7.20	345	T	T	16 25 26.4	
	baz=169,slow=74,SNR=46						
H10S1	**ASCENSION HYDR**	7.21	345	T	T	16 25 30.7	
	baz=169,slow=74,SNR=41						
H10N1	**ASCENSION HYDR**	8.23	348	T	T	16 26 49.3	
	baz=160						
H10N3	**ASCENSION HYDR**	8.24	348	T	T	16 26 48.2	
	baz=160						
H10N2	**ASCENSION HYDR**	8.25	348	T	T	16 26 52.6	
	baz=160						
DBIC	**Dimbokro**	23.83	20	P	P	16 22 08.2	-0.3
	3.2nm,0.8s,baz=208,slow=11,SNR=3.3						
DBIC				LR	LR	16 28 55.5	
	comp=Z,128nm,21.6s,baz=130,slow=30						
TORD	**Torodi Ar. Bea**	32.29	27	P	P	16 23 24.8	+0.5
	2.0nm,0.8s,baz=220,slow=7.9,SNR=10.0						
TORD				LR	LR	16 34 14.4	
	comp=Z,167nm,20.0s,baz=260,slow=32						
BDFB	**Brasilia**	33.84	266	LR	LR	16 34 42.7	
	comp=Z,158nm,19.9s,baz=102,slow=32						
BOSA	**Boshof**	37.25	116	LR	LR	16 37 05.3	
	comp=Z,194nm,18.5s,baz=239,slow=32						
CPUP	**Villa Florida**	42.59	248	P	P	16 24 51.5	0.0
	1.0nm,0.5s,baz=100,slow=6.1,SNR=2.9						
CPUP				LR	LR	16 39 38.0	
	comp=Z,94nm,19.6s,baz=159,slow=32						
LPAZ	**La Paz**	52.99	261	LR	LR	16 46 55.9	
	comp=Z,62nm,19.5s,baz=108,slow=34						
USHA	**Ushuaia**	57.50	214	LR	LR	16 47 14.4	
	comp=Z,176nm,20.1s,baz=323,slow=32						
ROSC	**El Rosal**	64.25	284	LR	LR	16 54 47.3	
	comp=Z,164nm,18.5s,baz=108,slow=35						
BRTR	**Keskin Array B**	70.30	36	LR	LR	16 59 31.9	
	comp=Z,19nm,18.6s,baz=162,slow=36						
AKASG	**Malin Array Be**	75.92	26	P	P	16 28 41.4	-0.4
	0.4nm,0.4s,baz=217,slow=5.6,SNR=2.2						
NOA	**NORSAR Array B**	79.12	12	LR	LR	17 05 35.4	
	comp=Z,18nm,18.4s,baz=30,slow=37						
GEYT	**Alibeck**	85.35	49	LR	LR	17 05 34.6	
	comp=Z,38nm,20.2s,baz=150,slow=34						

IDC 16 16:25:15.5±1.5**, 14°.59N×145°.17E, h105**^{km}±10^{km}**, mb3.0**/4**, mb1 3.3**/4**, mb1mx2.9**/50**, mbtmp3.3**/4**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.8**/13**, Error ellipse: s-maj=51.7km s-min=20.7km az=97.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	1.04	196	P	Pn	16 25 38.3	+1.6
	270nm,0.3s,baz=351,slow=2.7,SNR=141						
GUMO				S	Sn	16 25 52.8	+0.1
	258nm,0.3s,baz=323,slow=20,SNR=20						
JHJ	**Hachijo jima 2**	19.09	346	LR	LR	16 35 40.8	
	comp=Z,262nm,22.0s,baz=130,slow=33						
H11S3	**WAKE ISLAND Hy**	20.99	76	T	T	16 51 24.8	
	baz=262						
H11S1	**WAKE ISLAND Hy**	21.00	76	T	T	16 51 25.6	
	baz=262						
H11S2	**WAKE ISLAND Hy**	21.00	76	T	T	16 51 28.9	
	baz=262						
MJAR	**Matsushiro Arr**	22.73	345	LR	LR	16 36 48.8	
	comp=Z,27nm,20.8s,baz=60,slow=30						
WRA	**Warramunga Arr**	35.93	198	P	P	16 32 05.9	-0.1
	0.7nm,0.7s,baz=29,slow=8.9,SNR=17						
ASAR	**Alice Springs**	39.58	196	P	P	16 32 36.9	+0.1
	0.4nm,0.5s,baz=18,slow=12,SNR=16						
MKAR	**Makanchi Array**	60.98	316	P	P	16 35 17.1	-0.7
	0.1nm,0.7s,baz=87,slow=8.4,SNR=2.6						
ILAR	**Eielson Array**	67.55	25	P	P	16 36 00.4	+0.1
	0.2nm,0.5s,baz=258,slow=6.1,SNR=4.6						

IDC 16 16:37:27.9±3.2**, 25°.15S×176°.16W, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.6**/21**, mbtmp3.5**/3**, Error ellipse: s-maj=270.4km s-min=36.9km az=163.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	45.29	261	P	P	16 45 47.2	-0.5
	0.2nm,0.4s,baz=94,slow=7.1,SNR=21						
WRA	**Warramunga Arr**	45.81	266	P	P	16 45 52.1	+0.3
	0.8nm,0.7s,baz=106,slow=7.8,SNR=7.9						
TXAR	**Lajitas Array**	88.16	56	P	P	16 50 21.1	0.0
	0.1nm,0.3s,baz=239,slow=5.1,SNR=3.1						

IDC 16 16:42:56.9±1.0**, 49°.95N×28°.91W, h0**^{km}**, mb3.4**/6**, mb1 3.7**/6**, mb1mx3.4**/34**, mbtmp3.4**/6**, Error ellipse: s-maj=36.2km s-min=21.7km az=13.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	20.37	111	P	P	16 47 35.2	+0.1
	0.4nm,0.6s,baz=309,slow=10,SNR=4.3						
FINES	**FINESS Array B**	32.05	48	P	P	16 49 25.6	+0.6
	1.1nm,0.6s,baz=266,slow=7.3,SNR=5.7						
TORD	**Torodi Ar. Bea**	44.43	135	P	P	16 51 09.5	0.0
	0.6nm,0.9s,baz=337,slow=9.3,SNR=2.9						
PDAR	**Pinedale Array**	53.58	295	P	P	16 52 19.4	-0.3
	0.2nm,0.6s,baz=69,slow=11,SNR=2.8						
TXAR	**Lajitas Array**	58.64	279	P	P	16 52 56.5	+0.5
	0.3nm,0.7s,baz=61,slow=9.4,SNR=3.2						
MKAR	**Makanchi Array**	66.79	44	P	P	16 53 50.0	0.0
	0.6nm,0.8s,baz=330,slow=5.8,SNR=6.4						
ASAR	**Alice Springs**	150.52	33	PKPbc	PKPbc	17 02 49.1	-1.4
	0.3nm,0.9s,baz=360,slow=1.5,SNR=3.9						

MDD ***16*** *16:49:14.6±2.4, 36°.04N×0°.69W, h23*^{km}*±23*^{km}*, mbLg1.9/7, Error ellipse: s-maj=18.4km s-min=6.9km az=14.0, PRXIMO*

CNRM ***16*** *16:49:17.1, 36°.03N×1°.55W, h30*^{km}*, ml2.5*

ISC 16 16:49:10.0±1.3**, 35°.95N**±0°.04×**0°.95W**±0°.04**, h31**^{km}±14^{km}**, n19, σ2**^{s}**17**/27**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKGL	**Djebel Kef Gue**	1.29	86	P	Pb	16 49 33.6	-0.2
	17nm,0.2s,SNR=7.9						
OKGL				S	Sn	16 49 47.1	-1.1
	49nm,0.2s,SNR=7.9						
GOG	**Mont Gurugu**	1.82	247	S	Sn	16 49 59.1	-2.2
EBER	**Berja**	1.83	302	P	Pb	16 49 44.7	+1.8
	1.5nm,0.3s,SNR=5.8						
EBER				S	Sb	16 50 09.7	+4.2
	3.1nm,0.3s,SNR=5.4						
EMUR	**La Murta**	1.90	353	P	Pb	16 49 42.8	-1.3
	2.8nm,0.3s,SNR=7.7						
EMUR				S	Sn	16 50 01.9	-1.3
	2.4nm,0.3s						
JBK	**JBK**	2.09	220	P	Pb	16 49 49.3	+2.0
JBK				S	Sb	16 50 12.8	-0.1
ELGU	**Los Guajares,**	2.35	294	P	Pb	16 49 52.1	+0.5
	0.7nm,0.1s,SNR=7.9						
EQUE	**Quentar**	2.36	303	P	Pb	16 49 53.5	+1.6
	1.3nm,0.4s,SNR=6.9						
EQUE				S	Sb	16 50 17.2	-3.5
	2.1nm,0.3s,SNR=4.0						
EQES	**Quesada**	2.51	318	P	Pb	16 49 55.4	+0.9
	2.3nm,0.2s,SNR=8.2						
EQES				S	Sb	16 50 23.5	-1.5
	2.5nm,0.3s						
SESP	**Santiago Espad**	2.51	330	P	Pb	16 49 54.6	0.0

	9.1nm,0.2s,SNR=7.9						
SESP				S	Sb	16 50 22.8	-2.3
	4.5nm,0.2s,SNR=7.9						
SESP	Santiago Espad	2.51	330	P	Pb	16 49 51.9	-2.7
SESP				S	Sn	16 50 19.6	+1.1
PALE	Palemas	2.55	254	P	Pn	16 49 50.4	+1.2
PALE				S	Sn	16 50 16.7	-2.4
ETOB	Tobarra	2.73	350	P	Pb	16 49 55.8	-2.4
	2.9nm,0.3s,SNR=16						
ETOB				S	Sn	16 50 23.1	-0.6
	1.9nm,0.2s						
AKLM	AKL	2.79	240	P	Pb	16 49 55.4	-3.7
AKLM				S	Sn	16 50 24.2	-0.9
EIBI	Ibiza	3.57	30	P	Pn	16 50 04.8	+1.6
	1.2nm,0.2s,SNR=7.9						
ECAB	El Cabril	4.16	302	P	Pb	16 50 17.1	-5.3
	SNR=7.9						
ESDC	Sonseca Array	4.42	328	P	Pb	16 50 20.4	-6.5
	0.9nm,0.2s,baz=142,slow=13,SNR=12						
EMOS	Mosqueruela	4.42	5	P	Pn	16 50 18.0	+2.9
	0.4nm,0.2s,SNR=6.0						
PAB	San Pablo	4.49	324	P	Pb	16 50 22.3	-5.8
	0.7nm,0.1s,SNR=7.9						
ETOS	Mallorca	4.83	37	P	Pn	16 50 22.4	+1.8
	0.4nm,0.2s,SNR=7.9						

*BEO **16** 17:18:34.6±0.9, 48°.10N×20°.05E, h0^{km}, ML3.3/3*

*SIGU **16** 17:18:40.8±0.1, 48°N±1°×20°.2E±0°.9, h8^{km}, mb2.9/5*

*ISCJB **16** 17:18:41.4±0.4, 47°.60N±0°.02×20°.22E±0°.02, h14^{km}±3^{km}, Error ellipse: s-maj=2.9km s-min=2.0km az=17.7*

*PRU **16** 17:18:42.9±0.0, 47°.69N×20°.09E, h0^{km}*

*IPEC **16** 17:18:43.1±0.2, 47°.64N×20°.19E, h16^{km}, ML2.4/3, Error ellipse: s-maj=2.0km s-min=1.2km az=79.0*

ISC 16 17:18:41.8±1.0**, 47°.63N**±0°.02×**20°.29E**±0°.01**, h11**^{km}±8^{km}**, n119, σ1^{s}.04**/161**, 17C-10D, Hungary**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSZ	Piszkesteto	0.39	318	⇑iP	Pg	17 18 49.8	+0.2
PSZ				S	Sg	17 18 55.5	+0.6
PSZ	Piszkesteto	0.39	318	ePg	Pg	17 18 49.1	-0.5
PSZ				eSg	Sg	17 18 55.0	+0.2
BUD	Budapest	0.87	261	ePn	Pg	17 18 58.1	-0.5
BUD				Sn	Sb	17 19 11.1	+0.6
LTVH	Ltavrtes, Hu	1.12	102	ePn	Pb	17 19 02.1	-1.1
LTVH				Sn	Sn	17 19 19.1	+0.3
SRO2	Moca	1.29	277	ePG	Pn	17 19 05.6	0.0
SRO2				eSG	Sn	17 19 22.8	0.0
VYHS	Vyhne	1.30	312	ePG	Pn	17 19 05.6	-0.3
VYHS				eSG	Sg	17 19 24.0	+0.3
VYHS				eLG	Lg	17 19 32.6	
SRO	Srobarova	1.34	279	ePG	Pb	17 19 07.1	+0.1
SRO				eSG	Sg	17 19 25.5	+0.4
KOLL	Kolacno	1.58	308	e	Pn	17 19 09.5	-0.2
KOLL	Kolacno	1.58	308	ePG	Pg	17 19 11.8	-0.3
KOLL				eSG	Sn	17 19 30.5	+0.4
TRPA	Tarpa	1.60	71	⇓iP	Pb	17 19 11.2	0.0
TRPA	Tarpa	1.60	71	S	Sg	17 19 32.8	-0.3
TRPA	Tarpa	1.60	71	ePn	Pn	17 19 10.0	+0.1
TRPA				Sn	Sn	17 19 30.1	-0.4
LANS	Liptovska Anna	1.62	341	e	Pn	17 19 10.8	+0.5
LANS	Liptovska Anna	1.62	341	ePG	Pg	17 19 12.6	-0.2
LANS				eSG	Sb	17 19 33.0	+0.9
SIRR	Siria	1.66	145	⇑iP	Pn	17 19 10.4	-0.4
UZH	Uzhgorod	1.68	53	Pn	Pb	17 19 12.9	+0.3
UZH				i Sn	Sg	17 19 35.4	-0.3
BERU	Beregovo	1.70	68	Pn	Pb	17 19 13.0	0.0
BERU				i Sn	Sb	17 19 33.8	-0.5
TIH	Tihany	1.79	247	ePn	Pb	17 19 14.1	-0.4
TIH				Sn	Sb	17 19 37.1	+0.2
TIH				eSg	Sg	17 19 41.1	+1.9
MORH	Mrgy, Hungar	1.81	219	ePn	Pn	17 19 11.9	-0.9
MORH	Mrgy, Hungar	1.81	219	ePn	Pn	17 19 12.0	-0.8
MORH				Sn	Sg	17 19 41.1	+1.2
MUKU	Mukachevo	1.81	62	i Pn	Pb	17 19 15.1	+0.2
MUKU				Pm		17 19 21.6	
MUKU				i Sn	Sg	17 19 38.8	-1.1
MUKU				Sm		17 19 40.7	
DRGR		1.85	116	ePn	Pn	17 19 12.9	-0.6
DRGR				eSn	Sg	17 19 40.8	-0.5
DRGR		1.85	116	⇑iP	Pn	17 19 13.0	-0.6
DRGR		1.85	116	S	Sn	17 19 37.7	+0.8
TRSU	Trosnyk	1.86	74	ePn	Pb	17 19 16.5	+0.8
TRSU				Pm		17 19 22.7	
TRSU				i Sn	Sg	17 19 40.8	-0.7
TRSU				Sm		17 19 47.5	
BRIU	Brid	1.97	68	ePn	Pb	17 19 17.1	-0.5
BRIU				i Sn	Sb	17 19 43.4	+1.3
KORU	Korolevo	1.99	74	ePn	Pb	17 19 18.4	+0.5
KORU				Pm		17 19 28.3	
KORU				eSn	Sb	17 19 43.6	+1.0
KORU				Sm		17 19 54.3	
BMR	Baia Mare	2.17	88	⇓iP	Pn	17 19 18.9	+1.1
BZS	Buzias	2.21	155	ePn	Pn	17 19 18.2	-0.2
BZS				eSn	Sg	17 19 53.6	+0.8
BZS	Buzias	2.21	155	⇑iP	Pn	17 19 18.2	-0.2
BANR	Banloc	2.32	165	⇑iP	Pn	17 19 20.7	+0.8
MEZ	Mezhgor'ye	2.34	67	ePn	Pb	17 19 23.0	-0.9
MEZ				Pm		17 19 34.2	
MEZ				i Sn	Sb	17 19 54.1	+1.3
MEZ				Sm		17 20 03.0	
CJR	Cluj-Napoca	2.44	111	⇑iP	Pn	17 19 21.5	0.0
FRGS	Fruska Gora	2.50	188	ePn	Pn	17 19 22.3	0.0
FRGS				eSn	Sb	17 19 58.3	+1.0
FRGS	Fruska Gora	2.50	188	ePn	Pn	17 19 18.4	-3.9
DEV	Deva	2.51	133	⇑iP	Pn	17 19 22.5	+0.1
SOP	Sopron	2.52	273	ePn	Pn	17 19 22.1	-0.6
SOP				Sn	Sn	17 19 51.1	-2.2
SOP				eSg	Sg	17 20 06.1	+3.3
OKC	Ostrava-Krasne	2.62	328	ePN	Pn	17 19 24.8	+0.8
RAKU	Rahkiv	2.64	80	ePn	Pn	17 19 25.5	+1.2
BEHE	Becsehely	2.67	246	ePn	Pn	17 19 24.9	+0.3
BEHE	Becsehely	2.67	246	ePn	Pn	17 19 24.1	-0.6
BEHE				ePn	Sn	17 19 59.0	+2.1
BEHE				Sn	Sg	17 20 09.1	+1.7
BEHE				eSg	Sg	17 20 10.0	+2.6
MORC	Moravsky Berou	2.81	321	⇑iP	Pn	17 19 27.4	+0.7
MORC	Moravsky Berou	2.81	321	ePN	Pn	17 19 26.8	+0.1
MORC				eSN	Sn	17 20 00.5	-0.1
MORC	Moravsky Berou	2.81	321	ePn	Pn	17 19 26.8	+0.1
	baz=140						
MORC				eSn	Sn	17 20 00.5	-0.1
	16nm,0.8s,baz=140						
ARCR	ARCALIA	2.82	100	⇑iP	Pn	17 19 26.6	-0.1
GZR	Gura Zlata	2.82	142	⇓iP	Pn	17 19 27.2	+0.4
GZR	Gura Zlata	2.82	142	S	Sn	17 19 59.2	-1.6
NSLU	Nyzhne Selyshc	2.86	77	ePn	Pn	17 19 21.2	-6.1
NSLU				Pm		17 19 29.2	
NSLU				eSn	Sn	17 19 51.1	-11
NSLU				Sm		17 19 59.5	
KRUC	Moravsky	2.96	300	ePN	Pn	17 19 28.5	-0.2
KRUC				eSN	Sn	17 20 03.3	-1.0
KRUC	Moravsky	2.96	300	ePn	Pn	17 19 28.5	-0.2
	baz=118						
KRUC				eSn	Sn	17 20 03.3	-1.0
	12nm,0.6s,baz=118						
VRAC	Vranov	2.98	306	⇑iP	Pn	17 19 29.0	+0.1
VRAC	Vranov	2.98	306	S	Sn	17 20 03.7	-0.9
VRAC	Vranov	2.98	306	ePN	Pn	17 19 28.8	-0.1
VRAC				eSN	Sn	17 20 04.0	-0.6
VRAC	Vranov	2.98	306	ePn	Pn	17 19 28.8	-0.1
	baz=124						
VRAC				eSn	Sn	17 20 04.0	-0.6
	17nm,0.5s,baz=124						
CONA	Conrad Observa	3.00	277	i Pn	Pn	17 19 29.3	0.0
	7.8nm,0.4s,SNR=23						
CONA				i Sn	Sn	17 20 05.6	+0.4
	18nm,0.5s						
KOGS	Kog	3.00	248	i Pn	Pg	17 19 38.5	-0.8
MDVR	Moldovita	3.02	160	⇓iP	Pn	17 19 29.4	-0.1
MDVR	Moldovita	3.02	160	S	Sn	17 20 03.9	-1.7
HERR	Herculane	3.12	151	⇑iP	Pn	17 19 31.4	+0.5
HERR	Herculane	3.12	151	S	Sn	17 20 10.4	+2.3
TEKS	Tekeris	3.13	190	ePn	Pn	17 19 31.7	+0.7
TEKS	Tekeris	3.13	190	ePn	Pn	17 19 30.7	-0.3
LOT	Lotru	3.25	131	⇑iP	Pn	17 19 33.7	+1.0
LOT	Lotru	3.25	131	S	Sn	17 20 11.9	+0.5
ARSA	Arzberg	3.26	265	i Pn	Pn	17 19 33.3	+0.6
	7.4nm,0.3s						
ARSA				i Sn	Sn	17 20 11.2	-0.3
	29nm,0.5s						
BURAR	Bucovina Array	3.33	88	⇑iP	Pn	17 19 33.3	-0.6
KUBS	Kucevo	3.36	163	ePn	Pn	17 19 33.1	-1.1
KRLC	Kraliky	3.37	318	ePN	Pn	17 19 35.3	+1.0
KRLC				eSN	Sn	17 20 14.1	-0.2
TRUS	Trudelj	3.41	179	ePn	Pn	17 19 35.0	+0.2
DIVS	Divibare	3.54	183	ePn	Pn	17 19 36.6	-0.1
DIVS	Divibare	3.54	183	ePn	Pn	17 19 36.7	0.0
GOLS	Golise	3.59	245	i Pn	Pg	17 19 49.6	-0.9
BLY	Banja Luka	3.60	218	⇓iP	Pg	17 19 50.9	+0.2
BLY	Banja Luka	3.60	218	ePn	Pg	17 19 49.7	-1.0
TREC	Trest	3.60	299	eSN	Sn	17 20 19.2	-0.8
DOBS	Dobrina	3.62	248	i Pn	Pg	17 19 49.7	-1.4
HAPS	Han Pijesak,Bl	3.67	195	ePn	Pn	17 19 38.0	-0.5
HAPS	Han Pijesak,Bl	3.67	195	ePn	Pn	17 19 36.7	-1.8
PERS	Pernice	3.67	256	i Pn	Pn	17 19 38.5	0.0
SOKA	Soboth	3.71	257	i Pn	Pn	17 19 39.1	+0.1
	1.7nm,0.3s						
GRUS	Gruza	3.75	175	ePn	Pn	17 19 39.8	+0.2
ARR	Arges	3.76	125	⇑iP	Pn	17 19 40.0	+0.3
DPC	Dobruska-Polom	3.77	318	ePN	Pn	17 19 40.6	+0.7
CRES	Cresnjev	3.78	243	i Pn	Pg	17 19 52.9	-1.3
CRES	Cresnjev	3.78	243	ePn	Pg	17 19 52.9	-1.3
BBLS	Lazići	3.81	190	ePn	Pn	17 19 40.8	+0.3
BBLS	Lazići	3.81	190	ePn	Pn	17 19 40.6	+0.1
DOPR	Dopca	3.88	114	⇑iP	Pn	17 19 41.9	+0.6
OZLJ	Ozalj	3.88	241	i Pn	Pn	17 19 44.2	+2.9
VOIR		3.95	122	⇑iP	Pn	17 19 43.3	+0.9
VOIR		3.95	122	S	Sn	17 20 28.8	+0.1
BIZ	Bicaz	4.02	98	⇓iP	Pn	17 19 44.2	+1.0
UPC	Upice	4.02	317	ePN	Pn	17 19 43.8	+0.5
ZAGS	Zajecar	4.05	160	ePn	Pn	17 19 45.0	+1.3
IVAS	Ivanjica	4.05	181	ePn	Pn	17 19 43.8	0.0
MOA	Molln	4.07	275	i Pn	Pn	17 19 44.4	+0.4
	2.0nm,0.3s,SNR=6.0						
MOA				eSn	Sn	17 20 33.0	+1.5
	4.5nm,0.4s						
OZUR		4.07	110	⇓iP	Pn	17 19 44.6	+0.6
OBKA	Obir	4.08	256	ePn	Pn	17 19 44.0	-0.1
	1.7nm,0.5s						
BOVS	Bovan	4.12	166	ePn	Pn	17 19 45.1	+0.5
GOPC	GO Pecny, Ondr	4.30	304	ePN	Pn	17 19 46.9	-0.1
GOPC				eSN	Sn	17 20 35.3	-1.8
SJES	Sjenica	4.37	183	ePn	Pn	17 19 49.0	+0.8
UDBI	Udbina	4.42	227	ePn	Pn	17 19 51.5	+2.7
UDBI				Sn	Sn	17 20 38.5	-1.7
SELS	Selova	4.45	172	ePn	Pn	17 19 49.0	-0.2
MLR	Muntele Rosu	4.45	117	⇓iP	Pn	17 19 49.6	+0.3
CEY	Cerknica	4.46	247	ePn	Pb	17 19 56.5	-3.5
PRU	Pruhonice	4.47	304	ePN	Pn	17 19 49.7	+0.3
PRU				eSN	Sn	17 20 39.7	-1.7
TESR	Tescani	4.49	102	⇓iP	Pn	17 19 49.8	+0.1
KHC	Kasperske Hory	4.72	291	ePN	Pn	17 19 53.2	+0.4
KHC				ex	x	17 20 06.5	
KHC				ex	x	17 20 45.4	
KHC				ex	x	17 21 21.5	
PLOR	Plostina	4.72	110	⇓iP	Pn	17 19 53.5	+0.6
PLOR	Plostina	4.72	110	S	Sn	17 20 47.6	0.0
PVCC	Panska Ves	4.75	310	ePN	Pn	17 19 53.1	-0.1
KBA	Koelnbreinsper	4.75	266	i Pn	Pn	17 19 54.8	+1.3
	5.1nm,0.3s,SNR=4.9						
VRI	Vrincioaia	4.76	109	⇑iP	Pn	17 19 54.0	+0.5
NVLJ	Novalja	4.86	233	ePn	Pn	17 19 56.7	+2.0
NVLJ				Sn	Sn	17 20 50.3	-0.6
BARS	Barje	4.93	167	ePn	Pn	17 19 55.8	0.0
STON	Ston	5.10	202	ePn	Pn	17 19 59.9	+1.9
STON				Sn	Sn	17 20 56.7	0.0
BRG	Berggiesshubel	5.27	310	SG	Sb	17 21 15.6	-1.5
	4.2nm,0.9s						
DRME	Dracevica, Mon	5.50	189	ePn	Pn	17 20 05.8	+2.2
NKC	Novy Kostel	5.79	300	ePN	Pn	17 20 07.3	-0.2

*ISCJB **16** 17:35:32.9±0.6, 14°.2S±0°.1×170°.3E±0°.1, h600^{km}, mb3.7/14, Error ellipse: s-maj=18.0km s-min=12.9km az=13.8*

*IDC **16** 17:35:35.5±1.5, 14°.20S×170°.29E, h620^{km}±18^{km}, mb3.2/14, mb1 3.4/15, mb1mx3.2/32, mbtmp4.2/15, Error ellipse: s-maj=16.3km s-min=13.1km az=91.0*

ISC 16 17:35:34.2±0.6**, 14°.1S**±0°.1×**170°.1E**±0°.1**, h600**^{km}**, n16, σ1^{s}.85**/23**, mb3.6**/14**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.66	203	P	P	17 37 43.4	+3.4
	2.1nm,0.3s,baz=158,slow=21,SNR=18						
URZ	Urewera	24.86	167	P	P	17 40 10.3	-0.7
	8.2nm,0.6s,baz=81,slow=1.5,SNR=9.7						
RPZ	Rata Peaks	29.53	179	P	P	17 40 50.3	-1.5
	11nm,0.8s,baz=272,slow=3.8,SNR=3.2						
STKA	Stephens Creek	31.51	231	P	P	17 41 10.4	+1.5
	3.5nm,0.5s,baz=69,slow=8.5,SNR=12						
STKA				PcP	PcP	17 43 41.4	-1.4
	1.3nm,0.5s,baz=321,slow=2.9,SNR=4.4						
WRA	Warramunga Arr	34.65	255	P	P	17 41 35.9	+0.5
	2.5nm,0.6s,baz=84,slow=8.4,SNR=16						
WRA				PcP	PcP	17 43 50.4	-1.6
	0.5nm,0.6s,baz=81,slow=3.5,SNR=5.2						
WRA				S	S	17 46 19.1	-4.9
	0.3nm,0.7s,baz=88,slow=14,SNR=2.7						
WRA				ScP	ScP	17 46 40.7	-0.6
	0.1nm,0.5s,baz=85,slow=4.4,SNR=3.7						
ASAR	Alice Springs	35.47	249	P	P	17 41 43.0	+0.9
	5.7nm,0.6s,baz=74,slow=9.6,SNR=159						
ASAR				PcP	PcP	17 43 53.5	-1.1
	1.2nm,0.8s,baz=76,slow=2.7,SNR=8.3						
ASAR				S	S	17 46 33.5	-2.7
	0.7nm,0.6s,baz=76,slow=16,SNR=8.5						
ASAR				ScP	ScP	17 46 43.2	-1.1
	1.0nm,1.0s,baz=95,slow=4.1,SNR=5.7						
MJAR	Matsushiro Arr	58.67	330	P	P	17 44 36.9	+1.4
	0.8nm,0.5s,baz=165,slow=6.8,SNR=6.3						
VNDA	Vanda	63.57	182	P	P	17 45 06.5	-0.3
	1.5nm,0.5s,baz=353,slow=6.4,SNR=12						
USRK	Ussuriysk Ar.	67.61	331	P	P	17 45 33.5	+1.2
	0.8nm,0.6s,baz=134,slow=8.5,SNR=3.3						
CMAR	Chiang Mai Arr	77.22	293	P	P	17 46 30.1	+2.0
	0.9nm,0.9s,baz=124,slow=3.6,SNR=6.1						
SEY	Seymchan	78.02	352	P	P	17 46 32.0	+0.6
	1.4nm,0.5s,baz=149,slow=6.4,SNR=7.2						
NVAR	Mina Array Bea	84.78	48	P	P	17 47 07.0	+0.1
	0.7nm,0.7s,baz=230,slow=7.9,SNR=4.6						
ILAR	Eielson Array	85.10	17	P	P	17 47 05.8	-1.6
	0.9nm,0.6s,baz=236,slow=5.0,SNR=17						
PDAR	Pinedale Array	92.51	47	P	P	17 47 42.5	-0.3
	0.2nm,0.7s,baz=225,slow=3.7,SNR=2.7						
YKA	Yellowknife Ar	95.73	27	P	P	17 47 55.8	-0.8
	0.3nm,0.5s,baz=254,slow=4.8,SNR=7.9						
ARCES	ARCESS Array B	120.31	346	PKP	PKPdf	17 53 16.4	-1.2
	3.3nm,1.0s,baz=79,slow=1.9,SNR=5.2						

*IDC **16** 17:52:58.5±7.9, 35°.80N×70°.13E, h138^{km}±53^{km}, mb3.1/7, mb1 3.2/12, mb1mx3.0/60, mbtmp3.6/12, Error ellipse: s-maj=71.7km s-min=24.1km az=3.0*

*ISCJB **16** 17:53:05.5±0.7, 36°.55N±0°.05×69°.9E±0°.1, h150^{km}, mb3.2/6, Error ellipse: s-maj=12.6km s-min=6.0km az=165.6*

ISC 16 17:53:05.5±0.8**, 36°.60N**±0°.07×**70°.0E**±0°.1**, h150**^{km}**, n28, σ2^{s}.49**/29**, mb3.2**/6**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.19	150	P	Pn	17 53 58.9	+3.4
CEP				S	Sn	17 54 36.0	+1.9
CHCP	Chirah Chowk	3.99	136	P	Pn	17 54 08.1	+2.5
THW	Thamme Wali	4.07	158	P	Pn	17 54 09.3	+2.6
AML	Almayashu	6.23	26	P	Pn	17 54 38.9	+3.3
	SNR=69						
UCH	Uchtor	6.63	31	P	Pn	17 54 44.0	+3.1
	SNR=34						
EKS2	Erkin-Say	6.73	25	P	Pn	17 54 45.6	+3.6
	SNR=5.7						
KZA	Kyzart	6.83	35	P	Pn	17 54 45.9	+2.3
	SNR=5.2						
AAK	Ala-Archa	6.97	29	P	Pn	17 54 48.6	+3.4
	SNR=6.8						
AAK	Ala-Archa	6.97	29	P	Pn	17 54 47.6	+2.4
	2.5nm,0.3s,baz=178,slow=7.1,SNR=33						
AAK				S	Sn	17 56 02.7	-0.6
	1.7nm,0.3s,baz=346,slow=20,SNR=19						
KBK	Karagaybulak	7.16	31	P	Pn	17 54 51.3	+3.4
	SNR=9.4						
CHMS	Chumysh	7.37	28	P	Pn	17 54 53.8	+3.3
	SNR=7.0						
TKM2	Tokmak 2	7.66	33	P	Pn	17 54 57.1	+2.7
	SNR=5.1						
MKAR	Makanchi Array	13.71	38	P	Pn	17 56 14.3	+0.6
	0.3nm,0.3s,baz=206,slow=8.8,SNR=10						
PYUN	Piuthan	13.88	124	eP	Pn	17 56 13.0	-3.1
	5.9nm,0.4s						
DANN	Dangsing	14.24	121	eP	Pn	17 56 18.2	-2.5
	5.6nm,0.4s						
KURBB	Kurchatov Arra	15.31	21	P	P	17 56 34.2	-0.7
	0.1nm,0.3s,baz=211,slow=9.9,SNR=4.4						
DMN	Daman	15.63	121	eP	Pn	17 56 36.6	-1.4
	4.6nm,0.5s						
PKIN	Phulchoki	15.85	120	eP	Pn	17 56 39.0	-1.7
	8.3nm,0.4s						
GUN	Gumba	15.99	118	eP	Pn	17 56 40.3	-2.2
	13nm,0.7s						
AKTO	Aktyubinsk	16.29	332	P	P	17 56 48.0	+2.2
	0.3nm,0.3s,baz=158,slow=11,SNR=12						
BVAR	Borovoye Array	16.43	1	P	P	17 56 49.6	+2.3
	0.3nm,0.3s,baz=172,slow=9.4,SNR=8.1						
ZALV	Zalesovo Beam	20.18	26	P	P	17 57 27.9	-0.2
	2.2nm,0.3s,baz=213,slow=11,SNR=23						
SONM	Songino Array	28.96	56	P	P	17 58 48.5	-2.3
	0.2nm,0.6s,baz=249,slow=6.0,SNR=3.1						
FINES	FINESS Array B	36.94	326	P	P	18 00 00.8	+1.2
	0.6nm,0.4s,baz=120,slow=11,SNR=5.4						
ARCES	ARCESS Array B	40.74	338	P	P	18 00 32.2	+1.1
	0.8nm,0.5s,baz=109,slow=7.3,SNR=14						
NOA	NORSAR Array B	43.80	323	P	P	18 00 55.1	-1.0
	0.1nm,0.5s,baz=105,slow=8.3,SNR=3.1						
ESDC	Sonseca Array	56.68	297	P	P	18 02 30.1	-3.1
	0.2nm,0.4s,baz=98,slow=10,SNR=4.0						
YKA	Yellowknife Ar	81.18	2	P	P	18 05 02.4	-1.6
	0.1nm,0.4s,baz=354,slow=5.6,SNR=2.9						

*KRNET **16** 17:54:08.6±0.1, 42°.52N×79°.68E, h9^{km}, mb2.4*

*SOME **16** 17:54:09.8, 42°.55N×79°.73E, h15^{km}*

*NNC **16** 17:54:10.2±1.1, 42°.59N×79°.65E, h0^{km}, mb2.9, mpv2.4, Error ellipse: s-maj=6.4km s-min=5.3km az=136.0*

ISC 16 17:54:08.6±1.8**, 42°.51N**±0°.05×**79°.70E**±0°.04**, h3**^{km}±11^{km}**, n34, σ1^{s}.10**/63**, 15C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.81	322	P	Pg	17 54 23.9	-0.3
	1.5nm,0.3s						
UZB				S	Sg	17 54 33.9	-0.9
	9.9nm,0.2s						
UZB	Uzynbulak	0.81	322	eP	Pg	17 54 23.8	-0.4
	baz=23						
UZB				eS	Sg	17 54 33.9	-0.9
	baz=23						
UZB	Uzynbulak	0.81	322	eP	Pg	17 54 23.8	-0.4
	1.5nm,0.2s						
UZB				eS	Sg	17 54 33.9	-0.9
	9.9nm,0.2s						
PDGK	Podgornoye	0.84	349	P	Pg	17 54 24.4	-0.3
	2.3nm,0.1s						
PDGK				S	Sg	17 54 35.3	-0.2
	10.0nm,0.3s						
PDGK	Podgornoye	0.84	349	⇓P	Pg	17 54 24.2	-0.5
	1.1nm,0.3s						
PDGK				⇑S	Sg	17 54 35.4	-0.2
	5.6nm,0.4s						
PDGK	Podgornoye	0.84	349	⇑iP	Pg	17 54 24.0	-0.7
	baz=50						
PDGK				⇑iS	Sg	17 54 35.3	-0.2
	baz=50						
PRZ	Przheval'sk	0.96	269	⇑iP	Pb	17 54 26.4	-1.7
	baz=68						
PRZ				⇑iS	Sb	17 54 40.1	-1.2
	baz=68						
KTMS	Ketmen	1.05	27	P	Pg	17 54 29.3	+0.4
	1.2nm,0.1s						
KTMS				S	Sn	17 54 43.1	-2.7
	9.1nm,0.2s						
KTMS	Ketmen	1.05	27	eP	Pg	17 54 29.3	+0.4
	baz=27						
KTMS				eS	Sn	17 54 43.1	-2.7
	baz=27						
KTMS	Ketmen	1.05	27	eP	Pg	17 54 29.3	+0.4
	1.2nm,0.1s						
KTMS				eS	Sn	17 54 43.1	-2.7
	9.6nm,0.3s						
TARG	Taragay, Kyrgy	1.61	242	⇑iP	Pn	17 54 37.6	-0.8
	baz=41						
TARG				⇑iS	Sn	17 54 59.6	-0.3
	baz=41						
DJR	Jarkent	1.83	2	P	Pb	17 54 42.4	-0.4
	0.8nm,0.2s						
DJR				S	Sg	17 55 06.4	-0.9
	4.0nm,0.4s						
DJR	Jarkent	1.83	2	eP	Pb	17 54 42.4	-0.4
	0.8nm,0.2s						
DJR				eS	Sb	17 55 05.6	-0.5
	2.7nm,0.2s						
MNBS	Baschi	1.84	329	eP	Pb	17 54 42.5	-0.5
	baz=30						
MNBS				eS	Sb	17 55 05.9	-0.5
	baz=30						
MNBS	Baschi	1.84	329	eP	Pb	17 54 42.5	-0.5
	2.0nm,0.4s						
MNBS				eS	Sb	17 55 05.8	-0.5
	7.7nm,0.2s						
KDJ	Kajisay	1.91	259	⇑iP	Pn	17 54 43.1	+0.9
	baz=59						
KDJ				⇑iS	Sb	17 55 08.8	+0.3
	baz=59						
KOTS	Kotyrbulak	2.04	292	Pg	Pb	17 54 47.6	+1.2
	1.9nm,0.3s						
KOTS				Lg	Lg	17 55 15.1	
	7.8nm,0.4s						
KOTS	Kotyrbulak	2.04	292	eP	Pb	17 54 47.7	+1.3
	baz=91						
KOTS				eS	Sg	17 55 15.3	+1.2
	baz=91						
KOTS	Kotyrbulak	2.04	292	eP	Pb	17 54 47.7	+1.3
	1.5nm,0.3s						
KOTS				eS	Sg	17 55 15.3	+1.2
	14nm,0.2s						
ARXS	Arharly	2.19	322	Pg	Pb	17 54 47.7	-1.2
ARXS				Lg	Lg	17 55 16.2	
ARXS	Arharly	2.19	322	eP	Pb	17 54 48.5	-0.4
	0.9nm,0.5s						
ARXS				eS	Sb	17 55 16.2	-0.2
	5.6nm,0.3s						
CHKK	Chushkaly	2.40	305	eP	Pb	17 54 51.9	-0.6
	baz=5.0						
CHKK				eS	Sb	17 55 21.9	-0.6
	baz=5.0						
CHKK	Chushkaly	2.40	305	eP	Pb	17 54 51.9	-0.6
	0.5nm,0.1s						
CHKK				eS	Sb	17 55 21.9	-0.6
	4.3nm,0.3s						
KTBS	Karatobe	2.52	300	Pg	Pb	17 54 54.0	-0.5
KTBS				Lg	Lg	17 55 26.3	
KTBS	Karatobe	2.52	300	eP	Pb	17 54 54.1	-0.4
	baz=98						
KTBS				eS	Sb	17 55 26.3	+0.4
	baz=98						
KTBS	Karatobe	2.52	300	eP	Pb	17 54 54.1	-0.4
	1.0nm,0.3s						
KTBS				eS	Sb	17 55 26.3	+0.4
	7.0nm,0.3s						
ULHL	Ulahol	2.58	265	⇓iP	Pn	17 54 52.3	+0.8
	baz=65						
ULHL				⇓iS	Sb	17 55 25.8	-2.0
	baz=65						
BOOM	Boomskoye usch	2.78	271	⇑iP	Pn	17 54 55.8	+1.5
	baz=71						
BOOM				⇑iS	Sn	17 55 29.8	+1.4
	baz=71						
KAPS	Kapalarasan	2.79	355	Pg	Pb	17 54 59.2	0.0
KAPS				Lg	Lg	17 55 35.3	
KAPS	Kapalarasan	2.79	355	eP	Pb	17 54 59.2	0.0
	0.4nm,0.2s						
KAPS				eS	Sb	17 55 35.0	+1.2
	3.3nm,0.5s						
KUU	Kurty	2.82	301	eP	Pb	17 54 59.9	+0.2
	baz=0.0						
KUU				eS	Sb	17 55 35.8	+1.1
	baz=0.0						
KUU	Kurty	2.82	301	eP	Pb	17 54 59.9	+0.2
	0.2nm,0.3s						
KUU				eS	Sb	17 55 35.7	+1.1

	3.4nm,0.4s						
MAKZ	**Makanchi**	**4.60**	**20**	⇑Pn	**Pn**	**17 55 21.8**	**+2.7**
	2.4nm,1.4s						
MAKZ				⇑Sn	**Sn**	**17 56 13.5**	**+0.5**
	1.8nm,1.1s						
MK31	**Makanchi Array**	**4.67**	**22**	⇑Pn	**Pn**	**17 55 22.4**	**+2.3**
	0.1nm,0.3s,baz=210,slow=13						
MK31				⇑Lg	Lg	17 56 35.4	
	0.5nm,0.6s,baz=210,slow=28						

NIED ***16*** *17:56:00, 37°.10N×141°.40E, h41^{km}, Mw3.6 Best double couple: $M_0$2.88000×10^{14} NP1:ϕ_s85.00000°, δ13.00000°, λ95.00000°. NP2:ϕ_s260.00000°, δ77.00000°, λ89.00000°.*
IDC ***16*** *17:56:16.4±5.8, 37°.00N×141°.66E, h32^{km}±45^{km}, mb3.3/6, mb1 3.5/10, mb1mx3.3/43, mbtmp3.6/10, ML3.1/4, Error ellipse: s-maj=28.5km s-min=17.9km az=96.0*
JMA ***16*** *17:56:17.3±0.1, 37°.13N×141°.35E, h49^{km}±1^{km}, M3.9*
JMA Felt I J1.
ISC 16 17:56:13.3±1.8**, 37°.10N**±0°.05×**141°.59E**±0°.06**, h12**^{km}±10^{km}**, n25,** σ**1^{s}42**/31**, mb3.4**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.63**	**295**	P	**Pn**	**17 56 27.6**	**-0.5**
JFK				S	**Sb**	**17 56 34.9**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.64**	**270**	P	**Pn**	**17 56 27.7**	**-0.5**
ONAJ				S	**Sb**	**17 56 35.1**	**-0.2**
JFFD	**Fukushimafurud**	**0.83**	**269**	P	**Pn**	**17 56 30.1**	**-0.7**
JFFD				S	**Sg**	**17 56 39.2**	**-0.9**
JHO	**Hitachi**	**0.96**	**239**	P	**Pn**	**17 56 32.0**	**-0.6**
JHO				S	**Sb**	**17 56 42.6**	**-1.9**
JMM	**Marumori**	**0.99**	**320**	P	**Pn**	**17 56 33.0**	**-0.1**
JMM				S	**Sb**	**17 56 44.2**	**-1.3**
JFT	**Otama**	**1.08**	**293**	P	**Pg**	**17 56 34.4**	**+0.2**
JFT				S	**Sb**	**17 56 46.4**	**-1.8**
JIO	**Ouri**	**1.36**	**352**	P	**Pg**	**17 56 39.1**	**-0.4**
JIO				S	**Sn**	**17 56 55.0**	**-1.1**
JFY	**Yanaizu**	**1.54**	**282**	P	**Pn**	**17 56 40.5**	**-0.1**
JFY				S	**Sn**	**17 56 58.0**	**-2.5**
MJAR	**Matsushiro Arr**	**2.77**	**259**	Pn	**Pn**	**17 56 58.0**	**+0.4**
	0.7nm,0.3s,baz=109,slow=7.6,SNR=50						
MJAR				Sn	**Sn**	**17 57 30.9**	**-0.1**
	1.1nm,0.3s,baz=79,slow=26,SNR=5.5						
MAT	**Matsushiro**	**2.77**	**259**	P	**Pn**	**17 56 58.2**	**+0.6**
MAT				*e*S	**Sn**	**17 57 32.5**	**+1.5**
JHJ	**Hachijo jima 2**	**4.24**	**201**	Pn	**Pn**	**17 57 19.1**	**+1.3**
	14nm,0.3s,baz=329,slow=23,SNR=6.1						
JHJ				Sn	**Sn**	**17 58 05.1**	**-2.2**
	28nm,0.3s,baz=78,slow=23,SNR=6.8						
ASAJ	**Asahikawa**	**7.05**	**6**	Pn	**Pn**	**17 57 56.8**	**+0.5**
	0.8nm,0.3s,baz=214,slow=13,SNR=11						
ASAJ				Sn	**Sn**	**17 59 14.2**	**-2.1**
	0.2nm,0.3s,baz=246,slow=20,SNR=2.4						
USRK	**Ussuriysk Ar.**	**10.17**	**317**	Pn	**Pn**	**17 58 42.8**	**+3.7**
	0.2nm,0.3s,baz=126,slow=13,SNR=9.4						
SONM	**Songino Array**	**27.87**	**304**	P	**P**	**18 02 05.0**	**+2.1**
	0.3nm,0.4s,baz=107,slow=8.4,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	**28.06**	**121**	T	T	18 31 41.4	
	baz=313,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**28.07**	**121**	T	T	18 31 42.5	
	baz=313,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**28.08**	**121**	T	T	18 31 42.5	
	baz=313,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**28.78**	**123**	T	T	18 32 35.6	
	baz=314,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**28.78**	**123**	T	T	18 32 36.7	
	baz=314,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	**28.79**	**123**	T	T	18 32 36.1	
	baz=314,slow=75,SNR=5.6						
MKAR	**Makanchi Array**	**44.20**	**302**	P	**P**	**18 04 22.4**	**+0.2**
	0.2nm,0.7s,baz=96,slow=7.7,SNR=2.1						
ILAR	**Eielson Array**	**49.36**	**32**	P	**P**	**18 05 03.3**	**+1.1**
	0.2nm,0.7s,baz=266,slow=7.1,SNR=3.3						
FITZ	**Fitzroy Crossi**	**56.93**	**198**	P	**P**	**18 05 57.3**	**-1.1**
	1.2nm,1.0s,baz=54,slow=8.7,SNR=2.7						
WRA	**Warramunga Arr**	**57.15**	**188**	P	**P**	**18 05 58.9**	**-1.1**
	0.6nm,0.6s,baz=7.1,slow=7.6,SNR=10						
ASAR	**Alice Springs**	**60.88**	**188**	P	**P**	**18 06 25.8**	**0.0**
	0.3nm,0.8s,baz=13,slow=8.9,SNR=3.7						

KRNET ***16*** *18:03:58.0±0.1, 42°.54N×79°.69E, h18^{km}, mb3.2*
ISCJB ***16*** *18:03:59.2±0.7, 42°.52N±0°.03×79°.74E±0°.04, h10^{km}, Error ellipse: s-maj=6.0km s-min=2.8km az=139.3*
SOME ***16*** *18:03:59.0, 42°.55N×79°.68E, h20^{km}*
NNC ***16*** *18:03:59.2±0.7, 42°.60N×79°.63E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=4.4km s-min=2.5km az=136.0*
ISC 16 18:03:57.7±1.1**, 42°.54N**±0°.04×**79°.76E**±0°.04**, h10**^{km}**, n60,** σ**1^{s}58**/105**, 34C-24D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**0.81**	**346**	P	**Pb**	**18 04 13.6**	**-0.4**
	24nm,0.2s						
PDGK				S	**Sb**	**18 04 24.1**	**-1.0**
	55nm,0.1s						
PDGK	**Podgornoye**	**0.81**	**346**	⇑P	**Pb**	**18 04 13.6**	**-0.4**
	21nm,0.4s						
PDGK				⇓S	**Sb**	**18 04 23.9**	**-1.2**
	50nm,0.4s						
PDGK	**Podgornoye**	**0.81**	**346**	⇑*i*P	**Pb**	**18 04 13.5**	**-0.4**
	baz=49						
PDGK				⇑*i*S	**Sb**	**18 04 24.1**	**-1.0**
	baz=49						
UZB	**Uzynbulak**	**0.81**	**318**	P	**Pb**	**18 04 13.2**	**-0.8**
	93nm,0.1s						
UZB				S	**Sg**	**18 04 23.5**	**-0.6**
	91nm,0.2s						
UZB	**Uzynbulak**	**0.81**	**318**	⇓*e*P	**Pb**	**18 04 13.3**	**-0.8**
	baz=21						
UZB				⇓*e*S	**Sg**	**18 04 23.5**	**-0.6**
	baz=21						
UZB	**Uzynbulak**	**0.81**	**318**	⇓*e*P	**Pb**	**18 04 13.3**	**-0.8**
	93nm,0.1s						
UZB				*e*S	**Sg**	**18 04 23.5**	**-0.6**
	91nm,0.2s						
KTMS	**Ketmen**	**1.00**	**25**	P	**Pn**	**18 04 18.1**	**+0.1**
KTMS				S	**Sn**	**18 04 31.7**	**-0.6**
KTMS	**Ketmen**	**1.00**	**25**	⇑*e*P	**Pn**	**18 04 18.1**	**+0.1**
	baz=27						
KTMS				⇑*e*S	**Sn**	**18 04 31.7**	**-0.6**
	baz=27						
KTMS	**Ketmen**	**1.00**	**25**	⇑*e*P	**Pn**	**18 04 18.1**	**+0.1**
	22nm,0.1s						
KTMS				*e*S	**Sn**	**18 04 31.7**	**-0.6**
	47nm,0.1s						
PRZ	**Przheval'sk**	**1.01**	**267**	⇑*i*P	**Pg**	**18 04 16.1**	**-1.0**
	baz=67						
PRZ				⇑*i*S	**Sg**	**18 04 29.5**	**-0.7**
	baz=67						
SATY	**Saty**	**1.12**	**298**	P	**Pb**	**18 04 18.7**	**-0.6**
	6.8nm,0.1s						
SATY				S	**Sg**	**18 04 32.0**	**-1.9**
	70nm,0.1s						
SATY	**Saty**	**1.12**	**298**	*e*P	**Pb**	**18 04 18.7**	**-0.6**
	14nm,0.1s						
SATY				*e*S	**Sg**	**18 04 32.4**	**-1.5**
	246nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.67**	**241**	⇓*i*P	**Pb**	**18 04 27.7**	**-1.0**
	baz=41						
TARG				⇓*i*S	**Sb**	**18 04 49.1**	**-0.8**
	baz=41						
DJR	**Jarkent**	**1.79**	**1**	P	**Pg**	**18 04 31.3**	**-0.8**
	9.9nm,0.2s						
DJR				S	**Sg**	**18 04 55.2**	**0.0**
	49nm,0.3s						
DJR	**Jarkent**	**1.79**	**1**	⇑*e*P	**Pg**	**18 04 31.2**	**-0.8**
	9.9nm,0.2s						
DJR				*e*S	**Sg**	**18 04 55.2**	**0.0**
	49nm,0.3s						
MNBS	**Baschi**	**1.83**	**328**	⇓*e*P	**Pg**	**18 04 31.4**	**-1.4**
	69nm,0.2s						
MNBS				*e*S	**Sg**	**18 04 55.0**	**-1.5**
	52nm,0.4s						
KDJ	**Kajisay**	**1.96**	**259**	⇓*i*P	**Pb**	**18 04 33.0**	**-0.5**
	baz=58						
KDJ				⇓*i*S	**Sb**	**18 04 58.2**	**+0.1**
	baz=58						
KOTS	**Kotyrbulak**	**2.07**	**290**	Pg	**Pg**	**18 04 36.0**	**-1.3**
	24nm,0.2s						
KOTS				Lg	Lg	18 05 02.2	
	244nm,0.7s						
KOTS	**Kotyrbulak**	**2.07**	**290**	*e*P	**Pg**	**18 04 36.0**	**-1.3**
	24nm,0.2s						
KOTS				*e*S	**Sg**	**18 05 02.2**	**-1.9**
	244nm,0.7s						
MDOK	**Medeo**	**2.09**	**288**	Pg	**Pb**	**18 04 35.7**	**-0.1**
	10nm,0.2s						
MDOK				Lg	Lg	18 05 02.1	
	74nm,0.6s						
MDOK	**Medeo**	**2.09**	**288**	*e*P	**Pb**	**18 04 35.7**	**-0.1**
	baz=89						
MDOK				*e*S	**Sb**	**18 05 02.1**	**+0.2**
	baz=89						
MDOK	**Medeo**	**2.09**	**288**	*e*P	**Pb**	**18 04 35.7**	**-0.1**
	10nm,0.2s						
MDOK				*e*S	**Sb**	**18 05 02.1**	**+0.2**
	74nm,0.6s						
TNSS	**Tian-Shan**	**2.13**	**284**	Pg	**Pb**	**18 04 36.7**	**+0.1**
	16nm,0.2s						
TNSS				Lg	Lg	18 05 03.6	
	38nm,0.2s						
TNSS	**Tian-Shan**	**2.13**	**284**	*e*P	**Pb**	**18 04 36.7**	**+0.1**
	16nm,0.2s						
TNSS				*e*S	**Sb**	**18 05 03.6**	**+0.4**
	38nm,0.2s						
KNDC	**Almaty**	**2.16**	**289**	⇑Pg	**Pb**	**18 04 37.0**	**0.0**
	9.8nm,0.2s						
KNDC				⇑Lg	Lg	18 05 07.1	
	149nm,0.7s						
ARXS	**Arharly**	**2.19**	**320**	Pg	**Pb**	**18 04 37.0**	**-0.4**
	36nm,0.4s						
ARXS				Lg	Lg	18 05 04.5	
	35nm,0.4s						
ARXS	**Arharly**	**2.19**	**320**	*e*P	**Pb**	**18 04 37.0**	**-0.4**
	36nm,0.4s						
ARXS				*e*S	**Sb**	**18 05 04.5**	**0.0**
	35nm,0.4s						
IZV	**Izvestkoviy**	**2.37**	**283**	Pg	**Pb**	**18 04 40.5**	**-0.1**
	17nm,0.2s						
IZV				Lg	Lg	18 05 10.1	
	90nm,0.2s						
IZV	**Izvestkoviy**	**2.37**	**283**	*e*P	**Pb**	**18 04 40.5**	**-0.1**
	17nm,0.2s						
IZV				*e*S	**Sb**	**18 05 10.1**	**+0.2**
	90nm,0.2s						
CHKK	**Chushkaly**	**2.41**	**304**	*e*P	**Pb**	**18 04 41.3**	**0.0**
	4.4nm,0.2s						
CHKK				*e*S	**Sb**	**18 05 11.3**	**+0.3**
	72nm,0.2s						
MTBS	**Maitube**	**2.52**	**285**	*e*P	**Pb**	**18 04 43.5**	**+0.4**
	28nm,0.3s						
MTBS				*e*S	**Sb**	**18 05 15.2**	**+1.0**
	49nm,0.3s						
KTBS	**Karatobe**	**2.54**	**298**	Pg	**Pb**	**18 04 42.5**	**-0.8**
	4.8nm,0.2s						
KTBS				Lg	Lg	18 05 13.5	
	51nm,0.5s						
KTBS	**Karatobe**	**2.54**	**298**	*e*P	**Pb**	**18 04 42.5**	**-0.8**
	4.8nm,0.2s						
KTBS				*e*S	**Sb**	**18 05 13.5**	**-1.2**
	51nm,0.5s						
ULHL	**Ulahol**	**2.62**	**265**	⇓*i*P	**Pb**	**18 04 42.1**	**-2.8**
	baz=65						
ULHL				⇓*i*S	**Sb**	**18 05 14.4**	**-2.9**
	baz=65						
KAPS	**Kapalarasan**	**2.76**	**354**	Pg	**Pg**	**18 04 48.0**	**-2.5**
	3.4nm,0.2s						
KAPS				Lg	Lg	18 05 23.5	
	46nm,0.3s						
KAPS	**Kapalarasan**	**2.76**	**354**	*e*P	**Pg**	**18 04 48.0**	**-2.5**
	3.4nm,0.2s						
KAPS				*e*S	**Sg**	**18 05 23.5**	**-2.7**
	46nm,0.3s						
BOOM	**Boomskoye usch**	**2.83**	**270**	⇑*i*P	**Pb**	**18 04 45.3**	**-3.0**
	baz=70						
BOOM				⇑*i*S	**Sn**	**18 05 19.2**	**+1.9**
	baz=70						
KST	**Kastek**	**2.84**	**281**	Pg	**Pb**	**18 04 48.5**	**0.0**
	11nm,0.4s						
KST				Lg	Lg	18 05 24.0	
	45nm,0.3s						
KST	**Kastek**	**2.84**	**281**	*e*P	**Pb**	**18 04 48.5**	**0.0**
	11nm,0.4s						
KST				*e*S	**Sb**	**18 05 23.9**	**+0.5**
	45nm,0.3s						
KUU	**Kurty**	**2.84**	**300**	Pg	**Pb**	**18 04 48.2**	**-0.4**
	2.1nm,0.2s						
KUU				Lg	Lg	18 05 24.1	
	30nm,0.3s						
KUU	**Kurty**	**2.84**	**300**	*e*P	**Pb**	**18 04 48.2**	**-0.4**
	2.1nm,0.2s						
KUU				*e*S	**Sb**	**18 05 24.1**	**+0.7**
	30nm,0.3s						
DGS	**Degeres**	**3.01**	**285**	Pg	**Pb**	**18 04 52.0**	**+0.5**
	7.6nm,0.4s						
DGS				Lg	Lg	18 05 29.8	
	60nm,0.4s						
DGS	**Degeres**	**3.01**	**285**	*e*P	**Pb**	**18 04 52.0**	**+0.5**
	7.6nm,0.4s						
DGS				*e*S	**Sb**	**18 05 29.8**	**+1.4**
	60nm,0.4s						
NRN	**Naryn**	**3.02**	**250**	⇑*i*P	**Pn**	**18 04 48.0**	**+2.2**
	baz=49						
NRN				⇑*i*S	**Sn**	**18 05 24.5**	**+2.4**
	baz=49						
TKM2	**Tokmak 2**	**3.09**	**278**	⇑Pg	**Pb**	**18 04 53.4**	**+0.5**
	3.4nm,0.5s						
TKM2				⇑Lg	Lg	18 05 31.6	
	18nm,0.4s						
TKM2	**Tokmak 2**	**3.09**	**278**	⇑*e*P	**Pn**	**18 04 48.4**	**+1.6**
	baz=79						
TKM2				⇑*i*S	**Sn**	**18 05 25.2**	**+1.3**
	baz=79						
KZA	**Kyzart**	**3.38**	**264**	⇓*i*P	**Pn**	**18 04 53.2**	**+2.3**
	baz=64						
KZA				⇓*i*S	**Sn**	**18 05 33.1**	**+1.9**
	baz=64						
KBK	**Karagaybulak**	**3.56**	**273**	⇓*i*P	**Pn**	**18 04 55.5**	**+2.4**
	baz=74						
KBK				⇓*i*S	**Sn**	**18 05 37.1**	**+1.8**
	baz=74						
CHMS	**Chumysh**	**3.72**	**279**	⇑*i*P	**Pn**	**18 04 56.9**	**+1.7**
	baz=79						
CHMS				⇑*i*S	**Sn**	**18 05 40.6**	**+1.6**
	baz=79						
FRU1	**Bishkek**	**3.79**	**276**	⇑*i*P	**Pn**	**18 04 57.9**	**+1.6**
	baz=76						
FRU1				⇑*i*S	**Sn**	**18 05 42.4**	**+1.4**
	baz=76						
AAK	**Ala-Archa**	**3.89**	**273**	⇑Pg	**Pb**	**18 05 08.2**	**+1.7**
	1.7nm,0.5s						
AAK				⇑Lg	Lg	18 05 58.6	
	7.1nm,0.4s						
AAK	**Ala-Archa**	**3.89**	**273**	⇓*i*P	**Pn**	**18 04 59.8**	**+2.1**
	baz=73						
AAK				⇓*i*S	**Sn**	**18 05 45.3**	**+1.8**
	baz=73						
UCH	**Uchtor**	**3.90**	**267**	⇑*i*P	**Pn**	**18 04 59.9**	**+1.8**
	baz=67						
UCH				⇑*i*S	**Sn**	**18 05 45.6**	**+1.4**
	baz=67						
ARLS	**Aral**	**4.10**	**262**	⇓*i*P	**Pn**	**18 05 02.3**	**+1.8**
	baz=62						
ARLS				⇓*i*S	**Sn**	**18 05 49.1**	**+0.5**
	baz=62						
AML	**Almayashu**	**4.52**	**267**	⇓*i*P	**Pn**	**18 05 08.7**	**+2.2**
	baz=67						
AML				⇓*i*S	**Sn**	**18 06 00.2**	**+0.9**
	baz=67						
MAKZ	**Makanchi**	**4.55**	**20**	⇑Pn	**Pn**	**18 05 10.3**	**+3.7**
	0.7nm,0.4s						
MAKZ				⇑Sn	**Sn**	**18 06 02.9**	**+3.4**
	1.3nm,0.6s						
MAKZ				⇑Lg	Lg	18 06 24.7	
	3.3nm,0.6s						
MK31	**Makanchi Array**	**4.62**	**22**	⇑Pn	**Pn**	**18 05 10.9**	**+3.3**
	0.1nm,0.2s,baz=206,slow=13,SNR=3.8						
MK31				⇑Sn	**Sn**	**18 06 04.7**	**+3.5**
	0.5nm,0.3s,baz=208,slow=28,SNR=3.8						
MK31				⇓Lg	Lg	18 06 22.9	
	0.9nm,0.3s,baz=200,slow=29,SNR=4.8						
MRKS	**Merke**	**4.83**	**275**	*e*P	**Pg**	**18 05 26.2**	**-3.9**
	3.6nm,0.3s						
MRKS				*e*S	**Sg**	**18 06 28.3**	**-4.3**
	10nm,0.3s						
SFK	**Sufi-Kurgan**	**5.35**	**244**	⇑Pg	**Pg**	**18 05 37.9**	**-2.2**
	0.6nm,0.5s						
SFK				⇓Lg	Lg	18 06 45.1	
	0.8nm,0.3s						
MNAS	**Manas**	**5.36**	**272**	⇓Pg	**Pb**	**18 05 35.3**	**+3.7**
	4.1nm,1.4s						
MNAS				⇑Lg	Lg	18 06 44.0	
	5.2nm,1.1s						

IDC ***16*** *18:29:25.1±0.4, 11°.10S×164°.51E, h0^{km}, mb5.0/31, mb1 5.1/33, mb1mx5.0/46, mbtmp5.0/33, ML5.0/2, MS4.5/20, Ms1 4.5/20, ms1mx4.3/29, Error ellipse: s-maj=13.6km s-min=11.2km az=127.0*
NEIC ***16*** *18:29:28.4±0.6, 11°.13S×164°.49E, h21^{km}±4^{km}, mb5.3/236, Error ellipse: s-maj=2.9km s-min=2.6km az=135.0*
BJI ***16*** *18:29:28.0, 11°.49S×164°.44E, h34^{km}, mB5.3/42, mb5.0/60, Ms5.0/36, Ms7 4.7/37*
ISCJB ***16*** *18:29:28.1±0.1, 11°.14S±0°.02×164°.45E±0°.02, h29^{km}, mb5.2/285, MS4.6/29, Error ellipse: s-maj=3.3km s-min=2.5km az=155.7*
MOS ***16*** *18:29:28.7±0.9, 11°.11S×164°.48E, h33^{km}, mb5.4/57, Error ellipse: s-maj=6.6km s-min=6.0km az=65.0*
GCMT ***16*** *18:29:30.4±0.1, 11°.23S±0°.01×164°.40E±0°.01, h21^{km}, MW5.3/111, Moment Tensor Solution. s87,c148; s111,c190; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.24±.02; $M_{\theta\theta}$-0.23±.01; $M_{\phi\phi}$0.46±.01; $M_{r\theta}$-0.29±.03; $M_{\theta\phi}$0.84±.01; $M_{\phi r}$0.23±.03; Best double couple: $M_0$1.00200×10^{17} NP1:ϕ_s172.00000°, δ73.00000°, λ-159.00000°. NP2:ϕ_s76.00000°, δ70.00000°, λ-18.00000°. Principal axes: T 1.0290, Plg2.0000°, Azm303.0000°; N -0.0540, Plg63.0000°, Azm210.0000°; P -0.9750, Plg27.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 18:29:29.7±0.2**, 11°.19S**±0°.04×**164°.55E**±0°.04**, h29**^{km}**, n635,** σ**1^{s}29**/658**, mb5.3**/290**, MS4.6**/31**, 10C-9D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.86**	**291**	*i* P	**Pn**	**18 30 40.5**	**-0.3**
HNR				*i* S	**Sn**	**18 31 33.0**	**-3.1**
HNR	**Honiara**	**4.86**	**291**	*e*Pn	**Pn**	**18 30 40.8**	**-0.1**
HNR				*e*Sn	**Sn**	**18 31 34.8**	**-1.3**
HNR	**Honiara**	**4.86**	**291**	*e*P	**Pn**	**18 30 40.8**	**-0.1**
HNR				*e*		18 31 34.8	
HNR	**Honiara**	**4.86**	**291**	Pn	**Pn**	**18 30 41.0**	**+0.2**
	650nm,0.3s,baz=156,slow=2.2,SNR=207						
HNR				Sn	**Sn**	**18 31 35.3**	**-0.9**
	392nm,0.3s,baz=139,slow=11,SNR=4.4						
MARNC	**Mare, Loyalty**	**10.76**	**162**	*e*Pn	**Pn**	**18 32 00.6**	**-1.3**
DZM	**Mont Dzumac**	**10.97**	**171**	*e*Pn	**Pn**	**18 32 04.4**	**-0.4**
	138nm,0.6s						
DZM				*e*Sn	**Sn**	**18 34 01.2**	**-5.5**
	224nm,0.8s						
DZM				*e*LR	LR	18 34 35.0	
	comp=Z,2μm,24.7s						
DZM	**Mont Dzumac**	**10.97**	**171**	*e*Pn	**Pn**	**18 32 04.2**	**-0.6**
DZM				*e*Sn	Sn	18 33 55.6	-11
DZM				Sn	**Sn**	**18 34 04.3**	**-2.4**
DZM	**Mont Dzumac**	**10.97**	**171**	Pn	**Pn**	**18 32 04.5**	**-0.3**
	9.2nm,0.3s,baz=305,slow=14,SNR=38						
DZM				Sn	**Sn**	**18 34 04.3**	**-2.4**
	3.3nm,0.3s,baz=330,slow=20,SNR=5.1						
DZM				LR	LR	18 35 15.2	
	comp=Z,2μm,18.5s,baz=2.0,slow=32						
OUENC	**Ouen Island, N**	**11.38**	**169**	*e*Pn	**Pn**	**18 32 09.8**	**-0.5**
OUENC				*e*Sn	**Sn**	**18 34 10.3**	**-6.2**
PINNC	**Pines Island,**	**11.69**	**167**	*e*Pn	**Pn**	**18 32 14.0**	**-0.6**
RABL	**Rabaul**	**14.10**	**299**	*e*Pn	**Pn**	**18 32 47.7**	**0.0**
MSVF	**Nonsavu**	**14.60**	**118**	*e*Pn	**Pn**	**18 32 55.0**	**+0.6**
MSVF	**Nonsavu**	**14.60**	**118**	*e*P	**Pn**	**18 32 55.0**	**+0.6**
FUNA	**Funafuti**	**14.67**	**81**	*e*Pn	**Pn**	**18 32 57.6**	**+2.2**
TARA	**Tarawa**	**14.99**	**34**	*e*Pn	**Pn**	**18 32 58.5**	**-1.2**
PATS	**Pohnpei**	**18.96**	**341**	*e*P	**Pn**	**18 33 50.2**	**+0.7**
	345nm,1.3s						
EIDS	**Eidsvold**	**19.01**	**220**	P	**Pn**	**18 33 51.2**	**+1.1**
	baz=19,SNR=22						
EIDS	**Eidsvold**	**19.01**	**220**	*e*P	**Pn**	**18 33 50.6**	**+0.5**
	94nm,0.9s						
MANU	**Manus Island**	**19.32**	**297**	*e*P	**P**	**18 33 52.4**	**-0.4**
	322nm,1.1s						
CTA	**Charters Tower**	**19.70**	**241**	P	**P**	**18 33 57.4**	**+0.5**
	3.2nm,0.3s,baz=66,slow=12,SNR=76						
CTA				S	**Sn**	**18 37 41.1**	**+2.1**
	0.4nm,0.3s,baz=240,slow=3.2,SNR=2.0						
CTA				LR	LR	18 40 22.2	
	comp=Z,1μm,18.2s,baz=64,slow=33						
CTAO	**Charters Tower**	**19.70**	**241**	*e*P	**Pn**	**18 33 58.4**	**-0.1**
	188nm,0.9s						
CTAO	**Charters Tower**	**19.70**	**241**	*e*P	**Pn**	**18 33 58.4**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,188nm,0.9s						
KWAJ	**Kwajalein Atol**	**20.09**	**9**	*e*P	**P**	**18 34 00.6**	**-0.6**
	comp=Z,465nm,1.0s						
KWAJ	**Kwajalein Atol**	**20.09**	**9**	*e*P	**P**	**18 34 00.6**	**-0.6**
KWAJ				pmax	pmax		
	comp=Z,465nm,1.0s						
MTSU	**Mount Surprise**	**20.75**	**248**	P	**P**	**18 34 09.2**	**+1.0**
	baz=21,SNR=38						
LHI	**Lord Howe Isla**	**20.86**	**193**	P	Pn	18 34 13.2	+1.4
	baz=21,SNR=3.6						
LHI	**Lord Howe Isla**	**20.86**	**193**	*e*P	Pn	18 34 10.7	-1.2
	comp=Z,243nm,1.4s						
COEN	**Coen**	**21.04**	**260**	P	**P**	**18 34 12.0**	**+0.5**
	baz=21,SNR=118						
COEN	**Coen**	**21.04**	**260**	*e*P	**P**	**18 34 11.7**	**+0.2**
	comp=Z,370nm,1.0s						
RMQ	**Roma**	**21.29**	**222**	P	**P**	**18 34 15.9**	**+1.9**
	baz=22,SNR=155						
ARMA	**Armidale**	**22.59**	**210**	P	**P**	**18 34 29.8**	**+1.7**
	baz=23,SNR=10						
ARMA	**Armidale**	**22.59**	**210**	*e*P	**P**	**18 34 28.3**	**+0.3**
	comp=Z,112nm,0.9s						
RAO	**Raoul Island**	**24.30**	**140**	P	**P**	**18 34 45.2**	**+0.5**
	comp=Z,145nm,0.3s,baz=176,slow=20,SNR=3.7						
KNTN	**Kanton**	**24.97**	**72**	*e*P	**P**	**18 34 49.9**	**-1.2**
	comp=Z,385nm,1.4s						
MGCD	**Mangrove Creek**	**25.15**	**207**	P	**P**	**18 34 55.0**	**+2.6**
	baz=25,SNR=8.1						
JAY	**Jayapura**	**25.18**	**288**	P	**P**	**18 34 48.9**	**-4.0**
JAY	**Jayapura**	**25.18**	**288**	P	**P**	**18 34 50.2**	**-2.7**
	comp=Z,30nm,1.0s,baz=182,slow=20,SNR=5.9						
JAY				LR	LR	18 45 24.3	
	comp=Z,773nm,19.9s,baz=63,slow=38						
OUZ	**Omahuta**	**25.29**	**162**	*e*P	**P**	**18 34 58.4**	**+4.7**
	comp=Z,158nm,1.4s						
GENI	**Genyem**	**25.65**	**288**	P	**P**	**18 34 54.8**	**-2.4**
RIV	**Riverview**	**25.65**	**206**	P	**P**	**18 34 59.1**	**+2.2**
	baz=26,SNR=4.9						
QIS	**Mount Isa**	**25.70**	**246**	P	**P**	**18 34 57.3**	**-0.3**
	baz=26,SNR=16						
NIUE	**Niue**	**25.83**	**111**	*e*P	**P**	**18 35 01.9**	**+3.2**
	comp=Z,191nm,1.2s						
CMSA	**Cobar Meteorol**	**26.72**	**218**	P	**P**	**18 35 08.6**	**+1.9**
	baz=27,SNR=37						
YNG	**Young**	**27.32**	**210**	P	**P**	**18 35 13.5**	**+1.4**
	baz=28,SNR=7.7						
CNB	**Canberra Magne**	**27.70**	**207**	P	**P**	**18 35 19.0**	**+3.5**
	baz=28,SNR=13						
CAN	**Canberra**	**27.87**	**208**	*e*P	**P**	**18 35 19.0**	**+2.0**
	comp=Z,18nm,0.8s						
CAN	**Canberra**	**27.87**	**208**	*e*P	**P**	**18 35 19.0**	**+2.0**
CAN				pmax	pmax		
	comp=Z,18nm,0.8s						
HIZ	**Hauiti**	**28.72**	**163**	*e*P	**P**	**18 35 25.7**	**+1.2**
	comp=Z,58nm,1.2s						
MXZ	**Matakaoa Point**	**29.02**	**157**	*e*P	**P**	**18 35 28.9**	**+1.7**
	comp=Z,36nm,0.9s						
URZ	**Urewera**	**29.20**	**159**	*e*P	**P**	**18 35 30.1**	**+1.3**
	comp=Z,32nm,1.0s						
URZ	**Urewera**	**29.20**	**159**	P	**P**	**18 35 30.1**	**+1.3**
	comp=Z,11nm,0.8s,baz=18,slow=9.6,SNR=2.6						
URZ				LR	LR	18 44 21.5	
	comp=Z,886nm,21.4s,baz=352,slow=31						
STKA	**Stephens Creek**	**29.54**	**222**	P	**P**	**18 35 33.4**	**+1.5**
	baz=30,SNR=18						
STKA	**Stephens Creek**	**29.54**	**222**	*e*P	**P**	**18 35 32.9**	**+1.0**
	comp=Z,5.1nm,0.8s						
STKA	**Stephens Creek**	**29.54**	**222**	P	**P**	**18 35 32.5**	**+0.7**
	comp=Z,13nm,0.8s,baz=36,slow=9.3,SNR=31						
STKA				LR	LR	18 46 49.7	
	comp=Z,2μm,18.6s,baz=39,slow=35						
H11S2	**WAKE ISLAND Hy**	**29.57**	**4**	T	T	19 06 36.8	
	baz=184,slow=76,SNR=50						
H11S3	**WAKE ISLAND Hy**	**29.57**	**4**	T	T	19 06 44.1	
	baz=184,slow=76,SNR=47						
SRPI	**Serui, Papua**	**29.58**	**286**	P	**P**	**18 35 32.0**	**-0.4**

H11S1	WAKE ISLAND Hy	29.59	4	T	T	19 06 43.0	
	baz=184,slow=76,SNR=37						
BKZ	Black Stump Fm	29.82	161	eP	P	18 35 34.7	+0.4
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	30.32	250	eP	P	18 35 37.3	-1.7
	comp=Z,80nm,1.0s						
WRAB	Tennant Creek	30.32	250c	iP	P	18 35 37.5	-1.4
WRAB				pmax	pmax		
	comp=Z,161nm,1.7s						
WB2	Warramunga Arr	30.32	250	eP	P	18 35 36.9	-2.0
WR1	Warramunga Arr	30.33	250	eP	P	18 35 37.8	-1.2
	comp=Z,108nm,1.0s						
WR1				eS	S	18 40 38.9	+1.1
WR1				eScP	ScP	18 42 22.3	+2.8
WRA	Warramunga Arr	30.33	250	i P	P	18 35 37.7	-1.4
WRA				pmax	pmax		
	comp=Z,47nm,0.8s						
WRA	Warramunga Arr	30.33	250	P	P	18 35 37.8	-1.2
	comp=Z,46nm,0.8s,baz=78,slow=9.1,SNR=181						
WRA				S	S	18 40 38.9	+1.1
	comp=Z,8.1nm,1.3s,baz=77,slow=14,SNR=4.8						
WRA				ScP	ScP	18 42 22.3	+2.7
	comp=Z,1.7nm,1.1s,baz=64,slow=3.8,SNR=4.5						
WRA				LR	LR	18 47 50.2	
	comp=Z,1µm,18.7s,baz=75,slow=36						
WAKE	Wake Island	30.35	4	eP	P	18 35 37.9	-1.2
	comp=Z,341nm,1.5s						
H11N1	WAKE ISLAND Hy	30.80	4	T	T	19 08 09.4	
	baz=184,slow=76,SNR=37						
H11N3	WAKE ISLAND Hy	30.80	4	T	T	19 08 08.5	
	baz=184,slow=76,SNR=43						
H11N2	WAKE ISLAND Hy	30.82	4	T	T	19 08 08.8	
	baz=184,slow=76,SNR=16						
BFZ	Birch Farm	31.13	163	eP	P	18 35 46.2	+0.3
	comp=Z,38nm,1.2s						
SNZO	South Karori	31.30	165	eP	P	18 35 48.3	+1.1
	comp=Z,142nm,1.4s						
THZ	Tophouse	31.32	168	eP	P	18 35 49.2	+1.7
	comp=Z,26nm,1.0s						
TOO	Toolangi	31.35	210	P	P	18 35 51.4	+3.5
	baz=32,SNR=9.5						
TOO	Toolangi	31.35	210	eP	P	18 35 49.2	+1.4
	comp=Z,20nm,0.9s						
TOO	Toolangi	31.35	210	eP	P	18 35 49.2	+1.4
TOO				pmax	pmax		
	comp=Z,20nm,0.9s						
KDU	Kakadu	31.41	264	P	P	18 35 46.5	-2.0
	baz=31,SNR=13						
GUMO	Guam	31.42	321	LR	LR	18 48 31.4	
	comp=Z,648nm,18.5s,baz=140,slow=37						
AS01	Alice Springs	31.64	243	eP	P	18 35 48.7	-1.9
AS31	Alice Springs	31.68	243	eP	P	18 35 49.5	-1.5
	comp=Z,14nm,1.0s						
ASAR	Alice Springs	31.68	243	P	P	18 35 49.9	-1.1
	comp=Z,32nm,0.8s,baz=62,slow=10,SNR=252						
ASAR				PcP	PcP	18 38 42.1	-0.5
	comp=Z,1.5nm,0.7s,baz=73,slow=2.8,SNR=2.7						
ASAR				LR	LR	18 47 16.4	
	comp=Z,1µm,21.3s,baz=72,slow=34						
KHZ	Kahutara	32.08	167	eP	P	18 35 53.8	-0.3
	comp=Z,20nm,0.9s						
LTZ	Lake Taylor	32.18	169	eP	P	18 35 54.5	-0.5
	comp=Z,46nm,0.8s						
HTT	Hallett	32.27	223	P	P	18 35 56.8	+0.8
	baz=32,SNR=33						
FOZ	Fox Glacier	32.54	173	eP	P	18 35 58.6	+0.5
	comp=Z,41nm,1.1s						
OXZ	Oxford	32.67	170	eP	P	18 36 00.0	+0.7
	comp=Z,26nm,0.7s						
ARPS	Mount Arapiles	32.68	215	P	P	18 36 00.5	+1.0
	baz=33,SNR=7.1						
MTN	Manton Dam	32.72	264	P	P	18 35 58.0	-2.0
	baz=33,SNR=20						
MTN	Manton Dam	32.72	264	eP	P	18 35 58.4	-1.6
	comp=Z,48nm,0.9s						
RPZ	Rata Peaks	32.89	171	eP	P	18 36 01.4	+0.2
	comp=Z,38nm,0.8s						
SAUI	Saumlaki	32.93	273	eP	P	18 36 01.8	-0.1
	comp=Z,105nm,0.9s						
CRLZ	Canterbury Las	33.01	169	eP	P	18 36 02.1	-0.2
	comp=Z,40nm,1.1s						
FAKI	Fak Fak	33.06	282	eP	P	18 36 03.8	+0.7
	comp=Z,20nm,1.1s						
MQZ	McQueen's Vall	33.15	169	eP	P	18 36 03.8	+0.4
	comp=Z,22nm,0.8s						
SARN	Sarigan	33.36	326	eP	P	18 36 03.9	-1.7
	comp=Z,86nm,1.1s						
LBZ	Lake Benmore	33.43	173	eP	P	18 36 05.3	-0.6
	comp=Z,21nm,0.8s						
WKZ	Wanaka	33.73	174	eP	P	18 36 08.6	-0.1
	comp=Z,62nm,1.2s						
BBOO	Buckleboo	33.88	226	P	P	18 36 10.0	0.0
	baz=34,SNR=9.6						
BBOO	Buckleboo	33.88	226	eP	P	18 36 09.6	-0.4
	comp=Z,75nm,0.9s						
ODZ	Otahua Downs	34.14	172	eP	P	18 36 16.6	+4.6
	comp=Z,15nm,1.0s						
MLZ	Mavora Lakes	34.19	176	eP	P	18 36 15.7	+3.2
	comp=Z,29nm,1.3s						
DCZ	Deep Cove	34.23	177	eP	P	18 36 15.9	+3.1
	comp=Z,36nm,1.2s						
SIJI	Sorong	34.61	285	P	P	18 36 14.0	-2.5
	comp=Z,14nm,0.9s,baz=24,slow=7.7,SNR=5.7						
SIJI				LR	LR	18 51 10.4	
	comp=Z,622nm,18.1s,baz=112,slow=38						
MOO	Moorlands	34.62	203	P	P	18 36 18.6	+2.3
	baz=35,SNR=4.2						
WHZ	Wether Hill Ro	34.70	176	eP	P	18 36 18.4	+1.5
	comp=Z,24nm,1.2s						
PYZ	Puysegur Point	34.90	177	eP	P	18 36 19.2	+0.5
	comp=Z,97nm,1.1s						
TAU	Tasmania Unive	34.98	202	eP	P	18 36 20.1	+0.8
	comp=Z,33nm,1.1s						
TAU	Tasmania Unive	34.98	202	eP	P	18 36 20.2	+0.8
TAU				pmax	pmax		
	comp=Z,33nm,1.1s						
KNRA	Kununurra	35.06	259	P	P	18 36 19.2	-1.2
	baz=35,SNR=60						
RAR	Rarotonga	35.60	111	LR	LR	18 47 54.4	
	comp=Z,375nm,20.5s,baz=284,slow=31						
WRKA	Warakurna	36.97	243	P	P	18 36 35.6	-1.1
	baz=37,SNR=65						
NLAI	Namlea	37.95	279	P	P	18 36 44.0	-1.1
FITZ	Fitzroy Crossi	38.21	255	P	P	18 36 45.8	-1.5
	baz=38,SNR=174						
FITZ	Fitzroy Crossi	38.21	255	eP	P	18 36 46.0	-1.3
	comp=Z,181nm,0.7s						
FITZ	Fitzroy Crossi	38.21	255	P	P	18 36 46.4	-0.9
	comp=Z,181nm,0.7s,baz=79,slow=7.7,SNR=393						
FITZ				LR	LR	18 51 42.6	
	comp=Z,833nm,19.9s,baz=82,slow=35						
TNTI	Ternate	38.82	285	eP	P	18 36 52.7	+0.3
	comp=Z,26nm,1.0s						
FORT	Forrest	39.00	234	P	P	18 36 54.3	+0.6
	baz=39,SNR=19						
FORT	Forrest	39.00	234	eP	P	18 36 54.5	+0.8
	comp=Z,93nm,0.9s						
SANI	Sanana	39.32	281	P	P	18 36 55.6	-1.0
SOEI	Soe	39.62	268	eP	P	18 36 58.0	-1.3
	comp=Z,32nm,0.9s						
BATI	Baumata	40.17	267	P	P	18 37 03.9	+0.2
BATI	Baumata	40.17	267	P	P	18 37 03.2	-0.5
	comp=Z,84nm,0.6s,baz=186,slow=2.7,SNR=17						
MMRI	Maumere	41.73	270	eP	P	18 37 14.1	-2.5
	comp=Z,75nm,1.0s						
KMSI	Cibinong	41.98	284	P	P	18 37 28.1	+10
MCQ	Macquarie Isla	43.42	185	eP	P	18 37 30.1	+0.4
	comp=Z,276nm,1.5s						
MCQ	Macquarie Isla	43.42	185	eP	P	18 37 30.1	+0.4
MCQ				pmax	pmax		
	comp=Z,276nm,1.5s						
APSI	Ampana	43.80	280	P	P	18 37 34.2	+0.8
	comp=Z,33nm,1.2s						
MBWA	Marble Bar	44.04	251	eP	P	18 37 34.2	-1.0
	comp=Z,65nm,0.8s						
BNSI	Bone	44.51	275	P	P	18 37 38.8	-0.2
PPT	Papeete	44.80	104	eP	P	18 37 39.9	-1.4
PPT	Papeete	44.80	104	eP	P	18 37 39.9	-1.4
PPT	Papeete	44.80	104	LR	LR	18 55 24.0	
	comp=Z,378nm,18.1s,baz=268,slow=35						
PPT2	Papeete2	44.80	104	eS	S	18 44 14.2	-3.1
	comp=Z,350nm,26.5s						
PPT2				eLQ	LQ	18 48 12.3	
	comp=Z,2µm,27.2s						
PPT2				eLR	LR	18 50 04.5	
	comp=Z,780nm,23.0s,baz=281						
PPTF	Pamatai, Papee	44.81	104	eP	P	18 37 39.6	-1.9
	comp=Z,37nm,0.9s						
TBI	Tubuai	45.37	112	eS	S	18 44 25.3	+0.2
	comp=Z,386nm,29.5s						
TBI				eLQ	LQ	18 48 26.5	
	comp=Z,1µm,28.8s						
TBI				eLR	LR	18 50 20.9	
	comp=Z,2µm,29.5s,baz=284						
PCI	Palu	45.55	280	P	P	18 37 46.7	-0.7
	comp=Z,85nm,1.2s,comp=Z,1µm						
MEEK	Meekatharra	45.83	244	P	P	18 37 49.3	-0.2
	baz=46,SNR=40						
KLBR	Kellerberrin	47.64	237	P	P	18 38 04.0	+0.5
	baz=48,SNR=7.7						
BLDU	Ballidu	48.28	239	P	P	18 38 09.0	+0.5
	baz=48,SNR=12						
NWAO	Narrogin (SRO)	48.41	236	P	P	18 38 10.6	+1.2
	baz=48,SNR=11						
NWAO	Narrogin (SRO)	48.41	236	eP	P	18 38 09.4	-0.1
	comp=Z,128nm,1.2s						
NWAO	Narrogin (SRO)	48.41	236	P	P	18 38 10.1	+0.6
	comp=Z,68nm,1.1s,baz=306,slow=7.1,SNR=12						
MORW	Morawa	48.53	241	P	P	18 38 10.9	+0.5
	baz=49,SNR=29						
MORW	Morawa	48.53	241	eP	P	18 38 08.8	-1.6
	comp=Z,127nm,1.0s						
HON	Honolulu	48.96	49	eP	P	18 38 13.4	-0.3
	comp=Z,234nm,1.0s						
HON	Honolulu	48.96	49	eP	P	18 38 13.4	-0.3
HON				pmax	pmax		
	comp=Z,234nm,1.0s						
KIP	Kipapa	49.01	49	eP	P	18 38 14.0	-0.1
	comp=Z,183nm,1.5s						
KIP	Kipapa	49.01	49	eP	P	18 38 14.0	-0.1
KIP				pmax	pmax		
	comp=Z,183nm,1.5s						
MUN	Mundaring	49.01	237	P	P	18 38 15.7	+1.6
	baz=49,SNR=7.1						
RKGY	Rocky Gully	49.08	234	P	P	18 38 15.4	+0.8
	baz=49,SNR=4.6						
OPA	Opana	49.17	48	eP	P	18 38 15.0	-0.4
	comp=Z,358nm,1.2s						
OPA	Opana	49.17	48	eP	P	18 38 15.0	-0.4
OPA				pmax	pmax		
	comp=Z,358nm,1.2s						
GIRL	Giralia	49.26	250	eP	P	18 38 15.3	-0.8
	comp=Z,238nm,1.4s						
KKH	Kailua Kona	49.48	52	eP	P	18 38 17.6	-0.1
KKH	Kailua Kona	49.48	52	eP	P	18 38 17.6	-0.1
KHU	Kahuku	49.56	53	eP	P	18 38 18.4	-0.2
	comp=Z,278nm,1.3s						
KHU	Kahuku	49.56	53	eP	P	18 38 18.5	-0.2
KHU				pmax	pmax		
	comp=Z,279nm,1.3s						
JAGI	Jajag, Banyuwa	49.69	268	eP	P	18 38 16.2	-3.3
	comp=Z,36nm,0.6s						
MWH	Moku'aweowe	49.70	52	eP	P	18 38 18.4	-1.7
	comp=Z,61nm,1.1s						
AIN	Ainahou	49.75	53	eP	P	18 38 19.2	-0.9
	comp=Z,276nm,1.3s						
HLP	Hilina Pali	49.82	53	eP	P	18 38 21.0	+0.5
	comp=Z,270nm,1.1s						
HMH	Humu'ula Sheep	49.86	52	eP	P	18 38 20.6	-0.5
	comp=Z,223nm,1.2s						
MLH	Mauna Loa	49.87	53	eP	P	18 38 21.1	0.0
	comp=Z,195nm,1.3s						
MLH	Mauna Loa	49.87	53	eP	P	18 38 21.1	0.0
MLH				pmax	pmax		
	comp=Z,195nm,1.3s						
SDHHI	Sand Hill	49.89	53	eP	P	18 38 20.8	-0.3
	comp=Z,205nm,1.3s						
UWE	Uwekahuna	49.91	53	eP	P	18 38 21.9	+0.7
	comp=Z,205nm,1.2s						
POHA	Pohakuloa	49.91	52	eP	P	18 38 20.6	-0.7
	comp=Z,145nm,1.3s						
UWB	Uwekahuna B	49.92	53	eP	P	18 38 20.3	-1.0
	comp=Z,106nm,1.4s						
KKM	Kota Kinabalu	51.06	287	eP	P	18 38 28.9	-1.1
	comp=Z,30nm,0.8s						
PWJI	Pagerwojo	52.05	269	P	P	18 38 40.2	+2.9
PCJI	Pacitan	52.64	268	P	P	18 38 43.9	+2.2
	comp=Z,76nm,1.3s						
INU	Inuyama	53.12	332	eP	P	18 38 44.8	0.0
	comp=Z,92nm,1.4s						
UGM	Wanagama	53.32	268	eP	P	18 38 43.9	-2.9
	comp=Z,106nm,1.2s						
MJAR	Matsushiro Arr	53.57	334	P	P	18 38 47.2	-0.9
	comp=Z,18nm,1.1s,baz=178,slow=7.6,SNR=9.3						
MJAR				LR	LR	19 00 15.2	
	comp=Z,297nm,21.1s,baz=150,slow=35						
MAJO	Matsushiro	53.57	334	eP	P	18 38 47.1	-1.0
	comp=Z,45nm,1.3s						
MAJO	Matsushiro	53.57	334⇑	iP	P	18 38 46.2	-1.9
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAT	Matsushiro	53.57	334	P	P	18 38 47.5	-0.6
MAT				S	S	18 46 20.4	+0.7
MJB9	Matsu-Tunnel	53.58	334	eP	P	18 38 47.2	-0.9
	comp=Z,49nm,1.3s						
SBUM	Sibu	53.78	281	eP	P	18 38 49.1	-1.0
	comp=Z,8.1nm,1.1s						
TWG	Pinlang	54.37	309	eP	P	18 38 52.9	-1.3
	comp=Z,72nm,0.9s						
TAOE	Nuku Hiva Isla	54.44	93	eLR	LR	18 54 28.4	
	comp=Z,709nm,26.3s						
YULB	Yu-li	54.52	309	eP	P	18 38 54.5	-0.8
	comp=Z,36nm,1.1s						
JNU	Nakatsue	54.52	325	eP	P	18 38 54.8	-0.3
	comp=Z,97nm,1.1s						
JNU	Nakatsue	54.52	325	P	P	18 38 55.0	-0.1
	comp=Z,60nm,0.9s,baz=172,slow=4.2,SNR=8.9						
JNU				LR	LR	18 59 47.4	
	comp=Z,126nm,19.7s,baz=130,slow=34						
NACB	Ninganchiao	54.73	310	eP	P	18 38 55.7	-1.1
	comp=Z,28nm,0.9s						
KPJI	Karang Pucung	54.97	269	P	P	18 39 09.4	+11
TPUB	Ta-pu	54.97	309	eP	P	18 38 57.4	-1.2
	comp=Z,51nm,0.8s						
SSLB	Suanglung	55.00	310	eP	P	18 38 58.4	-0.4
	comp=Z,35nm,1.2s						
YHNB	Yeheng	55.18	311	eP	P	18 39 00.3	+0.1
	comp=Z,51nm,1.1s						
KSM	Kuching	55.37	280	eP	P	18 38 59.3	-2.3
	comp=Z,26nm,1.0s						
JCJI	Jatiwangi	55.74	270	P	P	18 39 04.6	+0.3
	comp=Z,212nm,1.1s						
CISI	Cisompet, Garu	56.03	268	eP	P	18 39 04.5	-2.0
	comp=Z,51nm,0.8s						
CISI	Cisompet, Garu	56.03	268	P	P	18 39 06.2	-0.2
	comp=Z,67nm,0.8s						
LEM	Lembang	56.33	269	P	P	18 39 08.0	-0.7
	comp=Z,112nm,0.8s,baz=60,slow=4.8,SNR=27						
LEM				LR	LR	19 05 40.4	
	comp=Z,142nm,20.5s,baz=60,slow=39						
DBJI	Dramaga	57.23	269	P	P	18 39 14.7	-0.2
	comp=Z,34nm,1.0s						
ASAJ	Asahikawa	58.55	342	P	P	18 39 23.9	+0.4
	comp=Z,12nm,0.8s,baz=208,slow=8.4,SNR=8.2						
RKT	Rikitea	58.64	110	eLR	LR	18 56 30.1	
	comp=Z,2µm,30.0s						
TJN	Taejon	58.87	325⇑	eP	P	18 39 26.1	+0.2
SSE	Sheshan	59.15	317	eP	P	18 39 27.4	-0.5
	comp=Z,87nm,0.9s						
KSRS	Korea Array	59.34	326	P	P	18 39 29.4	+0.2
	comp=Z,15nm,1.0s,baz=145,slow=6.8,SNR=20						
KSAR	Wonju Array Be	59.36	326	P	P	18 39 29.4	+0.1
KSAR	Wonju Array Be	59.36	326	P	P	18 39 29.4	+0.1
KS01	Wonju Array Si	59.38	326	eP	P	18 39 27.4	-2.0
YSS	Yuzh-Sakhalins	61.08	343⇑	eP	P	18 39 45.5	+4.7
YSS				e		18 39 58.0	
YSS				eS	S	18 48 03.5	+5.6
YSS				eSSS	SSS	18 54 32.4	
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				pmax	pmax		
	comp=N,20nm,1.3s						
NJ2	Nanjing	61.31	316	eP	P	18 39 43.3	+0.6
NJ2				pmax	pmax		
	comp=N,13nm,0.7s						
MNAI	Manna	61.31	271	eP	P	18 39 42.1	-1.1
	comp=N,533nm,1.3s						
QIZ	Qiongzhong	61.72	299	P	P	18 39 47.1	+1.3
QIZ				S	S	18 48 06.0	-1.1
QIZ				sS	sS	18 48 24.5	+4.8
QIZ				pmax	pmax		
	comp=N,22nm,1.3s						
QIZ				LR	LR		
	comp=N,300nm,18.1s						
QIZ				LR	LR		
	comp=N,270nm,23.5s						
QIZ				LR	LR		
	comp=N,280nm,23.0s						
VLA	Vladivostok	61.74	333⇑	eP	P	18 39 46.4	+1.0
VLA				pmax	pmax		
	comp=Z,40nm,1.3s						
USA0B	Ussuriysk Arra	62.56	334	eP	P	18 39 51.4	+0.5
	comp=Z,63nm,1.3s						
USRK	Ussuriysk Ar.	62.56	334	P	P	18 39 51.4	+0.5
	comp=Z,24nm,1.0s,baz=134,slow=5.5,SNR=7.4						
WHN	Wuhan	63.62	312	⇓P	P	18 39 57.8	-0.4
MDJ	Mudanjiang	63.94	333	P	P	18 40 03.5	+3.5
MDJ				pmax	pmax		
	comp=Z,27nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,320nm,5.6s						
MDJ	Mudanjiang	63.94	333	eP	P	18 40 00.4	+0.3
	comp=Z,47nm,1.4s						
BKNI	Bangkinang	64.12	276	eP	P	18 40 02.0	+0.1
	comp=Z,77nm,0.9s						
BKNI	Bangkinang	64.12	276	P	P	18 40 02.9	+1.0
	comp=Z,81nm,0.5s,comp=Z,1µm						
PET	Petropavlovsk	64.16	356⇓	eP	P	18 40 00.1	-1.2
PET				pmax	pmax		
	comp=Z,86nm,1.4s						
PETK	Petropavlovsk-	64.31	355	eP	P	18 40 01.4	-0.9
PETK	Petropavlovsk-	64.31	355	P	P	18 40 02.5	+0.2
	comp=Z,13nm,0.8s,baz=164,slow=9.6,SNR=11						
PEA1	Petropavlovsk-	64.32	355	eP	P	18 40 02.5	+0.2
TYV	Tymovskoe	64.67	345	eP	P	18 40 05.3	+0.6
TYV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KIWB	Kanaga Island	64.75	12	eP	P	18 40 04.1	-1.1
TIA	Tai'an	64.95	319	P	P	18 40 10.0	+3.1
TIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
IPM	Ipoh	65.09	280	eP	P	18 40 07.7	-0.6
	comp=Z,59nm,1.1s						
CN2	Changchun	65.27	330	eP	P	18 40 08.0	-0.8
CN2				epP	sP	18 40 18.4	-1.2
CN2				eS	S	18 48 48.4	-2.1
CN2				eSS	SS	18 53 02.9	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,330nm,15.0s						
CN2				LR	LR		
	comp=Z,420nm,16.0s						
MNSI	Mandailing Nat	65.64	276	P	P	18 40 11.0	-0.8
	comp=Z,72nm,0.9s						
KULM	Kulim	65.66	281	eP	P	18 40 11.3	-0.6
	comp=Z,34nm,1.2s						
SKNT	Sakolnakorn	66.08	294	P	P	18 40 14.7	+0.2
	comp=Z,15nm,0.8s						
VNDA	Vanda	66.33	181	eP	P	18 40 16.2	+1.1
	comp=Z,9.3nm,1.0s						
VNDA	Vanda	66.33	181	eP	P	18 40 16.2	+1.1
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VNDA	Vanda	66.33	181	P	P	18 40 17.2	+2.1
	comp=Z,6.0nm,1.0s,baz=8.5,slow=5.0,SNR=8.1						
VNDA				LR	LR	19 06 03.2	
	comp=Z,401nm,18.1s,baz=356,slow=33						
GRNR	Gornyy	66.39	341	eP	P	18 40 16.8	+0.9
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
PSI	Prapat	66.73	278	eP	P	18 40 17.2	-1.7
	comp=Z,41nm,1.2s						
PSI	Prapat	66.73	278	eP	P	18 40 17.2	-1.7
PSI				pmax	pmax		
	comp=Z,41nm,1.2s						
KLR	Kul'dur	66.73	337⇓	iP	P	18 40 18.2	+0.2
KLR	Kul'dur	66.73	337	LR	LR	19 08 12.6	
	comp=Z,216nm,19.5s,baz=159,slow=35						
ENH	Enshi	67.08	310	eP	P	18 40 19.9	-0.9
	comp=Z,38nm,1.0s						
TRTT	Trang	67.24	283	P	P	18 40 23.9	+1.9
	comp=Z,6.5nm,1.7s						
TSI	Tuntungan	67.24	279	P	P	18 40 21.9	-0.1
	comp=Z,77nm,1.0s						
GYA	Guiyang	67.53	305⇑	iP	P	18 40 24.3	+0.5
GYA				pP	pwP	18 40 36.0	-1.0
GYA				PP	PP	18 42 57.4	+4.3
GYA				S	S	18 49 18.8	-0.1
GYA				SKS	SKSac	18 50 16.0	-4.1
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,5.6s						
GYA				LR	LR		
	comp=Z,530nm,18.9s						
GYA				LR	LR		
	comp=Z,510nm,18.6s						
GSI	Gunungsitoli	67.71	276	eP	P	18 40 23.2	-1.8
	comp=Z,50nm,0.9s						
BJT	Baijiatuau	67.86	322	eP	P	18 40 24.8	-0.6
	comp=Z,27nm,1.3s						
BJT	Baijiatuau	67.86	322	eP	P	18 40 24.8	-0.6
BJT				pmax	pmax		
	comp=Z,27nm,1.3s						
PBKT	Sadao Pong	68.65	293	eP	P	18 40 30.7	-0.1
PBKT	Sadao Pong	68.65	293	P	P	18 40 31.4	+0.6
PHET	Kaeng Krachan	68.73	289	P	P	18 40 34.5	+3.1
	comp=Z,2.7nm,0.8s						
XAN	Xi'an	69.36	313	eP	P	18 40 33.8	-1.1
	comp=Z,19nm,1.0s						
XAN	Xi'an	69.36	313	eP	P	18 40 33.8	-1.1
XAN				pmax	pmax		
	comp=Z,19nm,1.0s						
UTTA	Uttaradit	69.42	294	P	P	18 40 39.6	+4.1
	comp=Z,3.4nm,0.9s,comp=Z,41nm						
UTHA	Uthaitani	69.72	291	P	P	18 40 39.5	+2.1
	comp=Z,4.9nm,1.3s,comp=Z,56nm						
KMI	Kunming	70.20	302	P	P	18 40 41.8	+1.3
KMI				pP	sP	18 40 51.4	+0.2
KMI				sP	pwP	18 40 55.3	+1.4
KMI				S	S	18 49 47.9	-2.9
KMI				sS	sS	18 50 05.3	+1.9
KMI				SS	SS	18 54 18.8	-2.7
KMI				pmax	pmax		
	comp=Z,26nm,1.1s						
KMI				pmax	pmax		
	comp=Z,100nm,3.1s						
KMI				LR	LR		
	comp=Z,230nm,19.7s						
KMI				LR	LR		
	comp=Z,230nm,23.5s						
KMI				LR	LR		
	comp=Z,340nm,25.4s						
KMI	Kunming	70.20	302	eP	P	18 40 41.3	+0.8
	comp=Z,30nm,1.1s						
KMI	Kunming	70.20	302	eP	P	18 40 41.3	+0.8
KMI				pmax	pmax		
	comp=Z,30nm,1.1s						
CM01	Chiang Mai Arr	71.07	294	eP	P	18 40 45.3	-0.4
CM31	Chiang Mai Arr	71.10	294	eP	P	18 40 45.5	-0.4
CMAR	Chiang Mai Arr	71.10	294	P	P	18 40 46.0	+0.1
	comp=Z,5.4nm,0.9s,baz=122,slow=4.4,SNR=28						
HHC	Hu-ho-hao-te	71.19	320	eP	P	18 40 48.1	+2.0
HHC				PP	PP	18 43 28.4	+4.0
HHC				S	S	18 50 02.1	+0.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,92nm,5.3s						
HHC				LR	LR		
	comp=Z,300nm,13.0s						
HHC				LR	LR		
	comp=Z,250nm,15.6s						
HHC				LR	LR		
	comp=Z,240nm,18.1s						
CMMT	Chiang Mai	71.21	294	P	P	18 40 47.9	+1.3
	comp=Z,13nm,1.2s						
CHTO	Chiang Mai	71.21	294	eP	P	18 40 45.6	-1.0
	comp=Z,24nm,1.4s						
CHTO	Chiang Mai	71.21	294	eP	P	18 40 45.6	-1.0
CHTO				pmax	pmax		
	comp=Z,24nm,1.4s						
CHTO	Chiang Mai	71.21	294	P	P	18 40 47.9	+1.3
	comp=Z,58nm,1.2s						
MA2	Magadan	71.40	353	eP	P	18 40 45.8	-1.0
	comp=Z,9.0nm,0.9s						
MA2	Magadan	71.40	353⇓	eP	P	18 40 45.9	-0.9
MA2				pmax	pmax		

	comp=Z,27nm,2.5s						
MA2	**Magadan**	**71.40**	**353**	P	**P**	**18 40 45.9**	**-0.9**
	comp=Z,6.6nm,0.8s,baz=158,slow=4.9,SNR=11						
CD2	**Chengdu**	**71.76**	**308**	⇑P	**P**	**18 40 49.5**	**-0.2**
CD2				pP	sP	18 41 00.3	-0.1
CD2				sP	pwP	18 41 04.5	+1.5
CD2				PP	**PP**	**18 43 28.9**	**-0.5**
CD2				S	**S**	**18 50 07.9**	**-0.5**
CD2				SS	**SS**	**18 54 45.3**	**+0.3**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=Z,540nm,14.2s						
CD2				LR	LR		
	comp=Z,460nm,13.7s						
CD2				LR	LR		
	comp=Z,350nm,12.3s						
HIA	**Hailar**	**71.92**	**331**	*e*P	**P**	**18 40 50.9**	**+0.7**
	comp=Z,37nm,1.1s						
HIA	**Hailar**	**71.92**	**331**	*e*P	**P**	**18 40 50.9**	**+0.7**
HIA				pmax	pmax		
	comp=Z,37nm,1.1s						
ZEA	**Zeya**	**72.03**	**338**	*e*P	**P**	**18 40 51.4**	**+0.7**
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=E,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
BTO	**Baotou**	**72.03**	**319**	*e*P	**P**	**18 40 51.8**	**+0.6**
CMBY	**CAMPBELL BAY**	**72.56**	**281**	*e*P	**P**	**18 40 53.2**	**-1.6**
LZH	**Lanzhou**	**73.99**	**313**	⇓P	**P**	**18 41 04.3**	**+1.3**
LZH				pP	pwP	18 41 15.4	-0.9
LZH				sP	PcP	18 41 19.8	+1.6
LZH				*e*S	**S**	**18 50 32.4**	**-1.4**
LZH				sS	sS	18 50 50.3	+4.2
LZH				SS	**SS**	**18 55 17.1**	**-2.0**
LZH				pmax	pmax		
	comp=Z,58nm,1.3s						
LZH				pmax	pmax		
	comp=Z,200nm,5.3s						
LZH				LR	LR		
	comp=Z,570nm,15.2s						
LZH				LR	LR		
	comp=Z,450nm,16.3s						
LZH				LR	LR		
	comp=Z,630nm,18.2s						
SEY	**Seymchan**	**74.50**	**354**	⇑*e*P	**P**	**18 41 05.4**	**+0.3**
SEY	**Seymchan**	**74.50**	**354**	P	**P**	**18 41 04.5**	**-0.6**
	comp=Z,6.6nm,1.0s,baz=159,slow=5.6,SNR=19						
OHAK	**Old Harbor**	**76.48**	**22**	*e*P	**P**	**18 41 15.3**	**-1.3**
	comp=Z,22nm,0.9s						
CIT	**Chita**	**76.70**	**330**	*e*P	**P**	**18 41 22.8**	**+4.7**
CIT				*e*		18 41 34.5	
CIT				pmax	pmax		
	comp=Z,74nm,1.3s						
GAMB	**Gambell**	**76.92**	**11**	*e*P	**P**	**18 41 18.8**	**-0.1**
	comp=Z,36nm,1.1s						
KDAK	**Kodiak Island**	**77.15**	**22**	*e*P	**P**	**18 41 20.4**	**+0.1**
	comp=Z,52nm,1.4s						
KDAK	**Kodiak Island**	**77.15**	**22**	*e*P	**P**	**18 41 20.4**	**+0.1**
KDAK				pmax	pmax		
	comp=Z,52nm,1.4s						
KDAK	**Kodiak Island**	**77.15**	**22**	P	**P**	**18 41 20.1**	**-0.2**
	comp=Z,18nm,0.9s,baz=97,slow=6.4,SNR=5.7						
ULN	**Ulaanbaatar**	**77.73**	**324**	*e*P	**P**	**18 41 23.7**	**-0.4**
	comp=Z,34nm,1.0s						
ULN	**Ulaanbaatar**	**77.73**	**324**	*d i*P	**P**	**18 41 24.9**	**+0.8**
ULN				pmax	pmax		
	comp=Z,61nm,1.7s						
YAK	**Yakutsk**	**77.91**	**344**	*e*P	**P**	**18 41 23.7**	**-0.8**
YAK				pmax	pmax		
	comp=Z,140nm,1.0s						
YAK				pmax	pmax		
	comp=E,30nm,1.1s						
YAK				pmax	pmax		
	comp=N,52nm,1.0s						
SONA0	**Songino Array**	**78.09**	**324**	*e*P	**P**	**18 41 26.0**	**0.0**
SONM	**Songino Array**	**78.09**	**324**	P	**P**	**18 41 26.0**	**0.0**
	comp=N,5.8nm,0.8s,baz=143,slow=4.6,SNR=32						
SONA1	**Songino Array**	**78.10**	**324**	*e*P	**P**	**18 41 25.9**	**-0.2**
GTA	**Gaotai**	**78.32**	**314**	⇑P	**P**	**18 41 28.0**	**+0.5**
GTA				pP	sP	18 41 38.4	+0.2
GTA				sP	pwP	18 41 42.9	+2.0
GTA				S	**S**	**18 51 23.8**	**+2.6**
GTA				pmax	pmax		
	comp=N,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=N,140nm,6.8s						
GTA				LR	LR		
	comp=N,260nm,19.7s						
GTA				LR	LR		
	comp=N,290nm,21.9s						
GTA				LR	LR		
	comp=N,510nm,21.9s						
SVW2	**Sparrevohn**	**78.62**	**19**	*e*P	**P**	**18 41 28.7**	**+0.2**
	comp=N,19nm,0.9s						
QSPA	**South Pole Qui**	**78.81**	**180**	*e*P	**P**	**18 41 30.4**	**+0.7**
	comp=N,26nm,1.0s						
QSPA	**South Pole Qui**	**78.81**	**180**	LR	LR	19 14 01.4	
	comp=N,405nm,18.6s,baz=32,slow=34						
ANM	**Nome**	**78.89**	**13**	*e*P	**P**	**18 41 30.8**	**+1.0**
	comp=N,35nm,1.4s						
BILL	**Bilibino**	**79.03**	**1**	*e*P	**P**	**18 41 30.8**	**+0.2**
	comp=N,31nm,1.1s						
BILL	**Bilibino**	**79.03**	**1**	*d i*P	**P**	**18 41 30.1**	**-0.5**
BILL				*i*		18 41 39.6	
BILL				*i*		18 41 45.6	
BILL				pmax	pmax		
	comp=Z,39nm,1.3s						
RSO	**Redoubt South**	**79.06**	**20**	*e*P	**P**	**18 41 29.2**	**-1.9**
BRLK	**Bradley Lake**	**79.19**	**21**	*e*P	**P**	**18 41 31.5**	**-0.2**
	comp=Z,21nm,0.8s						
SHL	**Shillong**	**79.56**	**299**	*e*P	**P**	**18 41 33.9**	**-0.8**
	comp=Z,22nm,1.2s						
SHL	**Shillong**	**79.56**	**299**	*e*P	**P**	**18 41 33.9**	**-0.8**
SHL				pmax	pmax		
	comp=Z,22nm,1.2s						
SHL	**Shillong**	**79.56**	**299**	*e*P	**P**	**18 41 34.4**	**-0.2**
SHL				IAmb	IAmb	18 41 38.8	
	comp=Z,18nm,1.1s						
BOD	**Bodaibo**	**80.17**	**335**	*e*P	**P**	**18 41 36.6**	**-0.4**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.5s						
SUA	**Susitna One**	**80.46**	**20**	*e*P	**P**	**18 41 37.6**	**-1.0**
	comp=Z,17nm,1.0s						
MID	**Middleton Isla**	**80.64**	**23**	*e*P	**P**	**18 41 39.7**	**+0.3**
	comp=Z,317nm,1.1s						
MID	**Middleton Isla**	**80.64**	**23**	*e*P	**P**	**18 41 39.7**	**+0.3**
MID				pmax	pmax		
	comp=Z,317nm,1.1s						
PPLA	**Purkeypile**	**81.03**	**19**	*e*P	**P**	**18 41 42.7**	**+1.0**
	comp=Z,17nm,1.3s						
PMR	**Palmer**	**81.10**	**20**	*e*P	**P**	**18 41 41.9**	**0.0**
	comp=Z,11nm,0.9s						
PMR	**Palmer**	**81.10**	**20**	*e*P	**P**	**18 41 41.9**	**0.0**
PMR				pmax	pmax		
	comp=Z,11nm,0.9s						
ZAK	**Zakamensk**	**81.15**	**325**	*e*P	**P**	**18 41 43.1**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,15nm,1.2s						
KNK	**Knik Glacier**	**81.21**	**21**	*e*P	**P**	**18 41 42.3**	**-0.2**
	comp=Z,16nm,0.8s						
GHO	**Glory Hole Cre**	**81.30**	**20**	*e*P	**P**	**18 41 43.0**	**0.0**
	comp=Z,30nm,1.3s						
LSA	**Lhasa**	**81.44**	**303**	*e*P	**P**	**18 41 44.1**	**-0.9**
	comp=Z,6.0nm,0.9s						
LSA	**Lhasa**	**81.44**	**303**	*e*P	**P**	**18 41 44.1**	**-0.9**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CAST	**Castle Rocks**	**81.45**	**18**	*e*P	**P**	**18 41 42.4**	**-1.4**
	comp=Z,12nm,0.8s						
SML	**Sawmill**	**81.52**	**21**	*e*P	**P**	**18 41 44.3**	**+0.1**
	comp=Z,14nm,0.9s						
SML	**Sawmill**	**81.52**	**21**	*e*P	**P**	**18 41 44.3**	**+0.1**
SML				pmax	pmax		
	comp=Z,14nm,0.9s						
RPN	**Rapa Nui**	**81.56**	**116**	*e*P	**P**	**18 41 44.7**	**-0.5**
	comp=Z,169nm,1.4s						
RPN	**Rapa Nui**	**81.56**	**116**	*e*P	**P**	**18 41 44.7**	**-0.5**
RPN				pmax	pmax		
	comp=Z,169nm,1.4s						
TLY	**Talaya**	**81.60**	**327**	*e*P	**P**	**18 41 45.0**	**+0.2**
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**81.60**	**327**	*e*P	**P**	**18 41 45.5**	**+0.7**
TLY				*e*S	**S**	**18 52 01.6**	**+6.6**
TLY				pmax	pmax		
	comp=Z,28nm,0.9s						
TLY				MLR	MLR		
	comp=Z,394nm,18.0s						
EYAK	**Cordova Ski Ar**	**81.61**	**22**	*e*P	**P**	**18 41 44.6**	**0.0**
	comp=Z,51nm,1.3s						
SCM	**Sheep Creek Mo**	**81.89**	**21**	*e*P	**P**	**18 41 46.7**	**+0.5**
	comp=Z,35nm,1.2s						
SCM	**Sheep Creek Mo**	**81.89**	**21**	*e*P	**P**	**18 41 46.7**	**+0.5**
SCM				pmax	pmax		
	comp=Z,35nm,1.2s						
DIV	**Divide**	**81.98**	**22**	*e*P	**P**	**18 41 46.2**	**-0.4**
	comp=Z,17nm,1.0s						
TRF	**Thorofare Moun**	**82.03**	**19**	*e*P	**P**	**18 41 45.8**	**-1.2**
	comp=Z,11nm,0.8s						
HMT	**Hamilton**	**82.03**	**23**	*e*P	**P**	**18 41 46.7**	**-0.2**
	comp=Z,55nm,1.2s						
KLU	**Klutina**	**82.16**	**22**	*e*P	**P**	**18 41 47.4**	**-0.3**
	comp=Z,29nm,1.3s						
RDOG	**Red Dog Mine**	**82.40**	**12**	*e*P	**P**	**18 41 48.8**	**+0.2**
	comp=Z,45nm,1.4s						
RND	**Reindeer**	**82.46**	**19**	*e*P	**P**	**18 41 48.3**	**-0.8**
	comp=Z,14nm,0.9s						
RND	**Reindeer**	**82.46**	**19**	*e*P	**P**	**18 41 48.3**	**-0.8**
RND				pmax	pmax		
	comp=Z,14nm,0.9s						
MCK	**McKinley**	**82.66**	**19**	*e*P	**P**	**18 41 49.4**	**-0.7**
	comp=Z,27nm,1.0s						
MCK	**McKinley**	**82.66**	**19**	*e*P	**P**	**18 41 49.4**	**-0.7**
MCK				pmax	pmax		
	comp=Z,27nm,1.0s						
DHY	**Denali Highway**	**82.72**	**20**	*e*P	**P**	**18 41 50.1**	**-0.5**
	comp=Z,9.3nm,1.0s						
BWN	**Browne**	**82.80**	**19**	*e*P	**P**	**18 41 50.9**	**+0.1**
	comp=Z,37nm,0.9s						
IM3	**Indian Mountai**	**82.88**	**16**	*e*P	**P**	**18 41 51.1**	**-0.1**
MLY	**Manley**	**83.03**	**18**	*e*P	**P**	**18 41 51.0**	**-1.0**
	comp=Z,19nm,1.4s						
HARP	**HAARP**	**83.04**	**21**	*e*P	**P**	**18 41 52.1**	**+0.1**
	comp=Z,42nm,0.9s						
PAX	**Paxson**	**83.30**	**21**	*e*P	**P**	**18 41 53.4**	**-0.1**
	comp=Z,6.6nm,1.1s						
PAX	**Paxson**	**83.30**	**21**	*e*P	**P**	**18 41 53.4**	**-0.1**
PAX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WRH	**Wood River Hil**	**83.44**	**19**	*e*P	**P**	**18 41 53.2**	**-0.9**
	comp=Z,16nm,0.8s						
BWNR	**Bhubaneshwar**	**83.50**	**292**	*e*P	**P**	**18 41 51.9**	**-3.4**
BWNR				IAmb	IAmb	18 41 53.0	
	comp=Z,41nm,1.4s						
MCCM	**Marconi Confer**	**83.50**	**49**	*e*P	**P**	**18 41 54.7**	**-0.2**
	comp=Z,36nm,1.0s						
JCC	**Jacoby Creek,**	**83.58**	**46**	*e*P	**P**	**18 41 54.6**	**-0.7**
	comp=Z,49nm,1.3s						
KMRM	**Mail Ridge**	**83.61**	**47**	*e*P	**P**	**18 41 55.1**	**-0.5**
	comp=Z,41nm,1.1s						
MDM	**Murphy Dome**	**83.73**	**18**	*e*P	**P**	**18 41 54.5**	**-1.1**
	comp=Z,18nm,1.0s						
HDA	**Harding Lake**	**83.76**	**19**	*e*P	**P**	**18 41 54.8**	**-0.9**
	comp=Z,42nm,0.8s						
HDA	**Harding Lake**	**83.76**	**19**	P	**P**	**18 41 55.2**	**-0.5**
	baz=228						
GDXM	**Geysers**	**83.79**	**49**	*e*P	**P**	**18 41 56.4**	**-0.2**
	comp=Z,20nm,1.2s						
TCOL	**CIGO, UAF Yank**	**83.79**	**18**	P	**P**	**18 41 54.9**	**-0.9**
	baz=227						
COLA	**College**	**83.79**	**18**	*e*P	**P**	**18 41 55.4**	**-0.5**
	comp=Z,29nm,0.9s						
COLA	**College**	**83.79**	**18**	*d i*P	**P**	**18 41 55.0**	**-0.8**
COLA				pmax	pmax		
	comp=Z,24nm,0.9s						
KHMM	**Horse Mountain**	**83.82**	**46**	*e*P	**P**	**18 41 56.6**	**-0.1**
	comp=Z,63nm,1.4s						
MENT	**Mentasta**	**83.89**	**21**	*e*P	**P**	**18 41 56.3**	**-0.2**
	comp=Z,11nm,0.9s						
KRMB	**Red Mountain**	**83.92**	**46**	*e*P	**P**	**18 41 57.7**	**+0.5**
RIDG	**Independ'e Rid**	**84.01**	**20**	*e*P	**P**	**18 41 56.7**	**-0.5**
	comp=Z,18nm,1.0s						
IL1	**Eielson Array**	**84.03**	**19**	*e*P	**P**	**18 41 55.2**	**-1.9**
ILAR	**Eielson Array**	**84.03**	**19**	P	**P**	**18 41 56.1**	**-0.9**
	comp=Z,8.0nm,0.8s,baz=222,slow=6.1,SNR=57						
ILB	**Eielson Array**	**84.03**	**19**	*e*P	**P**	**18 41 55.6**	**-1.4**
	comp=Z,11nm,0.9s						
POKR	**Poker Plat Res**	**84.09**	**18**	P	**P**	**18 41 56.6**	**-0.8**
	baz=227						
KEBM	**Edson Butte**	**84.10**	**44**	*e*P	**P**	**18 41 57.3**	**-0.8**
	comp=Z,67nm,1.2s						
SAO	**San Andreas Ge**	**84.13**	**51**	*e*P	**P**	**18 41 57.9**	**-0.4**
	comp=Z,33nm,1.3s						
SAO	**San Andreas Ge**	**84.13**	**51**	*e*P	**P**	**18 41 57.9**	**-0.4**
SAO				pmax	pmax		
	comp=Z,33nm,1.3s						
MAW	**Mawson**	**84.14**	**202**	*e*P	**P**	**18 42 00.1**	**+2.4**
	comp=Z,48nm,1.4s						
MAW	**Mawson**	**84.14**	**202**	*e*P	**P**	**18 42 00.1**	**+2.4**
MAW				pmax	pmax		
	comp=Z,48nm,1.4s						
MAW	**Mawson**	**84.14**	**202**	LR	LR	19 12 12.9	
	comp=Z,300nm,19.4s,baz=80,slow=30						
CRAG	**Craig**	**84.20**	**30**	*e*P	**P**	**18 41 58.1**	**0.0**
	comp=Z,70nm,1.4s						
DOT	**Dot Lake**	**84.22**	**21**	*e*P	**P**	**18 41 58.2**	**+0.1**
	comp=Z,17nm,0.9s						
O02D	**Mt. Diablo Mer**	**84.25**	**47**	P	**P**	**18 41 59.7**	**+0.8**
	baz=250,SNR=7.7						
BOK	**Bokaro**	**84.30**	**296**	*e*P	**P**	**18 41 57.2**	**-2.2**
BOK				IAmb	IAmb	18 42 00.1	
	comp=Z,5.7nm,0.3s						
L02E	**Cave Junction**	**84.36**	**45**	P	**P**	**18 41 59.4**	**+0.1**
	baz=250						
SCRK	**Sand Creek**	**84.46**	**20**	*e*P	**P**	**18 41 59.7**	**+0.3**
	comp=Z,14nm,0.8s						
J01E	**Myrtle Point**	**84.48**	**44**	P	**P**	**18 42 00.4**	**+0.5**
	baz=249						
K02D	**Willamette Mer**	**84.50**	**45**	P	**P**	**18 42 00.2**	**+0.1**
	baz=250						
SNCC	**San Nicolas Is**	**84.56**	**55**	P	**P**	**18 42 00.7**	**+0.2**
	baz=253						
N02D	**Trinity Center**	**84.58**	**47**	P	**P**	**18 42 01.4**	**+0.9**
	baz=250,SNR=8.2						
M02C	**Callahan**	**84.62**	**46**	P	**P**	**18 42 01.6**	**+0.8**
	baz=250,SNR=7.9						
SCZ2	**Santa Cruz Isl**	**84.69**	**54**	P	**P**	**18 42 01.5**	**+0.3**
	baz=253						
COLD	**Coldfoot**	**84.76**	**16**	*e*P	**P**	**18 42 02.2**	**+1.5**
	comp=Z,6.3nm,1.0s						
SBC	**Santa Barbara**	**84.77**	**54**	P	**P**	**18 42 01.6**	**+0.1**
	baz=253						
SMMC	**Simmler**	**84.80**	**53**	P	**P**	**18 42 02.3**	**+0.5**
	baz=252						
PKM	**Mcpherson Peak**	**84.82**	**53**	P	**P**	**18 42 02.7**	**+0.7**
	baz=253						
YBH	**Yreka Blue Hor**	**84.83**	**46**	*e*P	**P**	**18 42 02.3**	**+0.5**
	comp=Z,22nm,1.1s						
YBH	**Yreka Blue Hor**	**84.83**	**46**	*e*P	**P**	**18 42 02.3**	**+0.5**
YBH				pmax	pmax		
	comp=Z,22nm,1.1s						
I02D	**Swisshome**	**84.87**	**43**	P	**P**	**18 42 02.5**	**+0.7**
	baz=249						
BESE	**Bessie Mountai**	**84.94**	**27**	*e*P	**P**	**18 42 02.1**	**+0.2**
	comp=Z,15nm,1.0s						
PRP	**Porcupine Dome**	**84.96**	**19**	*e*P	**P**	**18 42 01.6**	**-0.4**
	comp=Z,12nm,1.4s						
HUMO	**Hull Mountain**	**84.96**	**45**	*e*P	**P**	**18 42 02.8**	**+0.5**
	comp=Z,22nm,1.1s						
JIS	**Juneau Island**	**85.00**	**28**	*e*P	**P**	**18 42 02.2**	**+0.2**
	comp=Z,34nm,1.4s						
O03E	**Paynes Creek**	**85.00**	**47**	P	**P**	**18 42 02.8**	**+0.1**
	baz=251,SNR=8.8						
HYT	**Haines Junctio**	**85.01**	**25**	*e*P	**P**	**18 42 02.4**	**+0.1**
	comp=Z,9.9nm,0.9s						
JIRN	**Jiri**	**85.04**	**299**	*e*P	**P**	**18 42 03.3**	**-0.2**
	comp=Z,63nm,1.3s						
WRAK	**Wrangell Islan**	**85.05**	**30**	*e*P	**P**	**18 42 02.8**	**+0.4**
	comp=Z,11nm,0.8s						
I03D	**Drain, OR**	**85.07**	**44**	P	**P**	**18 42 03.2**	**+0.4**
	baz=250						
BLG	**Laguna Peak, P**	**85.18**	**54**	P	**P**	**18 42 03.6**	**0.0**
	baz=253						
SKAG	**Skagway**	**85.19**	**26**	*e*P	**P**	**18 42 03.2**	**+0.2**
	comp=Z,29nm,1.2s						
SCI2	**San Clemente I**	**85.27**	**55**	P	**P**	**18 42 04.2**	**+0.1**
	baz=254						
L04D	**Klamath Falls**	**85.28**	**46**	P	**P**	**18 42 04.4**	**+0.2**
	baz=250,SNR=7.0						
CMB	**Columbia Colle**	**85.33**	**50**	*e*P	**P**	**18 42 04.6**	**+0.2**
	comp=Z,16nm,1.1s						
CMB	**Columbia Colle**	**85.33**	**50**	*e*P	**P**	**18 42 04.6**	**+0.2**
CMB				pmax	pmax		
	comp=Z,16nm,1.1s						
GUN	**Gumba**	**85.37**	**299**	*e*P	**P**	**18 42 04.6**	**-0.5**
	comp=Z,37nm,1.0s						
PALK	**Pallekele**	**85.41**	**278**	*e*P	**P**	**18 42 05.9**	**+0.7**
	comp=Z,20nm,1.0s						
PALK	**Pallekele**	**85.41**	**278**	*i* P	**P**	**18 42 06.7**	**+1.5**
PALK	**Pallekele**	**85.41**	**278**	P	**P**	**18 42 05.5**	**+0.3**
	comp=Z,13nm,0.9s,baz=115,slow=4.5,SNR=9.2						
M04C	**Macdoel**	**85.47**	**46**	P	**P**	**18 42 05.4**	**+0.3**
	baz=251,SNR=10						
CIS	**Catalina Islan**	**85.50**	**55**	P	**P**	**18 42 05.0**	**-0.3**
	baz=254						
VOG	**Valley Oaks Go**	**85.58**	**52**	P	**P**	**18 42 05.6**	**+0.1**
	baz=253						
OSI	**Osito Audit: C**	**85.60**	**54**	P	**P**	**18 42 06.1**	**+0.4**
	baz=253						
G03D	**McMinnville, O**	**85.65**	**42**	P	**P**	**18 42 06.0**	**+0.3**
	baz=250						
ARVC	**Arvin**	**85.66**	**53**	P	**P**	**18 42 06.3**	**+0.3**
	baz=253						
VES	**Vestal, Richgr**	**85.67**	**52**	P	**P**	**18 42 05.8**	**-0.2**
	baz=253						
FMP	**Fort Macarthur**	**85.68**	**55**	P	**P**	**18 42 06.1**	**0.0**
	baz=254						
PKIN	**Phulchoki**	**85.69**	**299**	*e*P	**P**	**18 42 06.1**	**-0.6**
	comp=Z,23nm,0.9s						
FYU	**Fort Yukon**	**85.74**	**18**	*e*P	**P**	**18 42 05.9**	**+0.3**
	comp=Z,8.6nm,1.0s						
I04A	**Tendick Farm,**	**85.74**	**44**	P	**P**	**18 42 06.2**	**-0.1**
	baz=250						
J04D	**Umpqua Nationa**	**85.76**	**45**	P	**P**	**18 42 06.5**	**0.0**
	baz=250						
H04D	**Lebanon**	**85.77**	**43**	P	**P**	**18 42 06.5**	**+0.2**
	baz=250						
K04D	**Chiloquin, OR**	**85.80**	**45**	P	**P**	**18 42 06.7**	**0.0**
	baz=251						
DECC	**Green Verdugo**	**85.80**	**54**	P	**P**	**18 42 06.6**	**-0.2**
	baz=254						
RUBR	**Rubicon Trail**	**85.82**	**49**	*e*P	**P**	**18 42 07.1**	**+0.2**
	comp=Z,57nm,1.4s						
BEKR	**Beckworth**	**85.92**	**48**	*e*P	**P**	**18 42 07.2**	**-0.2**
	comp=Z,12nm,1.0s						
EGAK	**Eagle**	**85.92**	**20**	*e*P	**P**	**18 42 06.5**	**-0.1**
TOLK	**Toolik Lake Re**	**85.94**	**15**	*e*P	**P**	**18 42 07.5**	**+0.9**
	comp=Z,17nm,1.2s						
TOLK	**Toolik Lake Re**	**85.94**	**15**	P	**P**	**18 42 07.3**	**+0.6**
	baz=225						
DMN	**Daman**	**85.95**	**299**	*e*P	**P**	**18 42 07.7**	**-0.2**
	comp=Z,76nm,1.2s						
WHY	**Whitehorse**	**86.01**	**25**	*e*P	**P**	**18 42 07.5**	**+0.3**
	comp=Z,6.4nm,1.1s						
ISA	**Isabella, Lake**	**86.09**	**53**	*e*P	**P**	**18 42 08.4**	**+0.2**
	comp=Z,17nm,1.1s						
ISA	**Isabella, Lake**	**86.09**	**53**	*e*P	**P**	**18 42 08.4**	**+0.2**
ISA				pmax	pmax		
	comp=Z,17nm,1.1s						
ISA	**Isabella, Lake**	**86.09**	**53**	P	**P**	**18 42 08.5**	**+0.3**
	baz=253,SNR=6.4						
DAWY	**Dawson**	**86.12**	**21**	*e*P	**P**	**18 42 08.2**	**+0.5**
	comp=Z,12nm,1.0s						
F04D	**Rainier, OR**	**86.12**	**42**	P	**P**	**18 42 08.5**	**+0.5**
	baz=250						
WAKR	**Walker**	**86.19**	**50**	*e*P	**P**	**18 42 08.8**	**0.0**
	comp=Z,41nm,1.3s						
H04A	**Detroit Lake**	**86.19**	**43**	*e*P	**P**	**18 42 08.3**	**-0.2**
	comp=Z,32nm,1.5s						
MDPB	**Devils Postpil**	**86.20**	**51**	*e*P	**P**	**18 42 08.8**	**-0.1**
	comp=Z,29nm,1.2s						
PNTR	**Pine Nut**	**86.24**	**49**	*e*P	**P**	**18 42 09.0**	**-0.1**
	comp=Z,45nm,1.5s						
EDW2	**Edwards Air Fo**	**86.25**	**54**	P	**P**	**18 42 09.4**	**+0.5**
	baz=254,SNR=18						
OMMB	**Old Mammoth Mi**	**86.25**	**51**	*e*P	**P**	**18 42 08.8**	**-0.5**
	comp=Z,35nm,1.5s						
VCNR	**Virginia City**	**86.26**	**49**	*e*P	**P**	**18 42 08.7**	**-0.4**
	comp=Z,9.1nm,0.6s						
BFSC	**Mount Baldy Ra**	**86.34**	**54**	P	**P**	**18 42 09.5**	**0.0**
	baz=254,SNR=12						
J05D	**Fort Rock, OR**	**86.38**	**45**	P	**P**	**18 42 10.0**	**+0.5**
	baz=251						
MLAC	**Mammoth, Mammo**	**86.38**	**51**	P	**P**	**18 42 10.0**	**+0.1**
	baz=253						
109C	**Camp Elliot, M**	**86.41**	**56**	P	**P**	**18 42 09.9**	**+0.2**
	baz=254						
CPE	**Camp Elliot**	**86.41**	**56**	*e*P	**P**	**18 42 10.2**	**+0.4**
	comp=Z,40nm,1.4s						
YERR	**Yerington**	**86.47**	**49**	*e*P	**P**	**18 42 09.9**	**-0.3**
	comp=Z,16nm,1.4s						
MURC	**Murrieta**	**86.53**	**55**	P	**P**	**18 42 10.3**	**-0.1**
	baz=254						
E04D	**Cinebar**	**86.58**	**41**	P	**P**	**18 42 10.6**	**+0.4**
	baz=250						
D03D	**Eldon**	**86.58**	**40**	P	**P**	**18 42 10.6**	**+0.3**
	baz=250						
PAHR	**Pah Rah Range**	**86.58**	**49**	*e*P	**P**	**18 42 10.7**	**0.0**
	comp=Z,27nm,1.3s						
MOD	**Modoc Plateau**	**86.59**	**46**	*e*P	**P**	**18 42 10.3**	**-0.4**
	comp=Z,32nm,1.4s						
CWC	**Cottonwood Cre**	**86.62**	**52**	P	**P**	**18 42 11.0**	**+0.1**
	baz=254						
I05D	**Terrebonne, OR**	**86.65**	**44**	P	**P**	**18 42 10.9**	**+0.1**
	baz=251						
D04E	**Lakebay**	**86.66**	**41**	P	**P**	**18 42 11.1**	**+0.6**
	baz=250						
LRMC	**Laurel Mtn Rad**	**86.66**	**53**	P	**P**	**18 42 11.4**	**+0.3**
	baz=254,SNR=12						
TIN	**Tinemaha, Big**	**86.68**	**51**	P	**P**	**18 42 11.5**	**+0.4**
	baz=254						
BAR	**Barrett**	**86.71**	**56**	*e*P	**P**	**18 42 10.5**	**-0.7**
	comp=Z,8.8nm,0.6s						
PINE	**Pine Mountain**	**86.74**	**44**	*e*P	**P**	**18 42 11.6**	**+0.2**
	comp=Z,41nm,1.4s						
PGC	**Sidney**	**86.75**	**39**	*e*P	**P**	**18 42 11.1**	**+0.2**
	comp=Z,56nm,1.4s						
RYN	**Ryan**	**86.91**	**50**	*e*P	**P**	**18 42 12.3**	**0.0**
	comp=Z,26nm,1.3s						
BBRC	**Big Bear Solar**	**86.93**	**54**	P	**P**	**18 42 12.6**	**0.0**
	baz=254						
DAC	**Darwin (Calif)**	**86.95**	**52**	*e*P	**P**	**18 42 12.1**	**-0.5**
	comp=Z,12nm,1.1s						
DAC	**Darwin (Calif)**	**86.95**	**52**	*e*P	**P**	**18 42 12.1**	**-0.5**
DAC				pmax	pmax		
	comp=Z,12nm,1.1s						
G05D	**Wamic, OR**	**86.96**	**43**	P	**P**	**18 42 12.2**	**0.0**
	baz=251						
MONP2	**Monument Peak**	**86.97**	**56**	P	**P**	**18 42 13.3**	**+0.6**
	baz=255,SNR=15						
MPMC	**Manual Prospec**	**86.97**	**53**	P	**P**	**18 42 13.0**	**+0.3**
	baz=254,SNR=12						
NV01	**Mina Array Sit**	**87.02**	**50**	*e*P	**P**	**18 42 12.5**	**-0.4**
NVAR	**Mina Array Bea**	**87.02**	**50**	P	**P**	**18 42 12.2**	**-0.7**
	comp=Z,15nm,1.0s,baz=234,slow=7.4,SNR=14						
NVAR				LR	LR	19 15 36.4	
	comp=Z,397nm,18.7s,baz=277,slow=32						
RRX	**Edison Barstow**	**87.03**	**54**	P	**P**	**18 42 12.9**	**+0.1**
	baz=254						
MDRS	**Chennai**	**87.05**	**284**	*e*P	**P**	**18 42 10.4**	**-2.7**
F05D	**White Salmon**	**87.07**	**42**	P	**P**	**18 42 12.9**	**+0.2**
	baz=251						
DLBC	**Dease Lake**	**87.10**	**29**	*e*P	**P**	**18 42 12.4**	**-0.2**
	comp=Z,5.5nm,1.0s						
PFO	**Pinyon Flats O**	**87.13**	**55**	*e*P	**P**	**18 42 13.0**	**-0.4**
	comp=Z,11nm,1.0s						
PFO	**Pinyon Flats O**	**87.13**	**55**	*e*P	**P**	**18 42 13.0**	**-0.4**
PFO				pmax	pmax		
	comp=Z,11nm,1.0s						
PFO	**Pinyon Flats O**	**87.13**	**55**	P	**P**	**18 42 13.5**	**+0.1**
	baz=255,SNR=7.2						
PFO	**Pinyon Flats O**	**87.13**	**55**	P	**P**	**18 42 13.7**	**+0.3**
	comp=Z,6.6nm,0.8s,baz=249,slow=2.5,SNR=10						
NV11	**Mina Array Sit**	**87.13**	**50**	*e*P	**P**	**18 42 13.2**	**-0.1**
	comp=Z,2.3nm,1.2s						
XPFO	**Pion Flat**	**87.13**	**55**	*e*P	**P**	**18 42 13.0**	**-0.4**
	comp=Z,13nm,1.0s						
IKP	**In-Ko-Pah, Jac**	**87.16**	**56**	P	**P**	**18 42 14.1**	**+0.6**
	baz=255,SNR=5.9						
D05A	**Enumclaw**	**87.16**	**41**	*e*P	**P**	**18 42 14.0**	**+0.9**
	comp=Z,37nm,1.2s						
A04D	**Lummi Island**	**87.23**	**39**	P	**P**	**18 42 14.1**	**+0.8**
	baz=250						
DANN	**Dangsing**	**87.29**	**299**	*e*P	**P**	**18 42 13.2**	**-1.3**
	comp=Z,8.7nm,0.7s						
GSC	**Goldstone, Bar**	**87.30**	**53**	*e*P	**P**	**18 42 13.9**	**-0.2**
	comp=Z,30nm,1.5s						
GSC	**Goldstone, Bar**	**87.30**	**53**	*e*P	**P**	**18 42 13.9**	**-0.2**

GSC				pmax	pmax		
	comp=Z,30nm,1.5s						
GSC	Goldstone, Bar	87.30	53	P	P	18 42 14.3	+0.2
	baz=254,SNR=7.4						
GRAC	Grapevine Rang	87.33	52	P	P	18 42 14.4	+0.2
	baz=254,SNR=7.2						
KVN	Kaiserville	87.34	50	eP	P	18 42 14.1	-0.3
	comp=Z,15nm,1.1s						
KVN	Kaiserville	87.34	50	eP	P	18 42 14.1	-0.3
KVN				pmax	pmax		
	comp=Z,15nm,1.1s						
B05A	Bryant	87.46	40	P	P	18 42 14.6	+0.2
	baz=250						
SWSC	Sam W. Stewart	87.49	56	P	P	18 42 15.5	+0.5
	baz=255,SNR=5.6						
HEC	Hector,Ludlow	87.55	54	P	P	18 42 15.3	-0.1
	baz=255						
FURC	Furnace Creek,	87.57	52	P	P	18 42 15.7	+0.4
	baz=254						
BELC	Belle Mtn. Jos	87.60	55	P	P	18 42 16.2	+0.5
	baz=255,SNR=25						
I07A	Izee	87.82	44	eP	P	18 42 16.6	+0.1
	comp=Z,24nm,1.3s						
SHOC	Shoshone, Teco	87.88	53	P	P	18 42 17.1	+0.3
	baz=255						
PYUN	Piuthan	87.89	299	eP	P	18 42 15.4	-1.9
	comp=Z,13nm,1.0s						
B06A	Marblemount	87.93	40	eP	P	18 42 16.1	-0.5
	comp=Z,6.3nm,0.9s						
WVOR	Wild Horse Val	87.93	46	eP	P	18 42 16.8	-0.3
	comp=Z,29nm,1.3s						
WVOR	Wild Horse Val	87.93	46	eP	P	18 42 16.8	-0.3
WVOR				pmax	pmax		
	comp=Z,29nm,1.3s						
BC3	Big Chuckawall	87.95	55	P	P	18 42 18.0	+0.7
	baz=255,SNR=15						
TUQ	Turquoise Moun	88.03	53	P	P	18 42 17.9	+0.2
	baz=255,SNR=12						
LTY	Liberty	88.03	41	eP	P	18 42 16.9	-0.4
	comp=Z,10nm,1.1s						
GMRC	Granite Mounta	88.07	54	P	P	18 42 18.2	+0.3
	baz=255,SNR=15						
F07A	Phinny Hill Vi	88.09	43	eP	P	18 42 17.4	-0.2
	comp=Z,14nm,1.1s						
C06D	Leavenworth	88.11	40	P	P	18 42 17.4	-0.3
	baz=251						
TPNV	Topopah Spring	88.17	52	eP	P	18 42 18.8	+0.4
	comp=Z,15nm,1.3s						
TPNV	Topopah Spring	88.17	52	eP	P	18 42 18.8	+0.4
TPNV				pmax	pmax		
	comp=Z,15nm,1.3s						
TPNV	Topopah Spring	88.17	52	P	P	18 42 18.8	+0.4
	baz=255,SNR=5.7						
GLA	Glamis	88.30	56	eP	P	18 42 19.7	+0.7
	comp=Z,64nm,1.3s						
GLA	Glamis	88.30	56	P	P	18 42 19.9	+1.0
	baz=256,SNR=6.9						
J08A	Circle Bar Ran	88.32	45	eP	P	18 42 18.9	0.0
	comp=Z,25nm,1.1s						
IRM	Iron Mountain	88.32	55	P	P	18 42 19.7	+0.7
	baz=255,SNR=29						
E07A	Sunnyside	88.34	42	eP	P	18 42 18.6	-0.2
	comp=Z,16nm,1.3s						
EPYK	Eagle Plains	88.35	20	eP	P	18 42 18.3	-0.1
	comp=Z,15nm,0.9s						
EPYK	Eagle Plains	88.35	20	P	P	18 42 19.0	+0.7
	baz=237						
WMQ	Urumqi	88.37	315	eP	P	18 42 19.4	+0.4
WMQ				pP	sP	18 42 30.6	+0.6
WMQ				sP	pwP	18 42 38.3	+6.1
WMQ				S	S	18 53 00.6	-2.0
WMQ				SS	SS	18 58 53.8	+0.7
WMQ				pmax	pmax		
	comp=Z,33nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,470nm,6.1s						
WMQ				LR	LR		
	comp=Z,540nm,14.7s						
WMQ				LR	LR		
	comp=Z,340nm,19.9s						
WMQ				LR	LR		
	comp=Z,600nm,25.3s						
WMQ	Urumqi	88.37	315	eP	P	18 42 18.8	-0.3
	comp=Z,15nm,0.9s						
WMQ	Urumqi	88.37	315	eP	P	18 42 18.8	-0.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
BMN	Battle Mountai	88.38	48	eP	P	18 42 19.3	0.0
	comp=Z,13nm,1.3s						
BMN	Battle Mountai	88.38	48	eP	P	18 42 19.3	0.0
BMN				pmax	pmax		
	comp=Z,13nm,1.3s						
LLLB	Lillooet	88.38	38	eP	P	18 42 18.3	-0.6
	comp=Z,3.6nm,0.9s						
HAWA	Hanford	88.51	42	eP	P	18 42 19.4	-0.1
	comp=Z,15nm,1.2s						
G08A	Pilot Rock	88.56	43	eP	P	18 42 20.0	0.0
	comp=Z,19nm,1.1s						
LDFC	Landfair	88.58	54	eP	P	18 42 20.4	0.0
	comp=Z,90nm,1.4s						
Y12C	Blythe	88.72	55	eP	P	18 42 21.4	+0.6
	comp=Z,59nm,1.4s						
Y12C	Blythe	88.72	55	P	P	18 42 21.4	+0.6
	baz=256,SNR=5.3						
E08A	Dider Farm, El	88.85	42	eP	P	18 42 21.3	+0.2
	comp=Z,18nm,1.4s						
NEE2	Needles Airpor	88.90	54	P	P	18 42 22.1	+0.5
	baz=256						
SHPR	Sheep Range	88.90	53	eP	P	18 42 22.2	+0.3
	comp=Z,39nm,1.4s						
R11A	Troy Canyon, C	89.05	51	eP	P	18 42 22.3	-0.2
	comp=Z,20nm,1.3s						
R11A	Troy Canyon, C	89.05	51	P	P	18 42 22.8	+0.2
	baz=255,SNR=15						
D08A	Wollman Farm,	89.11	42	eP	P	18 42 22.5	+0.2
	comp=Z,11nm,1.3s						
PDMCI	Parker Dam,Lak	89.17	55	P	P	18 42 23.4	+0.5
	baz=256,SNR=13						
B08A	Colville Reser	89.23	40	eP	P	18 42 22.8	-0.1
	comp=Z,5.0nm,1.2s						
E09A	Wood Farm, Sta	89.46	42	eP	P	18 42 24.0	0.0
	comp=Z,11nm,1.2s						
HYB	Hyderabad	89.54	288	eP	P	18 42 24.0	-1.0
BMO	Blue Mountains	89.55	44	eP	P	18 42 24.3	-0.3
	comp=Z,11nm,1.3s						
BMO	Blue Mountains	89.55	44	eP	P	18 42 24.3	-0.3
BMO				pmax	pmax		
	comp=Z,11nm,1.3s						
W13A	Hualapai Mount	89.56	54	eP	P	18 42 25.4	+0.4
	comp=Z,36nm,1.4s						
214A	Organ Pipe Nat	89.70	57	P	P	18 42 26.4	+0.9
	baz=257						
C09A	Chrisman Ranch	89.75	41	eP	P	18 42 25.1	-0.2
	comp=Z,16nm,1.5s						
NGP	Nagpur	89.85	291	eP	P	18 42 26.3	-0.1
F10A	Beach Ranch, E	89.92	43	eP	P	18 42 26.0	-0.2
	comp=Z,10nm,0.9s						
ELK	Elko	89.92	48	eP	P	18 42 26.8	+0.1
	comp=Z,30nm,1.4s						
Y14A	Wickenburg	89.99	56	eP	P	18 42 27.2	+0.3
	comp=Z,19nm,1.4s						
DGZ	Jazzator, Alta	90.27	321	c iP	P	18 42 27.8	-0.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PSUT	Pine Spring	90.41	51	eP	P	18 42 28.4	-0.5
	comp=Z,19nm,1.2s						
INK	Inuvik	90.42	19	eP	P	18 42 26.6	-1.3
	comp=Z,15nm,1.4s						
INK	Inuvik	90.42	19	P	P	18 42 27.3	-0.7
	comp=Z,3.6nm,1.2s,baz=222,slow=4.4,SNR=4.8						
NEW	Newport	90.62	41	P	P	18 42 29.1	-0.3
	baz=254						
NEW	Newport	90.62	41	P	P	18 42 29.1	-0.3
	baz=261,slow=17,SNR=1.9						
HLID	Hailey	91.22	46	P	P	18 42 33.2	+0.7
	baz=256						
X16A	Lo Mia Camp, P	91.36	55	eP	P	18 42 34.8	+1.4
	comp=Z,14nm,1.0s						
TUC	Tucson	91.45	58	P	P	18 42 34.9	+1.2
	baz=258						
DUG	Dugway, Tooele	91.58	49	P	P	18 42 34.6	+0.3
	baz=257						
BGU	Big Grassy Mou	91.59	49	eP	P	18 42 34.5	+0.3
	comp=Z,18nm,1.2s						
WUAZ	Wupatki	91.66	54	P	P	18 42 35.5	+0.8
	baz=258						
BHPL	Bhopal	91.74	293	eP	P	18 42 34.8	-0.4
BHPL				IAmb	IAmb	18 42 35.6	
	comp=Z,6.6nm,0.3s						
HVU	Hansel Valley	91.97	48	eP	P	18 42 36.8	+0.8
	comp=Z,37nm,1.2s						
HVU	Hansel Valley	91.97	48	eP	P	18 42 36.8	+0.8
HVU				pmax	pmax		
	comp=Z,37nm,1.2s						
NLU	North Lily Min	92.08	50	eP	P	18 42 37.3	+0.6
	comp=Z,18nm,1.1s						
SPUT	South Promonto	92.11	48	eP	P	18 42 37.6	+1.0
	comp=Z,8.0nm,1.0s						
MSO	Missoula	92.33	43	P	P	18 42 38.2	+0.7
	baz=256						
319A	Douglas	92.51	59	eP	P	18 42 40.2	+1.5
	comp=Z,12nm,1.0s						
DDI	Dehra Dun	92.58	300	ex	P	18 42 34.4	-4.6
MK01	Makanchi Array	92.82	317	eP	P	18 42 39.0	-0.7
MK31	Makanchi Array	92.83	317	eP	P	18 42 39.6	-0.1
	comp=Z,8.8nm,1.0s						
MK32	Makanchi Array	92.83	317	eP	P	18 42 38.5	-1.2
MK32				ePP	PP	18 46 22.5	+0.2
MK32				ePKKPdf	PKKPdf	18 59 51.1	+0.4
MKAR	Makanchi Array	92.83	317	eP	P	18 42 39.4	-0.3
	comp=Z,43nm,0.9s						
MKAR				PP	PP	18 46 22.5	+0.2
MKAR				PKKPbc	PKKPdf	18 59 51.1	+0.4
MKAR	Makanchi Array	92.83	317	P	P	18 42 38.5	-1.2
	comp=Z,2.5nm,0.7s,baz=99,slow=6.3,SNR=15						
MKAR				PP	PP	18 46 22.5	+0.2
	comp=Z,1.5nm,0.9s,baz=101,slow=6.3,SNR=4.2						
MKAR				PKKPbc	PKKPdf	18 59 51.1	+0.4
	comp=Z,0.9nm,1.0s,baz=308,slow=2.8,SNR=3.6						
WALA	Waterton Lakes	92.88	41	eP	P	18 42 41.4	+1.3
	comp=Z,13nm,1.1s						
W18A	Petrified Fore	92.88	55	P	P	18 42 40.7	+0.3
	baz=258						
ZAA0	Zalesovo Array	92.99	324	eP	P	18 42 37.5	-2.7
	comp=Z,7.1nm,0.8s						
ZALV	Zalesovo Beam	92.99	324	P	P	18 42 38.7	-1.5
	comp=Z,6.0nm,0.9s,baz=125,slow=4.7,SNR=10						
ZAA1	Zalesovo Array	92.99	324	eP	P	18 42 38.7	-1.5
MAKZ	Makanchi	93.04	317	eP	P	18 42 40.0	-0.7
	comp=Z,11nm,1.0s						
MAKZ	Makanchi	93.04	317	eP	P	18 42 40.0	-0.7
MAKZ				pmax	pmax		
	comp=Z,11nm,1.0s						
SMLA	Simla	93.49	301	eP	P	18 42 42.2	-0.8
SMLA				IAmb	IAmb	18 42 46.6	
BOZ	Bozeman (W)	93.62	44	P	P	18 42 44.0	+0.4
	baz=258						
GOA	Goa	93.62	285	eP	P	18 42 41.0	-3.0
121A	Cookes Peak, D	93.98	58	P	P	18 42 46.1	+0.6
	baz=259						
H17A	Grant Village	94.11	46	P	P	18 42 47.2	+1.2
	baz=258						
NVS	Novosibirsk	94.11	325	eP	P	18 42 43.6	-1.7
NVS				pmax	pmax		
	comp=N,7.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.5s						
NVS				pmax	pmax		
	comp=Z,14nm,1.5s						
POO	Poona	94.15	288	eP	P	18 42 44.9	-1.6
DHRM	DHARAMSHALA	94.42	302	eP	P	18 42 45.8	-1.8
DHRM				IAmb	IAmb	18 42 50.0	
	comp=Z,41nm,1.9s						
BW06	Boulder Array	94.51	47	P	P	18 42 47.2	-0.6
	baz=259						
PDAR	Pinedale Array	94.51	47	eP	P	18 42 47.6	-0.2
PDAR	Pinedale Array	94.51	47	P	P	18 42 47.8	-0.1
	comp=Z,4.2nm,1.0s,baz=246,slow=2.9,SNR=19						
O20A	White River Ci	95.00	50	P	P	18 42 50.2	+0.1
	baz=260						
EGMT	Eagleton	95.36	42	P	P	18 42 51.3	-0.1
	baz=259						
ANMO	Albuquerque	95.50	56⇓	eP	P	18 42 52.4	-0.1
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ANMO	Albuquerque	95.50	56	P	P	18 42 52.4	-0.1
	baz=260						
YKA	Yellowknife Ar	95.64	27	P	P	18 42 50.6	-1.5
	comp=Z,3.6nm,0.8s,baz=255,slow=4.6,SNR=61						
YKB5	Yellowknife Ar	95.64	27	eP	P	18 42 50.0	-2.1
S22A	4UR Ranch, Cre	95.67	53	eP	P	18 42 55.0	+1.7
	comp=Z,7.1nm,1.5s						
S22A	4UR Ranch, Cre	95.67	53	P	P	18 42 53.3	0.0
	baz=260						
MNTX	Cornudas Mount	95.84	59	P	P	18 42 53.7	-0.2
	baz=261						
LTX	Lajitas	96.93	62	eP	P	18 42 58.7	-0.3
LTX				ePP	PP	18 46 54.5	-0.3
LTX	Lajitas	96.93	62	eP	P	18 42 58.7	-0.3
LTX				e		18 46 54.5	
TXAR	Lajitas Array	96.93	62	P	P	18 42 58.7	-0.3
	comp=Z,1.2nm,0.8s,baz=217,slow=4.1,SNR=12						
TXAR				PP	PP	18 46 54.5	-0.3
	comp=Z,0.7nm,1.0s,baz=252,slow=7.5,SNR=4.8						
BHJ	Bhuj	98.79	292	eP	P	18 43 05.8	-1.5
ARA0	ARCESS Array S	116.18	345	ePKPdf	PKiKP	18 48 08.8	-0.8
ARCES	ARCESS Array B	116.18	345	PKP	PKiKP	18 48 08.8	-0.8
	comp=Z,2.6nm,0.9s,baz=69,slow=2.2,SNR=9.0						
KIV	Kislovodsk	120.50	315	i PKIKP	PKPdf	18 48 16.6	-2.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,171nm,23.0s						
LPAZ	La Paz	121.17	117	PKP	PKPdf	18 48 19.9	-1.6
	comp=Z,1.0nm,0.6s,baz=348,slow=8.0,SNR=3.5						
FIA0	FINESS Array S	121.47	338	ePKPdf	PKPdf	18 48 18.3	-1.7
FIA0	FINESS Array S	121.47	338	ePKIKP	PKPdf	18 48 18.3	-1.7
FINES	FINESS Array B	121.47	338	PKP	PKPdf	18 48 18.3	-1.7
	comp=Z,2.2nm,1.0s,baz=17,slow=2.0,SNR=5.1						
SDV	Santo Domingo	125.67	87	ePKPdf	PKPdf	18 48 28.5	-1.2
AKASG	Malin Array Be	126.34	326	PP	PP	18 50 27.6	+3.1
	comp=Z,0.4nm,0.4s,baz=46,slow=6.2,SNR=4.1						
NB2	NORSAR Subarra	126.53	344	PKPdf	PKPdf	18 48 28.3	-1.5
	comp=Z,4.1nm,1.1s,baz=38,slow=1.9						
NB200	NORSAR Array S	126.53	344	ePKPdf	PKPdf	18 48 29.3	-0.5
NOA	NORSAR Array B	126.53	344	PKP	PKPdf	18 48 29.3	-0.5
	comp=Z,1.1nm,0.8s,baz=320,slow=2.1,SNR=4.6						
BR101	Keskin Array S	128.20	312	ePP	PP	18 50 40.1	+2.5
BRTR	Keskin Array B	128.20	312	PP	PP	18 50 40.1	+2.5
	comp=Z,1.6nm,0.9s,baz=72,slow=8.3,SNR=5.7						
CLL	Collm	133.76	336	i PKPdf	PKPdf	18 48 43.9	+0.2
CLL				i		18 49 00.4	
CLL				ePP	PP	18 51 14.0	+1.5
CLL				eSS	SS	19 08 58.0	+1.1
CLL				eSSS	SSS	19 13 49.0	
CLL				e		19 14 53.0	
CLL				Lm	MLR	19 48 00.0	
	comp=Z,200nm,21.0s						
CLL	Collm	133.76	336	i PKIKP	PKPdf	18 48 43.9	+0.2
CLL				i		18 49 00.4	
KHC	Kasperske Hory	135.15	333	ePKP	PKiKP	18 48 51.2	+3.2
KHC				AMS	AMS	19 45 00.0	
	comp=Z,200nm,17.6s						
KHC	Kasperske Hory	135.15	333	ePKIKP	PKiKP	18 48 51.2	+3.2
KHC				MLR	MLR		
	comp=Z,200nm,17.6s						
GEC2	GERESS Array S	135.31	333	ePKPdf	PKPdf	18 48 46.7	-0.2
GEC2	GERESS Array S	135.31	333	ePKIKP	PKPdf	18 48 46.7	-0.2
GERES	GERESS Array B	135.31	333	PKP	PKPdf	18 48 46.7	-0.2
	comp=Z,0.7nm,0.8s,baz=14,slow=2.8,SNR=4.5						
BDFB	Brasilia	138.16	129	PKP	PKPdf	18 48 53.5	+0.3
	comp=Z,3.6nm,0.9s,baz=187,slow=5.4,SNR=3.7						
KEST	Kesra	146.81	321	epPKPdf	PKiKP	18 49 13.8	+1.5
KEST	Kesra	146.81	321	PKPbc	PKPab	18 49 10.9	0.0
	comp=Z,9.4nm,0.9s,baz=282,slow=1.8,SNR=8.3						
PBRG	Braganca	148.56	347	ePKPdf	PKPab	18 49 21.1	+3.5
PGAV	Gavieira, Arco	148.71	350	ePKPab	PKPab	18 49 17.6	-0.6
POLO	Lamas de Olo	149.19	349	ePKPdf	PKPbc	18 49 16.3	+0.5
MVO	Moncorvo	149.24	348	ePKPdf	PKiKP	18 49 16.6	-0.6
ES19	SONSECA Array	149.81	342	ePKPbc	PKPbc	18 49 16.8	-0.6
PVIS	Viseu	149.85	349	ePKPdf	PKiKP	18 49 18.0	-0.4
ESDC	Sonseca Array	149.86	342	PKPbc	PKPbc	18 49 17.4	-0.1
	comp=Z,2.6nm,0.9s,baz=20,slow=2.0,SNR=18						
MTE	Manteigas	150.08	348	ePKPdf	PKiKP	18 49 18.9	0.0
PAB	San Pablo	150.09	343	ePKPbc	PKPbc	18 49 18.5	+0.4
PAB	San Pablo	150.09	343	ePKP2	PKPbc	18 49 18.5	+0.4
PCBR	Castelo Branco	150.60	347	ePKPdf	PKPbc	18 49 19.4	+0.2
PMRV	Marv??o	150.98	347	ePKPdf	PKiKP	18 49 20.5	-0.2
PTOM	Tomar	151.01	349	ePKPdf	PKiKP	18 49 20.7	0.0
PMTG	Montargil	151.50	348	ePKPdf	PKPbc	18 49 21.3	0.0
PNCL	Nicolau / Gran	152.49	348	ePKPdf	PKPdf	18 49 20.0	+3.3
MESJ	Messejana	152.68	347	ePKPdf	PKiKP	18 49 24.9	+0.7
TOA0	Torodi Ar. Sit	163.13	278	ePKPdf	PKPdf	18 49 28.5	-1.9
TORD	Torodi Ar. Bea	163.13	278	PKP	PKPdf	18 49 30.6	+0.1
	comp=Z,1.5nm,0.9s,baz=129,slow=0.9,SNR=6.0						
TOA1	Torodi Ar. Sit	163.13	278	ePKPdf	PKPdf	18 49 30.6	+0.1

IDC 16 18:45:16.2±3.7**, 12°.27S**×**165°.41E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.6**/36**, mbtmp3.8**/4**, Error ellipse: s-maj=160.9km s-min=30.9km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.77	252	P	P	18 51 34.2	+0.5
	0.6nm,0.9s,baz=82,slow=8.9,SNR=7.0						
ASAR	Alice Springs	31.96	245	P	P	18 51 43.8	-0.5
	0.7nm,0.8s,baz=74,slow=9.4,SNR=7.1						
ILAR	Eielson Array	84.77	19	P	P	18 57 52.1	+0.1
	1.0nm,0.6s,baz=240,slow=5.2,SNR=11						
MKAR	Makanchi Array	94.18	317	P	P	18 58 36.7	-0.4
	0.6nm,0.8s,baz=98,slow=6.4,SNR=4.5						

IDC 16 18:53:08.5±4.9**, 39°.43N**×**110°.09E, h0^{km}, mb3.2**/3**, mb1 3.4**/4**, mb1mx3.2**/49**, mbtmp3.3**/4**, ML2.3**/1**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.8**/36**, Error ellipse: s-maj=104.1km s-min=22.9km az=85.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	8.81	344	Pn	Pn	18 55 18.1	+0.9
	0.0nm,0.3s,baz=160,slow=14,SNR=4.9						
SONM				Sn	Sn	18 56 57.3	0.0
	0.0nm,0.3s,baz=166,slow=22,SNR=3.8						
SONM				Lg	Lg	18 57 48.3	
	0.0nm,0.3s,baz=164,slow=27,SNR=2.7						
MKAR	Makanchi Array	21.51	299	P	P	18 58 00.4	+1.5
	1.1nm,0.8s,baz=98,slow=12,SNR=11						
CMAR	Chiang Mai Arr	23.03	208	P	P	18 58 15.2	0.0
	0.7nm,0.7s,baz=14,slow=10,SNR=7.2						
KURBB	Kurchatov Arra	24.76	307	P	P	18 58 30.6	-1.1
	0.4nm,0.7s,baz=106,slow=9.6,SNR=3.7						
SPITS	Spitsbergen Ar	52.51	345	LR	LR	19 28 51.5	
	comp=Z,94nm,20.0s,baz=225,slow=41						

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*IDC **16** 18:59:36.3±1.8, 0°.69S×133°.48E, h0^{km}, mb3.5/2, mb1 3.8/5, mb1mx3.4/46, mbtmp3.6/5, ML3.9/3, MS4.1/1, Ms1 4.1/1, ms1mx2.8/28, Error ellipse: s-maj=35.6km s-min=23.7km az=65.0*

*ISCJB **16** 18:59:38.8±1.4, 0°.7S±0°.1×133°.51E±0°.08, h28^{km}, mb3.5/2, MS4.0/1, Error ellipse: s-maj=18.6km s-min=8.6km az=25.1*

*DJA **16** 18:59:38.7±1.9, 1°S±27°×13°3E±2°2, h13^{km}±35^{km}, M3.7/4, MLv3.7/4*

ISC 16 18:59:40.7±1.5**, 0°.6S**±0°.1×**133°.43E**±0°.08**, h28^{km}, n9, σ1^{s}.10**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	1.17	140	P	Pn	19 00 01.2	+0.1
RKPI				S	Sb	19 00 17.9	+1.0
SIJI	Sorong	2.18	263	Pn	Pn	19 00 14.9	-0.1
	24nm,0.3s,baz=328,slow=14,SNR=98						
SIJI				Sn	Sn	19 00 42.5	+1.4
	27nm,0.3s,baz=26,slow=24,SNR=16						
SWI	Sorong	2.18	263	P	Pn	19 00 14.6	-0.5
SWI				S	Sn	19 00 42.2	+0.9
FAKI	Fak Fak	2.58	207	P	Pn	19 00 20.8	+0.2
FITZ	Fitzroy Crossi	18.99	203	P	P	19 03 58.6	-1.6
	0.5nm,0.3s,baz=36,slow=9.0,SNR=9.1						
FITZ				S	Sn	19 07 16.0	-17
	0.0nm,0.3s,baz=252,slow=20,SNR=3.5						
WRA	Warramunga Arr	19.23	177	P	P	19 04 01.4	-1.5
	0.3nm,0.3s,baz=357,slow=12,SNR=11						
WRA				S	Sn	19 07 28.0	-11
	0.1nm,0.3s,baz=355,slow=24,SNR=5.3						
ASAR	Alice Springs	22.92	179	P	P	19 04 41.9	-0.8
	0.7nm,0.4s,baz=359,slow=11,SNR=9.4						
JHJ	Hachijo jima 2	34.08	10	LR	LR	19 17 39.7	
	comp=Z,317nm,20.2s,baz=247,slow=32						
MKAR	Makanchi Array	64.95	324	P	P	19 10 18.5	+0.5
	0.2nm,0.5s,baz=111,slow=7.9,SNR=3.3						

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*ISCJB **16** 19:05:59.4±0.2, 6°.31S±0°.02×130°.31E±0°.03, h150^{km}, mb4.3/54, Error ellipse: s-maj=4.7km s-min=3.1km az=175.3*

*NEIC **16** 19:06:00.4±0.5, 6°.28S×130°.24E, h143^{km}±5^{km}, mb4.5/34, Error ellipse: s-maj=6.6km s-min=4.1km az=72.0*

*IDC **16** 19:06:01.5±1.9, 6°.22S×130°.22E, h144^{km}±17^{km}, mb3.9/20, mb1 4.0/23, mb1mx3.9/44, mbtmp4.4/23, MS3.2/1, Ms1 3.2/1, ms1mx2.7/30, Error ellipse: s-maj=15.5km s-min=10.2km az=78.0*

*DJA **16** 19:06:01.2±0.2, 6°S±2°×13°0E±°, h139^{km}±4^{km}, M5.2/9, mb4.7/9, mB5.5/2, MLv5.4/2, Mw(mB)5.0/2*

ISC 16 19:06:00.8±0.4**, 6°.33S**±0°.04×**130°.37E**±0°.05**, h150^{km}, n124, σ1^{s}.63**/141**, mb4.4**/54**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.85	346	P	Pn	19 06 36.7	+2.5
SAUI	Saumlaki	1.89	151	ePn	Pn	19 06 35.8	+1.1
SAUI				eSn	Sn	19 07 00.8	0.0
SAUI	Saumlaki	1.89	151	P	Pn	19 06 40.1	+5.4
SAUI				S	Sn	19 06 59.8	-0.9
FAKI	Fak Fak	3.87	29	ePn	Pn	19 06 59.0	-0.4
FAKI				eSn	Sn	19 07 38.8	-6.2
FAKI	Fak Fak	3.87	29	P	Pn	19 07 00.2	+0.8
FAKI				S	Sn	19 07 41.9	-3.0
NLAI	Namlea	4.47	313	P	Pn	19 07 10.5	+3.2
NLAI				S	Sn	19 08 02.6	+3.6
SIJI	Sorong	5.49	9	P	Pn	19 07 20.3	-0.5
	44nm,0.3s,baz=45,slow=6.8,SNR=375						
SIJI				S	Sn	19 08 18.1	-5.2
	81nm,0.3s,baz=161,slow=23,SNR=16						
SWI	Sorong	5.50	9	P	Pn	19 07 20.4	-0.5
SWI				S	Sn	19 08 17.7	-5.8
SANI	Sanana	6.09	314	P	Pn	19 07 30.4	+1.6
SANI				S	Sn	19 08 35.5	-2.1
RKPI	Ransiki, Papua	6.11	39	P	Pn	19 07 30.9	+1.9
RKPI				S	Sn	19 08 37.3	-0.8
MTN	Manton Dam	6.52	173	ePn	Pn	19 07 35.4	+0.9
MTN				eSn	Sn	19 08 46.8	-1.1
SOEI	Soe	6.93	240	ePn	Pn	19 07 39.3	-0.8
SOEI				eSn	Sn	19 08 57.8	-0.2
SOEI	Soe	6.93	240	P	Pn	19 07 41.0	+0.9
SOEI				S	Sn	19 08 57.4	-0.6
SRPI	Serui, Papua	7.34	53	P	Pn	19 07 47.1	+1.6
TNTI	Ternate	7.66	337	ePn	Pn	19 07 47.8	-1.9
TNTI	Ternate	7.66	337	P	Pn	19 07 50.0	+0.3
	71nm,0.8s,0.3nm						
BATI	Baumata	7.67	239	P	Pn	19 07 50.6	+0.7
BATI				S	Sn	19 09 14.2	-1.4
BATI	Baumata	7.67	239	P	Pn	19 07 50.3	+0.4
	38nm,0.3s,baz=114,slow=2.4,SNR=40						
BATI				S	Sn	19 09 13.6	-2.0
	31nm,0.3s,baz=81,slow=22,SNR=9.5						
EDFI	Ende, Flores	8.93	254	P	Pn	19 08 09.0	+2.2
MRSI	Marisa	10.79	308	P	Pn	19 08 33.4	+2.1
	33nm,1.1s						
PCI	Palu	11.80	297	P	P	19 08 50.9	-0.7
FITZ	Fitzroy Crossi	12.58	201	ePn	Pn	19 08 53.3	-1.3
FITZ				eSn	Sn	19 11 08.6	-5.2
FITZ	Fitzroy Crossi	12.58	201	P	Pn	19 08 53.1	-1.5
	6.2nm,0.3s,baz=33,slow=12,SNR=62						
FITZ				S	Sn	19 11 03.5	-10
	4.6nm,0.3s,baz=133,slow=8.9,SNR=4.4						
FITZ				LR	LR	19 14 22.9	
	comp=Z,111nm,18.2s,baz=76,slow=40						
WRAB	Tennant Creek	14.07	164	ePn	Pn	19 09 12.1	-1.6
WRA	Warramunga Arr	14.08	164	P	Pn	19 09 11.8	-2.0
	3.8nm,0.3s,baz=348,slow=13,SNR=65						
WRA				S	Sn	19 11 41.0	-8.8
	5.4nm,0.3s,baz=352,slow=21,SNR=15						
WR1	Warramunga Arr	14.08	164	ePn	Pn	19 09 11.8	-2.0
WR1				eSn	Sn	19 11 41.0	-8.8
WB2	Warramunga Arr	14.08	164	ePn	Pn	19 09 13.0	-0.8
AS31	Alice Springs	17.57	169	eP	Pn	19 09 57.6	+0.9
	13nm,0.8s						
AS31				eS	S	19 13 07.4	-3.3
ASAR	Alice Springs	17.57	169	P	Pn	19 09 58.6	+1.9
	4.6nm,0.3s,baz=342,slow=8.9,SNR=228						

ASAR				S	S	19 13 03.3	-7.4
	1.1nm,0.3s,baz=352,slow=26,SNR=8.8						
AS01	Alice Springs	17.58	169	eP	Pn	19 09 57.4	+0.7
MBWA	Marble Bar	17.99	214	eP	Pn	19 10 00.3	-1.3
	19nm,0.6s						
KKM	Kota Kinabalu	18.72	311	eP	P	19 10 06.7	-1.5
	33nm,0.9s						
SBUM	Sibu	20.11	295	eP	P	19 10 21.9	-1.1
	9.1nm,0.9s						
CTA	Charters Tower	20.62	133	P	Pn	19 10 32.5	-0.2
	4.2nm,0.6s,baz=294,slow=11,SNR=6.5						
KSM	Kuching	21.47	290	eP	P	19 10 36.6	-1.1
	17nm,0.9s						
CISI	Cisompet, Garu	22.42	266	eP	P	19 10 46.0	-1.4
	59nm,0.6s						
CISI	Cisompet, Garu	22.42	266	P	P	19 10 48.4	+1.0
	89nm,0.8s,2µm						
LEM	Lembang	22.60	267	P	P	19 10 52.5	+3.2
	15nm,0.6s,baz=290,slow=7.4,SNR=4.9						
FORT	Forrest	24.42	185	eP	P	19 11 06.3	+0.8
	37nm,0.6s						
MORW	Morawa	26.36	209	eP	P	19 11 23.1	0.0
	20nm,1.3s						
BBOO	Buckleboo	26.88	169	eP	P	19 11 29.0	+1.3
	15nm,1.4s						
STKA	Stephens Creek	27.50	159	eP	P	19 11 34.4	+1.1
	0.8nm,1.3s						
STKA	Stephens Creek	27.50	159	P	P	19 11 35.5	+2.3
	0.9nm,0.5s,baz=335,slow=11,SNR=4.6						
NWAO	Narrogin (SRO)	29.15	203	eP	P	19 11 48.9	+1.0
	41nm,1.5s						
KULM	Kulim	31.83	291	eP	P	19 12 10.2	-1.5
	12nm,1.0s						
GSI	Gunungsitoli	33.60	282	eP	P	19 12 25.8	-1.4
	47nm,1.2s						
UTTA	Uttaradit	37.93	310	P	P	19 13 04.4	+0.5
	5.0nm,0.8s,46nm						
UTTA	Uttaradit	37.93	310	P	P	19 13 04.4	+0.5
	5.0nm,0.8s,46nm						
SUKH	Sukhothai	38.49	308	P	P	19 13 09.5	+0.9
SUKH	Sukhothai	38.49	308	P	P	19 13 09.5	+0.9
	4.7nm,0.7s						
CM01	Chiang Mai Arr	39.55	309	eP	P	19 13 16.3	-1.2
CM31	Chiang Mai Arr	39.58	309	eP	P	19 13 16.8	-1.0
	5.5nm,0.7s						
CMAR	Chiang Mai Arr	39.58	309	P	P	19 13 18.2	+0.4
	4.4nm,0.6s,baz=135,slow=7.2,SNR=49						
CMAR				PcP	PcP	19 15 23.1	+0.9
	0.9nm,0.8s,baz=160,slow=2.8,SNR=5.1						
CMMT	Chiang Mai	39.79	310	P	P	19 13 19.8	+0.3
	16nm,0.8s						
CHTO	Chiang Mai	39.79	310	eP	P	19 13 18.5	-0.9
	10nm,0.7s						
CHTO	Chiang Mai	39.79	310	P	P	19 13 19.9	+0.4
	73nm,0.8s						
GYA	Guiyang	39.88	326	eP	P	19 13 20.8	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	Matsushiro Arr	43.27	9	P	P	19 13 47.3	-0.3
	comp=Z,1.2nm,0.7s,baz=190,slow=9.9,SNR=5.4						
MAJO	Matsushiro	43.27	9	eP	P	19 13 47.3	-0.3
KSRS	Korea Array	43.61	357	P	P	19 13 49.5	-0.7
	comp=Z,0.5nm,0.6s,baz=167,slow=8.9,SNR=5.4						
CD2	Chengdu	44.94	327	eP	P	19 14 01.5	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	Baijiatuau	47.94	345	eP	P	19 14 23.4	-0.8
	comp=Z,6.5nm,0.7s						
SHL	Shillong	49.02	312	eP	P	19 14 31.5	-1.4
	comp=Z,13nm,0.9s						
USRK	Ussuriysk Ar.	50.31	2	P	P	19 14 42.9	+0.8
	comp=Z,1.5nm,0.7s,baz=176,slow=5.7,SNR=5.8						
PALK	Pallekele	51.35	284	eP	P	19 14 48.8	-1.7
	comp=Z,20nm,1.6s						
PALK	Pallekele	51.35	284	P	P	19 14 49.2	-1.3
	comp=Z,2.1nm,0.7s,baz=115,slow=10,SNR=4.2						
ASAJ	Asahikawa	51.41	11	P	P	19 14 50.9	+0.6
	comp=Z,8.2nm,1.0s,baz=186,slow=9.2,SNR=2.9						
LSA	Lhasa	51.97	316	eP	P	19 14 54.6	-0.8
	comp=Z,4.7nm,0.6s						
GTA	Gaotai	53.56	331	eP	P	19 15 07.3	+0.9
GTA				pP	pwP	19 15 41.9	-3.0
GTA				sP	sP	19 15 56.5	+0.5
GTA				S	S	19 22 27.0	-1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,110nm,6.2s						
GTA				LR	LR		
	comp=N,120nm,17.5s						
GTA				LR	LR		
	comp=E,150nm,18.4s						
GTA				LR	LR		
	comp=Z,150nm,16.2s						
RAMN	Ramite	53.74	310	eP	P	19 15 08.6	+0.5
	comp=Z,70nm,0.5s						
JIRN	Jiri	54.42	311	eP	P	19 15 13.3	+0.1
	comp=Z,30nm,0.6s						
GUN	Gumba	54.79	311	eP	P	19 15 15.9	+0.1
	comp=Z,63nm,0.7s						
PKI	Pulchoki	54.97	310	eP	P	19 15 16.7	-0.4
	comp=Z,15nm,0.6s						
PKIN	Phulchoki	54.98	310	eP	P	19 15 16.7	-0.4
	comp=Z,11nm,0.6s						
DMN	Daman	55.22	310	eP	P	19 15 18.9	+0.1
	comp=Z,32nm,0.9s						
KOLN	Koldanda	56.45	309	eP	P	19 15 27.7	+0.2
	comp=Z,38nm,0.9s						
DANN	Dangsing	56.62	310	eP	P	19 15 28.7	-0.1
	comp=Z,31nm,0.9s						
PYUN	Piuthan	57.09	309	eP	P	19 15 32.1	+0.1
	comp=Z,68nm,0.9s						
ULN	Ulaanbaatar	57.74	342	eP	P	19 15 36.3	+0.2
	comp=Z,7.3nm,0.7s						
SONA0	Songino Array	57.92	341	eP	P	19 15 38.6	+1.3
SONM	Songino Array	57.92	341	P	P	19 15 38.6	+1.3
	comp=Z,2.3nm,0.6s,baz=163,slow=7.1,SNR=40						
SONA1	Songino Array	57.93	341	eP	P	19 15 37.9	+0.5
PETK	Petropavlovsk-	63.57	18	P	P	19 16 16.1	+0.8
	comp=Z,4.7nm,0.8s,baz=209,slow=2.6,SNR=4.1						
PEA1	Petropavlovsk-	63.58	18	eP	P	19 16 16.1	+0.8
MK01	Makanchi Array	67.84	326	eP	P	19 16 42.8	-0.1
MK31	Makanchi Array	67.86	327	eP	P	19 16 42.9	-0.1
MK32	Makanchi Array	67.86	327	eP	P	19 16 44.0	+1.0
MKAR	Makanchi Array	67.86	327	eP	P	19 16 42.9	-0.1
	comp=Z,90nm,0.5s						
MKAR	Makanchi Array	67.86	327	P	P	19 16 44.0	+1.0
	comp=Z,11nm,0.4s,baz=114,slow=8.4,SNR=318						
MAKZ	Makanchi	68.05	326	eP	P	19 16 43.6	-0.5
	comp=Z,10.0nm,0.6s						
NRN	Naryn	68.70	319	eP	P	19 16 48.1	-0.5
	comp=Z,3.9nm,1.0s						
AAK	Ala-Archa	70.27	320	eP	P	19 16 57.5	-0.5
	comp=Z,5.7nm,0.8s						
KBL	Kabul	70.61	310	eP	P	19 16 59.6	-0.8
	comp=Z,5.2nm,1.1s						
ARSB	Arslanbob	70.64	318	eP	P	19 17 00.4	+0.1
	comp=Z,12nm,0.7s						
ZAA0	Zalesovo Array	71.14	334	eP	P	19 17 02.6	-0.3
	comp=Z,4.9nm,0.7s						
ZALV	Zalesovo Beam	71.14	334	eP	P	19 17 02.6	-0.3
ZALV	Zalesovo Beam	71.14	334	P	P	19 17 02.9	0.0
	comp=Z,4.7nm,0.6s,baz=126,slow=5.2,SNR=22						
ZAA1	Zalesovo Array	71.15	334	eP	P	19 17 02.9	-0.1
GAR	Garm	71.45	315	eP	P	19 17 05.1	-0.2
	comp=Z,12nm,0.6s						
BTK	Batken	71.55	316	eP	P	19 17 05.5	-0.3
	comp=Z,4.7nm,0.9s						
KURBB	Kurchatov Arra	72.13	328	P	P	19 17 08.5	-0.4
	comp=Z,5.8nm,0.6s,baz=130,slow=5.0,SNR=49						
KURK	Kurchatov	72.14	328	eP	P	19 17 08.5	-0.4
CHGR	Chuyangaron	72.14	314	eP	P	19 17 08.9	-0.4
	comp=Z,12nm,0.7s						
VNDA	Vanda	73.07	173	eP	P	19 17 15.2	+1.2
	comp=Z,18nm,1.6s						
VNDA	Vanda	73.07	173	P	P	19 17 15.8	+1.7
	comp=Z,3.8nm,1.1s,baz=316,slow=7.3,SNR=5.5						
KK31	Karatay Array	73.08	319	eP	P	19 17 14.6	-0.1
KKAR	Karatay Array	73.08	319	eP	P	19 17 14.5	-0.2
WSAR	Wadi Sarin	75.90	296	P	P	19 17 32.2	+0.8
	comp=Z,2.8nm,0.8s,baz=210,slow=1.6,SNR=5.6						
BVAR	Borovoye Array	77.69	328	P	P	19 17 41.2	+0.4
	comp=Z,2.2nm,0.5s,baz=140,slow=7.7,SNR=9.9						
GEYT	Alibeck	80.06	310	P	P	19 17 54.6	+0.5
	comp=Z,0.9nm,0.4s,baz=169,slow=2.9,SNR=2.8						
NRIK	Noril'sk	81.00	346	P	P	19 17 59.3	+1.0
	comp=Z,2.5nm,0.3s,baz=136,slow=2.3,SNR=5.5						
GAMB	Gambell	82.16	22	eP	P	19 18 05.1	+0.6
	comp=Z,2.8nm,1.2s						
ABKAR	Akbulak array	82.21	321	eP	P	19 18 04.5	-0.6
	comp=Z,2.1nm,0.8s						
QSPA	South Pole Qui	83.65	180	P	P	19 18 13.6	+1.2
	comp=Z,1.1nm,0.6s,baz=324,slow=1.8,SNR=9.3						
ANM	Nome	84.97	23	eP	P	19 18 20.1	+1.2
	comp=Z,8.8nm,1.6s						
ARU	Arti	85.33	328	eP	P	19 18 20.1	-0.7
	comp=Z,7.5nm,1.0s						
RAYN	Ar Rayn	87.81	294	eP	P	19 18 33.5	-0.2
	comp=Z,4.1nm,0.8s						
ILAR	Eielson Array	92.58	25	P	P	19 18 54.1	-0.8
	comp=Z,0.7nm,0.7s,baz=267,slow=4.8,SNR=8.5						
ILB	Eielson Array	92.58	25	eP	P	19 18 54.2	-0.8
YKA	Yellowknife Ar	106.99	26	PKiKP	PKiKP	19 24 08.7	+0.2
	comp=Z,0.3nm,0.5s,baz=298,slow=1.6,SNR=10.0						
CPUP	Villa Florida	146.69	167	ePKPdf	PKPdf	19 25 23.9	-0.1
CPUP	Villa Florida	146.69	167	PKPbc	PKPab	19 25 27.1	0.0
	comp=Z,2.8nm,0.7s,baz=197,slow=2.7,SNR=6.5						
LPAZ	La Paz	151.02	141	ePKPbc	PKiKP	19 25 38.6	+0.3
LPAZ	La Paz	151.02	141	PKPbc	PKiKP	19 25 40.1	+1.7
	comp=Z,1.9nm,0.4s,baz=29,slow=5.1,SNR=10						
LPAZ				PKPab	PKPab	19 25 48.2	+2.6
	comp=Z,1.9nm,0.5s,baz=186,slow=6.6,SNR=6.5						

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*ISCJB **16** 19:14:41.0±0.6, 67°.49N±0°.04×143°.2E±0°.1, h10^{km}, mb3.3/4, Error ellipse: s-maj=7.7km s-min=5.7km az=26.2*
*IDC **16** 19:14:41.0±1.2, 67°.49N×143°.16E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.2/59, mbtmp3.4/5, ML2.5/1, Error ellipse: s-maj=30.3km s-min=19.0km az=6.0*
*YARS **16** 19:14:42.2±0.1, 67°.500N±0°.003×143°.240E±0°.008, h10^{km}±1^{km}*
ISC 16 19:14:42.6±0.7**, 67°.51N**±0°.04×**143°.31E**±0°.04**, h10**^{km}**, n11, σ2^{s}.06**/20**, mb3.3**/4**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.04	182	eP	Pg	19 15 01.1	-1.5
MOMR				eS	Sg	19 15 14.5	-1.6
YBGR	Belaya Gora	1.50	45	eP	Pb	19 15 09.3	-1.1
YBGR				eS	Sg	19 15 29.2	-1.4
BTGS	Batagay	3.33	277	eP	Pn	19 15 34.3	-0.3
BTGS				eP	Pb	19 15 41.5	-0.1
BTGS				eS	Sn	19 16 12.4	-1.7
BTGS				eS	Sb	19 16 24.2	+2.2
ATKR	Artyk	3.42	167	eP	Pn	19 15 36.1	+0.1
ATKR				eP	Pb	19 15 43.7	+0.5
ATKR				eS	Sn	19 16 15.4	-1.1
ATKR				eS	Sb	19 16 28.0	+3.1
SEY	Seymchan	5.96	136	Pn	Pn	19 16 10.3	-0.4
	0.1nm,0.3s,baz=348,slow=13,SNR=4.1						
SEY				Lg	Lg	19 17 51.8	
	0.7nm,0.3s,baz=217,slow=20,SNR=3.7						
YAK	Yakutsk	7.99	233	eP	Pn	19 16 39.0	+0.5
YAK				eP	Pb	19 17 05.6	+4.7
YAK				eS	Sn	19 18 04.6	-4.2
YAK				eS	Sb	19 18 48.4	+12
MA2	Magadan	8.62	154	Lg	Lg	19 19 16.6	
	0.3nm,0.3s,baz=135,slow=19,SNR=2.5						
ILAR	Eielson Array	27.02	62	P	P	19 20 24.6	+0.3
	0.8nm,0.7s,baz=298,slow=7.9,SNR=8.8						
KURBB	Kurchatov Arra	35.32	275	P	P	19 21 38.2	+0.8
	0.2nm,0.4s,baz=36,slow=9.0,SNR=4.4						
MKAR	Makanchi Array	36.99	267	P	P	19 21 49.9	-1.9
	0.3nm,0.6s,baz=38,slow=7.3,SNR=3.4						
YKA	Yellowknife Ar	38.73	47	P	P	19 22 06.5	+0.3
	0.3nm,0.7s,baz=322,slow=8.0,SNR=7.1						

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*ISCJB **16** 19:15:08.3±0.4, 35°.85N±0°.04×141°.63E±0°.05, h26^{km}, mb3.8/18, MS3.3/1, Error ellipse: s-maj=6.5km s-min=5.2km az=140.5*
*JMA **16** 19:15:09.7±0.2, 35°.91N×141°.56E, h29^{km}±3^{km}, M3.3*
*IDC **16** 19:15:12.2±2.1, 35°.86N×141°.36E, h40^{km}±20^{km}, mb3.6/18, mb1 3.8/21, mb1mx3.7/55, mbtmp3.9/21, ML3.3/3, MS3.1/5, Ms1 3.2/5, ms1mx2.8/43, Error ellipse: s-maj=17.1km s-min=10.8km az=96.0*
ISC 16 19:15:10.1±0.6**, 35°.90N**±0°.04×**141°.46E**±0°.06**, h26**^{km}**, n50, σ1^{s}.00**/45**, mb4.0**/22**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.53	249	P	Pn	19 15 21.6	-0.3
CHOJ				S	Sn	19 15 29.8	-0.2
JIHU	Itakohorinouch	0.76	276	P	Pn	19 15 25.8	+0.6
JIHU				eS	Sn	19 15 37.2	+1.4
JHYU	Hitachinakayam	0.83	302	P	Pn	19 15 26.4	+0.2
JSMT	Sammumatsuo	0.86	253	P	Pn	19 15 27.7	+1.2
JHO	Hitachi	1.01	315	P	Pb	19 15 28.5	-0.5
JYT	Yasato	1.08	288	P	Pb	19 15 29.7	-0.4
BSO1	Boso 1	1.30	198	P	Pb	19 15 32.1	-1.5
ONAJ	Iwakimizuishiy	1.32	336	P	Pb	19 15 33.0	-1.2
BSO3	Boso 3	1.34	216	P	Pb	19 15 33.4	-1.0
JFK	Kawauchi	1.54	342	P	Pb	19 15 36.2	-1.8
MJAR	Matsushiro Arr	2.71	285	P	Pn	19 15 52.4	+0.5
	0.6nm,0.3s,baz=189,slow=8.8,SNR=39						
MJAR				LR	LR	19 16 44.1	
	comp=Z,73nm,19.1s,baz=120,slow=35						
MAT	Matsushiro	2.71	285	P	Pb	19 15 55.1	-2.8
MAT				eS	Sb	19 16 30.5	-0.2
JHJ	Hachijo jima 2	3.10	207	P	Pn	19 15 56.8	-0.5
	39nm,0.3s,baz=351,slow=21,SNR=7.5						
JHJ				S	Sn	19 16 33.2	-0.3
	50nm,0.3s,baz=233,slow=22,SNR=8.9						
ASAJ	Asahikawa	8.26	6	P	Pn	19 17 08.2	+0.1
	0.6nm,0.3s,baz=207,slow=15,SNR=11						
ASAJ				S	Sn	19 18 38.8	-1.7
	0.2nm,0.3s,baz=300,slow=20,SNR=3.0						
JNU	Nakatsue	9.16	255	LR	LR	19 21 27.1	
	comp=Z,319nm,19.1s,baz=16,slow=41						
KSRS	Korea Array	10.98	282	LR	LR	19 22 05.8	
	comp=Z,80nm,20.6s,baz=110,slow=38						
USRK	Ussuriysk Ar.	11.01	322	P	Pn	19 17 55.6	+10
	0.1nm,0.3s,baz=124,slow=13,SNR=5.7						
KLR	Kul'dur	15.11	335	LR	LR	19 24 30.0	
	comp=Z,85nm,18.6s,baz=144,slow=37						
H11N2	WAKE ISLAND Hy	27.55	119	T	T	19 49 55.1	
	baz=311,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	27.56	119	T	T	19 49 36.9	
	baz=311,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	27.57	119	T	T	19 49 40.1	
	baz=311,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	28.23	121	T	T	19 50 27.0	
	baz=313,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	28.23	121	T	T	19 50 34.8	
	baz=313,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	28.24	121	T	T	19 50 24.7	
	baz=313,slow=76,SNR=14						
SONM	Songino Array	28.46	306	P	P	19 21 03.1	+0.1
	0.4nm,0.8s,baz=106,slow=9.1,SNR=3.7						
CMAR	Chiang Mai Arr	41.26	257	LR	LR	19 41 41.6	
	comp=Z,38nm,18.4s,baz=165,slow=39						
ZALV	Zalesovo Beam	42.71	313	P	P	19 23 05.9	+1.2
	0.4nm,0.3s,baz=64,slow=3.4,SNR=4.1						
ZALV				PcP	PcP	19 24 55.5	-0.6
	0.8nm,0.5s,baz=103,slow=2.6,SNR=3.8						
MKAR	Makanchi Array	44.76	303	P	P	19 23 22.4	+1.0
	2.0nm,0.9s,baz=87,slow=8.9,SNR=12						
KURBB	Kurchatov Arra	46.74	309	P	P	19 23 37.6	+0.8
	2.1nm,0.8s,baz=84,slow=8.0,SNR=15						
PKI	Pulchoki	47.83	277	eP	P	19 23 46.5	+0.4
PKIN	Phulchoki	47.84	277	eP	P	19 23 46.4	+0.3
	4.0nm,0.8s						
KDAK	Kodiak Island	47.92	41	P	P	19 23 46.6	+0.7
	5.5nm,0.9s,baz=270,slow=13,SNR=3.3						
DMN	Daman	48.06	277	eP	P	19 23 48.5	+0.7
DANN	Dangsing	48.84	278	eP	P	19 23 54.9	+1.1
	19nm,0.7s						
KOLN	Koldanda	49.21	278	eP	P	19 23 57.3	+0.8
	5.2nm,0.8s						
PYUN	Piuthan	49.56	278	eP	P	19 23 59.5	+0.3
	8.7nm,0.8s						
ILAR	Eielson Array	50.44	32	P	P	19 24 06.3	+1.2
	1.3nm,0.8s,baz=275,slow=6.4,SNR=12						
BVAR	Borovoye Array	51.37	313	P	P	19 24 11.7	-0.6
	0.9nm,0.8s,baz=83,slow=6.0,SNR=3.6						
FITZ	Fitzroy Crossi	55.75	198	P	P	19 24 45.1	+0.5
	1.6nm,0.8s,baz=328,slow=4.4,SNR=5.2						
WRA	Warramunga Arr	55.94	188	P	P	19 24 45.1	-0.9
	2.2nm,0.8s,baz=4.3,slow=7.6,SNR=17						
ASAR	Alice Springs	59.67	188	P	P	19 25 11.8	-0.4
	0.8nm,0.8s,baz=14,slow=10,SNR=16						
YKA	Yellowknife Ar	64.77	30	P	P	19 25 46.9	+0.9
	1.0nm,0.7s,baz=301,slow=6.7,SNR=21						
FINES	FINESS Array B	69.84	332	P	P	19 26 17.4	-0.6
	0.9nm,0.7s,baz=58,slow=8.4,SNR=4.2						
AKASG	Malin Array Be	75.22	322	P	P	19 26 50.3	0.0
	0.3nm,0.4s,baz=46,slow=5.9,SNR=2.7						
NOA	NORSAR Array B	75.25	337	P	P	19 26 49.0	-1.4
	1.3nm,1.0s,baz=25,slow=6.2,SNR=2.9						
NVAR	Mina Array Bea	75.64	53	P	P	19 26 54.5	+1.2
	0.9nm,0.6s,baz=291,slow=5.5,SNR=8.1						
PDAR	Pinedale Array	78.44	45	P	P	19 27 09.6	+0.6
	0.4nm,0.7s,baz=261,slow=5.6,SNR=3.6						
GERES	GERESS Array B	83.70	328	P	P	19 27 35.3	-1.3
	0.3nm,0.6s,baz=39,slow=6.3,SNR=3.6						
TXAR	Lajitas Array	90.78	52	P	P	19 28 12.4	+1.1
	0.3nm,0.6s,baz=290,slow=2.5,SNR=5.4						
LPAZ	La Paz	147.22	61	PKPbc	PKPab	19 34 53.0	-1.0
	1.5nm,0.6s,baz=256,slow=4.0,SNR=6.6						

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*ISCJB **16** 19:21:55.6±0.6, 67°.57N±0°.04×142°.9E±0°.1, h10^{km}, mb3.2/4, Error ellipse: s-maj=7.3km s-min=5.9km az=28.6*
*IDC **16** 19:21:55.5±1.2, 67°.53N×142°.97E, h0^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.2/57, mbtmp3.2/5, ML2.5/1, Error ellipse: s-maj=31.3km s-min=20.1km az=10.0*
*YARS **16** 19:21:56.9±0.1, 67°.580N±0°.004×142°.96E±0°.01, h11^{km}±3^{km}*
ISC 16 19:21:56.7±0.8**, 67°.52N**±0°.05×**142°.81E**±0°.04**, h10**^{km}**, n11, σ2^{s}.10**/20**, mb3.2**/4**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.07	171	eP	Pb	19 22 16.9	-0.4
MOMR				eS	Sg	19 22 31.6	+0.4
YBGR	Belaya Gora	1.63	50	eP	Pn	19 22 24.5	-0.9
YBGR				eS	Sn	19 22 44.5	-1.9
BTGS	Batagay	3.13	276	eP	Pn	19 22 47.5	+1.4
BTGS				eP	Pb	19 22 54.3	+1.9
BTGS				eS	Sn	19 23 24.0	+0.6
BTGS				eS	Sg	19 23 35.4	-1.8
ATKR	Artyk	3.49	163	eP	Pn	19 22 52.3	+1.3
ATKR				eP	Pb	19 23 00.5	+2.0
ATKR				eS	Sn	19 23 32.7	+0.4
ATKR				eS	Sg	19 23 46.2	-2.4
SEY	Seymchan	6.11	134	Pn	Pn	19 23 27.4	+0.5
	0.1nm,0.3s,baz=324,slow=19,SNR=2.8						
SEY				Lg	Lg	19 25 06.7	
	0.7nm,0.3s,baz=20,slow=7.6,SNR=4.8						
YAK	Yakutsk	7.85	232	eP	Pn	19 23 52.7	+2.0
YAK				eP	Pb	19 24 19.2	+6.6
YAK				eS	Sn	19 25 18.1	-1.4
YAK				eS	Sg	19 26 01.7	-6.5
MA2	Magadan	8.72	152	Lg	Lg	19 26 30.6	
	0.2nm,0.3s,baz=53,slow=7.2,SNR=3.8						
ILAR	Eielson Array	27.18	62	P	P	19 27 39.5	-0.4
	0.9nm,0.9s,baz=307,slow=8.3,SNR=7.2						
KURBB	Kurchatov Arra	35.12	274	P	P	19 28 50.8	+1.0
	0.1nm,0.3s,baz=45,slow=8.5,SNR=4.4						
MKAR	Makanchi Array	36.80	267	P	P	19 29 04.7	+0.4
	0.3nm,0.6s,baz=37,slow=7.8,SNR=4.2						
YKA	Yellowknife Ar	38.86	46	P	P	19 29 21.3	-0.2
	0.2nm,0.6s,baz=321,slow=7.6,SNR=4.6						

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*ISCJB **16** 19:25:05.3±0.6, 4°.02S±0°.06×136°.99E±0°.06, h150^{km}, mb3.4/5, Error ellipse: s-maj=8.3km s-min=7.8km az=162.0*
*IDC **16** 19:25:06.2±1.3, 4°.11S×137°.01E, h148^{km}±14^{km}, mb3.2/5, mb1 3.6/10, mb1mx3.4/33, mbtmp3.9/10, Error ellipse: s-maj=13.4km s-min=10.5km az=96.0*
ISC 16 19:25:06.4±0.7**, 4°.10S**±0°.07×**137°.01E**±0°.07**, h150**^{km}**, n11, σ1^{s}.13**/15**, mb3.6**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	4.01	67	P	Pn	19 26 08.1	+1.1
	3.5nm,0.3s,baz=235,slow=9.9,SNR=34						
JAY				S	Sn	19 26 52.9	-1.0
	5.6nm,0.3s,baz=124,slow=17,SNR=5.9						
SIJI	Sorong	6.57	299	P	Pn	19 26 40.2	-0.7
	11nm,0.3s,baz=122,slow=9.5,SNR=58						
SIJI				S	Sn	19 27 53.9	-0.9
	0.9nm,0.3s,baz=217,slow=20,SNR=2.7						
BATI	Baumata	14.56	245	P	P	19 28 30.2	+2.3
	4.6nm,0.3s,baz=50,slow=2.5,SNR=7.1						
WRA	Warramunga Arr	15.96	189	P	P	19 28 43.6	+0.2
	3.8nm,0.3s,baz=10,slow=12,SNR=154						
WRA				S	S	19 31 41.1	+0.2
	0.3nm,0.3s,baz=10.0,slow=20,SNR=5.3						
FITZ	Fitzroy Crossi	17.82	218	P	Pn	19 29 04.4	-0.7
	0.2nm,0.3s,baz=38,slow=12,SNR=8.4						
ASAR	Alice Springs	19.68	188	P	Pn	19 29 25.5	-1.6
	1.8nm,0.3s,baz=8.8,slow=12,SNR=147						
ASAR				S	S	19 32 57.0	-1.1
	0.2nm,0.3s,baz=9.6,slow=22,SNR=16						
STKA	Stephens Creek	27.97	172	P	P	19 30 43.5	+0.4
	0.4nm,0.3s,baz=340,slow=12,SNR=3.4						
USRK	Ussuriysk Ar.	48.29	355	P	P	19 33 32.9	+0.5
	0.8nm,0.6s,baz=164,slow=7.6,SNR=5.5						
KLR	Kul'dur	53.31	356	P	P	19 34 10.3	+0.5
	0.6nm,0.5s,baz=131,slow=5.0,SNR=4.7						
MKAR	Makanchi Array	69.86	323	P	P	19 36 01.2	+0.2
	0.1nm,0.3s,baz=100,slow=9.1,SNR=5.8						
ILAR	Eielson Array	87.79	25	P	P	19 37 37.2	-1.1
	0.3nm,0.7s,baz=263,slow=3.6,SNR=3.4						

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*IDC **16** 20:12:45.0±2.3, 43°.38N×105°.32W, h0^{km}, mb1 3.3/3, mb1mx3.1/50, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=45.8km s-min=9.5km az=153.0*
*ISCJB **16** 20:12:45.6±0.6, 43°.63N±0°.04×105°.17W±0°.08, h0^{km}, Error ellipse: s-maj=7.9km s-min=5.5km az=2.3*
*NEIC **16** 20:12:47.0±0.4, 43°.62N×105°.15W, h0^{km}, ML3.2, Error ellipse: s-maj=6.1km s-min=4.4km az=96.0, Suspected Mining explosion.*
NEIC 79 km [49 miles] SSE of Gillette.
ISC 16 20:12:46.8±1.1**, 43°.58N**±0°.05×**105°.27W**±0°.06**, h0**^{km}**, n35, σ1^{s}.40**/34**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.05	58	ePn	Pg	20 13 06.8	-0.1
K22A	Casper	1.30	225	ePn	Pg	20 13 10.6	-1.2
PHWY	Pilot Hill	2.28	184	ePn	Pn	20 13 26.9	+0.9
RWWY	Rawlins	2.37	218	ePn	Pn	20 13 27.8	+0.6
N23A	Red Feather La	2.73	191	ePn	Pn	20 13 33.5	+1.4
LAO	LASA Array	3.18	348	ePn	Pn	20 13 38.4	+0.2
BW06	Boulder Array	3.24	257	ePn	Pn	20 13 39.9	+0.7
PD31	Pinedale Array	3.24	257	ePn	Pn	20 13 39.5	+0.4
PDAR	Pinedale Array	3.24	257	ePn	Pn	20 13 39.8	+0.7
PDAR	Pinedale Array	3.24	257	Pn	Pn	20 13 39.5	+0.4
	1.9nm,0.3s,baz=84,slow=15,SNR=30						
PDAR				Lg	Lg	20 14 23.4	
	7.1nm,0.3s,baz=81,slow=34,SNR=11						
RLMT	Red Lodge	3.25	300	ePn	Pn	20 13 39.6	+0.2
ISCO	Idaho Springs	3.78	184	ePn	Pn	20 13 47.6	+0.9
GCMT	Greycliff	3.84	307	ePn	Pn	20 13 48.1	+0.9
FLWY	Flagg Ranch	3.96	279	ePn	Pn	20 13 50.5	+1.5
MOOW	Moose Ponds	3.97	274	ePn	Pn	20 13 50.6	+1.4
REDW	Red Top Meadow	4.07	269	ePn	Pn	20 13 51.7	+1.2
O20A	White River Ci	4.09	214	ePn	Pn	20 13 49.4	-1.4
IMW	Indian Meadow	4.12	276	ePn	Pn	20 13 53.0	+1.8
TPAW	Teton Pass	4.13	271	ePn	Pn	20 13 51.8	+0.4
BOZ	Bozeman (W)	4.97	296	ePn	Pn	20 14 05.2	+2.4
TCUT	Toone Canyon	5.17	244	ePn	Pn	20 14 07.7	+2.0
EGMT	Eagleton	5.44	326	ePn	Pn	20 14 09.8	+0.7
HRY	Holter Researc	5.60	306	ePn	Pn	20 14 12.7	+1.3
SPUT	South Promonto	5.77	249	ePn	Pn	20 14 15.1	+1.2
P17A	Butcher Ranch,	5.80	227	ePn	Pn	20 14 16.3	+2.0
HVU	Hansel Valley	5.81	255	ePn	Pn	20 14 15.6	+1.1
PV14	Lion Creek, Pa	5.92	210	ePn	Pn	20 14 18.7	+2.7
S22A	4UR Ranch, Cre	5.95	192	ePn	Pn	20 14 18.3	+1.9
SRU	San Rafael Swe	5.96	223	ePn	Pn	20 14 17.4	+0.9
PV01	Paradox Valley	5.99	206	ePn	Pn	20 14 19.0	+2.1
PV13	Radium Mtn., P	6.04	208	ePn	Pn	20 14 19.4	+1.7
Q16A	Castle Valley	6.44	226	ePn	Pn	20 14 24.0	+1.0
I10CA	LAC DU BONNET	9.16	40	i		21 13 10.0	
	baz=221,slow=331,SNR=3.3						
ULM	Lac du Bonnet	9.26	41	Pn	Pn	20 14 60.0	-1.6
	0.6nm,0.3s,baz=229,slow=14,SNR=6.2						
ULM				Lg	Lg	20 17 34.5	
	0.2nm,0.3s,baz=317,slow=2.5,SNR=3.5						

YKA	Yellowknife Ar	19.72	347	P	P	20 17 17.2	-0.4
	0.0nm,0.3s,baz=155,slow=12,SNR=4.0						

IDC 16 20:16:15.0±1.1, 15°.66N×120°.41E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.2/41, mbtmp3.3/4, MS3.1/2, Ms1 3.2/2, ms1mx2.7/20, Error ellipse: s-maj=152.0km s-min=20.8km az=66.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	20.70	281	LR	LR	20 28 57.7	
	comp=Z,20nm,19.4s,baz=75,slow=37						
GUMO	Guam	23.76	92	LR	LR	20 30 27.7	
	comp=Z,99nm,18.2s,baz=108,slow=36						
SONM	Songino Array	34.11	343	P	P	20 23 01.9	+0.3
	0.3nm,0.5s,baz=163,slow=11,SNR=4.7						
WRA	Warramunga Arr	37.94	158	P	P	20 23 33.8	-0.8
	0.3nm,0.8s,baz=340,slow=9.2,SNR=10						
WRA				PcP	PcP	20 25 50.6	-0.1
	0.2nm,0.9s,baz=342,slow=3.1,SNR=4.0						
ASAR	Alice Springs	41.25	161	P	P	20 24 02.5	+0.4
	0.1nm,0.3s,baz=336,slow=7.4,SNR=7.7						
ASAR				PcP	PcP	20 26 01.2	0.0
	0.1nm,0.3s,baz=337,slow=3.2,SNR=4.3						
MKAR	Makanchi Array	44.30	323	P	P	20 24 26.2	-0.5
	0.2nm,0.7s,baz=119,slow=9.6,SNR=3.4						
MKAR				PcP	PcP	20 26 10.6	-0.5
	0.3nm,0.7s,baz=131,slow=4.0,SNR=3.6						

ISCJB 16 20:27:09.2±0.4, 0°.07N±0°.06×123°.44E±0°.03, h157km, mb3.6/8, Error ellipse: s-maj=8.0km s-min=4.9km az=1.6

DJA 16 20:27:11.2±0.4, 0°N±3°×12°3E±°, h144km±6km, M3.9/11, MLv3.9/11

IDC 16 20:27:12.7±3.7, 0°.13N×123°.59E, h181km±37km, mb3.3/8, mb1 3.4/9, mb1mx3.2/31, mbtmp3.8/9, Error ellipse: s-maj=31.9km s-min=12.0km az=72.0

ISC 16 20:27:10.5±0.6, 0°.03S±0°.06×123°.42E±0°.04, h157km, n20, σ1s.96/30, mb3.6/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.82	43	P	Pn	20 27 36.0	+1.4
KMSI				S	Sn	20 27 57.2	+4.2
LUWI	Luwuk	1.20	213	P	Pn	20 27 38.3	+0.6
LUWI				S	Sn	20 27 58.5	-0.1
MRSI	Marisa	1.56	289	P	Pn	20 27 40.9	-0.4
MRSI				S	Sn	20 28 02.5	-2.3
APSI	Ampana	1.98	244	P	Pn	20 27 46.7	+0.9
APSI				S	Sn	20 28 12.7	-0.3
SANI	Sanana	3.26	128	P	Pn	20 28 00.5	-1.0
SANI				S	Sn	20 28 38.2	-2.8
MPSI	Mapaga	3.54	276	P	Pn	20 28 06.0	+0.9
MPSI				S	Sn	20 28 47.8	+0.4
PCI	Palu	3.69	256	P	Pn	20 28 08.4	+1.4
TNTI	Ternate	4.03	79	P	Pn	20 28 11.2	-0.1
TNTI				S	Sn	20 28 57.6	-1.0
TTSI	Tana Toraja	4.68	230	P	Pn	20 28 21.4	+1.4
NLAI	Namlea	4.87	131	P	Pn	20 28 23.3	+0.9
SIJI	Sorong	7.89	96	P	Pn	20 29 03.1	+0.6
	1.4nm,0.3s,baz=293,slow=23,SNR=5.9						
SIJI				S	Sn	20 30 37.6	+6.9
	0.4nm,0.3s,baz=307,slow=20,SNR=2.3						
FITZ	Fitzroy Crossi	18.09	173	P	Pn	20 31 11.7	-0.5
	0.3nm,0.3s,baz=17,slow=8.2,SNR=15						
WRA	Warramunga Arr	22.50	152	P	P	20 31 57.7	+0.5
	1.6nm,0.5s,baz=337,slow=9.9,SNR=69						
ASAR	Alice Springs	25.61	157	P	P	20 32 25.6	0.0
	0.2nm,0.3s,baz=331,slow=8.7,SNR=17						
ASAR				PcP	PcP	20 35 52.5	+0.1
	0.2nm,0.4s,baz=350,slow=2.4,SNR=5.3						
CMAR	Chiang Mai Arr	30.26	309	P	P	20 33 08.0	+1.0
	0.5nm,0.7s,baz=140,slow=7.1,SNR=5.4						
STKA	Stephens Creek	36.05	153	P	P	20 33 58.1	+1.1
	1.4nm,0.4s,baz=337,slow=10.0,SNR=6.4						
MJAR	Matsushiro Arr	38.89	19	P	P	20 34 18.7	-2.2
	2.1nm,0.9s,baz=203,slow=9.5,SNR=3.8						
SONM	Songino Array	49.92	345	P	P	20 35 47.5	-0.8
	0.6nm,0.5s,baz=162,slow=9.2,SNR=10						
MKAR	Makanchi Array	58.86	328	P	P	20 36 51.8	-1.0
	0.5nm,0.4s,baz=120,slow=8.6,SNR=19						
MKAR				PcP	PcP	20 37 38.7	-1.8
	0.2nm,0.4s,baz=139,slow=2.6,SNR=5.7						
ZALV	Zalesovo Beam	62.51	335	P	P	20 37 16.1	-1.2
	0.3nm,0.4s,baz=108,slow=4.7,SNR=2.6						

GUC 16 20:28:10.4±0.7, 33°.96S×72°.11W, h24km±14km, ML3.5, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.43	168	eP	Pn	20 28 21.0	-0.2
CHPI				i S	Sn	20 28 27.0	-1.3
ROCH	El Roble	1.35	43	eP	Pb	20 28 35.4	+0.2
ROCH				eS	Sb	20 28 54.6	+2.5
ROCH				IAML		20 29 04.9	
	comp=N,2µm,0.6s						
CLCH	Cerro Calan	1.43	67	eP	Pb	20 28 36.6	+0.1
CLCH				i S	Sb	20 28 55.9	+1.6
CLCH				IAML		20 29 01.5	
	comp=E,1µm,0.5s						
PEL	Peldehue	1.45	56	eP	Pb	20 28 36.9	+0.2
PEL				i S	Sb	20 28 56.8	+2.2
PEL				IAML		20 29 03.0	
	comp=E,2µm,0.4s						
LMEL	Las Melosas	1.59	86	eP	Pb	20 28 39.0	-0.2
LMEL				i S	Sb	20 29 00.4	+1.4
LMEL				IAML		20 29 01.4	
	comp=N,1µm,0.3s						
FCH	Farellones	1.65	68	eP	Pb	20 28 39.8	-0.4
FCH				i S	Sb	20 29 03.3	+2.6
FCH				IAML		20 29 07.8	
	comp=E,784nm,0.2s						
CMCH	Combarbala	2.94	19	eP	Pn	20 28 56.7	+1.1
CMCH				eS	Sn	20 29 31.3	+1.1

IDC 16 20:29:15.6±1.6, 15°.67S×13°.40W, h0km, mb4.0/10, mb1 4.1/10, mb1mx3.9/33, mbtmp4.0/10, MS4.1/9, Ms1 4.1/9, ms1mx3.7/24, Error ellipse: s-maj=61.0km s-min=39.3km az=117.0

ISCJB 16 20:29:16.4±0.8, 15°.5S±0°.1×13°.2W±0°.1, h10km, mb4.2/16, MS4.1/9, Error ellipse: s-maj=20.3km s-min=16.4km az=162.0

NEIC 16 20:29:17.9±0.6, 15°.57S×13°.21W, h10km, mb4.6/7, Error ellipse: s-maj=14.0km s-min=11.1km az=177.0

GCMT 16 20:29:18.9±0.4, 15°.47S±0°.04×13°.26W±0°.03, h21km±1km, MW4.9/72, Moment Tensor Solution. s17,c17; s72,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.69±.20; $M_{\theta\theta}$0.34±.11; $M_{\phi\phi}$2.35±.14; $M_{r\theta}$1.18±.24; $M_{\theta\phi}$-0.18±.08; $M_{\phi r}$-0.04±.23; Best double couple: $M_0$2.73300×10^{16} NP1:ϕ_s336.00000°, δ50.00000°, λ-115.00000°. NP2: ϕ_s192.00000°, δ46.00000°, λ-63.00000°. Principal axes: T 2.3710, Plg2.0000°, Azm84.0000°; N 0.7240, Plg19.0000°, Azm353.0000°; P -3.0950, Plg71.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 16 20:29:17.7±0.8, 15°.6S±0°.2×13°.2W±0°.1, h10km, n38, σ0s.75/28, mb4.4/16, MS4.0/9, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	6.75	348	T	T	20 37 47.4	
	baz=168,slow=74,SNR=107						
H10S3	ASCENSION HYDR	6.76	348	T	T	20 37 53.4	
	baz=168,slow=74,SNR=66						
H10S1	ASCENSION HYDR	6.77	348	T	T	20 37 49.2	
	baz=168,slow=74,SNR=62						
SHEL	Horse Pasture	7.20	94	ePn	Pn	20 31 02.2	-1.0
DBIC	Dimbokro	23.63	21	P	P	20 34 30.1	+0.8
	5.0nm,0.9s,baz=216,slow=9.8,SNR=3.3						
DBIC				LR	LR	20 41 26.9	
	comp=Z,279nm,19.8s,baz=181,slow=31						
TSUM	Tsumeb	29.59	101	LR	LR	20 44 47.0	
	comp=Z,303nm,21.5s,baz=268,slow=31						
TOA0	Torodi Ar. Sit	32.15	28	eP	P	20 35 45.7	0.0
TORD	Torodi Ar. Bea	32.15	28	P	P	20 35 45.2	-0.5
	5.4nm,1.0s,baz=230,slow=7.2,SNR=20						
TORD				LR	LR	20 46 35.2	
	comp=Z,435nm,19.8s,baz=280,slow=32						
TOA1	Torodi Ar. Sit	32.15	28	eP	P	20 35 45.2	-0.5
BDFB	Brasilia	33.49	265	LR	LR	20 46 41.7	
	comp=Z,448nm,21.5s,baz=88,slow=31						
BOSA	Boshof	37.75	117	LR	LR	20 49 36.1	
	comp=Z,218nm,19.4s,baz=268,slow=32						
CPUP	Villa Florida	42.37	248	LR	LR	20 51 57.9	
	comp=Z,177nm,20.1s,baz=62,slow=32						
LPAZ	La Paz	52.67	261	LR	LR	20 59 05.1	
	comp=Z,133nm,21.0s,baz=110,slow=34						
ESDC	Sonseca Array	55.66	9	P	P	20 38 54.8	+0.7
	0.5nm,0.8s,baz=191,slow=8.1,SNR=4.4						
STVI	Saint Thomas	61.11	302	eP	P	20 39 32.1	-0.5
	30nm,1.0s						
SDV	Santo Domingo	61.85	289	eP	P	20 39 37.6	-0.3
	3.8nm,0.8s						
ROSC	El Rosal	63.80	284	LR	LR	21 07 06.7	
	comp=Z,396nm,18.4s,baz=122,slow=36						
GEA0	GERESS Array S	68.47	19	eP	P	20 40 19.6	-0.4
GERES	GERESS Array B	68.47	19	P	P	20 40 20.4	+0.3
	0.6nm,0.8s,baz=183,slow=2.4,SNR=5.5						
BR101	Keskin Array S	70.24	37	eP	P	20 40 32.8	+1.5
BRTR	Keskin Array B	70.24	37	P	P	20 40 32.8	+1.5
	1.7nm,0.8s,baz=203,slow=6.9,SNR=11						
MLR	Muntele Rosu	70.39	28	eP	P	20 40 32.1	0.0
	8.1nm,1.1s						
SIRT	Sirnak	74.31	43	eP	P	20 40 56.2	+0.5
	14nm,0.9s						
QSPA	South Pole Qui	74.56	180	eP	P	20 40 58.0	+1.3
	3.1nm,0.7s						
AK11	Malin Array Si	75.72	26	eP	P	20 41 03.5	+0.1
AKASG	Malin Array Be	75.76	26	P	P	20 41 03.6	0.0
	0.2nm,0.3s,baz=221,slow=6.0,SNR=6.1						
AKBB	Malin Array Si	75.76	26	eP	P	20 41 03.5	-0.1
	4.4nm,1.1s						
NB200	NORSAR Array S	78.84	12	eP	P	20 41 19.9	-0.8
NOA	NORSAR Array B	78.84	12	P	P	20 41 19.9	-0.8
	0.8nm,0.8s,baz=207,slow=5.4,SNR=3.0						
FIA0	FINESS Array S	82.88	18	eP	P	20 41 42.1	-0.1
FINES	FINESS Array B	82.88	18	P	P	20 41 42.1	-0.1
	1.7nm,0.9s,baz=198,slow=4.1,SNR=5.3						
FIA1	FINESS Array S	82.88	18	eP	P	20 41 42.3	+0.1
SCHQ	Schefferville	83.53	332	eP	P	20 41 45.3	-0.4
	2.6nm,0.8s						
SCHQ	Schefferville	83.53	332	P	P	20 41 45.8	+0.1
	1.1nm,0.6s,baz=90,slow=6.5,SNR=4.7						
GEYT	Alibeck	85.39	49	P	P	20 41 56.5	+0.8
	1.8nm,0.8s,baz=260,slow=8.3,SNR=4.5						
VNDA	Vanda	87.02	179	LR	LR	21 17 23.5	
	comp=Z,116nm,18.4s,baz=216,slow=33						
ILAR	Eielson Array	121.78	339	PKP	PKPdf	20 48 10.4	-1.2
	0.6nm,0.9s,baz=38,slow=1.6,SNR=4.7						
ASAR	Alice Springs	129.44	140	PKP	PKPdf	20 48 26.7	-0.9
	1.3nm,1.1s,baz=236,slow=3.1,SNR=4.1						

IDC 16 20:40:48.3±1.9, 11°.49S×118°.08E, h0km, mb3.4/1, mb1 3.4/5, mb1mx3.2/37, mbtmp3.3/5, ML3.2/4, MS3.0/1, Ms1 3.2/1, ms1mx2.4/28, Error ellipse: s-maj=65.5km s-min=24.1km az=42.0

ISCJB 16 20:40:51.2±0.7, 11°.49S±0°.07×118°.17E±0°.04, h36km, mb3.3/1, MS2.9/1, Error ellipse: s-maj=9.6km s-min=6.2km az=9.2

DJA 16 20:40:55.8±0.5, 11°S±7°×11°8E±°, h68km±47km, M3.9/7, mb4.0/2, MLv3.9/7

ISC 16 20:40:53.3±1.1, 11°.37S±0°.09×118°.17E±0°.06, h36km, n16, σ1s.30/19, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.55	351	P	Pn	20 41 31.7	-0.5
PLAI				S	Sn	20 42 00.5	-1.6
BASI	Baing, Sumba	2.63	64	P	Pn	20 41 34.8	+1.5
BASI				S	Sn	20 42 04.6	+0.6
WSI	Waingapu	2.69	51	P	Pn	20 41 34.9	+0.8
WSI				S	Sn	20 42 05.7	+0.2
DNP	Denpasar	3.95	312	P	Pn	20 41 52.6	+1.1
EDFI	Ende, Flores	4.34	53	P	Pn	20 41 57.6	+0.7
SRBI	Singaraja	4.37	318	P	Pn	20 41 57.6	+0.4
MMRI	Maumere	4.84	56	P	Pn	20 42 04.0	+0.3
JAGI	Jajag, Banyuwa	4.89	306	P	Pn	20 42 05.6	+1.2
BATI	Baumata	5.52	78	Pn	Pn	20 42 13.4	+0.3
	3.7nm,0.3s,baz=219,slow=6.5,SNR=15						
BATI				Sn	Sn	20 43 12.8	-2.7
	2.2nm,0.3s,baz=29,slow=19,SNR=3.3						
GMJI	Gumukmas	5.58	303	P	Pn	20 42 15.2	+1.4
	12nm,1.3s,0.1nm						
SOEI	Soe	6.21	76	P	Pn	20 42 23.5	+0.9
FITZ	Fitzroy Crossi	9.85	134	Pn	Pn	20 43 10.9	-1.5
	0.1nm,0.3s,baz=314,slow=12,SNR=5.2						
FITZ				Sn	Sn	20 44 50.5	-11
	0.6nm,0.3s,baz=184,slow=18,SNR=9.0						
WRA	Warramunga Arr	17.74	121	P	Pn	20 44 55.7	-2.0
	0.1nm,0.3s,baz=292,slow=13,SNR=4.1						
WRA				S	Sn	20 47 58.3	-16
	0.1nm,0.3s,baz=290,slow=25,SNR=5.0						
ASAR	Alice Springs	19.34	131	P	P	20 45 16.4	+0.6
	0.1nm,0.3s,baz=307,slow=9.7,SNR=5.7						
ASAR				S	S	20 48 38.3	-14
	0.1nm,0.3s,baz=299,slow=21,SNR=4.7						
CMAR	Chiang Mai Arr	35.19	327	LR	LR	21 02 17.4	
	comp=Z,21nm,19.3s,baz=229,slow=37						
MKAR	Makanchi Array	66.19	334	P	P	20 51 38.3	+0.9
	0.1nm,0.3s,baz=148,slow=6.1,SNR=9.4						

DJA 16 20:43:42.2±1.3, 1°N±5°×12°6E±°, h12km±14km, M3.8/4, MLv3.8/4

ISCJB 16 20:43:44.1±1.9, 1°.0N±0°.2×126°.3E±0°.1, h39km, mb3.5/3, Error ellipse: s-maj=31.4km s-min=15.4km az=1.4

IDC 16 20:43:52.1±15.0, 0°.09S×126°.54E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/39, mbtmp3.6/3, Error ellipse: s-maj=241.8km s-min=166.0km az=159.0

ISC 16 20:43:46.1±1.8, 1°.0N±0°.2×126°.37E±0°.08, h39km, n6, σ3s.00/6, mb3.7/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.02	101	P	Pn	20 44 01.5	-2.4
KMSI	Cibinong	2.42	261	P	Pn	20 44 21.3	-1.9
SANI	Sanana	3.03	187	P	Pn	20 44 29.1	-2.4
WRA	Warramunga Arr	22.21	160	P	P	20 48 38.6	-0.8
	1.1nm,0.4s,baz=338,slow=11,SNR=18						
ASAR	Alice Springs	25.56	164	P	P	20 49 13.1	+1.5
	0.3nm,0.4s,baz=341,slow=8.0,SNR=6.2						
STKA	Stephens Creek	35.72	157	P	P	20 50 44.1	+3.0
	0.4nm,0.4s,baz=316,slow=11,SNR=3.5						

NIED 16 20:45:00, 40°.80N×145°.30E, h5km, Mw4.0 Best double couple: $M_0$1.09000×10^{15} NP1:ϕ_s202.00000°, δ25.00000°, λ-90.00000°. NP2:ϕ_s22.00000°, δ65.00000°, λ-90.00000°.

ISCJB 16 20:45:22.7±0.3, 40°.83N±0°.02×145°.12E±0°.04, h10km, mb4.2/45, MS3.6/4, Error ellipse: s-maj=4.0km s-min=3.2km az=10.8

IDC 16 20:45:22.8±0.8, 40°.74N×145°.12E, h0km, mb4.0/20, mb1 4.1/25, mb1mx4.0/48, mbtmp3.9/25, ML3.2/5, MS3.1/5, Ms1 3.1/5, ms1mx2.8/47, Error ellipse: s-maj=19.5km s-min=14.2km az=159.0

JMA 16 20:45:24.1±0.2, 40°.80N×145°.34E, h67km±3km, M4.2

NEIC 16 20:45:24.5±0.3, 40°.76N×145°.04E, h10km, mb4.5/17, Error ellipse: s-maj=6.4km s-min=4.6km az=130.0

MOS 16 20:45:25.1±0.9, 40°.94N×145°.06E, h22km, mb4.6/18, Error ellipse: s-maj=10.1km s-min=5.8km az=104.7

ISC 16 20:45:24.3±0.5, 40°.85N±0°.05×145°.11E±0°.05, h10km, n147, σ1s.40/166, mb4.3/50, MS3.8/5, 11C-7D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	1.88	309	ePn	Pb	20 45 56.9	-1.7
ERM				eSn	Sn	20 46 19.4	-0.6
ERM	Erimo	1.88	309d	iP	Pb	20 45 56.8	-1.8
ERM				pmax	pmax		
	comp=Z,303nm,0.6s						
JEM	Erimo	1.88	309	P	Pb	20 45 57.0	-1.6
JEM				eS	Sn	20 46 19.8	-0.3
JTHR	Tokachihiroo	1.98	317	P	Pb	20 45 58.5	-1.9
JTHR				S	Sn	20 46 22.3	-0.4
JAK	Akkeshi	2.17	352	P	Pn	20 45 59.7	-0.8
JAK				eS	Sn	20 46 26.1	-1.3
JCH	Churui	2.20	324	P	Pn	20 46 01.1	+0.3
JCH				eS	Sn	20 46 27.4	-0.7
JKHN	Kushirohamanak	2.24	1	P	Pn	20 46 00.6	-0.8
JKHN				eS	Sn	20 46 27.3	-1.7
JOB	Onbets	2.27	336	P	Pn	20 46 02.0	+0.2
JOB				S	Sn	20 46 29.6	-0.1
JNBK	Urakawa-nobuka	2.27	310	P	Pb	20 46 03.3	-2.1
JNBK				eS	Sb	20 46 31.8	-1.8
NEM2	Nemuro 2	2.56	10	P	Pn	20 46 04.7	-1.1
NEM2				eS	Sn	20 46 34.2	-2.8
JAR	Ashorobuto	2.64	338	P	Pn	20 46 06.5	-0.5
JAR				eS	Sn	20 46 37.1	-2.0
JNK	Nakash	2.75	354	P	Pn	20 46 07.2	-1.3
JNK				S	Sn	20 46 38.0	-3.8
JANG	Nango	2.77	261	P	Pn	20 46 07.8	-1.0
JANG				eS	Sn	20 46 38.5	-3.8
GLVR	Golovnino	2.91	6	eP	Pn	20 46 10.2	-0.4
GLVR				i S	Sn	20 46 42.5	-3.1
GLVR				smax	smax		
	comp=N,1µm,0.2s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
JFR	Furan	2.98	322	P	Pn	20 46 12.0	+0.4
JFR				eS	Sn	20 46 46.8	-0.6
JRA	Rausu	3.09	0	P	Pn	20 46 12.0	-1.1
JRA				eS	Sn	20 46 48.0	-2.1
JOT	Ohata	3.11	281	P	Pn	20 46 13.6	+0.2
JOT				eS	Sn	20 46 48.7	-1.9
GRPR	Tuman	3.18	9	eP	Pn	20 46 14.1	-0.3
GRPR				eS	Sn	20 46 49.4	-3.0
GRPR				pmax	pmax		
	comp=Z,166nm,0.5s						
GRPR				pmax	pmax		
	comp=N,54nm,0.1s						
GRPR				pmax	pmax		
	comp=E,97nm,0.2s						
GRPR				smax	smax		
	comp=E,820nm,0.3s						
GRPR				smax	smax		
	comp=N,1µm,0.4s						
JOM	Ohasama	3.23	246	P	Pn	20 46 14.3	-0.7
YUK	Yuzh-Kuril'sk	3.24	10c	iP	Pn	20 46 13.2	-1.9
YUK				i S	Sn	20 46 49.4	-4.3
YUK				pmax	pmax		
	comp=Z,142nm,0.3s						
YUK				smax	smax		
	comp=N,526nm,0.5s						
YUK				smax	smax		
	comp=E,941nm,0.5s						
JKB	Kayabe	3.24	290	P	Pn	20 46 16.2	+1.1
JTKR	Abashiri--Toko	3.25	345	P	Pn	20 46 15.7	+0.5
JTKR				eS	Sn	20 46 54.1	+0.2
LAGR	Lagunnoye	3.25	9	eP	Pn	20 46 15.1	-0.1
LAGR				i S	Sn	20 46 50.8	-3.1
LAGR				pmax	pmax		
	comp=Z,241nm,0.5s						
LAGR				smax	smax		
	comp=N,1µm,0.3s						
LAGR				smax	smax		
	comp=E,265nm,0.2s						
SHO	Shikotan	3.28	22d	iP	Pn	20 46 14.3	-1.4
SHO				i S	Sn	20 46 49.9	-4.9
SHO				pmax	pmax		
	comp=Z,110nm,0.3s						
SHO				pmax	pmax		
	comp=N,34nm,0.4s						
SHO				pmax	pmax		
	comp=E,56nm,0.4s						
SHO				smax	smax		
	comp=N,191nm,0.2s						
SHO				smax	smax		
	comp=E,351nm,0.4s						
JEW	Eniwo	3.38	307	P	Pn	20 46 19.1	+2.0
ASAJ	Asahikawa	3.76	331	Pn	Pn	20 46 23.7	+1.4
	comp=E,5.5nm,0.3s,baz=170,slow=12,SNR=61						
ASAJ				Sn	Sn	20 47 07.8	+1.2
	comp=E,6.0nm,0.3s,baz=185,slow=31,SNR=7.0						
JHR	Hokuryu	3.83	320	S	Sn	20 47 09.5	+1.1
KUR	Kuril'sk	4.83	24	eP	Pn	20 46 37.0	0.0
KUR				eS	Sn	20 47 28.8	-4.1
KUR				pmax	pmax		
	comp=N,44nm,0.3s						
KUR				pmax	pmax		
	comp=Z,75nm,0.3s						
KUR				pmax	pmax		
	comp=E,45nm,0.4s						
KUR				smax	smax		
	comp=E,334nm,0.3s						
KUR				smax	smax		
	comp=N,156nm,0.2s						
YSS	Yuzh-Sakhalins	6.34	345	ePn	Pn	20 46 59.2	+1.5
YSS	Yuzh-Sakhalins	6.34	345	eP	Pn	20 46 59.2	+1.5
MAJO	Matsushiro	6.90	234	ePn	Pn	20 47 04.9	-0.5
MAJO				eSn	Sn	20 48 22.4	-1.6
MAJO	Matsushiro	6.90	234	eP	Pn	20 47 04.9	-0.5
MAJO				e		20 48 22.4	
MAT	Matsushiro	6.90	234	P	Pn	20 47 05.1	-0.3
MAT				eS	Sn	20 48 22.0	-2.0
MJAR	Matsushiro Arr	6.90	234	Pn	Pn	20 47 05.3	-0.2
	comp=N,0.2nm,0.3s,baz=49,slow=10,SNR=15						
MJAR				Sn	Sn	20 48 22.4	-1.6
	baz=16,slow=21,SNR=2.3						
MJB9	Matsu-Tunnel	6.90	234	ePn	Pn	20 47 05.0	-0.4
TEY	Ternei	7.51	307⇑	eP	Pn	20 47 15.2	+1.4
TEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
INU	Inuyama	8.41	232	ePn	Pn	20 47 25.9	-0.3
VLA	Vladivostok	10.11	287⇓	eP	Pn	20 47 51.3	+1.9
USRK	Ussuriysk Ar.	10.25	293	Pn	Pn	20 47 53.5	+2.2
	comp=Z,0.5nm,0.3s,baz=108,slow=13,SNR=20						
USA0B	Ussuriysk Arra	10.25	293	ePn	Pn	20 47 50.6	-0.7
MSHR	Mys Shultsa	10.57	284⇑	eP	Pn	20 47 57.7	+1.9
KLR	Kul'dur	12.62	316⇑	eP	Pn	20 48 22.9	-0.8
KLR	Kul'dur	12.62	316	Pn	Pn	20 48 24.1	+0.4
	comp=Z,0.1nm,0.3s,baz=123,slow=17,SNR=4.8						
KLR				LR	LR	20 53 29.0	
	comp=Z,70nm,20.4s,baz=130,slow=38						
OKH	Okha	12.80	354d	eP	Pn	20 48 15.4	-11
OKH				pmax	pmax		
	comp=Z,100nm,16.0s						
OKH				MLR	MLR		
	comp=Z,200nm,15.0s						
JNU	Nakatsue	13.73	240	ePn	Pn	20 48 37.2	-1.8
JNU	Nakatsue	13.73	240	LR	LR	20 54 33.9	
	comp=Z,56nm,19.4s,baz=340,slow=40						
KSRS	Korea Array	13.76	261	Pn	Pn	20 48 38.6	-0.7
	comp=Z,0.0nm,0.3s,baz=70,slow=13,SNR=2.6						
KSRS				LR	LR	20 53 10.6	
	comp=Z,33nm,20.5s,baz=40,slow=34						
KS01	Wonju Array Si	13.77	261	ePn	Pn	20 48 36.1	-3.5
ZEA	Zeya	17.63	323	eP	Pn	20 49 28.8	-1.0
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
MA2	Magadan	19.09	9⇑	eP	P	20 49 44.5	-2.3
MA2				pmax	pmax		
	comp=Z,21nm,2.7s						
SEY	Seymchan	22.54	9⇑	eP	P	20 50 24.2	+0.1
SEY	Seymchan	22.54	9	P	P	20 50 23.6	-0.5
	comp=Z,2.1nm,0.6s,baz=192,slow=8.6,SNR=13						
HHC	Hu-ho-hao-te	25.29	281	eP	P	20 50 49.1	-1.8
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
BOD	Bodaibo	26.11	321	eP	P	20 50 58.1	+0.1
BOD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULN	Ulaanbaatar	27.88	297	eP	P	20 51 14.4	+0.1
	comp=Z,9.9nm,0.9s						
ULN	Ulaanbaatar	27.88	297c	iP	P	20 51 17.7	+3.4
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONA1	Songino Array	28.32	297	eP	P	20 51 19.0	+0.8
SONA0	Songino Array	28.32	297	eP	P	20 51 19.1	+0.9
SONM	Songino Array	28.32	297	P	P	20 51 19.2	+0.9
	comp=Z,5.7nm,0.8s,baz=83,slow=8.7,SNR=35						
BILL	Bilibino	29.57	16	eP	P	20 51 29.8	+0.9
	comp=Z,7.9nm,1.5s						
BILL	Bilibino	29.57	16	i P	P	20 51 28.3	-0.6
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TLY	Talaya	30.26	305	eP	P	20 51 36.7	+1.5
TLY				pmax	pmax		
	comp=Z,8.0nm,1.1s						

TLY				MLR	MLR		
	comp=Z,211nm,18.0s						
ZAK	Zakamensk	30.41	302	eP	P	20 51 36.6	-0.1
ZAK				pmax	pmax		
	comp=Z,15nm,1.2s						
GTA	Gaotai	34.37	283	eP	P	20 52 12.8	+1.3
GTA				pP	pwP	20 52 17.5	-2.2
GTA				sP	sP	20 52 19.8	+6.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,63nm,6.2s						
GTA				LR	LR		
	comp=N,140nm,19.0s						
GTA				LR	LR		
	comp=E,210nm,19.0s						
GTA				LR	LR		
	comp=Z,96nm,18.7s						
DGZ	Jazzator, Alta	40.63	303	⇓eP	P	20 53 05.9	+1.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NRIK	Noril'sk	41.10	333	LR	LR	21 11 00.2	
	comp=Z,44nm,19.5s,baz=72,slow=37						
ZAA0	Zalesovo Array	41.60	309	eP	P	20 53 12.9	+0.7
	comp=Z,3.7nm,1.1s						
ZAA1	Zalesovo Array	41.60	309	eP	P	20 53 12.8	+0.7
ZALV	Zalesovo Beam	41.60	309	eP	P	20 53 12.7	+0.6
ZALV	Zalesovo Beam	41.60	309	eP	P	20 53 12.7	+0.6
ZALV	Zalesovo Beam	41.60	309	P	P	20 53 12.8	+0.7
	comp=Z,1.2nm,0.5s,baz=81,slow=7.1,SNR=7.7						
ZALV				PcP	PcP	20 55 09.5	+0.5
	comp=Z,1.3nm,0.5s,baz=59,slow=3.2,SNR=5.3						
PPLA	Purkeypile	42.40	37	eP	P	20 53 20.3	+1.6
	comp=Z,12nm,1.2s						
CAST	Castle Rocks	42.45	36	eP	P	20 53 20.1	+1.0
	comp=Z,3.4nm,1.0s						
COLA	College	44.32	34	⇓eP	P	20 53 34.5	+0.5
COLA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MK01	Makanchi Array	44.64	300	eP	P	20 53 37.4	+0.5
MK31	Makanchi Array	44.64	300	eP	P	20 53 37.3	+0.4
MK31	Makanchi Array	44.64	300	eP	P	20 53 37.3	+0.4
MK32	Makanchi Array	44.64	300	eP	P	20 53 37.7	+0.8
MKAR	Makanchi Array	44.64	300	eP	P	20 53 37.3	+0.4
	comp=Z,18nm,0.4s						
MKAR	Makanchi Array	44.64	300	eP	P	20 53 37.3	+0.4
MKAR				pmax	pmax		
	comp=Z,18nm,0.4s						
MKAR	Makanchi Array	44.64	300	P	P	20 53 37.7	+0.8
	comp=Z,0.9nm,0.8s,baz=83,slow=9.8,SNR=8.2						
ILAR	Eielson Array	44.73	34	P	P	20 53 38.1	+0.8
	comp=Z,0.9nm,0.6s,baz=259,slow=6.6,SNR=13						
ILB	Eielson Array	44.73	34	eP	P	20 53 37.9	+0.6
MAKZ	Makanchi	44.85	300	eP	P	20 53 38.6	+0.1
	comp=Z,6.3nm,1.2s						
MAKZ	Makanchi	44.85	300	eP	P	20 53 38.6	+0.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURK	Kurchatov	45.95	306	eP	P	20 53 47.2	0.0
	comp=Z,5.0nm,0.7s						
KURK	Kurchatov	45.95	306	ceP	P	20 53 47.9	+0.8
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
JIRN	Jiri	49.59	274	eP	P	20 54 23.2	+7.1
INK	Inuvik	49.68	29	eP	P	20 54 16.7	+1.0
	comp=Z,5.0nm,1.4s						
INK	Inuvik	49.68	29	eP	P	20 54 16.7	+1.0
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	Inuvik	49.68	29	P	P	20 54 16.9	+1.2
	comp=Z,1.8nm,0.5s,baz=305,slow=5.2,SNR=13						
GUN	Gumba	49.70	274	eP	P	20 54 24.0	+7.1
	comp=Z,20nm,0.4s						
PKIN	Phulchoki	50.23	274	eP	P	20 54 28.2	+7.3
	comp=Z,2.5nm,0.5s						
BRVK	Borovoye	50.26	311	eP	P	20 54 21.8	+1.4
	comp=Z,2.3nm,0.8s						
BRVK	Borovoye	50.26	311	j eP	P	20 54 21.3	+0.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DMN	Daman	50.44	275	eP	P	20 54 30.1	+7.7
	comp=Z,4.2nm,0.4s						
DANN	Dangsing	51.07	276	eP	P	20 54 35.2	+8.0
	comp=Z,24nm,0.5s						
PYUN	Piuthan	51.78	276	eP	P	20 54 40.6	+8.1
	comp=Z,3.6nm,0.3s						
KK31	Karatay Array	53.76	299	eP	P	20 54 46.5	-0.2
KK31	Karatay Array	53.76	299	eP	P	20 54 46.5	-0.2
KKAR	Karatay Array	53.76	299	eP	P	20 54 46.7	0.0
KKAR	Karatay Array	53.76	299	eP	P	20 54 46.7	0.0
ARU	Arti	55.45	318	eP	P	20 54 59.4	+0.6
	comp=Z,3.7nm,0.8s						
ARU	Arti	55.45	318	c iP	P	20 54 59.3	+0.6
ARU						20 57 02.4	
ARU				S	S	21 02 45.4	+2.1
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ABKAR	Akbulak array	57.72	309	eP	P	20 55 15.9	+0.9
	comp=Z,2.7nm,0.6s						
RES	Resolute Bay	58.18	16	eP	P	20 55 18.6	+0.8
	comp=Z,6.8nm,0.9s						
RES	Resolute Bay	58.18	16	eP	P	20 55 18.6	+0.8
RES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RES	Resolute Bay	58.18	16	P	P	20 55 18.7	+0.9
	comp=Z,4.6nm,0.7s,baz=315,slow=6.8,SNR=27						
YKA	Yellowknife Ar	59.06	32	P	P	20 55 24.6	+0.5
	comp=Z,0.4nm,0.7s,baz=302,slow=6.5,SNR=7.8						
WR1	Warramunga Arr	61.30	192	eP	P	20 55 38.6	-1.3
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	61.30	192	P	P	20 55 38.6	-1.3
	comp=Z,1.6nm,0.7s,baz=12,slow=7.1,SNR=11						
ARA0	ARCESS Array S	61.44	340	eP	P	20 55 40.8	+0.5
ARCES	ARCESS Array B	61.44	340	P	P	20 55 40.8	+0.5
	comp=Z,1.7nm,0.9s,baz=38,slow=6.0,SNR=3.2						
GEYT	Alibeck	64.51	299	P	P	20 56 01.8	+0.5
	comp=Z,1.2nm,0.7s,baz=19,slow=6.1,SNR=4.0						
AS01	Alice Springs	65.01	191	eP	P	20 56 04.6	+0.1
AS31	Alice Springs	65.02	191	eP	P	20 56 04.2	-0.4
	comp=Z,1.4nm,0.4s						
OBN	Obninsk	66.75	324	iP	P	20 56 16.3	+0.9
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FIA1	FINESS Array S	66.77	333	eP	P	20 56 15.7	+0.3
	comp=Z,13nm,1.1s						
FIA0	FINESS Array S	66.77	333	eP	P	20 56 15.8	+0.4
FIA0	FINESS Array S	66.77	333	eP	P	20 56 15.8	+0.4
FINES	FINESS Array B	66.77	333	P	P	20 56 15.8	+0.4
	comp=Z,3.0nm,0.7s,baz=53,slow=7.2,SNR=24						
VSR	Storozhevoye	67.95	319	⇑eP	P	20 56 22.9	-0.1
VSR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NVAR	Mina Array Bea	70.43	56	P	P	20 56 40.1	+1.1
	comp=Z,0.1nm,0.3s,baz=290,slow=5.3,SNR=2.5						
KIV	Kislovodsk	70.56	312	eP	P	20 56 42.0	+2.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	Khabaz	70.58	311	P	P	20 56 40.6	+1.2
	comp=Z,2.3nm,0.8s,baz=60,slow=8.1,SNR=6.2						
NB2	NORSAR Subarra	71.75	338	P	P	20 56 46.4	0.0
	comp=Z,4.0nm,1.1s,baz=34,slow=6.5						
NB200	NORSAR Array S	71.75	338	eP	P	20 56 46.8	+0.4
NOA	NORSAR Array B	71.75	338	P	P	20 56 46.8	+0.4
	comp=Z,2.4nm,0.8s,baz=37,slow=6.1,SNR=7.3						
PDAR	Pinedale Array	72.96	48	P	P	20 56 54.2	0.0
	comp=Z,0.3nm,0.6s,baz=255,slow=2.7,SNR=3.3						
PDAR				LR	LR	21 28 17.7	
	comp=Z,20nm,20.1s,baz=85,slow=35						
AKASG	Malin Array Be	73.01	323	P	P	20 56 54.1	+0.1
	comp=Z,1.3nm,0.5s,baz=43,slow=6.2,SNR=4.0						
BUR08	Bucovina Ar. S	77.05	323	eP	P	20 57 17.8	+0.3
	comp=Z,5.2nm,1.3s						
LANS	Liptovska Anna	78.40	327	eP	P	20 57 26.6	+1.7
LANS	Liptovska Anna	78.40	327	eP	P	20 57 26.6	+1.7
BR101	Keskin Array S	78.43	313	eP	P	20 57 26.2	+0.8
BRTR	Keskin Array B	78.43	313	iP	P	20 57 26.3	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	78.43	313	P	P	20 57 26.2	+0.8
	comp=Z,0.7nm,0.6s,baz=50,slow=7.7,SNR=4.5						
VYHS	Vyhne	79.17	327	eP	P	20 57 29.8	+0.7
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.9s						
VYHS	Vyhne	79.17	327	eP	P	20 57 29.8	+0.7
CLL	Collm	79.17	332	eP	P	20 57 29.0	-0.1
CLL				Lm	MLR	21 09 00.0	
	comp=Z,100nm,19.3s						
CLL	Collm	79.17	332	eP	P	20 57 28.0	-1.1
KHC	Kasperske Hory	80.74	330	eP	P	20 57 38.0	+0.3
KHC	Kasperske Hory	80.74	330	eP	P	20 57 38.0	+0.3
GERES	GERESS Array B	80.93	330	P	P	20 57 39.2	+0.5
	comp=Z,0.5nm,0.5s,baz=46,slow=5.7,SNR=5.9						
GEA0	GERESS Array S	80.94	330	eP	P	20 57 38.9	+0.1
LTX	Lajitas	85.54	55	eP	P	20 58 04.4	+1.5
LTX	Lajitas	85.54	55	eP	P	20 58 04.4	+1.5
TXAR	Lajitas Array	85.54	55	P	P	20 58 04.4	+1.5
	comp=Z,0.2nm,0.5s,baz=324,slow=4.5,SNR=3.8						

DJA 16 20:51:21.8±2.2, 3°S±4°×12°9E±°, h23^{km}±22^{km}, M3.6/5, MLv3.6/5, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.71	159	P	Pn	20 51 50.3	+0.1
NLAI	Namlea	2.22	261	P	Pn	20 51 57.8	+0.6
SWI	Sorong	2.82	44	P	Pn	20 52 05.6	+0.1
SWI				S	Sn	20 52 39.6	+0.7
FAKI	Fak Fak	2.94	90	P	Pn	20 52 07.4	+0.2
FAKI				S	Sn	20 52 41.7	-0.2
SANI	Sanana	3.42	284	P	Pn	20 52 13.4	-0.3
TNTI	Ternate	4.14	332	P	Pn	20 52 23.9	+0.3
RKPI	Ransiki, Papua	5.07	74	P	Pn	20 52 36.4	0.0
SAUI	Saumlaki	5.42	159	P	Pn	20 52 41.5	+0.2

MEX 16 21:00:42.2±0.8, 15.°40N×98.°47W, h16^{km}±18^{km}, MD4.1, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	1.04	18	eP	Pb	21 00 57.7	-4.2
PNIG				iS	Sb	21 01 10.7	-4.7
VHO	Vista Hermosa	2.36	45	eP	Pn	21 01 18.0	-2.4
VHO				iS	Sn	21 01 45.0	-4.1
CAIG	El Cayaco	2.38	314	iP	Pn	21 01 17.3	-3.3
CAIG				eS	Sn	21 01 42.3	-7.3

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*IDC **16** 21:06:37.4±1.2, 10.°91S×166.°89E, h0^{km}, mb3.9/12, mb1 4.1/13, mb1mx3.9/38, mbtmp3.9/13, ML4.1/1, MS3.7/3, Ms1 3.7/3, ms1mx3.1/31, Error ellipse: s-maj=46.6km s-min=18.5km az=141.0*

*NEIC **16** 21:06:39.2±0.5, 10.°87S×166.°85E, h10^{km}, mb4.4/12, Error ellipse: s-maj=19.4km s-min=7.9km az=141.0*

*ISCJB **16** 21:06:40.4±0.5, 10.°90S±0.°10×166.°73E±0.°06, h28^{km}, mb4.2/21, MS3.8/1, Error ellipse: s-maj=14.7km s-min=8.0km az=158.4*

ISC 16 21:06:41.6±0.8, 10.°9S±0.°2×166.°86E±0.°10, h28^{km}, n42, σ1^{s}36/35, mb4.2/21, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.95	281	Pn	Pn	21 08 23.0	+1.3
	3.6nm,0.3s,baz=43,slow=6.5,SNR=3.6						
HNR				Sn	Sn	21 09 38.9	-1.0
	1.3nm,0.3s,baz=28,slow=20,SNR=1.8						
HNR				LR	LR	21 11 06.3	
	comp=Z,968nm,18.9s,baz=114,slow=38						
DZM	Mont Dzumac	11.15	182	LR	LR	21 13 24.1	
	comp=Z,185nm,18.3s,baz=20,slow=37						
EIDS	Eidsvold	20.77	224	eP	Pn	21 11 22.7	-0.3
	9.5nm,0.9s						
CTA	Charters Tower	21.85	243	P	P	21 11 33.7	+1.6
	6.2nm,0.9s,baz=33,slow=4.7,SNR=3.7						
CTAO	Charters Tower	21.85	243	eP	P	21 11 28.4	-3.7
	18nm,1.4s						
H11S2	WAKE ISLAND Hy	29.17	360	T	T	21 43 08.9	
	baz=181,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.18	360	T	T	21 43 08.4	
	baz=181,slow=76,SNR=28						
H11S1	WAKE ISLAND Hy	29.19	360	T	T	21 43 10.5	
	baz=181,slow=76,SNR=25						
WAKE	Wake Island	29.96	360	eP	P	21 12 46.8	-0.9
	151nm,1.1s						
H11N1	WAKE ISLAND Hy	30.39	0	T	T	21 44 40.8	
	baz=182,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.39	0	T	T	21 44 41.2	
	baz=182,slow=76,SNR=5.9						
H11N2	WAKE ISLAND Hy	30.41	0	T	T	21 44 43.3	
	baz=182,slow=76,SNR=6.4						
STKA	Stephens Creek	31.32	224	P	P	21 13 01.1	+1.4
	0.7nm,0.2s,baz=62,slow=16,SNR=3.5						
WRAB	Tennant Creek	32.56	250	eP	P	21 13 09.4	-1.3
	6.9nm,1.0s						
WB2	Warramunga Arr	32.56	250	eP	P	21 13 09.2	-1.5
WR1	Warramunga Arr	32.57	250	eP	P	21 13 09.9	-0.8
	4.7nm,0.9s						
WRA	Warramunga Arr	32.57	250	P	P	21 13 09.9	-0.8
	2.5nm,0.8s,baz=82,slow=8.9,SNR=26						
AS31	Alice Springs	33.85	244	eP	P	21 13 20.6	-1.3
	1.5nm,1.4s						
ASAR	Alice Springs	33.85	244	P	P	21 13 20.6	-1.3
	1.0nm,0.8s,baz=73,slow=9.5,SNR=12						
ASAR				LR	LR	21 26 09.6	
	comp=Z,183nm,19.7s,baz=62,slow=35						
FITZ	Fitzroy Crossi	40.48	255	eP	P	21 14 17.9	-0.4
	4.7nm,0.9s						
FITZ	Fitzroy Crossi	40.48	255	P	P	21 14 17.5	-0.8
	3.8nm,0.8s,baz=111,slow=6.3,SNR=7.9						
CM31	Chiang Mai Arr	73.05	293	eP	P	21 18 10.2	+0.7
	6.9nm,1.5s						
CMAR	Chiang Mai Arr	73.05	293	P	P	21 18 10.2	+0.7
	0.4nm,0.8s,baz=141,slow=3.3,SNR=4.2						
RSO	Redoubt South	78.00	19	eP	P	21 18 34.5	-2.9
SONA0	Songino Array	79.17	323	eP	P	21 18 44.7	+0.6
SONM	Songino Array	79.17	323	P	P	21 18 44.7	+0.6
	0.4nm,0.8s,baz=115,slow=5.1,SNR=3.3						
HDA	Harding Lake	82.73	18	eP	P	21 19 03.4	+1.0
	10nm,1.1s						
IL1	Eielson Array	83.00	18	eP	P	21 19 04.4	+0.5
ILAR	Eielson Array	83.00	18	P	P	21 19 04.5	+0.6
	1.1nm,0.9s,baz=234,slow=5.1,SNR=7.1						
ILB	Eielson Array	83.00	18	eP	P	21 19 04.5	+0.6
	4.7nm,1.2s						
EGAK	Eagle	84.84	20	eP	P	21 19 15.2	+2.0
	5.3nm,1.0s						
NV01	Mina Array Sit	85.08	50	eP	P	21 19 15.9	+0.5
NVAR	Mina Array Bea	85.08	50	P	P	21 19 15.9	+0.5
	0.3nm,0.7s,baz=230,slow=9.8,SNR=3.6						
BOZ	Bozeman (W)	91.81	44	eP	P	21 19 48.1	+0.9
	6.3nm,0.6s						
LKWY	Lake	92.42	45	eP	P	21 19 47.2	-3.1
	40nm,1.3s						
ZALV	Zalesovo Beam	94.05	324	P	P	21 19 57.9	+0.7
	0.2nm,0.3s,baz=106,slow=3.1,SNR=2.4						
ZAA1	Zalesovo Array	94.06	324	eP	P	21 19 57.9	+0.7
MK32	Makanchi Array	94.14	317	eP	P	21 19 58.1	+0.3
MKAR	Makanchi Array	94.14	317	P	P	21 19 58.1	+0.3
	0.7nm,0.8s,baz=92,slow=6.2,SNR=8.1						
YKA	Yellowknife Ar	94.32	27	P	P	21 19 58.0	-0.2
	0.1nm,0.6s,baz=261,slow=9.9,SNR=2.2						
YKB5	Yellowknife Ar	94.32	27	eP	P	21 19 58.0	-0.2
ESDC	Sonseca Array	150.18	346	PKPbc	PKiKP	21 26 31.0	-0.2
	0.8nm,1.0s,baz=350,slow=2.9,SNR=3.2						

IDC 16 21:14:10.0±2.8, 10.°82S×164.°72E, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.6/35, mbtmp3.8/5, Error ellipse: s-maj=98.5km s-min=29.9km az=136.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.90	286	Sn	Sg	21 16 42.3	-5.3
	8.0nm,0.3s,baz=324,slow=23,SNR=5.9						
WRA	Warramunga Arr	30.62	249	P	P	21 20 27.6	+1.3
	2.1nm,0.9s,baz=80,slow=8.6,SNR=12						
ASAR	Alice Springs	32.00	242	P	P	21 20 37.5	-0.9
	0.8nm,0.9s,baz=75,slow=9.4,SNR=7.4						
CMAR	Chiang Mai Arr	71.10	294	P	P	21 25 29.5	-1.3
	0.3nm,0.7s,baz=79,slow=4.7,SNR=3.2						
ILAR	Eielson Array	83.62	19	P	P	21 26 40.0	0.0
	0.6nm,0.8s,baz=239,slow=5.4,SNR=10						
MKAR	Makanchi Array	92.67	317	P	P	21 27 25.7	+1.6
	1.0nm,0.8s,baz=90,slow=5.8,SNR=3.5						

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*TIR **16** 21:16:04.4, 42.°00N×13.°39E, h21^{km}, Md5.1/7*

*MOS **16** 21:16:07.7±1.1, 41.°73N×13.°58E, h11^{km}, mb4.7/52, MS4.4/29, Error ellipse: s-maj=3.4km s-min=2.4km az=85.9*

*LDG **16** 21:16:08.6±0.1, 41.°73N×13.°64E, h10^{km}, Md3.7/1, Ml4.2/19, Error ellipse: s-maj=2.8km s-min=1.6km az=14.0*

*ISCJB **16** 21:16:09.6±0.2, 41.°74N±0.°01×13.°61E±0.°01, h23^{km}±1^{km}, mb4.5/121, MS4.4/39, Error ellipse: s-maj=1.9km s-min=1.2km az=22.8*

*ROM **16** 21:16:09.3±0.1, 41.°714N±0.°004×13.°570E±0.°005, h17^{km}, ML4.7/84*

*PDG **16** 21:16:09.0±1.2, 41.°74N×13.°58E, h17^{km}±1^{km}, MD4.9/5, ML4.9/11, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*

*NEIC **16** 21:16:09.0±0.0, 41.°71N×13.°58E, h11^{km}, mb4.8/58, MW4.8, ML4.8(ROM), Moment Tensor Solution. s39 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.92; M$_{\theta\theta}$0.42; M$_{\phi\phi}$1.51; M$_{r\theta}$0.76; M$_{\theta\phi}$-1.11; M$_{\phi r}$0.37; Best double couple: M$_0$2.20000×10^{16} NP1:φ$_s$307.00000°, δ51.00000°, λ-120.00000°. NP2:φ$_s$169.00000°, δ48.00000°, λ-59.00000°. Principal axes: T 2.2000, Plg1.0000°, Azm58.0000°; N 0.0800, Plg23.0000°, Azm327.0000°; P -2.2800, Plg67.0000°, Azm151.0000°; After ROM.*

NEIC Felt [VI] at Brocostella and Castelliri; [V] at Boville Ernica, Isola del Liri and Sora; [IV] in the Avezzano-Cassino-Frosinone area. Felt in central Italy from Rome to Foggia and from Ancona and Perugia to Naples and Salerno.

*BJI **16** 21:16:10.7, 42.°40N×13.°64E, h18^{km}, mB5.1/34, mb4.5/43, Ms5.0/24, Ms7 4.7/23*

*PRU **16** 21:16:11.1±0.0, 41.°79N×13.°23E, h10^{km}, M4.8*

*BEO **16** 21:16:12.0±0.6, 41.°74N×13.°77E, h5^{km}, ML4.9/10*

*GCMT **16** 21:16:13.0±0.2, 41.°70N±0.°02×13.°51E±0.°02, h22^{km}, MW5.0/90, Moment Tensor Solution. s51,c64; s90,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.13±.12; M$_{\theta\theta}$0.54±.08; M$_{\phi\phi}$2.59±.08; M$_{r\theta}$0.87±.13; M$_{\theta\phi}$-1.50±.05; M$_{\phi r}$0.30±.12; Best double couple: M$_0$3.39100×10^{16} NP1:φ$_s$317.00000°, δ48.00000°, λ-112.00000°. NP2: φ$_s$168.00000°, δ46.00000°, λ-67.00000°. Principal axes: T 3.3850, Plg1.0000°, Azm62.0000°; N 0.0140, Plg16.0000°, Azm331.0000°; P -3.3970, Plg74.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **16** 21:16:13.8±1.0, 41.°75N×13.°59E, h47^{km}±10^{km}, mb3.9/35, mb1 4.0/48, mb1mx4.0/58, mbtmp4.1/48, ML3.9/14, MS4.3/36, Ms1 4.3/36, ms1mx4.2/58 Error ellipse: s-maj=9.9km s-min=7.6km az=81.0*

*STR **16** 21:16:38.7±6.3, 42°N±29°×1°1E±4°5, h10^{km}, M4.3/7, mB4.3/2, mb4.5/6, MLv4.2/6, MLv4.2/7, Mw(mB)3.4/2*

ISC 16 21:16:10.5±0.6, 41.°72N±0.°02×13.°57E±0.°02, h18^{km}±2^{km}, n1079, σ2^{s}25/1121, mb4.6/129, MS4.4/39, 71C-37D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POFI	Posta Fibreno	0.11	91	eP	Pb	21 16 13.3	+1.1
POFI				S	Sg	21 16 16.1	-0.9
VVLD	Villa Vallelon	0.16	15	iP	Pb	21 16 13.8	-0.2
VVLD				S	Sb	21 16 17.1	+0.9
GUAR	Guarcino	0.21	291	iP	Pb	21 16 14.7	-0.6
GUAR				S	Sb	21 16 18.3	-0.2
GIUL	Giuliano Di Ro	0.28	236	iP	Pg	21 16 15.9	-0.9
GIUL				S	Sg	21 16 20.5	-0.7
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
PTQR	Pietraquaria	0.33	337	P	Pg	21 16 16.3	-1.3
PTQR				S	Sg	21 16 22.0	-0.4
PTQR				AML	AML		
PTQR				AML	AML		
PTQR				AML	AML		
PTQR				AML	AML		
PTQR				AML	AML		
PTQR				AML	AML		
PTQR				AML	AML		
PTQR				AML	AML		
CERA	Filignano	0.36	110	P	Pg	21 16 16.8	-1.3
CERA				S	Sg	21 16 22.4	-0.8
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
INTR	Introdacqua	0.39	40	P	Pg	21 16 17.1	-1.5
INTR				S	Sg	21 16 23.2	-0.8
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
RNI2	Rionero Sannit	0.44	92	P	Pg	21 16 18.4	-1.0
RNI2				S	Sg	21 16 25.4	-0.1
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
CERT	Cerreto	0.49	298	P	Pg	21 16 18.9	-1.6
CERT				S	Sg	21 16 26.4	-0.9
CERT				AML	AML		
CERT				AML	AML		
	comp=N,82450µm,1.5s						
CERT				AML	AML		
CERT				AML	AML		
	comp=N,82450µm,1.5s						
CERT				AML	AML		
CERT				AML	AML		
	comp=N,82450µm,1.5s						
MIDA	Miranda	0.52	98	P	Pg	21 16 19.2	-1.7
MIDA				S	Sg	21 16 27.4	-0.6
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
MIDA				AML	AML		
FAGN	Fagnano	0.55	1	P	Pg	21 16 19.9	-1.6
FAGN				S	Sg	21 16 28.6	-0.3
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		

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FAGN                             AML   AML
LPEL  Lama dei Pelig    0.56  54 P     Pg    21 16 19.8 -1.9
LPEL                             AML   AML
LPEL                             AML   AML
      comp=N,80350µm,0.2s
LPEL                             AML   AML
LPEL                             AML   AML
      comp=N,80350µm,0.2s
LPEL                             AML   AML
LPEL                             AML   AML
      comp=N,80350µm,0.2s
LPEL                             AML   AML
      comp=N,80350µm,0.2s
LPEL                             AML   AML
VAGA  Valle Agricola    0.58 121 P     Pg    21 16 20.4 -1.7
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
VAGA                             AML   AML
MODR  Mondragone        0.62 158 P     Pb    21 16 21.1 -1.6
MODR                             AML   AML
      comp=E,43150µm,0.6s
MODR                             AML   AML
      comp=N,68500µm,0.6s
MODR                             AML   AML
      comp=E,43150µm,0.6s
MODR                             AML   AML
      comp=N,68500µm,0.6s
MODR                             AML   AML
      comp=E,43150µm,0.6s
MODR                             AML   AML
      comp=N,68500µm,0.6s
RDP   Rocca di Papa     0.64 274 P     Pb    21 16 21.6 -1.5
RDP                              S     Sb    21 16 33.0 +1.4
FIAM  Fiamignano        0.64 329 eP    Pb    21 16 21.1 -2.0
AQU   L'Aquila          0.65 349 ePg   Pb    21 16 21.2 -2.0
AQU                              eSg   Sg    21 16 30.8 -1.2
AQU   L'Aquila          0.65 349 eP    Pb    21 16 21.2 -2.0
AQU                              e           21 16 30.8
AQU   L'Aquila          0.65 349⇓iPn   Pb    21 16 21.1 -2.1
AQU   L'Aquila          0.65 349 P     Pb    21 16 21.4 -1.8
AQU                              AML   AML
      comp=E,61350µm,1.3s
AQU                              AML   AML
      comp=N,55600µm,0.6s
AQU                              AML   AML
      comp=E,60200µm,1.6s
AQU                              AML   AML
      comp=N,56350µm,0.6s
AQU                              AML   AML
      comp=E,61350µm,1.3s
AQU                              AML   AML
      comp=N,55600µm,0.6s
AQU                              AML   AML
      comp=E,60200µm,1.6s
AQU                              AML   AML
      comp=N,56350µm,0.6s
AQU                              AML   AML
      comp=E,60200µm,1.6s
AQU                              AML   AML
      comp=N,56350µm,0.6s
AQU                              AML   AML
      comp=N,55600µm,0.6s
AQU                              AML   AML
      comp=E,61350µm,1.3s
LAV9  Lanuvio           0.65 267 P     Pb    21 16 21.9 -1.4
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
LAV9                             AML   AML
RMP   Rome, Mte Porz    0.66 278 P     Pb    21 16 21.7 -1.6
RMP   Rome, Mte Porz    0.66 278 P     Pb    21 16 21.7 -1.6
RMP                              S     Sb    21 16 31.9 -0.1
RMP                              AML   AML
      comp=E,70600µm,1.1s
RMP                              AML   AML
      comp=N,96250µm,0.4s
RMP                              AML   AML
      comp=E,70600µm,1.1s
RMP                              AML   AML
      comp=N,96250µm,0.4s
RMP                              AML   AML
      comp=N,96250µm,0.4s
RMP                              AML   AML
      comp=E,70600µm,1.1s
SGG   Gregorio Mates    0.69 118 P     Pb    21 16 22.7 -1.3
SGG                              AML   AML
SGG                              AML   AML
      comp=N,93800µm,0.9s
SGG                              AML   AML
SGG                              AML   AML
      comp=N,93800µm,0.9s
SGG                              AML   AML
SGG                              AML   AML
      comp=N,93800µm,0.9s
VCEL  Villa Celiera     0.70  17 P     Pb    21 16 22.6 -1.6
VCEL                             AML   AML
VCEL                             AML   AML
      comp=N,88150µm,0.8s
VCEL                             AML   AML
VCEL                             AML   AML
      comp=N,88300µm,0.8s
VCEL                             AML   AML
      comp=N,88150µm,0.8s
VCEL                             AML   AML
SAMA  S.Maria delle     0.73 275 P     Pb    21 16 22.9 -1.7
SAMA                             AML   AML
      comp=E,32200µm,1.3s
SAMA                             AML   AML
      comp=N,38000µm,0.7s
SAMA                             AML   AML
      comp=E,32200µm,1.3s
SAMA                             AML   AML
      comp=N,38000µm,0.7s
SAMA                             AML   AML
      comp=N,38000µm,0.7s
SAMA                             AML   AML
      comp=E,32200µm,1.3s
TRIV  Trivento          0.74  86 P     Pb    21 16 23.1 -1.7
TRIV                             AML   AML
      comp=E,68700µm,0.8s
TRIV                             AML   AML
      comp=N,84550µm,1.2s
TRIV                             AML   AML
      comp=E,68700µm,0.8s
TRIV                             AML   AML
      comp=N,84550µm,1.2s
TRIV                             AML   AML
      comp=E,68700µm,0.8s
TRIV                             AML   AML
      comp=N,84550µm,1.2s
CAFR  Castel Frentan    0.77  49 P     Pb    21 16 23.8 -1.6
CAFR                             AML   AML
CAFR                             AML   AML
CAFR                             AML   AML
CAFR                             AML   AML
CAFR                             AML   AML
CAFR                             AML   AML
BSSO  Busso             0.79 102 AML   AML
BSSO                             AML   AML
BSSO                             AML   AML
      comp=N,93450µm,1.6s
BSSO                             AML   AML
BSSO                             AML   AML
      comp=N,97150µm,1.6s
BSSO                             AML   AML
      comp=N,93450µm,1.6s
BSSO                             AML   AML
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      comp=N,97150µm,1.6s
BSSO                             AML   AML
PTRJ  Pietraroja        0.80 116 P     Pb    21 16 24.4 -1.5
PTRJ                             AML   AML
PTRJ                             AML   AML
PTRJ                             AML   AML
PTRJ                             AML   AML
CAMP  Campotosto        0.82 352 P     Pb    21 16 25.1 -1.2
CAMP                             AML   AML
      comp=E,22150µm,1.0s
CAMP                             AML   AML
      comp=N,31050µm,0.8s
CAMP                             AML   AML
      comp=E,22150µm,1.0s
CAMP                             AML   AML
      comp=N,31050µm,0.8s
TERO  Teramo            0.90   2 P     Pb    21 16 25.7 -2.0
TERO                             AML   AML
      comp=E,33150µm,1.6s
TERO                             AML   AML
      comp=N,36400µm,0.8s
TERO                             AML   AML
      comp=E,13500µm,1.6s
TERO                             AML   AML
      comp=N,14750µm,0.8s
TERO                             AML   AML
      comp=E,33100µm,1.6s
TERO                             AML   AML
      comp=N,36350µm,0.8s
TERO                             AML   AML
      comp=E,13500µm,1.6s
TERO                             AML   AML
      comp=N,14750µm,0.8s
TERO                             AML   AML
      comp=N,36400µm,0.8s
TERO                             AML   AML
      comp=E,13500µm,1.6s
TERO                             AML   AML
      comp=E,33150µm,1.6s
TERO                             AML   AML
      comp=N,14750µm,0.8s
SACR  S. Croce Del S    0.91 110 P     Pb    21 16 26.6 -1.2
SACR                             AML   AML
      comp=E,80750µm,0.7s
SACR                             AML   AML
      comp=N,92600µm,0.9s
SACR                             AML   AML
      comp=E,79400µm,0.7s
SACR                             AML   AML
      comp=N,94800µm,0.9s
SACR                             AML   AML
      comp=E,80750µm,0.7s
SACR                             AML   AML
      comp=N,94800µm,0.9s
SACR                             AML   AML
      comp=N,92600µm,0.9s
SACR                             AML   AML
      comp=E,79400µm,0.7s
SMA1  SAN MARTINO       0.93 349 P     Pb    21 16 27.2 -0.9
SMA1                             AML   AML
      comp=E,44550µm,0.9s
SMA1                             AML   AML
      comp=N,50700µm,1.0s
SMA1                             AML   AML
      comp=N,50700µm,1.0s
SMA1                             AML   AML
      comp=E,44550µm,0.9s
VENT  Ventotene         0.93 187 P     Pb    21 16 26.3 -1.7
VENT                             AML   AML
      comp=E,36150µm,0.9s
VENT                             AML   AML
      comp=N,1250µm,0.8s
VENT                             AML   AML
      comp=E,36150µm,0.9s
VENT                             AML   AML
      comp=N,1246µm,0.8s
VENT                             AML   AML
      comp=E,36150µm,0.9s
VENT                             AML   AML
      comp=N,1250µm,0.8s
VENT                             AML   AML
      comp=E,36150µm,0.9s
VENT                             AML   AML
      comp=N,1246µm,0.8s
LNSS  Leonessa          0.97 336 P     Pb    21 16 28.2 -0.5
LNSS                             AML   AML
      comp=E,43600µm,1.0s
LNSS                             AML   AML
      comp=N,57450µm,1.0s
LNSS                             AML   AML
      comp=E,43600µm,1.0s
LNSS                             AML   AML
      comp=N,57450µm,1.0s
LNSS                             AML   AML
      comp=N,57450µm,1.0s
LNSS                             AML   AML
      comp=E,43600µm,1.0s
CIGN  Sant’Elia a Pi    1.00  93 P     Pb    21 16 28.1 -1.2
CIGN                             AML   AML
      comp=E,43000µm,1.0s
CIGN                             AML   AML
      comp=N,51150µm,1.0s
CIGN                             AML   AML
      comp=E,43000µm,1.0s
CIGN                             AML   AML
      comp=N,51150µm,1.0s
CIGN                             AML   AML
      comp=N,51150µm,1.0s
CIGN                             AML   AML
      comp=E,43000µm,1.0s
PAOL  Paolisi           1.02 132 P     Pb    21 16 28.0 -1.6
PAOL                             AML   AML
      comp=E,23800µm,0.6s
PAOL                             AML   AML
      comp=N,21800µm,0.6s
PAOL                             AML   AML
      comp=E,24600µm,0.6s
PAOL                             AML   AML
      comp=N,22050µm,0.6s
PAOL                             AML   AML
      comp=E,23850µm,0.6s
PAOL                             AML   AML
      comp=N,21800µm,0.6s
PAOL                             AML   AML
      comp=E,24600µm,0.6s
PAOL                             AML   AML
      comp=N,22050µm,0.6s
PAOL                             AML   AML
      comp=E,24600µm,0.6s
PAOL                             AML   AML
      comp=E,23800µm,0.6s
PAOL                             AML   AML
      comp=N,22050µm,0.6s
PAOL                             AML   AML
      comp=N,21800µm,0.6s
GATE  Gambatesa         1.03 101 P     Pb    21 16 29.0 -0.7
GATE                             AML   AML
      comp=E,35500µm,0.8s
GATE                             AML   AML
      comp=N,45200µm,0.9s
GATE                             AML   AML
      comp=E,28400µm,1.1s
GATE                             AML   AML
      comp=N,44850µm,1.0s
GATE                             AML   AML
      comp=E,35500µm,0.8s
GATE                             AML   AML
      comp=N,45200µm,0.9s
GATE                             AML   AML
      comp=E,28400µm,1.1s
GATE                             AML   AML
      comp=N,44850µm,1.0s
GATE                             AML   AML
      comp=E,28400µm,1.1s
GATE                             AML   AML
      comp=N,44850µm,1.0s
GATE                             AML   AML
      comp=N,45200µm,0.9s
GATE                             AML   AML
      comp=E,35500µm,0.8s
ARRO  Arrone            1.05 325 P     Pb    21 16 29.2 -0.9
ARRO                             AML   AML
      comp=E,25650µm,0.8s
ARRO                             AML   AML
      comp=N,22900µm,0.9s
ARRO                             AML   AML
      comp=N,22900µm,0.9s
ARRO                             AML   AML
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      comp=E,25650µm,0.8s
PSB1  Pescosannita      1.06 118 P     Pb    21 16 29.7 -0.5
PSB1                             AML   AML
PSB1                             AML   AML
      comp=N,49950µm,1.4s
PSB1                             AML   AML
PSB1                             AML   AML
      comp=N,45750µm,1.4s
PSB1                             AML   AML
PSB1                             AML   AML
PSB1                             AML   AML
      comp=N,45750µm,1.4s
PSB1                             AML   AML
      comp=N,49950µm,1.4s
CESX  Cesi              1.16 321 P     Pn    21 16 31.0 -0.8
CESX                             AML   AML
      comp=E,24650µm,0.8s
CESX                             AML   AML
      comp=N,29400µm,0.7s
CESX                             AML   AML
      comp=N,29400µm,0.7s
CESX                             AML   AML
      comp=E,24650µm,0.8s
NRCA  Norcia            1.16 343 P     Pn    21 16 31.7 -0.2
NRCA                             AML   AML
      comp=E,14600µm,1.4s
NRCA                             AML   AML
      comp=N,12275µm,1.1s
NRCA                             AML   AML
      comp=E,14650µm,1.0s
NRCA                             AML   AML
      comp=N,13200µm,1.1s
NRCA                             AML   AML
      comp=N,13200µm,1.1s
NRCA                             AML   AML
      comp=E,14650µm,1.0s
NRCA                             AML   AML
      comp=E,14600µm,1.4s
NRCA                             AML   AML
      comp=N,12275µm,1.1s
MELA  Melanico ??? S    1.17  90 P     Pn    21 16 29.9 -1.9
MELA                             AML   AML
      comp=E,51500µm,0.6s
MELA                             AML   AML
      comp=N,45200µm,0.6s
MELA                             AML   AML
      comp=E,53100µm,0.6s
MELA                             AML   AML
      comp=N,46150µm,0.6s
MELA                             AML   AML
      comp=N,46150µm,0.6s
MELA                             AML   AML
      comp=N,45200µm,0.6s
MELA                             AML   AML
      comp=E,53100µm,0.6s
MELA                             AML   AML
      comp=E,51500µm,0.6s
MRB1  Monte Rocchett    1.21 119 P     Pn    21 16 31.5 -1.0
MRB1                             AML   AML
      comp=E,66550µm,1.0s
MRB1                             AML   AML
      comp=N,56900µm,1.0s
MRB1                             AML   AML
      comp=E,67900µm,1.0s
MRB1                             AML   AML
      comp=N,56700µm,0.6s
MRB1                             AML   AML
      comp=N,56900µm,1.0s
MRB1                             AML   AML
      comp=E,67900µm,1.0s
MRB1                             AML   AML
      comp=E,66550µm,1.0s
MRB1                             AML   AML
      comp=N,56700µm,0.6s
OFFI  Offida            1.22   4 P     Pn    21 16 32.5 -0.1
OFFI                             AML   AML
      comp=E,66000µm,0.7s
OFFI                             AML   AML
      comp=N,77050µm,0.8s
OFFI                             AML   AML
      comp=E,66000µm,0.7s
OFFI                             AML   AML
      comp=N,77050µm,0.8s
TOLF  Tolfa             1.22 287 P     Pn    21 16 31.1 -1.5
TOLF                             AML   AML
      comp=E,13050µm,1.2s
TOLF                             AML   AML
      comp=N,15150µm,1.6s
TOLF                             AML   AML
      comp=N,15150µm,1.6s
TOLF                             AML   AML
      comp=E,13050µm,1.2s
MOCO  Biccari - m.te    1.24 106 P     Pn    21 16 33.0  0.0
MOCO                             AML   AML
      comp=E,30600µm,1.4s
MOCO                             AML   AML
      comp=N,15800µm,1.6s
MOCO                             AML   AML
      comp=E,30750µm,1.4s
MOCO                             AML   AML
      comp=N,16000µm,1.6s
MOCO                             AML   AML
      comp=N,15800µm,1.6s
MOCO                             AML   AML
      comp=N,16000µm,1.6s
MOCO                             AML   AML
      comp=E,30750µm,1.4s
MOCO                             AML   AML
      comp=E,30600µm,1.4s
FDMO  Fiordimonte       1.36 345 AML   AML
      comp=E,14500µm,1.5s
FDMO                             AML   AML
      comp=N,16250µm,0.7s
FDMO                             AML   AML
      comp=N,16250µm,0.7s
FDMO                             AML   AML
      comp=E,14500µm,1.5s
GUMA  Gualdo di Mace    1.37  11 AML   AML
      comp=E,59600µm,0.8s
GUMA                             AML   AML
      comp=E,59600µm,0.8s
GUMA                             AML   AML
      comp=N,68050µm,0.6s
GUMA                             AML   AML
      comp=N,68050µm,0.6s
CESI  CESI - Serrava    1.38 339 P     Pb    21 16 35.4 -0.3
CESI                             AML   AML
      comp=E,13700µm,0.5s
CESI                             AML   AML
      comp=N,11950µm,0.6s
CESI                             AML   AML
      comp=N,11950µm,0.6s
CESI                             AML   AML
      comp=E,13700µm,0.5s
CAFE  Carife            1.43 118 eP    Pn    21 16 34.8 -0.8
CAFE                             AML   AML
      comp=E,22900µm,0.9s
CAFE                             AML   AML
      comp=N,18150µm,1.4s
CAFE                             AML   AML
      comp=E,22950µm,0.9s
CAFE                             AML   AML
      comp=N,18100µm,1.4s
CAFE                             AML   AML
      comp=E,22900µm,0.9s
CAFE                             AML   AML
      comp=N,18150µm,1.4s
CAFE                             AML   AML
      comp=N,18100µm,1.4s
CAFE                             AML   AML
      comp=E,22950µm,0.9s
SNAL  S. Angelo Dei     1.47 122 P     Pn    21 16 35.0 -1.1
SNAL                             AML   AML
      comp=E,38900µm,1.0s
SNAL                             AML   AML
      comp=N,32000µm,1.3s
SNAL                             AML   AML
      comp=E,38900µm,1.0s
SNAL                             AML   AML
      comp=N,32000µm,1.3s
SGTA  Sant Agata di     1.47 113 eP    Pn    21 16 35.8 -0.3
SGTA                             AML   AML
      comp=E,25350µm,1.3s
SGTA                             AML   AML
      comp=N,16200µm,0.9s
SGTA                             AML   AML
      comp=E,24750µm,1.3s
SGTA                             AML   AML
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	comp=N,16450µm,0.9s						
SGTA				AML	AML		
	comp=E,24750µm,1.3s						
SGTA				AML	AML		
	comp=N,16450µm,0.9s						
SGTA				AML	AML		
	comp=N,16200µm,0.9s						
SGTA				AML	AML		
	comp=E,25350µm,1.3s						
ASSB	**Assisi San Ben**	**1.48**	**333**	P	**Pb**	**21 16 37.3**	**-0.2**
ASSB				AML	AML		
	comp=E,14450µm,1.1s						
ASSB				AML	AML		
	comp=N,17550µm,1.1s						
ASSB				AML	AML		
	comp=E,14450µm,1.1s						
ASSB				AML	AML		
	comp=N,17550µm,1.1s						
SNTG	**Esanatoglia**	**1.60**	**343**	P	**Pb**	**21 16 39.3**	**-0.3**
SNTG				AML	AML		
	comp=E,10350µm,0.8s						
SNTG				AML	AML		
	comp=N,10025µm,1.0s						
SNTG				AML	AML		
	comp=N,10025µm,1.0s						
SNTG				AML	AML		
	comp=E,10350µm,0.8s						
MGAB	**Montegabbione**	**1.61**	**318**	P	**Pn**	**21 16 37.8**	**-0.2**
MGAB				AML	AML		
	comp=E,12175µm,0.7s						
MGAB				AML	AML		
	comp=N,9465µm,1.2s						
MGAB				AML	AML		
	comp=E,13200µm,0.8s						
MGAB				AML	AML		
	comp=N,9985µm,0.9s						
MGAB				AML	AML		
	comp=N,9985µm,0.9s						
MGAB				AML	AML		
	comp=N,9465µm,1.2s						
MGAB				AML	AML		
	comp=E,13200µm,0.8s						
MGAB				AML	AML		
	comp=E,12175µm,0.7s						
ATCC	**AVT- Casa Cast**	**1.62**	**335**	AML	AML		
	comp=E,26300µm,0.8s						
ATCC				AML	AML		
	comp=N,20100µm,0.8s						
ATCC				AML	AML		
	comp=N,20100µm,0.8s						
ATCC				AML	AML		
	comp=E,26300µm,0.8s						
SGRT	**San Giovanni R**	**1.63**	**88**	P	**Pn**	**21 16 37.8**	**-0.5**
SGRT				AML	AML		
	comp=E,24350µm,0.7s						
SGRT				AML	AML		
	comp=N,20650µm,1.6s						
SGRT				AML	AML		
	comp=N,20650µm,1.6s						
SGRT				AML	AML		
	comp=E,24350µm,0.7s						
EL6	**Elcito**	**1.65**	**348**	AML	AML		
	comp=E,20450µm,1.5s						
EL6				AML	AML		
	comp=E,20450µm,1.5s						
EL6				AML	AML		
	comp=N,24100µm,0.9s						
EL6				AML	AML		
	comp=N,24100µm,0.9s						
SACS	**San Casciano d**	**1.67**	**313**	P	**Pn**	**21 16 39.0**	**+0.2**
SACS				AML	AML		
	comp=E,7985µm,0.9s						
SACS				AML	AML		
	comp=N,9450µm,1.1s						
SACS				AML	AML		
	comp=E,7795µm,0.9s						
SACS				AML	AML		
	comp=N,9375µm,1.1s						
SACS				AML	AML		
	comp=E,7795µm,0.9s						
SACS				AML	AML		
	comp=E,7985µm,0.9s						
SACS				AML	AML		
	comp=N,9375µm,1.1s						
SACS				AML	AML		
	comp=N,9450µm,1.1s						
CING	**Cingoli**	**1.68**	**351**	AML	AML		
	comp=E,12850µm,0.8s						
CING				AML	AML		
	comp=E,12850µm,0.8s						
CING				AML	AML		
	comp=N,7005µm,0.7s						
CING				AML	AML		
	comp=N,7005µm,0.7s						
VULT	**Monte Vulture**	**1.72**	**116**	P	**Pn**	**21 16 39.1**	**-0.5**
VULT				AML	AML		
	comp=E,25700µm,0.9s						
VULT				AML	AML		
	comp=N,35050µm,0.8s						
VULT				AML	AML		
	comp=N,35050µm,0.8s						
VULT				AML	AML		
	comp=E,25700µm,0.9s						
MURB	**Monte Urbino**	**1.73**	**334**	AML	AML		
	comp=N,16750µm,1.0s						
MURB				AML	AML		
	comp=E,23300µm,0.5s						
MURB				AML	AML		
	comp=N,17200µm,1.5s						
MURB				AML	AML		
	comp=E,24600µm,0.5s						
MURB				AML	AML		
	comp=E,23300µm,0.5s						
MURB				AML	AML		
	comp=E,24600µm,0.5s						
MURB				AML	AML		
	comp=N,17200µm,1.5s						
MURB				AML	AML		
	comp=N,16750µm,1.0s						
ATTE	**AVT- Monte Tez**	**1.73**	**329**	P	**Pn**	**21 16 40.4**	**+0.7**
ATTE				AML	AML		
	comp=E,11950µm,0.9s						
ATTE				AML	AML		
	comp=N,9530µm,0.8s						
ATTE				AML	AML		
	comp=E,11950µm,0.9s						
ATTE				AML	AML		
	comp=N,9530µm,0.8s						
MRLC	**Muro Lucano**	**1.74**	**123**	P	**Pn**	**21 16 38.6**	**-1.2**
MRLC				AML	AML		
	comp=E,10365µm,1.6s						
MRLC				AML	AML		
	comp=N,8945µm,1.6s						
MRLC				AML	AML		
	comp=E,10625µm,1.6s						
MRLC				AML	AML		
	comp=N,8570µm,1.0s						
MRLC				AML	AML		
	comp=N,8945µm,1.6s						
MRLC				AML	AML		
	comp=N,8570µm,1.0s						
MRLC				AML	AML		
	comp=E,10625µm,1.6s						
MRLC				AML	AML		
	comp=E,10365µm,1.6s						
MSAG	**Monte S. Angel**	**1.75**	**89**	P	**Pn**	**21 16 39.1**	**-0.8**
MSAG				AML	AML		
	comp=E,16250µm,1.2s						
MSAG				AML	AML		
	comp=N,44100µm,0.5s						
MSAG				AML	AML		
	comp=E,17850µm,1.2s						
MSAG				AML	AML		
	comp=N,44250µm,0.5s						
MSAG				AML	AML		
	comp=N,44100µm,0.5s						
MSAG				AML	AML		
	comp=E,17850µm,1.2s						
MSAG				AML	AML		
	comp=E,16250µm,1.2s						
MSAG				AML	AML		
	comp=N,44250µm,0.5s						
MCIV	**Monte Civitell**	**1.76**	**308**	P	**Pn**	**21 16 40.4**	**+0.3**
MCIV				AML	AML		
	comp=E,3840µm,0.9s						
MCIV				AML	AML		
	comp=N,3850µm,1.2s						
MCIV				AML	AML		
	comp=N,3850µm,1.2s						
MCIV				AML	AML		
	comp=E,3840µm,0.9s						
ARVD	**Arcevia**	**1.84**	**346**	AML	AML		
	comp=N,6545µm,0.8s						
ARVD				AML	AML		
	comp=E,8835µm,0.8s						
ARVD				AML	AML		
	comp=N,6545µm,0.8s						
ARVD				AML	AML		
	comp=E,8835µm,0.8s						
ATVO	**AVT- Monte Val**	**1.87**	**333**	AML	AML		
	comp=E,9375µm,0.9s						
ATVO				AML	AML		
	comp=N,8780µm,0.8s						
ATVO				AML	AML		
	comp=N,8780µm,0.8s						
ATVO				AML	AML		
	comp=E,9375µm,0.9s						
FRON	**Frontone**	**1.90**	**341**	AML	AML		
	comp=N,12650µm,0.9s						
FRON				AML	AML		
	comp=E,7585µm,0.9s						
FRON				AML	AML		
	comp=N,12650µm,0.9s						
FRON				AML	AML		
	comp=E,7585µm,0.9s						
CMPR	**Campora**	**1.92**	**136**	AML	AML		
	comp=N,3575µm,0.8s						
CMPR				AML	AML		
	comp=E,4065µm,0.7s						
CMPR				AML	AML		
	comp=N,3575µm,0.8s						
CMPR				AML	AML		
	comp=E,4065µm,0.7s						
ARCI	**Arcidosso**	**1.92**	**307**	P	**Pn**	**21 16 42.2**	**-0.2**
ARCI				AML	AML		
	comp=E,2545µm,1.1s						
ARCI				AML	AML		
	comp=N,2430µm,1.6s						
ARCI				AML	AML		
	comp=E,2545µm,1.1s						
ARCI				AML	AML		
	comp=N,2430µm,1.6s						
ATPC	**Poggio Castell**	**1.94**	**335**	AML	AML		
	comp=N,11965µm,0.8s						
ATPC				AML	AML		
	comp=E,3925µm,0.9s						
ATPC				AML	AML		
	comp=E,14700µm,0.9s						
ATPC				AML	AML		
	comp=N,11940µm,0.8s						
ATPC				AML	AML		
	comp=E,3925µm,0.9s						
ATPC				AML	AML		
	comp=E,14700µm,0.9s						
ATPC				AML	AML		
	comp=N,11940µm,0.8s						
ATPC				AML	AML		
	comp=N,11965µm,0.8s						
MAON	**Monte Argentar**	**1.95**	**292**	P	**Pn**	**21 16 41.5**	**-1.1**
MAON				AML	AML		
	comp=E,2055µm,0.4s						
MAON				AML	AML		
	comp=N,1805µm,1.5s						
MAON				AML	AML		
	comp=E,2055µm,0.4s						
MAON				AML	AML		
	comp=N,1805µm,1.5s						
PIEI	**Pieia**	**1.97**	**338**	AML	AML		
	comp=E,4260µm,1.1s						
PIEI				AML	AML		
	comp=N,5410µm,1.3s						
PIEI				AML	AML		
	comp=N,5410µm,1.3s						
PIEI				AML	AML		
	comp=E,4260µm,1.1s						
CAFI	**Castiglion Fio**	**2.00**	**324**	AML	AML		
	comp=N,6325µm,0.9s						
CAFI				AML	AML		
	comp=E,5125µm,0.8s						
CAFI				AML	AML		
	comp=N,5950µm,0.9s						
CAFI				AML	AML		
	comp=E,5075µm,0.8s						
CAFI				AML	AML		
	comp=N,6325µm,0.9s						
CAFI				AML	AML		
	comp=N,5950µm,0.9s						
CAFI				AML	AML		
	comp=E,5075µm,0.8s						
CAFI				AML	AML		
	comp=E,5125µm,0.8s						
CDCA	**Citt‘ di Caste**	**2.00**	**331**	AML	AML		
	comp=N,10835µm,1.5s						
CDCA				AML	AML		
	comp=E,20600µm,0.9s						
CDCA				AML	AML		
	comp=N,37950µm,1.1s						
CDCA				AML	AML		
	comp=E,11930µm,1.6s						
CDCA				AML	AML		
	comp=N,10835µm,1.5s						
CDCA				AML	AML		
	comp=E,20600µm,0.9s						
CDCA				AML	AML		
	comp=N,37950µm,1.1s						
CDCA				AML	AML		
	comp=E,11930µm,1.6s						
MPAG	**Monte Paganucc**	**2.00**	**343**	AML	AML		
	comp=E,6050µm,1.6s						
MPAG				AML	AML		
	comp=E,6125µm,1.6s						
MPAG				AML	AML		
	comp=N,6935µm,0.8s						
MPAG				AML	AML		
	comp=N,6935µm,0.8s						
MPAG				AML	AML		
	comp=E,6050µm,1.6s						
MPAG				AML	AML		
	comp=E,6125µm,1.6s						
MPAG				AML	AML		
	comp=N,6935µm,0.8s						
MPAG				AML	AML		
	comp=N,6935µm,0.8s						
ATMC	**Monte Cedrone**	**2.00**	**330**	AML	AML		
	comp=E,9135µm,0.9s						
ATMC				AML	AML		
	comp=N,7560µm,0.7s						
ATMC				AML	AML		
	comp=E,9135µm,0.9s						
ATMC				AML	AML		
	comp=N,7560µm,0.7s						
ACER	**Acerenza**	**2.02**	**117**	P	**Pn**	**21 16 43.6**	**0.0**
ACER				AML	AML		
	comp=E,19100µm,1.0s						
ACER				AML	AML		
	comp=N,14450µm,1.0s						
ACER				AML	AML		
	comp=E,19400µm,1.0s						
ACER				AML	AML		
	comp=N,14800µm,1.0s						
ACER				AML	AML		
	comp=E,19400µm,1.0s						
ACER				AML	AML		
	comp=E,19100µm,1.0s						
ACER				AML	AML		
	comp=N,14450µm,1.0s						
ACER				AML	AML		
	comp=N,14800µm,1.0s						
NARO	**Abbazia di Nar**	**2.03**	**339**	AML	AML		
	comp=N,5260µm,1.2s						
NARO				AML	AML		
	comp=E,4540µm,1.6s						
NARO				AML	AML		
	comp=N,5260µm,1.2s						
NARO				AML	AML		
	comp=E,4540µm,1.6s						
BADI	**Badiali**	**2.04**	**332**	AML	AML		
	comp=E,6645µm,0.9s						
BADI				AML	AML		
	comp=N,8195µm,1.2s						
BADI				AML	AML		
	comp=E,6645µm,0.9s						
BADI				AML	AML		
	comp=N,8195µm,1.2s						
SLCN	**Sala Consilina**	**2.05**	**130**	AML	AML		
	comp=N,9610µm,1.3s						
SLCN				AML	AML		
	comp=E,9425µm,1.6s						
SLCN				AML	AML		
	comp=N,9305µm,1.3s						
SLCN				AML	AML		
	comp=E,9335µm,1.6s						
SLCN				AML	AML		
	comp=E,9335µm,1.6s						
SLCN				AML	AML		
	comp=N,9305µm,1.3s						
SLCN				AML	AML		
	comp=N,9610µm,1.3s						
SLCN				AML	AML		
	comp=E,9425µm,1.6s						
FSSB	**Fossombrone**	**2.06**	**344**	AML	AML		
	comp=N,11465µm,1.4s						
FSSB				AML	AML		
	comp=E,8020µm,0.5s						
FSSB				AML	AML		
	comp=N,11465µm,1.4s						
FSSB				AML	AML		
	comp=E,8020µm,0.5s						
MRVN	**Minervino Murg**	**2.08**	**108**	P	**Pn**	**21 16 43.8**	**-0.7**
MRVN				AML	AML		
	comp=E,6955µm,1.0s						
MRVN				AML	AML		
	comp=N,7750µm,1.0s						
MRVN				AML	AML		
	comp=E,6955µm,1.0s						
MRVN				AML	AML		
	comp=N,7750µm,1.0s						
SSP9	**Sansepolcro**	**2.14**	**331**	AML	AML		
	comp=N,8855µm,1.5s						
SSP9				AML	AML		
	comp=E,6465µm,1.3s						
SSP9				AML	AML		
	comp=E,6465µm,1.3s						
SSP9				AML	AML		
	comp=N,8855µm,1.5s						
PARC	**Parchiule**	**2.16**	**333**	AML	AML		
	comp=E,4250µm,0.9s						
PARC				AML	AML		
	comp=N,4360µm,0.9s						
PARC				AML	AML		
	comp=E,4250µm,0.9s						
PARC				AML	AML		
	comp=N,4360µm,0.9s						
MGR	**Morigerati**	**2.18**	**136**	AML	AML		
	comp=N,3035µm,1.6s						
MGR				AML	AML		
	comp=E,3495µm,1.0s						
MGR				AML	AML		
	comp=N,2985µm,0.7s						
MGR				AML	AML		
	comp=E,3905µm,1.0s						
MGR				AML	AML		
	comp=N,3035µm,1.6s						
MGR				AML	AML		
	comp=E,3905µm,1.0s						
MGR				AML	AML		
	comp=E,3495µm,1.0s						
MGR				AML	AML		
	comp=N,2985µm,0.7s						
MCEL	**Monticello**	**2.19**	**129**	AML	AML		
	comp=N,6445µm,0.9s						
MCEL				AML	AML		
	comp=E,6560µm,1.1s						
MCEL				AML	AML		
	comp=N,6385µm,0.9s						
MCEL				AML	AML		
	comp=E,6565µm,1.1s						
MCEL				AML	AML		
	comp=N,6385µm,0.9s						
MCEL				AML	AML		
	comp=E,6560µm,1.1s						
MCEL				AML	AML		
	comp=E,6565µm,1.1s						
MCEL				AML	AML		
	comp=N,6445µm,0.9s						
CASP	**Castiglione de**	**2.27**	**299**	P	**Pn**	**21 16 46.1**	**-1.0**
CASP				AML	AML		
	comp=E,1046µm,0.6s						
CASP				AML	AML		
	comp=N,1470µm,1.3s						
CASP				AML	AML		
	comp=N,1470µm,1.3s						
CASP				AML	AML		
	comp=E,1046µm,0.6s						
CPGN	**Carpegna, Ital**	**2.27**	**337**	AML	AML		
	comp=N,7420µm,0.9s						
CPGN				AML	AML		
	comp=E,12250µm,1.2s						
CPGN				AML	AML		
	comp=N,7565µm,0.9s						
CPGN				AML	AML		
	comp=E,12790µm,1.2s						
CPGN				AML	AML		
	comp=E,12250µm,1.2s						
CPGN				AML	AML		
	comp=E,12790µm,1.2s						
CPGN				AML	AML		
	comp=N,7420µm,0.9s						
CPGN				AML	AML		
	comp=N,7565µm,0.9s						
SIRI	**Monte Sirino -**	**2.32**	**131**	AML	AML		
	comp=E,4915µm,1.6s						
SIRI				AML	AML		
	comp=E,4925µm,1.6s						
SIRI				AML	AML		
	comp=N,3950µm,1.5s						
SIRI				AML	AML		
	comp=E,4915µm,1.6s						
SIRI				AML	AML		
	comp=N,3975µm,1.5s						
SIRI				AML	AML		
	comp=N,3975µm,1.5s						
SIRI				AML	AML		
	comp=N,3950µm,1.5s						
SIRI				AML	AML		
	comp=E,4925µm,1.6s						
FROS	**Frosini**	**2.33**	**311**	AML	AML		
	comp=N,2240µm,1.0s						
FROS				AML	AML		
	comp=E,2920µm,1.4s						
FROS				AML	AML		
	comp=E,2920µm,1.4s						
FROS				AML	AML		
	comp=N,2240µm,1.0s						
TRIF	**Trifonti**	**2.42**	**306**	P	**Pn**	**21 16 48.5**	**-0.6**
TRIF				AML	AML		
	comp=E,1505µm,0.8s						
TRIF				AML	AML		
	comp=N,1550µm,1.2s						
TRIF				AML	AML		
	comp=E,1505µm,0.8s						
TRIF				AML	AML		
	comp=N,1550µm,1.2s						
CUC	**Castrocucco**	**2.42**	**135**	*e*Pn	**Pn**	**21 16 48.5**	**-0.7**
CUC				*e*Sn	**Sn**	**21 17 19.3**	**+0.9**
AMUR	**Altamura**	**2.43**	**109**	AML	AML		
	comp=E,5685µm,1.5s						
AMUR				AML	AML		
	comp=N,6950µm,0.9s						
AMUR				AML	AML		
	comp=N,6950µm,0.9s						
AMUR				AML	AML		
	comp=E,5685µm,1.5s						
CSNT	**Castellina Chi**	**2.43**	**317**	AML	AML		
	comp=N,1370µm,0.9s						
CSNT				AML	AML		
	comp=E,1420µm,1.4s						
CSNT				AML	AML		
	comp=N,1370µm,0.9s						
CSNT				AML	AML		
	comp=E,1420µm,1.4s						
SCHR	**S. Chirico Rap**	**2.43**	**128**	AML	AML		
	comp=N,2660µm,0.9s						
SCHR				AML	AML		
	comp=E,2375µm,1.6s						
SCHR				AML	AML		
	comp=N,2660µm,0.9s						
SCHR				AML	AML		
	comp=E,2375µm,1.6s						
MIGL	**Miglionico**	**2.44**	**116**	AML	AML		
	comp=N,23900µm,1.1s						
MIGL				AML	AML		
	comp=E,21400µm,0.9s						
MIGL				AML	AML		

	comp=N,23900µm,1.1s						
MIGL				AML	AML		
	comp=E,21400µm,0.9s						
ASQU	Asqua	2.46	328	AML	AML		
	comp=E,2610µm,1.0s						
ASQU				AML	AML		
	comp=E,2610µm,1.0s						
ASQU				AML	AML		
	comp=N,3915µm,1.1s						
ASQU				AML	AML		
	comp=N,3915µm,1.1s						
SG1	Sgolgore (BA)	2.50	110	⇓*i*Pn	Pn	21 16 49.7	-0.6
BAI	Bari	2.56	103	⇓*i*Pn	Pn	21 16 50.6	-0.4
MATE	Matera	2.60	113	⇑*i*P	Pn	21 16 52.1	+0.6
MATE	Matera	2.60	113	S	Sn	21 17 23.0	+0.5
LTRZ	Laterza	2.69	113	AML	AML		
	comp=N,6455µm,0.8s						
LTRZ				AML	AML		
	comp=E,3110µm,1.3s						
LTRZ				AML	AML		
	comp=N,6455µm,0.8s						
LTRZ				AML	AML		
	comp=E,3110µm,1.3s						
CELB	S.Piero in Cam	2.70	293	AML	AML		
	comp=E,426µm,0.7s						
CELB				AML	AML		
	comp=E,426µm,0.7s						
CELB				AML	AML		
	comp=N,489µm,0.9s						
CELB				AML	AML		
	comp=N,489µm,0.9s						
NOCI	Noci	2.79	108	AML	AML		
	comp=E,3850µm,1.4s						
NOCI				AML	AML		
	comp=E,3850µm,1.4s						
NOCI				AML	AML		
	comp=N,5730µm,0.6s						
NOCI				AML	AML		
	comp=N,5730µm,0.6s						
SALB	San Lorenzo Be	2.80	130	AML	AML		
	comp=E,1666µm,1.6s						
SALB				AML	AML		
	comp=E,1652µm,1.6s						
SALB				AML	AML		
	comp=N,1815µm,0.9s						
SALB				AML	AML		
	comp=E,1666µm,1.6s						
SALB				AML	AML		
	comp=N,1985µm,0.9s						
SALB				AML	AML		
	comp=N,1815µm,0.9s						
SALB				AML	AML		
	comp=E,1652µm,1.6s						
SALB				AML	AML		
	comp=N,1985µm,0.9s						
CET2	Cetraro	2.84	140	AML	AML		
	comp=N,3810µm,0.8s						
CET2				AML	AML		
	comp=E,4445µm,0.9s						
CET2				AML	AML		
	comp=E,4445µm,0.9s						
CET2				AML	AML		
	comp=N,3810µm,0.8s						
MASS	Massafra	2.91	111	*e*Pn	Pn	21 16 55.1	-0.7
FASA	Fasano	2.99	106	*e*Pn	Pn	21 16 56.7	-0.2
NVLJ	Novalja	3.00	18	*e*Pn	Pn	21 16 57.3	+0.3
TAR1	Taranto	3.05	112	*e*Pn	Pn	21 16 57.3	-0.4
CGL1	Ceglie Messapi	3.13	109	*e*Pn	Pn	21 16 58.8	-0.1
MAIM	Mastiano	3.15	315	AML	AML		
	comp=N,726µm,1.3s						
MAIM				AML	AML		
	comp=E,944µm,0.9s						
MAIM				AML	AML		
	comp=E,944µm,0.9s						
MAIM				AML	AML		
	comp=N,726µm,1.3s						
CELI	Celico	3.22	135	AML	AML		
	comp=N,3130µm,1.2s						
CELI				AML	AML		
	comp=E,1245µm,1.3s						
CELI				AML	AML		
	comp=N,1260µm,1.2s						
CELI				AML	AML		
	comp=E,3065µm,1.3s						
CELI				AML	AML		
	comp=E,3065µm,1.3s						
CELI				AML	AML		
	comp=E,1245µm,1.3s						
CELI				AML	AML		
	comp=N,1260µm,1.2s						
CELI				AML	AML		
	comp=N,3130µm,1.2s						
SMPL	Sampolo	3.22	278	Pg	Pn	21 16 58.9	-1.2
SMPL	Sampolo	3.22	278	AML	AML		
	comp=N,18000µm,1.6s						
SMPL				AML	AML		
	comp=E,21250µm,0.8s						
SMPL				AML	AML		
	comp=N,18000µm,1.6s						
SMPL				AML	AML		
	comp=E,21250µm,0.8s						
UDBI	Udbina	3.23	29	*e*Pn	Pn	21 17 01.5	+1.2
UDBI				Sn	Sn	21 17 35.1	-3.3
IFIL	Filicudi I Eol	3.24	166	AML	AML		
	comp=N,518µm,1.1s						
IFIL				AML	AML		
	comp=E,1675µm,0.7s						
IFIL				AML	AML		
	comp=E,1675µm,0.7s						
IFIL				AML	AML		
	comp=N,518µm,1.1s						
STON	Ston	3.27	68	*e*Pn	Pn	21 17 00.5	-0.3
STON				Sn	Sn	21 17 38.3	-0.9
VLC	Villacollemand	3.38	317	*e*Pn	Pn	21 17 04.4	+2.2
VLC				*e*Sn	Sn	21 17 38.5	-3.4
PGF	Pioggiola	3.50	285	*e*Pn	Pn	21 17 03.3	-0.7
	SNR=1.0						
PGF				*e*Sn	Sn	21 17 41.0	-4.0
	comp=N,201nm,0.5s						
PGF	Pioggiola	3.50	285	*e*Pn	Pn	21 17 03.3	-0.7
PGF				*e*Sn	Sn	21 17 41.0	-4.0
PGF	Pioggiola	3.50	285	*e*P	Pn	21 17 03.3	-0.7
PGF				*e*		21 17 41.0	
PGF	Pioggiola	3.50	285	AML	AML		
	comp=N,686µm,0.6s						
PGF				AML	AML		
	comp=E,632µm,0.7s						
PGF				AML	AML		
	comp=N,686µm,0.6s						
PGF				AML	AML		
	comp=E,632µm,0.7s						
TIP	Timpagrande	3.52	135	*e*Pn	Pn	21 17 06.1	+1.9
TIP				*e*Sn	Sn	21 17 37.7	-7.6
TIP	Timpagrande	3.52	135	⇑*i*P	Pn	21 17 06.3	+2.1
TIP	Timpagrande	3.52	135	P	Pn	21 17 03.8	-0.4
TIP	Timpagrande	3.52	135	AML	AML		
	comp=N,707µm,1.5s						
TIP				AML	AML		
	comp=E,684µm,1.6s						
TIP				AML	AML		
	comp=N,566µm,1.5s						
TIP				AML	AML		
	comp=E,805µm,1.6s						
TIP				AML	AML		
	comp=E,684µm,1.6s						
TIP				AML	AML		
	comp=E,805µm,1.6s						
TIP				AML	AML		
	comp=N,566µm,1.5s						
TIP				AML	AML		
	comp=N,707µm,1.5s						
PLMA	Palmaria, Port	3.59	312	AML	AML		
	comp=N,380µm,1.6s						
PLMA				AML	AML		
	comp=E,350µm,1.6s						
PLMA				AML	AML		
	comp=N,380µm,1.6s						
PLMA				AML	AML		
	comp=E,350µm,1.6s						
GRI	Girifalco	3.62	142	AML	AML		
	comp=N,934µm,1.0s						
GRI				AML	AML		
	comp=E,842µm,0.9s						
GRI				AML	AML		
	comp=N,934µm,1.0s						
GRI				AML	AML		
	comp=E,842µm,0.9s						
TREB	Trebinje	3.69	73	*e*Pn	Pn	21 17 06.7	+0.2
TREB				*e*Sn	Sn	21 17 49.0	-0.5
TREB	Trebinje	3.69	73	⇑*i*Pn	Pn	21 17 06.2	-0.3
HCY	Herceg Novi	3.74	77	⇑*i*Pn	Pn	21 17 07.0	-0.2
HCY				*i* Sn	Sn	21 17 49.9	-0.8
HCY	Herceg Novi	3.74	77	P	Pn	21 17 07.4	+0.2
HCY	Herceg Novi	3.74	77	⇑*i*Pn	Pn	21 17 06.9	-0.2
MSRU	Castanea	3.76	156	AML	AML		
	comp=N,628µm,1.2s						
MSRU				AML	AML		
	comp=E,680µm,1.0s						
MSRU				AML	AML		
	comp=N,628µm,1.2s						
MSRU				AML	AML		
	comp=E,680µm,1.0s						
GRAM	Graiana	3.78	318	AML	AML		
	comp=E,1166µm,0.8s						
GRAM				AML	AML		
	comp=N,1335µm,1.0s						
GRAM				AML	AML		
	comp=N,1335µm,1.0s						
GRAM				AML	AML		
	comp=E,1166µm,0.8s						
MUCR	Ucria	3.81	164	AML	AML		
	comp=N,560µm,0.7s						
MUCR				AML	AML		
	comp=E,248µm,0.5s						
MUCR				AML	AML		
	comp=N,560µm,0.7s						
MUCR				AML	AML		
	comp=E,248µm,0.5s						
SKDS	Skadanscina	3.84	5	*i* Pn	Pn	21 17 08.0	-0.6
KNDS	Knezji Dol	3.85	9	*i* Pn	Pn	21 17 09.0	+0.1
BRY	Bratogost	3.87	71	⇓*i*Pn	Pn	21 17 09.2	0.0
BRY				*i* Sn	Sn	21 17 54.4	+0.2
BRY	Bratogost	3.87	71	P	Pn	21 17 09.7	+0.5
BRY	Bratogost	3.87	71	*e*Pn	Pn	21 17 08.4	-0.8
MCSR	Castroreale	3.87	160	AML	AML		
	comp=N,431µm,0.4s						
MCSR				AML	AML		
	comp=E,360µm,0.3s						
MCSR				AML	AML		
	comp=N,431µm,0.4s						
MCSR				AML	AML		
	comp=E,360µm,0.3s						
NOV	Novara	3.88	161	AML	AML		
	comp=N,201µm,0.8s						
NOV				AML	AML		
	comp=E,310µm,0.8s						
NOV				AML	AML		
	comp=N,201µm,0.8s						
NOV				AML	AML		
	comp=E,310µm,0.8s						
VSL	Villasalto	3.89	237	AML	AML		
	comp=N,426µm,0.9s						
VSL				AML	AML		
	comp=E,398µm,0.9s						
VSL				AML	AML		
	comp=N,426µm,0.9s						
VSL				AML	AML		
	comp=E,398µm,0.9s						
CEL	Celeste	3.89	152	*e*Pn	Pn	21 17 12.2	+2.9
GBRS	Gornja Briga	3.92	13	*i* Pn	Pn	21 17 10.4	+0.7
PLAC	Placanica	3.94	145	AML	AML		
	comp=N,710µm,0.7s						
PLAC				AML	AML		
	comp=E,805µm,1.6s						
PLAC				AML	AML		
	comp=N,710µm,0.7s						
PLAC				AML	AML		
	comp=E,805µm,1.6s						
ALJA	Alia	3.97	178	AML	AML		
	comp=E,273µm,1.2s						
ALJA				AML	AML		
	comp=E,273µm,1.2s						
ALJA				AML	AML		
	comp=N,322µm,0.8s						
ALJA				AML	AML		
	comp=N,322µm,0.8s						
BOJS	Bojanci	3.98	17	*i* Pn	Pn	21 17 12.1	+1.6
BOJS	Bojanci	3.98	17	AML	AML		
	comp=E,2560µm,1.2s						
BOJS				AML	AML		
	comp=N,1395µm,1.2s						
BOJS				AML	AML		
	comp=E,2560µm,1.2s						
BOJS				AML	AML		
	comp=N,1395µm,1.2s						
BUM	Brajici-Budva	4.01	80	⇓*i*Pn	Pn	21 17 11.2	+0.2
BUM				*i* Sn	Sn	21 17 57.8	+0.3
CGL	Cagliari Serpe	4.02	236	AML	AML		
	comp=E,685µm,0.5s						
CGL				AML	AML		
	comp=E,685µm,0.5s						
CGL				AML	AML		
	comp=N,722µm,1.3s						
CGL				AML	AML		
	comp=N,722µm,1.3s						
BLY	Banja Luka	4.02	40	*e*Pn	Pn	21 17 12.8	+1.8
BLY				*e*Sn	Sn	21 17 58.8	+1.2
BLY	Banja Luka	4.02	40	*e*Pn	Pn	21 17 12.1	+1.0
BLY				*e*Sn	Sn	21 17 55.2	-2.4
BLY	Banja Luka	4.02	40	⇓*i*P	Pn	21 17 12.6	+1.6
BLY	Banja Luka	4.02	40	⇑*i*Pn	Pn	21 17 12.0	+1.0
BLY	Banja Luka	4.02	40	AML	AML		
	comp=N,3695µm,1.1s						
BLY				AML	AML		
	comp=E,4270µm,0.9s						
BLY				AML	AML		
	comp=E,4270µm,0.9s						
BLY				AML	AML		
	comp=N,3675µm,1.1s						
BLY				AML	AML		
	comp=N,3675µm,1.1s						
BLY				AML	AML		
	comp=E,4270µm,0.9s						
BLY				AML	AML		
	comp=E,4270µm,0.9s						
BLY				AML	AML		
	comp=N,3695µm,1.1s						
CEY	Cerknica	4.07	8	*e*Pn	Pn	21 17 11.0	-0.7
SOI	Samo	4.11	151	AML	AML		
	comp=N,675µm,0.7s						
SOI				AML	AML		
	comp=E,622µm,0.9s						
SOI				AML	AML		
	comp=N,675µm,0.7s						
SOI				AML	AML		
	comp=E,622µm,0.9s						
OZLJ	Ozalj	4.13	19	*e*Pn	Pn	21 17 14.0	+1.4
OZLJ				Sn	Sn	21 17 57.8	-2.5
NKME	Niksic	4.13	74	⇓*i*Pn	Pn	21 17 13.0	+0.3
NKME				*i* Sn	Sn	21 18 00.9	+0.4
CLTB	Caltabellotta	4.14	184	*e*Pn	Pn	21 17 14.7	+1.9
CLTB	Caltabellotta	4.14	184	P	Pn	21 17 16.4	+3.5
CAGR	Agira	4.15	170	P	Pn	21 17 16.4	+3.4
NKY	Niksic	4.17	73	⇓*i*Pn	Pn	21 17 13.7	+0.4
NKY				*i* Sn	Sn	21 18 01.8	+0.2
NKY	Niksic	4.17	73	P	Pn	21 17 15.6	+2.3
VISS	Visnje	4.18	12	*i* Pn	Pn	21 17 14.1	+0.7
MPAZ	Palizzi	4.20	153	AML	AML		
	comp=E,668µm,0.7s						
MPAZ				AML	AML		
	comp=N,780µm,0.6s						
MPAZ				AML	AML		
	comp=E,668µm,0.7s						
MPAZ				AML	AML		
	comp=N,780µm,0.6s						
DRME	Dracevica, Mon	4.21	82	⇓*i*Pn	Pn	21 17 14.1	+0.4
DRME				*i* Sn	Sn	21 18 02.6	+0.1
DRME	Dracevica, Mon	4.21	82	*e*Pn	Pn	21 17 13.6	-0.1
ULC	Ulcinj	4.25	85	⇑*i*Pn	Pn	21 17 14.5	+0.3
ULC				*i* Sn	Sn	21 18 03.6	+0.3
VAE	Valguarnera	4.29	171	P	Pn	21 17 18.7	+4.0
	comp=N,5.3nm,0.3s,baz=253,slow=6.0,SNR=16						
VAE				S	Sn	21 18 05.2	+0.9
	baz=8.4,slow=19,SNR=2.3						
PDG	Podgorica	4.29	79	*e*Pn	Pn	21 17 15.4	+0.7
PDG				*e*Sn	Sn	21 18 02.6	-1.7
PDG	Podgorica	4.29	79	⇑*i*P	Pn	21 17 15.5	+0.7
PDG	Podgorica	4.29	79	S	Sn	21 18 01.8	-2.5
PDG	Podgorica	4.29	79	⇑*i*Pn	Pn	21 17 15.0	+0.2
PDG	Podgorica	4.29	79	AML	AML		
	comp=N,1670µm,1.2s						
PDG				AML	AML		
	comp=E,1565µm,1.6s						
PDG				AML	AML		
	comp=N,2165µm,1.2s						
PDG				AML	AML		
	comp=E,1210µm,1.2s						
PDG				AML	AML		
	comp=N,1670µm,1.2s						
PDG				AML	AML		
	comp=E,1210µm,1.2s						
PDG				AML	AML		
	comp=E,1565µm,1.6s						
PDG				AML	AML		
	comp=N,2165µm,1.2s						
TTG	Podgorica	4.29	79	⇑*i*Pn	Pn	21 17 15.3	+0.5
TTG				*i* Sn	Sn	21 18 04.8	+0.5
TTG	Podgorica	4.29	79	*e*Pn	Pn	21 17 14.7	-0.1
TTG	Podgorica	4.29	79	*e*P	Pn	21 17 14.7	-0.1
CRES	Cresnjev	4.33	18	⇑*i*Pn	Pn	21 17 16.1	+0.8
CGRP	Cima Grappa	4.35	343	AML	AML		
	comp=N,1640µm,0.7s						
CGRP				AML	AML		
	comp=E,1785µm,0.9s						
CGRP				AML	AML		
	comp=E,1785µm,0.9s						
CGRP				AML	AML		
	comp=N,1640µm,0.7s						
LJU	Ljubljana	4.38	9	*e*Pn	Pn	21 17 16.8	+0.7
LJU				*e*Pg	Pg	21 17 35.8	+1.4
LJU				*e*Sn	Sn	21 18 08.7	+2.2
LJU				*e*Sg	Sg	21 18 33.5	+2.5
	comp=Z,4µm,2.6s						
LJU	Ljubljana	4.38	9	P	Pn	21 17 16.9	+0.9
LJU	Ljubljana	4.38	9	⇑*i*Pn	Pn	21 17 16.7	+0.7
LJU	Ljubljana	4.38	9	P	Pn	21 17 16.8	+0.7
LJU				AML	AML		
	comp=E,3150µm,1.0s						
LJU				AML	AML		
	comp=N,3335µm,1.2s						
LJU				AML	AML		
	comp=N,3335µm,1.2s						
LJU				AML	AML		
	comp=E,3150µm,1.0s						
FAVR	Favara	4.45	179	P	Pn	21 17 22.4	+5.4
ZAG	Zagreb	4.46	22	*e*Pn	Pn	21 17 17.9	+0.7
DOB	Doboj	4.48	46	*e*Pn	Pn	21 17 17.2	-0.1
HLNI	Lentini	4.48	167	P	Pn	21 17 19.3	+1.9
HLNI				AML	AML		
	comp=E,145µm,1.6s						
HLNI				AML	AML		
	comp=N,170µm,1.6s						
HLNI				AML	AML		
	comp=E,145µm,1.6s						
HLNI				AML	AML		
	comp=N,170µm,1.6s						
SALO	Salr	4.48	331	P	Pn	21 17 17.9	+0.5
SALO				AML	AML		
	comp=E,1370µm,0.8s						
SALO				AML	AML		
	comp=N,1495µm,1.2s						
SALO				AML	AML		
	comp=E,1370µm,0.8s						
SALO				AML	AML		
	comp=N,1495µm,1.2s						
KOME	Kolasin	4.55	74	⇓*i*Pn	Pn	21 17 18.9	+0.4
KOME				*i* Sn	Sn	21 18 11.0	0.0
MAGA	Magasa	4.58	333	P	Pn	21 17 19.4	+0.5
MAGA				AML	AML		
	comp=E,2525µm,0.6s						
MAGA				AML	AML		
	comp=N,1270µm,0.5s						
MAGA				AML	AML		
	comp=N,1270µm,0.5s						
MAGA				AML	AML		
	comp=E,2525µm,0.6s						
PLE	Pljevlja	4.59	68	⇑*i*Pn	Pn	21 17 20.5	+1.4
PLE				*i* Sn	Sn	21 18 12.1	+0.1
PLE	Pljevlja	4.59	68	P	Pn	21 17 21.8	+2.7
HAPS	Han Pijesak,Bl	4.61	57	*e*Pn	Pn	21 17 19.7	+0.5
HAPS				*e*Sn	Sn	21 18 11.2	-1.1
HAPS	Han Pijesak,Bl	4.61	57	*e*Pn	Pn	21 17 19.0	-0.2
HVZN	Vizzini	4.62	169	P	Pn	21 17 21.2	+1.8
HVZN				AML	AML		
	comp=E,1590µm,0.9s						
HVZN				AML	AML		
	comp=N,1795µm,1.0s						
HVZN				AML	AML		
	comp=N,1795µm,1.0s						
HVZN				AML	AML		
	comp=E,1590µm,0.9s						
VLO	Vlora	4.65	104	P	Pn	21 17 20.3	+0.6
VLO	Vlora	4.65	104	*i* PN	Pn	21 17 20.3	+0.6
VLO				*i* SN	Sb	21 18 21.7	-5.3
AGOR	Agordo	4.69	347	P	Pn	21 17 22.3	+1.9
AGOR				AML	AML		
	comp=E,697µm,1.6s						
AGOR				AML	AML		
	comp=N,486µm,0.7s						
AGOR				AML	AML		
	comp=N,486µm,0.7s						
AGOR				AML	AML		
	comp=E,697µm,1.6s						
IMI	Imperia	4.71	300	P	Pn	21 17 20.0	-0.7
PUK	Puka	4.73	84	P	Pn	21 17 21.5	+0.6
PUK				AML	AML		
	comp=E,1965µm,1.1s						
PUK				AML	AML		
	comp=N,1975µm,0.7s						
PUK				AML	AML		
	comp=N,1975µm,0.7s						
PUK				AML	AML		
	comp=E,1965µm,1.1s						
PUK	Puka	4.73	84	*i* PN	Pn	21 17 21.4	+0.4
PUK				*i* SN	Sn	21 18 16.1	+0.8
TIR	Tirane	4.74	92	*e*Pn	Pn	21 17 21.5	+0.5
TIR				*e*Sn	Sn	21 18 14.4	-1.0
TIR	Tirane	4.74	92	*e*Pn	Pn	21 17 21.4	+0.5
TIR				*e*Sn	Sn	21 18 15.2	-0.2
TIR	Tirane	4.74	92	⇑*i*P	Pn	21 17 21.5	+0.5
TIR	Tirane	4.74	92	S	Sn	21 18 14.4	-1.0
TIR	Tirane	4.74	92	P	Pn	21 17 21.4	+0.5
TIR	Tirane	4.74	92	*e*P	Pn	21 17 21.4	+0.5
TIR				*e*		21 18 15.2	
TIR	Tirane	4.74	92	*i* PN	Pn	21 17 21.4	+0.5
TIR				*i* SN	Sn	21 18 18.0	+2.6
BBLS	Lazići	4.80	62	*e*Pn	Pn	21 17 23.1	+1.2
BBLS				*e*Sn	Sn	21 18 15.0	-2.0
BBLS	Lazići	4.80	62	⇑*i*Pn	Pn	21 17 21.9	0.0
NEGI	Seborga	4.81	298	P	Pn	21 17 22.5	+0.5
NEGI				AML	AML		
	comp=E,206µm,0.9s						
NEGI				AML	AML		
	comp=N,146µm,0.9s						
NEGI				AML	AML		
	comp=N,146µm,0.9s						
NEGI				AML	AML		
	comp=E,206µm,0.9s						
ACOM	Acomizza, Ital	4.83	360	P	Pn	21 17 23.0	+0.7
PVY	Plav	4.83	77	⇓*i*Pn	Pn	21 17 24.1	+1.8
PVY				*i* Sn	Sn	21 18 17.6	-0.2
IVA	Berane	4.83	74	⇓*i*Pn	Pn	21 17 23.7	+1.4
OBKA	Obir	4.84	8	*e*Pn	Pn	21 17 23.5	+1.1
	comp=E,49nm,0.5s,SNR=28						
MABI	Malga Bissina	4.86	334	P	Pn	21 17 22.7	-0.2
BCI	Bajram Curri	4.88	80	*i* PN	Pn	21 17 23.9	+0.9
BCI				*i* SN	Sn	21 18 22.2	+3.3
MYKA	Terra Mystica	4.91	1	*e*Pn	Pn	21 17 23.6	+0.2
	comp=E,21nm,0.4s,SNR=18						
MON	Monaco	4.95	296	Pn	Pn	21 17 24.1	+0.3
SAOF	Saorge	4.97	299	P	Pn	21 17 23.4	-0.7
SAOF	Saorge	4.97	299	P	Pn	21 17 23.6	-0.5
SAOF				AML	AML		
	comp=E,638µm,0.6s						
SAOF				AML	AML		
	comp=N,328µm,0.5s						
SAOF				AML	AML		
	comp=N,328µm,0.5s						
SAOF				AML	AML		
	comp=E,638µm,0.6s						
SJES	Sjenica	4.98	70	*e*Pn	Pn	21 17 25.5	+1.1
SJES				*e*Sn	Sn	21 18 19.6	-1.9
SBF	Sospel	5.00	297	*e*Pn	Pn	21 17 23.6	-1.0
	SNR=1.0						
SBF				*e*Sn	Sn	21 18 16.1	-5.7
	comp=E,143nm,0.7s						
SBF	Sospel	5.00	297	*e*Pn	Pn	21 17 23.6	-1.0
SBF				*e*Sn	Sn	21 18 16.1	-5.7

SBF	Sospel	5.00	297	eP	Pn	21 17 23.6	-1.0
SBF				e		21 18 16.1	
KOSI	Kohlern	5.00	342	P	Pn	21 17 25.3	+0.7
APPI	Appiano	5.05	341	P	Pn	21 17 26.6	+1.3
SOKA	Soboth	5.07	11	ePn	Pn	21 17 25.7	+0.2
	comp=E,9.2nm,0.4s,SNR=17						
TPE	Tepelena	5.08	104	ePn	Pn	21 17 26.0	+0.4
TPE	Tepelena	5.08	104	P	Pn	21 17 26.0	+0.4
TPE	Tepelena	5.08	104	i PN	Pn	21 17 25.7	+0.1
TPE				i SN	Sn	21 18 28.6	+4.9
ABTA	Abfaltersbach	5.08	352	ePn	Pn	21 17 25.1	-0.7
	comp=E,68nm,0.8s,SNR=34						
KOGS	Kog	5.11	21	P	Pn	21 17 25.5	-0.5
KEK	Kerkira	5.14	111	ePn	Pn	21 17 26.5	0.0
KEK	Kerkira	5.14	111	P	Pn	21 17 26.5	0.0
KEK	Kerkira	5.14	111	P	Pn	21 17 28.5	+2.0
PHP	Peshkopia	5.14	88	ePn	Pn	21 17 27.3	+0.7
PHP	Peshkopia	5.14	88	P	Pn	21 17 27.3	+0.7
PHP	Peshkopia	5.14	88	eP	Pn	21 17 27.3	+0.7
PHP	Peshkopia	5.14	88	i PN	Pn	21 17 27.9	+1.3
PHP				i SN	Sn	21 18 29.5	+4.0
TEKS	Tekeris	5.20	55	ePn	Pn	21 17 28.6	+1.3
TEKS	Tekeris	5.20	55	ePn	Pn	21 17 27.9	+0.6
IVAS	Ivanjica	5.20	67	ePn	Pn	21 17 27.6	+0.3
IVAS				eSn	Sn	21 18 25.4	-1.4
SRN	Sarande	5.21	109	ePn	Pn	21 17 28.1	+0.6
SRN	Sarande	5.21	109	P	Pn	21 17 28.1	+0.6
SRN	Sarande	5.21	109	i PN	Pn	21 17 28.6	+1.1
SRN				i SN	Sb	21 18 35.6	-7.7
STV	Sant Anna di V	5.23	301	P	Pn	21 17 29.4	+1.6
ABSI	Aberstueckl	5.26	343	P	Pn	21 17 29.0	+0.7
BEHE	Becsehely	5.28	25⇑	iPn	Pn	21 17 28.9	+0.5
BEHE	Becsehely	5.28	25	ePn	Pn	21 17 35.0	+6.7
BEHE				Sn	Sn	21 18 27.0	-1.7
BEHE				eSg	Sg	21 19 01.0	+1.1
DIVS	Divibare	5.28	61	ePn	Pn	21 17 28.8	+0.3
DIVS	Divibare	5.28	61	ePn	Pn	21 17 27.9	-0.5
DIVS				eSn	Sn	21 18 22.6	-6.3
DIVS	Divibare	5.28	61⇑	iPn	Pn	21 17 28.0	-0.5
RISI	Rein	5.34	349	P	Pn	21 17 31.7	+2.4
MOSI	Grossmontoni	5.36	337	P	Pn	21 17 33.3	+3.7
KBA	Koelnbreinsper	5.36	358	ePn	Pn	21 17 31.0	+1.4
	comp=E,18nm,0.4s,SNR=19						
KBA	Koelnbreinsper	5.36	358	P	Pn	21 17 29.3	-0.4
KBA				pmax	pmax		
	comp=Z,226nm,0.8s						
ISO	Isola	5.38	299	Pn	Pn	21 17 30.9	+1.1
DOI	San Damiano	5.40	303	P	Pn	21 17 33.0	+2.8
FRF	La Foret Royal	5.43	292	ePn	Pn	21 17 28.5	-1.9
	SNR=1.0						
FRF	La Foret Royal	5.43	292	eP	Pn	21 17 32.6	+2.2
FRF				eSn	Sn	21 18 26.8	-5.6
	comp=Z,33nm,0.5s						
FRF	La Foret Royal	5.43	292	ePn	Pn	21 17 28.5	-1.9
FRF				eSn	Sn	21 18 26.8	-5.6
ROSI	Rosskopf	5.43	344	P	Pn	21 17 33.3	+2.7
FUORN	Ofenpass-Fuorn	5.45	335	ePn	Pn	21 17 33.0	+2.2
FUORN	Ofenpass-Fuorn	5.45	335	P	Pn	21 17 33.3	+2.4
LMR	La Mourre	5.46	290	ePn	Pn	21 17 29.2	-1.7
	SNR=1.0						
LMR	La Mourre	5.46	290	eP	Pn	21 17 33.6	+2.7
LMR				eSn	Sn	21 18 27.7	-5.5
	comp=Z,48nm,0.5s,SNR=1.0						
LMR	La Mourre	5.46	290	ePn	Pn	21 17 29.2	-1.7
LMR				eSn	Sn	21 18 27.7	-5.5
LMR	La Mourre	5.46	290	eP	Pn	21 17 29.2	-1.7
LMR				e		21 18 27.7	
OHR	Ohrid	5.47	94	i Pn	Pn	21 17 31.9	+0.9
IGT	Igoumenitsa	5.59	111	ePn	Pn	21 17 32.5	-0.2
IGT	Igoumenitsa	5.59	111	P	Pn	21 17 32.5	-0.2
IGT	Igoumenitsa	5.59	111	eP	Pn	21 17 32.5	-0.2
TRUS	Trudelj	5.61	61	ePn	Pn	21 17 33.0	+0.1
VDL	Val di Lei	5.61	329	P	Pn	21 17 34.9	+1.8
TUE	Stuetta	5.64	329	ePn	Pn	21 17 36.1	+2.6
TUE				eSn	Sn	21 18 37.2	-0.7
SURF	Saint Ours	5.66	301	Pn	Pn	21 17 35.7	+1.9
FETA	Feichten	5.68	340	ePn	Pn	21 17 36.1	+2.1
	comp=Z,25nm,0.9s,SNR=17						
GRUS	Gruza	5.69	65	ePn	Pn	21 17 34.4	+0.4
FRGS	Fruska Gora	5.70	51	ePn	Pn	21 17 34.2	+0.1
FRGS	Fruska Gora	5.70	51	ePn	Pn	21 17 34.1	0.0
ARSA	Arzberg	5.70	14	i Pn	Pn	21 17 35.3	+1.1
	comp=Z,4.6nm,0.3s,SNR=22						
ARSA	Arzberg	5.70	14	P	Pn	21 17 35.5	+1.2
DAVOX	Davos/Dischmat	5.71	334	P	Pn	21 17 36.4	+2.0
	comp=Z,5.1nm,0.3s,baz=152,slow=18,SNR=49						
DAVOX				S	Sn	21 18 41.4	+1.8
	baz=116,slow=20,SNR=2.1						
DAVOX				LR	LR	21 20 28.6	
	comp=Z,6µm,19.2s,baz=116,slow=45						
DAVOX	Davos/Dischmat	5.71	334	P	Pn	21 17 39.2	+4.7
WTTA	Wattenberg	5.71	347	ePn	Pn	21 17 36.7	+2.2
	comp=Z,30nm,0.8s,SNR=6.9						
SQTA	Sankt Quirin	5.75	344	ePn	Pn	21 17 36.8	+1.7
	comp=Z,5.7nm,0.3s,SNR=18						
KRUS	Krusevo	5.77	91	i Pn	Pn	21 17 35.0	-0.2
SELS	Selova	5.78	72	ePn	Pn	21 17 35.3	0.0
WATA	Walderalm	5.79	346	ePn	Pn	21 17 37.4	+1.8
	comp=Z,26nm,0.5s,SNR=31						
MORH	Mrgy, Hungar	5.80	37⇑	iPn	Pn	21 17 34.7	-0.7
MORH	Mrgy, Hungar	5.80	37	ePn	Pn	21 17 34.1	-1.4
MORH				Sn	Sn	21 18 42.0	+0.6
NEST	Nestorio	5.80	101	P	Pn	21 17 37.6	+1.9
MBDF	Montbardon	5.80	303	eP	Pn	21 17 36.5	+0.8
MBDF				eSn	Sn	21 18 35.8	-6.1
	comp=Z,103nm,0.8s						
MBDF	Montbardon	5.80	303	ePn	Pn	21 17 36.5	+0.8
MBDF				eSn	Sn	21 18 35.8	-6.1
MBDF	Montbardon	5.80	303	eP	Pn	21 17 36.5	+0.8
MBDF				e		21 18 35.8	
OGAG	Argentiere	5.83	300	Pn	Pn	21 17 41.2	+5.2
BIA	Bitola	5.88	94	i Pn	Pn	21 17 37.6	+1.0
RRL	Rocca Remolon	5.89	305	P	Pn	21 17 40.6	+3.6
MOTA	Moosalm	5.89	343	ePn	Pn	21 17 38.8	+1.8
	comp=Z,13nm,0.5s,SNR=40						
JAN	Janina	5.91	108	ePn	Pn	21 17 37.9	+0.9
JAN	Janina	5.91	108	P	Pn	21 17 37.9	+0.9
JAN	Janina	5.91	108	eP	Pn	21 17 37.9	+0.9
BEO	Beograd	5.91	56	P	Pn	21 17 36.1	-0.9
PENT	Pentalofos	5.93	102	P	Pn	21 17 38.7	+1.3
LSD	Lago del Serru	5.98	311	P	Pn	21 17 41.9	+3.6
ARTF	Artigues	6.02	291	Pn	Pn	21 17 37.9	-0.7
BNI	Bardonecchia	6.03	306	ePn	Pn	21 17 40.4	+1.6
BNI	Bardonecchia	6.03	306	eP	Pn	21 17 40.4	+1.6
TIH	Tihany	6.04	29	ePn	Pn	21 17 34.0	-4.7
TIH				Sn	Sn	21 18 46.0	-1.3
RETA	Reutte	6.11	342	ePn	Pn	21 17 41.0	+1.2
	comp=Z,47nm,0.9s,SNR=19						
MOA	Molln	6.15	4	i Pn	Pn	21 17 41.4	+1.0
	comp=Z,73nm,0.7s,SNR=48						
SVIS	Svilajnac	6.16	63	ePn	Pn	21 17 41.6	+1.2
SVIS				eSn	Sn	21 18 48.8	-1.5
DAVA	Damuels	6.16	336	ePn	Pn	21 17 43.4	+2.8
	comp=Z,16nm,0.6s,SNR=24						
LKD2	Lefkada island	6.16	116	ePn	Pn	21 17 41.0	+0.5
LKD2	Lefkada island	6.16	116	P	Pn	21 17 41.0	+0.5
MLYF	Mely	6.17	294	Pn	Pn	21 17 41.5	+0.8
KPRO	Kipourio	6.17	104	P	Pn	21 17 41.2	+0.5
BARS	Barje	6.21	77	ePn	Pn	21 17 41.6	+0.4
BARS	Barje	6.21	77	ePn	Pn	21 17 46.6	+5.4
BARS				eSn	Sn	21 18 49.8	-2.0
BSTF	la Bastide-des	6.22	293	Pn	Pn	21 17 40.8	-0.5
LPG	La Plagne	6.22	310	eP	Pn	21 17 44.8	+3.2
LPG				eSn	Sn	21 18 45.1	-7.3
	comp=Z,110nm,0.8s						
LPG	La Plagne	6.22	310	ePn	Pn	21 17 44.8	+3.2
LPG				eSn	Sn	21 18 45.1	-7.3
LPG	La Plagne	6.22	310	eP	Pn	21 17 43.2	+1.6
LPG				pmax	pmax		
	comp=Z,39nm,0.7s						
LPL	La Plagne	6.25	310	eP	Pn	21 17 44.6	+2.7
LPL				eSn	Sn	21 18 45.0	-7.9
	comp=Z,128nm,1.0s						
LPL	La Plagne	6.25	310	ePn	Pn	21 17 44.6	+2.7
LPL				eSn	Sn	21 18 45.0	-7.9
LPL	La Plagne	6.25	310	eP	Pn	21 17 44.2	+2.3
LPL				pmax	pmax		
	comp=Z,24nm,0.5s						
EVGI	Lefkada island	6.25	117	P	Pn	21 17 41.2	-0.5
SMRF	Simiane la Rot	6.29	294	ePn	Pn	21 17 39.6	-2.8
	SNR=1.0						
SMRF	Simiane la Rot	6.29	294	eP	Pn	21 17 43.0	+0.6
SMRF	Simiane la Rot	6.29	294	ePg	Pn	21 17 43.0	+0.6
BOVS	Bovan	6.29	70	ePn	Pn	21 17 43.3	+1.0
SOP	Sopron	6.33	19	P	Pn	21 17 43.3	+0.5
SOP				pmax	pmax		
	comp=Z,80nm,0.7s						
SOP	Sopron	6.33	19	ePn	Pn	21 17 39.1	-3.8
SOP				Sn	Sn	21 18 47.0	-7.6
SOP				eSg	Sg	21 19 37.0	+3.5
RUSF	Rustrel	6.35	293	Pn	Pn	21 17 43.6	+0.5
KZN	Kozani	6.36	100	ePn	Pn	21 17 44.3	+1.0
KZN	Kozani	6.36	100	P	Pn	21 17 44.3	+1.0
RSL	Roselend	6.41	311	Pn	Pn	21 17 48.1	+4.1
CONA	Conrad Observa	6.42	14	ePn	Pn	21 17 44.2	+0.1
	comp=Z,26nm,0.6s,SNR=23						
STIP	Stip	6.45	87	i Pn	Pn	21 17 46.4	+2.0
VLS	Valsamata	6.45	121	ePn	Pn	21 17 43.8	-0.7
VLS	Valsamata	6.45	121	P	Pn	21 17 43.8	-0.7
VLS	Valsamata	6.45	121	eP	Pn	21 17 43.8	-0.7
ORIF	Oris-en-Rattie	6.46	302	eP	Pn	21 17 46.7	+2.1
ORIF	Oris-en-Rattie	6.46	302	ePn	Pn	21 17 46.7	+2.1
ORIF	Oris-en-Rattie	6.46	302	eP	Pn	21 17 46.3	+1.7
ORIF				pmax	pmax		
	comp=Z,50nm,0.6s						
SENIN	Lac Senin/Sane	6.48	318	ePn	Pn	21 17 48.3	+3.3
KUBS	Kucevo	6.52	63	ePn	Pn	21 17 46.1	+0.7
MDVR	Moldovita	6.69	60⇑	iP	Pn	21 17 47.8	0.0
GRG	Griva	6.69	94	P	Pn	21 17 49.2	+1.4
GRG	Griva	6.69	94	ePn	Pn	21 17 48.0	+0.2
GRG	Griva	6.69	94	P	Pn	21 17 48.0	+0.2
GRG	Griva	6.69	94	eP	Pn	21 17 48.0	+0.2
ZAGS	Zajecar	6.71	69	ePn	Pn	21 17 48.6	+0.6
VAY	Valandovo	6.77	90	i Pn	Pn	21 17 42.0	-6.8
THL	Klokotos Trika	6.77	106	P	Pn	21 17 49.8	+0.9
KEST	Kesra	6.83	210	ePn	Pn	21 17 52.0	+2.3
KEST	Kesra	6.83	210	P	Pn	21 17 51.7	+1.9
	comp=Z,8.5nm,0.3s,baz=330,slow=5.2,SNR=84						
KEST				S	Sn	21 19 05.6	-1.4
	comp=Z,2.0nm,0.3s,baz=4.2,slow=19,SNR=3.9						
KEST				LR	LR	21 20 37.4	
	comp=Z,5µm,18.1s,baz=304,slow=38						
PVO	Paravola	6.83	114	P	Pn	21 17 51.0	+1.2
ZAPS	Zavoj	6.88	74	ePn	Pn	21 17 51.4	+1.0
ZAPS				eSn	Sn	21 19 04.7	-3.4
EVR	Evrytania	6.89	111	ePn	Pn	21 17 51.3	+0.7
EVR	Evrytania	6.89	111	P	Pn	21 17 51.3	+0.7
OGSM	Saint Maurice	6.91	307	Pn	Pn	21 17 54.4	+3.7
ZST	Bratislava	6.94	20	eP	Pn	21 17 50.7	-0.5
ZST	Bratislava	6.94	20	ePN	Pn	21 17 50.7	-0.5
LIT	Litokhoron	6.95	101	ePn	Pn	21 17 53.2	+1.9
LIT				eSn	Sn	21 19 06.1	-3.8
LIT	Litokhoron	6.95	101	P	Pn	21 17 51.8	+0.5
LIT	Litokhoron	6.95	101	P	Pn	21 17 53.8	+2.5
LIT				pmax	pmax		
	comp=Z,235nm,0.8s						
SRO2	Moca	6.95	28	eP	Pn	21 17 50.6	-0.7
SRO2	Moca	6.95	28	ePN	Pn	21 17 50.6	-0.7
AXS	Araxos	6.95	118	P	Pn	21 17 51.6	+0.3
BUD	Budapest	6.95	32	ePn	Pn	21 17 52.0	+0.7
BUD				Sn	Sn	21 19 09.1	-0.8
BUD				eSg	Sg	21 19 58.0	+4.6
SRO	Srobarova	6.96	27	eP	Pn	21 17 52.1	+0.6
SRO				e		21 19 07.8	
SRO	Srobarova	6.96	27	ePN	Pn	21 17 52.1	+0.6
SRO				eSN	Sn	21 19 07.8	-2.4
BZS	Buzias	7.01	54	ePn	Pn	21 17 52.1	-0.1
BZS	Buzias	7.01	54⇓	iP	Pn	21 17 53.1	+0.9
KNT	Kendrikon	7.03	91	eP	Pn	21 17 53.7	+1.2
SLE	Schleitheim	7.04	331	P	Pn	21 17 54.3	+1.7
RLS	Riolos of Patr	7.09	118	ePn	Pn	21 17 51.8	-1.4
RLS	Riolos of Patr	7.09	118	P	Pn	21 17 51.8	-1.4
KKB	Krupnik	7.11	86	P	Pn	21 17 53.9	+0.3
ANX	Ano Chora	7.12	113	P	Pn	21 17 55.4	+1.7
GEA0	GERESS Array S	7.12	1	ePn	Pn	21 17 52.0	-1.7
GEC2	GERESS Array S	7.13	1	ePn	Pn	21 17 53.0	-0.9
GEC2				eSn	Sn	21 19 11.7	-2.6
GERES	GERESS Array B	7.13	1	P	Pn	21 17 54.0	+0.2
	comp=Z,5.7nm,0.3s,baz=174,slow=13,SNR=87						
GERES				S	Sn	21 19 11.7	-2.6
	comp=Z,4.1nm,0.3s,baz=176,slow=21,SNR=3.4						
GERES				LR	LR	21 20 50.1	
	comp=Z,614nm,21.5s,baz=184,slow=39						
MODS	Modra-Piesok	7.15	20	eP	Pn	21 17 54.1	0.0
MODS	Modra-Piesok	7.15	20	ePN	Pn	21 17 54.1	0.0
MODS	Modra-Piesok	7.15	20	eSG	Sg	21 19 57.9	-1.9
HERR	Herculane	7.18	61⇑	iP	Pn	21 17 55.2	+0.7
HERR	Herculane	7.18	61	S	Sn	21 19 15.1	-0.5
EFP	Efpalio	7.19	114	P	Pn	21 17 55.7	+1.1
VIVF	Saint-Julien-l	7.21	299	ePn	Pn	21 17 51.8	-3.1
	SNR=1.0						
VIVF	Saint-Julien-l	7.21	299	eP	Pn	21 17 56.4	+1.5
VIVF				eSn	Sn	21 19 10.0	-6.3
	comp=Z,9.3nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	7.21	299	ePn	Pn	21 17 51.8	-3.1
VIVF				ePg	Pn	21 17 56.4	+1.5
VIVF				eSn	Sn	21 19 10.0	-6.3
VIVF	Saint-Julien-l	7.21	299	eP	Pn	21 17 54.1	-0.8
VIVF				pmax	pmax		
	comp=Z,8.0nm,0.4s						
AGG	Agios Georgios	7.21	109	P	Pn	21 17 56.2	+1.3
AGG	Agios Georgios	7.21	109	ePn	Pn	21 17 57.6	+2.7
AGG	Agios Georgios	7.21	109	P	Pn	21 17 54.4	-0.5
OG35	Corcelles	7.21	310	Pn	Pn	21 17 58.4	+3.4
VTS	Vitosha	7.24	80	ePn	Pn	21 17 55.5	+0.1
VTS	Vitosha	7.24	80	ePn	Pn	21 17 55.3	-0.1
VTS				eSn	Sn	21 19 14.7	-2.5
VTS	Vitosha	7.24	80⇑	iP	Pn	21 17 55.6	+0.1
VTS	Vitosha	7.24	80	S	Sn	21 19 16.4	-0.8
VTS	Vitosha	7.24	80	P	Pn	21 17 54.7	-0.7
VTS	Vitosha	7.24	80	P	Pn	21 17 55.2	-0.2
CABF	La Chapelle	7.27	315	eP	Pn	21 17 57.9	+2.1
CABF	La Chapelle	7.27	315	ePn	Pn	21 17 57.9	+2.1
CABF	La Chapelle	7.27	315	eP	Pn	21 17 57.9	+2.1
CABF				pmax	pmax		
	comp=Z,15nm,0.6s						
HORT	Hortiatis	7.28	96	eP	Pn	21 17 54.5	-1.4
MAHO	Mahon	7.29	259	eP	Pb	21 18 10.0	-6.4
MAHO				eS	Sn	21 19 22.9	+4.7
SERG	Sergoula	7.30	114	P	Pn	21 17 58.0	+1.9
DRO	Drossia	7.31	118	P	Pn	21 17 56.0	-0.2
SMOL	Smolenice	7.32	21	eP	Pn	21 17 58.9	+2.5
SMOL	Smolenice	7.32	21	ePN	Pn	21 17 58.8	+2.4
PUNG	Punghina	7.33	66⇑	iP	Pn	21 17 58.0	+1.6
LAKA	Lakka	7.33	116	ePn	Pn	21 17 56.2	-0.4
LAKA	Lakka	7.33	116	P	Pn	21 17 56.2	-0.4
TRIZ	Trizonia	7.33	114	P	Pn	21 17 57.8	+1.2
KALE	Kalithea	7.37	114	ePn	Pn	21 17 59.0	+1.9
KALE	Kalithea	7.37	114	P	Pn	21 17 59.0	+1.9
SIRR	Siria	7.39	49⇑	iP	Pn	21 17 58.6	+1.2
LOMF	Lomont	7.41	322	P	Pn	21 17 58.5	+0.8
ALIK	Aliki, Aigiali	7.41	115	P	Pn	21 18 01.1	+3.5
KHC	Kasperske Hory	7.41	0	ePn	Pn	21 17 56.3	-1.4
KHC	Kasperske Hory	7.41	0	ePN	Pn	21 17 56.2	-1.5
KHC				ex	x	21 18 07.0	
KHC				eSN	Sn	21 19 17.6	-3.7
KHC				AMS	AMS	21 21 10.0	
	comp=Z,3µm,11.3s						
KHC	Kasperske Hory	7.41	0	eP	Pn	21 17 56.2	-1.5
KHC				e		21 19 17.6	
KHC				MLR	MLR		
	comp=Z,3µm,11.3s						
WET	Wettzell	7.44	356	P	Pn	21 17 58.0	-0.1
WET				pmax	pmax		
	comp=Z,47nm,0.8s						
TRBF	Trabuc cave	7.45	292	Pn	Pn	21 17 58.1	-0.1
SSB	Saint Sauveur	7.46	301	ePn	Pn	21 18 00.6	+2.2
LASF	Ste Croix	7.51	292	ePn	Pn	21 17 56.7	-2.3
	SNR=1.0						
LASF	Ste Croix	7.51	292	eP	Pn	21 18 00.6	+1.6
LASF				eSn	Sn	21 19 16.7	-7.0
	comp=Z,7.2nm,0.4s						
LASF	Ste Croix	7.51	292	eP	Pn	21 18 00.6	+1.6
LASF				eSn	Sn	21 19 16.7	-7.0
AMT	Artemida-Makis	7.54	121	P	Pn	21 18 00.1	+0.6
KLV	Kalavryta, Ach	7.55	116	ePn	Pn	21 17 59.3	-0.3
KLV	Kalavryta, Ach	7.55	116	P	Pn	21 17 59.3	-0.3
AXAR	Agios Charalam	7.55	110	ePn	Pn	21 18 01.6	+2.0
AXAR	Agios Charalam	7.55	110	P	Pn	21 18 01.6	+2.0
BFO	Black Forest	7.58	332	ePn	Pn	21 18 00.0	0.0
BFO	Black Forest	7.58	332	i P	Pn	21 18 01.4	+1.4
KRUC	Moravsky	7.61	14	P	Pn	21 18 01.2	+0.9
KRUC				pmax	pmax		
	comp=Z,22nm,0.9s						
KRUC	Moravsky	7.61	14	ePN	Pn	21 18 00.3	0.0
MMB	Musomiste	7.61	88	P	Pn	21 18 01.1	+0.7
DSF	Desfina	7.62	113	ePn	Pn	21 18 00.6	0.0
DSF	Desfina	7.62	113	P	Pn	21 18 00.6	0.0
GZR	Gura Zlata	7.63	58⇓	iP	Pn	21 18 01.0	+0.3
SRE	Strehaia	7.63	64⇑	iP	Pn	21 18 02.9	+2.2
MOF	Molkenrain	7.65	325	P	Pn	21 18 00.4	-0.6
PSZ	Piszkesteto	7.66	34	ePn	Pn	21 18 01.3	+0.3
PSZ	Piszkesteto	7.66	34⇓	iP	Pn	21 18 01.5	+0.5
PSZ	Piszkesteto	7.66	34	eP	Pn	21 18 01.3	+0.3
PSZ	Piszkesteto	7.66	34	ePn	Pn	21 18 04.1	+3.0
PSZ				⇓Sn	Sn	21 18 58.1	-29
KOLL	Kolacno	7.66	25	eP	Pn	21 18 01.5	+0.5
KOLL	Kolacno	7.66	25	ePN	Pn	21 18 01.5	+0.5
TREC	Trest	7.70	9	ePN	Pn	21 18 01.1	-0.4
TREC				AMS	AMS	21 21 20.0	
	comp=Z,10µm,14.2s						
TREC	Trest	7.70	9	eP	Pn	21 18 01.1	-0.4
TREC				MLR	MLR		
	comp=Z,10µm,14.2s						
XOR	Xorichti	7.70	105	ePn	Pn	21 18 02.2	+0.6
XOR	Xorichti	7.70	105	P	Pn	21 18 02.2	+0.6
STU	Stuttgart	7.70	338	P	Pn	21 18 03.2	+1.6
STU				pmax	pmax		
	comp=Z,57nm,0.8s						
VYHS	Vyhne	7.73	27	eP	Pn	21 18 02.3	+0.3
VYHS				e		21 19 23.7	
VYHS	Vyhne	7.73	27	ePN	Pn	21 18 02.3	+0.3
VYHS				eSN	Sn	21 19 23.7	-5.3
VYHS				eSG	Sb	21 20 18.7	+23
NVR	Nevrokopi	7.73	89	ePn	Pn	21 18 03.4	+1.3
NVR	Nevrokopi	7.73	89	P	Pn	21 18 03.4	+1.3
GUR	Goura	7.74	116	ePn	Pn	21 18 02.1	-0.1
GUR	Goura	7.74	116	P	Pn	21 18 02.1	-0.1
HINF	Hinteralfeld	7.74	324	ePn	Pn	21 18 00.5	-1.7
	SNR=1.0						
HINF	Hinteralfeld	7.74	324	eP	Pn	21 18 05.4	+3.2
HINF				eSn	Sn	21 19 22.1	-7.3
	comp=Z,118nm,0.9s						
HINF	Hinteralfeld	7.74	324	eP	Pn	21 18 05.4	+3.2
HINF				eSn	Sn	21 19 22.1	-7.3
HINF	Hinteralfeld	7.74	324	eP	Pn	21 18 03.0	+0.8
HINF				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ATAL	Atalanti	7.84	110	ePn	Pn	21 18 02.1	-1.4
ATAL	Atalanti	7.84	110	P	Pn	21 18 02.1	-1.4
PAIG	Paliouri	7.87	100	ePn	Pn	21 18 04.8	+0.8
PAIG	Paliouri	7.87	100	P	Pn	21 18 04.8	+0.8
VRAC	Vranov	7.88	15⇑	iP	Pn	21 18 04.7	+0.6
VRAC	Vranov	7.88	15	ePN	Pn	21 18 04.2	+0.1
VRAC	Vranov	7.88	15	P	Pn	21 18 04.6	+0.6
	comp=Z,1.7nm,0.3s,baz=217,slow=10,SNR=14						
VRAC				S	Sn	21 19 28.3	-4.4
	comp=Z,0.3nm,0.3s,baz=233,slow=12,SNR=2.3						
VRAC				LR	LR	21 21 11.3	
	comp=Z,1µm,20.6s,baz=200,slow=38						
SMIA	Simia	7.89	108	P	Pn	21 18 03.2	-1.1
ITM	Ithomi	7.89	122	eP	Pn	21 18 04.1	-0.2
ITM	Ithomi	7.89	122	ePn	Pn	21 18 05.3	+1.0
PGB	Panagyurishte	7.92	80	P	Pn	21 18 06.1	+1.4
ECH	Echery	7.93	327	ePn	Pn	21 18 04.4	-0.3
ECH	Echery	7.93	327	eP	Pn	21 18 04.4	-0.3
DEV	Deva	7.93	55⇑	iP	Pn	21 18 07.0	+2.3
DEV	Deva	7.93	55	P	Pn	21 18 06.4	+1.7
DEV				pmax	pmax		
	comp=Z,128nm,0.8s						
PYL	PYLOS	7.96	125	ePn	Pn	21 18 02.1	-3.1
PYL	PYLOS	7.96	125	P	Pn	21 18 02.1	-3.1
OUR	Ouranopolis	7.99	97	eP	Pn	21 18 04.5	-1.1
CDF	Champ du Feu	8.04	329	ePn	Pn	21 18 04.0	-2.3
CDF	Champ du Feu	8.04	329	eP	Pn	21 18 09.2	+2.9
CDF				eSn	Sn	21 19 29.6	-7.1
	comp=Z,75nm,0.9s						
CDF	Champ du Feu	8.04	329	eP	Pn	21 18 09.2	+2.9
CDF				eSn	Sn	21 19 29.6	-7.1
CDF	Champ du Feu	8.04	329	eP	Pn	21 18 04.8	-1.5
CDF				pmax	pmax		
	comp=Z,14nm,0.5s						
VLX	Vlachokerasia	8.07	120	ePn	Pn	21 18 06.8	0.0
VLX	Vlachokerasia	8.07	120	P	Pn	21 18 06.8	0.0
HAU	Haudompre	8.11	323	ePn	Pn	21 18 05.0	-2.2
HAU	Haudompre	8.11	323	eP	Pn	21 18 10.1	+2.9
HAU				eSn	Sn	21 19 29.8	-8.6
	comp=Z,80nm,0.7s						
HAU	Haudompre	8.11	323	ePn	Pn	21 18 05.0	-2.2
HAU				eSn	Sn	21 19 29.8	-8.6
HAU	Haudompre	8.11	323	eP	Pn	21 18 05.0	-2.2
LTK	Loutraki	8.11	114	ePn	Pn	21 18 07.6	+0.3
LTK	Loutraki	8.11	114	P	Pn	21 18 07.6	+0.3
LOUT	Loutraki	8.14	114	P	Pn	21 18 07.6	0.0
GRFO	Grafenberg	8.14	349	ePn	Pn	21 18 10.1	+2.5
GRFO	Grafenberg	8.14	349	eP	Pn	21 18 10.1	+2.5
GRA1	Grafenberg Arr	8.14	349	ePn	Pn	21 18 10.0	+2.4
GRF	Grafenberg Arr	8.14	349	eP	Pn	21 18 10.0	+2.4
LTVH	Ltavrtes, Hu	8.21	44	ePn	Pn	21 18 09.1	+0.5
LTVH				Sn	Sn	21 19 22.1	-19
MRKA	Markates	8.23	108	P	Pn	21 18 09.1	+0.1
GOPC	GO Pecny, Ondr	8.24	6	ePN	Pn	21 18 09.1	+0.1
GOPC				AMS	AMS	21 21 40.0	
	comp=Z,6µm,13.7s						
GOPC	GO Pecny, Ondr	8.24	6	eP	Pn	21 18 09.1	+0.1
GOPC				MLR	MLR		
	comp=Z,6µm,13.7s						
AOS	Alonnisos	8.26	105	eP	Pn	21 18 10.3	+0.9
VLAD	Vladila	8.28	70⇑	iP	Pn	21 18 11.5	+2.0
VILL	Villia	8.28	112	P	Pn	21 18 09.1	-0.6
LOT	Lotru	8.29	60⇑	iP	Pn	21 18 12.7	+2.9
DRGR		8.29	49	ePn	Pn	21 18 10.8	+1.0
DRGR		8.29	49⇓	iP	Pn	21 18 11.9	+2.2
DRGR		8.29	49	P	Pn	21 18 12.0	+2.2
DRGR				pmax	pmax		
	comp=Z,113nm,0.7s						
PRU	Pruhonice	8.30	4	ePN	Pn	21 18 09.2	-0.6
PRU				AMS	AMS	21 21 40.0	
	comp=Z,5µm,13.9s						
PRU	Pruhonice	8.30	4	eP	Pn	21 18 09.2	-0.6
PRU				MLR	MLR		
	comp=Z,5µm,13.9s						
PLD	Plovdiv	8.31	84	eP	Pn	21 18 13.3	+3.3
LANF	Langenberg	8.32	333	P	Pn	21 18 09.8	-0.2
RZN	Rozhen	8.34	87	P	Pn	21 18 11.5	+0.9
THEF	They Montfort	8.44	323	P	Pn	21 18 12.0	+0.3
LANS	Liptovska Anna	8.51	27	eP	Pn	21 18 12.3	-0.4
LANS	Liptovska Anna	8.51	27	ePN	Pn	21 18 12.3	-0.4
MORC	Moravsky Berou	8.52	18	ePn	Pn	21 18 14.1	+1.2
MORC	Moravsky Berou	8.52	18⇓	iP	Pn	21 18 13.9	+1.0
MORC	Moravsky Berou	8.52	18	P	Pn	21 18 15.4	+2.5
MORC	Moravsky Berou	8.52	18	ePN	Pn	21 18 14.2	+1.3
MTLF	Montolieu	8.54	285	ePn	Pn	21 18 10.5	-2.6
	SNR=1.0						
MTLF	Montolieu	8.54	285	eP	Pn	21 18 16.1	+3.0
MTLF				eSn	Sn	21 19 40.6	-8.3
	comp=Z,6.6nm,0.5s						
MTLF	Montolieu	8.54	285	ePn	Pn	21 18 10.5	-2.6
MTLF				eSn	Sn	21 19 40.6	-8.3
MTLF	Montolieu	8.54	285	eP	Pn	21 18 11.0	-2.1
MTLF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SMF	Signal de Mont	8.55	308	ePn	Pn	21 18 08.9	-4.3
	SNR=1.0						
SMF	Signal de Mont	8.55	308	eP	Pn	21 18 14.8	+1.6
SMF				eSn	Sn	21 19 41.9	-7.3
	comp=Z,52nm,1.0s,SNR=1.0						
SMF	Signal de Mont	8.55	308	eP	Pn	21 18 14.8	+1.6
SMF				eSn	Sn	21 19 41.9	-7.3
SMF	Signal de Mont	8.55	308	eP	Pn	21 18 14.0	+0.8
SMF				pmax	pmax		
	comp=Z,44nm,1.0s						
NKC	Novy Kostel	8.55	355	ePN	Pn	21 18 13.8	+0.5
NKC				AMS	AMS	21 22 20.0	
	comp=Z,4µm,13.1s						
NKC	Novy Kostel	8.55	355	eP	Pn	21 18 13.8	+0.5
NKC				MLR	MLR		
	comp=Z,4µm,13.1s						
DID	Didima	8.56	116	ePn	Pn	21 18 13.2	-0.3
DID	Didima	8.56	116	P	Pn	21 18 13.2	-0.3
KRND	KRANIDI	8.57	117	P	Pn	21 18 16.1	+2.5
FNEB	Nbias	8.58	282	Pn	Pn	21 18 12.4	-1.2
EREA	Eretria	8.60	109	P	Pn	21 18 09.9	-4.1
PYM	Petit Puy Mans	8.64	301	P	Pn	21 18 14.8	+0.2
KRLC	Kraliky	8.65	14	ePN	Pn	21 18 16.0	+1.3

KRLC	Kraliky	8.65	14	eP	Pn	21 18 16.0	+1.3
AGO	Saint Agoulin	8.69	303	P	Pn	21 18 16.2	+0.9
PTL	Penteli	8.72	111	ePn	Pn	21 18 16.1	+0.4
PTL	Penteli	8.72	111	P	Pn	21 18 16.1	+0.4
OKC	Ostrava-Krasne	8.72	20	ePN	Pn	21 18 17.0	+1.4
OKC				AMS	AMS	21 22 30.0	
	comp=Z,9µm,12.9s						
OKC	Ostrava-Krasne	8.72	20	eP	Pn	21 18 17.0	+1.4
OKC				MLR	MLR		
	comp=Z,9µm,12.9s						
CJR	Cluj-Napoca	8.76	52	⇓iP	Pn	21 18 18.5	+2.3
PAGF	Fort de Pagny	8.80	324	ePn	Pn	21 18 14.3	-2.3
PAGF	Fort de Pagny	8.80	324	eP	Pn	21 18 19.3	+2.7
	baz=140						
PAGF				eSn	Sn	21 19 47.3	-7.9
	comp=Z,450nm,1.1s						
PAGF	Fort de Pagny	8.80	324	eP	Pn	21 18 19.3	+2.7
PAGF				eSn	Sn	21 19 47.3	-7.9
HUMR	Humele	8.80	68	⇑iP	Pn	21 18 18.1	+1.4
VLI	Veliai	8.82	121	ePn	Pn	21 18 17.4	+0.4
VLI	Veliai	8.82	121	P	Pn	21 18 17.4	+0.4
ARR	Arges	8.82	62	⇓iP	Pn	21 18 18.9	+1.8
PVL	Pavlikeni	8.82	76	P	Pn	21 18 15.7	-1.3
PVCC	Panska Ves	8.84	4	ePN	Pn	21 18 18.2	+1.0
PVCC				AMS	AMS	21 22 10.0	
	comp=Z,4µm,16.5s						
PVCC	Panska Ves	8.84	4	eP	Pn	21 18 18.2	+1.0
PVCC				MLR	MLR		
	comp=Z,4µm,16.5s						
DPC	Dobruska-Polom	8.84	12	ePN	Pn	21 18 17.8	+0.5
DPC				AMS	AMS	21 22 10.0	
	comp=Z,7µm,14.6s						
DPC	Dobruska-Polom	8.84	12	eP	Pn	21 18 17.8	+0.5
DPC				MLR	MLR		
	comp=Z,7µm,14.6s						
SFTF	Sexfontaines	8.86	320	ePn	Pn	21 18 15.1	-2.4
SFTF	Sexfontaines	8.86	320	eP	Pn	21 18 20.1	+2.6
	baz=134						
SFTF				eSn	Sn	21 19 48.9	-8.0
	comp=Z,113nm,1.1s						
SFTF	Sexfontaines	8.86	320	eP	Pn	21 18 20.1	+2.6
SFTF				eSn	Sn	21 19 48.9	-8.0
KDZ	Kurdzhali	8.87	87	eP	Pn	21 18 20.4	+2.8
LOR	Lormes	8.88	312	ePn	Pn	21 18 14.9	-2.9
	baz=134,SNR=1.0						
LOR	Lormes	8.88	312	eP	Pn	21 18 19.7	+1.9
	baz=131						
LOR	Lormes	8.88	312	eP	Pn	21 18 19.7	+1.9
LOR	Lormes	8.88	312	eP	Pn	21 18 19.0	+1.2
LOR				pmax	pmax		
	comp=Z,20nm,1.0s						
ZIMR		8.90	73	⇑iP	Pn	21 18 19.4	+1.3
AVF	Avril sur Loir	8.91	308	ePn	Pn	21 18 16.1	-2.1
	SNR=1.0						
AVF	Avril sur Loir	8.91	308	eP	Pn	21 18 20.9	+2.7
AVF	Avril sur Loir	8.91	308	eP	Pn	21 18 20.9	+2.7
AVF	Avril sur Loir	8.91	308	eP	Pn	21 18 18.6	+0.4
AVF				pmax	pmax		
	comp=Z,21nm,0.9s						
UPC	Upice	8.95	10	ePN	Pn	21 18 19.6	+0.8
UPC				AMS	AMS	21 22 10.0	
	comp=Z,8µm,12.5s						
UPC	Upice	8.95	10	eP	Pn	21 18 19.6	+0.8
UPC				MLR	MLR		
	comp=Z,8µm,12.5s						
SSF	Saint Saulge	8.96	310	eP	Pn	21 18 21.0	+2.1
SSF				eSn	Sn	21 19 51.6	-7.8
	comp=Z,11nm,0.6s,SNR=1.0						
SSF	Saint Saulge	8.96	310	ePn	Pn	21 18 21.0	+2.1
SSF				eSn	Sn	21 19 51.6	-7.8
SSF	Saint Saulge	8.96	310	eP	Pn	21 18 19.6	+0.7
SSF				pmax	pmax		
	comp=Z,25nm,1.0s						
CAF	Calviac	8.98	295	ePn	Pn	21 18 17.4	-1.8
	SNR=1.0						
CAF	Calviac	8.98	295	eP	Pn	21 18 21.3	+2.1
CAF	Calviac	8.98	295	ePn	Pn	21 18 17.4	-1.8
CAF	Calviac	8.98	295	eP	Pn	21 18 18.0	-1.2
CAF				pmax	pmax		
	comp=Z,12nm,0.5s						
RDO	Rodhopi	9.01	90	eP	Pn	21 18 18.1	-1.5
NIE	Niedzica	9.03	29	eP	Pn	21 18 21.7	+1.9
NIE	Niedzica	9.03	29	eP	Pn	21 18 21.7	+1.9
TRPA	Tarpa	9.03	42	⇑iP	Pn	21 18 21.5	+1.7
TRPA	Tarpa	9.03	42	ePn	Pn	21 18 17.0	-2.8
TRPA				Sn	Sn	21 19 53.0	-7.8
MOX	Moxa	9.03	352	P	Pn	21 18 21.9	+2.1
MTUR	Matau	9.06	63	⇑iP	Pn	21 18 22.0	+1.6
MEZF	Maizieres J'vi	9.06	321	ePn	Pn	21 18 18.2	-2.1
	baz=143,SNR=1.0						
MEZF	Maizieres J'vi	9.06	321	eP	Pn	21 18 23.2	+2.9
	baz=133						
MEZF				eSn	Sn	21 19 54.2	-7.6
	comp=Z,104nm,1.2s						
MEZF	Maizieres J'vi	9.06	321	ePn	Pn	21 18 18.2	-2.1
MEZF				eSn	Sn	21 19 54.2	-7.6
BGF	Bois d'Agland	9.10	306	ePn	Pn	21 18 18.1	-2.7
	SNR=1.0						
BGF	Bois d'Agland	9.10	306	ePn	Pn	21 18 18.1	-2.7
BGF	Bois d'Agland	9.10	306	eP	Pn	21 18 18.1	-2.7
VOIR		9.12	62	⇑iP	Pn	21 18 23.5	+2.3
KTHR	Kythira	9.14	124	P	Pn	21 18 21.0	-0.4
BRG	Berggiesshubel	9.16	1	PN	Pn	21 18 21.4	-0.2
BRG				SN	Sn	21 20 12.2	+8.1
	comp=N,2µm,16.6s comp=E,5µm,16.5s comp=Z,3µm,13.8s						
BRG	Berggiesshubel	9.16	1	P	Pn	21 18 21.4	-0.2
BRG						21 20 12.2	
BRG				MLR	MLR		
	comp=N,2µm,16.6s						
BRG				MLR	MLR		
	comp=E,5µm,16.5s						
BRG				MLR	MLR		
	comp=Z,3µm,13.8s						
KYTH	Kithira	9.17	123	ePn	Pn	21 18 18.9	-2.9
KYTH	Kithira	9.17	123	P	Pn	21 18 18.9	-2.9
UZH	Uzhgorod	9.25	39	eP	Pn	21 18 26.4	+3.5
UZH				eS	Sn	21 20 11.2	+4.8
UZH				MLR	MLR		
	comp=N,800nm,12.0s						
UZH				MLR	MLR		
	comp=E,700nm,12.0s						
UZH				MLR	MLR		
	comp=Z,300nm,12.0s						
SZH	Strazhica	9.27	76	P	Pn	21 18 23.4	+0.3
KSP	Ksiaz	9.32	11	P	Pn	21 18 25.1	+1.3
KSP				pmax	pmax		
	comp=Z,16nm,0.7s						
TCF	Toulx Ste Croi	9.37	303	ePn	Pn	21 18 21.6	-2.9
	SNR=1.0						
TCF	Toulx Ste Croi	9.37	303	eP	Pn	21 18 27.1	+2.6
TCF	Toulx Ste Croi	9.37	303	ePn	Pn	21 18 21.6	-2.9
TCF	Toulx Ste Croi	9.37	303	eP	Pn	21 18 21.6	-2.9
ARCR	ARCALIA	9.40	52	⇓iP	Pn	21 18 27.7	+2.8
ALN	Alexandroupoli	9.43	91	eP	Pn	21 18 23.2	-2.1
ALN	Alexandroupoli	9.43	91	ePn	Pn	21 18 27.6	+2.4
ALN	Alexandroupoli	9.43	91	P	Pn	21 18 24.7	-0.6
ALN				pmax	pmax		
	comp=Z,20nm,1.4s						
SGRR	Singureni	9.43	70	⇑iP	Pn	21 18 26.4	+1.1
MONQ	Montcuq	9.44	290	Pn	Pn	21 18 25.5	+0.1
RJF	Les Rejaudoux	9.46	296	ePn	Pn	21 18 22.6	-3.2
RJF	Les Rejaudoux	9.46	296	eP	Pn	21 18 28.0	+2.2
RJF	Les Rejaudoux	9.46	296	ePn	Pn	21 18 22.6	-3.2
RJF	Les Rejaudoux	9.46	296	eP	Pn	21 18 24.9	-0.9
RJF				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WLF	Walferdange	9.48	329	ePn	Pn	21 18 32.1	+6.0
WLF	Walferdange	9.48	329	⇑P	Pn	21 18 30.6	+4.6
ENEZ	Enez	9.53	92	eP	Pn	21 18 34.3	+7.6
DOPR	Dopca	9.54	60	⇑iP	Pn	21 18 29.6	+2.8
OJC	Ojcow	9.54	25	ePn	Pn	21 18 35.0	+8.2
HYF	Humbligny	9.58	309	eP	Pn	21 18 30.2	+2.9
HYF	Humbligny	9.58	309	ePn	Pn	21 18 30.2	+2.9
CLL	Collm	9.60	358	ePn	Pn	21 18 27.1	-0.6
CLL	Collm	9.60	358	ePn	Pn	21 18 27.0	-0.6
CLL				i		21 18 30.4	
CLL				i		21 18 36.6	
CLL				eSn	Sn	21 19 56.0	-19
CLL				e		21 20 11.0	
CLL				e		21 20 21.0	
CLL				i		21 20 45.4	
CLL				e		21 20 59.0	
CLL				eSglp		21 21 09.0	
CLL				eSg		21 21 30.0	
	comp=Z,250nm,1.5s						
CLL				LmV		21 22 00.0	
	comp=Z,2µm,18.7s						
CLL				eLmax		21 22 14.0	
CLL	Collm	9.60	358	eP	Pn	21 18 27.0	-0.6
CLL				MLR	MLR		
	comp=Z,2µm,18.7s						
SECR		9.69	66	⇓iP	Pn	21 18 31.9	+3.1
SIGR	SIGRI	9.69	101	eP	Pn	21 18 30.9	+2.0
JMB	Yambol	9.71	81	P	Pn	21 18 30.3	+1.2
SULR		9.72	68	⇑iP	Pn	21 18 30.9	+1.6
MLR	Muntele Rosu	9.73	63	⇑iP	Pn	21 18 32.1	+2.5
MLR	Muntele Rosu	9.73	63	P	Pn	21 18 30.5	+0.8
	comp=Z,1.5nm,0.3s,baz=179,slow=6.6,SNR=122						
MLR				LR	LR	21 23 06.6	
	comp=Z,6µm,19.8s,baz=252,slow=42						
ERIK	Erikli-Kesan	9.81	92	eP	Pn	21 18 30.4	-0.2
GELI	Tayfur-Gelibol	9.84	93	eP	Pn	21 18 32.4	+1.5
OZUR		9.84	60	⇓iP	Pn	21 18 32.6	+1.6
EDRB	Edirne	9.84	85	eP	Pn	21 18 30.4	-0.6
EPF	Esparros	9.88	282	ePn	Pn	21 18 28.8	-2.7
EPF	Esparros	9.88	282	eP	Pn	21 18 34.2	+2.7
EPF	Esparros	9.88	282	ePn	Pn	21 18 28.8	-2.7
EPF	Esparros	9.88	282	eP	Pn	21 18 28.8	-2.7
LFF	La Frestale	9.89	293	ePn	Pn	21 18 28.4	-3.2
LFF	La Frestale	9.89	293	ePn	Pn	21 18 28.4	-3.2
LFF	La Frestale	9.89	293	eP	Pn	21 18 28.4	-3.2
PRK	Paraskevi	9.99	100	ePn	Pn	21 18 32.4	-0.6
PRK	Paraskevi	9.99	100	P	Pn	21 18 32.4	-0.6
PRK	Paraskevi	9.99	100	eP	Pn	21 18 32.4	-0.6
ISR	Istrita	10.03	66	⇑iP	Pn	21 18 36.3	+2.7
LEHL	Lehliu	10.08	70	⇑iP	Pn	21 18 36.3	+2.2
CHOS	Chios island	10.13	105	eP	Pn	21 18 32.0	-3.1
BUR04	Bucovina Ar. S	10.17	51	ePn	Pn	21 18 37.9	+2.3
BURAR	Bucovina Array	10.17	51	⇑iP	Pn	21 18 38.8	+3.2
BUR08	Bucovina Ar. S	10.18	50	ePn	Pn	21 18 38.5	+2.8
IMMV	Iera Moni Meta	10.27	124	eP	Pn	21 18 36.2	-0.6
IMMV	Iera Moni Meta	10.27	124	P	Pn	21 18 36.0	-0.8
MEM	Membach	10.32	332	⇑P	Pn	21 18 40.8	+3.4
PLOR	Plostina	10.32	62	⇑iP	Pn	21 18 39.5	+2.0
PRD	Provadia	10.33	77	P	Pn	21 18 39.9	+2.3
APE	Apeiranthos	10.35	113	eP	Pn	21 18 38.2	+0.2
APE	Apeiranthos	10.35	113	⇑iP	Pn	21 18 38.3	+0.2
APE	Apeiranthos	10.35	113	deP	Pn	21 18 37.2	-0.9
GIVF	Givet	10.36	327	eP	Pn	21 18 41.4	+3.4
GIVF	Givet	10.36	327	ePn	Pn	21 18 41.4	+3.4
VRI	Vrincioaia	10.38	62	eP	Pn	21 18 38.6	+0.3
VRI	Vrincioaia	10.38	62	⇓iP	Pn	21 18 40.1	+1.8
BIZ	Bicaz	10.38	56	⇓iP	Pn	21 18 41.5	+3.1
BCLA	Clavier	10.42	329	⇓P	Pn	21 18 41.1	+2.2
DOU	Dourbes	10.45	326	⇑P	Pn	21 18 50.8	+12
ETSF	Etsaut	10.53	281	ePn	Pn	21 18 37.5	-3.0
ETSF	Etsaut	10.53	281	eP	Pn	21 18 44.2	+3.7
ETSF	Etsaut	10.53	281	ePn	Pn	21 18 37.5	-3.0
ETSF	Etsaut	10.53	281	eP	Pn	21 18 37.5	-3.0
URLA	Izmir	10.54	104	eP	Pn	21 18 39.5	-1.0
TESR	Tescani	10.55	59	⇑iP	Pn	21 18 43.8	+3.1
ODBI	Odobesti	10.56	63	⇓iP	Pn	21 18 44.9	+4.1
BAIF	Baives	10.58	325	eP	Pn	21 18 43.8	+2.8
BAIF	Baives	10.58	325	ePn	Pn	21 18 43.8	+2.8
BAIF	Baives	10.58	325	eP	Pn	21 18 43.8	+2.8
MRMT	Marmara Adasi	10.64	91	eP	Pn	21 18 44.5	+2.6
PRAR	RASCA	10.65	54	⇑iP	Pn	21 18 44.0	+2.0
PETR	Petresti	10.67	63	⇓iP	Pn	21 18 45.2	+3.0
SANT	Santorini	10.67	116	eP	Pn	21 18 47.6	+5.2
SANT	Santorini	10.67	116	ePn	Pn	21 18 49.5	+7.1
ICOR	Ion Corvin	10.71	72	⇑iP	Pn	21 18 44.8	+2.0
AMGA	Amorgos Island	10.72	113	P	Pn	21 18 40.6	-2.5
EDC	Edincik	10.89	92	eP	Pn	21 18 41.8	-3.5
ANAF	Anafi Island	10.89	115	P	Pn	21 18 42.2	-3.2
HARR	Harsova	10.90	69	⇓iP	Pn	21 18 47.0	+1.6
LVV	L'vov	10.90	38	eP	Pn	21 18 46.5	+1.1
LVV				eS	Sn	21 20 50.0	+3.2
LVV				MLR	MLR		
	comp=E,1µm,10.0s						
LVV				MLR	MLR		
	comp=N,900nm,11.0s						
LVV				MLR	MLR		
	comp=Z,2µm,11.0s						
PSN	Preselentsi	10.94	75	P	Pn	21 18 47.0	+1.1
IDI	Anoyia	10.95	122	eP	Pn	21 18 46.9	+0.7
IDI	Anoyia	10.95	122	ePn	Pn	21 18 49.2	+3.0
IDI				eSn	Sn	21 20 45.9	-2.2
IDI	Anoyia	10.95	122	⇑iP	Pn	21 18 48.2	+2.0
IDI	Anoyia	10.95	122	P	Pn	21 18 47.1	+0.9
	comp=Z,1.5nm,0.3s,baz=308,slow=18,SNR=12						
IDI				S	Sn	21 20 45.9	-2.2
	comp=Z,1.5nm,0.3s,baz=322,slow=14,SNR=3.8						
TLB	Topalu	10.96	70	⇑iP	Pn	21 18 46.8	+0.6
MFF	Saint Martin d	10.99	301	eP	Pn	21 18 50.1	+3.4
MFF	Saint Martin d	10.99	301	ePn	Pn	21 18 50.1	+3.4
MFF	Saint Martin d	10.99	301	eP	Pn	21 18 50.1	+3.4
SJPF	Ste Jean	11.03	282	ePn	Pn	21 18 44.3	-2.9
SJPF	Ste Jean	11.03	282	eP	Pn	21 18 50.7	+3.5
SJPF	Ste Jean	11.03	282	eP	Pn	21 18 50.7	+3.5
SJPF	Ste Jean	11.03	282	eP	Pn	21 18 50.7	+3.5
UCC	Uccle	11.09	328	⇑P	Pn	21 18 52.0	+4.1
CFR	Carcaliu	11.14	67	⇓iP	Pn	21 18 49.8	+1.1
CFR	Carcaliu	11.14	67	P	Pn	21 18 48.4	-0.3
TIRR	Tirgusor	11.20	71	ePn	Pn	21 18 50.9	+1.4
TIRR	Tirgusor	11.20	71	eP	Pn	21 18 50.9	+1.4
CTKS	Kestanelik-??a	11.22	88	eP	Pn	21 18 47.9	-1.9
GCAM	G?zelcaml?	11.26	106	eP	Pn	21 18 51.5	+1.1
KCTX	Karacabey (Bur	11.27	93	eP	Pn	21 18 53.1	+2.5
LAST	Lasithi	11.40	121	ePn	Pn	21 18 52.0	-0.4
LAST	Lasithi	11.40	121	P	Pn	21 18 52.0	-0.4
BODT	Bodrum	11.60	109	eP	Pn	21 18 59.6	+4.5
AYDB	Zeytinkoy-Aydi	11.64	104	eP	Pn	21 18 55.2	-0.5
LDF	La Druitiere	11.85	310	ePn	Pn	21 18 55.2	-3.2
LDF	La Druitiere	11.85	310	ePn	Pn	21 18 55.2	-3.2
LDF	La Druitiere	11.85	310	eP	Pn	21 18 55.2	-3.2
ZKR	Zakros	11.90	120	eP	Pn	21 18 58.9	-0.3
MANT	Manisa	11.92	101	ePn	Pn	21 19 03.0	+3.3
DAT	Datca	11.95	110	eP	Pn	21 19 00.4	+0.5
KULA	Kula-Manisa	11.99	101	eP	Pn	21 19 02.3	+1.8
MILM	Milestii Mici	12.09	59	⇑iP	Pn	21 19 03.8	+2.2
KIS	Kishinev	12.12	59	eP	Pn	21 19 02.0	-0.1
	comp=Z,210nm,2.0s						
KIS				eRg	Rg	21 23 30.0	
KIS				LRM	MLR	21 24 46.0	
	comp=Z,3µm,14.0s						
KIS	Kishinev	12.12	59	eP	Pn	21 19 02.0	-0.1
KIS				pmax	pmax		
	comp=Z,210nm,2.0s						
KIS				MLR	MLR		
	comp=Z,3µm,14.0s						
FLN	La Foliniere	12.14	310	ePn	Pn	21 18 59.4	-3.0
FLN	La Foliniere	12.14	310	ePn	Pn	21 18 59.4	-3.0
FLN	La Foliniere	12.14	310	eP	Pn	21 18 59.4	-3.0
GRR	Gorron	12.18	308	eP	Pn	21 19 05.1	+2.2
GRR	Gorron	12.18	308	ePn	Pn	21 19 05.1	+2.2
GRR	Gorron	12.18	308	eP	Pn	21 19 05.1	+2.2
KARP	Karpathos	12.28	116	eP	Pn	21 19 08.9	+4.5
KARP	Karpathos	12.28	116	ePn	Pn	21 19 08.0	+3.7
TVSB	Tavsanli	12.29	95	eP	Pn	21 19 01.6	-3.1
ARG	Arkhangelos	12.59	111	i P	Pn	21 19 11.4	+2.9
TURN	Turunc	12.61	108	eP	Pn	21 19 03.5	-5.3
DALY	Dalyan (Mula)	12.67	108	eP	P	21 19 21.3	+0.4
FETY	Fethiye	13.06	108	eP	Pn	21 19 19.9	+4.9
SGMF	Saint Gilles	13.14	305	ePn	Pn	21 19 12.4	-3.6
SGMF	Saint Gilles	13.14	305	ePn	Pn	21 19 12.4	-3.6
SGMF	Saint Gilles	13.14	305	eP	Pn	21 19 12.4	-3.6
ES19	SONSECA Array	13.41	267	ePn	Pn	21 19 19.4	-0.4
ESDC	Sonseca Array	13.46	267	P	Pn	21 19 18.9	-1.6
	comp=Z,0.5nm,0.3s,baz=76,slow=14,SNR=11						
ESDC				LR	LR	21 24 13.0	
	comp=Z,585nm,20.6s,baz=85,slow=36						
ESLA	Sonseca Array	13.46	267	ePn	Pn	21 19 19.6	-0.9
ELL	Elmali	13.60	106	eP	P	21 19 29.2	-2.2
KLNR	Kaliningrad	13.62	17	⇑eP	Pn	21 19 23.6	+1.0
AUMIH	MIHALICIK	13.70	92	eP	Pn	21 19 23.4	-0.5
PAB	San Pablo	13.78	267	ePn	Pn	21 19 24.0	-0.9
PAB	San Pablo	13.78	267	eP	Pn	21 19 24.0	-0.9
KORT	Korkueli	13.81	104	eP	P	21 19 33.5	-0.2
SUW	Suwalki	13.87	24	ePn	Pn	21 19 29.3	+3.4
SUW	Suwalki	13.87	24	eP	Pn	21 19 29.3	+3.4
AK11	Malin Array Si	14.01	45	ePn	P	21 19 35.7	0.0
KIEV	Kiev	14.04	45	ePn	Pn	21 19 31.0	+2.7
KIEV	Kiev	14.04	45	⇓eP	Pn	21 19 28.2	-0.1
AKASG	Malin Array Be	14.05	45	P	Pn	21 19 29.3	+0.9
	comp=Z,0.7nm,0.3s,baz=237,slow=12,SNR=4.1						
AKASG				LR	LR	21 25 47.1	
	comp=Z,2µm,21.4s,baz=235,slow=41						
AKBB	Malin Array Si	14.05	45	ePn	Pn	21 19 29.5	+1.0
AKBB	Malin Array Si	14.05	45	eP	Pn	21 19 29.5	+1.0
KONT	Konya--Tatoy	14.92	98	eP	P	21 19 48.9	+3.0
AFSR	Afar-Bala (An	14.99	92	eP	Pn	21 19 43.9	+2.5
KULU	Kulu	15.05	94	eP	Pn	21 19 42.9	+0.7
CHBY	Cihanbeyli	15.10	96	eP	Pn	21 19 42.6	-0.3
SIM	Simferopol'	15.29	71	ceP	P	21 19 51.9	+1.9
SIM				eS	Sn	21 22 40.0	+5.9
SIM				pmax	pmax		
	comp=Z,59nm,1.6s						
SIM				MLR	MLR		
	comp=Z,1µm,13.0s						
BR101	Keskin Array S	15.35	91	ePn	Pn	21 19 48.6	+2.4
BR131	Keskin Array S	15.35	91	ePn	P	21 19 52.5	+1.6
BRTR	Keskin Array B	15.35	91	P	Pn	21 19 48.6	+2.4
	comp=Z,0.2nm,0.3s,baz=279,slow=11,SNR=14						
BRTR				LR	LR	21 26 57.2	
	comp=Z,1µm,18.8s,baz=278,slow=42						
MVO	Moncorvo	15.46	275	eP	P	21 19 50.4	-1.6
	comp=Z,31nm,1.6s						
MVO				eLQ	LQ	21 23 20.9	
MVO				eLR	LR	21 24 57.1	
	comp=Z,1µm,14.0s						
YAYX	Yaylak	15.68	94	P	P	21 19 53.4	-1.1
SULT	Sultanhani-AKS	15.69	96	eP	P	21 19 56.0	+1.4
NACGM	Naroch	15.81	29	e	Pn	21 19 49.0	-3.0
NACGM				eLQ	LQ	21 24 54.0	
NACGM				eLR	LR	21 26 12.0	
NACGM				LRM	MLR	21 26 46.0	
	comp=N,3.3nm,12.0s						
CEU	Ceuta	15.86	255	eP	P	21 20 04.0	+7.7
CEU				eS	Sn	21 22 45.2	-2.7
MICGM	Minsk	15.92	32	eP	Pn	21 19 52.0	-1.4
MICGM				eLR	LR	21 26 08.0	
MICGM				LRM	MLR	21 26 54.0	
	comp=Z,6.3nm,14.0s						
MNK	Minsk	15.92	32	eP	Pn	21 19 52.0	-1.4
MNK				MLR	MLR		
	comp=Z,6µm,14.0s						
IIGN	Ignalina	15.97	27	eP	P	21 19 56.4	-1.1
IIGN				IAmb	IAmb	21 20 05.3	
	comp=Z,23nm,1.3s						
MTE	Manteigas	15.98	272	eP	P	21 19 58.3	+0.6
	comp=Z,43nm,1.6s						
MTE				eLR	LR	21 25 08.9	
	comp=Z,1µm,16.0s						
POLO	Lamas de Olo	16.00	276	eP	Pn	21 19 52.4	-2.2
PMRV	Marv??o	16.09	269	eP	P	21 19 59.1	+0.2
	comp=Z,30nm,1.6s						
PMRV				eLR	LR	21 25 05.1	
	comp=Z,715nm,20.0s						
ISAL	Salakas	16.12	26	eP	P	21 19 57.8	-1.3
ISAL				IAmb	IAmb	21 20 08.8	
	comp=Z,16nm,1.2s						
IDID	Didziasalis	16.12	28	eP	Pn	21 19 57.5	+1.7
IDID				IAmb	IAmb	21 20 06.6	
	comp=Z,10nm,1.1s						
PCAB	Cabril	16.13	277	eP	P	21 20 01.2	+1.9
BERE	Bereket-Mersin	16.18	103	eP	Pn	21 19 56.3	-0.6
PVIS	Viseu	16.18	274	eP	P	21 20 08.2	+8.2
	comp=Z,34nm,1.5s						
PGAV	Gavieira, Arco	16.28	278	eLR	LR	21 25 16.5	
	comp=Z,778nm,20.0s						
IZAR	Zarasai	16.30	26	eP	P	21 20 00.2	-0.9
IZAR				IAmb	IAmb	21 20 12.2	
	comp=Z,8.9nm,1.0s						
PESTR	Estremoz	16.39	267	eP	P	21 20 03.4	+1.2
	comp=Z,26nm,1.1s						
PESTR				eLR	LR	21 23 23.4	
	comp=Z,636nm,21.6s						
PESTR	Estremoz	16.39	267	ePn	P	21 20 03.5	+1.2
	comp=Z,9.7nm,1.0s						
PCAS	Casmilo, Conde	16.77	272	eP	P	21 20 07.2	+0.8
	comp=Z,42nm,1.9s						
PTOM	Tomar	16.80	270	eP	Pn	21 20 00.4	-4.3
	comp=Z,85nm,1.6s						
PMTG	Montargil	16.81	268	eP	P	21 20 07.8	+1.0
	comp=Z,49nm,1.7s						
SLIT	Slitere, Latvi	16.87	16	eP	P	21 20 09.0	+1.7
SLIT				IAmb	IAmb	21 20 20.1	
	comp=Z,160nm,1.0s						
MDT	Midelt	16.95	244	P	P	21 20 09.7	+1.1
	comp=Z,0.1nm,0.3s,baz=90,slow=4.0,SNR=3.8						
MDT				LR	LR	21 25 54.4	
	comp=Z,898nm,18.3s,baz=64,slow=34						
PVAQ	Vaqueiros	16.96	262	eP	P	21 20 11.0	+2.5
	comp=Z,43nm,1.8s						
PVAQ				eLR	LR	21 25 44.0	
	comp=Z,945nm,18.0s						
KARA	Karaisali	17.16	98	eP	P	21 20 10.6	-0.2
PBDV	Barranco-do-Ve	17.18	262	eP	P	21 20 16.6	+5.6
	comp=Z,54nm,1.8s						
MESJ	Messejana	17.18	264	A	A	21 20 23.9	
	comp=Z,25nm,1.9s						
BNN	Bunyan	17.23	92	eP	P	21 20 12.1	+0.4
PNCL	Nicolau / Gran	17.32	265	eP	P	21 20 16.5	+4.0
EKA	Eskdalemuir Ar	17.49	327	P	P	21 20 14.6	+0.3
	baz=134,slow=11,SNR=3.6						
ANN	Anapa	17.64	72	eP	P	21 20 16.0	+0.1
ANN				eS	Sn	21 23 33.4	+2.4
ANN				pmax	pmax		
	comp=Z,113nm,1.3s						
ANN				MLR	MLR		
	comp=Z,918nm,11.0s						
KOZT	Kozan	17.66	97	eP	Pn	21 20 15.9	+0.5
MORF	Marmelete	17.69	263	eP	P	21 20 19.4	+2.7
SVSK	Karacayir	17.82	88	eP	P	21 20 19.5	+1.5
KONO	Kongsberg	18.12	354	⇑eP	Pn	21 20 20.0	-0.9
TAHT	Tahtakopru-Hat	18.34	99	eP	Pn	21 20 23.7	-0.1
HFS	Hagfors	18.44	0	P	Pn	21 20 26.0	+1.2
	comp=Z,0.2nm,0.3s,baz=178,slow=17,SNR=9.0						
KMRS	Kahramanmaras	18.45	95	eP	Pn	21 20 26.9	+1.8
DARE	Darende-Malaty	18.54	92	eP	P	21 20 26.1	+0.1
AVE	Averroes	18.62	250	⇑iP	Pn	21 20 32.4	+5.3
AVE				eS	S	21 23 57.3	-1.0
VSU	Vasula	18.71	22	⇑eP	Pn	21 20 28.2	+0.2
VSU	Vasula	18.71	22	eP	Pn	21 20 28.5	+0.4
VSU				IAmb	IAmb	21 20 37.0	
	comp=Z,70nm,0.9s						
NC602	NORSAR Array S	19.08	357	eP	Pn	21 20 32.4	-0.2
	comp=Z,25nm,1.0s						
NORES	NORESS Array B	19.08	357	P	P	21 20 32.0	+0.3
SOC	Sochi	19.30	76	eP	Pn	21 20 36.2	+0.9
SOC				e		21 24 12.7	
SOC				pmax	pmax		
	comp=Z,62nm,0.9s						
SOC				MLR	MLR		
	comp=Z,383nm,12.0s						
MMAI	Mount Meron Ar	19.37	110	P	Pn	21 20 36.7	+0.4
	comp=Z,0.9nm,0.3s,baz=323,slow=9.6,SNR=5.9						
MMAI				LR	LR	21 29 46.6	
	comp=Z,473nm,18.6s,baz=315,slow=42						
NB2	NORSAR Subarra	19.40	357	P	P	21 20 34.7	-0.6
	comp=Z,43nm,1.7s,baz=174,slow=12						
NB200	NORSAR Array S	19.40	357	eP	P	21 20 35.5	+0.3
NOA	NORSAR Array B	19.40	357	P	P	21 20 35.5	+0.3
	comp=Z,0.0nm,0.3s,baz=233,slow=24,SNR=5.8						
NOA				LR	LR	21 29 18.9	
	comp=Z,1µm,18.4s,baz=175,slow=40						
NC405	NORSAR Array S	19.45	357	eP	Pn	21 20 41.0	+3.9
KSDI	Kefar Szold	19.45	109	P	Pn	21 20 38.1	+0.8
	comp=Z,75nm,1.1s						
NC303	NORSAR Array S	19.58	357	eP	Pn	21 20 41.9	+3.3
MMLI	Mount Malkishu	19.70	111	eP	Pn	21 20 51.1	+11
URFA	Urfa	19.90	94	eP	Pn	21 20 42.5	-0.2
VSR	Storozhevoye	19.94	53	eP	P	21 20 42.0	+0.9
VSR				eS	S	21 24 17.7	-6.8
VSR				pmax	pmax		
	comp=Z,40nm,1.7s						
VSR				smax	smax		
	comp=N,270nm,5.0s						
VSR				MLR	MLR		
	comp=Z,3µm,14.0s						
TAM	Tamanrasset	20.04	202	eP	Pn	21 20 46.9	+2.4
	comp=Z,33nm,1.3s						
TAM	Tamanrasset	20.04	202	eP	Pn	21 20 46.9	+2.4
TAM				pmax	pmax		
	comp=Z,33nm,1.3s						
VORR	Voronezh	20.11	52	eP	P	21 20 43.0	0.0
VORR				pmax	pmax		

	comp=Z,250nm,2.0s						
OBN	Obninsk	20.19	41	eP	Pn	21 20 46.6	+0.8
	comp=Z,124nm,1.5s						
OBN	Obninsk	20.19	41	iP	P	21 20 42.7	-1.1
OBN				i		21 20 49.1	
OBN				pmax	pmax		
	comp=Z,21nm,0.9s						
OBN				MLR	MLR		
	comp=Z,2µm,15.0s						
OBN	Obninsk	20.19	41	P	Pn	21 20 45.3	-0.4
	comp=Z,5.9nm,0.7s,baz=214,slow=8.2,SNR=6.4						
OBN				LR	LR	21 29 20.7	
	comp=Z,312nm,20.8s,baz=218,slow=39						
LPSR	Galich'ya Gora	20.28	49	eP	P	21 20 45.3	+0.4
LPSR				pmax	pmax		
	comp=Z,70nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,2µm,13.0s						
LISJ	El Lisan	20.44	114	P	Pn	21 20 49.3	+0.5
	comp=Z,28nm,1.6s						
WALJ	Wala	20.47	113	P	Pn	21 20 48.8	-0.5
	comp=Z,55nm,0.8s						
DOMR	Dombai	20.71	76⇑	eP	P	21 20 50.8	+1.0
DOMR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BNGB	Bingl	20.81	89	eP	Pn	21 20 52.9	-0.4
HRFI	Mount Harif	20.88	117	eP	P	21 20 50.8	-0.8
HRFI	Mount Harif	20.88	117	P	Pn	21 20 55.9	+1.8
	comp=Z,63nm,1.2s						
ASF	Jabal al Asfar	20.88	110	P	P	21 20 52.8	+1.2
	comp=Z,7.8nm,0.9s,baz=19,slow=3.6,SNR=3.8						
BCA	Borcka	20.95	81	eP	Pn	21 20 56.2	+1.3
MOS	Moscow	21.03	40	eP	P	21 20 56.7	+3.8
MOS				eS	Sn	21 24 58.0	+5.4
MOS				eSS	SnSn	21 25 23.0	+16
MOS				pmax	pmax		
	comp=Z,500nm,2.0s						
MOS				pmax	pmax		
	comp=Z,207nm,1.6s						
MOS				MLR	MLR		
	comp=E,1µm,14.0s						
MOS				MLR	MLR		
	comp=Z,2µm,14.0s						
MOS				MLR	MLR		
	comp=N,900nm,15.0s						
EIL	Elat	21.06	118	eP	P	21 20 48.9	-4.6
EIL	Elat	21.06	118	P	P	21 20 57.8	+4.3
	comp=N,18nm,0.8s						
EIL	Elat	21.06	118	P	P	21 20 54.8	+1.4
	comp=N,7.9nm,0.9s,baz=322,slow=10,SNR=3.6						
EIL				LR	LR	21 31 49.5	
	comp=N,161nm,19.5s,baz=308,slow=44						
AQBJ	Aqaba	21.09	118	P	P	21 20 57.9	+4.1
MAZI	Mazidag	21.11	93	eP	P	21 20 52.9	-1.2
FIA0	FINESS Array S	21.15	17	eP	P	21 20 53.2	-1.0
FIA0	FINESS Array S	21.15	17	eP	P	21 20 53.2	-1.0
FINES	FINESS Array B	21.15	17	P	P	21 20 53.2	-1.0
	comp=N,7.6nm,0.7s,baz=186,slow=8.4,SNR=23						
FINES				LR	LR	21 30 40.7	
	comp=N,2µm,19.2s,baz=208,slow=41						
FIA1	FINESS Array S	21.16	17	eP	P	21 20 56.1	+1.9
SHA1	Shidzhatmaz	21.42	75⇑	eP	P	21 20 57.7	+0.2
KIV	Kislovodsk	21.42	74	eP	P	21 20 59.6	+2.2
	comp=N,33nm,1.0s						
KIV	Kislovodsk	21.42	74	eP	P	21 20 58.7	+1.3
KIV				eS	S	21 24 56.9	+2.5
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KIV				MLR	MLR		
	comp=Z,571nm,14.0s						
KVAR	Kislovodsk Arr	21.43	74	P	P	21 20 58.4	+0.9
	comp=Z,15nm,1.4s,baz=34,slow=22,SNR=2.8						
KVAR				LR	LR	21 32 02.4	
	comp=Z,454nm,18.4s,baz=182,slow=44						
VRH	Novokhopyorsk	21.47	54	eP	P	21 20 58.0	+0.3
VRH				eS	S	21 24 55.7	+0.7
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
VRH				smax	smax		
	comp=N,500nm,4.4s						
VRH				MLR	MLR		
	comp=Z,3µm,15.0s						
NEY	Neytrino	21.51	76⇑	eP	P	21 20 59.8	+1.4
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KBZ	Khabaz	21.59	75	P	P	21 21 00.2	+1.1
	comp=Z,5.1nm,0.8s,baz=302,slow=11,SNR=8.1						
KBZ				LR	LR	21 32 52.1	
	comp=Z,762nm,19.0s,baz=277,slow=46						
GOF	Gofitskoye	21.62	71	eP	P	21 21 01.0	+1.6
GOF				pmax	pmax		
	comp=Z,30nm,1.1s						
SENK	Senkaya-Erzuru	21.67	83	eP	P	21 21 05.1	+4.9
PYA1	Pyatigorsk	21.71	74⇓	iP	P	21 21 01.4	+1.0
PYA1				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VAF	Ylistaro	22.02	11	P	P	21 21 04.2	+0.7
VAF				pmax	pmax		
	comp=Z,22nm,0.8s						
NCK	Nalchik	22.12	75⇑	eP	P	21 21 04.4	-0.4
NCK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SUF	Sumiainen	22.32	15	P	P	21 21 05.6	-1.1
SUF				pmax	pmax		
	comp=Z,40nm,1.4s						
AGRB	Hanur-Agry	22.38	86	eP	P	21 21 09.4	+1.6
ZEI	Tsey	22.42	77	eP	P	21 21 11.8	+3.5
ZEI				pmax	pmax		
	comp=Z,66nm,1.8s						
SIRT	Sirnak	22.59	91	eP	P	21 21 09.2	-0.7
SIRT	Sirnak	22.59	91	eP	P	21 21 09.6	-0.3
	comp=Z,149nm,0.9s						
GNI	Garni	23.54	83	eP	P	21 21 24.5	+4.8
GNI	Garni	23.54	83c	eP	P	21 21 20.1	+0.3
GNI				pmax	pmax		
	comp=Z,44nm,1.1s						
GNI	Garni	23.54	83	P	P	21 21 20.5	+0.7
	comp=Z,8.1nm,0.9s,baz=292,slow=3.6,SNR=2.7						
GROC	Groznyy	23.75	76	eP	P	21 21 21.4	-0.1
GROC				e		21 21 49.2	
GROC				eS	S	21 25 36.3	+0.4
GROC				pmax	pmax		
	comp=Z,29nm,1.0s						
DVE	Vedeno	24.02	76⇑	eP	P	21 21 24.8	+0.6
DVE				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BTLR	Botlikh	24.13	77⇓	eP	P	21 21 26.6	+1.3
BTLR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OUL	Oulu	24.44	13	P	P	21 21 26.1	-1.7
KLMR	Klimovskoe	24.82	31	eP	P	21 21 29.7	-1.5
KLMR				pmax	pmax		
	comp=Z,47nm,1.1s						
KLMR	Klimovskoe	24.82	31	eP	P	21 21 29.7	-1.5
KLMR				AMP		21 21 43.8	
	comp=Z,47nm,1.1s						
MAK	Makhachkala	25.02	76	eP	P	21 21 31.9	-1.3
MAK				e		21 22 05.7	
MAK				eS	S	21 25 57.4	+1.1
MAK				pmax	pmax		
	comp=Z,79nm,1.0s						
MAK				MLR	MLR		
	comp=Z,1µm,15.0s						
MSF	Maaselka	25.75	15	P	P	21 21 41.2	+1.6
MSF				pmax	pmax		
	comp=Z,31nm,1.8s						
PMOZ	Porto Moniz, M	25.93	260	eLR	LR	21 26 32.6	
	comp=Z,321nm,16.0s						
TMCR	Tamitsa	26.55	24	eP	P	21 21 46.0	-0.8
TMCR				pmax	pmax		
	comp=Z,20nm,1.0s						
PRGR	Permogore	27.69	33	eP	P	21 21 54.4	-2.7
PRGR				pmax	pmax		
	comp=Z,19nm,0.8s						
KIRV	Kirov	28.04	41	P	P	21 21 59.2	-1.0
	comp=Z,5.7nm,0.5s,baz=243,slow=2.3,SNR=3.3						
KIRV				LR	LR	21 35 07.4	
	comp=Z,611nm,20.4s,baz=201,slow=40						
APA	Apatity	28.06	16⇑	iP	P	21 21 53.6	-6.7
APA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,3µm,15.0s						
ARA0	ARCESS Array S	28.57	9	eP	P	21 22 03.0	-1.9
ARCES	ARCESS Array B	28.57	9	P	P	21 22 03.0	-1.9
ARCES	ARCESS Array B	28.57	9	P	P	21 22 03.0	-1.9
	comp=Z,1.4nm,0.7s,baz=186,slow=8.5,SNR=11						
ARCES				LR	LR	21 34 05.2	
	comp=Z,705nm,21.6s,baz=202,slow=38						
TOA1	Torodi Ar. Sit	30.28	203	eP	P	21 22 20.5	-0.1
TOA1				ePcP	PcP	21 25 20.4	-0.5
TOA0	Torodi Ar. Sit	30.29	203	eP	P	21 22 21.2	+0.6
	comp=Z,10nm,1.0s						
TORD	Torodi Ar. Bea	30.29	203	P	P	21 22 20.5	-0.1
	comp=Z,2.1nm,0.6s,baz=9.0,slow=10,SNR=20						
TORD				PcP	PcP	21 25 20.3	-0.5
	comp=Z,0.5nm,0.8s,baz=325,slow=0.8,SNR=2.8						
TORD				LR	LR	21 35 47.5	
	comp=Z,891nm,19.2s,baz=350,slow=39						
BORG	Borgarnes	30.43	331	LR	LR	21 35 55.7	
	comp=Z,694nm,18.5s,baz=140,slow=39						
AKTO	Aktyubinsk	31.63	59	P	P	21 22 32.2	+0.1
	comp=Z,3.0nm,1.0s,baz=289,slow=7.6,SNR=5.2						
ARU	Arti	32.29	47	eP	P	21 22 38.7	+0.9
	comp=Z,24nm,0.9s						
ARU	Arti	32.29	47c	iP	P	21 22 38.2	+0.4
ARU						21 23 43.4	
ARU				PPP	PPP	21 23 55.6	
ARU				S	S	21 27 54.4	+4.1
ARU				SS	SnSn	21 29 45.2	+3.1
ARU				pmax	pmax		
	comp=Z,11nm,1.6s						
ABKAR	Akbulak array	32.94	61	eP	P	21 22 45.0	+1.4
	comp=Z,4.4nm,0.9s						
SVE	Sverdlovsk	33.47	47	eP	P	21 22 58.1	+10
SVE				pmax	pmax		
	comp=Z,25nm,1.0s						
SVE				MLR	MLR		
	comp=Z,2µm,15.0s						
GEYT	Alibeck	34.13	81	P	P	21 22 53.8	-0.5
	comp=Z,2.1nm,0.6s,baz=261,slow=8.8,SNR=6.3						
GEYT				LR	LR	21 42 10.3	
	comp=Z,311nm,18.2s,baz=280,slow=46						
SPA0	Spitsbergen Ar	36.59	1	eP	P	21 23 14.2	-0.6
	comp=Z,56nm,1.4s						
SPITS	Spitsbergen Ar	36.59	1	P	P	21 23 14.3	-0.6
	comp=Z,6.4nm,0.9s,baz=312,slow=10.0,SNR=3.2						
DAG	Danmarks Havn	37.72	348	P	P	21 23 22.8	-1.6
DAG				pmax	pmax		
	comp=Z,4.0nm,1.6s						
DBIC	Dimbokro	38.55	210	eP	P	21 23 31.8	-0.3
	comp=Z,19nm,1.3s						
DBIC	Dimbokro	38.55	210	eP	P	21 23 31.8	-0.3
DBIC				pmax	pmax		
	comp=Z,19nm,1.3s						
DBIC	Dimbokro	38.55	210	P	P	21 23 31.8	-0.3
	comp=Z,3.0nm,0.8s,baz=124,slow=17,SNR=2.9						
DBIC				LR	LR	21 40 34.6	
	comp=Z,462nm,18.0s,baz=8.5,slow=38						
BRVK	Borovoye	39.05	53	eP	P	21 23 40.5	+4.6
	comp=Z,20nm,0.9s						
BRVK	Borovoye	39.05	53⇑	eP	P	21 23 35.8	-0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OTUK	Ortayu	41.19	60	P	P	21 23 52.9	-0.8
OTUK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KK31	Karatay Array	41.37	68	eP	P	21 23 55.5	+0.3
KK31	Karatay Array	41.37	68	eP	P	21 23 55.6	+0.3
KKAR	Karatay Array	41.37	68	eP	P	21 23 55.5	+0.3
KKAR	Karatay Array	41.37	68	eP	P	21 23 55.6	+0.3
CHGR	Chuyangaron	41.95	75	eP	P	21 24 00.7	+0.5
	comp=Z,19nm,1.2s						
SFJD	Kangerlussuaq	42.46	328	P	P	21 24 04.3	+0.5
	comp=Z,5.0nm,0.8s,baz=86,slow=16,SNR=2.1						
GAR	Garm	42.66	74	eP	P	21 24 07.7	+1.7
	comp=Z,30nm,1.5s						
GAR	Garm	42.66	74	eP	P	21 24 07.7	+1.7
GAR				pmax	pmax		
	comp=Z,30nm,1.5s						
MNAS	Manas	42.95	68	P	P	21 24 08.0	-0.4
MNAS				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KBL	Kabul	43.58	81	eP	P	21 24 13.4	-0.2
	comp=Z,6.5nm,1.1s						
KBL	Kabul	43.58	81	eP	P	21 24 13.4	-0.2
KBL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARSB	Arslanbob	43.69	70	eP	P	21 24 15.5	+1.1
	comp=Z,17nm,1.2s						
AAK	Ala-Archa	44.28	67	eP	P	21 24 19.9	+0.8
	comp=Z,6.6nm,0.8s						
AAK	Ala-Archa	44.28	67⇓	eP	P	21 24 19.3	+0.2
AAK				pmax	pmax		
	comp=Z,14nm,1.7s						
FRU	Bishkek	44.30	67	eP	P	21 24 18.0	-1.1
FRU				pmax	pmax		
	comp=Z,50nm,2.0s						
FRU1	Bishkek	44.32	67	eP	P	21 24 20.0	+0.7
	comp=Z,35nm,1.3s						
FRU1	Bishkek	44.32	67	eP	P	21 24 20.0	+0.7
FRU1				pmax	pmax		
	comp=Z,35nm,1.3s						
SFK	Sufi-Kurgan	44.55	71	P	P	21 24 21.3	-0.1
SFK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURK	Kurchatov	44.56	55	eP	P	21 24 23.0	+2.0
	comp=Z,8.2nm,0.9s						
KURK	Kurchatov	44.56	55⇓	eP	P	21 24 22.4	+1.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK				MLR	MLR		
	comp=Z,610nm,17.0s						
NRN	Naryn	45.77	68	eP	P	21 24 32.5	+1.4
	comp=Z,6.1nm,1.2s						
NRN	Naryn	45.77	68	eP	P	21 24 32.5	+1.4
NRN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NRIK	Noril'sk	46.12	28	P	P	21 24 33.1	0.0
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NRIK	Noril'sk	46.12	28	P	P	21 24 33.1	0.0
	comp=Z,4.0nm,0.7s,baz=264,slow=9.8,SNR=3.8						
NVS	Novosibirsk	46.27	49	eP	P	21 24 33.2	-1.2
NVS				e		21 26 26.3	
NVS				pmax	pmax		
	comp=Z,37nm,1.6s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,14nm,1.6s						
KSH	Kashi	46.49	71	P	P	21 24 36.4	-0.2
KSH				pP	sP	21 24 45.1	+0.1
KSH				S	S	21 31 18.3	-5.7
KSH				sS	sS	21 31 36.1	+2.2
KSH				SS	ScS	21 34 38.3	+7.4
KSH				pmax	pmax		
	comp=E,15nm,0.7s						
KSH				pmax	pmax		
	comp=E,310nm,4.0s						
KSH				LR	LR		
	comp=E,200nm,5.8s						
KSH				LR	LR		
	comp=E,240nm,6.6s						
KSH				LR	LR		
	comp=E,410nm,6.2s						
TARG	Taragay, Kyrgy	46.91	67	eP	P	21 24 41.7	+1.5
	comp=E,12nm,0.8s						
NIL	Nilore	47.09	79	eP	P	21 24 41.7	+0.5
	comp=E,27nm,1.0s						
NIL	Nilore	47.09	79	eP	P	21 24 41.7	+0.5
NIL				pmax	pmax		
	comp=Z,27nm,1.0s						
ZAA1	Zalesovo Array	47.39	50	eP	P	21 24 42.4	-0.8
ZAA1				ePcP	PcP	21 26 13.6	-0.1
ZAA1				ePP	PP	21 26 33.9	-0.4
ZAA0	Zalesovo Array	47.39	50	eP	P	21 24 42.6	-0.6
	comp=Z,4.1nm,0.8s						
ZALV	Zalesovo Beam	47.39	50	eP	P	21 24 42.1	-1.1
ZALV	Zalesovo Beam	47.39	50	eP	P	21 24 42.2	-1.1
ZALV	Zalesovo Beam	47.39	50	P	P	21 24 42.4	-0.8
	comp=Z,0.9nm,0.5s,baz=265,slow=8.3,SNR=5.9						
ZALV				PcP	PcP	21 26 13.6	-0.1
	comp=Z,0.5nm,0.5s,baz=264,slow=4.3,SNR=2.0						
ZALV				PP	PP	21 26 33.9	-0.4
	comp=Z,0.6nm,0.4s,baz=290,slow=9.0,SNR=2.4						
PDGK	Podgornoye	47.45	65	P	P	21 24 43.7	-0.4
PDGK				pmax	pmax		
	comp=Z,17nm,0.9s						
KMBO	Kilima Mbogo	47.74	147	eP	P	21 24 47.1	+0.5
	comp=Z,3.2nm,1.0s						
KMBO	Kilima Mbogo	47.74	147	eP	P	21 24 47.1	+0.5
KMBO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KMBO	Kilima Mbogo	47.74	147	P	P	21 24 47.1	+0.5
	comp=Z,2.1nm,0.8s,baz=29,slow=6.5,SNR=3.1						
MAKZ	Makanchi	47.85	59	eP	P	21 24 47.4	+0.4
	comp=Z,3.4nm,0.9s						
MAKZ	Makanchi	47.85	59	eP	P	21 24 47.4	+0.4
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	48.06	59	eP	P	21 24 47.7	-0.9
MK31	Makanchi Array	48.06	59	eP	P	21 24 47.7	-0.9
MK32	Makanchi Array	48.06	59	eP	P	21 24 47.9	-0.7
MKAR	Makanchi Array	48.06	59	eP	P	21 24 47.7	-0.9
	comp=Z,33nm,0.8s						
MKAR	Makanchi Array	48.06	59	eP	P	21 24 47.7	-0.9
MKAR				pmax	pmax		
	comp=Z,33nm,0.8s						
MKAR	Makanchi Array	48.06	59	P	P	21 24 47.9	-0.7
	comp=Z,3.4nm,0.6s,baz=286,slow=6.7,SNR=46						
MKAR				LR	LR	21 48 03.9	
	comp=Z,538nm,18.2s,baz=282,slow=40						
MK01	Makanchi Array	48.07	59	eP	P	21 24 47.8	-0.9
FRB	Frobisher Bay	50.25	325	P	P	21 25 04.0	-1.0
FRB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DGZ	Jazzator, Alta	50.26	54⇑	eP	P	21 25 05.2	-0.3
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SCHQ	Schefferville	52.20	314	eP	P	21 25 20.1	+0.2
	comp=Z,8.0nm,0.8s						
SCHQ	Schefferville	52.20	314	P	P	21 25 18.3	-1.5
	comp=Z,4.0nm,0.8s,baz=84,slow=6.6,SNR=5.9						
SCHQ				LR	LR	21 45 43.6	
	comp=Z,321nm,19.7s,baz=354,slow=34						
WMQ	Urumqi	52.72	61	eP	P	21 25 24.3	+0.3
WMQ				sP	sP	21 25 39.1	+6.8
WMQ				pmax	pmax		
	comp=Z,27nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,410nm,3.8s						
WMQ				LR	LR		
	comp=Z,1µm,12.7s						
WMQ				LR	LR		
	comp=Z,880nm,16.7s						
WMQ				LR	LR		
	comp=Z,750nm,18.7s						
RES	Resolute Bay	54.82	342	P	P	21 25 38.4	-0.3
RES				pmax	pmax		
	comp=Z,5.0nm,2.1s						
PYUN	Piuthan	57.10	80	eP	P	21 25 54.5	-1.6
	comp=Z,93nm,1.2s						
MOY	Mondy	57.34	48	eP	P	21 26 08.8	+12
DANN	Dangsing	57.53	79	eP	P	21 25 58.0	-1.2
	comp=Z,46nm,0.8s						
KOLN	Koldanda	57.73	80	eP	P	21 25 58.3	-2.2
	comp=Z,49nm,1.2s						
LSZ	Lusaka	58.30	163	eP	P	21 26 04.6	+0.4
	comp=Z,10.0nm,1.1s						
LSZ	Lusaka	58.30	163	eP	P	21 26 04.6	+0.4
LSZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TLY	Talaya	58.79	47c	eP	P	21 26 08.0	+0.7
DMN	Daman	58.93	79	eP	P	21 26 07.1	-1.8
	comp=Z,76nm,1.3s						
PKIN	Phulchoki	59.16	79	eP	P	21 26 08.6	-2.0
	comp=Z,36nm,1.3s						
PKI	Pulchoki	59.18	79	eP	P	21 26 09.6	-1.1
	comp=Z,35nm,1.0s						
ZAK	Zakamensk	59.22	48	eP	P	21 26 08.0	-2.4
ZAK				e		21 28 22.1	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.8s						
GUN	Gumba	59.33	79	eP	P	21 26 11.2	-0.6
	comp=Z,59nm,0.8s						
BOD	Bodaibo	60.82	37	eP	P	21 26 17.2	-3.9
BOD				pmax	pmax		
	comp=Z,6.0nm,1.2s						
LSA	Lhasa	62.17	74	P	P	21 26 30.6	-0.7
LSA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LSA	Lhasa	62.17	74	eP	P	21 26 30.6	-0.7
	comp=Z,14nm,0.8s						
SONA1	Songino Array	62.28	49	eP	P	21 26 30.8	-0.6
SONA0	Songino Array	62.29	49	eP	P	21 26 30.5	-0.9
SONM	Songino Array	62.29	49	P	P	21 26 30.5	-0.9
	comp=Z,3.6nm,1.0s,baz=291,slow=9.0,SNR=23						
ULN	Ulaanbaatar	62.64	49	eP	P	21 26 33.2	-0.6
	comp=Z,4.9nm,1.3s						
ULN	Ulaanbaatar	62.64	49⇓	eP	P	21 26 32.9	-0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
GTA	Gaotai	62.79	60	eP	P	21 26 34.6	-0.3
GTA				pP	pP	21 26 41.8	+0.9
GTA				sP	sP	21 26 45.0	+1.7
GTA				S	S	21 34 59.8	-3.4
GTA				sS	pS	21 35 11.6	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,72nm,7.1s						
GTA				LR	LR		
	comp=Z,260nm,18.1s						
GTA				LR	LR		
	comp=Z,320nm,19.0s						
GTA				LR	LR		
	comp=Z,500nm,19.4s						
FCC	Fort Churchill	63.42	326	eP	P	21 26 42.9	+4.4
	comp=Z,3.9nm,1.1s						
FCC	Fort Churchill	63.42	326	eP	P	21 26 42.9	+4.4
FCC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SADO	Sadowa	63.89	308	LR	LR	21 54 03.0	
	comp=Z,165nm,18.2s,baz=70,slow=36						
LZH	Lanzhou	67.30	61	eP	P	21 27 05.8	+1.5
LZH				pP	sP	21 27 14.6	+1.8
LZH				sP	pP	21 27 18.3	+7.9
LZH				PP	PP	21 29 36.6	+4.3
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,6.2s						
LZH				LR	LR		
	comp=Z,660nm,15.2s						
LZH				LR	LR		
	comp=Z,590nm,16.3s						
LZH				LR	LR		
	comp=Z,750nm,18.1s						
INK	Inuvik	67.56	347	eP	P	21 27 04.7	-0.4
	comp=Z,3.7nm,1.2s						
INK	Inuvik	67.56	347	eP	P	21 27 04.7	-0.4
INK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
INK	Inuvik	67.56	347	P	P	21 27 04.7	-0.4
	comp=Z,1.0nm,0.7s,baz=11,slow=9.6,SNR=4.3						
YKA	Yellowknife Ar	68.14	337	P	P	21 27 08.1	-0.8
	comp=Z,1.0nm,0.8s,baz=41,slow=5.8,SNR=14						
YKB5	Yellowknife Ar	68.14	337	eP	P	21 27 08.1	-0.8
PALK	Pallekele	68.16	100	eP	P	21 27 09.4	-0.4
	comp=Z,17nm,1.3s						
PALK	Pallekele	68.16	100	eP	P	21 27 09.4	-0.4
PALK				pmax	pmax		
	comp=Z,17nm,1.3s						
BILL	Bilibino	68.65	11	iP	P	21 27 09.5	-2.5
BILL				i		21 27 18.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,306nm,18.0s						
MDP	Montagnes des	68.94	258	LR	LR	21 53 04.1	
	comp=Z,135nm,20.3s,baz=44,slow=32						
HHC	Hu-ho-hao-te	69.33	53	eP	P	21 27 18.0	+1.2
HHC				PP	PP	21 29 53.0	+3.3
HHC				S	S	21 36 20.0	-2.6
HHC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC				LR	LR		
	comp=Z,350nm,13.0s						
HHC				LR	LR		
	comp=Z,350nm,9.5s						
HHC				LR	LR		
	comp=Z,1µm,13.0s						
FFC	Flin Flon	69.34	326	eP	P	21 27 17.2	+0.7

	comp=Z,3.0nm,0.8s						
FFC	Flin Flon	69.34	326	eP	P	21 27 17.2	+0.7
FFC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULM	Lac du Bonnet	69.61	320	eP	P	21 27 17.6	-0.7
	comp=Z,5.4nm,0.9s						
ULM	Lac du Bonnet	69.61	320	P	P	21 27 17.1	-1.2
	comp=Z,1.5nm,0.5s,baz=142,slow=4.4,SNR=5.8						
CD2	Chengdu	70.32	66	eP	P	21 27 22.0	-1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,4.8s						
SEY	Seymchan	70.62	19	eP	P	21 27 24.0	-0.2
SEY	Seymchan	70.62	19	P	P	21 27 24.0	-0.2
	comp=Z,0.7nm,0.6s,baz=226,slow=23,SNR=3.4						
BOSA	Boshof	70.81	169	P	P	21 27 26.0	+0.2
	comp=Z,2.4nm,0.9s,baz=340,slow=6.6,SNR=6.1						
BOSA				LR	LR	22 01 39.9	
	comp=Z,194nm,18.1s,baz=344,slow=38						
XAN	Xi'an	71.86	60	P	P	21 27 31.3	-1.0
XAN				pP	sP	21 27 39.8	-1.0
XAN				PcP	PcP	21 27 50.3	-0.8
XAN				PP	PP	21 30 13.8	+2.3
XAN				S	S	21 36 51.0	-1.1
XAN				ScS	SKSac	21 37 30.1	-5.3
XAN				SS	SS	21 41 25.4	-2.4
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,97nm,6.7s						
XAN	Xi'an	71.86	60	eP	P	21 27 31.7	-0.6
	comp=Z,18nm,1.3s						
XAN	Xi'an	71.86	60	eP	P	21 27 31.7	-0.6
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
IM3	Indian Mountai	72.18	355	eP	P	21 27 33.5	-0.1
DAWY	Dawson	72.41	348	eP	P	21 27 35.3	+0.2
	comp=Z,8.8nm,1.1s						
IL1	Eielson Array	72.74	351	eP	P	21 27 36.5	-0.4
ILAR	Eielson Array	72.74	351	P	P	21 27 36.3	-0.6
	comp=Z,0.5nm,0.7s,baz=350,slow=3.5,SNR=11						
ILAR				LR	LR	22 02 23.5	
	comp=Z,120nm,19.5s,baz=10.0,slow=38						
ILB	Eielson Array	72.74	351	eP	P	21 27 36.4	-0.6
MLY	Manley	72.88	353	eP	P	21 27 40.5	+2.7
	comp=Z,4.1nm,0.8s						
MA2	Magadan	73.07	21	⇑eP	P	21 27 41.2	+2.2
MA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HDA	Harding Lake	73.10	351	eP	P	21 27 39.7	+0.6
	comp=Z,8.3nm,0.8s						
KMI	Kunming	73.16	71	P	P	21 27 39.3	-1.1
KMI				pP	pP	21 27 45.4	-1.1
KMI				sP	sP	21 27 49.1	+0.2
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,91nm,4.1s						
RIDG	Independ'e Rid	73.49	350	eP	P	21 27 42.9	+1.4
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	74.35	79	eP	P	21 27 50.6	+3.4
	comp=Z,8.0nm,1.1s						
CHTO	Chiang Mai	74.35	79	P	P	21 27 49.6	+2.4
CHTO	Chiang Mai	74.35	79	P	P	21 27 52.1	+4.9
	comp=Z,34nm,1.1s						
ECSD	EROS Data Cent	74.37	315	eP	P	21 27 47.1	+0.1
	comp=Z,4.3nm,0.8s						
KLR	Kul'dur	74.40	37	⇑eP	P	21 27 46.3	-0.7
KLR	Kul'dur	74.40	37	P	P	21 27 44.8	-2.2
	comp=Z,1.1nm,0.8s,baz=296,slow=3.2,SNR=2.6						
DHY	Denali Highway	74.44	351	eP	P	21 27 48.2	+1.0
	comp=Z,13nm,0.8s						
CM31	Chiang Mai Arr	74.58	79	eP	P	21 27 46.5	-1.9
CMAR	Chiang Mai Arr	74.58	79	P	P	21 27 46.5	-1.9
	comp=Z,1.0nm,0.8s,baz=309,slow=6.9,SNR=8.5						
CMAR				LR	LR	22 10 04.8	
	comp=Z,93nm,18.1s,baz=296,slow=43						
CM01	Chiang Mai Arr	74.61	79	eP	P	21 27 46.7	-2.0
CN2	Changchun	75.21	44	eP	P	21 27 50.0	-1.8
CN2				epP	pP	21 27 57.8	-0.4
CN2				SKS	SKSac	21 37 52.0	-8.1
CN2				eSS	SS	21 42 14.0	-4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,160nm,4.0s						
CN2				LR	LR		
	comp=Z,490nm,15.0s						
CN2				LR	LR		
	comp=Z,290nm,15.0s						
CN2				LR	LR		
	comp=Z,570nm,16.0s						
USRK	Ussuriysk Ar.	78.21	40	P	P	21 28 08.7	0.0
	comp=Z,1.3nm,0.8s,baz=282,slow=3.7,SNR=4.8						
PTGA	Pitinga	78.24	258	LR	LR	22 01 33.8	
	comp=Z,56nm,18.1s,baz=44,slow=35						
NJ2	Nanjing	79.48	56	eP	P	21 28 18.0	+2.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SDV	Santo Domingo	79.84	273	eP	P	21 28 19.1	+0.8
	comp=Z,10nm,1.0s						
BOZ	Bozeman (W)	80.26	324	eP	P	21 28 22.2	+2.1
	comp=Z,20nm,0.8s						
BOZ	Bozeman (W)	80.26	324	P	P	21 28 22.2	+2.1
BDFB	Brasilia	80.47	239	P	P	21 28 21.7	+0.2
	comp=Z,2.7nm,0.6s,baz=55,slow=8.5,SNR=5.2						
YSS	Yuzh-Sakhalins	80.85	33	eP	P	21 28 22.7	-0.3
YSS	Yuzh-Sakhalins	80.85	33	⇑eP	P	21 28 23.4	+0.4
YSS				pmax	pmax		
	comp=Z,11nm,1.1s						
KS01	Wonju Array Si	81.00	47	eP	P	21 28 22.9	-1.1
KS15	Wonju Array Si	81.02	47	eP	P	21 28 23.4	-0.7
KSAR	Wonju Array Be	81.02	47	P	P	21 28 23.4	-0.7
KSAR	Wonju Array Be	81.02	47	P	P	21 28 23.4	-0.7
KSRS	Korea Array	81.04	47	P	P	21 28 23.4	-0.8
	comp=Z,1.0nm,0.7s,baz=336,slow=2.7,SNR=5.5						
PD31	Pinedale Array	81.53	321	eP	P	21 28 27.6	+0.6
PDAR	Pinedale Array	81.53	321	eP	P	21 28 26.9	-0.2
PDAR	Pinedale Array	81.53	321	P	P	21 28 26.5	-0.5
	comp=Z,0.8nm,0.7s,baz=58,slow=5.2,SNR=9.6						
PDAR				LR	LR	22 05 40.3	
	comp=Z,243nm,18.8s,baz=44,slow=36						
ISCO	Idaho Springs	81.87	317	P	P	21 28 31.1	+2.1
O20A	White River Ci	82.93	319	eP	P	21 28 34.5	+0.1
	comp=Z,7.6nm,0.9s						
BMO	Blue Mountains	83.25	327	eP	P	21 28 35.0	-0.8
	comp=Z,5.4nm,0.8s						
BMO	Blue Mountains	83.25	327	eP	P	21 28 35.0	-0.8
BMO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SDCO	Great Sand Dun	83.35	316	eP	P	21 28 37.5	+0.8
	comp=Z,6.0nm,1.1s						
HWUT	Hardware Ranch	83.37	322	eP	P	21 28 37.5	+0.9
	comp=Z,5.4nm,1.0s						
S22A	4UR Ranch, Cre	84.04	317	eP	P	21 28 41.5	+1.3
	comp=Z,4.8nm,1.0s						
PV04	Paradox Valley	84.59	318	eP	P	21 28 44.4	+1.5
	comp=Z,9.1nm,1.0s						
PV12	Saucer Basin,	84.60	318	eP	P	21 28 44.0	+1.0
	comp=Z,9.2nm,1.1s						
PV23	Carpenter Ridg	84.60	318	eP	P	21 28 43.1	+0.1
	comp=Z,7.1nm,0.7s						
PV09	Paradox Valley	84.63	318	eP	P	21 28 44.2	+1.0
PV11	David Mesa, Pa	84.65	318	eP	P	21 28 44.2	+1.0
	comp=Z,6.6nm,0.9s						
PV16	Nyswonger Mesa	84.66	318	eP	P	21 28 44.3	+1.0
	comp=Z,12nm,1.2s						
PV14	Lion Creek, Pa	84.67	318	eP	P	21 28 43.5	+0.1
	comp=Z,7.1nm,0.7s						
SRU	San Rafael Swe	84.83	320	eP	P	21 28 44.6	+0.5
	comp=Z,4.4nm,0.7s						
SRU	San Rafael Swe	84.83	320	eP	P	21 28 44.6	+0.5
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TCRU	Three Creeks R	86.15	321	eP	P	21 28 47.6	-3.1
	comp=Z,10nm,0.4s						
LTX	Lajitas	88.63	309	eP	P	21 29 03.8	+1.2
LTX	Lajitas	88.63	309	eP	P	21 29 03.8	+1.2
TXAR	Lajitas Array	88.63	309	P	P	21 29 03.8	+1.2
	comp=Z,0.2nm,0.7s,baz=103,slow=5.6,SNR=2.8						
TXAR				LR	LR	22 09 19.0	
	comp=Z,128nm,18.3s,baz=0.0,slow=36						
NV01	Mina Array Sit	88.97	324	eP	P	21 29 04.3	0.0
NVAR	Mina Array Bea	88.97	324	P	P	21 29 04.3	0.0
	comp=Z,0.2nm,0.6s,baz=32,slow=5.3,SNR=2.2						
NVAR				LR	LR	22 08 52.8	
	comp=Z,142nm,19.9s,baz=360,slow=36						
TGY	Tagaytay City	93.23	68	LR	LR	22 16 02.5	
	comp=Z,263nm,21.7s,baz=154,slow=38						
CPUP	Villa Florida	94.17	238	LR	LR	22 11 17.0	
	comp=Z,196nm,19.0s,baz=64,slow=35						
LPAZ	La Paz	94.65	252	LR	LR	22 06 27.8	
	comp=Z,83nm,21.1s,baz=26,slow=32						
WR1	Warramunga Arr	125.81	85	ePKPdf	PKPdf	21 35 10.0	-1.3
WRA	Warramunga Arr	125.81	85	PKP	PKPdf	21 35 10.0	-1.3
	comp=Z,0.2nm,0.8s,baz=324,slow=1.9,SNR=2.9						
AS31	Alice Springs	127.68	89	ePKPdf	PKPdf	21 35 13.9	-0.9
ASAR	Alice Springs	127.68	89	PKP	PKPdf	21 35 13.9	-0.9
	comp=Z,0.4nm,1.0s,baz=322,slow=1.5,SNR=3.9						

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*SOME **16** 21:27:28.9, 40°.23N×76°.70E, h5^{km}*
*KRNET **16** 21:27:28.2±0.1, 40°.20N×76°.72E, h20^{km}, mb3.4*
*NNC **16** 21:27:31.7±1.2, 40°.35N×76°.58E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=10.3km s-min=5.0km az=143.0*
ISC 16 21:27:31.3±1.2**, 40°.32N**±0°.05×**76°.69E**±0°.03**, h10^{km}, n74, σ1^{s}.64**/113**, 31C-22D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.23	335	⇓iP	Pn	21 27 53.7	-1.2
	baz=35						
NRN				⇓iS	Sn	21 28 11.9	+0.2
	baz=35						
TARG	Taragay, Kyrgy	1.64	31	⇓iP	Pn	21 28 00.7	+0.1
	baz=28						
TARG				⇓iS	Sg	21 28 24.2	+0.1
	baz=28						
KDJ	Kajisay	1.84	11	⇓iP	Pb	21 28 04.4	-0.8
	baz=10.0						
KDJ				⇓iS	Sg	21 28 30.3	-0.3
	baz=10.0						
ULHL	Ulahol	1.95	350	P	Pb	21 28 06.7	-0.4
	SNR=111						
ULHL	Ulahol	1.95	350	⇑iP	Pb	21 28 06.3	-0.8
	baz=50						
ULHL				⇑iS	Sg	21 28 33.8	-0.3
	baz=50						
KZA	Kyzart	2.06	329	P	Pn	21 28 07.5	+1.1
	SNR=46						
KZA	Kyzart	2.06	329	⇑iP	Pn	21 28 07.3	+0.9
	baz=30						
KZA				⇑iS	Sb	21 28 36.4	+1.4
	baz=30						
BOOM	Boomskoye usch	2.24	346	⇑eP	Pn	21 28 10.1	+1.5
	baz=46						
BOOM				⇑iS	Sb	21 28 40.8	+1.0
	baz=46						
ARLS	Aral	2.36	311	⇑iP	Pn	21 28 10.9	+0.6
	baz=14						
ARLS				⇑iS	Sb	21 28 42.2	-1.1
	baz=14						
SFK	Sufi-Kurgan	2.46	264	⇓Pg	Pb	21 28 14.3	-1.5
	16nm,0.3s						
SFK				⇓Lg	Lg	21 28 46.0	
	24nm,0.3s						
SFK	Sufi-Kurgan	2.46	264	Pg	Pn	21 28 13.5	+1.7
	12nm,0.2s						
SFK				Lg	Lg	21 28 45.7	
	37nm,0.3s						
SFK	Sufi-Kurgan	2.46	264	⇑iP	Pn	21 28 11.8	0.0
	baz=67						
SFK				⇑iS	Sn	21 28 43.7	+1.7
	baz=67						
PRZ	Przheval'sk	2.51	30	⇑iP	Pn	21 28 13.2	+0.8
	baz=29						
PRZ				⇑iS	Sb	21 28 45.9	-1.8
	baz=29						
UCH	Uchtor	2.51	320	P	Pb	21 28 16.9	+0.1
	SNR=10						
UCH	Uchtor	2.51	320	⇓iP	Pn	21 28 13.1	+0.4
	baz=21						
UCH				⇓iS	Sb	21 28 46.8	-1.2
	baz=21						
KBK	Karagaybulak	2.67	331	P	Pn	21 28 16.8	+2.1
	SNR=20						
KBK	Karagaybulak	2.67	331	⇑iP	Pn	21 28 15.8	+1.2
	baz=32						
KBK				⇑iS	Sb	21 28 50.6	-1.7
	baz=32						
IZV	Izvestkoviy	2.71	359	Pg	Pb	21 28 20.1	0.0
IZV				Lg	Lg	21 28 57.0	
IZV	Izvestkoviy	2.71	359	eP	Pb	21 28 20.1	0.0
	14nm,0.3s						
IZV				eS	Sg	21 28 57.0	-1.4
	92nm,0.6s						
TNSS	Tian-Shan	2.72	4	Pg	Pb	21 28 18.7	-1.6
	14nm,0.3s						
TNSS				Lg	Lg	21 28 54.8	
	41nm,0.6s						
TNSS	Tian-Shan	2.72	4	eP	Pb	21 28 18.7	-1.6
	14nm,0.3s						
TNSS				eS	Sb	21 28 54.8	+1.0
	41nm,0.6s						
TKM2	Tokmak 2	2.72	343	P	Pn	21 28 17.0	+1.6
	SNR=20						
TKM2	Tokmak 2	2.72	343	⇑Pn	Pn	21 28 16.8	+1.5
	8.5nm,0.3s						
TKM2				⇑Lg	Lg	21 28 57.2	
	16nm,0.5s						
TKM2	Tokmak 2	2.72	343	⇓iP	Pn	21 28 16.6	+1.3
	baz=43						
TKM2				⇓iS	Sb	21 28 52.0	-1.8
	baz=43						
KST	Kastek	2.77	349	Pg	Pb	21 28 21.6	+0.6
	15nm,0.5s						
KST				Lg	Lg	21 28 59.4	
	31nm,0.6s						
KST	Kastek	2.77	349	eP	Pb	21 28 21.6	+0.6
	15nm,0.5s						
KST				eS	Sg	21 28 59.4	-1.0
	31nm,0.6s						
MTBS	Maitube	2.81	356	eP	Pb	21 28 22.6	+0.8
	9.6nm,0.3s						
MTBS				eS	Sg	21 29 00.7	-1.0
	60nm,0.4s						
AAK	Ala-Archa	2.84	325	P	Pn	21 28 18.3	+1.3
	SNR=14						
AAK	Ala-Archa	2.84	325	⇑Pn	Pn	21 28 18.1	+1.2
	18nm,0.6s						
AAK				⇑Lg	Lg	21 29 00.6	
	19nm,0.6s						
AAK	Ala-Archa	2.84	325	⇑iP	Pn	21 28 18.2	+1.3
	baz=26						
AAK				⇑iS	Sb	21 28 54.9	-2.2
	baz=26						
MDOK	Medeo	2.85	5	⇑Pn	Pb	21 28 20.6	-1.8
	7.4nm,0.7s						
MDOK				⇓Pg	Pg	21 28 26.9	+0.9
	20nm,0.6s						
MDOK				Lg	Lg	21 29 02.4	
	33nm,0.5s						
MDOK	Medeo	2.85	5	Pg	Pb	21 28 22.8	+0.4
	4.6nm,0.3s						
MDOK				Lg	Lg	21 29 01.4	
	43nm,0.5s						
MDOK	Medeo	2.85	5	eP	Pb	21 28 22.8	+0.4
	4.6nm,0.3s						
MDOK				eS	Sg	21 29 01.4	-1.6
	43nm,0.5s						
AML	Almayashu	2.89	310	P	Pn	21 28 18.9	+1.0
	SNR=21						
AML	Almayashu	2.89	310	⇓iP	Pn	21 28 19.0	+1.2
	baz=11						
AML				⇓iS	Sn	21 28 55.4	+2.5
	baz=11						
KNDC	Almaty	2.90	4	⇓Pn	Pb	21 28 22.7	-0.5
	12nm,0.5s						
KNDC				⇓Lg	Lg	21 29 03.5	
	84nm,0.8s						
KOTS	Kotyrbulak	2.93	6	Pg	Pb	21 28 24.6	+0.9
	14nm,0.3s						
KOTS				Lg	Lg	21 29 04.6	
	57nm,0.3s						
KOTS	Kotyrbulak	2.93	6	eP	Pb	21 28 24.6	+0.9
	14nm,0.3s						
KOTS				eS	Sg	21 29 04.6	-0.8
	57nm,0.3s						
ARSB	Arslanbob	2.99	291	⇑iP	Pn	21 28 19.0	+0.1
	baz=93						
ARSB				⇑iS	Sn	21 28 56.5	+1.7
	baz=93						
DGS	Degeres	3.00	347	Pg	Pb	21 28 25.4	+0.5
	9.2nm,0.3s						
DGS				Lg	Lg	21 29 06.0	
	30nm,0.5s						
DGS	Degeres	3.00	347	eP	Pb	21 28 25.4	+0.5
	9.2nm,0.3s						
DGS				eS	Sg	21 29 06.0	-1.6
	30nm,0.5s						
SATY	Saty	3.02	25	Pg	Pb	21 28 26.3	+1.1
	12nm,0.4s						
SATY				Lg	Lg	21 29 07.6	
	39nm,0.2s						
SATY	Saty	3.02	25	eP	Pb	21 28 26.4	+1.1
	12nm,0.4s						
SATY				eS	Sg	21 29 07.6	-0.8
	39nm,0.2s						
CHMS	Chumysh	3.04	332	P	Pn	21 28 21.2	+1.6
	SNR=12						
CHMS	Chumysh	3.04	332	⇑eP	Pn	21 28 20.7	+1.1
	baz=33						
CHMS				⇑iS	Sn	21 28 59.5	+3.4
	baz=33						
EKS2	Erkin-Say	3.20	318	P	Pn	21 28 23.7	+1.8
	SNR=9.4						
EKS2	Erkin-Say	3.20	318	⇑iP	Pn	21 28 23.2	+1.4
	baz=19						
EKS2				⇑iS	Sn	21 29 03.1	+3.0
	baz=19						
UZB	Uzynbulak	3.32	31	Pg	Pb	21 28 30.7	+0.4
	3.4nm,0.4s						
UZB				Lg	Lg	21 29 15.3	
	21nm,0.6s						
UZB	Uzynbulak	3.32	31	eP	Pb	21 28 30.7	+0.4
	3.4nm,0.4s						
UZB				eS	Sg	21 29 15.3	-2.6
	21nm,0.6s						
KTBS	Karatobe	3.39	360	Pg	Pb	21 28 31.8	+0.3
	5.5nm,0.3s						
KTBS				Lg	Lg	21 29 17.2	
	13nm,0.4s						
KTBS	Karatobe	3.39	360	eP	Pb	21 28 31.8	+0.3
	5.5nm,0.3s						
KTBS				eS	Sg	21 29 17.2	-2.9
	13nm,0.4s						
SGDS	Sogindy	3.48	334	Pg	Pb	21 28 33.7	+0.5
SGDS				Lg	Lg	21 29 20.6	
CHKK	Chushkaly	3.54	3	eP	Pb	21 28 35.3	+1.3
	6.8nm,0.4s						
CHKK				eS	Sg	21 29 22.7	-2.1
	48nm,0.5s						
MRKS	Merke	3.55	314	Pg	Pb	21 28 35.0	+0.6
	9.1nm,0.6s						
MRKS				Lg	Lg	21 29 22.2	
	10nm,0.4s						
MRKS	Merke	3.55	314	eP	Pb	21 28 35.0	+0.6
	9.1nm,0.6s						
MRKS				eS	Sg	21 29 22.2	-3.2
	10nm,0.4s						
KUU	Kurty	3.58	356	Pg	Pb	21 28 35.3	+0.6
	7.8nm,0.3s						
KUU				Lg	Lg	21 29 22.9	
	9.3nm,0.6s						
KUU	Kurty	3.58	356	eP	Pb	21 28 35.3	+0.6
	7.8nm,0.3s						
KUU				eS	Sg	21 29 22.9	-3.3
	9.3nm,0.6s						
PDGK	Podgornoye	3.66	34	⇓Pg	Pg	21 28 41.1	-0.4
	7.8nm,0.6s						
PDGK				⇓Lg	Lg	21 29 29.7	
	26nm,0.6s						
PDGK	Podgornoye	3.66	34	⇓iP	Pn	21 28 29.1	+1.0
	baz=33						
PDGK				⇓iS	Sn	21 29 13.9	+2.5
	baz=33						
MNAS	Manas	3.82	306	⇑Pn	Pn	21 28 30.7	+0.3
	2.2nm,0.6s						
MNAS				⇓Pg	Pb	21 28 41.0	+2.1
	5.2nm,0.6s						
MNAS				⇑Lg	Lg	21 29 31.0	
	6.7nm,0.7s						
MNAS	Manas	3.82	306	Pg	Pb	21 28 40.4	+1.5
MNAS				Lg	Lg	21 29 31.6	
MNBS	Baschi	3.96	18	Pg	Pb	21 28 42.5	+1.1
MNBS				Lg	Lg	21 29 36.1	
MNBS	Baschi	3.96	18	eP	Pb	21 28 42.5	+1.1
	5.4nm,0.5s						
MNBS				eS	Sg	21 29 35.4	-3.1
	23nm,0.4s						
ARXS	Arharly	3.98	12	Pg	Pb	21 28 42.9	+1.3
	4.2nm,0.5s						
ARXS				Lg	Lg	21 29 36.3	
	28nm,0.7s						
ARXS	Arharly	3.98	12	eP	Pb	21 28 42.9	+1.3
	4.2nm,0.5s						
ARXS				eS	Sg	21 29 36.3	-2.7
	28nm,0.7s						
KTMS	Ketmen	4.15	40	Pg	Pb	21 28 45.5	+1.0
KTMS				Lg	Lg	21 29 41.5	
KTMS	Ketmen	4.15	40	eP	Pb	21 28 45.5	+1.0
	5.8nm,0.6s						
KTMS				eS	Sg	21 29 41.5	-3.1
	13nm,0.6s						
DJR	Jarkent	4.62	29	Pg	Pb	21 28 53.4	+0.9
DJR				Lg	Lg	21 29 54.4	
DJR	Jarkent	4.62	29	eP	Pb	21 28 54.8	+2.3
	1.4nm,0.6s						
DJR				eS	Sg	21 29 56.2	-3.3
	4.3nm,0.5s						
KAPS	Kapalarasan	5.33	21	Pg	Pb	21 29 07.2	+2.5
KAPS				Lg	Lg	21 30 17.5	
KAPS	Kapalarasan	5.33	21	eP	Pg	21 29 09.4	-4.0
	1.5nm,0.4s						
KAPS				eS	Sg	21 30 21.2	-1.3
	8.3nm,0.4s						
IUG	Iuzhnay	5.34	292	Pg	Pb	21 29 07.5	+2.7
IUG				Lg	Lg	21 30 18.2	
IUG	Iuzhnay	5.34	292	eP	Pb	21 29 07.3	+2.4
	5.9nm,0.3s						
IUG				eS	Sg	21 30 18.2	-4.6
	14nm,0.5s						
KK31	Karatay Array	5.39	303	⇑Pg	Pb	21 29 07.5	+1.9
	1.3nm,0.6s,baz=123,slow=17,SNR=9.6						
KK31				⇑Lg	Lg	21 30 19.6	
	1.2nm,0.4s,baz=125,slow=30,SNR=4.5						

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*DJA **16** 21:38:23.3±1.0, 1°N±5°×12°5E±°, h14^{km}±9^{km}, M3.4/2, MLv3.4/2*
*ISCJB **16** 21:38:24.4±0.9, 0°.71N±0°.10×125°.37E±0°.06, h35^{km}, mb2.9/2, Error ellipse: s-maj=14.0km s-min=9.2km az=171.6*
*IDC **16** 21:38:35.8±1.3, 1°.10S×126°.29E, h0^{km}, mb3.1/4, mb1 3.3/4, mb1mx3.2/41, mbtmp3.1/4, Error ellipse: s-maj=134.2km s-min=22.5km az=68.0*
ISC 16 21:38:24.0±1.3**, 0°.68N**±0°.08×**125°.37E**±0°.06**, h35^{km}, n9, σ2^{s}.70**/8**, mb3.2**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.40	266	P	Pn	21 38 47.2	+0.2
KMSI				S	Sn	21 39 06.0	+1.8
TNTI	Ternate	2.00	87	P	Pn	21 38 57.2	+2.0
SANI	Sanana	2.78	167	P	Pn	21 39 07.8	+1.7
SGSI	Sangihe	2.99	3	P	Pn	21 39 09.7	+0.8
LUWI	Luwuk	3.12	237	P	Pn	21 39 12.4	+1.8
WRA	Warramunga Arr	22.30	157	P	P	21 43 14.2	-4.4
	0.2nm,0.4s,baz=336,slow=11,SNR=7.3						
ASAR	Alice Springs	25.59	162	P	P	21 43 48.3	-1.7
	0.4nm,1.0s,baz=345,slow=9.4,SNR=4.4						
SONM	Songino Array	49.77	343	P	P	21 47 44.9	+32
	0.7nm,1.1s,baz=138,slow=6.7,SNR=3.2						
MKAR	Makanchi Array	59.31	327	P	P	21 48 53.3	+31
	0.2nm,0.7s,baz=121,slow=5.6,SNR=2.3						

IDC 16 21:41:32.7±1.6**, 10°.73S×165°.21E, h0^{km}, mb3.4**/4**, mb1 3.6**/5**, mb1mx3.4**/40**, mbtmp3.5**/5**, ML3.6**/1**, Error ellipse: s-maj=50.9km s-min=29.3km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.34	174	Pn	Pn	21 44 16.7	+0.4
	0.4nm,0.3s,baz=311,slow=16,SNR=8.1						
WRA	Warramunga Arr	31.10	249	P	P	21 47 54.1	+0.9
	0.3nm,0.9s,baz=81,slow=9.3,SNR=2.8						
ASAR	Alice Springs	32.47	243	P	P	21 48 04.0	-1.2

	0.3nm,0.5s,baz=65,slow=10,SNR=7.4						
ILAR	**Eielson Array**	**83.38**	**19**	P	P	21 54 01.4	-0.1
	0.2nm,0.7s,baz=240,slow=5.6,SNR=4.0						
MKAR	**Makanchi Array**	**92.93**	**317**	P	P	21 54 48.0	+0.1
	0.2nm,0.6s,baz=108,slow=4.7,SNR=2.3						

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*ISCJB **16** 21:47:17.3±1.1, 4°.63S±0°.08×144°.7E±0°.1, h100^{km}, mb3.4/5, Error ellipse: s-maj=15.8km s-min=10.4km az=158.9*

*IDC **16** 21:47:23.3±2.9, 4°.68S×144°.34E, h136^{km}±25^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.2/29, mbtmp3.7/7, Error ellipse: s-maj=26.7km s-min=14.2km az=107.0*

ISC 16 21:47:19.1±1.3**, 4°.8S**±0°.1×**144°.6E**±0°.1**, h100^{km}, n7, σ1^{s}.55**/9**, mb3.4**/5**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.49**	**300**	P	**Pn**	**21 48 26.3**	**+1.3**
	1.9nm,0.3s,baz=106,slow=15,SNR=6.3						
JAY				S	**Sn**	**21 49 16.0**	**-0.2**
	1.2nm,0.3s,baz=131,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**18.10**	**213**	P	**Pn**	**21 51 23.3**	**-0.9**
	0.2nm,0.3s,baz=34,slow=11,SNR=24						
WRA				S	**S**	**21 54 44.5**	**-1.2**
	0.0nm,0.3s,baz=27,slow=22,SNR=2.9						
ASAR	**Alice Springs**	**21.45**	**208**	P	**P**	**21 51 59.4**	**0.0**
	1.1nm,0.6s,baz=34,slow=11,SNR=24						
FITZ	**Fitzroy Crossi**	**22.80**	**233**	P	**P**	**21 52 12.8**	**-0.8**
	2.1nm,0.5s,baz=42,slow=12,SNR=20						
STKA	**Stephens Creek**	**27.12**	**186**	P	**P**	**21 52 55.8**	**+3.0**
	0.4nm,0.4s,baz=352,slow=15,SNR=2.5						
MKAR	**Makanchi Array**	**75.04**	**321**	P	**P**	**21 58 49.3**	**-0.6**
	0.2nm,0.5s,baz=101,slow=7.5,SNR=5.5						
ILAR	**Eielson Array**	**85.30**	**24**	P	**P**	**21 59 43.7**	**-0.9**
	0.4nm,0.6s,baz=258,slow=4.6,SNR=7.0						

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*IDC **16** 21:59:39.8±0.8, 11°.09S×165°.41E, h0^{km}, mb4.0/11, mb1 4.2/13, mb1mx4.0/33, mbtmp4.1/13, ML4.7/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/46, Error ellipse: s-maj=26.3km s-min=19.6km az=130.0*

*NEIC **16** 21:59:40.7±0.3, 11°.17S×165°.47E, h10^{km}, mb4.7/12, Error ellipse: s-maj=8.6km s-min=7.8km az=120.0*

*ISCJB **16** 21:59:42.3±0.4, 11°.24S±0°.05×165°.38E±0°.06, h30^{km}, mb4.3/21, MS3.9/2, Error ellipse: s-maj=9.2km s-min=7.3km az=164.2*

ISC 16 21:59:43.6±0.5**, 11°.14S**±0°.07×**165°.53E**±0°.08**, h30^{km}, n43, σ1^{s}.30**/40**, mb4.3**/21**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.75**	**287**	Pn	**Pn**	**22 01 05.0**	**-1.9**
	29nm,0.3s,baz=188,slow=8.0,SNR=2.4						
HNR				Sn	**Sn**	**22 02 14.3**	**+2.4**
	1.1nm,0.3s,baz=196,slow=23,SNR=2.6						
HNR				LR	LR	22 02 40.5	
	comp=Z,31nm,18.6s,baz=71,slow=32						
DZM	**Mont Dzumac**	**10.90**	**175**	*e*Pn	**Pn**	**22 02 17.2**	**-0.6**
DZM				*e*Sn	**Sn**	**22 04 21.0**	**+2.1**
DZM	**Mont Dzumac**	**10.90**	**175**	Pn	**Pn**	**22 02 17.2**	**-0.6**
	4.7nm,0.3s,baz=350,slow=12,SNR=38						
PATS	**Pohnpei**	**19.25**	**338**	*e*P	**P**	**22 04 04.5**	**-1.3**
	226nm,1.5s						
CTA	**Charters Tower**	**20.56**	**242**	P	**P**	**22 04 20.0**	**-0.2**
	3.0nm,0.6s,baz=66,slow=14,SNR=4.1						
URZ	**Urewera**	**28.93**	**161**	*e*P	**P**	**22 05 41.1**	**+0.9**
	9.2nm,1.1s						
URZ	**Urewera**	**28.93**	**161**	P	**P**	**22 05 42.2**	**+2.0**
	12nm,1.2s,baz=319,slow=9.3,SNR=3.4						
H11S2	**WAKE ISLAND Hy**	**29.47**	**2**	T	T	22 36 44.9	
	baz=180						
H11S3	**WAKE ISLAND Hy**	**29.47**	**2**	T	T	22 36 39.7	
	baz=180						
H11S1	**WAKE ISLAND Hy**	**29.48**	**2**	T	T	22 36 47.9	
	baz=180						
BKZ	**Black Stump Fm**	**29.57**	**163**	*e*P	**P**	**22 05 47.4**	**+1.5**
	9.3nm,0.6s						
STKA	**Stephens Creek**	**30.22**	**223**	*e*P	**P**	**22 05 52.5**	**+0.8**
	0.6nm,0.7s						
STKA	**Stephens Creek**	**30.22**	**223**	P	**P**	**22 05 52.5**	**+0.8**
	2.4nm,0.6s,baz=34,slow=11,SNR=9.1						
THZ	**Tophouse**	**31.18**	**169**	*e*P	**P**	**22 06 00.3**	**+0.2**
	26nm,1.2s						
WRAB	**Tennant Creek**	**31.23**	**250**	*e*P	**P**	**22 05 59.1**	**-1.7**
	5.1nm,1.0s						
WB2	**Warramunga Arr**	**31.24**	**250**	*e*P	**P**	**22 05 59.1**	**-1.7**
WR1	**Warramunga Arr**	**31.25**	**250**	*e*P	**P**	**22 06 00.3**	**-0.7**
	5.7nm,1.0s						
WRA	**Warramunga Arr**	**31.25**	**250**	P	**P**	**22 06 00.3**	**-0.7**
	3.7nm,0.9s,baz=81,slow=9.1,SNR=15						
AS01	**Alice Springs**	**32.51**	**243**	*e*P	**P**	**22 06 10.7**	**-1.4**
AS31	**Alice Springs**	**32.55**	**243**	*e*P	**P**	**22 06 11.4**	**-1.0**
	0.5nm,0.9s						
ASAR	**Alice Springs**	**32.56**	**243**	P	**P**	**22 06 11.4**	**-1.0**
	0.4nm,0.5s,baz=63,slow=10.0,SNR=16						
MQZ	**McQueen's Vall**	**33.03**	**170**	*e*P	**P**	**22 06 15.1**	**-1.1**
	41nm,1.1s						
BBOO	**Buckleboo**	**34.60**	**227**	*e*P	**P**	**22 06 27.7**	**-2.4**
	3.4nm,0.8s						
RAR	**Rarotonga**	**34.73**	**111**	*e*P	**P**	**22 06 28.7**	**-2.6**
	57nm,1.3s						
BATI	**Baumata**	**41.12**	**267**	LR	LR	22 26 01.1	
	comp=Z,157nm,18.8s,baz=324,slow=39						
HMH	**Humu'ula Sheep**	**49.08**	**52**	*e*P	**P**	**22 08 27.8**	**-1.1**
	94nm,1.1s						
CM31	**Chiang Mai Arr**	**71.95**	**294**	*e*P	**P**	**22 11 06.1**	**+1.2**
	2.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**71.95**	**294**	P	**P**	**22 11 06.1**	**+1.2**
	0.1nm,0.3s,baz=111,slow=4.0,SNR=2.6						
HDA	**Harding Lake**	**83.41**	**19**	*e*P	**P**	**22 12 08.0**	**+0.2**
	4.9nm,1.0s						
ILAR	**Eielson Array**	**83.67**	**19**	P	**P**	**22 12 09.1**	**0.0**
	0.5nm,0.8s,baz=230,slow=6.3,SNR=4.9						
ILB	**Eielson Array**	**83.67**	**19**	*e*P	**P**	**22 12 09.1**	**0.0**
	3.7nm,1.3s						
NV01	**Mina Array Sit**	**86.25**	**50**	*e*P	**P**	**22 12 24.3**	**+1.4**
NVAR	**Mina Array Bea**	**86.25**	**50**	P	**P**	**22 12 24.3**	**+1.4**
	1.1nm,1.0s,baz=224,slow=5.0,SNR=2.9						
LPIG	**La Paz**	**89.25**	**65**	LR	LR	22 44 34.6	
	comp=Z,40nm,19.5s,baz=200,slow=30						
MK32	**Makanchi Array**	**93.44**	**317**	*e*P	**P**	**22 12 57.1**	**+0.7**
MKAR	**Makanchi Array**	**93.44**	**317**	P	**P**	**22 12 57.1**	**+0.7**
	0.4nm,0.7s,baz=95,slow=6.6,SNR=6.4						
ZALV	**Zalesovo Beam**	**93.51**	**324**	P	**P**	**22 12 57.2**	**+0.8**
	0.2nm,0.2s,baz=52,slow=9.3,SNR=3.1						
ZAA1	**Zalesovo Array**	**93.51**	**324**	*e*P	**P**	**22 12 57.2**	**+0.8**
YKA	**Yellowknife Ar**	**95.16**	**27**	P	**P**	**22 13 04.9**	**+1.1**
	0.1nm,0.6s,baz=256,slow=4.1,SNR=3.5						
YKB5	**Yellowknife Ar**	**95.16**	**27**	*e*P	**P**	**22 13 04.9**	**+1.1**
ARA0	**ARCESS Array S**	**116.37**	**345**	*e*PKPdf	**PKPdf**	**22 18 24.3**	**+0.5**
ARCES	**ARCESS Array B**	**116.37**	**345**	PKP	**PKPdf**	**22 18 24.3**	**+0.5**
	1.3nm,0.7s,baz=25,slow=4.5,SNR=4.3						
ESDC	**Sonseca Array**	**150.09**	**344**	PKPbc	**PKPbc**	**22 19 32.5**	**+0.6**
	0.4nm,0.7s,baz=46,slow=2.2,SNR=3.3						

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*ISCJB **16** 22:13:41.4±0.6, 4°.54S±0°.06×135°.25E±0°.06, h16^{km}, mb3.7/4, Error ellipse: s-maj=9.4km s-min=7.5km az=38.3*

*IDC **16** 22:13:41.7±1.0, 4°.42S×135°.20E, h0^{km}, mb3.8/4, mb1 4.2/10, mb1mx4.0/43, mbtmp4.2/10, ML4.3/6, MS3.1/1, Ms1 3.1/1, ms1mx2.8/34, Error ellipse: s-maj=30.2km s-min=19.4km az=69.0*

ISC 16 22:13:42.8±0.7**, 4°.61S**±0°.06×**135°.16E**±0°.07**, h16^{km}, n11, σ2^{s}.93**/16**, mb3.8**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.38**	**314**	Pn	**Pn**	**22 15 02.6**	**0.0**
	4.1nm,0.3s,baz=112,slow=4.2,SNR=40						
SIJI				Sn	**Sn**	**22 16 00.5**	**-3.8**
	6.1nm,0.3s,baz=273,slow=23,SNR=2.6						
JAY	**Jayapura**	**5.91**	**70**	Pn	**Pn**	**22 15 08.9**	**-0.9**
	1.1nm,0.3s,baz=263,slow=13,SNR=3.4						
JAY				Sn	**Sn**	**22 16 15.1**	**-2.3**
	1.3nm,0.3s,baz=101,slow=23,SNR=6.9						
BATI	**Baumata**	**12.68**	**243**	Pn	**Pn**	**22 16 45.1**	**+2.4**
	4.6nm,0.3s,baz=81,slow=4.7,SNR=4.6						
WRA	**Warramunga Arr**	**15.26**	**183**	Pn	**Pn**	**22 17 17.9**	**+0.1**
	0.4nm,0.3s,baz=3.4,slow=13,SNR=20						
WRA				Sn	**Sn**	**22 20 01.9**	**-4.7**
	0.7nm,0.3s,baz=3.4,slow=23,SNR=8.4						
FITZ	**Fitzroy Crossi**	**16.32**	**214**	Pn	**Pn**	**22 17 33.3**	**+1.7**
	1.8nm,0.3s,baz=35,slow=11,SNR=28						
FITZ				Sn	**Sn**	**22 20 27.9**	**-4.6**
	0.5nm,0.3s,baz=219,slow=17,SNR=3.9						
FITZ				LR	LR	22 24 49.6	
	comp=Z,68nm,18.5s,baz=302,slow=40						
CTA	**Charters Tower**	**18.79**	**146**	P	**Pn**	**22 18 03.9**	**+1.6**
	0.6nm,0.3s,baz=330,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**18.98**	**184**	P	**Pn**	**22 18 06.8**	**+2.3**
	1.3nm,0.3s,baz=6.0,slow=10.0,SNR=123						
ASAR				S	**Sn**	**22 21 33.0**	**-3.9**
	0.2nm,0.3s,baz=4.4,slow=26,SNR=5.2						
STKA	**Stephens Creek**	**27.79**	**168**	P	**P**	**22 19 35.0**	**+3.8**
	1.3nm,0.7s,baz=333,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**69.19**	**324**	P	**P**	**22 24 49.2**	**+0.4**
	0.7nm,0.7s,baz=114,slow=6.5,SNR=8.1						
KURBB	**Kurchatov Arra**	**73.28**	**326**	P	**P**	**22 25 14.1**	**+0.7**
	0.8nm,0.8s,baz=125,slow=5.0,SNR=4.8						
BVAR	**Borovoye Array**	**78.88**	**326**	P	**P**	**22 25 46.2**	**+0.9**
	0.6nm,0.7s,baz=116,slow=3.4,SNR=3.6						

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*NIED **16** 22:17:00, 43°.40N×146°.80E, h41^{km}, Mw5.4   Best double couple: $M_0$1.68000×10^{17} NP1:ϕ_s195.00000°, δ21.00000°, λ50.00000°.   NP2:ϕ_s57.00000°, δ74.00000°, λ104.00000°.*

*BJI **16** 22:17:27.4, 43°.54N×147°.16E, h42^{km}, mB5.3/57, mb5.2/78, Ms5.0/89, Ms7 4.8/83*

*IDC **16** 22:17:29.7±2.3, 43°.49N×146°.79E, h29^{km}±15^{km}, mb5.1/53, mb1 5.1/61, mb1mx5.1/63, mbtmp5.2/61, ML4.3/6, MS4.9/31, Ms1 4.9/31, ms1mx4.7/43, Error ellipse: s-maj=9.6km s-min=7.2km az=122.0*

*ISCJB **16** 22:17:30.5±0.2, 43°.47N±0°.02×146°.79E±0°.01, h49^{km}±2^{km}, mb5.6/595, MS5.1/291, Error ellipse: s-maj=2.8km s-min=1.7km az=163.7*

*MOS **16** 22:17:30.5±1.1, 43°.45N×146°.75E, h56^{km}, mb5.9/140, MS5.0/50, Error ellipse: s-maj=5.1km s-min=3.6km az=112.2*

MOS Felt (IV) at Malokuril'skoye; (III-IV) at Goryachiy Plyazh, Yuzhno-Kuril'sk; (III) at Golovnino, Lagunnoye, Mendeleyevo.

*JMA **16** 22:17:30.4±0.2, 43°.34N×146°.83E, h44^{km}±3^{km}, M5.3*

JMA Felt III J1.

*SKHL **16** 22:17:30.1±0.8, 43°.38N×146°.88E, h55^{km}±4^{km}, mb6.0/6, mbh5.9/3, Ms5.3/7, msh5.6/3*

SKHL Felt (IV) at Malokuril'skoje; (III-IV) at Yushno-Kuril'sk, Gorjachy Pljash; (III) at Golo.

*NEIC **16** 22:17:32.1±0.5, 43°.54N×146°.68E, h46^{km}±4^{km}, mb5.6/297, MS5.1/230, MW5.3, Error ellipse: s-maj=3.2km s-min=2.1km az=156.0   Best double couple: NP1: ϕ_s236.00000°, δ17.00000°, λ90.00000°.   NP2:ϕ_s57.00000°, δ73.00000°, λ90.00000°.   Principal axes: T 1.0500, Plg62.0000°, Azm327.0000°; N -0.1000, Plg0.0000°, Azm237.0000°; P -0.9500, Plg28.0000°, Azm147.0000°;*

NEIC Felt at Nemuro, Hokkaido. Recorded [3 JMA] in eastern Hokkaido.

*GCMT **16** 22:17:33.1±0.1, 43°.48N±0°.01×147°.10E±0°.01, h44^{km}, MW5.4/109, Moment Tensor Solution.   s85,c157; s109,c227;   Duration: 1^{s}.2   Moment tensor: Scale 10^{17} Nm; M_{rr}0.97±.03; $M_{\theta\theta}$-0.16±.02; $M_{\phi\phi}$-0.81±.02; $M_{r\theta}$0.99±.03; $M_{\theta\phi}$-0.69±.02; $M_{\phi r}$0.73±.02;   Best double couple: $M_0$1.66500×10^{17} NP1:ϕ_s49.00000°, δ70.00000°, λ105.00000°.   NP2:ϕ_s191.00000°, δ25.00000°, λ55.00000°.   Principal axes: T 1.5820, Plg62.0000°, Azm343.0000°; N 0.1660, Plg14.0000°, Azm224.0000°; P -1.7480, Plg23.0000°, Azm128.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 16 22:17:31.3±0.3**, 43°.54N**±0°.03×**146°.76E**±0°.03**, h42^{km}**±2^{km}**, h42^{km}:pP-P, n2219, σ1^{s}.30**/2367**, mb5.7**/629**, MS5.0**/295**, 208C-64D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.33**	**8**	*i* P	**Pn**	**22 17 40.0**	**-0.1**
SHO				AMB	AMB	22 17 41.0	
	110μm,0.4s						
SHO				AMB	AMB	22 17 41.0	
	36μm,0.4s						
SHO				AMB	AMB	22 17 41.0	
	31μm,0.4s						
SHO				*i* S	**Sn**	**22 17 48.1**	**+1.8**
SHO				A	A	22 17 48.6	
	128μm,0.4s						
SHO				A	A	22 17 48.6	
	126μm,0.4s						
SHO	**Shikotan**	**0.33**	**8**	*d i*PN	**Pn**	**22 17 40.9**	**+0.8**
SHO				*i* S	**Sn**	**22 17 48.0**	**+1.8**
SHO				pmax	pmax		
	comp=N,110μm,0.5s						
SHO				pmax	pmax		
	comp=E,36μm,0.5s						
SHO				pmax	pmax		
	comp=Z,215μm,0.5s						
SHO				smax	smax		
	comp=N,128μm,0.4s						
SHO				smax	smax		
	comp=E,1243μm,0.4s						
NEM2	**Nemuro 2**	**0.76**	**257**	⇓P	**Pn**	**22 17 45.4**	**-0.3**
NEM2				*e*S	**Sn**	**22 17 56.3**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**0.82**	**307**	*i* P	**Pn**	**22 17 47.7**	**+1.3**
YUK				AMB	AMB	22 17 48.0	
	comp=E,21μm,0.6s						
YUK				AMB	AMB	22 17 48.0	
	comp=E,24μm,0.6s						
YUK				AMB	AMB	22 17 48.0	
	comp=E,70μm,0.6s						
YUK				*e*S	**Sn**	**22 18 00.2**	**+2.8**
YUK				A	A	22 18 01.0	
	comp=E,194μm,0.7s						
YUK				A	A	22 18 01.0	
	comp=E,49μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**0.82**	**307**	*d i*PN	**Pn**	**22 17 47.7**	**+1.3**
YUK				*e*S	**Sn**	**22 17 59.6**	**+2.2**
YUK				pmax	pmax		
	comp=N,21μm,0.6s						
YUK				pmax	pmax		
	comp=Z,70μm,0.6s						
YUK				pmax	pmax		
	comp=E,24μm,0.4s						
YUK				smax	smax		
	comp=N,488nm,0.5s						
GRPR	**Tuman**	**0.85**	**302**	*i* P	**Pn**	**22 17 47.0**	**+0.2**
GRPR				AMB	AMB	22 17 48.0	
	comp=N,31μm,0.7s						
GRPR				AMB	AMB	22 17 48.0	
	comp=N,18μm,0.7s						
GRPR				AMB	AMB	22 17 48.0	
	comp=N,56μm,0.7s						
GRPR				*i* S	**Sn**	**22 18 00.0**	**+1.9**
GRPR				A	A	22 18 02.0	
	comp=N,42μm,0.4s						
GRPR				A	A	22 18 02.0	
	comp=N,56μm,0.4s						
GRPR	**Tuman**	**0.85**	**302**	*d i*PN	**Pn**	**22 17 47.9**	**+1.1**
GRPR				*i* S	**Sn**	**22 18 00.4**	**+2.3**
GRPR				pmax	pmax		
	comp=E,18μm,0.6s						
GRPR				pmax	pmax		
	comp=Z,56μm,0.6s						
GRPR				pmax	pmax		
	comp=N,31μm,0.7s						
GRPR				smax	smax		
	comp=N,42μm,0.4s						
GRPR				smax	smax		
	comp=E,56μm,0.3s						
LAGR	**Lagunnoye**	**0.87**	**306**	*i* P	**Pn**	**22 17 47.0**	**-0.2**
LAGR				AMB	AMB	22 17 49.0	
	comp=E,15μm,0.7s						
LAGR				AMB	AMB	22 17 49.0	
	comp=E,16μm,0.7s						
LAGR				AMB	AMB	22 17 49.0	
	comp=E,58μm,0.7s						
LAGR	**Lagunnoye**	**0.87**	**306**	*c i*PN	**Pn**	**22 17 47.8**	**+0.6**
LAGR				*i* S	**Sn**	**22 18 01.9**	**+3.2**
LAGR				pmax	pmax		
	comp=N,15μm,0.7s						
LAGR				pmax	pmax		
	comp=Z,58μm,0.7s						
LAGR				pmax	pmax		
	comp=E,16μm,0.5s						
GLVR	**Golovnino**	**0.92**	**283**	*i* P	**Pn**	**22 17 48.0**	**+0.2**
GLVR				AMB	AMB	22 17 49.0	
	comp=E,1μm,0.5s						
GLVR				AMB	AMB	22 17 49.0	
	comp=E,2μm,0.5s						
GLVR				AMB	AMB	22 17 49.0	
	comp=E,21μm,0.5s						
GLVR				*i* S	**Sn**	**22 18 01.0**	**+1.1**
GLVR				A	A	22 18 09.0	
	comp=E,114μm,0.4s						
GLVR				A	A	22 18 09.0	
	comp=E,29μm,0.4s						
GLVR	**Golovnino**	**0.92**	**283**	*c i*PN	**Pn**	**22 17 48.3**	**+0.5**
GLVR				*i* S	**Sn**	**22 18 01.3**	**+1.4**
GLVR				pmax	pmax		
	comp=Z,21μm,0.5s						
GLVR				pmax	pmax		
	comp=N,1μm,0.2s						
GLVR				pmax	pmax		
	comp=E,2μm,0.1s						
GLVR				smax	smax		
	comp=N,114nm,0.4s						
GLVR				smax	smax		
	comp=E,29nm,0.2s						
JRA	**Rausu**	**1.25**	**289**	⇓P	**Pn**	**22 17 53.7**	**+1.4**
JKHN	**Kushirohamanak**	**1.26**	**249**	P	**Pn**	**22 17 52.1**	**-0.3**
JKHN				*e*S	**Sn**	**22 18 07.8**	**-0.3**
JNK	**Nakash**	**1.49**	**272**	⇓P	**Pn**	**22 17 56.0**	**+0.4**
JAK	**Akkeshi**	**1.60**	**251**	⇓P	**Pn**	**22 17 56.7**	**-0.5**
KUR	**Kuril'sk**	**1.87**	**25**	*i* P	**Pn**	**22 18 01.6**	**+0.8**
KUR				AMB	AMB	22 18 04.0	
	comp=E,6μm,0.4s						
KUR				AMB	AMB	22 18 04.0	
	comp=E,26μm,0.4s						
KUR				AMB	AMB	22 18 08.9	
	comp=E,12μm,1.0s						
KUR				*i* S	**Sn**	**22 18 24.7**	**+1.6**
KUR				A	A	22 18 27.0	
	comp=E,17μm,0.4s						
KUR				A	A	22 18 27.0	
	comp=E,33μm,0.4s						
KUR				A	A	22 18 35.0	
	comp=E,53μm,2.0s						
KUR				AMS	AMS	22 19 00.0	
	comp=E,74μm,17.0s						
KUR				AMS	AMS	22 19 00.0	
	comp=E,53μm,17.0s						
KUR				AMS	AMS	22 19 00.0	
	comp=E,61μm,17.0s						
KUR	**Kuril'sk**	**1.87**	**25**	*c i*PN	**Pn**	**22 18 01.9**	**+1.1**
KUR				*i* S	**Sn**	**22 18 24.6**	**+1.5**
KUR				pmax	pmax		
	comp=Z,5μm,0.7s						
KUR				pmax	pmax		
	comp=N,2μm,0.3s						
KUR				pmax	pmax		
	comp=E,1μm,0.4s						
KUR				pmax	pmax		
	comp=Z,11μm,1.0s						
KUR				smax	smax		
	comp=N,17μm,0.3s						
KUR				smax	smax		
	comp=E,33μm,0.3s						
KUR				smax	smax		
	comp=E,53μm,1.4s						
JTKR	**Abashiri--Toko**	**2.11**	**283**	⇓P	**Pn**	**22 18 06.3**	**+2.2**
JAR	**Ashorobuto**	**2.19**	**265**	⇓P	**Pn**	**22 18 06.1**	**+0.8**
JAR				*e*S	**Sn**	**22 18 32.2**	**+1.0**
JOB	**Onbets**	**2.23**	**254**	⇓P	**Pn**	**22 18 05.8**	**0.0**
JMP	**Maruseppu**	**2.51**	**282**	⇓P	**Pn**	**22 18 11.9**	**+2.3**
HRK	**Horoka**	**2.65**	**270**	*e*P	**Pn**	**22 18 13.7**	**+2.2**
JCH	**Churui**	**2.66**	**251**	P	**Pn**	**22 18 11.3**	**-0.3**
JKK2	**Kamakawa 2**	**2.93**	**278**	P	**Pn**	**22 18 17.9**	**+2.5**
JEM	**Erimo**	**3.06**	**241**	P	**Pn**	**22 18 18.8**	**+1.6**
ERM	**Erimo**	**3.06**	**241**	*e*Pn	**Pn**	**22 18 19.3**	**+2.2**
ERM				*e*Sn	**Sn**	**22 18 52.6**	**0.0**
ERM	**Erimo**	**3.06**	**241**	⇑*e*PN	**Pn**	**22 18 19.1**	**+1.9**
JKA	**Kamikawa-asahi**	**3.07**	**282**	*e*P	**Pn**	**22 18 19.1**	**+1.8**
ASAJ	**Asahikawa**	**3.07**	**282**	Pn	**Pn**	**22 18 19.9**	**+2.6**
	comp=E,75nm,0.3s,baz=94,slow=14,SNR=366						
ASAJ				Sn	**Sn**	**22 18 52.0**	**-0.7**
	comp=E,255nm,0.3s,baz=126,slow=17,SNR=6.2						
ASAJ				Lg	Lg	22 19 05.0	
	comp=E,90nm,0.3s,baz=34,slow=34,SNR=3.0						
ASAJ				LR	LR	22 19 28.9	
	comp=E,10μm,21.5s,baz=120,slow=38						
YSS	**Yuzh-Sakhalins**	**4.43**	**322**	*e*Pn	**Pn**	**22 18 38.8**	**+2.8**
YSS	**Yuzh-Sakhalins**	**4.43**	**322**	*i* P	**Pn**	**22 18 39.2**	**+3.2**
YSS				AMB	AMB	22 18 41.2	
	comp=E,350nm,0.7s						
YSS				AMB	AMB	22 18 41.2	
	comp=E,540nm,0.7s						
YSS				AMB	AMB	22 18 41.2	
	comp=E,650nm,0.7s						
YSS				AMB	AMB	22 18 41.4	
	comp=E,1μm,3.0s						
YSS				AMB	AMB	22 18 41.4	
	comp=E,1μm,3.0s						
YSS				*e*S	**Sn**	**22 19 29.1**	**+2.8**
YSS				AMS	AMS	22 20 32.0	
	comp=E,14μm,12.0s						
YSS				AMS	AMS	22 20 32.0	
	comp=E,24μm,12.0s						
YSS	**Yuzh-Sakhalins**	**4.43**	**322**	κ *i*PN	**Pn**	**22 18 39.2**	**+3.2**
YSS				*e*S	**Sn**	**22 19 30.0**	**+3.7**
YSS				pmax	pmax		
	comp=Z,650nm,0.7s						
YSS				pmax	pmax		
	comp=N,350nm,0.6s						
YSS				pmax	pmax		
	comp=E,540nm,0.6s						
YSS				pmax	pmax		
	comp=N,1μm,2.7s						
YSS				pmax	pmax		
	comp=Z,1μm,2.7s						
YSS				MLR	MLR		
	comp=Z,24μm,11.0s						
YSS				MLR	MLR		
	comp=E,14μm,13.0s						
JANG	**Nango**	**5.03**	**233**	P	**Pn**	**22 18 42.7**	**-1.6**
JKZ	**Kuzumaki**	**5.40**	**231**	⇓P	**Pn**	**22 18 48.0**	**-1.3**
MIYJ	**Miyakonagasawa**	**5.43**	**225**	P	**Pn**	**22 18 47.3**	**-2.4**
OFUJ	**Ofunato**	**5.88**	**222**	⇓P	**Pn**	**22 18 53.5**	**-2.4**
UGL	**Uglegorsk**	**6.42**	**331**	*e*P	**Pn**	**22 19 07.4**	**+4.1**
UGL				AMB	AMB	22 19 09.0	
	comp=E,180nm,1.0s						
UGL				AMB	AMB	22 19 11.0	
	comp=E,2μm,4.0s						
UGL				AMB	AMB	22 19 11.0	
	comp=E,1μm,4.0s						
UGL				AMB	AMB	22 19 11.0	
	comp=E,3μm,4.0s						
UGL				*e*S	**Sn**	**22 20 17.7**	**+2.5**
UGL				A	A	22 20 29.4	
	comp=E,820nm,0.8s						
UGL				A	A	22 20 35.0	
	comp=E,10μm,5.0s						
UGL				AMS	AMS	22 22 01.1	
	comp=E,11μm,12.0s						
UGL				AMS	AMS	22 22 01.1	
	comp=E,10μm,12.0s						
UGL				AMS	AMS	22 22 01.1	
	comp=E,12μm,12.0s						
UGL	**Uglegorsk**	**6.42**	**331**	*e*PN	Pn	22 19 08.8	+5.5
UGL				*e*S	**Sn**	**22 20 20.3**	**+5.1**
UGL				pmax	pmax		
	comp=Z,185nm,1.0s						
UGL				pmax	pmax		
	comp=Z,3μm,3.3s						
UGL				pmax	pmax		
	comp=N,2μm,3.4s						
UGL				pmax	pmax		
	comp=E,1μm,3.9s						
UGL				smax	smax		
	comp=E,823nm,1.1s						
UGL				smax	smax		
	comp=N,10μm,4.6s						
UGL				MLR	MLR		
	comp=N,11μm,14.0s						
UGL				MLR	MLR		
	comp=Z,12μm,15.0s						
UGL				MLR	MLR		
	comp=E,10μm,10.0s						
JIO	**Ouri**	**6.53**	**221**	P	**Pn**	**22 19 01.7**	**-3.0**
TEY	**Ternei**	**7.44**	**285**	*e*P	**Pn**	**22 19 21.8**	**+4.5**
TEY				AMB	AMB	22 19 23.3	
	comp=E,20nm,1.0s						
TEY				AMB	AMB	22 19 23.3	
	comp=E,50nm,1.0s						

TEY				AMS	AMS	22 22 14.0	
	comp=E,4µm,16.0s						
TEY				AMS	AMS	22 22 14.0	
	comp=E,11µm,16.0s						
TEY				AMS	AMS	22 22 14.0	
	comp=E,13µm,16.0s						
TEY	**Ternei**	**7.44**	**285**	⇓*e*PN	Pn	22 19 22.2	+4.9
TEY				pmax	pmax		
	comp=Z,50nm,1.6s						
TEY				pmax	pmax		
	comp=E,50nm,1.4s						
TEY				pmax	pmax		
	comp=N,20nm,1.6s						
TEY				MLR	MLR		
	comp=E,11µm,16.0s						
TEY				MLR	MLR		
	comp=N,4µm,14.0s						
TEY				MLR	MLR		
	comp=Z,13µm,16.0s						
TYV	**Tymovskoe**	**7.84**	**341**	*e*P	**Pn**	**22 19 26.0**	**+3.3**
TYV				AMB	AMB	22 19 30.5	
	comp=Z,900nm,3.0s						
TYV				AMB	AMB	22 19 30.6	
	comp=Z,190nm,0.7s						
TYV				*e*S	**Sn**	**22 20 52.1**	**+2.1**
TYV				A	A	22 21 03.8	
	comp=Z,1µm,6.0s						
TYV				A	A	22 21 59.3	
	comp=Z,110nm,0.8s						
TYV				A	A	22 21 59.3	
	comp=Z,120nm,0.8s						
TYV	**Tymovskoe**	**7.84**	**341**	*e*PN	**Pn**	**22 19 26.0**	**+3.3**
TYV				*e*S	**Sn**	**22 20 57.3**	**+7.3**
TYV				pmax	pmax		
	comp=Z,900nm,3.1s						
TYV				pmax	pmax		
	comp=Z,190nm,0.7s						
TYV				smax	smax		
	comp=E,1µm,5.3s						
SKR	**Severo-Kuril's**	**9.57**	**38**	*e*P	**Pn**	**22 19 47.1**	**+0.7**
SKR				AMB	AMB	22 19 50.5	
	comp=E,510nm,0.5s						
SKR				AMB	AMB	22 19 54.5	
	comp=E,2µm,2.0s						
SKR				*e*S	**Sn**	**22 21 30.2**	**-2.3**
SKR				AMS	AMS	22 23 25.5	
	comp=E,8µm,18.0s						
SKR				AMS	AMS	22 23 25.5	
	comp=E,7µm,18.0s						
SKR				AMS	AMS	22 23 25.5	
	comp=E,7µm,18.0s						
SKR	**Severo-Kuril's**	**9.57**	**38**	*e*PN	**Pn**	**22 19 48.3**	**+1.9**
SKR				*e*S	Sn	22 21 44.1	+12
SKR				pmax	pmax		
	comp=Z,510nm,0.7s						
SKR				pmax	pmax		
	comp=Z,2µm,2.5s						
SKR				MLR	MLR		
	comp=Z,6µm,18.0s						
SKR				MLR	MLR		
	comp=Z,7µm,16.0s						
MJB9	**Matsu-Tunnel**	**9.58**	**226**	*e*Pn	**Pn**	**22 19 45.6**	**-1.1**
MAJO	**Matsushiro**	**9.58**	**226**	*e*Pn	**Pn**	**22 19 45.2**	**-1.5**
MAJO				*e*Sn	**Sn**	**22 21 36.3**	**+3.3**
MAJO	**Matsushiro**	**9.58**	**226**	*e*P	**Pn**	**22 19 45.2**	**-1.5**
MAJO	**Matsushiro**	**9.58**	**226**	*d i*PN	**Pn**	**22 19 45.1**	**-1.6**
MAT	**Matsushiro**	**9.58**	**226**	P	**Pn**	**22 19 45.0**	**-1.7**
MAT				*e*S	**Sn**	**22 21 28.0**	**-5.0**
MJAR	**Matsushiro Arr**	**9.58**	**226**	Pn	**Pn**	**22 19 45.2**	**-1.4**
	comp=Z,2.3nm,0.3s,baz=26,slow=14,SNR=135						
MJAR				Sn	**Sn**	**22 21 36.3**	**+3.3**
	comp=Z,1.1nm,0.3s,baz=41,slow=37,SNR=3.0						
GRNR	**Gornyy**	**10.09**	**319**	*e*P	**Pn**	**22 19 57.5**	**+4.0**
GRNR				AMB	AMB	22 19 59.0	
	comp=Z,30nm,1.0s						
GRNR	**Gornyy**	**10.09**	**319**	*e*PN	**Pn**	**22 19 58.1**	**+4.6**
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
OKH	**Okha**	**10.33**	**347**	*e*P	**Pn**	**22 20 01.1**	**+4.3**
OKH				AMB	AMB	22 20 03.8	
	comp=Z,900nm,6.0s						
OKH				*e*S	**Sn**	**22 21 54.3**	**+3.2**
OKH				AMS	AMS	22 24 50.1	
	comp=Z,10µm,16.0s						
OKH	**Okha**	**10.33**	**347**	*de*PN	Pn	22 20 02.1	+5.3
OKH				pmax	pmax		
	comp=Z,900nm,5.9s						
OKH				MLR	MLR		
	comp=Z,10µm,15.0s						
NKL	**Nikolayevsk**	**10.43**	**339**	*e*P	**Pn**	**22 20 02.0**	**+3.9**
NKL				AMB	AMB	22 20 04.0	
	comp=Z,2µm,4.0s						
NKL				AMB	AMB	22 20 04.0	
	comp=Z,1µm,4.0s						
NKL				AMB	AMB	22 20 04.0	
	comp=Z,3µm,4.0s						
NKL				AMB	AMB	22 20 06.0	
	comp=Z,150nm,2.0s						
NKL				AMB	AMB	22 20 06.0	
	comp=Z,200nm,2.0s						
NKL				A	A	22 22 14.0	
	comp=Z,6µm,16.0s						
NKL				A	A	22 22 14.0	
	comp=Z,8µm,16.0s						
NKL				A	A	22 22 14.0	
	comp=Z,13µm,16.0s						
NKL				AMS	AMS	22 24 26.0	
	comp=Z,6µm,16.0s						
NKL				AMS	AMS	22 24 26.0	
	comp=Z,8µm,16.0s						
NKL				AMS	AMS	22 24 26.0	
	comp=Z,13µm,16.0s						
NKL	**Nikolayevsk**	**10.43**	**339**	*i* PN	**Pn**	**22 20 02.0**	**+3.9**
NKL				*e*S	Sn	22 22 10.0	+17
NKL				pmax	pmax		
	comp=N,2µm,4.0s						
NKL				pmax	pmax		
	comp=E,1µm,4.0s						
NKL				pmax	pmax		
	comp=Z,3µm,4.0s						
NKL				pmax	pmax		
	comp=E,150nm,1.5s						
NKL				pmax	pmax		
	comp=Z,200nm,1.5s						
NKL				smax	smax		
	comp=E,1µm,10.0s						
NKL				MLR	MLR		
	comp=N,6µm,16.0s						
NKL				MLR	MLR		
	comp=E,8µm,16.0s						
NKL				MLR	MLR		
	comp=Z,13µm,16.0s						
USA0B	**Ussuriysk Arra**	**10.69**	**279**	*e*Pn	**Pn**	**22 20 04.7**	**+2.9**
USRK	**Ussuriysk Ar.**	**10.69**	**279**	Pn	**Pn**	**22 20 04.5**	**+2.7**
	comp=Z,2.5nm,0.3s,baz=91,slow=12,SNR=50						
USRK				LR	LR	22 24 23.3	
	comp=Z,7µm,18.6s,baz=85,slow=39						
VLA	**Vladivostok**	**10.85**	**273**	*e*P	**Pn**	**22 20 04.1**	**+0.2**
VLA	**Vladivostok**	**10.85**	**273**	⇑*e*PN	**Pn**	**22 20 04.1**	**+0.2**
INU	**Inuyama**	**11.12**	**226**	*e*Pn	**Pn**	**22 20 06.8**	**-0.9**
MSHR	**Mys Shultsa**	**11.46**	**271**	⇓*e*PN	**Pn**	**22 20 13.1**	**+0.8**
JHJ2	**Mitsune**	**11.75**	**210**	*e*Pn	**Pn**	**22 20 13.1**	**-3.2**
JHJ2				*e*Sn	Sn	22 22 16.5	-10
JHJ	**Hachijo jima 2**	**11.76**	**210**	Pn	**Pn**	**22 20 14.7**	**-1.7**
	comp=Z,40nm,0.3s,baz=48,slow=15,SNR=5.1						
JHJ				Sn	Sn	22 22 13.3	-13
	comp=Z,194nm,0.3s,baz=217,slow=17,SNR=10.0						
KLR	**Kul'dur**	**11.82**	**304**	Pn	**Pn**	**22 20 16.6**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=316,slow=21,SNR=1.7						
KLR				LR	LR	22 25 26.4	
	comp=Z,9µm,18.8s,baz=120,slow=40						
PEA0B	**Petropavlovsk-**	**12.01**	**33**	*e*Pn	**Pn**	**22 20 19.9**	**+0.1**
PETK	**Petropavlovsk-**	**12.01**	**33**	Pn	**Pn**	**22 20 19.5**	**-0.3**
	comp=Z,4.6nm,0.3s,baz=198,slow=12,SNR=60						
PETK				LR	LR	22 24 49.1	
	comp=Z,4µm,21.8s,baz=217,slow=36						
PEA1	**Petropavlovsk-**	**12.01**	**33**	*e*Pn	**Pn**	**22 20 19.5**	**-0.3**
JWT	**Wachi**	**12.04**	**231**	P	**Pn**	**22 20 19.7**	**-0.6**
PET	**Petropavlovsk**	**12.34**	**36**	*e*Pn	**Pn**	**22 20 20.4**	**-3.8**
PET	**Petropavlovsk**	**12.34**	**36**	*e*P	**Pn**	**22 20 23.6**	**-0.6**
PET				AMB	AMB	22 20 33.6	
	comp=Z,110nm,0.9s						
PET				*e*S	**Sn**	**22 22 37.4**	**-2.9**
PET				A	A	22 22 55.8	
	comp=Z,80nm,0.9s						
PET				A	A	22 22 55.8	
	comp=Z,70nm,0.9s						
PET				AMS	AMS	22 24 46.4	
	comp=Z,7µm,20.0s						
PET	**Petropavlovsk**	**12.34**	**36**	*e*PN	**Pn**	**22 20 28.4**	**+4.2**
PET				*e*S	**Sn**	**22 22 47.6**	**+7.3**
PET				pmax	pmax		
	comp=Z,112nm,0.9s						
PET				MLR	MLR		
	comp=Z,7µm,20.0s						
PET				MLR	MLR		
	comp=Z,7µm,16.0s						
MDJ	**Mudanjiang**	**12.40**	**281**	P	**Pn**	**22 20 27.3**	**+2.2**
MDJ				pP	P	22 20 34.8	-1.4
MDJ				sP		22 20 41.5	
MDJ				S	**Sn**	**22 22 42.3**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,64nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,1µm,6.0s						
MDJ				LR	LR		
	comp=Z,1µm,17.3s						
MDJ				LR	LR		
	comp=Z,7µm,16.3s						
MDJ				LR	LR		
	comp=Z,10µm,17.5s						
MDJ	**Mudanjiang**	**12.40**	**281**	*e*Pn	**Pn**	**22 20 27.2**	**+2.1**
EKMR	**Ekimchan**	**13.22**	**321**	*e*P	**Pn**	**22 20 38.1**	**+1.8**
EKMR				AMB	AMB	22 20 44.8	
	comp=Z,140nm,1.0s						
EKMR				AMB	AMB	22 20 44.8	
	comp=Z,110nm,1.0s						
EKMR				AMB	AMB	22 20 44.8	
	comp=Z,90nm,1.0s						
KSRS	**Korea Array**	**15.56**	**253**	Pn	**Pn**	**22 21 07.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=59,slow=12,SNR=27						
KSRS				Sn	**S**	**22 24 07.1**	**-5.6**
	comp=Z,0.3nm,0.3s,baz=65,slow=24,SNR=4.8						
KSRS				LR	LR	22 27 23.5	
	comp=Z,2µm,19.6s,baz=76,slow=38						
KS01	**Wonju Array Si**	**15.57**	**254**	*e*Pn	**Pn**	**22 21 07.5**	**-0.3**
KS15	**Wonju Array Si**	**15.59**	**253**	*e*Pn	**Pn**	**22 21 08.5**	**+0.5**
KS15				*e*Sn	**S**	**22 24 07.1**	**-6.3**
KSAR	**Wonju Array Be**	**15.59**	**253**	Pn	**Pn**	**22 21 07.6**	**-0.4**
KSAR	**Wonju Array Be**	**15.59**	**253**	P	**Pn**	**22 21 07.6**	**-0.4**
BMKR	**Bomnak**	**16.15**	**320**	*e*P	**Pn**	**22 21 15.0**	**0.0**
BMKR				AMB	AMB	22 21 21.6	
	comp=Z,130nm,0.6s						
JNU	**Nakatsue**	**16.21**	**235**	*e*Pn	**Pn**	**22 21 13.9**	**-2.1**
	comp=Z,81nm,1.0s						
JNU	**Nakatsue**	**16.21**	**235**	Pn	**Pn**	**22 21 15.3**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=122,slow=6.2,SNR=10						
JNU				LR	LR	22 27 47.0	
	comp=Z,3µm,21.6s,baz=34,slow=38						
MA2	**Magadan**	**16.24**	**7**	*e*Pn	**Pn**	**22 21 15.7**	**-0.6**
	comp=Z,70nm,0.7s						
MA2	**Magadan**	**16.24**	**7**	*e*P	**Pn**	**22 21 15.5**	**-0.7**
MA2	**Magadan**	**16.24**	**7**	*ce*P	**Pn**	**22 21 15.5**	**-0.7**
MA2				pmax	pmax		
	comp=Z,196nm,1.7s						
MA2	**Magadan**	**16.24**	**7**	Pn	**Pn**	**22 21 16.0**	**-0.2**
	comp=Z,4.5nm,0.3s,baz=193,slow=9.3,SNR=33						
MA2				LR	LR	22 27 24.1	
	comp=Z,5µm,20.1s,baz=186,slow=36						
ZEA	**Zeya**	**16.39**	**315**	*e*P	**Pn**	**22 21 17.6**	**-0.5**
ZEA				AMB	AMB	22 21 29.2	
	comp=Z,220nm,2.0s						
ZEA				AMB	AMB	22 21 29.2	
	comp=Z,240nm,2.0s						
ZEA				AMB	AMB	22 21 29.2	
	comp=Z,380nm,2.0s						
ZEA				AMS	AMS	22 28 24.0	
	comp=Z,8µm,16.0s						
ZEA				AMS	AMS	22 28 24.0	
	comp=Z,10µm,16.0s						
ZEA				AMS	AMS	22 28 24.0	
	comp=Z,16µm,16.0s						
ZEA	**Zeya**	**16.39**	**315**	*e*P	**Pn**	**22 21 17.8**	**-0.3**
ZEA				*e*S	**Sn**	**22 24 19.0**	**+0.3**
ZEA				pmax	pmax		
	comp=E,240nm,1.6s						
ZEA				pmax	pmax		
	comp=N,220nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,380nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,2µm,4.0s						
ZEA				pmax	pmax		
	comp=N,1µm,3.0s						
ZEA				pmax	pmax		
	comp=E,2µm,3.0s						
ZEA				smax	smax		
	comp=E,700nm,6.0s						
ZEA				smax	smax		
	comp=N,900nm,7.0s						
ZEA				MLR	MLR		
	comp=Z,16µm,16.0s						
ZEA				MLR	MLR		
	comp=N,8µm,15.0s						
ZEA				MLR	MLR		
	comp=E,10µm,15.0s						
TJN	**Taejon**	**16.48**	**251**	*de*P	**Pn**	**22 21 19.3**	**-0.1**
CBIJ	**Chichi jima**	**16.82**	**194**	*e*Pn	**Pn**	**22 21 22.7**	**-1.0**
JCJ	**Chichijima**	**16.82**	**194**	Pn	**Pn**	**22 21 22.7**	**-1.0**
	comp=E,14nm,0.3s,baz=289,slow=23,SNR=4.0						
JCJ				LR	LR	22 27 56.2	
	comp=E,1µm,19.0s,baz=7.0,slow=37						
KROS	**Kirovskiy**	**16.89**	**317**	*e*P	**Pn**	**22 21 20.5**	**-3.9**
KROS				AMB	AMB	22 21 25.2	
	comp=E,30nm,0.8s						
KROS				AMB	AMB	22 21 25.2	
	comp=E,50nm,0.8s						
KROS				AMB	AMB	22 21 25.2	
	comp=E,80nm,0.8s						
SNY	**Shenyang**	**17.13**	**272**	⇑P	**P**	**22 21 29.6**	**+1.0**
SNY				S	**Sn**	**22 24 37.9**	**+1.2**
SNY				LR	LR		
	comp=E,2µm,13.9s						
SNY				LR	LR		
	comp=E,3µm,18.5s						
SNY				LR	LR		
	comp=E,3µm,19.6s						
DL2	**Dalian**	**19.44**	**265**	⇑P	**P**	**22 21 54.3**	**+0.2**
DL2				sP	**sP**	**22 22 09.3**	**-0.4**
DL2				S	**S**	**22 25 28.8**	**-2.7**
DL2				pmax	pmax		
	comp=E,110nm,0.8s						
DL2				pmax	pmax		
	comp=E,860nm,5.3s						
DL2				LR	LR		
	comp=E,750nm,18.4s						
DL2				LR	LR		
	comp=E,1µm,20.1s						
DL2				LR	LR		
	comp=E,1µm,16.9s						
HIA	**Hailar**	**19.44**	**297**	*e*P	**P**	**22 21 53.2**	**-0.8**
	comp=E,83nm,1.0s						
HIA	**Hailar**	**19.44**	**297**	*e*P	**P**	**22 21 53.2**	**-0.8**
HIA				pmax	pmax		
	comp=Z,83nm,1.0s						
SEY	**Seymchan**	**19.70**	**8**	⇓*e*P	**P**	**22 21 55.6**	**-1.1**
SEY	**Seymchan**	**19.70**	**8**	P	**P**	**22 21 56.1**	**-0.7**
	comp=Z,3.2nm,0.3s,baz=184,slow=7.4,SNR=82						
SMY	**Shemya**	**20.32**	**54**	*e*P	**P**	**22 22 01.5**	**-2.0**
	comp=Z,676nm,1.4s						
SMY	**Shemya**	**20.32**	**54**	*e*P	**P**	**22 22 01.5**	**-2.0**
SMY				pmax	pmax		
	comp=Z,676nm,1.4s						
YAK	**Yakutsk**	**21.08**	**337**	*e*P	**P**	**22 22 07.7**	**-4.0**
YAK				*e*		22 22 24.6	
YAK				*e*S	**S**	**22 25 57.3**	**-6.4**
YAK				*e*		22 26 14.5	
YAK				*e*SS	Sn	22 26 22.4	+11
YAK				*e*		22 33 30.1	
YAK				pmax	pmax		
	comp=Z,364nm,0.8s						
YAK				pmax	pmax		
	comp=N,82nm,1.0s						
YAK				pmax	pmax		
	comp=E,43nm,0.9s						
YAK				smax	smax		
	comp=E,1µm,1.8s						
YAK				smax	smax		
	comp=N,114nm,1.3s						
YAK				MLR	MLR		
	comp=Z,21µm,15.0s						
YAK				MLR	MLR		
	comp=N,13µm,14.0s						
YAK				MLR	MLR		
	comp=E,10µm,17.0s						
JOW	**Kunigami**	**22.42**	**228**	*e*P	**P**	**22 22 21.6**	**-4.7**
	comp=E,77nm,1.2s						
BJI	**Beijing**	**23.01**	**272**	P	**P**	**22 22 31.4**	**-1.0**
BJI				S	**S**	**22 26 41.8**	**+2.0**
BJI				pmax	pmax		
	comp=E,74nm,1.3s						
BJI				LR	LR		
	comp=E,900nm,17.8s						
BJI				LR	LR		
	comp=E,1µm,21.8s						
BJI				LR	LR		
	comp=E,2µm,25.9s						
BJT	**Baijiatuau**	**23.02**	**272**	*e*P	**P**	**22 22 31.4**	**-1.1**
	comp=E,94nm,0.8s						
BJT				LR	LR		
	comp=Z,2µm,19.0s						
BJT	**Baijiatuau**	**23.02**	**272**	*e*P	**P**	**22 22 31.4**	**-1.1**
BJT				pmax	pmax		
	comp=Z,94nm,0.8s						
BJT				MLR	MLR		
	comp=Z,2µm,19.0s						
CIT	**Chita**	**23.70**	**303**	*e*P	**P**	**22 22 40.0**	**+0.9**
CIT				*e*		22 23 04.4	
CIT				*e*		22 23 22.8	
CIT				pmax	pmax		
	comp=Z,83nm,2.0s						
SSE	**Sheshan**	**23.73**	**247**	P	**P**	**22 22 37.8**	**-1.7**
SSE				S	**S**	**22 26 53.8**	**+2.1**
SSE				pmax	pmax		
	comp=Z,310nm,3.2s						
SSE				LR	LR		
	comp=Z,490nm,16.5s						
SSE				LR	LR		
	comp=Z,560nm,19.6s						
SSE	**Sheshan**	**23.73**	**247**	*e*P	**P**	**22 22 41.9**	**+2.5**
	comp=Z,485nm,1.2s						
SSE				LR	LR		
	comp=Z,1µm,21.0s						
TIA	**Tai'an**	**23.81**	**262**	P	**P**	**22 22 39.9**	**-0.3**
TIA				pP	**pP**	**22 22 49.8**	**-1.6**
TIA				S	**S**	**22 26 53.8**	**+0.9**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,240nm,2.7s						
TIA				LR	LR		
	comp=Z,270nm,15.0s						
TIA				LR	LR		
	comp=Z,380nm,15.0s						
TIA				LR	LR		
	comp=Z,420nm,14.2s						
NJ2	**Nanjing**	**24.74**	**252**	*e*P	**P**	**22 22 50.0**	**+1.3**
NJ2				pP	**pP**	**22 23 01.6**	**+1.5**
NJ2				sP	**sP**	**22 23 06.1**	**+1.0**
NJ2				S	**S**	**22 27 12.3**	**+4.4**
NJ2				pmax	pmax		
	comp=Z,42nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,750nm,6.3s						
NJ2				LR	LR		
	comp=Z,2µm,19.0s						
NJ2				LR	LR		
	comp=Z,2µm,20.1s						
NJ2				LR	LR		
	comp=Z,2µm,17.9s						
BOD	**Bodaibo**	**24.89**	**317**	*e*P	**P**	**22 22 46.0**	**-3.8**
BOD				pmax	pmax		
	comp=Z,79nm,1.3s						
ADK	**Adak**	**25.74**	**58**	*e*P	**P**	**22 22 56.0**	**-1.6**
	comp=Z,282nm,1.4s						
ADK	**Adak**	**25.74**	**58**	*e*P	**P**	**22 22 56.0**	**-1.6**
ADK				pmax	pmax		
	comp=Z,282nm,1.4s						
HHC	**Hu-ho-hao-te**	**26.10**	**276**	*e*P	**P**	**22 23 01.4**	**+0.3**
HHC				PP	**PnPn**	**22 23 43.5**	**+2.9**
HHC				S	**S**	**22 27 26.8**	**-2.8**
HHC				pmax	pmax		
	comp=Z,31nm,1.3s						
HHC				pmax	pmax		
	comp=Z,740nm,5.2s						
HHC				LR	LR		
	comp=Z,850nm,8.6s						
HHC				LR	LR		
	comp=Z,2µm,9.5s						
HHC				LR	LR		
	comp=Z,2µm,12.1s						
TIY	**Taiyuan**	**26.57**	**269**	P	**P**	**22 23 07.4**	**+2.0**
TIY				S	**S**	**22 27 34.4**	**-2.6**
TIY				pmax	pmax		
	comp=Z,44nm,1.0s						
BILL	**Bilibino**	**26.64**	**16**	*e*P	**P**	**22 23 03.4**	**-2.1**
	comp=Z,28nm,0.6s						
BILL				LR	LR		
	comp=Z,3µm,18.0s						
BILL	**Bilibino**	**26.64**	**16**	*i* P	**P**	**22 23 02.7**	**-2.9**
BILL				*i*		22 23 11.8	
BILL				*i*		22 23 49.3	
BILL				pmax	pmax		
	comp=Z,19nm,0.8s						
BILL				MLR	MLR		
	comp=Z,3µm,18.0s						
SARN	**Sarigan**	**26.77**	**182**	PFAKE		22 23 20.0	+13
SARN				LR	LR		
	comp=Z,2µm,20.0s						
BTO	**Baotou**	**27.29**	**277**	*e*P	**P**	**22 23 12.0**	**+0.1**
BTO				S	**S**	**22 27 49.6**	**+1.2**
ULN	**Ulaanbaatar**	**27.85**	**293**	*e*P	**P**	**22 23 16.9**	**0.0**
	comp=Z,94nm,0.7s						
ULN				LR	LR		
	comp=Z,8µm,18.0s						
ULN	**Ulaanbaatar**	**27.85**	**293**	*e*P	**P**	**22 23 17.1**	**+0.3**
ULN	**Ulaanbaatar**	**27.85**	**293**	*c i*P	**P**	**22 23 17.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,51nm,0.9s						
ULN	**Ulaanbaatar**	**27.85**	**293**	P	**P**	**22 23 17.4**	**+0.5**
	SNR=102						
ULN				P	**P**	**22 23 17.4**	**+0.5**
	SNR=102						
YHNB	**Yeheng**	**28.04**	**236**	PFAKE		22 23 30.0	+11
YHNB				LR	LR		
	comp=Z,2µm,22.0s						
NACB	**Ninganchiao**	**28.28**	**235**	PFAKE		22 23 30.0	+9.3
NACB				LR	LR		
	comp=Z,2µm,21.0s						
SONA1	**Songino Array**	**28.29**	**293**	*e*P	**P**	**22 23 20.3**	**-0.5**
SONA0	**Songino Array**	**28.29**	**293**	*e*P	**P**	**22 23 21.3**	**+0.5**
SONA0				*e*PcP	**PcP**	**22 26 33.8**	**+0.9**
SONM	**Songino Array**	**28.29**	**293**	P	**P**	**22 23 21.3**	**+0.5**
	comp=Z,98nm,0.7s,baz=88,slow=8.3,SNR=268						
SONM				PcP	**PcP**	**22 26 33.8**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=87,slow=3.4,SNR=3.7						
SONM				LR	LR	22 35 50.2	
	comp=Z,9µm,18.8s,baz=88,slow=39						
WHN	**Wuhan**	**28.75**	**254**	⇓P	**P**	**22 23 25.5**	**+0.7**
WHN				S	**S**	**22 28 10.0**	**-1.3**
WHN				LR	LR		
	comp=Z,4µm,17.2s						
WHN				LR	LR		
	comp=Z,4µm,19.1s						
WHN				LR	LR		
	comp=Z,3µm,23.3s						
SSLB	**Suanglung**	**28.95**	**235**	PFAKE		22 23 40.0	+13
SSLB				LR	LR		
	comp=Z,2µm,22.0s						
YULB	**Yu-li**	**29.05**	**234**	PFAKE		22 23 40.0	+12
YULB				LR	LR		
	comp=Z,2µm,19.0s						
H11N2	**WAKE ISLAND Hy**	**29.13**	**138**	T	T	22 54 12.7	
	baz=330,slow=75						
H11N1	**WAKE ISLAND Hy**	**29.14**	**138**	T	T	22 54 14.5	
	baz=330,slow=75						
H11N3	**WAKE ISLAND Hy**	**29.15**	**138**	T	T	22 54 05.5	
	baz=330,slow=75						
TPUB	**Ta-pu**	**29.52**	**235**	PFAKE		22 23 40.0	+8.3
TPUB				LR	LR		
	comp=Z,3µm,22.0s						
QZH	**Quanzhou**	**29.56**	**240**	⇑*i*P	**P**	**22 23 33.3**	**+1.3**
QZH				S	**S**	**22 28 26.4**	**+2.3**
QZH				sS	**sS**	**22 28 48.8**	**+5.7**
QZH				LR	LR		
	comp=Z,870nm,21.0s						
QZH				LR	LR		
	comp=Z,1µm,17.5s						

QZH				LR	LR		
	comp=Z,1µm,15.2s						
TWG	**Pinlang**	**29.62**	**234**	*e*P	**P**	**22 23 31.7**	**-0.9**
	comp=Z,78nm,0.8s						
TWG				LR	LR		
	comp=Z,6µm,22.0s						
TLY	**Talaya**	**29.81**	**301**	*e*P	**P**	**22 23 33.1**	**-0.9**
	comp=Z,19nm,0.8s						
TLY				LR	LR		
	comp=Z,10µm,18.0s						
TLY	**Talaya**	**29.81**	**301**	*e*P	**P**	**22 23 33.6**	**-0.5**
TLY				*e*		22 24 46.5	
TLY				pmax	pmax		
	comp=Z,18nm,0.6s						
TLY				MLR	MLR		
	comp=Z,9µm,15.0s						
GUMO	**Guam**	**29.89**	**184**	LR	LR	22 33 25.2	
	comp=Z,2µm,22.0s,baz=21,slow=32						
H11S1	**WAKE ISLAND Hy**	**30.09**	**140**	T	T	22 55 23.3	
	baz=331,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.09**	**140**	T	T	22 55 23.5	
	baz=331,slow=76						
ZAK	**Zakamensk**	**30.10**	**299**	*e*P	**P**	**22 23 35.7**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,21nm,1.5s						
H11S2	**WAKE ISLAND Hy**	**30.10**	**140**	T	T	22 55 24.6	
	baz=331,slow=76						
XAN	**Xi'an**	**30.76**	**265**	P	**P**	**22 23 42.6**	**0.0**
XAN				pP	pP	22 23 53.3	-0.8
XAN				PP	**PnPn**	**22 24 43.3**	**-0.3**
XAN				PcP	**PcP**	**22 26 42.6**	**+3.3**
XAN				ScS	ScS	22 34 11.9	-3.2
XAN				pmax	pmax		
	comp=Z,22nm,1.4s						
XAN				LR	LR		
	comp=Z,730nm,15.1s						
XAN				LR	LR		
	comp=Z,950nm,16.1s						
XAN				LR	LR		
	comp=Z,950nm,15.9s						
XAN	**Xi'an**	**30.76**	**265**	*e*P	**P**	**22 23 42.8**	**+0.1**
	comp=Z,121nm,1.0s						
XAN				LR	LR		
	comp=Z,701nm,21.0s						
XAN	**Xi'an**	**30.76**	**265**	*e*P	**P**	**22 23 42.8**	**+0.1**
XAN				pmax	pmax		
	comp=Z,121nm,1.0s						
XAN				MLR	MLR		
	comp=Z,701nm,21.0s						
GAMB	**Gambell**	**31.04**	**35**	*e*P	**P**	**22 23 45.1**	**+0.4**
	comp=Z,32nm,1.2s						
GAMB				LR	LR		
	comp=Z,2µm,21.0s						
MOY	**Mondy**	**31.46**	**301**	*e*P	**P**	**22 23 49.9**	**+1.1**
MOY				pmax	pmax		
	comp=Z,29nm,1.4s						
ENH	**Enshi**	**32.34**	**258**	*e*P	**P**	**22 23 56.5**	**-0.1**
	comp=Z,62nm,0.9s						
ENH				LR	LR		
	comp=Z,800nm,19.0s						
LZH	**Lanzhou**	**33.50**	**272**	⇑P	**P**	**22 24 07.8**	**+1.0**
LZH				pP	pP	22 24 19.5	+1.2
LZH				sP	sP	22 24 24.6	+1.3
LZH				PP	**PnPn**	**22 25 19.3**	**+0.5**
LZH				S	**S**	**22 29 24.3**	**-1.5**
LZH				sS	sS	22 29 43.3	-1.6
LZH				SS	SS	22 31 29.8	-21
LZH				pmax	pmax		
	comp=Z,140nm,1.3s						
LZH				pmax	pmax		
	comp=Z,880nm,5.2s						
LZH				LR	LR		
	comp=Z,2µm,14.5s						
LZH				LR	LR		
	comp=Z,2µm,14.2s						
LZH				LR	LR		
	comp=Z,2µm,17.0s						
ANM	**Nome**	**33.92**	**35**	*e*P	**P**	**22 24 11.0**	**+1.1**
	comp=Z,52nm,0.7s						
ANM				LR	LR		
	comp=Z,1µm,19.0s						
ANM	**Nome**	**33.92**	**35**	*e*P	**P**	**22 24 11.0**	**+1.1**
ANM				pmax	pmax		
	comp=Z,52nm,0.7s						
ANM				MLR	MLR		
	comp=Z,1µm,19.0s						
GTA	**Gaotai**	**35.05**	**280**	⇑P	**P**	**22 24 20.8**	**+0.6**
GTA				pP	pP	22 24 32.9	+1.2
GTA				sP	sP	22 24 38.3	+1.6
GTA				PcP	**PcP**	**22 26 52.4**	**+1.1**
GTA				S	**S**	**22 29 48.3**	**-1.3**
GTA				sS	sS	22 30 08.4	-0.4
GTA				ScP	**ScP**	**22 30 34.0**	**+0.7**
GTA				PcS	**PcS**	**22 30 38.5**	**+0.3**
GTA				ScS	**ScS**	**22 34 36.6**	**-0.6**
GTA				pmax	pmax		
	comp=Z,17nm,1.5s						
GTA				pmax	pmax		
	comp=Z,310nm,9.4s						
GTA				LR	LR		
	comp=Z,1µm,16.2s						
GTA				LR	LR		
	comp=Z,2µm,15.6s						
GTA				LR	LR		
	comp=Z,2µm,18.1s						
RDOG	**Red Dog Mine**	**35.84**	**30**	PFAKE		22 24 40.0	+14
RDOG				LR	LR		
	comp=Z,2µm,22.0s						
CD2	**Chengdu**	**36.10**	**264**	⇑*i*P	**P**	**22 24 29.3**	**+0.1**
CD2				pP	pP	22 24 41.0	+0.2
CD2				sP	sP	22 24 46.4	+0.6
CD2				PP	**PP**	**22 25 51.8**	**+0.1**
CD2				S	**S**	**22 30 05.9**	**+0.1**
CD2				sS	sS	22 30 26.1	+1.1
CD2				pmax	pmax		
	comp=Z,220nm,0.6s						
CD2				pmax	pmax		
	comp=Z,540nm,3.7s						
CD2				LR	LR		
	comp=Z,2µm,19.6s						
CD2				LR	LR		
	comp=Z,1µm,10.8s						
CD2				LR	LR		
	comp=Z,1µm,12.7s						
GYA	**Guiyang**	**36.60**	**256**	⇑*i*P	**P**	**22 24 33.3**	**-0.2**
GYA				pP	pP	22 24 47.0	+1.9
GYA				sP	sP	22 24 52.8	+2.7
GYA				PP	**PnPn**	**22 26 00.4**	**+3.1**
GYA				S	**S**	**22 30 09.9**	**-3.6**
GYA				sS	sS	22 30 34.3	+1.6
GYA				ScP	**ScP**	**22 30 40.8**	**+1.7**
GYA				SS	**SnSn**	**22 32 41.9**	**-3.7**
GYA				pmax	pmax		
	comp=Z,40nm,0.7s						
GYA				pmax	pmax		
	comp=Z,150nm,6.8s						
GYA				LR	LR		
	comp=Z,820nm,18.3s						
GYA				LR	LR		
	comp=Z,560nm,20.5s						
GYA				LR	LR		
	comp=Z,620nm,18.6s						
TGY	**Tagaytay City**	**36.75**	**225**	P	**P**	**22 24 33.4**	**-1.3**
	comp=Z,147nm,0.3s,baz=194,slow=6.2,SNR=4.8						
SVW2	**Sparrevohn**	**37.91**	**42**	*e*P	**P**	**22 24 45.5**	**+1.4**
	comp=Z,111nm,1.3s						
IM3	**Indian Mountai**	**38.97**	**34**	*e*P	**P**	**22 24 52.4**	**-0.5**
OHAK	**Old Harbor**	**39.28**	**48**	*e*P	**P**	**22 24 55.9**	**+0.3**
	comp=Z,140nm,1.0s						
OHAK				LR	LR		
	comp=Z,2µm,22.0s						
NRIK	**Noril'sk**	**39.30**	**331**	P	**P**	**22 24 54.7**	**-0.9**
	comp=Z,8.4nm,0.5s,baz=105,slow=5.7,SNR=5.9						
NRIK				LR	LR	22 42 36.8	
	comp=Z,2µm,18.7s,baz=86,slow=38						
RSO	**Redoubt South**	**39.31**	**43**	*e*P	**P**	**22 24 57.5**	**+1.4**
QIZ	**Qiongzhong**	**39.42**	**243**	P	**P**	**22 24 57.8**	**+0.6**
QIZ				S	**S**	**22 31 01.9**	**+5.8**
QIZ				sS	**sS**	**22 31 18.3**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,28nm,2.0s						
QIZ				LR	LR		
	comp=Z,980nm,20.0s						
QIZ				LR	LR		
	comp=Z,980nm,17.8s						
QIZ				LR	LR		
	comp=Z,930nm,25.0s						
QIZ	**Qiongzhong**	**39.42**	**243**	PFAKE		22 25 10.0	+13
QIZ				LR	LR		
	comp=Z,1µm,21.0s						
PPLA	**Purkeypile**	**39.52**	**39**	*e*P	**P**	**22 24 59.4**	**+1.7**
	comp=Z,246nm,1.1s						
PPLA				LR	LR		
	comp=Z,1µm,20.0s						
CAST	**Castle Rocks**	**39.56**	**38**	*e*P	**P**	**22 24 59.4**	**+1.4**
	comp=Z,75nm,0.7s						
CAST				LR	LR		
	comp=Z,1µm,20.0s						
KDAK	**Kodiak Island**	**39.60**	**47**	*e*P	**P**	**22 24 57.6**	**-0.6**
	comp=Z,323nm,0.8s						
KDAK	**Kodiak Island**	**39.60**	**47**	P	**P**	**22 24 57.7**	**-0.5**
	comp=Z,65nm,0.8s,baz=281,slow=3.6,SNR=29						
MLY	**Manley**	**40.17**	**36**	*e*P	**P**	**22 25 04.2**	**+1.1**
	comp=Z,70nm,1.0s						
MLY				LR	LR		
	comp=Z,1µm,19.0s						
KMI	**Kunming**	**40.20**	**257**	P	**P**	**22 25 04.3**	**+0.4**
KMI				pP	pP	22 25 14.9	-0.7
KMI				sP	sP	22 25 19.8	-0.7
KMI				PP	**PnPn**	**22 26 39.1**	**-1.5**
KMI				S	**S**	**22 31 06.9**	**-1.1**
KMI				sS	sS	22 31 25.0	-2.4
KMI				SS	**SS**	**22 34 07.0**	**0.0**
KMI				pmax	pmax		
	comp=Z,30nm,1.5s						
KMI				pmax	pmax		
	comp=Z,310nm,5.2s						
KMI				LR	LR		
	comp=Z,980nm,18.2s						
KMI				LR	LR		
	comp=Z,610nm,19.3s						
KMI				LR	LR		
	comp=Z,770nm,17.1s						
KMI	**Kunming**	**40.20**	**257**	*e*P	**P**	**22 25 04.8**	**+0.9**
	comp=Z,72nm,0.9s						
KMI				LR	LR		
	comp=Z,800nm,20.0s						
KMI	**Kunming**	**40.20**	**257**	*e*P	**P**	**22 25 04.8**	**+0.9**
KMI				pmax	pmax		
	comp=Z,73nm,0.9s						
KMI				MLR	MLR		
	comp=Z,800nm,20.0s						
SUA	**Susitna One**	**40.24**	**41**	*e*P	**P**	**22 25 04.5**	**+0.9**
	comp=Z,65nm,0.9s						
DGZ	**Jazzator, Alta**	**40.28**	**300**	*c* *i*P	**P**	**22 25 05.0**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,11nm,0.7s						
BRLK	**Bradley Lake**	**40.29**	**44**	*e*P	**P**	**22 25 04.1**	**+0.1**
	comp=Z,92nm,0.8s						
TRF	**Thorofare Moun**	**40.37**	**38**	*e*P	**P**	**22 25 05.5**	**+0.6**
	comp=Z,68nm,1.2s						
TRF				LR	LR		
	comp=Z,1µm,20.0s						
COLD	**Coldfoot**	**40.48**	**32**	*e*P	**P**	**22 25 06.2**	**+0.8**
	comp=Z,36nm,0.8s						
BWN	**Browne**	**40.72**	**37**	*e*P	**P**	**22 25 09.8**	**+2.3**
	comp=Z,433nm,1.1s						
BWN				LR	LR		
	comp=Z,1µm,18.0s						
RC01	**Rabbit Creek A**	**40.74**	**42**	*e*P	**P**	**22 25 07.8**	**+0.1**
	comp=Z,122nm,1.0s						
RC01				LR	LR		
	comp=Z,1µm,20.0s						
TOLK	**Toolik Lake Re**	**40.81**	**30**	*e*P	**P**	**22 25 07.8**	**-0.4**
	comp=Z,33nm,0.6s						
TOLK				LR	LR		
	comp=Z,2µm,22.0s						
TOLK	**Toolik Lake Re**	**40.81**	**30**	P	**P**	**22 25 08.3**	**+0.1**
	baz=266						
DAV	**Davao City (W)**	**40.81**	**213**	*e*P	**P**	**22 25 07.9**	**-0.8**
	comp=Z,168nm,1.0s						
DAV	**Davao City (W)**	**40.81**	**213**	P	**P**	**22 25 07.9**	**-0.8**
	comp=Z,99nm,0.5s,baz=304,slow=16,SNR=2.7						
ZAA1	**Zalesovo Array**	**40.90**	**307**	*e*P	**P**	**22 25 08.4**	**-0.7**
ZAA1				*e*PcP	**PcP**	**22 27 09.9**	**+1.0**
ZAA1				*e*ScP	**ScP**	**22 30 56.8**	**+1.8**
ZAA0	**Zalesovo Array**	**40.90**	**307**	*e*P	**P**	**22 25 08.9**	**-0.1**
	comp=Z,17nm,0.7s						
ZAA0				LR	LR		
	comp=Z,2µm,18.0s						
ZALV	**Zalesovo Beam**	**40.90**	**307**	P	**P**	**22 25 08.4**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=104,slow=7.5,SNR=5.3						
ZALV				PcP	**PcP**	**22 27 09.9**	**+1.0**
	comp=Z,7.3nm,0.5s,baz=79,slow=3.0,SNR=5.7						
ZALV				ScP	**ScP**	**22 30 56.8**	**+1.8**
	comp=Z,1.5nm,0.8s,baz=72,slow=4.7,SNR=2.5						
ZALV				LR	LR	22 42 51.2	
	comp=Z,986nm,20.2s,baz=76,slow=37						
MCK	**McKinley**	**40.97**	**38**	*e*P	**P**	**22 25 10.0**	**+0.4**
	comp=Z,76nm,0.9s						
MCK				LR	LR		
	comp=Z,1µm,20.0s						
MCK	**McKinley**	**40.97**	**38**	*e*P	**P**	**22 25 10.0**	**+0.4**
MCK	**McKinley**	**40.97**	**38**	*e*P	**P**	**22 25 10.0**	**+0.4**
MCK				pmax	pmax		
	comp=Z,76nm,0.9s						
MCK				MLR	MLR		
	comp=Z,1µm,20.0s						
SEW	**Seward**	**40.97**	**43**	*e*P	**P**	**22 25 10.3**	**+0.7**
	comp=Z,118nm,0.9s						
SEW				LR	LR		
	comp=Z,2µm,18.0s						
PMR	**Palmer**	**41.00**	**41**	*e*P	**P**	**22 25 10.0**	**+0.2**
	comp=Z,66nm,0.9s						
PMR				LR	LR		
	comp=Z,900nm,19.0s						
PMR	**Palmer**	**41.00**	**41**	*e*P	**P**	**22 25 10.0**	**+0.2**
PMR				pmax	pmax		
	comp=Z,66nm,0.9s						
PMR				MLR	MLR		
	comp=Z,900nm,19.0s						
RND	**Reindeer**	**41.02**	**38**	*e*P	**P**	**22 25 10.0**	**0.0**
	comp=Z,128nm,1.1s						
RND				LR	LR		
	comp=Z,1µm,19.0s						
RND	**Reindeer**	**41.02**	**38**	*e*P	**P**	**22 25 10.0**	**0.0**
RND				pmax	pmax		
	comp=Z,128nm,1.1s						
RND				MLR	MLR		
	comp=Z,1µm,19.0s						
KCP	**Kidapawan**	**41.06**	**214**	⇑*i*P	**P**	**22 25 10.5**	**-0.4**
GHO	**Glory Hole Cre**	**41.08**	**41**	PFAKE		22 25 20.0	+9.4
GHO				LR	LR		
	comp=Z,1µm,21.0s						
MDM	**Murphy Dome**	**41.24**	**36**	*e*P	**P**	**22 25 12.8**	**+1.0**
	comp=Z,90nm,0.9s						
MDM				LR	LR		
	comp=Z,800nm,19.0s						
WRH	**Wood River Hil**	**41.31**	**37**	*e*P	**P**	**22 25 12.9**	**+0.5**
	comp=Z,87nm,1.0s						
WRH				LR	LR		
	comp=Z,900nm,18.0s						
KNK	**Knik Glacier**	**41.33**	**41**	*e*P	**P**	**22 25 13.2**	**+0.6**
	comp=Z,204nm,1.2s						
KNK				LR	LR		
	comp=Z,1µm,19.0s						
SML	**Sawmill**	**41.36**	**41**	*e*P	**P**	**22 25 13.3**	**+0.5**
	comp=Z,324nm,0.9s						
SML				LR	LR		
	comp=Z,1µm,20.0s						
SML	**Sawmill**	**41.36**	**41**	*e*P	**P**	**22 25 13.3**	**+0.5**
SML				pmax	pmax		
	comp=Z,324nm,0.9s						
SML				MLR	MLR		
	comp=Z,1µm,20.0s						
TCOL	**CIGO, UAF Yank**	**41.40**	**36**	P	**P**	**22 25 14.0**	**+1.0**
	baz=272,SNR=33						
COLA	**College**	**41.41**	**36**	*e*P	**P**	**22 25 14.2**	**+1.1**
	comp=Z,152nm,0.6s						
COLA				LR	LR		
	comp=Z,900nm,19.0s						
COLA	**College**	**41.41**	**36**	*e*P	**P**	**22 25 13.8**	**+0.7**
COLA	**College**	**41.41**	**36**	*c* *i*P	**P**	**22 25 13.8**	**+0.7**
COLA				pmax	pmax		
	comp=Z,111nm,0.9s						
CCB	**Clear Creek Bu**	**41.43**	**36**	*e*P	**P**	**22 25 13.8**	**+0.5**
	comp=Z,58nm,1.0s						
CCB				LR	LR		
	comp=Z,900nm,18.0s						
POKR	**Poker Plat Res**	**41.58**	**36**	P	**P**	**22 25 15.8**	**+1.3**
	baz=272						
NVS	**Novosibirsk**	**41.63**	**309**	⇑*i*P	**P**	**22 25 14.9**	**-0.1**
NVS				*e*		22 27 20.6	
NVS				pmax	pmax		
	comp=N,9.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,30nm,1.2s						
NVS				pmax	pmax		
	comp=Z,41nm,1.2s						
DHY	**Denali Highway**	**41.71**	**39**	*e*P	**P**	**22 25 16.3**	**+0.5**
	comp=Z,141nm,1.1s						
DHY				LR	LR		
	comp=Z,1µm,20.0s						
HDA	**Harding Lake**	**41.81**	**37**	*e*P	**P**	**22 25 16.3**	**-0.1**
	comp=Z,56nm,0.7s						
HDA				LR	LR		
	comp=Z,1µm,19.0s						
HDA	**Harding Lake**	**41.81**	**37**	P	**P**	**22 25 16.4**	**-0.1**
	baz=273						
ILAR	**Eielson Array**	**41.82**	**36**	P	**P**	**22 25 16.6**	**+0.1**
	comp=Z,42nm,0.7s,baz=257,slow=6.5,SNR=145						
ILAR				PcP	**PcP**	**22 27 13.4**	**+1.6**
	comp=Z,2.3nm,0.9s,baz=274,slow=3.6,SNR=1.6						
ILAR				ScP	**ScP**	**22 30 58.5**	**0.0**
	comp=Z,0.4nm,0.7s,baz=274,slow=3.6,SNR=2.9						
ILB	**Eielson Array**	**41.82**	**36**	*e*P	**P**	**22 25 16.6**	**+0.1**
ILB				*e*PcP	**PcP**	**22 27 13.3**	**+1.6**
ILB				*e*ScP	**ScP**	**22 30 58.5**	**0.0**
IL1	**Eielson Array**	**41.82**	**36**	*e*P	**P**	**22 25 15.6**	**-0.9**
SCM	**Sheep Creek Mo**	**41.83**	**41**	*e*P	**P**	**22 25 18.3**	**+1.6**
	comp=Z,141nm,0.9s						
SCM	**Sheep Creek Mo**	**41.83**	**41**	*e*P	**P**	**22 25 18.3**	**+1.6**
WMQ	**Urumqi**	**41.91**	**292**	⇑*i*P	**P**	**22 25 18.6**	**+1.0**
WMQ				pP	pP	22 25 28.4	-0.9
WMQ				sP	sP	22 25 35.1	+0.8
WMQ				S	**S**	**22 31 32.8**	**-0.1**
WMQ				sS	sS	22 31 57.8	+5.5
WMQ				ScS	**ScS**	**22 35 16.6**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,110nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,850nm,3.7s						
WMQ				LR	LR		
	comp=Z,9µm,18.5s						
WMQ	**Urumqi**	**41.91**	**292**	*e*P	**P**	**22 25 18.8**	**+1.2**
	comp=Z,106nm,0.6s						
WMQ				LR	LR		
	comp=Z,6µm,20.0s						
PRP	**Porcupine Dome**	**42.36**	**35**	*e*P	**P**	**22 25 21.2**	**+0.1**
	comp=Z,123nm,0.9s						
PRP				LR	LR		
	comp=Z,1µm,21.0s						
FYU	**Fort Yukon**	**42.43**	**33**	*e*P	**P**	**22 25 23.0**	**+1.6**
	comp=Z,339nm,0.9s						
FYU				LR	LR		
	comp=Z,1µm,20.0s						
KLU	**Klutina**	**42.54**	**41**	*e*P	**P**	**22 25 23.5**	**+1.0**
	comp=Z,166nm,1.0s						
KLU				LR	LR		
	comp=Z,1µm,19.0s						
ZSN	**Zaisan**	**42.56**	**298**	*d* *i*P	**P**	**22 25 22.8**	**+0.1**
ZSN				*i* *PP	**pP**	**22 25 33.0**	**-1.4**
ZSN				pmax	pmax		
	comp=Z,74nm,1.0s						
ZSN				MLR	MLR		
	comp=Z,812nm,18.0s						
ZSN	**Zaisan**	**42.56**	**298**	⇓*i*P	**P**	**22 25 22.9**	**+0.1**
	comp=Z,74nm,1.0s						
ZSN				⇓*i*pP	**pP**	**22 25 33.1**	**-1.4**
ZSN				*e*LR	LR	22 43 29.3	
	comp=Z,812nm,17.5s						
DIV	**Divide**	**42.66**	**41**	*e*P	**P**	**22 25 24.4**	**+1.0**
	comp=Z,177nm,1.0s						
DIV				LR	LR		
	comp=Z,1µm,18.0s						
EYAK	**Cordova Ski Ar**	**42.75**	**42**	*e*P	**P**	**22 25 27.1**	**+3.1**
	comp=Z,188nm,1.1s						
EYAK				LR	LR		
	comp=Z,2µm,20.0s						
RIDG	**Independ’e Rid**	**42.79**	**38**	*e*P	**P**	**22 25 24.2**	**-0.3**
	comp=Z,81nm,1.0s						
RIDG				LR	LR		
	comp=Z,1µm,18.0s						
HARP	**HAARP**	**42.79**	**39**	*e*P	**P**	**22 25 26.0**	**+1.6**
	comp=Z,203nm,0.9s						
SCRK	**Sand Creek**	**43.14**	**37**	*e*P	**P**	**22 25 27.4**	**0.0**
	comp=Z,85nm,0.9s						
SCRK				LR	LR		
	comp=Z,900nm,21.0s						
DOT	**Dot Lake**	**43.14**	**38**	PFAKE		22 25 40.0	+13
DOT				LR	LR		
	comp=Z,900nm,19.0s						
MENT	**Mentasta**	**43.38**	**39**	*e*P	**P**	**22 25 30.4**	**+1.1**
	comp=Z,65nm,0.9s						
MENT				LR	LR		
	comp=Z,1µm,20.0s						
HMT	**Hamilton**	**43.51**	**42**	*e*P	**P**	**22 25 33.4**	**+3.2**
	comp=Z,77nm,0.8s						
EGAK	**Eagle**	**44.27**	**36**	*e*P	**P**	**22 25 36.5**	**+0.2**
	comp=Z,251nm,1.4s						
MK31	**Makanchi Array**	**44.43**	**298**	*i* P	**P**	**22 25 38.3**	**+0.4**
MK31				pmax	pmax		
	comp=Z,138nm,0.8s						
MK32	**Makanchi Array**	**44.43**	**298**	*e*P	**P**	**22 25 38.1**	**+0.3**
MK32				*e*PcP	**PP**	**22 27 22.5**	**+0.6**
MK32				*e*ScP	**ScP**	**22 31 09.5**	**+0.1**
MKAR	**Makanchi Array**	**44.43**	**298**	P	**P**	**22 25 38.1**	**+0.3**
MKAR				LR	LR		
	comp=Z,700nm,21.0s						
MKAR	**Makanchi Array**	**44.43**	**298**	P	**P**	**22 25 38.2**	**+0.3**
MKAR				MLR	MLR		
	comp=Z,700nm,21.0s						
MKAR	**Makanchi Array**	**44.43**	**298**	P	**P**	**22 25 38.1**	**+0.3**
	comp=Z,52nm,0.6s,baz=80,slow=8.9,SNR=357						
MKAR				PcP	**PP**	**22 27 22.5**	**+0.6**
	comp=Z,34nm,1.3s,baz=99,slow=2.4,SNR=1.9						
MKAR				ScP	**ScP**	**22 31 09.5**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=112,slow=3.9,SNR=2.3						
MKAR				LR	LR	22 46 38.5	
	comp=Z,1µm,18.7s,baz=66,slow=39						
MAKZ	**Makanchi**	**44.63**	**298**	*e*P	**P**	**22 25 39.8**	**+0.4**
	comp=Z,137nm,0.9s						
MAKZ				LR	LR		
	comp=Z,4µm,19.0s						
MAKZ	**Makanchi**	**44.63**	**298**	*e*P	**P**	**22 25 39.8**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,137nm,0.9s						
MAKZ				MLR	MLR		
	comp=Z,4µm,19.0s						
SKNT	**Sakolnakorn**	**44.77**	**247**	P	**P**	**22 25 42.3**	**+1.5**
	comp=Z,29nm,1.3s						
DAWY	**Dawson**	**45.13**	**37**	*e*P	**P**	**22 25 43.8**	**+0.5**
	comp=Z,21nm,0.8s						
DAWY				LR	LR		
	comp=Z,1µm,19.0s						
MANU	**Manus Island**	**45.38**	**179**	*e*P	**P**	**22 25 45.0**	**-0.6**
	comp=Z,70nm,1.0s						
MANU				LR	LR		
	comp=Z,2µm,20.0s						
KURK	**Kurchatov**	**45.41**	**304**	*e*P	**P**	**22 25 46.0**	**+0.5**
KURK				*e*PcP	**PcP**	**22 27 25.5**	**+1.3**
KURK				LR	LR		
	comp=Z,2µm,19.0s						
KURK	**Kurchatov**	**45.41**	**304**	*e*P	**P**	**22 25 45.3**	**-0.2**
KURK	**Kurchatov**	**45.41**	**304**	*c* *i*P	**P**	**22 25 45.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,47nm,0.7s						
KURK	**Kurchatov**	**45.41**	**304**	P	**P**	**22 25 45.4**	**-0.2**
	SNR=29						
KURK				P	**P**	**22 25 45.4**	**-0.2**
	SNR=29						
KURBB	**Kurchatov Arra**	**45.50**	**304**	P	**P**	**22 25 46.0**	**-0.2**
	comp=Z,35nm,0.6s,baz=69,slow=8.7,SNR=174						
KURBB				PcP	**PcP**	**22 27 25.5**	**+1.0**
	comp=Z,4.9nm,0.6s,baz=80,slow=3.5,SNR=2.4						
EPYK	**Eagle Plains**	**45.85**	**33**	*e*P	**P**	**22 25 49.0**	**+0.1**
	comp=Z,276nm,0.9s						
EPYK	**Eagle Plains**	**45.85**	**33**	P	**P**	**22 25 50.1**	**+1.2**
	baz=280						
LSA	**Lhasa**	**45.92**	**272**	P	**P**	**22 25 51.8**	**+1.4**
LSA				pmax	pmax		
	comp=Z,42nm,1.4s						
LSA				LR	LR		
	comp=Z,260nm,23.0s						
LSA				LR	LR		
	comp=Z,280nm,12.4s						
LSA				LR	LR		
	comp=Z,790nm,26.5s						
LSA	**Lhasa**	**45.92**	**272**	*e*P	**P**	**22 25 51.8**	**+1.4**
	comp=Z,34nm,0.9s						

LSA				LR	LR		
	comp=Z,700nm,22.0s						
LSA	**Lhasa**	**45.92**	**272**	i P	**P**	**22 25 52.0**	**+1.6**
	SNR=7.2						
TNTI	**Ternate**	**45.97**	**208**	PFAKE		22 26 00.0	+10
TNTI				LR	LR		
	comp=Z,400nm,22.0s						
KKM	**Kota Kinabalu**	**46.00**	**225**	PFAKE		22 26 00.0	+9.3
KKM				LR	LR		
	comp=Z,500nm,21.0s						
JAY	**Jayapura**	**46.17**	**188**	P	**P**	**22 25 52.4**	**+0.5**
	comp=Z,518nm,1.2s,comp=Z,8µm						
JAY	**Jayapura**	**46.17**	**188**	P	**P**	**22 25 51.6**	**-0.2**
	comp=Z,35nm,0.8s,baz=331,slow=7.5,SNR=6.4						
SIJI	**Sorong**	**46.34**	**202**	P	**P**	**22 25 52.7**	**-0.5**
	comp=Z,32nm,0.8s,baz=16,slow=9.2,SNR=16						
UTTA	**Uttaradit**	**46.57**	**251**	P	**P**	**22 25 56.4**	**+1.4**
	comp=Z,13nm,0.8s,comp=Z,107nm						
HYT	**Haines Junctio**	**46.67**	**41**	eP	**P**	**22 25 57.3**	**+1.8**
	comp=Z,346nm,0.9s						
HYT				LR	LR		
	comp=Z,1µm,19.0s						
INK	**Inuvik**	**46.73**	**30**	eP	**P**	**22 25 56.0**	**+0.4**
	comp=Z,154nm,1.0s						
INK				LR	LR		
	comp=Z,2µm,22.0s						
INK	**Inuvik**	**46.73**	**30**	eP	**P**	**22 25 56.0**	**+0.4**
INK				pmax	pmax		
	comp=Z,154nm,1.0s						
INK				MLR	MLR		
	comp=Z,2µm,22.0s						
INK	**Inuvik**	**46.73**	**30**	P	**P**	**22 25 56.2**	**+0.6**
	comp=Z,55nm,0.4s,baz=298,slow=8.3,SNR=543						
INK				LR	LR	22 46 53.3	
	comp=Z,1µm,21.8s,baz=286,slow=38						
CMMT	**Chiang Mai**	**46.95**	**254**	P	**P**	**22 25 59.0**	**+0.9**
	comp=Z,66nm,1.2s,comp=Z,797nm						
CHTO	**Chiang Mai**	**46.96**	**254**	eP	**P**	**22 25 59.0**	**+0.9**
	comp=Z,51nm,0.9s						
CHTO				LR	LR		
	comp=Z,600nm,20.0s						
CHTO	**Chiang Mai**	**46.96**	**254**	eP	**P**	**22 25 59.0**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,51nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,600nm,20.0s						
CHTO	**Chiang Mai**	**46.96**	**254**	P	**P**	**22 25 58.9**	**+0.8**
	SNR=21						
CHTO	**Chiang Mai**	**46.96**	**254**	P	**P**	**22 25 59.0**	**+0.9**
	comp=Z,296nm,1.2s,comp=Z,3µm						
PBKT	**Sadao Pong**	**47.09**	**250**	eP	**P**	**22 26 00.5**	**+1.4**
	comp=Z,37nm,1.2s						
PBKT	**Sadao Pong**	**47.09**	**250**	P	**P**	**22 26 00.6**	**+1.4**
	comp=Z,31nm,1.4s						
CM31	**Chiang Mai Arr**	**47.20**	**253**	eP	**P**	**22 26 01.8**	**+1.8**
CM31				ePcP	**PcP**	**22 27 32.6**	**+1.7**
CM31	**Chiang Mai Arr**	**47.20**	**253**	P	**P**	**22 26 01.0**	**+1.0**
	SNR=13						
CMAR	**Chiang Mai Arr**	**47.20**	**253**	P	**P**	**22 26 00.5**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=34,slow=8.5,SNR=30						
CMAR				PcP	**PcP**	**22 27 32.6**	**+1.7**
	comp=Z,7.2nm,1.0s,baz=12,slow=3.7,SNR=4.5						
CM01	**Chiang Mai Arr**	**47.21**	**253**	eP	**P**	**22 26 00.3**	**+0.3**
PDGK	**Podgornoye**	**47.60**	**294**	i P	**P**	**22 26 02.9**	**-0.1**
TDK	**Taldyqorghan**	**47.62**	**297**	d eP	**P**	**22 26 02.2**	**-0.7**
TDK				i *PP	**pP**	**22 26 14.0**	**-0.9**
TDK				i S	**S**	**22 32 55.5**	**+0.1**
TDK				smax	smax		
	comp=N,716nm,4.1s						
TDK				MLR	MLR		
	comp=Z,3µm,16.0s						
TDK	**Taldyqorghan**	**47.62**	**297**	⇓eP	**P**	**22 26 02.3**	**-0.7**
	comp=Z,2µm,0.8s						
TDK				⇓ipP	**pP**	**22 26 14.0**	**-0.9**
TDK				⇑iS	**S**	**22 32 55.5**	**+0.1**
	comp=Z,716nm,4.1s						
TDK				eLR	LR	22 46 25.9	
	comp=Z,3µm,16.4s						
SHL	**Shillong**	**47.74**	**267**	eP	**P**	**22 26 04.6**	**+0.3**
	comp=Z,31nm,0.9s						
SHL	**Shillong**	**47.74**	**267**	eP	**P**	**22 26 04.6**	**+0.3**
SHL				pmax	pmax		
	comp=Z,31nm,0.9s						
SHL	**Shillong**	**47.74**	**267**	eP	**P**	**22 26 04.1**	**-0.3**
SHL				IAmb	IAmb	22 26 05.9	
	comp=Z,22nm,1.1s						
RABL	**Rabaul**	**47.76**	**173**	eP	**P**	**22 26 04.7**	**+0.4**
	comp=Z,143nm,1.0s						
RABL				LR	LR		
	comp=Z,1µm,20.0s						
WHY	**Whitehorse**	**47.96**	**41**	eP	**P**	**22 26 07.0**	**+1.5**
	comp=Z,90nm,1.0s						
UZB	**Uzynbulak**	**47.98**	**294**	c iP	**P**	**22 26 04.8**	**-1.2**
UZB				i *PP	**pP**	**22 26 16.3**	**-1.6**
UZB				i S	**S**	**22 33 00.9**	**0.0**
UZB				pmax	pmax		
	comp=Z,503nm,0.9s						
UZB				smax	smax		
	comp=E,259nm,3.8s						
UZB				MLR	MLR		
	comp=Z,926nm,18.0s						
UZB	**Uzynbulak**	**47.98**	**294**	⇑iP	**P**	**22 26 04.8**	**-1.2**
	comp=Z,504nm,0.9s						
UZB				⇓ipP	**pP**	**22 26 16.3**	**-1.6**
UZB				⇑iS	**S**	**22 33 00.9**	**0.0**
	comp=Z,259nm,3.8s						
UZB				eLR	LR	22 46 57.9	
	comp=Z,926nm,17.5s						
FAKI	**Fak Fak**	**48.06**	**200**	PFAKE		22 26 20.0	+13
FAKI				LR	LR		
	comp=Z,1µm,22.0s						
KPKS	**Kokpek**	**48.07**	**295**	d eP	**P**	**22 26 05.1**	**-1.5**
KPKS				i *PP	**pP**	**22 26 17.5**	**-1.0**
KPKS				i S	**S**	**22 33 02.6**	**+0.6**
KPKS				smax	smax		
	comp=E,269nm,3.1s						
KPKS				MLR	MLR		
	comp=Z,2µm,16.0s						
KPKS	**Kokpek**	**48.07**	**295**	⇓eP	**P**	**22 26 05.1**	**-1.5**
	comp=Z,1µm,0.9s						
KPKS				⇑ipP	**pP**	**22 26 17.6**	**-1.0**
KPKS				⇓iS	**S**	**22 33 02.6**	**+0.6**
	comp=Z,269nm,3.1s						
KPKS				eLR	LR	22 47 25.9	
	comp=Z,2µm,15.8s						
SRAK	**Srakaew**	**48.19**	**246**	P	**P**	**22 26 06.2**	**-1.4**
ZHN	**Zhinishke**	**48.36**	**295**	c eP	**P**	**22 26 08.0**	**-0.8**
ZHN				i *PP	**pP**	**22 26 19.3**	**-1.5**
ZHN				pmax	pmax		
	comp=Z,825nm,0.9s						
ZHN				MLR	MLR		
	comp=Z,1µm,18.0s						
ZHN	**Zhinishke**	**48.36**	**295**	⇑eP	**P**	**22 26 08.1**	**-0.8**
	comp=Z,826nm,0.9s						
ZHN				⇓ipP	**pP**	**22 26 19.3**	**-1.5**
ZHN				eLR	LR	22 47 25.9	
	comp=Z,1µm,17.5s						
SATY	**Saty**	**48.43**	**294**	c eP	**P**	**22 26 08.7**	**-0.6**
SATY				i *PP	**pP**	**22 26 20.5**	**-0.8**
SATY				eS	**S**	**22 33 07.7**	**+0.6**
SATY				smax	smax		
	comp=E,373nm,4.0s						
SATY				MLR	MLR		
	comp=Z,1µm,18.0s						
SATY	**Saty**	**48.43**	**294**	⇑eP	**P**	**22 26 08.8**	**-0.6**
	comp=Z,1µm,0.9s						
SATY				⇑ipP	**pP**	**22 26 20.6**	**-0.8**
SATY				eS	**S**	**22 33 07.7**	**+0.6**
	comp=Z,373nm,4.0s						
SATY				eLR	LR	22 47 31.2	
	comp=Z,1µm,17.5s						
BESE	**Bessie Mountai**	**48.59**	**43**	eP	**P**	**22 26 14.4**	**+4.0**
	comp=Z,149nm,1.3s						
PRZ	**Przheval'sk**	**48.68**	**294**	eP	**P**	**22 26 13.3**	**+1.9**
	comp=Z,106nm,0.6s						
PRZ				LR	LR		
	comp=Z,7µm,19.0s						
PRZ	**Przheval'sk**	**48.68**	**294**	eP	**P**	**22 26 13.3**	**+1.9**
PRZ				pmax	pmax		
	comp=Z,106nm,0.6s						
PRZ				MLR	MLR		
	comp=Z,7µm,19.0s						
UMPA	**Umpang Tak**	**48.80**	**251**	P	**P**	**22 26 16.3**	**+4.0**
	comp=Z,16nm,1.2s,comp=Z,146nm						
UTHA	**Uthaitani**	**48.84**	**250**	P	**P**	**22 26 14.9**	**+2.2**
	comp=Z,14nm,1.0s,comp=Z,131nm						
JIS	**Juneau Island**	**48.92**	**43**	eP	**P**	**22 26 14.8**	**+2.1**
	comp=Z,141nm,0.9s						
CHKK	**Chushkaly**	**49.02**	**296**	eP	**P**	**22 26 13.2**	**-0.6**
CHKK				i *PP	**pP**	**22 26 24.4**	**-1.3**
CHKK				eS	**S**	**22 33 12.3**	**-2.9**
CHKK				pmax	pmax		
	comp=Z,617nm,0.7s						
CHKK	**Chushkaly**	**49.02**	**296**	eP	**P**	**22 26 13.3**	**-0.6**
	comp=Z,617nm,0.7s						
CHKK				⇑ipP	**pP**	**22 26 24.4**	**-1.3**
CHKK				eS	**S**	**22 33 12.4**	**-2.9**
BRZS	**Berezniki**	**49.23**	**305**	d eP	**P**	**22 26 14.7**	**-0.6**
BRZS				eS	**S**	**22 33 16.6**	**-1.4**
BRZS				MLR	MLR		
	comp=Z,1µm,21.0s						
BRZS	**Berezniki**	**49.23**	**305**	⇓eP	**P**	**22 26 14.7**	**-0.6**
	comp=Z,1µm,0.7s						
BRZS				eS	**S**	**22 33 16.6**	**-1.4**
BRZS				eLR	LR	22 47 33.8	
	comp=Z,1µm,20.8s						
MDOK	**Medeo**	**49.28**	**295**	d eP	**P**	**22 26 15.3**	**-0.7**
MDOK				i *PP	**pP**	**22 26 26.6**	**-1.3**
MDOK				i S	**S**	**22 33 18.2**	**-0.9**
MDOK				pmax	pmax		
	comp=Z,627nm,0.9s						
MDOK				smax	smax		
	comp=E,261nm,4.6s						
MDOK				MLR	MLR		
	comp=Z,740nm,21.0s						
MDOK	**Medeo**	**49.28**	**295**	⇓eP	**P**	**22 26 15.3**	**-0.7**
	comp=Z,627nm,0.9s						
MDOK				⇑ipP	**pP**	**22 26 26.6**	**-1.3**
MDOK				⇑iS	**S**	**22 33 18.2**	**-0.9**
	comp=Z,261nm,4.6s						
MDOK				eLR	LR	22 47 38.2	
	comp=Z,740nm,21.0s						
LUWI	**Luwuk**	**49.32**	**212**	PFAKE		22 26 30.0	+14
LUWI				LR	LR		
	comp=Z,500nm,22.0s						
AAA	**Alma-Ata**	**49.35**	**295**	c iP	**P**	**22 26 15.8**	**-0.5**
AAA				eS	**S**	**22 33 21.9**	**+2.0**
AAA				pmax	pmax		
	comp=Z,435nm,0.9s						
AAA				smax	smax		
	comp=N,255nm,4.6s						
AAA				MLR	MLR		
	comp=Z,346nm,17.0s						
AAA	**Alma-Ata**	**49.35**	**295**	⇑iP	**P**	**22 26 15.9**	**-0.5**
	comp=Z,435nm,0.9s						
AAA				eS	**S**	**22 33 22.0**	**+2.0**
	comp=Z,255nm,4.6s						
AAA				eLR	LR	22 47 22.4	
	comp=Z,346nm,17.1s						
TNSS	**Tian-Shan**	**49.40**	**295**	⇓eP	**P**	**22 26 17.4**	**+0.3**
TNSS				i *PP	**pP**	**22 26 28.5**	**-0.6**
TNSS				pmax	pmax		
	comp=Z,593nm,0.7s						
TNSS	**Tian-Shan**	**49.40**	**295**	⇓eP	**P**	**22 26 17.5**	**+0.3**
	comp=Z,593nm,0.7s						
TNSS				⇑ipP	**pP**	**22 26 28.5**	**-0.6**
TARG	**Taragay, Kyrgy**	**49.41**	**293**	eP	**P**	**22 26 18.8**	**+1.5**
	comp=Z,101nm,1.1s						
TARG				LR	LR		
	comp=Z,4µm,20.0s						
BVAR	**Borovoye Array**	**49.42**	**309**	P	**P**	**22 26 17.0**	**+0.3**
BVAR	**Borovoye Array**	**49.42**	**309**	P	**P**	**22 26 17.0**	**+0.3**
	comp=Z,11nm,0.5s,baz=79,slow=9.2,SNR=54						
BVAR				PcP	**PcP**	**22 27 39.3**	**+0.9**
	comp=Z,7.3nm,0.7s,baz=61,slow=5.2,SNR=2.6						
KUU	**Kurty**	**49.43**	**296**	i P	**P**	**22 26 15.2**	**-1.7**
KUU				i *PP	**pP**	**22 26 27.2**	**-1.6**
KUU				eS	**S**	**22 33 19.8**	**-1.1**
KUU				pmax	pmax		
	comp=Z,409nm,0.8s						
KUU				MLR	MLR		
	comp=Z,913nm,18.0s						
KUU	**Kurty**	**49.43**	**296**	⇑iP	**P**	**22 26 15.3**	**-1.7**
	comp=Z,409nm,0.8s						
KUU				⇑ipP	**pP**	**22 26 27.3**	**-1.6**
KUU				eS	**S**	**22 33 19.9**	**-1.1**
KUU				eLR	LR	22 47 55.7	
	comp=Z,913nm,17.5s						
BRVK	**Borovoye**	**49.47**	**309**	eP	**P**	**22 26 17.5**	**+0.5**
	comp=Z,25nm,0.9s						
BRVK				LR	LR		
	comp=Z,3µm,18.0s						
BRVK	**Borovoye**	**49.47**	**309**	eP	**P**	**22 26 17.1**	**+0.1**
BRVK	**Borovoye**	**49.47**	**309**	c eP	**P**	**22 26 17.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,39nm,2.2s						
BRVK	**Borovoye**	**49.47**	**309**	P	**P**	**22 26 16.7**	**-0.3**
	SNR=25						
BRVK				P	**P**	**22 26 16.7**	**-0.3**
	SNR=25						
KDJ	**Kajisay**	**49.65**	**294**	eP	**P**	**22 26 20.8**	**+2.0**
	comp=Z,151nm,0.9s						
KDJ				LR	LR		
	comp=Z,6µm,19.0s						
KDJ	**Kajisay**	**49.65**	**294**	eP	**P**	**22 26 20.8**	**+2.0**
KDJ				pmax	pmax		
	comp=Z,151nm,0.9s						
KDJ				MLR	MLR		
	comp=Z,6µm,19.0s						
BRDH	**Bariadhala**	**49.67**	**264**	P	**P**	**22 26 18.9**	**-0.1**
	comp=Z,61nm,0.3s,baz=75,slow=12,SNR=5.4						
MTBS	**Maitube**	**49.70**	**295**	eP	**P**	**22 26 19.1**	**0.0**
MTBS				i *PP	**pP**	**22 26 30.4**	**-0.6**
MTBS				i S	**S**	**22 33 25.8**	**+0.9**
MTBS	**Maitube**	**49.70**	**295**	eP	**P**	**22 26 19.1**	**0.0**
	comp=Z,910nm,0.7s						
MTBS				⇑ipP	**pP**	**22 26 30.5**	**-0.6**
MTBS				⇑iS	**S**	**22 33 25.9**	**+0.9**
PATY	**Pattaya**	**49.76**	**247**	P	**P**	**22 26 22.1**	**+2.4**
	comp=Z,26nm,1.0s,comp=Z,661nm						
OTUK	**Ortayu**	**50.13**	**303**	i P	**P**	**22 26 22.4**	**+0.2**
OTUK				pmax	pmax		
	comp=Z,67nm,0.6s						
ULHL	**Ulahol**	**50.22**	**294**	P	**P**	**22 26 24.3**	**+1.1**
	SNR=11						
TKM2	**Tokmak 2**	**50.34**	**295**	P	**P**	**22 26 25.2**	**+1.1**
	SNR=110						
TKM2	**Tokmak 2**	**50.34**	**295**	i P	**P**	**22 26 25.0**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,207nm,0.8s						
BTLS	**Baital**	**50.41**	**299**	c eP	**P**	**22 26 22.9**	**-1.4**
BTLS				i *PP	**pP**	**22 26 34.3**	**-2.0**
BTLS				i S	**S**	**22 33 33.9**	**-0.6**
BTLS				pmax	pmax		
	comp=Z,258nm,1.5s						
BTLS				smax	smax		
	comp=E,201nm,5.3s						
BTLS				MLR	MLR		
	comp=Z,2µm,16.0s						
BTLS	**Baital**	**50.41**	**299**	⇑eP	**P**	**22 26 23.0**	**-1.4**
	comp=Z,258nm,1.5s						
BTLS				⇓ipP	**pP**	**22 26 34.4**	**-2.0**
BTLS				⇑iS	**S**	**22 33 34.0**	**-0.6**
	comp=Z,201nm,5.3s						
BTLS				eLR	LR	22 48 13.7	
	comp=Z,2µm,16.3s						
CRAG	**Craig**	**50.55**	**47**	eP	**P**	**22 26 29.3**	**+4.1**
	comp=Z,85nm,0.9s						
WRAK	**Wrangell Islan**	**50.60**	**45**	epP	pP	22 26 38.4	+0.8
JIRN	**Jiri**	**50.66**	**273**	eP	**P**	**22 26 27.4**	**+0.5**
	comp=Z,179nm,0.8s						
GUN	**Gumba**	**50.74**	**273**	eP	**P**	**22 26 28.1**	**+0.6**
	comp=Z,112nm,0.4s						
NRN	**Naryn**	**50.75**	**294**	eP	**P**	**22 26 28.2**	**+0.8**
	comp=Z,66nm,1.3s						
NRN				LR	LR		
	comp=Z,4µm,20.0s						
NRN	**Naryn**	**50.75**	**294**	eP	**P**	**22 26 28.2**	**+0.8**
NRN				pmax	pmax		
	comp=Z,66nm,1.3s						
NRN				MLR	MLR		
	comp=Z,4µm,20.0s						
RAMN	**Ramite**	**50.77**	**272**	eP	**P**	**22 26 28.0**	**+0.4**
	comp=Z,91nm,0.5s						
CHMS	**Chumysh**	**50.86**	**296**	P	**P**	**22 26 28.5**	**+0.7**
	SNR=24						
KBK	**Karagaybulak**	**50.89**	**295**	P	**P**	**22 26 29.2**	**+1.1**
	SNR=95						
USP	**Ospenovka**	**50.90**	**296**	P	**P**	**22 26 29.0**	**+0.9**
	SNR=46						
KZA	**Kyzart**	**50.95**	**295**	P	**P**	**22 26 30.7**	**+1.7**
	SNR=46						
DLBC	**Dease Lake**	**51.02**	**42**	eP	**P**	**22 26 30.7**	**+1.9**
	comp=Z,81nm,1.0s						
FRU	**Bishkek**	**51.02**	**296**	eP	**P**	**22 26 29.0**	**0.0**
FRU				e		22 26 40.0	
FRU				e		22 33 52.0	
FRU				MLR	MLR		
	comp=E,2µm,16.0s						
FRU1	**Bishkek**	**51.02**	**296**	eP	**P**	**22 26 30.1**	**+1.0**
	comp=E,125nm,0.7s						
FRU1	**Bishkek**	**51.02**	**296**	eP	**P**	**22 26 30.1**	**+1.0**
FRU1				pmax	pmax		
	comp=Z,125nm,0.7s						
SBUM	**Sibu**	**51.13**	**227**	eP	**P**	**22 26 30.4**	**+0.4**
	comp=Z,4.8nm,1.0s						
SBUM				LR	LR		
	comp=Z,300nm,20.0s						
AAK	**Ala-Archa**	**51.19**	**296**	P	**P**	**22 26 31.3**	**+0.8**
	SNR=43						
AAK	**Ala-Archa**	**51.19**	**296**	eP	**P**	**22 26 31.2**	**+0.8**
AAK				LR	LR		
	comp=Z,2µm,18.0s						
AAK	**Ala-Archa**	**51.19**	**296**	eP	**P**	**22 26 30.7**	**+0.3**
AAK	**Ala-Archa**	**51.19**	**296**	i P	**P**	**22 26 31.2**	**+0.8**
	SNR=64						
AAK	**Ala-Archa**	**51.19**	**296**	i P	**P**	**22 26 30.7**	**+0.3**
AAK				i *PP	**pP**	**22 26 40.9**	**-1.5**
AAK				pmax	pmax		
	comp=Z,39nm,0.6s						
AAK	**Ala-Archa**	**51.19**	**296**	P	**P**	**22 26 31.1**	**+0.7**
	SNR=40						
AAK				P	**P**	**22 26 31.1**	**+0.7**
	SNR=40						
AAK	**Ala-Archa**	**51.19**	**296**	P	**P**	**22 26 31.2**	**+0.7**
	comp=Z,33nm,0.6s,baz=102,slow=5.4,SNR=167						
KKN	**Kakani**	**51.25**	**273**	eP	**P**	**22 26 31.9**	**+0.8**
PKI	**Pulchoki**	**51.28**	**273**	eP	**P**	**22 26 31.8**	**+0.3**
PKIN	**Phulchoki**	**51.29**	**273**	eP	**P**	**22 26 31.6**	**+0.1**
	comp=Z,329nm,1.6s						
UCH	**Uchtor**	**51.37**	**295**	P	**P**	**22 26 33.1**	**+1.0**
	SNR=13						
DMN	**Daman**	**51.48**	**273**	eP	**P**	**22 26 33.6**	**+0.7**
	comp=Z,149nm,0.8s						
EKS2	**Erkin-Say**	**51.65**	**296**	P	**P**	**22 26 34.6**	**+0.8**
	SNR=46						
KSH	**Kashi**	**51.67**	**291**	⇑iP	**P**	**22 26 38.4**	**+4.4**
KSH				pP	sP	22 26 49.3	-1.7
KSH				S	**S**	**22 33 54.6**	**+2.2**
KSH				sS	sS	22 34 17.9	+5.6
KSH				SS	**SS**	**22 37 32.8**	**+4.1**
KSH				pmax	pmax		
	comp=Z,53nm,0.7s						
KSH				LR	LR		
	comp=Z,1µm,9.4s						
KSH				LR	LR		
	comp=Z,2µm,11.7s						
KSH				LR	LR		
	comp=Z,4µm,16.9s						
AML	**Almayashu**	**51.95**	**295**	P	**P**	**22 26 37.6**	**+1.2**
	SNR=34						
DANN	**Dangsing**	**52.03**	**275**	eP	**P**	**22 26 38.0**	**+1.0**
	comp=Z,235nm,0.8s						
KOLN	**Koldanda**	**52.48**	**275**	eP	**P**	**22 26 41.0**	**+0.7**
MNAS	**Manas**	**52.56**	**296**	i P	**P**	**22 26 41.0**	**+0.4**
MNAS				pmax	pmax		
	comp=Z,260nm,0.7s						
MTKI	**Muara Teweh, K**	**52.68**	**222**	P	**P**	**22 26 42.1**	**+0.6**
	comp=Z,66nm,0.8s,comp=Z,3µm						
PYUN	**Piuthan**	**52.73**	**275**	eP	**P**	**22 26 42.8**	**+0.7**
ARSB	**Arslanbob**	**52.80**	**295**	eP	**P**	**22 26 43.6**	**+1.2**
	comp=Z,362nm,0.8s						
KSM	**Kuching**	**52.97**	**228**	eP	**P**	**22 26 44.7**	**+1.0**
	comp=Z,50nm,1.1s						
SFK	**Sufi-Kurgan**	**53.10**	**293**	i P	**P**	**22 26 44.9**	**+0.2**
SFK				pmax	pmax		
	comp=Z,177nm,1.0s						
SVE	**Sverdlovsk**	**53.10**	**317**	d iP	**P**	**22 26 44.5**	**+0.3**
SVE				pmax	pmax		
	comp=Z,36nm,0.9s						
SVE				MLR	MLR		
	comp=Z,4µm,16.0s						
DZA	**Taraz**	**53.13**	**297**	eP	**P**	**22 26 44.1**	**-0.6**
DZA				i *PP	**pP**	**22 26 55.9**	**-0.8**
DZA	**Taraz**	**53.13**	**297**	eP	**P**	**22 26 44.1**	**-0.6**
	comp=Z,1µm,0.8s						
DZA				⇑ipP	**pP**	**22 26 56.0**	**-0.8**
BOK	**Bokaro**	**53.16**	**269**	eP	**P**	**22 26 45.7**	**+0.7**
BOK				IAmb	IAmb	22 26 47.5	
	comp=Z,51nm,1.1s						
KK31	**Karatay Array**	**53.56**	**298**	eP	**P**	**22 26 48.3**	**+0.5**
KK31	**Karatay Array**	**53.56**	**298**	eP	**P**	**22 26 48.3**	**+0.5**
KKAR	**Karatay Array**	**53.56**	**298**	eP	**P**	**22 26 48.3**	**+0.5**
KKAR	**Karatay Array**	**53.56**	**298**	eP	**P**	**22 26 48.3**	**+0.5**
OBL	**Observatory Le**	**53.77**	**97**	PFAKE		22 27 00.0	+10
OBL				LR	LR		
	comp=Z,4µm,21.0s						
SBLHI	**Steaming Bluff**	**53.78**	**97**	PFAKE		22 27 00.0	+10
SBLHI				LR	LR		
	comp=Z,4µm,19.0s						
HNR	**Honiara**	**54.07**	**164**	eP	**P**	**22 26 49.9**	**-1.8**
HNR				LR	LR		
	comp=Z,2µm,19.0s						
HNR	**Honiara**	**54.07**	**164**	eP	**P**	**22 26 49.9**	**-1.8**
HNR				MLR	MLR		
	comp=Z,2µm,19.0s						
HNR	**Honiara**	**54.07**	**164**	P	**P**	**22 26 49.9**	**-1.8**
	comp=Z,21nm,0.4s,baz=200,slow=22,SNR=3.7						
KAPI	**Kappang**	**54.14**	**214**	PFAKE		22 27 00.0	+7.8
KAPI				LR	LR		
	comp=Z,300nm,21.0s						
TRTT	**Trang**	**54.29**	**243**	P	**P**	**22 26 56.6**	**+3.2**
	comp=Z,24nm,1.2s						
ARU	**Arti**	**54.31**	**317**	eP	**P**	**22 26 51.6**	**-1.4**
	comp=Z,40nm,1.0s						
ARU				LR	LR		
	comp=Z,4µm,18.0s						
ARU	**Arti**	**54.31**	**317**	c iP	**P**	**22 26 52.3**	**-0.7**
ARU				*PP	**pP**	**22 27 07.0**	**+1.9**
ARU						22 27 56.2	
ARU						22 28 52.8	
ARU				PPP	PPP	22 30 04.0	
ARU				S	**S**	**22 34 26.9**	**-0.6**
ARU				SS	**SS**	**22 38 06.8**	**-2.5**
ARU				pmax	pmax		
	comp=Z,89nm,1.8s						
ARU				MLR	MLR		
	comp=Z,4µm,17.0s						
IUG	**Iuzhnay**	**54.34**	**297**	c eP	**P**	**22 26 52.8**	**-0.8**
IUG				i *PP	**pP**	**22 27 04.7**	**-0.9**
IUG				eS	**S**	**22 34 29.3**	**+0.8**
IUG				pmax	pmax		
	comp=Z,713nm,1.1s						
IUG				MLR	MLR		
	comp=Z,950nm,18.0s						
IUG	**Iuzhnay**	**54.34**	**297**	⇑eP	**P**	**22 26 52.8**	**-0.8**
	comp=Z,714nm,1.1s						
IUG				⇑ipP	**pP**	**22 27 04.8**	**-0.9**
IUG				eS	**S**	**22 34 29.4**	**+0.9**
IUG				eLR	LR	22 51 03.3	
	comp=Z,950nm,17.5s						
CHM	**Chimkent**	**54.53**	**297**	d eP	**P**	**22 26 55.1**	**+0.3**
CHM				i *PP	**pP**	**22 27 06.2**	**-0.7**
CHM				eS	**S**	**22 34 30.2**	**-0.7**
CHM				smax	smax		
	comp=N,960nm,5.4s						
CHM				MLR	MLR		
	comp=Z,657nm,21.0s						
CHM	**Chimkent**	**54.53**	**297**	⇓eP	**P**	**22 26 55.1**	**+0.3**
	comp=Z,3µm,0.7s						
CHM				⇑ipP	**pP**	**22 27 06.3**	**-0.7**
CHM				⇓eS	**S**	**22 34 30.3**	**-0.7**
	comp=Z,960nm,5.4s						
CHM				eLR	LR	22 50 58.0	
	comp=Z,657nm,21.0s						
BBB	**Bella Bella**	**54.62**	**49**	LR	LR	22 51 03.1	
	comp=Z,222nm,19.9s,baz=272,slow=37						
HOPEN	**Hopen**	**54.73**	**346**	eP	**P**	**22 26 53.3**	**-2.5**
SPA0	**Spitsbergen Ar**	**54.93**	**349**	eP	**P**	**22 26 55.1**	**-2.2**
SPITS	**Spitsbergen Ar**	**54.93**	**349**	P	**P**	**22 26 55.4**	**-1.9**
KBS	**Kingsbay**	**54.94**	**350**	eP	**P**	**22 26 55.7**	**-1.6**
	comp=Z,57nm,1.0s						
KBS				LR	LR		
	comp=Z,900nm,18.0s						
KBS	**Kingsbay**	**54.94**	**350**	eP	**P**	**22 26 55.7**	**-1.6**
KBS				pmax	pmax		
	comp=Z,57nm,1.0s						
KBS				MLR	MLR		

	comp=Z,900nm,18.0s						
KBS	**Kingsbay**	**54.94**	**350**	eP	**P**	**22 26 54.8**	**-2.5**
DDI	**Dehra Dun**	**55.03**	**281**	eP	**P**	**22 26 59.2**	**+0.5**
DDI				IAmb	IAmb	22 27 00.9	
	comp=Z,102nm,1.1s						
PKDT	**Phuket**	**55.13**	**245**	P	**P**	**22 27 02.9**	**+3.4**
	comp=Z,37nm,1.3s,comp=Z,526nm						
DHRM	**DHARAMSHALA**	**55.21**	**283**	eP	**P**	**22 26 59.9**	**-0.3**
DHRM				IAmb	IAmb	22 27 00.8	
	comp=Z,70nm,0.5s						
SMLA	**Simla**	**55.21**	**282**	eP	**P**	**22 27 00.2**	**+0.3**
SMLA				IAmb	IAmb	22 27 01.4	
	comp=Z,158nm,0.8s						
TAS	**Tashkent**	**55.23**	**296**	P	**P**	**22 27 01.5**	**+1.6**
TAS				pmax	pmax		
	comp=Z,242nm,1.1s						
RES	**Resolute Bay**	**55.25**	**17**	eP	**P**	**22 26 58.0**	**-1.5**
	comp=Z,50nm,0.8s						
RES				LR	LR		
	comp=Z,1µm,22.0s						
RES	**Resolute Bay**	**55.25**	**17**	P	**P**	**22 26 59.2**	**-0.4**
	comp=Z,50nm,0.7s,baz=324,slow=7.2,SNR=152						
RES				LR	LR	22 52 58.4	
	comp=Z,954nm,21.0s,baz=294,slow=38						
BWNR	**Bhubaneshwar**	**55.38**	**266**	ex	**P**	**22 26 57.4**	**-3.9**
BWNR				IAmb	IAmb	22 27 10.0	
	comp=Z,189nm,1.5s						
KULM	**Kulim**	**55.61**	**240**	eP	**P**	**22 27 04.3**	**+1.4**
	comp=Z,68nm,0.8s						
KULM				LR	LR		
	comp=Z,400nm,20.0s						
GAR	**Garm**	**55.73**	**294**	eP	**P**	**22 27 04.1**	**+0.3**
	comp=Z,664nm,1.4s						
GAR				LR	LR		
	comp=Z,6µm,18.0s						
GAR	**Garm**	**55.73**	**294**	eP	**P**	**22 27 04.1**	**+0.3**
GAR				pmax	pmax		
	comp=Z,664nm,1.4s						
GAR				MLR	MLR		
	comp=Z,6µm,18.0s						
HSPB	**Hornsund (broa**	**55.93**	**348**	eP	**P**	**22 27 03.8**	**-0.6**
IPM	**Ipoh**	**56.00**	**239**	eP	**P**	**22 27 06.1**	**+0.4**
	comp=Z,32nm,0.9s						
YKW3	**Yellowknife Ar**	**56.09**	**33**	eP	**P**	**22 27 05.9**	**+0.1**
	comp=Z,80nm,0.9s						
YKA	**Yellowknife Ar**	**56.13**	**34⇑**	eP	**P'P'bc**	**22 57 16.8**	**-6.3**
YKA	**Yellowknife Ar**	**56.13**	**34**	P	**P**	**22 27 06.4**	**+0.4**
	comp=Z,32nm,0.7s,baz=302,slow=6.8,SNR=150						
YKA				PKP2bc		22 57 16.8	
	comp=Z,0.3nm,0.7s,baz=128,slow=2.6,SNR=4.0						
YKB5	**Yellowknife Ar**	**56.13**	**34**	eP	**P**	**22 27 04.4**	**-1.6**
MYKOM	**Kota Tinggi**	**56.38**	**235**	PFAKE		22 27 20.0	+12
MYKOM				LR	LR		
	comp=Z,300nm,20.0s						
NIL	**Nilore**	**56.58**	**287**	eP	**P**	**22 27 09.2**	**-0.6**
	comp=Z,198nm,1.1s						
NIL				LR	LR		
	comp=Z,1µm,19.0s						
NIL	**Nilore**	**56.58**	**287**	eP	**P**	**22 27 09.2**	**-0.6**
NIL				pmax	pmax		
	comp=Z,198nm,1.1s						
NIL				MLR	MLR		
	comp=Z,1µm,19.0s						
CHGR	**Chuyangaron**	**56.69**	**294**	eP	**P**	**22 27 10.9**	**+0.4**
	comp=Z,446nm,0.8s						
CHGR				LR	LR		
	comp=Z,4µm,19.0s						
EDFI	**Ende, Flores**	**56.81**	**210**	P	**P**	**22 27 10.1**	**-1.4**
SOEI	**Soe**	**56.86**	**207**	eP	**P**	**22 27 10.4**	**-1.5**
	comp=Z,41nm,0.8s						
SOEI				LR	LR		
	comp=Z,500nm,21.0s						
SOEI	**Soe**	**56.86**	**207**	P	**P**	**22 27 11.5**	**-0.4**
	comp=Z,78nm,1.3s						
ABKAR	**Akbulak array**	**56.98**	**309**	eP	**P**	**22 27 12.7**	**+0.4**
COEN	**Coen**	**57.31**	**184**	eP	**P**	**22 27 14.7**	**-0.1**
	comp=Z,50nm,0.9s						
COEN				LR	LR		
	comp=Z,1µm,21.0s						
AKTO	**Aktyubinsk**	**57.46**	**311**	i P	**P**	**22 27 16.0**	**+0.3**
AKTO				pmax	pmax		
	comp=Z,37nm,1.0s						
BATI	**Baumata**	**57.48**	**207**	P	**P**	**22 27 16.4**	**+0.3**
	comp=Z,31nm,0.8s,baz=90,slow=2.7,SNR=2.7						
PRGR	**Permogore**	**57.59**	**326⇑**	iP	**P**	**22 27 15.0**	**-1.3**
PRGR				pmax	pmax		
	comp=Z,54nm,0.7s						
KIRV	**Kirov**	**57.59**	**322**	P	**P**	**22 27 15.9**	**-0.5**
	comp=Z,39nm,0.6s,baz=62,slow=5.0,SNR=12						
JBP	**Jabalpur**	**57.83**	**272**	eP	**P**	**22 27 20.2**	**+1.5**
LVZ	**Lovozero**	**57.87**	**336**	eP	**P**	**22 27 18.1**	**-0.2**
	comp=Z,23nm,0.6s						
LVZ				LR	LR		
	comp=Z,1µm,18.0s						
LVZ	**Lovozero**	**57.87**	**336c**	eP	**P**	**22 27 17.7**	**-0.6**
LVZ				pmax	pmax		
	comp=Z,27nm,0.8s						
MTN	**Manton Dam**	**57.90**	**198**	eP	**P**	**22 27 18.2**	**-0.9**
	comp=Z,67nm,0.9s						
TULEG	**Thule**	**58.08**	**9**	eP	**P**	**22 27 17.2**	**-2.3**
	comp=Z,34nm,0.9s						
TULEG				LR	LR		
	comp=Z,1µm,20.0s						
APA	**Apatity**	**58.45**	**336⇑**	iP	**P**	**22 27 21.6**	**-0.7**
APA				pmax	pmax		
	comp=Z,25nm,0.7s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
PSI	**Prapat**	**58.61**	**240**	eP	**P**	**22 27 25.3**	**+1.0**
	comp=Z,28nm,0.9s						
PSI				LR	LR		
	comp=Z,500nm,21.0s						
CMBY	**CAMPBELL BAY**	**58.72**	**248**	eP	**P**	**22 27 25.6**	**+0.7**
LLLB	**Lillooet**	**58.79**	**48**	eP	**P**	**22 27 25.9**	**+0.9**
	comp=Z,41nm,0.9s						
KEV	**Kevo**	**58.81**	**339**	eP	**P**	**22 27 24.7**	**-0.1**
	comp=Z,42nm,0.6s						
KEV				LR	LR		
	comp=Z,1µm,19.0s						
KEV	**Kevo**	**58.81**	**339**	eP	**P**	**22 27 24.7**	**-0.1**
KEV				pmax	pmax		
	comp=Z,42nm,0.6s						
KEV				MLR	MLR		
	comp=Z,1µm,19.0s						
KBL	**Kabul**	**58.99**	**290**	eP	**P**	**22 27 26.4**	**-0.5**
	comp=Z,91nm,0.8s						
KBL				LR	LR		
	comp=Z,1µm,20.0s						
KBL	**Kabul**	**58.99**	**290**	eP	**P**	**22 27 26.4**	**-0.5**
KBL				pmax	pmax		
	comp=Z,91nm,0.8s						
KBL				MLR	MLR		
	comp=Z,1µm,20.0s						
HAMF	**Hammerfest**	**59.02**	**341**	eP	**P**	**22 27 26.3**	**+0.1**
TMCR	**Tamitsa**	**59.02**	**331**	eP	**P**	**22 27 26.5**	**+0.2**
TMCR				pmax	pmax		
	comp=Z,78nm,0.8s						
BKNI	**Bangkinang**	**59.23**	**236**	eP	**P**	**22 27 29.7**	**+1.3**
	comp=Z,104nm,0.9s						
BKNI				LR	LR		
	comp=Z,300nm,20.0s						
BKNI	**Bangkinang**	**59.23**	**236**	P	**P**	**22 27 30.6**	**+2.2**
	comp=Z,130nm,1.0s,comp=Z,1µm						
A04D	**Lummi Island**	**59.34**	**50**	P	**P**	**22 27 28.8**	**0.0**
	baz=302						
ARA0	**ARCESS Array S**	**59.34**	**340**	eP	**P**	**22 27 28.3**	**-0.2**
ARCES	**ARCESS Array B**	**59.34**	**340**	P	**P**	**22 27 28.3**	**-0.2**
	comp=Z,28nm,0.6s,baz=46,slow=7.1,SNR=201						
ARCES				LR	LR	22 58 39.5	
	comp=Z,2µm,18.1s,baz=36,slow=42						
ARE0	**ARCESS Array S**	**59.34**	**340**	eP	**P**	**22 27 28.6**	**0.0**
	comp=Z,1.7nm,0.9s						
ARE0				LR	LR		
	comp=Z,100nm,21.0s						
ARE0	**ARCESS Array S**	**59.34**	**340**	eP	**P**	**22 27 28.7**	**+0.2**
DAG	**Danmarks Havn**	**59.61**	**356**	i P	**P**	**22 27 28.3**	**-1.9**
DAG	**Danmarks Havn**	**59.61**	**356**	i P	**P**	**22 27 28.3**	**-1.9**
BHPL	**Bhopal**	**59.65**	**274**	eP	**P**	**22 27 31.2**	**-0.1**
NGP	**Nagpur**	**59.76**	**271**	eP	**P**	**22 27 31.4**	**-0.7**
NGP				IAmb	IAmb	22 27 33.1	
	comp=Z,37nm,1.0s						
D03D	**Eldon**	**59.76**	**52**	P	**P**	**22 27 30.3**	**-1.4**
	baz=303						
B05A	**Bryant**	**59.93**	**51**	P	**P**	**22 27 31.8**	**-1.0**
	baz=303						
SDSI	**Sungai Dareh**	**60.00**	**235**	P	**P**	**22 27 37.0**	**+3.3**
	comp=Z,67nm,1.2s,comp=Z,3µm						
D04E	**Lakebay**	**60.14**	**52**	P	**P**	**22 27 33.9**	**-0.3**
	baz=303						
KTK1	**Kautokeino**	**60.29**	**340**	eP	**P**	**22 27 35.3**	**+0.3**
PWJI	**Pagerwojo**	**60.33**	**221**	P	**P**	**22 27 35.5**	**-0.4**
KLMR	**Klimovskoe**	**60.46**	**327**	eP	**P**	**22 27 33.7**	**-2.6**
KLMR				pmax	pmax		
	comp=Z,50nm,0.9s						
KLMR	**Klimovskoe**	**60.46**	**327**	eP	**P**	**22 27 33.7**	**-2.6**
KLMR				AMP		22 27 37.3	
	comp=Z,50nm,0.8s						
SGF	**Sodankyl**	**60.53**	**337**	P	**P**	**22 27 36.6**	**0.0**
SGF				pmax	pmax		
	comp=Z,113nm,0.6s						
E04D	**Cinebar**	**60.60**	**52**	P	**P**	**22 27 36.9**	**-0.5**
	baz=304						
C06D	**Leavenworth**	**60.79**	**50**	P	**P**	**22 27 38.3**	**-0.5**
	baz=304						
MSF	**Maaselka**	**60.85**	**335**	P	**P**	**22 27 38.9**	**0.0**
MSF				pmax	pmax		
	comp=Z,90nm,0.9s						
TRO	**Tromso**	**60.87**	**342**	P	**P**	**22 27 38.7**	**-0.2**
TRO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TRO	**Tromso**	**60.87**	**342**	eP	**P**	**22 27 38.8**	**0.0**
KRJI	**Kerinci**	**60.91**	**234**	P	**P**	**22 27 42.4**	**+2.4**
	comp=Z,160nm,1.1s						
G03D	**McMinnville, O**	**60.94**	**54**	P	**P**	**22 27 38.2**	**-1.5**
	baz=304						
KULLO	**Kullorsuaq**	**61.08**	**7**	i P	**P**	**22 27 39.1**	**-1.1**
KULLO	**Kullorsuaq**	**61.08**	**7**	i P	**P**	**22 27 39.1**	**-1.1**
LHSI	**Lahat**	**61.11**	**231**	P	**P**	**22 27 42.6**	**+1.3**
	comp=Z,97nm,1.1s						
KPJI	**Karang Pucung**	**61.14**	**224**	P	**P**	**22 27 42.4**	**+1.0**
	comp=Z,42nm,1.1s						
I02D	**Swisshome**	**61.20**	**55**	P	**P**	**22 27 40.1**	**-1.5**
	baz=304						
MDSI	**Maura Dua**	**61.28**	**230**	P	**P**	**22 27 43.0**	**+0.6**
	comp=Z,29nm,1.3s						
LTY	**Liberty**	**61.29**	**51**	eP	**P**	**22 27 45.2**	**+2.9**
	comp=Z,54nm,1.3s						
LEM	**Lembang**	**61.38**	**226**	P	**P**	**22 27 42.5**	**-0.8**
	comp=Z,32nm,0.9s,baz=88,slow=11,SNR=6.0						
B08A	**Colville Reser**	**61.42**	**49**	eP	**P**	**22 27 43.6**	**+0.6**
	comp=Z,46nm,0.8s						
B08A				LR	LR		
	comp=Z,500nm,19.0s						
F05D	**White Salmon**	**61.61**	**53**	P	**P**	**22 27 42.8**	**-1.6**
	baz=304						
H04D	**Lebanon**	**61.63**	**54**	P	**P**	**22 27 43.4**	**-1.1**
	baz=304						
J01E	**Myrtle Point**	**61.68**	**56**	P	**P**	**22 27 43.3**	**-1.5**
	baz=304						
I03D	**Drain, OR**	**61.73**	**55**	P	**P**	**22 27 44.1**	**-1.0**
	baz=304						
H04A	**Detroit Lake**	**61.87**	**54**	eP	**P**	**22 27 47.9**	**+1.8**
	comp=Z,74nm,1.0s						
G05D	**Wamic, OR**	**62.06**	**53**	P	**P**	**22 27 46.4**	**-1.0**
	baz=305						
K02D	**Willamette Mer**	**62.11**	**57**	P	**P**	**22 27 47.7**	**-0.2**
	baz=305						
JOF	**Joensuu**	**62.14**	**332**	P	**P**	**22 27 47.5**	**-0.1**
JOF				pmax	pmax		
	comp=Z,136nm,0.8s						
E07A	**Sunnyside**	**62.15**	**51**	eP	**P**	**22 27 49.1**	**+1.1**
	comp=Z,64nm,0.9s						
I04A	**Tendick Farm,**	**62.24**	**55**	P	**P**	**22 27 48.9**	**+0.3**
	baz=305						
C09A	**Chrisman Ranch**	**62.32**	**49**	eP	**P**	**22 27 49.8**	**+0.7**
	comp=Z,58nm,0.8s						
OUL	**Oulu**	**62.37**	**336**	P	**P**	**22 27 48.8**	**-0.3**
OUL				pmax	pmax		
	comp=Z,136nm,0.8s						
D08A	**Wollman Farm,**	**62.39**	**50**	eP	**P**	**22 27 50.2**	**+0.7**
	comp=Z,40nm,0.8s						
HAWA	**Hanford**	**62.42**	**51**	eP	**P**	**22 27 50.7**	**+0.9**
	comp=Z,51nm,1.0s						
L02E	**Cave Junction**	**62.45**	**57**	P	**P**	**22 27 50.4**	**+0.4**
	baz=305						
F07A	**Phinny Hill Vi**	**62.48**	**52**	eP	**P**	**22 27 52.3**	**+2.1**
	comp=Z,108nm,0.8s						
HYB	**Hyderabad**	**62.49**	**268**	i P	**P**	**22 27 50.0**	**-0.6**
HYB				eS	**S**	**22 36 16.0**	**+0.9**
HYB	**Hyderabad**	**62.49**	**268**	eP	**P**	**22 27 50.2**	**-0.4**
HYB				IAmb	IAmb	22 27 52.2	
	comp=Z,31nm,0.6s						
I05D	**Terrebonne, OR**	**62.56**	**54**	P	**P**	**22 27 50.9**	**+0.1**
	baz=305						
HUMO	**Hull Mountain**	**62.59**	**56**	eP	**P**	**22 27 55.0**	**+4.0**
	comp=Z,22nm,1.1s						
E08A	**Dider Farm, El**	**62.63**	**51**	eP	**P**	**22 27 52.8**	**+1.6**
	comp=Z,54nm,0.9s						
NEW	**Newport**	**62.68**	**48**	eP	**P**	**22 27 51.6**	**+0.1**
	comp=Z,69nm,0.9s						
NEW	**Newport**	**62.68**	**48**	eP	**P**	**22 27 51.6**	**+0.1**
NEW				pmax	pmax		
	comp=Z,69nm,0.9s						
NEW	**Newport**	**62.68**	**48**	P	**P**	**22 27 51.6**	**+0.1**
	baz=306						
NEW	**Newport**	**62.68**	**48**	P	**P**	**22 27 51.4**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=318,slow=4.4,SNR=10						
J04D	**Umpqua Nationa**	**62.73**	**55**	P	**P**	**22 27 51.6**	**-0.5**
	baz=305						
STEI	**Steigen**	**63.04**	**341**	eP	**P**	**22 27 53.3**	**-0.2**
PINE	**Pine Mountain**	**63.11**	**54**	eP	**P**	**22 27 56.2**	**+1.6**
	comp=Z,90nm,1.0s						
E09A	**Wood Farm, Sta**	**63.13**	**50**	eP	**P**	**22 27 55.5**	**+1.0**
	comp=Z,90nm,0.9s						
L04D	**Klamath Falls**	**63.21**	**56**	P	**P**	**22 27 54.5**	**-0.7**
	baz=306						
J05D	**Fort Rock, OR**	**63.23**	**55**	P	**P**	**22 27 54.7**	**-0.7**
	baz=306						
YBH	**Yreka Blue Hor**	**63.24**	**57**	eP	**P**	**22 27 56.8**	**+1.4**
	comp=Z,36nm,0.9s						
YBH	**Yreka Blue Hor**	**63.24**	**57**	P	**P**	**22 27 55.7**	**+0.3**
	comp=Z,4.6nm,0.8s						
LOF	**Lofoten**	**63.26**	**342**	eP	**P**	**22 27 54.4**	**-0.6**
K04D	**Chiloquin, OR**	**63.30**	**56**	P	**P**	**22 27 56.2**	**+0.3**
	baz=306						
CTA	**Charters Tower**	**63.32**	**181**	P	**P**	**22 27 54.8**	**-1.0**
	comp=Z,14nm,1.0s,baz=13,slow=9.5,SNR=5.2						
CTAO	**Charters Tower**	**63.32**	**181**	eP	**P**	**22 27 55.2**	**-0.6**
	comp=Z,43nm,1.3s						
CTAO				LR	LR		
	comp=Z,600nm,20.0s						
CTAO	**Charters Tower**	**63.32**	**181**	eP	**P**	**22 27 55.2**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,43nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,600nm,20.0s						
M02C	**Callahan**	**63.35**	**57**	P	**P**	**22 27 56.5**	**+0.4**
	baz=306						
G08A	**Pilot Rock**	**63.39**	**52**	eP	**P**	**22 27 57.5**	**+1.1**
	comp=Z,23nm,1.0s						
N02D	**Trinity Center**	**63.69**	**58**	P	**P**	**22 27 57.6**	**-0.8**
	baz=306						
M04C	**Macdoel**	**63.74**	**56**	P	**P**	**22 27 58.7**	**-0.1**
	baz=306						
I07A	**Izee**	**63.78**	**53**	eP	**P**	**22 28 00.7**	**+1.7**
	comp=Z,21nm,1.0s						
WALA	**Waterton Lakes**	**63.93**	**46**	eP	**P**	**22 28 00.7**	**+0.8**
	comp=Z,65nm,0.8s						
SUF	**Sumiainen**	**63.99**	**334**	P	**P**	**22 27 59.7**	**-0.1**
SUF				pmax	pmax		
	comp=Z,171nm,0.7s						
WDC	**Whiskeytown Da**	**64.02**	**58**	eP	**P**	**22 28 02.2**	**+1.8**
	comp=Z,34nm,0.9s						
O02D	**Mt. Diablo Mer**	**64.10**	**58**	P	**P**	**22 28 01.5**	**+0.4**
	baz=306						
MDRS	**Chennai**	**64.11**	**263**	eP	**P**	**22 28 01.6**	**+0.2**
MDRS				IAmb	IAmb	22 28 04.2	
	comp=Z,69nm,1.3s						
SUMG	**Summit**	**64.13**	**2**	eP	**P**	**22 28 00.7**	**-0.3**
	comp=Z,277nm,1.3s						
SUMG	**Summit**	**64.13**	**2**	i P	**P**	**22 28 00.8**	**-0.3**
SUMG	**Summit**	**64.13**	**2**	i P	**P**	**22 28 00.8**	**-0.3**
WRAB	**Tennant Creek**	**64.18**	**193**	eP	**P**	**22 28 00.3**	**-1.3**
	comp=Z,80nm,1.1s						
WRAB	**Tennant Creek**	**64.18**	**193d**	iP	**P**	**22 28 00.2**	**-1.3**
WRAB				i *PP	**pP**	**22 28 12.5**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,77nm,1.1s						
WB2	**Warramunga Arr**	**64.19**	**193**	eP	**P**	**22 28 00.1**	**-1.5**
WR1	**Warramunga Arr**	**64.19**	**193**	eP	**P**	**22 28 00.2**	**-1.4**
	comp=Z,70nm,1.0s						
WRA	**Warramunga Arr**	**64.19**	**193**	P	**P**	**22 28 00.2**	**-1.4**
	comp=Z,47nm,1.0s,baz=10,slow=6.9,SNR=54						
WRA				PKPPKP	**P'P'df**	**22 56 51.1**	**+4.9**
	comp=Z,0.6nm,1.0s,baz=205,slow=2.8,SNR=3.1						
WRA				PKP2bc		22 56 56.5	
	comp=Z,0.5nm,0.7s,baz=192,slow=2.0,SNR=6.4						
WRA				PKP2ab		22 57 03.9	
	comp=Z,2.9nm,1.0s,baz=197,slow=2.3,SNR=7.7						
WC4	**Warramunga Arr**	**64.21**	**193**	PFAKE		22 28 10.0	+8.2
WC4				LR	LR		
	comp=Z,800nm,22.0s						
GEYT	**Alibeck**	**64.29**	**299**	P	**P**	**22 28 02.7**	**+0.3**
	comp=Z,27nm,0.6s,baz=46,slow=2.5,SNR=62						
GEYT				LR	LR	22 58 47.1	
	comp=Z,4µm,18.2s,baz=50,slow=38						
GYA0B	**ALIBECK ARRAY**	**64.29**	**299**	eP	**P**	**22 28 03.0**	**+0.6**
	comp=Z,65nm,0.9s						
GYA0B				LR	LR		
	comp=Z,4µm,20.0s						
FITZ	**Fitzroy Crossi**	**64.33**	**202**	eP	**P**	**22 28 02.2**	**-0.3**
	comp=Z,41nm,0.9s						
FITZ	**Fitzroy Crossi**	**64.33**	**202**	P	**P**	**22 28 02.2**	**-0.3**
	comp=Z,38nm,0.9s,baz=26,slow=6.7,SNR=38						
MOS	**Moscow**	**64.45**	**324**	eP	**P**	**22 28 00.8**	**-2.2**
MOS				eS	**S**	**22 36 36.8**	**-1.6**
MOS				pmax	pmax		
	comp=Z,500nm,2.4s						
MOS				pmax	pmax		
	comp=Z,180nm,1.9s						
MOS				MLR	MLR		
	comp=N,600nm,17.0s						
MOS				MLR	MLR		
	comp=Z,1µm,17.0s						
MOS				MLR	MLR		
	comp=E,700nm,16.0s						
BMO	**Blue Mountains**	**64.59**	**52**	eP	**P**	**22 28 05.2**	**+1.0**
	comp=E,42nm,1.1s						
BMO	**Blue Mountains**	**64.59**	**52**	eP	**P**	**22 28 05.3**	**+1.0**
BMO				pmax	pmax		
	comp=Z,42nm,1.1s						
MOD	**Modoc Plateau**	**64.60**	**56**	eP	**P**	**22 28 05.4**	**+1.0**
	comp=Z,37nm,0.9s						
MOR8	**Moi Rana**	**64.64**	**341**	eP	**P**	**22 28 02.8**	**-1.3**
O03E	**Paynes Creek**	**64.64**	**58**	P	**P**	**22 28 04.5**	**-0.1**
	baz=307						
PUL	**Pulkovo**	**64.65**	**330**	eP	**P**	**22 28 04.5**	**+0.3**
PUL	**Pulkovo**	**64.65**	**330c**	iP	**P**	**22 28 04.5**	**+0.3**
PUL				pmax	pmax		
	comp=Z,121nm,0.8s						
PUL	**Pulkovo**	**64.65**	**330**	eP	**P**	**22 28 04.5**	**+0.3**
PUL				IAmb	IAmb	22 28 05.5	
	comp=Z,199nm,0.6s						
KONS	**Konsvik**	**64.69**	**341**	eP	**P**	**22 28 04.3**	**-0.1**
J08A	**Circle Bar Ran**	**64.81**	**53**	eP	**P**	**22 28 07.0**	**+1.2**
	comp=Z,44nm,0.9s						
VAF	**Ylistaro**	**64.83**	**335**	P	**P**	**22 28 05.3**	**0.0**
VAF				pmax	pmax		
	comp=Z,116nm,0.9s						
FIA1	**FINESS Array S**	**64.93**	**333**	eP	**P**	**22 28 05.2**	**-0.8**
FIA0	**FINESS Array S**	**64.93**	**333**	eP	**P**	**22 28 05.5**	**-0.5**
FIA0	**FINESS Array S**	**64.93**	**333**	eP	**P**	**22 28 05.5**	**-0.5**
FINES	**FINESS Array B**	**64.93**	**333**	i P	**P**	**22 28 05.0**	**-1.0**
FINES				pmax	pmax		
	comp=Z,118nm,0.6s						
FINES	**FINESS Array B**	**64.93**	**333**	P	**P**	**22 28 05.5**	**-0.5**
	comp=Z,118nm,0.6s,baz=45,slow=6.0,SNR=424						
FINES				LR	LR	23 01 18.3	
	comp=Z,831nm,18.2s,baz=45,slow=40						
POO	**Poona**	**65.19**	**272**	eP	**P**	**22 28 07.6**	**-0.8**
POO				eP	**P**	**22 28 08.0**	**-0.4**
POO				IAmb	IAmb	22 28 10.0	
	comp=Z,67nm,1.2s						
BHJ	**Bhuj**	**65.25**	**279**	eP	**P**	**22 28 09.2**	**+0.5**
MSO	**Missoula**	**65.27**	**48**	eP	**P**	**22 28 09.4**	**+0.8**
	comp=Z,88nm,0.9s						
MSO	**Missoula**	**65.27**	**48**	P	**P**	**22 28 08.5**	**-0.1**
	baz=308						
ORV	**Oroville**	**65.27**	**58**	eP	**P**	**22 28 08.4**	**-0.2**
	comp=Z,36nm,0.9s						
ORV	**Oroville**	**65.27**	**58**	eP	**P**	**22 28 08.4**	**-0.2**
ORV				pmax	pmax		
	comp=Z,36nm,0.9s						
WVOR	**Wild Horse Val**	**65.27**	**54**	eP	**P**	**22 28 10.4**	**+1.7**
	comp=Z,42nm,1.0s						
WVOR	**Wild Horse Val**	**65.27**	**54**	eP	**P**	**22 28 10.4**	**+1.7**
WVOR				pmax	pmax		
	comp=Z,42nm,1.0s						
OBN	**Obninsk**	**65.32**	**324**	eP	**P**	**22 28 08.8**	**+0.3**
	comp=Z,171nm,1.5s						
OBN				LR	LR		
	comp=Z,2µm,18.0s						
OBN	**Obninsk**	**65.32**	**324**	eP	**P**	**22 28 08.2**	**-0.4**
OBN	**Obninsk**	**65.32**	**324c**	iP	**P**	**22 28 08.2**	**-0.4**
OBN				i		22 28 19.1	
OBN				pmax	pmax		
	comp=Z,50nm,1.2s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
VRH	**Novokhopyorsk**	**65.49**	**318**	eP	**P**	**22 28 09.1**	**-0.7**
VRH				e*PP	**pP**	**22 28 19.5**	**-2.6**
VRH				pmax	pmax		
	comp=Z,110nm,0.7s						
VRH				pmax	pmax		
	comp=Z,310nm,1.9s						
VRH				MLR	MLR		
	comp=Z,2µm,14.0s						
BEKR	**Beckworth**	**65.78**	**57**	eP	**P**	**22 28 12.4**	**+0.2**
	comp=Z,62nm,0.9s						
LPSR	**Galich'ya Gora**	**65.91**	**321**	eP	**P**	**22 28 12.4**	**-0.1**
LPSR				e*PP	**pP**	**22 28 23.3**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,370nm,2.3s						
LPSR				pmax	pmax		
	comp=Z,80nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,2µm,17.0s						
AFDM	**Forest Hills D**	**65.96**	**59**	eP	**P**	**22 28 15.3**	**+2.2**
	comp=Z,30nm,1.1s						
SCO	**Scoresbysund**	**65.99**	**356**	eP	**P**	**22 28 12.9**	**+0.2**
	comp=Z,47nm,0.8s						
SCO				LR	LR		
	comp=Z,1µm,21.0s						
SCO	**Scoresbysund**	**65.99**	**356⇑**	iP	**P**	**22 28 13.1**	**+0.4**
	comp=Z,44nm,0.8s						
SCO	**Scoresbysund**	**65.99**	**356⇑**	iP	**P**	**22 28 13.1**	**+0.4**
SCO				pmax	pmax		
	comp=Z,44nm,0.8s						
FFC	**Flin Flon**	**66.03**	**36**	eP	**P**	**22 28 13.8**	**+0.5**
	comp=Z,119nm,0.8s						
FFC				LR	LR		
	comp=Z,600nm,19.0s						
FFC	**Flin Flon**	**66.03**	**36**	eP	**P**	**22 28 13.5**	**+0.2**
FFC	**Flin Flon**	**66.03**	**36**	i P	**P**	**22 28 13.5**	**+0.2**
FCC	**Fort Churchill**	**66.34**	**30**	eP	**P**	**22 28 15.1**	**0.0**
	comp=Z,62nm,1.0s						
FCC				LR	LR		
	comp=Z,700nm,20.0s						
FCC	**Fort Churchill**	**66.34**	**30**	eP	**P**	**22 28 15.1**	**0.0**
FCC				pmax	pmax		
	comp=Z,62nm,1.0s						
FCC				MLR	MLR		
	comp=Z,700nm,20.0s						
VORR	**Voronezh**	**66.39**	**320**	eP	**P**	**22 28 14.0**	**-1.6**
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
RUBR	**Rubicon Trail**	**66.40**	**58**	eP	**P**	**22 28 19.4**	**+3.1**
	comp=Z,68nm,0.8s						
HRY	**Holter Researc**	**66.48**	**47**	eP	**P**	**22 28 17.1**	**+0.7**
PAHR	**Pah Rah Range**	**66.48**	**57**	eP	**P**	**22 28 16.9**	**+0.3**
	comp=Z,61nm,1.0s						
VCNR	**Virginia City**	**66.57**	**58**	eP	**P**	**22 28 19.6**	**+2.4**
	comp=Z,52nm,1.0s						
NSS	**Namsos**	**66.58**	**340**	eP	**P**	**22 28 16.6**	**0.0**
VSR	**Storozhevoye**	**66.71**	**319**	eP	**P**	**22 28 16.9**	**-0.7**
VSR				e*PP	**pP**	**22 28 28.4**	**-1.6**
VSR				pmax	pmax		
	comp=Z,90nm,0.6s						
VSR				pmax	pmax		
	comp=Z,390nm,2.0s						
VSR				MLR	MLR		
	comp=Z,3µm,19.0s						
PNTR	**Pine Nut**	**66.72**	**58**	eP	**P**	**22 28 20.1**	**+1.8**
	comp=Z,67nm,0.9s						
EGMT	**Eagleton**	**66.74**	**45**	eP	**P**	**22 28 18.4**	**+0.4**
	comp=Z,153nm,0.8s						
EGMT				LR	LR		
	comp=Z,702nm,19.0s						
EGMT	**Eagleton**	**66.74**	**45**	P	**P**	**22 28 18.2**	**+0.2**
	baz=310						

ILULI	**Ilulissat**	**66.79**	**7**	eP	**P**	**22 28 16.7**	**-1.1**
	comp=Z,25nm,0.8s						
ILULI	**Ilulissat**	**66.79**	**7**	i P	**P**	**22 28 17.4**	**-0.4**
	comp=Z,26nm,0.8s						
ILULI	**Ilulissat**	**66.79**	**7**	i P	**P**	**22 28 17.4**	**-0.4**
VSU	**Vasula**	**66.88**	**330**	ceP	**P**	**22 28 18.7**	**+0.1**
VSU				pmax	pmax		
	comp=Z,605nm,1.7s						
VSU	**Vasula**	**66.88**	**330**	eP	**P**	**22 28 18.0**	**-0.6**
VSU				IAmb	IAmb	22 28 19.5	
	comp=Z,279nm,0.6s						
CMB	**Columbia Colle**	**66.88**	**59**	eP	**P**	**22 28 19.9**	**+0.8**
	comp=Z,42nm,0.9s						
CMB	**Columbia Colle**	**66.88**	**59**	eP	**P**	**22 28 19.9**	**+0.8**
CMB				pmax	pmax		
	comp=Z,42nm,0.9s						
DLMT	**Dillon**	**66.91**	**49**	eP	**P**	**22 28 20.8**	**+1.6**
	comp=Z,71nm,0.9s						
YERR	**Yerington**	**67.01**	**58**	eP	**P**	**22 28 21.0**	**+1.0**
	comp=Z,79nm,0.9s						
HLID	**Hailey**	**67.03**	**51**	eP	**P**	**22 28 20.6**	**+0.6**
	comp=Z,37nm,1.0s						
HLID	**Hailey**	**67.03**	**51**	P	**P**	**22 28 20.6**	**+0.6**
	baz=309						
MCMT	**McKenzie Canyo**	**67.11**	**49**	eP	**P**	**22 28 21.3**	**+0.6**
GOA	**Goa**	**67.18**	**270**	eP	**P**	**22 28 19.0**	**-2.1**
GOA				IAmb	IAmb	22 28 22.9	
	comp=Z,79nm,1.2s						
WAKR	**Walker**	**67.18**	**58**	eP	**P**	**22 28 23.0**	**+1.9**
	comp=Z,46nm,0.9s						
BOZ	**Bozeman (W)**	**67.29**	**48**	eP	**P**	**22 28 22.6**	**+1.0**
	comp=Z,117nm,0.7s						
BOZ	**Bozeman (W)**	**67.29**	**48**	eP	**P**	**22 28 22.6**	**+1.0**
BOZ				pmax	pmax		
	comp=Z,117nm,0.7s						
BOZ	**Bozeman (W)**	**67.29**	**48**	P	**P**	**22 28 22.3**	**+0.7**
	baz=310						
BMN	**Battle Mountai**	**67.34**	**55**	eP	**P**	**22 28 23.1**	**+1.1**
	comp=Z,45nm,0.8s						
BMN	**Battle Mountai**	**67.34**	**55**	eP	**P**	**22 28 23.2**	**+1.1**
BMN				pmax	pmax		
	comp=Z,45nm,0.8s						
MAK	**Makhachkala**	**67.65**	**308**	eP	**P**	**22 28 22.1**	**-1.6**
MAK				e*PP	**pP**	**22 28 36.1**	**0.0**
MAK				e*SP	**sP**	**22 28 42.6**	**+1.6**
MAK				e		22 30 51.3	
MAK				eS	**S**	**22 37 16.9**	**-0.8**
MAK				e*SS	**sS**	**22 37 40.5**	**+2.2**
MAK				pmax	pmax		
	comp=Z,77nm,0.8s						
MAK				MLR	MLR		
	comp=Z,2µm,16.0s						
KVN	**Kaiserville**	**67.67**	**57**	eP	**P**	**22 28 25.2**	**+1.0**
	comp=Z,98nm,1.0s						
RYN	**Ryan**	**67.67**	**58**	eP	**P**	**22 28 25.3**	**+1.1**
	comp=Z,51nm,0.9s						
PALK	**Pallekele**	**67.72**	**258**	eP	**P**	**22 28 25.3**	**+0.6**
	comp=Z,97nm,1.3s						
PALK				LR	LR		
	comp=Z,400nm,20.0s						
PALK	**Pallekele**	**67.72**	**258**	i P	**P**	**22 28 24.4**	**-0.3**
	SNR=9.5						
PALK	**Pallekele**	**67.72**	**258**	i P	**P**	**22 28 25.4**	**+0.7**
PALK	**Pallekele**	**67.72**	**258**	P	**P**	**22 28 24.8**	**+0.2**
	SNR=8.2						
PALK				P	**P**	**22 28 24.8**	**+0.2**
	SNR=8.2						
PALK	**Pallekele**	**67.72**	**258**	P	**P**	**22 28 24.8**	**+0.2**
	comp=Z,20nm,1.1s,baz=116,slow=1.5,SNR=10						
DZM	**Mont Dzumac**	**67.75**	**160**	eP	**P**	**22 28 25.0**	**+0.5**
	comp=Z,136nm,1.3s						
DZM				eS	**S**	**22 37 23.2**	**+4.0**
	comp=Z,377nm,26.0s						
DZM	**Mont Dzumac**	**67.75**	**160**	eLR	LR	22 48 58.7	
	comp=Z,2µm,24.4s						
DZM	**Mont Dzumac**	**67.75**	**160**	eP	**P**	**22 28 25.9**	**+1.4**
	comp=Z,72nm,1.2s						
QLMT	**Earthquake Lak**	**67.89**	**49**	eP	**P**	**22 28 26.6**	**+1.1**
QLMT				ePcP	**PcP**	**22 28 57.3**	**+5.5**
AS01	**Alice Springs**	**67.90**	**193**	eP	**P**	**22 28 24.1**	**-1.3**
AS31	**Alice Springs**	**67.91**	**193**	eP	**P**	**22 28 25.4**	**-0.1**
	comp=Z,11nm,0.8s						
ASAR	**Alice Springs**	**67.91**	**193**	eP	**P**	**22 28 25.0**	**-0.5**
ASAR	**Alice Springs**	**67.91**	**193**	P	**P**	**22 28 25.0**	**-0.5**
ASAR	**Alice Springs**	**67.91**	**193**	P	**P**	**22 28 24.9**	**-0.5**
	comp=Z,39nm,0.8s,baz=13,slow=5.9,SNR=108						
ASAR				PKP2bc		22 56 46.1	
	comp=Z,0.9nm,1.1s,baz=212,slow=1.4,SNR=4.8						
NV01	**Mina Array Sit**	**67.93**	**58**	eP	**P**	**22 28 26.4**	**+0.5**
NVAR	**Mina Array Bea**	**67.93**	**58**	P	**P**	**22 28 26.6**	**+0.7**
	comp=Z,6.8nm,0.7s,baz=298,slow=7.1,SNR=37						
NVAR				PKP2bc		22 56 46.7	
	comp=Z,0.2nm,0.5s,baz=123,slow=3.3,SNR=2.7						
NVAR				LR	LR	22 56 49.9	
	comp=Z,144nm,19.8s,baz=314,slow=35						
NV11	**Mina Array Sit**	**68.02**	**58**	eP	**P**	**22 28 27.3**	**+0.9**
	comp=Z,3.0nm,0.9s						
YHB	**Horse Butte**	**68.07**	**49**	eP	**P**	**22 28 28.3**	**+1.6**
	comp=Z,85nm,0.8s						
TBLU	**Trondheim**	**68.07**	**340**	eP	**P**	**22 28 25.2**	**-0.8**
MLAC	**Mammoth, Mammo**	**68.10**	**59**	P	**P**	**22 28 27.5**	**+0.5**
	baz=309						
YHH	**Holmes Hill**	**68.23**	**48**	eP	**P**	**22 28 28.8**	**+1.0**
	comp=Z,54nm,0.8s						
YMR	**Madison River**	**68.24**	**49**	eP	**P**	**22 28 29.1**	**+1.4**
	comp=Z,70nm,0.7s						
ELK	**Elko**	**68.32**	**54**	eP	**P**	**22 28 29.3**	**+0.9**
	comp=Z,12nm,0.7s						
ELK	**Elko**	**68.32**	**54**	P	**P**	**22 28 28.9**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=330,slow=8.0,SNR=9.6						
YNR	**Norris Junctio**	**68.37**	**48**	eP	**P**	**22 28 30.5**	**+1.9**
	comp=Z,43nm,0.9s						
YFT	**Old Faithful**	**68.45**	**49**	eP	**P**	**22 28 31.7**	**+2.6**
	comp=Z,59nm,0.8s						
GROC	**Groznyy**	**68.46**	**309**	eP	**P**	**22 28 25.9**	**-3.0**
GROC				e*SP	**pP**	**22 28 40.3**	**-1.0**
GROC				e		22 28 50.7	
GROC				eS	**S**	**22 37 29.3**	**+1.9**
GROC				pmax	pmax		
	comp=Z,57nm,1.5s						
VOG	**Valley Oaks Go**	**68.57**	**60**	P	**P**	**22 28 29.8**	**+0.1**
	baz=309						
YPP	**Pitchstone Pla**	**68.59**	**49**	eP	**P**	**22 28 32.9**	**+2.9**
	comp=Z,27nm,0.8s						
LKWY	**Lake**	**68.62**	**48**	PFAKE		22 28 40.0	+10
LKWY				LR	LR		
	comp=Z,898nm,19.0s						
H17A	**Grant Village**	**68.63**	**49**	eP	**P**	**22 28 32.5**	**+2.2**
	comp=Z,90nm,0.9s						
H17A	**Grant Village**	**68.63**	**49**	P	**P**	**22 28 31.0**	**+0.7**
	baz=310						
EIDS	**Eidsvold**	**68.69**	**176**	eP	**P**	**22 28 31.3**	**+1.1**
	comp=Z,33nm,1.1s						
EIDS				LR	LR		
	comp=Z,700nm,20.0s						
IMW	**Indian Meadow**	**68.76**	**49**	eP	**P**	**22 28 32.4**	**+1.3**
	comp=Z,83nm,0.9s						
IMW				LR	LR		
	comp=Z,400nm,20.0s						
FLWY	**Flagg Ranch**	**68.77**	**49**	eP	**P**	**22 28 32.4**	**+1.4**
	comp=Z,50nm,0.8s						
GOF	**Gofitskoye**	**68.78**	**312**	eP	**P**	**22 28 31.7**	**+0.9**
GOF				eS	**S**	**22 37 35.3**	**+4.2**
GOF				pmax	pmax		
	comp=Z,230nm,1.0s						
GOF				smax	smax		
	comp=E,60nm,1.0s						
SMMC	**Simmler**	**68.81**	**61**	P	**P**	**22 28 31.5**	**+0.3**
	baz=309						
TIN	**Tinemaha, Big**	**68.83**	**59**	P	**P**	**22 28 30.8**	**-0.6**
	baz=309						
RLMT	**Red Lodge**	**68.87**	**47**	eP	**P**	**22 28 32.8**	**+1.2**
	comp=E,96nm,1.4s						
RLMT	**Red Lodge**	**68.87**	**47**	P	**P**	**22 28 32.2**	**+0.6**
	baz=311						
FXWY	**Fox Creek**	**68.88**	**50**	eP	**P**	**22 28 33.0**	**+1.2**
	comp=E,50nm,0.8s						
MOOW	**Moose Ponds**	**68.96**	**49**	eP	**P**	**22 28 33.1**	**+0.9**
	comp=E,65nm,0.9s						
SFJD	**Kangerlussuaq**	**68.99**	**7**	eP	**P**	**22 28 31.6**	**-0.1**
	comp=E,32nm,0.8s						
SFJD	**Kangerlussuaq**	**68.99**	**7⇑**	iP	**P**	**22 28 31.5**	**-0.2**
	comp=E,31nm,0.8s						
SFJD	**Kangerlussuaq**	**68.99**	**7**	eP	**P**	**22 28 31.6**	**-0.1**
SFJD				pmax	pmax		
	comp=Z,32nm,0.8s						
SFJD	**Kangerlussuaq**	**68.99**	**7**	LR	LR	22 59 13.0	
	comp=Z,925nm,20.6s,baz=340,slow=36						
MBWA	**Marble Bar**	**69.01**	**207**	eP	**P**	**22 28 32.0**	**-0.3**
	comp=Z,64nm,1.1s						
TPAW	**Teton Pass**	**69.01**	**50**	eP	**P**	**22 28 32.9**	**+0.2**
	comp=Z,105nm,0.9s						
IZAR	**Zarasai**	**69.06**	**329**	eP	**P**	**22 28 32.7**	**+0.4**
IZAR				IAmb	IAmb	22 28 34.0	
	comp=Z,43nm,0.6s						
VES	**Vestal, Richgr**	**69.06**	**60**	P	**P**	**22 28 33.2**	**+0.5**
	baz=309						
SLIT	**Slitere, Latvi**	**69.07**	**332**	eP	**P**	**22 28 30.9**	**-1.4**
SLIT				IAmb	IAmb	22 28 32.8	
	comp=Z,532nm,0.8s						
HVU	**Hansel Valley**	**69.09**	**52**	eP	**P**	**22 28 34.1**	**+1.1**
	comp=Z,39nm,0.8s						
HVU	**Hansel Valley**	**69.09**	**52**	eP	**P**	**22 28 34.1**	**+1.1**
HVU				pmax	pmax		
	comp=Z,39nm,0.8s						
LOHW	**Long Hollow**	**69.13**	**49**	eP	**P**	**22 28 34.4**	**+1.1**
	comp=Z,41nm,0.8s						
SNOW	**Snow King Moun**	**69.14**	**50**	eP	**P**	**22 28 35.1**	**+1.7**
	comp=Z,60nm,0.8s						
REDW	**Red Top Meadow**	**69.15**	**50**	eP	**P**	**22 28 34.1**	**+0.7**
	comp=Z,67nm,0.8s						
IDID	**Didziasalis**	**69.19**	**328**	eP	**P**	**22 28 33.5**	**+0.4**
IDID				IAmb	IAmb	22 28 35.0	
	comp=Z,52nm,0.7s						
PKM	**Mcpherson Peak**	**69.20**	**61**	P	**P**	**22 28 34.1**	**+0.3**
	baz=309						
ISAL	**Salakas**	**69.24**	**328**	eP	**P**	**22 28 33.9**	**+0.5**
ISAL				IAmb	IAmb	22 28 35.4	
	comp=Z,61nm,0.8s						
DGMT	**Dagmar**	**69.24**	**42**	eP	**P**	**22 28 34.1**	**+0.5**
	comp=Z,234nm,0.6s						
DGMT	**Dagmar**	**69.24**	**42**	P	**P**	**22 28 33.8**	**+0.1**
	baz=313						
MOL	**Molde**	**69.30**	**341**	eP	**P**	**22 28 34.2**	**+0.5**
CWC	**Cottonwood Cre**	**69.31**	**59**	P	**P**	**22 28 34.5**	**0.0**
	baz=309						
MICGM	**Minsk**	**69.34**	**327⇑**	eP	**P**	**22 28 35.0**	**+0.9**
MICGM				PM		22 28 36.0	
	comp=Z,0.6nm,1.2s						
MICGM				eLR	LR	22 56 52.0	
MICGM				LRM	MLR	23 00 46.0	
	comp=Z,2.8nm,20.0s						
MNK	**Minsk**	**69.34**	**327⇑**	eP	**P**	**22 28 35.0**	**+0.9**
MNK				pmax	pmax		
	comp=Z,580nm,1.2s						
IIGN	**Ignalina**	**69.36**	**328**	eP	**P**	**22 28 34.7**	**+0.5**
IIGN				IAmb	IAmb	22 28 36.1	
	comp=Z,96nm,0.6s						
DOMB	**Dombas**	**69.39**	**340**	eP	**P**	**22 28 34.6**	**+0.2**
GRAC	**Grapevine Rang**	**69.41**	**58**	P	**P**	**22 28 34.8**	**-0.1**
	baz=310						
LAO	**LASA Array**	**69.42**	**45**	eP	**P**	**22 28 36.1**	**+1.2**
	comp=Z,127nm,0.8s						
LAO	**LASA Array**	**69.42**	**45**	P	**P**	**22 28 34.9**	**0.0**
	baz=312						
FRB	**Frobisher Bay**	**69.46**	**16**	P	**P**	**22 28 34.2**	**-0.4**
	comp=Z,22nm,0.3s,baz=326,slow=6.9,SNR=12						
FRB				LR	LR	23 03 41.2	
	comp=Z,654nm,18.7s,baz=347,slow=40						
NACGM	**Naroch**	**69.48**	**328**	eP	**P**	**22 28 33.0**	**-1.9**
NACGM				PM		22 28 35.0	
	comp=Z,0.6nm,0.8s						
NACGM				eLQ	LQ	22 56 26.0	
NACGM				eLR	LR	22 59 16.0	
BGU	**Big Grassy Mou**	**69.49**	**53**	eP	**P**	**22 28 36.9**	**+1.4**
	comp=Z,21nm,1.1s						
NCK	**Nalchik**	**69.50**	**311⇑**	eP	**P**	**22 28 36.1**	**+0.8**
NCK				pmax	pmax		
	comp=Z,96nm,1.3s						
NC303	**NORSAR Array S**	**69.50**	**339**	eP	**P**	**22 28 35.2**	**+0.2**
NC405	**NORSAR Array S**	**69.50**	**339**	eP	**P**	**22 28 35.2**	**+0.2**
ISA	**Isabella, Lake**	**69.56**	**60**	eP	**P**	**22 28 39.0**	**+3.1**
	comp=Z,18nm,0.9s						
ISA	**Isabella, Lake**	**69.56**	**60**	P	**P**	**22 28 35.9**	**0.0**
	baz=310						
TRD	**Trivandrum**	**69.56**	**262**	eP	**P**	**22 28 35.2**	**-0.8**
SPUT	**South Promonto**	**69.58**	**52**	eP	**P**	**22 28 37.3**	**+1.2**
	comp=Z,50nm,1.0s						
NC204	**NORSAR Array S**	**69.61**	**339**	eP	**P**	**22 28 36.0**	**+0.3**
R11A	**Troy Canyon, C**	**69.63**	**56**	eP	**P**	**22 28 36.8**	**+0.3**
	comp=Z,44nm,0.9s						
R11A	**Troy Canyon, C**	**69.63**	**56**	P	**P**	**22 28 36.8**	**+0.3**
	baz=310						
NB201	**NORSAR Array S**	**69.67**	**339**	eP	**P**	**22 28 35.9**	**-0.2**
ARVC	**Arvin**	**69.67**	**61**	P	**P**	**22 28 36.1**	**-0.4**
	baz=310						
KIV	**Kislovodsk**	**69.69**	**312**	eP	**P**	**22 28 37.5**	**+0.9**
KIV	**Kislovodsk**	**69.69**	**312**	eP	**P**	**22 28 37.7**	**+1.1**
	comp=Z,126nm,0.8s						
KIV				LR	LR		
	comp=Z,4µm,20.0s						
KIV	**Kislovodsk**	**69.69**	**312**	eP	**P**	**22 28 37.4**	**+0.9**
KIV	**Kislovodsk**	**69.69**	**312**	i P	**P**	**22 28 37.8**	**+1.1**
	SNR=45						
KIV	**Kislovodsk**	**69.69**	**312**	i P	**P**	**22 28 37.5**	**+0.9**
KIV				pmax	pmax		
	comp=Z,126nm,1.0s						
KIV	**Kislovodsk**	**69.69**	**312**	P	**P**	**22 28 37.7**	**+1.1**
	SNR=30						
KIV				P	**P**	**22 28 37.7**	**+1.1**
	SNR=30						
NB2	**NORSAR Subarra**	**69.69**	**339**	P	**P**	**22 28 36.1**	**-0.1**
	comp=Z,156nm,0.8s,baz=32,slow=6.5						
NB2	**NORSAR Subarra**	**69.69**	**339**	P	**P**	**22 28 36.1**	**-0.1**
	baz=32,slow=6.5						
NB200	**NORSAR Array S**	**69.69**	**339**	eP	**P**	**22 28 36.6**	**+0.3**
NOA	**NORSAR Array B**	**69.69**	**339**	P	**P**	**22 28 36.6**	**+0.3**
	comp=Z,114nm,0.7s,baz=33,slow=6.2,SNR=471						
NOA				LR	LR	23 03 54.0	
	comp=Z,2µm,18.7s,baz=45,slow=40						
DAC	**Darwin (Calif)**	**69.72**	**59**	eP	**P**	**22 28 37.7**	**+0.7**
	comp=Z,24nm,0.9s						
DAC	**Darwin (Calif)**	**69.72**	**59**	eP	**P**	**22 28 37.7**	**+0.7**
DAC				pmax	pmax		
	comp=Z,24nm,0.9s						
KBZ	**Khabaz**	**69.73**	**311**	P	**P**	**22 28 37.8**	**+1.2**
	comp=Z,39nm,0.8s,baz=67,slow=3.2,SNR=77						
KBZ				LR	LR	23 04 06.7	
	comp=Z,3µm,19.3s,baz=34,slow=40						
AKN	**Aaknes**	**69.77**	**341**	eP	**P**	**22 28 37.4**	**+0.7**
ZEI	**Tsey**	**69.79**	**310**	eP	**P**	**22 28 34.3**	**-3.1**
ZEI				pmax	pmax		
	comp=Z,34nm,0.6s						
NBO00	**NORSAR Array S**	**69.82**	**339**	eP	**P**	**22 28 37.2**	**+0.2**
NC602	**NORSAR Array S**	**69.86**	**338**	eP	**P**	**22 28 37.0**	**-0.2**
NC602	**NORSAR Array S**	**69.86**	**338**	eP	**P**	**22 28 37.0**	**-0.2**
NORES	**NORESS Array B**	**69.86**	**338**	P	**P**	**22 28 37.0**	**-0.2**
SCZ2	**Santa Cruz Isl**	**69.87**	**62**	P	**P**	**22 28 37.5**	**-0.3**
	baz=310						
HWUT	**Hardware Ranch**	**69.89**	**51**	eP	**P**	**22 28 38.9**	**+0.9**
	comp=Z,30nm,0.8s						
MPMC	**Manual Prospec**	**69.92**	**59**	P	**P**	**22 28 38.1**	**-0.2**
	baz=310						
NAO01	**NORSAR Array S**	**69.95**	**339**	eP	**P**	**22 28 37.6**	**-0.1**
BTNK	**Botanikuri**	**70.01**	**309**	i P	**P**	**22 28 40.8**	**+2.3**
BTNK				IAML_P			
	comp=Z,19nm,0.2s						
TBLG	**Delisi**	**70.01**	**309**	eP	**P**	**22 28 40.0**	**+1.5**
TBLG	**Delisi**	**70.01**	**309**	eP	**P**	**22 28 40.0**	**+1.5**
	comp=Z,88nm,0.7s						
TBLG	**Delisi**	**70.01**	**309**	i P	**P**	**22 28 40.3**	**+1.8**
TBLG				IAML_P			
	comp=Z,2µm,0.6s						
FURC	**Furnace Creek,**	**70.05**	**58**	P	**P**	**22 28 39.3**	**+0.6**
	baz=310						
OSI	**Osito Audit: C**	**70.06**	**61**	P	**P**	**22 28 39.4**	**+0.4**
	baz=310						
DUG	**Dugway, Tooele**	**70.09**	**53**	eP	**P**	**22 28 39.9**	**+0.7**
	comp=Z,56nm,0.8s						
DUG	**Dugway, Tooele**	**70.09**	**53**	eP	**P**	**22 28 39.9**	**+0.7**
DUG				pmax	pmax		
	comp=Z,56nm,0.8s						
DUG	**Dugway, Tooele**	**70.09**	**53**	P	**P**	**22 28 39.7**	**+0.5**
	baz=311						
TPNV	**Topopah Spring**	**70.12**	**58**	eP	**P**	**22 28 40.0**	**+0.5**
	comp=Z,86nm,1.0s						
TPNV	**Topopah Spring**	**70.12**	**58**	eP	**P**	**22 28 40.0**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,86nm,1.0s						
TPNV	**Topopah Spring**	**70.12**	**58**	P	**P**	**22 28 39.8**	**+0.3**
	baz=310						
NEY	**Neytrino**	**70.14**	**311**	deP	**P**	**22 28 41.4**	**+1.9**
NEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BLG	**Laguna Peak, P**	**70.17**	**62**	P	**P**	**22 28 39.5**	**-0.1**
	baz=310						
LRMC	**Laurel Mtn Rad**	**70.17**	**60**	P	**P**	**22 28 40.1**	**+0.3**
	baz=310						
BW06	**Boulder Array**	**70.26**	**49**	eP	**P**	**22 28 40.4**	**+0.1**
	comp=Z,53nm,0.8s						
BW06	**Boulder Array**	**70.26**	**49**	P	**P**	**22 28 40.1**	**-0.2**
	baz=312						
PD31	**Pinedale Array**	**70.26**	**49**	eP	**P**	**22 28 40.4**	**+0.1**
PDAR	**Pinedale Array**	**70.26**	**49**	eP	**P**	**22 28 39.4**	**-0.9**
PDAR	**Pinedale Array**	**70.26**	**49**	P	**P**	**22 28 40.3**	**0.0**
	comp=Z,3.9nm,0.6s,baz=288,slow=1.4,SNR=25						
PDAR				PKP2bc		22 56 39.2	
	comp=Z,0.3nm,0.8s,baz=76,slow=4.7,SNR=4.2						
PDAR				PKPPKP	**P'P'df**	**22 56 44.3**	**-2.4**
	comp=Z,0.4nm,1.0s,baz=64,slow=5.1,SNR=2.9						
TCUT	**Toone Canyon**	**70.30**	**52**	PFAKE		22 28 50.0	+9.4
TCUT				LR	LR		
	comp=Z,700nm,18.0s						
EDW2	**Edwards Air Fo**	**70.36**	**60**	P	**P**	**22 28 40.6**	**-0.2**
	baz=310						
SNCC	**San Nicolas Is**	**70.42**	**63**	P	**P**	**22 28 41.1**	**0.0**
	baz=310						
PBUR	**Paburg**	**70.44**	**331**	eP	**P**	**22 28 40.8**	**0.0**
PBUR				IAmb	IAmb	22 28 41.5	
	comp=Z,132nm,0.7s						
DECC	**Green Verdugo**	**70.54**	**61**	P	**P**	**22 28 41.6**	**-0.2**
	baz=310						
PSUT	**Pine Spring**	**70.55**	**55**	eP	**P**	**22 28 42.6**	**+0.5**
	comp=Z,26nm,1.0s						
PSUT				LR	LR		
	comp=Z,400nm,18.0s						
JLU	**Jordanelle**	**70.61**	**52**	eP	**P**	**22 28 43.7**	**+1.2**
	comp=Z,57nm,1.2s						
NLU	**North Lily Min**	**70.68**	**53**	eP	**P**	**22 28 43.8**	**+0.9**
	comp=Z,40nm,0.8s						
FOO	**Floro**	**70.73**	**342**	eP	**P**	**22 28 42.9**	**+0.4**
OSL	**Oslo**	**70.76**	**338**	eP	**P**	**22 28 43.5**	**+0.8**
SHOC	**Shoshone, Teco**	**70.78**	**59**	P	**P**	**22 28 43.3**	**0.0**
	baz=310						
GSC	**Goldstone, Bar**	**70.83**	**59**	P	**P**	**22 28 43.4**	**-0.4**
	baz=310						
HYA	**Hoyanger**	**70.85**	**341**	eP	**P**	**22 28 43.8**	**+0.7**
MPU	**Maple Canyon**	**70.89**	**53**	eP	**P**	**22 28 45.1**	**+1.0**
	comp=Z,45nm,0.7s						
BGD	**Bogdanovka**	**70.96**	**309**	eP	**P**	**22 28 46.8**	**+2.2**
BFSC	**Mount Baldy Ra**	**70.98**	**61**	P	**P**	**22 28 44.0**	**-0.7**
	baz=310						
RRX	**Edison Barstow**	**70.99**	**60**	P	**P**	**22 28 43.7**	**-0.9**
	baz=310						
CIS	**Catalina Islan**	**71.03**	**62**	P	**P**	**22 28 45.0**	**+0.1**
	baz=310						
GNI	**Garni**	**71.05**	**308**	eP	**P**	**22 28 46.4**	**+1.4**
GNI	**Garni**	**71.05**	**308**	eP	**P**	**22 28 47.2**	**+2.1**
	comp=Z,133nm,1.3s						
GNI				LR	LR		
	comp=Z,1µm,20.0s						
GNI	**Garni**	**71.05**	**308**	i P	**P**	**22 28 47.0**	**+2.0**
	SNR=17						
GNI	**Garni**	**71.05**	**308**	ceP	**P**	**22 28 46.4**	**+1.4**
GNI				pmax	pmax		
	comp=Z,208nm,1.4s						
GNI	**Garni**	**71.05**	**308**	P	**P**	**22 28 47.0**	**+2.0**
	SNR=20						
GNI				P	**P**	**22 28 47.0**	**+2.0**
	SNR=20						
SHPR	**Sheep Range**	**71.08**	**57**	eP	**P**	**22 28 46.7**	**+1.4**
	comp=Z,52nm,1.0s						
ANGG	**Ammassalik, Gr**	**71.13**	**2**	eP	**P**	**22 28 44.5**	**-0.3**
	comp=Z,42nm,0.8s						
SCI2	**San Clemente I**	**71.22**	**62**	P	**P**	**22 28 45.6**	**-0.4**
	baz=310						
SUE	**Sulen**	**71.28**	**342**	eP	**P**	**22 28 46.6**	**+0.8**
TUQ	**Turquoise Moun**	**71.30**	**59**	P	**P**	**22 28 46.4**	**-0.2**
	baz=311						
KONO	**Kongsberg**	**71.30**	**339**	eP	**P**	**22 28 46.2**	**+0.3**
	comp=Z,53nm,0.9s						
KONO				LR	LR		
	comp=Z,2µm,22.0s						
KONO	**Kongsberg**	**71.30**	**339**	ceP	**P**	**22 28 46.2**	**+0.3**
KONO				pmax	pmax		
	comp=Z,117nm,1.7s						
KONO	**Kongsberg**	**71.30**	**339**	eP	**P**	**22 28 46.3**	**+0.3**
EAK	**Akyaka**	**71.34**	**309**	i P	**P**	**22 28 49.1**	**+2.3**
EAK				IAML_P			
	comp=Z,506nm,0.3s						
BBRC	**Big Bear Solar**	**71.43**	**60**	P	**P**	**22 28 46.8**	**-0.8**
	baz=310						
HEC	**Hector,Ludlow**	**71.43**	**59**	P	**P**	**22 28 46.9**	**-0.4**
	baz=311						
TASB	**TASBURUN-IGDIR**	**71.45**	**308**	eP	**P**	**22 28 47.6**	**+0.3**
CCUT	**Cedar City**	**71.49**	**56**	eP	**P**	**22 28 49.0**	**+1.2**
	comp=Z,30nm,0.9s						
SUW	**Suwalki**	**71.53**	**329**	eP	**P**	**22 28 47.4**	**-0.1**
SUW	**Suwalki**	**71.53**	**329**	eP	**P**	**22 28 46.4**	**-1.1**
	comp=Z,320nm,1.3s						
SUW				LR	LR		
	comp=Z,2µm,21.0s						
SUW	**Suwalki**	**71.53**	**329⇑**	eP	**P**	**22 28 47.4**	**-0.1**
SOC	**Sochi**	**71.54**	**313**	c iP	**P**	**22 28 47.7**	**0.0**
SOC				e*PP	**pP**	**22 28 59.9**	**-0.3**
SOC				e*SP	**sP**	**22 29 05.6**	**+0.6**
SOC				ePPP	PPP	22 33 07.5	
SOC				eS	**S**	**22 38 02.2**	**-1.2**
SOC				e*SS	sS	22 38 32.2	+8.0
SOC				e		22 38 41.9	
SOC				eSS	**SS**	**22 42 36.6**	**-1.5**
SOC				eSSS	SSS	22 45 49.5	
SOC				pmax	pmax		
	comp=Z,56nm,0.6s						
SOC				MLR	MLR		
	comp=Z,3µm,17.0s						
MSU	**Marysvale**	**71.56**	**54**	eP	**P**	**22 28 49.8**	**+1.6**
AKASG	**Malin Array Be**	**71.58**	**324**	i P	**P**	**22 28 47.9**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,64nm,0.6s						
AKASG	**Malin Array Be**	**71.58**	**324**	P	**P**	**22 28 47.9**	**+0.1**
	comp=Z,63nm,0.6s,baz=39,slow=6.1,SNR=152						
AKASG				LR	LR	23 03 16.1	
	comp=Z,2µm,19.1s,baz=50,slow=38						
AKBB	**Malin Array Si**	**71.58**	**324**	eP	**P**	**22 28 47.9**	**+0.1**
	comp=Z,127nm,0.8s						
AKBB				LR	LR		
	comp=Z,2µm,20.0s						
KIEV	**Kiev**	**71.59**	**324**	eP	**P**	**22 28 47.7**	**-0.2**
	comp=Z,124nm,0.8s						
KIEV				LR	LR		
	comp=Z,2µm,19.0s						
KIEV	**Kiev**	**71.59**	**324**	eP	**P**	**22 28 47.7**	**-0.2**
KIEV	**Kiev**	**71.59**	**324**	i P	**P**	**22 28 47.9**	**0.0**
	SNR=10						
KIEV	**Kiev**	**71.59**	**324**	i P	**P**	**22 28 47.7**	**-0.2**
KIEV				pmax	pmax		
	comp=Z,108nm,0.9s						
TMUT	**Trail Mountain**	**71.61**	**53**	eP	**P**	**22 28 49.7**	**+1.0**
	comp=Z,32nm,0.7s						
IGDI	**IGDIR**	**71.62**	**308**	i P	**P**	**22 28 50.9**	**+2.5**
IGDI				IAML_P			
	comp=Z,253nm,0.7s						
AK11	**Malin Array Si**	**71.62**	**324**	eP	**P**	**22 28 47.8**	**-0.3**
SZCU	**Shurtz Canyon**	**71.62**	**55**	eP	**P**	**22 28 49.5**	**+0.9**
	comp=Z,26nm,0.9s						
BORG	**Borgarnes**	**71.65**	**355**	eP	**P**	**22 28 50.3**	**+2.4**
	comp=Z,94nm,0.8s						
BORG	**Borgarnes**	**71.65**	**355**	i P	**P**	**22 28 50.7**	**+2.7**
KARS	**Kars**	**71.68**	**309**	eP	**P**	**22 28 49.7**	**+0.9**
KARS	**Kars**	**71.68**	**309**	eP	**P**	**22 28 50.8**	**+2.0**
	comp=Z,188nm,0.9s						
KARS				LR	LR		
	comp=Z,3µm,19.0s						
ASK	**Askoy**	**71.68**	**341**	eP	**P**	**22 28 49.1**	**+0.9**
MURC	**Murrieta**	**71.69**	**61**	P	**P**	**22 28 49.0**	**+0.2**
	baz=311						
BER	**Bergen**	**71.74**	**341**	P	**P**	**22 28 49.6**	**+1.0**
BER				pmax	pmax		
	comp=Z,108nm,0.7s						
BER	**Bergen**	**71.74**	**341**	eP	**P**	**22 28 49.3**	**+0.7**
P17A	**Butcher Ranch,**	**71.77**	**53**	eP	**P**	**22 28 50.4**	**+1.0**
	comp=Z,71nm,0.8s						
ULM	**Lac du Bonnet**	**71.83**	**37**	eP	**P**	**22 28 49.0**	**-0.4**
	comp=Z,45nm,0.8s						
ULM	**Lac du Bonnet**	**71.83**	**37**	eP	**P**	**22 28 49.0**	**-0.4**
ULM				pmax	pmax		
	comp=Z,45nm,0.8s						
ULM	**Lac du Bonnet**	**71.83**	**37**	P	**P**	**22 28 48.7**	**-0.7**

	comp=Z,5.4nm,0.4s,baz=316,slow=7.2,SNR=11						
ODD1	Odda	71.84	340	*e*P	P	22 28 50.0	+0.8
MTPU	Mount Pierson	71.87	55	*e*P	P	22 28 51.8	+1.5
	comp=Z,38nm,0.8s						
MDND	Maddock	71.88	40	*e*P	P	22 28 50.5	+0.8
	comp=Z,236nm,0.8s						
MDND	Maddock	71.88	40	P	P	22 28 49.6	-0.2
	baz=316						
GMRC	Granite Mounta	71.89	59	P	P	22 28 50.1	-0.1
	baz=311						
Q16A	Castle Valley	71.89	53	*e*P	P	22 28 51.5	+1.3
	comp=Z,63nm,1.2s						
ANN	Anapa	71.90	315	*e*P	P	22 28 49.9	+0.1
ANN	Anapa	71.90	315	*c i*P	P	22 28 50.0	+0.1
ANN				*e**PP	pP	22 29 03.9	+1.6
ANN				*e*		22 29 13.5	
ANN				*e*S	S	22 38 08.6	+1.1
ANN				pmax	pmax		
	comp=Z,55nm,0.5s						
LCMT	Little Creek M	71.91	56	*e*P	P	22 28 51.5	+1.2
	comp=Z,51nm,0.9s						
BCA	Borcka	71.95	310	*e*P	P	22 28 51.5	+1.2
DBOC	Borcka	71.99	310	*i* P	P	22 28 52.3	+1.7
DBOC				IAML_P			
	comp=Z,813nm,0.6s						
K22A	Casper	71.99	48	*e*P	P	22 28 51.2	+0.5
	comp=Z,251nm,1.4s						
K22A	Casper	71.99	48	P	P	22 28 50.1	-0.7
	baz=313						
DAGI	Agillar	72.03	310	*i* P	P	22 28 53.4	+2.5
DAGI				IAML_P			
	comp=Z,386nm,0.7s						
LDFC	Landfair	72.04	59	*e*P	P	22 28 52.4	+1.4
	comp=Z,112nm,0.9s						
DYDN	Diyadin	72.06	308	*i* P	P	22 28 54.0	+2.9
DYDN				IAML_P			
	comp=Z,86nm,0.1s						
SRU	San Rafael Swe	72.14	53	*e*P	P	22 28 52.4	+0.8
	comp=Z,102nm,0.9s						
SENK	Senkaya-Erzuru	72.14	309	*e*P	P	22 28 53.5	+1.9
PFO	Pinyon Flats O	72.14	61	*e*P	P	22 28 49.3	-2.4
	comp=Z,24nm,0.9s						
PFO	Pinyon Flats O	72.14	61	P	P	22 28 50.8	-0.9
	baz=311						
PFO	Pinyon Flats O	72.14	61	P	P	22 28 51.2	-0.5
	comp=Z,1.8nm,0.6s,baz=336,slow=9.6,SNR=3.1						
XPFO	Pion Flat	72.15	61	*e*P	P	22 28 49.3	-2.4
	comp=Z,26nm,0.9s						
KNB	Kanab	72.16	56	*e*P	P	22 28 53.2	+1.4
	comp=Z,57nm,0.9s						
BELC	Belle Mtn. Jos	72.18	60	P	P	22 28 50.8	-1.2
	baz=311						
CLDR	Caldiran	72.19	307	*e*P	P	22 28 54.1	+2.1
CLDR	Caldiran	72.19	307	*i* P	P	22 28 54.2	+2.2
CLDR				IAML_P			
	comp=Z,93nm,0.1s						
DBAD	Bademkaya	72.20	310	*i* P	P	22 28 54.4	+2.5
DBAD				IAML_P			
	comp=Z,566nm,0.7s						
109C	Camp Elliot, M	72.20	61	P	P	22 28 51.4	-0.5
	baz=311						
RWWY	Rawlins	72.27	49	*e*P	P	22 28 52.0	-0.5
	comp=Z,85nm,0.9s						
RSSD	Black Hills	72.30	46	*e*P	P	22 28 52.6	0.0
	comp=Z,95nm,0.8s						
RSSD	Black Hills	72.30	46	*e*P	P	22 28 52.6	0.0
RSSD				pmax	pmax		
	comp=Z,95nm,0.8s						
RSSD	Black Hills	72.30	46	P	P	22 28 52.4	-0.2
	baz=314						
BLS5	Blasjo	72.31	340	*e*P	P	22 28 52.9	+0.8
AGRB	Hanur-Agry	72.43	308	*e*P	P	22 28 55.6	+2.2
VMUR	Van-Muradiye	72.49	307	*i* P	P	22 28 56.4	+2.7
VMUR				IAML_P			
	comp=Z,126nm,0.4s						
NEE2	Needles Airpor	72.54	59	P	P	22 28 54.4	+0.5
	baz=311						
BAR	Barrett	72.62	61	*e*P	P	22 28 58.3	+3.9
	comp=Z,26nm,1.0s						
IRM	Iron Mountain	72.62	59	P	P	22 28 54.1	-0.3
	baz=311						
MONP2	Monument Peak	72.64	61	P	P	22 28 55.2	+0.5
	baz=311						
TUTA	Tutak	72.65	308	*i* P	P	22 28 58.0	+3.2
TUTA				IAML_P			
	comp=Z,1µm,0.6s						
HOMI	Horasan	72.74	309	*i* P	P	22 28 57.0	+1.8
HOMI				IAML_P			
	comp=Z,95nm,0.1s						
BC3	Big Chuckawall	72.75	60	P	P	22 28 56.1	+0.8
	baz=311						
O20A	White River Ci	72.75	51	*e*P	P	22 28 55.8	+0.5
	comp=Z,50nm,0.8s						
O20A	White River Ci	72.75	51	P	P	22 28 55.1	-0.2
	baz=313						
W13A	Hualapai Mount	72.78	58	*e*P	P	22 28 56.0	+0.4
	comp=Z,28nm,0.9s						
HOMB	Homborsund	72.78	338	*e*P	P	22 28 55.8	+0.9
KMY	Karmoy	72.79	340	*e*P	P	22 28 55.9	+1.0
KOPR	Koprukoy-ERZUR	72.80	309	*e*P	P	22 28 56.0	+0.4
TVAN	Van	72.90	307	*i* P	P	22 28 59.8	+3.5
TVAN				IAML_P			
	comp=Z,545nm,0.6s						
BANOM	Banah	72.95	290	*i* P	P	22 28 57.2	+0.7
	SNR=12						
BANOM	Banah	72.95	290	P	P	22 28 57.0	+0.5
	SNR=5.7						
IKP	In-Ko-Pah, Jac	72.99	61	P	P	22 28 57.6	+0.9
	baz=311						
SWSC	Sam W. Stewart	73.00	61	P	P	22 28 56.5	-0.1
	baz=311						
SNART	Snartemo	73.06	339	*e*P	P	22 28 57.4	+0.8
WSAR	Wadi Sarin	73.08	286	P	P	22 28 58.3	+1.1
ADCV	BITLIS_Adilcev	73.10	308	*i* P	P	22 29 00.3	+2.9
ADCV				IAML_P			
	comp=Z,64nm,0.1s						
PDMCI	Parker Dam,Lak	73.15	59	P	P	22 28 58.5	+1.0
	baz=312						
JLN	Jalan Bani Buh	73.23	285	P	P	22 28 59.3	+1.1
	SNR=15						
JLN				P	P	22 28 59.3	+1.1
	SNR=15						
BIDO	Bidbid	73.24	287	P	P	22 28 59.2	+1.1
	SNR=20						
BIDO				P	P	22 28 59.2	+1.1
	SNR=20						
GEVA	Gevas	73.25	307	*i* P	P	22 29 00.3	+2.1
GEVA				IAML_P			
	comp=Z,82nm,0.1s						
Y12C	Blythe	73.27	59	P	P	22 28 59.7	+1.5
	baz=312						
AKDM	Akdamar-Van	73.28	307	*e*P	P	22 29 00.2	+1.8
PV09	Paradox Valley	73.35	53	*e*P	P	22 28 59.9	+0.9
MDH	Madha	73.36	289	P	P	22 28 59.3	+0.5
MDH	Madha	73.36	289	P	P	22 28 58.8	-0.1
	SNR=5.5						
MDH				P	P	22 28 58.8	-0.1
	SNR=5.5						
PV21	Cone Mtn., Par	73.40	52	*e*P	P	22 29 00.1	+0.9
	comp=Z,64nm,0.9s						
MSFE	Esma-Masafi	73.41	289	P	P	22 28 59.4	+0.2
PV23	Carpenter Ridg	73.45	53	*e*P	P	22 29 00.5	+0.9
	comp=Z,68nm,0.8s						
PV23				LR	LR		
	comp=Z,700nm,19.0s						
SIM	Simferopol'	73.47	317	*e*P	P	22 29 00.3	+1.1
SIM	Simferopol'	73.47	317	*ce*P	P	22 28 59.6	+0.4
SIM				*e*		22 29 15.0	
SIM				*e*		22 31 47.0	
SIM				*e*S	SKiKP	22 38 29.0	+3.0
SIM				pmax	pmax		
	comp=Z,52nm,0.7s						
SIM				MLR	MLR		
	comp=Z,2µm,16.0s						
PV10	Paradox Valley	73.49	53	*e*P	P	22 29 01.5	+1.7
	comp=Z,146nm,0.8s						
PV14	Lion Creek, Pa	73.50	53	*e*P	P	22 29 00.5	+0.7
	comp=Z,73nm,0.7s						
N23A	Red Feather La	73.51	49	*e*P	P	22 29 01.0	+1.1
	comp=Z,89nm,1.0s						
N23A	Red Feather La	73.51	49	P	P	22 29 00.3	+0.4
	baz=314						
BAYB	BAYBURT	73.52	310	*i* P	P	22 29 02.5	+2.6
BAYB				IAML_P			
	comp=Z,729nm,0.7s						
GLA	Glamis	73.54	60	P	P	22 28 59.9	+0.1
	baz=312						
PV20	West Nyswonger	73.55	53	*e*P	P	22 29 01.1	+1.0
	comp=Z,90nm,0.8s						
BSD	Bornholm Skovb	73.55	333	⇑*i*P	P	22 28 59.4	-0.1
	comp=Z,123nm,0.9s						
	comp=Z,1µm,19.0s						
BSD	Bornholm Skovb	73.55	333	⇑*i*P	P	22 28 59.4	-0.1
PV04	Paradox Valley	73.55	53	*e*P	P	22 29 00.6	+0.6
	comp=Z,77nm,0.9s						
PV04				LR	LR		
	comp=Z,800nm,20.0s						
ECAT	Cat-ERZURUM	73.56	309	*i* P	P	22 29 02.4	+2.4
PV19	Morning Glory	73.56	53	*e*P	P	22 29 00.5	+0.4
	comp=Z,70nm,0.8s						
PV17	East Wray Mesa	73.60	53	*e*P	P	22 29 00.8	+0.5
	comp=Z,128nm,0.7s						
PV16	Nyswonger Mesa	73.60	53	*e*P	P	22 29 00.8	+0.5
	comp=Z,64nm,0.8s						
PV11	David Mesa, Pa	73.64	53	*e*P	P	22 29 01.5	+1.0
	comp=Z,84nm,0.8s						
CUKT	Cukurca	73.64	306	*e*P	P	22 29 00.9	+0.4
UOSS	Minazif	73.65	289	*e*P	P	22 29 01.1	+0.6
	comp=Z,119nm,0.9s						
UOSS				LR	LR		
	comp=Z,700nm,20.0s						
UOSS	Minazif	73.65	289	*i* P	P	22 29 01.0	+0.4
	SNR=13						
UOSS	Minazif	73.65	289	P	P	22 29 00.6	0.0
	SNR=18						
UOSS				P	P	22 29 00.6	0.0
	SNR=18						
PV05	Paradox Valley	73.66	53	*e*P	P	22 29 01.8	+1.1
	comp=Z,98nm,0.8s						
PV12	Saucer Basin,	73.66	53	*e*P	P	22 29 01.7	+0.9
	comp=Z,98nm,1.3s						
PV07	Paradox Valley	73.67	52	*e*P	P	22 29 02.3	+1.5
	comp=Z,45nm,1.1s						
GURO	Guroymak-BITLI	73.68	308	*e*P	P	22 29 02.6	+1.9
PV03	Paradox Valley	73.68	53	*e*P	P	22 29 01.6	+0.8
	comp=Z,58nm,0.8s						
PV03				LR	LR		
	comp=Z,600nm,21.0s						
ARMA	Armidale	73.73	176	*e*P	P	22 29 02.1	+1.3
	comp=Z,31nm,1.0s						
ARMA				LR	LR		
	comp=Z,2µm,22.0s						
PV13	Radium Mtn., P	73.76	53	*e*P	P	22 29 02.2	+0.8
	comp=Z,79nm,0.8s						
PV02	Paradox Valley	73.78	53	*e*P	P	22 29 03.1	+1.6
	comp=Z,39nm,0.9s						
HATD	Hatta, Dubai	73.78	289	*i* P	P	22 29 01.8	+0.5
	SNR=19						
COP	Copenhagen	73.86	335	⇑*i*P	P	22 29 01.8	+0.6
	comp=Z,810nm,21.0s						
COP	Copenhagen	73.86	335	⇑*i*P	P	22 29 01.8	+0.6
ASHO	Ashiyiah	73.92	289	*i* P	P	22 29 03.0	+0.8
	SNR=22						
ASHO	Ashiyiah	73.92	289	P	P	22 29 02.5	+0.2
	SNR=27						
PV01	Paradox Valley	73.92	53	*e*P	P	22 29 03.0	+0.7
	comp=Z,30nm,0.7s						
SOHO	SOHO	73.95	288	P	P	22 29 02.0	-0.3
	SNR=21						
NAZ	Nazwa, Dubai	74.00	289	*i* P	P	22 29 03.1	+0.6
	SNR=6.4						
WUAZ	Wupatki	74.03	56	*e*P	P	22 29 04.2	+1.3
	comp=Z,44nm,0.8s						
WUAZ	Wupatki	74.03	56	P	P	22 29 03.2	+0.3
	baz=312						
Y14A	Wickenburg	74.09	58	*e*P	P	22 29 04.8	+1.6
	comp=Z,43nm,0.8s						
SMCO	Snowmass	74.12	51	*e*P	P	22 29 04.1	+0.5
	comp=Z,53nm,0.8s						
BEL	Belsk	74.14	329	*e*P	P	22 29 04.0	+1.0
BEL	Belsk	74.14	329	⇑*e*P	P	22 29 04.0	+1.0
BNGB	Bingl	74.15	309	*e*P	P	22 29 05.4	+2.0
SIRT	Sirnak	74.16	307	*e*P	P	22 29 04.9	+1.4
SIRT	Sirnak	74.16	307	*e*P	P	22 29 04.7	+1.3
	comp=Z,358nm,1.2s						
SIRT				LR	LR		
	comp=Z,3µm,19.0s						
MUD	Monsted U'grnd	74.17	337	⇑*i*P	P	22 29 03.5	+0.5
	comp=Z,83nm,0.9s						
MUD	Monsted U'grnd	74.17	337	⇑*i*P	P	22 29 03.5	+0.5
FAQ	Al Faqa, Dubai	74.20	289	*i* P	P	22 29 04.3	+0.5
	SNR=9.3						
ERZN	Erzincan	74.28	310	*e*P	P	22 29 04.8	+0.6
GKP	Gorka Klasztor	74.28	331	*e*P	P	22 29 04.2	+0.4
GKP	Gorka Klasztor	74.28	331	⇑*e*P	P	22 29 04.2	+0.4
SVAN	Silvan-Diyarba	74.43	308	*e*P	P	22 29 05.7	+0.7
LVV	L'vov	74.44	326	*e*P	P	22 29 05.3	+0.5
LVV				*e*		22 29 30.7	
LVV				*e*S	S	22 38 34.9	-1.3
LVV				*e*PS	PnS	22 39 09.5	-4.6
ISCO	Idaho Springs	74.45	50	*e*P	P	22 29 06.2	+0.8
	comp=Z,48nm,0.8s						
ISCO	Idaho Springs	74.45	50	*e*P	P	22 29 06.2	+0.8
ISCO				pmax	pmax		
	comp=Z,48nm,0.8s						
ISCO	Idaho Springs	74.45	50	P	P	22 29 05.0	-0.4
	baz=314						
ASUD	Al Ashush, Dub	74.46	289	P	P	22 29 06.1	+0.8
KIS	Kishinev	74.50	321	⇑*i*P	P	22 29 04.0	-1.2
	comp=Z,360nm,1.5s						
KIS				*e*S	S	22 38 34.0	-2.9
KIS	Kishinev	74.50	321	*e*PS	PnS	22 39 02.0	-13
KIS				*e*L	L	22 55 50.0	
KIS				LRM	MLR	23 04 16.0	
	comp=Z,2µm,21.0s						
KIS	Kishinev	74.50	321	⇑*i*P	P	22 29 04.0	-1.2
KIS				*i*		22 29 15.0	
KIS				*i*		22 29 21.0	
KIS				*i*		22 29 27.0	
KIS				*e*S	S	22 38 34.0	-2.9
KIS				*e*PS	PnS	22 39 02.0	-13
KIS				pmax	pmax		
	comp=Z,360nm,1.5s						
RGN	Rugen	74.54	334	*e*P	P	22 29 05.7	+0.5
	comp=Z,126nm,0.7s						
RGN				LR	LR		
	comp=Z,2µm,18.0s						
RGN	Rugen	74.54	334	*e*P	P	22 29 05.4	+0.2
RGN				IAmb	IAmb	22 29 06.8	
	comp=Z,120nm,0.7s						
ALNE	Al Ain	74.54	289	*i* P	P	22 29 06.3	+0.5
	SNR=15						
MVCO	Mesa Verde	74.59	53	*e*P	P	22 29 07.0	+0.8
	comp=Z,52nm,0.8s						
MVCO	Mesa Verde	74.59	53	P	P	22 29 06.1	-0.2
	baz=313						
SUSD	Miller	74.64	43	P	P	22 29 05.5	-0.6
	baz=317						
X16A	Lo Mia Camp, P	74.73	57	*e*P	P	22 29 08.0	+1.0
	comp=Z,66nm,0.8s						
IVI	Ivigtut	74.90	7	*e*P	P	22 29 07.1	0.0
	comp=Z,80nm,1.1s						
IAS	Iasi	74.92	322	⇑*i*P	P	22 29 08.2	+0.6
MHTO	MHTO	75.01	285	P	P	22 29 09.2	+0.7
	SNR=42						
MHTO				P	P	22 29 09.2	+0.7
	SNR=42						
RSDY	Resadiye-TOKAT	75.03	312	*e*P	P	22 29 10.1	+1.7
LEOM	Leova	75.16	321	⇑*i*P	P	22 29 09.9	+1.0
LEOM	Leova	75.16	321	P	P	22 29 09.8	+0.9
NRS	Narsarsuaq	75.18	6	*i* P	P	22 29 08.7	-0.1
NRS	Narsarsuaq	75.18	6	*i* P	P	22 29 08.7	-0.1
S22A	4UR Ranch, Cre	75.19	52	*e*P	P	22 29 10.9	+1.2
	comp=Z,45nm,0.9s						
S22A	4UR Ranch, Cre	75.19	52	P	P	22 29 09.7	0.0
	baz=314						
STKA	Stephens Creek	75.20	185	*e*P	P	22 29 08.9	-0.2
	comp=Z,6.6nm,0.8s						
STKA				LR	LR		
	comp=Z,100nm,22.0s						
STKA	Stephens Creek	75.20	185	*e*P	P	22 29 09.0	-0.2
STKA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STKA				MLR	MLR		
	comp=Z,100nm,22.0s						
STKA	Stephens Creek	75.20	185	P	P	22 29 09.0	-0.2
	comp=Z,26nm,0.9s,baz=352,slow=7.6,SNR=32						
STKA				LR	LR	23 00 37.2	
	comp=Z,431nm,21.7s,baz=6.7,slow=34						
KVT	Kavak	75.23	313	*e*P	P	22 29 09.1	-0.5
DIKM	Dikmen	75.24	314	*e*P	P	22 29 10.2	+0.6
W18A	Petrified Fore	75.29	56	P	P	22 29 09.8	-0.4
	baz=313						
Q24A	Divide	75.29	50	P	P	22 29 10.1	-0.2
	baz=314						
MAZI	Mazidag	75.34	308	*e*P	P	22 29 09.8	-0.5
PRAR	RASCA	75.39	323	⇑*i*P	P	22 29 10.8	+0.5
BIGH	Upper Bighouse	75.45	345	⇑*e*P	P	22 29 10.7	+0.3
EYMN	Ely	75.47	36	*e*P	P	22 29 10.3	-0.5
	comp=Z,89nm,0.8s						
EYMN	Ely	75.47	36	P	P	22 29 10.2	-0.5
	baz=320						
TOKT	Tokat	75.50	312	*e*P	P	22 29 12.6	+1.4
214A	Organ Pipe Nat	75.54	60	P	P	22 29 11.3	-0.1
	baz=313						
SVSK	Karacayir	75.55	312	*e*P	P	22 29 09.3	-2.0
OGNE	Ogallala	75.59	47	*e*P	P	22 29 11.8	+0.1
	comp=Z,291nm,0.8s						
OGNE	Ogallala	75.59	47	P	P	22 29 11.4	-0.2
	baz=316						
BIR	Birlad	75.59	321	⇑*i*P	P	22 29 13.4	+1.9
BUR08	Bucovina Ar. S	75.62	324	*e*P	P	22 29 12.6	+0.8
BUR04	Bucovina Ar. S	75.64	323	*e*P	P	22 29 10.6	-1.2
BURAR	Bucovina Array	75.64	323	⇑*i*P	P	22 29 12.8	+1.0
BZK	Bozkurt	75.67	315	*e*P	P	22 29 10.8	-1.2
BIZ	Bicaz	75.77	323	⇑*i*P	P	22 29 13.3	+0.8
OJC	Ojcow	75.81	328	*e*P	P	22 29 13.6	+0.9
OJC	Ojcow	75.81	328	*e*P	P	22 29 13.6	+0.9
	comp=Z,262nm,1.3s						
OJC	Ojcow	75.81	328	⇑*e*P	P	22 29 13.6	+0.9
TESR	Tescani	75.85	322	⇑*i*P	P	22 29 13.8	+0.8
TLCR		75.86	320	⇓*i*P	P	22 29 13.9	+0.9
TLCR		75.86	320	P	P	22 29 13.9	+0.9
FORT	Forrest	75.92	197	*e*P	P	22 29 13.7	+0.4
	comp=Z,60nm,0.8s						
SDCO	Great Sand Dun	75.94	51	*e*P	P	22 29 14.4	+0.3
	comp=Z,22nm,0.9s						
SDCO	Great Sand Dun	75.94	51	P	P	22 29 14.3	+0.3
	baz=315						
DQM	DQM	76.00	284	P	P	22 29 14.2	0.0
DQM				P	P	22 29 14.2	0.0
UZH	Uzhgorod	76.08	326	⇑*i*P	P	22 29 13.3	-0.9
UZH				*e*		22 29 21.8	
UZH				*e*		22 29 32.6	
UZH				*e*S	S	22 38 50.3	-4.0
RUE	Ruedersdorf	76.12	333	*e*P	P	22 29 14.1	-0.2
RUE				IAmb	IAmb	22 29 15.5	
	comp=Z,97nm,0.8s						
MCD	Coleburn Disti	76.17	344	⇑*e*P	P	22 29 14.8	+0.3
CFR	Carcaliu	76.18	320	⇓*i*P	P	22 29 15.4	+0.6
CFR	Carcaliu	76.18	320	P	P	22 29 15.4	+0.6
PETR	Petresti	76.19	321	⇑*i*P	P	22 29 16.8	+2.0
DARE	Darende-Malaty	76.23	310	*e*P	P	22 29 17.5	+2.1
ODBI	Odobesti	76.23	321	⇓*i*P	P	22 29 17.3	+2.2
NIE	Niedzica	76.25	327	*e*P	P	22 29 16.6	+1.3
NIE	Niedzica	76.25	327	⇑*e*P	P	22 29 16.6	+1.3
URFA	Urfa	76.28	309	*e*P	P	22 29 17.7	+2.1
VRI	Vrincioaia	76.31	321	*e*P	P	22 29 16.7	+1.1
VRI	Vrincioaia	76.31	321	⇑*i*P	P	22 29 16.5	+0.9
VRI	Vrincioaia	76.31	321	P	P	22 29 16.4	+0.9
ECSD	EROS Data Cent	76.31	42	*e*P	P	22 29 15.3	-0.4
	comp=Z,94nm,0.9s						
ECSD				LR	LR		
	comp=Z,600nm,20.0s						
ECSD	EROS Data Cent	76.31	42	P	P	22 29 15.2	-0.4
	baz=318						
BMR	Baia Mare	76.33	324	⇑*i*P	P	22 29 16.8	+1.2
PLOR	Plostina	76.35	322	⇑*i*P	P	22 29 16.9	+1.0
PLOR	Plostina	76.35	322	P	P	22 29 16.8	+0.9
TRPA	Tarpa	76.37	325	⇑*i*P	P	22 29 17.2	+1.4
TRPA	Tarpa	76.37	325	⇑*e*P	P	22 29 17.0	+1.2
ARCR	ARCALIA	76.42	324	⇑*i*P	P	22 29 17.9	+1.7
E38A	The Farm, Brul	76.47	37	*e*P	P	22 29 15.9	-0.6
	comp=Z,133nm,0.8s						
E38A	The Farm, Brul	76.47	37	P	P	22 29 15.9	-0.6
	baz=321						
ILGA	Ilgaz	76.48	314	*e*P	P	22 29 19.0	+2.1
	comp=Z,66nm,1.0s						
C40A	Isle Royale Na	76.48	35	P	P	22 29 15.3	-1.2
	baz=322						
MDO	Dochfour	76.52	344	⇑*e*P	P	22 29 16.6	0.0
OZUR		76.55	322	⇑*i*P	P	22 29 18.5	+1.5
TUC	Tucson	76.56	58	*e*P	P	22 29 20.3	+3.0
	comp=Z,21nm,0.9s						
TUC	Tucson	76.56	58	P	P	22 29 17.3	-0.1
	baz=313						
TIRR	Tirgusor	76.59	320	*e*P	P	22 29 17.8	+0.6
	comp=Z,42nm,1.1s						
TIRR				LR	LR		
	comp=Z,1µm,20.0s						
TIRR	Tirgusor	76.59	320	⇑*i*P	P	22 29 17.8	+0.6
TIRR	Tirgusor	76.59	320	*e*P	P	22 29 17.8	+0.6
TIRR				pmax	pmax		
	comp=Z,42nm,1.1s						
TIRR				MLR	MLR		
	comp=Z,1µm,20.0s						
KSP	Ksiaz	76.61	330	*e*P	P	22 29 18.0	+0.8
KSP	Ksiaz	76.61	330	⇑*e*P	P	22 29 18.0	+0.8
BBOO	Buckleboo	76.61	189	*e*P	P	22 29 17.0	-0.2
	comp=Z,31nm,0.8s						
BBOO				LR	LR		
	comp=Z,900nm,22.0s						
HARR	Harsova	76.64	320	⇓*i*P	P	22 29 18.7	+1.2
HARR	Harsova	76.64	320	P	P	22 29 18.7	+1.2
KAC	Achnashellach	76.64	345	⇑*e*P	P	22 29 17.5	+0.2
KSCO	Kaye Shedlock'	76.65	49	*e*P	P	22 29 19.1	+1.3
	comp=Z,77nm,0.9s						
KSCO	Kaye Shedlock'	76.65	49	P	P	22 29 17.1	-0.7
	baz=316						
TLB	Topalu	76.67	320	⇑*i*P	P	22 29 18.6	+0.9
TLB	Topalu	76.67	320	P	P	22 29 18.5	+0.9
F37A	Hinrichs Farm,	76.67	38	P	P	22 29 16.5	-1.1
	baz=320						
OKC	Ostrava-Krasne	76.75	329	*e*P	P	22 29 19.1	+1.1
OKC				*e*S	S	22 39 02.4	+0.8
OKC				AMS	AMS	23 04 50.0	
	comp=Z,1µm,22.1s						
OKC	Ostrava-Krasne	76.75	329	*e*P	P	22 29 19.1	+1.1
OKC				*e*S	S	22 39 02.4	+0.8
OKC				MLR	MLR		
	comp=Z,1µm,22.1s						
LANS	Liptovska Anna	76.79	328	*e*P	P	22 29 20.0	+1.7
LANS				*e*		22 29 30.9	
LANS	Liptovska Anna	76.79	328	*e*P	P	22 29 20.0	+1.7
LANS				*e*PCP	pP	22 29 30.9	0.0
MFTR	Murfatlar	76.80	319	⇑*i*P	P	22 29 19.8	+1.5
DOPR	Dopca	76.83	322	⇑*i*P	P	22 29 20.0	+1.5
F38A	Pierce - Schro	76.83	38	P	P	22 29 18.1	-0.4
	baz=320						
KPL	Plockton	76.86	345	⇑*e*P	P	22 29 19.0	+0.6
KPL				IAmb	IAmb	22 29 19.8	
	comp=Z,66nm,0.7s						
PGOR	Pogoanele	76.92	321	⇓*i*P	P	22 29 21.1	+2.1
BNN	Bunyan	76.93	312	*e*P	P	22 29 19.2	-0.2
MLR	Muntele Rosu	76.95	322	*e*P	P	22 29 19.7	+0.3
	comp=Z,51nm,0.9s						
MLR				LR	LR		
	comp=Z,2µm,20.0s						
MLR	Muntele Rosu	76.95	322	⇑*i*P	P	22 29 20.4	+1.0
MLR	Muntele Rosu	76.95	322	*e*P	P	22 29 19.7	+0.3
MLR				pmax	pmax		
	comp=Z,51nm,0.9s						
MLR				MLR	MLR		
	comp=Z,2µm,20.0s						
ISR	Istrita	76.96	321	⇑*i*P	P	22 29 20.7	+1.4
ISR	Istrita	76.96	321	P	P	22 29 20.6	+1.3
ISR				pmax	pmax		
	comp=Z,205nm,1.2s						
SPMN	Marine on St.	76.98	39	*e*P	P	22 29 18.9	-0.4
	comp=Z,68nm,0.8s						
SPMN				LR	LR		
	comp=Z,600nm,19.0s						
SPMN	Marine on St.	76.98	39	P	P	22 29 18.7	-0.7
	baz=320						
AMRR	Amara	76.98	320	⇑*i*P	P	22 29 21.1	+1.7
UPC	Upice	76.99	330	*e*P	P	22 29 19.1	-0.2
UPC				*e*S	S	22 39 08.1	+3.8
UPC				AMS	AMS	23 10 00.0	
	comp=Z,1µm,20.0s						
UPC	Upice	76.99	330	*e*P	P	22 29 19.1	-0.2
UPC				*e*S	S	22 39 08.1	+3.8
UPC				MLR	MLR		
	comp=Z,1µm,20.0s						
T25A	Trinidad	76.99	51	*e*P	P	22 29 20.6	+0.7
	comp=Z,59nm,0.8s						
T25A	Trinidad	76.99	51	P	P	22 29 20.0	+0.1

	baz=315						
DPC	Dobruska-Polom	77.00	330	*e*P	P	22 29 20.6	+1.1
DPC				*e*S	S	22 39 04.8	+0.2
DPC				AMS	AMS	23 10 20.0	
	comp=Z,1µm,17.4s						
DPC	Dobruska-Polom	77.00	330	*e*P	P	22 29 20.6	+1.1
DPC				*e*S	S	22 39 04.8	+0.2
DPC				MLR	MLR		
	comp=Z,1µm,17.4s						
MORC	Moravsky Berou	77.02	329	*e*P	P	22 29 20.1	+0.5
	comp=Z,80nm,1.0s						
MORC				LR	LR		
	comp=Z,1µm,21.0s						
MORC	Moravsky Berou	77.02	329	⇑*i*P	P	22 29 20.6	+1.0
MORC	Moravsky Berou	77.02	329	*e*P	P	22 29 20.1	+0.5
MORC				pmax	pmax		
	comp=Z,80nm,1.0s						
MORC				MLR	MLR		
	comp=Z,1µm,21.0s						
MORC	Moravsky Berou	77.02	329	*e*P	P	22 29 20.5	+1.0
MORC				*e*pP	PcP	22 29 31.1	+0.7
CJR	Cluj-Napoca	77.03	324	⇑*i*P	P	22 29 20.9	+1.2
CJR	Cluj-Napoca	77.03	324	P	P	22 29 20.8	+1.1
KRLC	Kraliky	77.06	330	*e*P	P	22 29 20.8	+1.0
KRLC	Kraliky	77.06	330	*e*P	P	22 29 20.8	+1.0
E39A	Mellen	77.09	37	P	P	22 29 19.2	-0.7
	baz=321						
ICOR	Ion Corvin	77.14	320	⇑*i*P	P	22 29 21.8	+1.5
LTVH	Ltavrtes, Hu	77.22	325	⇑*e*P	P	22 29 21.1	+0.4
SECR		77.24	321	⇓*i*P	P	22 29 22.7	+1.8
BGNE	Belgrade	77.27	44	*e*P	P	22 29 21.7	+0.6
	comp=Z,224nm,1.0s						
BGNE	Belgrade	77.27	44	P	P	22 29 19.8	-1.3
	baz=318						
F39A	Loretta	77.29	37	P	P	22 29 20.6	-0.5
	baz=321						
KMRS	Kahramanmaras	77.31	310	*e*P	P	22 29 22.1	+0.7
E40A	Wakefield	77.32	36	P	P	22 29 21.3	0.0
	baz=322						
LEHL	Lehliu	77.33	321	⇓*i*P	P	22 29 22.7	+1.4
LAZ	Ladron	77.33	55	*e*P	P	22 29 22.5	+0.7
DRGR		77.35	324	⇑*i*P	P	22 29 22.3	+0.8
ANMO	Albuquerque	77.35	54	*e*P	P	22 29 23.0	+1.0
	comp=Z,31nm,0.8s						
ANMO	Albuquerque	77.35	54	P	P	22 29 22.6	+0.7
	baz=315						
ANMO	Albuquerque	77.35	54	P	P	22 29 22.9	+1.0
	comp=Z,2.8nm,0.7s,baz=303,slow=9.7,SNR=6.5						
CLL	Collm	77.37	332	*e*P	P	22 29 21.2	-0.2
	comp=Z,134nm,0.8s						
CLL				LR	LR		
	comp=Z,1µm,18.0s						
CLL	Collm	77.37	332	⇑*i*P	P	22 29 21.7	+0.3
	comp=Z,135nm,0.8s						
CLL				*e*(PcP)	PcP	22 29 29.0	-2.8
CLL				*i* (pP)	pP	22 29 32.8	-1.2
CLL				*e*PP	PP	22 32 12.0	-3.4
CLL				*e*S	S	22 39 07.0	-1.4
CLL				*e*SP	SPn	22 39 44.0	-1.7
CLL				*e*SS	SS	22 44 36.0	+30
CLL				*e*		22 48 18.0	
CLL				LmH		23 06 00.0	
	comp=N,600nm,19.7s						
CLL				LmH		23 06 00.0	
	comp=E,900nm,18.8s						
CLL				LmV		23 09 00.0	
	comp=N,700nm,21.1s						
CLL				LmV		23 09 00.0	
	comp=E,400nm,18.6s						
CLL				LmV		23 09 00.0	
	comp=Z,1µm,18.5s						
CLL	Collm	77.37	332	*e*P	P	22 29 21.2	-0.2
CLL				*i*		22 29 32.8	
CLL				*e*S	S	22 39 07.0	-1.4
CLL				pmax	pmax		
	comp=Z,135nm,0.8s						
CLL				MLR	MLR		
	comp=Z,1µm,18.5s						
RASA	Rasa	77.37	320	⇑*i*P	P	22 29 23.0	+1.5
VOIR		77.39	322	⇑*i*P	P	22 29 22.7	+0.9
VOIR		77.39	322	P	P	22 29 22.7	+0.9
VOIR				pmax	pmax		
	comp=Z,80nm,1.4s						
D41A	Chassel	77.40	35	*e*P	P	22 29 22.0	+0.3
	comp=Z,348nm,1.5s						
D41A	Chassel	77.40	35	P	P	22 29 21.4	-0.3
	baz=322						
INVG	Invergeldie, C	77.41	344	⇑*e*P	P	22 29 21.4	-0.1
BRG	Berggiesshubel	77.41	332	⇑*i*P	P	22 29 22.1	+0.4
	comp=Z,50nm,0.9s						
BRG				*i* PCP	pP	22 29 33.2	-1.1
	comp=Z,167nm,2.2s						
BRG				*i* PP	PP	22 32 07.7	-8.1
	comp=Z,18nm,1.6s						
BRG				S	S	22 39 10.0	+1.1
BRG				SS	SS	22 44 08.0	+1.2
	comp=N,929nm,14.3s						
	comp=E,896nm,16.9s						
	comp=Z,1µm,16.5s						
BRG	Berggiesshubel	77.41	332	⇑*i*P	P	22 29 22.1	+0.4
BRG				*i*		22 29 33.2	
BRG				S	S	22 39 10.0	+1.1
BRG				SS	SS	22 44 08.0	+1.2
BRG				pmax	pmax		
	comp=Z,50nm,0.9s						
BRG				MLR	MLR		
	comp=N,929nm,14.3s						
BRG				MLR	MLR		
	comp=E,896nm,16.9s						
BRG				MLR	MLR		
	comp=Z,1µm,16.5s						
SULR		77.43	321	⇑*i*P	P	22 29 23.1	+1.2
G38A	Ridgeland	77.45	38	P	P	22 29 20.7	-1.3
	baz=321						
BR101	Keskin Array S	77.48	313	*e*P	P	22 29 23.1	+0.6
PVCC	Panska Ves	77.48	331	*e*P	P	22 29 23.1	+1.0
PVCC				AMS	AMS	23 10 10.0	
	comp=Z,1µm,17.4s						
PVCC	Panska Ves	77.48	331	*e*P	P	22 29 23.1	+1.0
PVCC				MLR	MLR		
	comp=Z,1µm,17.4s						
BR131	Keskin Array S	77.48	313	*e*P	P	22 29 23.3	+0.8
BR131	Keskin Array S	77.48	313	P	P	22 29 23.2	+0.8
	SNR=12						
BRTR	Keskin Array B	77.48	313	P	P	22 29 23.1	+0.6
	comp=Z,9.1nm,0.6s,baz=78,slow=3.3,SNR=50						
BRTR				LR	LR	23 10 16.9	
	comp=Z,1µm,18.2s,baz=42,slow=41						
MTUR	Matau	77.55	322	⇑*i*P	P	22 29 23.9	+1.2
MORW	Morawa	77.56	207	*e*P	P	22 29 23.1	+0.5
	comp=Z,31nm,0.9s						
VYHS	Vyhne	77.57	328	*e*P	P	22 29 23.7	+1.1
VYHS				pmax	pmax		
	comp=Z,100nm,1.9s						
VYHS	Vyhne	77.57	328	*e*P	P	22 29 23.7	+1.1
ESY	Stoneypath	77.58	343	⇑*e*P	P	22 29 23.0	+0.5
LENM	Lemitar	77.59	55	*e*P	P	22 29 26.4	+3.1
PSZ	Piszkesteto	77.62	327	*e*P	P	22 29 23.0	0.0
	comp=Z,58nm,0.9s						
PSZ				LR	LR		
	comp=Z,3µm,20.0s						
PSZ	Piszkesteto	77.62	327	⇑*i*P	P	22 29 24.0	+1.0
PSZ	Piszkesteto	77.62	327	*e*P	P	22 29 23.0	0.0
PSZ				pmax	pmax		
	comp=Z,58nm,0.9s						
PSZ				MLR	MLR		
	comp=Z,3µm,20.0s						
PSZ	Piszkesteto	77.62	327	⇑*e*P	P	22 29 24.0	+1.0
ARR	Arges	77.63	322	⇑*i*P	P	22 29 24.7	+1.6
F40A	Park Falls	77.63	37	P	P	22 29 22.4	-0.6
	baz=322						
H38A	Maiden Rock	77.64	39	P	P	22 29 22.7	-0.4
	baz=320						
G39A	Holcombe	77.66	38	P	P	22 29 22.0	-1.2
	baz=321						
KOLL	Kolacno	77.67	328	*e*P	P	22 29 24.1	+0.9
KOLL				*e*		22 29 35.1	
KOLL	Kolacno	77.67	328	*e*P	P	22 29 24.1	+0.9
KOLL				*e*pP	pP	22 29 35.1	-0.7
EAB	Aberfoyle	77.69	344	⇑*e*P	P	22 29 23.6	+0.4
E41A	Kenton	77.70	36	P	P	22 29 22.9	-0.5
	baz=322						
VRAC	Vranov	77.76	329	⇑*i*P	P	22 29 24.7	+1.1
VRAC	Vranov	77.76	329	P	P	22 29 24.5	+0.8
VRAC				pmax	pmax		
	comp=Z,103nm,1.4s						
VRAC	Vranov	77.76	329	*e*P	P	22 29 24.8	+1.1
VRAC				*e*pP	pP	22 29 35.4	-0.9
BNM	Barren Site	77.81	54	*e*P	P	22 29 25.7	+1.2
EBL	Broad Law	77.81	343	⇑*e*P	P	22 29 24.2	+0.4
ANTO	Ankara	77.82	314	*e*P	P	22 29 25.1	+0.8
ANTO	Ankara	77.82	314	*e*P	P	22 29 25.5	+1.2
	comp=Z,75nm,0.9s						
ANTO				LR	LR		
	comp=Z,2µm,18.0s						
ANTO	Ankara	77.82	314	*e*P	P	22 29 25.5	+1.2
ANTO				pmax	pmax		
	comp=Z,75nm,0.9s						
ANTO				MLR	MLR		
	comp=Z,2µm,18.0s						
ANTO	Ankara	77.82	314	P	P	22 29 25.5	+1.2
	SNR=8.8						
ANTO				P	P	22 29 25.5	+1.2
	SNR=8.8						
EAU	Auchinoon	77.83	343	⇑*e*P	P	22 29 24.1	+0.2
LAWE	Loch Awe, Argy	77.83	345	⇑*e*P	P	22 29 24.2	+0.3
BR231	Keskin MP Arra	77.85	314	*e*P	P	22 29 26.1	+1.6
SCHQ	Schefferville	77.91	19	*e*P	P	22 29 24.7	+0.3
	comp=Z,60nm,1.1s						
SCHQ				LR	LR		
	comp=Z,2µm,20.0s						
SCHQ	Schefferville	77.91	19	P	P	22 29 24.5	+0.1
	comp=Z,18nm,0.7s,baz=359,slow=6.6,SNR=39						
SCHQ				LR	LR	23 05 47.9	
	comp=Z,1µm,21.0s,baz=339,slow=37						
COWI	Conover	77.92	36	*e*P	P	22 29 24.5	-0.1
GOPC	GO Pecny, Ondr	77.92	331	*e*P	P	22 29 24.9	+0.3
GOPC				AMS	AMS	23 09 20.0	
	comp=Z,1µm,17.0s						
GOPC	GO Pecny, Ondr	77.92	331	*e*P	P	22 29 24.9	+0.3
GOPC				MLR	MLR		
	comp=Z,1µm,17.0s						
KOZT	Kozan	77.92	311	*e*P	P	22 29 24.1	-0.7
PRU	Pruhonice	77.94	331	*e*P	P	22 29 25.5	+0.8
PRU				*e*PCP	PcP	22 29 32.6	-1.7
PRU				*e*S	S	22 39 11.6	-3.0
PRU				AMS	AMS	23 10 10.0	
	comp=Z,1µm,16.0s						
PRU	Pruhonice	77.94	331	*e*P	P	22 29 25.5	+0.8
PRU				*e*		22 29 32.6	
PRU				*e*S	S	22 39 11.6	-3.0
PRU				MLR	MLR		
	comp=Z,1µm,16.0s						
LOT	Lotru	77.95	323	⇓*i*P	P	22 29 25.8	+0.9
YAYX	Yaylak	77.96	313	*e*P	P	22 29 25.7	+0.6
DEV	Deva	77.98	324	⇑*i*P	P	22 29 26.2	+1.2
DEV	Deva	77.98	324	P	P	22 29 25.8	+0.8
DEV				pmax	pmax		
	comp=Z,50nm,1.5s						
AFSR	Afar-Bala (An	77.99	314	*e*P	P	22 29 26.5	+1.3
PRD	Provadia	78.03	319	P	P	22 29 25.5	+0.3
KRUC	Moravsky	78.04	329	P	P	22 29 25.8	+0.6
KRUC				pmax	pmax		
	comp=Z,104nm,1.3s						
KRUC	Moravsky	78.04	329	*e*P	P	22 29 26.1	+0.9
KRUC				*e*pP	pP	22 29 36.8	-1.0
WIT	Witteveen	78.06	337	P	P	22 29 26.9	+1.7
WIT				pmax	pmax		
	comp=Z,1µm,1.6s						
PGBU	Glenifferbraes	78.07	344	⇑*e*P	P	22 29 25.9	+0.7
PGBU				IAmb	IAmb	22 29 26.9	
	comp=Z,97nm,0.9s						
H39A	Augusta	78.08	38	P	P	22 29 25.3	-0.3
	baz=321						
SMOL	Smolenice	78.10	328	P	P	22 29 27.3	+1.7
SMOL				pmax	pmax		
	comp=Z,165nm,1.0s						
SMOL	Smolenice	78.10	328	*e*P	P	22 29 26.6	+1.0
G40A	Rib Lake	78.11	37	*e*P	P	22 29 25.6	-0.1
	comp=Z,75nm,0.8s						
G40A	Rib Lake	78.11	37	P	P	22 29 24.9	-0.8
	baz=322						
HUMR	Humele	78.12	322	⇑*i*P	P	22 29 26.2	+0.4
319A	Douglas	78.13	58	*e*P	P	22 29 27.3	+1.1
	comp=Z,91nm,0.9s						
E42A	Champion	78.17	35	P	P	22 29 25.7	-0.3
	baz=323						
TREC	Trest	78.18	330	*e*P	P	22 29 26.3	+0.3
TREC				*e*S	S	22 39 16.4	-0.9
TREC				AMS	AMS	23 08 30.0	
	comp=Z,1µm,16.6s						
TREC	Trest	78.18	330	*e*P	P	22 29 26.3	+0.3
TREC				*e*S	S	22 39 16.4	-0.9
TREC				MLR	MLR		
	comp=Z,1µm,16.6s						
MDUB	Mudurnu	78.20	315	*e*P	P	22 29 27.7	+1.3
SIRR	Siria	78.21	325	⇑*i*P	P	22 29 27.4	+1.2
F41A	Three Lakes	78.22	36	*e*P	P	22 29 26.1	-0.2
	comp=Z,118nm,0.8s						
F41A	Three Lakes	78.22	36	P	P	22 29 26.2	-0.1
	baz=322						
EKA	Eskdalemuir Ar	78.24	343	P	P	22 29 26.2	0.0
121A	Cookes Peak, D	78.24	56	P	P	22 29 27.2	+0.3
	baz=314						
ESK	Eskdalemuir	78.27	343	*e*P	P	22 29 26.9	+0.5
	comp=Z,40nm,0.7s						
ESK	Eskdalemuir	78.27	343	⇑*e*P	P	22 29 26.7	+0.4
ESK				IAmb	IAmb	22 29 27.3	
	comp=Z,40nm,0.7s						
ESK	Eskdalemuir	78.27	343	*e*P	P	22 29 26.9	+0.5
ESK				pmax	pmax		
	comp=Z,40nm,0.7s						
MODS	Modra-Piesok	78.27	328	*e*P	P	22 29 28.0	+1.5
MODS				*e*		22 29 38.3	
MODS				pmax	pmax		
	comp=Z,69nm,1.1s						
MODS	Modra-Piesok	78.27	328	*e*P	P	22 29 28.0	+1.5
MODS				*e*pP	pP	22 29 38.3	-0.8
CEYT	Ceyhan	78.31	310	*e*P	P	22 29 29.7	+2.8
BUD	Budapest	78.31	327	P	P	22 29 27.9	+1.1
BUD				pmax	pmax		
	comp=Z,72nm,1.4s						
BUD	Budapest	78.31	327	⇑*e*P	P	22 29 27.1	+0.3
KULU	Kulu	78.32	313	*e*P	P	22 29 27.8	+0.7
SRO	Srobarova	78.33	327	*e*P	P	22 29 27.9	+1.1
SRO	Srobarova	78.33	327	*e*P	P	22 29 27.9	+1.1
SRO2	Moca	78.34	327	*e*P	P	22 29 27.0	+0.1
SRO2	Moca	78.34	327	*e*P	P	22 29 27.0	+0.1
CBKS	Cedar Bluff	78.35	47	P	P	22 29 26.4	-0.8
	baz=317						
MOX	Moxa	78.40	333	P	P	22 29 27.5	+0.3
MOX				pmax	pmax		
	comp=Z,55nm,1.6s						
GZR	Gura Zlata	78.42	323	⇑*i*P	P	22 29 28.0	+0.5
GZR	Gura Zlata	78.42	323	P	P	22 29 28.0	+0.5
EDMD	Edmundbyers	78.45	342	⇑*e*P	P	22 29 27.6	+0.2
NKC	Novy Kostel	78.47	332	*e*P	P	22 29 28.3	+0.7
NKC				AMS	AMS	23 08 20.0	
	comp=Z,1µm,17.7s						
NKC	Novy Kostel	78.47	332	*e*P	P	22 29 28.3	+0.7
NKC				MLR	MLR		
	comp=Z,1µm,17.7s						
BHH	Howats Hill	78.48	343	⇑*i*P	P	22 29 28.1	+0.6
ZST	Bratislava	78.48	328	*e*P	P	22 29 27.8	+0.1
ZST				*e*		22 29 38.5	
ZST	Bratislava	78.48	328	*e*P	P	22 29 27.8	+0.1
ZST				*e*PCP	pP	22 29 38.5	-1.8
YURE	YUREGIR	78.50	310	*e*P	P	22 29 29.2	+1.2
AUMIH	MIHALICIK	78.50	315	*e*P	P	22 29 26.8	-1.3
KARA	Karaisali	78.51	311	*e*P	P	22 29 28.4	+0.4
CAN	Canberra	78.52	178	*e*P	P	22 29 29.0	+1.2
	comp=Z,23nm,1.1s						
CAN				LR	LR		
	comp=Z,700nm,21.0s						
CAN	Canberra	78.52	178	*e*P	P	22 29 29.0	+1.2
CAN				pmax	pmax		
	comp=Z,23nm,1.1s						
CAN				MLR	MLR		
	comp=Z,700nm,21.0s						
TAHT	Tahtakopru-Hat	78.52	310	*e*P	P	22 29 29.4	+1.3
H40A	Chili	78.53	38	P	P	22 29 27.0	-1.0
	baz=322						
GULT	Gulveren	78.58	316	*e*P	P	22 29 28.2	-0.3
G41A	Antigo	78.60	37	P	P	22 29 27.7	-0.7
	baz=322						
E43A	Lone Tree Farm	78.60	35	*e*P	P	22 29 28.2	-0.1
	comp=Z,85nm,0.8s						
E43A	Lone Tree Farm	78.60	35	P	P	22 29 27.7	-0.7
	baz=323						
F42A	Maple Grove Fa	78.61	36	P	P	22 29 27.8	-0.7
	baz=323						
I39A	Houston	78.62	39	*e*P	P	22 29 28.2	-0.3
	comp=Z,106nm,0.8s						
I39A	Houston	78.62	39	P	P	22 29 27.4	-1.1
	baz=321						
ZIMR		78.62	321	⇓*i*P	P	22 29 29.3	+0.8
SULT	Sultanhani-AKS	78.66	312	*e*P	P	22 29 28.2	-0.8
SZH	Strazhica	78.66	320	P	P	22 29 27.9	-0.9
CHBY	Cihanbeyli	78.72	313	*e*P	P	22 29 28.6	-0.7
BZS	Buzias	78.75	324	⇑*i*P	P	22 29 29.6	+0.4
BZS	Buzias	78.75	324	P	P	22 29 29.4	+0.2
BZS				pmax	pmax		
	comp=Z,51nm,1.5s						
WTSB	Winterswijk	78.77	336	*e*P	P	22 29 29.1	0.0
WTSB				*e*pP	pP	22 29 40.2	-1.5
AUSIV	SIVRIHISAR	78.79	314	*e*P	P	22 29 29.4	-0.3
SRE	Strehaia	78.81	323	⇓*i*P	P	22 29 30.0	+0.4
SRE	Strehaia	78.81	323	P	P	22 29 30.0	+0.4
E44A	Grand Marais A	78.84	34	*e*P	P	22 29 29.9	+0.2
	comp=Z,157nm,0.8s						
E44A	Grand Marais A	78.84	34	P	P	22 29 29.5	-0.2
	baz=324						
H41A	Junction City	78.86	37	*e*P	P	22 29 30.1	+0.2
	comp=Z,78nm,0.8s						
H41A				LR	LR		
	comp=Z,600nm,19.0s						
H41A	Junction City	78.86	37	P	P	22 29 28.9	-0.9
	baz=322						
BGKT	Bogazkoy	78.89	317	*e*P	P	22 29 24.9	-5.1
G42A	Mountain	78.90	36	*e*P	P	22 29 30.1	+0.1
	comp=Z,102nm,0.9s						
G42A	Mountain	78.90	36	P	P	22 29 29.4	-0.7
	baz=323						
KESW	Keswick, Cumbr	78.92	343	⇑*e*P	P	22 29 30.3	+0.3
J39A	Decorah	78.93	39	P	P	22 29 29.1	-1.2
	baz=321						
F43A	Flat Rock, Esc	78.96	35	P	P	22 29 29.8	-0.6
	baz=323						
BUY	Buyukada	78.97	317	*e*P	P	22 29 29.6	-0.9
JMB	Yambol	78.97	319	P	P	22 29 30.5	0.0
PVL	Pavlikeni	78.98	321	P	P	22 29 30.5	0.0
CTKS	Kestanelik-??a	78.98	317	*e*P	P	22 29 29.0	-1.5
HERR	Herculane	78.98	323	⇑*i*P	P	22 29 30.8	+0.3
I40A	Norwalk	79.00	38	P	P	22 29 30.1	-0.5
	baz=322						
GAL1	Galloway	79.00	344	⇑*e*P	P	22 29 30.7	+0.4
GAL1				IAmb	IAmb	22 29 32.3	
	comp=Z,31nm,0.6s						
KHC	Kasperske Hory	79.00	331	*e*P	P	22 29 31.4	+0.8
	comp=Z,25nm,0.8s						
KHC				LR	LR		
	comp=Z,700nm,18.0s						
KHC	Kasperske Hory	79.00	331	*e*P	P	22 29 31.4	+0.8
KHC				*e*x	x	22 29 35.5	
KHC				AMS	AMS	23 08 30.0	
	comp=Z,2µm,18.0s						
KHC	Kasperske Hory	79.00	331	*e*P	P	22 29 31.4	+0.8
KHC				*e*		22 29 35.5	
KHC				MLR	MLR		
	comp=Z,2µm,18.0s						
BORA	Eskisehir	79.03	315	*e*P	P	22 29 31.7	+0.8
CLGH	Cloghs, Cushen	79.08	345	⇑*e*P	P	22 29 31.3	+0.5
CLGH				IAmb	IAmb	22 29 31.8	
	comp=Z,65nm,0.8s						
MERS	Mersin	79.08	311	*e*P	P	22 29 30.3	-1.0
SOP	Sopron	79.11	328	P	P	22 29 32.4	+1.3
SOP				pmax	pmax		
	comp=Z,84nm,1.4s						
SOP	Sopron	79.11	328	⇑*e*P	P	22 29 32.1	+0.9
SLVT	Silivri	79.13	318	*e*P	P	22 29 30.7	-0.7
F44A	Big Bay de Noc	79.16	35	P	P	22 29 30.8	-0.7
	baz=324						
HPK	Haverah Park	79.18	342	⇑*e*P	P	22 29 32.2	+0.9
HPK				IAmb	IAmb	22 29 33.0	
	comp=Z,123nm,0.6s						
GEC2	GERESS Array S	79.20	331	*e*P	P	22 29 32.1	+0.3
	comp=Z,21nm,0.8s						
GEC2				LR	LR		
	comp=Z,2µm,19.0s						
GEC2	GERESS Array S	79.20	331	*e*P	P	22 29 32.1	+0.3
GEC2				pmax	pmax		
	comp=Z,21nm,0.8s						
GEC2				MLR	MLR		
	comp=Z,2µm,19.0s						
GERES	GERESS Array B	79.20	331	P	P	22 29 32.0	+0.3
	comp=Z,11nm,0.6s,baz=37,slow=5.9,SNR=122						
GERES				LR	LR	23 09 13.7	
	comp=Z,1µm,18.1s,baz=40,slow=39						
I41A	Arkdale	79.20	38	*e*P	P	22 29 31.8	+0.1
	comp=Z,81nm,0.8s						
I41A	Arkdale	79.20	38	P	P	22 29 30.8	-0.9
	baz=322						
G43A	Wallace	79.20	36	*e*P	P	22 29 31.8	+0.1
	comp=Z,172nm,0.8s						
G43A	Wallace	79.20	36	P	P	22 29 31.4	-0.3
	baz=323						
GEA0	GERESS Array S	79.21	331	*e*P	P	22 29 31.3	-0.4
PUNG	Punghina	79.23	323	⇑*i*P	P	22 29 32.4	+0.5
TIH	Tihany	79.24	327	⇑*e*P	P	22 29 31.1	-0.7
WET	Wettzell	79.24	331	P	P	22 29 32.4	+0.5
WET				pmax	pmax		
	comp=Z,71nm,1.3s						
LADK	Ladik-KONYA	79.28	313	*e*P	P	22 29 32.3	-0.1
MATQ	Matagami	79.31	28	P	P	22 29 31.5	-0.7
	baz=329						
ARMT	Armutlu	79.31	317	*e*P	P	22 29 31.9	-0.5
SCIA	State Center	79.33	41	*e*P	P	22 29 33.0	+0.5
	comp=Z,216nm,0.8s						
SCIA	State Center	79.33	41	P	P	22 29 32.5	+0.1
	baz=320						
J40A	Soldiers Grove	79.33	39	P	P	22 29 31.3	-1.1
	baz=322						
K39A	Oelwein	79.34	40	P	P	22 29 31.2	-1.2
	baz=321						
GRA1	Grafenberg Arr	79.34	332	*e*P	P	22 29 32.6	+0.2
	comp=Z,79nm,0.8s						
GRA1				LR	LR		
	comp=Z,1µm,20.0s						
GRF	Grafenberg Arr	79.34	332	*e*P	P	22 29 32.6	+0.2
GRF				pmax	pmax		
	comp=Z,79nm,0.8s						
GRF				MLR	MLR		
	comp=Z,1µm,20.0s						
GRFO	Grafenberg	79.34	332	*e*P	P	22 29 33.4	+1.0
	comp=Z,132nm,1.2s						
GRFO				LR	LR		
	comp=Z,1µm,20.0s						
GRFO	Grafenberg	79.34	332	*e*P	P	22 29 33.4	+1.0
GRFO				pmax	pmax		
	comp=Z,132nm,1.2s						
GRFO				MLR	MLR		
	comp=Z,1µm,20.0s						
IDGL	Inch Island, C	79.35	345	*i* P	P	22 29 32.2	-0.1
E45A	Wooded Hills,	79.36	34	P	P	22 29 32.1	-0.4
	baz=324						
MDVR	Moldovita	79.37	324	⇑*i*P	P	22 29 33.0	+0.3
EDRB	Edirne	79.37	319	*e*P	P	22 29 32.7	0.0
EDRB	Edirne	79.37	319	*e*P	P	22 29 32.9	+0.2
EDRB	Edirne	79.37	319	P	P	22 29 32.9	+0.2
D46A	Sault St. Mari	79.38	33	P	P	22 29 31.8	-0.8
	baz=325						
H42A	Shiocton	79.44	37	P	P	22 29 32.5	-0.5
	baz=323						
CRLT	Corlu	79.44	318	*e*P	P	22 29 33.1	0.0
KONT	Konya--Tatoy	79.47	313	*e*P	P	22 29 34.3	+1.0
MORH	Mrgy, Hungar	79.50	326	⇑*i*P	P	22 29 33.1	-0.2
MORH	Mrgy, Hungar	79.50	326	⇑*e*P	P	22 29 33.1	-0.2
KIZK	Mersin	79.58	311	*e*P	P	22 29 28.4	-5.5
D47A	Chapleau	79.60	32	P	P	22 29 32.9	-1.0
	baz=326						
WIM	Isle of Man	79.67	343	⇑*e*P	P	22 29 34.4	+0.4
J41A	Loganville	79.68	38	P	P	22 29 33.5	-0.8
	baz=322						
K40A	Colesburg	79.69	39	P	P	22 29 33.7	-0.7
	baz=321						
E46A	Sault Ste Mari	79.70	33	P	P	22 29 33.7	-0.7
	baz=325						
LBWR	Ladybower, Pea	79.71	341	⇑*e*P	P	22 29 35.2	+0.8
LBWR				IAmb	IAmb	22 29 35.6	
	comp=Z,169nm,0.7s						
L39A	Vinton	79.74	40	P	P	22 29 34.0	-0.6
	baz=321						
I42A	Draeger Farm,	79.76	37	*e*P	P	22 29 37.9	+3.2
	comp=Z,78nm,0.8s						

I42A				LR	LR		
	comp=Z,700nm,20.0s						
F45A	CMU Biological	79.77	34	P	P	22 29 34.1	-0.6
	baz=324						
WACR	West Acre	79.77	340	⇑eP	P	22 29 35.2	+0.6
WACR				IAmb	IAmb	22 29 35.8	
	comp=Z,99nm,0.8s						
KSU1	Kansas State U	79.77	45	eP	P	22 29 35.1	+0.2
	comp=Z,67nm,0.8s						
KSU1	Kansas State U	79.77	45	P	P	22 29 33.8	-1.1
	baz=319						
KCTX	Karacabey (Bur	79.79	317	eP	P	22 29 35.2	+0.2
H43A	Windswept, Lux	79.80	36	P	P	22 29 34.8	-0.2
	baz=323						
KEBE	Keben-Mersin	79.84	311	eP	P	22 29 33.9	-1.5
GRC1	Grafenberg Arr	79.84	332	P	P	22 29 35.7	+0.6
GMM	Mts of Mourne	79.84	344	eP	P	22 29 35.1	+0.2
TVSB	Tavsanli	79.85	316	eP	P	22 29 36.6	+1.1
FRGS	Fruska Gora	79.88	325	⇑iP	P	22 29 35.7	+0.3
BEO	Beograd	79.88	324	P	P	22 29 36.0	+0.7
JFWS	Jewell Farm	79.93	39	eP	P	22 29 38.0	+2.3
	comp=Z,39nm,0.8s						
JFWS	Jewell Farm	79.93	39	eP	P	22 29 38.0	+2.3
JFWS				pmax	pmax		
	comp=Z,39nm,0.8s						
JFWS	Jewell Farm	79.93	39	P	P	22 29 35.0	-0.7
	baz=322						
SHUT	Suhut-Afyon	79.97	314	eP	P	22 29 37.4	+1.3
EDC	Edincik	79.97	317	eP	P	22 29 36.8	+0.8
TEVE	Tevekalti-Mers	79.99	311	eP	P	22 29 36.2	0.0
D48A	Paudash Townsh	80.00	31	P	P	22 29 34.5	-1.5
	baz=326						
F46A	Macinaw City C	80.00	34	P	P	22 29 35.6	-0.4
	baz=325						
IKL	Isikli	80.00	311	eP	P	22 29 37.0	+0.8
BEHE	Becsehely	80.03	327	⇑iP	P	22 29 36.7	+0.5
BEHE	Becsehely	80.03	327	⇑eP	P	22 29 35.1	-1.1
E47A	Iron Bridge	80.03	33	P	P	22 29 35.2	-0.9
	baz=326						
RKY	Sarkoy-Tekirda	80.05	318	eP	P	22 29 37.8	+1.4
HGN	Heimansgroeve	80.08	336	eP	P	22 29 36.5	+0.2
HGN				epP	pP	22 29 47.7	-1.3
HGN				eS	S	22 39 45.8	+8.5
I43A	Langenfeld Bro	80.10	37	P	P	22 29 36.2	-0.4
	baz=323						
STNC	Stoke	80.11	342	⇑eP	P	22 29 37.1	+0.7
STNC				IAmb	IAmb	22 29 39.5	
	comp=Z,60nm,0.6s						
J42A	Columbus	80.12	38	P	P	22 29 36.0	-0.7
	baz=322						
LSQQ	Lebel-sur-Quev	80.13	27	P	P	22 29 36.4	-0.2
	baz=329						
BEBN	Eben Emael	80.13	336	⇑P	P	22 29 37.0	+0.4
BEBN				⇑pP	pP	22 29 47.7	-1.5
PLD	Plovdiv	80.14	320	eP	P	22 29 37.8	+1.0
PLD	Plovdiv	80.14	320	P	P	22 29 36.5	-0.3
AKKU	Akkuyu-Mersin	80.14	311	eP	P	22 29 37.6	+0.7
AMTX	Amarillo	80.14	51	P	P	22 29 37.5	+0.3
	baz=317						
K41A	Shullsburg	80.14	39	P	P	22 29 35.9	-0.9
	baz=322						
L40A	Anamosa	80.15	40	eP	P	22 29 36.5	-0.4
	comp=Z,89nm,0.9s						
L40A	Anamosa	80.15	40	P	P	22 29 36.0	-0.9
	baz=321						
KDZ	Kurdzhali	80.16	319	P	P	22 29 40.5	+3.6
BERE	Bereket-Mersin	80.18	311	eP	P	22 29 37.6	+0.3
MSTX	Muleshoe	80.18	52	eP	P	22 29 37.8	+0.5
	comp=Z,36nm,1.1s						
MSTX	Muleshoe	80.18	52	P	P	22 29 37.5	+0.1
	baz=316						
GEDZ	Gediz	80.19	315	eP	P	22 29 38.7	+1.5
MEM	Membach	80.20	336	P	P	22 29 37.3	+0.3
MEM				pmax	pmax		
	comp=Z,58nm,1.4s						
MEM	Membach	80.20	336	⇑P	P	22 29 37.2	+0.3
	comp=Z,38nm,1.3s						
MEM				⇑PcP	PcP	22 29 41.0	-3.1
MEM				⇓pP	pP	22 29 48.3	-1.3
KRBG	Karabiga-Canak	80.22	318	eP	P	22 29 35.6	-1.6
CWF	Charnwood Fore	80.23	341	⇑eP	P	22 29 37.4	+0.3
G45A	Suttons Bay	80.23	35	P	P	22 29 36.8	-0.5
	baz=324						
CHGQ	Chibougamau	80.23	26	P	P	22 29 36.5	-0.7
	baz=331						
KOGS	Kog	80.25	328	eP	P	22 29 37.5	+0.1
KOGS				i pP	pP	22 29 48.2	-1.8
MNTX	Cornudas Mount	80.28	55	eP	P	22 29 38.3	+0.5
	comp=Z,45nm,0.8s						
MNTX	Cornudas Mount	80.28	55	P	P	22 29 37.8	+0.1
	baz=316						
WME	Myndd Eilian	80.29	343	⇑eP	P	22 29 37.7	+0.3
G46A	Petoskey	80.33	34	P	P	22 29 37.1	-0.7
	baz=325						
J43A	Natural Harves	80.38	37	P	P	22 29 37.2	-0.9
	baz=323						
ERIK	Erikli-Kesan	80.39	318	eP	P	22 29 38.9	+0.8
TEKE	Tekeli-Mersin	80.39	311	eP	P	22 29 36.8	-1.5
H45A	Beulah	80.41	35	P	P	22 29 37.3	-0.9
	baz=324						
VTS	Vitosha	80.41	321	eP	P	22 29 39.5	+1.0
VTS				LR	LR		
	comp=Z,2µm,21.0s						
VTS	Vitosha	80.41	321	⇑iP	P	22 29 39.8	+1.3
VTS	Vitosha	80.41	321	P	P	22 29 37.8	-0.7
WLF1	Llynfaes	80.41	343	eP	P	22 29 37.9	-0.1
WLF1				IAmb	IAmb	22 29 39.7	
	comp=Z,44nm,0.7s						
ALN	Alexandroupoli	80.44	319	eP	P	22 29 37.8	-0.6
ALN	Alexandroupoli	80.44	319	eP	P	22 29 38.9	+0.5
ALN				LR	LR		
	comp=Z,400nm,19.0s						
ALN	Alexandroupoli	80.44	319	P	P	22 29 38.9	+0.5
ALN	Alexandroupoli	80.44	319	eP	P	22 29 38.9	+0.5
ALN				MLR	MLR		
	comp=Z,400nm,19.0s						
E48A	Lockeyer	80.44	32	P	P	22 29 37.2	-1.2
	baz=326						
K42A	Prairie Point,	80.44	38	P	P	22 29 37.2	-1.2
	baz=322						
L41A	Preston	80.47	39	P	P	22 29 37.7	-0.9
	baz=322						
RDO	Rodhopi	80.49	319	eP	P	22 29 38.9	+0.2
RDO	Rodhopi	80.49	319	eP	P	22 29 38.1	-0.6
RDO	Rodhopi	80.49	319	P	P	22 29 38.1	-0.6
LPK	Lapseki	80.50	318	eP	P	22 29 37.8	-1.0
YLL	Llanberis	80.50	343	⇑eP	P	22 29 38.5	0.0
UCC	Uccle	80.51	337	eP	P	22 29 39.3	+0.7
	comp=Z,65nm,1.5s						
UCC				LR	LR		
	comp=Z,2µm,19.0s						
UCC	Uccle	80.51	337	eP	P	22 29 39.3	+0.7
UCC				pmax	pmax		
	comp=Z,65nm,1.5s						
UCC				MLR	MLR		
	comp=Z,2µm,19.0s						
UCC	Uccle	80.51	337	⇑P	P	22 29 38.6	0.0
UCC				⇓pP	pP	22 29 49.7	-1.6
ENEZ	Enez	80.51	318	eP	P	22 29 38.9	+0.1
M40A	Post Highland	80.52	40	P	P	22 29 38.5	-0.4
	baz=321						
FOEL	Foel Wylfa	80.52	342	⇑eP	P	22 29 39.6	+0.9
FOEL				IAmb	IAmb	22 29 41.0	
	comp=Z,160nm,0.6s						
GDL2	Guadalupe Moun	80.53	54	eP	P	22 29 40.6	+1.4
ISP	Isparta	80.53	314	PFAKE		22 29 50.0	+11
ISP				LR	LR		
	comp=Z,2µm,18.0s						
PERS	Pernice	80.53	329	i P	P	22 29 39.4	+0.4
PERS				i pP	pP	22 29 50.1	-1.4
BCLA	Clavier	80.57	336	⇑P	P	22 29 39.2	+0.2
BCLA				⇓pP	pP	22 29 50.4	-1.3
GELI	Tayfur-Gelibol	80.62	318	eP	P	22 29 39.1	-0.3
FUR	Furstenfeldbru	80.63	332	P	P	22 29 40.1	+0.7
DIVS	Divibare	80.65	324	eP	P	22 29 39.8	+0.1
	comp=Z,97nm,1.5s						
DIVS				LR	LR		
	comp=Z,1µm,20.0s						
DIVS	Divibare	80.65	324	⇑iP	P	22 29 39.7	+0.1
LLW	Llanuwychllyn	80.67	342	⇑eP	P	22 29 40.1	+0.7
D50A	G1974 Best Tow	80.74	30	P	P	22 29 39.4	-0.5
	baz=328						
TOO	Toolangi	80.74	181	eP	P	22 29 40.7	+0.9
	comp=Z,15nm,0.8s						
TOO				LR	LR		
	comp=Z,800nm,19.0s						
NWAO	Narrogin (SRO)	80.75	205	eP	P	22 29 40.1	+0.1
NWAO	Narrogin (SRO)	80.75	205	P	P	22 29 39.6	-0.3
	comp=Z,40nm,0.9s,baz=270,slow=5.5,SNR=16						
VLDQ	Val d'Or	80.78	28	eP	P	22 29 38.9	-1.2
	comp=Z,114nm,0.9s						
LFK	Lefkose	80.79	310	eP	P	22 29 39.9	-0.6
I45A	Fountain	80.80	36	P	P	22 29 39.9	-0.4
	baz=324						
F48A	Evansville	80.81	33	P	P	22 29 39.4	-0.9
	baz=326						
STU	Stuttgart	80.81	333	eP	P	22 29 40.5	+0.2
	comp=Z,48nm,0.7s						
STU				LR	LR		
	comp=Z,700nm,20.0s						
STU	Stuttgart	80.81	333	eP	P	22 29 40.5	+0.2
STU				pmax	pmax		
	comp=Z,48nm,0.7s						
STU				MLR	MLR		
	comp=Z,700nm,20.0s						
KBA	Koelnbreinsper	80.82	330	P	P	22 29 41.5	+0.9
KBA				pmax	pmax		
	comp=Z,68nm,1.0s						
H46A	Fife Lake	80.83	35	P	P	22 29 40.0	-0.4
	baz=325						
GLMI	Grayling	80.83	34	P	P	22 29 40.3	-0.2
	baz=325						
G47A	Hillman	80.86	34	P	P	22 29 40.2	-0.4
	baz=325						
DSB	Dublin	80.86	344	i P	P	22 29 40.5	0.0
DSB	Dublin	80.86	344	eP	P	22 29 41.2	+0.7
	comp=Z,40nm,0.5s						
N40A	Mertquake, Sal	80.89	41	P	P	22 29 40.6	-0.3
	baz=321						
L42A	Oliver, Polo	80.91	39	eP	P	22 29 40.5	-0.4
	comp=Z,77nm,0.8s						
L42A	Oliver, Polo	80.91	39	P	P	22 29 40.2	-0.8
	baz=322						
K43A	Burlington	80.96	38	P	P	22 29 40.3	-0.9
	baz=323						
KULA	Kula-Manisa	80.97	316	eP	P	22 29 40.7	-0.7
KULA	Kula-Manisa	80.97	316	eP	P	22 29 41.2	-0.2
KULA	Kula-Manisa	80.97	316	P	P	22 29 41.2	-0.2
D51A	Lot 18 Range I	80.97	30	P	P	22 29 40.1	-1.1
	baz=328						
WLF	Walferdange	80.99	335	eP	P	22 29 41.8	+0.6
	comp=Z,284nm,1.4s						
WLF				LR	LR		
	comp=Z,9µm,18.0s						
WLF	Walferdange	80.99	335	⇓P	P	22 29 41.6	+0.4
WLF				⇑pP	pP	22 29 53.3	-0.6
	comp=Z,46nm,2.1s						
MMB	Musomiste	80.99	320	P	P	22 29 39.2	-2.3
GIVF	Givet	81.00	336	eP	P	22 29 40.6	-0.7
GIVF				pmax	pmax		
	comp=Z,151nm,1.8s						
M41A	Milan	81.00	40	P	P	22 29 40.3	-1.1
	baz=322						
E50A	Wahnapitae	81.03	31	P	P	22 29 40.4	-1.2
	baz=327						
MANT	Manisa	81.04	316	eP	P	22 29 42.8	+0.8
	comp=Z,153nm,1.0s						
DOU	Dourbes	81.07	336	P	P	22 29 41.8	+0.2
DOU	Dourbes	81.07	336	⇑P	P	22 29 41.6	0.0
DOU				⇓pP	pP	22 29 53.1	-1.2
ELSH	Elham, Standar	81.08	339	⇑eP	P	22 29 42.3	+0.7
ELSH				IAmb	IAmb	22 29 43.1	
	comp=Z,130nm,0.7s						
CRES	Cresnjev	81.08	328	⇑iP	P	22 29 41.8	0.0
LANF	Langenberg	81.08	334	P	P	22 29 42.4	+0.6
F49A	Sandfield	81.09	32	P	P	22 29 40.9	-0.9
	baz=326						
BBLS	Lazići	81.09	324	⇑iP	P	22 29 42.6	+0.6
KAVA	Kavala	81.09	320	eP	P	22 29 42.3	+0.4
KAVA	Kavala	81.09	320	P	P	22 29 42.3	+0.4
HAPS	Han Pijesak,Bl	81.10	325	⇑iP	P	22 29 42.1	0.0
NVR	Nevrokopi	81.12	320	eP	P	22 29 42.3	+0.2
NVR	Nevrokopi	81.12	320	P	P	22 29 42.3	+0.2
EZN	Ezine	81.13	318	eP	P	22 29 41.5	-0.6
EZN	Ezine	81.13	318	eP	P	22 29 41.5	-0.6
EZN	Ezine	81.13	318	P	P	22 29 41.5	-0.6
EZN	Ezine	81.13	318	eP	P	22 29 41.5	-0.6
CSS	Mathiatis	81.14	310	eP	P	22 29 41.1	-1.2
CSS	Mathiatis	81.14	310	eP	P	22 29 42.5	+0.2
	comp=Z,66nm,1.1s						
CSS				LR	LR		
	comp=Z,800nm,21.0s						
H47A	Mio	81.19	34	P	P	22 29 41.7	-0.7
	baz=325						
L43A	Garden Prairie	81.19	38	P	P	22 29 41.8	-0.7
	baz=323						
I46A	Reed City	81.21	35	P	P	22 29 42.3	-0.2
	baz=325						
BAIF	Baives	81.22	337	eP	P	22 29 41.8	-0.6
BAIF				pmax	pmax		
	comp=Z,71nm,1.4s						
J45A	Montague	81.22	36	P	P	22 29 41.7	-0.9
	baz=324						
KORT	Korkueli	81.23	313	eP	P	22 29 42.3	-0.7
OZLJ	Ozalj	81.25	328	P	P	22 29 42.1	-0.5
LJU	Ljubljana	81.25	329	i P	P	22 29 42.5	-0.3
LJU	Ljubljana	81.25	329	⇑iP	P	22 29 42.4	-0.3
IGLA	Glengowla, Co	81.27	346	i P	P	22 29 41.9	-0.7
BLY	Banja Luka	81.29	326	eP	P	22 29 42.5	-0.4
	comp=Z,53nm,1.4s						
BLY				LR	LR		
	comp=Z,2µm,21.0s						
BLY	Banja Luka	81.29	326	⇑iP	P	22 29 43.0	0.0
BLY	Banja Luka	81.29	326	⇑iP	P	22 29 42.9	0.0
M42A	Sheffield	81.30	39	P	P	22 29 42.1	-0.9
	baz=322						
MCH1	Michaelchurch	81.31	342	⇑eP	P	22 29 43.5	+0.6
MCH1				IAmb	IAmb	22 29 45.5	
	comp=Z,72nm,0.7s						
STRD	Stroud	81.32	341	⇑eP	P	22 29 43.5	+0.6
STRD				IAmb	IAmb	22 29 45.8	
	comp=Z,427nm,1.7s						
N41A	Harden Midland	81.38	40	eP	P	22 29 43.2	-0.2
	comp=Z,168nm,0.8s						
N41A	Harden Midland	81.38	40	P	P	22 29 42.6	-0.9
	baz=322						
E51A	G1948 Merrick	81.40	30	P	P	22 29 42.5	-1.0
	baz=328						
MONM	Monmouth	81.41	341	⇑eP	P	22 29 44.0	+0.6
D52A	ZEK Kipawa Sen	81.42	29	P	P	22 29 42.7	-0.9
	baz=329						
LPW	Lampeter	81.44	342	⇑eP	P	22 29 44.1	+0.6
H48A	Harrisville	81.46	34	P	P	22 29 43.3	-0.5
	baz=326						
SWN1	Swindon	81.48	341	⇑eP	P	22 29 44.6	+0.8
SWN1				IAmb	IAmb	22 29 45.6	
	comp=Z,179nm,0.6s						
BFO	Black Forest	81.48	333	eP	P	22 29 43.4	-0.5
	comp=Z,32nm,0.9s						
BFO				LR	LR		
	comp=Z,800nm,18.0s						
BFO	Black Forest	81.48	333	eP	P	22 29 43.4	-0.5
BFO				pmax	pmax		
	comp=Z,32nm,0.9s						
BFO				MLR	MLR		
	comp=Z,800nm,18.0s						
WOL	Wolverton	81.52	340	⇑eP	P	22 29 44.5	+0.5
WOL				IAmb	IAmb	22 29 45.8	
	comp=Z,187nm,0.6s						
PLE	Pljevlja	81.53	324	⇑iP	P	22 29 44.9	+0.5
I47A	Gladwin	81.54	35	P	P	22 29 44.2	-0.1
	baz=325						
HMNX	Herstmonceux	81.54	339	⇑eP	P	22 29 45.3	+1.2
HMNX				IAmb	IAmb	22 29 45.9	
	comp=Z,183nm,0.7s						
CEY	Cerknica	81.55	328	⇑iP	P	22 29 44.0	-0.3
L44A	Lake County Fo	81.57	38	P	P	22 29 43.6	-0.8
	baz=323						
D53A	Lac Vacive, Po	81.58	29	P	P	22 29 43.5	-1.0
	baz=329						
J46A	Howard City	81.61	36	P	P	22 29 44.0	-0.6
	baz=324						
STIP	Stip	81.62	321	i P	P	22 29 44.5	-0.3
LIA	Limnos Island	81.63	319	eP	P	22 29 44.9	+0.1
LIA	Limnos Island	81.63	319	P	P	22 29 44.9	+0.1
ELL	Elmali	81.66	314	eP	P	22 29 44.6	-0.6
N42A	Yates City	81.67	40	P	P	22 29 44.6	-0.4
	baz=322						
M43A	Waltham Townsh	81.69	39	P	P	22 29 44.4	-0.7
	baz=323						
IVA	Berane	81.69	324	⇑iP	P	22 29 45.9	+0.7
KNT	Kendrikon	81.71	321	eP	P	22 29 44.4	-0.8
KNT	Kendrikon	81.71	321	eP	P	22 29 44.0	-1.2
KNT	Kendrikon	81.71	321	P	P	22 29 44.0	-1.2
KNT	Kendrikon	81.71	321	eP	P	22 29 44.0	-1.2
I48A	Sherman Twp	81.73	34	P	P	22 29 45.3	0.0
	baz=326						
TOBO	Tobermory, Bru	81.74	32	P	P	22 29 43.7	-1.6
	baz=327						
VAY	Valandovo	81.74	321	i P	P	22 29 46.0	+0.7
RSBS	Rosebush, Pemb	81.74	343	⇑eP	P	22 29 45.3	+0.2
CDF	Champ du Feu	81.75	334	eP	P	22 29 44.9	-0.5
CDF				pmax	pmax		
	comp=Z,53nm,1.0s						
F51A	Arnstein	81.76	31	P	P	22 29 43.9	-1.4
	baz=328						
SOH	Sokhos	81.77	320	P	P	22 29 45.3	-0.3
SOH				pmax	pmax		
	comp=Z,13nm,1.3s						
AYDB	Zeytinkoy-Aydi	81.79	316	eP	P	22 29 46.9	+1.0
MMLI	Mount Malkishu	81.80	307	eP	P	22 29 45.8	-0.1
O41A	Passleys Farm,	81.83	41	P	P	22 29 45.4	-0.5
	baz=322						
RAYN	Ar Rayn	81.83	295	eP	P	22 29 46.9	+0.7
	comp=Z,88nm,1.3s						
RAYN				LR	LR		
	comp=Z,2µm,20.0s						
SIGR	SIGRI	81.83	318	eP	P	22 29 43.9	-2.0
SIGR	SIGRI	81.83	318	eP	P	22 29 46.2	+0.3
SIGR	SIGRI	81.83	318	P	P	22 29 46.2	+0.3
OUR	Ouranopolis	81.86	320	eP	P	22 29 45.6	-0.4
KOME	Kolasin	81.87	324	⇓iP	P	22 29 46.3	+0.2
WMOK	Wichita Mounta	81.87	49	eP	P	22 29 46.6	+0.4
	comp=Z,29nm,0.9s						
WMOK	Wichita Mounta	81.87	49	P	P	22 29 46.0	-0.2
	baz=318						
D54A	Lac Fusel, La	81.88	28	P	P	22 29 45.0	-1.0
	baz=330						
BLCB	Balcova	81.89	316	eP	P	22 29 42.6	-3.6
E52A	Mattawa	81.92	30	P	P	22 29 45.1	-1.1
	baz=329						
SLE	Schleitheim	81.92	333	P	P	22 29 46.2	-0.1
SLE				pmax	pmax		
	comp=Z,26nm,0.7s						
ECH	Echery	81.96	334	eP	P	22 29 46.2	-0.2
	comp=Z,109nm,1.5s						
ECH				LR	LR		
	comp=Z,2µm,20.0s						
ECH	Echery	81.96	334	eP	P	22 29 46.2	-0.2
ECH				pmax	pmax		
	comp=Z,109nm,1.5s						
ECH				MLR	MLR		
	comp=Z,2µm,20.0s						
N43A	Stutzman Famil	81.98	39	P	P	22 29 46.2	-0.4
	baz=323						
UDBI	Udbina	82.04	327	P	P	22 29 46.5	-0.5
J47A	Sunmer	82.05	35	P	P	22 29 47.1	+0.1
	baz=325						
HORT	Hortiatis	82.07	320	eP	P	22 29 45.6	-1.6
HORT	Hortiatis	82.07	320	eP	P	22 29 46.5	-0.7
HORT	Hortiatis	82.07	320	P	P	22 29 46.5	-0.7
PLG	Polygyros	82.08	320	eP	P	22 29 47.1	-0.1
PLG	Polygyros	82.08	320	P	P	22 29 47.1	-0.1
PLG	Polygyros	82.08	320	eP	P	22 29 47.1	-0.1
K46A	Dorr	82.09	36	P	P	22 29 46.3	-0.8
	baz=324						
P41A	Barry, Barry	82.09	41	P	P	22 29 47.0	-0.3
	baz=322						
F52A	Sundridge	82.09	31	P	P	22 29 46.2	-1.0
	baz=328						
THE	Thessaloniki	82.10	320	eP	P	22 29 49.4	+2.2
THE	Thessaloniki	82.10	320	P	P	22 29 49.4	+2.2
GRG	Griva	82.10	321	P	P	22 29 47.3	0.0
GRG	Griva	82.10	321	eP	P	22 29 47.1	-0.2
GRG	Griva	82.10	321	P	P	22 29 47.1	-0.2
GRG	Griva	82.10	321	eP	P	22 29 47.1	-0.2
KLBO	Killbear Provi	82.13	31	P	P	22 29 46.6	-0.7
	baz=328						
URLA	Izmir	82.13	317	P	P	22 29 48.1	+0.6
M44A	Midewin, Midew	82.14	38	eP	P	22 29 48.1	+0.6
	comp=Z,183nm,0.8s						
M44A	Midewin, Midew	82.14	38	P	P	22 29 46.5	-0.9
	baz=323						
O42A	Bath	82.14	40	P	P	22 29 47.1	-0.4
	baz=322						
FETY	Fethiye	82.18	314	P	P	22 29 47.9	+0.1
E53A	Dumoine, Ponti	82.19	29	P	P	22 29 46.7	-1.0
	baz=329						
YER	Yerkesik	82.21	315	P	P	22 29 47.9	-0.1
YER	Yerkesik	82.21	315	eP	P	22 29 47.9	-0.1
YER	Yerkesik	82.21	315	P	P	22 29 47.9	-0.1
YER	Yerkesik	82.21	315	eP	P	22 29 47.9	-0.1
HDIL	Hopedale	82.23	40	eP	P	22 29 48.1	+0.1
	comp=Z,208nm,0.8s						
HDIL	Hopedale	82.23	40	P	P	22 29 47.5	-0.5
	baz=323						
BRY	Bratogost	82.24	324	⇓iP	P	22 29 47.7	-0.4
BRY	Bratogost	82.24	324	eP	P	22 29 47.8	-0.4
TURN	Turunc	82.25	314	P	P	22 29 50.3	+2.2
DALY	Dalyan (Mula)	82.26	314	P	P	22 29 49.4	+1.2
I49A	Point Hope	82.29	34	P	P	22 29 47.4	-0.8
	baz=326						
KRUS	Krusevo	82.30	322	i P	P	22 29 48.8	+0.4
FUORN	Ofenpass-Fuorn	82.31	331	eP	P	22 29 49.3	+0.7
	comp=Z,38nm,0.6s						
FUORN				LR	LR		
	comp=Z,1µm,20.0s						
GCAM	G?zelcaml?	82.31	316	P	P	22 29 49.3	+0.9
E54A	Lac Daplat, Po	82.32	29	P	P	22 29 48.0	-0.3
	baz=330						
PDG	Podgorica	82.32	324	⇑iP	P	22 29 48.7	+0.3
PDG	Podgorica	82.32	324	⇑iP	P	22 29 48.5	+0.2
TTG	Podgorica	82.32	324	⇓iP	P	22 29 48.6	+0.2
TTG	Podgorica	82.32	324	eP	P	22 29 48.6	+0.2
	comp=Z,72nm,0.8s						
TTG				LR	LR		
	comp=Z,1µm,19.0s						
PAIG	Paliouri	82.32	319	P	P	22 29 49.2	+0.8
PAIG				pmax	pmax		
	comp=Z,98nm,1.5s						
MLSB	Milas	82.35	315	P	P	22 29 50.1	+1.4
NVLJ	Novalja	82.36	328	P	P	22 29 47.5	-1.0
BUKO	Buck Lake	82.36	31	P	P	22 29 47.3	-1.2
	baz=328						
CHOS	Chios island	82.38	317	P	P	22 29 47.3	-1.6
CHOS	Chios island	82.38	317	eP	P	22 29 49.0	+0.1
CHOS	Chios island	82.38	317	P	P	22 29 49.0	+0.1
BMRO	Meriville Lake	82.38	32	P	P	22 29 48.2	-0.4
	baz=327						
HAU	Haudompre	82.40	334	eP	P	22 29 48.0	-0.7
HAU				pmax	pmax		
	comp=Z,36nm,1.1s						
HINF	Hinteralfeld	82.41	334	eP	P	22 29 47.9	-0.9
HINF				pmax	pmax		
	comp=Z,16nm,0.9s						
PHP	Peshkopia	82.41	322	eP	P	22 29 48.2	-0.7
PHP	Peshkopia	82.41	322	P	P	22 29 48.2	-0.7
PHP	Peshkopia	82.41	322	eP	P	22 29 48.2	-0.7
L46A	Eue Claire	82.41	37	P	P	22 29 48.0	-0.9
	baz=324						
ALGO	Algonquin Park	82.42	30	P	P	22 29 48.0	-0.9
	baz=329						
J48A	Bridge Port	82.43	35	P	P	22 29 49.4	+0.5
	baz=326						
O43A	Sugar Creek Fa	82.43	40	P	P	22 29 48.6	-0.4
	baz=323						
K47A	Vermontville	82.44	36	P	P	22 29 48.7	-0.3
	baz=325						
TREB	Trebinje	82.47	324	⇑iP	P	22 29 49.1	-0.1
M45A	Boilermakers S	82.50	38	P	P	22 29 49.4	0.0
	baz=324						
P42A	Winchester	82.50	41	eP	P	22 29 48.9	-0.5
	comp=Z,108nm,0.8s						
P42A	Winchester	82.50	41	P	P	22 29 48.9	-0.5
	baz=322						
SMG	Samos	82.51	316	eP	P	22 29 49.5	0.0
SMG	Samos	82.51	316	P	P	22 29 49.5	0.0
LPIG	La Paz	82.53	64	P	P	22 29 50.4	+0.7
	comp=Z,26nm,0.3s,baz=81,slow=23,SNR=3.0						
BIA	Bitola	82.55	322	i P	P	22 29 50.2	+0.5
DRME	Dracevica, Mon	82.55	324	⇑iP	P	22 29 50.0	+0.4
DRME	Dracevica, Mon	82.55	324	⇑iP	P	22 29 49.9	+0.4
Q41A	Truxton	82.57	42	P	P	22 29 49.3	-0.5
	baz=322						
N44A	Piper City	82.57	39	P	P	22 29 49.6	-0.2
	baz=323						

HTL	**Hartland**	**82.58**	**342**	*e*P	**P**	**22 29 50.4**	**+0.8**
BRCO	**Bruce Peninsul**	**82.59**	**33**	P	**P**	**22 29 49.4**	**-0.3**
	baz=327						
TUL1	**Leonard**	**82.60**	**47**	*e*P	**P**	**22 29 51.1**	**+1.1**
	comp=Z,56nm,0.7s						
TUL1	**Leonard**	**82.60**	**47**	P	**P**	**22 29 49.7**	**-0.3**
	baz=320						
STON	**Ston**	**82.62**	**325**	P	**P**	**22 29 49.0**	**-0.9**
HCY	**Herceg Novi**	**82.63**	**324**	⇑*i*P	**P**	**22 29 49.6**	**-0.5**
HCY	**Herceg Novi**	**82.63**	**324**	⇑*i*P	**P**	**22 29 49.5**	**-0.5**
J49A	**Marlette**	**82.64**	**34**	P	**P**	**22 29 50.1**	**0.0**
	baz=326						
BASO	**Ashfield**	**82.69**	**33**	P	**P**	**22 29 50.2**	**-0.1**
	baz=327						
K48A	**Perry**	**82.70**	**35**	P	**P**	**22 29 50.2**	**-0.2**
	baz=326						
OHR	**Ohrid**	**82.71**	**322**	*i* P	**P**	**22 29 50.5**	**0.0**
LIT	**Litokhoron**	**82.74**	**320**	*e*P	**P**	**22 29 50.1**	**-0.6**
LIT				LR	LR		
	comp=Z,900nm,20.0s						
LIT	**Litokhoron**	**82.74**	**320**	P	**P**	**22 29 50.1**	**-0.6**
LIT	**Litokhoron**	**82.74**	**320**	*e*P	**P**	**22 29 50.1**	**-0.6**
LIT				MLR	MLR		
	comp=Z,900nm,20.0s						
TUE	**Stuetta**	**82.76**	**332**	*e*P	**P**	**22 29 51.2**	**+0.3**
	comp=Z,27nm,0.6s						
TUE				LR	LR		
	comp=Z,1µm,21.0s						
BODT	**Bodrum**	**82.77**	**315**	P	**P**	**22 29 50.3**	**-0.5**
BODT	**Bodrum**	**82.77**	**315**	*e*P	**P**	**22 29 50.7**	**-0.1**
BODT	**Bodrum**	**82.77**	**315**	P	**P**	**22 29 50.7**	**-0.1**
N45A	**Kentland**	**82.81**	**38**	P	**P**	**22 29 50.6**	**-0.4**
	baz=324						
BWLO	**Walkerton**	**82.81**	**33**	P	**P**	**22 29 50.7**	**-0.2**
	baz=327						
LOMF	**Lomont**	**82.82**	**334**	P	**P**	**22 29 51.9**	**+0.9**
VAL	**Valentia**	**82.84**	**346**	*i* P	**P**	**22 29 50.5**	**-0.3**
P43A	**Skaggs, Pawnee**	**82.85**	**40**	P	**P**	**22 29 50.0**	**-1.1**
	baz=323						
M46A	**Old House Fiel**	**82.88**	**37**	P	**P**	**22 29 50.6**	**-0.7**
	baz=324						
DAT	**Datca**	**82.89**	**315**	P	**P**	**22 29 51.7**	**+0.1**
KZN	**Kozani**	**82.91**	**321**	*e*P	**P**	**22 29 51.0**	**-0.6**
KZN	**Kozani**	**82.91**	**321**	P	**P**	**22 29 51.0**	**-0.6**
KZN	**Kozani**	**82.91**	**321**	*e*P	**P**	**22 29 51.0**	**-0.6**
L47A	**Sherwood**	**82.92**	**36**	P	**P**	**22 29 50.8**	**-0.7**
	baz=325						
G53A	**Haliburton**	**82.92**	**31**	P	**P**	**22 29 50.3**	**-1.2**
	baz=329						
O44A	**Mansfield**	**82.93**	**39**	P	**P**	**22 29 50.7**	**-0.9**
	baz=323						
TIR	**Tirane**	**82.93**	**323**	*e*P	**P**	**22 29 52.2**	**+0.6**
	comp=Z,85nm,0.9s						
TIR				LR	LR		
	comp=Z,2µm,21.0s						
TIR	**Tirane**	**82.93**	**323**	⇑*i*P	**P**	**22 29 52.4**	**+0.8**
Q42A	**Golden Eagle**	**82.94**	**41**	P	**P**	**22 29 51.3**	**-0.4**
	baz=322						
PEMO	**Pembroke**	**82.95**	**29**	P	**P**	**22 29 50.6**	**-1.0**
	baz=330						
ABTX	**Abilene, Hawle**	**82.95**	**51**	*e*P	**P**	**22 29 53.3**	**+1.4**
	comp=Z,53nm,1.2s						
ABTX	**Abilene, Hawle**	**82.95**	**51**	P	**P**	**22 29 51.5**	**-0.4**
	baz=318						
LATQ	**La Tuque**	**82.96**	**26**	P	**P**	**22 29 50.6**	**-1.0**
	baz=332						
K49A	**Clarkson**	**82.99**	**35**	P	**P**	**22 29 51.7**	**-0.2**
	baz=326						
ARG	**Arkhangelos**	**82.99**	**314**	P	**P**	**22 29 52.8**	**+0.8**
ARG	**Arkhangelos**	**82.99**	**314**	*e*P	**P**	**22 29 51.6**	**-0.4**
ARG	**Arkhangelos**	**82.99**	**314**	P	**P**	**22 29 51.6**	**-0.4**
ARG	**Arkhangelos**	**82.99**	**314**	*e*P	**P**	**22 29 51.6**	**-0.4**
LTX	**Lajitas**	**83.00**	**56**	*e*P	**P**	**22 29 52.8**	**+0.5**
LTX	**Lajitas**	**83.00**	**56**	*e*P	**P**	**22 29 52.8**	**+0.5**
TXAR	**Lajitas Array**	**83.00**	**56**	P	**P**	**22 29 52.8**	**+0.5**
	comp=Z,10nm,0.6s,baz=295,slow=3.4,SNR=71						
TXAR				PKKPbc	**PKKPbc**	22 48 15.1	+2.9
	comp=Z,0.8nm,1.0s,baz=134,slow=3.6,SNR=4.3						
R41A	**Rosebud**	**83.01**	**42**	P	**P**	**22 29 51.9**	**-0.2**
	baz=322						
NEO	**Neokhori**	**83.03**	**319**	*e*P	**P**	**22 29 52.0**	**-0.2**
NEO	**Neokhori**	**83.03**	**319**	P	**P**	**22 29 52.0**	**-0.2**
SADO	**Sadowa**	**83.03**	**31**	*e*P	**P**	**22 29 52.4**	**+0.3**
	comp=Z,63nm,1.4s						
SADO	**Sadowa**	**83.03**	**31**	P	**P**	**22 29 52.4**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=0.0,slow=6.1,SNR=3.5						
FYTO	**Fytoko, Volos**	**83.08**	**320**	*e*P	**P**	**22 29 51.0**	**-1.4**
FYTO	**Fytoko, Volos**	**83.08**	**320**	P	**P**	**22 29 51.0**	**-1.4**
N46A	**Monticello**	**83.12**	**38**	P	**P**	**22 29 51.4**	**-1.2**
	baz=324						
I51A	**Listowel**	**83.12**	**33**	P	**P**	**22 29 52.5**	**0.0**
	baz=327						
F55A	**Otter Lake**	**83.13**	**29**	P	**P**	**22 29 51.1**	**-1.4**
	baz=330						
NEST	**Nestorio**	**83.15**	**321**	P	**P**	**22 29 52.4**	**-0.5**
O45A	**Potomac**	**83.19**	**39**	P	**P**	**22 29 52.9**	**-0.1**
	baz=324						
I52A	**Shelburne**	**83.23**	**32**	P	**P**	**22 29 52.5**	**-0.6**
	baz=328						
M47A	**Cromwell**	**83.24**	**37**	P	**P**	**22 29 52.9**	**-0.3**
	baz=325						
BANO	**Bancroft**	**83.27**	**30**	P	**P**	**22 29 52.9**	**-0.4**
	baz=329						
CCM	**Cathedral Cave**	**83.27**	**42**	*e*P	**P**	**22 29 53.5**	**+0.1**
	comp=Z,82nm,0.8s						
CCM	**Cathedral Cave**	**83.27**	**42**	*e*P	**P**	**22 29 53.5**	**+0.1**
CCM				pmax	pmax		
	comp=Z,82nm,0.8s						
CCM	**Cathedral Cave**	**83.27**	**42**	P	**P**	**22 29 53.0**	**-0.4**
	baz=322						
L48A	**N Adams**	**83.27**	**36**	P	**P**	**22 29 52.9**	**-0.5**
	baz=325						
HHAR	**Hobbs**	**83.29**	**45**	*e*P	**P**	**22 29 53.3**	**-0.2**
	comp=Z,32nm,0.7s						
PENT	**Pentalofos**	**83.29**	**321**	P	**P**	**22 29 53.0**	**-0.6**
SLM	**Saint Louis**	**83.30**	**41**	PFAKE		22 30 10.0	+16
SLM				LR	LR		
	comp=Z,800nm,20.0s						
PMOR	**Pomariorio Ree**	**83.31**	**118**	*e*T	T	00 01 36.8	
	comp=Z,158nm,0.3s						
AAM	**Ann Arbor**	**83.31**	**35**	*e*P	**P**	**22 29 54.0**	**+0.5**
	comp=Z,100nm,0.8s						
AAM	**Ann Arbor**	**83.31**	**35**	*e*P	**P**	**22 29 54.0**	**+0.5**
AAM				pmax	pmax		
	comp=Z,100nm,0.8s						
AAM	**Ann Arbor**	**83.31**	**35**	P	**P**	**22 29 53.4**	**-0.1**
	baz=326						
R42A	**Luebbering**	**83.31**	**42**	P	**P**	**22 29 53.2**	**-0.4**
	baz=322						
Q43A	**New Douglas**	**83.32**	**41**	P	**P**	**22 29 53.2**	**-0.4**
	baz=323						
SFIN	**Lafayette**	**83.38**	**38**	*e*P	**P**	**22 29 54.0**	**+0.1**
	comp=Z,87nm,0.9s						
SFIN	**Lafayette**	**83.38**	**38**	P	**P**	**22 29 53.6**	**-0.3**
	baz=324						
KPRO	**Kipourio**	**83.38**	**321**	P	**P**	**22 29 53.0**	**-1.0**
S41A	**Jillco Farms,**	**83.39**	**43**	P	**P**	**22 29 53.6**	**-0.4**
	baz=322						
TRQ	**Mont Tremblant**	**83.41**	**27**	*e*P	**P**	**22 29 53.5**	**-0.5**
P44A	**Sand Creek, Wi**	**83.41**	**40**	P	**P**	**22 29 54.0**	**-0.1**
	baz=323						
L49A	**Milan**	**83.42**	**35**	P	**P**	**22 29 53.9**	**-0.2**
	baz=326						
G55A	**Calabogie**	**83.50**	**29**	P	**P**	**22 29 53.7**	**-0.8**
	baz=330						
CCA1	**Carnmenellis**	**83.50**	**342**	⇑*e*P	**P**	**22 29 54.5**	**+0.2**
KZIT	**Kziot**	**83.51**	**307**	P	**P**	**22 29 54.6**	**-0.2**
M48A	**Edgerton**	**83.53**	**36**	*e*P	**P**	**22 29 54.6**	**0.0**
	comp=Z,135nm,0.9s						
M48A	**Edgerton**	**83.53**	**36**	P	**P**	**22 29 54.0**	**-0.7**
	baz=325						
SENIN	**Lac Senin/Sane**	**83.54**	**333**	*e*P	**P**	**22 29 55.2**	**+0.3**
	comp=Z,24nm,0.8s						
SENIN				LR	LR		
	comp=Z,1µm,21.0s						
PLVO	**Plevna**	**83.56**	**30**	*e*P	**P**	**22 29 54.5**	**-0.3**
	comp=Z,67nm,0.8s						
PLVO				LR	LR		
	comp=Z,700nm,19.0s						
PLVO	**Plevna**	**83.56**	**30**	P	**P**	**22 29 54.0**	**-0.8**
	baz=330						
N47A	**Urbana**	**83.59**	**37**	P	**P**	**22 29 53.8**	**-1.2**
	baz=325						
CLF	**Chambon-Foret**	**83.61**	**337**	*e*P	**P**	**22 29 55.7**	**+0.8**
	comp=Z,22nm,0.7s						
CLF				LR	LR		
	comp=Z,2µm,20.0s						
ATAL	**Atalanti**	**83.61**	**319**	*e*P	**P**	**22 29 53.5**	**-1.6**
ATAL	**Atalanti**	**83.61**	**319**	P	**P**	**22 29 53.5**	**-1.6**
LKR	**Lokris**	**83.65**	**319**	*e*P	**P**	**22 29 52.4**	**-3.0**
LKR	**Lokris**	**83.65**	**319**	P	**P**	**22 29 52.4**	**-3.0**
APE	**Apeiranthos**	**83.66**	**317**	P	**P**	**22 29 54.9**	**-0.6**
APE	**Apeiranthos**	**83.66**	**317**	*e*P	**P**	**22 29 54.6**	**-0.9**
APE	**Apeiranthos**	**83.66**	**317**	P	**P**	**22 29 54.6**	**-0.9**
APE	**Apeiranthos**	**83.66**	**317**	*e*P	**P**	**22 29 54.6**	**-0.9**
I53A	**Kortright Cn E**	**83.66**	**32**	P	**P**	**22 29 54.6**	**-0.7**
	baz=328						
ACTO	**Acton**	**83.66**	**32**	P	**P**	**22 29 55.2**	**-0.1**
	baz=328						
AMGA	**Amorgos Island**	**83.66**	**316**	P	**P**	**22 29 54.1**	**-1.4**
Q44A	**Meyer Farm, Va**	**83.67**	**40**	*e*P	**P**	**22 29 56.2**	**+0.8**
	comp=Z,109nm,1.0s						
Q44A	**Meyer Farm, Va**	**83.67**	**40**	P	**P**	**22 29 55.1**	**-0.4**
	baz=323						
AGG	**Agios Georgios**	**83.68**	**320**	P	**P**	**22 29 53.6**	**-1.9**
AGG	**Agios Georgios**	**83.68**	**320**	*e*P	**P**	**22 29 55.1**	**-0.4**
	comp=Z,35nm,1.1s						
AGG				LR	LR		
	comp=Z,800nm,20.0s						
AGG	**Agios Georgios**	**83.68**	**320**	*e*P	**P**	**22 29 55.1**	**-0.4**
AGG				pmax	pmax		
	comp=Z,35nm,1.1s						
AGG				MLR	MLR		
	comp=Z,800nm,20.0s						
FLN	**La Foliniere**	**83.68**	**339**	*e*P	**P**	**22 29 54.8**	**-0.5**
FLN				pmax	pmax		
	comp=Z,44nm,0.6s						
S42A	**Caledonia**	**83.71**	**42**	P	**P**	**22 29 55.0**	**-0.7**
	baz=322						
CABF	**La Chapelle**	**83.72**	**334**	*e*P	**P**	**22 29 55.2**	**-0.5**
CABF				pmax	pmax		
	comp=Z,16nm,0.6s						
JSA	**Saint Aubin**	**83.72**	**340**	⇑*e*P	**P**	**22 29 55.8**	**+0.3**
JSA				IAmb	IAmb	22 29 56.5	
	comp=Z,105nm,0.9s						
FVM	**French Village**	**83.72**	**42**	*e*P	**P**	**22 29 56.6**	**+0.9**
	comp=Z,35nm,0.8s						
AXAR	**Agios Charalam**	**83.72**	**319**	*e*P	**P**	**22 29 57.2**	**+1.5**
AXAR	**Agios Charalam**	**83.72**	**319**	P	**P**	**22 29 57.2**	**+1.5**
R43A	**Red Bud**	**83.73**	**41**	P	**P**	**22 29 55.2**	**-0.6**
	baz=322						
PKRO	**Pickering**	**83.74**	**31**	P	**P**	**22 29 55.2**	**-0.5**
	baz=328						
P45A	**Graceland, Par**	**83.77**	**39**	*e*P	**P**	**22 29 56.8**	**+0.8**
	comp=Z,98nm,0.7s						
P45A	**Graceland, Par**	**83.77**	**39**	P	**P**	**22 29 55.6**	**-0.3**
	baz=324						
HRFI	**Mount Harif**	**83.77**	**306**	P	**P**	**22 29 56.1**	**-0.1**
U40A	**Yellville**	**83.78**	**44**	P	**P**	**22 29 55.7**	**-0.4**
	baz=321						
T41A	**Mountain View**	**83.80**	**43**	P	**P**	**22 29 55.5**	**-0.7**
	baz=322						
VLO	**Vlora**	**83.81**	**322**	*e*P	**P**	**22 29 56.8**	**+0.7**
VLO	**Vlora**	**83.81**	**322**	P	**P**	**22 29 56.8**	**+0.7**
DELO	**Deloro Mine**	**83.81**	**30**	P	**P**	**22 29 55.4**	**-0.7**
	baz=329						
J52A	**Paris**	**83.81**	**33**	P	**P**	**22 29 56.2**	**+0.1**
	baz=328						
ALFO	**Alfred**	**83.81**	**28**	P	**P**	**22 29 55.2**	**-0.8**
	baz=331						
ATHU	**Athens Univers**	**83.82**	**318**	*e*P	**P**	**22 29 55.2**	**-1.0**
ATHU	**Athens Univers**	**83.82**	**318**	P	**P**	**22 29 55.2**	**-1.0**
LOR	**Lormes**	**83.82**	**336**	*e*P	**P**	**22 29 55.5**	**-0.6**
LOR				pmax	pmax		
	comp=Z,38nm,0.8s						
K51A	**Iona Station**	**83.84**	**34**	P	**P**	**22 29 56.0**	**-0.2**
	baz=327						
ATH	**Athens Observa**	**83.85**	**318**	*e*P	**P**	**22 29 55.2**	**-1.1**
ATH	**Athens Observa**	**83.85**	**318**	P	**P**	**22 29 55.2**	**-1.1**
ATH	**Athens Observa**	**83.85**	**318**	*e*P	**P**	**22 29 55.2**	**-1.1**
M49A	**Liberty Center**	**83.85**	**36**	P	**P**	**22 29 56.1**	**-0.2**
	baz=326						
JAN	**Janina**	**83.85**	**321**	*e*P	**P**	**22 29 55.8**	**-0.6**
JAN	**Janina**	**83.85**	**321**	P	**P**	**22 29 55.8**	**-0.6**
JAN	**Janina**	**83.85**	**321**	*e*P	**P**	**22 29 55.8**	**-0.6**
L50A	**Kingsville**	**83.87**	**35**	P	**P**	**22 29 56.2**	**-0.2**
	baz=326						
VILL	**Villia**	**83.89**	**319**	P	**P**	**22 29 55.7**	**-0.9**
N48A	**Decatur**	**83.91**	**37**	P	**P**	**22 29 55.9**	**-0.7**
	baz=325						
O47A	**Sheridan**	**83.91**	**38**	P	**P**	**22 29 55.8**	**-0.8**
	baz=324						
H55A	**Tweed**	**83.94**	**30**	P	**P**	**22 29 56.2**	**-0.5**
	baz=330						
P46A	**Rosedale**	**83.94**	**39**	P	**P**	**22 29 56.9**	**+0.1**
	baz=324						
DRWO	**Darlington Wes**	**83.95**	**31**	P	**P**	**22 29 56.2**	**-0.5**
	baz=329						
DRCO	**St. Marys Ceme**	**83.95**	**31**	P	**P**	**22 29 56.6**	**-0.2**
	baz=329						
EVR	**Evrytania**	**84.00**	**320**	*e*P	**P**	**22 29 56.6**	**-0.7**
EVR	**Evrytania**	**84.00**	**320**	P	**P**	**22 29 56.6**	**-0.7**
KARP	**Karpathos**	**84.01**	**315**	P	**P**	**22 29 57.9**	**+0.6**
KARP	**Karpathos**	**84.01**	**315**	*e*P	**P**	**22 29 56.9**	**-0.4**
	comp=Z,103nm,0.6s						
KARP				LR	LR		
	comp=Z,1µm,18.0s						
KARP	**Karpathos**	**84.01**	**315**	P	**P**	**22 29 56.9**	**-0.4**
TAOE	**Nuku Hiva Isla**	**84.03**	**108**	*e*LR	LR	22 56 28.3	
	comp=Z,2µm,24.4s,baz=317						
TAOE	**Nuku Hiva Isla**	**84.03**	**108**	*e*T	T	00 02 27.7	
	comp=Z,38nm,0.2s						
WLVO	**Wesleyville**	**84.03**	**31**	P	**P**	**22 29 56.2**	**-0.9**
	baz=329						
I55A	**Frankford**	**84.05**	**30**	P	**P**	**22 29 56.5**	**-0.7**
	baz=329						
IOSP	**Ios island**	**84.05**	**316**	P	P	22 29 52.1	-5.3
SRN	**Sarande**	**84.06**	**322**	*e*P	**P**	**22 29 57.3**	**-0.1**
SRN	**Sarande**	**84.06**	**322**	P	**P**	**22 29 57.3**	**-0.1**
DSF	**Desfina**	**84.07**	**319**	*e*P	**P**	**22 29 55.5**	**-2.1**
DSF	**Desfina**	**84.07**	**319**	P	**P**	**22 29 55.5**	**-2.1**
Q45A	**Warren Harvey,**	**84.08**	**40**	P	**P**	**22 29 57.1**	**-0.4**
	baz=323						
ANAF	**Anafi Island**	**84.09**	**316**	P	**P**	**22 29 56.1**	**-1.6**
EIL	**Elat**	**84.09**	**306**	P	**P**	**22 29 56.7**	**-1.1**
K52A	**Tillsonburg**	**84.11**	**33**	P	**P**	**22 29 57.6**	**0.0**
	baz=328						
SSF	**Saint Saulge**	**84.11**	**336**	*e*P	**P**	**22 29 57.0**	**-0.6**
SSF				pmax	pmax		
	comp=Z,16nm,0.6s						
GRR	**Gorron**	**84.13**	**339**	*e*P	**P**	**22 29 57.3**	**-0.3**
T42A	**Van Buren**	**84.14**	**43**	*e*P	**P**	**22 29 58.3**	**+0.4**
	comp=Z,26nm,0.8s						
T42A	**Van Buren**	**84.14**	**43**	P	**P**	**22 29 57.7**	**-0.1**
	baz=322						
PPT	**Papeete**	**84.16**	**121**	P	**P**	**22 29 58.8**	**+0.8**
	comp=Z,18nm,0.6s,baz=259,slow=20,SNR=2.4						
PPT				LR	LR	22 59 50.9	
	comp=Z,802nm,21.9s,baz=352,slow=30						
R44A	**Waltonville**	**84.16**	**41**	P	**P**	**22 29 57.9**	**0.0**
	baz=323						
PPT2	**Papeete2**	**84.17**	**121**	*e*LR	LR	22 56 29.0	
	comp=Z,3µm,26.2s,baz=316						
PPT2	**Papeete2**	**84.17**	**121**	*e*T	T	00 02 42.5	
	comp=Z,15nm,0.3s						
TYNO	**Tyneside**	**84.17**	**32**	P	**P**	**22 29 57.2**	**-0.7**
	baz=328						
IGT	**Igoumenitsa**	**84.19**	**321**	*e*P	**P**	**22 29 57.2**	**-0.9**
IGT	**Igoumenitsa**	**84.19**	**321**	P	**P**	**22 29 57.2**	**-0.9**
IGT	**Igoumenitsa**	**84.19**	**321**	*e*P	**P**	**22 29 57.2**	**-0.9**
W39A	**Magazine**	**84.20**	**46**	*e*P	**P**	**22 29 58.3**	**+0.1**
	comp=Z,57nm,1.1s						
W39A	**Magazine**	**84.20**	**46**	P	**P**	**22 29 57.9**	**-0.3**
	baz=321						
ANX	**Ano Chora**	**84.21**	**320**	P	**P**	**22 29 57.2**	**-1.1**
S43A	**Fulton Ridge,**	**84.22**	**42**	P	**P**	**22 29 58.1**	**-0.2**
	baz=322						
N49A	**Columbus Grove**	**84.22**	**36**	*e*P	**P**	**22 29 58.4**	**+0.2**
	comp=Z,95nm,0.8s						
N49A	**Columbus Grove**	**84.22**	**36**	P	**P**	**22 29 58.0**	**-0.2**
	baz=326						
PAE	**Paea**	**84.22**	**121**	*e*T	T	00 02 45.5	
	comp=Z,2.7nm,0.3s						
H56A	**Elgin**	**84.23**	**29**	P	**P**	**22 29 57.2**	**-1.0**
	baz=330						
OLIL	**Olney**	**84.24**	**40**	*e*P	**P**	**22 29 59.3**	**+1.0**
	comp=Z,75nm,0.9s						
OLIL				LR	LR		
	comp=Z,600nm,20.0s						
SANT	**Santorini**	**84.24**	**316**	P	**P**	**22 29 54.4**	**-4.0**
SANT	**Santorini**	**84.24**	**316**	*e*P	**P**	**22 29 58.9**	**+0.5**
	comp=Z,74nm,1.1s						
SANT				LR	LR		
	comp=Z,900nm,21.0s						
U41A	**Viola**	**84.27**	**44**	P	**P**	**22 29 57.4**	**-1.1**
	baz=322						
KEK	**Kerkira**	**84.29**	**322**	*e*P	**P**	**22 29 57.5**	**-1.1**
KEK	**Kerkira**	**84.29**	**322**	P	**P**	**22 29 57.5**	**-1.1**
SERG	**Sergoula**	**84.29**	**320**	P	**P**	**22 29 57.7**	**-1.0**
TIAR	**Tiarei**	**84.29**	**121**	*e*T	T	00 02 50.5	
	comp=Z,5.6nm,0.2s						
M50A	**Fremont**	**84.31**	**35**	*e*P	**P**	**22 29 58.8**	**+0.1**
	comp=Z,81nm,0.8s						
M50A				LR	LR		
	comp=Z,600nm,19.0s						
M50A	**Fremont**	**84.31**	**35**	P	**P**	**22 29 58.1**	**-0.5**
	baz=326						
TRIZ	**Trizonia**	**84.32**	**319**	P	**P**	**22 29 56.6**	**-2.1**
O48A	**Farmland**	**84.34**	**37**	P	**P**	**22 29 58.1**	**-0.7**
	baz=325						
STCO	**Saint Catharin**	**84.34**	**32**	P	**P**	**22 29 58.6**	**-0.2**
	baz=328						
Q46A	**CEJHS Indians,**	**84.35**	**39**	P	**P**	**22 29 58.7**	**-0.2**
	baz=324						
EFP	**Efpalio**	**84.35**	**320**	P	**P**	**22 29 58.3**	**-0.6**
PVO	**Paravola**	**84.38**	**320**	P	**P**	**22 29 58.0**	**-1.0**
SMF	**Signal de Mont**	**84.39**	**335**	*e*P	**P**	**22 29 58.6**	**-0.4**
SMF				pmax	pmax		
	comp=Z,42nm,0.6s						
VLC	**Villacollemand**	**84.39**	**330**	PFAKE		22 30 10.0	+11
VLC				LR	LR		
	comp=Z,1µm,18.0s						
AVF	**Avril sur Loir**	**84.40**	**336**	*e*P	**P**	**22 29 58.7**	**-0.3**
AVF				pmax	pmax		
	comp=Z,42nm,0.7s						
TRAZ	**Trapeza**	**84.41**	**319**	P	**P**	**22 29 58.6**	**-0.7**
JCT	**Junction City**	**84.45**	**53**	*e*P	**P**	**22 29 60.0**	**+0.4**
	comp=Z,71nm,0.8s						
JCT	**Junction City**	**84.45**	**53**	*e*P	**P**	**22 30 00.0**	**+0.4**
JCT				pmax	pmax		
	comp=Z,71nm,0.8s						
JCT	**Junction City**	**84.45**	**53**	P	**P**	**22 29 59.4**	**-0.2**
	baz=318						
LAKA	**Lakka**	**84.47**	**319**	*e*P	**P**	**22 29 58.6**	**-0.9**
LAKA	**Lakka**	**84.47**	**319**	P	**P**	**22 29 58.6**	**-0.9**
P47A	**Martinsville**	**84.47**	**38**	P	**P**	**22 29 59.3**	**-0.2**
	baz=324						
LPL	**La Plagne**	**84.47**	**333**	*e*P	**P**	**22 29 59.6**	**-0.1**
LPL				pmax	pmax		
	comp=Z,27nm,0.8s						
LPG	**La Plagne**	**84.48**	**333**	*e*P	**P**	**22 29 59.8**	**0.0**
LPG				pmax	pmax		
	comp=Z,28nm,0.7s						
T43A	**Greenville**	**84.50**	**42**	P	**P**	**22 29 59.2**	**-0.5**
	baz=322						
R45A	**Skylar, Fairfi**	**84.50**	**40**	P	**P**	**22 29 59.5**	**-0.2**
	baz=323						
S44A	**Carbondale**	**84.52**	**41**	P	**P**	**22 29 59.4**	**-0.4**
	baz=323						
TVO	**Taravao**	**84.52**	**121**	*e*T	T	00 03 08.1	
	comp=Z,1.7nm,0.3s						
SIUC	**Southern Illin**	**84.52**	**41**	*e*P	**P**	**22 30 00.2**	**+0.4**
	comp=Z,137nm,0.8s						
SIUC				LR	LR		
	comp=Z,700nm,20.0s						
GUR	**Goura**	**84.53**	**319**	*e*P	**P**	**22 29 57.2**	**-2.8**
GUR	**Goura**	**84.53**	**319**	P	**P**	**22 29 57.2**	**-2.8**
KLV	**Kalavryta, Ach**	**84.54**	**319**	*e*P	**P**	**22 29 58.6**	**-1.4**
KLV	**Kalavryta, Ach**	**84.54**	**319**	P	**P**	**22 29 58.6**	**-1.4**
V41A	**Mountainview**	**84.58**	**44**	P	**P**	**22 29 59.3**	**-0.9**
	baz=321						
U42A	**Revenden**	**84.60**	**43**	P	**P**	**22 29 59.6**	**-0.6**
	baz=322						
WHTX	**Lake Whitney,**	**84.65**	**50**	*e*P	**P**	**22 30 01.2**	**+0.6**
	comp=Z,127nm,1.4s						
WHTX	**Lake Whitney,**	**84.65**	**50**	P	**P**	**22 30 00.4**	**-0.2**
	baz=319						
MEDO	**Medina**	**84.66**	**31**	P	**P**	**22 30 00.1**	**-0.2**
	baz=329						
PBMO	**Poplar Bluff**	**84.67**	**43**	*e*P	**P**	**22 30 00.9**	**+0.4**
	comp=Z,118nm,1.1s						
PBMO				LR	LR		
	comp=Z,500nm,19.0s						
M51A	**Elyria**	**84.72**	**35**	P	**P**	**22 30 00.3**	**-0.5**
	baz=327						
O49A	**Covington**	**84.76**	**37**	*e*P	**P**	**22 30 04.4**	**+3.5**
	comp=Z,61nm,0.8s						
O49A	**Covington**	**84.76**	**37**	P	**P**	**22 30 00.5**	**-0.5**
	baz=326						
EVGI	**Lefkada island**	**84.78**	**321**	P	**P**	**22 30 00.0**	**-1.1**
ROSF	**Rostrenen**	**84.78**	**340**	*e*P	**P**	**22 30 01.1**	**+0.2**
ROSF				pmax	pmax		
	comp=Z,123nm,0.8s						
N50A	**Nevada**	**84.78**	**36**	P	**P**	**22 30 00.9**	**-0.2**
	baz=326						
AQU	**L'Aquila**	**84.80**	**327**	*e*P	**P**	**22 30 01.7**	**+0.6**
	comp=Z,76nm,1.3s						
AQU				LR	LR		
	comp=Z,2µm,20.0s						
AQU	**L'Aquila**	**84.80**	**327**	⇑*i*P	**P**	**22 30 01.6**	**+0.4**
LONY	**Lake Ozonia**	**84.80**	**28**	*e*P	**P**	**22 30 00.7**	**-0.4**
	comp=Z,29nm,0.9s						
LONY	**Lake Ozonia**	**84.80**	**28**	P	**P**	**22 30 00.3**	**-0.8**
	baz=331						
J55A	**Hilton**	**84.81**	**31**	P	**P**	**22 30 00.6**	**-0.5**
	baz=329						
MIAR	**Mount Ida**	**84.81**	**46**	*e*P	**P**	**22 30 01.8**	**+0.5**
	comp=Z,63nm,0.8s						
MIAR	**Mount Ida**	**84.81**	**46**	P	**P**	**22 30 02.1**	**+0.8**
MIAR				pmax	pmax		
	comp=Z,99nm,1.3s						
MIAR	**Mount Ida**	**84.81**	**46**	P	**P**	**22 30 01.2**	**-0.1**
	baz=321						
DRO	**Drossia**	**84.82**	**319**	P	**P**	**22 30 00.5**	**-0.8**
ZKR	**Zakros**	**84.83**	**315**	P	**P**	**22 30 00.8**	**-0.6**
T44A	**Benton**	**84.84**	**42**	P	**P**	**22 30 01.5**	**+0.1**
	baz=323						
Q47A	**Bedord North L**	**84.85**	**39**	P	**P**	**22 30 01.0**	**-0.4**
	baz=324						
RLS	**Riolos of Patr**	**84.85**	**320**	*e*P	**P**	**22 30 00.8**	**-0.6**
RLS	**Riolos of Patr**	**84.85**	**320**	P	**P**	**22 30 00.8**	**-0.6**
S45A	**Carrier Mills**	**84.85**	**41**	P	**P**	**22 30 01.5**	**+0.1**
	baz=323						
P48A	**Milroy**	**84.87**	**38**	P	**P**	**22 30 01.3**	**-0.2**
	baz=325						
MATE	**Matera**	**84.87**	**324**	⇑*i*P	**P**	**22 30 01.4**	**-0.1**
M52A	**Chesterland**	**84.89**	**34**	P	**P**	**22 30 01.6**	**0.0**
	baz=327						
TRIP	**Tripoli**	**84.89**	**319**	P	**P**	**22 30 01.2**	**-0.6**
WHAR	**Wooly Hollow**	**84.90**	**45**	*e*P	**P**	**22 30 01.9**	**+0.2**
	comp=Z,92nm,0.9s						
BNI	**Bardonecchia**	**84.90**	**333**	*e*P	**P**	**22 30 02.4**	**+0.7**
	comp=Z,13nm,0.8s						
BNI				LR	LR		
	comp=Z,1µm,18.0s						
BNI	**Bardonecchia**	**84.90**	**333**	P	**P**	**22 30 02.5**	**+0.7**
BNI				pmax	pmax		
	comp=Z,21nm,1.2s						
R46A	**Gibon Southern**	**84.93**	**40**	P	**P**	**22 30 01.8**	**-0.1**
	baz=324						
ERPA	**Erie**	**84.95**	**33**	*e*P	**P**	**22 30 02.8**	**+0.9**
	comp=Z,120nm,0.7s						
ERPA	**Erie**	**84.95**	**33**	P	**P**	**22 30 00.9**	**-1.0**
	baz=328						
MOQ	**Mont Orford**	**84.97**	**26**	*e*P	**P**	**22 30 02.5**	**+0.6**
L53A	**Girard**	**84.98**	**33**	P	**P**	**22 30 02.2**	**+0.2**
	baz=328						
U43A	**Rector**	**85.00**	**43**	P	**P**	**22 30 01.8**	**-0.4**
	baz=322						
W41B	**Gary Mavity, V**	**85.01**	**45**	*e*P	**P**	**22 30 02.3**	**0.0**
	comp=Z,55nm,1.0s						
W41B	**Gary Mavity, V**	**85.01**	**45**	P	**P**	**22 30 01.7**	**-0.6**
	baz=321						
NPS	**Neapolis**	**85.03**	**315**	*e*P	**P**	**22 30 00.3**	**-2.1**
NPS	**Neapolis**	**85.03**	**315**	P	**P**	**22 30 00.3**	**-2.1**
NPS	**Neapolis**	**85.03**	**315**	*e*P	**P**	**22 30 00.3**	**-2.1**
BATG	**Bathurst New B**	**85.03**	**22**	*e*P	**P**	**22 30 02.8**	**+0.6**
	comp=Z,62nm,0.8s						
PARMO	**Parma**	**85.09**	**42**	PFAKE		22 30 10.0	+7.3
PARMO				LR	LR		
	comp=Z,500nm,20.0s						
O50A	**Cable**	**85.10**	**36**	P	**P**	**22 30 02.7**	**0.0**
	baz=326						
P49A	**Miami Univ. Ec**	**85.13**	**37**	P	**P**	**22 30 02.4**	**-0.5**
	baz=325						
QUIF	**Quistinic**	**85.15**	**340**	*e*P	**P**	**22 30 02.6**	**-0.1**
QUIF				pmax	pmax		
	comp=Z,37nm,0.6s						

MBDF	Montbardon	85.16	333	eP	P	22 30 02.2	-0.9
MBDF				pmax	pmax		
	comp=Z,11nm,0.5s						
VLS	Valsamata	85.17	320	eP	P	22 30 02.8	-0.3
VLS	Valsamata	85.17	320	P	P	22 30 02.8	-0.3
VLS	Valsamata	85.17	320	eP	P	22 30 02.8	-0.3
Q48A	North Vernon	85.17	38	P	P	22 30 02.1	-0.9
	baz=325						
LAST	Lasithi	85.17	315	eP	P	22 30 02.8	-0.4
LAST	Lasithi	85.17	315	P	P	22 30 02.8	-0.4
K55A	Perry	85.18	31	P	P	22 30 02.5	-0.5
	baz=329						
TCF	Toulx Ste Croi	85.19	336	eP	P	22 30 03.0	-0.1
TCF				pmax	pmax		
	comp=Z,25nm,0.8s						
VLI	Veliai	85.22	318	eP	P	22 30 00.9	-2.4
VLI	Veliai	85.22	318	P	P	22 30 00.9	-2.4
MMNY	Mt. Morris Dam	85.23	31	eP	P	22 30 03.2	0.0
	comp=Z,89nm,0.7s						
X40A	Basin Creek Fa	85.24	46	eP	P	22 30 03.9	+0.4
	comp=Z,38nm,0.9s						
X40A	Basin Creek Fa	85.24	46	P	P	22 30 03.3	-0.1
	baz=321						
M53A	WI Miller and	85.25	34	P	P	22 30 03.3	-0.1
	baz=328						
U44A	Portageville	85.25	42	P	P	22 30 03.3	-0.1
	baz=323						
S46A	Don Dixon Farm	85.26	40	P	P	22 30 02.2	-1.2
	baz=324						
ORIF	Oris-en-Rattie	85.28	333	eP	P	22 30 03.5	-0.1
ORIF				pmax	pmax		
	comp=Z,29nm,0.9s						
ALLY	Alegheny Colle	85.29	33	eP	P	22 30 03.5	-0.1
	comp=Z,157nm,0.8s						
ALLY				LR	LR		
	comp=Z,600nm,22.0s						
ACSO	Alum Creek Sta	85.30	36	eP	P	22 30 03.9	+0.2
	comp=Z,105nm,0.8s						
ACSO	Alum Creek Sta	85.30	36	P	P	22 30 03.1	-0.5
	baz=326						
R47A	Wooly Knot Far	85.32	39	P	P	22 30 03.6	-0.2
	baz=324						
ITM	Ithomi	85.34	319	P	P	22 30 02.0	-1.9
ITM	Ithomi	85.34	319	eP	P	22 30 03.4	-0.5
	comp=Z,139nm,1.2s						
ITM				LR	LR		
	comp=Z,800nm,19.0s						
ITM	Ithomi	85.34	319	P	P	22 30 03.4	-0.5
T45A	Paducah	85.35	41	PFAKE		22 30 20.0	+16
T45A				LR	LR		
	comp=Z,700nm,19.0s						
T45A	Paducah	85.35	41	P	P	22 30 03.2	-0.7
	baz=323						
N52A	McGinn's Farm,	85.36	35	P	P	22 30 03.6	-0.3
	baz=327						
IDI	Anoyia	85.37	316	P	P	22 30 03.5	-0.7
IDI	Anoyia	85.37	316	eP	P	22 30 03.6	-0.6
	comp=Z,170nm,1.5s						
IDI				LR	LR		
	comp=Z,600nm,20.0s						
SSB	Saint Sauveur	85.39	334	eP	P	22 30 04.4	+0.3
	comp=Z,46nm,1.3s						
SSB				LR	LR		
	comp=Z,1µm,19.0s						
SSB	Saint Sauveur	85.39	334	eP	P	22 30 04.4	+0.3
SSB				pmax	pmax		
	comp=Z,46nm,1.3s						
SSB				MLR	MLR		
	comp=Z,1µm,19.0s						
V43A	Jonesboro	85.39	43	P	P	22 30 03.8	-0.3
	baz=322						
P50A	Jamestown	85.47	37	P	P	22 30 04.3	-0.2
	baz=326						
Q49A	Aurora	85.48	38	P	P	22 30 04.7	+0.1
	baz=325						
WCI	Wyandotte Cave	85.48	39	eP	P	22 30 04.9	+0.3
	comp=Z,68nm,0.8s						
WCI	Wyandotte Cave	85.48	39	eP	P	22 30 04.9	+0.3
WCI				pmax	pmax		
	comp=Z,68nm,0.8s						
WCI	Wyandotte Cave	85.48	39	P	P	22 30 04.4	-0.2
	baz=324						
435B	Jarrell	85.49	51	P	P	22 30 04.6	-0.2
	baz=319						
NCB	Newcomb	85.49	28	eP	P	22 30 04.6	0.0
L55A	Hinsdale	85.50	32	P	P	22 30 04.1	-0.5
	baz=329						
O51A	Pataskala	85.53	36	P	P	22 30 04.4	-0.5
	baz=326						
R48A	Northridge Ran	85.53	39	P	P	22 30 04.8	-0.1
	baz=325						
SAOF	Saorge	85.55	332	eP	P	22 30 04.9	0.0
SAOF				pmax	pmax		
	comp=Z,40nm,1.8s						
HIZ	Hauiti	85.55	158	PFAKE		22 30 20.0	+15
HIZ				LR	LR		
	comp=Z,1µm,20.0s						
MFF	Saint Martin d	85.58	338	eP	P	22 30 05.0	+0.1
MFF				pmax	pmax		
	comp=Z,34nm,0.5s						
M54A	Oil Creek Stat	85.60	33	eP	P	22 30 05.4	+0.3
	comp=Z,105nm,0.8s						
M54A	Oil Creek Stat	85.60	33	P	P	22 30 04.8	-0.4
	baz=328						
VT1	Waterbury	85.67	27	eP	P	22 30 06.0	+0.5
	comp=Z,67nm,0.8s						
V44A	Blytheville	85.68	43	P	P	22 30 06.0	+0.4
	baz=323						
T46A	Princeton	85.69	41	P	P	22 30 06.0	+0.3
	baz=324						
SBF	Sospel	85.69	332	eP	P	22 30 04.7	-0.9
SBF				pmax	pmax		
	comp=Z,36nm,0.6s						
IMMV	Iera Moni Meta	85.70	317	P	P	22 30 06.1	+0.4
IMMV	Iera Moni Meta	85.70	317	P	P	22 30 04.8	-0.9
WLAR	White Oak Lake	85.72	46	eP	P	22 30 06.7	+0.9
	comp=Z,81nm,0.7s						
N53A	Lisbon	85.72	34	P	P	22 30 05.7	0.0
	baz=328						
S47A	Hartford	85.72	40	P	P	22 30 05.6	-0.2
	baz=324						
VIVF	Saint-Julien-l	85.73	334	eP	P	22 30 05.8	0.0
VIVF				pmax	pmax		
	comp=Z,55nm,1.4s						
CUC	Castrocucco	85.80	324	eP	P	22 30 05.5	-0.7
	comp=Z,26nm,1.3s						
CUC				LR	LR		
	comp=Z,1µm,20.0s						
U45A	Rockin P Farm,	85.83	42	P	P	22 30 06.2	-0.2
	baz=323						
O52A	Adamsville	85.88	35	eP	P	22 30 06.8	+0.2
	comp=Z,108nm,0.9s						
O52A	Adamsville	85.88	35	P	P	22 30 06.3	-0.2
	baz=327						
P51A	Williamsport	85.89	36	eP	P	22 30 06.6	0.0
	comp=Z,97nm,0.8s						
P51A	Williamsport	85.89	36	P	P	22 30 06.0	-0.6
	baz=326						
N54A	Moraine State	85.93	34	eP	P	22 30 06.9	+0.1
	comp=Z,103nm,0.8s						
N54A	Moraine State	85.93	34	P	P	22 30 06.5	-0.3
	baz=328						
PKME	Peaks-Kenny Pk	85.94	25	P	P	22 30 06.7	0.0
	baz=335						
R49A	Shelbyville	85.94	38	P	P	22 30 06.4	-0.5
	baz=325						
M55A	Ridgway	85.99	33	P	P	22 30 06.7	-0.4
	baz=329						
Q50A	Georgetown	86.02	37	P	P	22 30 07.3	0.0
	baz=326						
LBNH	Lisbon	86.03	27	eP	P	22 30 10.0	+2.8
	comp=Z,33nm,0.8s						
LBNH	Lisbon	86.03	27	P	P	22 30 06.8	-0.4
	baz=333						
O53A	New Philadelph	86.03	35	P	P	22 30 07.2	-0.1
	baz=327						
S48A	Wiedeman Farm,	86.05	39	P	P	22 30 07.0	-0.4
	baz=325						
TAU	Tasmania Unive	86.07	180	PFAKE		22 30 20.0	+13
TAU				LR	LR		
	comp=Z,1µm,20.0s						
TIP	Timpagrande	86.07	323	eP	P	22 30 08.2	+0.6
	comp=Z,125nm,1.5s						
TIP				LR	LR		
	comp=Z,1µm,20.0s						
TIP	Timpagrande	86.07	323	⇑iP	P	22 30 07.8	+0.2
U46A	Springville	86.10	41	P	P	22 30 07.5	-0.2
	baz=324						
T47A	Sharon Grove	86.11	40	eP	P	22 30 07.5	-0.2
	comp=Z,121nm,0.7s						
T47A	Sharon Grove	86.11	40	P	P	22 30 07.9	+0.1
	baz=324						
GVD	Gavdhos	86.13	316	P	P	22 30 06.3	-1.6
Q51A	Peebles	86.15	37	eP	P	22 30 08.3	+0.5
	comp=Z,169nm,0.8s						
Q51A	Peebles	86.15	37	P	P	22 30 07.8	-0.1
	baz=326						
P52A	Corning	86.16	36	P	P	22 30 07.2	-0.7
	baz=327						
ACCN	Adirondack Com	86.20	28	eP	P	22 30 08.2	+0.1
	comp=Z,64nm,1.0s						
Z41A	Richland Creek	86.21	46	P	P	22 30 08.2	-0.1
	baz=321						
V45A	Humboldt	86.22	42	P	P	22 30 06.9	-1.3
	baz=323						
X43A	Marvell	86.22	44	P	P	22 30 08.5	+0.2
	baz=322						
MET	Memphis--Engin	86.22	43	PFAKE		22 30 20.0	+12
MET				LR	LR		
	comp=Z,500nm,19.0s						
FRF	La Foret Royal	86.23	332	eP	P	22 30 07.5	-0.7
FRF				pmax	pmax		
	comp=Z,66nm,1.5s						
833A	Chaparral WMA,	86.28	54	P	P	22 30 08.9	+0.2
	baz=318						
RJF	Les Rejaudoux	86.29	336	eP	P	22 30 08.5	0.0
RJF				pmax	pmax		
	comp=Z,56nm,1.0s						
PGF	Pioggiola	86.29	330	eP	P	22 30 07.7	-1.0
PGF				pmax	pmax		
	comp=Z,17nm,0.8s						
S49A	Springfield	86.30	39	P	P	22 30 08.7	+0.1
	baz=325						
R50A	Paris	86.33	38	P	P	22 30 08.9	+0.1
	baz=326						
T48A	Bowling Green	86.34	40	P	P	22 30 08.9	+0.1
	baz=324						
NATX	Nacogdoches	86.37	49	PFAKE		22 30 20.0	+11
NATX				LR	LR		
	comp=Z,399nm,20.0s						
NATX	Nacogdoches	86.37	49	P	P	22 30 09.4	+0.3
	baz=320						
HNH	Hanover	86.38	27	eP	P	22 30 09.6	+0.7
	comp=Z,48nm,0.9s						
BINY	Binghamton	86.41	30	eP	P	22 30 12.6	+3.4
	comp=Z,38nm,0.8s						
BINY	Binghamton	86.41	30	P	P	22 30 08.8	-0.4
	baz=330						
O54A	Avella	86.43	34	P	P	22 30 09.6	+0.3
	baz=328						
WVT	Waverly	86.45	41	eP	P	22 30 09.5	+0.1
	comp=Z,44nm,0.8s						
WVT				LR	LR		
	comp=Z,700nm,20.0s						
WVT	Waverly	86.45	41	eP	P	22 30 09.5	+0.1
WVT				pmax	pmax		
	comp=Z,44nm,0.8s						
WVT				MLR	MLR		
	comp=Z,700nm,20.0s						
WVT	Waverly	86.45	41	P	P	22 30 09.3	-0.2
	baz=324						
WVL	Waterville	86.46	25	eP	P	22 30 08.4	-0.9
	comp=Z,45nm,0.9s						
U47A	Clarksville	86.46	41	P	P	22 30 09.5	+0.1
	baz=324						
CAF	Calviac	86.47	336	eP	P	22 30 09.9	+0.5
CAF				pmax	pmax		
	comp=Z,226nm,1.6s						
N55A	Marion Center	86.48	33	P	P	22 30 09.3	-0.3
	baz=329						
W45A	Hickory Valley	86.57	43	P	P	22 30 10.4	+0.3
	baz=323						
V46A	Holladay	86.58	42	P	P	22 30 09.6	-0.5
	baz=324						
P53A	Whipple	86.60	35	eP	P	22 30 10.4	+0.3
	comp=Z,64nm,0.8s						
P53A	Whipple	86.60	35	P	P	22 30 10.1	0.0
	baz=327						
BKZ	Black Stump Fm	86.61	157	PFAKE		22 30 20.0	+10
BKZ				LR	LR		
	comp=Z,1µm,21.0s						
R51A	Hillsboro	86.64	37	P	P	22 30 10.1	-0.2
	baz=326						
Q52A	Bidwell	86.67	36	P	P	22 30 09.8	-0.6
	baz=327						
Y43A	Makayla and Ka	86.67	45	P	P	22 30 10.6	+0.1
	baz=322						
LMN	Caledonia Moun	86.68	22	eP	P	22 30 10.9	+0.6
	comp=Z,87nm,0.9s						
LMN				LR	LR		
	comp=Z,800nm,20.0s						
T49A	Edmonton	86.74	39	eP	P	22 30 11.3	+0.4
	comp=Z,38nm,0.8s						
T49A				LR	LR		
	comp=Z,700nm,21.0s						
T49A	Edmonton	86.74	39	P	P	22 30 10.1	-0.7
	baz=325						
U48A	Cassie Pea, Po	86.76	40	P	P	22 30 10.9	-0.1
	baz=324						
S50A	Richmond	86.79	38	P	P	22 30 10.9	-0.2
	baz=326						
V47A	Nunnelly	86.84	41	P	P	22 30 11.0	-0.4
	baz=324						
O55A	Ligonier	86.85	34	P	P	22 30 10.9	-0.4
	baz=328						
LFF	La Frestale	86.85	337	eP	P	22 30 11.7	+0.5
LFF				pmax	pmax		
	comp=Z,34nm,0.6s						
P54A	Burton	86.88	35	P	P	22 30 11.4	-0.1
	baz=328						
OXF	Oxford	86.97	43	PFAKE		22 30 20.0	+8.0
OXF				LR	LR		
	comp=Z,600nm,18.0s						
OXF	Oxford	86.97	43	P	P	22 30 11.6	-0.4
	baz=323						
W46A	Michie	86.98	42	P	P	22 30 11.6	-0.4
	baz=324						
R52A	Catlettsburg	87.02	37	P	P	22 30 11.7	-0.5
	baz=327						
SSPA	Standing Stone	87.04	32	eP	P	22 30 12.7	+0.5
	comp=Z,71nm,0.9s						
SSPA	Standing Stone	87.04	32	P	P	22 30 12.2	0.0
	baz=329						
KSPA	Keystone Colle	87.05	31	eP	P	22 30 12.4	+0.2
	comp=Z,46nm,0.8s						
O56A	Blue Knob Stat	87.09	33	eP	P	22 30 12.6	+0.1
	comp=Z,128nm,0.8s						
O56A	Blue Knob Stat	87.09	33	P	P	22 30 12.1	-0.4
	baz=329						
MCWV	Mont Chateau	87.09	34	eP	P	22 30 13.4	+0.9
	comp=Z,54nm,0.8s						
MCWV	Mont Chateau	87.09	34	P	P	22 30 12.8	+0.3
	baz=328						
U49A	Red Boiling Sp	87.11	40	P	P	22 30 12.5	-0.2
	baz=325						
T50A	Nancy	87.13	39	P	P	22 30 12.3	-0.4
	baz=325						
S51A	Beattyville	87.18	38	eP	P	22 30 13.8	+0.9
	comp=Z,66nm,1.0s						
S51A	Beattyville	87.18	38	P	P	22 30 13.0	0.0
	baz=326						
CEL	Celeste	87.21	323	PFAKE		22 30 20.0	+6.8
CEL				LR	LR		
	comp=Z,1µm,22.0s						
P55A	Reedsville	87.23	34	P	P	22 30 13.7	+0.5
	baz=328						
V48A	Smith Brothers	87.25	41	eP	P	22 30 14.3	+0.9
	comp=Z,37nm,0.8s						
V48A				LR	LR		
	comp=Z,600nm,20.0s						
V48A	Smith Brothers	87.25	41	P	P	22 30 13.0	-0.3
	baz=324						
Q54A	Coxs Mills	87.25	35	P	P	22 30 13.6	+0.3
	baz=328						
W47A	Westpoint	87.27	42	P	P	22 30 13.5	+0.1
	baz=324						
R53A	Hurricane	87.33	36	P	P	22 30 13.4	-0.2
	baz=327						
X46A	Booneville	87.34	43	P	P	22 30 13.4	-0.4
	baz=323						
S52A	Salyersville	87.38	37	P	P	22 30 13.7	-0.2
	baz=326						
Q55A	Buckhannon	87.56	35	P	P	22 30 14.9	0.0
	baz=328						
T51A	Gray	87.58	38	P	P	22 30 14.3	-0.6
	baz=326						
N59A	State Game Lan	87.61	31	eP	P	22 30 15.2	+0.2
	comp=Z,123nm,1.1s						
N59A	State Game Lan	87.61	31	P	P	22 30 15.1	+0.2
	baz=331						
U50A	Jamestown	87.62	39	P	P	22 30 14.9	-0.2
	baz=325						
V49A	McMinnville	87.66	40	P	P	22 30 14.4	-0.9
	baz=325						
W48A	Pulaski	87.68	41	P	P	22 30 15.5	+0.1
	baz=324						
HRV	Adam Dziewonsk	87.69	27	PFAKE		22 30 30.0	+15
HRV				LR	LR		
	comp=Z,800nm,18.0s						
HRV	Adam Dziewonsk	87.69	27	P	P	22 30 15.5	+0.2
	baz=333						
X47A	Russelville	87.73	42	P	P	22 30 15.3	-0.4
	baz=324						
S53A	Williamson	87.79	37	P	P	22 30 15.3	-0.7
	baz=327						
PAGS	Pennsylvania G	87.84	32	eP	P	22 30 16.2	+0.2
	comp=Z,82nm,0.8s						
PAGS				LR	LR		
	comp=Z,700nm,22.0s						
MTLF	Montolieu	87.86	335	eP	P	22 30 16.5	+0.4
MTLF				pmax	pmax		
	comp=Z,103nm,1.7s						
R54A	Victor	87.86	36	P	P	22 30 16.3	0.0
	baz=328						
WES	Weston	87.88	27	PFAKE		22 30 30.0	+14
WES				LR	LR		
	comp=Z,800nm,19.0s						
ODNJ	Ogdensburg	87.89	30	eP	P	22 30 16.8	+0.5
	comp=Z,28nm,0.9s						
T52A	Hallie	87.89	38	P	P	22 30 16.4	0.0
	baz=326						
GBN	Guysborough	87.93	20	eP	P	22 30 18.1	+1.7
	comp=Z,78nm,1.1s						
GBN				LR	LR		
	comp=Z,1µm,18.0s						
BFZ	Birch Farm	87.96	158	PFAKE		22 30 30.0	+14
BFZ				LR	LR		
	comp=Z,1µm,22.0s						
W49A	Belvidere	88.02	41	P	P	22 30 16.8	-0.2
	baz=325						
U51A	La Follette	88.03	39	P	P	22 30 17.1	0.0
	baz=326						
SWET	Sewanee	88.10	41	eP	P	22 30 17.4	0.0
	comp=Z,83nm,0.7s						
TZTN	Tazewell	88.11	38	eP	P	22 30 18.5	+1.1
TZTN	Tazewell	88.11	38	P	P	22 30 16.9	-0.6
	baz=326						
THZ	Tophouse	88.12	161	PFAKE		22 30 30.0	+13
THZ				LR	LR		
	comp=Z,600nm,19.0s						
V50A	Pikevile	88.12	40	P	P	22 30 16.8	-0.7
	baz=325						
R55A	Marlinton	88.14	35	P	P	22 30 16.6	-1.1
	baz=328						
X48A	Hartselle	88.18	42	eP	P	22 30 17.7	-0.1
	comp=Z,37nm,0.8s						
X48A				LR	LR		
	comp=Z,600nm,19.0s						
X48A	Hartselle	88.18	42	P	P	22 30 16.9	-0.9
	baz=324						
MVL	Millersville	88.18	32	eP	P	22 30 18.2	+0.5
	comp=Z,61nm,0.8s						
T53A	Wise	88.20	37	P	P	22 30 17.0	-1.0
	baz=327						
PAL	Palisades	88.21	30	P	P	22 30 16.2	-1.6
	baz=332						
145A	Houston Renfro	88.22	45	P	P	22 30 17.2	-0.8
	baz=323						
VBMS	Vicksburg	88.22	46	P	P	22 30 17.7	-0.3
	baz=322						
U52A	Thorn Hill	88.32	38	P	P	22 30 18.2	-0.3
	baz=326						
V51A	Loudon	88.35	39	eP	P	22 30 19.0	+0.4
	comp=Z,64nm,0.9s						
V51A	Loudon	88.35	39	P	P	22 30 18.5	-0.1
	baz=326						
W50A	Signal Mountai	88.40	40	eP	P	22 30 21.9	+3.0
	comp=Z,43nm,0.8s						
W50A	Signal Mountai	88.40	40	P	P	22 30 18.6	-0.3
	baz=325						
S55A	Lewisburg	88.42	36	P	P	22 30 19.5	+0.6
	baz=328						
X49A	Woodville	88.48	41	P	P	22 30 18.8	-0.4
	baz=325						
T54A	Tazewell	88.55	37	P	P	22 30 19.2	-0.4
	baz=327						
Y48A	Jasper	88.56	42	P	P	22 30 18.7	-0.9
	baz=324						
CPCT	Cooper Cave	88.57	40	eP	P	22 30 20.3	+0.7
	comp=Z,51nm,0.8s						
TBI	Tubuai	88.58	124	eT	T	00 08 12.0	
	comp=Z,17nm,0.3s						
V52A	Sevierville	88.67	39	eP	P	22 30 20.6	+0.5
	comp=Z,56nm,0.8s						
V52A				LR	LR		
	comp=Z,700nm,20.0s						
V52A	Sevierville	88.67	39	P	P	22 30 19.9	-0.2
	baz=326						
W51A	Cleveland	88.69	40	P	P	22 30 19.5	-0.7
	baz=326						
U53A	Fall Branch	88.69	38	P	P	22 30 20.0	-0.3
	baz=327						
TKL	Tuckaleechee C	88.74	39	eP	P	22 30 20.9	+0.4
	comp=Z,72nm,0.8s						
TKL				LR	LR		
	comp=Z,600nm,19.0s						
TKL	Tuckaleechee C	88.74	39	eP	P	22 30 20.9	+0.4
TKL				pmax	pmax		
	comp=Z,72nm,0.8s						
TKL				MLR	MLR		
	comp=Z,600nm,19.0s						
TKL	Tuckaleechee C	88.74	39	P	P	22 30 21.0	+0.6
	comp=Z,12nm,0.9s,baz=156,slow=1.5,SNR=7.7						
DAMY	Dhamar	88.81	289	PFAKE		22 30 30.0	+8.6
DAMY				LR	LR		
	comp=Z,800nm,21.0s						
M65A	Busby, Falmout	88.84	27	P	P	22 30 20.0	-0.7
	baz=334						
X50B	Fort Payne	88.84	41	P	P	22 30 20.5	-0.5
	baz=325						
CLTB	Caltabellotta	88.92	325	PFAKE		22 30 30.0	+8.6
CLTB				LR	LR		
	comp=Z,2µm,19.0s						
BLA	Blacksburg	88.92	36	eP	P	22 30 25.0	+3.7
	comp=Z,66nm,1.0s						
BLA	Blacksburg	88.92	36	eP	P	22 30 25.0	+3.7
BLA				pmax	pmax		
	comp=Z,66nm,1.0s						
BLA	Blacksburg	88.92	36	P	P	22 30 20.3	-1.0
	baz=328						
Y49A	Blount Mountai	88.97	42	eP	P	22 30 21.5	-0.1
	comp=Z,43nm,0.8s						
Y49A	Blount Mountai	88.97	42	P	P	22 30 20.9	-0.7
	baz=325						
147A	Livingston	89.01	44	eP	P	22 30 22.6	+0.8
	comp=Z,132nm,0.9s						
147A				LR	LR		
	comp=Z,600nm,20.0s						
147A	Livingston	89.01	44	P	P	22 30 21.6	-0.1
	baz=324						
SJPF	Ste Jean	89.09	337	eP	P	22 30 22.9	+1.0
SJPF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ETSF	Etsaut	89.09	337	eP	P	22 30 22.1	0.0
ETSF				pmax	pmax		
	comp=Z,29nm,0.6s						
W52A	Murphy	89.13	39	P	P	22 30 21.4	-0.9
	baz=326						
X51A	Calhoun	89.14	40	eP	P	22 30 22.6	+0.3
	comp=Z,31nm,0.8s						
X51A	Calhoun	89.14	40	P	P	22 30 22.3	+0.1
	baz=325						
V53A	Saluda	89.17	38	eP	P	22 30 23.4	+0.9
	comp=Z,48nm,1.1s						
V53A	Saluda	89.17	38	P	P	22 30 22.0	-0.5
	baz=327						
Y50A	Piedmont	89.27	41	P	P	22 30 22.5	-0.4
	baz=325						
CBN	Corbin Frederi	89.33	33	P	P	22 30 22.9	-0.2
	baz=330						
R58B	Mineral	89.34	34	P	P	22 30 22.4	-0.7
	baz=329						
LRAL	Lakeview Retre	89.35	43	eP	P	22 30 23.9	+0.6

	comp=Z,18nm,0.8s						
LRAL	**Lakeview Retre**	**89.35**	**43**	P	**P**	**22 30 22.7**	**-0.7**
	baz=324						
OXZ	**Oxford**	**89.40**	**162**	*e*P	**P**	**22 30 23.9**	**+1.0**
	comp=Z,57nm,1.0s						
OXZ				LR	LR		
	comp=Z,800nm,18.0s						
W53A	**Cullowhee**	**89.42**	**39**	P	**P**	**22 30 23.4**	**-0.4**
	baz=326						
Z49A	**Columbiana**	**89.45**	**42**	P	**P**	**22 30 23.6**	**-0.2**
	baz=324						
X52A	**Dahlonega**	**89.55**	**40**	P	**P**	**22 30 23.6**	**-0.7**
	baz=326						
Y51A	**Rockmart**	**89.58**	**41**	P	**P**	**22 30 24.5**	**0.0**
	baz=325						
Z50A	**Ashland**	**89.70**	**42**	*e*P	**P**	**22 30 24.8**	**-0.2**
	comp=Z,130nm,0.8s						
Z50A	**Ashland**	**89.70**	**42**	P	**P**	**22 30 23.7**	**-1.3**
	baz=325						
149A	**Jones**	**89.80**	**43**	P	**P**	**22 30 24.5**	**-0.9**
	baz=324						
WDD	**Wied Dalam**	**89.83**	**323**	PFAKE		22 30 40.0	+14
WDD				LR	LR		
	comp=Z,2µm,19.0s						
X53A	**Estanollee**	**89.91**	**39**	P	**P**	**22 30 25.8**	**-0.1**
	baz=326						
Z51A	**Franklin**	**90.01**	**41**	P	**P**	**22 30 25.3**	**-1.1**
	baz=325						
Y52A	**Lilburn**	**90.08**	**40**	*e*P	**P**	**22 30 30.8**	**+4.0**
	comp=Z,33nm,0.8s						
Y52A	**Lilburn**	**90.08**	**40**	P	**P**	**22 30 26.2**	**-0.5**
	baz=326						
249A	**Camden**	**90.14**	**43**	P	**P**	**22 30 26.9**	**-0.2**
	baz=324						
150A	**Eclectic**	**90.17**	**42**	P	**P**	**22 30 26.8**	**-0.4**
	baz=325						
KMSC	**Kings Mountain**	**90.27**	**38**	*e*P	**P**	**22 30 27.8**	**+0.2**
	comp=Z,38nm,0.9s						
KMSC	**Kings Mountain**	**90.27**	**38**	P	**P**	**22 30 27.4**	**-0.2**
	baz=327						
Y53A	**Monroe**	**90.32**	**40**	P	**P**	**22 30 27.9**	**0.0**
	baz=326						
PAULI	**Pauline**	**90.32**	**38**	*e*P	**P**	**22 30 31.5**	**+3.7**
	comp=Z,29nm,0.8s						
Z52A	**Williamson**	**90.47**	**41**	P	**P**	**22 30 27.9**	**-0.7**
	baz=326						
MLZ	**Mavora Lakes**	**90.54**	**165**	PFAKE		22 30 40.0	+12
MLZ				LR	LR		
	comp=Z,2µm,22.0s						
250A	**Grady**	**90.56**	**43**	PFAKE		22 30 40.0	+11
250A				LR	LR		
	comp=Z,700nm,20.0s						
250A	**Grady**	**90.56**	**43**	P	**P**	**22 30 28.7**	**-0.3**
	baz=325						
151A	**Opelika**	**90.58**	**42**	P	**P**	**22 30 28.6**	**-0.5**
	baz=325						
HODGE	**Hodges**	**90.61**	**39**	*e*P	**P**	**22 30 31.0**	**+1.8**
	comp=Z,33nm,1.0s						
X55A	**Gracelyn & Ava**	**90.70**	**38**	P	**P**	**22 30 29.4**	**-0.2**
	baz=327						
Y54A	**Tignall**	**90.72**	**39**	P	**P**	**22 30 29.5**	**-0.2**
	baz=327						
GOGA	**Godfrey**	**90.74**	**40**	P	**P**	**22 30 29.3**	**-0.4**
	baz=326						
152A	**Waverly Hall**	**90.76**	**41**	PFAKE		22 30 40.0	+10
152A				LR	LR		
	comp=Z,500nm,20.0s						
152A	**Waverly Hall**	**90.76**	**41**	P	**P**	**22 30 28.8**	**-1.1**
	baz=326						
Z53A	**Monticello**	**90.80**	**40**	P	**P**	**22 30 29.5**	**-0.5**
	baz=326						
BRAL	**Brewton**	**90.83**	**44**	P	**P**	**22 30 29.1**	**-1.1**
	baz=324						
251A	**Midway**	**90.89**	**42**	P	**P**	**22 30 29.9**	**-0.6**
	baz=325						
X56A	**White Oak**	**90.95**	**38**	P	**P**	**22 30 30.8**	**0.0**
	baz=328						
Z54A	**Sparta**	**91.17**	**40**	P	**P**	**22 30 31.9**	**+0.1**
	baz=326						
252A	**Lumpkin**	**91.30**	**42**	P	**P**	**22 30 31.8**	**-0.6**
	baz=326						
X57A	**Johnson Farm,**	**91.39**	**37**	P	**P**	**22 30 32.5**	**-0.2**
	baz=328						
253A	**Americus**	**91.54**	**41**	P	**P**	**22 30 33.4**	**-0.1**
	baz=326						
154A	**Montrose**	**91.57**	**40**	P	**P**	**22 30 33.3**	**-0.3**
	baz=326						
352A	**Blakely**	**91.63**	**42**	P	**P**	**22 30 33.9**	**-0.1**
	baz=325						
X58A	**Rowland**	**91.64**	**37**	P	**P**	**22 30 33.7**	**-0.2**
	baz=329						
PBRG	**Braganca**	**91.76**	**341**	*e*P	**P**	**22 30 34.1**	**-0.3**
	comp=Z,25nm,1.8s						
PGAV	**Gavieira, Arco**	**91.97**	**342**	*e*LR	LR	23 04 46.0	
	comp=Z,642nm,18.0s						
ATD	**Arta Tunnel**	**92.01**	**288**	PFAKE		22 30 50.0	+14
ATD				LR	LR		
	comp=Z,600nm,18.0s						
KEST	**Kesra**	**92.09**	**327**	*e*P	**P**	**22 30 36.5**	**+0.3**
	comp=Z,11nm,0.8s						
KEST				LR	LR		
	comp=Z,2µm,18.0s						
KEST	**Kesra**	**92.09**	**327**	P	**P**	**22 30 36.2**	**0.0**
	comp=Z,7.9nm,0.6s,baz=335,slow=2.5,SNR=28						
KEST				LR	LR	23 16 59.7	
	comp=Z,2µm,18.6s,baz=351,slow=39						
POLO	**Lamas de Olo**	**92.42**	**341**	*e*P	**P**	**22 30 36.8**	**-0.8**
	comp=Z,24nm,1.8s						
MVO	**Moncorvo**	**92.43**	**341**	*e*P	**P**	**22 30 36.5**	**-1.1**
	comp=Z,47nm,1.9s						
MVO	**Moncorvo**	**92.43**	**341**	*e*LR	LR	23 05 42.4	
	comp=Z,771nm,20.0s						
ES19	**SONSECA Array**	**93.00**	**338**	*e*P	**P**	**22 30 40.0**	**-0.3**
ESDC	**Sonseca Array**	**93.04**	**338**	P	**P**	**22 30 40.1**	**-0.3**
	comp=Z,5.3nm,0.7s,baz=18,slow=4.0,SNR=76						
ESLA	**Sonseca Array**	**93.04**	**338**	*e*P	**P**	**22 30 40.6**	**+0.2**
	comp=Z,40nm,1.4s						
ESLA				LR	LR		
	comp=Z,700nm,19.0s						
PAB	**San Pablo**	**93.27**	**338**	*e*P	**P**	**22 30 41.3**	**-0.2**
	comp=Z,19nm,1.2s						
PAB				LR	LR		
	comp=Z,1µm,19.0s						
PAB	**San Pablo**	**93.27**	**338**	*e*P	**P**	**22 30 41.3**	**-0.2**
PAB				pmax	pmax		
	comp=Z,19nm,1.2s						
PAB				MLR	MLR		
	comp=Z,1µm,19.0s						
MTE	**Manteigas**	**93.28**	**341**	*e*P	**P**	**22 30 40.9**	**-0.6**
MTE	**Manteigas**	**93.28**	**341**	*e*LR	LR	23 05 58.7	
	comp=Z,839nm,18.0s						
MTE	**Manteigas**	**93.28**	**341**	PFAKE		22 30 50.0	+8.5
MTE				LR	LR		
	comp=Z,1µm,20.0s						
PCAS	**Casmilo, Conde**	**93.84**	**341**	*e*P	**P**	**22 30 41.5**	**-2.5**
CART	**Cartagena**	**94.11**	**335**	PFAKE		22 31 00.0	+15
CART				LR	LR		
	comp=Z,900nm,20.0s						
PMRV	**Marv??o**	**94.17**	**340**	*e*P	**P**	**22 30 44.4**	**-1.1**
PMRV	**Marv??o**	**94.17**	**340**	*e*LR	LR	23 07 05.8	
	comp=Z,744nm,20.0s						
PESTR	**Estremoz**	**94.75**	**340**	PFAKE		22 31 00.0	+12
PESTR				LR	LR		
	comp=Z,500nm,20.0s						
PNCL	**Nicolau / Gran**	**95.69**	**341**	*e*P	**P**	**22 30 51.3**	**-1.2**
MESJ	**Messejana**	**95.88**	**340**	*e*P	**P**	**22 30 52.9**	**-0.4**
MESJ				AMb	AMB	22 30 55.8	
	comp=Z,24nm,1.8s						
MESJ	**Messejana**	**95.88**	**340**	*e*P	**P**	**22 30 52.0**	**-1.3**
MESJ	**Messejana**	**95.88**	**340**	*e*P	**P**	**22 30 52.9**	**-0.4**
PVAQ	**Vaqueiros**	**96.17**	**340**	*e*LR	LR	23 09 08.1	
	comp=Z,1µm,20.0s						
MORF	**Marmelete**	**96.49**	**340**	*e*P	**P**	**22 30 55.7**	**-0.6**
MORF				AMb	AMB	22 30 59.8	
	comp=Z,25nm,2.0s						
MORF	**Marmelete**	**96.49**	**340**	*e*P	**P**	**22 30 55.6**	**-0.6**
MORF				pmax	pmax		
	comp=Z,25nm,2.0s						
PFVI	**Vila Bisbo**	**96.69**	**341**	PFAKE		22 31 10.0	+13
PFVI				LR	LR		
	comp=Z,1µm,20.0s						
FURI	**Furi**	**96.75**	**289**	PFAKE		22 31 10.0	+12
FURI				LR	LR		
	comp=Z,2µm,19.0s						
RKT	**Rikitea**	**97.58**	**115**	*e*LR	LR	23 02 32.4	
	comp=Z,854nm,32.0s						
RTC	**Rabat Centre**	**99.17**	**338**	PFAKE		22 31 20.0	+12
RTC				LR	LR		
	comp=Z,6µm,18.0s						
KMBO	**Kilima Mbogo**	**104.85**	**283**	PFAKE		22 31 50.0	+16
KMBO				LR	LR		
	comp=Z,800nm,20.0s						
KMBO	**Kilima Mbogo**	**104.85**	**283**	*i* P	**PKiKP**	**22 35 46.7**	**-2.6**
TAM	**Tamanrasset**	**105.00**	**323**	PFAKE		22 31 50.0	+15
TAM				LR	LR		
	comp=Z,1µm,19.0s						
MTDJ	**Mount Denham**	**106.34**	**44**	PFAKE		22 36 00.0	+8.3
MTDJ				LR	LR		
	comp=Z,600nm,19.0s						
ESPN	**Las Esperanzas**	**107.62**	**53**	PFAKE		22 36 10.0	+16
ESPN				LR	LR		
	comp=Z,400nm,19.0s						
JTS	**JuntasAbangare**	**108.76**	**55**	PFAKE		22 36 10.0	+14
JTS				LR	LR		
	comp=Z,1µm,19.0s						
MBAR	**Mbarara**	**109.04**	**288**	PFAKE		22 36 10.0	+13
MBAR				LR	LR		
	comp=Z,2µm,19.0s						
HDC	**Heredia**	**109.48**	**54**	PFAKE		22 36 10.0	+12
HDC				LR	LR		
	comp=Z,1µm,19.0s						
CBYP	**Canovanas**	**111.60**	**33**	PFAKE		22 36 10.0	+8.5
CBYP				LR	LR		
	comp=Z,500nm,21.0s						
SJG	**San Juan**	**111.62**	**34**	PFAKE		22 36 10.0	+8.5
SJG				LR	LR		
	comp=Z,500nm,21.0s						
HUMP	**Col San Antoni**	**111.72**	**33**	PFAKE		22 36 10.0	+8.3
HUMP				LR	LR		
	comp=Z,500nm,21.0s						
BCIP	**Isla Barro Col**	**112.62**	**51**	PFAKE		22 36 20.0	+17
BCIP				LR	LR		
	comp=Z,1µm,18.0s						
SMRT	**St. Maarten**	**112.87**	**31**	PFAKE		22 36 20.0	+16
SMRT				LR	LR		
	comp=Z,500nm,20.0s						
TOA1	**Torodi Ar. Sit**	**115.19**	**322**	*e*PKiKP	**PKiKP**	**22 36 07.7**	**-0.7**
TOA1				*e*PP	PP	22 36 53.3	-15
TORD	**Torodi Ar. Bea**	**115.19**	**322**	PKP	**PKiKP**	**22 36 07.7**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=24,slow=2.5,SNR=9.7						
TORD				PP	PP	22 36 53.3	-15
	comp=Z,2.0nm,1.0s,baz=45,slow=3.2,SNR=4.0						
SDV	**Santo Domingo**	**117.74**	**43**	PFAKE		22 36 30.0	+16
SDV				LR	LR		
	comp=Z,800nm,18.0s						
OTAV	**Otavalo**	**120.63**	**56**	PFAKE		22 36 30.0	+10
OTAV				LR	LR		
	comp=Z,1µm,20.0s						
VNDA	**Vanda**	**121.15**	**176**	PKP	**PKPdf**	**22 36 17.7**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=16,slow=2.5,SNR=3.8						
DBIC	**Dimbokro**	**123.80**	**325**	PKP	**PKPdf**	**22 36 23.5**	**-1.5**
	comp=Z,2.5nm,0.5s,baz=7.3,slow=3.4,SNR=6.1						
DBIC	**Dimbokro**	**123.80**	**325**	*e*P	**PKiKP**	**22 36 25.5**	**+0.3**
BLWY	**Bulawayo**	**123.87**	**274**	*i* P	**PKPdf**	**22 36 25.0**	**-0.1**
BLWY				*i* S	**pPKPdf**	**22 36 37.8**	**-0.4**
TIC	**Toumodi**	**123.89**	**326**	*e*PKIKP	PKiKP	22 36 36.3	+11
KIC	**Kosan Boka**	**124.03**	**325**	*e*PKIKP	PKiKP	22 36 36.4	+11
	comp=Z,83nm,1.4s						
MATP	**Matopo**	**124.13**	**274**	*i* P	**PKPdf**	**22 36 25.2**	**-0.3**
MATP				*i* S	**pPKPdf**	**22 36 37.4**	**-1.3**
LIC	**Lamto**	**124.27**	**325**	*e*PKIKP	PKiKP	22 36 36.9	+11
	comp=Z,29nm,0.7s						
PTGA	**Pitinga**	**131.16**	**37**	*e*P	**PKiKP**	**22 36 40.1**	**+0.1**
BOSA	**Boshof**	**131.39**	**268**	PKhKP	PKPpre	22 36 33.9	
	comp=Z,3.3nm,1.1s,baz=112,slow=4.7,SNR=3.9						
BOSA				SKPbc	**SKPbc**	**22 39 58.9**	**-1.8**
	comp=Z,5.1nm,0.9s,baz=120,slow=4.4,SNR=3.8						
BOSA				SKiKP	**SKiKP**	**22 40 17.4**	**+4.9**
	comp=Z,3.6nm,0.8s,baz=45,slow=0.4,SNR=3.4						
BOSA	**Boshof**	**131.39**	**268**	*e*P	**PKPdf**	**22 36 33.8**	**-5.4**
QSPA	**South Pole Qui**	**133.28**	**180**	*e*PKPdf	**PKPdf**	**22 36 41.1**	**-0.3**
LPAZ	**La Paz**	**139.83**	**58**	*e*PKPpre	PKPpre	22 36 48.9	
LPAZ				*e*PKPdf	**PKPdf**	**22 36 53.9**	**-1.9**
LPAZ				PKP	**PKiKP**	**22 36 57.5**	**-0.6**
LPAZ	**La Paz**	**139.83**	**58**	PKhKP	PKPpre	22 36 48.9	
	comp=Z,0.7nm,0.4s,baz=340,slow=8.2,SNR=3.2						
LPAZ				PKP	**PKiKP**	**22 36 57.5**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=2.3,slow=4.5,SNR=8.6						
LPAZ	**La Paz**	**139.83**	**58**	*e*P	**PKPdf**	**22 36 53.7**	**-2.0**
MNMC	**Minye Minye**	**141.01**	**63**	*e*PKPdf	**PKiKP**	**22 36 59.6**	**-0.5**
RCBR	**Riachuelo**	**142.37**	**4**	PFAKE		22 37 10.0	+7.2
RCBR				LR	LR		
	comp=Z,46µm,20.0s						
RCBR	**Riachuelo**	**142.37**	**4**	*e*P	**PKiKP**	**22 37 01.3**	**-1.5**
PB01	**IPOC Station P**	**142.45**	**65**	*e*PKPdf	**PKPdf**	**22 37 01.0**	**+1.3**
LVC	**Limon Verde**	**143.93**	**66**	*e*PKPdf	**PKiKP**	**22 37 04.9**	**-1.2**
LVC	**Limon Verde**	**143.93**	**66**	*e*PKIKP	**PKiKP**	**22 37 04.9**	**-1.2**
NVL	**N'lazarevskaya**	**144.87**	**204**⇑	*i*PKIKP	**PKPab**	**22 37 00.6**	**-0.9**
NVL				*e*		22 37 13.6	
NVL				pmax	pmax		
	comp=Z,43nm,1.0s						
GO02	**Mina Guanaco**	**145.18**	**70**	*e*PKPbc	**PKPdf**	**22 37 05.2**	**+0.6**
GO03	**Copiap**	**146.28**	**74**	*e*PKPdf	**PKPab**	**22 37 08.0**	**-0.2**
SALV	**Santo Antonio**	**146.47**	**42**	*e*P	**PKPbc**	**22 37 08.1**	**+0.1**
LCO	**Las Campanas**	**146.80**	**77**	*e*PKPdf	**PKPbc**	**22 37 08.7**	**-0.4**
LCO	**Las Campanas**	**146.80**	**77**	*e*PKP2	**PKPbc**	**22 37 08.7**	**-0.4**
GO04	**Tololo Observa**	**147.40**	**78**	*e*PKPdf	**PKPbc**	**22 37 10.3**	**-0.4**
SNAA	**Sanae**	**148.17**	**198**	PKP	**PKPbc**	**22 37 11.2**	**-0.1**
SNAA	**Sanae**	**148.17**	**198**	*e*PKPbc	**PKPbc**	**22 37 11.4**	**+0.1**
SNAA				LR	LR		
	comp=Z,700nm,22.0s						
SNAA	**Sanae**	**148.17**	**198**	*e*PKP2	**PKPbc**	**22 37 11.4**	**+0.1**
SNAA				MLR	MLR		
	comp=Z,700nm,22.0s						
NBCP	**Cabaceiras do**	**148.74**	**11**	*e*P	**PKPdf**	**22 37 11.8**	**+1.2**
ROC1	**El Roble**	**148.76**	**83**	*e*PKPbc	**PKPbc**	**22 37 14.3**	**0.0**
PEL	**Peldehue**	**149.08**	**83**	*e*PKPbc	**PKPbc**	**22 37 14.8**	**0.0**
PEL	**Peldehue**	**149.08**	**83**	*e*PKP2	**PKPbc**	**22 37 14.8**	**0.0**
BDFB	**Brasilia**	**149.47**	**29**	PKPbc	**PKiKP**	**22 37 16.8**	**-0.5**
	comp=Z,8.3nm,0.7s,baz=16,slow=3.2,SNR=12						
BDFB				SKPbc		22 40 46.9	
	comp=Z,5.9nm,1.0s,baz=353,slow=9.7,SNR=3.3						
VNA2	**Neumayer--Watz**	**149.71**	**197**	PKP	**PKPbc**	**22 37 15.4**	**+0.3**
VNA3	**Neumayer Olymp**	**149.90**	**195**	PKP	**PKPbc**	**22 37 15.6**	**0.0**
JANB	**Januaria**	**150.07**	**22**	*e*P	**PKPdf**	**22 37 13.6**	**+0.9**
VNA1	**Neumayer--Stat**	**150.10**	**196**	PKP	**PKPbc**	**22 37 16.1**	**+0.1**
C2SB	**Chapadao do Su**	**150.30**	**40**	*e*P	**PKPdf**	**22 37 14.8**	**+2.0**
AQDB	**Aquidauana**	**150.32**	**46**	*e*P	**PKPdf**	**22 37 13.2**	**+0.4**
GO06	**Curarrehue**	**151.29**	**95**	*e*PKPbc	**PKiKP**	**22 37 20.3**	**-0.2**
IPMB	**Ipameri, GO**	**151.55**	**31**	*e*P	**PKPdf**	**22 37 16.5**	**+1.6**
MCI8	**Montes Claros**	**151.71**	**22**	*e*P	**PKPdf**	**22 37 15.4**	**+0.2**
MCI9	**Montes Claros**	**151.75**	**22**	*e*P	**PKPdf**	**22 37 15.2**	**0.0**
MCI7	**Montes Claros**	**151.85**	**22**	*e*P	**PKPdf**	**22 37 17.2**	**+1.8**
MCI6	**Montes Claros**	**151.86**	**22**	*e*P	**PKPdf**	**22 37 16.3**	**+0.9**
ITRB	**Iturama**	**152.23**	**37**	*e*P	**PKPdf**	**22 37 17.2**	**+1.3**
PLCA	**Paso Flores**	**152.34**	**97**	*e*PKPdf	**PKPdf**	**22 37 16.6**	**+1.1**
PLCA	**Paso Flores**	**152.34**	**97**	*e*PKIKP	**PKPdf**	**22 37 16.6**	**+1.1**
PLCA	**Paso Flores**	**152.34**	**97**	*e*P	**PKPdf**	**22 37 15.1**	**-0.4**
PMNB	**Patos De Minas**	**152.70**	**28**	*e*P	**PKPdf**	**22 37 16.4**	**-0.2**
TRCB	**Terra Rica**	**153.82**	**44**	*e*P	**PKPdf**	**22 37 19.7**	**+1.6**
CPUP	**Villa Florida**	**153.97**	**57**	*e*PKPdf	**PKPdf**	**22 37 20.1**	**+1.9**
CPUP				*e*PKPbc	**PKiKP**	**22 37 27.1**	**+0.9**
CPUP				*e*PKPab	**pPKPbc**	**22 37 38.9**	**-0.4**
CPUP	**Villa Florida**	**153.97**	**57**	*e*PKIKP	**PKPdf**	**22 37 20.1**	**+1.9**
CPUP				*e*		22 37 38.9	
CPUP	**Villa Florida**	**153.97**	**57**	PKPbc	**PKiKP**	**22 37 26.6**	**+0.4**
	comp=Z,5.0nm,0.9s,baz=273,slow=1.9,SNR=7.0						
CPUP				PKPab	**pPKPbc**	**22 37 37.9**	**-1.5**
	comp=Z,3.5nm,0.7s,baz=329,slow=4.3,SNR=6.5						
CPUP	**Villa Florida**	**153.97**	**57**	*e*P	**PKPdf**	**22 37 19.5**	**+1.4**
BB19B	**Bebedouro**	**154.21**	**34**	*e*P	**PKPdf**	**22 37 20.8**	**+2.1**
SJMB	**Sao Joao De Ma**	**154.35**	**18**	*e*P	**PKPdf**	**22 37 20.8**	**+1.9**
BSFB	**Barra de Sao F**	**154.54**	**17**	*e*P	**PKPdf**	**22 37 21.0**	**+1.9**
RIB01	**Linhares ES**	**155.11**	**16**	*e*P	**PKPdf**	**22 37 20.6**	**+0.6**
BSCB	**Bom Sucesso**	**155.54**	**27**	*e*P	**PKPdf**	**22 37 22.4**	**+1.9**
PTGB	**Pitanga**	**155.70**	**45**	*e*P	**PKPdf**	**22 37 21.1**	**+0.4**
FRTB	**Fartura**	**155.76**	**39**	*e*P	**PKPdf**	**22 37 22.6**	**+1.8**
RCLB	**Rio Claro- Sao**	**155.83**	**34**	*e*P	**PKPdf**	**22 37 22.3**	**+1.4**
ALF01	**Guarapari-ES**	**156.30**	**18**	*e*P	**PKPdf**	**22 37 21.9**	**+0.4**
VAS01	**Vassouras-RJ**	**157.17**	**25**	*e*P	**PKPdf**	**22 37 24.6**	**+2.0**
CAM01	**Campos-RJ**	**157.24**	**21**	*e*P	**PKPdf**	**22 37 25.0**	**+2.4**
DUB01	**Friburgo-RJ**	**157.29**	**22**	*e*P	**PKPdf**	**22 37 23.7**	**+0.9**
ESAR	**Angra dos Reis**	**157.53**	**28**	*e*P	**PKPdf**	**22 37 23.7**	**+0.8**
TRQA	**Tornquist**	**157.62**	**86**	*e*P	**PKPdf**	**22 37 23.3**	**+0.6**
ITAB	**Concordia**	**157.68**	**49**	*e*P	**PKPdf**	**22 37 24.8**	**+1.8**
CPSB	**Cacapava Do Su**	**159.27**	**57**	*e*P	**PKPdf**	**22 37 26.0**	**+1.1**
CNLB	**Canela**	**160.00**	**51**	*e*P	**PKPdf**	**22 37 26.4**	**+0.6**
PLTB	**Pedras Altas**	**160.10**	**61**	*e*P	**PKPdf**	**22 37 27.1**	**+1.3**
TER01	**Tubaro-SC**	**160.32**	**46**	*e*P	**PKPdf**	**22 37 26.8**	**+0.7**

BJI ***16*** *22:20:25.0, 1°.25S×123°.69E, h6km, mB5.0/14, mb4.6/24, Ms4.7/9, Ms7 4.4/9*

ISCJB ***16*** *22:20:29.5±0.2, 1°.31S±0°.03×123°.63E±0°.03, h49km, mb4.6/36, Error ellipse: s-maj=4.5km s-min=4.1km az=173.8*

NEIC ***16*** *22:20:29.6±2.6, 1°.21S×123°.52E, h34km±7km, mb4.7/19, Error ellipse: s-maj=13.0km s-min=7.4km az=192.0*

DJA ***16*** *22:20:29.2±0.3, 1°S±3°×12°4E±°, h10km, M4.9/13, mb5.0/1, mB4.9/1, MLv4.8/13, Mw(mB)4.2/1*

IDC ***16*** *22:20:33.7±3.4, 1°.28S×123°.77E, h73km±33km, mb4.0/16, mb1 4.0/20, mb1mx3.9/47, mbtmp4.3/20, ML4.1/4, Error ellipse: s-maj=25.5km s-min=12.4km az=95.0*

ISC 16 22:20:31.5±0.4**, 1°.33S**±0°.05×**123°.60E**±0°.04**, h49km, n78,** σ**1s.97**/83**, mb4.6**/36**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.88**	**289**	*e*Pn	**Pn**	**22 20 45.2**	**-2.4**
LUWI				*e*Sn	**Sn**	**22 20 54.0**	**-5.4**
LUWI	**Luwuk**	**0.88**	**289**	P	**Pn**	**22 20 45.2**	**-2.4**
KMSI	**Cibinong**	**1.93**	**11**	P	**Pn**	**22 21 02.6**	**+0.7**
APSI	**Ampana**	**2.00**	**282**	P	**Pn**	**22 21 02.3**	**-0.6**
MRSI	**Marisa**	**2.44**	**317**	P	**Pn**	**22 21 09.2**	**+0.2**
SANI	**Sanana**	**2.49**	**107**	P	**Pn**	**22 21 10.3**	**+0.7**
KDI	**Kendari**	**2.79**	**201**	P	**Pn**	**22 21 12.2**	**-1.6**
PCI	**Palu**	**3.79**	**276**	P	**Pn**	**22 21 28.0**	**+0.5**
NLAI	**Namlea**	**3.98**	**119**	P	**Pn**	**22 21 29.7**	**-0.3**
MPSI	**Mapaga**	**4.06**	**294**	P	**Pn**	**22 21 31.5**	**+0.4**
TTSI	**Tana Toraja**	**4.15**	**246**	P	**Pn**	**22 21 31.3**	**-1.1**
TNTI	**Ternate**	**4.30**	**61**	*e*Pn	**Pn**	**22 21 32.3**	**-2.2**
TNTI				*e*Sn	**Sn**	**22 22 25.6**	**+2.2**
TNTI	**Ternate**	**4.30**	**61**	P	Pn	22 21 44.9	+10
BNSI	**Bone**	**4.64**	**229**	P	**Pn**	**22 21 38.3**	**-0.8**
SPSI	**Sidrap Palu**	**4.64**	**236**	P	**Pn**	**22 21 38.6**	**-0.6**
BKSI	**Bulukumba**	**5.28**	**221**	P	**Pn**	**22 21 47.9**	**0.0**
MMRI	**Maumere**	**7.39**	**191**	*e*Pn	**Pn**	**22 22 20.7**	**+3.8**
EDFI	**Ende, Flores**	**7.62**	**194**	P	**Pn**	**22 22 24.2**	**+4.1**
SIJI	**Sorong**	**7.67**	**87**	P	**Pn**	**22 22 20.0**	**-0.9**
	5.3nm,0.3s,baz=273,slow=17,SNR=10						
SIJI				S	**Sn**	**22 23 46.7**	**+0.2**
	4.1nm,0.3s,baz=17,slow=23,SNR=9.2						
SOEI	**Soe**	**8.40**	**176**	*e*Pn	Pn	22 22 36.5	+5.6
SOEI	**Soe**	**8.40**	**176**	P	Pn	22 22 38.4	+7.5
DAV	**Davao City (W)**	**8.57**	**13**	S	**Sn**	**22 24 10.4**	**+1.9**
	baz=124,slow=18,SNR=1.4						
FAKI	**Fak Fak**	**8.78**	**101**	*e*Pn	**Pn**	**22 22 33.6**	**-2.4**
FAKI				*e*Sn	**Sn**	**22 24 10.2**	**-3.6**
BATI	**Baumata**	**8.82**	**180**	P	**Pn**	**22 22 39.6**	**+3.0**
	4.7nm,0.3s,baz=30,slow=14,SNR=4.3						
MTN	**Manton Dam**	**13.66**	**147**	*e*Pn	**Pn**	**22 23 45.8**	**+3.1**
FITZ	**Fitzroy Crossi**	**16.79**	**173**	*e*Pn	**Pn**	**22 24 22.1**	**-1.3**
	7.1nm,1.0s						
FITZ	**Fitzroy Crossi**	**16.79**	**173**	P	**P**	**22 24 26.1**	**+1.2**
	0.1nm,0.3s,baz=27,slow=11,SNR=2.5						
JAY	**Jayapura**	**17.13**	**94**	P	**Pn**	**22 24 27.1**	**-0.7**
	0.7nm,0.3s,baz=28,slow=4.4,SNR=2.4						
MDSI	**Maura Dua**	**19.65**	**260**	P	**Pn**	**22 25 02.8**	**+4.6**
MBWA	**Marble Bar**	**20.07**	**191**	*e*P	**P**	**22 24 59.0**	**-1.9**
	15nm,1.2s						
WR1	**Warramunga Arr**	**21.27**	**151**	*e*P	**P**	**22 25 13.1**	**-0.9**
	9.2nm,0.8s						
WRA	**Warramunga Arr**	**21.27**	**151**	P	**P**	**22 25 13.1**	**-0.9**
	9.9nm,0.9s,baz=326,slow=12,SNR=7.9						
WB2	**Warramunga Arr**	**21.28**	**151**	*e*P	**P**	**22 25 14.4**	**+0.3**
TWG	**Pinlang**	**24.13**	**354**	*e*P	**P**	**22 25 41.7**	**-1.3**
	71nm,0.7s						
AS31	**Alice Springs**	**24.35**	**157**	*e*P	**P**	**22 25 45.0**	**-0.1**
	1.4nm,0.6s						
ASAR	**Alice Springs**	**24.35**	**157**	P	**P**	**22 25 44.8**	**-0.3**
	1.1nm,0.5s,baz=340,slow=11,SNR=11						
AS01	**Alice Springs**	**24.37**	**156**	*e*P	**P**	**22 25 44.3**	**-0.9**
TPUB	**Ta-pu**	**24.65**	**353**	*e*P	**P**	**22 25 47.1**	**-0.7**
	58nm,0.8s						
YULB	**Yu-li**	**24.67**	**355**	*e*P	**P**	**22 25 46.2**	**-1.7**
	52nm,1.5s						
SSLB	**Suanglung**	**25.10**	**354**	*e*P	**P**	**22 25 50.9**	**-0.9**
	16nm,0.8s						
GUMO	**Guam**	**25.77**	**54**	*e*P	**P**	**22 25 56.0**	**-2.0**
	382nm,1.3s						
YHNB	**Yeheng**	**25.93**	**355**	*e*P	**P**	**22 25 55.7**	**-3.7**
	60nm,1.2s						
FORT	**Forrest**	**29.59**	**172**	*e*P	**P**	**22 26 32.2**	**+0.1**
	26nm,1.1s						
NWAO	**Narrogin (SRO)**	**32.00**	**190**	P	**P**	**22 26 55.2**	**+1.9**
	4.2nm,0.7s,baz=347,slow=3.2,SNR=3.1						
KMI	**Kunming**	**33.16**	**324**	P	**P**	**22 27 05.4**	**+1.6**
KMI				pmax	pmax		
	comp=Z,16nm,1.5s						
NJ2	**Nanjing**	**33.50**	**353**	*e*P	**P**	**22 27 06.3**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
STKA	**Stephens Creek**	**34.81**	**153**	P	**P**	**22 27 15.3**	**-2.5**
	0.4nm,0.3s,baz=323,slow=10,SNR=2.0						
JNU	**Nakatsue**	**34.95**	**11**	*e*P	**P**	**22 27 17.9**	**-1.1**
	18nm,1.2s						
JNU	**Nakatsue**	**34.95**	**11**	P	**P**	**22 27 17.9**	**-1.1**
	7.9nm,0.9s,baz=142,slow=8.2,SNR=2.7						
PATS	**Pohnpei**	**35.58**	**76**	*e*P	**P**	**22 27 24.8**	**+0.2**
	182nm,1.4s						
CD2	**Chengdu**	**37.20**	**331**	*e*P	**P**	**22 27 39.3**	**+1.0**
CD2				S	**S**	**22 33 26.4**	**+4.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,220nm,5.0s						
CD2				LR	LR		
	comp=N,2µm,19.6s						
CD2				LR	LR		
	comp=E,1µm,10.8s						
CD2				LR	LR		
	comp=Z,1µm,12.7s						
KS15	**Wonju Array Si**	**38.78**	**5**	*e*P	**P**	**22 27 50.0**	**-1.5**
KSRS	**Korea Array**	**38.79**	**5**	P	**P**	**22 27 50.0**	**-1.6**
	2.0nm,0.6s,baz=180,slow=9.6,SNR=9.8						
MJAR	**Matsushiro Arr**	**40.05**	**18**	P	**P**	**22 28 00.3**	**-1.8**
	2.4nm,0.8s,baz=200,slow=9.5,SNR=5.3						
MAJO	**Matsushiro**	**40.05**	**18**	*e*P	**P**	**22 28 00.3**	**-1.8**
LZH	**Lanzhou**	**41.53**	**336**	*e*P	**P**	**22 28 15.5**	**+1.0**
LZH				pP	pP	22 28 17.1	-10
LZH				PP	**PnPn**	**22 29 54.6**	**-1.7**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,96nm,6.0s						
LZH				LR	LR		
	comp=N,560nm,14.2s						
LZH				LR	LR		
	comp=E,550nm,14.3s						
LZH				LR	LR		
	comp=Z,700nm,17.0s						
HHC	**Hu-ho-hao-te**	**43.39**	**347**	*e*P	**P**	**22 28 32.3**	**+2.9**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
USRK	**Ussuriysk Ar.**	**45.94**	**8**	P	**P**	**22 28 49.0**	**-0.6**
	2.2nm,0.5s,baz=187,slow=7.1,SNR=10						
GTA	**Gaotai**	**46.04**	**334**	*e*P	**P**	**22 28 50.3**	**-0.3**
GTA				pP	pP	22 28 54.1	-10
GTA				sP	sP	22 28 56.8	-13
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MDJ	**Mudanjiang**	**46.05**	**6**	P	**P**	**22 28 52.4**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,740nm,10.3s						
TAU	**Tasmania Unive**	**46.52**	**156**	*e*P	**P**	**22 28 54.7**	**+0.6**
	21nm,1.1s						
ASAJ	**Asahikawa**	**48.32**	**18**	P	**P**	**22 29 07.4**	**-0.8**
	13nm,0.9s,baz=127,slow=8.0,SNR=3.6						
KLR	**Kul'dur**	**50.85**	**7**	P	**P**	**22 29 26.5**	**-0.8**
	1.9nm,0.6s,baz=225,slow=5.3,SNR=6.0						
ULN	**Ulaanbaatar**	**51.08**	**346**	*e*P	**P**	**22 29 27.9**	**-1.3**
	14nm,1.4s						
SONA0	**Songino Array**	**51.21**	**345**	*e*P	**P**	**22 29 29.5**	**-0.7**
SONM	**Songino Array**	**51.21**	**345**	P	**P**	**22 29 29.5**	**-0.7**
	4.9nm,0.7s,baz=161,slow=9.2,SNR=8.6						
WMQ	**Urumqi**	**55.23**	**329**	*e*P	**P**	**22 30 01.8**	**+2.0**
KSH	**Kashi**	**59.56**	**318**	P	**P**	**22 30 32.3**	**+1.8**
KSH				PP	PP	22 32 50.6	+8.1
KSH				S	**S**	**22 38 40.5**	**+3.4**
KSH				SS	**SS**	**22 42 38.3**	**+5.0**

```
KSH                                 pmax    pmax
        comp=Z,37nm,1.4s
KSH                                 pmax    pmax
        comp=Z,340nm,4.1s
KSH                                 LR      LR
        comp=N,350nm,6.0s
KSH                                 LR      LR
        comp=E,440nm,7.2s
KSH                                 LR      LR
        comp=Z,580nm,11.5s
MK32  Makanchi Array    60.05 328  ePP      P          22 30 31.8 -1.8
MKAR  Makanchi Array    60.05 328   P       P          22 30 31.8 -1.8
        0.5nm,0.3s,baz=126,slow=8.1,SNR=4.3
PETK  Petropavlovsk-    61.26  23   P       P          22 30 39.8 -1.9
        4.7nm,1.0s,baz=217,slow=16,SNR=5.2
PEA1  Petropavlovsk-    61.27  23  eP       P          22 30 39.8 -1.9
NRIK  Noril'sk          74.61 347   P       P          22 32 06.2 +1.0
        6.0nm,0.6s,baz=111,slow=4.0,SNR=4.4
ARA0  ARCESS Array S    94.08 340  eP       P          22 33 44.0 -0.3
ARCES ARCESS Array B    94.08 340   P       P          22 33 44.0 -0.3
        0.8nm,0.7s,baz=99,slow=5.8,SNR=2.9
INK   Inuvik            95.98  21  eP       P          22 33 53.0 -0.1
        3.4nm,1.4s
INK   Inuvik            95.98  21   P       P          22 33 53.0 -0.1
        0.4nm,0.4s,baz=267,slow=7.8,SNR=2.2
WVOR  Wild Horse Val   111.11  45  ePdif    Pdif       22 35 02.7 +1.4
```

IDC 16 22:22:31.7±5.3,**37°.31N**×**135°.79E**,**h0**^{km},**mb3.7**/3, **mb1 4.0**/3,**mb1mx3.5**/59,**mbtmp3.7**/3,**MS3.9**/1,**Ms1 3.9**/1, **ms1mx3.3**/44,**Error ellipse: s-maj=470.0km s-min=32.4km az=105.0**,**Sea of Japan**

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op      ISC       h  m  s    ISC
TGY   Tagaytay City     26.63 214   LR      LR         22 36 59.9
        comp=Z,280nm,21.9s,baz=52,slow=33
WRA   Warramunga Arr    56.96 182   P       P          22 32 18.3 -0.5
        0.7nm,0.6s,baz=0.8,slow=8.0,SNR=5.7
ASAR  Alice Springs     60.67 182   P       P          22 32 45.2 +0.6
        0.6nm,0.7s,baz=0.7,slow=6.1,SNR=4.5
YKA   Yellowknife Ar    65.78  29   P       P          22 33 18.0 -0.1
        0.5nm,0.7s,baz=309,slow=4.5,SNR=3.6
```

ROM 16 22:24:22.4±0.2,**41°.711N**±0°.006×**13°.602E**±0°.008, **h16**^{km}±1^{km},**Md1.5**/3,**Southern Italy**

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op      ISC       h  m  s    ISC
POFI  Posta Fibreno      0.08  86   P       Pg         22 24 26.0 +0.2
POFI                                S       Sg         22 24 28.2 +0.3
POFI                                AML     AML
        comp=E,2460µm,0.3s
POFI                                AML     AML
        comp=N,1810µm,0.2s
POFI                                AML     AML
        comp=E,2565µm,0.3s
POFI                                AML     AML
        comp=N,2000µm,0.2s
POFI                                AML     AML
        comp=E,2460µm,0.3s
POFI                                AML     AML
        comp=E,2565µm,0.3s
POFI                                AML     AML
        comp=N,1810µm,0.2s
POFI                                AML     AML
        comp=N,2000µm,0.2s
POFI                                END
POFI                                END
VVLD  Villa Vallelon     0.16   5   P       Pb         22 24 27.0 -0.1
VVLD                                S       Sb         22 24 30.1 -0.1
VVLD                                AML     AML
        comp=E,2440µm,0.1s
VVLD                                AML     AML
        comp=N,3080µm,0.2s
VVLD                                AML     AML
        comp=N,3080µm,0.2s
VVLD                                AML     AML
        comp=E,2440µm,0.1s
VVLD                                END
VVLD                                END
GUAR  Guarcino           0.23 291   P       Pg         22 24 27.6 -0.1
GUAR                                S       Sb         22 24 31.8 -0.4
GIUL  Giuliano Di Ro     0.30 240   P       Pg         22 24 29.1 +0.3
GIUL                                S       Sb         22 24 34.1 -0.1
GIUL                                AML     AML
        comp=E,481µm,1.3s
GIUL                                AML     AML
        comp=N,404µm,0.3s
GIUL                                AML     AML
        comp=N,404µm,0.3s
GIUL                                AML     AML
        comp=E,481µm,1.3s
GIUL                                END
GIUL                                END
CERA  Filignano          0.33 110   P       Pg         22 24 29.4  0.0
CERA                                S       Sb         22 24 35.2 +0.1
CERA                                AML     AML
        comp=E,400µm,0.2s
CERA                                AML     AML
        comp=N,549µm,0.5s
CERA                                AML     AML
        comp=E,400µm,0.2s
CERA                                AML     AML
        comp=N,549µm,0.5s
```

ROM 16 22:24:57.2±0.1,**41°.722N**±0°.004×**13°.598E**±0°.005, **h17**^{km}±1^{km},**ML2.2**/14,**Southern Italy**

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op      ISC       h  m  s    ISC
POFI  Posta Fibreno      0.09  93  iP       Pg         22 25 00.8 +0.1
POFI                                S       Sg         22 25 03.1 +0.1
POFI                                AML     AML
        comp=E,2460µm,0.3s
POFI                                AML     AML
        comp=N,1805µm,0.2s
POFI                                AML     AML
        comp=E,2565µm,0.3s
POFI                                AML     AML
        comp=N,2000µm,0.2s
POFI                                AML     AML
        comp=E,2460µm,0.3s
POFI                                AML     AML
        comp=N,1810µm,0.2s
POFI                                AML     AML
        comp=E,2565µm,0.3s
POFI                                AML     AML
        comp=N,2000µm,0.2s
POFI                                AML     AML
        comp=E,2460µm,0.3s
POFI                                AML     AML
        comp=E,2565µm,0.3s
POFI                                AML     AML
        comp=N,1810µm,0.2s
POFI                                AML     AML
        comp=N,2000µm,0.2s
VVLD  Villa Vallelon     0.15   7   P       Pb         22 25 01.6  0.0
VVLD                                S       Sb         22 25 04.6  0.0
VVLD                                AML     AML
        comp=E,2445µm,0.1s
VVLD                                AML     AML
        comp=N,3075µm,0.2s
VVLD                                AML     AML
        comp=E,2440µm,0.1s
VVLD                                AML     AML
        comp=N,3080µm,0.2s
VVLD                                AML     AML
        comp=N,3080µm,0.2s
VVLD                                AML     AML
        comp=E,2440µm,0.1s
GUAR  Guarcino           0.23 289   P       Pb         22 25 02.8 -0.1
GUAR                                S       Sb         22 25 06.7  0.0
GUAR                                AML     AML
        comp=E,1120µm,0.2s
GUAR                                AML     AML
        comp=N,1320µm,0.4s
GUAR                                AML     AML
        comp=E,1120µm,0.2s
GUAR                                AML     AML
        comp=N,1322µm,0.4s
GUAR                                AML     AML
        comp=E,1120µm,0.2s
GUAR                                AML     AML
        comp=N,1322µm,0.4s
GIUL  Giuliano Di Ro     0.30 238   P       Pb         22 25 04.0 -0.2
GIUL                                S       Sb         22 25 09.3 +0.4
GIUL                                AML     AML
        comp=E,481µm,1.3s
GIUL                                AML     AML
        comp=N,404µm,0.3s
GIUL                                AML     AML
        comp=E,481µm,1.3s
GIUL                                AML     AML
        comp=N,404µm,0.3s
GIUL                                AML     AML
        comp=E,481µm,1.3s
GIUL                                AML     AML
        comp=N,404µm,0.3s
PTQR  Pietraquaria       0.33 334   P       Pg         22 25 04.4 +0.1
PTQR                                S       Sb         22 25 09.9 +0.1
PTQR                                AML     AML
        comp=E,616µm,1.1s
PTQR                                AML     AML
        comp=N,531µm,0.8s
PTQR                                AML     AML
        comp=E,616µm,1.1s
PTQR                                AML     AML
        comp=N,531µm,0.8s
PTQR                                AML     AML
        comp=N,531µm,0.8s
PTQR                                AML     AML
        comp=E,616µm,1.1s
CERA  Filignano          0.34 111   P       Pg         22 25 04.3 -0.1
CERA                                S       Sb         22 25 09.8 -0.2
CERA                                AML     AML
        comp=E,465µm,1.3s
CERA                                AML     AML
        comp=N,517µm,1.5s
CERA                                AML     AML
        comp=E,400µm,0.2s
CERA                                AML     AML
        comp=N,549µm,0.5s
CERA                                AML     AML
        comp=N,549µm,0.5s
CERA                                AML     AML
        comp=N,517µm,1.5s
CERA                                AML     AML
        comp=E,465µm,1.3s
CERA                                AML     AML
        comp=E,400µm,0.2s
INTR  Introdacqua        0.37  38   P       Pg         22 25 04.8 -0.1
INTR                                S       Sb         22 25 10.7 -0.2
INTR                                AML     AML
        comp=E,602µm,0.2s
INTR                                AML     AML
        comp=N,697µm,0.5s
INTR                                AML     AML
        comp=E,602µm,0.2s
INTR                                AML     AML
        comp=N,697µm,0.5s
INTR                                AML     AML
        comp=E,602µm,0.2s
INTR                                AML     AML
        comp=N,697µm,0.5s
RNI2  Rionero Sannit     0.42  92   P       Pb         22 25 06.0 -0.1
RNI2                                S       Sb         22 25 12.9 +0.8
RNI2                                AML     AML
        comp=E,410µm,1.1s
RNI2                                AML     AML
        comp=N,368µm,0.2s
RNI2                                AML     AML
        comp=E,412µm,0.2s
RNI2                                AML     AML
        comp=N,363µm,0.2s
RNI2                                AML     AML
        comp=E,410µm,1.1s
RNI2                                AML     AML
        comp=N,363µm,0.2s
RNI2                                AML     AML
        comp=E,412µm,0.2s
RNI2                                AML     AML
        comp=N,368µm,0.2s
MIDA  Miranda            0.50  99   P       Pg         22 25 06.8 -0.4
MIDA                                S       Sb         22 25 14.7 +0.2
MIDA                                AML     AML
        comp=E,232µm,0.3s
MIDA                                AML     AML
        comp=N,199µm,1.6s
MIDA                                AML     AML
        comp=E,232µm,0.3s
MIDA                                AML     AML
        comp=N,199µm,1.6s
CERT  Cerreto            0.51 296   P       Pg         22 25 07.2 -0.3
CERT                                S       Sb         22 25 14.9 -0.1
CERT                                AML     AML
        comp=E,700µm,0.2s
CERT                                AML     AML
        comp=N,246µm,0.2s
CERT                                AML     AML
        comp=E,699µm,0.2s
CERT                                AML     AML
        comp=N,246µm,0.2s
CERT                                AML     AML
        comp=E,699µm,0.2s
CERT                                AML     AML
        comp=N,246µm,0.2s
FAGN  Fagnano            0.54 359   P       Pb         22 25 08.2 -0.1
FAGN                                AML     AML
        comp=E,522µm,0.4s
FAGN                                AML     AML
        comp=N,344µm,0.4s
FAGN                                AML     AML
        comp=E,522µm,0.4s
FAGN                                AML     AML
        comp=N,344µm,0.4s
LPEL  Lama dei Pelig     0.55  53   P       Pg         22 25 07.7 -0.3
LPEL                                AML     AML
        comp=E,197µm,0.9s
LPEL                                AML     AML
        comp=N,137µm,1.5s
LPEL                                AML     AML
        comp=E,197µm,0.9s
LPEL                                AML     AML
        comp=N,137µm,1.5s
LPEL                                AML     AML
        comp=N,137µm,1.5s
LPEL                                AML     AML
        comp=E,197µm,0.9s
VAGA  Valle Agricola     0.57 122   P       Pg         22 25 08.3 -0.2
VAGA                                AML     AML
        comp=E,101µm,1.4s
VAGA                                AML     AML
        comp=N,186µm,1.4s
VAGA                                AML     AML
        comp=N,186µm,1.4s
VAGA                                AML     AML
        comp=E,101µm,1.4s
VCEL  Villa Celiera      0.70  15   P       Pg         22 25 10.6 -0.3
BSSO  Busso              0.77 103   AML     AML
        comp=E,79µm,1.3s
BSSO                                AML     AML
        comp=E,79µm,1.3s
BSSO                                AML     AML
        comp=N,76µm,1.5s
BSSO                                AML     AML
        comp=N,76µm,1.5s
```

ROM 16 22:27:40.3±0.1,**41°.725N**±0°.004×**13°.605E**±0°.004, **h17**^{km},**ML1.1**/3,**Southern Italy**

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op      ISC       h  m  s    ISC
POFI  Posta Fibreno      0.08  96   P       Pg         22 27 43.9 +0.2
POFI                                S       Sg         22 27 46.2 +0.2
POFI                                AML     AML
        comp=E,126µm,0.3s
POFI                                AML     AML
        comp=N,102µm,0.2s
POFI                                AML     AML
        comp=E,126µm,0.3s
POFI                                AML     AML
        comp=N,102µm,0.2s
VVLD  Villa Vallelon     0.15   5   P       Pb         22 27 44.6  0.0
VVLD                                S       Sb         22 27 47.7 +0.1
VVLD                                AML     AML
        comp=E,105µm,0.1s
VVLD                                AML     AML
        comp=N,124µm,0.2s
VVLD                                AML     AML
        comp=N,124µm,0.2s
VVLD                                AML     AML
        comp=E,105µm,0.1s
GUAR  Guarcino           0.23 288   P       Pb         22 27 45.9 -0.2
GUAR                                S       Sb         22 27 49.9  0.0
GIUL  Giuliano Di Ro     0.31 238   P       Pg         22 27 47.1 +0.1
GIUL                                S       Sb         22 27 52.3 +0.1
PTQR  Pietraquaria       0.33 333   P       Pg         22 27 47.5 +0.2
PTQR                                S       Sb         22 27 53.1 +0.1
CERA  Filignano          0.34 112   P       Pg         22 27 47.4  0.0
CERA                                S       Sb         22 27 53.2 +0.3
INTR  Introdacqua        0.36  38   P       Pg         22 27 47.9  0.0
INTR                                S       Sb         22 27 53.7 -0.1
INTR                                AML     AML
INTR                                AML     AML
INTR                                AML     AML
INTR                                AML     AML
CERT  Cerreto            0.52 296   P       Pg         22 27 50.3 -0.4
CERT                                S       Sb         22 27 58.0 -0.2
CERT                                AML     AML
        comp=E,41µm,1.2s
CERT                                AML     AML
        comp=N,17µm,1.0s
CERT                                AML     AML
        comp=E,41µm,1.2s
CERT                                AML     AML
        comp=N,17µm,1.0s
```

ATH ***16*** *22:37:19.3,39°.80N×25°.49E,h25*^{km}*±3*^{km}*,ML1.7/1,Error ellipse: s-maj=3.2km s-min=1.2km az=236.0*
ISK ***16*** *22:37:19.5,39°.80N×25°.54E,h7*^{km}*,ML2.0/11*
ISCJB ***16*** *22:37:20.4±0.4,39°.79N±0°.03×25°.50E±0°.03,h16*^{km}*±8*^{km}*, Error ellipse: s-maj=4.6km s-min=3.8km az=27.0*
DDA ***16*** *22:37:24.2,39°.88N×25°.86E,h7*^{km}*±6*^{km}*,ML2.3*
ISC 16 22:37:19.8±1.0,**39°.80N**±0°.03×**25°.53E**±0°.03,**h11**^{km}±10^{km}, **n23**,σ**0**^{s}**49**/35,**Aegean Sea**

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op      ISC       h  m  s    ISC
LIA   Limnos Island      0.29 289   P       Pg         22 37 25.6  0.0
LIA                                 S       Sg         22 37 29.6 +0.1
LIA                                 AML     AML        22 37 30.1
        comp=N,413µm,0.3s
LIA                                 AML     AML        22 37 30.1
        comp=E,390µm,0.3s
BOZC  Bozcaada           0.40  84   PG      Pb         22 37 28.2 -0.7
BOZC                                SG      Sb         22 37 34.1 -0.9
BOZC  Bozcaada           0.40  84  iP       Pb         22 37 28.8 -0.1
BOZC                                IAML_P
        comp=Z,3µm,0.1s
EFSA  Agios Efstrati     0.50 238   P       Pb         22 37 30.2 -0.3
EFSA                                S       Sg         22 37 36.6 +0.6
EZN   Ezine              0.61  88   PG      Pg         22 37 31.7  0.0
EZN                                 SG      Sb         22 37 40.4 -0.6
SIGR  SIGRI              0.64 157   PG      Pg         22 37 32.2 -0.1
SIGR                                SG      Sb         22 37 41.2 -0.7
SIGR  SIGRI              0.64 157   P       Pg         22 37 31.6 -0.6
SIGR                                S       Sg         22 37 40.8 +0.1
SMTH  Samothraki Isl     0.67 360   P       Pb         22 37 33.3 -0.2
SMTH                                S       Sb         22 37 43.5 +0.8
BAYC  CANAKKALE_Bayr     0.78  94  iP       Pb         22 37 35.3 -0.1
BAYC                               iS       Sb         22 37 46.7 +0.6
BAYC                                IAML_P
        comp=Z,365nm,0.1s
PRK   Paraskevi          0.80 134   P       Pb         22 37 36.0 +0.4
PRK                                 S       Sb         22 37 47.4 +1.0
GELI  Tayfur-Gelibol     0.93  50   PG      Pb         22 37 38.1 +0.1
GELI                                SG      Sb         22 37 51.1 +0.7
THAS  Thassos island     1.01 322   P       Pg         22 37 39.0 -0.4
THAS                                S       Sg         22 37 52.6  0.0
ENEZ  Enez               1.04  27   PG      Pb         22 37 39.9  0.0
ERIK  Erikli-Kesan       1.15  41   PN      Pb         22 37 41.7 +0.1
ALN   Alexandroupoli     1.16  20   PN      Pn         22 37 42.1 +0.2
ALN   Alexandroupoli     1.16  20   P       Pg         22 37 41.7 -0.5
ALN                                 S       Sn         22 37 57.8  0.0
OUR   Ouranopolis        1.30 294   PN      Pg         22 37 45.2 +0.4
RDO   Rodhopi            1.34   0   PN      Pb         22 37 44.9  0.0
RDO   Rodhopi            1.34   0   P       Pn         22 37 44.2 -0.2
KAVA  Kavala             1.42 327   P       Pn         22 37 44.8 -0.8
CHOS  Chios island       1.47 164   PN      Pn         22 37 46.6 +0.3
KRBG  Karabiga-Canak     1.48  66   PN      Pb         22 37 47.2  0.0
RKY   Sarkoy-Tekirda     1.54  54   PN      Pn         22 37 47.6 +0.4
```

JMA ***16*** *22:37:30.6±0.1,23°.98N×121°.62E,h45*^{km}*±1*^{km}*,M3.0*
ISCJB ***16*** *22:37:31.5±0.2,24°.01N±0°.01×121°.69E±0°.02,h45*^{km}*±3*^{km}*, Error ellipse: s-maj=2.6km s-min=1.8km az=37.4*
TAP ***16*** *22:37:31.5,24°.02N×121°.61E,h45*^{km}*,ML3.6,B*
ISC 16 22:37:32.1±0.9,**24°.01N**±0°.02×**121°.67E**±0°.02,**h33**^{km}±2^{km}, **n116**,σ**0**^{s}**98**/184,**26C-25D**,**Taiwan**

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op      ISC       h  m  s    ISC
HWA   Hwalien            0.07 244 ⇓ P       Pb         22 37 39.2 +1.5
        baz=188
HWA                                eS       Sb         22 37 45.0 +3.5
        baz=188
TWD   Chiawan            0.10 317 ⇑iP       Pb         22 37 38.7 +0.8
        baz=334
TWD                                iS       Sb         22 37 43.6 +1.7
        baz=334
ENLB  Shoufeng           0.12 212 ⇓ P       Pb         22 37 39.4 +1.3
        baz=178
ENLB                                S       Sb         22 37 45.6 +3.6
        baz=178
NACB  Ninganchiao        0.18 337 ⇑ P       Pn         22 37 38.9 +1.1
        baz=345
NACB                                S       Sb         22 37 43.9 +1.0
        baz=345
ETLH  Xiulin Townshi     0.26 319 ⇑ P       Pn         22 37 39.6 +0.1
        baz=326
ETLH                               eS       Sn         22 37 45.1 +1.2
        baz=326
ESL   Shilin             0.29 229 ⇓iP       Pn         22 37 39.5 -0.4
        baz=223
ESL                                 S       Sn         22 37 44.8 +0.1
        baz=223
WHF   Hehuan Shan        0.40 290 ⇑iP       Pb         22 37 41.4 -0.2
        baz=291
WHF                                iS       Sn         22 37 47.9 -0.4
        baz=291
EGFH  Guangfu            0.40 214 ⇓ P       Pb         22 37 40.6 -0.6
        baz=216
ENA   Nanau              0.42   9 ⇑iP       Pb         22 37 41.5 -0.1
        baz=10.0
ENA                                 S       Sb         22 37 48.9 +0.8
        baz=10.0
NANB  Nanao              0.42  10 ⇑ P       Pb         22 37 41.5 -0.2
        baz=10.0
NANB                                S       Sb         22 37 49.0 +0.9
        baz=10.0
OWD   Renai              0.46 264 ⇓ P       Pb         22 37 42.0 -0.1
        baz=261
OWD                                 S       Sb         22 37 48.6 -0.5
        baz=261
CHGB  Renai              0.46 277 ⇑ P       Pb         22 37 42.2  0.0
        baz=276
CHGB                                S       Sb         22 37 49.2  0.0
        baz=276
NNSB  Datong             0.50 328 ⇑ P       Pb         22 37 42.4 -0.4
        baz=336
NNSB                                S       Sb         22 37 49.6 -0.5
        baz=336
NNS   Nan Shan           0.51 328 ⇑iP       Pb         22 37 42.5 -0.5
        baz=339
NNS                                 S       Sb         22 37 50.3 -0.1
        baz=339
TWT   Tachien            0.52 299 ⇑iP       Pb         22 37 43.1  0.0
        baz=299
TWT                                iS       Sb         22 37 50.5 -0.1
        baz=299
TDCB  Techi              0.53 298 ⇑ P       Pb         22 37 43.1 -0.2
        baz=299
TDCB                                S       Sb         22 37 50.5 -0.5
        baz=299
VWDT  VWDT               0.55 243 ⇓ P       Pn         22 37 43.1 -0.4
        baz=236
VWDT                                S       Sb         22 37 50.9 -0.3
        baz=236
HGSD  Ruisui             0.56 204 ⇑ P       Pn         22 37 43.5 -0.3
        baz=208
HGSD                               eS       Sb         22 37 52.9 +1.3
        baz=208
EHY   Hungye             0.59 213 ⇓eP       Pn         22 37 42.4 -1.8
```

	baz=207						
NDT	**Datong Townshi** baz=350	**0.61**	**346**	⇑*i*P	**Pn**	**22 37 43.9**	**-0.6**
NDT	baz=350			*e*S	**Sn**	**22 37 52.3**	**-0.9**
TWC	**Suao** baz=12	**0.62**	**15**	⇑P	**Pn**	**22 37 44.3**	**-0.3**
TWC	baz=12			*e*S	**Sn**	**22 37 54.3**	**+0.9**
ENTT	**Nioudou** baz=2.0	**0.64**	**351**	⇑*i*P	**Pn**	**22 37 44.1**	**-0.7**
ENTT	baz=2.0			*e*S	**Sn**	**22 37 52.9**	**-1.0**
EOS1	**EOS1** baz=54	**0.68**	**38**	⇓P	**Pn**	**22 37 46.2**	**+0.8**
EOS1	baz=54			*e*S	**Sb**	**22 37 57.3**	**+2.4**
SSLB	**Suanglung** baz=245	**0.69**	**252**	⇓P	**Pn**	**22 37 44.7**	**-0.9**
YULB	**Yu-li** baz=205	**0.70**	**209**	⇓*e*P	**Pn**	**22 37 43.8**	**-2.0**
TWE	**Neicheng** baz=4.0	**0.71**	**360**	⇑*i*P	**Pn**	**22 37 45.1**	**-0.7**
TWE	baz=4.0			*e*S	**Sn**	**22 37 54.7**	**-0.9**
YHNB	**Yeheng** baz=347	**0.71**	**338**	⇑P	**Pn**	**22 37 45.4**	**-0.6**
YHNB	baz=347			*e*S	**Sn**	**22 37 54.5**	**-1.3**
WHP	**Taichung City** baz=295	**0.71**	**292**	⇓P	**Pn**	**22 37 45.9**	**-0.1**
WHP	baz=295			*e*S	**Sn**	**22 37 55.8**	**-0.1**
SMLT	**Sun Moon Lake** baz=256	**0.72**	**260**	⇓*i*P	**Pn**	**22 37 45.3**	**-0.7**
SMLT	baz=256			*e*S	**Sn**	**22 37 55.5**	**-0.4**
NSK	**Sanguang** baz=346	**0.72**	**337**	⇑*i*P	**Pn**	**22 37 45.5**	**-0.6**
NSK	baz=346			*i* S	**Sn**	**22 37 54.6**	**-1.6**
TWF1	**Yuli** baz=211	**0.74**	**208**	⇓*i*P	**Pn**	**22 37 44.3**	**-1.9**
TYC	**Yuchr** baz=256	**0.75**	**262**	⇓P	**Pn**	**22 37 45.8**	**-0.6**
ILA	**Ilan** baz=2.0	**0.76**	**5**	*e*P	**Pn**	**22 37 46.0**	**-0.5**
NWLT	**Wulai** baz=351	**0.78**	**349**	⇑P	**Pn**	**22 37 46.1**	**-0.8**
NWLT	baz=351			*e*S	**Sn**	**22 37 56.0**	**-1.5**
WHYT	**Xinyi Township** baz=246	**0.81**	**248**	*e*P	**Pn**	**22 37 47.2**	**-0.1**
EGS	baz=12	**0.87**	**16**	*e*P	**Pn**	**22 37 48.2**	**+0.2**
NSTT	**Nanjuang** baz=305	**0.87**	**316**	⇑P	**Pn**	**22 37 48.3**	**+0.2**
NSTT	baz=305			S	**Sn**	**22 37 59.9**	**+0.3**
LIOB	**Emei** baz=318	**0.87**	**317**	⇑*i*P	**Pn**	**22 37 47.8**	**-0.3**
LIOB	baz=318			*e*S	**Sn**	**22 37 59.4**	**-0.3**
WJS	**Zhushan** baz=257	**0.88**	**258**	*e*P	**Pn**	**22 37 48.9**	**+0.6**
TWQ1	**Liyutan** baz=293	**0.89**	**293**	⇑P	**Pn**	**22 37 48.2**	**-0.1**
TWQ1	baz=293			*e*S	**Sn**	**22 38 00.7**	**+0.6**
WNT	**Mingjian** baz=260	**0.91**	**262**	⇓*e*P	**Pn**	**22 37 49.0**	**+0.4**
WNT	baz=260			*e*S	**Sn**	**22 38 01.2**	**+0.6**
TCU	**Taichung** baz=278	**0.92**	**279**	*e*P	**Pn**	**22 37 48.9**	**+0.2**
TCU	baz=278			*e*S	**Sn**	**22 38 01.7**	**+0.9**
NSY	**Sanyi** baz=297	**0.93**	**296**	⇓*e*P	**Pn**	**22 37 48.9**	**+0.1**
NSY	baz=297			*e*S	**Sn**	**22 38 01.7**	**+0.8**
WLTB	**Daxi** baz=342	**0.93**	**336**	⇑P	**Pn**	**22 37 49.0**	**+0.2**
WLTB	baz=342			*e*S	**Sn**	**22 38 01.8**	**+0.9**
CHKT	**Chengkung** baz=194	**0.95**	**197**	*e*P	**Pn**	**22 37 48.1**	**-0.9**
NMLH	**Miaoli** baz=304	**0.96**	**304**	*e*P	**Pn**	**22 37 49.0**	**-0.3**
NHDH	**Xindian Distri** baz=354	**0.96**	**352**	*e*P	**Pn**	**22 37 48.8**	**-0.5**
NHDH	baz=354			*e*S	**Sn**	**22 38 01.4**	**-0.5**
TIPB	**Shuangxi** baz=3.0	**0.97**	**8**	⇑P	**Pn**	**22 37 49.2**	**-0.3**
TIPB	baz=3.0			*e*S	**Sn**	**22 38 02.0**	**-0.2**
TWA	**Mucha** baz=358	**0.97**	**355**	*e*P	**Pn**	**22 37 48.7**	**-0.8**
TWA	baz=358			*e*S	**Sn**	**22 38 01.3**	**-0.8**
TATO	**Taipei** baz=1.0	**0.98**	**350**	⇑P	**Pn**	**22 37 48.9**	**-0.6**
TATO	baz=1.0			*e*S	**Sn**	**22 38 01.6**	**-0.6**
PTSB	**Yuanli** baz=297	**0.98**	**297**	*e*P	**Pn**	**22 37 49.6**	**0.0**
PTSB	baz=297			*e*S	**Sn**	**22 38 02.0**	**-0.5**
CHN5	**Tsauling** baz=235	**1.00**	**246**	⇓*i*P	**Pn**	**22 37 49.8**	**-0.1**
CHN5	baz=235			*e*S	**Sn**	**22 38 04.1**	**+1.3**
SBCB	**Hsinchu** baz=323	**1.00**	**322**	*e*P	**Pn**	**22 37 50.0**	**+0.1**
SBCB	baz=323			*e*S	**Sn**	**22 38 03.7**	**+0.8**
WDJ	**Dajia District** baz=290	**1.00**	**290**	*e*P	**Pn**	**22 37 49.4**	**-0.5**
ELDTW	**Lidau** baz=206	**1.01**	**217**	*e*P	**Pn**	**22 37 48.4**	**-1.7**
ELDTW	baz=206			*e*S	**Sn**	**22 38 02.2**	**-1.0**
HSN	**Hsinchu** baz=325	**1.02**	**321**	*e*P	**Pn**	**22 37 49.8**	**-0.3**
HSN	baz=325			*e*S	**Sn**	**22 38 04.5**	**+1.3**
WCHH	**Zhanghua** baz=273	**1.02**	**274**	*e*P	**Pn**	**22 37 50.3**	**+0.2**
TWB1	**Santiao Chiao** baz=5.0	**1.04**	**16**	*e*P	**Pn**	**22 37 50.4**	**+0.1**
NCUH	**Zhongli** baz=336	**1.05**	**335**	*e*P	**Pn**	**22 37 50.1**	**-0.5**
NCU	**National Centr** baz=337	**1.06**	**335**	*e*P	**Pn**	**22 37 50.5**	**-0.1**
NCU	baz=337			*e*S	**Sn**	**22 38 04.6**	**+0.4**
WGK	**Gukeng** baz=251	**1.06**	**253**	*e*P	**Pn**	**22 37 51.0**	**+0.3**
NWF	**Wu-fen Shan** baz=7.0	**1.06**	**5**	*e*P	**Pn**	**22 37 50.2**	**-0.6**
WFSB	**Wu-fen Shan** baz=7.0	**1.06**	**5**	*e*P	**Pn**	**22 37 50.4**	**-0.3**
WDLH	**Douliu** baz=243	**1.08**	**253**	*e*P	**Pn**	**22 37 51.5**	**+0.5**
TWS1	**Kuangyinshan** baz=3.0	**1.11**	**348**	*e*P	**Pn**	**22 37 50.7**	**-0.7**
TWS1	baz=3.0			*e*S	**Sn**	**22 38 05.6**	**0.0**
YM01	**YM01** baz=356	**1.14**	**355**	*e*P	**Pn**	**22 37 50.8**	**-1.0**
YM04	**YM04** baz=355	**1.15**	**354**	*e*P	**Pn**	**22 37 50.6**	**-1.3**
YM05	**YM05** baz=356	**1.16**	**355**	*e*P	**Pn**	**22 37 51.0**	**-1.0**
NTST	**Danshui** baz=351	**1.17**	**350**	*e*P	**Pn**	**22 37 51.5**	**-0.7**
YM08	**YM08** baz=357	**1.18**	**356**	*e*P	**Pn**	**22 37 50.9**	**-1.5**
CHN4	**Tsaushan** baz=225	**1.18**	**237**	⇓*e*P	**Pn**	**22 37 52.8**	**+0.4**
CHN4	baz=225			*e*S	**Sn**	**22 38 08.6**	**+1.3**
TPUB	**Ta-pu** baz=223	**1.19**	**234**	⇓P	**Pn**	**22 37 52.5**	**+0.1**
TPUB	baz=223			*e*S	**Sn**	**22 38 08.5**	**+1.1**
STYT	**Tauyuan** baz=222	**1.19**	**225**	⇑P	**Pn**	**22 37 52.4**	**-0.1**
STYT	baz=222			*e*S	**Sn**	**22 38 08.3**	**+0.8**
CHN2	**Minshiung** baz=236	**1.19**	**247**	*e*P	**Pn**	**22 37 53.1**	**+0.6**
CHN2	baz=236			*e*S	**Sb**	**22 38 10.4**	**+1.1**
RLNB	**Erlin** baz=274	**1.21**	**265**	*e*P	**Pn**	**22 37 53.0**	**+0.3**
RLNB	baz=274			S	**Sn**	**22 38 09.0**	**+1.2**
WTP	**Ta-pu** baz=229	**1.23**	**232**	⇓P	**Pn**	**22 37 53.0**	**-0.1**
WTP	baz=229			*e*S	**Sn**	**22 38 09.8**	**+1.2**
JYNG	**Yonagunijimaku**	**1.25**	**69**	P	**Pn**	**22 37 52.9**	**-0.3**
JYNG				*e*S	**Sn**	**22 38 09.1**	**+0.3**
CHY	**Chiayi** baz=245	**1.25**	**246**	*e*P	**Pn**	**22 37 53.1**	**-0.2**
TWY	**Chenhua** baz=358	**1.27**	**357**	*e*P	**Pn**	**22 37 52.5**	**-1.0**
WTCT	**Ta-ch'eng** baz=275	**1.28**	**264**	*e*P	**Pn**	**22 37 53.9**	**+0.2**
WTCT	baz=275			*e*S	**Sn**	**22 38 10.5**	**+0.8**
TWG	**Pinlang** baz=192	**1.30**	**205**	*e*P	**Pn**	**22 37 51.4**	**-2.6**
TWGBT	**Beinan** baz=195	**1.30**	**205**	*e*P	**Pn**	**22 37 51.6**	**-2.4**
TWGBT	baz=195			*e*S	**Sn**	**22 38 07.2**	**-3.1**
YOJ	**Yonaguni jima** baz=70	**1.30**	**69**	⇓P	**Pn**	**22 37 53.9**	**-0.1**
YOJ	**Yonaguni jima**	**1.30**	**69**	P	**Pn**	**22 37 53.8**	**-0.2**
TWK	**Hsinying** baz=233	**1.31**	**236**	⇓P	**Pn**	**22 37 54.2**	**+0.1**
TWK	baz=233			*e*S	**Sn**	**22 38 12.2**	**+1.7**
CHN1	**Nanshi** baz=230	**1.33**	**232**	⇓P	**Pn**	**22 37 54.6**	**+0.2**
CHN1	baz=230			S	**Sn**	**22 38 12.1**	**+1.1**
SNST	**Tainan City** baz=232	**1.33**	**234**	*e*P	**Pn**	**22 37 54.5**	**+0.1**
SNST	baz=232			*e*S	**Sn**	**22 38 12.6**	**+1.6**
SGST	**Jiashian** baz=217	**1.36**	**228**	⇓P	**Pn**	**22 37 55.4**	**+0.6**
SGST	baz=217			*e*S	**Sn**	**22 38 12.5**	**+0.9**
WSF	**Szhu** baz=242	**1.38**	**255**	*e*P	**Pn**	**22 37 54.7**	**-0.3**
WSF	baz=242			*e*S	**Sn**	**22 38 13.6**	**+1.5**
SLGT	**Liugui** baz=221	**1.38**	**223**	*e*P	**Pn**	**22 37 55.7**	**+0.6**
CHN8	**Yiju** baz=231	**1.49**	**244**	*e*P	**Pn**	**22 37 57.0**	**+0.4**
CHN8	baz=231			*e*S	**Sn**	**22 38 16.3**	**+1.4**
ECL	**Taimali** baz=195	**1.55**	**205**	*e*P	**Pn**	**22 37 56.9**	**-0.5**
SSD	**Sandimen** baz=204	**1.58**	**217**	*e*P	**Pn**	**22 37 58.3**	**+0.5**
SSD	baz=204			*e*S	**Sn**	**22 38 17.9**	**+0.9**
SCLT	**Jiali** baz=236	**1.59**	**239**	*e*P	**Pn**	**22 37 58.1**	**+0.2**
SCLT	baz=236			*e*S	**Sn**	**22 38 18.7**	**+1.4**
MASBT	**Mashibuluo** baz=213	**1.68**	**215**	*e*P	**Pn**	**22 37 59.1**	**-0.2**
EAST	**Anshuo** baz=193	**1.78**	**205**	*e*P	**Pn**	**22 38 00.3**	**-0.3**
TAW	**Tawu** baz=193	**1.79**	**204**	*e*P	**Pn**	**22 38 00.1**	**-0.6**
SCZT	**Fangliau** baz=197	**1.89**	**211**	*e*P	**Pn**	**22 38 01.9**	**-0.2**
IRIF	**Iriomote-Funau**	**1.91**	**80**	P	**Pn**	**22 38 02.0**	**-0.3**
IRIF				S	**Sn**	**22 38 25.2**	**0.0**
HATJ	**Hateruma jima**	**1.95**	**88**	P	**Pn**	**22 38 03.1**	**+0.2**
LAY	**Lan-yu** baz=175	**1.96**	**183**	*e*P	**Pn**	**22 38 01.4**	**-1.7**
PHUB	**P'eng-hu** baz=269	**1.98**	**256**	⇓*e*P	**Pn**	**22 38 02.3**	**-1.1**
PHUB	baz=269			*e*S	**Sn**	**22 38 25.9**	**-1.2**
PNG	**Penghu** baz=257	**1.99**	**258**	*e*P	**Pn**	**22 38 02.2**	**-1.2**
WDGT	**Dungji** baz=247	**1.99**	**248**	*e*P	**Pn**	**22 38 03.0**	**-0.4**
JKRS	**Kuro-shima**	**2.15**	**83**	P	**Pn**	**22 38 06.0**	**+0.4**
JKRS				S	**Sn**	**22 38 32.6**	**+1.5**
TWK1	**Hengchun** baz=191	**2.20**	**201**	*e*P	**Pn**	**22 38 05.8**	**-0.6**
TWKBT	**Hengchun** baz=191	**2.20**	**201**	*e*P	**Pn**	**22 38 05.6**	**-0.8**
VCHM	**Qimei** baz=237	**2.20**	**249**	*e*P	**Pn**	**22 38 05.7**	**-0.7**
VWUC	**VWUC** baz=297	**2.25**	**296**	*e*P	**Pn**	**22 38 05.3**	**-1.7**
PTTC	**Pingtan** baz=311	**2.28**	**311**	*e*P	**Pn**	**22 38 05.6**	**-1.8**
JIJ	**Ishigaki jima**	**2.29**	**81**	P	**Pn**	**22 38 07.1**	**-0.4**
JIJ				S	**Sn**	**22 38 33.2**	**-1.3**
JISG	**Ishigakijimahi**	**2.48**	**76**	P	**Pn**	**22 38 09.6**	**-0.5**
JISG				S	**Sn**	**22 38 38.4**	**-0.9**
MATB	**Ma-tsu** baz=324	**2.65**	**324**	*e*P	**Pn**	**22 38 10.8**	**-1.7**
JTJ	**Tarama**	**2.84**	**77**	P	**Pn**	**22 38 14.9**	**-0.2**
JTJ				*e*S	**Sn**	**22 38 48.8**	**+0.7**
KNM	**Kinmen** baz=277	**2.98**	**279**	*e*P	**Pn**	**22 38 17.6**	**+0.5**
KNMB	**Chin-men Tao** baz=279	**3.03**	**279**	*e*P	**Pn**	**22 38 16.3**	**-1.5**

ISCJB ***16*** *22:42:48.7±0.3, 15°.60S±0°.06×13°.28W±0°.05, h9^{km}, mb4.5/60, Error ellipse: s-maj=9.2km s-min=6.8km az=146.9*

IDC ***16*** *22:42:49.5±0.4, 15°.62S×13°.22W, h0^{km}, mb4.2/28, mb1 4.3/28, mb1mx4.2/41, mbtmp4.2/28, Error ellipse: s-maj=13.7km s-min=12.4km az=148.0*

NEIC ***16*** *22:42:50.5±0.2, 15°.61S×13°.30W, h10^{km}, mb4.9/31, Error ellipse: s-maj=8.0km s-min=6.2km az=144.0*

ISC 16 22:42:50.6±0.4**, 15°.63S**±0°.09×**13°.29W**±0°.08**, h9**^{km}**, n101,** σ1^{s}.**24**/95**, mb4.6**/63**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR** baz=167	**6.76**	**349**	T	T	22 51 29.6	
H10S3	**ASCENSION HYDR** baz=167	**6.77**	**348**	T	T	22 51 25.5	
H10S1	**ASCENSION HYDR** baz=167	**6.78**	**349**	T	T	22 51 28.6	
H10N1	**ASCENSION HYDR** baz=172	**7.82**	**351**	T	T	22 52 47.5	
H10N3	**ASCENSION HYDR** baz=172	**7.83**	**351**	T	T	22 52 50.3	
H10N2	**ASCENSION HYDR** baz=172	**7.84**	**351**	T	T	22 52 44.4	
H09W1	**TRISTAN DA CUN**	**21.40**	**178**	T	T	23 09 44.3	
DBIC	**Dimbokro** 26nm,1.3s	**23.68**	**21**	*e*P	**P**	**22 48 02.8**	**+0.1**
DBIC	**Dimbokro** 4.0nm,0.8s,baz=189,slow=11,SNR=3.7	**23.68**	**21**	P	**P**	**22 48 02.8**	**+0.1**
RCBR	**Riachuelo** 25nm,1.1s	**24.23**	**291**	*e*P	**P**	**22 48 07.1**	**-1.0**
TORD	**Torodi Ar. Bea** 5.9nm,0.9s,baz=240,slow=8.0,SNR=24	**32.21**	**28**	P	**P**	**22 49 18.5**	**-0.8**
TOA1	**Torodi Ar. Sit**	**32.21**	**28**	*e*P	**P**	**22 49 18.5**	**-0.8**
BDFB	**Brasilia** 0.9nm,0.4s,baz=98,slow=9.3,SNR=3.1	**33.42**	**265**	P	**P**	**22 49 30.4**	**+0.3**
SUR	**Sutherland** 33nm,1.4s	**35.14**	**124**	*e*P	**P**	**22 49 44.4**	**-0.5**
SUR	**Sutherland** 5.5nm,0.9s,baz=213,slow=16,SNR=1.5	**35.14**	**124**	P	**P**	**22 49 44.4**	**-0.5**
LBTB	**Lobatse** 16nm,1.1s	**37.53**	**111**	*e*P	**P**	**22 50 04.5**	**-0.9**
LBTB	**Lobatse** 3.8nm,0.8s,baz=243,slow=4.9,SNR=3.8	**37.53**	**111**	P	**P**	**22 50 04.5**	**-0.9**
BOSA	**Boshof** 3.9nm,1.0s,baz=327,slow=10,SNR=3.3	**37.81**	**117**	P	**P**	**22 50 07.9**	**+0.2**
LSZ	**Lusaka** 13nm,1.2s	**39.94**	**95**	*e*P	**P**	**22 50 26.6**	**+0.9**
LSZ	**Lusaka** 6.1nm,1.0s,baz=280,slow=10,SNR=4.0	**39.94**	**95**	P	**P**	**22 50 25.9**	**+0.2**
MATP	**Matopo** 3.2nm,0.9s,baz=310,slow=5.8,SNR=3.7	**39.95**	**103**	P	**P**	**22 50 25.2**	**-0.5**
CPUP	**Villa Florida** 6.9nm,1.1s	**42.29**	**248**	*e*P	**P**	**22 50 43.5**	**-1.3**
CPUP	**Villa Florida** 2.5nm,0.8s,baz=92,slow=7.9,SNR=5.8	**42.29**	**248**	P	**P**	**22 50 45.0**	**+0.1**
SIV	**San Ignacio** 0.4nm,0.3s,baz=114,slow=15,SNR=2.5	**45.89**	**263**	P	**P**	**22 51 14.4**	**+0.5**
MDT	**Midelt** 1.5nm,1.1s,baz=291,slow=7.5,SNR=4.4	**48.88**	**10**	P	**P**	**22 51 38.5**	**+1.7**
LPAZ	**La Paz**	**52.59**	**261**	*e*P	**P**	**22 52 04.6**	**-1.3**
LPAZ	**La Paz** 0.5nm,0.8s,baz=111,slow=12,SNR=1.9	**52.59**	**261**	P	**P**	**22 52 08.3**	**+2.4**
LVC	**Limon Verde** 7.3nm,1.1s	**52.76**	**253**	*e*P	**P**	**22 52 05.2**	**-1.6**
CART	**Cartagena** 13nm,1.0s	**54.18**	**12**	*e*P	**P**	**22 52 16.5**	**+0.2**
LCO	**Las Campanas** 25nm,1.0s	**54.29**	**245**	*e*P	**P**	**22 52 19.0**	**+1.2**
GO04	**Tololo Observa** 21nm,0.8s	**54.40**	**244**	*e*P	**P**	**22 52 18.3**	**-0.3**
KEST	**Kesra** 18nm,1.1s	**55.40**	**22**	*e*P	**P**	**22 52 23.9**	**-1.5**
KEST	**Kesra** 9.5nm,1.1s,baz=63,slow=17,SNR=4.4	**55.40**	**22**	P	**P**	**22 52 26.9**	**+1.6**
ESDC	**Sonseca Array** 1.3nm,0.9s,baz=188,slow=7.7,SNR=7.8	**55.70**	**9**	P	**P**	**22 52 28.2**	**+0.8**
SNAA	**Sanae** 4.3nm,1.1s,baz=342,slow=3.2,SNR=4.0	**56.38**	**176**	P	**P**	**22 52 32.7**	**+0.8**
PMSA	**Palmer Station** 35nm,0.4s,baz=21,slow=8.6,SNR=14	**59.80**	**203**	P	**P**	**22 52 57.7**	**+1.9**
SDV	**Santo Domingo** 26nm,1.4s	**61.79**	**289**	*e*P	**P**	**22 53 10.1**	**-0.4**
SDV	**Santo Domingo**	**61.79**	**289**	*e*P	**P**	**22 53 12.7**	**+2.2**
SDV	**Santo Domingo**	**61.79**	**289**	*e*P	**P**	**22 53 12.7**	**+2.2**
CHIC	**Chingaza**	**63.11**	**284**	*e*P	**P**	**22 53 20.7**	**+1.1**
CHIC	**Chingaza**	**63.11**	**284**	*e*P	**P**	**22 53 20.7**	**+1.1**
ROSC	**El Rosal** 6.0nm,1.0s	**63.73**	**284**	*e*P	**P**	**22 53 24.1**	**+0.4**
ROSC	**El Rosal** 4.3nm,0.4s,baz=47,slow=19,SNR=2.5	**63.73**	**284**	P	**P**	**22 53 24.1**	**+0.4**
PTBC	**PUERTO BERRIO,**	**64.44**	**285**	*e*P	**P**	**22 53 26.0**	**-1.9**
PTBC	**PUERTO BERRIO,**	**64.44**	**285**	*e*P	**P**	**22 53 26.0**	**-1.9**
ZARC	**Zaragoza, Cauc**	**65.15**	**286**	*e*P	**P**	**22 53 32.0**	**-0.6**
ZARC	**Zaragoza, Cauc**	**65.15**	**286**	*e*P	**P**	**22 53 32.0**	**-0.6**
DAVA	**Damuels** 10nm,1.3s	**65.99**	**17**	*e*P	**P**	**22 53 37.0**	**-0.4**
FETA	**Feichten** 5.3nm,0.9s	**65.99**	**18**	*e*pP	**P**	**22 53 41.0**	**+3.5**
OTAV	**Otavalo** 4.9nm,1.1s	**66.19**	**277**	*e*P	**P**	**22 53 39.1**	**-0.7**
ABTA	**Abfaltersbach** 4.2nm,1.3s	**66.29**	**19**	*e*P	**P**	**22 53 41.6**	**+2.3**
SQTA	**Sankt Quirin** 12nm,1.3s	**66.31**	**18**	*i* pP	**P**	**22 53 43.9**	**+4.4**
MOTA	**Moosalm** 4.3nm,1.2s	**66.39**	**18**	*e*P	**P**	**22 53 40.6**	**+0.6**
RETA	**Reutte** 4.2nm,1.1s	**66.42**	**18**	*e*P	**P**	**22 53 40.9**	**+0.8**
BFO	**Black Forest** 6.5nm,1.0s	**66.53**	**16**	*e*P	**P**	**22 53 40.6**	**0.0**
MYKA	**Terra Mystica** 0.8nm,0.4s	**66.55**	**20**	pP	**P**	**22 53 44.6**	**+3.7**
DIVS	**Divibare** 8.7nm,1.2s	**66.76**	**25**	*e*P	**P**	**22 53 41.0**	**-1.3**
VTS	**Vitosha** 5.8nm,1.1s	**66.99**	**29**	*e*P	**P**	**22 53 43.4**	**-0.6**
ARSA	**Arzberg** 5.9nm,1.1s	**67.72**	**21**	*e*P	**P**	**22 53 48.8**	**+0.5**
MOA	**Molln** 4.9nm,1.1s	**67.82**	**20**	*e*P	**P**	**22 53 48.6**	**-0.4**
CONA	**Conrad Observa** 5.7nm,1.2s	**68.42**	**21**	*e*P	**P**	**22 53 53.6**	**+0.8**
GEA0	**GERESS Array S**	**68.51**	**19**	*e*P	**P**	**22 53 52.9**	**-0.5**
GERES	**GERESS Array B** 1.3nm,0.9s,baz=217,slow=3.3,SNR=4.9	**68.52**	**19**	P	**P**	**22 53 53.1**	**-0.3**
BBSR	**BB Station** 45nm,1.3s	**68.53**	**315**	*e*P	**P**	**22 53 52.9**	**-0.8**
GRFO	**Grafenberg** 20nm,1.5s	**68.55**	**17**	*e*P	**P**	**22 53 52.1**	**-1.3**
KRUC	**Moravsky**	**69.58**	**20**	*e*P	**P**	**22 54 00.1**	**+0.3**
VRAC	**Vranov**	**69.86**	**20**	*e*P	**P**	**22 54 01.8**	**+0.2**
PSZ	**Piszkesteto** 17nm,1.4s	**69.86**	**23**	*e*P	**P**	**22 53 59.6**	**-2.1**
VYHS	**Vyhne**	**69.95**	**22**	*e*P	**P**	**22 54 02.6**	**+0.5**
VYHS				*e*sP	**pwP**	**22 54 07.7**	**-0.2**
GTBY	**Guantanamo Bay** 30nm,1.1s	**70.28**	**298**	*e*P	**P**	**22 54 03.6**	**-1.2**
BR101	**Keskin Array S**	**70.31**	**37**	*e*P	**P**	**22 54 05.5**	**+0.8**
BRTR	**Keskin Array B** 2.6nm,0.8s,baz=203,slow=5.7,SNR=14	**70.31**	**37**	P	**P**	**22 54 05.5**	**+0.8**
MAW	**Mawson** 28nm,1.3s	**70.39**	**157**	*e*P	**P**	**22 54 05.1**	**+0.5**
MAW	**Mawson** 45nm,1.1s,baz=256,slow=12,SNR=1.9	**70.39**	**157**	P	**P**	**22 54 05.1**	**+0.5**
MLR	**Muntele Rosu** 41nm,1.3s	**70.45**	**28**	*e*P	**P**	**22 54 05.0**	**-0.5**
CLL	**Collm**	**70.50**	**17**	*e*(P)	**P**	**22 54 07.0**	**+1.6**
MORC	**Moravsky Berou** 9.5nm,1.2s	**70.58**	**21**	*e*P	**P**	**22 54 06.1**	**+0.1**
MORC	**Moravsky Berou**	**70.58**	**21**	*e*P	**P**	**22 54 05.5**	**-0.5**
MTDJ	**Mount Denham** 38nm,1.3s	**71.66**	**296**	*e*P	**P**	**22 54 12.2**	**-1.1**
OJC	**Ojcow** 8.2nm,1.1s	**71.74**	**22**	*e*P	**P**	**22 54 12.6**	**-0.4**
BUR04	**Bucovina Ar. S**	**71.76**	**26**	*e*P	**P**	**22 54 11.8**	**-1.5**
BUR08	**Bucovina Ar. S** 6.0nm,1.4s	**71.78**	**26**	*e*P	**P**	**22 54 12.5**	**-1.0**
QSPA	**South Pole Qui** 12nm,1.0s	**74.54**	**180**	*e*P	**P**	**22 54 28.5**	**-1.1**
AK11	**Malin Array Si**	**75.78**	**26**	*e*P	**P**	**22 54 36.0**	**-0.6**
KIEV	**Kiev** 9.7nm,1.1s	**75.81**	**26**	*e*P	**P**	**22 54 36.1**	**-0.7**
AKASG	**Malin Array Be** 3.3nm,0.9s,baz=221,slow=5.5,SNR=7.1	**75.82**	**26**	P	**P**	**22 54 36.5**	**-0.4**
AKBB	**Malin Array Si** 10nm,1.1s	**75.82**	**26**	*e*P	**P**	**22 54 36.4**	**-0.5**
SUW	**Suwalki** 26nm,1.0s	**76.05**	**21**	*e*P	**P**	**22 54 37.6**	**-0.5**
KBZ	**Khabaz** 2.2nm,1.0s,baz=258,slow=9.3,SNR=2.7	**78.21**	**38**	P	**P**	**22 54 50.8**	**+0.3**
NB200	**NORSAR Array S**	**78.88**	**12**	*e*P	**P**	**22 54 55.1**	**+1.1**
NOA	**NORSAR Array B** 0.6nm,0.8s,baz=204,slow=6.0,SNR=3.5	**78.88**	**12**	P	**P**	**22 54 55.1**	**+1.1**
FINES	**FINESS Array B** 2.4nm,0.9s,baz=260,slow=5.6,SNR=3.8	**82.93**	**18**	P	**P**	**22 55 16.1**	**+0.6**
SCHQ	**Schefferville** 1.8nm,0.8s,baz=135,slow=4.5,SNR=5.6	**83.52**	**332**	P	**P**	**22 55 19.0**	**+0.3**
TKL	**Tuckaleechee C** 4.2nm,1.1s,baz=65,slow=4.8,SNR=1.6	**83.87**	**309**	P	**P**	**22 55 21.7**	**+0.8**
SADO	**Sadowa** 3.8nm,0.7s,baz=101,slow=7.5,SNR=4.0	**84.67**	**319**	P	**P**	**22 55 24.8**	**+0.1**
GEYT	**Alibeck** 2.1nm,0.7s,baz=354,slow=40,SNR=3.1	**85.47**	**49**	P	**P**	**22 55 27.9**	**-1.1**
FRB	**Frobisher Bay** 1.7nm,0.8s,baz=96,slow=7.3,SNR=6.4	**89.75**	**339**	P	**P**	**22 55 48.3**	**-0.6**
TXAR	**Lajitas Array** 0.5nm,0.9s,baz=118,slow=7.2,SNR=3.3	**97.82**	**298**	P	**P**	**22 56 26.9**	**-0.1**
ASAR	**Alice Springs** 0.9nm,0.9s,baz=240,slow=1.6,SNR=6.7	**129.47**	**140**	PKP	**PKPdf**	**23 01 58.7**	**-1.9**
WRA	**Warramunga Arr** 0.6nm,0.8s,baz=261,slow=2.4,SNR=7.3	**132.44**	**137**	PKP	**PKPdf**	**23 02 04.4**	**-1.9**
MJAR	**Matsushiro Arr** 2.2nm,0.9s,baz=357,slow=5.0,SNR=3.8	**147.21**	**45**	PKPbc	**PKPab**	**23 02 35.7**	**-0.7**

IDC ***16*** *22:43:40.8±0.4, 15°.58S×13°.21W, h0^{km}, mb4.5/36, mb1 4.6/36, mb1mx4.5/43, mbtmp4.5/36, Error ellipse: s-maj=13.3km s-min=11.1km az=180.0*

ISCJB ***16*** *22:43:40.8±0.2, 15°.57S±0°.04×13°.18W±0°.03, h10^{km}, mb4.9/129, Error ellipse: s-maj=7.2km s-min=3.4km az=147.2*

MOS ***16*** *22:43:40.8±0.9, 15°.52S×13°.26W, h10^{km}, mb5.2/50, Error ellipse: s-maj=11.9km s-min=5.8km az=63.7*

BJI ***16*** *22:43:42.6, 15°.60S×13°.20W, h15^{km}, mB5.5/4, mb5.1/1, Ms5.2/7, Ms7 4.9/8*

NEIC ***16*** *22:43:42.3±0.2, 15°.66S×13°.17W, h10^{km}, mb5.1/66, Error ellipse: s-maj=6.8km s-min=5.1km az=161.0*

VAO ***16*** *22:43:46.6±1.9, 15°.46S×13°.73W, h10^{km}, mb4.7*

GCMT ***16*** *22:43:46.3±0.2, 15°.48S±0°.02×13°.21W±0°.01, h12^{km}, MW5.2/108, Moment Tensor Solution. s73,c99; s108,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.93±.12; $M_{\theta\theta}$0.52±.13; $M_{\phi\phi}$6.41±.11; $M_{r\theta}$2.62±.40;*

$M_{\theta\phi}$-1.07±.10; $M_{\phi r}$0.60±.35; Best double couple: $M_0$7.20800×10^{16} NP1:ϕ_s187.00000°,δ48.00000°, λ-65.00000°. NP2:ϕ_s333.00000°,δ47.00000°, λ-115.00000°. Principal axes: T 6.6000, Plg1.0000°, Azm260.0000°; N 1.2180, Plg18.0000°, Azm350.0000°; P -7.8150, Plg72.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 16 22:43:42.4±0.3,**15°.63S**±0°.07×**13°.19W**±0°.06,**h10**^{km},**n394**, σ**1**^{s}**.05**/390,**mb5.0**/129,**32C-13D,Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	ASCENSION HYDR	6.78	348	T	T	22 52 14.2	
	baz=168,slow=74,SNR=598						
H10S3	ASCENSION HYDR	6.79	348	T	T	22 52 11.7	
	baz=168,slow=74,SNR=357						
H10S1	ASCENSION HYDR	6.79	348	T	T	22 52 15.6	
	baz=168,slow=74,SNR=416						
SHEL	Horse Pasture	7.17	94	*e*Pn	Pn	22 45 24.3	-3.2
SHEL	Horse Pasture	7.17	94	*e*P	Pn	22 45 24.3	-3.2
H10N1	ASCENSION HYDR	7.83	351	T	T	22 53 34.7	
	baz=166,slow=74,SNR=7.1						
H10N3	ASCENSION HYDR	7.84	350	T	T	22 53 34.8	
	baz=166,slow=74,SNR=30						
H10N2	ASCENSION HYDR	7.85	351	T	T	22 53 32.2	
	baz=166,slow=74,SNR=7.3						
H09W1	TRISTAN DA CUN	21.40	178	T	T	23 10 33.6	
	SNR=1.6						
LIC	Lamto	23.16	21	*e*PKIKP	P	22 48 48.3	-1.0
	104nm,1.3s						
KIC	Kosan Boka	23.39	22	*e*PKIKP	P	22 48 48.6	-3.0
	145nm,1.4s						
TIC	Toumodi	23.56	21	*e*PKIKP	P	22 48 49.0	-4.3
DBIC	Dimbokro	23.64	21	*e*P	P	22 48 52.2	-1.8
	20nm,1.3s						
DBIC	Dimbokro	23.64	21	*e*P	P	22 48 52.2	-1.8
DBIC				pmax	pmax		
	comp=Z,20nm,1.3s						
DBIC	Dimbokro	23.64	21	P	P	22 48 52.5	-1.5
	comp=Z,6.4nm,0.9s,baz=183,slow=12,SNR=4.7						
RCBR	Riachuelo	24.32	291	*e*P	P	22 48 59.3	-1.3
NBCP	Cabaceiras do	25.38	273	*e*P	P	22 49 09.8	-0.3
RIB01	Linhares ES	26.20	258	*e*P	P	22 49 17.7	+0.2
BSFB	Barra de Sao F	26.60	259	*e*P	P	22 49 21.6	+0.5
ALF01	Guarapari-ES	26.62	255	*e*P	P	22 49 22.0	+0.7
SJMB	Sao Joao De Ma	26.91	259	*e*P	P	22 49 24.4	+0.4
CAM01	Campos-RJ	27.63	253	*e*P	P	22 49 30.1	-0.3
DUB01	Friburgo-RJ	28.32	252	*e*P	P	22 49 35.4	-1.3
MCI7	Montes Claros	29.43	263	*e*P	P	22 49 46.1	-0.4
MCI9	Montes Claros	29.50	264	*e*P	P	22 49 46.1	-1.0
MCI8	Montes Claros	29.52	264	*e*P	P	22 49 47.2	-0.2
JANB	Januaria	30.01	267	*e*P	P	22 49 50.7	-0.9
BSCB	Bom Sucesso	30.43	255	*e*P	P	22 49 54.3	-1.0
PMNB	Patos De Minas	31.89	260	*e*P	P	22 50 07.6	-0.7
TOA0	Torodi Ar. Sit	32.16	28	*e*P	P	22 50 10.1	-0.4
TORD	Torodi Ar. Bea	32.16	28	P	P	22 50 09.6	-0.9
	comp=Z,19nm,1.0s,baz=205,slow=9.6,SNR=17						
TOA1	Torodi Ar. Sit	32.16	28	*e*P	P	22 50 09.6	-1.0
RCLB	Rio Claro- Sao	33.11	253	*e*P	P	22 50 19.2	+0.2
BDFB	Brasilia	33.51	265	*e*P	P	22 50 21.4	-1.2
	comp=Z,24nm,1.4s						
BDFB	Brasilia	33.51	265	*e*P	P	22 50 21.4	-1.2
BDFB				pmax	pmax		
	comp=Z,24nm,1.4s						
BDFB	Brasilia	33.51	265	P	P	22 50 21.4	-1.2
	comp=Z,1.8nm,0.4s,baz=69,slow=15,SNR=4.8						
IPMB	Ipameri, GO	33.58	261	*e*P	P	22 50 22.4	-0.7
BB19B	Bebedouro	33.93	255	*e*P	P	22 50 24.9	-1.2
TIJ01	Guaruva-PR	34.82	248	*e*P	P	22 50 35.2	+1.4
SUR	Sutherland	35.06	125	*e*P	P	22 50 35.3	-0.7
	comp=Z,26nm,1.3s						
SUR	Sutherland	35.06	125	P	P	22 50 36.5	+0.5
	comp=Z,7.1nm,0.9s,baz=237,slow=9.3,SNR=2.5						
FRTB	Fartura	35.07	252	*e*P	P	22 50 36.8	+0.9
TER01	Tubaro-SC	35.55	243	*e*P	P	22 50 41.1	+1.1
ITRB	Iturama	35.60	258	*e*P	P	22 50 39.5	-1.1
CNLB	Canela	37.20	242	*e*P	P	22 50 55.1	+0.9
LBTB	Lobatse	37.44	111	*e*P	P	22 50 56.8	+0.5
	comp=Z,7.8nm,1.1s						
LBTB	Lobatse	37.44	111	*e*P	P	22 50 56.8	+0.5
LBTB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LBTB	Lobatse	37.44	111	P	P	22 50 56.8	+0.5
	comp=Z,3.6nm,0.8s,baz=276,slow=9.6,SNR=3.2						
PTGB	Pitanga	37.49	250	*e*P	P	22 50 55.8	-0.8
BOSA	Boshof	37.72	117	P	P	22 50 58.1	-0.6
	comp=Z,7.6nm,1.1s,baz=222,slow=6.3,SNR=4.2						
TRCB	Terra Rica	37.84	253	*e*P	P	22 50 59.4	-0.2
ITAB	Concordia	37.90	246	*e*P	P	22 51 02.1	+2.1
C2SB	Chapadao do Su	37.95	259	*e*P	P	22 51 01.5	+0.9
CPSB	Cacapava Do Su	39.63	241	*e*P	P	22 51 16.1	+1.5
LSZ	Lusaka	39.84	95	*e*P	P	22 51 17.8	+1.2
	comp=Z,21nm,1.3s						
LSZ	Lusaka	39.84	95	*e*P	P	22 51 17.8	+1.2
LSZ				pmax	pmax		
	comp=Z,21nm,1.3s						
LSZ	Lusaka	39.84	95	P	P	22 51 16.9	+0.3
	comp=Z,6.1nm,1.0s,baz=272,slow=8.1,SNR=4.2						
MATP	Matopo	39.85	103	P	P	22 51 16.1	-0.6
	comp=Z,4.9nm,1.1s,baz=259,slow=9.0,SNR=4.8						
PLTB	Pedras Altas	40.08	239	*e*P	P	22 51 19.6	+1.3
AQDB	Aquidauana	40.62	257	*e*P	P	22 51 22.6	-0.3
SALV	Santo Antonio	40.85	264	*e*P	P	22 51 25.2	+0.4
TAM	Tamanrasset	42.35	26	*e*P	P	22 51 37.9	+0.8
	comp=Z,13nm,1.4s						
CPUP	Villa Florida	42.39	248	*e*P	P	22 51 36.9	-0.4
	comp=Z,19nm,1.3s						
CPUP	Villa Florida	42.39	248	*e*P	P	22 51 36.9	-0.4
CPUP				pmax	pmax		
	comp=Z,19nm,1.3s						
CPUP	Villa Florida	42.39	248	P	P	22 51 37.0	-0.4
	comp=Z,4.9nm,0.9s,baz=77,slow=8.1,SNR=5.5						
CPUP	Villa Florida	42.39	248	*e*P	P	22 51 38.5	+1.3
MDP	Montagnes des	44.16	295	P	P	22 51 51.3	-0.4
	comp=Z,18nm,1.0s,baz=52,slow=14,SNR=1.9						
MBAR	Mbarara	45.84	75	*e*P	P	22 52 07.2	+1.9
	comp=Z,21nm,1.5s						
MBAR	Mbarara	45.84	75	*e*P	P	22 52 07.2	+1.9
MBAR				pmax	pmax		
	comp=Z,21nm,1.5s						
SIV	San Ignacio	45.99	263	P	P	22 52 07.6	+1.3
	comp=Z,0.5nm,0.4s,baz=98,slow=16,SNR=4.2						
PTGA	Pitinga	48.46	283	*e*P	P	22 52 26.6	+1.0
	comp=Z,21nm,1.4s						
PTGA	Pitinga	48.46	283	*e*P	P	22 52 26.1	+0.5
MDT	Midelt	48.86	10	P	P	22 52 29.3	+0.9
	comp=Z,8.0nm,1.1s,baz=202,slow=4.4,SNR=8.4						
KMBO	Kilima Mbogo	51.78	79	*e*P	P	22 52 52.6	+1.5
	comp=Z,7.1nm,1.4s						
KMBO	Kilima Mbogo	51.78	79	*e*P	P	22 52 52.6	+1.5
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KMBO	Kilima Mbogo	51.78	79	P	P	22 52 52.6	+1.5
	comp=Z,0.5nm,0.4s,baz=251,slow=9.6,SNR=2.8						
LPAZ	La Paz	52.69	261	P	P	22 52 57.2	-1.0
	comp=Z,1.7nm,1.0s,baz=120,slow=14,SNR=3.9						
LPAZ	La Paz	52.69	261	*e*P	P	22 52 57.1	-1.2
PVAQ	Vaqueiros	52.99	5	*e*P	P	22 52 59.8	+0.5
	comp=Z,28nm,1.6s						
PB01	IPOC Station P	53.49	255	*e*P	P	22 53 03.2	-0.4
	comp=Z,34nm,1.5s						
PBEJ	Beja	53.60	5	*e*P	P	22 53 05.3	+1.5
	comp=Z,20nm,1.4s						
PNCL	Nicolau / Gran	53.63	5	*e*P	P	22 53 04.9	+0.9
	comp=Z,23nm,1.5s						
LCO	Las Campanas	54.38	245	*e*P	P	22 53 09.6	-0.5
	comp=Z,47nm,1.0s						
LCO	Las Campanas	54.38	245	*e*P	P	22 53 09.6	-0.5
LCO				pmax	pmax		
	comp=Z,47nm,1.0s						
GO04	Tololo Observa	54.49	244	*e*P	P	22 53 09.4	-1.5
	comp=Z,65nm,1.1s						
PEL	Peldehue	54.55	240	P	P	22 53 10.2	-0.8
PEL				pmax	pmax		
	comp=Z,21nm,1.5s						
PMRV	Marv??o	55.03	5	*e*P	P	22 53 15.2	+1.0
	comp=Z,23nm,1.6s						
VNA1	Neumayer--Stat	55.09	178	P	P	22 53 20.7	+6.5
PLCA	Paso Flores	55.33	231	*e*P	P	22 53 17.3	+0.7
KEST	Kesra	55.36	22	*e*P	P	22 53 16.2	-0.6
	comp=Z,46nm,1.1s						
KEST	Kesra	55.36	22	P	P	22 53 17.6	+0.9
	comp=Z,24nm,1.1s,baz=175,slow=4.4,SNR=6.1						
VNA2	Neumayer--Watz	55.39	178	P	P	22 53 22.4	+5.9
PCBR	Castelo Branco	55.43	5	*e*P	P	22 53 19.6	+2.5
PAB	San Pablo	55.50	8	*e*P	P	22 53 17.0	-0.7
	comp=Z,9.7nm,1.3s						
PAB	San Pablo	55.50	8	*e*P	P	22 53 17.0	-0.7
PAB				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VNA3	Neumayer Olymp	55.64	179	P	P	22 53 18.2	0.0
ESDC	Sonseca Array	55.68	9	P	P	22 53 18.6	-0.3
	comp=Z,2.0nm,0.7s,baz=186,slow=7.5,SNR=13						
ESLA	Sonseca Array	55.68	9	*e*P	P	22 53 18.0	-1.0
	comp=Z,6.5nm,1.1s						
ES19	SONSECA Array	55.72	9	*e*P	P	22 53 18.9	-0.3
SNAA	Sanae	56.37	176	P	P	22 53 29.2	+5.7
SNAA	Sanae	56.37	176	*e*P	P	22 53 23.8	+0.3
	comp=Z,20nm,1.3s						
SNAA	Sanae	56.37	176	*e*P	P	22 53 23.8	+0.3
SNAA				pmax	pmax		
	comp=Z,21nm,1.3s						
SNAA	Sanae	56.37	176	P	P	22 53 23.4	-0.1
	comp=Z,5.3nm,1.0s,baz=349,slow=9.7,SNR=3.0						
MVO	Moncorvo	56.79	6	*e*P	P	22 53 27.2	+0.4
	comp=Z,44nm,1.4s						
POLO	Lamas de Olo	56.93	5	*e*P	P	22 53 28.1	+0.2
NVL	N'lazarevskaya	57.19	170	*e*P	P	22 53 20.2	-9.0
NVL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PCAB	Cabril	57.24	5	*e*P	P	22 53 30.4	+0.4
	comp=Z,46nm,1.9s						
PGAV	Gavieira, Arco	57.48	4	*e*P	P	22 53 33.7	+1.9
SDV	Santo Domingo	61.88	289	*e*P	P	22 54 03.7	+0.9
	comp=Z,32nm,0.9s						
IDI	Anoyia	62.19	35	*e*P	P	22 54 05.0	+0.7
	comp=Z,25nm,1.2s						
AQU	L'Aquila	62.68	22	*e*P	P	22 54 08.2	+0.8
	comp=Z,44nm,1.2s						
AQU	L'Aquila	62.68	22	P	P	22 54 07.6	+0.2
AQU				pmax	pmax		
	comp=Z,36nm,1.1s						
SSB	Saint Sauveur	62.72	14	*e*P	P	22 54 07.6	0.0
	comp=Z,16nm,1.2s						
SSB	Saint Sauveur	62.72	14	*e*P	P	22 54 07.6	0.0
SSB				pmax	pmax		
	comp=Z,16nm,1.2s						
BNI	Bardonecchia	63.03	16	*e*P	P	22 54 10.6	+0.8
	comp=Z,15nm,1.3s						
BNI	Bardonecchia	63.03	16	*e*P	P	22 54 10.6	+0.8
BNI				pmax	pmax		
	comp=Z,15nm,1.3s						
ROSC	El Rosal	63.82	284	*e*P	P	22 54 17.1	+1.1
	comp=Z,8.1nm,0.9s						
ROSC	El Rosal	63.82	284	P	P	22 54 17.1	+1.1
	comp=Z,4.5nm,0.4s,baz=122,slow=8.0,SNR=5.1						
ATAH	Atahualpa	64.28	270	P	P	22 54 20.4	+1.4
	comp=Z,2.8nm,0.6s,baz=146,slow=5.5,SNR=2.6						
TTG	Podgorica	65.03	26	*e*P	P	22 54 23.7	+0.9
	comp=Z,22nm,1.1s						
TTG	Podgorica	65.03	26	*e*P	P	22 54 23.7	+0.9
TTG				pmax	pmax		
	comp=Z,22nm,1.1s						
GRG	Griva	65.25	29	P	P	22 54 23.5	-0.8
GRG				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KNT	Kendrikon	65.64	29	P	P	22 54 25.9	-0.9
KNT				pmax	pmax		
	comp=Z,7.0nm,1.4s						
DAVA	Damuels	65.96	17	P	P	22 54 28.5	-0.4
	comp=Z,10nm,1.1s,SNR=6.1						
FETA	Feichten	65.96	18	P	P	22 54 28.5	-0.4
	comp=Z,17nm,1.2s,SNR=8.0						
SLE	Schleitheim	66.02	16	P	P	22 54 28.2	-0.9
SLE				pmax	pmax		
	comp=Z,24nm,1.2s						
BOJS	Bojanci	66.08	21	*e*P	P	22 54 29.7	+0.2
ECH	Echery	66.10	15	*e*P	P	22 54 29.2	-0.4
	comp=Z,21nm,1.3s						
ECH	Echery	66.10	15	*e*P	P	22 54 29.2	-0.4
ECH				pmax	pmax		
	comp=Z,21nm,1.3s						
BLY	Banja Luka	66.14	23	⇑*i*P	P	22 54 31.5	+1.6
ABTA	Abfaltersbach	66.25	19	*e*P	P	22 54 31.1	+0.4
	comp=Z,13nm,1.3s						
SQTA	Sankt Quirin	66.28	18	*e*P	P	22 54 30.5	-0.4
	comp=Z,18nm,1.2s,SNR=5.4						
OTAV	Otavalo	66.29	277	*e*P	P	22 54 33.7	+1.6
	comp=Z,8.8nm,1.1s						
MOTA	Moosalm	66.36	18	*e*P	P	22 54 30.1	-1.4
	comp=Z,11nm,1.5s						
RETA	Reutte	66.39	17	*e*P	P	22 54 30.7	-0.8
	comp=Z,7.5nm,1.1s						
WTTA	Wattenberg	66.45	18	*e*P	P	22 54 31.4	-0.7
	comp=Z,13nm,1.8s						
WATA	Walderalm	66.49	18	*e*P	P	22 54 32.1	-0.2
	comp=Z,14nm,1.4s						
BFO	Black Forest	66.50	15	*e*P	P	22 54 31.8	-0.4
	comp=Z,16nm,1.1s						
BFO	Black Forest	66.50	15	*i* P	P	22 54 32.2	0.0
MYKA	Terra Mystica	66.51	20	*e*P	P	22 54 33.2	+0.8
	comp=Z,9.7nm,1.0s						
DIVS	Divibare	66.71	25	*e*P	P	22 54 33.7	0.0
	comp=Z,24nm,1.3s						
VTS	Vitosha	66.94	28	*e*P	P	22 54 35.2	-0.1
	comp=Z,9.9nm,1.0s						
VTS	Vitosha	66.94	28	⇑*i*P	P	22 54 34.9	-0.4
VTS	Vitosha	66.94	28	*e*P	P	22 54 35.2	-0.1
VTS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GROS	Grobnik	66.99	21	*e*P	P	22 54 35.4	0.0
WLF	Walferdange	67.22	13	*e*P	P	22 54 36.9	+0.2
	comp=Z,89nm,1.2s						
WLF	Walferdange	67.22	13	*e*P	P	22 54 36.9	+0.2
WLF				pmax	pmax		
	comp=Z,89nm,1.2s						
WLF	Walferdange	67.22	13	⇓P	P	22 54 36.8	+0.2
WLF				⇓pP	pwP	22 54 42.0	-1.0
DOU	Dourbes	67.29	12	⇑P	P	22 54 36.7	-0.5
ARSA	Arzberg	67.68	21	*e*P	P	22 54 40.2	+0.5
	comp=Z,11nm,1.2s,SNR=6.9						
BCLA	Clavier	67.74	13	⇑P	P	22 54 39.5	-0.4
MOA	Molln	67.79	20	P	P	22 54 39.9	-0.5
	comp=Z,16nm,1.3s						
UCC	Uccle	67.91	12	⇑P	P	22 54 41.3	+0.3
UCC				⇓sP	pwP	22 54 47.2	-0.2
MORH	Mrgy, Hungar	67.93	23	⇓*e*P	P	22 54 40.1	-1.2
MDVR	Moldovita	67.99	26	⇑*i*P	P	22 54 42.3	+0.6
MEM	Membach	68.07	13	⇑P	P	22 54 42.5	+0.5
HERR	Herculane	68.36	26	⇓*i*P	P	22 54 44.3	+0.3
CONA	Conrad Observa	68.39	21	*e*P	P	22 54 44.8	+0.6
	comp=Z,15nm,1.4s,SNR=7.3						
SOP	Sopron	68.41	21	*e*P	P	22 54 45.0	+0.8
GEA0	GERESS Array S	68.48	19	*e*P	P	22 54 43.9	-0.9
GEC2	GERESS Array S	68.49	19	*e*P	P	22 54 44.5	-0.4
	comp=Z,14nm,1.4s						
GEC2	GERESS Array S	68.49	19	*e*P	P	22 54 44.5	-0.4
GEC2				pmax	pmax		
	comp=Z,14nm,1.4s						
GERES	GERESS Array B	68.49	19	P	P	22 54 44.4	-0.5
	comp=Z,3.7nm,1.0s,baz=195,slow=4.0,SNR=11						
GERES				PP	PP	22 57 17.1	+0.8
	comp=Z,1.9nm,1.1s,baz=190,slow=11,SNR=3.6						
WET	Wettzell	68.50	18	P	P	22 54 45.1	+0.2
BZS	Buzias	68.62	25	⇑*i*P	P	22 54 45.8	+0.2
BZS	Buzias	68.62	25	P	P	22 54 45.8	+0.2
KHC	Kasperske Hory	68.70	19	*e*P	P	22 54 45.7	-0.4
	comp=Z,5.1nm,1.5s						
KHC	Kasperske Hory	68.70	19	*e*P	P	22 54 44.6	-1.5
KHC				*e*x	x	22 57 13.5	
KHC	Kasperske Hory	68.70	19	*e*P	P	22 54 45.7	-0.4
KHC				pmax	pmax		
	comp=Z,5.0nm,1.5s						
SIRR	Siria	69.16	25	⇑*i*P	P	22 54 49.3	+0.3
MODS	Modra-Piesok	69.25	21	*e*P	P	22 54 50.0	+0.5
MODS				pmax	pmax		
	comp=Z,45nm,1.3s						
MODS	Modra-Piesok	69.25	21	*e*P	P	22 54 50.0	+0.5
RAYN	Ar Rayn	69.31	57	*e*P	P	22 54 52.1	+1.6
	comp=Z,15nm,1.4s						
RAYN	Ar Rayn	69.31	57	*e*P	P	22 54 52.1	+1.6
RAYN				pmax	pmax		
	comp=Z,15nm,1.4s						
LOT	Lotru	69.40	27	⇑*i*P	P	22 54 50.3	-0.3
MOX	Moxa	69.49	17	P	P	22 54 51.0	+0.1
MOX				pmax	pmax		
	comp=Z,14nm,1.2s						
KRUC	Moravsky	69.54	20	P	P	22 54 51.3	0.0
KRUC				pmax	pmax		
	comp=Z,13nm,1.5s						
KRUC	Moravsky	69.54	20	*e*pP	P	22 54 51.2	0.0
ARR	Arges	69.72	27	⇑*i*P	P	22 54 52.3	-0.2
PRU	Pruhonice	69.75	19	*e*P	P	22 54 52.0	-0.6
PRU	Pruhonice	69.75	19	*e*P	P	22 54 52.0	-0.6
GOPC	GO Pecny, Ondr	69.77	19	*e*P	P	22 54 53.7	+1.0
GOPC	GO Pecny, Ondr	69.77	19	*e*P	P	22 54 53.7	+1.0
PSZ	Piszkesteto	69.82	23	*e*P	P	22 54 53.6	+0.5
	comp=Z,19nm,1.2s						
PSZ	Piszkesteto	69.82	23	⇑*i*P	P	22 54 51.7	-1.4
PSZ	Piszkesteto	69.82	23	*e*P	P	22 54 53.6	+0.5
PSZ				pmax	pmax		
	comp=Z,19nm,1.2s						
PSZ	Piszkesteto	69.82	23	*e*P	P	22 54 51.0	-2.1
VRAC	Vranov	69.82	20	P	P	22 54 53.6	+0.6
VRAC				pmax	pmax		
	comp=Z,13nm,2.0s						
VRAC	Vranov	69.82	20	*e*pP	P	22 54 53.2	+0.2
ANTO	Ankara	69.86	36	*e*P	P	22 54 55.6	+2.1
	comp=Z,31nm,1.3s						
ANTO	Ankara	69.86	36	⇑*i*P	P	22 54 55.8	+2.3
ANTO	Ankara	69.86	36	*e*P	P	22 54 55.6	+2.1
ANTO				pmax	pmax		
	comp=Z,31nm,1.3s						
VYHS	Vyhne	69.91	22	*e*P	P	22 54 52.9	-0.7
VYHS				pmax	pmax		
	comp=Z,13nm,1.2s						
VYHS	Vyhne	69.91	22	*e*P	P	22 54 52.9	-0.7
SULR		69.92	29	⇑*i*P	P	22 54 53.3	-0.4
VOIR		69.95	28	⇑*i*P	P	22 54 53.7	-0.3
VOIR		69.95	28	P	P	22 54 54.4	+0.4
VOIR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
DRGR		70.02	25	⇑*i*P	P	22 54 54.3	-0.1
DRGR		70.02	25	P	P	22 54 54.2	-0.1
BR101	Keskin Array S	70.24	37	*e*P	P	22 54 56.5	+0.4
BR131	Keskin Array S	70.24	37	*e*P	P	22 54 56.8	+0.8
	comp=Z,11nm,1.0s						
BRTR	Keskin Array B	70.24	37	P	P	22 54 56.5	+0.4
	comp=Z,5.1nm,0.8s,baz=209,slow=6.0,SNR=11						
CJR	Cluj-Napoca	70.32	26	⇑*i*P	P	22 54 56.4	+0.2
CJR	Cluj-Napoca	70.32	26	P	P	22 54 56.4	+0.2
BRG	Berggiesshubel	70.35	18	*e*P	P	22 54 55.7	-0.5
	comp=Z,9.6nm,1.3s						
BRG				*e*PP	PP	22 57 28.6	-3.7
	comp=Z,24nm,1.9s						
BRG	Berggiesshubel	70.35	18	*e*P	P	22 54 55.7	-0.5
BRG				*e*		22 57 28.6	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,24nm,2.0s						
MAW	Mawson	70.36	157	*e*P	P	22 54 57.9	+1.9
	comp=Z,37nm,1.3s						
MAW	Mawson	70.36	157	P	P	22 54 57.9	+1.9
	comp=Z,16nm,0.6s,baz=270,slow=19,SNR=1.6						
ISR	Istrita	70.39	29	⇑*i*P	P	22 54 55.9	-0.8
ISR	Istrita	70.39	29	P	P	22 54 55.8	-0.9
MLR	Muntele Rosu	70.40	28	*e*P	P	22 54 58.1	+1.3
	comp=Z,59nm,1.3s						
MLR	Muntele Rosu	70.40	28	⇑*i*P	P	22 54 56.6	-0.2
CLL	Collm	70.47	17	*e*P	P	22 54 56.0	-0.9
	comp=Z,25nm,2.0s						
CLL				*i*		22 55 01.8	
	comp=Z,33nm,2.0s						
CLL				*e*		22 57 20.0	
CLL				*e*PP	PP	22 57 32.0	-1.3
CLL				LmV		23 21 00.0	
	comp=Z,400nm,20.4s						
CLL	Collm	70.47	17	*e*P	P	22 54 56.0	-0.9
CLL				*i*		22 55 01.8	
CLL				pmax	pmax		
	comp=Z,25nm,2.0s						
DOPR	Dopca	70.52	27	⇑*i*P	P	22 54 57.0	-0.4
MORC	Moravsky Berou	70.54	21	*e*P	P	22 54 57.6	+0.1
	comp=Z,19nm,1.3s						
MORC	Moravsky Berou	70.54	21	⇑*i*P	P	22 54 57.6	+0.1
MORC	Moravsky Berou	70.54	21	*e*P	P	22 54 57.6	+0.1
MORC				pmax	pmax		
	comp=Z,19nm,1.3s						
MORC	Moravsky Berou	70.54	21	*e*pP	P	22 54 57.8	+0.3
DPC	Dobruska-Polom	70.63	20	*e*P	P	22 54 57.7	-0.3
DPC				*e*x	x	22 55 04.0	
DPC	Dobruska-Polom	70.63	20	*e*P	P	22 54 57.7	-0.3
DPC				*e*		22 55 04.0	
UPC	Upice	70.67	19	*e*P	P	22 54 58.7	+0.5
UPC	Upice	70.67	19	*e*P	P	22 54 58.7	+0.5
TIRR	Tirgusor	70.78	30	⇑*i*P	P	22 54 58.2	-0.8
TIRR	Tirgusor	70.78	30	P	P	22 54 58.1	-0.9
OZUR		70.79	28	⇑*i*P	P	22 54 59.0	-0.1
TRPA	Tarpa	71.02	24	⇑*i*P	P	22 54 59.9	-0.4
TRPA	Tarpa	71.02	24	⇑*e*P	P	22 54 59.1	-1.2
VRI	Vrincioaia	71.04	28	⇓*i*P	P	22 54 58.6	-2.0
VRI	Vrincioaia	71.04	28	P	P	22 54 58.5	-2.0
ESK	Eskdalemuir	71.17	6	*i* P	P	22 55 03.6	+2.5
CFR	Carcaliu	71.18	30	⇓*i*P	P	22 55 00.8	-0.6
CFR	Carcaliu	71.18	30	P	P	22 55 00.7	-0.6
UZH	Uzhgorod	71.33	24	*e*P	P	22 55 01.1	-1.1
UZH				*e*		22 55 16.4	
TESR	Tescani	71.50	28	⇑*i*P	P	22 55 01.5	-1.8
BIZ	Bicaz	71.58	27	⇑*i*P	P	22 55 03.3	-0.5
OJC	Ojcow	71.70	22	*e*P	P	22 55 04.0	-0.4
	comp=Z,22nm,1.2s						
OJC	Ojcow	71.70	22	*e*P	P	22 55 04.0	-0.4
OJC				pmax	pmax		
	comp=Z,22nm,1.2s						
BUR04	Bucovina Ar. S	71.72	26	*e*P	P	22 55 04.9	+0.2
BURAR	Bucovina Array	71.72	26	⇓*i*P	P	22 55 04.9	+0.2
BURAR	Bucovina Array	71.72	26	P	P	22 55 04.8	+0.1
SIRT	Sirnak	74.31	43	*e*P	P	22 55 22.0	+1.7
	comp=Z,55nm,1.3s						
QSPA	South Pole Qui	74.54	180	*e*P	P	22 55 21.9	+0.6
	comp=Z,44nm,1.4s						
KLNR	Kaliningrad	75.50	19	⇓*e*P	P	22 55 25.9	-0.7
KLNR				pmax	pmax		
	comp=Z,21nm,0.7s						
JTS	JuntasAbangare	75.57	285	*e*P	P	22 55 27.2	-0.8
	comp=Z,13nm,1.1s						
JTS	JuntasAbangare	75.57	285	P	P	22 55 27.2	-0.8
	comp=Z,7.9nm,1.1s,baz=12,slow=13,SNR=1.8						
AK11	Malin Array Si	75.73	26	*e*P	P	22 55 27.1	-0.9
KIEV	Kiev	75.76	26	*e*P	P	22 55 26.9	-1.3
	comp=Z,19nm,1.1s						
KIEV	Kiev	75.76	26	⇑*i*P	P	22 55 27.7	-0.5
KIEV	Kiev	75.76	26	*e*P	P	22 55 26.9	-1.3
KIEV				pmax	pmax		
	comp=Z,19nm,1.1s						
AKASG	Malin Array Be	75.77	26	P	P	22 55 27.5	-0.8
	comp=Z,12nm,1.0s,baz=221,slow=5.8,SNR=11						
AKBB	Malin Array Si	75.77	26	*e*P	P	22 55 27.6	-0.7
	comp=Z,18nm,1.0s						
AKBB	Malin Array Si	75.77	26	*e*P	P	22 55 27.6	-0.7
AKBB				pmax	pmax		
	comp=Z,18nm,1.0s						
SUW	Suwalki	76.01	21	*e*P	P	22 55 29.8	+0.3
	comp=Z,42nm,1.1s						
SUW	Suwalki	76.01	21	*e*P	P	22 55 29.8	+0.3
SUW				pmax	pmax		
	comp=Z,42nm,1.1s						
GNI	Garni	77.28	42	⇑*e*P	P	22 55 37.7	+0.4
GNI				pmax	pmax		
	comp=Z,43nm,1.2s						
NEY	Neytrino	77.77	38	⇑*e*P	P	22 55 39.7	-0.3
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	78.15	38	P	P	22 55 42.4	+0.6
	comp=Z,6.3nm,1.1s,baz=298,slow=4.4,SNR=3.6						
KIV	Kislovodsk	78.16	38	*e*P	P	22 55 42.5	+0.4
	comp=Z,45nm,1.5s						
KIV	Kislovodsk	78.16	38	*e*P	P	22 55 42.5	+0.4
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
UOSS	Minazif	78.72	60	*e*P	P	22 55 45.8	+0.3
	comp=Z,17nm,0.8s						
NB2	NORSAR Subarra	78.86	12	P	P	22 55 45.4	-0.1
	comp=Z,1.9nm,1.0s,baz=205,slow=5.9						
NB200	NORSAR Array S	78.86	12	*e*P	P	22 55 45.6	+0.1
NOA	NORSAR Array B	78.86	12	P	P	22 55 45.6	+0.1
	comp=Z,3.2nm,1.1s,baz=206,slow=5.8,SNR=4.3						
LUPA	Lehigh Univers	80.28	317	*e*P	P	22 55 55.5	+1.8
	comp=Z,2.4nm,1.4s						
VSR	Storozhevoye	80.68	30	⇑*i*P	P	22 55 54.3	-1.2
VSR				pmax	pmax		

	comp=Z,26nm,1.3s						
VSU	Vasula	80.75	20⇓	*e*P	P	22 55 55.9	+0.2
VSU				pmax	pmax		
	comp=Z,53nm,2.5s						
X56A	White Oak	81.42	309	P	P	22 55 59.7	-0.1
	baz=116						
LPSR	Galich'ya Gora	81.45	29	*e*P	P	22 55 58.3	-1.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
155A	Kite	81.72	307	P	P	22 56 02.8	+1.4
	baz=114						
VRH	Novokhopyorsk	81.93	31	*e*P	P	22 56 00.6	-1.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SSPA	Standing Stone	81.97	316	*e*P	P	22 56 03.9	+1.3
	comp=Z,28nm,1.2s						
OBN	Obninsk	82.04	26	*i* P	P	22 56 02.4	-0.2
OBN				*i*		22 56 05.2	
OBN				*i*		22 59 10.9	
OBN				pmax	pmax		
	comp=Z,12nm,1.3s						
OBN				MLR	MLR		
	comp=Z,224nm,17.0s						
LATQ	La Tuque	82.24	324	P	P	22 56 03.1	-0.8
	baz=123						
TRQ	Mont Tremblant	82.65	322	*e*P	P	22 56 05.2	-0.9
Q55A	Buckhannon	82.71	314	P	P	22 56 07.5	+0.9
	baz=117						
O55A	Ligonier	82.72	315	P	P	22 56 06.7	0.0
	baz=118						
N55A	Marion Center	82.77	316	P	P	22 56 07.2	+0.3
	baz=118						
FIA0	FINESS Array S	82.89	18	*e*P	P	22 56 06.5	-0.4
FIA0	FINESS Array S	82.89	18	*e*P	P	22 56 06.5	-0.4
FINES	FINESS Array B	82.89	18	P	P	22 56 06.5	-0.4
	comp=Z,4.4nm,0.8s,baz=194,slow=3.2,SNR=9.7						
FIA1	FINESS Array S	82.90	18	*e*P	P	22 56 07.0	0.0
MOS	Moscow	82.90	26	*e*P	P	22 56 04.7	-2.4
MOS				pmax	pmax		
	comp=Z,22nm,0.8s						
M55A	Ridgway	82.94	316	P	P	22 56 07.6	-0.2
	baz=118						
Y53A	Monroe	83.07	308	P	P	22 56 09.7	+1.2
	baz=114						
X53A	Estanollee	83.12	309	P	P	22 56 08.9	+0.1
	baz=114						
W53A	Cullowhee	83.29	309	P	P	22 56 09.1	-0.6
	baz=114						
Y52A	Lilburn	83.44	308	P	P	22 56 11.9	+1.5
	baz=114						
O54A	Avella	83.44	315	P	P	22 56 10.6	+0.3
	baz=117						
N54A	Moraine State	83.53	316	*e*P	P	22 56 11.9	+1.1
	comp=Z,27nm,1.0s						
N54A	Moraine State	83.53	316	P	P	22 56 11.8	+1.1
	baz=117						
M54A	Oil Creek Stat	83.56	316	*e*P	P	22 56 10.9	0.0
	comp=Z,24nm,1.0s						
M54A	Oil Creek Stat	83.56	316	P	P	22 56 10.6	-0.3
	baz=117						
SCHQ	Schefferville	83.56	332	*e*P	P	22 56 10.6	0.0
	comp=Z,19nm,1.4s						
SCHQ	Schefferville	83.56	332	P	P	22 56 10.0	-0.6
	comp=Z,4.9nm,0.8s,baz=91,slow=6.6,SNR=8.3						
151A	Opelika	83.89	306	P	P	22 56 12.4	-0.4
	baz=113						
TKL	Tuckaleechee C	83.94	309	*e*P	P	22 56 12.1	-0.9
	comp=Z,34nm,1.4s						
TKL	Tuckaleechee C	83.94	309	*e*P	P	22 56 12.1	-0.9
TKL				pmax	pmax		
	comp=Z,34nm,1.4s						
TKL	Tuckaleechee C	83.94	309	P	P	22 56 12.1	-0.9
	comp=Z,3.0nm,0.8s,baz=90,slow=9.1,SNR=2.0						
ALLY	Alegheny Colle	83.95	316	*e*P	P	22 56 14.2	+1.4
	comp=Z,26nm,0.8s						
PEMO	Pembroke	83.99	321	P	P	22 56 13.3	+0.4
	baz=120						
O53A	New Philadelph	84.05	314	P	P	22 56 13.7	+0.3
	baz=116						
M53A	WI Miller and	84.21	316	P	P	22 56 14.1	-0.1
	baz=117						
R52A	Catlettsburg	84.23	312	P	P	22 56 15.4	+1.0
	baz=115						
D54A	Lac Fusel, La	84.37	322	P	P	22 56 15.0	+0.1
	baz=120						
O52A	Adamsville	84.42	314	*e*P	P	22 56 16.6	+1.2
	comp=Z,20nm,1.0s						
O52A	Adamsville	84.42	314	P	P	22 56 15.4	+0.1
	baz=116						
TYNO	Tyneside	84.42	317	P	P	22 56 15.8	+0.5
	baz=117						
SADO	Sadowa	84.73	319	*e*P	P	22 56 16.4	-0.3
	comp=Z,15nm,1.0s						
SADO	Sadowa	84.73	319	P	P	22 56 15.9	-0.8
	comp=Z,12nm,1.0s,baz=110,slow=6.9,SNR=5.1						
ACTO	Acton	84.78	318	P	P	22 56 16.1	-1.0
	baz=117						
D53A	Lac Vacive, Po	84.95	322	P	P	22 56 16.4	-1.4
	baz=119						
Z49A	Columbiana	85.08	306	P	P	22 56 17.0	-1.8
	baz=112						
BUKO	Buck Lake	85.21	320	P	P	22 56 19.1	0.0
	baz=118						
S50A	Richmond	85.22	311	P	P	22 56 19.0	-0.4
	baz=114						
ACSO	Alum Creek Sta	85.26	314	P	P	22 56 19.2	-0.4
	baz=115						
VLDQ	Val d'Or	85.31	323	*e*P	P	22 56 19.9	+0.3
	comp=Z,12nm,1.3s						
D52A	ZEK Kipawa Sen	85.33	321	P	P	22 56 18.5	-1.2
	baz=119						
GEYT	Alibeck	85.39	49	P	P	22 56 20.2	-0.1
	comp=Z,6.1nm,0.8s,baz=265,slow=7.0,SNR=7.8						
LSQQ	Lebel-sur-Quev	85.51	324	P	P	22 56 19.3	-1.2
	baz=120						
N50A	Nevada	85.60	314	P	P	22 56 22.8	+1.5
	baz=115						
M50A	Fremont	85.80	315	*e*P	P	22 56 23.1	+1.0
	comp=Z,23nm,0.9s						
T49A	Edmonton	85.82	310	P	P	22 56 22.9	+0.5
	baz=113						
W48A	Pulaski	86.12	308	P	P	22 56 23.6	-0.3
	baz=112						
V48A	Smith Brothers	86.26	309	*e*P	P	22 56 25.7	+1.1
	comp=Z,8.8nm,0.9s						
N49A	Columbus Grove	86.38	314	P	P	22 56 25.3	+0.2
	baz=114						
P48A	Milroy	86.67	312	P	P	22 56 26.1	-0.5
	baz=113						
O48A	Farmland	86.79	313	P	P	22 56 27.0	-0.1
	baz=114						
CMIG	Matias Romero	86.85	289	P	P	22 56 28.5	+0.6
	comp=Z,6.9nm,0.9s,baz=106,slow=3.9,SNR=2.9						
SFJD	Kangerlussuaq	86.87	346	P	P	22 56 27.5	+0.7
	comp=Z,12nm,1.0s,baz=131,slow=6.7,SNR=3.2						
KLMR	Klimovskoe	87.00	23	*e*PP	PP	22 59 51.6	+0.6
KLMR				AMP		22 59 56.9	
	comp=Z,7.0nm,1.2s						
WVT	Waverly	87.16	309	*e*P	P	22 56 28.0	-1.0
	comp=Z,24nm,1.4s						
WVT	Waverly	87.16	309	*e*P	P	22 56 28.0	-1.0
WVT				pmax	pmax		
	comp=Z,24nm,1.4s						
WVT	Waverly	87.16	309	P	P	22 56 27.8	-1.2
	baz=112						
V46A	Holladay	87.26	308	P	P	22 56 28.2	-1.3
	baz=111						
O47A	Sheridan	87.50	313	P	P	22 56 30.2	-0.3
	baz=113						
H46A	Fife Lake	88.53	317	P	P	22 56 35.1	-0.3
	baz=114						
TMCR	Tamitsa	88.64	20	*e*P	P	22 56 35.3	0.0
TMCR				pmax	pmax		
	comp=Z,16nm,1.3s						
ARA0	ARCESS Array S	89.20	13	*e*P	P	22 56 38.0	+0.1
ARCES	ARCESS Array B	89.20	13	P	P	22 56 38.0	+0.1
	comp=Z,2.9nm,0.9s,baz=287,slow=4.6,SNR=4.6						
FVM	French Village	89.76	310	*e*P	P	22 56 42.5	+1.2
	comp=Z,26nm,1.4s						
FRB	Frobisher Bay	89.78	339	P	P	22 56 40.1	-0.6
	comp=Z,8.3nm,1.1s,baz=129,slow=4.8,SNR=7.8						
PRGR	Permogore	89.83	24	*e*P	P	22 56 40.7	-0.3
PRGR				*e**SP	pwP	22 56 46.8	-0.6
PRGR				pmax	pmax		
	comp=Z,11nm,1.2s						
Q42A	Golden Eagle	90.16	310	P	P	22 56 42.8	-0.3
	baz=110						
P42A	Winchester	90.25	311	P	P	22 56 42.6	-0.9
	baz=110						
CCM	Cathedral Cave	90.39	309	*e*P	P	22 56 45.1	+0.9
	comp=Z,22nm,1.2s						
CCM	Cathedral Cave	90.39	309	*e*P	P	22 56 45.1	+0.9
CCM				pmax	pmax		
	comp=Z,22nm,1.2s						
CCM	Cathedral Cave	90.39	309	P	P	22 56 43.9	-0.3
	baz=110						
R41A	Rosebud	90.58	310	P	P	22 56 44.7	-0.4
	baz=110						
ABKAR	Akbulak array	91.09	39	*e*P	P	22 56 47.5	+0.3
	comp=Z,7.9nm,1.5s						
W39A	Magazine	91.41	306	*e*P	P	22 56 49.4	+0.3
	comp=Z,40nm,1.5s						
HKT	Hockley	91.48	301⇓	*e*P	P	22 56 50.6	+1.2
HKT				pmax	pmax		
	comp=Z,21nm,2.4s						
HHAR	Hobbs	91.87	307	*e*P	P	22 56 51.4	+0.3
	comp=Z,23nm,1.4s						
ARU	Arti	93.15	32	*e*P	P	22 56 57.2	+0.7
	comp=Z,12nm,1.3s						
ARU	Arti	93.15	32	*d i*P	P	22 56 56.3	-0.2
ARU						23 00 41.4	
ARU				S	SKSac	23 07 30.7	+0.1
ARU				SS	SS	23 14 26.0	+7.3
ARU				pmax	pmax		
	comp=Z,11nm,1.3s						
G38A	Ridgeland	93.17	316	P	P	22 56 55.8	-1.1
	baz=109						
H38A	Maiden Rock	93.30	315	P	P	22 56 57.4	-0.1
	baz=109						
LTX	Lajitas	97.90	298	*e*P	P	22 57 18.4	-0.6
LTX	Lajitas	97.90	298	*e*P	P	22 57 18.4	-0.6
TXAR	Lajitas Array	97.90	298	P	P	22 57 18.4	-0.6
	comp=Z,0.9nm,1.0s,baz=105,slow=6.9,SNR=3.1						
KSH	Kashi	99.13	52	P	Pdif	22 57 25.3	+0.9
YKA	Yellowknife Ar	109.00	331	PKiKP	PKiKP	23 02 11.3	-0.6
	comp=Z,0.2nm,0.7s,baz=70,slow=1.4,SNR=2.8						
YKB5	Yellowknife Ar	109.00	331	*e*PKiKP	PKiKP	23 02 11.3	-0.6
CM31	Chiang Mai Arr	115.39	77	*e*PKPdf	PKiKP	23 02 25.6	+0.3
CMAR	Chiang Mai Arr	115.39	77	PKP	PKiKP	23 02 25.6	+0.3
	comp=Z,0.6nm,0.7s,baz=48,slow=1.3,SNR=3.8						
INK	Inuvik	115.43	339	PKP	PKPdf	23 02 24.1	+0.2
	comp=Z,2.2nm,1.1s,baz=114,slow=4.2,SNR=3.3						
GTA	Gaotai	117.45	53	*e*PKP	PKiKP	23 02 29.0	+0.1
KMI	Kunming	119.67	70	PKP	PKiKP	23 02 34.8	+1.0
KMI				sPKP		23 02 44.1	
KMI				LR	LR		
	comp=Z,190nm,20.7s						
KMI				LR	LR		
	comp=Z,230nm,19.6s						
KMI				LR	LR		
	comp=Z,300nm,24.6s						
LZH	Lanzhou	120.78	57	*e*PKP	PKiKP	23 02 36.3	+0.8
LZH				sPKP		23 02 43.0	
LZH				LR	LR		
	comp=Z,130nm,18.0s						
LZH				LR	LR		
	comp=Z,140nm,18.1s						
LZH				LR	LR		
	comp=Z,170nm,20.3s						
CD2	Chengdu	120.80	63	PKP	PKPdf	23 02 34.5	-1.0
SONA0	Songino Array	121.22	43	*e*PKPdf	PKPdf	23 02 35.0	-0.9
SONM	Songino Array	121.22	43	PKP	PKPdf	23 02 35.0	-0.9
	comp=Z,0.7nm,1.1s,baz=289,slow=4.4,SNR=3.2						
ILAR	Eielson Array	121.81	339	PKP	PKPdf	23 02 34.8	-1.5
	comp=Z,0.9nm,0.9s,baz=352,slow=1.6,SNR=6.4						
ILB	Eielson Array	121.81	339	*e*PKPdf	PKPdf	23 02 34.8	-1.5
TAOE	Nuku Hiva Isla	122.11	249	*e*LR	LR	23 40 18.0	
	comp=Z,422nm,26.7s						
GYA	Guiyang	123.27	68	*e*Pdif	Pdif	22 59 11.0	-1.0
GYA				PKP	PKPdf	23 02 39.4	-1.0
GYA				AMB	AMB		
	comp=Z,130nm,7.8s						
PPT2	Papeete2	125.80	234	*e*LR	LR	23 41 58.4	
	comp=Z,636nm,28.8s						
PPT	Papeete	125.81	234	PKP	PKPdf	23 02 44.3	-1.1
	comp=Z,18nm,0.7s,baz=318,slow=6.0,SNR=2.6						
HHC	Hu-ho-hao-te	126.23	51	*e*PKP	PKPdf	23 02 42.5	-3.2
HHC				PP	PP	23 04 41.8	+1.5
HHC				SS	SS	23 21 39.9	-4.0
HHC				AMB	AMB		
	comp=Z,92nm,5.6s						
HHC				LR	LR		
	comp=Z,180nm,12.1s						
HHC				LR	LR		
	comp=Z,330nm,13.0s						
HHC				LR	LR		
	comp=Z,690nm,17.3s						
STKA	Stephens Creek	126.94	153	PKP	PKPdf	23 02 46.4	-0.8
	comp=Z,1.4nm,0.7s,baz=259,slow=5.2,SNR=2.9						
BILL	Bilibino	127.62	0	*e*PKPdf	PKPdf	23 02 47.1	-0.2
BILL	Bilibino	127.62	0⇓	*i*PKIKP	PKPdf	23 02 47.6	+0.2
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ASAR	Alice Springs	129.41	140	PKP	PKPdf	23 02 51.4	-0.9
	comp=Z,1.7nm,1.0s,baz=222,slow=1.3,SNR=7.4						
AS31	Alice Springs	129.41	140	*e*PKPdf	PKPdf	23 02 51.4	-0.9
AS01	Alice Springs	129.44	140	*e*PKPdf	PKPdf	23 02 50.4	-1.9
SEY	Seymchan	131.67	9⇑	*i*PKIKP	PKPdf	23 02 55.1	-0.1
WR1	Warramunga Arr	132.37	137	*e*PKPdf	PKPdf	23 02 56.0	-1.9
WRA	Warramunga Arr	132.37	137	PKP	PKPdf	23 02 56.0	-1.9
	comp=Z,1.0nm,0.9s,baz=246,slow=2.3,SNR=6.5						
NJ2	Nanjing	133.57	61	*e*PKP	PKPdf	23 02 58.4	-1.3
INU	Inuyama	146.90	48	*e*PKPdf	PKPbc	23 03 24.9	-0.7
MAJO	Matsushiro	147.13	45	*e*PKPdf	PKPdf	23 03 24.4	+0.3
MAJO	Matsushiro	147.13	45	*e*PKP2	PKPdf	23 03 24.4	+0.3
MAT	Matsushiro	147.13	45	PKP	PKPdf	23 03 24.5	+0.5
MJAR	Matsushiro Arr	147.13	45	PKPbc	PKPdf	23 03 24.4	+0.3
	comp=Z,8.9nm,1.0s,baz=282,slow=4.6,SNR=4.2						

TAP ***16*** *23:06:18.9, 24°.32N×121°.44E, h6^{km}, ML3.6, C*
ISCJB ***16*** *23:06:19.5±0.2, 24°.332N±0°.010×121°.47E±0°.01, h2^{km}±2^{km}, mb3.4/4, Error ellipse: s-maj=2.1km s-min=1.5km az=32.0*
IDC ***16*** *23:06:19.4±1.4, 23°.91N×120°.83E, h0^{km}, mb3.6/4, mb1 3.6/5, mb1mx3.4/28, mbtmp3.5/5, ML3.0/1, Error ellipse: s-maj=68.8km s-min=23.7km az=67.0*
JMA ***16*** *23:06:19.1±0.1, 24°.31N×121°.43E, h3^{km}, M3.2*
ISC 16 23:06:19.6±1.0, **24°.32N**±0°.01×**121°.44E**±0°.01, **h3**^{km}±7^{km}, **n120, σ0^{s}.81**/172, **mb3.5**/4, **31C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	Xiulin Townshi	0.12	163	*e*P	Pg	23 06 22.5	+0.6
	baz=163						
ETLH				*e*S	Sg	23 06 24.5	+0.9
	baz=163						
NNSB	Datong	0.12	333	⇓P	Pg	23 06 22.1	0.0
	baz=332						
NNSB				S	Sg	23 06 23.7	0.0
	baz=332						
NNS	Nan Shan	0.14	332	⇓P	Pg	23 06 22.3	0.0
	baz=334						
NNS				S	Sg	23 06 24.3	+0.1
	baz=334						
NACB	Ninganchiao	0.20	137	⇑P	Pg	23 06 23.8	+0.4
	baz=137						
NACB				*e*S	Sg	23 06 26.5	+0.4
	baz=137						
WHF	Hehuan Shan	0.24	223	⇑P	Pg	23 06 24.3	0.0
	baz=221						
WHF				*e*S	Sg	23 06 28.0	+0.5
	baz=221						
TWT	Tachien	0.25	255⇑	*i*P	Pg	23 06 24.9	+0.5
	baz=244						
TWT				S	Sg	23 06 28.6	+0.8
	baz=244						
TDCB	Techi	0.27	256	⇑P	Pg	23 06 25.1	+0.3
	baz=245						
TDCB				S	Sg	23 06 28.5	+0.2
	baz=245						
TWD	Chiawan	0.28	150	⇑P	Pg	23 06 25.2	+0.3
	baz=149						
TWD				S	Sg	23 06 29.3	+0.7
	baz=149						
NDT	Datong Townshi	0.29	13⇑	*i*P	Pg	23 06 25.2	+0.1
	baz=13						
NDT				S	Sg	23 06 29.4	+0.5
	baz=13						
ENA	Nanau	0.29	68⇑	*i*P	Pg	23 06 25.0	-0.2
	baz=70						
ENA				*e*S	Sg	23 06 28.8	-0.2
	baz=70						
NANB	Nanao	0.30	69	⇑P	Pg	23 06 25.0	-0.4
	baz=69						
NANB				*e*S	Sg	23 06 28.8	-0.5
	baz=69						
ENTT	Nioudou	0.34	19⇑	*i*P	Pg	23 06 26.1	0.0
	baz=12						
ENTT				*e*S	Sg	23 06 30.4	-0.1
	baz=12						
YHNB	Yeheng	0.35	350	⇑P	Pg	23 06 26.7	+0.3
	baz=350						
YHNB				*e*S	Sg	23 06 30.4	-0.7
	baz=350						
CHGB	Renai	0.36	224	⇑P	Pg	23 06 26.5	0.0
	baz=223						
CHGB				S	Sb	23 06 32.6	-2.2
	baz=223						
NSK	Sanguang	0.36	348⇑	*i*P	Pg	23 06 26.9	+0.3
	baz=347						
HWA	Hwalien	0.37	157	*e*P	Pb	23 06 27.6	-1.2
	baz=145						
OWD	Renai	0.44	214⇑	*e*P	Pg	23 06 27.7	-0.3
	baz=214						
ENLB	Shoufeng	0.44	161	*e*P	Pg	23 06 28.1	+0.1
	baz=149						
TWE	Neicheng	0.45	27	⇑P	Pg	23 06 28.3	+0.1
	baz=41						
TWE				S	Sg	23 06 34.6	+0.6
	baz=41						
WHP	Taichung City	0.46	265⇑	*i*P	Pb	23 06 29.1	-1.2
	baz=263						
WHP				*i* S	Sg	23 06 35.0	+0.7
	baz=263						
NWLT	Wulai	0.46	7	*e*P	Pg	23 06 28.6	+0.2
	baz=7.0						
NWLT				*e*S	Sg	23 06 33.9	-0.5
	baz=7.0						
TWC	Suao	0.47	52	⇑P	Pg	23 06 28.1	-0.5
	baz=55						
ESL	Shilin	0.50	181	⇑P	Pg	23 06 29.3	+0.1
	baz=169						
LIOB	Emei	0.51	310⇑	*i*P	Pg	23 06 29.6	+0.3
	baz=310						
LIOB				*i* S	Sg	23 06 36.8	+0.9
	baz=310						
NSTT	Nanjuang	0.51	308	⇑P	Pb	23 06 30.1	-1.0
	baz=307						
NSTT				S	Sb	23 06 36.9	-2.0
	baz=307						
ILA	Ilan	0.52	32	P	Pg	23 06 29.6	-0.1
	baz=44						
ILA				S	Sg	23 06 37.0	+0.6
	baz=44						
WLTB	Daxi	0.56	342	*e*P	Pb	23 06 31.4	-0.6
	baz=343						
WLTB				*e*S	Sb	23 06 38.9	-1.4
	baz=343						
TWQ1	Liyutan	0.61	273	⇑P	Pb	23 06 32.4	-0.5
	baz=271						
SBCB	Hsinchu	0.63	319	*e*P	Pb	23 06 32.9	-0.3
	baz=316						
VWDT	VWDT	0.63	206	⇑P	Pg	23 06 31.2	-0.4
	baz=211						
NSY	Sanyi	0.63	279	⇑P	Pb	23 06 33.2	0.0
	baz=277						
NMLH	Miaoli	0.63	290	*e*P	Pb	23 06 33.2	0.0
	baz=289						
NMLH				*e*S	Sb	23 06 42.1	-0.4
	baz=289						
NTC	Toucheng	0.64	33	*e*P	Pg	23 06 31.4	-0.5
	baz=47						
NHDH	Xindian Distri	0.64	7	*e*P	Pb	23 06 32.7	-0.8
	baz=18						
NHDH				*e*S	Sg	23 06 40.1	-0.2
	baz=18						
HSN	Hsinchu	0.65	318	*e*P	Pb	23 06 33.5	0.0
	baz=320						
EGFH	Guangfu	0.65	181	*e*P	Pg	23 06 31.9	-0.1
	baz=174						
TATO	Taipei	0.65	4	*e*P	Pb	23 06 32.7	-0.9
	baz=355						
SMLT	Sun Moon Lake	0.66	229	⇑P	Pb	23 06 32.5	-1.3
	baz=228						
EOS1	EOS1	0.67	70	*e*P	Pg	23 06 32.5	+0.2
	baz=72						
TWA	Mucha	0.67	11⇑	*e*P	Pg	23 06 32.8	+0.4
	baz=26						
TYC	Yuchr	0.68	232⇑	*i*P	Pb	23 06 32.6	-1.4
	baz=222						
TYC				*e*S	Sg	23 06 40.6	-0.7
	baz=222						
PTSB	Yuanli	0.69	281	⇑P	Pb	23 06 34.5	+0.3
	baz=279						
PTSB				*e*S	Sb	23 06 44.0	0.0
	baz=279						
EGS		0.69	40	*e*P	Pg	23 06 32.7	0.0
	baz=43						
NCUH	Zhongli	0.69	340	*e*P	Pb	23 06 34.1	-0.1
	baz=338						
NCU	National Centr	0.69	340	*e*P	Pb	23 06 34.4	+0.2
	baz=342						
NCU				*e*S	Sn	23 06 46.2	-1.2
	baz=342						
SSLB	Suanglung	0.69	220	⇑P	Pg	23 06 32.3	-0.6
	baz=220						
TAP1	Taipei	0.72	6	*e*P	Pg	23 06 33.4	0.0
	baz=16						
TAP1				*e*S	Sg	23 06 42.9	+0.2
	baz=16						
TCU	Taichung	0.72	256	*e*P	Pn	23 06 35.5	-1.1
	baz=255						
WDJ	Dajia District	0.73	272	*e*P	Pn	23 06 35.5	-1.3
	baz=271						
TIPB	Shuangxi	0.74	28⇑	*i*P	Pg	23 06 33.4	-0.3
	baz=16						
TIPB				*i* S	Sg	23 06 42.4	-0.9
	baz=16						
TWS1	Kuangyinshan	0.78	358	*e*P	Pb	23 06 35.9	+0.1
	baz=9.0						
TWS1				*e*S	Sb	23 06 46.6	-0.1
	baz=9.0						
NWF	Wu-fen Shan	0.81	22	*e*P	Pg	23 06 35.0	-0.1
	baz=24						
WFSB	Wu-fen Shan	0.81	22	*e*P	Pg	23 06 35.3	+0.2
	baz=24						
EHY	Hungye	0.82	188	*e*P	Pb	23 06 35.4	-1.0
	baz=180						
WJS	Zhushan	0.82	233	*e*P	Pb	23 06 36.4	-0.1
	baz=225						
WNT	Mingjian	0.82	238	P	Pn	23 06 36.8	-1.3
	baz=230						
WNT				*e*S	Sn	23 06 49.4	-1.3
	baz=230						
WHYT	Xinyi Township	0.82	221	*e*P	Pg	23 06 35.1	-0.3
	baz=221						
HGSD	Ruisui	0.82	181	⇑P	Pb	23 06 35.5	-1.0
	baz=187						
HGSD				*e*S	Sb	23 06 48.3	+0.3
	baz=187						
YM01	YM01	0.83	8	*e*P	Pb	23 06 36.3	-0.4
	baz=9.0						
YM01				*e*S	Sg	23 06 45.9	-0.4
	baz=9.0						
YM04	YM04	0.83	6	*e*P	Pb	23 06 36.7	0.0
	baz=22						
NTST	Danshui	0.84	0	*e*P	Pb	23 06 36.8	0.0
	baz=16						
WCHH	Zhanghua	0.84	254	*e*P	Pn	23 06 37.6	-0.8
	baz=253						
TWB1	Santiao Chiao	0.84	36	*e*P	Pg	23 06 34.9	-0.9
	baz=38						
YM05	YM05	0.85	8	*e*P	Pb	23 06 36.9	-0.1
	baz=8.0						
YM08	YM08	0.87	9	*e*P	Pg	23 06 36.6	+0.2
	baz=10.0						
YULB	Yu-li	0.93	188	*e*P	Pg	23 06 37.2	-0.3
	baz=178						
YULB				*e*S	Sb	23 06 50.1	-1.0
	baz=178						
TWY	Chenhua	0.96	8	*e*P	Pb	23 06 39.1	+0.2
	baz=10.0						
TWF1	Yuli	0.97	188	*e*P	Pb	23 06 38.0	-1.0
	baz=177						
TWF1				*e*S	Sg	23 06 50.8	-0.1
	baz=177						
ALS	Alishan	1.00	216	*e*P	Pg	23 06 38.2	-0.5
	baz=224						
CHN5	Tsauling	1.00	224	⇓P	Pn	23 06 39.7	-1.0
	baz=222						

CHN5				eS	Sn	23 06 56.1	+0.8
	baz=222						
WGK	Gukeng	1.02	232	eP	Pb	23 06 39.0	-0.9
	baz=232						
WDLH	Douliu	1.04	233	eP	Pn	23 06 40.1	-0.9
	baz=233						
RLNB	Erlin	1.08	247	eP	Pn	23 06 41.3	-0.3
	baz=258						
RLNB				eS	Sn	23 06 56.5	-0.5
	baz=258						
WTCT	Ta-ch'eng	1.16	247	eP	Pn	23 06 42.3	-0.3
	baz=244						
WTCT				eS	Sn	23 06 58.7	-0.2
	baz=244						
CHN2	Minshiung	1.18	229	eP	Pn	23 06 43.2	+0.2
	baz=226						
CHN2				eS	Sn	23 07 00.3	+0.7
	baz=226						
ELDTW	Lidau	1.19	199	⇓eP	Pg	23 06 41.5	-0.9
	baz=188						
CHN4	Tsaushan	1.24	219	eP	Pn	23 06 43.2	-0.6
	baz=217						
CHN4				eS	Sn	23 07 02.6	+1.6
	baz=217						
CHY	Chiayi	1.24	229	eP	Pn	23 06 44.1	+0.3
	baz=245						
TPUB	Ta-pu	1.26	216	⇑P	Pn	23 06 43.5	-0.5
	baz=214						
TPUB				S	Sn	23 07 02.1	+0.6
	baz=214						
WSF	Szhu	1.31	239	eP	Pn	23 06 44.5	-0.2
	baz=239						
WTP	Ta-pu	1.31	216	P	Pn	23 06 44.6	-0.3
	baz=231						
STYT	Tauyuan	1.31	209	eP	Pb	23 06 44.1	-0.8
	baz=197						
STYT				eS	Sn	23 07 04.0	+1.0
	baz=197						
TWK	Hsinying	1.37	220	⇑P	Pb	23 06 46.0	+0.2
	baz=216						
TWK				eS	Sn	23 07 06.8	+2.6
	baz=216						
JYNG	Yonagunijimaku	1.38	84	P	Pn	23 06 45.2	-0.4
JYNG				S	Sb	23 07 03.8	-0.1
SNST	Tainan City	1.40	219	eP	Pg	23 06 46.7	+0.3
	baz=216						
SNST				eS	Sn	23 07 06.7	+1.8
	baz=216						
CHN1	Nanshi	1.41	217	P	Pg	23 06 46.5	0.0
	baz=215						
CHN1				eS	Sn	23 07 07.3	+2.2
	baz=215						
YOJ	Yonaguni jima	1.44	84	P	Pn	23 06 46.3	-0.2
	baz=75						
YOJ	Yonaguni jima	1.44	84	P	Pn	23 06 46.1	-0.4
YOJ				S	Sb	23 07 05.5	-0.1
SGST	Jiashian	1.46	213	eP	Pg	23 06 47.1	-0.5
	baz=205						
SGST				S	Sn	23 07 08.6	+2.0
	baz=205						
CHN8	Yiju	1.49	230	eP	Pn	23 06 46.0	-1.2
	baz=239						
CHN8				eS	Sg	23 07 09.6	+2.2
	baz=239						
SLGT	Liugui	1.51	209	eP	Pg	23 06 48.6	+0.1
	baz=198						
TWG	Pinlang	1.53	193	eP	Pn	23 06 47.3	-0.5
	baz=192						
TWGBT	Beinan	1.53	193	eP	Pg	23 06 48.3	-0.7
	baz=192						
SCLT	Jiali	1.62	225	eP	Pb	23 06 49.1	-1.0
	baz=206						
SCLT				eS	Sg	23 07 13.1	+1.6
	baz=206						
SSD	Sandimen	1.73	206	eP	Pg	23 06 51.8	-1.0
	baz=204						
SSD				eS	Sg	23 07 15.5	+0.2
	baz=204						
ECL	Taimali	1.77	195	eP	Pb	23 06 52.0	-0.7
	baz=177						
MASBT	Mashibuluo	1.86	204	eP	Pb	23 06 53.6	-0.5
	baz=204						
MASBT				eS	Sg	23 07 19.9	+0.7
	baz=204						
PNG	Penghu	1.88	247	eP	Pb	23 06 53.4	-1.2
	baz=247						
PHUB	P'eng-hu	1.89	245	eP	Pn	23 06 52.3	-0.5
	baz=246						
PTTC	Pingtan	1.92	308	eP	Pn	23 06 53.5	+0.3
	baz=307						
VWUC	VWUC	1.93	291	eP	Pn	23 06 51.4	-1.9
	baz=292						
WDGT	Dungji	1.94	237	eP	Pb	23 06 54.6	-1.1
	baz=237						
EAST	Anshuo	2.00	196	eP	Pb	23 06 56.2	-0.5
	baz=177						
SCZT	Fangliau	2.08	201	eP	Pb	23 06 57.7	-0.3
	baz=219						
IRIF	Iriomote-Funau	2.09	89	P	Pn	23 06 55.3	-0.1
IRIF				S	Sn	23 07 22.2	+0.3
VCHM	Qimei	2.15	239	eP	Pn	23 06 56.5	+0.2
	baz=239						
PTMZ	Houxiangcun	2.23	289	eP	Pn	23 06 55.8	-1.6
	baz=291						
MATB	Ma-tsu	2.27	324	eP	Pn	23 06 58.4	+0.4
	baz=321						
JIJ	Ishigaki jima	2.46	88	S	Sn	23 07 31.4	+0.2
JISG	Ishigakijimahi	2.63	84	eS	Sn	23 07 35.3	+0.1
LYJJ	Jianjiangzhen	2.69	326	eP	Pn	23 07 04.5	+0.8
	baz=324						
KNMB	Chin-men Tao	2.79	274	eP	Pn	23 07 04.3	-0.8
	baz=276						
MHZQ	Yeshan	2.81	310	eP	Pn	23 07 05.1	-0.3
	baz=307						
XPSS	Dashiqiu	2.83	337	eP	Pn	23 07 05.0	-0.7
	baz=336						
AXDP	Jialang	3.21	281	eP	Pn	23 07 10.3	-0.6
	baz=283						
KSRS	Korea Array	14.22	21	Pn	P	23 09 51.8	+2.4
	0.1nm,0.3s,baz=202,slow=12,SNR=3.8						
SONM	Songino Array	26.34	337	P	P	23 11 57.8	+1.0
	1.3nm,0.8s,baz=149,slow=9.6,SNR=10						
MKAR	Makanchi Array	38.41	316	P	P	23 13 42.7	+0.5
	0.9nm,0.7s,baz=106,slow=9.7,SNR=10						
ZALV	Zalesovo Beam	40.26	327	P	P	23 13 57.3	-0.2
	0.8nm,0.6s,baz=120,slow=10,SNR=3.3						
WRA	Warramunga Arr	45.75	163	P	P	23 14 40.9	-1.5
	0.1nm,0.5s,baz=344,slow=8.5,SNR=3.2						

UCR 16 23:15:49.7±1.7**, 9°.98N×86°.27W, h23**^{km}±5^{km}**, MD3.8, ML2.9, 3C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLVR	Palo Verde	0.98	68	⇑iP	Pb	23 16 06.9	-1.1
PLVR				eS	Sn	23 16 21.8	+0.4
GBS3	Finca Las Img	1.13	45	i P	Pn	23 16 09.5	-0.6
LAPC	Finca la Perla	1.14	47	i P	Pn	23 16 09.4	-0.8
GPS3	Bodega del ICE	1.18	49	i P	Pn	23 16 10.5	-0.3
GPS3				i S	Sb	23 16 27.4	+1.1
GPS2	Hotel Rincn d	1.18	50	i P	Pn	23 16 10.7	-0.3
GPS1	Guardaparques	1.20	49	i P	Pn	23 16 10.9	-0.3
GPS1				i S	Sb	23 16 27.7	+0.7
LIM1	Limonal	1.23	55	i P	Pn	23 16 11.3	-0.2
LIM1				i S	Sb	23 16 28.5	+0.8
COLC	Colonia	1.25	57	i P	Pn	23 16 11.4	-0.4
CUI	Cuipilapa	1.28	58	i P	Pn	23 16 11.9	-0.3
CUI				eS	Sb	23 16 30.0	+0.8
BUAI	Buenos Aires	1.28	46	i P	Pn	23 16 12.0	-0.2
HORNC	Hornillas	1.30	56	i P	Pn	23 16 11.9	-0.6
MESS	Mesas	1.30	55	i P	Pn	23 16 12.0	-0.5
MESS				⇑eP	Pb	23 16 12.2	-1.3
MESS				eS	Sb	23 16 30.9	+1.0
JTS	JuntasAbangare	1.33	77	eP	Pn	23 16 11.9	-1.0
JTS				eS	Sn	23 16 29.9	-0.1
ACAL	Aguas Claras	1.38	62	i P	Pn	23 16 13.3	-0.3
AMAS	Alto Masis	1.40	63	i P	Pn	23 16 13.5	-0.5
ARE1	Arenal 1	1.60	73	eP	Pn	23 16 16.8	+0.2
CEDE	Laguna Cedeo	1.62	72	eP	Pn	23 16 17.5	+0.6
CEDE				eS	Sb	23 16 41.6	+2.5
CONN	Concepcion	1.69	22	eP	Pn	23 16 18.4	+0.5
COPN	Copaltepe	2.21	352	eP	Pn	23 16 25.5	+0.6
ACON	Acoyapa	2.25	29	⇑iP	Pn	23 16 25.9	+0.4
ACON				eP	Pb	23 16 26.1	-3.6
LCR2	La Lucha 2	2.25	96	eP	Pn	23 16 25.7	0.0
MOMN	Momotombo	2.42	354	eP	Pn	23 16 28.6	+0.7
BOAB	BOACO BROADBAN	2.52	14	eP	Pn	23 16 30.0	+0.7
BOAB				eS	Sn	23 17 00.3	+1.0
CNGN	Cerro Negro	2.54	351	eP	Pn	23 16 30.3	+0.7
CNGN				eS	Sn	23 16 59.0	-0.8
CNGN				IAML		23 17 05.8	
	comp=E,70nm,0.2s						
TEL3	Telica 3	2.63	348	eP	Pn	23 16 31.5	+0.7
CRIN	San Cristobal	2.81	344	eS	Sn	23 17 05.7	-0.8
ESPN	Las Esperanzas	2.93	41	eP	Pn	23 16 36.0	+1.1

*KRNET **16** 23:18:15.0±0.1, 42°.53N×79°.65E, h16^{km}, mb2.2*
*SOME **16** 23:18:15.4, 42°.52N×79°.62E, h15^{km}*
*NNC **16** 23:18:15.9±0.8, 42°.58N×79°.57E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=5.4km s-min=2.6km az=130.0*
ISC 16 23:18:14.9±1.8**, 42°.52N**±0°.05×**79°.60E**±0°.05**, h8**^{km}±14^{km}**, n34, σ0^{s}.86**/59**, 6C-15D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.76	326	P	Pg	23 18 29.8	+0.2
	2.3nm,0.2s						
UZB				S	Sg	23 18 40.1	+0.6
	8.3nm,0.4s						
UZB	Uzynbulak	0.76	326	⇓eP	Pg	23 18 29.9	+0.3
	baz=23						
UZB				⇓eS	Sg	23 18 40.2	+0.6
	baz=23						
UZB	Uzynbulak	0.76	326	⇓eP	Pg	23 18 29.9	+0.3
	2.4nm,0.2s						
UZB				eS	Sg	23 18 40.2	+0.7
	8.3nm,0.4s						
PDGK	Podgornoye	0.81	354	P	Pg	23 18 30.6	-0.1
	1.5nm,0.1s						
PDGK				S	Sg	23 18 41.4	+0.2
	1.2nm,0.1s						
PDGK	Podgornoye	0.81	354	⇑P	Pg	23 18 30.6	-0.1
	0.9nm,0.3s						
PDGK				⇓S	Sg	23 18 41.0	-0.3
	0.5nm,0.2s						
PDGK	Podgornoye	0.81	354	⇑iP	Pg	23 18 30.5	-0.1
	baz=51						
PDGK				⇑iS	Sg	23 18 40.9	-0.4
	baz=51						
PRZ	Przheval'sk	0.89	268	⇓iP	Pb	23 18 32.8	+0.1
	baz=68						
PRZ				⇓iS	Sb	23 18 45.5	+0.7
	baz=68						
SATY	Saty	1.03	302	P	Pb	23 18 34.5	-0.6
	0.7nm,0.1s						
SATY				S	Sg	23 18 48.3	0.0
	9.5nm,0.1s						
SATY	Saty	1.03	302	eP	Pb	23 18 34.5	-0.6
	0.7nm,0.1s						
SATY				eS	Sg	23 18 48.3	0.0
	9.5nm,0.1s						
TARG	Taragay, Kyrgy	1.55	240	⇓iP	Pb	23 18 44.3	+0.2
	baz=41						
TARG				⇓iS	Sg	23 19 05.8	+0.9
	baz=41						
DJR	Jarkent	1.82	4	P	Pb	23 18 48.5	0.0
	0.4nm,0.2s						
DJR				S	Sg	23 19 12.6	-0.7
	1.7nm,0.2s						
DJR	Jarkent	1.82	4	eP	Pb	23 18 48.5	0.0
	0.4nm,0.2s						
DJR				eS	Sg	23 19 12.4	-1.0
	1.7nm,0.2s						
KDJ	Kajisay	1.84	259	⇑iP	Pb	23 18 49.4	+0.5
	baz=58						
KDJ				⇑iS	Sg	23 19 14.2	+0.2
	baz=58						
KOTS	Kotyrbulak	1.97	292	Pg	Pg	23 18 52.1	-0.5
	1.0nm,0.2s						
KOTS				Lg	Lg	23 19 18.6	
	6.9nm,0.4s						
KOTS	Kotyrbulak	1.97	292	eP	Pg	23 18 52.1	-0.5
	baz=91						
KOTS				eS	Sg	23 19 18.6	+0.5
	baz=91						
KOTS	Kotyrbulak	1.97	292	eP	Pg	23 18 52.1	-0.5
	1.0nm,0.2s						
KOTS				eS	Sg	23 19 18.6	+0.5
	6.9nm,0.4s						
MDOK	Medeo	1.99	290	⇑Pg	Pn	23 18 49.8	+0.8
	5.7nm,1.4s						
MDOK				⇓Lg	Lg	23 19 18.0	
	3.0nm,0.6s						
TNSS	Tian-Shan	2.02	286	Pg	Pb	23 18 52.8	+0.6
	1.4nm,0.2s						
TNSS				Lg	Lg	23 19 20.0	
	2.1nm,0.3s						
TNSS	Tian-Shan	2.02	286	eP	Pb	23 18 52.8	+0.6
	baz=85						
TNSS				eS	Sg	23 19 20.0	0.0
	baz=85						
TNSS	Tian-Shan	2.02	286	eP	Pb	23 18 52.8	+0.6
	1.4nm,0.2s						
TNSS				eS	Sg	23 19 20.0	0.0
	2.1nm,0.3s						
ARXS	Arharly	2.13	323	Pg	Pb	23 18 54.3	+0.5
ARXS				Lg	Lg	23 19 22.2	
ARXS	Arharly	2.13	323	eP	Pb	23 18 54.6	+0.8
	1.3nm,0.3s						
ARXS				eS	Sg	23 19 22.2	-1.3
	4.5nm,0.4s						
IZV	Izvestkoviy	2.26	284	Pg	Pb	23 18 56.5	+0.4
IZV				Lg	Lg	23 19 26.4	
IZV	Izvestkoviy	2.26	284	eP	Pb	23 18 56.8	+0.7
	2.2nm,0.2s						
IZV				eS	Sg	23 19 26.4	-1.2
	4.3nm,0.3s						
CHKK	Chushkaly	2.33	306	eP	Pb	23 18 57.5	+0.3
	1.3nm,0.1s						
CHKK				eS	Sg	23 19 28.4	-1.5
	3.4nm,0.2s						
KTBS	Karatobe	2.45	300	Pg	Pb	23 18 59.3	+0.1
KTBS				Lg	Lg	23 19 30.6	
KTBS	Karatobe	2.45	300	eP	Pb	23 18 59.0	-0.2
	0.5nm,0.2s						
KTBS				eS	Sb	23 19 30.2	+0.7
	5.1nm,0.5s						
ULHL	Ulahol	2.51	265	⇓iP	Pb	23 18 58.5	-1.8
	baz=65						
ULHL				⇓iS	Sb	23 19 30.5	-0.8
	baz=65						
BOOM	Boomskoye usch	2.71	271	⇓iP	Pb	23 19 02.0	-1.7
	baz=70						
BOOM				⇓iS	Sb	23 19 35.5	-1.6
	baz=70						
KAPS	Kapalarasan	2.77	356	Pg	Pb	23 19 05.5	+0.8
	0.2nm,0.1s						
KAPS				Lg	Lg	23 19 41.3	
	0.9nm,0.3s						
KAPS	Kapalarasan	2.77	356	eP	Pb	23 19 05.5	+0.8
	0.2nm,0.1s						
KAPS				eS	Sg	23 19 41.3	-2.6
	0.9nm,0.3s						
DGS	Degeres	2.91	286	Pg	Pb	23 19 08.3	+1.2
DGS				Lg	Lg	23 19 46.1	
DGS	Degeres	2.91	286	eP	Pb	23 19 08.3	+1.2
	1.3nm,0.5s						
DGS				eS	Sg	23 19 46.4	-1.9
	2.7nm,0.5s						
TKM2	Tokmak 2	2.98	279	⇓Pg	Pb	23 19 08.5	+0.2
	4.5nm,1.4s						
TKM2				⇓Lg	Lg	23 19 47.4	
	0.7nm,0.3s						

IDC 16 23:19:55.1±1.9**, 10°.38S×167°.48E, h0**^{km}**, mb4.0**/8**, mb1 4.2**/8**, mb1mx3.9**/35**, mbtmp4.0**/8**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.8**/32**, Error ellipse: s-maj=66.0km s-min=25.3km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.48	277	LR	LR	23 24 41.4	
	comp=Z,160nm,19.2s,baz=102,slow=38						
H11S2	WAKE ISLAND Hy	28.70	358	T	T	23 55 54.9	
	baz=181,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	28.70	358	T	T	23 55 53.4	
	baz=181,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	28.71	358	T	T	23 55 52.2	
	baz=181,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	29.91	359	T	T	23 57 25.8	
	baz=182,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	29.91	359	T	T	23 57 23.2	
	baz=182,slow=76,SNR=8.0						
H11N2	WAKE ISLAND Hy	29.93	359	T	T	23 57 23.7	
	baz=182,slow=76,SNR=9.7						
STKA	Stephens Creek	32.10	224	P	P	23 26 24.6	+0.5
	0.8nm,0.7s,baz=29,slow=14,SNR=4.9						
WRA	Warramunga Arr	33.31	249	P	P	23 26 35.0	+0.1
	6.5nm,0.8s,baz=80,slow=9.1,SNR=29						
WRA				PcP	PcP	23 29 17.3	+0.1
	0.5nm,0.9s,baz=80,slow=3.6,SNR=4.1						
ASAR	Alice Springs	34.61	243	P	P	23 26 45.3	-0.9
	2.7nm,0.8s,baz=74,slow=9.4,SNR=29						
ASAR				PcP	PcP	23 29 20.5	-0.5
	0.5nm,0.9s,baz=90,slow=1.9,SNR=3.7						
FITZ	Fitzroy Crossi	41.20	254	P	P	23 27 41.8	-0.1
	3.9nm,0.7s,baz=83,slow=7.4,SNR=7.8						
CMAR	Chiang Mai Arr	73.42	293	P	P	23 31 30.6	+0.8
	1.0nm,0.9s,baz=116,slow=6.2,SNR=4.4						
SONM	Songino Array	79.15	323	P	P	23 32 02.6	+0.7
	0.3nm,0.7s,baz=145,slow=5.4,SNR=3.7						
ILAR	Eielson Array	82.35	18	P	P	23 32 18.5	0.0
	0.6nm,0.8s,baz=237,slow=5.4,SNR=5.3						
MKAR	Makanchi Array	94.21	317	P	P	23 33 14.2	-2.0
	0.7nm,0.9s,baz=110,slow=5.3,SNR=4.6						

*NIED **16** 23:35:00, 32°.80N×132°.70E, h35^{km}, Mw3.8 Best double couple: M$_0$5.59000×10^{14} NP1:φ$_s$188.00000°, δ37.00000°, λ-90.00000°. NP2:φ$_s$8.00000°, δ53.00000°, λ-90.00000°.*
*ISCJB **16** 23:35:19.9±0.6, 32°.79N±0°.05×132°.68E±0°.05, h39^{km}±5^{km}, mb3.3/5, Error ellipse: s-maj=9.2km s-min=6.3km az=146.3*
*JMA **16** 23:35:20.9, 32°.83N×132°.64E, h30^{km}, M3.8*
JMA Felt II J1.
*IDC **16** 23:35:22.5±2.1, 32°.87N×132°.62E, h49^{km}±21^{km}, mb3.1/5, mb1 3.3/8, mb1mx3.2/39, mbtmp3.4/8, ML2.9/3, Error ellipse: s-maj=26.7km s-min=19.9km az=63.0*
ISC 16 23:35:20.6±0.9**, 32°.83N**±0°.05×**132°.65E**±0°.04**, h31**^{km}±6^{km}**, n23, σ0^{s}.76**/25**, mb3.5**/5**, 2C-6D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTO	Tosashimizu	0.13	76	⇓P	Pb	23 35 26.3	0.0
JTO				S	Sb	23 35 30.0	-0.2
UWA2	Uwa jima 2	0.39	356	⇓P	Pb	23 35 29.3	-0.1
UWA2				S	Sb	23 35 35.1	-0.3
JKU	Kubokawa	0.59	36	⇑P	Pb	23 35 32.7	+0.1
JKU				S	Sb	23 35 40.8	+0.1
JSKE	Saikikamae	0.64	267	⇓P	Pb	23 35 33.2	0.0
JSKE				S	Sn	23 35 42.2	-0.2
JNA	Nagahama	0.74	349	⇓P	Pb	23 35 34.7	-0.4
JNA				S	Sb	23 35 44.6	-0.3
JUS	Usuki	0.80	288	⇑P	Pb	23 35 35.5	-0.4
JUS				S	Sn	23 35 46.2	-0.2
JET	Tanbara	1.00	19	⇓P	Pn	23 35 38.5	0.0
JET				S	Sb	23 35 52.7	+0.3
JTSN	Tsuno	1.13	239	⇓P	Pn	23 35 40.0	-0.3
JNU	Nakatsue	1.52	282	P	Pn	23 35 46.5	+0.9
	22nm,0.3s,baz=118,slow=5.3,SNR=103						
JNU				S	Sb	23 36 09.0	+1.9
	57nm,0.3s,baz=306,slow=16,SNR=12						
JNU				LR	LR	23 36 35.5	
	comp=Z,283nm,18.1s,baz=138,slow=49						
MJAR	Matsushiro Arr	5.89	49	P	Pn	23 36 47.2	+1.6
	0.2nm,0.3s,baz=241,slow=15,SNR=14						
KSRS	Korea Array	6.03	321	P	Pn	23 36 48.7	+1.2
	0.3nm,0.3s,baz=139,slow=13,SNR=4.0						
KLR	Kul'dur	16.40	358	P	P	23 39 10.1	-0.7
	0.1nm,0.3s,baz=152,slow=8.7,SNR=5.6						
SONM	Songino Array	24.85	315	P	P	23 40 39.1	-1.1
	0.3nm,0.6s,baz=119,slow=9.0,SNR=3.0						
H11N2	WAKE ISLAND Hy	33.20	105	T	T	00 16 47.1	
	baz=300,slow=75,SNR=5.4						
H11N1	WAKE ISLAND Hy	33.21	105	T	T	00 16 46.5	
	baz=300,slow=75,SNR=4.6						
H11N3	WAKE ISLAND Hy	33.22	105	T	T	00 16 48.2	
	baz=300,slow=75,SNR=4.6						
H11S3	WAKE ISLAND Hy	33.67	107	T	T	00 17 21.2	
	baz=302,slow=74						
H11S1	WAKE ISLAND Hy	33.67	107	T	T	00 17 22.4	
	baz=302						
H11S2	WAKE ISLAND Hy	33.68	107	T	T	00 17 26.8	
	baz=302,slow=74						
MKAR	Makanchi Array	40.44	305	P	P	23 42 56.7	+0.6
	0.1nm,0.7s,baz=99,slow=8.9,SNR=2.5						
WRA	Warramunga Arr	52.50	178	P	P	23 44 30.6	-0.2
	0.5nm,0.8s,baz=354,slow=8.0,SNR=7.1						
ASAR	Alice Springs	56.19	179	P	P	23 44 58.2	+0.6
	0.3nm,0.6s,baz=14,slow=12,SNR=7.5						
FINES	FINESS Array B	69.04	330	P	P	23 46 22.0	-0.8
	1.0nm,0.8s,baz=66,slow=6.8,SNR=4.2						

*GII **16** 23:37:50.4±0.0, 34°.11N×35°.57E, h3^{km}, MD2.2/7*
*ISCJB **16** 23:37:51.5±0.7, 34°.17N±0°.04×35°.65E±0°.08, h24^{km}±4^{km}, Error ellipse: s-maj=12.1km s-min=5.8km az=15.8*
*GRAL **16** 23:37:53.0±0.2, 34°.11N×35°.75E, h25^{km}±1^{km}, MD3.0*
ISC 16 23:37:52.4±1.2**, 34°.14N**±0°.05×**35°.69E**±0°.07**, h25**^{km}±9^{km}**, n22, σ0^{s}.93**/35**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.24	186	eP	Pb	23 37 58.6	0.0
BHL				eS	Sb	23 38 02.7	-0.1
HWQ	Hawqa	0.26	58	eP	Pb	23 37 58.7	-0.1
HWQ				eS	Sb	23 38 03.0	-0.3
BEYL	Beirut	0.31	211	eP	Pb	23 37 59.8	+0.3
DQRL	Deir Qamar	0.44	192	eP	Pb	23 38 01.5	-0.2
DQRL				eS	Sb	23 38 07.6	-0.4
QRWL	Qaraoun	0.59	180	eP	Pb	23 38 03.5	-0.7
QRWL				eS	Sb	23 38 11.3	-0.9
RCY	Rachaya	0.65	169	eP	Pb	23 38 04.3	-0.9
RCY				eS	Sb	23 38 12.7	-1.3
NATI	Neve Ativ	0.88	177	Pg	Pb	23 38 07.7	-1.2
NATI				Sg	Sb	23 38 19.7	-0.5
KSDI	Kefar Szold	0.95	181	Pg	Pb	23 38 08.6	-1.5
KSDI				Sg	Sb	23 38 22.2	0.0
HNTI	Hanita	1.14	202	Pg	Pn	23 38 11.8	-0.9
HNTI				Sg	Sn	23 38 27.3	-0.2
MMA0B	Mount Meron ar	1.15	192	Pg	Pn	23 38 12.2	-0.7
MMA0B				Sg	Sb	23 38 27.6	-0.4
KSHT	Keshet	1.16	175	Pg	Pn	23 38 12.8	-0.3
BLGI	Bet Lehem HaGe	1.46	197	Pn	Pn	23 38 16.9	-0.3
BLGI				Sn	Sb	23 38 36.6	-0.4
OFRI	`Ofer	1.62	201	Pn	Pn	23 38 19.3	-0.1
MMLI	Mount Malkishu	1.71	187	Pn	Pn	23 38 20.7	0.0
HMDT	Nahal Hemdat	1.89	184	Pn	Pn	23 38 23.0	0.0
HMDT				Sn	Sb	23 38 48.7	-0.5
SLTI	Sal'it	1.97	196	Pn	Pn	23 38 24.0	-0.2
CSS	Mathiatis	2.11	294	Pn	Pn	23 38 25.4	-0.7
DSI	Dead Sea	2.58	186	Pn	Pn	23 38 32.5	0.0
AMAZ	Amatzia	2.68	194	Pn	Pn	23 38 34.0	0.0
AMAZ				Sn	Sn	23 39 08.5	+2.9
GHAJ	Ghor Haditha	2.83	182	Pn	Pn	23 38 36.5	+0.5
GHAJ				Sn	Sn	23 39 12.0	+2.7
KZIT	Kziot	3.40	199	Pn	Pn	23 38 44.3	+0.4
PRNI	Paran	3.82	189	Pn	Pn	23 38 49.9	+0.2

*IDC **16** 23:41:43.3±4.2, 42°.31N×147°.17E, h0^{km}, mb3.3/5, mb1 3.4/6, mb1mx3.3/29, mbtmp3.3/6, ML3.0/1, Error ellipse: s-maj=105.1km s-min=26.4km az=177.0*
*ISCJB **16** 23:41:51.7±0.8, 43°.38N±0°.05×146°.97E±0°.05, h24^{km}, mb3.2/5, Error ellipse: s-maj=7.5km s-min=5.3km az=157.6*
*SKHL **16** 23:41:54.4±0.5, 43°.46N×146°.94E, h43^{km}±2^{km}, mb3.8/4*
*JMA **16** 23:41:54.6±0.4, 43°.31N×146°.78E, h45^{km}±3^{km}, M2.9*
ISC 16 23:41:52.9±1.1**, 43°.40N**±0°.07×**146°.92E**±0°.06**, h24**^{km}**, n19, σ1^{s}.09**/27**, mb3.1**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.48	352	i P	Pb	23 42 04.0	+1.3
SHO				AMB	AMB	23 42 04.0	
	90nm,0.3s						
SHO				i S	Sb	23 42 11.0	+1.6
SHO				A	A	23 42 12.0	
	2μm,0.3s						
SHO				A	A	23 42 12.0	
	2μm,0.3s						
NEM2	Nemuro 2	0.86	268	P	Pb	23 42 09.0	-0.2

NEM2				eS	Sb	23 42 19.5	-0.8
YUK	Yuzh-Kuril'sk	1.00	310	i P	Pn	23 42 11.0	-0.4
YUK				AMB	AMB	23 42 12.0	
	170nm,0.2s						
YUK				AMB	AMB	23 42 12.0	
	40nm,0.2s						
YUK				i S	Sb	23 42 23.0	-1.3
YUK				A	A	23 42 25.0	
	1μm,0.4s						
YUK				A	A	23 42 25.0	
	930nm,0.4s						
GRPR	Tuman	1.03	306	eP	Pn	23 42 11.0	-0.8
GRPR				AMB	AMB	23 42 12.0	
	20nm,0.2s						
GRPR				eS	Sb	23 42 24.0	-1.0
GRPR				A	A	23 42 25.0	
	690nm,0.5s						
GRPR				A	A	23 42 25.0	
	570nm,0.5s						
LAGR	Lagunnoye	1.06	309	eP	Pn	23 42 12.0	-0.2
LAGR				eS	Sn	23 42 25.0	-1.1
LAGR				A	A	23 42 32.0	
	360nm,0.5s						
LAGR				A	A	23 42 32.0	
	1μm,0.5s						
GLVR	Golovnino	1.08	289	eS	Sn	23 42 26.0	-0.6
JRA	Rausu	1.42	293	P	Pn	23 42 17.4	+0.3
JNK	Nakash	1.62	277	P	Pn	23 42 19.7	-0.2
JAK	Akkeshi	1.68	257	P	Pn	23 42 20.4	-0.3
KUR	Kuril'sk	1.96	20	eP	Pn	23 42 24.0	-0.6
KUR				AMB	AMB	23 42 28.2	
	10.0nm,0.2s						
KUR				AMB	AMB	23 42 28.2	
	9.0nm,0.2s						
KUR				eS	Sn	23 42 46.5	-1.9
KUR				A	A	23 42 52.3	
	100nm,0.2s						
KUR				A	A	23 42 52.3	
	70nm,0.2s						
JTKR	Abashiri--Toko	2.26	286	P	Pn	23 42 30.0	+1.2
JAR	Ashorobuto	2.30	269	P	Pn	23 42 30.0	+0.7
JAR				eS	Sn	23 42 56.5	-0.4
JOB	Onbets	2.31	259	P	Pn	23 42 29.9	+0.4
ASAJ	Asahikawa	3.22	284	Pn	Pn	23 42 44.4	+2.5
	1.0nm,0.3s,baz=112,slow=12,SNR=7.9						
ASAJ				Sn	Sb	23 43 30.0	+2.0
	0.7nm,0.3s,baz=72,slow=20,SNR=3.0						
SONM	Songino Array	28.46	293	P	P	23 47 45.8	-0.1
	0.4nm,1.0s,baz=88,slow=10.0,SNR=2.5						
ILAR	Eielson Array	41.87	36	P	P	23 49 41.7	+1.0
	0.1nm,0.5s,baz=272,slow=7.1,SNR=3.8						
MKAR	Makanchi Array	44.60	298	P	P	23 50 02.5	-0.6
	0.2nm,0.5s,baz=82,slow=9.1,SNR=6.8						
YKA	Yellowknife Ar	56.19	34	P	P	23 51 30.6	+0.2
	0.1nm,0.5s,baz=301,slow=7.2,SNR=2.6						
FINES	FINESS Array B	65.11	333	P	P	23 52 30.3	-0.8
	0.9nm,0.7s,baz=52,slow=7.7,SNR=4.0						

MEX 16 23:58:40.5±1.2**,16°.01N×98°.09W,h10^{km},MD4.0,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.38	355	eP	Pg	23 58 46.8	-1.3
PNIG				eS	Sg	23 58 52.9	-0.3
VHO	Vista Hermosa	1.68	51	eP	Pn	23 59 07.0	-3.1
HUIG	Huatulco	1.92	97	eP	Pn	23 59 09.4	-3.9
CAIG	El Cayaco	2.33	297	eP	Pn	23 59 10.6	-8.2
MEIG	Mezcala	2.40	323	eP	Pn	23 59 20.5	+0.6
TPIG	Tehuac#an	2.50	16	eP	Pn	23 59 19.6	-1.8

NNC 16 23:59:47.4±2.1**,37°.77N×71°.61E,h0^{km},mb3.5,mpv3.0, 2C-3D,Error ellipse: s-maj=17.7km s-min=13.8km az=165.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	2.69	33	⇑P	Pn	00 00 32.5	+0.4
	2.9nm,0.3s						
SFK				⇓S	Sn	00 01 06.9	+1.4
	3.2nm,0.3s						
MNAS	Manas	4.77	8	⇓P	Pn	00 01 00.7	0.0
	1.4nm,0.4s						
MNAS				⇓S	Sn	00 01 57.9	+1.3
	1.4nm,0.8s						
AAK	Ala-Archa	5.34	23	⇑P	Pn	00 01 06.9	-1.7
	1.1nm,0.5s						
KK31	Karatay Array	5.40	351	P	Pn	00 01 10.1	+0.9
	0.2nm,0.2s,baz=158,slow=11,SNR=18						
KK31				S	Sn	00 02 13.0	+0.9
	0.5nm,0.3s,baz=175,slow=24,SNR=11						
AB31	Akbulak array	14.25	327	P	Pn	00 03 10.8	+0.4
	5.0nm,1.6s,baz=338,slow=6.6,SNR=3.6						

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*UPP **17** 00:20:34.5±0.5,67°.82N×20°.27E,h0^{km},ML1.6,Explosion*
HEL 17 00:20:30.0,67°.87N×20°.34E,h0^{km},ML1.4,Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.08	359	P	Pg	00 20 31.2	-0.4
KUA				S	Sg	00 20 33.3	+0.6
KUA	Kurravaara	0.08	359	P	Pg	00 20 37.3	+5.7
KUA				S	Sg	00 20 39.3	+6.7
KUA	Kurravaara	0.08	359	i P	Pg	00 20 31.2	-0.4
KUA				i S	Sg	00 20 33.3	+0.6
RATU	Laukkuluspa	0.29	261	P	Pg	00 20 32.9	-2.6
RATU	Laukkuluspa	0.29	261	i P	Pg	00 20 32.9	-2.6
NIKU	Nikkaluokta	0.49	270	P	Pg	00 20 36.7	-2.7
NIKU	Nikkaluokta	0.49	270	i P	Pg	00 20 36.7	-2.7
LANU	Lannavaara	0.65	73	P	Pg	00 20 41.6	-0.8
LANU	Lannavaara	0.65	73	eP	Pg	00 20 41.4	-0.9
DUNU	Dundret	0.76	173	P	Pg	00 20 41.6	-2.9
DUNU	Dundret	0.76	173	i P	Pg	00 20 41.6	-2.9
MASU	Masugnsbyn	0.76	123	P	Pg	00 20 42.9	-1.6
MASU	Masugnsbyn	0.76	123	i P	Pg	00 20 42.9	-1.6
KIF	Kilpisjarvi	1.15	8	eP	Pg	00 20 51.0	-1.0
KIF				MSG		00 21 06.0	
	comp=Z,3.1nm,0.2s						
KIF				eSB	Sb	00 21 07.8	-0.4
HEF	Hetta	1.35	65	eP	Pg	00 20 54.2	-1.7
HEF				MSG		00 21 11.0	
	comp=Z,2.6nm,0.2s						
PAJU	Pajala	1.37	127	P	Pg	00 20 53.5	-2.7
PAJU	Pajala	1.37	127	P	Pb	00 20 59.6	+3.2
PAJU	Pajala	1.37	127	eP	Pg	00 20 53.5	-2.7
HARU	Harads	1.73	171	P	Pn	00 20 59.0	-2.4
HARU	Harads	1.73	171	eP	Pn	00 20 59.0	-2.4
KALU	Kalix	2.35	148	P	Pn	00 21 08.9	-0.8
KALU	Kalix	2.35	148	ePB	Pn	00 21 09.3	-0.4
	baz=330						
KALU				eSG	Sb	00 21 40.9	-1.6
TOF	Tornio	2.39	137	ePB	Pn	00 21 10.2	0.0
TOF				MSG		00 21 40.5	
	comp=Z,1.8nm,0.2s						
TOF				eSG	Sb	00 21 42.4	-1.3
SGF	Sodankyl	2.40	97	ePB	Pn	00 21 11.3	+0.8
	baz=287						
ARE0	ARCESS Array S	2.52	46	eP	Pn	00 21 12.5	+0.4
	baz=227						
ARE0				eSG	Sb	00 21 48.2	+0.7
RNF	Rovaniemi	2.54	117	ePB	Pn	00 21 12.8	+0.3
	baz=302						
RNF				eSB	Sb	00 21 46.6	-1.6
KEV	Kevo	3.07	49	eS	Sn	00 21 58.5	+1.4
KEV				MSG		00 22 00.2	
	comp=Z,1.3nm,0.2s						

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*ISCJB **17** 00:28:33.4±0.3,59°.19N±0°.03×153°.58W±0°.07, h114^{km}±4^{km},mb3.6/1,Error ellipse: s-maj=6.8km s-min=3.5km az=28.9*
*IDC **17** 00:28:33.8±2.0,59°.24N×153°.84W,h82^{km}±31^{km},mb3.1/1, mb1 3.4/5,mb1mx2.9/53,mbtmp3.4/5,Error ellipse: s-maj=33.7km s-min=13.3km az=104.0*
*NEIC **17** 00:28:35.7±0.0,59°.19N×153°.65W,h103^{km},ML2.9(AEIC), After AEIC.*
ISC 17 00:28:34.8±1.0**,59°.18N**±0°.04×**153°.63W**±0°.05**, h106**^{km}±7^{km}**,n78,**σ**0^{s}.75**/87**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUI	Augustine Isla	0.18	34	P	Pn	00 28 49.7	+0.1
AUI				S	Sn	00 28 59.9	-0.9
AUJK	Augustine Jueg	0.20	34	P	Pn	00 28 49.8	+0.1
AUW	Augustine West	0.20	23	P	Pn	00 28 49.9	+0.2
AUE	Augustine Isla	0.22	37	P	Pn	00 28 50.0	+0.3
AUL	Augustine Lava	0.22	26	P	Pn	00 28 50.0	+0.2
FONW	Fourpeaked Sta	0.38	203	P	Pn	00 28 50.4	-0.2
ILS	Iliamna Low So	0.83	20	P	Pn	00 28 53.9	-0.1
KAHG	Katmai Hook Gl	0.84	215	P	Pn	00 28 54.0	-0.1
IVE	Iliamna Volcan	0.89	20	P	Pn	00 28 54.6	-0.1
ILW	Iliamna West	0.92	16	P	Pn	00 28 54.8	-0.1
ILW				S	Sn	00 29 09.8	-0.3
KAKN	Katmai Knife C	1.16	221	P	Pn	00 28 57.2	-0.3
KAKN				S	Sn	00 29 14.0	-0.7
KABU	Katmai Buttres	1.26	224	P	Pn	00 28 58.8	+0.2
RED	Redoubt Volcan	1.31	19	P	Pn	00 28 59.1	-0.1
RED				S	Sn	00 29 17.4	-0.3
KELA	Mount Kelaz	1.33	237	P	Pn	00 28 59.0	-0.4
RDSO	Redoubt South	1.35	19	P	Pn	00 28 59.6	-0.2
RDWB	Redoubt West	1.37	17	P	Pn	00 28 59.8	-0.2
RDWB				S	Sn	00 29 18.6	-0.3
ANCK	Angle Creek	1.39	225	P	Pn	00 28 60.0	-0.1
CAHL	Cahill	1.43	218	P	Pn	00 29 00.6	0.0
RDJH	Redoubt Jeurge	1.47	16	P	Pn	00 29 01.1	-0.1
RDJH				S	Sn	00 29 20.8	-0.3
CNTC	Contact Creek	1.49	233	P	Pn	00 29 01.2	-0.2
KDAK	Kodiak Island	1.51	158	P	Pn	00 29 01.3	-0.1
	12nm,0.3s,baz=353,slow=10,SNR=200						
KDAK				S	Sn	00 29 20.6	-1.0
	20nm,0.3s,baz=216,slow=20,SNR=34						
BRLK	Bradley Lake	1.52	66	P	Pn	00 29 01.4	-0.2
KJL	Kejulik	1.52	223	P	Pn	00 29 02.0	+0.3
OHAK	Old Harbor	1.98	175	P	Pn	00 29 06.8	-0.5
OHAK				S	Sn	00 29 30.0	-2.0
PLK3	Peulik 3	2.04	224	P	Pn	00 29 08.6	+0.4
PLK1	Peulik 1	2.09	230	P	Pn	00 29 09.0	+0.3
PLK4	Peulik 4	2.12	224	P	Pn	00 29 09.6	+0.4
SVW2	Sparrevohn	2.15	334	P	Pn	00 29 09.1	-0.5
SPWE	Spurr West	2.17	14	P	Pn	00 29 10.3	+0.5
SLKM	Skilak Lake	2.17	51	P	Pn	00 29 10.0	+0.2
SPBG	Spurr Blockage	2.18	16	P	Pn	00 29 10.2	+0.3
SEW	Seward	2.31	65	P	Pn	00 29 11.3	-0.2
FIB	Fire Island	2.63	39	P	Pn	00 29 16.8	+1.0
SUA	Susitna One	2.70	31	P	Pn	00 29 17.0	+0.2
RC01	Rabbit Creek A	2.73	44	P	Pn	00 29 16.9	-0.2
PTE	Portage	2.86	52	P	Pn	00 29 18.4	-0.3
PWL	Port Wells	3.15	55	P	Pn	00 29 21.7	-0.8
PMR	Palmer	3.29	41	P	Pn	00 29 23.5	-0.9
KNK	Knik Glacier	3.41	47	P	Pn	00 29 25.2	-0.9
GHO	Glory Hole Cre	3.49	40	P	Pn	00 29 26.3	-0.9
SML	Sawmill	3.71	43	P	Pn	00 29 29.4	-0.8
MID	Middleton Isla	3.75	83	P	Pn	00 29 30.5	0.0
PPLA	Purkeypile	3.79	10	P	Pn	00 29 31.8	+0.4
CHGN	Chignik	3.86	224	P	Pn	00 29 31.6	-0.6
TT01	Tatalina	3.91	344	P	Pn	00 29 32.2	-0.6
JPK	Jack Peak	3.99	59	P	Pn	00 29 33.0	-0.8
SCM	Sheep Creek Mo	4.09	47	P	Pn	00 29 34.8	-0.6
EYAK	Cordova Ski Ar	4.20	68	P	Pn	00 29 36.3	-0.4
CAST	Castle Rocks	4.32	9	P	Pn	00 29 38.5	+0.3
DIV	Divide	4.38	60	P	Pn	00 29 38.6	-0.6
KLU	Klutina	4.48	56	P	Pn	00 29 39.6	-0.9
TRF	Thorofare Moun	4.58	19	P	Pn	00 29 41.3	-0.6
RND	Reindeer	4.82	26	P	Pn	00 29 44.5	-0.6
MCK	McKinley	5.09	24	P	Pn	00 29 48.6	-0.1
PS10	TAPS Pump St10	5.69	38	P	Pn	00 29 57.1	+0.2
MCARA	McCarthy VSAT	5.72	63	P	Pn	00 29 57.3	+0.1
NEA	Nenana	5.83	20	P	Pn	00 29 57.6	-1.0
WRH	Wood River Hil	5.92	24	P	Pn	00 29 58.5	-1.3
MESA	MESA	6.00	75	P	Pn	00 30 01.3	0.0
MLY	Manley	6.02	12	P	Pn	00 30 00.2	-1.1
MENT	Mentasta	6.11	48	P	Pn	00 30 01.9	-0.6
HDA	Harding Lake	6.12	28	P	Pn	00 30 02.5	-0.2
CCB	Clear Creek Bu	6.13	24	P	Pn	00 30 01.2	-1.5
RIDG	Independ'e Rid	6.21	39	P	Pn	00 30 03.6	-0.4
MDM	Murphy Dome	6.33	21	P	Pn	00 30 04.2	-1.2
ILAR	Eielson Array	6.44	27	P	Pn	00 30 05.6	-1.4
	1.3nm,0.3s,baz=215,slow=14,SNR=45						
ILAR				S	Sn	00 31 17.5	-1.4
	0.4nm,0.3s,baz=226,slow=36,SNR=4.9						
SCRK	Sand Creek	6.65	40	P	Pn	00 30 09.5	-0.5
IM3	Indian Mountai	6.83	360	P	Pn	00 30 11.6	-0.6
YUK2	White River	6.83	62	P	Pn	00 30 12.5	+0.1
BCA3	Beaver Creek A	6.93	51	P	Pn	00 30 13.4	-0.3
YUK3	Moose Creek	7.01	63	P	Pn	00 30 15.4	+0.5
PRP	Porcupine Dome	7.39	27	P	Pn	00 30 19.5	-0.4
YUK4	Talbot Arm	7.76	67	P	Pn	00 30 25.7	+0.6
BM3	Burnt Mountain	9.20	22	P	Pn	00 30 42.2	-2.1
DLBC	Dease Lake	12.24	83	P	Pn	00 31 28.1	+2.7
	0.3nm,0.3s,baz=273,slow=8.6,SNR=6.1						
INK	Inuvik	12.69	36	P	Pn	00 31 32.4	+1.3
	0.1nm,0.3s,baz=228,slow=10,SNR=3.4						
YKA	Yellowknife Ar	19.09	63	P	P	00 32 49.5	+0.7
	0.1nm,0.3s,baz=278,slow=11,SNR=7.0						
SONM	Songino Array	55.01	306	P	P	00 37 55.5	+0.5
	0.3nm,0.5s,baz=35,slow=8.8,SNR=4.8						

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*TAP **17** 00:34:09.0,24°.39N×122°.33E,h71^{km},ML3.7,B*
*ISCJB **17** 00:34:09.0±0.3,24°.41N±0°.02×122°.36E±0°.02,h70^{km}±3^{km}, Error ellipse: s-maj=2.8km s-min=2.2km az=157.2*
*JMA **17** 00:34:09.1±0.1,24°.35N×122°.34E,h69^{km}±2^{km},M2.9*
ISC 17 00:34:09.1±1.2**,24°.41N**±0°.03×**122°.35E**±0°.02**,h72**^{km}±6^{km}**, n122,**σ**0^{s}.96**/219**,10C-12D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.25	305	⇑P	Pn	00 34 20.7	+0.6
	baz=309						
EOS1				S	Sn	00 34 29.4	+1.2
	baz=309						
TWC	Suao	0.50	294	P	Pn	00 34 22.1	+0.1
	baz=296						
TWC				eS	Sn	00 34 31.3	-0.3
	baz=296						
JYNG	Yonagunijimaku	0.54	85	P	Pn	00 34 22.6	+0.2
JYNG				S	Sn	00 34 32.2	-0.1
NANB	Nanao	0.55	272	⇑P	Pn	00 34 22.6	0.0
	baz=273						
NANB				S	Sn	00 34 32.6	+0.1
	baz=273						
ENA	Nanau	0.56	272	eP	Pn	00 34 22.8	+0.2
	baz=273						
ENA				eS	Sn	00 34 32.8	+0.2
	baz=273						
EGS		0.58	319	eP	Pn	00 34 23.1	+0.3
	baz=321						
EGS				eS	Sn	00 34 32.8	-0.2
	baz=321						
YOJ	Yonaguni jima	0.60	85	⇓P	Pn	00 34 23.3	+0.3
	baz=82						
YOJ				eS	Sn	00 34 32.9	-0.5
	baz=82						
YOJ	Yonaguni jima	0.60	85	P	Pn	00 34 23.3	+0.3
YOJ				S	Sn	00 34 33.0	-0.4
NTC	Toucheng	0.65	313	eP	Pn	00 34 23.9	+0.3
	baz=315						
NTC				eS	Sn	00 34 34.4	+0.1
	baz=315						
ILA	Ilan	0.66	303	P	Pn	00 34 24.2	+0.6
	baz=305						
ILA				S	Sn	00 34 34.8	+0.4
	baz=305						
TWB1	Santiao Chiao	0.68	331	⇓P	Pn	00 34 24.0	0.0
	baz=333						
TWB1				eS	Sn	00 34 34.4	-0.6
	baz=333						
TWE	Neicheng	0.70	297	⇓P	Pn	00 34 24.6	+0.5
	baz=298						
TWE				S	Sn	00 34 35.3	+0.1
	baz=298						
NACB	Ninganchiao	0.73	252	⇑P	Pn	00 34 24.1	-0.3
	baz=252						
NACB				eS	Sn	00 34 35.0	-0.8
	baz=252						
SLBB	Yuanshan	0.74	298	P	Pn	00 34 25.4	+0.8
	baz=299						
SLBB				eS	Sn	00 34 36.4	+0.3
	baz=299						
TIPB	Shuangxi	0.74	320	⇓P	Pn	00 34 24.7	+0.1
	baz=321						
TIPB				eS	Sn	00 34 35.3	-0.8
	baz=321						
ENTT	Nioudou	0.75	288	⇓i P	Pn	00 34 25.6	+0.8
	baz=289						
ENTT				S	Sn	00 34 36.7	+0.4
	baz=289						
TWD	Chiawan	0.76	245	⇑P	Pn	00 34 24.6	-0.2
	baz=244						
TWD				S	Sn	00 34 35.8	-0.7
	baz=244						
NDT	Datong Townshi	0.79	284	⇓P	Pn	00 34 26.0	+0.9
	baz=285						
NDT				S	Sn	00 34 37.6	+0.5
	baz=285						
HWA	Hwalien	0.81	238	⇑P	Pn	00 34 25.4	+0.1
	baz=237						
HWA				eS	Sn	00 34 37.4	0.0
	baz=237						
ETLH	Xiulin Townshi	0.82	256	eP	Pn	00 34 25.6	+0.1
	baz=256						
ETLH				eS	Sn	00 34 37.5	-0.3
	baz=256						
NWF	Wu-fen Shan	0.84	322	⇓P	Pn	00 34 26.2	+0.3
	baz=323						
NWF				eS	Sn	00 34 37.5	-0.7
	baz=323						
WFSB	Wu-fen Shan	0.84	322	P	Pn	00 34 26.2	+0.4
	baz=323						
WFSB				eS	Sn	00 34 37.5	-0.6
	baz=323						
ENLB	Shoufeng	0.85	234	⇑P	Pn	00 34 25.9	0.0
	baz=233						
ENLB				eS	Sn	00 34 38.1	-0.2
	baz=233						
NWLT	Wulai	0.86	296	eP	Pn	00 34 26.9	+0.9
	baz=296						
NWLT				eS	Sn	00 34 39.1	+0.6
	baz=296						
NNSB	Datong	0.88	272	eP	Pn	00 34 25.9	-0.4
	baz=272						
NNSB				eS	Sn	00 34 38.5	-0.8
	baz=272						
NNS	Nan Shan	0.89	272	P	Pn	00 34 26.7	+0.2
	baz=272						
NNS				S	Sn	00 34 39.1	-0.3
	baz=272						
TWA	Mucha	0.90	309	P	Pn	00 34 26.9	+0.4
	baz=310						
TWA				eS	Sn	00 34 39.4	-0.1
	baz=310						
YHNB	Yeheng	0.93	287	⇓P	Pn	00 34 27.7	+0.8
	baz=287						
YHNB				S	Sn	00 34 40.0	-0.1
	baz=287						
NHDH	Xindian Distri	0.94	306	P	Pn	00 34 27.3	+0.4
	baz=307						
NHDH				eS	Sn	00 34 39.6	-0.5
	baz=307						
NSK	Sanguang	0.94	287	⇓P	Pn	00 34 27.8	+0.7
	baz=287						
NSK				S	Sn	00 34 40.5	+0.1
	baz=287						
TATO	Taipei	0.97	306	P	Pn	00 34 27.7	+0.4
	baz=307						
TATO				eS	Sn	00 34 39.9	-0.9
	baz=307						
TAP1	Taipei	0.98	310	eP	Pn	00 34 26.8	-0.7
	baz=310						
YM01	YM01	1.02	316	P	Pn	00 34 28.2	+0.1
	baz=317						
YM01				eS	Sn	00 34 41.5	-0.6
	baz=317						
WHF	Hehuan Shan	1.03	255	⇑P	Pn	00 34 28.5	+0.1
	baz=255						
WHF				eS	Sn	00 34 42.1	-0.7
	baz=255						
ESL	Shilin	1.03	235	⇓P	Pn	00 34 27.7	-0.3
	baz=234						
ESL				eS	Sn	00 34 40.9	-1.2
	baz=234						
YM10	YM10	1.04	316	eP	Pn	00 34 28.4	+0.2
	baz=317						
YM10				eS	Sn	00 34 41.8	-0.6
	baz=317						
YM05	YM05	1.04	317	eP	Pn	00 34 28.2	-0.1
	baz=317						
YM05				eS	Sn	00 34 41.5	-1.0
	baz=317						
YM08	YM08	1.04	318	eP	Pn	00 34 29.0	+0.8
	baz=319						
YM04	YM04	1.05	315	P	Pn	00 34 28.5	+0.1
	baz=316						
YM04				eS	Sn	00 34 41.4	-1.2
	baz=316						
TWT	Tachien	1.08	262	eP	Pn	00 34 30.1	+1.2
	baz=262						
TWT				eS	Sn	00 34 44.2	+0.5
	baz=262						
TWS1	Kuangyinshan	1.09	309	eP	Pn	00 34 29.3	+0.5
	baz=310						
TWS1				eS	Sn	00 34 44.2	+0.6
	baz=310						
WLTB	Daxi	1.09	294	eP	Pn	00 34 29.7	+0.9
	baz=294						
WLTB				eS	Sn	00 34 44.6	+1.0
	baz=294						
TDCB	Techi	1.10	262	P	Pn	00 34 30.1	+1.0
	baz=262						
TDCB				eS	Sn	00 34 43.9	-0.1
	baz=262						
TWY	Chenhua	1.10	322	eP	Pn	00 34 29.5	+0.5
	baz=322						
TWY				eS	Sn	00 34 43.3	-0.5
	baz=322						
NTST	Danshui	1.11	313	eP	Pn	00 34 29.5	+0.4
	baz=313						
NTST				eS	Sn	00 34 44.0	0.0
	baz=313						
EGFH	Guangfu	1.12	229	eP	Pn	00 34 29.1	-0.1
	baz=228						
EGFH				eS	Sn	00 34 43.6	-0.6
	baz=228						
CHGB	Renai	1.13	252	⇑P	Pn	00 34 30.0	+0.5
	baz=252						
CHGB				S	Sn	00 34 44.3	-0.5
	baz=252						
OWD	Renai	1.17	247	eP	Pn	00 34 29.9	0.0
	baz=247						
OWD				eS	Sn	00 34 44.6	-0.9
	baz=247						
NCU	National Centr	1.20	298	eP	Pn	00 34 31.2	+1.1
	baz=298						
NCU				eS	Sn	00 34 46.7	+0.7
	baz=298						
NCUH	Zhongli	1.20	298	eP	Pn	00 34 31.3	+1.1
	baz=298						
NCUH				eS	Sn	00 34 46.7	+0.7
	baz=298						
LIOB	Emei	1.24	281	⇓P	Pn	00 34 31.3	+0.5
	baz=281						
LIOB				eS	Sn	00 34 47.2	+0.2
	baz=281						
PCYT	Pengchaiyu	1.24	348	eP	Pn	00 34 31.3	+0.5
	baz=349						
HGSD	Ruisui	1.25	223	⇑P	Pn	00 34 30.5	-0.3
	baz=222						
HGSD				eS	Sn	00 34 47.1	0.0
	baz=222						
NSTT	Nanjuang	1.25	281	eP	Pn	00 34 32.1	+1.3
	baz=281						
NSTT				eS	Sn	00 34 47.5	+0.3
	baz=281						
IRIF	Iriomote-Funau	1.26	93	P	Pn	00 34 30.9	0.0
IRIF				S	Sn	00 34 47.2	-0.1
VWDT	VWDT	1.28	240	⇑P	Pn	00 34 31.8	+0.6
	baz=239						
VWDT				eS	Sn	00 34 46.8	-1.1
	baz=239						
WHP	Taichung City	1.29	265	eP	Pn	00 34 33.0	+1.6
	baz=264						
WHP				eS	Sn	00 34 49.0	+0.8
	baz=264						
EHY	Hungye	1.30	227	⇓P	Pn	00 34 31.0	-0.5
	baz=226						
EHY				eS	Sn	00 34 47.0	-1.4
	baz=226						
SBCB	Hsinchu	1.30	287	eP	Pn	00 34 32.0	+0.5
	baz=287						
SBCB				eS	Sn	00 34 48.6	+0.2

	baz=287						
HSN	**Hsinchu**	1.32	288	eP	Pn	00 34 32.3	+0.6
	baz=289						
HATJ	**Hateruma jima**	1.37	104	P	Pn	00 34 33.0	+0.6
YULB	**Yu-li**	1.40	224	eP	Pn	00 34 32.2	-0.5
	baz=223						
SSLB	**Suanglung**	1.42	245	eP	Pn	00 34 33.6	+0.6
	baz=244						
SSLB				eS	Sn	00 34 50.2	-0.9
	baz=244						
SMLT	**Sun Moon Lake**	1.43	249	eP	Pn	00 34 34.3	+1.1
	baz=248						
SMLT				eS	Sn	00 34 50.6	-0.8
	baz=248						
TWF1	**Yuli**	1.43	223	P	Pn	00 34 32.7	-0.5
	baz=222						
TWF1				eS	Sn	00 34 49.9	-1.4
	baz=222						
NMLH	**Miaoli**	1.43	276	eP	Pn	00 34 34.1	+0.9
	baz=275						
TWQ1	**Liyutan**	1.44	268	eP	Pn	00 34 34.4	+1.1
	baz=268						
TWQ1				eS	Sn	00 34 53.1	+1.5
	baz=268						
NSY	**Sanyi**	1.45	271	eP	Pn	00 34 34.1	+0.7
	baz=270						
NSY				eS	Sn	00 34 51.6	-0.3
	baz=270						
TYC	**Yuchr**	1.46	250	eP	Pn	00 34 34.8	+1.3
	baz=250						
TYC				eS	Sn	00 34 51.9	0.0
	baz=250						
PTSB	**Yuanli**	1.50	272	eP	Pn	00 34 34.1	0.0
	baz=272						
PTSB				eS	Sn	00 34 53.2	+0.2
	baz=272						
JKRS	**Kuro-shima**	1.52	96	P	Pn	00 34 35.2	+0.9
JKRS				eS	Sn	00 34 54.2	+0.8
WHYT	**Xinyi Township**	1.54	243	eP	Pn	00 34 35.9	+1.2
	baz=242						
WHYT				eS	Sn	00 34 54.8	+0.7
	baz=242						
TCU	**Taichung**	1.55	261	eP	Pn	00 34 35.6	+0.8
	baz=260						
TCU				eS	Sn	00 34 55.4	+1.2
	baz=260						
WDJ	**Dajia District**	1.56	268	eP	Pn	00 34 35.6	+0.7
	baz=268						
WDJ				eS	Sn	00 34 55.1	+0.7
	baz=268						
CHKT	**Chengkung**	1.58	215	eP	Pn	00 34 34.4	-0.8
	baz=214						
WJS	**Zhushan**	1.59	249	eP	Pn	00 34 37.2	+1.9
	baz=248						
WNT	**Mingjian**	1.61	251	eP	Pn	00 34 36.9	+1.3
	baz=251						
WNT				eS	Sn	00 34 57.6	+2.0
	baz=251						
JIJ	**Ishigaki jima**	1.63	91	P	Pn	00 34 36.4	+0.6
JIJ				eS	Sn	00 34 55.5	-0.6
WCHH	**Zhanghua**	1.67	259	eP	Pn	00 34 36.7	+0.4
	baz=259						
WCHH				eS	Sn	00 34 57.8	+0.8
	baz=259						
ALS	**Alishan**	1.67	238	eP	Pn	00 34 38.0	+1.3
	baz=237						
ALS				eS	Sn	00 34 57.8	+0.2
	baz=237						
ELDTW	**Lidau**	1.72	226	eP	Pn	00 34 36.9	-0.2
	baz=224						
ELDTW				eS	Sn	00 34 56.4	-2.0
	baz=224						
CHN5	**Tsauling**	1.73	243	eP	Pn	00 34 38.8	+1.5
	baz=242						
CHN5				eS	Sn	00 35 00.2	+1.6
	baz=242						
JISG	**Ishigakijimahi**	1.79	84	P	Pn	00 34 38.3	+0.3
JISG				eS	Sn	00 34 59.6	-0.3
WDLH	**Douliu**	1.81	247	eP	Pn	00 34 39.7	+1.6
	baz=246						
WDLH				eS	Sn	00 35 02.4	+2.1
	baz=246						
RLNB	**Erlin**	1.89	255	eP	Pn	00 34 40.0	+0.7
	baz=254						
RLNB				eS	Sn	00 35 03.1	+0.8
	baz=254						
STYT	**Tauyuan**	1.92	230	eP	Pn	00 34 40.1	+0.4
	baz=229						
STYT				eS	Sn	00 35 03.4	+0.4
	baz=229						
CHN4	**Tsaushan**	1.92	237	eP	Pn	00 34 41.4	+1.7
	baz=236						
CHN4				eS	Sn	00 35 04.8	+1.7
	baz=236						
TPUB	**Ta-pu**	1.92	235	eP	Pn	00 34 40.7	+0.9
	baz=235						
TPUB				eS	Sn	00 35 04.5	+1.4
	baz=235						
TWGBT	**Beinan**	1.97	217	eP	Pn	00 34 39.7	-0.6
	baz=216						
TWGBT				eS	Sn	00 35 01.9	-2.2
	baz=216						
WTP	**Ta-pu**	1.97	234	eP	Pn	00 34 41.9	+1.5
	baz=233						
WTP				eS	Sn	00 35 05.3	+1.1
	baz=233						
TWG	**Pinlang**	1.97	217	eP	Pn	00 34 39.7	-0.7
	baz=216						
TWG				eS	Sn	00 35 02.0	-2.2
	baz=216						
CHY	**Chiayi**	1.98	243	eP	Pn	00 34 42.0	+1.5
	baz=242						
CHY				eS	Sn	00 35 06.1	+1.6
	baz=242						
TTN	**Taitung**	1.98	214	eP	Pn	00 34 40.9	+0.4
	baz=213						
TWK	**Hsinying**	2.05	237	eP	Pn	00 34 43.0	+1.5
	baz=236						
TWK				eS	Sn	00 35 06.8	+0.6
	baz=236						
CHN1	**Nanshi**	2.07	234	eP	Pn	00 34 43.4	+1.7
	baz=233						
CHN1				eS	Sn	00 35 07.6	+1.0
	baz=233						
SNST	**Tainan City**	2.07	236	eP	Pn	00 34 42.6	+0.9
	baz=235						
SGST	**Jiashian**	2.09	231	eP	Pn	00 34 43.9	+1.9
	baz=230						
SGST				eS	Sn	00 35 08.8	+1.7
	baz=230						
WSF	**Szhu**	2.09	249	eP	Pn	00 34 44.1	+2.1
	baz=248						
SLGT	**Liugui**	2.10	228	eP	Pn	00 34 44.1	+1.9
	baz=227						
SLGT				eS	Sn	00 35 09.2	+1.7
	baz=227						
JTJ	**Tarama**	2.15	83	P	Pn	00 34 43.9	+1.1
JTJ				S	Sn	00 35 09.0	+0.4
ECL	**Taimali**	2.21	216	eP	Pn	00 34 44.8	+1.2
	baz=215						
SSD	**Sandimen**	2.29	224	eP	Pn	00 34 46.2	+1.6
	baz=223						
SSD				eS	Sn	00 35 12.9	+1.1
	baz=223						
MASBT	**Mashibuluo**	2.38	222	eP	Pn	00 34 47.1	+1.2
	baz=221						
MASBT				eS	Sn	00 35 15.9	+1.7
	baz=221						
EAST	**Anshuo**	2.44	215	eP	Pn	00 34 46.1	-0.7
	baz=214						
LAY	**Lan-yu**	2.47	198	eP	Pn	00 34 46.0	-1.1
	baz=196						
SCZT	**Fangliau**	2.58	219	eP	Pn	00 34 49.6	+1.1
	baz=217						
SCZT				eS	Sn	00 35 20.2	+1.3
	baz=217						
PTTC	**Pingtan**	2.58	295	eP	Pn	00 34 48.8	+0.1
	baz=295						
PNG	**Penghu**	2.69	252	eP	Pn	00 34 49.9	-0.2
	baz=251						
PHUB	**P'eng-hu**	2.69	251	eP	Pn	00 34 49.4	-0.7
	baz=250						
PHUB				eS	Sn	00 35 19.8	-1.9
	baz=250						
VWUC	**VWUC**	2.70	283	eP	Pn	00 34 50.4	+0.1
	baz=282						
VWUC				eS	Sn	00 35 19.8	-2.1
	baz=282						
WDGT	**Dungji**	2.72	246	eP	Pn	00 34 50.8	+0.3
	baz=245						
MATB	**Ma-tsu**	2.79	309	eP	Pn	00 34 51.8	+0.4
	baz=308						
TWKBT	**Hengchun**	2.83	210	eP	Pn	00 34 50.7	-1.4
	baz=209						
TWKBT				eS	Sn	00 35 24.1	-1.0
	baz=209						
TWK1	**Hengchun**	2.84	210	eP	Pn	00 34 53.2	+1.1
	baz=209						
VCHM	**Qimei**	2.93	247	eP	Pn	00 34 53.0	-0.4
	baz=246						
PTMZ	**Houxiangcun**	3.01	283	eP	Pn	00 34 54.5	+0.2
	baz=282						
PTMZ				eS	Sn	00 35 27.3	-2.0
	baz=282						
LYJJ	**Jianjiangzhen**	3.17	313	eP	Pn	00 34 57.1	+0.5
	baz=312						
XPSS	**Dashiqiu**	3.18	323	eP	Pn	00 34 56.6	-0.1
	baz=322						
MHZQ	**Yeshan**	3.45	300	eP	Pn	00 35 00.6	+0.2
	baz=299						
KNMB	**Chin-men Tao**	3.61	272	eP	Pn	00 35 02.5	-0.1
	baz=271						
KNMB				eS	Sn	00 35 40.6	-3.5
	baz=271						
AXDP	**Jialang**	4.02	278	eP	Pn	00 35 08.3	+0.2
	baz=277						
AXDP				eS	Sn	00 35 50.8	-3.2
	baz=277						
ZPLA	**Ao Xicun**	4.23	264	eP	Pn	00 35 11.1	0.0
	baz=263						

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*IDC **17** 00:38:34.7±1.3, 36°.25N×93°.91E, h0^{km}, mb3.2/3, mb1 3.4/7, mb1mx3.2/51, mbtmp3.3/7, ML3.2/4, MS3.8/2, Ms1 3.8/2, ms1mx2.7/38, Error ellipse: s-maj=66.4km s-min=20.0km az=57.0*

*ISCJB **17** 00:38:37.0±1.1, 36°.3N±0°.1×93°.7E±0°.2, h33^{km}, mb3.2/3, MS3.7/2, Error ellipse: s-maj=27.2km s-min=14.4km az=147.0*

ISC 17 00:38:39.5±1.4**, 36°.4N**±0°.2×**93°.6E**±0°.2**, h35**^{km}**, n9,** σ**2^{s}12**/8**, mb3.2**/3**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	13.40	324	Pn	Pn	00 41 47.4	+0.3
	0.4nm,0.3s,baz=137,slow=14,SNR=27						
MKAR				Sn	Sn	00 44 11.8	-2.8
	0.1nm,0.3s,baz=130,slow=26,SNR=3.5						
SONM	**Songino Array**	14.81	36	Pn	Pn	00 42 06.5	+0.2
	0.2nm,0.3s,baz=218,slow=13,SNR=4.1						
KURBB	**Kurchatov Arra**	17.90	327	P	P	00 42 47.6	+1.8
	0.0nm,0.3s,baz=138,slow=11,SNR=4.5						
ZALV	**Zalesovo Beam**	18.59	343	P	P	00 42 54.0	+0.6
	0.1nm,0.3s,baz=171,slow=10,SNR=2.9						
BVAR	**Borovoye Array**	23.27	323	P	P	00 43 46.7	+3.0
	0.5nm,0.6s,baz=126,slow=7.3,SNR=3.3						
AKTO	**Aktyubinsk**	29.12	310	LR	LR	00 58 19.8	
	comp=Z,64nm,18.8s,baz=29,slow=40						
DAV	**Davao City (W)**	41.26	127	LR	LR	01 05 45.7	
	comp=Z,247nm,18.4s,baz=338,slow=40						
WRA	**Warramunga Arr**	67.97	139	P	P	00 49 33.8	-1.3
	0.2nm,1.0s,baz=334,slow=7.0,SNR=2.4						
ASAR	**Alice Springs**	70.81	141	P	P	00 49 52.0	-0.6
	0.2nm,0.5s,baz=320,slow=6.0,SNR=6.5						

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*NEIC **17** 00:53:07.2±0.0, 15°.97N×98°.11W, h3^{km}, MD4.0(MEX), After MEX.*

MEX 17 00:53:07.2±0.5**, 15°.97N×98°.11W, h3**^{km}±6^{km}**, MD4.0, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.42	358	iP	Pg	00 53 14.9	-0.4
PNIG				iS	Sg	00 53 21.0	+0.2
PNIG	**Pinotepa**	0.42	358	iP	Pg	00 53 14.9	-0.4
PNIG				iS	Sg	00 53 21.0	+0.2
VHO	**Vista Hermosa**	1.72	50	iP	Pn	00 53 36.3	-1.9
VHO				iS	Sn	00 53 56.1	-4.7
VHO	**Vista Hermosa**	1.72	50	iP	Pn	00 53 36.3	-1.9
VHO				iS	Sn	00 53 56.1	-4.7
CAIG	**El Cayaco**	2.33	298	eP	Pn	00 53 45.9	-0.6
CAIG	**El Cayaco**	2.33	298	eP	Pn	00 53 45.9	-0.6
PLIG	**Platanillo**	2.75	331	eP	Pb	00 53 56.0	-1.1
PLIG				eS	Sn	00 54 25.0	-1.2
PLIG	**Platanillo**	2.75	331	eP	Pb	00 53 56.0	-1.1
PLIG				eS	Sn	00 54 25.0	-1.2
PPM	**Popocatepetl**	3.12	351	eP	Pb	00 54 04.5	+0.9
PPM				eS	Sn	00 54 33.6	-2.3
PPM	**Popocatepetl**	3.12	351	eP	Pb	00 54 04.5	+0.9
PPM				eS	Sn	00 54 33.6	-2.3

UCR 17 00:53:18.9±3.0**, 8°.50N×83°.09W, h0**^{km}±5^{km}**, MD4.4, 2C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTJ1	**Puerto Jimnez**	0.21	281	⇑eP	Pg	00 53 22.2	-0.7
PTJ1				eS	Sg	00 53 29.9	+4.2
EDSV	**San Vito**	0.34	21	⇓iP	Pb	00 53 27.2	-0.8
EDSV				eS	Sb	00 53 34.6	+0.5
BRU2	**Volcan**	0.50	53	⇓iP	Pb	00 53 29.8	-0.9
BRU2				eS	Sb	00 53 38.4	-0.1
TBS2		0.52	56	eP	Pb	00 53 31.1	+0.1
TBS2				eS	Sb	00 53 41.4	+2.1
DVD	**David**	0.64	95	⇑iP	Pg	00 53 31.7	+0.6
DVD				eS	Sb	00 53 41.9	-0.6
EDBA	**Buenos Aires**	0.69	345	eP	Pg	00 53 32.2	+0.1
EDBA				eS	Sb	00 53 43.1	-0.8
EDDO	**Dominical**	1.07	315	eS	Sb	00 53 54.2	-0.7
LCR2	**La Lucha 2**	1.53	324	eP	Pn	00 53 45.4	-2.2
LCR2				eS	Sn	00 54 08.9	+0.5
HDC	**Heredia**	1.80	326	eP	Pn	00 53 51.3	-0.1
HDC				eS	Sg	00 54 17.4	+0.6
FORC	**Fortuna**	2.50	322	iP	Pn	00 54 02.3	+1.5
ARE1	**Arenal 1**	2.52	321	eP	Pn	00 54 03.0	+1.8
CEDE	**Laguna Cedeo**	2.54	321	iP	Pn	00 54 03.0	+1.6
CEDE				iS	Sb	00 54 37.2	0.0
JTS	**JuntasAbangare**	2.56	314	eP	Pn	00 54 01.6	-0.1
JTS				eS	Sb	00 54 36.2	-1.5
AZU	**Azuero**	2.88	104	eP	Pn	00 54 07.4	+1.4
AZU				eS	Sn	00 54 43.0	+1.6
HORNC	**Hornillas**	3.01	317	iP	Pn	00 54 03.8	-4.2

IDC 17 00:57:15.5±2.5**, 11°.55S×122°.47E, h0**^{km}**, mb3.4**/1**, mb1 3.4**/3**, mb1mx3.2**/26**, mbtmp3.2**/3**, ML2.3**/1**, Error ellipse: s-maj=187.4km s-min=29.4km az=50.0, South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.14	128	Pn	Pn	01 00 39.3	+2.1
	0.0nm,0.3s,baz=305,slow=13,SNR=2.2						
ASAR	**Alice Springs**	16.23	139	Pn	Pn	01 01 03.6	-1.4
	baz=316,slow=13,SNR=6.6						
ASAR				Sn	Sn	01 04 05.8	-0.1
	0.1nm,0.3s,baz=318,slow=25,SNR=5.9						
MKAR	**Makanchi Array**	68.29	332	P	P	01 08 18.4	0.0
	0.2nm,0.5s,baz=129,slow=7.6,SNR=6.0						

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*LDG **17** 01:00:06.9±0.1, 42°.51N×13°.50E, h16^{km}, Ml3.5/16, Error ellipse: s-maj=3.3km s-min=2.6km az=17.0*

*IDC **17** 01:00:06.4±1.0, 42°.61N×13°.30E, h0^{km}, mb3.5/6, mb1 3.7/14, mb1mx3.5/45, mbtmp3.5/14, ML3.4/8, MS3.2/3, Ms1 3.2/3, ms1mx2.5/39, Error ellipse: s-maj=18.1km s-min=11.3km az=95.0*

*ROM **17** 01:00:06.9±0.1, 42°.465N±0°.003×13°.483E±0°.005, h16^{km}, ML3.7/114*

*ISCJB **17** 01:00:07.1±0.2, 42°.49N±0°.01×13°.48E±0°.01, h18^{km}±2^{km}, mb3.5/5, MS3.8/1, Error ellipse: s-maj=2.3km s-min=1.5km az=37.1*

*PRU **17** 01:00:07.8±0.0, 42°.53N×13°.50E, h1^{km}*

*PDG **17** 01:00:07.0±0.8, 42°.50N×13°.48E, h11^{km}, ML3.8/10, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*

*BEO **17** 01:00:09.1±1.2, 42°.55N×13°.46E, h15^{km}, ML3.7/3*

ISC 17 01:00:07.7±0.8**, 42°.48N**±0°.02×**13°.46E**±0°.02**, h19**^{km}±2^{km}**,**

n274, σ**2^{s}37**/307**, mb3.6**/5**, 25C-14D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	0.07	327	iP	Pg	01 00 10.5	-1.0
CAMP				S	Sg	01 00 12.7	-1.3
CAMP				AML	AML		
	comp=E,72550µm,0.3s						
CAMP				AML	AML		
CAMP				AML	AML		
	comp=E,72550µm,0.3s						
CAMP				AML	AML		
AQU	**L'Aquila**	0.13	199	ePg	Pg	01 00 10.5	-1.4
AQU	**L'Aquila**	0.13	199	eP	Pg	01 00 11.1	-0.8
AQU				S	Sg	01 00 14.0	-0.8
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
SMA1	**SAN MARTINO**	0.18	329	iP	Pg	01 00 11.8	-0.8
SMA1				S	Sg	01 00 15.2	-0.7
SMA1				AML	AML		
SMA1				AML	AML		
	comp=N,82150µm,0.3s						
SMA1				AML	AML		
SMA1				AML	AML		
	comp=N,82150µm,0.3s						
SMA1				AML	AML		
SMA1				AML	AML		
	comp=N,82150µm,0.3s						
TERO	**Teramo**	0.18	36	iP	Pg	01 00 11.5	-1.1
TERO				S	Sg	01 00 14.6	-1.2
FAGN	**Fagnano**	0.23	157	eP	Pg	01 00 12.2	-1.1
FAGN				S	Sg	01 00 16.4	-0.7
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
VCEL	**Villa Celiera**	0.29	106	eP	Pg	01 00 13.3	-1.0
VCEL				S	Sg	01 00 18.2	-0.6
VCEL				AML	AML		
	comp=E,75850µm,1.1s						
VCEL				AML	AML		
	comp=N,77450µm,1.0s						
VCEL				AML	AML		
	comp=E,75900µm,1.1s						
VCEL				AML	AML		
	comp=N,77450µm,1.0s						
VCEL				AML	AML		
	comp=E,75900µm,1.1s						
VCEL				AML	AML		
	comp=N,77450µm,1.0s						
VCEL				AML	AML		
	comp=E,75900µm,1.1s						
VCEL				AML	AML		
	comp=N,77450µm,1.0s						
FIAM	**Fiamignano**	0.33	231	iP	Pg	01 00 14.4	-0.5
FIAM				S	Sg	01 00 19.6	-0.2
FIAM				AML	AML		
	comp=E,18250µm,0.5s						
FIAM				AML	AML		
	comp=N,16850µm,0.4s						
FIAM				AML	AML		
	comp=E,18250µm,0.5s						
FIAM				AML	AML		
	comp=N,16850µm,0.4s						
FIAM				AML	AML		
	comp=E,18250µm,0.5s						
FIAM				AML	AML		
	comp=N,16850µm,0.4s						
LNSS	**Leonessa**	0.34	292	iP	Pg	01 00 14.4	-0.6
LNSS				S	Sb	01 00 19.9	-0.2
LNSS				AML	AML		
	comp=E,37550µm,0.7s						
LNSS				AML	AML		
	comp=N,35950µm,0.5s						
LNSS				AML	AML		
	comp=E,37550µm,0.7s						
LNSS				AML	AML		
	comp=N,35950µm,0.5s						
NRCA	**Norcia**	0.44	324	P	Pg	01 00 15.9	-0.8
NRCA				S	Sb	01 00 22.9	-0.3
NRCA				AML	AML		
	comp=E,16400µm,0.2s						
NRCA				AML	AML		
	comp=N,18750µm,0.4s						
NRCA				AML	AML		
	comp=E,17800µm,0.9s						
NRCA				AML	AML		
	comp=N,20250µm,0.4s						
NRCA				AML	AML		
	comp=N,20250µm,0.4s						
NRCA				AML	AML		
	comp=E,16400µm,0.2s						
NRCA				AML	AML		
	comp=E,17800µm,0.9s						
NRCA				AML	AML		
	comp=N,18750µm,0.4s						
PTQR	**Pietraquaria**	0.46	186	eP	Pg	01 00 16.0	-1.1
PTQR				S	Sg	01 00 22.3	-1.1
PTQR				AML	AML		
	comp=E,10550µm,0.9s						
PTQR				AML	AML		
	comp=N,8250µm,1.1s						
PTQR				AML	AML		
	comp=E,10550µm,0.9s						
PTQR				AML	AML		
	comp=N,8250µm,1.1s						
PTQR				AML	AML		
	comp=E,10550µm,0.9s						
PTQR				AML	AML		
	comp=N,8250µm,1.1s						
PTQR				AML	AML		
	comp=E,10550µm,0.9s						
PTQR				AML	AML		
	comp=N,8250µm,1.1s						
TRTR	**Tortoreto Alta**	0.47	45	eP	Pb	01 00 17.0	-0.3
TRTR				AML	AML		
	comp=E,26100µm,1.3s						
TRTR				AML	AML		
	comp=N,32750µm,0.6s						
TRTR				AML	AML		
	comp=E,26100µm,1.3s						
TRTR				AML	AML		
	comp=N,32750µm,0.6s						
TRTR				AML	AML		
	comp=E,26100µm,1.3s						
TRTR				AML	AML		
	comp=N,32750µm,0.6s						
TRTR				AML	AML		
	comp=E,26100µm,1.3s						
TRTR				AML	AML		
	comp=N,32750µm,0.6s						
OFFI	**Offida**	0.49	20	eP	Pb	01 00 17.4	-0.3
OFFI				AML	AML		
	comp=E,41900µm,0.4s						
OFFI				AML	AML		
	comp=N,63250µm,0.4s						
OFFI				AML	AML		
	comp=E,41900µm,0.4s						
OFFI				AML	AML		
	comp=N,63250µm,0.4s						
OFFI				AML	AML		
	comp=N,63250µm,0.4s						
OFFI				AML	AML		
	comp=E,41900µm,0.4s						
ARRO	**Arrone**	0.52	281	P	Pg	01 00 17.4	-0.8
ARRO				S	Sb	01 00 25.4	0.0
ARRO				AML	AML		
	comp=E,16900µm,0.3s						

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ARRO                             AML   AML
      comp=N,12100µm,0.2s
ARRO                             AML   AML
      comp=E,16900µm,0.3s
ARRO                             AML   AML
      comp=N,12100µm,0.2s
ARRO                             AML   AML
      comp=E,16900µm,0.3s
ARRO                             AML   AML
      comp=N,12100µm,0.2s
ARRO                             AML   AML
      comp=E,16900µm,0.3s
ARRO                             AML   AML
      comp=N,12100µm,0.2s
INTR  Introdacqua     0.57 145 i P     Pg    01 00 17.6 -1.6
INTR                             S     Sg    01 00 25.9 -1.0
INTR                             AML   AML
INTR                             AML   AML
INTR                             AML   AML
      comp=E,11000µm,0.6s
INTR                             AML   AML
      comp=N,14600µm,0.3s
INTR                             AML   AML
INTR                             AML   AML
INTR                             AML   AML
      comp=E,11000µm,0.6s
INTR                             AML   AML
      comp=N,14600µm,0.3s
INTR                             AML   AML
      comp=N,14600µm,0.3s
INTR                             AML   AML
      comp=E,11000µm,0.6s
INTR                             AML   AML
INTR                             AML   AML
VVLD  Villa Vallelon  0.62 169   P     Pg    01 00 18.4 -1.6
VVLD                             AML   AML
      comp=E,7560µm,0.5s
VVLD                             AML   AML
      comp=N,6100µm,0.8s
VVLD                             AML   AML
      comp=E,7560µm,0.5s
VVLD                             AML   AML
      comp=N,6100µm,0.8s
VVLD                             AML   AML
      comp=E,7560µm,0.5s
VVLD                             AML   AML
      comp=N,6100µm,0.8s
FDMO  Fiordimonte     0.62 334 i P     Pg    01 00 19.0 -1.1
FDMO                             S     Sb    01 00 28.6 +0.4
FDMO                             AML   AML
      comp=E,7745µm,0.9s
FDMO                             AML   AML
      comp=N,12900µm,0.2s
FDMO                             AML   AML
      comp=E,7745µm,0.9s
FDMO                             AML   AML
      comp=N,12950µm,0.2s
FDMO                             AML   AML
      comp=N,12950µm,0.2s
FDMO                             AML   AML
      comp=E,7745µm,0.9s
CERT  Cerreto         0.64 214 i P     Pg    01 00 19.2 -1.2
CERT                             AML   AML
      comp=E,7965µm,0.3s
CERT                             AML   AML
      comp=N,5955µm,0.8s
CERT                             AML   AML
      comp=E,7965µm,0.3s
CERT                             AML   AML
      comp=N,5955µm,0.8s
CERT                             AML   AML
      comp=N,5955µm,0.8s
CERT                             AML   AML
      comp=E,7965µm,0.3s
CESX  Cesi            0.66 282   P     Pg    01 00 19.6 -1.2
CESX                             S     Sb    01 00 29.6 +0.2
CESX                             AML   AML
      comp=E,7595µm,0.4s
CESX                             AML   AML
      comp=N,7085µm,0.3s
CESX                             AML   AML
      comp=E,7595µm,0.4s
CESX                             AML   AML
      comp=N,7085µm,0.3s
CESX                             AML   AML
      comp=N,7085µm,0.3s
CESX                             AML   AML
      comp=E,7595µm,0.4s
CESI  CESI - Serrava  0.67 322 i P     Pg    01 00 19.9 -1.1
CESI                             S     Sb    01 00 30.1 +0.5
CESI                             AML   AML
      comp=E,4955µm,0.5s
CESI                             AML   AML
      comp=N,3760µm,0.4s
CESI                             AML   AML
      comp=E,4955µm,0.5s
CESI                             AML   AML
      comp=N,3760µm,0.4s
CESI                             AML   AML
      comp=N,3760µm,0.4s
CESI                             AML   AML
      comp=E,4955µm,0.5s
GUMA  Gualdo di Mace  0.68  31   P     Pg    01 00 18.9 -2.3
GUMA                             S     Sg    01 00 28.3 -2.0
GUMA                             AML   AML
      comp=E,63700µm,0.8s
GUMA                             AML   AML
      comp=N,51150µm,0.7s
GUMA                             AML   AML
      comp=E,63700µm,0.8s
GUMA                             AML   AML
      comp=N,51150µm,0.7s
LPEL  Lama dei Pelig  0.69 129   P     Pg    01 00 19.2 -2.0
LPEL                             S     Sg    01 00 29.0 -1.5
LPEL                             AML   AML
      comp=E,8800µm,0.3s
LPEL                             AML   AML
      comp=N,9055µm,0.4s
LPEL                             AML   AML
      comp=E,8800µm,0.3s
LPEL                             AML   AML
      comp=N,9055µm,0.4s
LPEL                             AML   AML
      comp=E,8800µm,0.3s
LPEL                             AML   AML
      comp=N,9055µm,0.4s
GUAR  Guarcino        0.69 189   P     Pg    01 00 20.1 -1.3
GUAR                             AML   AML
      comp=E,5525µm,0.5s
GUAR                             AML   AML
      comp=N,7655µm,0.5s
GUAR                             AML   AML
      comp=E,5525µm,0.5s
GUAR                             AML   AML
      comp=N,7655µm,0.5s
GUAR                             AML   AML
      comp=E,5525µm,0.5s
GUAR                             AML   AML
      comp=N,7655µm,0.5s
CAFR  Castel Frentan  0.70 111   P     Pg    01 00 20.1 -1.5
CAFR                             S     Sg    01 00 29.6 -1.3
CAFR                             AML   AML
      comp=E,18200µm,0.4s
CAFR                             AML   AML
      comp=N,14250µm,0.8s
CAFR                             AML   AML
      comp=E,18200µm,0.4s
CAFR                             AML   AML
      comp=N,14250µm,0.8s
CAFR                             AML   AML
      comp=E,18200µm,0.4s
CAFR                             AML   AML
      comp=N,14250µm,0.8s
CAFR                             AML   AML
      comp=N,14250µm,0.8s
CAFR                             AML   AML
      comp=E,18200µm,0.4s
MDAR  Monte D'Aria    0.75 342   P     Pg    01 00 21.3 -1.2
CRM1  Catelraimondo   0.79 338   P     Pg    01 00 22.1 -1.1
CRM1                             AML   AML
      comp=E,29450µm,0.3s
CRM1                             AML   AML
      comp=N,26550µm,0.3s
CRM1                             AML   AML
      comp=E,29500µm,0.2s
CRM1                             AML   AML
      comp=N,26550µm,0.3s
CRM1                             AML   AML
      comp=N,26550µm,0.3s
CRM1                             AML   AML
      comp=E,29500µm,0.2s
GAG1  Gagliole        0.81 339   P     Pb    01 00 22.5 -0.7
GAG1                             AML   AML
      comp=E,21950µm,0.6s
GAG1                             AML   AML
      comp=N,15750µm,0.3s
GAG1                             AML   AML
      comp=E,21950µm,0.6s
GAG1                             AML   AML
      comp=N,15700µm,0.3s
GAG1                             AML   AML
      comp=E,21950µm,0.6s
GAG1                             AML   AML
      comp=N,15700µm,0.3s
ASSB  Assisi San Ben  0.82 314  eP     Pb    01 00 22.3 -1.0
ASSB                             AML   AML
      comp=E,4415µm,0.4s
ASSB                             AML   AML
      comp=N,5180µm,0.9s
ASSB                             AML   AML
      comp=E,4415µm,0.4s
ASSB                             AML   AML
      comp=N,5180µm,0.9s
ASSB                             AML   AML
      comp=E,4415µm,0.4s
ASSB                             AML   AML
      comp=N,5180µm,0.9s
TRE1  Treia           0.84 353   P     Pb    01 00 23.6 -0.1
TRE1                             AML   AML
      comp=E,18000µm,0.4s
TRE1                             AML   AML
      comp=N,17150µm,0.5s
TRE1                             AML   AML
      comp=E,18000µm,0.4s
TRE1                             AML   AML
      comp=N,17150µm,0.5s
TRE1                             AML   AML
      comp=E,18000µm,0.4s
TRE1                             AML   AML
      comp=N,17150µm,0.5s
SNTG  Esanatoglia     0.87 334   P     Pb    01 00 23.1 -1.0
SNTG                             AML   AML
      comp=E,3155µm,1.1s
SNTG                             AML   AML
      comp=N,4965µm,0.3s
SNTG                             AML   AML
      comp=E,3155µm,1.1s
SNTG                             AML   AML
      comp=N,4965µm,0.3s
SNTG                             AML   AML
      comp=N,4965µm,0.3s
SNTG                             AML   AML
      comp=E,3155µm,1.1s
RMP   Rome, Mte Porz  0.87 221   P     Pb    01 00 23.4 -0.8
RMP                              AML   AML
      comp=E,5405µm,1.4s
RMP                              AML   AML
      comp=N,5115µm,1.4s
RMP                              AML   AML
      comp=E,5400µm,1.4s
RMP                              AML   AML
      comp=N,5115µm,1.4s
RMP                              AML   AML
      comp=E,5400µm,1.4s
RMP                              AML   AML
      comp=N,5115µm,1.4s
EL6   Elcito          0.89 343  eP     Pb    01 00 23.7 -0.9
EL6                              AML   AML
      comp=E,8785µm,0.4s
EL6                              AML   AML
      comp=N,10460µm,0.9s
EL6                              AML   AML
      comp=E,8780µm,0.4s
EL6                              AML   AML
      comp=N,10490µm,0.9s
EL6                              AML   AML
      comp=N,10490µm,0.9s
EL6                              AML   AML
      comp=E,8780µm,0.4s
CING  Cingoli         0.92 348   P     Pb    01 00 24.1 -0.9
CING                             AML   AML
      comp=E,6840µm,1.1s
CING                             AML   AML
      comp=N,5130µm,1.0s
CING                             AML   AML
      comp=N,5130µm,1.0s
CING                             AML   AML
      comp=E,6840µm,1.1s
ATCC  AVT- Casa Cast  0.93 320   P     Pb    01 00 24.4 -0.8
ATCC                             AML   AML
      comp=E,6420µm,0.4s
ATCC                             AML   AML
      comp=N,6055µm,0.7s
ATCC                             AML   AML
      comp=E,6420µm,0.4s
ATCC                             AML   AML
      comp=N,6050µm,0.7s
ATCC                             AML   AML
      comp=E,6420µm,0.4s
ATCC                             AML   AML
      comp=N,6050µm,0.7s
RNI2  Rionero Sannit  0.93 146   P     Pb    01 00 23.5 -1.7
RNI2                             AML   AML
      comp=E,5025µm,0.9s
RNI2                             AML   AML
      comp=N,5140µm,1.0s
RNI2                             AML   AML
      comp=E,5025µm,0.9s
RNI2                             AML   AML
      comp=N,4825µm,1.0s
RNI2                             AML   AML
      comp=N,4825µm,1.0s
RNI2                             AML   AML
      comp=N,5140µm,1.0s
RNI2                             AML   AML
      comp=E,5025µm,0.9s
RNI2                             AML   AML
      comp=E,5025µm,0.9s
GIUL  Giuliano Di Ro  0.93 190   P     Pb    01 00 24.4 -0.8
GIUL                             AML   AML
      comp=E,3180µm,0.5s
GIUL                             AML   AML
      comp=N,3060µm,0.6s
GIUL                             AML   AML
      comp=N,3060µm,0.6s
GIUL                             AML   AML
      comp=E,3180µm,0.5s
CERA  Filignano       0.97 155   P     Pb    01 00 23.9 -2.1
CERA                             AML   AML
      comp=E,4300µm,0.8s
CERA                             AML   AML
      comp=N,3675µm,1.0s
CERA                             AML   AML
      comp=E,4395µm,0.8s
CERA                             AML   AML
      comp=N,3645µm,1.0s
CERA                             AML   AML
      comp=N,3675µm,1.0s
CERA                             AML   AML
      comp=N,3645µm,1.0s
CERA                             AML   AML
      comp=E,4395µm,0.8s
CERA                             AML   AML
      comp=E,4300µm,0.8s
LAV9  Lanuvio         0.98 216   P     Pb    01 00 25.4 -0.6
LAV9                             AML   AML
      comp=E,8280µm,0.4s
LAV9                             AML   AML
      comp=N,11140µm,0.9s
LAV9                             AML   AML
      comp=E,8380µm,0.4s
LAV9                             AML   AML
      comp=N,11670µm,0.9s
LAV9                             AML   AML
      comp=E,8280µm,0.4s
LAV9                             AML   AML
      comp=E,8380µm,0.4s
LAV9                             AML   AML
      comp=N,11670µm,0.9s
LAV9                             AML   AML
      comp=N,11140µm,0.9s
MIDA  Miranda         1.02 144   P     Pb    01 00 24.7 -2.1
MIDA                             AML   AML
      comp=E,3155µm,0.6s
MIDA                             AML   AML
      comp=N,2510µm,0.5s
MIDA                             AML   AML
      comp=E,3240µm,0.6s
MIDA                             AML   AML
      comp=N,2540µm,0.5s
MIDA                             AML   AML
      comp=N,2540µm,0.5s
MIDA                             AML   AML
      comp=N,2510µm,0.5s
MIDA                             AML   AML
      comp=E,3240µm,0.6s
MIDA                             AML   AML
      comp=E,3155µm,0.6s
MURB  Monte Urbino    1.04 319   P     Pb    01 00 26.4 -0.8
MURB                             AML   AML
      comp=E,9745µm,0.3s
MURB                             AML   AML
      comp=N,8155µm,1.3s
MURB                             AML   AML
      comp=E,10175µm,0.3s
MURB                             AML   AML
      comp=N,7380µm,1.3s
MURB                             AML   AML
      comp=E,9755µm,0.3s
MURB                             AML   AML
      comp=N,8155µm,1.3s
MURB                             AML   AML
      comp=E,10175µm,0.3s
MURB                             AML   AML
      comp=N,7380µm,1.3s
MURB                             AML   AML
      comp=E,9755µm,0.3s
MURB                             AML   AML
      comp=N,8155µm,1.3s
MURB                             AML   AML
      comp=N,7380µm,1.3s
MURB                             AML   AML
      comp=E,10175µm,0.3s
TRIV  Trivento        1.08 131   P     Pb    01 00 26.2 -1.5
TRIV                             AML   AML
      comp=E,2645µm,1.0s
TRIV                             AML   AML
      comp=N,2200µm,0.7s
TRIV                             AML   AML
      comp=N,2200µm,0.7s
TRIV                             AML   AML
      comp=E,2645µm,1.0s
SSFR  Montelago di S  1.08 333  eP     Pb    01 00 26.9 -0.9
SSFR                             AML   AML
      comp=E,6890µm,1.3s
SSFR                             AML   AML
      comp=N,7050µm,0.3s
SSFR                             AML   AML
      comp=E,6890µm,1.3s
SSFR                             AML   AML
      comp=N,7050µm,0.3s
MGAB  Montegabbione   1.08 294  eP     Pb    01 00 27.4 -0.5
MGAB                             AML   AML
      comp=E,5215µm,0.6s
MGAB                             AML   AML
      comp=N,4190µm,0.9s
MGAB                             AML   AML
      comp=E,5150µm,0.5s
MGAB                             AML   AML
      comp=N,4585µm,0.5s
MGAB                             AML   AML
      comp=E,5215µm,0.6s
MGAB                             AML   AML
      comp=E,5150µm,0.5s
MGAB                             AML   AML
      comp=N,4585µm,0.5s
MGAB                             AML   AML
      comp=N,4190µm,0.9s
ATTE  AVT- Monte Tez  1.09 312   P     Pb    01 00 27.2 -0.7
ATTE                             AML   AML
      comp=E,2025µm,0.9s
ATTE                             AML   AML
      comp=N,1780µm,0.8s
ATTE                             AML   AML
      comp=E,2025µm,0.9s
ATTE                             AML   AML
      comp=N,1780µm,0.8s
ATTE                             AML   AML
      comp=E,2025µm,0.9s
ATTE                             AML   AML
      comp=N,1780µm,0.8s
ARVD  Arcevia         1.09 340   P     Pb    01 00 27.1 -0.8
ARVD                             AML   AML
      comp=E,3565µm,1.3s
ARVD                             AML   AML
      comp=N,2120µm,0.6s
ARVD                             AML   AML
      comp=E,3565µm,1.3s
ARVD                             AML   AML
      comp=N,2120µm,0.6s
TOLF  Tolfa           1.16 250   P     Pn    01 00 28.7 -0.2
TOLF                             AML   AML
      comp=E,2050µm,0.8s
TOLF                             AML   AML
      comp=N,1195µm,1.3s
TOLF                             AML   AML
      comp=N,1195µm,1.3s
TOLF                             AML   AML
      comp=E,2050µm,0.8s
FRON  Frontone        1.17 333   P     Pn    01 00 28.4 -0.6
FRON                             AML   AML
      comp=E,3360µm,0.6s
FRON                             AML   AML
      comp=N,3820µm,0.6s
FRON                             AML   AML
      comp=E,3360µm,0.6s
FRON                             AML   AML
      comp=N,3820µm,0.6s
ATVO  AVT- Monte Val  1.19 320   P     Pn    01 00 28.8 -0.5
ATVO                             AML   AML
      comp=E,1715µm,0.7s
ATVO                             AML   AML
      comp=N,2185µm,0.8s
ATVO                             AML   AML
      comp=E,1715µm,0.7s
ATVO                             AML   AML
      comp=N,2185µm,0.8s
COR1  Corinaldo       1.20 344   P     Pg    01 00 30.1 -0.8
COR1                             AML   AML
      comp=E,3440µm,0.9s
COR1                             AML   AML
      comp=N,5860µm,1.0s
COR1                             AML   AML
      comp=N,5860µm,1.0s
COR1                             AML   AML
      comp=E,3440µm,0.9s
SACS  San Casciano d  1.20 288   P     Pn    01 00 29.6 +0.1
SACS                             AML   AML
      comp=E,1450µm,0.8s
SACS                             AML   AML
      comp=N,1395µm,0.4s
SACS                             AML   AML
      comp=E,1480µm,0.8s
SACS                             AML   AML
      comp=N,1470µm,0.4s
SACS                             AML   AML
      comp=N,1470µm,0.4s
SACS                             AML   AML
      comp=N,1395µm,0.4s
SACS                             AML   AML
      comp=E,1480µm,0.8s
SACS                             AML   AML
      comp=E,1450µm,0.8s
VAGA  Valle Agricola  1.21 151   P     Pn    01 00 28.3 -1.3
VAGA                             AML   AML
      comp=E,1250µm,0.8s
VAGA                             AML   AML
      comp=N,2270µm,0.5s
VAGA                             AML   AML
      comp=E,1270µm,0.8s
VAGA                             AML   AML
      comp=N,2310µm,0.5s
VAGA                             AML   AML
      comp=N,2270µm,0.5s
VAGA                             AML   AML
      comp=E,1270µm,0.8s
VAGA                             AML   AML
      comp=E,1250µm,0.8s
VAGA                             AML   AML
      comp=N,2310µm,0.5s
SENI  Senigallia      1.24 352   AML   AML
      comp=N,4425µm,0.9s
SENI                             AML   AML
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           comp=E,12400µm,1.4s
SENI                                 AML    AML
           comp=N,12200µm,1.0s
SENI                                 AML    AML
           comp=E,3626µm,1.0s
SENI                                 AML    AML
           comp=N,12200µm,1.0s
SENI                                 AML    AML
           comp=E,12400µm,1.4s
SENI                                 AML    AML
           comp=E,3626µm,1.0s
SENI                                 AML    AML
           comp=N,4425µm,0.9s
ATPC  Poggio Castell       1.24 324  P      Pn        01 00 29.9  -0.2
ATPC                                 AML    AML
           comp=E,3695µm,0.5s
ATPC                                 AML    AML
           comp=N,4735µm,1.5s
ATPC                                 AML    AML
           comp=E,3695µm,0.5s
ATPC                                 AML    AML
           comp=N,4735µm,1.5s
ATPI  Pietralunga -        1.25 322  AML    AML
           comp=E,2640µm,0.6s
ATPI                                 AML    AML
           comp=N,2255µm,0.5s
ATPI                                 AML    AML
           comp=E,2640µm,0.6s
ATPI                                 AML    AML
           comp=N,2255µm,0.5s
BSSO  Busso               1.26 137  AML    AML
           comp=N,1440µm,0.6s
BSSO                                 AML    AML
           comp=E,1360µm,0.9s
BSSO                                 AML    AML
           comp=N,1445µm,0.6s
BSSO                                 AML    AML
           comp=E,1370µm,0.9s
BSSO                                 AML    AML
           comp=N,1440µm,0.6s
BSSO                                 AML    AML
           comp=E,1360µm,0.9s
BSSO                                 AML    AML
           comp=N,1445µm,0.6s
BSSO                                 AML    AML
           comp=E,1370µm,0.9s
PIEI  Pieia                1.26 328  P      Pn        01 00 30.0  -0.3
PIEI                                 AML    AML
           comp=E,2365µm,0.3s
PIEI                                 AML    AML
           comp=N,2235µm,1.2s
PIEI                                 AML    AML
           comp=N,2235µm,1.2s
PIEI                                 AML    AML
           comp=E,2365µm,0.3s
MPAG  Monte Paganucc       1.26 336 eP      Pn        01 00 30.2  -0.1
MPAG                                 AML    AML
           comp=E,2785µm,0.5s
MPAG                                 AML    AML
           comp=N,2565µm,0.4s
MPAG                                 AML    AML
           comp=E,2775µm,0.5s
MPAG                                 AML    AML
           comp=N,2620µm,0.4s
MPAG                                 AML    AML
           comp=E,2775µm,0.5s
MPAG                                 AML    AML
           comp=N,2565µm,0.4s
MPAG                                 AML    AML
           comp=N,2620µm,0.4s
MPAG                                 AML    AML
           comp=E,2785µm,0.5s
SGG   Gregorio Mates       1.29 148  AML    AML
           comp=E,2420µm,0.6s
SGG                                  AML    AML
           comp=E,2420µm,0.6s
SGG                                  AML    AML
           comp=N,1045µm,0.6s
SGG                                  AML    AML
           comp=N,1045µm,0.6s
NARO  Abbazia di Nar       1.30 331  P      Pn        01 00 30.8   0.0
NARO                                 AML    AML
           comp=E,1700µm,0.8s
NARO                                 AML    AML
           comp=N,1670µm,1.4s
NARO                                 AML    AML
           comp=N,1670µm,1.4s
NARO                                 AML    AML
           comp=E,1700µm,0.8s
FSSB  Fossombrone          1.31 338  AML    AML
           comp=N,10345µm,0.4s
FSSB                                 AML    AML
           comp=E,9760µm,0.4s
FSSB                                 AML    AML
           comp=N,10345µm,0.4s
FSSB                                 AML    AML
           comp=E,9760µm,0.4s
CDCA  Citt‘ di Caste       1.33 318  AML    AML
           comp=E,3235µm,0.5s
CDCA                                 AML    AML
           comp=E,3235µm,0.5s
CDCA                                 AML    AML
           comp=N,5815µm,0.7s
CDCA                                 AML    AML
           comp=E,1475µm,1.2s
CDCA                                 AML    AML
           comp=N,2058µm,0.6s
CDCA                                 AML    AML
           comp=N,2058µm,0.6s
CDCA                                 AML    AML
           comp=E,1475µm,1.2s
CDCA                                 AML    AML
           comp=N,5815µm,0.7s
ATMC  Monte Cedrone        1.34 317  AML    AML
           comp=E,2165µm,0.5s
ATMC                                 AML    AML
           comp=E,2165µm,0.5s
ATMC                                 AML    AML
           comp=N,2000µm,0.5s
ATMC                                 AML    AML
           comp=N,2000µm,0.5s
CIGN  Sant’Elia a Pi       1.35 127  AML    AML
           comp=E,887µm,0.6s
CIGN                                 AML    AML
           comp=E,887µm,0.6s
CIGN                                 AML    AML
           comp=N,762µm,1.5s
CIGN                                 AML    AML
           comp=N,762µm,1.5s
BADI  Badiali              1.36 320  P      Pb        01 00 32.3  -0.3
BADI                                 AML    AML
           comp=E,1505µm,0.6s
BADI                                 AML    AML
           comp=N,1920µm,0.5s
BADI                                 AML    AML
           comp=E,1505µm,0.6s
BADI                                 AML    AML
           comp=N,1920µm,0.5s
PTRJ  Pietraroja           1.37 144  AML    AML
           comp=E,2875µm,1.0s
PTRJ                                 AML    AML
           comp=E,2875µm,1.0s
PTRJ                                 AML    AML
           comp=N,4205µm,0.9s
PTRJ                                 AML    AML
           comp=N,4205µm,0.9s
CAFI  Castiglion Fio       1.39 308  P      Pb        01 00 32.6  -0.5
CAFI                                 AML    AML
           comp=E,1350µm,0.8s
CAFI                                 AML    AML
           comp=N,2436µm,1.4s
CAFI                                 AML    AML
           comp=E,1370µm,0.8s
CAFI                                 AML    AML
           comp=N,1086µm,1.0s
CAFI                                 AML    AML
           comp=N,2436µm,1.4s
CAFI                                 AML    AML
           comp=N,1086µm,1.0s
CAFI                                 AML    AML
           comp=E,1350µm,0.8s
CAFI                                 AML    AML
           comp=E,1370µm,0.8s
PE3   Peglio               1.41 330  AML    AML
           comp=E,6195µm,0.6s
PE3                                  AML    AML
           comp=N,6570µm,1.3s
PE3                                  AML    AML
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           comp=N,6570µm,1.3s
PE3                                  AML    AML
           comp=E,6195µm,0.6s
GATE  Gambatesa            1.45 131  AML    AML
           comp=E,466µm,0.5s
GATE                                 AML    AML
           comp=E,946µm,0.9s
GATE                                 AML    AML
           comp=N,941µm,0.6s
GATE                                 AML    AML
           comp=E,466µm,0.5s
GATE                                 AML    AML
           comp=N,980µm,0.6s
GATE                                 AML    AML
           comp=E,946µm,0.9s
GATE                                 AML    AML
           comp=N,941µm,0.6s
GATE                                 AML    AML
           comp=N,980µm,0.6s
MELA  Melanico ??? S       1.46 121  AML    AML
           comp=N,3170µm,0.7s
MELA                                 AML    AML
           comp=E,2470µm,0.6s
MELA                                 AML    AML
           comp=E,2530µm,0.6s
MELA                                 AML    AML
           comp=N,3270µm,0.7s
MELA                                 AML    AML
           comp=E,2530µm,0.6s
MELA                                 AML    AML
           comp=E,2470µm,0.6s
MELA                                 AML    AML
           comp=N,3170µm,0.7s
MELA                                 AML    AML
           comp=N,3270µm,0.7s
SSP9  Sansepolcro          1.47 319  AML    AML
           comp=N,1268µm,0.6s
SSP9                                 AML    AML
           comp=E,1120µm,1.1s
SSP9                                 AML    AML
           comp=N,1268µm,0.6s
SSP9                                 AML    AML
           comp=E,1120µm,1.1s
PARC  Parchiule            1.47 323  P      Pb        01 00 33.9  -0.6
PARC                                 AML    AML
           comp=E,2255µm,0.7s
PARC                                 AML    AML
           comp=N,1290µm,0.5s
PARC                                 AML    AML
           comp=N,1290µm,0.5s
PARC                                 AML    AML
           comp=E,2255µm,0.7s
ARCI  Arcidosso            1.51 285  AML    AML
           comp=E,386µm,0.6s
ARCI                                 AML    AML
           comp=E,386µm,0.6s
ARCI                                 AML    AML
           comp=N,370µm,0.5s
ARCI                                 AML    AML
           comp=N,370µm,0.5s
PESA  Pesaro               1.53 343  P      Pg        01 00 36.1  -1.1
PESA                                 AML    AML
           comp=E,3675µm,1.3s
PESA                                 AML    AML
           comp=N,3150µm,0.3s
PESA                                 AML    AML
           comp=E,3675µm,1.3s
PESA                                 AML    AML
           comp=N,3150µm,0.3s
CPGN  Carpegna, Ital       1.56 328  AML    AML
           comp=N,2476µm,0.8s
CPGN                                 AML    AML
           comp=E,3000µm,1.6s
CPGN                                 AML    AML
           comp=N,2715µm,0.8s
CPGN                                 AML    AML
           comp=E,3180µm,1.5s
CPGN                                 AML    AML
           comp=E,3000µm,1.6s
CPGN                                 AML    AML
           comp=E,3180µm,1.5s
CPGN                                 AML    AML
           comp=N,2715µm,0.8s
CPGN                                 AML    AML
           comp=N,2476µm,0.8s
MAON  Monte Argentar       1.73 269  P      Pn        01 00 37.3  +0.7
MAON                                 AML    AML
           comp=E,375µm,0.7s
MAON                                 AML    AML
           comp=N,272µm,1.4s
MAON                                 AML    AML
           comp=N,272µm,1.4s
MAON                                 AML    AML
           comp=E,375µm,0.7s
ASQU  Asqua                1.80 318  AML    AML
           comp=N,782µm,0.5s
ASQU                                 AML    AML
           comp=E,653µm,0.8s
ASQU                                 AML    AML
           comp=N,782µm,0.5s
ASQU                                 AML    AML
           comp=E,653µm,0.8s
FROS  Frosini              1.85 294  AML    AML
           comp=N,372µm,0.6s
FROS                                 AML    AML
           comp=E,586µm,0.6s
FROS                                 AML    AML
           comp=E,586µm,0.6s
FROS                                 AML    AML
           comp=N,372µm,0.6s
SGRT  San Giovanni R       1.85 112  P      Pn        01 00 39.1  +0.7
SGRT                                 AML    AML
           comp=E,1405µm,0.4s
SGRT                                 AML    AML
           comp=N,1002µm,0.7s
SGRT                                 AML    AML
           comp=E,1405µm,0.4s
SGRT                                 AML    AML
           comp=N,1002µm,0.7s
CSNT  Castellina Chi       1.88 303  AML    AML
           comp=E,338µm,0.5s
CSNT                                 AML    AML
           comp=E,338µm,0.5s
CSNT                                 AML    AML
           comp=N,360µm,0.6s
CSNT                                 AML    AML
           comp=N,360µm,0.6s
CASP  Castiglione de       1.94 280  P      Pn        01 00 40.1  +0.5
CASP                                 AML    AML
           comp=E,128µm,1.1s
CASP                                 AML    AML
           comp=N,180µm,0.7s
CASP                                 AML    AML
           comp=E,128µm,1.1s
CASP                                 AML    AML
           comp=N,180µm,0.7s
CAFE  Carife               1.97 137  AML    AML
           comp=N,500µm,1.6s
CAFE                                 AML    AML
           comp=E,528µm,0.6s
CAFE                                 AML    AML
           comp=N,524µm,1.6s
CAFE                                 AML    AML
           comp=E,576µm,0.6s
CAFE                                 AML    AML
           comp=N,500µm,1.6s
CAFE                                 AML    AML
           comp=N,524µm,1.6s
CAFE                                 AML    AML
           comp=E,528µm,0.6s
CAFE                                 AML    AML
           comp=E,576µm,0.6s
MSAG  Monte S. Angel       1.98 112  AML    AML
           comp=E,1122µm,1.2s
MSAG                                 AML    AML
           comp=E,1096µm,1.2s
MSAG                                 AML    AML
           comp=N,2695µm,0.4s
MSAG                                 AML    AML
           comp=E,1122µm,1.2s
MSAG                                 AML    AML
           comp=N,2700µm,0.4s
MSAG                                 AML    AML
           comp=N,2700µm,0.4s
MSAG                                 AML    AML
           comp=E,1096µm,1.2s
MSAG                                 AML    AML
           comp=N,2695µm,0.4s
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TRIF  Trifonti             1.99 290  P      Pn        01 00 41.1  +0.9
TRIF                                 AML    AML
           comp=E,312µm,0.7s
TRIF                                 AML    AML
           comp=N,223µm,0.5s
TRIF                                 AML    AML
           comp=E,312µm,0.7s
TRIF                                 AML    AML
           comp=N,223µm,0.5s
SEI   Scarperia            2.20 316  AML    AML
           comp=E,654µm,0.7s
SEI                                  AML    AML
           comp=N,1245µm,0.5s
SEI                                  AML    AML
           comp=E,654µm,0.7s
SEI                                  AML    AML
           comp=N,1245µm,0.5s
VULT  Monte Vulture        2.22 133  AML    AML
           comp=E,458µm,0.5s
VULT                                 AML    AML
           comp=E,458µm,0.5s
VULT                                 AML    AML
           comp=N,892µm,0.6s
VULT                                 AML    AML
           comp=N,892µm,0.6s
CRMI  Carmignano           2.25 307  AML    AML
           comp=E,94µm,0.4s
CRMI                                 AML    AML
           comp=N,99µm,0.7s
CRMI                                 AML    AML
           comp=E,94µm,0.4s
CRMI                                 AML    AML
           comp=N,99µm,0.7s
NVLJ  Novalja              2.32  26 i Pn    Pn        01 00 45.2  +0.4
NVLJ                                 Sn     Sn        01 01 11.8  -1.0
ACER  Acerenza             2.51 131  AML    AML
           comp=N,432µm,0.5s
ACER                                 AML    AML
           comp=E,574µm,0.6s
ACER                                 AML    AML
           comp=N,418µm,0.5s
ACER                                 AML    AML
           comp=E,597µm,0.7s
ACER                                 AML    AML
           comp=N,418µm,0.5s
ACER                                 AML    AML
           comp=N,432µm,0.5s
ACER                                 AML    AML
           comp=E,597µm,0.7s
ACER                                 AML    AML
           comp=E,574µm,0.6s
MAIM  Mastiano             2.60 304  AML    AML
           comp=E,204µm,0.6s
MAIM                                 AML    AML
           comp=N,224µm,0.7s
MAIM                                 AML    AML
           comp=E,204µm,0.6s
MAIM                                 AML    AML
           comp=N,224µm,0.7s
BDI   Bagni Di Lucca       2.62 308  AML    AML
           comp=E,397µm,0.8s
BDI                                  AML    AML
           comp=E,397µm,0.8s
BDI                                  AML    AML
           comp=N,220µm,0.8s
BDI                                  AML    AML
           comp=E,356µm,0.6s
BDI                                  AML    AML
           comp=N,260µm,0.9s
BDI                                  AML    AML
           comp=N,220µm,0.8s
BDI                                  AML    AML
           comp=N,260µm,0.9s
BDI                                  AML    AML
           comp=E,356µm,0.6s
UDBI  Udbina               2.65  38 ePn     Pn        01 00 50.8  +1.4
CARD  Cardoso              2.67 306  P      Pn        01 00 51.1  +1.4
SARO  Sassorosso           2.81 308  P      Pn        01 00 52.5  +0.9
SARO  Sassorosso           2.81 308  AML    AML
           comp=E,218µm,0.7s
SARO                                 AML    AML
           comp=E,218µm,0.7s
SARO                                 AML    AML
           comp=N,224µm,0.6s
SARO                                 AML    AML
           comp=N,224µm,0.6s
AMUR  Altamura             2.83 123  AML    AML
           comp=N,290µm,0.7s
AMUR                                 AML    AML
           comp=E,382µm,1.1s
AMUR                                 AML    AML
           comp=N,290µm,0.7s
AMUR                                 AML    AML
           comp=E,382µm,1.1s
BAI   Bari                 2.90 117⇓iPn     Pn        01 00 54.3  +1.5
BAI                                  Sn     Sn        01 01 28.6  +1.5
SG1   Sgolgore (BA)        2.91 123⇓iPn     Pn        01 00 54.6  +1.6
SG1                                  Sn     Sb        01 01 31.5  -2.8
EQUI  Equi                 2.94 306  P      Pn        01 00 54.8  +1.4
EQUI  Equi                 2.94 306  AML    AML
           comp=N,173µm,0.9s
EQUI                                 AML    AML
           comp=E,113µm,0.6s
EQUI                                 AML    AML
           comp=E,113µm,0.6s
EQUI                                 AML    AML
           comp=N,173µm,0.9s
MATE  Matera               3.04 126⇑iP      Pn        01 00 56.5  +1.8
PLMA  Palmaria, Port       3.07 302  AML    AML
           comp=E,80µm,0.7s
PLMA                                 AML    AML
           comp=N,142µm,0.7s
PLMA                                 AML    AML
           comp=E,80µm,0.7s
PLMA                                 AML    AML
           comp=N,142µm,0.7s
SMPL  Sampolo              3.12 264  AML    AML
           comp=E,2020µm,0.7s
SMPL                                 AML    AML
           comp=N,2350µm,0.4s
SMPL                                 AML    AML
           comp=N,2350µm,0.4s
SMPL                                 AML    AML
           comp=E,2020µm,0.7s
STON  Ston                 3.15  81 ePn     Pn        01 00 57.2  +1.0
NOCI  Noci                 3.19 121  AML    AML
           comp=E,220µm,0.7s
NOCI                                 AML    AML
           comp=E,220µm,0.7s
NOCI                                 AML    AML
           comp=N,254µm,1.6s
NOCI                                 AML    AML
           comp=N,254µm,1.6s
GRAM  Graiana              3.19 310  AML    AML
           comp=E,297µm,0.8s
GRAM                                 AML    AML
           comp=E,297µm,0.8s
GRAM                                 AML    AML
           comp=N,265µm,0.8s
GRAM                                 AML    AML
           comp=N,265µm,0.8s
BOJS  Bojanci              3.29  23  AML    AML
           comp=N,132µm,1.4s
BOJS                                 AML    AML
           comp=E,156µm,0.8s
BOJS                                 AML    AML
           comp=N,132µm,1.4s
BOJS                                 AML    AML
           comp=E,156µm,0.8s
PGF   Pioggiola            3.30 273 eP      Pn        01 00 59.7  +1.3
           SNR=1.0
PGF                                 eSn     Sn        01 01 32.9  -4.2
           comp=E,37nm,0.9s
PGF   Pioggiola            3.30 273  AML    AML
           comp=N,41µm,1.5s
PGF                                  AML    AML
           comp=E,50µm,1.6s
PGF                                  AML    AML
           comp=N,41µm,1.5s
PGF                                  AML    AML
           comp=E,50µm,1.6s
CEY   Cerknica             3.33  12 ePn     Pn        01 00 59.3  +0.5
FASA  Fasano               3.36 118⇓iPn     Pn        01 01 00.8  +1.7
MSSA  Maissana             3.41 304  AML    AML
           comp=E,100µm,0.7s
MSSA                                 AML    AML
           comp=E,100µm,0.7s
MSSA                                 AML    AML
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	comp=N,126µm,0.9s						
MSSA				AML	AML		
	comp=N,126µm,0.9s						
OZLJ	**Ozalj**	**3.45**	**24**	ePn	**Pn**	**01 01 01.3**	**+0.9**
SABO	**M.te Sabotino**	**3.50**	**2**	AML	AML		
	comp=E,414µm,0.5s						
SABO				AML	AML		
	comp=N,513µm,0.6s						
SABO				AML	AML		
	comp=E,414µm,0.5s						
SABO				AML	AML		
	comp=N,513µm,0.6s						
BLY	**Banja Luka**	**3.53**	**49**	⇑iP	**Pn**	**01 01 03.1**	**+1.7**
BLY	**Banja Luka**	**3.53**	**49**	⇑iPn	**Pn**	**01 01 02.9**	**+1.5**
CGRP	**Cima Grappa**	**3.60**	**341**	AML	AML		
	comp=N,374µm,0.8s						
CGRP				AML	AML		
	comp=E,471µm,0.6s						
CGRP				AML	AML		
	comp=N,374µm,0.8s						
CGRP				AML	AML		
	comp=E,471µm,0.6s						
POLC	**Polcenigo**	**3.62**	**349**	AML	AML		
	comp=N,820µm,0.5s						
POLC				AML	AML		
	comp=E,478µm,0.7s						
POLC				AML	AML		
	comp=N,820µm,0.5s						
POLC				AML	AML		
	comp=E,478µm,0.7s						
TREB	**Trebinje**	**3.62**	**85**	ePn	**Pn**	**01 01 03.8**	**+1.1**
TREB				eSn	**Sn**	**01 01 45.8**	**+1.0**
TREB	**Trebinje**	**3.62**	**85**	⇑iPn	**Pn**	**01 01 03.9**	**+1.2**
CRES	**Cresnjev**	**3.64**	**23**	⇑iPn	**Pn**	**01 01 03.6**	**+0.6**
LJU	**Ljubljana**	**3.65**	**12**	ePn	**Pn**	**01 01 04.0**	**+0.9**
LJU				eSn	**Sn**	**01 01 47.4**	**+1.8**
	comp=Z,93nm,0.9s						
LJU	**Ljubljana**	**3.65**	**12**	⇑iPn	**Pn**	**01 01 03.9**	**+0.9**
LJU	**Ljubljana**	**3.65**	**12**	AML	AML		
	comp=N,587µm,0.8s						
LJU				AML	AML		
	comp=E,396µm,0.6s						
LJU				AML	AML		
	comp=E,396µm,0.6s						
LJU				AML	AML		
	comp=N,587µm,0.8s						
HCY	**Herceg Novi**	**3.72**	**89**	⇓iPn	**Pn**	**01 01 05.3**	**+1.2**
HCY				i Sn	**Sn**	**01 01 50.1**	**+2.7**
HCY	**Herceg Novi**	**3.72**	**89**	⇑iPn	**Pn**	**01 01 05.1**	**+1.0**
BRY	**Bratogost**	**3.77**	**82**	⇑iPn	**Pn**	**01 01 06.1**	**+1.2**
BRY				i Sn	**Sn**	**01 01 50.4**	**+1.7**
BRY	**Bratogost**	**3.77**	**82**	⇑iPn	**Pn**	**01 01 06.1**	**+1.2**
CTI	**Castel Tesino**	**3.80**	**341**	AML	AML		
	comp=E,252µm,0.9s						
CTI				AML	AML		
	comp=N,244µm,0.2s						
CTI				AML	AML		
	comp=E,252µm,0.9s						
CTI				AML	AML		
	comp=N,244µm,0.2s						
GEPF	**Gemona**	**3.80**	**357**	AML	AML		
	comp=N,194µm,0.4s						
GEPF				AML	AML		
	comp=E,150µm,0.6s						
GEPF				AML	AML		
	comp=N,194µm,0.4s						
GEPF				AML	AML		
	comp=E,150µm,0.6s						
STAL	**STALIGIAL**	**3.82**	**352**	AML	AML		
	comp=E,306µm,0.6s						
STAL				AML	AML		
	comp=E,257µm,0.2s						
STAL				AML	AML		
	comp=N,346µm,1.5s						
STAL				AML	AML		
	comp=N,216µm,0.3s						
STAL				AML	AML		
	comp=E,306µm,0.6s						
STAL				AML	AML		
	comp=E,257µm,0.2s						
STAL				AML	AML		
	comp=N,346µm,1.5s						
STAL				AML	AML		
	comp=N,216µm,0.3s						
MAGA	**Magasa**	**3.88**	**329**	AML	AML		
	comp=E,720µm,0.6s						
MAGA				AML	AML		
	comp=N,418µm,0.4s						
MAGA				AML	AML		
	comp=N,418µm,0.4s						
MAGA				AML	AML		
	comp=E,720µm,0.6s						
AGOR	**Agordo**	**3.94**	**346**	AML	AML		
	comp=E,185µm,0.4s						
AGOR				AML	AML		
	comp=E,185µm,0.4s						
AGOR				AML	AML		
	comp=N,126µm,0.4s						
AGOR				AML	AML		
	comp=N,126µm,0.4s						
BUM	**Brajici-Budva**	**4.03**	**91**	⇓iPn	**Pn**	**01 01 09.7**	**+1.3**
BUM				i Sn	**Sn**	**01 01 58.0**	**+3.0**
NKME	**Niksic**	**4.06**	**84**	⇓iPn	**Pn**	**01 01 10.1**	**+1.3**
NKME				i Sn	**Sn**	**01 01 58.4**	**+2.5**
OBKA	**Obir**	**4.11**	**11**	ePn	**Pn**	**01 01 10.0**	**+0.6**
	comp=N,8.8nm,0.3s						
OBKA				Pg	**Pg**	**01 01 25.7**	**-0.6**
	comp=N,36nm,0.5s						
OBKA				Sn	**Sn**	**01 01 59.7**	**+2.8**
	comp=N,12nm,0.4s						
TIP	**Timpagrande**	**4.14**	**142**	⇓iP	**Pb**	**01 01 15.5**	**-4.4**
MYKA	**Terra Mystica**	**4.15**	**2**	ePn	**Pn**	**01 01 11.4**	**+1.3**
	comp=N,8.8nm,0.2s						
MYKA				eSn	**Sn**	**01 01 59.8**	**+1.7**
	comp=N,20nm,0.3s						
DRME	**Dracevica, Mon**	**4.25**	**92**	⇓iPn	**Pn**	**01 01 12.8**	**+1.4**
DRME				i Sn	**Sn**	**01 02 02.9**	**+2.4**
DRME	**Dracevica, Mon**	**4.25**	**92**	ePn	**Pn**	**01 01 12.9**	**+1.5**
KOSI	**Kohlern**	**4.25**	**340**	P	**Pn**	**01 01 12.4**	**+0.8**
PDG	**Podgorica**	**4.29**	**89**	ePn	**Pn**	**01 01 13.5**	**+1.6**
PDG				eSn	**Sn**	**01 02 02.2**	**+0.9**
PDG	**Podgorica**	**4.29**	**89**	⇓iP	**Pn**	**01 01 13.4**	**+1.6**
PDG	**Podgorica**	**4.29**	**89**	ePn	**Pn**	**01 01 13.2**	**+1.4**
PDG	**Podgorica**	**4.29**	**89**	P	**Pn**	**01 01 14.2**	**+2.3**
PDG				AML	AML		
	comp=E,142µm,1.3s						
PDG				AML	AML		
	comp=N,170µm,1.0s						
PDG				AML	AML		
	comp=N,170µm,1.0s						
PDG				AML	AML		
	comp=E,142µm,1.3s						
TTG	**Podgorica**	**4.29**	**89**	⇑iPn	**Pn**	**01 01 13.4**	**+1.6**
TTG				i Sn	**Sn**	**01 02 03.6**	**+2.3**
APPI	**Appiano**	**4.31**	**339**	P	**Pn**	**01 01 13.8**	**+1.6**
APPI				AML	AML		
	comp=E,160µm,1.5s						
APPI				AML	AML		
	comp=N,218µm,0.3s						
APPI				AML	AML		
	comp=N,218µm,0.3s						
APPI				AML	AML		
	comp=E,160µm,1.5s						
HAPS	**Han Pijesak,Bl**	**4.32**	**66**	⇑iPn	**Pn**	**01 01 13.1**	**+0.7**
ABTA	**Abfaltersbach**	**4.32**	**351**	ePn	**Pn**	**01 01 13.7**	**+1.3**
	comp=E,9.6nm,0.2s,SNR=28						
ABTA				eSn	**Sn**	**01 02 04.4**	**+2.1**
	comp=E,22nm,0.4s						
ULC	**Ulcinj**	**4.33**	**95**	⇑iPn	**Pn**	**01 01 13.8**	**+1.4**
ULC				i Sn	**Sn**	**01 02 03.6**	**+1.3**
SOKA	**Soboth**	**4.35**	**14**	ePn	**Pn**	**01 01 13.3**	**+0.6**
	comp=E,8.1nm,0.4s						
SOKA				eSn	**Sn**	**01 02 03.9**	**+1.0**
	comp=E,13nm,0.7s						
BRES	**Bressanone**	**4.40**	**344**	P	**Pn**	**01 01 15.3**	**+1.7**
BRES				AML	AML		
	comp=E,160µm,0.3s						
BRES				AML	AML		
	comp=N,156µm,0.4s						
BRES				AML	AML		
	comp=E,160µm,0.3s						
BRES				AML	AML		
	comp=N,156µm,0.4s						
KOGS	**Kog**	**4.44**	**26**	P	**Pn**	**01 01 15.4**	**+1.5**
KOME	**Kolasin**	**4.48**	**83**	⇑iPn	**Pn**	**01 01 15.9**	**+1.3**
KOME				i Sn	**Sn**	**01 02 08.3**	**+2.1**
ABSI	**Aberstueckl**	**4.52**	**341**	P	**Pn**	**01 01 16.4**	**+1.3**
ABSI				AML	AML		
	comp=E,406µm,0.3s						
ABSI				AML	AML		
	comp=N,378µm,0.4s						
ABSI				AML	AML		
	comp=N,378µm,0.4s						
ABSI				AML	AML		
	comp=E,406µm,0.3s						
BBLS	**Lazići**	**4.56**	**70**	ePn	**Pn**	**01 01 17.6**	**+1.9**
BBLS	**Lazići**	**4.56**	**70**	⇑iPn	**Pn**	**01 01 17.3**	**+1.6**
BRMO	**Bormio**	**4.57**	**332**	P	**Pn**	**01 01 18.5**	**+2.7**
RISI	**Rein**	**4.58**	**348**	P	**Pn**	**01 01 17.8**	**+1.8**
RISI				AML	AML		
	comp=E,512µm,0.5s						
RISI				AML	AML		
	comp=N,574µm,0.6s						
RISI				AML	AML		
	comp=N,574µm,0.6s						
RISI				AML	AML		
	comp=E,512µm,0.5s						
KBA	**Koelnbreinsper**	**4.60**	**359**	ePn	**Pn**	**01 01 17.5**	**+1.2**
	comp=E,5.6nm,0.3s,SNR=5.4						
KBA				eSn	**Sn**	**01 02 09.9**	**+0.6**
	comp=E,15nm,0.3s						
SBF	**Sospel**	**4.62**	**289**	eP	**Pn**	**01 01 17.9**	**+1.4**
	SNR=1.0						
SBF				eSn	**Sn**	**01 02 03.2**	**-6.4**
	comp=E,19nm,0.5s						
MOSI	**Grossmontoni**	**4.63**	**334**	P	**Pn**	**01 01 19.9**	**+3.2**
ROSI	**Rosskopf**	**4.68**	**343**	P	**Pn**	**01 01 19.8**	**+2.3**
MUGIO	**Muggio**	**4.69**	**319**	P	**Pn**	**01 01 18.9**	**+1.5**
FUORN	**Ofenpass-Fuorn**	**4.73**	**332**	P	**Pn**	**01 01 20.7**	**+2.5**
IVA	**Berane**	**4.76**	**83**	ePn	**Pn**	**01 01 21.5**	**+3.1**
IVA				i Sn	**Sn**	**01 02 15.4**	**+2.3**
PUK	**Puka**	**4.79**	**93**	P	**Pn**	**01 01 21.0**	**+2.2**
PVY	**Plav**	**4.80**	**86**	⇑iPn	**Pn**	**01 01 22.5**	**+3.4**
PVY				i Sn	**Sn**	**01 02 16.4**	**+2.2**
SJES	**Sjenica**	**4.85**	**79**	ePn	**Pn**	**01 01 21.7**	**+2.0**
TIR	**Tirane**	**4.91**	**101**	ePn	**Pn**	**01 01 21.7**	**+1.3**
TIR				eSn	**Sn**	**01 02 17.4**	**+0.7**
TIR	**Tirane**	**4.91**	**101**	⇓iP	**Pn**	**01 01 21.8**	**+1.3**
FETA	**Feichten**	**4.94**	**338**	ePn	**Pn**	**01 01 23.3**	**+2.3**
	comp=E,12nm,0.4s,SNR=8.1						
FETA				Sn	**Sn**	**01 02 21.0**	**+3.3**
	comp=E,16nm,0.7s						
WTTA	**Wattenberg**	**4.96**	**345**	ePn	**Pn**	**01 01 24.8**	**+3.5**
	comp=E,5.6nm,0.4s						
WTTA				eSn	**Sn**	**01 02 20.9**	**+2.8**
	comp=E,13nm,0.3s						
ARSA	**Arzberg**	**4.99**	**16**	i Pn	**Pn**	**01 01 21.8**	**+0.3**
	comp=E,1.4nm,0.3s						
ARSA				Sn	**Sn**	**01 02 17.1**	**-1.6**
	comp=E,3.6nm,0.4s						
DAVOX	**Davos/Dischmat**	**5.00**	**331**	Pn	**Pn**	**01 01 24.3**	**+2.4**
	comp=E,3.1nm,0.3s,baz=143,slow=12,SNR=37						
DAVOX				Sn	**Sn**	**01 02 20.7**	**+1.5**
	comp=E,2.3nm,0.3s,baz=286,slow=19,SNR=3.2						
DAVOX	**Davos/Dischmat**	**5.00**	**331**	P	**Pn**	**01 01 24.8**	**+3.0**
SQTA	**Sankt Quirin**	**5.00**	**342**	i Pn	**Pn**	**01 01 24.3**	**+2.4**
	comp=E,10.0nm,0.3s,SNR=13						
SQTA				eSn	**Sn**	**01 02 22.4**	**+3.2**
	comp=E,16nm,0.4s						
IVAS	**Ivanjica**	**5.03**	**75**	ePn	**Pn**	**01 01 23.2**	**+1.1**
DIVS	**Divibare**	**5.04**	**69**	ePn	**Pn**	**01 01 23.2**	**+1.0**
DIVS	**Divibare**	**5.04**	**69**	ePn	**Pn**	**01 01 22.8**	**+0.6**
DIVS	**Divibare**	**5.04**	**69**	P	**Pn**	**01 01 24.2**	**+2.0**
WATA	**Walderalm**	**5.04**	**345**	ePn	**Pn**	**01 01 25.2**	**+2.9**
	comp=E,10nm,0.3s,SNR=19						
FRF	**La Foret Royal**	**5.11**	**285**	eP	**Pn**	**01 01 24.4**	**+1.2**
FRF				eSn	**Sn**	**01 02 16.4**	**-5.2**
	comp=E,6.7nm,0.5s						
MOTA	**Moosalm**	**5.15**	**342**	i Pn	**Pn**	**01 01 26.7**	**+2.9**
	comp=E,3.1nm,0.3s,SNR=26						
LMR	**La Mourre**	**5.18**	**282**	eP	**Pn**	**01 01 25.1**	**+1.0**
	SNR=1.0						
MORH	**Mrgy, Hungar**	**5.27**	**43**	ePn	**Pn**	**01 01 26.1**	**+0.7**
MORH				ePg	**Pg**	**01 01 47.1**	**-1.4**
MORH				Sn	**Sn**	**01 02 29.1**	**+3.6**
MORH	**Mrgy, Hungar**	**5.27**	**43**	ePn	**Pn**	**01 01 25.7**	**+0.4**
FRGS	**Fruska Gora**	**5.32**	**58**	ePn	**Pn**	**01 01 26.7**	**+0.7**
FRGS	**Fruska Gora**	**5.32**	**58**	⇑iPn	**Pn**	**01 01 26.7**	**+0.7**
MBDF	**Montbardon**	**5.35**	**297**	ePn	**Pn**	**01 01 23.8**	**-2.8**
	SNR=1.0						
MBDF	**Montbardon**	**5.35**	**297**	eP	**Pn**	**01 01 28.5**	**+1.9**
MBDF				eSn	**Sn**	**01 02 21.5**	**-6.3**
	comp=E,21nm,0.7s						
TRUS	**Trudelj**	**5.36**	**69**	ePn	**Pn**	**01 01 27.1**	**+0.5**
RETA	**Reutte**	**5.36**	**340**	ePn	**Pn**	**01 01 29.7**	**+3.1**
	comp=E,7.9nm,0.3s						
RETA				eSn	**Sn**	**01 02 31.1**	**+3.2**
	comp=E,17nm,0.4s						
MOA	**Molln**	**5.40**	**6**	ePn	**Pn**	**01 01 28.3**	**+1.1**
	comp=E,8.7nm,0.3s,SNR=9.2						
MOA				Sn	**Sn**	**01 02 30.8**	**+2.0**
	comp=E,10nm,0.3s						
DAVA	**Damuels**	**5.44**	**333**	i P	**Pn**	**01 01 30.8**	**+3.0**
	SNR=9.5						
GRUS	**Gruza**	**5.49**	**73**	ePn	**Pn**	**01 01 29.3**	**+0.9**
SOP	**Sopron**	**5.65**	**22**	ePn	**Pn**	**01 01 30.0**	**-0.5**
SOP				Sn	**Sn**	**01 02 33.1**	**-1.7**
OHR	**Ohrid**	**5.65**	**102**	ePn	**Pn**	**01 01 31.8**	**+1.1**
OHR				i Sn	**Sn**	**01 02 29.3**	**-5.8**
SELS	**Selova**	**5.68**	**80**	ePn	**Pn**	**01 01 32.2**	**+1.2**
LPG	**La Plagne**	**5.70**	**304**	eP	**Pn**	**01 01 33.3**	**+1.7**
	SNR=1.0						
LPG				eSn	**Sn**	**01 02 30.0**	**-6.6**
	comp=E,12nm,0.6s						
CONA	**Conrad Observa**	**5.71**	**16**	ePn	**Pn**	**01 01 31.9**	**+0.5**
	comp=E,2.0nm,0.2s						
CONA				eSn	**Sn**	**01 02 36.2**	**-0.2**
	comp=E,12nm,0.6s						
LPL	**La Plagne**	**5.72**	**304**	eP	**Pn**	**01 01 34.5**	**+2.7**
	SNR=1.0						
LPL				eSn	**Sn**	**01 02 30.5**	**-6.6**
	comp=E,5.2nm,0.4s,SNR=1.0						
KRUS	**Krusevo**	**5.91**	**98**	i Pn	**Pn**	**01 01 36.4**	**+2.1**
KRUS				i Sn	**Sn**	**01 02 39.8**	**-1.8**
SMRF	**Simiane la Rot**	**5.95**	**287**	eP	**Pn**	**01 01 36.6**	**+1.8**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**6.01**	**297**	eP	**Pn**	**01 01 39.4**	**+3.8**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**6.01**	**297**	P	Pn	01 01 41.1	+5.5
BIA	**Bitola**	**6.06**	**101**	ePn	**Pn**	**01 01 36.7**	**+0.4**
BIA				i Sn	**Sn**	**01 02 43.9**	**-1.1**
BOVS	**Bovan**	**6.15**	**76**	ePn	**Pn**	**01 01 38.4**	**+1.0**
BARS	**Barje**	**6.17**	**84**	ePn	**Pn**	**01 01 39.0**	**+1.3**
SRO	**Srobarova**	**6.34**	**31**	eSN	**Sn**	**01 02 48.5**	**-3.4**
GERES	**GERESS Array B**	**6.37**	**1**	Pn	**Pn**	**01 01 41.0**	**+0.5**
	comp=E,1.7nm,0.3s,baz=167,slow=13,SNR=55						
GERES				Sn	**Sn**	**01 02 52.7**	**-0.1**
	comp=E,4.0nm,0.3s,baz=169,slow=23,SNR=12						
MDVR	**Moldovita**	**6.42**	**66**	⇑iP	**Pn**	**01 01 41.8**	**+0.7**
MODS	**Modra-Piesok**	**6.48**	**23**	ePN	**Pn**	**01 01 43.0**	**+1.0**
STIP	**Stip**	**6.54**	**94**	i Pn	**Pn**	**01 01 46.3**	**+3.5**
STIP				i Sn	**Sn**	**01 02 58.8**	**+2.0**
ZAGS	**Zajecar**	**6.55**	**75**	ePn	**Pn**	**01 01 44.4**	**+1.4**
KHC	**Kasperske Hory**	**6.66**	**1**	ePN	**Pn**	**01 01 44.8**	**+0.4**
KHC				eSN	**Sn**	**01 02 58.0**	**-1.7**
BZS	**Buzias**	**6.66**	**59**	⇓iP	**Pn**	**01 01 45.2**	**+0.7**
CABF	**La Chapelle**	**6.69**	**311**	eP	**Pn**	**01 01 47.0**	**+2.0**
	SNR=1.0						
ZAPS	**Zavoj**	**6.79**	**80**	ePn	**Pn**	**01 01 47.2**	**+1.0**
VIVF	**Saint-Julien-l**	**6.80**	**293**	eP	**Pn**	**01 01 48.7**	**+2.3**
VAY	**Valandovo**	**6.89**	**97**	ePn	**Pn**	**01 01 45.6**	**-2.1**
KRUC	**Moravsky**	**6.90**	**16**	ePN	**Pn**	**01 01 47.5**	**-0.2**
HERR	**Herculane**	**6.92**	**67**	⇑iP	**Pn**	**01 01 49.3**	**+1.3**
TREC	**Trest**	**6.96**	**11**	ePN	**Pn**	**01 01 48.8**	**+0.2**
TREC				eSN	**Sn**	**01 03 04.8**	**-2.4**
HINF	**Hinteralfeld**	**7.09**	**321**	eP	**Pn**	**01 01 50.9**	**+0.5**
	SNR=1.0						
HINF				eSn	**Sn**	**01 03 03.2**	**-7.2**
	comp=E,13nm,0.4s						
VYHS	**Vyhne**	**7.10**	**30**	ePN	**Pn**	**01 01 51.0**	**+0.5**
VYHS				eSN	**Sn**	**01 03 04.5**	**-6.2**
PUNG	**Punghina**	**7.13**	**72**	⇓iP	**Pn**	**01 01 52.2**	**+1.3**
VRAC	**Vranov**	**7.17**	**17**	ePN	**Pn**	**01 01 51.6**	**+0.1**
VRAC	**Vranov**	**7.17**	**17**	Pn	**Pn**	**01 01 51.5**	**+0.1**
	comp=E,0.4nm,0.3s,baz=197,slow=16,SNR=3.1						
VRAC				Sn	**Sn**	**01 03 10.1**	**-2.3**
	comp=E,0.3nm,0.3s,baz=309,slow=9.7,SNR=1.8						
VRAC				LR	LR	01 05 10.2	
	comp=E,76nm,18.7s,baz=170,slow=43						
LASF	**Ste Croix**	**7.19**	**286**	eP	**Pn**	**01 01 53.7**	**+2.0**
	SNR=1.0						
VTS	**Vitosha**	**7.22**	**86**	ePn	**Pn**	**01 01 53.4**	**+1.1**
VTS	**Vitosha**	**7.22**	**86**	⇓iP	**Pn**	**01 01 53.4**	**+1.1**
GZR	**Gura Zlata**	**7.33**	**63**	⇑iP	**Pn**	**01 01 54.6**	**+0.9**
CDF	**Champ du Feu**	**7.36**	**326**	eP	**Pn**	**01 01 54.8**	**+0.7**
CDF				eSn	**Sn**	**01 03 09.6**	**-7.4**
	comp=E,14nm,0.6s						
KEST	**Kesra**	**7.46**	**207**	Pn	**Pn**	**01 01 59.1**	**+3.6**
	comp=E,0.9nm,0.3s,baz=48,slow=3.0,SNR=17						
KEST				Sn	**Sn**	**01 03 23.4**	**+3.9**
	baz=57,slow=23,SNR=1.5						
KEST				LR	LR	01 05 02.0	
	comp=E,103nm,21.3s,baz=302,slow=39						
HAU	**Haudompre**	**7.46**	**320**	eP	**Pn**	**01 01 56.7**	**+1.2**
	SNR=1.0						
HAU				eSn	**Sn**	**01 03 12.0**	**-7.6**
	comp=E,25nm,0.4s						
GOPC	**GO Pecny, Ondr**	**7.50**	**7**	ePN	**Pn**	**01 01 57.0**	**+1.1**
PRU	**Pruhonice**	**7.55**	**5**	ePN	**Pn**	**01 01 56.5**	**-0.1**
PRU				eSN	**Sn**	**01 03 18.8**	**-2.8**
NKC	**Novy Kostel**	**7.79**	**355**	eSN	**Sn**	**01 03 25.5**	**-2.0**
MORC	**Moravsky Berou**	**7.83**	**20**	⇑iP	**Pn**	**01 02 04.4**	**+3.9**
DRGR		**7.88**	**54**	⇑iP	**Pn**	**01 02 03.3**	**+2.1**
SMF	**Signal de Mont**	**8.03**	**305**	eP	**Pn**	**01 02 04.7**	**+1.4**
	SNR=1.0						
SMF				eSn	**Sn**	**01 03 25.4**	**-8.1**
	comp=E,6.1nm,0.6s						
DPC	**Dobruska-Polom**	**8.12**	**13**	ePN	**Pn**	**01 02 05.5**	**+1.0**
PAGF	**Fort de Pagny**	**8.15**	**321**	eP	**Pn**	**01 02 06.7**	**+1.9**
	baz=147						
PAGF				eSn	**Sn**	**01 03 27.8**	**-8.5**
	comp=E,71nm,0.8s,baz=132						
SFTF	**Sexfontaines**	**8.24**	**317**	eP	**Pn**	**01 02 07.5**	**+1.4**
	baz=134						
SFTF				eSn	**Sn**	**01 03 30.4**	**-8.3**
	comp=E,6.3nm,0.5s						
MTLF	**Montolieu**	**8.30**	**280**	eP	**Pn**	**01 02 08.6**	**+1.7**
LOR	**Lormes**	**8.33**	**308**	ePn	**Pn**	**01 02 03.6**	**-3.8**
	baz=129,SNR=1.0						
LOR	**Lormes**	**8.33**	**308**	eP	**Pn**	**01 02 09.7**	**+2.3**
	baz=129						
LOR				eSn	**Sn**	**01 03 33.4**	**-7.5**
	comp=E,4.1nm,0.5s						
AVF	**Avril sur Loir**	**8.40**	**304**	eP	**Pn**	**01 02 10.3**	**+2.0**
	SNR=1.0						
BRG	**Berggiesshubel**	**8.40**	**2**	PG	**Pb**	**01 02 29.8**	**-2.7**
BRG				SG	**Sn**	**01 03 38.4**	**-4.2**
	comp=E,3.9nm,0.7s						
MEZF	**Maizieres J'vi**	**8.43**	**318**	eP	**Pn**	**01 02 10.5**	**+1.8**
	baz=131						
MEZF				eSn	**Sn**	**01 03 34.9**	**-8.4**
	comp=E,3.6nm,0.4s,baz=125						
SSF	**Saint Saulge**	**8.43**	**306**	eP	**Pn**	**01 02 10.6**	**+1.8**
SSF				eSn	**Sn**	**01 03 35.0**	**-8.4**
	comp=E,3.7nm,0.5s						
ARR	**Arges**	**8.57**	**67**	⇑iP	**Pn**	**01 02 12.3**	**+1.6**
BGF	**Bois d'Agland**	**8.61**	**302**	eP	**Pn**	**01 02 12.9**	**+1.7**
	SNR=1.0						
CAF	**Calviac**	**8.61**	**290**	ePn	**Pn**	**01 02 08.0**	**-3.2**
CAF	**Calviac**	**8.61**	**290**	eP	**Pn**	**01 02 14.1**	**+2.9**
CLL	**Collm**	**8.84**	**358**	ePn	**Pn**	**01 02 16.0**	**+1.7**
CLL				eSn	**Sn**	**01 03 50.0**	**-3.3**
CLL				eSb		01 04 23.0	
CLL				eSglp		01 05 00.0	
	comp=E,100nm,22.1s						
CLL				eSg		01 05 02.0	
	comp=Z,21nm,1.6s						
VOIR		**8.87**	**67**	⇓iP	**Pn**	**01 02 16.5**	**+1.7**
MLR	**Muntele Rosu**	**9.49**	**67**	⇑iP	**Pn**	**01 02 25.7**	**+2.3**
MLR	**Muntele Rosu**	**9.49**	**67**	Pn	**Pn**	**01 02 26.2**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=124,slow=20,SNR=3.5						
BURAR	**Bucovina Array**	**9.77**	**54**	⇑iP	**Pn**	**01 02 29.8**	**+2.6**
BAIF	**Baives**	**9.92**	**323**	eP	**Pn**	**01 02 32.1**	**+3.0**
PLOR	**Plostina**	**10.06**	**66**	⇑iP	**Pn**	**01 02 31.9**	**+0.8**
ESDC	**Sonseca Array**	**13.44**	**264**	Pn	**P**	**01 03 24.4**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=65,slow=15,SNR=3.4						
BRTR	**Keskin Array B**	**15.46**	**93**	Pn	**P**	**01 03 49.7**	**+0.6**
	comp=Z,0.0nm,0.3s,baz=322,slow=9.1,SNR=3.0						
EKA	**Eskdalemuir Ar**	**16.82**	**326**	Pn	**Pn**	**01 04 00.3**	**-1.5**
	baz=141,slow=13,SNR=3.0						
HFS	**Hagfors**	**17.68**	**0**	P	**P**	**01 04 14.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=148,slow=11,SNR=3.3						
NOA	**NORSAR Array B**	**18.64**	**357**	P	**P**	**01 04 24.0**	**0.0**
	comp=Z,0.0nm,0.3s,baz=176,slow=11,SNR=3.2						
FINES	**FINESS Array B**	**20.45**	**17**	P	**P**	**01 04 44.1**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=202,slow=8.1,SNR=15						
KBZ	**Khabaz**	**21.48**	**77**	P	**P**	**01 04 59.2**	**+4.2**
	comp=Z,3.5nm,0.8s,baz=300,slow=8.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**30.95**	**203**	P	**P**	**01 06 24.9**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=11,slow=8.9,SNR=9.4						
MKAR	**Makanchi Array**	**47.74**	**60**	P	**P**	**01 08 44.4**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=282,slow=6.2,SNR=7.0						
SONM	**Songino Array**	**61.86**	**50**	P	**P**	**01 10 27.0**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=256,slow=5.5,SNR=3.1						
YKA	**Yellowknife Ar**	**67.41**	**337**	P	**P**	**01 11 02.1**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=38,slow=5.7,SNR=5.0						
KLR	**Kul'dur**	**73.84**	**37**	LR	LR	01 48 34.3	
	comp=Z,44nm,18.6s,baz=104,slow=39						

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*IDC **17** 01:07:53.8±1.3, 7°.06S×132°.02E, h0^{km}, mb3.6/4, mb1 4.0/9, mb1mx3.8/28, mbtmp3.9/9, ML4.0/5, Error ellipse: s-maj=46.6km s-min=19.4km az=82.0*

*ISCJB **17** 01:07:55.7±0.5, 7°.22S±0°.04×132°.01E±0°.08, h33^{km}, mb3.8/9, Error ellipse: s-maj=11.7km s-min=5.6km az=166.9*

*NEIC **17** 01:08:03.2±1.2, 7°.50S×131°.87E, h92^{km}±11^{km}, mb4.1/6, Error ellipse: s-maj=17.7km s-min=6.2km az=56.0*

ISC 17 01:07:58.0±0.8**, 7°.19S**±0°.06×**132°.0E**±0°.1**, h35^{km}, n27,** σ1^{s}**75**/33**, mb4.0**/9**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.05**	**222**	ePn	**Pn**	**01 08 20.9**	**+4.6**
MTN	**Manton Dam**	**5.68**	**189**	ePn	**Pn**	**01 09 20.9**	**+0.9**
SIJI	**Sorong**	**6.33**	**353**	Pn	**Pn**	**01 09 26.4**	**-2.5**
	3.3nm,0.3s,baz=197,slow=23,SNR=10						
SIJI				Sn	Sn	01 10 30.8	-9.2
	4.2nm,0.3s,baz=232,slow=24,SNR=7.4						
SOEI	**Soe**	**8.07**	**251**	ePn	**Pn**	**01 09 53.8**	**+0.9**
BATI	**Baumata**	**8.78**	**249**	Pn	**Pn**	**01 10 04.3**	**+1.7**
	5.3nm,0.3s,baz=172,slow=6.4,SNR=4.7						
BATI				Sn	**Sn**	**01 11 39.3**	**-1.1**
	2.5nm,0.3s,baz=351,slow=18,SNR=3.3						
FITZ	**Fitzroy Crossi**	**12.49**	**209**	Pn	**Pn**	**01 10 53.9**	**+0.5**
	0.5nm,0.3s,baz=40,slow=13,SNR=16						
FITZ				Sn	**Sn**	**01 13 07.6**	**-3.8**
	0.8nm,0.3s,baz=206,slow=16,SNR=5.8						
WRAB	**Tennant Creek**	**12.87**	**170**	ePn	**Pn**	**01 10 58.2**	**-0.4**
WRAB				eSn	**Sn**	**01 13 18.8**	**-1.8**
WR1	**Warramunga Arr**	**12.87**	**170**	ePn	**Pn**	**01 10 58.2**	**-0.5**
WR1				eSn	**Sn**	**01 13 17.6**	**-3.2**
WRA	**Warramunga Arr**	**12.87**	**170**	Pn	**Pn**	**01 10 58.2**	**-0.5**
	0.5nm,0.3s,baz=342,slow=13,SNR=36						
WRA				Sn	**Sn**	**01 13 17.6**	**-3.2**
	0.7nm,0.3s,baz=349,slow=24,SNR=6.8						
WB2	**Warramunga Arr**	**12.88**	**170**	ePn	**Pn**	**01 10 58.9**	**+0.3**
AS31	**Alice Springs**	**16.48**	**174**	ePn	**Pn**	**01 11 46.0**	**-0.7**
	3.5nm,0.5s						
ASAR	**Alice Springs**	**16.48**	**174**	Pn	**Pn**	**01 11 46.5**	**-0.3**
	0.6nm,0.3s,baz=353,slow=8.2,SNR=59						
ASAR				Sn	**Sn**	**01 14 49.6**	**+0.9**
	0.2nm,0.3s,baz=358,slow=26,SNR=4.4						
AS01	**Alice Springs**	**16.48**	**174**	ePn	**Pn**	**01 11 46.4**	**-0.3**
STKA	**Stephens Creek**	**26.14**	**161**	P	**P**	**01 13 32.4**	**+3.4**
	0.4nm,0.4s,baz=339,slow=14,SNR=2.8						
CHTO	**Chiang Mai**	**41.60**	**309**	eP	**P**	**01 15 43.1**	**+0.1**
	1.6nm,0.5s						
ULN	**Ulaanbaatar**	**59.09**	**341**	eP	**P**	**01 17 55.7**	**+0.7**
	0.6nm,0.5s						
SONA0	**Songino Array**	**59.28**	**340**	eP	**P**	**01 17 57.3**	**+1.0**
SONM	**Songino Array**	**59.28**	**340**	P	**P**	**01 17 57.3**	**+1.0**
	0.2nm,0.6s,baz=111,slow=7.9,SNR=3.3						
MK01	**Makanchi Array**	**69.47**	**326**	eP	**P**	**01 19 01.7**	**-1.2**
MK32	**Makanchi Array**	**69.49**	**326**	eP	**P**	**01 19 03.3**	**+0.2**
MKAR	**Makanchi Array**	**69.49**	**326**	P	**P**	**01 19 03.3**	**+0.2**
	0.5nm,0.5s,baz=118,slow=7.3,SNR=15						
AAK	**Ala-Archa**	**71.98**	**319**	eP	**P**	**01 19 17.6**	**-0.9**
	1.5nm,0.9s						
ZALV	**Zalesovo Beam**	**72.65**	**333**	eP	**P**	**01 19 22.9**	**+0.9**
ZALV	**Zalesovo Beam**	**72.65**	**333**	P	**P**	**01 19 21.9**	**0.0**
	0.5nm,0.4s,baz=142,slow=5.4,SNR=2.6						
ZAA1	**Zalesovo Array**	**72.65**	**333**	eP	**P**	**01 19 21.9**	**-0.1**
KK31	**Karatay Array**	**74.81**	**318**	eP	**P**	**01 19 34.0**	**-0.9**
	8.2nm,1.7s						
KKAR	**Karatay Array**	**74.81**	**318**	eP	**P**	**01 19 34.1**	**-0.8**

8.2nm,1.7s

IDC ***17*** *01:16:44.2±1.2, 38.°28S×94.°28W, h0^{km}, mb4.1/9, mb1 4.4/9, mb1mx4.2/26, mbtmp4.1/9, MS4.1/16, Ms1 4.1/16, ms1mx4.0/28, Error ellipse: s-maj=37.5km s-min=23.0km az=2.0*

NEIC ***17*** *01:16:46.6±0.3, 38.°09S×94.°20W, h10^{km}, mb4.8/27, Error ellipse: s-maj=10.0km s-min=6.0km az=30.0*

ISCJB ***17*** *01:16:47.3±0.6, 38.°1S±0.°1×94.°1W±0.°1, h25^{km}, mb4.6/34, MS4.1/15, Error ellipse: s-maj=17.9km s-min=9.1km az=32.6*

GCMT ***17*** *01:16:48.6±0.3, 37.°72S±0.°03×93.°99W±0.°02, h19^{km}±1^{km}, MW5.0/78, Moment Tensor Solution. s23,c24; s78,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.54±.24; M$_{\theta\theta}$-0.25±.14; M$_{\phi\phi}$3.78±.18; M$_{r\theta}$2.71±.35; M$_{\theta\phi}$0.01±.09; M$_{\phi r}$0.01±.30; Best double couple: M$_0$4.42200×10^{16} NP1:φ$_s$206.00000°, δ52.00000°, λ-52.00000°. NP2: φ$_s$334.00000°, δ52.00000°, λ-129.00000°. Principal axes: T 3.7800, Plg0.0000°, Azm270.0000°; N 1.2780, Plg29.0000°, Azm0.0000°; P -5.0640, Plg61.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 01:16:49.5±0.6**, 38.°0S**±0.°1×**94.°01W**±0.°10**, h25**^{km}**, n68, σ1**^{s}**13**/55**, mb4.7**/34**, MS4.1**/15**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**16.86**	**306**	LR	LR	01 25 21.6	
	comp=Z,1µm,18.1s,baz=122,slow=31						
PLCA	**Paso Flores**	**18.33**	**106**	*e*P	**Pn**	**01 21 02.8**	**+0.8**
	33nm,1.5s						
PEL	**Peldehue**	**19.57**	**83**	*e*P	**Pn**	**01 21 17.4**	**+0.4**
	136nm,2.0s						
GO09	**Cerro Castillo**	**20.23**	**138**	*e*P	**P**	**01 21 22.2**	**-0.3**
	161nm,1.8s						
GO04	**Tololo Observa**	**20.72**	**75**	*e*P	**P**	**01 21 28.7**	**+0.4**
	40nm,1.3s						
LCO	**Las Campanas**	**21.37**	**72**	*e*P	**P**	**01 21 35.4**	**0.0**
	16nm,1.1s						
USHA	**Ushuaia**	**24.15**	**142**	LR	LR	01 29 13.0	
	comp=Z,474nm,19.0s,baz=294,slow=31						
LVC	**Limon Verde**	**26.45**	**62**	LR	LR	01 30 13.0	
	comp=Z,763nm,19.6s,baz=232,slow=30						
NNA	**Nana**	**30.13**	**35**	LR	LR	01 31 47.5	
	comp=Z,493nm,20.6s,baz=214,slow=30						
LPAZ	**La Paz**	**31.42**	**54**	*e*P	**P**	**01 23 11.1**	**+1.6**
	21nm,1.5s						
LPAZ	**La Paz**	**31.42**	**54**	P	**P**	**01 23 12.0**	**+2.5**
	6.2nm,1.1s,baz=240,slow=2.9,SNR=8.9						
LPAZ				LR	LR	01 33 00.2	
	comp=Z,200nm,19.3s,baz=212,slow=31						
CPUP	**Villa Florida**	**32.97**	**80**	P	**P**	**01 23 21.9**	**-0.4**
	0.7nm,0.5s,baz=157,slow=17,SNR=2.3						
CPUP				LR	LR	01 35 21.0	
	comp=Z,494nm,18.0s,baz=241,slow=34						
ATAH	**Atahualpa**	**33.86**	**29**	P	**P**	**01 23 31.6**	**+1.1**
	2.6nm,0.7s,baz=275,slow=22,SNR=4.0						
ATAH				LR	LR	01 34 20.7	
	comp=Z,360nm,18.9s,baz=207,slow=31						
SIV	**San Ignacio**	**36.35**	**62**	P	**P**	**01 23 52.9**	**+1.2**
	1.6nm,0.9s,baz=225,slow=9.9,SNR=7.3						
OTAV	**Otavalo**	**40.69**	**24**	*e*P	**P**	**01 24 28.7**	**+0.1**
	18nm,1.9s						
BDFB	**Brasilia**	**46.14**	**74**	P	**P**	**01 25 12.3**	**+0.1**
	2.9nm,0.9s,baz=180,slow=9.1,SNR=4.5						
BDFB				LR	LR	01 43 41.8	
	comp=Z,396nm,18.5s,baz=243,slow=35						
ROSC	**El Rosal**	**46.41**	**28**	LR	LR	01 43 25.1	
	comp=Z,96nm,18.3s,baz=204,slow=34						
TAOE	**Nuku Hiva Isla**	**50.61**	**293**	*e*LR	LR	01 40 24.3	
	comp=Z,411nm,26.6s						
PPT2	**Papeete2**	**52.40**	**277**	*e*S	**S**	**01 33 28.8**	**+4.3**
	154nm,24.8s						
PPT2				*e*LR	LR	01 40 58.1	
	comp=Z,474nm,25.2s,baz=134						
PPT	**Papeete**	**52.41**	**277**	LR	LR	01 41 41.4	
	comp=Z,220nm,20.5s,baz=144,slow=29						
CCIG	**Comitan**	**54.05**	**2**	*e*P	**P**	**01 26 11.1**	**-1.0**
	17nm,1.1s						
SNAA	**Sanae**	**54.77**	**157**	*e*P	**P**	**01 26 17.0**	**+0.4**
	55nm,1.8s						
VNDA	**Vanda**	**56.16**	**195**	LR	LR	01 45 39.1	
	comp=Z,102nm,20.3s,baz=262,slow=31						
RAR	**Rarotonga**	**58.45**	**267**	LR	LR	01 44 43.9	
	comp=Z,169nm,20.1s,baz=105,slow=29						
TXAR	**Lajitas Array**	**67.62**	**351**	P	**P**	**01 27 43.3**	**-0.8**
	1.2nm,0.8s,baz=170,slow=8.2,SNR=13						
TXAR				LR	LR	01 52 24.0	
	comp=Z,106nm,18.1s,baz=0.0,slow=32						
HKT	**Hockley**	**67.65**	**358**	*e*P	**P**	**01 27 44.7**	**+0.6**
	7.7nm,1.3s						
WHTX	**Lake Whitney,**	**69.73**	**357**	*e*P	**P**	**01 27 56.1**	**-1.0**
	6.5nm,0.9s						
MSTX	**Muleshoe**	**72.09**	**352**	*e*P	**P**	**01 28 11.3**	**-0.3**
	28nm,1.8s						
AMTX	**Amarillo**	**72.89**	**353**	*e*P	**P**	**01 28 15.9**	**-0.3**
	5.2nm,0.8s						
SWET	**Sewanee**	**73.26**	**7**	*e*P	**P**	**01 28 17.9**	**-0.5**
	24nm,1.4s						
LDFC	**Landfair**	**75.33**	**342**	*e*P	**P**	**01 28 31.1**	**+0.6**
	6.5nm,0.9s						
T25A	**Trinidad**	**75.41**	**351**	*e*P	**P**	**01 28 31.0**	**0.0**
	19nm,1.7s						
MVCO	**Mesa Verde**	**76.05**	**348**	*e*P	**P**	**01 28 33.8**	**-0.9**
	11nm,1.4s						
WCI	**Wyandotte Cave**	**76.22**	**6**	*e*P	**P**	**01 28 35.0**	**-0.4**
	8.8nm,1.0s						
SHPR	**Sheep Range**	**76.70**	**343**	*e*P	**P**	**01 28 38.2**	**-0.2**
	14nm,1.9s						
SZCU	**Shurtz Canyon**	**77.28**	**345**	*e*P	**P**	**01 28 42.2**	**+0.5**
	14nm,1.7s						
Q16A	**Castle Valley**	**78.18**	**346**	*e*P	**P**	**01 28 47.0**	**+0.4**
	19nm,1.9s						
SRU	**San Rafael Swe**	**78.25**	**347**	*e*P	**P**	**01 28 46.6**	**-0.4**
	16nm,1.9s						
NV01	**Mina Array Sit**	**79.31**	**341**	*e*P	**P**	**01 28 52.4**	**-0.4**
NVAR	**Mina Array Bea**	**79.31**	**341**	P	**P**	**01 28 53.3**	**+0.4**
	1.2nm,0.8s,baz=174,slow=6.0,SNR=7.8						
N54A	**Moraine State**	**79.65**	**11**	*e*P	**P**	**01 28 53.7**	**-0.7**
	61nm,1.8s						
ECSD	**EROS Data Cent**	**81.42**	**358**	*e*P	**P**	**01 29 03.6**	**-0.3**
	42nm,2.0s						
BW06	**Boulder Array**	**81.65**	**348**	*e*P	**P**	**01 29 05.0**	**-0.4**
	19nm,1.9s						
PD31	**Pinedale Array**	**81.65**	**348**	*e*P	**P**	**01 29 04.7**	**-0.7**
PDAR	**Pinedale Array**	**81.65**	**348**	*e*P	**P**	**01 29 04.9**	**-0.4**
PDAR	**Pinedale Array**	**81.65**	**348**	P	**P**	**01 29 05.2**	**-0.2**
	1.1nm,0.6s,baz=161,slow=5.9,SNR=12						
FXWY	**Fox Creek**	**82.74**	**348**	*e*P	**P**	**01 29 10.7**	**-0.4**
	2.9nm,1.0s						
FLWY	**Flagg Ranch**	**83.12**	**348**	*e*P	**P**	**01 29 13.5**	**+0.5**
	31nm,1.8s						
SADO	**Sadowa**	**83.51**	**11**	LR	LR	02 01 17.8	
	comp=Z,96nm,21.5s,baz=166,slow=32						
DZM	**Mont Dzumac**	**83.81**	**247**	*e*LR	LR	01 55 30.6	
	comp=Z,334nm,24.1s						
YHH	**Holmes Hill**	**83.83**	**348**	*e*P	**P**	**01 29 17.1**	**+0.4**
	10nm,1.7s						
J08A	**Circle Bar Ran**	**84.00**	**342**	*e*P	**P**	**01 29 17.6**	**+0.2**
	19nm,1.8s						
ULM	**Lac du Bonnet**	**87.92**	**359**	*e*P	**P**	**01 29 35.1**	**-1.3**
	25nm,1.8s						
ULM	**Lac du Bonnet**	**87.92**	**359**	P	**P**	**01 29 35.2**	**-1.2**
	2.5nm,0.8s,baz=100,slow=1.9,SNR=4.7						
FFC	**Flin Flon**	**92.64**	**355**	*e*P	**P**	**01 29 57.6**	**-0.8**
	13nm,1.6s						
BOSA	**Boshof**	**92.70**	**130**	LR	LR	02 05 14.9	
	comp=Z,76nm,21.1s,baz=210,slow=31						
DBIC	**Dimbokro**	**93.40**	**84**	LR	LR	02 09 53.1	
	comp=Z,78nm,18.1s,baz=206,slow=34						
USRK	**Ussuriysk Ar.**	**145.16**	**295**	PKPbc	**PKPbc**	**01 36 21.9**	**-2.1**
	1.9nm,0.6s,baz=128,slow=2.4,SNR=6.4						
NRIK	**Noril'sk**	**148.62**	**359**	PKPbc	**PKPbc**	**01 36 32.9**	**-0.2**
	1.4nm,0.3s,baz=11,slow=3.3,SNR=4.8						
KIRV	**Kirov**	**148.74**	**37**	PKPbc	**PKPbc**	**01 36 32.9**	**-0.8**
	5.4nm,0.6s,baz=326,slow=8.4,SNR=4.0						
PALK	**Pallekele**	**149.01**	**170**	*e*PKPbc	**PKPbc**	**01 36 34.9**	**-1.0**
PALK	**Pallekele**	**149.01**	**170**	PKPbc	**PKPbc**	**01 36 33.6**	**-2.2**
	0.7nm,0.3s,baz=115,slow=2.0,SNR=4.1						
NJ2	**Nanjing**	**152.53**	**267**	*e*P	**PKPdf**	**01 36 37.8**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,86nm,0.9s						
HHC	**Hu-ho-hao-te**	**160.07**	**286**	*e*P	**PKPdf**	**01 36 48.8**	**+2.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SONA1	**Songino Array**	**162.17**	**310**	*e*PKPab	**PKPab**	**01 37 34.7**	**-0.7**
SONM	**Songino Array**	**162.18**	**310**	PKPab	**PKPab**	**01 37 33.9**	**-1.5**
	comp=Z,0.6nm,0.9s,baz=95,slow=3.4,SNR=4.3						
LZH	**Lanzhou**	**165.61**	**268**	*e*PKP	**PKPdf**	**01 36 52.5**	**+0.5**
LZH				pPKP	pPKPdf	01 36 57.8	-1.4
LZH				sPKP		01 36 59.6	
KURBB	**Kurchatov Arra**	**166.34**	**20**	PKP	**PKPdf**	**01 36 50.4**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=326,slow=1.9,SNR=5.2						

IDC ***17*** *01:22:36.4±1.7, 7.°67S×125.°08E, h0^{km}, mb3.6/1, mb1 3.3/3, mb1mx3.1/36, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=203.8km s-min=30.3km az=60.0*

DJA ***17*** *01:22:44.5±2.6, 9°S±7°×12°4E±1°0, h162^{km}±28^{km}, M3.2/6, MLv3.2/6*

ISC 17 01:22:37.2±1.4**, 8.°46S**±0.°10×**124.°36E**±0.°09**, h20**^{km}**, n8, σ2**^{s}**75**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.29**	**184**	P	Pb	01 23 09.3	+8.4
BATI	**Baumata**	**1.87**	**202**	P	**Pb**	**01 23 12.3**	**+1.6**
BATI				S	**Sn**	**01 23 30.4**	**-0.7**
MMRI	**Maumere**	**2.11**	**265**	P	**Pb**	**01 23 17.2**	**+2.4**
EDFI	**Ende, Flores**	**2.66**	**264**	P	**Pb**	**01 23 22.4**	**-1.9**
BASI	**Baing, Sumba**	**4.12**	**245**	P	**Pn**	**01 23 38.0**	**-1.1**
WRA	**Warramunga Arr**	**14.95**	**141**	Pn	**P**	**01 26 12.6**	**-0.5**
	0.1nm,0.3s,baz=323,slow=13,SNR=6.5						
WRA				Sn	**Sn**	**01 28 49.1**	**-3.6**
	0.2nm,0.3s,baz=321,slow=26,SNR=8.0						
ASAR	**Alice Springs**	**17.67**	**150**	P	**P**	**01 26 48.2**	**+5.1**
	0.1nm,0.3s,baz=319,slow=12,SNR=6.6						
ASAR				S	**Sn**	**01 29 58.5**	**-0.2**
	0.1nm,0.3s,baz=315,slow=22,SNR=3.2						
MKAR	**Makanchi Array**	**66.53**	**330**	P	**P**	**01 33 26.1**	**+0.4**
	0.4nm,0.5s,baz=134,slow=7.8,SNR=10						

TAP 17 01:31:18.3, 24.°33N×121.°45E, h10^{km}, ML2.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.12**	**328**	*i* P	Pb	01 31 22.3	-0.4
	baz=327						
NNSB				*i* S	Sg	01 31 24.1	+0.6
	baz=327						
ETLH	**Xiulin Townshi**	**0.13**	**167**	P	Pb	01 31 22.5	-0.3
	baz=166						
ETLH				S	Sg	01 31 24.5	+0.9
	baz=166						
NNS	**Nan Shan**	**0.13**	**327**	*i* P	Pb	01 31 22.5	-0.5
	baz=329						
NNS				*i* S	Sg	01 31 24.5	+0.7
	baz=329						
NACB	**Ninganchiao**	**0.20**	**140**	P	Pb	01 31 24.0	-0.2
	baz=139						
NACB				*e*S	Sg	01 31 26.9	+1.3
	baz=139						
WHF	**Hehuan Shan**	**0.25**	**223**	P	Pb	01 31 24.6	-0.6
	baz=221						
WHF				S	Sg	01 31 28.1	+0.9
	baz=221						
TWT	**Tachien**	**0.26**	**253**	*e*P	Pb	01 31 25.1	-0.2
	baz=252						
TWT				S	Sb	01 31 28.9	-0.9
	baz=252						
NDT	**Datong Townshi**	**0.28**	**12**	*e*P	Pb	01 31 25.1	-0.4
	baz=11						
NDT				S	Sb	01 31 29.6	-0.6
	baz=11						
TDCB	**Techi**	**0.28**	**254**	*e*P	Pb	01 31 24.8	-0.7
	baz=253						
TDCB				*e*S	Sb	01 31 29.5	-0.7
	baz=253						
TWD	**Chiawan**	**0.28**	**152**	*e*P	Pb	01 31 25.2	-0.3
	baz=150						
TWD				*e*S	Sb	01 31 29.8	-0.4
	baz=150						
ENA	**Nanau**	**0.28**	**70**	*e*P	Pb	01 31 25.4	-0.1
	baz=70						
ENA				*e*S	Sb	01 31 29.2	-1.1
	baz=70						
NANB	**Nanao**	**0.29**	**70**	*e*P	Pb	01 31 25.2	-0.4
	baz=70						
NANB				*e*S	Sb	01 31 29.7	-0.8
	baz=70						
ENTT	**Nioudou**	**0.33**	**19**	P	Pb	01 31 26.4	+0.1
	baz=20						
ENTT				S	Sb	01 31 30.9	-0.7
	baz=20						
YHNB	**Yeheng**	**0.34**	**349**	P	Pb	01 31 26.9	+0.3
	baz=348						
YHNB				*e*S	Sb	01 31 31.1	-1.1
	baz=348						
CHGB	**Renai**	**0.37**	**223**	P	Pb	01 31 26.6	-0.5
	baz=223						
CHGB				*e*S	Sb	01 31 33.2	+0.2
	baz=223						
HWA	**Hwalien**	**0.38**	**158**	*e*P	Pb	01 31 27.0	-0.1
	baz=157						
HWA				*e*S	Sb	01 31 33.0	0.0
	baz=157						
TWE	**Neicheng**	**0.44**	**27**	*e*P	Pb	01 31 28.7	+0.5
	baz=28						
TWE				*e*S	Sb	01 31 35.1	+0.4
	baz=28						
NWLT	**Wulai**	**0.45**	**6**	*e*S	Sb	01 31 34.7	-0.5
	baz=6.0						
OWD	**Renai**	**0.45**	**214**	*e*P	Pb	01 31 28.0	-0.4
	baz=213						
OWD				*e*S	Sb	01 31 35.2	0.0
	baz=213						
TWC	**Suao**	**0.46**	**53**	*e*P	Pb	01 31 28.4	-0.1
	baz=53						
TWC				S	Sb	01 31 35.0	-0.4
	baz=53						
WHP	**Taichung City**	**0.46**	**264**	*e*P	Pb	01 31 28.7	+0.1
	baz=263						
WHP				*e*S	Sb	01 31 35.6	+0.1
	baz=263						
LIOB	**Emei**	**0.51**	**309**	*e*P	Pb	01 31 29.5	+0.2
	baz=308						
LIOB				*e*S	Sb	01 31 36.9	+0.2
	baz=308						
NSTT	**Nanjuang**	**0.51**	**306**	*e*S	Sb	01 31 37.5	+0.7
	baz=306						
ESL	**Shilin**	**0.51**	**182**	*e*P	Pb	01 31 29.4	-0.1
	baz=180						
ESL				*e*S	Sb	01 31 36.5	-0.5
	baz=180						
VWDT	**VWDT**	**0.64**	**206**	*e*P	Pb	01 31 31.3	-0.3
	baz=206						
VWDT				*e*S	Sb	01 31 40.8	+0.2
	baz=206						
PTSB	**Yuanli**	**0.69**	**280**	*e*P	Pb	01 31 32.4	0.0
	baz=279						
PTSB				*e*S	Sb	01 31 42.5	+0.4
	baz=279						

NIED ***17*** *01:32:00, 24.°30N×121.°40E, h8^{km}, Mw4.4 Best double couple: M$_0$5.06000×10^{15} NP1:φ$_s$179.00000°, δ31.00000°, λ-61.00000°. NP2:φ$_s$325.00000°, δ63.00000°, λ-107.00000°.*

JMA ***17*** *01:32:06.8±0.1, 24.°30N×121.°42E, h0^{km}, M4.7*

NEIC ***17*** *01:32:07.7±0.6, 24.°27N×121.°45E, h7^{km}±4^{km}, mb4.7/18, ML4.5(TAP), Error ellipse: s-maj=6.2km s-min=3.8km az=98.0*

NEIC Felt at Taipei and Toucheng. Recorded [5 TAP] in Yilan, [3 TAP] in Hsinchu and [2 TAP] in Hualien, Nantou, Taichung and Taoyuan.

TAP ***17*** *01:32:07.4, 24.°32N×121.°45E, h6^{km}, ML4.6, C*

BJI ***17*** *01:32:08.7, 24.°28N×121.°47E, h15^{km}, mB4.7/25, mb4.3/32, ML4.5/11, Ms4.2/39, Ms7 4.0/36*

ISCJB ***17*** *01:32:08.1±0.2, 24.°339N±0.°008×121.°48E±0.°01, h6^{km}±1^{km}, mb4.3/42, MS3.7/8, Error ellipse: s-maj=1.7km s-min=1.2km az=30.0*

IDC ***17*** *01:32:14.0±3.0, 24.°24N×121.°54E, h52^{km}±27^{km}, mb3.9/16, mb1 4.1/18, mb1mx3.9/72, mbtmp4.2/18, ML2.8/3, MS3.5/10, Ms1 3.6/10, ms1mx3.1/53, Error ellipse: s-maj=21.0km s-min=14.0km az=84.0*

ISC 17 01:32:08.4±0.7**, 24.°32N**±0.°01×**121.°47E**±0.°01**, h6**^{km}±4^{km}**, n225, σ1**^{s}**49**/313**, mb4.5**/42**, MS3.6**/8**, 68C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.11**	**172**	P	**Pg**	**01 32 10.8**	**0.0**
	baz=165						
ETLH				*e*S	**Sg**	**01 32 12.7**	**+0.3**
	baz=165						
NNSB	**Datong**	**0.13**	**326**	P	**Pg**	**01 32 10.6**	**-0.7**
	baz=331						
NNSB				S	**Sg**	**01 32 12.3**	**-0.9**
	baz=331						
NNS	**Nan Shan**	**0.15**	**325**	⇑P	**Pg**	**01 32 10.8**	**-0.7**
	baz=332						
NNS				S	**Sg**	**01 32 12.8**	**-0.8**
	baz=332						
NACB	**Ninganchiao**	**0.18**	**140**	*e*Pg	**Pg**	**01 32 12.1**	**+0.1**
NACB				*e*Sg	**Sg**	**01 32 15.0**	**+0.4**
NACB	**Ninganchiao**	**0.18**	**140**	⇑P	**Pg**	**01 32 12.2**	**+0.1**
	baz=137						
NACB				S	**Sg**	**01 32 14.7**	**+0.2**
	baz=137						
WHF	**Hehuan Shan**	**0.25**	**227**	⇑P	**Pg**	**01 32 12.8**	**-0.7**
	baz=222						
WHF				S	**Sg**	**01 32 16.3**	**-0.5**
	baz=222						
TWD	**Chiawan**	**0.26**	**153**	⇑P	**Pg**	**01 32 13.6**	**+0.1**
	baz=150						
TWD				*e*S	**Sg**	**01 32 17.7**	**+0.7**
	baz=150						
TWT	**Tachien**	**0.27**	**257**	⇑*i*P	**Pg**	**01 32 13.5**	**-0.3**
	baz=245						
TWT				*e*S	**Sg**	**01 32 17.1**	**-0.3**
	baz=245						
ENA	**Nanau**	**0.27**	**66**	⇑*i*P	**Pg**	**01 32 13.4**	**-0.3**
	baz=69						
ENA				*e*S	**Sg**	**01 32 17.5**	**+0.1**
	baz=69						
NANB	**Nanao**	**0.28**	**67**	⇑P	**Pg**	**01 32 13.4**	**-0.5**
	baz=69						
NANB				S	**Sg**	**01 32 17.3**	**-0.4**
	baz=69						
NDT	**Datong Townshi**	**0.29**	**9**	⇑*i*P	**Pg**	**01 32 13.7**	**-0.3**
	baz=12						
NDT				S	**Sg**	**01 32 17.5**	**-0.4**
	baz=12						
TDCB	**Techi**	**0.29**	**257**	⇑P	**Pg**	**01 32 13.5**	**-0.5**
	baz=246						
TDCB				S	**Sg**	**01 32 17.1**	**-0.8**
	baz=246						
ENTT	**Nioudou**	**0.34**	**16**	⇑P	**Pg**	**01 32 14.6**	**-0.3**
	baz=11						
ENTT				*e*S	**Sg**	**01 32 19.2**	**-0.2**
	baz=11						
HWA	**Hwalien**	**0.36**	**159**	*e*P	**Pg**	**01 32 15.8**	**+0.5**
	baz=157						
HWA				*e*S	**Sg**	**01 32 21.4**	**+1.3**
	baz=157						
YHNB	**Yeheng**	**0.36**	**347**	*e*Pg	**Pg**	**01 32 14.6**	**-0.9**
YHNB				*e*Sg	**Sg**	**01 32 19.1**	**-1.1**
YHNB	**Yeheng**	**0.36**	**347**	⇑P	**Pg**	**01 32 15.3**	**-0.2**
	baz=350						
YHNB				*e*S	**Sg**	**01 32 19.3**	**-0.9**
	baz=350						
CHGB	**Renai**	**0.37**	**226**	⇑P	**Pg**	**01 32 14.9**	**-0.7**
	baz=224						
CHGB				*e*S	**Sg**	**01 32 19.8**	**-0.7**
	baz=224						
NSK	**Sanguang**	**0.37**	**345**	⇑*i*P	**Pg**	**01 32 15.4**	**-0.2**
	baz=348						
NSK				*e*S	**Sg**	**01 32 19.7**	**-0.9**
	baz=348						
ENLB	**Shoufeng**	**0.43**	**163**	⇑P	**Pg**	**01 32 17.1**	**+0.4**
	baz=162						
ENLB				*e*S	**Sg**	**01 32 23.2**	**+0.9**
	baz=162						
TWE	**Neicheng**	**0.44**	**24**	⇑P	**Pg**	**01 32 16.8**	**-0.2**
	baz=40						
TWE				*e*S	**Sg**	**01 32 22.6**	**-0.1**
	baz=40						
OWD	**Renai**	**0.45**	**216**	⇑P	**Pg**	**01 32 16.2**	**-0.8**
	baz=214						
OWD				*e*S	**Sg**	**01 32 22.6**	**-0.4**
	baz=214						
TWC	**Suao**	**0.46**	**50**	⇑P	**Pg**	**01 32 16.6**	**-0.6**
	baz=43						
TWC				S	**Sg**	**01 32 22.7**	**-0.5**
	baz=43						
NWLT	**Wulai**	**0.46**	**4**	⇑P	**Pg**	**01 32 17.1**	**-0.2**
NWLT				*e*S	**Sg**	**01 32 22.5**	**-0.8**
SLBB	**Yuanshan**	**0.46**	**20**	⇑P	**Pg**	**01 32 17.2**	**-0.2**
	baz=21						
SLBB				*e*S	**Sg**	**01 32 23.0**	**-0.4**
	baz=21						
WHP	**Taichung City**	**0.48**	**265**	⇑*i*P	**Pg**	**01 32 17.6**	**+0.1**
	baz=263						
WHP				S	**Sg**	**01 32 23.1**	**-0.7**
	baz=263						
ESL	**Shilin**	**0.50**	**183**	⇑P	**Pg**	**01 32 17.7**	**-0.4**
	baz=170						
ILA	**Ilan**	**0.52**	**30**	P	**Pg**	**01 32 18.1**	**-0.2**
	baz=43						
ILA				*e*S	**Sg**	**01 32 25.7**	**+0.6**
	baz=43						
LIOB	**Emei**	**0.53**	**309**	⇑P	**Pg**	**01 32 18.2**	**-0.3**
	baz=309						
LIOB				S	**Sg**	**01 32 25.3**	**-0.1**
	baz=309						
NSTT	**Nanjuang**	**0.53**	**307**	⇑P	**Pg**	**01 32 18.7**	**+0.1**
	baz=307						
NSTT				S	**Sg**	**01 32 25.6**	**+0.2**
	baz=307						
WLTB	**Daxi**	**0.57**	**340**	⇑*e*P	**Pg**	**01 32 20.0**	**+0.7**
	baz=343						
WLTB				*e*S	**Sg**	**01 32 27.1**	**+0.3**
	baz=343						
NTC	**Toucheng**	**0.63**	**32**	*e*P	**Pg**	**01 32 20.3**	**-0.2**
	baz=45						
NTC				*e*S	**Sg**	**01 32 28.8**	**0.0**
	baz=45						
TWQ1	**Liyutan**	**0.63**	**273**	⇑P	**Pg**	**01 32 21.0**	**+0.5**
	baz=271						
VWDT	**VWDT**	**0.63**	**208**	⇑P	**Pg**	**01 32 19.6**	**-1.0**
	baz=211						
VWDT				*e*S	**Sg**	**01 32 28.9**	**+0.1**
	baz=211						
SBCB	**Hsinchu**	**0.65**	**317**	⇑P	**Pb**	**01 32 21.8**	**-0.2**
	baz=318						
SBCB				*e*S	**Sg**	**01 32 30.3**	**+1.1**
	baz=318						
EGFH	**Guangfu**	**0.65**	**183**	⇓P	**Pg**	**01 32 20.5**	**-0.3**
	baz=182						
EGFH				*e*S	**Sg**	**01 32 28.8**	**-0.4**
	baz=182						
NHDH	**Xindian Distri**	**0.65**	**5**	*e*P	**Pg**	**01 32 20.8**	**-0.1**
	baz=18						
NHDH				*e*S	**Sg**	**01 32 29.0**	**-0.2**
	baz=18						
EOS1	**EOS1**	**0.65**	**69**	⇑*e*P	**Pg**	**01 32 20.9**	**+0.1**
	baz=58						
EOS1				*e*S	**Sb**	**01 32 31.1**	**-0.2**
	baz=58						
NSY	**Sanyi**	**0.65**	**279**	⇑*i*P	**Pb**	**01 32 21.7**	**-0.4**
	baz=278						
NSY				*e*S	**Sg**	**01 32 29.9**	**+0.6**
	baz=278						
NMLH	**Miaoli**	**0.65**	**290**	⇑*i*P	**Pb**	**01 32 21.9**	**-0.3**
	baz=289						
NMLH				*e*S	**Sg**	**01 32 30.5**	**+1.0**
	baz=289						
TATO	**Taipei**	**0.66**	**2**	*e*Pg	**Pg**	**01 32 21.1**	**+0.1**
TATO				*e*Sg	**Sg**	**01 32 29.2**	**-0.4**
TATO	**Taipei**	**0.66**	**2**	⇑P	**Pg**	**01 32 21.1**	**+0.1**
	baz=15						
TATO				*e*S	**Sg**	**01 32 29.1**	**-0.4**
	baz=15						
HSN	**Hsinchu**	**0.66**	**317**	⇑P	**Pb**	**01 32 22.0**	**-0.3**
	baz=322						
HSN				*e*S	**Sg**	**01 32 30.6**	**+0.8**
	baz=322						
TWA	**Mucha**	**0.67**	**9**	⇑P	**Pg**	**01 32 21.3**	**0.0**
	baz=11						
TWA				*e*S	**Sg**	**01 32 29.6**	**-0.4**
	baz=11						
SMLT	**Sun Moon Lake**	**0.67**	**230**	⇑P	**Pg**	**01 32 20.9**	**-0.4**
	baz=228						
SMLT				*e*S	**Sb**	**01 32 31.6**	**-0.6**
	baz=228						

EGS		0.68	39	⇑P	**Pg**	**01 32 21.1**	**-0.3**
	baz=42						
NCUH	**Zhongli**	0.70	339	eP	**Pb**	**01 32 23.0**	**+0.1**
	baz=339						
NCU	**National Centr**	0.70	339	⇑P	**Pb**	**01 32 23.0**	**0.0**
	baz=341						
NCU				eS	**Sb**	**01 32 34.1**	**+1.3**
	baz=341						
SSLB	**Suanglung**	0.70	222	ePg	**Pg**	**01 32 20.1**	**-1.9**
SSLB	**Suanglung**	0.70	222	⇑P	**Pg**	**01 32 20.9**	**-1.1**
	baz=231						
PTSB	**Yuanli**	0.71	281	⇑iP	**Pb**	**01 32 23.1**	**0.0**
	baz=279						
PTSB				S	**Sb**	**01 32 32.4**	**-0.6**
	baz=279						
TAP1	**Taipei**	0.72	4	eP	**Pg**	**01 32 21.6**	**-0.7**
	baz=15						
TAP1				eS	**Sg**	**01 32 31.2**	**-0.4**
	baz=15						
TIPB	**Shuangxi**	0.73	27	⇑iP	**Pg**	**01 32 21.9**	**-0.6**
	baz=15						
TIPB				S	**Sg**	**01 32 30.9**	**-1.0**
	baz=15						
TCU	**Taichung**	0.74	257	⇑P	**Pb**	**01 32 23.5**	**-0.2**
	baz=255						
WDJ	**Dajia District**	0.75	273	⇑eP	**Pb**	**01 32 24.1**	**+0.2**
	baz=271						
WDJ				eS	**Sb**	**01 32 34.3**	**-0.1**
	baz=271						
TWS1	**Kuangyinshan**	0.78	357	⇑P	**Pb**	**01 32 24.4**	**0.0**
	baz=8.0						
TWS1				eS	**Sb**	**01 32 35.1**	**-0.2**
	baz=8.0						
NWF	**Wu-fen Shan**	0.80	21	⇑eP	**Pg**	**01 32 23.7**	**-0.1**
	baz=22						
NWF				eS	**Sg**	**01 32 34.3**	**0.0**
	baz=22						
WFSB	**Wu-fen Shan**	0.80	21	⇑P	**Pg**	**01 32 23.7**	**-0.1**
	baz=22						
WFSB				eS	**Sg**	**01 32 33.9**	**-0.4**
	baz=22						
EHY	**Hungye**	0.82	189	⇑eP	**Pg**	**01 32 23.1**	**-1.0**
	baz=180						
HGSD	**Ruisui**	0.82	183	⇑P	**Pg**	**01 32 24.1**	**-0.1**
	baz=189						
YM01	**YM01**	0.83	7	⇑P	**Pg**	**01 32 24.7**	**+0.3**
	baz=7.0						
YM01				eS	**Sg**	**01 32 34.9**	**-0.3**
	baz=7.0						
WHYT	**Xinyi Township**	0.83	222	⇑eP	**Pg**	**01 32 23.3**	**-1.1**
	baz=220						
WJS	**Zhushan**	0.83	234	⇑iP	**Pg**	**01 32 24.7**	**+0.3**
	baz=225						
YM04	**YM04**	0.84	4	⇑P	**Pg**	**01 32 24.7**	**+0.3**
	baz=20						
YM04				eS	**Sg**	**01 32 35.6**	**+0.2**
	baz=20						
TWB1	**Santiao Chiao**	0.84	35	⇑iP	**Pg**	**01 32 23.6**	**-0.9**
	baz=36						
TWB1				eS	**Sg**	**01 32 34.3**	**-1.1**
	baz=36						
WNT	**Mingjian**	0.84	239	⇑iP	**Pb**	**01 32 25.1**	**-0.3**
	baz=231						
NTST	**Danshui**	0.84	359	eP	**Pb**	**01 32 25.4**	**-0.1**
	baz=9.0						
NTST				eS	**Sb**	**01 32 37.5**	**+0.5**
	baz=9.0						
YM05	**YM05**	0.85	6	⇑P	**Pg**	**01 32 25.1**	**+0.4**
	baz=21						
YM05				eS	**Sg**	**01 32 35.5**	**-0.2**
	baz=21						
WCHH	**Zhanghua**	0.86	254	eP	**Pb**	**01 32 26.0**	**+0.2**
	baz=252						
YM08	**YM08**	0.88	7	eP	**Pg**	**01 32 25.1**	**-0.1**
	baz=8.0						
YM08				eS	**Sg**	**01 32 35.9**	**-0.7**
	baz=8.0						
YULB	**Yu-li**	0.93	190	ePg	**Pg**	**01 32 25.2**	**-1.1**
YULB	**Yu-li**	0.93	190	⇑P	**Pg**	**01 32 25.2**	**-1.1**
	baz=178						
YULB				eS	**Sg**	**01 32 38.2**	**-0.2**
	baz=178						
TWF1	**Yuli**	0.97	189	eP	**Pg**	**01 32 26.2**	**-0.8**
	baz=177						
TWF1				eS	**Sg**	**01 32 39.8**	**+0.1**
	baz=177						
ALS	**Alishan**	1.00	217	⇑P	**Pg**	**01 32 26.9**	**-0.8**
	baz=203						
CHN5	**Tsauling**	1.02	225	⇑iP	**Pg**	**01 32 27.9**	**0.0**
	baz=223						
CHN5				eS	**Sn**	**01 32 43.1**	**-0.7**
	baz=223						
WGK	**Gukeng**	1.04	233	⇑eP	**Pb**	**01 32 28.7**	**-0.1**
	baz=230						
WGK				eS	**Sn**	**01 32 44.5**	**+0.2**
	baz=230						
WDLH	**Douliu**	1.05	234	eP	**Pb**	**01 32 29.1**	**+0.1**
	baz=231						
WDLH				eS	**Sn**	**01 32 45.3**	**+0.7**
	baz=231						
RLNB	**Erlin**	1.10	247	⇑P	**Pb**	**01 32 29.6**	**-0.1**
	baz=259						
RLNB				eS	**Sn**	**01 32 45.2**	**-0.5**
	baz=259						
WTCT	**Ta-ch'eng**	1.17	248	eP	**Pg**	**01 32 30.6**	**-0.2**
	baz=245						
WTCT				S	**Sn**	**01 32 47.4**	**-0.2**
	baz=245						
ELDTW	**Lidau**	1.20	200	eP	**Pg**	**01 32 29.6**	**-1.7**
	baz=188						
CHN2	**Minshiung**	1.20	229	P	**Pg**	**01 32 31.3**	**0.0**
	baz=227						
CHN2				eS	**Sn**	**01 32 48.4**	**+0.2**
	baz=227						
CHKT	**Chengkung**	1.22	184	eP	**Pg**	**01 32 31.1**	**-0.6**
	baz=169						
WMLT	**Mailiao**	1.25	246	eP	**Pg**	**01 32 31.9**	**-0.4**
	baz=245						
CHN4	**Tsaushan**	1.25	220	⇑iP	**Pg**	**01 32 32.2**	**-0.2**
	baz=218						
CHN4				eS	**Sn**	**01 32 51.6**	**+2.1**
	baz=218						
CHY	**Chiayi**	1.25	230	eP	**Pg**	**01 32 32.3**	**-0.2**
	baz=227						
CHY				eS	**Sn**	**01 32 50.2**	**+0.6**
	baz=227						
TPUB	**Ta-pu**	1.27	217	ePn	**Pn**	**01 32 32.1**	**-0.6**
TPUB	**Ta-pu**	1.27	217	⇑P	**Pn**	**01 32 32.0**	**-0.6**
	baz=216						
TPUB				eS	**Sn**	**01 32 50.6**	**+0.6**
	baz=216						
STYT	**Tauyuan**	1.32	210	eP	**Pn**	**01 32 32.8**	**-0.6**
	baz=197						
STYT				eS	**Sn**	**01 32 51.9**	**+0.6**
	baz=197						
WTP	**Ta-pu**	1.32	216	⇑P	**Pn**	**01 32 33.0**	**-0.4**
	baz=215						
WSF	**Szhu**	1.32	240	eP	**Pn**	**01 32 32.8**	**-0.6**
	baz=237						
WSF				eS	**Sn**	**01 32 51.2**	**-0.1**
	baz=237						
JYNG	**Yonagunijimaku**	1.36	84	P	**Pn**	**01 32 33.7**	**-0.1**
JYNG				S	**Sb**	**01 32 51.6**	**-0.2**
TWK	**Hsinying**	1.38	221	eP	**Pn**	**01 32 33.9**	**-0.3**
	baz=219						
TWK				eS	**Sn**	**01 32 54.2**	**+1.4**
	baz=219						
SNST	**Tainan City**	1.41	219	⇑eP	**Pn**	**01 32 34.7**	**+0.2**
	baz=218						
YOJ	**Yonaguni jima**	1.42	84	ePn	**Pn**	**01 32 34.7**	**0.0**
YOJ	**Yonaguni jima**	1.42	84	⇑P	**Pn**	**01 32 34.2**	**-0.4**
	baz=73						
YOJ				eS	**Sg**	**01 32 54.1**	**+0.2**
	baz=73						
YOJ	**Yonaguni jima**	1.42	84	P	**Pn**	**01 32 34.7**	**0.0**
YOJ				S	**Sg**	**01 32 54.1**	**+0.2**
CHN1	**Nanshi**	1.42	218	⇑P	**Pn**	**01 32 34.9**	**+0.2**
	baz=216						
CHN1				eS	**Sg**	**01 32 55.4**	**+1.5**
	baz=216						
PCYT	**Pengchaiyu**	1.42	23	eP	**Pn**	**01 32 33.6**	**-1.1**
	baz=6.0						
SGST	**Jiashian**	1.47	214	⇑iP	**Pb**	**01 32 35.9**	**-0.2**
	baz=207						
SGST				eS	**Sg**	**01 32 55.7**	**0.0**
	baz=207						
CHN8	**Yiju**	1.50	230	eP	**Pn**	**01 32 36.1**	**+0.3**
	baz=240						
CHN8				eS	**Sg**	**01 32 58.2**	**+1.5**
	baz=240						
SLGT	**Liugui**	1.52	210	eP	**Pb**	**01 32 36.9**	**0.0**
	baz=199						
SLGT				eS	**Sg**	**01 32 59.1**	**+2.0**
	baz=199						
TWG	**Pinlang**	1.53	194	ePn	**Pn**	**01 32 35.7**	**-0.6**
TWG	**Pinlang**	1.53	194	eP	**Pn**	**01 32 36.1**	**-0.1**
	baz=173						
TWGBT	**Beinan**	1.53	193	eP	**Pn**	**01 32 36.0**	**-0.3**
	baz=173						
TTN	**Taitung**	1.58	191	eP	**Pb**	**01 32 37.6**	**-0.4**
	baz=171						
CHN3	**Shinhua**	1.59	219	⇑eP	**Pb**	**01 32 38.1**	**-0.1**
	baz=218						
CHN3				eS	**Sg**	**01 33 01.5**	**+1.8**
	baz=218						
SCLT	**Jiali**	1.63	226	P	**Pn**	**01 32 38.1**	**+0.6**
	baz=208						
SCLT				S	**Sg**	**01 33 01.7**	**+0.9**
	baz=208						
TAI1	**Yung-k'ang**	1.70	222	eP	**Pn**	**01 32 39.3**	**+0.7**
	baz=220						
SSD	**Sandimen**	1.74	206	eP	**Pb**	**01 32 40.2**	**-0.5**
	baz=207						
SSD				eS	**Sg**	**01 33 04.3**	**0.0**
	baz=207						
ECL	**Taimali**	1.77	195	eP	**Pn**	**01 32 40.1**	**+0.6**
	baz=177						
SGLT	**Jiouru**	1.82	210	eP	**Pb**	**01 32 42.3**	**+0.3**
	baz=208						
MASBT	**Mashibuluo**	1.86	204	⇑P	**Pb**	**01 32 42.2**	**-0.6**
	baz=206						
MASBT				eS	**Sb**	**01 33 07.1**	**+0.8**
	baz=206						
SNJT	**Kaohsiung City**	1.87	214	eP	**Pb**	**01 32 42.5**	**-0.4**
	baz=212						
PNG	**Penghu**	1.90	247	eP	**Pn**	**01 32 41.7**	**+0.4**
	baz=247						
PHUB	**P'eng-hu**	1.91	246	eP	**Pn**	**01 32 39.8**	**-1.6**
	baz=246						
VWUC	**VWUC**	1.95	291	eP	**Pn**	**01 32 40.0**	**-2.1**
	baz=292						
WDGT	**Dungji**	1.96	238	eP	**Pn**	**01 32 41.5**	**-0.6**
	baz=233						
WDGT				eS	**Sn**	**01 33 07.5**	**+0.4**
	baz=233						
SSPT	**Xinbi**	2.00	204	eP	**Pb**	**01 32 45.3**	**+0.1**
	baz=205						
EAST	**Anshuo**	2.01	197	⇓eP	**Pb**	**01 32 45.2**	**-0.1**
	baz=177						
TAW	**Tawu**	2.02	195	eP	**Pb**	**01 32 44.6**	**-0.9**
	baz=177						
IRIF	**Iriomote-Funau**	2.07	89	P	**Pn**	**01 32 44.1**	**+0.5**
IRIF				S	**Sb**	**01 33 11.4**	**-0.8**
SCZT	**Fangliau**	2.09	202	eP	**Pb**	**01 32 45.8**	**-0.8**
	baz=220						
VCHM	**Qimei**	2.17	240	eP	**Pn**	**01 32 45.2**	**+0.2**
	baz=239						
WLCH	**Liuqiu**	2.20	207	eP	**Pb**	**01 32 48.0**	**-0.5**
	baz=206						
TWP	**Hsiaoliuchiu**	2.21	208	eP	**Pg**	**01 32 49.7**	**-1.0**
	baz=206						
MATB	**Ma-tsu**	2.29	323	eP	**Pn**	**01 32 46.2**	**-0.5**
	baz=321						
JKRS	**Kuro-shima**	2.32	91	P	**Pn**	**01 32 48.1**	**+1.0**
JKRS				S	**Sb**	**01 33 18.0**	**-1.6**
HEN	**Hengchun**	2.40	196	eP	**Pb**	**01 32 51.9**	**0.0**
	baz=179						
TWK1	**Hengchun**	2.44	195	eP	**Pb**	**01 32 51.3**	**-1.4**
	baz=178						
TWKBT	**Hengchun**	2.44	194	eP	**Pn**	**01 32 50.6**	**+1.8**
	baz=178						
JIJ	**Ishigaki jima**	2.44	88	P	**Pn**	**01 32 49.8**	**+1.0**
JIJ				S	**Sn**	**01 33 19.1**	**+0.1**
JISG	**Ishigakijimahi**	2.61	83	P	**Pn**	**01 32 51.2**	**+0.2**
JISG				S	**Sn**	**01 33 23.3**	**+0.3**
QZH	**Quanzhou**	2.69	284	⇑iPn	**Pn**	**01 32 50.3**	**-1.9**
QZH				Sn	**Sn**	**01 33 22.3**	**-2.7**
QZH				smax	smax		
	comp=N,590nm,0.9s						
QZH				smax	smax		
	comp=E,430nm,1.0s						
KNM	**Kinmen**	2.77	273	eP	**Pn**	**01 32 53.9**	**+0.6**
	baz=275						
KNMB	**Chin-men Tao**	2.81	274	eP	**Pn**	**01 32 52.4**	**-1.5**
	baz=276						
JTJ	**Tarama**	2.97	83	P	**Pn**	**01 32 57.5**	**+1.5**
JTJ				S	**Sn**	**01 33 33.9**	**+2.0**
JIRB	**Irabujima**	3.41	81	P	**Pn**	**01 33 03.7**	**+1.6**
JOW	**Kunigami**	6.64	66	ePn	**Pn**	**01 33 45.5**	**-1.0**
JOW	**Kunigami**	6.64	66	P	**Pn**	**01 33 48.2**	**+1.8**
	0.2nm,0.3s,baz=146,slow=12,SNR=3.3						
SSE	**Sheshan**	6.76	358	ePn	**Pn**	**01 33 46.4**	**-1.7**
NJ2	**Nanjing**	8.04	344	eP	**Pn**	**01 34 07.1**	**+1.4**
NJ2				S	**Sn**	**01 35 45.1**	**+8.1**
NJ2				pmax	pmax		
	comp=Z,37nm,0.8s						
NJ2				smax	smax		
	comp=N,280nm,1.0s						
NJ2				smax	smax		
	comp=E,120nm,1.1s						
NJ2				LR	LR		
	comp=N,680nm,5.2s						
NJ2				LR	LR		
	comp=Z,1µm,10.0s						
WHN	**Wuhan**	8.85	316	P	Pn	01 34 23.3	+6.4
WHN				S	**Sn**	**01 36 05.9**	**+8.9**
WHN				LR	LR		
	comp=N,3µm,10.9s						
WHN				LR	LR		
	comp=E,3µm,6.3s						
WHN				LR	LR		
	comp=Z,3µm,10.0s						
QIZ	**Qiongzhong**	12.02	246	P	**Pn**	**01 35 01.0**	**+0.7**
QIZ				S	**Sn**	**01 37 13.5**	**-1.2**
QIZ				LR	LR		
	comp=N,280nm,9.8s						
QIZ				LR	LR		
	comp=E,340nm,18.6s						
QIZ				LR	LR		
	comp=Z,420nm,9.8s						
JNU	**Nakatsue**	12.04	41	ePn	**Pn**	**01 34 58.8**	**-1.8**
JNU	**Nakatsue**	12.04	41	P	**Pn**	**01 35 04.4**	**+3.8**
	0.0nm,0.3s,baz=199,slow=21,SNR=2.2						
JNU				LR	LR	01 40 28.7	
	comp=Z,231nm,18.2s,baz=284,slow=41						
KS15	**Wonju Array Si**	14.19	21	ePn	**Pn**	**01 35 30.3**	**+0.4**
KSAR	**Wonju Array Be**	14.19	21	P	**Pn**	**01 35 33.0**	**+3.1**
KSRS	**Korea Array**	14.21	21	P	**Pn**	**01 35 33.0**	**+2.8**
	0.4nm,0.3s,baz=208,slow=14,SNR=5.8						
KSRS				LR	LR	01 41 39.2	
	comp=Z,98nm,18.8s,baz=212,slow=40						
KS01	**Wonju Array Si**	14.22	21	ePn	**Pn**	**01 35 28.9**	**-1.4**
XAN	**Xi'an**	14.61	314	P	**P**	**01 35 43.8**	**+1.5**
XAN				PP	PnPn	01 35 56.0	+12
XAN				S	**S**	**01 38 35.3**	**-2.2**
XAN				SS	SnSn	01 38 53.1	+22
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,130nm,4.3s						
XAN				LR	LR		
	comp=N,680nm,4.3s						
XAN				LR	LR		
	comp=E,400nm,5.1s						
XAN				LR	LR		
	comp=Z,690nm,9.8s						
XAN	**Xi'an**	14.61	314	ePn	**Pn**	**01 35 35.4**	**-0.3**
	comp=Z,151nm,1.6s						
BJI	**Beijing**	16.30	345	P	**P**	**01 36 03.3**	**+2.4**
BJI				LR	LR		
	comp=Z,250nm,8.2s						
BJI				LR	LR		
	comp=Z,190nm,6.9s						
CD2	**Chengdu**	17.00	297	P	**Pn**	**01 36 06.3**	**-0.6**
CD2				pP	sP	01 36 12.5	+0.4
CD2				sP	pP	01 36 14.6	+3.5
CD2				S	**Sn**	**01 39 16.3**	**0.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				pmax	pmax		
	comp=Z,440nm,4.9s						
CD2				LR	LR		
	comp=Z,2µm,6.9s						
CD2				LR	LR		
	comp=Z,2µm,7.5s						
CD2				LR	LR		
	comp=Z,2µm,8.8s						
KMI	**Kunming**	17.04	277	P	**P**	**01 36 11.8**	**+2.4**
KMI				pP	sP	01 36 16.1	+3.4
KMI				sP	pP	01 36 17.6	+6.0
KMI				S	**Sn**	**01 39 15.5**	**-1.9**
KMI				SS	**SnSn**	**01 39 37.9**	**+7.3**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,150nm,3.8s						
KMI				LR	LR		
	comp=Z,520nm,7.8s						
KMI				LR	LR		
	comp=Z,1µm,10.2s						
JHJ	**Hachijo jima 2**	18.28	57	LR	LR	01 42 39.0	
	comp=Z,108nm,20.4s,baz=115,slow=34						
HHC	**Hu-ho-hao-te**	18.45	336	eP	**Pn**	**01 36 26.6**	**+1.7**
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
MJAR	**Matsushiro Arr**	18.86	46	P	**Pn**	**01 36 33.7**	**+3.9**
	comp=Z,0.0nm,0.3s,baz=242,slow=10,SNR=5.2						
MJAR				LR	LR	01 44 50.5	
	comp=Z,90nm,19.9s,baz=220,slow=40						
LZH	**Lanzhou**	19.19	312	eP	**Pn**	**01 36 36.6**	**+2.7**
LZH				pP	sP	01 36 40.3	+4.0
LZH				sP	pP	01 36 41.8	+6.5
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				LR	LR		
	comp=N,130nm,17.9s						
LZH				LR	LR		
	comp=E,130nm,18.1s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
LZH	**Lanzhou**	19.19	312	eP	**Pn**	**01 36 35.6**	**+1.7**
LZH				pP	sP	01 36 38.3	+2.0
LZH				sP	pP	01 36 39.6	+4.3
LZH				eS	**Sn**	**01 40 01.6**	**-7.7**
LZH				sS	sS	01 40 13.6	-1.0
LZH				SS	S	01 40 32.0	+21
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.6s						
LZH				LR	LR		
	comp=Z,810nm,12.1s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
CN2	**Changchun**	19.71	9	eP	**P**	**01 36 35.0**	**-3.5**
PBKT	**Sadao Pong**	20.68	252	P	Pn	01 36 52.7	+1.2
SRAK	**Srakaew**	20.99	244	P	Pn	01 36 55.2	0.0
	comp=Z,30nm,1.1s						
MDJ	**Mudanjiang**	21.31	16	P	**P**	**01 37 01.5**	**+5.7**
MDJ				pmax	pmax		
	comp=Z,14nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,360nm,4.9s						
SUKH	**Sukhothai**	21.49	256	P	**P**	**01 37 04.0**	**+6.1**
	comp=Z,5.3nm,1.2s						
USRK	**Ussuriysk Ar.**	21.62	21	P	**P**	**01 37 00.6**	**+1.4**
	comp=Z,3.1nm,0.8s,baz=193,slow=10,SNR=3.9						
CMMT	**Chiang Mai**	21.64	260	P	P	01 37 07.5	+7.9
	comp=Z,7.3nm,0.7s						
CHTO	**Chiang Mai**	21.64	260	eP	**P**	**01 36 58.1**	**-1.5**
	comp=Z,9.8nm,1.2s						
CHTO	**Chiang Mai**	21.64	260	P	P	01 37 07.9	+8.3
	comp=Z,36nm,1.0s						
CMAR	**Chiang Mai Arr**	21.75	259	P	**P**	**01 37 03.0**	**+2.2**
	comp=Z,0.9nm,0.3s,baz=60,slow=9.2,SNR=5.8						
CMAR				LR	LR	01 46 48.7	
	comp=Z,105nm,19.1s,baz=315,slow=40						
UTHA	**Uthaitani**	22.43	251	P	P	01 37 18.3	+10
	comp=Z,2.9nm,1.3s						
UMPA	**Umpang Tak**	22.67	253	P	P	01 37 21.5	+11
	comp=Z,6.6nm,0.9s						
SBUM	**Sibu**	23.50	204	eP	**P**	**01 37 18.6**	**-0.6**
	comp=Z,15nm,1.1s						
GTA	**Gaotai**	23.68	315	eP	**P**	**01 37 23.1**	**+2.2**
GTA				pP	sP	01 37 27.1	+2.8
GTA				sP	pP	01 37 30.3	+7.0
GTA				S	**S**	**01 41 40.5**	**+4.2**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,5.2s						
GTA				LR	LR		
	comp=Z,550nm,14.6s						
GTA				LR	LR		
	comp=Z,350nm,14.6s						
ULN	**Ulaanbaatar**	26.14	338	eP	**P**	**01 37 43.0**	**-0.4**
	comp=Z,14nm,0.9s						
KLR	**Kul'dur**	26.14	15	P	**P**	**01 37 42.9**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=239,slow=6.7,SNR=8.4						
ASAJ	**Asahikawa**	26.24	36	LR	LR	01 48 19.8	
	comp=Z,132nm,19.2s,baz=154,slow=37						
SONM	**Songino Array**	26.35	337	P	**P**	**01 37 45.7**	**+0.4**
	comp=Z,15nm,0.9s,baz=154,slow=7.6,SNR=77						
SONA1	**Songino Array**	26.35	337	eP	**P**	**01 37 45.4**	**+0.1**
WMQ	**Urumqi**	33.75	314	eP	**P**	**01 38 50.8**	**0.0**
WMQ				LR	LR		
	comp=N,1µm,22.9s						
WMQ				LR	LR		
	comp=E,590nm,21.9s						
WMQ				LR	LR		
	comp=Z,290nm,19.9s						
WMQ	**Urumqi**	33.75	314	eP	**P**	**01 38 52.0**	**+1.2**
WMQ				sP	sP	01 39 01.3	+7.0
WMQ				LR	LR		
	comp=Z,600nm,22.3s						
WMQ				LR	LR		
	comp=Z,290nm,19.3s						
LEM	**Lembang**	33.77	205	LR	LR	01 52 54.8	
	comp=Z,133nm,20.9s,baz=204,slow=37						
MKAR	**Makanchi Array**	38.42	316	LR	LR	01 55 50.0	
	comp=Z,58nm,19.2s,baz=143,slow=37						
KSH	**Kashi**	41.04	303	P	**P**	**01 39 54.6**	**+1.8**
KSH				pP	sP	01 39 59.5	+3.2
KSH				PP	**PnPn**	**01 41 33.9**	**+2.3**
KSH				S	**S**	**01 46 08.0**	**+2.2**
KSH				SS	**SS**	**01 49 04.4**	**-3.4**
KSH				LR	LR		
	comp=Z,200nm,5.4s						
KSH				LR	LR		
	comp=Z,210nm,6.0s						
KSH				LR	LR		
	comp=Z,450nm,5.6s						
AAK	**Ala-Archa**	42.63	307	LR	LR	02 00 38.8	
	comp=Z,65nm,18.2s,baz=62,slow=40						
COEN	**Coen**	43.55	149	eP	**P**	**01 40 12.8**	**-0.4**
	comp=Z,8.9nm,0.9s						
MBWA	**Marble Bar**	45.23	182	eP	**P**	**01 40 24.7**	**-1.9**
WRAB	**Tennant Creek**	45.74	163	eP	**P**	**01 40 28.6**	**-2.1**
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	45.74	163	P	**P**	**01 40 28.4**	**-2.3**
	comp=Z,2.5nm,1.1s,baz=345,slow=8.7,SNR=12						
WRA				PcP	**PcP**	**01 42 07.3**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=352,slow=3.9,SNR=3.4						
WB2	**Warramunga Arr**	45.75	163	eP	**P**	**01 40 27.9**	**-2.8**
WC3	**Warramunga Arr**	45.77	163	eP	**P**	**01 40 28.8**	**-2.1**
	comp=Z,7.0nm,1.1s						
ASAR	**Alice Springs**	49.20	165	P	**P**	**01 40 55.7**	**-1.8**
	comp=Z,1.3nm,0.9s,baz=338,slow=6.3,SNR=10						
ASAR				PcP	**PcP**	**01 42 19.6**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=344,slow=4.5,SNR=4.2						
AS01	**Alice Springs**	49.21	165	eP	**P**	**01 40 56.2**	**-1.5**
NRIK	**Noril'sk**	49.34	345	P	**P**	**01 40 56.9**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=90,slow=3.0,SNR=3.6						
FORT	**Forrest**	55.15	173	eP	**P**	**01 41 39.0**	**-2.7**
	comp=Z,26nm,1.1s						
STKA	**Stephens Creek**	59.10	160	P	**P**	**01 42 08.9**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=343,slow=11,SNR=2.5						
IM3	**Indian Mountai**	65.95	27	eP	**P**	**01 42 54.0**	**-1.0**
MLY	**Manley**	67.31	27	eP	**P**	**01 43 05.5**	**+1.6**
	comp=Z,11nm,1.4s						
MDM	**Murphy Dome**	68.38	27	eP	**P**	**01 43 10.5**	**0.0**
	comp=Z,6.6nm,1.0s						
RND	**Reindeer**	68.41	29	eP	**P**	**01 43 10.2**	**-0.7**
	comp=Z,10.0nm,0.8s						
COLA	**College**	68.55	27	eP	**P**	**01 43 10.5**	**-1.0**
	comp=Z,4.3nm,0.9s						
ILAR	**Eielson Array**	68.98	27	P	**P**	**01 43 14.9**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=287,slow=8.1,SNR=8.0						
SCRK	**Sand Creek**	70.39	28	eP	**P**	**01 43 23.4**	**+0.3**
	comp=Z,12nm,1.6s						

MENT	Mentasta	70.78	29	eP	P	01 43 25.2	-0.2
	comp=Z,10nm,1.0s						
EGAK	Eagle	71.35	27	eP	P	01 43 29.3	+0.6
	comp=Z,8.2nm,1.2s						
FIA1	FINESS Array S	71.46	330	eP	P	01 43 28.6	-0.9
	comp=Z,100nm,1.8s						
DAWY	Dawson	72.30	27	eP	P	01 43 33.5	-1.1
	comp=Z,7.7nm,1.1s						
AKASG	Malin Array Be	72.94	318	P	P	01 43 37.4	-1.1
	comp=Z,5.1nm,0.8s,baz=61,slow=6.1,SNR=4.1						
INK	Inuvik	73.01	22	eP	P	01 43 37.7	-0.9
	comp=Z,1.1nm,0.6s						
INK	Inuvik	73.01	22	P	P	01 43 37.7	-0.9
	comp=Z,2.0nm,0.8s,baz=282,slow=2.7,SNR=7.2						
BRTR	Keskin Array B	73.30	306	P	P	01 43 42.2	+1.1
	comp=Z,6.3nm,1.0s,baz=101,slow=5.2,SNR=5.0						
DLBC	Dease Lake	78.70	31	LR	LR	02 22 18.0	
	comp=Z,92nm,18.6s,baz=60,slow=38						
VTS	Vitosha	79.64	312	eP	P	01 44 16.2	-0.8
	comp=Z,13nm,1.0s						
MORC	Moravsky Berou	80.24	320	eP	P	01 44 11.5	-8.5
CLL	Collm	82.10	323	i pP	pP	01 44 32.3	-0.1
	comp=Z,10.0nm,0.9s						
YKA	Yellowknife Ar	82.75	23	P	P	01 44 30.4	-2.5
	comp=Z,1.4nm,0.9s,baz=313,slow=5.0,SNR=12						
YKB5	Yellowknife Ar	82.75	23	eP	P	01 44 32.4	-0.5
GEC2	GERESS Array S	82.90	321	eP	P	01 44 33.3	-0.9
	comp=Z,22nm,1.4s						
GERES	GERESS Array B	82.90	321	P	P	01 44 33.5	-0.7
	comp=Z,3.5nm,0.9s,baz=62,slow=3.2,SNR=7.5						
GEA0	GERESS Array S	82.91	321	eP	P	01 44 33.5	-0.7
B08A	Colville Reser	89.53	36	eP	P	01 45 06.5	-0.2
	comp=Z,6.1nm,1.0s						
NEW	Newport	90.75	35	P	P	01 45 13.4	+1.0
	comp=Z,2.8nm,0.9s,baz=274,slow=2.1,SNR=5.6						
FCC	Fort Churchill	92.14	18	eP	P	01 45 17.1	-1.4
	comp=Z,1.1nm,0.7s						
FFC	Flin Flon	92.91	24	eP	P	01 45 21.4	-0.8
NVAR	Mina Array Bea	96.16	43	P	P	01 45 38.1	+0.3
	comp=Z,0.5nm,0.8s,baz=289,slow=4.5,SNR=3.7						
SDV	Santo Domingo	144.95	21	ePKPdf	PKPab	01 51 45.4	-1.3
OTAV	Otavalo	148.88	41	ePKPbc	PKPbc	01 51 57.7	-0.8
OTAV				ePKPab	sPKPbc	01 52 02.0	-0.3

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*ISCJB **17** 01:35:05.9±0.3, 36°.43N±0°.01×71°.68E±0°.02, h90^{km}±2^{km}, mb4.9/282, Error ellipse: s-maj=2.2km s-min=2.1km az=135.2*

*MOS **17** 01:35:06.8±1.1, 36°.45N×71°.73E, h101^{km}, mb5.0/108, Error ellipse: s-maj=3.8km s-min=2.6km az=100.4*

*IDC **17** 01:35:08.0±0.3, 36°.31N×71°.68E, h99^{km}±2^{km}, mb4.5/49, mb1 4.6/52, mb1mx4.5/67, mbtmp4.9/52, MS4.0/20, Ms1 4.0/20, ms1mx3.7/44, Error ellipse: s-maj=7.2km s-min=5.4km az=21.0*

*NEIC **17** 01:35:07.7±0.3, 36°.44N×71°.67E, h96^{km}±3^{km}, mb4.9/139, Error ellipse: s-maj=2.8km s-min=2.2km az=197.0*

NEIC Felt at Islamabad.

*GCMT **17** 01:35:09.7±0.2, 36°.48N±0°.01×71°.36E±0°.02, h103^{km}±1^{km}, MW5.1/92, Moment Tensor Solution. s63,c91; s92,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.37±.11; $M_{\theta\theta}$-0.83±.12; $M_{\phi\phi}$-1.53±.13; $M_{r\theta}$-0.54±.09; $M_{\theta\phi}$-4.97±.11; $M_{\phi r}$-1.79±.09; Best double couple: $M_0$5.35700×10^{16} NP1:ϕ_s183.00000°,δ79.00000°,λ28.00000°. NP2: ϕ_s87.00000°,δ63.00000°,λ167.00000°. Principal axes: T 4.2310, Plg27.0000°, Azm48.0000°; N 2.2600, Plg60.0000°, Azm203.0000°; P -6.4830, Plg11.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NNC **17** 01:35:09.1±1.7, 36°.65N×71°.26E, h140^{km}±20^{km}, mb5.0, mpv5.7 Error ellipse: s-maj=15.7km s-min=11.8km az=170.0*

*BJI **17** 01:35:11.4, 36°.56N×72°.18E, h105^{km}, mB5.2/44, mb5.2/64*

ISC 17 01:35:07.3±0.2**, 36°.43N**±0°.03×**71°.59E**±0°.02**, h95**^{km}±1^{km}**, h95**^{km}**:pP-P, n801,** σ1^{s}.**97**/933**, mb4.9**/288**, 74C-66D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.61	174	P	Pn	01 35 48.8	+0.9
CEP				S	Sn	01 36 21.0	+2.0
GAR	Garm	2.76	339	ePn	Pn	01 35 50.5	+0.6
GAR				eSn	Sn	01 36 22.6	0.0
GAR	Garm	2.76	339	ePN	Pn	01 35 50.5	+0.6
GAR				e		01 36 22.6	
KBL	Kabul	2.81	229	ePn	Pn	01 35 51.1	+0.6
KBL				eSn	Sn	01 36 22.9	-0.9
KBL	Kabul	2.81	229	ePN	Pn	01 35 51.1	+0.6
CHGR	Chuyangaron	2.95	320	ePn	Pn	01 35 51.8	-0.6
CHGR				eSn	Sn	01 36 25.7	-1.3
CHCP	Chirah Chowk	3.08	153	P	Pn	01 35 55.3	+1.2
NIL	Nilore	3.09	153	ePn	Pn	01 35 55.8	+1.6
NIL				eSn	Sn	01 36 29.1	-1.2
NIL	Nilore	3.09	153	ePN	Pn	01 35 55.8	+1.6
NIL				e		01 36 29.1	
THW	Thamme Wali	3.63	178	P	Pn	01 36 01.6	+0.2
BTK	Batken	3.68	351	ePn	Pn	01 36 05.2	+3.1
BTK				eSn	Sn	01 36 45.3	+0.9
BTK	Batken	3.68	351	ePN	Pn	01 36 05.2	+3.1
BTK				e		01 36 45.3	
SFK	Sufi-Kurgan	3.88	22	⇑P	Pn	01 36 07.5	+2.5
	222nm,0.3s						
SFK				⇓S	Sn	01 36 53.6	+3.9
	702nm,0.5s						
SFK	Sufi-Kurgan	3.88	22	Lg	Lg	01 36 53.3	
	1µm,0.2s						
SFK	Sufi-Kurgan	3.88	22	PN	Pn	01 36 07.5	+2.5
SFK				S	Sn	01 36 53.6	+3.9
SFK				pmax	pmax		
	comp=Z,222nm,0.3s						
SFK				smax	smax		
	comp=N,702nm,0.5s						
SARP	Sargodha	4.58	168	P	Pn	01 36 13.2	-1.1
KSH	Kashi	4.63	47	P	Pn	01 36 10.8	-4.3
KSH				S	Sn	01 36 56.8	-11
KSH				smax	smax		
	comp=N,16µm,0.5s						
KSH				smax	smax		
	comp=N,11µm,0.6s						
TAS	Tashkent	5.21	341	PN	Pn	01 36 28.0	+5.1
TAS				pmax	pmax		
	comp=Z,629nm,0.7s						
DHRM	DHARAMSHALA	5.70	136	eP	Pn	01 36 29.3	-0.5
DHRM				eS	Sn	01 37 29.8	-4.2
IUG	Iuzhnay	5.84	349	d iPN	Pn	01 36 31.6	+0.2
IUG	Iuzhnay	5.84	349	⇓iPn	Pn	01 36 31.6	+0.2
	comp=Z,11µm,0.3s						
IUG				⇓iSn	Sn	01 37 34.2	-2.8
	comp=Z,17µm,1.7s						
IUG				eLQ	LQ	01 38 03.0	
AML	Almayashu	5.92	15	P	Pn	01 36 33.5	+0.6
	SNR=723						
JBG	Jabagly	6.04	353	i PN	Pn	01 36 34.7	+0.5
JBG				pmax	pmax		
	comp=Z,4µm,0.9s						
JBG				MLR	MLR		
	comp=Z,430nm,7.0s						
NRN	Naryn	6.06	33	ePn	Pn	01 36 34.8	+0.1
NRN				eSn	Sn	01 37 41.4	-1.4
NRN	Naryn	6.06	33	ePN	Pn	01 36 34.8	+0.1
CHM	Chimkent	6.08	346	d iPN	Pn	01 36 34.9	+0.2
CHM				pmax	pmax		
	comp=Z,5µm,1.3s						
CHM	Chimkent	6.08	346	⇓iPn	Pn	01 36 34.9	+0.2
	comp=Z,5µm,1.3s						
CHM				⇑iSn	Sn	01 37 38.9	-3.9
	comp=Z,22µm,2.2s						
CHM				eLQ	LQ	01 38 15.7	
MNAS	Manas	6.09	6	⇓P	Pn	01 36 35.7	+0.8
	comp=Z,433nm,0.7s						
MNAS				⇓S	Sn	01 37 40.3	-3.0
	comp=Z,1µm,1.2s						
MNAS	Manas	6.09	6	Lg	Lg	01 37 41.5	
	comp=Z,385nm,0.7s						
MNAS	Manas	6.09	6	PN	Pn	01 36 35.7	+0.8
MNAS				pmax	pmax		
	comp=Z,433nm,0.7s						
UCH	Uchtor	6.22	20	P	Pn	01 36 37.7	+0.8
	SNR=957						
KZA	Kyzart	6.32	26	P	Pn	01 36 38.7	+0.5
	SNR=230						
MRKS	Merke	6.43	11	Lg	Lg	01 37 50.0	
	comp=Z,492nm,0.4s						
EKS2	Erkin-Say	6.45	14	P	Pn	01 36 40.8	+1.0
	SNR=316						
DZA	Taraz	6.46	358	d iPN	Pn	01 36 40.2	+0.4
DZA	Taraz	6.46	358	⇓iPn	Pn	01 36 40.2	+0.4
	comp=Z,40µm,0.3s						
DZA				⇑iSn	Sn	01 37 49.0	-3.1
AAK	Ala-Archa	6.59	19	P	Pn	01 36 42.9	+1.2
	SNR=306						
AAK	Ala-Archa	6.59	19	P	Pn	01 36 43.0	+1.2
AAK				⇓S	Sn	01 37 54.4	-1.1
	comp=Z,1µm,0.8s						
AAK	Ala-Archa	6.59	19	i P	Pn	01 36 43.0	+1.3
	SNR=462						
AAK	Ala-Archa	6.59	19	d iPN	Pn	01 36 42.8	+1.0
AAK	Ala-Archa	6.59	19	P	Pn	01 36 43.1	+1.3
	SNR=183						
AAK	Ala-Archa	6.59	19	P	Pn	01 36 43.0	+1.3
	comp=Z,128nm,0.3s,baz=174,slow=6.2,SNR=2077						
AAK				S	Sn	01 37 53.5	-2.0
	comp=Z,36nm,0.3s,baz=315,slow=20,SNR=18						
KK31	Karatay Array	6.72	353	ePn	Pn	01 36 43.6	+0.3
KK31				eSn	Sn	01 37 56.1	-2.3
KK31	Karatay Array	6.72	353	⇑P	Pn	01 36 43.6	+0.3
	comp=Z,340nm,0.4s,baz=178,slow=12						
KK31				⇓S	Sn	01 37 55.1	-3.3
	comp=Z,424nm,0.6s,baz=175,slow=20,SNR=7.6						
KK31	Karatay Array	6.72	353	ePN	Pn	01 36 43.6	+0.3
KKAR	Karatay Array	6.72	353	ePn	Pn	01 36 43.8	+0.5
KKAR				eSn	Sn	01 37 54.9	-3.4
KKAR	Karatay Array	6.72	353	ePN	Pn	01 36 43.8	+0.5
KBK	Karagaybulak	6.74	22	P	Pn	01 36 44.9	+1.1
	SNR=80						
FRU1	Bishkek	6.79	19	ePn	Pn	01 36 45.5	+1.1
FRU1				eSn	Sn	01 37 59.8	-0.4
FRU1	Bishkek	6.79	19	ePN	Pn	01 36 45.5	+1.1
FRU	Bishkek	6.81	19	i PN	Pn	01 36 46.0	+1.4
FRU				pmax	pmax		
	comp=Z,880nm,1.8s						
FRU				MLR	MLR		
	comp=E,6µm,6.0s						
ULHL	Ulahol	6.83	30	P	Pn	01 36 45.5	+0.4
	SNR=227						
CHMS	Chumysh	7.00	19	P	Pn	01 36 48.0	+0.8
	SNR=134						
SMLA	Simla	7.03	137	eP	Pn	01 36 46.3	-1.3
SMLA				eS	Sn	01 38 00.3	-5.7
SMLA				IAML		01 38 02.6	
	comp=N,4µm,1.2s						
SMLA				IAML		01 38 03.0	
	comp=E,2µm,0.1s						
KDJ	Kajisay	7.15	36	ePn	Pn	01 36 50.9	+1.5
KDJ	Kajisay	7.15	36	ePN	Pn	01 36 50.9	+1.5
TKM2	Tokmak 2	7.18	24	P	Pn	01 36 50.4	+0.6
	SNR=540						
TKM2	Tokmak 2	7.18	24	⇑P	Pn	01 36 50.6	+0.8
	comp=E,302nm,0.6s						
TKM2				⇓S	Sn	01 38 08.0	-1.9
	comp=E,355nm,1.1s						
TKM2	Tokmak 2	7.18	24	PN	Pn	01 36 50.6	+0.8
TKM2				pmax	pmax		
	comp=Z,302nm,0.6s						
USP	Ospenovka	7.19	17	P	Pn	01 36 50.1	+0.4
	SNR=256						
KST	Kastek	7.41	26	P	Pn	01 36 53.8	+0.9
	comp=Z,486nm,0.7s						
DGS	Degeres	7.53	24	Lg	Lg	01 38 14.3	
	comp=Z,289nm,1.2s						
MTBS	Maitube	7.66	28	P	Pn	01 36 57.1	+0.9
	comp=Z,397nm,0.6s						
MTBS	Maitube	7.66	28	⇓ePN	Pn	01 36 56.1	-0.1
MTBS				pmax	pmax		
	comp=Z,4µm,0.6s						
MTBS	Maitube	7.66	28	⇓ePn	Pn	01 36 56.1	-0.1
	comp=Z,4µm,0.6s						
MTBS				eSn	Sn	01 38 20.7	-0.6
TNSS	Tian-Shan	7.78	30	P	Pn	01 36 58.4	+0.3
	comp=Z,318nm,0.5s						
TNSS	Tian-Shan	7.78	30	ePN	Pn	01 36 57.6	-0.6
TNSS				pmax	pmax		
	comp=Z,883nm,0.6s						
TNSS	Tian-Shan	7.78	30	ePn	Pn	01 36 57.7	-0.5
	comp=Z,883nm,0.6s						
AAA	Alma-Ata	7.91	30	P	Pn	01 37 01.0	+1.4
	comp=Z,295nm,0.8s						
AAA	Alma-Ata	7.91	30	ePN	Pn	01 37 01.0	+1.4
AAA				pmax	pmax		
	comp=Z,800nm,1.3s						
AAA				MLR	MLR		
	comp=Z,1µm,3.0s						
AAA	Alma-Ata	7.91	30	ePn	Pn	01 36 59.4	-0.2
	comp=Z,3µm,0.9s						
AAA				eLR	LR	01 39 46.5	
	comp=Z,176nm,13.0s						
MDOK	Medeo	7.93	30	⇓P	Pn	01 37 00.7	+0.8
	comp=Z,300nm,0.7s						
MDOK	Medeo	7.93	30	ePN	Pn	01 37 00.3	+0.4
MDOK				MLR	MLR		
	comp=Z,342nm,11.0s						
MDOK	Medeo	7.93	30	ePn	Pn	01 37 00.4	+0.4
MDOK				eSn	Sn	01 38 30.1	+2.1
MDOK				eLR	LR	01 39 56.5	
	comp=Z,342nm,11.3s						
KNDC	Almaty	7.94	30	⇑P	Pn	01 37 01.1	+1.2
	comp=Z,425nm,0.6s						
KOTS	Kotyrbulak	8.01	30	P	Pn	01 37 01.9	+0.8
	comp=Z,275nm,0.5s						
PRZ	Przheval'sk	8.02	39	ePn	Pn	01 37 02.1	+0.9
PRZ	Przheval'sk	8.02	39	ePN	Pn	01 37 02.1	+0.9
DDI	Dehra Dun	8.14	137	eP	Pn	01 37 01.0	-1.7
DDI				eS	Sn	01 38 24.6	-8.5
KTBS	Karatobe	8.25	27	P	Pn	01 37 03.8	-0.4
	comp=Z,134nm,0.9s						
KUU	Kurty	8.29	24	P	Pn	01 37 04.4	-0.4
	comp=Z,54nm,0.5s						
KUU	Kurty	8.29	24	cePN	Pn	01 37 03.8	-0.9
KUU				pmax	pmax		
	comp=Z,566nm,0.9s						
KUU				MLR	MLR		
	comp=Z,168nm,9.0s						
KUU	Kurty	8.29	24	⇑ePn	Pn	01 37 03.9	-0.9
	comp=Z,566nm,0.9s						
KUU				eLQ	LQ	01 39 21.3	
KUU				eLR	LR	01 40 07.8	
	comp=Z,168nm,9.3s						
SATY	Saty	8.45	36	P	Pn	01 37 06.7	-0.2
	comp=Z,543nm,0.9s						
SATY	Saty	8.45	36	cePN	Pn	01 37 05.0	-1.9
SATY				pmax	pmax		
	comp=Z,4µm,1.0s						
SATY	Saty	8.45	36	⇑ePn	Pn	01 37 05.1	-1.9
	comp=Z,4µm,1.0s						
CHKK	Chushkaly	8.49	27	P	Pn	01 37 08.2	+0.8
	comp=Z,237nm,0.7s						
CHKK	Chushkaly	8.49	27	⇑ePN	Pn	01 37 06.6	-0.8
CHKK				pmax	pmax		
	comp=Z,3µm,0.9s						
CHKK	Chushkaly	8.49	27	⇑ePn	Pn	01 37 06.7	-0.8
	comp=Z,3µm,0.9s						
ZHN	Zhinishke	8.54	36	ePN	Pn	01 37 05.7	-2.5
ZHN				pmax	pmax		
	comp=Z,2µm,1.1s						
ZHN	Zhinishke	8.54	36	ePn	Pn	01 37 05.7	-2.5
	comp=Z,2µm,1.1s						
BTLS	Baital	8.80	11	d iPN	Pn	01 37 11.1	-0.5
BTLS				pmax	pmax		
	comp=Z,1µm,0.6s						
BTLS				MLR	MLR		
	comp=Z,226nm,9.0s						
BTLS	Baital	8.80	11	⇓iP	Pn	01 37 11.1	-0.5
	comp=Z,1µm,0.6s						
BTLS				⇓iS	Sn	01 38 44.0	-5.1
BTLS				eLR	LR	01 40 52.9	
	comp=Z,226nm,8.6s						
UZB	Uzynbulak	8.81	38	dePN	Pn	01 37 09.2	-2.7
UZB				pmax	pmax		
	comp=Z,1µm,1.1s						
UZB				MLR	MLR		
	comp=Z,200nm,9.0s						
UZB	Uzynbulak	8.81	38	⇓eP	Pn	01 37 09.3	-2.7
	comp=Z,1µm,1.1s						
UZB				eLR	LR	01 40 42.3	
	comp=Z,200nm,9.3s						
KPKS	Kokpek	8.89	36	d iPN	Pn	01 37 12.7	-0.2
KPKS				pmax	pmax		
	comp=Z,5µm,1.1s						
KPKS				MLR	MLR		
	comp=Z,407nm,11.0s						
KPKS	Kokpek	8.89	36	⇓iPn	Pn	01 37 12.8	-0.2
	comp=Z,5µm,1.1s						
KPKS				eLR	LR	01 40 35.6	
	comp=Z,407nm,10.6s						
PDGK	Podgornoye	9.18	39	⇑P	Pn	01 37 16.0	-1.0
	comp=Z,256nm,0.8s						
PDGK	Podgornoye	9.18	39	P	Pn	01 37 16.0	-1.0
PDGK				pmax	pmax		
	comp=Z,256nm,0.8s						
TDK	Taldyqorghan	10.00	29	eP	Pn	01 37 25.5	-2.4
TDK				pmax	pmax		
	comp=Z,4µm,1.4s						
TDK				MLR	MLR		
	comp=Z,637nm,13.0s						
TDK	Taldyqorghan	10.00	29	eP	Pn	01 37 25.6	-2.4
	comp=Z,4µm,1.4s						
TDK				eLR	LR	01 41 06.2	
	comp=Z,637nm,13.3s						
DJR	Jarkent	10.07	36	P	Pn	01 37 28.1	-0.9
	comp=Z,61nm,0.8s						
KAPS	Kapalarasan	10.62	31	P	Pn	01 37 36.5	+0.1
	comp=Z,86nm,0.7s						
GEYT	Alibeck	10.86	282	P	Pn	01 37 35.4	-4.4
	comp=Z,28nm,0.3s,baz=116,slow=14,SNR=226						
GEYT				S	Sn	01 39 32.6	-6.6
	comp=Z,48nm,0.3s,baz=169,slow=16,SNR=11						
GEYT				LR	LR	01 43 21.2	
	comp=Z,786nm,19.5s,baz=100,slow=45						
GYA0B	ALIBECK ARRAY	10.86	282	ePn	Pn	01 37 35.5	-4.2
GYA0B				eSn	Sn	01 39 30.3	-8.9
GYA0B	ALIBECK ARRAY	10.86	282	⇑P	Pn	01 37 36.0	-3.7
	comp=Z,152nm,0.8s						
GYA0B				⇑S	Sn	01 39 30.5	-8.7
	comp=Z,283nm,0.6s						
OTUK	Ortayu	11.82	2	⇓P	Pn	01 37 50.4	-2.2
	comp=Z,74nm,0.8s						
OTUK	Ortayu	11.82	2	P	Pn	01 37 50.4	-2.2
OTUK				pmax	pmax		
	comp=Z,74nm,0.8s						
PYUN	Piuthan	12.72	128	eP	Pn	01 37 59.3	-5.6
	comp=Z,1µm,0.7s						
PYUN				eS	Sn	01 40 08.3	-16
MAKZ	Makanchi	12.95	34	ePn	Pn	01 38 06.0	-1.5
MAKZ	Makanchi	12.95	34	⇓P	Pn	01 38 05.8	-1.8
	comp=Z,214nm,0.8s						
MAKZ	Makanchi	12.95	34	eP	Pn	01 38 06.0	-1.5
DANN	Dangsing	13.05	125	eP	Pn	01 38 03.7	-5.6
	comp=Z,572nm,0.3s						
MK01	Makanchi Array	13.06	34	ePn	Pn	01 38 06.6	-2.5
MK31	Makanchi Array	13.07	34	ePn	Pn	01 38 07.5	-1.8
MK31	Makanchi Array	13.07	34	⇑P	Pn	01 38 07.4	-1.8
	comp=Z,29nm,0.6s,baz=213,slow=11,SNR=552						
MK31	Makanchi Array	13.07	34	eP	Pn	01 38 07.5	-1.8
MKAR	Makanchi Array	13.07	34	P	Pn	01 38 07.2	-2.0
	comp=Z,5.6nm,0.3s,baz=220,slow=15,SNR=327						
MKAR				S	Sn	01 40 22.8	-10
	baz=213,slow=25,SNR=2.4						
BHJ	Bhuj	13.24	188	eP	Pn	01 38 08.3	-3.1
BHJ				eS	Sn	01 40 24.8	-12
BHJ				IAML		01 40 31.1	
	comp=N,89nm,0.6s						
BHJ				IAML		01 40 31.4	
	comp=E,131nm,0.1s						
KOLN	Koldanda	13.34	127	eP	Pn	01 38 07.5	-5.5
	comp=E,332nm,0.4s						
GKN	Gorkha	13.86	124	eP	Pn	01 38 14.3	-5.5
	comp=E,1.6nm,0.2s						
BHPL	Bhopal	14.08	157	eP	Pn	01 38 19.5	-3.0
BHPL				IAmb	IAmb	01 38 21.2	
BHPL				ex	x	01 40 44.7	
WMQ	Urumqi	14.35	54	⇑iP	Pn	01 38 23.6	-2.3
WMQ				pP	P	01 38 40.4	+10
WMQ				sP		01 38 56.5	
WMQ				S	Sn	01 41 01.8	-2.1
WMQ				pmax	pmax		
	comp=E,180nm,0.9s						
WMQ				LR	LR		
	comp=E,2µm,12.3s						
WMQ				LR	LR		
	comp=E,1µm,10.7s						
WMQ				LR	LR		
	comp=E,540nm,20.3s						
WMQ	Urumqi	14.35	54	ePn	Pn	01 38 23.7	-2.3
WMQ				eSn	Sn	01 40 57.0	-6.8
WMQ	Urumqi	14.35	54	eP	Pn	01 38 23.7	-2.2
WMQ				e		01 40 57.0	
DMN	Daman	14.43	124	eP	Pn	01 38 21.8	-5.5
	comp=E,444nm,0.4s						
PKIN	Phulchoki	14.65	123	eP	Pn	01 38 24.5	-5.6
	comp=E,463nm,0.4s						
PKI	Pulchoki	14.66	123	eP	Pn	01 38 24.6	-5.7
	comp=E,468nm,0.5s						
GUN	Gumba	14.77	121	eP	Pn	01 38 25.8	-5.9
	comp=E,267nm,0.3s						
ZSN	Zaisan	14.77	38	deP	Pn	01 38 28.0	-3.2
ZSN				pmax	pmax		
	comp=Z,81nm,1.0s						
ZSN	Zaisan	14.77	38	⇓eP	Pn	01 38 28.0	-3.2
	comp=Z,81nm,1.0s						
KURBB	Kurchatov Arra	15.04	17	P	Pn	01 38 31.6	-3.0
	comp=Z,0.6nm,0.3s,baz=205,slow=12,SNR=132						
KURBB				S	Sn	01 41 12.0	-8.4
	baz=200,slow=26,SNR=2.8						
JBP	Jabalpur	15.08	149	⇑eP	Pn	01 38 34.8	-0.4
JBP				ex	x	01 41 04.6	
JIRN	Jiri	15.14	121	eP	Pn	01 38 30.7	-5.7
	comp=Z,818nm,0.4s						
KURK	Kurchatov	15.15	17	ePn	Pn	01 38 32.7	-3.4
	comp=Z,221nm,1.1s						
KURK				S	Sn	01 41 12.0	-11
KURK				eSn	Sn	01 41 21.2	-1.8
KURK	Kurchatov	15.15	17	⇓P	Pn	01 38 32.1	-3.9
	comp=Z,187nm,1.0s						
KURK	Kurchatov	15.15	17	c iP	Pn	01 38 32.6	-3.4
SEM	Semipalatinsk	15.31	21	ceP	Pn	01 38 39.1	+0.9
SEM				pmax	pmax		
	comp=Z,335nm,0.6s						
SEM				MLR	MLR		
	comp=Z,314nm,11.0s						
SEM	Semipalatinsk	15.31	21	⇑eP	Pn	01 38 39.2	+0.9
	comp=Z,335nm,0.6s						
SEM				eS	S	01 41 38.7	+1.2
SEM				eLR	LR	01 44 22.6	
	comp=Z,314nm,10.6s						
AB31	Akbulak array	15.38	330	⇑P	Pn	01 38 35.6	-3.3
	comp=Z,39nm,0.6s,baz=137,slow=13,SNR=1089						
AB31				⇑S	Sn	01 41 22.0	-6.6
	comp=Z,82nm,0.8s,baz=149,slow=23,SNR=10						
AB31	Akbulak array	15.38	330	P	Pn	01 38 35.6	-3.3
AB31				pmax	pmax		
	comp=Z,39nm,0.6s						
ABKAR	Akbulak array	15.38	330	ePn	Pn	01 38 35.8	-3.2
RAMN	Ramite	15.87	122	eP	Pn	01 38 40.1	-5.4
	comp=Z,351nm,0.4s						
NGP	Nagpur	16.55	155	⇑iP	P	01 38 54.5	-0.2
NGP				ex	x	01 41 38.5	
BVA0	Borovoye Array	16.62	357	⇓P	Pn	01 38 52.3	-2.0
	comp=Z,67nm,1.2s,baz=173,slow=13,SNR=208						
BVA0				⇓S	Sn	01 41 53.9	-4.5
	comp=Z,3.8nm,1.0s,baz=176,slow=24,SNR=4.6						
BVA0	Borovoye Array	16.62	357	P	Pn	01 38 52.3	-2.0
BVA0				pmax	pmax		
	comp=Z,67nm,1.2s						
BVAR	Borovoye Array	16.62	357	P	Pn	01 38 52.2	-2.1
	comp=Z,4.5nm,0.3s,baz=177,slow=11,SNR=75						
BVAR				S	Sn	01 41 49.8	-8.6
	comp=Z,0.7nm,0.3s,baz=172,slow=22,SNR=5.3						
BVAR				LR	LR	01 45 25.1	
	comp=Z,396nm,18.0s,baz=178,slow=37						
BRVK	Borovoye	16.66	357	ePn	Pn	01 38 52.8	-1.9
	comp=Z,110nm,1.1s						
BRVK				eSn	Sn	01 41 56.2	-3.0
BRVK	Borovoye	16.66	357	d iP	Pn	01 38 52.7	-2.0
BRVK	Borovoye	16.66	357	P	Pn	01 38 52.7	-2.0
	SNR=32						
BANOM	Banah	16.74	236	i P	Pn	01 38 54.7	-1.3
	SNR=15						
BANOM	Banah	16.74	236	P	Pn	01 38 54.7	-1.3
	SNR=5.5						
SHME	Shamm	16.76	236	i P	Pn	01 38 56.3	0.0
	SNR=7.9						
GTK	Tadong	17.04	117	eP	P	01 39 00.3	+0.1
GTK				IAmb	IAmb	01 39 03.0	

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      comp=Z,82nm,0.5s
AKTO  Aktyubinsk        17.08 329 ⇓P      Pn      01 38 58.8 -1.2
      comp=Z,229nm,1.2s
AKTO                              ⇑S      Sn      01 42 03.1 -6.6
      comp=Z,102nm,1.1s
AKTO  Aktyubinsk        17.08 329  P      Pn      01 38 58.9 -1.2
      comp=Z,34nm,0.3s,baz=141,slow=7.4,SNR=245
AKTO                               S      Sn      01 42 01.1 -8.6
      comp=Z,1.6nm,0.3s,baz=170,slow=20,SNR=4.6
AKTO                               LR     LR      01 45 47.6
      comp=Z,540nm,20.2s,baz=143,slow=37
MDH   Madha             17.16 234  P      Pn      01 38 59.0 -2.2
MSFE  Esma-Masafi       17.21 234 i P     Pn      01 39 00.8 -1.0
      SNR=14
WSAR  Wadi Sarin        17.27 224  P      P       01 39 03.5 +0.9
      SNR=8.5
WSAR  Wadi Sarin        17.27 224  P      Pn      01 39 01.6 -1.0
      comp=Z,2.4nm,0.3s,baz=69,slow=6.9,SNR=29
UOSS  Minazif           17.47 233 eP      P       01 39 04.5 -0.3
      comp=Z,35nm,0.8s
UOSS  Minazif           17.47 233  P      P       01 39 04.7 -0.1
UOSS  Minazif           17.47 233  P      P       01 39 04.0 -0.8
      SNR=6.6
DGZ   Jazzator, Alta    17.55  36ceP      P       01 39 04.0 -1.7
HATD  Hatta, Dubai      17.60 233 i P     Pn      01 39 07.1 +0.5
      SNR=7.7
BOK   Bokaro            17.62 132 eP      P       01 39 03.2 -3.2
BOK                                IAmb   IAmb    01 39 05.5
      comp=Z,128nm,1.0s
LSA   Lhasa             17.70 107  P      P       01 39 05.8 -1.9
LSA                                pmax   pmax
      comp=Z,23nm,1.2s
LSA   Lhasa             17.70 107 eP      P       01 39 06.5 -1.2
      comp=Z,58nm,0.8s
LSA                               eSn     Sn      01 42 12.8  -13
LSA   Lhasa             17.70 107  P      P       01 39 06.6 -1.2
LSA   Lhasa             17.70 107 eP      P       01 39 06.5 -1.2
LSA                               e               01 42 12.8
LSA                                pmax   pmax
      comp=Z,58nm,0.8s
JLN   Jalan Bani Buh    17.73 220  P      P       01 39 07.7 +0.1
      SNR=5.5
SMDO  Samad             17.74 225  P      Pn      01 39 09.2 +0.8
      SNR=7.9
ASHO  Ashiyiah          17.75 233 i P     Pn      01 39 08.7 +0.4
      SNR=29
ASHO  Ashiyiah          17.75 233  P      Pn      01 39 08.7 +0.4
      SNR=20
NAZ   Nazwa, Dubai      17.80 235 i P     Pn      01 39 09.4 +0.5
      SNR=9.8
SOHO  SOHO              17.84 231  P      P       01 39 07.4 -1.4
      SNR=7.5
POO   Poona             17.94 173 eP      P       01 39 07.0 -3.0
POO                                IAmb   IAmb    01 39 13.7
      comp=Z,13nm,0.7s
FAQ   Al Faqa, Dubai    18.01 234 i P     Pn      01 39 11.2 -0.3
      SNR=11
ASUD  Al Ashush, Dub    18.26 234 i P     Pn      01 39 14.5  0.0
      SNR=20
ALNE  Al Ain            18.39 232 i P     Pn      01 39 15.7 -0.4
      SNR=23
BSY   Bisya             18.48 226  P      Pn      01 39 19.0 +1.9
      SNR=13
AJN   Ajban             18.53 235 i P     P       01 39 16.5 +0.1
      SNR=7.4
AJN   Ajban             18.53 235  P      P       01 39 17.0 +0.6
MHTO  MHTO              19.45 221  P      Pn      01 39 28.7 +0.2
      SNR=30
MAK   Makhachkala       19.62 297 eP      P       01 39 28.1  0.0
MAK                               eS      S       01 43 06.1 +1.9
MAK                                pmax   pmax
      comp=Z,67nm,0.7s
MAK                                MLR    MLR
      comp=Z,438nm,12.0s
ZAA0  Zalesovo Array    19.79  24 eP      P       01 39 29.3 -0.5
      comp=Z,326nm,1.2s
ZAA0  Zalesovo Array    19.79  24 ⇑P      P       01 39 29.5 -0.3
      comp=Z,203nm,0.9s
ZALV  Zalesovo Beam     19.79  24 eP      P       01 39 29.1 -0.7
ZALV                               S      S       01 43 10.2 +2.7
ZALV  Zalesovo Beam     19.79  24  P      P       01 39 29.6 -0.2
      comp=Z,21nm,0.3s,baz=212,slow=10.0,SNR=291
ZALV                               S      S       01 43 10.2 +2.7
      comp=Z,0.3nm,0.3s,baz=191,slow=23,SNR=3.3
ZALV                               LR     LR      01 48 01.4
      comp=Z,196nm,19.1s,baz=252,slow=39
HYB   Hyderabad         19.91 160 i P     P       01 39 32.0 +0.5
      comp=Z,100nm,1.0s
HYB                               esP     sP      01 40 03.0 +0.1
HYB                               eS      S       01 43 06.0 -4.6
HYB   Hyderabad         19.91 160 eP      P       01 39 31.9 +0.3
HYB                                IAmb   IAmb    01 39 34.3
      comp=Z,72nm,0.7s
NVS   Novosibirsk       20.08  20⇓iP      P       01 39 33.4 +0.4
NVS                               e               01 43 06.1
SHL   Shillong          20.45 116 eP      P       01 39 36.7 -0.7
      comp=Z,86nm,0.9s
SHL   Shillong          20.45 116 eP      P       01 39 36.7 -0.7
SHL                                pmax   pmax
      comp=Z,86nm,0.9s
SHL   Shillong          20.45 116 eP      P       01 39 36.1 -1.3
SHL                               ex      x       01 43 08.4
TEZP  TEZPUR            20.52 112 eP      P       01 39 37.5 -0.4
TEZP                               IAmb   IAmb    01 39 39.0
      comp=Z,63nm,0.4s
DQM   DQM               20.54 221  P      P       01 39 39.5 +1.3
      SNR=10
ZIRO  ZIRO              20.82 109 eP      P       01 39 41.8 +0.3
GROC  Groznyy           20.89 297 eP      P       01 39 42.4 +0.6
GROC                              eS      S       01 43 30.0 +0.6
GROC                              e               01 43 49.2
GROC                              e*SS    sS      01 43 59.0 -3.0
GROC                               pmax   pmax
      comp=Z,504nm,1.4s
GOA   Goa               20.95 174 eP      P       01 39 42.2 -0.4
VIS   Vishakhapatnam    21.33 148 i P     P       01 39 46.8 +0.1
GNI   Garni             21.37 288 eP      P       01 39 49.8 +2.6
      comp=Z,479nm,1.2s
GNI                                S      S       01 43 44.7 +5.5
GNI   Garni             21.37 288 i P     P       01 39 47.8 +0.6
      SNR=32
GNI   Garni             21.37 288d iP     P       01 39 50.3 +3.1
GNI                                pmax   pmax
      comp=Z,486nm,1.1s
GNI   Garni             21.37 288  P      P       01 39 50.4 +3.1
      SNR=44
GNI   Garni             21.37 288  P      P       01 39 49.3 +2.1
      comp=Z,130nm,1.0s,baz=9.2,slow=1.0,SNR=46
GNI                                S      S       01 43 44.7 +5.5
      comp=Z,8.8nm,0.9s,baz=157,slow=19,SNR=1.7
BTNK  Botanikuri        21.42 292 i P     P       01 39 50.9 +3.3
BTNK                               IAML_P
      comp=Z,867nm,0.3s
TBLG  Delisi            21.47 292 eP      P       01 39 49.4 +1.3
      comp=Z,200nm,1.0s
TBLG  Delisi            21.47 292 eP      P       01 39 49.4 +1.3
TBLG                               pmax   pmax
      comp=Z,200nm,1.0s
TBLG  Delisi            21.47 292 i P     P       01 39 52.0 +3.9
TBLG                               IAML_P
      comp=Z,3μm,0.5s
BELO  BELONIA           21.60 122 eP      P       01 39 50.9 +1.3
SVE   Sverdlovsk        21.70 344c iP     P       01 39 50.6 +0.3
SVE                               eS      S       01 43 41.1 -3.7
SVE                                pmax   pmax
      comp=Z,125nm,1.0s
SVE                                MLR    MLR
      comp=Z,514nm,11.0s
ARU   Arti              21.86 340 eP      P       01 39 52.0  0.0
      comp=Z,75nm,0.9s
ARU   Arti              21.86 340d iP     P       01 39 51.8 -0.2
ARU                                               01 40 22.2
ARU                               eS      S       01 43 47.6 -0.2
ARU                                SS     SnSn    01 44 24.8 +3.2
ARU                                pmax   pmax
      comp=Z,83nm,0.9s
IGDI  IGDIR             21.88 287 i P     P       01 39 56.3 +3.8
IGDI                               IAML_P
      comp=Z,165nm,0.5s
MOKO  MOKOCHONG         21.96 111 eP      P       01 39 53.7 +0.1
KOHI  KOHIMA            21.99 113 eP      P       01 39 54.6 +0.7
CLDR  Caldiran          22.01 285 i P     P       01 39 58.7 +4.6
CLDR                               IAML_P
      comp=Z,63nm,0.1s
BRDH  Bariadhala        22.12 123  P      P       01 39 55.6 +0.5
      comp=Z,118nm,0.4s,baz=30,slow=9.1,SNR=8.5
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BRDH                               pP     pP      01 40 15.8 +0.9
      comp=Z,243nm,0.9s,baz=23,slow=4.3,SNR=2.9
BRDH                               S      S       01 43 56.7 +3.7
      comp=Z,60nm,0.3s,baz=20,slow=22,SNR=5.5
ZEI   Tsey              22.20 295 eP      P       01 39 57.2 +1.1
ZEI                                pmax   pmax
      comp=Z,56nm,0.9s
EAK   Akyaka            22.25 290 i P     P       01 40 00.1 +3.6
EAK                                IAML_P
      comp=Z,873nm,0.7s
VMUR  Van-Muradiye      22.28 285 i P     P       01 40 02.2 +5.3
VMUR                               IAML_P
      comp=Z,78nm,0.8s
GTA   Gaotai            22.43  74 ⇑P      P       01 39 59.0 +0.6
GTA                                pP     pP      01 40 20.3 +2.1
GTA                                sP     sP      01 40 32.3 +1.8
GTA                                S      S       01 43 57.3 -0.9
GTA                                pmax   pmax
      comp=Z,17nm,1.3s
GTA                                pmax   pmax
      comp=Z,420nm,7.5s
GTA                                LR     LR
      comp=Z,660nm,11.4s
GTA                                LR     LR
      comp=Z,320nm,11.4s
GTA                                LR     LR
      comp=Z,240nm,12.1s
NCK   Nalchik           22.52 297⇓iP      P       01 39 59.8 +0.6
NCK                                pmax   pmax
      comp=Z,114nm,0.9s
KARS  Kars              22.65 289 eP      P       01 40 02.5 +1.8
      comp=Z,74nm,1.0s
KARS  Kars              22.65 289 eP      P       01 40 02.5 +1.8
KARS                               pmax   pmax
      comp=Z,74nm,1.0s
TUTA  Tutak             22.86 286 i P     P       01 40 07.1 +4.2
TUTA                               IAML_P
      comp=Z,3.9nm,0.1s
PYA1  Pyatigorsk        22.97 298⇑iP      P       01 40 04.2 +0.5
PYA1                               pmax   pmax
      comp=Z,3.0nm,1.0s
KBZ   Khabaz            23.06 297  P      P       01 40 04.9 +0.4
      comp=Z,27nm,0.9s,baz=123,slow=7.2,SNR=27
KBZ                                S      S       01 44 11.6 +3.7
      comp=Z,4.6nm,1.1s,baz=212,slow=14,SNR=1.5
KBZ                                LR     LR      01 51 39.4
      comp=Z,489nm,19.0s,baz=93,slow=43
NEY   Neytrino          23.12 296⇑eP      P       01 40 07.8 +2.5
NEY                                pmax   pmax
      comp=Z,7.0nm,0.9s
SAIH  SAIHA             23.17 121 eP      P       01 40 06.3 +0.4
SHA1  Shidzhatmaz       23.23 297 i P     P       01 40 07.1 +0.7
KVAR  Kislovodsk Arr    23.24 298  P      P       01 40 08.5 +2.2
      comp=Z,9.4nm,0.6s,baz=85,slow=23,SNR=20
KVAR                               S      S       01 44 19.6 +8.6
      comp=Z,8.0nm,0.8s,baz=345,slow=3.1,SNR=2.5
KVAR                               LR     LR      01 51 30.8
      comp=Z,472nm,18.7s,baz=238,slow=42
KIV   Kislovodsk        23.25 298 eP      P       01 40 07.5 +1.1
      comp=Z,70nm,0.7s
KIV   Kislovodsk        23.25 298⇓iP      P       01 40 08.1 +1.7
KIV   Kislovodsk        23.25 298 i P     P       01 40 07.0 +0.7
      SNR=10
KIV   Kislovodsk        23.25 298 eP      P       01 40 06.7 +0.3
KIV                               e*PP    pP      01 40 27.1 +0.5
KIV                               eS      S       01 44 12.3 +1.2
KIV                                pmax   pmax
      comp=Z,62nm,1.1s
KIV                                MLR    MLR
      comp=Z,490nm,15.0s
KIV   Kislovodsk        23.25 298  P      P       01 40 08.5 +2.2
      SNR=11
SIRT  Sirnak            23.28 281 eP      P       01 40 08.1 +1.3
      comp=Z,120nm,1.5s
KNGR  Kungurtug, Tuv    23.39  45ceP      P       01 40 08.5 +0.9
ARTV  Artvin            23.54 291 i P     P       01 40 13.1 +3.8
ARTV                               IAML_P
      comp=Z,267nm,0.5s
HOMI  Horasan           23.55 288 i P     P       01 40 14.1 +4.8
HOMI                               IAML_P
      comp=Z,12nm,0.1s
DAGI  Agillar           23.55 290 i P     P       01 40 14.0 +4.8
DAGI                               IAML_P
      comp=Z,365nm,0.7s
DBAD  Bademkaya         23.71 290 i P     P       01 40 16.3 +5.6
DBAD                               IAML_P
      comp=Z,228nm,0.6s
DMTO  DMTO              23.75 223  P      P       01 40 11.8 +0.8
RBK   Rabkut            24.33 224  P      P       01 40 17.0 +0.7
      SNR=5.7
MDRS  Chennai           24.53 159 eP      P       01 40 17.4 -0.6
KOPT  Kop Dagi          24.63 288 i P     P       01 40 24.9 +5.8
KOPT                               IAML_P
      comp=Z,111nm,0.1s
ABTO  Aybut             24.96 225  P      P       01 40 24.6 +2.5
      SNR=10
SOC   Sochi             25.33 296 eP      P       01 40 28.7 +3.5
SOC                               eS      S       01 44 49.2 +4.8
SOC                               e*SS    sS      01 45 28.9 +5.4
SOC                                pmax   pmax
      comp=Z,94nm,1.1s
SOC                                MLR    MLR
      comp=Z,213nm,12.0s
MOY   Mondy             25.82  45 eP      P       01 40 31.5 +1.8
MOY                                pmax   pmax
      comp=Z,150nm,1.7s
VRH   Novokhopyorsk     25.90 314 eP      P       01 40 29.9 -0.3
VRH                                pmax   pmax
      comp=Z,40nm,1.0s
RAYN  Ar Rayn           25.91 247 eP      P       01 40 30.2 -0.4
      comp=Z,59nm,1.0s
RAYN  Ar Rayn           25.91 247 eP      P       01 40 30.2 -0.4
RAYN                               pmax   pmax
      comp=Z,59nm,1.0s
LZH   Lanzhou           25.95  81 ⇑P      P       01 40 33.0 +2.0
LZH                                pP     pP      01 40 56.4 +3.1
LZH                                sP     sP      01 41 09.3 +4.4
LZH                                PP     PnPn    01 41 20.3 +6.0
LZH                               eS      S       01 44 54.5 -0.1
LZH                                sS     sS      01 45 34.6 +0.7
LZH                                pmax   pmax
      comp=Z,110nm,1.3s
LZH                                pmax   pmax
      comp=Z,400nm,4.3s
LZH                                LR     LR
      comp=Z,1μm,11.4s
LZH                                LR     LR
      comp=Z,750nm,12.0s
LZH                                LR     LR
      comp=Z,960nm,14.2s
KIRV  Kirov             26.52 334  P      P       01 40 37.0 +1.4
      comp=Z,39nm,0.6s,baz=95,slow=3.7,SNR=20
KIRV                               S      S       01 45 11.4 +8.8
      comp=Z,8.3nm,0.6s,baz=266,slow=22,SNR=1.9
KIRV                               LR     LR      01 51 47.8
      comp=Z,361nm,21.8s,baz=117,slow=38
ZAK   Zakamensk         26.68  49 eP      P       01 40 37.9 +0.5
ZAK                                pmax   pmax
      comp=Z,44nm,1.4s
ANN   Anapa             27.09 299 eP      P       01 40 42.1 +1.1
ANN                               e*PP    pP      01 41 06.1 +3.2
ANN                               eS      S       01 45 14.9 +2.9
ANN                               e*SS    sS      01 45 53.5 +2.1
ANN                                pmax   pmax
      comp=Z,29nm,0.7s
ANN                                MLR    MLR
      comp=E,115nm,18.0s
ANN                                MLR    MLR
      comp=Z,654nm,18.0s
ANN                                MLR    MLR
      comp=N,326nm,18.0s
CD2   Chengdu           27.25  92  P      P       01 40 44.3 +1.6
CD2                                pP     pP      01 41 05.8 +1.0
CD2                                sP     sP      01 41 17.3 +1.1
CD2                                S      S       01 45 16.4 +1.4
CD2                                sS     sS      01 45 54.5 +0.1
CD2                                pmax   pmax
      comp=N,70nm,0.7s
CD2                                pmax   pmax
      comp=N,140nm,4.6s
CD2                                LR     LR
      comp=N,450nm,10.3s
CD2                                LR     LR
      comp=N,430nm,9.3s
CD2                                LR     LR
      comp=N,530nm,10.8s
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TLY   Talaya            27.34  46 eP      P       01 40 44.3 +1.0
      comp=N,38nm,0.8s
TLY   Talaya            27.34  46 eP      P       01 40 44.9 +1.6
TLY                                pmax   pmax
      comp=Z,91nm,1.6s
TLY                                MLR    MLR
      comp=Z,369nm,15.0s
TLY   Talaya            27.34  46  P      P       01 40 45.1 +1.9
      SNR=11
VSR   Storozhevoye      27.40 313d iP     P       01 40 43.6 -0.1
VSR                                pmax   pmax
      comp=Z,72nm,1.1s
VORR  Voronezh          27.54 314 eP      P       01 40 46.0 +1.1
VORR                               pmax   pmax
      comp=Z,250nm,1.2s
IRK   Irkutsk           27.91  45 eP      P       01 40 49.1 +0.8
IRK                                pmax   pmax
      comp=Z,67nm,2.9s
SONM  Songino Array     27.98  55  P      P       01 40 50.2 +1.1
      comp=Z,48nm,0.9s,baz=255,slow=9.7,SNR=203
SONM                               LR     LR      01 53 31.4
      comp=Z,227nm,19.4s,baz=306,slow=39
SONA1 Songino Array     27.99  55 eP      P       01 40 49.6 +0.4
LPSR  Galich'ya Gora    28.04 316 eP      P       01 40 49.3  0.0
LPSR                               pmax   pmax
      comp=Z,40nm,1.0s
ULN   Ulaanbaatar       28.43  55 eP      P       01 40 53.7 +0.7
      comp=Z,48nm,0.9s
ULN   Ulaanbaatar       28.43  55c iP     P       01 40 54.2 +1.1
ULN                                pmax   pmax
      comp=Z,54nm,0.9s
ULN   Ulaanbaatar       28.43  55  P      P       01 40 54.4 +1.3
      SNR=28
ASF   Jabal al Asfar    28.88 272  LR     LR      01 55 40.5
      comp=Z,429nm,19.2s,baz=37,slow=43
KMI   Kunming           28.91 104  P      P       01 40 58.1 +0.4
KMI                                pP     pP      01 41 22.9 +2.8
KMI                                sP     sP      01 41 36.1 +4.6
KMI                                S      S       01 45 44.1 +2.5
KMI                                sS     sS      01 46 23.0 +1.9
KMI                                pmax   pmax
      comp=Z,15nm,0.7s
KMI                                pmax   pmax
      comp=Z,220nm,4.0s
KMI                                LR     LR
      comp=Z,310nm,11.9s
KMI                                LR     LR
      comp=Z,370nm,12.6s
KMI                                LR     LR
      comp=Z,190nm,19.8s
KMI   Kunming           28.91 104 eP      P       01 40 57.5 -0.2
      comp=Z,36nm,1.4s
KMI   Kunming           28.91 104 eP      P       01 40 57.5 -0.2
KMI                                pmax   pmax
      comp=Z,36nm,1.4s
CHTO  Chiang Mai        29.77 119 eP      P       01 41 06.0 +1.0
      comp=Z,9.9nm,0.8s
CHTO  Chiang Mai        29.77 119 eP      P       01 41 06.0 +1.0
CHTO                               pmax   pmax
      comp=Z,10.0nm,0.8s
CHTO  Chiang Mai        29.77 119  P      P       01 41 06.5 +1.5
      comp=Z,123nm,1.1s
CMMT  Chiang Mai        29.77 119  P      P       01 41 06.4 +1.3
      comp=Z,27nm,1.1s,comp=Z,495nm
MMAI  Mount Meron Ar    29.83 274  P      P       01 41 07.8 +2.3
      comp=Z,0.6nm,0.4s,baz=46,slow=12,SNR=3.0
BR131 Keskin Array S    29.91 288 eP      P       01 41 07.6 +1.3
BRTR  Keskin Array B    29.91 288  P      P       01 41 08.8 +2.5
      comp=Z,2.7nm,0.6s,baz=107,slow=8.0,SNR=19
BRTR                               pP     pP      01 41 29.9 +1.4
      comp=Z,4.1nm,0.7s,baz=95,slow=7.1,SNR=7.5
BRTR                               LR     LR      01 56 24.4
      comp=Z,105nm,21.9s,baz=70,slow=42
CMAR  Chiang Mai Arr    30.00 119  P      P       01 41 07.2 +0.1
      comp=Z,9.4nm,0.7s,baz=301,slow=8.7,SNR=52
CMAR                               pP     pP      01 41 30.2 +0.2
      comp=Z,14nm,0.8s,baz=305,slow=9.5,SNR=6.0
MOS   Moscow            30.02 321 eP      P       01 41 06.0 -0.8
MOS                               e               01 41 40.8
MOS                                pmax   pmax
      comp=Z,73nm,1.3s
PRGR  Permogore         30.04 335 eP      P       01 41 05.2 -1.7
PRGR                              e*PP    pP      01 41 31.7 +2.2
PRGR                               pmax   pmax
      comp=Z,28nm,1.2s
CM01  Chiang Mai Arr    30.04 119 eP      P       01 41 07.4  0.0
PALK  Pallekele         30.19 162 eP      P       01 41 09.1 +0.3
      comp=Z,17nm,0.7s
PALK  Pallekele         30.19 162 i P     P       01 41 09.4 +0.6
      SNR=7.9
PALK  Pallekele         30.19 162 eP      P       01 41 09.1 +0.3
PALK                               pmax   pmax
      comp=Z,17nm,0.7s
PALK  Pallekele         30.19 162  P      P       01 41 09.1 +0.3
      comp=Z,14nm,0.7s,baz=295,slow=6.9,SNR=20
PALK                               LR     LR      01 54 47.5
      comp=Z,183nm,18.4s,baz=302,slow=39
BTO   Baotou            30.19  70 eP      P       01 41 08.9 +0.2
OBN   Obninsk           30.30 319 eP      P       01 41 10.1 +0.7
      comp=Z,88nm,1.2s
OBN   Obninsk           30.30 319c iP     P       01 41 10.3 +0.9
OBN                               i *PP   pP      01 41 34.8 +3.1
OBN                               i               01 44 06.4
OBN                               i SS    SS      01 47 47.7  -27
OBN                                pmax   pmax
      comp=Z,77nm,1.1s
OBN                                MLR    MLR
      comp=Z,339nm,18.0s
XAN   Xi'an             30.46  83  P      P       01 41 12.0 +0.9
XAN                                pP     pP      01 41 35.5 +2.0
XAN                                PP     PnPn    01 42 14.0 +0.2
XAN                                S      S       01 46 01.3 -4.1
XAN                                pmax   pmax
      comp=Z,35nm,1.0s
XAN                                pmax   pmax
      comp=Z,730nm,10.0s
XAN                                LR     LR
      comp=Z,410nm,13.3s
XAN                                LR     LR
      comp=Z,280nm,10.2s
XAN                                LR     LR
      comp=Z,210nm,13.2s
XAN   Xi'an             30.46  83 eP      P       01 41 11.0 -0.1
      comp=Z,35nm,1.0s
XAN   Xi'an             30.46  83 eP      P       01 41 11.0 -0.1
XAN                                pmax   pmax
      comp=Z,35nm,1.0s
SUKH  Sukhothai         31.14 120  P      P       01 41 18.4 +1.3
      comp=Z,14nm,0.8s
HHC   Hu-ho-hao-te      31.34  70 eP      P       01 41 20.8 +2.0
HHC                                pP     pP      01 41 45.3 +3.6
HHC                                sP     sP      01 41 58.6 +5.4
HHC                                S      S       01 46 18.3 -0.8
HHC                                pmax   pmax
      comp=Z,35nm,1.1s
HHC                                pmax   pmax
      comp=Z,160nm,5.5s
HHC                                LR     LR
      comp=Z,430nm,8.8s
HHC                                LR     LR
      comp=Z,300nm,6.1s
GYA   Guiyang           31.38  98  P      P       01 41 20.1 +0.8
GYA                                pP     pP      01 41 45.3 +3.5
GYA                                sP     sP      01 41 57.8 +4.6
GYA                                PP     PnPn    01 42 28.0 +2.3
GYA                                S      S       01 46 20.6 +0.6
GYA                                sS     sS      01 47 01.4 +1.8
GYA                                pmax   pmax
      comp=Z,20nm,0.8s
GYA                                pmax   pmax
      comp=Z,120nm,4.9s
UMPA  Umpang Tak        31.49 123  P      P       01 41 23.4 +3.2
      comp=Z,7.3nm,0.8s,comp=Z,919nm
UTTA  Uttaradit         31.61 118  P      P       01 41 22.2 +0.9
      comp=Z,11nm,0.7s,comp=Z,96nm
KLMR  Klimovskoe        31.78 330 eP      P       01 41 21.1 -1.2
KLMR                               pmax   pmax
      comp=Z,22nm,0.8s
KLMR  Klimovskoe        31.78 330 eP      P       01 41 21.2 -1.1
KLMR                               AMP            01 41 25.4
      comp=Z,22nm,0.8s
ENH   Enshi             32.10  90 eP      P       01 41 26.2 +0.7
UTHA  Uthaitani         32.34 123  P      P       01 41 29.5 +1.8
      comp=Z,9.7nm,0.8s,comp=Z,116nm
TIY   Taiyuan           32.43  75 eP      P       01 41 29.4 +1.0
TIY                                pmax   pmax
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	comp=Z,67nm,1.0s						
KIS	**Kishinev**	**33.26**	**302**	*e*P	**P**	**01 41 35.0**	**-0.4**
KIS				*e*L	L	01 55 08.0	
KIS	**Kishinev**	**33.26**	**302**	*e*P	**P**	**01 41 35.0**	**-0.4**
KIS				*e*		01 42 01.0	
KIS				*i*		01 42 51.0	
CIT	**Chita**	**33.34**	**49**	*e*P	**P**	**01 41 37.0**	**+0.9**
CIT				*e*		01 42 03.9	
CIT				pmax	pmax		
	comp=Z,159nm,1.4s						
AKASG	**Malin Array Be**	**33.36**	**309**	P	**P**	**01 41 37.4**	**+1.1**
	comp=Z,6.4nm,0.6s,baz=84,slow=7.5,SNR=27						
AKASG				pP	**pP**	**01 41 59.6**	**+1.0**
	comp=Z,3.8nm,0.5s,baz=80,slow=7.4,SNR=2.2						
AKASG				sP	**sP**	**01 42 10.2**	**+0.2**
	comp=Z,2.0nm,0.4s,baz=83,slow=7.7,SNR=1.5						
AKASG				PP	**PP**	**01 42 45.9**	**-7.4**
	comp=Z,6.8nm,0.8s,baz=84,slow=10.0,SNR=4.5						
AKASG				S	**S**	**01 46 45.9**	**-4.2**
	comp=Z,0.4nm,0.4s,baz=84,slow=38,SNR=0.9						
AKASG				LR	LR	01 58 31.9	
	comp=Z,162nm,18.6s,baz=110,slow=42						
AKBB	**Malin Array Si**	**33.36**	**309**	*e*P	**P**	**01 41 37.8**	**+1.5**
	comp=Z,22nm,0.8s						
KIEV	**Kiev**	**33.37**	**309**	*e*P	**P**	**01 41 36.4**	**+0.1**
	comp=Z,23nm,0.9s						
KIEV	**Kiev**	**33.37**	**309**	⇓*i*P	**P**	**01 41 37.4**	**+1.1**
KIEV	**Kiev**	**33.37**	**309**	*i* P	**P**	**01 41 36.4**	**+0.1**
	SNR=8.4						
KIEV	**Kiev**	**33.37**	**309**	*d i*P	**P**	**01 41 37.2**	**+0.9**
KIEV				pmax	pmax		
	comp=Z,24nm,1.1s						
AK11	**Malin Array Si**	**33.40**	**309**	*e*P	**P**	**01 41 36.3**	**-0.2**
LEOM	**Leova**	**33.63**	**301**	⇑*i*P	**P**	**01 41 41.3**	**+2.7**
LEOM	**Leova**	**33.63**	**301**	P	**P**	**01 41 41.3**	**+2.7**
CFR	**Carcaliu**	**33.69**	**299**	⇑*i*P	**P**	**01 41 41.1**	**+1.9**
CFR	**Carcaliu**	**33.69**	**299**	P	**P**	**01 41 41.4**	**+2.2**
CFR				pmax	pmax		
	comp=Z,17nm,0.9s						
MANT	**Manisa**	**34.00**	**287**	*e*P	**P**	**01 41 43.2**	**+1.0**
	comp=Z,31nm,1.2s						
NRIK	**Noril'sk**	**34.11**	**10**	P	**P**	**01 41 43.6**	**+1.1**
	comp=Z,8.7nm,0.4s,baz=208,slow=6.0,SNR=13						
NRIK				pP	**pP**	**01 42 07.7**	**+2.1**
	comp=Z,7.4nm,0.6s,baz=215,slow=2.2,SNR=2.5						
NRIK				LR	LR	01 57 47.5	
	comp=Z,201nm,18.5s,baz=205,slow=40						
TMCR	**Tamitsa**	**34.32**	**335**	*e*P	**P**	**01 41 45.3**	**+1.0**
TMCR				pmax	pmax		
	comp=Z,36nm,1.2s						
PHET	**Kaeng Krachan**	**34.38**	**126**	P	**P**	**01 41 47.2**	**+1.8**
	comp=Z,11nm,0.7s,comp=Z,152nm						
ODBI	**Odobesti**	**34.45**	**300**	⇓*i*P	**P**	**01 41 49.1**	**+3.4**
SKNT	**Sakolnakorn**	**34.58**	**115**	P	**P**	**01 41 47.6**	**+0.4**
	comp=Z,23nm,1.2s						
VRI	**Vrincioaia**	**34.68**	**300**	⇑*i*P	**P**	**01 41 50.5**	**+2.8**
VRI	**Vrincioaia**	**34.68**	**300**	P	**P**	**01 41 50.5**	**+2.8**
PLOR	**Plostina**	**34.73**	**300**	⇓*i*P	**P**	**01 41 50.6**	**+2.4**
PLOR	**Plostina**	**34.73**	**300**	P	**P**	**01 41 50.6**	**+2.4**
TESR	**Tescani**	**34.73**	**301**	⇑*i*P	**P**	**01 41 50.4**	**+2.2**
ISR	**Istrita**	**34.82**	**299**	⇑*i*P	**P**	**01 41 51.8**	**+2.7**
ISR	**Istrita**	**34.82**	**299**	P	**P**	**01 41 51.7**	**+2.7**
MICGM	**Minsk**	**34.89**	**315**	*e*	**P**	**01 41 50.0**	**+0.6**
MNK	**Minsk**	**34.89**	**315**	*e*P	**P**	**01 41 50.0**	**+0.6**
BJT	**Baijiatuau**	**34.93**	**70**	*e*P	**P**	**01 41 50.5**	**+0.6**
	comp=Z,40nm,0.9s						
BJT	**Baijiatuau**	**34.93**	**70**	*e*P	**P**	**01 41 50.5**	**+0.6**
BJT				pmax	pmax		
	comp=Z,40nm,0.9s						
BJI	**Beijing**	**34.93**	**70**	⇑*i*P	**P**	**01 41 51.8**	**+1.9**
BJI				pmax	pmax		
	comp=Z,32nm,0.9s						
BJI				LR	LR		
	comp=Z,320nm,15.2s						
BJI				LR	LR		
	comp=Z,220nm,5.1s						
BJI				LR	LR		
	comp=Z,190nm,34.1s						
PRAR	**RASCA**	**35.03**	**303**	⇑*i*P	**P**	**01 41 52.9**	**+2.1**
SULR		**35.04**	**298**	⇓*i*P	**P**	**01 41 53.5**	**+2.7**
BOD	**Bodaibo**	**35.10**	**39**	*e*P	**P**	**01 41 50.9**	**-0.3**
BOD				pmax	pmax		
	comp=Z,30nm,1.8s						
BIZ	**Bicaz**	**35.11**	**302**	⇓*i*P	**P**	**01 41 53.7**	**+2.3**
SRAK	**Srakaew**	**35.20**	**121**	P	P	01 41 58.1	+5.6
	comp=Z,72nm,0.7s,comp=Z,698nm						
MLR	**Muntele Rosu**	**35.23**	**299**	*e*P	**P**	**01 41 54.5**	**+1.9**
	comp=Z,53nm,1.0s						
MLR	**Muntele Rosu**	**35.23**	**299**	⇑*i*P	**P**	**01 41 55.4**	**+2.8**
MLR	**Muntele Rosu**	**35.23**	**299**	*e*P	**P**	**01 41 54.5**	**+1.9**
MLR				pmax	pmax		
	comp=Z,53nm,1.0s						
PUL	**Pulkovo**	**35.25**	**325**	⇑*e*P	**P**	**01 41 52.6**	**+0.2**
PUL				pmax	pmax		
	comp=Z,46nm,0.7s						
SGRR	**Singureni**	**35.27**	**297**	⇓*i*P	**P**	**01 41 55.6**	**+2.9**
OZUR		**35.33**	**300**	⇑*i*P	**P**	**01 41 55.9**	**+2.5**
NACGM	**Naroch**	**35.60**	**316**	*e*	**P**	**01 41 55.0**	**-0.5**
DOPR	**Dopca**	**35.61**	**300**	⇓*i*P	**P**	**01 41 58.8**	**+3.0**
IDID	**Didziasalis**	**35.72**	**316**	*e*P	**P**	**01 41 58.1**	**+1.6**
IDID				IAmb	IAmb	01 41 59.1	
	comp=Z,21nm,1.2s						
KARP	**Karpathos**	**35.72**	**282**	*e*P	**P**	**01 41 58.4**	**+1.5**
	comp=Z,20nm,0.8s						
BURAR	**Bucovina Array**	**35.73**	**303**	⇑*i*P	**P**	**01 41 58.6**	**+1.8**
BURAR	**Bucovina Array**	**35.73**	**303**	P	**P**	**01 41 58.6**	**+1.8**
BUR04	**Bucovina Ar. S**	**35.73**	**303**	*e*P	**P**	**01 41 57.4**	**+0.6**
BUR08	**Bucovina Ar. S**	**35.74**	**303**	*e*P	**P**	**01 41 58.0**	**+1.1**
MTUR	**Matau**	**35.86**	**299**	⇑*i*P	**P**	**01 42 01.5**	**+3.5**
VOIR		**35.87**	**299**	⇓*i*P	**P**	**01 42 00.0**	**+2.0**
VOIR		**35.87**	**299**	P	**P**	**01 42 00.0**	**+2.0**
WHN	**Wuhan**	**35.92**	**87**	⇓P	**P**	**01 42 00.3**	**+1.8**
HUMR	**Humele**	**35.96**	**298**	⇑*i*P	**P**	**01 42 01.1**	**+2.4**
IIGN	**Ignalina**	**36.01**	**316**	*e*P	**P**	**01 42 00.9**	**+1.9**
IIGN				IAmb	IAmb	01 42 02.8	
	comp=Z,15nm,0.7s						
IZAR	**Zarasai**	**36.09**	**317**	*e*P	**P**	**01 42 01.5**	**+1.9**
IZAR				IAmb	IAmb	01 42 03.3	
	comp=Z,13nm,0.6s						
ISAL	**Salakas**	**36.11**	**317**	*e*P	**P**	**01 42 01.5**	**+1.7**
ISAL				IAmb	IAmb	01 42 03.7	
	comp=Z,7.5nm,0.8s						
ARR	**Arges**	**36.16**	**299**	⇓*i*P	**P**	**01 42 02.8**	**+2.3**
ARCR	**ARCALIA**	**36.31**	**302**	⇑*i*P	**P**	**01 42 04.0**	**+2.3**
VSU	**Vasula**	**36.54**	**321**	*d i*P	**P**	**01 42 04.0**	**+0.6**
VSU				pmax	pmax		
	comp=Z,100nm,1.1s						
VSU	**Vasula**	**36.54**	**321**	*e*P	**P**	**01 42 03.7**	**+0.3**
VSU				IAmb	IAmb	01 42 05.6	
	comp=Z,69nm,1.0s						
LVV	**L'vov**	**36.59**	**307**	*e*P	**P**	**01 42 05.8**	**+1.8**
LOT	**Lotru**	**36.77**	**299**	⇑*i*P	**P**	**01 42 07.4**	**+1.7**
CJR	**Cluj-Napoca**	**36.83**	**301**	⇑*i*P	**P**	**01 42 07.8**	**+1.6**
CJR	**Cluj-Napoca**	**36.83**	**301**	P	**P**	**01 42 07.8**	**+1.6**
HIA	**Hailar**	**36.95**	**54**	*e*P	**P**	**01 42 07.7**	**+0.7**
	comp=Z,25nm,1.0s						
HIA	**Hailar**	**36.95**	**54**	*c e*P	**P**	**01 42 08.4**	**+1.3**
HIA				pmax	pmax		
	comp=Z,27nm,1.2s						
DEV	**Deva**	**37.35**	**300**	⇑*i*P	**P**	**01 42 13.3**	**+2.8**
DEV	**Deva**	**37.35**	**300**	P	**P**	**01 42 13.2**	**+2.8**
VTS	**Vitosha**	**37.40**	**295**	*e*P	**P**	**01 42 12.1**	**+1.0**
	comp=Z,6.3nm,1.0s						
VTS	**Vitosha**	**37.40**	**295**	⇓*i*P	**P**	**01 42 13.8**	**+2.7**
VTS	**Vitosha**	**37.40**	**295**	*e*P	**P**	**01 42 12.1**	**+1.0**
VTS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PKDT	**Phuket**	**37.42**	**133**	P	**P**	**01 42 13.5**	**+2.1**
	comp=Z,24nm,0.5s,comp=Z,2µm						
PUNG	**Punghina**	**37.44**	**297**	⇑*i*P	**P**	**01 42 13.4**	**+2.1**
DRGR		**37.44**	**302**	⇓*i*P	**P**	**01 42 13.9**	**+2.5**
DRGR		**37.44**	**302**	P	**P**	**01 42 13.9**	**+2.5**
GZR	**Gura Zlata**	**37.47**	**299**	⇑*i*P	**P**	**01 42 13.2**	**+1.6**
GZR	**Gura Zlata**	**37.47**	**299**	P	**P**	**01 42 13.1**	**+1.5**
SUW	**Suwalki**	**37.51**	**314**	*e*P	**P**	**01 42 12.9**	**+1.2**
SUW	**Suwalki**	**37.51**	**314**	*e*P	**P**	**01 42 12.4**	**+0.6**
	comp=Z,20nm,0.6s						
SUW	**Suwalki**	**37.51**	**314**	*e*P	**P**	**01 42 12.9**	**+1.2**
TRPA	**Tarpa**	**37.53**	**304**	⇓*i*P	**P**	**01 42 14.3**	**+2.3**
IDI	**Anoyia**	**37.58**	**283**	P	**P**	**01 42 14.2**	**+1.5**
	comp=Z,2.2nm,0.3s,baz=68,slow=9.2,SNR=7.6						
KRAB	**Krabi**	**37.68**	**131**	P	P	01 42 22.5	+9.0
UZH	**Uzhgorod**	**37.69**	**305**	⇓*i*P	**P**	**01 42 13.8**	**+0.5**
UZH				*i*		01 42 38.7	
UZH				*e*		01 43 43.9	
FIA1	**FINESS Array S**	**37.81**	**326**	*e*P	**P**	**01 42 14.2**	**+0.1**
	comp=Z,18nm,1.0s						
FINES	**FINESS Array B**	**37.81**	**326**	P	**P**	**01 42 15.6**	**+1.5**
	comp=Z,10nm,0.4s,baz=120,slow=9.7,SNR=217						
FINES				pP	**pP**	**01 42 38.9**	**+1.8**
	comp=Z,6.6nm,0.6s,baz=111,slow=10,SNR=3.7						
FINES				LR	LR	01 58 42.2	
	comp=Z,291nm,19.4s,baz=102,slow=37						
APA	**Apatity**	**37.89**	**337**	⇓*i*P	P	01 42 03.0	-12
APA				*i* *PP	pP	01 42 23.6	-14
APA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,700nm,15.0s						
SIRR	**Siria**	**38.19**	**301**	⇑*i*P	**P**	**01 42 20.9**	**+3.3**
BZS	**Buzias**	**38.26**	**300**	⇓*i*P	**P**	**01 42 20.4**	**+2.2**
BZS	**Buzias**	**38.26**	**300**	P	**P**	**01 42 20.3**	**+2.1**
MDVR	**Moldovita**	**38.27**	**298**	⇑*i*P	**P**	**01 42 20.6**	**+2.3**
TRTT	**Trang**	**38.28**	**131**	P	**P**	**01 42 19.6**	**+1.0**
	comp=Z,25nm,0.6s						
PBUR	**Paburg**	**38.52**	**317**	*e*P	**P**	**01 42 20.0**	**-0.2**
PBUR				IAmb	IAmb	01 42 22.4	
	comp=Z,34nm,0.5s						
SLIT	**Slitere, Latvi**	**38.62**	**319**	*e*P	**P**	**01 42 21.1**	**+0.2**
SLIT				IAmb	IAmb	01 42 22.6	
	comp=Z,103nm,0.8s						
BEL	**Belsk**	**38.75**	**310**	*e*P	**P**	**01 42 24.5**	**+2.3**
BEL	**Belsk**	**38.75**	**310**	*e*P	**P**	**01 42 24.5**	**+2.3**
NIE	**Niedzica**	**39.01**	**306**	*e*P	**P**	**01 42 26.8**	**+2.4**
NIE	**Niedzica**	**39.01**	**306**	*e*P	**P**	**01 42 26.8**	**+2.4**
NJ2	**Nanjing**	**39.01**	**82**	*e*P	**P**	**01 42 26.0**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,26nm,0.7s						
DL2	**Dalian**	**39.29**	**71**	P	**P**	**01 42 28.4**	**+1.6**
DL2				pmax	pmax		
	comp=Z,110nm,1.0s						
PSZ	**Piszkesteto**	**39.31**	**304**	*e*P	**P**	**01 42 28.3**	**+1.3**
	comp=Z,11nm,0.9s						
PSZ	**Piszkesteto**	**39.31**	**304**	⇑*i*P	**P**	**01 42 29.9**	**+2.9**
PSZ	**Piszkesteto**	**39.31**	**304**	⇓*e*P	**P**	**01 42 27.0**	**0.0**
PSZ				*e*PP	**PP**	**01 43 57.0**	**-1.8**
PSZ	**Piszkesteto**	**39.31**	**304**	P	**P**	**01 42 29.7**	**+2.7**
PSZ				pmax	pmax		
	comp=Z,11nm,0.9s						
KLNR	**Kaliningrad**	**39.31**	**314**	*d i*P	**P**	**01 42 28.1**	**+1.3**
KLNR				pmax	pmax		
	comp=Z,41nm,1.1s						
OJC	**Ojcow**	**39.33**	**307**	*e*P	**P**	**01 42 29.0**	**+1.9**
OJC	**Ojcow**	**39.33**	**307**	*e*P	**P**	**01 42 27.7**	**+0.7**
	comp=Z,22nm,0.8s						
OJC	**Ojcow**	**39.33**	**307**	*e*P	**P**	**01 42 27.7**	**+0.7**
OJC				pmax	pmax		
	comp=Z,22nm,0.8s						
LANS	**Liptovska Anna**	**39.55**	**306**	*e*P	**P**	**01 42 31.8**	**+2.8**
LANS	**Liptovska Anna**	**39.55**	**306**	*e*P	**P**	**01 42 31.8**	**+2.8**
DIVS	**Divibare**	**39.56**	**298**	*e*P	**P**	**01 42 29.9**	**+0.7**
	comp=Z,10nm,0.9s						
VYHS	**Vyhne**	**39.99**	**305**	*e*P	**P**	**01 42 34.8**	**+2.2**
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
VYHS	**Vyhne**	**39.99**	**305**	*e*P	**P**	**01 42 34.8**	**+2.2**
VYHS				*e*PP	**PP**	**01 44 09.4**	**+3.3**
SNY	**Shenyang**	**40.18**	**66**	⇑P	**P**	**01 42 34.6**	**+0.5**
SNY				pmax	pmax		
	comp=Z,44nm,0.8s						
MORH	**Mrgy, Hungar**	**40.28**	**301**	⇓*e*P	**P**	**01 42 36.0**	**+1.1**
MORH				*e*PP	**PP**	**01 44 09.1**	**-0.2**
SRO2	**Moca**	**40.33**	**303**	*e*P	**P**	**01 42 37.1**	**+1.7**
SRO2	**Moca**	**40.33**	**303**	*e*P	**P**	**01 42 37.0**	**+1.7**
SRO	**Srobarova**	**40.38**	**303**	*e*P	**P**	**01 42 37.8**	**+2.1**
SRO	**Srobarova**	**40.38**	**303**	*e*P	**P**	**01 42 37.8**	**+2.1**
OKC	**Ostrava-Krasne**	**40.40**	**307**	AMS	AMS	02 02 30.0	
	comp=Z,200nm,13.4s						
KCSI	**Kotacane, Aceh**	**40.67**	**137**	P	**P**	**01 42 37.7**	**-0.7**
MORC	**Moravsky Berou**	**40.79**	**307**	*e*P	**P**	**01 42 40.0**	**+0.8**
	comp=Z,16nm,0.8s						
MORC	**Moravsky Berou**	**40.79**	**307**	⇑*i*P	**P**	**01 42 41.5**	**+2.3**
MORC	**Moravsky Berou**	**40.79**	**307**	*e*P	**P**	**01 42 40.0**	**+0.8**
MORC				pmax	pmax		
	comp=Z,16nm,0.8s						
MORC	**Moravsky Berou**	**40.79**	**307**	*e*P	**P**	**01 42 41.4**	**+2.3**
SNSI	**Sinabang, Aceh**	**40.84**	**140**	P	**P**	**01 42 40.5**	**+0.7**
	comp=Z,166nm,0.8s						
KULM	**Kulim**	**40.87**	**132**	*e*P	**P**	**01 42 40.4**	**+0.2**
	comp=Z,14nm,0.8s						
KULM	**Kulim**	**40.87**	**132**	P	**P**	**01 42 41.1**	**+0.9**
GKP	**Gorka Klasztor**	**40.98**	**312**	*e*P	**P**	**01 42 42.3**	**+1.8**
GKP	**Gorka Klasztor**	**40.98**	**312**	*e*P	**P**	**01 42 42.3**	**+1.8**
MODS	**Modra-Piesok**	**41.04**	**304**	*e*P	**P**	**01 42 43.4**	**+2.2**
MODS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MODS	**Modra-Piesok**	**41.04**	**304**	*e*P	**P**	**01 42 43.4**	**+2.2**
KEV	**Kevo**	**41.05**	**338**	*e*P	**P**	**01 42 41.8**	**+0.9**
	comp=Z,8.2nm,0.6s						
KEV	**Kevo**	**41.05**	**338**	*e*P	**P**	**01 42 41.8**	**+0.9**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ZST	**Bratislava**	**41.16**	**304**	*e*P	**P**	**01 42 43.9**	**+1.7**
ZST	**Bratislava**	**41.16**	**304**	*e*P	**P**	**01 42 43.9**	**+1.7**
SSE	**Sheshan**	**41.21**	**83**	*e*P	**P**	**01 42 44.1**	**+1.4**
	comp=Z,98nm,0.9s						
CN2	**Changchun**	**41.22**	**63**	*e*P	**P**	**01 42 43.3**	**+0.6**
CN2				PcP	**PcP**	**01 44 41.5**	**+1.6**
CN2				*e*S	**S**	**01 48 48.4**	**-0.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				LR	LR		
	comp=Z,270nm,7.0s						
CN2				LR	LR		
	comp=Z,220nm,7.0s						
CN2				LR	LR		
	comp=Z,170nm,6.0s						
KRLC	**Kraliky**	**41.27**	**307**	*e*P	**P**	**01 42 45.8**	**+2.7**
KRLC	**Kraliky**	**41.27**	**307**	*e*P	**P**	**01 42 45.8**	**+2.7**
ARCES	**ARCESS Array B**	**41.39**	**337**	*e*P	**P**	**01 42 44.9**	**+1.0**
ARCES				pP	**pP**	**01 43 08.8**	**+1.7**
ARCES	**ARCESS Array B**	**41.39**	**337**	P	**P**	**01 42 45.2**	**+1.4**
	comp=Z,9.0nm,0.4s,baz=118,slow=8.8,SNR=145						
ARCES				pP	**pP**	**01 43 08.8**	**+1.7**
	comp=Z,10nm,0.7s,baz=108,slow=7.8,SNR=5.1						
ARCES				LR	LR	02 00 49.3	
	comp=Z,594nm,19.0s,baz=152,slow=37						
ARE0	**ARCESS Array S**	**41.39**	**337**	*e*P	**P**	**01 42 44.9**	**+1.1**
	comp=Z,0.7nm,0.8s						
ARE0	**ARCESS Array S**	**41.39**	**337**	*e*P	**P**	**01 42 45.2**	**+1.4**
VRAC	**Vranov**	**41.43**	**306**	⇑*i*P	**P**	**01 42 47.1**	**+2.7**
VRAC	**Vranov**	**41.43**	**306**	P	**P**	**01 42 47.0**	**+2.7**
VRAC	**Vranov**	**41.43**	**306**	*e*P	**P**	**01 42 46.9**	**+2.5**
DPC	**Dobruska-Polom**	**41.56**	**307**	*e*P	**P**	**01 42 47.9**	**+2.5**
DPC	**Dobruska-Polom**	**41.56**	**307**	*e*P	**P**	**01 42 47.9**	**+2.5**
KSP	**Ksiaz**	**41.56**	**308**	*e*P	**P**	**01 42 47.5**	**+2.1**
KSP	**Ksiaz**	**41.56**	**308**	*e*P	**P**	**01 42 47.5**	**+2.1**
SOP	**Sopron**	**41.57**	**303**	⇓*e*P	**P**	**01 42 47.0**	**+1.5**
SOP				*e*PP	**PP**	**01 44 20.1**	**-3.1**
KRUC	**Moravsky**	**41.57**	**306**	*e*P	**P**	**01 42 47.8**	**+2.3**
IPM	**Ipoh**	**41.74**	**133**	*e*P	**P**	**01 42 47.6**	**+0.3**
	comp=Z,86nm,0.5s						
IPM	**Ipoh**	**41.74**	**133**	P	**P**	**01 42 47.8**	**+0.5**
UPC	**Upice**	**41.75**	**308**	*e*P	**P**	**01 42 49.8**	**+2.9**
UPC				AMS	AMS	02 03 20.0	
	comp=Z,200nm,16.5s						
UPC	**Upice**	**41.75**	**308**	*e*P	**P**	**01 42 49.8**	**+2.9**
UPC				MLR	MLR		
	comp=Z,200nm,16.5s						
ZEA	**Zeya**	**41.77**	**47**	*e*P	**P**	**01 42 48.4**	**+1.4**
ZEA				pmax	pmax		
	comp=N,28nm,1.2s						
ZEA				pmax	pmax		
	comp=E,28nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
KTK1	**Kautokeino**	**41.88**	**336**	*e*P	**P**	**01 42 48.8**	**+1.0**
PSI	**Prapat**	**41.90**	**137**	*e*P	**P**	**01 42 48.2**	**-0.4**
	comp=Z,29nm,0.9s						
PSI	**Prapat**	**41.90**	**137**	*e*P	**P**	**01 42 48.2**	**-0.4**
PSI				pmax	pmax		
	comp=Z,29nm,0.9s						
KOGS	**Kog**	**41.91**	**302**	*i* P	**P**	**01 42 50.4**	**+2.2**
CONA	**Conrad Observa**	**42.02**	**304**	*e*P	**P**	**01 42 51.3**	**+2.1**
	comp=Z,24nm,0.9s,SNR=11						
TREC	**Trest**	**42.15**	**306**	*e*P	**P**	**01 42 53.1**	**+2.8**
TREC	**Trest**	**42.15**	**306**	*e*P	**P**	**01 42 53.1**	**+2.8**
ARSA	**Arzberg**	**42.31**	**303**	*e*P	**P**	**01 42 53.8**	**+2.2**
	comp=Z,3.9nm,0.9s						
KTGM	**Kuala Trenggan**	**42.36**	**129**	P	**P**	**01 42 54.0**	**+1.7**
BSD	**Bornholm Skovb**	**42.40**	**315**	*i* P	**P**	**01 42 53.0**	**+0.9**
	comp=Z,3.2nm,0.4s						
BSD	**Bornholm Skovb**	**42.40**	**315**	*i* P	**P**	**01 42 53.0**	**+0.9**
BSD				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GSI	**Gunungsitoli**	**42.42**	**140**	*e*P	**P**	**01 42 53.8**	**+1.0**
	comp=Z,152nm,0.6s						
GSI	**Gunungsitoli**	**42.42**	**140**	P	**P**	**01 42 53.5**	**+0.7**
	comp=Z,252nm,0.9s						
HAMF	**Hammerfest**	**42.47**	**339**	*e*P	**P**	**01 42 54.2**	**+1.8**
GOPC	**GO Pecny, Ondr**	**42.56**	**307**	*e*P	**P**	**01 42 56.1**	**+2.5**
GOPC				AMS	AMS	02 03 50.0	
	comp=Z,200nm,11.1s						
GOPC	**GO Pecny, Ondr**	**42.56**	**307**	*e*P	**P**	**01 42 56.1**	**+2.5**
GOPC				MLR	MLR		
	comp=Z,200nm,11.1s						
PERS	**Pernice**	**42.66**	**302**	*e*P	**P**	**01 42 56.9**	**+2.4**
PVCC	**Panska Ves**	**42.67**	**308**	*e*P	**P**	**01 42 57.1**	**+2.7**
PVCC	**Panska Ves**	**42.67**	**308**	*e*P	**P**	**01 42 57.1**	**+2.7**
SOKA	**Soboth**	**42.71**	**302**	*e*P	**P**	**01 42 56.4**	**+1.4**
	comp=Z,15nm,0.8s,SNR=10						
PRU	**Pruhonice**	**42.72**	**307**	*e*P	**P**	**01 42 57.6**	**+2.8**
PRU				AMS	AMS	02 04 00.0	
	comp=Z,300nm,16.4s						
PRU	**Pruhonice**	**42.72**	**307**	*e*P	**P**	**01 42 57.6**	**+2.8**
PRU				MLR	MLR		
	comp=Z,300nm,16.4s						
BRG	**Berggiesshubel**	**43.04**	**308**	*i* P	**P**	**01 42 59.6**	**+2.2**
	comp=Z,25nm,0.8s						
BRG				*e*PP	**PP**	**01 44 38.5**	**-0.4**
	comp=Z,9.2nm,1.1s						
BRG				PP	**PcP**	**01 44 44.0**	**-1.8**
BRG				S	**S**	**01 49 21.0**	**+5.1**
BRG				SS	SnSn	01 53 18.0	+24
	comp=N,162nm,16.6s						
	comp=E,190nm,16.2s						
	comp=Z,326nm,22.9s						
BRG	**Berggiesshubel**	**43.04**	**308**	*i* P	**P**	**01 42 59.6**	**+2.2**
BRG						01 44 44.0	
BRG				S	**S**	**01 49 21.0**	**+5.1**
BRG				SS	SnSn	01 53 18.0	+24
BRG				pmax	pmax		
	comp=Z,25nm,0.9s						
BRG				MLR	MLR		
	comp=N,162nm,16.6s						
BRG				MLR	MLR		
	comp=E,190nm,16.2s						
BRG				MLR	MLR		
	comp=Z,326nm,22.9s						
RUE	**Ruedersdorf**	**43.07**	**311**	*e*P	**P**	**01 42 57.8**	**+0.3**
RUE				IAmb	IAmb	01 43 00.7	
	comp=Z,12nm,0.8s						
FRIM	**Kepong**	**43.09**	**133**	P	**P**	**01 42 59.7**	**+1.5**
MOA	**Molln**	**43.09**	**304**	*e*P	**P**	**01 42 59.5**	**+1.6**
	comp=Z,12nm,1.0s,SNR=5.5						
RGN	**Rugen**	**43.31**	**314**	*e*P	**P**	**01 43 00.4**	**+0.9**
	comp=Z,67nm,0.9s						
RGN	**Rugen**	**43.31**	**314**	*e*P	**P**	**01 42 59.8**	**+0.3**
RGN				IAmb	IAmb	01 43 02.8	
	comp=Z,60nm,0.9s						
GEA0	**GERESS Array S**	**43.36**	**305**	*e*P	**P**	**01 43 01.2**	**+1.1**
GEC2	**GERESS Array S**	**43.36**	**305**	*e*P	**P**	**01 43 01.2**	**+1.1**
	comp=Z,8.2nm,1.2s						
GEC2	**GERESS Array S**	**43.36**	**305**	*e*P	**P**	**01 43 01.2**	**+1.1**
GEC2				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GERES	**GERESS Array B**	**43.36**	**305**	P	**P**	**01 43 01.3**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=87,slow=7.7,SNR=21						
GERES				pP	**pP**	**01 43 24.1**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=72,slow=8.7,SNR=2.8						
CUC	**Castrocucco**	**43.37**	**292**	*e*P	**P**	**01 43 01.8**	**+1.5**
	comp=Z,16nm,0.9s						
KHC	**Kasperske Hory**	**43.41**	**306**	*e*P	**P**	**01 43 01.4**	**+0.9**
	comp=Z,3.4nm,1.1s						
KHC	**Kasperske Hory**	**43.41**	**306**	*e*P	**P**	**01 43 02.8**	**+2.3**
KHC				*e*S	**S**	**01 49 25.6**	**+4.1**
KHC	**Kasperske Hory**	**43.41**	**306**	*e*P	**P**	**01 43 02.8**	**+2.3**
KHC				*e*S	**S**	**01 49 25.6**	**+4.1**
HFS	**Hagfors**	**43.42**	**322**	LR	LR	02 04 07.0	
	comp=Z,193nm,18.3s,baz=88,slow=40						
TRO	**Tromso**	**43.53**	**336**	*e*P	**P**	**01 43 02.0**	**+1.0**
CLL	**Collm**	**43.61**	**309**	*e*P	**P**	**01 43 03.0**	**+1.0**
	comp=Z,11nm,0.9s						
CLL	**Collm**	**43.61**	**309**	⇓*i*P	**P**	**01 43 03.3**	**+1.4**
	comp=Z,12nm,0.9s						
CLL				*e*pP	**pP**	**01 43 26.0**	**+0.8**
CLL				*i* sP	**sP**	**01 43 37.3**	**+0.9**
CLL				*i*		01 43 50.2	
	comp=Z,12nm,1.0s						
CLL				*e*PP	**PP**	**01 44 45.0**	**+0.1**
CLL				*i*		01 44 52.5	
	comp=Z,29nm,1.2s						
CLL				*e*sPP		01 45 18.0	
CLL				*e*PPP	PPP	01 45 26.0	
CLL				*e*(PcS)		01 48 46.0	
CLL				*e*S	**S**	**01 49 25.0**	**+0.8**
CLL				*e*sS	**sS**	**01 50 06.0**	**+1.0**
CLL				*e*SS	**SS**	**01 52 42.0**	**-0.2**
CLL				*e*sSS		01 53 17.0	
CLL				Lm	MLR	02 03 00.0	
	comp=Z,200nm,19.3s						
CLL	**Collm**	**43.61**	**309**	⇓*i*P	**P**	**01 43 03.3**	**+1.4**
CLL				*e**PP	**pP**	**01 43 26.0**	**+0.8**
CLL				*e*		01 44 45.0	
CLL				*e*S	**S**	**01 49 17.0**	**-7.2**
CLL				pmax	pmax		
	comp=Z,12nm,0.9s						
MYKA	**Terra Mystica**	**43.67**	**302**	*e*P	**P**	**01 43 05.0**	**+2.3**
	comp=Z,5.0nm,0.8s						
YAK	**Yakutsk**	**43.75**	**35**	*e*P	**P**	**01 43 01.8**	**-1.1**
YAK				*e**PP	**pP**	**01 43 28.8**	**+2.2**
YAK				*e*		01 44 43.9	
YAK				*e*		01 44 46.7	
YAK				*e*PPP	PPP	01 45 26.4	
YAK				*e*S	**S**	**01 49 23.6**	**-2.3**
YAK				*e**SS	**sS**	**01 50 01.5**	**-5.2**
YAK				*e*		01 52 40.3	
YAK				*e*SSS	SSS	01 53 33.6	
YAK				pmax	pmax		
	comp=Z,130nm,1.0s						
YAK				pmax	pmax		
	comp=E,36nm,1.5s						
YAK				pmax	pmax		
	comp=N,31nm,1.4s						
YAK				pmax	pmax		
	comp=Z,71nm,0.9s						
YAK				pmax	pmax		
	comp=N,40nm,1.0s						
YAK				pmax	pmax		
	comp=E,117nm,1.5s						
YAK				smax	smax		
	comp=E,459nm,1.8s						
YAK				smax	smax		
	comp=N,366nm,2.0s						
KBA	**Koelnbreinsper**	**43.81**	**303**	*e*P	**P**	**01 43 05.4**	**+1.6**
	comp=N,3.3nm,0.6s						
MNSI	**Mandailing Nat**	**43.92**	**137**	P	**P**	**01 43 05.4**	**+0.6**
	comp=N,101nm,0.6s,comp=N,1µm						
MDJ	**Mudanjiang**	**44.02**	**61**	P	**P**	**01 43 06.4**	**+1.0**
MDJ				pmax	pmax		
	comp=N,23nm,0.7s						
MDJ				pmax	pmax		
	comp=N,280nm,3.9s						
MDJ	**Mudanjiang**	**44.02**	**61**	*e*P	**P**	**01 43 05.8**	**+0.5**
	comp=N,55nm,1.3s						
SSLB	**Suanglung**	**44.09**	**92**	*e*P	**P**	**01 43 07.7**	**+1.5**
	comp=N,54nm,0.8s						
MOR8	**Moi Rana**	**44.11**	**331**	*e*P	**P**	**01 43 06.6**	**+0.8**
STEI	**Steigen**	**44.25**	**333**	*e*P	**P**	**01 43 08.6**	**+1.8**
TJN	**Taejon**	**44.34**	**73**	*d e*P	**P**	**01 43 08.3**	**+0.3**
ABTA	**Abfaltersbach**	**44.42**	**303**	*e*P	**P**	**01 43 10.3**	**+1.7**
	comp=N,5.4nm,0.8s						
KS01	**Wonju Array Si**	**44.42**	**71**	*e*P	**P**	**01 43 07.7**	**-1.0**
KS15	**Wonju Array Si**	**44.42**	**71**	*e*P	**P**	**01 43 09.0**	**+0.3**
KSAR	**Wonju Array Be**	**44.42**	**71**	P	**P**	**01 43 09.3**	**+0.6**
KSAR				pP	**pP**	**01 43 31.2**	**-1.6**
KSAR	**Wonju Array Be**	**44.42**	**71**	P	**P**	**01 43 09.3**	**+0.6**
KSAR				*PP	**pP**	**01 43 31.2**	**-1.6**
KSRS	**Korea Array**	**44.45**	**71**	P	**P**	**01 43 09.3**	**+0.5**
	comp=N,36nm,1.0s,baz=280,slow=6.8,SNR=76						
KSRS				pP	**pP**	**01 43 31.2**	**-1.8**
	comp=N,15nm,1.1s,baz=280,slow=7.9,SNR=2.7						
KSRS				LR	LR	02 03 40.7	

	comp=N,115nm,18.2s,baz=286,slow=39						
NC405	NORSAR Array S	44.49	323	*e*P	P	01 43 09.1	+0.3
NC602	NORSAR Array S	44.54	323	*e*P	P	01 43 09.4	+0.1
NORES	NORESS Array B	44.54	323	P	P	01 43 09.6	+0.3
YULB	Yu-li	44.55	93	*e*P	P	01 43 10.6	+0.8
	comp=N,36nm,0.9s						
NC303	NORSAR Array S	44.67	323	*e*P	P	01 43 11.0	+0.8
NB201	NORSAR Array S	44.69	323	*e*P	P	01 43 10.7	+0.2
KONS	Konsvik	44.71	331	*e*P	P	01 43 11.8	+1.3
NB2	NORSAR Subarra	44.73	323	P	P	01 43 11.3	+0.5
	comp=Z,32nm,0.9s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.73	323	P	P	01 43 11.3	+0.5
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.73	323	P	P	01 43 11.3	+0.5
	comp=Z,12nm,0.6s,baz=105,slow=7.1,SNR=95						
NOA				pP	pP	01 43 34.0	-0.5
	comp=Z,3.6nm,0.5s,baz=96,slow=7.9,SNR=2.2						
NOA				LR	LR	02 05 10.7	
	comp=Z,192nm,19.8s,baz=80,slow=40						
KLR	Kul'dur	44.80	54*c*	*i*P	P	01 43 12.0	+0.5
KLR	Kul'dur	44.80	54	P	P	01 43 11.5	0.0
	comp=Z,14nm,0.8s,baz=288,slow=8.9,SNR=33						
NSS	Namsos	44.81	328	*e*P	P	01 43 12.2	+0.9
NAO01	NORSAR Array S	44.87	323	*e*P	P	01 43 12.0	+0.1
GRA1	Grafenberg Arr	44.89	307	*e*P	P	01 43 13.8	+1.6
	comp=Z,13nm,0.9s						
GRF	Grafenberg Arr	44.89	307	P	P	01 43 15.1	+2.9
GRF				pmax	pmax		
	comp=Z,13nm,0.9s						
GRFO	Grafenberg	44.89	307	*e*P	P	01 43 13.2	+1.0
	comp=Z,12nm,0.9s						
GRFO	Grafenberg	44.89	307	*e*P	P	01 43 13.2	+1.0
GRFO				pmax	pmax		
	comp=Z,12nm,0.9s						
LOF	Lofoten	44.92	333	*e*P	P	01 43 12.7	+0.5
WTTA	Wattenberg	44.94	303	*e*P	P	01 43 14.0	+1.2
	comp=Z,11nm,1.1s						
NBO00	NORSAR Array S	44.94	323	*e*P	P	01 43 13.0	+0.6
NC204	NORSAR Array S	44.96	323	*e*P	P	01 43 13.4	+0.7
WATA	Walderalm	44.97	304	*e*P	P	01 43 13.6	+0.5
	comp=Z,4.7nm,0.8s,SNR=6.9						
KGM	Kluang	45.07	132	P	P	01 43 15.3	+1.3
BKNI	Bangkinang	45.12	136	*e*P	P	01 43 14.5	+0.2
	comp=Z,108nm,0.7s						
BKNI	Bangkinang	45.12	136	P	P	01 43 14.6	+0.2
SQTA	Sankt Quirin	45.23	303	*e*P	P	01 43 15.4	+0.3
	comp=Z,6.7nm,0.6s						
MOTA	Moosalm	45.28	304	*e*P	P	01 43 16.1	+0.6
	comp=Z,5.9nm,0.6s,SNR=12						
KONO	Kongsberg	45.44	321	*e*P	P	01 43 16.7	+0.3
	comp=Z,22nm,0.9s						
KONO	Kongsberg	45.44	321*c*	*e*P	P	01 43 17.0	+0.6
KONO				pmax	pmax		
	comp=Z,21nm,0.9s						
RETA	Reutte	45.49	304	*e*P	P	01 43 18.4	+1.3
	comp=Z,6.6nm,1.3s						
MYKOM	Kota Tinggi	45.57	132	*e*P	P	01 43 18.3	+0.4
	comp=Z,41nm,0.6s						
MYKOM	Kota Tinggi	45.57	132	P	P	01 43 19.4	+1.5
FETA	Feichten	45.59	303	*e*P	P	01 43 18.8	+0.9
	comp=Z,2.7nm,0.5s						
USA0B	Ussuriysk Arra	45.79	61	*e*P	P	01 43 19.4	0.0
	comp=Z,29nm,1.1s						
USRK	Ussuriysk Ar.	45.79	61	P	P	01 43 19.6	+0.3
	comp=Z,15nm,0.8s,baz=280,slow=6.8,SNR=38						
USRK				LR	LR	02 04 57.6	
	comp=Z,148nm,18.7s,baz=277,slow=39						
PDSI	Padang	45.83	138	P	P	01 43 19.9	-0.1
DOMB	Dombas	45.83	324	*e*P	P	01 43 20.7	+1.2
VLA	Vladivostok	45.95	62*d*	*i*P	P	01 43 20.7	+0.1
VLA				pmax	pmax		
	comp=Z,132nm,0.9s						
FUORN	Ofenpass-Fuorn	45.97	303	*e*P	P	01 43 21.7	+0.7
	comp=Z,6.9nm,0.8s						
DAVA	Damuels	46.11	304	*e*P	P	01 43 22.8	+0.7
	comp=Z,19nm,0.5s,SNR=9.1						
STU	Stuttgart	46.33	306	*e*P	P	01 43 24.4	+0.8
	comp=Z,15nm,1.2s						
STU	Stuttgart	46.33	306	*e*P	P	01 43 24.4	+0.8
STU				pmax	pmax		
	comp=Z,15nm,1.2s						
BFO	Black Forest	46.97	305	*e*P	P	01 43 29.5	+0.9
	comp=Z,6.6nm,1.0s						
BFO	Black Forest	46.97	305	*i* P	P	01 43 30.5	+1.9
KRJI	Kerinci	47.35	137	P	P	01 43 32.7	+0.7
	comp=Z,122nm,0.6s						
GRNR	Gornyy	47.58	51	*e*P	P	01 43 35.0	+1.7
GRNR				pmax	pmax		
	comp=Z,29nm,1.0s						
CDF	Champ du Feu	47.64	306	*e*P	P	01 43 35.5	+1.6
CDF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SPA0	Spitsbergen Ar	47.67	347	*e*P	P	01 43 35.0	+1.3
SPA0	Spitsbergen Ar	47.67	347	*e*P	P	01 43 35.2	+1.6
SPITS	Spitsbergen Ar	47.67	347	P	P	01 43 34.9	+1.3
	comp=Z,2.3nm,0.4s,baz=122,slow=11,SNR=43						
PGF	Pioggiola	47.73	298	*e*P	P	01 43 34.8	+0.1
PGF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ECH	Echery	47.76	305	*e*P	P	01 43 35.3	+0.6
	comp=Z,12nm,1.3s						
ECH	Echery	47.76	305	*e*P	P	01 43 35.3	+0.6
ECH				pmax	pmax		
	comp=Z,12nm,1.3s						
SENIN	Lac Senin/Sane	48.03	303	*e*P	P	01 43 37.2	+0.2
	comp=Z,12nm,0.8s						
HINF	Hinteralfeld	48.03	305	*e*P	P	01 43 37.3	+0.4
HINF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MEM	Membach	48.08	309	⇑P	P	01 43 37.1	0.0
	comp=Z,8.5nm,0.9s						
MEM	Membach	48.08	309	⇑pP	pP	01 44 01.4	+0.4
JNU	Nakatsue	48.15	76	*e*P	P	01 43 38.7	+0.8
	comp=Z,74nm,1.0s						
JNU	Nakatsue	48.15	76	P	P	01 43 39.0	+1.1
	comp=Z,59nm,1.0s,baz=334,slow=4.2,SNR=21						
WLF	Walferdange	48.15	307	*e*P	P	01 43 38.8	+1.2
	comp=Z,79nm,0.9s						
WLF	Walferdange	48.15	307	*e*P	P	01 43 38.8	+1.2
WLF				pmax	pmax		
	comp=Z,79nm,0.9s						
WLF	Walferdange	48.15	307	⇓P	P	01 43 40.1	+2.5
	comp=Z,13nm,0.8s						
WLF				⇑pP	pP	01 44 02.8	+1.4
HAU	Haudompre	48.33	305	*e*P	P	01 43 39.6	+0.5
HAU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SBF	Sospel	48.51	300	*e*P	P	01 43 41.4	+0.8
SBF				pmax	pmax		
	comp=Z,11nm,0.7s						
LPG	La Plagne	48.59	302	*e*P	P	01 43 42.8	+1.3
LPG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LPL	La Plagne	48.60	302	*e*P	P	01 43 42.4	+0.9
LPL				pmax	pmax		
	comp=Z,15nm,0.9s						
JOW	Kunigami	48.60	84	*e*P	P	01 43 41.4	-0.1
	comp=Z,34nm,1.3s						
JOW	Kunigami	48.60	84	P	P	01 43 41.9	+0.5
	comp=Z,1.7nm,0.3s,baz=131,slow=14,SNR=11						
MASI	Maura Aman, Be	48.65	137	P	P	01 43 42.7	+0.8
	comp=Z,182nm,0.6s						
BNI	Bardonecchia	48.74	301	*e*P	P	01 43 43.3	+0.8
	comp=Z,17nm,1.4s						
BNI	Bardonecchia	48.74	301	*e*P	P	01 43 43.3	+0.8
BNI				pmax	pmax		
	comp=Z,17nm,1.4s						
MBDF	Montbardon	48.76	301	*e*P	P	01 43 44.1	+1.5
MBDF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CABF	La Chapelle	48.79	304	*e*P	P	01 43 44.5	+1.7
CABF				pmax	pmax		
	comp=Z,13nm,0.7s						
GIVF	Givet	48.92	308	*e*P	P	01 43 44.8	+1.3
GIVF				pmax	pmax		
	comp=Z,15nm,1.2s						
DOU	Dourbes	49.06	308	⇑P	P	01 43 46.8	+2.1
FRF	La Foret Royal	49.14	299	*e*P	P	01 43 45.8	+0.5
FRF				pmax	pmax		
	comp=Z,25nm,1.3s						
KMBO	Kilima Mbogo	49.14	228	*e*P	P	01 43 46.3	+0.4
	comp=Z,3.9nm,0.6s						
KMBO				pP	pP	01 44 09.8	-0.3
KMBO	Kilima Mbogo	49.14	228	P	P	01 43 47.4	+1.5
KMBO	Kilima Mbogo	49.14	228	*e*P	P	01 43 46.3	+0.4
KMBO				*PP	pP	01 44 09.8	-0.3
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KMBO	Kilima Mbogo	49.14	228	P	P	01 43 46.3	+0.4
	comp=Z,2.9nm,0.5s,baz=37,slow=12,SNR=11						
KMBO				pP	pP	01 44 09.8	-0.3
	comp=Z,2.6nm,0.7s,baz=28,slow=8.0,SNR=2.1						
BAIF	Baives	49.31	308	*e*P	P	01 43 47.9	+1.4
BAIF				pmax	pmax		
	comp=Z,25nm,1.0s						
ORIF	Oris-en-Rattie	49.33	301	*e*P	P	01 43 47.4	+0.5
ORIF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KEST	Kesra	49.51	289	*e*P	P	01 43 49.5	+1.1
	comp=Z,19nm,1.4s						
KEST				pP	pP	01 44 12.9	+0.9
KEST	Kesra	49.51	289	P	P	01 43 48.8	+0.4
	comp=Z,1.9nm,0.5s,baz=323,slow=1.6,SNR=13						
KEST				pP	pP	01 44 12.9	+0.9
	comp=Z,20nm,1.2s,baz=180,slow=2.1,SNR=5.7						
NKL	Nikolayevsk	49.81	47	*i* P	P	01 43 50.5	+0.3
NKL				pmax	pmax		
	comp=Z,73nm,1.0s						
KSM	Kuching	49.90	125	*e*P	P	01 43 50.9	-0.5
	comp=Z,19nm,0.8s						
KSM	Kuching	49.90	125	P	P	01 43 53.0	+1.7
LOR	Lormes	50.13	305	*e*P	P	01 43 52.9	+0.1
LOR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SSB	Saint Sauveur	50.16	302	*e*P	P	01 43 53.5	+0.4
	comp=Z,7.1nm,0.7s						
SSB	Saint Sauveur	50.16	302	*e*P	P	01 43 53.5	+0.4
SSB				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VIVF	Saint-Julien-l	50.17	302	*e*P	P	01 43 54.3	+1.1
VIVF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SMF	Signal de Mont	50.29	304	*e*P	P	01 43 54.5	+0.5
SMF				pmax	pmax		
	comp=Z,16nm,0.6s						
SSF	Saint Saulge	50.41	305	*e*P	P	01 43 55.3	+0.4
SSF				pmax	pmax		
	comp=Z,13nm,1.1s						
SBUM	Sibu	50.46	122	*e*P	P	01 43 55.5	-0.1
	comp=Z,10nm,1.0s						
AVF	Avril sur Loir	50.58	304	*e*P	P	01 43 56.6	+0.4
AVF				pmax	pmax		
	comp=Z,16nm,0.7s						
KKM	Kota Kinabalu	50.75	116	*e*P	P	01 43 58.1	+0.1
	comp=Z,30nm,0.9s						
BGF	Bois d'Agland	50.98	304	*e*P	P	01 44 00.3	+1.1
BGF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLF	Chambon-Foret	51.00	306	*e*P	P	01 44 00.1	+0.8
	comp=Z,13nm,0.8s						
TCF	Toulx Ste Croi	51.47	304	*e*P	P	01 44 03.8	+0.9
TCF				pmax	pmax		
	comp=Z,12nm,0.8s						
CAF	Calviac	51.94	302	*e*P	P	01 44 07.4	+1.0
CAF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
INU	Inuyama	52.07	70	*e*P	P	01 44 08.0	+0.5
	comp=Z,67nm,1.3s						
RJF	Les Rejaudoux	52.21	303	*e*P	P	01 44 10.1	+1.7
RJF				pmax	pmax		
	comp=Z,19nm,1.5s						
MTLF	Montolieu	52.30	300	*e*P	P	01 44 09.8	+0.7
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LDF	La Druitiere	52.40	307	*e*P	P	01 44 10.9	+1.2
LDF				pmax	pmax		
	comp=Z,12nm,0.8s						
YSS	Yuzh-Sakhalins	52.48	55	*e*P	P	01 44 10.5	+0.2
	comp=Z,93nm,1.3s						
YSS	Yuzh-Sakhalins	52.48	55⇑	*e*P	P	01 44 09.0	-1.3
YSS				*e**SP	sP	01 44 48.2	+2.0
YSS				*e*		01 45 24.0	
YSS				*e*		01 46 08.0	
YSS				*e*S	S	01 51 23.8	-5.5
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				pmax	pmax		
	comp=Z,300nm,7.0s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
MJB9	Matsu-Tunnel	52.53	69	*e*P	P	01 44 10.8	-0.1
	comp=Z,58nm,0.8s						
MAJO	Matsushiro	52.53	69	*e*P	P	01 44 11.0	+0.1
	comp=Z,58nm,0.8s						
MAJO	Matsushiro	52.53	69*c*	*i*P	P	01 44 10.8	-0.1
MAJO				pmax	pmax		
	comp=Z,54nm,0.9s						
MAT	Matsushiro	52.53	69	P	P	01 44 10.8	-0.1
MJAR	Matsushiro Arr	52.53	69	P	P	01 44 11.4	+0.4
	comp=Z,40nm,0.9s,baz=287,slow=9.9,SNR=77						
MJAR				pP	pP	01 44 35.8	+0.2
	comp=Z,7.4nm,0.8s,baz=283,slow=10,SNR=3.1						
FLN	La Foliniere	52.59	308	*e*P	P	01 44 11.2	+0.1
FLN				pmax	pmax		
	comp=Z,12nm,0.6s						
EKA	Eskdalemuir Ar	52.67	316	P	P	01 44 11.3	-0.3
EKA				pmax	pmax		
	comp=Z,11nm,0.6s						
ESK	Eskdalemuir	52.70	316	*i* P	P	01 44 13.8	+2.0
LFF	La Frestale	52.84	303	*e*P	P	01 44 13.8	+0.8
LFF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MBAR	Mbarara	52.86	235	*e*P	P	01 44 14.3	+0.6
	comp=Z,7.1nm,0.6s						
MBAR	Mbarara	52.86	235	*e*P	P	01 44 14.3	+0.6
MBAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GRR	Gorron	52.93	307	*e*P	P	01 44 13.7	+0.1
ASAJ	Asahikawa	53.19	58	P	P	01 44 16.1	+0.5
	comp=Z,4.2nm,0.4s,baz=266,slow=9.3,SNR=6.6						
SGMF	Saint Gilles	54.05	307	*e*P	P	01 44 22.2	+0.3
SGMF				pmax	pmax		
	comp=Z,66nm,1.6s						
MA2	Magadan	54.12	38⇑	*e*P	P	01 44 22.2	0.0
MA2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MA2	Magadan	54.12	38	P	P	01 44 22.7	+0.5
	comp=Z,1.9nm,0.3s,baz=290,slow=8.2,SNR=3.6						
SEY	Seymchan	54.21	34⇑	*e*P	P	01 44 22.0	-0.8
SEY	Seymchan	54.21	34	P	P	01 44 22.8	+0.1
	comp=Z,8.7nm,1.0s,baz=286,slow=10,SNR=7.5						
ETSF	Etsaut	54.36	301	*e*P	P	01 44 25.0	+0.7
ETSF				pmax	pmax		
	comp=Z,16nm,1.1s						
ROSF	Rostrenen	54.49	308	*e*P	P	01 44 25.3	+0.3
ROSF				pmax	pmax		
	comp=Z,30nm,1.0s						
QUIF	Quistinic	54.54	307	*e*P	P	01 44 25.5	+0.1
QUIF				pmax	pmax		
	comp=Z,182nm,2.2s						
DAG	Danmarks Havn	54.93	344	*i* P	P	01 44 29.1	+1.3
	comp=Z,7.5nm,0.4s						
DAG				*i*		01 44 53.4	
DAG	Danmarks Havn	54.93	344	*i* P	P	01 44 29.1	+1.3
DAG				*i*		01 44 53.4	
DAG				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KCP	Kidapawan	56.78	107⇑	*i*P	P	01 44 44.6	+2.7
MPSI	Mapaga	57.32	117	P	P	01 44 47.9	+2.3
ES19	SONSECA Array	57.86	298	*e*P	P	01 44 49.5	+0.3
ESDC	Sonseca Array	57.91	298	P	P	01 44 50.1	+0.5
	comp=Z,1.2nm,0.4s,baz=59,slow=7.0,SNR=21						
ESDC				pP	pP	01 45 13.9	-0.2
	comp=Z,3.9nm,0.7s,baz=61,slow=7.5,SNR=7.6						
ESLA	Sonseca Array	57.91	298	*e*P	P	01 44 49.7	+0.1
	comp=Z,3.9nm,1.1s						
PAB	San Pablo	58.24	298	*e*P	P	01 44 52.5	+0.6
	comp=Z,8.8nm,1.4s						
PAB	San Pablo	58.24	298	*e*P	P	01 44 52.5	+0.6
PAB				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BILL	Bilibino	58.46	26	*e*P	P	01 44 53.6	+0.8
	comp=Z,24nm,1.4s						
BILL	Bilibino	58.46	26	*i* P	P	01 44 52.7	-0.2
BILL				*i*		01 45 21.3	
BILL				*i*		01 45 40.5	
BILL				*i*		01 47 02.6	
BILL				pmax	pmax		
	comp=Z,20nm,1.5s						
MRSI	Marisa	58.70	116	P	P	01 44 57.3	+2.1
APSI	Ampana	59.44	117	P	P	01 45 02.3	+1.9
	comp=Z,57nm,1.4s,comp=Z,626nm						
MVO	Moncorvo	59.48	301	*e*pP	pP	01 45 25.9	+0.8
TTSI	Tana Toraja	59.65	120	P	P	01 45 04.0	+2.2
PETK	Petropavlovsk-	59.69	44	P	P	01 45 01.7	+0.1
	comp=Z,1.3nm,0.5s,baz=309,slow=26,SNR=7.9						
ABPO	Ambohimpanom	59.76	207	*e*P	P	01 45 03.6	+1.0
	comp=Z,32nm,1.1s						
ABPO	Ambohimpanom	59.76	207	*e*P	P	01 45 03.6	+1.0
ABPO				pmax	pmax		
	comp=Z,32nm,1.1s						
MTE	Manteigas	60.15	300	*e*pP	pP	01 45 30.9	+1.2
PMRV	Marv??o	60.44	299	*e*pP	pP	01 45 32.7	+1.1
SUMG	Summit	61.28	341	*e*P	P	01 45 13.1	+0.5
	comp=Z,12nm,0.7s						
SUMG	Summit	61.28	341	*i* P	P	01 45 14.7	+2.1
SUMG				*i*		01 45 38.7	
SUMG	Summit	61.28	341	*i* P	P	01 45 14.7	+2.1
SUMG				*i*		01 45 38.7	
PVAQ	Vaqueiros	61.53	297	*e*P	P	01 45 15.2	+0.9
	comp=Z,26nm,1.6s						
PVAQ				*i* pP	pP	01 45 40.7	+1.7
SANI	Sanana	63.37	115	P	P	01 45 28.6	+1.8
	comp=Z,50nm,1.4s,comp=Z,1µm						
TULEG	Thule	64.59	350	*e*P	P	01 45 34.4	+0.5
	comp=Z,4.1nm,0.7s						
BASI	Baing, Sumba	65.37	125	P	P	01 45 40.0	+0.2
LSZ	Lusaka	65.75	227	*e*P	P	01 45 42.0	-0.3
	comp=Z,5.2nm,0.8s						
LSZ	Lusaka	65.75	227	*e*P	P	01 45 42.1	-0.3
LSZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TOA0	Torodi Ar. Sit	66.19	269	*e*P	P	01 45 42.1	-3.2
TORD	Torodi Ar. Bea	66.19	269	P	P	01 45 44.0	-1.2
	comp=Z,3.3nm,0.5s,baz=52,slow=5.9,SNR=75						
TORD				pP	pP	01 46 08.8	-1.8
	comp=Z,3.8nm,0.6s,baz=49,slow=5.6,SNR=5.2						
SIJI	Sorong	66.53	110	P	P	01 45 46.4	-1.0
	comp=Z,55nm,1.0s,baz=329,slow=11,SNR=14						
SIJI				pP	pP	01 46 12.6	-0.1
	comp=Z,17nm,1.0s,baz=229,slow=22,SNR=2.0						
SIJI				sP	sP	01 46 23.3	-0.3
	comp=Z,7.9nm,0.7s,baz=333,slow=7.2,SNR=1.3						
ILULI	Ilulissat	66.63	341	*e*P	P	01 45 47.8	+0.7
	comp=Z,17nm,0.6s						
ILULI	Ilulissat	66.63	341	*e*P	P	01 45 47.8	+0.7
ILULI				pmax	pmax		
	comp=Z,17nm,0.6s						
BATI	Baumata	67.42	123	P	P	01 45 53.0	0.0
BATI	Baumata	67.42	123	P	P	01 45 52.0	-1.0
	comp=Z,112nm,0.6s,baz=238,slow=2.0,SNR=24						
BATI				pP	pP	01 46 16.3	-1.7
	comp=Z,37nm,0.9s,baz=351,slow=23,SNR=1.7						
SOEI	Soe	67.51	122	P	P	01 45 54.3	+0.7
SFJD	Kangerlussuaq	68.00	339	*e*P	P	01 45 55.9	+0.1
	comp=Z,12nm,0.8s						
SFJD	Kangerlussuaq	68.00	339	*i* P	P	01 45 56.7	+0.9
SFJD	Kangerlussuaq	68.00	339	*i* P	P	01 45 56.7	+0.9
SFJD	Kangerlussuaq	68.00	339	P	P	01 45 56.4	+0.6
	comp=Z,10nm,0.7s,baz=116,slow=3.3,SNR=8.2						
RDOG	Red Dog Mine	68.17	19	*e*P	P	01 45 56.0	-0.9
	comp=Z,16nm,1.4s						
FAKI	Fak Fak	68.60	111	*e*P	P	01 46 00.4	0.0
	comp=Z,77nm,1.1s						
FAKI	Fak Fak	68.60	111	P	P	01 46 02.6	+2.2
	comp=Z,68nm,1.2s						
RES	Resolute Bay	68.80	356	*e*P	P	01 46 00.7	-0.1
	comp=Z,1.9nm,1.0s						
RES				pP	pP	01 46 27.4	+1.4
RES	Resolute Bay	68.80	356	P	P	01 46 01.4	+0.6
	comp=Z,1.1nm,0.4s,baz=32,slow=7.2,SNR=12						
RES				pP	pP	01 46 27.4	+1.4
	comp=Z,0.9nm,0.5s,baz=21,slow=7.5,SNR=2.9						
ANM	Nome	69.92	23	*e*P	P	01 46 07.9	+0.2
	comp=Z,6.9nm,1.1s						
ANM	Nome	69.92	23	*e*P	P	01 46 07.9	+0.2
ANM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TOLK	Toolik Lake Re	70.87	15	*e*P	P	01 46 13.7	+0.1
	comp=Z,20nm,0.5s						
SAUI	Saumlaki	71.25	115	P	P	01 46 18.5	+1.9
	comp=Z,506nm,1.1s,comp=Z,5µm						
COLD	Coldfoot	71.91	16	*e*P	P	01 46 19.9	+0.1
	comp=Z,8.8nm,1.1s						
IM3	Indian Mountai	72.10	18	*e*P	P	01 46 19.5	-1.4
MBWA	Marble Bar	73.13	133	*e*P	P	01 46 27.5	-0.1
FYU	Fort Yukon	73.52	14	*e*P	P	01 46 29.9	+0.6
	comp=Z,25nm,1.2s						
MLY	Manley	73.61	17	*e*P	P	01 46 30.3	+0.4
	comp=Z,12nm,1.2s						
INK	Inuvik	73.90	9	*e*P	P	01 46 31.9	+0.5
	comp=Z,25nm,1.2s						
INK				pP	pP	01 46 58.5	+1.2
INK	Inuvik	73.90	9	P	P	01 46 32.0	+0.5
	comp=Z,7.7nm,0.4s,baz=349,slow=3.9,SNR=106						
INK				pP	pP	01 46 58.5	+1.2
	comp=Z,5.3nm,0.6s,baz=15,slow=8.3,SNR=3.3						
MDM	Murphy Dome	74.25	16	*e*P	P	01 46 34.0	+0.4
	comp=Z,16nm,1.1s						
PRP	Porcupine Dome	74.37	15	*e*P	P	01 46 34.8	+0.4
	comp=Z,3.8nm,0.6s						
COLA	College	74.41	16	*e*P	P	01 46 35.1	+0.6
	comp=Z,17nm,0.8s						
COLA	College	74.41	16*c*	*i*P	P	01 46 34.5	0.0
COLA				pmax	pmax		
	comp=Z,16nm,0.9s						
MTN	Manton Dam	74.44	119	*e*P	P	01 46 35.6	+0.2
	comp=Z,22nm,1.1s						
FITZ	Fitzroy Crossi	74.46	127	*e*P	P	01 46 36.1	+0.7
	comp=Z,27nm,1.1s						
FITZ				pP	pP	01 47 01.5	+0.4
FITZ	Fitzroy Crossi	74.46	127	P	P	01 46 35.5	+0.1
	comp=Z,22nm,1.0s,baz=341,slow=6.2,SNR=28						
FITZ				pP	pP	01 47 01.5	+0.4
	comp=Z,14nm,1.0s,baz=302,slow=5.6,SNR=5.5						
GENI	Genyem	74.47	105	P	P	01 46 37.7	+2.0
CAST	Castle Rocks	74.60	19	*e*P	P	01 46 36.2	+0.5
	comp=Z,26nm,1.0s						
CCB	Clear Creek Bu	74.62	16	*e*P	P	01 46 34.8	-0.9
	comp=Z,3.0nm,0.8s						
WRH	Wood River Hil	74.70	17	*e*P	P	01 46 36.6	+0.4
	comp=Z,4.6nm,1.1s						
IL1	Eielson Array	74.72	16	*e*P	P	01 46 35.4	-0.9
ILAR	Eielson Array	74.72	16	P	P	01 46 35.5	-0.8
	comp=Z,4.2nm,0.8s,baz=306,slow=4.8,SNR=40						
ILAR				pP	pP	01 47 03.2	+1.1
	comp=Z,2.2nm,0.8s,baz=320,slow=4.8,SNR=4.2						
ILB	Eielson Array	74.72	16	*e*P	P	01 46 36.1	-0.2
LBTB	Lobatse	74.95	223	*e*P	P	01 46 38.3	+0.1
	comp=Z,13nm,0.8s						
LBTB				*e*pP	pP	01 47 07.1	+3.1
LBTB	Lobatse	74.95	223	*e*P	P	01 46 38.3	+0.1
LBTB				*e**PP	pP	01 47 07.1	+3.1
LBTB				pmax	pmax		
	comp=Z,13nm,0.8s						
PPLA	Purkeypile	75.00	19	*e*P	P	01 46 37.6	-0.5
	comp=Z,17nm,1.3s						
HDA	Harding Lake	75.01	16	*e*P	P	01 46 37.2	-0.8
	comp=Z,5.4nm,0.9s						
TRF	Thorofare Moun	75.03	18	*e*P	P	01 46 38.8	+0.4
	comp=Z,11nm,1.3s						
MCK	McKinley	75.13	17	*e*P	P	01 46 38.9	+0.2
	comp=Z,9.4nm,0.4s						
MCK	McKinley	75.13	17	*e*P	P	01 46 38.9	+0.2
MCK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
DBIC	Dimbokro	75.17	267	*e*P	P	01 46 39.7	0.0
	comp=Z,7.8nm,1.0s						
DBIC				pP	pP	01 47 04.3	-1.3
DBIC	Dimbokro	75.17	267	*e*P	P	01 46 39.7	0.0
DBIC				*PP	pP	01 47 04.3	-1.3
DBIC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DBIC	Dimbokro	75.17	267	P	P	01 46 38.6	-1.1
	comp=Z,2.5nm,0.6s,baz=28,slow=6.7,SNR=7.5						
DBIC				pP	pP	01 47 04.3	-1.3
	comp=Z,4.5nm,0.8s,baz=14,slow=5.8,SNR=2.9						
EPYK	Eagle Plains	75.23	11	*e*P	P	01 46 39.4	+0.1
	comp=Z,6.8nm,1.0s						
TSUM	Tsumeb	75.25	232	*e*P	P	01 46 40.6	+0.4
	comp=Z,20nm,1.5s						
KIC	Kosan Boka	75.26	267	*e*P	P	01 46 38.9	-1.4
	comp=Z,76nm,1.4s						
TIC	Toumodi	75.32	267	*e*P	P	01 46 39.2	-1.4
RND	Reindeer	75.42	18	*e*P	P	01 46 39.9	-0.6
	comp=Z,23nm,1.4s						
RND	Reindeer	75.42	18	*e*P	P	01 46 39.9	-0.6
RND				pmax	pmax		

	comp=Z,23nm,1.4s						
LIC	Lamto	75.57	267	eP	P	01 46 36.5	-5.5
	comp=Z,70nm,1.5s						
EGAK	Eagle	75.90	14	eP	P	01 46 43.5	+0.4
	comp=Z,8.4nm,1.1s						
SCRK	Sand Creek	76.04	15	eP	P	01 46 44.4	+0.4
	comp=Z,19nm,1.2s						
DHY	Denali Highway	76.06	17	eP	P	01 46 44.3	+0.1
	comp=Z,8.1nm,0.6s						
RIDG	Independ'e Rid	76.06	16	eP	P	01 46 43.7	-0.4
	comp=Z,20nm,1.3s						
DOT	Dot Lake	76.31	16	eP	P	01 46 45.0	-0.5
	comp=Z,4.9nm,1.0s						
SUA	Susitna One	76.57	19	eP	P	01 46 47.2	+0.1
	comp=Z,7.3nm,0.9s						
PAX	Paxson	76.59	16	eP	P	01 46 46.2	-0.9
	comp=Z,12nm,1.1s						
PAX	Paxson	76.59	16	eP	P	01 46 46.2	-0.9
PAX				pmax	pmax		
	comp=Z,12nm,1.1s						
GHO	Glory Hole Cre	76.78	18	eP	P	01 46 47.6	-0.6
	comp=Z,15nm,1.1s						
DAWY	Dawson	76.88	13	eP	P	01 46 48.7	0.0
	comp=Z,15nm,1.1s						
SML	Sawmill	76.90	18	eP	P	01 46 48.9	0.0
	comp=Z,16nm,0.8s						
SML	Sawmill	76.90	18	eP	P	01 46 48.9	0.0
SML				pmax	pmax		
	comp=Z,17nm,0.8s						
MENT	Mentasta	77.01	16	eP	P	01 46 49.6	+0.1
	comp=Z,10nm,1.4s						
SCM	Sheep Creek Mo	77.13	18	eP	P	01 46 49.7	-0.5
	comp=Z,15nm,1.1s						
SCM	Sheep Creek Mo	77.13	18	eP	P	01 46 49.7	-0.5
SCM				pmax	pmax		
	comp=Z,15nm,1.1s						
RC01	Rabbit Creek A	77.15	19	eP	P	01 46 50.4	+0.2
	comp=Z,7.2nm,1.0s						
HARP	HAARP	77.16	17	eP	P	01 46 50.7	+0.4
	comp=Z,37nm,0.9s						
KNK	Knik Glacier	77.21	19	eP	P	01 46 50.9	+0.4
	comp=Z,9.7nm,0.8s						
MORW	Morawa	77.39	141	eP	P	01 46 52.0	+0.1
	comp=Z,28nm,0.8s						
MORW				epP	pP	01 47 19.6	+1.9
KLU	Klutina	77.77	17	eP	P	01 46 54.1	+0.3
	comp=Z,13nm,1.1s						
BOSA	Boshof	78.00	221	i P	P	01 46 55.3	-0.1
BOSA	Boshof	78.00	221	eP	P	01 46 55.8	+0.4
	comp=Z,6.6nm,0.8s						
BOSA				epP	pP	01 47 23.0	+1.6
BOSA	Boshof	78.00	221	eP	P	01 46 55.8	+0.4
BOSA				e*PP	pP	01 47 23.0	+1.6
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BOSA	Boshof	78.00	221	P	P	01 46 54.2	-1.3
	comp=Z,5.8nm,0.7s,baz=47,slow=3.7,SNR=14						
BOSA				pP	pP	01 47 20.0	-1.4
	comp=Z,11nm,0.9s,baz=25,slow=4.1,SNR=5.1						
SEW	Seward	78.06	20	eP	P	01 46 55.8	+0.6
	comp=Z,22nm,1.4s						
KDAK	Kodiak Island	79.08	22	i P	P	01 47 01.1	+0.2
KDAK	Kodiak Island	79.08	22	P	P	01 47 00.8	-0.1
	comp=Z,13nm,0.8s,baz=222,slow=16,SNR=9.7						
HYT	Haines Junctio	80.21	14	eP	P	01 47 07.2	+0.1
	comp=Z,17nm,1.0s						
NWAO	Narrogin (SRO)	81.12	143	eP	P	01 47 11.8	-0.3
NWAO	Narrogin (SRO)	81.12	143	eP	P	01 47 11.8	-0.3
NWAO	Narrogin (SRO)	81.12	143	P	P	01 47 11.4	-0.7
	comp=Z,9.2nm,0.6s,baz=159,slow=5.1,SNR=6.7						
YKW3	Yellowknife Ar	81.23	3	eP	P	01 47 11.5	-0.8
	comp=Z,10nm,0.7s						
YKA	Yellowknife Ar	81.29	3	P	P	01 47 12.7	0.0
	comp=Z,9.8nm,0.7s,baz=349,slow=5.4,SNR=148						
YKA				pP	pP	01 47 38.3	-0.3
	comp=Z,3.3nm,0.6s,baz=347,slow=5.3,SNR=3.6						
YKA				PKKPbc	PKKPbc	02 05 44.2	-2.7
	comp=Z,0.1nm,0.5s,baz=169,slow=2.1,SNR=4.6						
YKB5	Yellowknife Ar	81.29	3	eP	P	01 47 12.1	-0.6
WRA	Warramunga Arr	81.55	122	P	P	01 47 14.0	-0.6
	comp=Z,9.9nm,0.6s,baz=325,slow=5.0,SNR=192						
WRA				pP	pP	01 47 39.9	-1.1
	comp=Z,6.6nm,0.8s,baz=323,slow=4.7,SNR=5.5						
WRA				PKKPbc	PKKPbc	02 05 45.6	-1.2
	comp=Z,0.1nm,0.3s,baz=228,slow=1.1,SNR=6.3						
WRAB	Tennant Creek	81.55	122	eP	P	01 47 14.1	-0.5
	comp=Z,9.8nm,0.3s						
WRAB	Tennant Creek	81.55	122	c iP	P	01 47 14.0	-0.7
WRAB				i *PP	pP	01 47 40.8	-0.1
WRAB				pmax	pmax		
	comp=Z,14nm,0.9s						
WB2	Warramunga Arr	81.56	122	eP	P	01 47 14.2	-0.5
	comp=Z,28nm,1.0s						
SCHQ	Schefferville	82.35	337	eP	P	01 47 19.1	+0.7
	comp=Z,3.2nm,0.5s						
SCHQ	Schefferville	82.35	337	P	P	01 47 19.0	+0.6
	comp=Z,2.8nm,0.4s,baz=27,slow=4.1,SNR=30						
SCHQ				LR	LR	02 22 22.3	
	comp=Z,135nm,21.8s,baz=328,slow=34						
DLBC	Dease Lake	83.77	11	P	P	01 47 26.2	+0.4
	comp=Z,4.8nm,0.8s,baz=90,slow=3.9,SNR=8.5						
DLBC				pP	pP	01 47 53.5	+1.8
	comp=Z,4.1nm,0.8s,baz=359,slow=2.2,SNR=3.7						
AS31	Alice Springs	83.82	125	eP	P	01 47 26.1	-0.3
	comp=Z,3.0nm,0.6s						
AS31				epP	pP	01 47 52.4	-0.4
ASAR	Alice Springs	83.82	125	P	P	01 47 25.8	-0.7
	comp=Z,10nm,0.8s,baz=309,slow=5.1,SNR=98						
ASAR				pP	pP	01 47 52.1	-0.6
	comp=Z,9.5nm,1.0s,baz=322,slow=5.1,SNR=7.3						
AS01	Alice Springs	83.85	125	eP	P	01 47 25.7	-0.8
AS01				epP	pP	01 47 51.7	-1.2
FCC	Fort Churchill	84.41	353	eP	P	01 47 28.8	-0.1
	comp=Z,11nm,1.0s						
FCC	Fort Churchill	84.41	353	eP	P	01 47 28.8	-0.1
FCC				pmax	pmax		
	comp=Z,11nm,1.0s						
FFC	Flin Flon	89.04	356	eP	P	01 47 51.7	+0.2
	comp=Z,13nm,0.9s						
FFC	Flin Flon	89.04	356	i P	P	01 47 52.0	+0.5
CTA	Charters Tower	90.08	115	P	P	01 47 56.6	-0.2
	comp=Z,13nm,0.9s,baz=295,slow=7.5,SNR=7.9						
CTA				pP	pP	01 48 23.4	-0.3
	comp=Z,11nm,1.0s,baz=284,slow=7.2,SNR=4.3						
CTAO	Charters Tower	90.08	115	eP	P	01 47 56.2	-0.6
CTAO	Charters Tower	90.08	115	eP	P	01 47 56.2	-0.6
ULM	Lac du Bonnet	92.99	352	P	P	01 48 09.3	-0.6
	comp=Z,4.1nm,0.8s,baz=18,slow=4.3,SNR=7.8						
ULM				pP	pP	01 48 36.9	+0.7
	comp=Z,2.5nm,0.8s,baz=355,slow=4.9,SNR=3.7						
NEW	Newport	95.33	6	eP	P	01 48 20.5	-0.2
	comp=Z,1.5nm,0.7s						
NEW	Newport	95.33	6	P	P	01 48 21.0	+0.3
	comp=Z,2.0nm,0.9s,baz=32,slow=3.2,SNR=4.1						
EGMT	Eagleton	95.92	1	eP	P	01 48 24.1	+0.7
	comp=Z,5.7nm,1.0s						
LAO	LASA Array	97.24	358	eP	Pdif	01 48 29.9	+0.5
	comp=Z,16nm,1.5s						
CPUP	Villa Florida	135.69	268	PKP	PKPdf	01 54 15.7	-1.1
	comp=Z,0.6nm,0.5s,baz=52,slow=2.1,SNR=4.6						
CPUP				pPKP	pPKPdf	01 54 43.7	-0.8
	comp=Z,1.8nm,0.8s,baz=81,slow=3.6,SNR=2.7						
LCO	Las Campanas	147.58	272	ePKPbc	PKPbc	01 54 40.5	-0.6
LCO	Las Campanas	147.58	272	ePKP2	PKPbc	01 54 40.5	-0.6
GO06	Curarrehue	150.86	252	ePKPbc	PKPbc	01 54 48.4	-0.4

TAP 17 01:37:05.9, 24°.32N×121°.44E, h6km, ML3.9, 46C-3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.12	163	⇑P	Pg	01 37 09.5	+1.0
	baz=163						
ETLH				S	Sg	01 37 11.3	+1.1
	baz=163						
NNSB	Datong	0.12	333	⇑P	Pg	01 37 09.1	+0.5
	baz=332						
NNSB				S	Sg	01 37 10.7	+0.3
	baz=332						
NNS	Nan Shan	0.14	332	⇑P	Pg	01 37 09.3	+0.5
	baz=333						
NNS				S	Sg	01 37 11.2	+0.5
	baz=333						
NACB	Ninganchiao	0.20	136	⇑P	Pg	01 37 10.8	+0.9
	baz=137						
NACB				eS	Sg	01 37 13.4	+0.8
	baz=137						
WHF	Hehuan Shan	0.24	223	⇑P	Pg	01 37 11.4	+0.6
	baz=220						
WHF				S	Sg	01 37 14.8	+0.8
	baz=220						
TWT	Tachien	0.25	255	⇑iP	Pb	01 37 12.0	-0.9
	baz=244						
TWT				i S	Sg	01 37 15.9	+1.6
	baz=244						
TDCB	Techi	0.27	256	⇑P	Pg	01 37 12.1	+0.9
	baz=245						
TDCB				S	Sg	01 37 15.7	+0.9
	baz=245						
TWD	Chiawan	0.28	150	⇑P	Pg	01 37 12.3	+0.9
	baz=149						
TWD				S	Sg	01 37 16.3	+1.3
	baz=149						
NDT	Datong Townshi	0.29	13	⇑iP	Pg	01 37 12.2	+0.6
	baz=13						
NDT				S	Sg	01 37 15.8	+0.3
	baz=13						
ENA	Nanau	0.29	68	⇑P	Pg	01 37 11.9	+0.3
	baz=70						
ENA				eS	Sg	01 37 16.2	+0.7
	baz=70						
NANB	Nanao	0.30	69	⇑P	Pg	01 37 11.9	+0.1
	baz=70						
NANB				eS	Sg	01 37 15.7	-0.1
	baz=70						
ENTT	Nioudou	0.34	19	⇑iP	Pg	01 37 13.1	+0.6
	baz=13						
ENTT				S	Sg	01 37 17.4	+0.4
	baz=13						
YHNB	Yeheng	0.35	350	⇑P	Pg	01 37 13.7	+0.9
	baz=351						
YHNB				S	Sg	01 37 17.9	+0.3
	baz=351						
CHGB	Renai	0.36	224	⇑P	Pg	01 37 13.5	+0.6
	baz=222						
CHGB				eS	Sb	01 37 19.7	-1.1
	baz=222						
NSK	Sanguang	0.36	348	⇑P	Pg	01 37 13.9	+0.9
	baz=349						
NSK				eS	Sg	01 37 18.1	+0.3
	baz=349						
HWA	Hwalien	0.37	157	eP	Pb	01 37 14.3	-0.6
	baz=145						
OWD	Renai	0.44	214	⇑iP	Pg	01 37 14.8	+0.3
	baz=212						
OWD				eS	Sg	01 37 21.1	+0.9
	baz=212						
ENLB	Shoufeng	0.44	161	eP	Pb	01 37 15.3	-0.7
	baz=149						
TWE	Neicheng	0.45	27	⇑P	Pg	01 37 15.2	+0.6
	baz=41						
TWE				S	Sb	01 37 22.2	-1.0
	baz=41						
WHP	Taichung City	0.46	265	⇑iP	Pb	01 37 16.2	-0.2
	baz=263						
WHP				S	Sb	01 37 22.1	-1.3
	baz=263						
NWLT	Wulai	0.46	7	⇑P	Pg	01 37 15.6	+0.8
	baz=8.0						
NWLT				eS	Sg	01 37 20.9	+0.1
	baz=8.0						
SLBB	Yuanshan	0.47	22	eP	Pg	01 37 15.6	+0.7
	baz=23						
TWC	Suao	0.47	52	⇑P	Pg	01 37 15.1	+0.1
	baz=55						
ESL	Shilin	0.50	181	⇑P	Pg	01 37 16.3	+0.7
	baz=169						
LIOB	Emei	0.51	310	⇑iP	Pb	01 37 16.7	-0.5
	baz=309						
LIOB				S	Sg	01 37 23.5	+1.2
	baz=309						
NSTT	Nanjuang	0.51	308	⇑P	Pb	01 37 17.2	-0.1
	baz=307						
NSTT				S	Sb	01 37 24.0	-0.9
	baz=307						
ILA	Ilan	0.52	32	⇑P	Pg	01 37 16.6	+0.6
	baz=44						
ILA				eS	Sg	01 37 24.0	+1.1
	baz=44						
WLTB	Daxi	0.56	342	eP	Pb	01 37 18.4	+0.4
	baz=343						
WLTB				eS	Sb	01 37 26.1	-0.2
	baz=343						
TWQ1	Liyutan	0.61	273	⇑P	Pb	01 37 19.6	+0.6
	baz=271						
SBCB	Hsinchu	0.63	319	⇑P	Pb	01 37 20.3	+1.0
	baz=318						
SBCB				eS	Sn	01 37 30.9	-0.9
	baz=318						
VWDT	VWDT	0.63	206	⇑P	Pg	01 37 18.2	+0.2
	baz=211						
NSY	Sanyi	0.63	279	⇑iP	Pb	01 37 20.3	+1.0
	baz=277						
NSY				eS	Sb	01 37 28.4	0.0
	baz=277						
NMLH	Miaoli	0.63	290	eP	Pb	01 37 20.1	+0.7
	baz=288						
NTC	Toucheng	0.64	33	eP	Pg	01 37 18.3	+0.1
	baz=47						
HSN	Hsinchu	0.65	318	eP	Pb	01 37 20.6	+1.0
	baz=320						
NHDH	Xindian Distri	0.65	7	eP	Pb	01 37 19.4	-0.2
	baz=19						
NHDH				eS	Sg	01 37 27.6	+0.8
	baz=19						
EGFH	Guangfu	0.65	181	eP	Pg	01 37 18.4	0.0
	baz=182						
EGFH				eS	Sb	01 37 28.1	-0.8
	baz=182						
TATO	Taipei	0.65	4	eP	Pb	01 37 19.5	-0.2
	baz=16						
TATO				S	Sg	01 37 27.9	+0.8
	baz=16						
SMLT	Sun Moon Lake	0.66	229	⇑P	Pb	01 37 19.6	-0.3
	baz=228						
EOS1	EOS1	0.67	70	⇑P	Pg	01 37 19.3	+0.5
	baz=59						
EOS1				eS	Sb	01 37 30.0	+0.7
	baz=59						
TWA	Mucha	0.67	11	⇑P	Pb	01 37 19.8	-0.3
	baz=13						
TWA				S	Sg	01 37 28.3	+0.8
	baz=13						
TYC	Yuchr	0.68	232	⇑iP	Pb	01 37 19.8	-0.4
	baz=221						
TYC				eS	Sg	01 37 28.4	+0.7
	baz=221						
PTSB	Yuanli	0.69	281	eP	Pn	01 37 21.6	-0.5
	baz=279						
PTSB				eS	Sn	01 37 31.6	-1.5
	baz=279						
NCUH	Zhongli	0.69	340	eP	Pb	01 37 20.8	+0.5
	baz=338						
EGS		0.69	40	⇑P	Pg	01 37 19.5	+0.4
	baz=43						
NCU	National Centr	0.69	340	eP	Pn	01 37 21.3	-0.9
	baz=339						
SSLB	Suanglung	0.69	220	⇑P	Pg	01 37 19.5	+0.2
	baz=219						
SSLB				eS	Sg	01 37 27.7	-0.6
	baz=219						
TAP1	Taipei	0.72	6	eP	Pg	01 37 19.9	+0.1
	baz=16						
TAP1				eS	Sg	01 37 29.3	+0.2
	baz=16						
TCU	Taichung	0.72	256	⇑eP	Pn	01 37 22.0	-0.6
	baz=255						
WDJ	Dajia District	0.73	272	⇑eP	Pn	01 37 22.7	-0.1
	baz=271						
TIPB	Shuangxi	0.74	28	⇑P	Pg	01 37 20.4	+0.3
	baz=16						
TIPB				S	Sg	01 37 29.3	-0.4
	baz=16						
TWS1	Kuangyinshan	0.78	358	eP	Pn	01 37 22.7	-0.7
	baz=8.0						
TWS1				eS	Sb	01 37 33.3	+0.6
	baz=8.0						
NWF	Wu-fen Shan	0.81	22	⇑P	Pb	01 37 22.1	-0.3
	baz=22						
NWF				eS	Sb	01 37 33.0	-0.6
	baz=22						
WFSB	Wu-fen Shan	0.81	22	⇑P	Pb	01 37 22.1	-0.3
	baz=22						
WFSB				eS	Sg	01 37 32.4	+0.4
	baz=22						
EHY	Hungye	0.82	188	eP	Pg	01 37 21.5	-0.1
	baz=180						
WJS	Zhushan	0.82	233	eP	Pb	01 37 22.8	+0.2
	baz=225						
WNT	Mingjian	0.82	238	⇑P	Pn	01 37 23.6	-0.4
	baz=231						
WHYT	Xinyi Township	0.82	221	⇓P	Pg	01 37 21.9	+0.2
	baz=221						
HGSD	Ruisui	0.82	181	⇑P	Pb	01 37 22.7	+0.1
	baz=189						
YM01	YM01	0.83	8	⇑P	Pb	01 37 23.3	+0.5
	baz=10.0						
YM01				eS	Sg	01 37 33.1	+0.4
	baz=10.0						
YM04	YM04	0.83	6	eP	Pb	01 37 23.2	+0.4
	baz=22						
NTST	Danshui	0.84	0	eP	Pn	01 37 23.8	-0.4
	baz=359						
WCHH	Zhanghua	0.84	254	eP	Pn	01 37 24.5	+0.2
	baz=253						
TWB1	Santiao Chiao	0.85	36	eP	Pg	01 37 22.1	-0.1
	baz=38						
YM05	YM05	0.85	8	eP	Pb	01 37 23.4	+0.3
	baz=6.0						
YM08	YM08	0.87	9	eP	Pb	01 37 23.6	+0.1
	baz=9.0						
YULB	Yu-li	0.93	188	eP	Pg	01 37 24.0	+0.2
	baz=197						
YULB				eS	Sb	01 37 37.7	+0.6
	baz=197						
TWY	Chenhua	0.96	8	eP	Pn	01 37 26.3	+0.4
	baz=8.0						
TWF1	Yuli	0.97	188	eP	Pb	01 37 25.0	-0.2
	baz=181						
ALS	Alishan	0.99	216	⇑P	Pg	01 37 25.4	+0.3
	baz=224						
CHN5	Tsauling	1.00	224	eP	Pn	01 37 26.2	-0.4
	baz=218						
WGK	Gukeng	1.02	232	eP	Pn	01 37 26.7	0.0
	baz=232						
WDLH	Douliu	1.04	233	⇑eP	Pn	01 37 27.2	+0.3
	baz=233						
RLNB	Erlin	1.08	247	eP	Pn	01 37 28.4	+0.9
	baz=246						
WTCT	Ta-ch'eng	1.16	247	eP	Pn	01 37 29.2	+0.6
	baz=244						
WTCT				eS	Sn	01 37 46.8	+2.1
	baz=244						
CHN2	Minshiung	1.18	229	P	Pn	01 37 30.1	+1.1
	baz=225						
CHN2				eS	Sn	01 37 47.4	+2.1
	baz=225						
ELDTW	Lidau	1.19	199	eP	Pg	01 37 28.5	-0.2
	baz=188						
CHN4	Tsaushan	1.24	219	⇑iP	Pn	01 37 30.8	+1.0
	baz=216						
CHN4				eS	Sn	01 37 50.1	+3.3
	baz=216						
CHY	Chiayi	1.24	229	eP	Pn	01 37 30.8	+1.0
	baz=245						
TPUB	Ta-pu	1.26	216	eP	Pg	01 37 30.4	+0.3
	baz=217						
WSF	Szhu	1.31	239	eP	Pg	01 37 31.6	+0.6
	baz=235						
WSF				eS	Sn	01 37 50.0	+1.6
	baz=235						
WTP	Ta-pu	1.31	216	eP	Pg	01 37 31.3	+0.2
	baz=231						
STYT	Tauyuan	1.31	209	eP	Pg	01 37 31.8	+0.7
	baz=195						
TWK	Hsinying	1.37	220	eP	Pg	01 37 32.7	+0.6
	baz=216						
TWK				eS	Sn	01 37 53.6	+3.6
	baz=216						
SNST	Tainan City	1.40	219	eP	Pg	01 37 33.4	+0.7
	baz=215						
SNST				eS	Sg	01 37 53.1	+2.3
	baz=215						
CHN1	Nanshi	1.41	217	eP	Pg	01 37 33.5	+0.5
	baz=214						
CHN1				eS	Sg	01 37 55.0	+3.8
	baz=214						
PCYT	Pengchaiyu	1.42	23	⇓eP	Pn	01 37 32.3	0.0
	baz=5.0						
YOJ	Yonaguni jima	1.44	84	P	Pb	01 37 33.1	+0.1
	baz=74						
YOJ				eS	Sg	01 37 53.1	+1.0
	baz=74						
SGST	Jiashian	1.46	213	⇑P	Pg	01 37 34.3	+0.3
	baz=204						
SGST				S	Sg	01 37 55.7	+2.8
	baz=204						
CHN8	Yiju	1.49	230	eP	Pg	01 37 34.6	+0.2
	baz=238						
CHN8				eS	Sg	01 37 56.5	+2.7
	baz=238						
SLGT	Liugui	1.51	209	eP	Pg	01 37 35.2	+0.3
	baz=198						
TWG	Pinlang	1.53	193	eP	Pn	01 37 33.9	+0.1
	baz=173						
TWGBT	Beinan	1.53	193	eP	Pb	01 37 34.5	-0.2
	baz=173						
CHN3	Shinhua	1.58	219	eP	Pg	01 37 37.0	+0.7
	baz=218						
SCLT	Jiali	1.61	225	eP	Pg	01 37 36.7	-0.2
	baz=242						
TAI1	Yung-k'ang	1.69	221	eP	Pg	01 37 39.1	+0.8
	baz=238						
SSD	Sandimen	1.73	206	eP	Pg	01 37 39.1	-0.1
	baz=204						
ECL	Taimali	1.77	195	eP	Pb	01 37 39.0	+0.2
	baz=177						
SGLT	Jiouru	1.81	209	eP	Pg	01 37 40.5	-0.2
	baz=208						
MASBT	Mashibuluo	1.86	204	⇓P	Pg	01 37 41.7	+0.2
	baz=203						
MASBT				eS	Sg	01 38 05.8	+0.2
	baz=203						
PNG	Penghu	1.88	247	eP	Pb	01 37 40.4	-0.3
	baz=243						
PNG				eS	Sg	01 38 06.0	-0.5
	baz=243						
PHUB	P'eng-hu	1.89	245	eP	Pb	01 37 40.0	-0.8
	baz=245						
VWUC	VWUC	1.93	291	eP	Pn	01 37 39.2	0.0
	baz=292						
WDGT	Dungji	1.94	237	eP	Pb	01 37 41.1	-0.6
	baz=233						
WDGT				eS	Sb	01 38 07.1	+0.9
	baz=233						
SSPT	Xinbi	2.00	204	eP	Pg	01 37 43.6	-0.6
	baz=203						
EAST	Anshuo	2.00	196	eP	Pg	01 37 43.7	-0.6
	baz=195						
SCZT	Fangliau	2.08	201	eP	Pb	01 37 44.4	+0.4
	baz=201						
VCHM	Qimei	2.15	239	eP	Pb	01 37 44.1	-1.2
	baz=239						
MATB	Ma-tsu	2.27	324	eP	Pn	01 37 43.9	-0.1
	baz=321						
TWKBT	Hengchun	2.44	194	eP	Pb	01 37 48.8	-1.4
	baz=177						
KNM	Kinmen	2.75	273	eP	Pn	01 37 52.5	+2.1
	baz=275						
KNMB	Chin-men Tao	2.79	274	eP	Pn	01 37 51.2	+0.2
	baz=276						

IDC 17 01:38:16.4±3.0, 10°.74S×163°.89E, h0km, mb4.1/4, mb1 4.1/5, mb1mx3.7/52, mbtmp4.1/5, ML3.9/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/30, Error ellipse: s-maj=52.1km s-min=41.6km az=69.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.09	288	eP	Pn	01 39 20.0	-0.3
HNR	Honiara	4.09	288	Pn	Pn	01 39 20.5	+0.2
	7.8nm,0.3s,baz=107,slow=23,SNR=3.5						
HNR				Sn	Sn	01 40 11.8	+2.9
	5.6nm,0.3s,baz=279,slow=21,SNR=2.3						
HNR				LR	LR	01 41 12.1	
	comp=Z,416nm,21.9s,baz=176,slow=43						
DZM	Mont Dzumac	11.54	168	LR	LR	01 44 18.5	
	comp=Z,403nm,19.7s,baz=33,slow=31						
STKA	Stephens Creek	29.44	221	P	P	01 44 22.1	+0.1
	1.2nm,0.3s,baz=24,slow=10,SNR=3.0						
WRA	Warramunga Arr	29.89	249	P	P	01 44 24.6	-1.4

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	1.7nm,1.0s,baz=76,slow=9.2,SNR=6.0						
ASAR	Alice Springs	31.31	242	P	P	01 44 39.5	+0.8
	0.8nm,0.8s,baz=74,slow=9.9,SNR=6.9						
BBB	Bella Bella	85.36	35	LR	LR	02 21 20.0	
	comp=Z,47nm,20.1s,baz=218,slow=30						
MKAR	Makanchi Array	92.05	317	P	P	01 51 27.7	+0.2
	1.5nm,1.0s,baz=108,slow=4.0,SNR=4.6						

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*ISCJB **17** 01:46:56.5±0.4, 33.°74N±0.°05×90.°28E±0.°08, h10^{km}, mb4.0/18, MS3.3/2, Error ellipse: s-maj=10.0km s-min=6.6km az=150.9*

*IDC **17** 01:46:56.9±0.8, 33.°68N×90.°29E, h0^{km}, mb3.8/12, mb1 4.0/15, mb1mx3.7/64, mbtmp3.8/15, ML3.1/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/33, Error ellipse: s-maj=31.7km s-min=16.1km az=56.0*

*NEIC **17** 01:46:58.5±2.5, 33.°75N×90.°28E, h10^{km}±15^{km}, mb4.3/11, Error ellipse: s-maj=7.5km s-min=5.0km az=50.0*

ISC 17 01:46:58.1±0.6, **33.°72N**±0.°07×**90.°3E**±0.°1, **h10**^{km}, **n45**, σ**0.^{s}72**/45, **mb4.1**/18, **Qinghai**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
LSA	Lhasa	4.07	169	*e*Pn	Pn	01 48 01.3	+0.5
LSA				*e*Pg	Pg	01 48 15.2	-0.9
MK32	Makanchi Array	14.40	337	*e*Pn	Pn	01 50 21.5	-0.5
MKAR	Makanchi Array	14.40	337	Pn	Pn	01 50 21.5	-0.5
	0.1nm,0.3s,baz=149,slow=9.8,SNR=5.6						
AAK	Ala-Archa	15.26	310	*e*Pn	Pn	01 50 33.3	-0.4
ENH	Enshi	16.65	97	*e*Pn	Pn	01 50 52.4	+0.8
SONA0	Songino Array	18.60	36	*e*P	Pn	01 51 16.2	+0.5
SONM	Songino Array	18.60	36	P	Pn	01 51 16.2	+0.5
	0.1nm,0.3s,baz=232,slow=14,SNR=4.0						
SONA1	Songino Array	18.61	36	*e*P	P	01 51 15.7	0.0
ULN	Ulaanbaatar	18.94	37	*e*P	P	01 51 19.0	-0.4
	3.0nm,0.8s						
KURBB	Kurchatov Arra	18.96	336	P	Pn	01 51 20.0	0.0
	0.1nm,0.3s,baz=145,slow=11,SNR=3.9						
KURK	Kurchatov	19.01	337	*e*P	P	01 51 20.0	+0.1
ZAA0	Zalesovo Array	20.59	351	*e*P	P	01 51 35.9	-1.2
	4.3nm,0.8s						
ZALV	Zalesovo Beam	20.59	351	*e*P	P	01 51 37.2	+0.1
ZALV	Zalesovo Beam	20.59	351	P	P	01 51 37.7	+0.6
	3.1nm,0.7s,baz=175,slow=11,SNR=9.1						
ZAA1	Zalesovo Array	20.60	351	*e*P	P	01 51 37.7	+0.6
BVAR	Borovoye Array	23.97	330	P	P	01 52 14.0	+1.6
	2.1nm,0.7s,baz=138,slow=9.8,SNR=9.6						
BVAR				LR	LR	02 02 45.9	
	comp=Z,85nm,18.1s,baz=277,slow=40						
BRVK	Borovoye	24.04	330	*e*P	P	01 52 13.9	+0.8
	8.8nm,1.0s						
AKTO	Aktyubinsk	28.90	315	LR	LR	02 06 14.3	
	comp=Z,65nm,18.0s,baz=64,slow=40						
FIA0	FINESS Array S	48.79	325	*e*P	P	01 55 43.6	+0.7
FINES	FINESS Array B	48.79	325	P	P	01 55 43.6	+0.7
	0.7nm,0.7s,baz=90,slow=9.5,SNR=5.3						
BUR04	Bucovina Ar. S	49.86	307	*e*P	P	01 55 52.1	+0.5
ARA0	ARCESS Array S	50.05	335	*e*P	P	01 55 53.5	+1.0
ARCES	ARCESS Array B	50.05	335	P	P	01 55 53.5	+1.0
	2.0nm,0.9s,baz=106,slow=9.5,SNR=2.8						
BILL	Bilibino	54.00	27	*e*P	P	01 56 19.9	-2.0
	4.3nm,0.3s						
DIVS	Divibare	54.15	303	*e*P	P	01 56 22.6	-0.8
	11nm,1.4s						
NB2	NORSAR Subarra	55.97	325	P	P	01 56 36.3	-0.1
	comp=Z,0.3nm,0.5s,baz=81,slow=7.4						
NB200	NORSAR Array S	55.97	325	*e*P	P	01 56 36.2	-0.1
NOA	NORSAR Array B	55.97	325	P	P	01 56 36.2	-0.1
	comp=Z,0.5nm,0.7s,baz=96,slow=4.4,SNR=3.1						
GEC2	GERESS Array S	57.14	310	*e*P	P	01 56 45.5	+0.6
	comp=Z,10nm,1.6s						
GERES	GERESS Array B	57.14	310	P	P	01 56 46.0	+1.1
	comp=Z,0.7nm,0.6s,baz=69,slow=7.3,SNR=7.4						
GEA0	GERESS Array S	57.14	310	*e*P	P	01 56 45.3	+0.4
WRAB	Tennant Creek	67.90	135	*e*P	P	01 57 58.1	+1.0
	comp=Z,1.5nm,0.6s						
WR1	Warramunga Arr	67.91	135	*e*P	P	01 57 57.5	+0.5
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	67.91	135	P	P	01 57 57.5	+0.5
	comp=Z,1.5nm,0.7s,baz=328,slow=6.1,SNR=18						
AS31	Alice Springs	70.57	138	*e*P	P	01 58 14.1	+0.6
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	70.57	138	P	P	01 58 14.1	+0.6
	comp=Z,1.1nm,0.7s,baz=324,slow=6.2,SNR=10						
COLA	College	71.84	22	*e*P	P	01 58 19.7	-0.9
	comp=Z,1.6nm,0.5s						
ILAR	Eielson Array	72.21	22	P	P	01 58 23.1	+0.2
	comp=Z,0.6nm,0.8s,baz=293,slow=5.0,SNR=6.8						
ILB	Eielson Array	72.21	22	*e*P	P	01 58 23.1	+0.2
INK	Inuvik	73.19	16	*e*P	P	01 58 28.6	0.0
	comp=Z,1.1nm,0.8s						
INK	Inuvik	73.19	16	P	P	01 58 29.2	+0.6
	comp=Z,1.3nm,0.9s,baz=343,slow=6.6,SNR=4.5						
TOA1	Torodi Ar. Sit	81.67	280	*e*P	P	01 59 16.6	-0.5
TORD	Torodi Ar. Bea	81.67	280	P	P	01 59 16.6	-0.5
	comp=Z,1.2nm,1.0s,baz=49,slow=4.5,SNR=4.3						
YKA	Yellowknife Ar	82.05	11	P	P	01 59 18.0	-0.2
	comp=Z,0.6nm,0.8s,baz=332,slow=5.0,SNR=9.0						
YKB5	Yellowknife Ar	82.05	11	*e*P	P	01 59 18.0	-0.2

IDC 17 01:48:54.0±4.0, **5.°95S**×**146.°53E**, **h0**^{km}, **mb3.4**/3, **mb1 3.7**/4, **mb1mx3.4**/35, **mbtmp3.5**/4, **ML3.9**/1, **Error ellipse: s-maj=105.2km s-min=34.1km az=107.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
WRA	Warramunga Arr	18.27	219	P	P	01 53 10.4	+1.0
	0.4nm,0.3s,baz=46,slow=12,SNR=22						
ASAR	Alice Springs	21.40	213	P	P	01 53 44.5	+0.9
	0.6nm,0.6s,baz=41,slow=8.6,SNR=6.9						
FITZ	Fitzroy Crossi	23.70	238	P	P	01 54 06.2	-1.5
	1.9nm,0.5s,baz=46,slow=11,SNR=13						
MKAR	Makanchi Array	77.17	321	P	P	02 00 50.2	+0.4
	0.3nm,0.9s,baz=117,slow=5.4,SNR=2.7						

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*IDC **17** 01:54:59.8±1.8, 15.°59N×91.°62W, h0^{km}, mb3.7/3, mb1 3.9/6, mb1mx3.6/33, mbtmp3.6/6, ML3.3/3, Error ellipse: s-maj=54.8km s-min=17.0km az=37.0*

MEX 17 01:54:55.8±0.7, **13.°94N**×**92.°30W**, **h20**^{km}±505^{km}, **MD3.7, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
THIG		0.96	2	*e*P	Pb	01 55 10.8	-3.0
THIG				*e*S	Sb	01 55 22.1	-4.0
PCIG		1.96	333	*e*P	Pn	01 55 25.1	-2.9
APG	El Apazote	2.07	59	Pg	Pn	01 55 24.5	-5.2
	7.2nm,0.3s,baz=233,slow=5.1,SNR=37						
APG				Lg	Lg	01 55 52.5	
	14nm,0.3s,baz=161,slow=22,SNR=9.3						
CCIG	Comitan	2.33	4	*e*P	Pn	01 55 31.8	-1.4
CMIG	Matias Romero	4.00	322	Pn	Pn	01 55 54.9	-1.1
	1.0nm,0.3s,baz=118,slow=11,SNR=13						
CMIG				Sn	Sb	01 56 48.1	-5.5
	2.5nm,0.3s,baz=102,slow=20,SNR=3.1						
JTS	JuntasAbangare	8.05	116	Pn	Pn	01 57 01.7	+10
	0.5nm,0.3s,baz=2.8,slow=20,SNR=3.3						
TXAR	Lajitas Array	18.59	327	P	P	01 59 08.9	-2.9
	0.0nm,0.3s,baz=135,slow=12,SNR=5.4						
NVAR	Mina Array Bea	33.53	321	P	P	02 01 34.2	-0.3
	0.4nm,0.6s,baz=135,slow=9.0,SNR=4.9						
SCHQ	Schefferville	45.38	20	P	P	02 03 05.5	-7.2
	1.3nm,0.6s,baz=214,slow=7.2,SNR=4.8						
YKA	Yellowknife Ar	51.02	347	P	P	02 03 52.0	-4.1
	0.5nm,0.5s,baz=150,slow=7.4,SNR=20						

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*MEX **17** 01:57:41.8±0.7, 13.°64N×92.°04W, h30^{km}, MD3.7*

*IDC **17** 01:57:51.7±2.1, 15.°73N×91.°74W, h0^{km}, mb3.1/2, mb1 3.4/4, mb1mx3.2/34, mbtmp3.0/4, ML2.8/2, Error ellipse: s-maj=85.6km s-min=22.3km az=36.0*

ISC 17 01:57:43.1±2.0, **13.°6N**±0.°1×**92.°42W**±0.°09, **h35**^{km}, **n8**, σ**3.^{s}43**/11, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
THIG		1.27	7	*i* P	Pn	01 58 02.1	-2.3
THIG				*i* S	Sn	01 58 16.8	-3.4
PCIG		2.20	339	*i* P	Pn	01 58 13.5	-3.7
APG	El Apazote	2.33	54	Pg	Pn	01 58 18.2	-1.0
	5.7nm,0.3s,baz=231,slow=11,SNR=6.9						
APG				Lg	Lg	01 58 48.1	
	9.8nm,0.3s,baz=9.7,slow=22,SNR=4.9						
CCIG	Comitan	2.64	6	*e*P	Pn	01 58 24.5	+1.1
CCIG				*i* S	Sn	01 58 59.8	+5.4
CMIG	Matias Romero	4.18	326	Pn	Pn	01 58 44.4	0.0
	0.2nm,0.3s,baz=132,slow=13,SNR=3.0						
CMIG				Sn	Sn	01 59 33.6	+1.6
	1.7nm,0.3s,baz=121,slow=14,SNR=3.7						
TXAR	Lajitas Array	18.78	328	P	P	02 01 55.6	-3.9
	0.0nm,0.3s,baz=140,slow=13,SNR=2.3						
NVAR	Mina Array Bea	33.70	322	P	P	02 04 25.1	+3.8
	0.2nm,0.6s,baz=127,slow=10,SNR=2.6						
YKA	Yellowknife Ar	51.28	347	P	P	02 06 42.9	-0.5
	0.1nm,0.4s,baz=151,slow=7.4,SNR=5.3						

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*IDC **17** 02:09:04.6±0.7, 53.°11N×161.°24W, h0^{km}, mb4.1/24, mb1 4.2/26, mb1mx4.2/37, mbtmp4.0/26, ML3.8/2, Error ellipse: s-maj=19.5km s-min=12.1km az=4.0*

*ISCJB **17** 02:09:07.0±1.3, 53.°15N±0.°04×161.°21W±0.°04, h27^{km}±9^{km}, mb4.0/24, Error ellipse: s-maj=7.0km s-min=4.3km az=170.3*

*NEIC **17** 02:09:08.6±0.0, 53.°21N×161.°25W, h71^{km}, mb4.2/2, ML3.8(AEIC), After AEIC.*

ISC 17 02:09:09.0±3.6, **53.°18N**±0.°07×**161.°15W**±0.°04, **h28**^{km}±25^{km}, **n68**, σ**1.^{s}38**/72, **mb4.0**/24, **South of Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
DRIA	Deer Island	1.91	340	P	Pn	02 09 39.0	-0.7
DOL	Dolgoi Island	2.02	348	P	Pn	02 09 40.8	-0.4
DT1	Dutton Round H	2.05	342	P	Pn	02 09 40.8	-0.7
FALS	False Pass	2.15	322	P	Pn	02 09 41.8	-1.2
FALS				S	Sn	02 10 08.5	-0.1
PS4A	Pavlof South-4	2.21	350	P	Pn	02 09 43.8	-0.1
SDPT	Sand Point	2.21	10	P	Pn	02 09 43.6	-0.2
SDPT				S	Sn	02 10 09.9	-0.3
PVV	Pavlof Volcano	2.23	351	P	Pn	02 09 44.0	-0.1
SSBA	Shishaldin	2.38	314	P	Pn	02 09 45.3	-0.8
SSBA				S	Sn	02 10 13.9	-0.4
WESE	West Dahl East	2.42	304	P	Pn	02 09 45.8	-0.9
WESP	Westdahl Peak	2.49	303	P	Pn	02 09 47.0	-0.8
WESP				S	Sn	02 10 15.6	-1.7
WECS	Westdahl Cape	2.54	304	P	Pn	02 09 47.4	-0.9
AKSA	Akutan Strait	2.87	291	P	Pn	02 09 51.8	-1.1
AKSA				S	Sn	02 10 25.6	-0.8
AHB	Akutan Harbor	2.93	291	P	Pn	02 09 53.1	-0.6
ZRO	Akutan Zero	3.02	290	P	Pn	02 09 54.0	-0.9
AKMO	Akutan Morgan	3.04	290	P	Pn	02 09 54.0	-1.1
AKGG	Akutan Green G	3.06	292	P	Pn	02 09 55.1	-0.3
VNSS	Veniaminof 8	3.21	17	P	Pn	02 09 58.8	+1.1
VNFG	Veniaminof 2	3.25	16	P	Pn	02 09 59.1	+1.0
UNV	Unalaska Valle	3.27	284	P	Pn	02 09 56.7	-1.5
UNV				S	Sn	02 10 34.1	-2.0
MTBL	Makushin Table	3.39	286	P	Pn	02 09 59.6	-0.4
MREP	Makushin Rep't	3.40	283	P	Pn	02 09 59.3	-0.9
MSW	Makushin Switc	3.44	285	P	Pn	02 09 59.9	-0.8
MSW				S	Sn	02 10 39.4	-1.1
MCIR	Makushin Cirqu	3.51	285	P	Pn	02 10 01.2	-0.5
CHGN	Chignik	3.51	26	P	Pn	02 10 02.0	+0.4
CHGN				S	Sn	02 10 42.6	+0.5
OKWE	Okmok W'ng Wal	4.26	277	P	Pn	02 10 11.3	-0.7
OKSP	Okmok Steeple	4.29	274	P	Pn	02 10 11.0	-1.4
NIKH	Nikolski High	4.65	271	P	Pn	02 10 15.8	-1.5
CAHL	Cahill	5.90	32	P	Pn	02 10 34.1	-0.4
OHAK	Old Harbor	6.06	45	P	Pn	02 10 34.9	-1.6
KDAK	Kodiak Island	6.71	43	Pn	Pn	02 10 43.7	-1.8
	2.9nm,0.3s,baz=217,slow=6.6,SNR=32						
KDAK				Sn	Sn	02 11 55.1	-5.7
	2.6nm,0.3s,baz=6.2,slow=21,SNR=7.3						
KOFP	Korovin Flat P	7.91	269	P	Pn	02 11 02.0	-0.1
ILAR	Eielson Array	13.71	26	Pn	Pn	02 12 17.6	-3.7
	0.3nm,0.3s,baz=218,slow=13,SNR=12						
ILAR				Sn	Sn	02 14 42.6	-10
	0.2nm,0.3s,baz=216,slow=22,SNR=4.9						
EGAK	Eagle	15.44	33	*e*Pn	Pn	02 12 42.0	-2.5
	24nm,0.9s						
DAWY	Dawson	15.63	37	*e*Pn	Pn	02 12 44.4	-2.7
	8.3nm,0.6s						
DLBC	Dease Lake	18.16	61	P	P	02 13 21.6	+2.6
	0.1nm,0.3s,baz=278,slow=11,SNR=5.0						
INK	Inuvik	20.02	30	P	P	02 13 40.4	+1.2
	7.7nm,0.7s,baz=217,slow=11,SNR=45						
INK				S	S	02 17 19.0	-3.5
	0.9nm,0.9s,baz=60,slow=20,SNR=2.2						
PETK	Petropavlovsk-	24.45	287	P	P	02 14 25.5	+0.4
	12nm,0.7s,baz=86,slow=12,SNR=15						
YKA	Yellowknife Ar	25.91	50	P	P	02 14 38.6	+0.4
	2.1nm,0.8s,baz=265,slow=7.1,SNR=50						
YKA				PcP	PcP	02 18 05.7	-0.5
	0.2nm,0.5s,baz=273,slow=2.0,SNR=4.3						
MA2	Magadan	26.87	303	P	P	02 14 50.5	+3.6
	1.4nm,0.3s,baz=155,slow=19,SNR=5.3						
NEW	Newport	27.96	82	P	P	02 14 57.0	+0.1
	1.1nm,0.5s,baz=354,slow=9.2,SNR=4.1						
YBH	Yreka Blue Hor	28.06	98	P	P	02 14 58.5	+0.6
	1.2nm,0.8s,baz=229,slow=7.7,SNR=2.9						
NVAR	Mina Array Bea	32.77	99	P	P	02 15 40.6	+1.0
	0.8nm,0.7s,baz=297,slow=7.3,SNR=4.0						
PDAR	Pinedale Array	35.35	86	P	P	02 16 02.8	+0.8
	1.5nm,0.7s,baz=291,slow=4.1,SNR=20						
ULM	Lac du Bonnet	39.30	67	P	P	02 16 34.0	-1.1
	3.8nm,0.6s,baz=293,slow=7.9,SNR=10						
H11N2	WAKE ISLAND Hy	41.49	229	T	T	03 01 14.7	
	baz=35						
H11N3	WAKE ISLAND Hy	41.49	229	T	T	03 01 05.5	
	baz=35						
H11N1	WAKE ISLAND Hy	41.51	229	T	T	03 01 15.3	
	baz=35						
H11S1	WAKE ISLAND Hy	42.65	228	T	T	03 02 38.1	
	baz=29,slow=74						
H11S2	WAKE ISLAND Hy	42.66	228	T	T	03 02 38.2	
	baz=29,slow=74						
H11S3	WAKE ISLAND Hy	42.66	228	T	T	03 02 38.5	
	baz=29						
TXAR	Lajitas Array	47.80	96	P	P	02 17 44.5	+0.7
	1.3nm,0.7s,baz=293,slow=5.5,SNR=17						
NRIK	Noril'sk	48.01	334	P	P	02 17 46.4	+1.5
	1.3nm,0.3s,baz=163,slow=19,SNR=3.7						
KSRS	Korea Array	50.20	282	P	P	02 18 01.9	-0.1
	2.6nm,0.9s,baz=54,slow=8.1,SNR=7.4						
KSAR	Wonju Array Be	50.23	282	P	P	02 18 01.9	-0.3
SONM	Songino Array	55.06	305	P	P	02 18 38.9	+0.9
	0.9nm,1.0s,baz=64,slow=6.8,SNR=4.7						
ARCES	ARCESS Array B	57.50	357	P	P	02 18 54.9	-0.1
	1.8nm,0.7s,baz=34,slow=9.0,SNR=7.2						
ZALV	Zalesovo Beam	60.05	321	P	P	02 19 12.2	-0.7
	0.3nm,0.3s,baz=35,slow=5.8,SNR=2.3						
FINES	FINESS Array B	65.58	356	P	P	02 19 49.9	+0.3
	2.0nm,0.8s,baz=13,slow=7.4,SNR=13						
NB2	NORSAR Subarra	65.97	4	P	P	02 19 52.7	+0.6
	comp=Z,0.8nm,0.7s,baz=356,slow=6.5						
NOA	NORSAR Array B	65.97	4	P	P	02 19 52.1	0.0
	comp=Z,1.5nm,0.8s,baz=356,slow=6.5,SNR=4.8						
MKAR	Makanchi Array	66.72	318	P	P	02 19 56.7	-0.4
	comp=Z,0.3nm,0.6s,baz=47,slow=8.3,SNR=5.1						
AKASG	Malin Array Be	76.13	353	P	P	02 20 53.9	+0.2
	comp=Z,1.1nm,0.5s,baz=9.7,slow=5.7,SNR=3.9						
GERES	GERESS Array B	78.26	3	P	P	02 21 07.1	+1.2
	comp=Z,0.1nm,0.3s,baz=357,slow=3.9,SNR=4.1						
CMAR	Chiang Mai Arr	81.20	289	P	P	02 21 22.1	-0.1
	comp=Z,1.3nm,0.3s,baz=12,slow=5.6,SNR=7.0						
ESDC	Sonseca Array	85.44	17	P	P	02 21 43.5	-0.3
	comp=Z,0.4nm,0.6s,baz=338,slow=4.7,SNR=5.4						
BRTR	Keskin Array B	86.59	349	P	P	02 21 50.7	+1.1
	comp=Z,3.0nm,0.9s,baz=31,slow=4.4,SNR=10						
WRA	Warramunga Arr	91.55	238	P	P	02 22 11.4	-1.5
	comp=Z,0.8nm,0.7s,baz=36,slow=5.8,SNR=10						
ASAR	Alice Springs	94.88	236	P	P	02 22 26.9	-1.3
	comp=Z,1.3nm,1.0s,baz=31,slow=3.7,SNR=8.8						

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*CNRM **17** 02:25:50.1, 33.°71N×9.°34W, h15^{km}, ml3.2*

*ISCJB **17** 02:25:53.8±0.6, 33.°96N±0.°02×8.°72W±0.°05, h10^{km}, Error ellipse: s-maj=6.4km s-min=2.9km az=161.3*

*MDD **17** 02:25:55.0±1.7, 33.°89N×8.°78W, h0^{km}, mb4.0/7, Error ellipse: s-maj=15.2km s-min=11.7km az=27.0, PRXIMO*

*SFS **17** 02:25:55.0, 33.°89N×8.°77W, ML2.7, ATLANTICO-MARRUECOS*

*IGIL **17** 02:25:55.6, 33.°76N×8.°92W, h18^{km}, ML2.5*

*INMG **17** 02:25:55.6±1.4, 33.°73N×8.°95W, h21^{km}±19^{km}, ML2.5, Error ellipse: s-maj=23.1km s-min=5.7km az=60.0*

ISC 17 02:25:52.8±1.4, **33.°84N**±0.°04×**8.°90W**±0.°05, **h10**^{km}, **n54**, σ**2.^{s}21**/104, **1C-1D, Morocco**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
AVE	Averroes	1.35	113	⇓*i*P	Pn	02 26 18.3	+0.6
AVE				*e*S	Sb	02 26 34.8	-0.7
AVE	Averroes	1.35	113	P	Pn	02 26 18.7	+1.0
AVE				S	Sb	02 26 35.5	+0.1
SRHM	Skhour des Reh	1.60	148	P	Pn	02 26 20.4	-0.8
SRHM				S	Sn	02 26 41.6	-0.3
RTC	Rabat Centre	1.70	84	P	Pn	02 26 22.9	+0.3
RTC				S	Sg	02 26 49.5	+2.0
RSA	Sarsar	2.75	67	P	Pn	02 26 39.7	+2.7
RSA				S	Sb	02 27 17.2	+1.4
OUK	Oukaimeden	2.76	161	P	Pn	02 26 35.0	-2.4
OUK				S	Sn	02 27 11.1	+0.1
IFR	Ifrane	3.16	95	*e*P	Pn	02 26 42.5	-0.2
IFR				*e*S	Sn	02 27 19.4	-1.1
CHEFC	Chefchaouen	3.20	66	P	Pn	02 26 44.9	+1.7
CHEFC				S	Sb	02 27 29.1	+0.3
PFVI	Vila Bisbo	3.29	1	*e*Pn	Pn	02 26 45.6	+1.2
PFVI				*e*Sn	Sn	02 27 22.8	-0.8
PFVI				A	A	02 27 27.4	
	6.7nm,0.3s						
PFVI	Vila Bisbo	3.29	1	⇑Pn	Pn	02 26 45.6	+1.2
	4.1nm,0.1s,SNR=18						
PFVI				Sn	Sn	02 27 22.5	-1.0
	3.9nm,0.3s,SNR=5.6						
PFVI	Vila Bisbo	3.29	1	P	Pn	02 26 43.6	-0.8
PFVI				S	Sn	02 27 24.1	+0.5
TTIG	Tnine Tigouga,	3.30	173	P	Pn	02 26 40.7	-4.0
TTIG				S	Sn	02 27 19.9	-4.1
LCRM	LCR	3.37	91	P	Pn	02 26 46.6	+1.0
LCRM				S	Sb	02 27 34.3	+0.5
OUZM	OUZ	3.43	148	P	Pn	02 26 45.3	-1.1
OUZM				S	Sn	02 27 29.9	+2.6
MORF	Marmelete	3.47	3	*e*P	Pn	02 26 48.0	+1.2
MORF				*e*S	Sn	02 27 27.0	-1.1
MORF				AML	AML	02 27 28.5	
	comp=N,14nm,0.3s						
MORF	Marmelete	3.47	3	*e*Pn	Pn	02 26 48.1	+1.2
MORF				*e*Sn	Sn	02 27 27.2	-0.8
MORF				A	A	02 27 31.9	
	comp=N,10nm,0.1s						
MORF	Marmelete	3.47	3	Pn	Pn	02 26 48.0	+1.2
MORF				Sn	Sn	02 27 27.0	-1.1
	comp=N,14nm,0.3s						
PBDV	Barranco-do-Ve	3.49	13	*e*Pn	Pn	02 26 48.6	+1.5
PBDV				*e*Sn	Sn	02 27 28.2	-0.3
PBDV	Barranco-do-Ve	3.49	13	Pn	Pn	02 26 48.6	+1.5
PBDV				Sn	Sn	02 27 28.2	-0.3
MD31	MD31	3.59	104	P	Pn	02 26 50.3	+1.7
MD31				S	Sn	02 27 37.4	+6.2
PVAQ	Vaqueiros	3.69	15	*e*Pn	Pn	02 26 51.2	+1.3
PVAQ				*e*Sn	Sn	02 27 32.2	-1.2
PVAQ				A	A	02 27 33.5	
	comp=N,5.1nm,0.1s						
PVAQ	Vaqueiros	3.69	15	Pn	Pn	02 26 51.2	+1.3
PVAQ				Sn	Sn	02 27 32.2	-1.2
	comp=N,5.1nm,0.1s						
PVAQ	Vaqueiros	3.69	15	P	Pn	02 26 51.1	+1.3
PVAQ				S	Sn	02 27 36.1	+2.8
PTEO	Sao Teotonio	3.71	2	*e*Pn	Pn	02 26 50.8	+0.7
PTEO				*e*Sn	Sn	02 27 32.2	-1.6
PTEO				A	A	02 27 37.0	
	comp=N,6.6nm,0.2s						
PTEO	Sao Teotonio	3.71	2	Pn	Pn	02 26 50.8	+0.7
PTEO				Sn	Sn	02 27 32.2	-1.6
	comp=N,3.3nm,0.2s						
MDT	Midelt	3.73	105	P	Pn	02 26 52.2	+1.7
MDT				S	Sn	02 27 40.6	+6.0
EGRO	El Granado	3.87	17	Pn	Pn	02 26 53.6	+1.3
	comp=N,1.0nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	02 27 36.7	-1.0
	comp=N,3.8nm,0.2s,SNR=7.9						
ESPR	Espera	3.92	39	Pn	Pn	02 26 54.1	+1.1
	comp=N,1.2nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	02 27 37.0	-2.0
	comp=N,5.4nm,0.2s,SNR=7.9						
MESJ	Messejana	4.03	8	*e*P	Pn	02 26 56.1	+1.6
MESJ				*e*S	Sn	02 27 39.8	-2.1
MESJ				AML	AML	02 27 43.5	
	comp=N,8.3nm,0.3s						
MESJ	Messejana	4.03	8	*e*Pn	Pn	02 26 57.0	+2.4
MESJ				*e*Sn	Sn	02 27 41.3	-0.6
MESJ				A	A	02 27 44.0	
	comp=N,3.4nm,0.1s						
MESJ	Messejana	4.03	8	Pn	Pn	02 26 57.0	+2.4
MESJ				Sn	Sn	02 27 41.3	-0.6
	comp=N,3.4nm,0.1s						
PBEJ	Beja	4.26	11	*e*Pn	Pn	02 27 01.1	+3.3
PBEJ				*e*Sn	Sn	02 27 47.1	-0.5
PBEJ				A	A	02 27 51.5	
	comp=N,2.9nm,0.2s						
PBEJ	Beja	4.26	11	Pn	Pn	02 27 01.1	+3.3
PBEJ				Sn	Sn	02 27 47.1	-0.5
	comp=N,1.4nm,0.2s						
PNCL	Nicolau / Gran	4.28	4	*e*Pn	Pn	02 27 00.2	+2.3
PNCL				*e*Sn	Sn	02 27 46.4	-1.5
PNCL				A	A	02 27 49.4	
	comp=N,4.2nm,0.1s						
PNCL	Nicolau / Gran	4.28	4	Pn	Pn	02 27 00.2	+2.3
PNCL				Sn	Sn	02 27 46.4	-1.5
	comp=N,4.2nm,0.1s						
EMIN	Mina Concepcio	4.32	24	Pn	Pn	02 26 58.3	-0.2
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	02 27 46.7	-2.2
	comp=N,1.8nm,0.1s,SNR=7.9						
EMIJ	Mijas	4.34	50	Pn	Pn	02 26 59.3	+0.5
	comp=N,1.9nm,0.3s,SNR=5.4						
EMIJ				Sn	Sn	02 27 47.8	-1.6
	comp=N,1.7nm,0.2s,SNR=7.9						
ECAB	El Cabril	5.08	33	Pn	Pn	02 27 10.5	+1.5
	comp=N,1.5nm,0.1s,SNR=16						
ECAB				Sn	Sn	02 28 04.3	-3.6
	comp=N,1.3nm,0.1s,SNR=7.9						
EGOR	Sierra Gorda,	5.09	49	Pn	Pn	02 27 10.0	+0.7
	comp=N,0.5nm,0.2s,SNR=7.9						
EGOR				Sn	Sn	02 28 06.9	-1.3
	comp=N,1.2nm,0.2s,SNR=7.9						
PMAFR	Mafra	5.12	357	Pn	Pn	02 27 11.1	+1.6
	comp=N,6.1nm,0.1s,SNR=20						
PMAFR				Sn	Sn	02 28 06.9	-1.8
	comp=N,13nm,0.3s,SNR=7.1						
PESTR	Estremoz	5.13	11	*e*Sn	Sn	02 28 07.5	-1.5
EBAD	Badajoz	5.14	17	Pn	Pn	02 27 10.9	+1.1
	comp=N,0.6nm,0.1s,SNR=9.7						
EBAD				Sn	Sn	02 28 06.7	-2.4
	comp=N,2.8nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	5.26	53	Pn	Pn	02 27 12.2	+0.6
	comp=N,0.3nm,0.2s,SNR=7.9						
ELGU				Sn	Sn	02 28 08.8	-3.5
	comp=N,2.3nm,0.2s,SNR=7.9						
EADA	Adamuz	5.56	38	Pn	Pn	02 27 16.3	+0.7
	comp=N,2.1nm,0.2s,SNR=16						
EADA				Sn	Sn	02 28 16.4	-3.2
	comp=N,4.5nm,0.1s,SNR=7.9						
EQUE	Quentar	5.58	51	Sn	Sn	02 28 19.1	-1.0
	comp=N,2.4nm,0.4s,SNR=7.9						
EBER	Berja	5.78	56	Pn	Pn	02 27 18.6	-0.2
	comp=N,0.3nm,0.3s,SNR=4.0						
EBER				Sn	Sn	02 28 21.2	-4.0
	comp=N,0.4nm,0.2s,SNR=7.9						
EQES	Quesada	6.17	48	Pn	Pn	02 27 24.9	+0.8
	comp=N,0.2nm,0.1s,SNR=7.9						
EQES				Sn	Sn	02 28 31.4	-3.3
	comp=N,1.6nm,0.2s,SNR=7.9						
EPLA	Plasencia	6.61	19	Pn	Pn	02 27 31.4	+1.4
	comp=N,0.2nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	02 28 41.4	-4.1
	comp=N,0.6nm,0.1s,SNR=7.9						
SESP	Santiago Espad	6.69	48	Pn	Pn	02 27 32.1	+0.9
	comp=N,0.3nm,0.1s,SNR=7.9						
SESP				Sn	Sn	02 28 42.6	-5.0
	comp=N,2.1nm,0.2s,SNR=7.9						
PAB	San Pablo	6.77	31	Pn	Pn	02 27 33.4	+1.1
	comp=N,0.1nm,0.1s,SNR=7.9						
PAB				Sn	Sn	02 28 43.8	-5.6
	comp=N,0.7nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	7.04	33	Sn	Sn	02 28 51.6	-4.5
	SNR=7.9						
MVO	Moncorvo	7.46	11	Pn	Pn	02 27 42.6	+0.8
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				Sn	Sn	02 29 02.0	-4.5
	comp=N,0.9nm,0.3s,SNR=7.9						
ETOB	Tobarra	7.63	49	Pn	Pn	02 27 43.9	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,0.7nm,0.1s,SNR=14						
ETOB				Sn	Sn	02 29 04.5	-6.2
	comp=N,1.5nm,0.1s,SNR=7.9						
ELOB	**Lobios**	8.05	4	Pn	Pn	02 27 51.0	+1.2
	comp=N,0.8nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	02 29 17.9	-2.9
	comp=N,0.9nm,0.2s,SNR=7.9						

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*SOME **17** 02:32:57.8, 42°.60N×79°.67E, h10^{km}*
*KRNET **17** 02:32:57.7±0.1, 42°.60N×79°.63E, h14^{km}, mb2.2*
*NNC **17** 02:32:58.3±1.1, 42°.64N×79°.64E, h0^{km}, mb2.8, mpv2.3, Error ellipse: s-maj=6.9km s-min=4.7km az=136.0*
ISC 17 02:32:54.7±2.6, **42°.59N**±0°.06×**79°.78E**±0°.10, **h12**^{km}±11^{km}, **n16**, σ**0^{s}.52**/30, **10C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	0.76	344	P	Pn	02 33 11.9	+0.4
	0.8nm,0.1s						
PDGK				S	Sn	02 33 22.1	-0.9
	0.9nm,0.1s						
PDGK	**Podgornoye**	0.76	344	⇑iP	Pn	02 33 11.8	+0.4
	baz=52						
PDGK				⇑iS	Sn	02 33 22.4	-0.6
	baz=52						
UZB	**Uzynbulak**	0.78	315	P	Pn	02 33 11.7	0.0
	0.7nm,0.2s						
UZB				S	Sb	02 33 21.7	+0.7
	6.4nm,0.2s						
UZB	**Uzynbulak**	0.78	315	eP	Pn	02 33 11.7	0.0
	baz=21						
UZB				eS	Sb	02 33 21.7	+0.7
	baz=21						
UZB	**Uzynbulak**	0.78	315	eP	Pn	02 33 11.7	0.0
	0.8nm,0.1s						
UZB				eS	Sb	02 33 21.7	+0.7
	6.2nm,0.3s						
PRZ	**Przheval'sk**	1.02	264	⇑iP	Pn	02 33 15.0	0.0
	baz=63						
PRZ				⇑iS	Sg	02 33 27.4	-0.3
	baz=63						
SATY	**Saty**	1.11	295	P	Pn	02 33 17.3	+1.1
	0.4nm,0.1s						
SATY				S	Sn	02 33 31.2	-0.3
	4.1nm,0.1s						
SATY	**Saty**	1.11	295	eP	Pn	02 33 17.3	+1.1
	0.4nm,0.1s						
SATY				eS	Sn	02 33 31.2	-0.3
	4.1nm,0.1s						
KDJ	**Kajisay**	1.98	257	⇑eP	Pg	02 33 32.9	+0.3
	baz=56						
KDJ				⇑eS	Sg	02 33 58.1	-0.2
	baz=56						
KOTS	**Kotyrbulak**	2.06	289	Pg	Pg	02 33 34.3	+0.1
	1.1nm,0.5s						
KOTS				Lg	Lg	02 34 00.6	
	4.7nm,0.4s						
KOTS	**Kotyrbulak**	2.06	289	eP	Pg	02 33 34.3	+0.1
	baz=90						
KOTS				eS	Sg	02 34 00.6	-0.2
	baz=90						
KOTS	**Kotyrbulak**	2.06	289	eP	Pg	02 33 34.3	+0.1
	1.1nm,0.5s						
KOTS				eS	Sg	02 34 00.6	-0.2
	4.7nm,0.4s						
ARXS	**Arharly**	2.15	319	Pg	Pg	02 33 36.0	0.0
	1.4nm,0.5s						
ARXS				Lg	Lg	02 34 03.5	
	2.2nm,0.3s						
ARXS	**Arharly**	2.15	319	eP	Pg	02 33 36.0	0.0
	1.4nm,0.5s						
ARXS				eS	Sg	02 34 03.5	-0.4
	2.2nm,0.3s						
ULHL	**Ulahol**	2.64	264	⇑iP	Pb	02 33 42.2	+0.2
	baz=63						
ULHL				⇑iS	Sb	02 34 14.8	+0.3
	baz=63						
BOOM	**Boomskoye usch**	2.84	269	⇑eP	Pb	02 33 44.7	-0.7
	baz=69						
BOOM				⇑iS	Sb	02 34 19.5	-0.6
	baz=69						

IDC 17 02:37:03.2±11.0, **13°.65S**×**173°.58E, h572**^{km}±136^{km}, **mb2.8**/6, **mb1 3.1**/6, **mb1mx2.9**/21, **mbtmp3.7**/6, **Error ellipse: s-maj=83.3km s-min=51.5km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	34.44	233	P	P	02 43 03.1	-1.0
	0.9nm,0.5s,baz=50,slow=9.8,SNR=3.6						
WRA	**Warramunga Arr**	38.02	255	P	P	02 43 33.9	+0.2
	0.5nm,0.3s,baz=88,slow=8.4,SNR=24						
ASAR	**Alice Springs**	38.78	249	P	P	02 43 39.8	-0.1
	1.3nm,0.6s,baz=80,slow=9.2,SNR=34						
ILAR	**Eielson Array**	83.71	16	P	P	02 48 31.2	-0.9
	0.2nm,0.5s,baz=232,slow=4.4,SNR=5.5						
TXAR	**Lajitas Array**	90.41	60	P	P	02 49 05.5	+0.8
	0.2nm,0.8s,baz=243,slow=4.0,SNR=2.2						
YKA	**Yellowknife Ar**	93.83	26	P	P	02 49 19.6	+0.1
	0.2nm,0.9s,baz=268,slow=4.3,SNR=2.7						
ARCES	**ARCESS Array B**	120.64	348	PKP	PKPdf	02 54 49.7	-0.3
	2.5nm,1.0s,baz=72,slow=2.9,SNR=5.2						

IDC 17 02:41:16.9±3.8, **15°.54S**×**12°.68W, h0**^{km}, **mb3.8**/7, **mb1 4.0**/7, **mb1mx3.7**/24, **mbtmp3.7**/7, **MS4.0**/8, **Ms1 4.0**/8, **ms1mx3.7**/40, **Error ellipse: s-maj=178.1km s-min=29.0km az=141.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	6.82	343	T	T	02 50 05.1	
	baz=168,slow=74,SNR=74						
H10S3	**ASCENSION HYDR**	6.83	343	T	T	02 50 08.5	
	baz=168,slow=74,SNR=75						
H10S1	**ASCENSION HYDR**	6.84	343	T	T	02 50 07.2	
	baz=168,slow=74,SNR=12						
DBIC	**Dimbokro**	23.39	20	LR	LR	02 53 52.0	
	comp=Z,116nm,18.4s,baz=180,slow=32						
TORD	**Torodi Ar. Bea**	31.86	27	P	P	02 47 43.6	-0.3
	1.0nm,0.9s,baz=204,slow=12,SNR=7.3						
TORD				LR	LR	02 58 51.0	
	comp=Z,209nm,19.2s,baz=285,slow=33						
BDFB	**Brasilia**	34.01	265	LR	LR	02 59 00.2	
	comp=Z,260nm,20.5s,baz=114,slow=31						
BOSA	**Boshof**	37.32	117	LR	LR	03 01 45.6	
	comp=Z,204nm,18.8s,baz=232,slow=33						
CPUP	**Villa Florida**	42.87	248	P	P	02 49 16.8	-0.5
	1.7nm,0.9s,baz=70,slow=9.2,SNR=3.2						
CPUP				LR	LR	03 03 55.9	
	comp=Z,104nm,21.0s,baz=60,slow=32						
LPAZ	**La Paz**	53.19	261	LR	LR	03 11 13.6	
	comp=Z,70nm,20.6s,baz=97,slow=34						
ROSC	**El Rosal**	64.28	283	LR	LR	03 19 14.2	
	comp=Z,265nm,18.5s,baz=127,slow=35						
GERES	**GERESS Array B**	68.25	18	P	P	02 52 20.1	+0.6
	0.3nm,0.6s,baz=237,slow=5.4,SNR=2.8						
BRTR	**Keskin Array B**	69.89	36	P	P	02 52 30.9	+1.0
	0.7nm,0.9s,baz=193,slow=7.1,SNR=2.8						
AKASG	**Malin Array Be**	75.48	26	P	P	02 53 01.7	-1.0
	0.4nm,0.3s,baz=219,slow=5.7,SNR=1.7						
KBZ	**Khabaz**	77.78	38	LR	LR	03 26 22.8	
	comp=Z,462nm,21.5s,baz=250,slow=35						
NOA	**NORSAR Array B**	78.68	12	P	P	02 53 20.1	-0.5
	1.1nm,0.9s,baz=188,slow=9.8,SNR=3.0						
TXAR	**Lajitas Array**	98.30	298	P	Pdif	02 54 57.8	+0.8
	0.7nm,1.0s,baz=108,slow=6.0,SNR=3.5						

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*KRNET **17** 02:45:37.8±0.1, 39°.84N×77°.06E, mb2.7*
*NNC **17** 02:45:37.2±1.4, 39°.92N×77°.16E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=12.1km s-min=5.9km az=132.0*
ISC 17 02:45:37.8±2.2, **39°.94N**±0°.08×**77°.08E**±0°.06, **h4**^{km}±16^{km}, **n25**, σ**1^{s}.67**/34, **14C-15D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	1.70	332	⇑iP	Pg	02 46 11.2	+0.7
	baz=33						
NRN				⇑iS	Sg	02 46 35.9	+3.3
	baz=33						
KDJ	**Kajisay**	2.19	2	⇑iP	Pg	02 46 19.2	-0.6
	baz=3.0						
KDJ				⇑iS	Sg	02 46 49.4	+1.2
	baz=3.0						
ULHL	**Ulahol**	2.39	345	⇓eP	Pb	02 46 21.9	+0.4
	baz=46						
ULHL				⇓iS	Sg	02 46 54.2	-0.4
	baz=46						
KZA	**Kyzart**	2.55	328	⇓iP	Pb	02 46 23.7	-0.6
	baz=29						
KZA				⇓iS	Sb	02 46 58.1	+2.0
	baz=29						
BOOM	**Boomskoye usch**	2.69	342	⇓iP	Pb	02 46 26.3	-0.3
	baz=43						
BOOM				⇓iS	Sb	02 47 01.1	+1.1
	baz=43						
SFK	**Sufi-Kurgan**	2.75	273	⇑Pn	Pn	02 46 22.5	-0.4
	0.2nm,0.2s						
SFK				⇑Pg	Pg	02 46 30.3	-0.2
	0.5nm,0.2s						
SFK				⇓Lg	Lg	02 47 07.9	
	6.1nm,0.4s						
ARLS	**Aral**	2.84	313	⇑iP	Pb	02 46 27.7	-1.4
	baz=15						
ARLS				⇑iS	Sb	02 47 03.7	-0.6
	baz=15						
UCH	**Uchtor**	3.00	321	⇓eP	Pb	02 46 30.4	-1.6
	baz=22						
UCH				⇓iS	Sb	02 47 08.2	-1.0
	baz=22						
TNSS	**Tian-Shan**	3.10	358	Pg	Pg	02 46 35.3	-1.9
	5.4nm,0.5s						
TNSS				Lg	Lg	02 47 18.1	
	7.2nm,0.5s						
IZV	**Izvestkoviy**	3.12	354	Pg	Pg	02 46 35.8	-1.7
	4.5nm,0.6s						
IZV				Lg	Lg	02 47 18.9	
	6.1nm,0.2s						
KBK	**Karagaybulak**	3.15	330	⇓iP	Pb	02 46 32.5	-2.0
	baz=31						
KBK				⇓iS	Sb	02 47 12.2	-1.2
	baz=31						
TKM2	**Tokmak 2**	3.18	340	⇑Pg	Pb	02 46 32.4	-2.7
	1.1nm,0.5s						
TKM2				⇑Lg	Lg	02 47 18.8	
	1.8nm,0.5s						
MDOK	**Medeo**	3.22	360	⇓Pg	Pb	02 46 36.9	+1.3
	3.4nm,0.8s						
MDOK				⇓Lg	Lg	02 47 19.3	
	6.9nm,0.8s						
MDOK	**Medeo**	3.22	360	Pg	Pb	02 46 36.8	+1.2
	2.5nm,0.4s						
MDOK				Lg	Lg	02 47 20.7	
	5.3nm,0.6s						
SATY	**Saty**	3.27	17	Pg	Pb	02 46 37.2	+0.7
	2.5nm,0.5s						
SATY				Lg	Lg	02 47 21.4	
	9.5nm,0.6s						
KOTS	**Kotyrbulak**	3.29	0	Pg	Pg	02 46 38.8	-2.2
	3.4nm,0.5s						
KOTS				Lg	Lg	02 47 23.9	
	9.1nm,0.4s						
AAK	**Ala-Archa**	3.33	325	⇓Pg	Pb	02 46 39.0	+1.5
	3.6nm,0.9s						
AAK				⇓Lg	Lg	02 47 23.4	
	4.8nm,0.7s						
DGS	**Degeres**	3.44	344	Pg	Pg	02 46 42.0	-1.8
	2.4nm,0.4s						
DGS				Lg	Lg	02 47 29.6	
	2.5nm,0.4s						
KTBS	**Karatobe**	3.78	356	Pg	Pg	02 46 47.8	-2.5
	1.9nm,0.4s						
KTBS				Lg	Lg	02 47 39.4	
	9.7nm,0.5s						
PDGK	**Podgornoye**	3.84	27	Pg	Pb	02 46 47.0	+0.8
	0.2nm,0.1s						
PDGK				Lg	Lg	02 47 38.0	
	2.6nm,0.7s						
PDGK	**Podgornoye**	3.84	27	⇑Pg	Pb	02 46 46.0	-0.2
	3.2nm,1.1s						
PDGK				⇑Lg	Lg	02 47 35.5	
	5.2nm,0.8s						
CHKK	**Chushkaly**	3.91	359	Pg	Pb	02 46 49.4	+2.0
	1.1nm,0.2s						
CHKK				Lg	Lg	02 47 42.2	
	9.1nm,0.4s						
KUU	**Kurty**	3.99	352	Pg	Pb	02 46 50.8	+2.1
	0.5nm,0.1s						
KUU				Lg	Lg	02 47 44.6	
	3.4nm,0.3s						
MNAS	**Manas**	4.29	308	⇑Pg	Pb	02 46 56.4	+2.6
	2.0nm,1.0s						
MNAS				⇑Lg	Lg	02 47 50.7	
	5.2nm,1.2s						
ARXS	**Arharly**	4.31	7	Pg	Pb	02 46 56.1	+1.9
	3.0nm,0.5s						
ARXS				Lg	Lg	02 47 53.6	
	4.5nm,0.5s						

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*SJA **17** 02:50:49.8±1.3, 31°.61S×72°.47W, h41^{km}±999^{km}, ML3.4, MW3.5*
*GUC **17** 02:50:51.9±0.6, 31°.57S×71°.92W, h29^{km}±9^{km}, ML3.2*
ISC 17 02:50:49.1±1.8, **31°.53S**±0°.03×**71°.97W**±0°.08, **h8**^{km}±12^{km}, **n20**, σ**1^{s}.10**/31, **3C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	**Combarbala**	0.90	67	eP	Pn	02 51 08.9	+0.8
CMCH				eS	Sn	02 51 21.3	-0.1
CMCH				IAML		02 51 23.1	
	comp=E,1μm,0.5s						
ROCH	**El Roble**	1.66	151	⇑iP	Pg	02 51 21.0	+0.1
ROCH				eS	Sg	02 51 42.5	+0.1
ROCH				IAML		02 51 48.2	
	comp=N,593nm,0.8s						
ROC1	**El Roble**	1.66	151	eP	Pg	02 51 21.4	+0.5
ROC1				eS	Sg	02 51 42.9	+0.5
GO04	**Tololo Observa**	1.68	37	⇑eP	Pg	02 51 22.2	+0.8
GO04				eS	Sg	02 51 45.5	+2.3
PEL	**Peldehue**	1.94	146	eP	Pg	02 51 25.4	-1.0
PEL	**Peldehue**	1.94	146	eP	Pb	02 51 24.1	-0.7
PEL				eS	Sb	02 51 49.5	+0.2
PEL				IAML		02 51 53.3	
	comp=E,211nm,0.3s						
CLCH	**Cerro Calan**	2.22	147	eP	Pb	02 51 29.0	-0.6
CLCH				eS	Sb	02 51 56.7	-0.6
CLCH				IAML		02 52 03.9	
	comp=E,415nm,0.5s						
FCH	**Farellones**	2.29	142	⇑eP	Pb	02 51 30.4	-0.5
FCH				eS	Sn	02 51 57.2	+1.1
RTLS	**Leoncito**	2.29	98	eP	Pg	02 51 33.1	0.0
RTLS				eS	Sg	02 52 03.4	+0.5
RTLS				IAML		02 52 07.8	
	comp=Z,76nm,0.4s						
AUSP	**Uspallata**	2.31	108	eP	Pg	02 51 33.2	-0.1
AUSP				eS	Sg	02 52 04.0	+0.8
AROD	**Rodeo**	2.54	58	eP	Pg	02 51 36.9	-0.9
AROD				eS	Sg	02 52 11.5	+0.8
ACCO	**Cerro Coronel**	2.66	70	eP	Pg	02 51 39.0	-1.2
ACCO				eS	Sg	02 52 16.1	+1.4
LCO	**Las Campanas**	2.74	24	eP	Pb	02 51 37.1	-1.4
ACDV	**Cuesta del Vie**	2.80	62	eP	Pg	02 51 40.7	-2.1
ACDV				eS	Sg	02 52 19.1	+0.1
RTCV	**Cerro Valdivia**	2.94	97	eP	Pb	02 51 42.5	+0.6
RTLL	**Cerro Villicun**	2.99	87	eS	Sg	02 52 25.8	+0.5
RTLL				IAML		02 52 27.9	
	comp=N,146nm,0.4s						
AMOG	**MOGNA**	3.04	80	eP	Pb	02 51 44.2	+0.7
AGUA	**GUANDACOL**	3.62	57	eP	Pb	02 51 52.4	-1.1
ACAN	**Cantantal**	4.13	102	eP	Pb	02 51 59.4	-2.8
CYA	**Choya**	6.17	62	eP	Pn	02 52 25.5	+4.9
CYA				IAML		02 53 46.2	
	comp=Z,9.8nm,0.9s						

IDC 17 03:11:54.2±2.1, **11°.86S**×**164°.82E, h0**^{km}, **mb3.7**/3, **mb1 4.0**/4, **mb1mx3.7**/35, **mbtmp3.8**/4, **ML2.9**/1, **Error ellipse: s-maj=48.8km s-min=44.2km az=148.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	10.28	172	Pn	Pn	03 14 22.5	-0.6
	0.1nm,0.3s,baz=97,slow=19,SNR=2.5						
H11S2	**WAKE ISLAND Hy**	30.21	4	T	T	03 48 08.4	
	baz=181,slow=76,SNR=6.6						
H11S3	**WAKE ISLAND Hy**	30.21	4	T	T	03 48 08.9	
	baz=181,slow=76,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	30.23	4	T	T	03 48 09.4	
	baz=181,slow=76,SNR=7.1						
WRA	**Warramunga Arr**	30.35	251	P	P	03 18 08.2	+0.2
	0.7nm,0.7s,baz=81,slow=9.2,SNR=9.3						
H11N1	**WAKE ISLAND Hy**	31.44	4	T	T	03 49 40.4	
	baz=184,slow=74						
H11N3	**WAKE ISLAND Hy**	31.44	4	T	T	03 49 42.1	
	baz=184						
H11N2	**WAKE ISLAND Hy**	31.45	4	T	T	03 49 41.8	
	baz=184,slow=74						
ASAR	**Alice Springs**	31.62	244	P	P	03 18 19.4	+0.3
	0.2nm,0.4s,baz=67,slow=10,SNR=2.8						
FITZ	**Fitzroy Crossi**	38.29	256	P	P	03 19 16.2	-0.5
	2.2nm,0.8s,baz=121,slow=7.4,SNR=6.1						
FINES	**FINESS Array B**	122.18	338	PKP	PKPdf	03 30 50.5	-0.1
	0.5nm,0.3s,baz=63,slow=5.6,SNR=10						

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*BJI **17** 03:12:51.4, 37°.55N×20°.72E, h5^{km}, mB5.1/42, mb5.0/52, Ms4.9/32, Ms7 4.6/32*
*ATH **17** 03:12:52.8, 37°.16N×20°.52E, h15^{km}, ML5.0/34, Error ellipse: s-maj=1.8km s-min=1.2km az=66.0*
*MOS **17** 03:12:53.2±1.2, 37°.37N×20°.77E, h7^{km}, mb5.1/64, MS4.7/23, Error ellipse: s-maj=3.9km s-min=2.1km az=84.8*
*IDC **17** 03:12:53.8±0.4, 37°.46N×20°.85E, h0^{km}, mb4.8/36, mb1 4.8/46, mb1mx4.8/55, mbtmp4.8/46, ML4.3/10, MS4.4/45, Ms1 4.4/45, ms1mx4.3/56, Error ellipse: s-maj=9.7km s-min=8.6km az=68.0*
*PDG **17** 03:12:55.4±0.7, 37°.35N×20°.66E, h17^{km}±1^{km}, MD5.1/3, ML5.1/11, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
*BEO **17** 03:12:55.1±0.7, 37°.35N×20°.48E, h0^{km}, ML4.8/15*
*HLW **17** 03:12:56.1, 37°.74N×21°.47E, h33^{km}±59^{km}, Md5.2, Ml5.3*
*TIR **17** 03:12:56.8, 37°.87N×21°.42E, h15^{km}, Md4.9/7*
*ISCJB **17** 03:12:56.6±0.4, 37°.39N±0°.01×20°.72E±0°.01, h32^{km}±2^{km}, mb4.9/219, MS4.6/49, Error ellipse: s-maj=2.2km s-min=1.4km az=32.3*
*THE **17** 03:12:56.2, 37°.33N×20°.74E, h4^{km}, ML4.9/18, Error ellipse: s-maj=0.7km s-min=0.4km az=64.0*
*NEIC **17** 03:12:56.2±0.0, 37°.33N×20°.74E, h4^{km}, mb4.9/149, ML4.9(THE), After THE.*
NEIC Felt at Lefkada and Poros, Greece.
*GCMT **17** 03:12:58.2±0.2, 37°.21N±0°.01×20°.60E±0°.02, h20^{km}, MW5.1/94, Moment Tensor Solution. s46,c65; s94,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.34±.17; $M_{\theta\theta}$-3.00±.12; $M_{\phi\phi}$-0.33±.11; $M_{r\theta}$2.81±.24; $M_{\theta\phi}$3.30±.09; $M_{\phi r}$-1.83±.22; Best double couple: $M_0$5.44000×10^{16} NP1:ϕ_s123.00000°, δ64.00000°, λ89.00000°. NP2: ϕ_s306.00000°, δ26.00000°, λ92.00000°. Principal axes: T 4.4970, Plg71.0000°, Azm31.0000°; N 1.8890, Plg1.0000°, Azm124.0000°; P -6.3830, Plg19.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*GII **17** 03:12:58.2±0.0, 36°.73N×21°.20E, h3^{km}, mb4.9/2, MD4.8/2*
ISC 17 03:12:56.8±0.7, **37°.28N**±0°.02×**20°.72E**±0°.02, **h27**^{km}±4^{km}, **n1253**, σ**1^{s}.92**/1408, **mb4.9**/219, **MS4.6**/49, **82C-41D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	**Vitineika**	0.74	30	P	Pb	03 13 09.8	-1.2
VTN				S	Sn	03 13 23.3	+1.5
VTN	**Vitineika**	0.74	30	P	Pb	03 13 09.5	-1.6
VTN				S	Sb	03 13 19.4	-1.3
MES3	**Kyparissia**	0.77	92	P	Pb	03 13 11.3	-0.2
AMT	**Artemida-Makis**	0.83	72	P	Pn	03 13 13.0	+0.2
AMT				S	Sn	03 13 25.8	+1.6
AMT				AML	AML	03 13 31.4	
AMT				AML	AML	03 13 34.3	
AMT	**Artemida-Makis**	0.83	72	P	Pb	03 13 11.7	-1.0
AMT				S	Sb	03 13 23.1	-0.4
VLS	**Valsamata**	0.90	354	P	Pb	03 13 11.5	-2.3
VLS				S	Sb	03 13 24.5	-1.0
VLS	**Valsamata**	0.90	354	P	Pb	03 13 12.7	-1.2
VLS				S	Sn	03 13 25.7	-0.2
VLS				AML	AML	03 13 31.6	
VLS				AML	AML	03 13 33.5	
VLS	**Valsamata**	0.90	354	P	Pb	03 13 11.8	-2.0
VLS				S	Sb	03 13 24.5	-1.0
VLS	**Valsamata**	0.90	354	P	Pb	03 13 11.5	-2.3
VLS				S	Sb	03 13 24.5	-1.0
PYL	**PYLOS**	0.91	115	P	Pn	03 13 13.2	-0.6
PYL				S	Sn	03 13 26.3	+0.3
PYL	**PYLOS**	0.91	115	P	Pb	03 13 14.0	0.0
PYL				AML	AML	03 13 30.5	
	comp=N,74754μm,0.5s						
PYL				AML	AML	03 13 30.7	
PYL	**PYLOS**	0.91	115	P	Pn	03 13 13.2	-0.6
PYL				S	Sn	03 13 26.3	+0.3
MES2	**Methoni**	0.92	120	P	Pn	03 13 13.5	-0.4
MES2				AML	AML	03 13 30.2	
MES2				AML	AML	03 13 30.5	
ITM	**Ithomi**	0.97	96	P	Pn	03 13 14.2	-0.5
ITM	**Ithomi**	0.97	96	ePn	Pn	03 13 13.9	-0.9
ITM				S	Sn	03 13 28.0	+0.3
ITM	**Ithomi**	0.97	96	P	Pn	03 13 14.4	-0.3
ITM				AML	AML	03 13 37.2	
ITM				AML	AML	03 13 43.6	
	comp=E,99436μm,0.7s						
ITM	**Ithomi**	0.97	96	P	Pn	03 13 14.1	-0.6
ITM				S	Sn	03 13 28.0	+0.3
RLS	**Riolos of Patr**	0.98	37	P	Pn	03 13 13.3	-1.5
RLS				S	Sb	03 13 27.0	-0.6
RLS	**Riolos of Patr**	0.98	37	P	Pb	03 13 15.1	0.0
RLS				S	Sn	03 13 30.1	+2.4
RLS				AML	AML	03 13 32.8	
RLS				AML	AML	03 13 33.5	
RLS	**Riolos of Patr**	0.98	37	P	Pn	03 13 13.3	-1.5
RLS				S	Sb	03 13 27.0	-0.6
DRO	**Drossia**	1.04	49	P	Pn	03 13 14.9	-0.7
DRO				S	Sn	03 13 32.5	+3.3
DRO				AML	AML	03 13 33.4	
DRO				AML	AML	03 13 33.4	
DRO	**Drossia**	1.04	49	P	Pn	03 13 14.5	-1.1
DRO				S	Sn	03 13 29.6	+0.3
AXS	**Araxos**	1.05	30	P	Pb	03 13 16.3	-0.1
AXS				S	Sn	03 13 33.2	+3.6
AXS				AML	AML	03 13 36.0	
	comp=E,80698μm,0.7s						
AXS				AML	AML	03 13 38.0	
AXS	**Araxos**	1.05	30	P	Pn	03 13 14.5	-1.3
AXS				S	Sn	03 13 29.7	+0.1
TRIP	**Tripoli**	1.26	78	P	Pb	03 13 19.5	-0.5
TRIP				S	Sb	03 13 40.7	+4.8
TRIP				AML	AML	03 13 42.7	
	comp=N,56951μm,0.8s						
TRIP				AML	AML	03 13 54.2	
	comp=E,63947μm,0.7s						
TRIP	**Tripoli**	1.26	78	P	Pn	03 13 18.7	-0.1
UPR	**University Cam**	1.31	40	P	Pb	03 13 22.1	+1.3
UPR	**University Cam**	1.31	40	P	Pn	03 13 20.0	+0.6
VLX	**Vlachokerasia**	1.33	86	P	Pn	03 13 19.9	+0.2
VLX				S	Sb	03 13 39.1	+1.3
VLX	**Vlachokerasia**	1.33	86	P	Pb	03 13 21.0	-0.1
VLX				AML	AML	03 13 47.9	
	comp=N,92960μm,0.5s						
VLX				AML	AML	03 13 49.0	
VLX	**Vlachokerasia**	1.33	86	P	Pn	03 13 19.9	+0.2
VLX				S	Sb	03 13 39.1	+1.3
EVGI	**Lefkada island**	1.34	358	P	Pb	03 13 20.6	-0.7
EVGI				S	Sb	03 13 40.0	+2.0
EVGI	**Lefkada island**	1.34	358	P	Pn	03 13 19.7	-0.1
KLV	**Kalavryta, Ach**	1.37	56	P	Pn	03 13 20.2	-0.1
KLV	**Kalavryta, Ach**	1.37	56	P	Pb	03 13 21.4	-0.4
KLV				AML	AML	03 13 48.7	
	comp=E,63874μm,1.1s						
KLV				AML	AML	03 13 56.2	
	comp=N,80868μm,0.7s						
KLV	**Kalavryta, Ach**	1.37	56	P	Pn	03 13 20.2	-0.1
LAKA	**Lakka**	1.39	46	P	Pn	03 13 20.3	-0.1
LAKA				S	Sb	03 13 40.0	+0.6
LAKA	**Lakka**	1.39	46	P	Pb	03 13 22.7	+0.6
LAKA				S	Sb	03 13 43.7	+4.3
LAKA				AML	AML	03 13 45.5	
	comp=E,89313μm,0.9s						
LAKA				AML	AML	03 13 52.3	

	comp=N,98684µm,0.9s						
LAKA	**Lakka**	**1.39**	**46**	P	**Pn**	**03 13 20.3**	**-0.1**
LAKA				S	**Sb**	**03 13 40.0**	**+0.6**
GUR	**Goura**	**1.45**	**63**	P	**Pn**	**03 13 21.3**	**-0.1**
GUR	**Goura**	**1.45**	**63**	P	**Pb**	**03 13 23.3**	**+0.1**
GUR				S	**Sb**	**03 13 45.0**	**+3.7**
GUR				AML	AML	03 13 52.5	
GUR				AML	AML	03 13 52.9	
GUR	**Goura**	**1.45**	**63**	P	**Pn**	**03 13 21.3**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.48**	**48**	P	**Pb**	**03 13 22.8**	**-0.8**
PVO	**Paravola**	**1.48**	**25**	P	**Pb**	**03 13 22.9**	**-0.7**
PVO				S	**Sb**	**03 13 47.0**	**+5.0**
PVO				AML	AML	03 13 48.7	
PVO				AML	AML	03 13 51.1	
	comp=N,90078µm,0.5s						
PVO	**Paravola**	**1.48**	**25**	P	**Pn**	**03 13 22.1**	**+0.4**
PVO				S	**Sb**	**03 13 41.9**	**-0.1**
TRAZ	**Trapeza**	**1.48**	**53**	P	**Pb**	**03 13 22.9**	**-0.8**
EFP	**Efpalio**	**1.48**	**39**	P	**Pb**	**03 13 24.2**	**+0.5**
EFP				S	**Sb**	**03 13 47.0**	**+4.9**
EFP				AML	AML	03 13 52.0	
	comp=N,64047µm,0.7s						
EFP				AML	AML	03 13 53.9	
	comp=E,67985µm,0.7s						
EFP	**Efpalio**	**1.48**	**39**	P	**Pn**	**03 13 21.8**	**+0.1**
EFP				S	**Sb**	**03 13 41.9**	**-0.2**
LKD2	**Lefkada island**	**1.50**	**358**	P	**Pn**	**03 13 22.4**	**+0.3**
LKD2				S	**Sb**	**03 13 43.6**	**+0.8**
LKD2	**Lefkada island**	**1.50**	**358**	P	**Pb**	**03 13 23.6**	**-0.5**
LKD2				S	**Sb**	**03 13 45.6**	**+2.8**
LKD2				AML	AML	03 13 53.8	
LKD2				AML	AML	03 13 56.1	
	comp=E,99328µm,0.6s						
LKD2	**Lefkada island**	**1.50**	**358**	P	**Pn**	**03 13 22.4**	**+0.3**
LKD2				S	**Sb**	**03 13 43.6**	**+0.8**
TRIZ	**Trizonia**	**1.52**	**44**	P	**Pb**	**03 13 23.5**	**-0.9**
TRIZ				S	**Sb**	**03 13 49.0**	**+5.6**
TRIZ	**Trizonia**	**1.52**	**44**	P	**Pn**	**03 13 22.5**	**+0.2**
TRIZ				S	**Sb**	**03 13 43.2**	**-0.1**
TSLK	**Tsoukalades, L**	**1.54**	**358**	P	**Pb**	**03 13 24.2**	**-0.5**
TSLK				S	**Sb**	**03 13 46.1**	**+2.2**
TSLK				AML	AML	03 13 48.6	
TSLK				AML	AML	03 14 01.0	
SERG	**Sergoula**	**1.55**	**43**	P	**Pb**	**03 13 25.0**	**+0.1**
SERG				S	**Sb**	**03 13 49.0**	**+4.9**
SERG				AML	AML	03 13 52.3	
SERG				AML	AML	03 13 53.3	
SERG	**Sergoula**	**1.55**	**43**	P	**Pn**	**03 13 23.1**	**+0.4**
KALE	**Kalithea**	**1.58**	**45**	P	**Pn**	**03 13 23.8**	**+0.6**
KALE				S	**Sb**	**03 13 45.0**	**0.0**
KALE	**Kalithea**	**1.58**	**45**	P	**Pb**	**03 13 24.4**	**-1.1**
KALE				AML	AML	03 13 53.0	
KALE				AML	AML	03 13 54.6	
	comp=N,94634µm,0.7s						
KALE	**Kalithea**	**1.58**	**45**	P	**Pn**	**03 13 23.8**	**+0.6**
KALE				S	**Sb**	**03 13 45.0**	**0.0**
ANX	**Ano Chora**	**1.62**	**36**	P	**Pb**	**03 13 25.1**	**-1.0**
ANX				S	**Sb**	**03 13 50.4**	**+4.2**
ANX	**Ano Chora**	**1.62**	**36**	P	**Pn**	**03 13 24.1**	**+0.4**
ANX				S	**Sb**	**03 13 45.3**	**-0.9**
DSF	**Desfina**	**1.82**	**51**	P	**Pn**	**03 13 28.0**	**+1.5**
DSF	**Desfina**	**1.82**	**51**	P	**Pb**	**03 13 28.9**	**-0.7**
DSF				AML	AML	03 14 06.2	
	comp=E,28766µm,0.7s						
DSF				AML	AML	03 14 13.1	
	comp=N,22963µm,0.5s						
DSF	**Desfina**	**1.82**	**51**	P	**Pn**	**03 13 27.5**	**+1.0**
EVR	**Evrytania**	**1.85**	**28**	P	**Pn**	**03 13 27.5**	**+0.7**
EVR				S	**Sb**	**03 13 51.7**	**-1.0**
EVR	**Evrytania**	**1.85**	**28**	P	**Pb**	**03 13 28.9**	**-1.1**
EVR				S	**Sb**	**03 13 54.5**	**+1.8**
EVR				AML	AML	03 13 57.3	
	comp=E,73240µm,0.5s						
EVR				AML	AML	03 13 57.9	
	comp=N,63839µm,1.0s						
EVR	**Evrytania**	**1.85**	**28**	P	**Pn**	**03 13 27.5**	**+0.7**
EVR				S	**Sb**	**03 13 51.7**	**-1.0**
VLI	**Veliai**	**1.87**	**107**	P	**Pb**	**03 13 28.9**	**-1.3**
VLI	**Veliai**	**1.87**	**107**	P	**Pb**	**03 13 28.9**	**-1.3**
DSL	**Palaion Diasel**	**1.87**	**9**	P	**Pb**	**03 13 29.3**	**-1.1**
LOUT	**Loutraki**	**1.93**	**68**	P	**Pn**	**03 13 29.3**	**+1.4**
LOUT				AML	AML	03 14 07.4	
	comp=E,9730µm,0.8s						
LOUT				AML	AML	03 14 11.9	
	comp=N,6712µm,0.7s						
LOUT	**Loutraki**	**1.93**	**68**	P	**Pn**	**03 13 29.1**	**+1.2**
LTK	**Loutraki**	**1.94**	**67**	P	**Pn**	**03 13 29.2**	**+1.2**
LTK	**Loutraki**	**1.94**	**67**	P	**Pn**	**03 13 29.4**	**+1.4**
LTK				AML	AML	03 14 08.2	
	comp=N,39941µm,1.0s						
LTK				AML	AML	03 14 14.5	
	comp=E,42675µm,1.1s						
LTK	**Loutraki**	**1.94**	**67**	P	**Pn**	**03 13 29.2**	**+1.2**
KRND	**KRANIDI**	**1.94**	**86**	P	**Pn**	**03 13 29.1**	**+1.0**
KRND	**KRANIDI**	**1.94**	**86**	P	**Pn**	**03 13 28.8**	**+0.7**
PROD	**Prodromos**	**1.99**	**60**	P	**Pn**	**03 13 30.3**	**+1.6**
PROD				S	**Sb**	**03 13 59.7**	**+3.0**
PROD				AML	AML	03 14 09.7	
	comp=N,33767µm,0.7s						
PROD				AML	AML	03 14 13.2	
	comp=E,38050µm,0.7s						
PROD	**Prodromos**	**1.99**	**60**	P	**Pn**	**03 13 30.3**	**+1.6**
DID	**Didima**	**2.02**	**83**	P	**Pn**	**03 13 29.9**	**+0.7**
DID	**Didima**	**2.02**	**83**	P	**Pn**	**03 13 30.3**	**+1.2**
DID	**Didima**	**2.02**	**83**	P	**Pn**	**03 13 29.9**	**+0.7**
KTHR	**Kythira**	**2.10**	**118**	P	**Pn**	**03 13 31.9**	**+1.6**
KTHR				S	**Sb**	**03 13 59.6**	**-0.3**
KYTH	**Kithira**	**2.13**	**118**	P	**Pb**	**03 13 33.0**	**-1.7**
KYTH	**Kithira**	**2.13**	**118**	P	**Pb**	**03 13 33.0**	**-1.7**
AGG	**Agios Georgios**	**2.15**	**36**	*i* P	**Pb**	**03 13 33.5**	**-1.7**
AGG	**Agios Georgios**	**2.15**	**36**	*e*Pn	**Pn**	**03 13 32.7**	**+1.7**
AGG	**Agios Georgios**	**2.15**	**36**	P	**Pb**	**03 13 33.7**	**-1.5**
AGG				AML	AML	03 14 06.7	
	comp=N,34961µm,0.7s						
AGG				AML	AML	03 14 07.9	
	comp=E,28834µm,0.4s						
AGG	**Agios Georgios**	**2.15**	**36**	P	**Pn**	**03 13 33.0**	**+2.0**
AGG	**Agios Georgios**	**2.15**	**36**	*e*P	**Pn**	**03 13 32.7**	**+1.7**
VIL2	**Platees**	**2.23**	**65**	P	**Pn**	**03 13 33.0**	**+1.0**
VIL2				S	**Sb**	**03 14 05.3**	**+1.8**
VIL2				AML	AML	03 14 15.1	
	comp=N,25846µm,0.7s						
VIL2				AML	AML	03 14 18.2	
	comp=E,68657µm,0.9s						
VILL	**Villia**	**2.24**	**66**	P	**Pn**	**03 13 33.0**	**+0.8**
IGT	**Igoumenitsa**	**2.27**	**353**	*e*Pn	**Pn**	**03 13 33.8**	**+1.2**
IGT				*e*Sn	**Sn**	**03 13 59.0**	**-0.6**
IGT	**Igoumenitsa**	**2.27**	**353**	P	**Pn**	**03 13 33.7**	**+1.2**
IGT	**Igoumenitsa**	**2.27**	**353**	P	**Pn**	**03 13 34.1**	**+1.5**
IGT	**Igoumenitsa**	**2.27**	**353**	P	**Pn**	**03 13 33.7**	**+1.2**
IGT	**Igoumenitsa**	**2.27**	**353**	P	**Pn**	**03 13 33.7**	**+1.2**
ATAL	**Atalanti**	**2.30**	**52**	P	**Pn**	**03 13 34.3**	**+1.3**
ATAL	**Atalanti**	**2.30**	**52**	P	**Pn**	**03 13 34.7**	**+1.6**
ATAL				AML	AML	03 14 20.4	
	comp=N,23538µm,1.0s						
ATAL				AML	AML	03 14 24.3	
	comp=E,14630µm,0.8s						
ATAL	**Atalanti**	**2.30**	**52**	P	**Pn**	**03 13 34.3**	**+1.3**
ATAL				S	**Sn**	**03 14 02.8**	**+2.3**
JAN	**Janina**	**2.37**	**3**	P	**Pn**	**03 13 35.4**	**+1.4**
JAN	**Janina**	**2.37**	**3**	P	**Pn**	**03 13 36.0**	**+1.9**
JAN				AML	AML	03 14 27.1	
	comp=E,37560µm,0.7s						
JAN				AML	AML	03 14 37.1	
	comp=N,30179µm,0.9s						
JAN	**Janina**	**2.37**	**3**	P	**Pn**	**03 13 35.4**	**+1.4**
JAN	**Janina**	**2.37**	**3**	P	**Pn**	**03 13 35.4**	**+1.4**
ATH	**Athens Observa**	**2.48**	**73**	P	**Pn**	**03 13 36.1**	**+0.7**
ATH	**Athens Observa**	**2.48**	**73**	P	**Pn**	**03 13 36.2**	**+0.7**
ATH				AML	AML	03 14 25.5	
	comp=E,26585µm,0.8s						
ATH				AML	AML	03 14 31.4	
	comp=N,17276µm,1.2s						
ATH	**Athens Observa**	**2.48**	**73**	P	**Pn**	**03 13 36.1**	**+0.7**
ATH	**Athens Observa**	**2.48**	**73**	P	**Pn**	**03 13 36.1**	**+0.7**
THL	**Klokotos Trika**	**2.50**	**24**	P	**Pn**	**03 13 37.4**	**+1.7**
VLY	**Voula,Athens**	**2.51**	**76**	P	**Pn**	**03 13 36.3**	**+0.4**
VLY	**Voula,Athens**	**2.51**	**76**	P	**Pn**	**03 13 36.3**	**+0.4**
ANKY	**Antikythira Is**	**2.52**	**123**	P	**Pn**	**03 13 37.9**	**+2.0**
ANKY	**Antikythira Is**	**2.52**	**123**	P	**Pn**	**03 13 37.9**	**+2.0**
ANKY				S	**Sb**	**03 14 09.8**	**-2.0**
ATHU	**Athens Univers**	**2.53**	**73**	P	**Pn**	**03 13 36.5**	**+0.3**
ATHU	**Athens Univers**	**2.53**	**73**	P	**Pn**	**03 13 36.7**	**+0.6**
ATHU				AML	AML	03 14 26.1	
	comp=N,5879µm,0.6s						
ATHU				AML	AML	03 14 28.1	
	comp=E,3746µm,0.7s						
ATHU	**Athens Univers**	**2.53**	**73**	P	**Pn**	**03 13 36.5**	**+0.3**
KEK	**Kerkira**	**2.53**	**344**	P	**Pn**	**03 13 36.7**	**+0.5**
KEK	**Kerkira**	**2.53**	**344**	P	**Pn**	**03 13 38.0**	**+1.8**
KEK				AML	AML	03 14 30.1	
	comp=E,30275µm,0.8s						
KEK				AML	AML	03 14 31.5	
	comp=N,18688µm,0.7s						
KEK	**Kerkira**	**2.53**	**344**	P	**Pn**	**03 13 36.7**	**+0.5**
SMIA	**Simia**	**2.53**	**50**	P	**Pn**	**03 13 38.0**	**+1.8**
SMIA	**Simia**	**2.53**	**50**	P	**Pn**	**03 13 37.7**	**+1.5**
PTL	**Penteli**	**2.61**	**72**	P	**Pn**	**03 13 37.8**	**+0.5**
PTL	**Penteli**	**2.61**	**72**	P	**Pn**	**03 13 38.0**	**+0.7**
PTL	**Penteli**	**2.61**	**72**	P	**Pn**	**03 13 37.8**	**+0.5**
SRN	**Sarande**	**2.65**	**348**	P	**Pn**	**03 13 38.5**	**+0.7**
SRN	**Sarande**	**2.65**	**348**	P	**Pn**	**03 13 38.5**	**+0.7**
SRN	**Sarande**	**2.65**	**348**	*i* PN	**Pn**	**03 13 38.9**	**+1.1**
SRN				*i* SN	**Sn**	**03 14 10.7**	**+1.6**
MRKA	**Markates**	**2.68**	**57**	P	**Pn**	**03 13 39.5**	**+1.2**
MRKA				AML	AML	03 14 18.6	
	comp=N,22456µm,0.6s						
MRKA				AML	AML	03 14 29.7	
	comp=E,21997µm,0.7s						
MRKA	**Markates**	**2.68**	**57**	P	**Pn**	**03 13 39.4**	**+1.2**
KPRO	**Kipourio**	**2.72**	**11**	P	**Pn**	**03 13 41.3**	**+2.5**
KPRO	**Kipourio**	**2.72**	**11**	P	**Pn**	**03 13 40.6**	**+1.8**
LRSO	**Larissa Observ**	**2.73**	**28**	P	**Pn**	**03 13 40.4**	**+1.6**
LRSO	**Larissa Observ**	**2.73**	**28**	P	**Pn**	**03 13 40.2**	**+1.4**
FYTO	**Fytoko, Volos**	**2.75**	**39**	P	**Pn**	**03 13 40.1**	**+0.9**
FYTO	**Fytoko, Volos**	**2.75**	**39**	P	**Pn**	**03 13 40.2**	**+0.9**
FYTO				AML	AML	03 14 19.6	
	comp=E,6866µm,0.5s						
FYTO				AML	AML	03 14 19.9	
	comp=N,7856µm,0.5s						
FYTO	**Fytoko, Volos**	**2.75**	**39**	P	**Pn**	**03 13 40.1**	**+0.9**
EREA	**Eretria**	**2.79**	**65**	P	**Pn**	**03 13 40.8**	**+1.0**
EREA				AML	AML	03 14 44.7	
	comp=N,14542µm,0.9s						
EREA				AML	AML	03 14 45.1	
	comp=E,14626µm,0.9s						
EREA	**Eretria**	**2.79**	**65**	P	**Pn**	**03 13 40.7**	**+1.0**
NEO	**Neokhori**	**2.83**	**44**	P	**Pn**	**03 13 41.2**	**+1.0**
NEO	**Neokhori**	**2.83**	**44**	P	**Pn**	**03 13 41.6**	**+1.4**
NEO	**Neokhori**	**2.83**	**44**	P	**Pn**	**03 13 41.2**	**+1.0**
XOR	**Xorichti**	**2.85**	**42**	P	**Pn**	**03 13 41.4**	**+0.8**
XOR	**Xorichti**	**2.85**	**42**	P	**Pn**	**03 13 41.7**	**+1.1**
XOR	**Xorichti**	**2.85**	**42**	P	**Pn**	**03 13 41.4**	**+0.8**
SKIA	**Skiathos**	**2.87**	**48**	P	**Pn**	**03 13 42.2**	**+1.3**
SKIA	**Skiathos**	**2.87**	**48**	P	**Pn**	**03 13 42.1**	**+1.3**
PENT	**Pentalofos**	**2.93**	**6**	P	**Pn**	**03 13 44.4**	**+2.6**
PENT	**Pentalofos**	**2.93**	**6**	P	**Pn**	**03 13 43.8**	**+2.1**
MHLO	**Agia Marina, M**	**3.01**	**100**	P	**Pn**	**03 13 43.8**	**+1.0**
MHLO	**Agia Marina, M**	**3.01**	**100**	P	**Pn**	**03 13 43.4**	**+0.7**
SERI	**Serifos**	**3.01**	**91**	P	**Pn**	**03 13 43.1**	**+0.3**
MHLA	**Plaka, Milos I**	**3.02**	**99**	P	**Pn**	**03 13 44.2**	**+1.4**
TPE	**Tepelena**	**3.06**	**350**	P	**Pn**	**03 13 44.0**	**+0.6**
TPE	**Tepelena**	**3.06**	**350**	P	**Pn**	**03 13 44.0**	**+0.6**
TPE	**Tepelena**	**3.06**	**350**	*i* PN	**Pn**	**03 13 43.9**	**+0.4**
TPE				*i* SN	**Sn**	**03 14 19.2**	**0.0**
AOS	**Alonnisos**	**3.12**	**52**	*e*P	**Pn**	**03 13 45.4**	**+1.0**
AOS	**Alonnisos**	**3.12**	**52**	P	**Pn**	**03 13 45.1**	**+0.8**
AOS	**Alonnisos**	**3.12**	**52**	P	**Pn**	**03 13 45.3**	**+1.0**
AOS	**Alonnisos**	**3.12**	**52**	P	**Pn**	**03 13 45.1**	**+0.8**
KZN	**Kozani**	**3.13**	**15**	P	**Pn**	**03 13 46.1**	**+1.6**
KZN	**Kozani**	**3.13**	**15**	P	**Pn**	**03 13 46.1**	**+1.6**
KZN	**Kozani**	**3.13**	**15**	P	**Pn**	**03 13 46.1**	**+1.6**
LIT	**Litokhoron**	**3.14**	**26**	*e*Pn	**Pn**	**03 13 45.0**	**+0.5**
LIT	**Litokhoron**	**3.14**	**26**	P	**Pn**	**03 13 45.4**	**+0.9**
LIT	**Litokhoron**	**3.14**	**26**	P	**Pn**	**03 13 45.3**	**+0.8**
LIT	**Litokhoron**	**3.14**	**26**	*e*P	**Pn**	**03 13 45.0**	**+0.5**
NEST	**Nestorio**	**3.14**	**5**	P	**Pn**	**03 13 46.7**	**+2.1**
IMMV	**Iera Moni Meta**	**3.20**	**124**	*e*P	**Pn**	**03 13 47.8**	**+2.4**
IMMV	**Iera Moni Meta**	**3.20**	**124**	P	**Pn**	**03 13 47.8**	**+2.4**
IMMV	**Iera Moni Meta**	**3.20**	**124**	P	**Pn**	**03 13 47.2**	**+1.8**
VLO	**Vlora**	**3.32**	**344**	P	**Pn**	**03 13 49.6**	**+2.6**
VLO				S	**Sn**	**03 14 29.9**	**+4.4**
VLO	**Vlora**	**3.32**	**344**	*i* PN	**Pn**	**03 13 49.6**	**+2.6**
VLO				*i* SN	**Sn**	**03 14 30.0**	**+4.4**
VAM	**Vamos**	**3.38**	**123**	P	**Pn**	**03 13 49.3**	**+1.5**
VAM	**Vamos**	**3.38**	**123**	P	**Pn**	**03 13 49.3**	**+1.5**
VAM	**Vamos**	**3.38**	**123**	P	**Pn**	**03 13 49.3**	**+1.5**
PAIG	**Paliouri**	**3.52**	**40**	P	**Pn**	**03 13 49.9**	**+0.2**
PAIG	**Paliouri**	**3.52**	**40**	P	**Pn**	**03 13 49.9**	**+0.2**
PAIG	**Paliouri**	**3.52**	**40**	P	**Pn**	**03 13 49.9**	**+0.2**
TIP	**Timpagrande**	**3.65**	**302**	*e*Pn	**Pn**	**03 13 51.5**	**0.0**
GVD	**Gavdhos**	**3.66**	**131**	*e*P	**Pb**	**03 13 56.6**	**-4.2**
GVD	**Gavdhos**	**3.66**	**131**	P	**Pn**	**03 13 53.5**	**+1.8**
GVD	**Gavdhos**	**3.66**	**131**	P	**Pn**	**03 13 53.7**	**+2.0**
GVD	**Gavdhos**	**3.66**	**131**	P	**Pn**	**03 13 53.5**	**+1.8**
PLG	**Polygyros**	**3.75**	**34**	P	**Pn**	**03 13 53.3**	**+0.3**
PLG	**Polygyros**	**3.75**	**34**	P	**Pn**	**03 13 53.7**	**+0.7**
PLG	**Polygyros**	**3.75**	**34**	P	**Pn**	**03 13 53.3**	**+0.3**
PLG	**Polygyros**	**3.75**	**34**	P	**Pn**	**03 13 53.3**	**+0.3**
BIA	**Bitola**	**3.76**	**7**	*i* Pn	**Pn**	**03 13 54.7**	**+1.5**
THE	**Thessaloniki**	**3.78**	**27**	P	**Pn**	**03 13 56.0**	**+2.7**
THE	**Thessaloniki**	**3.78**	**27**	P	**Pn**	**03 13 56.3**	**+3.1**
THE	**Thessaloniki**	**3.78**	**27**	P	**Pn**	**03 13 56.0**	**+2.7**
THE	**Thessaloniki**	**3.78**	**27**	P	**Pn**	**03 13 56.4**	**+3.1**
HORT	**Hortiatis**	**3.80**	**29**	*e*P	**Pn**	**03 13 54.7**	**+1.1**
HORT	**Hortiatis**	**3.80**	**29**	P	**Pn**	**03 13 53.9**	**+0.3**
HORT	**Hortiatis**	**3.80**	**29**	P	**Pn**	**03 13 53.9**	**+0.3**
SAP3	**Santorini-Thir**	**3.81**	**101**	P	**Pn**	**03 13 54.8**	**+1.1**
OHR	**Ohrid**	**3.83**	**1**	*i* Pn	**Pn**	**03 13 55.6**	**+1.6**
APE	**Apeiranthos**	**3.85**	**92**	*e*P	**Pn**	**03 13 54.6**	**+0.2**
APE	**Apeiranthos**	**3.85**	**92**	P	**Pn**	**03 13 54.5**	**+0.2**
APE	**Apeiranthos**	**3.85**	**92**	P	**Pn**	**03 13 54.5**	**+0.2**
APE	**Apeiranthos**	**3.85**	**92***c*	*i*P	**Pn**	**03 13 54.4**	**0.0**
SAP2K	**Karterados**	**3.89**	**101**	P	**Pn**	**03 13 55.9**	**+1.0**
GRG	**Griva**	**3.90**	**19**	P	**Pn**	**03 13 55.6**	**+0.6**
GRG	**Griva**	**3.90**	**19**	P	**Pn**	**03 13 55.2**	**+0.2**
GRG	**Griva**	**3.90**	**19**	P	**Pn**	**03 13 55.2**	**+0.2**
GRG	**Griva**	**3.90**	**19**	P	**Pn**	**03 13 55.2**	**+0.2**
SANT	**Santorini**	**3.91**	**102**	*e*P	**Pn**	**03 13 56.3**	**+1.1**
SANT	**Santorini**	**3.91**	**102**	*e*Pn	**Pn**	**03 13 55.3**	**+0.1**
SANT				*e*Sn	**Sn**	**03 14 39.8**	**-0.4**
SANT	**Santorini**	**3.91**	**102**	P	**Pn**	**03 13 56.1**	**+0.9**
IDI	**Anoyia**	**3.92**	**119**	*e*P	**Pn**	**03 13 58.1**	**+2.8**
IDI	**Anoyia**	**3.92**	**119**	*e*Pn	**Pn**	**03 13 54.7**	**-0.5**
IDI				*e*Sn	**Sn**	**03 14 40.5**	**+0.1**
IDI	**Anoyia**	**3.92**	**119**	P	**Pn**	**03 13 57.3**	**+2.1**
IDI	**Anoyia**	**3.92**	**119**	Pn	**Pn**	**03 13 55.1**	**-0.2**
	comp=E,13nm,0.3s,baz=266,slow=11,SNR=94						
IDI				Sn	**Sn**	**03 14 41.9**	**+1.5**
	comp=E,151nm,0.3s,baz=358,slow=20,SNR=10						
IDI				LR	LR	03 15 46.1	
	comp=E,3µm,21.9s,baz=295,slow=44						
CEL	**Celeste**	**3.94**	**286**	*e*Pn	**Pn**	**03 13 55.8**	**+0.1**
OUR	**Ouranopolis**	**3.98**	**39**	*e*P	**Pn**	**03 13 56.9**	**+0.9**
OUR	**Ouranopolis**	**3.98**	**39**	P	**Pn**	**03 13 56.7**	**+0.7**
OUR	**Ouranopolis**	**3.98**	**39**	P	**Pn**	**03 13 56.7**	**+0.7**
OUR	**Ouranopolis**	**3.98**	**39**	P	**Pn**	**03 13 56.7**	**+0.7**
IACM	**Heraklion**	**4.03**	**118**	P	**Pn**	**03 13 58.8**	**+2.0**
SOH	**Sokhos**	**4.09**	**29**	P	**Pn**	**03 13 58.5**	**+0.9**
SOH	**Sokhos**	**4.09**	**29**	P	**Pn**	**03 13 58.5**	**+0.9**
SOH	**Sokhos**	**4.09**	**29**	P	**Pn**	**03 13 58.5**	**+0.9**
KRUS	**Krusevo**	**4.10**	**6**	*i* Pn	**Pn**	**03 13 58.6**	**+0.8**
TIR	**Tirane**	**4.11**	**351**	*e*Pn	**Pn**	**03 13 58.9**	**+1.0**
TIR	**Tirane**	**4.11**	**351**	*e*Pn	**Pn**	**03 13 58.6**	**+0.7**
TIR	**Tirane**	**4.11**	**351**	*e*P	**Pn**	**03 13 58.6**	**+0.7**
TIR	**Tirane**	**4.11**	**351**	*i* PN	**Pn**	**03 13 59.2**	**+1.3**
TIR				*i* SN	**Sn**	**03 14 45.0**	**-0.1**
ANAF	**Anafi Island**	**4.16**	**101**	P	**Pn**	**03 13 59.7**	**+1.1**
AMGA	**Amorgos Island**	**4.17**	**95**	P	**Pn**	**03 13 59.4**	**+0.7**
TAR1	**Taranto**	**4.20**	**321**	⇑*i*Pn	**Pn**	**03 13 59.2**	**+0.1**
TAR1				Sn	**Sn**	**03 14 46.1**	**-1.2**
CGL1	**Ceglie Messapi**	**4.21**	**324**	⇓*i*Pn	**Pn**	**03 13 59.9**	**+0.7**
CGL1				Sn	**Sn**	**03 14 47.2**	**-0.3**
KNT	**Kendrikon**	**4.23**	**23**	*e*P	**Pn**	**03 14 00.6**	**+1.1**
KNT	**Kendrikon**	**4.23**	**23**	P	**Pn**	**03 14 00.4**	**+0.9**
KNT	**Kendrikon**	**4.23**	**23**	P	**Pn**	**03 14 00.8**	**+1.3**
KNT	**Kendrikon**	**4.23**	**23**	P	**Pn**	**03 14 00.4**	**+0.9**
KNT	**Kendrikon**	**4.23**	**23**	P	**Pn**	**03 14 00.4**	**+0.9**
VAY	**Valandovo**	**4.28**	**19**	*i* Pn	**Pn**	**03 14 01.0**	**+0.8**
MASS	**Massafra**	**4.35**	**321**	⇓*i*Pn	**Pn**	**03 14 01.9**	**+0.7**
MASS				Sn	**Sn**	**03 14 49.6**	**-1.4**
LIA	**Limnos Island**	**4.37**	**52**	P	**Pn**	**03 14 02.1**	**+0.7**
LIA	**Limnos Island**	**4.37**	**52**	P	**Pn**	**03 14 02.1**	**+0.7**
CHOS	**Chios island**	**4.37**	**74**	*e*P	**Pn**	**03 14 02.1**	**+0.6**
FASA	**Fasano**	**4.39**	**324**	⇓*i*Pn	**Pn**	**03 14 02.2**	**+0.5**
FASA				Sn	**Sn**	**03 14 50.7**	**-1.3**
LAST	**Lasithi**	**4.39**	**117**	P	**Pn**	**03 14 02.7**	**+0.9**
LAST	**Lasithi**	**4.39**	**117**	P	**Pn**	**03 14 02.8**	**+0.9**
LAST	**Lasithi**	**4.39**	**117**	P	**Pn**	**03 14 02.7**	**+0.9**
PHP	**Peshkopia**	**4.40**	**357**	*i* PN	**Pn**	**03 14 02.9**	**+1.0**
PHP				*i* SN	**Sn**	**03 14 51.6**	**-0.7**
NPS	**Neapolis**	**4.44**	**116**	P	**Pn**	**03 14 03.1**	**+0.7**
NPS	**Neapolis**	**4.44**	**116**	P	**Pn**	**03 14 04.1**	**+1.7**
NPS	**Neapolis**	**4.44**	**116**	P	**Pn**	**03 14 03.1**	**+0.7**
NPS	**Neapolis**	**4.44**	**116**	P	**Pn**	**03 14 03.1**	**+0.7**
SIGR	**SIGRI**	**4.48**	**63**	*e*P	**Pn**	**03 14 04.1**	**+1.2**
STIP	**Stip**	**4.55**	**14**	*i* Pn	**Pn**	**03 14 05.8**	**+1.9**
THAS	**Thassos island**	**4.56**	**42**	P	**Pn**	**03 14 04.2**	**+0.2**
ZEY	**zmir**	**4.69**	**76**	*i* P	**Pn**	**03 14 07.0**	**+1.3**
ZEY				IAML_P			
	comp=Z,10µm,0.6s						
CUC	**Castrocucco**	**4.69**	**307**	*e*Pn	**Pn**	**03 14 07.9**	**+2.0**
NVR	**Nevrokopi**	**4.74**	**30**	P	**Pn**	**03 14 07.2**	**+0.7**
NVR	**Nevrokopi**	**4.74**	**30**	P	**Pn**	**03 14 07.9**	**+1.3**
NVR	**Nevrokopi**	**4.74**	**30**	P	**Pn**	**03 14 07.2**	**+0.7**
SG1	**Sgolgore (BA)**	**4.74**	**320**	*e*Pn	**Pn**	**03 14 07.2**	**+0.6**
SG1				Sn	**Sn**	**03 14 57.0**	**-3.7**
URLA	**Izmir**	**4.78**	**75**	*e*P	**Pn**	**03 14 08.2**	**+1.1**
URLA	**Izmir**	**4.78**	**75**	*i* P	**Pn**	**03 14 08.6**	**+1.5**
URLA				IAML_P			
	comp=Z,15µm,0.5s						
PRK	**Paraskevi**	**4.79**	**64**	P	**Pn**	**03 14 09.7**	**+2.5**
PUK	**Puka**	**4.80**	**353**	*i* PN	**Pn**	**03 14 07.4**	**+0.1**
ULC	**Ulcinj**	**4.81**	**347**	⇑*i*Pn	**Pn**	**03 14 07.4**	**-0.1**
ULC				*i* Sn	**Sn**	**03 15 01.7**	**-0.7**
BAI	**Bari**	**4.84**	**323**	*e*Pn	**Pn**	**03 14 08.2**	**+0.3**
BAI				Sn	**Sn**	**03 15 02.2**	**-0.9**
BOZC	**Bozcaada**	**4.90**	**57**	*e*P	**Pn**	**03 14 08.0**	**-0.7**
BOZC	**Bozcaada**	**4.90**	**57**	*i* P	**Pn**	**03 14 10.3**	**+1.5**
BOZC				IAML_P			
	comp=Z,4µm,0.2s						
KKB	**Krupnik**	**4.93**	**21**	P	**Pn**	**03 14 09.9**	**+0.7**
ZKR	**Zakros**	**4.95**	**114**	*e*P	**Pn**	**03 14 09.9**	**+0.5**
DGB	**zmir**	**4.95**	**79**	*i* P	**Pn**	**03 14 10.9**	**+1.4**
DGB				IAML_P			
	comp=Z,2µm,0.3s						
VAE	**Valguarnera**	**5.02**	**274**	Pn	**Pn**	**03 14 13.1**	**+2.6**
	comp=Z,37nm,0.3s,baz=126,slow=1.4,SNR=49						
VAE				Sn	**Sn**	**03 15 06.1**	**-1.6**
	comp=Z,60nm,0.3s,baz=135,slow=7.7,SNR=3.8						
DRME	**Dracevica, Mon**	**5.04**	**347**	⇑*i*Pn	**Pn**	**03 14 10.4**	**-0.2**
DRME				*i* Sn	**Sn**	**03 15 07.3**	**-0.6**
DRME	**Dracevica, Mon**	**5.04**	**347**	*e*Pn	**Pn**	**03 14 09.6**	**-1.0**
EZN	**Ezine**	**5.08**	**58**	*e*P	**Pn**	**03 14 12.7**	**+1.6**
BCI	**Bajram Curri**	**5.10**	**355**	*i* PN	**Pn**	**03 14 11.2**	**-0.4**
BCI				*i* SN	**Sn**	**03 15 11.3**	**+1.8**
AYVA	**Ayvalik**	**5.12**	**65**	*i* P	**Pn**	**03 14 13.2**	**+1.6**
AYVA				IAML_P			
	comp=Z,1µm,0.5s						
BLCB	**Balcova**	**5.13**	**76**	*i* P	**Pn**	**03 14 13.0**	**+1.2**
WDD	**Wied Dalam**	**5.19**	**256**	*e*Pn	**Pn**	**03 14 12.9**	**+0.2**
WDD				*e*Sn	**Sn**	**03 15 11.5**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**5.19**	**60**	*i* P	**Pn**	**03 14 13.6**	**+0.9**
BAYC				IAML_P			
	comp=Z,946nm,0.2s						
GCAM	**G?zelcaml?**	**5.20**	**83**	*e*P	**Pn**	**03 14 13.7**	**+0.9**
GCAM	**G?zelcaml?**	**5.20**	**83**	*i* P	**Pn**	**03 14 14.5**	**+1.7**
GCAM				IAML_P			
	comp=Z,3µm,0.5s						
PDG	**Podgorica**	**5.26**	**348**	⇑*i*Pn	**Pn**	**03 14 12.6**	**-1.1**
TTG	**Podgorica**	**5.26**	**348**	⇓*i*Pn	**Pn**	**03 14 13.8**	**+0.1**
TTG				*i* Sn	**Sn**	**03 15 12.6**	**-0.8**
TTG	**Podgorica**	**5.26**	**348**	*e*Pn	**Pn**	**03 14 13.1**	**-0.6**
TTG				*e*Sn	**Sn**	**03 15 10.6**	**-2.8**
TTG	**Podgorica**	**5.26**	**348**	*e*P	**Pn**	**03 14 13.1**	**-0.6**
TTG				*e*		03 15 10.6	
BODT	**Bodrum**	**5.27**	**90**	*e*P	**Pn**	**03 14 15.1**	**+1.2**
PVY	**Plav**	**5.34**	**354**	⇑*i*Pn	**Pn**	**03 14 15.9**	**+1.1**
PVY				*i* Sn	**Sn**	**03 15 14.5**	**-1.0**
RDO	**Rodhopi**	**5.38**	**43**	P	**Pn**	**03 14 15.4**	**+0.2**
BDRM	**Kayabasi**	**5.38**	**90**	*i* P	**Pn**	**03 14 17.0**	**+1.7**
BDRM				IAML_P			
	comp=Z,2µm,0.3s						
RZN	**Rozhen**	**5.38**	**34**	P	**Pn**	**03 14 16.5**	**+1.0**
HCY	**Herceg Novi**	**5.43**	**342**	⇑*i*Pn	**Pn**	**03 14 14.9**	**-1.2**
HCY				*i* Sn	**Sn**	**03 15 16.0**	**-1.7**
HCY	**Herceg Novi**	**5.43**	**342**	⇑*i*Pn	**Pn**	**03 14 14.8**	**-1.3**
ENEZ	**Enez**	**5.46**	**49**	*e*P	**Pn**	**03 14 16.0**	**-0.4**
GELI	**Tayfur-Gelibol**	**5.47**	**54**	*e*P	**Pn**	**03 14 17.5**	**+1.0**
KARP	**Karpathos**	**5.48**	**106**	*e*P	**Pn**	**03 14 17.2**	**+0.5**
KARP	**Karpathos**	**5.48**	**106**	*e*Pn	**Pn**	**03 14 17.4**	**+0.7**
KARP				*e*Sn	**Sn**	**03 15 17.1**	**-1.8**
ALN	**Alexandroupoli**	**5.50**	**47**	P	**Pn**	**03 14 17.6**	**+0.7**
ALN	**Alexandroupoli**	**5.50**	**47**	*e*Pn	**Pn**	**03 14 17.2**	**+0.3**
ALN	**Alexandroupoli**	**5.50**	**47**	*e*P	**Pn**	**03 14 17.2**	**+0.3**
DAT	**Datca**	**5.52**	**94**	*i* P	**Pn**	**03 14 18.7**	**+1.3**
DAT	**Datca**	**5.52**	**94**	*i* P	**Pn**	**03 14 19.1**	**+1.7**
DAT				IAML_P			
	comp=Z,1µm,0.3s						
BARS	**Barje**	**5.59**	**8**	⇑*i*Pn	**Pn**	**03 14 18.3**	**+0.1**
BARS	**Barje**	**5.59**	**8**	*e*Pn	**Pb**	**03 14 34.3**	**+0.6**
BARS				*e*Sn	Sb	03 15 52.7	+12
IVA	**Berane**	**5.62**	**354**	⇑*i*Pn	**Pn**	**03 14 18.7**	**0.0**
IVA				*i* Sn	**Sn**	**03 15 21.6**	**-0.8**
MLSB	**Milas**	**5.63**	**88**	*i* P	**Pn**	**03 14 20.6**	**+1.8**
KOME	**Kolasin**	**5.64**	**351**	⇓*i*Pn	**Pn**	**03 14 19.5**	**+0.6**
KOME				*i* Sn	**Sn**	**03 15 21.8**	**-1.0**
LPK	**Lapseki**	**5.64**	**55**	*e*P	**Pn**	**03 14 20.3**	**+1.4**
NKME	**Niksic**	**5.64**	**347**	⇑*i*Pn	**Pn**	**03 14 18.5**	**-0.5**
NKME				*i* Sn	**Sn**	**03 15 21.7**	**-1.2**
ERIK	**Erikli-Kesan**	**5.64**	**51**	*e*P	**Pn**	**03 14 14.9**	**-4.0**
VTS	**Vitosha**	**5.67**	**19**	⇑*i*Pn	**Pn**	**03 14 20.2**	**+0.8**
VTS				*e*Sn	**Sn**	**03 15 23.2**	**-0.5**
VTS	**Vitosha**	**5.67**	**19**	*e*Pn	**Pn**	**03 14 19.7**	**+0.3**
VTS				*e*Sn	**Sn**	**03 15 21.9**	**-1.8**
VTS	**Vitosha**	**5.67**	**19**	⇑*i*P	**Pn**	**03 14 20.4**	**+1.0**
VTS	**Vitosha**	**5.67**	**19**	*e*P	**Pn**	**03 14 19.7**	**+0.3**
VTS				*e*		03 15 21.9	
VTS	**Vitosha**	**5.67**	**19**	P	**Pn**	**03 14 19.8**	**+0.3**
KDZ	**Kurdzhali**	**5.68**	**38**	P	**Pn**	**03 14 22.7**	**+3.3**
NKY	**Niksic**	**5.68**	**347**	⇓*i*Pn	**Pn**	**03 14 19.4**	**-0.1**
NKY				*i* Sn	**Sn**	**03 15 21.7**	**-2.2**
AYDN	**Tasoluk**	**5.71**	**84**	*i* P	**Pn**	**03 14 21.6**	**+1.7**
AYDN				IAML_P			
	comp=Z,1µm,0.5s						
PLD	**Plovdiv**	**5.71**	**31**	*e*P	**Pn**	**03 14 22.3**	**+2.4**
PLD	**Plovdiv**	**5.71**	**31**	*e*Pn	**Pn**	**03 14 20.8**	**+0.9**
TREB	**Trebinje**	**5.72**	**342**	*e*Pn	**Pn**	**03 14 19.0**	**-1.0**
TREB	**Trebinje**	**5.72**	**342**	⇑*i*Pn	**Pn**	**03 14 18.2**	**-1.8**
AYDB	**Zeytinkoy-Aydi**	**5.74**	**81**	*e*P	**Pn**	**03 14 20.9**	**+0.6**
AKHS	**Akhisar**	**5.82**	**72**	*i* P	**Pn**	**03 14 23.8**	**+2.4**
AKHS				IAML_P			
	comp=Z,2µm,0.3s						
BRY	**Bratogost**	**5.86**	**344**	⇓*i*Pn	**Pn**	**03 14 21.5**	**-0.5**
BRY				*i* Sn	**Sn**	**03 15 27.1**	**-1.2**
BRY	**Bratogost**	**5.86**	**344**	*e*Pn	**Pn**	**03 14 20.3**	**-1.7**
STEP	**BALIKESIR_Sava**	**5.89**	**67**	*i* P	**Pn**	**03 14 25.5**	**+3.2**
STEP				IAML_P			
	comp=Z,4µm,0.6s						
SELS	**Selova**	**5.94**	**3**	*e*Pn	**Pn**	**03 14 22.2**	**-0.8**
BALY	**Balya**	**5.95**	**64**	*i* P	Pn	03 14 29.8	+6.7
BALY				IAML_P			
	comp=Z,2µm,0.3s						
CLTB	**Caltabellotta**	**5.97**	**275**	*e*Pn	**Pn**	**03 14 25.8**	**+2.3**
CLTB				*e*Sn	**Sn**	**03 15 31.5**	**+0.3**
SJES	**Sjenica**	**6.00**	**355**	*e*Pn	**Pn**	**03 14 24.0**	**+0.1**
SJES				*e*Sn	**Sn**	**03 15 28.7**	**-3.1**
KRBG	**Karabiga-Canak**	**6.00**	**57**	*e*P	**Pn**	**03 14 24.2**	**+0.3**
STON	**Ston**	**6.04**	**338**	*e*Pn	**Pn**	**03 14 23.0**	**-1.4**
STON				Sn	**Sn**	**03 15 26.0**	**-6.6**
YER	**Yerkesik**	**6.04**	**89**	*e*P	**Pn**	**03 14 26.0**	**+1.5**
ARG	**Arkhangelos**	**6.04**	**98**	*i* P	**Pn**	**03 14 26.5**	**+2.0**
ARG	**Arkhangelos**	**6.04**	**98**	P	**Pn**	**03 14 26.5**	**+2.0**
ARG				pmax	pmax		
	comp=Z,332nm,0.9s						
RKY	**Sarkoy-Tekirda**	**6.08**	**54**	*e*P	**Pn**	**03 14 24.6**	**-0.3**
KNL	**Balıkesir**	**6.10**	**59**	*i* P	**Pn**	**03 14 27.4**	**+2.2**
KNL				IAML_P			
	comp=Z,2µm,0.6s						
GONE	**Gonen-Balikesi**	**6.11**	**61**	*e*P	**Pn**	**03 14 26.7**	**+1.3**
PLE	**Pljevlja**	**6.13**	**351**	⇑*i*Pn	**Pn**	**03 14 25.7**	**0.0**
PLE				*i* Sn	**Sn**	**03 15 30.5**	**-4.4**
ZAPS	**Zavoj**	**6.16**	**13**	*i* Pn	**Pn**	**03 14 27.1**	**+1.0**
IVAS	**Ivanjica**	**6.30**	**356**	*e*Pn	**Pn**	**03 14 27.6**	**-0.4**

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IVAS                               eSn    Sn     03 15 37.5  -1.6
MANT   Manisa            6.32  77  ePn    Pn     03 14 28.1  -0.3
MANT   Manisa            6.32  77  i P    Pn     03 14 30.0  +1.6
MANT                                IAML_P
       comp=Z,961nm,0.5s
TURN   Turunc            6.32  91  eP     Pn     03 14 26.1  -2.1
EDC    Edincik           6.37  59  eP     Pn     03 14 30.5  +1.7
DALY   Dalyan (Mula)     6.37  92  eP     Pn     03 14 27.7  -1.1
BOVS   Bovan             6.39   6⇑iPn   Pn     03 14 28.5  -0.7
KULA   Kula-Manisa       6.40  77  eP     Pn     03 14 31.4  +2.0
DURS   Dursunbey         6.52  67  i P    Pn     03 14 32.5  +1.5
DURS                                IAML_P
       comp=Z,3µm,0.4s
EDRB   Edirne            6.52  44  eP     Pn     03 14 30.5  -0.4
TAVA   DENIZLI_Tavas     6.53  86  i P    Pn     03 14 34.0  +2.7
TAVA                                IAML_P
       comp=Z,512nm,0.5s
DEMI   Demirci           6.54  72  i P    Pn     03 14 34.5  +3.1
DEMI                                IAML_P
       comp=Z,3µm,0.7s
GRUS   Gruza             6.60   0  ePn    Pn     03 14 31.4  -0.6
ZAGS   Zajecar           6.62  10  i Pn   Pn     03 14 32.3  -0.1
BBLS   Lazi&#263;i       6.65 352  ePn    Pn     03 14 32.6  -0.2
BBLS                               eSn    Sn     03 15 45.2  -2.6
BBLS   Lazi&#263;i       6.65 352  ePn    Pn     03 14 31.6  -1.2
CRLT   Corlu             6.67  53  eP     Pn     03 14 34.2  +1.2
KCTX   Karacabey (Bur    6.67  61  eP     Pn     03 14 33.6  +0.5
FETY   Fethiye           6.73  93  eP     Pn     03 14 36.3  +2.4
PHSR   Pinarhisar        6.83  48  eP     Pn     03 14 34.2  -1.0
DIVS   Divibare          6.83 356  ePn    Pn     03 14 34.2  -1.1
DIVS                               eSn    Sn     03 15 48.8  -3.4
DIVS   Divibare          6.83 356  ePn    Pn     03 14 33.4  -1.9
DIVS   Divibare          6.83 356⇑iPn   Pn     03 14 34.0  -1.3
SLUM   Salum             6.87 146   P     Pn     03 14 36.4  +0.6
       baz=152
SLUM                                AMP          03 15 00.0
       baz=152
SLUM                                S     Sn     03 15 48.3  -4.7
       baz=152
PVL    Pavlikeni         6.90  29   P     Pn     03 14 34.8  -1.3
HAPS   Han Pijesak,Bl    6.93 349  ePn    Pn     03 14 35.2  -1.5
HAPS                               eSn    Sn     03 15 50.4  -4.2
HAPS   Han Pijesak,Bl    6.93 349⇑iPn   Pn     03 14 34.3  -2.4
TRUS   Trudelj           6.94 358  ePn    Pn     03 14 35.8  -0.9
TRUS                               eSn    Sn     03 15 52.1  -2.6
SVIS   Svilajnac         6.99   3  ePn    Pn     03 14 35.5  -1.8
SLVT   Silivri           7.03  54  eP     Pn     03 14 38.3  +0.4
GEDZ   Gediz             7.07  73  eP     Pn     03 14 40.9  +2.3
MDNY   Mudanya-Bursa     7.08  62  eP     Pn     03 14 39.4  +0.7
ARMT   Armutlu           7.15  60  eP     Pn     03 14 47.1  +7.5
KUBS   Kucevo            7.16   6  ePn    Pn     03 14 37.7  -2.1
SZH    Strazhica         7.18  32   P     Pn     03 14 41.4  +1.3
PUNG   Punghina          7.19  13⇑iP    Pn     03 14 40.1   0.0
TVSB   Tavsanli          7.21  70  eP     Pn     03 14 42.2  +1.7
CTYL   Yalikoy Yolu      7.21  52  eP     Pn     03 14 40.9  +0.5
AKAS   Kas               7.21  96  eP     Pn     03 14 41.2  +0.6
CTKS   Kestanelik-??a    7.22  54  eP     Pn     03 14 40.6  +0.1
VLAD   Vladila           7.27  22⇑iP    Pn     03 14 42.1  +0.9
ZIMR                     7.29  28⇑iP    Pn     03 14 42.9  +1.4
TEKS   Tekeris           7.32 353  ePn    Pn     03 14 40.8  -1.1
BGKT   Bogazkoy          7.37  56  eP     Pn     03 14 43.9  +1.3
ELL    Elmali            7.38  91  eP     Pn     03 14 45.3  +2.5
CRAR   CRAIOVA           7.41  17⇑iP    Pn     03 14 43.4  +0.2
BUY    Buyukada          7.45  59  eP     Pn     03 14 44.9  +1.3
DEMR   Demre-Antalya     7.45  95  eP     Pn     03 14 45.5  +1.7
KAVV   Kandilli-Istan    7.50  57  eP     Pn     03 14 45.7  +1.3
ISK    Istanbul-Kandi    7.50  57  eP     Pn     03 14 44.3  -0.1
YLV    Yalova            7.50  61  eP     Pn     03 14 44.3  -0.2
BEO    Beograd           7.52 359   P     Pn     03 14 44.4  -0.3
MDVR   Moldovita         7.53   5⇑iP    Pn     03 14 43.6  -1.3
AQU    L'Aquila          7.57 314  ePn    Pn     03 14 46.1  +0.7
AQU    L'Aquila          7.57 314  eP     Pn     03 14 46.1  +0.7
AQU    L'Aquila          7.57 314  ePn    Pn     03 14 46.3  +0.9
BLJ    Bijeljina         7.57 352  ePn    Pn     03 14 43.0  -2.4
KLYT   Kilyos            7.58  56  eP     Pn     03 14 45.9  +0.4
SRE    Strehaia          7.61  14⇓iP    Pn     03 14 46.0   0.0
SRE    Strehaia          7.61  14   P     Pn     03 14 45.9   0.0
HERR   Herculane         7.70   9⇑iP    Pn     03 14 46.5  -0.6
DOB    Doboj             7.70 346  ePn    Pn     03 14 44.7  -2.4
KORT   Korkueli          7.70  89  eP     Pn     03 14 51.9  +4.6
CAVI   Cavuskoy          7.71  65  eP     Pn     03 14 49.2  +1.9
ISP    Isparta           7.81  83  eP     Pn     03 14 49.8  +1.0
ISP    Isparta           7.81  83  ePn    Pn     03 14 49.5  +0.7
ISP    Isparta           7.81  83  eP     Pn     03 14 49.5  +0.7
PRD    Provadia          7.81  39   P     Pn     03 14 51.7  +3.0
BCK    Bucak             7.87  86  eP     Pn     03 14 47.1  -2.4
SHUT   Suhut-Afyon       7.88  78  eP     Pn     03 14 52.1  +2.4
FRGS   Fruska Gora       7.90 355  ePn    Pn     03 14 48.2  -1.7
FRGS   Fruska Gora       7.90 355⇑iPn   Pn     03 14 47.9  -2.0
BLY    Banja Luka        7.92 341  ePn    Pn     03 14 50.0  -0.2
BLY    Banja Luka        7.92 341  ePn    Pn     03 14 49.4  -0.8
BLY                                eSn    Sn     03 16 13.9  -4.9
BLY    Banja Luka        7.92 341⇓iP    Pn     03 14 49.4  -0.8
BLY    Banja Luka        7.92 341  ePn    Pn     03 14 49.4  -0.8
HUMR   Humele            7.92  23⇑iP    Pn     03 14 51.0  +0.8
SILT   Sile              7.94  58  eP     Pn     03 14 48.4  -2.0
ANTB   Antalya           7.95  90  eP     Pn     03 14 53.5  +2.9
SGRR   Singureni         8.00  28⇓iP    Pn     03 14 52.4  +1.2
MATC   Matruh            8.01 136   P     Pn     03 14 50.0  -1.4
       baz=141
MATC                                AMP          03 16 00.0
       baz=141
MATC                                S     Sn     03 16 12.1  -8.9
       baz=141
BORA   Eskisehir         8.06  68  eP     Pn     03 14 54.8  +2.7
BANR   Banloc            8.10   2⇑iP    Pn     03 14 52.2  -0.4
UDBI   Udbina            8.15 334  ePn    Pn     03 14 53.9  +0.5
UDBI                                Sn    Sn     03 16 17.5  -7.1
GOLR                     8.20  22⇓iP    Pn     03 14 55.5  +1.5
SPNC   Sapanca-Adapaz    8.21  63  eP     Pn     03 14 54.3  +0.2
SAUV   Serdivan-Sakar    8.24  62  eP     Pn     03 14 55.9  +1.3
GZR    Gura Zlata        8.25  10⇑iP    Pn     03 14 54.3  -0.5
GULT   Gulveren          8.27  65  eP     Pn     03 14 56.8  +1.8
BZS    Buzias            8.36   4  ePn    Pn     03 14 54.3  -1.8
BZS    Buzias            8.36   4⇓iP    Pn     03 14 54.6  -1.5
BZS    Buzias            8.36   4   P     Pn     03 14 54.4  -1.7
BZS                                 pmax  pmax
       comp=Z,35nm,0.8s
LOT    Lotru             8.47  15  eP     Pn     03 14 57.6  -0.3
LOT    Lotru             8.47  15⇓iP    Pn     03 14 57.3  -0.6
SULR                     8.49  28⇑iP    Pn     03 14 57.8  -0.2
NVLJ   Novalja           8.51 331  i Pn   Pn     03 14 57.2  -1.1
NVLJ                                Sn    Sn     03 16 25.9  -7.4
LEHL   Lehliu            8.54  31⇓iP    Pn     03 14 59.8  +1.1
PSN    Preselentsi       8.56  39  eP     Pn     03 14 56.9  -2.0
PSN    Preselentsi       8.56  39   P     Pn     03 14 59.4  +0.5
MTUR   Matau             8.58  21⇓iP    Pn     03 15 00.5  +1.1
ARR    Arges             8.60  19⇑iP    Pn     03 15 00.0  +0.5
ICOR   Ion Corvin        8.69  36⇓iP    Pn     03 15 02.6  +1.9
SECR                     8.73  26⇓iP    Pn     03 15 03.2  +1.9
DEV    Deva              8.75  10⇓iP    Pn     03 15 01.6  +0.1
DEV    Deva              8.75  10   P     Pn     03 15 02.3  +0.8
DEV                                 pmax  pmax
       comp=Z,73nm,1.3s
AUSIV  SIVRIHISAR        8.77  72  eP     Pn     03 15 03.5  +1.5
MDUB   Mudurnu           8.77  66  eP     Pn     03 15 06.8  +4.8
VOIR                     8.77  20⇑iP    Pn     03 15 02.3  +0.4
VOIR                     8.77  20   P     Pn     03 15 02.9  +1.0
VOIR                                pmax  pmax
       comp=Z,106nm,0.8s
AUMIH  MIHALICIK         8.82  70  eP     Pn     03 15 04.9  +2.2
SWA2                     8.94 152   P     Pn     03 15 03.6  -0.6
       baz=157
SWA2                                AMP          03 16 00.0
       baz=157
CVDA   Cernavoda         8.97  36⇑iP    Pn     03 15 06.0  +1.5
ISR    Istrita           8.97  27⇓iP    Pn     03 15 05.6  +0.9
ISR    Istrita           8.97  27   P     Pn     03 15 06.9  +2.2
ISR                                 pmax  pmax
       comp=Z,153nm,0.8s
SIRR   Siria             9.01   4⇑iP    Pn     03 15 03.9  -1.2
MFTR   Murfatlar         9.03  38⇑iP    Pn     03 15 06.7  +1.3
MORH   Mrgy, Hungar      9.06 351  ePn    Pn     03 15 03.1  -2.7
MORH   Mrgy, Hungar      9.06 351  eP     Pn     03 15 03.0  -2.7
MLR    Muntele Rosu      9.09  24  ePn    Pn     03 15 07.3  +0.9
MLR                                 Lg    Lg     03 17 31.8
MLR    Muntele Rosu      9.09  24⇓iP    Pn     03 15 08.0  +1.6
MLR    Muntele Rosu      9.09  24  eP     Pn     03 15 07.3  +0.9
MLR    Muntele Rosu      9.09  24   Pn    Pn     03 15 08.9  +2.5
       comp=Z,2.8nm,0.3s,baz=183,slow=15,SNR=30
MLR                                 Lg    Lg     03 17 31.7
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       comp=Z,0.4nm,0.3s,baz=247,slow=13,SNR=2.1
MLR                                 LR    LR     03 19 16.4
       comp=Z,3µm,19.3s,baz=165,slow=43
TLB    Topalu            9.16  35⇓iP    Pn     03 15 07.5  +0.3
TLB    Topalu            9.16  35   P     Pn     03 15 07.4  +0.3
BOJS   Bojanci           9.18 335  ePn    Pn     03 15 07.7  +0.3
BOJS                               i Sn   Sn     03 16 46.0  -3.8
       comp=Z,5µm,8.5s
HARR   Harsova           9.19  34⇑iP    Pn     03 15 08.3  +0.7
HARR   Harsova           9.19  34   P     Pn     03 15 08.3  +0.7
OZLJ   Ozalj             9.21 336  i Pn   Pn     03 15 06.7  -1.1
TIRR   Tirgusor          9.24  37  ePn    Pn     03 15 08.8  +0.6
TIRR   Tirgusor          9.24  37⇑iP    Pn     03 15 09.2  +1.0
TIRR   Tirgusor          9.24  37  eP     Pn     03 15 08.8  +0.6
ZAG    Zagreb            9.24 339  ePn    Pn     03 15 06.7  -1.6
KONT   Konya--Tatoy      9.27  82  eP     Pn     03 15 11.3  +2.6
LADK   Ladik-KONYA       9.28  81  eP     Pn     03 15 10.9  +2.0
KEST   Kesra             9.28 264  ePn    Pn     03 15 10.4  +1.5
KEST                                Sn    Sn     03 16 53.5  +1.0
KEST   Kesra             9.28 264   Pn    Pn     03 15 11.2  +2.3
       comp=Z,6.4nm,0.3s,baz=31,slow=6.0,SNR=109
KEST                                Sn    Sn     03 16 53.5  +1.0
       comp=Z,1.7nm,0.3s,baz=24,slow=19,SNR=4.4
KEST                                LR    LR     03 19 27.1
       comp=Z,1µm,19.8s,baz=2.5,slow=42
DOPR   Dopca             9.36  20⇑iP    Pn     03 15 11.0  +1.1
CRES   Cresnjev          9.40 337  ePn    Pn     03 15 08.9  -1.6
OZUR                     9.59  22⇑iP    Pn     03 15 14.5  +1.5
DRGR                     9.62   8⇑iP    Pn     03 15 13.0  -0.5
BEHE   Becsehely         9.64 344  ePn    Pn     03 15 12.1  -1.6
BEHE   Becsehely         9.64 344  ePn    Pn     03 15 12.1  -1.6
PLOR   Plostina          9.64  26⇓iP    Pn     03 15 15.1  +1.2
PLOR   Plostina          9.64  26   P     Pn     03 15 15.0  +1.2
CFR    Carcaliu          9.66  33⇑iP    Pn     03 15 14.0   0.0
CFR    Carcaliu          9.66  33   P     Pn     03 15 14.4  +0.4
CFR                                 pmax  pmax
       comp=Z,29nm,0.7s
CJR    Cluj-Napoca       9.66  12⇓iP    Pn     03 15 14.5  +0.4
CJR    Cluj-Napoca       9.66  12   P     Pn     03 15 14.5  +0.4
CEY    Cerknica          9.67 333  ePn    Pn     03 15 13.3  -0.9
VRI    Vrincioaia        9.69  26  eP     Pn     03 15 16.3  +1.9
VRI    Vrincioaia        9.69  26⇑iP    Pn     03 15 15.4  +1.0
VRI    Vrincioaia        9.69  26   P     Pn     03 15 15.4  +1.0
CHBY   Cihanbeyli        9.71  79  eP     Pn     03 15 17.5  +2.7
ODBI   Odobesti          9.71  27⇑iP    Pn     03 15 15.8  +1.1
PPCY   Paphos            9.71 101   P     Pn     03 15 13.0  -1.8
PETR   Petresti          9.74  28⇑iP    Pn     03 15 17.2  +2.1
BR231  Keskin MP Arra    9.79  71  ePn    Pn     03 15 17.4  +1.5
ANTO   Ankara            9.80  71  eP     Pn     03 15 18.1  +2.0
ANTO   Ankara            9.80  71  ePn    Pn     03 15 16.5  +0.4
ANTO   Ankara            9.80  71  eP     Pn     03 15 16.5  +0.4
ALFC   Alefka            9.83  99   P     Pn     03 15 15.0  -1.5
ALFC                                S     Sn     03 16 56.8  -9.2
KULU   Kulu              9.84  76  eP     Pn     03 15 19.3  +2.7
TIH    Tihany            9.84 349  ePn    Pn     03 15 16.0  -0.4
LJU    Ljubljana         9.90 334  ePn    Pn     03 15 15.9  -1.4
AFSR   Afar-Bala (An     9.94  74  eP     Pn     03 15 21.1  +3.1
TLCR                     9.97  35⇑iP    Pn     03 15 19.5  +1.2
TEKE   Tekeli-Mersin    10.02  93  i P    Pn     03 15 18.7  -0.3
BERE   Bereket-Mersin   10.07  92  eP     Pn     03 15 19.7  -0.2
LEF    Lefka            10.07  99  eP     Pn     03 15 17.0  -2.7
HBRG   Burj al `Arab    10.11 129   P     Pn     03 15 18.3  -1.9
       baz=133
HBRG                                S     Sn     03 16 59.8   -13
       baz=133
HBRG                                AMP          03 17 00.0
       baz=133
LTVH   Ltavrtes, Hu     10.13   5  ePn    Pn     03 15 19.0  -1.5
ARCR   ARCALIA          10.16  14⇑iP    Pn     03 15 21.5  +0.6
SZAC   Souni            10.17 101   P     Pn     03 15 18.6  -2.5
SULT   Sultanhani-AKS   10.18  81  eP     Pn     03 15 24.6  +3.3
TESR   Tescani          10.22  24⇑iP    Pn     03 15 23.5  +1.8
TEVE   Tevekalti-Mers   10.24  91  eP     Pn     03 15 24.4  +2.4
SERE   Sereflikochisa   10.26  77  eP     Pn     03 15 33.2   +11
BUD    Budapest         10.27 354  ePn    Pn     03 15 21.1  -1.3
BUD                                 Sn    Sn     03 17 25.0  +8.5
BUD    Budapest         10.27 354   P     Pn     03 15 22.5  +0.1
BUD                                 pmax  pmax
       comp=Z,47nm,0.7s
SOKA   Soboth           10.29 338  ePn    Pn     03 15 21.1  -1.7
       comp=Z,26nm,0.5s,SNR=16
SOKA                                Sn    Sn     03 17 07.6   -10
       comp=Z,25nm,0.6s
OBKA   Obir             10.30 335  ePn    Pn     03 15 22.3  -0.5
       comp=Z,16nm,0.4s
OBKA                                Sn    Sn     03 17 12.7  -4.7
       comp=Z,85nm,0.7s
MAMC   Mammari          10.32  98   P     Pn     03 15 22.5  -0.6
KURC   Kurucasile-Bar   10.34  60   P     Pn     03 15 27.1  +3.7
BIR    Birlad           10.35  28⇑iP    Pn     03 15 25.2  +1.8
BIR    Birlad           10.35  28   P     Pn     03 15 25.1  +1.7
AKKU   Akkuyu-Mersin    10.37  92  eP     Pn     03 15 23.6  -0.1
AKKU   Akkuyu-Mersin    10.37  92  eP     Pn     03 15 24.2  +0.5
VLC    Villacollemand   10.42 314  ePn    Pn     03 15 26.7  +2.2
PGF    Pioggiola        10.42 304  eP     Pn     03 15 27.2  +2.7
BR131  Keskin Array S   10.42  73  ePn    Pn     03 15 26.4  +1.8
BRTR   Keskin Array B   10.42  73   Pn    Pn     03 15 27.2  +2.7
       comp=Z,1.3nm,0.3s,baz=255,slow=11,SNR=70
BRTR                                LR    LR     03 19 47.1
       comp=Z,1µm,19.2s,baz=253,slow=40
BIZ    Bicaz            10.44  21⇓iP    Pn     03 15 26.6  +1.9
KEBE   Keben-Mersin     10.45  91  eP     Pn     03 15 27.3  +2.4
YAYX   Yaylak           10.45  77  eP     Pn     03 15 28.9  +3.9
IKL    Isikli           10.46  92  eP     Pn     03 15 25.4  +0.4
CSS    Mathiatis        10.46  99  eP     Pn     03 15 23.8  -1.3
CSS    Mathiatis        10.46  99  ePn    Pn     03 15 23.0  -2.1
CSS    Mathiatis        10.46  99   P     Pn     03 15 23.3  -1.8
CSS                                 S     Sn     03 17 11.6   -10
CSS    Mathiatis        10.46  99   Pn    Pn     03 15 23.2  -1.8
CSS                                 Sn    Sn     03 17 17.5  -3.9
LFK    Lefkose          10.54  97  eP     Pn     03 15 25.6  -0.6
SRO2   Moca             10.61 351  eP     Pn     03 15 26.0  -1.0
SRO2                               e             03 17 20.1
SRO2   Moca             10.61 351  ePN    Pn     03 15 26.0  -1.0
SRO2                               eSN    Sn     03 17 20.1  -4.8
PSZ    Piszkesteto      10.65 357  ePn    Pn     03 15 24.9  -2.7
PSZ    Piszkesteto      10.65 357⇑iP    Pn     03 15 26.8  -0.8
PSZ    Piszkesteto      10.65 357  eP     Pn     03 15 24.9  -2.7
PSZ    Piszkesteto      10.65 357  ePn    Pn     03 15 27.0  -0.6
CMAH   Djebel Manchou   10.66 270   P     Pn     03 15 29.6  +1.8
SRO    Srobarova        10.67 351  eP     Pn     03 15 27.9  +0.1
SRO                                e             03 17 22.1
SRO    Srobarova        10.67 351  ePN    Pn     03 15 27.9  +0.1
SRO                                eSN    Sn     03 17 22.1  -4.3
ARSA   Arzberg          10.68 341  ePn    Pn     03 15 26.7  -1.3
       comp=Z,4.7nm,0.3s,SNR=9.4
MYKA   Terra Mystica    10.72 333  ePn    Pn     03 15 29.4  +0.8
       comp=Z,1.5nm,0.2s
MYKA                                Sn    Sn     03 17 22.0  -5.6
       comp=Z,15nm,0.5s
ILGA   Ilgaz            10.77  66  ePn    Pn     03 15 31.8  +2.3
KIZK   Mersin           10.79  90  eP     Pn     03 15 31.2  +1.7
SOP    Sopron           10.84 345   P     Pn     03 15 30.3  +0.2
SOP                                 pmax  pmax
       comp=Z,28nm,1.0s
SOP    Sopron           10.84 345  ePn    Pn     03 15 30.0  -0.1
BURAR  Bucovina Array   10.85  16⇓iP    Pn     03 15 31.6  +1.3
BUR04  Bucovina Ar. S   10.85  16  ePn    Pn     03 15 30.4  +0.1
PRAR   RASCA            10.86  20⇑iP    Pn     03 15 32.0  +1.5
BUR08  Bucovina Ar. S   10.87  16  ePn    Pn     03 15 31.1  +0.4
TRPA   Tarpa            10.93   6  ePn    Pn     03 15 30.1  -1.2
MERS   Mersin           11.04  88  eP     Pn     03 15 35.1  +2.1
KBA    Koelnbreinsper   11.21 333  ePn    Pn     03 15 35.6  +0.3
       comp=Z,4.4nm,0.4s,SNR=16
KBA                                 Sn    Sn     03 17 34.1  -5.6
       comp=Z,23nm,0.6s
KBA    Koelnbreinsper   11.21 333   P     Pn     03 15 36.1  +0.8
KBA                                 pmax  pmax
       comp=Z,41nm,0.9s
CONA   Conrad Observa   11.22 343  ePn    Pn     03 15 33.5  -2.0
       comp=Z,6.2nm,0.5s
ZST    Bratislava       11.22 347  eP     Pn     03 15 34.0  -1.4
ZST    Bratislava       11.22 347  ePN    Pn     03 15 34.0  -1.4
HNAT   Natroun          11.24 130   P     Pn     03 15 33.9  -1.9
       baz=134
HNAT                                AMP          03 17 00.0
       baz=134
ABTA   Abfaltersbach    11.25 330  ePn    Pn     03 15 35.1  -0.7
       comp=Z,8.9nm,0.5s,SNR=6.4
ABTA                                Sn    Sn     03 17 32.6  -8.0
       comp=Z,40nm,0.6s
VYHS   Vyhne            11.29 354  eP     Pn     03 15 35.1  -1.2
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VYHS                                pmax  pmax
       comp=N,3.0nm,0.7s
VYHS   Vyhne            11.29 354  ePN    Pn     03 15 35.1  -1.2
VYHS                               eSN    Sn     03 17 33.5  -8.0
VYHS                               eSG           03 19 09.0
VYHS                               e             03 53 08.6
MODS   Modra-Piesok     11.37 348  eP     Pn     03 15 36.8  -0.6
MODS                               e             03 17 36.8
MODS   Modra-Piesok     11.37 348  ePN    Pn     03 15 36.8  -0.6
MODS                               eSN    Sn     03 17 36.8  -6.6
UZH    Uzhgorod         11.40   5⇓iP    Pn     03 15 36.5  -1.3
UZH                                eS     Sn     03 17 42.7  -1.5
UZH                                 MLR   MLR
       comp=N,700nm,15.5s
UZH                                 MLR   MLR
       comp=E,450nm,15.5s
UZH                                 MLR   MLR
       comp=Z,300nm,15.5s
KIS    Kishinev         11.41  29  eP     Pn     03 15 37.0  -1.0
KIS                                eS     Sn     03 17 43.0  -1.5
KIS                                i Li          03 18 27.0
KIS                                eLg1          03 18 43.0
KIS                                eLg2          03 19 17.0
KIS                                eRg    Rg     03 19 44.0
KIS                                 LRM   MLR    03 20 48.0
       comp=Z,9µm,16.0s
KIS    Kishinev         11.41  29  eP     Pn     03 15 37.0  -1.0
KIS                                eS     Sn     03 17 43.0  -1.5
KIS                                 MLR   MLR
       comp=Z,9µm,16.0s
KIS                                 MLR   MLR
       comp=N,8µm,14.0s
KARA   Karaisali        11.43  86  eP     Pn     03 15 40.8  +2.5
SMOL   Smolenice        11.48 349  eP     Pn     03 15 40.4  +1.5
SMOL   Smolenice        11.48 349  ePN    Pn     03 15 40.4  +1.5
MOA    Molln            11.58 338  ePn    Pn     03 15 39.1  -1.2
       comp=N,7.6nm,0.2s,SNR=24
MOA                                 Sn    Sn     03 17 42.7  -5.9
       comp=N,15nm,0.4s
YOZ    Yozgat           11.69  74  eP     Pn     03 15 46.9  +4.9
KRTS   Karatas          11.76  89  eP     Pn     03 15 42.9  +0.2
KOT    Kottamia         11.81 125   P     Pn     03 15 39.9  -3.7
       baz=129
LANS   Liptovska Anna   11.90 356  eP     Pn     03 15 46.8  +2.1
LANS   Liptovska Anna   11.90 356  ePN    Pn     03 15 46.8  +2.1
DFRA   Djebel Bou Aff   11.90 271   P     Pn     03 15 39.9  -5.0
YURE   YUREGIR          11.93  88  eP     Pn     03 15 43.7  -1.5
GLL    Jalalah          11.97 127   P     Pn     03 15 42.6  -3.1
       baz=130
HHAG   Hagoal           11.97 124   P     Pn     03 15 42.8  -2.9
       baz=128
WTTA   Wattenberg       12.02 329  ePn    Pn     03 15 48.6  +2.1
       comp=N,9.4nm,0.6s
WTTA                                Sn    Sn     03 17 52.9  -6.8
       comp=N,24nm,0.6s
KOZT   Kozan            12.03  84  eP     Pn     03 15 47.2  +0.7
BNN    Bunyan           12.03  78  eP     Pn     03 15 50.2  +3.6
SBF    Sospel           12.04 307   P     Pn     03 15 48.8  +2.1
DIKM   Dikmen           12.05  64  eP     P      03 15 58.4  -1.0
WATA   Walderalm        12.10 329  ePn    Pn     03 15 48.3  +0.8
       comp=N,1.0nm,0.1s,SNR=28
NIE    Niedzica         12.13 359  eP     Pn     03 15 48.5  +0.6
NIE                                eS            03 19 03.0
NIE    Niedzica         12.13 359  eP     Pn     03 15 48.5  +0.6
FUORN  Ofenpass-Fuorn   12.14 324  ePn    Pn     03 15 48.9  +0.7
SQTA   Sankt Quirin     12.16 328  ePn    Pn     03 15 49.8  +1.5
       comp=N,6.6nm,0.4s,SNR=9.4
SQTA                                Sn    Sn     03 17 55.0  -8.1
       comp=N,19nm,0.5s
KRUC   Moravsky         12.19 346   P     Pn     03 15 47.7  -0.8
KRUC                                pmax  pmax
       comp=Z,21nm,1.3s
KRUC   Moravsky         12.19 346  ePN    Pn     03 15 47.7  -0.8
FETA   Feichten         12.22 326  ePn    Pn     03 15 50.6  +1.5
       comp=Z,6.1nm,0.5s
FETA                                Sn    Sn     03 17 56.6  -7.9
       comp=Z,18nm,0.7s
MOTA   Moosalm          12.31 328  ePn    Pn     03 15 51.3  +0.9
       comp=Z,0.8nm,0.2s,SNR=22
NBNS   Bani Suef        12.38 131   P     Pn     03 15 49.4  -2.0
       baz=135
VRAC   Vranov           12.39 347⇑iP    Pn     03 15 50.5  -0.9
VRAC   Vranov           12.39 347  ePN    Pn     03 15 50.4  -0.9
VRAC   Vranov           12.39 347   Pn    Pn     03 15 50.1  -1.2
       comp=Z,0.4nm,0.3s,baz=176,slow=13,SNR=36
VRAC                                Sn    Sn     03 18 04.3  -4.1
       comp=Z,0.5nm,0.3s,baz=195,slow=16,SNR=2.4
VRAC                                LR    LR     03 21 43.6
       comp=Z,2µm,18.8s,baz=170,slow=43
TAHT   Tahtakopru-Hat   12.43  90  eP     Pn     03 15 53.1  +1.1
DAVOX  Davos/Dischmat   12.44 323   Pn    Pn     03 15 53.1  +0.9
       comp=Z,1.6nm,0.3s,baz=160,slow=3.8,SNR=17
DAVOX                               Sn    Sn     03 18 02.1  -7.8
       comp=Z,1.1nm,0.3s,baz=131,slow=19,SNR=2.9
DAVOX                               LR    LR     03 21 17.9
       comp=Z,1µm,18.1s,baz=126,slow=41
TUE    Stuetta          12.48 321  ePn    Pn     03 15 52.8   0.0
TUE                                eSn    Sn     03 18 09.3  -1.6
KVT    Kavak            12.49  68  eP     P      03 16 00.3  -3.9
RETA   Reutte           12.56 327  ePn    Pn     03 15 56.2  +2.5
       comp=Z,0.4nm,0.2s
RETA                               eSn    Sn     03 18 09.4  -3.4
       comp=Z,27nm,0.6s
TREC   Trest            12.59 344  eP     Pn     03 15 53.7  -0.4
TREC                               eS     Sn     03 18 08.2  -5.2
TREC                                AMS   AMS    03 21 00.0
       comp=Z,2µm,8.9s
TREC   Trest            12.59 344  eP     Pn     03 15 53.7  -0.4
TREC                               eS     Sn     03 18 08.2  -5.2
TREC                                MLR   MLR
       comp=Z,2µm,8.9s
OFRI   `Ofer            12.59 107   Pn    Pn     03 15 51.4  -2.9
DQRL   Deir Qamar       12.62 102  eP     Pn     03 15 51.9  -2.7
HORU   Horodok          12.63  17   P     Pn     03 15 55.9  +1.3
GEA0   GERESS Array S   12.63 338  ePn    Pn     03 15 52.6  -2.1
GEC2   GERESS Array S   12.64 338  ePn    Pn     03 15 54.5  -0.3
GERES  GERESS Array B   12.64 338   Pn    Pn     03 15 52.6  -2.2
       comp=Z,0.6nm,0.3s,baz=158,slow=14,SNR=31
GERES                               Sn    Sn     03 18 06.1  -8.4
       comp=Z,1.5nm,0.3s,baz=159,slow=23,SNR=5.4
GERES                               LR    LR     03 21 56.6
       comp=Z,1µm,18.6s,baz=140,slow=43
SIM    Simferopol'      12.67  49d iP   P      03 16 03.4  -2.8
SIM                                 MLR   MLR
       comp=Z,1µm,13.9s
OKC    Ostrava-Krasne   12.69 352  eP     Pn     03 15 54.7  -0.7
OKC                                 AMS   AMS    03 21 40.0
       comp=Z,3µm,9.9s
OKC    Ostrava-Krasne   12.69 352  eP     Pn     03 15 54.7  -0.7
OKC                                 MLR   MLR
       comp=Z,3µm,9.9s
MORC   Moravsky Berou   12.70 351  ePn    Pn     03 15 54.4  -1.2
MORC   Moravsky Berou   12.70 351⇑iP    Pn     03 15 54.8  -0.8
MORC   Moravsky Berou   12.70 351  eP     Pn     03 15 54.4  -1.2
MORC   Moravsky Berou   12.70 351  ePN    Pn     03 15 53.9  -1.7
TOKT   Tokat            12.72  71  eP     P      03 16 05.8  -1.0
HWQ    Hawqa            12.73  99  eP     Pn     03 15 54.3  -1.8
MMA0B  Mount Meron ar   12.75 105   Pn    Pn     03 15 53.2  -3.2
MMAI   Mount Meron Ar   12.75 105   Pn    Pn     03 15 52.8  -3.6
       comp=Z,11nm,0.3s,baz=308,slow=13,SNR=32
MMAI                                Sn    Sn     03 18 08.5  -9.0
       comp=Z,16nm,0.3s,baz=286,slow=27,SNR=7.7
MMAI                                LR    LR     03 22 53.9
       comp=Z,381nm,18.9s,baz=335,slow=47
LVV    L'vov            12.76  10  eP     Pn     03 15 58.0  +1.6
LVV                                eS     Sn     03 18 21.0  +3.6
LVV                                 MLR   MLR
       comp=N,1µm,12.0s
LVV                                 MLR   MLR
       comp=E,1µm,12.0s
LVV                                 MLR   MLR
       comp=Z,2µm,12.0s
DAVA   Damuels          12.80 325  ePn    Pn     03 15 59.9  +2.7
       comp=Z,2.2nm,0.2s
DAVA                                Sn    Sn     03 18 10.6  -8.2
       comp=Z,42nm,0.6s
SLTI   Sal'it           12.80 109   Pn    Pn     03 15 53.8  -3.3
KMRS   Kahramanmaras    12.88  84  eP     P      03 16 03.9  -4.7
KSDI   Kefar Szold      12.88 104   Pn    Pn     03 15 54.7  -3.4
FUR    Furstenfeldbru   12.89 331   P     Pn     03 15 59.4  +1.2
FUR                                 pmax  pmax
       comp=Z,94nm,0.7s
RCY    Rachaya          12.90 103  eP     Pn     03 15 54.7  -3.9
NATI   Neve Ativ        12.91 104   Pn    Pn     03 15 55.1  -3.4
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KHC	Kasperske Hory	12.93	339	ePn	Pn	03 15 58.4	-0.3
KHC	Kasperske Hory	12.93	339	eP	Pn	03 15 57.8	-0.9
KHC				ex	x	03 16 06.1	
KHC				eS	Sn	03 18 16.1	-5.5
KHC				AMS	AMS	03 22 00.0	
	comp=Z,3µm,10.7s						
KHC	Kasperske Hory	12.93	339	eP	Pn	03 15 57.8	-0.9
KHC				eS	Sn	03 18 16.1	-5.5
KHC				MLR	MLR		
	comp=Z,3µm,10.7s						
OJC	Ojcow	12.95	357	ePn	Pn	03 15 58.0	-0.9
OJC	Ojcow	12.95	357	eP	Pn	03 15 58.1	-0.9
KZIT	Kziot	12.99	115	eP	Pn	03 15 56.4	-3.3
KZIT	Kziot	12.99	115	P	Pn	03 15 55.2	-4.5
	comp=Z,156nm,0.6s						
KZIT	Kziot	12.99	115	Pn	Pn	03 15 56.0	-3.7
KZIT				Sn	Sn	03 18 15.4	-8.0
MMLI	Mount Malkishu	13.01	107	eP	Pn	03 15 55.6	-4.3
SVSK	Karacayir	13.01	73	eP	P	03 16 09.2	-0.8
AMAZ	Amatzia	13.05	112	P	Pn	03 15 57.6	-2.8
	comp=Z,175nm,0.7s						
AMAZ	Amatzia	13.05	112	Pn	Pn	03 15 57.2	-3.2
AMAZ				Sn	Sn	03 18 16.9	-7.8
KSHT	Keshet	13.08	105	Pn	Pn	03 15 57.9	-3.0
KRLC	Kraliky	13.10	349	eP	Pn	03 16 01.8	+0.7
KRLC	Kraliky	13.10	349	eP	Pn	03 16 01.8	+0.7
BNI	Bardonecchia	13.11	311	ePn	Pn	03 16 02.2	+0.9
BNI	Bardonecchia	13.11	311	eP	Pn	03 16 02.2	+0.9
GAZ	Gaziantep	13.15	85	eP	Pn	03 15 58.7	-3.2
WET	Wettzell	13.15	337	P	Pn	03 16 01.1	-0.7
WET				pmax	pmax		
	comp=Z,31nm,0.9s						
HMDT	Nahal Hemdat	13.17	108	Pn	Pn	03 15 58.9	-3.1
HMDT				Sn	Sn	03 18 21.0	-6.5
DARE	Darende-Malaty	13.30	79	P	Pn	03 16 06.6	+2.6
RSDY	Resadiye-TOKAT	13.32	71	eP	P	03 16 09.1	-4.4
GOPC	GO Pecny, Ondr	13.33	343	eP	Pn	03 16 03.6	-0.6
GOPC				ex	x	03 16 10.9	
GOPC				AMS	AMS	03 22 20.0	
	comp=Z,3µm,9.9s						
GOPC	GO Pecny, Ondr	13.33	343	eP	Pn	03 16 03.6	-0.6
GOPC				MLR	MLR		
	comp=Z,3µm,9.9s						
DSI	Dead Sea	13.38	111	Pn	Pn	03 16 01.7	-3.2
DSI				Sn	Sn	03 18 24.9	-7.7
RMNI	Mount Ramon	13.43	116	Pn	Pn	03 16 02.3	-3.4
DPC	Dobruska-Polom	13.44	348	eP	Pn	03 16 06.0	+0.3
DPC				ex	x	03 16 16.4	
DPC				AMS	AMS	03 22 30.0	
	comp=Z,4µm,11.8s						
DPC	Dobruska-Polom	13.44	348	eP	Pn	03 16 06.0	+0.3
DPC				MLR	MLR		
	comp=Z,4µm,11.8s						
PRU	Pruhonice	13.46	343	eP	Pn	03 16 04.7	-1.2
PRU				ex	x	03 16 15.2	
PRU				AMS	AMS	03 22 20.0	
	comp=Z,4µm,9.7s						
PRU	Pruhonice	13.46	343	eP	Pn	03 16 04.7	-1.2
PRU				MLR	MLR		
	comp=Z,4µm,9.7s						
MZDA	Masada	13.49	112	Pn	Pn	03 16 03.6	-2.8
MZDA				Sn	Sn	03 18 26.3	-9.1
SENIN	Lac Senin/Sane	13.49	316	ePn	Pn	03 16 06.5	-0.1
LISJ	El Lisan	13.61	112	P	Pn	03 16 05.3	-2.8
	comp=Z,62nm,0.7s						
GHAJ	Ghor Haditha	13.64	112	P	Pn	03 16 08.1	-0.4
GHAJ	Ghor Haditha	13.64	112	Pn	Pn	03 16 06.1	-2.4
UPC	Upice	13.64	347	eP	Pn	03 16 08.5	0.0
UPC				ex	x	03 16 17.9	
UPC				AMS	AMS	03 22 30.0	
	comp=Z,4µm,11.6s						
UPC	Upice	13.64	347	eP	Pn	03 16 08.5	0.0
UPC				MLR	MLR		
	comp=Z,4µm,11.6s						
WALJ	Wala	13.70	110	P	Pn	03 16 09.4	+0.1
	comp=Z,171nm,0.6s						
PRNI	Paran	13.74	116	Pn	Pn	03 16 05.7	-4.1
ZFRI	Zfri	13.75	115	Pn	Pn	03 16 05.7	-4.3
SLE	Schleitheim	13.80	323	P	P	03 16 15.0	-3.8
SLE				pmax	pmax		
	comp=Z,75nm,1.0s						
KSP	Ksiaz	13.92	348	eP	Pn	03 16 11.4	-0.7
KSP				eS	S	03 19 38.7	+32
KSP	Ksiaz	13.92	348	eP	Pn	03 16 11.5	-0.7
HRFI	Mount Harif	13.94	117	P	Pn	03 16 07.2	-5.4
HRFI	Mount Harif	13.94	117	P	Pn	03 16 08.5	-4.1
	comp=Z,66nm,0.6s						
HRFI	Mount Harif	13.94	117	Pn	Pn	03 16 08.4	-4.1
HRFI				Sn	Sn	03 18 37.9	-8.5
PVCC	Panska Ves	13.96	344	eP	Pn	03 16 13.7	+1.0
PVCC				AMS	AMS	03 22 10.0	
	comp=Z,2µm,10.4s						
PVCC	Panska Ves	13.96	344	eP	Pn	03 16 13.7	+1.0
PVCC				MLR	MLR		
	comp=Z,2µm,10.4s						
MBRI	Mt Berech	13.99	118	Pn	Pn	03 16 09.9	-3.5
JDRJ	Daraweish	14.01	113	P	Pn	03 16 12.9	-0.8
	comp=Z,107nm,0.6s						
SWQJ	Swaqa	14.04	111	P	Pn	03 16 12.0	-2.1
	comp=Z,112nm,0.8s						
EIL	Elat	14.09	118	eP	Pn	03 16 11.5	-3.1
EIL	Elat	14.09	118	P	Pn	03 16 13.6	-1.1
	comp=Z,60nm,0.7s						
EIL	Elat	14.09	118	Pn	Pn	03 16 11.1	-3.5
EIL	Elat	14.09	118	Pn	Pn	03 16 10.8	-3.9
	comp=Z,2.6nm,0.3s,baz=307,slow=2.5,SNR=35						
EIL				Sn	Sn	03 18 35.5	-15
	comp=Z,5.9nm,0.3s,baz=266,slow=19,SNR=7.1						
AQBJ	Aqaba	14.12	118	P	Pn	03 16 13.5	-1.6
	comp=Z,149nm,0.5s						
GRFO	Grafenberg	14.17	334	ePn	Pn	03 16 15.2	-0.5
GRA1	Grafenberg Arr	14.17	334	ePn	Pn	03 16 17.5	+1.8
GRF	Grafenberg Arr	14.17	334	P	Pn	03 16 18.5	+2.8
GRF				pmax	pmax		
	comp=Z,155nm,1.2s						
STU	Stuttgart	14.22	327	ePn	Pn	03 16 15.1	-1.3
STU	Stuttgart	14.22	327	P	Pn	03 16 15.1	-1.3
NKC	Novy Kostel	14.24	338	eP	Pn	03 16 16.4	-0.3
NKC				AMS	AMS	03 22 50.0	
	comp=Z,4µm,10.9s						
NKC	Novy Kostel	14.24	338	eP	Pn	03 16 16.4	-0.3
NKC				MLR	MLR		
	comp=Z,4µm,10.9s						
ASF	Jabal al Asfar	14.25	106	P	Pn	03 16 14.7	-2.2
	comp=Z,28nm,0.7s						
ASF	Jabal al Asfar	14.25	106	Pn	Pn	03 16 12.1	-4.7
	comp=Z,1.7nm,0.3s,baz=251,slow=8.1,SNR=13						
ASF				Sn	Sn	03 18 47.4	-6.6
	comp=Z,0.8nm,0.3s,baz=197,slow=19,SNR=3.0						
ASF				LR	LR	03 23 52.6	
	comp=Z,597nm,21.2s,baz=258,slow=46						
BFO	Black Forest	14.28	325	ePn	Pn	03 16 16.7	-0.5
BFO	Black Forest	14.28	325	eP	Pn	03 16 16.7	-0.5
HSNJ	Maan	14.28	115	P	Pn	03 16 15.7	-1.7
	comp=Z,136nm,0.8s						
CABF	La Chapelle	14.31	315	eP	Pn	03 16 18.4	+0.7
URFA	Urfa	14.41	84	eP	Pn	03 16 19.9	+0.9
BRG	Berggiesshubel	14.42	343	⇑iP	Pn	03 16 17.4	-1.7
	comp=Z,5.5nm,1.0s						
BRG				i PP	P	03 16 24.7	-0.9
	comp=Z,31nm,1.1s						
BRG				S	Sn	03 18 38.0	-20
	comp=N,876nm,14.3s comp=E,1µm,12.4s comp=Z,4µm,9.8s						
BRG	Berggiesshubel	14.42	343	⇑iP	Pn	03 16 17.4	-1.7
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRG				MLR	MLR		
	comp=N,876nm,14.3s						
BRG				MLR	MLR		
	comp=E,1µm,12.4s						
BRG				MLR	MLR		
	comp=Z,4µm,9.8s						
SSB	Saint Sauveur	14.53	308	ePn	Pn	03 16 20.6	0.0
SSB	Saint Sauveur	14.53	308	eP	Pn	03 16 20.6	0.0
BEL	Belsk	14.55	0	eP	P	03 16 28.7	+1.7
BEL	Belsk	14.55	0	eP	P	03 16 28.7	+1.7
ANN	Anapa	14.67	54	eP	P	03 16 27.4	-1.0
ANN				pmax	pmax		
	comp=Z,83nm,0.6s						
AK11	Malin Array Si	14.70	22	ePn	Pn	03 16 21.3	-1.4
AK11				eS	S	03 19 17.9	-5.0
KIEV	Kiev	14.72	22	ePn	Pn	03 16 21.6	-1.5
KIEV				eSn	Sn	03 19 03.2	-2.0
KIEV	Kiev	14.72	22	i P	Pn	03 16 22.0	-1.1
	SNR=16						
KIEV	Kiev	14.72	22	⇑eP	Pn	03 16 21.0	-2.1
AKASG	Malin Array Be	14.73	22	ceP	Pn	03 16 24.6	+1.4
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKASG	Malin Array Be	14.73	22	Pn	Pn	03 16 21.6	-1.6
	comp=Z,7.3nm,0.3s,baz=209,slow=11,SNR=11						
AKASG				Sn	S	03 19 18.2	-5.5
	baz=203,slow=22,SNR=5.6						
AKASG				LR	LR	03 23 41.0	
	comp=Z,2µm,19.6s,baz=205,slow=45						
AKBB	Malin Array Si	14.73	22	ePn	Pn	03 16 21.7	-1.5
AKBB	Malin Array Si	14.73	22	eP	Pn	03 16 21.7	-1.5
ECH	Echery	14.76	322	ePn	Pn	03 16 22.8	-0.9
ECH	Echery	14.76	322	eP	Pn	03 16 22.8	-0.9
CDF	Champ du Feu	14.84	323	eP	Pn	03 16 24.9	+0.1
HAU	Haudompre	15.03	320	P	Pn	03 16 27.4	+0.1
CLL	Collm	15.06	341	ePn	Pn	03 16 27.9	+0.3
	comp=Z,149nm,1.4s						
CLL	Collm	15.06	341	eP	Pn	03 16 28.0	+0.4
	comp=Z,10.0nm,1.1s						
CLL				⇑iP(2)		03 16 34.4	
	comp=Z,102nm,1.3s						
CLL				e		03 16 41.0	
CLL				i PP	pwP	03 16 43.8	+0.2
CLL				e		03 16 54.0	
CLL				e		03 17 45.0	
CLL				eS	S	03 19 29.0	-1.3
CLL				Lmax		03 22 00.0	
CLL	Collm	15.06	341	eP	Pn	03 16 27.9	+0.3
CLL				pmax	pmax		
	comp=Z,149nm,1.4s						
ERZN	Erzincan	15.07	75	eP	Pn	03 16 30.3	+2.2
KTUT	Trabzon	15.24	70	eP	P	03 16 33.9	-0.9
BAYT	Aydıntepe-Bayb	15.45	72	eP	P	03 16 36.1	-1.3
MAZI	Mazidag	15.69	83	eP	Pn	03 16 37.1	+1.0
SOC	Sochi	15.77	61	eP	Pn	03 16 36.7	-0.2
SOC				e		03 19 35.5	
SOC				MLR	MLR		
	comp=Z,729nm,12.0s						
BNGB	Bingl	15.80	78	eP	Pn	03 16 38.5	+0.9
LOR	Lormes	15.94	314	eP	P	03 16 41.0	-1.6
RUE	Ruedersdorf	15.96	344	eP	P	03 16 43.9	+1.3
RUE				IAmb	IAmb	03 16 45.6	
	comp=Z,263nm,1.1s						
GKP	Gorka Klasztor	16.17	352	eP	P	03 16 46.2	+1.3
GKP	Gorka Klasztor	16.17	352	eP	P	03 16 46.3	+1.3
WLF	Walferdange	16.24	324	ePn	P	03 16 44.5	-1.3
	comp=Z,578nm,1.0s						
WLF	Walferdange	16.24	324	eP	P	03 16 44.5	-1.3
WLF				pmax	pmax		
	comp=Z,578nm,1.0s						
WLF	Walferdange	16.24	324	⇑P	P	03 16 47.0	+1.2
	comp=Z,105nm,1.2s						
BCA	Borcka	16.69	69	eP	P	03 16 49.9	-1.0
KOPR	Koprukoy-ERZUR	16.73	74	eP	P	03 16 51.5	-0.1
SUW	Suwalki	16.82	5	eP	Pn	03 16 49.6	-0.6
SUW	Suwalki	16.82	5	ePn	Pn	03 16 49.2	-1.0
	comp=Z,434nm,0.8s						
SUW	Suwalki	16.82	5	eP	Pn	03 16 49.6	-0.6
GURO	Guroymak-BITLI	16.87	79	P	P	03 16 52.5	-0.5
MEM	Membach	16.98	326	P	P	03 16 57.2	+3.3
MEM				pmax	pmax		
	comp=Z,47nm,1.6s						
MEM	Membach	16.98	326	⇓P	Pn	03 16 51.6	-0.7
MEM				⇓pP	pP	03 16 56.7	-3.5
	comp=Z,28nm,1.1s						
HGN	Heimansgroeve	17.12	327	eP	P	03 16 58.2	+2.7
SENK	Senkaya-Erzuru	17.15	72	eP	P	03 16 55.9	-0.3
BCLA	Clavier	17.16	325	⇑P	P	03 16 59.5	+3.5
	comp=Z,28nm,1.4s						
CART	Cartagena	17.25	278	ePn	P	03 16 56.4	-0.7
	comp=Z,19nm,0.9s						
CART	Cartagena	17.25	278	⇓iP	P	03 17 01.4	+4.4
CART				i S	Sn	03 20 10.2	+3.3
BEBN	Eben Emael	17.26	326	⇓pP	P	03 17 00.9	+3.9
CLF	Chambon-Foret	17.26	314	ePn	P	03 16 57.1	0.0
	comp=Z,50nm,1.2s						
SIRT	Sirnak	17.27	83	eP	P	03 16 57.3	-0.1
SIRT	Sirnak	17.27	83	ePn	Pn	03 16 56.8	+0.7
	comp=Z,146nm,1.0s						
DOU	Dourbes	17.27	323	P	P	03 16 59.9	+2.7
DOU	Dourbes	17.27	323	⇑P	P	03 16 58.0	+0.7
DOU				⇓pP	P	03 16 59.3	+2.1
	comp=Z,34nm,1.3s						
KLNR	Kaliningrad	17.33	359	⇑eP	Pn	03 16 55.7	-0.9
AGRB	Hanur-Agry	17.60	76	eP	P	03 17 01.3	+0.1
AKDM	Akdamar-Van	17.62	80	eP	Pn	03 17 00.9	+0.3
WTSB	Winterswijk	17.66	331	eP	P	03 17 03.4	+1.9
KARS	Kars	17.70	72	eP	P	03 17 03.1	+0.8
KARS	Kars	17.70	72	ePn	P	03 17 03.4	+1.1
	comp=Z,120nm,1.0s						
KARS	Kars	17.70	72	P	P	03 17 03.4	+1.1
KARS				pmax	pmax		
	comp=Z,120nm,1.0s						
NEY	Neytrino	17.80	64	⇓eP	Pn	03 17 02.3	-0.4
UCC	Uccle	17.86	324	ePn	P	03 17 04.8	+1.1
	comp=Z,38nm,0.9s						
SHA1	Shidzhatmaz	17.86	62	i P	P	03 17 04.1	0.0
MICGM	Minsk	17.91	14	eP	Pn	03 17 02.0	-1.8
MICGM				eLQ	LQ	03 22 40.0	
MICGM				eLR	LR	03 24 20.0	
MICGM				LRM	MLR	03 25 10.0	
	comp=Z,8.0nm,14.0s						
MNK	Minsk	17.91	14	eP	Pn	03 17 02.0	-1.8
MNK				MLR	MLR		
	comp=Z,8µm,14.0s						
KIV	Kislovodsk	17.94	61	eP	P	03 17 05.4	+0.7
KIV	Kislovodsk	17.94	61	ePn	Pn	03 17 03.9	-0.4
	comp=Z,35nm,0.8s						
KIV	Kislovodsk	17.94	61	i P	Pn	03 17 04.0	-0.4
	SNR=11						
KIV	Kislovodsk	17.94	61	eP	P	03 17 04.6	-0.1
KIV				eS	Sn	03 20 24.3	+0.8
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV				MLR	MLR		
	comp=Z,399nm,14.0s						
KVAR	Kislovodsk Arr	17.94	61	P	P	03 17 07.5	+2.7
	baz=107,slow=20,SNR=13						
RGN	Rugen	18.00	346	ePn	P	03 17 05.1	-0.1
	comp=Z,54nm,0.9s						
KBZ	Khabaz	18.03	62	P	P	03 17 06.3	+0.7
	comp=Z,1.5nm,0.3s,baz=196,slow=0.4,SNR=40						
NACGM	Naroch	18.11	11	eP	Pn	03 17 02.0	-4.2
NACGM				PM		03 17 06.0	
	comp=Z,0.2nm,0.8s						
NACGM				eLQ	LQ	03 22 34.0	
NACGM				eLR	LR	03 24 06.0	
NACGM				LRM	MLR	03 24 42.0	
	comp=N,4.2nm,14.0s						
CUKT	Cukurca	18.22	83	i P	Pn	03 17 06.8	-1.1
PYA1	Pyatigorsk	18.25	61	⇑eP	Pn	03 17 08.1	0.0
BSD	Bornholm Skovb	18.27	349	i P	Pn	03 17 06.4	-1.8
	comp=N,46nm,0.9s						
BSD	Bornholm Skovb	18.27	349	i P	Pn	03 17 06.4	-1.8
BSD				pmax	pmax		
	comp=Z,46nm,0.9s						
CLDR	Caldiran	18.32	77	eP	Pn	03 17 10.7	+1.5
IIGN	Ignalina	18.46	10	eP	P	03 17 07.8	-2.4
IIGN				IAmb	IAmb	03 17 18.8	
	comp=Z,28nm,0.8s						
NCK	Nalchik	18.48	63	⇓eP	Pn	03 17 12.2	+1.4
GOF	Gofitskoye	18.48	58	eP	Pn	03 17 11.4	+0.5
GOF				pmax	pmax		
	comp=Z,50nm,0.6s						
IDID	Didziasalis	18.50	11	eP	P	03 17 07.8	-2.9
IDID				IAmb	IAmb	03 17 15.7	
	comp=Z,19nm,0.8s						
ZEI	Tsey	18.56	66	eP	P	03 17 11.2	-0.6
ZEI				pmax	pmax		
	comp=Z,54nm,0.6s						
TASB	TASBURUN-IGDIR	18.57	74	eP	P	03 17 11.5	-0.2
ISAL	Salakas	18.66	10	eP	P	03 17 10.2	-2.3
ISAL				IAmb	IAmb	03 17 12.9	
	comp=Z,27nm,1.0s						
PBUR	Paburg	18.77	2	eP	P	03 17 12.0	-1.6
PBUR				IAmb	IAmb	03 17 13.6	
	comp=Z,98nm,0.8s						
IZAR	Zarasai	18.85	10	eP	P	03 17 12.5	-2.1
IZAR				IAmb	IAmb	03 17 18.2	
	comp=Z,35nm,0.6s						
UCM	Universidad Co	18.91	287	i P	P	03 17 10.7	-4.7
UCM				i S	Sn	03 20 46.7	-0.2
GNI	Garni	18.95	74	eP	Pn	03 17 16.9	+0.1
GNI	Garni	18.95	74	eP	P	03 17 16.4	+0.4
	comp=Z,53nm,0.9s						
GNI	Garni	18.95	74	i P	P	03 17 16.4	+0.4
	SNR=14						
GNI	Garni	18.95	74	deP	Pn	03 17 17.0	+0.1
GNI				pmax	pmax		
	comp=Z,141nm,0.5s						
GNI	Garni	18.95	74	P	Pn	03 17 16.6	-0.2
	comp=Z,6.6nm,0.3s,baz=314,slow=4.1,SNR=49						
GNI				LR	LR	03 24 35.8	
	comp=Z,1µm,18.8s,baz=282,slow=37						
TBLG	Delisi	19.04	69	eP	P	03 17 15.8	-1.0
TBLG	Delisi	19.04	69	eP	P	03 17 16.5	-0.3
	comp=Z,36nm,0.7s						
TBLG	Delisi	19.04	69	eP	P	03 17 16.5	-0.3
TBLG				pmax	pmax		
	comp=Z,36nm,0.7s						
VSR	Storozhevoye	19.13	37	eP	P	03 17 15.8	-1.8
VSR				pmax	pmax		
	comp=Z,20nm,0.5s						
VSR				MLR	MLR		
	comp=Z,4µm,12.0s						
MELI	Melilla	19.16	271	i P	P	03 17 15.1	-3.0
MELI				i S	Sn	03 20 52.2	-0.9
COP	Copenhagen	19.25	346	i P	Pn	03 17 21.3	+1.3
COP				i S	S	03 20 59.4	+4.4
COP	Copenhagen	19.25	346	i P	Pn	03 17 21.3	+1.3
COP				i S	S	03 20 59.4	+4.4
ES19	SONSECA Array	19.40	285	eP	Pn	03 17 21.9	-0.2
VORR	Voronezh	19.44	36	P	P	03 17 21.0	-0.1
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
ESDC	Sonseca Array	19.45	285	P	Pn	03 17 23.1	+0.4
	comp=Z,0.6nm,0.3s,baz=80,slow=11,SNR=23						
ESLA	Sonseca Array	19.45	285	eP	Pn	03 17 22.4	-0.3
	comp=Z,39nm,1.1s						
PAB	San Pablo	19.75	284	eP	Pn	03 17 25.6	-0.7
	comp=Z,18nm,0.8s						
PAB	San Pablo	19.75	284	eP	Pn	03 17 25.6	-0.7
PAB				pmax	pmax		
	comp=Z,18nm,0.8s						
LPSR	Galich'ya Gora	19.93	34	eP	P	03 17 25.7	-0.7
LPSR				pmax	pmax		
	comp=Z,140nm,0.7s						
LPSR				MLR	MLR		
	comp=Z,3µm,12.0s						
GROC	Groznyy	20.00	65	eP	P	03 17 26.5	-0.8
GROC				eS	Sn	03 21 15.8	+2.6
GROC				pmax	pmax		
	comp=Z,42nm,0.6s						
EMAL	Malaga-Limoner	20.07	276	i P	Pn	03 17 31.8	+1.8
EMAL				i S	Sn	03 21 13.5	-1.5
SLIT	Slitere, Latvi	20.39	2	eP	P	03 17 29.9	-1.3
SLIT				IAmb	IAmb	03 17 31.8	
	comp=Z,506nm,0.9s						
VRH	Novokhopyorsk	20.40	40	eP	P	03 17 30.5	-1.0
VRH				pmax	pmax		
	comp=Z,180nm,0.6s						
VRH				MLR	MLR		
	comp=Z,2µm,12.0s						
MUD	Monsted U'grnd	20.69	342	i P	P	03 17 34.9	+0.4
	comp=Z,63nm,1.0s						
MUD				i S	Sn	03 21 30.6	+1.2
MUD	Monsted U'grnd	20.69	342	i P	P	03 17 34.9	+0.4
MUD				i S	Sn	03 21 30.6	+1.2
MUD				pmax	pmax		
	comp=Z,63nm,1.0s						
REAL	Reales	20.73	276	eP	Pn	03 17 38.0	+0.1
LIJA	Lijar	20.82	277	⇓iP	Pn	03 17 37.5	-1.4
OBN	Obninsk	20.85	26	eP	P	03 17 35.0	-1.3
	comp=Z,85nm,0.7s						
OBN	Obninsk	20.85	26	c iP	P	03 17 34.8	-1.5
OBN				i S	S	03 21 16.8	-11
OBN				pmax	pmax		
	comp=Z,145nm,1.3s						
OBN				MLR	MLR		
	comp=Z,3µm,14.0s						
OBN	Obninsk	20.85	26	P	P	03 17 35.0	-1.3
	comp=Z,18nm,0.5s,baz=20,slow=1.9,SNR=18						
OBN				LR	LR	03 26 22.7	
	comp=Z,317nm,20.6s,baz=214,slow=39						
CEU	Ceuta	20.98	274	eP	Pn	03 17 40.0	-0.5
CEU				i S	S	03 21 25.8	-4.4
ALJ	Aljibe	21.08	276	eP	P	03 17 41.1	+2.1
MDT	Midelt	21.18	265	P	P	03 17 42.1	+1.9
	comp=Z,25nm,0.8s,baz=84,slow=12,SNR=68						
MDT				LR	LR	03 27 07.5	
	comp=Z,247nm,20.0s,baz=77,slow=40						
MAK	Makhachkala	21.21	66	eP	P	03 17 37.8	-2.5
MAK				eS	S	03 21 34.6	-0.1
MAK				eSS	SnSn	03 21 57.9	+0.7
MAK				pmax	pmax		
	comp=Z,147nm,1.4s						
GIBL	Gibalbin	21.28	277	eP	P	03 17 42.1	+0.9
IFR	Ifrane	21.37	268	i P	P	03 17 50.4	+8.0
IFR				i S	Sn	03 21 43.6	-3.1
CNIL	Conil	21.43	276	eP	P	03 17 43.1	+0.4
VSU	Vasula	21.56	9	c iP	P	03 17 43.1	-0.8
VSU				pmax	pmax		
	comp=Z,307nm,0.7s						
VSU	Vasula	21.56	9	eP	P	03 17 42.9	-0.9
VSU				IAmb	IAmb	03 17 53.5	
	comp=Z,493nm,0.8s						
PBRG	Braganca	21.61	291	eP	P	03 17 46.0	+1.3
	comp=Z,81nm,1.6s						
MOS	Moscow	21.72	26	eP	P	03 17 43.3	-2.3
MOS				eS	S	03 21 45.1	+0.7
MOS				eSS	SnSn	03 22 10.4	+0.9
MOS				pmax	pmax		
	comp=Z,145nm,1.0s						
MOS				MLR	MLR		
	comp=Z,3µm,14.0s						
MOS				MLR	MLR		
	comp=E,2µm,13.0s						
MOS				MLR	MLR		
	comp=N,3µm,14.0s						
MVO	Moncorvo	21.80	289	eP	P	03 17 47.2	+0.4
	comp=N,100nm,1.8s						
MVO				eS	Sn	03 21 52.5	-4.1
MVO				A	A	03 28 22.9	
	comp=N,414nm,18.0s						
PMRV	Marv??o	22.11	284	eP	P	03 17 50.3	+0.2
	comp=N,67nm,1.4s						
PMRV				eLR	LR	03 26 09.6	
	comp=N,515nm,16.0s						
PCBR	Castelo Branco	22.16	285	eP	P	03 17 51.1	+0.6
	comp=N,45nm,1.5s						
MTE	Manteigas	22.19	287	eP	P	03 17 51.8	+0.8
	comp=N,73nm,1.9s						
MTE				eS	S	03 21 54.6	+0.6
MTE				A	A	03 27 44.4	
	comp=N,382nm,20.0s						
MTE	Manteigas	22.19	287	eP	P	03 17 51.8	+0.8
	comp=N,33nm,0.9s						
PESTR	Estremoz	22.31	283	eP	P	03 17 52.7	+0.5
	comp=N,41nm,1.3s						
PESTR				eS	S	03 21 46.4	-10
PESTR	Estremoz	22.31	283	eP	P	03 17 52.2	+0.1
	comp=N,20nm,1.1s						
PVRL	Vila Real	22.32	289	eP	P	03 17 53.4	+1.0
	comp=N,51nm,1.4s						
POLO	Lamas de Olo	22.38	289	eP	P	03 17 52.5	-0.6
PVIS	Viseu	22.45	288	eP	P	03 17 54.3	+0.5
	comp=N,85nm,1.4s						
PCAB	Cabril	22.57	290	eP	P	03 17 55.4	+0.5
PVAQ	Vaqueiros	22.57	279	eP	P	03 17 54.4	-0.6
	comp=N,42nm,1.5s						
PVAQ				eS	S	03 21 53.5	-7.4
PBEJ	Beja	22.61	281	eP	P	03 17 56.4	+1.0
	comp=N,26nm,1.4s						
PGAV	Gavieira, Arco	22.75	291	eP	P	03 17 57.4	+0.4
PGAV				eLR	LR	03 25 44.1	
	comp=N,621nm,18.0s						
PBDV	Barranco-do-Ve	22.77	279	eP	P	03 17 57.9	+0.8
	comp=N,51nm,1.5s						
PBDV				eS	S	03 22 03.6	-0.7
PMTG	Montargil	22.78	283	eP	P	03 17 56.5	-0.7
PMTG				eS	S	03 21 55.8	-8.7
SNART	Snartemo	22.85	342	eP	P	03 18 00.1	+2.4
COI	Coimbra	22.86	286	P	P	03 17 58.6	+0.6
COI				pmax	pmax		
	comp=Z,37nm,0.9s						

PTOM	Tomar	22.89	285	eP	P	03 17 59.2	+0.9
	comp=Z,63nm,1.1s						
MESJ	Messejana	22.91	280	eP	P	03 18 01.4	+2.9
	comp=Z,43nm,1.6s						
PCAS	Casmilo, Conde	22.93	286	eP	P	03 18 00.0	+1.2
	comp=Z,53nm,1.5s						
PCAS				eS	S	03 22 02.3	-4.8
PNCL	Nicolau / Gran	23.12	281	eP	P	03 18 00.9	+0.2
PNCL				eS	S	03 22 03.7	-6.5
AVE	Averroes	23.26	269	eP	P	03 18 01.4	-0.8
AVE				i S	S	03 22 15.9	+3.1
HFS	Hagfors	23.31	351	P	P	03 18 01.1	-1.3
	comp=Z,26nm,0.5s,baz=153,slow=10.0,SNR=103						
HFS				LR	LR	03 27 27.1	
	comp=Z,790nm,19.9s,baz=169,slow=38						
MORF	Marmelete	23.32	279	eS	S	03 22 04.0	-10
PUL	Pulkovo	23.34	12⇑	eP	P	03 18 02.7	+0.1
PUL				pmax	pmax		
	comp=Z,127nm,0.5s						
PTEO	Sao Teotonio	23.35	280	eP	P	03 18 02.0	-1.0
	comp=Z,59nm,1.6s						
PFVI	Vila Bisbo	23.49	279	eP	P	03 18 04.4	0.0
PFVI				eS	S	03 22 10.2	-6.2
KONO	Kongsberg	23.50	346	eP	P	03 18 04.0	-0.2
	comp=Z,43nm,1.2s						
KONO	Kongsberg	23.50	346	eP	P	03 18 04.0	-0.2
KONO				pmax	pmax		
	comp=Z,43nm,1.2s						
OSL	Oslo	23.56	347	eP	P	03 18 03.4	-1.4
PMAFR	Mafra	23.61	283	eS	S	03 22 12.8	-5.6
NC602	NORSAR Array S	24.18	349	eP	P	03 18 10.2	-0.5
NORES	NORESS Array B	24.18	349	P	P	03 18 10.4	-0.3
EKA	Eskdalemuir Ar	24.25	326	P	P	03 18 11.8	+0.4
EKA				pmax	pmax		
	comp=Z,38nm,0.8s						
EKA	Eskdalemuir Ar	24.25	326	P	P	03 18 11.8	+0.4
	comp=Z,39nm,0.8s,baz=123,slow=8.4,SNR=76						
ESK	Eskdalemuir	24.26	326	eP	P	03 18 11.2	-0.2
ESK	Eskdalemuir	24.26	326c	eP	P	03 18 12.5	+1.0
NAO01	NORSAR Array S	24.39	348	eP	P	03 18 12.4	-0.2
FINES	FINESS Array B	24.42	6	P	P	03 18 11.6	-1.3
	comp=Z,16nm,0.6s,baz=169,slow=11,SNR=82						
FINES				LR	LR	03 29 02.0	
	comp=Z,2µm,18.9s,baz=188,slow=40						
FIA1	FINESS Array S	24.42	6	eP	P	03 18 11.3	-1.5
NC405	NORSAR Array S	24.52	349	eP	P	03 18 13.2	-0.6
NB201	NORSAR Array S	24.52	349	eP	P	03 18 13.6	-0.3
NB2	NORSAR Subarra	24.52	349	P	P	03 18 13.2	-0.7
	comp=Z,33nm,1.0s,baz=162,slow=9.3						
NB2	NORSAR Subarra	24.52	349	P	P	03 18 13.2	-0.7
	baz=162,slow=9.3						
NOA	NORSAR Array B	24.52	349	P	P	03 18 13.0	-0.9
NOA	NORSAR Array B	24.52	349	P	P	03 18 12.9	-0.9
	comp=Z,16nm,0.8s,baz=157,slow=9.0,SNR=58						
NOA				LR	LR	03 28 46.3	
	comp=Z,830nm,18.6s,baz=175,slow=39						
NBO00	NORSAR Array S	24.59	348	eP	P	03 18 14.2	-0.2
DSB	Dublin	24.65	319	eP	P	03 18 16.4	+1.3
NC303	NORSAR Array S	24.68	349	eP	P	03 18 14.8	-0.4
NC204	NORSAR Array S	24.82	349	eP	P	03 18 16.6	0.0
HYA	Hoyanger	25.60	344	eP	P	03 18 24.1	+0.6
DOMB	Dombas	25.82	347	eP	P	03 18 25.0	-0.6
IDGL	Inch Island, C	26.15	322	eP	P	03 18 29.1	+0.5
VAL	Valentia	26.22	314	eP	P	03 18 17.5	-12
AKN	Aaknes	26.34	345	eP	P	03 18 30.2	0.0
KLMR	Klimovskoe	26.42	21	eP	P	03 18 29.6	-1.3
KLMR				pmax	pmax		
	comp=Z,58nm,0.8s						
KLMR	Klimovskoe	26.42	21	eP	P	03 18 29.6	-1.3
KLMR				AMP		03 18 34.2	
	comp=Z,58nm,0.8s						
NSS	Namsos	27.78	352	eP	P	03 18 42.6	-0.5
KIRV	Kirov	28.33	32	P	P	03 18 46.5	-1.5
	comp=Z,47nm,0.6s,baz=256,slow=2.1,SNR=15						
KIRV				LR	LR	03 30 01.8	
	comp=Z,636nm,20.5s,baz=190,slow=37						
TMCR	Tamitsa	28.86	16	eP	P	03 18 51.2	-1.5
TMCR				pmax	pmax		
	comp=Z,47nm,0.7s						
PRGR	Permogore	28.91	25	eP	P	03 18 51.1	-2.1
PRGR				pmax	pmax		
	comp=Z,20nm,0.8s						
TOA0	Torodi Ar. Sit	29.44	220	eP	P	03 18 58.7	+0.3
TORD	Torodi Ar. Bea	29.44	220	P	P	03 18 59.1	+0.8
	comp=Z,10nm,0.6s,baz=37,slow=7.3,SNR=101						
TORD				LR	LR	03 31 59.9	
	comp=Z,986nm,18.2s,baz=5.0,slow=39						
GEYT	Alibeck	29.51	77	P	P	03 18 58.3	-0.6
	comp=Z,26nm,0.6s,baz=274,slow=7.4,SNR=42						
GEYT				LR	LR	03 32 16.7	
	comp=Z,437nm,20.3s,baz=280,slow=40						
GYA0B	ALIBECK ARRAY	29.51	77	eP	P	03 18 57.9	-1.0
	comp=Z,27nm,0.6s						
KONS	Konsvik	29.59	354	eP	P	03 18 59.4	+0.2
AKTO	Aktyubinsk	29.61	52	P	P	03 18 58.5	-1.0
	comp=Z,5.0nm,0.3s,baz=232,slow=6.1,SNR=30						
AB31	Akbulak array	30.63	54	eP	P	03 19 07.3	-1.3
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ABKAR	Akbulak array	30.63	54	eP	P	03 19 07.6	-1.0
STEI	Steigen	30.85	356	eP	P	03 19 08.5	-1.8
DAMY	Dhamar	30.90	131	eP	P	03 19 12.2	+0.6
	comp=Z,42nm,1.4s						
APA	Apatity	31.17	9⇓	iP	P	03 19 12.3	-0.9
APA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
APA				MLR	MLR		
	comp=Z,3µm,12.0s						
ARU	Arti	31.63	41	eP	P	03 19 15.7	-1.6
	comp=Z,21nm,0.8s						
ARU	Arti	31.63	41c	iP	P	03 19 15.5	-1.8
ARU				pmax	pmax		
	comp=Z,18nm,0.6s						
LVZ	Lovozero	31.65	10	eP	P	03 19 17.6	+0.2
	comp=Z,33nm,1.0s						
LVZ	Lovozero	31.65	10⇓	eP	P	03 19 17.5	+0.1
LVZ				pmax	pmax		
	comp=Z,21nm,1.9s						
KTK1	Kautokeino	31.82	2	eP	P	03 19 19.4	+0.5
SHME	Shamm	31.99	100	i P	P	03 19 20.5	-0.4
	SNR=6.2						
ASUD	Al Ashush, Dub	32.07	103	i P	P	03 19 22.3	+0.7
	SNR=6.1						
NAZ	Nazwa, Dubai	32.15	102	i P	P	03 19 22.6	+0.4
	SNR=10						
BANOM	Banah	32.18	100	i P	P	03 19 22.7	+0.2
	SNR=24						
BANOM	Banah	32.18	100	P	P	03 19 22.3	-0.2
	SNR=23						
FAQ	Al Faqa, Dubai	32.22	103	i P	P	03 19 23.1	+0.2
	SNR=7.4						
MACI	Morro de la Ar	32.40	265	eP	P	03 19 25.9	+1.3
	comp=Z,34nm,0.8s						
ARCES	ARCESS Array B	32.42	3	eP	P	03 19 23.1	-0.9
ARCES	ARCESS Array B	32.42	3	eP	P	03 19 23.2	-0.9
ARCES	ARCESS Array B	32.42	3	P	P	03 19 23.0	-1.1
	comp=Z,7.2nm,0.8s,baz=189,slow=9.9,SNR=49						
ARCES				LR	LR	03 35 50.5	
	comp=Z,627nm,18.1s,baz=182,slow=43						
ARE0	ARCESS Array S	32.42	3	eP	P	03 19 23.6	-0.5
TRO	Tromso	32.42	359	eP	P	03 19 23.6	-0.6
ATD	Arta Tunnel	32.44	137	eP	P	03 19 26.5	+1.6
	comp=Z,15nm,1.0s						
UOSS	Minazif	32.59	102	eP	P	03 19 25.4	-0.7
	comp=Z,34nm,0.8s						
UOSS	Minazif	32.59	102	i P	P	03 19 25.9	-0.2
	SNR=7.5						
UOSS	Minazif	32.59	102	P	P	03 19 25.7	-0.5
HATD	Hatta, Dubai	32.60	102	i P	P	03 19 26.2	0.0
	SNR=12						
ASHO	Ashiyiah	32.61	102	i P	P	03 19 26.4	0.0
	SNR=27						
ASHO	Ashiyiah	32.61	102	P	P	03 19 26.7	+0.3
	SNR=27						
ALNE	Al Ain	32.70	104	i P	P	03 19 27.5	+0.4
	SNR=25						
KEV	Kevo	32.71	4	eP	P	03 19 26.3	-0.3
	comp=Z,17nm,0.8s						
KEV	Kevo	32.71	4	eP	P	03 19 26.3	-0.3
KEV				pmax	pmax		
	comp=Z,17nm,0.8s						
SVE	Sverdlovsk	32.85	41d	iP	P	03 19 27.0	-1.0
SVE				pmax	pmax		
	comp=Z,67nm,0.7s						
SVE				MLR	MLR		
	comp=Z,2µm,13.0s						
SOHO	SOHO	33.27	103	P	P	03 19 32.1	+0.1
	SNR=17						
HAMF	Hammerfest	33.46	2	eP	P	03 19 32.9	-0.3
ARQ	Araqi	33.68	104	P	P	03 19 36.1	+0.4
	SNR=9.9						
ABTO	Aybut	34.85	116	P	P	03 19 46.7	+0.9
SMDO	Samad	35.01	103	P	P	03 19 47.1	-0.2
	SNR=7.9						
WSAR	Wadi Sarin	35.37	102	P	P	03 19 49.8	-0.5
	comp=Z,7.1nm,0.5s,baz=310,slow=6.7,SNR=12						
RBK	Rabkut	35.40	115	P	P	03 19 51.6	+1.0
DMTO	DMTO	35.81	114	P	P	03 19 54.0	0.0
MHTO	MHTO	36.10	106	P	P	03 19 56.8	+0.4
	SNR=8.9						
DQM	DQM	36.38	108	P	P	03 19 58.8	-0.1
BRVK	Borovoye	37.52	49	eP	P	03 20 07.7	-0.6
BRVK	Borovoye	37.52	49c	iP	P	03 20 07.3	-1.0
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BVA0	Borovoye Array	37.58	49	P	P	03 20 07.5	-1.3
BVA0				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KK31	Karatay Array	38.02	65	eP	P	03 20 11.9	-0.8
KK31	Karatay Array	38.02	65	eP	P	03 20 11.9	-0.8
KKAR	Karatay Array	38.02	65	eP	P	03 20 11.9	-0.8
KKAR	Karatay Array	38.02	65	eP	P	03 20 11.9	-0.8
DBIC	Dimbokro	38.34	224	eP	P	03 20 16.2	+0.6
	comp=Z,20nm,0.7s						
DBIC	Dimbokro	38.34	224	eP	P	03 20 16.2	+0.6
DBIC				pmax	pmax		
	comp=Z,20nm,0.7s						
DBIC	Dimbokro	38.34	224	P	P	03 20 17.8	+2.2
	comp=Z,14nm,0.6s,baz=14,slow=10,SNR=30						
DBIC				LR	LR	03 37 11.2	
	comp=Z,463nm,18.3s,baz=7.0,slow=38						
TIC	Toumodi	38.46	224	eP	P	03 20 18.1	+1.5
KIC	Kosan Boka	38.54	223	eP	P	03 20 19.0	+1.8
	comp=Z,42nm,0.7s						
GAR	Garm	38.66	72	eP	P	03 20 18.2	0.0
	comp=Z,44nm,0.8s						
GAR	Garm	38.66	72	eP	P	03 20 18.2	0.0
GAR				pmax	pmax		
	comp=Z,44nm,0.8s						
OTUK	Ortayu	38.77	57	P	P	03 20 17.6	-1.4
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BTK	Batken	38.80	70	eP	P	03 20 19.9	+0.5
BTK				epP	P	03 20 20.7	+1.3
BTK	Batken	38.80	70	eP	P	03 20 19.9	+0.5
BTK				e*PP	P	03 20 20.7	+1.3
LIC	Lamto	38.81	224	eP	P	03 20 21.4	+1.9
	comp=Z,118nm,0.8s						
MBAR	Mbarara	38.82	164	P	P	03 20 22.2	+2.4
	comp=Z,2.7nm,0.3s,baz=344,slow=18,SNR=5.6						
KBL	Kabul	38.91	79	eP	P	03 20 20.1	-0.3
	comp=Z,6.5nm,0.5s						
KBL	Kabul	38.91	79	eP	P	03 20 20.1	-0.3
KBL				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SCO	Scoresbysund	40.08	339	eP	P	03 20 29.7	+0.3
	comp=Z,44nm,1.1s						
SCO	Scoresbysund	40.08	339	i P	P	03 20 30.8	+1.4
	comp=Z,44nm,1.1s						
SCO	Scoresbysund	40.08	339	eP	P	03 20 29.7	+0.3
SCO				pmax	pmax		
	comp=Z,45nm,1.1s						
ARSB	Arslanbob	40.15	68	eP	P	03 20 30.6	-0.1
	comp=Z,18nm,0.8s						
SFK	Sufi-Kurgan	40.82	69	P	P	03 20 35.6	-0.7
SFK				pmax	pmax		
	comp=Z,13nm,0.6s						
AAK	Ala-Archa	40.99	65	eP	P	03 20 37.3	-0.3
	comp=Z,10nm,0.8s						
AAK	Ala-Archa	40.99	65	i P	P	03 20 37.0	-0.5
	SNR=11						
AAK	Ala-Archa	40.99	65c	iP	P	03 20 36.9	-0.7
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FRU	Bishkek	41.04	65	eP	P	03 20 38.0	+0.2
SPA0	Spitsbergen Ar	41.05	359	eP	P	03 20 37.1	-0.3
SPA0	Spitsbergen Ar	41.05	359	eP	P	03 20 38.3	+0.8
SPITS	Spitsbergen Ar	41.05	359	P	P	03 20 38.2	+0.8
	comp=Z,2.7nm,0.3s,baz=151,slow=12,SNR=43						
KMBO	Kilima Mbogo	41.17	154	eP	P	03 20 41.8	+2.4
	comp=Z,5.6nm,0.9s						
KMBO	Kilima Mbogo	41.17	154	i P	P	03 20 43.2	+3.8
	SNR=5.7						
KMBO	Kilima Mbogo	41.17	154c	eP	P	03 20 43.4	+4.0
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KMBO	Kilima Mbogo	41.17	154	P	P	03 20 42.7	+3.3
	comp=Z,4.3nm,0.9s,baz=358,slow=9.7,SNR=9.0						
NRN	Naryn	42.34	67	eP	P	03 20 48.0	-0.9
	comp=Z,11nm,0.8s						
NRN	Naryn	42.34	67	eP	P	03 20 48.0	-0.9
NRN				pmax	pmax		
	comp=Z,11nm,0.8s						
NIL	Nilore	42.49	79	eP	P	03 20 49.8	0.0
KURK	Kurchatov	42.69	53	eP	P	03 20 49.8	-1.4
KURK	Kurchatov	42.69	53c	eP	P	03 20 49.6	-1.6
KURK				pmax	pmax		
	comp=Z,16nm,0.6s						
KURK	Kurchatov	42.69	53	P	P	03 20 49.6	-1.6
	SNR=6.0						
KSH	Kashi	42.79	69	P	P	03 20 50.5	-1.8
KSH				pP	pP	03 20 57.3	-2.8
KSH				PP	PP	03 22 31.5	-0.1
KSH				S	S	03 27 09.3	-5.5
KSH				sS	pS	03 27 19.5	-3.9
KSH				SS	SS	03 30 13.8	-12
KSH				pmax	pmax		
	comp=Z,22nm,0.7s						
KSH				pmax	pmax		
	comp=Z,350nm,4.8s						
KSH				LR	LR		
	comp=Z,190nm,4.7s						
KSH				LR	LR		
	comp=Z,210nm,6.1s						
KSH				LR	LR		
	comp=Z,400nm,6.5s						
ANGG	Ammassalik, Gr	43.74	329	eP	P	03 21 00.7	+1.3
	comp=Z,90nm,1.5s						
PDGK	Podgornoye	44.43	63	P	P	03 21 03.4	-2.0
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NVS	Novosibirsk	45.18	46	eP	P	03 21 10.6	-0.4
NVS				e		03 22 52.0	
NVS				pmax	pmax		
	comp=E,13nm,0.7s						
NVS				pmax	pmax		
	comp=Z,20nm,0.7s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.7s						
MAKZ	Makanchi	45.43	58	eP	P	03 21 12.2	-1.0
	comp=N,7.1nm,0.8s						
MAKZ	Makanchi	45.43	58	eP	P	03 21 12.2	-1.0
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK31	Makanchi Array	45.65	58	eP	P	03 21 13.7	-1.2
MK31	Makanchi Array	45.65	58	eP	P	03 21 13.7	-1.2
MKAR	Makanchi Array	45.65	58	P	P	03 21 13.7	-1.3
	comp=Z,20nm,0.5s,baz=274,slow=7.0,SNR=368						
MKAR				PcP	PcP	03 22 53.8	+1.0
	comp=Z,5.2nm,0.6s,baz=286,slow=3.2,SNR=3.0						
MKAR				LR	LR	03 43 52.7	
	comp=Z,447nm,19.3s,baz=274,slow=41						
MK01	Makanchi Array	45.66	58	eP	P	03 21 13.6	-1.4
SUMG	Summit	45.71	339	eP	P	03 21 15.7	+0.2
	comp=Z,36nm,1.0s						
SUMG	Summit	45.71	339	i P	P	03 21 16.8	+1.3
	comp=Z,91nm,1.0s						
SUMG	Summit	45.71	339	eP	P	03 21 15.7	+0.2
SUMG				pmax	pmax		
	comp=Z,36nm,1.0s						
ZAA0	Zalesovo Array	46.18	47	eP	P	03 21 17.5	-1.5
	comp=Z,22nm,0.8s						
ZALV	Zalesovo Beam	46.18	47	P	P	03 21 17.5	-1.5
	comp=Z,24nm,0.5s,baz=273,slow=9.0,SNR=75						
ZALV				LR	LR	03 41 39.0	
	comp=Z,268nm,20.7s,baz=254,slow=38						
NRIK	Noril'sk	47.53	26	P	P	03 21 29.3	0.0
	comp=Z,5.3nm,0.5s,baz=258,slow=6.6,SNR=6.7						
NRIK				LR	LR	03 43 46.1	
	comp=Z,622nm,19.2s,baz=261,slow=39						
NDI	New Delhi	47.56	83	eP	P	03 21 32.0	+1.8
DGZ	Jazzator, Alta	48.44	53c	iP	P	03 21 35.8	-1.1
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ILULI	Ilulissat	49.29	333	eP	P	03 21 43.3	+0.5
	comp=Z,17nm,0.8s						
ILULI	Ilulissat	49.29	333	eP	P	03 21 43.3	+0.5
ILULI				pmax	pmax		
	comp=Z,17nm,0.8s						
WMQ	Urumqi	50.06	60	P	P	03 21 48.6	-0.7
WMQ				pP	pP	03 21 56.5	0.0
WMQ				sP	pwP	03 22 00.1	-0.6
WMQ				PP	PP	03 23 44.3	+0.1
WMQ				S	S	03 29 01.9	+3.1
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,440nm,5.5s						
WMQ				LR	LR		
	comp=Z,1µm,20.9s						
WMQ				LR	LR		
	comp=Z,1µm,13.5s						
WMQ				LR	LR		
	comp=Z,810nm,23.9s						
WMQ	Urumqi	50.06	60	eP	P	03 21 49.1	-0.1
	comp=Z,27nm,1.5s						
WMQ	Urumqi	50.06	60	eP	P	03 21 49.1	-0.1
WMQ				pmax	pmax		
	comp=Z,27nm,1.5s						
PYUN	Piuthan	52.38	81	eP	P	03 22 06.5	-0.5
	comp=Z,92nm,0.6s						
LSZ	Lusaka	52.75	171	eP	P	03 22 11.7	+2.1
	comp=Z,5.3nm,0.6s						
LSZ	Lusaka	52.75	171	eP	P	03 22 11.7	+2.1
LSZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LSZ	Lusaka	52.75	171	P	P	03 22 12.5	+2.9
	comp=Z,6.4nm,0.6s,baz=357,slow=7.8,SNR=15						
LSZ				LR	LR	03 48 44.0	
	comp=Z,480nm,19.2s,baz=11,slow=41						
DANN	Dangsing	52.87	80	eP	P	03 22 10.3	-0.5
	comp=Z,130nm,0.6s						
KOLN	Koldanda	53.01	81	eP	P	03 22 10.9	-0.8
	comp=Z,38nm,0.6s						
TULEG	Thule	53.99	343	eP	P	03 22 18.2	+0.3
	comp=Z,25nm,0.9s						
DMN	Daman	54.27	80	eP	P	03 22 20.3	-0.7
	comp=Z,102nm,0.7s						
KKN	Kakani	54.32	80	eP	P	03 22 20.8	-0.5
PKIN	Phulchoki	54.51	80	eP	P	03 22 21.6	-1.1
	comp=Z,36nm,0.6s						
PKI	Pulchoki	54.52	80	eP	P	03 22 21.8	-1.1
	comp=Z,36nm,0.6s						
GUN	Gumba	54.74	80	eP	P	03 22 23.6	-0.9
	comp=Z,45nm,0.4s						
JIRN	Jiri	55.10	80	eP	P	03 22 26.2	-0.9
	comp=Z,79nm,0.5s						
RAMN	Ramite	55.75	80	eP	P	03 22 30.5	-1.2
	comp=Z,127nm,0.7s						
MOY	Mondy	56.23	48	eP	P	03 22 39.6	+5.0
TSUM	Tsumeb	56.26	184	eP	P	03 22 36.7	+1.6
	comp=Z,2.4nm,0.6s						
TSUM	Tsumeb	56.26	184	LR	LR	03 49 11.5	
	comp=Z,1µm,18.6s,baz=358,slow=39						
TLY	Talaya	57.78	47	eP	P	03 22 45.8	+0.3
	comp=Z,16nm,0.8s						
TLY	Talaya	57.78	47	eP	P	03 22 45.3	-0.2
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,2µm,17.0s						
MATP	Matopo	57.86	171	LR	LR	03 50 30.2	
	comp=Z,804nm,18.6s,baz=356,slow=39						
LSA	Lhasa	58.01	75	P	P	03 22 47.8	-0.2
LSA				pmax	pmax		
	comp=Z,37nm,0.9s						
LSA	Lhasa	58.01	75	eP	P	03 22 47.9	0.0
LSA	Lhasa	58.01	75	i P	P	03 22 48.0	0.0
	SNR=28						
LSA	Lhasa	58.01	75	eP	P	03 22 47.9	0.0
ZAK	Zakamensk	58.03	48	eP	P	03 22 45.8	-1.5
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SCHQ	Schefferville	59.22	318	eP	P	03 22 56.2	+0.8
	comp=Z,8.2nm,0.8s						
SCHQ	Schefferville	59.22	318	P	P	03 22 56.1	+0.6
	comp=Z,2.3nm,0.4s,baz=74,slow=7.6,SNR=20						
SCHQ				LR	LR	03 48 27.4	
	comp=Z,334nm,18.1s,baz=32,slow=36						
GTA	Gaotai	60.12	61	eP	P	03 23 01.3	-0.7
GTA				pP	pP	03 23 05.8	-3.8
GTA				sP	sP	03 23 08.4	-4.3
GTA				S	S	03 31 11.3	-2.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,7.1s						
GTA				LR	LR		
	comp=Z,310nm,18.1s						
GTA				LR	LR		
	comp=Z,280nm,20.3s						
GTA				LR	LR		
	comp=Z,330nm,18.7s						
SHL	Shillong	60.57	79	eP	P	03 23 03.9	-1.4
	comp=Z,62nm,1.3s						
SHL	Shillong	60.57	79	eP	P	03 23 03.9	-1.4
SHL				pmax	pmax		
	comp=Z,62nm,1.3s						
SHL	Shillong	60.57	79	eP	P	03 23 04.5	-0.8
RES	Resolute Bay	60.67	344	eP	P	03 23 05.7	+0.7
	comp=Z,17nm,1.4s						
RES	Resolute Bay	60.67	344	eP	P	03 23 05.7	+0.7
RES				pmax	pmax		
	comp=Z,17nm,1.4s						
OPO	Ambohidratompo	60.90	151	LR	LR	03 49 43.5	
	comp=Z,146nm,20.9s,baz=334,slow=36						
SONA1	Songino Array	60.91	50	eP	P	03 23 06.3	-0.9
SONM	Songino Array	60.91	50	P	P	03 23 06.7	-0.5
	comp=Z,3.4nm,0.5s,baz=282,slow=8.0,SNR=51						
SONM				LR	LR	03 51 54.1	
	comp=Z,380nm,18.8s,baz=272,slow=38						
BOD	Bodaibo	60.99	38	eP	P	03 23 06.4	-1.0
BOD				pmax	pmax		
	comp=Z,19nm,0.7s						
ULN	Ulaanbaatar	61.30	50	eP	P	03 23 09.2	-0.8
	comp=Z,5.7nm,0.6s						
ULN	Ulaanbaatar	61.30	50c	iP	P	03 23 09.0	-0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRDH	Bariadhala	61.84	82	P	P	03 23 14.1	+0.3
	comp=Z,35nm,0.3s,baz=249,slow=22,SNR=4.4						
PALK	Pallekele	61.86	103	eP	P	03 23 13.7	-0.3
	comp=Z,14nm,0.8s						
PALK	Pallekele	61.86	103c	eP	P	03 23 14.9	+0.9
PALK	Pallekele	61.86	103	P	P	03 23 14.4	+0.4
	comp=Z,11nm,0.6s,baz=296,slow=7.1,SNR=15						
LZH	Lanzhou	64.47	63	eP	P	03 23 32.0	+0.8
LZH				pP	pP	03 23 35.3	-3.6
LZH				sP	pwP	03 23 36.8	-5.2
LZH				ePP	PP	03 25 56.1	+3.2
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,7.2s						
LZH				LR	LR		
	comp=Z,360nm,15.0s						
LZH				LR	LR		
	comp=Z,380nm,15.2s						
LZH				LR	LR		
	comp=Z,530nm,18.5s						
BOSA	Boshof	65.69	176	P	P	03 23 41.2	+2.3
	comp=Z,3.3nm,0.8s,baz=358,slow=7.1,SNR=13						
BOSA				LR	LR	03 55 22.7	
	comp=Z,646nm,18.2s,baz=1.5,slow=39						
YAK	Yakutsk	65.81	29	eP	P	03 23 37.6	-1.7
YAK				pmax	pmax		
	comp=Z,73nm,0.7s						
YAK				pmax	pmax		
	comp=N,19nm,0.9s						
YAK				pmax	pmax		
	comp=E,37nm,1.0s						
CD2	Chengdu	66.96	68	eP	P	03 23 46.0	-1.2
CD2				pmax	pmax		
	comp=E,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=E,120nm,4.8s						
HHC	Hu-ho-hao-te	67.42	55	eP	P	03 23 51.1	+1.1

HHC				S	**S**	**03 32 43.8**	**-0.5**
HHC				pmax	pmax		
	comp=E,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=E,210nm,5.5s						
HHC				LR	LR		
	comp=E,250nm,14.5s						
HHC				LR	LR		
	comp=E,340nm,14.3s						
HHC				LR	LR		
	comp=E,370nm,14.1s						
HIA	**Hailar**	**68.05**	**44**⇓	*e*P	**P**	**03 23 54.2**	**+0.4**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN	**Xi'an**	**69.10**	**63**	*e*P	**P**	**03 24 00.8**	**+0.2**
	comp=Z,12nm,0.6s						
XAN	**Xi'an**	**69.10**	**63**	*e*P	**P**	**03 24 00.8**	**+0.2**
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI	**Kunming**	**69.21**	**74**	P	**P**	**03 24 01.3**	**-0.3**
KMI				pP	sP	03 24 11.8	-0.6
KMI				pmax	pmax		
	comp=Z,23nm,0.8s						
KMI				pmax	pmax		
	comp=Z,74nm,4.4s						
SUR	**Sutherland**	**69.30**	**180**	LR	LR	03 56 37.7	
	comp=Z,381nm,18.7s,baz=4.0,slow=38						
ZEA	**Zeya**	**69.49**	**37**	*e*P	**P**	**03 24 02.8**	**+0.2**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=N,600nm,15.0s						
ZEA				MLR	MLR		
	comp=E,700nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
CHTO	**Chiang Mai**	**69.67**	**81**	*e*P	**P**	**03 24 04.0**	**-0.3**
	comp=Z,16nm,1.0s						
CHTO	**Chiang Mai**	**69.67**	**81**	*e*P	**P**	**03 24 04.0**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,16nm,1.0s						
CHTO	**Chiang Mai**	**69.67**	**81**	P	**P**	**03 24 04.7**	**+0.4**
	comp=Z,74nm,0.7s,comp=Z,1µm						
CMMT	**Chiang Mai**	**69.67**	**81**	P	**P**	**03 24 04.6**	**+0.3**
	comp=Z,16nm,0.6s,comp=Z,429nm						
CMAR	**Chiang Mai Arr**	**69.86**	**82**	P	**P**	**03 24 05.2**	**-0.2**
	comp=Z,9.3nm,0.6s,baz=301,slow=7.4,SNR=27						
CMAR				LR	LR	04 00 01.9	
	comp=Z,102nm,18.6s,baz=303,slow=41						
CM01	**Chiang Mai Arr**	**69.90**	**82**	*e*P	**P**	**03 24 05.1**	**-0.6**
FCC	**Fort Churchill**	**70.10**	**330**	*e*P	**P**	**03 24 06.8**	**+0.6**
	comp=Z,8.3nm,0.8s						
FCC	**Fort Churchill**	**70.10**	**330**	*e*P	**P**	**03 24 06.8**	**+0.6**
FCC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJI	**Beijing**	**70.84**	**54**	P	**P**	**03 24 11.5**	**+0.4**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJI				LR	LR		
	comp=Z,390nm,15.7s						
BJI				LR	LR		
	comp=Z,340nm,15.1s						
BJI				LR	LR		
	comp=Z,160nm,34.1s						
SUKH	**Sukhothai**	**70.95**	**82**	P	**P**	**03 24 12.8**	**+0.7**
	comp=Z,8.3nm,0.7s						
UMPA	**Umpang Tak**	**71.05**	**84**	P	**P**	**03 24 14.7**	**+1.9**
	comp=Z,8.0nm,1.0s,comp=Z,2µm						
GYA	**Guiyang**	**71.47**	**71**⇑	*i*P	**P**	**03 24 14.5**	**-0.8**
GYA				PP	**PP**	**03 26 57.8**	**+4.0**
GYA				S	**S**	**03 33 32.6**	**+0.1**
GYA				SKS	**SKSac**	**03 34 15.5**	**-1.7**
GYA				SS	**SS**	**03 38 08.0**	**+0.9**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=Z,510nm,18.6s						
GYA				LR	LR		
	comp=Z,480nm,18.1s						
GYA				LR	LR		
	comp=Z,490nm,18.9s						
ENH	**Enshi**	**71.50**	**66**	*e*P	**P**	**03 24 14.9**	**-0.4**
UTTA	**Uttaradit**	**71.53**	**81**	P	**P**	**03 24 16.2**	**+0.6**
	comp=Z,4.4nm,0.6s						
BILL	**Bilibino**	**71.85**	**13**	*e*P	**P**	**03 24 16.6**	**-0.1**
	comp=Z,12nm,1.2s						
BILL	**Bilibino**	**71.85**	**13**⇑	*e*P	**P**	**03 24 16.5**	**-0.3**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
UTHA	**Uthaitani**	**71.88**	**84**	P	**P**	**03 24 18.7**	**+1.0**
PBKT	**Sadao Pong**	**72.52**	**82**	*e*P	**P**	**03 24 21.6**	**+0.1**
PBKT	**Sadao Pong**	**72.52**	**82**	P	P	03 24 33.3	+12
SEY	**Seymchan**	**72.92**	**21**⇓	*i*P	**P**	**03 24 24.4**	**+1.2**
INK	**Inuvik**	**72.97**	**350**	*e*P	**P**	**03 24 23.6**	**+0.2**
	comp=Z,18nm,1.6s						
INK	**Inuvik**	**72.97**	**350**	*e*P	**P**	**03 24 23.6**	**+0.2**
INK				pmax	pmax		
	comp=Z,18nm,1.6s						
TOLK	**Toolik Lake Re**	**74.14**	**356**	*e*P	**P**	**03 24 31.0**	**+0.6**
	comp=Z,8.2nm,1.0s						
YKW3	**Yellowknife Ar**	**74.23**	**340**	*e*P	**P**	**03 24 31.1**	**+0.2**
	comp=Z,8.3nm,0.9s						
YKA	**Yellowknife Ar**	**74.28**	**340**	P	**P**	**03 24 31.8**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=34,slow=5.3,SNR=87						
YKB5	**Yellowknife Ar**	**74.28**	**340**	*e*P	**P**	**03 24 31.2**	**0.0**
CN2	**Changchun**	**74.39**	**47**	*e*P	**P**	**03 24 31.9**	**-0.3**
CN2				*e*pP	pP	03 24 36.6	-3.2
CN2				*e*S	**S**	**03 34 04.8**	**-0.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,590nm,12.0s						
CN2				LR	LR		
	comp=Z,740nm,12.0s						
CN2				LR	LR		
	comp=Z,690nm,14.0s						
KLR	**Kul'dur**	**74.47**	**39***c*	*i*P	**P**	**03 24 32.6**	**+0.1**
MA2	**Magadan**	**75.05**	**24**	*e*P	**P**	**03 24 35.9**	**+0.2**
	comp=Z,19nm,0.7s						
MA2	**Magadan**	**75.05**	**24***c*	*i*P	**P**	**03 24 36.3**	**+0.6**
MA2				pmax	pmax		
	comp=Z,24nm,1.3s						
COLD	**Coldfoot**	**75.58**	**356**	*e*P	**P**	**03 24 39.5**	**+0.8**
	comp=Z,6.1nm,1.0s						
FYU	**Fort Yukon**	**75.92**	**354**	*e*P	**P**	**03 24 41.5**	**+1.0**
	comp=Z,25nm,1.3s						
NKL	**Nikolayevsk**	**76.02**	**33**	*i* P	**P**	**03 24 43.0**	**+1.6**
NKL				pmax	pmax		
	comp=Z,65nm,1.0s						
NKL				MLR	MLR		
	comp=N,800nm,15.0s						
NKL				MLR	MLR		
	comp=E,1µm,15.0s						
NKL				MLR	MLR		
	comp=Z,1µm,15.0s						
FFC	**Flin Flon**	**76.03**	**330**	*e*P	**P**	**03 24 42.1**	**+0.6**
	comp=Z,7.1nm,1.0s						
FFC	**Flin Flon**	**76.03**	**330***c*	*e*P	**P**	**03 24 43.0**	**+1.6**
ULM	**Lac du Bonnet**	**76.51**	**324**	*e*P	**P**	**03 24 45.4**	**+1.1**
	comp=Z,17nm,1.3s						
ULM	**Lac du Bonnet**	**76.51**	**324**	P	**P**	**03 24 45.0**	**+0.8**
	comp=Z,5.2nm,0.8s,baz=53,slow=4.2,SNR=9.3						
ULM				LR	LR	04 01 01.8	
	comp=Z,200nm,18.2s,baz=52,slow=38						
PRP	**Porcupine Dome**	**76.97**	**354**	*e*P	**P**	**03 24 47.5**	**+0.8**
	comp=Z,6.1nm,1.1s						
IM3	**Indian Mountai**	**76.97**	**358**	*e*P	**P**	**03 24 46.8**	**+0.3**
NJ2	**Nanjing**	**77.14**	**60**	*e*P	**P**	**03 24 48.6**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
EGAK	**Eagle**	**77.28**	**352**	*e*P	**P**	**03 24 48.8**	**+0.5**
	comp=Z,2.8nm,0.7s						
MDM	**Murphy Dome**	**77.72**	**355**	*e*P	**P**	**03 24 51.4**	**+0.6**
	comp=Z,22nm,1.6s						
DAWY	**Dawson**	**77.77**	**351**	*e*P	**P**	**03 24 51.7**	**+0.6**
	comp=Z,14nm,1.2s						
COLA	**College**	**77.78**	**355**	*e*P	**P**	**03 24 52.1**	**+1.0**
	comp=Z,3.1nm,0.6s						
COLA	**College**	**77.78**	**355**⇑	*e*P	**P**	**03 24 51.9**	**+0.8**
COLA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MLY	**Manley**	**77.80**	**356**	*e*P	**P**	**03 24 52.5**	**+1.2**
	comp=Z,39nm,1.9s						
IL1	**Eielson Array**	**77.81**	**355**	*e*P	**P**	**03 24 51.6**	**+0.3**
ILAR	**Eielson Array**	**77.81**	**355**	P	**P**	**03 24 52.1**	**+0.8**
	comp=Z,1.7nm,1.0s,baz=4.5,slow=3.2,SNR=11						
ILAR				LR	LR	04 01 32.1	
	comp=Z,209nm,19.3s,baz=348,slow=38						
ILB	**Eielson Array**	**77.81**	**355**	*e*P	**P**	**03 24 52.2**	**+0.8**
USA0B	**Ussuriysk Arra**	**77.83**	**43**	*e*P	**P**	**03 24 51.7**	**-0.1**
USRK	**Ussuriysk Ar.**	**77.83**	**43**	P	**P**	**03 24 51.5**	**-0.2**
	comp=Z,9.5nm,0.6s,baz=295,slow=4.6,SNR=34						
USRK				LR	LR	04 03 32.3	
	comp=Z,386nm,18.4s,baz=318,slow=39						
HDA	**Harding Lake**	**78.18**	**355**	*e*P	**P**	**03 24 53.8**	**+0.5**
	comp=Z,7.7nm,0.8s						
WRH	**Wood River Hil**	**78.20**	**355**	*e*P	**P**	**03 24 53.6**	**+0.2**
	comp=Z,6.8nm,0.8s						
SCRK	**Sand Creek**	**78.35**	**353**	*e*P	**P**	**03 24 55.3**	**+0.8**
	comp=Z,18nm,1.5s						
ANM	**Nome**	**78.38**	**3**	*e*P	**P**	**03 24 55.0**	**+0.6**
	comp=Z,28nm,1.7s						
ANM	**Nome**	**78.38**	**3**	*e*P	**P**	**03 24 55.0**	**+0.6**
ANM				pmax	pmax		
	comp=Z,28nm,1.7s						
RIDG	**Independ'e Rid**	**78.66**	**354**	*e*P	**P**	**03 24 56.9**	**+0.8**
	comp=Z,27nm,1.5s						
DOT	**Dot Lake**	**78.68**	**353**	*e*P	**P**	**03 24 57.3**	**+1.1**
	comp=Z,29nm,1.6s						
GAMB	**Gambell**	**78.80**	**6**	*e*P	**P**	**03 24 58.0**	**+1.3**
	comp=Z,21nm,1.8s						
KULM	**Kulim**	**78.81**	**92**	*e*P	**P**	**03 24 57.5**	**-0.1**
	comp=Z,70nm,1.7s						
PSI	**Prapat**	**78.93**	**95**	*e*P	**P**	**03 24 58.5**	**+0.1**
	comp=Z,17nm,0.6s						
PSI	**Prapat**	**78.93**	**95**	*e*P	**P**	**03 24 58.5**	**+0.1**
PSI				pmax	pmax		
	comp=Z,17nm,0.6s						
MCK	**McKinley**	**78.99**	**355**	*e*P	**P**	**03 24 58.7**	**+0.8**
	comp=Z,10nm,1.0s						
CAST	**Castle Rocks**	**79.47**	**357**	*e*P	**P**	**03 25 01.4**	**+0.9**
	comp=Z,5.8nm,0.8s						
DHY	**Denali Highway**	**79.53**	**355**	*e*P	**P**	**03 25 01.1**	**+0.1**
	comp=Z,8.9nm,0.7s						
KS01	**Wonju Array Si**	**79.75**	**51**	*e*P	**P**	**03 25 01.9**	**-0.5**
KS15	**Wonju Array Si**	**79.76**	**51**	*e*P	**P**	**03 25 02.5**	**0.0**
KSAR	**Wonju Array Be**	**79.76**	**51**	P	**P**	**03 25 02.5**	**0.0**
KSAR	**Wonju Array Be**	**79.76**	**51**	P	**P**	**03 25 02.5**	**0.0**
KSRS	**Korea Array**	**79.78**	**51**	P	**P**	**03 25 02.5**	**-0.1**
	comp=Z,9.1nm,0.6s,baz=311,slow=4.8,SNR=52						
KSRS				LR	LR	04 04 23.4	
	comp=Z,170nm,19.7s,baz=300,slow=39						
PPLA	**Purkeypile**	**80.00**	**357**	*e*P	**P**	**03 25 04.5**	**+0.9**
	comp=Z,86nm,2.0s						
T47A	**Sharon Grove**	**80.45**	**309**	*e*P	**P**	**03 25 07.5**	**+1.3**
	comp=Z,106nm,2.0s						
HYT	**Haines Junctio**	**80.63**	**349**	*e*P	**P**	**03 25 08.1**	**+1.2**
	comp=Z,9.0nm,1.1s						
SUA	**Susitna One**	**81.36**	**356**	*e*P	**P**	**03 25 11.6**	**+0.8**
	comp=Z,48nm,1.8s						
ECSD	**EROS Data Cent**	**81.37**	**319**	*e*P	**P**	**03 25 12.6**	**+1.6**
	comp=Z,7.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**81.40**	**36**	*e*P	**P**	**03 25 12.2**	**+1.1**
YSS	**Yuzh-Sakhalins**	**81.40**	**36**⇑	*e*P	**P**	**03 25 11.9**	**+0.8**
YSS				*e*		03 25 14.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				MLR	MLR		
	comp=E,600nm,16.0s						
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
X48A	**Hartselle**	**82.03**	**307**	*e*P	**P**	**03 25 16.2**	**+1.5**
	comp=N,12nm,0.9s						
PETK	**Petropavlovsk-**	**82.55**	**25**	LR	LR	04 08 20.3	
	comp=N,486nm,18.1s,baz=324,slow=40						
T42A	**Van Buren**	**82.84**	**312**	*e*P	**P**	**03 25 20.1**	**+1.3**
	comp=N,9.0nm,1.0s						
LRAL	**Lakeview Retre**	**82.91**	**306**	*e*P	**P**	**03 25 20.2**	**+0.9**
BDFB	**Brasilia**	**83.27**	**245**	P	**P**	**03 25 23.5**	**+2.1**
	comp=N,3.3nm,0.6s,baz=42,slow=4.5,SNR=7.3						
BDFB				LR	LR	04 03 27.8	
	comp=N,606nm,18.3s,baz=78,slow=36						
LAO	**LASA Array**	**83.83**	**326**	*e*P	**P**	**03 25 25.2**	**+1.4**
	comp=N,15nm,0.9s						
EGMT	**Eagleton**	**84.29**	**329**	*e*P	**P**	**03 25 27.2**	**+1.0**
	comp=N,18nm,0.9s						
KSU1	**Kansas State U**	**84.61**	**316**	*e*P	**P**	**03 25 29.4**	**+1.6**
	comp=N,19nm,1.1s						
WHAR	**Wooly Hollow**	**84.73**	**311**	*e*P	**P**	**03 25 30.1**	**+1.6**
	comp=N,25nm,1.2s						
RSSD	**Black Hills**	**84.78**	**324**	*e*P	**P**	**03 25 30.2**	**+1.3**
	comp=N,6.3nm,1.1s						
RSSD	**Black Hills**	**84.78**	**324**	*e*P	**P**	**03 25 30.2**	**+1.3**
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WALA	**Waterton Lakes**	**85.08**	**332**	*e*P	**P**	**03 25 31.5**	**+1.2**
	comp=Z,8.1nm,0.9s						
ERM	**Erimo**	**85.22**	**39**	*e*P	**P**	**03 25 31.3**	**+0.4**
ERM	**Erimo**	**85.22**	**39***c*	*e*P	**P**	**03 25 32.5**	**+1.7**
ERM				pmax	pmax		
	comp=Z,55nm,1.1s						
X40A	**Basin Creek Fa**	**85.60**	**311**	*e*P	**P**	**03 25 34.5**	**+1.6**
	comp=Z,8.0nm,0.9s						
SDV	**Santo Domingo**	**85.75**	**278**	*e*P	**P**	**03 25 35.7**	**+1.5**
	comp=Z,24nm,1.4s						
MIAR	**Mount Ida**	**86.01**	**311**	*e*P	**P**	**03 25 36.6**	**+1.7**
	comp=Z,11nm,1.1s						
MIAR	**Mount Ida**	**86.01**	**311**	*e*P	**P**	**03 25 36.7**	**+1.7**
MIAR				pmax	pmax		
	comp=Z,11nm,1.1s						
GCMT	**Greycliff**	**86.02**	**328**	*e*P	**P**	**03 25 35.9**	**+0.9**
HRY	**Holter Researc**	**86.19**	**329**	*e*P	**P**	**03 25 36.7**	**+0.9**
TUL1	**Leonard**	**86.38**	**313**	*e*P	**P**	**03 25 38.0**	**+1.2**
	comp=Z,7.2nm,0.8s						
MAJO	**Matsushiro**	**86.50**	**46**	*e*P	**P**	**03 25 37.5**	**+0.1**
	comp=Z,4.7nm,0.6s						
MAJO	**Matsushiro**	**86.50**	**46**	*e*P	**P**	**03 25 37.5**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAT	**Matsushiro**	**86.50**	**46**	P	**P**	**03 25 36.8**	**-0.6**
MJAR	**Matsushiro Arr**	**86.50**	**46**	P	**P**	**03 25 37.6**	**+0.2**
	comp=Z,6.7nm,0.8s,baz=321,slow=4.3,SNR=18						
MJAR				LR	LR	04 07 56.6	
	comp=Z,162nm,18.5s,baz=330,slow=38						
NEW	**Newport**	**86.92**	**333**	*e*P	**P**	**03 25 40.6**	**+1.4**
	comp=Z,5.9nm,0.8s						
NEW	**Newport**	**86.92**	**333**	*e*P	**P**	**03 25 40.6**	**+1.4**
NEW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MSO	**Missoula**	**86.93**	**331**	*e*P	**P**	**03 25 40.4**	**+1.0**
	comp=Z,7.8nm,1.1s						
BOZ	**Bozeman (W)**	**87.00**	**329**	*e*P	**P**	**03 25 40.8**	**+1.0**
	comp=Z,10nm,0.6s						
BOZ	**Bozeman (W)**	**87.00**	**329**	*e*P	**P**	**03 25 40.8**	**+1.0**
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
K22A	**Casper**	**87.07**	**324**	*e*P	**P**	**03 25 41.6**	**+1.4**
	comp=Z,8.1nm,1.0s						
YHH	**Holmes Hill**	**87.33**	**328**	*e*P	**P**	**03 25 42.6**	**+1.0**
	comp=Z,7.6nm,1.3s						
H17A	**Grant Village**	**87.52**	**327**	*e*P	**P**	**03 25 43.4**	**+0.9**
	comp=Z,6.8nm,1.0s						
DLMT	**Dillon**	**87.59**	**329**	*e*P	**P**	**03 25 43.2**	**+0.6**
	comp=Z,12nm,1.5s						
YPP	**Pitchstone Pla**	**87.72**	**327**	*e*P	**P**	**03 25 44.5**	**+1.0**
	comp=Z,7.2nm,1.0s						
C09A	**Chrisman Ranch**	**87.72**	**334**	*e*P	**P**	**03 25 44.2**	**+1.1**
	comp=Z,12nm,0.7s						
KSCO	**Kaye Shedlock'**	**87.90**	**319**	*e*P	**P**	**03 25 45.3**	**+1.0**
	comp=Z,9.8nm,0.8s						
IMW	**Indian Meadow**	**88.08**	**327**	*e*P	**P**	**03 25 46.4**	**+1.2**
	comp=Z,4.1nm,0.9s						
MOOW	**Moose Ponds**	**88.11**	**327**	*e*P	**P**	**03 25 46.4**	**+1.1**
	comp=Z,2.4nm,0.8s						
LOHW	**Long Hollow**	**88.16**	**327**	*e*P	**P**	**03 25 46.8**	**+1.3**
	comp=Z,8.2nm,1.6s						
FXWY	**Fox Creek**	**88.33**	**327**	*e*P	**P**	**03 25 47.1**	**+0.7**
	comp=Z,2.6nm,1.0s						
PD31	**Pinedale Array**	**88.37**	**326**	*e*P	**P**	**03 25 47.2**	**+0.7**
PDAR	**Pinedale Array**	**88.37**	**326**	*e*P	**P**	**03 25 46.6**	**0.0**
PDAR	**Pinedale Array**	**88.37**	**326**	P	**P**	**03 25 47.0**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=46,slow=4.3,SNR=8.3						
PDAR				LR	LR	04 08 55.0	
	comp=Z,134nm,18.4s,baz=46,slow=38						
BW06	**Boulder Array**	**88.37**	**326**	*e*P	**P**	**03 25 47.3**	**+0.7**
	comp=Z,4.4nm,1.1s						
TPAW	**Teton Pass**	**88.41**	**327**	*e*P	**P**	**03 25 47.7**	**+1.0**
	comp=Z,4.7nm,0.8s						
WMOK	**Wichita Mounta**	**88.93**	**314**	*e*P	**P**	**03 25 49.7**	**+0.7**
	comp=Z,10nm,1.4s						
WMOK	**Wichita Mounta**	**88.93**	**314**	*e*P	**P**	**03 25 49.7**	**+0.7**
WMOK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
AHID	**Auburn Hatcher**	**89.06**	**327**	*e*P	**P**	**03 25 50.5**	**+0.8**
	comp=Z,3.8nm,0.7s						
HAWA	**Hanford**	**89.38**	**334**	*e*P	**P**	**03 25 52.4**	**+1.6**
	comp=Z,8.0nm,1.0s						
O20A	**White River Ci**	**89.84**	**323**	*e*P	**P**	**03 25 54.5**	**+1.0**
	comp=Z,7.1nm,0.8s						
BMO	**Blue Mountains**	**89.87**	**332**	*e*P	**P**	**03 25 54.0**	**+0.6**
	comp=Z,23nm,1.8s						
BMO	**Blue Mountains**	**89.87**	**332**	*e*P	**P**	**03 25 54.0**	**+0.6**
BMO				pmax	pmax		
	comp=Z,23nm,1.8s						
SDCO	**Great Sand Dun**	**90.34**	**320**	*e*P	**P**	**03 25 57.0**	**+1.1**
	comp=Z,4.6nm,1.1s						
HVU	**Hansel Valley**	**90.58**	**327**	*e*P	**P**	**03 25 57.7**	**+0.8**
	comp=Z,7.8nm,1.3s						
HVU	**Hansel Valley**	**90.58**	**327**	*e*P	**P**	**03 25 57.7**	**+0.8**
HVU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ABTX	**Abilene, Hawle**	**90.95**	**313**	*e*P	**P**	**03 25 60.0**	**+1.4**
	comp=Z,8.3nm,0.9s						
JLU	**Jordanelle**	**90.95**	**326**	*e*P	**P**	**03 25 59.4**	**+0.7**
	comp=Z,5.0nm,0.9s						
S22A	**4UR Ranch, Cre**	**91.01**	**321**	*e*P	**P**	**03 26 00.0**	**+0.9**
	comp=Z,7.8nm,1.4s						
CTU	**Camp Tracy**	**91.02**	**326**	*e*P	**P**	**03 25 59.7**	**+0.8**
	comp=Z,4.6nm,0.9s						
PV15	**Paradox Valley**	**91.36**	**322**	*e*P	**P**	**03 26 02.0**	**+1.3**
	comp=Z,5.4nm,0.9s						
PV07	**Paradox Valley**	**91.37**	**323**	*e*P	**P**	**03 26 02.1**	**+1.5**
	comp=Z,5.3nm,0.8s						
BGU	**Big Grassy Mou**	**91.39**	**327**	*e*P	**P**	**03 26 01.4**	**+0.8**
	comp=Z,5.2nm,1.1s						
PV21	**Cone Mtn., Par**	**91.43**	**323**	*e*P	**P**	**03 26 02.1**	**+1.2**
	comp=Z,8.9nm,1.1s						
PV04	**Paradox Valley**	**91.53**	**323**	*e*P	**P**	**03 26 02.4**	**+1.1**
	comp=Z,9.0nm,1.1s						
PV23	**Carpenter Ridg**	**91.53**	**323**	*e*P	**P**	**03 26 02.2**	**+0.8**
	comp=Z,10nm,0.9s						
PV12	**Saucer Basin,**	**91.54**	**323**	*e*P	**P**	**03 26 02.6**	**+1.2**
	comp=Z,21nm,1.5s						
PV09	**Paradox Valley**	**91.55**	**323**	*e*P	**P**	**03 26 02.5**	**+0.9**
PV01	**Paradox Valley**	**91.57**	**322**	*e*P	**P**	**03 26 02.6**	**+1.0**
	comp=Z,12nm,1.5s						
PV11	**David Mesa, Pa**	**91.58**	**323**	*e*P	**P**	**03 26 02.8**	**+1.2**
	comp=Z,9.3nm,0.9s						
J08A	**Circle Bar Ran**	**91.59**	**332**	*e*P	**P**	**03 26 02.4**	**+1.0**
	comp=Z,20nm,1.9s						
PV02	**Paradox Valley**	**91.59**	**323**	*e*P	**P**	**03 26 02.2**	**+0.5**
	comp=Z,4.3nm,0.9s						
PV16	**Nyswonger Mesa**	**91.60**	**323**	*e*P	**P**	**03 26 02.7**	**+1.0**
	comp=Z,21nm,1.5s						
PV14	**Lion Creek, Pa**	**91.60**	**323**	*e*P	**P**	**03 26 02.9**	**+1.2**
	comp=Z,6.9nm,0.8s						
PV19	**Morning Glory**	**91.63**	**323**	*e*P	**P**	**03 26 02.5**	**+0.7**
	comp=Z,5.8nm,0.9s						
PV17	**East Wray Mesa**	**91.64**	**323**	*e*P	**P**	**03 26 02.8**	**+0.9**
	comp=Z,7.1nm,0.9s						
PV13	**Radium Mtn., P**	**91.67**	**323**	*e*P	**P**	**03 26 02.6**	**+0.5**
	comp=Z,5.1nm,1.0s						
SRU	**San Rafael Swe**	**91.73**	**324**	*e*P	**P**	**03 26 03.1**	**+0.9**
	comp=Z,6.7nm,0.7s						
SRU	**San Rafael Swe**	**91.73**	**324**	*e*P	**P**	**03 26 03.1**	**+0.9**
SRU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NLU	**North Lily Min**	**91.76**	**326**	*e*P	**P**	**03 26 03.3**	**+0.9**
	comp=Z,3.0nm,0.9s						
DUG	**Dugway, Tooele**	**91.89**	**326**	*e*P	**P**	**03 26 03.4**	**+0.5**
	comp=Z,3.2nm,0.8s						
DUG	**Dugway, Tooele**	**91.89**	**326**	*e*P	**P**	**03 26 03.4**	**+0.5**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TMUT	**Trail Mountain**	**91.89**	**325**	*e*P	**P**	**03 26 03.4**	**+0.3**
	comp=Z,15nm,1.6s						
Q16A	**Castle Valley**	**92.18**	**324**	*e*P	**P**	**03 26 04.9**	**+0.6**
	comp=Z,4.3nm,1.0s						
WVOR	**Wild Horse Val**	**92.44**	**331**	*e*P	**P**	**03 26 06.1**	**+0.7**
	comp=Z,23nm,2.0s						
WVOR	**Wild Horse Val**	**92.44**	**331**	*e*P	**P**	**03 26 06.1**	**+0.7**
WVOR				pmax	pmax		
	comp=Z,23nm,2.0s						
ANMO	**Albuquerque**	**92.98**	**319**⇑	*e*P	**P**	**03 26 09.2**	**+1.1**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MTPU	**Mount Pierson**	**93.36**	**325**	*e*P	**P**	**03 26 10.7**	**+0.7**
	comp=Z,4.4nm,1.1s						
MOD	**Modoc Plateau**	**93.53**	**332**	*e*P	**P**	**03 26 11.3**	**+0.9**
	comp=Z,4.4nm,0.8s						
MNTX	**Cornudas Mount**	**94.89**	**316**	*e*P	**P**	**03 26 17.4**	**+0.7**
	comp=Z,3.5nm,1.1s						
TXAR	**Lajitas Array**	**95.70**	**314**	P	**P**	**03 26 22.4**	**+1.9**
	comp=Z,0.9nm,0.7s,baz=73,slow=4.1,SNR=11						
TXAR				LR	LR	04 11 29.2	
	comp=Z,82nm,18.3s,baz=0.0,slow=37						
NVAR	**Mina Array Bea**	**95.71**	**329**	P	**P**	**03 26 21.9**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=37,slow=4.1,SNR=7.0						
NVAR				PKKPbc	**PKKPbc**	**03 43 11.5**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=190,slow=4.1,SNR=3.6						
NVAR				LR	LR	04 11 02.8	
	comp=Z,222nm,18.3s,baz=10.0,slow=36						
CPUP	**Villa Florida**	**96.77**	**242**	LR	LR	04 11 50.8	
	comp=Z,536nm,18.7s,baz=52,slow=36						
LPAZ	**La Paz**	**98.78**	**256**	LR	LR	04 12 53.0	
	comp=Z,102nm,18.8s,baz=60,slow=36						
WRA	**Warramunga Arr**	**120.34**	**93**	PKP	**PKPdf**	**03 31 45.8**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=327,slow=1.8,SNR=14						
WRAB	**Tennant Creek**	**120.35**	**93**	*e*PKPdf	**PKiKP**	**03 31 46.8**	**+0.8**
WRAB	**Tennant Creek**	**120.35**	**93**	*e*PKIKP	**PKiKP**	**03 31 46.8**	**+0.8**
WB2	**Warramunga Arr**	**120.36**	**93**	*e*PKPdf	**PKiKP**	**03 31 46.6**	**+0.5**
AS31	**Alice Springs**	**121.92**	**97**	*e*PKPdf	**PKPdf**	**03 31 48.7**	**-0.2**
ASAR	**Alice Springs**	**121.92**	**97**	PKP	**PKiKP**	**03 31 49.6**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=318,slow=1.6,SNR=45						
AS01	**Alice Springs**	**121.96**	**97**	*e*PKPdf	**PKiKP**	**03 31 49.3**	**+0.1**
CTA	**Charters Tower**	**129.92**	**86**	PKP	**PKiKP**	**03 32 06.4**	**+1.3**
	comp=Z,2.6nm,0.7s,baz=243,slow=4.5,SNR=2.5						
CTAO	**Charters Tower**	**129.92**	**86**	*e*PKPdf	**PKiKP**	**03 32 05.9**	**+0.8**
CTAO	**Charters Tower**	**129.92**	**86**	*e*PKIKP	**PKiKP**	**03 32 05.9**	**+0.8**
STKA	**Stephens Creek**	**131.70**	**102**	PKP	**PKiKP**	**03 32 09.5**	**+1.2**
	comp=Z,2.6nm,0.7s,baz=300,slow=1.0,SNR=9.3						
DZM	**Mont Dzumac**	**146.80**	**73**	PKPbc	**PKPbc**	**03 32 37.1**	**+0.2**
	comp=Z,14nm,0.7s,baz=254,slow=8.3,SNR=11						
URZ	**Urewera**	**161.32**	**100**	PKPab	**PKPab**	**03 33 38.4**	**-0.5**
	comp=Z,5.2nm,0.6s,baz=284,slow=1.0,SNR=7.9						

NNC 17 03:13:09.2±3.5, 36.°95N×70.°20E, h0km, mb3.6, mpv3.2, 6C-3D, Error ellipse: s-maj=29.2km s-min=26.4km az=124.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.01**	**39**	⇓P	Pn	03 14 12.8	+0.6
	0.9nm,0.4s						
SFK				⇑S	Sn	03 15 02.1	+2.2
	11nm,0.6s						
MNAS	**Manas**	**5.81**	**17**	⇓P	Pn	03 14 37.4	+0.7
	4.3nm,0.9s						
MNAS				⇑S	Sn	03 15 46.1	+2.0
	9.0nm,0.4s						
KK31	**Karatay Array**	**6.15**	**2**	⇑P	Pn	03 14 42.3	+0.9
	0.3nm,0.2s,baz=184,slow=13,SNR=20						
KK31				⇑S	Sn	03 15 53.5	+1.1
	1.1nm,0.4s,baz=186,slow=25,SNR=6.9						
AAK	**Ala-Archa**	**6.57**	**29**	⇑P	Pn	03 14 46.2	-1.1
	0.8nm,0.4s						
AAK				⇑S	Sn	03 16 01.5	-1.5
	4.6nm,0.6s						
TKM2	**Tokmak 2**	**7.26**	**33**	⇓P	Pn	03 14 54.7	-2.0
	2.7nm,0.6s						

IDC 17 03:20:36.8±2.0, 8.°70S×124.°11E, h0km, mb3.3/1, mb1 3.3/4, mb1mx3.2/33, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=60.4km s-min=26.0km az=78.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.56**	**196**	Pn	Pb	03 21 06.2	-0.3
	11nm,0.3s,baz=138,slow=1.3,SNR=14						
BATI				Sn	Sn	03 21 21.8	-5.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	11nm,0.3s,baz=46,slow=4.1,SNR=5.6						
FITZ	**Fitzroy Crossi**	**9.46**	**171**	Pn	Pn	03 22 52.2	-2.2
	0.1nm,0.3s,baz=358,slow=8.9,SNR=7.5						
FITZ				Sn	Sn	03 24 25.5	-16
	0.6nm,0.3s,baz=243,slow=18,SNR=12						
WRA	**Warramunga Arr**	**14.92**	**140**	Pn	Pn	03 24 10.6	+1.4
	0.1nm,0.3s,baz=320,slow=14,SNR=2.5						
WRA				Sn	Sn	03 26 42.8	-13
	0.1nm,0.3s,baz=321,slow=25,SNR=2.0						
ASAR	**Alice Springs**	**17.59**	**149**	Pn	P	03 24 44.2	-0.4
	0.0nm,0.3s,baz=327,slow=14,SNR=2.5						
ASAR				Sn	Sn	03 27 45.0	-15
	0.0nm,0.3s,baz=313,slow=21,SNR=4.1						
MKAR	**Makanchi Array**	**66.61**	**330**	P	P	03 31 29.1	0.0
	0.3nm,0.8s,baz=143,slow=7.0,SNR=1.9						

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*ISK **17** 03:25:03.3, 42°.34N×40°.98E, h12^{km}, ML2.7/6*
*MOS **17** 03:25:04.6±0.0, 42°.56N×41°.11E, h2^{km}, MPVA3.6*
*NORS **17** 03:25:04.6±0.0, 42°.56N×41°.11E, h2^{km}, MPVA3.6*
ISC 17 03:25:01.0±1.6, **42°.38N**±0°.05×**41°.09E**±0°.05, **h1**^{km}±13^{km}, **n15**, σ**0^{s}.83**/24, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.90**	**150**	PG	**Pn**	**03 25 21.0**	**+0.3**
BATM				SG	**Sn**	**03 25 34.5**	**+0.3**
BCA	**Borcka**	**1.01**	**157**	PG	**Pn**	**03 25 22.8**	**+0.5**
BCA				SG	**Sn**	**03 25 37.5**	**+0.3**
NEY	**Neytrino**	**1.48**	**54**	*e*Pg	**Pg**	**03 25 30.5**	**+1.1**
NEY				*e*Sg	**Sn**	**03 25 49.0**	**-0.1**
KTUT	**Trabzon**	**1.71**	**216**	PN	**Pb**	**03 25 32.9**	**-0.2**
KTUT				SN	**Sn**	**03 25 53.0**	**-1.3**
SHA1	**Shidzhatmaz**	**1.78**	**40**	*e*Pg	**Pg**	**03 25 35.9**	**+0.8**
SHA1				*e*Sg	**Sg**	**03 25 58.2**	**0.0**
DIGR	**Digorskoe uzhe**	**1.91**	**73**	*e*Pg	**Pg**	**03 25 38.2**	**+0.5**
DIGR				*e*Sg	**Sg**	**03 26 03.1**	**+0.7**
KIV	**Kislovodsk**	**1.96**	**36**	PN	**Pg**	**03 25 38.1**	**-0.5**
SENK	**Senkaya-Erzuru**	**2.05**	**152**	PN	**Pb**	**03 25 38.9**	**-0.2**
BAYT	**Aydıntepe-Bayb**	**2.11**	**200**	PN	**Pb**	**03 25 38.9**	**-1.2**
ZEI	**Tsey**	**2.12**	**78**	*e*Pg	**Pg**	**03 25 41.1**	**-0.4**
ZEI				*e*Sg	**Sg**	**03 26 09.6**	**+0.6**
KBTC	**Kuba-Taba**	**2.23**	**49**	*e*Pg	**Pb**	**03 25 41.2**	**-0.8**
KBTC				*e*Sg	**Sb**	**03 26 10.1**	**+0.1**
KARS	**Kars**	**2.30**	**139**	PN	**Pb**	**03 25 43.1**	**-0.2**
LACR	**Lac**	**2.41**	**78**	*e*Pn	**Pg**	**03 25 46.3**	**-0.9**
LACR				*e*Sn	**Sg**	**03 26 17.5**	**-1.0**
KOPR	**Koprukoy-ERZUR**	**2.45**	**166**	PN	**Pn**	**03 25 43.8**	**+1.5**
TBLG	**Delisi**	**2.79**	**102**	PN	**Pb**	**03 25 50.2**	**-1.5**

IDC 17 03:25:37.2±10.0, **31°.79N**×**68°.81E**, **h0**^{km}, **mb3.4**/3, **mb1 3.4**/4, **mb1mx3.2**/38, **mbtmp3.4**/4, **ML3.0**/1, **Error ellipse: s-maj=174.3km s-min=57.3km az=21.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.22**	**31**	P	P	03 29 51.7	-0.1
	0.1nm,0.3s,baz=209,slow=10,SNR=4.2						
AKTO	**Aktyubinsk**	**20.29**	**340**	P	P	03 30 14.8	+0.5
	0.7nm,0.6s,baz=156,slow=12,SNR=2.3						
ZALV	**Zalesovo Beam**	**24.95**	**23**	P	P	03 31 01.1	-1.0
	0.6nm,0.4s,baz=213,slow=12,SNR=2.6						
SONM	**Songino Array**	**32.64**	**50**	P	P	03 32 11.3	+0.4
	0.3nm,0.3s,baz=263,slow=4.1,SNR=4.6						

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*DJA **17** 03:33:14.6±1.2, 3°S±5°×13°6E±1°0, h14^{km}±6^{km}, M3.8/3, MLv3.8/3*
*ISCJB **17** 03:33:21.2±0.9, 2°.24S±0°.07×135°.98E±0°.10, h33^{km}, mb2.6/1, Error ellipse: s-maj=15.3km s-min=7.9km az=29.4*
*IDC **17** 03:33:37.8±5.9, 4°.37S×138°.84E, h0^{km}, mb3.1/1, mb1 3.3/3, mb1mx3.2/30, mbtmp3.1/3, ML3.1/2, Error ellipse: s-maj=234.5km s-min=35.7km az=87.0*
ISC 17 03:33:21.9±1.5, **2°.29S**±0°.08×**136°.2E**±0°.1, **h35**^{km}, **n6**, σ**3^{s}.15**/9, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.41**	**6**	P	**Pn**	**03 33 29.1**	**-2.3**
SRPI				S	**Sn**	**03 33 37.2**	**-0.7**
BAKI	**Biak**	**1.09**	**355**	P	**Pn**	**03 33 40.0**	**-0.7**
BAKI				S	**Sn**	**03 33 56.0**	**+1.4**
RKPI	**Ransiki, Papua**	**2.16**	**291**	P	**Pn**	**03 33 52.5**	**-3.0**
RKPI				S	**Sn**	**03 34 25.6**	**+4.6**
FAKI	**Fak Fak**	**4.00**	**261**	P	**Pn**	**03 34 17.0**	**-3.7**
WRA	**Warramunga Arr**	**17.64**	**186**	Pn	**P**	**03 37 27.6**	**+1.8**
	0.1nm,0.3s,baz=17,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**21.37**	**186**	P	**P**	**03 38 08.7**	**+2.2**
	0.1nm,0.3s,baz=10,slow=11,SNR=4.8						

DJA 17 03:35:18.6±1.2, **3°N**±4°×**12°6E**±°, **h16**^{km}±11^{km}, **M4.1**/9, **mb4.3**/2, **mB5.1**/1, **MLv4.0**/9, **Mw(mB)4.4**/1, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.80**	**310**	P	Pb	03 35 32.9	-1.2
SGSI				S	Sn	03 35 47.1	+0.3
TNTI	**Ternate**	**2.68**	**153**	P	Pn	03 36 00.1	-1.0
TNTI				S	Sn	03 36 34.6	+1.3
KMSI	**Cibinong**	**3.36**	**220**	P	Pn	03 36 10.2	-0.3
MRSI	**Marisa**	**4.98**	**238**	P	Pn	03 36 33.6	+0.9
SANI	**Sanana**	**5.19**	**182**	P	Pn	03 36 36.4	+0.8
APSI	**Ampana**	**6.05**	**228**	P	Pn	03 36 49.2	+1.7

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*SOME **17** 03:36:07.5, 42°.60N×79°.57E, h10^{km}*
*NNC **17** 03:36:07.3±0.8, 42°.59N×79°.62E, h2^{km}±3^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=5.2km s-min=2.6km az=148.0*
KRNET 17 03:36:07.3±0.1, **42°.58N**×**79°.66E**, **h18**^{km}, **mb2.9, 21C-16D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.73**	**321**	*e*P	Pb	03 36 21.2	-0.4
	baz=21						
UZB				*e*S	Sb	03 36 31.2	-0.1
	baz=21						
UZB	**Uzynbulak**	**0.73**	**321**	*e*P	Pb	03 36 21.2	-0.4
	4.4nm,0.1s						
UZB				*e*S	Sb	03 36 31.2	-0.2
	30nm,0.2s						
PDGK	**Podgornoye**	**0.76**	**351**	⇑P	Pb	03 36 21.9	-0.1
	3.9nm,0.3s						
PDGK				⇑S	Sg	03 36 32.5	+0.3
	9.3nm,0.6s						
PDGK	**Podgornoye**	**0.76**	**351**	⇑*i*P	Pb	03 36 21.7	-0.3
	baz=50						
PDGK				⇑*i*S	Sg	03 36 32.6	+0.4
	baz=50						
PRZ	**Przheval'sk**	**0.93**	**264**	⇓*i*P	Pb	03 36 24.6	-0.5
	baz=64						
PRZ				⇓*i*S	Sg	03 36 37.6	-0.2
	baz=64						
KTMS	**Ketmen**	**1.00**	**30**	P	Pn	03 36 26.5	-0.1
	3.8nm,0.1s						
KTMS				S	Sg	03 36 40.0	0.0
	6.4nm,0.1s						
KTMS	**Ketmen**	**1.00**	**30**	*e*P	Pn	03 36 26.5	-0.1
	baz=30						
KTMS				*e*S	Sg	03 36 40.0	0.0
	baz=30						
KTMS	**Ketmen**	**1.00**	**30**	*e*P	Pn	03 36 26.5	-0.1
	3.8nm,0.1s						
KTMS				*e*S	Sg	03 36 40.0	0.0
	6.4nm,0.1s						
SATY	**Saty**	**1.03**	**298**	P	Pb	03 36 26.4	-0.3
	4.9nm,0.2s						
SATY				S	Sb	03 36 40.1	0.0
	63nm,0.1s						
SATY	**Saty**	**1.03**	**298**	*e*P	Pb	03 36 26.4	-0.3
	2.7nm,0.3s						
SATY				⇓*i*S	Sb	03 36 40.1	0.0
	65nm,0.2s						
KURS	**Kuram**	**1.42**	**310**	P	Pb	03 36 33.9	+0.7
	1.3nm,0.4s						
KURS				S	Sg	03 36 52.5	-0.6
	9.9nm,0.5s						
KURS	**Kuram**	**1.42**	**310**	*e*P	Pb	03 36 33.9	+0.7
	baz=10.0						
KURS				⇓*i*S	Sg	03 36 52.6	-0.5
	baz=10.0						
KURS	**Kuram**	**1.42**	**310**	*e*P	Pb	03 36 33.9	+0.7
	0.6nm,0.2s						
KURS				⇓*i*S	Sg	03 36 52.5	-0.6
	4.4nm,0.2s						
DJR	**Jarkent**	**1.75**	**3**	P	Pb	03 36 39.6	+0.6
	1.4nm,0.2s						
DJR				S	Sg	03 37 02.6	-1.1
	3.4nm,0.2s						
DJR	**Jarkent**	**1.75**	**3**	*e*P	Pb	03 36 39.6	+0.6
	1.4nm,0.2s						
DJR				*e*S	Sg	03 37 02.6	-1.1
	3.4nm,0.2s						
KDJ	**Kajisay**	**1.89**	**257**	⇑*i*P	Pb	03 36 41.6	+0.2
	baz=57						
KDJ				⇑*i*S	Sg	03 37 07.5	-0.7
	baz=57						
KOTS	**Kotyrbulak**	**1.98**	**290**	Pg	Pb	03 36 43.5	+0.6
	4.1nm,0.2s						
KOTS				Lg	Lg	03 37 09.2	
	39nm,0.3s						
KOTS	**Kotyrbulak**	**1.98**	**290**	*e*P	Pb	03 36 43.5	+0.6
	baz=90						
KOTS				*e*S	Sg	03 37 09.2	-1.8
	baz=90						
KOTS	**Kotyrbulak**	**1.98**	**290**	*e*P	Pb	03 36 43.5	+0.6
	4.1nm,0.2s						
KOTS				*e*S	Sg	03 37 09.2	-1.9
	39nm,0.3s						
TNSS	**Tian-Shan**	**2.04**	**284**	Pg	Pb	03 36 44.5	+0.4
	6.6nm,0.3s						
TNSS				Lg	Lg	03 37 11.1	
	8.5nm,0.2s						
TNSS	**Tian-Shan**	**2.04**	**284**	*e*P	Pb	03 36 44.6	+0.5
	baz=84						
TNSS				*e*S	Sb	03 37 11.2	+1.8
	baz=84						
TNSS	**Tian-Shan**	**2.04**	**284**	*e*P	Pb	03 36 44.5	+0.4
	6.6nm,0.3s						
TNSS				*e*S	Sb	03 37 11.1	+1.8
	8.5nm,0.2s						
ARXS	**Arharly**	**2.10**	**321**	Pg	Pb	03 36 45.7	+0.8
	1.7nm,0.2s						
ARXS				Lg	Lg	03 37 13.1	
	15nm,0.4s						
ARXS	**Arharly**	**2.10**	**321**	*e*P	Pb	03 36 45.7	+0.8
	1.7nm,0.2s						
ARXS				*e*S	Sg	03 37 13.1	-1.9
	15nm,0.4s						
IZV	**Izvestkoviy**	**2.28**	**282**	Pg	Pb	03 36 48.7	+0.6
	7.5nm,0.2s						
IZV				Lg	Lg	03 37 18.4	
	12nm,0.1s						
IZV	**Izvestkoviy**	**2.28**	**282**	*e*P	Pb	03 36 48.7	+0.6
	baz=82						
IZV				*e*S	Sg	03 37 18.5	-2.3
	baz=82						
IZV	**Izvestkoviy**	**2.28**	**282**	*e*P	Pb	03 36 48.7	+0.6
	7.5nm,0.2s						
IZV				*e*S	Sg	03 37 18.4	-2.4
	12nm,0.1s						
CHKK	**Chushkaly**	**2.33**	**304**	Pg	Pb	03 36 49.1	+0.4
	1.8nm,0.1s						
CHKK				Lg	Lg	03 37 18.9	
	22nm,0.2s						
CHKK	**Chushkaly**	**2.33**	**304**	*e*P	Pb	03 36 49.1	+0.4
	baz=4.0						
CHKK				*e*S	Sb	03 37 18.9	+1.8
	baz=4.0						
CHKK	**Chushkaly**	**2.33**	**304**	*e*P	Pb	03 36 49.1	+0.4
	1.8nm,0.1s						
CHKK				*e*S	Sb	03 37 18.9	+1.8
	22nm,0.2s						
MTBS	**Maitube**	**2.44**	**284**	Pg	Pb	03 36 51.3	+0.7
	5.9nm,0.2s						
MTBS				Lg	Lg	03 37 22.5	
	7.3nm,0.4s						
MTBS	**Maitube**	**2.44**	**284**	*e*P	Pb	03 36 51.3	+0.7
	baz=84						
MTBS				⇓*i*S	Sb	03 37 22.5	+2.2
	baz=84						
MTBS	**Maitube**	**2.44**	**284**	*e*P	Pb	03 36 51.3	+0.7
	5.9nm,0.2s						
MTBS				⇓*i*S	Sb	03 37 22.5	+2.2
	7.3nm,0.4s						
KTBS	**Karatobe**	**2.45**	**298**	Pg	Pb	03 36 51.4	+0.6
	1.3nm,0.2s						
KTBS				Lg	Lg	03 37 23.0	
	22nm,0.5s						
KTBS	**Karatobe**	**2.45**	**298**	*e*P	Pb	03 36 51.5	+0.6
	baz=97						
KTBS				*e*S	Sb	03 37 23.1	+2.4
	baz=97						
KTBS	**Karatobe**	**2.45**	**298**	*e*P	Pb	03 36 51.5	+0.6
	1.3nm,0.2s						
KTBS				*e*S	Sb	03 37 23.0	+2.3
	22nm,0.5s						
ULHL	**Ulahol**	**2.55**	**264**	⇑*i*P	Pb	03 36 51.3	-1.3
	baz=64						
ULHL				⇑*i*S	Sb	03 37 24.2	+0.4
	baz=64						
BOOM	**Boomskoye usch**	**2.75**	**269**	⇑*i*P	Pb	03 36 53.9	-2.1
	baz=69						
BOOM				⇑*i*S	Sb	03 37 28.9	-0.5
	baz=69						
KUU	**Kurty**	**2.75**	**299**	Pg	Pb	03 36 56.5	+0.5
	0.8nm,0.2s						
KUU				Lg	Lg	03 37 31.8	
	8.5nm,0.1s						
KUU	**Kurty**	**2.75**	**299**	*e*P	Pb	03 36 56.5	+0.5
	baz=99						
KUU				*e*S	Sb	03 37 31.8	+2.4
	baz=99						
KUU	**Kurty**	**2.75**	**299**	*e*P	Pb	03 36 56.5	+0.5
	0.8nm,0.2s						
KUU				*e*S	Sb	03 37 31.8	+2.4
	8.5nm,0.1s						
KST	**Kastek**	**2.76**	**281**	Pg	Pb	03 36 57.1	+1.0
	3.7nm,0.2s						
KST				Lg	Lg	03 37 32.6	
	5.8nm,0.9s						
KST	**Kastek**	**2.76**	**281**	*e*P	Pb	03 36 57.1	+1.0
	baz=81						
KST				⇓*i*S	Sb	03 37 32.5	+2.9
	baz=81						
KST	**Kastek**	**2.76**	**281**	*e*P	Pb	03 36 57.1	+1.0
	3.7nm,0.2s						
KST				⇓*i*S	Sb	03 37 32.6	+3.0
	5.8nm,0.9s						
DGS	**Degeres**	**2.93**	**284**	Pg	Pb	03 36 59.8	+0.8
	2.2nm,0.3s						
DGS				Lg	Lg	03 37 37.3	
	8.2nm,0.3s						
DGS	**Degeres**	**2.93**	**284**	*e*P	Pb	03 36 59.8	+0.8
	baz=84						
DGS				*e*S	Sb	03 37 37.3	+2.8
	baz=84						
DGS	**Degeres**	**2.93**	**284**	*e*P	Pb	03 36 59.8	+0.8
	2.2nm,0.3s						
DGS				*e*S	Sb	03 37 37.3	+2.8
	8.2nm,0.3s						
NRN	**Naryn**	**2.96**	**248**	⇑*i*P	Pb	03 36 57.0	-2.6
	baz=48						
NRN				⇑*i*S	Sb	03 37 34.3	-1.3
	baz=48						
TKM2	**Tokmak 2**	**3.01**	**278**	⇑Pg	Pb	03 37 00.3	-0.2
	2.0nm,0.9s						
TKM2				⇓Lg	Lg	03 37 41.7	
	2.4nm,0.4s						
TKM2	**Tokmak 2**	**3.01**	**278**	⇑*i*P	Pb	03 36 57.9	-2.5
	baz=78						
TKM2				⇑*i*S	Sb	03 37 35.5	-1.4
	baz=78						
KZA	**Kyzart**	**3.31**	**263**	⇑*i*P	Pn	03 37 01.8	+3.3
	baz=63						
KZA				⇑*i*S	Sb	03 37 42.4	-3.3
	baz=63						
KBK	**Karagaybulak**	**3.48**	**273**	⇓*i*P	Pn	03 37 04.2	+3.6
	baz=73						
KBK				⇓*i*S	Sb	03 37 46.5	-3.8
	baz=73						
ARLS	**Aral**	**4.03**	**261**	⇓*i*P	Pn	03 37 11.8	+3.6
	baz=62						
ARLS				⇓*i*S	Sn	03 37 59.6	+4.6
	baz=62						
MAKZ	**Makanchi**	**4.54**	**21**	⇑Pn	Pn	03 37 18.5	+3.5
	0.5nm,0.6s						
MAKZ				⇓Sn	Sn	03 38 09.9	+2.6
	0.7nm,0.7s						
MAKZ				⇓Lg	Lg	03 38 31.5	
	0.7nm,0.8s						
MK31	**Makanchi Array**	**4.61**	**23**	⇑Pn	Pn	03 37 19.2	+3.1
	0.2nm,0.5s,baz=201,slow=13,SNR=5.6						
MK31				⇑Sn	Sn	03 38 10.8	+1.7
	0.1nm,0.2s						
MK31				⇑Lg	Lg	03 38 35.2	
	0.3nm,0.5s						

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*NIED **17** 03:38:00, 23°.10N×123°.20E, h8^{km}, Mw3.9 Best double couple: M$_0$7.67000×10^{14} NP1:φ$_s$94.00000°, δ39.00000°, λ-127.00000°. NP2:φ$_s$317.00000°, δ60.00000°, λ-64.00000°.*
*IDC **17** 03:38:55.9±0.8, 23°.06N×122°.97E, h0^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.8/48, mbtmp3.8/14, ML3.2/2, Error ellipse: s-maj=30.9km s-min=17.9km az=68.0*
*JMA **17** 03:38:58.1±0.2, 23°.12N×123°.22E, h54^{km}, M4.0*
*NEIC **17** 03:39:00.8±1.9, 23°.12N×123°.03E, h33^{km}±13^{km}, mb4.0/5, Error ellipse: s-maj=7.4km s-min=6.7km az=112.0*
ISC 17 03:38:56.8±1.9, **23°.20N**±0°.07×**123°.20E**±0°.04, **h8**^{km}±10^{km}, **n54**, σ**1^{s}.06**/66, **mb3.9**/17, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.01**	**33**	P	**Pn**	**03 39 17.4**	**+0.1**
HATJ				S	**Sn**	**03 39 31.0**	**-0.8**
IRIF	**Iriomote-Funau**	**1.23**	**23**	P	**Pg**	**03 39 20.6**	**+0.3**
IRIF				S	**Sn**	**03 39 36.3**	**-0.7**
JYNG	**Yonagunijimaku**	**1.26**	**349**	P	**Pg**	**03 39 21.6**	**+0.6**
JYNG				*e*S	**Sg**	**03 39 36.7**	**-0.8**
YOJ	**Yonaguni jima**	**1.26**	**352**	*e*Pn	**Pg**	**03 39 21.2**	**+0.2**
YOJ	**Yonaguni jima**	**1.26**	**352**	P	**Pg**	**03 39 21.5**	**+0.5**
YOJ				S	**Sg**	**03 39 36.8**	**-0.7**
JKRS	**Kuro-shima**	**1.27**	**36**	P	**Pg**	**03 39 21.0**	**-0.1**
JKRS				S	**Sg**	**03 39 37.1**	**-0.4**
JIJ	**Ishigaki jima**	**1.44**	**37**	P	**Pn**	**03 39 22.9**	**-0.3**
JIJ				S	**Sn**	**03 39 40.4**	**-1.9**
JISG	**Ishigakijimahi**	**1.71**	**36**	P	**Pn**	**03 39 26.6**	**-0.3**
JISG				*e*S	**Sn**	**03 39 47.1**	**-1.9**
NACB	**Ninganchiao**	**1.76**	**304**	*e*Pn	**Pn**	**03 39 27.2**	**-0.5**
YULB	**Yu-li**	**1.76**	**276**	*e*Pn	**Pn**	**03 39 26.8**	**-0.9**
JTJ	**Tarama**	**1.98**	**43**	P	**Pn**	**03 39 30.6**	**0.0**
JTJ				*e*S	**Sn**	**03 39 54.4**	**-1.3**
TWG	**Pinlang**	**2.00**	**259**	*e*Pn	**Pn**	**03 39 29.9**	**-1.0**
SSLB	**Suanglung**	**2.15**	**286**	*e*Pn	**Pn**	**03 39 32.5**	**-0.4**
YHNB	**Yeheng**	**2.22**	**311**	*e*Pn	**Pn**	**03 39 34.4**	**+0.4**
TATO	**Taipei**	**2.36**	**319**	*e*Pn	**Pn**	**03 39 36.9**	**+1.0**
TPUB	**Ta-pu**	**2.37**	**273**	*e*Pn	**Pn**	**03 39 36.6**	**+0.6**
JIRB	**Irabujima**	**2.42**	**48**	P	**Pn**	**03 39 36.3**	**-0.4**
JIRB				*e*S	**Sn**	**03 40 05.0**	**-1.5**
JMJ	**Miyako jima 2**	**2.50**	**50**	P	**Pn**	**03 39 37.7**	**0.0**
JMJ				*e*S	**Sn**	**03 40 07.0**	**-1.4**
JIKM	**Ikemajima**	**2.53**	**47**	P	**Pn**	**03 39 38.1**	**-0.1**
JIKM				S	**Sn**	**03 40 08.4**	**-0.9**
JOGS	**Gusukube**	**2.54**	**52**	P	**Pn**	**03 39 38.3**	**-0.1**
JOGS				*e*S	**Sn**	**03 40 08.5**	**-1.0**
KSAR	**Wonju Array Be**	**14.75**	**15**	Pn	**P**	**03 42 29.6**	**-2.2**
KSRS	**Korea Array**	**14.77**	**15**	Pn	**P**	**03 42 29.6**	**-2.5**
	0.2nm,0.3s,baz=197,slow=12,SNR=4.5						
MAJO	**Matsushiro**	**18.57**	**41**	*e*P	**Pn**	**03 43 17.4**	**+3.0**
MJAR	**Matsushiro Arr**	**18.57**	**41**	P	**Pn**	**03 43 17.5**	**+3.0**
	0.0nm,0.3s,baz=231,slow=9.8,SNR=4.8						
ULN	**Ulaanbaatar**	**27.78**	**336**	*e*P	**P**	**03 44 45.7**	**-0.6**
	1.3nm,0.5s						
SONA0	**Songino Array**	**28.00**	**335**	*e*P	**P**	**03 44 48.2**	**-0.1**
SONM	**Songino Array**	**28.00**	**335**	P	**P**	**03 44 48.2**	**-0.1**
	2.0nm,0.6s,baz=148,slow=9.0,SNR=18						
SONA1	**Songino Array**	**28.01**	**336**	*e*P	**P**	**03 44 48.1**	**-0.3**
LSA	**Lhasa**	**29.36**	**290**	*e*P	**P**	**03 44 59.7**	**-1.2**
	2.8nm,0.4s						
MK01	**Makanchi Array**	**40.31**	**316**	*e*P	**P**	**03 46 34.7**	**0.0**
MK31	**Makanchi Array**	**40.33**	**316**	*e*P	**P**	**03 46 35.1**	**+0.3**
MK32	**Makanchi Array**	**40.33**	**316**	*e*P	**P**	**03 46 35.8**	**+1.0**
MKAR	**Makanchi Array**	**40.33**	**316**	P	**P**	**03 46 35.8**	**+0.9**
	1.8nm,0.7s,baz=105,slow=10,SNR=18						
ZALV	**Zalesovo Beam**	**42.07**	**327**	*e*P	**P**	**03 46 49.0**	**+0.1**
ZALV	**Zalesovo Beam**	**42.07**	**327**	P	**P**	**03 46 49.2**	**+0.3**
	0.7nm,0.4s,baz=116,slow=8.0,SNR=4.0						
ZAA1	**Zalesovo Array**	**42.07**	**327**	*e*P	**P**	**03 46 49.2**	**+0.2**
KURK	**Kurchatov**	**44.03**	**320**	*e*P	**P**	**03 47 04.8**	**-0.1**
KURBB	**Kurchatov Arra**	**44.05**	**320**	P	**P**	**03 47 05.6**	**+0.5**
	1.4nm,0.8s,baz=110,slow=8.6,SNR=7.4						
WR1	**Warramunga Arr**	**44.24**	**165**	*e*P	**P**	**03 47 06.2**	**-0.7**
	14nm,1.5s						
WRA	**Warramunga Arr**	**44.24**	**165**	P	**P**	**03 47 06.2**	**-0.7**
	0.3nm,0.7s,baz=346,slow=9.0,SNR=3.1						
AS31	**Alice Springs**	**47.73**	**167**	*e*P	**P**	**03 47 34.4**	**-0.1**
	1.8nm,1.5s						
ASAR	**Alice Springs**	**47.74**	**167**	P	**P**	**03 47 34.4**	**-0.1**
	0.2nm,0.5s,baz=349,slow=8.1,SNR=6.5						
BRVK	**Borovoye**	**49.67**	**321**	*e*P	**P**	**03 47 49.3**	**+0.3**
ILAR	**Eielson Array**	**69.23**	**27**	P	**P**	**03 50 07.3**	**+3.4**
	0.3nm,0.8s,baz=260,slow=5.3,SNR=3.0						
FIA0	**FINESS Array S**	**73.22**	**330**	*e*P	**P**	**03 50 28.4**	**+0.3**
FINES	**FINESS Array B**	**73.22**	**330**	P	**P**	**03 50 28.5**	**+0.3**
	1.3nm,0.7s,baz=60,slow=3.3,SNR=7.7						
HFS	**Hagfors**	**79.32**	**331**	P	**P**	**03 51 02.8**	**0.0**
	1.5nm,0.6s,baz=91,slow=6.2,SNR=8.0						
RES	**Resolute Bay**	**79.32**	**10**	*e*P	**P**	**03 51 03.0**	**+0.4**
	0.7nm,0.6s						
NB2	**NORSAR Subarra**	**79.95**	**333**	P	**P**	**03 51 05.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=56,slow=5.6						
NB200	**NORSAR Array S**	**79.95**	**333**	*e*P	**P**	**03 51 05.8**	**-0.5**
NOA	**NORSAR Array B**	**79.95**	**333**	P	**P**	**03 51 05.8**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=56,slow=5.5,SNR=3.7						
YKA	**Yellowknife Ar**	**83.14**	**23**	P	**P**	**03 51 23.0**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=305,slow=5.0,SNR=8.8						
YKB5	**Yellowknife Ar**	**83.14**	**23**	*e*P	**P**	**03 51 23.0**	**-0.1**
GERES	**GERESS Array B**	**84.77**	**321**	P	**P**	**03 51 32.0**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=48,slow=6.0,SNR=5.2						

MEX 17 03:40:32.0±0.5, **14°.44N**×**92°.47W**, **h80**^{km}±13^{km}, **MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.50**	**23**	*i* P	Pn	03 40 44.3	-1.4
THIG				*i* S	Sn	03 40 54.3	-1.5
PCIG		**1.45**	**330**	*e*P	Pn	03 40 55.3	-1.4
CCIG	**Comitan**	**1.86**	**10**	*e*P	Pn	03 41 05.3	+3.1

MEX 17 03:42:16.8±0.5, **16°.30N**×**97°.95W**, **h2**^{km}, **MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**299**	*e*P	Pg	03 42 20.2	-0.3
PNIG				*i* S	Sg	03 42 23.3	+0.3
VHO	**Vista Hermosa**	**1.40**	**56**	*i* P	Pn	03 42 39.5	-4.1
VHO				*e*S	Sg	03 42 58.1	-3.8
CAIG	**El Cayaco**	**2.34**	**289**	*e*P	Pb	03 43 00.0	+0.3
CAIG				*i* S	Sb	03 43 27.5	-1.6

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*DDA **17** 03:43:21.6, 38°.68N×38°.18E, h7^{km}±5^{km}, ML2.6*
*ISK **17** 03:43:23.6, 38°.61N×38°.02E, h13^{km}, ML1.7/3*
ISC 17 03:43:22.5±1.1, **38°.67N**±0°.03×**38°.14E**±0°.04, **h9**^{km}±13^{km}, **n8**, σ**0^{s}.82**/13, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	**0.25**	**326**	*i* P	**Pg**	**03 43 27.4**	**-0.4**
HEKM				*i* S	**Sg**	**03 43 32.5**	**+1.3**
HEKM				IAML_P			
	comp=Z,2μm,0.1s						
AKCD	**Akcadag**	**0.41**	**205**	*i* P	**Pg**	**03 43 29.7**	**-0.9**
AKCD				*i* S	**Sb**	**03 43 38.4**	**+0.1**
AKCD				IAML_P			
	comp=Z,2μm,0.1s						
DARE	**Darende-Malaty**	**0.52**	**260**	PG	**Pg**	**03 43 32.6**	**-0.1**
DARE				SG	**Sg**	**03 43 38.8**	**-0.8**
KEMA	**Kemaliye**	**0.66**	**24**	*i* P	**Pg**	**03 43 34.5**	**-0.7**
KEMA				*i* S	**Sg**	**03 43 44.3**	**+0.4**
ELZG	**Elazig**	**0.68**	**104**	*i* P	**Pg**	**03 43 34.8**	**-0.9**
ELZG				IAML_P			
	comp=Z,1μm,0.1s						
URFA	**Urfa**	**1.34**	**156**	PN	**Pg**	**03 43 48.4**	**+0.3**
URFA				SN	**Sg**	**03 44 06.6**	**+1.1**
KMRS	**Kahramanmaras**	**1.52**	**221**	PN	**Pn**	**03 43 49.6**	**-0.2**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVSK	**Karacayir**	**1.53**	**325**	PN	**Pb**	**03 43 51.2**	**+0.2**

NNC 17 03:46:34.8±3.6, 36°.83N×70°.15E, h0km, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=29.1km s-min=27.6km az=137.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**4.13**	**39**	⇑P	Pn	03 47 39.1	-0.2
	2.9nm,0.4s						
SFK				⇑S	Sn	03 48 30.2	+1.7
	2.7nm,0.5s						
MNAS	**Manas**	**5.94**	**17**	⇑P	Pn	03 48 04.4	+0.4
	0.8nm,0.5s						
MNAS				⇓S	Sn	03 49 13.7	+0.9
	3.1nm,0.4s						
KK31	**Karatay Array**	**6.27**	**2**	P	Pn	03 48 10.2	+1.7
	0.5nm,0.3s,baz=181,slow=12,SNR=21						
KK31				⇓S	Sn	03 49 21.8	+0.8
	2.2nm,0.4s						
AAK	**Ala-Archa**	**6.70**	**29**	⇑P	Pn	03 48 12.6	-1.9
	1.7nm,0.6s						

ISCJB ***17*** *03:52:12.2±0.3, 51°.48N±0°.01×16°.18E±0°.03, h0km, Error ellipse: s-maj=2.6km s-min=2.0km az=173.6*
IDC ***17*** *03:52:15.5±0.6, 51°.44N×16°.03E, h0km, mb1 3.2/10, mb1mx3.0/48, mbtmp3.1/10, ML2.8/9, Error ellipse: s-maj=11.8km s-min=5.7km az=97.0*
VIE ***17*** *03:52:16.9±0.7, 51°.32N×16°.09E, h0km, mb2.4/5, ml2.9/6, Error ellipse: s-maj=6.8km s-min=4.8km az=27.0, Suspected Mining induced.*
UPP ***17*** *03:52:20.9±3.0, 51°.86N×15°.78E, h0km, ML2.1, Suspected explosion*
ISC 17 03:52:13.3±0.6**, 51°.53N**±0°.03×**16°.20E**±0°.02**, h0km, n48, σ1ˢ34**/90**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.69**	**175**	*e*Pg	**Pg**	**03 52 27.2**	**+0.6**
KSP				*e*Sg	**Sg**	**03 52 35.2**	**-0.3**
UPC	**Upice**	**1.03**	**187**	*e*PG	**Pg**	**03 52 33.4**	**+0.3**
UPC				*e*SG	**Sg**	**03 52 46.4**	**-0.1**
	comp=Z,126nm,0.4s						
DPC	**Dobruska-Polom**	**1.19**	**176**	*e*PG	**Pg**	**03 52 36.2**	**+0.2**
DPC				*e*SG	**Sg**	**03 52 51.3**	**-0.1**
	comp=Z,66nm,0.5s						
PVCC	**Panska Ves**	**1.44**	**226**	*e*PG	**Pb**	**03 52 41.3**	**+0.3**
PVCC				*e*SG	**Sb**	**03 53 00.1**	**+0.3**
	comp=Z,140nm,0.5s						
KRLC	**Kraliky**	**1.51**	**166**	*e*PG	**Pn**	**03 52 42.0**	**+0.4**
KRLC				*e*SG	**Sg**	**03 53 00.4**	**-1.2**
	comp=Z,11nm,0.5s						
BRG	**Berggiesshubel**	**1.57**	**246**	PN	**Pn**	**03 52 42.5**	**+0.2**
BRG				PG	**Pg**	**03 52 43.9**	**+0.6**
BRG				SG	**Sg**	**03 53 04.5**	**+1.0**
	76nm,0.6s						
GOPC	**GO Pecny, Ondr**	**1.85**	**210**	*e*PG	**Pb**	**03 52 48.3**	**+0.3**
GOPC				*e*SG	**Sb**	**03 53 11.4**	**-0.4**
	comp=Z,28nm,0.5s						
PRU	**Pruhonice**	**1.87**	**215**	*e*PN	**Pn**	**03 52 46.4**	**-0.1**
PRU				*e*PG	**Pb**	**03 52 48.6**	**+0.3**
PRU				*e*SG	**Sb**	**03 53 11.8**	**-0.4**
	comp=Z,46nm,0.5s						
MORC	**Moravsky Berou**	**1.96**	**154**	*e*PN	**Pn**	**03 52 48.0**	**+0.3**
MORC				*e*SG	**Sb**	**03 53 14.8**	**+0.1**
CLL	**Collm**	**2.01**	**265**	*e*Pn	**Pn**	**03 52 49.0**	**+0.5**
CLL				*e*Pg	**Pg**	**03 52 52.0**	**+0.1**
CLL				*i* Sg	**Sg**	**03 53 18.1**	**+0.2**
	comp=Z,31nm,0.4s						
OKC	**Ostrava-Krasne**	**2.10**	**143**	*e*PG	**Pb**	**03 52 53.1**	**+0.9**
OKC				*e*SG	**Sb**	**03 53 19.4**	**+0.5**
	comp=Z,34nm,0.5s						
CHZP	**Chorzow**	**2.16**	**124**	*e*Pg	**Pg**	**03 52 56.9**	**+2.2**
CHZP				*e*Sg	**Sg**	**03 53 24.2**	**+1.5**
VRAC	**Vranov**	**2.24**	**173**	*e*PN	**Pn**	**03 52 52.2**	**+0.5**
VRAC				*e*SG	**Sb**	**03 53 23.7**	**+0.8**
VRAC	**Vranov**	**2.24**	**173**	Pn	**Pn**	**03 52 51.6**	**0.0**
	comp=Z,1.4nm,0.3s,baz=342,slow=16,SNR=6.2						
VRAC				Pg	**Pg**	**03 52 55.9**	**-0.3**
	comp=Z,3.1nm,0.3s,baz=344,slow=18,SNR=12						
VRAC				Lg	Lg	03 53 24.0	
	comp=Z,7.0nm,0.3s,baz=78,slow=20,SNR=12						
TREC	**Trest**	**2.29**	**192**	*e*PN	**Pn**	**03 52 53.0**	**+0.7**
TREC				*e*PG	**Pb**	**03 52 55.7**	**+0.3**
TREC				*e*SG	**Sb**	**03 53 24.7**	**+0.5**
	comp=Z,25nm,0.5s						
KRUC	**Moravsky**	**2.48**	**177**	*e*PG	**Pb**	**03 52 59.1**	**+0.4**
KRUC				*e*SG	**Sg**	**03 53 32.1**	**-0.7**
OJC	**Ojcow**	**2.63**	**119**	*e*Pn	**Pn**	**03 52 56.5**	**-0.5**
OJC				*e*Pg	**Pg**	**03 53 04.9**	**+1.2**
OJC				*e*Sg	**Sg**	**03 53 39.5**	**+1.8**
NKC	**Novy Kostel**	**2.71**	**243**	*e*PN	**Pn**	**03 52 59.0**	**+0.9**
NKC				*e*PG	**Pg**	**03 53 05.7**	**+0.5**
NKC				*e*SG	**Sg**	**03 53 40.6**	**+0.3**
	comp=Z,57nm,0.3s						
KHC	**Kasperske Hory**	**2.93**	**216**	*e*PN	**Pn**	**03 53 02.0**	**+0.8**
KHC				*e*PG	**Pb**	**03 53 08.0**	**+1.6**
KHC				*e*SN	**Sn**	**03 53 36.0**	**-1.1**
KHC				*e*SG	**Sb**	**03 53 45.1**	**+2.2**
	comp=Z,20nm,0.5s						
GERES	**GERESS Array B**	**3.13**	**212**	Pn	**Pn**	**03 53 05.3**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=26,slow=13,SNR=13						
GERES				Pg	**Pb**	**03 53 10.7**	**+0.8**
	comp=Z,2.8nm,0.3s,baz=36,slow=17,SNR=58						
GERES				Lg	Lg	03 53 49.7	
	comp=Z,6.4nm,0.3s,baz=28,slow=27,SNR=12						
LANS	**Liptovska Anna**	**3.17**	**137**	*e*PG	**Pg**	**03 53 14.4**	**+0.3**
LANS				*e*SG	**Sg**	**03 53 53.0**	**-2.2**
MODS	**Modra-Piesok**	**3.24**	**167**	*e*PG	**Pg**	**03 53 15.4**	**+0.1**
MODS				*e*SG	**Sg**	**03 53 57.7**	**+0.4**
MODS				*e*LG	Lg	03 54 08.0	
VYHS	**Vyhne**	**3.49**	**150**	*e*PG	**Pg**	**03 53 19.8**	**-0.2**
VYHS				*e*SG	**Sg**	**03 54 03.4**	**-1.8**
VYHS				*e*LG	Lg	03 54 13.2	
CONA	**Conrad Observa**	**3.62**	**184**	*e*Pn	**Pn**	**03 53 11.6**	**+1.0**
	comp=Z,1.0nm,0.5s						
CONA				Sg	**Sg**	**03 54 07.9**	**-1.5**
	comp=Z,11nm,0.4s						
BSD	**Bornholm Skovb**	**3.67**	**348**	*i* P	**Pn**	**03 53 12.8**	**+1.6**
BSD				*e*S	**Sn**	**03 53 55.0**	**-0.1**
MOA	**Molln**	**3.90**	**200**	*e*Pn	**Pn**	**03 53 15.3**	**+1.0**
	comp=Z,0.6nm,0.2s						
MOA				Sg	**Sg**	**03 54 18.3**	**-0.1**
	comp=Z,11nm,0.5s						
ARSA	**Arzberg**	**4.31**	**186**	*e*Pn	**Pn**	**03 53 20.7**	**+0.6**
	comp=Z,0.5nm,0.3s						
ARSA				Pg	**Pg**	**03 53 35.8**	**0.0**
	comp=Z,1.0nm,0.3s						
ARSA				Sg	**Sg**	**03 54 31.2**	**-0.5**
	comp=Z,9.1nm,0.7s						
BLEU	**Blekinge**	**4.79**	**357**	P	**Pn**	**03 53 28.4**	**+1.8**
BLEU				S	**Sn**	**03 54 20.4**	**-2.2**
KBA	**Koelnbreinsper**	**4.83**	**204**	*e*Pn	**Pn**	**03 53 28.8**	**+1.4**
	comp=Z,1.7nm,0.4s						
KBA				Sg	**Sg**	**03 54 50.0**	**+1.5**
	comp=Z,17nm,0.9s						
BJUU	**Bjuv**	**4.92**	**339**	P	**Pn**	**03 53 29.2**	**+0.8**
BJUU				S	**Sn**	**03 54 23.2**	**-2.7**
DEL	**Delary**	**5.13**	**345**	P	**Pn**	**03 53 32.5**	**+1.2**
VXJU	**Vaexsjoe**	**5.45**	**353**	P	**Pn**	**03 53 37.6**	**+1.9**
OSKU	**Oskarshamn**	**5.67**	**359**	P	**Pn**	**03 53 40.7**	**+2.0**
BYXU	**Byxelkrok**	**5.79**	**4**	P	**Pn**	**03 53 42.6**	**+2.4**
FABU	**Falkenberg**	**5.84**	**341**	P	**Pn**	**03 53 42.4**	**+1.3**
ASPU	**Aespoe**	**5.90**	**2**	P	**Pn**	**03 53 44.2**	**+2.3**
GNOU	**Gnosjoe**	**5.94**	**347**	P	**Pn**	**03 53 44.0**	**+1.6**
EKSU	**Eksjoe**	**6.07**	**355**	P	**Pn**	**03 53 46.3**	**+2.0**
VSTU	**Vaestervik**	**6.14**	**2**	P	**Pn**	**03 53 47.5**	**+2.4**
DAVOX	**Davos/Dischmat**	**6.31**	**224**	Pn	**Pn**	**03 53 48.6**	**+1.0**
	baz=147,slow=17						
DAVOX				Sn	**Sn**	**03 54 58.6**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=210,slow=16,SNR=2.4						
DAVOX				Lg	Lg	03 55 29.5	
	baz=186,slow=19						
BORU	**Boraas**	**6.43**	**343**	P	**Pn**	**03 53 51.5**	**+2.4**
AKASG	**Malin Array Be**	**8.24**	**91**	Pn	**Pn**	**03 54 14.6**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=277,slow=12,SNR=2.9						
AKASG				Lg	Lg	03 56 48.5	
	comp=Z,0.2nm,0.3s,baz=275,slow=24,SNR=2.0						
HFS	**Hagfors**	**8.73**	**352**	Pn	**Pn**	**03 54 21.5**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=161,slow=14,SNR=9.2						
HFS				Sn	**Sn**	**03 55 56.8**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=186,slow=28,SNR=2.7						
HFS				Lg	Lg	03 56 52.7	
	comp=Z,0.1nm,0.3s,baz=172,slow=34,SNR=2.1						
NOA	**NORSAR Array B**	**9.92**	**346**	Pn	**Pn**	**03 54 36.9**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=130,slow=15,SNR=5.8						
FINES	**FINESS Array B**	**11.32**	**25**	Pn	**Pn**	**03 54 56.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=207,slow=12,SNR=11						
FINES				Sn	**Sn**	**03 56 57.9**	**-5.2**
	comp=Z,0.2nm,0.3s,baz=222,slow=20,SNR=6.0						
EKA	**Eskdalemuir Ar**	**12.14**	**296**	Pn	**Pn**	**03 55 08.0**	**+0.6**
	baz=99,slow=14,SNR=3.5						
BRTR	**Keskin Array B**	**16.93**	**127**	Pn	**P**	**03 56 14.4**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=340,slow=11,SNR=3.7						
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn	**P**	**03 56 29.4**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=6.1						

IDC ***17*** *04:03:12.7±1.6, 11°.50S×164°.92E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/36, mbtmp3.6/6, ML3.4/1, Error ellipse: s-maj=49.8km s-min=29.8km az=119.0*
ISCJB ***17*** *04:03:16.0±1.1, 11°.7S±0°.1×164°.9E±0°.2, h34km, mb3.5/5, Error ellipse: s-maj=29.3km s-min=18.1km az=175.5*
ISC 17 04:03:17.7±1.2**, 11°.6S**±0°.1×**164°.9E**±0°.3**, h34km, n12, σ0ˢ48**/6**, mb3.5**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.54**	**172**	Pn	**Pn**	**04 05 46.7**	**+0.1**
	0.3nm,0.3s,baz=8.3,slow=19,SNR=1.1						
H11S2	**WAKE ISLAND Hy**	**29.92**	**3**	T	T	04 40 47.1	
	baz=172						
H11S3	**WAKE ISLAND Hy**	**29.93**	**3**	T	T	04 40 46.7	
	baz=172						
H11S1	**WAKE ISLAND Hy**	**29.94**	**3**	T	T	04 40 46.7	
	baz=172						
WRA	**Warramunga Arr**	**30.55**	**250**	P	**P**	**04 09 28.2**	**-0.2**
	0.3nm,0.7s,baz=81,slow=9.1,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**31.15**	**4**	T	T	04 42 19.8	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**31.15**	**4**	T	T	04 42 21.9	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**31.16**	**4**	T	T	04 42 21.1	
	baz=182						
ASAR	**Alice Springs**	**31.84**	**244**	P	**P**	**04 09 39.5**	**-0.3**
	0.5nm,0.7s,baz=69,slow=9.7,SNR=6.3						
SONM	**Songino Array**	**78.62**	**324**	P	**P**	**04 15 16.8**	**+0.6**
	0.4nm,0.9s,baz=140,slow=9.4,SNR=2.4						
ILAR	**Eielson Array**	**84.26**	**19**	P	**P**	**04 15 45.1**	**-0.5**
	0.3nm,0.7s,baz=258,slow=4.1,SNR=5.5						
MKAR	**Makanchi Array**	**93.36**	**317**	P	**P**	**04 16 29.6**	**+0.1**
	0.7nm,0.8s,baz=87,slow=6.5,SNR=5.2						

NEIC ***17*** *04:12:55.7±0.0, 42°.02N×82°.22W, h5km, MN2.5(OTT), After OTT.*
OTT 17 04:12:55.7±0.7**, 42°.02N×82°.22W, h5km, MN2.5**/2**, 29km east from Leamington, On Eastern Background Seismic Zone., Southern Ontario**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
M50A	**Fremont**	**0.87**	**225**	*e*Pg	Pg	04 13 12.6	+0.2
AAM	**Ann Arbor**	**1.10**	**285**	*e*Pg	Pg	04 13 16.4	-0.5
ELFO	**Elginfield**	**1.35**	**29**	*e*Pn	Pn	04 13 19.5	-1.8
ELFO				*e*Sn	Sb	04 13 37.7	-1.4
ELFO	**Elginfield**	**1.35**	**29**	PG	Pn	04 13 19.5	-1.8
ELFO				SG	Sb	04 13 37.7	-1.4
ELFO				Trac		04 13 38.5	
	comp=Z,7.1nm,0.1s						
ERPA	**Erie**	**1.67**	**86**	Pn	Pn	04 13 23.9	-1.7
ERPA	**Erie**	**1.67**	**86**	PG	Pb	04 13 27.1	+0.2
BASO	**Ashfield**	**2.04**	**11**	SN	Sn	04 13 55.9	-0.5
TYNO	**Tyneside**	**2.04**	**57**	SN	Sn	04 13 57.1	+0.4
BWLO	**Walkerton**	**2.24**	**20**	SN	Sn	04 14 00.7	-0.8
BWLO				SN	Sb	04 14 01.1	-3.7
BWLO				Trac		04 14 06.1	
	comp=Z,8.5nm,0.0s						
ACTO	**Acton**	**2.25**	**44**	Pg	Pn	04 13 34.5	+0.9
ACTO	**Acton**	**2.25**	**44**	PN	Pn	04 13 34.5	+0.9
ACTO				SN	Sn	04 14 01.1	-0.6
ACTO				LG	Lg	04 14 04.9	
BMRO	**Meriville Lake**	**2.68**	**16**	*e*Pn	Pn	04 13 39.9	+0.4
BMRO	**Meriville Lake**	**2.68**	**16**	PN	Pn	04 13 39.9	+0.4
BMRO				SN	Sn	04 14 11.4	-0.9
BMRO				Trac		04 14 15.2	
	comp=Z,41nm,1.0s						
BMRO				LG	Lg	04 14 17.9	

ISCJB ***17*** *04:14:12.3±0.8, 67°.58N±0°.05×142°.9E±0°.2, h10km, mb3.3/4, Error ellipse: s-maj=10.6km s-min=5.9km az=20.2*
YARS ***17*** *04:14:14.8, 67°.57N×142°.99E, h10km*
IDC ***17*** *04:14:15.7±1.6, 67°.79N×141°.85E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/33, mbtmp3.4/5, ML2.6/1, Error ellipse: s-maj=42.8km s-min=26.7km az=15.0*
ISC 17 04:14:14.5±1.0**, 67°.53N**±0°.05×**142°.59E**±0°.10**, h10km, n9, σ1ˢ26**/16**, mb3.4**/4**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	**Moma**	**1.10**	**167**	*e*Pg	**Pn**	**04 14 34.7**	**-1.2**
	56nm,0.2s						
MOMR				*e*Pg	**Pn**	**04 14 34.7**	**-1.2**
MOMR				*e*Pg	**Pn**	**04 14 34.7**	**-1.2**
MOMR				*e*Sg	**Sb**	**04 14 50.3**	**+0.5**
	267nm,0.2s						
MOMR				*e*Sg	**Sb**	**04 14 50.3**	**+0.5**
MOMR				*e*Sg	**Sb**	**04 14 50.3**	**+0.5**
	180nm,0.3s						
YBGR	**Belaya Gora**	**1.69**	**52**	*e*Pg	**Pn**	**04 14 43.1**	**-0.9**
	64nm,0.2s						
YBGR				*e*Pg	**Pn**	**04 14 43.1**	**-0.9**
YBGR				*e*Pg	**Pn**	**04 14 43.1**	**-0.9**
YBGR				*e*Sg	**Sn**	**04 15 04.8**	**-0.9**
YBGR				*e*Sg	**Sn**	**04 15 04.8**	**-0.9**
	250nm,0.3s						
YBGR				*e*Sg	**Sn**	**04 15 04.8**	**-0.9**
	250nm,0.2s						
SEY	**Seymchan**	**6.18**	**134**	Pn	Pn	04 15 53.1	+7.5
	0.1nm,0.3s,baz=37,slow=20,SNR=1.6						
SEY				Lg	Lg	04 17 30.1	
	0.5nm,0.3s,baz=8.0,slow=21,SNR=6.5						
MA2	**Magadan**	**8.77**	**152**	Lg	Lg	04 18 51.9	
	0.3nm,0.3s,baz=171,slow=19,SNR=0.9						
ILAR	**Eielson Array**	**27.25**	**62**	P	**P**	**04 20 01.6**	**+3.3**
	0.4nm,1.0s,baz=312,slow=8.0,SNR=4.7						
MKAR	**Makanchi Array**	**36.72**	**267**	P	**P**	**04 21 21.2**	**-0.1**
	0.2nm,0.6s,baz=42,slow=5.9,SNR=3.8						
FINES	**FINESS Array B**	**43.35**	**321**	P	**P**	**04 22 15.8**	**-0.4**
	1.8nm,1.1s,baz=22,slow=7.7,SNR=5.5						
NOA	**NORSAR Array B**	**46.94**	**330**	P	**P**	**04 22 44.9**	**+0.2**
	0.4nm,0.7s,baz=49,slow=7.9,SNR=3.5						
PPT2	**Papeete2**	**97.99**	**117**	*e*LR	LR	04 28 42.1	
	comp=Z,139nm,24.8s						

IDC 17 04:27:00.1±3.0**, 0°.98S×131°.25E, h0km, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.4**/23**, mbtmp3.5**/4**, ML3.5**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/29**, Error ellipse: s-maj=210.3km s-min=27.3km az=70.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**9.58**	**99**	LR	LR	04 32 53.5	
	comp=Z,133nm,18.1s,baz=344,slow=37						
WRA	**Warramunga Arr**	**19.09**	**171**	P	P	04 31 24.1	-0.4
	0.2nm,0.3s,baz=354,slow=12,SNR=9.4						
WRA				S	Sn	04 34 53.5	-6.2
	0.0nm,0.3s,baz=358,slow=25,SNR=3.5						
ASAR	**Alice Springs**	**22.70**	**174**	P	P	04 32 03.5	-0.1
	0.6nm,0.6s,baz=354,slow=12,SNR=11						
STKA	**Stephens Creek**	**32.25**	**163**	P	P	04 33 30.8	+0.4
	0.3nm,0.3s,baz=344,slow=15,SNR=2.6						
MKAR	**Makanchi Array**	**63.98**	**325**	P	P	04 37 35.2	-0.1
	0.5nm,0.9s,baz=108,slow=8.4,SNR=2.9						

ISCJB ***17*** *04:34:41.5±0.3, 7°.48S±0°.03×128°.55E±0°.04, h151km, mb4.1/18, Error ellipse: s-maj=5.2km s-min=3.9km az=1.2*
DJA ***17*** *04:34:43.6±0.4, 8°S±3°×12°8E±°, h169km±11km, M4.6/9, mb4.6/6, mB5.2/7, MLv4.7/9, Mw(mB)4.5/7*
IDC ***17*** *04:34:44.0±1.9, 7°.35S×128°.50E, h153km±18km, mb3.7/10, mb1 4.0/14, mb1mx3.8/33, mbtmp4.3/14, MS3.1/3, Ms1 3.1/3, ms1mx2.7/46, Error ellipse: s-maj=20.1km s-min=12.0km az=80.0*
NEIC ***17*** *04:34:43.9±0.5, 7°.43S×128°.49E, h158km±5km, mb4.3/9, Error ellipse: s-maj=6.8km s-min=4.6km az=63.0*
ISC 17 04:34:42.6±0.4**, 7°.56S**±0°.04×**128°.55E**±0°.05**, h151km, n65, σ2ˢ13**/77**, mb4.1**/18**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.76**	**99**	*e*Pn	**Pn**	**04 35 29.8**	**+2.8**
SAUI	**Saumlaki**	**2.76**	**99**	P	**Pn**	**04 35 30.1**	**+3.1**
SAUI				S	**Sn**	**04 36 07.0**	**+5.8**
BNDI	**Bandanaira**	**3.30**	**24**	P	**Pn**	**04 35 37.8**	**+3.9**
NLAI	**Namlea**	**4.53**	**341**	P	**Pn**	**04 35 51.9**	**+2.0**
SOEI	**Soe**	**4.76**	**242**	*e*Pn	**Pn**	**04 35 54.3**	**+1.2**
SOEI	**Soe**	**4.76**	**242**	P	**Pn**	**04 35 54.8**	**+1.7**
SOEI				S	**Sn**	**04 36 47.5**	**-0.5**
BATI	**Baumata**	**5.50**	**241**	P	**Pn**	**04 36 04.4**	**+1.7**
	137nm,0.8s,2µm0.6nm						
BATI				S	**Sn**	**04 37 06.0**	**+0.7**
	137nm,0.8s,2µm0.6nm						
BATI	**Baumata**	**5.50**	**241**	P	**Pn**	**04 36 04.7**	**+2.0**
	73nm,0.3s,baz=110,slow=2.3,SNR=38						
BATI				S	**Sn**	**04 37 04.8**	**-0.6**
	47nm,0.3s,baz=108,slow=22,SNR=12						
MTN	**Manton Dam**	**5.83**	**154**	*e*Pn	**Pn**	**04 36 09.4**	**+2.2**
MTN				*e*Sn	**Sn**	**04 37 12.4**	**-0.9**
FAKI	**Fak Fak**	**5.90**	**39**	*e*Pn	**Pn**	**04 36 08.2**	**+0.2**
FAKI				*e*Sn	**Sn**	**04 37 10.6**	**-4.3**
FAKI	**Fak Fak**	**5.90**	**39**	P	**Pn**	**04 36 07.6**	**-0.5**
FAKI				S	**Sn**	**04 37 11.4**	**-3.5**
SANI	**Sanana**	**6.04**	**335**	P	**Pn**	**04 36 10.3**	**+0.4**
KDI	**Kendari**	**6.90**	**301**	P	**Pn**	**04 36 23.2**	**+1.8**
	80nm,1.3s,2µm						
SIJI	**Sorong**	**7.17**	**22**	P	**Pn**	**04 36 25.3**	**+0.2**
	5.0nm,0.3s,baz=190,slow=22,SNR=16						
SIJI				S	**Sn**	**04 37 43.6**	**-1.9**
	2.5nm,0.3s,baz=171,slow=20,SNR=4.9						
RKPI	**Ransiki, Papua**	**8.22**	**43**	P	**Pn**	**04 36 41.3**	**+2.3**
	112nm,0.7s,4µm						
LUWI	**Luwuk**	**8.66**	**318**	*e*Pn	**Pn**	**04 36 45.4**	**+0.5**
LUWI	**Luwuk**	**8.66**	**318**	P	**Pn**	**04 36 43.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**10.85**	**195**	*e*Pn	**Pn**	**04 37 13.6**	**-0.4**
FITZ				*e*Sn	**Sn**	**04 39 09.8**	**-4.2**
FITZ	**Fitzroy Crossi**	**10.85**	**195**	P	**Pn**	**04 37 13.4**	**-0.5**
	1.9nm,0.3s,baz=30,slow=9.9,SNR=50						
FITZ				S	**Sn**	**04 39 09.2**	**-4.8**
	6.9nm,0.3s,baz=159,slow=5.9,SNR=8.2						
FITZ				LR	LR	04 42 09.8	
	comp=Z,55nm,20.3s,baz=24,slow=40						
JAY	**Jayapura**	**13.10**	**68**	P	**Pn**	**04 37 42.1**	**-1.1**
	0.9nm,0.3s,baz=177,slow=17,SNR=3.4						
WRAB	**Tennant Creek**	**13.53**	**156**	*e*Pn	**Pn**	**04 37 48.2**	**-0.3**
WRAB				*e*Sn	**Sn**	**04 40 12.9**	**-5.5**
WRA	**Warramunga Arr**	**13.53**	**156**	P	**Pn**	**04 37 49.0**	**+0.3**
	6.8nm,0.3s,baz=329,slow=14,SNR=101						
WRA				S	Sn	04 40 10.6	-8.0
	10nm,0.3s,baz=326,slow=24,SNR=9.4						
WRA				LR	LR	04 43 24.9	
	comp=Z,87nm,21.5s,baz=345,slow=38						
WB2	**Warramunga Arr**	**13.54**	**156**	*e*Pn	**Pn**	**04 37 48.2**	**-0.5**
COEN	**Coen**	**15.71**	**115**	*e*Pn	**P**	**04 38 17.6**	**+0.9**
	32nm,0.6s						
MBWA	**Marble Bar**	**15.98**	**211**	*e*Pn	**P**	**04 38 20.8**	**+1.1**
	20nm,1.1s						
AS31	**Alice Springs**	**16.82**	**163**	*e*P	**Pn**	**04 38 32.2**	**+2.8**
	8.9nm,0.6s						
ASAR	**Alice Springs**	**16.82**	**163**	P	**Pn**	**04 38 32.4**	**+3.0**
	3.5nm,0.3s,baz=337,slow=10.0,SNR=250						
ASAR				S	**S**	**04 41 29.5**	**-7.0**
	1.3nm,0.3s,baz=328,slow=16,SNR=4.4						
AS01	**Alice Springs**	**16.83**	**163**	*e*P	**Pn**	**04 38 31.1**	**+1.5**
CTA	**Charters Tower**	**21.20**	**128**	P	**P**	**04 39 13.7**	**-2.8**
	1.7nm,0.5s,baz=45,slow=8.6,SNR=2.8						
CTAO	**Charters Tower**	**21.20**	**128**	*e*P	**P**	**04 39 19.0**	**+2.5**
FORT	**Forrest**	**23.11**	**181**	*e*P	**P**	**04 39 37.6**	**+2.3**
	29nm,0.7s						
BBOO	**Buckleboo**	**26.08**	**166**	*e*P	**P**	**04 40 04.3**	**+2.1**
	16nm,0.8s						
STKA	**Stephens Creek**	**27.08**	**155**	*e*P	**P**	**04 40 13.5**	**+2.3**
	2.2nm,0.7s						
STKA	**Stephens Creek**	**27.08**	**155**	P	**P**	**04 40 14.4**	**+3.2**
	3.0nm,0.6s,baz=321,slow=9.7,SNR=13						
STKA				LR	LR	04 51 59.2	
	comp=Z,79nm,18.9s,baz=11,slow=38						
CMAR	**Chiang Mai Arr**	**39.01**	**312**	P	**P**	**04 41 54.6**	**-0.1**
	1.2nm,0.3s,baz=146,slow=6.6,SNR=6.7						
CHTO	**Chiang Mai**	**39.23**	**312**	*e*P	**P**	**04 41 55.4**	**-1.1**
	1.5nm,0.4s						
KSRS	**Korea Array**	**44.78**	**359**	P	**P**	**04 42 41.5**	**+0.3**
	0.6nm,0.5s,baz=177,slow=9.1,SNR=4.4						
MJAR	**Matsushiro Arr**	**44.79**	**11**	P	**P**	**04 42 39.6**	**-1.8**
	1.9nm,0.9s,baz=203,slow=16,SNR=4.3						
GTA	**Gaotai**	**53.78**	**333**	*e*P	**P**	**04 43 49.3**	**-0.5**
GTA				pP	pP	04 43 53.0	-30
GTA				sP	pwP	04 43 55.8	-33
ULN	**Ulaanbaatar**	**58.36**	**343**	*e*P	**P**	**04 44 22.1**	**-0.1**
	14nm,1.4s						
SONM	**Songino Array**	**58.53**	**343**	P	**P**	**04 44 23.6**	**+0.4**
	3.1nm,0.8s,baz=168,slow=6.5,SNR=20						
SONA1	**Songino Array**	**58.54**	**343**	*e*P	**P**	**04 44 23.2**	**-0.1**
PETK	**Petropavlovsk-**	**65.31**	**19**	P	**P**	**04 45 08.8**	**+0.6**
	2.8nm,0.6s,baz=180,slow=4.6,SNR=5.5						
MK01	**Makanchi Array**	**67.89**	**328**	*e*P	**P**	**04 45 24.6**	**-0.2**
MK31	**Makanchi Array**	**67.91**	**328**	*e*P	**P**	**04 45 24.0**	**-1.0**
MKAR	**Makanchi Array**	**67.91**	**328**	P	**P**	**04 45 24.1**	**-0.9**
	2.6nm,0.9s,baz=122,slow=5.3,SNR=20						
MAKZ	**Makanchi**	**68.09**	**327**	*e*P	**P**	**04 45 26.2**	**+0.2**
	5.8nm,1.1s						
AAK	**Ala-Archa**	**70.05**	**321**	*e*P	**P**	**04 45 38.3**	**-0.1**
	1.4nm,0.6s						
ZAA0	**Zalesovo Array**	**71.45**	**334**	*e*P	**P**	**04 45 45.1**	**-1.3**
ZALV	**Zalesovo Beam**	**71.45**	**334**	*e*P	**P**	**04 45 45.3**	**-1.2**
ZALV	**Zalesovo Beam**	**71.45**	**334**	P	**P**	**04 45 45.6**	**-0.9**
	1.1nm,0.4s,baz=129,slow=4.7,SNR=9.0						
VNDA	**Vanda**	**72.07**	**173**	P	**P**	**04 45 52.0**	**+2.1**
	1.4nm,0.7s,baz=352,slow=5.0,SNR=6.2						
KURK	**Kurchatov**	**72.25**	**329**	*e*P	**P**	**04 45 51.2**	**-0.1**
BRVK	**Borovoye**	**77.85**	**328**	*e*P	**P**	**04 46 23.3**	**0.0**
	9.6nm,1.4s						
ABKAR	**Akbulak array**	**82.06**	**322**	*e*P	**P**	**04 46 45.6**	**-0.5**
ARU	**Arti**	**85.42**	**328**	*e*P	**P**	**04 47 02.6**	**-0.4**
ILAR	**Eielson Array**	**94.46**	**25**	P	**P**	**04 47 43.7**	**-1.6**
	0.5nm,0.8s,baz=256,slow=5.4,SNR=3.7						
GERES	**GERESS Array B**	**111.92**	**320**	PKiKP	**PKiKP**	**04 52 60.0**	**0.0**
	0.2nm,0.5s,baz=104,slow=4.1,SNR=2.6						
PDAR	**Pinedale Array**	**118.30**	**45**	PKP	**PKiKP**	**04 53 13.1**	**+0.4**
	0.3nm,0.6s,baz=5.2,slow=1.0,SNR=3.1						
TXAR	**Lajitas Array**	**126.45**	**59**	PKP	**PKiKP**	**04 53 30.0**	**+1.1**
	0.2nm,0.6s,baz=175,slow=3.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**127.50**	**281**	PKP	**PKiKP**	**04 53 31.2**	**0.0**
	0.7nm,0.6s,baz=111,slow=1.8,SNR=4.7						
TRQA	**Tornquist**	**133.57**	**169**	*e*PKPdf	**PKPdf**	**04 53 42.0**	**+0.3**
CPUP	**Villa Florida**	**145.83**	**171**	PKPbc	**PKPab**	**04 54 05.7**	**+0.2**
	4.0nm,0.9s,baz=234,slow=0.7,SNR=7.1						
JTS	**JuntasAbangare**	**146.80**	**83**	*e*PKPbc	**PKPbc**	**04 54 08.4**	**+0.3**
LPAZ	**La Paz**	**151.12**	**145**	PKPbc	**PKiKP**	**04 54 22.1**	**+1.8**
	1.8nm,0.4s,baz=34,slow=5.0,SNR=17						

IDC ***17*** *04:45:01.8±12.0, 15°.89S×174°.86W, h149km±118km, mb3.7/12, mb1 3.9/12, mb1mx3.7/28, mbtmp4.1/12, Error ellipse: s-maj=39.7km s-min=23.8km az=158.0*
ISCJB ***17*** *04:45:13.9±0.7, 16°.1S±0°.2×174°.9W±0°.2, h278km, mb3.7/12, Error ellipse: s-maj=29.1km s-min=14.4km az=43.2*
ISC 17 04:45:15.1±0.8**, 16°.1S**±0°.2×**174°.9W**±0°.2**, h278km, n22, σ0ˢ52**/22**, mb3.8**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**23.17**	**196**	P	**P**	**04 49 57.3**	**-0.1**
	2.2nm,0.3s,baz=41,slow=9.3,SNR=2.4						
STKA	**Stephens Creek**	**42.45**	**240**	P	**P**	**04 52 43.4**	**+0.1**
	1.3nm,0.4s,baz=76,slow=8.6,SNR=4.0						
WRA	**Warramunga Arr**	**48.29**	**257**	P	**P**	**04 53 28.3**	**-0.8**
	5.7nm,0.7s,baz=91,slow=7.4,SNR=82						
ASAR	**Alice Springs**	**48.53**	**252**	P	**P**	**04 53 30.7**	**-0.2**
	14nm,0.7s,baz=87,slow=8.0,SNR=153						
PETK	**Petropavlovsk-**	**72.87**	**343**	P	**P**	**04 56 13.6**	**0.0**
	6.1nm,0.9s,baz=115,slow=8.8,SNR=8.4						
NVAR	**Mina Array Bea**	**75.81**	**43**	P	**P**	**04 56 30.6**	**-0.6**
	0.6nm,0.8s,baz=225,slow=7.1,SNR=3.7						
TXAR	**Lajitas Array**	**82.19**	**57**	P	**P**	**04 57 06.3**	**+0.6**
	0.2nm,0.6s,baz=231,slow=5.7,SNR=2.9						

SEY	**Seymchan** 0.7nm,0.3s,baz=130,slow=4.2,SNR=7.3	**82.83**	**346**	P	**P**	**04 57 07.9**	**-0.2**
ILAR	**Eielson Array** 0.6nm,0.7s,baz=220,slow=5.4,SNR=8.7	**83.41**	**12**	P	**P**	**04 57 10.4**	**-0.6**
PDAR	**Pinedale Array** 0.2nm,0.6s,baz=232,slow=4.4,SNR=3.2	**83.74**	**42**	P	**P**	**04 57 13.3**	**-0.2**
YKA	**Yellowknife Ar** 0.3nm,0.9s,baz=244,slow=4.9,SNR=3.8	**91.31**	**24**	P	**P**	**04 57 49.1**	**+0.2**
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=108,slow=2.9,SNR=1.7	**91.48**	**289**	P	**P**	**04 57 52.1**	**+1.4**
UPC	**Upice**	**144.57**	**348**	*e*PKP	**PKPdf**	**05 04 18.2**	**-0.3**
DPC	**Dobruska-Polom**	**144.66**	**348**	*e*PKP	**PKPdf**	**05 04 19.0**	**+0.3**
MORC	**Moravsky Berou**	**144.93**	**346**	*e*PKP	**PKPdf**	**05 04 19.0**	**-0.2**
PRU	**Pruhonice**	**145.34**	**349**	*e*PKP	**PKPab**	**05 04 20.7**	**0.0**
VRAC	**Vranov**	**145.58**	**347**	*e*PKP	**PKPab**	**05 04 22.4**	**+0.7**
BRTR	**Keskin Array B** 1.5nm,0.7s,baz=98,slow=2.8,SNR=7.8	**145.77**	**319**	PKPbc	**PKPbc**	**05 04 22.0**	**-0.1**
KRUC	**Moravsky**	**145.86**	**347**	*e*PKP	**PKPbc**	**05 04 21.7**	**-0.1**
MLR	**Muntele Rosu** 2.3nm,0.7s,baz=196,slow=4.9,SNR=5.9	**145.88**	**334**	PKPbc	**PKPab**	**05 04 23.0**	**-0.1**
KHC	**Kasperske Hory**	**146.34**	**350**	*e*PKP	**PKPab**	**05 04 24.0**	**-0.7**
GERES	**GERESS Array B** 0.6nm,0.6s,baz=26,slow=3.4,SNR=6.8	**146.59**	**350**	PKPbc	**PKPbc**	**05 04 24.2**	**+0.1**

IDC 17 04:56:24.2±1.6**, 2°.15S×137°.74E, h0^{km}, mb3.1**/2**, mb1 3.3**/4**, mb1mx3.2**/26**, mbtmp3.1**/4**, ML2.9**/2**, Error ellipse: s-maj=40.7km s-min=30.6km az=75.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura** 1.0nm,0.3s,baz=260,slow=19,SNR=1.5	**2.99**	**97**	Pn	Pn	04 57 12.9	0.0
JAY	1.1nm,0.3s,baz=180,slow=20,SNR=1.7			Sn	Sn	04 57 45.2	-4.2
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=12,slow=12,SNR=1.5	**17.99**	**190**	P	Pn	05 00 35.9	0.0
ASAR	**Alice Springs** 0.4nm,0.7s,baz=14,slow=11,SNR=4.8	**21.70**	**190**	P	P	05 01 17.0	0.0
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=104,slow=8.6,SNR=5.2	**68.76**	**323**	P	P	05 07 30.1	0.0

IDC ***17*** *05:04:45.2±0.9, 24°.01N×121°.89E, h0^{km}, mb3.4/7, mb1 3.6/7, mb1mx3.4/55, mbtmp3.4/7, MS2.6/1, Ms1 2.8/1, ms1mx2.3/33, Error ellipse: s-maj=63.3km s-min=18.9km az=67.0*

JMA ***17*** *05:04:51.4±0.1, 24°.02N×121°.69E, h43^{km}±2^{km}, M3.3*

ISCJB ***17*** *05:04:52.6±0.2, 24°.06N±0°.01×121°.74E±0°.01, h35^{km}, mb3.3/7, MS2.4/1, Error ellipse: s-maj=2.0km s-min=1.5km az=138.4*

TAP ***17*** *05:04:52.4, 24°.07N×121°.68E, h43^{km}, ML4.1, B*

ISC 17 05:04:51.8±0.7**, 24°.07N**±0°.02×**121°.71E**±0°.02**, h35^{km}, n138, σ1^{s}72**/198**, mb3.5**/7**, 9C-34D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=280	**0.11**	**274**	⇓P	**Pn**	**05 04 59.5**	**+1.7**
TWD	baz=280			S	**Sn**	**05 05 04.3**	**+2.3**
HWA	**Hwalien** baz=214	**0.14**	**226**	*e*P	**Pn**	**05 05 00.0**	**+2.0**
HWA	baz=214			*e*S	**Sn**	**05 05 05.8**	**+3.5**
NACB	**Ninganchiao** baz=311	**0.15**	**313**	⇓P	**Pn**	**05 04 59.6**	**+1.5**
NACB	baz=311			S	**Sn**	**05 05 04.4**	**+1.8**
ENLB	**Shoufeng** baz=197	**0.20**	**211**	⇑*e*P	**Pn**	**05 05 00.2**	**+1.6**
ENLB	baz=197			*e*S	**Sn**	**05 05 07.1**	**+3.9**
ETLH	**Xiulin Townshi** baz=301	**0.25**	**303**	⇓P	**Pn**	**05 05 00.3**	**+1.1**
ETLH	baz=301			*e*S	**Sn**	**05 05 05.8**	**+1.5**
ENA	**Nanau** baz=6.0	**0.35**	**4**	P	**Pn**	**05 05 01.5**	**+1.1**
ENA	baz=6.0			*e*S	**Sn**	**05 05 09.0**	**+2.6**
NANB	**Nanao** baz=6.0	**0.36**	**6**	⇑P	**Pn**	**05 05 01.5**	**+1.0**
NANB	baz=6.0			S	**Sn**	**05 05 08.6**	**+2.2**
ESL	**Shilin** baz=228	**0.36**	**225**	⇓P	**Pn**	**05 05 01.0**	**+0.5**
ESL	baz=228			*e*S	**Sn**	**05 05 06.9**	**+0.4**
WHF	**Hehuan Shan** baz=278	**0.41**	**280**	⇓P	**Pn**	**05 05 02.3**	**+0.7**
WHF	baz=278			S	**Sn**	**05 05 09.0**	**+0.6**
NNSB	**Datong** baz=329	**0.47**	**320**	⇓P	**Pn**	**05 05 03.0**	**+0.9**
NNSB	baz=329			*e*S	**Sn**	**05 05 09.6**	**+0.5**
EGFH	**Guangfu** baz=221	**0.48**	**213**	*e*P	**Pn**	**05 05 02.3**	**+0.2**
NNS	**Nan Shan** baz=329	**0.48**	**320**	⇓P	**Pn**	**05 05 03.1**	**+0.9**
NNS	baz=329			S	**Sn**	**05 05 10.6**	**+1.0**
CHGB	**Renai** baz=266	**0.49**	**269**	⇓P	**Pn**	**05 05 03.4**	**+0.9**
CHGB	baz=266			S	**Sn**	**05 05 10.7**	**+0.7**
OWD	**Renai** baz=260	**0.50**	**257**	⇓P	**Pn**	**05 05 03.4**	**+0.8**
OWD	baz=260			*e*S	**Sn**	**05 05 10.5**	**+0.3**
TDCB	**Techi** baz=291	**0.54**	**290**	⇓P	**Pn**	**05 05 04.1**	**+1.1**
TWC	**Suao** baz=24	**0.55**	**13**	⇑*e*P	**Pn**	**05 05 04.3**	**+1.2**
TWC	baz=24			*e*S	**Sn**	**05 05 13.7**	**+2.6**
NDT	**Datong Townshi** baz=344	**0.56**	**341**	⇓*i*P	**Pn**	**05 05 04.3**	**+1.0**
NDT	baz=344			*e*S	**Sn**	**05 05 12.3**	**+1.0**
ENTT	**Nioudou** baz=350	**0.58**	**347**	⇓*i*P	**Pn**	**05 05 04.5**	**+0.9**
ENTT	baz=350			*e*S	**Sn**	**05 05 12.6**	**+0.7**
EOS1	**EOS1** baz=52	**0.61**	**39**	⇑P	**Pn**	**05 05 06.2**	**+2.3**
VWDT	**VWDT** baz=233	**0.61**	**239**	⇓P	**Pn**	**05 05 05.0**	**+1.0**
VWDT	baz=233			S	**Sn**	**05 05 13.2**	**+0.6**
HGSD	**Ruisui** baz=214	**0.64**	**205**	*e*P	**Pn**	**05 05 05.1**	**+0.8**
HGSD	baz=214			*e*S	**Sn**	**05 05 14.9**	**+1.8**
TWE	**Neicheng** baz=354	**0.65**	**356**	⇓*e*P	**Pn**	**05 05 05.5**	**+1.0**
EHY	**Hungye** baz=210	**0.67**	**212**	⇑P	**Pn**	**05 05 04.3**	**-0.4**
YHNB	**Yeheng** baz=335	**0.67**	**333**	⇓P	**Pn**	**05 05 05.9**	**+1.0**
YHNB	baz=335			S	**Sn**	**05 05 14.6**	**+0.4**
NSK	**Sanguang** baz=334	**0.68**	**332**	⇓*i*P	**Pn**	**05 05 06.0**	**+1.0**
NSK	baz=334			*e*S	**Sn**	**05 05 14.4**	**-0.1**
ILA	**Ilan** baz=360	**0.69**	**3**	*e*P	**Pn**	**05 05 05.8**	**+0.7**
NWLT	**Wulai** baz=341	**0.73**	**345**	*e*P	**Pn**	**05 05 06.5**	**+0.9**
NWLT	baz=341			*e*S	**Sn**	**05 05 15.9**	**+0.4**
WHP	**Taichung City** baz=287	**0.73**	**286**	⇓*i*P	**Pn**	**05 05 06.9**	**+1.3**
WHP	baz=287			*e*S	**Sn**	**05 05 17.4**	**+1.8**
SSLB	**Suanglung** baz=247	**0.75**	**248**	⇓P	**Pn**	**05 05 06.6**	**+0.7**
SSLB	baz=247			*e*S	**Sn**	**05 05 15.8**	**-0.2**
SMLT	**Sun Moon Lake** baz=251	**0.77**	**256**	⇓P	**Pn**	**05 05 07.1**	**+0.9**
SMLT	baz=251			S	**Sn**	**05 05 17.0**	**+0.4**
YULB	**Yu-li** baz=207	**0.78**	**209**	⇑P	**Pn**	**05 05 05.7**	**-0.5**
NTC	**Toucheng** baz=3.0	**0.79**	**8**	*e*P	**Pn**	**05 05 07.8**	**+1.5**
EGS	baz=18	**0.80**	**15**	*e*P	**Pn**	**05 05 08.9**	**+2.4**
TYC	**Yuchr** baz=254	**0.80**	**258**	⇓*i*P	**Pn**	**05 05 07.5**	**+1.0**
TYC	baz=254			*e*S	**Sn**	**05 05 17.3**	**+0.1**
TWF1	**Yuli** baz=214	**0.81**	**208**	⇑*i*P	**Pn**	**05 05 06.3**	**-0.4**
LIOB	**Emei** baz=313	**0.85**	**312**	⇓*i*P	**Pn**	**05 05 08.7**	**+1.4**
LIOB	baz=313			S	**Sn**	**05 05 19.8**	**+1.1**
NSTT	**Nanjuang** baz=312	**0.85**	**311**	⇓P	**Pn**	**05 05 09.3**	**+2.0**
NSTT	baz=312			S	**Sn**	**05 05 20.4**	**+1.8**
WHYT	**Xinyi Township** baz=242	**0.87**	**245**	⇓*e*P	**Pn**	**05 05 09.0**	**+1.4**
WLTB	**Daxi** baz=338	**0.88**	**332**	⇓P	**Pn**	**05 05 09.7**	**+2.0**
WLTB	baz=338			*e*S	**Sn**	**05 05 21.2**	**+1.9**
TWQ1	**Liyutan** baz=289	**0.90**	**288**	⇓P	**Pn**	**05 05 09.8**	**+1.8**
TWQ1	baz=289			S	**Sn**	**05 05 21.9**	**+2.1**
TIPB	**Shuangxi** baz=1.0	**0.90**	**7**	*e*P	**Pn**	**05 05 09.8**	**+1.8**
TIPB	baz=1.0			*e*S	**Sn**	**05 05 22.8**	**+2.9**
NHDH	**Xindian Distri** baz=351	**0.90**	**349**	*e*P	**Pn**	**05 05 09.5**	**+1.5**
NHDH	baz=351			*e*S	**Sn**	**05 05 21.4**	**+1.6**
TWA	**Mucha** baz=346	**0.91**	**353**	⇑P	**Pn**	**05 05 09.7**	**+1.6**
TWA	baz=346			*e*S	**Sn**	**05 05 21.3**	**+1.2**
TATO	**Taipei** baz=349	**0.92**	**347**	*e*P	**Pn**	**05 05 09.6**	**+1.4**
TATO	baz=349			*e*S	**Sn**	**05 05 21.6**	**+1.3**
NSY	**Sanyi** baz=292	**0.93**	**292**	⇓*i*P	**Pn**	**05 05 10.4**	**+2.0**
NSY	baz=292			S	**Sn**	**05 05 23.1**	**+2.5**
WJS	**Zhushan** baz=255	**0.93**	**255**	⇓*e*P	**Pn**	**05 05 10.5**	**+2.1**
WJS	baz=255			*e*S	**Sn**	**05 05 23.0**	**+2.4**
TCU	**Taichung** baz=275	**0.95**	**275**	*e*P	**Pn**	**05 05 10.3**	**+1.7**
NMLH	**Miaoli** baz=300	**0.96**	**299**	*e*P	**Pn**	**05 05 10.6**	**+1.9**
WNT	**Mingjian** baz=258	**0.96**	**259**	⇓*i*P	**Pn**	**05 05 10.9**	**+2.2**
WNT	baz=258			S	**Sn**	**05 05 24.0**	**+2.8**
TWB1	**Santiao Chiao** baz=27	**0.97**	**15**	*e*P	**Pn**	**05 05 10.9**	**+2.1**
TWB1	baz=27			*e*S	**Sn**	**05 05 23.9**	**+2.5**
SBCB	**Hsinchu** baz=318	**0.98**	**317**	*e*P	**Pn**	**05 05 10.7**	**+1.7**
SBCB	baz=318			*e*S	**Sn**	**05 05 24.4**	**+2.8**
TAP1	**Taipei** baz=351	**0.98**	**350**	*e*P	**Pn**	**05 05 09.0**	**0.0**
HSN	**Hsinchu** baz=321	**0.99**	**317**	*e*P	**Pn**	**05 05 11.0**	**+1.8**
NWF	**Wu-fen Shan** baz=355	**1.00**	**4**	*e*P	**Pn**	**05 05 11.6**	**+2.3**
WFSB	**Wu-fen Shan** baz=355	**1.00**	**4**	*e*P	**Pn**	**05 05 10.8**	**+1.5**
WFSB	baz=355			S	**Sn**	**05 05 24.1**	**+2.0**
ALS	**Alishan** baz=235	**1.00**	**236**	⇓P	**Pn**	**05 05 11.0**	**+1.4**
NCUH	**Zhongli** baz=333	**1.01**	**332**	*e*P	**Pn**	**05 05 11.1**	**+1.6**
NCUH	baz=333			*e*S	**Sn**	**05 05 25.6**	**+3.1**
NCU	**National Centr** baz=333	**1.01**	**332**	*e*P	**Pn**	**05 05 11.3**	**+1.8**
NCU	baz=333			*e*S	**Sn**	**05 05 24.8**	**+2.3**
WDJ	**Dajia District** baz=286	**1.02**	**286**	⇓P	**Pn**	**05 05 11.2**	**+1.7**
WDJ	baz=286			*e*S	**Sn**	**05 05 24.5**	**+1.9**
CHKT	**Chengkung** baz=186	**1.02**	**198**	*e*P	**Pn**	**05 05 09.7**	**+0.1**
WCHH	**Zhanghua** baz=270	**1.05**	**271**	*e*P	**Pn**	**05 05 11.7**	**+1.7**
WCHH	baz=270			*e*S	**Sn**	**05 05 26.9**	**+3.4**
CHN5	**Tsauling** baz=243	**1.06**	**244**	*e*P	**Pn**	**05 05 12.0**	**+1.8**
TWS1	**Kuangyinshan** baz=347	**1.06**	**345**	*e*P	**Pn**	**05 05 11.3**	**+1.2**
YM01	**YM01** baz=355	**1.08**	**353**	*e*P	**Pn**	**05 05 11.4**	**+1.0**
ELDTW	**Lidau** baz=208	**1.09**	**216**	*e*P	**Pn**	**05 05 10.5**	**-0.1**
YM04	**YM04** baz=353	**1.09**	**352**	*e*P	**Pn**	**05 05 12.1**	**+1.6**
YM05	**YM05** baz=355	**1.09**	**353**	*e*P	**Pn**	**05 05 11.4**	**+0.7**
YM11	**YM11** baz=355	**1.10**	**353**	*e*P	**Pn**	**05 05 11.1**	**+0.4**
NTST	**Danshui** baz=349	**1.11**	**348**	*e*P	**Pn**	**05 05 12.1**	**+1.3**
YM08	**YM08** baz=343	**1.12**	**354**	*e*P	**Pn**	**05 05 11.4**	**+0.4**
WGK	**Gukeng** baz=250	**1.12**	**250**	*e*P	**Pn**	**05 05 12.5**	**+1.6**
WDLH	**Douliu** baz=251	**1.14**	**251**	*e*P	**Pn**	**05 05 13.3**	**+2.1**
WDLH	baz=251			*e*S	**Sn**	**05 05 29.8**	**+4.2**
JYNG	**Yonagunijimaku**	**1.19**	**71**	P	**Pn**	**05 05 13.2**	**+1.3**
JYNG				*e*S	**Sn**	**05 05 28.1**	**+1.3**
TWY	**Chenhua** baz=344	**1.20**	**355**	*e*P	**Pn**	**05 05 13.8**	**+1.7**
YOJ	**Yonaguni jima** baz=71	**1.25**	**72**	*e*P	**Pn**	**05 05 13.8**	**+1.1**
YOJ	baz=71			*e*S	**Sn**	**05 05 29.6**	**+1.4**
YOJ	**Yonaguni jima**	**1.25**	**72**	P	**Pn**	**05 05 14.0**	**+1.3**
YOJ				*e*S	**Sn**	**05 05 29.2**	**+0.9**
RLNB	**Erlin** baz=272	**1.25**	**262**	*e*P	**Pn**	**05 05 14.8**	**+2.1**
RLNB	baz=272			*e*S	**Sn**	**05 05 31.4**	**+3.1**
CHN4	**Tsaushan** baz=225	**1.25**	**235**	*e*P	**Pn**	**05 05 14.9**	**+2.2**
CHN4	baz=225			S	**Sn**	**05 05 31.8**	**+3.4**
CHN2	**Minshiung** baz=245	**1.25**	**245**	*e*P	**Pn**	**05 05 15.8**	**+3.0**
CHN2	baz=245			*e*S	**Sn**	**05 05 32.7**	**+4.3**
TPUB	**Ta-pu** baz=222	**1.25**	**232**	*e*P	**Pn**	**05 05 15.1**	**+2.2**
TPUB	baz=222			*e*S	**Sn**	**05 05 30.9**	**+2.4**
STYT	**Tauyuan** baz=224	**1.26**	**224**	*e*P	**Pn**	**05 05 14.2**	**+1.3**
STYT	baz=224			*e*S	**Sn**	**05 05 30.7**	**+2.1**
WTP	**Ta-pu** baz=230	**1.30**	**231**	*e*P	**Pn**	**05 05 15.3**	**+1.8**
WTP	baz=230			*e*S	**Sn**	**05 05 32.4**	**+2.8**
CHY	**Chiayi** baz=234	**1.31**	**244**	*e*P	**Pn**	**05 05 15.6**	**+2.1**
CHY	baz=234			*e*S	**Sn**	**05 05 33.9**	**+4.1**
WTCT	**Ta-ch'eng** baz=274	**1.32**	**261**	*e*P	**Pn**	**05 05 15.5**	**+1.7**
WTCT	baz=274			*e*S	**Sn**	**05 05 32.7**	**+2.5**
TWG	**Pinlang** baz=194	**1.38**	**205**	*e*P	**Pn**	**05 05 14.0**	**-0.5**
TWGBT	**Beinan** baz=194	**1.38**	**205**	*e*P	**Pn**	**05 05 13.5**	**-1.0**
TWK	**Hsinying** baz=234	**1.38**	**235**	*e*P	**Pn**	**05 05 16.3**	**+1.7**
CHN1	**Nanshi** baz=231	**1.40**	**231**	*e*P	**Pn**	**05 05 16.7**	**+1.9**
SNST	**Tainan City** baz=232	**1.40**	**233**	*e*P	**Pn**	**05 05 16.8**	**+2.0**
SGST	**Jiashian** baz=217	**1.43**	**227**	⇑P	**Pn**	**05 05 17.5**	**+2.3**
SGST	baz=217			*e*S	**Sn**	**05 05 35.7**	**+2.9**
WSF	**Szhu** baz=265	**1.43**	**253**	*e*P	**Pn**	**05 05 16.9**	**+1.6**
WSF	baz=265			*e*S	**Sn**	**05 05 36.4**	**+3.6**
SLGT	**Liugui** baz=222	**1.45**	**223**	*e*P	**Pn**	**05 05 17.6**	**+2.1**
CHN8	**Yiju** baz=242	**1.55**	**243**	*e*P	**Pn**	**05 05 18.9**	**+2.0**
ECL	**Taimali** baz=196	**1.62**	**206**	*e*P	**Pn**	**05 05 18.3**	**+0.4**
SSD	**Sandimen** baz=205	**1.65**	**217**	*e*P	**Pn**	**05 05 20.3**	**+2.0**
MASBT	**Mashibuluo** baz=214	**1.76**	**215**	*e*P	**Pn**	**05 05 20.7**	**+0.9**
EAST	**Anshuo** baz=199	**1.86**	**205**	*e*P	**Pn**	**05 05 22.4**	**+1.2**
IRIF	**Iriomote-Funau**	**1.86**	**82**	P	**Pn**	**05 05 22.4**	**+1.3**
IRIF				S	**Sn**	**05 05 44.9**	**+1.5**
HATJ	**Hateruma jima**	**1.91**	**90**	P	**Pn**	**05 05 23.7**	**+1.9**
HATJ				*e*S	**Sn**	**05 05 46.3**	**+1.6**
SCZT	**Fangliau** baz=200	**1.97**	**211**	*e*P	**Pn**	**05 05 25.3**	**+2.7**
PHUB	**P'eng-hu** baz=269	**2.04**	**255**	*e*P	**Pn**	**05 05 23.9**	**+0.3**
PHUB	baz=269			*e*S	**Sn**	**05 05 48.6**	**+0.8**
PNG	**Penghu** baz=256	**2.04**	**256**	*e*P	**Pn**	**05 05 24.2**	**+0.6**
WDGT	**Dungji** baz=247	**2.05**	**247**	*e*P	**Pn**	**05 05 25.0**	**+1.3**
JKRS	**Kuro-shima**	**2.10**	**85**	P	**Pn**	**05 05 26.3**	**+1.8**
JKRS				S	**Sn**	**05 05 51.7**	**+2.3**
JIJ	**Ishigaki jima**	**2.24**	**82**	P	**Pn**	**05 05 27.5**	**+1.2**
JIJ				S	**Sn**	**05 05 53.3**	**+0.6**
VWUC	**VWUC** baz=294	**2.25**	**294**	*e*P	**Pn**	**05 05 26.7**	**+0.1**
VCHM	**Qimei** baz=237	**2.26**	**248**	*e*P	**Pn**	**05 05 28.0**	**+1.3**
VCHM	baz=237			*e*S	**Sn**	**05 05 54.4**	**+1.1**
PTTC	**Pingtan** baz=308	**2.27**	**309**	*e*P	**Pn**	**05 05 26.9**	**+0.2**
TWK1	**Hengchun** baz=193	**2.28**	**202**	*e*P	**Pn**	**05 05 28.8**	**+1.9**
TWKBT	**Hengchun** baz=193	**2.28**	**202**	*e*P	**Pn**	**05 05 28.8**	**+1.9**
JISG	**Ishigakijimahi**	**2.42**	**77**	P	**Pn**	**05 05 30.2**	**+1.3**
JISG				*e*S	**Sn**	**05 05 58.0**	**+0.6**
PTMZ	**Houxiangcun** baz=292	**2.55**	**293**	⇓*e*P	**Pn**	**05 05 30.7**	**+0.1**
MATB	**Ma-tsu** baz=321	**2.62**	**323**	*e*P	**Pn**	**05 05 32.2**	**+0.7**
JTJ	**Tarama**	**2.79**	**78**	P	**Pn**	**05 05 35.4**	**+1.6**
JTJ				*e*S	**Sn**	**05 06 07.6**	**+1.4**
KNM	**Kinmen** baz=276	**3.01**	**277**	*e*P	**Pn**	**05 05 38.9**	**+2.0**
LYJJ	**Jianjiangzhen** baz=323	**3.04**	**325**	*e*P	**Pn**	**05 05 37.8**	**+0.5**
KNMB	**Chin-men Tao** baz=278	**3.06**	**278**	⇓*e*P	**Pn**	**05 05 37.7**	**+0.1**
MHZQ	**Yeshan** baz=309	**3.16**	**310**	*e*P	**Pn**	**05 05 39.4**	**+0.4**
XPSS	**Dashiqiu** baz=333	**3.16**	**335**	*e*P	**Pn**	**05 05 39.1**	**+0.1**
JIRB	**Irabujima**	**3.24**	**76**	P	**Pn**	**05 05 41.6**	**+1.5**
JIRB				S	**Sn**	**05 06 18.6**	**+1.1**
JIKM	**Ikemajima**	**3.33**	**75**	S	**Sn**	**05 06 20.5**	**+0.8**
AXDP	**Jialang** baz=284	**3.51**	**284**	⇓*e*P	**Pn**	**05 05 44.2**	**+0.4**
ZPLA	**Ao Xicun** baz=269	**3.63**	**269**	⇓*e*P	**Pn**	**05 05 45.8**	**+0.4**
ZPLA	baz=269			*e*S	**Sn**	**05 06 25.6**	**-1.4**
ZZJH	**Jiuhuzhen** baz=276	**3.75**	**277**	*e*P	**Pn**	**05 05 47.5**	**+0.4**
CMAR	**Chiang Mai Arr** comp=Z,14nm,19.2s,baz=205,slow=36	**21.93**	**260**	LR	LR	05 18 00.4	
SONM	**Songino Array** 0.2nm,0.6s,baz=135,slow=9.0,SNR=2.2	**26.66**	**337**	P	**P**	**05 10 27.5**	**+0.1**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=102,slow=10,SNR=9.3	**38.75**	**316**	P	**P**	**05 12 13.2**	**+0.4**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,baz=123,slow=7.9,SNR=3.7	**40.60**	**327**	P	**P**	**05 12 27.1**	**-0.8**
H11N1	**WAKE ISLAND Hy** baz=283	**42.01**	**87**	T	T	05 57 57.7	
H11N2	**WAKE ISLAND Hy** baz=283	**42.01**	**87**	T	T	05 58 05.7	
H11N3	**WAKE ISLAND Hy** baz=283	**42.03**	**87**	T	T	05 57 58.9	
H11S3	**WAKE ISLAND Hy** baz=285	**42.14**	**89**	T	T	05 58 04.8	
H11S1	**WAKE ISLAND Hy** baz=285	**42.15**	**89**	T	T	05 58 14.6	
H11S2	**WAKE ISLAND Hy** baz=285	**42.16**	**89**	T	T	05 58 03.2	
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=344,slow=8.8,SNR=4.0	**45.45**	**163**	P	**P**	**05 13 05.1**	**-2.4**
ASAR	**Alice Springs** 0.1nm,0.3s,baz=338,slow=9.0,SNR=3.5	**48.91**	**165**	P	**P**	**05 13 32.4**	**-2.0**
FINES	**FINESS Array B** 0.5nm,0.7s,baz=78,slow=7.3,SNR=3.2	**71.78**	**330**	P	**P**	**05 16 09.4**	**-1.0**
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=314,slow=5.1,SNR=7.5	**82.88**	**23**	P	**P**	**05 17 11.6**	**-0.9**

IDC 17 05:10:00.2±28.0**, 16°.21S×174°.64W, h0^{km}, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.7**/48**, mbtmp4.1**/4**, MS4.5**/1**, Ms1 4.5**/1**, ms1mx2.9**/40**, Error ellipse: s-maj=565.6km s-min=156.6km az=86.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island** comp=Z,2µm,19.6s,baz=14,slow=31	**13.33**	**193**	LR	LR	05 16 58.9	
STKA	**Stephens Creek** 1.1nm,0.4s,baz=82,slow=10,SNR=5.0	**42.60**	**240**	P	P	05 17 58.6	+0.2
WRA	**Warramunga Arr** 0.8nm,0.5s,baz=94,slow=7.2,SNR=8.0	**48.51**	**258**	P	P	05 18 45.0	-0.3
ASAR	**Alice Springs** 8.8nm,0.6s,baz=89,slow=8.1,SNR=110	**48.73**	**253**	P	P	05 18 46.5	-0.6
FITZ	**Fitzroy Crossi** 0.9nm,0.7s,baz=90,slow=5.1,SNR=3.8	**56.88**	**259**	P	P	05 19 47.6	+0.3

ISCJB ***17*** *05:10:42.8±0.9, 6°.82S±0°.09×127°.9E±0°.1, h350^{km}, mb3.2/3, Error ellipse: s-maj=17.3km s-min=12.4km az=14.8*

IDC ***17*** *05:10:42.8±4.6, 6°.72S×127°.86E, h326^{km}±53^{km}, mb2.9/3, mb1 3.3/6, mb1mx3.0/40, mbtmp3.9/6, Error ellipse: s-maj=60.7km s-min=19.0km az=56.0*

ISC 17 05:10:44.6±1.1**, 6°.81S**±0°.10×**127°.8E**±0°.2**, h350^{km}, n7, σ1^{s}11**/9**, mb3.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata** 67nm,0.3s,baz=57,slow=2.6,SNR=17	**5.26**	**230**	P	**Pn**	**05 12 06.3**	**-0.9**
BATI	12nm,0.3s,baz=68,slow=22,SNR=5.6			S	**S**	**05 13 12.9**	**-1.0**
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=4.4,slow=13,SNR=12	**11.41**	**190**	P	**P**	**05 13 20.2**	**+0.5**
FITZ	0.1nm,0.3s,baz=331,slow=11,SNR=2.3			S	**S**	**05 15 28.3**	**+1.5**
WRA	**Warramunga Arr** 1.2nm,0.3s,baz=331,slow=12,SNR=39	**14.54**	**155**	P	**P**	**05 13 52.7**	**-1.5**
ASAR	**Alice Springs** 1.4nm,0.3s,baz=345,slow=12,SNR=159	**17.77**	**161**	P	**P**	**05 14 29.1**	**-0.1**
SONM	**Songino Array** 0.4nm,0.8s,baz=157,slow=5.5,SNR=3.3	**57.58**	**343**	P	**P**	**05 19 59.5**	**+0.5**
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=124,slow=7.3,SNR=11	**66.86**	**328**	P	**P**	**05 21 00.5**	**+0.6**
ZALV	**Zalesovo Beam** 0.5nm,0.6s,baz=145,slow=5.3,SNR=2.7	**70.44**	**335**	P	**P**	**05 21 21.4**	**-0.2**

*ISCJB **17** 05:18:05.3±0.2, 57°.57N±0°.03×156°.92W±0°.04, h132^{km}±2^{km}, mb3.8/27, Error ellipse: s-maj=5.3km s-min=2.8km az=144.7*

*IDC **17** 05:18:07.1±0.6, 57°.76N×157°.03W, h129^{km}±4^{km}, mb3.5/21, mb1 3.7/24, mb1mx3.6/58, mbtmp4.0/24, Error ellipse: s-maj=14.0km s-min=8.5km az=15.0*

*NEIC **17** 05:18:07.6±0.0, 57°.45N×156°.82W, h123^{km}, mb4.2/6, ML4.3(AEIC), After AEIC.*

ISC 17 05:18:06.5±0.5, **57°.59N**±0°.05×**156°.83W**±0°.04, **h129**^{km}±3^{km}, **n155**, σ**1^s.43**/180, **mb3.9**/29, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLBL	Peulik Blue Cr	0.11	3	P	Pn	05 18 24.1	0.0
PLK1	Peulik 1	0.25	29	P	Pn	05 18 24.6	+0.4
PLK3	Peulik 3	0.32	71	P	Pn	05 18 25.0	+0.5
PLK3				S	Sn	05 18 38.7	+0.5
PLK5	Peulik 5	0.41	357	P	Pn	05 18 25.7	+0.8
KJL	Kejulik	0.82	55	P	Pn	05 18 28.3	+0.6
CNTC	Contact Creek	0.85	36	P	Pn	05 18 28.8	+0.8
ANCK	Angle Creek	0.94	49	P	Pn	05 18 29.7	+0.9
CAHL	Cahill	0.94	60	P	Pn	05 18 29.3	+0.5
ANNE	Aniakchak Nort	0.95	225	P	Pn	05 18 27.9	-1.0
ANNE				S	Sn	05 18 44.0	-1.8
ANPK	Aniakchak Peak	1.03	224	P	Pn	05 18 28.5	-1.1
KELA	Mount Kelaz	1.03	34	P	Pn	05 18 30.4	+0.8
KABU	Katmai Buttres	1.07	50	P	Pn	05 18 30.9	+0.9
KABU				S	Sn	05 18 49.0	+1.1
KAKN	Katmai Knife C	1.18	52	P	Pn	05 18 32.2	+1.0
KAKN				S	Sn	05 18 51.3	+1.5
KAHG	Katmai Hook Gl	1.52	52	P	Pn	05 18 35.8	+1.0
CHGN	Chignik	1.55	215	P	Pn	05 18 33.5	-1.5
CHGN				S	Sn	05 18 53.6	-3.2
SII	Sitkinak Islan	1.78	124	P	Pn	05 18 36.4	-1.3
SII				S	Sn	05 18 59.7	-1.8
VNHG	Veniaminof 1	1.88	224	P	Pn	05 18 38.0	-0.9
OHAK	Old Harbor	1.95	99	P	Pn	05 18 39.1	-0.6
OHAK				S	Sn	05 19 03.8	-1.4
VNFG	Veniaminof 2	1.98	230	P	Pn	05 18 39.5	-0.8
VNSS	Veniaminof 8	1.98	228	P	Pn	05 18 39.3	-1.0
FONW	Fourpeaked Sta	1.98	50	P	Pn	05 18 41.4	+1.2
KDAK	Kodiak Island	2.29	83	P	Pn	05 18 44.0	+0.2
	545nm,0.3s,baz=183,slow=1.8						
KDAK				S	Sn	05 19 11.3	-1.3
	193nm,0.3s,baz=350,slow=22,SNR=4.5						
AUJK	Augustine Jueg	2.52	44	P	Pn	05 18 48.5	+1.7
AUL	Augustine Lava	2.53	43	P	Pn	05 18 48.3	+1.3
SDPT	Sand Point	3.02	224	P	Pn	05 18 51.3	-1.9
ILS	Iliamna Low So	3.08	38	P	Pn	05 18 55.8	+1.7
ILW	Iliamna West	3.14	36	P	Pn	05 18 56.4	+1.4
IVE	Iliamna Volcan	3.14	38	P	Pn	05 18 56.4	+1.5
HOM	Homer	3.42	50	P	Pn	05 19 00.0	+1.6
RED	Redoubt Volcan	3.53	35	P	Pn	05 19 01.5	+1.5
RDWB	Redoubt West	3.57	34	P	Pn	05 19 01.6	+1.1
RSO	Redoubt South	3.57	34	*e*Pn	Pn	05 19 02.2	+1.6
SVW2	Sparrevohn	3.58	10	P	Pn	05 19 01.7	+1.1
BRLK	Bradley Lake	3.79	52	P	Pn	05 19 03.5	+0.1
SPWE	Spurr West	4.29	29	P	Pn	05 19 11.6	+1.5
SPCR	Spurr Chakacha	4.33	31	P	Pn	05 19 12.6	+2.0
SPBG	Spurr Blockage	4.33	30	P	Pn	05 19 12.9	+2.4
SLKM	Skilak Lake	4.50	47	P	Pn	05 19 13.3	+0.6
FALS	False Pass	4.58	236	P	Pn	05 19 12.9	-1.0
SEW	Seward	4.59	54	P	Pn	05 19 14.0	+0.1
SUA	Susitna One	4.97	36	P	Pn	05 19 19.9	+0.8
RC01	Rabbit Creek A	5.05	43	P	Pn	05 19 20.3	+0.2
TT01	Tatalina	5.35	4	P	Pn	05 19 25.4	+1.3
WESP	Westdahl Peak	5.40	238	P	Pn	05 19 24.5	-0.5
PWL	Port Wells	5.46	49	P	Pn	05 19 25.2	-0.4
PMR	Palmer	5.60	41	P	Pn	05 19 27.5	0.0
KNK	Knik Glacier	5.73	45	P	Pn	05 19 29.0	-0.3
GHO	Glory Hole Cre	5.80	40	P	Pn	05 19 29.4	-0.8
MID	Middleton Isla	5.80	67	P	Pn	05 19 29.6	-0.6
PPLA	Purkeypile	5.81	22	P	Pn	05 19 33.1	+2.8
SML	Sawmill	6.03	42	P	Pn	05 19 32.5	-0.8
AKUT	Akutan	6.11	239	*e*Pn	Pn	05 19 33.9	-0.4
AHB	Akutan Harbor	6.14	239	P	Pn	05 19 33.4	-1.4
ZRO	Akutan Zero	6.23	240	P	Pn	05 19 34.7	-1.3
AKMO	Akutan Morgan	6.25	240	P	Pn	05 19 35.1	-1.1
JPK	Jack Peak	6.29	52	P	Pn	05 19 36.8	+0.1
CAST	Castle Rocks	6.30	20	*e*Pn	Pn	05 19 39.0	+2.1
VMT	TAPS Tl Valdez	6.40	52	P	Pn	05 19 38.5	+0.4
SCM	Sheep Creek Mo	6.42	44	P	Pn	05 19 38.0	-0.6
EYAK	Cordova Ski Ar	6.44	58	P	Pn	05 19 38.5	-0.2
HUR	Hurricane	6.48	30	P	Pn	05 19 39.6	+0.3
UNV	Unalaska Valle	6.62	240	P	Pn	05 19 39.5	-1.8
MTBL	Makushin Table	6.63	241	P	Pn	05 19 40.5	-1.0
DIV	Divide	6.67	53	P	Pn	05 19 42.0	+0.1
TRF	Thorofare Moun	6.71	26	P	Pn	05 19 42.9	+0.4
MSW	Makushin Switc	6.71	241	P	Pn	05 19 41.0	-1.6
MREP	Makushin Rep’t	6.76	240	P	Pn	05 19 42.0	-1.2
KLU	Klutina	6.79	50	P	Pn	05 19 43.1	-0.3
RND	Reindeer	7.04	31	P	Pn	05 19 46.5	-0.4
HMT	Hamilton	7.06	62	*e*Pn	Pn	05 19 47.8	+0.7
BPAW	Bear Paw Mtn.	7.13	21	P	Pn	05 19 48.5	+0.5
NICHA	Nichawak Mount	7.17	63	P	Pn	05 19 48.7	+0.1
DHY	Denali Highway	7.23	36	P	Pn	05 19 48.5	-1.0
SPIA	Saint Paul Isl	7.26	272	*e*Pn	Pn	05 19 50.0	+0.1
MCK	McKinley	7.28	29	P	Pn	05 19 50.2	+0.1
PS11	TAPS Pump St11	7.28	47	P	Pn	05 19 50.6	+0.6
BWN	Browne	7.51	25	*e*Pn	Pn	05 19 53.7	+0.5
KHIT	Khitrov Hills	7.57	62	P	Pn	05 19 53.9	-0.1
HARP	HAARP	7.58	46	P	Pn	05 19 55.0	+0.8
KULT	Kultieth River	7.77	64	P	Pn	05 19 56.8	+0.1
PAX	Paxson	7.80	42	P	Pn	05 19 56.8	-0.4
MCARA	McCarthy VSAT	7.99	56	P	Pn	05 19 59.7	+0.1
PS10	TAPS Pump St10	8.00	38	P	Pn	05 19 59.9	+0.2
MLY	Manley	8.02	19	P	Pn	05 19 59.8	-0.2
WRH	Wood River Hil	8.10	28	P	Pn	05 20 00.3	-0.7
ANM	Nome	8.13	333	P	Pn	05 20 02.6	+1.2
MESA	MESA	8.13	65	P	Pn	05 20 02.0	+0.3
CCB	Clear Creek Bu	8.31	28	*e*Pn	Pn	05 20 02.7	-1.2
HDA	Harding Lake	8.35	31	P	Pn	05 20 03.2	-1.2
MENT	Mentasta	8.43	45	P	Pn	05 20 05.9	+0.4
RKAV	Rock Avalanche	8.45	65	P	Pn	05 20 06.6	+0.6
MDM	Murphy Dome	8.47	26	*e*Pn	Pn	05 20 04.8	-1.2
COLA	College	8.49	27	P	Pn	05 20 05.4	-0.8
PS08	TAPS Pump Stn8	8.49	31	P	Pn	05 20 05.0	-1.3
RIDG	Independ’e Rid	8.52	39	P	Pn	05 20 06.6	-0.2
IM3	Indian Mountai	8.55	9	P	Pn	05 20 08.8	+1.7
IL1	Eielson Array	8.65	29	*e*Pn	Pn	05 20 06.7	-1.7
ILAR	Eielson Array	8.65	29	P	Pn	05 20 07.4	-1.1
	2.7nm,0.3s,baz=218,slow=13,SNR=248						
ILAR				S	Sn	05 21 38.8	-5.4
	6.5nm,0.3s,baz=219,slow=18,SNR=12						
ILAR				ScP	ScP	05 29 43.4	+0.2
	0.0nm,0.3s,baz=215,slow=2.2,SNR=4.2						
ILB	Eielson Array	8.65	29	*e*Pn	Pn	05 20 07.0	-1.4
PCA	Pinnacle	8.95	67	*e*Pn	Pn	05 20 13.1	+0.5
SCRK	Sand Creek	8.96	39	P	Pn	05 20 11.5	-1.2
BCPM	Bancas Point	9.24	68	P	Pn	05 20 16.5	+0.1
BCA3	Beaver Creek A	9.25	47	P	Pn	05 20 17.2	+0.6
YUK3	Moose Creek	9.27	56	P	Pn	05 20 18.0	+0.9
GAMB	Gambell	9.56	317	*e*Pn	Pn	05 20 22.2	+1.6
PRP	Porcupine Dome	9.60	29	P	Pn	05 20 19.1	-2.2
COLD	Coldfoot	10.14	15	*e*Pn	Pn	05 20 30.6	+2.1
EGAK	Eagle	10.42	40	*e*Pn	Pn	05 20 31.2	-1.0
FYU	Fort Yukon	10.50	26	*e*Pn	Pn	05 20 33.1	-0.1
DAWY	Dawson	10.68	45	*e*Pn	Pn	05 20 36.3	+0.6
RDOG	Red Dog Mine	10.86	348	*e*Pn	Pn	05 20 43.4	+5.4
SKAG	Skagway	11.38	71	*e*Pn	Pn	05 20 46.0	+0.9
SKAG				*e*Sn	Sn	05 22 50.6	+0.3
TOLK	Toolik Lake Re	11.56	13	*e*Pn	Pn	05 20 49.4	+2.0
BESE	Bessie Mountai	11.66	76	*e*Pn	P	05 20 55.8	-1.0
WHY	Whitehorse	11.67	66	*e*Pn	Pn	05 20 50.1	+1.1
JIS	Juneau Island	11.94	77	*e*Pn	Pn	05 20 53.8	+1.5
EPYK	Eagle Plains	12.85	39	*e*Pn	Pn	05 21 05.3	+1.1
KIWB	Kanaga Island	13.05	253	*e*Pn	Pn	05 21 05.8	-1.0
DLBC	Dease Lake	14.20	75	P	P	05 21 23.1	-2.0
	1.0nm,0.3s,baz=250,slow=9.4,SNR=22						
DLBC				S	Sn	05 23 55.8	-2.5
	0.4nm,0.3s,baz=112,slow=26,SNR=2.7						
INK	Inuvik	14.97	35	P	Pn	05 21 29.2	-1.9
	0.3nm,0.3s,baz=228,slow=9.7,SNR=20						
INK				S	S	05 24 20.6	-4.4
	0.2nm,0.3s,baz=15,slow=31,SNR=12						
BBB	Bella Bella	17.30	96	P	Pn	05 22 07.6	+7.8
	0.4nm,0.3s,baz=290,slow=15,SNR=2.7						
BBB				S	S	05 25 11.6	-1.1
	0.3nm,0.3s,baz=196,slow=16,SNR=1.8						
BILL	Bilibino	19.49	317	*e*P	Pn	05 22 23.6	-2.0
	8.3nm,0.9s						
YKW3	Yellowknife Ar	21.33	59	*e*P	P	05 22 44.0	+1.2
	13nm,1.2s						
YKA	Yellowknife Ar	21.34	59	P	P	05 22 43.8	+0.9
	2.4nm,0.6s,baz=278,slow=10,SNR=30						
YKA				PcP	PcP	05 26 41.8	+0.5
	0.1nm,0.5s,baz=282,slow=2.0,SNR=4.6						
YKA				ScP	ScP	05 30 06.1	+0.1
	0.5nm,0.7s,baz=285,slow=2.3,SNR=9.7						
YKB5	Yellowknife Ar	21.34	59	*e*P	P	05 22 44.0	+1.0
SEY	Seymchan	25.18	304	P	P	05 23 18.1	-1.4
	1.2nm,0.4s,baz=92,slow=7.5,SNR=5.4						
NEW	Newport	25.35	94	pP	pP	05 23 49.9	+1.3
	2.0nm,0.8s,baz=279,slow=19,SNR=2.6						
PETK	Petropavlovsk-	25.85	280	P	P	05 23 25.6	-0.1
	3.7nm,0.5s,baz=80,slow=11,SNR=24						
YBH	Yreka Blue Hor	26.81	111	P	P	05 23 37.3	+2.8
	3.8nm,0.8s,baz=343,slow=5.3,SNR=11						
VCNR	Virginia City	30.18	111	*e*P	P	05 24 07.5	+3.0
	4.3nm,0.9s						
PNTR	Pine Nut	30.36	111	*e*P	P	05 24 09.3	+3.1
	5.8nm,0.8s						
NV01	Mina Array Sit	31.52	111	*e*P	P	05 24 18.5	+2.2
NVAR	Mina Array Bea	31.52	111	P	P	05 24 18.9	+2.6
	2.2nm,0.7s,baz=308,slow=9.0,SNR=20						
NVAR				pP	pP	05 24 46.9	+2.8
	1.0nm,0.8s,baz=318,slow=8.5,SNR=3.2						
NVAR				ScP	ScP	05 30 38.6	+1.8
	0.2nm,0.6s,baz=307,slow=3.3,SNR=2.2						
MDPB	Devils Postpil	31.75	113	*e*P	P	05 24 21.5	+3.1
	2.9nm,0.7s						
PDAR	Pinedale Array	32.95	96	P	P	05 24 29.5	+0.7
	0.6nm,0.6s,baz=314,slow=3.3,SNR=6.1						
PDAR				pP	pP	05 24 58.6	+1.9
	0.5nm,0.6s,baz=340,slow=3.0,SNR=3.6						
SRU	San Rafael Swe	35.03	102	*e*P	P	05 24 49.3	+2.6
	4.1nm,0.7s						
ULM	Lac du Bonnet	35.52	75	P	P	05 24 51.7	+1.1
	0.5nm,0.3s,baz=305,slow=6.2,SNR=3.2						
FRB	Frobisher Bay	40.37	43	P	P	05 25 31.7	+0.6
	0.8nm,0.4s,baz=302,slow=9.5,SNR=9.1						
FRB				pP	pP	05 26 00.1	+0.2
	1.0nm,0.6s,baz=312,slow=6.3,SNR=2.2						
TXAR	Lajitas Array	46.16	104	P	P	05 26 19.7	+1.6
	1.3nm,0.7s,baz=309,slow=5.8,SNR=20						
TXAR				PcP	PcP	05 27 52.2	+0.4
	0.2nm,0.5s,baz=179,slow=1.7,SNR=4.0						
SCHQ	Schefferville	46.59	53	P	P	05 26 21.4	+0.4
	1.0nm,0.5s,baz=313,slow=6.9,SNR=5.8						
SCHQ				pP	pP	05 26 49.6	-0.9
	1.2nm,0.7s,baz=314,slow=9.5,SNR=1.7						
MJAR	Matsushiro Arr	46.91	273	P	P	05 26 22.9	-0.8
	0.6nm,0.3s,baz=26,slow=5.6,SNR=4.3						
KSRS	Korea Array	51.73	281	P	P	05 26 59.4	-0.9
	1.3nm,0.7s,baz=33,slow=7.6,SNR=4.4						
ARCES	ARCESS Array B	53.17	359	P	P	05 27 08.8	-1.6
	4.7nm,1.2s,baz=7.5,slow=7.5,SNR=2.9						
SONM	Songino Array	54.56	305	P	P	05 27 20.9	-0.1
	0.9nm,0.6s,baz=45,slow=6.1,SNR=8.7						
SONM				pP	pP	05 27 51.0	-0.3
	1.2nm,0.7s,baz=44,slow=7.0,SNR=5.3						
SONM				ScP	ScP	05 32 14.1	+5.5
	0.2nm,0.5s,baz=54,slow=2.5,SNR=2.4						
ZALV	Zalesovo Beam	58.10	322	P	P	05 27 45.9	+0.1
	0.8nm,0.6s,baz=45,slow=8.6,SNR=4.4						
ZALV				pP	pP	05 28 15.2	-1.2
	0.8nm,0.6s,baz=42,slow=6.8,SNR=3.3						
FINES	FINESS Array B	61.28	358	P	P	05 28 06.9	-0.6
	0.6nm,0.5s,baz=352,slow=5.8,SNR=5.5						
FINES				pP	pP	05 28 40.2	+1.9
	1.8nm,0.9s,baz=352,slow=8.4,SNR=2.8						
MKAR	Makanchi Array	65.02	319	P	P	05 28 31.2	-1.2
	0.3nm,0.5s,baz=27,slow=4.9,SNR=5.7						
MKAR				pP	pP	05 29 03.3	-0.3
	1.5nm,0.8s,baz=41,slow=5.7,SNR=10						
AAK	Ala-Archa	71.32	323	pP	pP	05 29 44.7	+1.1
	1.3nm,0.6s,baz=353,slow=7.8,SNR=3.0						
AKASG	Malin Array Be	71.96	356	P	P	05 29 14.2	-1.2
	1.3nm,0.5s,baz=7.2,slow=6.1,SNR=3.0						
AKASG				pP	pP	05 29 47.3	+0.3
	1.2nm,0.6s,baz=6.4,slow=6.0,SNR=2.0						
GERES	GERESS Array B	73.64	7	P	P	05 29 25.3	-0.2
	0.1nm,0.3s,baz=350,slow=4.4,SNR=2.7						
PPT	Papeete	75.11	173	P	P	05 29 35.7	+1.6
	23nm,0.8s,baz=28,slow=17,SNR=2.3						
ESDC	Sonseca Array	80.45	21	P	P	05 30 05.0	+1.3
	0.2nm,0.5s,baz=343,slow=6.2,SNR=3.4						
CMAR	Chiang Mai Arr	81.98	292	P	P	05 30 11.5	-0.5
	1.1nm,0.5s,baz=14,slow=6.0,SNR=9.1						
USHA	Ushuaia	132.73	128	PKP	PKiKP	05 37 05.1	-0.7
	6.6nm,0.9s,baz=306,slow=8.7,SNR=2.4						
QSPA	South Pole Qui	147.38	180	PKPbc	PKiKP	05 37 33.2	-2.4
	6.4nm,0.8s,baz=73,slow=0.5,SNR=29						
QSPA				SKPbc	SKiKP	05 40 59.5	+0.1
	1.2nm,1.0s,baz=116,slow=1.6,SNR=3.1						

IDC 17 05:18:20.3±10.0, **6°.96S**×**116°.26E**, **h228**^{km}±118^{km}, **mb2.8**/3, **mb1 3.1**/4, **mb1mx2.8**/43, **mbtmp3.5**/4, **Error ellipse: s-maj=210.0km s-min=28.9km az=49.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	14.36	141	P	Pn	05 21 33.5	-0.2
	0.2nm,0.3s,baz=309,slow=12,SNR=4.9						
WRA	Warramunga Arr	21.78	128	P	P	05 22 54.5	+0.2
	0.8nm,0.6s,baz=309,slow=9.3,SNR=11						
ASAR	Alice Springs	23.73	136	P	P	05 23 11.9	-0.1
	0.4nm,0.4s,baz=313,slow=8.2,SNR=12						
MKAR	Makanchi Array	61.43	334	P	P	05 28 12.5	0.0
	0.2nm,0.6s,baz=140,slow=7.7,SNR=2.6						

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*DDA **17** 05:20:26.8, 35°.99N×28°.58E, h7^{km}±7^{km}, ML3.2*

*ATH **17** 05:20:27.8, 36°.12N×28°.62E, h55^{km}±3^{km}, ML2.5/3, Error ellipse: s-maj=3.7km s-min=1.3km az=1.0*

*ISCJB **17** 05:20:28.7±0.5, 36°.04N±0°.04×28°.61E±0°.03, h54^{km}±8^{km}, Error ellipse: s-maj=6.2km s-min=4.1km az=159.7*

*ISK **17** 05:20:28.9, 36°.07N×28°.64E, h31^{km}, ML2.7/8*

*THE **17** 05:20:29.9, 36°.04N×28°.63E, h36^{km}±5^{km}, ML2.5/4, Error ellipse: s-maj=5.1km s-min=0.9km az=310.0*

ISC 17 05:20:29.6±1.3, **36°.05N**±0°.04×**28°.62E**±0°.03, **h40**^{km}±15^{km}, **n49**, σ**0^s.54**/68, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.43	292	PG	Pn	05 20 39.0	-0.4
ARG				SG	Sn	05 20 46.8	+0.5
ARG	Arkhangelos	0.43	292	P	Pn	05 20 39.2	-0.2
ARG				S	Sn	05 20 46.9	+0.5
ARG				AML	AML	05 20 47.2	
	comp=N,794µm,0.4s						
ARG				AML	AML	05 20 48.6	
	comp=E,758µm,0.2s						
ARG	Arkhangelos	0.43	292	P	Pn	05 20 39.1	-0.4
ARG				S	Sn	05 20 46.7	+0.5
FETY	Fethiye	0.69	33	PG	Pn	05 20 42.3	-0.7
FETY	Fethiye	0.69	33	*i* P	Pn	05 20 42.8	-0.2
FETY				*i* S	Sn	05 20 53.1	+0.5
FETY				IAML_P			
	comp=Z,8µm,0.1s						
MRSB	Marmaris-Mugla	0.74	333	PG	Pn	05 20 43.3	-0.4
DALY	Dalyan (Mula)	0.76	2	PG	Pn	05 20 43.4	-0.5
DALY				SG	Sn	05 20 54.1	-0.1
DALY	Dalyan (Mula)	0.76	2	*i* P	Pn	05 20 43.8	0.0
DALY				*i* S	Sn	05 20 54.2	0.0
DALY				IAML_P			
	comp=Z,3µm,0.1s						
BBRN	Bozburun-Marma	0.77	324	PG	Pn	05 20 43.4	-0.6
KSL	Kastellorizon	0.79	83	P	Pn	05 20 43.8	-0.4
KSL				S	Sn	05 20 54.7	-0.1
KSL				AML	AML	05 20 54.9	
	comp=N,333µm,0.4s						
KSL				AML	AML	05 20 55.7	
	comp=E,614µm,0.4s						
KSL	Kastellorizon	0.79	83	P	Pn	05 20 43.7	-0.5
KSL				S	Sn	05 20 54.3	-0.5
TURN	Turunc	0.82	359	PG	Pn	05 20 43.8	-0.8
TURN	Turunc	0.82	359	*i* P	Pn	05 20 44.8	+0.2
TURN				*i* S	Sn	05 20 56.0	+0.4
TURN				IAML_P			
	comp=Z,4µm,0.1s						
AKAS	Kas	0.82	77	PG	Pn	05 20 44.2	-0.6
AKAS	Kas	0.82	77	*i* P	Pn	05 20 44.4	-0.4
AKAS				*i* S	Sn	05 20 56.7	+0.9
DATC	Datca-Mugla	1.05	313	PG	Pn	05 20 47.7	-0.1
DAT	Datca	1.08	309	PG	Pn	05 20 48.3	0.0
DAT	Datca	1.08	309	*i* P	Pn	05 20 48.4	+0.1
DAT				IAML_P			
	comp=Z,1µm,0.2s						
YER	Yerkesik	1.11	346	PN	Pn	05 20 48.5	-0.3
YER	Yerkesik	1.11	346	P	Pn	05 20 49.0	+0.2
YER				S	Sn	05 21 03.5	+0.6
ELL	Elmali	1.25	56	PN	Pn	05 20 50.3	-0.4
KARP	Karpathos	1.29	247	PN	Pn	05 20 51.6	+0.5
KARP	Karpathos	1.29	247	P	Pn	05 20 51.4	+0.2
KARP				S	Sn	05 21 07.6	+0.4
KARP				AML	AML	05 21 08.6	
	comp=N,370µm,0.2s						
KARP				AML	AML	05 21 09.0	
	comp=E,479µm,0.1s						
KARP	Karpathos	1.29	247	P	Pn	05 20 51.3	+0.2
KARP				S	Sn	05 21 07.0	-0.2
NISR	Nisiros	1.33	295	P	Pn	05 20 50.8	-0.8
BDRM	Kayabasi	1.38	317	*i* P	Pn	05 20 52.0	-0.4
BDRM				*i* S	Sn	05 21 10.8	+1.3
BDRM				IAML_P			
	comp=Z,661nm,0.1s						
MLSB	Milas	1.41	332	PN	Pn	05 20 53.1	+0.3
TAVA	DENIZLI_Tavas	1.43	9	*i* P	Pn	05 20 54.0	+0.8
TAVA				*i* S	Sn	05 21 11.6	+0.8
TAVA				IAML_P			
	comp=Z,2µm,0.1s						
BODT	Bodrum	1.46	314	PN	Pn	05 20 52.9	-0.5
BODT	Bodrum	1.46	314	P	Pn	05 20 52.8	-0.6
BODT				S	Sn	05 21 10.8	-0.5
KORT	Korkueli	1.68	55	PN	Pn	05 20 56.6	-0.1
KORT	Korkueli	1.68	55	*i* P	Pn	05 20 57.6	+1.0
KORT				IAML_P			
	comp=Z,357nm,0.1s						
AYDN	Tasoluk	1.71	340	*i* P	Pn	05 20 57.6	+0.6
AYDN				*i* S	Sn	05 21 18.5	+0.9
AYDB	Zeytinkoy-Aydi	1.98	343	PN	Pn	05 21 00.9	+0.2
GCAM	G?zelcaml?	1.98	326	PN	Pn	05 21 00.0	-0.6
BCK	Bucak	2.12	48	PN	Pn	05 21 02.7	+0.2
ZKR	Zakros	2.17	245	P	Pn	05 21 03.8	+0.6
SMG	Samos	2.18	320	P	Pn	05 21 02.4	-1.0
ANAF	Anafi Island	2.32	278	P	Pn	05 21 04.8	-0.6
ANAF	Anafi Island	2.32	278	P	Pn	05 21 05.0	-0.3
ANAF				S	Sn	05 21 31.9	-0.7
AMGA	Amorgos Island	2.33	290	P	Pn	05 21 05.0	-0.4
KHAL	Karahalli	2.42	17	*i* P	Pn	05 21 06.0	-0.7
KHAL				*i* S	Sn	05 21 34.0	-1.1
KHAL				IAML_P			
	comp=Z,166nm,0.1s						
KULA	Kula-Manisa	2.46	1	PN	Pn	05 21 07.5	+0.3
NPS	Neapolis	2.57	253	P	Pn	05 21 08.5	-0.3
SANT	Santorini	2.58	278	P	Pn	05 21 08.3	-0.5
THR6	Thira Island,	2.62	278	P	Pn	05 21 09.2	-0.2
THR3	Thira Island,	2.63	279	P	Pn	05 21 09.0	-0.5
APE	Apeiranthos	2.69	293	P	Pn	05 21 10.0	-0.4
LAST	Lasithi	2.71	252	P	Pn	05 21 10.7	0.0

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*DJA **17** 05:29:07.4±0.7, 8°S±8°×12°2E±°, h14^{km}±5^{km}, M3.1/6, MLv3.1/6*

*IDC **17** 05:30:08.6±1.9, 12°.19S×124°.93E, h0^{km}, mb3.4/1, mb1 3.3/4, mb1mx3.2/47, mbtmp3.2/4, ML2.5/3, Error ellipse: s-maj=92.2km s-min=29.3km az=61.0*

ISC 17 05:29:03.6±4.4, **8°.2S**±0°.3×**121°.6E**±0°.2, **h10**^{km}, **n7**, σ**1^s.63**/7, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	0.55	168	P	Pg	05 29 14.4	+0.1
MMRI	Maumere	0.78	123	P	Pb	05 29 18.4	-0.8
BASI	Baing, Sumba	2.23	206	P	Pn	05 29 41.7	+1.1
SOEI	Soe	3.07	120	P	Pn	05 29 52.0	-0.3
FITZ	Fitzroy Crossi	10.60	159	Pn	Pn	05 31 37.0	+1.5
	0.1nm,0.3s,baz=357,slow=18,SNR=2.8						
WRA	Warramunga Arr	16.99	135	Pn	Pn	05 32 59.3	-2.2
	0.0nm,0.3s,baz=310,slow=15,SNR=2.4						
ASAR	Alice Springs	19.39	144	Pn	Pn	05 33 32.1	+1.2
	0.1nm,0.3s,baz=325,slow=12,SNR=9.2						

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*NIED **17** 05:36:00, 37°.30N×142°.20E, h17^{km}, Mw3.6 Best double couple: $M_0$2.59000×10^{14} NP1:ϕ_s289.00000°, δ9.00000°, λ175.00000°. NP2:ϕ_s23.00000°, δ89.00000°, λ81.00000°.*

*IDC **17** 05:36:21.8±2.6, 37°.59N×142°.29E, h0^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.4/64, mbtmp3.4/6, ML2.8/2, MS2.4/2, Ms1 2.4/2, ms1mx2.2/29, Error ellipse: s-maj=62.9km s-min=22.3km az=155.0*

*JMA **17** 05:36:22.6±0.2, 37°.27N×142°.22E, h30^{km}±3^{km}, M3.8*

ISC 17 05:36:20.4±2.0, **37°.35N**±0°.06×**142°.24E**±0°.06, **h3**^{km}±11^{km}, **n28**, σ**1^s.10**/35, **mb3.4**/4, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	1.09	271	P	Pg	05 36 41.9	+0.6
JFK				*e*S	Sg	05 36 55.4	-0.1
JIKH	Ishinomakikobu	1.14	327	P	Pn	05 36 43.5	+0.2
JIKH				*e*S	Sn	05 36 58.2	-1.2
ONAJ	Iwakimizuishiy	1.18	258	*e*S	Sg	05 36 57.4	-1.0
JMM	Marumori	1.26	294	P	Pn	05 36 44.9	0.0
JMM				*e*S	Sb	05 37 00.9	-0.6
JIO	Ouri	1.31	328	P	Pg	05 36 46.2	+0.7
JIO				*e*S	Sn	05 37 03.2	-0.4
JFFD	Fukushimafurud	1.37	260	P	Pn	05 36 45.6	-0.8
JFFD				*e*S	Sb	05 37 02.2	-2.4
JFT	Otama	1.53	277	P	Pb	05 36 49.3	-0.1
JFT				*e*S	Sn	05 37 07.5	-1.5
JOU	Okura	1.61	309	P	Pb	05 36 51.0	+0.2
JOU				*e*S	Sb	05 37 11.4	-0.1
JMK	Ichinoseki	1.79	333	P	Pb	05 36 53.9	+0.1
JYS	Shirataka	1.93	297	P	Pb	05 36 55.8	-0.5
JYS				*e*S	Sb	05 37 21.2	+0.4
JFY	Yanaizu	2.02	272	P	Pn	05 36 56.4	+0.9
JFY				*e*S	Sn	05 37 21.4	+0.1
JYK	Kaneyama	2.16	317	P	Pb	05 36 58.9	-1.2
JYK				*e*S	Sn	05 37 25.2	+0.7
JOM	Ohasama	2.25	341	P	Pb	05 37 00.7	-0.9
JAG	Ashikaga	2.42	248	P	Pn	05 37 00.5	-0.4
JAG				*e*S	Sn	05 37 28.9	-2.2
MJAR	Matsushiro Arr	3.33	257	Pn	Pn	05 37 15.8	+2.3
	0.9nm,0.3s,baz=72,slow=8.8,SNR=40						
MJAR				Sn	Sb	05 37 59.5	-1.6
	0.8nm,0.3s,baz=138,slow=30,SNR=2.8						
MJAR				LR	LR	05 38 10.7	
	comp=Z,30nm,19.3s,baz=100,slow=32						
MAT	Matsushiro	3.33	257	P	Pn	05 37 15.1	+1.6
MAT				*e*S	Sn	05 37 54.2	+0.6
ASAJ	Asahikawa	6.76	2	Pn	Pn	05 37 58.8	-1.7
	0.2nm,0.3s,baz=180,slow=20,SNR=2.4						
ASAJ				Sn	Sn	05 39 18.0	-0.1
	0.5nm,0.3s,baz=304,slow=19,SNR=1.6						
KSRS	Korea Array	11.39	275	LR	LR	05 43 01.9	
	comp=Z,30nm,18.8s,baz=90,slow=35						
H11N2	WAKE ISLAND Hy	27.75	122	T	T	06 11 05.6	
	baz=315,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	27.76	122	T	T	06 11 03.7	
	baz=315,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	27.77	122	T	T	06 11 03.3	
	baz=315,slow=75,SNR=17						
SONM	Songino Array	28.16	303	P	P	05 42 14.9	+0.9
	0.3nm,0.5s,baz=96,slow=7.9,SNR=3.7						
H11S1	WAKE ISLAND Hy	28.48	125	T	T	06 11 59.4	
	baz=316						
H11S3	WAKE ISLAND Hy	28.48	125	T	T	06 11 57.0	
	baz=316						
H11S2	WAKE ISLAND Hy	28.50	125	T	T	06 12 01.1	
	baz=316						
MKAR	Makanchi Array	44.51	302	P	P	05 44 34.0	+0.8
	0.2nm,0.6s,baz=79,slow=7.5,SNR=3.3						
ILAR	Eielson Array	48.87	33	P	P	05 45 06.7	-0.3
	0.5nm,0.8s,baz=266,slow=6.7,SNR=5.5						
YKA	Yellowknife Ar	63.20	30	P	P	05 46 50.1	+0.6
	0.2nm,0.8s,baz=294,slow=6.0,SNR=4.1						

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*IDC **17** 05:38:42.5±0.8, 9°.81S×124°.57E, h0^{km}, mb4.0/6, mb1 4.2/9, mb1mx3.9/47, mbtmp4.0/9, ML4.1/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/38, Error ellipse: s-maj=16.5km s-min=11.0km az=150.0*

*ISCJB **17** 05:38:43.4±0.3, 9°.93S±0°.05×124°.47E±0°.04, h19^{km},*

mb4.5/15, MS4.1/1, Error ellipse: s-maj=8.1km s-min=4.3km az=41.1

*NEIC **17** 05:38:45.8±0.8, 9°.95S×124°.34E, h23km±6km, mb4.5/7, Error ellipse: s-maj=8.6km s-min=4.7km az=48.0*

*DJA **17** 05:38:50.0±0.5, 10°S±3°×12°4E±°, h38km±12km, M4.6/10, mb4.8/5, mB5.1/2, MLv4.5/10, Mw(mB)4.4/2*

ISC 17 05:38:44.9±0.5, **10°.07S**±0°.05×**124°.39E**±0°.05, **h19**km, **n57**, σ**2s.41**/65, **mb4.7**/20, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.33	339	*e*Pg	Pg	05 38 50.8	-1.5
BATI	Baumata	0.73	259	P	Pn	05 39 02.9	+2.6
BATI				S	Sn	05 39 15.2	+4.3
BATI	Baumata	0.73	259	Pg	Pn	05 39 01.4	+1.1
	450nm,0.3s,baz=77,slow=3.4,SNR=70						
BATI				Lg	Lg	05 39 14.8	
	1µm,0.3s,baz=56,slow=6.5,SNR=12						
BATI				LR	LR	05 39 38.3	
	comp=Z,1µm,20.2s,baz=7.5,slow=57						
MMRI	Maumere	2.56	304	P	Pb	05 39 28.3	-1.9
EDFI	Ende, Flores	2.97	296	P	Pb	05 39 35.2	-2.1
BASI	Baing, Sumba	3.76	267	P	Pn	05 39 44.0	+2.1
WSI	Waingapu	4.05	275	P	Pb	05 39 51.5	-4.2
WSI				S	Sn	05 40 35.8	+2.9
BKSI	Bulukumba	6.33	318	P	Pn	05 40 20.9	+3.6
PLAI	Plampang	6.64	280	P	Pn	05 40 24.7	+3.1
	144nm,0.7s,1µm						
BNSI	Bone	7.05	323	P	Pn	05 40 33.9	+6.7
MTN	Manton Dam	7.16	113	*e*Pn	Pn	05 40 32.7	+3.9
MTN				*e*Sn	Sn	05 41 53.9	+4.3
FITZ	Fitzroy Crossi	8.07	172	Pn	Pn	05 40 44.6	+3.3
	3.5nm,0.3s,baz=358,slow=8.6,SNR=84						
FITZ				Sn	Sn	05 42 13.2	+1.1
	5.9nm,0.3s,baz=110,slow=6.1,SNR=24						
MBWA	Marble Bar	11.90	202	*e*Pn	Pn	05 41 36.4	+2.7
WRA	Warramunga Arr	13.73	137	Pn	Pn	05 41 59.1	+0.4
	0.8nm,0.3s,baz=308,slow=14,SNR=22						
WRA				Sn	Sn	05 44 26.9	-4.0
	0.9nm,0.3s,baz=301,slow=22,SNR=7.4						
WRA				LR	LR	05 47 21.3	
	comp=Z,73nm,21.4s,baz=165,slow=38						
WR1	Warramunga Arr	13.73	137	*e*Pn	Pn	05 41 59.1	+0.4
WR1				*e*Sn	Sn	05 44 26.9	-4.0
WRAB	Tennant Creek	13.73	137	*e*Pn	Pn	05 42 01.4	+2.6
WRAB				*e*Sn	S	05 44 47.4	-6.0
WB2	Warramunga Arr	13.74	137	*e*Pn	Pn	05 42 00.2	+1.4
WB2				*e*Sn	Sn	05 44 29.0	-2.0
WC3	Warramunga Arr	13.76	137	*e*Pn	Pn	05 42 00.1	+0.9
AS31	Alice Springs	16.29	147	*e*Pn	Pn	05 42 35.4	+2.6
	2.6nm,0.8s						
AS31				*e*Sn	Sn	05 45 27.9	-5.4
ASAR	Alice Springs	16.29	147	Pn	Pn	05 42 34.6	+1.8
	0.7nm,0.3s,baz=319,slow=12,SNR=51						
ASAR				Sn	Sn	05 45 27.9	-5.4
	0.2nm,0.3s,baz=318,slow=21,SNR=6.9						
AS01	Alice Springs	16.31	147	*e*Pn	Pn	05 42 35.5	+2.3
JAY	Jayapura	17.86	66	LR	LR	05 50 35.8	
	comp=Z,78nm,18.5s,baz=20,slow=40						
XMIS	Christmas Isla	18.44	267	*e*Pn	P	05 42 57.5	-2.1
	105nm,1.2s						
COEN	Coen	18.77	104	*e*P	P	05 43 04.3	+1.0
	7.6nm,0.8s						
FORT	Forrest	20.89	171	*e*P	P	05 43 27.1	+0.9
	34nm,0.6s						
MNAI	Manna	22.00	283	*e*P	P	05 43 36.7	-1.6
	724nm,1.5s						
MANU	Manus Island	24.18	72	*e*P	P	05 44 01.4	+1.0
	58nm,1.6s						
BBOO	Buckleboo	25.06	156	*e*P	P	05 44 13.5	+5.2
	19nm,1.5s						
BKNI	Bangkinang	25.43	293	*e*P	P	05 44 10.2	-1.5
	53nm,0.7s						
STKA	Stephens Creek	26.92	146	*e*P	P	05 44 25.9	+0.8
	0.6nm,0.8s						
STKA	Stephens Creek	26.92	146	P	P	05 44 26.1	+1.0
	0.5nm,0.2s,baz=308,slow=12,SNR=2.9						
KULM	Kulim	28.14	302	*e*P	P	05 44 34.7	-1.5
	15nm,1.1s						
LHMI	Lhok Sumawe	31.28	298	*e*P	P	05 45 02.3	-1.7
	84nm,1.2s						
CM31	Chiang Mai Arr	37.87	318	*e*P	P	05 46 00.5	-0.4
	6.8nm,0.4s						
CMAR	Chiang Mai Arr	37.87	318	P	P	05 46 00.5	-0.4
	1.3nm,0.4s,baz=143,slow=6.3,SNR=4.9						
MJAR	Matsushiro Arr	48.15	15	P	P	05 47 23.3	-0.7
	1.2nm,0.6s,baz=196,slow=9.6,SNR=6.4						
MAJO	Matsushiro	48.15	15	*e*P	P	05 47 23.3	-0.7
RAMN	Ramite	51.95	316	*e*P	P	05 47 54.3	+1.1
	24nm,0.5s						
JIRN	Jiri	52.68	316	*e*P	P	05 47 58.5	-0.3
	15nm,0.6s						
GUN	Gumba	53.05	316	*e*P	P	05 48 01.1	-0.5
	23nm,0.8s						
PKI	Pulchoki	53.16	316	*e*P	P	05 48 02.4	+0.1
	11nm,0.5s						
KOLN	Koldanda	54.54	315	*e*P	P	05 48 12.5	+0.2
	4.8nm,0.5s						
DANN	Dangsing	54.78	315	*e*P	P	05 48 13.3	-0.8
	14nm,0.5s						
SONA0	Songino Array	59.82	346	*e*P	P	05 48 47.8	-1.3
SONM	Songino Array	59.82	346	P	P	05 48 47.8	-1.3
	0.5nm,0.7s,baz=164,slow=8.2,SNR=6.6						
SONA1	Songino Array	59.83	346	*e*P	P	05 48 49.6	+0.4
MK01	Makanchi Array	67.90	330	*e*P	P	05 49 42.9	+0.6
MK31	Makanchi Array	67.92	330	*e*P	P	05 49 43.1	+0.6
	5.6nm,1.6s						
MK32	Makanchi Array	67.92	330	*e*P	P	05 49 42.4	-0.1
MKAR	Makanchi Array	67.92	330	*e*P	P	05 49 42.8	+0.4
	8.1nm,0.8s						
MKAR	Makanchi Array	67.92	330	P	P	05 49 42.4	-0.1
	0.7nm,0.5s,baz=140,slow=6.1,SNR=12						
AAK	Ala-Archa	69.46	323	LR	LR	06 22 31.4	
	comp=Z,126nm,21.6s,baz=278,slow=38						
ZALV	Zalesovo Beam	72.02	337	P	P	05 50 06.8	-0.6
	0.5nm,0.4s,baz=157,slow=4.1,SNR=2.6						
ZAA1	Zalesovo Array	72.03	337	*e*P	P	05 50 06.8	-0.6
LPAZ	La Paz	151.03	155	*e*PKPdf	PKPdf	05 58 30.6	-2.1
LPAZ				*e*PKPbc	PKiKP	05 58 40.0	+0.9
LPAZ	La Paz	151.03	155	PKPbc	PKiKP	05 58 40.0	+0.9
	0.7nm,0.7s,baz=192,slow=3.6,SNR=2.8						
SIV	San Ignacio	153.55	168	PKPab	PKPab	05 58 56.6	+1.0
	0.5nm,0.7s,baz=203,slow=7.1,SNR=3.0						

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*IDC **17** 05:42:02.3±0.4, 36°.71N×21°.71E, h0km, mb4.7/37, mb1 4.8/50, mb1mx4.7/61, mbtmp4.7/50, ML4.2/11, MS4.5/40, Ms1 4.5/40, ms1mx4.4/56, Error ellipse: s-maj=9.8km s-min=9.2km az=20.0*

*MOS **17** 05:42:03.8±1.4, 36°.71N×21°.67E, h16km, mb5.2/54, MS4.5/26, Error ellipse: s-maj=3.8km s-min=2.2km az=89.2*

*BJI **17** 05:42:04.6, 36°.82N×21°.41E, h38km, mB5.3/44, mb5.1/62, Ms5.0/39, Ms7 4.7/34*

*BEO **17** 05:42:05.7±0.6, 36°.68N×21°.29E, h5km, ML4.8/14*

*ATH **17** 05:42:06.8, 36°.60N×21°.59E, h31km, ML4.9/19, Error ellipse: s-maj=2.5km s-min=1.1km az=65.0*

*GCMT **17** 05:42:07.8±0.2, 36°.23N±0°.02×21°.21E±0°.02, h50km±1km, MW5.1/79, Moment Tensor Solution. s60,c85; s79,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.49±.20; $M_{\theta\theta}$-1.70±.14; $M_{\phi\phi}$-2.79±.14; $M_{r\theta}$1.58±.13; $M_{\theta\phi}$3.04±.10; $M_{\phi r}$-1.71±.13; Best double couple: $M_0$5.43600×10^{16} NP1:ϕ_s139.00000°, δ58.00000°, λ88.00000°. NP2: ϕ_s322.00000°, δ32.00000°, λ93.00000°. Principal axes: T 5.0160, Plg77.0000°, Azm43.0000°; N 0.8410, Plg1.0000°, Azm140.0000°; P -5.8560, Plg13.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*PDG **17** 05:42:07.8±0.7, 36°.66N×21°.54E, h31km±2km, MD5.0/3, ML5.0/11 Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*

*ISCJB **17** 05:42:07.7±0.2, 36°.79N±0°.01×21°.65E±0°.01, h44km±1km, mb5.0/197, MS4.5/49, Error ellipse: s-maj=2.5km s-min=1.5km az=31.5*

*NEIC **17** 05:42:07.8±1.0, 36°.68N×21°.68E, h32km±7km, mb5.0/126, ML4.9(THE), ML5.0(ATH), Error ellipse: s-maj=5.2km s-min=3.2km az=196.0*

NEIC Felt at Kalamata.

*THE **17** 05:42:08.8, 36°.63N×21°.67E, h16km, ML4.8/17, Error ellipse: s-maj=0.9km s-min=0.4km az=242.0*

*GII **17** 05:42:13.1±0.0, 36°.29N×22°.30E, h15km, mb4.8/3, MD4.8/3*

*HLW **17** 05:42:13.2, 36°.27N×21°.91E, h33km±49km, Md5.0, Ml5.0*

*TIR **17** 05:42:13.7, 37°.63N×21°.66E, h17km, Md4.9/6*

ISC 17 05:42:07.2±0.4, **36°.66N**±0°.02×**21°.61E**±0°.02, **h34**km±1km, **h33**km**:pP-P**, **n1151**, σ**2s.02**/1290, **mb5.0**/208, **MS4.5**/51, **78C-36D**, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MES2	Methoni	0.19	25	P	Pn	05 42 14.1	+1.7
MES2				S	Sb	05 42 18.3	+0.2
MES2				AML	AML	05 42 19.9	
MES2				AML	AML	05 42 20.0	
PYL	PYLOS	0.26	24	P	Pn	05 42 15.1	+0.7
PYL				S	Sn	05 42 20.7	+2.5
PYL				AML	AML	05 42 21.9	
PYL				AML	AML	05 42 22.8	
PYL	PYLOS	0.26	24	P	Pn	05 42 15.0	+0.7
PYL				S	Sb	05 42 19.4	-0.1
ITM	Ithomi	0.58	26	*i* P	Pn	05 42 20.2	+1.2
ITM	Ithomi	0.58	26	*e*Pn	Pn	05 42 19.9	+0.9
ITM				*e*Sn	Sn	05 42 30.8	+3.3
ITM	Ithomi	0.58	26	P	Pn	05 42 20.1	+1.0
ITM				S	Sn	05 42 29.2	+1.7
ITM				AML	AML	05 42 35.6	
ITM				AML	AML	05 42 36.4	
ITM	Ithomi	0.58	26	P	Pn	05 42 20.1	+1.0
ITM				S	Sn	05 42 29.2	+1.7
MES3	Kyparissia	0.59	5	P	Pn	05 42 20.1	+0.9
MES3				S	Sn	05 42 30.4	+2.7
AMT	Artemida-Makis	0.88	5	P	Pb	05 42 24.9	+0.8
AMT				AML	AML	05 42 50.8	
AMT				AML	AML	05 42 53.6	
AMT	Artemida-Makis	0.88	5	P	Pb	05 42 25.1	+1.0
AMT				S	Sb	05 42 38.6	+3.0
VLX	Vlachokerasia	0.94	41	P	Pb	05 42 26.2	+1.0
VLX				S	Sb	05 42 40.6	+3.2
VLX				AML	AML	05 42 47.8	
VLX				AML	AML	05 42 49.0	
VLX	Vlachokerasia	0.94	41	P	Pb	05 42 26.2	+1.0
VLX				S	Sb	05 42 39.3	+1.9
TRIP	Tripoli	1.02	31	P	Pb	05 42 27.2	+0.7
TRIP				S	Sb	05 42 41.1	+1.6
TRIP				AML	AML	05 42 45.4	
	comp=N,72972µm,1.0s						
TRIP				AML	AML	05 42 52.8	
TRIP	Tripoli	1.02	31	P	Pb	05 42 27.1	+0.7
TRIP				S	Sb	05 42 41.5	+1.9
VLI	Veliai	1.07	86	P	Pb	05 42 28.3	+1.1
VLI				S	Sb	05 42 44.1	+3.2
VLI				AML	AML	05 42 52.3	
VLI				AML	AML	05 42 53.8	
VLI	Veliai	1.07	86	P	Pb	05 42 28.2	+1.1
VLI				S	Sb	05 42 42.6	+1.7
KTHR	Kythira	1.19	109	P	Pb	05 42 29.6	+0.4
KTHR				S	Sb	05 42 44.9	+0.5
KYTH	Kithira	1.22	108	P	Pb	05 42 30.2	+0.4
KYTH				S	Sb	05 42 47.0	+1.7
KYTH				AML	AML	05 42 54.8	
KYTH				AML	AML	05 42 56.9	
KYTH	Kithira	1.22	108	P	Pb	05 42 30.2	+0.4
KYTH				S	Sb	05 42 45.7	+0.4
DRO	Drossia	1.30	4	P	Pb	05 42 31.4	+0.3
DRO				S	Sb	05 42 49.6	+2.2
DRO				AML	AML	05 43 05.5	
	comp=N,67564µm,0.5s						
DRO				AML	AML	05 43 05.9	
DRO	Drossia	1.30	4	P	Pb	05 42 31.8	+0.7
DRO				S	Sb	05 42 49.7	+2.3
VTN	Vitineika	1.30	345	P	Pb	05 42 30.9	-0.2
VTN	Vitineika	1.30	345	P	Pb	05 42 31.5	+0.4
RLS	Riolos of Patr	1.41	355	P	Pb	05 42 33.3	+0.5
RLS				S	Sb	05 42 52.9	+2.5
GUR	Goura	1.41	24	P	Pb	05 42 33.3	+0.4
GUR				S	Sb	05 42 53.1	+2.5
GUR				AML	AML	05 43 08.2	
	comp=N,84690µm,0.6s						
GUR				AML	AML	05 43 10.5	
	comp=E,64020µm,0.6s						
GUR	Goura	1.41	24	P	Pb	05 42 33.1	+0.2
GUR				S	Sb	05 42 52.4	+1.8
KRND	KRANIDI	1.43	59	P	Pb	05 42 32.9	-0.4
KRND				S	Sb	05 42 52.0	+0.8
KLV	Kalavryta, Ach	1.45	17	P	Pb	05 42 33.5	-0.1
KLV	Kalavryta, Ach	1.45	17	P	Pb	05 42 33.6	-0.1
AXS	Araxos	1.55	353	P	Pb	05 42 35.3	0.0
AXS				S	Sb	05 42 56.1	+1.6
DID	Didima	1.55	56	P	Pn	05 42 34.3	+1.8
DID				S	Sb	05 42 56.2	+1.5
DID				AML	AML	05 43 05.8	
	comp=N,41889µm,0.8s						
DID				AML	AML	05 43 09.1	
	comp=E,64537µm,0.6s						
DID	Didima	1.55	56	P	Pb	05 42 34.5	-0.9
ANKY	Antikythira Is	1.58	119	P	Pb	05 42 35.2	-0.6
ANKY				S	Sb	05 42 55.8	+0.5
ANKY				AML	AML	05 43 15.4	
ANKY				AML	AML	05 43 16.2	
ANKY	Antikythira Is	1.58	119	P	Pb	05 42 35.1	-0.6
ANKY				S	Sb	05 42 54.3	-1.0
LAKA	Lakka	1.61	10	P	Pb	05 42 36.1	-0.2
LAKA	Lakka	1.61	10	P	Pb	05 42 36.1	-0.2
UPR	University Cam	1.63	5	P	Pb	05 42 37.0	+0.3
ALIK	Aliki, Aigiali	1.65	14	P	Pb	05 42 37.3	+0.3
LOUT	Loutraki	1.72	39	P	Pn	05 42 36.8	+2.1
VLS	Valsamata	1.72	332	P	Pn	05 42 35.9	+1.1
VLS	Valsamata	1.72	332	P	Pb	05 42 37.1	-1.1
LTK	Loutraki	1.74	38	P	Pn	05 42 37.1	+2.0
TRIZ	Trizonia	1.75	12	P	Pb	05 42 38.3	-0.3
EFP	Efpalio	1.78	8	P	Pb	05 42 39.2	0.0
EFP				S	Sb	05 43 01.4	+0.1
EFP				AML	AML	05 43 21.0	
	comp=N,25628µm,0.8s						
EFP				AML	AML	05 43 22.7	
	comp=E,25478µm,0.9s						
EFP	Efpalio	1.78	8	P	Pb	05 42 39.2	0.0
KALE	Kalithea	1.78	14	P	Pb	05 42 38.9	-0.4
KALE				AML	AML	05 43 22.8	
	comp=N,29897µm,1.5s						
KALE				AML	AML	05 43 23.0	
	comp=E,24336µm,0.8s						
KALE	Kalithea	1.78	14	P	Pb	05 42 39.3	0.0
KALE				S	Sb	05 43 01.9	+0.6
SERG	Sergoula	1.79	11	P	Pb	05 42 39.1	-0.3
SERG	Sergoula	1.79	11	P	Pb	05 42 39.4	0.0
DSF	Desfina	1.90	22	P	Pn	05 42 39.3	+2.0
DSF	Desfina	1.90	22	P	Pn	05 42 39.4	+2.1
DSF				S	Sb	05 43 05.0	+0.4
ANX	Ano Chora	1.95	7	P	Pb	05 42 41.7	-0.4
ANX	Ano Chora	1.95	7	P	Pb	05 42 41.8	-0.4
PVO	Paravola	1.96	358	P	Pb	05 42 41.6	-0.7
PVO	Paravola	1.96	358	P	Pb	05 42 41.7	-0.5
VILL	Villia	2.03	41	P	Pn	05 42 40.4	+1.4
KERA	Keramoti	2.04	129	P	Pn	05 42 40.4	+1.3
KERA				AML	AML	05 43 33.0	
	comp=N,39941µm,0.9s						
KERA				AML	AML	05 43 38.2	
	comp=E,28563µm,0.8s						
VIL2	Platees	2.04	40	P	Pn	05 42 40.3	+1.2
VLY	Voula,Athens	2.11	55	P	Pn	05 42 41.4	+1.2
VLY				S	Sb	05 43 09.9	-0.8
VLY				AML	AML	05 43 21.7	
	comp=N,31318µm,0.8s						
VLY				AML	AML	05 43 30.4	
	comp=E,22735µm,0.8s						
VLY	Voula,Athens	2.11	55	P	Pn	05 42 41.3	+1.2
ATH	Athens Observa	2.13	51	P	Pn	05 42 41.9	+1.5
ATH				S	Sn	05 43 09.3	+3.5
ATH				AML	AML	05 43 25.3	
	comp=N,28083µm,1.4s						
ATH				AML	AML	05 43 30.0	
	comp=E,28080µm,0.9s						
ATH	Athens Observa	2.13	51	P	Pn	05 42 41.9	+1.5
ATHU	Athens Univers	2.17	52	P	Pn	05 42 42.2	+1.2
MHLO	Agia Marina, M	2.25	88	P	Pn	05 42 43.2	+1.3
IMMV	Iera Moni Meta	2.26	121	P	Pn	05 42 44.1	+1.9
IMMV	Iera Moni Meta	2.26	121	P	Pn	05 42 43.9	+1.7
IMMV				AML	AML	05 43 34.5	
	comp=E,44164µm,1.1s						
IMMV				AML	AML	05 43 40.6	
	comp=N,55547µm,0.8s						
IMMV	Iera Moni Meta	2.26	121	P	Pn	05 42 43.9	+1.7
IMMV				S	Sb	05 43 11.5	-3.4
EVR	Evrytania	2.26	4	P	Pb	05 42 46.5	-0.9
EVR	Evrytania	2.26	4	P	Pb	05 42 46.5	-0.9
CHAN	Chania	2.27	119	P	Pn	05 42 44.2	+1.9
PTL	Penteli	2.27	52	P	Pn	05 42 43.9	+1.5
PTL	Penteli	2.27	52	P	Pn	05 42 43.6	+1.2
ATAL	Atalanti	2.32	28	P	Pn	05 42 44.6	+1.6
ATAL	Atalanti	2.32	28	P	Pn	05 42 44.6	+1.6
SERI	Serifos	2.36	77	P	Pn	05 42 44.4	+0.9
AGG	Agios Georgios	2.43	13	*e*P	Pn	05 42 47.7	+3.1
AGG	Agios Georgios	2.43	13	*e*Pn	Pn	05 42 47.5	+3.0
AGG	Agios Georgios	2.43	13	P	Pn	05 42 47.4	+2.8
AGG	Agios Georgios	2.43	13	*e*P	Pn	05 42 47.5	+3.0
VAM	Vamos	2.44	120	P	Pn	05 42 46.4	+1.8
VAM				S	Sn	05 43 15.5	+2.2
VAM				AML	AML	05 43 34.5	
	comp=N,42338µm,0.8s						
VAM				AML	AML	05 43 42.0	
	comp=E,38704µm,1.0s						
VAM	Vamos	2.44	120	P	Pn	05 42 46.2	+1.5
VAM	Vamos	2.44	120	P	Pn	05 42 45.9	+1.2
VAM				S	Sn	05 43 14.5	+1.2
EREA	Eretria	2.55	46	P	Pn	05 42 47.8	+1.6
SMIA	Simia	2.56	29	P	Pn	05 42 48.1	+1.8
GVD	Gavdhos	2.71	131	*e*P	Pn	05 42 50.9	+2.5
GVD	Gavdhos	2.71	131	P	Pn	05 42 50.2	+1.9
SKIA	Skiathos	2.91	30	P	Pn	05 42 52.9	+1.9
THL	Klokotos Trika	2.92	6	P	Pn	05 42 53.9	+2.6
NEO	Neokhori	2.94	25	P	Pn	05 42 53.2	+1.7
FYTO	Fytoko, Volos	2.94	21	P	Pn	05 42 53.4	+1.9
XOR	Xorichti	2.98	24	P	Pn	05 42 54.2	+2.1
IDI	Anoyia	2.99	116	*i* P	Pn	05 42 54.2	+1.9
IDI	Anoyia	2.99	116	*e*Pn	Pn	05 42 54.1	+1.8
IDI				*e*Sn	Sn	05 43 29.6	+2.6
IDI				Lg	Lg	05 43 47.3	
IDI	Anoyia	2.99	116	Pn	Pn	05 42 51.3	-0.9
	comp=E,26nm,0.3s,baz=291,slow=13,SNR=119						
IDI				Sn	Sn	05 43 29.2	+2.2
	comp=E,286nm,0.3s,baz=173,slow=5.9,SNR=12						
IDI				Lg	Lg	05 43 47.3	
	comp=E,93nm,0.3s,baz=211,slow=20,SNR=4.0						
IDI				LR	LR	05 44 29.2	
	comp=E,9µm,21.2s,baz=288,slow=50						
SAP3	Santorini-Thir	3.02	93	P	Pn	05 42 54.0	+1.4
IGT	Igoumenitsa	3.04	341	*e*Pn	Pn	05 42 54.3	+1.3
IGT				*e*Sn	Sn	05 43 29.1	+0.9
IGT	Igoumenitsa	3.04	341	P	Pn	05 42 54.4	+1.4
JAN	Janina	3.06	349	P	Pn	05 42 55.7	+2.6
JAN	Janina	3.06	349	P	Pn	05 42 55.6	+2.5
AOS	Alonnisos	3.09	35	*e*P	Pn	05 42 54.8	+1.3
AOS	Alonnisos	3.09	35	P	Pn	05 42 54.8	+1.3
SANT	Santorini	3.11	94	*e*P	Pn	05 42 55.4	+1.5
SANT	Santorini	3.11	94	*e*Pn	Pn	05 42 55.0	+1.1
SANT	Santorini	3.11	94	P	Pn	05 42 55.0	+1.1
APE	Apeiranthos	3.17	81	*i* P	Pn	05 42 55.1	+0.3
APE	Apeiranthos	3.17	81	⇑*i*P	Pn	05 42 55.6	+0.9
APE	Apeiranthos	3.17	81	⇓*e*P	Pn	05 42 55.0	+0.3
KPRO	Kipourio	3.30	357	P	Pn	05 42 59.6	+3.1
ANAF	Anafi Island	3.37	94	P	Pn	05 42 58.4	+1.0
KEK	Kerkira	3.37	336	P	Pn	05 42 58.4	+1.0
AMGA	Amorgos Island	3.45	86	P	Pn	05 42 59.6	+1.1
SRN	Sarande	3.46	339	*i* PN	Pn	05 43 00.4	+1.8
SRN				*i* SN	Sn	05 43 35.6	-2.8
LIT	Litokhoron	3.51	11	*e*Pn	Pn	05 43 01.6	+2.2
LIT	Litokhoron	3.51	11	P	Pn	05 43 01.9	+2.5
LIT	Litokhoron	3.51	11	*e*P	Pn	05 43 01.6	+2.2
NPS	Neapolis	3.53	112	P	Pn	05 43 02.5	+2.8
PENT	Pentalofos	3.56	354	P	Pn	05 43 03.4	+3.3
KZN	Kozani	3.65	2	P	Pn	05 43 03.7	+2.4
PAIG	Paliouri	3.65	26	P	Pn	05 43 03.1	+1.8
PAIG	Paliouri	3.65	26	P	Pn	05 43 03.3	+2.0
NEST	Nestorio	3.78	353	P	Pn	05 43 06.3	+3.2
TPE	Tepelena	3.84	341	*i* PN	Pn	05 43 05.4	+1.4
TPE				*i* SN	Sn	05 43 45.3	-2.6
CHOS	Chios island	3.93	63	*e*P	Pn	05 43 05.9	+0.7
PLG	Polygyros	3.98	21	P	Pn	05 43 07.7	+1.8
ZKR	Zakros	4.04	111	*e*P	Pn	05 43 09.3	+2.6
HORT	Hortiatis	4.11	16	*e*P	Pn	05 43 11.2	+3.6
THE	Thessaloniki	4.11	15	P	Pn	05 43 11.2	+3.6
THE	Thessaloniki	4.11	15	P	Pn	05 43 12.6	+5.0
OUR	Ouranopolis	4.12	26	*e*P	Pn	05 43 09.8	+2.1
OUR	Ouranopolis	4.12	26	P	Pn	05 43 09.9	+2.2
VLO	Vlora	4.15	337	*i* PN	Pn	05 43 10.2	+2.1
VLO				*i* SN	Sn	05 43 52.4	-3.1
ZEY	zmir	4.20	66	*i* P	Pn	05 43 10.8	+1.9
ZEY				IAML_P			
	comp=Z,3µm,0.4s						
SIGR	SIGRI	4.22	51	*e*P	Pn	05 43 09.8	+0.8
URLA	Izmir	4.31	65	*e*P	Pn	05 43 11.7	+1.3
URLA	Izmir	4.31	65	*i* P	Pn	05 43 12.7	+2.3
URLA				IAML_P			
	comp=Z,8µm,0.2s						
GRG	Griva	4.34	8	P	Pn	05 43 10.9	+0.1
GRG	Griva	4.34	8	P	Pn	05 43 12.4	+1.6
BIA	Bitola	4.36	357	*i* Pn	Pn	05 43 13.5	+2.3
KRBN	Karaburun	4.38	62	*e*P	Pn	05 43 11.9	+0.7
SOH	Sokhos	4.38	18	P	Pn	05 43 13.4	+2.1
SOH	Sokhos	4.38	18	P	Pn	05 43 13.5	+2.1
DGB	zmir	4.43	70	*i* P	Pn	05 43 13.6	+1.7
DGB				IAML_P			
	comp=Z,1µm,0.3s						
NISR	Nisiros	4.44	89	P	Pn	05 43 14.1	+2.0
OHR	Ohrid	4.50	352	*i* Pn	Pn	05 43 14.8	+1.9
PRK	Paraskevi	4.50	54	P	Pn	05 43 15.3	+2.3
TIP	Timpagrande	4.59	305	*e*Pn	Pn	05 43 14.5	+0.2
TIP	Timpagrande	4.59	305	⇓*i*P	Pn	05 43 14.5	+0.2
BODT	Bodrum	4.59	83	*i* P	Pn	05 43 15.9	+1.7
GCAM	G?zelcaml?	4.61	75	*e*P	Pn	05 43 16.6	+2.1
GCAM	G?zelcaml?	4.61	75	*i* P	Pn	05 43 16.4	+2.0
GCAM				IAML_P			
	comp=Z,2µm,0.4s						
KNT	Kendrikon	4.61	12	*i* P	Pn	05 43 16.7	+2.2
KNT	Kendrikon	4.61	12	P	Pn	05 43 16.4	+1.9
KARP	Karpathos	4.63	102	P	Pn	05 43 19.7	+4.9
KARP	Karpathos	4.63	102	*e*Pn	Pn	05 43 15.6	+0.8
BLCB	Balcova	4.65	67	*e*P	Pn	05 43 16.3	+1.3
BDRM	Kayabasi	4.70	83	*i* P	Pn	05 43 17.7	+2.0
BDRM				IAML_P			
	comp=Z,5µm,0.4s						
KRUS	Krusevo	4.72	357	*i* Pn	Pn	05 43 17.4	+1.4
VAY	Valandovo	4.72	9	*i* Pn	Pn	05 43 17.8	+1.9
BOZC	Bozcaada	4.73	46	*e*P	Pn	05 43 16.2	+0.1
DAT	Datca	4.80	87	*i* P	Pn	05 43 18.9	+1.8
DAT	Datca	4.80	87	*i* P	Pn	05 43 20.0	+2.8
DAT				IAML_P			
	comp=Z,2µm,0.6s						
CEL	Celeste	4.82	291	*e*Pn	Pn	05 43 17.9	+0.5
DATC	Datca-Mugla	4.86	87	*e*P	Pn	05 43 19.7	+1.8
EZN	Ezine	4.88	48	*e*P	Pn	05 43 16.8	-1.3
TIR	Tirane	4.88	344	*e*Pn	Pn	05 43 18.8	+0.7
TIR				*e*Sn	Sn	05 44 13.0	-0.4
TIR	Tirane	4.88	344	*e*Pn	Pn	05 43 19.3	+1.1
TIR	Tirane	4.88	344	⇑*i*P	Pn	05 43 19.6	+1.5
TIR	Tirane	4.88	344	*e*P	Pn	05 43 19.3	+1.1
TIR	Tirane	4.88	344	*i* PN	Pn	05 43 19.4	+1.3
TIR				*i* SN	Sn	05 44 10.0	-3.4
MLSB	Milas	4.98	81	*e*P	Pn	05 43 21.9	+2.3
STIP	Stip	5.05	5	*i* Pn	Pn	05 43 23.1	+2.5
PHP	Peshkopia	5.10	350	*i* PN	Pn	05 43 23.2	+1.9
PHP				*i* SN	Sn	05 44 15.3	-3.8
AYDN	Tasoluk	5.11	77	*i* P	Pn	05 43 24.1	+2.7
AYDN				IAML_P			
	comp=Z,1µm,0.4s						
CGL1	Ceglie Messapi	5.14	322	*e*Pn	Pn	05 43 22.5	+0.8
CGL1				Sn	Sn	05 44 15.6	-4.3
TAR1	Taranto	5.14	320	*e*Pn	Pn	05 43 22.5	+0.8
TAR1				Sn	Sn	05 44 15.7	-4.1
AYDB	Zeytinkoy-Aydi	5.17	74	*e*P	Pn	05 43 23.8	+1.5
ARG	Arkhangelos	5.27	93	P	Pn	05 43 24.6	+1.0
ARG	Arkhangelos	5.27	93	P	Pn	05 43 26.0	+2.4
ARG				pmax	pmax		
	comp=Z,766nm,0.9s						
MASS	Massafra	5.29	320	*e*Pn	Pn	05 43 24.6	+0.8
MASS				Sn	Sn	05 44 19.9	-3.7
FASA	Fasano	5.32	323	*e*Pn	Pn	05 43 24.5	+0.3
FASA				Sn	Sn	05 44 19.1	-5.2
KKB	Krupnik	5.33	12	P	Pn	05 43 25.8	+1.5
GELI	Tayfur-Gelibol	5.34	44	*e*P	Pn	05 43 26.0	+1.5
YER	Yerkesik	5.37	83	P	Pn	05 43 27.9	+2.9

AKHS	Akhisar	5.39	64	i P	Pn	05 43 27.2	+2.0
AKHS				IAML_P			
	comp=Z,8.1nm,0.2s						
ENEZ	Enez	5.41	40	eP	Pn	05 43 25.4	0.0
RDO	Rodhopi	5.43	33	eP	Pn	05 43 26.6	+0.9
ALN	Alexandroupoli	5.47	38	eP	Pn	05 43 26.9	+0.7
ALN	Alexandroupoli	5.47	38	ePn	Pn	05 43 27.0	+0.7
ALN	Alexandroupoli	5.47	38	eP	Pn	05 43 27.0	+0.7
LPK	Lapseki	5.49	46	eP	Pn	05 43 27.3	+0.8
MATE	Matera	5.54	318	⇓iP	Pn	05 43 27.1	0.0
PUK	Puka	5.54	347	i PN	Pn	05 43 28.2	+0.8
PUK				i SN	Sn	05 44 27.8	-2.1
ERIK	Erikli-Kesan	5.55	42	eP	Pn	05 43 28.1	+0.8
RZN	Rozhen	5.58	25	P	Pn	05 43 29.4	+1.5
ULC	Ulcinj	5.61	342	⇓iPn	Pn	05 43 28.5	+0.3
ULC				i Sn	Sn	05 44 30.1	-1.4
TURN	Turunc	5.62	86	eP	Pn	05 43 26.5	-1.8
TURN	Turunc	5.62	86	i P	Pn	05 43 27.2	-1.1
TURN				IAML_P			
	comp=Z,3µm,0.6s						
CUC	Castrocucco	5.64	308	ePn	Pn	05 43 30.1	+1.4
DALY	Dalyan (Mula)	5.66	86	eP	Pn	05 43 29.7	+0.8
DALY	Dalyan (Mula)	5.66	86	i P	Pn	05 43 32.2	+3.3
DALY				IAML_P			
	comp=Z,985nm,0.7s						
SG1	Sgolgore (BA)	5.68	319	ePn	Pn	05 43 29.5	+0.3
SG1				Sn	Sn	05 44 27.4	-5.9
BAI	Bari	5.78	322	ePn	Pn	05 43 30.8	+0.3
BAI				Sn	Sn	05 44 29.9	-5.6
WDD	Wied Dalam	5.78	264	ePn	Pn	05 43 29.6	-0.9
KDZ	Kurdzhali	5.80	30	eP	Pn	05 43 35.5	+4.7
KDZ	Kurdzhali	5.80	30	P	Pn	05 43 36.0	+5.2
VAE	Valguarnera	5.81	280	Pn	Pn	05 43 32.0	+1.0
	comp=Z,7.4nm,0.3s,baz=55,slow=0.3,SNR=45						
VAE				Sn	Sn	05 44 35.0	-1.6
	comp=Z,79nm,0.3s,baz=345,slow=8.1,SNR=8.0						
KRBG	Karabiga-Canak	5.81	48	eP	Pn	05 43 30.8	-0.2
BCI	Bajram Curri	5.83	349	i PN	Pn	05 43 33.1	+2.0
BCI				i SN	Sn	05 44 32.5	-4.4
DRME	Dracevica, Mon	5.83	342	⇑iPn	Pn	05 43 31.6	+0.3
DRME				i Sn	Sn	05 44 35.5	-1.5
DRME	Dracevica, Mon	5.83	342	⇑iPn	Pn	05 43 31.4	+0.1
TAVA	DENIZLI_Tavas	5.90	80	i P	Pn	05 43 36.2	+4.0
TAVA				IAML_P			
	comp=Z,1µm,0.6s						
KULA	Kula-Manisa	5.90	70	eP	Pn	05 43 33.2	+0.9
RKY	Sarkoy-Tekirda	5.93	46	eP	Pn	05 43 34.1	+1.4
PLD	Plovdiv	5.95	23	i P	Pn	05 43 35.2	+2.4
PLD	Plovdiv	5.95	23	ePn	Pn	05 43 34.0	+1.2
SLUM	Salum	5.96	149	P	Pn	05 43 33.3	+0.4
	baz=149						
SLUM				AMP		05 44 00.0	
	baz=149						
SLUM				S	Sn	05 44 30.7	-9.3
	baz=149						
FETY	Fethiye	6.01	88	eP	Pn	05 43 38.0	+4.3
FETY	Fethiye	6.01	88	i P	Pn	05 43 38.9	+5.1
FETY				IAML_P			
	comp=Z,5µm,0.5s						
DENT	Denizli	6.03	77	eP	Pb	05 44 03.5	+12
PDG	Podgorica	6.05	343	ePn	Pn	05 43 34.0	-0.1
PDG				eSn	Sn	05 44 39.4	-2.8
PDG	Podgorica	6.05	343	⇓iP	Pn	05 43 33.9	-0.1
PDG	Podgorica	6.05	343	⇑iPn	Pn	05 43 34.1	-0.1
TTG	Podgorica	6.05	343	⇑iPn	Pn	05 43 34.3	+0.1
TTG				i Sn	Sn	05 44 40.8	-1.4
TTG	Podgorica	6.05	343	ePn	Pn	05 43 34.1	-0.1
TTG	Podgorica	6.05	343	eP	Pn	05 43 34.1	-0.1
PVY	Plav	6.07	348	⇑iPn	Pn	05 43 36.0	+1.4
PVY				i Sn	Sn	05 44 41.8	-1.1
VTS	Vitosha	6.09	11	i Pn	Pn	05 43 36.3	+1.4
VTS				eSn	Sn	05 44 43.8	+0.4
VTS	Vitosha	6.09	11	ePn	Pn	05 43 36.5	+1.7
VTS	Vitosha	6.09	11	⇓iP	Pn	05 43 36.5	+1.7
VTS	Vitosha	6.09	11	P	Pn	05 43 36.9	+2.0
EDC	Edincik	6.13	51	eP	Pn	05 43 34.1	-1.3
BARS	Barje	6.16	1	i Pn	Pn	05 43 36.7	+1.0
BARS	Barje	6.16	1	ePn	Pb	05 43 52.6	-1.0
BARS				eSn	Sn	05 44 45.4	+0.5
HCY	Herceg Novi	6.26	338	⇓iPn	Pn	05 43 36.2	-1.0
HCY				i Sn	Sn	05 44 44.0	-3.6
HCY	Herceg Novi	6.26	338	⇑iPn	Pn	05 43 36.1	-1.1
IVA	Berane	6.35	349	⇑iPn	Pn	05 43 39.6	+1.2
IVA				i Sn	Sn	05 44 48.9	-0.8
KOME	Kolasin	6.39	346	⇑iPn	Pn	05 43 39.6	+0.6
KOME				i Sn	Sn	05 44 49.1	-1.8
KCTX	Karacabey (Bur	6.40	54	eP	Pn	05 43 40.5	+1.4
NKME	Niksic	6.44	342	⇓iPn	Pn	05 43 39.7	+0.1
NKME				i Sn	Sn	05 44 50.5	-1.4
AKAS	Kas	6.46	91	eP	Pn	05 43 41.2	+1.2
AKAS	Kas	6.46	91	i P	Pn	05 43 42.5	+2.5
AKAS				IAML_P			
	comp=Z,5µm,0.3s						
NKY	Niksic	6.47	343	⇓iPn	Pn	05 43 40.3	+0.2
NKY				i Sn	Sn	05 44 51.3	-1.5
KHAL	Karahalli	6.50	72	i P	Pn	05 43 44.0	+3.5
KHAL				IAML_P			
	comp=Z,656nm,0.7s						
EDRB	Edirne	6.54	36	eP	Pn	05 43 42.7	+1.8
CRLT	Corlu	6.54	45	eP	Pn	05 43 42.0	+1.0
TREB	Trebinje	6.55	338	ePn	Pn	05 43 40.3	-0.9
TREB				eSn	Sn	05 44 51.9	-2.8
TREB	Trebinje	6.55	338	⇑iPn	Pn	05 43 40.0	-1.2
SELS	Selova	6.57	357	ePn	Pn	05 43 41.4	0.0
SELS				eSn	Sn	05 44 54.4	-0.7
ZAPS	Zavoj	6.66	6	ePn	Pn	05 43 44.4	+1.8
ELL	Elmali	6.67	87	eP	Pn	05 43 45.8	+2.9
BRY	Bratogost	6.67	340	⇑iPn	Pn	05 43 42.1	-0.8
BRY				i Sn	Sn	05 44 55.5	-2.3
BRY	Bratogost	6.67	340	⇑iPn	Pn	05 43 41.9	-1.0
SJES	Sjenica	6.72	350	i Pn	Pn	05 43 44.0	+0.5
SJES				eSn	Sn	05 44 56.9	-2.0
TVSB	Tavsanli	6.79	63	eP	Pn	05 43 47.7	+3.1
MDNY	Mudanya-Bursa	6.80	55	eP	Pn	05 43 45.7	+1.2
BRDR	BURDUR-Merkez	6.83	79	i P	Pn	05 43 49.3	+4.3
BRDR				IAML_P			
	comp=Z,3µm,0.7s						
SLVT	Silivri	6.88	46	eP	Pn	05 43 53.1	+7.5
PLE	Pljevlja	6.88	346	⇓iPn	Pn	05 43 46.8	+1.1
PLE				i Sn	Sn	05 45 00.8	-2.1
ARMT	Armutlu	6.89	53	eP	Pn	05 43 47.2	+1.4
STON	Ston	6.90	335	ePn	Pn	05 43 44.6	-1.2
STON				Sn	Sn	05 44 56.7	-6.4
BOVS	Bovan	6.97	1	i Pn	Pn	05 43 47.2	+0.3
IVAS	Ivanjica	7.00	351	ePn	Pn	05 43 47.0	-0.4
IVAS	Ivanjica	7.00	351	ePn	Pn	05 43 47.2	-0.2
IVAS				eSn	Sn	05 45 03.2	-2.6
KORT	Korkueli	7.02	85	eP	Pn	05 43 53.4	+5.7
CTKS	Kestanelik-??a	7.06	47	eP	Pn	05 43 49.2	+1.2
MATC	Matruh	7.06	137	P	Pn	05 43 47.8	-0.3
	baz=136						
MATC				S	Sn	05 44 56.7	-10
	baz=136						
MATC				AMP		05 45 00.0	
	baz=136						
CTYL	Yalikoy Yolu	7.08	45	eP	Pn	05 43 53.7	+5.3
ZAGS	Zajecar	7.17	4	ePn	Pn	05 43 50.7	+1.2
BGKT	Bogazkoy	7.18	49	eP	Pn	05 43 48.6	-1.2
ISP	Isparta	7.21	78	eP	Pn	05 43 53.4	+3.2
ISP	Isparta	7.21	78	ePn	Pn	05 43 53.6	+3.4
ISP	Isparta	7.21	78	eP	Pn	05 43 53.6	+3.4
ISP	Isparta	7.21	78	Pn	Pn	05 43 52.4	+2.2
YLV	Yalova	7.22	55	eP	Pn	05 43 51.5	+1.1
BCK	Bucak	7.23	81	eP	Pb	05 44 02.1	-10
GRUS	Gruza	7.26	355	i Pn	Pn	05 43 50.7	-0.1
GRUS				eSn	Sn	05 45 09.3	-2.7
ANTB	Antalya	7.26	85	eP	Pn	05 43 53.7	+2.8
ISK	Istanbul-Kandi	7.29	51	eP	Pn	05 43 51.1	-0.2
KAVV	Kandilli-Istan	7.29	51	P	Pn	05 43 50.4	-0.8
SHUT	Suhut-Afyon	7.35	72	eP	Pn	05 43 55.6	+3.4
KLYT	Kilyos	7.39	49	P	Pn	05 43 53.1	+0.5
SZH	Strazhica	7.39	25	P	Pn	05 43 54.0	+1.4
BBLS	Lazići	7.40	348	ePn	Pn	05 43 52.3	-0.5
BBLS				eSn	Sn	05 45 12.6	-2.9
BBLS	Lazići	7.40	348	⇑iPn	Pn	05 43 52.1	-0.7
DIVS	Divibare	7.54	351	ePn	Pn	05 43 54.2	-0.5
DIVS				eSn	Sn	05 45 15.1	-3.9
DIVS	Divibare	7.54	351	ePn	Pn	05 43 54.1	-0.6
DIVS	Divibare	7.54	351	⇑iPn	Pn	05 43 54.1	-0.6
TRUS	Trudelj	7.62	353	ePn	Pn	05 43 55.2	-0.5
TRUS				eSn	Sn	05 45 17.7	-3.1
VLAD	Vladila	7.64	15	⇑iP	Pn	05 43 57.4	+1.4
BORA	Eskisehir	7.67	62	eP	Pn	05 43 58.4	+1.9
PUNG	Punghina	7.68	7	⇑iP	Pn	05 43 57.5	+0.9
HAPS	Han Pijesak,BI	7.70	346	ePn	Pn	05 43 55.7	-1.2
HAPS	Han Pijesak,BI	7.70	346	⇑iPn	Pn	05 43 55.3	-1.6
SILT	Sile	7.71	52	eP	Pn	05 43 57.6	+0.7
KUBS	Kucevo	7.75	0	ePn	Pn	05 43 56.2	-1.4
GULT	Gulveren	7.93	59	eP	Pn	05 44 01.3	+1.2
SAUV	Serdivan-Sakar	7.94	56	eP	Pn	05 44 01.5	+1.3
TEKS	Tekeris	8.04	349	ePn	Pn	05 44 00.8	-0.8
TEKS	Tekeris	8.04	349	ePn	Pn	05 44 00.6	-1.0
SWA2		8.07	155	P	Pn	05 44 00.8	-1.2
	baz=155						
SWA2				AMP		05 45 00.0	
	baz=155						
SWA2				S	Sn	05 45 20.3	-12
	baz=155						
SRE	Strehaia	8.09	8	⇑iP	Pn	05 44 03.9	+1.7
SRE	Strehaia	8.09	8	P	Pn	05 44 03.8	+1.6
MDVR	Moldovita	8.12	1	⇑iP	Pn	05 44 02.7	0.0
BEO	Beograd	8.19	354	P	Pn	05 44 02.7	-0.9
HERR	Herculane	8.24	4	⇑iP	Pn	05 44 05.0	+0.7
SGRR	Singureni	8.26	22	⇑iP	Pn	05 44 06.4	+1.9
HUMR	Humele	8.27	17	⇑iP	Pn	05 44 07.0	+2.3
AUSIV	SIVRIHISAR	8.31	67	eP	Pn	05 44 07.4	+2.0
AUMIH	MIHALICIK	8.40	65	eP	Pn	05 44 08.9	+2.2
MDUB	Mudurnu	8.42	60	eP	Pn	05 44 12.2	+5.3
DOB	Doboj	8.50	343	ePn	Pn	05 44 07.5	-0.3
AQU	L'Aquila	8.52	314	ePn	Pn	05 44 10.8	+2.6
AQU	L'Aquila	8.52	314	eP	Pn	05 44 10.8	+2.6
AQU	L'Aquila	8.52	314	⇑iPn	Pn	05 44 10.4	+2.2
FRGS	Fruska Gora	8.60	351	ePn	Pn	05 44 08.1	-1.2
FRGS	Fruska Gora	8.60	351	⇑iPn	Pn	05 44 08.1	-1.2
PSN	Preselentsi	8.63	34	eP	Pn	05 44 09.5	-0.2
KONT	Konya--Tatoy	8.66	78	eP	Pn	05 44 14.6	+4.4
LADK	Ladik-KONYA	8.70	77	eP	Pn	05 44 13.8	+3.1
BLY	Banja Luka	8.75	339	ePn	Pn	05 44 10.7	-0.7
BLY	Banja Luka	8.75	339	⇑iP	Pn	05 44 11.3	0.0
BLY	Banja Luka	8.75	339	⇑iPn	Pn	05 44 10.4	-0.9
SULR		8.76	22	⇓iP	Pn	05 44 12.6	+1.3
GZR	Gura Zlata	8.77	5	⇑iP	Pn	05 44 12.4	+0.7
GZR	Gura Zlata	8.77	5	P	Pn	05 44 12.3	+0.6
ICOR	Ion Corvin	8.82	30	⇓iP	Pn	05 44 14.4	+2.2
MTUR	Matau	8.95	16	⇑iP	Pn	05 44 15.6	+1.5
BZS	Buzias	8.95	0	ePn	Pn	05 44 13.1	-0.9
BZS	Buzias	8.95	0	⇑iP	Pn	05 44 14.3	+0.3
BZS	Buzias	8.95	0	P	Pn	05 44 13.8	-0.2
BZS				pmax	pmax		
	comp=Z,22nm,0.8s						
ARR	Arges	9.00	14	⇑iP	Pn	05 44 15.9	+1.2
SECR		9.03	21	⇓iP	Pn	05 44 17.1	+2.0
UDBI	Udbina	9.03	332	i Pn	Pn	05 44 15.9	+0.7
UDBI				Sn	Sn	05 45 49.7	-6.0
ALFC	Alefka	9.04	96	P	Pn	05 44 12.3	-3.0
VOIR		9.15	15	⇓iP	Pn	05 44 18.4	+1.6
VOIR		9.15	15	P	Pn	05 44 18.3	+1.5
HBRG	Burj al `Arab	9.15	129	P	Pn	05 44 17.1	+0.3
	baz=128						
CHBY	Cihanbeyli	9.16	74	eP	Pn	05 44 20.6	+3.6
ISR	Istrita	9.24	22	⇑iP	Pn	05 44 20.5	+2.4
ISR	Istrita	9.24	22	P	Pn	05 44 21.6	+3.5
ISR				pmax	pmax		
	comp=Z,112nm,1.0s						
DEV	Deva	9.27	6	⇑iP	Pn	05 44 20.6	+2.2
DEV	Deva	9.27	6	P	Pn	05 44 20.3	+1.9
LEF	Lefka	9.28	96	eP	Pn	05 44 08.5	-10
TEKE	Tekeli-Mersin	9.29	90	eP	Pn	05 44 17.7	-1.0
TLB	Topalu	9.31	30	⇑iP	Pn	05 44 19.8	+0.9
TLB	Topalu	9.31	30	P	Pn	05 44 19.7	+0.9
KULU	Kulu	9.32	72	eP	Pn	05 44 22.4	+3.2
HARR	Harsova	9.35	29	⇑iP	Pn	05 44 20.8	+1.3
HARR	Harsova	9.35	29	P	Pn	05 44 20.8	+1.3
BERE	Bereket-Mersin	9.36	88	eP	Pn	05 44 18.9	-0.9
ANTO	Ankara	9.36	67	ePn	Pn	05 44 20.2	+0.5
	comp=Z,245nm,1.2s						
ANTO	Ankara	9.36	67	eP	Pn	05 44 20.2	+0.5
ANTO				pmax	pmax		
	comp=Z,245nm,1.2s						
SZAC	Souni	9.36	98	P	Pn	05 44 18.7	-1.0
NVLJ	Novalja	9.41	329	i Pn	Pn	05 44 20.4	+0.1
NVLJ				Sg	Sn	05 45 57.2	-7.7
MLR	Muntele Rosu	9.41	19	⇑iP	Pn	05 44 22.6	+2.1
MLR	Muntele Rosu	9.41	19	Pn	Pn	05 44 22.2	+1.8
	comp=Z,0.6nm,0.3s,baz=182,slow=9.0,SNR=40						
MLR				Sn	Sn	05 46 05.1	0.0
	comp=Z,0.3nm,0.3s,baz=204,slow=16,SNR=0.7						
MLR				Lg	Lg	05 46 36.3	
	comp=Z,0.3nm,0.3s,baz=212,slow=14,SNR=0.7						
MLR				LR	LR	05 48 50.0	
	comp=Z,5µm,19.0s,baz=198,slow=44						
AFSR	Afar-Bala (An	9.46	69	eP	Pn	05 44 24.6	+3.5
TEVE	Tevekalti-Mers	9.53	88	eP	Pn	05 44 21.8	-0.2
MAMC	Mammari	9.53	96	P	Pn	05 44 21.3	-0.7
SULT	Sultanhani-AKS	9.60	77	eP	Pn	05 44 26.5	+3.5
SIRR	Siria	9.60	0	⇑iP	Pn	05 44 23.3	+0.3
AKKU	Akkuyu-Mersin	9.64	89	eP	Pn	05 44 25.1	+1.6
CSS	Mathiatis	9.67	97	eP	Pn	05 44 23.0	-0.9
CSS	Mathiatis	9.67	97	ePn	Pn	05 44 24.7	+0.8
CSS	Mathiatis	9.67	97	P	Pn	05 44 27.3	+3.4
	comp=Z,14nm,0.9s						
CSS	Mathiatis	9.67	97	Pn	Pn	05 44 23.1	-0.9
CSS				Sn	Sn	05 46 06.7	-4.7
DOPR	Dopca	9.73	16	⇓iP	Pn	05 44 26.9	+2.2
IKL	Isikli	9.74	89	eP	Pn	05 44 23.0	-1.9
KEBE	Keben-Mersin	9.74	88	eP	Pn	05 44 25.9	+0.9
LFK	Lefkose	9.76	95	eP	Pn	05 44 28.5	+3.3
MORH	Mrgy, Hungar	9.81	348	⇑iPn	Pn	05 44 23.7	-2.0
MORH	Mrgy, Hungar	9.81	348	ePn	Pn	05 44 23.0	-2.7
MORH				Sn	Sn	05 46 05.1	-9.5
CFR	Carcaliu	9.84	28	⇓iP	Pn	05 44 26.8	+0.6
CFR	Carcaliu	9.84	28	P	Pn	05 44 27.6	+1.4
CFR				pmax	pmax		
	comp=Z,39nm,1.1s						
YAYX	Yaylak	9.92	73	eP	Pn	05 44 28.7	+1.2
PLOR	Plostina	9.94	21	⇓iP	Pn	05 44 30.7	+3.1
OZUR		9.94	17	⇑iP	Pn	05 44 29.5	+1.9
BR131	Keskin Array S	9.95	68	ePn	Pn	05 44 31.4	+3.4
BR131	Keskin Array S	9.95	68	P	Pn	05 44 31.0	+3.0
	SNR=12						
BRTR	Keskin Array B	9.95	68	Pn	Pn	05 44 30.4	+2.5
	comp=Z,0.5nm,0.3s,baz=262,slow=15,SNR=36						
BRTR				Lg	Lg	05 47 44.5	
	baz=252,slow=18,SNR=2.7						
KEST	Kesra	9.96	268	ePn	Pn	05 44 28.4	+0.5
KEST				Sn	Sn	05 46 13.1	-5.4
KEST	Kesra	9.96	268	Pn	Pn	05 44 27.8	-0.1
	comp=Z,0.5nm,0.3s,baz=7.5,slow=4.1,SNR=27						
KEST				Sn	Sn	05 46 13.1	-5.4
	comp=Z,1.4nm,0.3s,baz=55,slow=23,SNR=1.3						
KEST				LR	LR	05 49 01.7	
	comp=Z,3µm,21.6s,baz=7.5,slow=42						
VRI	Vrincioaia	9.97	21	i P	Pn	05 44 29.6	+1.6
VRI	Vrincioaia	9.97	21	⇓iP	Pn	05 44 30.6	+2.6
VRI	Vrincioaia	9.97	21	P	Pn	05 44 30.6	+2.6
ODBI	Odobesti	9.98	23	⇑iP	Pn	05 44 31.9	+3.8
KURC	Kurucasile-Bar	10.07	56	eP	Pn	05 44 30.9	+1.6
OZLJ	Ozalj	10.07	335	ePn	Pn	05 44 28.6	-0.8
KIZK	Mersin	10.09	87	eP	Pn	05 44 30.4	+0.8
ZAG	Zagreb	10.09	337	ePn	Pn	05 44 28.4	-1.2
CJR	Cluj-Napoca	10.16	8	⇓iP	Pn	05 44 32.8	+2.1
CJR	Cluj-Napoca	10.16	8	P	Pn	05 44 32.7	+2.1
DRGR		10.16	4	⇑iP	Pn	05 44 31.8	+1.1
DRGR		10.16	4	P	Pn	05 44 31.4	+0.7
DRGR				pmax	pmax		
	comp=Z,37nm,1.1s						
PHNC	Paralimni	10.22	96	P	Pn	05 44 29.5	-2.0
CRES	Cresnjev	10.26	335	⇑iPn	Pn	05 44 30.8	-1.2
MERS	Mersin	10.36	85	eP	Pn	05 44 37.8	+4.3
ILGA	Ilgaz	10.41	61	ePn	Pn	05 44 39.5	+5.2
BEHE	Becsehely	10.45	341	⇑iPn	Pn	05 44 33.0	-1.6
BEHE	Becsehely	10.45	341	ePn	Pn	05 44 31.1	-3.5
BEHE				Sn	Sn	05 46 21.1	-9.3
TESR	Tescani	10.54	19	⇑iP	Pn	05 44 37.7	+1.9
CEY	Cerknica	10.56	331	ePn	Pn	05 44 35.7	-0.4
TIH	Tihany	10.60	346	ePn	Pn	05 44 38.0	+1.4
TIH				Sn	Sn	05 46 29.0	-5.1
ARCR	ARCALIA	10.62	10	⇑iP	Pn	05 44 38.8	+1.9
KARA	Karaisali	10.78	83	eP	Pn	05 44 42.7	+3.6
LJU	Ljubljana	10.78	333	ePn	Pn	05 44 39.0	-0.1
TRI	Trieste	10.80	329	ePn	Pn	05 44 40.2	+0.9
TRI	Trieste	10.80	329	eP	Pn	05 44 40.2	+0.9
BIZ	Bicaz	10.81	17	⇑iP	Pn	05 44 41.6	+2.2
BUD	Budapest	10.99	351	P	Pn	05 44 42.4	+0.5
BUD				pmax	pmax		
	comp=Z,31nm,0.8s						
BUD	Budapest	10.99	351	ePn	Pn	05 44 30.1	-12
BUD				Sn	Sn	05 46 38.0	-5.5
KRTS	Karatas	11.07	86	eP	Pn	05 44 42.7	-0.3
BMR	Baia Mare	11.10	7	⇑iP	Pn	05 44 42.5	-0.9
SOKA	Soboth	11.15	336	ePn	Pn	05 44 42.8	-1.4
	SNR=32						
SOKA				Sn	Sn	05 46 38.4	-9.3
	comp=Z,28nm,0.6s						
OBKA	Obir	11.17	334	ePn	Pn	05 44 44.0	-0.5
	comp=Z,8.4nm,0.2s						
OBKA				Sn	Sn	05 46 39.8	-8.4
	comp=Z,72nm,0.6s						
YOZ	Yozgat	11.20	70	eP	Pn	05 44 49.6	+4.6
PRAR	RASCA	11.23	16	⇑iP	Pn	05 44 47.5	+2.2
YURE	YUREGIR	11.26	85	eP	Pn	05 44 48.0	+2.4
BURAR	Bucovina Array	11.27	13	⇓iP	Pn	05 44 46.9	+1.0
BUR04	Bucovina Ar. S	11.28	13	ePn	Pn	05 44 46.9	+1.0
BUR08	Bucovina Ar. S	11.30	12	ePn	Pn	05 44 47.9	+1.7
PSZ	Piszkesteto	11.33	354	ePn	Pn	05 44 45.7	-0.9
PSZ	Piszkesteto	11.33	354	⇑iP	Pn	05 44 46.0	-0.6
PSZ	Piszkesteto	11.33	354	eP	Pn	05 44 45.7	-0.9
PSZ	Piszkesteto	11.33	354	ePn	Pn	05 44 43.0	-3.6
PSZ				Sn	Sn	05 46 34.0	-18
CEYT	Ceyhan	11.34	84	eP	Pn	05 44 46.4	-0.3
KOZT	Kozan	11.39	82	eP	Pn	05 44 47.8	+0.3
CMAH	Djebel Manchou	11.40	274	P	Pn	05 44 45.6	-2.1
SRO	Srobarova	11.41	349	eP	Pn	05 44 47.7	0.0
SRO				e		05 46 51.7	
SRO	Srobarova	11.41	349	ePN	Pn	05 44 47.7	0.0
SRO	Srobarova	11.41	349	eSN	Sn	05 46 51.7	-2.2
BNN	Bunyan	11.48	75	eP	Pn	05 44 53.3	+4.4
TRPA	Tarpa	11.49	3	⇑iP	Pn	05 44 49.5	+0.8
ARSA	Arzberg	11.51	339	ePn	Pn	05 44 47.8	-1.3
	comp=Z,8.4nm,0.5s,SNR=8.6						
ARSA				Sn	Sn	05 46 50.1	-6.3
	comp=Z,7.5nm,0.5s						
MYKA	Terra Mystica	11.61	332	ePn	Pn	05 44 50.0	-0.4
	comp=Z,5.6nm,0.3s						
MYKA				Sn	Sn	05 46 49.8	-8.9
	comp=Z,22nm,0.4s						
SOP	Sopron	11.64	343	P	Pn	05 44 50.8	0.0
SOP				pmax	pmax		
	comp=Z,24nm,1.0s						
SOP	Sopron	11.64	343	ePn	Pn	05 44 51.0	+0.3
SOP				Sn	Sn	05 46 43.0	-16
KIS	Kishinev	11.64	25	eP	Pn	05 44 52.0	+1.2
KIS				eS	Sn	05 46 53.0	-6.6
KIS				eLi		05 48 05.0	
KIS				i LQ	LQ	05 49 08.0	
KIS				LRM	MLR	05 49 50.0	
	comp=Z,1µm,14.0s						
KIS	Kishinev	11.64	25	eP	Pn	05 44 52.0	+1.2
KIS				eS	Sn	05 46 53.0	-6.6
KIS				MLR	MLR		
	comp=Z,2µm,15.0s						
KIS				MLR	MLR		
	comp=N,1µm,14.0s						
DIKM	Dikmen	11.71	61	eP	Pn	05 45 04.6	+13
TAHT	Tahtakopru-Hat	11.73	87	eP	Pn	05 44 51.9	-0.3
DQRL	Deir Qamar	11.80	100	eP	Pn	05 44 53.6	+0.5
MMAI	Mount Meron Ar	11.90	104	Pn	Pn	05 44 50.7	-3.9
	comp=N,4.8nm,0.3s,baz=298,slow=10.0,SNR=6.2						
MMAI				Sn	Sn	05 46 57.7	-8.5
	comp=N,16nm,0.3s,baz=326,slow=30,SNR=6.6						
SLTI	Sal'it	11.93	108	Pn	Pn	05 44 53.9	-0.9
HWQ	Hawqa	11.93	97	eP	Pn	05 44 52.1	-2.9
UZH	Uzhgorod	11.98	2	⇓iP	Pn	05 44 54.4	-1.0
UZH				eS	Sn	05 47 05.2	-2.6
UZH				MLR	MLR		
	comp=N,340nm,16.0s						
UZH				MLR	MLR		
	comp=E,340nm,16.0s						
UZH				MLR	MLR		
	comp=Z,240nm,16.0s						
VYHS	Vyhne	12.01	351	eP	Pn	05 44 54.5	-1.3
VYHS	Vyhne	12.01	351	ePN	Pn	05 44 54.5	-1.3
VYHS	Vyhne	12.01	351	eSN	Sn	05 46 59.3	-9.2
CONA	Conrad Observa	12.04	341	Pn	Pn	05 44 54.3	-2.0
	comp=Z,1.8nm,0.3s						
KSDI	Kefar Szold	12.04	103	Pn	Pn	05 44 55.8	-0.5
RCY	Rachaya	12.07	101	eP	Pn	05 44 52.8	-4.1
KZIT	Kziot	12.08	115	eP	Pn	05 44 53.9	-3.0
KZIT	Kziot	12.08	115	P	Pn	05 44 50.8	-6.1
KZIT	Kziot	12.08	115	Pn	Pn	05 44 55.2	-1.7
KBA	Koelnbreinsper	12.09	332	Pn	Pn	05 44 56.4	-0.8
	comp=Z,12nm,0.6s						
KBA				Sn	Sn	05 47 02.9	-7.9
	comp=Z,66nm,0.7s						
KBA	Koelnbreinsper	12.09	332	P	Pn	05 44 58.1	+0.9
KBA				pmax	pmax		
	comp=Z,42nm,1.1s						
MODS	Modra-Piesok	12.14	346	eP	Pn	05 44 56.6	-1.0
MODS				e		05 47 06.1	
MODS	Modra-Piesok	12.14	346	ePN	Pn	05 44 56.6	-1.0
MODS	Modra-Piesok	12.14	346	eSN	Sn	05 47 06.1	-5.6
MMLI	Mount Malkishu	12.14	106	eP	Pn	05 44 54.1	-3.6
ABTA	Abfaltersbach	12.15	329	ePn	Pn	05 44 57.4	-0.5
	comp=Z,7.2nm,0.5s,SNR=8.1						
ABTA				Sn	Sn	05 47 03.1	-9.0
	comp=Z,67nm,0.7s						
AMAZ	Amatzia	12.15	111	P	Pn	05 45 01.6	+3.7
AMAZ	Amatzia	12.15	111	Pn	Pn	05 44 57.2	-0.7
AMAZ				Sn	Sn	05 47 05.3	-6.9
KSHT	Keshet	12.23	103	Pn	Pn	05 44 58.1	-0.9
SMOL	Smolenice	12.24	347	eP	Pn	05 44 58.5	-0.6
SMOL	Smolenice	12.24	347	ePN	Pn	05 44 58.5	-0.6
KMRS	Kahramanmaras	12.24	81	eP	Pn	05 45 00.3	+1.1
HMDT	Nahal Hemdat	12.29	107	Pn	Pn	05 44 59.3	-0.5
MOA	Molln	12.43	336	ePn	Pn	05 45 00.3	-1.3
	comp=Z,7.0nm,0.2s,SNR=29						
MOA				Sn	Sn	05 47 11.6	-7.3
	comp=Z,29nm,0.8s						
DSI	Dead Sea	12.48	110	Pn	Pn	05 45 01.8	-0.6
DSI				Sn	Sn	05 47 12.9	-7.4
GAZ	Gaziantep	12.50	83	eP	Pn	05 45 03.2	+0.5
SVSK	Karacayir	12.52	70	eP	P	05 45 12.4	-1.7
SIM	Simferopol'	12.57	45	c iP	Pn	05 45 07.7	+4.1
SIM				pmax	pmax		
	comp=Z,16nm,0.9s						
SIM				MLR	MLR		
	comp=Z,740nm,13.1s						
LANS	Liptovska Anna	12.59	354	eP	Pn	05 45 03.6	-0.2
LANS	Liptovska Anna	12.59	354	ePN	Pn	05 45 03.6	-0.2
LISJ	El Lisan	12.72	111	P	Pn	05 45 04.5	-1.1
	comp=Z,44nm,0.6s						
DARE	Darende-Malaty	12.73	77	eP	Pn	05 45 07.9	+2.0
GHAJ	Ghor Haditha	12.75	111	P	Pn	05 45 07.2	+1.2
	comp=Z,139nm,0.7s						
GHAJ	Ghor Haditha	12.75	111	Pn	Pn	05 45 05.9	-0.1
GHAJ				Sn	Sn	05 47 20.4	-6.4
NIE	Niedzica	12.79	356	eP	Pn	05 45 07.4	+0.8
NIE				eS		05 48 59.0	
NIE	Niedzica	12.79	356	eP	Pn	05 45 07.4	+0.8
WALJ	Wala	12.81	109	P	Pn	05 45 08.5	+1.6
	comp=Z,160nm,0.7s						
ZFRI	Zfri	12.84	114	Pn	Pn	05 45 05.3	-1.9
WTTA	Wattenberg	12.93	328	ePn	Pn	05 45 09.1	+0.5
	comp=Z,6.0nm,0.4s						
WTTA				Sn	Sn	05 47 22.0	-9.2
	comp=Z,54nm,0.6s						
KRUC	Moravsky	12.97	345	P	Pn	05 45 08.1	-0.9
KRUC				pmax	pmax		
	comp=Z,15nm,0.9s						
KRUC	Moravsky	12.97	345	ePN	Pn	05 45 06.8	-2.2
WATA	Walderalm	13.01	328	ePn	Pn	05 45 10.9	+1.3
	comp=Z,12nm,0.6s,SNR=8.9						
HRFI	Mount Harif	13.02	117	eP	Pn	05 45 05.0	-4.7
HRFI	Mount Harif	13.02	117	P	Pn	05 45 04.7	-5.0
HRFI	Mount Harif	13.02	117	Pn	Pn	05 45 08.8	-0.9
MBRI	Mt Berech	13.06	118	Pn	Pn	05 45 09.5	-1.0
MBRI				Sn	Sn	05 47 27.3	-7.3
SET	Setif	13.06	273	P	P	05 45 17.0	-3.3
FUORN	Ofenpass-Fuorn	13.07	323	ePn	Pn	05 45 13.5	+3.0
SQTA	Sankt Quirin	13.08	327	ePn	Pn	05 45 11.9	+1.4
	comp=Z,4.0nm,0.3s,SNR=11						
SQTA				Sn	Sn	05 47 28.1	-6.8
	comp=Z,57nm,0.5s						
FETA	Feichten	13.14	325	ePn	Pn	05 45 13.7	+2.2
	comp=Z,0.1nm,0.2s,SNR=5.7						

FETA				Sn	Sn	05 47 26.3	-10
	comp=Z,21nm,0.6s						
EIL	Elat	13.16	118	P	Pn	05 45 08.6	-3.1
EIL	Elat	13.16	118	Pn	Pn	05 45 10.7	-1.0
EIL	Elat	13.16	118	Pn	Pn	05 45 09.5	-2.2
	comp=Z,1.9nm,0.3s,baz=294,slow=2.2,SNR=11						
EIL				Sn	Sn	05 47 22.7	-14
	comp=Z,8.4nm,0.3s,baz=294,slow=1.0,SNR=6.7						
VRAC	Vranov	13.16	345	⇓iP	Pn	05 45 10.7	-0.9
VRAC	Vranov	13.16	345	ePN	Pn	05 45 09.8	-1.8
VRAC	Vranov	13.16	345	Pn	Pn	05 45 09.8	-1.8
	comp=Z,0.1nm,0.3s,baz=179,slow=13,SNR=9.7						
VRAC				Lg	Lg	05 49 13.1	
	comp=Z,0.1nm,0.3s,baz=118,slow=15,SNR=1.0						
VRAC				LR	LR	05 51 43.2	
	comp=Z,4µm,18.3s,baz=168,slow=44						
AQBJ	Aqaba	13.20	118	P	Pn	05 45 10.4	-1.8
MOTA	Moosalm	13.22	327	ePn	Pn	05 45 13.1	+0.5
	comp=Z,5.1nm,0.4s,SNR=22						
LVV	L'vov	13.28	7	eP	Pn	05 45 14.8	+1.7
LVV				eS	Sn	05 47 45.6	+6.2
LVV				MLR	MLR		
	comp=E,600nm,14.0s						
LVV				MLR	MLR		
	comp=N,1µm,15.0s						
LVV				MLR	MLR		
	comp=Z,1µm,15.0s						
DAVOX	Davos/Dischmat	13.37	323	Pn	Pn	05 45 15.1	+0.5
	baz=151,slow=17						
DAVOX				Sn	Sn	05 47 31.3	-11
	comp=Z,3.2nm,0.3s,baz=313,slow=18,SNR=5.8						
DAVOX				Lg	Lg	05 49 27.1	
	baz=88,slow=18,SNR=0.5						
DAVOX				LR	LR	05 51 09.5	
	comp=Z,776nm,21.1s,baz=118,slow=41						
ASF	Jabal al Asfar	13.39	105	P	Pn	05 45 15.6	+0.7
	comp=Z,22nm,0.7s						
ASF	Jabal al Asfar	13.39	105	Pn	Pn	05 45 12.4	-2.5
	comp=Z,0.8nm,0.3s,baz=305,slow=6.5,SNR=5.3						
ASF				Sn	Sn	05 47 36.6	-5.9
	comp=Z,0.9nm,0.3s,baz=120,slow=23,SNR=1.3						
TREC	Trest	13.40	342	AMS	AMS	05 51 10.0	
	comp=Z,6µm,12.8s						
TREC	Trest	13.40	342	P	Pn	05 45 15.6	+0.8
TREC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OKC	Ostrava-Krasne	13.41	350	eP	Pn	05 45 15.3	+0.3
OKC				ex	x	05 45 25.8	
OKC				AMS	AMS	05 51 30.0	
	comp=Z,3µm,15.3s						
OKC	Ostrava-Krasne	13.41	350	eP	Pn	05 45 15.3	+0.3
OKC				MLR	MLR		
	comp=Z,3µm,15.3s						
TUE	Stuetta	13.42	321	ePn	P	05 45 23.5	-0.8
MORC	Moravsky Berou	13.44	349	ePn	Pn	05 45 14.4	-1.0
MORC	Moravsky Berou	13.44	349	⇑iP	Pn	05 45 15.9	+0.4
MORC	Moravsky Berou	13.44	349	eP	Pn	05 45 14.4	-1.0
MORC	Moravsky Berou	13.44	349	ePN	Pn	05 45 14.5	-1.0
RETA	Reutte	13.48	327	ePn	Pn	05 45 17.8	+1.9
	comp=Z,1.8nm,0.4s						
RETA				Sn	Sn	05 47 37.4	-7.1
	comp=Z,18nm,0.5s						
GEA0	GERESS Array S	13.48	337	ePn	Pn	05 45 13.7	-2.3
GEC2	GERESS Array S	13.49	337	ePn	Pn	05 45 16.3	+0.2
GEC2	GERESS Array S	13.49	337	eP	Pn	05 45 16.3	+0.2
GERES	GERESS Array B	13.49	337	Pn	Pn	05 45 14.7	-1.4
	comp=Z,0.8nm,0.3s,baz=159,slow=14,SNR=20						
GERES				Sn	Sn	05 47 36.5	-8.2
	comp=Z,2.9nm,0.3s,baz=152,slow=23,SNR=11						
GERES				Lg	Lg	05 49 16.8	
	baz=158,slow=21,SNR=1.6						
GERES				LR	LR	05 51 42.3	
	comp=Z,6µm,18.7s,baz=142,slow=43						
GERES				ScP	ScP	05 54 11.6	-1.1
	comp=Z,0.1nm,0.3s,baz=160,slow=3.1,SNR=6.2						
OJC	Ojcow	13.62	355	eP	Pn	05 45 19.2	+1.3
OJC				eS	S	05 49 19.1	+69
OJC	Ojcow	13.62	355	ePn	Pn	05 45 18.8	+0.9
OJC	Ojcow	13.62	355	eP	Pn	05 45 19.2	+1.3
DAVA	Damuels	13.73	324	ePn	Pn	05 45 21.4	+1.9
	comp=Z,2.9nm,0.4s,SNR=9.4						
DAVA				Sn	Sn	05 47 39.9	-11
	comp=Z,74nm,0.6s						
URFA	Urfa	13.77	82	eP	Pn	05 45 20.8	+0.7
KHC	Kasperske Hory	13.78	337	ePn	Pn	05 45 18.1	-1.9
KHC	Kasperske Hory	13.78	337	eP	Pn	05 45 17.9	-2.1
KHC				ex	x	05 45 21.9	
KHC				eS	Sn	05 47 42.2	-10
KHC				AMS	AMS	05 51 30.0	
	comp=Z,6µm,16.0s						
KHC	Kasperske Hory	13.78	337	eP	Pn	05 45 18.1	-1.9
FUR	Furstenfeldbru	13.79	330	P	Pn	05 45 24.1	+3.9
FUR				pmax	pmax		
	comp=Z,52nm,1.1s						
KRLC	Kraliky	13.86	347	eP	Pn	05 45 23.6	+2.4
KRLC				ex	x	05 45 31.0	
KRLC	Kraliky	13.86	347	eP	Pn	05 45 23.6	+2.4
MAHO	Mahon	14.00	289	eS	Sn	05 47 43.0	-14
BNI	Bardonecchia	14.06	311	ePn	P	05 45 29.4	-2.0
BNI	Bardonecchia	14.06	311	eP	P	05 45 29.4	-2.0
GOPC	GO Pecny, Ondr	14.14	342	eP	Pn	05 45 23.2	-1.8
GOPC				ex	x	05 45 33.6	
GOPC				AMS	AMS	05 51 40.0	
	comp=Z,4µm,13.4s						
GOPC	GO Pecny, Ondr	14.14	342	eP	Pn	05 45 23.2	-1.8
GOPC				MLR	MLR		
	comp=Z,4µm,13.4s						
DPC	Dobruska-Polom	14.21	346	eP	Pn	05 45 25.2	-0.7
DPC				ex	x	05 45 31.9	
DPC				AMS	AMS	05 52 00.0	
	comp=Z,3µm,16.6s						
DPC	Dobruska-Polom	14.21	346	eP	Pn	05 45 25.2	-0.7
DPC				MLR	MLR		
	comp=Z,3µm,16.6s						
LPL	La Plagne	14.27	313	eP	P	05 45 31.4	-2.4
LPL				pmax	pmax		
	comp=Z,19nm,1.3s						
PRU	Pruhonice	14.28	341	eP	Pn	05 45 26.0	-0.8
PRU				ex	x	05 45 34.2	
PRU				eS	Sn	05 48 02.3	-1.5
PRU				AMS	AMS	05 51 50.0	
	comp=Z,4µm,14.6s						
PRU	Pruhonice	14.28	341	eP	Pn	05 45 26.0	-0.8
PRU				eS	Sn	05 48 02.3	-1.5
PRU				MLR	MLR		
	comp=Z,4µm,14.6s						
UPC	Upice	14.42	346	eP	Pn	05 45 28.5	-0.3
UPC				ex	x	05 45 36.7	
UPC				AMS	AMS	05 52 10.0	
	comp=Z,4µm,15.0s						
UPC	Upice	14.42	346	eP	Pn	05 45 28.5	-0.3
UPC				MLR	MLR		
	comp=Z,4µm,15.0s						
SENIN	Lac Senin/Sane	14.44	317	ePn	Pn	05 45 31.4	+2.2
ORIF	Oris-en-Rattie	14.48	310	eP	P	05 45 35.6	-0.4
ORIF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANN	Anapa	14.48	51	eP	P	05 45 34.1	-1.7
ANN				eS	Sn	05 48 17.1	+8.3
ANN				pmax	pmax		
	comp=Z,241nm,1.1s						
ANN				MLR	MLR		
	comp=Z,1µm,19.0s						
ERZN	Erzincan	14.56	73	eP	P	05 45 34.7	-2.2
KSP	Ksiaz	14.69	347	eP	P	05 45 39.6	+1.5
KSP				eS	S	05 49 49.3	+77
KSP	Ksiaz	14.69	347	eP	P	05 45 39.6	+1.5
SLE	Schleitheim	14.73	323	P	P	05 45 37.6	-1.1
SLE				pmax	pmax		
	comp=Z,46nm,0.9s						
PVCC	Panska Ves	14.77	342	eP	Pn	05 45 33.7	+0.3
PVCC				AMS	AMS	05 52 00.0	
	comp=Z,4µm,12.5s						
PVCC	Panska Ves	14.77	342	eP	Pn	05 45 33.7	+0.3
PVCC				MLR	MLR		
	comp=Z,4µm,12.5s						
KTUT	Trabzon	14.80	67	eP	P	05 45 38.6	-0.8
AK11	Malin Array Si	15.03	19	ePn	Pn	05 45 34.3	-2.7
GRA1	Grafenberg Arr	15.05	333	ePn	P	05 45 40.9	-1.3
	comp=Z,89nm,1.1s						
GRF	Grafenberg Arr	15.05	333	P	P	05 45 43.5	+1.3
GRFO	Grafenberg	15.05	333	ePn	P	05 45 41.0	-1.2
	comp=Z,97nm,1.2s						
KIEV	Kiev	15.06	19	ePn	Pn	05 45 35.3	-2.0
	comp=Z,30nm,0.9s						
KIEV	Kiev	15.06	19	P	Pn	05 45 35.4	-2.0
KIEV	Kiev	15.06	19c	iP	Pn	05 45 35.0	-2.3
MAZI	Mazidag	15.07	81	eP	Pn	05 45 39.0	+1.4
AKASG	Malin Array Be	15.07	19	Pn	Pn	05 45 35.3	-2.2
	comp=Z,3.1nm,0.3s,baz=207,slow=12,SNR=23						
AKASG				Sn	Sn	05 48 32.6	+10
	baz=199,slow=23,SNR=4.2						
AKASG				Lg	Lg	05 50 04.4	
	comp=Z,0.4nm,0.3s,baz=211,slow=14,SNR=2.4						
AKASG				LR	LR	05 52 24.4	
	comp=Z,943nm,18.7s,baz=205,slow=42						
AKBB	Malin Array Si	15.07	19	ePn	Pn	05 45 35.4	-2.1
	comp=Z,34nm,0.9s						
AKBB	Malin Array Si	15.07	19	eP	Pn	05 45 35.4	-2.1
AKBB				pmax	pmax		
	comp=Z,34nm,0.9s						
NKC	Novy Kostel	15.10	337	eP	P	05 45 41.1	-1.6
NKC				AMS	AMS	05 52 20.0	
	comp=Z,5µm,14.6s						
NKC	Novy Kostel	15.10	337	eP	P	05 45 41.1	-1.6
NKC				MLR	MLR		
	comp=Z,5µm,14.6s						
STU	Stuttgart	15.14	327	ePn	Pn	05 45 38.4	0.0
	comp=Z,36nm,1.1s						
STU	Stuttgart	15.14	327	eP	Pn	05 45 38.4	0.0
STU				pmax	pmax		
	comp=Z,36nm,1.1s						
BEL	Belsk	15.19	358	eP	P	05 45 45.4	+1.7
BEL	Belsk	15.19	358	eP	P	05 45 45.4	+1.7
VIVF	Saint-Julien-l	15.21	308	eP	P	05 45 41.8	-2.2
VIVF				pmax	pmax		
	comp=Z,11nm,1.3s						
BFO	Black Forest	15.21	324	ePn	Pn	05 45 41.2	+1.9
	comp=Z,23nm,1.0s						
BFO	Black Forest	15.21	324	eP	Pn	05 45 41.2	+1.9
BFO				pmax	pmax		
	comp=Z,23nm,1.0s						
BRG	Berggiesshubel	15.24	341	eP	Pn	05 45 36.3	-3.4
	comp=Z,4.1nm,1.4s						
BRG				i PP	P	05 45 46.0	+1.7
	comp=Z,15nm,0.9s comp=N,3µm,12.3s comp=E,2µm,16.1s comp=Z,5µm,11.9s						
BRG	Berggiesshubel	15.24	341	eP	Pn	05 45 36.3	-3.4
BRG				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BRG				MLR	MLR		
	comp=N,3µm,12.3s						
BRG				MLR	MLR		
	comp=E,2µm,16.1s						
BRG				MLR	MLR		
	comp=Z,5µm,11.9s						
BNGB	Bingl	15.25	75	eP	P	05 45 43.3	-1.3
SOC	Sochi	15.47	58	eP	Pn	05 45 41.8	-0.9
SOC				e		05 48 34.2	
SOC				pmax	pmax		
	comp=Z,56nm,0.8s						
SOC				MLR	MLR		
	comp=Z,718nm,12.0s						
SSB	Saint Sauveur	15.48	309	ePn	P	05 45 52.3	+5.3
	comp=Z,50nm,1.8s						
ECH	Echery	15.69	322	ePn	Pn	05 45 47.3	+1.7
	comp=Z,59nm,1.3s						
ECH	Echery	15.69	322	eP	Pn	05 45 47.3	+1.7
ECH				pmax	pmax		
	comp=Z,59nm,1.3s						
CLL	Collm	15.89	340	ePn	Pn	05 45 47.7	-0.4
	comp=Z,41nm,1.2s						
CLL	Collm	15.89	340	eP	Pn	05 45 48.0	-0.1
CLL				i		05 45 51.4	
	comp=Z,47nm,1.3s						
CLL				i PP	pP	05 45 58.5	-1.3
CLL				e		05 46 25.0	
CLL				e		05 47 07.0	
CLL				eS	Sn	05 48 50.0	+7.0
CLL				Lmax		05 52 00.0	
CLL	Collm	15.89	340	eP	Pn	05 45 47.7	-0.4
CLL				pmax	pmax		
	comp=Z,41nm,1.2s						
KOPR	Koprukoy-ERZUR	16.23	72	eP	Pn	05 45 54.4	+1.7
BCA	Borcka	16.26	67	eP	Pn	05 45 52.9	0.0
MTLF	Montolieu	16.27	300	eP	P	05 45 58.1	+2.3
MTLF				pmax	pmax		
	comp=Z,44nm,2.0s						
TNS	Taunus Mts	16.55	329	P	P	05 45 59.5	+0.6
SIRT	Sirnak	16.65	81	eP	Pn	05 45 59.1	+1.1
SIRT	Sirnak	16.65	81	ePn	P	05 45 59.9	-0.2
	comp=Z,238nm,1.1s						
SENK	Senkaya-Erzuru	16.67	70	P	P	05 46 00.5	+0.1
RUE	Ruedersdorf	16.76	343	eP	P	05 46 01.7	+0.7
RUE				IAmb	IAmb	05 46 03.8	
	comp=Z,36nm,0.8s						
GKP	Gorka Klasztor	16.89	351	eP	P	05 46 05.1	+2.5
GKP	Gorka Klasztor	16.89	351	eP	P	05 46 05.1	+2.5
LOR	Lormes	16.89	314	eP	P	05 46 04.7	+2.0
LOR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AVF	Avril sur Loir	16.94	312	eP	P	05 46 04.4	+1.2
AVF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SSF	Saint Saulge	16.99	313	eP	Pn	05 46 01.7	-0.4
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AKDM	Akdamar-Van	17.04	78	eP	P	05 46 05.9	+1.4
AGRB	Hanur-Agry	17.07	74	eP	P	05 46 05.0	+0.1
BGF	Bois d'Agland	17.13	311	eP	P	05 46 05.9	+0.6
BGF				pmax	pmax		
	comp=Z,40nm,1.4s						
WLF	Walferdange	17.16	324	ePn	P	05 46 08.1	+2.5
	comp=Z,221nm,1.0s						
WLF	Walferdange	17.16	324	⇑P	P	05 46 08.1	+2.5
	comp=Z,47nm,1.3s						
KARS	Kars	17.23	70	ePn	P	05 46 11.5	+5.0
	comp=Z,294nm,1.4s						
SUW	Suwalki	17.39	3	eP	Pn	05 46 05.7	-1.4
SUW	Suwalki	17.39	3	ePn	Pn	05 46 06.2	-0.8
	comp=Z,487nm,1.0s						
SUW	Suwalki	17.39	3	eP	Pn	05 46 06.2	-0.8
SUW				pmax	pmax		
	comp=Z,487nm,1.0s						
TCF	Toulx Ste Croi	17.39	310	eP	P	05 46 08.2	0.0
TCF				pmax	pmax		
	comp=Z,18nm,1.2s						
RJF	Les Rejaudoux	17.43	306	eP	P	05 46 10.5	+2.0
RJF				pmax	pmax		
	comp=Z,25nm,1.2s						
NEY	Neytrino	17.45	61	⇑eP	P	05 46 09.6	+0.5
SHA1	Shidzhatmaz	17.54	60	i P	P	05 46 11.1	+1.0
CUKT	Cukurca	17.59	81	P	Pn	05 46 10.4	+0.6
KIV	Kislovodsk	17.62	59	ePn	P	05 46 11.2	+0.3
	comp=Z,49nm,0.8s						
KIV	Kislovodsk	17.62	59	P	P	05 46 11.6	+0.7
KIV	Kislovodsk	17.62	59	eP	P	05 46 11.0	+0.1
KIV				eS	Sn	05 49 28.3	+2.9
KIV				pmax	pmax		
	comp=Z,62nm,1.0s						
KIV				MLR	MLR		
	comp=Z,683nm,14.0s						
KIV	Kislovodsk	17.62	59	P	P	05 46 11.0	+0.1
	SNR=9.7						
KVAR	Kislovodsk Arr	17.63	59	Pn	Pn	05 46 10.4	+0.2
	baz=255,slow=19,SNR=11						
KVAR				Sn	S	05 49 30.5	-1.8
	baz=151,slow=11,SNR=1.6						
KBZ	Khabaz	17.71	60	Pn	P	05 46 12.6	+1.0
	comp=Z,2.1nm,0.3s,baz=251,slow=7.6,SNR=46						
KBZ				Sn	Sn	05 49 24.9	-2.3
	baz=211,slow=22,SNR=0.8						
KBZ				LR	LR	05 54 44.9	
	comp=Z,2µm,19.4s,baz=262,slow=43						
CLDR	Caldiran	17.78	75	eP	Pn	05 46 12.4	+0.3
LFF	La Frestale	17.80	304	eP	P	05 46 15.5	+2.8
LFF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MEM	Membach	17.89	326	P	P	05 46 16.2	+2.6
MEM				pmax	pmax		
	comp=Z,32nm,1.0s						
MEM	Membach	17.89	326	⇓P	P	05 46 15.7	+2.0
PYA1	Pyatigorsk	17.94	59	⇓iP	P	05 46 14.8	+0.5
KLNR	Kaliningrad	17.98	357	⇑eP	Pn	05 46 13.5	-0.7
HGN	Heimansgroeve	18.04	326	eP	P	05 46 16.9	+1.7
HGN				eS	S	05 49 42.3	+2.1
HGN				eL	L	05 54 40.5	
	comp=Z,1µm,19.3s						
CART	Cartagena	18.05	280	i P	Pn	05 46 14.0	-1.3
CART				i S	Sn	05 49 37.3	+1.7
TASB	TASBURUN-IGDIR	18.06	73	P	P	05 46 17.3	+1.7
BCLA	Clavier	18.08	325	⇑P	P	05 46 16.3	+0.6
ETSF	Etsaut	18.12	297	eP	P	05 46 16.6	+0.3
NCK	Nalchik	18.13	61	⇓eP	P	05 46 18.2	+1.8
BEBN	Eben Emael	18.17	326	⇑P	P	05 46 21.1	+4.3
ZEI	Tsey	18.19	63	eP	Pn	05 46 15.1	-2.0
ZEI				pmax	pmax		
	comp=Z,49nm,0.6s						
DOU	Dourbes	18.20	323	P	Pn	05 46 18.7	+1.7
DOU	Dourbes	18.20	323	⇑P	Pn	05 46 18.1	+1.1
	comp=Z,25nm,1.0s						
CLF	Chambon-Foret	18.21	315	eP	Pn	05 46 23.8	+6.7
	comp=Z,50nm,1.2s						
GOF	Gofitskoye	18.22	56	eP	P	05 46 17.4	+0.1
GOF				pmax	pmax		
	comp=Z,80nm,0.8s						
MICGM	Minsk	18.37	12	⇓iP	P	05 46 16.0	-2.8
MICGM				PM		05 46 17.0	
	comp=Z,0.2nm,1.0s						
MICGM				ePP	PnPn	05 46 37.0	+6.2
MICGM				eS	Sn	05 49 37.0	-6.0
MICGM				eLR	LR	05 52 38.0	
MICGM				LRM	MLR	05 54 16.0	
	comp=Z,5.6nm,16.0s						
MNK	Minsk	18.37	12	⇓iP	P	05 46 16.0	-2.8
MNK				eS	Sn	05 49 37.0	-6.0
MNK				pmax	pmax		
	comp=Z,290nm,1.0s						
MNK				MLR	MLR		
	comp=Z,6µm,16.0s						
GNI	Garni	18.45	72	eP	Pn	05 46 20.8	+0.5
GNI	Garni	18.45	72	eP	Pn	05 46 21.5	+1.2
	comp=Z,121nm,1.2s						
GNI	Garni	18.45	72	P	Pn	05 46 21.4	+1.1
GNI	Garni	18.45	72c	iP	P	05 46 20.0	-0.1
GNI	Garni	18.45	72	Pn	Pn	05 46 20.9	+0.6
	comp=Z,2.9nm,0.3s,baz=6.7,slow=7.6,SNR=11						
GNI				LR	LR	05 54 41.6	
	comp=Z,2µm,19.0s,baz=278,slow=41						
WTSB	Winterswijk	18.56	330	eP	Pn	05 46 22.6	+1.2
NACGM	Naroch	18.59	9	eP	P	05 46 18.0	-3.3
NACGM				eP	Pn	05 46 19.0	-2.8
NACGM				PM		05 46 23.0	
	comp=Z,0.3nm,0.8s						
NACGM				ePP	sP	05 46 34.0	+1.2
NACGM				ePPP	PPP	05 46 48.0	
NACGM				eS	Sn	05 49 44.0	-4.5
NACGM				eSS	SnSn	05 50 21.0	+19
NACGM				eLQ	LQ	05 52 04.0	
NACGM				eLR	LR	05 53 50.0	
NACGM				LRM	MLR	05 54 31.0	
	comp=Z,5.2nm,16.0s						
TBLG	Delisi	18.61	67	eP	Pn	05 46 22.7	+0.6
	comp=Z,25nm,0.6s						
TBLG	Delisi	18.61	67	eP	Pn	05 46 22.7	+0.6
TBLG				pmax	pmax		
	comp=Z,25nm,0.6s						
SJPF	Ste Jean	18.64	297	eP	Pn	05 46 23.9	+1.4
SJPF				pmax	pmax		
	comp=Z,28nm,1.0s						
UCC	Uccle	18.78	324	eP	Pn	05 46 25.6	+1.6
	comp=Z,31nm,0.9s						
UCC	Uccle	18.78	324	eP	Pn	05 46 25.6	+1.6
UCC				pmax	pmax		
	comp=Z,31nm,0.9s						
UCC	Uccle	18.78	324	⇓P	Pn	05 46 25.1	+1.1
	comp=Z,17nm,1.1s						
IIGN	Ignalina	18.96	8	eP	P	05 46 25.0	-0.3
IIGN				IAmb	IAmb	05 46 30.1	
	comp=Z,36nm,0.5s						
IDID	Didziasalis	18.99	9	eP	P	05 46 25.2	-0.4
IDID				IAmb	IAmb	05 46 28.5	
	comp=Z,28nm,0.9s						
MFF	Saint Martin d	19.00	308	eP	Pn	05 46 26.9	+0.1
MFF				pmax	pmax		
	comp=Z,35nm,1.2s						
BSD	Bornholm Skovb	19.02	348	⇓iP	P	05 46 25.4	-0.6
	comp=Z,57nm,0.9s						
BSD	Bornholm Skovb	19.02	348	⇓iP	P	05 46 25.4	-0.6
BSD				pmax	pmax		
	comp=Z,57nm,0.9s						
ISAL	Salakas	19.17	8	eP	P	05 46 26.9	-0.7
ISAL				IAmb	IAmb	05 46 29.4	
	comp=Z,45nm,0.9s						
VSR	Storozhevoye	19.21	35	eP	P	05 46 26.7	-1.4
VSR				eS	Sn	05 49 59.8	-3.5
VSR				pmax	pmax		
	comp=Z,40nm,0.8s						
VSR				smax	smax		
	comp=N,730nm,5.9s						
VSR				MLR	MLR		
	comp=Z,2µm,12.0s						
IZAR	Zarasai	19.36	8	eP	P	05 46 29.1	-0.6
IZAR				IAmb	IAmb	05 46 31.4	
	comp=Z,39nm,0.5s						
PBUR	Paburg	19.38	1	eP	P	05 46 29.5	-0.3
PBUR				IAmb	IAmb	05 46 32.4	
	comp=Z,180nm,0.8s						
FIGM	Figuig	19.39	263	P	Pn	05 46 31.0	-0.7
VORR	Voronezh	19.54	34	eP	P	05 46 32.0	+0.4
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
GROC	Groznyy	19.63	63	eP	P	05 46 33.6	+0.8
GROC				eS	Sn	05 50 17.5	+3.8
GROC				pmax	pmax		
	comp=Z,143nm,1.3s						
UCM	Universidad Co	19.78	288	eP	P	05 46 25.7	-8.8
UCM				i S	S	05 50 14.5	-0.9
LDF	La Druitiere	19.87	314	eP	P	05 46 36.3	+0.9
LDF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MELI	Melilla	19.90	273	i P	Pn	05 46 37.9	+0.3
MELI				i S	S	05 50 15.9	-2.1
COP	Copenhagen	20.03	345	i P	P	05 46 37.4	+0.4
	comp=Z,42nm,0.9s						
COP	Copenhagen	20.03	345	i P	P	05 46 37.4	+0.4
COP				pmax	pmax		
	comp=Z,42nm,0.9s						
LPSR	Galich'ya Gora	20.07	32	eP	P	05 46 36.5	-0.9
LPSR				eS	S	05 50 21.2	+0.2
LPSR				pmax	pmax		
	comp=Z,250nm,0.9s						
LPSR				smax	smax		
	comp=N,630nm,3.8s						
LPSR				MLR	MLR		
	comp=Z,1µm,14.0s						
FLN	La Foliniere	20.16	314	eP	P	05 46 38.4	-0.1
FLN				pmax	pmax		
	comp=Z,34nm,1.2s						
GRR	Gorron	20.21	312	eP	Pn	05 46 40.7	-0.4
GRR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ES19	SONSECA Array	20.26	286	eP	P	05 46 40.4	+0.7
ESDC	Sonseca Array	20.31	286	P	P	05 46 40.6	+0.3
	comp=Z,7.3nm,0.8s,baz=82,slow=10,SNR=55						
ESDC				LR	LR	05 54 55.7	
	comp=Z,488nm,21.0s,baz=90,slow=38						
ESLA	Sonseca Array	20.31	286	eP	P	05 46 40.7	+0.4
	comp=Z,21nm,1.0s						
VRH	Novokhopyorsk	20.43	38	eP	P	05 46 41.0	-0.3
VRH				eS	S	05 50 27.0	-1.2
VRH				pmax	pmax		
	comp=Z,270nm,0.8s						
VRH				smax	smax		
	comp=N,970nm,4.1s						
VRH				MLR	MLR		
	comp=Z,2µm,23.0s						
PAB	San Pablo	20.61	286	eP	P	05 46 43.9	+0.4
	comp=Z,17nm,0.9s						
PAB	San Pablo	20.61	286	eP	P	05 46 43.9	+0.4
PAB				pmax	pmax		
	comp=Z,17nm,0.9s						
MAK	Makhachkala	20.82	64	eP	P	05 46 44.5	-1.2
MAK				e		05 47 03.5	
MAK				eS	S	05 50 39.0	+2.9
MAK				eSS	SnSn	05 50 59.9	+2.8
MAK				pmax	pmax		
	comp=Z,246nm,0.7s						
MAK				MLR	MLR		
	comp=Z,2µm,15.0s						
EMAL	Malaga-Limoner	20.86	278	i P	P	05 46 46.0	-0.1
EMAL				i S	Sn	05 50 44.0	+0.6
SLIT	Slitere, Latvi	20.99	1	eP	P	05 46 46.2	-1.1

SLIT				IAmb	IAmb	05 46 48.0	
	comp=Z,693nm,0.9s						
OBN	**Obninsk**	**21.11**	**24**	*e*P	**P**	**05 46 47.9**	**-0.8**
	comp=Z,109nm,0.8s						
OBN				S	**S**	**05 50 40.0**	**-1.6**
OBN	**Obninsk**	**21.11**	**24***c*	*i*P	**P**	**05 46 47.6**	**-1.1**
OBN				*i*		05 47 09.5	
OBN				pmax	pmax		
	comp=Z,203nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	**Obninsk**	**21.11**	**24**	P	**P**	**05 46 47.8**	**-0.9**
	comp=Z,20nm,0.5s,baz=242,slow=2.5,SNR=28						
OBN				S	**S**	**05 50 40.0**	**-1.6**
	comp=Z,3.4nm,0.5s,baz=234,slow=22,SNR=0.9						
OBN				LR	LR	05 56 26.2	
	comp=Z,96nm,20.7s,baz=201,slow=41						
SGMF	**Saint Gilles**	**21.17**	**311**	*e*P	**P**	**05 46 50.4**	**+1.0**
SGMF				pmax	pmax		
	comp=Z,22nm,1.1s						
MUD	**Monsted U'grnd**	**21.51**	**341**	*i* P	**P**	**05 46 55.9**	**+3.0**
	comp=Z,37nm,1.0s						
MUD	**Monsted U'grnd**	**21.51**	**341**	*i* P	**P**	**05 46 55.9**	**+3.0**
MUD				pmax	pmax		
	comp=Z,37nm,1.0s						
LIJA	**Lijar**	**21.62**	**279**	*e*P	**P**	**05 46 53.0**	**-1.4**
CEU	**Ceuta**	**21.75**	**276**	*i* P	**P**	**05 46 57.6**	**+1.9**
CEU				*i* S	**S**	**05 50 54.2**	**-0.2**
MDT	**Midelt**	**21.86**	**268**	P	**P**	**05 46 56.9**	**-0.2**
	comp=Z,9.3nm,0.8s,baz=93,slow=12,SNR=21						
MDT				S	**S**	**05 50 55.0**	**-1.9**
	comp=Z,2.8nm,1.1s,baz=249,slow=9.4,SNR=2.0						
MDT	**Midelt**	**21.86**	**268**	P	**P**	**05 46 57.1**	**0.0**
CHEFC	**Chefchaouen**	**21.87**	**274**	P	**P**	**05 46 58.0**	**+0.9**
MOS	**Moscow**	**21.97**	**25**	*e*P	**P**	**05 46 56.1**	**-1.8**
MOS				*e*		05 47 17.0	
MOS				*e*		05 47 31.9	
MOS				*e*S	**S**	**05 50 52.9**	**-5.5**
MOS				*e*		05 51 02.7	
MOS				pmax	pmax		
	comp=Z,500nm,1.2s						
MOS				pmax	pmax		
	comp=Z,460nm,1.1s						
MOS				pmax	pmax		
	comp=N,300nm,1.1s						
MOS				pmax	pmax		
	comp=E,200nm,1.0s						
MOS				pmax	pmax		
	comp=N,241nm,1.1s						
MOS				pmax	pmax		
	comp=E,209nm,1.0s						
MOS				MLR	MLR		
	comp=Z,1µm,14.0s						
IFR	**Ifrane**	**22.08**	**270**	*i* P	**P**	**05 47 05.3**	**+5.8**
IFR				*i* S	**S**	**05 51 06.5**	**+5.4**
VSU	**Vasula**	**22.08**	**7***c*	*e*P	**P**	**05 46 58.1**	**-0.9**
VSU				pmax	pmax		
	comp=Z,491nm,1.0s						
VSU	**Vasula**	**22.08**	**7**	*e*P	**P**	**05 46 57.9**	**-1.1**
VSU				IAmb	IAmb	05 47 04.5	
	comp=Z,534nm,0.9s						
RSA	**Sarsar**	**22.30**	**274**	P	**P**	**05 47 02.1**	**+0.4**
PBRG	**Braganca**	**22.50**	**292**	*e*P	**P**	**05 47 03.8**	**0.0**
MVO	**Moncorvo**	**22.68**	**290**	*e*P	**P**	**05 47 05.1**	**-0.7**
	comp=Z,48nm,1.5s						
MVO				*e*S	**S**	**05 51 10.8**	**-1.1**
MVO				A	A	05 57 08.9	
	comp=Z,498nm,20.0s						
PMRV	**Marv??o**	**22.97**	**286**	*e*P	**P**	**05 47 07.4**	**-1.3**
	comp=Z,33nm,1.4s						
PMRV				A	A	05 56 38.3	
	comp=Z,477nm,22.0s						
PCBR	**Castelo Branco**	**23.02**	**287**	*e*P	**P**	**05 47 08.1**	**-1.1**
MTE	**Manteigas**	**23.06**	**288**	*e*P	**P**	**05 47 08.4**	**-1.3**
	comp=Z,45nm,1.8s						
MTE				*e*S	**S**	**05 51 19.5**	**+1.1**
MTE				A	A	05 57 17.8	
	comp=Z,579nm,20.0s						
PESTR	**Estremoz**	**23.15**	**284**	*e*P	**P**	**05 47 09.4**	**-1.1**
	comp=Z,29nm,1.4s						
PVRL	**Vila Real**	**23.21**	**290**	*e*P	**P**	**05 47 12.7**	**+1.6**
PVIS	**Viseu**	**23.33**	**289**	*e*P	**P**	**05 47 12.2**	**-0.2**
PVAQ	**Vaqueiros**	**23.39**	**281**	*e*P	**P**	**05 47 13.3**	**+0.4**
	comp=Z,57nm,1.3s						
PVAQ				*e*S	**S**	**05 51 20.9**	**-2.7**
PVAQ	**Vaqueiros**	**23.39**	**281**	P	**P**	**05 47 13.3**	**+0.4**
PBEJ	**Beja**	**23.43**	**282**	*e*P	**P**	**05 47 13.3**	**0.0**
	comp=Z,36nm,1.6s						
PBDV	**Barranco-do-Ve**	**23.58**	**280**	*e*P	**P**	**05 47 14.2**	**-0.6**
	comp=Z,94nm,1.2s						
PMTG	**Montargil**	**23.63**	**285**	*e*P	**P**	**05 47 14.0**	**-1.2**
	comp=Z,32nm,1.4s						
PGAV	**Gavieira, Arco**	**23.65**	**292**	*e*S	**S**	**05 51 29.8**	**+1.8**
PGAV				A	A	06 00 52.0	
	comp=Z,560nm,20.0s						
COI	**Coimbra**	**23.73**	**288**	P	**P**	**05 47 16.3**	**+0.2**
MESJ	**Messejana**	**23.73**	**282**	*e*P	**P**	**05 47 16.0**	**-0.2**
MESJ				AMb	AMB	05 47 17.7	
	comp=Z,22nm,0.7s						
MESJ	**Messejana**	**23.73**	**282**	*e*P	**P**	**05 47 16.3**	**+0.1**
	comp=Z,44nm,1.2s						
MESJ	**Messejana**	**23.73**	**282**	*e*P	**P**	**05 47 16.0**	**-0.2**
MESJ				pmax	pmax		
	comp=Z,22nm,0.7s						
PTOM	**Tomar**	**23.75**	**286**	*e*P	**P**	**05 47 15.0**	**-1.3**
PCAS	**Casmilo, Conde**	**23.80**	**287**	*e*P	**P**	**05 47 16.7**	**-0.1**
	comp=Z,42nm,1.6s						
PUL	**Pulkovo**	**23.80**	**11**⇑	*e*P	**P**	**05 47 17.2**	**+0.6**
PUL				pmax	pmax		
	comp=Z,151nm,0.5s						
PNCL	**Nicolau / Gran**	**23.95**	**283**	*e*P	**P**	**05 47 15.5**	**-2.7**
	comp=Z,43nm,1.4s						
AVE	**Averroes**	**23.98**	**271**	*e*P	P	05 47 10.6	-7.9
AVE				*i* S	**S**	**05 51 43.8**	**+11**
AVE	**Averroes**	**23.98**	**271**	P	**P**	**05 47 19.8**	**+1.2**
HFS	**Hagfors**	**24.04**	**350**	P	**P**	**05 47 17.7**	**-1.1**
	comp=Z,28nm,0.7s,baz=153,slow=12,SNR=100						
HFS				LR	LR	05 58 59.1	
	comp=Z,1µm,19.2s,baz=168,slow=42						
MORF	**Marmelete**	**24.14**	**281**	*e*P	**P**	**05 47 19.8**	**-0.2**
MORF				AMb	AMB	05 47 21.0	
	comp=Z,33nm,2.9s						
MORF				*e*S	**S**	**05 51 37.9**	**+2.1**
MORF	**Marmelete**	**24.14**	**281**	*e*P	**P**	**05 47 19.8**	**-0.2**
MORF				*e*S	**S**	**05 51 37.8**	**+2.1**
MORF				pmax	pmax		
	comp=Z,33nm,2.9s						
PTEO	**Sao Teotonio**	**24.16**	**281**	*e*P	**P**	**05 47 19.2**	**-1.0**
	comp=Z,64nm,1.5s						
OUZM	**OUZ**	**24.22**	**265**	P	**P**	**05 47 23.0**	**+2.1**
KONO	**Kongsberg**	**24.29**	**345**	*e*P	**P**	**05 47 20.5**	**-0.6**
	comp=Z,58nm,1.2s						
KONO	**Kongsberg**	**24.29**	**345**	*e*P	**P**	**05 47 20.5**	**-0.6**
KONO				pmax	pmax		
	comp=Z,58nm,1.2s						
PFVI	**Vila Bisbo**	**24.30**	**280**	*e*P	**P**	**05 47 21.6**	**+0.1**
	comp=Z,51nm,1.4s						
OSL	**Oslo**	**24.33**	**347**	*e*P	**P**	**05 47 20.8**	**-0.7**
RAYN	**Ar Rayn**	**24.39**	**116**	*e*P	**P**	**05 47 23.2**	**+0.7**
	comp=Z,27nm,1.1s						
RAYN	**Ar Rayn**	**24.39**	**116**	*e*P	**P**	**05 47 23.2**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,27nm,1.1s						
PMAFR	**Mafra**	**24.46**	**285**	*e*P	**P**	**05 47 21.1**	**-1.8**
	comp=Z,103nm,1.5s						
NC602	**NORSAR Array S**	**24.94**	**348**	*e*P	**P**	**05 47 26.7**	**-0.3**
NC602	**NORSAR Array S**	**24.94**	**348**	*e*P	**P**	**05 47 27.1**	**+0.1**
NORES	**NORESS Array B**	**24.94**	**348**	P	**P**	**05 47 26.5**	**-0.5**
FINES	**FINESS Array B**	**24.97**	**5**	P	**P**	**05 47 26.9**	**-0.4**
	comp=Z,25nm,0.6s,baz=166,slow=10,SNR=149						
FINES				S	**S**	**05 51 40.5**	**-8.0**
	comp=Z,1.5nm,0.6s,baz=180,slow=18,SNR=2.2						
FINES				LR	LR	05 58 28.7	
	comp=Z,3µm,20.3s,baz=188,slow=40						
FIA1	**FINESS Array S**	**24.97**	**5**	*e*P	**P**	**05 47 26.9**	**-0.3**
NAO01	**NORSAR Array S**	**25.15**	**348**	*e*P	**P**	**05 47 29.0**	**0.0**
EKA	**Eskdalemuir Ar**	**25.17**	**326**	P	**P**	**05 47 29.4**	**+0.3**
	comp=Z,3.5nm,0.4s,baz=127,slow=9.6,SNR=25						
ESK	**Eskdalemuir**	**25.18**	**326**	*e*P	**P**	**05 47 30.3**	**+1.0**
	comp=Z,190nm,2.0s						
NC405	**NORSAR Array S**	**25.27**	**349**	*e*P	**P**	**05 47 29.1**	**-0.9**
NB201	**NORSAR Array S**	**25.28**	**348**	*e*P	**P**	**05 47 30.1**	**-0.1**
NB2	**NORSAR Subarra**	**25.28**	**348**	P	**P**	**05 47 29.2**	**-1.0**
	comp=Z,36nm,0.9s,baz=159,slow=10						
NB2	**NORSAR Subarra**	**25.28**	**348**	P	**P**	**05 47 29.2**	**-1.0**
	baz=159,slow=10						
NOA	**NORSAR Array B**	**25.28**	**348**	P	**P**	**05 47 29.6**	**-0.6**
	comp=Z,23nm,0.8s,baz=159,slow=9.2,SNR=75						
NOA				PcP	**PcP**	**05 51 03.2**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=154,slow=2.1,SNR=2.1						
NOA				LR	LR	05 59 05.3	
	comp=Z,645nm,18.3s,baz=160,slow=40						
NBO00	**NORSAR Array S**	**25.35**	**348**	*e*P	**P**	**05 47 30.6**	**-0.1**
NC303	**NORSAR Array S**	**25.43**	**348**	*e*P	**P**	**05 47 31.3**	**-0.2**
NC204	**NORSAR Array S**	**25.58**	**348**	*e*P	**P**	**05 47 33.0**	**+0.2**
DOMB	**Dombas**	**26.59**	**347**	*e*P	**P**	**05 47 43.1**	**+1.0**
KLMR	**Klimovskoe**	**26.76**	**20**	*e*P	**P**	**05 47 41.2**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,147nm,1.1s						
KLMR	**Klimovskoe**	**26.76**	**20**	*e*P	**P**	**05 47 41.2**	**-2.3**
KLMR				AMP		05 47 47.2	
	comp=Z,147nm,1.1s						
KIRV	**Kirov**	**28.49**	**31**	P	**P**	**05 47 57.9**	**-1.0**
	comp=Z,11nm,0.4s,baz=218,slow=6.8,SNR=6.0						
KIRV				LR	LR	06 00 07.3	
	comp=Z,797nm,19.2s,baz=229,slow=38						
NSS	**Namsos**	**28.50**	**351**	*e*P	**P**	**05 47 59.6**	**+0.6**
GEYT	**Alibeck**	**28.96**	**76**	P	**P**	**05 48 03.4**	**-0.1**
	comp=Z,27nm,0.5s,baz=280,slow=8.9,SNR=42						
GEYT				LR	LR	06 02 43.1	
	comp=Z,436nm,18.4s,baz=280,slow=43						
GYA0B	**ALIBECK ARRAY**	**28.96**	**76**	*e*P	**P**	**05 48 03.5**	**0.0**
	comp=Z,30nm,0.6s						
PRGR	**Permogore**	**29.19**	**23**	*e*P	**P**	**05 48 02.3**	**-2.8**
PRGR				*e*S	**S**	**05 52 47.8**	**-7.2**
PRGR				pmax	pmax		
	comp=Z,42nm,0.9s						
TMCR	**Tamitsa**	**29.27**	**15**	*e*P	**P**	**05 48 04.1**	**-1.8**
TMCR				pmax	pmax		
	comp=Z,13nm,0.7s						
AKTO	**Aktyubinsk**	**29.44**	**51**	P	**P**	**05 48 06.8**	**-0.7**
	comp=Z,16nm,0.6s,baz=259,slow=9.4,SNR=59						
TOA0	**Torodi Ar. Sit**	**29.44**	**222**	*e*P	**P**	**05 48 08.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**29.44**	**222**	P	**P**	**05 48 08.1**	**+0.2**
	comp=Z,9.6nm,0.7s,baz=30,slow=9.1,SNR=56						
TORD				PcP	**PcP**	**05 51 14.2**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=29,slow=3.3,SNR=2.8						
TORD				ScP	**ScP**	**05 54 52.2**	**-0.1**
	comp=Z,1.7nm,1.1s,baz=46,slow=4.2,SNR=4.3						
TORD				LR	LR	06 00 40.0	
	comp=Z,1µm,22.0s,baz=0.0,slow=38						
MOR8	**Moi Rana**	**29.85**	**354**	*e*P	**P**	**05 48 12.3**	**+1.3**
KONS	**Konsvik**	**30.29**	**353**	*e*P	**P**	**05 48 14.8**	**-0.1**
AB31	**Akbulak array**	**30.42**	**53**	*i* P	**P**	**05 48 14.8**	**-1.4**
AB31				pmax	pmax		
	comp=Z,18nm,1.0s						
ABKAR	**Akbulak array**	**30.42**	**53**	*e*P	**P**	**05 48 14.6**	**-1.6**
SHME	**Shamm**	**31.18**	**100**	P	**P**	**05 48 22.8**	**-0.4**
ASUD	**Al Ashush, Dub**	**31.23**	**103**	P	**P**	**05 48 23.4**	**-0.2**
NAZ	**Nazwa, Dubai**	**31.31**	**102**	P	**P**	**05 48 24.4**	**0.0**
FAQ	**Al Faqa, Dubai**	**31.38**	**103**	P	**P**	**05 48 24.8**	**-0.1**
STEI	**Steigen**	**31.53**	**355**	*e*P	**P**	**05 48 26.7**	**+1.0**
ARU	**Arti**	**31.65**	**40**	*e*P	**P**	**05 48 24.6**	**-2.3**
	comp=Z,43nm,0.8s						
ARU	**Arti**	**31.65**	**40***d*	*i*P	**P**	**05 48 25.4**	**-1.6**
ARU						05 49 30.9	
ARU						05 51 16.1	
ARU				S	**S**	**05 53 34.3**	**+0.5**
ARU				SS	**SnSn**	**05 55 21.8**	**+0.5**
ARU				pmax	pmax		
	comp=Z,69nm,1.1s						
ARU				MLR	MLR		
	comp=Z,808nm,16.0s						
MDH	**Madha**	**31.66**	**101**	P	**P**	**05 48 27.2**	**-0.2**
APA	**Apatity**	**31.68**	**9**⇓	*i*P	**P**	**05 48 26.6**	**-0.5**
APA				pmax	pmax		
	comp=Z,18nm,0.8s						
APA				MLR	MLR		
	comp=Z,2µm,15.0s						
UOSS	**Minazif**	**31.76**	**102**	*e*P	**P**	**05 48 28.2**	**-0.1**
	comp=Z,17nm,0.8s						
UOSS	**Minazif**	**31.76**	**102**	*i* P	**P**	**05 48 27.2**	**-1.1**
	SNR=5.7						
HATD	**Hatta, Dubai**	**31.76**	**102**	*i* P	**P**	**05 48 27.8**	**-0.5**
	SNR=9.7						
ASHO	**Ashiyiah**	**31.78**	**102**	*i* P	**P**	**05 48 27.6**	**-0.9**
	SNR=6.6						
ALNE	**Al Ain**	**31.86**	**104**	*i* P	**P**	**05 48 28.9**	**-0.2**
	SNR=12						
LVZ	**Lovozero**	**32.15**	**9**⇓	*e*P	**P**	**05 48 30.7**	**-0.6**
LVZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KTK1	**Kautokeino**	**32.42**	**1**	*e*P	**P**	**05 48 34.0**	**+0.4**
SOHO	**SOHO**	**32.43**	**103**	P	**P**	**05 48 34.2**	**0.0**
	SNR=13						
SOHO				P	**P**	**05 48 34.2**	**0.0**
	SNR=13						
SVE	**Sverdlovsk**	**32.86**	**40***d*	*i*P	**P**	**05 48 37.1**	**-0.5**
SVE				pmax	pmax		
	comp=Z,171nm,1.0s						
SVE				MLR	MLR		
	comp=Z,794nm,14.0s						
ARE0	**ARCESS Array S**	**33.01**	**3**	*e*P	**P**	**05 48 39.9**	**+1.2**
ARCES	**ARCESS Array B**	**33.01**	**3**	*e*P	**P**	**05 48 38.2**	**-0.5**
ARCES	**ARCESS Array B**	**33.01**	**3**	P	**P**	**05 48 38.5**	**-0.2**
	comp=Z,4.8nm,0.6s,baz=187,slow=10.0,SNR=56						
ARCES				LR	LR	06 03 18.5	
	comp=Z,2µm,19.8s,baz=179,slow=39						
MACI	**Morro de la Ar**	**33.07**	**266**	*e*P	**P**	**05 48 41.4**	**+1.5**
	comp=Z,43nm,1.0s						
TRO	**Tromso**	**33.07**	**358**	*e*P	**P**	**05 48 39.5**	**+0.4**
HAMF	**Hammerfest**	**34.07**	**1**	*e*P	**P**	**05 48 49.2**	**+1.3**
WSAR	**Wadi Sarin**	**34.53**	**102**	P	**P**	**05 48 52.4**	**-0.1**
	comp=Z,5.2nm,0.6s,baz=300,slow=8.9,SNR=7.9						
MHTO	**MHTO**	**35.23**	**106**	P	**P**	**05 49 00.0**	**+1.5**
	SNR=5.1						
MHTO				P	**P**	**05 49 00.0**	**+1.5**
	SNR=5.1						
CHGR	**Chuyangaron**	**37.37**	**72**	*e*P	**P**	**05 49 16.7**	**0.0**
	comp=Z,106nm,0.7s						
BRVK	**Borovoye**	**37.40**	**48**	*e*P	**P**	**05 49 16.2**	**-0.5**
	comp=Z,29nm,0.6s						
BRVK	**Borovoye**	**37.40**	**48***c*	*i*P	**P**	**05 49 16.1**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,28nm,0.9s						
BRVK	**Borovoye**	**37.40**	**48**	P	**P**	**05 49 16.1**	**-0.6**
	SNR=12						
BVA0	**Borovoye Array**	**37.46**	**48**	P	**P**	**05 49 15.9**	**-1.3**
BVA0				pmax	pmax		
	comp=Z,20nm,0.6s						
KK31	**Karatay Array**	**37.64**	**65**	*e*P	**P**	**05 49 18.1**	**-0.7**
KK31	**Karatay Array**	**37.64**	**65**	*e*P	**P**	**05 49 18.2**	**-0.7**
KKAR	**Karatay Array**	**37.64**	**65**	*e*P	**P**	**05 49 18.1**	**-0.7**
KKAR	**Karatay Array**	**37.64**	**65**	*e*P	**P**	**05 49 18.2**	**-0.7**
MBAR	**Mbarara**	**38.03**	**165**	P	**P**	**05 49 26.6**	**+4.0**
	comp=Z,4.0nm,0.3s,baz=349,slow=9.9,SNR=4.6						
GAR	**Garm**	**38.18**	**71**	*e*P	**P**	**05 49 23.9**	**+0.3**
	comp=Z,101nm,0.8s						
GAR	**Garm**	**38.18**	**71**	*e*P	**P**	**05 49 23.9**	**+0.3**
GAR				pmax	pmax		
	comp=Z,101nm,0.8s						
KBL	**Kabul**	**38.32**	**79**	*e*P	**P**	**05 49 25.0**	**0.0**
	comp=Z,17nm,0.6s						
KBL	**Kabul**	**38.32**	**79**	P	**P**	**05 49 25.4**	**+0.4**
BTK	**Batken**	**38.35**	**69**	*e*P	**P**	**05 49 26.4**	**+1.4**
	comp=Z,34nm,0.9s						
BTK	**Batken**	**38.35**	**69**	P	**P**	**05 49 26.4**	**+1.4**
DBIC	**Dimbokro**	**38.40**	**225**	*e*P	**P**	**05 49 24.9**	**-0.6**
	comp=Z,24nm,0.9s						
DBIC	**Dimbokro**	**38.40**	**225**	P	**P**	**05 49 25.7**	**+0.2**
	comp=Z,22nm,0.9s,baz=14,slow=10,SNR=19						
DBIC				LR	LR	06 05 53.1	
	comp=Z,632nm,21.6s,baz=4.5,slow=37						
TIC	**Toumodi**	**38.52**	**226**	*e*P	**P**	**05 49 26.5**	**0.0**
OTUK	**Ortayu**	**38.52**	**56**	P	**P**	**05 49 25.3**	**-1.0**
OTUK				pmax	pmax		
	comp=Z,29nm,1.1s						
KIC	**Kosan Boka**	**38.59**	**225**	*e*P	**P**	**05 49 27.2**	**+0.1**
	comp=Z,42nm,0.8s						
LIC	**Lamto**	**38.86**	**225**	*e*P	**P**	**05 49 29.6**	**+0.2**
	comp=Z,124nm,0.9s						
MNAS	**Manas**	**39.18**	**65**	*i* P	**P**	**05 49 31.1**	**-0.9**
MNAS				pmax	pmax		
	comp=Z,18nm,1.0s						
ARSB	**Arslanbob**	**39.73**	**67**	*e*P	**P**	**05 49 36.6**	**0.0**
	comp=Z,67nm,1.0s						
HOPEN	**Hopen**	**39.98**	**1**	*e*P	**P**	**05 49 38.4**	**+0.3**
EKS2	**Erkin-Say**	**40.08**	**65**	P	**P**	**05 49 39.6**	**+0.1**
	SNR=69						
AML	**Almayashu**	**40.11**	**66**	P	**P**	**05 49 40.1**	**0.0**
	SNR=15						
KMBO	**Kilima Mbogo**	**40.30**	**155**	*e*P	**P**	**05 49 44.1**	**+2.5**
	comp=Z,8.7nm,1.1s						
KMBO	**Kilima Mbogo**	**40.30**	**155**	P	**P**	**05 49 43.3**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=336,slow=6.9,SNR=2.8						
KMBO				LR	LR	06 09 19.0	
	comp=Z,531nm,18.3s,baz=286,slow=41						
SFK	**Sufi-Kurgan**	**40.38**	**69**	*i* P	**P**	**05 49 41.6**	**-0.5**
SFK				pmax	pmax		
	comp=Z,60nm,0.7s						
USP	**Ospenovka**	**40.50**	**64**	P	**P**	**05 49 42.4**	**-0.5**
	SNR=14						
AAK	**Ala-Archa**	**40.60**	**65**	P	**P**	**05 49 44.0**	**+0.1**
	SNR=46						
AAK	**Ala-Archa**	**40.60**	**65**	*e*P	**P**	**05 49 43.8**	**0.0**
	comp=Z,48nm,0.9s						
AAK	**Ala-Archa**	**40.60**	**65**	*e*P	**P**	**05 49 43.8**	**0.0**
AAK				pmax	pmax		
	comp=Z,48nm,0.9s						
AAK	**Ala-Archa**	**40.60**	**65**	P	**P**	**05 49 44.3**	**+0.4**
	SNR=23						
AAK				P	**P**	**05 49 44.3**	**+0.4**
	SNR=23						
FRU1	**Bishkek**	**40.67**	**64**	*e*P	**P**	**05 49 45.1**	**+0.8**
	comp=Z,100nm,1.2s						
FRU1	**Bishkek**	**40.67**	**64**	*e*P	**P**	**05 49 45.1**	**+0.8**
FRU1				pmax	pmax		
	comp=Z,100nm,1.2s						
UCH	**Uchtor**	**40.69**	**65**	P	**P**	**05 49 44.9**	**0.0**
	SNR=22						
CHMS	**Chumysh**	**40.73**	**64**	P	**P**	**05 49 44.4**	**-0.3**
	SNR=34						
SCO	**Scoresbysund**	**40.91**	**339**	*e*P	**P**	**05 49 47.8**	**+2.0**
	comp=Z,18nm,0.9s						
SCO	**Scoresbysund**	**40.91**	**339**	*i* P	**P**	**05 49 47.8**	**+2.0**
	comp=Z,18nm,0.9s						
SCO	**Scoresbysund**	**40.91**	**339**	*i* P	**P**	**05 49 47.8**	**+2.0**
SCO				pmax	pmax		
	comp=Z,18nm,0.9s						
KBK	**Karagaybulak**	**40.93**	**65**	P	**P**	**05 49 47.1**	**+0.6**
	SNR=33						
KZA	**Kyzart**	**41.26**	**65**	P	**P**	**05 49 50.0**	**+0.5**
	SNR=31						
TKM2	**Tokmak 2**	**41.35**	**64**	P	**P**	**05 49 49.6**	**-0.5**
	SNR=24						
SPITS	**Spitsbergen Ar**	**41.69**	**358**	P	**P**	**05 49 52.8**	**+0.7**
	comp=Z,1.8nm,0.4s,baz=149,slow=11,SNR=14						
NIL	**Nilore**	**41.92**	**78**	*e*P	**P**	**05 49 55.3**	**+0.7**
	comp=Z,179nm,0.9s						
NIL	**Nilore**	**41.92**	**78**	P	**P**	**05 49 55.6**	**+1.0**
NRN	**Naryn**	**41.93**	**66**	*e*P	**P**	**05 49 55.1**	**+0.2**
	comp=Z,86nm,1.2s						
NRN	**Naryn**	**41.93**	**66**	*e*P	**P**	**05 49 55.2**	**+0.2**
NRN				pmax	pmax		
	comp=Z,86nm,1.2s						
ULHL	**Ulahol**	**41.95**	**65**	P	**P**	**05 49 55.7**	**+0.8**
	SNR=15						
KSH	**Kashi**	**42.34**	**69**⇑	*i*P	**P**	**05 49 56.4**	**-1.7**
KSH				pP	pP	05 50 05.3	-2.6
KSH				PP	**PP**	**05 51 40.5**	**+4.1**
KSH				S	**S**	**05 56 11.8**	**-5.3**
KSH				sS	pS	05 56 30.3	+2.3
KSH				SS	**SS**	**05 59 17.8**	**-8.4**
KSH				pmax	pmax		
	comp=Z,47nm,0.7s						
KSH				pmax	pmax		
	comp=Z,310nm,3.6s						
KSH				LR	LR		
	comp=Z,250nm,5.1s						
KSH				LR	LR		
	comp=Z,380nm,5.2s						
KSH				LR	LR		
	comp=Z,510nm,6.2s						
KURK	**Kurchatov**	**42.51**	**52**	*e*P	**P**	**05 49 57.9**	**-1.2**
	comp=Z,14nm,0.9s						
KURK	**Kurchatov**	**42.51**	**52***d*	*i*P	**P**	**05 49 57.3**	**-1.8**
KURK				pmax	pmax		
	comp=Z,26nm,1.7s						
KURK	**Kurchatov**	**42.51**	**52**	P	**P**	**05 49 57.9**	**-1.2**
	SNR=5.4						
KURK				P	**P**	**05 49 57.9**	**-1.2**
	SNR=5.4						
KBS	**Kingsbay**	**42.57**	**357**	*e*P	**P**	**05 50 00.9**	**+1.7**
KBS	**Kingsbay**	**42.57**	**357**	*e*P	**P**	**05 50 01.0**	**+1.7**
KDJ	**Kajisay**	**42.65**	**65**	*e*P	**P**	**05 50 02.3**	**+1.6**
	comp=Z,50nm,0.8s						
KDJ	**Kajisay**	**42.65**	**65**	*e*P	**P**	**05 50 02.3**	**+1.6**
KDJ				pmax	pmax		
	comp=Z,50nm,0.8s						
PRZ	**Przheval'sk**	**43.47**	**64**	*e*P	**P**	**05 50 08.4**	**+1.2**
	comp=Z,40nm,1.2s						
PRZ	**Przheval'sk**	**43.47**	**64**	*e*P	**P**	**05 50 08.4**	**+1.2**
PRZ				pmax	pmax		
	comp=Z,40nm,1.2s						
PDGK	**Podgornoye**	**44.08**	**63**	P	**P**	**05 50 10.8**	**-1.3**
PDGK				pmax	pmax		
	comp=Z,14nm,0.8s						
NVS	**Novosibirsk**	**45.09**	**46**	*e*P	**P**	**05 50 19.7**	**-0.1**
NVS				*e*S	**S**	**05 56 52.7**	**-3.8**
NVS				pmax	pmax		
	comp=Z,62nm,0.9s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,23nm,0.8s						
NVS				smax	smax		
	comp=N,9.0nm,1.2s						
NVS				smax	smax		
	comp=E,9.0nm,1.4s						
MAKZ	**Makanchi**	**45.16**	**57**	*e*P	**P**	**05 50 19.5**	**-1.0**
	comp=E,8.3nm,0.8s						
MAKZ	**Makanchi**	**45.16**	**57**	*e*P	**P**	**05 50 19.5**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MK31	**Makanchi Array**	**45.38**	**57**	*e*P	**P**	**05 50 21.2**	**-1.0**
MK31	**Makanchi Array**	**45.38**	**57**	*e*P	**P**	**05 50 21.3**	**-1.0**
MKAR	**Makanchi Array**	**45.38**	**57**	*e*P	**P**	**05 50 21.2**	**-1.0**
	comp=Z,128nm,0.4s						
MKAR	**Makanchi Array**	**45.38**	**57**	P	**P**	**05 50 21.2**	**-1.0**
	comp=Z,12nm,0.5s,baz=271,slow=7.1,SNR=112						
MKAR				LR	LR	06 13 50.2	
	comp=Z,245nm,18.7s,baz=270,slow=42						
MK01	**Makanchi Array**	**45.39**	**57**	*e*P	**P**	**05 50 21.1**	**-1.3**
ZAA0	**Zalesovo Array**	**46.08**	**47**	*e*P	**P**	**05 50 26.5**	**-1.1**
	comp=Z,36nm,0.6s						
ZALV	**Zalesovo Beam**	**46.08**	**47**	*e*P	**P**	**05 50 26.1**	**-1.5**
ZALV	**Zalesovo Beam**	**46.08**	**47**	*i* P	**P**	**05 50 26.3**	**-1.3**
ZALV				pmax	pmax		
	comp=Z,39nm,0.4s						
ZALV	**Zalesovo Beam**	**46.08**	**47**	P	**P**	**05 50 26.4**	**-1.2**
	comp=Z,39nm,0.4s,baz=266,slow=9.5,SNR=121						
ZALV				LR	LR	06 13 21.5	
	comp=Z,301nm,18.9s,baz=254,slow=41						
SUMG	**Summit**	**46.55**	**339**	*e*P	**P**	**05 50 33.0**	**+1.4**
	comp=Z,14nm,1.0s						
SUMG	**Summit**	**46.55**	**339**	*i* P	**P**	**05 50 32.9**	**+1.4**
	comp=Z,32nm,1.2s						
SUMG	**Summit**	**46.55**	**339**	*e*P	**P**	**05 50 33.0**	**+1.4**
SUMG				pmax	pmax		
	comp=Z,14nm,1.0s						
NDI	**New Delhi**	**46.93**	**83**	*e*P	**P**	**05 50 37.0**	**+2.4**
NRIK	**Noril'sk**	**47.77**	**26**	P	**P**	**05 50 40.6**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=250,slow=6.5,SNR=7.5						
NRIK				LR	LR	06 14 36.4	
	comp=Z,563nm,18.2s,baz=258,slow=41						
DGZ	**Jazzator, Alta**	**48.25**	**53***c*	*i*P	**P**	**05 50 43.8**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
POO	**Poona**	**49.08**	**97**⇑	*i*P	**P**	**05 50 48.0**	**-3.5**
	comp=Z,4.0nm,1.0s						
WMQ	**Urumqi**	**49.75**	**60**	P	**P**	**05 50 56.5**	**+0.2**
WMQ				pP	sP	05 51 09.0	+0.5
WMQ				sP	pwP	05 51 15.8	+10
WMQ				PP	**PP**	**05 52 55.3**	**+4.4**
WMQ				S	**S**	**05 58 04.4**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,74nm,3.7s						
WMQ				LR	LR		
	comp=Z,870nm,17.5s						
WMQ				LR	LR		
	comp=Z,2µm,22.1s						
WMQ				LR	LR		
	comp=Z,1µm,22.9s						
PYUN	**Piuthan**	**51.77**	**81**	*e*P	**P**	**05 51 11.5**	**-0.4**
	comp=Z,120nm,0.6s						

LSZ	Lusaka	52.02	172	eP	P	05 51 16.4	+2.8
	comp=Z,9.0nm,1.1s						
LSZ	Lusaka	52.02	172	eP	P	05 51 16.4	+2.8
LSZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LSZ	Lusaka	52.02	172	P	P	05 51 14.9	+1.3
	comp=Z,3.1nm,0.6s,baz=9.4,slow=7.9,SNR=5.5						
DANN	Dangsing	52.27	80	eP	P	05 51 15.5	-0.2
	comp=Z,238nm,0.7s						
KOLN	Koldanda	52.40	81	eP	P	05 51 15.9	-0.7
	comp=Z,61nm,0.7s						
DMN	Daman	53.67	80	eP	P	05 51 25.5	-0.5
	comp=Z,128nm,0.7s						
KKN	Kakani	53.72	80	eP	P	05 51 25.5	-0.9
	comp=Z,60nm,0.6s						
PKIN	Phulchoki	53.91	80	eP	P	05 51 26.7	-1.1
	comp=Z,54nm,0.9s						
PKI	Pulchoki	53.92	80	eP	P	05 51 26.9	-1.1
	comp=Z,57nm,0.8s						
GUN	Gumba	54.15	80	eP	P	05 51 28.8	-0.8
	comp=Z,81nm,0.8s						
JIRN	Jiri	54.50	80	eP	P	05 51 31.4	-0.8
	comp=Z,83nm,0.7s						
TULEG	Thule	54.80	343	eP	P	05 51 33.9	+0.8
	comp=Z,28nm,1.3s						
RAMN	Ramite	55.15	80	eP	P	05 51 35.5	-1.3
	comp=Z,102nm,0.8s						
TSUM	Tsumeb	55.68	185	LR	LR	06 18 02.6	
	comp=Z,1µm,19.0s,baz=328,slow=39						
MOY	Mondy	56.13	47	eP	P	05 51 42.7	-0.6
MOY				pmax	pmax		
	comp=Z,16nm,2.7s						
LSA	Lhasa	57.48	75	eP	P	05 51 53.5	-0.1
	comp=Z,25nm,0.8s						
LSA	Lhasa	57.48	75	eP	P	05 51 53.5	-0.1
LSA				pmax	pmax		
	comp=Z,25nm,0.8s						
TLY	Talaya	57.69	47	eP	P	05 51 55.0	+0.8
TLY				pmax	pmax		
	comp=Z,32nm,1.4s						
TLY				MLR	MLR		
	comp=Z,496nm,15.0s						
ZAK	Zakamensk	57.91	48	eP	P	05 51 54.7	-1.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA	Gaotai	59.79	61	⇑P	P	05 52 08.4	-0.7
GTA				pP	pP	05 52 18.3	-0.7
GTA				sP	sP	05 52 22.1	+0.4
GTA				S	S	06 00 14.4	-3.8
GTA				sS	pS	06 00 31.8	+1.4
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				pmax	pmax		
	comp=Z,67nm,6.4s						
GTA				LR	LR		
	comp=Z,260nm,20.0s						
GTA				LR	LR		
	comp=Z,260nm,20.0s						
GTA				LR	LR		
	comp=Z,470nm,20.0s						
SHL	Shillong	59.98	79	eP	P	05 52 09.6	-1.1
	comp=Z,20nm,0.7s						
SHL	Shillong	59.98	79	eP	P	05 52 09.6	-1.1
SHL				pmax	pmax		
	comp=Z,20nm,0.7s						
SCHQ	Schefferville	60.17	318	eP	P	05 52 11.8	+0.5
	comp=Z,10nm,0.9s						
SCHQ	Schefferville	60.17	318	P	P	05 52 12.0	+0.7
	comp=Z,5.1nm,0.6s,baz=71,slow=5.9,SNR=15						
SCHQ				LR	LR	06 17 54.2	
	comp=Z,241nm,19.6s,baz=348,slow=36						
SONA1	Songino Array	60.76	50	eP	P	05 52 14.9	-0.7
SONM	Songino Array	60.76	50	P	P	05 52 15.0	-0.6
	comp=Z,5.6nm,0.8s,baz=279,slow=7.9,SNR=43						
PALK	Pallekele	61.02	103	eP	P	05 52 16.5	-1.2
PALK	Pallekele	61.02	103	i P	P	05 52 18.1	+0.4
PALK	Pallekele	61.02	103	P	P	05 52 17.4	-0.3
	comp=Z,4.1nm,0.5s,baz=298,slow=5.6,SNR=6.4						
BOD	Bodaibo	61.04	38	eP	P	05 52 15.6	-1.6
BOD				e		05 54 29.0	
BOD				pmax	pmax		
	comp=Z,17nm,0.9s						
ULN	Ulaanbaatar	61.15	50	eP	P	05 52 17.0	-1.4
	comp=Z,6.9nm,0.7s						
ULN	Ulaanbaatar	61.15	50	deP	P	05 52 16.8	-1.5
ULN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRDH	Bariadhala	61.22	82	LR	LR	06 24 15.8	
	comp=Z,295nm,18.3s,baz=313,slow=41						
LBTB	Lobatse	61.45	176	eP	P	05 52 22.1	+1.7
	comp=Z,20nm,1.1s						
LBTB	Lobatse	61.45	176	eP	P	05 52 22.1	+1.7
LBTB				pmax	pmax		
	comp=Z,20nm,1.1s						
RES	Resolute Bay	61.47	344	eP	P	05 52 21.1	+1.3
	comp=Z,7.1nm,0.9s						
RES	Resolute Bay	61.47	344	eP	P	05 52 21.1	+1.3
RES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LZH	Lanzhou	64.11	63	⇑P	P	05 52 38.3	0.0
LZH				pP	pwP	05 52 49.5	+1.3
LZH				sP	sP	05 52 55.0	+4.2
LZH				PP	PP	05 55 03.5	+4.3
LZH				sS	sS	06 01 31.9	+4.2
LZH				SS	SS	06 05 23.3	+1.4
LZH				pmax	pmax		
	comp=Z,57nm,1.3s						
LZH				pmax	pmax		
	comp=Z,280nm,5.6s						
LZH				LR	LR		
	comp=Z,490nm,16.1s						
LZH				LR	LR		
	comp=Z,600nm,16.0s						
LZH				LR	LR		
	comp=Z,650nm,18.0s						
BOSA	Boshof	65.01	176	P	P	05 52 44.6	+0.7
	comp=Z,3.3nm,0.7s,baz=358,slow=8.3,SNR=5.6						
BOSA				LR	LR	06 23 53.6	
	comp=Z,443nm,18.6s,baz=2.5,slow=39						
YAK	Yakutsk	66.01	29	eP	P	05 52 48.0	-1.9
YAK				e*PP	pP	05 52 55.1	-5.2
YAK				e		05 53 20.7	
YAK				e		05 55 15.9	
YAK				eS	S	06 01 30.4	-4.7
YAK				e*SS	sS	06 01 51.2	+1.3
YAK				pmax	pmax		
	comp=Z,186nm,1.0s						
YAK				pmax	pmax		
	comp=N,30nm,1.2s						
YAK				pmax	pmax		
	comp=E,50nm,1.5s						
YAK				pmax	pmax		
	comp=Z,59nm,0.8s						
YAK				pmax	pmax		
	comp=N,21nm,0.7s						
YAK				pmax	pmax		
	comp=E,36nm,0.9s						
YAK				smax	smax		
	comp=N,1µm,6.4s						
YAK				smax	smax		
	comp=E,1µm,6.6s						
YAK				MLR	MLR		
	comp=N,2µm,27.0s						
CHGQ	Chibougamau	66.47	315	P	P	05 52 54.8	+1.7
	baz=61						
CD2	Chengdu	66.53	68	⇑P	P	05 52 53.6	-0.3
CD2				sP	sP	05 53 09.3	+2.9
CD2				S	S	06 01 41.1	-1.4
CD2				SS	SS	06 05 59.0	-0.5
CD2				pmax	pmax		
	comp=N,80nm,0.5s						
CD2				pmax	pmax		
	comp=N,290nm,4.3s						
CD2				LR	LR		
	comp=N,530nm,15.7s						
CD2				LR	LR		
	comp=N,340nm,11.3s						
HHC	Hu-ho-hao-te	67.18	55	eP	P	05 53 00.0	+2.0
HHC				S	S	06 01 49.1	-1.2
HHC				pmax	pmax		
	comp=N,19nm,1.1s						
HHC				pmax	pmax		
	comp=N,240nm,5.8s						
HHC				LR	LR		
	comp=N,380nm,15.3s						
HHC				LR	LR		
	comp=N,300nm,17.3s						
HHC				LR	LR		
	comp=N,740nm,17.1s						
LSQQ	Lebel-sur-Quev	68.36	316	P	P	05 53 07.0	+1.9
	baz=59						
MATQ	Matagami	68.37	316	P	P	05 53 06.8	+1.7
	baz=58						
KMI	Kunming	68.69	74	P	P	05 53 06.4	-1.4
KMI				pmax	pmax		
	comp=N,21nm,1.5s						
KMI				pmax	pmax		
	comp=N,59nm,3.1s						
XAN	Xi'an	68.75	63	P	P	05 53 07.4	-0.4
XAN				pP	pP	05 53 16.4	-1.4
XAN				S	S	06 02 04.6	-4.4
XAN				pmax	pmax		
	comp=N,20nm,1.1s						
XAN				LR	LR		
	comp=N,150nm,16.7s						
XAN				LR	LR		
	comp=N,260nm,21.4s						
XAN				LR	LR		
	comp=N,290nm,27.5s						
XAN	Xi'an	68.75	63	eP	P	05 53 07.3	-0.4
	comp=N,131nm,0.9s						
XAN	Xi'an	68.75	63	eP	P	05 53 07.3	-0.5
XAN				pmax	pmax		
	comp=Z,131nm,0.9s						
ALFO	Alfred	68.92	312	P	P	05 53 10.5	+1.9
	baz=59						
CHTO	Chiang Mai	69.05	82	eP	P	05 53 09.1	-0.8
	comp=Z,14nm,0.3s						
CHTO	Chiang Mai	69.05	82	eP	P	05 53 09.1	-0.8
CHTO				pmax	pmax		
	comp=Z,14nm,0.3s						
CHTO	Chiang Mai	69.05	82	P	P	05 53 09.5	-0.4
	comp=Z,49nm,0.5s,comp=Z,1µm						
CMMT	Chiang Mai	69.05	82	P	P	05 53 09.4	-0.5
D54A	Lac Fusel, La	69.17	314	P	P	05 53 12.1	+1.9
	baz=58						
CMAR	Chiang Mai Arr	69.24	82	P	P	05 53 10.6	-0.5
	comp=Z,9.1nm,0.7s,baz=304,slow=7.7,SNR=48						
CMAR				LR	LR	06 28 31.3	
	comp=Z,126nm,20.5s,baz=308,slow=40						
CM01	Chiang Mai Arr	69.27	82	eP	P	05 53 09.9	-1.3
TIY	Taiyuan	69.33	58	eP	P	05 53 10.8	-0.6
PAYA	Payao	69.49	81	P	P	05 53 12.2	-0.4
	comp=Z,15nm,0.7s,comp=Z,147nm						
ZEA	Zeya	69.55	38	eP	P	05 53 11.6	-0.8
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,500nm,15.0s						
D53A	Lac Vacive, Po	69.82	314	P	P	05 53 16.4	+2.2
	baz=58						
E54A	Lac Daplat, Po	69.86	313	P	P	05 53 16.1	+1.7
	baz=58						
E53A	Dumoine, Ponti	70.17	313	P	P	05 53 18.7	+2.3
	baz=57						
D52A	ZEK Kipawa Sen	70.28	314	P	P	05 53 18.8	+1.7
	baz=57						
SUKH	Sukhothai	70.32	83	P	P	05 53 17.4	-0.3
	comp=Z,8.4nm,0.8s						
UMPA	Umpang Tak	70.41	84	P	P	05 53 19.7	+1.5
	comp=Z,5.6nm,0.7s,comp=Z,934nm						
PLVO	Plevna	70.54	312	eP	P	05 53 21.8	+3.1
	comp=Z,21nm,1.0s						
PLVO	Plevna	70.54	312	P	P	05 53 21.1	+2.5
	baz=57						
BJI	Beijing	70.62	54	P	P	05 53 18.8	-0.4
BJI				pmax	pmax		
	comp=Z,11nm,0.9s						
BJI				LR	LR		
	comp=Z,270nm,21.0s						
BJI				LR	LR		
	comp=Z,370nm,21.4s						
BJI				LR	LR		
	comp=Z,400nm,21.4s						
ALGO	Algonquin Park	70.63	313	P	P	05 53 22.5	+3.4
	baz=57						
D51A	Lot 18 Range I	70.77	315	P	P	05 53 22.8	+2.8
	baz=57						
UTTA	Uttaradit	70.91	82	P	P	05 53 20.9	-0.4
	comp=Z,3.5nm,0.7s						
FCC	Fort Churchill	71.00	330	eP	P	05 53 22.5	+1.4
	comp=Z,13nm,0.9s						
FCC	Fort Churchill	71.00	330	eP	P	05 53 22.5	+1.4
FCC				pmax	pmax		
	comp=Z,13nm,0.9s						
GYA	Guiyang	71.00	71	⇑iP	P	05 53 20.9	-1.0
GYA				pP	sP	05 53 35.4	+1.0
GYA				PP	PP	05 56 02.0	+2.8
GYA				S	S	06 02 34.8	-1.0
GYA				sS	sS	06 02 53.6	+3.0
GYA				SKS	SKSac	06 03 18.3	-4.0
GYA				SS	SS	06 07 09.0	+0.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,540nm,18.3s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
ENH	Enshi	71.10	66	eP	P	05 53 21.7	-0.6
	comp=Z,30nm,0.9s						
PBKT	Sadao Pong	71.89	83	P	P	05 53 27.7	+0.5
	comp=Z,6.2nm,1.5s						
SADO	Sadowa	71.92	313	eP	P	05 53 27.6	+0.7
E50A	Wahnapitae	71.92	315	P	P	05 53 28.9	+1.9
	baz=56						
KLBO	Killbear Provi	72.22	314	P	P	05 53 30.8	+2.0
	baz=56						
BILL	Bilibino	72.30	13	eP	P	05 53 29.1	+0.2
	comp=Z,9.4nm,1.1s						
BILL	Bilibino	72.30	13	⇑eP	P	05 53 27.9	-0.9
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MEDO	Medina	72.40	311	P	P	05 53 32.0	+2.2
	baz=56						
D47A	Chapleau	72.89	316	P	P	05 53 34.6	+1.9
	baz=54						
L55A	Hinsdale	72.94	310	P	P	05 53 34.6	+1.5
	baz=56						
SEY	Seymchan	73.24	21	⇑eP	P	05 53 34.7	+0.2
D46A	Sault St. Mari	73.51	316	P	P	05 53 38.8	+2.4
	baz=54						
M55A	Ridgway	73.54	310	P	P	05 53 38.9	+2.2
	baz=55						
INK	Inuvik	73.71	351	eP	P	05 53 37.3	+0.2
	comp=Z,6.5nm,0.9s						
INK	Inuvik	73.71	351	eP	P	05 53 37.3	+0.2
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
E46A	Sault Ste Mari	73.97	316	P	P	05 53 41.2	+2.2
	baz=53						
SKNT	Sakolnakorn	74.06	81	P	P	05 53 39.7	-0.4
	comp=Z,11nm,1.0s						
N55A	Marion Center	74.07	309	P	P	05 53 42.6	+2.8
	baz=55						
CN2	Changchun	74.29	47	⇑P	P	05 53 40.8	-0.2
CN2				esP	PcP	05 53 55.0	-0.7
CN2				eS	S	06 03 10.8	-1.8
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				LR	LR		
	comp=Z,270nm,8.0s						
CN2				LR	LR		
	comp=Z,170nm,8.0s						
WHN	Wuhan	74.49	63	P	P	05 53 42.0	-0.4
KLR	Kul'dur	74.49	40	ceP	P	05 53 41.7	-0.4
KLR	Kul'dur	74.49	40	LR	LR	06 30 35.2	
	comp=Z,271nm,18.5s,baz=322,slow=39						
TOLK	Toolik Lake Re	74.81	357	P	P	05 53 45.5	+1.8
	baz=7.3						
YKW3	Yellowknife Ar	75.06	341	eP	P	05 53 45.6	+0.6
YKA	Yellowknife Ar	75.11	341	P	P	05 53 46.0	+0.7
	comp=Z,4.7nm,0.8s,baz=36,slow=5.5,SNR=96						
YKA				LR	LR	06 29 44.3	
	comp=Z,29nm,18.2s,baz=35,slow=38						
YKB5	Yellowknife Ar	75.11	341	eP	P	05 53 45.0	-0.3
MCWV	Mont Chateau	75.25	309	P	P	05 53 48.7	+2.1
	baz=54						
MA2	Magadan	75.33	24	eP	P	05 53 47.2	+0.5
	comp=Z,19nm,0.7s						
MA2	Magadan	75.33	24	c iP	P	05 53 47.0	+0.3
MA2				pmax	pmax		
	comp=Z,49nm,1.7s						
F44A	Big Bay de Noc	75.38	317	P	P	05 53 49.1	+1.8
	baz=52						
I47A	Gladwin	75.49	314	P	P	05 53 50.1	+2.2
	baz=53						
C40A	Isle Royale Na	75.64	320	eP	P	05 53 50.5	+1.8
	comp=Z,8.8nm,0.8s						
C40A	Isle Royale Na	75.64	320	P	P	05 53 50.5	+1.8
	baz=51						
P54A	Burton	75.68	309	P	P	05 53 50.1	+1.0
	baz=54						
GRNR	Gornyy	75.82	36	eP	P	05 53 50.0	+0.3
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
EPYK	Eagle Plains	75.95	351	eP	P	05 53 51.1	+0.9
	comp=Z,9.9nm,0.8s						
EPYK	Eagle Plains	75.95	351	P	P	05 53 50.8	+0.6
	baz=18						
I46A	Reed City	76.08	315	P	P	05 53 53.3	+2.0
	baz=52						
NKL	Nikolayevsk	76.16	33	i P	P	05 53 51.5	0.0
NKL				pmax	pmax		
	comp=Z,50nm,0.9s						
MDJ	Mudanjiang	76.19	44	P	P	05 53 50.4	-1.5
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,230nm,3.6s						
O52A	Adamsville	76.22	310	eP	P	05 53 54.6	+2.4
	comp=Z,21nm,1.0s						
COLD	Coldfoot	76.25	357	eP	P	05 53 53.1	+1.3
	comp=Z,31nm,2.0s						
FYU	Fort Yukon	76.61	355	eP	P	05 53 56.1	+2.3
	comp=Z,18nm,1.1s						
O51A	Pataskala	76.68	310	P	P	05 53 57.2	+2.4
	baz=53						
COWI	Conover	76.78	318	eP	P	05 53 57.1	+1.9
	comp=Z,17nm,0.9s						
EYMN	Ely	76.83	321	eP	P	05 53 57.0	+1.5
	comp=Z,13nm,1.3s						
EYMN	Ely	76.83	321	P	P	05 53 57.0	+1.5
	baz=49						
NJ2	Nanjing	76.83	60	eP	P	05 53 55.5	-0.2
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
FFC	Flin Flon	76.93	330	eP	P	05 53 57.3	+1.4
	comp=Z,12nm,0.8s						
FFC	Flin Flon	76.93	330	i P	P	05 53 57.6	+1.7
E39A	Mellen	77.36	319	P	P	05 53 60.0	+1.5
	baz=50						
F40A	Park Falls	77.42	318	P	P	05 54 00.4	+1.5
	baz=50						
ULM	Lac du Bonnet	77.44	324	eP	P	05 53 59.8	+1.0
	comp=Z,22nm,1.3s						
ULM	Lac du Bonnet	77.44	324	eP	P	05 53 59.8	+1.0
ULM				pmax	pmax		
	comp=Z,22nm,1.3s						
ULM	Lac du Bonnet	77.44	324	P	P	05 53 59.6	+0.7
	comp=Z,5.6nm,0.6s,baz=46,slow=5.4,SNR=15						
IM3	Indian Mountai	77.63	358	eP	P	05 53 59.2	-0.4
PRP	Porcupine Dome	77.66	355	eP	P	05 54 01.7	+1.7
	comp=Z,6.9nm,1.0s						
N48A	Decatur	77.72	312	P	P	05 54 02.4	+1.8
	baz=52						
E38A	The Farm, Brul	77.73	320	P	P	05 54 01.7	+1.1
	baz=49						
USA0B	Ussuriysk Arra	77.79	44	eP	P	05 54 00.6	-0.3
	comp=Z,17nm,0.9s						
USRK	Ussuriysk Ar.	77.79	44	P	P	05 54 00.2	-0.6
	comp=Z,13nm,0.8s,baz=290,slow=5.0,SNR=29						
USRK				LR	LR	06 32 19.1	
	comp=Z,143nm,19.2s,baz=310,slow=39						
Q51A	Peebles	77.81	310	P	P	05 54 02.5	+1.4
	baz=52						
F39A	Loretta	77.85	319	P	P	05 54 02.5	+1.3
	baz=49						
PSI	Prapat	78.16	95	eP	P	05 54 03.1	-0.4
	comp=Z,12nm,0.7s						
PSI	Prapat	78.16	95	eP	P	05 54 03.1	-0.4
PSI				pmax	pmax		
	comp=Z,12nm,0.7s						
PSI	Prapat	78.16	95	P	P	05 54 02.9	-0.7
	comp=Z,12nm,0.7s,baz=2.1,slow=1.8,SNR=12						
G39A	Holcombe	78.39	318	P	P	05 54 05.7	+1.4
	baz=49						
MDM	Murphy Dome	78.40	356	eP	P	05 54 04.9	+0.9
	comp=Z,9.4nm,1.1s						
MLY	Manley	78.47	357	eP	P	05 54 05.6	+1.3
	comp=Z,35nm,1.9s						
DAWY	Dawson	78.49	352	eP	P	05 54 05.8	+1.3
	comp=Z,47nm,1.8s						
IL1	Eielson Array	78.50	355	eP	P	05 54 04.6	+0.1
ILAR	Eielson Array	78.50	355	P	P	05 54 05.1	+0.6
	comp=Z,1.5nm,0.8s,baz=345,slow=3.4,SNR=17						
ILAR				LR	LR	06 30 24.9	
	comp=Z,217nm,20.0s,baz=348,slow=37						
O47A	Sheridan	78.79	312	P	P	05 54 07.8	+1.3
	baz=51						
G38A	Ridgeland	78.83	319	P	P	05 54 07.9	+1.2
	baz=49						
HDA	Harding Lake	78.86	355	eP	P	05 54 07.1	+0.6
	comp=Z,8.2nm,0.8s						
HDA	Harding Lake	78.86	355	P	P	05 54 07.2	+0.7
	baz=9.3						
F37A	Hinrichs Farm,	78.87	319	P	P	05 54 08.7	+1.8
	baz=48						
WRH	Wood River Hil	78.88	355	eP	P	05 54 07.2	+0.6
	comp=Z,24nm,1.5s						
ANM	Nome	78.96	3	eP	P	05 54 07.9	+0.9
	comp=Z,31nm,0.5s						
ANM	Nome	78.96	3	eP	P	05 54 07.9	+0.9
ANM				pmax	pmax		
	comp=Z,31nm,0.5s						
SCRK	Sand Creek	79.05	354	eP	P	05 54 09.3	+1.6
	comp=Z,10nm,1.3s						
SPMN	Marine on St.	79.30	319	eP	P	05 54 11.4	+2.2
	comp=Z,55nm,1.8s						
SPMN	Marine on St.	79.30	319	P	P	05 54 10.8	+1.6
	baz=48						
RIDG	Independ’e Rid	79.36	354	eP	P	05 54 10.9	+1.6
	comp=Z,48nm,1.8s						
KS15	Wonju Array Si	79.60	51	eP	P	05 54 11.3	+0.3
KSAR	Wonju Array Be	79.60	51	P	P	05 54 10.9	0.0
KSAR	Wonju Array Be	79.60	51	P	P	05 54 11.0	0.0
KSRS	Korea Array	79.62	51	P	P	05 54 11.0	-0.1
KSRS				pmax	pmax		
	comp=Z,12nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,239nm,20.4s						
KSRS	Korea Array	79.62	51	P	P	05 54 10.9	-0.1
	comp=Z,12nm,0.7s,baz=308,slow=4.9,SNR=34						
KSRS				LR	LR	06 33 25.8	
	comp=Z,238nm,20.4s,baz=315,slow=39						
J39A	Decorah	79.97	317	P	P	05 54 14.4	+1.5
	baz=48						
MENT	Mentasta	80.05	353	eP	P	05 54 15.4	+2.3
	comp=Z,15nm,1.3s						
WCI	Wyandotte Cave	80.12	310	eP	P	05 54 16.1	+2.3
	comp=Z,14nm,0.8s						
WCI	Wyandotte Cave	80.12	310	eP	P	05 54 16.1	+2.3
WCI				pmax	pmax		
	comp=Z,14nm,0.8s						
WCI	Wyandotte Cave	80.12	310	P	P	05 54 15.7	+1.9
	baz=51						
L41A	Preston	80.12	316	P	P	05 54 15.1	+1.4
	baz=49						
T49A	Edmonton	80.35	309	eP	P	05 54 18.7	+3.6
	comp=Z,42nm,1.7s						
T49A	Edmonton	80.35	309	P	P	05 54 17.1	+2.0
	baz=51						
L40A	Anamosa	80.54	316	eP	P	05 54 17.3	+1.3
L40A				epP	sP	05 54 27.1	-2.6
L40A	Anamosa	80.54	316	P	P	05 54 17.5	+1.5
	baz=48						
S47A	Hartford	80.88	310	P	P	05 54 19.2	+1.3
	baz=50						
T48A	Bowling Green	80.89	310	P	P	05 54 19.8	+1.9
	baz=51						
L39A	Vinton	80.93	316	P	P	05 54 19.0	+0.9
	baz=48						
T47A	Sharon Grove	81.40	310	P	P	05 54 22.4	+1.7
	baz=50						
YSS	Yuzh-Sakhalins	81.48	36	eP	P	05 54 21.6	+0.7
	comp=Z,73nm,1.2s						
YSS	Yuzh-Sakhalins	81.48	36	⇑iP	P	05 54 21.1	+0.2

YSS				e		05 54 29.2	
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
P42A	Winchester	81.67	314	P	P	05 54 23.9	+1.9
	baz=49						
U47A	Clarksville	81.86	310	P	P	05 54 24.6	+1.5
	baz=50						
SUA	Susitna One	82.03	356	eP	P	05 54 25.0	+1.3
	comp=Z,59nm,1.6s						
ECSD	EROS Data Cent	82.31	320	eP	P	05 54 27.0	+1.6
	comp=Z,6.7nm,0.8s						
ECSD	EROS Data Cent	82.31	320	P	P	05 54 27.0	+1.6
	baz=46						
W48A	Pulaski	82.47	308	P	P	05 54 27.8	+1.4
	baz=50						
V46A	Holladay	82.79	310	P	P	05 54 28.7	+0.7
	baz=50						
PETK	Petropavlovsk-	82.82	25	LR	LR	06 35 25.6	
	comp=Z,101nm,18.8s,baz=315,slow=39						
R41A	Rosebud	83.12	313	P	P	05 54 31.7	+2.1
	baz=48						
CCM	Cathedral Cave	83.20	313	eP	P	05 54 31.6	+1.5
	comp=Z,29nm,1.5s						
CCM	Cathedral Cave	83.20	313	eP	P	05 54 31.6	+1.5
CCM				pmax	pmax		
	comp=Z,29nm,1.5s						
CCM	Cathedral Cave	83.20	313	P	P	05 54 31.5	+1.4
	baz=48						
T43A	Greenville	83.28	312	P	P	05 54 32.5	+2.0
	baz=48						
BDFB	Brasilia	83.66	245	P	P	05 54 34.2	+1.4
	comp=Z,2.4nm,0.6s,baz=66,slow=4.6,SNR=5.8						
BDFB				LR	LR	06 31 30.3	
	comp=Z,2µm,20.9s,baz=73,slow=35						
T42A	Van Buren	83.80	312	eP	P	05 54 34.7	+1.6
	comp=Z,41nm,1.8s						
T42A	Van Buren	83.80	312	P	P	05 54 34.3	+1.2
	baz=48						
S41A	Jillco Farms,	83.81	313	P	P	05 54 34.9	+1.7
	baz=48						
LRAL	Lakeview Retre	83.86	307	eP	P	05 54 34.7	+1.2
149A	Jones	84.00	306	P	P	05 54 36.5	+2.2
	baz=50						
T41A	Mountain View	84.19	312	P	P	05 54 37.2	+2.0
	baz=48						
JNU	Nakatsue	84.23	53	LR	LR	06 38 13.0	
	comp=Z,362nm,19.5s,baz=306,slow=40						
U42A	Revenden	84.33	312	P	P	05 54 37.7	+1.8
	baz=48						
BGNE	Belgrade	84.75	319	eP	P	05 54 40.1	+2.1
	comp=Z,40nm,0.8s						
BGNE	Belgrade	84.75	319	P	P	05 54 39.7	+1.7
	baz=44						
EGMT	Eagleton	85.19	330	eP	P	05 54 41.9	+1.7
	comp=Z,18nm,0.9s						
EGMT	Eagleton	85.19	330	P	P	05 54 41.7	+1.6
	baz=37						
V41A	Mountainview	85.26	312	P	P	05 54 41.7	+1.1
	baz=47						
KSU1	Kansas State U	85.56	317	eP	P	05 54 43.5	+1.5
	comp=Z,16nm,0.8s						
KSU1	Kansas State U	85.56	317	P	P	05 54 43.1	+1.1
	baz=45						
RSSD	Black Hills	85.71	324	P	P	05 54 44.4	+1.4
	baz=41						
WALA	Waterton Lakes	85.97	332	eP	P	05 54 45.2	+1.1
	comp=Z,11nm,0.9s						
MAJO	Matsushiro	86.42	46	eP	P	05 54 46.3	0.0
MAT	Matsushiro	86.42	46	P	P	05 54 45.4	-0.9
MAT				S	S	06 05 19.6	-0.4
MJAR	Matsushiro Arr	86.42	46	P	P	05 54 46.2	-0.2
	comp=Z,7.2nm,0.8s,baz=306,slow=5.3,SNR=20						
X40A	Basin Creek Fa	86.55	311	eP	P	05 54 48.3	+1.3
	comp=Z,12nm,1.3s						
X40A	Basin Creek Fa	86.55	311	P	P	05 54 47.8	+0.8
	baz=47						
SDV	Santo Domingo	86.55	278	eP	P	05 54 50.4	+2.8
	comp=Z,8.1nm,0.8s						
SDV	Santo Domingo	86.55	278	P	P	05 54 48.4	+0.8
	comp=Z,2.8nm,0.6s,baz=286,slow=7.4						
MIAR	Mount Ida	86.96	312	eP	P	05 54 50.9	+1.9
	comp=Z,14nm,1.2s						
MIAR	Mount Ida	86.96	312	eP	P	05 54 50.9	+1.9
MIAR				pmax	pmax		
	comp=Z,14nm,1.2s						
MIAR	Mount Ida	86.96	312	P	P	05 54 50.9	+1.9
	baz=47						
HRY	Holter Researc	87.09	330	eP	P	05 54 51.7	+2.2
TUL1	Leonard	87.33	314	P	P	05 54 52.1	+1.4
	baz=45						
NEW	Newport	87.80	334	eP	P	05 54 54.5	+1.7
	comp=Z,8.2nm,0.9s						
NEW	Newport	87.80	334	eP	P	05 54 54.5	+1.7
NEW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NEW	Newport	87.80	334	P	P	05 54 54.0	+1.2
	baz=32						
K22A	Casper	88.00	325	P	P	05 54 54.9	+0.9
	baz=39						
YMR	Madison River	88.38	328	eP	P	05 54 58.5	+2.6
	comp=Z,5.0nm,0.9s						
DLMT	Dillon	88.50	330	eP	P	05 54 58.8	+2.4
	comp=Z,7.3nm,1.2s						
PHWY	Pilot Hill	88.53	323	eP	P	05 54 58.2	+1.4
	comp=Z,21nm,1.4s						
C09A	Chrisman Ranch	88.60	334	eP	P	05 54 58.6	+2.0
	comp=Z,15nm,1.1s						
YPP	Pitchstone Pla	88.63	328	eP	P	05 55 01.2	+4.0
	comp=Z,14nm,1.4s						
KSCO	Kaye Shedlock'	88.84	320	P	P	05 54 59.8	+1.7
	baz=42						
MOOW	Moose Ponds	89.03	328	eP	P	05 55 00.9	+1.9
	comp=Z,4.9nm,1.1s						
N23A	Red Feather La	89.08	323	eP	P	05 55 00.9	+1.6
	comp=Z,16nm,1.4s						
FXWY	Fox Creek	89.24	328	eP	P	05 55 02.1	+2.1
	comp=Z,7.1nm,1.1s						
BW06	Boulder Array	89.29	326	eP	P	05 55 00.9	+0.7
	comp=Z,7.8nm,1.4s						
PD31	Pinedale Array	89.29	326	eP	P	05 55 01.2	+1.0
PDAR	Pinedale Array	89.29	326	eP	P	05 54 58.7	-1.6
PDAR	Pinedale Array	89.29	326	P	P	05 55 00.7	+0.5
	comp=Z,2.7nm,1.1s,baz=57,slow=5.5,SNR=8.6						
PDAR				LR	LR	06 35 55.7	
	comp=Z,426nm,21.7s,baz=33,slow=36						
TPAW	Teton Pass	89.32	328	eP	P	05 54 59.5	-0.9
TPAW				epP	sP	05 55 12.2	-1.2
F10A	Beach Ranch, E	89.78	333	eP	P	05 55 03.8	+1.5
	comp=Z,9.7nm,1.2s						
WMOK	Wichita Mounta	89.88	315	eP	P	05 55 04.8	+1.9
	comp=Z,7.8nm,1.1s						
WMOK	Wichita Mounta	89.88	315	eP	P	05 55 04.8	+1.9
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BMO	Blue Mountains	90.76	332	eP	P	05 55 07.4	+0.5
	comp=Z,4.1nm,0.9s						
BMO	Blue Mountains	90.76	332	eP	P	05 55 07.4	+0.5
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
O20A	White River Ci	90.77	324	eP	P	05 55 08.1	+1.0
	comp=Z,11nm,0.9s						
O20A	White River Ci	90.77	324	P	P	05 55 07.9	+0.7
	baz=38						
SDCO	Great Sand Dun	91.28	321	eP	P	05 55 11.1	+1.4
	comp=Z,13nm,1.8s						
SDCO	Great Sand Dun	91.28	321	P	P	05 55 10.9	+1.2
	baz=40						
HVU	Hansel Valley	91.50	328	eP	P	05 55 12.0	+1.6
	comp=Z,4.5nm,1.0s						
HVU	Hansel Valley	91.50	328	eP	P	05 55 12.0	+1.6
HVU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JLU	Jordanelle	91.87	326	eP	P	05 55 14.2	+1.8
	comp=Z,12nm,1.4s						
BGU	Big Grassy Mou	92.31	327	eP	P	05 55 16.2	+2.1
	comp=Z,15nm,1.8s						
PV23	Carpenter Ridg	92.46	323	eP	P	05 55 16.7	+1.6
	comp=Z,11nm,0.9s						
PV12	Saucer Basin,	92.47	323	eP	P	05 55 16.8	+1.7
	comp=Z,8.5nm,1.1s						
PV09	Paradox Valley	92.48	323	eP	P	05 55 16.5	+1.3
PV01	Paradox Valley	92.50	323	eP	P	05 55 16.4	+1.2
	comp=Z,6.9nm,1.2s						
PV11	David Mesa, Pa	92.52	323	eP	P	05 55 17.1	+1.8
	comp=Z,8.7nm,0.9s						
PV16	Nyswonger Mesa	92.53	323	eP	P	05 55 17.0	+1.7
	comp=Z,7.2nm,1.0s						
PV14	Lion Creek, Pa	92.53	323	eP	P	05 55 16.8	+1.4
	comp=Z,6.3nm,0.9s						
PV03	Paradox Valley	92.54	323	eP	P	05 55 16.9	+1.5
	comp=Z,4.7nm,1.0s						
PV17	East Wray Mesa	92.57	323	eP	P	05 55 17.1	+1.5
	comp=Z,12nm,1.3s						
PV13	Radium Mtn., P	92.60	323	eP	P	05 55 17.2	+1.5
	comp=Z,21nm,1.8s						
NVAR	Mina Array Bea	96.62	329	P	P	05 55 34.7	+0.6
	comp=Z,0.2nm,0.5s,baz=42,slow=4.1,SNR=3.3						
NVAR				LR	LR	06 41 25.6	
	comp=Z,300nm,20.2s,baz=11,slow=37						
TXAR	Lajitas Array	96.65	314	P	P	05 55 33.8	-0.5
	comp=Z,1.0nm,1.0s,baz=72,slow=4.1,SNR=6.3						
TXAR				LR	LR	06 38 54.3	
	comp=Z,121nm,19.0s,baz=0.0,slow=35						
CPUP	Villa Florida	97.11	243	LR	LR	06 41 00.6	
	comp=Z,852nm,19.5s,baz=47,slow=36						
LPAZ	La Paz	99.33	257	LR	LR	06 40 22.3	
	comp=Z,216nm,21.8s,baz=78,slow=35						
SYO	Syowa Base	106.19	173⇑	epPdiff	pPdif	05 56 32.2	+7.2
WRA	Warramunga Arr	119.59	94	PKP	PKPdf	06 00 53.1	-0.7
	comp=Z,0.9nm,0.7s,baz=298,slow=2.1,SNR=9.7						
WRA				PP	PP	06 02 16.8	+0.1
	comp=Z,0.8nm,0.9s,baz=312,slow=6.9,SNR=4.5						
ASAR	Alice Springs	121.13	98	PKP	PKPdf	06 00 56.3	-0.4
	comp=Z,1.2nm,0.6s,baz=320,slow=1.5,SNR=17						
ASAR				PP	PP	06 02 26.8	-0.5
	comp=Z,0.7nm,0.8s,baz=303,slow=5.8,SNR=4.2						
STKA	Stephens Creek	130.87	103	PKIKP	PKPdf	06 01 15.0	-0.1
STKA	Stephens Creek	130.87	103	PKP	PKPdf	06 01 15.0	-0.1
	comp=Z,0.7nm,0.4s,baz=294,slow=12,SNR=3.5						
VNDA	Vanda	135.62	169	PKP	PKPdf	06 01 22.6	-0.1
	comp=Z,2.4nm,0.9s,baz=166,slow=4.2,SNR=3.0						
DZM	Mont Dzumac	146.29	74	eLR	LR	06 49 51.4	
	comp=Z,163nm,27.8s						
TAOE	Nuku Hiva Isla	147.74	325	eLR	LR	06 50 40.6	
	comp=Z,105nm,29.0s						
PPT2	Papeete2	159.47	335	eLR	LR	06 56 07.9	
	comp=Z,183nm,24.2s						
TBI	Tubuai	164.66	327	eLR	LR	06 58 33.5	
	comp=Z,215nm,22.8s						

JMA 17 05:49:04.2±0.1, 24°.71N×124°.23E, h63^{km}±1^{km}, M2.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	0.14	149	P	Pn	05 49 13.8	+0.1
JISG				S	Sn	05 49 20.9	+0.3
JIJ	Ishigaki jima	0.35	193	P	Pn	05 49 14.8	-0.3
JIJ				S	Sn	05 49 22.6	-0.3
JTJ	Tarama	0.43	99	P	Pn	05 49 15.9	+0.2
JTJ				S	Sn	05 49 24.7	+0.5
JKRS	Kuro-shima	0.51	203	P	Pn	05 49 16.7	+0.2
JKRS				S	Sn	05 49 26.1	+0.6
IRIF	Iriomote-Funau	0.59	231	P	Pn	05 49 17.4	+0.1
IRIF				S	Sn	05 49 27.6	+0.7
HATJ	Hateruma jima	0.76	211	P	Pn	05 49 19.7	+0.4
HATJ				S	Sn	05 49 31.2	+0.8
JIRB	Irabujima	0.86	82	P	Pn	05 49 20.4	-0.2
JIRB				S	Sn	05 49 32.7	-0.1
JIKM	Ikemajima	0.95	77	P	Pn	05 49 22.0	+0.3
JIKM				S	Sn	05 49 34.9	+0.3
JMJ	Miyako jima 2	0.97	84	eS	Sn	05 49 35.4	+0.2
JOGS	Gusukube	1.07	87	P	Pn	05 49 23.6	+0.3
JOGS				S	Sn	05 49 38.1	+0.7
YOJ	Yonaguni jima	1.14	258	P	Pn	05 49 24.4	+0.3
YOJ				eS	Sn	05 49 38.7	-0.3
JYNG	Yonagunijimaku	1.20	258	P	Pn	05 49 25.3	+0.4
JYNG				eS	Sn	05 49 40.5	+0.1

TAP 17 05:49:54.4, 24°.84N×122°.43E, h44^{km}±2^{km}, ML2.4, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.40	223	P	Pn	05 50 04.2	+0.1
	baz=215						
EOS1				S	Sn	05 50 11.7	+0.8
	baz=215						
TWB1	Santiao Chiao	0.44	292	P	Pn	05 50 04.2	-0.3
	baz=292						
TIPB	Shuangxi	0.57	283	P	Pn	05 50 06.6	+0.3
	baz=284						
TIPB				S	Sn	05 50 14.3	-0.3
	baz=284						
TWC	Suao	0.58	246	eP	Pn	05 50 06.8	+0.5
	baz=246						
YOJ	Yonaguni jima	0.65	126	eP	Pn	05 50 05.4	-1.9
	baz=134						
TWE	Neicheng	0.71	260	eP	Pn	05 50 09.2	+1.2
	baz=259						
TWE				eS	Sn	05 50 17.9	+0.1
	baz=259						
ENTT	Nioudou	0.81	256	eP	Pn	05 50 11.9	+2.4
	baz=255						
TWY	Chenhua	0.87	300	eP	Pn	05 50 11.9	+1.7
	baz=307						

IDC 17 05:54:54.5±3.9, 3°.18S×95°.24W, h0^{km}, mb3.9/6, mb1 4.3/6, mb1mx3.7/40, mbtmp3.9/6, MS3.2/3, Ms1 3.2/3, ms1mx2.8/29, Error ellipse: s-maj=149.4km s-min=81.6km az=72.0, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	El Apazote	18.67	15	LR	LR	06 04 06.9	
	comp=Z,26nm,20.3s,baz=93,slow=30						
CMIG	Matias Romero	20.14	1	LR	LR	06 05 09.5	
	comp=Z,86nm,21.6s,baz=196,slow=30						
TXAR	Lajitas Array	33.32	347	P	P	06 01 34.8	+0.5
	1.2nm,1.0s,baz=159,slow=12,SNR=7.7						
NVAR	Mina Array Bea	46.57	335	P	P	06 03 22.9	-1.5
	0.8nm,0.9s,baz=143,slow=7.6,SNR=4.8						
PDAR	Pinedale Array	47.53	346	P	P	06 03 31.9	+0.1
	1.2nm,0.7s,baz=139,slow=8.4,SNR=9.9						
ULM	Lac du Bonnet	53.22	359	P	P	06 04 14.4	-0.1
	3.3nm,1.0s,baz=182,slow=8.3,SNR=3.4						
YKA	Yellowknife Ar	67.13	350	P	P	06 05 48.9	-0.8
	0.9nm,0.9s,baz=150,slow=5.0,SNR=3.7						
ILAR	Eielson Array	77.54	340	P	P	06 06 53.2	+1.4
	1.8nm,0.9s,baz=140,slow=4.8,SNR=9.5						
SPITS	Spitsbergen Ar	97.45	11	LR	LR	06 51 47.9	
	comp=Z,25nm,20.7s,baz=40,slow=35						
MKAR	Makanchi Array	136.50	2	PKP	PKPdf	06 14 17.4	-1.4
	0.3nm,1.0s,baz=349,slow=1.5,SNR=2.8						

IDC ***17*** *05:59:09.4±1.9, 59°.89N×140°.48W, h0^{km}, mb3.1/2, mb1 3.4/6, mb1mx3.2/60, mbtmp3.1/6, ML3.0/4, Error ellipse: s-maj=30.7km s-min=9.7km az=41.0*

ISCJB ***17*** *05:59:16.2±0.3, 60°.15N±0°.03×139°.55W±0°.04, h19^{km}±4^{km}, mb2.8/2, Error ellipse: s-maj=4.3km s-min=2.9km az=171.8*

PGC ***17*** *05:59:16.6±0.0, 60°.17N×139°.60W, h4^{km}, ML3.5/12, 98km northeast of Yakutat, Ak Southeastern Alaska*

NEIC ***17*** *05:59:16.2±0.0, 60°.19N×139°.56W, h9^{km}, ML3.4(AEIC), ML3.5(OTT), After AEIC.*

ISC 17 05:59:16.5±0.8, 60°.18N±0°.02×139°.58W±0°.02, h15^{km}±7^{km}, n94, σ1^{s}.78/125, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPM	Bancas Point	0.23	187	P	Pg	05 59 20.8	-0.8
BCPM				S	Sg	05 59 24.5	-0.5
PCA	Pinnacle	0.35	256	P	Pg	05 59 22.7	-0.9
PCA				S	Sb	05 59 29.6	-0.2
PCA	Pinnacle	0.35	256	P	Pg	05 59 22.8	-0.9
PCA				S	Sg	05 59 27.9	-0.7
PNL	Peninsula	0.52	170	P	Pg	05 59 25.9	-0.9
PNL	Peninsula	0.52	170	P	Pg	05 59 25.8	-0.9
SAMH	Samovar Hills	0.60	266	P	Pg	05 59 27.9	-0.4
YKU2	Yakutat	0.67	184	P	Pg	05 59 29.3	-0.3
YKU2				S	Sb	05 59 40.6	+1.7
YUK7	Dusty Glacier	0.80	63	P	Pg	05 59 31.0	-1.0
YUK7				S	Sg	05 59 41.7	-0.8
YUK7	Dusty Glacier	0.80	63	P	Pg	05 59 31.0	-1.0
YUK7				S	Sg	05 59 41.5	-1.1
RKAV	Rock Avalanche	0.89	278	P	Pg	05 59 32.7	-1.0
RKAV				S	Sb	05 59 45.8	+0.4
YUK6	Outpost Mounta	0.97	38	P	Pg	05 59 34.3	-1.0
YUK6				S	Sg	05 59 47.2	-0.9
YUK6	Outpost Mounta	0.97	38	P	Pg	05 59 34.4	-1.0
YUK6				S	Sg	05 59 47.1	-1.0
MESA	MESA	1.19	271	P	Pg	05 59 38.2	-1.1
HYT	Haines Junctio	1.21	57	P	Pg	05 59 38.0	-1.8
HYT				S	Sg	05 59 54.0	-1.7
HYT	Haines Junctio	1.21	57	P	Pg	05 59 38.3	-1.6
HYT				S	Sg	05 59 54.2	-1.5
YUK4	Talbot Arm	1.25	21	P	Pn	05 59 41.2	+1.7
YUK4	Talbot Arm	1.25	21	P	Pn	05 59 41.3	+1.7
YUK4				S	Sn	05 59 59.6	+3.3
YUK5	Granite Creek	1.27	41	P	Pg	05 59 39.9	-1.1
YUK5				S	Sg	05 59 56.7	-1.0
YUK5	Granite Creek	1.27	41	P	Pg	05 59 39.9	-1.1
YUK5				S	Sg	05 59 56.8	-0.8
KULT	Kultieth River	1.57	274	P	Pn	05 59 43.9	+0.1
KULT				S	Sn	06 00 04.3	+0.4
YUK3	Moose Creek	1.66	345	P	Pn	05 59 45.4	+0.2
YUK3	Moose Creek	1.66	345	Pn	Pn	05 59 45.8	+0.6
YUK3				Sg	Sg	06 00 10.4	+0.6
YUK2	White River	1.73	340	P	Pn	05 59 46.8	+0.9
YUK2	White River	1.73	340	Pn	Pn	05 59 46.9	+0.9
YUK2				Sg	Sb	06 00 11.2	+1.8
PLBC	Pleasant Camp	1.78	113	P	Pn	05 59 47.2	+0.6
PLBC	Pleasant Camp	1.78	113	Pn	Pn	05 59 47.1	+0.6
PLBC				Sg	Sb	06 00 12.0	+1.2
KHIT	Khitrov Hills	1.85	280	P	Pn	05 59 47.8	+0.2
MCARA	McCarthy VSAT	2.08	307	P	Pn	05 59 52.1	+1.4
SUCK	Suckling Hills	2.10	269	P	Pn	05 59 51.6	+0.5
NICHA	Nichawak Mount	2.19	273	P	Pn	05 59 53.0	+0.7
SKAG	Skagway	2.27	107	P	Pn	05 59 54.5	+1.3
BVCY	Beaver Creek	2.33	345	P	Pn	05 59 55.4	+1.2
BVCY	Beaver Creek	2.33	345	Pn	Pb	05 59 57.1	-0.9
BVCY				Sg	Sg	06 00 29.6	-1.5
HMT	Hamilton	2.34	276	P	Pn	05 59 54.9	+0.5
WHY	Whitehorse	2.38	76	P	Pn	05 59 56.0	+1.0
WHY	Whitehorse	2.38	76	Pn	Pn	05 59 55.9	+1.0
WHY				Sn	Sn	06 00 25.6	+1.7
BESE	Bessie Mountai	2.90	122	P	Pn	06 00 02.7	+0.6
BESE	Bessie Mountai	2.90	122	Pn	Pn	06 00 01.4	-0.7
BESE				Sn	Sn	06 00 36.0	-0.7
BESE				Sg	Sb	06 00 44.8	+1.6
BCA3	Beaver Creek A	3.08	341	P	Pn	06 00 04.7	+0.1
EYAK	Cordova Ski Ar	3.09	280	P	Pn	06 00 04.8	+0.2
DIV	Divide	3.19	290	P	Pn	06 00 06.6	+0.5
DIV	Divide	3.19	290	Pn	Pn	06 00 06.3	+0.2
DIV				Sn	Sn	06 00 44.5	+0.6
JIS	Juneau Island	3.28	123	P	Pn	06 00 07.6	+0.4
KLU	Klutina	3.37	296	P	Pn	06 00 09.3	+0.7
MENT	Mentasta	3.40	326	ePn	Pn	06 00 10.4	+1.5
HARP	HAARP	3.50	312	ePn	Pn	06 00 12.0	+1.8
HARP	HAARP	3.50	312	Pn	Pn	06 00 11.3	+1.1
JPK	Jack Peak	3.57	287	P	Pn	06 00 11.6	+0.3
SIT	Sitka	3.84	143	ePn	Pn	06 00 15.4	+0.5
DAWY	Dawson	3.90	1	P	Pn	06 00 17.0	+1.2
DAWY	Dawson	3.90	1	Pn	Pn	06 00 16.9	+1.2
DAWY				Sn	Sn	06 01 03.3	+2.0
DAWY				Sg	Sg	06 01 20.8	-0.7
PAX	Paxson	3.97	317	ePn	Pn	06 00 17.5	+0.7
PAX	Paxson	3.97	317	Pn	Pn	06 00 17.5	+0.7
DOT	Dot Lake	4.07	331	P	Pn	06 00 19.5	+1.3
DOT	Dot Lake	4.07	331	Pn	Pn	06 00 18.2	0.0
SCM	Sheep Creek Mo	4.12	297	ePn	Pn	06 00 19.4	+0.6
SCRK	Sand Creek	4.34	333	P	Pn	06 00 23.5	+1.6
RIDG	Independ'e Rid	4.35	327	ePn	Pn	06 00 26.1	+4.1
KNK	Knik Glacier	4.52	290	ePn	Pn	06 00 25.0	+0.7
SML	Sawmill	4.56	295	ePn	Pn	06 00 25.9	+1.0
EGAK	Eagle	4.67	352	P	Pn	06 00 27.5	+1.2
PMR	Palmer	4.88	291	ePn	Pn	06 00 31.5	+2.4
RC01	Rabbit Creek A	5.08	285	ePn	Pn	06 00 34.6	+2.6
DLBC	Dease Lake	5.20	106	Pn	Pn	06 00 34.2	+0.6
DLBC				Pg	Pb	06 00 49.3	+2.4
DLBC				Sg	Sg	06 01 58.4	-4.7
DLBC	Dease Lake	5.20	106	Pn	Pn	06 00 34.1	+0.5
	0.3nm,0.3s,baz=297,slow=9.0,SNR=10						
DLBC				Pg	Pb	06 00 42.1	-4.9
	0.6nm,0.3s,baz=299,slow=12,SNR=7.9						
DLBC				Lg	Lg	06 01 58.4	
	3.0nm,0.3s,baz=198,slow=16,SNR=5.5						
HDA	Harding Lake	5.46	324	ePn	Pn	06 00 40.7	+3.6
RND	Reindeer	5.46	310	ePn	Pn	06 00 38.0	+0.8
SUA	Susitna One	5.61	288	ePn	Pn	06 00 42.3	+3.0
MCK	McKinley	5.67	313	ePn	Pn	06 00 39.2	-0.9
IL1	Eielson Array	5.72	327	ePg	Pg	06 01 03.8	-1.9
IL1				eLg	Lg	06 02 20.6	
ILAR	Eielson Array	5.72	327	Pn	Pn	06 00 35.8	-4.9
	0.1nm,0.3s,baz=150,slow=13,SNR=4.3						
ILAR				Pg	Pb	06 00 43.5	-12
	0.2nm,0.3s,baz=142,slow=13,SNR=13						
ILAR				Sn	Sn	06 01 41.8	-4.2
	0.3nm,0.3s,baz=150,slow=16,SNR=4.6						
ILAR				Lg	Lg	06 02 10.5	
	0.3nm,0.3s,baz=141,slow=23,SNR=4.3						
ILB	Eielson Array	5.72	327	ePn	Pn	06 00 35.8	-4.9
ILB				ePg	Pb	06 00 43.5	-12
ILB				eSn	Sn	06 01 41.8	-4.2
ILB				eLg	Lg	06 02 10.5	
WRH	Wood River Hil	5.85	321	ePn	Pn	06 00 47.2	+4.7
PRP	Porcupine Dome	6.00	336	P	Pn	06 00 45.6	+0.8
TRF	Thorofare Moun	6.04	307	ePn	Pn	06 00 48.5	+3.3
MDM	Murphy Dome	6.24	324	ePg	Pb	06 01 05.6	+0.9
MDM				eLg	Lg	06 02 43.0	
EPYK	Eagle Plains	6.34	10	ePn	Pn	06 00 50.5	+1.1
PPLA	Purkeypile	6.61	300	ePg	Pb	06 01 12.4	+1.3
PPLA				eSg	Sb	06 02 36.7	+6.9
FYU	Fort Yukon	6.89	341	ePn	Pn	06 00 59.2	+2.5
KDAK	Kodiak Island	7.14	256	Pn	Pn	06 00 59.5	-0.6
	1.0nm,0.3s,baz=78,slow=8.1,SNR=20						
KDAK				Sn	Sn	06 02 15.6	-5.2
	0.1nm,0.3s,baz=246,slow=8.7,SNR=2.2						
BM3	Burnt Mountain	7.60	345	P	Pn	06 01 07.7	+1.2
COLD	Coldfoot	8.49	331	Pn	Pn	06 01 20.5	+1.9
FNBB	Fort Nelson	8.52	92	Pn	Pn	06 01 20.2	+1.1
FNBB				Sg		06 03 42.7	
INK	Inuvik	8.57	15	Pn	Pn	06 01 19.9	+0.1
	1.9nm,1.0s						
INK				Sn	Sn	06 02 54.4	-1.5
INK				Lg	Lg	06 03 42.5	
INK	Inuvik	8.57	15	Pn	Pn	06 01 19.6	-0.1
INK	Inuvik	8.57	15	Pn	Pn	06 01 19.9	+0.1
	0.1nm,0.3s,baz=194,slow=14,SNR=9.2						
INK				Sn	Sn	06 02 54.4	-1.5
	0.2nm,0.3s,baz=126,slow=25,SNR=1.2						
INK				Lg	Lg	06 03 42.5	
	0.2nm,0.3s,baz=92,slow=31,SNR=2.2						
TOLK	Toolik Lake Re	9.51	337	ePn	Pn	06 01 32.9	+0.2
DHRN	Dharma Camp	11.22	44	P	Pn	06 01 56.5	+0.5
YKW3	Yellowknife Ar	12.18	68	P	Pn	06 02 08.0	-1.1
YKA	Yellowknife Ar	12.18	68	Pn	Pn	06 02 08.8	-0.3
	0.1nm,0.3s,baz=274,slow=13,SNR=16						
YKA				Lg	Lg	06 05 36.6	
	baz=266,slow=28,SNR=2.5						
YKB5	Yellowknife Ar	12.18	68	ePn	Pn	06 02 08.7	-0.4
RES	Resolute Bay	21.65	30	P	P	06 04 05.3	-0.4
	0.5nm,0.6s,baz=245,slow=13,SNR=3.7						
NV01	Mina Array Sit	25.59	139	eP	P	06 04 40.8	-4.2
NVAR	Mina Array Bea	25.59	139	P	P	06 04 40.8	-4.2
	0.1nm,0.5s,baz=312,slow=6.7,SNR=2.0						

IDC ***17*** *06:04:25.7±0.7, 9°.04S×156°.30E, h0^{km}, mb4.1/13, mb1 4.2/15, mb1mx4.1/44, mbtmp4.1/15, ML3.7/2, MS3.6/11, Ms1 3.6/11, ms1mx3.4/36, Error ellipse: s-maj=20.0km s-min=16.2km az=130.0*

ISCJB ***17*** *06:04:26.9±0.3, 9°.03S±0°.06×156°.25E±0°.04, h20^{km}, mb4.3/28, MS3.5/9, Error ellipse: s-maj=8.3km s-min=6.3km az=2.3*

NEIC ***17*** *06:04:26.9±0.2, 9°.10S×156°.31E, h10^{km}, mb4.4/16, Error ellipse: s-maj=6.1km s-min=5.8km az=160.0*

ISC 17 06:04:28.1±0.5, 9°.10S±0°.09×156°.32E±0°.07, h20^{km}, n57, σ1^{s}.51/51, mb4.3/26, MS3.5/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.60	96	Pn	Pn	06 05 22.2	-0.6
	25nm,0.3s,baz=297,slow=14,SNR=3.6						
HNR				Sn	Sn	06 06 07.8	+3.1
	40nm,0.3s,baz=99,slow=2.4,SNR=5.0						

HNR				LR	LR	06 06 31.9	
	comp=Z,923nm,18.6s,baz=254,slow=35						
RABL	Rabaul	6.39	320	ePn	Pn	06 05 59.7	-1.5
MANU	Manus Island	11.33	308	ePn	Pn	06 07 08.5	-0.5
DZM	Mont Dzumac	16.16	144	eLR	LR	06 11 57.7	
	comp=Z,630nm,25.4s						
DZM	Mont Dzumac	16.16	144	ePn	Pn	06 08 13.1	-1.2
	20nm,1.1s						
DZM	Mont Dzumac	16.16	144	Pn	Pn	06 08 14.6	+0.4
	0.1nm,0.3s,baz=298,slow=17,SNR=2.3						
DZM				LR	LR	06 13 03.2	
	comp=Z,390nm,21.5s,baz=251,slow=32						
MSVF	Nonsavu	22.80	114	eP	P	06 09 30.1	+0.2
	30nm,1.2s						
WRAB	Tennant Creek	23.80	241	eP	P	06 09 40.1	+0.3
	8.1nm,0.8s						
WB2	Warramunga Arr	23.80	241	eP	P	06 09 39.9	0.0
WR1	Warramunga Arr	23.81	241	eP	P	06 09 41.0	+1.0
	9.5nm,1.0s						
WR1				ePcP	PcP	06 13 24.8	+1.6
WRA	Warramunga Arr	23.82	241	P	P	06 09 41.0	+1.0
	6.2nm,0.9s,baz=66,slow=10,SNR=30						
WRA				PcP	PcP	06 13 24.8	+1.6
	0.5nm,0.7s,baz=68,slow=2.3,SNR=4.8						
WRA				LR	LR	06 18 37.3	
	comp=Z,218nm,19.0s,baz=25,slow=36						
GUMO	Guam	25.25	333	LR	LR	06 17 48.9	
	comp=Z,94nm,20.4s,baz=93,slow=32						
AS01	Alice Springs	25.83	233	eP	P	06 09 59.5	+1.2
AS31	Alice Springs	25.86	233	eP	P	06 09 58.6	0.0
	1.6nm,1.3s						
ASAR	Alice Springs	25.86	233	P	P	06 09 58.9	+0.2
	1.8nm,0.8s,baz=60,slow=10.0,SNR=11						
ASAR				LR	LR	06 19 52.6	
	comp=Z,105nm,19.1s,baz=69,slow=36						
SIJI	Sorong	26.24	287	LR	LR	06 21 19.0	
	comp=Z,99nm,20.1s,baz=224,slow=39						
STKA	Stephens Creek	26.46	209	eP	P	06 10 04.9	+1.0
	1.3nm,0.7s						
STKA	Stephens Creek	26.46	209	P	P	06 10 05.0	+1.1
	5.8nm,0.6s,baz=13,slow=8.8,SNR=14						
STKA				LR	LR	06 20 29.1	
	comp=Z,111nm,18.3s,baz=27,slow=36						
BBOO	Buckleboo	30.12	216	eP	P	06 10 35.8	-0.8
	8.3nm,1.1s						
FITZ	Fitzroy Crossi	31.08	250	eP	P	06 10 45.4	+0.1
	10nm,1.5s						
FITZ	Fitzroy Crossi	31.08	250	P	P	06 10 45.5	+0.3
	2.5nm,0.9s,baz=54,slow=7.7,SNR=11						
FITZ				LR	LR	06 22 39.2	
	comp=Z,114nm,18.7s,baz=86,slow=35						
SOEI	Soe	31.62	266	eP	P	06 10 49.2	-1.0
	19nm,1.0s						
MMRI	Maumere	33.67	268	eP	P	06 11 07.6	-0.4
	77nm,1.3s						
URZ	Urewera	34.54	150	LR	LR	06 23 05.7	
	comp=Z,84nm,18.9s,baz=30,slow=32						
RPZ	Rata Peaks	36.80	162	LR	LR	06 26 13.0	
	comp=Z,148nm,18.1s,baz=2.5,slow=36						
MJAR	Matsushiro Arr	48.49	340	P	P	06 13 09.2	-0.3
	0.8nm,0.7s,baz=178,slow=8.4,SNR=3.6						
MAJO	Matsushiro	48.49	340	eP	P	06 13 09.2	-0.3
PPT	Papeete	53.17	105	LR	LR	06 31 31.4	
	comp=Z,51nm,21.1s,baz=128,slow=31						
PPT2	Papeete2	53.17	105	eS	S	06 21 08.3	-7.2
	88nm,27.5s						
PPT2				eLQ	LQ	06 27 03.1	
	1µm,29.8s						
PPT2				eLR	LR	06 29 11.4	
	comp=Z,120nm,24.0s						
USRK	Ussuriysk Ar.	57.45	339	P	P	06 14 15.8	+0.3
	2.8nm,0.8s,baz=171,slow=8.4,SNR=6.0						
PETK	Petropavlovsk-	61.98	1	P	P	06 14 46.5	0.0
	2.6nm,0.7s,baz=180,slow=10,SNR=4.0						
PEA1	Petropavlovsk-	61.98	1	eP	P	06 14 46.5	-0.1
CM31	Chiang Mai Arr	62.87	296	eP	P	06 14 54.3	+1.1
	11nm,1.6s						
CMAR	Chiang Mai Arr	62.87	296	P	P	06 14 54.3	+1.1
	0.7nm,0.6s,baz=129,slow=7.1,SNR=6.5						
ULN	Ulaanbaatar	71.47	327	eP	P	06 15 47.9	+0.4
	6.1nm,1.3s						
SONA0	Songino Array	71.80	327	eP	P	06 15 50.5	+1.1
SONM	Songino Array	71.80	327	P	P	06 15 50.5	+1.1
	1.2nm,0.8s,baz=141,slow=6.2,SNR=9.2						
SONA1	Songino Array	71.81	327	eP	P	06 15 49.2	-0.2
BILL	Bilibino	77.28	4	eP	P	06 16 21.1	+0.5
	7.4nm,0.8s						
ILAR	Eielson Array	84.85	21	P	P	06 17 00.7	-0.3
	0.7nm,0.9s,baz=224,slow=5.0,SNR=4.5						
ILB	Eielson Array	84.85	21	eP	P	06 17 01.2	+0.2
	2.3nm,1.1s						
MK01	Makanchi Array	85.83	319	eP	P	06 17 06.8	+0.5
MK31	Makanchi Array	85.84	319	eP	P	06 17 07.0	+0.6
	1.2nm,0.9s						
MK32	Makanchi Array	85.84	319	eP	P	06 17 06.8	+0.4
MKAR	Makanchi Array	85.84	319	eP	P	06 17 07.2	+0.7
	8.0nm,0.6s						
MKAR	Makanchi Array	85.84	319	P	P	06 17 06.8	+0.4
	0.9nm,0.8s,baz=101,slow=5.6,SNR=8.1						
MAKZ	Makanchi	86.05	318	eP	P	06 17 08.8	+1.3
	2.4nm,0.9s						
ZALV	Zalesovo Beam	86.65	326	P	P	06 17 08.4	-1.7
	0.4nm,0.3s,baz=119,slow=5.2,SNR=3.1						
ZAA1	Zalesovo Array	86.65	326	eP	P	06 17 08.4	-1.7
NV01	Mina Array Sit	92.00	52	eP	P	06 17 38.5	+2.4
NVAR	Mina Array Bea	92.00	52	P	P	06 17 38.5	+2.4
	0.5nm,0.7s,baz=255,slow=6.4,SNR=4.2						
GAR	Garm	92.57	309	eP	P	06 17 36.5	-2.1
	9.0nm,0.4s						
YKA	Yellowknife Ar	97.58	28	P	Pdif	06 18 01.3	+0.5
	0.4nm,0.8s,baz=263,slow=4.9,SNR=4.0						
YKB5	Yellowknife Ar	97.58	28	eP	Pdif	06 18 01.6	+0.8
H17A	Grant Village	98.51	46	eP	Pdif	06 18 05.8	+0.1
	7.9nm,0.3s						
ESDC	Sonseca Array	144.83	333	PKP	PKPdf	06 24 03.8	-0.3
	0.1nm,0.5s,baz=40,slow=2.9,SNR=3.1						
BDFB	Brasilia	145.57	135	PKPbc	PKPab	06 24 07.1	+0.6
	7.4nm,0.8s,baz=195,slow=3.1,SNR=15						

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*ISCJB **17** 06:07:27.9±0.4, 2°.42S±0°.06×98°.15W±0°.08, h10km, mb4.5/59, Error ellipse: s-maj=12.7km s-min=7.8km az=149.4*

*IDC **17** 06:07:28.6±0.7, 2°.36S×98°.17W, h0km, mb4.2/14, mb1 4.4/15, mb1mx4.2/32, mbtmp4.2/15, ML3.6/1, Error ellipse: s-maj=23.8km s-min=14.8km az=55.0*

*NEIC **17** 06:07:29.3±0.2, 2°.47S×98°.16W, h10km, mb4.5/50, Error ellipse: s-maj=7.8km s-min=4.8km az=67.0*

ISC 17 06:07:29.6±0.5**, 2°.42S**±0°.09×**98°.2W**±0°.1**, h10**km**, n91, σ0§78**/95**, mb4.5**/59**, Southwest of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	El Apazote	18.92	24	P	P	06 11 50.7	-0.2
	0.2nm,0.3s,baz=208,slow=16,SNR=1.8						
H06E1	SOCORRO T-PHAS	24.51	330	T	T	06 38 10.2	
ZAIG	Zacatecas	25.40	351	eP	P	06 12 58.5	+0.8
RPN	Rapa Nui	26.79	202	eP	P	06 13 10.5	+0.5
	139nm,1.4s						
RPN	Rapa Nui	26.79	202	P	P	06 13 11.7	+1.7
	12nm,0.4s,baz=50,slow=16,SNR=1.8						
FSCY	Frank Sound, G	27.30	37	eP	P	06 13 16.3	+1.6
	724nm,1.6s						
SDV	Santo Domingo	29.66	67	eP	P	06 13 36.5	+0.5
	5.5nm,0.8s						
SDV	Santo Domingo	29.66	67	P	P	06 13 36.8	+0.8
	4.7nm,0.8s,baz=240,slow=6.7,SNR=7.6						
HPIG		30.06	347	eP	P	06 13 40.4	+1.0
	6.6nm,1.3s						
LTX	Lajitas	32.01	351	eP	P	06 13 57.5	+1.1
LTX				ePcP	PcP	06 16 46.5	+0.1
TXAR	Lajitas Array	32.01	351	P	P	06 13 57.5	+1.1
	1.7nm,0.9s,baz=167,slow=9.7,SNR=13						
TXAR				PcP	PcP	06 16 46.5	+0.1
	0.2nm,0.9s,baz=166,slow=5.4,SNR=2.6						
SRIG	Santa Rosalia	32.52	336	eP	P	06 14 02.0	+1.2
	37nm,1.0s						
LPAZ	La Paz	32.62	117	eP	P	06 14 01.2	-1.4
LPAZ				epP	P	06 14 01.9	-0.7
LPAZ	La Paz	32.62	117	P	P	06 14 04.2	+1.6
	1.4nm,0.7s,baz=304,slow=8.3,SNR=6.4						
JCT	Junction City	32.75	357	eP	P	06 14 04.0	+1.1
	5.6nm,1.3s						
059A	Moore Haven	33.52	28	eP	P	06 14 09.1	-0.5
NATX	Nacogdoches	34.15	5	eP	P	06 14 15.2	+0.2
	18nm,1.1s						
WHTX	Lake Whitney,	34.23	1	eP	P	06 14 16.7	+1.1
	5.9nm,0.9s						
MNTX	Cornudas Mount	34.61	349	eP	P	06 14 19.5	+0.5
	4.5nm,1.1s						
LVC	Limon Verde	34.78	128	eP	P	06 14 18.9	-2.1
	8.6nm,1.3s						
ANMO	Albuquerque	37.97	349	eP	P	06 14 46.9	-1.0
	5.2nm,1.3s						
TUL1	Leonard	38.19	3	eP	P	06 14 49.8	+0.3
	13nm,1.2s						
PTGA	Pitinga	38.23	88	P	P	06 14 50.0	-0.2
	4.4nm,0.8s,baz=233,slow=4.6,SNR=4.9						
SIV	San Ignacio	38.94	113	P	P	06 14 56.2	+0.1
	0.8nm,0.7s,baz=279,slow=20,SNR=3.7						
WVT	Waverly	39.55	13	eP	P	06 15 00.7	-0.1
	25nm,1.3s						
PBMO	Poplar Bluff	39.66	10	eP	P	06 15 01.0	-0.8
	9.4nm,1.1s						
T25A	Trinidad	39.78	352	eP	P	06 15 01.6	-1.5
	17nm,1.3s						
SDCO	Great Sand Dun	40.53	351	eP	P	06 15 10.0	+0.6
	6.3nm,1.3s						
S22A	4UR Ranch, Cre	40.76	349	eP	P	06 15 11.4	+0.1
	9.5nm,1.4s						
KNB	Kanab	41.53	342	eP	P	06 15 17.8	+0.3
	22nm,1.7s						
LCMT	Little Creek M	41.66	342	eP	P	06 15 17.3	-1.2
	8.4nm,1.6s						
SMCO	Snowmass	42.17	350	eP	P	06 15 22.6	-0.4
	10nm,1.4s						
ISCO	Idaho Springs	42.56	352	eP	P	06 15 26.6	+0.5
	11nm,1.5s						
TPNV	Topopah Spring	42.62	338	eP	P	06 15 25.6	-0.8
	4.7nm,1.2s						
Q16A	Castle Valley	42.84	345	eP	P	06 15 29.1	+0.9
	15nm,1.6s						
TMUT	Trail Mountain	43.20	345	eP	P	06 15 32.0	+0.7
	12nm,1.5s						
P17A	Butcher Ranch,	43.26	346	eP	P	06 15 31.1	-0.4
	4.2nm,1.2s						
P18A	Preston Nutter	43.28	346	eP	P	06 15 32.3	+0.4
R11A	Troy Canyon, C	43.64	340	eP	P	06 15 34.2	-0.4
	8.0nm,1.6s						
MPU	Maple Canyon	43.99	345	eP	P	06 15 36.4	-1.1
	6.0nm,1.3s						
NLU	North Lily Min	44.05	345	eP	P	06 15 38.4	+0.4
	6.6nm,1.3s						
DUG	Dugway, Tooele	44.47	344	eP	P	06 15 41.1	-0.2
	10.0nm,1.4s						
NV01	Mina Array Sit	44.69	337	eP	P	06 15 43.9	+0.7
NV01				ePcP	PcP	06 17 26.1	+0.4
NVAR	Mina Array Bea	44.69	337	P	P	06 15 44.3	+1.1
	2.0nm,1.1s,baz=166,slow=7.9,SNR=8.0						
NVAR				PcP	PcP	06 17 26.1	+0.4
	0.5nm,0.8s,baz=163,slow=4.7,SNR=3.8						
ELK	Elko	45.69	342	eP	P	06 15 50.8	-0.3
	8.5nm,1.6s						
ELK	Elko	45.69	342	P	P	06 15 52.4	+1.3
	1.2nm,0.7s,baz=132,slow=4.1,SNR=4.2						
CPUP	Villa Florida	45.84	125	eP	P	06 15 51.0	-1.2
	7.7nm,1.4s						
CPUP	Villa Florida	45.84	125	P	P	06 15 53.4	+1.2
	2.6nm,1.1s,baz=270,slow=4.0,SNR=2.9						
HVU	Hansel Valley	45.94	345	eP	P	06 15 52.9	-0.1
	8.8nm,1.2s						
VCNR	Virginia City	45.97	337	eP	P	06 15 53.0	-0.2
	7.4nm,1.3s						
BW06	Boulder Array	46.14	348	eP	P	06 15 54.8	+0.2
	11nm,1.4s						
PD31	Pinedale Array	46.14	348	eP	P	06 15 54.6	+0.1
	9.9nm,1.4s						
PDAR	Pinedale Array	46.14	348	eP	P	06 15 54.5	0.0
PDAR	Pinedale Array	46.14	348	P	P	06 15 54.9	+0.3
	2.1nm,0.7s,baz=152,slow=7.6,SNR=19						
ORV	Oroville	46.94	335	eP	P	06 16 00.8	+0.2
	4.6nm,1.0s						
REDW	Red Top Meadow	46.98	347	eP	P	06 16 01.0	-0.2
	11nm,1.6s						
LOHW	Long Hollow	47.16	348	eP	P	06 16 02.5	0.0
	2.9nm,0.8s						
FXWY	Fox Creek	47.28	347	eP	P	06 16 03.5	0.0
	4.7nm,1.1s						
IMW	Indian Meadow	47.51	347	eP	P	06 16 05.5	+0.2
	3.3nm,0.8s						
MOD	Modoc Plateau	48.47	338	eP	P	06 16 12.4	-0.2
	7.7nm,1.1s						
GCMT	Greycliff	49.07	349	eP	P	06 16 17.4	+0.2
ULM	Lac du Bonnet	52.50	2	eP	P	06 16 41.8	-0.9
	10nm,1.1s						
ULM	Lac du Bonnet	52.50	2	P	P	06 16 42.0	-0.8
	6.7nm,1.0s,baz=184,slow=8.0,SNR=11						
SCHQ	Schefferville	62.64	20	P	P	06 17 52.9	-1.3
	2.7nm,0.9s,baz=207,slow=6.8,SNR=3.5						
YKA	Yellowknife Ar	65.93	352	P	P	06 18 15.4	-0.2
	1.9nm,0.9s,baz=156,slow=6.1,SNR=18						
YKB5	Yellowknife Ar	65.93	352	eP	P	06 18 15.7	+0.2
NIUE	Niue	71.97	251	eP	P	06 18 52.4	-1.6
	568nm,1.5s						
DAWY	Dawson	72.97	342	eP	P	06 18 58.4	-0.8
	12nm,1.4s						
KNK	Knik Glacier	74.31	337	eP	P	06 19 07.4	+0.3
	25nm,0.6s						
SML	Sawmill	74.50	338	eP	P	06 19 09.0	+0.8
	23nm,1.2s						
INK	Inuvik	74.69	347	eP	P	06 19 09.7	+0.6
	6.0nm,0.9s						
RND	Reindeer	75.67	339	eP	P	06 19 15.5	+0.5
	14nm,1.0s						
IL1	Eielson Array	75.83	341	eP	P	06 19 15.3	-0.4
ILAR	Eielson Array	75.83	341	P	P	06 19 15.8	0.0
	3.7nm,0.8s,baz=150,slow=4.7,SNR=36						
ILB	Eielson Array	75.83	341	eP	P	06 19 15.5	-0.3
	7.7nm,1.0s						
PRP	Porcupine Dome	75.87	342	eP	P	06 19 16.2	+0.1
	6.9nm,1.0s						
MLY	Manley	77.30	340	eP	P	06 19 22.2	-1.9
	5.5nm,1.1s						
COLD	Coldfoot	78.42	342	eP	P	06 19 30.2	0.0
	4.4nm,1.0s						
QSPA	South Pole Qui	87.63	180	P	P	06 20 19.2	+1.0
AS31	Alice Springs	123.11	240	ePKPdf	PKPdf	06 26 26.9	-0.6
ASAR	Alice Springs	123.11	240	PKP	PKPdf	06 26 26.9	-0.6
	0.5nm,0.9s,baz=106,slow=3.3,SNR=3.4						
WR1	Warramunga Arr	123.90	244	ePKPdf	PKPdf	06 26 28.6	-0.4
WRA	Warramunga Arr	123.90	244	PKP	PKPdf	06 26 28.6	-0.4
	0.5nm,0.7s,baz=87,slow=1.5,SNR=4.8						
ZAA1	Zalesovo Array	128.57	358	ePKPdf	PKPdf	06 26 36.6	-0.3
ZALV	Zalesovo Beam	128.58	358	PKP	PKPdf	06 26 36.6	-0.3
	0.3nm,0.3s,baz=8.5,slow=2.9,SNR=2.9						
KURK	Kurchatov	131.80	3	ePKPdf	PKPdf	06 26 43.4	+0.2
KURBB	Kurchatov Arra	131.89	3	PKP	PKPdf	06 26 43.4	+0.1
	0.3nm,0.3s,baz=342,slow=2.3,SNR=4.0						
MK32	Makanchi Array	135.80	360	ePKPdf	PKPdf	06 26 50.9	0.0
MKAR	Makanchi Array	135.80	360	PKP	PKPdf	06 26 50.9	0.0
	0.3nm,0.7s,baz=187,slow=24,SNR=8.1						
CM31	Chiang Mai Arr	156.85	315	ePKPab	PKPab	06 27 56.3	+0.3
CMAR	Chiang Mai Arr	156.85	315	PKPab	PKPab	06 27 56.3	+0.3
	0.8nm,0.3s,baz=15,slow=3.7,SNR=4.1						

IDC 17 06:17:37.2±21.0**, 22°.48S**×**179°.17W, h453**km±195km**, mb3.1**/6**, mb1 3.2**/6**, mb1mx3.0**/26**, mbtmp4.0**/6**, Error ellipse: s-maj=219.0km s-min=42.5km az=52.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	Rata Peaks	22.67	199	P	P	06 22 02.4	0.0
	4.0nm,0.4s,baz=38,slow=12,SNR=4.3						
CTA	Charters Tower	32.27	268	P	P	06 23 27.7	+0.5
	3.7nm,1.0s,baz=93,slow=10,SNR=4.2						
STKA	Stephens Creek	35.97	246	P	P	06 23 57.5	-0.8
	1.5nm,0.6s,baz=88,slow=10,SNR=4.5						
ASAR	Alice Springs	43.04	259	P	P	06 24 55.5	-0.2
	0.8nm,0.5s,baz=100,slow=6.7,SNR=19						
WRA	Warramunga Arr	43.28	264	P	P	06 24 57.4	-0.4
	0.8nm,0.7s,baz=94,slow=8.5,SNR=12						
FITZ	Fitzroy Crossi	51.72	264	P	P	06 26 01.5	+0.1
	0.9nm,0.8s,baz=84,slow=9.2,SNR=2.9						

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*ISCJB **17** 06:36:23.1±0.6, 43°.45N±0°.04×146°.82E±0°.06, h52km±4km, mb3.9/28, Error ellipse: s-maj=8.9km s-min=5.4km az=137.5*

*JMA **17** 06:36:23.1±0.3, 43°.33N×146°.81E, h45km±3km, M4.1*

JMA Felt I J1.

*MOS **17** 06:36:23.4±1.0, 43°.47N×146°.78E, h54km, mb4.4/6, Error ellipse: s-maj=10.9km s-min=7.1km az=105.3*

MOS Felt (III) at Malokuril'skoye.

*SKHL **17** 06:36:23.3±0.5, 43°.48N×146°.94E, h55km±5km, mb5.1/8*

SKHL Felt (III) at Malokuril'skoje.

*IDC **17** 06:36:27.4±2.5, 43°.49N×146°.71E, h75km±21km, mb3.6/22, mb1 3.8/26, mb1mx3.7/48, mbtmp3.9/26, Error ellipse: s-maj=18.3km s-min=13.2km az=162.0*

ISC 17 06:36:23.3±0.9**, 43°.40N**±0°.06×**146°.87E**±0°.05**, h41**km±7km**, n93, σ1§30**/108**, mb4.0**/28**, 6C-11D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.48	357	i P	Pn	06 36 33.0	-0.7
SHO				AMB	AMB	06 36 33.7	
	1µm,0.2s						
SHO				AMB	AMB	06 36 33.7	
	2µm,0.2s						
SHO				i S	Sn	06 36 40.0	-1.1
SHO				A	A	06 36 40.9	
	19µm,0.4s						
SHO				A	A	06 36 40.9	
	4µm,0.4s						
SHO	Shikotan	0.48	357	d iPN	Pn	06 36 33.4	-0.3
SHO				i S	Sn	06 36 39.8	-1.3
SHO				pmax	pmax		
	comp=Z,4µm,0.2s						
SHO				pmax	pmax		
	comp=N,2µm,0.1s						
SHO				smax	smax		
	comp=E,33µm,0.3s						
SHO				smax	smax		
	comp=N,19µm,0.4s						
NEM2	Nemuro 2	0.82	268	P	Pn	06 36 37.8	-0.5
NEM2				eS	Sn	06 36 48.8	-0.4
YUK	Yuzh-Kuril'sk	0.97	312	i P	Pn	06 36 40.0	-0.3
YUK				AMB	AMB	06 36 40.7	
	comp=N,400nm,0.3s						
YUK				AMB	AMB	06 36 40.7	
	comp=N,4µm,0.3s						
YUK				i S	Sn	06 36 52.0	-0.9
YUK				A	A	06 36 57.7	
	comp=N,8µm,0.4s						
YUK				A	A	06 36 57.7	
	comp=N,4µm,0.4s						
YUK	Yuzh-Kuril'sk	0.97	312	d iPN	Pn	06 36 40.1	-0.3
YUK				i S	Sn	06 36 52.9	0.0
YUK				pmax	pmax		
	comp=Z,4µm,0.3s						
YUK				pmax	pmax		
	comp=E,393nm,0.1s						
YUK				smax	smax		
	comp=E,4µm,0.3s						
YUK				smax	smax		
	comp=N,8µm,0.4s						
GRPR	Tuman	0.99	307	i P	Pn	06 36 40.0	-0.7
GRPR				AMB	AMB	06 36 40.0	
	comp=N,810nm,0.4s						
GRPR				AMB	AMB	06 36 40.0	
	comp=N,700nm,0.4s						
GRPR				AMB	AMB	06 36 40.0	
	comp=N,2µm,0.4s						
GRPR				i S	Sn	06 36 53.0	-0.5
GRPR				A	A	06 36 54.0	
	comp=N,830nm,0.2s						
GRPR				A	A	06 36 54.0	
	comp=N,3µm,0.2s						
GRPR	Tuman	0.99	307	d iPN	Pn	06 36 40.4	-0.3
GRPR				i S	Sn	06 36 53.3	-0.2
GRPR				pmax	pmax		
	comp=Z,3µm,0.6s						
GRPR				pmax	pmax		
	comp=N,808nm,0.4s						
GRPR				pmax	pmax		
	comp=E,699nm,0.3s						
GRPR				smax	smax		
	comp=N,832µm,0.4s						
GRPR				smax	smax		
	comp=E,3µm,0.3s						
LAGR	Lagunnoye	1.02	311	i P	Pn	06 36 41.0	-0.1
LAGR				AMB	AMB	06 36 41.0	
	comp=E,2µm,0.3s						
LAGR				i S	Sn	06 36 54.0	-0.2
LAGR				A	A	06 36 58.0	
	comp=E,1µm,0.4s						
LAGR				A	A	06 36 58.0	
	comp=E,5µm,0.4s						
LAGR	Lagunnoye	1.02	311	i PN	Pn	06 36 41.1	-0.1
LAGR				i S	Sn	06 36 54.1	-0.2
LAGR				pmax	pmax		
	comp=Z,2µm,0.3s						
LAGR				pmax	pmax		
	comp=N,451nm,0.2s						
LAGR				pmax	pmax		
	comp=E,376nm,0.1s						
LAGR				smax	smax		
	comp=N,12nm,0.4s						
GLVR	Golovnino	1.04	290	i P	Pn	06 36 41.0	-0.3
GLVR				AMB	AMB	06 36 41.0	
	comp=N,270nm,0.3s						
GLVR				AMB	AMB	06 36 41.0	
	comp=N,410nm,0.3s						
GLVR				AMB	AMB	06 36 41.0	
	comp=N,1µm,0.3s						
GLVR				i S	Sn	06 36 54.0	-0.6
GLVR				A	A	06 37 03.0	
	comp=N,5µm,0.3s						
GLVR				A	A	06 37 03.0	
	comp=N,4µm,0.3s						
GLVR	Golovnino	1.04	290	i PN	Pn	06 36 41.2	-0.1
GLVR				i S	Sn	06 36 54.6	0.0
GLVR				pmax	pmax		
	comp=Z,1µm,0.3s						
GLVR				pmax	pmax		
	comp=E,406nm,0.2s						
GLVR				pmax	pmax		
	comp=N,272nm,0.2s						
GLVR				smax	smax		
	comp=N,5.0nm,0.2s						
GLVR				smax	smax		
	comp=E,4.0nm,0.3s						
JKHN	Kushirohamanak	1.28	257	P	Pn	06 36 44.5	-0.2
JRA	Rausu	1.38	294	P	Pn	06 36 46.1	+0.1
JNK	Nakash	1.57	278	P	Pn	06 36 48.4	-0.3
JAK	Akkeshi	1.64	257	P	Pn	06 36 48.9	-0.6
KUR	Kuril'sk	1.97	21	i P	Pn	06 36 53.4	-0.8
KUR				AMB	AMB	06 36 56.0	
	comp=E,140nm,0.2s						
KUR				i S	Sn	06 37 16.2	-1.4
KUR				A	A	06 37 21.0	
	comp=E,1µm,0.2s						
KUR				A	A	06 37 21.0	
	comp=E,880nm,0.2s						
KUR	Kuril'sk	1.97	21	d iPN	Pn	06 36 55.0	+0.8
KUR				i S	Sn	06 37 17.1	-0.5
KUR				pmax	pmax		
	comp=Z,81nm,0.1s						
KUR				smax	smax		
	comp=N,942nm,0.2s						
KUR				smax	smax		
	comp=E,826nm,0.2s						
JTKR	Abashiri--Toko	2.22	286	P	Pn	06 36 58.8	+1.3
JAR	Ashorobuto	2.26	269	P	Pn	06 36 58.5	+0.4
JOB	Onbets	2.27	259	P	Pn	06 36 58.5	+0.3
JMP	Maruseppu	2.62	285	P	Pn	06 37 04.4	+1.4
JCH	Churui	2.69	254	P	Pn	06 37 04.1	+0.2
HRK	Horoka	2.72	273	eP	Pn	06 37 06.1	+1.6
ERM	Erimo	3.06	244	eP	Pn	06 37 11.7	+2.6
ERM	Erimo	3.06	244	c ePN	Pn	06 37 11.7	+2.6
ERM				pmax	pmax		
	comp=Z,95nm,0.7s						
ASAJ	Asahikawa	3.17	285	P	Pn	06 37 13.2	+2.6
	comp=Z,6.4nm,0.3s,baz=98,slow=7.9,SNR=47						
ASAJ				S	Sn	06 37 54.6	+7.3
	comp=Z,2.2nm,0.3s,baz=34,slow=17,SNR=1.9						
YSS	Yuzh-Sakhalins	4.59	322	eP	Pn	06 37 31.5	+1.4
YSS				AMB	AMB	06 37 33.5	
	comp=Z,20nm,0.6s						
YSS				eS	Sn	06 38 20.7	-1.5
YSS	Yuzh-Sakhalins	4.59	322	⇑ePN	Pn	06 37 31.7	+1.6
YSS				eS	Sn	06 38 21.8	-0.4
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						

UGL	**Uglegorsk**	6.58	331	eP	Pn	06 37 58.5	+1.1
UGL				AMB	AMB	06 38 01.1	
	comp=Z,60nm,1.0s						
TYV	**Tymovskoe**	8.00	340	eP	Pn	06 38 16.4	-0.5
MJAR	**Matsushiro Arr**	9.54	227	P	Pn	06 38 37.9	-0.1
	comp=Z,0.1nm,0.3s,baz=29,slow=12,SNR=8.1						
MJAR				S	Sn	06 40 19.9	-3.9
	comp=Z,0.0nm,0.3s,baz=312,slow=15,SNR=4.1						
KLR	**Kul'dur**	11.96	304	P	Pn	06 39 13.8	+2.8
	comp=Z,0.1nm,0.3s,baz=89,slow=10,SNR=3.5						
PETK	**Petropavlovsk-**	12.09	33	P	Pn	06 39 16.3	+3.5
	comp=Z,0.6nm,0.3s,baz=210,slow=16,SNR=8.2						
MA2	**Magadan**	16.38	7	P	Pn	06 40 10.2	+0.2
	comp=Z,0.5nm,0.3s,baz=340,slow=2.1,SNR=4.0						
SEY	**Seymchan**	19.84	7	eP	P	06 40 50.1	-0.2
SEY	**Seymchan**	19.84	7	iP	P	06 40 50.1	-0.2
SEY	**Seymchan**	19.84	7	P	P	06 40 48.2	-2.0
	comp=Z,0.1nm,0.3s,baz=186,slow=9.6,SNR=7.7						
ULN	**Ulaanbaatar**	27.97	293	eP	P	06 42 08.9	-1.1
ULN	**Ulaanbaatar**	27.97	293	ceP	P	06 42 08.9	-1.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	28.42	293	P	P	06 42 13.7	-0.3
	comp=Z,1.9nm,0.7s,baz=88,slow=8.3,SNR=16						
SONM				PcP	PcP	06 45 23.8	-1.5
	comp=Z,0.1nm,0.4s,baz=90,slow=1.4,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	28.97	138	T	T	07 12 58.3	
	baz=330,slow=76,SNR=633						
H11N1	**WAKE ISLAND Hy**	28.98	138	T	T	07 12 59.2	
	baz=330,slow=76,SNR=377						
H11N3	**WAKE ISLAND Hy**	28.99	138	T	T	07 12 59.6	
	baz=330,slow=76,SNR=379						
H11S1	**WAKE ISLAND Hy**	29.93	140	T	T	07 14 13.1	
	baz=331,slow=76,SNR=1438						
H11S3	**WAKE ISLAND Hy**	29.93	140	T	T	07 14 11.3	
	baz=331,slow=76,SNR=1108						
H11S2	**WAKE ISLAND Hy**	29.94	140	T	T	07 14 09.9	
	baz=331,slow=76,SNR=976						
DGZ	**Jazzator, Alta**	40.42	300	iP	P	06 43 57.3	-0.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.7s						
ZALV	**Zalesovo Beam**	41.05	307	PcP	PcP	06 46 01.0	-0.5
	comp=Z,0.7nm,0.6s,baz=74,slow=6.2,SNR=3.5						
COLA	**College**	41.48	36	iP	P	06 44 07.5	+1.7
COLA				pmax	pmax		
	comp=Z,14nm,2.3s						
ILAR	**Eielson Array**	41.90	36	P	P	06 44 09.6	+0.3
	comp=Z,1.0nm,0.7s,baz=279,slow=8.8,SNR=19						
MKAR	**Makanchi Array**	44.57	298	P	P	06 44 30.9	-0.1
	comp=Z,2.3nm,0.5s,baz=82,slow=9.0,SNR=33						
MKAR				PcP	PcP	06 46 12.2	-1.2
	comp=Z,0.1nm,0.5s,baz=79,slow=3.1,SNR=2.7						
KURK	**Kurchatov**	45.56	304	eP	P	06 44 37.9	-0.9
KURK	**Kurchatov**	45.56	304	iP	P	06 44 37.9	-0.9
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	45.64	304	P	P	06 44 38.9	-0.6
	comp=Z,1.2nm,0.4s,baz=74,slow=7.9,SNR=8.2						
INK	**Inuvik**	46.81	30	P	P	06 44 48.6	+0.3
	comp=Z,1.4nm,0.3s,baz=296,slow=9.3,SNR=46						
CMAR	**Chiang Mai Arr**	47.23	254	eP	P	06 44 51.5	-0.8
CMAR	**Chiang Mai Arr**	47.23	254	ceP	P	06 44 51.5	-0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	**Borovoye Array**	49.57	310	P	P	06 45 09.0	-0.9
BVAR	**Borovoye Array**	49.57	310	P	P	06 45 09.0	-0.9
	comp=Z,0.3nm,0.5s,baz=85,slow=9.3,SNR=2.6						
AAK	**Ala-Archa**	51.32	296	P	P	06 45 23.6	+0.1
	comp=Z,1.1nm,0.4s,baz=138,slow=5.6,SNR=5.0						
YKA	**Yellowknife Ar**	56.21	34	P	P	06 45 58.9	+0.3
	comp=Z,0.8nm,0.7s,baz=300,slow=6.7,SNR=14						
AKTO	**Aktyubinsk**	57.61	311	P	P	06 46 08.1	-0.7
	comp=Z,0.7nm,0.5s,baz=34,slow=11,SNR=3.3						
ARCES	**ARCESS Array B**	59.51	340	P	P	06 46 20.7	-1.0
	comp=Z,1.2nm,0.7s,baz=56,slow=6.2,SNR=13						
WRA	**Warramunga Arr**	64.07	193	iP	P	06 46 54.2	+1.3
WRA	**Warramunga Arr**	64.07	193	P	P	06 46 53.4	+0.5
	comp=Z,0.4nm,0.5s,baz=11,slow=6.8,SNR=6.6						
FINES	**FINESS Array B**	65.10	333	P	P	06 46 58.6	-0.6
	comp=Z,2.5nm,0.6s,baz=36,slow=7.7,SNR=17						
FFC	**Flin Flon**	66.11	36	iP	P	06 47 03.5	-2.3
ASAR	**Alice Springs**	67.79	193	P	P	06 47 17.4	+0.6
	comp=Z,0.4nm,0.5s,baz=16,slow=6.6,SNR=4.2						
NVAR	**Mina Array Bea**	67.94	58	P	P	06 47 19.3	+1.2
	comp=Z,0.2nm,0.5s,baz=300,slow=7.2,SNR=2.8						
NB2	**NORSAR Subarra**	69.86	339	P	P	06 47 28.7	-0.6
	comp=Z,2.5nm,0.8s,baz=32,slow=6.5						
NOA	**NORSAR Array B**	69.86	339	eP	P	06 47 28.9	-0.4
NOA	**NORSAR Array B**	69.86	339	P	P	06 47 28.8	-0.6
	comp=Z,2.6nm,0.7s,baz=33,slow=6.1,SNR=14						
KBZ	**Khabaz**	69.88	311	P	P	06 47 29.6	-0.1
	comp=Z,1.1nm,0.6s,baz=94,slow=4.2,SNR=4.3						
AKASG	**Malin Array Be**	71.74	324	P	P	06 47 40.1	-0.8
	comp=Z,0.8nm,0.4s,baz=41,slow=6.0,SNR=3.9						
BORG	**Borgarnes**	71.80	355	iP	P	06 47 43.0	+2.0
BURAR	**Bucovina Array**	75.80	324	⇓iP	P	06 48 05.3	+0.4
BURAR	**Bucovina Array**	75.80	324	⇓P	P	06 48 05.3	+0.4
BIZ	**Bicaz**	75.93	323	⇑iP	P	06 48 05.3	-0.2
TESR	**Tescani**	76.01	322	⇓iP	P	06 48 05.1	-0.9
TRPA	**Tarpa**	76.53	325	⇑iP	P	06 48 10.0	+1.1
MORC	**Moravsky Berou**	77.19	329	⇓iP	P	06 48 13.4	+0.8
MORC	**Moravsky Berou**	77.19	329	⇓P	P	06 48 13.4	+0.8
CLL	**Collm**	77.53	332	⇓iP	P	06 48 14.4	0.0
	comp=Z,4.0nm,0.8s						
CLL				epP	pP	06 48 26.0	-0.7
CLL	**Collm**	77.53	332	eP	P	06 48 14.4	0.0
CLL	**Collm**	77.53	332	⇓iP	P	06 48 14.4	0.0
CLL				e*PP	pP	06 48 26.0	-0.7
BRG	**Berggiesshubel**	77.58	332	eP	P	06 48 15.0	+0.3
	comp=Z,1.5nm,0.8s						
BRG	**Berggiesshubel**	77.58	332	eP	P	06 48 15.0	+0.3
BRTR	**Keskin Array B**	77.64	313	P	P	06 48 15.8	+0.4
	comp=Z,0.3nm,0.5s,baz=62,slow=7.5,SNR=2.5						
SCHQ	**Schefferville**	78.02	19	P	P	06 48 16.9	-0.2
	comp=Z,0.8nm,0.5s,baz=9.5,slow=12,SNR=3.9						
GERES	**GERESS Array B**	79.37	331	P	P	06 48 24.4	-0.3
	comp=Z,0.3nm,0.4s,baz=46,slow=5.8,SNR=5.0						
TXAR	**Lajitas Array**	83.02	56	P	P	06 48 45.4	+0.9
	comp=Z,0.3nm,0.9s,baz=287,slow=3.3,SNR=6.3						
ESDC	**Sonseca Array**	93.20	338	P	P	06 49 32.6	-0.7
	comp=Z,0.6nm,0.7s,baz=39,slow=5.3,SNR=4.3						
BDFB	**Brasilia**	149.56	29	PKPbc	PKPbc	06 56 08.9	+0.3
	comp=Z,0.9nm,0.5s,baz=226,slow=8.3,SNR=2.6						

MEX 17 07:22:38.8±0.6, 16°.48N × 98°.09W, h31^{km}±6^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.10	202	iP	Pb	07 22 42.8	-1.5
PNIG				iS	Sb	07 22 46.8	-1.3
VHO	**Vista Hermosa**	1.42	66	iP	Pn	07 23 01.5	-1.2
VHO				eS	Sn	07 23 18.0	-2.6
PLIG	**Platanillo**	2.33	325	eS	Sb	07 23 47.7	-0.9

ISCJB ***17*** *07:27:22.9±0.5, 67°.65N±0°.06 × 142°.7E±0°.2, h10^{km}, mb3.5/11, MS3.2/2, Error ellipse: s-maj=9.1km s-min=7.6km az=138.4*

MOS ***17*** *07:27:22.5±1.2, 67°.60N × 142°.90E, h10^{km}, mb4.4/1, Error ellipse: s-maj=32.2km s-min=10.8km az=89.6*

IDC ***17*** *07:27:23.4±0.7, 67°.64N × 142°.91E, h0^{km}, mb3.6/10, mb1 3.9/14, mb1mx3.6/49, mbtmp3.6/14, ML3.7/4, MS3.1/3, Ms1 3.2/3, ms1mx2.6/56, Error ellipse: s-maj=17.0km s-min=14.6km az=42.0*

YARS ***17*** *07:27:24.6±0.2, 67°.58N±0°.01 × 142°.94E±0°.03, h12^{km}*

ISC 17 07:27:24.7±0.6, 67°.60N±0°.07 × 142°.71E±0°.07, h10^{km}, n21, σ1^{s}.56/21, mb3.7/11, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	1.15	170	P	Pb	07 27 44.8	-1.8
MOMR						07 27 59.8	
MOMR				pmax	pmax		
	comp=Z,477nm,0.5s						
MOMR				smax	smax		
	comp=N,4μm,0.6s						
ATKR	**Artyk**	3.57	163	P	Pb	07 28 28.3	+0.4
SEY	**Seymchan**	6.19	135	Pn	Pn	07 28 55.3	-0.6
	comp=N,0.3nm,0.3s,baz=323,slow=11,SNR=9.6						
SEY				Sn	Sn	07 30 10.8	+4.1
	comp=N,0.9nm,0.3s,baz=220,slow=7.9,SNR=2.6						
SEY				Lg	Lg	07 30 39.6	
	comp=N,3.0nm,0.3s,baz=204,slow=20,SNR=8.8						
YAK	**Yakutsk**	7.87	231	eP	Pn	07 29 27.8	+8.9
YAK				e		07 30 56.8	
YAK				pmax	pmax		
	comp=Z,44nm,0.7s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.3s						
YAK				pmax	pmax		
	comp=N,20nm,0.6s						
YAK				smax	smax		
	comp=N,30nm,0.6s						
YAK				smax	smax		
	comp=E,49nm,0.7s						
USMR	**Ust'-Maya**	8.04	210	eP	Pn	07 29 23.4	+2.1
USMR				eS	Sn	07 30 50.4	-1.8
USMR				smax	smax		
	comp=N,63nm,1.4s						
MA2	**Magadan**	8.80	152	Pn	Pn	07 29 29.8	-2.0
	comp=N,0.3nm,0.3s,baz=139,slow=19,SNR=2.1						
MA2				Lg	Lg	07 32 03.9	
	comp=N,0.5nm,0.3s,baz=57,slow=15,SNR=4.6						
BOD	**Bodaibo**	16.23	247	eP	Pn	07 31 10.9	-1.5
BOD				e		07 34 04.3	
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KLR	**Kul'dur**	19.23	202	P	Pn	07 31 51.2	+1.6
	comp=Z,0.1nm,0.3s,baz=12,slow=11,SNR=4.3						
KLR				LR	LR	07 39 54.2	
	comp=Z,44nm,18.1s,baz=67,slow=39						
NRIK	**Noril'sk**	19.75	300	P	P	07 31 54.6	+0.4
	comp=Z,0.3nm,0.3s,baz=69,slow=18,SNR=3.3						
ZAK	**Zakamensk**	25.96	248	eP	P	07 32 56.4	-0.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	27.05	241	P	P	07 33 08.9	+2.0
	comp=Z,0.7nm,0.9s,baz=35,slow=8.8,SNR=3.5						
ILAR	**Eielson Array**	27.18	62	P	P	07 33 07.6	-0.2
	comp=Z,2.3nm,0.9s,baz=296,slow=8.2,SNR=19						
KSRS	**Korea Array**	31.32	203	LR	LR	07 46 15.4	
	comp=Z,19nm,18.9s,baz=40,slow=36						
YKA	**Yellowknife Ar**	38.84	46	P	P	07 34 48.5	-0.7
	comp=Z,0.6nm,0.7s,baz=322,slow=8.0,SNR=14						
FINES	**FINESS Array B**	43.33	321	P	P	07 35 26.9	+0.7
	comp=Z,1.4nm,0.9s,baz=8.9,slow=9.8,SNR=4.2						
AKASG	**Malin Array Be**	52.00	312	P	P	07 36 33.5	-0.1
	comp=Z,1.0nm,0.7s,baz=28,slow=8.3,SNR=4.4						
PDAR	**Pinedale Array**	57.39	56	P	P	07 37 13.4	+0.4
	comp=Z,0.6nm,0.7s,baz=347,slow=2.8,SNR=6.0						
PDAR				LR	LR	08 04 27.4	
	comp=Z,40nm,18.8s,baz=276,slow=39						
NVAR	**Mina Array Bea**	58.35	66	P	P	07 37 20.0	+0.1
	comp=Z,0.5nm,0.7s,baz=312,slow=7.2,SNR=4.7						
ESDC	**Sonseca Array**	70.12	333	P	P	07 38 37.0	+0.2
	comp=Z,0.2nm,0.4s,baz=345,slow=7.0,SNR=4.1						
TXAR	**Lajitas Array**	71.58	57	P	P	07 38 45.3	-0.6
	comp=Z,0.2nm,0.8s,baz=2.3,slow=4.5,SNR=2.5						
WRA	**Warramunga Arr**	87.50	188	P	P	07 40 11.5	-0.6
	comp=Z,0.2nm,0.4s,baz=7.8,slow=6.7,SNR=2.9						

NNC 17 07:31:29.7±0.3, 50°.01N × 78°.69E, h0^{km}, mb3.7, mpv3.4, 20C-5D, Error ellipse: s-maj=4.1km s-min=1.7km az=72.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	0.58	349	⇑P	Pg	07 31 40.9	+0.1
KUR07				⇑S	Sg	07 31 49.8	+1.4
KUR06	**Kurchatov Arra**	0.60	350	⇑P	Pg	07 31 41.3	+0.1
KUR06				⇑S	Sg	07 31 50.2	+1.2
KUR14	**Kurchatov Arra**	0.61	354	⇑P	Pg	07 31 41.3	0.0
KUR14				⇑S	Sg	07 31 49.9	+0.7
KUR15	**Kurchatov Arra**	0.61	352	⇑P	Pg	07 31 41.5	0.0
KUR15				⇑S	Sg	07 31 50.6	+1.2
KURBB	**Kurchatov Arra**	0.62	351	⇑P	Pg	07 31 41.6	0.0
	37nm,0.3s						
KURBB				⇑S	Sg	07 31 51.1	+1.5
	124nm,0.6s						
KUR16	**Kurchatov Arra**	0.63	349	⇑P	Pg	07 31 41.7	0.0
KUR16				⇓S	Sg	07 31 50.1	+0.3
KUR17	**Kurchatov Arra**	0.64	347	⇑P	Pg	07 31 41.8	-0.1
KUR17				⇑S	Sg	07 31 50.1	-0.1
KUR05	**Kurchatov Arra**	0.64	351	⇑P	Pg	07 31 41.9	0.0
KUR05				⇑S	Sg	07 31 51.0	+0.7
KUR04	**Kurchatov Arra**	0.66	352	⇑P	Pg	07 31 42.3	0.0
KUR04				⇓S	Sg	07 31 51.4	+0.6
SEM	**Semipalatinsk**	1.08	68	P	Pg	07 31 50.0	-0.3
	11nm,0.1s						
SEM				S	Sg	07 32 04.6	+0.3
	111nm,0.8s						
MAKZ	**Makanchi**	3.88	144	⇑Pn	Pn	07 32 32.3	+1.6
	0.2nm,0.4s						
MAKZ				⇑Pg	Pb	07 32 39.2	+0.2
	2.8nm,0.5s						
MAKZ				⇓Lg	Lg	07 33 35.6	
	12nm,0.5s						
MK31	**Makanchi Array**	4.02	142	Pn	Pn	07 32 33.8	+1.3
	0.1nm,0.1s,baz=307,slow=67,SNR=37						
MK31				Pg	Pb	07 32 43.4	+2.1
	3.1nm,0.5s,baz=342,slow=15,SNR=26						
MK31				Lg	Lg	07 33 37.8	
	7.2nm,0.4s,baz=330,slow=27,SNR=16						
KAPS	**Kapalarasan**	4.75	174	Pg	Pb	07 32 56.3	+2.5
	2.0nm,0.6s						
KAPS				Lg	Lg	07 33 58.8	
	18nm,0.5s						
ZSN	**Zaisan**	4.82	120	Pg	Pb	07 32 54.6	-0.5
	1.3nm,0.3s						
ZSN				Lg	Lg	07 33 55.7	
	7.3nm,0.7s						
ZAA0	**Zalesovo Array**	5.46	42	⇑Pn	Pn	07 32 54.0	+1.7
	1.9nm,0.5s						
ZAA0				⇓Sn	Sn	07 33 57.2	+1.3
	0.6nm,0.3s						
ZAA0				⇑Lg	Lg	07 34 22.2	
	3.4nm,0.9s						
DJR	**Jarkent**	5.73	172	Pg	Pb	07 33 14.0	+3.4
	1.4nm,0.6s						
DJR				Lg	Lg	07 34 28.9	
	3.5nm,0.6s						
ARXS	**Arharly**	5.83	186	Pg	Pb	07 33 16.1	+3.9
	1.5nm,0.4s						
ARXS				Lg	Lg	07 34 31.4	
	24nm,0.7s						
BTLS	**Baital**	5.88	214	Pg	Pb	07 33 17.3	+4.2
	0.9nm,0.3s						
BTLS				Lg	Lg	07 34 34.6	
	3.0nm,0.7s						
CHKK	**Chushkaly**	6.27	191	Pg	Pb	07 33 24.2	+4.5
	1.1nm,0.1s						
CHKK				Lg	Lg	07 34 45.9	
	16nm,0.4s						
KUU	**Kurty**	6.33	196	Pg	Pb	07 33 25.4	+4.7
	1.0nm,0.1s						
KUU				Lg	Lg	07 34 48.2	
	10nm,0.8s						
KTBS	**Karatobe**	6.45	193	Pg	Pg	07 33 30.5	-2.8
	1.0nm,0.4s						
KTBS				Lg	Lg	07 34 57.5	
	10nm,0.5s						
KURS	**Kuram**	6.54	183	Pg	Pg	07 33 31.7	-3.2
	1.8nm,0.5s						
KURS				Lg	Lg	07 34 59.2	
	4.6nm,0.8s						
PDGK	**Podgornoye**	6.71	175	⇓Lg	Lg	07 35 03.9	
	11nm,0.6s						
DGS	**Degeres**	7.06	198	Pg	Pb	07 33 37.5	+4.2
	3.9nm,0.3s						
DGS				Lg	Lg	07 35 09.9	
	16nm,0.4s						
IZV	**Izvestkoviy**	7.12	192	Pg	Pg	07 33 40.3	-5.8
	2.8nm,0.7s						
IZV				Lg	Lg	07 35 14.3	
	5.6nm,0.4s						
KST	**Kastek**	7.22	196	Pg	Pb	07 33 40.6	+4.6
	7.1nm,1.8s						
KST				Lg	Lg	07 35 14.4	
	5.7nm,0.5s						

IDC 17 07:45:02.3±25.0, 26°.09S × 71°.71E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.4/50, mbtmp3.6/3, Error ellipse: s-maj=811.4km s-min=43.3km az=49.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	56.00	102	P	P	07 54 42.9	-0.2
	0.5nm,1.0s,baz=254,slow=6.7,SNR=4.2						
WRA	**Warramunga Arr**	57.50	98	P	P	07 54 53.9	+0.1
	0.7nm,1.0s,baz=250,slow=7.4,SNR=3.7						
MKAR	**Makanchi Array**	73.17	8	P	P	07 56 34.7	0.0
	0.4nm,0.8s,baz=190,slow=7.3,SNR=4.5						

DDA ***17*** *07:56:47.6, 38°.67N × 38°.14E, h7^{km}±4^{km}, ML2.6*

ISCJB ***17*** *07:56:48.8±0.6, 38°.67N±0°.02 × 38°.15E±0°.04, h1^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=3.8km az=25.8*

ISK ***17*** *07:56:48.3, 38°.68N × 38°.16E, h10^{km}, ML2.1/2*

ISC 17 07:56:48.6±1.0, 38°.68N±0°.03 × 38°.14E±0°.03, h13^{km}±9^{km}, n17, σ1^{s}.00/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	0.25	325	iP	Pg	07 56 53.1	-0.9
HEKM				iS	Sb	07 56 58.5	-1.0
HEKM				IAML_P			
	comp=Z,3μm,0.1s						
AKCD	**Akcadag**	0.42	204	iP	Pb	07 56 56.9	-1.0
AKCD				iS	Sb	07 57 04.0	-0.2
AKCD				IAML_P			
	comp=Z,4μm,0.1s						
DARE	**Darende-Malaty**	0.53	259	PG	Pb	07 56 59.2	-0.6
DARE				SG	Sb	07 57 07.3	-0.1
KEMA	**Kemaliye**	0.65	25	iP	Pg	07 57 00.6	-0.8
KEMA				iS	Sb	07 57 11.1	+0.1
CUGUR	**Gurin_SVAS**	0.68	274	iP	Pn	07 57 05.8	+1.6
ELZG	**Elazig**	0.68	105	iP	Pb	07 57 01.4	-1.2
ELZG				iS	Sb	07 57 11.6	-0.4
ELZG				IAML_P			
	comp=Z,2μm,0.1s						
CUKAN	**kangal_SIVAS**	0.83	321	iP	Pg	07 57 03.4	-1.3
ELBS	**KAHRAMANMARAS**	0.86	246	iP	Pg	07 57 04.0	-1.3
CUZAR	**Zara_SIVAS**	1.25	347	iP	Pg	07 57 12.2	-0.4
URFA	**Urfa**	1.34	156	PN	Pg	07 57 14.3	-0.1
GZT	**Gaziantep**	1.39	199	iP	Pg	07 57 16.4	+1.0
GZT				iS	Sg	07 57 34.5	+1.0
GZT				IAML_P			
	comp=Z,347nm,0.2s						
KMRS	**Kahramanmaras**	1.52	220	PN	Pg	07 57 16.7	-1.2
KMRS				SN	Sg	07 57 36.8	-0.8
SVSK	**Karacayir**	1.52	325	PN	Pg	07 57 16.7	-1.2
ERZN	**Erzincan**	1.53	53	PN	Pb	07 57 15.8	-1.1
SUSE	**Susehri**	1.53	2	iP	Pg	07 57 17.6	-0.5
SUSE				iS	Sg	07 57 39.7	+1.7
SUSE				IAML_P			
	comp=Z,190nm,0.3s						
CUSAR	**Sarkisla-SIVAS**	1.65	297	iP	Pb	07 57 18.7	-0.4
KELT	**Kelkit**	1.71	30	iP	Pg	07 57 20.9	-0.4
KELT				iS	Sg	07 57 44.0	+0.4
KELT				IAML_P			
	comp=Z,225nm,0.2s						

DJA ***17*** *07:57:50.1±0.9, 5°N±5° × 9°5E±°, h10^{km}, M4.2/8, mb4.3/4, MLv4.2/8*

IDC ***17*** *07:57:51.5±2.2, 4°.15N × 94°.94E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.5/50, mbtmp3.6/6, ML3.9/2, MS3.0/2, Ms1 3.1/2, ms1mx2.5/47, Error ellipse: s-maj=65.2km s-min=21.7km az=57.0*

ISCJB ***17*** *07:57:53.1±1.3, 4°.4N±0°.2 × 95°.3E±0°.2, h10^{km}, mb3.4/4, MS3.2/1, Error ellipse: s-maj=32.8km s-min=10.7km az=39.7*

ISC 17 07:57:54.2±1.1, 4°.43N±0°.10 × 95°.3E±0°.1, h10^{km}, n16, σ1^{s}.82/13, mb3.5/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	1.84	65	P	Pn	07 58 16.9	-9.0
SNSI	**Sinabang, Aceh**	2.27	152	P	Pg	07 58 38.3	+0.6
KCSI	**Kotacane, Aceh**	2.65	110	P	Pn	07 58 38.4	+1.4
KCSI				S	Sn	07 59 08.0	-1.2
TSI	**Tuntungan**	3.41	106	P	Sn	07 59 31.6	+3.6
GSI	**Gunungsitoli**	3.86	143	P	Pb	07 59 00.8	-1.7
PSI	**Prapat**	3.98	114	Pn	Pn	07 58 56.5	+1.0
	4.1nm,0.3s,baz=360,slow=14,SNR=19						
PSI				Sn	Sb	07 59 50.9	-2.1
	9.7nm,0.3s,baz=0.0,slow=19,SNR=5.9						
MNSI	**Mandailing Nat**	5.62	130	P	Pn	07 59 19.5	+1.7
CMAR	**Chiang Mai Arr**	14.39	14	Pn	P	08 01 23.6	-1.6
	0.3nm,0.3s,baz=200,slow=12,SNR=3.6						
CMAR				LR	LR	08 06 38.2	
	comp=Z,31nm,18.5s,baz=200,slow=36						
H08S2	**Diego Garcia H**	25.70	242	T	T	08 30 40.7	
	baz=62,slow=76,SNR=5.9						
H08S3	**Diego Garcia H**	25.70	242	T	T	08 30 40.5	
	baz=62,slow=76,SNR=9.2						
H08S1	**Diego Carcia H**	25.72	242	T	T	08 30 34.4	
	baz=62,slow=76,SNR=3.0						
AAK	**Ala-Archa**	42.30	337	LR	LR	08 26 11.8	
	comp=Z,28nm,19.2s,baz=200,slow=40						
MKAR	**Makanchi Array**	43.67	347	P	P	08 05 59.4	+0.1
	0.4nm,0.9s,baz=167,slow=8.9,SNR=2.9						
SONM	**Songino Array**	44.28	11	P	P	08 06 05.3	+1.1
	0.5nm,0.8s,baz=191,slow=7.8,SNR=4.4						
WRA	**Warramunga Arr**	45.39	124	P	P	08 06 12.4	-0.9
	0.3nm,0.5s,baz=302,slow=9.3,SNR=9.0						
ASAR	**Alice Springs**	46.88	128	P	P	08 06 25.4	+0.3
	0.8nm,0.5s,baz=299,slow=7.8,SNR=19						

IDC ***17*** *07:59:39.3±1.2, 1°.09S × 126°.67E, h0^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.4/49, mbtmp3.5/6, ML3.3/1, Error ellipse: s-maj=35.9km s-min=19.7km az=62.0*

ISCJB ***17*** *07:59:41.9±1.0, 1°.1S±0°.1 × 126°.60E±0°.08, h33^{km}, mb3.5/4, Error ellipse: s-maj=17.3km s-min=12.2km az=1.2*

ISC 17 07:59:44.3±1.1, 1°.2S±0°.1 × 126°.6E±0°.1, h35^{km}, n6, σ0^{s}.97/7, mb3.5/4, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	4.66	87	Pn	Pn	08 00 51.2	-1.1
	1.4nm,0.3s,baz=310,slow=16,SNR=4.9						
SIJI				Sn	Sn	08 01 46.3	+1.1
	baz=221,slow=19,SNR=2.5						
WRA	**Warramunga Arr**	20.15	158	P	P	08 04 14.9	-0.7
	0.8nm,0.7s,baz=341,slow=12,SNR=8.9						
ASAR	**Alice Springs**	23.48	163	P	P	08 04 50.6	-0.4
	0.5nm,0.5s,baz=344,slow=7.8,SNR=13						
STKA	**Stephens Creek**	33.68	157	P	P	08 06 22.9	+0.9
	1.1nm,0.7s,baz=332,slow=9.5,SNR=3.5						
SONM	**Songino Array**	51.87	343	P	P	08 08 49.4	+0.1
	0.3nm,0.6s,baz=148,slow=6.5,SNR=2.7						
MKAR	**Makanchi Array**	61.51	327	P	P	08 09 57.8	+0.1
	0.2nm,0.4s,baz=120,slow=8.5,SNR=4.1						

IDC 17 08:06:08.1±1.4, 2°.85N × 127°.37E, h0^{km}, mb3.5/7, mb1 3.6/7, mb1mx3.4/59, mbtmp3.5/7, Error ellipse: s-maj=99.8km s-min=17.3km az=72.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	20.89	185	P	P	08 10 52.0	-0.1
	0.7nm,0.5s,baz=0.0,slow=9.1,SNR=4.1						
WRA	**Warramunga Arr**	23.66	163	P	P	08 11 21.0	-0.5
	0.8nm,0.5s,baz=344,slow=10,SNR=14						
ASAR	**Alice Springs**	27.12	167	P	P	08 11 53.3	+0.3
	0.2nm,0.4s,baz=340,slow=6.7,SNR=5.3						
SONM	**Songino Array**	48.33	341	P	P	08 14 52.6	+1.0
	0.3nm,0.5s,baz=153,slow=6.9,SNR=3.5						
MKAR	**Makanchi Array**	58.64	325	P	P	08 16 07.2	-0.1
	0.2nm,0.4s,baz=122,slow=6.8,SNR=4.3						
KURBB	**Kurchatov Arra**	62.82	327	P	P	08 16 35.4	-0.1
	0.3nm,0.4s,baz=130,slow=5.8,SNR=5.8						
BVAR	**Borovoye Array**	68.40	327	P	P	08 17 11.3	-0.3
	0.5nm,0.6s,baz=126,slow=7.3,SNR=3.7						

IDC 17 08:10:37.5±6.3, 22°.33N × 143°.57E, h342^{km}±62^{km}, mb3.1/9, mb1 3.1/9, mb1mx2.9/67, mbtmp3.8/9, Error ellipse: s-maj=35.8km s-min=23.2km az=80.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	20.24	322	P	P	08 14 47.9	-0.3
	2.4nm,0.8s,baz=148,slow=8.8,SNR=6.4						
KLR	**Kul'dur**	28.44	344	P	P	08 16 01.8	+0.1
	0.8nm,0.4s,baz=139,slow=8.6,SNR=5.2						

SONM	Songino Array 0.3nm,0.4s,baz=127,slow=7.8,SNR=6.1	39.09	320	P	P	08 17 32.5	-0.3
WRA	Warramunga Arr 0.2nm,0.7s,baz=12,slow=8.7,SNR=1.8	42.97	193	P	P	08 18 04.1	-0.2
MKAR	Makanchi Array 0.6nm,0.5s,baz=95,slow=8.3,SNR=8.8	54.54	312	P	P	08 19 31.1	-0.1
MKAR	0.2nm,0.5s,baz=84,slow=5.4,SNR=6.1			PcP	PcP	08 20 29.3	-0.3
KURBB	Kurchatov Arra 2.1nm,0.6s,baz=94,slow=7.7,SNR=16	57.32	317	P	P	08 19 50.5	0.0
BVAR	Borovoye Array 1.2nm,0.4s,baz=93,slow=8.4,SNR=12	62.43	319	P	P	08 20 25.4	+0.3
YKA	Yellowknife Ar 0.3nm,0.6s,baz=290,slow=5.7,SNR=6.4	75.73	28	P	P	08 21 46.0	+0.1
FINES	FINESS Array B 0.7nm,0.6s,baz=46,slow=4.0,SNR=3.6	82.77	335	P	P	08 22 22.7	-0.9

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*NNC **17** 08:11:47.3±9.1, 42°.40N×83°.02E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=70.0km s-min=33.4km az=149.0*

SOME 17 08:11:46.7, 42°.43N×82°.95E, h0^{km}, 3C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen 4.0nm,0.1s	2.16	299	eP	Pg	08 12 28.0	-0.1
KTMS	10nm,0.2s			eS	Sg	08 12 58.0	+1.9
PDGK	Podgornoye 1.7nm,0.7s	2.70	291	⇑Pg	Pg	08 12 37.6	-0.7
PDGK	5.4nm,0.6s			⇓Lg	Lg	08 13 13.8	
UZB	Uzynbulak 1.0nm,0.3s	2.98	285	eP	Pb	08 12 42.0	+1.2
UZB	2.3nm,0.2s			eS	Sg	08 13 21.7	-0.6
DJR	Jarkent 0.4nm,0.1s	2.98	311	eP	Pb	08 12 41.3	+0.5
DJR	2.3nm,0.7s			eS	Sg	08 13 20.3	-2.2
SATY	Saty 3.2nm,0.2s	3.41	282	eP	Pg	08 12 50.3	-1.7
SATY	3.9nm,0.3s			eS	Sg	08 13 35.9	-0.2
KAPS	Kapalarasan 0.4nm,0.2s	3.86	319	eP	Pb	08 12 56.2	+0.6
KAPS	1.1nm,0.3s			eS	Sb	08 13 46.3	+3.4
MK31	Makanchi Array 0.3nm,0.4s,baz=166,slow=16,SNR=6.4	4.39	354	Pg	Pg	08 13 09.3	-1.4
MK31	2.7nm,0.7s,baz=173,slow=25			⇑Lg	Lg	08 14 08.8	
MAKZ	Makanchi 1.2nm,0.9s	4.43	351	⇑Lg	Lg	08 14 07.6	

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*IDC **17** 08:18:49.2±0.8, 41°.30N×71°.69E, h0^{km}, mb3.5/10, mb1 3.7/17, mb1mx3.5/55, mbtmp3.5/17, ML3.3/7, Error ellipse: s-maj=14.4km s-min=9.4km az=159.0*
*KRNET **17** 08:18:51.6±0.1, 41°.41N×71°.83E, h14^{km}, mb3.9*
*MOS **17** 08:18:51.0±2.1, 41°.41N×71°.58E, h14^{km}, mb4.2/3, Error ellipse: s-maj=11.2km s-min=7.4km az=85.1*
*SOME **17** 08:18:52.1, 41°.38N×71°.80E, h10^{km}*
*NNC **17** 08:18:52.3±1.9, 41°.45N×71°.74E, h9^{km}±16^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=11.5km s-min=9.8km az=84.0*
ISC 17 08:18:50.9±1.0**, 41°.38N**±0°.02×**71°.89E**±0°.02**, h13**^{km}±7^{km}**, n118, σ1^{s}.94**/172**, mb3.6**/10**, 42C-29D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	Arkit baz=17	0.42	7	⇑iP	Pg	08 18 59.6	+0.2
ARK	baz=17			⇑iS	Sg	08 19 05.4	+0.3
ARSB	Arslanbob baz=95	0.82	93	⇓iP	Pn	08 19 08.2	-0.2
ARSB	baz=95			⇓iS	Sn	08 19 20.6	0.0
MNAS	Manas 21nm,0.4s	1.20	22	⇓P	Pb	08 19 13.6	0.0
MNAS	412nm,0.6s			⇓S	Sn	08 19 30.8	+0.9
MNAS	Manas 12nm,0.1s	1.20	22	P	Pg	08 19 14.2	+0.2
MNAS	269nm,0.4s			S	Sn	08 19 30.7	+0.8
MNAS	Manas	1.20	22	PG	Pb	08 19 13.6	0.0
MNAS				S	Sn	08 19 30.8	+0.9
MNAS	comp=Z,21nm,0.4s			pmax	pmax		
MNAS	comp=N,412nm,0.6s			smax	smax		
MNAS	Manas baz=25	1.20	22	⇑iP	Pg	08 19 14.0	0.0
MNAS	baz=25			⇑iS	Sn	08 19 31.1	+1.2
AML	Almayashu SNR=230	1.55	60	P	Pg	08 19 21.2	+0.5
AML	Almayashu baz=62	1.55	60	⇓iP	Pg	08 19 21.1	+0.5
AML	baz=62			⇓iS	Sg	08 19 42.8	+2.0
BTK	Batken baz=10.0	1.55	212	⇑iP	Pg	08 19 20.9	+0.3
BTK	baz=10.0			⇑iS	Sg	08 19 42.5	+1.7
DZA	Taraz comp=N,328nm,0.5s	1.57	345	P	Pg	08 19 20.4	-0.6
DZA	comp=N,2µm,0.2s			S	Sg	08 19 41.3	-0.2
DZA	Taraz comp=N,76nm,0.1s	1.57	345	eP	Pg	08 19 20.4	-0.6
DZA	comp=N,2µm,0.2s			eS	Sg	08 19 41.3	-0.2
IUG	Iuzhnay comp=N,238nm,0.5s	1.59	300	eP	Pn	08 19 18.5	-0.4
IUG	comp=N,6µm,0.4s			eS	Sn	08 19 37.3	-2.1
MRKS	Merke comp=N,145nm,0.4s	1.69	36	P	Pg	08 19 25.3	+1.9
MRKS	comp=N,976nm,0.3s			S	Sg	08 19 49.2	+3.8
MRKS	Merke comp=N,145nm,0.4s	1.69	36	eP	Pg	08 19 25.3	+1.9
MRKS	comp=N,991nm,0.3s			eS	Sg	08 19 49.2	+3.8
SFK	Sufi-Kurgan comp=N,41nm,0.4s	1.83	137	⇓Pn	Pg	08 19 26.6	+0.6
SFK	comp=N,166nm,0.3s			⇑Lg	Lg	08 19 52.6	
SFK	Sufi-Kurgan comp=N,34nm,0.1s	1.83	137	Pg	Pg	08 19 27.4	+1.4
SFK	comp=N,525nm,0.2s			Lg	Lg	08 19 52.6	
SFK	Sufi-Kurgan	1.83	137	ePN	Pg	08 19 26.2	+0.1
SFK	Sufi-Kurgan baz=37	1.83	137	⇑iP	Pg	08 19 26.5	+0.4
SFK	baz=37			⇑iS	Sg	08 19 52.7	+2.8
ARLS	Aral baz=75	1.89	74	⇓iP	Pg	08 19 27.3	+0.2
ARLS	baz=75			⇓iS	Sg	08 19 53.8	+2.2
DRK	Karamyk baz=81	1.90	182	⇑iP	Pg	08 19 27.3	0.0
DRK	baz=81			⇑iS	Sg	08 19 53.8	+1.9
EKS2	Erkin-Say SNR=82	1.90	47	P	Pg	08 19 27.5	+0.1
EKS2	Erkin-Say baz=49	1.90	47	⇓iP	Pg	08 19 27.2	-0.3
EKS2	baz=49			⇓iS	Sg	08 19 53.6	+1.4
CHM	Chimkent comp=N,1µm,0.2s	1.95	300	eP	Pb	08 19 26.4	+0.1
CHM	comp=N,3µm,0.5s			eS	Sb	08 19 50.8	+0.2
KK31	Karatay Array comp=N,82nm,0.4s,baz=156,slow=18,SNR=1668	2.01	330	⇑Pn	Pb	08 19 26.3	-1.1
KK31	comp=N,203nm,0.3s,baz=138,slow=26,SNR=11			⇑Sn	Sn	08 19 50.6	+1.0
KK31	Karatay Array	2.01	330	PN	Pb	08 19 26.2	-1.1
KK31				S	Sn	08 19 50.1	+0.5
KK31	comp=Z,82nm,0.4s			pmax	pmax		
KK31	comp=N,203nm,0.4s			smax	smax		
UCH	Uchtor SNR=177	2.14	66	P	Pg	08 19 31.6	-0.3
UCH	Uchtor baz=67	2.14	66	⇓eP	Pg	08 19 31.0	-0.9
UCH	baz=67			⇓iS	Sg	08 20 00.2	+0.5
AAK	Ala-Archa SNR=111	2.31	56	P	Pg	08 19 34.4	-0.9
AAK	Ala-Archa comp=N,61nm,0.6s	2.31	56	⇑Pn	Pg	08 19 33.8	-1.4
AAK	comp=N,204nm,0.8s			Lg	Lg	08 20 07.3	
AAK	Ala-Archa baz=57	2.31	56	⇓iP	Pb	08 19 33.2	+0.6
AAK	baz=57			⇓iS	Sg	08 20 03.8	-1.5
AAK	Ala-Archa comp=N,20nm,0.3s,baz=210,slow=5.4,SNR=269	2.31	56	Pn	Pg	08 19 34.8	-0.5
AAK	comp=N,24nm,0.3s,baz=358,slow=20,SNR=17			Sn	Sg	08 20 06.9	+1.6
FRU1	Bishkek baz=55	2.49	54	⇓iP	Pb	08 19 36.1	+0.5
FRU1	baz=55			⇓iS	Sb	08 20 08.0	+1.8
FRU	Bishkek	2.50	53	ePN	Pg	08 19 38.0	-0.8
FRU				i S	Sg	08 20 12.0	+0.9
FRU	comp=Z,150nm,1.0s			pmax	pmax		
FRU	comp=E,690nm,2.0s			smax	smax		
KZA	Kyzart SNR=52	2.61	73	P	Pb	08 19 38.6	+0.8
KZA	Kyzart baz=74	2.61	73	⇑iP	Pb	08 19 38.0	+0.2
KZA	baz=74			⇑iS	Sb	08 20 11.9	+1.9
KBK	Karagaybulak SNR=17	2.61	60	P	Pb	08 19 39.0	+1.2
KBK	Karagaybulak baz=61	2.61	60	⇑eP	Pb	08 19 37.4	-0.3
KBK	baz=61			⇑iS	Sb	08 20 11.1	+1.3
CHMS	Chumysh SNR=38	2.67	52	P	Pb	08 19 38.7	+0.1
CHMS	Chumysh baz=53	2.67	52	⇑iP	Pb	08 19 38.4	-0.3
CHMS	baz=53			⇑iS	Sb	08 20 12.4	+1.0
USP	Ospenovka SNR=28	2.70	45	P	Pb	08 19 39.0	-0.2
USP	Ospenovka baz=46	2.70	45	⇑iP	Pb	08 19 38.6	-0.6
USP	baz=46			⇑iS	Sb	08 20 13.0	+0.7
SGDS	Sogindy comp=E,40nm,0.3s	2.90	43	Pg	Pg	08 19 44.5	-2.0
SGDS	comp=E,177nm,0.5s			Lg	Lg	08 20 22.9	
TKM2	Tokmak 2 SNR=34	3.16	60	P	Pb	08 19 45.6	-1.5
TKM2	Tokmak 2 comp=E,4.5nm,0.6s	3.16	60	⇑Pn	Pb	08 19 45.1	-1.9
TKM2	comp=E,91nm,0.5s			⇓Lg	Lg	08 20 33.8	
TKM2	Tokmak 2	3.16	60	ePN	Pb	08 19 45.1	-1.9
TKM2	Tokmak 2 baz=60	3.16	60	⇑iP	Pb	08 19 45.3	-1.8
TKM2	baz=60			⇑iS	Sb	08 20 24.2	-1.4
BOOM	Boomskoye usch baz=69	3.22	68	⇑iP	Pb	08 19 46.1	-2.0
BOOM	baz=69			⇑iS	Sb	08 20 26.3	-1.0
ULHL	Ulahol SNR=6.2	3.37	74	P	Pb	08 19 48.7	-1.9
KST	Kastek comp=E,23nm,0.5s	3.45	60	Pg	Pg	08 19 55.4	-1.7
KST	comp=E,135nm,0.9s			Lg	Lg	08 20 41.7	
KST	Kastek comp=E,23nm,0.5s	3.45	60	eP	Pg	08 19 55.4	-1.7
KST	comp=E,135nm,0.8s			eS	Sg	08 20 41.5	-0.4
KSH	Kashi	3.63	119	Pn	Pb	08 19 51.1	-3.9
KSH				Sn	Sb	08 20 36.5	-2.5
KSH	comp=N,430nm,0.9s			smax	smax		
KSH	comp=E,240nm,0.8s			smax	smax		
MTBS	Maitube comp=E,21nm,0.8s	3.80	61	Pg	Pg	08 20 01.8	-1.9
MTBS	comp=E,76nm,0.7s			Lg	Lg	08 20 52.9	
MTBS	Maitube comp=E,10.0nm,0.4s	3.80	61	⇓iP	Pg	08 20 01.8	-1.9
MTBS	comp=E,128nm,0.6s			eS	Sg	08 20 52.1	-0.8
IZV	Izvestkoviy comp=E,48nm,0.6s	3.88	63	Pg	Pg	08 20 03.4	-1.9
IZV	comp=E,60nm,0.3s			Lg	Lg	08 20 54.5	
IZV	Izvestkoviy comp=E,48nm,0.6s	3.88	63	eP	Pg	08 20 03.4	-1.9
IZV	comp=E,60nm,0.3s			eS	Sg	08 20 54.5	-1.0
KDJ	Kajisay baz=78	4.03	77	⇓iP	Pb	08 19 57.5	-4.4
KDJ	baz=78			⇓iS	Sb	08 20 45.5	-5.1
TNSS	Tian-Shan comp=E,37nm,0.5s	4.11	64	Pg	Pg	08 20 08.1	-1.5
TNSS	comp=E,91nm,0.7s			Lg	Lg	08 21 03.1	
TNSS	Tian-Shan comp=E,37nm,0.5s	4.11	64	⇓iP	Pg	08 20 08.1	-1.5
TNSS	comp=E,91nm,0.7s			⇑iS	Sg	08 21 03.1	+0.3
KUU	Kurty comp=E,24nm,0.3s	4.13	51	Pg	Pg	08 20 08.5	-1.6
KUU	comp=E,82nm,0.3s			Lg	Lg	08 21 02.0	
KUU	Kurty comp=E,24nm,0.3s	4.13	51	eP	Pg	08 20 07.6	-2.5
KUU	comp=E,96nm,0.4s			eS	Sg	08 21 01.6	-2.1
AAA	Alma-Ata comp=E,18nm,0.1s	4.15	62	Pg	Pg	08 20 09.4	-1.1
AAA	comp=E,138nm,0.4s			Lg	Lg	08 21 04.6	
AAA	Alma-Ata	4.15	62	ePN	Pg	08 20 09.3	-1.1
AAA				eS	Sg	08 21 04.6	+0.4
AAA	comp=Z,18nm,0.1s			pmax	pmax		
AAA	comp=E,139nm,0.4s			smax	smax		
AAA	Alma-Ata comp=E,18nm,0.1s	4.15	62	eP	Pg	08 20 09.4	-1.1
AAA	comp=E,138nm,0.4s			eS	Sg	08 21 04.6	+0.4
KNDC	Almaty comp=E,43nm,0.7s	4.19	62	⇑Pg	Pg	08 20 10.0	-1.1
KNDC	comp=E,112nm,0.6s			⇓Lg	Lg	08 21 06.7	
MDOK	Medeo comp=E,4.3nm,0.4s	4.22	63	⇓Pn	Pb	08 20 00.5	-4.7
MDOK	comp=E,42nm,0.8s			⇑Pg	Pg	08 20 09.6	-2.2
MDOK	comp=E,133nm,0.7s			⇓Lg	Lg	08 21 07.5	
MDOK	Medeo comp=E,30nm,0.6s	4.22	63	Pg	Pg	08 20 09.1	-2.7
MDOK	comp=E,91nm,0.7s			Lg	Lg	08 21 06.6	
MDOK	Medeo comp=E,14nm,0.3s	4.22	63	eP	Pg	08 20 09.5	-2.2
MDOK	comp=E,118nm,0.6s			eS	Sg	08 21 05.6	-0.9
KTBS	Karatobe comp=E,19nm,0.5s	4.24	55	Pg	Pg	08 20 10.4	-1.8
KTBS	comp=E,126nm,0.8s			Lg	Lg	08 21 06.3	
KTBS	Karatobe comp=E,19nm,0.5s	4.24	55	eP	Pg	08 20 10.4	-1.8
KTBS	comp=E,126nm,0.8s			eS	Sg	08 21 06.3	-0.7
KOTS	Kotyrbulak comp=E,21nm,0.4s	4.29	63	Pg	Pg	08 20 11.4	-1.8
KOTS	comp=E,314nm,0.4s			Lg	Lg	08 21 08.9	
KOTS	Kotyrbulak comp=E,21nm,0.4s	4.29	63	eP	Pg	08 20 11.4	-1.8
KOTS	comp=E,314nm,0.4s			eS	Sg	08 21 08.9	+0.1
TARG	Taragay, Kyrgy baz=84	4.45	84	⇑iP	Pn	08 20 03.7	+5.2
TARG	baz=84			⇑iS	Sn	08 20 56.1	+5.7
CHKK	Chushkaly comp=E,13nm,0.4s	4.50	55	Pg	Pg	08 20 15.1	-2.1
CHKK	comp=E,78nm,0.3s			Lg	Lg	08 21 14.5	
CHKK	Chushkaly comp=E,13nm,0.4s	4.50	55	eP	Pg	08 20 15.1	-2.1
CHKK	comp=E,78nm,0.3s			eS	Sg	08 21 14.5	-1.0
KURS	Kuram comp=E,13nm,0.8s	5.10	63	Pg	Pg	08 20 26.4	-2.2
KURS	comp=E,56nm,1.5s			Lg	Lg	08 21 34.0	
KURS	Kuram comp=E,9.5nm,0.6s	5.10	63	eP	Pg	08 20 26.4	-2.2
KURS	comp=E,56nm,1.3s			⇑iS	Sg	08 21 34.0	-0.7
SATY	Saty comp=E,16nm,0.6s	5.12	69	Pg	Pg	08 20 28.2	-0.8
SATY	comp=E,46nm,0.7s			Lg	Lg	08 21 36.8	
SATY	Saty comp=E,16nm,0.6s	5.12	69	⇓iP	Pg	08 20 28.2	-0.8
SATY	comp=E,46nm,0.7s			⇑iS	Sg	08 21 36.8	+1.4
ARXS	Arharly comp=E,12nm,0.5s	5.21	55	Pg	Pg	08 20 28.1	-2.5
ARXS	comp=E,96nm,0.6s			Lg	Lg	08 21 37.4	
ARXS	Arharly comp=E,12nm,0.5s	5.21	55	eP	Pg	08 20 28.1	-2.5
ARXS	comp=E,96nm,0.6s			eS	Sg	08 21 37.4	-0.6
PDGK	Podgornoye comp=E,5.3nm,0.6s	5.96	68	Pg	Pg	08 20 41.9	-3.1
PDGK	comp=E,18nm,0.7s			Lg	Lg	08 22 00.6	
PDGK	Podgornoye comp=E,12nm,0.9s	5.96	68	⇓Pg	Pg	08 20 41.4	-3.6
PDGK	comp=E,47nm,0.8s			⇑Lg	Lg	08 22 05.5	
PDGK	Podgornoye	5.96	68	PN	Pg	08 20 41.4	-3.6
PDGK	comp=Z,12nm,0.9s			pmax	pmax		
DJR	Jarkent comp=Z,3.5nm,0.4s	6.51	60	Pg	Pg	08 20 54.0	-1.6
DJR	comp=Z,11nm,0.7s			Lg	Lg	08 22 21.4	
DJR	Jarkent comp=Z,3.5nm,0.4s	6.51	60	eP	Pg	08 20 54.0	-1.6
DJR	comp=Z,11nm,0.7s			eS	Sg	08 22 21.4	+1.5
KAPS	Kapalarasan comp=Z,2.6nm,0.8s	6.70	52	Pg	Pg	08 20 58.4	-0.8
KAPS	comp=Z,21nm,0.8s			Lg	Lg	08 22 28.7	
KAPS	Kapalarasan comp=Z,2.6nm,0.8s	6.70	52	eP	Pg	08 20 58.4	-0.8
KAPS	comp=Z,21nm,0.8s			eS	Sg	08 22 28.7	+2.9
MAKZ	Makanchi comp=Z,8.5nm,1.1s	9.06	50	⇑Lg	Lg	08 23 41.5	
MK31	Makanchi Array comp=Z,1.7nm,0.6s,baz=237,slow=14,SNR=15	9.23	51	⇑Pn	Pn	08 21 08.2	+4.4
MK31	comp=Z,8.0nm,0.7s			⇓Lg	Lg	08 23 48.3	
MK31	Makanchi Array	9.23	51	eP	Pn	08 21 06.9	+3.1
MK31	comp=Z,1.0nm,0.6s			pmax	pmax		
MK31	comp=Z,2.0nm,0.6s			pmax	pmax		
MKAR	Makanchi Array comp=Z,0.2nm,0.3s,baz=232,slow=14,SNR=12	9.23	51	Pn	Pn	08 21 07.7	+3.9
MKAR	comp=Z,0.2nm,0.3s,baz=247,slow=14,SNR=2.2			Sn	Sn	08 22 54.3	+6.7
MKAR	comp=Z,0.4nm,0.3s,baz=236,slow=28,SNR=5.8			Lg	Lg	08 23 45.3	
KURBB	Kurchatov Arra comp=Z,2.3nm,0.6s	10.33	24	⇓Pn	Pn	08 21 21.9	+3.2
KURBB	comp=Z,35nm,0.8s			⇑Lg	Lg	08 24 19.5	
KURBB	Kurchatov Arra comp=Z,0.1nm,0.3s,baz=213,slow=13,SNR=4.1	10.33	24	Pn	Pn	08 21 18.6	-0.1
KURBB	comp=Z,0.1nm,0.3s,baz=54,slow=14,SNR=3.1			Sn	Sn	08 23 17.7	+3.3
KURBB	comp=Z,0.2nm,0.3s,baz=206,slow=28,SNR=7.4			Lg	Lg	08 24 18.8	
KURK	Kurchatov	10.44	24	P	Pn	08 21 18.7	-1.6
KURK						08 23 17.7	
GEYT	Alibeck comp=Z,0.5nm,0.3s,baz=57,slow=16,SNR=3.0	11.16	257	Pn	Pn	08 21 28.7	-1.6
GEYT	comp=Z,0.8nm,0.3s,baz=80,slow=21,SNR=3.2			Sn	Sn	08 23 25.4	-10
AB31	Akbulak array comp=Z,0.5nm,0.3s,baz=130,slow=13,SNR=33	11.51	317	⇑Pn	Pn	08 21 33.1	-1.8
AB31	comp=Z,3.7nm,0.8s,baz=124,slow=12,SNR=5.4			⇑Sn	Sn	08 23 43.0	-0.3
AB31	Akbulak array	11.51	317	P	Pn	08 21 33.1	-1.8
AB31				S	Sn	08 23 43.4	0.0
AB31	comp=Z,1.0nm,0.3s			pmax	pmax		
AB31	comp=N,4.0nm,0.9s			smax	smax		
BVA0	Borovoye Array comp=N,1.9nm,1.0s,baz=76,slow=2.1,SNR=4.6	11.70	356	⇑Pn	Pn	08 21 36.6	-0.8
BVA0	Borovoye Array	11.70	356	P	Pn	08 21 36.6	-0.8
BVA0	comp=Z,2.0nm,1.0s			pmax	pmax		
BVAR	Borovoye Array comp=Z,0.3nm,0.3s,baz=164,slow=14,SNR=6.3	11.70	356	Pn	Pn	08 21 38.4	+0.9
BVAR	comp=Z,0.9nm,0.3s,baz=164,slow=25,SNR=7.7			Sn	Sn	08 23 43.0	-4.9
BVAR	comp=Z,0.2nm,0.3s,baz=174,slow=28,SNR=2.6			Lg	Lg	08 25 01.2	
BRVK	Borovoye	11.74	355	i P	Pn	08 21 42.0	+4.0
AKTO	Aktyubinsk comp=Z,4.3nm,1.1s	13.22	318	⇑Pn	Pn	08 21 56.5	-1.8
AKTO	Aktyubinsk comp=Z,0.4nm,0.3s,baz=125,slow=15,SNR=5.0	13.22	318	Pn	Pn	08 21 56.8	-1.6
AKTO	comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=2.9			Sn	Sn	08 24 15.9	-9.2
ZALV	Zalesovo Beam comp=Z,0.2nm,0.3s,baz=224,slow=11,SNR=2.4	15.27	30	Pn	Pn	08 22 28.2	+2.2
ZALV	comp=Z,0.1nm,0.3s,baz=183,slow=15,SNR=2.1			Sn	Sn	08 25 12.6	-2.2
GNI	Garni	20.57	276	i P	Pn	08 23 32.5	+0.6
GNI	comp=Z,13nm,0.5s			pmax	pmax		
SONM	Songino Array comp=Z,0.5nm,0.9s,baz=262,slow=9.9,SNR=3.0	25.25	63	P	P	08 24 18.7	+2.0
BRTR	Keskin Array B comp=Z,0.2nm,0.4s,baz=83,slow=14,SNR=2.7	28.96	280	P	P	08 24 49.9	-0.3
FINES	FINESS Array B	33.95	322	eP	P	08 25 37.6	+4.0
FINES	comp=Z,1.0nm,0.9s			pmax	pmax		
FINES	FINESS Array B comp=Z,1.0nm,0.9s,baz=113,slow=11,SNR=3.6	33.95	322	P	P	08 25 33.8	+0.1
ARCES	ARCESS Array B	36.96	335	eP	P	08 26 03.0	+3.5
ARCES	comp=Z,2.0nm,0.9s			pmax	pmax		
ARCES	ARCESS Array B comp=Z,2.2nm,0.9s,baz=108,slow=8.6,SNR=7.4	36.96	335	P	P	08 25 59.5	0.0
NOA	NORSAR Array B	41.01	320	P	P	08 26 34.0	+0.5
NOA	NORSAR Array B comp=Z,0.4nm,0.8s,baz=100,slow=7.7,SNR=3.0	41.01	320	P	P	08 26 34.0	+0.5
ESDC	Sonseca Array comp=Z,0.1nm,0.3s,baz=57,slow=5.2,SNR=3.0	55.90	295	P	P	08 28 28.3	-0.2
TORD	Torodi Ar. Bea comp=Z,0.3nm,0.7s,baz=86,slow=4.5,SNR=3.1	66.60	267	P	P	08 29 39.1	-2.1
YKA	Yellowknife Ar comp=Z,0.5nm,0.8s,baz=350,slow=5.4,SNR=8.0	76.35	3	P	P	08 30 39.1	-0.2
WRA	Warramunga Arr comp=Z,0.3nm,0.6s,baz=329,slow=4.8,SNR=5.7	84.02	123	P	P	08 31 21.8	+0.6
ASAR	Alice Springs comp=Z,0.4nm,0.9s,baz=319,slow=5.5,SNR=4.1	86.50	126	P	P	08 31 34.3	+0.7

NNC 17 08:29:58.9±2.3**, 37°.88N×71°.23E, h0**^{km}**, mb3.7, mpv3.3,**

4C-3D, Error ellipse: s-maj=17.7km s-min=15.9km az=36.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 3.2nm,0.2s	2.77	39	⇑P	Pn	08 30 45.0	+0.1
SFK	18nm,0.2s			⇑S	Sn	08 31 21.2	+2.0
MNAS	Manas 1.9nm,0.4s	4.71	12	⇓P	Pn	08 31 11.6	+0.2
MNAS	3.5nm,0.3s			⇑S	Sn	08 32 07.3	+0.5
KK31	Karatay Array 0.8nm,0.3s,baz=176,slow=12,SNR=28	5.25	354	P	Pn	08 31 19.2	+0.5
KK31	0.8nm,0.2s,baz=185,slow=24,SNR=6.5			S	Sn	08 32 21.8	+1.8
AAK	Ala-Archa 2.1nm,0.3s	5.37	27	⇑P	Pn	08 31 20.2	-0.3
AAK	6.6nm,0.5s			⇓S	Sn	08 32 23.3	+0.2
TKM2	Tokmak 2 1.4nm,0.5s	6.04	32	⇓P	Pn	08 31 28.9	-0.9

JMA 17 08:42:27.3±0.8, 45°.52N×150°.96E, h30^{km}, M4.0

SKHL 17 08:42:27.1±0.4, 44°.89N×151°.22E, h49^{km}±4^{km}, mb3.6/2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.40	279	*e*P	Pn	08 43 03.7	-0.2
KUR	30nm,0.4s			AMB	AMB	08 43 05.0	
KUR	10.0nm,0.4s			AMB	AMB	08 43 05.0	
KUR				*e*S	Sn	08 43 31.4	-0.6
KUR	170nm,0.4s			A	A	08 43 35.0	
KUR	140nm,0.4s			A	A	08 43 35.0	
SHO	Shikotan	3.31	254	*e*P	Pn	08 43 16.9	+0.6
SHO	7.0nm,0.4s			AMB	AMB	08 43 20.0	
SHO	4.0nm,0.4s			AMB	AMB	08 43 20.0	
SHO	10.0nm,0.4s			AMB	AMB	08 43 20.0	
SHO				*e*S	Sn	08 43 54.4	0.0
SHO	90nm,0.4s			A	A	08 44 12.0	
SHO	80nm,0.4s			A	A	08 44 12.0	
NEM2	Nemuro 2	4.23	251	P	Pn	08 43 29.9	+1.0
NEM2				*e*S	Sn	08 44 16.8	-0.2
JRA	Rausu	4.47	260	P	Pn	08 43 34.8	+2.5
JNK	Nakash	4.85	257	P	Pn	08 43 39.5	+2.0
JAK	Akkeshi	5.08	250	P	Pn	08 43 41.5	+0.9
JTKR	Abashiri--Toko	5.32	263	P	Pn	08 43 46.0	+2.1
JAR	Ashorobuto	5.60	256	P	Pn	08 43 49.3	+1.6
JOB	Onbets	5.69	252	P	Pn	08 43 50.8	+1.8
JMP	Maruseppu	5.70	264	P	Pn	08 43 51.5	+2.4
JCH	Churui	6.13	251	P	Pn	08 43 56.9	+1.9
JKK2	Kamakawa 2	6.16	263	P	Pn	08 43 58.1	+2.7
MYR	Moyori	6.32	249	*e*P	Pn	08 43 59.6	+2.0
JNBK	Urakawa-nobuka	6.68	250	P	Pn	08 44 03.8	+1.2
JNBK				*e*S	Sn	08 45 18.3	+1.0

IDC 17 08:45:46.9±1.4, 37°.04N×141°.59E, h0^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.3/51, mbtmp3.3/6, ML2.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/34, Error ellipse: s-maj=30.2km s-min=24.1km az=63.0

ISCJB 17 08:45:48.7±1.1, 36°.85N±0°.04×141°.47E±0°.06, h19^{km}±6^{km}, mb3.5/5, MS3.2/1, Error ellipse: s-maj=8.5km s-min=5.6km az=22.2

JMA 17 08:45:50.5±0.1, 36°.86N×141°.34E, h30^{km}±1^{km}, M3.3

ISC 17 08:45:48.4±2.2, 36°.84N±0°.05×141°.32E±0°.07, h11^{km}±12^{km}, n24, σ1^{s}19/29, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.49	302	P	Pn	08 46 00.5	-1.0
ONAJ				*e*S	Sb	08 46 07.6	+1.2
JFK	Kawauchi	0.64	326	P	Pn	08 46 02.6	-0.8
JFK				*e*S	Sb	08 46 11.1	+0.6
JHO	Hitachi	0.64	250	P	Pn	08 46 03.3	-0.2
JHO				S	Sn	08 46 12.5	-1.2
JFFD	Fukushimafurud	0.66	293	P	Pn	08 46 03.2	-0.5
JFFD				S	Sb	08 46 12.1	+1.0
JHYU	Hitachinakayam	0.77	230	P	Pn	08 46 05.1	-0.1
JHYU				*e*S	Sn	08 46 15.9	-0.9
JFT	Otama	1.04	311	P	Pn	08 46 09.8	+0.9
JFT				S	Sn	08 46 23.4	0.0
JMM	Marumori	1.11	338	P	Pn	08 46 10.0	+0.1
JMM				*e*S	Sb	08 46 23.7	-0.4
JFY	Yanaizu	1.41	294	P	Pg	08 46 15.9	+0.4
JFY				S	Sg	08 46 34.2	+0.4
JAG	Ashikaga	1.56	255	P	Pb	08 46 17.1	-0.1
JAG				S	Sb	08 46 36.9	0.0
JIO	Ouri	1.61	1	P	Pb	08 46 17.3	-0.9
JIO				S	Sn	08 46 36.6	-1.0
MJAR	Matsushiro Arr 0.7nm,0.3s,baz=78,slow=16,SNR=18	2.52	264	Pn	Pb	08 46 31.3	-2.4
MJAR	0.6nm,0.3s,baz=77,slow=39,SNR=5.1			Sn	Sb	08 47 04.9	+0.3
MAT	Matsushiro	2.52	264	P	Pb	08 46 31.9	-1.8
MAT				*e*S	Sb	08 47 04.1	-0.5
H11N2	WAKE ISLAND Hy baz=313,slow=75,SNR=39	28.11	120	T	T	09 21 07.4	
H11N1	WAKE ISLAND Hy baz=313,slow=75,SNR=36	28.12	120	T	T	09 21 07.6	
H11N3	WAKE ISLAND Hy baz=313,slow=75,SNR=43	28.13	120	T	T	09 21 08.4	
H11S1	WAKE ISLAND Hy baz=315,slow=75,SNR=12	28.82	122	T	T	09 21 58.9	
H11S3	WAKE ISLAND Hy baz=315,slow=75,SNR=19	28.82	122	T	T	09 21 58.9	
H11S2	WAKE ISLAND Hy baz=315,slow=75,SNR=15	28.84	122	T	T	09 22 00.0	
MKAR	Makanchi Array 0.2nm,0.6s,baz=84,slow=9.2,SNR=3.3	44.16	302	P	P	08 53 58.1	+1.1
KURBB	Kurchatov Arra 0.5nm,0.6s,baz=83,slow=7.8,SNR=3.5	46.06	308	P	P	08 54 13.5	+1.4
LEM	Lembang comp=Z,24nm,20.1s,baz=214,slow=36	53.68	223	LR	LR	09 18 37.3	
WRA	Warramunga Arr 0.2nm,0.7s,baz=2.7,slow=7.5,SNR=2.9	56.86	188	P	P	08 55 34.7	+1.5
ASAR	Alice Springs 0.4nm,1.0s,baz=15,slow=7.7,SNR=2.8	60.58	188	P	P	08 56 01.5	+2.4
TXAR	Lajitas Array 0.6nm,1.1s,baz=290,slow=2.7,SNR=2.7	90.30	52	P	P	08 58 47.5	-2.3

JMA 17 08:49:07.7±0.6, 45°.53N×151°.05E, h30^{km}, M4.2

SKHL 17 08:49:07.6±0.3, 44°.91N×151°.30E, h56^{km}±5^{km}, mb4.0/2

ISC 17 08:49:10.6±4.4, 44°.8N±0°.1×151°.1E±0°.2, h35^{km}, n17, σ1^{s}29/25, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.33	281	*e*P	Pn	08 49 44.9	-1.4
KUR	60nm,0.2s			AMB	AMB	08 49 46.0	
KUR	50nm,0.2s			AMB	AMB	08 49 46.0	
KUR	10.0nm,0.2s			AMB	AMB	08 49 46.0	
KUR				*e*S	Sn	08 50 12.7	-1.0
KUR	210nm,0.4s			A	A	08 50 17.0	
KUR	150nm,0.4s			A	A	08 50 17.0	
SHO	Shikotan	3.21	254	*e*P	Pn	08 49 58.3	-0.2
SHO	10.0nm,0.3s			AMB	AMB	08 50 01.0	
SHO	20nm,0.3s			AMB	AMB	08 50 01.0	
SHO				*e*S	Sn	08 50 36.6	+1.0
SHO	70nm,0.3s			A	A	08 50 44.0	
SHO	50nm,0.3s			A	A	08 50 44.0	
NEM2	Nemuro 2	4.13	251	P	Pn	08 50 11.3	+0.2
NEM2				*e*S	Sn	08 50 57.7	-0.5
JRA	Rausu	4.38	260	P	Pn	08 50 15.9	+1.4
JNK	Nakash	4.76	257	P	Pn	08 50 20.9	+1.2
JAK	Akkeshi	4.98	250	P	Pn	08 50 22.8	0.0
JAK				*e*S	Sn	08 51 19.1	0.0
JTKR	Abashiri--Toko	5.23	263	P	Pn	08 50 27.4	+1.2
JAR	Ashorobuto	5.50	256	P	Pn	08 50 30.9	+0.9
JAR				*e*S	Sn	08 51 33.5	+1.5
JOB	Onbets	5.60	252	P	Pn	08 50 32.0	+0.7
JOB				*e*S	Sn	08 51 35.9	+1.5
JMP	Maruseppu	5.61	264	P	Pn	08 50 33.0	+1.5
JCH	Churui	6.03	251	P	Pn	08 50 37.6	+0.3
JCH				*e*S	Sn	08 51 45.4	+0.3
JKK2	Kamakawa 2	6.07	264	P	Pn	08 50 39.1	+1.3
MYR	Moyori	6.22	249	*e*P	Pn	08 50 40.9	+1.0
JNBK	Urakawa-nobuka	6.58	250	P	Pn	08 50 45.0	+0.2
JBT2	Biratori 2	6.65	255	P	Pn	08 50 46.1	+0.4
JKB	Kayabe	7.91	252	P	Pn	08 51 02.9	-0.1
JKB				*e*S	Sn	08 52 28.2	-3.0
JANG	Nango	8.36	241	*e*S	Sn	08 52 39.6	-2.7

THE 17 08:51:23.9, 40°.35N×23°.93E, h6^{km}±1^{km}, ML1.9/7, Error ellipse: s-maj=1.9km s-min=0.5km az=145.0

SKO 17 08:51:27.5, 40°.48N×23°.95E, h0^{km}, ML1.7

ATH 17 08:51:24.1, 40°.35N×23°.93E, h8^{km}±2^{km}, ML2.0/5, 1C, Error ellipse: s-maj=2.8km s-min=1.0km az=151.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.04	105	P	Pg	08 51 25.7	+0.1
OUR				S	Sg	08 51 26.8	0.0
OUR	comp=E,9766µm,0.2s			AML	AML	08 51 26.8	
OUR	comp=N,3683µm,0.1s			AML	AML	08 51 27.0	
OUR	Ouranopolis	0.04	105	P	Pg	08 51 25.7	+0.1
OUR				S	Sg	08 51 26.1	-0.7
PLG	Polygyros	0.37	275	P	Pg	08 51 31.5	+0.1
PLG				S	Sg	08 51 36.8	+0.5
PLG	comp=E,362µm,0.2s			AML	AML	08 51 37.6	
PLG	comp=N,302µm,0.2s			AML	AML	08 51 37.6	
PLG	Polygyros	0.37	275	P	Pg	08 51 31.3	-0.1
PLG				S	Sg	08 51 36.5	+0.2
PAIG	Paliouri	0.46	205	P	Pg	08 51 32.9	-0.1
PAIG				S	Sg	08 51 39.4	+0.4
PAIG	Paliouri	0.46	205	P	Pg	08 51 32.8	-0.2
PAIG				S	Sg	08 51 39.0	0.0
SOH	Sokhos	0.65	317	P	Pg	08 51 36.8	+0.2
SOH				S	Sg	08 51 45.1	0.0
SOH	comp=E,168µm,0.2s			AML	AML	08 51 46.5	
SOH	comp=N,259µm,0.4s			AML	AML	08 51 46.8	
SOH	Sokhos	0.65	317	P	Pg	08 51 36.8	+0.2
SOH				S	Sg	08 51 45.2	+0.1
SOH	Sokhos	0.65	317	⇑*i*Pg	Pg	08 51 37.0	+0.4
SOH				*i* Sg	Sg	08 51 45.4	+0.3
THAS	Thassos island	0.65	66	P	Pg	08 51 36.1	-0.6
THAS	comp=N,1072µm,0.3s			AML	AML	08 51 47.6	
THAS	comp=E,469µm,0.2s			AML	AML	08 51 48.0	
THAS	Thassos island	0.65	66	P	Pg	08 51 36.1	-0.6
THAS				S	Sg	08 51 45.5	+0.3
HORT	Hortiatis	0.68	292	P	Pg	08 51 36.8	-0.5
HORT				S	Sg	08 51 46.4	+0.2
HORT	Hortiatis	0.68	292	P	Pg	08 51 36.8	-0.5
HORT				S	Sg	08 51 46.2	0.0
KVLA	Kavala	0.69	30	P	Pb	08 51 38.1	-0.2
KVLA				S	Sg	08 51 46.5	+0.3
KAVA	Kavala	0.79	34	P	Pg	08 51 39.5	+0.3
KAVA	comp=N,262µm,0.1s			AML	AML	08 51 51.9	
KAVA	comp=E,242µm,0.1s			AML	AML	08 51 51.9	
KAVA	Kavala	0.79	34	P	Pg	08 51 38.9	-0.3
KAVA				S	Sb	08 51 50.3	-0.5
THE	Thessaloniki	0.79	292	*e*Pg	Pn	08 51 40.9	-0.7
THE				*i* Sg	Sb	08 51 51.8	+0.9
NVR	Nevrokopi	1.01	357	P	Pg	08 51 43.0	-0.3
NVR	Nevrokopi	1.01	357	P	Pg	08 51 42.3	-1.1
LIA	Limnos Island	1.06	115	P	Pg	08 51 44.2	-0.2
KNT	Kendrikon	1.13	316	P	Pg	08 51 44.9	-0.9
KNT	Kendrikon	1.13	316	P	Pg	08 51 44.9	-0.9
KNT	Kendrikon	1.13	316	*i* Pg	Pb	08 51 46.0	+0.1
KNT				*i* Sg	Sg	08 52 00.1	-0.4
SMTH	Samothraki Isl	1.23	84	P	Pb	08 51 46.3	-1.2
GRG	Griva	1.32	298	*i* Pg	Pg	08 51 50.8	+1.5
GRG				*i* Sg	Sn	08 52 07.8	+1.2
VAY	Valandovo	1.42	314	*e*Pg	Pg	08 51 52.4	+1.1
VAY				*i* Sg	Sg	08 52 10.0	+0.3
VAY	comp=E,6.0nm,0.5s			*e*Lg	Lg	08 52 11.7	
ALN	Alexandroupoli	1.70	70	P	Pb	08 51 55.3	-0.3
STIP	Stip	1.89	316	*i* Pg	Pb	08 51 58.1	-0.7
STIP				*i* Sg	Sb	08 52 22.7	+0.2

ISCJB 17 08:56:55.0±0.5, 36°.35N±0°.04×70°.79E±0°.05, h100^{km}, mb3.5/7, Error ellipse: s-maj=6.5km s-min=4.8km az=144.8

IDC 17 08:56:55.0±3.4, 36°.27N×70°.99E, h105^{km}±27^{km}, mb3.3/8, mb1 3.4/14, mb1mx3.2/65, mbtmp3.8/14, Error ellipse: s-maj=27.4km s-min=17.7km az=173.0

NNC 17 08:57:03.2±3.5, 37°.05N×70°.68E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=29.5km s-min=25.8km az=130.0

ISC 17 08:56:57.5±0.7, 36°.52N±0°.05×70°.81E±0°.07, h100^{km}, n39, σ2^{s}69/45, mb3.6/7, 3C-7D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.84	161	⇓P	Pn	08 57 44.9	+3.7
CEP				S	Sn	08 58 18.0	+3.2
CHCP	Chirah Chowk	3.49	144	P	Pn	08 57 52.6	+2.7
THW	Thamme Wali	3.79	168	P	Pn	08 57 57.1	+3.1
SFK	Sufi-Kurgan 8.6nm,0.3s	4.08	30	⇓P	Pn	08 58 02.1	+4.1
SFK	19nm,0.2s			⇑S	Sn	08 58 48.4	+3.6
AML	Almayashu SNR=28	6.03	21	P	Pn	08 58 27.2	+2.6
MNAS	Manas 12nm,0.7s	6.10	12	⇓P	Pn	08 58 28.2	+3.0
MNAS	62nm,0.9s			⇑S	Sn	08 59 34.0	+0.4
UCH	Uchtor SNR=26	6.38	26	P	Pn	08 58 31.8	+2.5
KZA	Kyzart SNR=6.4	6.53	30	P	Pn	08 58 34.3	+3.0
EKS2	Erkin-Say SNR=17	6.55	20	P	Pn	08 58 34.2	+3.0
KK31	Karatay Array 4.1nm,0.5s,baz=248,slow=4.5,SNR=29	6.58	358	⇑P	Pn	08 58 34.9	+3.3
KK31	7.4nm,0.6s,baz=173,slow=13,SNR=13			⇓S	Sn	08 59 45.7	+0.6
AAK	Ala-Archa SNR=18	6.74	24	P	Pn	08 58 36.7	+2.8
AAK	Ala-Archa 12nm,0.7s	6.74	24	⇓P	Pn	08 58 37.9	+4.0
AAK	21nm,0.8s			⇓S	Sn	08 59 49.1	-0.1
AAK	Ala-Archa 1.3nm,0.3s,baz=190,slow=6.3,SNR=44	6.74	24	P	Pn	08 58 35.5	+1.6
AAK	1.7nm,0.3s,baz=24,slow=7.9,SNR=12			S	Sn	08 59 49.3	+0.1
KBK	Karagaybulak SNR=9.2	6.91	26	P	Pn	08 58 41.4	+5.2
ULHL	Ulahol SNR=5.5	7.10	35	P	Pn	08 58 41.4	+2.5
CHMS	Chumysh SNR=7.1	7.15	24	P	Pn	08 58 44.1	+4.7
TKM2	Tokmak 2 SNR=16	7.38	29	P	Pn	08 58 47.0	+4.3
TKM2	Tokmak 2 9.7nm,0.7s	7.38	29	⇓P	Pn	08 58 44.7	+2.0
GEYT	Alibeck 1.4nm,0.3s,baz=90,slow=18,SNR=4.0	10.22	282	P	Pn	08 59 20.8	-0.3
GEYT	1.1nm,0.3s,baz=109,slow=17,SNR=6.5			S	Sn	09 01 15.6	+1.8
PYUN	Piuthan 12nm,0.4s	13.28	126	*e*P	Pn	08 59 58.8	-3.4
MKAR	Makanchi Array 0.0nm,0.3s,baz=222,slow=13,SNR=9.5	13.37	36	P	Pn	09 00 01.8	-1.2
DANN	Dangsing 17nm,0.4s	13.63	123	*e*P	Pn	09 00 03.4	-3.5
DMN	Daman 11nm,0.5s	15.01	122	*e*P	Pn	09 00 21.5	-3.1
KKN	Kakani 15nm,0.6s	15.02	121	*e*P	Pn	09 00 21.9	-2.8
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=206,slow=11,SNR=8.1	15.15	19	P	Pn	09 00 27.1	+1.1
PKIN	Phulchoki 15nm,0.5s	15.23	122	*e*P	Pn	09 00 24.8	-2.6
PKI	Pulchoki 16nm,0.6s	15.24	122	*e*P	Pn	09 00 25.4	-2.2
GUN	Gumba 11nm,0.5s	15.36	120	*e*P	Pn	09 00 25.9	-3.2
JIRN	Jiri 36nm,0.4s	15.73	120	*e*P	Pn	09 00 31.0	-2.8
BVAR	Borovoye Array 0.2nm,0.3s,baz=181,slow=12,SNR=6.5	16.51	359	P	Pn	09 00 43.9	+1.1
AKTO	Aktyubinsk 0.2nm,0.3s,baz=133,slow=9.7,SNR=21	16.69	330	P	Pn	09 00 46.7	+1.7
AKTO	0.1nm,0.3s,baz=18,slow=20,SNR=3.7			S	Sn	09 03 46.3	-3.8
ZALV	Zalesovo Beam 2.9nm,0.6s,baz=227,slow=11,SNR=12	19.96	25	P	P	09 01 20.1	-1.4
AKASG	Malin Array Be 0.2nm,0.3s,baz=81,slow=7.2,SNR=2.2	32.81	309	P	P	09 03 20.5	-0.6
FINES	FINESS Array B 1.0nm,0.9s,baz=119,slow=12,SNR=3.4	37.38	326	P	P	09 04 00.0	-0.1
ARCES	ARCESS Array B 3.7nm,1.0s,baz=103,slow=6.6,SNR=3.2	41.07	338	P	P	09 04 30.5	-0.3
HFS	Hagfors 0.8nm,0.5s,baz=80,slow=10,SNR=4.2	42.96	322	P	P	09 04 44.6	-1.6
NOA	NORSAR Array B 0.8nm,0.7s,baz=97,slow=7.8,SNR=3.8	44.27	323	P	P	09 04 55.5	-1.3
YKA	Yellowknife Ar 0.1nm,0.5s,baz=351,slow=5.3,SNR=4.8	81.23	3	P	P	09 09 00.4	-1.5
ASAR	Alice Springs 0.6nm,0.9s,baz=332,slow=7.4,SNR=3.7	84.39	125	P	P	09 09 14.2	-4.6

NNC 17 09:02:43.1±1.4, 41°.75N×78°.18E, h0^{km}, mb3.2, mpv2.9, 1C-3D, Error ellipse: s-maj=9.2km s-min=7.1km az=153.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan 3.1nm,0.4s	1.57	325	P	Pn	09 03 12.9	+0.2
TNSS	3.5nm,0.3s			S	Sn	09 03 34.5	+0.4
KST	Kastek 5.2nm,0.8s	2.09	309	Pg	Pb	09 03 21.8	-0.2
KST	4.7nm,0.4s			Lg	Lg	09 03 49.1	
TKM2	Tokmak 2 1.4nm,0.5s	2.24	302	⇓Pg	Pb	09 03 23.7	-1.0
TKM2	4.3nm,0.7s			⇑Lg	Lg	09 03 54.2	
KTBS	Karatobe 3.5nm,0.3s	2.25	331	Pg	Pb	09 03 24.6	0.0
KTBS	9.3nm,0.4s			Lg	Lg	09 03 54.5	
CHKK	Chushkaly 9.0nm,0.3s	2.28	338	Pg	Pb	09 03 25.2	+0.1
CHKK	12nm,0.6s			Lg	Lg	09 03 55.2	
ARXS	Arharly 5.4nm,0.4s	2.47	354	Pg	Pb	09 03 27.7	-0.8
ARXS	4.0nm,0.4s			Lg	Lg	09 03 59.8	
KUU	Kurty 3.4nm,0.2s	2.53	328	Pg	Pb	09 03 29.0	-0.4
KUU	8.3nm,0.3s			Lg	Lg	09 04 02.2	
DJR	Jarkent 0.6nm,0.3s	2.83	24	Pg	Pb	09 03 34.1	-0.5
DJR	2.5nm,0.2s			Lg	Lg	09 04 10.9	
AAK	Ala-Archa 2.9nm,0.8s	2.88	289	⇓Pg	Pb	09 03 34.4	-1.1
AAK	5.3nm,0.7s			⇓Lg	Lg	09 04 13.8	

IDC 17 09:02:44.5±1.5, 0°.90N×126°.02E, h0^{km}, mb3.2/4, mb1 3.4/4, mb1mx3.2/45, mbtmp3.2/4, Error ellipse: s-maj=176.2km s-min=21.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 1.1nm,0.7s,baz=338,slow=11,SNR=7.0	22.26	159	P	P	09 07 42.1	-1.2
ASAR	Alice Springs 0.2nm,0.3s,baz=346,slow=11,SNR=7.9	25.59	163	P	P	09 08 16.1	+0.5
ASAR	0.2nm,0.7s,baz=337,slow=4.0,SNR=3.1			PcP	PcP	09 11 47.2	+0.2
MKAR	Makanchi Array 0.1nm,0.4s,baz=120,slow=7.6,SNR=4.8	59.49	327	P	P	09 12 48.6	-0.8
KURBB	Kurchatov Arra 0.1nm,0.4s,baz=120,slow=5.6,SNR=2.5	63.74	328	P	P	09 13 18.4	+0.4

NNC 17 09:03:20.4±1.5, 41°.81N×78°.35E, h0^{km}, mb3.6, mpv3.2, 1C-1D, Error ellipse: s-maj=10.7km s-min=6.8km az=177.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan 3.6nm,0.1s	1.61	320	P	Pn	09 03 49.7	-0.6
TNSS	4.6nm,0.3s			S	Sn	09 04 12.0	0.0
IZV	Izvestkoviy 16nm,0.3s	1.77	314	P	Pn	09 03 53.2	+0.7
IZV	8.2nm,0.2s			S	Sg	09 04 17.9	+0.5
KST	Kastek 5.6nm,0.4s	2.15	306	Pg	Pb	09 03 59.2	-1.1
KST	12nm,0.7s			Lg	Lg	09 04 28.3	
KTBS	Karatobe 6.0nm,0.2s	2.26	328	Pg	Pb	09 04 01.8	-0.3
CHKK	Chushkaly 9.4nm,0.4s	2.27	334	Pg	Pb	09 04 01.7	-0.6
CHKK	14nm,0.2s			Lg	Lg	09 04 32.5	
TKM2	Tokmak 2 4.6nm,0.5s	2.32	299	⇑Lg	Lg	09 04 32.6	
DGS	Degeres 6.7nm,0.5s	2.38	308	Pg	Pb	09 04 03.1	-1.1
DGS	5.9nm,0.4s			Lg	Lg	09 04 35.0	
ARXS	Arharly 7.6nm,0.5s	2.43	351	Pg	Pb	09 04 04.6	-0.4
ARXS	9.6nm,0.6s			Lg	Lg	09 04 37.6	
KUU	Kurty 5.7nm,0.4s	2.55	325	Pg	Pb	09 04 06.2	-0.8
KUU	12nm,0.7s			Lg	Lg	09 04 40.3	
DJR	Jarkent 2.7nm,0.4s	2.73	22	Pg	Pb	09 04 10.2	0.0
DJR	2.3nm,0.4s			Lg	Lg	09 04 47.1	
AAK	Ala-Archa 10nm,1.0s	2.98	287	⇓Lg	Lg	09 04 54.6	

IDC 17 09:09:58.4±3.4, 11°.70S×163°.32E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.5/38, mbtmp3.7/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/24, Error ellipse: s-maj=146.4km s-min=31.2km az=137.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.7nm,0.8s,baz=81,slow=9.1,SNR=8.6	29.03	250	P	P	09 16 01.2	+0.8
ASAR	Alice Springs 0.1nm,0.4s,baz=64,slow=11,SNR=5.0	30.38	243	P	P	09 16 11.8	-0.6
DAV	Davao City (W)	41.92	295	LR	LR	09 32 34.1	

	comp=Z,60nm,19.8s,baz=176,slow=32						
ILAR	Eielson Array	84.90	19	P	P	09 22 35.3	+0.4
	0.8nm,1.1s,baz=230,slow=7.0,SNR=3.5						
KURBB	Kurchatov Arra	95.67	320	P	P	09 23 25.0	-1.0
	0.3nm,0.4s,baz=91,slow=4.6,SNR=4.8						

IDC 17 09:14:51.9±2.6**,54°.10N**×**86°.38E,h0^{km},mb1 2.8**/2**, mb1mx2.7**/40**,mbtmp2.8**/2**,ML2.4**/2**,Error ellipse: s-maj=19.3km s-min=12.2km az=65.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.93	261	i		09 21 40.0	
	baz=83,slow=347,SNR=1.5						
ZALV	Zalesovo Beam	0.93	261	Pg	Pg	09 15 08.5	-1.2
	1.9nm,0.3s,baz=76,slow=16,SNR=19						
ZALV				Lg	Lg	09 15 23.3	
	3.2nm,0.3s,baz=81,slow=30,SNR=6.0						
KURBB	Kurchatov Arra	5.94	237	Pn	Pn	09 16 20.9	0.0
	0.1nm,0.3s,baz=54,slow=14,SNR=5.2						
KURBB				Sn	Sn	09 17 29.1	-0.5
	0.0nm,0.3s,baz=9.6,slow=23,SNR=3.6						
KURBB				Lg	Lg	09 18 02.3	
	0.0nm,0.3s,baz=44,slow=5.4,SNR=2.8						
MKAR	Makanchi Array	7.76	201	Pn	Pn	09 16 48.1	+2.0
	0.1nm,0.3s,baz=24,slow=12,SNR=5.7						
MKAR				Lg	Lg	09 18 58.5	
	0.0nm,0.3s,baz=23,slow=30,SNR=5.3						

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*IDC **17** 09:30:02.2±1.0,6°.17S×142°.97E,h0^{km},mb4.1/10, mb1 4.4/14,mb1mx4.3/25,mbtmp4.2/14,ML4.4/4,MS3.3/5, Ms1 3.3/5,ms1mx3.0/19,Error ellipse: s-maj=31.9km s-min=16.4km az=94.0*

*ISCJB **17** 09:30:07.0±0.3,6°.16S±0°.04×142°.57E±0°.06,h33^{km}, mb4.3/23,MS3.2/2,Error ellipse: s-maj=8.2km s-min=5.1km az=12.7*

*NEIC **17** 09:30:09.6±1.0,6°.13S×142°.56E,h41^{km}±10^{km},mb4.4/20, Error ellipse: s-maj=11.1km s-min=7.3km az=97.0*

ISC 17 09:30:08.8±0.5**,6°.27S**±0°.05×**142°.60E**±0°.07**,h35^{km},n53, σ1^s.92**/53**,mb4.3**/23**,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	4.18	333	Pn	Pn	09 31 09.1	-1.1
	15nm,0.3s,baz=181,slow=9.7,SNR=27						
JAY				Sn	Sn	09 32 01.7	+3.8
	21nm,0.3s,baz=27,slow=5.9,SNR=4.9						
JAY				LR	LR	09 32 50.9	
	comp=Z,272nm,18.0s,baz=60,slow=40						
MANU	Manus Island	6.34	49	ePn	Pn	09 31 46.2	+6.2
COEN	Coen	7.66	176	ePn	Pn	09 32 01.4	+3.3
RABL	Rabaul	9.75	78	ePn	Pn	09 32 29.0	+2.3
FAKI	Fak Fak	10.84	287	ePn	Pn	09 32 41.4	-0.2
SAUI	Saumlaki	11.34	261	ePn	Pn	09 32 50.5	+2.0
SIJI	Sorong	12.51	295	Pn	Pn	09 33 06.0	+1.5
	1.2nm,0.3s,baz=22,slow=22,SNR=4.2						
MTN	Manton Dam	13.05	239	ePn	Pn	09 33 11.4	-0.4
WRAB	Tennant Creek	15.77	210	ePn	Pn	09 33 49.0	+0.5
	17nm,1.0s						
WB2	Warramunga Arr	15.78	210	ePn	Pn	09 33 48.7	+0.2
	14nm,0.7s						
WR1	Warramunga Arr	15.78	210	ePn	Pn	09 33 47.8	-0.8
	29nm,1.1s						
WR1				eSn	Sn	09 36 37.9	-4.7
WRA	Warramunga Arr	15.78	210	Pn	Pn	09 33 47.8	-0.8
	1.6nm,0.3s,baz=30,slow=13,SNR=52						
WRA				Sn	Sn	09 36 37.9	-4.7
	1.1nm,0.3s,baz=32,slow=24,SNR=4.9						
WRA				LR	LR	09 39 47.3	
	comp=Z,86nm,18.7s,baz=350,slow=36						
HNR	Honiara	17.47	101	ePn	Pn	09 34 07.5	-2.5
	73nm,0.7s						
AS01	Alice Springs	19.19	205	eP	Pn	09 34 33.5	+2.6
AS31	Alice Springs	19.21	205	eP	Pn	09 34 33.6	+2.5
	9.7nm,0.7s						
ASAR	Alice Springs	19.21	205	P	Pn	09 34 32.2	+1.1
	1.9nm,0.3s,baz=32,slow=10,SNR=155						
ASAR				S	S	09 38 02.3	-3.6
	0.4nm,0.3s,baz=20,slow=28,SNR=4.5						
ASAR				LR	LR	09 42 38.5	
	comp=Z,142nm,20.1s,baz=70,slow=39						
FITZ	Fitzroy Crossi	20.30	233	eP	P	09 34 44.2	+2.4
	10.0nm,0.8s						
FITZ	Fitzroy Crossi	20.30	233	P	P	09 34 43.1	+1.4
	6.6nm,0.5s,baz=47,slow=9.9,SNR=20						
EIDS	Eidsvold	20.66	158	eP	Pn	09 34 49.4	+1.3
	18nm,1.1s						
SARN	Sarigan	23.04	8	eP	P	09 35 10.5	-0.7
	74nm,1.2s						
STKA	Stephens Creek	25.50	182	P	P	09 35 33.5	-0.5
	1.1nm,0.5s,baz=6.4,slow=17,SNR=3.6						
STKA				LR	LR	09 46 47.0	
	comp=Z,84nm,21.0s,baz=13,slow=39						
BBOO	Buckleboo	27.10	192	eP	P	09 35 51.2	+2.7
	5.5nm,1.0s						
FORT	Forrest	27.94	207	eP	P	09 35 56.4	+0.3
	16nm,0.9s						
SMRI	Semarang	31.94	267	eP	P	09 36 31.3	-0.4
	110nm,1.0s						
YHNB	Yeheng	37.05	327	eP	P	09 37 15.9	+0.1
	8.0nm,0.9s						
MJAR	Matsushiro Arr	42.78	355	P	P	09 37 59.8	-3.4
	2.3nm,0.9s,baz=191,slow=12,SNR=4.5						
MJAR				LR	LR	09 53 34.2	
	comp=Z,23nm,18.7s,baz=55,slow=33						
MAJO	Matsushiro	42.78	355	eP	P	09 37 59.8	-3.4
KSAR	Wonju Array Be	45.60	344	P	P	09 38 19.6	-6.1
KSRS	Korea Array	45.60	344	P	P	09 38 19.6	-6.1
	1.1nm,0.7s,baz=159,slow=7.7,SNR=7.5						
CMAR	Chiang Mai Arr	49.56	301	P	P	09 38 57.1	+0.3
	1.6nm,0.7s,baz=124,slow=5.4,SNR=11						
USRK	Ussuriysk Ar.	51.14	350	P	P	09 39 07.1	-1.1
	2.5nm,0.7s,baz=164,slow=5.8,SNR=4.0						
KLR	Kul'dur	56.07	351	P	P	09 39 43.1	-1.3
	1.1nm,0.8s,baz=154,slow=9.8,SNR=3.4						
GTA	Gaotai	60.22	323	eP	P	09 40 14.8	+1.1
GTA				pP	pP	09 40 18.8	-5.9
GTA				sP	sP	09 40 21.9	-7.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONA0	Songino Array	62.59	333	eP	P	09 40 29.3	-0.3
SONM	Songino Array	62.59	333	P	P	09 40 29.3	-0.3
	comp=Z,0.5nm,0.5s,baz=155,slow=7.4,SNR=4.9						
SONA1	Songino Array	62.60	333	eP	P	09 40 30.5	+0.8
MK32	Makanchi Array	74.96	322	eP	P	09 41 46.6	+0.1
MKAR	Makanchi Array	74.96	322	eP	P	09 41 46.8	+0.3
	comp=Z,9.1nm,0.6s						
MKAR	Makanchi Array	74.96	322	P	P	09 41 46.6	+0.1
	comp=Z,2.5nm,0.8s,baz=107,slow=7.1,SNR=23						
MAKZ	Makanchi	75.16	322	eP	P	09 41 48.0	+0.4
	comp=Z,3.3nm,0.9s						
ZALV	Zalesovo Beam	76.95	329	eP	P	09 41 57.6	-0.1
ZALV	Zalesovo Beam	76.95	329	P	P	09 41 56.2	-1.4
	comp=Z,1.4nm,0.5s,baz=110,slow=5.0,SNR=6.8						
ZAA1	Zalesovo Array	76.95	329	eP	P	09 41 56.2	-1.4
KURK	Kurchatov	78.84	324	eP	P	09 42 08.7	+0.5
	comp=Z,3.3nm,0.9s						
QSPA	South Pole Qui	83.70	180	eP	P	09 42 35.5	+1.5
	comp=Z,4.8nm,1.0s						
IM3	Indian Mountai	85.32	22	eP	P	09 42 41.5	-0.5
MLY	Manley	86.05	23	eP	P	09 42 45.1	-0.5
	comp=Z,2.8nm,1.0s						
WRH	Wood River Hil	86.88	24	eP	P	09 42 48.1	-1.5
	comp=Z,5.1nm,1.2s						
MDM	Murphy Dome	87.00	23	eP	P	09 42 49.1	-1.2
	comp=Z,2.8nm,1.0s						
IL1	Eielson Array	87.47	24	eP	P	09 42 51.0	-1.6
ILAR	Eielson Array	87.47	24	P	P	09 42 50.3	-2.2
	comp=Z,1.7nm,0.8s,baz=260,slow=4.4,SNR=14						
ILB	Eielson Array	87.47	24	eP	P	09 42 51.0	-1.6
	comp=Z,1.6nm,0.6s						
TOLK	Toolik Lake Re	87.91	20	eP	P	09 42 53.8	-0.8
	comp=Z,3.3nm,1.1s						

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*ISCJB **17** 09:31:28.4±0.4,26°.06N±0°.08×44°.85W±0°.07,h12^{km}, mb4.2/27,MS3.4/17,Error ellipse: s-maj=12.3km s-min=8.7km az=6.9*

*IDC **17** 09:31:28.5±0.8,26°.17N×44°.84W,h0^{km},mb4.0/18, mb1 4.1/18,mb1mx4.0/40,mbtmp4.0/18,MS3.4/17, Ms1 3.4/17,ms1mx3.3/34,Error ellipse: s-maj=24.3km s-min=16.0km az=3.0*

*NEIC **17** 09:31:29.9±0.3,26°.06N×44°.85W,h10^{km},mb4.5/10,Error ellipse: s-maj=10.3km s-min=7.4km az=184.0*

ISC 17 09:31:30.2±0.6**,26°.0N**±0°.1×**44°.85W**±0°.09**,h12^{km},n55, σ1^s.00**/42**,mb4.3**/27**,MS3.4**/17**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	21.23	253	LR	LR	09 42 52.9	
	comp=Z,79nm,21.3s,baz=78,slow=32						
MDP	Montagnes des	22.11	201	LR	LR	09 43 16.5	
	comp=Z,39nm,18.7s,baz=34,slow=32						
BATG	Bathurst New B	27.03	327	eP	P	09 37 13.1	+0.9
	14nm,1.2s						
M54A	Oil Creek Stat	32.54	307	eP	P	09 38 00.5	-0.7
	12nm,1.0s						
SCHQ	Schefferville	33.00	337	LR	LR	09 49 53.0	
	comp=Z,80nm,20.9s,baz=324,slow=34						
ROSC	El Rosal	35.20	238	LR	LR	09 52 52.1	
	comp=Z,56nm,18.8s,baz=80,slow=36						
MDT	Midelt	35.54	69	P	P	09 38 27.3	-0.1
	1.7nm,0.8s,baz=334,slow=13,SNR=4.3						
BDFB	Brasilia	41.53	185	LR	LR	09 53 19.1	
	comp=Z,51nm,20.7s,baz=238,slow=32						
DBIC	Dimbokro	42.69	110	eP	P	09 39 28.9	+1.6
	7.9nm,0.8s						
DBIC	Dimbokro	42.69	110	P	P	09 39 27.4	+0.2
	7.6nm,0.9s,baz=267,slow=8.0,SNR=5.2						
DBIC				LR	LR	09 54 20.5	
	comp=Z,95nm,19.3s,baz=276,slow=32						
H10N2	ASCENSION HYDR	44.76	135	T	T	10 27 28.2	
	baz=320,slow=75,SNR=132						
H10N3	ASCENSION HYDR	44.76	135	T	T	10 27 29.5	
	baz=320,slow=75,SNR=118						
H10N1	ASCENSION HYDR	44.77	135	T	T	10 27 35.4	
	baz=320,slow=75,SNR=165						
TOA1	Torodi Ar. Sit	45.45	97	eP	P	09 39 48.9	-0.6
TOA0	Torodi Ar. Sit	45.46	97	eP	P	09 39 51.4	+1.9
TORD	Torodi Ar. Bea	45.46	97	P	P	09 39 48.9	-0.7
	0.9nm,0.7s,baz=304,slow=8.8,SNR=5.3						
TORD				LR	LR	09 57 30.9	
	comp=Z,74nm,19.1s,baz=310,slow=34						
H10S1	ASCENSION HYDR	45.50	136	T	T	10 28 29.1	
	baz=321,slow=75,SNR=45						
H10S3	ASCENSION HYDR	45.50	136	T	T	10 28 32.8	
	baz=321,slow=75,SNR=42						
H10S2	ASCENSION HYDR	45.52	136	T	T	10 28 33.7	
	baz=321,slow=75,SNR=44						
ULM	Lac du Bonnet	45.74	316	P	P	09 39 51.5	+0.3
	3.3nm,1.0s,baz=84,slow=10,SNR=3.9						
ULM				LR	LR	09 56 29.5	
	comp=Z,68nm,20.0s,baz=74,slow=33						
SCO	Scoresbysund	46.40	10	eP	P	09 39 57.2	+1.0
	4.9nm,0.8s						
WMOK	Wichita Mounta	46.85	294	eP	P	09 40 02.0	+1.7
	4.9nm,1.1s						
KEST	Kesra	47.00	64	P	P	09 40 01.1	-0.5
	4.9nm,0.9s,baz=228,slow=10,SNR=4.8						
KEST				LR	LR	09 57 51.0	
	comp=Z,44nm,20.5s,baz=248,slow=34						
FCC	Fort Churchill	47.26	327	eP	P	09 40 04.3	+1.3
	1.8nm,1.0s						
LPAZ	La Paz	47.77	211	eP	P	09 40 10.1	+1.8
LPAZ	La Paz	47.77	211	P	P	09 40 09.8	+1.6
	3.2nm,1.0s,baz=35,slow=11,SNR=6.0						
LPAZ				LR	LR	09 58 24.4	
	comp=Z,32nm,20.4s,baz=54,slow=34						
SPB	Sao Paulo	49.39	183	eP	P	09 40 18.4	-1.5
	6.6nm,1.1s						
GERES	GERESS Array B	50.38	47	P	P	09 40 26.1	-1.2
	0.5nm,0.8s,baz=260,slow=5.8,SNR=3.9						
NB200	NORSAR Array S	51.27	31	eP	P	09 40 34.1	+0.3
NOA	NORSAR Array B	51.27	31	P	P	09 40 34.1	+0.3
	2.3nm,1.1s,baz=254,slow=7.8,SNR=2.6						
NOA				LR	LR	09 58 27.0	
	comp=Z,28nm,19.5s,baz=245,slow=32						
PB11	IPOC Station P	51.50	210	eP	P	09 40 35.8	-0.2
	19nm,0.8s						
LTX	Lajitas	51.72	288	eP	P	09 40 37.0	-0.7
TXAR	Lajitas Array	51.72	288	P	P	09 40 37.0	-0.7
	0.3nm,0.8s,baz=77,slow=8.4,SNR=3.1						
TXAR				LR	LR	10 02 44.3	
	comp=Z,28nm,18.1s,baz=0.0,slow=36						
PD31	Pinedale Array	54.66	305	eP	P	09 40 59.3	-0.1
	3.7nm,1.1s						
PDAR	Pinedale Array	54.66	305	P	P	09 40 59.0	-0.4
	1.7nm,1.1s,baz=80,slow=7.4,SNR=6.1						
PDAR				LR	LR	10 02 04.6	
	comp=Z,66nm,20.7s,baz=94,slow=34						
YHB	Horse Butte	55.70	308	eP	P	09 41 05.6	-1.2
	6.8nm,0.9s						
YKA	Yellowknife Ar	57.92	329	P	P	09 41 20.6	-1.3
	0.4nm,0.7s,baz=92,slow=7.6,SNR=8.5						
YKA				LR	LR	10 05 12.9	
	comp=Z,9.9nm,19.7s,baz=76,slow=35						
BUR04	Bucovina Ar. S	58.07	49	eP	P	09 41 24.6	+1.2
FIA0	FINESS Array S	58.40	32	eP	P	09 41 24.2	-1.1
FINES	FINESS Array B	58.40	32	P	P	09 41 24.2	-1.1
	2.2nm,0.9s,baz=280,slow=8.2,SNR=3.9						
ARA0	ARCESS Array S	59.01	23	eP	P	09 41 28.7	-0.8
ARCES	ARCESS Array B	59.01	23	P	P	09 41 28.7	-0.7
	1.4nm,0.7s,baz=272,slow=7.8,SNR=4.5						
AKASG	Malin Array Be	60.41	45	P	P	09 41 38.3	-1.1
	1.9nm,0.7s,baz=273,slow=6.2,SNR=8.6						
NVAR	Mina Array Bea	61.87	301	LR	LR	10 07 07.0	
	comp=Z,85nm,19.7s,baz=22,slow=35						
SNCC	San Nicolas Is	64.06	296	eP	P	09 42 05.1	+0.9
	65nm,1.0s						
BR101	Keskin Array S	65.40	56	eP	P	09 42 13.3	+0.3
BRTR	Keskin Array B	65.40	56	P	P	09 42 13.3	+0.3
	2.2nm,0.9s,baz=274,slow=5.5,SNR=9.4						
BRTR				LR	LR	10 08 48.4	
	comp=Z,18nm,18.5s,baz=266,slow=34						
INK	Inuvik	65.61	336	P	P	09 42 13.5	-0.2
	0.9nm,0.9s,baz=40,slow=9.5,SNR=3.2						
KBZ	Khabaz	70.96	50	P	P	09 42 48.4	+0.7
	2.7nm,0.9s,baz=190,slow=6.8,SNR=3.5						
ILAR	Eielson Array	71.70	334	LR	LR	10 13 15.2	
	comp=Z,54nm,20.0s,baz=248,slow=35						
ZAA1	Zalesovo Array	89.28	27	eP	P	09 44 25.9	-0.3
ZALV	Zalesovo Beam	89.28	27	P	P	09 44 25.9	-0.3
	0.4nm,0.3s,baz=311,slow=7.5,SNR=4.9						
HNR	Honiara	151.27	301	ePKPdf	PKPdf	09 51 18.3	-0.2
WR1	Warramunga Arr	173.90	7	ePKPab	PKPab	09 53 09.4	-1.2
WRA	Warramunga Arr	173.90	7	PKPab	PKPab	09 53 09.4	-1.2
	0.7nm,1.1s,baz=353,slow=5.4,SNR=3.8						

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*TIF **17** 09:47:35.4,41°.53N×47°.25E,h45^{km}±1^{km}*

*MOS **17** 09:47:36.7±0.0,41°.30N×46°.95E,h9^{km},MPVA3.3*

*ISCJB **17** 09:47:37.0±1.3,41°.25N±0°.07×46°.93E±0°.06,h7^{km}±12^{km}, Error ellipse: s-maj=12.7km s-min=5.9km az=25.2*

*NORS **17** 09:47:37.4±0.0,41°.39N×47°.09E,h1^{km},MPVA3.0*

*DRS **17** 09:47:38.0±0.0,41°.48N×47°.09E,h5^{km}*

ISC 17 09:47:37.2±1.9**,41°.28N**±0°.07×**46°.96E**±0°.03**,h6^{km}**±13^{km}**, n12,σ1^s.31**/23**,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKT	Akhty	0.61	70	ePg	Pn	09 47 49.8	-2.8
AKT				eSg	Sb	09 47 59.1	-0.3
DDFL	Dedoflistskaro	0.66	285	P	Pb	09 47 52.2	+1.1
LGD	Lagodekhi	0.78	316	P	Pg	09 47 51.9	-0.2
LGD				S	Sb	09 48 03.8	-0.2
LGD	Lagodekhi	0.78	316	ePg	Pg	09 47 51.9	-0.2
LGD				eSg	Sb	09 48 03.8	-0.2
KMKR	Kumukh	0.86	7	ePg	Pn	09 47 54.0	-2.1
KMKR				eSg	Sn	09 48 06.5	-2.7
KSMR	Kasumkent	0.94	69	ePg	Pn	09 47 57.0	0.0
KSMR				i Sg	Sn	09 48 12.5	+1.7
GNBR	Gunib	1.11	0	ePg	Pn	09 47 59.5	+0.1
GNBR				eSg	Sn	09 48 15.9	+0.7
DRN	Derbent	1.27	53	ePg	Pn	09 48 01.9	+0.4
DRN				eSg	Sn	09 48 19.8	+0.9
BTLR	Botlikh	1.49	339	ePg	Pg	09 48 06.0	+0.2
BTLR				eSg	Sn	09 48 26.8	+2.3
BTNK	Botanikuri	1.68	285	P	Pn	09 48 06.1	-1.0
BTNK				S	Sn	09 48 29.0	+0.1
KZRT	Kazreti	1.93	274	P	Pn	09 48 09.6	-1.1
KZRT				S	Sn	09 48 35.1	-0.2
TRLG	Trialeti	2.17	278	P	Pn	09 48 13.9	-0.1
TRLG				S	Sn	09 48 41.3	0.0

MEX 17 09:57:53.2±0.5**,16°.33N**×**98°.24W,h12^{km}**±2^{km}**,MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.13	60	i P	Pg	09 57 55.7	-0.8
PNIG				i S	Sg	09 57 58.4	-0.5
VHO	Vista Hermosa	1.63	63	eP	Pn	09 58 18.5	-3.3
VHO				eS	Sn	09 58 38.0	-4.8

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*IDC **17** 09:59:36.9±1.4,25°.48S×176°.52W,h0^{km},mb4.2/5, mb1 4.3/5,mb1mx3.9/37,mbtmp4.2/5,MS3.1/3,Ms1 3.1/3, ms1mx2.8/36,Error ellipse: s-maj=56.6km s-min=34.1km az=172.0*

*ISCJB **17** 09:59:40.3±0.7,25°.28S±0°.09×176°.5W±0°.1,h36^{km}, mb4.4/16,MS3.2/2,Error ellipse: s-maj=15.3km s-min=10.8km az=39.8*

*NEIC **17** 09:59:42.3±1.5,25°.33S×176°.45W,h40^{km}±14^{km},mb4.2/11, Error ellipse: s-maj=17.2km s-min=10.8km az=136.0*

ISC 17 09:59:42.1±0.6**,25°.4S**±0°.1×**176°.4W**±0°.1**,h36^{km},n45, σ1^s.30**/36**,mb4.3**/16**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.09	199	ePn	Pn	10 00 43.7	+1.6
NIUE	Niue	8.68	45	ePn	Pn	10 01 44.5	-0.6
MSVF	Nonsavu	9.18	325	ePn	Pn	10 01 59.3	+7.2
OUZ	Omahuta	13.06	219	ePn	P	10 02 52.3	-2.6
URZ	Urewera	13.97	202	ePn	P	10 03 03.8	-1.2
RAR	Rarotonga	15.84	78	LR	LR	10 07 39.8	
	comp=Z,59nm,21.7s,baz=308,slow=30						
DZM	Mont Dzumac	16.04	278	eP	Pn	10 03 25.5	+0.5
	52nm,1.2s						
DZM				eLR	LR	10 07 09.5	
	comp=Z,156nm,24.1s						
ODZ	Otahua Downs	22.24	205	eP	P	10 04 35.5	-0.1
	2.6nm,1.0s						
WHZ	Wether Hill Ro	24.02	208	eP	P	10 04 54.3	+0.8
	6.3nm,1.1s						
TBI	Tubuai	24.62	91	eT	T	10 30 11.4	
	2.9nm,0.2s						
PAE	Paea	26.08	78	eT	T	10 32 02.2	
	1.3nm,0.2s						
PPT2	Papeete2	26.11	78	eLR	LR	10 11 46.9	
	comp=Z,79nm,24.0s						
PPT	Papeete	26.12	78	LR	LR	10 15 06.9	
	comp=Z,25nm,18.5s,baz=256,slow=36						
EIDS	Eidsvold	29.33	263	eP	P	10 05 43.3	+1.8
	5.8nm,0.8s						
CTA	Charters Tower	34.75	271	P	P	10 06 29.5	+0.3
	1.6nm,0.5s,baz=90,slow=12,SNR=3.7						
CTAO	Charters Tower	34.75	271	eP	P	10 06 30.4	+1.2
	3.8nm,1.0s						
STKA	Stephens Creek	37.25	250	eP	P	10 06 50.8	+0.4
	0.4nm,0.7s						
STKA	Stephens Creek	37.25	250	P	P	10 06 50.3	-0.2
	1.0nm,0.4s,baz=7.6,slow=24,SNR=6.4						
RKT	Rikitea	37.75	96	eT	T	10 46 35.1	
	0.7nm,0.2s						
TAOE	Nuku Hiva Isla	38.19	71	eLR	LR	10 17 18.7	
	comp=Z,62nm,26.4s						
BBOO	Buckleboo	41.91	248	eP	P	10 07 27.7	-1.5
	4.7nm,1.0s						
AS01	Alice Springs	44.98	261	eP	P	10 07 53.5	-0.7
AS31	Alice Springs	45.02	261	eP	P	10 07 53.8	-0.7
	1.6nm,0.6s						
ASAR	Alice Springs	45.02	261	P	P	10 07 52.7	-1.8
	3.3nm,0.6s,baz=90,slow=7.0,SNR=66						
WB2	Warramunga Arr	45.56	266	eP	P	10 07 58.6	-0.1
	3.8nm,0.8s						
WR1	Warramunga Arr	45.57	266	eP	P	10 07 56.4	-2.4
	4.5nm,1.1s						
WRA	Warramunga Arr	45.57	266	P	P	10 07 56.4	-2.4
	0.7nm,0.5s,baz=103,slow=8.1,SNR=9.2						
FORT	Forrest	48.88	250	eP	P	10 08 22.9	-1.6
	12nm,0.8s						
QSPA	South Pole Qui	64.72	180	eP	P	10 10 17.2	+0.7
	2.8nm,0.9s						
ADK	Adak	76.92	360	eP	P	10 11 31.7	+1.4
	54nm,1.1s						
KLR	Kul'dur	87.44	329	LR	LR	10 44 28.5	
	comp=Z,24nm,20.4s,baz=53,slow=31						
HMT	Hamilton	89.35	15	eP	P	10 12 34.5	+0.2
	53nm,0.7s						
CMAR	Chiang Mai Arr	93.09	289	P	P	10 12 54.6	+2.0
	0.6nm,0.3s,baz=127,slow=3.0,SNR=6.7						
MK01	Makanchi Array	115.54	312	ePKPdf	PKiKP	10 18 21.4	+1.3
NB201	NORSAR Array S	143.94	354	ePKPdf	PKPdf	10 19 12.4	-0.7
NB2	NORSAR Subarra	143.96	354	PKP	PKPdf	10 19 12.2	-1.0
	comp=Z,0.6nm,0.6s,baz=12,slow=3.5						
NB200	NORSAR Array S	143.96	354	ePKPdf	PKPdf	10 19 11.7	-1.5
NOA	NORSAR Array B	143.96	354	PKP	PKPdf	10 19 11.7	-1.5
	comp=Z,1.2nm,0.8s,baz=2.0,slow=2.5,SNR=4.1						
AKASG	Malin Array Be	147.94	329	PKPbc	PKPbc	10 19 22.5	-0.8
	comp=Z,0.2nm,0.3s,baz=42,slow=3.7,SNR=2.4						
BR101	Keskin Array S	151.06	307	ePKPbc	PKiKP	10 19 32.7	+0.6
BRTR	Keskin Array B	151.06	307	PKPbc	PKiKP	10 19 32.7	+0.6
	comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=3.1						
GRA1	Grafenberg Arr	155.00	348	ePKPdf	PKPdf	10 19 29.7	-1.3
GRFO	Grafenberg	155.00	348	ePKPdf	PKPdf	10 19 29.6	-1.4
TORD	Torodi Ar. Bea	167.71	171	PKPab	PKPab	10 20 51.3	-0.2
	comp=Z,0.9nm,1.0s,baz=204,slow=3.2,SNR=3.6						
TOA1	Torodi Ar. Sit	167.72	171	ePKPab	PKPab	10 20 51.3	-0.2

IDC 17 10:03:27.3±10.0**,10°.79S**×**167°.25E,h0^{km},mb3.5**/4**, mb1 3.6**/4**,mb1mx3.4**/45**,mbtmp3.5**/4**,Error ellipse: s-maj=303.8km s-min=38.5km az=122.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.96	250	P	P	10 10 04.1	0.0
	0.5nm,0.8s,baz=82,slow=9.1,SNR=3.0						
ASAR	Alice Springs	34.23	244	P	P	10 10 15.0	-0.1
	0.2nm,0.7s,baz=64,slow=11,SNR=3.3						
SONM	Songino Array	79.34	323	P	P	10 15 35.3	+0.2
	0.3nm,0.8s,baz=131,slow=4.0,SNR=2.5						
MKAR	Makanchi Array	94.35	317	P	P	10 16 48.7	-0.3
	0.4nm,0.9s,baz=108,slow=4.8,SNR=3.4						

IDC 17 10:11:24.7±1.2**,1°.34S**×**130°.20E,h0^{km},mb3.5**/3**, mb1 3.5**/4**,mb1mx3.4**/37**,mbtmp3.4**/4**,ML3.4**/1**,Error ellipse: s-maj=22.5km s-min=13.5km az=157.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.16	67	Pg	Pg	10 11 46.3	-0.7
	37nm,0.3s,baz=262,slow=21,SNR=116						
SIJI				Lg	Lg	10 12 04.4	
	52nm,0.3s,baz=147,slow=20,SNR=31						
WRA	Warramunga Arr	18.93	168	P	P	10 15 46.6	-0.8
	0.1nm,0.3s,baz=355,slow=12,SNR=6.9						
ASAR	Alice Springs	22.49	171	P	P	10 16 26.6	+0.6
	0.5nm,0.6s,baz=357,slow=11,SNR=13						
SONM	Songino Array	53.19	340	P	P	10 20 44.1	-0.7
	0.3nm,0.6s,baz=140,slow=7.0,SNR=2.8						
MKAR	Makanchi Array	63.66	325	P	P	10 21 58.1	+0.1
	1.1nm,0.8s,baz=109,slow=8.0,SNR=5.6						

IDC 17 10:23:33.1±1.4**,4°.32S**×**151°.92E,h0^{km},mb3.5**/5**, mb1 3.8**/7**,mb1mx3.6**/38**,mbtmp3.8**/7**,ML4.5**/2**,Error ellipse: s-maj=34.6km s-min=29.3km az=96.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	9.45	123	Pn	Pn	10 25 51.7	+1.0
	12nm,0.3s,baz=225,slow=19,SNR=5.3						
JAY	Jayapura	11.33	279	Pn	Pn	10 26 16.4	-0.1
	1.1nm,0.3s,baz=104,slow=8.3,SNR=5.9						
WRA	Warramunga Arr	23.12	226	P	P	10 28 42.0	+1.0
	0.3nm,0.7s,baz=52,slow=9.9,SNR=6.5						
ASAR	Alice Springs	25.93	220	P	P	10 29 06.6	-0.7
	0.2nm,0.6s,baz=59,slow=9.4,SNR=5.9						
MKAR	Makanchi Array	79.38	319	P	P	10 35 41.8	+0.7
	0.6nm,0.9s,baz=104,slow=6.1,SNR=3.2						
ZALV	Zalesovo Beam	80.26	326	P	P	10 35 46.4	+0.7
	0.9nm,0.7s,baz=128,slow=4.9,SNR=3.6						
BVAR	Borovoye Array	88.33	323	P	P	10 36 24.9	-1.8
	0.1nm,0.3s,baz=126,slow=4.1,SNR=2.2						
TORD	Torodi Ar. Bea	149.32	289	PKPbc	PKPbc	10 43 24.3	-0.8

0.4nm,0.7s,baz=64,slow=3.4,SNR=3.7

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*ISCJB **17** 10:33:39.5±0.7, 67°.51N±0°.05×142°.6E±0°.1, h10^{km}, mb3.4/5, MS4.1/2, Error ellipse: s-maj=8.5km s-min=5.7km az=30.8*
*IDC **17** 10:33:41.4±1.2, 67°.29N×142°.32E, h0^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.3/48, mbtmp3.4/6, ML2.8/1, MS4.2/2, Ms1 4.2/2, ms1mx2.7/38, Error ellipse: s-maj=46.1km s-min=19.3km az=168.0*
*YARS **17** 10:33:42.0, 67°.64N×142°.42E, h10^{km}*
ISC 17 10:33:42.2±0.8**, 67°.54N**±0°.04×**142°.22E**±0°.05**, h10**^{km}**, n13,** σ**1^{s}73**/28**, mb3.3**/5**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	1.15	160	*e*Pg	Pn	10 34 04.8	+0.5
MOMR				*e*Pg	Pn	10 34 04.8	+0.5
MOMR				*e*Pg	Pn	10 34 04.8	+0.5
	96nm,0.3s						
MOMR				*e*Sg	Sn	10 34 20.4	+0.4
	832nm,0.3s						
MOMR				*e*Sg	Sn	10 34 20.4	+0.4
	482nm,0.3s						
MOMR				*e*Sg	Sn	10 34 20.4	+0.4
YBGR	**Belaya Gora**	1.79	54	*e*Pg	Pn	10 34 12.2	-1.0
YBGR				*e*Pg	Pn	10 34 12.2	-1.0
	691nm,0.5s						
YBGR				*e*Pg	Pn	10 34 12.2	-1.0
YBGR				*e*Sg	Sn	10 34 34.2	-1.7
	1µm,0.3s						
YBGR				*e*Sg	Sn	10 34 34.2	-1.7
YBGR				*e*Sg	Sn	10 34 34.2	-1.7
	256nm,0.1s						
ATKR	**Artyk**	3.58	159	*i* Pg	Pg	10 34 48.4	-2.3
	38nm,0.4s						
ATKR				*e*Sg	Sg	10 35 36.5	-0.5
ATKR				*e*Sg	Sg	10 35 36.5	-0.5
	84nm,0.2s						
ATKR				*e*Sg	Sg	10 35 36.5	-0.5
	301nm,0.3s						
SEY	**Seymchan**	6.29	133	Pn	Pn	10 35 12.9	-1.9
	0.2nm,0.3s,baz=343,slow=19,SNR=1.8						
SEY				Lg	Lg	10 36 58.7	
	1.1nm,0.3s,baz=21,slow=6.2,SNR=4.6						
YAK	**Yakutsk**	7.69	230	*e*Pg	Pg	10 36 03.4	-5.8
	57nm,0.4s						
YAK				*e*Pg	Pg	10 36 03.4	-5.8
YAK				*e*Pg	Pg	10 36 03.4	-5.8
YAK				*e*Sn	Sn	10 37 02.5	+1.6
YAK				*e*Sn	Sn	10 37 02.5	+1.6
YAK				*e*Sn	Sn	10 37 02.5	+1.6
YAK				*e*Sg	Sg	10 37 45.5	-3.0
YAK				*e*Sg	Sg	10 37 45.5	-3.0
YAK				*e*Sg	Sg	10 37 45.5	-3.0
	317nm,1.4s						
MA2	**Magadan**	8.85	151	Lg	Lg	10 38 21.5	
	0.4nm,0.3s,baz=353,slow=13,SNR=4.7						
ASAJ	**Asahikawa**	23.48	179	LR	LR	10 47 49.2	
	comp=Z,900nm,20.4s,baz=195,slow=36						
ILAR	**Eielson Array**	27.37	62	P	P	10 39 27.3	+0.3
	0.4nm,0.8s,baz=301,slow=8.5,SNR=5.1						
KURBB	**Kurchatov Arra**	34.90	274	P	P	10 40 34.8	+1.5
	0.4nm,0.2s,baz=36,slow=8.9,SNR=2.1						
MKAR	**Makanchi Array**	36.57	266	P	P	10 40 48.4	+0.6
	0.5nm,0.5s,baz=42,slow=7.5,SNR=11						
YKA	**Yellowknife Ar**	39.01	46	P	P	10 41 11.9	+3.7
	0.2nm,0.7s,baz=322,slow=8.2,SNR=4.8						
GUMO	**Guam**	53.93	177	LR	LR	11 06 28.9	
	comp=Z,132nm,18.1s,baz=20,slow=37						
PDAR	**Pinedale Array**	57.58	56	P	P	10 43 32.4	+0.5
	0.2nm,0.6s,baz=319,slow=4.0,SNR=3.1						

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*ISCJB **17** 10:45:29.0±0.3, 11°.95S±0°.04×165°.72E±0°.06, h10^{km}, mb4.6/40, MS3.7/4, Error ellipse: s-maj=8.5km s-min=5.2km az=153.8*
*IDC **17** 10:45:28.4±0.8, 11°.89S×165°.82E, h0^{km}, mb4.3/17, mb1 4.4/19, mb1mx4.2/50, mbtmp4.4/19, ML4.4/2, MS3.8/5, Ms1 3.8/5, ms1mx3.3/30, Error ellipse: s-maj=23.2km s-min=15.9km az=89.0*
*NEIC **17** 10:45:30.7±0.3, 11°.89S×165°.76E, h10^{km}, mb4.6/27, Error ellipse: s-maj=9.0km s-min=5.8km az=74.0*
ISC 17 10:45:30.9±0.4**, 12°.01S**±0°.06×**165°.74E**±0°.07**, h10**^{km}**, n78,** σ**1^{s}54**/79**, mb4.5**/40**, MS3.8**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	6.24	294	*e*P	Pn	10 47 04.0	+0.9
HNR				*e*S	Sn	10 48 16.0	+1.4
HNR	**Honiara**	6.24	294	*e*Pn	Pn	10 47 04.8	+1.7
HNR				*e*Sn	Sn	10 48 13.2	-1.3
HNR	**Honiara**	6.24	294	Pn	Pn	10 47 04.4	+1.3
	21nm,0.3s,baz=126,slow=2.4,SNR=9.2						
HNR				Sn	Sn	10 48 13.2	-1.3
	baz=90,slow=20,SNR=4.0						
MARNC	**Mare, Loyalty**	9.67	167	*e*Pn	Pn	10 47 51.1	+0.9
DZM	**Mont Dzumac**	10.03	176	*e*Pn	Pn	10 47 56.2	+1.0
	21nm,0.6s						
DZM				*e*LR	LR	10 50 30.4	
	comp=Z,356nm,23.9s						
DZM	**Mont Dzumac**	10.03	176	*e*Pn	Pn	10 47 56.3	+1.0
DZM				Sn	Sn	10 49 43.3	-4.6
DZM	**Mont Dzumac**	10.03	176	Pn	Pn	10 47 55.9	+0.7
	1.5nm,0.3s,baz=312,slow=12,SNR=16						
DZM				Sn	Sn	10 49 43.3	-4.6
	0.4nm,0.3s,baz=284,slow=4.2,SNR=1.9						
DZM				LR	LR	10 51 52.3	
	comp=Z,460nm,18.0s,baz=19,slow=38						
ONTNC	**Ouen Toro**	10.27	176	*e*Pn	Pn	10 47 59.3	+1.0
OUENC	**Ouen Island, N**	10.41	174	*e*Pn	Pn	10 48 02.3	+2.0
PINNC	**Pines Island,**	10.67	171	*e*Pn	Pn	10 48 07.1	+3.3
PATS	**Pohnpei**	20.13	338	*e*P	Pn	10 50 07.3	+0.3
	131nm,1.1s						
CTA	**Charters Tower**	20.36	244	P	P	10 50 09.2	+1.4
	7.0nm,0.7s,baz=70,slow=13,SNR=7.8						
CTAO	**Charters Tower**	20.36	244	*e*P	Pn	10 50 10.1	+0.3
	6.9nm,0.7s						
LHI	**Lord Howe Isla**	20.37	197	*e*P	P	10 50 06.5	-1.2
	69nm,1.0s						
COEN	**Coen**	22.07	262	*e*P	P	10 50 28.2	+1.9
	12nm,0.8s						
ARMA	**Armidale**	22.51	213	*e*P	P	10 50 32.7	+1.8
	30nm,0.8s						
RAO	**Raoul Island**	22.93	141	*e*P	P	10 50 37.1	+1.8
	313nm,0.4s						
OUZ	**Omahuta**	24.18	164	*e*P	P	10 50 49.9	+2.4
	15nm,1.1s						
URZ	**Urewera**	28.04	161	P	P	10 51 22.8	+0.4
	4.4nm,0.8s,baz=359,slow=17,SNR=3.2						
BKZ	**Black Stump Fm**	28.68	162	*e*P	P	10 51 28.2	+0.1
	12nm,1.1s						
STKA	**Stephens Creek**	29.75	225	*e*P	P	10 51 38.8	+1.2
	1.3nm,0.8s						
STKA	**Stephens Creek**	29.75	225	P	P	10 51 36.9	-0.8
	4.4nm,0.8s,baz=13,slow=10,SNR=6.9						
STKA				LR	LR	11 03 41.1	
	comp=Z,206nm,18.2s,baz=27,slow=37						
THZ	**Tophouse**	30.30	169	*e*P	P	10 51 44.8	+2.3
	16nm,1.2s						
WRAB	**Tennant Creek**	31.15	251	*e*P	P	10 51 48.4	-1.8
	10nm,0.8s						
WB2	**Warramunga Arr**	31.15	251	*e*P	P	10 51 50.3	+0.2
	5.0nm,0.8s						
WR1	**Warramunga Arr**	31.16	251	*e*P	P	10 51 49.7	-0.6
	5.2nm,0.8s						
WR1				*e*PcP	PcP	10 54 45.8	+0.3
WRA	**Warramunga Arr**	31.16	251	P	P	10 51 49.7	-0.6
	2.6nm,0.6s,baz=83,slow=8.9,SNR=35						
WRA				PcP	PcP	10 54 45.8	+0.3
	0.9nm,1.1s,baz=74,slow=3.4,SNR=3.7						
FOZ	**Fox Glacier**	31.61	174	*e*P	P	10 51 55.2	+1.4
	16nm,0.9s						
RPZ	**Rata Peaks**	31.92	173	*e*P	P	10 51 57.4	+0.7
	21nm,0.8s						
RPZ	**Rata Peaks**	31.92	173	P	P	10 51 57.3	+0.6
	20nm,0.8s,baz=315,slow=2.7,SNR=12						
AS01	**Alice Springs**	32.32	245	*e*P	P	10 52 00.5	0.0
AS31	**Alice Springs**	32.36	245	*e*P	P	10 52 00.5	-0.4
	1.8nm,0.8s						
ASAR	**Alice Springs**	32.37	245	P	P	10 52 00.0	-0.9
	4.5nm,0.7s,baz=71,slow=9.4,SNR=83						
ASAR				PcP	PcP	10 54 48.0	-0.7
	0.5nm,0.8s,baz=64,slow=4.2,SNR=3.9						
ASAR				LR	LR	11 05 00.3	
	comp=Z,185nm,18.8s,baz=82,slow=36						
MLZ	**Mavora Lakes**	33.31	177	*e*P	P	10 52 09.6	+0.8
	4.8nm,0.9s						
WHZ	**Wether Hill Ro**	33.82	177	*e*P	P	10 52 13.2	-0.1
	16nm,1.1s						
BBOO	**Buckleboo**	34.17	228	*e*P	P	10 52 16.5	0.0
	4.6nm,0.7s						
SIJI	**Sorong**	35.94	285	LR	LR	11 09 15.6	
	comp=Z,121nm,18.3s,baz=149,slow=40						
FITZ	**Fitzroy Crossi**	39.13	256	*e*P	P	10 52 59.3	+0.4
	5.1nm,0.9s						
FORT	**Forrest**	39.49	236	*e*P	P	10 53 02.2	+0.4
	26nm,0.9s						
BATI	**Baumata**	41.30	268	P	P	10 53 17.4	+0.4
	25nm,0.8s,baz=137,slow=6.1,SNR=2.1						
PPT	**Papeete**	43.48	103	LR	LR	11 07 36.6	
	comp=Z,78nm,21.2s,baz=321,slow=31						
PPT2	**Papeete2**	43.48	103	*e*LR	LR	11 05 57.7	
	comp=Z,153nm,26.0s						
TBI	**Tubuai**	43.98	111	*e*LR	LR	11 06 07.3	
	comp=Z,87nm,23.0s						
MBWA	**Marble Bar**	44.89	252	*e*P	P	10 53 46.9	+0.9
	16nm,1.1s						
MHA	**Mahukona**	49.48	50	*e*P	P	10 54 19.2	-2.6
TAOE	**Nuku Hiva Isla**	53.24	92	*e*S	S	11 02 23.4	+1.4
	78nm,27.6s						
TAOE				*e*LR	LR	11 10 18.3	
	comp=Z,93nm,22.0s						
MJAR	**Matsushiro Arr**	54.82	333	P	P	10 54 58.5	-2.8
	1.4nm,0.9s,baz=172,slow=9.6,SNR=4.9						
MAJO	**Matsushiro**	54.82	333	*e*P	P	10 55 00.7	-0.6
	4.8nm,1.0s						
MJB9	**Matsu-Tunnel**	54.82	333	*e*P	P	10 55 00.5	-0.8
	5.2nm,1.1s						
KSRS	**Korea Array**	60.66	326	P	P	10 55 41.4	-0.9
	0.8nm,0.7s,baz=135,slow=6.7,SNR=3.0						
KSAR	**Wonju Array Be**	60.68	326	P	P	10 55 41.4	-1.0
USRK	**Ussuriysk Ar.**	63.80	334	P	P	10 56 02.4	-0.8
	4.0nm,1.0s,baz=153,slow=7.8,SNR=4.2						
SMY	**Shemya**	64.88	6	*e*P	P	10 56 11.3	+1.3
	212nm,1.1s						
CHBT	**CHBT**	67.55	289	P	P	10 56 33.3	+5.3
	114nm,1.1s						
KLR	**Kul'dur**	67.93	337	P	P	10 56 29.6	-0.1
	1.5nm,0.8s,baz=134,slow=5.1,SNR=3.6						
PSI	**Prapat**	67.99	278	P	P	10 56 30.5	-0.6
	3.4nm,0.4s,baz=180,slow=5.0,SNR=4.0						
CMAR	**Chiang Mai Arr**	72.49	294	P	P	10 56 58.2	-0.1
	1.5nm,0.4s,baz=124,slow=3.9,SNR=7.1						
QSPA	**South Pole Qui**	78.00	180	*e*P	P	10 57 28.9	-0.5
	4.7nm,0.9s						
SONA0	**Songino Array**	79.44	324	*e*P	P	10 57 36.6	-0.9
SONM	**Songino Array**	79.44	324	P	P	10 57 36.6	-0.9
	1.1nm,0.9s,baz=136,slow=5.1,SNR=6.7						
SONA1	**Songino Array**	79.44	324	*e*P	P	10 57 39.0	+1.4
ILAR	**Eielson Array**	84.42	18	P	P	10 58 01.3	-2.0
	0.3nm,0.9s,baz=235,slow=6.1,SNR=3.0						
BEKR	**Beckworth**	85.59	48	*e*P	P	10 58 13.2	+3.2
	7.3nm,0.6s						
MK01	**Makanchi Array**	94.20	317	*e*P	P	10 58 49.6	-0.6
MK31	**Makanchi Array**	94.22	317	*e*P	P	10 58 50.0	-0.3
	2.1nm,0.9s						
MK32	**Makanchi Array**	94.22	317	*e*P	P	10 58 49.5	-0.7
MKAR	**Makanchi Array**	94.22	317	*e*P	P	10 58 50.3	0.0
	14nm,1.0s						
MKAR	**Makanchi Array**	94.22	317	P	P	10 58 49.5	-0.7
	1.1nm,0.7s,baz=95,slow=6.0,SNR=11						
ZALV	**Zalesovo Beam**	94.33	324	P	P	10 58 49.3	-1.3
	0.4nm,0.3s,baz=129,slow=4.0,SNR=6.5						
ZAA1	**Zalesovo Array**	94.33	324	*e*P	P	10 58 49.3	-1.3
ARA0	**ARCESS Array S**	117.26	345	*e*PKPdf	PKPdf	11 04 14.1	-2.0
ARCES	**ARCESS Array B**	117.26	345	PKP	PKPdf	11 04 14.1	-2.0
	1.3nm,0.8s,baz=18,slow=5.1,SNR=4.5						
BANI	**BANI**	125.67	76	*e*PKPdf	PKiKP	11 04 35.0	+0.8
NC405	**NORSAR Array S**	127.43	344	*e*PKPdf	PKiKP	11 04 38.2	+1.9
NB201	**NORSAR Array S**	127.59	345	*e*PKPdf	PKiKP	11 04 38.2	+1.5
GERES	**GERESS Array B**	136.56	333	PKP	PKPdf	11 04 53.1	-0.3
	0.2nm,0.5s,baz=346,slow=2.0,SNR=2.6						
KEST	**Kesra**	148.17	322	PKPbc	PKPdf	11 05 15.7	+1.3
	3.5nm,0.8s,baz=9.4,slow=4.7,SNR=4.9						
ESDC	**Sonseca Array**	150.97	343	PKPab	PKPab	11 05 28.4	-3.3
	0.3nm,0.5s,baz=321,slow=1.8,SNR=3.7						

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*ISCJB **17** 10:46:02.5±0.4, 15°.08S±0°.09×173°.85W±0°.09, h10^{km}, mb4.2/16, Error ellipse: s-maj=14.8km s-min=10.4km az=137.6*
*IDC **17** 10:46:02.7±1.4, 15°.05S×173°.85W, h0^{km}, mb3.9/8, mb1 4.2/8, mb1mx3.9/41, mbtmp3.9/8, MS3.0/1, Ms1 3.0/1, ms1mx2.6/24, Error ellipse: s-maj=66.6km s-min=21.5km az=150.0*
*NEIC **17** 10:46:04.5±0.3, 15°.07S×173°.83W, h10^{km}, mb4.2/8, Error ellipse: s-maj=12.0km s-min=8.3km az=134.0*
ISC 17 10:46:04.3±0.6**, 15°.1S**±0°.1×**173°.8W**±0°.1**, h10**^{km}**, n29,** σ**0^{s}91**/28**, mb4.2**/16**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	5.44	138	*e*Pn	Pn	10 47 24.4	-1.2
NIUE				*e*Sn	Sn	10 48 18.5	-10
RAR	**Rarotonga**	14.66	117	LR	LR	10 52 40.9	
	comp=Z,58nm,21.7s,baz=220,slow=27						
WHZ	**Wether Hill Ro**	34.36	203	*e*P	P	10 52 53.1	+1.7
CAN	**Canberra**	38.94	232	*e*P	P	10 53 30.3	-0.3
	8.1nm,1.1s						
MCQ	**Macquarie Isla**	44.71	202	*e*P	P	10 54 18.4	+0.9
	117nm,1.1s						
BBOO	**Buckleboo**	48.66	239	*e*P	P	10 54 48.0	-0.7
	2.1nm,0.8s						
WB2	**Warramunga Arr**	49.54	257	*e*P	P	10 54 55.4	-0.4
WR1	**Warramunga Arr**	49.55	257	*e*P	P	10 54 55.1	-0.7
	3.6nm,1.1s						
WRA	**Warramunga Arr**	49.55	257	P	P	10 54 55.1	-0.7
	0.9nm,0.4s,baz=91,slow=7.0,SNR=22						
AS01	**Alice Springs**	49.81	252	*e*P	P	10 54 57.0	-0.8
AS31	**Alice Springs**	49.85	252	*e*P	P	10 54 57.6	-0.5
	1.8nm,0.8s						
ASAR	**Alice Springs**	49.85	252	P	P	10 54 57.5	-0.7
	6.8nm,0.7s,baz=87,slow=8.1,SNR=43						
PETK	**Petropavlovsk-**	72.19	342	P	P	10 57 29.2	-0.1
	5.8nm,0.9s,baz=139,slow=9.5,SNR=2.9						
PEA1	**Petropavlovsk-**	72.20	342	*e*P	P	10 57 29.2	-0.1
NVAR	**Mina Array Bea**	74.33	42	P	P	10 57 43.5	+1.0
	0.4nm,0.7s,baz=246,slow=5.8,SNR=3.3						
DIB	**Dawson Inlet,**	76.69	24	*e*P	P	10 57 57.1	+1.7
	24nm,1.2s						
SUA	**Susitna One**	78.44	11	*e*P	P	10 58 03.6	-1.6
	1.1nm,0.7s						
SCM	**Sheep Creek Mo**	79.45	12	*e*P	P	10 58 11.2	+0.5
	7.7nm,1.0s						
LTX	**Lajitas**	80.74	56	*e*P	P	10 58 18.8	+0.4
TXAR	**Lajitas Array**	80.74	56	P	P	10 58 18.8	+0.4
	0.2nm,0.7s,baz=225,slow=8.9,SNR=2.4						
ILAR	**Eielson Array**	82.19	11	P	P	10 58 25.1	0.0
	1.2nm,0.9s,baz=214,slow=5.7,SNR=5.3						
ILB	**Eielson Array**	82.19	11	*e*P	P	10 58 26.1	+0.9
	1.3nm,1.0s						
PDAR	**Pinedale Array**	82.27	42	P	P	10 58 25.7	-0.6
	0.3nm,0.6s,baz=197,slow=2.8,SNR=3.5						
YKA	**Yellowknife Ar**	89.94	24	P	P	10 59 01.8	-1.6
	0.2nm,0.7s,baz=238,slow=4.5,SNR=3.4						
KHC	**Kasperske Hory**	145.49	351	*e*PKP	PKPbc	11 05 41.7	-1.1
BR101	**Keskin Array S**	145.65	321	*e*PKPdf	PKPbc	11 05 43.9	+0.1
BRTR	**Keskin Array B**	145.65	321	PKPbc	PKPbc	11 05 43.9	+0.1
	0.8nm,0.6s,baz=29,slow=3.3,SNR=4.4						
GERES	**GERESS Array B**	145.75	351	PKPbc	PKPab	11 05 44.1	0.0
	0.8nm,0.6s,baz=27,slow=3.3,SNR=5.4						
FUORN	**Ofenpass-Fuorn**	148.35	355	*e*PKPbc	PKPbc	11 05 52.0	+0.6

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*JMA **17** 10:48:36.8±0.2, 25°.91N×127°.27E, h20^{km}±2^{km}, M3.9*
JMA Felt I J1.
*IDC **17** 10:48:38.0±5.4, 25°.91N×127°.22E, h34^{km}±43^{km}, mb3.5/14, mb1 3.7/15, mb1mx3.5/49, mbtmp3.7/15, ML3.7/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/37, Error ellipse: s-maj=28.1km s-min=16.8km az=67.0*
*NEIC **17** 10:48:37.1±0.9, 25°.78N×127°.58E, h40^{km}±10^{km}, mb4.2/6, Error ellipse: s-maj=14.4km s-min=8.3km az=148.0*
NEIC Felt at Chatan, Itoman, Okinawa and Yomitan. Also felt in Naha.
ISC 17 10:48:33.8±1.6**, 25°.76N**±0°.06×**127°.30E**±0°.05**, h7**^{km}±10^{km}**, n57,** σ**2^{s}03**/59**, mb3.9**/20**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	0.58	49	P	Pb	10 48 47.0	+0.8
JJT3				*e*S	Sb	10 48 54.6	-0.1
JKE	**Kume jima 2**	0.73	321	P	Pg	10 48 48.5	+0.6
JKE				S	Sg	10 48 56.9	-0.5
JAGN	**Aguni-jima**	0.83	356	P	Pg	10 48 50.0	+0.3
JAGN				S	Sg	10 48 59.5	-1.0
JNTH	**Nagotoyohara**	0.99	40	P	Pb	10 48 52.9	-0.4
JNTH				*e*S	Sg	10 49 04.4	-1.4
JOW	**Kunigami**	1.38	39	*e*Pn	Pn	10 48 59.8	+0.3
JOW	**Kunigami**	1.38	39	P	Pn	10 48 59.5	+0.1
JOW				*e*S	Sn	10 49 15.7	-2.2
JOW	**Kunigami**	1.38	39	Pn	Pn	10 48 59.6	+0.1
	39nm,0.3s,baz=199,slow=17,SNR=194						
JOW				Sn	Sn	10 49 15.8	-2.2
	69nm,0.3s,baz=108,slow=15,SNR=12						
JIH	**Iheya**	1.40	25	P	Pn	10 48 59.6	-0.2
JIH				*e*S	Sn	10 49 15.9	-2.6
YOJ	**Yonaguni jima**	4.10	253	*e*Pn	Pb	10 49 42.3	-4.0
TATO	**Taipei**	5.32	263	*e*Pn	Pn	10 49 57.8	+4.2
NACB	**Ninganchiao**	5.42	254	*e*Pn	Pn	10 49 59.2	+4.2
YHNB	**Yeheng**	5.48	260	*e*Pn	Pn	10 50 00.2	+4.3
YULB	**Yu-li**	5.95	248	*e*Pn	Pn	10 50 04.2	+1.8
JNU	**Nakatsue**	7.97	22	*e*Pn	Pn	10 50 32.9	+2.8
JNU	**Nakatsue**	7.97	22	Pn	Pn	10 50 31.4	+1.3
	1.1nm,0.3s,baz=204,slow=19,SNR=12						
JNU				LR	LR	10 54 08.0	
	comp=Z,39nm,19.7s,baz=172,slow=42						
KSRS	**Korea Array**	11.67	2	LR	LR	10 55 50.4	
	comp=Z,48nm,19.3s,baz=180,slow=38						
MAJO	**Matsushiro**	14.22	38	*e*Pn	Pn	10 51 52.1	-3.6
MJAR	**Matsushiro Arr**	14.22	38	Pn	P	10 52 03.3	+0.1
	0.0nm,0.3s,baz=222,slow=9.8,SNR=6.0						
MJB9	**Matsu-Tunnel**	14.22	38	*e*Pn	Pn	10 51 52.1	-3.6
DAV	**Davao City (W)**	18.66	185	*e*P	P	10 52 51.7	-0.7
	145nm,0.4s						
SARN	**Sarigan**	19.42	114	*e*P	P	10 52 58.1	-2.7
	98nm,1.0s						
HHC	**Hu-ho-hao-te**	19.94	323	*e*P	Pn	10 53 10.5	+2.5
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	**Lanzhou**	22.55	303	*e*P	P	10 53 35.5	+0.8
LZH				pP	sP	10 53 46.3	+9.0
LZH				sP	pP	10 53 51.4	+15
LZH				*e*PP	PnPn	10 54 04.6	+6.6
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,65nm,4.8s						
LZH				LR	LR		
	comp=N,170nm,10.5s						
LZH				LR	LR		
	comp=E,180nm,11.2s						
LZH				LR	LR		
	comp=Z,250nm,13.5s						
GTA	**Gaotai**	26.74	307	*e*P	P	10 54 13.5	-0.7
GTA				pP	sP	10 54 25.3	+8.5
GTA				sP	pP	10 54 28.8	+13
GTA				PcP	PcP	10 57 39.9	+2.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	27.51	329	P	P	10 54 21.1	+0.2
	comp=Z,0.5nm,0.8s,baz=128,slow=9.3,SNR=3.4						
SONA1	**Songino Array**	27.51	329	*e*P	P	10 54 21.8	+0.8
WMQ	**Urumqi**	36.76	310	*e*P	P	10 55 41.8	-0.2
H11N1	**WAKE ISLAND Hy**	36.91	91	T	T	11 34 54.1	
	baz=285						
H11N2	**WAKE ISLAND Hy**	36.91	91	T	T	11 34 50.0	
	baz=285						
H11N3	**WAKE ISLAND Hy**	36.92	91	T	T	11 34 55.0	
	baz=285						
H11S3	**WAKE ISLAND Hy**	37.09	93	T	T	11 35 05.3	
	baz=289,slow=75,SNR=7.2						
H11S1	**WAKE ISLAND Hy**	37.10	93	T	T	11 35 05.3	
	baz=289,slow=75,SNR=9.8						
H11S2	**WAKE ISLAND Hy**	37.11	93	T	T	11 35 06.1	
	baz=289,slow=75,SNR=13						
MK01	**Makanchi Array**	41.22	312	*e*P	P	10 56 18.3	-1.0
MK31	**Makanchi Array**	41.23	312	*e*P	P	10 56 18.4	-0.9
MKAR	**Makanchi Array**	41.23	312	*e*P	P	10 56 18.4	-1.0
	comp=Z,8.2nm,0.6s						
MKAR	**Makanchi Array**	41.23	312	P	P	10 56 18.1	-1.2
	comp=Z,1.2nm,0.5s,baz=97,slow=11,SNR=30						
MAKZ	**Makanchi**	41.44	312	*e*P	P	10 56 20.5	-0.6
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	42.12	323	P	P	10 56 25.0	-1.5
	comp=Z,0.5nm,0.4s,baz=116,slow=8.7,SNR=2.9						
COEN	**Coen**	42.40	157	*e*P	P	10 56 31.3	+2.2
	comp=Z,3.7nm,1.0s						
KURBB	**Kurchatov Arra**	44.62	317	P	P	10 56 45.8	-1.0
	comp=Z,0.7nm,0.4s,baz=106,slow=9.0,SNR=5.1						
WRA	**Warramunga Arr**	45.94	171	P	P	10 56 58.9	+1.4
	comp=Z,1.0nm,0.8s,baz=354,slow=8.4,SNR=5.7						
AAK	**Ala-Archa**	46.06	305	P	P	10 56 56.0	-2.5
	comp=Z,0.4nm,0.3s,baz=184,slow=15,SNR=2.2						
PALK	**Pallekele**	48.01	256	LR	LR	11 18 26.4	
	comp=Z,38nm,18.3s,baz=116,slow=37						
ASAR	**Alice Springs**	49.55	172	P	P	10 57 27.3	+1.9
	comp=Z,0.3nm,0.6s,baz=356,slow=8.4,SNR=7.4						
ASAR				PcP	PcP	10 58 46.2	-1.1
	comp=Z,0.4nm,0.7s,baz=350,slow=3.0,SNR=5.3						
BRVK	**Borovoye**	50.14	319	*e*P	P	10 57 29.3	-0.4
	comp=Z,4.1nm,1.1s						
ABKAR	**Akbulak array**	56.36	313	*e*P	P	10 58 15.6	+0.1
ARCES	**ARCESS Array B**	70.14	339	P	P	10 59 45.2	-1.4
	comp=Z,3.4nm,1.1s,baz=66,slow=7.0,SNR=3.6						
FINES	**FINESS Array B**	72.86	330	P	P	11 00 01.6	-1.5
	comp=Z,1.7nm,1.0s,baz=50,slow=6.0,SNR=4.9						
AKASG	**Malin Array Be**	75.34	319	P	P	11 00 16.9	-1.0
	comp=Z,0.4nm,0.4s,baz=68,slow=5.3,SNR=3.4						
RES	**Resolute Bay**	76.16	11	*e*P	P	11 00 21.9	-0.2
	comp=Z,1.6nm,1.0s						
BRTR	**Keskin Array B**	76.66	308	P	P	11 00 25.6	-0.2
	comp=Z,0.6nm,0.7s,baz=35,slow=5.3,SNR=2.5						
BUR04	**Bucovina Ar. S**	79.02	318	*e*P	P	11 00 39.3	+0.6
NC405	**NORSAR Array S**	79.12	334	*e*P	P	11 00 38.5	-0.4
YKA	**Yellowknife Ar**	79.30	25	P	P	11 00 39.8	0.0
	comp=Z,0.3nm,0.7s,baz=299,slow=5.2,SNR=5.2						
NOA	**NORSAR Array B**	79.36	334	P	P	11 00 39.4	-0.8
	comp=Z,0.4nm,0.7s,baz=90,slow=7.6,SNR=3.4						
GERES	**GERESS Array B**	85.07	323	P	P	11 01 10.6	+0.2
	comp=Z,0.1nm,0.3s,baz=15,slow=4.1,SNR=2.4						

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*NORS **17** 10:48:37.8±0.0, 42°.32N×48°.96E, h31^{km}, MPVA3.7*
*MOS **17** 10:48:37.4±0.0, 42°.36N×48°.93E, h23^{km}, MPVA3.9*
DRS 17 10:48:37.6±0.0**, 42°.39N**×**49°.19E, h18**^{km}**, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRN	**Derbent**	0.73	241	*i* Pg	Pb	10 48 50.4	-1.5
DRN				*e*Sg	Sb	10 48 59.5	-2.0
KSMR	**Kasumkent**	1.11	225	*e*Pg	Pb	10 48 57.0	-1.4
KSMR				*i* Sg	Sb	10 49 11.0	-1.6
URKR	**Urkarakh**	1.17	260	*e*Pg	Pn	10 48 57.5	-1.8
URKR				*e*Sg	Sb	10 49 11.2	-3.2
AKT	**Akhty**	1.42	231	*e*Pg	Pn	10 49 01.9	-0.7
AKT				*e*Sg	Sn	10 49 19.1	-1.8
KMKR	**Kumukh**	1.57	261	*e*Pg	Pn	10 49 04.0	-0.8
KMKR				*e*Sg	Sn	10 49 23.5	-1.4
BUJR	**Buynaksk**	1.59	287	*e*Pg	Pg	10 49 18.0	+10
BUJR				*e*Sg	Sn	10 49 25.0	-0.2
GNBR	**Gunib**	1.65	271	*e*Pg	Pn	10 49 05.2	-0.5
GNBR				*e*Sg	Sn	10 49 25.7	-0.8
KRNR	**Karanay**	1.74	285	*e*Pg	Pg	10 49 20.0	+9.0
KRNR				*i* Sg	Sn	10 49 28.0	-0.9
XNZR	**Khunzakh**	1.84	276	*e*Pg	Pn	10 49 08.3	-0.2
XNZR				*e*Sg	Sn	10 49 31.1	-0.4
DBC	**Dubki**	1.85	291	*e*Pg	Pn	10 49 08.5	-0.1
DBC				*e*Sg	Sn	10 49 31.5	0.0
BTLR	**Botlikh**	2.21	278	*e*Pg	Pn	10 49 13.2	-0.3
BTLR				*e*Sg	Sn	10 49 40.3	-0.1
DVE	**Vedeno**	2.33	285	*e*Pg	Pn	10 49 14.7	-0.4
DVE				*e*Sg	Sn	10 49 43.1	-0.2
GROC	**Groznyy**	2.62	289	*e*Pn	Pn	10 49 19.1	0.0
GROC				*e*Sn	Sn	10 49 51.1	+0.6

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*NIED **17** 10:53:00, 45°.60N×151°.10E, h35^{km}, Mw4.0 Best double couple: M$_0$1.18000×10^{15} NP1:φ$_s$240.00000°, δ42.00000°, λ124.00000°. NP2:φ$_s$18.00000°, δ57.00000°, λ63.00000°.*
*ISCJB **17** 10:53:34.9±0.5, 45°.23N±0°.07×151°.09E±0°.07, h35^{km},*

mb3.7/22, MS3.5/4, Error ellipse: s-maj=11.1km s-min=3.5km az=146.4

*JMA **17** 10:53:35.4±0.5, 45°.57N×151°.06E, h30^{km}, M4.6*

*SKHL **17** 10:53:36.2±0.5, 45°.28N×151°.21E, h65^{km}±2^{km}, mb4.7/3*

*IDC **17** 10:53:38.7±0.7, 45°.36N×150°.97E, h50^{km}±6^{km}, mb3.5/18, mb1 3.7/24, mb1mx3.6/45, mbtmp3.8/24, MS3.3/7, Ms1 3.4/7, ms1mx3.0/43, Error ellipse: s-maj=17.8km s-min=13.2km az=132.0*

*MOS **17** 10:53:38.0±1.0, 45°.37N×150°.95E, h59^{km}, mb4.0/7, MS2.8/3, Error ellipse: s-maj=10.5km s-min=8.4km az=47.3*

ISC 17 10:53:36.4±0.6, **45°.16N**±0°.08×**151°.10E**±0°.07, **h35**^{km}, **n87**, σ**1^{s}82**/105, **mb3.8**/22, **MS3.5**/4, **2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.29	273	eP	Pn	10 54 12.3	+0.7
KUR				AMB	AMB	10 54 13.6	
	180nm,0.2s						
KUR				AMB	AMB	10 54 13.6	
	70nm,0.2s						
KUR				AMB	AMB	10 54 13.6	
	30nm,0.2s						
KUR				iS	Sn	10 54 39.3	+0.8
KUR				A	A	10 54 42.5	
	550nm,0.5s						
KUR				A	A	10 54 42.5	
	320nm,0.5s						
KUR	Kuril'sk	2.29	273	c iPN	Pn	10 54 12.2	+0.7
KUR				iS	Sn	10 54 39.3	+0.8
KUR				pmax	pmax		
	comp=N,173nm,0.1s						
KUR				pmax	pmax		
	comp=Z,333nm,0.1s						
KUR				pmax	pmax		
	comp=E,68nm,0.2s						
KUR				smax	smax		
	comp=E,555nm,0.3s						
KUR				smax	smax		
	comp=N,646nm,0.4s						
SHO	Shikotan	3.32	249	iP	Pn	10 54 26.7	+1.0
SHO				AMB	AMB	10 54 29.5	
	comp=N,40nm,0.3s						
SHO				AMB	AMB	10 54 29.5	
	comp=N,30nm,0.3s						
SHO				AMB	AMB	10 54 29.5	
	comp=N,100nm,0.3s						
SHO				iS	Sn	10 55 05.0	+1.1
SHO				A	A	10 55 15.7	
	comp=N,110nm,0.4s						
SHO				A	A	10 55 15.7	
	comp=N,240nm,0.4s						
SHO	Shikotan	3.32	249	c iPN	Pn	10 54 26.3	+0.6
SHO				iS	Sn	10 55 05.0	+1.1
SHO				pmax	pmax		
	comp=Z,99nm,0.3s						
SHO				pmax	pmax		
	comp=E,25nm,0.2s						
SHO				pmax	pmax		
	comp=N,38nm,0.2s						
SHO				smax	smax		
	comp=N,105nm,0.3s						
SHO				smax	smax		
	comp=E,235nm,0.4s						
YUK	Yuzh-Kuril'sk	3.91	255	iP	Pn	10 54 36.7	+2.9
YUK				AMB	AMB	10 54 38.4	
	comp=E,120nm,0.2s						
YUK				AMB	AMB	10 54 38.4	
	comp=E,50nm,0.2s						
YUK				AMB	AMB	10 54 38.4	
	comp=E,30nm,0.2s						
YUK				iS	Sn	10 55 21.6	+3.1
YUK				A	A	10 55 27.1	
	comp=E,130nm,0.6s						
YUK				A	A	10 55 27.1	
	comp=E,310nm,0.6s						
YUK	Yuzh-Kuril'sk	3.91	255	d iPN	Pn	10 54 36.8	+2.9
YUK				iS	Sn	10 55 21.8	+3.3
YUK				pmax	pmax		
	comp=N,121nm,0.2s						
YUK				pmax	pmax		
	comp=Z,247nm,0.2s						
YUK				pmax	pmax		
	comp=E,51nm,0.1s						
YUK				smax	smax		
	comp=E,308nm,0.6s						
YUK				smax	smax		
	comp=N,126nm,0.2s						
GRPR	Tuman	3.98	255	eP	Pn	10 54 36.5	+1.6
GRPR				eS	Sn	10 55 23.8	+3.5
GRPR	Tuman	3.98	255	ePN	Pn	10 54 36.5	+1.6
GRPR				eS	Sn	10 55 23.8	+3.5
GRPR				smax	smax		
	comp=N,311nm,0.4s						
GRPR				smax	smax		
	comp=E,240nm,0.4s						
GLVR	Golovnino	4.24	252	iP	Pn	10 54 40.2	+1.8
GLVR				iS	Sn	10 55 28.4	+1.7
GLVR	Golovnino	4.24	252	⇓ iPN	Pn	10 54 40.2	+1.8
GLVR				iS	Sn	10 55 28.4	+1.7
GLVR				smax	smax		
	comp=E,362nm,0.4s						
GLVR				smax	smax		
	comp=N,173nm,0.2s						
NEM2	Nemuro 2	4.25	247	P	Pn	10 54 39.0	+0.5
NEM2				eS	Sn	10 55 26.9	+0.1
JRA	Rausu	4.45	256	P	Pn	10 54 44.0	+2.8
JNK	Nakash	4.84	253	P	Pn	10 54 48.4	+1.8
JNK				eS	Sn	10 55 42.0	+0.6
JAK	Akkeshi	5.10	247	P	Pn	10 54 50.7	+0.5
JAK				eS	Sn	10 55 46.8	-0.9
JTKR	Abashiri--Toko	5.28	260	P	Pn	10 54 55.2	+2.6
JAR	Ashorobuto	5.59	253	P	Pn	10 54 58.9	+2.0
JAR				eS	Sn	10 56 00.7	+0.8
JMP	Maruseppu	5.65	261	P	Pn	10 55 00.9	+3.1
JOB	Onbets	5.70	249	P	Pn	10 54 59.8	+1.3
JOB				eS	Sn	10 56 01.1	-1.6
HRK	Horoka	5.97	256	eP	Pn	10 55 04.8	+2.6
YSS	Yuzh-Sakhalins	6.08	290	eP	Pn	10 55 04.2	+0.5
YSS	Yuzh-Sakhalins	6.08	290	ePN	Pn	10 55 04.2	+0.5
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
JKK2	Kamakawa 2	6.11	261	P	Pn	10 55 07.0	+2.9
JCH	Churui	6.14	248	P	Pn	10 55 05.6	+1.0
JCH				eS	Sn	10 56 13.3	-0.3
JKA	Kamikawa-asahi	6.16	263	eP	Pn	10 55 07.8	+3.1
ASAJ	Asahikawa	6.16	263	P	Pn	10 55 07.8	+3.0
ASAJ	Asahikawa	6.16	263	P	Pn	10 55 07.8	+3.0
	comp=Z,1.6nm,0.3s,baz=73,slow=24,SNR=26						
ASAJ				LR	LR	10 57 32.9	
	comp=Z,157nm,18.5s,baz=80,slow=38						
MYR	Moyori	6.35	246	eP	Pn	10 55 08.7	+1.4
JFR	Furan	6.44	255	P	Pn	10 55 11.5	+2.9
ERM	Erimo	6.57	244	eP	Pn	10 55 13.7	+3.3
ERM	Erimo	6.57	244	iPN	Pn	10 55 13.7	+3.3
JEM	Erimo	6.57	244	P	Pn	10 55 13.2	+2.8
JEM				eS	Sn	10 56 24.2	+0.2
JNBK	Urakawa-nobuka	6.70	247	P	Pn	10 55 12.7	+0.5
JNBK				eS	Sn	10 56 27.5	+0.3
JBT2	Biratori 2	6.74	252	P	Pn	10 55 13.6	+0.9
JNB	Noboribetsu	7.76	253	P	Pn	10 55 27.8	+1.1
JKB	Kayabe	8.01	249	P	Pn	10 55 30.9	+0.7
JKB				eS	Sn	10 56 55.5	-4.0
JYM2	Yakumo 2	8.36	252	P	Pn	10 55 35.6	+0.7
JANG	Nango	8.52	239	P	Pn	10 55 36.0	-1.2
JANG				eS	Sn	10 57 06.1	-5.9
JTM	Tenmabayashi	8.55	243	P	Pn	10 55 37.6	0.0
JOSM	Okushiri--Mats	8.98	254	P	Pn	10 55 45.1	+1.7
PETK	Petropavlovsk-	9.05	26	P	Pn	10 55 45.5	+1.1
	comp=Z,0.4nm,0.3s,baz=197,slow=14,SNR=6.5						
MJAR	Matsushiro Arr	13.00	233	P	Pn	10 56 41.8	+3.3
	comp=Z,0.0nm,0.3s,baz=30,slow=11,SNR=3.9						
MJAR				LR	LR	11 02 51.2	
	comp=Z,53nm,18.8s,baz=65,slow=42						
USRK	Ussuriysk Ar.	13.64	273	P	Pn	10 56 49.0	+1.9
	comp=Z,0.2nm,0.3s,baz=83,slow=14,SNR=5.6						
USRK				LR	LR	11 01 51.6	
	comp=Z,89nm,19.0s,baz=28,slow=36						
MA2	Magadan	14.44	359	P	Pn	10 56 57.8	-0.2
	comp=Z,0.3nm,0.3s,baz=205,slow=18,SNR=1.4						
KSRS	Korea Array	19.00	254	P	Pn	10 57 55.1	-0.6
	comp=Z,0.1nm,0.3s,baz=62,slow=11,SNR=4.7						
H11N2	WAKE ISLAND Hy	28.54	148	T	T	11 30 10.2	
	baz=336						
H11N1	WAKE ISLAND Hy	28.55	148	T	T	11 30 12.4	
	baz=336,slow=76						
H11N3	WAKE ISLAND Hy	28.56	148	T	T	11 30 22.6	
	baz=336,slow=76						
H11S1	WAKE ISLAND Hy	29.58	149	T	T	11 31 43.8	
	baz=337						
H11S3	WAKE ISLAND Hy	29.59	149	T	T	11 31 39.0	
	baz=337						
H11S2	WAKE ISLAND Hy	29.60	149	T	T	11 31 37.9	
	baz=337						
ULN	Ulaanbaatar	30.13	291	iP	P	10 59 39.5	-3.3
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	30.57	291	P	P	10 59 46.4	-0.3
	comp=Z,0.4nm,0.6s,baz=101,slow=7.5,SNR=3.2						
ILAR	Eielson Array	38.66	37	eP	P	11 00 56.8	+0.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	38.66	37	P	P	11 00 55.0	-1.1
	comp=Z,0.7nm,1.0s,baz=266,slow=7.3,SNR=4.4						
ZALV	Zalesovo Beam	42.42	307	P	P	11 01 25.7	-1.5
	comp=Z,0.3nm,0.3s,baz=80,slow=10,SNR=2.2						
ZALV				PcP	PcP	11 03 20.6	+0.8
	comp=Z,0.7nm,0.6s,baz=63,slow=0.7,SNR=3.9						
ZALV				LR	LR	11 18 49.3	
	comp=Z,30nm,18.2s,baz=88,slow=36						
INK	Inuvik	43.74	31	P	P	11 01 38.4	+0.7
	comp=Z,0.4nm,0.4s,baz=280,slow=4.8,SNR=5.7						
MKAR	Makanchi Array	46.44	298	eP	P	11 02 00.0	+0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	46.44	298	P	P	11 01 59.0	-0.5
	comp=Z,0.8nm,0.6s,baz=74,slow=7.6,SNR=9.7						
MKAR				PcP	PcP	11 03 34.5	+0.7
	comp=Z,0.5nm,0.6s,baz=50,slow=3.7,SNR=4.1						
MKAR				LR	LR	11 22 06.9	
	comp=Z,29nm,21.1s,baz=44,slow=37						
KURK	Kurchatov	47.09	304	P	P	11 02 04.0	-0.4
KURBB	Kurchatov Arra	47.17	304	P	P	11 02 04.0	-1.1
	comp=Z,0.4nm,0.3s,baz=70,slow=7.6,SNR=3.9						
BRVK	Borovoye	50.83	310	iP	P	11 02 30.9	-2.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.5s						
YKA	Yellowknife Ar	53.04	35	P	P	11 02 50.2	+0.9
	comp=Z,0.3nm,0.8s,baz=302,slow=7.0,SNR=3.8						
AAK	Ala-Archa	53.28	296	eP	P	11 02 50.0	-1.7
AAK	Ala-Archa	53.28	296	iP	P	11 02 50.0	-1.7
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	58.89	340	P	P	11 03 30.9	-0.3
	comp=Z,1.3nm,0.8s,baz=34,slow=7.2,SNR=5.0						
NVAR	Mina Array Bea	64.43	61	LR	LR	11 29 09.7	
	comp=Z,108nm,20.6s,baz=232,slow=33						
FINES	FINESS Array B	64.87	334	eP	P	11 04 10.1	-1.3
FINES	FINESS Array B	64.87	334	iP	P	11 04 10.1	-1.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	64.87	334	P	P	11 04 09.6	-1.8
	comp=Z,0.5nm,0.5s,baz=34,slow=10,SNR=8.2						
FINES				pP	pwP	11 04 25.3	-0.3
	comp=Z,2.0nm,1.0s,baz=18,slow=8.0,SNR=2.0						
WRA	Warramunga Arr	66.56	197	P	P	11 04 23.7	+1.0
	comp=Z,0.8nm,0.8s,baz=16,slow=6.9,SNR=6.4						
WRA				pP	pwP	11 04 38.5	-0.1
	comp=Z,0.5nm,0.7s,baz=16,slow=6.5,SNR=2.4						
NB2	NORSAR Subarra	69.27	340	P	P	11 04 38.4	-1.0
	comp=Z,0.4nm,0.5s,baz=28,slow=6.2						
NOA	NORSAR Array B	69.27	340	eP	P	11 04 38.6	-0.8
NOA	NORSAR Array B	69.27	340	eP	P	11 04 38.6	-0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	69.27	340	P	P	11 04 38.2	-1.2
	comp=Z,0.6nm,0.6s,baz=26,slow=6.4,SNR=6.6						
ASAR	Alice Springs	70.27	197	P	P	11 04 47.6	+1.7
	comp=Z,0.7nm,0.8s,baz=12,slow=7.1,SNR=7.5						
ASAR				pP	pwP	11 05 02.3	+0.5
	comp=Z,0.5nm,0.8s,baz=12,slow=6.0,SNR=3.1						
KBZ	Khabaz	70.94	313	P	P	11 04 49.8	-0.1
	comp=Z,3.1nm,0.8s,baz=32,slow=9.5,SNR=5.9						
AKASG	Malin Array Be	72.07	325	P	P	11 04 56.1	-0.5
	comp=Z,0.6nm,0.4s,baz=35,slow=6.0,SNR=3.2						
ANMO	Albuquerque	73.87	57	LR	LR	11 32 22.0	
	comp=Z,50nm,21.8s,baz=268,slow=32						
SCHQ	Schefferville	75.31	22	P	P	11 05 14.9	-0.7
	comp=Z,1.1nm,0.5s,baz=334,slow=3.0,SNR=4.3						
CLL	Collm	77.32	335	iP	P	11 05 26.3	-0.6
	comp=Z,4.0nm,0.7s						
CLL	Collm	77.32	335	eP	P	11 05 26.3	-0.6
CLL	Collm	77.32	335	iP	P	11 05 26.3	-0.6
BRTR	Keskin Array B	78.57	316	P	P	11 05 32.6	-1.8
	comp=Z,0.4nm,0.5s,baz=38,slow=5.6,SNR=2.9						
KHC	Kasperske Hory	79.04	333	eP	P	11 05 36.7	+0.1
GERES	GERESS Array B	79.25	333	eP	P	11 05 37.9	+0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	79.25	333	P	P	11 05 37.6	-0.3
	comp=Z,0.8nm,0.6s,baz=48,slow=6.0,SNR=5.9						
TXAR	Lajitas Array	79.50	59	P	P	11 05 41.4	+1.8
	comp=Z,0.2nm,0.6s,baz=294,slow=5.0,SNR=4.4						
TXAR				pP	sP	11 05 53.2	+0.8
	comp=Z,0.5nm,0.6s,baz=302,slow=4.2,SNR=5.8						

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*IDC **17** 11:02:33.5±1.0, 7°.75S×130°.73E, h0^{km}, mb3.9/4, mb1 4.0/8, mb1mx3.8/32, mbtmp3.9/8, ML3.7/4, Error ellipse: s-maj=38.2km s-min=22.6km az=73.0*

*ISCJB **17** 11:02:35.7±0.9, 7°.73S±0°.03×131°.17E±0°.06, h37^{km}±10^{km}, mb4.0/11, Error ellipse: s-maj=10.3km s-min=5.3km az=176.0*

*NEIC **17** 11:02:38.0±1.6, 7°.78S×130°.81E, h34^{km}±12^{km}, mb4.1/9, Error ellipse: s-maj=14.9km s-min=8.4km az=82.0*

ISC 17 11:02:38.6±0.9, **7°.71S**±0°.05×**131°.04E**±0°.07, **h46**^{km}±10^{km}, **n37**, σ**2^{s}76**/46, **mb4.0**/11, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	0.37	137	ePn	Pn	11 02 51.0	+2.9
FAKI	Fak Fak	4.91	14	ePn	Pn	11 03 49.3	-0.6
FAKI				eSn	Sn	11 04 44.5	-0.9
MTN	Manton Dam	5.10	179	ePn	Pn	11 03 55.2	+2.6
MTN				eSn	Sn	11 04 52.4	+2.1
SIJI	Sorong	6.80	2	Pn	Pn	11 04 14.5	-1.4
	1.1nm,0.3s,baz=189,slow=19,SNR=5.3						
SIJI				Sn	Sn	11 05 23.5	-8.5
	0.8nm,0.3s,baz=150,slow=14,SNR=3.0						
SOEI	Soe	7.00	253	ePn	Pn	11 04 21.8	+3.1
SOEI				eSn	Sn	11 05 40.0	+2.9
BATI	Baumata	7.70	251	Pn	Pn	11 04 23.4	-4.8
	0.8nm,0.3s,baz=71,slow=16,SNR=2.5						
BATI				Sn	Sn	11 05 51.7	-2.5
	1.5nm,0.3s,baz=41,slow=20,SNR=2.8						
WR1	Warramunga Arr	12.58	166	ePn	Pn	11 05 33.0	-2.0
WR1				eSn	Sn	11 07 47.2	-6.5
WRA	Warramunga Arr	12.58	166	Pn	Pn	11 05 33.0	-2.0
	0.6nm,0.3s,baz=346,slow=12,SNR=19						
WRA				Sn	Sn	11 07 47.2	-6.5
	2.2nm,0.3s,baz=343,slow=22,SNR=13						
WB2	Warramunga Arr	12.58	166	ePn	Pn	11 05 32.5	-2.5
WB2				eSn	Sn	11 07 48.9	-4.9
WB2				eSn	Sn	11 07 49.3	-4.5
COEN	Coen	13.43	119	ePn	Pn	11 05 47.9	+1.2
AS31	Alice Springs	16.10	170	ePn	Pn	11 06 21.4	-0.5
	2.3nm,0.5s						
AS31				eSn	Sn	11 09 15.6	-4.1
ASAR	Alice Springs	16.10	170	Pn	Pn	11 06 20.3	-1.7
	0.5nm,0.3s,baz=6.7,slow=12,SNR=47						
ASAR				Sn	Sn	11 09 13.2	-6.5
	0.5nm,0.3s,baz=354,slow=27,SNR=12						
AS01	Alice Springs	16.11	170	ePn	Pn	11 06 21.5	-0.6
AS01				eSn	Sn	11 09 17.1	-2.7
FORT	Forrest	23.12	187	eP	P	11 07 44.0	+3.2
	20nm,0.9s						
BBOO	Buckleboo	25.41	170	eP	P	11 08 06.0	+4.0
	2.2nm,0.7s						
EIDS	Eidsvold	25.96	135	eP	P	11 08 08.0	+1.0
	8.9nm,1.1s						
CMAR	Chiang Mai Arr	40.98	310	P	P	11 10 16.6	-0.8
	1.3nm,0.7s,baz=140,slow=7.8,SNR=8.1						
MAJO	Matsushiro	44.53	8	eP	P	11 10 46.0	+0.2
	3.8nm,1.1s						
MJB9	Matsu-Tunnel	44.53	8	eP	P	11 10 46.3	+0.4
	3.6nm,1.0s						
SONA0	Songino Array	59.44	341	eP	P	11 12 37.4	+0.6
SONM	Songino Array	59.44	341	P	P	11 12 37.4	+0.6
	0.6nm,0.7s,baz=163,slow=6.0,SNR=5.2						
SONA1	Songino Array	59.45	341	eP	P	11 12 37.9	+1.0
MK01	Makanchi Array	69.36	326	eP	P	11 13 42.5	+0.9
MK31	Makanchi Array	69.38	327	eP	P	11 13 42.9	+1.2
	1.9nm,1.0s						
MK32	Makanchi Array	69.38	327	eP	P	11 13 42.6	+0.9
MKAR	Makanchi Array	69.38	327	eP	P	11 13 42.8	+1.1
	9.3nm,0.8s						
MKAR	Makanchi Array	69.38	327	P	P	11 13 42.6	+0.9
	1.1nm,0.5s,baz=117,slow=7.9,SNR=21						
MAKZ	Makanchi	69.56	326	eP	P	11 13 43.4	+0.6
	1.0nm,0.6s						
ZALV	Zalesovo Beam	72.67	333	P	P	11 14 01.7	+0.2
	0.5nm,0.4s,baz=127,slow=6.3,SNR=4.2						
ZAA1	Zalesovo Array	72.67	333	eP	P	11 14 01.7	+0.2
KNB	Kanab	115.42	53	ePKPdf	PKiKP	11 21 12.4	-3.7
GCMT	Greycliff	115.75	43	ePKPdf	PKPdf	11 21 16.9	+0.5
LTX	Lajitas	124.40	60	ePKPdf	PKiKP	11 21 37.0	+3.3
TXAR	Lajitas Array	124.40	60	PKP	PKiKP	11 21 37.0	+3.3
	0.2nm,0.7s,baz=279,slow=1.7,SNR=3.1						
TORD	Torodi Ar. Bea	129.96	281	PKP	PKiKP	11 21 45.6	+0.5
	0.4nm,0.7s,baz=79,slow=2.1,SNR=2.5						
TOA1	Torodi Ar. Sit	129.96	281	ePKPdf	PKiKP	11 21 45.6	+0.5
LPAZ	La Paz	149.53	142	PKPbc	PKPab	11 22 26.7	-3.0
	0.7nm,0.6s,baz=225,slow=1.4,SNR=3.8						

IDC 17 11:07:57.7±1.4, **26°.32S**×**71°.30E**, **h0**^{km}, **mb4.0**/8, **mb1 4.1**/8, **mb1mx3.8**/43, **mbtmp4.0**/8, **Error ellipse: s-maj=44.0km s-min=24.8km az=71.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	18.61	4	T	T	11 31 12.9	
	baz=187						
H08S2	Diego Garcia H	18.61	4	T	T	11 31 07.7	
	baz=187,slow=74						
H08S3	Diego Garcia H	18.62	4	T	T	11 31 12.1	
	baz=187,slow=74						
H01W2	Cape Leeuwin H	37.62	114	T	T	11 54 46.7	
	baz=272,slow=75,SNR=3.6						
H01W3	Cape Leeuwin H	37.62	114	T	T	11 54 49.4	
	baz=272,slow=75,SNR=3.5						
H01W1	Cape Leeuwin H	37.63	114	T	T	11 54 50.4	
	baz=272,slow=75,SNR=5.1						
CMAR	Chiang Mai Arr	51.99	34	P	P	11 17 09.4	+0.5
	0.4nm,0.3s,baz=241,slow=8.0,SNR=5.3						
ASAR	Alice Springs	56.31	102	P	P	11 17 40.6	-0.1
	0.9nm,0.8s,baz=252,slow=6.3,SNR=12						
WRA	Warramunga Arr	57.84	98	P	P	11 17 51.2	-0.3
	2.1nm,0.9s,baz=253,slow=7.1,SNR=10						
STKA	Stephens Creek	60.71	113	P	P	11 18 11.1	-0.1
	0.8nm,0.4s,baz=293,slow=1.0,SNR=3.1						
QSPA	South Pole Qui	63.81	180	P	P	11 18 31.9	+0.4
	2.9nm,1.1s,baz=285,slow=1.8,SNR=3.6						
MKAR	Makanchi Array	73.45	8	P	P	11 19 31.3	-0.4
	2.7nm,0.9s,baz=197,slow=6.6,SNR=16						
SONM	Songino Array	80.28	23	P	P	11 20 10.6	+0.3
	1.0nm,1.0s,baz=212,slow=5.3,SNR=4.8						
ZALV	Zalesovo Beam	80.79	8	P	P	11 20 13.0	+0.3
	0.9nm,0.5s,baz=199,slow=5.7,SNR=5.2						
YKA	Yellowknife Ar	143.62	5	PKP	PKPbc	11 27 31.8	+0.6
	0.2nm,0.6s,baz=340,slow=2.7,SNR=4.1						

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*TAP **17** 11:14:54.8, 24°.36N×122°.53E, h58^{km}±1^{km}, ML2.8, C*

*ISCJB **17** 11:14:55.1±0.4, 24°.39N±0°.04×122°.53E±0°.02, h60^{km}±6^{km}, Error ellipse: s-maj=6.3km s-min=2.8km az=178.1*

*JMA **17** 11:14:55.0±0.1, 24°.38N×122°.51E, h63^{km}±2^{km}, M2.0*

ISC 17 11:14:55.6±1.3, **24°.40N**±0°.05×**122°.53E**±0°.02, **h58**^{km}±9^{km}, **n56**, σ**0^{s}55**/87, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.39	83	P	Pn	11 15 06.3	+0.1
JYNG				S	Sn	11 15 14.2	+0.3
EOS1	EOS1	0.39	292	iP	Pn	11 15 06.2	0.0
	baz=297						
EOS1				iS	Sn	11 15 14.7	+0.7
	baz=297						
YOJ	Yonaguni jima	0.45	83	P	Pn	11 15 06.9	+0.1
	baz=75						
YOJ				S	Sn	11 15 14.7	-0.2
	baz=75						
YOJ	Yonaguni jima	0.45	83	P	Pn	11 15 06.9	+0.1
YOJ				S	Sn	11 15 15.1	+0.1
TWC	Suao	0.65	288	eP	Pn	11 15 08.5	-0.6
	baz=292						
TWC				eS	Sn	11 15 18.6	-0.4
	baz=292						
EGS		0.70	309	eP	Pn	11 15 09.1	-0.6
	baz=312						
NANB	Nanao	0.71	272	eP	Pn	11 15 09.6	-0.2
	baz=275						
NANB				eS	Sn	11 15 21.2	+1.0
	baz=275						
ENA	Nanau	0.72	272	eP	Pn	11 15 09.9	0.0
	baz=275						
ENA				eS	Sn	11 15 20.6	+0.2
	baz=275						
NTC	Toucheng	0.78	305	eP	Pn	11 15 10.0	-0.7
	baz=307						
TWE	Neicheng	0.84	292	eP	Pn	11 15 11.1	-0.4
	baz=294						
TWE				eS	Sn	11 15 23.9	+0.6
	baz=294						
TIPB	Shuangxi	0.85	312	eP	Pn	11 15 10.8	-1.0
	baz=313						
NACB	Ninganchiao	0.88	255	eP	Pn	11 15 11.7	-0.3
	baz=257						
NACB				eS	Sn	11 15 23.6	-0.5
	baz=257						
ENTT	Nioudou	0.91	285	eP	Pn	11 15 12.7	+0.3
	baz=287						
ENTT				eS	Sn	11 15 25.4	+0.7
	baz=287						
TWD	Chiawan	0.91	249	eP	Pn	11 15 12.0	-0.4
	baz=251						
TWD				eS	Sn	11 15 24.4	-0.3
	baz=251						
NDT	Datong Townshi	0.94	282	P	Pn	11 15 13.3	+0.4
	baz=284						
NDT				eS	Sn	11 15 26.2	+0.7
	baz=284						
WFSB	Wu-fen Shan	0.95	315	eP	Pn	11 15 12.0	-0.9
	baz=316						
ETLH	Xiulin Townshi	0.97	259	eP	Pn	11 15 13.0	-0.3
	baz=261						
ENLB	Shoufeng	0.98	240	eP	Pn	11 15 13.3	0.0
	baz=241						
NWLT	Wulai	1.00	292	eP	Pn	11 15 13.5	-0.1
	baz=294						
NWLT				eS	Sn	11 15 26.2	-0.8
	baz=294						
NNSB	Datong	1.04	272	eP	Pn	11 15 14.1	-0.1
	baz=273						
NNS	Nan Shan	1.05	272	eP	Pn	11 15 14.3	-0.1
	baz=274						
NNS				eS	Sn	11 15 28.1	-0.2
	baz=274						
NHDH	Xindian Distri	1.07	302	eP	Pn	11 15 13.9	-0.5
	baz=303						
YHNB	Yeheng	1.08	284	P	Pn	11 15 14.9	+0.2
	baz=286						
YHNB				eS	Sn	11 15 28.6	-0.3
	baz=286						
NSK	Sanguang	1.10	285	P	Pn	11 15 14.9	-0.1
	baz=286						
NSK				eS	Sn	11 15 29.2	-0.1
	baz=286						
IRIF	Iriomote-Funau	1.10	93	P	Pn	11 15 14.8	-0.1
IRIF				S	Sn	11 15 29.2	0.0
YM01	YM01	1.14	311	eP	Pn	11 15 15.4	-0.1
	baz=311						
ESL	Shilin	1.16	240	eP	Pn	11 15 15.3	-0.4
	baz=241						
WHF	Hehuan Shan	1.18	258	eP	Pn	11 15 16.1	-0.3
	baz=259						
TWS1	Kuangyinshan	1.22	305	eP	Pn	11 15 16.2	-0.3
	baz=306						
TWS1				eS	Sn	11 15 32.1	-0.1
	baz=306						
TWT	Tachien	1.24	263	eP	Pn	11 15 17.1	+0.2
	baz=265						
TWT				eS	Sn	11 15 33.5	+0.7
	baz=265						
EGFH	Guangfu	1.24	234	eP	Pn	11 15 16.1	-0.7
	baz=235						

TDCB	Techi	1.26	263	eP	Pn	11 15 17.4	+0.2
	baz=265						
TDCB				eS	Sn	11 15 32.7	-0.5
	baz=265						
CHGB	Renai	1.28	255	eP	Pn	11 15 17.5	0.0
	baz=256						
CHGB				eS	Sn	11 15 33.4	-0.5
	baz=256						
OWD	Renai	1.31	250	eP	Pn	11 15 17.6	-0.3
	baz=251						
OWD				eS	Sn	11 15 33.7	-0.8
	baz=251						
HGSD	Ruisui	1.36	228	eP	Pn	11 15 18.7	+0.4
	baz=229						
JKRS	Kuro-shima	1.36	97	P	Pn	11 15 18.9	+0.5
JKRS				S	Sn	11 15 36.4	+0.9
LIOB	Emei	1.40	280	eP	Pn	11 15 18.5	-0.4
	baz=281						
NSTT	Nanjuang	1.41	280	eP	Pn	11 15 19.6	+0.6
	baz=281						
EHY	Hungye	1.42	231	eP	Pn	11 15 18.8	-0.4
	baz=232						
VWDT	VWDT	1.42	243	eP	Pn	11 15 18.9	-0.3
	baz=244						
VWDT				eS	Sn	11 15 36.4	-0.5
	baz=244						
WHP	Taichung City	1.45	265	i P	Pn	11 15 20.8	+1.2
	baz=266						
HSN	Hsinchu	1.47	286	eP	Pn	11 15 20.5	+0.7
	baz=288						
JIJ	Ishigaki jima	1.48	91	P	Pn	11 15 19.6	-0.3
JIJ				S	Sn	11 15 37.5	-0.7
YULB	Yu-li	1.51	228	eP	Pn	11 15 20.0	-0.4
	baz=229						
TWF1	Yuli	1.54	227	eP	Pn	11 15 20.5	-0.3
	baz=228						
TWF1				eS	Sn	11 15 39.0	-0.7
	baz=228						
SSLB	Suanglung	1.56	247	eP	Pn	11 15 21.1	0.0
	baz=248						
SMLT	Sun Moon Lake	1.57	251	eP	Pn	11 15 21.3	-0.1
	baz=252						
SMLT				eS	Sn	11 15 41.5	+0.7
	baz=252						
TWQ1	Liyutan	1.60	268	eP	Pn	11 15 22.4	+0.7
	baz=269						
TWQ1				eS	Sn	11 15 42.0	+0.8
	baz=269						
TYC	Yuchr	1.60	252	eP	Pn	11 15 23.0	+1.4
	baz=253						
TYC				eS	Sn	11 15 41.5	+0.2
	baz=253						
JISG	Ishigakijimahi	1.64	83	P	Pn	11 15 21.8	-0.3
JISG				eS	Sn	11 15 41.6	-0.5
WHYT	Xinyi Township	1.68	246	eP	Pn	11 15 23.7	+0.9
	baz=246						
WJS	Zhushan	1.74	251	eP	Pn	11 15 25.2	+1.6
	baz=252						
ALS	Alishan	1.81	241	eP	Pn	11 15 25.4	+0.7
	baz=241						
ELDTW	Lidau	1.84	229	eP	Pn	11 15 24.8	-0.2
	baz=229						
ELDTW				eS	Sn	11 15 46.1	-1.1
	baz=229						
JTJ	Tarama	2.00	83	P	Pn	11 15 27.4	+0.4
CHN4	Tsaushan	2.06	240	eP	Pn	11 15 27.9	+0.1
	baz=240						

MEX 17 11:18:52.1±0.4**, 17°.41N×101°.50W, h24^{km}**±8^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.20	10	i P	Pb	11 18 56.5	-1.2
ZIIG				i S	Sb	11 19 00.1	-1.4
CAIG	El Cayaco	1.23	107	eP	Pn	11 19 11.1	-2.7
CAIG				eS	Sn	11 19 25.7	-4.0
ARIG	Puente Sto Nin	1.40	52	eP	Pn	11 19 13.5	-2.7
ARIG				i S	Sn	11 19 29.7	-4.2
MEIG	Mezcala	1.86	74	eP	Pn	11 19 18.8	-3.8
MEIG				eS	Sn	11 19 46.2	+0.8
PLIG	Platanillo	2.14	63	eP	Pn	11 19 25.7	-0.7

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*ISCJB **17** 11:19:28.9±5.4, 11°.59S±0°.06×166°.45E±0°.06, h15^{km}±37^{km}, mb4.5/51, MS3.6/14, Error ellipse: s-maj=12.9km s-min=7.5km az=44.9*

*NEIC **17** 11:19:30.2±0.2, 11°.53S×166°.53E, h10^{km}, mb4.7/39, Error ellipse: s-maj=7.6km s-min=5.1km az=85.0*

*IDC **17** 11:19:32.2±3.2, 11°.56S×166°.56E, h25^{km}±20^{km}, mb4.1/16, mb1 4.3/18, mb1mx4.2/35, mbtmp4.3/18, ML3.7/2, MS3.5/16, Ms1 3.6/16, ms1mx3.4/28, Error ellipse: s-maj=19.1km s-min=15.3km az=112.0*

ISC 17 11:19:35.1±1.6**, 11°.55S**±0°.08×**166°.49E**±0°.09**, h43^{km}**±12^{km}**, n100, σ1^{s}.11**/97**, mb4.6**/51**, MS3.6**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.77	287	eP	Pn	11 21 14.0	+2.1
HNR	Honiara	6.77	287	ePn	Pn	11 21 14.4	+2.5
HNR				eSn	Sn	11 22 26.6	-1.2
HNR	Honiara	6.77	287	Pn	Pn	11 21 08.9	-3.1
	4.7nm,0.3s,baz=28,slow=17,SNR=2.1						
HNR				Sn	Sn	11 22 26.6	-1.2
	3.1nm,0.3s,baz=135,slow=19,SNR=3.3						
HNR				LR	LR	11 22 59.2	
	comp=Z,105nm,20.8s,baz=120,slow=30						
DZM	Mont Dzumac	10.46	180	ePn	Pn	11 22 06.1	+3.5
	13nm,0.6s						
DZM				eLR	LR	11 24 34.4	
	comp=Z,667nm,25.8s						
DZM	Mont Dzumac	10.46	180	Pn	Pn	11 22 00.3	-2.3
	0.2nm,0.3s,baz=6.1,slow=18,SNR=2.7						
DZM				LR	LR	11 25 30.3	
	comp=Z,417nm,21.3s,baz=330,slow=34						
CTA	Charters Tower	21.22	244	P	P	11 24 17.5	+0.1
	8.4nm,0.8s,baz=81,slow=11,SNR=7.0						
COEN	Coen	22.86	261	eP	P	11 24 35.4	+0.4
	10nm,0.9s						
ARMA	Armidale	23.30	214	eP	P	11 24 40.0	+0.7
	40nm,1.0s						
OUZ	Omahuta	24.43	166	eP	P	11 24 50.9	+1.2
	7.8nm,1.0s						
JAY	Jayapura	27.09	287	LR	LR	11 37 23.3	
	comp=Z,103nm,18.7s,baz=122,slow=39						
URZ	Urewera	28.24	162	LR	LR	11 34 23.0	
	comp=Z,172nm,20.7s,baz=323,slow=32						
BKZ	Black Stump Fm	28.91	164	eP	P	11 25 29.8	-0.2
	20nm,1.2s						
H11S2	WAKE ISLAND Hy	29.85	0	T	T	11 56 29.3	
	baz=181,slow=76,SNR=4.4						
H11S3	WAKE ISLAND Hy	29.85	0	T	T	11 56 26.1	
	baz=181,slow=76,SNR=3.1						
H11S1	WAKE ISLAND Hy	29.87	0	T	T	11 56 31.3	
	baz=181,slow=76,SNR=3.3						
BFZ	Birch Farm	30.27	165	eP	P	11 25 41.2	-0.8
	31nm,1.2s						
STKA	Stephens Creek	30.59	225	eP	P	11 25 44.4	-0.6
	1.6nm,0.8s						
STKA				ePcP	PcP	11 28 43.1	+0.2
STKA	Stephens Creek	30.59	225	P	P	11 25 45.0	0.0
	7.2nm,0.7s,baz=40,slow=11,SNR=22						
STKA				PcP	PcP	11 28 42.8	-0.1
	1.5nm,0.7s,baz=55,slow=6.5,SNR=3.1						
THZ	Tophouse	30.62	171	eP	P	11 25 45.8	+0.6
	9.7nm,0.7s						
LTZ	Lake Taylor	31.52	172	eP	P	11 25 52.7	-0.4
	10nm,0.8s						
WB2	Warramunga Arr	31.99	251	eP	P	11 25 56.7	-0.8
	5.4nm,0.8s						
WB2				ePcP	PcP	11 28 46.9	0.0
FOZ	Fox Glacier	32.00	175	eP	P	11 25 57.4	+0.2
	15nm,1.1s						
WR1	Warramunga Arr	32.00	251	eP	P	11 25 56.4	-1.2
	6.6nm,1.0s						
WR1				ePcP	PcP	11 28 46.7	-0.2
WR1				eScP	ScP	11 32 28.1	+1.0
WRA	Warramunga Arr	32.00	251	P	P	11 25 56.4	-1.2
	5.8nm,1.0s,baz=82,slow=9.3,SNR=34						
WRA				PcP	PcP	11 28 46.7	-0.2
	1.5nm,0.8s,baz=75,slow=3.2,SNR=9.0						
WRA				ScP	ScP	11 32 28.1	+1.0
	0.4nm,0.9s,baz=74,slow=6.2,SNR=3.2						
OXZ	Oxford	32.02	172	eP	P	11 25 56.9	-0.5
	16nm,1.0s						
TOO	Toolangi	32.03	212	eP	P	11 25 57.8	+0.1
	11nm,0.9s						
RPZ	Rata Peaks	32.29	174	eP	P	11 25 59.8	0.0
	11nm,0.9s						
RPZ	Rata Peaks	32.29	174	P	P	11 25 59.2	-0.6
	7.3nm,0.7s,baz=271,slow=4.5,SNR=7.4						
CRLZ	Canterbury Las	32.35	172	eP	P	11 25 59.4	-0.9
	29nm,1.1s						
MQZ	McQueen's Vall	32.48	172	eP	P	11 26 00.6	-0.8
	40nm,1.2s						
LBZ	Lake Benmore	32.87	175	eP	P	11 26 04.8	-0.1
	12nm,1.2s						
GUMO	Guam	32.92	319	LR	LR	11 38 50.9	
	comp=Z,55nm,21.8s,baz=118,slow=35						
AS01	Alice Springs	33.19	244	eP	P	11 26 07.5	-0.4
AS31	Alice Springs	33.23	244	eP	P	11 26 07.0	-1.3
	1.4nm,0.8s						
AS31				ePcP	PcP	11 28 49.5	-0.8
ASAR	Alice Springs	33.23	244	P	P	11 26 06.8	-1.5
	3.9nm,0.7s,baz=69,slow=9.5,SNR=63						
ASAR				PcP	PcP	11 28 49.5	-0.7
	1.8nm,0.8s,baz=80,slow=2.8,SNR=12						
ASAR				ScP	ScP	11 32 32.2	+0.9
	0.7nm,0.9s,baz=85,slow=3.1,SNR=4.6						
RAR	Rarotonga	33.70	111	LR	LR	11 36 34.4	
	comp=Z,115nm,21.8s,baz=274,slow=30						
WHZ	Wether Hill Ro	34.25	178	eP	P	11 26 16.4	-0.4
	8.8nm,1.1s						
MTN	Manton Dam	34.57	264	eP	P	11 26 20.2	+0.2
	9.5nm,1.0s						
BBOO	Buckleboo	35.03	228	eP	P	11 26 23.2	-0.5
	3.8nm,0.9s						
TAU	Tasmania Unive	35.41	205	eP	P	11 26 27.8	+1.0
	8.8nm,0.9s						
SIJI	Sorong	36.54	284	LR	LR	11 42 45.8	
	comp=Z,64nm,20.2s,baz=38,slow=38						
FITZ	Fitzroy Crossi	39.96	256	eP	P	11 27 05.4	-0.3
	9.2nm,0.8s						
FITZ	Fitzroy Crossi	39.96	256	LR	LR	11 42 00.4	
	comp=Z,139nm,19.5s,baz=106,slow=34						
BATI	Baumata	42.05	268	LR	LR	11 44 43.3	
	comp=Z,83nm,20.1s,baz=130,slow=36						
PPT2	Papeete2	42.87	103	eLR	LR	11 39 37.6	
	comp=Z,229nm,29.5s						
TBI	Tubuai	43.47	112	eLR	LR	11 39 59.0	
	comp=Z,224nm,30.0s						
MBWA	Marble Bar	45.73	252	eP	P	11 27 52.5	+0.1
	15nm,0.9s						
NWAO	Narrogin (SRO)	49.79	237	LR	LR	11 48 53.1	
	comp=Z,162nm,21.4s,baz=292,slow=35						
TAOE	Nuku Hiva Isla	52.53	92	eLR	LR	11 43 53.1	
	comp=Z,117nm,30.9s						
MJAR	Matsushiro Arr	54.75	332	P	P	11 28 59.5	-0.9
	1.9nm,0.8s,baz=152,slow=8.1,SNR=5.6						
MAJO	Matsushiro	54.76	332	eP	P	11 28 59.5	-1.0
MAJO				epP	P	11 29 01.3	+0.9
MJB9	Matsu-Tunnel	54.76	332	eP	P	11 29 01.4	+1.0
	2.7nm,0.8s						
RKT	Rikitea	56.73	110	eLR	LR	11 46 08.0	
	comp=Z,330nm,30.8s						
KSRS	Korea Array	60.70	325	P	P	11 29 42.4	+0.2
	0.8nm,0.7s,baz=139,slow=7.6,SNR=5.0						
KSAR	Wonju Array Be	60.72	325	P	P	11 29 42.4	+0.1
PETK	Petropavlovsk-	64.84	354	LR	LR	11 54 18.5	
	comp=Z,24nm,20.8s,baz=132,slow=32						
VNDA	Vanda	66.01	181	eP	P	11 30 17.0	+0.4
	5.1nm,0.9s						
VNDA	Vanda	66.01	181	P	P	11 30 15.9	-0.7
	3.3nm,1.0s,baz=355,slow=5.0,SNR=5.8						
IPM	Ipoh	67.03	280	eP	P	11 30 24.8	+0.4
	8.1nm,0.8s						
ENH	Enshi	68.78	309	eP	P	11 30 33.6	-1.5
	12nm,1.0s						
PBKT	Sadao Pong	70.55	292	eP	P	11 30 47.5	+1.4
	8.2nm,0.9s						
XAN	Xi'an	71.00	312	eP	P	11 30 49.5	+0.9
	8.4nm,0.8s						
UTHA	Uthaitani	71.62	291	P	P	11 30 54.1	+1.5
CM01	Chiang Mai Arr	72.96	293	eP	P	11 31 02.0	+1.4
CMAR	Chiang Mai Arr	72.98	293	P	P	11 31 01.8	+1.0
	8.0nm,0.8s,baz=123,slow=4.5,SNR=44						
CMAR				LR	LR	12 01 28.8	
	comp=Z,14nm,21.1s,baz=200,slow=34						
CMMT	Chiang Mai	73.09	294	P	P	11 31 02.4	+1.0
CHTO	Chiang Mai	73.09	294	eP	P	11 31 03.0	+1.6
	12nm,1.1s						
CHTO	Chiang Mai	73.09	294	P	P	11 31 02.5	+1.1
	47nm,1.0s						
CHTO	Chiang Mai	73.09	294	P	P	11 31 02.5	+1.1
	47nm,1.0s						
QSPA	South Pole Qui	78.46	180	eP	P	11 31 30.5	-0.9
	11nm,0.9s						
ULN	Ulaanbaatar	79.14	324	eP	P	11 31 36.3	+0.9
	4.3nm,0.8s						
SONA0	Songino Array	79.50	324	eP	P	11 31 37.6	+0.2
SONM	Songino Array	79.50	324	P	P	11 31 37.6	+0.2
	1.5nm,0.6s,baz=142,slow=4.9,SNR=8.2						
KNK	Knik Glacier	80.87	20	eP	P	11 31 47.4	+3.1
	11nm,1.2s						
TLY	Talaya	82.95	326	eP	P	11 31 55.7	+0.3
	3.3nm,0.9s						
ILAR	Eielson Array	83.76	18	P	P	11 31 59.3	0.0
	0.9nm,0.5s,baz=238,slow=4.7,SNR=22						
IL1	Eielson Array	83.76	18	eP	P	11 32 00.8	+1.5
DOT	Dot Lake	83.90	20	eP	P	11 32 01.8	+1.8
	3.3nm,1.0s						
SCRK	Sand Creek	84.14	20	eP	P	11 32 02.8	+1.5
	2.3nm,0.7s						
NVAR	Mina Array Bea	85.79	50	P	P	11 32 09.1	-1.3
	0.5nm,0.6s,baz=246,slow=6.5,SNR=1.1						
NVAR				LR	LR	12 03 04.4	
	comp=Z,58nm,18.8s,baz=218,slow=30						
PDAR	Pinedale Array	93.36	47	P	P	11 32 44.6	-1.5
	0.1nm,0.4s,baz=270,slow=5.2,SNR=2.5						
PDAR				LR	LR	12 10 37.7	
	comp=Z,22nm,18.6s,baz=250,slow=33						
MK01	Makanchi Array	94.38	317	eP	P	11 32 50.3	-0.1
MK31	Makanchi Array	94.39	317	eP	P	11 32 50.3	-0.1
	3.5nm,0.9s						
MK32	Makanchi Array	94.39	317	eP	P	11 32 50.3	-0.1
MKAR	Makanchi Array	94.39	317	eP	P	11 32 50.3	-0.1
	22nm,0.8s						
MKAR	Makanchi Array	94.39	317	P	P	11 32 50.3	-0.1
	3.6nm,0.7s,baz=93,slow=6.4,SNR=42						
ZAA1	Zalesovo Array	94.39	324	eP	P	11 32 49.2	-0.9
ZALV	Zalesovo Beam	94.39	324	P	P	11 32 49.2	-0.9
	0.9nm,0.7s,baz=118,slow=2.5,SNR=5.0						
YKA	Yellowknife Ar	95.08	27	P	P	11 32 51.7	-1.4
	0.1nm,0.4s,baz=258,slow=4.9,SNR=4.8						
YKB5	Yellowknife Ar	95.08	27	eP	P	11 32 54.4	+1.3
TXAR	Lajitas Array	95.43	61	LR	LR	12 08 08.7	
	comp=Z,26nm,21.3s,baz=0.0,slow=31						
NRIK	Noril'sk	96.85	339	LR	LR	12 13 39.0	
	comp=Z,23nm,22.0s,baz=63,slow=34						
ARA0	ARCESS Array S	117.00	346	ePKPdf	PKPdf	11 38 13.4	-1.2
ARCES	ARCESS Array B	117.00	346	ePKPdf	PKPdf	11 38 13.8	-0.9
ARCES	ARCESS Array B	117.00	346	PKP	PKPdf	11 38 13.4	-1.2
	1.2nm,0.7s,baz=52,slow=3.5,SNR=13						
FIA0	FINESS Array S	122.50	339	ePKPdf	PKPdf	11 38 24.4	-1.0
FINES	FINESS Array B	122.50	339	PKP	PKPdf	11 38 24.4	-1.0
	0.3nm,0.5s,baz=48,slow=2.1,SNR=5.1						
ESDC	Sonseca Array	150.74	345	PKPbc	PKPbc	11 39 22.3	-0.7
	0.1nm,0.3s,baz=31,slow=3.0,SNR=3.4						
TORD	Torodi Ar. Bea	165.06	278	PKP	PKPdf	11 39 34.9	-0.7
	0.6nm,0.9s,baz=344,slow=4.7,SNR=2.7						
TORD				PKPab	PKPab	11 40 32.8	+0.3
	1.3nm,0.9s,baz=43,slow=5.0,SNR=7.3						
TOA1	Torodi Ar. Sit	165.06	278	ePKPdf	PKPdf	11 39 34.9	-0.7
TOA1				ePKPab	PKPab	11 40 32.8	+0.3

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*ISCJB **17** 11:40:24.6±0.9, 6°.38S±0°.06×128°.3E±0°.1, h334^{km}, mb2.8/1, Error ellipse: s-maj=18.1km s-min=7.4km az=16.9*

*IDC **17** 11:40:25.2±1.2, 6°.52S×128°.43E, h253^{km}±19^{km}, mb2.5/1, mb1 3.3/6, mb1mx3.0/30, mbtmp3.9/6, Error ellipse: s-maj=24.8km s-min=12.3km az=114.0*

ISC 17 11:40:24.5±1.0**, 6°.38S**±0°.08×**128°.3E**±0°.1**, h334^{km}, n6, σ3^{s}.14**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.92	230	P	Pn	11 41 54.7	+0.7
	16nm,0.3s,baz=112,slow=5.4,SNR=21						
BATI				S	S	11 43 02.7	-3.6
	3.4nm,0.3s,baz=53,slow=20,SNR=3.8						
SIJI	Sorong	6.25	29	P	Pn	11 41 58.8	+1.0
	0.6nm,0.3s,baz=115,slow=4.1,SNR=11						
SIJI				S	S	11 43 10.2	-3.1
	0.5nm,0.3s,baz=262,slow=23,SNR=3.0						
FITZ	Fitzroy Crossi	11.92	192	P	P	11 43 08.2	+2.3
	0.2nm,0.3s,baz=18,slow=13,SNR=5.2						
FITZ				S	S	11 45 15.8	-2.7
	0.1nm,0.3s,baz=32,slow=19,SNR=2.7						
WRA	Warramunga Arr	14.72	157	P	Pn	11 43 38.8	+0.1
	0.3nm,0.3s,baz=337,slow=12,SNR=26						
WRA				S	S	11 46 13.5	-3.1
	0.0nm,0.3s,baz=332,slow=23,SNR=2.8						
ASAR	Alice Springs	18.03	163	P	Pn	11 44 16.2	+3.6
	0.7nm,0.3s,baz=343,slow=12,SNR=93						
MKAR	Makanchi Array	66.77	327	P	P	11 50 49.8	+9.0
	0.1nm,0.5s,baz=137,slow=9.3,SNR=1.4						

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*NORS **17** 11:43:17.9±0.0, 42°.50N×43°.42E, h7^{km}, MPVA3.2*

*MOS **17** 11:43:18.0±0.0, 42°.48N×43°.42E, h13^{km}, MPVA3.2*

ISC 17 11:43:18.1±1.1**, 42°.50N**±0°.03×**43°.42E**±0°.03**, h7^{km}**±10^{km}**, n18, σ0^{s}.61**/33**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIGR	Digorskoe uzhe	0.41	17	i Pg	Pg	11 43 26.3	+0.1
DIGR				eSg	Sg	11 43 32.1	+0.4
ZEI	Tsey	0.46	51	ePg	Pg	11 43 27.1	+0.1
ZEI				eSg	Sg	11 43 33.2	+0.2
LACR	Lac	0.72	63	ePg	Pg	11 43 31.8	-0.2
LACR				eSg	Sg	11 43 41.5	0.0
KORR	Kora	0.75	39	ePg	Pb	11 43 33.1	-0.5
KORR				eSg	Sb	11 43 44.3	+0.2
LSNR	Lesken	0.83	21	ePg	Pb	11 43 34.7	-0.2
LSNR				eSg	Sb	11 43 46.8	+0.4
NEY	Neytrino	0.91	326	ePg	Pb	11 43 35.8	-0.5
NEY				eSg	Sb	11 43 47.8	-0.8
ARNR	Ardon	0.93	43	ePg	Pn	11 43 37.4	-0.2
ARNR				eSg	Sn	11 43 50.0	-1.3
STDR	Stavd-Durt	0.99	28	ePg	Pn	11 43 39.2	+0.7
STDR				eSg	Sn	11 43 53.0	+0.3
KBTC	Kuba-Taba	1.31	360	ePg	Pg	11 43 44.0	+0.7
KBTC				eSg	Sn	11 44 02.0	+1.2
SHA1	Shidzhatmaz	1.36	336	ePg	Pg	11 43 44.5	+0.4
SHA1				eSg	Sn	11 44 02.4	+0.3
KIV0	Kislovodsk Arr	1.55	340	ePg	Pg	11 43 47.3	-0.5
KIV	Kislovodsk	1.55	340	ePg	Pb	11 43 46.5	-0.6
KIV				eSg	Sg	11 44 07.2	-0.7
BEYR	Belyy Ugol+	1.57	344	ePg	Pb	11 43 47.0	-0.5
ARTV	Artvin	1.72	221	i P	Pg	11 43 51.7	+0.6
ARTV				i S	Sg	11 44 14.1	+0.6
ARTV				IAML_P			
	comp=Z,623nm,0.2s						
DBOC	Borcka	1.75	229	i P	Pb	11 43 50.0	-0.5
DBOC				IAML_P			
	comp=Z,402nm,0.1s						
DAGI	Agillar	1.81	219	i P	Pg	11 43 53.2	+0.3
DAGI				i S	Sg	11 44 17.1	+0.7
DAGI				IAML_P			
	comp=Z,200nm,0.3s						
DBAD	Bademkaya	1.96	222	i P	Pg	11 43 55.8	0.0
DBAD				i S	Sg	11 44 20.4	-0.8
DBAD				IAML_P			
	comp=Z,389nm,0.1s						
DDEM	Demirkent	2.04	218	i P	Pb	11 43 54.5	-1.0
DDEM				i S	Sb	11 44 21.5	+0.4
DDEM				IAML_P			
	comp=Z,296nm,0.2s						

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*ISK **17** 11:43:21.4, 37°.48N×38°.59E, h14^{km}, ML1.8/3*

*ISCJB **17** 11:43:22.8±0.6, 37°.44N±0°.05×38°.60E±0°.05, h10^{km}±7^{km}, Error ellipse: s-maj=9.8km s-min=5.8km az=145.8*

*DDA **17** 11:43:22.0, 37°.47N×38°.59E, h7^{km}±1^{km}, ML2.5*

ISC 17 11:43:22.3±1.0**, 37°.47N**±0°.06×**38°.59E**±0°.03**, h12^{km}**±8^{km}**, n11, σ0^{s}.71**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	Urfa	0.19	99	PG	Pg	11 43 26.2	-0.3
URFA				SG	Sg	11 43 29.4	0.0
ATAB	Bozova	0.23	270	i P	Pg	11 43 27.7	+0.4
ATAB				IAML_P			
	comp=Z,8μm,0.1s						
SANL	SANLIURFA_Merk	0.43	133	i P	Pg	11 43 31.3	+0.4
SANL				IAML_P			
	comp=Z,528nm,0.1s						
SURC	SANLIURFA_SURC	0.59	178	i P	Pb	11 43 34.9	+0.3
SURC				IAML_P			
	comp=Z,176nm,0.1s						
GZT	Gaziantep	0.82	262	i P	Pg	11 43 38.1	-0.2
GZT				i S	Sn	11 43 50.9	-1.2
GZT				IAML_P			
	comp=Z,889nm,0.1s						
AKCD	Akcadag	0.98	328	i P	Pn	11 43 41.7	-0.3
AKCD				IAML_P			
	comp=Z,201nm,0.2s						
ELZG	Elazig	1.07	17	i P	Pn	11 43 43.9	+0.5
ELZG				i S	Sn	11 43 59.0	+0.7
ELZG				IAML_P			
	comp=Z,222nm,0.1s						
GAZ	Gaziantep	1.14	255	PN	Pb	11 43 43.6	-0.4
GAZ				SN	Sn	11 43 59.7	-0.1
KMRS	Kahramanmaras	1.34	272	PN	Pn	11 43 46.4	-0.6
KMRS				SN	Sn	11 44 04.6	-0.2
KUZU	Kuzuini	1.40	241	i P	Pg	11 43 50.8	+1.7
KUZU				i S	Sg	11 44 07.3	0.0
KUZU				IAML_P			
	comp=Z,506nm,0.2s						
MAZI	Mazidag	1.48	90	PN	Pn	11 43 48.3	-0.6

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*ISCJB **17** 11:43:40.4±0.9, 7°.08N±0°.03×72°.63W±0°.03, h1^{km}±6^{km}, mb3.1/2, Error ellipse: s-maj=5.4km s-min=4.8km az=154.7*

*RSNC **17** 11:43:41.3±1.4, 7°.13N×72°.62W, h0^{km}±5^{km}, ML3.4, Mw3.5*

*IDC **17** 11:43:49.2±1.0, 7°.19N×72°.48W, h94^{km}±15^{km}, mb2.8/2, mb1 3.2/4, mb1mx3.0/26, mbtmp3.2/4, Error ellipse: s-maj=45.9km s-min=8.5km az=132.0*

ISC 17 11:43:40.6±1.1**, 7°.08N**±0°.03×**72°.68W**±0°.03**, h10^{km}**±8^{km}**, n19, σ1^{s}.24**/31**, 2C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.26	355	i Pg	Pg	11 43 46.0	-0.1
PAMC				eS	Sg	11 43 49.9	+0.1
PAMC				i		11 43 50.2	
	comp=N,13μm,0.2s						
BARC	Barichara	0.70	226	eP	Pb	11 43 54.9	-0.1
BARC				i		11 44 05.9	
	comp=Z,602nm,0.4s						
BRRC	Barranca, Sant	1.03	272⇓	iP	Pn	11 44 01.7	+0.6
BRRC				eS	Sn	11 44 16.2	+0.7
BRRC				i		11 44 22.1	
	comp=N,1μm,0.4s						
TAMC	Tame, Arauca	1.09	126	eP	Pb	11 44 01.2	-0.3
TAMC				eS	Sg	11 44 15.4	-0.3
TAMC				i		11 44 20.8	
	comp=N,1μm,0.7s						
RUSC	La Rusia	1.25	199	eP	Pn	11 44 04.3	-0.2
RUSC				eS	Sg	11 44 20.8	0.0
OCAC	Ocana	1.31	331⇑	eP	Pn	11 44 05.2	0.0
OCAC				eS	Sn	11 44 22.7	-0.1
OCAC				i		11 44 23.8	
	comp=N,2μm,0.3s						
PTBC	PUERTO BERRIO,	1.85	253	eP	Pb	11 44 13.9	-0.5
PTBC				eS	Sb	11 44 38.5	+0.9
PTBC				i		11 44 41.1	
	comp=N,459nm,0.5s						
SMLC	San Martn de	2.20	321	eP	Pb	11 44 19.4	-1.0
SMLC				eS	Sb	11 44 49.0	+1.3
SMLC				i		11 44 53.0	
	comp=N,540nm,0.1s						
ZARC	Zaragoza, Cauc	2.20	281⇑	eP	Pb	11 44 19.4	-1.1
ZARC				eS	Sb	11 44 48.0	+0.2
ZARC				i		11 44 51.2	
	comp=N,493nm,0.2s						
SDV	Santo Domingo	2.71	48	eP	Pn	11 44 25.8	+1.4
SDV				i		11 45 03.8	
	comp=Z,16nm,0.3s						
SDV	Santo Domingo	2.71	48	P	Pb	11 44 28.9	-0.3
	comp=Z,13nm,0.3s,baz=238,slow=13,SNR=40						
SDV				S	Sn	11 44 58.5	+1.2

	comp=Z,43nm,0.3s,baz=252,slow=20,SNR=9.4						
ROSC	**El Rosal**	**2.76**	**216**	P	**Pg**	**11 44 33.0**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=120,slow=17,SNR=4.0						
ROSC				S	**Sg**	**11 45 10.9**	**+1.5**
	comp=Z,3.3nm,0.3s,baz=54,slow=19,SNR=3.5						
UREC	**San Jos de Ur**	**2.91**	**283**	*e*P	**Pn**	**11 44 29.1**	**+2.2**
UREC				*e*S	**Sb**	**11 45 06.5**	**-1.7**
UREC				*i*		11 45 10.1	
	comp=N,164nm,0.3s						
CODC	**Agustn Codazz**	**2.94**	**345**	*e*P	**Pn**	**11 44 27.8**	**+0.4**
CODC				*e*S	**Sb**	**11 45 10.6**	**+1.6**
HELC	**Santa Helena**	**2.97**	**253**	*e*P	**Pn**	**11 44 30.7**	**+2.7**
HELC				*i*		11 45 18.1	
	comp=Z,33nm,0.4s						
TXAR	**Lajitas Array**	**36.62**	**311**	P	**P**	**11 50 47.2**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=127,slow=11,SNR=2.5						
YKA	**Yellowknife Ar**	**63.17**	**340**	P	**P**	**11 54 07.0**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=131,slow=6.6,SNR=5.0						
YKA				pP	sP	11 54 30.1	+16
	comp=Z,0.2nm,0.5s,baz=132,slow=7.0,SNR=3.9						
ASAR	**Alice Springs**	**149.62**	**234**	PKPbc	**PKPdf**	**12 03 28.7**	**+1.9**
	comp=Z,0.6nm,1.1s,baz=123,slow=3.4,SNR=3.0						
WRA	**Warramunga Arr**	**150.84**	**241**	PKPbc	**PKPbc**	**12 03 32.1**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=106,slow=2.6,SNR=5.0						

SJA ***17*** *11:53:59.8±0.6, 23°.06S×66°.88W, h246^{km}±12^{km}, ML3.6, MW3.4*

ISCJB ***17*** *11:54:02.0±0.3, 23°.21S±0°.03×66°.91W±0°.04, h223^{km}±5^{km}, mb3.8/8, Error ellipse: s-maj=6.6km s-min=3.7km az=161.7*

IDC ***17*** *11:54:02.5±1.0, 23°.07S×66°.67W, h198^{km}±9^{km}, mb3.4/6, mb1 3.6/11, mb1mx3.5/30, mbtmp3.9/11, Error ellipse: s-maj=18.5km s-min=12.8km az=166.0*

GUC ***17*** *11:54:04.1±0.6, 23°.11S×67°.26W, h247^{km}±9^{km}, ML4.5*

NEIC ***17*** *11:54:04.0±0.0, 23°.11S×67°.26W, h247^{km}, mb4.4/5, ML4.5(GUC), After GUC.*

ISC 17 11:54:02.5±0.7**, 23°.18S**±0°.04×**66°.86W**±0°.04**, h213**^{km}±6^{km}**, n51, σ1^{s}70**/81**, mb3.8**/8**, 8C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.97**	**141**	*i* P	**Pn**	**11 54 43.1**	**+1.2**
SLA				IAML		11 54 44.2	
	comp=Z,332nm,0.7s						
SLA				*i* S	**S**	**11 55 15.6**	**+3.3**
SLA	**San Lorenzo**	**1.97**	**141**	⇓*i*P	**Pn**	**11 54 43.4**	**+1.6**
SLA				*e*S	**S**	**11 55 14.9**	**+2.5**
LVC	**Limon Verde**	**1.98**	**286**	*e*Pn	**Pn**	**11 54 43.5**	**+1.3**
LVC				*e*S	**S**	**11 55 14.2**	**+1.4**
LVC	**Limon Verde**	**1.98**	**286**	P	**Pn**	**11 54 43.3**	**+1.1**
	comp=Z,43nm,0.3s,baz=97,slow=6.4,SNR=320						
LVC				S	**S**	**11 55 13.5**	**+0.7**
	comp=Z,66nm,0.3s,baz=300,slow=20,SNR=37						
PB15	**IPOC Station P**	**2.41**	**269**	⇑*i*P	**Pn**	**11 54 47.8**	**+1.3**
PB15				*e*S	**S**	**11 55 21.0**	**+0.7**
PB06	**IPOC Station P**	**2.55**	**280**	⇑*i*P	**Pn**	**11 54 49.1**	**+1.1**
PB06				*e*S	**S**	**11 55 23.1**	**+0.1**
PB06				IAML		11 55 23.9	
	comp=N,864nm,0.4s						
PB09	**IPOC Station P**	**2.60**	**302**	*i* P	**Pn**	**11 54 50.1**	**+1.5**
PB09				*e*S	**S**	**11 55 25.2**	**+1.0**
PB03	**IPOC Station P**	**2.90**	**292**	⇑*i*P	**Pn**	**11 54 52.8**	**+0.9**
PB03				*e*S	**S**	**11 55 29.4**	**-0.8**
PB03				IAML		11 55 30.9	
	comp=E,1μm,0.3s						
PB05	**IPOC Station P**	**3.10**	**275**	⇑*i*P	**Pn**	**11 54 54.9**	**+0.7**
PB05				*e*S	**S**	**11 55 33.2**	**-1.0**
PB05				IAML		11 55 38.3	
	comp=N,448nm,0.3s						
PB04	**IPOC Station P**	**3.15**	**285**	*e*Pn	**Pn**	**11 54 55.6**	**+0.8**
PB04				*e*S	**S**	**11 55 35.6**	**+0.2**
PB04	**IPOC Station P**	**3.15**	**285**	⇑*e*P	**Pn**	**11 54 55.6**	**+0.8**
PB04				*e*S	**S**	**11 55 34.5**	**-0.9**
PB07	**IPOC Station P**	**3.15**	**297**	*i* P	**Pn**	**11 54 55.6**	**+0.7**
PB07				*e*S	**S**	**11 55 34.3**	**-1.2**
PB07				IAML		11 55 35.1	
	comp=N,1μm,0.3s						
GO02	**Mina Guanaco**	**3.18**	**231**	*e*Pn	**Pn**	**11 54 56.5**	**+1.2**
GO02				*e*S	**S**	**11 55 36.9**	**+0.7**
PB01	**IPOC Station P**	**3.24**	**311**	*e*Pn	**Pn**	**11 54 56.4**	**+0.7**
PB01				*e*S	**S**	**11 55 37.2**	**+0.1**
PB01	**IPOC Station P**	**3.24**	**311**	⇑*i*P	**Pn**	**11 54 56.4**	**+0.7**
PB01				*e*S	**S**	**11 55 37.1**	**0.0**
PB01				IAML		11 55 37.9	
	comp=E,635nm,0.2s						
PB02	**IPOC Station P**	**3.37**	**303**	⇑*i*P	**Pn**	**11 54 57.7**	**+0.4**
PB02				*e*S	**S**	**11 55 38.8**	**-1.2**
PB10	**IPOC Station P**	**3.41**	**264**	*e*Pn	**Pn**	**11 54 58.7**	**+1.0**
PB10				*e*S	**S**	**11 55 39.8**	**-0.8**
PB10	**IPOC Station P**	**3.41**	**264**	⇑*i*P	**Pn**	**11 54 58.5**	**+0.8**
PB10				*e*S	**S**	**11 55 39.4**	**-1.2**
PB10				IAML		11 55 43.8	
	comp=N,255nm,0.5s						
PB14	**IPOC Station P**	**3.55**	**245**	*i* P	**Pn**	**11 55 00.3**	**+0.7**
PB14				*e*S	**S**	**11 55 43.4**	**-0.7**
AHML	**Horco Molle**	**3.84**	**159**	*i* P	**Pn**	**11 55 03.8**	**+0.9**
AHML				IAML		11 55 04.1	
	comp=Z,17nm,0.4s						
AHML				*i* S	**S**	**11 55 50.5**	**+0.3**
PB11	**IPOC Station P**	**4.29**	**322**	*e*Pn	**Pn**	**11 55 08.2**	**-0.4**
PB11				*e*S	**S**	**11 55 58.5**	**-1.7**
MNMC	**Minye Minye**	**4.77**	**327**	*e*Pn	**Pn**	**11 55 15.0**	**+0.3**
MNMC				*e*S	**S**	**11 56 09.9**	**-1.4**
CYA	**Choya**	**5.32**	**170**	*i* P	**Pn**	**11 55 21.8**	**+0.4**
CYA				IAML		11 55 23.7	
	comp=Z,6.9nm,0.4s						
ACLC	**CERRO LA CRUZ**	**6.22**	**181**	*i* P	**Pn**	**11 55 32.5**	**-0.4**
ACLC				*i* S	**S**	**11 56 42.2**	**-2.4**
AGUA	**GUANDACOL**	**6.45**	**193**	*i* P	**Pn**	**11 55 36.0**	**+0.2**
AGUA				*i* S	**S**	**11 56 46.2**	**-3.6**
LCO	**Las Campanas**	**6.76**	**210**	*e*Pn	**Pn**	**11 55 38.2**	**-1.7**
LCO				*e*S	**S**	**11 56 55.4**	**-1.9**
LPAZ	**La Paz**	**6.96**	**350**	*e*Pn	**Pn**	**11 55 43.8**	**+0.7**
LPAZ	**La Paz**	**6.96**	**350**	P	**Pn**	**11 55 43.4**	**+0.4**
	comp=Z,1.9nm,0.3s,baz=158,slow=6.0,SNR=46						
LPAZ				S	**S**	**11 57 00.8**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=270,slow=20,SNR=3.0						
APLL	**PUNTA DE LOS L**	**7.19**	**178**	*i* P	**Pn**	**11 55 44.7**	**-0.6**
APLL				IAML		11 55 45.6	
	comp=Z,27nm,0.2s						
APLL				*i* S	**S**	**11 57 02.9**	**-4.3**
GO04	**Tololo Observa**	**7.80**	**206**	*e*Pn	**Pn**	**11 55 51.6**	**-1.8**
GO04				*e*S	**S**	**11 57 18.3**	**-3.6**
SIV	**San Ignacio**	**8.99**	**38**	P	**Pn**	**11 56 06.8**	**-1.9**
	comp=Z,2.6nm,0.3s,baz=226,slow=11,SNR=50						
SIV				S	**S**	**11 57 43.2**	**-6.8**
	comp=Z,0.4nm,0.3s,baz=231,slow=14,SNR=3.8						
CPUP	**Villa Florida**	**9.21**	**112**	P	**Pn**	**11 56 10.5**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=271,slow=16,SNR=2.6						
PLCA	**Paso Flores**	**17.77**	**189**	*e*P	**Pn**	**11 57 56.5**	**-0.7**
	comp=Z,5.3nm,1.1s						
BDFB	**Brasilia**	**19.28**	**70**	*e*P	**P**	**11 58 11.9**	**+0.4**
	comp=Z,14nm,0.7s						
BDFB	**Brasilia**	**19.28**	**70**	P	**P**	**11 58 11.4**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=235,slow=12,SNR=22						
PTGA	**Pitinga**	**23.30**	**18**	*e*P	**P**	**11 58 51.6**	**0.0**
	comp=Z,4.9nm,0.9s						
PTGA	**Pitinga**	**23.30**	**18**	P	**P**	**11 58 51.2**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=193,slow=13,SNR=6.5						
RCBR	**Riachuelo**	**34.45**	**65**	*e*P	**P**	**12 00 31.2**	**+0.9**
	comp=Z,16nm,1.1s						
HOPE	**Hope Point**	**38.50**	**152**	*e*P	**P**	**12 01 08.0**	**+4.0**
	comp=Z,22nm,0.8s						
TXAR	**Lajitas Array**	**63.09**	**324**	P	**P**	**12 04 09.8**	**+2.2**
	comp=Z,0.3nm,0.9s,baz=138,slow=5.9,SNR=4.1						
DBIC	**Dimbokro**	**67.42**	**72**	P	**P**	**12 04 35.5**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=214,slow=3.6,SNR=2.0						
TORD	**Torodi Ar. Bea**	**76.15**	**69**	P	**P**	**12 05 27.0**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=245,slow=2.7,SNR=8.7						
PDAR	**Pinedale Array**	**76.52**	**329**	P	**P**	**12 05 30.6**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=123,slow=5.5,SNR=4.8						
YKA	**Yellowknife Ar**	**93.41**	**340**	P	**P**	**12 06 54.6**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=128,slow=4.4,SNR=7.6						
KBZ	**Khabaz**	**119.67**	**52**	PKP	**PKiKP**	**12 12 29.5**	**+2.4**
	comp=Z,2.2nm,1.0s,baz=214,slow=3.9,SNR=3.5						
ASAR	**Alice Springs**	**129.25**	**205**	PKP	**PKiKP**	**12 12 47.4**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=135,slow=2.1,SNR=3.6						
WRA	**Warramunga Arr**	**132.41**	**207**	PKP	**PKiKP**	**12 12 54.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=162,slow=1.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**142.61**	**28**	PKP	**PKPdf**	**12 13 08.3**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=337,slow=3.3,SNR=2.2						
MKAR	**Makanchi Array**	**145.81**	**39**	PKPbc	**PKPab**	**12 13 17.9**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=318,slow=3.5,SNR=13						
LZH	**Lanzhou**	**164.82**	**30**	*e*PKP	**PKPdf**	**12 13 38.3**	**-3.1**
LZH				PKP	**PKPab**	**12 14 38.5**	**+0.1**
LZH				pPKP	pPKPdf	12 14 42.6	+4.3
LZH				sPKP		12 15 07.3	
NJ2	**Nanjing**	**169.82**	**331**	*e*P	**PKPdf**	**12 13 42.1**	**-2.7**

ISCJB ***17*** *11:59:13.4±0.1, 19°.25N±0°.02×145°.35E±0°.03, h147^{km}, mb4.5/201, Error ellipse: s-maj=4.6km s-min=3.3km az=170.4*

MOS ***17*** *11:59:18.5±1.0, 19°.29N×145°.25E, h199^{km}, mb4.6/38, Error ellipse: s-maj=10.8km s-min=5.9km az=89.9*

NEIC ***17*** *11:59:19.1±0.5, 19°.23N×145°.35E, h186^{km}±5^{km}, mb4.6/165, Error ellipse: s-maj=4.5km s-min=3.1km az=91.0*

IDC ***17*** *11:59:20.7±1.6, 19°.20N×145°.46E, h211^{km}±16^{km}, mb4.0/28, mb1 4.1/31, mb1mx4.0/54, mbtmp4.5/31, Error ellipse: s-maj=12.0km s-min=7.3km az=79.0*

ISC 17 11:59:15.1±0.3**, 19°.34N**±0°.04×**145°.42E**±0°.07**, h147**^{km}**, n326, σ1^{s}31**/324**, mb4.6**/201**, 3C-1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**2.65**	**173**	*e*Pn	**Pn**	**12 00 02.1**	**+4.0**
ANA2	**Anatahan**	**3.00**	**175**	*e*Pn	**Pn**	**12 00 06.0**	**+3.7**
GUMO	**Guam**	**5.74**	**185**	P	Pn	12 00 42.6	+4.2
	25nm,0.3s,baz=316,slow=3.0,SNR=8.1						
GUMO				S	**Sn**	**12 01 47.7**	**+4.1**
	12nm,0.3s,baz=216,slow=19,SNR=3.6						
CBIJ	**Chichi jima**	**8.27**	**340**	*e*Pn	**Pn**	**12 01 16.3**	**+4.2**
CBIJ				*e*Sn	**Sn**	**12 02 44.1**	**-0.1**
JCJ	**Chichijima**	**8.27**	**340**	P	**Pn**	**12 01 16.3**	**+4.2**
	13nm,0.3s,baz=89,slow=22,SNR=6.0						
JCJ				S	**Sn**	**12 02 44.1**	**-0.1**
	27nm,0.3s,baz=53,slow=20,SNR=6.6						
INU	**Inuyama**	**17.59**	**337**	*e*P	**Pn**	**12 03 13.5**	**+2.3**
	12nm,0.8s						
PATS	**Pohnpei**	**17.65**	**133**	*e*P	**Pn**	**12 03 17.8**	**+5.7**
	164nm,1.1s						
MJAR	**Matsushiro Arr**	**18.27**	**341**	P	**Pn**	**12 03 18.9**	**-0.4**
	0.4nm,0.3s,baz=166,slow=10,SNR=28						
MJAR				S	**S**	**12 06 34.4**	**-4.4**
	0.0nm,0.3s,baz=120,slow=13,SNR=4.0						
MAJO	**Matsushiro**	**18.27**	**341**	*e*P	**Pn**	**12 03 20.2**	**+0.9**
	14nm,0.8s						
MAJO				*e*S	**S**	**12 06 34.4**	**-4.5**
MAJO	**Matsushiro**	**18.27**	**341**	*i* P	**P**	**12 03 16.1**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,14nm,0.9s						
MAT	**Matsushiro**	**18.27**	**341**	P	**Pn**	**12 03 18.9**	**-0.4**
MAT				*e*S	**S**	**12 06 38.4**	**-0.5**
MJB9	**Matsu-Tunnel**	**18.28**	**341**	*e*P	**Pn**	**12 03 19.8**	**+0.5**
	comp=Z,14nm,0.8s						
JNU	**Nakatsue**	**18.91**	**319**	*e*P	**Pn**	**12 03 28.1**	**+1.4**
	comp=Z,19nm,1.1s						
JNU	**Nakatsue**	**18.91**	**319**	P	**Pn**	**12 03 28.1**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=133,slow=9.2,SNR=3.4						
H11S3	**WAKE ISLAND Hy**	**20.14**	**89**	T	T	12 24 45.2	
	baz=275,slow=74,SNR=3.3						
H11S1	**WAKE ISLAND Hy**	**20.15**	**89**	T	T	12 24 46.2	
	baz=275,slow=74,SNR=3.1						
H11S2	**WAKE ISLAND Hy**	**20.16**	**89**	T	T	12 24 47.1	
	baz=275,slow=74,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**20.24**	**85**	T	T	12 24 54.8	
	baz=274						
H11N2	**WAKE ISLAND Hy**	**20.25**	**85**	T	T	12 24 58.7	
	baz=274						
H11N3	**WAKE ISLAND Hy**	**20.26**	**85**	T	T	12 24 57.9	
	baz=274						
MANU	**Manus Island**	**21.34**	**175**	*e*P	**P**	**12 03 49.4**	**-1.4**
	comp=Z,84nm,0.6s						
JAY	**Jayapura**	**22.21**	**193**	P	**P**	**12 03 58.9**	**-1.0**
	comp=Z,53nm,0.9s,baz=350,slow=2.8,SNR=13						
YHNB	**Yeheng**	**22.90**	**288**	*e*P	**P**	**12 04 07.8**	**+1.4**
	comp=Z,28nm,0.9s						
TPUB	**Ta-pu**	**23.42**	**284**	*e*P	**P**	**12 04 12.7**	**+1.6**
	comp=Z,19nm,1.1s						
KSRS	**Korea Array**	**23.65**	**323**	P	**P**	**12 04 13.8**	**+0.9**
	comp=Z,4.4nm,0.6s,baz=148,slow=9.1,SNR=21						
KS15	**Wonju Array Si**	**23.66**	**323**	*e*P	**P**	**12 04 14.3**	**+1.2**
KSAR	**Wonju Array Be**	**23.66**	**323**	P	**P**	**12 04 13.8**	**+0.8**
KSAR	**Wonju Array Be**	**23.66**	**323**	P	**P**	**12 04 13.9**	**+0.8**
KS01	**Wonju Array Si**	**23.68**	**323**	*e*P	**P**	**12 04 14.0**	**+0.7**
RABL	**Rabaul**	**24.31**	**163**	*e*P	**P**	**12 04 17.1**	**-2.1**
	comp=Z,102nm,1.1s						
ASAJ	**Asahikawa**	**24.82**	**355**	P	**P**	**12 04 25.4**	**+1.9**
	comp=Z,13nm,1.0s,baz=190,slow=10.0,SNR=11						
NJ2	**Nanjing**	**27.00**	**303**	*e*P	**P**	**12 04 43.9**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	**Ussuriysk Ar.**	**27.21**	**339**	P	**P**	**12 04 46.0**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=155,slow=7.6,SNR=4.8						
YSS	**Yuzh-Sakhalins**	**27.63**	**356**	*i* P	**P**	**12 04 48.2**	**-0.5**
YSS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLR	**Kul'dur**	**31.78**	**343**	*i* P	**P**	**12 05 24.8**	**-0.6**
COEN	**Coen**	**33.16**	**184**	*e*P	**P**	**12 05 35.9**	**-1.9**
	comp=Z,11nm,0.6s						
NKL	**Nikolayevsk**	**33.95**	**355**	*e*P	**P**	**12 05 45.0**	**+0.9**
NKL				pmax	pmax		
	comp=Z,39nm,1.0s						
MTN	**Manton Dam**	**34.94**	**205**	*e*P	**P**	**12 05 52.6**	**-0.6**
	comp=Z,36nm,0.9s						
PEA0B	**Petropavlovsk-**	**35.02**	**13**	*e*P	**P**	**12 05 55.6**	**+2.1**
	comp=Z,29nm,1.1s						
PETK	**Petropavlovsk-**	**35.02**	**13**	P	**P**	**12 05 55.4**	**+1.9**
	comp=Z,5.4nm,0.7s,baz=194,slow=7.4,SNR=7.2						
PEA1	**Petropavlovsk-**	**35.03**	**13**	*e*P	**P**	**12 05 55.4**	**+1.9**
HHC	**Hu-ho-hao-te**	**35.97**	**314**	*e*P	**P**	**12 06 04.4**	**+2.6**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CTAO	**Charters Tower**	**39.19**	**179**	*e*P	**P**	**12 06 27.5**	**-1.5**
	comp=Z,3.8nm,0.7s						
CTAO	**Charters Tower**	**39.19**	**179**	*e*P	**P**	**12 06 27.5**	**-1.5**
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CD2	**Chengdu**	**39.23**	**295**	*e*P	**P**	**12 06 30.0**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	**Kunming**	**39.80**	**286**	P	**P**	**12 06 35.3**	**+0.9**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LZH	**Lanzhou**	**40.07**	**303**	⇓P	**P**	**12 06 37.1**	**+0.7**
LZH				pP	sP	12 07 19.1	-4.6
LZH				sP	PP	12 07 41.3	-30
LZH				PP	**PnPn**	**12 08 16.3**	**-0.2**
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,65nm,5.4s						
MA2	**Magadan**	**40.37**	**4**	*e*P	**P**	**12 06 39.8**	**+1.5**
	comp=Z,15nm,1.0s						
MA2				*e*PcP	**PcP**	**12 08 37.9**	**-0.6**
MA2	**Magadan**	**40.37**	**4**	*ce*P	**P**	**12 06 39.5**	**+1.2**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WRAB	**Tennant Creek**	**40.51**	**196**	*e*P	**P**	**12 06 39.1**	**-0.8**
	comp=Z,42nm,0.6s						
WRAB	**Tennant Creek**	**40.51**	**196**	*c i*P	**P**	**12 06 38.9**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,43nm,1.1s						
WB2	**Warramunga Arr**	**40.52**	**196**	*e*P	**P**	**12 06 39.4**	**-0.6**
	comp=Z,47nm,0.8s						
WR1	**Warramunga Arr**	**40.52**	**196**	*e*P	**P**	**12 06 38.9**	**-1.1**
WRA	**Warramunga Arr**	**40.52**	**196**	P	**P**	**12 06 38.9**	**-1.1**
	comp=Z,28nm,0.7s,baz=12,slow=8.9,SNR=122						
FITZ	**Fitzroy Crossi**	**41.97**	**209**	*e*P	**P**	**12 06 51.6**	**-0.2**
	comp=Z,26nm,0.8s						
ULN	**Ulaanbaatar**	**42.11**	**321**	*e*P	**P**	**12 06 55.0**	**+2.1**
	comp=Z,3.3nm,0.8s						
ULN	**Ulaanbaatar**	**42.11**	**321**	*ce*P	**P**	**12 06 52.4**	**-0.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PBKT	**Sadao Pong**	**42.29**	**274**	P	P	12 07 00.0	+5.5
	comp=Z,5.1nm,1.2s						
SONA0	**Songino Array**	**42.48**	**321**	*e*P	**P**	**12 06 56.4**	**+0.6**
SONM	**Songino Array**	**42.48**	**321**	P	**P**	**12 06 56.4**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=138,slow=8.7,SNR=21						
SONA1	**Songino Array**	**42.48**	**321**	*e*P	**P**	**12 06 56.6**	**+0.8**
SEY	**Seymchan**	**43.82**	**5**	*i* P	**P**	**12 07 07.3**	**+1.2**
CM01	**Chiang Mai Arr**	**43.87**	**277**	*e*P	**P**	**12 07 08.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**43.88**	**277**	P	**P**	**12 07 08.9**	**+1.6**
	comp=Z,2.1nm,0.8s,baz=66,slow=6.7,SNR=16						
GTA	**Gaotai**	**43.95**	**307**	*e*P	P	12 07 15.6	+7.8
GTA				pP	sP	12 07 51.0	-4.6
AS01	**Alice Springs**	**44.18**	**195**	*e*P	**P**	**12 07 07.8**	**-1.8**
AS31	**Alice Springs**	**44.20**	**195**	*e*P	**P**	**12 07 08.6**	**-1.0**
	comp=Z,5.1nm,0.5s						
ASAR	**Alice Springs**	**44.20**	**195**	P	**P**	**12 07 08.0**	**-1.7**
	comp=Z,6.9nm,0.6s,baz=15,slow=6.8,SNR=13						
ZAK	**Zakamensk**	**45.48**	**323**	*e*P	**P**	**12 07 18.3**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TLY	**Talaya**	**45.89**	**325**	*i* P	**P**	**12 07 22.5**	**-0.2**
DZM	**Mont Dzumac**	**46.01**	**152**	*e*P	**P**	**12 07 23.0**	**-1.0**
	comp=Z,12nm,0.7s						
DZM	**Mont Dzumac**	**46.01**	**152**	P	**P**	**12 07 22.5**	**-1.6**
	comp=Z,17nm,0.9s,baz=319,slow=4.5,SNR=14						
OUENC	**Ouen Island, N**	**46.48**	**152**	*e*P	**P**	**12 07 27.1**	**-0.6**
	comp=Z,28nm,1.0s						
ARMA	**Armidale**	**49.83**	**173**	*e*P	**P**	**12 07 53.3**	**0.0**
	comp=Z,5.7nm,0.9s						
GSI	**Gunungsitoli**	**50.13**	**255**	*e*P	**P**	**12 07 57.4**	**+1.5**
	comp=Z,12nm,0.9s						
BILL	**Bilibino**	**50.44**	**10**	*e*P	**P**	**12 07 58.1**	**+0.8**
	comp=Z,24nm,0.9s						
BILL	**Bilibino**	**50.44**	**10**	*e*P	**P**	**12 07 58.1**	**+0.8**
BILL				pmax	pmax		
	comp=Z,24nm,0.9s						
AKUT	**Akutan**	**50.79**	**35**	*e*P	**P**	**12 08 01.0**	**+0.8**
	comp=Z,147nm,1.2s						
STKA	**Stephens Creek**	**51.06**	**184**	*e*P	**P**	**12 08 00.3**	**-2.1**
	comp=Z,1.4nm,1.0s						
STKA	**Stephens Creek**	**51.06**	**184**	*e*P	**P**	**12 08 00.3**	**-2.1**
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
STKA	**Stephens Creek**	**51.06**	**184**	P	**P**	**12 08 00.1**	**-2.3**
	comp=Z,1.8nm,0.3s,baz=24,slow=8.5,SNR=8.7						
FORT	**Forrest**	**52.55**	**199**	*e*P	**P**	**12 08 12.8**	**-0.7**
	comp=Z,29nm,0.8s						
BBOO	**Buckleboo**	**52.62**	**190**	*e*P	**P**	**12 08 12.2**	**-1.7**
	comp=Z,6.5nm,0.9s						
GAMB	**Gambell**	**52.96**	**22**	*e*P	**P**	**12 08 17.7**	**+1.7**
	comp=Z,16nm,1.0s						
WMQ	**Urumqi**	**53.69**	**311**	*e*P	**P**	**12 08 23.8**	**+1.9**
WMQ				pP	sP	12 09 07.5	-3.1
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,200nm,7.1s						
CAN	**Canberra**	**54.47**	**176**	*e*P	**P**	**12 08 28.3**	**+0.9**
	comp=Z,7.4nm,1.0s						
CAN	**Canberra**	**54.47**	**176**	*e*P	**P**	**12 08 28.3**	**+0.9**
CAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DGZ	**Jazzator, Alta**	**54.88**	**318**	*i* P	**P**	**12 08 29.1**	**-1.4**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KHLU	**Kahalu`u**	**55.08**	**79**	*e*P	**P**	**12 08 33.3**	**+1.0**
	comp=Z,124nm,1.1s						
ANM	**Nome**	**55.71**	**23**	*e*P	**P**	**12 08 37.3**	**+1.3**
	comp=Z,10nm,0.9s						
ANM	**Nome**	**55.71**	**23**	*e*P	**P**	**12 08 37.3**	**+1.3**
ANM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MORW	**Morawa**	**55.86**	**211**	*e*P	**P**	**12 08 36.9**	**-0.6**
	comp=Z,15nm,0.9s						
TOO	**Toolangi**	**56.61**	**180**	*e*P	**P**	**12 08 43.3**	**+0.7**
	comp=Z,4.9nm,0.8s						
TOO	**Toolangi**	**56.61**	**180**	*e*P	**P**	**12 08 43.3**	**+0.7**
TOO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZALV	**Zalesovo Beam**	**57.35**	**322**	*e*P	**P**	**12 08 47.3**	**-0.4**
ZALV	**Zalesovo Beam**	**57.35**	**322**	P	**P**	**12 08 46.6**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=109,slow=7.4,SNR=8.3						
ZAA1	**Zalesovo Array**	**57.35**	**322**	*e*P	**P**	**12 08 46.6**	**-1.1**
MK01	**Makanchi Array**	**57.82**	**314**	*e*P	**P**	**12 08 51.2**	**0.0**
MK31	**Makanchi Array**	**57.83**	**314**	*e*P	**P**	**12 08 51.3**	**0.0**
MK31	**Makanchi Array**	**57.83**	**314**	*e*P	**P**	**12 08 51.3**	**0.0**
MK32	**Makanchi Array**	**57.83**	**314**	*e*P	**P**	**12 08 51.0**	**-0.2**
MKAR	**Makanchi Array**	**57.83**	**314**	*e*P	**P**	**12 08 51.2**	**-0.1**
	comp=Z,9.2nm,0.6s						
MKAR	**Makanchi Array**	**57.83**	**314**	*e*P	**P**	**12 08 51.2**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MKAR	**Makanchi Array**	**57.83**	**314**	P	**P**	**12 08 51.0**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=90,slow=8.5,SNR=12						
SII	**Sitkinak Islan**	**57.83**	**35**	*e*P	**P**	**12 08 52.7**	**+1.6**
	comp=Z,74nm,0.8s						
MAKZ	**Makanchi**	**58.05**	**314**	*e*P	**P**	**12 08 52.8**	**0.0**
	comp=Z,1.6nm,0.8s						
MAKZ	**Makanchi**	**58.05**	**314**	*e*P	**P**	**12 08 52.8**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SVW2	**Sparrevohn**	**58.40**	**29**	*e*P	**P**	**12 08 56.2**	**+1.3**
	comp=Z,13nm,0.7s						
OHAK	**Old Harbor**	**58.47**	**34**	*e*P	**P**	**12 08 56.5**	**+1.1**
	comp=Z,25nm,1.0s						
NWAO	**Narrogin (SRO)**	**58.54**	**208**	*e*P	**P**	**12 08 55.8**	**-0.5**
	comp=Z,21nm,1.1s						
NWAO	**Narrogin (SRO)**	**58.54**	**208**	*e*P	**P**	**12 08 55.8**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,21nm,1.1s						
KDAK	**Kodiak Island**	**58.97**	**34**	*e*P	**P**	**12 08 59.6**	**+0.7**
	comp=Z,14nm,0.8s						
KDAK	**Kodiak Island**	**58.97**	**34**	*i* P	**P**	**12 08 59.3**	**+0.4**
KDAK	**Kodiak Island**	**58.97**	**34**	P	**P**	**12 08 59.1**	**+0.2**
	comp=Z,13nm,0.7s,baz=260,slow=1.3,SNR=22						
BRLK	**Bradley Lake**	**60.28**	**31**	*e*P	**P**	**12 09 07.8**	**-0.1**
	comp=Z,24nm,0.8s						
PPLA	**Purkeypile**	**60.46**	**28**	*e*P	**P**	**12 09 10.3**	**+1.1**
	comp=Z,14nm,1.1s						
KURK	**Kurchatov**	**60.62**	**318**	*e*P	**P**	**12 09 10.0**	**-0.3**
	comp=Z,2.2nm,0.7s						
KURK	**Kurchatov**	**60.62**	**318**	*i* P	**P**	**12 09 09.1**	**-1.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CAST	**Castle Rocks**	**60.65**	**27**	*e*P	**P**	**12 09 11.2**	**+0.9**
	comp=Z,25nm,0.8s						
IM3	**Indian Mountai**	**60.74**	**24**	*e*P	**P**	**12 09 11.7**	**+0.8**
SUA	**Susitna One**	**60.74**	**30**	*e*P	**P**	**12 09 11.5**	**+0.3**
	comp=Z,14nm,0.8s						
NRIK	**Noril'sk**	**60.92**	**340**	P	**P**	**12 09 11.7**	**-0.3**
	comp=Z,3.9nm,0.5s,baz=120,slow=9.8,SNR=4.2						
SEW	**Seward**	**61.06**	**31**	*e*P	**P**	**12 09 13.6**	**+0.4**
	comp=Z,40nm,1.1s						
RC01	**Rabbit Creek A**	**61.13**	**30**	*e*P	**P**	**12 09 13.6**	**0.0**
	comp=Z,36nm,1.0s						
TRF	**Thorofare Moun**	**61.43**	**27**	*e*P	**P**	**12 09 15.8**	**-0.1**
	comp=Z,28nm,0.9s						
PMR	**Palmer**	**61.53**	**30**	*e*P	**P**	**12 09 16.3**	**+0.1**
	comp=Z,18nm,1.0s						
PMR	**Palmer**	**61.53**	**30**	*e*P	**P**	**12 09 16.3**	**+0.1**
PMR				pmax	pmax		
	comp=Z,18nm,1.0s						
MLY	**Manley**	**61.66**	**26**	*e*P	**P**	**12 09 17.7**	**+0.6**
	comp=Z,14nm,0.9s						
GHO	**Glory Hole Cre**	**61.66**	**29**	*e*P	**P**	**12 09 17.3**	**0.0**
	comp=Z,16nm,0.7s						
KNK	**Knik Glacier**	**61.80**	**30**	*e*P	**P**	**12 09 18.9**	**+0.7**
	comp=Z,29nm,0.8s						
SML	**Sawmill**	**61.94**	**30**	*e*P	**P**	**12 09 19.6**	**+0.6**
	comp=Z,40nm,0.8s						
SML	**Sawmill**	**61.94**	**30**	*e*P	**P**	**12 09 19.7**	**+0.6**
SML				pmax	pmax		
	comp=Z,40nm,0.8s						
BWN	**Browne**	**61.97**	**27**	*e*P	**P**	**12 09 19.7**	**+0.6**
	comp=Z,32nm,1.0s						
RND	**Reindeer**	**62.05**	**28**	*e*P	**P**	**12 09 19.9**	**0.0**
	comp=Z,14nm,0.9s						
RND	**Reindeer**	**62.05**	**28**	*e*P	**P**	**12 09 19.9**	**0.0**
RND				pmax	pmax		
	comp=Z,14nm,0.9s						
MCK	**McKinley**	**62.09**	**27**	*e*P	**P**	**12 09 20.0**	**0.0**
	comp=Z,12nm,1.0s						
MCK	**McKinley**	**62.09**	**27**	*e*P	**P**	**12 09 20.0**	**0.0**
MCK				pmax	pmax		
	comp=Z,13nm,1.0s						
SCM	**Sheep Creek Mo**	**62.42**	**30**	*e*P	**P**	**12 09 22.7**	**+0.4**
	comp=Z,41nm,0.9s						
SCM	**Sheep Creek Mo**	**62.42**	**30**	*e*P	**P**	**12 09 22.7**	**+0.4**
SCM				pmax	pmax		
	comp=Z,41nm,0.9s						
COLD	**Coldfoot**	**62.47**	**23**	*e*P	**P**	**12 09 23.8**	**+1.3**
	comp=Z,2.9nm,1.0s						
WRH	**Wood River Hil**	**62.62**	**27**	*e*P	**P**	**12 09 23.4**	**-0.1**
	comp=Z,9.0nm,0.7s						
DHY	**Denali Highway**	**62.64**	**28**	*e*P	**P**	**12 09 24.2**	**+0.3**
	comp=Z,5.2nm,0.8s						
MDM	**Murphy Dome**	**62.67**	**26**	*e*P	**P**	**12 09 24.1**	**+0.2**

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             comp=Z,12nm,0.8s
COLA  College           62.81  26 eP        P           12 09 25.4 +0.8
             comp=Z,11nm,0.6s
COLA  College           62.81  26 i P       P           12 09 24.6 -0.1
COLA                                pmax    pmax
             comp=Z,8.0nm,0.8s
EYAK  Cordova Ski Ar    62.95  31 eP        P           12 09 27.1 +1.3
             comp=Z,30nm,1.0s
KLU   Klutina           63.02  30 eP        P           12 09 27.0 +0.7
             comp=Z,18nm,1.0s
DIV   Divide            63.03  31 eP        P           12 09 27.6 +1.3
             comp=Z,9.1nm,1.0s
HDA   Harding Lake      63.09  27 eP        P           12 09 25.8 -0.8
             comp=Z,9.5nm,0.8s
TOLK  Toolik Lake Re    63.10  22 eP        P           12 09 27.7 +1.1
             comp=Z,14nm,0.6s
IL1   Eielson Array     63.19  26 eP        P           12 09 26.5 -0.7
ILAR  Eielson Array     63.19  26  P        P           12 09 25.9 -1.4
             comp=Z,10.0nm,0.8s,baz=258,slow=5.1,SNR=73
ILB   Eielson Array     63.19  26 eP        P           12 09 26.3 -1.0
PAX   Paxson            63.47  28 eP        P           12 09 29.7 +0.4
             comp=Z,11nm,0.8s
PAX   Paxson            63.47  28 eP        P           12 09 29.7 +0.4
PAX                                 pmax    pmax
             comp=Z,11nm,0.8s
HARP  HAARP             63.52  29 eP        P           12 09 30.5 +1.0
             comp=Z,28nm,0.6s
PALK  Pallekele         63.80 269 eP        P           12 09 30.9 -1.3
             comp=Z,2.1nm,0.9s
PALK  Pallekele         63.80 269 eP        P           12 09 30.9 -1.3
PALK                                pmax    pmax
             comp=Z,2.0nm,0.9s
PALK  Pallekele         63.80 269  P        P           12 09 30.5 -1.7
             comp=Z,1.4nm,0.4s,baz=114,slow=8.0,SNR=2.8
RIDG  Independ'e Rid    63.88  28 eP        P           12 09 32.1 +0.2
             comp=Z,21nm,0.8s
PRP   Porcupine Dome    63.90  26 eP        P           12 09 30.9 -1.3
             comp=Z,2.5nm,0.8s
DOT   Dot Lake          64.20  28 eP        P           12 09 34.1 +0.1
             comp=Z,15nm,0.8s
FYU   Fort Yukon        64.22  25 eP        P           12 09 35.3 +1.3
             comp=Z,13nm,0.8s
MENT  Mentasta          64.26  29 eP        P           12 09 35.2 +0.9
             comp=Z,6.8nm,1.0s
SCRK  Sand Creek        64.29  28 eP        P           12 09 34.9 +0.2
             comp=Z,16nm,0.9s
URZ   Urewera           64.56 153 eP        P           12 09 36.5  0.0
             comp=Z,17nm,1.2s
BKZ   Black Stump Fm    65.06 154 eP        P           12 09 38.3 -1.5
             comp=Z,11nm,1.1s
EGAK  Eagle             65.61  27 eP        P           12 09 43.3 +0.3
             comp=Z,6.2nm,0.9s
BRVK  Borovoye          65.88 320 eP        P           12 09 44.7 -0.2
             comp=Z,3.3nm,0.9s
BRVK  Borovoye          65.88 320 eP        P           12 09 44.7 -0.2
BRVK                                pmax    pmax
             comp=Z,3.0nm,0.9s
THZ   Tophouse          65.91 158 eP        P           12 09 44.4 -0.8
             comp=Z,9.9nm,0.9s
KK31  Karatay Array     66.16 309 eP        P           12 09 47.6 +0.7
KK31  Karatay Array     66.16 309 eP        P           12 09 47.6 +0.7
KKAR  Karatay Array     66.16 309 eP        P           12 09 47.9 +0.9
KKAR  Karatay Array     66.16 309 eP        P           12 09 47.9 +0.9
SNZO  South Karori      66.17 156 eP        P           12 09 46.4 -0.4
             comp=Z,77nm,1.1s
DAWY  Dawson            66.31  28 eP        P           12 09 48.1 +0.5
             comp=Z,7.5nm,0.9s
LTZ   Lake Taylor       66.58 159 eP        P           12 09 50.1 +0.7
             comp=Z,8.9nm,1.0s
KHZ   Kahutara          66.70 158 eP        P           12 09 48.2 -1.9
             comp=Z,22nm,1.2s
OXZ   Oxford            66.98 159 eP        P           12 09 50.7 -1.2
             comp=Z,6.8nm,0.6s
HYT   Haines Junctio    67.02  31 eP        P           12 09 53.8 +1.6
             comp=Z,10nm,0.8s
EPYK  Eagle Plains      67.58  25 eP        P           12 09 56.2 +0.6
             comp=Z,6.4nm,0.8s
WHZ   Wether Hill Ro    68.06 163 eP        P           12 09 58.6 -0.1
             comp=Z,7.4nm,1.0s
WHY   Whitehorse        68.30  31 eP        P           12 10 01.3 +1.1
             comp=Z,5.0nm,1.0s
KBL   Kabul             68.32 300 eP        P           12 09 58.9 -2.1
             comp=Z,6.3nm,0.4s
KBL   Kabul             68.32 300 eP        P           12 09 58.9 -2.1
KBL                                 pmax    pmax
             comp=Z,6.0nm,0.4s
BESE  Bessie Mountai    68.37  34 eP        P           12 10 01.9 +1.3
             comp=Z,9.0nm,0.8s
JIS   Juneau Island     68.63  34 eP        P           12 10 03.6 +1.5
             comp=Z,6.7nm,1.0s
INK   Inuvik            68.89  23 eP        P           12 10 03.4 -0.2
             comp=Z,8.8nm,0.8s
INK   Inuvik            68.89  23 eP        P           12 10 03.4 -0.2
INK                                 pmax    pmax
             comp=Z,9.0nm,0.8s
WRAK  Wrangell Islan    69.84  36 eP        P           12 10 10.2 +0.6
             comp=Z,15nm,1.0s
DLBC  Dease Lake        70.91  34 eP        P           12 10 17.4 +1.3
             comp=Z,13nm,0.9s
ABKAR Akbulak array     72.69 317 eP        P           12 10 26.4 -0.5
PPT   Papeete           73.63 116  P        P           12 10 30.2 -2.7
             comp=Z,33nm,0.9s,baz=81,slow=9.5,SNR=2.4
AKTO  Aktyubinsk        73.71 318  P        P           12 10 31.7 -1.2
             comp=Z,0.7nm,0.4s,baz=68,slow=11,SNR=2.4
PGC   Sidney            76.46  43 eP        P           12 10 49.6 +1.0
LLLB  Lillooet          76.97  41 eP        P           12 10 52.4 +0.9
             comp=Z,5.1nm,1.0s
YKW3  Yellowknife Ar    77.52  28 eP        P           12 10 54.3  0.0
             comp=Z,5.2nm,0.6s
YKA   Yellowknife Ar    77.55  28  P        P           12 10 53.6 -0.8
             comp=Z,5.2nm,0.6s,baz=290,slow=5.4,SNR=83
YKB5  Yellowknife Ar    77.55  28 eP        P           12 10 53.9 -0.5
D05A  Enumclaw          77.78  44 eP        P           12 10 57.4 +1.4
             comp=Z,12nm,1.0s
LON   Longmire          78.02  45 eP        P           12 10 58.0 +0.6
             comp=Z,4.6nm,0.9s
LON   Longmire          78.02  45 eP        P           12 10 58.1 +0.6
LON                                 pmax    pmax
             comp=Z,5.0nm,0.9s
H04A  Detroit Lake      78.31  47 eP        P           12 10 59.3 +0.2
             comp=Z,10.0nm,1.0s
HUMO  Hull Mountain     78.33  49 eP        P           12 11 01.9 +2.6
             comp=Z,5.2nm,0.8s
LTY   Liberty           78.63  44 eP        P           12 11 01.3 +0.4
             comp=Z,5.4nm,0.8s
RES   Resolute Bay      78.86  14 eP        P           12 11 01.5  0.0
             comp=Z,3.7nm,0.8s
RES   Resolute Bay      78.86  14 eP        P           12 11 01.5  0.0
RES                                 pmax    pmax
             comp=Z,4.0nm,0.8s
B08A  Colville Reser    79.18  43 eP        P           12 11 04.2 +0.4
             comp=Z,5.0nm,0.8s
E07A  Sunnyside         79.36  44 eP        P           12 11 05.5 +0.8
             comp=Z,7.5nm,0.7s
PINE  Pine Mountain     79.42  47 eP        P           12 11 06.1 +0.7
             comp=Z,16nm,0.8s
HAWA  Hanford           79.62  45 eP        P           12 11 07.0 +0.8
D08A  Wollman Farm,     79.83  44 eP        P           12 11 07.7 +0.4
             comp=Z,7.4nm,1.0s
TMCR  Tamitsa           80.08 335 eP        P           12 11 06.9 -1.3
TMCR                                pmax    pmax
             comp=Z,7.0nm,0.7s
ORV   Oroville          80.24  52 eP        P           12 11 09.8 +0.2
             comp=Z,8.8nm,1.1s
ORV   Oroville          80.24  52 eP        P           12 11 09.8 +0.2
ORV                                 pmax    pmax
             comp=Z,9.0nm,1.1s
E09A  Wood Farm, Sta    80.50  44 eP        P           12 11 11.7 +0.9
             comp=Z,7.4nm,0.8s
NEW   Newport           80.62  42 eP        P           12 11 11.9 +0.4
             comp=Z,5.5nm,0.8s
NEW   Newport           80.62  42 eP        P           12 11 11.9 +0.4
NEW                                 pmax    pmax
             comp=Z,6.0nm,0.8s
AFDM  Forest Hills D    80.81  52 eP        P           12 11 13.0 +0.3
             comp=Z,5.1nm,1.0s
BEKR  Beckworth         80.98  51 eP        P           12 11 14.1 +0.2
             comp=Z,9.3nm,0.8s
KEV   Kevo              81.24 342 eP        P           12 11 13.4 -0.9
             comp=Z,11nm,1.0s
KEV   Kevo              81.24 342 eP        P           12 11 13.4 -0.9
KEV                                 pmax    pmax
             comp=Z,11nm,1.0s
J08A  Circle Bar Ran    81.26  47 eP        P           12 11 15.6 +0.5
             comp=Z,5.9nm,0.8s
WVOR  Wild Horse Val    81.43  48 eP        P           12 11 16.1  0.0
             comp=Z,4.6nm,0.9s
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CMB   Columbia Colle    81.52  53 eP        P           12 11 16.9 +0.4
             comp=Z,6.3nm,0.8s
BMO   Blue Mountains    81.58  46 eP        P           12 11 17.1 +0.3
             comp=Z,5.0nm,0.9s
PNTR  Pine Nut          81.78  52 eP        P           12 11 18.7 +0.6
             comp=Z,10nm,0.8s
ARCES ARCESS Array B    81.81 342 eP        P           12 11 15.9 -1.4
ARCES ARCESS Array B    81.81 342 eP        P           12 11 15.9 -1.4
ARCES ARCESS Array B    81.81 342  P        P           12 11 16.0 -1.4
             comp=Z,4.6nm,0.8s,baz=77,slow=6.2,SNR=19
ARE0  ARCESS Array S    81.81 342 eP        P           12 11 15.9 -1.4
             comp=Z,0.2nm,0.9s
YERR  Yerington         82.08  52 eP        P           12 11 20.2 +0.6
             comp=Z,7.4nm,0.9s
WAKR  Walker            82.08  52 eP        P           12 11 20.5 +0.9
             comp=Z,5.4nm,0.7s
WALA  Waterton Lakes    82.36  41 eP        P           12 11 21.6 +0.8
             comp=Z,1.0nm,0.9s
RYN   Ryan              82.72  52 eP        P           12 11 23.6 +0.7
             comp=Z,7.8nm,0.9s
KVN   Kaiserville       82.90  51 eP        P           12 11 24.3 +0.4
             comp=Z,5.4nm,0.7s
KVN   Kaiserville       82.90  51 eP        P           12 11 24.3 +0.4
KVN                                 pmax    pmax
             comp=Z,5.0nm,0.7s
NV01  Mina Array Sit    82.95  52 eP        P           12 11 24.7 +0.5
NVAR  Mina Array Bea    82.95  52  P        P           12 11 24.1 -0.1
             comp=Z,9.8nm,0.7s,baz=265,slow=6.0,SNR=63
NV11  Mina Array Sit    83.06  52 eP        P           12 11 24.8 +0.2
             comp=Z,0.4nm,0.8s
JOF   Joensuu           83.33 335  P        P           12 11 24.9 -0.4
JOF                                 pmax    pmax
             comp=Z,13nm,0.8s
HLID  Hailey            83.98  46 eP        P           12 11 29.6 +0.3
             comp=Z,1.9nm,0.8s
ELK   Elko              84.40  49 eP        P           12 11 32.0 +0.5
             comp=Z,6.6nm,0.8s
ELK   Elko              84.40  49 eP        P           12 11 32.0 +0.5
ELK                                 pmax    pmax
             comp=Z,7.0nm,0.8s
HRY   Holter Researc    84.52  42 eP        P           12 11 32.6 +0.7
DLMT  Dillon            84.53  44 eP        P           12 11 32.1 +0.1
             comp=Z,5.0nm,1.1s
OBN   Obninsk           84.60 327 i P       P           12 11 29.4 -2.4
OBN                                 pmax    pmax
             comp=Z,4.0nm,0.7s
TPNV  Topopah Spring    84.98  53 eP        P           12 11 34.5 +0.1
             comp=Z,6.6nm,0.7s
TPNV  Topopah Spring    84.98  53 eP        P           12 11 34.6 +0.1
TPNV                                pmax    pmax
             comp=Z,7.0nm,0.7s
R11A  Troy Canyon, C    84.99  51 eP        P           12 11 35.4 +1.0
             comp=Z,1.5nm,0.9s
BOZ   Bozeman (W)       85.08  43 eP        P           12 11 34.8 +0.1
             comp=Z,4.0nm,0.7s
BOZ   Bozeman (W)       85.08  43 eP        P           12 11 34.8 +0.1
BOZ                                 pmax    pmax
             comp=Z,4.0nm,0.7s
QLMT  Earthquake Lak    85.50  44 eP        P           12 11 38.2 +1.3
YHB   Horse Butte       85.69  44 eP        P           12 11 38.6 +0.8
             comp=Z,11nm,0.8s
HVU   Hansel Valley     85.75  47 eP        P           12 11 35.7 -2.5
             comp=Z,6.6nm,1.0s
HVU   Hansel Valley     85.75  47 eP        P           12 11 35.7 -2.5
HVU                                 pmax    pmax
             comp=Z,7.0nm,1.0s
YMR   Madison River     85.87  44 eP        P           12 11 39.8 +1.1
             comp=Z,15nm,0.8s
BGU   Big Grassy Mou    85.90  48 eP        P           12 11 39.0 +0.1
             comp=Z,2.1nm,0.8s
YHH   Holmes Hill       85.90  44 eP        P           12 11 39.8 +0.8
             comp=Z,4.8nm,0.8s
SHPR  Sheep Range       85.96  53 eP        P           12 11 39.6 +0.3
             comp=Z,3.0nm,0.9s
PSUT  Pine Spring       86.19  51 eP        P           12 11 40.6 +0.2
             comp=Z,6.3nm,1.0s
FIA1  FINESS Array S    86.19 335 eP        P           12 11 37.2 -2.5
FIA0  FINESS Array S    86.19 335 eP        P           12 11 37.0 -2.7
FIA0  FINESS Array S    86.19 335 eP        P           12 11 37.0 -2.7
FINES FINESS Array B    86.19 335  P        P           12 11 37.0 -2.7
FINES FINESS Array B    86.19 335  P        P           12 11 37.0 -2.7
             comp=Z,1.1nm,0.3s,baz=55,slow=5.3,SNR=16
FXWY  Fox Creek         86.23  45 eP        P           12 11 41.2 +0.6
             comp=Z,4.6nm,1.1s
GCMT  Greycliff         86.26  43 eP        P           12 11 37.5 -3.1
DUG   Dugway, Tooele    86.32  49 eP        P           12 11 41.0 +0.1
             comp=Z,6.5nm,0.8s
DUG   Dugway, Tooele    86.32  49 eP        P           12 11 41.1 +0.1
DUG                                 pmax    pmax
             comp=Z,6.0nm,0.8s
FFC   Flin Flon         86.69  32 eP        P           12 11 42.2  0.0
             comp=Z,6.6nm,1.0s
FFC   Flin Flon         86.69  32 i P       P           12 11 42.0 -0.3
CCUT  Cedar City        86.92  51 eP        P           12 11 44.6 +0.5
             comp=Z,4.3nm,1.0s
NLU   North Lily Min    86.94  49 eP        P           12 11 43.9 -0.1
             comp=Z,4.7nm,0.9s
JLU   Jordanelle        87.13  48 eP        P           12 11 45.2 +0.2
             comp=Z,6.0nm,0.8s
MSU   Marysvale         87.42  50 eP        P           12 11 47.0 +0.6
MSU   Marysvale         87.42  50 eP        P           12 11 47.0 +0.6
W13A  Hualapai Mount    87.43  54 eP        P           12 11 47.2 +0.7
             comp=Z,2.2nm,0.8s
KNB   Kanab             87.52  52 eP        P           12 11 47.2 +0.4
             comp=Z,7.8nm,0.9s
KNB   Kanab             87.52  52 eP        P           12 11 47.2 +0.4
KNB                                 pmax    pmax
             comp=Z,8.0nm,0.9s
BW06  Boulder Array     87.56  45 eP        P           12 11 47.2 +0.2
             comp=Z,1.4nm,0.8s
PD31  Pinedale Array    87.56  45 eP        P           12 11 47.2 +0.2
PDAR  Pinedale Array    87.56  45 eP        P           12 11 46.5 -0.5
PDAR  Pinedale Array    87.56  45  P        P           12 11 45.9 -1.2
             comp=Z,0.7nm,0.6s,baz=215,slow=2.4,SNR=9.3
Q16A  Castle Valley     87.98  49 eP        P           12 11 49.6 +0.6
             comp=Z,6.8nm,1.1s
FCC   Fort Churchill    88.21  27 eP        P           12 11 48.8 -0.6
             comp=Z,4.7nm,1.0s
FCC   Fort Churchill    88.21  27 eP        P           12 11 48.8 -0.6
FCC                                 pmax    pmax
             comp=Z,5.0nm,1.0s
SRU   San Rafael Swe    88.37  49 eP        P           12 11 50.8 -0.1
             comp=Z,5.8nm,1.1s
SRU   San Rafael Swe    88.37  49 eP        P           12 11 50.8 -0.1
SRU                                 pmax    pmax
             comp=Z,6.0nm,1.1s
RKT   Rikitea           88.38 115 eT        T           12 12 38.0
             comp=Z,5.0nm,0.3s
Y14A  Wickenburg        88.54  55 eP        P           12 11 52.0 +0.4
             comp=Z,7.7nm,0.8s
WUAZ  Wupatki           89.17  53 eP        P           12 11 56.2 +1.6
             comp=Z,6.3nm,0.8s
PV21  Cone Mtn., Par    89.70  49 eP        P           12 11 57.0 -0.1
             comp=Z,3.4nm,0.8s
PV23  Carpenter Ridg    89.72  49 eP        P           12 11 57.4 +0.1
             comp=Z,5.2nm,0.7s
PV14  Lion Creek, Pa    89.74  49 eP        P           12 11 56.9 -0.5
             comp=Z,7.4nm,0.7s
PV20  West Nyswonger    89.80  49 eP        P           12 11 57.6 +0.1
             comp=Z,7.4nm,0.7s
PV19  Morning Glory     89.80  49 eP        P           12 11 57.6  0.0
             comp=Z,7.4nm,0.9s
PV04  Paradox Valley    89.82  49 eP        P           12 11 57.6 -0.1
             comp=Z,1.9nm,0.8s
PV17  East Wray Mesa    89.83  49 eP        P           12 11 57.8  0.0
             comp=Z,6.8nm,0.8s
PV16  Nyswonger Mesa    89.85  49 eP        P           12 11 57.7 -0.1
             comp=Z,4.6nm,0.8s
PV11  David Mesa, Pa    89.88  49 eP        P           12 11 58.0  0.0
             comp=Z,6.9nm,0.6s
PV03  Paradox Valley    89.92  49 eP        P           12 11 57.9 -0.3
             comp=Z,5.3nm,0.9s
PV12  Saucer Basin,     89.92  49 eP        P           12 11 58.3 +0.1
             comp=Z,6.6nm,1.1s
PV13  Radium Mtn., P    89.98  49 eP        P           12 11 58.5  0.0
PV02  Paradox Valley    90.02  49 eP        P           12 11 58.5 -0.2
             comp=Z,4.8nm,0.7s
PV01  Paradox Valley    90.17  49 eP        P           12 11 59.2 -0.2
             comp=Z,4.3nm,0.7s
S22A  4UR Ranch, Cre    91.58  49 eP        P           12 12 06.2 +0.2
             comp=Z,1.5nm,0.8s
HFS   Hagfors           91.69 338  P        P           12 12 02.9 -2.7
             comp=Z,0.8nm,0.5s,baz=62,slow=4.3,SNR=5.6
ULM   Lac du Bonnet     92.22  34  P        P           12 12 06.1 -2.2
             comp=Z,3.0nm,0.9s,baz=266,slow=7.5,SNR=5.4
SDCO  Great Sand Dun    92.52  49 eP        P           12 12 10.4 +0.1
             comp=Z,1.0nm,0.8s
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ANMO  Albuquerque       93.07  51 i P       P           12 12 12.9 +0.1
ANMO                                pmax    pmax
             comp=Z,2.0nm,1.1s
BR101 Keskin Array S    93.48 314 eP        P           12 12 12.4 -2.1
BRTR  Keskin Array B    93.48 314  P        P           12 12 12.4 -2.1
             comp=Z,0.5nm,0.6s,baz=70,slow=1.7,SNR=3.1
LTX   Lajitas           97.69  55 eP        P           12 12 30.6 -3.2
LTX   Lajitas           97.69  55 eP        P           12 12 30.6 -3.2
TXAR  Lajitas Array     97.69  55  P        P           12 12 30.6 -3.2
             comp=Z,0.2nm,0.8s,baz=326,slow=4.4,SNR=2.9
PEL   Peldehue         145.00 120 ePKPbc    PKPbc       12 18 32.0 -3.1
PEL   Peldehue         145.00 120 ePKP2     PKPbc       12 18 32.0 -3.1
LCO   Las Campanas     145.78 113 ePKPdf    PKPbc       12 18 37.6 -0.3
LCO   Las Campanas     145.78 113 ePKP2     PKPbc       12 18 37.6 -0.3
MNMC  Minye Minye      146.97  96 ePKPdf    PKPbc       12 18 41.0 -0.5
PB11  IPOC Station P   146.98  97 ePKPdf    PKPbc       12 18 40.8 -0.7
LVC   Limon Verde      147.82 102 ePKPbc    PKPbc       12 18 44.4 +0.4
LPAZ  La Paz           147.94  90 ePKP2     PKPbc       12 18 44.0 -0.7
LPAZ  La Paz           147.94  90  PKPbc    PKPbc       12 18 44.0 -0.7
             comp=Z,2.0nm,0.8s,baz=245,slow=2.2,SNR=7.6
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IDC **17** *12:01:27.8±1.0, 41°.77S×174°.02E, h0^{km}, mb3.7/2, mb1 4.1/4, mb1mx3.9/20, mbtmp3.9/4, ML4.2/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/28, Error ellipse: s-maj=36.0km s-min=27.3km az=147.0*

ISCJB **17** *12:01:28.8±0.4, 41°.88S±0°.02×173°.99E±0°.03, h21^{km}±3^{km}, MS3.9/2, Error ellipse: s-maj=4.9km s-min=2.4km az=40.0*

NEIC **17** *12:01:28.2±0.0, 41°.92S×174°.01E, h2^{km}, mb4.3/4, ML4.8(WEL), After WEL.*

NEIC Felt in Blenheim.

WEL **17** *12:01:29.5, 42°S±1°×17°4E±°, h23^{km}±3^{km}, ML5.0/17*

ISC 17 12:01:29.5±0.8**, 41°.85S**±0°.03×**173°.99E**±0°.03**, h14**^{km}±5^{km}**,**
n191, σ1^{s}.49/217**, South Island**

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Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                  Op       ISC        h  m  s     ISC
BSWZ  Blackbirch Sta     0.15 327  P        Pg          12 01 32.8 -0.6
BSWZ                               S        Sg          12 01 35.0 -1.0
CMWZ  Cape Campbell      0.19  61  P        Pg          12 01 35.6 +1.6
CMWZ                               S        Sg          12 01 40.6 +3.6
TUWZ  Tuamarina          0.42 355  P        Pg          12 01 37.2 -0.7
TUWZ                               S        Sg          12 01 42.7 -0.7
KHZ   Kahutara           0.66 210 ePn       Pb          12 01 43.5 +0.6
KHZ                               eSg       Sn          12 01 54.5 -0.3
KHZ   Kahutara           0.66 210  P        Pb          12 01 43.4 +0.5
KHZ                                S        Sn          12 01 53.8 -1.0
TCW   Tory Channel       0.67  19  P        Pg          12 01 41.7 -0.9
TCW                                S        Sb          12 01 51.9 -0.3
SNZO  South Karori       0.76  45 ePn       Pb          12 01 44.8 +0.2
SNZO                              eSg       Sn          12 01 57.3 +0.2
NNZ   Nelson             0.78 324  P        Pg          12 01 43.2 -1.4
NNZ                                P        Pg          12 01 43.2 -1.4
NNZ                                S        Sg          12 01 53.0 -1.8
BHW   Baring Head        0.79  57  P        Pn          12 01 45.8 -0.5
BHW                                S        Sn          12 01 57.6 -0.4
THZ   Tophouse           0.81 275 ePg       Pg          12 01 44.3 -1.0
THZ   Tophouse           0.81 275  P        Pg          12 01 44.4 -1.0
PLWZ  Palliser           0.99  74  P        Pn          12 01 48.6 -0.5
PLWZ                               P        Pn          12 01 48.6 -0.5
MSWZ  Moikau Station     1.04  66  P        Pn          12 01 49.5 -0.3
DUWZ  D'Urville Isla     1.04 357  P        Pg          12 01 47.9 -1.8
CAW   Cannon Point       1.10  48  P        Pb          12 01 50.2 -0.1
CAW                                P        Pn          12 01 50.3 -0.2
PAWZ  Paruwai Farm       1.17  67  P        Pb          12 01 51.0 -0.7
KIW   Kapiti Island      1.20  36  P        Pb          12 01 51.1 -1.0
KIW                                P        Pb          12 01 51.1 -1.0
MTW   Mount Morrison     1.33  59  P        Pn          12 01 53.0 -0.7
TRWZ  Traveller          1.35  71  P        Pn          12 01 53.2 -0.8
TRWZ                               P        Pn          12 01 53.2 -0.8
OGWZ  Otaki Gorge        1.36  41  P        Pn          12 01 54.1 -0.1
HOWZ  Holdsworth Sta     1.49  51  P        Pn          12 01 55.3 -0.7
QRZ   Quartz Range       1.50 312  P        Pn          12 01 55.5 -0.5
LTZ   Lake Taylor        1.58 233 ePn       Pn          12 01 57.4 +0.2
LTZ   Lake Taylor        1.58 233  P        Pn          12 01 57.4 +0.2
TMWZ  Te Maipa           1.61  63  P        Pn          12 01 56.5 -1.1
DSZ   Denniston Nort     1.64 273  P        Pn          12 01 58.4 +0.5
AMCZ  Amberley           1.66 216  P        Pn          12 01 57.9 -0.3
MRZ   Mangatainoka R     1.69  46  P        Pn          12 01 58.1 -0.5
TIWZ  Tintock            1.79  54  P        Pn          12 01 58.9 -1.1
CPWZ  Castlepoint        1.91  61  P        Pn          12 02 00.6 -1.1
OHWZ  Ohakea             1.92  32  P        Pb          12 02 02.9 -1.4
PRWZ  Pori Road          1.98  50  P        Pn          12 02 01.7 -0.9
POWZ  Post Office Ro     1.98  43  P        Pn          12 02 01.9 -0.7
POWZ                               P        Pn          12 02 02.0 -0.7
OKCZ  Okains Bay         2.00 200  P        Pn          12 02 02.2 -0.8
CRLZ  Canterbury Las     2.00 210 ePn       Pn          12 02 01.6 -1.3
CRLZ  Canterbury Las     2.00 210  P        Pn          12 02 01.6 -1.3
BFZ   Birch Farm         2.06  56 ePn       Pn          12 02 02.0 -1.7
BFZ   Birch Farm         2.06  56  P        Pn          12 02 02.1 -1.7
OXZ   Oxford             2.06 224 ePn       Pn          12 02 02.4 -1.5
OXZ   Oxford             2.06 224  P        Pn          12 02 02.7 -1.1
INZ   Inchbonnie         2.08 244  P        Pn          12 02 04.3 +0.2
MQZ   McQueen's Vall     2.10 207 ePn       Pn          12 02 02.6 -1.7
MQZ                               eSn       Sn          12 02 29.3 -1.0
MQZ   McQueen's Vall     2.10 207  P        Pn          12 02 02.7 -1.7
AKCZ  Akaroa Harbour     2.18 201  P        Pn          12 02 04.3 -1.1
WAZ   Wanganui           2.22  20  P        Pn          12 02 06.9 +0.9
DVHZ  Dannevirke         2.26  48  P        Pn          12 02 05.0 -1.5
TSZ   Takapari Road      2.33  41  P        Pn          12 02 06.6 -0.9
LREZ  Lake Rotokare      2.40   8  P        Pn          12 02 09.5 +1.0
NMEZ  Namu Road          2.43 358  P        Pn          12 02 09.5 +0.7
PREZ  Palmer Road        2.50   3  P        Pn          12 02 11.0 +1.1
KHEZ  Kahui Hut          2.55   0  P        Pn          12 02 11.4 +0.8
PRHZ  Porangahau         2.55  53  P        Pn          12 02 08.5 -2.0
WPHZ  Waipukurau         2.57  47  P        Pn          12 02 09.4 -1.4
NBEZ  Newall Road No     2.58 358  P        Pn          12 02 11.5 +0.7
PKE   Pukeiti            2.65 360  P        Pn          12 02 12.5 +0.6
DREZ  Durham Road        2.66   4  P        Pn          12 02 13.1 +1.1
WVZ   Waitaha Valley     2.70 242  P        Pn          12 02 12.6  0.0
MTVZ  Mangateitei        2.70  25  P        Pn          12 02 14.0 +1.3
PKVZ  Pokaka             2.75  23  P        Pn          12 02 14.5 +1.1
VRZ   Vera Road          2.78  12  P        Pn          12 02 14.5 +0.9
MOVZ  Moawhango          2.78  29  P        Pn          12 02 13.6 -0.2
TRVZ  Turoa              2.81  26  P        Pn          12 02 14.8 +0.6
BHHZ  Black Hill Sta     2.83  35  P        Pn          12 02 14.0 -0.5
PXZ   Pawanui            2.83  51  P        Pn          12 02 12.0 -2.4
PXZ                                P        Pn          12 02 11.9 -2.4
WHVZ  Whangaehu Hut      2.83  26  P        Pn          12 02 15.6 +0.9
FWVZ  Far West T-bar     2.85  25  P        Pn          12 02 15.6 +0.8
RPZ   Rata Peaks         2.86 228  Pn       Pn          12 02 13.7 -1.0
             65nm,0.3s,baz=72,slow=2.9,SNR=254
RPZ                                Sn       Sn          12 02 46.3 -2.7
             109nm,0.3s,baz=150,slow=20,SNR=18
RPZ                                Lg       Lg          12 02 59.5
             78nm,0.3s,baz=310,slow=18,SNR=6.8
RPZ                                LR       LR          12 03 11.3
             comp=Z,187nm,20.9s,baz=43,slow=35
RPZ   Rata Peaks         2.86 228  P        Pn          12 02 13.7 -1.0
TUVZ  Tukino             2.87  27  P        Pn          12 02 15.7 +0.6
COVZ  Chateau Observ     2.90  25  P        Pn          12 02 16.4 +1.0
NGZ   Ngauruhoe          2.94  25  P        Pn          12 02 16.9 +0.9
TWVZ  Taurewa            2.98  22  P        Pn          12 02 18.3 +1.7
WTVZ  West Tongariro     2.99  25  P        Pn          12 02 17.3 +0.7
KAHZ  Kahuranaki         3.00  48  P        Pn          12 02 14.7 -2.0
KRVZ  Karewarewa         3.02  25  P        Pn          12 02 18.2 +1.0
KWHZ  Kaweka Forest      3.05  38  P        Pn          12 02 15.9 -1.5
KATZ  Kakaramea          3.15  25  P        Pn          12 02 20.6 +1.8
MCHZ  McNeill Hill       3.16  42  P        Pn          12 02 17.3 -1.6
RITZ  Rihia Road         3.20  27  P        Pn          12 02 21.3 +1.8
CKHZ  Cape Kidnapper     3.21  48  P        Pn          12 02 17.2 -2.3
CKHZ  Cape Kidnapper     3.21  48  P        Pg          12 02 32.0 +1.0
BKZ   Black Stump Fm     3.29  36 ePn       Pn          12 02 18.9 -1.8
BKZ   Black Stump Fm     3.29  36  P        Pn          12 02 19.1 -1.7
HATZ  Hinemaiaia         3.36  29  P        Pn          12 02 22.5 +0.8
HIZ   Hauiti             3.39  12 ePn       Pn          12 02 23.0 +0.9
HIZ   Hauiti             3.39  12  P        Pn          12 02 23.0 +0.9
ARHZ  Aropaoanui         3.45  43  P        Pn          12 02 21.3 -1.6
ARHZ                               P        Pn          12 02 21.2 -1.7
NMHZ  Naumai             3.49  39  P        Pn          12 02 21.6 -1.8
FOZ   Fox Glacier        3.51 240 ePn       Pn          12 02 24.7 +1.1
FOZ   Fox Glacier        3.51 240  P        Pn          12 02 23.7 +0.1
FOZ                                P        Pn          12 02 24.8 +1.1
WHTZ  Whakaora           3.52  26  P        Pb          12 02 30.3 -1.3
MRHZ  Matea Rd           3.54  32  P        Pn          12 02 22.7 -1.4
MRHZ  Matea Rd           3.54  32  P        Pb          12 02 31.1 -0.8
MTHZ  Maungataniwha      3.70  37  P        Pn          12 02 24.5 -1.8
TLZ   Tolley Road        3.71  19  P        Pn          12 02 27.4 +0.9
WHHZ  Waihua             3.71  43  P        Pn          12 02 24.7 -1.7
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WPRZ	Whakapapatarin	3.71	27	P	Pn	12 02 27.5	+0.9
ALRZ	Allen Road	3.74	30	P	Pn	12 02 25.6	-1.4
RAHZ	Arahi	3.76	40	P	Pn	12 02 25.2	-2.1
LBZ	Lake Benmore	3.77	226	ePn	Pn	12 02 26.6	-0.7
LBZ	Lake Benmore	3.77	226	P	Pn	12 02 26.6	-0.7
PRRZ	Plateau Road	3.82	30	P	Pn	12 02 26.8	-1.1
PRRZ	Plateau Road	3.82	30	P	Pb	12 02 35.6	-1.0
HRRZ	Handcock Road	3.87	28	P	Pb	12 02 35.6	-2.1
HSRZ	Hossack Road	3.93	27	P	Pn	12 02 29.8	+0.2
RTZ	Ruatahuna	3.96	36	P	Pn	12 02 21.9	-8.0
MUGZ	Murupara	3.98	33	P	Pn	12 02 28.3	-1.9
KNZ	Kokohu	3.98	46	P	Pn	12 02 27.2	-3.0
SNGZ	Shannon Statio	3.99	41	P	Pn	12 02 27.9	-2.5
RRRZ	Republican Roa	4.00	30	P	Pn	12 02 30.5	0.0
ODZ	Otahua Downs	4.02	216	ePn	Pn	12 02 29.1	-1.6
ODZ	Otahua Downs	4.02	216	P	Pn	12 02 29.0	-1.7
MHGZ	Mahia Peninsul	4.02	49	P	Pn	12 02 27.7	-3.0
TARZ	Mount Tarawera	4.09	29	P	Pn	12 02 32.6	+0.8
PRGZ	Paritu Road	4.17	47	P	Pn	12 02 29.7	-3.0
KARZ	Kaharoa	4.20	25	P	Pb	12 02 41.4	-1.8
RAGZ	Rawiri	4.25	39	P	Pn	12 02 31.2	-2.8
RAGZ				P	Pn	12 02 31.2	-2.8
RIGZ	Rimuhau	4.26	44	P	Pn	12 02 30.7	-3.4
RIGZ	Rimuhau	4.26	44	P	Pn	12 02 30.7	-3.4
KMRZ	Kaimai	4.27	21	P	Pb	12 02 44.6	+0.2
TOZ	Tahuroa Road	4.27	16	P	Pn	12 02 34.8	+0.6
EDRZ	Edgecumbe	4.29	30	P	Pn	12 02 34.9	+0.4
URZ	Urewera	4.31	35	ePn	Pn	12 02 32.8	-1.9
URZ				eSn	Sn	12 03 21.7	-3.1
URZ				eLg	Lg	12 03 36.3	
URZ	Urewera	4.31	35	Pn	Pn	12 02 31.5	-3.2
	6.3nm,0.3s,baz=230,slow=8.6,SNR=45						
URZ				Sn	Sn	12 03 21.7	-3.1
	27nm,0.3s,baz=100,slow=19,SNR=3.2						
URZ				Lg	Lg	12 03 36.3	
	8.8nm,0.3s,baz=72,slow=19,SNR=2.7						
URZ	Urewera	4.31	35	P	Pn	12 02 31.9	-2.8
MARZ	Manawahe	4.37	29	P	Pn	12 02 35.7	+0.1
MARZ				P	Pn	12 02 35.6	0.0
JCZ	Jackson Bay	4.42	238	P	Pn	12 02 35.2	-1.1
MWZ	Matawai	4.43	39	P	Pn	12 02 32.9	-3.5
OPRZ	Ohinepanea	4.46	27	P	Pn	12 02 36.2	-0.5
TGRZ	Tauranga	4.47	24	P	Pn	12 02 37.0	+0.2
TKGZ	Te Karaka	4.51	42	P	Pn	12 02 33.8	-3.6
WKZ	Wanaka	4.69	229	ePn	Pn	12 02 39.5	-0.5
WKZ	Wanaka	4.69	229	P	Pn	12 02 38.5	-1.5
HHSZ	Highcliff Hill	4.72	210	P	Pn	12 02 38.9	-1.5
TWGZ	Tauwhareparae	4.78	41	P	Pn	12 02 38.7	-2.5
TWGZ				P	Pn	12 02 38.7	-2.5
KBAZ	Karaka Road Bo	4.79	9	P	Pn	12 02 42.4	+1.1
EAZ	Earnscleugh	4.80	224	P	Pn	12 02 40.3	-1.1
AWAZ	Awhitu Peninsu	4.80	6	P	Pn	12 02 41.9	+0.5
RUGZ	Raukumara Rang	4.80	37	P	Pn	12 02 38.8	-2.8
MKAZ	Moumakai	4.82	11	P	Pn	12 02 42.1	+0.4
MYRZ	Mayor Island	4.88	22	P	Pn	12 02 44.4	+1.8
WTAZ	Waiatarua	4.93	5	P	Pn	12 02 43.8	+0.6
WTAZ				P	Pn	12 02 43.8	+0.6
ETAZ	East Tamaki Re	4.94	9	P	Pn	12 02 43.9	+0.6
PUZ	Puketiti	5.00	42	P	Pn	12 02 40.1	-4.0
HAZ	Te Kaha	5.02	37	P	Pn	12 02 41.8	-2.7
PKGZ	Pakihiroa	5.05	40	P	Pn	12 02 35.0	-10
MBAZ	Motutapu North	5.12	8	P	Pn	12 02 46.5	+0.7
WIAZ	Waiheke Island	5.12	10	P	Pn	12 02 46.6	+0.7
TUZ	Tuapeka	5.17	216	P	Pn	12 02 45.0	-1.5
MSZ	Milford Sound	5.25	235	P	Pn	12 02 47.1	-0.5
KUZ	Kuaotunu	5.27	15	P	Pn	12 02 48.1	+0.2
ABAZ	Army Bay	5.28	7	P	Pn	12 02 48.7	+0.7
MXZ	Matakaoa Point	5.42	39	ePn	Pn	12 02 47.6	-2.4
MXZ	Matakaoa Point	5.42	39	P	Pn	12 02 47.2	-2.7
MXZ				P	Pn	12 02 47.3	-2.7
MLZ	Mavora Lakes	5.53	228	ePn	Pn	12 02 51.7	+0.2
MLZ	Mavora Lakes	5.53	228	P	Pn	12 02 50.1	-1.4
GRZ	Great Barrier	5.70	12	P	Pn	12 02 55.2	+1.3
SYZ	Scrubby Hill	5.84	215	P	Pn	12 02 54.9	-0.8
WCZ	Waipu Caves	5.90	3	P	Pn	12 02 57.4	+0.8
WHZ	Wether Hill Ro	5.95	225	ePn	Pn	12 02 56.3	-0.9
WHZ	Wether Hill Ro	5.95	225	P	Pn	12 02 54.5	-2.8
DCZ	Deep Cove	6.14	232	ePn	Pn	12 02 59.1	-0.7
DCZ	Deep Cove	6.14	232	P	Pn	12 03 01.4	+1.7
OUZ	Omahuta	6.62	357	ePn	Pn	12 03 07.5	+1.0
OUZ	Omahuta	6.62	357	P	Pn	12 03 07.3	+0.9
PYZ	Puysegur Point	6.81	228	ePn	Pn	12 03 11.1	+2.0
PYZ	Puysegur Point	6.81	228	P	Pn	12 03 11.3	+2.2
CTZ	Chatham Island	7.17	108	P	Pn	12 03 11.9	-2.0
DZM	Mont Dzumac	20.71	340	eP	P	12 06 10.1	+0.5
	10nm,1.0s						
DZM	Mont Dzumac	20.71	340	LR	LR	12 12 50.7	
	comp=Z,108nm,18.9s,baz=326,slow=33						
AS31	Alice Springs	37.87	286	eP	P	12 08 46.5	+0.4
	0.9nm,0.7s						
ASAR	Alice Springs	37.87	286	P	P	12 08 46.5	+0.4
	0.4nm,0.4s,baz=126,slow=7.4,SNR=2.8						
WR1	Warramunga Arr	39.95	291	eP	P	12 09 03.9	+0.3
WRA	Warramunga Arr	39.95	291	P	P	12 09 03.9	+0.3
	1.0nm,0.6s,baz=128,slow=7.9,SNR=4.3						
MTN	Manton Dam	47.08	295	eP	P	12 10 00.9	-0.1
	5.5nm,1.0s						
QSPA	South Pole Qui	48.28	180	eP	P	12 10 11.4	+1.3
	4.6nm,1.1s						
NJ2	Nanjing	89.33	316	eP	P	12 14 27.4	+2.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC	Hu-ho-hao-te	99.83	317	eP	Pdif	12 15 14.9	+1.6
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LZH	Lanzhou	100.61	309	eP	Pdif	12 15 15.3	-1.7
LZH				pP	pPdif	12 15 18.5	-3.2
LZH				sP	pP	12 15 20.1	-1.6
LZH				ePP	PP	12 19 25.3	+0.6
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,76nm,9.3s						
LZH				LR	LR		
	comp=N,130nm,17.0s						
LZH				LR	LR		
	comp=E,140nm,17.4s						
LZH				LR	LR		
	comp=Z,170nm,19.6s						
YKA	Yellowknife Ar	118.56	30	PKP	PKiKP	12 20 16.4	+0.6
	comp=Z,0.2nm,0.6s,baz=249,slow=1.8,SNR=3.7						
YKB5	Yellowknife Ar	118.56	30	ePKPdf	PKiKP	12 20 16.2	+0.4
KBZ	Khabaz	144.47	290	PKP	PKPdf	12 21 05.3	+0.4
	comp=Z,1.6nm,0.8s,baz=95,slow=3.3,SNR=3.6						
DBIC	Dimbokro	144.96	182	PKPbc	PKPdf	12 21 07.2	+0.5
	comp=Z,2.1nm,0.8s,baz=176,slow=3.5,SNR=2.1						
ARA0	ARCESS Array S	147.80	340	ePKPbc	PKPbc	12 21 12.8	0.0
ARCES	ARCESS Array B	147.80	340	PKPbc	PKPbc	12 21 12.8	0.0
	comp=Z,1.2nm,0.6s,baz=48,slow=2.7,SNR=7.0						
BR101	Keskin Array S	150.08	279	ePKPbc	PKPbc	12 21 20.1	+0.4
BRTR	Keskin Array B	150.08	279	PKPbc	PKPbc	12 21 20.1	+0.4
	comp=Z,0.4nm,0.4s,baz=134,slow=6.2,SNR=3.8						
TORD	Torodi Ar. Bea	150.63	195	PKPbc	PKPbc	12 21 21.2	-0.3
	comp=Z,0.8nm,0.4s,baz=168,slow=2.2,SNR=14						
TOA1	Torodi Ar. Sit	150.64	195	ePKPbc	PKPbc	12 21 21.2	-0.4
FIA0	FINESS Array S	152.50	326	ePKPbc	PKiKP	12 21 24.9	+0.3
FINES	FINESS Array B	152.50	326	PKPbc	PKiKP	12 21 24.9	+0.3
	comp=Z,0.6nm,0.5s,baz=22,slow=4.5,SNR=5.2						

BEO ***17*** *12:06:47.8±0.6, 40°.78N×21°.56E, h0^{km}±4^{km}, ML3.3/13*

SOF ***17*** *12:06:47.1, 40°.75N×21°.39E, h2^{km}*

SKO ***17*** *12:06:47.3, 40°.78N×21°.39E, h21^{km}, M3.2, ML3.7*

ATH ***17*** *12:06:47.6, 40°.77N×21°.40E, h18^{km}±1^{km}, ML3.4/34, Error ellipse: s-maj=1.4km s-min=0.7km az=144.0*

ISCJB ***17*** *12:06:47.2±0.3, 40°.78N±0°.01×21°.41E±0°.02, h0^{km}±2^{km}, mb3.5/8, Error ellipse: s-maj=2.2km s-min=1.6km az=150.2*

TIR ***17*** *12:06:47.2, 40°.82N×21°.32E, h2^{km}, Md3.7/5*

PDG ***17*** *12:06:48.3±0.6, 40°.79N×21°.43E, h9^{km}±1^{km}, ML3.6/10, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

THE ***17*** *12:06:48.1, 40°.73N×21°.40E, h0^{km}±1^{km}, ML3.4/19, Error ellipse: s-maj=1.2km s-min=0.4km az=319.0*

IDC ***17*** *12:06:55.0±2.1, 40°.78N×21°.38E, h67^{km}±21^{km}, mb3.3/9, mb1 3.4/14, mb1mx3.3/45, mbtmp3.5/14, MS2.9/2, Ms1 2.9/2, ms1mx2.3/31, Error ellipse: s-maj=20.3km s-min=16.9km az=63.0*

ISC 17 12:06:48.1±1.0, **40°.77N**±0°.01×**21°.39E**±0°.02, **h7**^{km}±7^{km}, **n209,** σ1^{s}.28/273, **mb3.6**/8, **16C-21D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	Bitola	0.26	349	⇑iPg	Pg	12 06 53.6	+0.3
BIA				i Sg	Sb	12 06 59.1	-0.8
BIA				eLg	Lg	12 06 59.5	
	comp=N,4µm,0.3s						
BIA				eLg	Lg	12 06 59.5	
	comp=E,6µm,0.4s						
NEST	Nestorio	0.44	217	P	Pg	12 06 55.8	-0.8
NEST				S	Sg	12 07 02.9	+0.6
NEST				AML	AML	12 07 03.9	
	comp=E,22852µm,0.6s						
NEST				AML	AML	12 07 05.2	
	comp=N,18307µm,0.4s						
NEST	Nestorio	0.44	217	P	Pg	12 06 55.6	-1.0
NEST				S	Sg	12 07 01.9	-0.4
KZN	Kozani	0.54	148	P	Pg	12 06 58.2	-0.5
KZN				S	Sg	12 07 06.2	+0.5
KZN				AML	AML	12 07 09.9	
	comp=N,17442µm,0.6s						
KZN				AML	AML	12 07 10.1	
	comp=E,17744µm,0.4s						
KZN	Kozani	0.54	148	P	Pg	12 06 58.1	-0.5
KZN				S	Sg	12 07 06.1	+0.4
OHR	Ohrid	0.57	308	⇑iPg	Pg	12 06 58.5	-0.6
OHR				i Sg	Sg	12 07 06.9	+0.4
OHR				eLg	Lg	12 07 07.5	
	comp=N,5µm,0.9s						
OHR				eLg	Lg	12 07 07.7	
	comp=E,5µm,0.8s						
PENT	Pentalofos	0.60	199	P	Pg	12 06 59.1	-0.6
PENT				S	Sb	12 07 09.3	-0.5
PENT				AML	AML	12 07 11.9	
	comp=E,8761µm,0.4s						
PENT				AML	AML	12 07 14.7	
	comp=N,8129µm,0.4s						
PENT	Pentalofos	0.60	199	P	Pg	12 06 59.0	-0.7
PENT				S	Sg	12 07 07.0	-0.6
KRUS	Krusevo	0.61	350	⇑iPg	Pg	12 06 59.4	-0.5
KRUS				i Sg	Sg	12 07 08.6	+0.7
KRUS				eLg	Lg	12 07 09.0	
	comp=E,885nm,0.3s						
KRUS				eLg	Lg	12 07 09.3	
	comp=N,738nm,0.5s						
GRG	Griva	0.79	76	P	Pg	12 07 03.1	-0.2
GRG				S	Sg	12 07 14.0	+0.4
GRG				AML	AML	12 07 21.4	
	comp=N,5663µm,0.4s						
GRG				AML	AML	12 07 22.0	
	comp=E,6036µm,0.5s						
GRG	Griva	0.79	76	P	Pg	12 07 02.9	-0.4
GRG				S	Sb	12 07 15.3	+0.1
GRG	Griva	0.79	76	⇓iPg	Pg	12 07 03.1	-0.2
GRG				i Sg	Sb	12 07 15.5	+0.3
KPRO	Kipourio	0.81	181	P	Pg	12 07 02.3	-1.4
KPRO				S	Sg	12 07 14.6	+0.4
KPRO				AML	AML	12 07 23.1	
	comp=N,7858µm,0.5s						
KPRO				AML	AML	12 07 24.7	
	comp=E,5960µm,0.6s						
KPRO	Kipourio	0.81	181	P	Pg	12 07 02.3	-1.4
VAY	Valandovo	1.05	58	⇓iPg	Pg	12 07 07.9	-0.4
VAY				i Sg	Sb	12 07 22.8	+0.2
VAY				eLg	Lg	12 07 26.6	
	comp=E,2µm,0.7s						
VAY				eLg	Lg	12 07 26.7	
	comp=N,1µm,0.7s						
LIT	Litokhoron	1.07	128	P	Pg	12 07 08.2	-0.5
LIT				S	Sg	12 07 22.7	+0.1
LIT				AML	AML	12 07 28.9	
	comp=N,10795µm,0.6s						
LIT				AML	AML	12 07 29.8	
	comp=E,9440µm,0.4s						
LIT	Litokhoron	1.07	128	P	Pg	12 07 07.7	-1.0
LIT				S	Sb	12 07 23.4	+0.2
LIT	Litokhoron	1.07	128	i Pg	Pb	12 07 08.9	-0.1
LIT				i Sg	Sn	12 07 24.6	-0.1
STIP	Stip	1.10	33	⇓iPg	Pn	12 07 11.5	+1.5
STIP				i Sg	Sn	12 07 29.6	+4.0
STIP				eLg	Lg	12 07 29.9	
	comp=E,325nm,0.4s						
STIP				eLg	Lg	12 07 30.1	
	comp=N,169nm,0.4s						
PHP	Peshkopia	1.17	322	i PG	Pg	12 07 08.4	-2.1
PHP				i SG	Sb	12 07 25.9	-0.1
JAN	Janina	1.18	201	P	Pg	12 07 10.4	-0.4
JAN				S	Sn	12 07 27.7	+0.3
JAN				AML	AML	12 07 35.7	
	comp=N,3140µm,0.5s						
JAN				AML	AML	12 07 43.1	
	comp=E,2156µm,0.7s						
JAN	Janina	1.18	201	P	Pg	12 07 09.8	-1.0
JAN				S	Sb	12 07 26.7	+0.3
THE	Thessaloniki	1.21	96	i PN	Pn	12 07 12.5	+1.1
THE				i SN	Sn	12 07 32.2	+4.2
KNT	Kendrikon	1.21	70	P	Pg	12 07 10.7	-0.7
KNT				S	Sb	12 07 27.7	+0.5
KNT				AML	AML	12 07 33.0	
	comp=N,2953µm,0.5s						
KNT				AML	AML	12 07 33.6	
	comp=E,1227µm,0.5s						
KNT	Kendrikon	1.21	70	P	Pg	12 07 10.7	-0.7
KNT				S	Sn	12 07 28.2	+0.1
KNT	Kendrikon	1.21	70	⇓iPg	Pg	12 07 10.6	-0.7
THL	Klokotos Trika	1.29	158	P	Pn	12 07 11.3	-1.3
THL				S	Sn	12 07 30.4	+0.3
THL				AML	AML	12 07 37.4	
	comp=E,3758µm,0.8s						
THL				AML	AML	12 07 37.6	
	comp=N,2504µm,0.7s						
THL	Klokotos Trika	1.29	158	P	Pn	12 07 11.1	-1.5
THL				S	Sn	12 07 30.2	+0.1
TIR	Tirane	1.29	297	ePn	Pn	12 07 12.6	0.0
TIR				eSg	Sn	12 07 32.6	+2.4
TIR	Tirane	1.29	297	P	Pn	12 07 12.2	-0.4
TIR	Tirane	1.29	297	⇓iP	Pn	12 07 12.6	0.0
TIR	Tirane	1.29	297	i PN	Pn	12 07 11.4	-1.2
TIR				i SN	Sn	12 07 30.1	0.0
HORT	Hortiatis	1.31	97	P	Pn	12 07 12.3	-0.6
HORT				AML	AML	12 07 34.9	
	comp=E,1211µm,0.5s						
HORT				AML	AML	12 07 36.1	
	comp=N,1256µm,0.6s						
HORT	Hortiatis	1.31	97	P	Pn	12 07 12.2	-0.7
HORT				S	Sn	12 07 31.1	+0.4
LRSO	Larissa Observ	1.33	145	P	Pn	12 07 13.2	0.0
LRSO	Larissa Observ	1.33	145	P	Pn	12 07 12.8	-0.4
LRSO				S	Sn	12 07 31.5	+0.3
SRN	Sarande	1.38	231	P	Pn	12 07 13.8	0.0
SRN	Sarande	1.38	231	i PN	Pb	12 07 14.4	+0.1
SRN				i SN	Sg	12 07 35.6	+3.1
IGT	Igoumenitsa	1.48	214	ePn	Pg	12 07 16.3	-0.1
IGT				eSn	Sg	12 07 38.7	+3.2
IGT	Igoumenitsa	1.48	214	P	Pg	12 07 16.1	-0.3
IGT				S	Sg	12 07 36.8	+1.3
IGT				AML	AML	12 07 43.4	
	comp=N,2949µm,0.9s						
IGT				AML	AML	12 07 45.4	
	comp=E,2983µm,0.7s						
IGT	Igoumenitsa	1.48	214	P	Pg	12 07 16.1	-0.3
IGT				S	Sg	12 07 36.0	+0.5
IGT	Igoumenitsa	1.48	214	i PN	Pg	12 07 16.7	+0.3
IGT				i SN	Sg	12 07 39.5	+4.0
SOH	Sokhos	1.49	87	P	Pn	12 07 15.4	-0.1
SOH				S	Sg	12 07 35.9	-0.2
SOH				AML	AML	12 07 39.6	
	comp=N,3464µm,0.6s						
SOH				AML	AML	12 07 41.4	
	comp=E,2796µm,0.6s						
SOH	Sokhos	1.49	87	P	Pn	12 07 15.3	-0.1
SOH				S	Sg	12 07 36.2	+0.1
KEK	Kerkira	1.61	230	P	Pb	12 07 17.8	-0.4
KEK				AML	AML	12 07 47.9	
	comp=E,2138µm,0.8s						
KEK				AML	AML	12 07 51.1	
	comp=N,2217µm,0.7s						
KEK	Kerkira	1.61	230	P	Pn	12 07 17.6	+0.6
PLG	Polygyros	1.61	103	P	Pn	12 07 17.0	0.0
PLG				S	Sb	12 07 39.4	+0.6
PLG				AML	AML	12 07 41.5	
	comp=N,1778µm,0.6s						
PLG				AML	AML	12 07 46.8	
	comp=E,942µm,0.7s						
PLG	Polygyros	1.61	103	P	Pn	12 07 17.0	0.0
PLG				S	Sb	12 07 39.0	+0.1
KKB	Krupnik	1.68	49	P	Pn	12 07 18.2	+0.2
FYTO	Fytoko, Volos	1.80	138	P	Pn	12 07 19.8	+0.2
FYTO				AML	AML	12 07 50.1	
	comp=N,1504µm,1.1s						
FYTO				AML	AML	12 07 55.3	
	comp=E,1804µm,1.0s						
FYTO	Fytoko, Volos	1.80	138	P	Pn	12 07 19.8	+0.2
EVR	Evrytania	1.87	170	P	Pn	12 07 21.6	+0.9
EVR				AML	AML	12 07 56.7	
	comp=N,2048µm,0.5s						
EVR				AML	AML	12 08 04.0	
	comp=E,1249µm,0.6s						
EVR	Evrytania	1.87	170	P	Pn	12 07 20.6	-0.1
EVR				S	Sn	12 07 45.5	+0.8
AGG	Agios Georgios	1.89	157	P	Pn	12 07 21.1	+0.3
AGG				AML	AML	12 07 59.1	
	comp=E,1448µm,0.7s						
AGG				AML	AML	12 07 59.7	
	comp=N,1097µm,0.8s						
AGG	Agios Georgios	1.89	157	P	Pn	12 07 20.8	0.0
AGG				S	Sn	12 07 45.1	+0.3
PAIG	Paliouri	1.94	115	P	Pn	12 07 21.4	-0.1
PAIG				AML	AML	12 07 54.2	
	comp=E,511µm,0.6s						
PAIG				AML	AML	12 07 57.6	
	comp=N,667µm,0.6s						
PAIG	Paliouri	1.94	115	P	Pn	12 07 21.2	-0.3
MMB	Musomiste	1.95	64	P	Pn	12 07 22.0	+0.3
NVR	Nevrokopi	1.96	72	P	Pn	12 07 21.7	-0.1
NVR				AML	AML	12 07 58.7	
	comp=E,330µm,0.8s						
NVR				AML	AML	12 08 04.0	
	comp=N,373µm,0.7s						
NVR	Nevrokopi	1.96	72	P	Pn	12 07 21.7	-0.1
NVR				S	Sn	12 07 47.8	+1.1
XOR	Xorichti	1.97	135	P	Pn	12 07 22.0	+0.1
XOR				AML	AML	12 07 55.6	
	comp=N,3290µm,0.6s						
XOR				AML	AML	12 07 56.2	
	comp=E,1392µm,0.5s						
XOR	Xorichti	1.97	135	P	Pn	12 07 22.1	+0.2
ULC	Ulcinj	2.01	307	⇓iPn	Pn	12 07 23.8	+1.3
ULC				i Sn	Sg	12 07 52.7	0.0
TSLK	Tsoukalades, L	2.02	197	P	Pb	12 07 24.0	-1.1
OUR	Ouranopolis	2.02	101	P	Pn	12 07 22.7	+0.1
OUR				AML	AML	12 07 56.9	
	comp=N,1417µm,0.9s						
OUR				AML	AML	12 07 57.7	
	comp=E,778µm,0.7s						
OUR	Ouranopolis	2.02	101	P	Pn	12 07 22.8	+0.2
NEO	Neokhori	2.03	135	P	Pn	12 07 22.4	-0.3
NEO				AML	AML	12 07 57.6	
	comp=E,1896µm,1.1s						
NEO				AML	AML	12 07 58.1	
	comp=N,1804µm,0.6s						
LKD2	Lefkada island	2.05	196	P	Pb	12 07 24.8	-1.0
LKD2				AML	AML	12 08 03.5	
	comp=E,738µm,0.5s						
LKD2				AML	AML	12 08 07.8	
	comp=N,1255µm,0.8s						
BARS	Barje	2.07	9	ePn	Pn	12 07 24.0	+0.6
BARS	Barje	2.07	9	ePn	Pg	12 07 39.7	+12
BARS				eSn	Sn	12 07 50.2	+0.7
PVY	Plav	2.12	330	⇓iPn	Pb	12 07 26.0	-0.9
PVY				i Sn	Sb	12 07 53.1	-0.4
PVO	Paravola	2.15	177	P	Pb	12 07 26.2	-1.2
PVO				AML	AML	12 08 04.6	
	comp=E,1479µm,0.8s						
PVO				AML	AML	12 08 12.8	
	comp=N,1042µm,0.6s						
DRME	Dracevica, Mon	2.18	311	⇑iPn	Pb	12 07 26.7	-1.2
DRME				i Sn	Sb	12 07 55.4	+0.2
DRME	Dracevica, Mon	2.18	311	ePn	Pb	12 07 26.9	-1.1
ANX	Ano Chora	2.21	169	P	Pn	12 07 26.3	+1.0
ANX				AML	AML	12 08 00.1	
	comp=E,2287µm,0.5s						
ANX				AML	AML	12 08 00.6	
	comp=N,1902µm,0.5s						
ANX	Ano Chora	2.21	169	P	Pn	12 07 25.1	-0.2
EVGI	Lefkada island	2.21	195	P	Pn	12 07 26.7	+1.4
SKIA	Skiathos	2.26	134	P	Pn	12 07 25.6	-0.2
SKIA				AML	AML	12 08 09.0	
	comp=N,905µm,0.7s						
SKIA				AML	AML	12 08 11.7	
	comp=E,793µm,0.8s						
PDG	Podgorica	2.31	317	ePn	Pb	12 07 28.6	-1.5
PDG				eSn	Sb	12 07 59.6	+0.8
PDG	Podgorica	2.31	317	⇓iP	Pb	12 07 28.8	-1.3
PDG	Podgorica	2.31	317	⇓iPn	Pb	12 07 28.8	-1.3
TTG	Podgorica	2.31	317	⇑iPn	Pn	12 07 27.9	+1.3
TTG				i Sn	Sb	12 07 58.5	-0.3
VTS	Vitosha	2.31	36	ePg	Pn	12 07 27.7	+0.9
VTS				eSg	Sn	12 07 57.3	+1.8
VTS	Vitosha	2.31	36	⇓iP	Pn	12 07 27.1	+0.3
VTS	Vitosha	2.31	36	P	Pn	12 07 27.3	+0.5
VTS	Vitosha	2.31	36	P	Pn	12 07 27.2	+0.5
SMIA	Simia	2.35	143	P	Pn	12 07 27.3	+0.1
SMIA				AML	AML	12 08 15.1	
	comp=N,2182µm,0.8s						
SMIA				AML	AML	12 08 19.3	
	comp=E,2529µm,0.7s						
EFP	Efpalio	2.37	170	P	Pn	12 07 28.4	+1.0
EFP				AML	AML	12 08 09.3	
	comp=E,1005µm,0.6s						
EFP				AML	AML	12 08 12.1	
	comp=N,1123µm,0.8s						
EFP	Efpalio	2.37	170	P	Pn	12 07 27.6	+0.2
KAVA	Kavala	2.38	83	P	Pn	12 07 27.0	-0.6
KAVA				AML	AML	12 08 12.2	
	comp=N,475µm,0.8s						
KAVA				AML	AML	12 08 15.5	
	comp=E,324µm,0.5s						
IVA	Berane	2.38	332	⇑iPn	Pn	12 07 28.9	+1.2
IVA				i Sn	Sb	12 08 00.6	-0.5
SERG	Sergoula	2.41	167	P	Pn	12 07 28.4	+0.4
SERG				AML	AML	12 08 05.8	
	comp=N,1064µm,0.6s						
SERG				AML	AML	12 08 12.6	
	comp=E,1236µm,0.5s						
SERG	Sergoula	2.41	167	P	Pn	12 07 28.3	+0.4
ATAL	Atalanti	2.42	148	P	Pn	12 07 28.1	-0.1
BUM	Brajici-Budva	2.42	310	⇑iPn	Pn	12 07 29.6	+1.4
BUM				i Sn	Sb	12 08 01.5	-0.7
KALE	Kalithea	2.44	166	P	Pn	12 07 28.9	+0.4
KALE				AML	AML	12 08 16.2	
	comp=E,885µm,0.9s						
KALE				AML	AML	12 08 19.6	
	comp=N,837µm,0.8s						
TRIZ	Trizonia	2.45	167	P	Pn	12 07 28.6	+0.1
TRIZ	Trizonia	2.45	167	P	Pn	12 07 29.0	+0.4
SELS	Selova	2.46	355	ePn	Pn	12 07 29.2	+0.5
DSF	Desfina	2.51	159	P	Pn	12 07 29.8	+0.4
DSF				AML	AML	12 08 09.3	
	comp=N,604µm,0.5s						
DSF				AML	AML	12 08 10.1	
	comp=E,852µm,0.6s						
DSF	Desfina	2.51	159	P	Pn	12 07 29.8	+0.4
KOME	Kolasin	2.51	327	⇓iPn	Pn	12 07 31.0	+1.5
KOME				i Sn	Sb	12 08 03.1	-1.6
THAS	Thassos island	2.54	93	P	Pn	12 07 28.9	-0.8
LAKA	Lakka	2.56	170	P	Pn	12 07 31.6	+1.5
LAKA				AML	AML	12 08 19.5	
	comp=N,328µm,0.7s						
LAKA				AML	AML	12 08 22.3	
	comp=E,268µm,0.7s						
VLS	Valsamata	2.66	194	P	Pn	12 07 31.5	+0.1
MRKA	Markates	2.67	140	P	Pn	12 07 31.5	0.0
TRAZ	Trapeza	2.67	166	P	Pn	12 07 32.6	+1.0
RZN	Rozhen	2.67	69	P	Pn	12 07 32.2	+0.4
ZAPS	Zavoj	2.67	20	ePn	Pn	12 07 32.6	+1.0
RLS	Riolos of Patr	2.71	179	P	Pn	12 07 34.0	+1.9
NKME	Niksic	2.71	318	⇓iPn	Pn	12 07 34.2	+2.1
NKME				i Sn	Sb	12 08 07.9	-2.4
SJES	Sjenica	2.71	338	ePn	Pn	12 07 32.4	+0.2
NKY	Niksic	2.72	320	⇓iPn	Pb	12 07 38.1	+0.9
NKY				i Sn	Sb	12 08 09.3	-1.5
HCY	Herceg Novi	2.75	309	⇑iPn	Pb	12 07 35.8	-1.8
HCY				i Sn	Sb	12 08 10.1	-1.3
HCY	Herceg Novi	2.75	309	ePn	Pn	12 07 34.5	+1.9
PROD	Prodromos	2.76	154	P	Pn	12 07 33.1	+0.3

PROD				AML	AML	12 08 16.5	
	comp=E,671µm,0.6s						
PROD				AML	AML	12 08 17.9	
	comp=N,526µm,0.7s						
KLV	Kalavryta, Ach	2.78	168	P	Pn	12 07 33.8	+0.6
DRO	Drossia	2.82	175	P	Pn	12 07 35.5	+1.8
DRO	Drossia	2.82	175	P	Pn	12 07 34.0	+0.4
PLD	Plovdiv	2.83	61	*e*Pn	Pn	12 07 34.4	+0.7
PLD				*e*Sn	Sn	12 08 04.7	-3.3
BOVS	Bovan	2.88	5	*e*Pn	Pn	12 07 34.6	+0.2
GUR	Goura	2.92	165	P	Pn	12 07 35.4	+0.3
VIL2	Platees	2.94	150	P	Pn	12 07 36.1	+0.9
IVAS	Ivanjica	2.96	342	*e*Pn	Pn	12 07 35.3	-0.3
PLE	Pljevlja	2.96	330	⇑*i*Pn	Pn	12 07 36.8	+1.1
PLE				*i* Sn	Sn	12 08 13.9	+2.3
TREB	Trebinje	3.00	312	*e*Pn	Pn	12 07 36.6	+0.6
TREB				*e*Sn	Sn	12 08 14.7	+2.5
TREB	Trebinje	3.00	312	*e*Pn	Pn	12 07 38.7	+2.7
LTK	Loutraki	3.00	155	P	Pn	12 07 36.3	+0.2
BRY	Bratogost	3.02	316	⇑*i*Pn	Pn	12 07 37.6	+1.2
BRY				*i* Sn	Sn	12 08 15.2	+2.3
BRY	Bratogost	3.02	316	*e*Pn	Pn	12 07 37.9	+1.5
ZAGS	Zajecar	3.11	11	*e*Pn	Pn	12 07 38.0	+0.4
GRUS	Gruza	3.16	351	*e*Pn	Pn	12 07 39.0	+0.7
RDO	Rodhopi	3.16	82	P	Pn	12 07 37.5	-0.8
SMTH	Samothraki Isl	3.17	94	P	Pn	12 07 37.8	-0.6
AMT	Artemida-Makis	3.24	176	P	Pn	12 07 40.8	+1.4
PTL	Penteli	3.32	144	P	Pn	12 07 41.9	+1.3
ATHU	Athens Univers	3.35	146	P	Pn	12 07 41.9	+0.9
BBLS	Lazići	3.43	335	*e*Pn	Pn	12 07 43.1	+1.0
BBLS	Lazići	3.43	335	*e*Pn	Pn	12 07 42.7	+0.6
BAI	Bari	3.43	277	*e*Pn	Pn	12 07 44.2	+2.2
VLY	Voula,Athens	3.46	147	P	Pn	12 07 43.5	+1.2
VLY	Voula,Athens	3.46	147	P	Pn	12 07 43.0	+0.6
STON	Ston	3.47	309	*e*Pn	Pn	12 07 43.0	+0.5
DIVS	Divibare	3.49	343	*e*Pn	Pn	12 07 42.9	0.0
DIVS	Divibare	3.49	343	*e*Pn	Pn	12 07 42.8	-0.1
MES3	Kyparissia	3.52	176	P	Pn	12 07 44.6	+1.4
TRUS	Trudelj	3.53	348	*e*Pn	Pn	12 07 44.1	+0.7
ALN	Alexandroupoli	3.53	86	P	Pn	12 07 43.4	-0.1
DID	Didima	3.56	156	P	Pn	12 07 44.2	+0.4
MATE	Matera	3.56	270	⇑*i*P	Pn	12 07 40.7	-3.1
SG1	Sgolgore (BA)	3.58	273	*e*Pn	Pn	12 07 44.0	-0.1
ITM	Ithomi	3.60	173	P	Pn	12 07 45.7	+1.3
KUBS	Kucevo	3.65	3	*e*Pn	Pn	12 07 44.2	-0.8
HAPS	Han Pijesak,BI	3.78	332	*e*Pn	Pn	12 07 47.6	+0.7
HAPS	Han Pijesak,BI	3.78	332	*e*Pn	Pn	12 07 47.5	+0.7
PYL	PYLOS	3.87	176	P	Pn	12 07 48.9	+0.8
TIP	Timpagrande	3.90	247	P	Pn	12 07 48.7	+0.2
MDVR	Moldovita	4.02	3	⇓*i*P	Pn	12 07 52.4	+2.2
TEKS	Tekeris	4.02	341	*e*Pn	Pn	12 07 51.1	+0.9
TEKS	Tekeris	4.02	341	*e*Pn	Pn	12 07 48.6	-1.6
HERR	Herculane	4.18	10	⇑*i*P	Pn	12 07 52.1	-0.2
FRGS	Fruska Gora	4.54	346	*e*Pn	Pn	12 07 57.4	+0.1
FRGS	Fruska Gora	4.54	346	*e*Pn	Pn	12 07 57.3	0.0
GZR	Gura Zlata	4.74	12	⇑*i*P	Pn	12 08 00.0	0.0
BZS	Buzias	4.85	2	*e*Pn	Pn	12 08 00.3	-1.2
BZS	Buzias	4.85	2	⇓*i*P	Pn	12 08 00.4	-1.1
APE	Apeiranthos	4.90	138	⇓*i*P	Pn	12 08 03.4	+1.1
BLY	Banja Luka	5.04	324	⇑*i*P	Pn	12 08 04.5	+0.3
BLY	Banja Luka	5.04	324	*e*Pn	Pn	12 08 03.4	-0.8
ARR	Arges	5.18	26	⇓*i*P	Pn	12 08 06.4	+0.3
VOIR		5.38	29	⇑*i*P	Pn	12 08 09.8	+0.9
UDBI	Udbina	5.60	314	*e*Pn	Pn	12 08 12.9	+1.0
MLR	Muntele Rosu	5.78	34	⇓*i*P	Pn	12 08 15.8	+1.4
MLR	Muntele Rosu	5.78	34	P	Pn	12 08 18.5	+4.1
	comp=N,0.7nm,0.3s,baz=242,slow=10,SNR=11						
MLR				S	Sn	12 09 23.7	+2.7
	comp=N,0.3nm,0.3s,baz=149,slow=19,SNR=2.1						
NVLJ	Novalja	6.12	310	*e*Pn	Pn	12 08 19.0	0.0
IDI	Anoyia	6.13	152	P	Pn	12 08 23.6	+4.5
	comp=N,0.7nm,0.3s,baz=309,slow=13,SNR=4.7						
IDI				S	Sn	12 09 26.4	-3.1
	comp=N,0.5nm,0.3s,baz=330,slow=20,SNR=2.1						
TLB	Topalu	6.21	50	⇓*i*P	Pn	12 08 21.1	+0.9
VRI	Vrincioaia	6.41	36	⇓*i*P	Pn	12 08 23.8	+0.8
CFR	Carcaliu	6.63	46	⇓*i*P	Pn	12 08 27.0	+1.1
CRES	Cresnjev	6.66	321	*e*Pn	Pn	12 08 26.6	+0.3
CEY	Cerknica	7.11	317	*e*Pn	Pn	12 08 32.0	-0.5
PSZ	Piszkesteto	7.23	352	⇑*i*P	Pn	12 08 33.8	-0.5
PSZ	Piszkesteto	7.23	352	*e*Pn	Pn	12 08 32.0	-2.2
PSZ				Sn	Sn	12 10 01.0	+4.4
SOKA	Soboth	7.49	324	*e*Pn	Pn	12 08 38.3	+0.5
	comp=N,1.3nm,0.3s						
OBKA	Obir	7.59	321	*e*Pn	Pn	12 08 42.4	+3.3
	comp=N,2.8nm,0.5s						
ARSA	Arzberg	7.74	329	*e*Pn	Pn	12 08 44.3	+3.1
	comp=N,0.7nm,0.3s						
VYHS	Vyhne	7.94	348	*e*PN	Pn	12 08 45.1	+1.2
VYHS				*e*SN	Sn	12 10 11.7	-2.3
CONA	Conrad Observa	8.18	333	*e*Pn	Pn	12 08 55.3	+8.0
	comp=N,1.0nm,0.5s						
MOA	Molln	8.73	327	Pn	Pn	12 08 56.4	+1.7
	comp=N,0.7nm,0.3s						
ABTA	Abfaltersbach	8.77	316	*e*Pn	Pn	12 08 55.9	+0.5
	comp=N,2.3nm,0.5s						
ABTA				Sn	Sn	12 10 34.2	-0.3
	comp=N,2.9nm,0.7s						
BRTR	Keskin Array B	9.43	92	P	Pn	12 09 08.1	+3.6
	comp=N,0.1nm,0.3s,baz=268,slow=15,SNR=2.4						
WATA	Walderalm	9.64	316	*e*Pn	Pn	12 09 09.1	+1.7
	comp=N,1.2nm,0.3s						
GERES	GERESS Array B	9.75	329	P	Pn	12 09 10.8	+2.0
	comp=N,0.2nm,0.3s,baz=154,slow=13,SNR=5.7						
GERES				S	Sn	12 11 02.0	+3.5
	comp=N,0.1nm,0.3s,baz=151,slow=27,SNR=2.2						
SQTA	Sankt Quirin	9.77	315	*e*Pn	Pn	12 09 11.0	+2.0
	comp=N,4.8nm,0.5s						
SQTA				Sn	Sn	12 10 59.2	+0.2
	comp=N,4.0nm,0.6s						
MOTA	Moosalm	9.90	315	*e*Pn	Pn	12 09 11.5	+0.6
	comp=N,1.8nm,0.5s						
FETA	Feichten	9.91	313	*e*Pn	Pn	12 09 12.0	+0.9
	comp=N,1.1nm,0.5s						
FETA				Sn	Sn	12 11 03.1	+0.5
	comp=N,1.8nm,0.7s						
DAVOX	Davos/Dischmat	10.26	310	LR	LR	12 13 24.8	
	comp=N,60nm,19.3s,slow=38						
HFS	Hagfors	19.97	349	P	P	12 11 20.0	-0.8
	comp=N,0.1nm,0.3s,baz=164,slow=14,SNR=3.0						
HFS				LR	LR	12 19 48.8	
	comp=N,39nm,18.8s,baz=309,slow=39						
FINES	FINESS Array B	20.90	6	P	P	12 11 30.4	-0.4
	comp=N,1.1nm,0.7s,baz=181,slow=9.7,SNR=6.9						
NB2	NORSAR Subarra	21.24	346	P	P	12 11 34.6	+0.1
	comp=Z,1.1nm,0.8s,baz=159,slow=9.3						
NOA	NORSAR Array B	21.24	346	P	P	12 11 35.5	+0.9
	comp=Z,0.5nm,0.6s,baz=157,slow=11,SNR=5.1						
EKA	Eskdalemuir Ar	21.79	320	P	P	12 11 41.3	+0.9
	comp=Z,2.0nm,0.8s,baz=113,slow=10,SNR=4.7						
ARCES	ARCESS Array B	28.91	3	P	P	12 12 48.2	+0.8
	comp=Z,0.9nm,0.7s,baz=185,slow=10.0,SNR=4.1						
TORD	Torodi Ar. Bea	32.48	218	P	P	12 13 19.4	+0.1
	comp=Z,0.7nm,0.8s,baz=36,slow=8.8,SNR=4.7						
MKAR	Makanchi Array	43.41	61	P	P	12 14 50.5	-0.8
	comp=Z,0.2nm,0.6s,baz=270,slow=8.2,SNR=3.1						
ZALV	Zalesovo Beam	43.49	50	P	P	12 14 51.7	-0.1
	comp=Z,0.6nm,0.5s,baz=277,slow=8.4,SNR=2.8						
SCHQ	Schefferville	57.03	316	P	P	12 16 33.3	-1.1
	comp=Z,2.2nm,0.9s,baz=63,slow=6.8,SNR=3.7						
YKA	Yellowknife Ar	71.19	340	P	P	12 18 06.7	-0.5
	comp=Z,0.3nm,0.8s,baz=39,slow=5.4,SNR=5.1						
ASAR	Alice Springs	121.75	95	PKP	PKPdf	12 25 40.1	-3.0
	comp=Z,0.2nm,0.9s,baz=330,slow=1.5,SNR=2.7						

IDC 17 12:10:09.0±11.0**, 13°.94N**×**93°.30E, h230**^{km}±116^{km}**, mb2.9**/2**, mb1 3.1**/3**, mb1mx2.6**/46**, mbtmp3.4**/3**, Error ellipse: s-maj=107.4km s-min=69.7km az=41.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.04	50	P	Pn	12 11 51.2	+1.2
	0.1nm,0.3s,baz=237,slow=15,SNR=4.2						
CMAR				S	S	12 13 10.3	-0.4
	0.1nm,0.3s,baz=236,slow=29,SNR=4.2						
H08S3	Diego Garcia H	29.77	225	T	T	12 45 33.1	
	baz=45,slow=74						
H08S2	Diego Garcia H	29.77	225	T	T	12 45 32.0	
	baz=45,slow=74						
H08S1	Diego Carcia H	29.79	225	T	T	12 45 31.0	
	baz=45						
WRA	Warramunga Arr	52.56	129	P	P	12 18 59.5	+0.1
	0.5nm,0.8s,baz=308,slow=8.0,SNR=5.5						
ASAR	Alice Springs	54.52	133	P	P	12 19 13.3	-0.2
	0.2nm,0.4s,baz=312,slow=7.0,SNR=16						

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*IDC **17** 12:18:19.8±4.0, 36°.74N×80°.00E, h0^{km}, mb3.8/3, mb1 3.8/4, mb1mx3.3/58, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=87.9km s-min=38.1km az=111.0*

*NNC **17** 12:18:30.2±3.4, 37°.29N×79°.88E, h6^{km}±12^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=25.4km s-min=14.2km az=157.0*

ISC 17 12:18:28.1±2.5**, 37°.1N**±0°.2×**80°.1E**±0°.1**, h10**^{km}**, n13, σ2^{s}.62**/17**, mb3.7**/3**, 9C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	5.92	301	⇑Pn	Pn	12 19 57.3	+1.3
	0.9nm,0.4s						
SFK				⇑Pg	Pb	12 20 14.7	+3.2
	1.4nm,0.4s						
SFK				⇑Sn	Sn	12 21 00.8	-3.3
	3.6nm,0.5s						
SFK				⇓Lg	Lg	12 21 30.1	
	5.0nm,0.3s						
PDGK	Podgornoye	6.21	356	⇑Pn	Pn	12 20 00.4	+0.6
	2.5nm,0.5s						
PDGK				⇓Sn	Sn	12 21 13.3	+2.4
	20nm,0.7s						
MDOK	Medeo	6.46	340	⇑Pg	Pb	12 20 22.5	+1.9
	2.9nm,0.6s						
MDOK				Lg	Lg	12 21 48.8	
	12nm,0.8s						
TKM2	Tokmak 2	6.74	330	⇓Pg	Pb	12 20 27.7	+2.3
	1.7nm,0.5s						
TKM2				⇑Lg	Lg	12 21 58.0	
	4.7nm,0.6s						
AAK	Ala-Archa	6.99	324	⇓Pg	Pb	12 20 34.3	+4.7
	2.9nm,0.7s						
AAK				⇑Lg	Lg	12 22 05.6	
	16nm,0.9s						
AAK	Ala-Archa	6.99	324	Pg	Pb	12 20 31.1	+1.5
	0.3nm,0.3s,baz=144,slow=7.8,SNR=3.8						
AAK				Lg	Lg	12 22 04.6	
	0.4nm,0.3s,baz=107,slow=19,SNR=3.6						
WMQ	Urumqi	8.83	38	*e*P	Pn	12 20 38.3	+2.5
WMQ				pmax	pmax		
	comp=Z,360nm,5.5s						
WMQ				smax	smax		
	comp=N,22nm,0.7s						
WMQ				smax	smax		
	comp=E,25nm,0.7s						
MAKZ	Makanchi	9.77	8	⇑Pn	Pn	12 20 48.1	-0.4
	comp=E,2.1nm,0.6s						
MAKZ				⇓Sn	Sn	12 22 37.8	-0.4
	comp=E,2.5nm,0.8s						
MK31	Makanchi Array	9.79	9	⇑Pn	Pn	12 20 49.2	+0.4
	comp=E,0.3nm,0.2s,baz=203,slow=14,SNR=12						
MK31				⇓Sn	Sn	12 22 38.6	-0.2
	comp=E,2.2nm,0.8s,baz=186,slow=25,SNR=4.7						
MKAR	Makanchi Array	9.79	9	Pn	Pn	12 20 48.5	-0.4
	comp=E,0.3nm,0.3s,baz=192,slow=12,SNR=13						
MKAR				Sn	Sn	12 22 35.5	-3.3
	comp=E,0.3nm,0.3s,baz=186,slow=23,SNR=4.4						
FINES	FINESS Array B	41.18	324	P	P	12 26 07.5	-4.8
	comp=E,1.3nm,1.1s,baz=108,slow=8.9,SNR=2.4						
ARCES	ARCESS Array B	43.49	335	P	P	12 26 27.1	-4.0
	comp=E,2.2nm,0.9s,baz=96,slow=9.2,SNR=2.2						
TORD	Torodi Ar. Bea	73.01	274	P	P	12 29 51.5	-6.9
	comp=E,0.3nm,0.5s,baz=50,slow=5.4,SNR=7.4						

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*ISCJB **17** 12:19:29.8±0.3, 40°.78N±0°.01×21°.42E±0°.02, h4^{km}±2^{km}, Error ellipse: s-maj=2.5km s-min=1.9km az=153.9*

*ATH **17** 12:19:29.4, 40°.79N×21°.38E, h17^{km}±1^{km}, ML3.0/23, Error ellipse: s-maj=1.9km s-min=0.9km az=142.0*

*SKO **17** 12:19:29.1, 40°.77N×21°.38E, h19^{km}, M2.8, ML3.3*

*THE **17** 12:19:30.0, 40°.75N×21°.39E, h1^{km}±1^{km}, ML3.0/12, Error ellipse: s-maj=1.8km s-min=0.4km az=319.0*

*PDG **17** 12:19:31.6±0.8, 40°.91N×21°.46E, h10^{km}±1^{km}, ML3.4/9, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0*

*BEO **17** 12:19:31.6±0.7, 40°.92N×21°.36E, h1^{km}±5^{km}, ML2.8/12*

ISC 17 12:19:30.2±1.0**, 40°.78N**±0°.02×**21°.39E**±0°.02**, h9**^{km}±8^{km}**, n128, σ1^{s}.20**/180**, 8C-10D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIA	Bitola	0.24	349	⇑*i*Pg	Pg	12 19 35.5	+0.3
BIA				*i* Sg	Sg	12 19 41.5	+3.0
BIA				*e*Lg	Lg	12 19 41.7	
	comp=N,4µm,0.3s						
BIA				*e*Lg	Lg	12 19 41.9	
	comp=E,2µm,0.2s						
NEST	Nestorio	0.45	215	P	Pg	12 19 37.9	-1.0
NEST				S	Sg	12 19 45.0	+0.3
NEST				AML	AML	12 19 46.0	
	comp=E,7002µm,0.5s						
NEST				AML	AML	12 19 47.3	
	comp=N,5829µm,0.5s						
NEST	Nestorio	0.45	215	P	Pg	12 19 37.6	-1.3
NEST				S	Sg	12 19 44.4	-0.3
OHR	Ohrid	0.55	307	⇑*i*Pg	Pg	12 19 40.4	-0.5
OHR				*i* Sg	Sb	12 19 50.1	-0.1
OHR				*e*Lg	Lg	12 19 50.2	
	comp=N,1µm,0.5s						
OHR				*e*Lg	Lg	12 19 50.4	
	comp=E,1µm,0.5s						
KZN	Kozani	0.56	148	P	Pg	12 19 40.4	-0.6
KZN				S	Sg	12 19 48.8	+0.5
KZN				AML	AML	12 19 51.3	
	comp=N,5154µm,0.4s						
KZN				AML	AML	12 19 54.6	
	comp=E,5636µm,0.6s						
KZN	Kozani	0.56	148	P	Pg	12 19 40.2	-0.8
KZN				S	Sg	12 19 48.1	-0.2
KRUS	Krusevo	0.60	350	⇑*i*Pg	Pg	12 19 41.3	-0.4
KRUS				*i* Sg	Sb	12 19 51.5	0.0
KRUS				*e*Lg	Lg	12 19 51.6	
	comp=E,777nm,0.3s						
KRUS				*e*Lg	Lg	12 19 51.9	
	comp=N,463nm,0.3s						
PENT	Pentalofos	0.61	198	P	Pg	12 19 41.2	-0.8
PENT				S	Sg	12 19 50.8	+0.7
PENT				AML	AML	12 19 55.0	
	comp=E,2425µm,0.6s						
PENT				AML	AML	12 19 55.1	
	comp=N,2762µm,0.5s						
PENT	Pentalofos	0.61	198	P	Pg	12 19 41.0	-1.0
PENT				S	Sg	12 19 50.0	-0.1
GRG	Griva	0.79	77	P	Pg	12 19 45.0	-0.5
GRG				S	Sb	12 19 56.3	-0.7
GRG				AML	AML	12 20 04.0	
	comp=N,2472µm,0.3s						
GRG				AML	AML	12 20 04.4	
	comp=E,3352µm,0.7s						
GRG	Griva	0.79	77	P	Pg	12 19 44.9	-0.5
GRG				S	Sb	12 19 57.1	+0.1
GRG	Griva	0.79	77	⇓*i*Pg	Pg	12 19 45.0	-0.5
GRG				*i* Sg	Sb	12 19 57.3	+0.3
KPRO	Kipourio	0.82	181	P	Pg	12 19 44.5	-1.6
KPRO				S	Sg	12 19 57.3	+0.5
KPRO				AML	AML	12 20 05.1	
	comp=N,2594µm,0.6s						
KPRO				AML	AML	12 20 06.0	
	comp=E,2601µm,0.6s						
KPRO	Kipourio	0.82	181	P	Pg	12 19 44.6	-1.4
KPRO				S	Sg	12 19 56.6	-0.2
VAY	Valandovo	1.05	59	⇓*i*Pg	Pg	12 19 49.7	-0.5
VAY				*i* Sg	Sb	12 20 04.6	+0.3
VAY				*e*Lg	Lg	12 20 07.3	
	comp=N,425nm,0.8s						
VAY				*e*Lg	Lg	12 20 07.3	
	comp=E,909nm,0.8s						
LIT	Litokhoron	1.08	128	P	Pg	12 19 49.9	-1.1
LIT				S	Sb	12 20 05.8	+0.5
LIT				AML	AML	12 20 11.5	
	comp=N,2624µm,0.7s						
LIT				AML	AML	12 20 11.7	
	comp=E,2314µm,0.4s						
LIT	Litokhoron	1.08	128	P	Pg	12 19 50.0	-0.9
LIT				S	Sg	12 20 05.3	+0.3
LIT	Litokhoron	1.08	128	*i* Pg	Pg	12 19 50.4	-0.5
LIT				*i* Sg	Sn	12 20 06.4	-0.2
STIP	Stip	1.09	33	⇑*i*Pg	Pn	12 19 53.5	+1.8
STIP				*i* Sg	Sn	12 20 11.8	+4.8
STIP				*e*Lg	Lg	12 20 12.7	
	comp=E,116nm,0.4s						
STIP				*e*Lg	Lg	12 20 13.0	
	comp=N,65nm,0.2s						
JAN	Janina	1.19	200	P	Pb	12 19 52.4	-0.6
JAN				AML	AML	12 20 15.7	
	comp=N,718µm,0.4s						
JAN				AML	AML	12 20 17.7	
	comp=E,1165µm,0.4s						
JAN	Janina	1.19	200	P	Pb	12 19 52.3	-0.7
JAN				S	Sb	12 20 08.4	-0.2
KNT	Kendrikon	1.21	71	P	Pb	12 19 52.6	-0.6
KNT				S	Sn	12 20 09.7	0.0
KNT				AML	AML	12 20 14.3	
	comp=N,1144µm,0.4s						
KNT				AML	AML	12 20 14.5	
	comp=E,621µm,0.4s						
KNT	Kendrikon	1.21	71	P	Pb	12 19 52.5	-0.6
KNT				S	Sn	12 20 09.7	0.0
KNT	Kendrikon	1.21	71	*i* Pg	Pb	12 19 52.6	-0.6
KNT				*i* Sg	Sn	12 20 09.8	0.0
THE	Thessaloniki	1.21	97	P	Pg	12 19 53.5	+0.1
THE				AML	AML	12 20 16.1	
	comp=E,571µm,0.6s						
THE				AML	AML	12 20 17.2	
	comp=N,777µm,0.6s						
TIR	Tirane	1.28	297	*e*Pn	Pn	12 19 54.0	-0.3
TIR				*e*Sn	Sn	12 20 12.2	+0.6
THL	Klokotos Trika	1.31	158	P	Pn	12 19 53.3	-1.3
THL				S	Sg	12 20 12.6	+0.5
THL				AML	AML	12 20 19.3	
	comp=E,1297µm,0.7s						
THL				AML	AML	12 20 19.6	
	comp=N,1049µm,0.9s						
THL	Klokotos Trika	1.31	158	P	Pn	12 19 53.2	-1.4
THL				S	Sg	12 20 12.8	+0.6
HORT	Hortiatis	1.32	97	P	Pn	12 19 54.3	-0.5
HORT				AML	AML	12 20 15.8	
	comp=E,409µm,0.5s						
HORT				AML	AML	12 20 18.1	
	comp=N,567µm,0.5s						
HORT	Hortiatis	1.32	97	P	Pn	12 19 54.4	-0.4
HORT				S	Sn	12 20 13.3	+0.8
SRN	Sarande	1.39	230	P	Pn	12 19 55.8	+0.1
IGT	Igoumenitsa	1.48	213	*e*Pn	Pg	12 20 01.2	+2.6
IGT				*e*Sn	Sg	12 20 22.3	+4.4
SOH	Sokhos	1.50	88	P	Pn	12 19 57.1	-0.2
SOH				AML	AML	12 20 21.4	
	comp=N,1410µm,0.5s						
SOH				AML	AML	12 20 23.9	
	comp=E,1008µm,0.5s						
SOH	Sokhos	1.50	88	P	Pn	12 19 57.1	-0.2
SOH	Sokhos	1.50	88	*e*Pg	Pn	12 19 57.3	+0.1
SOH				*e*Sg	Sg	12 20 19.9	+1.6
KEK	Kerkira	1.62	229	P	Pb	12 20 00.1	-0.1
KEK				AML	AML	12 20 30.0	
	comp=E,764µm,0.9s						
KEK				AML	AML	12 20 36.5	
	comp=N,416µm,0.8s						
PLG	Polygyros	1.62	104	P	Pn	12 19 58.9	-0.1
PLG				S	Sb	12 20 20.7	-0.1
PLG				AML	AML	12 20 23.4	
	comp=N,703µm,0.6s						
PLG				AML	AML	12 20 24.8	
	comp=E,438µm,0.5s						
PLG	Polygyros	1.62	104	P	Pn	12 19 59.0	0.0
PLG				S	Sb	12 20 20.9	+0.1
FYTO	Fytoko, Volos	1.82	138	P	Pn	12 20 01.5	-0.1
FYTO				AML	AML	12 20 32.0	
	comp=N,515µm,0.7s						
FYTO				AML	AML	12 20 37.3	
	comp=E,619µm,1.0s						
EVR	Evrytania	1.89	170	P	Pn	12 20 03.5	+0.8
EVR				AML	AML	12 20 38.8	
	comp=N,617µm,0.6s						
EVR				AML	AML	12 20 39.5	
	comp=E,479µm,0.4s						
EVR	Evrytania	1.89	170	P	Pn	12 20 03.1	+0.4
AGG	Agios Georgios	1.90	157	P	Pn	12 20 03.2	+0.4
AGG				AML	AML	12 20 41.0	
	comp=E,565µm,0.9s						
AGG				AML	AML	12 20 41.6	
	comp=N,568µm,0.5s						
AGG	Agios Georgios	1.90	157	P	Pn	12 20 02.7	-0.1
AGG				S	Sn	12 20 27.6	+0.7
PAIG	Paliouri	1.95	115	P	Pn	12 20 03.4	0.0
PAIG	Paliouri	1.95	115	P	Pn	12 20 03.3	-0.1
NVR	Nevrokopi	1.96	72	P	Pn	12 20 03.5	-0.1
NVR				AML	AML	12 20 38.5	
	comp=N,124µm,0.4s						
NVR				AML	AML	12 20 38.9	
	comp=E,167µm,0.7s						
NVR	Nevrokopi	1.96	72	P	Pn	12 20 03.2	-0.4
XOR	Xorichti	1.98	135	P	Pn	12 20 04.1	+0.2
ULC	Ulcinj	2.00	307	⇑*i*Pn	Pb	12 20 06.0	-0.7
ULC				*i* Sn	Sg	12 20 33.4	-1.0
OUR	Ouranopolis	2.03	102	P	Pn	12 20 04.8	+0.3
TSLK	Tsoukalades, L	2.03	196	P	Pn	12 20 05.6	+1.0
NEO	Neokhori	2.04	136	P	Pn	12 20 04.9	+0.2
NEO				AML	AML	12 20 42.1	
	comp=N,653µm,0.4s						
NEO				AML	AML	12 20 42.1	
	comp=E,692µm,0.8s						
BARS	Barje	2.06	9	*e*Pn	Pn	12 20 05.8	+0.8
BARS				*e*Sn	Sn	12 20 30.7	-0.1
LKD2	Lefkada island	2.07	196	P	Pb	12 20 07.0	-0.9
PVY	Plav	2.10	330	⇑*i*Pn	Pb	12 20 07.5	-1.1
PVY				*i* Sn	Sb	12 20 34.5	-0.4
PVO	Paravola	2.16	177	P	Pb	12 20 08.2	-1.3
PVO				AML	AML	12 20 46.6	
	comp=E,377µm,0.7s						
PVO				AML	AML	12 20 54.8	
	comp=N,297µm,0.9s						
DRME	Dracevica, Mon	2.17	311	⇑*i*Pn	Pb	12 20 08.6	-1.0
DRME				*i* Sn	Sb	12 20 37.1	+0.5
DRME	Dracevica, Mon	2.17	311	*e*Pn	Pb	12 20 08.3	-1.3
ANX	Ano Chora	2.22	169	P	Pn	12 20 08.4	+1.1
ANX				AML	AML	12 20 41.6	
	comp=E,757µm,0.5s						
ANX				AML	AML	12 20 53.1	
	comp=N,743µm,0.4s						
ANX	Ano Chora	2.22	169	P	Pn	12 20 07.7	+0.4
EVGI	Lefkada island	2.23	195	P	Pb	12 20 09.1	-1.5
VTS	Vitosha	2.27	36	*e*Pn	Pn	12 20 09.2	+1.2
VTS				*e*Sn	Sn	12 20 37.0	+0.9
PDG	Podgorica	2.30	317	*e*Pn	Pn	12 20 09.0	+0.8
PDG				*e*Sn	Sn	12 20 36.1	-0.5
PDG	Podgorica	2.30	317	*e*Pn	Pb	12 20 10.9	-0.8
TTG	Podgorica	2.30	317	⇓*i*Pn	Pn	12 20 09.8	+1.6
TTG				*i* Sn	Sb	12 20 40.1	-0.1
IVA	Berane	2.37	332	⇓*i*Pn	Pb	12 20 11.1	-2.0
IVA				*i* Sn	Sb	12 20 40.7	-1.7
KAVA	Kavala	2.38	84	P	Pn	12 20 09.0	-0.4
EFP	Efpalio	2.38	170	P	Pn	12 20 10.6	+1.2
EFP				AML	AML	12 20 57.2	
	comp=N,472µm,0.8s						
EFP				AML	AML	12 20 59.6	
	comp=E,427µm,1.0s						
EFP	Efpalio	2.38	170	P	Pn	12 20 10.1	+0.7
BUM	Brajici-Budva	2.41	310	⇓*i*Pn	Pb	12 20 12.9	-0.8
BUM				*i* Sn	Sb	12 20 42.6	-1.0
SERG	Sergoula	2.42	167	P	Pn	12 20 10.4	+0.4
ATAL	Atalanti	2.44	148	P	Pn	12 20 11.5	+1.4
SELS	Selova	2.45	355	*e*Pn	Pn	12 20 10.5	+0.2
SELS				*e*Sn	Sn	12 20 39.1	-1.3
KALE	Kalithea	2.46	166	P	Pn	12 20 10.8	+0.4
KALE				AML	AML	12 20 51.0	
	comp=N,331µm,0.5s						
KALE				AML	AML	12 20 58.2	
	comp=E,331µm,0.8s						
TRIZ	Trizonia	2.47	167	P	Pn	12 20 11.4	+0.9
KOME	Kolasin	2.50	327	⇓*i*Pn	Pb	12 20 13.7	-1.5
KOME				*i* Sn	Sb	12 20 44.1	-2.0
DSF	Desfina	2.52	159	P	Pn	12 20 11.7	+0.2
DSF	Desfina	2.52	159	P	Pn	12 20 11.5	+0.1
LAKA	Lakka	2.58	170	P	Pn	12 20 13.8	+1.7
ZAPS	Zavoj	2.66	20	*e*Pn	Pn	12 20 14.7	+1.4
ZAPS				*e*Sn	Sn	12 20 45.2	-0.4
VLS	Valsamata	2.67	194	P	Pn	12 20 15.5	+2.1
TRAZ	Trapeza	2.69	166	P	Pn	12 20 14.1	+0.5
NKME	Niksic	2.69	318	⇓*i*Pn	Pn	12 20 15.5	+1.8
NKME				*i* Sn	Sb	12 20 49.5	-2.2
SJES	Sjenica	2.69	337	*e*Pn	Pn	12 20 15.2	+1.4

SJES				eSn	Sn	12 20 47.0	+0.4
NKY	Niksic	2.71	319	⇓iPn	Pn	12 20 15.5	+1.5
NKY				i Sn	Sb	12 20 49.5	-2.7
RLS	Riolos of Patr	2.72	179	P	Pn	12 20 15.9	+1.9
HCY	Herceg Novi	2.73	308	⇓iPn	Pb	12 20 18.9	-0.3
HCY				i Sn	Sb	12 20 50.1	-2.8
HCY	Herceg Novi	2.73	308	ePn	Pb	12 20 18.2	-1.0
PROD	Prodromos	2.78	155	P	Pn	12 20 15.2	+0.4
KLV	Kalavryta, Ach	2.80	168	P	Pn	12 20 15.6	+0.5
PLD	Plovdiv	2.82	61	ePn	Pn	12 20 15.8	+0.3
DRO	Drossia	2.83	175	P	Pn	12 20 16.9	+1.3
BOVS	Bovan	2.86	5	ePn	Pn	12 20 16.8	+0.8
GUR	Goura	2.94	165	P	Pn	12 20 17.7	+0.6
IVAS	Ivanjica	2.94	342	ePn	Pn	12 20 17.3	+0.2
IVAS				eSn	Sn	12 20 51.5	-1.1
PLE	Pljevlja	2.95	330	⇓iPn	Pb	12 20 21.1	-1.9
PLE				i Sn	Sn	12 20 54.2	+1.3
VIL2	Platees	2.95	150	P	Pn	12 20 19.6	+2.3
TREB	Trebinje	2.98	311	ePn	Pn	12 20 19.3	+1.6
TREB	Trebinje	2.98	311	ePn	Pn	12 20 19.3	+1.6
BRY	Bratogost	3.00	316	⇑iPn	Pn	12 20 19.7	+1.6
BRY				i Sn	Sn	12 20 56.4	+2.2
BRY	Bratogost	3.00	316	ePn	Pn	12 20 20.1	+2.0
LTK	Loutraki	3.01	156	P	Pn	12 20 18.4	+0.2
ZAGS	Zajecar	3.10	11	ePn	Pn	12 20 20.0	+0.8
GRUS	Gruza	3.15	351	ePn	Pn	12 20 20.8	+0.9
BBLS	Lazići	3.42	335	ePn	Pn	12 20 24.2	+0.5
BBLS	Lazići	3.42	335	ePn	Pn	12 20 23.4	-0.3
STON	Ston	3.46	308	ePn	Pn	12 20 26.8	+2.7
VLY	Voula,Athens	3.47	147	P	Pn	12 20 25.5	+1.1
DIVS	Divibare	3.47	343	ePn	Pn	12 20 24.8	+0.3
DIVS	Divibare	3.47	343	ePn	Pn	12 20 24.4	-0.1
TRUS	Trudelj	3.52	348	ePn	Pn	12 20 25.7	+0.7
ALN	Alexandroupoli	3.54	87	P	Pn	12 20 25.2	0.0
KUBS	Kucevo	3.64	3	ePn	Pn	12 20 26.2	-0.5
HAPS	Han Pijesak,Bl	3.76	332	ePn	Pn	12 20 28.3	-0.2
HAPS	Han Pijesak,Bl	3.76	332	ePn	Pn	12 20 26.1	-2.4
PYL	PYLOS	3.89	176	P	Pn	12 20 30.7	+0.6
TEKS	Tekeris	4.01	341	ePn	Pn	12 20 32.6	+0.8
TEKS	Tekeris	4.01	341	ePn	Pn	12 20 30.7	-1.1
FRGS	Fruska Gora	4.53	346	ePn	Pn	12 20 39.2	+0.3
FRGS	Fruska Gora	4.53	346	ePn	Pn	12 20 39.2	+0.3
BZS	Buzias	4.84	2	ePn	Pn	12 20 42.7	-0.4
UDBI	Udbina	5.58	314	ePn	Pn	12 20 55.2	+1.8
CRES	Cresnjev	6.64	321	ePn	Pn	12 21 08.7	+0.8
SOKA	Soboth	7.48	324	ePn	Pn	12 21 20.5	+1.0
	comp=E,0.5nm,0.3s						
OBKA	Obir	7.57	321	Pn	Pn	12 21 24.1	+3.3
	comp=E,0.8nm,0.3s						
VYHS	Vyhne	7.92	348	ePN	Pn	12 21 26.6	+1.1
VYHS				eSN	Sn	12 22 53.2	-2.1
MOA	Molln	8.71	327	ePn	Pn	12 21 38.6	+2.3
	comp=E,0.3nm,0.3s						
ABTA	Abfaltersbach	8.76	316	Pn	Pn	12 21 38.5	+1.4
	comp=E,1.0nm,0.3s						

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*SOME **17** 12:23:08.0, 41°.17N×70°.95E, h0^{km}*
*NNC **17** 12:23:09.0±2.5, 41°.04N×71°.14E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=18.5km s-min=8.8km az=5.0*
*KRNET **17** 12:23:10.0±0.1, 41°.31N×71°.04E, h14^{km}, mb2.3*
ISC 17 12:23:10.6±1.5**, 41°.23N**±0°.04×**71°.09E**±0°.03**, h3**^{km}±12^{km}**, n17, σ1^{s}.87**/33**, 13C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	Arkit	0.87	49	⇑iP	Pg	12 23 26.4	-0.8
	baz=56						
ARK				⇑iS	Sg	12 23 38.6	+0.1
	baz=56						
BTK	Batken	1.19	190	⇑iP	Pn	12 23 34.2	+0.1
	baz=88						
BTK				⇑iS	Sn	12 23 51.6	+0.8
	baz=88						
IUG	Iuzhnay	1.21	320	P	Pg	12 23 35.3	+1.5
	12nm,0.3s						
IUG				S	Sn	12 23 55.1	+3.7
	21nm,0.3s						
IUG	Iuzhnay	1.21	320	eP	Pb	12 23 31.2	-3.0
	8.3nm,0.5s						
IUG				eS	Sb	12 23 47.9	-2.4
	17nm,0.6s						
ARSB	Arslanbob	1.43	86	⇓eP	Pb	12 23 37.6	-0.3
	baz=89						
ARSB				⇓iS	Sg	12 23 57.9	+1.4
	baz=89						
MNAS	Manas	1.64	40	⇑P	Pn	12 23 39.9	-0.6
	1.6nm,0.4s						
MNAS				⇑S	Sg	12 24 06.0	+2.6
	2.0nm,0.3s						
MNAS	Manas	1.64	40	P	Pb	12 23 41.0	-0.5
	1.7nm,0.1s						
MNAS				S	Sg	12 24 05.0	+1.6
	2.8nm,0.4s						
MNAS	Manas	1.64	40	⇓eP	Pn	12 23 40.0	-0.5
	baz=42						
MNAS				⇓iS	Sb	12 24 02.6	-0.1
	baz=42						
KK31	Karatay Array	1.92	347	⇑P	Pb	12 23 45.5	-0.7
	3.7nm,0.3s,baz=170,slow=17,SNR=36						
KK31				S	Sg	12 24 12.4	0.0
	11nm,0.7s,baz=166,slow=26,SNR=14						
AML	Almayashu	2.15	64	⇓eP	Pb	12 23 49.0	-1.3
	baz=67						
AML				⇓eS	Sb	12 24 18.6	+1.1
	baz=67						
MRKS	Merke	2.20	46	Pg	Pb	12 23 51.1	0.0
	4.6nm,0.3s						
MRKS				Lg	Lg	12 24 22.1	
	5.6nm,0.3s						
MRKS	Merke	2.20	46	eP	Pb	12 23 51.1	0.0
	4.6nm,0.3s						
MRKS				eS	Sg	12 24 22.1	+0.9
	5.6nm,0.3s						
SFK	Sufi-Kurgan	2.20	123	⇑eP	Pb	12 23 51.1	0.0
	baz=24						
SFK				⇑iS	Sg	12 24 21.2	-0.1
	baz=24						
ARLS	Aral	2.51	74	⇑iP	Pb	12 23 55.6	-0.7
	baz=76						
ARLS				⇑iS	Sb	12 24 27.6	0.0
	baz=76						
UCH	Uchtor	2.75	68	⇓eP	Pb	12 23 57.8	-2.8
	baz=69						
UCH				⇓eS	Sb	12 24 32.9	-2.0
	baz=69						
AAK	Ala-Archa	2.91	60	⇓iP	Pb	12 23 59.8	-3.3
	baz=62						
AAK				⇓iS	Sb	12 24 36.1	-2.9
	baz=62						
KZA	Kyzart	3.23	73	⇑iP	Pn	12 24 04.8	+2.3
	baz=75						
KZA				⇑iS	Sb	12 24 44.7	-4.0
	baz=75						

IDC 17 12:24:39.5±1.3**, 1°.10N**×**127°.11E, h0**^{km}**, mb3.4**/5**, mb1 3.6**/6**, mb1mx3.4**/49**, mbtmp3.4**/6**, ML3.1**/1**, MS2.2**/1**, Ms1 2.2**/1**, ms1mx2.1**/22**, Error ellipse: s-maj=99.8km s-min=17.6km az=72.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.13	184	P	P	12 29 04.2	-0.1
	0.0nm,0.3s,baz=4.8,slow=12,SNR=2.5						
WRA	Warramunga Arr	22.08	162	P	P	12 29 36.2	-0.1
	0.4nm,0.4s,baz=340,slow=11,SNR=17						
ASAR	Alice Springs	25.49	165	P	P	12 30 09.7	+0.1
	0.6nm,0.3s,baz=342,slow=11,SNR=22						
KSRS	Korea Array	36.19	1	LR	LR	12 50 35.5	
	comp=Z,3.8nm,19.0s,baz=185,slow=43						
SONM	Songino Array	49.90	342	P	P	12 33 34.4	-0.5
	0.3nm,0.6s,baz=147,slow=8.6,SNR=2.5						
MKAR	Makanchi Array	59.93	326	P	P	12 34 48.0	+0.4
	0.4nm,0.4s,baz=117,slow=8.2,SNR=7.9						
KURBB	Kurchatov Arra	64.15	328	P	P	12 35 15.6	-0.1
	0.4nm,0.6s,baz=127,slow=6.3,SNR=3.7						

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*ISCJB **17** 12:27:49.4±0.9, 6°.65S±0°.07×130°.01E±0°.09, h146^{km}, mb4.1/1, Error ellipse: s-maj=12.1km s-min=9.7km az=2.6*
*IDC **17** 12:27:50.9±2.1, 6°.59S×130°.04E, h144^{km}±25^{km}, mb3.9/1, mb1 3.7/6, mb1mx3.2/40, mbtmp4.1/6, Error ellipse: s-maj=37.9km s-min=19.6km az=95.0*
ISC 17 12:27:48.9±0.9**, 6°.69S**±0°.06×**130°.2E**±0°.1**, h146**^{km}**, n6, σ4^{s}.03**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.89	11	P	Pn	12 29 15.1	+0.9
	2.7nm,0.3s,baz=139,slow=9.3,SNR=55						
SIJI				S	Sn	12 30 15.3	-5.5
	13nm,0.3s,baz=263,slow=23,SNR=14						
BATI	Baumata	7.31	241	P	Pn	12 29 35.4	+2.2
	10nm,0.3s,baz=94,slow=4.7,SNR=12						
BATI				S	Sn	12 30 52.6	-2.3
	4.3nm,0.3s,baz=334,slow=20,SNR=4.5						
FITZ	Fitzroy Crossi	12.16	201	P	Pn	12 30 38.9	+1.4
	0.6nm,0.3s,baz=14,slow=11,SNR=24						
FITZ				S	Sn	12 32 44.7	-7.2
	1.5nm,0.3s,baz=108,slow=20,SNR=8.8						
WRA	Warramunga Arr	13.79	163	P	Pn	12 31 00.4	+2.0
	0.1nm,0.3s,baz=344,slow=13,SNR=4.1						
WRA				S	Sn	12 33 28.2	-2.9
	0.9nm,0.3s,baz=333,slow=22,SNR=6.6						
ASAR	Alice Springs	17.26	168	P	Pn	12 31 45.8	+4.5
	0.4nm,0.3s,baz=346,slow=9.4,SNR=27						
ASAR				S	S	12 34 52.4	-0.7
	0.2nm,0.3s,baz=353,slow=28,SNR=5.3						
MKAR	Makanchi Array	68.05	327	P	P	12 38 33.9	+1.2
	2.4nm,0.6s,baz=117,slow=7.7,SNR=2.7						

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*IDC **17** 12:34:41.4±1.9, 44°.72N×80°.57E, h0^{km}, mb1 2.9/4, mb1mx2.8/44, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=31.1km s-min=11.3km az=140.0*
*NNC **17** 12:34:41.2±0.4, 44°.48N×80°.70E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=4.9km s-min=2.2km az=125.0*
*SOME **17** 12:34:42.7, 44°.53N×80°.67E, h30^{km}*
ISC 17 12:34:38.0±1.2**, 44°.53N**±0°.04×**80°.98E**±0°.04**, h9**^{km}±10^{km}**, n46, σ1^{s}.19**/66**, 12C-11D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	Jarkent	0.88	257	P	Pb	12 34 55.3	0.0
	72nm,0.2s						
DJR				S	Sg	12 35 05.1	-1.1
	90nm,0.2s						
DJR	Jarkent	0.88	257	eP	Pb	12 34 55.4	0.0
	72nm,0.2s						
DJR				eS	Sg	12 35 05.2	-1.1
	90nm,0.2s						
KAPS	Kapalarasan	1.38	304	P	Pg	12 35 04.9	+0.5
	37nm,0.2s						
KAPS				S	Sn	12 35 21.3	-0.6
	331nm,0.3s						
KAPS	Kapalarasan	1.38	304	eP	Pg	12 35 04.9	+0.5
	37nm,0.2s						
KAPS				eS	Sn	12 35 21.3	-0.6
	331nm,0.3s						
PDGK	Podgornoye	1.61	222	P	Pg	12 35 08.3	-0.6
	26nm,0.2s						
PDGK				S	Sb	12 35 27.9	-0.6
	313nm,0.4s						
PDGK	Podgornoye	1.61	222	⇑P	Pb	12 35 08.1	+0.1
	8.6nm,0.2s						
PDGK				⇑S	Sb	12 35 27.9	-0.6
	461nm,0.5s						
MNBS	Baschi	1.91	257	P	Pb	12 35 13.1	+0.1
	70nm,0.3s						
MNBS				S	Sb	12 35 36.7	-0.2
	166nm,0.2s						
MNBS	Baschi	1.91	257	eP	Pb	12 35 12.9	0.0
	70nm,0.3s						
MNBS				eS	Sb	12 35 36.3	-0.6
	166nm,0.2s						
UZB	Uzynbulak	1.98	226	P	Pb	12 35 14.1	-0.1
	23nm,0.3s						
UZB				S	Sb	12 35 38.6	-0.5
	385nm,0.3s						
UZB	Uzynbulak	1.98	226	eP	Pb	12 35 14.1	-0.1
	23nm,0.3s						
UZB				eS	Sb	12 35 38.5	-0.5
	385nm,0.3s						
KURS	Kuram	2.28	244	Pg	Pb	12 35 18.9	-0.4
	20nm,0.3s						
KURS				Lg	Lg	12 35 47.1	
	110nm,0.5s						
KURS	Kuram	2.28	244	⇑iP	Pb	12 35 18.9	-0.4
	20nm,0.3s						
KURS				eS	Sb	12 35 47.1	-0.5
	110nm,0.5s						
ARXS	Arharly	2.28	263	Pg	Pb	12 35 19.7	+0.3
	82nm,0.3s						
ARXS				Lg	Lg	12 35 48.4	
	260nm,0.2s						
ARXS	Arharly	2.28	263	eP	Pb	12 35 19.3	0.0
	82nm,0.3s						
ARXS				eS	Sb	12 35 47.8	+0.1
	260nm,0.2s						
SATY	Saty	2.38	233	Pg	Pb	12 35 20.9	0.0
	68nm,0.2s						
SATY				Lg	Lg	12 35 51.0	
	428nm,0.3s						
SATY	Saty	2.38	233	eP	Pb	12 35 20.9	0.0
	68nm,0.2s						
SATY				eS	Sb	12 35 50.6	+0.2
	428nm,0.3s						
MAKZ	Makanchi	2.38	17	⇑Pn	Pg	12 35 22.6	-1.0
	2.5nm,0.4s						
MAKZ				⇑Sn	Sg	12 35 55.5	+1.1
	30nm,0.4s						
MK31	Makanchi Array	2.44	22	Pn	Pg	12 35 23.6	-1.1
	8.0nm,0.5s,baz=204,slow=13,SNR=113						
MK31				Sn	Sg	12 35 56.9	+0.5
	11nm,0.2s,baz=200,slow=26,SNR=22						
MKAR	Makanchi Array	2.44	22	Pn	Pg	12 35 23.5	-1.3
	2.2nm,0.3s,baz=207,slow=13,SNR=46						
MKAR				Lg	Lg	12 35 55.1	
	29nm,0.3s,baz=210,slow=28,SNR=28						
CHKK	Chushkaly	2.95	258	Pg	Pb	12 35 30.0	-0.7
	36nm,0.4s						
CHKK				Lg	Lg	12 36 07.0	
	184nm,0.2s						
CHKK	Chushkaly	2.95	258	eP	Pb	12 35 30.1	-0.7
	36nm,0.4s						
CHKK				eS	Sb	12 36 07.0	+0.1
	184nm,0.2s						
KOTS	Kotyrbulak	3.08	246	Pg	Pb	12 35 32.7	-0.4
	35nm,0.4s						
KOTS				Lg	Lg	12 36 11.5	
	328nm,0.5s						
KOTS	Kotyrbulak	3.08	246	eP	Pb	12 35 32.7	-0.4
	35nm,0.4s						
KOTS				eS	Sb	12 36 11.5	+0.6
	328nm,0.5s						
MDOK	Medeo	3.16	246	⇑Pg	Pb	12 35 33.5	-0.8
MDOK				⇓Lg	Lg	12 36 13.4	
MDOK	Medeo	3.16	246	Pg	Pb	12 35 33.7	-0.6
	25nm,0.4s						
MDOK				Lg	Lg	12 36 13.1	
	52nm,0.4s						
MDOK	Medeo	3.16	246	⇑iP	Pb	12 35 33.7	-0.6
	25nm,0.4s						
MDOK				eS	Sb	12 36 13.1	+0.2
	52nm,0.4s						
KNDC	Almaty	3.19	247	⇓Pg	Pb	12 35 35.8	+1.0
	33nm,0.6s						
KNDC				⇓Lg	Lg	12 36 14.6	
	79nm,0.7s						
KTBS	Karatobe	3.20	257	Pg	Pb	12 35 34.6	-0.4
	22nm,0.6s						
KTBS				Lg	Lg	12 36 15.2	
	179nm,0.6s						
KTBS	Karatobe	3.20	257	eP	Pb	12 35 34.6	-0.4
	22nm,0.6s						
KTBS				eS	Sb	12 36 15.2	+1.1
	179nm,0.6s						
TNSS	Tian-Shan	3.28	244	Pg	Pb	12 35 35.8	-0.8
	25nm,0.5s						
TNSS				Lg	Lg	12 36 16.7	
	55nm,0.4s						
TNSS	Tian-Shan	3.28	244	⇑iP	Pb	12 35 35.8	-0.8
	25nm,0.5s						
TNSS				eS	Sb	12 36 16.7	0.0
	55nm,0.4s						
KUU	Kurty	3.40	261	Pg	Pb	12 35 37.4	-0.9
	20nm,0.4s						
KUU				Lg	Lg	12 36 20.1	
	76nm,0.2s						
KUU	Kurty	3.40	261	eP	Pb	12 35 37.4	-0.9
	20nm,0.4s						
KUU				⇓iS	Sb	12 36 20.1	+0.3
	76nm,0.2s						
ZSN	Zaisan	3.98	41	Pg	Pg	12 35 53.9	-0.3
	2.7nm,0.3s						
ZSN				Lg	Lg	12 36 48.3	
	53nm,0.4s						
ZSN	Zaisan	3.98	41	eP	Pg	12 35 52.5	-1.7
	2.7nm,0.3s						
ZSN				eS	Sg	12 36 47.0	+1.2
	53nm,0.4s						
TKM2	Tokmak 2	4.22	249	⇑Pg	Pb	12 35 54.7	+2.2
	6.0nm,0.5s						
TKM2				⇓Lg	Lg	12 36 47.8	
	12nm,0.4s						
AAK	Ala-Archa	5.08	250	⇑Pg	Pb	12 36 10.1	+3.0
	3.5nm,0.4s						
AAK				⇓Lg	Lg	12 37 15.7	
	18nm,0.7s						
AAK	Ala-Archa	5.08	250	Pg	Pb	12 36 09.9	+2.9
	1.9nm,0.3s,baz=75,slow=8.8,SNR=21						
AAK				Lg	Lg	12 37 15.0	
	0.9nm,0.3s,baz=338,slow=19,SNR=11						
SEM	Semipalatinsk	5.90	355	P	Sn	12 37 12.7	-0.8
	6.4nm,0.1s						
SEM				S	Sn	12 37 13.9	+0.4
	98nm,0.1s						
KURBB	Kurchatov Arra	6.32	346	⇓Pg	Pg	12 36 35.9	-3.0
	2.3nm,0.5s						
KURBB				⇓Lg	Lg	12 38 03.4	
	23nm,0.7s						
KURBB	Kurchatov Arra	6.32	346	Pn	Pn	12 36 13.5	+2.3
	0.1nm,0.3s,baz=173,slow=12,SNR=6.6						
KURBB				Lg	Lg	12 37 47.6	
	0.2nm,0.3s,baz=168,slow=32,SNR=4.3						
MNAS	Manas	6.49	255	⇓Pg	Pb	12 36 35.7	+4.5
	3.3nm,1.1s						
MNAS				⇓Lg	Lg	12 37 58.4	
	4.0nm,0.5s						
SFK	Sufi-Kurgan	7.15	233	⇑Lg	Lg	12 38 21.3	
	6.1nm,1.0s						
KK31	Karatay Array	7.71	263	⇓Pg	Pb	12 36 57.8	+6.1
	1.6nm,0.7s,baz=74,slow=17,SNR=5.8						
KK31				⇑Lg	Lg	12 38 38.2	
	1.8nm,0.5s,baz=71,slow=29,SNR=3.6						
ZALV	Zalesovo Beam	9.75	14	Pn	Pn	12 37 00.9	+2.7
	0.1nm,0.3s,baz=204,slow=14,SNR=2.7						
ZALV				Sn	Sn	12 38 43.5	-4.3
	0.1nm,0.3s,baz=189,slow=25,SNR=2.5						
ZALV				Lg	Lg	12 39 44.6	
	0.2nm,0.3s,baz=205,slow=23,SNR=2.3						
SONM	Songino Array	17.88	70	P	P	12 38 56.1	+8.5
	0.1nm,0.3s,baz=268,slow=11,SNR=2.8						

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*SKO **17** 12:40:57.1, 40°.77N×21°.35E, h15^{km}, M2.7, ML3.2*
*SOF **17** 12:40:58.5, 40°.68N×21°.19E, h75^{km}*
*ISCJB **17** 12:40:58.7±0.3, 40°.78N±0°.01×21°.42E±0°.02, h3^{km}±3^{km}, Error ellipse: s-maj=2.6km s-min=2.0km az=146.3*
*THE **17** 12:40:58.7, 40°.76N×21°.40E, h0^{km}±1^{km}, ML2.7/11, Error ellipse: s-maj=1.9km s-min=0.5km az=312.0*
*ATH **17** 12:40:58.0, 40°.79N×21°.39E, h15^{km}±1^{km}, ML2.7/17, Error ellipse: s-maj=2.0km s-min=0.8km az=142.0*
*BEO **17** 12:41:00.0±0.7, 40°.83N×21°.56E, h5^{km}±4^{km}, ML2.7/11*
*PDG **17** 12:41:00.5±0.8, 40°.89N×21°.43E, h10^{km}±2^{km}, ML3.1/5, Error ellipse: s-maj=1.4km s-min=2.1km az=0.0*
ISC 17 12:40:58.6±1.0**, 40°.77N**±0°.02×**21°.45E**±0°.02**, h6**^{km}±9^{km}**, n118, σ1^{s}.36**/160**, 7C-14D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	Bitola	0.27	339	⇑iPg	Pg	12 41 04.2	+0.4
BIA				i Sg	Sb	12 41 10.2	-0.6
BIA				eLg	Lg	12 41 10.3	
	comp=E,1µm,0.2s						
BIA				eLg	Lg	12 41 10.6	
	comp=N,2µm,0.3s						
NEST	Nestorio	0.47	221	P	Pg	12 41 06.6	-1.0
NEST				S	Sg	12 41 13.8	+0.1
NEST				AML	AML	12 41 14.7	
	comp=E,3669µm,0.5s						
NEST				AML	AML	12 41 16.1	
	comp=N,2887µm,0.4s						
NEST	Nestorio	0.47	221	P	Pg	12 41 06.4	-1.2
NEST				S	Sg	12 41 13.6	-0.1
KZN	Kozani	0.52	152	P	Pg	12 41 08.9	+0.3
KZN				S	Sb	12 41 17.2	-0.8
KZN				AML	AML	12 41 19.3	
	comp=E,5644µm,0.5s						
KZN				AML	AML	12 41 20.1	
	comp=N,3254µm,0.4s						
KZN	Kozani	0.52	152	P	Pg	12 41 08.8	+0.2
KZN				S	Sg	12 41 16.5	+1.2
OHR	Ohrid	0.60	305	⇑iPg	Pg	12 41 09.2	-0.9
OHR				i Sg	Sg	12 41 17.6	-0.4
OHR				eLg	Lg	12 41 18.3	
	comp=N,953nm,0.6s						
OHR				eLg	Lg	12 41 18.5	
	comp=E,783nm,0.5s						
PENT	Pentalofos	0.62	203	P	Pg	12 41 09.8	-0.7
PENT				S	Sg	12 41 19.2	+0.7
PENT				AML	AML	12 41 23.8	
	comp=N,1202µm,0.5s						
PENT				AML	AML	12 41 25.4	
	comp=E,1732µm,0.6s						
PENT	Pentalofos	0.62	203	P	Pg	12 41 09.8	-0.7
PENT				S	Sg	12 41 18.8	+0.3
KRUS	Krusevo	0.62	346	⇑iPg	Pg	12 41 10.2	-0.4
KRUS				i Sg	Sb	12 41 19.8	-1.2
KRUS				eLg	Lg	12 41 20.1	
	comp=E,299nm,0.2s						
KRUS				eLg	Lg	12 41 20.1	
	comp=N,248nm,0.2s						
GRG	Griva	0.74	75	P	Pb	12 41 13.7	-0.3
GRG				S	Sb	12 41 24.4	0.0
GRG				AML	AML	12 41 31.3	
	comp=E,961µm,0.4s						
GRG				AML	AML	12 41 32.0	
	comp=N,1321µm,0.5s						
GRG	Griva	0.74	75	P	Pb	12 41 13.6	-0.3
GRG				S	Sn	12 41 25.4	-1.9
GRG	Griva	0.74	75	⇓iPg	Pb	12 41 13.7	-0.3
KPRO	Kipourio	0.81	185	P	Pg	12 41 13.1	-1.1
KPRO				S	Sb	12 41 25.8	-0.6
KPRO				AML	AML	12 41 33.5	
	comp=E,1430µm,0.5s						
KPRO				AML	AML	12 41 34.4	
	comp=N,2003µm,0.7s						
KPRO	Kipourio	0.81	185	P	Pg	12 41 13.1	-1.1
KPRO				S	Sb	12 41 25.8	-0.6
VAY	Valandovo	1.01	56	⇓iPg	Pn	12 41 18.5	-0.8
VAY				i Sg	Sn	12 41 33.4	-0.5
VAY				eLg	Lg	12 41 37.5	
	comp=E,453nm,0.6s						
VAY				eLg	Lg	12 41 37.6	
	comp=N,240nm,0.5s						
LIT	Litokhoron	1.03	130	P	Pn	12 41 18.9	-0.7
LIT				S	Sn	12 41 33.7	-0.8
LIT				AML	AML	12 41 37.9	
	comp=E,1764µm,0.3s						
LIT				AML	AML	12 41 39.5	
	comp=N,1720µm,0.7s						
LIT	Litokhoron	1.03	130	P	Pn	12 41 19.0	-0.7
LIT				S	Sn	12 41 34.7	+0.2
LIT	Litokhoron	1.03	130	i Pg	Pn	12 41 18.9	-0.7
LIT				i Sg	Sn	12 41 35.9	+1.5
STIP	Stip	1.08	31	i Pg	Pn	12 41 22.1	+1.8
STIP				i Sg	Sn	12 41 40.4	+4.8
STIP				eLg	Lg	12 41 41.4	
	comp=E,82nm,0.4s						
STIP				eLg	Lg	12 41 41.5	
	comp=N,48nm,0.5s						
KNT	Kendrikon	1.16	70	P	Pn	12 41 21.4	0.0
KNT				S	Sn	12 41 37.2	-0.5
KNT				AML	AML	12 41 42.7	
	comp=E,353µm,0.4s						
KNT				AML	AML	12 41 45.2	
	comp=N,587µm,0.5s						
KNT	Kendrikon	1.16	70	P	Pn	12 41 21.1	-0.3
KNT				S	Sn	12 41 38.4	+0.7
KNT	Kendrikon	1.16	70	i Pg	Pn	12 41 21.4	0.0
KNT				i Sg	Sn	12 41 38.1	+0.4
JAN	Janina	1.20	203	P	Pn	12 41 20.5	-1.4
JAN				AML	AML	12 41 46.4	

	comp=N,583µm,0.5s						
JAN				AML	AML	12 41 46.9	
	comp=E,513µm,0.4s						
HORT	**Hortiatis**	**1.26**	**97**	P	**Pg**	**12 41 23.1**	**+0.3**
HORT				AML	AML	12 41 44.5	
	comp=N,315µm,0.5s						
HORT				AML	AML	12 41 46.2	
	comp=E,257µm,0.4s						
HORT	**Hortiatis**	**1.26**	**97**	P	**Pg**	**12 41 23.1**	**+0.3**
HORT				S	**Sn**	**12 41 42.1**	**+1.9**
THL	**Klokotos Trika**	**1.28**	**160**	P	**Pn**	**12 41 21.9**	**-1.1**
THL				S	**Sg**	**12 41 41.6**	**+2.0**
THL				AML	AML	12 41 45.5	
	comp=E,713µm,0.7s						
THL				AML	AML	12 41 47.4	
	comp=N,605µm,0.6s						
THL	**Klokotos Trika**	**1.28**	**160**	P	**Pn**	**12 41 22.1**	**-0.8**
THL				S	**Sg**	**12 41 41.7**	**+2.2**
TIR	**Tirane**	**1.33**	**296**	*e*Pg	**Pg**	**12 41 25.1**	**+1.0**
TIR				*e*Sg	**Sg**	**12 41 44.2**	**+2.8**
TIR	**Tirane**	**1.33**	**296**	⇑*i*P	**Pg**	**12 41 26.5**	**+2.4**
SRN	**Sarande**	**1.42**	**232**	P	**Pb**	**12 41 25.2**	**-0.3**
SOH	**Sokhos**	**1.44**	**87**	P	**Pg**	**12 41 26.0**	**-0.2**
SOH				AML	AML	12 41 50.1	
	comp=N,637µm,0.5s						
SOH				AML	AML	12 41 51.9	
	comp=E,534µm,0.7s						
SOH	**Sokhos**	**1.44**	**87**	P	**Pg**	**12 41 26.2**	**0.0**
SOH				S	**Sg**	**12 41 47.0**	**+2.0**
SOH	**Sokhos**	**1.44**	**87**	*i* Pg	**Pg**	**12 41 26.2**	**0.0**
SOH				*i* Sg	**Sg**	**12 41 50.1**	**+5.2**
IGT	**Igoumenitsa**	**1.50**	**215**	*e*Pn	**Pg**	**12 41 29.5**	**+2.1**
IGT				*e*Sn	**Sg**	**12 41 49.8**	**+3.0**
PLG	**Polygyros**	**1.57**	**104**	P	**Pb**	**12 41 27.7**	**-0.3**
PLG				AML	AML	12 41 52.1	
	comp=N,306µm,0.5s						
PLG				AML	AML	12 41 55.9	
	comp=E,204µm,0.7s						
PLG	**Polygyros**	**1.57**	**104**	P	**Pb**	**12 41 27.7**	**-0.3**
PLG				S	**Sg**	**12 41 49.4**	**+0.5**
KEK	**Kerkira**	**1.65**	**231**	P	**Pb**	**12 41 28.8**	**-0.5**
KEK				AML	AML	12 41 58.6	
	comp=E,373µm,1.0s						
KEK				AML	AML	12 42 01.2	
	comp=N,448µm,0.7s						
KKB	**Krupnik**	**1.65**	**48**	P	**Pg**	**12 41 29.3**	**-0.8**
KKB	**Krupnik**	**1.65**	**48**	P	**Pg**	**12 41 29.3**	**-0.8**
FYTO	**Fytoko, Volos**	**1.77**	**139**	P	**Pb**	**12 41 30.7**	**-0.7**
EVR	**Evrytania**	**1.87**	**171**	P	**Pb**	**12 41 32.8**	**-0.3**
EVR				AML	AML	12 42 04.0	
	comp=E,260µm,0.4s						
EVR				AML	AML	12 42 04.6	
	comp=N,292µm,0.6s						
EVR	**Evrytania**	**1.87**	**171**	P	**Pn**	**12 41 31.4**	**+0.2**
AGG	**Agios Georgios**	**1.87**	**159**	P	**Pb**	**12 41 31.8**	**-1.3**
AGG				AML	AML	12 42 07.3	
	comp=N,321µm,0.9s						
AGG				AML	AML	12 42 09.8	
	comp=E,326µm,0.9s						
AGG	**Agios Georgios**	**1.87**	**159**	P	**Pb**	**12 41 31.9**	**-1.3**
PAIG	**Paliouri**	**1.90**	**116**	P	**Pn**	**12 41 32.0**	**+0.5**
MMB	**Musomiste**	**1.90**	**64**	P	**Pb**	**12 41 32.8**	**-0.9**
MMB	**Musomiste**	**1.90**	**64**	P	**Pb**	**12 41 32.8**	**-0.9**
NVR	**Nevrokopi**	**1.91**	**71**	P	**Pb**	**12 41 32.1**	**-1.7**
NVR				AML	AML	12 42 09.3	
	comp=E,85µm,0.7s						
NVR				AML	AML	12 42 14.5	
	comp=N,73µm,0.6s						
NVR	**Nevrokopi**	**1.91**	**71**	P	**Pb**	**12 41 32.2**	**-1.7**
XOR	**Xorichti**	**1.93**	**136**	P	**Pb**	**12 41 33.5**	**-0.8**
OUR	**Ouranopolis**	**1.98**	**102**	P	**Pb**	**12 41 33.5**	**-1.4**
NEO	**Neokhori**	**1.99**	**136**	P	**Pn**	**12 41 33.4**	**+0.5**
TSLK	**Tsoukalades, L**	**2.04**	**198**	P	**Pb**	**12 41 35.0**	**-0.9**
BARS	**Barje**	**2.07**	**7**	*e*Pn	**Pn**	**12 41 34.3**	**+0.5**
BARS				*e*Sn	**Sn**	**12 41 59.2**	**-0.7**
BARS	**Barje**	**2.07**	**7**	*i* Pn	**Pb**	**12 41 34.6**	**-1.9**
LKD2	**Lefkada island**	**2.07**	**197**	P	**Pb**	**12 41 35.4**	**-1.1**
PVY	**Plav**	**2.14**	**329**	⇓*i*Pn	**Pb**	**12 41 36.4**	**-1.5**
PVY				*i* Sn	**Sb**	**12 42 02.6**	**-2.1**
PVO	**Paravola**	**2.15**	**178**	P	**Pb**	**12 41 36.9**	**-1.0**
ANX	**Ano Chora**	**2.20**	**170**	P	**Pb**	**12 41 37.3**	**-1.5**
ANX				AML	AML	12 42 07.3	
	comp=E,582µm,0.5s						
ANX				AML	AML	12 42 11.6	
	comp=N,406µm,0.6s						
ANX	**Ano Chora**	**2.20**	**170**	P	**Pn**	**12 41 35.8**	**0.0**
DRME	**Dracevica, Mon**	**2.22**	**311**	⇑*i*Pn	**Pb**	**12 41 37.5**	**-1.6**
DRME				*i* Sn	**Sb**	**12 42 05.2**	**-1.6**
DRME	**Dracevica, Mon**	**2.22**	**311**	*e*Pn	**Pb**	**12 41 37.8**	**-1.3**
VTS	**Vitosha**	**2.28**	**35**	*e*Pn	**Pn**	**12 41 36.8**	**-0.1**
VTS				*e*Sn	**Sn**	**12 42 04.8**	**-0.6**
VTS	**Vitosha**	**2.28**	**35**	⇓*i*P	**Pb**	**12 41 37.9**	**-2.3**
VTS	**Vitosha**	**2.28**	**35**	S	**Sb**	**12 42 07.3**	**-1.5**
VTS	**Vitosha**	**2.28**	**35**	P	**Pn**	**12 41 37.7**	**+0.8**
VTS	**Vitosha**	**2.28**	**35**	P	**Pn**	**12 41 37.7**	**+0.8**
KAVA	**Kavala**	**2.33**	**83**	P	**Pn**	**12 41 37.9**	**+0.5**
PDG	**Podgorica**	**2.34**	**316**	*e*Pn	**Pb**	**12 41 39.8**	**-1.3**
PDG				*e*Sn	**Sb**	**12 42 09.2**	**-1.1**
PDG	**Podgorica**	**2.34**	**316**	⇓*i*P	**Pb**	**12 41 39.8**	**-1.3**
PDG	**Podgorica**	**2.34**	**316**	S	**Sb**	**12 42 11.2**	**+0.9**
PDG	**Podgorica**	**2.34**	**316**	*e*Pn	**Pb**	**12 41 39.9**	**-1.2**
TTG	**Podgorica**	**2.34**	**316**	⇓*i*Pn	**Pb**	**12 41 39.1**	**-2.0**
TTG				*i* Sn	**Sn**	**12 42 07.5**	**+0.8**
EFP	**Efpalio**	**2.36**	**171**	P	**Pb**	**12 41 39.9**	**-1.7**
EFP	**Efpalio**	**2.36**	**171**	P	**Pn**	**12 41 38.9**	**+1.0**
SERG	**Sergoula**	**2.40**	**169**	P	**Pn**	**12 41 39.6**	**+1.2**
IVA	**Berane**	**2.40**	**332**	⇓*i*Pn	**Pb**	**12 41 39.9**	**-2.4**
IVA				*i* Sn	**Sn**	**12 42 08.4**	**0.0**
KALE	**Kalithea**	**2.43**	**167**	P	**Pn**	**12 41 39.2**	**+0.3**
BUM	**Brajici-Budva**	**2.46**	**309**	⇓*i*Pn	**Pb**	**12 41 41.1**	**-2.1**
BUM				*i* Sn	**Sn**	**12 42 10.7**	**+1.0**
SELS	**Selova**	**2.46**	**354**	*e*Pn	**Pn**	**12 41 39.5**	**+0.2**
DSF	**Desfina**	**2.50**	**160**	P	**Pn**	**12 41 40.8**	**+1.0**
DSF	**Desfina**	**2.50**	**160**	P	**Pn**	**12 41 40.7**	**+1.0**
KOME	**Kolasin**	**2.54**	**326**	⇓*i*Pn	**Pb**	**12 41 42.2**	**-2.4**
KOME				*i* Sn	**Sn**	**12 42 12.2**	**+0.5**
LAKA	**Lakka**	**2.56**	**171**	P	**Pb**	**12 41 42.5**	**-2.4**
RZN	**Rozhen**	**2.63**	**68**	P	**Pb**	**12 41 43.2**	**-3.0**
RZN	**Rozhen**	**2.63**	**68**	P	**Pb**	**12 41 43.2**	**-3.0**
ZAPS	**Zavoj**	**2.66**	**19**	*e*Pn	**Pn**	**12 41 42.9**	**+0.9**
SJES	**Sjenica**	**2.73**	**337**	*e*Pn	**Pn**	**12 41 44.1**	**+1.1**
SJES				*e*Sn	**Sn**	**12 42 17.3**	**+1.0**
NKME	**Niksic**	**2.74**	**318**	⇓*i*Pn	**Pn**	**12 41 44.1**	**+1.0**
NKME				*i* Sn	**Sn**	**12 42 17.6**	**+1.1**
PROD	**Prodromos**	**2.74**	**155**	P	**Pn**	**12 41 44.7**	**+1.6**
KLV	**Kalavryta, Ach**	**2.77**	**169**	P	**Pn**	**12 41 44.1**	**+0.5**
HCY	**Herceg Novi**	**2.78**	**308**	*e*Pn	**Pb**	**12 41 46.5**	**-2.2**
DRO	**Drossia**	**2.82**	**176**	P	**Pn**	**12 41 45.2**	**+1.0**
BOVS	**Bovan**	**2.87**	**4**	*e*Pn	**Pn**	**12 41 45.3**	**+0.4**
GUR	**Goura**	**2.91**	**166**	P	**Pn**	**12 41 46.8**	**+1.3**
VIL2	**Platees**	**2.91**	**151**	P	**Pn**	**12 41 47.8**	**+2.3**
IVAS	**Ivanjica**	**2.97**	**341**	*e*Pn	**Pn**	**12 41 46.1**	**-0.2**
PLE	**Pljevlja**	**2.99**	**330**	⇓*i*Pn	**Pb**	**12 41 49.5**	**-2.8**
PLE				*i* Sn	**Sn**	**12 42 22.8**	**0.0**
TREB	**Trebinje**	**3.03**	**311**	*e*Pn	**Pn**	**12 41 49.5**	**+2.4**
TREB	**Trebinje**	**3.03**	**311**	*e*Pn	**Pb**	**12 41 53.1**	**+0.2**
BRY	**Bratogost**	**3.05**	**315**	⇓*i*Pn	**Pn**	**12 41 48.2**	**+0.7**
BRY				*i* Sn	**Sb**	**12 42 29.4**	**-1.4**
BRY	**Bratogost**	**3.05**	**315**	*e*Pn	**Pn**	**12 41 48.6**	**+1.1**
GRUS	**Gruza**	**3.17**	**350**	*e*Pn	**Pn**	**12 41 49.8**	**+0.8**
BBLS	**Lazići**	**3.45**	**335**	*e*Pn	**Pn**	**12 41 53.7**	**+0.8**
BBLS	**Lazići**	**3.45**	**335**	*e*Pn	**Pn**	**12 41 52.8**	**-0.1**
DIVS	**Divibare**	**3.50**	**342**	*e*Pn	**Pn**	**12 41 54.1**	**+0.5**
DIVS	**Divibare**	**3.50**	**342**	*e*Pn	**Pn**	**12 41 53.8**	**+0.2**
HAPS	**Han Pijesak,Bl**	**3.80**	**332**	*e*Pn	**Pn**	**12 41 59.5**	**+1.7**
HAPS	**Han Pijesak,Bl**	**3.80**	**332**	*e*Pn	**Pn**	**12 42 00.1**	**+2.3**
MDVR	**Moldovita**	**4.02**	**3**	⇑*i*P	**Pn**	**12 42 00.8**	**+0.1**
FRGS	**Fruska Gora**	**4.55**	**345**	*e*Pn	**Pn**	**12 42 07.6**	**-0.4**
FRGS	**Fruska Gora**	**4.55**	**345**	*e*Pn	**Pn**	**12 42 08.1**	**+0.1**
GZR	**Gura Zlata**	**4.72**	**11**	⇑*i*P	**Pn**	**12 42 11.1**	**+0.7**
BZS	**Buzias**	**4.85**	**1**	⇓*i*P	**Pn**	**12 42 11.2**	**-0.9**
ARR	**Arges**	**5.15**	**26**	⇓*i*P	**Pn**	**12 42 17.8**	**+1.5**
VOIR		**5.36**	**28**	S	**Pn**	**12 42 17.2**	**-2.0**
VRI	**Vrincioaia**	**6.38**	**35**	S	Pn	12 42 37.6	+4.4
VYHS	**Vyhne**	**7.95**	**347**	*e*PN	**Pn**	**12 42 55.4**	**+0.8**
VYHS				*e*SN	**Sn**	**12 44 26.0**	**+1.2**

IDC 17 12:45:11.6±2.1,8°.14S×122°.00E,h0^{km},mb3.4/1, mb1 3.4/3,mb1mx3.2/34,mbtmp3.2/3,ML2.6/2,Error ellipse: s-maj=272.9km s-min=28.3km az=55.0,Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.75**	**136**	Pn	Pn	12 49 06.8	-1.1
	0.0nm,0.3s,baz=308,slow=14,SNR=3.0						
ASAR	**Alice Springs**	**19.20**	**145**	P	Pn	12 49 38.0	-0.2
	0.1nm,0.3s,baz=322,slow=12,SNR=11						
MKAR	**Makanchi Array**	**65.09**	**331**	P	P	12 55 54.0	-0.1
	0.4nm,0.8s,baz=138,slow=5.9,SNR=3.0						

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*MOS **17** 12:51:26.8±2.3,53°.36N×143°.29E,h7^{km},mb3.9/1,Error ellipse: s-maj=34.2km s-min=15.5km az=84.8*

MOS Felt (II) at Moskal'vo, Okha.

*SKHL **17** 12:51:27.2±0.3,53°.37N×142°.60E,h10^{km},mb4.1/5*

SKHL Felt (II) at Okha, Moskal'vo.

ISC 17 12:51:30.1±2.4,53°.4N±0°.1×142°.8E±0°.1,h10^{km},n13, σ3^{s}.06/17,2D,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKH	**Okha**	**0.21**	**26**	⇓*i*Pg	Pg	12 51 34.6	+0.1
OKH				AMB	AMB	12 51 34.9	
	850nm,0.2s						
OKH				*e*Sg	Sg	12 51 40.0	+2.5
OKH				A	A	12 51 40.4	
	8µm,0.4s						
OKH				A	A	12 51 40.4	
	6µm,0.4s						
OKH	**Okha**	**0.21**	**26**	⇓*i*PN	Pg	12 51 34.6	+0.1
OKH				*i* S	Sg	12 51 39.7	+2.2
OKH				pmax	pmax		
	comp=Z,1.0nm,0.4s						
OKH				smax	smax		
	comp=N,640nm,0.4s						
OKH				smax	smax		
	comp=E,710nm,0.4s						
NKL	**Nikolayevsk**	**1.28**	**261**	*e*Pg	**Pn**	**12 51 51.0**	**-2.9**
NKL				AMB	AMB	12 51 51.5	
	comp=E,48nm,0.3s						
NKL				AMB	AMB	12 51 51.5	
	comp=E,120nm,0.3s						
NKL				AMB	AMB	12 51 51.5	
	comp=E,140nm,0.3s						
NKL				*e*rx	rx	12 51 53.5	
NKL				*e*Sg	**Sn**	**12 52 07.5**	**-3.6**
NKL				A	A	12 52 08.5	
	comp=E,380nm,0.3s						
NKL	**Nikolayevsk**	**1.28**	**261**	*e*PN	**Pn**	**12 51 51.0**	**-2.9**
NKL				pmax	pmax		
	comp=N,48nm,0.3s						
NKL				pmax	pmax		
	comp=E,120nm,0.3s						
NKL				pmax	pmax		
	comp=Z,140nm,0.3s						
TYV	**Tymovskoe**	**2.50**	**182**	*e*P	**Pn**	**12 52 08.9**	**-1.9**
TYV				*e*Pg	**Pb**	**12 52 17.4**	**+2.4**
TYV				AMB	AMB	12 52 18.0	
	comp=Z,10.0nm,0.5s						
TYV				*e*S	**Sn**	**12 52 39.3**	**-2.0**
TYV				*e*Sg	**Sg**	**12 52 53.0**	**+2.7**
TYV				A	A	12 52 55.1	
	comp=Z,10.0nm,0.5s						
TYV	**Tymovskoe**	**2.50**	**182**	PN	**Pn**	**12 52 08.8**	**-2.0**
TYV				*e*S	**Sn**	**12 52 39.8**	**-1.5**
TYV				smax	smax		
	comp=N,1.0nm,0.4s						
TYV				smax	smax		
	comp=E,1.0nm,0.4s						
UGL	**Uglegorsk**	**4.31**	**186**	*e*PN	**Pn**	**12 52 35.5**	**-0.1**
GRNR	**Gornyy**	**4.70**	**239**	*e*Pg	**Pg**	**12 52 58.2**	**-1.9**
GRNR				AMB	AMB	12 52 59.0	
	comp=E,3.0nm,0.3s						
GRNR				*e*Sg	**Sg**	**12 54 01.0**	**+0.1**
GRNR				A	A	12 54 01.3	
	comp=E,14nm,0.3s						
GRNR	**Gornyy**	**4.70**	**239**	*e*PN	**Pb**	**12 52 56.1**	**+3.6**
EKMR	**Ekimchan**	**5.91**	**271**	*e*Pg	**Pg**	**12 53 22.0**	**-1.2**
EKMR				AMB	AMB	12 53 29.8	
	comp=E,4.0nm,0.5s						
EKMR				*e*Sg	**Sg**	**12 54 41.0**	**+1.3**
EKMR				A	A	12 54 46.4	
	comp=E,28nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.41**	**180**	*e*PN	**Pn**	**12 53 01.3**	**-3.2**
BMKR	**Bomnak**	**8.32**	**285**	*e*Sg	**Sg**	**12 56 03.5**	**+6.8**
BMKR				A	A	12 56 38.0	
	comp=E,2.0nm,0.5s						
KROS	**Kirovskiy**	**9.40**	**283**	*e*Sg	Sn	12 56 25.0	+54
KROS				A	A	12 56 25.9	
	comp=E,3.0nm,0.4s						

GUC 17 13:13:23.7±0.5,35°.46S×72°.89W,h15^{km},ML3.8,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHPI	**Pichilemu**	**1.30**	**35**	*e*P	Pn	13 13 45.4	-1.8
CHPI				*e*S	Sb	13 14 01.5	-2.7
CCHI	**Chillan**	**1.32**	**150**	*e*P	Pn	13 13 42.3	-5.2
CCHI				*i* S	Sb	13 13 59.0	-5.8
CCHI				IAML		13 14 04.8	
	comp=N,1µm,0.3s						
LMEL	**Las Melosas**	**2.74**	**55**	*i* P	Pn	13 14 07.7	+0.4
LMEL				IAML		13 14 50.8	
	comp=E,451nm,0.6s						
CLCH	**Cerro Calan**	**2.84**	**44**	*e*P	Pn	13 14 09.1	+0.5
CLCH				*e*S	Sn	13 14 43.9	+1.4
CLCH				IAML		13 15 01.1	
	comp=E,612nm,0.3s						
ROCH	**El Roble**	**2.93**	**33**	IAML		13 14 59.5	
	comp=N,392nm,0.6s						
PEL	**Peldehue**	**2.95**	**39**	*e*P	Pn	13 14 11.3	+1.3
PEL				*i* S	Sn	13 14 44.5	-0.7
PEL				IAML		13 15 02.8	
	comp=E,334nm,0.3s						
FCH	**Farellones**	**3.03**	**46**	*e*P	Pn	13 14 09.7	-1.7
FCH				IAML		13 14 58.2	
	comp=N,273nm,0.5s						

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*IDC **17** 13:20:01.9±0.8,32°.88N×39°.79W,h0^{km},mb3.6/10, mb1 3.8/10,mb1mx3.6/37,mbtmp3.6/10,MS3.3/16, Ms1 3.3/16,ms1mx3.1/45,Error ellipse: s-maj=28.1km s-min=18.1km az=179.0*

*ISCJB **17** 13:20:03.4±0.7,32°.9N±0°.2×39°.8W±0°.1,h22^{km},mb3.6/10, MS3.2/16,Error ellipse: s-maj=23.6km s-min=14.6km az=0.9*

ISC 17 13:20:05.3±0.8,32°.9N±0°.2×39°.8W±0°.1,h22^{km},n26, σ0^{s}.38/12,mb3.5/10,MS3.3/16,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**27.87**	**245**	LR	LR	13 34 18.1	
	comp=Z,26nm,21.1s,baz=68,slow=31						
SCHQ	**Schefferville**	**29.05**	**327**	LR	LR	13 37 27.8	
	comp=Z,61nm,18.4s,baz=320,slow=36						
MDT	**Midelt**	**29.47**	**80**	P	**P**	**13 26 08.0**	**+0.2**
	1.7nm,0.6s,baz=295,slow=9.2,SNR=4.4						
MDT				LR	LR	13 35 06.7	
	comp=Z,71nm,21.7s,baz=350,slow=31						
DAVOX	**Davos/Dischmat**	**39.94**	**55**	LR	LR	13 40 34.2	
	comp=Z,46nm,20.8s,baz=262,slow=31						
DBIC	**Dimbokro**	**41.61**	**121**	LR	LR	13 42 42.3	
	comp=Z,44nm,20.6s,baz=304,slow=33						
TORD	**Torodi Ar. Bea**	**42.58**	**108**	P	**P**	**13 27 59.3**	**-0.5**
	0.9nm,0.8s,baz=312,slow=8.3,SNR=7.1						
TORD				LR	LR	13 43 45.1	
	comp=Z,63nm,18.9s,baz=215,slow=33						
ROSC	**El Rosal**	**42.60**	**237**	LR	LR	13 44 29.5	
	comp=Z,34nm,19.3s,baz=60,slow=34						
NOA	**NORSAR Array B**	**43.14**	**34**	LR	LR	13 42 52.1	
	comp=Z,11nm,21.3s,baz=290,slow=32						
HFS	**Hagfors**	**44.08**	**35**	LR	LR	13 43 57.4	
	comp=Z,20nm,18.3s,baz=1.5,slow=33						
ULM	**Lac du Bonnet**	**44.31**	**310**	LR	LR	13 46 25.9	
	comp=Z,62nm,19.4s,baz=82,slow=36						
VRAC	**Vranov**	**44.49**	**51**	LR	LR	13 43 45.1	
	comp=Z,15nm,20.7s,baz=282,slow=32						
H10N2	**ASCENSION HYDR**	**47.10**	**145**	T	T	14 18 53.6	
	baz=330,slow=75,SNR=40						
H10N3	**ASCENSION HYDR**	**47.10**	**145**	T	T	14 18 54.2	
	baz=330,slow=75,SNR=29						
H10N1	**ASCENSION HYDR**	**47.12**	**145**	T	T	14 18 54.6	
	baz=330,slow=75,SNR=29						
H10S1	**ASCENSION HYDR**	**47.98**	**146**	T	T	14 19 57.9	
	baz=331,slow=75,SNR=11						
H10S3	**ASCENSION HYDR**	**47.99**	**146**	T	T	14 19 59.5	
	baz=331,slow=75,SNR=12						
H10S2	**ASCENSION HYDR**	**48.00**	**146**	T	T	14 19 58.8	
	baz=331,slow=75,SNR=12						
FINES	**FINESS Array B**	**50.27**	**35**	P	**P**	**13 29 00.1**	**+0.4**
	1.3nm,0.7s,baz=264,slow=6.9,SNR=4.0						
AKASG	**Malin Array Be**	**52.51**	**48**	P	**P**	**13 29 16.1**	**-0.4**
	0.5nm,0.5s,baz=279,slow=6.4,SNR=4.2						
AKASG				LR	LR	13 50 50.5	
	comp=Z,28nm,18.7s,baz=80,slow=35						
TXAR	**Lajitas Array**	**54.08**	**284**	P	**P**	**13 29 28.6**	**0.0**
	0.2nm,0.8s,baz=82,slow=7.4,SNR=3.3						
TXAR				LR	LR	13 50 53.0	
	comp=Z,48nm,20.7s,baz=0.0,slow=34						
YKA	**Yellowknife Ar**	**54.50**	**327**	P	**P**	**13 29 30.5**	**-0.5**
	0.3nm,0.8s,baz=80,slow=7.6,SNR=4.3						
YKA				PcP	**PcP**	**13 30 34.1**	**0.0**
	0.2nm,0.8s,baz=92,slow=4.7,SNR=3.4						
YKA				LR	LR	13 50 46.8	
	comp=Z,10nm,18.9s,baz=21,slow=34						
PDAR	**Pinedale Array**	**54.57**	**302**	P	**P**	**13 29 31.9**	**-0.2**
	0.4nm,0.8s,baz=78,slow=8.4,SNR=4.1						
PDAR				LR	LR	13 51 04.2	
	comp=Z,26nm,20.4s,baz=77,slow=34						
LPAZ	**La Paz**	**55.90**	**213**	P	**P**	**13 29 42.5**	**+0.2**
	0.6nm,0.6s,baz=27,slow=2.3,SNR=3.2						
NVAR	**Mina Array Bea**	**62.23**	**300**	P	**P**	**13 30 25.7**	**+0.1**
	0.2nm,0.5s,baz=86,slow=3.9,SNR=3.2						
NVAR				LR	LR	13 57 48.0	
	comp=Z,70nm,18.1s,baz=86,slow=36						
MKAR	**Makanchi Array**	**85.10**	**36**	P	**P**	**13 32 40.0**	**+0.5**
	0.2nm,0.6s,baz=331,slow=5.6,SNR=2.5						
ASAR	**Alice Springs**	**169.28**	**33**	PKPab	**PKPab**	**13 41 23.7**	**+0.3**
	0.6nm,1.1s,baz=340,slow=4.3,SNR=3.3						

ISC 17 13:21:47.2±1.0,47°.62N±0°.07×20°.29E±0°.07,h10^{km},n10, σ1^{s}.34/14,2C-3D,Hungary

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSZ	**Piszkesteto**	**0.40**	**318**	⇑*i*P	**Pg**	**13 21 55.4**	**+0.4**
PSZ				S	**Sg**	**13 22 01.3**	**+1.0**
PSZ	**Piszkesteto**	**0.40**	**318**	*e*Pg	**Pg**	**13 21 55.0**	**0.0**
PSZ				*e*Sg	**Sg**	**13 22 01.0**	**+0.7**
VYHS	**Vyhne**	**1.31**	**312**	*e*PG	**Pg**	**13 22 12.3**	**0.0**
VYHS				*e*SG	**Sg**	**13 22 30.2**	**+1.0**
VYHS				*e*LG	Lg	13 22 39.4	
TRPA	**Tarpa**	**1.60**	**71**	⇓*i*P	**Pb**	**13 22 17.4**	**+0.6**
TRPA	**Tarpa**	**1.60**	**71**	S	**Sn**	**13 22 34.4**	**-1.8**
LANS	**Liptovska Anna**	**1.62**	**341**	*e*PN	**Pg**	**13 22 19.5**	**+1.2**
LANS				*e*SG	**Sn**	**13 22 33.6**	**-3.3**
DRGR		**1.85**	**116**	⇑*i*P	**Pn**	**13 22 19.0**	**-0.1**
BZS	**Buzias**	**2.21**	**155**	⇓*i*P	**Pn**	**13 22 23.3**	**-0.6**
GZR	**Gura Zlata**	**2.82**	**141**	⇓*i*P	**Pn**	**13 22 32.9**	**+0.6**
GZR	**Gura Zlata**	**2.82**	**141**	S	**Sn**	**13 23 05.4**	**-1.0**

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*NIED **17** 13:24:00,43°.30N×147°.00E,h47^{km},Mw3.6 Best double couple: M$_0$2.75000×10^{14} NP1:ϕ_s216.00000°,δ30.00000°, λ81.00000°. NP2:ϕ_s47.00000°,δ61.00000°,λ95.00000°.*

*JMA **17** 13:24:11.2±0.3,43°.34N×146°.95E,h40^{km}±3^{km},M3.5*

*ISCJB **17** 13:24:12.8±0.7,43°.46N±0°.06×146°.87E±0°.06,h51^{km}±5^{km}, mb3.5/12,Error ellipse: s-maj=11.0km s-min=4.8km az=144.6*

*MOS **17** 13:24:13.5±1.1,43°.39N×146°.94E,h44^{km},mb4.1/1,Error ellipse: s-maj=14.4km s-min=11.0km az=94.3*

*SKHL **17** 13:24:13.1±0.4,43°.40N×146°.89E,h44^{km}±1^{km},mb4.3/5*

*IDC **17** 13:24:17.2±3.7,43°.50N×146°.69E,h75^{km}±33^{km},mb3.3/11, mb1 3.5/12,mb1mx3.3/56,mbtmp3.6/12,Error ellipse: s-maj=25.0km s-min=20.8km az=138.0*

ISC 17 13:24:13.7±1.2,43°.47N±0°.06×146°.86E±0°.05,h40^{km}±10^{km}, n48,σ1^{s}.22/61,mb3.6/12,3D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.40**	**357**	*i* P	**Pn**	**13 24 23.0**	**-0.2**
SHO				AMB	AMB	13 24 23.0	
	210nm,0.2s						
SHO				*i* S	**Sn**	**13 24 30.2**	**+0.4**
SHO				A	A	13 24 30.7	
	3µm,0.2s						
SHO				A	A	13 24 30.7	
	660nm,0.2s						
SHO	**Shikotan**	**0.40**	**357**	*d* *i*PN	**Pn**	**13 24 23.0**	**-0.2**
SHO				*i* S	**Sn**	**13 24 30.0**	**+0.2**
SHO				pmax	pmax		
	comp=N,418nm,0.2s						
SHO				pmax	pmax		
	comp=Z,2µm,0.2s						
SHO				pmax	pmax		
	comp=E,235nm,0.1s						
SHO				smax	smax		
	comp=N,3.0nm,0.3s						
SHO				smax	smax		
	comp=E,663nm,0.2s						
NEM2	**Nemuro 2**	**0.82**	**263**	P	**Pn**	**13 24 27.4**	**-1.3**
NEM2				*e*S	**Sn**	**13 24 39.1**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**0.92**	**308**	*i* P	**Pn**	**13 24 29.8**	**-0.3**
YUK				AMB	AMB	13 24 30.0	
	comp=E,80nm,0.2s						
YUK				AMB	AMB	13 24 30.0	
	comp=E,120nm,0.2s						
YUK				AMB	AMB	13 24 30.0	
	comp=E,130nm,0.2s						
YUK				*i* S	**Sn**	**13 24 42.0**	**0.0**
YUK				A	A	13 24 43.0	
	comp=E,920nm,0.4s						
YUK				A	A	13 24 43.0	
	comp=E,2µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.92**	**308**	*d* *i*PN	**Pn**	**13 24 29.7**	**-0.3**
YUK				*i* S	**Sn**	**13 24 42.1**	**0.0**
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				pmax	pmax		
	comp=N,83nm,0.1s						
YUK				pmax	pmax		
	comp=E,123nm,0.1s						
YUK				smax	smax		
	comp=N,918nm,0.4s						
YUK				smax	smax		
	comp=E,165nm,0.3s						
GRPR	**Tuman**	**0.94**	**304**	*i* P	**Pn**	**13 24 30.0**	**-0.5**
GRPR				AMB	AMB	13 24 30.0	
	comp=E,60nm,0.1s						
GRPR				*i* S	**Sn**	**13 24 43.0**	**+0.2**
GRPR				A	A	13 24 46.0	
	comp=E,1µm,0.3s						
GRPR				A	A	13 24 46.0	
	comp=E,510nm,0.3s						
GRPR	**Tuman**	**0.94**	**304**	*i* PN	**Pn**	**13 24 30.2**	**-0.3**
GRPR				*i* S	**Sn**	**13 24 43.0**	**+0.2**
GRPR				pmax	pmax		
	comp=Z,638nm,0.1s						
GRPR				smax	smax		
	comp=N,1µm,0.3s						
GRPR				smax	smax		
	comp=E,507nm,0.1s						
GLVR	**Golovnino**	**1.01**	**286**	*i* P	**Pn**	**13 24 30.0**	**-1.3**
GLVR				AMB	AMB	13 24 31.0	
	comp=E,50nm,0.2s						
GLVR				AMB	AMB	13 24 31.0	
	comp=E,70nm,0.2s						
GLVR				AMB	AMB	13 24 31.0	
	comp=E,40nm,0.2s						
GLVR				*i* S	**Sn**	**13 24 44.0**	**-0.3**
GLVR				A	A	13 24 53.0	
	comp=E,2µm,0.5s						
GLVR				A	A	13 24 53.0	
	comp=E,2µm,0.5s						
GLVR	**Golovnino**	**1.01**	**286**	*i* PN	**Pn**	**13 24 30.9**	**-0.4**
GLVR				*i* S	**Sn**	**13 24 44.9**	**+0.6**
GLVR				pmax	pmax		
	comp=Z,384nm,0.4s						
GLVR				pmax	pmax		
	comp=N,53nm,0.1s						
GLVR				pmax	pmax		
	comp=E,68nm,0.2s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR				smax	smax		

	comp=E,1µm,0.2s						
JKHN	Kushirohamanak	1.30	253	P	Pn	13 24 34.3	-1.0
JKHN				*e*S	Sn	13 24 51.9	+0.5
JRA	Rausu	1.34	291	P	Pn	13 24 35.7	-0.2
JNK	Nakash	1.56	275	P	Pn	13 24 38.1	-0.8
JNK				*e*S	Sn	13 24 57.5	-0.4
JAK	Akkeshi	1.65	254	P	Pn	13 24 38.7	-1.4
KUR	Kuril'sk	1.91	22	*i* P	Pn	13 24 43.6	-0.1
KUR				AMB	AMB	13 24 46.0	
	comp=E,5.0nm,0.1s						
KUR				AMB	AMB	13 24 46.0	
	comp=E,7.0nm,0.1s						
KUR				AMB	AMB	13 24 46.0	
	comp=E,40nm,0.1s						
KUR				*i* S	Sn	13 25 06.7	+0.2
KUR				A	A	13 25 08.0	
	comp=E,240nm,0.2s						
KUR				A	A	13 25 08.0	
	comp=E,110nm,0.2s						
KUR	Kuril'sk	1.91	22	*d i*PN	Pn	13 24 44.6	+0.9
KUR				*i* S	Sn	13 25 08.2	+1.7
KUR				pmax	pmax		
	comp=N,5.0nm,0.1s						
KUR				pmax	pmax		
	comp=E,7.0nm,0.1s						
KUR				pmax	pmax		
	comp=Z,40nm,0.1s						
KUR				smax	smax		
	comp=N,237nm,0.2s						
KUR				smax	smax		
	comp=E,113nm,0.2s						
JTKR	Abashiri--Toko	2.19	284	P	Pn	13 24 48.4	+0.8
JAR	Ashorobuto	2.26	267	P	Pn	13 24 48.3	-0.2
JAR				*e*S	Sn	13 25 15.9	+0.8
JOB	Onbets	2.28	257	P	Pn	13 24 48.2	-0.6
JOB				*e*S	Sn	13 25 17.0	+1.4
JMP	Maruseppu	2.59	283	P	Pn	13 24 54.0	+0.9
JCH	Churui	2.70	253	P	Pn	13 24 54.5	-0.1
JCH				*e*S	Sn	13 25 26.4	+0.4
HRK	Horoka	2.71	271	*e*P	Pn	13 24 55.8	+1.0
HRK				*e*S	Sn	13 25 27.8	+1.4
JKK2	Kamakawa 2	3.01	279	P	Pn	13 25 00.1	+1.3
JEM	Erimo	3.09	243	P	Pn	13 25 01.6	+1.7
ERM	Erimo	3.09	243	*e*P	Pn	13 25 01.7	+1.8
ERM	Erimo	3.09	243	*e*PN	Pn	13 25 01.7	+1.8
JFR	Furan	3.13	266	P	Pn	13 25 00.9	+0.5
JFR				*e*S	Sn	13 25 37.8	+1.3
ASAJ	Asahikawa	3.15	283	P	Pn	13 25 02.4	+1.6
	comp=E,1.7nm,0.3s,baz=118,slow=5.3,SNR=27						
ASAJ				S	Sn	13 25 43.3	+6.2
	comp=E,1.5nm,0.3s,baz=152,slow=17,SNR=2.5						
YSS	Yuzh-Sakhalins	4.53	322	*e*P	Pn	13 25 21.1	+1.4
YSS	Yuzh-Sakhalins	4.53	322	*e*PN	Pn	13 25 18.3	-1.4
SONM	Songino Array	28.38	293	P	P	13 30 04.4	+0.3
	comp=E,0.4nm,0.7s,baz=90,slow=8.6,SNR=3.8						
H11N2	WAKE ISLAND Hy	29.03	138	T	T	14 00 55.7	
	baz=329,slow=76,SNR=97						
H11N1	WAKE ISLAND Hy	29.04	138	T	T	14 00 56.8	
	baz=329,slow=76,SNR=69						
H11N3	WAKE ISLAND Hy	29.05	138	T	T	14 00 57.1	
	baz=329,slow=76,SNR=97						
H11S1	WAKE ISLAND Hy	29.99	140	T	T	14 02 02.7	
	baz=331,slow=76,SNR=200						
H11S3	WAKE ISLAND Hy	29.99	140	T	T	14 01 59.5	
	baz=331,slow=76,SNR=147						
H11S2	WAKE ISLAND Hy	30.00	140	T	T	14 02 00.5	
	baz=331,slow=76,SNR=117						
COLA	College	41.42	36	*e*P	P	13 31 56.2	+0.4
COLA	College	41.42	36	*i* P	P	13 31 56.2	+0.4
COLA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ILAR	Eielson Array	41.84	36	P	P	13 31 59.8	+0.6
	comp=Z,0.1nm,0.4s,baz=287,slow=9.3,SNR=5.3						
MKAR	Makanchi Array	44.53	298	P	P	13 32 20.6	-0.6
	comp=Z,0.4nm,0.5s,baz=81,slow=8.5,SNR=6.7						
INK	Inuvik	46.75	30	P	P	13 32 38.8	+0.4
	comp=Z,0.5nm,0.3s,baz=300,slow=7.3,SNR=10						
YKA	Yellowknife Ar	56.15	34	P	P	13 33 48.8	+0.1
	comp=Z,0.2nm,0.5s,baz=299,slow=6.7,SNR=5.7						
ARCES	ARCESS Array B	59.44	340	P	P	13 34 11.2	-0.5
	comp=Z,2.0nm,0.9s,baz=57,slow=6.6,SNR=4.2						
WRA	Warramunga Arr	64.14	193	P	P	13 34 43.5	-0.4
	comp=Z,0.1nm,0.5s,baz=13,slow=6.8,SNR=2.4						
FINES	FINESS Array B	65.03	333	P	P	13 34 48.4	-0.9
	comp=Z,1.1nm,1.0s,baz=45,slow=4.1,SNR=4.3						
NOA	NORSAR Array B	69.79	339	P	P	13 35 18.5	-0.9
	comp=Z,0.6nm,0.7s,baz=31,slow=6.3,SNR=5.5						
HFS	Hagfors	69.87	337	P	P	13 35 18.1	-1.7
	comp=Z,0.9nm,0.4s,baz=46,slow=8.3,SNR=11						
TXAR	Lajitas Array	82.98	56	P	P	13 36 35.1	+0.3
	comp=Z,0.1nm,0.4s,baz=294,slow=4.6,SNR=3.0						

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*IDC **17** 13:34:19.8±1.2, 51.°99N×171.°59W, h0^{km}, mb3.4/5, mb1 3.7/6, mb1mx3.3/65, mbtmp3.3/6, ML2.6/1, MS4.0/1, Ms1 4.0/1, ms1mx2.6/33, Error ellipse: s-maj=76.4km s-min=24.3km az=146.0*

*ISCJB **17** 13:34:24.9±0.7, 52.°0N±0.°1×171.°31W±0.°07, h44^{km}, mb3.4/5, MS4.0/1, Error ellipse: s-maj=18.6km s-min=4.1km az=165.7*

*NEIC **17** 13:34:24.9±0.0, 52.°13N×171.°35W, h26^{km}, ML3.0(AEIC), After AEIC.*

ISC 17 13:34:26.6±1.0, **52.°1N**±0.°2×**171.°33W**±0.°06, **h44**^{km}, **n21**, σ**0^{s}92**/19, **mb3.4**/5, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.71	277	P	Pn	13 34 52.9	-1.1
KOFP				S	Sn	13 35 13.5	-1.2
NIKH	Nikolski High	1.75	59	P	Pn	13 34 52.8	-1.6
NIKH				S	Sn	13 35 15.1	-0.4
OKSP	Okmok Steeple	2.19	57	P	Pn	13 35 00.7	+0.3
GSTD	Great Sitkin T	2.97	271	P	Pn	13 35 11.7	+0.5
GSTD				S	Sn	13 35 47.0	+1.3
MREP	Makushin Rep't	3.26	56	P	Pn	13 35 15.1	-0.2
MSW	Makushin Switc	3.30	55	P	Pn	13 35 14.9	-0.8
ADK	Adak	3.32	268	P	Pn	13 35 15.7	-0.2
ADK				S	Sn	13 35 54.5	+0.5
UNV	Unalaska Valle	3.41	57	P	Pn	13 35 16.9	-0.2
UNV				S	Sn	13 35 56.9	+0.7
ILAR	Eielson Array	17.87	35	P	P	13 38 31.8	0.0
	0.0nm,0.3s,baz=223,slow=9.2,SNR=3.3						
YKA	Yellowknife Ar	31.33	48	P	P	13 40 43.0	+0.7
	0.1nm,0.3s,baz=277,slow=7.3,SNR=3.5						
H11N2	WAKE ISLAND Hy	36.50	216	T	T	14 19 54.5	
	baz=21						
H11N3	WAKE ISLAND Hy	36.51	216	T	T	14 20 01.2	
	baz=21						
H11N1	WAKE ISLAND Hy	36.52	216	T	T	14 19 57.2	
	baz=21						
H11S1	WAKE ISLAND Hy	37.70	215	T	T	14 21 32.9	
	baz=21						
H11S2	WAKE ISLAND Hy	37.71	215	T	T	14 21 29.7	
	baz=21						
H11S3	WAKE ISLAND Hy	37.72	215	T	T	14 21 35.7	
	baz=21						
PDAR	Pinedale Array	41.64	78	P	P	13 42 11.5	+0.9
	0.2nm,0.5s,baz=310,slow=7.0,SNR=3.0						
JNU	Nakatsue	45.25	269	LR	LR	14 01 33.0	
	comp=Z,163nm,19.9s,baz=288,slow=36						
TXAR	Lajitas Array	53.96	87	P	P	13 43 46.3	+0.4
	0.2nm,0.5s,baz=290,slow=5.6,SNR=3.0						
WRA	Warramunga Arr	85.89	230	P	P	13 46 59.8	-1.8
	0.3nm,0.9s,baz=40,slow=5.7,SNR=3.2						
ASAR	Alice Springs	89.30	228	P	P	13 47 17.4	-0.5
	0.7nm,0.8s,baz=24,slow=5.1,SNR=12						

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*IPEC **17** 13:37:13.6±0.1, 49.°44N×20.°23E, h4^{km}, ML2.5/4, Error ellipse: s-maj=1.1km s-min=0.7km az=4.0*

*SIGU **17** 13:37:13.0±0.1, 49.°5N±0.°9×20.°2E±0.°5, h5^{km}*

*PRU **17** 13:37:13.7±0.0, 49.°50N×20.°15E, h0^{km}, High Tatras*

ISC 17 13:37:12.9±0.9, **49.°50N**±0.°03×**20.°24E**±0.°03, **h8**^{km}±7^{km}, **n45**, σ**1^{s}47**/69, **2C-6D**, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIE	Niedzica	0.09	155	*i* Pg	Pg	13 37 15.5	+0.3
NIE				*e*Sg	Sg	13 37 16.9	0.0
LANS	Liptovska Anna	0.61	235	*e*PG	Pg	13 37 24.9	+0.2
LANS				*e*SG	Sg	13 37 32.4	-0.4
OJC	Ojcow	0.77	339	*e*Pg	Pb	13 37 29.3	+0.8
OJC				*e*Sg	Sb	13 37 40.9	+1.7
VYHS	Vyhne	1.37	223	*e*PG	Pn	13 37 38.3	+0.1
VYHS				*e*SG	Sn	13 37 58.5	+2.0
VYHS				*e*LG	Lg	13 38 01.9	
OKC	Ostrava-Krasne	1.40	285	*e*PG	Pg	13 37 39.9	+0.2
OKC				*e*SG	Sg	13 37 58.0	+0.2
	comp=Z,59nm,0.7s						
KOLL	Kolacno	1.52	233	*e*PG	Pb	13 37 41.0	-0.3
KOLL				*e*SG	Sg	13 38 01.8	+0.1
PSZ	Piszkesteto	1.60	188	⇓*i*P	Pn	13 37 42.1	+0.6
PSZ	Piszkesteto	1.60	188	S	Sb	13 38 03.2	+0.1
PSZ	Piszkesteto	1.60	188	*e*Pn	Pb	13 37 43.0	+0.3
PSZ				Sn	Sb	13 38 03.0	-0.1
MORC	Moravsky Berou	1.77	280	⇓*i*P	Pb	13 37 46.1	+0.5
MORC	Moravsky Berou	1.77	280	S	Sg	13 38 09.6	-0.3
MORC	Moravsky Berou	1.77	280	*e*PN	Pn	13 37 45.0	+1.1
MORC				*e*SG	Sg	13 38 09.6	-0.3
MORC	Moravsky Berou	1.77	280	*e*Pn	Pn	13 37 44.9	+1.1
	baz=100						
MORC				*e*Sg	Sg	13 38 09.5	-0.3
	52nm,0.4s,baz=100						
MUKU	Mukachevo	1.93	122	*e*Pn	Pb	13 37 47.9	-0.3
ANAC	Anensky vrch	1.94	288	*e*Pn	Pn	13 37 47.2	+1.1
	baz=108						
ANAC				*e*Sg	Sg	13 38 15.0	-0.2
	22nm,0.3s,baz=108						
BERU	Beregovo	2.04	128	*e*Pn	Pb	13 37 50.0	0.0
TRPA	Tarpa	2.05	131	⇓*i*P	Pn	13 37 48.5	+0.9
BRIU	Brid	2.17	121	*e*Pn	Pb	13 37 53.2	+0.8
MODS	Modra-Piesok	2.26	241	*e*SN	Sb	13 38 20.5	-1.4
MODS				*e*LG	Lg	13 38 22.8	
KRLC	Kraliky	2.31	286	*e*PG	Pb	13 37 54.4	-0.4
KRLC				*e*SG	Sb	13 38 25.0	+1.5
	comp=Z,5.3nm,0.3s						
KORU	Korolevo	2.34	124	*e*Pn	Pb	13 37 54.6	-0.6
MEZ	Mezhgor'ye	2.37	113	*e*Pn	Pb	13 37 56.5	+0.7
VRAC	Vranov	2.39	267	⇑*i*P	Pb	13 37 55.2	-0.9
VRAC	Vranov	2.39	267	*e*PN	Pn	13 37 53.7	+1.4
VRAC				*e*PG	Pb	13 37 57.2	+1.1
VRAC				*e*SG	Sg	13 38 28.1	-1.5
VRAC	Vranov	2.39	267	*e*Pn	Pn	13 37 53.6	+1.3
	baz=86						
VRAC	Vranov	2.39	267	*e*Pg	Pb	13 37 57.1	+1.0
	baz=86						
VRAC				*e*Sg	Sg	13 38 28.1	-1.5
	19nm,0.5s,baz=86						
MORS	Morshin	2.42	97	Pn	Pb	13 37 57.1	+0.5
ZST	Bratislava	2.45	239	*e*PN	Pn	13 37 52.6	-0.5
ZST				*e*SN	Sn	13 38 22.1	-1.1
KRUC	Moravsky	2.56	262	*e*PN	Pn	13 37 55.6	+1.1
KRUC				*e*SG	Sg	13 38 33.0	-1.9
KRUC	Moravsky	2.56	262	*e*Pn	Pn	13 37 55.6	+1.1
	baz=80						
KRUC				*e*Sg	Sg	13 38 33.0	-1.9
	13nm,0.6s,baz=80						
DPC	Dobruska-Polom	2.67	290	*e*PG	Pb	13 38 01.8	+0.9
DPC				*e*SG	Sb	13 38 35.5	+1.7
	comp=Z,18nm,0.6s						
KSP	Ksiaz	2.87	299	*e*Pg	Pg	13 38 07.1	-0.8
KSP				*e*Sg	Sg	13 38 43.0	-2.0
UPC	Upice	2.91	292	*e*PG	Pb	13 38 05.6	+0.7
UPC				*e*SG	Sg	13 38 44.2	-1.9
	comp=Z,15nm,0.5s						
NSLU	Nyzhne Selyshc	3.08	114	*e*Pn	Pn	13 37 58.3	-3.4
TREC	Trest	3.11	268	*e*SG	Sg	13 38 51.5	-1.2
	comp=Z,9.8nm,0.3s						
DRGR		3.18	148	⇑*i*P	Pn	13 38 04.4	+1.2
GOPC	GO Pecny, Ondr	3.56	279	*e*PG	Pb	13 38 18.1	+2.0
PRU	Pruhonice	3.73	280	*e*PG	Pb	13 38 20.7	+1.8
PRU				*e*SG	Sg	13 39 11.4	-1.1
	comp=Z,9.8nm,0.7s						
BURAR	Bucovina Array	3.81	118	⇓*i*P	Pn	13 38 13.3	+1.4
BZS	Buzias	4.00	166	⇓*i*P	Pn	13 38 15.1	+0.7
BRG	Berggiesshubel	4.27	291	PG	Pg	13 38 33.3	-1.3
BRG				SG	Sg	13 39 26.3	-3.6
	5.1nm,0.7s						
KHC	Kasperske Hory	4.37	268	*e*PN	Pn	13 38 19.7	+0.1
KHC				*e*PG	Pb	13 38 30.7	+0.8
KHC				*e*SG	Sg	13 39 30.8	-2.4
	comp=Z,5.4nm,0.4s						
GZR	Gura Zlata	4.46	156	⇓*i*P	Pn	13 38 21.8	+1.0
CLL	Collm	4.97	294	*e*Sg	Sg	13 39 47.0	-5.3
	comp=Z,7.0nm,0.8s						
NKC	Novy Kostel	5.09	281	*e*SG	Sg	13 39 53.0	-3.2
	comp=Z,5.0nm,0.4s						

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*NIED **17** 13:39:00, 37.°40N×142.°30E, h5^{km}, Mw3.5 Best double couple: $M_0$1.92000×10^{14} NP1:ϕ_s14.00000°, δ32.00000°, λ-55.00000°. NP2:ϕ_s155.00000°, δ64.00000°, λ-110.00000°.*

*ISCJB **17** 13:39:16.8±0.7, 37.°34N±0.°04×142.°32E±0.°05, h10^{km}, mb3.6/8, Error ellipse: s-maj=6.2km s-min=5.1km az=136.2*

*IDC **17** 13:39:16.6±1.1, 37.°23N×142.°48E, h0^{km}, mb3.7/8, mb1 3.7/11, mb1mx3.5/58, mbtmp3.7/11, ML3.2/3, Error ellipse: s-maj=32.5km s-min=16.9km az=86.0*

*JMA **17** 13:39:17.6±0.2, 37.°35N×142.°33E, h25^{km}±4^{km}, M3.7*

ISC 17 13:39:18.2±0.9, **37.°35N**±0.°04×**142.°21E**±0.°06, **h10**^{km}, **n31**, σ**1^{s}53**/36, **mb3.6**/8, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	1.06	272	P	Pn	13 39 38.2	-1.0
JFK				*e*S	Sb	13 39 52.7	+0.1
JIKH	Ishinomakikobu	1.13	329	P	Pb	13 39 38.4	-1.4
JIKH				*e*S	Sb	13 39 53.1	-1.4
ONAJ	Iwakimizuishiy	1.15	258	P	Pg	13 39 39.5	-0.8
ONAJ				*e*S	Sn	13 39 55.6	-0.6
JMM	Marumori	1.24	295	P	Pn	13 39 40.6	-0.9
JMM				*e*S	Sn	13 39 57.6	-0.7
JIO	Ouri	1.30	329	P	Pn	13 39 41.2	-1.2
JFT	Otama	1.50	277	P	Pb	13 39 45.6	-0.5
JFT				*e*S	Sg	13 40 05.5	-0.9
JOU	Okura	1.59	310	P	Pb	13 39 46.4	-1.3
JMK	Ichinoseki	1.78	334	P	Pn	13 39 48.7	-0.3
JYS	Shirataka	1.91	298	P	Pb	13 39 51.4	-1.7
JFY	Yanaizu	1.99	272	P	Pb	13 39 52.5	-2.1
JYK	Kaneyama	2.14	318	P	Pn	13 39 54.3	+0.3
JYK				*e*S	Sn	13 40 21.3	+0.7
JOM	Ohasama	2.24	342	P	Pn	13 39 55.1	-0.3
JAG	Ashikaga	2.39	248	P	Pn	13 39 57.4	0.0
JAG				S	Sn	13 40 26.6	-0.2
MJAR	Matsushiro Arr	3.30	257	Pn	Pn	13 40 11.4	+1.4
	0.5nm,0.3s,baz=80,slow=15,SNR=19						
MJAR				Sn	Sb	13 40 54.3	-2.9
	0.4nm,0.3s,baz=82,slow=25,SNR=6.7						
MAT	Matsushiro	3.30	257	P	Pn	13 40 12.3	+2.3
MAT				*e*S	Sn	13 40 51.6	+2.3
JHJ	Hachijo jima 2	4.66	206	Pn	Pn	13 40 29.1	+0.5
	14nm,0.3s,baz=46,slow=12,SNR=3.5						
JHJ				Sn	Sn	13 41 19.0	-3.8
	11nm,0.3s,baz=54,slow=19,SNR=2.6						
ASAJ	Asahikawa	6.77	2	Pn	Pn	13 40 57.8	+0.2
	0.4nm,0.3s,baz=226,slow=12,SNR=6.0						
ASAJ				Sn	Sn	13 42 12.7	-2.1
	0.2nm,0.3s,baz=150,slow=20,SNR=2.2						
SEY	Seymchan	26.37	10	P	P	13 44 55.2	+1.0
	0.6nm,0.6s,baz=223,slow=19,SNR=5.0						
H11N2	WAKE ISLAND Hy	27.77	122	T	T	14 13 58.3	
	baz=315,slow=75,SNR=48						
H11N1	WAKE ISLAND Hy	27.78	122	T	T	14 13 57.6	
	baz=315,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	27.79	122	T	T	14 14 01.5	
	baz=315,slow=75,SNR=43						
SONM	Songino Array	28.14	303	P	P	13 45 12.4	+1.9
	0.6nm,0.7s,baz=91,slow=10,SNR=3.9						
H11S1	WAKE ISLAND Hy	28.50	124	T	T	14 14 51.4	
	baz=316,slow=76,SNR=25						
H11S3	WAKE ISLAND Hy	28.51	125	T	T	14 14 51.4	
	baz=316,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	28.52	124	T	T	14 14 53.1	
	baz=316,slow=76,SNR=24						
ZALV	Zalesovo Beam	42.17	312	P	P	13 47 12.8	+2.0
	0.7nm,0.4s,baz=85,slow=4.8,SNR=4.8						
MKAR	Makanchi Array	44.49	302	P	P	13 47 30.9	+1.3
	0.8nm,0.8s,baz=90,slow=10,SNR=4.1						
BVAR	Borovoye Array	50.83	312	P	P	13 48 21.2	+2.5
	0.3nm,0.4s,baz=91,slow=6.3,SNR=3.5						
WRA	Warramunga Arr	57.46	189	P	P	13 49 06.3	-1.1
	0.5nm,0.5s,baz=7.3,slow=7.1,SNR=15						
ASAR	Alice Springs	61.19	189	P	P	13 49 32.6	-0.5
	0.2nm,0.4s,baz=1.4,slow=5.7,SNR=13						
FINES	FINESS Array B	68.83	332	P	P	13 50 23.3	+0.9
	1.8nm,0.7s,baz=52,slow=9.0,SNR=3.8						

IDC 17 13:47:46.9±3.8, **7.°20S**×**131.°85E**, **h0**^{km}, **mb3.0**/1, **mb1 3.0**/3, **mb1mx2.9**/32, **mbtmp2.8**/3, **ML2.7**/2, **Error ellipse: s-maj=264.3km s-min=32.3km az=73.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.89	169	Pn	Pn	13 50 51.3	-0.3
	0.0nm,0.3s,baz=353,slow=13,SNR=4.0						
WRA				Sn	Sn	13 53 08.2	-7.7
	0.0nm,0.3s,baz=347,slow=24,SNR=2.7						
ASAR	Alice Springs	16.49	173	Pn	Pn	13 51 40.0	+0.3
	0.0nm,0.3s,baz=352,slow=7.5,SNR=5.3						
MKAR	Makanchi Array	69.41	326	P	P	13 58 56.8	0.0
	0.1nm,0.4s,baz=116,slow=6.6,SNR=2.6						

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*ISCJB **17** 13:53:18.5±0.8, 33.°50S±0.°03×71.°54W±0.°07, h45^{km}±9^{km}, mb3.6/3, Error ellipse: s-maj=9.8km s-min=5.7km az=175.9*

*SJA **17** 13:53:18.6±1.0, 33.°44S×71.°46W, h29^{km}±5^{km}, ML4.0, MW3.8*

*NEIC **17** 13:53:19.0±0.0, 33.°35S×71.°29W, h54^{km}, mb3.9/2, ML4.0(GUC), After GUC.*

NEIC Felt [III] at Quilpue and San Antonio; [II] at Algarrobo, San Felipe, Valparaiso, Villa Alemana and Vina del Mar.

*IDC **17** 13:53:19.7±1.0, 33.°56S×71.°33W, h48^{km}±7^{km}, mb3.3/3, mb1 3.6/7, mb1mx3.5/21, mbtmp3.6/7, Error ellipse: s-maj=30.2km s-min=28.0km az=123.0*

*GUC **17** 13:53:19.8±0.6, 33.°35S×71.°29W, h54^{km}±3^{km}, ML4.0*

ISC 17 13:53:19.6±0.7, **33.°44S**±0.°05×**71.°43W**±0.°06, **h44**^{km}±6^{km}, **n51**, σ**1^{s}87**/61, **mb3.6**/3, **2C-10D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	0.58	37	*e*Pn	Pn	13 53 31.9	+0.2
ROC1				*e*Sn	Sn	13 53 40.8	+0.4
ROC1	El Roble	0.58	37	⇓*e*S	Sn	13 53 40.8	+0.4
ROCH	El Roble	0.58	37	⇑*i*P	Pn	13 53 31.9	+0.1
ROCH				*i* S	Sn	13 53 41.1	+0.6
ROCH				IAML		13 53 41.7	
	comp=N,10µm,0.4s						
PEL	Peldehue	0.69	65	*e*Pn	Pn	13 53 33.0	-0.1
PEL				*e*Sn	Sn	13 53 43.0	+0.2
PEL	Peldehue	0.69	65	*e*S	Sn	13 53 43.8	+1.0
PEL	Peldehue	0.69	65	*e*P	Pn	13 53 32.5	-0.5
PEL				*e*S	Sn	13 53 42.6	-0.1
PEL				IAML		13 53 43.4	
	comp=E,7µm,0.2s						
CLCH	Cerro Calan	0.75	87	⇑*i*P	Pn	13 53 34.2	+0.3
CLCH				*e*S	Sn	13 53 44.5	+0.3
CLCH				IAML		13 53 45.2	
	comp=E,12µm,0.3s						
FCH	Farellones	0.96	84	⇓*i*P	Pn	13 53 37.1	+0.1
FCH				*i* S	Sn	13 53 49.5	-0.2
FCH				IAML		13 53 51.0	
	comp=N,8µm,0.2s						
CHPI	Pichilemu	1.06	206	*e*P	Pn	13 53 40.4	+2.4
LMEL	Las Melosas	1.10	112	⇓*e*P	Pn	13 53 39.5	+0.8
LMEL				*e*S	Sn	13 53 53.9	+1.0
LMEL				IAML		13 53 55.0	
	comp=E,12µm,0.2s						
AUSP	Uspallata	2.10	55	⇓*e*P	Pn	13 53 55.4	+2.8
AUSP				*e*S	Sn	13 54 22.2	+4.5
CMCH	Combarbala	2.29	9	*e*P	Pn	13 53 55.5	+0.6
CMCH				*i* S	Sn	13 54 23.0	+1.1
CMCH				IAML		13 54 35.8	
	comp=E,3µm,0.6s						
RTLS	Leoncito	2.43	48	*e*P	Pn	13 54 00.4	+3.3
RTLS				*e*S	Sn	13 54 33.4	+7.6
RTLS				IAML		13 54 34.1	
	comp=Z,472nm,0.6s						
RTCV	Cerro Valdivia	2.90	58	⇓*e*P	Pn	13 54 06.0	+2.6
CFA	Coronel Fontan	3.26	57	⇓*e*P	Pn	13 54 11.5	+3.3
RTLL	Cerro Villicun	3.27	51	*e*P	Pn	13 54 10.8	+2.4
RTLL				⇓*e*S	Sn	13 54 50.8	+4.8
RTLL				IAML		13 54 58.2	
	comp=N,607nm,0.4s						
GO04	Tololo Observa	3.30	10	*e*Pn	Pn	13 54 09.3	+0.4
ACCO	Cerro Coronel	3.48	36	*e*P	Pn	13 54 14.8	+3.3
ACCO				*e*S	Sn	13 55 00.3	+8.7
AMOG	MOGNA	3.52	46	⇓*e*P	Pn	13 54 14.3	+2.5
AROD	Rodeo	3.66	28	*e*P	Pn	13 54 16.6	+2.6
AROD				*e*S	Sn	13 55 06.3	+10
LCO	Las Campanas	4.46	8	*e*Pn	Pn	13 54 25.2	+0.3
LCO	Las Campanas	4.46	8	*e*P	Pn	13 54 25.2	+0.3
AGUA	GUANDACOL	4.67	33	⇓*e*P	Pn	13 54 29.6	+1.9
APLL	PUNTA DE LOS L	5.16	55	*e*P	Pn	13 54 35.0	+0.8
APLL				IAML		13 55 40.8	
	comp=Z,62nm,0.6s						
ACLC	CERRO LA CRUZ	5.54	45	⇓*e*P	Pn	13 54 40.6	+1.0
GO06	Curarrehue	6.13	180	*e*Pn	Pn	13 54 48.4	+0.7
PLCA	Paso Flores	7.32	175	*e*Pn	Pn	13 55 05.9	+2.0
GO02	Mina Guanaco	8.40	12	*e*Pn	Pn	13 55 16.5	-2.5
TRQA	Tornquist	8.96	124	*e*Pn	Pn	13 55 25.2	-1.2
LVC	Limon Verde	11.01	12	*e*Pn	Pn	13 55 52.3	-2.6
LVC	Limon Verde	11.01	12	P	Pn	13 55 57.4	+2.5
	comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=2.4						
LVC				S	Sn	13 58 00.8	+3.9
	comp=Z,0.7nm,0.3s,baz=196,slow=15,SNR=3.0						
PB04	IPOC Station P	11.12	6	*e*Pn	Pn	13 55 54.3	-1.9
PB11	IPOC Station P	13.71	7	*e*Pn	Pn	13 56 27.8	-3.8
CPUP	Villa Florida	14.13	64	*e*Pn	Pn	13 56 34.0	-3.0
CPUP	Villa Florida	14.13	64	P	Pn	13 56 36.2	-0.8
	comp=Z,0.2nm,0.3s,baz=258,slow=11,SNR=3.9						
LPAZ	La Paz	17.34	11	*e*Pn	Pn	13 57 15.1	-3.8
	comp=Z,2.9nm,1.0s						
LPAZ	La Paz	17.34	11	P	P	13 57 19.3	-0.6
	comp=Z,0.1nm,0.3s,baz=194,slow=7.1,SNR=2.7						
GO09	Cerro Castillo	17.83	182	*e*P	P	13 57 22.3	-2.3
	comp=Z,29nm,0.9s						
SIV	San Ignacio	19.73	31	P	Pn	13 57 44.6	-2.8
	comp=Z,0.1nm,0.3s,baz=218,slow=11,SNR=5.5						
VNA2	Neumayer--Watz	50.34	157	P	P	14 02 12.2	+0.7
	baz=293,slow=9.3						
SNAA	Sanae	51.91	158	P	P	14 02 24.1	+0.7
QSPA	South Pole Qui	56.80	180	*e*P	P	14 02 59.8	+0.7
TXAR	Lajitas Array	69.50	330	P	P	14 04 23.9	+0.4
	comp=Z,0.3nm,0.5s,baz=157,slow=9.0,SNR=4.2						
TXAR				pP	pP	14 04 38.2	+1.7
	comp=Z,0.4nm,0.6s,baz=152,slow=7.4,SNR=4.5						
TORD	Torodi Ar. Bea	83.54	70	P	P	14 05 43.3	0.0
	comp=Z,0.3nm,0.5s,baz=242,slow=3.1,SNR=2.0						
TORD				pP	pP	14 05 56.9	+0.3
	comp=Z,1.0nm,0.7s,baz=255,slow=4.0,SNR=4.1						
NVAR	Mina Array Bea	83.71	325	P	P	14 05 44.8	+0.9
	comp=Z,0.4nm,0.6s,baz=135,slow=5.5,SNR=3.5						
ASAR	Alice Springs	118.30	206	PKP	PKPdf	14 12 01.3	-1.3
	comp=Z,0.5nm,0.9s,baz=138,slow=1.8,SNR=3.6						
WRA	Warramunga Arr	121.50	209	PKP	PKPdf	14 12 07.5	-1.2
	comp=Z,0.3nm,0.5s,baz=157,slow=1.6,SNR=8.7						
AAK	Ala-Archa	151.79	61	pPKPbc	pPKPbc	14 13 24.4	+1.2
	comp=Z,1.0nm,0.7s,baz=240,slow=8.1,SNR=3.6						
KURBB	Kurchatov Arra	152.12	43	pPKPbc	pPKPbc	14 13 23.9	+0.4
	comp=Z,0.6nm,0.6s,baz=297,slow=2.9,SNR=3.6						
ZALV	Zalesovo Beam	153.48	32	PKPbc	PKiKP	14 13 12.5	-0.2
	comp=Z,0.3nm,0.3s,baz=298,slow=3.1,SNR=2.3						
ZALV				pPKPbc	pPKPbc	14 13 26.8	+0.5
	comp=Z,1.2nm,0.5s,baz=306,slow=3.3,SNR=5.9						
MKAR	Makanchi Array	156.01	48	PKPab	PKPab	14 13 35.9	-0.3
	comp=Z,0.2nm,0.7s,baz=284,slow=3.5,SNR=2.5						
MKAR				pPKPab	pPKPab	14 13 49.2	-0.4
	comp=Z,0.3nm,0.8s,baz=282,slow=2.1,SNR=2.6						

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*ISCJB **17** 14:04:04.7±0.3, 42.°98N±0.°04×143.°31E±0.°04, h121^{km}±2^{km}, mb3.7/14, Error ellipse: s-maj=6.3km s-min=3.7km az=154.6*

*MOS **17** 14:04:05.6±0.9, 42.°21N×143.°74E, h79^{km}, mb4.2/1, Error ellipse: s-maj=13.5km s-min=9.2km az=75.7*

*JMA **17** 14:04:06.0±0.1, 42.°99N×143.°30E, h112^{km}±1^{km}, M3.4*

JMA Felt I J1.

*IDC **17** 14:04:06.6±1.5, 43.°10N×143.°27E, h121^{km}±8^{km}, mb3.4/15, mb1 3.6/20, mb1mx3.4/69, mbtmp3.8/20, Error ellipse: s-maj=22.1km s-min=13.5km az=162.0*

ISC 17 14:04:05.4±0.7, **42.°97N**±0.°04×**143.°32E**±0.°04, **h116**^{km}±5^{km}, **n54**, σ**0^{s}89**/68, **mb3.7**/14, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC

JCH	Churui	0.36	175	P	Pn	14 04 22.3	+0.2
JCH				eS	Sn	14 04 34.3	-0.3
JOB	Onbets	0.38	100	P	Pn	14 04 23.0	+0.8
JOB				eS	Sn	14 04 35.9	+1.1
JAR	Ashorobuto	0.46	45	P	Pn	14 04 22.7	+0.1
JAR				eS	Sn	14 04 35.2	-0.4
JFR	Furan	0.57	290	P	Pn	14 04 23.3	0.0
JFR				eS	Sn	14 04 36.3	-0.5
JBT2	Biratori 2	0.73	255	P	Pn	14 04 25.0	+0.5
JBT2				eS	Sn	14 04 39.4	+0.4
JNBK	Urakawa-nobuka	0.81	211	P	Pn	14 04 25.9	+0.7
JNBK				eS	Sn	14 04 40.7	+0.5
JEM	Erimo	0.96	187	P	Pn	14 04 27.4	+0.7
JKK2	Kamakawa 2	0.99	335	P	Pn	14 04 27.2	+0.2
JAK	Akkeshi	1.01	88	P	Pn	14 04 27.3	+0.2
JAK				eS	Sn	14 04 43.7	+0.2
JMP	Maruseppu	1.03	2	P	Pn	14 04 27.6	+0.2
JMP				eS	Sn	14 04 43.7	-0.4
JTKR	Abashiri--Toko	1.09	23	P	Pn	14 04 28.1	+0.2
JTKR				eS	Sn	14 04 44.3	-0.7
ASAJ	Asahikawa	1.26	336	P	Pn	14 04 30.1	+0.3
	36nm,0.3s,baz=194,slow=8.6,SNR=719						
ASAJ				S	Sn	14 04 48.0	-0.3
	9.0nm,0.3s,baz=289,slow=29,SNR=11						
JEW	Eniwo	1.38	265	P	Pn	14 04 31.9	+0.8
JEW				eS	Sn	14 04 51.3	+0.6
JHR	Hokuryu	1.40	304	P	Pn	14 04 32.1	+0.8
JRA	Rausu	1.63	53	P	Pn	14 04 34.8	+0.8
JRA				eS	Sn	14 04 57.1	+1.3
GLVR	Golovnino	1.78	64	ePN	Pn	14 04 36.5	+0.7
GLVR				S	Sn	14 04 59.8	+0.7
GLVR				pmax	pmax		
	comp=N,15nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,223nm,0.1s						
GLVR				smax	smax		
	comp=N,716nm,0.2s						
GLVR				smax	smax		
	comp=E,449nm,0.3s						
NEM2	Nemuro 2	1.82	77	P	Pn	14 04 36.0	-0.3
NEM2				eS	Sn	14 04 58.3	-1.6
JYG	Yagishiri	2.00	317	P	Pn	14 04 39.0	+0.4
JKB	Kayabe	2.01	238	P	Pn	14 04 39.3	+0.6
JKB				eS	Sn	14 05 03.3	-0.9
GRPR	Tuman	2.06	59	i PN	Pn	14 04 40.2	+0.9
GRPR				eS	Sn	14 05 06.3	+1.1
GRPR				pmax	pmax		
	comp=E,161nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,207nm,0.4s						
GRPR				pmax	pmax		
	comp=N,39nm,0.1s						
GRPR				smax	smax		
	comp=E,665nm,0.2s						
GRPR				smax	smax		
	comp=N,556nm,0.4s						
YUK	Yuzh-Kuril'sk	2.13	59	PN	Pn	14 04 41.1	+0.9
YUK				i S	Sn	14 05 08.8	+1.8
YUK				pmax	pmax		
	comp=E,81nm,0.3s						
YUK				pmax	pmax		
	comp=Z,217nm,0.3s						
YUK				pmax	pmax		
	comp=N,44nm,0.2s						
YUK				smax	smax		
	comp=N,468nm,0.4s						
YUK				smax	smax		
	comp=E,444nm,0.5s						
SHO	Shikotan	2.71	69	i PN	Pn	14 04 47.5	-0.2
SHO				i S	Sn	14 05 18.0	-2.2
SHO				pmax	pmax		
	comp=E,95nm,0.4s						
SHO				pmax	pmax		
	comp=Z,151nm,0.4s						
SHO				pmax	pmax		
	comp=N,44nm,0.2s						
SHO				smax	smax		
	comp=N,299nm,0.3s						
SHO				smax	smax		
	comp=E,197nm,0.2s						
KUR	Kuril'sk	3.98	54	i PN	Pn	14 05 06.3	+1.8
KUR				eS	Sn	14 05 52.6	+2.3
KUR				pmax	pmax		
	comp=N,4.0nm,0.3s						
KUR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
KUR				pmax	pmax		
	comp=E,8.0nm,0.2s						
KUR				smax	smax		
	comp=E,24nm,0.2s						
KUR				smax	smax		
	comp=N,46nm,0.3s						
YSS	Yuzh-Sakhalins	4.00	354	ePN	Pn	14 05 05.5	+0.7
YSS				eS	Sn	14 05 52.2	+1.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax	smax		
	comp=E,20nm,0.8s						
MJAR	Matsushiro Arr	7.53	213	P	Pn	14 05 52.9	+0.4
	comp=E,0.1nm,0.3s,baz=35,slow=10,SNR=14						
USRK	Ussuriysk Ar.	8.32	282	P	Pn	14 06 04.3	+1.2
	comp=E,0.2nm,0.3s,baz=88,slow=14,SNR=5.9						
KLR	Kul'dur	10.18	312	P	Pn	14 06 29.5	+1.3
	comp=E,0.1nm,0.3s,baz=112,slow=16,SNR=4.0						
PETK	Petropavlovsk-	13.95	38	P	Pn	14 07 17.2	-0.6
	comp=E,0.2nm,0.3s,baz=221,slow=11,SNR=3.9						
MA2	Magadan	17.25	13	P	P	14 07 57.3	-1.2
	comp=E,0.9nm,0.3s,baz=202,slow=11,SNR=16						
SEY	Seymchan	20.69	12	P	P	14 08 33.7	-2.1
	comp=E,15nm,0.8s,baz=190,slow=12,SNR=60						
SONM	Songino Array	26.21	294	P	P	14 09 29.7	+0.4
	comp=E,0.5nm,0.5s,baz=84,slow=8.6,SNR=6.0						
H11N2	WAKE ISLAND Hy	30.50	132	T	T	14 41 45.8	
	baz=326,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	30.51	132	T	T	14 42 02.2	
	baz=326,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	30.52	132	T	T	14 42 00.4	
	baz=326,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	31.40	134	T	T	14 42 52.1	
	baz=328,slow=76,SNR=42						
H11S3	WAKE ISLAND Hy	31.40	134	T	T	14 42 52.6	
	baz=328,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	31.41	134	T	T	14 42 53.5	
	baz=328,slow=76,SNR=35						
MKAR	Makanchi Array	42.46	297	P	P	14 11 48.8	+0.1
	comp=E,0.2nm,0.4s,baz=80,slow=9.4,SNR=4.7						
KURK	Kurchatov	43.64	304	P	P	14 11 58.8	+0.7
KURBB	Kurchatov Arra	43.72	304	P	P	14 11 58.8	+0.1
	comp=E,0.6nm,0.6s,baz=72,slow=8.8,SNR=4.5						
ILAR	Eielson Array	43.76	36	P	P	14 11 59.0	+0.2
	comp=E,0.8nm,0.4s,baz=258,slow=5.7,SNR=16						
BVAR	Borovoye Array	47.82	309	P	P	14 12 31.0	0.0
BVAR	Borovoye Array	47.82	309	P	P	14 12 31.0	0.0
	comp=E,0.3nm,0.3s,baz=79,slow=9.6,SNR=4.5						
INK	Inuvik	48.47	30	P	P	14 12 35.5	-0.2
	comp=E,0.7nm,0.4s,baz=279,slow=5.6,SNR=11						
RES	Resolute Bay	56.49	16	P	P	14 13 34.0	-0.7
	comp=E,1.8nm,0.5s,baz=309,slow=9.9,SNR=11						
YKA	Yellowknife Ar	57.98	32	P	P	14 13 45.3	0.0
	comp=E,0.5nm,0.6s,baz=305,slow=6.7,SNR=13						
FINES	FINESS Array B	64.27	332	P	P	14 14 27.0	-0.8
FINES	FINESS Array B	64.27	332	P	P	14 14 26.9	-0.8
	comp=E,1.2nm,0.6s,baz=40,slow=6.8,SNR=7.5						
KBZ	Khabaz	68.19	310	P	P	14 14 52.5	-0.6
	comp=E,1.8nm,0.9s,baz=56,slow=11,SNR=3.7						
NB2	NORSAR Subarra	69.28	337	P	P	14 14 59.1	-0.5
	comp=Z,0.5nm,0.5s,baz=35,slow=6.9						
NOA	NORSAR Array B	69.28	337	P	P	14 14 59.1	-0.5
	comp=Z,0.7nm,0.7s,baz=34,slow=6.3,SNR=3.2						
NVAR	Mina Array Bea	70.34	56	P	P	14 15 07.8	+1.1
	comp=Z,0.5nm,0.7s,baz=268,slow=7.8,SNR=3.9						
PDAR	Pinedale Array	72.52	48	P	P	14 15 20.3	+0.5
	comp=Z,0.7nm,0.5s,baz=282,slow=0.5,SNR=10						
TXAR	Lajitas Array	85.38	54	P	P	14 16 30.8	+0.8
	comp=Z,0.5nm,0.5s,baz=286,slow=3.3,SNR=10.0						

ISCJB **17** *14:06:21.9±0.5, 36°.59N±0°.04×70°.92E±0°.07, h188km, Error ellipse: s-maj=7.6km s-min=5.2km az=15.6*

IDC **17** *14:06:21.3±7.4, 36°.39N×71°.09E, h173km±58km, mb3.1/4, mb1 3.1/9, mb1mx2.9/67, mbtmp3.5/9, MS3.1/1, Ms1 3.1/1, ms1mx2.2/24, Error ellipse: s-maj=72.0km s-min=24.7km az=53.0*

NEIC **17** *14:06:21.9±0.7, 36°.52N×70°.83E, h204km±11km, mb4.1/1, Error ellipse: s-maj=14.7km s-min=9.5km az=111.0*

BJI **17** *14:06:23.3, 36°.41N×71°.22E, h204km, mB4.4/3, mb4.4/7*

NNC **17** *14:06:26.8±1.8, 36°.92N×70°.73E, h162km±33km, mb2.6, mpv3.5, Error ellipse: s-maj=22.0km s-min=14.3km az=68.0*

ISC 17 14:06:22.5±0.7**, 36°.57N**±0°.06×**70°.89E**±0°.07**, h188km, n42, σ1s.64**/50**, 4C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.46	350	ePn	Pn	14 07 05.8	+0.4
GAR				eSn	Sn	14 07 36.8	-2.0
CHGR	Chuyangaron	2.49	327	ePn	Pn	14 07 06.1	+0.5
CHGR				eSn	Sn	14 07 37.6	-1.7
KBL	Kabul	2.52	217	ePn	Pn	14 07 06.6	+0.4
KBL				eSn	Sn	14 07 39.0	-1.2
BTK	Batken	3.48	359	ePn	Pn	14 07 20.6	+3.3
NIL	Nilore	3.50	146	ePn	Pn	14 07 18.0	+0.3
SFK	Sufi-Kurgan	4.00	30	⇑P	Pn	14 07 24.5	+0.5
	3.8nm,0.3s						
SFK				⇓S	Sn	14 08 10.8	-1.6
	9.1nm,0.2s						
ARSB	Arslanbob	5.02	18	ePn	Pn	14 07 36.5	-0.4
AML	Almayashu	5.96	21	P	Pn	14 07 49.3	-0.1
	SNR=37						
MNAS	Manas	6.04	11	⇑P	Pn	14 07 50.2	+0.1
	2.1nm,0.3s						
MNAS				⇑S	Sn	14 08 56.5	-2.9
	17nm,0.7s						
NRN	Naryn	6.28	38	ePn	Pn	14 07 50.8	-2.6
UCH	Uchtor	6.30	25	P	Pn	14 07 54.1	+0.2
	SNR=8.8						
EKS2	Erkin-Say	6.48	19	P	Pn	14 07 56.0	+0.2
	SNR=9.4						
KK31	Karatay Array	6.53	358	ePn	Pn	14 07 56.3	-0.1
KK31	Karatay Array	6.53	358	P	Pn	14 07 56.4	-0.1
	1.7nm,0.3s,baz=177,slow=12,SNR=85						
KK31				S	Sn	14 09 05.7	-5.0
	5.6nm,0.6s,baz=181,slow=15,SNR=10						
KKAR	Karatay Array	6.53	358	ePn	Pn	14 07 56.4	0.0
AAK	Ala-Archa	6.67	24	P	Pn	14 07 58.5	+0.2
	SNR=6.9						
AAK	Ala-Archa	6.67	24	ePn	Pn	14 07 58.2	-0.1
AAK	Ala-Archa	6.67	24	⇓P	Pn	14 07 58.3	-0.1
	2.3nm,0.5s						
AAK				⇑S	Sn	14 09 11.5	-2.7
	5.7nm,0.6s						
AAK	Ala-Archa	6.67	24	P	Pn	14 07 58.5	+0.2
	1.4nm,0.3s,baz=184,slow=7.8,SNR=24						
AAK				S	Sn	14 09 11.1	-3.0
	0.4nm,0.3s,baz=114,slow=20,SNR=13						
USP	Ospenovka	7.24	21	P	Pn	14 08 05.0	-0.7
	SNR=5.3						
TKM2	Tokmak 2	7.30	28	P	Pn	14 08 07.0	+0.3
	SNR=11						
MAKZ	Makanchi	13.15	36	ePn	Pn	14 09 22.4	+0.3
MK01	Makanchi Array	13.27	36	ePn	Pn	14 09 23.6	-0.1
MK31	Makanchi Array	13.29	36	ePn	Pn	14 09 24.1	+0.3
MKAR	Makanchi Array	13.29	36	P	Pn	14 09 24.2	+0.3
	0.1nm,0.3s,baz=213,slow=9.2,SNR=4.3						
WMQ	Urumqi	14.73	55	eP	P	14 09 43.1	0.0
WMQ				sP	Pn	14 10 35.0	+53
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,10.3s						
AB31	Akbulak array	14.97	331	P	P	14 09 47.1	+1.4
	0.2nm,0.3s,baz=148,slow=12,SNR=9.4						
ABKAR	Akbulak array	14.97	331	ePn	Pn	14 09 43.7	-1.0
KURBB	Kurchatov Arra	15.08	19	P	P	14 09 48.0	+1.2
	0.0nm,0.3s,baz=208,slow=10,SNR=3.5						
BVA0	Borovoye Array	16.45	359	P	Pn	14 10 04.3	+1.7
	0.8nm,0.8s,baz=159,slow=11,SNR=6.1						
BVAR	Borovoye Array	16.45	359	P	Pn	14 10 03.1	+0.5
	0.2nm,0.3s,baz=167,slow=11,SNR=6.6						
UOSS	Minazif	17.11	231	eP	P	14 10 05.8	-3.7
	12nm,1.3s						
ZALV	Zalesovo Beam	19.89	25	eP	P	14 10 39.4	+0.2
ZALV	Zalesovo Beam	19.89	25	P	P	14 10 39.9	+0.7
	0.4nm,0.3s,baz=215,slow=11,SNR=6.9						
LZH	Lanzhou	26.49	81	⇓P	P	14 11 42.0	-0.5
LZH				pP	pP	14 12 22.6	+0.5
LZH				PP	PnPn	14 12 38.1	+3.4
LZH				sP	PP	14 12 46.5	+0.4
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,43nm,4.9s						
HHC	Hu-ho-hao-te	31.82	70	eP	P	14 12 29.3	-0.3
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FINES	FINESS Array B	37.37	326	LR	LR	14 30 24.4	
	comp=Z,30nm,20.3s,baz=21,slow=38						
ARCES	ARCESS Array B	41.04	338	P	P	14 13 49.1	+2.1
ARCES	ARCESS Array B	41.04	338	P	P	14 13 49.1	+2.1
	3.7nm,1.1s,baz=116,slow=8.1,SNR=3.7						
YKA	Yellowknife Ar	81.17	3	P	P	14 18 18.3	+1.6
	0.1nm,0.3s,baz=354,slow=5.2,SNR=4.3						
WRA	Warramunga Arr	82.11	122	P	P	14 18 21.3	-0.9
	0.2nm,0.5s,baz=325,slow=4.4,SNR=4.0						
ASAR	Alice Springs	84.37	125	P	P	14 18 33.3	-0.5
	0.2nm,0.6s,baz=320,slow=4.2,SNR=4.5						

TAP 17 14:18:22.9, 24°.32N×121°.40E, h4km, ML0.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.11	350	P	Pg	14 18 25.5	+0.4
	baz=350						
NNSB				S	Sg	14 18 27.1	+0.4
	baz=350						
NNS	Nan Shan	0.12	347	eP	Pg	14 18 25.3	-0.1
	baz=351						
NNS				eS	Sg	14 18 27.5	+0.4
	baz=351						
ETLH	Xiulin Townshi	0.14	148	P	Pg	14 18 26.2	+0.6
	baz=153						
ETLH				eS	Sg	14 18 29.1	+1.6
	baz=153						
WHF	Hehuan Shan	0.22	216	eP	Pg	14 18 26.1	-1.1
	baz=208						
WHF				eS	Sg	14 18 31.4	+1.3
	baz=208						
TWT	Tachien	0.22	252	eP	Pg	14 18 27.9	+0.7
	baz=252						
TWT				eS	Sg	14 18 32.5	+2.5
	baz=252						
NACB	Ninganchiao	0.23	130	P	Pg	14 18 27.9	+0.6
	baz=130						
NACB				eS	Sg	14 18 32.1	+1.8
	baz=130						
TDCB	Techi	0.23	253	eP	Pg	14 18 27.9	+0.5
	baz=253						
TDCB				eS	Sg	14 18 32.5	+1.9
	baz=253						
NDT	Datong Townshi	0.30	20	eP	Pb	14 18 29.7	-1.0
	baz=20						
NDT				eS	Sb	14 18 35.0	-1.0
	baz=20						
NDT	Datong Townshi	0.30	20	eP	Pb	14 18 29.7	-1.0
	baz=303						
TWD	Chiawan	0.30	144	eP	Pg	14 18 29.4	+0.7
	baz=143						
CHGB	Renai	0.33	219	eP	Pg	14 18 30.1	+0.7
	baz=218						
CHGB				eS	Sg	14 18 35.2	+1.4
	baz=218						
YHNB	Yeheng	0.35	356	eP	Pg	14 18 29.8	+0.2
	baz=338						

TAP 17 14:18:23.1, 24°.45N×121°.77E, h5km±1km, ML0.9, 2C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	Nanao	0.03	221	⇑P	Pg	14 18 24.6	+0.4
	baz=219						
NANB				S	Sg	14 18 25.6	+0.7
	baz=219						
ENA	Nanau	0.03	232	⇑iP	Pg	14 18 24.6	+0.4
	baz=219						
ENA				S	Sg	14 18 25.6	+0.6
	baz=219						
TWC	Suao	0.18	25	eP	Pg	14 18 27.6	+0.9
	baz=27						
ENTT	Nioudou	0.27	316	eP	Pb	14 18 29.8	-0.7
	baz=317						
ENTT				eS	Sb	14 18 33.7	-1.6
	baz=317						
EOS1	EOS1	0.34	73	eP	Pg	14 18 30.6	+0.8
	baz=72						
EOS1				eS	Sb	14 18 37.2	-0.3
	baz=72						

IDC 17 14:18:27.1±2.0**, 7°.59S**×**122°.75E, h0km, mb3.4**/1**, mb1 3.3**/3**, mb1mx3.1**/45**, mbtmp3.2**/3**, ML2.7**/2**, Error ellipse: s-maj=250.4km s-min=30.7km az=57.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.64	139	Pn	Pn	14 22 21.8	-0.1
	0.0nm,0.3s,baz=316,slow=12,SNR=3.2						
ASAR	Alice Springs	19.23	147	P	P	14 22 53.2	+0.1
	0.0nm,0.3s,baz=330,slow=13,SNR=8.5						
MKAR	Makanchi Array	64.98	331	P	P	14 29 08.8	0.0
	0.3nm,0.7s,baz=140,slow=7.6,SNR=3.5						

IDC 17 14:19:24.9±2.9**, 6°.38S**×**130°.18E, h97km**±**38km, mb3.3**/3**, mb1 3.4**/6**, mb1mx3.2**/44**, mbtmp3.7**/6**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.3**/18**, Error ellipse: s-maj=93.3km s-min=23.3km az=93.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.58	11	P	Pn	14 20 45.7	+0.1
	1.4nm,0.3s,baz=222,slow=16,SNR=21						
SIJI				S	Sn	14 21 42.3	-6.2
	6.8nm,0.3s,baz=221,slow=23,SNR=19						
FITZ	Fitzroy Crossi	12.46	200	P	Pn	14 22 18.6	-0.2
	0.1nm,0.3s,baz=15,slow=12,SNR=8.7						
FITZ				S	Sn	14 24 28.6	-7.3
	0.1nm,0.3s,baz=107,slow=20,SNR=4.5						
WRA	Warramunga Arr	14.07	164	P	Pn	14 22 35.8	-4.3
	0.2nm,0.3s,baz=349,slow=14,SNR=14						
WRA				S	Sn	14 25 01.7	-13
	0.8nm,0.3s,baz=341,slow=22,SNR=10.0						
ASAR	Alice Springs	17.56	169	P	P	14 23 23.4	+0.1
	0.4nm,0.3s,baz=349,slow=10,SNR=55						
ASAR				S	Sn	14 26 26.0	-13
	0.1nm,0.3s,baz=354,slow=24,SNR=4.1						
KSRS	Korea Array	43.66	357	LR	LR	14 48 24.6	
	comp=Z,8.4nm,18.9s,baz=45,slow=40						
SONM	Songino Array	57.91	341	P	P	14 29 06.7	-0.4
	0.1nm,0.3s,baz=170,slow=6.2,SNR=4.1						
MKAR	Makanchi Array	67.81	327	P	P	14 30 13.0	+0.4
	0.5nm,0.4s,baz=118,slow=7.2,SNR=14						
KURBB	Kurchatov Arra	72.08	328	P	P	14 30 38.4	-0.2
	0.3nm,0.5s,baz=130,slow=5.4,SNR=3.5						

ISCJB **17** *14:22:11.0±0.4, 35°.88N±0°.07×135°.47E±0°.09, h350km, mb2.8/5, Error ellipse: s-maj=10.4km s-min=8.4km az=141.8*

JMA **17** *14:22:11.7±0.1, 35°.79N×135°.47E, h348km±2km, M2.8*

IDC **17** *14:22:12.4±2.2, 35°.98N×135°.50E, h347km±14km, mb2.7/5, mb1 2.8/10, mb1mx2.7/58, mbtmp3.5/10, Error ellipse: s-maj=46.6km s-min=18.1km az=174.0*

ISC 17 14:22:11.1±0.8**, 35°.93N**±0°.08×**135°.56E**±0°.08**, h350km, n23, σ1s.71**/28**, mb2.8**/5**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKY	Yasaka	0.48	231	P	Pn	14 22 55.9	+0.5
JWT	Wachi	0.66	191	P	Pn	14 22 55.9	+0.1
JWT				eS	S	14 23 30.4	-1.2
JKG	Kaga	0.71	61	P	Pn	14 22 56.7	+0.9
JKSM	Kasumi	0.81	245	P	Pn	14 22 56.4	+0.2
JYTA	Yamagatataniai	1.01	109	P	Pn	14 22 57.5	+0.6
JYTA				eS	S	14 23 33.8	+0.2
JIE	Ise	1.80	148	P	Pn	14 23 01.5	+0.4
JIE				eS	S	14 23 40.2	-1.0
JTNC	Tanabenakahech	2.11	179	P	Pn	14 23 02.5	-0.8
JTNC				eS	S	14 23 42.8	-2.4
MAT	Matsushiro	2.22	73	P	Pn	14 23 05.1	+1.1
MAT	Matsushiro	2.22	73	P	Pn	14 23 05.4	+1.4
MJAR	Matsushiro Arr	2.23	73	P	Pn	14 23 05.8	+1.8
	0.4nm,0.3s,baz=254,slow=3.6,SNR=42						
JAI	Aioi	2.32	203	P	Pn	14 23 04.3	-0.6
JYN	Shimob	2.47	99	P	Pn	14 23 06.7	+0.7
JRY	Ryogami san	2.71	87	P	Pn	14 23 10.1	+2.2
JOD2	Odawara 2	2.95	102	P	Pn	14 23 11.5	+1.5
KSRS	Korea Array	6.32	286	P	Pn	14 23 46.0	+0.5
	0.2nm,0.3s,baz=111,slow=12,SNR=7.8						
USRK	Ussuriysk Ar.	8.70	343	P	P	14 24 15.7	-0.2
	0.4nm,0.3s,baz=152,slow=9.4,SNR=8.6						
ASAJ	Asahikawa	9.79	31	P	Pn	14 24 25.9	-0.5
	1.2nm,0.3s,baz=236,slow=12,SNR=23						
ASAJ				S	S	14 26 11.1	-6.2
	0.5nm,0.3s,baz=180,slow=20,SNR=7.4						
KLR	Kul'dur	13.58	349	P	P	14 25 09.3	-0.6
	0.3nm,0.3s,baz=174,slow=6.6,SNR=9.7						
SONM	Songino Array	24.61	308	P	P	14 27 02.7	+1.9
	0.4nm,0.5s,baz=123,slow=9.8,SNR=4.3						
MKAR	Makanchi Array	40.71	302	P	P	14 29 19.4	+0.6
	0.4nm,0.6s,baz=91,slow=9.5,SNR=6.6						
KURBB	Kurchatov Arra	42.97	308	P	P	14 29 36.9	+0.1
	0.2nm,0.4s,baz=97,slow=7.0,SNR=4.8						
ILAR	Eielson Array	52.93	32	P	P	14 30 53.3	+1.3
	0.2nm,0.5s,baz=263,slow=5.8,SNR=4.4						
INK	Inuvik	57.48	26	P	P	14 31 26.0	+1.9
	0.4nm,0.4s,baz=276,slow=3.4,SNR=5.5						

ISCJB **17** *14:22:27.4±0.5, 8°.30S±0°.07×119°.86E±0°.05, h172km, mb3.8/6, Error ellipse: s-maj=10.6km s-min=5.8km az=23.1*

IDC **17** *14:22:30.4±2.4, 8°.15S×120°.06E, h192km±21km, mb3.6/7, mb1 3.7/10, mb1mx3.4/44, mbtmp4.1/10, Error ellipse: s-maj=51.9km s-min=13.6km az=61.0*

DJA **17** *14:22:30.0±0.4, 8°S±6°×12°0E±°, h165km±5km, M4.1/10, mb4.2/1, mB4.6/1, MLv4.0/10, Mw(mB)3.8/1*

ISC 17 14:22:27.5±0.7**, 8°.45S**±0°.06×**119°.85E**±0°.05**, h172km, n18, σ2s.19**/26**, mb3.7**/6**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.29	160	P	Sn	14 23 20.2	+0.6
WSI				S	Sn	14 23 21.6	+2.0
EDFI	Ende, Flores	1.85	99	P	Pn	14 23 05.0	+2.5
EDFI				S	Sn	14 23 30.8	+1.3
BASI	Baing, Sumba	1.90	158	P	Pn	14 23 05.8	+2.8
PLAI	Plampang	2.08	259	P	Pn	14 23 07.3	+2.4
PLAI				S	Sn	14 23 35.8	+1.9
BKSI	Bulukumba	3.12	5	P	Pn	14 23 19.4	+2.1
BATI	Baumata	4.15	115	P	Pn	14 23 33.4	+3.1
BATI	Baumata	4.15	115	P	Pn	14 23 33.5	+3.1
	66nm,0.3s,baz=278,slow=3.1,SNR=88						
BATI				S	Sn	14 24 18.9	-0.6
	30nm,0.3s,baz=329,slow=22,SNR=8.7						
SOEI	Soe	4.55	107	P	Pn	14 23 38.6	+2.9
JAGI	Jajag, Banyuwa	5.63	269	P	Pn	14 23 49.1	-0.5
FITZ	Fitzroy Crossi	11.12	150	P	P	14 25 06.6	-2.6
	0.4nm,0.3s,baz=324,slow=14,SNR=6.0						
FITZ				S	Sn	14 27 01.6	-3.8
	1.0nm,0.3s,baz=54,slow=18,SNR=7.3						
WRA	Warramunga Arr	18.09	131	P	P	14 26 27.6	+1.2
	1.9nm,0.3s,baz=305,slow=12,SNR=28						
WRA				S	S	14 29 41.9	-2.9
	0.3nm,0.3s,baz=305,slow=23,SNR=5.2						
ASAR	Alice Springs	20.26	140	P	P	14 26 51.5	+1.8
	6.6nm,0.4s,baz=314,slow=8.9,SNR=41						
ASAR				S	S	14 30 27.6	-0.1
	0.3nm,0.5s,baz=326,slow=23,SNR=3.2						
ASAR				ScP	ScP	14 34 15.0	-1.8
	0.2nm,0.5s,baz=322,slow=2.6,SNR=3.5						
STKA	Stephens Creek	30.86	142	P	P	14 28 29.8	+2.2
	4.4nm,0.3s,baz=320,slow=8.7,SNR=19						
USRK	Ussuriysk Ar.	53.54	11	P	P	14 31 28.7	-1.7
	0.5nm,0.3s,baz=203,slow=6.4,SNR=6.9						
SONM	Songino Array	57.29	349	P	P	14 31 57.0	-0.3
	0.2nm,0.7s,baz=169,slow=7.8,SNR=4.7						
MKAR	Makanchi Array	64.35	332	P	P	14 32 44.5	-0.4
	0.4nm,0.4s,baz=151,slow=6.9,SNR=10.0						
ZALV	Zalesovo Beam	68.83	339	P	P	14 33 11.6	-1.5
	1.4nm,0.4s,baz=145,slow=4.6,SNR=7.9						
AKTO	Aktyubinsk	79.25	325	P	P	14 34 14.0	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.6nm,0.5s,baz=107,slow=11,SNR=3.4						

MAN 17 14:27:24.2, 6°.47N×123°.52E, h2km, MS4.2
IDC 17 14:27:27.0±1.0, 6°.28N×123°.66E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/46, mbtmp3.7/6, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/38, Error ellipse: s-maj=26.1km s-min=19.7km az=47.0
ISC 17 14:27:29.1±1.0**, 6°.62N**±0°.05×**123°.64E**±0°.04**, h21**km±4km**, n18, σ2s.67**/27**, mb3.5**/5**, 3C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.85	45	⇓iP	Pb	14 27 42.6	-2.7
CTBH				iS	Sb	14 27 54.8	-1.5
SKMP	Bagumbayan, Su	0.91	96	eP	Pb	14 27 42.2	-4.0
SKMP				eS	Sb	14 27 53.5	-4.3
PAGZ	Pagadian	1.25	348	eP	Pn	14 27 50.2	-1.2
PAGZ				eS	Sb	14 28 09.5	+1.9
GSPH	General Santos	1.41	112	⇑eP	Pb	14 27 55.3	+0.5
GSPH				iS	Sb	14 28 16.3	+4.0
KCP	Kidapawan	1.50	75	⇑iP	Pn	14 27 53.0	-1.8
KCP				iS	Sb	14 28 16.7	+1.8
IPIL	Ipil	1.57	318	eP	Pn	14 27 55.7	0.0
IPIL				eS	Sb	14 28 16.8	-0.1
ZCP	Zamboanga City	1.58	281	⇓iP	Pn	14 27 55.4	-0.5
ZCP				iS	Sb	14 28 18.2	+1.0
BUKP	Musuan	1.89	48	eP	Pn	14 28 00.3	+0.1
BUKP				eS	Sb	14 28 28.5	+2.3
DMPH	Davao City--Mi	1.92	76	⇑eP	Pb	14 28 04.7	+1.3
DMPH				eS	Sb	14 28 34.3	+7.4
DAV	Davao City (W)	1.98	77	Pn	Pb	14 28 03.4	-1.1
	31nm,0.3s,baz=287,slow=1.4,SNR=14						
DAV				Sn	Sb	14 28 29.9	+1.2
	28nm,0.3s,baz=197,slow=22,SNR=6.8						
CGP	Cagayan de Oro	2.10	30	⇓iP	Pb	14 28 04.3	-2.3
CGP				iS	Sb	14 28 33.9	+1.6
BUTP	Butuan	3.05	40	eP	Pb	14 28 22.3	-0.5
CMAR	Chiang Mai Arr	26.78	298	P	P	14 33 11.0	+3.2
	0.2nm,0.4s,baz=106,slow=6.7,SNR=3.2						
WRA	Warramunga Arr	28.42	158	P	P	14 33 20.8	-1.7
	0.6nm,0.5s,baz=338,slow=9.7,SNR=5.1						
ASAR	Alice Springs	31.73	162	P	P	14 33 49.7	-2.1
	0.5nm,0.8s,baz=344,slow=7.1,SNR=3.5						
SONM	Songino Array	43.63	343	LR	LR	14 55 38.9	
	comp=Z,36nm,18.6s,baz=258,slow=38						
MKAR	Makanchi Array	53.44	326	P	P	14 36 49.2	+1.6
	0.5nm,0.8s,baz=121,slow=8.7,SNR=3.8						
ZALV	Zalesovo Beam	56.64	334	P	P	14 37 14.8	+4.3
	0.6nm,0.5s,baz=115,slow=7.2,SNR=3.0						

IDC 17 14:38:50.1±2.6, 24°.88S×69°.62W, h0km, mb3.7/2, mb1 3.7/3, mb1mx3.5/26, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=79.6km s-min=56.6km az=55.0
ISCJB 17 14:39:04.8±0.6, 23°.61S±0°.04×69°.36W±0°.07, h88km±6km, mb3.4/2, Error ellipse: s-maj=11.2km s-min=5.7km az=13.8
GUC 17 14:39:04.6±0.6, 23°.62S×69°.34W, h79km±4km, ML3.7
ISC 17 14:39:05.2±1.0**, 23°.61S**±0°.04×**69°.35W**±0°.07**, h81**km±8km**, n17, σ0s.57**/24**, 6C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.41	345	⇓iP	Pn	14 39 18.3	-0.4
PB15				iS	Sn	14 39 28.3	-0.3
PB06	IPOC Station P	0.92	347	⇓iP	Pn	14 39 23.5	-0.1
PB06				iS	Sn	14 39 37.8	+0.5
PB06				IAML		14 39 38.7	
	comp=E,5μm,0.2s						
LVC	Limon Verde	1.07	22	eP	Pn	14 39 25.5	-0.1
LVC				iS	Sn	14 39 41.0	+0.2
PB05	IPOC Station P	1.09	314	⇑iP	Pn	14 39 25.5	0.0
PB05				iS	Sn	14 39 41.2	+0.5
PB05				IAML		14 39 42.5	
	comp=N,2μm,0.2s						
PB10	IPOC Station P	1.11	275	⇑iP	Pn	14 39 25.7	+0.1
PB10				iS	Sn	14 39 41.2	+0.2
PB10				IAML		14 39 45.9	
	comp=E,913nm,0.6s						
PB14	IPOC Station P	1.40	223	⇓iP	Pn	14 39 29.7	+0.2
PB14				iS	Sn	14 39 48.4	+0.5
PB14				IAML		14 39 53.4	
	comp=N,773nm,0.6s						
PB04	IPOC Station P	1.47	330	⇑iP	Pn	14 39 30.1	-0.3
PB04				iS	Sn	14 39 49.2	0.0
PB04				IAML		14 39 55.5	
	comp=N,2μm,0.3s						
GO02	Mina Guanaco	1.56	188	⇑iP	Pn	14 39 32.0	+0.3
GO02				iS	Sn	14 39 52.3	+0.6
GO02				IAML		14 39 55.8	
	comp=N,663nm,0.4s						
PB03	IPOC Station P	1.60	346	⇑iP	Pn	14 39 32.2	+0.2
PB03				iS	Sn	14 39 52.9	+0.6
PB03				IAML		14 39 56.0	
	comp=E,2μm,0.4s						
PB09	IPOC Station P	1.81	3	⇓iP	Pn	14 39 35.8	+1.0
PB09				eS	Sn	14 39 58.7	+1.5
PB07	IPOC Station P	1.94	345	⇑iP	Pn	14 39 36.4	-0.1
PB02	IPOC Station P	2.33	347	IAML		14 40 17.9	
	comp=N,1μm,0.2s						
PB01	IPOC Station P	2.56	357	IAML		14 40 21.9	
	comp=E,849nm,0.1s						
LPAZ	La Paz	7.37	9	Pn	Pn	14 40 57.7	+6.9
	comp=E,0.2nm,0.3s,baz=197,slow=12,SNR=3.9						
TORD	Torodi Ar. Bea	78.45	70	P	P	14 50 56.6	-1.1
	comp=E,0.6nm,0.6s,baz=239,slow=4.9,SNR=3.2						
YKA	Yellowknife Ar	93.03	341	P	P	14 52 09.4	+0.3
	comp=E,0.1nm,0.6s,baz=143,slow=4.0,SNR=3.5						
MKAR	Makanchi Array	147.56	37	PKPbc	PKPbc	14 58 40.1	0.0
	comp=E,0.3nm,0.8s,baz=331,slow=2.1,SNR=3.6						

IDC 17 14:40:45.1±4.3**, 18°.01N**×**147°.49E, h215**km±47km**, mb3.0**/3**, mb1 3.4**/4**, mb1mx2.8**/53**, mbtmp3.7**/4**, Error ellipse: s-maj=251.3km s-min=22.7km az=112.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.07	210	P	Pn	14 42 02.1	+1.3
	5.6nm,0.3s,baz=342,slow=20,SNR=2.3						
GUMO				S	S	14 43 00.2	-0.3
	5.2nm,0.3s,baz=16,slow=19,SNR=2.1						
WRA	Warramunga Arr	39.86	200	P	P	14 47 58.1	0.0
	2.4nm,0.8s,baz=22,slow=9.1,SNR=53						
ASAR	Alice Springs	43.49	198	P	P	14 48 27.3	-0.2
	0.2nm,0.5s,baz=21,slow=6.6,SNR=5.8						
YKA	Yellowknife Ar	77.80	28	P	P	14 52 18.1	-0.1
	0.1nm,0.6s,baz=284,slow=5.4,SNR=3.9						

IDC 17 14:49:39.3±8.6, 23°.84S×179°.59W, h436km±83km, mb3.3/4, mb1 3.4/5, mb1mx3.1/29, mbtmp4.2/5, Error ellipse: s-maj=63.5km s-min=36.7km az=38.0
ISC 17 14:49:43.8±2.1**, 24°.0S**±0°.1×**179°.4W**±0°.3**, h512**km**, n7, σ1s.16**/9**, mb3.6**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.48	191	P	P	14 52 46.7	-1.5
	0.7nm,0.3s,baz=76,slow=4.2,SNR=7.3						
URZ				S	S	14 55 21.5	+1.2
	0.3nm,0.3s,baz=300,slow=20,SNR=2.9						
CTA	Charters Tower	31.99	270	P	P	14 55 27.3	-0.4
	6.8nm,0.5s,baz=88,slow=11,SNR=21						
STKA	Stephens Creek	35.15	248	P	P	14 55 55.1	+0.9
	1.0nm,0.6s,baz=96,slow=11,SNR=4.3						
ASAR	Alice Springs	42.52	261	P	P	14 56 53.9	-0.2
	1.2nm,0.7s,baz=95,slow=7.3,SNR=24						
ASAR				PcP	PcP	14 58 36.7	+1.5
	0.3nm,0.7s,baz=101,slow=4.8,SNR=3.2						
WRA	Warramunga Arr	42.91	266	P	P	14 56 56.2	-1.0
	1.7nm,0.6s,baz=103,slow=8.3,SNR=33						
AKASG	Malin Array Be	145.36	328	PKPbc	PKPbc	15 08 24.4	+0.4
	0.3nm,0.4s,baz=42,slow=3.8,SNR=2.2						
BRTR	Keskin Array B	148.07	307	PKPbc	PKPab	15 08 36.4	-0.2
	0.7nm,0.7s,baz=46,slow=4.3,SNR=4.7						

MEX 17 15:02:17.1±0.7**, 14°.96N**×**93°.52W, h16**km±183km**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		0.80	22	eP	Pb	15 02 29.7	-2.9
PCIG				eS	Sb	15 02 39.6	-3.6
CCIG	Comitan	1.87	45	eP	Pn	15 02 48.0	-0.7

IDC 17 15:15:00.9±0.7, 4°.87N×95°.67E, h0km, mb4.0/15, mb1 4.0/17, mb1mx3.9/41, mbtmp3.9/17, ML4.0/2, MS3.3/7, Ms1 3.4/7, ms1mx3.1/43, Error ellipse: s-maj=28.6km s-min=13.7km az=47.0
DJA 17 15:15:01.8±1.3, 5°N±9°×9°6E±°, h10km, M4.9/7, mb4.9/1, mB5.0/1, MLv4.9/7, Mw(mB)4.3/1
NEIC 17 15:15:01.9±4.3, 4°.92N×95°.79E, h7km±27km, mb4.4/4, Error ellipse: s-maj=13.9km s-min=6.7km az=60.0
ISCJB 17 15:15:03.8±0.4, 4°.97N±0°.05×95°.76E±0°.06, h29km, mb4.1/21, MS3.5/7, Error ellipse: s-maj=10.0km s-min=4.9km az=140.1
ISC 17 15:15:05.5±0.5**, 4°.97N**±0°.05×**95°.82E**±0°.06**, h29**km**, n48, σ1s.46**/48**, mb4.1**/21**, MS3.5**/7**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.15	77	ePn	Pn	15 15 24.2	-1.5
LHMI	Lhok Sumawe	1.15	77	P	Pn	15 15 24.6	-1.1
KCSI	Kotacane, Aceh	2.42	126	P	Pb	15 15 45.1	-3.3
KCSI				S	Sb	15 16 17.3	-0.5
SNSI	Sinabang, Aceh	2.59	169	P	Pn	15 15 45.9	+0.4
TSI	Tuntungan	3.10	118	P	Pn	15 15 54.0	+1.5
PSI	Prapat	3.77	125	ePn	Pn	15 16 01.4	-0.4
PSI				Sn	Sn	15 16 47.6	+2.3
PSI	Prapat	3.77	125	Pn	Pn	15 16 04.2	+2.4
	9.1nm,0.3s,baz=360,slow=11,SNR=46						
PSI				Sn	Sn	15 16 47.6	+2.3
	20nm,0.3s,baz=360,slow=17,SNR=5.7						
PSI				LR	LR	15 17 52.1	
	comp=Z,407nm,20.2s,baz=97,slow=44						
GSI	Gunungsitoli	4.04	154	ePn	Pn	15 16 04.8	-0.6
KULM	Kulim	4.82	86	ePn	Pn	15 16 14.7	-1.5
IPM	Ipoh	5.21	95	ePn	Pn	15 16 20.1	-1.4
MNSI	Mandailing Nat	5.59	138	P	Pn	15 16 29.3	+2.5
PDSI	Padang	7.46	141	P	Pb	15 17 03.9	-10
CMAR	Chiang Mai Arr	13.75	13	Pn	Pn	15 18 20.0	+1.4
	0.3nm,0.3s,baz=187,slow=13,SNR=3.5						
CMAR				LR	LR	15 24 42.1	
	comp=Z,64nm,18.4s,baz=210,slow=42						
QIZ	Qiongzhong	19.56	43	P	P	15 19 30.8	-0.3
QIZ				S	Sn	15 23 11.9	+0.4
QIZ				LR	LR		
	comp=N,330nm,19.6s						
QIZ				LR	LR		
	comp=E,240nm,18.6s						
SHL	Shillong	20.83	350	eP	P	15 19 44.0	-1.1
	comp=E,10nm,0.9s						
HYB	Hyderabad	20.95	308	iP	Pn	15 19 48.0	-0.9
KMI	Kunming	21.11	18	P	P	15 19 50.0	+1.8
KMI				pP	pP	15 19 53.1	-3.2
KMI				sP	sP	15 19 54.8	-5.2
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
H08S2	Diego Garcia H	26.43	242	T	T	15 47 49.9	
	baz=61,slow=75,SNR=62						
H08S3	Diego Garcia H	26.43	242	T	T	15 47 51.4	
	baz=61,slow=75,SNR=157						
H08S1	Diego Carcia H	26.45	242	T	T	15 47 55.8	
	baz=61,slow=75,SNR=13						
LZH	Lanzhou	31.84	12	eP	P	15 21 28.5	+0.4
LZH				pP	pP	15 21 32.1	-4.6
LZH				sP	sP	15 21 34.3	-6.0
LZH				ePP	PnPn	15 22 33.8	+0.6
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,46nm,4.8s						
LZH				LR	LR		
	comp=N,130nm,13.0s						
LZH				LR	LR		
	comp=E,140nm,13.5s						
LZH				LR	LR		
	comp=Z,170nm,16.9s						
GTA	Gaotai	34.48	5	eP	P	15 21 53.9	+2.8
GTA				pP	pP	15 21 57.8	-2.1
GTA				sP	sP	15 22 00.8	-2.6
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
NIL	Nilore	35.43	326	eP	P	15 21 58.3	-0.9
	comp=Z,17nm,0.5s						
HHC	Hu-ho-hao-te	38.42	19	eP	P	15 22 26.4	+1.7
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WMQ	Urumqi	39.35	351	eP	P	15 22 30.6	-1.8
WMQ				LR	LR		
	comp=N,77nm,22.1s						
WMQ				LR	LR		
	comp=E,100nm,22.5s						
WMQ				LR	LR		
	comp=Z,87nm,17.7s						
WSAR	Wadi Sarin	40.20	301	P	P	15 22 38.2	-1.5
	comp=Z,2.7nm,0.9s,baz=146,slow=6.7,SNR=2.1						
MKAR	Makanchi Array	43.28	346	eP	P	15 23 04.3	-0.3
	comp=Z,15nm,1.2s						
MKAR	Makanchi Array	43.28	346	P	P	15 23 04.2	-0.3
	comp=Z,0.8nm,0.7s,baz=161,slow=7.7,SNR=10						
MKAR				LR	LR	15 44 52.3	
	comp=Z,23nm,19.1s,baz=168,slow=41						
KSAR	Wonju Array Be	43.61	38	P	P	15 23 09.6	+2.3
KSRS	Korea Array	43.64	38	P	P	15 23 09.6	+2.1
	comp=Z,0.7nm,0.6s,baz=229,slow=7.9,SNR=2.6						
SONM	Songino Array	43.66	10	P	P	15 23 07.3	-0.5
	comp=Z,0.8nm,0.9s,baz=179,slow=8.2,SNR=5.7						
WRA	Warramunga Arr	45.24	124	P	P	15 23 20.1	-0.6
	comp=Z,1.8nm,0.6s,baz=303,slow=9.2,SNR=23						
WRA				PcP	PcP	15 24 59.6	-0.9
	comp=Z,0.2nm,0.5s,baz=314,slow=2.8,SNR=2.4						
ASAR	Alice Springs	46.79	129	P	P	15 23 32.5	-0.3
	comp=Z,4.4nm,0.7s,baz=298,slow=8.0,SNR=86						
ASAR				PcP	PcP	15 25 07.0	+1.1
	comp=Z,0.7nm,0.9s,baz=326,slow=4.6,SNR=3.0						
AS31	Alice Springs	46.79	129	eP	P	15 23 32.2	-0.7
	comp=Z,1.4nm,0.6s						
AS01	Alice Springs	46.83	129	eP	P	15 23 32.8	-0.3
GEYT	Alibeck	47.47	319	P	P	15 23 39.0	+1.0
	comp=Z,2.7nm,0.6s,baz=156,slow=15,SNR=4.2						
GEYT				LR	LR	15 45 08.0	
	comp=Z,57nm,20.2s,baz=170,slow=38						
ZALV	Zalesovo Beam	49.65	351	P	P	15 23 53.9	-0.4
	comp=Z,0.3nm,0.3s,baz=167,slow=7.1,SNR=3.1						
BVAR	Borovoye Array	52.26	341	LR	LR	15 50 17.6	
	comp=Z,35nm,18.7s,baz=144,slow=40						
ABKAR	Akbulak array	53.56	331	eP	P	15 24 24.2	+0.5
STKA	Stephens Creek	56.91	133	P	P	15 24 48.6	+0.4
	comp=Z,1.2nm,0.6s,baz=337,slow=9.8,SNR=4.0						
STKA				LR	LR	15 53 44.3	
	comp=Z,31nm,18.1s,baz=207,slow=41						
BRTR	Keskin Array B	65.58	311	P	P	15 25 47.0	0.0
	comp=Z,0.8nm,0.6s,baz=118,slow=7.1,SNR=4.9						
FINES	FINESS Array B	76.04	332	P	P	15 26 49.9	0.0
	comp=Z,0.3nm,0.3s,baz=132,slow=26,SNR=3.4						
ARCES	ARCESS Array B	78.55	340	P	P	15 27 03.9	0.0
	comp=Z,1.9nm,0.8s,baz=41,slow=23,SNR=4.1						
GERES	GERESS Array B	81.09	319	P	P	15 27 18.3	+0.1
	comp=Z,0.7nm,0.8s,baz=58,slow=3.5,SNR=4.4						
NOA	NORSAR Array B	83.07	331	LR	LR	16 09 09.1	
	comp=Z,30nm,18.3s,baz=100,slow=39						
SYO	Syowa Base	83.15	198	⇑eX	P	15 27 25.0	-3.3
DAVOX	Davos/Dischmat	83.63	316	P	P	15 27 32.5	+0.9
	comp=Z,1.0nm,0.4s,baz=306,slow=14,SNR=3.0						
TORD	Torodi Ar. Bea	92.89	283	P	P	15 28 15.8	-0.7
	comp=Z,0.5nm,0.8s,baz=96,slow=5.9,SNR=3.5						

ISCJB 17 15:19:23.0±0.9, 22°.82N±0°.09×12°.0W±0°.1, h10km, mb3.6/10, MS3.0/1, Error ellipse: s-maj=20.1km s-min=9.5km az=147.8
IDC 17 15:19:22.9±1.1, 22°.91N×12°.27W, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.7/40, mbtmp3.6/12, ML4.1/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/31, Error ellipse: s-maj=29.9km s-min=26.2km az=138.0
ISC 17 15:19:24.1±1.0**, 22°.8N**±0°.1×**12°.1W**±0°.2**, h10**km**, n17, σ1s.19**/16**, mb3.8**/10**, Mauritania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDT	Midelt	12.00	32	Lg	Lg	15 25 39.0	
	0.2nm,0.3s,baz=319,slow=15,SNR=4.1						
TORD	Torodi Ar. Bea	16.22	124	Pn	Pn	15 23 11.1	-1.1
	0.2nm,0.3s,baz=318,slow=12,SNR=12						
TORD				Sn	Sn	15 26 11.5	-0.8
	0.1nm,0.3s,baz=311,slow=25,SNR=3.6						
DBIC	Dimbokro	17.45	155	P	P	15 23 29.3	+0.3
	0.2nm,0.3s,baz=329,slow=9.8,SNR=4.1						
ESDC	Sonseca Array	18.22	20	P	Pn	15 23 36.2	-1.0
	0.2nm,0.3s,baz=195,slow=12,SNR=3.3						
I48TN	KESRA INFRASON	22.69	50	i		17 32 10.0	
	baz=240,slow=315,SNR=1.7						
GERES	GERESS Array B	33.09	32	P	P	15 25 59.5	-0.7
	1.0nm,0.7s,baz=224,slow=7.5,SNR=8.6						
GERES				LR	LR	15 39 00.8	
	comp=Z,26nm,19.8s,baz=82,slow=36						
BRTR	Keskin Array B	42.11	55	P	P	15 27 18.9	+2.2
	0.6nm,0.7s,baz=262,slow=7.2,SNR=3.4						
AKASG	Malin Array Be	42.46	38	P	P	15 27 18.4	-0.8
	0.2nm,0.3s,baz=239,slow=9.7,SNR=2.7						
FINES	FINESS Array B	46.68	24	P	P	15 27 52.9	+0.2
	1.3nm,0.6s,baz=211,slow=3.8,SNR=6.0						
KBZ	Khabaz	49.54	51	P	P	15 28 16.8	+1.7
	1.6nm,0.9s,baz=348,slow=6.9,SNR=4.3						
YKA	Yellowknife Ar	75.65	332	P	P	15 31 07.7	-1.5
	0.1nm,0.5s,baz=71,slow=6.3,SNR=3.2						
ZALV	Zalesovo Beam	75.84	37	P	P	15 31 09.4	-1.1
	0.3nm,0.3s,baz=288,slow=5.3,SNR=2.5						
MKAR	Makanchi Array	76.64	45	P	P	15 31 16.0	+0.8
	0.5nm,0.5s,baz=292,slow=5.6,SNR=13						
TXAR	Lajitas Array	80.48	298	P	P	15 31 37.3	+0.4
	0.3nm,0.8s,baz=77,slow=4.7,SNR=3.2						
SONM	Songino Array	90.70	36	P	P	15 32 28.8	+1.4
	0.3nm,0.6s,baz=308,slow=3.3,SNR=2.9						
WRA	Warramunga Arr	148.65	91	PKPbc	PKPbc	15 39 11.9	-0.4
	0.6nm,0.7s,baz=291,slow=2.4,SNR=10						
ASAR	Alice Springs	148.78	98	PKPbc	PKPbc	15 39 13.3	+0.7
	0.6nm,0.6s,baz=292,slow=1.8,SNR=17						

NIED 17 15:33:00, 40°.00N×143°.90E, h8km, Mw3.8 Best double couple: Mo4.91000×10¹⁴ NP1:φs51.00000°, δ56.00000°, λ141.00000°. NP2:φs165.00000°, δ58.00000°, λ41.00000°.
ISCJB 17 15:33:04.9±0.5, 40°.00N±0°.03×144°.03E±0°.04, h16km, mb3.6/16, Error ellipse: s-maj=5.4km s-min=3.3km az=35.7
JMA 17 15:33:07.0±0.2, 40°.05N×143°.89E, h23km, M3.8
IDC 17 15:33:08.5±6.0, 39°.94N×144°.03E, h29km±43km, mb3.4/16, mb1 3.6/22, mb1mx3.5/39, mbtmp3.6/22, ML3.0/5, MS2.7/3, Ms1 2.7/3, ms1mx2.5/27, Error ellipse: s-maj=20.9km s-min=14.4km az=110.0
ISC 17 15:33:06.1±0.7**, 39°.96N**±0°.05×**144°.06E**±0°.06**, h16**km**, n45, σ1s.55**/61**, mb3.6**/16**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.69	270	P	Pn	15 33 33.7	-1.3
MIYJ	Miyakonagasawa	1.77	258	P	Pn	15 33 35.6	-0.5
MIYJ				eS	Sn	15 33 56.8	-1.5
JKEN	Kujiedanarisaw	1.82	279	P	Pn	15 33 35.6	-1.2
JANG	Nango	2.00	283	P	Pn	15 33 38.2	-1.0
JANG				eS	Sn	15 34 01.2	-2.6
JOM	Ohasama	2.19	258	P	Pn	15 33 42.1	+0.2
JMK	Ichinoseki	2.42	246	P	Pn	15 33 44.9	-0.1
JMK				S	Sn	15 34 12.1	-2.1
JTM	Tenmabayashi	2.43	291	P	Pn	15 33 44.9	-0.3
JTM				S	Sn	15 34 13.1	-1.5
JNBK	Urakawa-nobuka	2.52	337	P	Pn	15 33 46.1	-0.3
JNBK				S	Sn	15 34 16.6	-0.2
JAH	Hinai	2.64	276	P	Pn	15 33 48.4	+0.4
JAH				eS	Sn	15 34 19.3	-0.4
JOT	Ohata	2.70	303	P	Pn	15 33 48.6	-0.2
JRG	Rokugo	2.71	259	P	Pn	15 33 49.6	+0.7
JRG				eS	Sn	15 34 21.4	+0.1
JCH	Churui	2.71	349	P	Pn	15 33 48.6	-0.3
JCH				eS	Sn	15 34 19.2	-2.1
JKB	Kayabe	3.00	311	P	Pn	15 33 52.7	-0.2
JKB				eS	Sn	15 34 26.3	-2.2
JYK	Kaneyama	3.05	251	P	Pn	15 33 54.2	+0.5
JYK				eS	Sn	15 34 29.3	-0.5
JAK	Akkeshi	3.07	9	P	Pn	15 33 53.3	-0.7
JAK				S	Sn	15 34 27.8	-2.6
JOU	Okura	3.08	240	P	Pn	15 33 54.4	+0.2
JOU				S	Sn	15 34 29.2	-1.5
JAR	Ashorobuto	3.34	356	P	Pn	15 33 56.4	-1.3
JAR				eS	Sn	15 34 33.4	-3.7
JFR	Furan	3.39	341	P	Pn	15 33 58.9	+0.6
JEW	Eniwo	3.49	327	P	Pn	15 34 00.3	+0.6
JEW				eS	Sn	15 34 39.5	-1.1
NEM2	Nemuro 2	3.63	20	P	Pn	15 34 00.5	-1.1
NEM2				S	Sn	15 34 40.1	-4.0
JFT	Otama	3.80	231	P	Pn	15 34 03.9	-0.1
ASAJ	Asahikawa	4.30	346	Pn	Pn	15 34 11.1	+0.3
	0.8nm,0.3s,baz=222,slow=17,SNR=18						
ASAJ				Sn	Sn	15 34 59.8	-0.8
	3.0nm,0.3s,baz=225,slow=16,SNR=5.3						
MJAR	Matsushiro Arr	5.73	235	Pn	Pn	15 34 31.1	+0.5
	0.3nm,0.3s,baz=41,slow=12,SNR=28						
MJAR				LR	LR	15 36 58.0	
	comp=Z,70nm,21.1s,baz=80,slow=40						
MAT	Matsushiro	5.73	235	P	Pn	15 34 31.7	+1.1
JHJ	Hachijo jima 2	7.64	208	Sn	Sn	15 36 15.7	-7.3
	10nm,0.3s,baz=61,slow=17,SNR=3.7						
USRK	Ussuriysk Ar.	9.93	299	Pn	Pn	15 35 28.9	+0.9
	0.5nm,0.3s,baz=98,slow=14,SNR=10						
JNU	Nakatsue	12.60	241	Pn	Pn	15 36 05.1	+0.4
	0.2nm,0.3s,baz=0.4,slow=4.2,SNR=2.2						
KLR	Kul'dur	12.75	321	Pn	Pn	15 36 07.4	+0.8
	0.1nm,0.3s,baz=126,slow=12,SNR=4.3						
KLR				LR	LR	15 42 05.5	
	comp=Z,55nm,19.4s,baz=58,slow=42						
KSRS	Korea Array	12.85	264	Pn	Pn	15 36 09.1	+1.0
	baz=78,slow=14,SNR=3.1						
KSRS				LR	LR	15 40 55.3	
	comp=Z,21nm,19.0s,baz=60,slow=36						
SEY	Seymchan	23.55	10	P	P	15 38 15.8	+0.4
	1.0nm,0.5s,baz=192,slow=8.2,SNR=12						
SONM	Songino Array	28.04	299	P	P	15 38 56.7	+0.1
	0.7nm,0.6s,baz=90,slow=8.6,SNR=7.9						
ZALV	Zalesovo Beam	41.56	310	P	P	15 40 53.7	+1.0
	0.5nm,0.5s,baz=89,slow=10,SNR=2.4						
CMAR	Chiang Mai Arr	44.27	254	P	P	15 41 14.6	-0.4
	0.2nm,0.3s,baz=52,slow=8.4,SNR=4.4						
MKAR	Makanchi Array	44.39	300	P	P	15 41 15.8	0.0
	0.3nm,0.6s,baz=83,slow=11,SNR=5.3						
KURBB	Kurchatov Arra	45.90	306	P	P	15 41 28.3	+0.6
	1.4nm,0.6s,baz=79,slow=8.5,SNR=6.7						
ILAR	Eielson Array	45.91	34	P	P	15 41 28.5	+0.9
	0.4nm,0.9s,baz=266,slow=6.1,SNR=4.1						
BVAR	Borovoye Array	50.19	311	P	P	15 42 01.6	+0.8
	0.3nm,0.4s,baz=79,slow=12,SNR=4.5						
INK	Inuvik	50.84	28	P	P	15 42 06.2	+0.7
	1.6nm,1.1s,baz=294,slow=6.2,SNR=4.5						
YKA	Yellowknife Ar	60.24	32	P	P	15 43 13.7	+0.6
	0.1nm,0.5s,baz=303,slow=6.8,SNR=3.7						
WRA	Warramunga Arr	60.28	191	P	P	15 43 14.4	+0.6
	0.6nm,0.5s,baz=8.3,slow=7.0,SNR=18						
ASAR	Alice Springs	64.00	190	P	P	15 43 38.5	-0.2
	0.7nm,0.8s,baz=10,slow=5.5,SNR=7.0						
FINES	FINESS Array B	67.19	333	P	P	15 43 59.5	+0.6
	1.1nm,0.9s,baz=59,slow=7.4,SNR=7.2						
NOA	NORSAR Array B	72.28	338	P	P	15 44 31.1	+0.7
	0.3nm,0.7s,baz=56,slow=19,SNR=2.8						
AKASG	Malin Array Be	73.24	323	P	P	15 44 35.1	-1.1
	0.3nm,0.5s,baz=45,slow=5.7,SNR=2.7						
TXAR	Lajitas Array	86.71	54	P	P	15 45 49.3	-0.2
	0.3nm,0.7s,baz=276,slow=3.4,SNR=3.5						

ISCJB 17 15:38:17.7±0.7, 67°.58N±0°.04×142°.9E±0°.2, h10km, mb3.4/8, Error ellipse: s-maj=9.2km s-min=5.8km az=22.2
YARS 17 15:38:18.8, 67°.58N×142°.83E, h10km
IDC 17 15:38:19.8±1.0, 67°.40N×142°.22E, h0km, mb3.4/7, mb1 3.6/8, mb1mx3.3/40, mbtmp3.4/8, ML2.4/1, Error ellipse: s-maj=29.0km s-min=16.2km az=5.0
ISC 17 15:38:20.4±0.7**, 67°.48N**±0°.04×**142°.74E**±0°.08**, h10**km**, n12, σ1s.79**/24**, mb3.4**/8**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOMR	Moma	1.03	169	ePg	Pg	15 38 40.0	-0.3
MOMR				ePg	Pg	15 38 40.0	-0.3
MOMR				ePg	Pg	15 38 40.0	-0.3
	59nm,0.3s						

MOMR				eSg	Sb	15 38 54.6	+0.6
	353nm,0.3s						
MOMR				eSg	Sb	15 38 54.6	+0.6
	362nm,0.2s						
MOMR				eSg	Sb	15 38 54.6	+0.6
YBGR	Belaya Gora	1.68	49	ePg	Pn	15 38 48.3	-1.5
YBGR				ePg	Pn	15 38 48.3	-1.5
	85nm,0.2s						
YBGR				ePg	Pn	15 38 48.3	-1.5
YBGR				eSg	Sn	15 39 09.3	-1.9
	1µm,0.3s						
YBGR				eSg	Sn	15 39 09.3	-1.9
YBGR				eSg	Sn	15 39 09.3	-1.9
	343nm,0.3s						
ATKR	Artyk	3.46	162	i Pg	Pb	15 39 21.9	+0.2
ATKR				eSg	Sg	15 40 08.8	-2.6
ATKR				eSg	Sg	15 40 08.8	-2.6
	108nm,0.4s						
ATKR				eSg	Sg	15 40 08.8	-2.6
	149nm,0.3s						
SEY	Seymchan	6.10	134	Pn	Pn	15 39 51.6	+1.1
	0.1nm,0.3s,baz=342,slow=20,SNR=2.0						
SEY				Lg	Lg	15 41 34.4	
	0.6nm,0.3s,baz=24,slow=23,SNR=5.5						
ILAR	Eielson Array	27.22	62	P	P	15 44 06.5	+2.5
	0.5nm,0.7s,baz=304,slow=7.3,SNR=6.4						
ZALV	Zalesovo Beam	30.08	272	P	P	15 44 34.2	+4.8
	0.6nm,0.4s,baz=71,slow=15,SNR=3.6						
BVAR	Borovoye Array	36.29	283	P	P	15 45 22.6	-1.0
	0.3nm,0.5s,baz=54,slow=7.8,SNR=2.4						
MKAR	Makanchi Array	36.77	267	P	P	15 45 26.3	-1.4
	0.4nm,0.6s,baz=46,slow=7.8,SNR=5.8						
YKA	Yellowknife Ar	38.91	46	P	P	15 45 48.6	+3.0
	0.1nm,0.3s,baz=325,slow=8.6,SNR=3.4						
AAK	Ala-Archa	43.27	271	P	P	15 46 22.4	+0.6
	0.6nm,0.5s,baz=27,slow=2.3,SNR=3.4						
FINES	FINESS Array B	43.43	321	P	P	15 46 21.5	-1.2
	1.3nm,0.9s,baz=33,slow=11,SNR=5.5						
TXAR	Lajitas Array	71.63	57	P	P	15 49 44.6	+2.7
	0.1nm,0.5s,baz=324,slow=4.5,SNR=2.8						

WEL 17 15:38:52.6, 40°S±4°×17°3E±°, h12km, ML3.6/16, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	Quartz Range	0.73	207	P	Pb	15 39 07.7	+0.4
QRZ				S	Sn	15 39 18.8	-1.1
DUWZ	D'Urville Isla	0.96	131	P	Pn	15 39 11.7	-0.2
DUWZ				S	Sn	15 39 25.3	-0.2
NMEZ	Namu Road	1.03	43	P	Pb	15 39 12.0	-0.4
NMEZ				S	Sg	15 39 26.1	+0.2
NNZ	Nelson	1.08	164	P	Pn	15 39 13.9	+0.3
NNZ				S	Sn	15 39 29.5	+0.9
NBEZ	Newall Road No	1.14	38	P	Pb	15 39 13.3	-0.9
NBEZ				S	Sn	15 39 29.7	-0.2
KHEZ	Kahui Hut	1.19	43	P	Pn	15 39 14.3	-0.8
KHEZ				S	Sb	15 39 30.6	0.0
PREZ	Palmer Road	1.24	48	P	Pn	15 39 15.3	-0.5
PREZ				S	Sn	15 39 32.3	-0.1
PKE	Pukeiti	1.25	39	P	Pn	15 39 15.0	-0.9
PKE				S	Sg	15 39 33.0	0.0
LREZ	Lake Rotokare	1.31	57	P	Pn	15 39 17.0	+0.2
LREZ				S	Sg	15 39 35.8	+0.9
DREZ	Durham Road	1.37	44	P	Pn	15 39 17.0	-0.5
DREZ				S	Sg	15 39 36.4	-0.2
TCW	Tory Channel	1.43	137	P	Pb	15 39 19.5	+0.2
TCW				S	Sb	15 39 37.9	+0.5
TUWZ	Tuamarina	1.45	150	P	Pb	15 39 19.6	+0.1
TUWZ				S	Sg	15 39 39.3	-0.1
THZ	Tophouse	1.59	182	P	Pb	15 39 21.7	-0.2
WAZ	Wanganui	1.60	75	P	Pn	15 39 21.2	+0.4
KIW	Kapiti Island	1.63	115	P	Pg	15 39 23.3	-0.6
KIW				S	Sg	15 39 45.0	0.0
BSWZ	Blackbirch Sta	1.68	156	P	Pb	15 39 24.0	+0.5
BSWZ				S	Sg	15 39 46.4	-0.4
VRZ	Vera Road	1.73	53	P	Pn	15 39 22.1	-0.4
OGWZ	Otaki Gorge	1.79	112	P	Pg	15 39 26.3	-0.7
DSZ	Denniston Nort	1.80	209	P	Pn	15 39 24.1	+0.6
DSZ				S	Sn	15 39 46.3	-0.1
CAW	Cannon Point	1.84	121	P	Pb	15 39 26.1	-0.1
PKVZ	Pokaka	2.03	65	P	Pn	15 39 26.9	+0.2
MRZ	Mangatainoka R	2.05	105	P	Pn	15 39 28.3	+1.4
MTVZ	Mangateitei	2.08	68	P	Pn	15 39 28.0	+0.6
POWZ	Post Office Ro	2.15	97	P	Pb	15 39 30.1	-1.4
TRVZ	Turoa	2.17	67	P	Pn	15 39 29.2	+0.5
DRZ	Dome Shelter	2.19	67	P	Pb	15 39 31.5	-0.9
FWVZ	Far West T-bar	2.19	66	P	Pn	15 39 29.3	+0.3
TWVZ	Taurewa	2.20	61	P	Pn	15 39 29.0	-0.1
COVZ	Chateau Observ	2.21	65	P	Pn	15 39 29.4	+0.2
HIZ	Hauiti	2.21	42	P	Pn	15 39 28.0	-1.1
TUVZ	Tukino	2.26	67	P	Pn	15 39 30.9	+1.0
NGZ	Ngauruhoe	2.26	65	P	Pn	15 39 30.1	+0.2
MOVZ	Moawhango	2.28	71	P	Pb	15 39 32.7	-1.0
KHZ	Kahutara	2.28	169	P	Pb	15 39 32.6	-1.1
WTVZ	West Tongariro	2.28	63	P	Pn	15 39 30.5	+0.4
KRVZ	Karewarewa	2.33	63	P	Pn	15 39 31.1	+0.3
KATZ	Kakaramea	2.42	61	P	Pn	15 39 32.8	+0.6
BHHZ	Black Hill Sta	2.48	75	P	Pb	15 39 35.0	-2.1
RATZ	Rangitukua	2.53	60	P	Pb	15 39 36.1	-1.9
WATZ	Wairara	2.59	56	P	Pn	15 39 36.2	+1.8
LTZ	Lake Taylor	2.66	191	P	Pn	15 39 36.6	+1.4
TLZ	Tolley Road	2.71	48	P	Pn	15 39 35.6	-0.5
INZ	Inchbonnie	2.79	204	P	Pn	15 39 38.1	+1.0
AMCZ	Amberley	3.01	184	P	Pn	15 39 42.2	+2.2
TOZ	Tahuroa Road	3.14	40	P	Pn	15 39 41.0	-0.9
OXZ	Oxford	3.22	192	P	Pn	15 39 44.7	+1.6
WVZ	Waitaha Valley	3.35	209	P	Pn	15 39 45.5	+0.8
AWAZ	Awhitu Peninsu	3.37	23	P	Pn	15 39 44.4	-0.6
WTAZ	Waiatarua	3.47	22	P	Pn	15 39 45.9	-0.6
MKAZ	Moumakai	3.51	30	P	Pn	15 39 46.5	-0.5
MQZ	McQueen's Vall	3.54	184	P	Pn	15 39 47.6	+0.3
OKCZ	Okains Bay	3.55	179	P	Pn	15 39 48.9	+1.4
ETAZ	East Tamaki Re	3.56	26	P	Pn	15 39 46.9	-0.7
MBAZ	Motutapu North	3.72	25	P	Pn	15 39 49.2	-0.6
WIAZ	Waiheke Island	3.78	27	P	Pn	15 39 50.1	-0.5
RPZ	Rata Peaks	3.81	201	P	Pn	15 39 52.7	+1.5
FOZ	Fox Glacier	4.10	214	P	Pn	15 39 55.9	+0.8
WCZ	Waipu Caves	4.37	15	P	Pn	15 39 57.7	-1.1
OUZ	Omahuta	4.97	6	P	Pn	15 40 06.3	-0.7
JCZ	Jackson Bay	4.99	217	P	Pn	15 40 08.4	+1.1
ODZ	Otahua Downs	5.16	199	P	Pn	15 40 09.7	+0.1

KRSC 17 15:50:50.6±1.4, 50°.88N×157°.22E, h120km±13km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.64	336	eP	Pn	15 51 11.2	+1.7
PAU				eS	Sn	15 51 25.7	+2.0
SKR	Severo-Kuril's	0.73	255	eP	Pn	15 51 11.2	+1.1
SKR				eS	Sn	15 51 25.6	+0.8
ALID	Alaid	1.06	270	eP	Pn	15 51 14.0	+0.6
KDTR	Khodutka, Kamc	1.07	30	eP	Pn	15 51 15.0	+1.7
KDTR				eS	Sn	15 51 32.6	+2.1
MTVR	Mutnovka	1.71	20	eP	Pn	15 51 22.6	+1.9
MTVR				eS	Sn	15 51 46.0	+2.4
RUS	Russkaya	1.75	27	eS	Sn	15 51 45.0	+0.9
KRMR	Karymshinskiy	2.03	16	eP	Pn	15 51 26.4	+2.0
KRMR				eS	Sn	15 51 52.5	+2.2
APC	Apacha	2.05	359	eP	Pn	15 51 26.0	+1.4
APC				eS	Sn	15 51 51.8	+1.1
PET	Petropavlovsk	2.32	22	eP	Pn	15 51 30.0	+1.9
PET				eS	Sn	15 51 58.2	+1.4
DALK	Dalny	2.35	23	eP	Pn	15 51 30.1	+1.6
DALK				eS	Sn	15 51 58.6	+1.1
UGLR	Uglovaya	2.54	22	eP	Pn	15 51 32.8	+1.9
AVH	Avacha	2.57	21	eP	Pn	15 51 33.6	+2.3
AVH				eS	Sn	15 52 04.4	+1.9
KOK	Koryaka	2.57	19	eP	Pn	15 51 33.6	+2.3
SMAR	Somma	2.58	22	eP	Pn	15 51 33.0	+1.4
SDLR	Sedlovina	2.61	22	eP	Pn	15 51 33.4	+1.5
SDLR				eS	Sn	15 52 04.2	+0.5
KRX	Arik	2.64	19	eP	Pn	15 51 34.8	+2.6
KRX				eS	Sn	15 52 06.5	+2.3
NLC	Nalytchevo	2.64	29	eS	Sn	15 52 02.9	-1.2
SPN	Mys Shipunski	2.82	37	eS	Sn	15 52 07.4	-0.8
GNL	Ganaly	2.86	9	eP	Pn	15 51 36.0	+0.9
KII	Karymskiy	3.44	22	eP	Pn	15 51 45.0	+2.3
KII				eS	Sn	15 52 25.1	+2.1

PDG 17 16:05:45.8±0.6, 42°.75N×21°.89E, h10km±1km, ML2.9/6, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0

BEO 17 16:05:46.3±0.3, 42°.79N×21°.92E, h7km±2km, ML2.8/16

SOF 17 16:05:47.2, 42°.69N×22°.10E, h2km, MD3.0

ISC 17 16:05:44.7±1.1, 42°.74N±0°.02×21°.95E±0°.02, h1km±10km, n83, σ1s.16/113, 12C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARS	Barje	0.13	307	ePg	Pg	16 05 48.2	+1.1
BARS				eSg	Sg	16 05 50.1	+1.3
ZAPS	Zavoj	0.73	43	ePg	Pb	16 06 00.0	-0.3
ZAPS				eSg	Sb	16 06 09.8	-1.0
SELS	Selova	0.78	308	ePg	Pg	16 05 59.5	-0.1
SELS				eSg	Sb	16 06 10.9	-1.3
BOVS	Bovan	0.91	349	ePg	Pg	16 06 01.9	-0.3
BOVS				eSg	Sg	16 06 13.6	-0.4
VTS	Vitosha	0.95	97	ePg	Pb	16 06 03.8	-0.4
VTS				eSg	Sb	16 06 16.6	-0.7
VTS	Vitosha	0.95	97	⇑iP	Pb	16 06 03.7	-0.4
VTS	Vitosha	0.95	97	S	Sb	16 06 16.4	-0.9
VTS	Vitosha	0.95	97	P	Pb	16 06 03.6	-0.5
VTS				S	Sg	16 06 13.9	-1.4
VTS	Vitosha	0.95	97	i P	Pb	16 06 03.7	-0.4
STIP	Stip	1.06	170	i Pg	Pg	16 06 04.4	-0.6
ZAGS	Zajecar	1.09	11	ePg	Pb	16 06 05.5	-0.9
ZAGS				eSg	Sg	16 06 19.6	-0.2
KKB	Krupnik	1.21	136	i P	Pg	16 06 09.2	+1.3
GRUS	Gruza	1.46	322	ePg	Pn	16 06 11.5	-0.8
GRUS				eSg	Sb	16 06 30.9	-0.9
KRUS	Krusevo	1.47	201	i Pn	Pb	16 06 12.6	-0.3
KRUS				i Sn	Sg	16 06 32.2	+0.4
PVY	Plav	1.48	265	⇑iPg	Pb	16 06 12.8	-0.3
PVY				i Sg	Sg	16 06 32.6	+0.4
VAY	Valandovo	1.49	162	i Pn	Pb	16 06 12.9	-0.2
VAY				i Sn	Sg	16 06 32.7	+0.2
IVA	Berane	1.52	276	⇓iPg	Pb	16 06 13.2	-0.6
IVA				i Sg	Sg	16 06 34.7	+1.1
SJES	Sjenica	1.54	290	ePg	Pb	16 06 13.3	-0.9
SJES				eSg	Sg	16 06 34.8	+0.6
IVAS	Ivanjica	1.56	303	ePg	Pb	16 06 13.6	-0.8
IVAS				eSg	Sn	16 06 33.4	-1.2
SVIS	Svilajnac	1.62	341	ePg	Pn	16 06 14.2	-0.2
SVIS				eSg	Sb	16 06 36.0	-0.3
PGB	Panagyurishte	1.65	96	i P	Pb	16 06 15.8	-0.1
KUBS	Kucevo	1.68	353	ePg	Pb	16 06 15.5	-1.0
KUBS				eSg	Sg	16 06 38.5	-0.3
PUNG	Punghina	1.69	25	⇑iP	Pn	16 06 15.1	-0.4
PUNG	Punghina	1.69	25	S	Sg	16 06 39.2	+0.1
KNT	Kendrikon	1.73	156	P	Pn	16 06 16.0	+0.1
MMB	Musomiste	1.75	130	i P	Pg	16 06 18.8	+0.6
BIA	Bitola	1.78	195	ePn	Pg	16 06 19.4	+0.6
KOME	Kolasin	1.80	274	⇓iPn	Pn	16 06 17.1	+0.1
KOME				i Sn	Sb	16 06 41.8	+0.2
GRG	Griva	1.81	169	P	Pn	16 06 17.4	+0.3
TRUS	Trudelj	1.86	323	ePg	Pb	16 06 19.3	-0.2
TRUS				eSg	Sg	16 06 44.3	-0.2
DIVS	Divibare	1.97	314	ePn	Pn	16 06 18.7	-0.7
DIVS				eSg	Sb	16 06 47.0	+0.4
DIVS	Divibare	1.97	314	ePn	Pn	16 06 18.5	-0.9
NVR	Nevrokopi	1.99	134	P	Pn	16 06 20.0	+0.5
PDG	Podgorica	2.02	262	⇑iP	Pg	16 06 22.9	-0.4
PDG	Podgorica	2.02	262	ePn	Pn	16 06 19.9	0.0
TTG	Podgorica	2.02	262	⇑iPn	Pb	16 06 20.6	-1.5
TTG				i Sn	Sb	16 06 47.2	-0.5
MDVR	Moldovita	2.05	355	⇑iP	Pb	16 06 21.9	-0.8
MDVR	Moldovita	2.05	355	S	Sb	16 06 49.0	+0.2
DRME	Dracevica, Mon	2.12	256	⇑iPn	Pb	16 06 22.2	-1.8
DRME				i Sn	Sb	16 06 49.6	-1.2
DRME	Dracevica, Mon	2.12	256	ePn	Pb	16 06 22.4	-1.6
SRE	Strehaia	2.12	25	⇑iP	Pb	16 06 23.7	-0.3
SRE	Strehaia	2.12	25	S	Sg	16 06 53.6	+0.6
ULC	Ulcinj	2.15	250	⇓iPn	Pn	16 06 22.4	+0.6
ULC				i Sn	Sb	16 06 50.4	-1.3
HERR	Herculane	2.17	9	⇓iP	Pn	16 06 21.8	-0.2
HERR	Herculane	2.17	9	S	Sb	16 06 50.4	-1.7
BBLS	Lazići	2.17	302	ePn	Pn	16 06 22.2	+0.1
BBLS				eSn	Sn	16 06 49.3	-0.5
BBLS	Lazići	2.17	302	ePn	Pn	16 06 21.8	-0.3
BUM	Brajici-Budva	2.30	260	⇓iPn	Pn	16 06 24.7	+0.8
BUM				i Sn	Sb	16 06 54.1	-2.0
RZN	Rozhen	2.31	116	i P	Pg	16 06 28.2	-0.7
BRY	Bratogost	2.52	275	⇑iPn	Pn	16 06 27.6	+0.7
BRY				i Sn	Sn	16 06 59.1	+0.8
BRY	Bratogost	2.52	275	ePn	Pn	16 06 27.0	+0.1
TEKS	Tekeris	2.52	317	ePn	Pn	16 06 27.4	+0.5
TEKS	Tekeris	2.52	317	ePn	Pn	16 06 26.6	-0.3
HAPS	Han Pijesak,BI	2.57	303	ePn	Pn	16 06 29.0	+1.5
HAPS	Han Pijesak,BI	2.57	303	ePn	Pn	16 06 29.1	+1.5
HCY	Herceg Novi	2.57	265	⇓iPn	Pn	16 06 28.2	+0.7
HCY				i Sn	Sn	16 07 00.3	+0.9
HCY	Herceg Novi	2.57	265	ePn	Pn	16 06 28.0	+0.5
TREB	Trebinje	2.65	271	ePn	Pb	16 06 31.5	-1.5
GZR	Gura Zlata	2.72	12	⇓iP	Pn	16 06 30.0	+0.4
OUR	Ouranopolis	2.85	147	P	Pn	16 06 31.1	-0.2
FRGS	Fruska Gora	2.87	328	ePn	Pn	16 06 31.1	-0.5
FRGS	Fruska Gora	2.87	328	ePn	Pb	16 06 34.6	-2.1
BZS	Buzias	2.89	355	ePn	Pn	16 06 30.6	-1.2
BZS	Buzias	2.89	355	⇑iP	Pn	16 06 30.2	-1.6
LOT	Lotru	3.01	25	S	Sn	16 07 11.0	+0.6
RDO	Rodhopi	3.11	120	P	Pn	16 06 35.5	+0.6
ARR	Arges	3.26	35	⇑iP	Pn	16 06 37.6	+0.5
VOIR		3.50	39	⇓iP	Pn	16 06 42.3	+1.9
SIRR	Siria	3.53	357	⇑iP	Pn	16 06 42.7	+1.9
MLR	Muntele Rosu	3.98	45	⇓iP	Pn	16 06 49.0	+2.0
BLY	Banja Luka	4.00	302	ePn	Pn	16 06 46.7	-0.4
DRGR		4.09	7	⇓iP	Pn	16 06 50.3	+1.9
SOKA	Soboth	6.31	311	Pn	Pn	16 07 20.2	+1.3
	0.7nm,0.3s						
SOKA				eSn	Sn	16 08 31.7	0.0
	1.3nm,0.3s						
ARSA	Arzberg	6.41	317	ePn	Pn	16 07 22.4	+2.1
	1.8nm,0.5s						
ARSA				eSn	Sn	16 08 34.4	+0.3
	0.8nm,0.6s						
OBKA	Obir	6.49	308	ePn	Pn	16 07 21.8	+0.4
	0.6nm,0.2s						
CONA	Conrad Observa	6.73	322	ePn	Pn	16 07 27.6	+2.8
	1.0nm,0.5s						
MOA	Molln	7.45	316	Pn	Pn	16 07 37.5	+3.0
	0.4nm,0.3s						
MOA				eSn	Sn	16 09 00.8	+1.2
	2.0nm,0.5s						
KBA	Koelnbreinsper	7.49	308	Pn	Pn	16 07 38.4	+3.1
	0.6nm,0.5s						
KBA				eSn	Sn	16 09 02.2	+1.2
	0.7nm,0.3s						
ABTA	Abfaltersbach	7.82	304	ePn	Pn	16 07 41.6	+1.9
	0.4nm,0.2s						
WATA	Walderalm	8.66	306	ePn	Pn	16 07 53.2	+1.9
	0.3nm,0.2s						
SQTA	Sankt Quirin	8.83	304	ePn	Pn	16 07 56.8	+3.2
	3.1nm,0.4s						
MOTA	Moosalm	8.95	305	ePn	Pn	16 07 56.8	+1.5
	1.2nm,0.4s						
FETA	Feichten	9.04	302	ePn	Pn	16 07 59.5	+3.0
	0.8nm,0.3s						

ISCJB 17 16:07:08.7±0.3, 6°.40S±0°.03×130°.14E±0°.05, h146km, mb4.1/18, Error ellipse: s-maj=6.9km s-min=4.3km az=172.9

IDC 17 16:07:10.5±1.8, 6°.31S×130°.05E, h151km±18km, mb3.7/10, mb1 4.0/15, mb1mx3.7/37, mbtmp4.4/15, MS2.9/1, Ms1 2.9/1, ms1mx2.4/24, Error ellipse: s-maj=17.5km s-min=11.2km az=79.0

DJA 17 16:07:10.8±0.3, 6°S±3°×13°0E±°, h185km±7km, M4.8/7, mB5.2/6, mb4.7/7, MLv4.9/4, Mw(mB)4.6/6

NEIC 17 16:07:11.4±0.5, 6°.33S×130°.14E, h158km±7km, mb4.6/5, Error ellipse: s-maj=9.4km s-min=6.3km az=66.0

ISC 17 16:07:09.8±0.4, 6°.39S±0°.04×130°.06E±0°.05, h146km, n54, σ2s.15/57, mb4.2/18, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.86	355	P	Pn	16 07 48.0	+4.8
SAUI	Saumlaki	2.00	142	ePn	Pn	16 07 48.8	+4.0
SAUI	Saumlaki	2.00	142	P	Pn	16 07 48.5	+3.7
SAUI				S	Sn	16 08 16.8	+5.2
FAKI	Fak Fak	4.08	32	ePn	Pn	16 08 11.2	+0.2
FAKI	Fak Fak	4.08	32	P	Pn	16 08 10.9	-0.2
FAKI				S	Sn	16 08 56.3	-2.4
NLAI	Namlea	4.30	317	P	Pn	16 08 21.6	+7.6
SIJI	Sorong	5.62	12	P	Pn	16 08 31.1	-0.3
	43nm,0.3s,baz=130,slow=24,SNR=264						
SIJI				S	Sn	16 09 30.6	-4.6
	26nm,0.3s,baz=256,slow=23,SNR=13						
SANI	Sanana	5.92	317	P	Pn	16 08 37.6	+2.1
	119nm,0.7s,1µm						
RKPI	Ransiki, Papua	6.35	40	P	Pn	16 08 42.7	+1.4
	939nm,0.6s,25µm						
MTN	Manton Dam	6.50	171	ePn	Pn	16 08 44.1	+0.9
SOEI	Soe	6.64	239	ePn	Pn	16 08 47.1	+1.9
SOEI	Soe	6.64	239	P	Pn	16 08 46.4	+1.2
	108nm,1.0s,2µm						
BATI	Baumata	7.38	239	P	Pn	16 08 55.5	+0.5
	67nm,0.7s,1µm						
BATI	Baumata	7.38	239	P	Pn	16 08 56.6	+1.5
	18nm,0.3s,baz=272,slow=1.0,SNR=115						
BATI				S	Sn	16 10 13.4	-4.1
	37nm,0.3s,baz=187,slow=22,SNR=5.7						
BATI				LR	LR	16 11 51.0	
	comp=Z,85nm,19.3s,baz=258,slow=38						
TNTI	Ternate	7.61	339	ePn	Pn	16 08 58.7	+0.6
MMRI	Maumere	8.07	253	ePn	Pn	16 09 08.2	+3.9
MRSI	Marisa	10.60	310	P	Pn	16 09 41.4	+3.5
	37nm,0.7s,1µm						
JAY	Jayapura	11.29	71	P	Pn	16 09 47.5	+0.4
	0.2nm,0.3s,baz=238,slow=6.9,SNR=3.9						
FITZ	Fitzroy Crossi	12.41	200	ePn	Pn	16 09 60.0	-1.7
FITZ	Fitzroy Crossi	12.41	200	P	Pn	16 10 01.3	-0.3
	4.4nm,0.3s,baz=30,slow=12,SNR=89						
FITZ				S	Sn	16 12 09.7	-9.2
	5.2nm,0.3s,baz=82,slow=7.6,SNR=9.4						
WRAB	Tennant Creek	14.09	163	ePn	Pn	16 10 21.5	-1.7
WRA	Warramunga Arr	14.10	163	P	Pn	16 10 20.9	-2.3
	2.9nm,0.3s,baz=337,slow=13,SNR=106						
WRA				S	Sn	16 12 48.5	-11
	6.1nm,0.3s,baz=346,slow=22,SNR=14						
DAV	Davao City (W)	14.10	341	ePn	Pn	16 10 24.2	+0.9
WB2	Warramunga Arr	14.10	163	ePn	Pn	16 10 21.3	-1.9
COEN	Coen	14.93	121	ePn	Pn	16 10 33.2	-0.5
AS31	Alice Springs	17.57	168	eP	Pn	16 11 06.4	+0.6
	12nm,0.6s						
ASAR	Alice Springs	17.57	168	P	Pn	16 11 06.8	+1.0
	3.4nm,0.3s,baz=345,slow=10.0,SNR=403						
ASAR				S	S	16 14 12.7	-7.5
	0.6nm,0.3s,baz=358,slow=28,SNR=4.6						
AS01	Alice Springs	17.58	168	eP	Pn	16 11 06.4	+0.4
KKM	Kota Kinabalu	18.54	312	eP	P	16 11 16.3	+0.8
	48nm,1.3s						
CTA	Charters Tower	20.80	132	P	P	16 11 41.4	+1.6
	8.3nm,0.8s,baz=315,slow=11,SNR=10						
LEM	Lembang	22.30	268	P	P	16 11 56.5	+0.8
	16nm,0.7s,baz=26,slow=12,SNR=4.6						
BBOO	Buckleboo	26.87	169	eP	P	16 12 37.4	+0.4
	12nm,0.7s						
STKA	Stephens Creek	27.55	158	eP	P	16 12 43.8	+0.7
	1.6nm,0.7s						
STKA	Stephens Creek	27.55	158	P	P	16 12 43.8	+0.7
	6.9nm,0.7s,baz=330,slow=9.2,SNR=13						
NWAO	Narrogin (SRO)	28.98	203	P	P	16 12 56.1	+0.4
	3.2nm,0.5s,baz=257,slow=7.3,SNR=6.8						
HNR	Honiara	29.75	98	eP	P	16 13 03.3	+0.5
	109nm,0.8s						
CMAR	Chiang Mai Arr	39.39	309	P	P	16 14 25.2	-0.4
	0.5nm,0.6s,baz=136,slow=6.7,SNR=5.7						
NJ2	Nanjing	39.69	345	eP	P	16 14 28.4	+0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI	Kunming	41.09	321	P	P	16 14 45.3	+5.6
KMI				sP	pP	16 14 56.9	-14
KMI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MJAR	Matsushiro Arr	43.38	10	P	P	16 14 56.2	-1.7
	comp=Z,1.0nm,0.8s,baz=191,slow=10,SNR=4.7						
KSRS	Korea Array	43.66	358	P	P	16 14 59.6	-0.4
	comp=Z,0.5nm,0.7s,baz=180,slow=8.3,SNR=2.9						
CD2	Chengdu	44.83	327	eP	P	16 15 10.3	+0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH	Lanzhou	48.90	332	⇓P	P	16 15 42.5	+1.3
LZH				pP	pwP	16 16 18.3	-0.8
LZH				sP	sP	16 16 35.4	+6.6
LZH				PP	PP	16 17 38.3	+2.2
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,72nm,6.2s						
HHC	Hu-ho-hao-te	49.99	342	eP	P	16 15 52.3	+3.0
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA	Gaotai	53.47	331	eP	P	16 16 17.5	+2.3
GTA				pP	pwP	16 16 51.4	-1.4
GTA				sP	sP	16 17 09.3	+5.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	57.89	341	P	P	16 16 45.8	-0.7
	comp=Z,0.2nm,0.5s,baz=126,slow=9.7,SNR=3.4						
WMQ	Urumqi	62.92	327	eP	P	16 17 21.5	+0.7
MK01	Makanchi Array	67.73	327	eP	P	16 17 51.9	+0.2
MK31	Makanchi Array	67.75	327	eP	P	16 17 52.1	+0.4
MKAR	Makanchi Array	67.75	327	eP	P	16 17 52.2	+0.4
	comp=Z,7.8nm,0.6s						
MKAR	Makanchi Array	67.75	327	P	P	16 17 51.6	-0.2
	comp=Z,0.9nm,0.5s,baz=114,slow=8.1,SNR=20						
ZALV	Zalesovo Beam	71.07	334	P	P	16 18 11.3	-0.6
	comp=Z,0.3nm,0.5s,baz=256,slow=3.0,SNR=2.4						
VNDA	Vanda	73.04	173	P	P	16 18 23.9	+0.6
	comp=Z,1.5nm,0.7s,baz=344,slow=7.8,SNR=5.1						
CPUP	Villa Florida	146.69	168	PKPbc	PKPbc	16 26 35.1	-0.2
	comp=Z,1.9nm,0.8s,baz=267,slow=2.9,SNR=5.4						

IDC 17 16:18:38.0±1.8, 4°.68N×95°.40E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.4/37, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=63.2km s-min=19.6km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.98	118	Pn	Pn	16 19 42.9	+2.4
	1.6nm,0.3s,baz=312,slow=13,SNR=4.2						
PSI				Sn	Sn	16 20 28.8	+0.7
	1.2nm,0.3s,baz=0.0,slow=19,SNR=4.3						
CMAR	Chiang Mai Arr	14.12	14	Pn	Pn	16 22 01.6	+2.1
	0.1nm,0.3s,baz=202,slow=10.0,SNR=3.3						
MKAR	Makanchi Array	43.46	347	P	P	16 26 42.9	0.0
	0.3nm,0.8s,baz=144,slow=5.2,SNR=3.4						
SONM	Songino Array	44.02	11	P	P	16 26 46.1	-1.4
	0.5nm,1.1s,baz=195,slow=6.3,SNR=3.1						
WRA	Warramunga Arr	45.43	124	P	P	16 26 57.7	-1.4
	0.6nm,0.9s,baz=303,slow=9.2,SNR=6.2						
WRA				PcP	PcP	16 28 38.5	+0.1
	0.3nm,0.9s,baz=285,slow=4.1,SNR=3.2						
ASAR	Alice Springs	46.94	129	P	P	16 27 10.8	-0.1
	0.9nm,0.5s,baz=300,slow=7.9,SNR=43						
ASAR				PcP	PcP	16 28 45.1	+1.4
	1.2nm,1.0s,baz=318,slow=3.7,SNR=4.2						

IDC 17 16:25:26.4±2.2, 23°.61S×180°.00E, h500km±22km, mb3.4/11, mb1 3.6/12, mb1mx3.4/31, mbtmp4.3/12, Error ellipse: s-maj=33.5km s-min=16.7km az=156.0

ISC 17 16:25:26.1±0.7, 23°.7S±0°.1×179°.9W±0°.1, h500km, n32, σ1s.06/35, mb3.8/11, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.73	274	P	P	16 28 16.1	+3.6
	0.6nm,0.3s,baz=214,slow=16,SNR=5.8						
URZ	Urewera	14.78	189	P	P	16 28 34.4	+0.6
	0.9nm,0.3s,baz=318,slow=3.5,SNR=6.4						
STKA	Stephens Creek	34.94	248	P	P	16 31 35.1	-0.4
	1.2nm,0.4s,baz=93,slow=11,SNR=5.2						
ASAR	Alice Springs	42.21	260	P	P	16 32 34.6	-0.1
	8.6nm,1.0s,baz=96,slow=7.5,SNR=155						
ASAR				ScP	ScP	16 37 20.8	+0.4
	2.1nm,0.7s,baz=111,slow=4.2,SNR=13						
WRA	Warramunga Arr	42.56	266	P	P	16 32 36.4	-1.2
	7.9nm,0.7s,baz=102,slow=8.3,SNR=65						
WRA				ScP	ScP	16 37 21.8	0.0

	0.6nm,0.9s,baz=97,slow=3.9,SNR=4.7						
FITZ	Fitzroy Crossi	50.98	265	P	P	16 33 40.2	-1.2
	2.5nm,0.5s,baz=118,slow=6.8,SNR=7.1						
SIJI	Sorong	52.49	288	P	P	16 33 51.9	-0.5
	9.3nm,0.6s,baz=75,slow=12,SNR=4.6						
MJAR	Matsushiro Arr	71.78	325	P	P	16 35 57.8	+0.4
	1.0nm,0.8s,baz=126,slow=5.7,SNR=3.1						
PETK	Petropavlovsk-	78.90	346	P	P	16 36 36.0	-0.8
	4.5nm,1.1s,baz=160,slow=6.0,SNR=2.7						
NVAR	Mina Array Bea	84.49	44	P	P	16 37 06.3	+0.2
	0.7nm,0.6s,baz=225,slow=6.6,SNR=6.1						
CMAR	Chiang Mai Arr	89.57	290	P	P	16 37 28.5	-1.8
	0.2nm,0.4s,baz=128,slow=4.3,SNR=3.3						
TXAR	Lajitas Array	90.19	58	P	P	16 37 34.9	+1.8
	1.3nm,0.7s,baz=210,slow=6.1,SNR=18						
ILAR	Eielson Array	91.77	13	P	P	16 37 40.2	+0.8
	0.2nm,0.5s,baz=218,slow=6.1,SNR=4.6						
MKAR	Makanchi Array	112.09	313	PKiKP	PKiKP	16 43 02.6	-1.5
	0.3nm,0.6s,baz=246,slow=1.5,SNR=5.2						
BVAR	Borovoye Array	120.35	319	PKP	PKPdf	16 43 18.5	-1.3
	0.7nm,0.4s,baz=129,slow=1.6,SNR=5.2						
AKTO	Aktyubinsk	128.22	316	PKP	PKPdf	16 43 34.1	-0.8
	0.8nm,0.7s,baz=112,slow=4.8,SNR=4.4						
ARCES	ARCESS Array B	131.68	348	PKP	PKPdf	16 43 40.2	-0.8
	1.6nm,0.8s,baz=64,slow=2.8,SNR=7.0						
FINES	FINESS Array B	138.26	342	PKhKP	PKPpre	16 43 44.9	
	0.3nm,0.5s,baz=48,slow=2.8,SNR=3.4						
FINES				PKP	PKPdf	16 43 54.0	+0.6
	0.6nm,0.5s,baz=68,slow=5.1,SNR=6.5						
NB2	NORSAR Subarra	141.87	351	PKP	PKPpre	16 43 55.6	
	comp=Z,0.4nm,0.5s,baz=10,slow=3.2						
NOA	NORSAR Array B	141.87	351	PKhKP	PKPpre	16 43 54.0	
	comp=Z,0.3nm,0.7s,baz=22,slow=4.7,SNR=4.4						
NOA				PKP	PKPdf	16 44 01.1	+1.0
	comp=Z,0.3nm,0.7s,baz=42,slow=1.3,SNR=2.5						
AKASG	Malin Array Be	144.84	328	PKP	PKPdf	16 44 04.8	-0.7
	comp=Z,1.6nm,0.5s,baz=43,slow=4.5,SNR=12						
BRTR	Keskin Array B	147.54	308	PKPbc	PKPbc	16 44 12.9	-1.1
	comp=Z,0.8nm,0.6s,baz=145,slow=5.0,SNR=5.3						
BRTR				PKPab	PKPab	16 44 18.1	+0.2
	comp=Z,0.8nm,0.5s,baz=92,slow=3.4,SNR=6.7						
OKC	Ostrava-Krasne	150.32	336	*e*PKP	PKiKP	16 44 21.6	+0.8
UPC	Upice	150.49	339	*e*PKP	PKiKP	16 44 21.3	+0.1
DPC	Dobruska-Polom	150.53	339	*e*PKP	PKiKP	16 44 21.4	+0.1
KRLC	Kraliky	150.61	338	*e*PKP	PKiKP	16 44 21.6	+0.1
CLL	Collm	150.67	343	⇑*i*PKPbc	PKPbc	16 44 21.3	+0.3
	comp=Z,7.0nm,0.9s						
CLL				*e*PKPab	PKPab	16 44 31.0	+0.9
BRG	Berggiesshubel	150.80	342	*i* PKP	PKiKP	16 44 21.8	0.0
	comp=Z,4.6nm,0.5s						
PVCC	Panska Ves	150.93	341	*e*PKP	PKiKP	16 44 22.3	+0.3
GOPC	GO Pecny, Ondr	151.40	340	*e*PKP	PKiKP	16 44 23.1	0.0
KHC	Kasperske Hory	152.46	341	*e*PKP	PKPbc	16 44 24.4	-0.8
GERES	GERESS Array B	152.68	340	PKPbc	PKPbc	16 44 25.1	-0.7
	comp=Z,0.7nm,0.8s,baz=48,slow=2.0,SNR=4.8						

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*JMA **17** 16:27:04.6±0.4, 43°.35N×146°.97E, h32^{km}±4^{km}, M3.1*
*SKHL **17** 16:27:06.1±0.6, 43°.41N×146°.93E, h46^{km}±1^{km}, mb4.0/5*
ISC 17 16:27:03.9±2.2, **43°.43N**±0°.08×**146°.96E**±0°.08, **h16**^{km}±14^{km}, **n14**, σ**0^{s}.96**/21, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	0.45	348	*i* P	Pn	16 27 16.4	+0.7
SHO				AMB	AMB	16 27 16.4	
	140nm,0.1s						
SHO				AMB	AMB	16 27 16.4	
	70nm,0.1s						
SHO				AMB	AMB	16 27 16.4	
	50nm,0.1s						
SHO				*i* S	Sn	16 27 23.5	+0.1
SHO				A	A	16 27 24.0	
	4μm,0.4s						
SHO				A	A	16 27 24.0	
	3μm,0.4s						
NEM2	Nemuro 2	0.89	266	P	Pg	16 27 20.9	-0.2
NEM2				*e*S	Sb	16 27 32.7	+0.3
YUK	Yuzh-Kuril'sk	1.00	308	*i* P	Pb	16 27 23.0	+0.2
YUK				AMB	AMB	16 27 23.0	
	20nm,0.2s						
YUK				AMB	AMB	16 27 23.0	
	30nm,0.2s						
YUK				AMB	AMB	16 27 23.0	
	90nm,0.2s						
YUK				*i* S	Sb	16 27 36.0	+0.4
YUK				A	A	16 27 39.0	
	990nm,0.3s						
YUK				A	A	16 27 39.0	
	760nm,0.3s						
GRPR	Tuman	1.03	304	*e*P	Pb	16 27 23.0	-0.3
GRPR				AMB	AMB	16 27 23.0	
	50nm,0.2s						
GRPR				AMB	AMB	16 27 23.0	
	30nm,0.2s						
GRPR				*i* S	Sb	16 27 36.0	-0.5
GRPR				A	A	16 27 37.0	
	1μm,0.5s						
GRPR				A	A	16 27 37.0	
	600nm,0.5s						
GLVR	Golovnino	1.09	287	*i* P	Pn	16 27 24.0	-0.4
GLVR				AMB	AMB	16 27 24.0	
	60nm,0.4s						
GLVR				*e*S	Sb	16 27 38.0	-0.2
GLVR				A	A	16 27 38.0	
	380nm,0.2s						
GLVR				A	A	16 27 38.0	
	250nm,0.2s						
JKHN	Kushirohamanak	1.36	256	P	Pb	16 27 28.2	-0.7
JRA	Rausu	1.42	292	P	Pb	16 27 29.8	-0.2
JNK	Nakash	1.64	276	P	Pn	16 27 31.6	-0.4
JNK				*e*S	Sn	16 27 51.5	-1.2
JAK	Akkeshi	1.71	256	P	Pn	16 27 33.1	+0.2
KUR	Kuril'sk	1.92	20	*e*P	Pn	16 27 36.1	+0.3
KUR				AMB	AMB	16 27 40.7	
	2.0nm,0.2s						
KUR				AMB	AMB	16 27 40.7	
	20nm,0.2s						
KUR				*e*S	Sn	16 27 58.7	-0.9
KUR				A	A	16 28 05.0	
	60nm,0.2s						
KUR				A	A	16 28 05.0	
	120nm,0.2s						
JTKR	Abashiri--Toko	2.27	285	P	Pn	16 27 41.9	+1.1
JAR	Ashorobuto	2.33	268	P	Pn	16 27 42.1	+0.6
JMP	Maruseppu	2.67	284	P	Pn	16 27 48.6	+2.4
JCH	Churui	2.76	254	P	Pn	16 27 49.4	+2.0

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*ISCJB **17** 16:30:53.3±0.6, 42°.41N±0°.09×89°.95E±0°.07, h10^{km}, mb3.6/6, MS3.8/2, Error ellipse: s-maj=13.2km s-min=5.8km az=23.6*
*IDC **17** 16:30:58.5±4.5, 42°.34N×90°.09E, h34^{km}±36^{km}, mb3.5/6, mb1 3.6/12, mb1mx3.3/48, mbtmp3.5/12, ML2.7/5, MS3.4/3, Ms1 3.4/3, ms1mx2.6/42, Error ellipse: s-maj=31.1km s-min=19.2km az=55.0*
*BJI **17** 16:30:59.0, 42°.33N×90°.10E, h21^{km}, mb3.9/2, ML3.4/12*
*NNC **17** 16:31:01.2±3.0, 42°.70N×89°.60E, h6^{km}±16^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=21.9km s-min=19.6km az=55.0*
ISC 17 16:30:55.6±0.8, **42°.3N**±0°.1×**90°.05E**±0°.07, **h10**^{km}, **n22**, σ**2^{s}.99**/27, **mb3.7**/6, **3C-8D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	2.27	311	Pn	Pn	16 31 35.5	+2.1
WMQ				Sg	Sn	16 32 04.5	+3.1
WMQ				smax	smax		
	comp=N,700nm,0.2s						
WMQ				smax	smax		
	comp=E,320nm,0.3s						
WMQ	Urumqi	2.27	311	*e*Pn	Pn	16 31 35.4	+2.1
WMQ				Sn	Sn	16 32 03.8	+2.4
WMQ				Sg	Sg	16 32 15.1	+6.4
WMQ				smax	smax		
	comp=E,670nm,0.5s						
WMQ				smax	smax		
	comp=E,750nm,0.7s						
MK31	Makanchi Array	7.11	311	⇑Pn	Pn	16 32 39.9	+0.2
	comp=E,2.1nm,0.3s,baz=129,slow=14,SNR=307						
MK31				⇓Sn	Sn	16 33 56.4	-4.1
	comp=E,0.7nm,0.2s,baz=126,slow=13,SNR=5.5						
MK31				⇓Lg	Lg	16 34 31.3	
	comp=E,3.5nm,0.5s,baz=122,slow=17,SNR=5.6						
MKAR	Makanchi Array	7.11	311	Pn	Pn	16 32 40.5	+0.8
	comp=E,5.9nm,0.3s,baz=124,slow=14,SNR=270						
MKAR				Sn	Sn	16 33 57.1	-3.4
	comp=E,0.9nm,0.3s,baz=122,slow=26,SNR=3.1						
MKAR				Lg	Lg	16 34 42.4	
	comp=E,0.8nm,0.3s,baz=126,slow=28,SNR=3.0						
MKAR				LR	LR	16 35 51.4	
	comp=E,34nm,18.8s,baz=104,slow=41						
MAKZ	Makanchi	7.29	310	⇓Pn	Pn	16 32 43.3	+1.2
	comp=E,1.4nm,0.4s						
MAKZ				⇓Sn	Sn	16 34 00.0	-5.0
	comp=E,2.2nm,0.5s						
MAKZ				⇓Lg	Lg	16 34 37.0	
	comp=E,8.6nm,0.9s						
PDGK	Podgornoye	7.83	281	⇓Pn	Pn	16 32 49.4	-0.3
	comp=E,4.5nm,0.8s						
PDGK				⇓Sn	Sn	16 34 17.0	-1.3
	comp=E,7.0nm,0.5s						
PDGK				⇑Lg	Lg	16 34 58.0	
	comp=E,12nm,0.7s						
GTA	Gaotai	7.96	108	P	Pn	16 32 52.0	+0.6
GTA				S	Sn	16 34 19.9	-1.6
GTA				smax	smax		
	comp=E,26nm,0.9s						
GTA				smax	smax		
	comp=E,27nm,0.6s						
KURBB	Kurchatov Arra	11.46	320	⇑Pn	Pn	16 33 36.7	-2.5
	comp=E,2.4nm,1.1s						
KURBB				⇓Lg	Lg	16 36 49.3	
	comp=E,11nm,0.7s						
KURBB	Kurchatov Arra	11.46	320	Pn	Pn	16 33 37.2	-2.0
	comp=E,0.1nm,0.3s,baz=130,slow=13,SNR=9.2						
KURBB				Sn	Sn	16 35 40.4	-6.9
	comp=E,0.0nm,0.3s,baz=134,slow=24,SNR=3.4						
AAK	Ala-Archa	11.49	277	Pn	Pn	16 33 40.1	+0.1
	comp=E,0.0nm,0.3s,baz=117,slow=6.8,SNR=3.0						
ZALV	Zalesovo Beam	12.12	345	Pn	Pn	16 33 48.2	-0.1
	comp=E,0.1nm,0.3s,baz=159,slow=12,SNR=2.4						
SONM	Songino Array	12.78	59	Pn	Pn	16 33 59.1	+1.6
	comp=E,0.1nm,0.3s,baz=241,slow=14,SNR=2.8						
BVAR	Borovoye Array	16.95	316	Pn	Pn	16 34 49.4	-3.4
	comp=E,0.1nm,0.3s,baz=123,slow=12,SNR=2.0						
XAN	Xi'an	16.97	113	P	P	16 34 59.3	+4.3
AKASG	Malin Array Be	41.61	303	LR	LR	16 56 14.5	
	comp=E,76nm,18.9s,baz=105,slow=36						
ARCES	ARCESS Array B	42.24	332	P	P	16 38 48.7	+0.1
	comp=E,3.0nm,0.9s,baz=92,slow=8.1,SNR=3.2						
PETK	Petropavlovsk-	45.14	52	LR	LR	16 58 45.8	
	comp=E,179nm,19.6s,baz=90,slow=37						
ILAR	Eielson Array	64.34	23	P	P	16 41 29.3	-1.7
	comp=E,0.3nm,0.7s,baz=320,slow=4.8,SNR=4.9						
YKA	Yellowknife Ar	73.65	12	P	P	16 42 27.7	-1.1
	comp=E,0.1nm,0.7s,baz=336,slow=5.1,SNR=2.6						
WRA	Warramunga Arr	74.23	137	P	P	16 42 31.6	-1.3
	comp=E,0.4nm,0.6s,baz=337,slow=6.0,SNR=7.6						
ASAR	Alice Springs	77.15	139	P	P	16 42 48.8	-0.7
	comp=E,0.4nm,0.5s,baz=326,slow=5.2,SNR=18						
NVAR	Mina Array Bea	95.57	22	P	P	16 44 20.8	-0.5
	comp=E,0.2nm,0.4s,baz=322,slow=6.6,SNR=3.9						

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*PRE **17** 16:43:02.6±1.8, 24°.71S×27°.44E, h2^{km}, ML1.9*
*EAF **17** 16:43:26.5±60.0, 25°.88S×26°.42E, h10^{km}, MD3.2*
ISC 17 16:43:03.1±1.4, **24°.80S**±0°.03×**27°.43E**±0°.05, **h4**^{km}±13^{km}, **n11**, σ**1^{s}.80**/20, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSR	Koster	1.15	205	*e*P	Pn	16 43 26.7	+0.5
KSR				*e*S	Sn	16 43 44.8	+2.4
KSR				AML	AML	16 43 48.6	
	comp=Z,21nm,0.5s						
SLR	Silverton	1.21	141	*e*P	Pn	16 43 26.1	-0.8
SLR				*e*S	Sn	16 43 45.0	+1.3
SLR				AML	AML	16 43 57.0	
	comp=Z,21nm,0.8s						
WDLM	Western Deep L	1.61	180	*e*P	Pg	16 43 35.1	+1.0
WDLM				*e*S	Sg	16 43 56.2	+1.2
WDLM				AML	AML	16 44 02.2	
	comp=Z,32nm,0.1s						
LBTB	Lobatse	1.68	262	*e*P	Pb	16 43 35.0	+0.3
LBTB				*e*S	Sb	16 43 55.7	-0.5
LBTB				AML	AML	16 44 07.7	
	comp=Z,42nm,0.7s						
ERPM	east rand prop	1.70	155	*e*P	Pb	16 43 34.4	-0.6
ERPM				*e*S	Sb	16 43 56.6	-0.2
ERPM				AML	AML	16 44 01.3	
	comp=Z,11nm,0.3s						
PRYS	Parys	2.12	182	*e*P	Pb	16 43 41.3	-0.8
PRYS				*e*S	Sb	16 44 08.3	-0.5
PRYS				AML	AML	16 44 14.3	
	comp=Z,12nm,0.4s						
BOSA	Boshof	4.27	207	*i* P	Pn	16 44 05.2	-3.7
BOSA	Boshof	4.27	207	*e*P	Pn	16 44 09.7	+0.8
BOSA				*e*S	Sn	16 44 59.5	+0.3
BOSA				AML	AML	16 45 33.4	
	comp=Z,2.5nm,0.4s						
BOSA	Boshof	4.27	207	*i* P	Pn	16 44 05.2	-3.7
MATP	Matopo	4.47	13	*i* P	Pb	16 44 23.7	+1.5
MATP				*i* S	Sg	16 45 24.9	-1.7
MATP	Matopo	4.47	13	*i* P	Pb	16 44 23.7	+1.5
MATP				*i* S	Sg	16 45 24.9	-1.7

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*TIR **17** 16:48:45.5, 40°.81N×21°.56E, h10^{km}, Md4.4/7*
*PRU **17** 16:48:47.4±0.0, 40°.49N×21°.51E, h0^{km}, M4.5*
*THE **17** 16:48:48.9, 40°.78N×21°.36E, h3^{km}±1^{km}, ML4.0/17, Error ellipse: s-maj=1.0km s-min=0.4km az=277.0*
*MOS **17** 16:48:48.8±1.0, 40°.78N×21°.36E, h14^{km}, mb4.2/7, Error ellipse: s-maj=4.3km s-min=3.0km az=93.7*
*SKO **17** 16:48:48.5, 40°.76N×21°.39E, h18^{km}, M3.8, ML4.3*
*NEIC **17** 16:48:48.9±0.0, 40°.78N×21°.36E, h3^{km}, mb4.5/6, MW4.1, ML4.0(THE), Moment Tensor Solution. s25 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.22; $M_{\theta\theta}$1.42; $M_{\phi\phi}$-0.20; $M_{r\theta}$-0.03; $M_{\theta\phi}$0.84; $M_{\phi r}$0.53; Best double couple: $M_0$1.70000×10^{15} NP1:ϕ_s222.00000°, δ55.00000°, λ-125.00000°. NP2:ϕ_s93.00000°, δ48.00000°, λ-51.00000°. Principal axes: T 1.7900, Plg4.0000°, Azm336.0000°; N -0.3000, Plg28.0000°, Azm244.0000°; P -1.4900, Plg62.0000°, Azm73.0000°; After THE.*
NEIC Felt at Ptolemaida and Veroia. Also felt at Bitola, Macedonia.
*ATH **17** 16:48:48.6, 40°.79N×21°.38E, h19^{km}, ML4.0/29 Error ellipse: s-maj=1.2km s-min=0.6km az=147.0*
*PDG **17** 16:48:49.7±0.6, 40°.80N×21°.45E, h10^{km}±1^{km}, MD4.1/5, ML4.1/12, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*ISCJB **17** 16:48:49.4±0.3, 40°.802N±0°.009×21°.37E±0°.01, h14^{km}±2^{km}, mb4.2/34, MS3.3/8, Error ellipse: s-maj=1.7km s-min=1.3km az=140.7*
*BEO **17** 16:48:50.4±0.6, 40°.85N×21°.44E, h0^{km}, ML3.9/16*
*IDC **17** 16:48:54.1±1.0, 40°.83N×21°.45E, h48^{km}±11^{km}, mb3.8/19, mb1 3.9/32, mb1mx3.8/55, mbtmp3.9/32, ML3.8/12, MS3.2/11, Ms1 3.2/11, ms1mx2.9/60, Error ellipse: s-maj=9.8km s-min=8.9km az=113.0*
ISC 17 16:48:49.5±0.9, **40°.78N**±0°.01×**21°.39E**±0°.01, **h8**^{km}±6^{km}, **n526**, σ**1^{s}.36**/636, **mb4.3**/42, **MS3.1**/8, **30C-21D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIA	Bitola	0.25	348	⇑*i*Pg	Pg	16 48 54.9	+0.3
BIA				*i* Sg	Sg	16 48 58.9	+0.9
BIA				*e*Lg	Lg	16 48 59.0	
	comp=E,13μm,0.5s						
BIA				*e*Lg	Lg	16 48 59.0	
	comp=N,9μm,0.3s						
NEST	Nestorio	0.45	216	P	Pg	16 48 57.3	-0.9
NEST				S	Sg	16 49 04.0	-0.1
NEST				AML	AML	16 49 08.4	
	comp=N,35179μm,0.4s						
NEST				AML	AML	16 49 08.8	
	comp=E,50202μm,0.5s						
NEST	Nestorio	0.45	216	P	Pg	16 48 57.3	-0.9
NEST				S	Sg	16 49 03.2	-0.9
KZN	Kozani	0.55	148	P	Pg	16 48 59.6	-0.6
KZN	Kozani	0.55	148	P	Pg	16 48 59.9	-0.2
KZN				S	Sb	16 49 08.6	-0.9
KZN				AML	AML	16 49 10.6	
	comp=E,59416μm,0.3s						
KZN				AML	AML	16 49 13.2	
	comp=N,41751μm,0.4s						
KZN	Kozani	0.55	148	P	Pg	16 48 59.6	-0.6
KZN				S	Sb	16 49 08.3	-1.2
KZN	Kozani	0.55	148	P	Pg	16 48 59.6	-0.6
OHR	Ohrid	0.56	307	⇑*i*Pg	Pg	16 48 59.8	-0.6
OHR				*i* Sg	Sg	16 49 08.4	+0.6
OHR				*e*Lg	Lg	16 49 09.0	
	comp=N,15μm,0.8s						
OHR				*e*Lg	Lg	16 49 09.2	
	comp=E,13μm,0.5s						
OHR	Ohrid	0.56	307	*i* P	Pg	16 48 59.8	-0.6
OHR				*i* SG	Sg	16 49 08.3	+0.6
KRUS	Krusevo	0.60	350	⇑*i*Pg	Pg	16 49 00.7	-0.5
KRUS				*i* Sg	Sg	16 49 09.8	+0.7
KRUS				*e*Lg	Lg	16 49 10.0	
	comp=N,3μm,0.5s						
KRUS				*e*Lg	Lg	16 49 10.1	
	comp=E,4μm,0.4s						
PENT	Pentalofos	0.61	199	P	Pg	16 49 00.6	-0.7
PENT				S	Sg	16 49 09.6	+0.3
PENT				AML	AML	16 49 14.1	
	comp=N,25113μm,0.9s						
PENT				AML	AML	16 49 16.4	
	comp=E,26924μm,0.8s						
PENT	Pentalofos	0.61	199	P	Pg	16 49 00.6	-0.7
PENT				S	Sg	16 49 09.1	-0.2
GRG	Griva	0.79	76	*e*P	Pb	16 49 04.5	-1.0
GRG				*e*S	Sb	16 49 15.9	-0.3
GRG	Griva	0.79	76	P	Pb	16 49 04.4	-1.0
GRG	Griva	0.79	76	P	Pb	16 49 04.4	-1.0
GRG				S	Sb	16 49 15.9	-0.3
GRG				AML	AML	16 49 22.8	
	comp=N,33413μm,0.8s						
GRG				AML	AML	16 49 23.8	
	comp=E,18131μm,0.7s						
GRG	Griva	0.79	76	P	Pb	16 49 04.4	-1.0
GRG				S	Sb	16 49 15.8	-0.4
GRG	Griva	0.79	76	⇓*i*Pg	Pb	16 49 04.4	-1.0
GRG				*i* Sg	Sb	16 49 16.8	+0.5
GRG	Griva	0.79	76	P	Pb	16 49 04.4	-1.0
KPRO	Kipourio	0.82	182	P	Pg	16 49 04.0	-1.3
KPRO				S	Sg	16 49 16.6	+0.7
KPRO				AML	AML	16 49 22.8	
	comp=E,17266μm,0.4s						
KPRO				AML	AML	16 49 24.6	
	comp=N,27168μm,0.7s						
KPRO	Kipourio	0.82	182	P	Pg	16 49 03.8	-1.5
KPRO				S	Sg	16 49 16.2	+0.2
VAY	Valandovo	1.04	58	⇓*i*Pg	Pb	16 49 09.1	-0.7
VAY				*i* Sg	Sb	16 49 23.8	+0.1
VAY				*e*Lg	Lg	16 49 26.8	
	comp=N,5μm,0.8s						
VAY				*e*Lg	Lg	16 49 27.5	
	comp=E,11μm,1.0s						
VAY	Valandovo	1.04	58	*i* P	Pb	16 49 09.1	-0.7
VAY				*i* SG	Sb	16 49 23.7	+0.1
LIT	Litokhoron	1.07	129	*e*Pg	Pg	16 49 08.8	-1.3
LIT				*e*Sn	Sn	16 49 25.1	-0.8
LIT	Litokhoron	1.07	129	P	Pg	16 49 08.9	-1.2
LIT				S	Sb	16 49 24.4	-0.1
LIT				AML	AML	16 49 28.7	
	comp=E,24519μm,0.4s						
LIT				AML	AML	16 49 30.4	
	comp=N,31526μm,0.4s						
LIT	Litokhoron	1.07	129	P	Pg	16 49 09.0	-1.2
LIT				S	Sn	16 49 25.6	-0.4
LIT	Litokhoron	1.07	129	⇑*i*Pg	Pg	16 49 09.5	-0.6
LIT				*i* Sg	Sn	16 49 26.2	+0.3
LIT	Litokhoron	1.07	129	*e*P	Pg	16 49 08.8	-1.3
LIT				*e*		16 49 25.2	
STIP	Stip	1.09	33	*i* Pg	Pn	16 49 12.8	+1.7
STIP				*i* Sg	Sn	16 49 30.4	+4.0
STIP				*e*Lg	Lg	16 49 31.4	
	comp=N,511nm,0.3s						
STIP				*e*Lg	Lg	16 49 31.5	
	comp=E,700nm,0.4s						
PHP	Peshkopia	1.16	322	P	Pg	16 49 09.3	-2.5
PHP				S	Sg	16 49 26.7	-0.1
PHP	Peshkopia	1.16	322	P	Pg	16 49 09.3	-2.5
PHP				S	Sg	16 49 26.7	-0.1
PHP	Peshkopia	1.16	322	P	Pg	16 49 09.3	-2.5
PHP				S	Sg	16 49 26.7	-0.1
PHP	Peshkopia	1.16	322	*i* PN	Pg	16 49 09.2	-2.5
PHP				*i* SN	Sn	16 49 28.1	0.0
TPE	Tepelena	1.16	246	P	Pg	16 49 10.3	-1.4
TPE				S	Sg	16 49 26.0	-0.8
TPE	Tepelena	1.16	246	P	Pg	16 49 10.3	-1.4
TPE				S	Sg	16 49 26.0	-0.8
TPE	Tepelena	1.16	246	*i* PN	Pg	16 49 09.8	-2.0
TPE				*i* SN	Sn	16 49 31.1	+3.1
JAN	Janina	1.19	201	P	Pg	16 49 11.0	-1.4
JAN				S	Sb	16 49 28.3	+0.4
JAN	Janina	1.19	201	P	Pg	16 49 11.9	-0.5
JAN				AML	AML	16 49 37.6	
	comp=N,7391μm,0.5s						
JAN				AML	AML	16 49 39.6	
	comp=E,6497μm,0.6s						
JAN	Janina	1.19	201	P	Pg	16 49 11.0	-1.4
JAN				S	Sb	16 49 28.3	+0.4
JAN	Janina	1.19	201	P	Pg	16 49 11.0	-1.4
JAN				S	Sb	16 49 28.3	+0.4
KNT	Kendrikon	1.20	71	*e*P	Pg	16 49 11.9	-0.7
KNT	Kendrikon	1.20	71	P	Pg	16 49 11.8	-0.8
KNT				S	Sn	16 49 29.8	+0.7
KNT	Kendrikon	1.20	71	P	Pg	16 49 11.9	-0.7
KNT				S	Sn	16 49 28.4	-0.8
KNT				AML	AML	16 49 33.2	
	comp=N,10906μm,0.5s						
KNT				AML	AML	16 49 33.5	
	comp=E,6268μm,0.5s						
KNT	Kendrikon	1.20	71	P	Pg	16 49 11.8	-0.8
KNT				S	Sn	16 49 29.8	+0.7
KNT	Kendrikon	1.20	71	⇓*i*Pg	Pg	16 49 11.9	-0.7
KNT				⇓*i*Pg	Pg	16 49 11.9	-0.7
KNT				*i* Sg	Sn	16 49 29.4	+0.3
KNT	Kendrikon	1.20	71	P	Pg	16 49 11.8	-0.8
KNT				S	Sn	16 49 29.8	+0.7
THE	Thessaloniki	1.20	96	P	Pg	16 49 11.7	-0.9
THE				S	Sn	16 49 28.3	-0.8
THE				AML	AML	16 49 35.6	
	comp=E,7643μm,0.6s						
THE				AML	AML	16 49 36.1	
	comp=N,9529μm,0.6s						
THE	Thessaloniki	1.20	96	P	Pn	16 49 13.9	+1.3
TIR	Tirane	1.29	297	*e*Pn	Pn	16 49 12.2	-1.6
TIR				S	Sg	16 49 31.2	+0.2
TIR	Tirane	1.29	297	P	Pn	16 49 11.9	-1.9
TIR				AML	AML	16 49 41.4	
	comp=E,11410μm,0.6s						
TIR				AML	AML	16 49 42.2	
	comp=N,7398μm,0.5s						
TIR	Tirane	1.29	297	⇑*i*P	Pn	16 49 13.2	-0.6
TIR	Tirane	1.29	297	P	Pn	16 49 13.2	-0.6
TIR				S	Sg	16 49 31.2	+0.2
TIR	Tirane	1.29	297	*e*P	Pn	16 49 12.2	-1.6
TIR				S	Sg	16 49 31.2	+0.2
TIR	Tirane	1.29	297	*i* PN	Pn	16 49 12.9	-0.9
TIR				*i* SN	Sn	16 49 34.2	+2.9
THL	Klokotos Trika	1.30	158	P	Pn	16 49 13.0	-0.9
THL				S	Sb	16 49 30.8	-0.2
THL				AML	AML	16 49 37.4	
	comp=N,10293μm,0.9s						
THL				AML	AML	16 49 38.9	
	comp=E,10514μm,0.6s						
THL	Klokotos Trika	1.30	158	P	Pn	16 49 12.7	-1.2
THL				S	Sn	16 49 31.6	+0.1
HORT	Hortiatis	1.31	97	*e*P	Pn	16 49 13.6	-0.6
HORT	Hortiatis	1.31	97	P	Pn	16 49 13.4	-0.8
HORT				S	Sn	16 49 32.2	+0.3
HORT	Hortiatis	1.31	97	P	Pn	16 49 13.4	-0.8
HORT				S	Sb	16 49 30.7	-0.6
HORT				AML	AML	16 49 37.0	
	comp=E,5560μm,0.6s						
HORT				AML	AML	16 49 37.5	
	comp=N,7564μm,0.5s						
HORT	Hortiatis	1.31	97	P	Pn	16 49 13.4	-0.8
HORT				S	Sn	16 49 32.2	+0.3
LRSO	Larissa Observ	1.34	145	P	Pg	16 49 14.8	-0.5
LRSO	Larissa Observ	1.34	145	P	Pn	16 49 14.3	-0.2
LRSO				S	Sn	16 49 33.3	+0.8
SRN	Sarande	1.39	230	P	Pn	16 49 15.1	-0.1
SRN	Sarande	1.39	230	P	Pn	16 49 15.1	-0.1
SRN	Sarande	1.39	230	*i* PN	Pn	16 49 15.6	+0.5
SRN				*i* SN	Sg	16 49 37.2	+2.9
VLO	Vlora	1.48	259	P	Pn	16 49 14.8	-1.6

VLO	Vlora	1.48	259	iPN	Pn	16 49 14.8	-1.6
VLO				iSN	Sg	16 49 40.6	+3.6
IGT	Igoumenitsa	1.48	214	P	Pn	16 49 16.3	-0.2
IGT	Igoumenitsa	1.48	214	P	Pn	16 49 16.9	+0.4
IGT				AML	AML	16 49 45.2	
	comp=N,9321µm,1.2s						
IGT				AML	AML	16 49 47.2	
	comp=E,5830µm,0.5s						
IGT	Igoumenitsa	1.48	214	P	Pn	16 49 16.3	-0.2
IGT	Igoumenitsa	1.48	214	P	Pn	16 49 16.3	-0.2
IGT	Igoumenitsa	1.48	214	iPN	Pg	16 49 18.2	+0.2
IGT				iSN	Sg	16 49 40.2	+3.0
SOH	Sokhos	1.49	88	P	Pn	16 49 16.5	-0.1
SOH				S	Sg	16 49 36.6	-0.8
SOH	Sokhos	1.49	88	P	Pb	16 49 16.7	-0.8
SOH				S	Sg	16 49 37.1	-0.2
SOH				AML	AML	16 49 40.9	
	comp=N,14311µm,0.6s						
SOH				AML	AML	16 49 42.8	
	comp=E,12376µm,0.7s						
SOH	Sokhos	1.49	88	P	Pn	16 49 16.5	-0.1
SOH				S	Sg	16 49 36.6	-0.8
SOH	Sokhos	1.49	88	⇓iPg	Pb	16 49 16.7	-0.8
SOH	Sokhos	1.49	88	P	Pn	16 49 16.5	-0.1
SOH				S	Sg	16 49 36.6	-0.8
PLG	Polygyros	1.61	104	P	Pn	16 49 17.9	-0.4
PLG				S	Sg	16 49 40.4	-1.0
PLG	Polygyros	1.61	104	P	Pn	16 49 18.4	+0.1
PLG				S	Sg	16 49 40.1	-1.2
PLG				AML	AML	16 49 46.4	
	comp=N,7545µm,0.9s						
PLG				AML	AML	16 49 46.8	
	comp=E,5167µm,0.6s						
PLG	Polygyros	1.61	104	P	Pn	16 49 17.9	-0.4
PLG				S	Sg	16 49 40.4	-1.0
PLG	Polygyros	1.61	104	P	Pn	16 49 17.9	-0.4
PLG				S	Sg	16 49 40.4	-1.0
KEK	Kerkira	1.62	230	P	Pn	16 49 18.4	+0.1
KEK				S	Sn	16 49 39.7	+0.4
KEK				AML	AML	16 49 48.0	
	comp=N,4385µm,0.9s						
KEK				AML	AML	16 49 49.8	
	comp=E,6206µm,1.0s						
DSL	Palaion Diasel	1.66	188	P	Pn	16 49 18.9	0.0
FYTO	Fytoko, Volos	1.81	139	P	Pn	16 49 20.9	0.0
FYTO				S	Sb	16 49 45.5	-0.1
FYTO	Fytoko, Volos	1.81	139	P	Pn	16 49 21.0	0.0
FYTO				AML	AML	16 49 56.9	
	comp=E,9575µm,0.9s						
FYTO				AML	AML	16 49 57.6	
	comp=N,7732µm,1.1s						
FYTO	Fytoko, Volos	1.81	139	P	Pn	16 49 20.9	0.0
FYTO				S	Sb	16 49 45.5	-0.1
BCI	Bajram Curri	1.88	328	iPN	Pn	16 49 22.5	+0.6
BCI				iSN	Sg	16 49 51.0	+1.3
EVR	Evrytania	1.88	170	P	Pn	16 49 22.0	-0.1
EVR	Evrytania	1.88	170	P	Pn	16 49 22.7	+0.7
EVR				AML	AML	16 49 58.4	
	comp=N,4163µm,0.7s						
EVR				AML	AML	16 49 59.0	
	comp=E,3526µm,0.6s						
EVR	Evrytania	1.88	170	P	Pn	16 49 22.0	-0.1
AGG	Agios Georgios	1.89	157	eP	Pn	16 49 22.5	+0.4
AGG	Agios Georgios	1.89	157	ePn	Pn	16 49 22.1	-0.1
AGG	Agios Georgios	1.89	157	P	Pn	16 49 22.3	+0.2
AGG				AML	AML	16 49 59.4	
	comp=N,5004µm,1.0s						
AGG				AML	AML	16 50 00.8	
	comp=E,6570µm,0.6s						
AGG	Agios Georgios	1.89	157	P	Pn	16 49 22.2	+0.1
AGG	Agios Georgios	1.89	157	eP	Pn	16 49 22.1	-0.1
MMB	Musomiste	1.94	64	P	Pn	16 49 22.9	+0.1
PAIG	Paliouri	1.94	115	P	Pn	16 49 22.7	-0.1
PAIG				AML	AML	16 49 51.8	
	comp=N,3014µm,0.7s						
PAIG				AML	AML	16 49 53.1	
	comp=E,1804µm,0.7s						
PAIG	Paliouri	1.94	115	P	Pn	16 49 22.5	-0.3
NVR	Nevrokopi	1.95	72	P	Pn	16 49 22.9	-0.1
NVR	Nevrokopi	1.95	72	P	Pn	16 49 23.1	+0.2
NVR				AML	AML	16 49 58.3	
	comp=E,1418µm,0.8s						
NVR				AML	AML	16 50 00.5	
	comp=N,1456µm,0.8s						
NVR	Nevrokopi	1.95	72	P	Pn	16 49 22.9	-0.1
XOR	Xorichti	1.97	135	P	Pn	16 49 23.2	0.0
XOR	Xorichti	1.97	135	P	Pn	16 49 23.4	+0.2
XOR				AML	AML	16 49 57.1	
	comp=N,12034µm,0.6s						
XOR				AML	AML	16 49 58.3	
	comp=E,3515µm,0.6s						
XOR	Xorichti	1.97	135	P	Pn	16 49 23.2	0.0
ULC	Ulcinj	2.01	307	⇑iPn	Pb	16 49 25.3	-0.9
ULC				iSn	Sb	16 49 52.0	+0.6
ULC	Ulcinj	2.01	307	P	Pb	16 49 25.3	-0.9
OUR	Ouranopolis	2.02	102	eP	Pn	16 49 24.3	+0.4
OUR	Ouranopolis	2.02	102	P	Pn	16 49 24.1	+0.3
OUR	Ouranopolis	2.02	102	P	Pn	16 49 24.2	+0.4
OUR				AML	AML	16 49 57.4	
	comp=N,6292µm,0.8s						
OUR				AML	AML	16 49 58.2	
	comp=E,3950µm,0.6s						
OUR	Ouranopolis	2.02	102	P	Pn	16 49 24.1	+0.3
OUR	Ouranopolis	2.02	102	P	Pn	16 49 24.1	+0.3
TSLK	Tsoukalades, L	2.03	197	P	Pn	16 49 24.3	+0.3
NEO	Neokhori	2.03	136	P	Pn	16 49 24.2	+0.1
NEO				S	Sn	16 49 49.7	+0.1
NEO				AML	AML	16 50 01.6	
	comp=E,9058µm,1.0s						
NEO				AML	AML	16 50 01.6	
	comp=N,8593µm,0.5s						
BARS	Barje	2.06	9	ePg	Pn	16 49 25.3	+0.8
BARS	Barje	2.06	9	ePn	Pg	16 49 42.4	+13
BARS				eSg	Sb	16 49 53.3	+0.3
LKD2	Lefkada island	2.06	196	P	Pn	16 49 25.1	+0.7
PVY	Plav	2.11	330	⇑iPn	Pn	16 49 26.6	+1.4
PVY				iSn	Sb	16 49 54.0	-0.5
PVO	Paravola	2.16	177	P	Pn	16 49 26.4	+0.7
PVO				AML	AML	16 50 08.5	
	comp=E,4070µm,1.1s						
PVO				AML	AML	16 50 09.1	
	comp=N,3612µm,0.9s						
DRME	Dracevica, Mon	2.18	311	⇓iPn	Pb	16 49 27.9	-1.3
DRME				iSn	Sb	16 49 56.4	+0.1
DRME	Dracevica, Mon	2.18	311	⇑iPn	Pb	16 49 27.7	-1.5
ANX	Ano Chora	2.22	169	P	Pn	16 49 27.7	+1.0
ANX				AML	AML	16 50 01.2	
	comp=E,10169µm,1.1s						
ANX				AML	AML	16 50 03.5	
	comp=N,6506µm,0.6s						
EVGI	Lefkada island	2.23	195	P	Pn	16 49 27.7	+1.1
AXAR	Agios Charalam	2.23	154	P	Pn	16 49 27.4	+0.6
SKIA	Skiathos	2.26	135	P	Pn	16 49 27.2	0.0
VTS	Vitosha	2.30	36	ePn	Pn	16 49 28.4	+0.6
VTS				eSn	Sn	16 49 56.0	-0.4
VTS	Vitosha	2.30	36	ePn	Pn	16 49 27.9	+0.1
VTS	Vitosha	2.30	36	⇓iP	Pn	16 49 28.5	+0.6
VTS	Vitosha	2.30	36	eP	Pn	16 49 27.9	+0.1
PDG	Podgorica	2.30	317	ePn	Pb	16 49 29.8	-1.5
PDG				eSn	Sb	16 49 58.6	-1.3
PDG	Podgorica	2.30	317	⇑iPn	Pb	16 49 30.0	-1.3
TTG	Podgorica	2.30	317	⇑iPn	Pn	16 49 29.5	+1.8
TTG				iSn	Sb	16 49 59.3	-0.6
TTG	Podgorica	2.30	317	ePn	Pn	16 49 29.3	+1.6
TTG	Podgorica	2.30	317	eP	Pn	16 49 29.3	+1.6
SMIA	Simia	2.35	143	P	Pn	16 49 28.9	+0.4
KAVA	Kavala	2.38	84	P	Pn	16 49 28.4	-0.3
KAVA	Kavala	2.38	84	P	Pn	16 49 28.6	-0.1
KAVA	Kavala	2.38	84	P	Pn	16 49 28.4	-0.3
IVA	Berane	2.38	332	⇑iPn	Pn	16 49 30.2	+1.4
IVA				iSn	Sb	16 50 00.4	-1.7
EFP	Efpalio	2.38	170	P	Pn	16 49 29.2	+0.4
SERG	Sergoula	2.41	168	P	Pn	16 49 29.9	+0.6
SERG				AML	AML	16 50 09.6	
	comp=E,2728µm,0.4s						
SERG				AML	AML	16 50 09.8	
	comp=N,2980µm,0.4s						
BUM	Brajici-Budva	2.42	310	⇑iPn	Pn	16 49 31.0	+1.6
BUM				iSn	Sb	16 50 02.1	-1.2
ATAL	Atalanti	2.43	148	P	Pn	16 49 29.7	+0.2
ATAL	Atalanti	2.43	148	P	Pn	16 49 30.1	+0.6
ATAL	Atalanti	2.43	148	P	Pn	16 49 29.7	+0.2
KALE	Kalithea	2.45	166	P	Pn	16 49 30.5	+0.6
SELS	Selova	2.45	355	ePn	Pn	16 49 31.0	+1.2
SELS				eSn	Sn	16 50 00.1	+0.1
LKR	Lokris	2.46	149	P	Pn	16 49 31.0	+1.2
LKR				AML	AML	16 50 15.8	
	comp=E,913µm,1.2s						
LKR				AML	AML	16 50 16.6	
	comp=N,1066µm,0.7s						
TRIZ	Trizonia	2.46	167	P	Pn	16 49 30.8	+0.8
AOS	Alonnisos	2.49	129	eP	Pn	16 49 30.6	+0.2
AOS	Alonnisos	2.49	129	P	Pn	16 49 29.9	-0.5
AOS	Alonnisos	2.49	129	P	Pn	16 49 30.3	-0.1
AOS	Alonnisos	2.49	129	P	Pn	16 49 29.9	-0.5
KOME	Kolasin	2.50	327	⇓iPn	Pb	16 49 33.1	-1.7
UPR	University Cam	2.51	173	P	Pn	16 49 31.5	+0.9
DSF	Desfina	2.52	159	P	Pn	16 49 30.7	-0.1
DSF	Desfina	2.52	159	P	Pn	16 49 30.9	+0.2
DSF				AML	AML	16 50 09.6	
	comp=E,2198µm,0.9s						
DSF				AML	AML	16 50 11.1	
	comp=N,1584µm,0.8s						
DSF	Desfina	2.52	159	P	Pn	16 49 30.7	-0.1
THAS	Thassos island	2.53	93	P	Pn	16 49 30.5	-0.4
LAKA	Lakka	2.57	170	P	Pn	16 49 32.9	+1.4
AXS	Araxos	2.58	180	P	Pn	16 49 32.0	+0.6
ZAPS	Zavoj	2.66	20	ePn	Pn	16 49 34.7	+2.0
ZAPS				eSn	Sn	16 50 06.4	+1.2
VLS	Valsamata	2.67	194	P	Pn	16 49 33.6	+0.8
MRKA	Markates	2.67	140	P	Pn	16 49 33.3	+0.5
TRAZ	Trapeza	2.68	166	P	Pn	16 49 34.1	+1.1
NKME	Niksic	2.70	318	⇑iPn	Pn	16 49 34.9	+1.6
NKME				iSn	Sn	16 50 08.6	+2.5
SJES	Sjenica	2.70	337	ePn	Pn	16 49 34.8	+1.5
SJES				eSn	Sn	16 50 07.5	+1.3
NKY	Niksic	2.71	319	⇓iPn	Pb	16 49 36.8	-1.6
NKY				eSn	Sb	16 50 10.4	-1.4
RLS	Riolos of Patr	2.71	179	P	Pn	16 49 34.0	+0.6
HCY	Herceg Novi	2.74	308	⇓iPn	Pn	16 49 35.3	+1.5
HCY				iSn	Sn	16 50 09.9	+2.8
HCY	Herceg Novi	2.74	308	ePn	Pn	16 49 35.1	+1.3
PROD	Prodromos	2.77	155	P	Pn	16 49 34.4	+0.2
KLV	Kalavryta, Ach	2.79	168	P	Pn	16 49 35.2	+0.7
PLD	Plovdiv	2.82	61	eP	Pn	16 49 36.6	+1.8
PLD	Plovdiv	2.82	61	P	Pn	16 49 35.5	+0.7
DRO	Drossia	2.83	175	P	Pn	16 49 36.3	+1.3
BOVS	Bovan	2.87	5	ePn	Pn	16 49 35.8	+0.3
GUR	Goura	2.93	165	P	Pn	16 49 36.7	+0.2
VIL2	Platees	2.94	150	P	Pn	16 49 38.0	+1.4
IVAS	Ivanjica	2.95	342	ePn	Pn	16 49 37.1	+0.4
PLE	Pljevlja	2.96	330	⇑iPn	Pn	16 49 38.2	+1.3
PLE				iSn	Sn	16 50 14.6	+2.0
PLE	Pljevlja	2.96	330	P	Pn	16 49 38.2	+1.3
PLE				S	Sn	16 50 15.0	+2.4
CGL1	Ceglie Messapi	2.98	269	ePn	Pn	16 49 37.3	+0.2
TREB	Trebinje	2.99	311	ePn	Pn	16 49 39.0	+1.8
TREB	Trebinje	2.99	311	⇑iPn	Pn	16 49 38.8	+1.6
BRY	Bratogost	3.01	316	⇓iPn	Pn	16 49 39.1	+1.5
BRY				iSn	Sn	16 50 14.3	+0.4
BRY	Bratogost	3.01	316	P	Pn	16 49 39.1	+1.5
BRY				S	Sn	16 50 17.0	+3.1
BRY	Bratogost	3.01	316	ePn	Pn	16 49 39.4	+1.8
LIA	Limnos Island	3.03	106	P	Pn	16 49 37.7	0.0
LOUT	Loutraki	3.04	156	P	Pn	16 49 38.1	+0.2
UPM	Unac-Piva	3.05	323	⇑iPn	Pn	16 49 40.6	+2.4
UPM				eSn	Sn	16 50 18.5	+3.4
EREA	Eretria	3.06	139	P	Pn	16 49 38.9	+0.7
FASA	Fasano	3.07	272	ePn	Pn	16 49 38.2	0.0
ZAGS	Zajecar	3.10	11	ePn	Pn	16 49 39.4	+0.7
TAR1	Taranto	3.14	267	ePn	Pn	16 49 41.1	+1.9
GRUS	Gruza	3.15	351	ePn	Pn	16 49 40.5	+1.1
KDZ	Kurdzhali	3.16	73	eP	Pg	16 49 51.8	+1.8
RDO	Rodhopi	3.16	82	eP	Pn	16 49 40.7	+1.2
SMTH	Samothraki Isl	3.16	94	P	Pn	16 49 39.3	-0.3
MASS	Massafra	3.23	269	ePn	Pn	16 49 40.2	-0.3
AMT	Artemida-Makis	3.25	176	P	Pn	16 49 41.4	+0.6
TRIP	Tripoli	3.31	168	P	Pn	16 49 43.3	+1.5
PTL	Penteli	3.33	144	P	Pn	16 49 42.8	+0.9
ATHU	Athens Univers	3.36	146	P	Pn	16 49 43.4	+1.1
DIM	Dimitrovgrad	3.36	66	P	Pn	16 49 43.9	+1.6
BBLS	Lazići	3.42	335	ePn	Pn	16 49 43.9	+0.7
BBLS	Lazići	3.42	335	⇑iPn	Pn	16 49 43.6	+0.4
BAI	Bari	3.44	277	ePn	Pn	16 49 43.2	-0.1
BAI				Sn	Sn	16 50 22.0	-2.2
VLY	Voula,Athens	3.46	147	P	Pn	16 49 44.6	+0.9
DIVS	Divibare	3.48	343	ePn	Pn	16 49 44.1	+0.1
DIVS	Divibare	3.48	343	ePn	Pn	16 49 44.0	0.0
DIVS	Divibare	3.48	343	⇑iPn	Pn	16 49 44.1	+0.1
SVIS	Svilajnac	3.49	358	ePn	Pn	16 49 45.9	+1.9
TRUS	Trudelj	3.52	348	ePn	Pn	16 49 45.2	+0.7
ALN	Alexandroupoli	3.53	87	eP	Pn	16 49 44.8	+0.2
ALN	Alexandroupoli	3.53	87	ePn	Pn	16 49 44.5	-0.1
ALN	Alexandroupoli	3.53	87	P	Pn	16 49 44.8	+0.2
ALN	Alexandroupoli	3.53	87	eP	Pn	16 49 44.5	-0.1
DID	Didima	3.56	156	P	Pn	16 49 45.4	+0.3
DID	Didima	3.56	156	P	Pn	16 49 45.8	+0.7
DID	Didima	3.56	156	P	Pn	16 49 45.4	+0.3
SG1	Sgolgore (BA)	3.58	273	ePn	Pn	16 49 45.2	-0.1
SG1				Sn	Sn	16 50 27.2	-0.6
ENEZ	Enez	3.62	89	eP	Pn	16 49 46.9	+1.1
ITM	Ithomi	3.62	173	eP	Pn	16 49 49.6	+3.8
ITM	Ithomi	3.62	173	ePn	Pn	16 49 48.4	+2.6
ITM	Ithomi	3.62	173	P	Pn	16 49 47.3	+1.5
KUBS	Kucevo	3.64	3	ePn	Pn	16 49 45.9	-0.2
PUNG	Punghina	3.68	17	⇓iP	Pn	16 49 48.3	+1.6
BOZC	Bozcaada	3.68	103	eP	Pn	16 49 47.2	+0.5
BOZC	Bozcaada	3.68	103	iP	Pn	16 49 44.2	-2.5
SIGR	SIGRI	3.77	113	eP	Pn	16 49 49.0	+1.2
SIGR	SIGRI	3.77	113	P	Pn	16 49 49.0	+1.2
HAPS	Han Pijesak,BI	3.77	332	ePn	Pn	16 49 48.7	+0.7
HAPS	Han Pijesak,BI	3.77	332	ePn	Pn	16 49 49.2	+1.2
PYL	PYLOS	3.88	176	P	Pn	16 49 50.5	+1.1
GELI	Tayfur-Gelibol	3.89	94	eP	Pn	16 49 49.7	+0.2
EZN	Ezine	3.89	103	eP	Pn	16 49 50.1	+0.6
ERIK	Erikli-Kesan	3.89	90	eP	Pn	16 49 49.9	+0.3
TIP	Timpagrande	3.90	247	ePn	Pn	16 49 51.0	+1.2
TIP	Timpagrande	3.90	247	P	Pn	16 49 51.2	+1.4
MDVR	Moldovita	4.01	3	⇓iP	Pn	16 49 50.9	-0.4
KESN	Edirne-Kesan	4.01	88	iP	Pn	16 49 52.2	+0.6
KESN				IAML_P			
	comp=Z,477nm,0.2s						
TEKS	Tekeris	4.01	341	ePn	Pn	16 49 51.9	+0.6
TEKS	Tekeris	4.01	341	ePn	Pn	16 49 52.1	+0.8
PRK	Paraskevi	4.04	111	P	Pn	16 49 52.9	+1.2
BEO	Beograd	4.09	351	P	Pn	16 49 53.6	+1.3
LPK	Lapseki	4.11	94	eP	Pn	16 49 52.2	-0.3
SRE	Strehaia	4.11	18	⇓iP	Pn	16 49 53.2	+0.7
SRE	Strehaia	4.11	18	P	Pn	16 49 53.1	+0.6
EDRB	Edirne	4.17	73	eP	Pn	16 49 53.6	+0.2
HERR	Herculane	4.17	10	⇑iP	Pn	16 49 55.8	+2.4
CHOS	Chios island	4.32	122	eP	Pn	16 49 56.4	+0.9
AYVA	Ayvalik	4.32	108	iP	Pn	16 49 56.5	+1.0
AYVA				IAML_P			
	comp=Z,130nm,0.2s						
CUC	Castrocucco	4.33	261	ePn	Pn	16 49 56.3	+0.7
RKY	Sarkoy-Tekirda	4.39	89	eP	Pn	16 49 57.2	+0.6
SART	Tekirdag	4.40	89	iP	Pn	16 49 57.4	+0.8
SART				IAML_P			
	comp=Z,1µm,0.2s						
KRBG	Karabiga-Canak	4.51	93	eP	Pn	16 49 58.7	+0.6
FRGS	Fruska Gora	4.53	346	ePn	Pn	16 49 58.4	+0.1
FRGS	Fruska Gora	4.53	346	⇑iPn	Pn	16 49 58.5	+0.1
DOB	Doboj	4.64	330	ePn	Pn	16 50 00.6	+0.8
URLA	Izmir	4.69	119	eP	Pn	16 50 02.3	+1.7
URLA	Izmir	4.69	119	iP	Pn	16 50 03.5	+2.9
URLA				IAML_P			
	comp=Z,996nm,0.4s						
GZR	Gura Zlata	4.72	12	⇑iP	Pn	16 50 01.3	+0.2
GZR	Gura Zlata	4.72	12	P	Pn	16 50 01.2	+0.2
BZS	Buzias	4.84	2	ePn	Pn	16 50 02.0	-0.7
BZS	Buzias	4.84	2	⇓iP	Pn	16 50 02.0	-0.7
BZS	Buzias	4.84	2	P	Pn	16 50 01.9	-0.7
APE	Apeiranthos	4.91	138	eP	Pn	16 50 05.9	+2.3
APE	Apeiranthos	4.91	138	⇑iP	Pn	16 50 04.8	+1.2
APE	Apeiranthos	4.91	138	iP	Pn	16 50 04.2	+0.6
CEL	Celeste	4.94	241	ePn	Pn	16 50 04.9	+0.8
EDC	Edincik	4.95	93	eP	Pn	16 50 05.0	+0.9
BLY	Banja Luka	5.04	323	ePn	Pn	16 50 06.3	+1.0
BLY	Banja Luka	5.04	323	ePn	Pn	16 50 06.5	+1.2
ARR	Arges	5.17	26	⇓iP	Pn	16 50 07.6	+0.4
KCTX	Karacabey (Bur	5.33	93	eP	Pn	16 50 10.1	+0.7
VOIR		5.37	29	⇓iP	Pn	16 50 10.5	+0.5
VOIR		5.37	29	P	Pn	16 50 11.6	+1.6
VOIR				pmax	pmax		
	comp=Z,15nm,0.4s						
RASA	Rasa	5.47	49	⇑iP	Pn	16 50 12.8	+1.6
GCAM	G?zelcaml?	5.47	122	eP	Pn	16 50 13.4	+2.1
GCAM	G?zelcaml?	5.47	122	iP	Pn	16 50 14.6	+3.2
SIRR	Siria	5.49	2	⇓iP	Pn	16 50 13.3	+1.7
DURS	Dursunbey	5.55	100	iP	Pn	16 50 14.2	+1.8
DURS				IAML_P			
	comp=Z,626nm,0.4s						
UDBI	Udbina	5.59	314	iPn	Pn	16 50 14.9	+1.9
UDBI				Sn	Sn	16 51 18.2	+0.7
MLR	Muntele Rosu	5.77	34	P	Pn	16 50 17.6	+2.1
	comp=Z,1.3nm,0.3s,baz=241,slow=4.7,SNR=17						
MLR				S	Sn	16 51 22.0	+0.1
	comp=Z,0.4nm,0.3s,baz=119,slow=17,SNR=3.2						
MLR				LR	LR	16 52 59.8	
	comp=Z,194nm,19.7s,baz=274,slow=43						
AYDB	Zeytinkoy-Aydi	5.77	117	eP	Pn	16 50 17.7	+2.1
ISK	Istanbul-Kandi	5.81	85	eP	Pn	16 50 18.1	+2.1
AMRR	Amara	5.82	47	⇑iP	Pn	16 50 18.4	+2.4
PSN	Preselentsi	5.82	58	eP	Pn	16 50 18.2	+2.2
PGOR	Pogoanele	5.83	43	⇓iP	Pn	16 50 18.4	+2.3
DEMI	Demirci	5.89	105	iP	Pn	16 50 19.6	+2.5
DEMI				IAML_P			
	comp=Z,486nm,0.2s						
AYDN	Tasoluk	5.92	120	iP	Pn	16 50 20.8	+3.3
AYDN				IAML_P			
	comp=Z,602nm,0.2s						
BODT	Bodrum	5.92	127	eP	Pn	16 50 20.4	+2.9
DOPR	Dopca	5.95	28	⇑iP	Pn	16 50 20.0	+2.1
MANT	Manisa	5.98	110	ePn	Pn	16 50 19.8	+1.3
MANT	Manisa	5.98	110	iP	Pn	16 50 20.9	+2.4
MANT				IAML_P			
	comp=Z,366nm,0.2s						
KULA	Kula-Manisa	6.05	110	eP	Pn	16 50 21.3	+2.0
DRGR		6.09	9	ePn	Pn	16 50 19.9	+0.1
NVLJ	Novalja	6.12	310	iPn	Pn	16 50 19.9	-0.2
NVLJ				Sn	Sn	16 51 27.7	-2.5
IDI	Anoyia	6.13	152	ePn	Pn	16 50 21.2	+0.7
IDI				S	Sn	16 51 32.0	+1.2
IDI	Anoyia	6.13	152	P	Pn	16 50 23.4	+2.9
	comp=Z,3.1nm,0.3s,baz=307,slow=12,SNR=9.5						
IDI				S	Sn	16 51 32.0	+1.2
	comp=Z,2.3nm,0.3s,baz=107,slow=19,SNR=3.9						
AQU	L'Aquila	6.20	287	ePn	Pn	16 50 21.7	+0.4
AQU	L'Aquila	6.20	287	eP	Pn	16 50 21.7	+0.4
AQU	L'Aquila	6.20	287	ePn	Pn	16 50 22.2	+0.9
TLB	Topalu	6.20	50	⇓iP	Pn	16 50 22.4	+1.1
TLB	Topalu	6.20	50	P	Pn	16 50 22.4	+1.1
TVSB	Tavsanli	6.33	99	eP	Pn	16 50 24.3	+1.2
VAE	Valguarnera	6.35	241	P	Pn	16 50 27.6	+4.3
	comp=Z,0.3nm,0.3s,baz=56,slow=11,SNR=2.0						
VAE				S	Sn	16 51 39.6	+3.5
	comp=Z,1.5nm,0.3s,baz=211,slow=19,SNR=1.9						
TIRR	Tirgusor	6.35	52	ePn	Pn	16 50 23.2	-0.2
TIRR	Tirgusor	6.35	52	eP	Pn	16 50 23.2	-0.2
PLOR	Plostina	6.36	35	⇑iP	Pn	16 50 25.8	+2.3
PLOR	Plostina	6.36	35	P	Pn	16 50 25.8	+2.3
CAVI	Cavuskoy	6.47	92	eP	Pn	16 50 25.7	+0.7
YER	Yerkesik	6.48	122	eP	Pn	16 50 27.1	+1.9
OZLJ	Ozalj	6.49	320	iPn	Pn	16 50 25.5	+0.3
BOJS	Bojanci	6.52	318	iPn	Pn	16 50 26.2	+0.6
BOJS				eSn	Sn	16 51 40.0	-0.2
	comp=Z,464nm,3.5s						
BEHE	Becsehely	6.60	331	ePn	Pn	16 50 30.4	+3.6
BEHE	Becsehely	6.60	331	ePn	Pn	16 50 29.1	+2.2
BEHE				Sn	Sn	16 51 47.1	+4.8
CFR	Carcaliu	6.62	46	⇑iP	Pn	16 50 27.8	+0.8
CFR	Carcaliu	6.62	46	P	Pn	16 50 30.7	+3.7
CFR				pmax	pmax		
	comp=Z,22nm,0.9s						
TIH	Tihany	6.62	339	ePn	Pn	16 50 26.0	-1.1
TIH				Sn	Sn	16 51 46.1	+3.3
CRES	Cresnjev	6.65	321	ePn	Pn	16 50 27.8	+0.3
ARCR	ARCALIA	6.66	18	⇓iP	Pn	16 50 29.5	+1.9
KHAL	Karahalli	6.70	108	iP	Pn	16 50 31.2	+2.9
KHAL				IAML_P			
	comp=Z,386nm,0.3s						
TURN	Turunc	6.84	122	eP	Pn	16 50 30.6	+0.5
DALY	Dalyan (Mula)	6.91	123	eP	Pn	16 50 33.7	+2.7
BUD	Budapest	6.92	347	P	Pn	16 50 32.6	+1.5
BUD				pmax	pmax		
	comp=Z,74nm,0.6s						
BUD	Budapest	6.92	347	ePn	Pn	16 50 29.0	-2.1
BUD				Sn	Sn	16 51 50.0	+0.1
KARP	Karpathos	6.92	137	ePn	Pn	16 50 32.6	+1.4
GULT	Gulveren	6.95	90	eP	Pn	16 50 33.9	+2.2
CEY	Cerknica	7.10	317	ePn	Pn	16 50 34.3	+0.6
PSZ	Piszkesteto	7.22	352	ePn	Pn	16 50 35.6	+0.2
PSZ	Piszkesteto	7.22	352	eP	Pn	16 50 35.6	+0.2
PSZ	Piszkesteto	7.22	352	ePn	Pn	16 50 36.1	+0.7
LJU	Ljubljana	7.26	319	ePn	Pn	16 50 35.6	-0.2
WDD	Wied Dalam	7.31	230	ePn	Pn	16 50 37.8	+1.2
BUR04	Bucovina Ar. S	7.37	21	ePn	Pn	16 50 37.9	+0.4
BUR08	Bucovina Ar. S	7.39	20	ePn	Pn	16 50 38.8	+1.1
TRI	Trieste	7.44	314	ePn	Pn	16 50 39.6	+1.3
TRI	Trieste	7.44	314	eP	Pn	16 50 39.6	+1.3
SOKA	Soboth	7.48	324	ePn	Pn	16 50 39.7	+0.7
	comp=Z,20nm,0.6s,SNR=13						
SOKA				Sn	Sn	16 52 08.3	+4.3
	comp=Z,6.7nm,0.6s						
OBKA	Obir	7.58	321	ePn	Pn	16 50 41.5	+1.2
	comp=Z,7.3nm,0.4s						
ISP	Isparta	7.67	110	ePn	Pn	16 50 41.6	0.0
ISP	Isparta	7.67	110	eP	Pn	16 50 41.6	0.0
SOP	Sopron	7.73	335	ePn	Pn	16 50 44.1	+1.8
SOP				Sn	Sn	16 52 10.0	+0.1
ARSA	Arzberg	7.73	329	ePn	Pn	16 50 43.2	+0.9
	comp=Z,12nm,0.8s						
AKAS	Kas	7.87	123	eP	Pn	16 50 52.9	+8.5
UZH	Uzhgorod	7.88	4	eP	Pn	16 50 43.6	-0.7
VYHS	Vyhne	7.93	348	eP	Pn	16 50 46.1	+1.1
VYHS				e		16 52 12.9	
VYHS	Vyhne	7.93	348	ePN	Pn	16 50 46.1	+1.1
VYHS				eSN	Sn	16 52 12.9	-2.0
KORT	Korkueli	7.94	115	eP	Pn	16 50 47.1	+1.8
ZST	Bratislava	8.03	339	eP	Pn	16 50 46.9	+0.6
ZST	Bratislava	8.03	339	ePN	Pn	16 50 46.9	+0.6
KOLL	Kolacno	8.09	346	eSN	Sn	16 52 22.6	+3.9
MYKA	Terra Mystica	8.11	319	ePn	Pn	16 50 48.8	+1.3
	comp=Z,4.1nm,0.4s						
MODS	Modra-Piesok	8.14	340	eP	Pn	16 50 49.5	+1.5
MODS				e		16 52 20.1	
MODS	Modra-Piesok	8.14	340	ePN	Pn	16 50 49.5	+1.5
MODS				eSN	Sn	16 52 20.1	-0.1
CONA	Conrad Observa	8.17	333	ePn	Pn	16 50 47.8	-0.6
	comp=Z,14nm,1.0s						
KIS	Kishinev	8.21	38	eP	Pn	16 50 48.0	-0.8
KIS				LRM	MLR	16 54 32.0	
	comp=Z,500nm,12.0s						
KIS	Kishinev	8.21	38	eP	Pn	16 50 48.0	-0.8
KIS				MLR	MLR		
	comp=Z,500nm,8.0s						
KIS				MLR	MLR		
	comp=N,500nm,12.0s						
LANS	Liptovska Anna	8.48	351	eP	Pn	16 50 56.3	+3.6
LANS				e		16 52 32.8	
LANS	Liptovska Anna	8.48	351	ePN	Pn	16 50 56.3	+3.6
LANS				eSN	Sn	16 52 32.8	+4.2
KBA	Koelnbreinsper	8.57	320	ePn	Pn	16 50 54.7	+0.8
	comp=N,1.8nm,0.3s,SNR=5.1						
KBA				Sn	Sn	16 52 33.4	+2.7
	comp=N,6.8nm,0.7s						
KBA	Koelnbreinsper	8.57	320	P	Pn	16 50 57.0	+3.1
KBA				pmax	pmax		
	comp=Z,28nm,1.0s						
NIE	Niedzica	8.68	355	eP	Pn	16 50 58.3	+3.0
NIE	Niedzica	8.68	355	eP	Pn	16 50 58.3	+3.0
MOA	Molln	8.72	327	ePn	Pn	16 50 57.1	+1.2
	comp=Z,6.0nm,0.4s,SNR=17						
MOA				Sn	Sn	16 52 32.7	-1.7
	comp=Z,2.6nm,0.5s						
BR231	Keskin MP Arra	8.75	92	ePn	Pn	16 50 55.8	-0.6
ABTA	Abfaltersbach	8.77	316	ePn	Pn	16 50 57.5	+0.9
	comp=Z,4.1nm,0.4s,SNR=6.0						
KRUC	Moravsky	9.01	339	ePN	Pn	16 51 02.8	+3.0
VRAC	Vranov	9.18	340	ePN	Pn	16 51 04.8	+2.6
VRAC	Vranov	9.18	340	P	Pn	16 51 03.8	+1.6
	comp=Z,0.3nm,0.3s,baz=160,slow=9.7,SNR=12						
VRAC				S	Sn	16 52 43.3	-2.3
	comp=Z,0.4nm,0.3s,baz=104,slow=12,SNR=2.6						

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VRAC                                    LR     LR      16 55 43.3
       comp=Z,65nm,21.8s,baz=158,slow=45
OKC    Ostrava-Krasne      9.35 347 ePN    Pn      16 51 06.6 +2.2
OKC                                 eSN    Sn      16 52 50.3 +0.7
OKC    Ostrava-Krasne      9.35 347 eP     Pn      16 51 06.6 +2.2
OKC                                 e              16 52 50.3
MORC   Moravsky Berou      9.40 345 ePn    Pn      16 51 06.7 +1.4
MORC   Moravsky Berou      9.40 345 ePN    Pn      16 51 08.5 +3.3
BR131  Keskin Array S      9.42  92 ePn    Pn      16 51 05.2 -0.4
BRTR   Keskin Array B      9.42  92 eP     Pn      16 51 06.9 +1.2
BRTR   Keskin Array B      9.42  92  P     Pn      16 51 06.2 +0.6
       comp=Z,0.4nm,0.3s,baz=269,slow=9.8,SNR=15
BRTR                                 S     Sn      16 52 50.1 -1.7
       comp=Z,0.1nm,0.3s,baz=284,slow=19,SNR=2.4
TREC   Trest               9.49 336  AMS   AMS     16 55 20.0
       comp=Z,500nm,7.7s
OJC    Ojcow               9.51 354 ePn    Pn      16 51 07.4 +0.7
OJC    Ojcow               9.51 354 eP     Pn      16 51 07.4 +0.7
WTTA   Wattenberg          9.56 316 ePn    Pn      16 51 08.4 +0.9
       comp=Z,4.6nm,0.3s
WTTA                                 Sn    Sn      16 52 56.0 +0.9
       comp=Z,19nm,0.6s
WATA   Walderalm           9.64 316 ePn    Pn      16 51 09.4 +0.9
       comp=Z,14nm,0.4s,SNR=15
GEA0   GERESS Array S      9.73 328 ePn    Pn      16 51 11.0 +1.2
GEC2   GERESS Array S      9.74 328 ePn    Pn      16 51 10.7 +0.8
GEC2   GERESS Array S      9.74 328 eP     Pn      16 51 10.7 +0.8
GERES  GERESS Array B      9.74 328  P     Pn      16 51 11.6 +1.7
       comp=Z,0.6nm,0.3s,baz=151,slow=9.9,SNR=23
GERES                                S     Sn      16 52 58.7 -0.8
       comp=Z,0.1nm,0.3s,baz=137,slow=14,SNR=2.0
GERES                                LR    LR      16 55 51.5
       comp=Z,129nm,20.1s,baz=156,slow=43
SQTA   Sankt Quirin        9.76 315 ePn    Pn      16 51 11.2 +1.0
       comp=Z,12nm,0.4s,SNR=15
SQTA                                 Sn    Sn      16 52 59.4 -0.6
       comp=Z,9.1nm,0.6s
KRLC   Kraliky             9.85 342 eSN    Sn      16 53 03.9 +1.9
MOTA   Moosalm             9.89 315 ePn    Pn      16 51 13.0 +1.0
       comp=Z,15nm,0.7s,SNR=7.8
FETA   Feichten            9.90 313 ePn    Pn      16 51 12.5 +0.3
       comp=Z,5.9nm,0.7s,SNR=7.6
FETA                                 Sn    Sn      16 53 03.2 -0.5
       comp=Z,7.8nm,0.6s
FUORN  Ofenpass-Fuorn      9.95 310 ePn    Pn      16 51 13.3 +0.3
KHC    Kasperske Hory     10.02 329 ePn    Pn      16 51 15.3 +1.6
KHC    Kasperske Hory     10.02 329 ePN    Pn      16 51 14.7 +1.0
KHC                                 ex     x       16 51 23.5
KHC                                 eSN    Sn      16 53 06.6 +0.4
KHC                                 ex     x       16 53 24.6
KHC                                  AMS   AMS     16 55 40.0
       comp=Z,400nm,7.8s
KHC    Kasperske Hory     10.02 329 eP     Pn      16 51 15.3 +1.6
RETA   Reutte             10.16 315 ePn    Pn      16 51 16.8 +1.1
       comp=Z,5.7nm,0.7s
RETA                                 Sn    Sn      16 53 09.4 -0.4
       comp=Z,13nm,0.6s
DPC    Dobruska-Polom     10.21 341 ePN    Pn      16 51 17.9 +1.6
DPC                                 eSN    Sn      16 53 12.5 +1.6
DPC                                  AMS   AMS     16 56 00.0
       comp=Z,400nm,7.6s
DPC    Dobruska-Polom     10.21 341 eP     Pn      16 51 17.9 +1.6
DPC                                 eS     Sn      16 53 12.5 +1.6
DPC                                  MLR   MLR
       comp=Z,400nm,7.6s
GOPC   GO Pecny, Ondr     10.25 335  AMS   AMS     16 55 30.0
       comp=Z,400nm,8.2s
DAVOX  Davos/Dischmat     10.26 310  P     Pn      16 51 18.3 +1.2
       comp=Z,1.6nm,0.3s,baz=132,slow=18,SNR=20
DAVOX                                LR    LR      16 56 06.8
       comp=Z,171nm,19.8s,baz=87,slow=42
PRU    Pruhonice          10.39 335  AMS   AMS     16 55 40.0
       comp=Z,400nm,6.9s
TUE    Stuetta            10.42 307 ePn    Pn      16 51 20.3 +0.9
UPC    Upice              10.43 341  AMS   AMS     16 55 50.0
       comp=Z,300nm,7.9s
DAVA   Damuels            10.53 312 ePn    Pn      16 51 21.7 +0.9
       comp=Z,2.9nm,0.3s
DAVA                                 Sn    Sn      16 53 18.8 -0.2
       comp=Z,6.5nm,0.7s
KEST   Kesra              10.73 246  P     Pn      16 51 27.4 +3.9
       comp=Z,0.3nm,0.3s,baz=232,slow=19,SNR=2.4
KIEV   Kiev               11.31  26 i P    Pn      16 51 33.7 +2.4
AKASG  Malin Array Be     11.33  26  P     Pn      16 51 32.8 +1.3
       comp=Z,0.4nm,0.3s,baz=211,slow=12,SNR=3.1
GRA1   Grafenberg Arr     11.43 325 ePn    Pn      16 51 33.8 +0.8
GRF    Grafenberg Arr     11.43 325 eP     Pn      16 51 33.8 +0.8
GRFO   Grafenberg         11.43 325 ePn    Pn      16 51 33.6 +0.6
GRFO   Grafenberg         11.43 325 eP     Pn      16 51 33.6 +0.6
SENIN  Lac Senin/Sane     11.64 303 ePn    Pn      16 51 35.4 -0.7
STU    Stuttgart          11.78 317 ePn    Pn      16 51 37.2 -0.6
STU    Stuttgart          11.78 317 eP     Pn      16 51 37.2 -0.6
BFO    Black Forest       11.98 313 ePn    Pn      16 51 39.8 -0.8
BFO    Black Forest       11.98 313 eP     Pn      16 51 39.8 -0.8
CLL    Collm              12.03 334 ePP    Pn      16 51 49.0 +7.9
CLL                                 e              16 51 57.0
       comp=Z,4.0nm,0.8s
CLL    Collm              12.03 334 eP     Pn      16 51 49.0 +7.9
SUW    Suwalki            13.30   5 ePn    Pn      16 51 56.6 -1.8
SUW    Suwalki            13.30   5 eP     Pn      16 51 56.6 -1.8
MMAI   Mount Meron Ar     13.62 120  P     Pn      16 52 03.6 +0.7
       comp=Z,0.3nm,0.3s,baz=246,slow=43,SNR=2.5
KLNR   Kaliningrad        13.86 357 i P    Pn      16 52 05.9 -0.2
RGN    Rugen              14.80 341 ePn    Pn      16 52 18.4 -0.5
IIGN   Ignalina           14.93  11 eP     P       16 52 24.9 -1.4
IIGN                                 IAmb  IAmb    16 52 30.6
       comp=Z,12nm,1.1s
IDID   Didziasalis        14.97  12 eP     P       16 52 25.3 -1.5
IDID                                 IAmb  IAmb    16 52 28.6
       comp=Z,4.9nm,0.7s
ISAL   Salakas            15.13  10 eP     P       16 52 27.3 -1.3
ISAL                                 IAmb  IAmb    16 52 30.6
       comp=Z,5.0nm,0.6s
DOMR   Dombai             15.24  74 i P    P       16 52 31.1 +1.0
EIL    Elat               15.65 131  P     Pn      16 52 30.8 +0.5
       comp=Z,0.3nm,0.3s,baz=63,slow=9.0,SNR=2.8
SHA1   Shidzhatmaz        16.01  72 i P    P       16 52 39.2 +0.4
NEY    Neytrino           16.04  74 i P    P       16 52 40.4 +1.4
KIV    Kislovodsk         16.05  72 eP     P       16 52 39.0  0.0
KIV                                  pmax  pmax
       comp=Z,8.0nm,1.1s
VSR    Storozhevoye       16.13  44 eP     Pn      16 52 34.3 -2.1
VSR                                  pmax  pmax
       comp=Z,10.0nm,1.2s
KBZ    Khabaz             16.19  72  P     P       16 52 42.0 +1.6
       comp=Z,0.1nm,0.3s,baz=268,slow=8.2,SNR=4.8
PYA1   Pyatigorsk         16.35  71 i P    P       16 52 44.5 +2.2
GOF    Gofitskoye         16.41  68⇑iP     P       16 52 44.8 +1.9
GOF                                  pmax  pmax
       comp=Z,20nm,0.8s
SIRT   Sirnak             16.65  95 ePn    Pn      16 52 41.3 -2.0
       comp=Z,41nm,1.2s
LPSR   Galich'ya Gora     16.82  39 eP     Pn      16 52 42.3 -2.8
LPSR                                 pmax  pmax
       comp=Z,9.0nm,1.2s
VRH    Novokhopyorsk      17.50  47 eP     P       16 52 55.1 +0.3
VRH                                  pmax  pmax
       comp=Z,8.0nm,1.0s
OBN    Obninsk            17.52  30 i P    P       16 52 55.7 +0.6
OBN                                  pmax  pmax
       comp=Z,6.0nm,0.9s
VSU    Vasula             18.03   9 i P    P       16 53 01.1 +0.5
VSU                                  pmax  pmax
       comp=Z,26nm,0.9s
VSU    Vasula             18.03   9⇑eP     Pn      16 52 59.4 -0.8
VSU                                  IAmb  IAmb    16 53 01.9
       comp=Z,28nm,0.7s
GROC   Groznyy            18.29  74 eP     Pn      16 53 02.1 -1.4
GROC                                 S     Sn      16 56 26.1 -1.6
GROC                                 pmax  pmax
       comp=Z,22nm,1.4s
MOS    Moscow             18.39  30 eP     Pn      16 53 03.2 -1.4
DVE    Vedeno             18.53  75 i P    Pn      16 53 08.9 +2.3
DVE                                  pmax  pmax
       comp=Z,7.0nm,0.8s
BTLR   Botlikh            18.61  76 i P    Pn      16 53 11.2 +3.6
BTLR                                 pmax  pmax
       comp=Z,7.0nm,0.9s
GNBR   Gunib              19.18  77 i P    Pn      16 53 16.9 +2.5
GNBR                                 pmax  pmax
       comp=Z,12nm,0.9s
ESDC   Sonseca Array      19.38 275  P     Pn      16 53 16.6 -0.2
       comp=Z,0.1nm,0.3s,baz=82,slow=11,SNR=3.4
AKT    Akhty              19.83  79 i P    Pn      16 53 22.2 -0.1
AKT                                  pmax  pmax
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       comp=Z,6.0nm,1.0s
HFS    Hagfors            19.96 349  P     P       16 53 21.0 -0.9
HFS    Hagfors            19.96 349  P     P       16 53 21.0 -0.9
       comp=Z,0.6nm,0.3s,baz=169,slow=11,SNR=14
NC602  NORSAR Array S     20.89 346 eP     P       16 53 30.5 -1.4
NORES  NORESS Array B     20.89 346  P     Pn      16 53 34.1 -0.3
FINES  FINESS Array B     20.89   6 eP     P       16 53 31.6 -0.3
FINES                                pmax  pmax
       comp=Z,4.0nm,0.7s
FINES  FINESS Array B     20.89   6  P     P       16 53 30.9 -1.0
       comp=Z,3.8nm,0.7s,baz=174,slow=12,SNR=14
FINES                                LR    LR      17 02 22.1
       comp=Z,68nm,18.5s,baz=202,slow=39
FIA1   FINESS Array S     20.89   6 eP     P       16 53 30.3 -1.6
NC405  NORSAR Array S     21.21 347 eP     P       16 53 33.9 -1.5
NB201  NORSAR Array S     21.23 346 eP     P       16 53 35.0 -0.6
NB2    NORSAR Subarra     21.23 346  P     P       16 53 35.0 -0.6
       comp=Z,3.9nm,0.8s,baz=151,slow=11
NOA    NORSAR Array B     21.23 346  P     P       16 53 35.0 -0.6
       comp=Z,3.1nm,0.7s,baz=174,slow=16,SNR=21
NOA                                  LR    LR      17 02 00.4
       comp=Z,34nm,20.2s,baz=165,slow=37
NBO00  NORSAR Array S     21.30 346 eP     P       16 53 36.5 +0.1
NC303  NORSAR Array S     21.38 347 eP     P       16 53 37.0 -0.2
NC204  NORSAR Array S     21.53 346 eP     P       16 53 39.3 +0.4
EKA    Eskdalemuir Ar     21.78 320  P     P       16 53 40.5 -1.0
       comp=Z,3.0nm,0.5s,baz=118,slow=10,SNR=19
KLMR   Klimovskoe         22.98  23 eP     P       16 53 52.8 -1.5
KLMR                                 pmax  pmax
       comp=Z,11nm,0.9s
KLMR   Klimovskoe         22.98  23 eP     P       16 53 52.8 -1.5
KLMR                                 AMP           16 53 57.4
       comp=Z,11nm,0.9s
KIRV   Kirov              25.13  35  P     P       16 54 12.5 -2.1
       comp=Z,8.5nm,0.8s,baz=233,slow=11,SNR=4.2
KIRV                                 LR    LR      17 05 52.0
       comp=Z,29nm,19.2s,baz=165,slow=41
TMCR   Tamitsa            25.36  17 eP     P       16 54 15.1 -1.5
TMCR                                 pmax  pmax
       comp=Z,19nm,0.6s
PRGR   Permogore          25.54  27 eP     P       16 54 18.1 -0.2
PRGR                                 pmax  pmax
       comp=Z,10.0nm,0.7s
AKTO   Aktyubinsk         27.13  57  P     P       16 54 32.3 -0.6
       comp=Z,4.0nm,0.8s,baz=263,slow=10,SNR=12
AKTO                                 LR    LR      17 07 18.3
       comp=Z,45nm,19.5s,baz=284,slow=41
ABKAR  Akbulak array      28.28  60 eP     P       16 54 43.4 +0.2
ARU    Arti               28.70  44 eP     P       16 54 46.7 -0.1
       comp=Z,6.0nm,1.0s
ARU    Arti               28.70  44c iP    P       16 54 47.1 +0.3
ARU                                                16 55 39.2
ARU                                                16 57 54.6
ARU                                  S     S       16 59 37.0 +1.2
ARU                                  pmax  pmax
       comp=Z,8.0nm,1.2s
ARCES  ARCESS Array B     28.91   3  P     P       16 54 47.3 -1.2
       comp=Z,0.8nm,0.5s,baz=192,slow=10,SNR=13
ARCES                                PcP   PcP     16 57 55.8 -1.5
       comp=Z,1.9nm,0.9s,baz=180,slow=0.7,SNR=3.9
SVE    Sverdlovsk         29.91  44 eP     P       16 54 58.6 +1.1
SVE                                  pmax  pmax
       comp=Z,11nm,0.9s
TOA0   Torodi Ar. Sit     32.48 218 eP     P       16 55 20.8 +0.2
TORD   Torodi Ar. Bea     32.48 218  P     P       16 55 20.5 -0.1
       comp=Z,4.8nm,0.9s,baz=22,slow=9.5,SNR=20
BRVK   Borovoye           34.91  53 i P    P       16 55 41.8 +0.5
BRVK                                 pmax  pmax
       comp=Z,5.0nm,1.0s
CHGR   Chuyangaron        36.45  77 eP     P       16 55 55.0 +0.1
       comp=Z,8.1nm,0.9s
GAR    Garm               37.19  76 eP     P       16 56 01.6 +0.4
       comp=Z,10nm,1.0s
GAR    Garm               37.19  76 eP     P       16 56 01.6 +0.4
GAR                                  pmax  pmax
       comp=Z,10.0nm,1.0s
AAK    Ala-Archa          39.15  69 i P    P       16 56 19.8 +2.1
AAK                                  pmax  pmax
       comp=Z,2.0nm,1.3s
DBIC   Dimbokro           41.27 222  P     P       16 56 35.0 -0.3
DBIC   Dimbokro           41.27 222  P     P       16 56 35.0 -0.3
       comp=Z,0.8nm,0.4s,baz=1.3,slow=7.9,SNR=3.3
NVS    Novosibirsk        42.44  49 eP     P       16 56 46.5 +2.0
MK31   Makanchi Array     43.41  61 eP     P       16 56 52.0 -0.5
MK31   Makanchi Array     43.41  61 eP     P       16 56 52.0 -0.5
MKAR   Makanchi Array     43.41  61 eP     P       16 56 52.0 -0.5
       comp=Z,8.3nm,0.8s
MKAR   Makanchi Array     43.41  61 eP     P       16 56 52.4 -0.1
MKAR                                 pmax  pmax
       comp=Z,1.0nm,0.6s
MKAR   Makanchi Array     43.41  61  P     P       16 56 52.1 -0.3
       comp=Z,1.0nm,0.6s,baz=284,slow=7.3,SNR=14
MK01   Makanchi Array     43.42  61 eP     P       16 56 52.0 -0.5
ZAA0   Zalesovo Array     43.48  50 eP     P       16 56 52.1 -0.8
       comp=Z,2.2nm,0.6s
ZALV   Zalesovo Beam      43.48  50 eP     P       16 56 52.2 -0.7
ZALV   Zalesovo Beam      43.48  50 eP     P       16 56 53.3 +0.4
ZALV                                 pmax  pmax
       comp=Z,2.0nm,0.4s
ZALV   Zalesovo Beam      43.48  50  P     P       16 56 52.0 -0.9
       comp=Z,2.1nm,0.4s,baz=284,slow=8.0,SNR=12
NRIK   Noril'sk           44.18  28  LR    LR      17 19 00.7
       comp=Z,24nm,19.3s,baz=61,slow=41
WMQ    Urumqi             47.95  63 eP     P       16 57 28.3 -0.2
WMQ                                  sP    sP      16 57 36.3 +3.8
WMQ                                  pmax  pmax
       comp=Z,12nm,0.7s
WMQ                                  pmax  pmax
       comp=Z,200nm,4.9s
PYUN   Piuthan            51.39  84 eP     P       16 57 53.8 -1.3
       comp=Z,4.2nm,0.6s
DANN   Dangsing           51.84  83 eP     P       16 57 57.8 -0.8
       comp=Z,10nm,0.6s
KOLN   Koldanda           52.02  84 eP     P       16 57 58.5 -1.3
       comp=Z,2.7nm,0.5s
DMN    Daman              53.25  83 eP     P       16 58 08.0 -0.9
       comp=Z,3.6nm,0.6s
PKIN   Phulchoki          53.48  83 eP     P       16 58 09.7 -1.0
       comp=Z,2.4nm,0.5s
PKI    Pulchoki           53.49  83 eP     P       16 58 10.0 -0.9
       comp=Z,2.9nm,0.7s
GUN    Gumba              53.67  82 eP     P       16 58 11.5 -0.7
       comp=Z,7.1nm,0.8s
RAMN   Ramite             54.72  83 eP     P       16 58 18.3 -1.4
       comp=Z,9.5nm,0.6s
TLY    Talaya             55.05  49 i P    P       16 58 23.0 +1.5
SCHQ   Schefferville      57.03 316  P     P       16 58 34.7 -0.9
       comp=Z,1.7nm,0.5s,baz=50,slow=3.5,SNR=10
SONA1  Songino Array      58.31  52 eP     P       16 58 44.1 -0.7
SONM   Songino Array      58.31  52 eP     P       16 58 46.4 +1.6
SONM                                 pmax  pmax
       comp=Z,1.0nm,0.8s
SONM   Songino Array      58.31  52  P     P       16 58 44.0 -0.8
       comp=Z,0.8nm,0.8s,baz=287,slow=11,SNR=7.2
ULN    Ulaanbaatar        58.69  52 i P    P       16 58 47.5  0.0
ULN                                  pmax  pmax
       comp=Z,1.0nm,1.5s
LZH    Lanzhou            62.46  65 eP     P       16 59 15.5 +2.0
LZH                                  pP    sP      16 59 18.6 +1.0
LZH                                  sP    pP      16 59 20.3 +4.0
LZH                                 ePP    PP      17 01 34.8 +4.2
LZH                                  pmax  pmax
       comp=Z,20nm,1.3s
LZH                                  pmax  pmax
       comp=Z,68nm,7.8s
LZH                                  LR    LR
       comp=N,140nm,15.0s
LZH                                  LR    LR
       comp=E,150nm,15.2s
LZH                                  LR    LR
       comp=Z,190nm,19.0s
HHC    Hu-ho-hao-te       65.03  57 eP     P       16 59 30.4 +0.2
HHC                                  pmax  pmax
       comp=Z,7.0nm,1.1s
CD2    Chengdu            65.21  70 eP     P       16 59 30.0 -1.5
KMI    Kunming            67.77  75  P     P       16 59 51.8 +3.6
KMI                                  pmax  pmax
       comp=Z,7.0nm,0.9s
CMAR   Chiang Mai Arr     68.89  83 eP     P       16 59 56.8 +1.8
CMAR                                 pmax  pmax
       comp=Z,1.0nm,0.9s
CMAR   Chiang Mai Arr     68.89  83  P     P       16 59 52.7 -2.3
       comp=Z,1.1nm,0.8s,baz=304,slow=8.1,SNR=8.0
BOSA   Boshof             69.13 176  P     P       16 59 55.7 -0.5
       comp=Z,2.7nm,0.8s,baz=355,slow=3.3,SNR=4.8
YKA    Yellowknife Ar     71.18 340  P     P       17 00 07.8 -0.5
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       comp=Z,0.6nm,0.6s,baz=35,slow=5.5,SNR=10.0
KLR    Kul'dur            71.45  40 i P    P       17 00 10.6 +0.4
ULM    Lac du Bonnet      74.01 324  LR    LR      17 36 37.5
       comp=Z,41nm,19.6s,baz=4.0,slow=39
ILAR   Eielson Array      74.39 355 eP     P       17 00 27.6 +0.2
ILAR                                 pmax  pmax
       comp=Z,1.0nm,0.8s
ILAR   Eielson Array      74.39 355  P     P       17 00 26.9 -0.4
       comp=Z,0.5nm,0.8s,baz=344,slow=3.6,SNR=5.5
NJ2    Nanjing            74.94  61 eP     P       17 00 32.8 +1.7
NJ2                                  pmax  pmax
       comp=Z,10.0nm,0.5s
BDFB   Brasilia           85.24 245  P     P       17 01 27.1 +0.1
       comp=Z,2.7nm,0.7s,baz=112,slow=6.9,SNR=5.0
PDAR   Pinedale Array     85.78 326  P     P       17 01 28.0 -1.6
       comp=Z,0.2nm,0.6s,baz=41,slow=2.9,SNR=2.5
PDAR                                 LR    LR      17 39 32.6
       comp=Z,17nm,20.9s,baz=330,slow=35
TXAR   Lajitas Array      93.66 314  P     P       17 02 05.9 -0.9
       comp=Z,0.6nm,0.7s,baz=54,slow=4.6,SNR=8.1
ASAR   Alice Springs     121.75  95  PKP   PKPdf   17 07 42.1 -2.2
       comp=Z,0.7nm,0.9s,baz=343,slow=2.9,SNR=3.2
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IDC ***17*** *16:55:03.7±1.4, 24°.03N×120°.86E, h0^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.4/46, mbtmp3.5/6, ML3.1/1, Error ellipse: s-maj=70.7km s-min=24.0km az=68.0*
TAP ***17*** *16:55:03.9, 24°.35N×121°.44E, h7^{km}, ML3.5, C*
JMA ***17*** *16:55:04.2, 24°.35N×121°.41E, h4^{km}, M3.0*
ISC 17 16:55:04.3±0.8**, 24°.36N**±0°.01×**121°.45E**±0°.01**, h6**^{km}±6^{km}**, n119, σ0ˢ.77**/187**, mb3.4**/5**, 27C-2D, Taiwan**

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Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                    Op     ISC      h  m  s   ISC
NNSB   Datong              0.10 319 ⇓P     Pg      16 55 06.6  0.0
       baz=328
NNSB                                 S     Sg      16 55 08.0 -0.1
       baz=328
NNS    Nan Shan            0.11 320  P     Pg      16 55 06.8  0.0
       baz=331
NNS                                  S     Sg      16 55 08.5  0.0
       baz=331
ETLH   Xiulin Townshi      0.15 169  P     Pg      16 55 08.0 +0.6
       baz=164
ETLH                                 S     Sg      16 55 10.2 +0.6
       baz=164
NACB   Ninganchiao         0.22 144  P     Pg      16 55 09.3 +0.5
       baz=140
NACB                                 S     Sg      16 55 12.3 +0.6
       baz=140
NDT    Datong Townshi      0.25  13⇑iP     Pg      16 55 09.6 +0.3
       baz=16
NDT                                  S     Sg      16 55 13.3 +0.6
       baz=16
WHF    Hehuan Shan         0.27 219 ⇑P     Pg      16 55 09.7 -0.1
       baz=206
WHF                                  S     Sg      16 55 13.2 -0.2
       baz=206
TWT    Tachien             0.27 248  P     Pg      16 55 09.8  0.0
       baz=238
TWT                                  S     Sg      16 55 13.6 +0.2
       baz=238
ENA    Nanau               0.27  75⇑iP     Pg      16 55 09.9 +0.2
       baz=75
ENA                                 eS     Sg      16 55 14.3 +0.9
       baz=75
NANB   Nanao               0.28  75 ⇑P     Pg      16 55 09.9  0.0
       baz=74
NANB                                eS     Sg      16 55 13.7 +0.1
       baz=74
TDCB   Techi               0.29 249 ⇑P     Pg      16 55 10.0  0.0
       baz=239
TDCB                                 S     Sg      16 55 13.6 -0.2
       baz=239
ENTT   Nioudou             0.30  20⇑iP     Pg      16 55 10.6 +0.3
       baz=15
ENTT                                i S    Sg      16 55 15.0 +0.7
       baz=15
TWD    Chiawan             0.30 154 eP     Pg      16 55 10.7 +0.4
       baz=150
TWD                                 eS     Sg      16 55 15.0 +0.7
       baz=150
YHNB   Yeheng              0.32 348 ⇑P     Pg      16 55 11.1 +0.5
       baz=339
YHNB                                 S     Sg      16 55 14.8 -0.2
       baz=339
NSK    Sanguang            0.33 345  P     Pg      16 55 11.3 +0.4
       baz=348
CHGB   Renai               0.39 221 ⇑P     Pg      16 55 11.7 -0.3
       baz=218
CHGB                                 S     Sg      16 55 17.5 +0.4
       baz=218
HWA    Hwalien             0.40 160 eP     Pb      16 55 13.1 -0.8
       baz=146
TWE    Neicheng            0.41  28 ⇑P     Pg      16 55 12.7 +0.4
       baz=45
TWE                                 eS     Sg      16 55 18.3 +0.5
       baz=45
NWLT   Wulai               0.42   6  P     Pg      16 55 12.9 +0.4
       baz=2.0
NWLT                                eS     Sg      16 55 18.5 +0.4
       baz=2.0
TWC    Suao                0.44  55 ⇑P     Pg      16 55 13.0 +0.1
       baz=48
TWC                                  S     Sg      16 55 19.2 +0.6
       baz=48
WHP    Taichung City       0.47 261⇑iP     Pg      16 55 14.0 +0.6
       baz=260
WHP                                  S     Sg      16 55 19.9 +0.3
       baz=260
ENLB   Shoufeng            0.47 163  P     Pg      16 55 13.8 +0.3
       baz=160
ENLB                                 S     Sg      16 55 20.2 +0.6
       baz=160
OWD    Renai               0.47 212⇑iP     Pg      16 55 13.1 -0.4
       baz=209
OWD                                  S     Sg      16 55 18.7 -1.0
       baz=209
ILA    Ilan                0.49  33 eP     Pg      16 55 13.7 -0.2
       baz=43
LIOB   Emei                0.49 306  P     Pg      16 55 14.1 +0.3
       baz=309
LIOB                                 S     Sg      16 55 20.6 +0.4
       baz=309
NSTT   Nanjuang            0.49 304 ⇑P     Pb      16 55 14.7 -0.7
       baz=307
NSTT                                 S     Sg      16 55 21.2 +0.9
       baz=307
ESL    Shilin              0.54 182 ⇑P     Pg      16 55 14.7  0.0
       baz=178
ESL                                 eS     Sg      16 55 21.5 -0.3
       baz=178
NTC    Toucheng            0.60  35 eP     Pg      16 55 15.7 -0.3
       baz=45
NHDH   Xindian Distri      0.61   6 eP     Pb      16 55 17.0 -0.4
       baz=20
NHDH                                eS     Sg      16 55 24.5 +0.4
       baz=20
SBCB   Hsinchu             0.61 316 eP     Pb      16 55 17.5 +0.1
       baz=317
TATO   Taipei              0.62   3 eP     Pb      16 55 16.8 -0.8
       baz=17
TATO                                eS     Sg      16 55 24.3 -0.1
       baz=17
TWQ1   Liyutan             0.62 269 ⇑P     Pb      16 55 17.3 -0.2
       baz=270
TWQ1                                eS     Sg      16 55 25.0 +0.7
       baz=270
HSN    Hsinchu             0.62 315 eP     Pb      16 55 17.8 +0.1
       baz=321
NMLH   Miaoli              0.63 287 eP     Pb      16 55 17.9 +0.1
       baz=288
NSY    Sanyi               0.63 276⇑iP     Pb      16 55 18.0 +0.2
       baz=276
NSY                                  S     Sb      16 55 26.2 -0.7
       baz=276
TWA    Mucha               0.63  11 ⇑P     Pb      16 55 17.2 -0.6
       baz=13
TWA                                 eS     Sg      16 55 25.4 +0.6
       baz=13
EOS1   EOS1                0.65  72 eP     Pb      16 55 17.3 -0.7
       baz=72
EOS1                                eS     Sb      16 55 27.3  0.0
       baz=72
EGS                        0.66  42 eP     Pg      16 55 17.1 +0.2
       baz=43
NCUH   Zhongli             0.66 338 eP     Pb      16 55 18.4 +0.2
       baz=339
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NCU	National Centr baz=340	0.66	339	eP	Pb	16 55 18.6	+0.3
VWDT	VWDT baz=208	0.66	205	⇑P	Pg	16 55 16.4	-0.7
VWDT	baz=208			eS	Sg	16 55 25.1	-0.6
TAP1	Taipei baz=18	0.68	5	eP	Pg	16 55 17.5	0.0
TAP1	baz=18			eS	Sg	16 55 26.4	0.0
EGFH	Guangfu baz=179	0.68	182	⇓iP	Pg	16 55 17.4	-0.1
EGFH	baz=179			S	Sg	16 55 26.6	+0.2
PTSB	Yuanli baz=279	0.69	278	⇑P	Pb	16 55 19.3	+0.6
PTSB	baz=279			S	Sb	16 55 28.4	0.0
SMLT	Sun Moon Lake baz=216	0.69	227	⇑P	Pg	16 55 17.6	0.0
SMLT	baz=216			S	Sb	16 55 27.5	-1.2
TIPB	Shuangxi baz=18	0.70	29	⇑P	Pg	16 55 17.9	0.0
TIPB	baz=18			S	Sg	16 55 26.9	-0.1
TYC	Yuchr baz=219	0.70	230	⇑iP	Pg	16 55 17.8	-0.1
TYC	baz=219			S	Sg	16 55 27.4	+0.3
SSLB	Suanglung baz=217	0.73	219	⇑P	Pg	16 55 17.6	-0.7
SSLB	baz=217			eS	Sg	16 55 28.0	+0.2
TCU	Taichung baz=254	0.74	254	eP	Pb	16 55 19.9	+0.4
WDJ	Dajia District baz=270	0.74	270	eP	Pn	16 55 20.3	-1.0
WDJ	baz=270			eS	Sb	16 55 30.5	+0.5
TWS1	Kuangyinshan baz=352	0.74	358	eP	Pb	16 55 20.1	+0.5
NWF	Wu-fen Shan baz=23	0.77	23	eP	Pg	16 55 19.5	+0.2
WFSB	Wu-fen Shan baz=25	0.77	23	eP	Pg	16 55 19.5	+0.3
WFSB	baz=25			S	Sg	16 55 29.7	+0.4
YM01	YM01 baz=25	0.80	8	eP	Pb	16 55 21.0	+0.4
YM01	baz=25			S	Sb	16 55 30.9	-0.7
YM04	YM04 baz=21	0.80	6	eP	Pb	16 55 20.8	+0.1
NTST	Danshui baz=9.0	0.81	360	eP	Pn	16 55 21.5	-0.8
NTST	baz=9.0			eS	Sn	16 55 33.5	-1.1
YM05	YM05 baz=8.0	0.81	7	⇑P	Pb	16 55 20.9	0.0
TWB1	Santiao Chiao baz=46	0.81	37	eP	Pg	16 55 19.7	-0.3
TWB1	baz=46			S	Sg	16 55 30.3	-0.3
YM11	YM11 baz=10.0	0.81	8	eP	Pb	16 55 20.6	-0.4
YM11	baz=10.0			eS	Sg	16 55 31.2	+0.6
YM08	YM08 baz=9.0	0.84	9	eP	Pb	16 55 21.1	-0.2
WNT	Mingjian baz=230	0.85	236	⇑P	Pb	16 55 21.5	0.0
WJS	Zhushan baz=232	0.85	231	eP	Pb	16 55 21.2	-0.3
EHY	Hungye baz=178	0.85	188	eP	Pg	16 55 20.3	-0.5
WHYT	Xinyi Township baz=220	0.85	220	eP	Pg	16 55 20.0	-0.7
HGSD	Ruisui baz=188	0.86	182	⇑P	Pg	16 55 21.0	+0.1
WCHH	Zhanghua baz=251	0.86	252	eP	Pn	16 55 22.2	-0.8
TWY	Chenhua baz=9.0	0.93	8	eP	Pb	16 55 23.0	+0.2
YULB	Yu-li baz=173	0.97	188	eP	Pg	16 55 22.6	-0.4
YULB	baz=173			eS	Sg	16 55 35.2	-0.3
TWF1	Yuli baz=193	1.01	188	eP	Pg	16 55 23.3	-0.4
TWF1	baz=193			eS	Sg	16 55 36.1	-0.7
ALS	Alishan baz=222	1.03	215	⇑P	Pg	16 55 23.6	-0.5
CHN5	Tsauling baz=215	1.03	223	eP	Pb	16 55 24.5	-0.2
WGK	Gukeng baz=227	1.05	231	eP	Pn	16 55 25.1	-0.5
WGK	baz=227			eS	Sn	16 55 42.3	+1.8
WDLH	Douliu baz=231	1.07	232	eP	Pn	16 55 25.5	-0.3
RLNB	Erlin baz=243	1.10	245	eP	Pn	16 55 26.4	+0.2
RLNB	baz=243			eS	Sn	16 55 42.2	+0.5
WTCT	Ta-ch'eng baz=242	1.18	246	eP	Pn	16 55 27.3	0.0
WTCT	baz=242			eS	Sn	16 55 43.8	+0.2
CHN2	Minshiung baz=224	1.21	228	eP	Pn	16 55 28.1	+0.2
CHN2	baz=224			eS	Sn	16 55 45.6	+1.0
ELDTW	Lidau baz=185	1.23	199	eP	Pg	16 55 27.1	-0.8
ELDTW	baz=185			eS	Sg	16 55 43.0	-0.9
CHY	Chiayi baz=243	1.27	228	eP	Pg	16 55 29.1	+0.4
CHN4	Tsaushan baz=214	1.27	218	eP	Pg	16 55 29.0	+0.2
CHN4	baz=214			eS	Sn	16 55 47.9	+1.8
TPUB	Ta-pu baz=212	1.29	216	eP	Pb	16 55 28.8	-0.2
TPUB	baz=212			eS	Sn	16 55 48.6	+2.0
WTP	Ta-pu baz=210	1.34	215	eP	Pn	16 55 29.1	-0.6
WTP	baz=210			eS	Sn	16 55 50.2	+2.3
STYT	Tauyuan baz=202	1.35	208	eP	Pb	16 55 29.7	-0.3
JYNG	Yonagunijimaku	1.36	86	P	Pg	16 55 30.3	-0.2
JYNG				eS	Sg	16 55 48.6	+0.3
PCYT	Pengchaiyu baz=26	1.39	24	eP	Pn	16 55 29.6	-0.6
TWK	Hsinying baz=214	1.40	219	eP	Pg	16 55 31.1	-0.1
TWK	baz=214			eS	Sg	16 55 52.3	+3.0
YOJ	Yonaguni jima baz=76	1.43	85	eP	Pb	16 55 31.0	-0.3
YOJ	Yonaguni jima	1.43	85	P	Pg	16 55 31.4	-0.3
YOJ				eS	Sg	16 55 50.8	+0.6
SNST	Tainan City baz=217	1.43	218	eP	Pg	16 55 31.4	-0.3
CHN1	Nanshi baz=211	1.44	216	eP	Pg	16 55 32.0	0.0
CHN1	baz=211			eS	Sg	16 55 53.9	+3.2
SGST	Jiashian baz=207	1.50	212	P	Pg	16 55 32.9	-0.2
SGST	baz=207			S	Sg	16 55 54.2	+1.7
CHN8	Yiju baz=237	1.52	229	eP	Pb	16 55 32.8	-0.1
CHN8	baz=237			eS	Sg	16 55 54.7	+1.6
SLGT	Liugui baz=197	1.54	209	eP	Pg	16 55 33.4	-0.5
TWG	Pinlang baz=191	1.57	193	eP	Pn	16 55 32.8	+0.1
TWGBT	Beinan baz=191	1.57	193	eP	Pb	16 55 33.0	-0.8
CHN3	Shinhua baz=213	1.62	218	eP	Pg	16 55 35.1	-0.2
CHN3	baz=213			eS	Sg	16 55 58.5	+2.2
SCLT	Jiali baz=220	1.65	225	eP	Pb	16 55 34.7	-0.4
SCLT	baz=220			eS	Sg	16 55 58.6	+1.3
SSD	Sandimen baz=200	1.77	205	eP	Pb	16 55 37.4	+0.2
SSD	baz=200			eS	Sg	16 56 02.7	+1.5
ECL	Taimali baz=178	1.81	195	eP	Pb	16 55 37.0	-0.9
SGLT	Jiouru baz=206	1.85	209	eP	Pb	16 55 38.8	+0.3
MASBT	Mashibuluo baz=218	1.89	204	eP	Pb	16 55 38.8	-0.5
MASBT	baz=218			eS	Sg	16 56 05.4	+0.2
PNG	Penghu baz=246	1.90	246	eP	Pb	16 55 38.5	-0.9
PHUB	P'eng-hu baz=245	1.91	244	eP	Pn	16 55 37.9	+0.5
VWUC	VWUC baz=287	1.93	290	eP	Pn	16 55 36.4	-1.3
WDGT	Dungji baz=236	1.97	237	eP	Pn	16 55 38.9	+0.7
SSPT	Xinbi baz=200	2.03	204	eP	Pb	16 55 40.3	-1.3
EAST	Anshuo baz=180	2.04	196	eP	Pb	16 55 41.1	-0.7
EAST	baz=180			eS	Sg	16 56 09.1	-0.9
TAW	Tawu baz=192	2.05	195	eP	Pb	16 55 41.9	-0.2
IRIF	Iriomote-Funau	2.08	90	P	Pn	16 55 40.5	+0.8
IRIF				eS	Sn	16 56 06.7	+0.8
SCZT	Fangliau baz=218	2.12	201	eP	Pb	16 55 41.7	-1.5
VCHM	Qimei baz=238	2.18	239	eP	Pb	16 55 42.5	-1.6
JKRS	Kuro-shima	2.34	92	P	Pn	16 55 44.7	+1.4
JKRS				eS	Sb	16 56 14.2	-1.8
JIJ	Ishigaki jima	2.46	89	P	Pn	16 55 45.5	+0.6
JIJ				eS	Sn	16 56 15.7	+0.5
JISG	Ishigakijimahi	2.62	84	P	Pn	16 55 47.7	+0.6
JISG				eS	Sn	16 56 20.1	+0.9
KNMB	Chin-men Tao baz=272	2.79	273	eP	Pn	16 55 47.3	-2.3
KSRS	Korea Array 0.1nm,0.3s,baz=200,slow=14,SNR=3.1	14.18	21	Pn	P	16 58 33.9	+0.5
SONM	Songino Array 0.9nm,1.0s,baz=160,slow=11,SNR=5.6	26.31	337	P	P	17 00 41.6	+0.8
MKAR	Makanchi Array 0.4nm,0.6s,baz=106,slow=9.4,SNR=5.6	38.38	316	P	P	17 02 26.7	+0.3
ZALV	Zalesovo Beam 0.3nm,0.4s,baz=120,slow=8.5,SNR=3.8	40.23	327	P	P	17 02 40.7	-1.0
WRA	Warramunga Arr 0.4nm,1.0s,baz=344,slow=8.7,SNR=2.6	45.78	163	P	P	17 03 26.1	-0.9
FINES	FINESS Array B 1.0nm,0.9s,baz=58,slow=4.7,SNR=4.2	71.42	330	P	P	17 06 25.2	0.0

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*ISCJB **17** 16:57:59.9±0.5, 21°.49S±0°.08×178°.1W±0°.1, h412^{km}, mb4.1/19, Error ellipse: s-maj=14.3km s-min=9.6km az=26.6*

*IDC **17** 16:58:07.1±3.0, 21°.72S×178°.09W, h486^{km}±32^{km}, mb3.7/19, mb1 3.9/21, mb1mx3.8/35, mbtmp4.5/21, Error ellipse: s-maj=18.4km s-min=15.1km az=147.0*

ISC 17 16:58:00.1±0.6**, 21°.6S**±0°.1×**177°.9W**±0°.1**, h412**^{km}**, n52, σ1§12**/54**, mb4.1**/19**, 2C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.3nm,0.3s,baz=74,slow=18,SNR=3.4	14.54	265	P	P	17 01 09.7	+2.3
URZ	Urewera 0.5nm,0.3s,baz=283,slow=4.9,SNR=8.4	17.17	193	P	P	17 01 36.7	+1.5
URZ	0.2nm,0.3s,baz=127,slow=10,SNR=2.2			S	S	17 04 31.2	-2.1
CTA	Charters Tower 8.6nm,0.5s,baz=92,slow=10,SNR=24	33.48	266	P	P	17 04 03.7	+0.5
STKA	Stephens Creek 5.9nm,0.7s,baz=93,slow=11,SNR=13	37.40	245	P	P	17 04 37.5	+1.4
ASAR	Alice Springs 7.1nm,0.6s,baz=96,slow=8.3,SNR=249	44.36	258	P	P	17 05 32.3	+0.1
ASAR	1.1nm,0.6s,baz=110,slow=3.8,SNR=6.7			PcP	PcP	17 07 06.7	-1.2
JAY	Jayapura 16nm,0.7s,baz=216,slow=7.6,SNR=3.9	44.47	289	P	P	17 05 32.5	-0.6
WRA	Warramunga Arr 6.6nm,0.7s,baz=93,slow=7.8,SNR=140	44.54	263	P	P	17 05 33.0	-0.6
WRA	0.6nm,0.8s,baz=92,slow=3.3,SNR=2.3			PcP	PcP	17 07 07.4	-1.1
SIJI	Sorong 38nm,0.7s,baz=78,slow=5.4,SNR=17	53.60	286	P	P	17 06 41.1	-0.2
MJAR	Matsushiro Arr 3.5nm,0.6s,baz=165,slow=6.3,SNR=31	71.12	324	P	P	17 08 34.9	-0.6
ASAJ	Asahikawa 4.8nm,0.6s,baz=228,slow=5.4,SNR=22	74.71	332	P	P	17 08 57.2	+1.2
KSRS	Korea Array 1.2nm,0.7s,baz=129,slow=6.0,SNR=7.8	77.75	319	P	P	17 09 13.5	+0.4
USRK	Ussuriysk Ar. 1.7nm,0.6s,baz=128,slow=2.4,SNR=5.7	79.90	326	P	P	17 09 25.4	+1.0
YBH	Yreka Blue Hor 4.9nm,0.7s,baz=227,slow=3.2,SNR=12	81.08	38	P	P	17 09 32.6	+1.7
NVAR	Mina Array Bea 3.3nm,0.8s,baz=223,slow=8.8,SNR=14	81.75	43	P	P	17 09 35.9	+1.3
KLR	Kul'dur 0.9nm,0.9s,baz=106,slow=2.7,SNR=4.1	83.50	329	P	P	17 09 42.2	-0.7
PSI	Prapat 3.5nm,0.2s,baz=0.5,slow=20,SNR=3.6	84.67	275	P	P	17 09 47.5	-2.2
TXAR	Lajitas Array 1.1nm,0.7s,baz=214,slow=6.4,SNR=8.0	87.57	57	P	P	17 10 05.3	+2.0
ILAR	Eielson Array 1.3nm,0.5s,baz=217,slow=5.4,SNR=22	89.35	13	P	P	17 10 09.6	-1.0
PDAR	Pinedale Array 2.1nm,0.8s,baz=215,slow=3.2,SNR=15	89.69	43	P	P	17 10 14.0	+0.9
CMAR	Chiang Mai Arr 2.3nm,0.9s,baz=128,slow=3.2,SNR=21	90.55	290	P	P	17 10 18.1	+0.8
YKA	Yellowknife Ar 0.2nm,0.7s,baz=238,slow=4.4,SNR=3.7	97.46	25	P	P	17 10 47.5	-0.3
ZALV	Zalesovo Beam 0.6nm,0.6s,baz=33,slow=3.4,SNR=2.9	111.38	321	PKiKP	PKiKP	17 15 43.4	-2.4
MKAR	Makanchi Array 0.2nm,0.4s,baz=61,slow=1.6,SNR=3.1	111.99	313	PKiKP	PKiKP	17 15 45.1	-2.1
ARCES	ARCESS Array B 1.5nm,0.6s,baz=107,slow=1.4,SNR=19	129.99	349	PKP	PKPdf	17 16 20.0	-1.0
FINES	FINESS Array B 0.5nm,0.5s,baz=243,slow=0.9,SNR=3.6	136.83	343	PKhKP	PKPpre	17 16 25.4	
FINES	0.9nm,0.5s,baz=74,slow=2.8,SNR=8.3			PKP	PKPdf	17 16 33.4	-0.6
NB2	NORSAR Subarra comp=Z,0.5nm,0.6s,baz=12,slow=3.2	140.06	353	PKP	PKPpre	17 16 32.8	
NOA	NORSAR Array B comp=Z,0.7nm,0.7s,baz=13,slow=2.4,SNR=4.2	140.06	353	PKhKP	PKPpre	17 16 30.2	
NOA	comp=Z,0.5nm,0.6s,baz=19,slow=4.1,SNR=3.4			PKP	PKPdf	17 16 40.6	+0.5
AKASG	Malin Array Be comp=Z,5.3nm,0.5s,baz=43,slow=4.3,SNR=36	143.99	330	PKP	PKPbc	17 16 44.4	-1.8
BRTR	Keskin Array B comp=Z,1.5nm,0.6s,baz=136,slow=4.6,SNR=14	147.62	311	PKPbc	PKPbc	17 16 56.0	-1.3
UPC	Upice	149.12	343	ePKP	PKPbc	17 16 59.6	-1.0
UPC				ex	x	17 17 02.6	
CLL	Collm comp=Z,13nm,1.1s	149.13	347	⇓iPKPbc	PKPbc	17 16 59.7	-0.8
DPC	Dobruska-Polom	149.18	342	ePKP	PKPbc	17 17 00.7	0.0
DPC				ex	x	17 17 03.3	
MORC	Moravsky Berou	149.32	340	ePKP	PKPbc	17 17 00.6	-0.5
BRG	Berggiesshubel comp=Z,5.0nm,0.6s	149.32	345	i PKP	PKPbc	17 17 00.5	-0.5
PVCC	Panska Ves	149.49	344	ePKP	PKPbc	17 17 01.3	-0.1
PVCC				ex	x	17 17 03.8	
PRU	Pruhonice	149.99	344	ePKP	PKPbc	17 17 02.1	-0.5
GOPC	GO Pecny, Ondr	149.99	343	ePKP	PKPbc	17 17 02.5	-0.2
VRAC	Vranov	150.02	341	ePKP	PKPbc	17 17 02.3	-0.5
NKC	Novy Kostel	150.26	347	ePKP	PKPbc	17 17 03.1	-0.2
NKC				ex	x	17 17 09.8	
TREC	Trest	150.36	342	ePKP	PKPbc	17 17 02.8	-0.8
SIRR	Siria	150.66	332	⇓iP	PKPbc	17 17 03.9	-0.5
GZR	Gura Zlata	150.81	329	⇑iP	PKPbc	17 17 04.0	-0.8
KHC	Kasperske Hory	151.03	344	ePKP	PKPbc	17 17 04.9	-0.2
KHC				ex	x	17 17 07.0	
KHC				ex	x	17 17 14.4	
BZS	Buzias	151.18	331	⇑iP	PKPbc	17 17 04.9	-0.6
GERES	GERESS Array B comp=Z,2.3nm,0.7s,baz=29,slow=3.0,SNR=24	151.26	344	PKPbc	PKPbc	17 17 04.4	-1.4
CONA	Conrad Observa comp=Z,5.2nm,0.7s	151.47	340	i PKiKP	PKPbc	17 17 06.0	-0.2
WATA	Walderalm comp=Z,1.7nm,0.4s	153.18	346	i PKiKP	PKiKP	17 17 10.9	+0.7
MOTA	Moosalm comp=Z,1.7nm,0.7s	153.28	346	ePKiKP	PKPbc	17 17 10.2	-0.1
SQTA	Sankt Quirin comp=Z,5.2nm,1.0s	153.38	346	ePKiKP	PKPbc	17 17 10.0	-0.5
ABTA	Abfaltersbach comp=Z,2.7nm,0.7s	153.50	344	ePKPbc	PKPbc	17 17 09.6	-1.1
DAVA	Damuels comp=Z,7.0nm,1.2s	153.59	348	ePKiKP	PKiKP	17 17 12.9	+1.8
TORD	Torodi Ar. Bea comp=Z,0.6nm,0.8s,baz=48,slow=2.2,SNR=3.6	171.60	177	PKP	PKPdf	17 17 19.9	-1.1
TORD	comp=Z,0.8nm,0.7s,baz=184,slow=3.8,SNR=4.8			PKPab	PKPab	17 18 45.1	+0.3

IDC 17 17:03:34.0±5.4**, 17°.58S**×**178°.53W, h641**^{km}±60^{km}**, mb2.9**/6**, mb1 3.2**/6**, mb1mx2.9**/28**, mbtmp4.0**/6**, Error ellipse: s-maj=76.3km s-min=29.4km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower 4.1nm,1.0s,baz=90,slow=7.1,SNR=2.6	33.39	260	P	P	17 09 22.7	+0.3
STKA	Stephens Creek 1.4nm,0.5s,baz=78,slow=6.6,SNR=4.6	38.69	241	P	P	17 10 05.3	-0.2
WRA	Warramunga Arr 0.9nm,0.4s,baz=95,slow=7.4,SNR=39	44.58	259	P	P	17 10 51.6	-0.2
WRA	0.1nm,0.3s,baz=90,slow=3.7,SNR=5.5			PcP	PcP	17 12 19.6	-0.6
ASAR	Alice Springs 2.4nm,0.4s,baz=90,slow=8.2,SNR=76	44.77	254	P	P	17 10 53.5	+0.3
ASAR	0.5nm,0.5s,baz=104,slow=3.9,SNR=8.0			PcP	PcP	17 12 20.4	-0.5
ILAR	Eielson Array 0.6nm,1.0s,baz=221,slow=4.8,SNR=3.7	85.59	13	P	P	17 15 05.5	-0.4
TXAR	Lajitas Array 0.2nm,0.5s,baz=243,slow=4.0,SNR=3.0	85.92	58	P	P	17 15 08.6	+0.2
BRTR	Keskin Array B 0.2nm,0.4s,baz=123,slow=4.8,SNR=2.6	144.47	315	PKP	PKPab	17 22 00.2	-0.3
GERES	GERESS Array B 0.2nm,0.5s,baz=20,slow=4.4,SNR=4.4	147.27	345	PKPbc	PKPbc	17 22 06.7	-0.4

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*SOME **17** 17:04:01.0, 42°.55N×79°.65E, h15^{km}*

*KRNET **17** 17:04:01.7±0.1, 42°.61N×79°.68E, h14^{km}, mb2.6*

NNC 17 17:04:01.2±0.8**, 42°.59N**×**79°.68E, h0**^{km}**, mb3.2, mpv3.0, 21C-10D, Error ellipse: s-maj=5.3km s-min=3.2km az=138.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak 18nm,0.1s	0.73	319	P	Pg	17 04 15.4	+0.2
UZB	31nm,0.2s			S	Sg	17 04 25.6	+0.8
UZB	Uzynbulak baz=19	0.73	319	eP	Pg	17 04 15.4	+0.1
UZB	baz=19			eS	Sg	17 04 25.6	+0.8
UZB	Uzynbulak 18nm,0.1s	0.73	319	eP	Pg	17 04 15.4	+0.2
UZB	31nm,0.2s			eS	Sg	17 04 25.6	+0.8
PDGK	Podgornoye 1.1nm,0.1s	0.75	350	P	Pg	17 04 15.7	+0.1
PDGK	10nm,0.1s			S	Sg	17 04 26.1	+0.9
PDGK	Podgornoye 0.5nm,0.3s	0.75	350	⇑P	Pg	17 04 15.7	+0.1
PDGK	17nm,0.5s			⇓S	Sg	17 04 26.2	+0.9
PDGK	Podgornoye baz=49	0.75	350	⇓iP	Pg	17 04 15.7	+0.1
PDGK	baz=49			⇓iS	Sg	17 04 26.2	+0.9
PRZ	Przheval'sk baz=63	0.95	264	⇑eP	Pg	17 04 19.8	+0.5
PRZ	baz=63			⇑iS	Sg	17 04 32.1	+0.5
KTMS	Ketmen 13nm,0.1s	0.99	30	P	Pg	17 04 19.9	-0.2
KTMS	15nm,0.2s			S	Sg	17 04 33.7	+0.8
KTMS	Ketmen baz=29	0.99	30	eP	Pg	17 04 20.0	-0.1
KTMS	baz=29			eS	Sg	17 04 33.8	+0.9
KTMS	Ketmen 13nm,0.1s	0.99	30	eP	Pg	17 04 19.9	-0.2
KTMS	15nm,0.2s			eS	Sg	17 04 33.7	+0.8
SATY	Saty 4.9nm,0.1s	1.04	297	P	Pg	17 04 21.1	0.0
SATY	21nm,0.1s			S	Sb	17 04 35.9	-0.6
SATY	Saty 4.9nm,0.1s	1.04	297	eP	Pg	17 04 21.1	0.0
SATY	18nm,0.1s			eS	Sb	17 04 35.9	-0.6
KURS	Kuram 3.1nm,0.3s	1.42	310	P	Pn	17 04 28.1	-0.2
KURS	4.9nm,0.2s			S	Sn	17 04 48.0	+0.2
KURS	Kuram baz=9.0	1.42	310	eP	Pn	17 04 28.1	-0.2
KURS	baz=9.0			eS	Sn	17 04 47.9	+0.1
KURS	Kuram 3.1nm,0.3s	1.42	310	eP	Pn	17 04 28.1	-0.2
KURS	4.9nm,0.2s			eS	Sn	17 04 48.0	+0.2
DJR	Jarkent 0.7nm,0.2s	1.74	3	P	Pb	17 04 33.6	-0.5
DJR	7.7nm,0.2s			S	Sg	17 04 57.2	+0.1
DJR	Jarkent 0.7nm,0.2s	1.74	3	eP	Pb	17 04 33.6	-0.5
DJR	7.7nm,0.2s			eS	Sg	17 04 57.2	+0.1
MNBS	Baschi 6.7nm,0.2s	1.75	328	P	Pn	17 04 33.5	+0.6
MNBS	26nm,0.3s			S	Sb	17 04 57.0	+0.1
MNBS	Baschi 6.7nm,0.2s	1.75	328	eP	Pn	17 04 33.5	+0.6
MNBS	26nm,0.3s			eS	Sb	17 04 57.0	+0.1
KDJ	Kajisay baz=56	1.91	257	⇑iP	Pb	17 04 37.1	+0.2
KDJ	baz=56			⇑iS	Sg	17 05 02.0	-0.4
KOTS	Kotyrbulak 4.8nm,0.1s	1.99	290	Pg	Pg	17 04 39.2	-0.1
KOTS	20nm,0.3s			Lg	Lg	17 05 06.9	
KOTS	Kotyrbulak baz=89	1.99	290	eP	Pb	17 04 38.0	-0.3
KOTS	baz=89			eS	Sg	17 05 05.1	0.0
KOTS	Kotyrbulak 4.8nm,0.1s	1.99	290	eP	Pb	17 04 38.0	-0.4
KOTS	20nm,0.3s			eS	Sg	17 05 05.1	0.0
MDOK	Medeo 5.0nm,0.6s	2.01	287	⇑Lg	Lg	17 05 05.1	
MDOK	Medeo 5.6nm,0.3s	2.01	287	Pg	Pb	17 04 38.1	-0.7
MDOK	6.6nm,0.4s			Lg	Lg	17 05 04.9	
MDOK	Medeo baz=87	2.01	287	eP	Pb	17 04 38.1	-0.7
MDOK	baz=87			eS	Sb	17 05 04.9	+0.5
MDOK	Medeo 5.6nm,0.3s	2.01	287	eP	Pb	17 04 38.1	-0.7
MDOK	6.6nm,0.4s			eS	Sb	17 05 04.9	+0.4
TNSS	Tian-Shan 4.1nm,0.3s	2.06	283	Pg	Pn	17 04 38.5	+1.1
TNSS	6.0nm,0.3s			Lg	Lg	17 05 05.8	
TNSS	Tian-Shan 4.1nm,0.3s	2.06	283	eP	Pn	17 04 38.5	+1.1
TNSS				⇑iS	Sb	17 05 05.8	-0.1

	6.0nm,0.3s						
ARXS	**Arharly**	2.11	321	Pg	Pb	17 04 39.2	-1.2
	6.1nm,0.3s						
ARXS				Lg	Lg	17 05 07.3	
	9.3nm,0.4s						
ARXS	**Arharly**	2.11	321	eP	Pb	17 04 39.2	-1.2
	6.1nm,0.3s						
ARXS				eS	Sb	17 05 07.0	0.0
	9.3nm,0.4s						
IZV	**Izvestkoviy**	2.30	282	Pg	Pb	17 04 42.8	-0.8
	5.1nm,0.3s						
IZV				Lg	Lg	17 05 13.1	
	13nm,0.4s						
IZV	**Izvestkoviy**	2.30	282	eP	Pb	17 04 42.8	-0.8
	5.1nm,0.3s						
IZV				eS	Sb	17 05 13.1	+0.5
	13nm,0.4s						
CHKK	**Chushkaly**	2.33	304	Pg	Pb	17 04 43.7	-0.4
	1.3nm,0.2s						
CHKK				Lg	Lg	17 05 14.5	
	6.6nm,0.3s						
CHKK	**Chushkaly**	2.33	304	eP	Pb	17 04 43.7	-0.4
	1.3nm,0.2s						
CHKK				eS	Sb	17 05 14.5	+1.0
	6.6nm,0.3s						
MTBS	**Maitube**	2.45	284	eP	Pb	17 04 45.6	-0.4
	5.6nm,0.2s						
MTBS				eS	Sb	17 05 17.7	+0.9
	6.1nm,0.2s						
KTBS	**Karatobe**	2.46	298	Pg	Pb	17 04 45.0	-1.3
	1.2nm,0.2s						
KTBS				Lg	Lg	17 05 16.8	
	7.4nm,0.2s						
KTBS	**Karatobe**	2.46	298	eP	Pb	17 04 45.0	-1.3
	1.2nm,0.2s						
KTBS				eS	Sb	17 05 16.8	-0.4
	7.4nm,0.2s						
ULHL	**Ulahol**	2.56	263	⇑iP	Pb	17 04 46.4	-1.8
	baz=63						
ULHL				⇑iS	Sb	17 05 18.6	-1.8
	baz=63						
KAPS	**Kapalarasan**	2.70	355	Pg	Pb	17 04 50.0	-0.4
	0.5nm,0.1s						
KAPS				Lg	Lg	17 05 25.4	
	11nm,0.2s						
KAPS	**Kapalarasan**	2.70	355	eP	Pb	17 04 50.0	-0.4
	0.5nm,0.1s						
KAPS				eS	Sb	17 05 25.4	+1.2
	11nm,0.2s						
BOOM	**Boomskoye usch**	2.76	269	⇑iP	Pn	17 04 48.9	+2.0
	baz=69						
BOOM				⇑iS	Sn	17 05 23.0	+2.0
	baz=69						
KUU	**Kurty**	2.76	299	Pg	Pb	17 04 50.9	-0.6
	1.0nm,0.1s						
KUU				Lg	Lg	17 05 26.8	
	4.1nm,0.2s						
KUU	**Kurty**	2.76	299	eP	Pb	17 04 50.9	-0.6
	1.0nm,0.1s						
KUU				eS	Sb	17 05 26.8	+0.9
	4.1nm,0.2s						
KST	**Kastek**	2.77	281	Pg	Pb	17 04 50.8	-0.8
	3.9nm,0.2s						
KST				Lg	Lg	17 05 27.1	
	5.5nm,0.4s						
KST	**Kastek**	2.77	281	eP	Pb	17 04 50.8	-0.8
	3.9nm,0.2s						
KST				eS	Sb	17 05 26.9	+0.8
	5.5nm,0.4s						
DGS	**Degeres**	2.94	284	Pg	Pb	17 04 54.3	-0.2
	2.1nm,0.3s						
DGS				Lg	Lg	17 05 33.0	
	8.8nm,0.3s						
DGS	**Degeres**	2.94	284	eP	Pb	17 04 54.3	-0.2
	2.1nm,0.3s						
DGS				eS	Sb	17 05 33.0	+2.0
	8.8nm,0.3s						
NRN	**Naryn**	2.97	248	⇓iP	Pb	17 04 52.6	-2.6
	baz=48						
NRN				⇓iS	Sn	17 05 29.2	+2.8
	baz=48						
TKM2	**Tokmak 2**	3.02	278	⇑Pg	Pb	17 04 55.5	-0.5
	0.5nm,0.3s						
TKM2				⇑Lg	Lg	17 05 36.4	
	2.5nm,0.5s						
TKM2	**Tokmak 2**	3.02	278	⇑iP	Pn	17 04 52.8	+2.3
	baz=77						
TKM2				⇑iS	Sn	17 05 29.6	+2.1
	baz=77						
KZA	**Kyzart**	3.32	263	⇑eP	Pn	17 04 57.0	+2.2
	baz=62						
KZA				⇑iS	Sn	17 05 37.1	+2.0
	baz=62						
KBK	**Karagaybulak**	3.49	273	⇑iP	Pn	17 04 59.0	+2.1
	baz=72						
KBK				⇑iS	Sn	17 05 40.6	+1.6
	baz=72						
AAK	**Ala-Archa**	3.82	272	⇓Pg	Pb	17 05 10.4	+0.8
	0.8nm,0.7s						
AAK				⇑Lg	Lg	17 06 00.7	
	2.2nm,0.5s						
UCH	**Uchtor**	3.84	266	⇓iP	Pn	17 05 04.3	+2.4
	baz=66						
UCH				⇓iS	Sn	17 05 49.4	+1.4
	baz=66						
MAKZ	**Makanchi**	4.53	20	⇓Pn	Pn	17 05 10.8	-0.1
	1.0nm,0.8s						
MK31	**Makanchi Array**	4.60	23	⇑Pn	Pn	17 05 13.1	+1.2
	baz=200,slow=13,SNR=7.0						
MK31				⇓Lg	Lg	17 06 28.0	
	0.5nm,0.6s						

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*ISCJB **17** 17:04:51.8±0.3, 33°.03N±0°.02×116°.28W±0°.02, h7^{km}±3^{km}, Error ellipse: s-maj=3.2km s-min=3.0km az=40.3*

*ANF **17** 17:04:51.9±0.2, 33°.04N×116°.31W, h15^{km}, ML3.2/24, Error ellipse: s-maj=1.4km s-min=1.3km az=134.0*

*NEIC **17** 17:04:53.1±0.0, 33°.01N×116°.31W, h11^{km}, ML3.4(PAS), After PAS.*

NEIC Felt [II] at Pine Valley, Ramona and San Diego. Also felt at Alpine, Borrego Springs, Campo, Cardiff-by- the-Sea, Carlsbad, Escondido, Hemet, Julian, La Mesa, San Marcos and Solana Beach.

*PAS **17** 17:04:53.1, 33°.01N×116°.31W, h11^{km}, ML3.4*

*MEX **17** 17:04:54.4±0.4, 32°.98N×116°.92W, h1^{km}±3^{km}, MD3.8*

ISC 17 17:04:51.8±0.9, 33°.01N±0°.02×116°.30W±0°.02, h17^{km}±7^{km}, n43, σ0^{s}.81/66, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MONP2	**Monument Peak**	0.16	220	P	Pg	17 04 56.7	+0.5
	baz=33,SNR=1000						
MONP2				S	Sg	17 04 59.2	0.0
	baz=33						
IKP	**In-Ko-Pah, Jac**	0.40	156	P	Pb	17 05 00.8	+0.4
	baz=337,SNR=374						
IKP				S	Sb	17 05 06.5	+0.2
	baz=337						
SWSC	**Sam W. Stewart**	0.43	99	P	Pb	17 05 01.3	+0.4
	baz=282,SNR=119						
SWSC				S	Sb	17 05 07.3	+0.3
	baz=282						
BAR	**Barrett**	0.46	223	ePg	Pb	17 05 01.7	+0.3
BAR				eSg	Sb	17 05 07.9	0.0
XPFO	**Pion Flat**	0.61	348	ePg	Pb	17 05 04.3	+0.2
XPFO				eSg	Sg	17 05 11.8	-0.2
PFO	**Pinyon Flats O**	0.61	347	ePg	Pb	17 05 04.3	+0.1
PFO				eSg	Sg	17 05 11.8	-0.3
PFO	**Pinyon Flats O**	0.61	347	P	Pb	17 05 04.2	+0.1
	baz=168,SNR=59						
PFO				S	Sb	17 05 12.1	-0.4
	baz=168						
TJIG	**Tijuana**	0.66	209	eP	Pb	17 05 05.2	+0.3
TJIG				i S	Sb	17 05 13.8	+0.1
109C	**Camp Elliot, M**	0.69	260	P	Pb	17 05 05.5	+0.2
	baz=77,SNR=117						
109C				S	Sb	17 05 14.5	0.0
	baz=77						
CPE	**Camp Elliot**	0.69	260	ePg	Pb	17 05 05.5	+0.2
CPE				ePn	Pn	17 05 14.5	+7.7
CBX	**Cerro Bola**	0.76	204	ePg	Pb	17 05 07.2	+0.4
CBX				eSg	Sb	17 05 17.3	+0.4
CBX	**Cerro Bola**	0.76	204	eP	Pb	17 05 07.2	+0.4
CBX				i S	Sb	17 05 17.3	+0.4
MURC	**Murrieta**	0.95	308	P	Pn	17 05 10.3	-0.1
	baz=127,SNR=103						
MURC				S	Sb	17 05 22.6	+0.4
	baz=127						
BC3	**Big Chuckawall**	0.95	48	P	Pb	17 05 10.0	+0.1
	baz=229,SNR=272						
BC3				S	Sg	17 05 22.1	-0.8
	baz=229						
BELC	**Belle Mtn. Jos**	1.02	14	P	Pb	17 05 11.2	+0.2
	baz=195,SNR=102						
BELC				S	Sb	17 05 24.8	+0.6
	baz=195						
GLA	**Glamis**	1.24	88	ePn	Pn	17 05 14.1	-0.3
GLA	**Glamis**	1.24	88	P	Pn	17 05 14.0	-0.3
	baz=270,SNR=48						
BBRC	**Big Bear Solar**	1.35	338	Pb	Pg	17 05 17.1	-0.8
	baz=157,SNR=17						
IRM	**Iron Mountain**	1.49	40	P	Pn	17 05 18.0	+0.1
	baz=221,SNR=83						
Y12C	**Blythe**	1.66	63	ePn	Pn	17 05 19.9	-0.3
Y12C				eSn	Sn	17 05 41.7	+0.7
Y12C	**Blythe**	1.66	63	P	Pn	17 05 20.1	-0.1
	baz=245,SNR=16						
BFSC	**Mount Baldy Ra**	1.67	318	Pb	Pb	17 05 22.3	+0.2
	baz=137						
BFSC				Sb	Sb	17 05 43.7	+0.9
	baz=137						
FMP	**Fort Macarthur**	1.81	293	P	Pn	17 05 21.9	-0.3
	baz=112						
HEC	**Hector,Ludlow**	1.81	359	Pg	Pg	17 05 26.2	-0.5
	baz=179						
CIS	**Catalina Islan**	1.81	283	P	Pn	17 05 22.7	+0.4
	baz=101,SNR=9.6						
GMRC	**Granite Mounta**	1.84	17	Pg	Pg	17 05 26.9	-0.4
	baz=197						
GMRC				Sb	Sg	17 05 50.2	-1.1
	baz=197						
MWC	**Mount Wilson**	1.90	310	ePn	Pb	17 05 26.4	+0.2
MWC				eSn	Sg	17 05 51.3	-1.7
RRX	**Edison Barstow**	1.94	343	Pg	Pg	17 05 28.8	-0.3
	baz=163						
PASC	**Pasadena Art C**	1.95	307	ePn	Pb	17 05 26.1	-0.8
PASC				eSn	Sb	17 05 50.5	-0.5
SPIG	**San Pedro Mart**	2.09	160	ePn	Pg	17 05 30.8	-1.1
SPIG				eSn	Sg	17 05 58.1	-0.9
SPIG	**San Pedro Mart**	2.09	160	eP	Pg	17 05 30.8	-1.1
SPIG				i S	Sg	17 05 58.1	-0.9
DECC	**Green Verdugo**	2.10	307	Pb	Pb	17 05 30.2	+0.8
	baz=125						
DECC				Sb	Sg	17 05 57.1	-2.3
	baz=125						
NEE2	**Needles Airpor**	2.24	38	Sb	Sg	17 06 01.9	-1.9
	baz=220						
GSC	**Goldstone, Bar**	2.32	350	ePn	Pb	17 05 33.0	-0.3
GSC	**Goldstone, Bar**	2.32	350	Pg	Pg	17 05 35.8	-0.6
	baz=170						
EDW2	**Edwards Air Fo**	2.33	323	Pb	Pb	17 05 34.3	+0.9
	baz=142						
EDW2				Sb	Sb	17 06 04.0	+2.0
	baz=142						
TUQ	**Turquoise Moun**	2.44	7	Pg	Pg	17 05 37.9	-0.6
	baz=188						
W13A	**Hualapai Mount**	2.89	43	ePn	Pn	17 05 37.8	+0.6
Y14A	**Wickenburg**	2.91	71	ePn	Pn	17 05 38.9	+1.6
ARVC	**Arvin**	2.97	316	Pb	Pb	17 05 45.7	+1.3
	baz=134						
DAC	**Darwin (Calif)**	3.42	342	ePn	Pn	17 05 45.5	+0.9
X16A	**Lo Mia Camp, P**	4.29	70	ePn	Pn	17 05 57.6	+1.2
KNB	**Kanab**	4.91	35	ePn	Pn	17 06 06.9	+2.0

MEX 17 17:05:08.6±0.3, 27°.94N×111°.58W, h10^{km}, MD3.7, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUYB	**Guaymas**	0.63	94	i P	Pg	17 05 19.3	-1.4
GUYB				eS	Sg	17 05 27.2	-1.7
SRIG	**Santa Rosalia**	0.85	224	eP	Pg	17 05 22.8	-2.3
SRIG				eS	Sg	17 05 33.4	-2.8

MEX 17 17:15:41.9±0.4, 26°.95N×111°.92W, h5^{km}, MD3.5, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	**Santa Rosalia**	0.46	322	eP	Pg	17 15 50.2	-0.6
SRIG				eS	Sg	17 15 57.3	+0.4
GUYB	**Guaymas**	1.33	45	eP	Pn	17 16 03.4	-3.7
GUYB				eS	Sg	17 16 19.7	-4.8

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*ISCJB **17** 17:27:30.9±0.5, 6°.88N±0°.03×73°.14W±0°.03, h156^{km}±4^{km}, mb3.4/5, Error ellipse: s-maj=6.1km s-min=4.8km az=36.0*

*IDC **17** 17:27:31.8±0.7, 6°.75N×72°.95W, h166^{km}±7^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.2/32, mbtmp3.8/7, Error ellipse: s-maj=23.2km s-min=7.5km az=131.0*

*RSNC **17** 17:27:32.9±1.0, 6°.84N×73°.15W, h144^{km}±5^{km}, ML3.9, Mw3.8*

ISC 17 17:27:31.1±0.7, 6°.85N±0°.04×73°.12W±0°.04, h153^{km}±5^{km}, n31, σ0^{s}.98/47, mb3.7/5, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	0.27	193	eP	Pn	17 27 52.4	+0.1
BARC				eS	Sn	17 28 07.2	-1.2
BARC				i		17 28 08.3	
	comp=Z,2µm,0.2s						
BRRC	**Barranca, Sant**	0.64	293	⇑iP	Pn	17 27 54.3	+0.7
BRRC				eS	Sn	17 28 11.1	+0.4
BRRC				i		17 28 11.4	
	comp=N,3µm,0.3s						
PAMC	**Pamplona, Colo**	0.64	41	eP	Pn	17 27 55.2	+1.1
PAMC				eS	Sn	17 28 12.1	+0.3
PAMC				i		17 28 13.2	
	comp=N,2µm,0.5s						
RUSC	**La Rusia**	0.96	178	eP	Pn	17 27 56.4	0.0
RUSC				eS	Sn	17 28 14.6	-1.1
PTBC	**PUERTO BERRIO,**	1.36	257	eP	Pn	17 27 58.9	-0.6
PTBC				eS	Sn	17 28 20.0	-1.2
PTBC				i		17 28 21.5	
	comp=N,1µm,0.3s						
TAMC	**Tame, Arauca**	1.39	107	⇓iP	Pn	17 28 00.8	+1.0
TAMC				eS	Sn	17 28 21.9	+0.2
OCAC	**Ocana**	1.39	352	eP	Pn	17 28 00.5	+0.6
OCAC				eS	Sn	17 28 22.2	+0.1
OCAC				i		17 28 25.6	
	comp=N,2µm,0.2s						
ZARC	**Zaragoza, Cauc**	1.83	290	eP	Pn	17 28 05.1	+0.6
ZARC				eS	Sn	17 28 30.8	+0.6
ZARC				i		17 28 37.9	
	comp=N,832nm,0.2s						
CTAB	**Cerro Tablazo,**	2.12	210	eP	Pn	17 28 09.8	+1.5
SMLC	**San Martn de**	2.15	334	eP	Pn	17 28 08.7	+0.5
SMLC				eS	Sn	17 28 37.0	+0.2
SMLC				i		17 28 45.5	
	comp=N,1µm,0.1s						
CHIC	**Chingaza**	2.29	195	eP	Pn	17 28 10.6	+0.3
CHIC				eS	Sn	17 28 39.7	-0.8
ROSC	**El Rosal**	2.33	211	eP	Pn	17 28 12.2	+1.5
ROSC				i		17 28 48.0	
	comp=Z,256nm,0.4s						
ROSC	**El Rosal**	2.33	211	P	Pn	17 28 12.3	+1.6
	comp=Z,12nm,0.3s,baz=306,slow=12,SNR=36						
ROSC				S	Sn	17 28 43.6	+2.5
	comp=Z,36nm,0.3s,baz=78,slow=16,SNR=13						
HELC	**Santa Helena**	2.48	255	eP	Pn	17 28 13.7	+1.2
HELC				eS	Sn	17 28 44.2	-0.2
HELC				i		17 28 52.5	
	comp=E,237nm,0.3s						
UREC	**San Jos de Ur**	2.55	291	eP	Pn	17 28 13.3	+0.3
UREC				eS	Sn	17 28 44.5	-0.9
VILC	**Villavicencio,**	2.78	192	eP	Pn	17 28 16.6	+0.6
VILC				i		17 28 55.7	
	comp=N,289nm,0.7s						
DBBC	**Dabeiba**	3.07	273	eP	Pn	17 28 20.4	+0.8
CODC	**Agustn Codazz**	3.08	354	eP	Pn	17 28 20.1	+0.5
SDV	**Santo Domingo**	3.19	51	eP	Pn	17 28 21.9	+0.8
SDV	**Santo Domingo**	3.19	51	P	Pn	17 28 21.9	+0.8
	comp=N,28nm,0.3s,baz=216,slow=8.9,SNR=178						
SDV				S	Sn	17 29 00.7	+0.8
	comp=N,21nm,0.3s,baz=77,slow=23,SNR=20						
ANIL	**Santa Ana**	3.27	224	eP	Pn	17 28 23.9	+1.7
ANIL				eS	Sn	17 29 02.2	+0.4
ANIL				i		17 29 11.6	
	comp=Z,138nm,0.4s						
PLMC	**San Jos del P**	3.69	239	eP	Pn	17 28 28.4	+0.9
PLMC				eS	Sn	17 29 10.4	-0.9
PLMC				i		17 29 18.0	
	comp=N,498nm,0.2s						
TXAR	**Lajitas Array**	36.44	312	P	P	17 34 22.6	+1.3
	comp=N,0.1nm,0.4s,baz=135,slow=10,SNR=3.6						
ULM	**Lac du Bonnet**	47.25	340	P	P	17 35 48.3	-0.4
	comp=N,0.7nm,0.4s,baz=120,slow=9.2,SNR=2.6						
SCHQ	**Schefferville**	48.11	5	P	P	17 35 55.9	+0.7
	comp=N,3.1nm,1.0s,baz=163,slow=5.8,SNR=5.5						
YKA	**Yellowknife Ar**	63.23	340	P	P	17 37 43.2	+0.4
	comp=N,0.5nm,0.5s,baz=131,slow=6.6,SNR=11						
TORD	**Torodi Ar. Bea**	73.73	78	P	P	17 38 46.9	-2.0
	comp=N,0.3nm,0.7s,baz=268,slow=6.9,SNR=3.4						
MKAR	**Makanchi Array**	122.29	20	PKP	PKPdf	17 46 07.2	-0.9
	comp=N,0.2nm,0.4s,baz=293,slow=2.4,SNR=5.0						
ASAR	**Alice Springs**	149.13	234	PKPbc	PKPbc	17 47 01.4	-0.8
	comp=N,0.3nm,0.5s,baz=115,slow=3.8,SNR=7.8						
WRA	**Warramunga Arr**	150.35	241	PKPbc	PKPbc	17 47 04.5	-0.7
	comp=N,0.4nm,0.4s,baz=110,slow=2.4,SNR=12						
CMAR	**Chiang Mai Arr**	153.66	17	PKPbc	PKiKP	17 47 12.7	-0.1
	comp=N,0.4nm,0.4s,baz=328,slow=3.2,SNR=2.4						

IDC 17 17:28:17.4±2.2, 7°.05S×128°.60E, h0^{km}, mb3.1/1, mb1 3.2/4, mb1mx3.1/35, mbtmp3.0/4, ML2.9/3, Error ellipse: s-maj=106.4km s-min=27.5km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	11.36	194	Pn	Pn	17 31 00.9	-0.1
	0.1nm,0.3s,baz=22,slow=18,SNR=2.9						
WRA	**Warramunga Arr**	13.97	157	Pn	Pn	17 31 36.2	-0.6
	0.1nm,0.3s,baz=335,slow=13,SNR=8.4						
WRA				Sn	Sn	17 33 57.1	-16
	0.2nm,0.3s,baz=337,slow=22,SNR=6.2						
ASAR	**Alice Springs**	17.29	163	P	Pn	17 32 21.1	+0.6
	0.0nm,0.3s,baz=345,slow=8.8,SNR=3.9						
ASAR				S	Sn	17 35 17.0	-17
	0.0nm,0.3s,baz=342,slow=26,SNR=2.6						
MKAR	**Makanchi Array**	67.52	327	P	P	17 39 15.5	0.0
	0.1nm,0.4s,baz=113,slow=7.7,SNR=2.4						

KRSC 17 17:28:32.4±1.1, 50°.96N×158°.16E, h41^{km}±15^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	0.85	356	eP	Pn	17 28 49.1	+1.1
KDTR				eS	Sn	17 29 00.2	+0.9
PAU	**Pauzhetka**	0.99	301	eP	Pn	17 28 51.7	+1.9
PAU				eS	Sn	17 29 04.9	+2.3
SKR	**Severo-Kuril's**	1.33	259	eP	Pn	17 28 55.3	+0.9
SKR				eS	Sn	17 29 12.5	+1.7
RUS	**Russkaya**	1.49	8	eP	Pn	17 28 58.3	+1.6
RUS				eS	Sn	17 29 16.9	+1.9
MTVR	**Mutnovka**	1.53	0	eP	Pn	17 28 59.1	+1.8
MTVR				eS	Sn	17 29 17.6	+1.6
KRMR	**Karymshinskiy**	1.88	359	eP	Pn	17 29 04.1	+2.2
KRMR				eS	Sn	17 29 27.4	+3.0
APC	**Apacha**	2.07	343	eP	Pn	17 29 06.3	+1.7
DALK	**Dalny**	2.11	10	eP	Pn	17 29 06.3	+1.2
DALK				eS	Sn	17 29 32.1	+2.0
UGLR	**Uglovaya**	2.29	10	eP	Pn	17 29 11.6	+3.8
AVH	**Avacha**	2.34	9	eP	Pn	17 29 11.5	+3.1
KOK	**Koryaka**	2.36	7	eP	Pn	17 29 11.8	+3.1
SDLR	**Sedlovina**	2.37	11	eP	Pn	17 29 10.8	+2.0
KRX	**Arik**	2.42	7	eP	Pn	17 29 12.7	+3.1
GNL	**Ganaly**	2.75	357	eP	Pn	17 29 17.1	+3.1

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*BJI **17** 17:31:47.7, 20°.20S×177°.34W, h535^{km}, mB5.1/22, mb4.8/46*

*ISCJB **17** 17:31:49.6±0.6, 20°.39S±0°.04×177°.98W±0°.03, h537^{km}±7^{km}, mb4.7/133, Error ellipse: s-maj=5.9km s-min=4.6km az=152.6*

*NEIC **17** 17:31:50.5±0.4, 20°.35S×177°.98W, h536^{km}±4^{km}, mb4.8/86, Error ellipse: s-maj=5.3km s-min=4.0km az=145.0*

*IDC **17** 17:31:51.1±0.5, 20°.32S×177°.98W, h539^{km}±5^{km}, mb4.2/28, mb1 4.3/30, mb1mx4.2/42, mbtmp5.1/30, Error ellipse: s-maj=9.5km s-min=8.3km az=160.0*

*MOS **17** 17:31:52.0±2.6, 20°.14S×178°.08W, h540^{km}, mb4.9/23, Error ellipse: s-maj=10.2km s-min=9.0km az=125.5*

ISC 17 17:31:50.5±0.4, 20°.35S±0°.05×177°.92W±0°.05, h540^{km}±4^{km}, h541^{km}:pP-P, n403, σ1^{s}.13/462, mb4.8/133, 55C-22D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	4.62	304	eP	P	17 33 17.1	+0.5
MSVF	**Nonsavu**	4.62	304	eP	P	17 33 17.1	+0.5
NIUE	**Niue**	7.63	82	eP	P	17 33 44.0	-0.3
RAO	**Raoul Island**	8.87	180	eP	P	17 33 56.4	-0.1
RAO				eS	S	17 35 40.3	+0.3
RAO	**Raoul Island**	8.87	180	eP	P	17 33 56.4	-0.1
RAO				eS	S	17 35 40.3	+0.3
RAO	**Raoul Island**	8.87	180	S	S	17 35 39.7	-0.3
	92nm,0.3s,baz=83,slow=22,SNR=6.4						
MARNC	**Mare, Loyalty**	13.18	263	eP	P	17 34 41.0	-0.3
PINNC	**Pines Island,**	13.81	258	eP	P	17 34 48.6	+0.8
DZM	**Mont Dzumac**	14.69	261	eP	P	17 35 00.3	+3.3
	29nm,0.6s						
DZM	**Mont Dzumac**	14.69	261	eP	P	17 35 00.4	+3.3
DZM	**Mont Dzumac**	14.69	261	P	P	17 34 57.6	+0.6
	2.3nm,0.3s,baz=96,slow=10,SNR=23						
OUZ	**Omahuta**	16.60	205	eP	P	17 35 17.0	+1.2
	26nm,0.9s						
RAR	**Rarotonga**	16.99	96	eP	P	17 35 19.5	-0.2
	111nm,1.4s						
RAR				eS	S	17 38 10.3	-0.1
RAR	**Rarotonga**	16.99	96	eP	P	17 35 19.5	-0.2
RAR				eS	S	17 38 10.3	-0.1
RAR				pmax	pmax		
	comp=Z,111nm,1.4s						
RAR	**Rarotonga**	16.99	96	P	P	17 35 20.0	+0.3
	comp=Z,1.6nm,0.3s,baz=246,slow=9.5,SNR=5.8						
URZ	**Urewera**	18.36	193	eP	P	17 35 30.4	-1.6
	comp=Z,52nm,0.8s						
URZ				S	S	17 38 27.1	-5.1
URZ				ScP	ScP	17 42 19.8	+0.4
URZ	**Urewera**	18.36	193	P	P	17 35 30.3	-1.6
	comp=Z,11nm,0.3s,baz=300,slow=2.2,SNR=55						
URZ				S	S	17 38 27.1	-5.1
	comp=Z,1.1nm,0.3s,baz=49,slow=23,SNR=8.9						
URZ				ScP	ScP	17 42 19.8	+0.4
	comp=Z,0.4nm,0.3s,baz=180,slow=11,SNR=3.7						
BKZ	**Black Stump Fm**	19.36	193	eP	P	17 35 39.8	-1.4
	comp=Z,10nm,0.9s						
BKZ				eS	S	17 38 48.4	-0.1
BFZ	**Birch Farm**	20.87	193	eP	P	17 35 53.4	-1.4
	comp=Z,85nm,1.5s						
SNZO	**South Karori**	21.82	195	eP	P	17 36 02.4	-0.8
	comp=Z,32nm,0.6s						
SNZO				eS	S	17 39 27.0	-0.3
THZ	**Tophouse**	22.72	198	eP	P	17 36 10.9	-0.5
	comp=Z,18nm,0.7s						
THZ				eS	S	17 39 40.0	-1.7
KHZ	**Kahutara**	23.15	196	eP	P	17 36 14.4	-0.7
	comp=Z,33nm,1.1s						
LTZ	**Lake Taylor**	23.84	198	eP	P	17 36 19.8	-1.6
	comp=Z,22nm,0.8s						
HNR	**Honiara**	23.95	294	P	P	17 36 23.4	+0.7
	comp=Z,24nm,0.6s,baz=182,slow=9.0,SNR=4.6						
OXZ	**Oxford**	24.41	198	eP	P	17 36 25.5	-0.9
	comp=Z,27nm,0.7s						
RPZ	**Rata Peaks**	25.06	199	eP	P	17 36 33.0	+0.9
	comp=Z,12nm,0.6s						
RPZ				ScP	ScP	17 42 36.8	+0.3
RPZ	**Rata Peaks**	25.06	199	P	P	17 36 31.6	-0.5
	comp=Z,11nm,0.6s,baz=326,slow=2.4,SNR=14						
RPZ				ScP	ScP	17 42 36.8	+0.3
	comp=Z,9.5nm,0.8s,baz=49,slow=7.3,SNR=4.1						
FOZ	**Fox Glacier**	25.29	201	eP	P	17 36 33.7	-0.4
	comp=Z,34nm,1.5s						
ODZ	**Otahua Downs**	26.39	198	eP	P	17 36 43.3	-0.5
	comp=Z,20nm,1.3s						
PAE	**Paea**	26.91	89	eP	P	17 36 48.8	+0.1
	comp=Z,13nm,1.0s						
PAE	**Paea**	26.91	89	eT	T	18 03 14.4	
	comp=Z,1.8nm,0.3s						
PPT2	**Papeete2**	26.93	89	eP	P	17 36 49.5	+0.5

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       comp=Z,123nm,1.3s
PPT    Papeete           26.93  89   P        P        17 36 50.0 +1.0
       comp=Z,68nm,0.7s,baz=5.4,slow=2.9,SNR=7.0
PPTF   Pamatai, Papee    26.94  89   eP       P        17 36 50.0 +0.9
       comp=Z,103nm,0.9s
TIAR   Tiarei            27.15  89   eP       P        17 36 51.3 +0.4
       comp=Z,32nm,1.0s
TVO    Taravao           27.20  89   eP       P        17 36 51.5 +0.1
       comp=Z,15nm,0.8s
WHZ    Wether Hill Ro    28.00 201   eP       P        17 36 59.5 +1.5
       comp=Z,40nm,0.7s
EIDS   Eidsvold          28.96 254   eP       P        17 37 07.0 +0.4
       comp=Z,20nm,1.3s
PMOR   Pomariorio Ree    29.07  84   eP       P        17 37 07.5 -0.1
       comp=Z,106nm,1.2s
ARMA   Armidale          29.20 244   eP       P        17 37 09.9 +1.1
       comp=Z,31nm,1.5s
VAH    Vaihoa            29.26  85   eP       P        17 37 09.0 -0.3
       comp=Z,70nm,1.0s
CTA    Charters Tower    33.58 264   P        P        17 37 46.4 +0.1
       comp=Z,29nm,0.7s,baz=87,slow=10,SNR=65
CTAO   Charters Tower    33.58 264   eP       P        17 37 46.3 +0.1
       comp=Z,37nm,0.8s
CTAO   Charters Tower    33.58 264   eP       P        17 37 46.3 +0.1
CTAO                                 pmax     pmax
       comp=Z,37nm,0.8s
COEN   Coen              37.65 273   eP       P        17 38 20.1 +0.1
       comp=Z,22nm,0.8s
COEN                                 ePcP     PcP      17 40 23.4 +0.1
STKA   Stephens Creek    37.92 244   eP       P        17 38 22.9 +0.9
       comp=Z,2.2nm,1.0s
STKA                                 ScP      ScP      17 43 22.0 +1.6
STKA   Stephens Creek    37.92 244   eP       P        17 38 22.9 +0.9
STKA                                 pmax     pmax
       comp=Z,2.0nm,1.0s
STKA   Stephens Creek    37.92 244   P        P        17 38 22.6 +0.6
       comp=Z,3.7nm,0.5s,baz=87,slow=12,SNR=10
STKA                                 ScP      ScP      17 43 22.0 +1.6
       comp=Z,6.0nm,0.9s,baz=18,slow=4.8,SNR=7.5
MANU   Manus Island      38.46 294   eP       P        17 38 25.9 -0.7
       comp=Z,66nm,0.8s
RKT    Rikitea           39.88 102   eP       P        17 38 38.7 +0.8
       comp=Z,77nm,1.1s
BBOO   Buckleboo         42.68 243   eP       P        17 38 60.0  0.0
       comp=Z,16nm,1.0s
JAY    Jayapura          44.07 288   P        P        17 39 11.2 +0.2
       comp=Z,98nm,0.6s,baz=148,slow=3.7,SNR=34
AS01   Alice Springs     44.59 257   eP       P        17 39 14.6 -0.3
AS31   Alice Springs     44.63 257   eP       P        17 39 15.2 -0.1
       comp=Z,8.8nm,0.8s
ASAR   Alice Springs     44.63 257   P        P        17 39 15.2 -0.2
       comp=Z,35nm,0.9s,baz=88,slow=8.3,SNR=461
ASAR                                 ScP      ScP      17 43 49.5 +2.0
       comp=Z,3.2nm,0.8s,baz=102,slow=4.1,SNR=8.8
ASAR                                 S        S        17 45 10.3 -2.1
       comp=Z,1.6nm,0.6s,baz=94,slow=16,SNR=7.8
WB2    Warramunga Arr    44.69 262   eP       P        17 39 15.4 -0.4
       comp=Z,42nm,1.0s
WRAB   Tennant Creek     44.69 262   eP       P        17 39 15.0 -0.8
       comp=Z,33nm,0.9s
WRAB   Tennant Creek     44.69 262d iP       P        17 39 14.2 -1.6
WRAB                                 pmax     pmax
       comp=Z,32nm,1.1s
WRA    Warramunga Arr    44.70 262   P        P        17 39 15.0 -0.9
       comp=Z,17nm,0.4s,baz=97,slow=8.3,SNR=166
WRA                                  ScP      ScP      17 43 49.5 +1.8
       comp=Z,2.0nm,0.9s,baz=95,slow=3.7,SNR=6.1
WRA                                  S        S        17 45 10.4 -3.1
       comp=Z,1.5nm,0.9s,baz=91,slow=14,SNR=6.7
MTN    Manton Dam        49.24 270   eP       P        17 39 49.5 -0.5
       comp=Z,44nm,0.6s
FITZ   Fitzroy Crossi    53.12 262   eP       P        17 40 18.4 +0.2
       comp=Z,30nm,1.4s
FITZ   Fitzroy Crossi    53.12 262   P        P        17 40 18.0 -0.2
       comp=Z,7.0nm,0.5s,baz=95,slow=5.0,SNR=40
SIJI   Sorong            53.27 285   P        P        17 40 19.2 -0.1
       comp=Z,82nm,0.7s,baz=87,slow=6.8,SNR=27
SOEI   Soe               56.57 272   eP       P        17 40 43.7 +1.2
       comp=Z,99nm,0.8s
BATI   Baumata           57.00 271   P        P        17 40 45.9 +0.5
       comp=Z,31nm,0.7s,baz=158,slow=1.8,SNR=9.3
VNDA   Vanda             58.07 185   P        P        17 40 52.6 +1.0
       comp=Z,9.6nm,0.8s,baz=359,slow=7.7,SNR=18
JHJ    Hachijo jima 2    66.77 322   P        P        17 41 48.0 -0.5
       comp=Z,92nm,0.4s,baz=135,slow=1.4,SNR=6.9
QSPA   South Pole Qui    69.72 180   eP       P        17 42 07.7 +1.6
       comp=Z,55nm,0.8s
QSPA   South Pole Qui    69.72 180   P        P        17 42 07.6 +1.6
       comp=Z,44nm,0.7s,baz=1.2,slow=0.3,SNR=192
MJAR   Matsushiro Arr    70.13 324   P        P        17 42 08.4 -0.4
       comp=Z,14nm,0.5s,baz=165,slow=6.0,SNR=98
MAJO   Matsushiro        70.14 324   eP       P        17 42 07.8 -1.0
       comp=Z,17nm,0.6s
MAJO   Matsushiro        70.14 324   eP       P        17 42 07.8 -1.0
MAJO                                 pmax     pmax
       comp=Z,17nm,0.6s
MAT    Matsushiro        70.14 324   P        P        17 42 08.1 -0.7
MJB9   Matsu-Tunnel      70.14 324   eP       P        17 42 07.8 -1.0
       comp=Z,18nm,0.6s
JNU    Nakatsue          72.22 317   P        P        17 42 21.1  0.0
       comp=Z,17nm,1.0s,baz=177,slow=4.5,SNR=4.6
LEM    Lembang           73.12 269   P        P        17 42 27.4 +0.5
       comp=Z,65nm,1.1s,baz=71,slow=11,SNR=7.2
NACB   Ninganchiao       73.66 304   eP       P        17 42 28.4 -1.2
       comp=Z,75nm,1.3s
SSLB   Suanglung         73.95 303   eP       P        17 42 29.8 -1.4
       comp=Z,21nm,0.5s
TPUB   Ta-pu             73.96 303   eP       P        17 42 29.6 -1.6
       comp=Z,40nm,0.9s
YHNB   Yeheng            74.08 304   eP       P        17 42 31.3 -0.7
       comp=Z,37nm,1.1s
YSS    Yuzh-Sakhalins    75.80 333   eP       P        17 42 40.5 -0.4
       comp=Z,70nm,0.9s
YSS    Yuzh-Sakhalins    75.80 333⇓eP       P        17 42 42.3 +1.3
YSS                                  e                 17 42 58.5
YSS                                  pmax     pmax
       comp=Z,60nm,1.1s
PETK   Petropavlovsk-    76.14 345   eP       P        17 42 42.5 -0.3
PETK   Petropavlovsk-    76.14 345   eP       P        17 42 42.5 -0.3
PETK   Petropavlovsk-    76.14 345   P        P        17 42 42.7 -0.1
       comp=Z,35nm,0.7s,baz=140,slow=7.2,SNR=34
KSRS   Korea Array       76.83 319   P        P        17 42 47.8 +0.9
       comp=Z,6.2nm,0.8s,baz=129,slow=6.1,SNR=30
KSAR   Wonju Array Be    76.84 318   P        P        17 42 47.8 +0.8
KSAR   Wonju Array Be    76.84 318   P        P        17 42 47.8 +0.8
KS01   Wonju Array Si    76.86 319   eP       P        17 42 47.0 -0.1
MSHR   Mys Shultsa       78.24 324   i P      P        17 42 53.9 -0.5
USA0B  Ussuriysk Arra    78.88 326   eP       P        17 42 58.9 +1.1
       comp=Z,40nm,0.9s
USRK   Ussuriysk Ar.     78.88 326   P        P        17 42 59.1 +1.4
       comp=Z,33nm,0.9s,baz=122,slow=3.8,SNR=54
TYV    Tymovskoe         78.93 336   eP       P        17 42 58.1 +0.2
TYV                                  pmax     pmax
       comp=Z,32nm,1.2s
CMB    Columbia Colle    79.30  43   eP       P        17 43 00.6 +0.3
       comp=Z,60nm,1.2s
CMB    Columbia Colle    79.30  43   eP       P        17 43 00.6 +0.3
CMB                                  pmax     pmax
       comp=Z,60nm,1.2s
NJ2    Nanjing           79.84 310   eP       P        17 43 03.4 +0.2
NJ2                                  pmax     pmax
       comp=Z,18nm,1.2s
YBH    Yreka Blue Hor    80.12  39   eP       P        17 43 06.4 +1.8
       comp=Z,12nm,0.9s
YBH    Yreka Blue Hor    80.12  39   eP       P        17 43 06.4 +1.8
YBH                                  pmax     pmax
       comp=Z,13nm,0.9s
WAKR   Walker            80.18  43   eP       P        17 43 07.0 +2.0
       comp=Z,17nm,1.2s
BEKR   Beckworth         80.40  41   eP       P        17 43 07.8 +1.6
       comp=Z,15nm,1.3s
PNTR   Pine Nut          80.42  42   eP       P        17 43 08.2 +1.8
       comp=Z,22nm,0.9s
MDJ    Mudanjiang        80.44 325   P        P        17 43 07.0 +1.0
MDJ                                  pmax     pmax
       comp=Z,50nm,0.9s
KDAK   Kodiak Island     80.65  13   i P      P        17 43 07.5 +0.8
NV01   Mina Array Sit    80.86  43   eP       P        17 43 09.8 +1.1
NVAR   Mina Array Bea    80.86  43   P        P        17 43 10.2 +1.5
       comp=Z,6.4nm,0.9s,baz=226,slow=9.4,SNR=32
NVAR                                 pP       pwP      17 45 06.4 -0.9
       comp=Z,1.1nm,1.0s,baz=211,slow=5.1,SNR=2.2
PAHR   Pah Rah Range     80.91  42   eP       P        17 43 09.5 +0.7
       comp=Z,8.2nm,1.0s
NV11   Mina Array Sit    80.96  43   eP       P        17 43 10.7 +1.6
       comp=Z,0.9nm,1.0s
KVN    Kaiserville       81.35  43   eP       P        17 43 12.6 +1.5
       comp=Z,14nm,1.1s
KVN    Kaiserville       81.35  43   P        P        17 43 12.6 +1.5
KVN                                  pmax     pmax
       comp=Z,14nm,1.1s
TPNV   Topopah Spring    81.38  45   eP       P        17 43 12.0 +0.7
       comp=Z,7.8nm,1.0s
TPNV   Topopah Spring    81.38  45   eP       P        17 43 12.0 +0.7
TPNV                                 pmax     pmax
       comp=Z,8.0nm,1.0s
GRNR   Gornyy            81.41 333   eP       P        17 43 12.0 +1.1
GRNR                                 pmax     pmax
       comp=Z,39nm,1.0s
NKL    Nikolayevsk       81.49 336   eP       P        17 43 10.0 -1.2
NKL                                  pmax     pmax
       comp=Z,33nm,0.9s
MOD    Modoc Plateau     81.65  40   eP       P        17 43 13.3 +0.8
       comp=Z,16nm,1.0s
CN2    Changchun         82.23 322   eP       P        17 43 15.9 +0.7
CN2                                  pmax     pmax
       comp=Z,30nm,1.0s
H04A   Detroit Lake      82.26  37   eP       P        17 43 16.6 +1.2
       comp=Z,34nm,1.4s
PINE   Pine Mountain     82.42  38   eP       P        17 43 18.2 +1.8
       comp=Z,28nm,0.9s
KLR    Kul'dur           82.44 329   i P      P        17 43 16.1  0.0
KLR    Kul'dur           82.44 329   P        P        17 43 17.2 +1.1
       comp=Z,9.5nm,0.8s,baz=105,slow=3.5,SNR=30
R11A   Troy Canyon, C    82.59  45   eP       P        17 43 18.6 +1.2
       comp=Z,3.3nm,1.0s
TUC    Tucson            82.83  52   eP       P        17 43 19.3 +0.7
       comp=Z,14nm,1.0s
TUC    Tucson            82.83  52   eP       P        17 43 19.3 +0.7
TUC                                  pmax     pmax
       comp=Z,14nm,1.0s
WVOR   Wild Horse Val    82.97  40   eP       P        17 43 19.6 +0.5
       comp=Z,17nm,1.3s
WVOR   Wild Horse Val    82.97  40   eP       P        17 43 19.6 +0.5
WVOR                                 pmax     pmax
       comp=Z,17nm,1.3s
RSO    Redoubt South     83.07  12   eP       P        17 43 18.8 -0.5
I07A   Izee              83.42  38   eP       P        17 43 22.7 +1.4
       comp=Z,16nm,1.0s
MA2    Magadan           83.66 345   eP       P        17 43 21.1 -0.9
       comp=Z,29nm,0.9s
MA2    Magadan           83.66 345ceP       P        17 43 21.0 -0.9
MA2                                  pmax     pmax
       comp=Z,25nm,0.9s
GAMB   Gambell           83.99   3   eP       P        17 43 24.4 +1.0
       comp=Z,37nm,0.8s
SUA    Susitna One       84.40  13   eP       P        17 43 25.6 -0.1
       comp=Z,39nm,0.8s
G08A   Pilot Rock        84.45  37   eP       P        17 43 27.9 +1.5
       comp=Z,14nm,1.1s
PSI    Prapat            84.56 275   P        P        17 43 27.5 -0.2
       comp=Z,15nm,0.9s,baz=180,slow=3.5,SNR=11
PMR    Palmer            84.85  13   eP       P        17 43 27.8  0.0
       comp=Z,34nm,1.3s
PMR    Palmer            84.85  13   eP       P        17 43 27.8  0.0
PMR                                  pmax     pmax
       comp=Z,35nm,1.3s
SKNT   Sakolnakorn       85.13 290   P        P        17 43 31.3 +1.1
BMO    Blue Mountains    85.15  38   eP       P        17 43 30.9 +1.2
       comp=Z,5.8nm,0.9s
ANM    Nome              85.19   5   eP       P        17 43 29.9 +0.5
       comp=Z,11nm,1.5s
ANM    Nome              85.19   5   eP       P        17 43 29.9 +0.5
ANM                                  pmax     pmax
       comp=Z,11nm,1.5s
D08A   Wollman Farm,     85.51  36   eP       P        17 43 30.6 -0.7
       comp=Z,14nm,1.1s
TRTT   Trang             85.63 280   P        P        17 43 34.8 +2.1
SRAK   Srakaew           85.74 287   P        P        17 43 33.5 +0.4
BJT    Baijiatuau        85.83 315   eP       P        17 43 32.7 -0.3
       comp=Z,11nm,0.6s
BJT    Baijiatuau        85.83 315   eP       P        17 43 32.7 -0.3
BJT                                  pmax     pmax
       comp=Z,11nm,0.6s
F10A   Beach Ranch, E    85.83  38   eP       P        17 43 33.7 +0.6
       comp=Z,23nm,0.9s
BJI    Beijing           85.84 315⇓iP       P        17 43 33.3 +0.3
BJI                                  pmax     pmax
       comp=Z,16nm,0.9s
CAST   Castle Rocks      85.92  11   eP       P        17 43 31.8 -1.1
       comp=Z,29nm,0.8s
ENH    Enshi             86.02 304   eP       P        17 43 34.6 +0.4
       comp=Z,74nm,1.3s
LLLB   Lillooet          86.12  32   eP       P        17 43 34.5 +0.2
       comp=Z,6.8nm,0.9s
SEY    Seymchan          86.25 347ceP       P        17 43 33.8 -0.6
TRF    Thorofare Moun    86.28  12   eP       P        17 43 34.4 -0.5
       comp=Z,43nm,0.9s
RND    Reindeer          86.53  13   eP       P        17 43 36.0 +0.1
       comp=Z,61nm,0.9s
RND    Reindeer          86.53  13   eP       P        17 43 36.0 +0.1
RND                                  pmax     pmax
       comp=Z,61nm,0.9s
MNTX   Cornudas Mount    86.60  55   eP       P        17 43 38.6 +1.7
       comp=Z,7.1nm,1.0s
GYA    Guiyang           86.64 300⇑iP       P        17 43 38.0 +0.6
GYA                                  pP       pP       17 45 35.4 +1.0
GYA                                  sP       sP       17 46 28.0 -0.7
GYA                                  PP       PP       17 47 12.5 +2.8
GYA                                  SKS      SKSac    17 53 12.3 -0.7
GYA                                  S        S        17 53 30.8 +1.1
GYA                                  pmax     pmax
       comp=Z,10.0nm,1.0s
MCK    McKinley          86.81  12   eP       P        17 43 36.9 -0.2
       comp=Z,35nm,0.9s
MCK    McKinley          86.81  12   eP       P        17 43 36.9 -0.2
MCK                                  pmax     pmax
       comp=Z,35nm,0.9s
SYO    Syowa Base        86.89 193⇓eP       P        17 43 36.4 -1.2
SYO    Syowa Base        86.89 193⇓ePcP     PcP      17 43 39.8 +0.7
TXAR   Lajitas Array     86.91  57   P        P        17 43 40.4 +1.8
       comp=Z,5.2nm,0.8s,baz=218,slow=6.7,SNR=56
TXAR                                 pP       pwP      17 45 38.8 -0.5
       comp=Z,1.0nm,1.1s,baz=215,slow=1.5,SNR=3.4
ANMO   Albuquerque       87.25  51   eP       P        17 43 41.7 +1.6
       comp=Z,3.6nm,0.9s
ANMO   Albuquerque       87.25  51ceP       P        17 43 40.8 +0.7
ANMO                                 pmax     pmax
       comp=Z,4.0nm,1.1s
PHET   Kaeng Krachan     87.51 285   P        P        17 43 44.6 +3.1
ZEA    Zeya              87.54 331   eP       P        17 43 51.0  +10
ZEA                                  pmax     pmax
       comp=Z,23nm,1.0s
GDL2   Guadalupe Moun    87.60  54   eP       P        17 43 43.2 +1.5
MLY    Manley            87.63  11   eP       P        17 43 40.3 -0.7
       comp=Z,16nm,0.7s
WRH    Wood River Hil    87.64  12   eP       P        17 43 40.9 -0.1
       comp=Z,42nm,0.9s
DLBC   Dease Lake        87.88  23   eP       P        17 43 43.7 +1.3
       comp=Z,11nm,0.9s
WHY    Whitehorse        87.88  20   eP       P        17 43 43.0 +0.6
       comp=Z,9.4nm,0.8s
IM3    Indian Mountai    88.00  10   eP       P        17 43 42.4 -0.2
COLA   College           88.04  12   eP       P        17 43 42.6 -0.3
       comp=Z,42nm,0.7s
COLA   College           88.04  12   i P      P        17 43 41.9 -0.9
COLA                                 pmax     pmax
       comp=Z,36nm,0.9s
MDM    Murphy Dome       88.04  12   eP       P        17 43 42.5 -0.4
       comp=Z,36nm,0.9s
XAN    Xi'an             88.10 307   P        P        17 43 44.3 +0.3
XAN                                  pmax     pmax
       comp=Z,47nm,1.0s
XAN                                  pmax     pmax
       comp=Z,190nm,5.3s
XAN    Xi'an             88.10 307   eP       P        17 43 44.1 +0.2
       comp=Z,198nm,0.8s
IL1    Eielson Array     88.15  13   eP       P        17 43 42.4 -0.9
ILAR   Eielson Array     88.15  13   P        P        17 43 42.5 -0.8
       comp=Z,13nm,0.9s,baz=228,slow=5.6,SNR=60
ILAR                                 pP       pP       17 45 41.5 +0.5
       comp=Z,3.8nm,1.1s,baz=217,slow=5.1,SNR=8.0
ILAR                                 PP       PP       17 47 18.4 -2.3
       comp=Z,1.3nm,0.9s,baz=218,slow=6.9,SNR=4.2
SNAA   Sanae             88.16 178   P        P        17 43 43.9 +0.3
SNAA   Sanae             88.16 178   i P      P        17 43 40.8 -2.8
TPAW   Teton Pass        88.27  42   eP       P        17 43 45.5 +0.7
       comp=Z,5.4nm,1.0s
VNA3   Neumayer Olymp    88.29 176   P        P        17 43 44.6 +0.5
UTTA   Uttaradit         88.45 289   P        P        17 43 47.9 +2.1
LOHW   Long Hollow       88.55  42   eP       P        17 43 47.1 +1.1
       comp=Z,8.9nm,1.4s
UTHA   Uthaitani         88.64 287   P        P        17 43 48.9 +2.2
UTHA   Uthaitani         88.64 287   P        P        17 43 48.9 +2.2
VNA2   Neumayer--Watz    88.73 177   P        P        17 43 46.8 +0.6
       baz=194,slow=3.5
PDAR   Pinedale Array    88.80  43   P        P        17 43 47.8 +0.5
       comp=Z,2.6nm,0.7s,baz=209,slow=3.4,SNR=21
NVL    N'lazarevskaya    88.87 183⇑iP       P        17 43 45.6 -1.2
NVL                                  pmax     pmax
       comp=Z,21nm,0.8s
BILL   Bilibino          88.89 354   eP       P        17 43 46.7  0.0
       comp=Z,11nm,0.8s
BILL   Bilibino          88.89 354ceP       P        17 43 46.0 -0.8
BILL                                 pmax     pmax
       comp=Z,10.0nm,0.9s
VNA1   Neumayer--Stat    88.96 177   P        P        17 43 48.2 +1.0
PRP    Porcupine Dome    89.09  13   eP       P        17 43 48.3 +0.4
       comp=Z,15nm,0.9s
SUKH   Sukhothai         89.17 289   P        P        17 43 51.4 +2.2
SUKH   Sukhothai         89.17 289   P        P        17 43 51.4 +2.2
DAWY   Dawson            89.29  16   eP       P        17 43 49.5 +0.8
       comp=Z,21nm,0.8s
HHC    Hu-ho-hao-te      89.30 314   eP       P        17 43 50.6 +1.1
HHC                                  pmax     pmax
       comp=Z,19nm,1.0s
KMI    Kunming           89.35 297   P        P        17 43 51.4 +1.2
KMI                                  pmax     pmax
       comp=Z,26nm,0.9s
KMI                                  pmax     pmax
       comp=Z,140nm,3.6s
UMPA   Umpang Tak        89.40 287   P        P        17 43 52.8 +2.5
UMPA   Umpang Tak        89.40 287   P        P        17 43 52.8 +2.5
       comp=Z,5.5nm,1.0s
EGAK   Eagle             89.44  15   eP       P        17 43 49.8 +0.5
       comp=Z,23nm,0.8s
PAYA   Payao             89.65 291   P        P        17 43 52.8 +1.4
PAYA   Payao             89.65 291   P        P        17 43 52.8 +1.4
COLD   Coldfoot          89.72  10   eP       P        17 43 51.4 +0.8
       comp=Z,7.8nm,1.0s
CM01   Chiang Mai Arr    90.11 290   eP       P        17 43 53.3 -0.3
CM31   Chiang Mai Arr    90.14 290   eP       P        17 43 54.5 +0.8
CMAR   Chiang Mai Arr    90.14 290   P        P        17 43 55.6 +2.0
       comp=Z,13nm,0.8s,baz=120,slow=2.7,SNR=99
CMAR                                 pP       pwP      17 45 55.8 +0.1
       comp=Z,3.3nm,1.0s,baz=122,slow=3.2,SNR=11
CMAR                                 PKKPbc   PKKPbc   18 01 21.9 +1.4
       comp=Z,0.6nm,0.6s,baz=277,slow=3.6,SNR=5.2
CMMT   Chiang Mai        90.26 290   P        P        17 43 55.5 +1.2
CMMT   Chiang Mai        90.26 290   P        P        17 43 55.5 +1.2
       comp=Z,30nm,0.7s
CHTO   Chiang Mai        90.27 290   eP       P        17 43 55.4 +1.1
       comp=Z,21nm,0.8s
CHTO   Chiang Mai        90.27 290   eP       P        17 43 55.4 +1.1
CHTO                                 pmax     pmax
       comp=Z,21nm,0.8s
CHTO   Chiang Mai        90.27 290   P        P        17 43 55.6 +1.3
       comp=Z,129nm,0.7s
CD2    Chengdu           90.77 303   eP       P        17 43 57.0 +0.6
TOLK   Toolik Lake Re    91.09  10   eP       P        17 43 57.4 +0.3
       comp=Z,12nm,1.1s
EPYK   Eagle Plains      91.82  15   eP       P        17 44 00.7 +0.3
       comp=Z,14nm,0.8s
YAK    Yakutsk           92.00 338   eP       P        17 43 59.0 -2.2
YAK                                  pmax     pmax
       comp=Z,121nm,0.9s
YAK                                  pmax     pmax
       comp=N,15nm,0.9s
YAK                                  pmax     pmax
       comp=E,22nm,1.1s
LZH    Lanzhou           92.74 307  ⇑P        P        17 44 06.9 +1.4
LZH                                  pP       pP       17 46 03.8 +0.1
LZH                                  sP       sP       17 46 58.0 +0.4
LZH                                  PP       PP       17 48 01.3 +4.0
LZH                                  pmax     pmax
       comp=E,25nm,1.4s
LZH                                  pmax     pmax
       comp=E,76nm,9.2s
INK    Inuvik            94.11  15   eP       P        17 44 10.6 -0.1
       comp=E,12nm,1.0s
INK    Inuvik            94.11  15   eP       P        17 44 10.6 -0.1
INK                                  pmax     pmax
       comp=Z,12nm,1.0s
ULN    Ulaanbaatar       95.30 319   eP       P        17 44 16.6 -0.3
       comp=Z,7.2nm,1.2s
ULN    Ulaanbaatar       95.30 319   i P      P        17 44 15.4 -1.5
ULN                                  pmax     pmax
       comp=Z,3.0nm,0.9s
SONA1  Songino Array     95.69 319   eP       P        17 44 17.7 -0.9
SONM   Songino Array     95.69 319   P        P        17 44 17.9 -0.6
       comp=Z,1.2nm,0.6s,baz=134,slow=3.3,SNR=13
YKA    Yellowknife Ar    96.34  25   P        P        17 44 20.9  0.0
       comp=Z,1.4nm,0.9s,baz=245,slow=4.5,SNR=14
GTA    Gaotai            96.94 309  ⇑P        P        17 44 24.8 +0.4
GTA                                  pP       pwP      17 46 25.6 -0.8
GTA                                  sP       sP       17 47 18.9 +2.1
GTA                                  SKS      SKSac    17 54 09.3 -0.2
GTA                                  S        S        17 54 58.4 -1.9
GTA                                  sS       sS       17 58 31.8 -3.3
GTA                                  SS       SS       18 01 54.9 +1.7
GTA                                  pmax     pmax
       comp=Z,4.0nm,1.4s
GTA                                  pmax     pmax
       comp=Z,160nm,7.0s
LPAZ   La Paz           102.05 112   P        Pdif     17 44 50.2 +1.9
       comp=Z,1.0nm,0.8s,baz=257,slow=4.5,SNR=4.7
ZALV   Zalesovo Beam    110.42 321   SKiKP    SKiKP    17 52 06.2 +0.8
       comp=Z,1.1nm,0.7s,baz=132,slow=2.2,SNR=4.4
MKAR   Makanchi Array   111.15 313   Pdiff    Pdif     17 45 28.4 +1.1
       comp=Z,0.3nm,0.6s,baz=79,slow=3.4,SNR=4.9
MKAR                                 PKiKP    PKiKP    17 49 21.6 -1.3
       comp=Z,0.6nm,0.5s,baz=219,slow=0.8,SNR=14
MKAR                                 SKiKP    SKiKP    17 52 07.9 +0.8
       comp=Z,1.1nm,0.9s,baz=64,slow=2.8,SNR=6.5
MKAR                                 PKKPbc   PKKPbc   18 00 21.4 -0.3
       comp=Z,0.6nm,0.6s,baz=262,slow=3.9,SNR=7.8
KURK   Kurchatov        113.94 317   PKiKP    PKiKP    17 49 26.9 -1.0
KURK                                 PP       PP       17 50 25.4 -6.9
KURK   Kurchatov        113.94 317c iPKIKP   PKiKP    17 49 27.9  0.0
KURK                                 pmax     pmax
       comp=Z,5.0nm,2.5s
KURBB  Kurchatov Arra   113.99 317   PKiKP    PKiKP    17 49 26.9 -1.1
       comp=Z,0.3nm,0.3s,baz=104,slow=1.9,SNR=11
KURBB                                PP       PP       17 50 25.4 -7.3
       comp=Z,0.4nm,0.5s,baz=96,slow=5.6,SNR=4.2
KURBB                                SKiKP    SKiKP    17 52 13.2 +0.8
       comp=Z,1.8nm,0.9s,baz=100,slow=1.9,SNR=11
KURBB                                PKKPbc   PKKPbc   18 00 11.5 -0.9
       comp=Z,0.7nm,0.7s,baz=274,slow=4.2,SNR=6.3
BVAR   Borovoye Array   119.01 320   PKIKP    PKPdf    17 49 37.0 -0.7
BVAR   Borovoye Array   119.01 320   PKP      PKPdf    17 49 37.0 -0.7
       comp=Z,1.9nm,0.3s,baz=115,slow=2.5,SNR=21
BVAR                                 SKP               17 52 23.2
       comp=Z,2.0nm,0.8s,baz=64,slow=6.8,SNR=6.3
BRVK   Borovoye         119.07 320c iPKIKP   PKiKP    17 49 38.2 +0.3
BRVK                                 pmax     pmax
       comp=Z,2.0nm,0.8s
GAR    Garm             119.20 304   ePKPdf   PKPdf    17 49 37.9 -0.8
GAR    Garm             119.20 304   ePKIKP   PKPdf    17 49 37.9 -0.8
ARU    Arti             125.12 326   ePKPdf   PKPdf    17 49 48.2 -1.1
ARU    Arti             125.12 326   i PKIKP  PKPdf    17 49 49.2 -0.1
ARU                                                    17 51 48.1
ARU                                                    17 56 08.1
ARU                                  SS       SS       18 08 04.6 +2.2
BOSA   Boshof           126.42 205   PKIKP    PKiKP    17 49 54.0 +0.5
BOSA   Boshof           126.42 205   PKP      PKiKP    17 49 54.0 +0.5
       comp=Z,1.7nm,0.6s,baz=171,slow=6.3,SNR=6.0
GEYT   Alibeck          128.77 303   SKPbc    SKPbc    17 52 29.1
       comp=Z,8.2nm,0.9s,baz=180,slow=1.0,SNR=12
ARCES  ARCESS Array B   128.79 350   PKIKP    PKPdf    17 49 56.0  0.0
ARCES  ARCESS Array B   128.79 350   PKP      PKPdf    17 49 56.0  0.0
       comp=Z,2.8nm,0.8s,baz=71,slow=1.6,SNR=13
ARCES                                SKPbc    SKPbc    17 52 27.9
       comp=Z,7.9nm,0.9s,baz=36,slow=4.5,SNR=11
KLMR   Klimovskoe       131.77 336   ePP      PP       17 52 32.9 +2.8
KLMR                                 AMP               17 52 41.4
       comp=Z,20nm,1.3s
FINES  FINESS Array B   135.65 344   PKhKP    PKPpre   17 50 01.9
       comp=Z,0.8nm,0.5s,baz=191,slow=1.9,SNR=5.1
FINES                                PKP      PKPdf    17 50 07.3 -1.7
       comp=Z,0.7nm,0.3s,baz=99,slow=4.0,SNR=12
FINES                                SKPbc    SKPbc    17 52 51.3 +1.4
       comp=Z,3.2nm,0.7s,baz=67,slow=2.5,SNR=12
VRH    Novokhopyorsk    136.33 324   ePKIKP   PKPdf    17 50 09.6 -1.0
VRH                                  pmax     pmax
       comp=Z,8.0nm,0.7s
OBN    Obninsk          136.66 332   i PKIKP  PKPdf    17 50 10.4 -0.7
OBN                                  pmax     pmax
       comp=Z,33nm,2.5s
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LPSR	Galich'ya Gora	137.05	328	ePKIKP	PKPdf	17 50 10.9	-1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
VSR	Storozhevoye	137.69	326	ePKIKP	PKPdf	17 50 12.7	-0.4
VSR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NB2	NORSAR Subarra	138.84	353	PKP	PKPpre	17 50 05.7	
	comp=Z,0.7nm,0.8s,baz=16,slow=3.2						
NOA	NORSAR Array B	138.84	353	PKhKP	PKPpre	17 50 05.4	
	comp=Z,1.1nm,0.7s,baz=16,slow=4.6,SNR=5.5						
NOA				SKPbc	SKiKP	17 53 01.0	-1.3
	comp=Z,4.3nm,0.8s,baz=14,slow=4.5,SNR=12						
KBZ	Khabaz	138.85	314	SKPbc	SKPbc	17 53 00.8	+1.1
	comp=Z,2.3nm,0.9s,baz=144,slow=2.0,SNR=4.2						
KMBO	Kilima Mbogo	139.48	242	SKPbc	SKiKP	17 53 04.6	-0.8
	comp=Z,2.1nm,0.7s,baz=68,slow=5.1,SNR=5.1						
KAC	Achnashellach	142.50	7	eP	PKPdf	17 50 18.5	-3.2
KPL	Plockton	142.62	7	eP	PKPdf	17 50 18.8	-3.0
SUW	Suwalki	142.72	339	ePKP	PKPdf	17 50 19.9	-2.2
TNCL	Tunceli-Merkez	142.81	308	i P	PKiKP	17 50 25.2	-1.1
TNCL				IAML_P			
	comp=Z,110nm,0.7s						
AKASG	Malin Array Be	142.92	331	PKhKP	PKPpre	17 50 19.1	
	comp=Z,26nm,0.7s,baz=44,slow=4.5,SNR=104						
AKASG				SKPbc	SKiKP	17 53 11.1	+0.2
	comp=Z,3.3nm,0.6s,baz=40,slow=2.9,SNR=14						
AKBB	Malin Array Si	142.92	331	ePKPpre	PKPpre	17 50 19.4	
KIEV	Kiev	142.93	331	ePKPpre	PKPpre	17 50 19.4	
KIEV	Kiev	142.93	331	⇑PKHKP	PKPpre	17 50 19.1	
AK11	Malin Array Si	142.96	331	ePKPpre	PKPpre	17 50 19.5	
SHEL	Horse Pasture	143.11	167	i PKIKP	PKPdf	17 50 24.8	+0.8
DRUM	Mains of Drumt	143.33	4	eP	PKPab	17 50 20.6	-0.6
KEMA	Kemaliye	143.53	309	i P	PKPdf	17 50 24.0	-0.1
KEMA				IAML_P			
	comp=Z,653nm,0.8s						
MUD	Monsted U'grnd	143.56	353	i PKHKP	PKPpre	17 50 21.8	
MUD				pmax	pmax		
	comp=Z,44nm,0.9s						
EDU	Dundee	143.65	5	eP	PKPab	17 50 22.2	-0.3
INVG	Invergeldie, C	143.68	6	eP	PKPab	17 50 22.4	-0.2
LAWE	Loch Awe, Argy	143.71	7	eP	PKPab	17 50 22.2	-0.4
CUZAR	Zara_SIVAS	143.82	310	i P	PKPdf	17 50 25.3	+0.6
SANL	SANLIURFA_Merk	143.83	306	i P	PKPdf	17 50 24.8	+0.1
SANL				IAML_P			
	comp=Z,3µm,0.8s						
COP	Copenhagen	143.87	350	i PKHKP	PKPpre	17 50 22.6	
COP				pmax	pmax		
	comp=Z,36nm,0.9s						
EAB	Aberfoyle	143.89	6	eP	PKPbc	17 50 23.1	-0.2
BSD	Bornholm Skovb	143.96	347	⇑iPKHKP	PKPpre	17 50 23.2	
BSD				pmax	pmax		
	comp=Z,66nm,1.0s						
HEKM	Malatya_Hekimh	144.05	309	i P	PKPdf	17 50 26.3	+1.1
HEKM				IAML_P			
	comp=Z,2µm,0.8s						
SURC	SANLIURFA_SURC	144.21	305	i P	PKPdf	17 50 26.1	+0.7
SURC				IAML_P			
	comp=Z,686nm,0.8s						
CUKAN	kangal_SIVAS	144.25	310	i P	PKPab	17 50 26.6	+1.1
ATAB	Bozova	144.27	306	i P	PKPab	17 50 26.3	+0.8
ATAB				IAML_P			
	comp=Z,681nm,0.3s						
AKCD	Akcadag	144.28	308	i P	PKPab	17 50 26.2	+0.5
AKCD				IAML_P			
	comp=Z,815nm,0.9s						
ESY	Stoneypath	144.31	5	eP	PKPbc	17 50 24.4	-0.2
EAU	Auchinoon	144.31	5	eP	PKPdf	17 50 24.8	0.0
EBL	Broad Law	144.42	5	eP	PKPbc	17 50 24.9	-0.1
GZT	Gaziantep	144.86	307	i P	PKPab	17 50 28.6	+0.7
GZT				IAML_P			
	comp=Z,716nm,0.7s						
BEL	Belsk	145.34	340	ePKP	PKPab	17 50 28.6	-0.5
BEL	Belsk	145.34	340	ePKIKP	PKPab	17 50 28.6	-0.5
EDMD	Edmundbyers	145.44	4	eP	PKPbc	17 50 27.5	-0.5
KIS	Kishinev	145.65	327	eP	PKPdf	17 50 27.0	-0.4
	comp=Z,150nm,1.0s						
ANDN	Andirin	145.70	307	i P	PKPbc	17 50 30.1	+0.6
ANDN				IAML_P			
	comp=Z,705nm,0.9s						
SAIM	ADANA	145.75	308	i P	PKPab	17 50 30.6	-0.7
SAIM				IAML_P			
	comp=Z,162nm,0.2s						
LVV	L'vov	145.80	334	ePKIKP	PKPbc	17 50 28.8	-0.5
LEOM	Leova	146.29	327	⇓iP	PKPbc	17 50 31.4	+0.7
LEOM	Leova	146.29	327	⇓PKIKP	PKPbc	17 50 31.4	+0.7
BR131	Keskin Array S	146.79	313	ePKPbc	PKPbc	17 50 32.6	0.0
BRTR	Keskin Array B	146.79	313	PKPbc	PKPbc	17 50 32.1	-0.4
	comp=Z,8.3nm,0.9s,baz=146,slow=5.6,SNR=31						
BRTR				pPKPbc	pPKPab	17 52 37.8	+1.1
	comp=Z,3.9nm,1.1s,baz=96,slow=1.2,SNR=7.0						
BRTR				SKPbc	SKiKP	17 53 20.3	+0.7
	comp=Z,1.2nm,0.8s,baz=132,slow=1.8,SNR=3.7						
TLCR		146.83	324	⇑iP	PKPbc	17 50 32.6	+0.4
TLCR		146.83	324	⇑PKIKP	PKPbc	17 50 32.6	+0.4
BUR08	Bucovina Ar. S	146.95	331	ePKPbc	PKPbc	17 50 33.4	+0.8
BUR04	Bucovina Ar. S	146.97	331	ePKPbc	PKiKP	17 50 33.7	-0.9
BURAR	Bucovina Array	146.97	331	⇓iP	PKiKP	17 50 33.8	-0.8
BURAR	Bucovina Array	146.97	331	⇓PKP2	PKiKP	17 50 33.8	-0.8
BIZ	Bicaz	147.04	329	⇑iP	PKPbc	17 50 33.6	+0.8
OJC	Ojcow	147.05	339	ePKP	PKPbc	17 50 33.0	+0.4
OJC	Ojcow	147.05	339	ePKPbc	PKPbc	17 50 32.8	+0.1
OJC	Ojcow	147.05	339	ePKIKP	PKPbc	17 50 33.0	+0.4
TESR	Tescani	147.08	328	⇑iP	PKPbc	17 50 33.2	+0.3
CFR	Carcaliu	147.21	325	⇑iP	PKPbc	17 50 33.5	+0.3
CFR	Carcaliu	147.21	325	⇑PKIKP	PKPbc	17 50 33.5	+0.3
ANTO	Ankara	147.31	313	ePKPbc	PKPbc	17 50 34.3	+0.5
ANTO	Ankara	147.31	313	⇑iP	PKPbc	17 50 34.5	+0.7
ANTO	Ankara	147.31	313	⇑PKP2	PKPbc	17 50 34.5	+0.7
BR231	Keskin MP Arra	147.34	313	ePKPbc	PKPbc	17 50 34.2	+0.3
UZH	Uzhgorod	147.44	335	⇓iPKIKP	PKPbc	17 50 32.2	-1.5
UZH				i		17 50 36.4	
UZH				e		17 52 40.3	
VRI	Vrincioaia	147.48	327	⇓iP	PKPbc	17 50 34.0	0.0
VRI	Vrincioaia	147.48	327	⇓PKIKP	PKPbc	17 50 34.0	0.0
TIRR	Tirgusor	147.51	324	⇑iP	PKPbc	17 50 34.1	+0.1
TIRR	Tirgusor	147.51	324	⇑PKIKP	PKPbc	17 50 34.1	+0.1
PLOR	Plostina	147.53	327	⇑iP	PKPbc	17 50 34.3	+0.2
PLOR	Plostina	147.53	327	⇑PKIKP	PKPbc	17 50 34.3	+0.2
NIE	Niedzica	147.55	338	ePKP	PKiKP	17 50 35.0	-0.6
NIE	Niedzica	147.55	338	ePKP2	PKiKP	17 50 35.0	-0.6
KSP	Ksiaz	147.57	343	ePKP	PKPbc	17 50 34.6	+0.6
KSP	Ksiaz	147.57	343	ePKIKP	PKPbc	17 50 34.6	+0.6
TLB	Topalu	147.64	324	⇑iP	PKPbc	17 50 35.0	+0.7
TLB	Topalu	147.64	324	⇑PKP2	PKPbc	17 50 35.1	+0.7
TRPA	Tarpa	147.74	334	⇑iP	PKPbc	17 50 35.1	+0.6
CLL	Collm	147.93	347	ePKPbc	PKPbc	17 50 34.9	0.0
CLL	Collm	147.93	347	⇓iPKPdf	PKPbc	17 50 34.8	-0.1
	comp=Z,39nm,1.0s						
CLL				i PKiKP	PKiKP	17 50 37.2	+0.9
CLL				⇑iPKPab	PKPab	17 50 39.3	-0.2
	comp=Z,29nm,0.9s						
CLL				epPKPab	pPKPab	17 52 41.0	+0.2
CLL				eSKPdf	SKPdf	17 53 12.0	-1.9
CLL				i SKPbc	SKiKP	17 53 23.3	+2.0
	comp=Z,7.0nm,1.0s						
UPC	Upice	147.95	343	⇑ePKP	PKPbc	17 50 35.6	+0.6
UPC				ePKPAB	PKPab	17 50 40.4	+0.8
DPC	Dobruska-Polom	148.00	343	⇑ePKP	PKiKP	17 50 35.9	-0.6
DPC				ePKPAB	PKPab	17 50 40.6	+0.7
LANS	Liptovska Anna	148.07	338	ePKP2	PKiKP	17 50 36.6	-0.1
LANS	Liptovska Anna	148.07	338	ePKP	PKiKP	17 50 36.5	-0.1
LANS				e		17 50 41.5	
DOPR	Dopca	148.08	329	⇑iP	PKiKP	17 50 36.6	-0.2
KRLC	Kraliky	148.12	342	⇑ePKP	PKPbc	17 50 36.1	+0.6
KRLC				ePKPAB	PKPab	17 50 41.5	+1.1
BRG	Berggiesshubel	148.13	346	ePKP	PKPdf	17 50 30.6	-0.8
	comp=Z,17nm,2.1s						
BRG				i		17 50 36.2	
	comp=Z,28nm,1.3s						
BRG				i		17 50 40.1	
	comp=Z,20nm,0.8s						
BRG	Berggiesshubel	148.13	346	ePKIKP	PKPdf	17 50 30.6	-0.8
BRG				i		17 50 36.2	
BRG				i		17 50 40.1	
BRG				pmax	pmax		
	comp=Z,17nm,2.1s						
BRG				pmax	pmax		
	comp=Z,29nm,1.3s						
MLR	Muntele Rosu	148.14	327	ePKPdf	PKPbc	17 50 34.5	-1.3
MLR	Muntele Rosu	148.14	327	⇑iP	PKPbc	17 50 35.9	+0.1
MORC	Moravsky Berou	148.16	341	⇑iP	PKiKP	17 50 36.3	-0.6
MORC	Moravsky Berou	148.16	341	ePKP	PKPbc	17 50 35.5	-0.1
PVCC	Panska Ves	148.30	345	⇑ePKP	PKPbc	17 50 36.4	+0.5
PVCC				ePKPAB	PKPab	17 50 41.3	+0.3
SECR		148.39	327	⇓iP	PKPbc	17 50 36.8	+0.5
VOIR		148.62	328	⇑iP	PKiKP	17 50 37.8	-0.2
DRGR		148.71	332	⇑iP	PKPbc	17 50 37.5	+0.4
PRU	Pruhonice	148.81	344	⇑ePKP	PKPbc	17 50 37.5	+0.4
PRU				ePKPAB	PKPab	17 50 43.9	+0.8
GOPC	GO Pecny, Ondr	148.81	344	⇑ePKP	PKPbc	17 50 37.6	+0.4
GOPC				ePKPAB	PKPab	17 50 42.5	-0.7
VYHS	Vyhne	148.85	338	ePKP	PKPbc	17 50 36.9	-0.4
VYHS				e		17 50 43.9	
VRAC	Vranov	148.86	342	⇓iP	PKiKP	17 50 37.9	-0.4
VRAC	Vranov	148.86	342	ePKP	PKiKP	17 50 37.8	-0.5
VRAC				e		17 50 43.9	
ARR	Arges	148.88	328	⇑iP	PKiKP	17 50 38.6	+0.1
PSZ	Piszkesteto	148.95	336	ePKiKP	PKPbc	17 50 37.0	-0.6
NKC	Novy Kostel	149.06	347	⇑ePKP	PKPbc	17 50 38.2	+0.4
NKC				ePKPAB	PKPab	17 50 44.0	-0.2
KRUC	Moravsky	149.14	342	ePKP	PKPbc	17 50 38.3	+0.3
KRUC				e		17 50 44.7	
TREC	Trest	149.19	343	⇑ePKP	PKPbc	17 50 36.4	-1.7
MODS	Modra-Piesok	149.47	340	ePKP	PKiKP	17 50 39.3	-0.3
MODS				e		17 50 46.7	
BEBN	Eben Emael	149.48	356	⇑PKPbc	PKiKP	17 50 39.3	-0.1
BEBN				⇑PKPab	PKPab	17 50 45.7	-0.2
UCC	Uccle	149.56	357	⇑PKPbc	PKiKP	17 50 39.3	-0.3
UCC				⇑PKPab	PKPab	17 50 47.0	+0.8
SRO	Srobarova	149.61	338	ePKP	PKPbc	17 50 39.4	+0.3
SRO				e		17 50 46.3	
MEM	Membach	149.64	355	⇑PKPbc	PKiKP	17 50 39.5	-0.3
MEM				⇑PKPab	PKPab	17 50 46.0	-0.6
GZR	Gura Zlata	149.75	330	⇑iP	PKPbc	17 50 39.5	-0.1
GZR	Gura Zlata	149.75	330	⇑PKIKP	PKPbc	17 50 39.5	-0.1
ISP	Isparta	149.82	311	⇓iP	PKPbc	17 50 39.2	-0.9
KHC	Kasperske Hory	149.84	345	ePKPbc	PKPbc	17 50 39.6	-0.1
KHC	Kasperske Hory	149.84	345	⇑ePKP	PKiKP	17 50 40.1	-0.3
KHC				ePKPAB	PKPab	17 50 48.1	+0.6
BCLA	Clavier	149.88	356	⇓PKPbc	PKPbc	17 50 39.0	-0.7
BCLA				⇑PKPab	PKPab	17 50 46.7	-0.8
GEC2	GERESS Array S	150.08	345	ePKPbc	PKiKP	17 50 40.7	-0.3
GERES	GERESS Array B	150.08	345	PKP	PKPdf	17 50 34.8	+0.1
	comp=Z,0.2nm,0.3s,baz=339,slow=3.3,SNR=4.0						
GERES				PKPbc	PKPbc	17 50 39.9	-0.4
	comp=Z,6.1nm,0.9s,baz=38,slow=2.4,SNR=39						
GERES				PKPab	PKPab	17 50 48.4	-0.2
	comp=Z,3.3nm,0.7s,baz=25,slow=3.5,SNR=13						
GERES				pPKPbc	pPKPbc	17 52 45.8	0.0
	comp=Z,0.4nm,0.7s,baz=282,slow=1.9,SNR=2.7						
GEA0	GERESS Array S	150.08	345	ePKPbc	PKPbc	17 50 40.1	-0.2
BZS	Buzias	150.10	332	⇓iP	PKPbc	17 50 40.0	-0.3
DOU	Dourbes	150.25	357	⇑PKPbc	PKiKP	17 50 41.0	-0.1
DOU				⇑PKPab	PKPab	17 50 48.7	-0.3
HERR	Herculane	150.30	330	⇓iP	PKPbc	17 50 40.1	-0.7
CONA	Conrad Observa	150.31	341	ePKiKP	PKiKP	17 50 41.6	+0.2
	comp=Z,8.3nm,0.7s						
CONA				ePKPab	PKPab	17 50 50.4	+0.8
	comp=Z,7.9nm,0.9s						
SOP	Sopron	150.31	340	ePKiKP	PKPbc	17 50 41.0	+0.2
WLF	Walferdange	150.57	355	⇓PKPbc	PKiKP	17 50 42.2	+0.5
WLF				⇓PKPab	PKPab	17 50 50.7	+0.3
MDVR	Moldovita	150.70	331	⇓iP	PKPbc	17 50 41.5	-0.3
MOA	Molln	150.84	343	ePKPbc	PKPbc	17 50 42.2	+0.2
	comp=Z,1.3nm,0.4s						
MOA				ePKPab	PKPab	17 50 52.4	+0.7
	comp=Z,16nm,1.0s,SNR=5.9						
ARSA	Arzberg	151.02	341	i PKPbc	PKPbc	17 50 42.4	0.0
	comp=Z,5.6nm,1.4s						
ARSA				ePKPab	PKPab	17 50 53.0	+0.6
	comp=Z,7.6nm,1.1s						
VTS	Vitosha	151.54	326	ePKPbc	PKPbc	17 50 44.0	+0.1
VTS	Vitosha	151.54	326	⇑iP	PKPbc	17 50 44.0	+0.1
VTS	Vitosha	151.54	326	ePKIKP	PKPbc	17 50 44.0	+0.1
SOKA	Soboth	151.68	341	ePKPbc	PKPbc	17 50 43.9	-0.1
	comp=Z,6.5nm,0.9s						
SOKA				ePKPab	PKPab	17 50 55.3	0.0
	comp=Z,20nm,1.1s						
KBA	Koelnbreinsper	151.80	344	ePKPbc	PKPbc	17 50 43.7	-0.7
	comp=Z,0.2nm,0.3s						
KBA				ePKPab	PKPab	17 50 56.9	+0.9
	comp=Z,5.9nm,0.7s						
OBKA	Obir	151.98	341	ePKPab	PKPab	17 50 56.4	-0.3
	comp=Z,11nm,1.3s						
WATA	Walderalm	151.99	346	i PKPbc	PKPbc	17 50 44.8	0.0
	comp=Z,2.6nm,0.5s						
WATA				ePKPab	PKPab	17 50 57.3	+0.6
	comp=Z,1.8nm,0.5s						
DIVS	Divibare	152.01	332	ePKPbc	PKPbc	17 50 44.2	-0.6
RETA	Reutte	152.02	347	ePKPab	PKPab	17 50 57.0	+0.2
	comp=Z,18nm,1.1s						
WTTA	Wattenberg	152.05	346	i PKiKP	PKiKP	17 50 45.2	0.0
	comp=Z,4.1nm,0.5s						
WTTA				i PKPab	PKPab	17 50 57.4	+0.4
	comp=Z,14nm,1.1s						
MOTA	Moosalm	152.09	347	ePKPbc	PKPbc	17 50 44.9	-0.1
	comp=Z,2.3nm,0.6s						
MOTA				i PKPab	PKPab	17 50 57.4	+0.2
	comp=Z,14nm,0.9s						
MYKA	Terra Mystica	152.13	343	i PKPbc	PKPbc	17 50 44.6	-0.4
	comp=Z,2.6nm,0.5s						
MYKA				ePKPab	PKPab	17 50 57.0	-0.2
	comp=Z,13nm,0.8s						
SQTA	Sankt Quirin	152.18	347	ePKPbc	PKPbc	17 50 45.1	-0.1
	comp=Z,3.1nm,0.9s						
SQTA				ePKPab	PKPab	17 50 57.9	+0.4
	comp=Z,28nm,2.1s						
ABTA	Abfaltersbach	152.32	344	ePKPbc	PKPbc	17 50 44.9	-0.5
	comp=Z,7.1nm,0.6s						
ABTA				ePKPab	PKPab	17 50 57.7	-0.4
	comp=Z,13nm,0.7s						
DAVA	Damuels	152.39	349	i PKPab	PKPab	17 50 58.3	-0.1
	comp=Z,3.7nm,0.7s						
FETA	Feichten	152.47	347	ePKiKP	PKiKP	17 50 46.2	+0.2
	comp=Z,5.7nm,1.0s						
FETA				ePKPab	PKPab	17 50 59.0	+0.2
	comp=Z,12nm,1.1s						
FUORN	Ofenpass-Fuorn	152.95	348	ePKPbc	PKiKP	17 50 47.5	+0.4
TTG	Podgorica	153.65	330	ePKPab	PKPab	17 51 03.2	-0.5
TTG	Podgorica	153.65	330	ePKP2	PKPab	17 51 03.2	-0.5
LIT	Litokhoron	153.69	323	ePKPab	PKPab	17 51 04.3	+0.3
LIT	Litokhoron	153.69	323	ePKP2	PKPab	17 51 04.3	+0.3
SENIN	Lac Senin/Sane	153.70	352	ePKPab	PKPab	17 51 04.2	+0.2
BNI	Bardonecchia	155.07	352	ePKPab	PKPab	17 51 10.5	+0.6
BNI	Bardonecchia	155.07	352	ePKP2	PKPab	17 51 10.5	+0.6
ESDC	Sonseca Array	160.05	14	PKPab	PKPab	17 51 30.6	-0.9
	comp=Z,4.1nm,1.0s,baz=356,slow=3.8,SNR=11						
KEST	Kesra	163.40	339	PKPab	PKPab	17 51 45.9	-0.5
	comp=Z,3.8nm,0.9s,baz=337,slow=8.0,SNR=4.6						
DBIC	Dimbokro	164.83	153	PKPab	PKPab	17 51 54.2	+1.2
	comp=Z,8.5nm,0.8s,baz=211,slow=4.4,SNR=8.6						
TOA0	Torodi Ar. Sit	172.83	177	ePKPab	PKPab	17 52 29.1	+0.7
TORD	Torodi Ar. Bea	172.83	177	PKP	PKPdf	17 50 56.7	-1.8
	comp=Z,1.1nm,0.8s,baz=136,slow=1.0,SNR=5.5						
TORD				PKPab	PKPab	17 52 27.6	-0.8
	comp=Z,2.0nm,0.8s,baz=171,slow=1.7,SNR=11						
TORD				PP	PP	17 56 19.3	+0.1
	comp=Z,2.2nm,1.0s,baz=176,slow=5.7,SNR=6.3						

MAN 17 17:38:25.4, 6°.59N×123°.67E, h1^{km}, MS4.1, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.85	42	⇓iP	Pb	17 38 42.5	-0.5
CTBH				i S	Sb	17 38 54.7	-0.3
SKMP	Bagumbayan, Su	0.87	94	eP	Pg	17 38 42.2	0.0
SKMP				eS	Sg	17 38 53.7	+0.2
PAGZ	Pagadian	1.28	347	eP	Pg	17 38 50.2	+0.1
PAGZ				eS	Sn	17 39 08.5	+0.1
GSPH	General Santos	1.37	111	⇑iP	Pb	17 38 55.5	+3.6
GSPH				i S	Sn	17 39 16.4	+5.8
KCP	Kidapawan	1.47	73	⇑eP	Pg	17 38 54.9	+1.2
KCP				eS	Sn	17 39 16.1	+2.9
IPIL	Ipil	1.61	318	eP	Pb	17 38 55.8	-0.3
IPIL				eS	Sb	17 39 16.9	-0.1
BUKP	Musuan	1.89	47	eP	Pn	17 38 59.5	+0.6
BUKP				eS	Sg	17 39 27.9	+1.7
DMPH	Davao City--Mi	1.89	75	⇑eP	Pg	17 39 06.6	+4.9
DMPH				eS	Sg	17 39 34.7	+8.4
DDMP	Don Marcelino,	2.09	103	eP	Pn	17 39 02.0	+0.4
DDMP				eS	Sb	17 39 31.3	+0.7
CGP	Cagayan de Oro	2.12	29	⇓eP	Pg	17 39 05.5	-0.6
CGP				eS	Sg	17 39 33.1	-0.4

IDC 17 17:46:22.8±1.8, 6°.89S×129°.77E, h0^{km}, mb3.5/1, mb1 3.7/4, mb1mx3.3/41, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=59.0km s-min=28.4km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.16	14	Pn	Pn	17 47 54.8	-0.4
	1.9nm,0.3s,baz=242,slow=23,SNR=19						
SIJI				Sn	Sn	17 49 00.9	-5.5
	4.3nm,0.3s,baz=135,slow=23,SNR=9.7						
WRA	Warramunga Arr	13.72	162	Pn	Pn	17 49 38.4	-0.4
	0.2nm,0.3s,baz=341,slow=14,SNR=22						
WRA				Sn	Sn	17 51 59.0	-13
	0.9nm,0.3s,baz=341,slow=22,SNR=10						
ASAR	Alice Springs	17.15	167	P	Pn	17 50 24.4	+0.3
	0.2nm,0.3s,baz=352,slow=14,SNR=19						
ASAR				S	Sn	17 53 25.2	-10
	0.2nm,0.3s,baz=360,slow=27,SNR=8.3						
MKAR	Makanchi Array	68.00	327	P	P	17 57 24.1	+0.1
	0.2nm,0.5s,baz=118,slow=7.8,SNR=5.4						

SKO 17 17:49:46.2, 40°.77N×21°.37E, h19^{km}, M1.2, ML1.7

ATH 17 17:49:46.3, 40°.74N×21°.36E, h26^{km}±2^{km}, ML1.7/2, 3C-3D, Error ellipse: s-maj=2.8km s-min=1.2km az=210.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIA	Bitola	0.28	355	⇑iPg	Pb	17 49 52.3	-0.8
BIA				i Sg	Sb	17 49 57.3	-0.6
BIA				eLg	Lg	17 49 58.0	
	comp=E,53nm,0.6s						
BIA				eLg	Lg	17 49 58.7	
	comp=N,75nm,0.3s						
NEST	Nestorio	0.40	216	P	Pb	17 49 54.8	-0.2
NEST				S	Sb	17 50 01.2	+0.4
NEST				AML	AML	17 50 03.9	
	comp=E,227µm,0.2s						
NEST				AML	AML	17 50 05.3	
	comp=N,213µm,0.2s						
KZN	Kozani	0.53	144	P	Pb	17 49 57.2	+0.1
KZN				S	Sb	17 50 05.5	+1.0
KZN				AML	AML	17 50 07.3	
	comp=N,214µm,0.4s						
KZN				AML	AML	17 50 07.6	
	comp=E,190µm,0.5s						
OHR	Ohrid	0.56	312	⇓iPg	Pb	17 49 57.5	-0.2
OHR				i Sg	Sn	17 50 06.8	-0.5
OHR				eLg	Lg	17 50 07.9	
	comp=N,18nm,0.3s						
OHR				eLg	Lg	17 50 07.9	
	comp=E,25nm,0.3s						
PENT	Pentalofos	0.57	197	P	Pb	17 49 58.1	+0.4
PENT				S	Sn	17 50 06.6	-0.8
KRUS	Krusevo	0.64	353	⇑iPg	Pb	17 49 58.2	-0.7
KRUS				i Sg	Sb	17 50 07.3	-0.1
KRUS				eLg	Lg	17 50 08.0	
	comp=E,14nm,0.3s						
KRUS				eLg	Lg	17 50 08.3	
	comp=N,17nm,0.3s						
KPRO	Kipourio	0.78	180	P	Pn	17 50 01.5	-0.2
KPRO				S	Sb	17 50 12.1	+0.6
GRG	Griva	0.82	74	P	Pn	17 50 02.3	0.0
GRG	Griva	0.82	74	⇓iPg	Pn	17 50 02.2	0.0
GRG				i Sg	Sn	17 50 14.3	+0.7
LIT	Litokhoron	1.07	126	P	Pb	17 50 07.6	+1.4
LIT	Litokhoron	1.07	126	i Pg	Pb	17 50 07.6	+1.4
LIT				i Sg	Sb	17 50 24.2	+4.4
VAY	Valandovo	1.09	57	i Pg	Pb	17 50 06.9	+0.5
VAY				i Sg	Sb	17 50 21.6	+1.4
VAY				eLg	Lg	17 50 26.3	
	comp=E,17nm,0.8s						
VAY				eLg	Lg	17 50 26.5	
	comp=N,15nm,0.7s						
STIP	Stip	1.14	33	⇓iPg	Pb	17 50 10.9	+3.5
STIP				i Sg	Sb	17 50 28.8	+7.0
STIP				eLg	Lg	17 50 30.1	
	comp=E,2.3nm,0.2s						
STIP				eLg	Lg	17 50 30.5	
	comp=N,2.3nm,0.3s						
KNT	Kendrikon	1.24	70	P	Pb	17 50 09.8	+0.7
KNT	Kendrikon	1.24	70	⇑iPg	Pb	17 50 09.9	+0.9
KNT				i Sg	Sb	17 50 26.1	+1.5
THL	Klokotos Trika	1.27	157	P	Pb	17 50 10.3	+0.7

ISCJB 17 17:50:07.9±0.8, 6°.85N±0°.03×73°.16W±0°.05, h149^{km}±7^{km}, mb3.2/1, Error ellipse: s-maj=7.4km s-min=5.7km az=178.6

RSNC 17 17:50:08.8±0.8, 6°.81N×73°.17W, h146^{km}±5^{km}, ML3.4, Mw3.7

IDC 17 17:50:09.1±6.4, 6°.76N×73°.27W, h174^{km}±37^{km}, mb2.9/1, mb1 3.2/2, mb1mx2.8/23, mbtmp3.4/2, Error ellipse: s-maj=177.4km s-min=41.6km az=97.0

ISC 17 17:50:08.3±1.0, 6°.85N±0°.04×73°.15W±0°.05, h147^{km}±7^{km}, n20, σ0^{s}.92/32, 1C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	188	eP	Pn	17 50 28.6	-0.1
BARC				eS	Sn	17 50 43.6	-0.6
BARC				i		17 50 44.7	
	comp=Z,325nm,0.3s						
BRRC	Barranca, Sant	0.62	295	⇑iP	Pn	17 50 30.4	+0.5
BRRC				eS	Sn	17 50 47.3	+0.9
BRRC				i		17 50 48.1	
	comp=N,808nm,0.2s						
PAMC	Pamplona, Colo	0.66	42	eP	Pn	17 50 31.5	+0.7
PAMC				eS	Sn	17 50 48.4	+0.4
PAMC				i		17 50 49.6	
	comp=N,186nm,0.4s						
RUSC	La Rusia	0.95	176	⇓eP	Pn	17 50 32.6	-0.4
RUSC				eS	Sn	17 50 51.1	-0.7
PTBC	PUERTO BERRIO,	1.33	257	eP	Pn	17 50 35.2	-0.7
PTBC				eS	Sn	17 50 55.9	-1.2
PTBC				i		17 51 01.5	
	comp=N,369nm,0.3s						
OCAC	Ocana	1.39	353	eP	Pn	17 50 36.7	0.0
OCAC				eS	Sn	17 50 59.3	+0.8
OCAC				i		17 51 01.1	
	comp=N,497nm,0.3s						
TAMC	Tame, Arauca	1.41	107	⇓iP	Pn	17 50 37.1	+0.4
TAMC				eS	Sn	17 50 58.6	+0.1
TAMC				i		17 50 59.5	
	comp=N,148nm,0.3s						
ZARC	Zaragoza, Cauc	1.81	291	eP	Pn	17 50 40.9	-0.2
ZARC				eS	Sn	17 51 06.5	+0.2
ZARC				i		17 51 13.9	
	comp=N,219nm,0.3s						
SMLC	San Martn de	2.15	335	eP	Pn	17 50 45.5	+0.5
SMLC				eS	Sn	17 51 12.8	-0.4
SMLC				i		17 51 16.6	
	comp=N,295nm,0.3s						
CHIC	Chingaza	2.28	195	eP	Pn	17 50 46.8	-0.2
CHIC				eS	Sn	17 51 16.2	-0.6
CHIC				i		17 51 18.8	
	comp=N,210nm,0.3s						
ROSC	El Rosal	2.31	210	eP	Pn	17 50 48.8	+1.4
ROSC				i		17 51 22.6	
	comp=Z,97nm,0.3s						
ROSC	El Rosal	2.31	210	P	Pn	17 50 48.4	+1.0
	comp=Z,6.7nm,0.3s,baz=300,slow=19,SNR=15						
ROSC				S	Sn	17 51 18.8	+1.4
	comp=Z,33nm,0.3s,baz=42,slow=20,SNR=20						
HELC	Santa Helena	2.45	255	eP	Pn	17 50 49.6	+0.5
UREC	San Jos de Ur	2.53	291	eP	Pn	17 50 49.0	-0.6
UREC				i		17 51 31.2	
	comp=N,164nm,0.3s						
VILC	Villavicencio,	2.77	191	eP	Pn	17 50 52.1	-0.7
VILC				eS	Sn	17 51 26.4	-0.8
VILC				i		17 51 32.3	
	comp=N,177nm,0.5s						
RREF	El Recreo	2.92	229	eP	Pn	17 50 56.7	+1.5
DBBC	Dabeiba	3.04	273	eP	Pn	17 50 56.1	-0.1
SDV	Santo Domingo	3.21	51	eP	Pn	17 50 58.2	-0.2
YKA	Yellowknife Ar	63.23	340	P	P	18 00 18.9	-1.7
	comp=N,0.2nm,0.6s,baz=128,slow=7.3,SNR=4.7						
WRA	Warramunga Arr	150.32	241	PKPbc	PKPdf	18 09 40.1	+2.3
	comp=N,0.4nm,1.1s,baz=107,slow=2.3,SNR=3.9						

IDC 17 18:12:53.0±2.5, 7°.16S×127°.56E, h0^{km}, mb3.4/1, mb1 3.2/3, mb1mx3.1/30, mbtmp3.1/3, ML2.7/2, Error ellipse: s-maj=300.2km s-min=32.9km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.30	153	Pn	Pn	18 16 16.2	-0.8
	0.0nm,0.3s,baz=329,slow=13,SNR=4.9						
WRA				Sn	Sn	18 18 39.5	-17
	0.1nm,0.3s,baz=141,slow=32,SNR=5.2						
ASAR	Alice Springs	17.50	160	P	P	18 16 59.4	-0.6
	0.0nm,0.3s,baz=345,slow=10,SNR=5.0						
MKAR	Makanchi Array	67.06	328	P	P	18 23 48.2	0.0
	0.3nm,0.7s,baz=131,slow=7.9,SNR=3.9						

IDC 17 18:19:18.6±1.6, 23°.31S×115°.00W, h0^{km}, mb3.8/6, mb1 4.1/6, mb1mx3.8/45, mbtmp3.8/6, MS3.8/5, Ms1 3.8/5, ms1mx3.5/25, Error ellipse: s-maj=64.9km s-min=26.1km az=35.0

ISC 17 18:19:20.6±1.4, 23°.2S±0°.4×114°.9W±0°.3, h10^{km}, n22, σ0^{s}.77/13, mb3.8/6, MS3.7/4, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.37	129	LR	LR	18 22 50.7	
	comp=Z,2μm,18.4s,baz=284,slow=33						
RKT	Rikitea	18.45	266	*e*T	T	18 42 21.8	
	2.3nm,0.3s						
TAOE	Nuku Hiva Isla	28.08	296	*e*LR	LR	18 32 16.9	
	comp=Z,376nm,26.8s						
PPT2	Papeete2	32.92	273	*e*LQ	LQ	18 32 55.5	
	176nm,23.5s						
PPT2				*e*LR	LR	18 34 20.3	
	comp=Z,193nm,26.0s						
LPAZ	La Paz	44.41	90	P	P	18 27 33.4	+0.9
	0.9nm,0.7s,baz=284,slow=7.4,SNR=5.1						
LPAZ				LR	LR	18 41 27.6	
	comp=Z,85nm,20.1s,baz=248,slow=30						
ROSC	El Rosal	48.45	60	LR	LR	18 43 15.5	
	comp=Z,69nm,20.7s,baz=172,slow=30						
SIV	San Ignacio	50.99	92	P	P	18 28 22.8	-0.2
	1.0nm,0.8s,baz=259,slow=12,SNR=4.6						
CPUP	Villa Florida	52.00	106	P	P	18 28 29.9	-0.5
	6.2nm,1.3s,baz=203,slow=5.5,SNR=3.4						
CPUP				LR	LR	18 46 07.8	
	comp=Z,98nm,21.9s,baz=219,slow=31						
NVAR	Mina Array Bea	61.41	357	P	P	18 29 37.3	+0.1
	1.3nm,0.8s,baz=188,slow=9.0,SNR=5.3						
PDAR	Pinedale Array	65.84	4	P	P	18 30 06.6	+0.2
	0.3nm,0.6s,baz=171,slow=7.8,SNR=3.2						
YKA	Yellowknife Ar	85.42	0	P	P	18 31 57.6	-0.1
	0.3nm,0.7s,baz=175,slow=5.3,SNR=6.5						
H11S2	WAKE ISLAND Hy	87.01	291	T	T	20 08 23.9	
	baz=122,slow=74,SNR=16						
H11S1	WAKE ISLAND Hy	87.02	291	T	T	20 08 21.9	
	baz=122						
H11S3	WAKE ISLAND Hy	87.03	291	T	T	20 08 20.4	
	baz=122,slow=74,SNR=10						
FRB	Frobisher Bay	93.94	19	LR	LR	19 12 02.6	
	comp=Z,54nm,18.9s,baz=178,slow=34						
KMI	Kunming	145.67	281	P	PKiKP	18 39 05.9	+1.7
KMI				pmax	pmax		
	comp=Z,13nm,1.5s						
ZALV	Zalesovo Beam	145.91	339	PKPbc	PKPab	18 39 00.6	+0.1
	comp=Z,0.5nm,0.5s,baz=20,slow=4.6,SNR=2.4						
GTA	Gaotai	146.48	307	*e*P	PKPab	18 39 03.0	-0.3
GTA				pP	sPKPab	18 39 11.1	+4.6
GTA				sP	pPKPab	18 39 15.1	+9.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRTR	Keskin Array B	148.74	51	PKPbc	PKPbc	18 39 08.7	+0.1
	comp=Z,0.7nm,0.6s,baz=289,slow=2.8,SNR=4.6						
BVAR	Borovoye Array	149.97	354	PKPbc	PKPbc	18 39 10.6	-0.4
	comp=Z,0.5nm,0.6s,baz=328,slow=2.3,SNR=5.9						
KURBB	Kurchatov Arra	150.71	342	PKPbc	PKPbc	18 39 11.9	-0.9
	comp=Z,0.4nm,0.4s,baz=25,slow=2.1,SNR=3.2						
MKAR	Makanchi Array	152.71	334	PKPbc	PKPbc	18 39 16.6	-1.0
	comp=Z,0.4nm,0.7s,baz=18,slow=1.6,SNR=5.9						

IDC 17 18:27:20.8±0.5, 10°.89S×165°.90E, h0^{km}, mb4.5/22, mb1 4.7/24, mb1mx4.5/44, mbtmp4.5/24, ML5.2/2, MS4.2/25, Ms1 4.2/25, ms1mx4.1/36, Error ellipse: s-maj=18.3km s-min=14.2km az=113.0

ISCJB 17 18:27:21.3±0.2, 10°.87S±0°.03×165°.77E±0°.04, h10^{km}, mb4.7/67, MS4.4/31, Error ellipse: s-maj=5.9km s-min=4.4km az=10.4

NEIC 17 18:27:22.7±0.2, 10°.79S×165°.82E, h10^{km}, mb5.0/28, Error ellipse: s-maj=6.6km s-min=4.4km az=107.0

BJI 17 18:27:25.1, 10°.71S×166°.01E, h39^{km}, mB5.2/27, mb4.7/35, Ms5.0/19, Ms7 4.7/12

GCMT 17 18:27:26.7±0.2, 10°.83S±0°.01×165°.53E±0°.02, h16^{km}, MW5.0/84, Moment Tensor Solution. s48,c71; s84,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.41±.21; $M_{\theta\theta}$5.78±.14; $M_{\phi\phi}$-2.36±.16; $M_{r\theta}$0.22±.32; $M_{\theta\phi}$-1.54±.12; $M_{\phi r}$-0.37±.50; Best double couple: $M_0$4.80400×10^{16} NP1:ϕ_s299.00000°, δ50.00000°, λ-63.00000°. NP2: ϕ_s81.00000°, δ47.00000°, λ-118.00000°. Principal axes: T 6.0700, Plg2.0000°, Azm10.0000°; N -2.5220, Plg20.0000°, Azm101.0000°; P -3.5380, Plg70.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

MOS 17 18:27:28.1±1.3, 10°.62S×165°.52E, h55^{km}, mb4.9/18 Error ellipse: s-maj=10.2km s-min=9.3km az=129.7

ISC 17 18:27:22.7±0.3, 10°.80S±0°.05×165°.84E±0°.05, h10^{km}, n176, σ1^{s}.44/179, mb4.8/67, MS4.4/32, 6C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.96	283	*e*P	Pn	18 28 52.0	+1.0
HNR				*e*S	Sn	18 30 05.0	+5.6
HNR	Honiara	5.96	283	*e*Pn	Pn	18 28 52.5	+1.5
HNR				*e*Sn	Sn	18 30 03.0	+3.6
HNR	Honiara	5.96	283	Pn	Pn	18 28 52.6	+1.6
	138nm,0.3s,baz=141,slow=6.6,SNR=90						
HNR				Sn	Sn	18 30 00.8	+1.4
	baz=107,slow=19,SNR=2.7						
HNR				LR	LR	18 31 09.1	
	comp=Z,7μm,21.4s,baz=100,slow=38						
DZM	Mont Dzumac	11.22	177	*e*Pn	Pn	18 30 03.6	+0.2
	66nm,0.5s						
DZM				*e*LR	LR	18 32 41.0	
	comp=Z,5μm,29.4s						
DZM	Mont Dzumac	11.22	177	*e*Pn	Pn	18 30 04.0	+0.7
DZM				*e*Sn	Sn	18 32 08.7	-0.4
DZM	Mont Dzumac	11.22	177	Pn	Pn	18 30 03.5	+0.2
	8.9nm,0.3s,baz=342,slow=10,SNR=59						
DZM				Sn	Sn	18 32 05.1	-3.9
	0.3nm,0.3s,baz=90,slow=20,SNR=2.2						
DZM				LR	LR	18 32 57.5	
	comp=Z,730nm,20.5s,baz=26,slow=30						
ONTNC	Ouen Toro	11.46	177	*e*Pn	Pn	18 30 07.5	+1.0
ONTNC				*e*Sn	Sn	18 32 14.2	-0.4
PINNC	Pines Island,	11.85	173	*e*Pn	Pn	18 30 14.7	+2.9
MSVF	Nonsavu	13.69	122	*i* P	P	18 30 47.7	+1.8
TARA	Tarawa	13.98	31	*e*Pn	Pn	18 30 41.0	0.0
RABL	Rabaul	15.06	295	*e*Pn	P	18 30 59.4	-1.7
	61nm,0.5s						
EIDS	Eidsvold	20.14	222	*e*P	P	18 31 56.8	-0.3
	39nm,1.0s						
CTA	Charters Tower	21.00	242	P	P	18 32 07.1	+0.6
	18nm,0.7s,baz=60,slow=9.6,SNR=7.8						
CTAO	Charters Tower	21.00	242	*e*P	P	18 32 07.6	+1.1
	59nm,1.0s						
CTAO	Charters Tower	21.00	242	*e*P	P	18 32 07.6	+1.1
CTAO				pmax	pmax		
	comp=Z,59nm,1.0s						
COEN	Coen	22.36	260	*e*P	P	18 32 20.8	-0.4
	comp=Z,22nm,1.2s						
ARMA	Armidale	23.58	212	*e*P	P	18 32 34.3	+0.6
	comp=Z,29nm,0.9s						
JAY	Jayapura	26.27	286	LR	LR	18 44 10.9	
	comp=Z,557nm,18.6s,baz=79,slow=38						
URZ	Urewera	29.15	162	LR	LR	18 44 25.5	
	comp=Z,1μm,18.1s,baz=339,slow=35						
BKZ	Black Stump Fm	29.80	163	*e*P	P	18 33 30.4	+0.5
	comp=Z,42nm,1.3s						
STKA	Stephens Creek	30.68	223	*e*P	P	18 33 38.1	+0.3
	comp=Z,1.4nm,0.8s						
STKA	Stephens Creek	30.68	223	*e*P	P	18 33 38.1	+0.3
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	30.68	223	P	P	18 33 37.5	-0.3
	comp=Z,5.0nm,0.7s,baz=44,slow=8.9,SNR=11						
STKA				LR	LR	18 45 27.2	
	comp=Z,923nm,18.3s,baz=45,slow=35						
THZ	Tophouse	31.46	170	*e*P	P	18 33 44.5	-0.1
	comp=Z,43nm,1.2s						
WRAB	Tennant Creek	31.64	250	*e*P	P	18 33 46.0	-0.3
	comp=Z,17nm,1.2s						
WRAB	Tennant Creek	31.64	250	*e*P	P	18 33 46.0	-0.3
WRAB				pmax	pmax		
	comp=Z,17nm,1.2s						
WB2	Warramunga Arr	31.64	249	*e*P	P	18 33 45.5	-0.8
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	31.66	249	P	P	18 33 46.1	-0.4
	comp=Z,6.4nm,0.8s,baz=82,slow=8.9,SNR=39						
WRA				PcP	PcP	18 36 37.8	-0.8
	comp=Z,1.1nm,0.8s,baz=79,slow=3.6,SNR=4.7						
WRA				LR	LR	18 45 29.7	
	comp=Z,605nm,19.0s,baz=65,slow=34						
GUMO	Guam	31.94	319	LR	LR	18 46 02.5	
	comp=Z,712nm,19.4s,baz=144,slow=35						
TOO	Toolangi	32.33	211	*e*P	P	18 33 52.7	+0.5
	comp=Z,14nm,0.8s						
TOO	Toolangi	32.33	211	*e*P	P	18 33 52.7	+0.5
TOO				pmax	pmax		
	comp=Z,14nm,0.8s						
LTZ	Lake Taylor	32.35	171	*e*P	P	18 33 52.6	+0.3
	comp=Z,28nm,0.8s						
FOZ	Fox Glacier	32.80	175	*e*P	P	18 33 56.6	+0.5
	comp=Z,26nm,1.1s						
AS01	Alice Springs	32.94	243	*e*P	P	18 33 55.9	-1.9
AS31	Alice Springs	32.98	243	*e*P	P	18 33 57.0	-1.2
	comp=Z,2.9nm,0.6s						
ASAR	Alice Springs	32.99	243	P	P	18 33 56.8	-1.3
	comp=Z,9.2nm,0.7s,baz=66,slow=9.9,SNR=97						
ASAR				PcP	PcP	18 36 42.0	-0.2
	comp=Z,2.6nm,1.0s,baz=84,slow=3.0,SNR=6.9						
ASAR				LR	LR	18 46 30.2	
	comp=Z,487nm,19.1s,baz=72,slow=35						
RPZ	Rata Peaks	33.11	173	*e*P	P	18 33 58.6	-0.3
	comp=Z,24nm,0.9s						
RPZ	Rata Peaks	33.11	173	P	P	18 33 57.5	-1.4
	comp=Z,17nm,0.8s,baz=348,slow=8.3,SNR=8.5						
RPZ				LR	LR	18 46 25.2	
	comp=Z,766nm,18.6s,baz=340,slow=35						
MQZ	McQueen's Vall	33.32	171	*e*P	P	18 33 59.9	-0.8
	comp=Z,58nm,1.2s						
BBOO	Buckleboo	35.06	227	*e*P	P	18 34 14.5	-1.6
	comp=Z,24nm,1.1s						
FITZ	Fitzroy Crossi	39.53	255	*e*P	P	18 34 54.3	+0.1
	comp=Z,5.2nm,0.8s						
PPT	Papeete	43.67	104	LR	LR	18 51 44.1	
	comp=Z,255nm,18.8s,baz=286,slow=34						
PPT2	Papeete2	43.67	104	*e*S	S	18 42 06.3	+7.9
	comp=Z,118nm,24.8s						
PPT2				*e*LQ	LQ	18 45 55.8	
	comp=Z,1μm,26.0s						
PPT2				*e*LR	LR	18 47 57.4	
	comp=Z,395nm,22.5s,baz=280						
TBI	Tubuai	44.34	112	*e*LQ	LQ	18 46 22.0	
	comp=Z,824nm,28.5s						
TBI				*e*LR	LR	18 48 17.0	
	comp=Z,680nm,28.0s,baz=290						
MJAR	Matsushiro Arr	53.80	332	P	P	18 36 44.8	-0.8
	comp=Z,7.9nm,0.9s,baz=166,slow=8.0,SNR=5.9						
MJAR				LR	LR	18 55 22.3	
	comp=Z,165nm,21.3s,baz=190,slow=31						
MAJO	Matsushiro	53.80	332	*i* P	P	18 36 42.8	-2.8
MAJO				pmax	pmax		
	comp=Z,13nm,1.0s						
JNU	Nakatsue	54.94	324	P	P	18 36 54.6	+0.6
	comp=Z,12nm,0.9s,baz=91,slow=18,SNR=3.3						
KSRS	Korea Array	59.73	326	P	P	18 37 27.6	-0.1
	comp=Z,1.8nm,0.9s,baz=161,slow=9.0,SNR=4.1						
KSRS				LR	LR	19 01 40.9	
	comp=Z,127nm,19.3s,baz=138,slow=34						
KSAR	Wonju Array Be	59.74	325	P	P	18 37 27.6	-0.1
KSAR	Wonju Array Be	59.74	325	P	P	18 37 27.7	-0.1
YSS	Yuzh-Sakhalins	61.08	342	*e*P	P	18 37 36.3	-0.5
	comp=Z,34nm,1.1s						
YSS	Yuzh-Sakhalins	61.08	342	*e*P	P	18 37 38.4	+1.6
YSS				*e*		18 46 07.3	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
NJ2	Nanjing	61.91	315	*e*P	P	18 37 44.3	+1.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VLA	Vladivostok	61.97	332	*i* P	P	18 37 40.1	-2.8
VLA				pmax	pmax		
	comp=Z,44nm,0.8s						
QIZ	Qiongzhong	62.65	298	P	P	18 37 49.8	+1.9
QIZ				S	S	18 46 16.5	-0.1
QIZ				LR	LR		
	comp=Z,180nm,16.3s						
QIZ				LR	LR		
	comp=Z,310nm,25.1s						
USRK	Ussuriysk Ar.	62.77	333	P	P	18 37 49.5	+1.3
	comp=Z,14nm,1.2s,baz=151,slow=8.3,SNR=8.8						
USRK				LR	LR	19 03 40.5	
	comp=Z,86nm,20.2s,baz=136,slow=35						
PETK	Petropavlovsk-	64.03	355	LR	LR	19 02 08.8	
	comp=Z,157nm,21.2s,baz=171,slow=33						
WHN	Wuhan	64.30	311	P	P	18 38 00.6	+2.0
CN2	Changchun	65.58	329	*e*P	P	18 38 03.3	-3.4
GRNR	Gornyy	66.44	340	*e*P	P	18 38 14.2	+2.1
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
VNDA	Vanda	66.74	181	LR	LR	19 04 28.2	
	comp=Z,273nm,18.3s,baz=22,slow=33						
KLR	Kul'dur	66.87	336	*i* P	P	18 38 15.1	+0.2
KLR	Kul'dur	66.87	336	P	P	18 38 16.1	+1.3
	comp=Z,6.1nm,1.1s,baz=138,slow=6.2,SNR=8.8						
CHBT	CHBT	67.25	289	P	P	18 38 18.6	+0.7
	comp=Z,112nm,1.2s						
BJI	Beijing	68.35	321	*e*P	P	18 38 22.3	-2.1
BJI				pmax	pmax		
	comp=Z,7.0nm,2.3s						
BJI				LR	LR		
	comp=Z,410nm,16.9s						
BJI				LR	LR		
	comp=Z,240nm,18.4s						
GYA	Guiyang	68.36	304	P	P	18 38 25.1	+0.2
GYA				pP	sP	18 38 38.4	+9.0
GYA				S	S	18 47 25.3	-1.3
GYA				SKS	SKiKP	18 48 19.6	-0.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=Z,490nm,18.3s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
GYA				LR	LR		
	comp=Z,500nm,18.0s						
KMI	Kunming	71.07	301	P	P	18 38 42.8	+1.0
KMI				pP	sP	18 38 54.0	+7.7
KMI				sP	PcP	18 38 58.5	-3.6
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				pmax	pmax		
	comp=Z,79nm,4.0s						
KMI				LR	LR		
	comp=Z,130nm,18.9s						
KMI				LR	LR		
	comp=Z,160nm,19.2s						
MA2	Magadan	71.18	352	*i* P	P	18 38 40.8	-0.6
MA2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MA2	Magadan	71.18	352	P	P	18 38 43.0	+1.6
	comp=Z,4.2nm,0.7s,baz=189,slow=10,SNR=7.8						
HHC	Hu-ho-hao-te	71.70	320	*e*P	P	18 38 48.0	+2.8
HHC				S	S	18 48 04.9	-0.4
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,5.8s						
HHC				LR	LR		
	comp=Z,210nm,16.7s						
HHC				LR	LR		
	comp=Z,200nm,16.3s						
HHC				LR	LR		
	comp=Z,760nm,18.4s						
CMAR	Chiang Mai Arr	72.10	293	P	P	18 38 48.6	+0.7
	comp=Z,1.9nm,0.9s,baz=112,slow=3.8,SNR=9.7						
CMAR				LR	LR	19 08 07.7	
	comp=Z,49nm,21.7s,baz=111,slow=34						
ZEA	Zeya	72.15	337	*e*P	P	18 38 48.0	+0.6
ZEA				pmax	pmax		
	comp=Z,36nm,1.2s						
CMMT	Chiang Mai	72.21	294	P	P	18 38 56.2	+7.7
CMMT	Chiang Mai	72.21	294	P	P	18 38 56.2	+7.7
	comp=Z,3.9nm,1.2s						
CHTO	Chiang Mai	72.21	294	P	P	18 38 56.3	+7.8
CHTO	Chiang Mai	72.21	294	P	P	18 38 56.3	+7.8
	comp=Z,15nm,2.1s						
CD2	Chengdu	72.53	307	*e*P	P	18 38 50.5	+0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	Seymchan	74.24	354	*ce*P	P	18 38 57.4	-2.1
SEY	Seymchan	74.24	354	P	P	18 38 59.0	-0.5
	comp=Z,1.7nm,0.8s,baz=160,slow=5.5,SNR=5.1						
LZH	Lanzhou	74.66	312	⇓P	P	18 39 04.0	+1.2
LZH				pP	PcP	18 39 15.6	-1.5
LZH				sP	sP	18 39 19.3	+12
LZH				PP	PP	18 41 53.3	+3.3
LZH				*e*S	S	18 48 35.9	-3.3
LZH				sS	sS	18 48 54.1	+9.5
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,5.7s						
LZH				LR	LR		
	comp=Z,440nm,15.3s						
LZH				LR	LR		
	comp=Z,500nm,14.6s						
LZH				LR	LR		
	comp=Z,600nm,18.5s						
GAMB	Gambell	76.31	10	*e*P	P	18 39 12.4	+1.0
	comp=Z,17nm,1.0s						
ULN	Ulaanbaatar	78.16	324	*e*P	P	18 39 23.1	+0.7
	comp=Z,2.7nm,0.6s						
ULN	Ulaanbaatar	78.16	324	*ce*P	P	18 39 21.5	-0.9
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANM	Nome	78.23	12	*e*P	P	18 39 23.8	+1.6
	comp=Z,13nm,1.4s						
ANM	Nome	78.23	12	*e*P	P	18 39 23.8	+1.6
ANM				pmax	pmax		
	comp=Z,13nm,1.4s						
SONM	Songino Array	78.52	324	P	P	18 39 24.9	+0.5
	comp=Z,2.1nm,0.9s,baz=142,slow=6.5,SNR=14						
SONM				LR	LR	19 10 10.8	
	comp=Z,155nm,21.5s,baz=120,slow=33						
SONA1	Songino Array	78.52	324	*e*P	P	18 39 24.4	0.0
BILL	Bilibino	78.63	0	*ce*P	P	18 39 23.6	-0.8
BILL				pmax	pmax		
	comp=Z,28nm,1.7s						
GTA	Gaotai	78.95	314	⇑P	P	18 39 28.3	+1.3
GTA				pP	PcP	18 39 38.6	+3.0
GTA				sP	sP	18 39 42.3	+11
GTA				S	S	18 49 23.3	-2.6
GTA				sS	SKSac	18 49 41.4	-1.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,6.0s						
GTA				LR	LR		
	comp=Z,260nm,17.5s						
GTA				LR	LR		
	comp=Z,210nm,20.3s						
GTA				LR	LR		
	comp=Z,250nm,18.1s						
QSPA	South Pole Qui	79.20	180	*e*P	P	18 39 27.3	-0.6
BOD	Bodaibo	80.35	335	*e*P	P	18 39 31.1	-2.8
BOD				pmax	pmax		
	comp=Z,8.0nm,1.7s						
CAST	Castle Rocks	80.69	18	*e*P	P	18 39 36.0	+0.3
	comp=Z,11nm,0.9s						
ZAK	Zakamensk	81.55	325	*e*P	P	18 39 39.5	-1.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	Talaya	81.97	326	*i* P	P	18 39 40.9	-1.9
IM3	Indian Mountai	82.16	16	*e*P	P	18 39 43.3	-0.1
WRH	Wood River Hil	82.67	18	*e*P	P	18 39 45.8	-0.3
	comp=Z,13nm,1.1s						
MDM	Murphy Dome	82.97	18	*e*P	P	18 39 47.6	-0.1
	comp=Z,13nm,1.0s						
HDA	Harding Lake	82.98	19	*e*P	P	18 39 48.2	+0.5
	comp=Z,27nm,0.9s						
HDA	Harding Lake	82.98	19	P	P	18 39 48.1	+0.4
	baz=227						
TCOL	CIGO, UAF Yank	83.02	18	P	P	18 39 48.0	+0.2
	baz=226						
COLA	College	83.02	18	*i* P	P	18 39 47.1	-0.8
COLA				pmax	pmax		
	comp=Z,14nm,0.9s						
ILAR	Eielson Array	83.25	18	P	P	18 39 49.5	+0.3
	comp=Z,5.4nm,0.7s,baz=232,slow=5.1,SNR=37						
ILAR				LR	LR	19 11 52.1	
	comp=Z,154nm,20.9s,baz=243,slow=32						
ILB	Eielson Array	83.25	18	*e*P	P	18 39 49.4	+0.3
POKR	Poker Plat Res	83.32	18	P	P	18 39 49.6	+0.1
	baz=226						
M02C	Callahan	83.44	46	P	P	18 39 51.7	+1.0
	baz=250						
SCRK	Sand Creek	83.65	20	*e*P	P	18 39 52.2	+0.8
	comp=Z,40nm,1.4s						
YBH	Yreka Blue Hor	83.65	46	LR	LR	19 11 50.9	
	comp=Z,58nm,19.0s,baz=253,slow=32						
O03E	Paynes Creek	83.81	47	P	P	18 39 53.6	+1.0
	baz=250						
L04D	Klamath Falls	84.11	45	P	P	18 39 55.0	+0.8
	baz=250						
BBB	Bella Bella	84.32	34	LR	LR	19 10 56.3	
	comp=Z,195nm,18.7s,baz=240,slow=31						
I04A	Tendick Farm,	84.58	44	P	P	18 39 57.2	+0.8
	baz=250						
J04D	Umpqua Nationa	84.59	44	P	P	18 39 57.5	+0.8
	baz=250						
EDW2	Edwards Air Fo	85.00	53	P	P	18 39 59.7	+0.9
	baz=253						
EGAK	Eagle	85.11	20	*e*P	P	18 39 59.6	+1.0
	comp=Z,26nm,1.0s						
J05D	Fort Rock, OR	85.21	44	P	P	18 40 01.1	+1.3
	baz=250						
TOLK	Toolik Lake Re	85.23	15	P	P	18 40 01.5	+2.3
	baz=224						
CWC	Cottonwood Cre	85.38	52	P	P	18 40 01.6	+0.8
	baz=253						
LRMC	Laurel Mtn Rad	85.42	53	P	P	18 40 01.9	+1.0
	baz=253						
PINE	Pine Mountain	85.58	44	*e*P	P	18 40 00.6	-1.1
	comp=Z,5.5nm,0.8s						
NV01	Mina Array Sit	85.79	50	*e*P	P	18 40 03.3	+0.4
NVAR	Mina Array Bea	85.79	50	P	P	18 40 02.7	-0.2
	comp=Z,3.0nm,0.8s,baz=234,slow=7.9,SNR=13						
TPFO	Pinon Flats	85.87	55	P	P	18 40 03.3	0.0
	baz=254						
DLBC	Dease Lake	86.15	28	LR	LR	19 10 38.5	
	comp=Z,249nm,20.4s,baz=256,slow=30						
BELC	Belle Mtn. Jos	86.34	55	P	P	18 40 06.1	+0.5
	baz=254						
TUQ	Turquoise Moun	86.78	53	P	P	18 40 08.3	+0.5
	baz=254						
GMRC	Granite Mounta	86.82	54	P	P	18 40 08.6	+0.7
	baz=255						
EPYK	Eagle Plains	87.55	20	P	P	18 40 11.7	+1.1
	baz=236						
R11A	Troy Canyon, C	87.82	50	P	P	18 40 13.5	+0.7
	baz=254						
PDMCI	Parker Dam,Lak	87.91	55	P	P	18 40 13.8	+0.8
	baz=256						
214A	Organ Pipe Nat	88.42	57	P	P	18 40 16.1	+0.6
	baz=256						
WMQ	Urumqi	88.99	315	*e*P	P	18 40 17.6	-0.4
WMQ				LR	LR		
	comp=Z,360nm,24.7s						
WMQ				LR	LR		
	comp=Z,200nm,21.9s						
WMQ				LR	LR		
	comp=Z,320nm,24.3s						
INK	Inuvik	89.64	19	P	P	18 40 20.6	+0.2
	comp=Z,3.3nm,1.1s,baz=265,slow=4.1,SNR=5.0						
INK				LR	LR	19 13 17.6	
	comp=Z,215nm,21.9s,baz=204,slow=31						
HLID	Hailey	90.04	46	P	P	18 40 23.9	+0.9
	baz=255						
TUC	Tucson	90.17	57	P	P	18 40 25.0	+1.2

	baz=257						
WUAZ	**Wupatki**	**90.40**	**54**	P	**P**	**18 40 26.4**	**+1.4**
	baz=257						
DGZ	**Jazzator, Alta**	**90.77**	**320**	*i* P	**P**	**18 40 24.7**	**-1.6**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DGAR	**Diego Garcia**	**91.93**	**262**	*i* P	**P**	**18 40 33.5**	**+1.2**
DGAR				pmax	pmax		
	comp=Z,74nm,1.2s						
SYO	**Syowa Base**	**92.05**	**197**	⇑*e*PKiKP	**PKiKP**	**18 45 19.6**	**-2.1**
BOZ	**Bozeman (W)**	**92.46**	**44**	P	**P**	**18 40 35.3**	**+1.1**
	baz=257						
PDAR	**Pinedale Array**	**93.32**	**47**	P	**P**	**18 40 38.9**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=236,slow=1.6,SNR=5.1						
MK01	**Makanchi Array**	**93.39**	**317**	*e*P	**P**	**18 40 37.7**	**-0.6**
MK31	**Makanchi Array**	**93.41**	**317**	*e*P	**P**	**18 40 38.1**	**-0.2**
MKAR	**Makanchi Array**	**93.41**	**317**	*ce*P	**P**	**18 40 38.2**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	**Makanchi Array**	**93.41**	**317**	P	**P**	**18 40 37.7**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=99,slow=6.3,SNR=17						
MKAR				PKKPbc	**PKKPdf**	**18 57 43.9**	**-1.9**
	comp=Z,0.8nm,0.8s,baz=273,slow=3.7,SNR=6.4						
MKAR				LR	LR	19 20 55.2	
	comp=Z,62nm,22.0s,baz=84,slow=34						
ZALV	**Zalesovo Beam**	**93.41**	**324**	P	**P**	**18 40 36.9**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=103,slow=4.7,SNR=6.4						
ANMO	**Albuquerque**	**94.23**	**55**	*i* P	**P**	**18 40 42.0**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ANMO	**Albuquerque**	**94.23**	**55**	P	**P**	**18 40 43.2**	**+0.5**
	baz=260						
YKA	**Yellowknife Ar**	**94.71**	**27**	P	**P**	**18 40 42.4**	**-1.6**
	comp=Z,0.9nm,0.7s,baz=258,slow=4.6,SNR=15						
YKA				LR	LR	19 17 06.8	
	comp=Z,17nm,19.7s,baz=262,slow=32						
YKB5	**Yellowknife Ar**	**94.71**	**27**	*e*P	**P**	**18 40 41.8**	**-2.2**
TXAR	**Lajitas Array**	**95.63**	**61**	P	**P**	**18 40 49.2**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=216,slow=5.4,SNR=3.6						
TXAR				PP	**PP**	**18 44 41.2**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=235,slow=4.4,SNR=5.9						
NRIK	**Noril'sk**	**95.92**	**340**	LR	LR	19 20 57.9	
	comp=Z,196nm,21.8s,baz=114,slow=34						
KURK	**Kurchatov**	**96.51**	**320**	*i* P	**P**	**18 40 49.9**	**-2.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARCES	**ARCESS Array B**	**116.12**	**346**	PKP	**PKiKP**	**18 46 04.8**	**-0.8**
	comp=Z,12nm,1.2s,baz=76,slow=2.0,SNR=24						
LPAZ	**La Paz**	**120.21**	**116**	PKP	**PKPdf**	**18 46 15.1**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=340,slow=1.9,SNR=4.5						
FINES	**FINESS Array B**	**121.58**	**339**	PKP	**PKPdf**	**18 46 15.3**	**-1.0**
	comp=Z,2.3nm,0.8s,baz=145,slow=7.0,SNR=6.5						
CPUP	**Villa Florida**	**124.12**	**132**	PKP	**PKPdf**	**18 46 21.5**	**-0.9**
	comp=Z,3.8nm,1.0s,baz=272,slow=2.0,SNR=4.7						
BOSA	**Boshof**	**125.36**	**223**	PKP	**PKPdf**	**18 46 24.3**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=140,slow=1.6,SNR=4.3						
NB2	**NORSAR Subarra**	**126.49**	**345**	PKPdf	**PKPdf**	**18 46 24.8**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**126.49**	**345**	PKP	**PKPdf**	**18 46 25.3**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=37,slow=1.9,SNR=5.1						
AKASG	**Malin Array Be**	**126.71**	**327**	PKP	**PKPdf**	**18 46 25.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=52,slow=2.1,SNR=6.2						
CLL	**Collm**	**133.92**	**337**	*e*PKPdf	**PKPdf**	**18 46 39.0**	**-1.1**
CLL				LmH		19 46 00.0	
	comp=N,200nm,18.3s						
CLL				LmH		19 46 00.0	
	comp=E,100nm,21.8s						
CLL				LmV		19 49 00.0	
	comp=Z,100nm,20.8s						
CLL	**Collm**	**133.92**	**337**	*e*PKIKP	**PKPdf**	**18 46 39.0**	**-1.1**
GERES	**GERESS Array B**	**135.53**	**334**	PKP	**PKPdf**	**18 46 43.6**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=29,slow=3.0,SNR=7.5						
KEST	**Kesra**	**147.28**	**323**	PKPbc	**PKPbc**	**18 47 07.1**	**0.0**
	comp=Z,8.7nm,1.1s,baz=323,slow=2.2,SNR=7.9						
POLO	**Lamas de Olo**	**149.03**	**351**	*e*PKPdf	**PKPbc**	**18 47 11.8**	**+0.2**
MVO	**Moncorvo**	**149.11**	**349**	*e*PKPdf	**PKPbc**	**18 47 11.8**	**+0.1**
PVRL	**Vila Real**	**149.12**	**351**	*e*PKPdf	**PKPbc**	**18 47 11.5**	**-0.2**
PVIS	**Viseu**	**149.69**	**351**	*e*PKPdf	**PKPbc**	**18 47 13.3**	**+0.1**
ESDC	**Sonseca Array**	**149.85**	**344**	PKPbc	**PKPbc**	**18 47 13.7**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=17,slow=2.1,SNR=13						
MTE	**Manteigas**	**149.94**	**350**	*e*PKPdf	**PKiKP**	**18 47 14.3**	**-0.4**
PCAS	**Casmilo, Conde**	**150.43**	**351**	*e*PKPdf	**PKPbc**	**18 47 14.1**	**-0.8**
PCBR	**Castelo Branco**	**150.47**	**350**	*e*PKPdf	**PKPbc**	**18 47 13.0**	**-2.0**
PTOM	**Tomar**	**150.85**	**351**	*e*PKPdf	**PKPbc**	**18 47 15.8**	**-0.1**
PMRV	**Marv??o**	**150.86**	**349**	*e*PKPdf	**PKPbc**	**18 47 16.1**	**+0.1**
TOA0	**Torodi Ar. Sit**	**164.31**	**280**	*e*PKPdf	**PKPdf**	**18 47 26.8**	**-0.9**
TORD	**Torodi Ar. Bea**	**164.31**	**280**	PKP	**PKPdf**	**18 47 26.5**	**-1.2**
	comp=Z,1.5nm,1.0s,baz=116,slow=3.4,SNR=5.4						
TORD				PKPab	**PKPab**	**18 48 20.1**	**-1.7**
	comp=Z,1.0nm,0.9s,baz=48,slow=2.2,SNR=4.1						

NIED ***17*** *18:34:00, 39°.30N×142°.60E, h23^{km}, Mw3.7 Best double couple: M$_0$4.21000×10^{14} NP1:ϕ$_s$131.00000°, δ21.00000°, λ-49.00000°. NP2:ϕ$_s$269.00000°, δ75.00000°, λ-104.00000°.*

IDC ***17*** *18:34:01.6±1.1, 39°.22N×142°.89E, h0^{km}, mb3.6/7, mb1 3.7/9, mb1mx3.5/53, mbtmp3.6/9, ML3.2/2, MS3.3/5, Ms1 3.3/5, ms1mx2.8/45, Error ellipse: s-maj=28.3km s-min=21.7km az=113.0*

ISCJB ***17*** *18:34:02.7±1.7, 39°.24N±0°.05×142°.79E±0°.10, h16^{km}±10^{km}, mb3.5/7, MS3.8/2, Error ellipse: s-maj=13.7km s-min=7.3km az=24.6*

JMA ***17*** *18:34:05.4±0.1, 39°.26N×142°.64E, h32^{km}±2^{km}, M3.6*

ISC 17 18:34:02.5±2.5**, 39°.25N**±0°.05×**142°.75E**±0°.09**, h5**^{km}±14^{km}**, n23,** σ**1^s.34**/26**, mb3.8**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.79**	**294**	P	**Pg**	**18 34 18.9**	**+1.2**
MIYJ				*e*S	**Sg**	**18 34 28.2**	**+0.3**
OFUJ	**Ofunato**	**0.86**	**259**	P	**Pb**	**18 34 19.9**	**0.0**
OFUJ				*e*S	**Sg**	**18 34 30.0**	**-0.1**
JTH	**Tanohata**	**0.97**	**315**	P	**Pg**	**18 34 21.7**	**+0.6**
JKMT	**Kesennumamotoy**	**1.09**	**246**	P	**Pg**	**18 34 23.5**	**+0.1**
JKMT				*e*S	**Sg**	**18 34 36.6**	**-0.9**
JOM	**Ohasama**	**1.15**	**281**	P	**Pg**	**18 34 24.6**	**0.0**
JOM				*e*S	**Sg**	**18 34 38.5**	**-1.0**
JMK	**Ichinoseki**	**1.23**	**256**	P	**Pg**	**18 34 25.6**	**-0.5**
JKZ	**Kuzumaki**	**1.32**	**304**	P	**Pn**	**18 34 27.6**	**0.0**
JIO	**Ouri**	**1.35**	**234**	P	**Pn**	**18 34 27.5**	**-0.6**
JIO				*e*S	**Sb**	**18 34 43.1**	**-2.9**
JANG	**Nango**	**1.47**	**320**	P	**Pn**	**18 34 29.2**	**-0.5**
JAH	**Hinai**	**1.88**	**300**	P	**Pn**	**18 34 36.3**	**+1.0**
MJAR	**Matsushiro Arr**	**4.50**	**234**	Pn	**Pn**	**18 35 13.9**	**+2.6**
	0.5nm,0.3s,baz=43,slow=10,SNR=66						
MJAR				LR	LR	18 37 14.7	
	comp=Z,126nm,19.7s,baz=55,slow=42						
MAT	**Matsushiro**	**4.50**	**234**	P	**Pn**	**18 35 14.8**	**+3.4**
MAT				*e*S	**Sn**	**18 36 05.5**	**+1.4**
ASAJ	**Asahikawa**	**4.86**	**359**	Pn	**Pn**	**18 35 16.8**	**+0.5**
	1.1nm,0.3s,baz=220,slow=7.8,SNR=19						
ASAJ				LR	LR	18 37 35.5	
	comp=Z,171nm,18.7s,baz=186,slow=44						
KLR	**Kul'dur**	**12.70**	**325**	LR	LR	18 41 57.4	
	comp=Z,63nm,19.6s,baz=98,slow=37						
ZALV	**Zalesovo Beam**	**41.24**	**311**	P	**P**	**18 41 48.5**	**+0.4**
	0.3nm,0.3s,baz=67,slow=8.0,SNR=2.2						
MKAR	**Makanchi Array**	**43.87**	**300**	P	**P**	**18 42 10.5**	**+0.7**
	0.2nm,0.6s,baz=82,slow=10,SNR=2.5						
KURBB	**Kurchatov Arra**	**45.50**	**306**	P	**P**	**18 42 22.6**	**0.0**
	0.4nm,0.4s,baz=80,slow=8.2,SNR=3.1						
ILAR	**Eielson Array**	**47.06**	**33**	P	**P**	**18 42 33.1**	**-1.6**
	0.5nm,0.6s,baz=260,slow=5.2,SNR=4.4						
PSI	**Prapat**	**53.84**	**239**	LR	LR	19 08 13.3	
	comp=Z,138nm,18.8s,baz=94,slow=38						
WRA	**Warramunga Arr**	**59.41**	**189**	P	**P**	**18 44 05.2**	**-0.8**
	0.7nm,0.6s,baz=6.9,slow=7.0,SNR=9.0						
YKA	**Yellowknife Ar**	**61.36**	**31**	P	**P**	**18 44 19.9**	**+0.9**
	0.1nm,0.5s,baz=302,slow=6.5,SNR=3.1						
FINES	**FINESS Array B**	**67.34**	**332**	P	**P**	**18 44 58.4**	**+0.2**
	0.8nm,0.7s,baz=37,slow=12,SNR=2.3						
PDAR	**Pinedale Array**	**75.37**	**46**	LR	LR	19 22 11.5	
	comp=Z,30nm,18.8s,baz=285,slow=38						

IDC ***17*** *18:34:24.9±0.8, 10°.91S×165°.94E, h0^{km}, mb4.1/14, mb1 4.3/16, mb1mx4.1/40, mbtmp4.1/16, ML4.2/2, Error ellipse: s-maj=28.9km s-min=17.3km az=131.0*

ISCJB ***17*** *18:34:25.1±0.5, 10°.94S±0°.08×165°.83E±0°.07, h10^{km}, mb4.0/15, Error ellipse: s-maj=12.0km s-min=9.7km az=172.7*

NEIC ***17*** *18:34:26.7±0.4, 10°.89S×165°.91E, h10^{km}, mb4.2/2, Error ellipse: s-maj=12.5km s-min=8.4km az=126.0*

ISC 17 18:34:26.7±0.7**, 10°.9S**±0°.1×**165°.91E**±0°.09**, h10**^{km}**, n21,** σ**0^s.79**/24**, mb4.2**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.04**	**283**	Pn	**Pn**	**18 35 56.9**	**+0.7**
	14nm,0.3s,baz=263,slow=4.7,SNR=5.5						
HNR				Sn	**Sn**	**18 37 05.0**	**-0.5**
	3.0nm,0.3s,baz=207,slow=18,SNR=2.2						
DZM	**Mont Dzumac**	**11.14**	**177**	Pn	**Pn**	**18 37 06.8**	**+0.5**
	0.9nm,0.3s,baz=74,slow=6.0,SNR=50						
CTA	**Charters Tower**	**21.02**	**242**	P	**P**	**18 39 11.8**	**+1.1**
	11nm,0.8s,baz=79,slow=14,SNR=8.0						
CTAO	**Charters Tower**	**21.02**	**242**	*e*P	**P**	**18 39 10.7**	**0.0**
STKA	**Stephens Creek**	**30.67**	**223**	P	**P**	**18 40 41.7**	**0.0**
	1.5nm,0.6s,baz=22,slow=8.9,SNR=3.9						
WRAB	**Tennant Creek**	**31.68**	**250**	*e*P	**P**	**18 40 49.9**	**-0.8**
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**31.69**	**250**	P	**P**	**18 40 49.8**	**-1.0**
	1.8nm,0.8s,baz=80,slow=9.0,SNR=9.6						
WRA				PcP	**PcP**	**18 43 42.2**	**-0.5**
	0.7nm,0.8s,baz=78,slow=2.9,SNR=4.7						
ASAR	**Alice Springs**	**33.01**	**243**	P	**P**	**18 41 01.6**	**-0.8**
	3.8nm,0.9s,baz=66,slow=10,SNR=34						
ASAR				PcP	**PcP**	**18 43 45.7**	**-0.6**
	1.1nm,0.9s,baz=54,slow=2.7,SNR=8.1						
MJAR	**Matsushiro Arr**	**53.90**	**332**	P	**P**	**18 43 50.1**	**-0.2**
	2.8nm,1.0s,baz=167,slow=7.5,SNR=5.0						
KLR	**Kul'dur**	**66.97**	**336**	P	**P**	**18 45 20.7**	**+1.2**
	2.5nm,1.1s,baz=121,slow=6.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	**72.19**	**293**	P	**P**	**18 45 53.1**	**+0.6**
	0.3nm,0.4s,baz=122,slow=4.6,SNR=4.2						
SONM	**Songino Array**	**78.63**	**324**	P	**P**	**18 46 29.1**	**+0.1**
	0.8nm,0.8s,baz=126,slow=6.9,SNR=6.0						
BILL	**Bilibino**	**78.71**	**0**	*e*P	**P**	**18 46 28.9**	**0.0**
	4.0nm,1.0s						
ILAR	**Eielson Array**	**83.31**	**18**	P	**P**	**18 46 53.9**	**+0.4**
	2.0nm,0.8s,baz=227,slow=6.0,SNR=16						
EGAK	**Eagle**	**85.17**	**20**	*e*P	**P**	**18 47 04.1**	**+1.2**
NVAR	**Mina Array Bea**	**85.80**	**50**	P	**P**	**18 47 06.6**	**-0.3**
	0.7nm,0.8s,baz=235,slow=8.7,SNR=3.3						
INK	**Inuvik**	**89.69**	**19**	P	**P**	**18 47 25.1**	**+0.5**
	1.6nm,1.1s,baz=212,slow=9.2,SNR=3.1						
MKAR	**Makanchi Array**	**93.51**	**317**	P	**P**	**18 47 42.9**	**0.0**
	1.1nm,0.8s,baz=101,slow=6.3,SNR=11						
ZALV	**Zalesovo Beam**	**93.51**	**324**	P	**P**	**18 47 41.2**	**-1.5**
	0.5nm,0.4s,baz=94,slow=5.3,SNR=3.5						
YKA	**Yellowknife Ar**	**94.75**	**27**	P	**P**	**18 47 47.8**	**-0.4**
	0.1nm,0.6s,baz=258,slow=3.8,SNR=3.4						
ARCES	**ARCESS Array B**	**116.21**	**346**	PKP	**PKiKP**	**18 53 08.5**	**-1.3**
	1.0nm,0.8s,baz=118,slow=1.3,SNR=5.4						

IDC 17 18:37:12.5±10.0**, 17°.27S**×**178°.74W, h516**^{km}±119^{km}**, mb3.2**/10**, mb1 3.5**/10**, mb1mx3.2**/32**, mbtmp4.0**/10**, Error ellipse: s-maj=69.3km s-min=34.5km az=162.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.24**	**260**	P	P	18 43 06.5	-0.4
	1.7nm,0.4s,baz=81,slow=12,SNR=4.7						
STKA	**Stephens Creek**	**38.66**	**240**	P	P	18 43 51.5	-0.2
	0.6nm,0.4s,baz=22,slow=8.9,SNR=2.9						
WRA	**Warramunga Arr**	**44.44**	**259**	P	P	18 44 37.6	0.0
	1.2nm,0.5s,baz=96,slow=7.2,SNR=38						
ASAR	**Alice Springs**	**44.66**	**254**	P	P	18 44 39.3	0.0
	6.5nm,0.7s,baz=87,slow=9.2,SNR=118						
NVAR	**Mina Array Bea**	**79.19**	**44**	P	P	18 48 24.6	+0.5
	0.7nm,0.9s,baz=229,slow=9.3,SNR=3.6						
SEY	**Seymchan**	**83.08**	**347**	P	P	18 48 43.9	+0.6
	0.6nm,0.5s,baz=163,slow=14,SNR=4.0						
ILAR	**Eielson Array**	**85.34**	**13**	P	P	18 48 54.3	-0.1
	0.4nm,0.4s,baz=220,slow=5.2,SNR=7.5						
TXAR	**Lajitas Array**	**85.92**	**58**	P	P	18 48 58.4	+0.2
	0.9nm,0.8s,baz=215,slow=6.5,SNR=10						
PDAR	**Pinedale Array**	**87.11**	**44**	P	P	18 49 03.2	-0.5
	0.6nm,0.6s,baz=222,slow=2.0,SNR=6.1						
YKA	**Yellowknife Ar**	**93.89**	**25**	P	P	18 49 33.4	-0.8
	0.1nm,0.5s,baz=237,slow=4.6,SNR=4.6						
GERES	**GERESS Array B**	**146.91**	**345**	PKPbc	PKPbc	18 55 56.2	-0.8
	0.6nm,0.6s,baz=27,slow=3.3,SNR=6.6						

ISCJB ***17*** *18:40:09.6±1.1, 10°.9S±0°.1×165°.8E±0°.2, h10^{km}, mb3.5/5, Error ellipse: s-maj=23.6km s-min=17.7km az=160.8*

IDC ***17*** *18:40:09.3±1.4, 10°.85S×165°.81E, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.7/30, mbtmp3.8/7, ML4.5/2, Error ellipse: s-maj=39.4km s-min=26.9km az=127.0*

ISC 17 18:40:11.1±1.1**, 10°.8S**±0°.1×**165°.9E**±0°.2**, h10**^{km}**, n8,** σ**1^s.22**/8**, mb3.7**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.97**	**283**	Pn	**Pn**	**18 41 40.7**	**+1.2**
	22nm,0.3s,baz=139,slow=7.2,SNR=13						
DZM	**Mont Dzumac**	**11.23**	**177**	Pn	**Pn**	**18 42 52.6**	**+0.8**
	1.7nm,0.3s,baz=320,slow=8.3,SNR=16						
WRA	**Warramunga Arr**	**31.66**	**249**	P	**P**	**18 46 33.9**	**-1.1**
	0.3nm,0.6s,baz=82,slow=8.7,SNR=4.8						
ASAR	**Alice Springs**	**32.99**	**243**	P	**P**	**18 46 45.0**	**-1.6**
	0.8nm,0.6s,baz=63,slow=10,SNR=11						
SONM	**Songino Array**	**78.53**	**324**	P	**P**	**18 52 13.1**	**+0.3**
	0.4nm,0.9s,baz=111,slow=3.2,SNR=3.2						
ILAR	**Eielson Array**	**83.25**	**18**	P	**P**	**18 52 38.0**	**+0.5**
	0.3nm,0.6s,baz=235,slow=6.3,SNR=4.0						
MKAR	**Makanchi Array**	**93.41**	**317**	P	**P**	**18 53 26.4**	**-0.4**
	0.2nm,0.6s,baz=81,slow=7.5,SNR=3.5						
ARCES	**ARCESS Array B**	**116.12**	**346**	PKP	**PKPdf**	**18 58 52.9**	**-1.1**
	1.4nm,0.8s,baz=46,slow=3.5,SNR=5.3						

NEIC ***17*** *18:59:29.3±1.0, 43°.77N×105°.29W, h0^{km}, ML3.1, Error ellipse: s-maj=14.6km s-min=11.6km az=50.0, Suspected Mining explosion.*

NEIC 61 km [38 miles] SSE of Gillette.

IDC ***17*** *18:59:30.6±1.0, 44°.26N×105°.80W, h0^{km}, mb1 3.6/4, mb1mx3.3/42, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=24.4km s-min=8.4km az=143.0*

ISC 17 18:59:28.1±0.9**, 43°.95N**±0°.06×**105°.79W**±0°.06**, h0**^{km}**, n13,** σ**2^s.59**/14**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLMT	**Red Lodge**	**2.75**	**296**	*e*Pn	**Pg**	**19 00 20.8**	**0.0**
RLMT				*e*Sn	**Sg**	**19 00 56.8**	**+0.4**
PDAR	**Pinedale Array**	**2.99**	**248**	Pn	**Pb**	**19 00 23.6**	**+1.2**
	8.8nm,0.3s,baz=72,slow=17,SNR=39						
PDAR				Lg	Lg	19 01 08.3	
	12nm,0.3s,baz=78,slow=34,SNR=13						
BW06	**Boulder Array**	**3.00**	**248**	*e*Pn	**Pb**	**19 00 22.9**	**+0.4**
BW06				*e*Sn	**Sb**	**19 00 57.4**	**-2.3**
LKWY	**Lake**	**3.37**	**282**	*e*Pn	**Pb**	**19 00 28.4**	**-0.4**
OGNE	**Ogallala**	**4.09**	**136**	Pn	**Pn**	**19 00 28.8**	**-3.2**
ISCO	**Idaho Springs**	**4.15**	**178**	*e*Pn	**Pn**	**19 00 29.8**	**-3.2**
ISCO				*e*Sn	**Sn**	**19 01 19.4**	**-3.0**
BOZ	**Bozeman (W)**	**4.47**	**294**	Pn	Pn	19 00 42.1	+4.8
DGMT	**Dagmar**	**4.65**	**13**	Pn	**Pn**	**19 00 42.5**	**+2.8**
DUG	**Dugway, Tooele**	**6.43**	**237**	*e*Pn	**Pn**	**19 01 08.1**	**+3.8**
	1.8nm,0.3s						
I10CA	**LAC DU BONNET**	**9.13**	**43**	*i*		19 55 22.1	
	baz=218,slow=296,SNR=0.6						
ULM	**Lac du Bonnet**	**9.23**	**44**	Pn	**Pn**	**19 01 39.6**	**-2.8**
	1.4nm,0.3s,baz=237,slow=12,SNR=14						
ULM				Pg		19 02 14.9	
	1.1nm,0.3s,baz=230,slow=13,SNR=5.1						
ULM				Lg	Lg	19 04 11.1	
	0.5nm,0.3s,baz=324,slow=17,SNR=3.3						
TXAR	**Lajitas Array**	**14.69**	**173**	Pn	**P**	**19 03 06.2**	**+2.5**
	0.0nm,0.3s,baz=27,slow=11,SNR=3.5						
TXAR				Lg	Lg	19 07 15.9	
	0.0nm,0.3s,baz=359,slow=27,SNR=4.2						
YKA	**Yellowknife Ar**	**19.27**	**348**	P	**Pn**	**19 03 55.1**	**+0.2**
	0.0nm,0.3s,baz=159,slow=11,SNR=3.0						

IDC ***17*** *19:04:50.5±3.0, 4°.50S×102°.45E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.6/38, mbtmp3.7/7, Error ellipse: s-maj=134.2km s-min=17.7km az=57.0*

ISCJB ***17*** *19:04:57.9±1.3, 4°.5S±0°.1×102°.6E±0°.1, h72^{km}±8^{km}, mb3.7/7, Error ellipse: s-maj=27.3km s-min=6.8km az=135.3*

DJA ***17*** *19:04:58.3±0.7, 5°S±4°×10°3E±°, h31^{km}±5^{km}, M3.7/8, MLv3.7/8*

ISC 17 19:04:58.8±1.6**, 4°.5S**±0°.1×**102°.6E**±0°.1**, h61**^{km}±11^{km}**, n15,** σ**0^s.89**/20**, mb3.8**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.41**	**67**	P	**Pn**	**19 05 09.9**	**-0.1**
MNAI				S	**Sn**	**19 05 17.7**	**-0.5**
LHSI	**Lahat**	**1.17**	**54**	P	**Pn**	**19 05 19.7**	**+0.5**
MASI	**Maura Aman, Be**	**1.42**	**346**	P	**Pn**	**19 05 23.0**	**+0.6**
MASI				S	**Sn**	**19 05 41.4**	**+1.2**
LWLI	**Liwa**	**1.56**	**108**	P	**Pn**	**19 05 25.0**	**+0.6**
LWLI				S	**Sn**	**19 05 44.0**	**+0.3**
MDSI	**Maura Dua**	**1.60**	**89**	P	**Pn**	**19 05 25.4**	**+0.6**
MDSI				S	**Sn**	**19 05 45.5**	**+1.0**
KASI	**Kota Agung**	**2.15**	**117**	P	**Pn**	**19 05 33.0**	**+0.6**
KASI				S	**Sn**	**19 05 57.5**	**-0.6**
KRJI	**Kerinci**	**2.66**	**335**	P	**Pn**	**19 05 40.3**	**+0.9**
CMAR	**Chiang Mai Arr**	**23.12**	**351**	P	**P**	**19 09 57.8**	**-2.0**
	0.5nm,0.4s,baz=184,slow=9.9,SNR=6.0						
WRA	**Warramunga Arr**	**34.52**	**119**	P	**P**	**19 11 41.1**	**-0.4**
	0.4nm,0.4s,baz=304,slow=9.0,SNR=9.0						
ASAR	**Alice Springs**	**35.70**	**125**	P	**P**	**19 11 52.1**	**+0.5**
	0.1nm,0.3s,baz=299,slow=8.1,SNR=11						
STKA	**Stephens Creek**	**45.56**	**131**	P	**P**	**19 13 13.9**	**+1.1**
	0.5nm,0.4s,baz=316,slow=8.5,SNR=3.0						
SONM	**Songino Array**	**52.25**	**3**	P	**P**	**19 14 04.0**	**+0.1**
	0.7nm,0.6s,baz=187,slow=9.5,SNR=8.3						
MKAR	**Makanchi Array**	**54.16**	**343**	P	**P**	**19 14 17.2**	**-0.6**
	0.6nm,0.4s,baz=151,slow=8.9,SNR=17						
ZALV	**Zalesovo Beam**	**60.13**	**348**	P	**P**	**19 14 58.7**	**-1.1**
	1.8nm,0.4s,baz=166,slow=5.9,SNR=11						
TXAR	**Lajitas Array**	**144.98**	**42**	PKPbc	**PKPab**	**19 24 29.4**	**0.0**
	0.2nm,0.5s,baz=298,slow=1.9,SNR=3.6						

BJI ***17*** *19:18:48.2, 10°.75S×166°.12E, h5^{km}, mB5.5/53, mb4.9/57, Ms5.5/61, Ms7 5.3/57*

IDC ***17*** *19:18:50.4±0.4, 10°.75S×165°.74E, h0^{km}, mb4.8/21, mb1 4.9/23, mb1mx4.9/29, mbtmp4.8/23, ML5.9/2, MS4.8/6, Ms1 4.8/6, ms1mx4.5/34, Error ellipse: s-maj=16.2km s-min=13.0km az=96.0*

ISCJB ***17*** *19:18:51.0±0.1, 10°.88S±0°.02×165°.61E±0°.03, h12^{km}, mb5.0/81, MS5.3/163, Error ellipse: s-maj=4.1km s-min=3.4km az=16.7*

NEIC ***17*** *19:18:52.2±0.1, 10°.84S×165°.67E, h10^{km}, mb5.3/39, MS5.3/126, MW5.5, Error ellipse: s-maj=4.4km s-min=3.4km az=101.0, Moment Tensor Solution. s39 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.70; M$_{\theta\theta}$2.22; M$_{\phi\phi}$-1.52; M$_{r\theta}$-0.24; M$_{\theta\phi}$-0.45; M$_{\phi r}$-0.64; Best double couple: M$_0$2.10000×10^{17} NP1:ϕ$_s$318.00000°, δ68.00000°, λ-19.00000°. NP2:ϕ$_s$56.00000°, δ73.00000°, λ-157.00000°. Principal axes: T 2.2900, Plg3.0000°, Azm186.0000°; N -0.3500, Plg61.0000°, Azm90.0000°; P -1.9400, Plg28.0000°, Azm278.0000°;*

NEIC Felt at Lata.

MOS ***17*** *19:18:55.8±1.1, 10°.67S×165°.50E, h40^{km}, mb5.1/30, MS5.4/19 Error ellipse: s-maj=9.5km s-min=8.4km az=104.8*

GCMT ***17*** *19:18:56.2±0.2, 10°.86S±0°.01×165°.67E±0°.01, h14^{km}, MW5.5/112, Moment Tensor Solution. s99,c173; s112,c208; Duration: 1^s.4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.05±.04; M$_{\theta\theta}$2.60±.04; M$_{\phi\phi}$-1.55±.04; M$_{r\theta}$-0.35±.08; M$_{\theta\phi}$-0.16±.04; M$_{\phi r}$-0.76±.10; Best double couple: M$_0$2.38100×10^{17} NP1:ϕ$_s$54.00000°, δ69.00000°, λ-149.00000°. NP2:ϕ$_s$312.00000°, δ61.00000°, λ-24.00000°. Principal axes: T 2.6350, Plg5.0000°, Azm181.0000°; N -0.5070, Plg53.0000°, Azm84.0000°; P -2.1280, Plg36.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 19:18:52.7±0.7**, 10°.86S**±0°.04×**165°.75E**±0°.04**, h13**^{km}±3^{km}**, n494,** σ**1^s.49**/431**, mb5.0**/88**, MS5.3**/163**, 9C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.89**	**283**	*i* P	**Pn**	**19 20 21.5**	**+1.8**
HNR				*i* S	**Sn**	**19 21 30.0**	**+2.9**
HNR	**Honiara**	**5.89**	**283**	*e*Pn	**Pn**	**19 20 20.9**	**+1.2**
HNR				Sn	**Sn**	**19 21 29.2**	**+2.1**
HNR	**Honiara**	**5.89**	**283**	*e*P	**Pn**	**19 20 20.9**	**+1.2**
HNR						19 21 29.3	
HNR	**Honiara**	**5.89**	**283**	Pn	**Pn**	**19 20 20.5**	**+0.8**
	565nm,0.3s,baz=145,slow=5.2,SNR=113						
HNR				Sn	**Sn**	**19 21 29.2**	**+2.1**
	baz=353,slow=17,SNR=2.1						
MARNC	**Mare, Loyalty**	**10.79**	**169**	*e*Pn	**Pn**	**19 21 27.8**	**+0.9**
DZM	**Mont Dzumac**	**11.17**	**177**	*e*Pn	**Pn**	**19 21 33.5**	**+1.3**
	323nm,0.5s						
DZM				*e*Sn	**Sn**	**19 23 32.2**	**-4.9**
	40nm,0.5s						
DZM				*e*LR	LR	19 24 09.0	
	comp=Z,19µm,28.4s						
DZM	**Mont Dzumac**	**11.17**	**177**	*e*Pn	**Pn**	**19 21 33.1**	**+0.9**
DZM				Sn	**Sn**	**19 23 37.3**	**+0.2**
DZM	**Mont Dzumac**	**11.17**	**177**	Pn	**Pn**	**19 21 33.5**	**+1.3**
	40nm,0.3s,baz=12,slow=17,SNR=84						
DZM				Sn	**Sn**	**19 23 37.3**	**+0.2**
	4.0nm,0.3s,baz=307,slow=20,SNR=2.8						
ONTNC	**Ouen Toro**	**11.40**	**177**	*e*Pn	**Pn**	**19 21 36.7**	**+1.3**
OUENC	**Ouen Island, N**	**11.54**	**175**	*e*Pn	**Pn**	**19 21 38.3**	**+1.1**
PINNC	**Pines Island,**	**11.80**	**172**	*e*Pn	**Pn**	**19 21 41.9**	**+1.2**
MSVF	**Nonsavu**	**13.73**	**121**	*e*Pn	**Pn**	**19 22 07.2**	**0.0**
MSVF	**Nonsavu**	**13.73**	**121**	*e*P	**Pn**	**19 22 07.3**	**0.0**
TARA	**Tarawa**	**14.07**	**31**	*e*Pn	**Pn**	**19 22 10.8**	**-1.1**
RABL	**Rabaul**	**15.01**	**295**	*e*Pn	**Pn**	**19 22 24.6**	**-0.1**
EIDS	**Eidsvold**	**20.04**	**222**	P	Pn	19 23 27.6	+0.3
	baz=20,SNR=6.4						
EIDS	**Eidsvold**	**20.04**	**222**	*e*P	**P**	**19 23 25.8**	**+0.3**
	196nm,1.6s						
MANU	**Manus Island**	**20.25**	**294**	*e*P	**P**	**19 23 27.3**	**-0.6**
	267nm,1.0s						
CTA	**Charters Tower**	**20.89**	**242**	P	**P**	**19 23 35.8**	**+0.9**
	50nm,1.0s,baz=67,slow=11,SNR=25						
CTAO	**Charters Tower**	**20.89**	**242**	*e*P	**P**	**19 23 35.6**	**+0.7**
	131nm,1.1s						
CTAO				LR	LR		
	comp=Z,5µm,20.0s						
CTAO	**Charters Tower**	**20.89**	**242**	*e*P	**P**	**19 23 35.6**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,131nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,5µm,20.0s						
MTSU	**Mount Surprise**	**21.96**	**248**	P	**P**	**19 23 47.0**	**+0.5**
	baz=22,SNR=53						
COEN	**Coen**	**22.26**	**260**	P	**P**	**19 23 49.4**	**-0.4**
	baz=22,SNR=13						
COEN	**Coen**	**22.26**	**260**	*e*P	**P**	**19 23 49.3**	**-0.4**
	comp=Z,51nm,1.1s						
RMQ	**Roma**	**22.34**	**224**	P	**P**	**19 23 50.9**	**+0.5**
	baz=22,SNR=9.4						
ARMA	**Armidale**	**23.48**	**212**	P	**P**	**19 24 03.2**	**+0.9**
	baz=24,SNR=24						
ARMA	**Armidale**	**23.48**	**212**	*e*P	**P**	**19 24 03.0**	**+0.7**
	comp=Z,62nm,1.0s						
RAO	**Raoul Island**	**23.82**	**143**	PFAKE		19 24 20.0	+14
RAO				LR	LR		
	comp=Z,5µm,20.0s						
OUZ	**Omahuta**	**25.28**	**165**	*e*P	**P**	**19 24 20.3**	**+1.5**
	comp=Z,165nm,1.9s						
MGCD	**Mangrove Creek**	**26.00**	**209**	P	**P**	**19 24 27.6**	**+2.2**
	baz=26,SNR=5.1						
JAY	**Jayapura**	**26.20**	**287**	P	**P**	**19 24 25.9**	**-1.6**
JAY	**Jayapura**	**26.20**	**287**	P	**P**	**19 24 26.4**	**-1.1**
	comp=Z,24nm,0.9s,baz=112,slow=4.0,SNR=5.0						
GENI	**Genyem**	**26.68**	**286**	P	**P**	**19 24 29.9**	**-1.9**
QIS	**Mount Isa**	**26.92**	**246**	P	**P**	**19 24 33.4**	**-0.5**
	baz=27,SNR=8.5						
CMSA	**Cobar Meteorol**	**27.71**	**219**	P	**P**	**19 24 40.9**	**0.0**
	baz=28,SNR=29						
CNB	**Canberra Magne**	**28.55**	**209**	P	**P**	**19 24 49.6**	**+1.3**
	baz=29,SNR=4.6						
URZ	**Urewera**	**29.12**	**161**	*e*P	**P**	**19 24 52.8**	**-0.4**
	comp=Z,23nm,0.8s						
URZ	**Urewera**	**29.12**	**161**	P	**P**	**19 24 54.9**	**+1.6**
	comp=Z,14nm,0.6s,baz=67,slow=3.0,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**29.18**	**2**	T	T	19 55 18.1	
	baz=181,slow=76,SNR=657						
H11S3	**WAKE ISLAND Hy**	**29.18**	**2**	T	T	19 55 18.4	

	baz=181,slow=76,SNR=325						
H11S1	WAKE ISLAND Hy	29.20	2	T	T	19 55 15.7	
	baz=181,slow=76,SNR=463						
BKZ	Black Stump Fm	29.77	163	eP	P	19 24 58.6	-0.5
	comp=Z,52nm,0.5s						
WAKE	Wake Island	29.96	2	PFAKE		19 25 10.0	+9.1
WAKE				LR	LR		
	comp=Z,7µm,19.0s						
STKA	Stephens Creek	30.58	223	P	P	19 25 06.9	+0.5
	baz=31,SNR=18						
STKA	Stephens Creek	30.58	223	eP	P	19 25 06.3	-0.1
	comp=Z,4.3nm,0.9s						
STKA				PcP	PcP	19 28 05.8	+0.8
STKA	Stephens Creek	30.58	223	P	P	19 25 07.0	+0.7
	comp=Z,7.3nm,0.5s,baz=49,slow=9.7,SNR=32						
STKA				PcP	PcP	19 28 05.8	+0.8
	comp=Z,3.8nm,0.9s,baz=60,slow=6.4,SNR=2.9						
BFZ	Birch Farm	31.12	164	eP	P	19 25 09.8	-1.2
	comp=Z,41nm,0.9s						
SNZO	South Karori	31.34	167	eP	P	19 25 12.4	-0.4
	comp=Z,51nm,0.9s						
SNZO				LR	LR		
	comp=Z,8µm,19.0s						
THZ	Tophouse	31.42	170	eP	P	19 25 13.5	-0.1
	comp=Z,168nm,1.4s						
WRAB	Tennant Creek	31.54	250	eP	P	19 25 13.8	-1.2
	comp=Z,24nm,1.0s						
WRAB				LR	LR		
	comp=Z,5µm,19.0s						
WRAB	Tennant Creek	31.54	250	i P	P	19 25 12.2	-2.8
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s						
WB2	Warramunga Arr	31.54	250	eP	P	19 25 14.0	-1.0
WB2				ePcP	PcP	19 28 08.2	+0.5
WRA	Warramunga Arr	31.55	250	i P	P	19 25 13.6	-1.5
WRA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WRA	Warramunga Arr	31.55	250	P	P	19 25 13.7	-1.4
	comp=Z,10nm,0.7s,baz=82,slow=9.1,SNR=94						
WRA				PcP	PcP	19 28 08.3	+0.5
	comp=Z,4.2nm,0.9s,baz=76,slow=2.6,SNR=5.7						
GUMO	Guam	31.93	319	PFAKE		19 25 30.0	+12
GUMO				LR	LR		
	comp=Z,7µm,21.0s						
KHZ	Kahutara	32.16	169	eP	P	19 25 20.2	+0.1
	comp=Z,48nm,0.9s						
TOO	Toolangi	32.23	211	P	P	19 25 21.8	+0.9
	baz=32,SNR=17						
TOO	Toolangi	32.23	211	eP	P	19 25 21.3	+0.4
	comp=Z,22nm,0.9s						
TOO	Toolangi	32.23	211	eP	P	19 25 21.3	+0.4
TOO				pmax	pmax		
	comp=Z,22nm,0.9s						
LTZ	Lake Taylor	32.31	171	eP	P	19 25 21.4	-0.1
	comp=Z,66nm,0.7s						
KDU	Kakadu	32.62	263	P	P	19 25 22.3	-2.1
	baz=33,SNR=10						
FOZ	Fox Glacier	32.74	175	eP	P	19 25 25.4	+0.3
	comp=Z,31nm,0.8s						
OXZ	Oxford	32.80	172	eP	P	19 25 25.1	-0.7
	comp=Z,37nm,0.6s						
AS01	Alice Springs	32.84	243	eP	P	19 25 24.4	-2.0
AS01				ePcP	PcP	19 28 10.9	-0.4
AS31	Alice Springs	32.88	243	eP	P	19 25 25.2	-1.5
	comp=Z,5.9nm,0.6s						
ASAR	Alice Springs	32.88	243	P	P	19 25 25.4	-1.4
	comp=Z,25nm,0.8s,baz=65,slow=9.9,SNR=310						
ASAR				PcP	PcP	19 28 11.6	+0.1
	comp=Z,5.2nm,0.9s,baz=69,slow=2.8,SNR=7.5						
ASAR				LR	LR	19 37 46.0	
	comp=Z,2µm,18.4s,baz=73,slow=34						
RPZ	Rata Peaks	33.05	173	eP	P	19 25 27.9	0.0
	comp=Z,47nm,0.8s						
RPZ	Rata Peaks	33.05	173	P	P	19 25 28.3	+0.3
	comp=Z,40nm,0.8s,baz=278,slow=1.1,SNR=23						
CRLZ	Canterbury Las	33.13	171	eP	P	19 25 28.1	-0.5
	comp=Z,392nm,1.8s						
MQZ	McQueen's Vall	33.27	171	eP	P	19 25 29.5	-0.3
	comp=Z,76nm,0.9s						
HTT	Hallett	33.31	223	P	P	19 25 30.7	+0.3
	baz=33,SNR=18						
LBZ	Lake Benmore	33.62	174	eP	P	19 25 33.0	+0.1
	comp=Z,68nm,1.6s						
ARPS	Mount Arapiles	33.63	216	P	P	19 25 33.7	+0.7
	baz=34,SNR=4.9						
ODZ	Otahua Downs	34.32	174	eP	P	19 25 39.2	+0.2
	comp=Z,42nm,1.3s						
RAR	Rarotonga	34.62	112	PFAKE		19 25 50.0	+8.2
RAR				LR	LR		
	comp=Z,3µm,20.0s						
BBOO	Buckleboo	34.96	227	P	P	19 25 44.3	-0.4
	baz=35,SNR=20						
BBOO	Buckleboo	34.96	227	eP	P	19 25 44.3	-0.4
	comp=Z,36nm,1.0s						
TAU	Tasmania Unive	35.74	203	PFAKE		19 26 00.0	+8.8
TAU				LR	LR		
	comp=Z,4µm,19.0s						
KNRA	Kununurra	36.29	258	P	P	19 25 55.0	-1.2
	baz=36,SNR=9.0						
WRKA	Warakurna	38.17	243	P	P	19 26 11.3	-1.0
	baz=38,SNR=8.8						
FITZ	Fitzroy Crossi	39.44	255	P	P	19 26 21.8	-1.1
	baz=39,SNR=30						
FITZ	Fitzroy Crossi	39.44	255	eP	P	19 26 21.6	-1.3
	comp=Z,14nm,0.8s						
SOEI	Soe	40.81	268	eP	P	19 26 31.3	-3.2
	comp=Z,57nm,1.0s						
SOEI	Soe	40.81	268	P	P	19 26 32.9	-1.6
BATI	Baumata	41.36	267	P	P	19 26 37.3	-1.6
PPT	Papeete	43.73	104	LR	LR	19 41 20.9	
	comp=Z,2µm,19.8s,baz=266,slow=31						
PPT2	Papeete2	43.73	104	eS	S	19 33 32.4	+3.9
	comp=Z,687nm,25.0s						
PPT2				eLQ	LQ	19 37 21.4	
	comp=Z,3µm,27.0s						
PPT2				eLR	LR	19 39 11.7	
	comp=Z,4µm,22.5s,baz=275						
DAV	Davao City (W)	43.77	292	PFAKE		19 27 10.0	+12
DAV				LR	LR		
	comp=Z,1µm,21.0s						
TBI	Tubuai	44.39	112	eS	S	19 33 42.6	+4.7
	comp=Z,599nm,26.0s						
TBI				eLQ	LQ	19 37 38.0	
	comp=Z,5µm,29.8s						
TBI				eLR	LR	19 39 29.8	
	comp=Z,5µm,25.8s,baz=281						
APSI	Ampana	44.91	280	P	P	19 27 05.9	-1.7
MBWA	Marble Bar	45.26	251	eP	P	19 27 09.7	-0.6
	comp=Z,162nm,1.3s						
MBWA				LR	LR		
	comp=Z,4µm,19.0s						
BNSI	Bone	45.65	274	P	P	19 27 12.5	-1.0
KAPI	Kappang	45.89	274	PFAKE		19 27 30.0	+15
KAPI				LR	LR		
	comp=Z,1µm,20.0s						
PCI	Palu	46.66	279	P	P	19 27 19.9	-1.6
MPSI	Mapaga	46.92	281	P	P	19 27 21.8	-1.6
MEEK	Meekatharra	47.04	244	P	P	19 27 24.6	+0.3
	baz=47,SNR=23						
POHA	Pohakuloa	48.77	52	PFAKE		19 27 50.0	+12
POHA				LR	LR		
	comp=Z,2µm,19.0s						
KLBR	Kellerberrin	48.81	237	P	P	19 27 37.8	-0.1
	baz=49,SNR=13						
BKB	Balikpapan	49.44	278	P	P	19 27 42.9	-0.1
NWAO	Narrogin (SRO)	49.57	236	P	P	19 27 43.9	+0.2
	baz=50,SNR=7.8						
NWAO	Narrogin (SRO)	49.57	236	PFAKE		19 28 00.0	+16
NWAO				LR	LR		
	comp=Z,5µm,20.0s						
MORW	Morawa	49.72	241	P	P	19 27 45.2	+0.3
	baz=50,SNR=6.5						
MORW	Morawa	49.72	241	eP	P	19 27 44.9	0.0
	comp=Z,33nm,0.8s						
MUN	Mundaring	50.18	237	P	P	19 27 49.0	+0.6
	baz=50,SNR=4.8						
TAOE	Nuku Hiva Isla	53.28	93	eS	S	19 35 45.6	+2.1
	comp=Z,618nm,25.9s						
TAOE				eLR	LR	19 43 37.0	
	comp=Z,2µm,23.5s,baz=278						
INU	Inuyama	53.39	331	eP	P	19 28 10.8	-1.4
	comp=Z,40nm,1.4s						
MJAR	Matsushiro Arr	53.81	333	P	P	19 28 13.7	-1.5
	comp=Z,12nm,0.9s,baz=170,slow=7.8,SNR=28						
MAJO	Matsushiro	53.81	333	eP	P	19 28 14.3	-0.9
	comp=Z,18nm,0.8s						
MAJO				LR	LR		
	comp=Z,2µm,20.0s						
MAJO	Matsushiro	53.81	333	eP	P	19 28 14.3	-0.9
MAJO				pmax	pmax		
	comp=Z,18nm,0.8s						
MAJO				MLR	MLR		
	comp=Z,2µm,20.0s						
MAT	Matsushiro	53.81	333	P	P	19 28 13.5	-1.8
MAT				S	S	19 35 59.2	+9.4
MJB9	Matsu-Tunnel	53.82	333	eP	P	19 28 14.4	-0.8
	comp=Z,19nm,0.9s						
TATO	Taipei	55.96	310	PFAKE		19 28 40.0	+9.0
TATO				LR	LR		
	comp=Z,2µm,19.0s						
ERM	Erimo	56.56	340	PFAKE		19 28 50.0	+15
ERM				LR	LR		
	comp=Z,2µm,21.0s						
RKT	Rikitea	57.65	110	eLQ	LQ	19 43 15.2	
	comp=Z,2µm,32.5s						
RKT				eLR	LR	19 45 40.3	
	comp=Z,3µm,28.2s						
QZH	Quanzhou	58.14	308	P	P	19 28 46.3	-0.1
QZH				S	S	19 36 51.8	+4.0
QZH				LR	LR		
	comp=Z,1µm,15.6s						
QZH				LR	LR		
	comp=Z,1µm,10.9s						
QZH				LR	LR		
	comp=Z,2µm,24.6s						
SSE	Sheshan	59.73	316	P	P	19 28 56.6	-0.7
SSE				S	S	19 37 08.9	+0.8
SSE				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SSE				pmax	pmax		
	comp=Z,130nm,4.2s						
SSE				LR	LR		
	comp=Z,710nm,19.4s						
SSE				LR	LR		
	comp=Z,750nm,18.9s						
SSE	Sheshan	59.73	316	PFAKE		19 29 10.0	+13
SSE				LR	LR		
	comp=Z,2µm,19.0s						
KSRS	Korea Array	59.73	326	P	P	19 28 57.4	+0.1
	comp=Z,2.7nm,0.8s,baz=129,slow=7.3,SNR=7.6						
KSAR	Wonju Array Be	59.74	326	P	P	19 28 57.4	0.0
KSAR	Wonju Array Be	59.74	326	P	P	19 28 57.4	0.0
KS01	Wonju Array Si	59.76	326	eP	P	19 28 57.1	-0.3
YSS	Yuzh-Sakhalins	61.11	342	eP	P	19 29 07.3	+0.8
	comp=Z,39nm,0.9s						
YSS				LR	LR		
	comp=Z,2µm,21.0s						
YSS	Yuzh-Sakhalins	61.11	342	eP	P	19 29 07.4	+0.9
YSS				eS	S	19 37 24.7	-0.6
YSS				ePS		19 37 40.6	
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				pmax	pmax		
	comp=Z,500nm,12.4s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
NJ2	Nanjing	61.89	315	eP	P	19 29 11.4	-0.7
NJ2				pmax	pmax		
	comp=N,6.0nm,0.5s						
QIZ	Qiongzhong	62.60	298	P	P	19 29 17.3	+0.2
QIZ				pP	pP	19 29 20.4	-0.7
QIZ				S	S	19 37 48.0	+2.8
QIZ				pmax	pmax		
	comp=N,15nm,1.5s						
QIZ				LR	LR		
	comp=N,1µm,17.1s						
QIZ				LR	LR		
	comp=N,950nm,26.3s						
QIZ				LR	LR		
	comp=N,2µm,22.1s						
QIZ	Qiongzhong	62.60	298	PFAKE		19 29 30.0	+13
QIZ				LR	LR		
	comp=Z,272nm,22.0s						
USA0B	Ussuriysk Arra	62.79	333	eP	P	19 29 19.1	+1.3
	comp=Z,116nm,1.8s						
USRK	Ussuriysk Ar.	62.79	333	P	P	19 29 18.4	+0.5
	comp=Z,18nm,1.1s,baz=131,slow=5.7,SNR=15						
PET	Petropavlovsk	63.92	355	PFAKE		19 29 40.0	+15
PET				LR	LR		
	comp=Z,3µm,21.0s						
PETK	Petropavlovsk-	64.08	355	P	P	19 29 25.8	-0.4
	comp=Z,12nm,1.1s,baz=242,slow=6.1,SNR=3.2						
MDJ	Mudanjiang	64.19	332	P	P	19 29 28.4	+1.3
MDJ				PP	PP	19 31 55.0	+6.5
MDJ				pmax	pmax		
	comp=Z,20nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,610nm,4.9s						
MDJ				LR	LR		
	comp=Z,1µm,10.6s						
MDJ				LR	LR		
	comp=Z,2µm,14.7s						
MDJ				LR	LR		
	comp=Z,2µm,27.8s						
MDJ	Mudanjiang	64.19	332	P	P	19 29 24.7	-2.4
	comp=Z,6.4nm,0.8s						
MDJ				LR	LR		
	comp=Z,1µm,20.0s						
WHN	Wuhan	64.28	312	P	P	19 29 31.3	+3.3
WHN				LR	LR		
	comp=Z,7µm,21.7s						
WHN				LR	LR		
	comp=Z,2µm,14.3s						
WHN				LR	LR		
	comp=Z,7µm,21.1s						
ADK	Adak	64.30	12	PFAKE		19 29 40.0	+12
ADK				LR	LR		
	comp=Z,3µm,21.0s						
DL2	Dalian	64.34	323	P	P	19 29 31.4	+3.2
DL2				eS	S	19 38 09.6	+3.5
DL2				pmax	pmax		
	comp=Z,43nm,1.3s						
DL2				pmax	pmax		
	comp=Z,230nm,6.2s						
DL2				LR	LR		
	comp=Z,2µm,15.7s						
DL2				LR	LR		
	comp=Z,650nm,14.3s						
DL2				LR	LR		
	comp=Z,2µm,17.5s						
TYV	Tymovskoe	64.67	344	eP	P	19 29 28.8	-1.3
TYV				pmax	pmax		
	comp=Z,12nm,2.3s						
SNY	Shenyang	65.18	326	⇑P	P	19 29 36.3	+2.7
SNY				S	S	19 38 18.6	+2.1
SNY				pmax	pmax		
	comp=Z,350nm,6.5s						
SNY				LR	LR		
	comp=Z,2µm,17.2s						
SNY				LR	LR		
	comp=Z,2µm,18.1s						
SNY				LR	LR		
	comp=Z,3µm,19.0s						
BKNI	Bangkinang	65.26	275	P	P	19 29 34.1	-0.7
CN2	Changchun	65.59	329	eP	P	19 29 35.8	-0.4
CN2				eS	S	19 38 19.8	-1.6
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
GRNR	Gornyy	66.47	340	eP	P	19 29 42.2	+0.4
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
CASY	Casey	66.55	201	PFAKE		19 29 50.0	+7.9
CASY				LR	LR		
	comp=Z,324nm,19.0s						
VNDA	Vanda	66.68	181	P	P	19 29 43.4	+0.6
	comp=Z,3.2nm,1.0s,baz=20,slow=9.1,SNR=2.3						
MNSI	Mandailing Nat	66.78	276	P	P	19 29 43.7	-0.9
KLR	Kul'dur	66.89	337	i P	P	19 29 44.2	-0.3
KLR	Kul'dur	66.89	337	LR	LR	19 53 15.2	
	comp=Z,502nm,21.5s,baz=142,slow=31						
SBA	Scott Base	66.98	180	PFAKE		19 30 00.0	+15
SBA				LR	LR		
	comp=Z,2µm,20.0s						
NKL	Nikolayevsk	67.26	344	eP	P	19 29 45.0	-1.7
NKL				pmax	pmax		
	comp=Z,20nm,1.0s						
COCO	West Island	67.37	261	PFAKE		19 30 00.0	+12
COCO				LR	LR		
	comp=Z,2µm,21.0s						
ENH	Enshi	67.79	309	eP	P	19 29 49.4	-1.2
	comp=Z,15nm,1.0s						
ENH				LR	LR		
	comp=Z,2µm,20.0s						
GYA	Guiyang	68.32	304	P	P	19 29 56.0	+1.8
GYA				PP	PP	19 32 28.5	+3.3
GYA				S	S	19 38 55.8	+0.5
GYA				SKS	SKiKP	19 39 50.4	+1.5
GYA				SS	SS	19 43 20.3	+1.3
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.4s						
GYA				LR	LR		
	comp=Z,550nm,18.5s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
GYA				LR	LR		
	comp=Z,530nm,18.2s						
BJT	Baijiatuau	68.33	321	eP	P	19 29 52.6	-1.2
	comp=Z,6.8nm,0.8s						
BJT				LR	LR		
	comp=Z,2µm,20.0s						
BJT	Baijiatuau	68.33	321	eP	P	19 29 52.6	-1.2
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJT				MLR	MLR		
	comp=Z,2µm,20.0s						
BJI	Beijing	68.34	321	eP	P	19 29 54.8	+1.0
BJI				S	S	19 38 56.5	+1.7
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BJI				LR	LR		
	comp=Z,2µm,20.8s						
BJI				LR	LR		
	comp=Z,960nm,20.8s						
PBKT	Sadao Pong	69.62	292	P	P	19 30 04.9	+2.7
	comp=Z,7.9nm,1.8s						
XAN	Xi'an	70.00	312	P	P	19 30 03.6	-0.8
XAN				sP	sP	19 30 10.6	+0.7
XAN				PcP	PcP	19 30 26.0	-0.6
XAN				PP	PP	19 32 37.8	-1.7
XAN				S	S	19 39 14.3	-0.5
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN				LR	LR		
	comp=Z,940nm,18.8s						
XAN				LR	LR		
	comp=Z,860nm,19.6s						
XAN				LR	LR		
	comp=Z,1µm,22.6s						
KMI	Kunming	71.03	301	P	P	19 30 12.6	+1.5
KMI				pP	sP	19 30 16.9	+0.3
KMI				sP	pP	19 30 18.5	+3.4
KMI				PP	PP	19 32 51.4	+2.7
KMI				S	S	19 39 28.1	+0.6
KMI				sS	sS	19 39 34.9	+0.8
KMI				SS	SS	19 44 03.1	+2.0
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
KMI				pmax	pmax		
	comp=Z,390nm,6.4s						
KMI				LR	LR		
	comp=Z,890nm,21.6s						
KMI				LR	LR		
	comp=Z,1µm,20.7s						
KMI				LR	LR		
	comp=Z,1µm,23.7s						
MA2	Magadan	71.23	352	i P	P	19 30 10.0	-1.2
MA2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CM01	Chiang Mai Arr	72.02	293	eP	P	19 30 16.7	-0.1
CM31	Chiang Mai Arr	72.05	293	eP	P	19 30 18.6	+1.5
CMAR	Chiang Mai Arr	72.05	293	P	P	19 30 17.3	+0.3
	comp=Z,4.6nm,1.0s,baz=114,slow=4.1,SNR=18						
CHTO	Chiang Mai	72.16	294	eP	P	19 30 17.4	-0.3
	comp=Z,18nm,1.4s						
CHTO				LR	LR		
	comp=Z,1µm,21.0s						
CHTO	Chiang Mai	72.16	294	eP	P	19 30 17.4	-0.3
CHTO				pmax	pmax		
	comp=Z,18nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
CHTO	Chiang Mai	72.16	294	P	P	19 30 18.5	+0.8
	comp=Z,45nm,1.5s						
ZEA	Zeya	72.17	337	eP	P	19 30 17.2	+0.2
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
ZEA				MLR	MLR		
	comp=N,1µm,16.0s						
HIA	Hailar	72.21	330	PFAKE		19 30 30.0	+13
HIA				LR	LR		
	comp=Z,2µm,20.0s						
CD2	Chengdu	72.50	307	P	P	19 30 20.3	+0.7
CD2				pP	pP	19 30 23.4	-0.2
CD2				sP	sP	19 30 24.8	-0.3
CD2				PP	PP	19 33 01.3	+0.3
CD2				S	S	19 39 45.4	+1.6
CD2				SS	SS	19 44 25.3	+2.3
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,590nm,7.8s						
CD2				LR	LR		
	comp=Z,4µm,20.1s						
CD2				LR	LR		
	comp=Z,4µm,17.7s						
BTO	Baotou	72.56	319	eP	P	19 30 20.0	+0.2
SEY	Seymchan	74.29	354	i P	P	19 30 28.2	-1.1
LZH	Lanzhou	74.64	312	⇓P	P	19 30 31.3	-0.9
LZH				pP	pP	19 30 34.6	-1.6
LZH				sP	sP	19 30 36.3	-1.4
LZH				PP	PP	19 33 19.8	+0.5
LZH				eS	S	19 40 05.5	-2.6
LZH				SS	SS	19 44 53.9	-1.8
LZH				pmax	pmax		
	comp=Z,37nm,1.3s						
LZH				pmax	pmax		
	comp=Z,580nm,8.6s						
LZH				LR	LR		
	comp=Z,2µm,16.9s						
LZH				LR	LR		
	comp=Z,3µm,17.0s						
LZH				LR	LR		
	comp=Z,4µm,19.2s						
GAMB	Gambell	76.39	10	eP	P	19 30 41.5	+0.2
KDAK	Kodiak Island	76.40	21	PFAKE		19 30 50.0	+8.4
KDAK				LR	LR		
	comp=Z,853nm,20.0s						
CIT	Chita	77.00	330	eP	P	19 30 44.2	-1.0
CIT				e		19 30 52.1	
CIT				e		19 31 00.1	
YAK	Yakutsk	77.92	344	eP	P	19 30 48.8	-1.2
YAK				eS	S	19 40 41.0	-1.7
YAK				pmax	pmax		
	comp=Z,64nm,0.9s						
YAK				pmax	pmax		
	comp=E,16nm,1.2s						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						
YAK				MLR	MLR		
	comp=Z,7µm,19.0s						
YAK				MLR	MLR		
	comp=N,6µm,18.0s						
YAK				MLR	MLR		
	comp=E,5µm,18.0s						
SVW2	Sparrevohn	77.94	18	eP	P	19 30 51.1	+0.9
ULN	Ulaanbaatar	78.16	324	eP	P	19 30 51.8	-0.1
	comp=E,13nm,0.9s						
ULN				LR	LR		
	comp=Z,1µm,19.0s						
ULN	Ulaanbaatar	78.16	324	i P	P	19 30 51.4	-0.5
ULN				pmax	pmax		
	comp=Z,12nm,1.0s						
ANM	Nome	78.31	12	eP	P	19 30 48.6	-3.5
ANM	Nome	78.31	12	eP	P	19 30 48.6	-3.5

SONM	Songino Array	78.52	324	P	P	19 30 53.5	-0.4
	comp=Z,4.5nm,0.9s,baz=138,slow=5.2,SNR=21						
SONA1	Songino Array	78.52	324	*e*P	P	19 30 53.5	-0.4
BILL	Bilibino	78.69	0	*e*P	P	19 30 53.8	-0.4
BILL				LR	LR		
	comp=Z,797nm,20.0s						
BILL	Bilibino	78.69	0	*i* P	P	19 30 53.5	-0.7
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
GTA	Gaotai	78.94	314	*e*P	P	19 30 56.5	+0.1
GTA				pP	sP	19 31 01.3	-0.6
GTA				sP	PcP	19 31 03.5	-1.5
GTA				S	S	19 40 55.4	+0.5
GTA				sS	sS	19 41 04.3	+2.4
GTA				SKS	SKSac	19 41 07.3	-4.7
GTA				SS	SS	19 46 04.8	+4.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,250nm,7.6s						
GTA				LR	LR		
	comp=Z,1μm,17.5s						
GTA				LR	LR		
	comp=Z,2μm,19.7s						
GTA				LR	LR		
	comp=Z,2μm,20.0s						
QSPA	South Pole Qui	79.14	180	*e*P	P	19 30 57.0	-0.1
QSPA				LR	LR		
	comp=Z,1μm,19.0s						
SUA	Susitna One	79.75	20	*e*P	P	19 31 01.7	+1.5
BOD	Bodaibo	80.37	335	*e*P	P	19 31 02.6	-0.9
BOD				pmax	pmax		
	comp=Z,9.0nm,1.8s						
SHL	Shillong	80.44	298	*e*P	P	19 31 07.0	+2.1
RPN	Rapa Nui	80.65	116	PFAKE		19 31 20.0	+14
RPN				LR	LR		
	comp=Z,825nm,19.0s						
CAST	Castle Rocks	80.77	18	*e*P	P	19 31 05.1	-0.5
TRF	Thorofare Moun	81.34	18	*e*P	P	19 31 10.7	+1.9
KLU	Klutina	81.42	21	*e*P	P	19 31 10.7	+1.5
ZAK	Zakamensk	81.56	325	*e*P	P	19 31 08.4	-1.8
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RND	Reindeer	81.76	19	*e*P	P	19 31 12.3	+1.4
RDOG	Red Dog Mine	81.84	11	*e*P	P	19 31 11.3	+0.2
MCK	McKinley	81.97	19	*e*P	P	19 31 12.3	+0.4
MCK	McKinley	81.97	19	*e*P	P	19 31 12.3	+0.4
TLY	Talaya	81.97	326	*e*P	P	19 31 11.9	-0.4
TLY				LR	LR		
	comp=Z,618nm,20.0s						
TLY	Talaya	81.97	326	*e*P	P	19 31 11.9	-0.4
TLY				*e*S	S	19 41 19.4	-6.6
TLY				pmax	pmax		
	comp=Z,12nm,0.7s						
TLY				MLR	MLR		
	comp=Z,2μm,20.0s						
IM3	Indian Mountai	82.24	16	*e*P	P	19 31 12.4	-0.9
LSA	Lhasa	82.26	302	PFAKE		19 31 30.0	+15
LSA				LR	LR		
	comp=Z,999nm,20.0s						
WRH	Wood River Hil	82.75	18	*e*P	P	19 31 15.6	-0.4
HDA	Harding Lake	83.07	19	*e*P	P	19 31 17.2	-0.4
HDA	Harding Lake	83.07	19	P	P	19 31 17.2	-0.4
	baz=227						
TCOL	CIGO, UAF Yank	83.11	18	P	P	19 31 17.5	-0.3
	baz=226						
COLA	College	83.11	18	*e*P	P	19 31 17.5	-0.3
COLA				LR	LR		
	comp=Z,1μm,20.0s						
COLA	College	83.11	18	*i* P	P	19 31 16.1	-1.7
COLA				pmax	pmax		
	comp=Z,24nm,0.9s						
MENT	Mentasta	83.16	21	*e*P	P	19 31 18.4	+0.2
O02D	Mt. Diablo Mer	83.16	47	P	P	19 31 19.5	+0.7
	baz=250						
RIDG	Independ’e Rid	83.30	20	*e*P	P	19 31 19.4	+0.4
IL1	Eielson Array	83.33	19	*e*P	P	19 31 17.6	-1.4
ILAR	Eielson Array	83.33	19	P	P	19 31 18.1	-1.0
	comp=Z,6.8nm,0.7s,baz=233,slow=4.7,SNR=66						
ILB	Eielson Array	83.33	19	*e*P	P	19 31 18.5	-0.6
POKR	Poker Plat Res	83.41	18	P	P	19 31 18.6	-0.8
	baz=226						
K02D	Willamette Mer	83.44	44	P	P	19 31 20.9	+0.7
	baz=249						
N02D	Trinity Center	83.50	46	P	P	19 31 22.4	+1.8
	baz=250						
SCRK	Sand Creek	83.74	20	*e*P	P	19 31 21.4	+0.1
AFDM	Forest Hills D	84.07	49	*e*P	P	19 31 23.9	+0.4
WRAK	Wrangell Islan	84.17	30	PFAKE		19 31 40.0	+17
WRAK				LR	LR		
	comp=Z,2μm,19.0s						
PRP	Porcupine Dome	84.27	18	*e*P	P	19 31 25.0	+1.1
M04C	Macdoel	84.39	46	P	P	19 31 25.6	+0.5
	baz=250						
I04A	Tendick Farm,	84.68	44	P	P	19 31 26.2	-0.2
	baz=250						
J04D	Umpqua Nationa	84.70	44	P	P	19 31 27.4	+0.7
	baz=250						
BEKR	Beckworth	84.82	48	*e*P	P	19 31 28.0	+0.6
NLWA	Neilton Lookou	85.02	40	PFAKE		19 31 40.0	+12
NLWA				LR	LR		
	comp=Z,2μm,22.0s						
MDPB	Devils Postpil	85.08	50	*e*P	P	19 31 29.4	+0.5
EDW2	Edwards Air Fo	85.10	53	P	P	19 31 29.4	+0.6
	baz=253						
OMMB	Old Mammoth Mi	85.13	50	*e*P	P	19 31 33.7	+4.5
EGAK	Eagle	85.20	20	*e*P	P	19 31 28.5	0.0
EGAK				LR	LR		
	comp=Z,1μm,22.0s						
TOLK	Toolik Lake Re	85.31	15	P	P	19 31 29.6	+0.6
	baz=224						
J05D	Fort Rock, OR	85.31	44	P	P	19 31 30.6	+0.8
	baz=250						
RAMN	Ramite	85.38	298	*e*P	P	19 31 29.5	-1.1
DAWY	Dawson	85.38	21	*e*P	P	19 31 30.4	+0.9
PAHR	Pah Rah Range	85.48	48	*e*P	P	19 31 31.2	+0.5
CWC	Cottonwood Cre	85.49	52	P	P	19 31 31.2	+0.4
	baz=253						
MOD	Modoc Plateau	85.51	46	*e*P	P	19 31 31.2	+0.4
LRMC	Laurel Mtn Rad	85.52	53	P	P	19 31 31.5	+0.6
	baz=253						
PINE	Pine Mountain	85.68	44	*e*P	P	19 31 32.5	+0.8
RYN	Ryan	85.79	50	*e*P	P	19 31 32.9	+0.6
NV01	Mina Array Sit	85.90	50	*e*P	P	19 31 32.3	-0.6
NVAR	Mina Array Bea	85.90	50	P	P	19 31 32.7	-0.2
	comp=Z,2.5nm,0.8s,baz=231,slow=8.3,SNR=13						
NVAR				LR	LR	20 04 20.9	
	comp=Z,652nm,18.3s,baz=273,slow=32						
JIRN	Jiri	85.91	299	*e*P	P	19 31 31.8	-1.5
	comp=Z,84nm,1.6s						
PFO	Pinyon Flats O	85.97	55	PFAKE		19 31 40.0	+6.8
PFO				LR	LR		
	comp=Z,1μm,19.0s						
PFO	Pinyon Flats O	85.97	55	P	P	19 31 34.1	+0.9
	baz=254						
NV11	Mina Array Sit	86.01	50	*e*P	P	19 31 34.0	+0.6
KVN	Kaiserville	86.23	49	*e*P	P	19 31 34.4	-0.1
KVN	Kaiserville	86.23	49	*e*P	P	19 31 34.4	-0.1
GUN	Gumba	86.23	299	*e*P	P	19 31 33.9	-1.0
	comp=Z,20nm,1.0s						
BELC	Belle Mtn. Jos	86.44	55	P	P	19 31 35.5	-0.1
	baz=254						
PKI	Pulchoki	86.56	299	*e*P	P	19 31 35.3	-1.2
	comp=Z,17nm,1.1s						
PKIN	Phulchoki	86.57	299	*e*P	P	19 31 35.1	-1.4
	comp=Z,14nm,1.0s						
KKN	Kakani	86.72	299	*e*P	P	19 31 36.0	-1.2
I07A	Izee	86.76	44	*e*P	P	19 31 36.9	0.0
BC3	Big Chuckawall	86.79	55	P	P	19 31 38.1	+0.9
	baz=255						
DMN	Daman	86.83	299	*e*P	P	19 31 36.3	-1.4
	comp=Z,33nm,1.2s						
WVOR	Wild Horse Val	86.85	46	*e*P	P	19 31 38.0	+0.6
WVOR				LR	LR		
	comp=Z,855nm,20.0s						
WVOR	Wild Horse Val	86.85	46	*e*P	P	19 31 38.0	+0.6
WVOR				MLR	MLR		
	comp=Z,855nm,20.0s						
TUQ	Turquoise Moun	86.89	53	P	P	19 31 38.0	+0.3
	baz=254						
IRM	Iron Mountain	87.17	55	P	P	19 31 38.9	-0.1
	baz=255						
J08A	Circle Bar Ran	87.25	45	*e*P	P	19 31 39.2	0.0
HAWA	Hanford	87.47	42	PFAKE		19 31 50.0	+10
HAWA				LR	LR		
	comp=Z,930nm,22.0s						
G08A	Pilot Rock	87.50	43	*e*P	P	19 31 40.8	+0.4
EPYK	Eagle Plains	87.63	20	*e*P	P	19 31 41.0	+0.5
EPYK	Eagle Plains	87.63	20	P	P	19 31 40.3	-0.2
	baz=236						
SHPR	Sheep Range	87.77	52	*e*P	P	19 31 43.0	+1.1
E08A	Dider Farm, El	87.81	42	*e*P	P	19 31 43.0	+1.3
R11A	Troy Canyon, C	87.92	50	*e*P	P	19 31 43.1	+0.4
R11A	Troy Canyon, C	87.92	50	P	P	19 31 42.1	-0.6
	baz=254						
PDMCI	Parker Dam,Lak	88.01	55	P	P	19 31 43.8	+0.8
	baz=256						
DANN	Dangsing	88.16	299	*e*P	P	19 31 42.5	-1.7
	comp=Z,7.6nm,0.5s						
BMO	Blue Mountains	88.49	44	*e*P	P	19 31 44.9	-0.3
BMO				LR	LR		
	comp=Z,999nm,22.0s						
BMO	Blue Mountains	88.49	44	*e*P	P	19 31 44.9	-0.3
BMO				MLR	MLR		
	comp=Z,999nm,22.0s						
214A	Organ Pipe Nat	88.52	57	P	P	19 31 45.8	+0.3
	baz=256						
PYUN	Piuthan	88.76	299	*e*P	P	19 31 44.8	-2.1
	comp=Z,9.6nm,0.8s						
ELK	Elko	88.82	48	*e*P	P	19 31 51.4	+4.4
F10A	Beach Ranch, E	88.87	43	*e*P	P	19 31 47.0	+0.1
WMQ	Urumqi	88.97	315	P	P	19 31 46.8	-0.6
WMQ				sP	sP	19 31 54.0	+1.1
WMQ				SKS	SKSac	19 42 15.3	-1.7
WMQ				S	S	19 42 33.6	-1.8
WMQ				SS	SS	19 48 30.5	+1.9
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,390nm,6.3s						
WMQ				LR	LR		
	comp=Z,2μm,20.9s						
WMQ				LR	LR		
	comp=Z,2μm,22.9s						
WMQ				LR	LR		
	comp=Z,2μm,27.7s						
PSUT	Pine Spring	89.29	51	*e*P	P	19 31 52.6	+3.4
CCUT	Cedar City	89.42	52	*e*P	P	19 31 50.6	+0.7
NEW	Newport	89.60	41	PFAKE		19 32 00.0	+10
NEW				LR	LR		
	comp=Z,658nm,20.0s						
SZCU	Shurtz Canyon	89.64	52	*e*P	P	19 31 51.5	+0.6
KNB	Kanab	89.71	52	*e*P	P	19 31 51.9	+0.7
KNB	Kanab	89.71	52	*e*P	P	19 31 51.9	+0.7
INK	Inuvik	89.72	19	*e*P	P	19 31 50.7	+0.5
INK	Inuvik	89.72	19	*e*P	P	19 31 50.7	+0.5
HLID	Hailey	90.14	46	*e*P	P	19 31 53.8	+0.8
HLID				LR	LR		
	comp=Z,820nm,20.0s						
HLID	Hailey	90.14	46	P	P	19 31 53.6	+0.6
	baz=255						
TUC	Tucson	90.28	57	*e*P	P	19 31 55.1	+1.3
TUC				LR	LR		
	comp=Z,2μm,20.0s						
TUC	Tucson	90.28	57	*e*P	P	19 31 55.1	+1.3
TUC				MLR	MLR		
	comp=Z,2μm,20.0s						
TUC	Tucson	90.28	57	P	P	19 31 54.3	+0.5
	baz=257						
MTPU	Mount Pierson	90.44	51	*e*P	P	19 31 56.4	+1.6
DUG	Dugway, Tooele	90.47	49	PFAKE		19 32 10.0	+15
DUG				LR	LR		
	comp=Z,718nm,20.0s						
DUG	Dugway, Tooele	90.47	49	P	P	19 31 55.1	+0.5
	baz=256						
BGU	Big Grassy Mou	90.49	48	*e*P	P	19 31 55.3	+0.6
WUAZ	Wupatki	90.51	54	PFAKE		19 32 10.0	+15
WUAZ				LR	LR		
	comp=Z,1μm,19.0s						
MSU	Marysvale	90.56	51	*e*P	P	19 31 56.1	+1.0
MSU	Marysvale	90.56	51	*e*P	P	19 31 56.1	+1.0
DGZ	Jazzator, Alta	90.76	321	*i* P	P	19 31 54.8	-0.9
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HVU	Hansel Valley	90.88	48	*e*P	P	19 31 57.2	+0.8
HVU	Hansel Valley	90.88	48	*e*P	P	19 31 57.2	+0.8
Q16A	Castle Valley	91.42	51	*e*P	P	19 32 03.5	+4.4
DGAR	Diego Garcia	91.84	262	PFAKE		19 32 10.0	+8.7
DGAR				LR	LR		
	comp=Z,688nm,19.0s						
DLMT	Dillon	91.84	44	*e*P	P	19 32 01.5	+0.7
SYO	Syowa Base	91.96	197⇑	*e*P	P	19 32 01.0	+0.2
AHID	Auburn Hatcher	92.31	47	PFAKE		19 32 10.0	+6.9
AHID				LR	LR		
	comp=Z,569nm,19.0s						
FXWY	Fox Creek	92.55	46	*e*P	P	19 32 04.8	+0.6
BOZ	Bozeman (W)	92.56	44	*e*P	P	19 32 04.2	0.0
BOZ				LR	LR		
	comp=Z,1μm,20.0s						
BOZ	Bozeman (W)	92.56	44	*e*P	P	19 32 04.2	0.0
BOZ				MLR	MLR		
	comp=Z,1μm,20.0s						
BOZ	Bozeman (W)	92.56	44	P	P	19 32 04.2	0.0
	baz=257						
IMW	Indian Meadow	92.67	46	*e*P	P	19 32 07.8	+2.9
MVCO	Mesa Verde	93.13	53	PFAKE		19 32 20.0	+13
MVCO				LR	LR		
	comp=Z,908nm,19.0s						
LKWY	Lake	93.19	45	PFAKE		19 32 20.0	+13
LKWY				LR	LR		
	comp=Z,1μm,20.0s						
MKAR	Makanchi Array	93.39	317	P	P	19 32 06.8	-1.0
	comp=Z,5.6nm,0.7s,baz=94,slow=5.6,SNR=52						
MKAR				PKKPbc	PKKPdf	19 49 14.3	-1.0
	comp=Z,1.2nm,0.7s,baz=262,slow=2.3,SNR=9.6						
ZALV	Zalesovo Beam	93.41	324	P	P	19 32 06.0	-1.6
	comp=Z,3.9nm,0.6s,baz=122,slow=3.5,SNR=17						
BW06	Boulder Array	93.42	47	PFAKE		19 32 20.0	+12
BW06				LR	LR		
	comp=Z,593nm,20.0s						
PDAR	Pinedale Array	93.42	47	*e*P	P	19 32 10.3	+2.0
PDAR	Pinedale Array	93.42	47	P	P	19 32 07.8	-0.6
	comp=Z,1.3nm,0.9s,baz=236,slow=1.6,SNR=7.2						
RLMT	Red Lodge	94.09	45	PFAKE		19 32 20.0	+8.7
RLMT				LR	LR		
	comp=Z,984nm,20.0s						
EGMT	Eagleton	94.33	42	PFAKE		19 32 20.0	+7.9
EGMT				LR	LR		
	comp=Z,718nm,20.0s						
ANMO	Albuquerque	94.34	55	PFAKE		19 32 20.0	+7.3
ANMO				LR	LR		
	comp=Z,987nm,19.0s						
ANMO	Albuquerque	94.34	55	*i* P	P	19 32 13.6	+0.9
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NVS	Novosibirsk	94.51	325	*e*P	P	19 32 07.1	-5.6
NVS				pmax	pmax		
	comp=Z,17nm,2.3s						
MNTX	Cornudas Mount	94.66	59	PFAKE		19 32 30.0	+16
MNTX				LR	LR		
	comp=Z,1μm,20.0s						
YKA	Yellowknife Ar	94.81	27	P	P	19 32 12.1	-1.8
	comp=Z,1.1nm,0.6s,baz=257,slow=4.6,SNR=18						
YKA				PKiKP	PKiKP	19 36 55.4	-0.6
	comp=Z,0.2nm,0.5s,baz=257,slow=1.3,SNR=4.2						
YKA				PKKPbc	PKKPdf	19 49 12.1	-1.0
	comp=Z,0.3nm,0.7s,baz=66,slow=2.3,SNR=3.9						
YKA				LR	LR	20 09 08.7	
	comp=Z,80nm,20.3s,baz=254,slow=32						
SDCO	Great Sand Dun	95.57	53	PFAKE		19 32 30.0	+12
SDCO				LR	LR		
	comp=Z,897nm,20.0s						
TXAR	Lajitas Array	95.73	61	P	P	19 32 18.5	-0.5
	comp=Z,0.4nm,0.8s,baz=224,slow=7.0,SNR=3.5						
TXAR				PP	PP	19 36 15.7	+4.7
	comp=Z,1.0nm,1.0s,baz=248,slow=6.6,SNR=6.1						
TXAR				PKKPbc	PKKPbc	19 49 09.5	-0.1
	comp=Z,0.7nm,0.6s,baz=352,slow=1.1,SNR=8.3						
TXAR				LR	LR	20 07 39.4	
	comp=Z,740nm,20.2s,baz=0.0,slow=31						
ISCO	Idaho Springs	95.81	51	PFAKE		19 32 30.0	+11
ISCO				LR	LR		
	comp=Z,1μm,20.0s						
PMSA	Palmer Station	95.89	161	PFAKE		19 32 30.0	+11
PMSA				LR	LR		
	comp=Z,1μm,19.0s						
LAO	LASA Array	96.46	44	PFAKE		19 32 30.0	+8.1
LAO				LR	LR		
	comp=Z,862nm,19.0s						
KURK	Kurchatov	96.50	320	PFAKE		19 32 30.0	+8.1
KURK				LR	LR		
	comp=Z,3μm,20.0s						
KURK	Kurchatov	96.50	320	*i* P	P	19 32 20.2	-1.7
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KSH	Kashi	96.64	309	P	P	19 32 25.9	+2.9
KSH				pP	sP	19 32 30.4	+1.8
KSH				PP	PP	19 36 20.6	+2.9
KSH				SKS	SKSac	19 43 00.1	+0.1
KSH				S	S	19 43 39.3	-5.0
KSH				sS	sS	19 43 50.8	-0.4
KSH				SS	SS	19 50 23.1	+4.1
KSH				LR	LR		
	comp=Z,240nm,6.4s						
KSH				LR	LR		
	comp=Z,210nm,5.1s						
KSH				LR	LR		
	comp=Z,2μm,20.1s						
NVL	N'lazarevskaya	96.65	188	*e*P	P	19 32 27.3	+5.1
NVL				MLR	MLR		
	comp=Z,2μm,18.0s						
NIL	Nilore	97.99	303	PFAKE		19 32 40.0	+11
NIL				LR	LR		
	comp=Z,441nm,20.0s						
DGMT	Dagmar	98.06	42	PFAKE		19 32 40.0	+11
DGMT				LR	LR		
	comp=Z,807nm,19.0s						
AAK	Ala-Archa	98.18	312	PFAKE		19 32 40.0	+10
AAK				LR	LR		
	comp=Z,1μm,21.0s						
OGNE	Ogallala	98.68	50	PFAKE		19 32 40.0	+7.9
OGNE				LR	LR		
	comp=Z,1μm,19.0s						
JCT	Junction City	99.22	61	PFAKE		19 32 50.0	+15
JCT				LR	LR		
	comp=Z,1μm,20.0s						
FFC	Flin Flon	100.08	36	PFAKE		19 32 50.0	+12
FFC				LR	LR		
	comp=Z,1μm,19.0s						
CBKS	Cedar Bluff	100.20	52	PFAKE		19 32 50.0	+11
CBKS				LR	LR		
	comp=Z,1μm,19.0s						
KVTX	Kingsville	100.52	64	PFAKE		19 32 50.0	+10
KVTX				LR	LR		
	comp=Z,928nm,19.0s						
WMOK	Wichita Mounta	100.56	57	PFAKE		19 32 50.0	+9.5
WMOK				LR	LR		
	comp=Z,1μm,20.0s						
BRVK	Borovoye	101.87	322	PFAKE		19 33 00.0	+14
BRVK				LR	LR		
	comp=Z,1μm,19.0s						
KSU1	Kansas State U	102.66	52	PFAKE		19 33 00.0	+10
KSU1				LR	LR		
	comp=Z,1μm,20.0s						
ECSD	EROS Data Cent	102.92	47	PFAKE		19 33 00.0	+9.2
ECSD				LR	LR		
	comp=Z,976nm,19.0s						
AGMN	Agassiz Nation	103.59	43	PFAKE		19 33 10.0	+16
AGMN				LR	LR		
	comp=Z,880nm,19.0s						
NATX	Nacogdoches	103.73	60	PFAKE		19 33 10.0	+15
NATX				LR	LR		
	comp=Z,1μm,20.0s						
MIAR	Mount Ida	104.82	57	PFAKE		19 33 10.0	+11
MIAR				LR	LR		
	comp=Z,1μm,20.0s						
SCIA	State Center	105.36	49	PFAKE		19 37 30.0	+14
SCIA				LR	LR		
	comp=Z,1μm,20.0s						
EYMN	Ely	106.52	43	PFAKE		19 37 30.0	+12
EYMN				LR	LR		
	comp=Z,904nm,19.0s						
JFWS	Jewell Farm	107.55	48	PFAKE		19 37 30.0	+10
JFWS				LR	LR		
	comp=Z,898nm,21.0s						
COWI	Conover	108.22	45	PFAKE		19 37 30.0	+9.2
COWI				LR	LR		
	comp=Z,759nm,19.0s						
HDIL	Hopedale	108.32	51	PFAKE		19 37 30.0	+8.9
HDIL				LR	LR		
	comp=Z,1μm,21.0s						
ARU	Arti	108.48	326	PFAKE		19 37 30.0	+9.1
ARU				LR	LR		
	comp=Z,845nm,22.0s						
BRAL	Brewton	110.20	61	PFAKE		19 37 40.0	+15
BRAL				LR	LR		
	comp=Z,2μm,20.0s						
JTS	JuntasAbangare	110.65	83	PFAKE		19 37 40.0	+14
JTS				LR	LR		
	comp=Z,1μm,19.0s						
KBS	Kingsbay	110.74	355	PFAKE		19 37 40.0	+15
KBS				LR	LR		
	comp=Z,829nm,22.0s						
GLMI	Grayling	111.49	46	PFAKE		19 37 40.0	+13
GLMI				LR	LR		
	comp=Z,1μm,19.0s						
HOPE	Hope Point	112.43	166	PFAKE		19 37 40.0	+12
HOPE				LR	LR		
	comp=Z,498nm,19.0s						
AAM	Ann Arbor	112.44	49	PFAKE		19 37 40.0	+11
AAM				LR	LR		
	comp=Z,1μm,21.0s						
ABPO	Ambohimpanom	112.53	244	PFAKE		19 37 40.0	+10
ABPO				LR	LR		
	comp=Z,691nm,20.0s						
LCO	Las Campanas	112.65	128	PFAKE		19 37 40.0	+10
LCO				LR	LR		
	comp=Z,882nm,19.0s						
ACSO	Alum Creek Sta	113.15	51	PFAKE		19 37 40.0	+10
ACSO				LR	LR		
	comp=Z,2μm,19.0s						
GOGA	Godfrey	113.21	58	PFAKE		19 37 40.0	+9.4
GOGA				LR	LR		
	comp=Z,1μm,19.0s						
NNA	Nana	113.81	108	PFAKE		19 37 40.0	+7.7
NNA				LR	LR		
	comp=Z,353nm,20.0s						
TRQA	Tornquist	114.00	140	PFAKE		19 37 40.0	+7.9
TRQA				LR	LR		
	comp=Z,4.0nm,22.0s						
LVZ	Lovozero	114.69	342	PFAKE		19 37 40.0	+7.6
LVZ				LR	LR		
	comp=Z,753nm,21.0s						
OTAV	Otavalo	115.36	95	PFAKE		19 37 50.0	+14
OTAV				LR	LR		
	comp=Z,660nm,20.0s						
BLA	Blacksburg	115.44	54	PFAKE		19 37 50.0	+15
BLA				LR	LR		
	comp=Z,548nm,19.0s						
BCIP	Isla Barro Col	115.50	85	PFAKE		19 37 50.0	+15
BCIP				LR	LR		
	comp=Z,511nm,20.0s						
KEV	Kevo	115.63	345	PFAKE		19 37 50.0	+16
KEV				LR	LR		
	comp=Z,2μm,22.0s						
NHSC	New Hope	115.98	58	PFAKE		19 37 50.0	+14
NHSC				LR	LR		
	comp=Z,2μm,20.0s						
ARCES	ARCESS Array B	116.16	345	PKP	PKiKP	19 37 33.8	-1.4
	comp=Z,3.9nm,0.5s,baz=67,slow=1.6,SNR=42						
LVC	Limon Verde	116.97	122	PFAKE		19 37 50.0	+11
LVC				LR	LR		
	comp=Z,644nm,20.0s						
CNNC	Cliffs of the	117.68	56	PFAKE		19 37 50.0	+11
CNNC				LR	LR		
	comp=Z,1μm,21.0s						
CBN	Corbin Frederi	117.72	53	PFAKE		19 37 50.0	+11
CBN				LR	LR		
	comp=Z,918nm,20.0s						
SFJD	Kangerlussuaq	118.88	15	PFAKE		19 37 50.0	+10
SFJD				LR	LR		
	comp=Z,1μm,20.0s						
VRH	Novokhopyorsk	119.43	323	*e*PKIKP	PKPdf	19 37 40.7	-1.2
VRH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SCHQ	Schefferville	119.87	32	PKP	PKPdf	19 37 41.8	-0.9
	comp=Z,2.5nm,0.9s,baz=219,slow=6.2,SNR=3.6						
LPAZ	La Paz	120.26	116	PKP	PKiKP	19 37 47.4	+1.9
	comp=Z,1.4nm,0.6s,baz=263,slow=5.6,SNR=8.3						
LPSR	Galich'ya Gora	120.49	325	*e*PKIKP	PKPdf	19 37 41.4	-2.6
LPSR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GNI	Garni	120.54	310	PFAKE		19 38 00.0	+15
GNI				LR	LR		
	comp=Z,722nm,19.0s						

OBN	**Obninsk**	120.65	329	PFAKE		19 38 00.0	+16
OBN				LR	LR		
	comp=Z,691nm,19.0s						
VSR	**Storozhevoye**	120.92	324	*e*PKIKP	PKPdf	19 37 42.7	-2.1
VSR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KBZ	**Khabaz**	121.02	315	PKP	PKPdf	19 37 44.5	-0.7
	comp=Z,1.2nm,0.9s,baz=101,slow=5.2,SNR=2.1						
KIV	**Kislovodsk**	121.10	315	PFAKE		19 38 00.0	+14
KIV				LR	LR		
	comp=Z,707nm,20.0s						
FINES	**FINESS Array B**	121.60	339	PKP	PKPdf	19 37 44.5	-1.3
	comp=Z,1.7nm,0.5s,baz=44,slow=1.8,SNR=12						
RAYN	**Ar Rayn**	121.91	291	PFAKE		19 38 00.0	+12
RAYN				LR	LR		
	comp=Z,749nm,21.0s						
PKME	**Peaks-Kenny Pk**	122.00	43	PFAKE		19 38 00.0	+13
PKME				LR	LR		
	comp=Z,1µm,19.0s						
CPUP	**Villa Florida**	124.14	132	PKIKP	PKiKP	19 37 52.0	-0.1
CPUP	**Villa Florida**	124.14	132	PKP	PKiKP	19 37 52.0	-0.1
	comp=Z,3.1nm,1.0s,baz=184,slow=0.8,SNR=5.9						
SDV	**Santo Domingo**	124.48	87	PFAKE		19 38 00.0	+6.7
SDV				LR	LR		
	comp=Z,405nm,21.0s						
SDDR	**Presa de Saban**	124.49	74	PFAKE		19 38 00.0	+7.0
SDDR				LR	LR		
	comp=Z,1µm,20.0s						
BOSA	**Boshof**	125.26	223	PKIKP	PKPdf	19 37 54.0	-0.1
BOSA	**Boshof**	125.26	223	PKP	PKPdf	19 37 54.0	-0.1
	comp=Z,3.2nm,0.8s,baz=81,slow=4.6,SNR=6.5						
SUR	**Sutherland**	125.49	217	PFAKE		19 38 10.0	+15
SUR				LR	LR		
	comp=Z,2µm,19.0s						
NB2	**NORSAR Subarra**	126.53	345	PKPdf	PKPdf	19 37 53.7	-1.7
	comp=Z,2.4nm,0.7s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	126.53	345	PKIKP	PKPdf	19 37 54.3	-1.1
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	**NORSAR Array B**	126.53	345	PKP	PKPdf	19 37 54.3	-1.1
	comp=Z,2.0nm,0.8s,baz=34,slow=2.0,SNR=16						
AKASG	**Malin Array Be**	126.71	327	PKP	PKPdf	19 37 54.1	-1.8
	comp=Z,1.6nm,0.7s,baz=62,slow=2.3,SNR=6.7						
KIEV	**Kiev**	126.72	327	PFAKE		19 38 10.0	+14
KIEV				LR	LR		
	comp=Z,850nm,21.0s						
KMBO	**Kilima Mbogo**	127.43	260	PFAKE		19 38 10.0	+11
KMBO				LR	LR		
	comp=Z,1µm,21.0s						
BRTR	**Keskin Array B**	128.84	313	PKIKP	PKPdf	19 37 59.0	-1.6
BRTR	**Keskin Array B**	128.84	313	PKP	PKPdf	19 37 59.0	-1.6
	comp=Z,1.0nm,0.8s,baz=157,slow=4.3,SNR=4.9						
SJG	**San Juan**	129.37	75	PFAKE		19 38 10.0	+7.3
SJG				LR	LR		
	comp=Z,618nm,21.0s						
ANTO	**Ankara**	129.40	313	PFAKE		19 38 10.0	+7.7
ANTO				LR	LR		
	comp=Z,422nm,20.0s						
BIZ	**Bicaz**	130.49	324	⇓*i*P	PKiKP	19 38 03.8	-0.4
LSZ	**Lusaka**	130.59	239	PKP	PKiKP	19 38 05.5	+0.1
LSZ				LR	LR		
	comp=Z,850nm,19.0s						
LSZ	**Lusaka**	130.59	239	PKIKP	PKiKP	19 38 05.5	+0.1
LSZ				MLR	MLR		
	comp=Z,850nm,19.0s						
LSZ	**Lusaka**	130.59	239	PKP	PKiKP	19 38 05.5	+0.1
	comp=Z,1.1nm,0.3s,baz=76,slow=6.5,SNR=3.3						
BURAR	**Bucovina Array**	130.61	325	⇑*i*P	PKiKP	19 38 05.3	+0.8
BURAR	**Bucovina Array**	130.61	325	⇑PKIKP	PKiKP	19 38 05.3	+0.8
ARR	**Arges**	132.21	323	⇓*i*P	PKiKP	19 38 08.3	+0.5
TRIS	**Tristan da Cun**	132.29	182	PFAKE		19 38 20.0	+12
TRIS				LR	LR		
	comp=Z,1µm,20.0s						
DRGR		132.48	326	⇓*i*P	PKPdf	19 38 06.7	-0.5
DRGR		132.48	326	⇓PKIKP	PKPdf	19 38 06.7	-0.5
LANS	**Liptovska Anna**	132.66	330	*e*PKIKP	PKiKP	19 38 11.3	+2.8
LANS	**Liptovska Anna**	132.66	330	*e*PKP	PKiKP	19 38 11.3	+2.8
OKC	**Ostrava-Krasne**	132.82	332	AMS	AMS	20 43 40.0	
	comp=Z,1µm,16.8s						
PTGA	**Pitinga**	133.11	101	PFAKE		19 38 20.0	+10
PTGA				LR	LR		
	comp=Z,12µm,20.0s						
MORC	**Moravsky Berou**	133.14	332	⇑*i*P	PKPdf	19 38 08.4	+0.1
MORC	**Moravsky Berou**	133.14	332	⇑PKIKP	PKPdf	19 38 08.4	+0.1
MORC	**Moravsky Berou**	133.14	332	*e*PKP	PKPdf	19 38 06.7	-1.6
GZR	**Gura Zlata**	133.27	324	⇑*i*P	PKiKP	19 38 13.2	+3.3
GZR	**Gura Zlata**	133.27	324	⇑PKIKP	PKiKP	19 38 13.2	+3.3
DPC	**Dobruska-Polom**	133.28	333	*e*PKPdf	PKPdf	19 38 09.0	+0.5
DPC				*e*pPKP	sPKPdf	19 38 14.8	+0.5
DPC				AMS	AMS	20 36 40.0	
	comp=Z,1µm,19.3s						
DPC	**Dobruska-Polom**	133.28	333	*e*PKIKP	PKPdf	19 38 09.0	+0.5
DPC				MLR	MLR		
	comp=Z,1µm,19.3s						
UPC	**Upice**	133.30	334	*e*PKPdf	PKiKP	19 38 10.9	+1.2
UPC				AMS	AMS	20 41 00.0	
	comp=Z,1µm,20.4s						
UPC	**Upice**	133.30	334	*e*PKIKP	PKiKP	19 38 10.9	+1.2
UPC				MLR	MLR		
	comp=Z,1µm,20.4s						
VYHS	**Vyhne**	133.41	330	*e*PKIKP	PKiKP	19 38 09.5	-0.5
VYHS	**Vyhne**	133.41	330	*e*PKP	PKiKP	19 38 09.5	-0.5
ANWB	**Willy Bob**	133.53	76	PFAKE		19 38 20.0	+8.9
ANWB				LR	LR		
	comp=Z,640nm,20.0s						
GRGR	**Grenville**	133.57	84	PFAKE		19 38 20.0	+8.7
GRGR				LR	LR		
	comp=Z,530nm,22.0s						
BZS	**Buzias**	133.79	325	⇓*i*P	PKPdf	19 38 09.0	-0.6
BZS	**Buzias**	133.79	325	⇓PKIKP	PKPdf	19 38 09.0	-0.6
MBAR	**Mbarara**	133.85	259	PFAKE		19 38 20.0	+7.9
MBAR				LR	LR		
	comp=Z,428nm,22.0s						
BRG	**Berggiesshubel**	133.90	335	*e*PKP	PKPdf	19 38 09.9	+0.3
	comp=Z,5.7nm,1.3s						
BRG				*e*		19 43 03.6	
	comp=Z,8.5nm,1.3s						
	comp=N,838nm,19.7s						
	comp=E,469nm,17.7s						
	comp=Z,1µm,19.9s						
BRG	**Berggiesshubel**	133.90	335	*e*PKIKP	PKPdf	19 38 09.9	+0.3
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,838nm,19.7s						
BRG				MLR	MLR		
	comp=E,469nm,17.7s						
BRG				MLR	MLR		
	comp=Z,1µm,19.9s						
PVCC	**Panska Ves**	133.90	335	*e*PKPdf	PKiKP	19 38 10.8	-0.1
PVCC				AMS	AMS	20 41 40.0	
	comp=Z,1µm,19.0s						
PVCC	**Panska Ves**	133.90	335	*e*PKIKP	PKiKP	19 38 10.8	-0.1
PVCC				MLR	MLR		
	comp=Z,1µm,19.0s						
CLL	**Collm**	133.94	336	*e*PKPdf	PKPdf	19 38 09.0	-0.7
	comp=Z,6.0nm,1.0s						
CLL				*e*		19 38 16.0	
CLL				*e*PSKS		19 50 42.0	
CLL				*e*PPS	PPS	19 52 36.0	
CLL				*e*PPPPrev		19 57 43.0	
CLL				*e*SS	SS	19 58 31.0	+5.0
CLL				*e*SSS	SSS	20 03 42.0	
CLL				*e*(SSSS)		20 07 54.0	
CLL				*e*		20 13 42.0	
CLL				Lm	MLR	20 41 00.0	
	comp=N,800nm,20.9s						
CLL				Lm	MLR	20 41 00.0	
	comp=E,300nm,20.6s						
CLL				Lm	MLR	20 41 00.0	
	comp=Z,800nm,20.6s						
CLL	**Collm**	133.94	336	*e*PKIKP	PKPdf	19 38 09.0	-0.7
CLL				*e*		19 38 16.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL				MLR	MLR		
	comp=Z,800nm,20.6s						
KRUC	**Moravsky**	134.18	332	*e*PKP	PKPdf	19 38 09.5	-0.7
MDVR	**Moldovita**	134.24	324	⇑*i*P	PKiKP	19 38 11.5	-0.4
MODS	**Modra-Piesok**	134.25	331	*e*PKIKP	PKiKP	19 38 11.2	-0.5
MODS	**Modra-Piesok**	134.25	331	*e*PKP	PKiKP	19 38 11.2	-0.5
GOPC	**GO Pecny, Ondr**	134.27	334	AMS	AMS	20 36 10.0	
	comp=Z,2µm,26.2s						
PRU	**Pruhonice**	134.32	334	*e*PKPdf	PKiKP	19 38 11.6	-0.2
PRU				AMS	AMS	20 36 40.0	
	comp=Z,2µm,22.0s						
PRU	**Pruhonice**	134.32	334	*e*PKIKP	PKiKP	19 38 11.6	-0.2
PRU				MLR	MLR		
	comp=Z,2µm,22.0s						
TREC	**Trest**	134.42	333	AMS	AMS	20 37 20.0	
	comp=Z,2µm,20.4s						
NKC	**Novy Kostel**	135.00	336	AMS	AMS	20 46 30.0	
	comp=Z,1µm,18.3s						
CONA	**Conrad Observa**	135.24	331	*e*PKPdf	PKPdf	19 38 12.1	-0.2
	comp=Z,4.1nm,0.8s						
KHC	**Kasperske Hory**	135.38	334	*e*PKPdf	PKPdf	19 38 11.9	-0.6
KHC				*e*pPKP	sPKPdf	19 38 18.8	+0.5
KHC				AMS	AMS	20 37 30.0	
	comp=Z,2µm,26.2s						
KHC	**Kasperske Hory**	135.38	334	*e*PKIKP	PKPdf	19 38 11.9	-0.6
KHC				*e*		19 38 18.8	
KHC				MLR	MLR		
	comp=Z,2µm,26.2s						
GERES	**GERESS Array B**	135.54	334	PKP	PKPdf	19 38 12.1	-0.8
	comp=Z,1.9nm,1.0s,baz=27,slow=4.5,SNR=3.8						
ARSA	**Arzberg**	135.88	331	*e*PKPdf	PKPdf	19 38 12.8	-0.7
	comp=Z,2.8nm,1.2s						
MOA	**Molln**	136.03	332	*e*PKiKP	PKPdf	19 38 14.2	+0.5
	comp=Z,1.3nm,0.5s						
SOKA	**Soboth**	136.53	331	*e*PKiKP	PKPdf	19 38 15.5	+0.7
	comp=Z,3.3nm,0.9s						
TSUM	**Tsumeb**	136.68	227	PFAKE		19 38 30.0	+12
TSUM				LR	LR		
	comp=Z,1µm,19.0s						
WATA	**Walderalm**	137.62	334	*e*PKiKP	PKPdf	19 38 17.7	+0.8
	comp=Z,3.0nm,0.8s						
WTTA	**Wattenberg**	137.65	334	*e*PKPdf	PKPdf	19 38 16.6	-0.3
	comp=Z,13nm,1.5s						
ABTA	**Abfaltersbach**	137.65	333	*e*PKPdf	PKPdf	19 38 15.5	-1.3
	comp=Z,3.6nm,0.8s						
MOTA	**Moosalm**	137.81	334	*e*PKiKP	PKiKP	19 38 18.7	-0.5
	comp=Z,5.2nm,0.8s						
SQTA	**Sankt Quirin**	137.86	334	*e*PKiKP	PKPdf	19 38 18.1	+0.8
	comp=Z,4.7nm,0.9s						
BFO	**Black Forest**	138.13	337	PFAKE		19 38 30.0	+10
BFO				LR	LR		
	comp=Z,28nm,20.0s						
FETA	**Feichten**	138.22	334	*e*PKPdf	PKPdf	19 38 17.6	-0.4
	comp=Z,2.4nm,0.9s						
DAVA	**Damuels**	138.37	335	*e*PKPdf	PKPdf	19 38 16.2	-2.1
	comp=Z,5.3nm,1.1s						
KEST	**Kesra**	147.27	323	PKPbc	PKPbc	19 38 35.9	-0.7
	comp=Z,10nm,0.8s,baz=262,slow=2.0,SNR=14						
CMAH	**Djebel Manchou**	147.74	326	P	PKPbc	19 38 37.0	-0.8
PBRG	**Braganca**	148.48	349	*e*PKPdf	PKPbc	19 38 39.4	-0.1
PGAV	**Gavieira, Arco**	148.57	351	*e*PKPdf	PKPdf	19 38 37.4	+1.2
DFRA	**Djebel Bou Aff**	148.62	328	P	PKPbc	19 38 40.5	+0.3
PCAB	**Cabril**	148.79	351	*e*PKPdf	PKPbc	19 38 38.5	-1.8
POLO	**Lamas de Olo**	149.08	351	*e*PKPdf	PKPdf	19 38 38.9	+1.9
SET	**Setif**	149.13	328	P	PKPbc	19 38 42.0	+0.6
MVO	**Moncorvo**	149.15	349	*e*PKPdf	PKPbc	19 38 39.5	-1.8
PVRL	**Vila Real**	149.16	350	*e*PKPdf	PKPbc	19 38 39.3	-2.0
PTO	**Porto**	149.43	352	*e*PKPdf	PKPbc	19 38 41.4	-0.5
PVIS	**Viseu**	149.74	350	*e*PKPdf	PKPdf	19 38 39.0	+0.9
ESDC	**Sonseca Array**	149.88	344	PKPbc	PKPbc	19 38 42.9	-0.3
	comp=Z,4.3nm,0.8s,baz=19,slow=2.6,SNR=15						
MTE	**Manteigas**	149.99	350	*e*PKPdf	PKPdf	19 38 40.6	+2.1
PAB	**San Pablo**	150.10	345	PFAKE		19 38 50.0	+0.5
PAB				LR	LR		
	comp=Z,1µm,22.0s						
PCAS	**Casmilo, Conde**	150.48	351	*e*PKPdf	PKPdf	19 38 41.3	+2.1
PCBR	**Castelo Branco**	150.52	349	*e*PKPdf	PKPdf	19 38 41.5	+2.3
PTOM	**Tomar**	150.89	351	*e*PKPdf	PKPbc	19 38 44.9	-0.6
PMRV	**Marv??o**	150.90	349	*e*PKPdf	PKPdf	19 38 40.6	+0.7
PMTG	**Montargil**	151.40	350	*e*PKPdf	PKPbc	19 38 46.2	-0.5
PESTR	**Estremoz**	151.48	349	*e*PKPdf	PKPdf	19 38 43.8	+3.0
SHEL	**Horse Pasture**	152.06	198	PFAKE		19 38 50.0	+0.8
SHEL				LR	LR		
	comp=Z,656nm,19.0s						
PBEJ	**Beja**	152.35	349	*e*PKPdf	PKPdf	19 38 42.1	0.0
MESJ	**Messejana**	152.59	350	*e*PKPdf	PKPdf	19 38 44.9	+2.5
MDT	**Midelt**	156.42	339	PKP	PKPdf	19 38 47.6	-0.4
	comp=Z,1.9nm,0.9s,baz=60,slow=8.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	164.24	280	PKP	PKPdf	19 38 55.4	-1.6
	comp=Z,2.2nm,1.1s,baz=14,slow=0.7,SNR=6.8						
TORD				PKPab	PKPab	19 39 50.1	-0.8
	comp=Z,3.0nm,1.1s,baz=96,slow=4.3,SNR=5.6						
DBIC	**Dimbokro**	169.83	247	PKP	PKPdf	19 39 02.5	+1.2
	comp=Z,5.2nm,0.9s,baz=295,slow=2.3,SNR=3.5						
SACV	**Santiago Islan**	170.00	65	PFAKE		19 39 10.0	+8.7
SACV				LR	LR		
	comp=Z,374nm,19.0s						

IDC ***17*** *19:22:27.3±1.4, 10°.82S×165°.72E, h0^{km}, mb4.0/5, mb1 4.3/7, mb1mx3.9/35, mbtmp4.2/7, ML4.7/2, Error ellipse: s-maj=39.7km s-min=27.0km az=127.0*

ISCJB ***17*** *19:22:30.4±1.1, 10°.9S±0°.1×165°.6E±0°.2, h30^{km}, mb3.9/5, Error ellipse: s-maj=23.4km s-min=17.4km az=159.1*

ISC 17 19:22:32.0±1.1**, 10°.8S**±0°.1×**165°.7E**±0°.2**, h30^{km}, n8, σ0^{s}.81**/8**, mb3.9**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.84	283	Pn	Pn	19 23 57.2	+0.6
	32nm,0.3s,baz=147,slow=5.7,SNR=7.0						
DZM	**Mont Dzumac**	11.20	176	Pn	Pn	19 25 10.7	+0.4
	3.8nm,0.3s,baz=29,slow=19,SNR=18						
WRA	**Warramunga Arr**	31.52	249	P	P	19 28 50.9	-0.8
	1.6nm,0.8s,baz=82,slow=9.1,SNR=3.2						
ASAR	**Alice Springs**	32.85	243	P	P	19 29 03.0	-0.4
	3.1nm,0.8s,baz=65,slow=10.0,SNR=6.1						
SONM	**Songino Array**	78.47	324	P	P	19 34 30.9	+0.6
	0.5nm,0.7s,baz=126,slow=5.7,SNR=2.5						
ILAR	**Eielson Array**	83.32	19	P	P	19 34 56.1	+0.4
	0.7nm,0.8s,baz=226,slow=5.9,SNR=4.5						
MKAR	**Makanchi Array**	93.34	317	P	P	19 35 43.8	-0.5
	0.7nm,0.8s,baz=105,slow=7.7,SNR=5.0						
ARCES	**ARCESS Array B**	116.12	345	PKP	PKiKP	19 41 10.7	-1.1
	2.2nm,0.9s,baz=65,slow=1.7,SNR=5.2						

IDC ***17*** *19:23:42.7±0.4, 10°.74S×165°.81E, h0^{km}, mb5.0/25, mb1 5.1/27, mb1mx5.0/36, mbtmp5.0/27, ML5.7/2, MS5.2/4, Ms1 5.2/4, ms1mx4.6/27, Error ellipse: s-maj=15.6km s-min=12.6km az=86.0*

BJI ***17*** *19:23:42.5, 10°.65S×165°.75E, h5^{km}, mB5.5/49, mb4.9/58, Ms5.5/45, Ms7 5.3/45*

ISCJB ***17*** *19:23:44.3±0.1, 10°.84S±0°.02×165°.56E±0°.02, h15^{km}, mb5.1/195, MS5.3/144, Error ellipse: s-maj=3.8km s-min=3.1km az=135.7*

NEIC ***17*** *19:23:45.1±0.1, 10°.81S×165°.56E, h10^{km}, mb5.2/154, MS5.3/124, MW5.6, MW5.7, Error ellipse: s-maj=4.5km s-min=3.7km az=109.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.49; $M_{\theta\theta}$2.76; $M_{\phi\phi}$-2.27; $M_{r\theta}$-0.39; $M_{\theta\phi}$2.05; $M_{\phi r}$-0.52; Best double couple: $M_0$3.30000×10^{17} NP1:ϕ_s26.00000°, δ90.00000°, λ-169.00000°. NP2:ϕ_s295.00000°, δ79.00000°, λ0.00000°. Principal axes: T 3.5600, Plg8.0000°, Azm160.0000°; N -0.5100, Plg79.0000°, Azm27.0000°; P -3.0500, Plg8.0000°, Azm251.0000°;*

NEIC ***17*** *19:23:45.0±0.0, 10°.70S×165°.77E, h17^{km}, Moment Tensor Solution. s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.05; $M_{\theta\theta}$3.83; $M_{\phi\phi}$-1.78; $M_{r\theta}$1.39; $M_{\theta\phi}$-0.74; $M_{\phi r}$-1.93; Best double couple: $M_0$4.10000×10^{17} NP1:ϕ_s310.00000°, δ70.00000°, λ-49.00000°. NP2:ϕ_s62.00000°, δ44.00000°, λ-150.00000°. Principal axes: T 4.3700, Plg15.0000°, Azm11.0000°; N -0.4900, Plg37.0000°, Azm113.0000°; P -3.8800, Plg48.0000°, Azm263.0000°;*

MOS ***17*** *19:23:48.1±1.2, 10°.74S×165°.51E, h38^{km}, mb5.3/53, MS5.2/19 Error ellipse: s-maj=8.2km s-min=7.3km az=126.1*

GCMT ***17*** *19:23:49.1±0.1, 10°.86S±0°.01×165°.61E±0°.01, h17^{km}, MW5.6/130, Moment Tensor Solution. s84,c154; s130,c300; Duration: 1^{s}.6 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.32±.05; $M_{\theta\theta}$3.61±.04; $M_{\phi\phi}$-2.29±.04; $M_{r\theta}$-0.23±.11; $M_{\theta\phi}$-0.37±.04; $M_{\phi r}$-0.88±.13; Best double couple: $M_0$3.23800×10^{17} NP1:ϕ_s53.00000°, δ71.00000°, λ-156.00000°. NP2:ϕ_s315.00000°, δ67.00000°, λ-21.00000°. Principal axes: T 3.6390, Plg2.0000°, Azm183.0000°; N -0.8020, Plg59.0000°, Azm90.0000°; P -2.8370, Plg30.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 17 19:23:47.0±1.0**, 10°.86S**±0°.05×**165°.78E**±0°.05**, h27^{km}**±6^{km}**, n613, σ1^{s}.50**/551**, mb5.2**/202**, MS5.3**/144**, 15C-10D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.91	283	*i* P	Pn	19 25 14.0	+1.1
HNR				*i* S	Sn	19 26 25.0	+5.1
HNR	**Honiara**	5.91	283	*e*Pn	Pn	19 25 11.8	-1.1
HNR				Sn	Sn	19 26 25.0	+5.1
HNR	**Honiara**	5.91	283	Pn	Pn	19 25 13.1	+0.2
	370nm,0.3s,baz=144,slow=9.2,SNR=31						
HNR				Sn	Sn	19 26 25.0	+5.1
	86nm,0.3s,baz=315,slow=23,SNR=5.5						
MARNC	**Mare, Loyalty**	10.78	169	*e*Pn	Pn	19 26 18.7	-0.9
DZM	**Mont Dzumac**	11.16	177	*e*Pn	Pn	19 26 26.3	+1.3
	389nm,0.6s						
DZM				*e*Sn	Sn	19 28 26.5	-2.6
	77nm,0.8s						
DZM				*e*LR	LR	19 28 59.7	
	comp=Z,21µm,29.9s						
DZM	**Mont Dzumac**	11.16	177	Pn	Pn	19 26 26.3	+1.3
	26nm,0.3s,baz=317,slow=11,SNR=52						
DZM				Sn	Sn	19 28 28.5	-0.6
	2.9nm,0.3s,baz=78,slow=19,SNR=3.5						
DZM				LR	LR	19 30 35.2	
	comp=Z,13µm,18.3s,baz=34,slow=37						
ONTNC	**Ouen Toro**	11.40	177	*e*Pn	Pn	19 26 29.3	+1.2
OUENC	**Ouen Island, N**	11.54	175	*e*Pn	Pn	19 26 31.4	+1.4
PINNC	**Pines Island,**	11.79	172	*e*Pn	Pn	19 26 35.2	+1.7
MSVF	**Nonsavu**	13.71	121	*e*Pn	Pn	19 27 04.5	+4.6
MSVF	**Nonsavu**	13.71	121	*i* P	P	19 27 04.9	-3.4
TARA	**Tarawa**	14.07	31	*e*Pn	Pn	19 27 03.8	-0.9
RABL	**Rabaul**	15.03	295	*e*Pn	Pn	19 27 14.6	-3.2
EIDS	**Eidsvold**	20.05	222	P	Pn	19 28 20.0	-0.1
	baz=20,SNR=13						
EIDS	**Eidsvold**	20.05	222	*e*P	P	19 28 19.2	+0.9
	88nm,1.0s						
MANU	**Manus Island**	20.27	294	*e*P	P	19 28 21.0	+0.2
	400nm,1.0s						
CTA	**Charters Tower**	20.91	242	P	P	19 28 28.6	+0.9
	41nm,0.9s,baz=72,slow=12,SNR=16						
CTAO	**Charters Tower**	20.91	242	*e*P	P	19 28 27.8	+0.1
	188nm,1.0s						
CTAO				LR	LR		
	comp=Z,5µm,20.0s						
CTAO	**Charters Tower**	20.91	242	*e*P	P	19 28 27.8	+0.1
CTAO				pmax	pmax		
	comp=Z,188nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,5µm,20.0s						
MTSU	**Mount Surprise**	21.98	248	P	P	19 28 39.7	+0.5
	baz=22,SNR=91						
COEN	**Coen**	22.29	260	P	P	19 28 42.3	-0.2
	baz=22,SNR=12						
COEN	**Coen**	22.29	260	*e*P	P	19 28 41.6	-0.8
	comp=Z,64nm,1.0s						
RMQ	**Roma**	22.35	224	P	P	19 28 44.5	+1.4
	baz=22,SNR=10						
ARMA	**Armidale**	23.49	212	P	P	19 28 55.2	+0.3
	baz=24,SNR=14						
ARMA	**Armidale**	23.49	212	*e*P	P	19 28 55.2	+0.3
	comp=Z,47nm,0.9s						
RAO	**Raoul Island**	23.80	143	PFAKE		19 29 10.0	+12
RAO				LR	LR		
	comp=Z,4µm,19.0s						
OUZ	**Omahuta**	25.27	165	*e*P	P	19 29 12.9	+1.8
	comp=Z,50nm,1.1s						
MGCD	**Mangrove Creek**	26.00	209	P	P	19 29 19.9	+2.1
	baz=26,SNR=4.6						
JAY	**Jayapura**	26.23	287	P	P	19 29 18.8	-1.3
JAY	**Jayapura**	26.23	287	P	P	19 29 19.3	-0.8
	comp=Z,24nm,0.9s,baz=324,slow=12,SNR=6.4						
GENI	**Genyem**	26.70	286	P	P	19 29 22.8	-1.6
QIS	**Mount Isa**	26.94	246	P	P	19 29 27.1	+0.7
	baz=27,SNR=5.3						
CMSA	**Cobar Meteorol**	27.72	219	P	P	19 29 33.5	+0.1
	baz=28,SNR=16						
CNB	**Canberra Magne**	28.55	209	P	P	19 29 41.8	+1.0
	baz=29,SNR=5.2						
HIZ	**Hauiti**	28.71	165	*e*P	P	19 29 43.6	+1.6
	comp=Z,84nm,1.2s						
URZ	**Urewera**	29.11	161	*e*P	P	19 29 46.9	+1.4
	comp=Z,58nm,1.2s						
URZ	**Urewera**	29.11	161	P	P	19 29 47.0	+1.4
	comp=Z,31nm,0.9s,baz=18,slow=4.8,SNR=8.5						
BKZ	**Black Stump Fm**	29.76	163	*e*P	P	19 29 51.7	+0.2
	comp=Z,53nm,0.5s						
WAKE	**Wake Island**	29.97	2	PFAKE		19 30 10.0	+17
WAKE				LR	LR		
	comp=Z,7µm,19.0s						
STKA	**Stephens Creek**	30.59	223	P	P	19 29 59.8	+1.0
	baz=31,SNR=7.2						
STKA	**Stephens Creek**	30.59	223	*e*P	P	19 29 58.4	-0.4
	comp=Z,3.4nm,0.8s						
STKA	**Stephens Creek**	30.59	223	P	P	19 29 59.6	+0.7
	comp=Z,11nm,0.6s,baz=45,slow=9.1,SNR=22						
BFZ	**Birch Farm**	31.11	164	*e*P	P	19 30 02.4	-0.8
	comp=Z,52nm,0.8s						
SNZO	**South Karori**	31.33	167	*e*P	P	19 30 04.6	-0.6
	comp=Z,80nm,0.9s						
SNZO				LR	LR		
	comp=Z,8µm,19.0s						
THZ	**Tophouse**	31.41	170	*e*P	P	19 30 06.5	+0.6
	comp=Z,159nm,1.1s						
WRAB	**Tennant Creek**	31.56	250	*e*P	P	19 30 06.1	-1.4
	comp=Z,105nm,1.5s						
WRAB				LR	LR		
	comp=Z,5µm,19.0s						
WRAB	**Tennant Creek**	31.56	250	*ce*P	P	19 30 06.3	-1.3
WRAB				pmax	pmax		
	comp=Z,23nm,0.9s						
WB2	**Warramunga Arr**	31.56	250	*e*P	P	19 30 06.1	-1.5
WRA	**Warramunga Arr**	31.57	250	P	P	19 30 06.5	-1.2
	comp=Z,24nm,0.9s,baz=81,slow=8.9,SNR=38						
WRA				LR	LR	19 42 59.7	
	comp=Z,5µm,18.1s,baz=65,slow=37						
GUMO	**Guam**	31.95	319	PFAKE		19 30 20.0	+9.1
GUMO				LR	LR		
	comp=Z,7µm,21.0s						
KHZ	**Kahutara**	32.16	169	*e*P	P	19 30 13.4	+1.0
	comp=Z,102nm,1.1s						
TOO	**Toolangi**	32.24	211	P	P	19 30 14.5	+1.2
	baz=32,SNR=11						
TOO	**Toolangi**	32.24	211	*e*P	P	19 30 13.9	+0.5
	comp=Z,22nm,1.0s						
TOO	**Toolangi**	32.24	211	*e*P	P	19 30 13.9	+0.5
TOO				pmax	pmax		
	comp=Z,23nm,1.0s						
LTZ	**Lake Taylor**	32.30	171	*e*P	P	19 30 14.4	+0.6
	comp=Z,62nm,0.7s						
KDU	**Kakadu**	32.64	263	P	P	19 30 15.6	-1.5
	baz=33,SNR=7.8						
FOZ	**Fox Glacier**	32.74	175	*e*P	P	19 30 17.9	+0.4
	comp=Z,59nm,0.9s						
OXZ	**Oxford**	32.80	172	*e*P	P	19 30 18.8	+0.8
	comp=Z,73nm,0.7s						
AS01	**Alice Springs**	32.86	243	*e*P	P	19 30 16.9	-2.1
AS01				*e*PcP	PcP	19 33 03.4	-0.1
AS31	**Alice Springs**	32.90	243	*e*P	P	19 30 18.0	-1.3
	comp=Z,9.0nm,0.6s						
ASAR	**Alice Springs**	32.90	243	P	P	19 30 18.4	-0.9
	comp=Z,46nm,0.9s,baz=66,slow=10,SNR=91						
ASAR				PcP	PcP	19 33 03.7	+0.1
	comp=Z,4.5nm,0.8s,baz=80,slow=3.2,SNR=6.7						
RPZ	**Rata Peaks**	33.05	173	*e*P	P	19 30 20.9	+0.7
	comp=Z,58nm,0.7s						
RPZ	**Rata Peaks**	33.05	173	P	P	19 30 20.6	+0.4
	comp=Z,57nm,0.6s,baz=60,slow=1.2,SNR=21						
RPZ				LR	LR	19 42 59.9	
	comp=Z,4µm,18.7s,baz=339,slow=35						
CRLZ	**Canterbury Las**	33.13	171	*e*P	P	19 30 22.3	+1.4
	comp=Z,171nm,1.2s						
MQZ	**McQueen’s Vall**	33.26	171	*e*P	P	19 30 22.4	+0.3
	comp=Z,92nm,0.8s						
HTT	**Hallett**	33.33	223	P	P	19 30 23.2	+0.3
	baz=34,SNR=9.7						
LBZ	**Lake Benmore**	33.62	174	*e*P	P	19 30 25.6	+0.4
	comp=Z,39nm,1.1s						
ARPS	**Mount Arapiles**	33.64	216	P	P	19 30 26.6	+1.1
	baz=34,SNR=5.2						
WKZ	**Wanaka**	33.96	176	*e*P	P	19 30 29.7	+1.5
	comp=Z,114nm,1.4s						
ODZ	**Otahua Downs**	34.31	174	*e*P	P	19 30 32.9	+1.7
	comp=Z,54nm,1.1s						
MLZ	**Mavora Lakes**	34.44	177	*e*P	P	19 30 33.5	+1.1

	comp=Z,67nm,1.6s						
DCZ	**Deep Cove**	**34.50**	**178**	*e*P	**P**	**19 30 34.4**	**+1.6**
	comp=Z,44nm,1.1s						
BBOO	**Buckleboo**	**34.98**	**227**	P	**P**	**19 30 37.2**	**+0.1**
	baz=35,SNR=18						
BBOO	**Buckleboo**	**34.98**	**227**	*e*P	**P**	**19 30 37.1**	**-0.1**
	comp=Z,48nm,0.9s						
TAU	**Tasmania Unive**	**35.75**	**203**	PFAKE		19 31 00.0	+16
TAU				LR	LR		
	comp=Z,4µm,19.0s						
KNRA	**Kununurra**	**36.31**	**258**	P	**P**	**19 30 49.5**	**+0.8**
	baz=36,SNR=8.5						
WRKA	**Warakurna**	**38.19**	**243**	P	**P**	**19 31 04.1**	**-0.7**
	baz=38,SNR=21						
FITZ	**Fitzroy Crossi**	**39.46**	**255**	P	**P**	**19 31 14.9**	**-0.5**
	baz=40,SNR=27						
FITZ	**Fitzroy Crossi**	**39.46**	**255**	*e*P	**P**	**19 31 14.6**	**-0.8**
	comp=Z,35nm,0.9s						
SANI	**Sanana**	**40.45**	**280**	P	**P**	**19 31 21.3**	**-2.4**
BATI	**Baumata**	**41.39**	**267**	P	**P**	**19 31 31.4**	**0.0**
PPT2	**Papeete2**	**43.71**	**104**	*e*LQ	LQ	19 42 24.2	
	comp=Z,4µm,24.8s						
PPT2				*e*LR	LR	19 44 14.7	
	comp=Z,3µm,22.2s,baz=276						
DAV	**Davao City (W)**	**43.80**	**292**	PFAKE		19 32 00.0	+9.0
DAV				LR	LR		
	comp=Z,1µm,21.0s						
LUWI	**Luwuk**	**43.81**	**280**	*e*P	**P**	**19 31 50.4**	**-0.7**
	comp=Z,83nm,1.1s						
LUWI	**Luwuk**	**43.81**	**280**	P	**P**	**19 31 50.8**	**-0.3**
KCP	**Kidapawan**	**44.22**	**292**	⇑*e*P	**P**	**19 31 56.2**	**+1.7**
TBI	**Tubuai**	**44.37**	**112**	*e*LQ	LQ	19 42 36.8	
	comp=Z,5µm,30.2s						
TBI				*e*LR	LR	19 44 32.1	
	comp=Z,5µm,26.8s,baz=286						
APSI	**Ampana**	**44.93**	**280**	P	**P**	**19 31 59.5**	**-0.6**
MRSI	**Marisa**	**45.01**	**282**	P	**P**	**19 31 57.7**	**-3.0**
MBWA	**Marble Bar**	**45.28**	**251**	*e*P	**P**	**19 32 02.6**	**-0.2**
	comp=Z,96nm,0.9s						
MBWA				LR	LR		
	comp=Z,4µm,19.0s						
BNSI	**Bone**	**45.68**	**274**	P	**P**	**19 32 05.6**	**-0.4**
KAPI	**Kappang**	**45.91**	**274**	PFAKE		19 32 20.0	+12
KAPI				LR	LR		
	comp=Z,1µm,20.0s						
SPSI	**Sidrap Palu**	**46.09**	**275**	P	**P**	**19 32 06.4**	**-2.9**
PCI	**Palu**	**46.69**	**279**	P	**P**	**19 32 14.7**	**+0.7**
MPSI	**Mapaga**	**46.94**	**281**	P	**P**	**19 32 13.6**	**-2.3**
MEEK	**Meekatharra**	**47.05**	**244**	P	**P**	**19 32 17.2**	**+0.5**
	baz=47,SNR=28						
PLAI	**Plampang**	**47.30**	**268**	P	**P**	**19 32 16.8**	**-2.0**
POHA	**Pohakuloa**	**48.76**	**52**	PFAKE		19 32 40.0	+10
POHA				LR	LR		
	comp=Z,2µm,19.0s						
KLBR	**Kellerberrin**	**48.83**	**237**	P	**P**	**19 32 30.4**	**0.0**
	baz=49,SNR=7.7						
BLDU	**Ballidu**	**49.48**	**239**	P	**P**	**19 32 37.0**	**+1.7**
	baz=50,SNR=6.7						
NWAO	**Narrogin (SRO)**	**49.59**	**236**	P	**P**	**19 32 36.5**	**+0.3**
	baz=50,SNR=8.0						
NWAO	**Narrogin (SRO)**	**49.59**	**236**	*e*P	**P**	**19 32 36.3**	**+0.1**
	comp=Z,38nm,0.9s						
NWAO				LR	LR		
	comp=Z,5µm,20.0s						
NWAO	**Narrogin (SRO)**	**49.59**	**236**	*e*P	**P**	**19 32 36.3**	**+0.1**
NWAO				pmax	pmax		
	comp=Z,38nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,5µm,20.0s						
MORW	**Morawa**	**49.74**	**241**	P	**P**	**19 32 38.0**	**+0.7**
	baz=50,SNR=5.9						
MORW	**Morawa**	**49.74**	**241**	*e*P	**P**	**19 32 37.7**	**+0.4**
	comp=Z,64nm,0.9s						
MUN	**Mundaring**	**50.20**	**237**	P	**P**	**19 32 42.1**	**+1.3**
	baz=50,SNR=4.5						
RKGY	**Rocky Gully**	**50.24**	**234**	P	**P**	**19 32 42.5**	**+1.4**
	baz=50,SNR=5.5						
JAGI	**Jajag, Banyuwa**	**50.90**	**268**	*e*P	**P**	**19 32 43.4**	**-3.0**
	comp=Z,31nm,0.8s						
TAOE	**Nuku Hiva Isla**	**53.26**	**93**	*e*S	S	19 40 49.0	+15
	comp=Z,976nm,26.2s						
TAOE				*e*LR	LR	19 48 31.9	
	comp=Z,2µm,24.5s,baz=272						
PWJI	**Pagerwojo**	**53.26**	**268**	P	**P**	**19 33 03.1**	**-0.8**
INU	**Inuyama**	**53.41**	**331**	*e*P	**P**	**19 33 02.9**	**-1.6**
	comp=Z,28nm,1.1s						
MJAR	**Matsushiro Arr**	**53.83**	**333**	P	**P**	**19 33 06.7**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,20nm,0.8s						
MJAR	**Matsushiro Arr**	**53.83**	**333**	P	**P**	**19 33 06.7**	**-1.0**
	comp=Z,19nm,0.9s,baz=169,slow=8.8,SNR=34						
MAJO	**Matsushiro**	**53.83**	**333**	*e*P	**P**	**19 33 06.2**	**-1.5**
	comp=Z,29nm,1.0s						
MAJO				LR	LR		
	comp=Z,2µm,20.0s						
MAJO	**Matsushiro**	**53.83**	**333**	*i* P	**P**	**19 33 05.9**	**-1.8**
MAJO				pmax	pmax		
	comp=Z,22nm,1.0s						
MAT	**Matsushiro**	**53.83**	**333**	P	**P**	**19 33 06.7**	**-1.0**
MAT				S	**S**	**19 40 44.6**	**+3.6**
MJB9	**Matsu-Tunnel**	**53.83**	**332**	*e*P	**P**	**19 33 06.2**	**-1.5**
	comp=Z,31nm,1.0s						
PCJI	**Pacitan**	**53.86**	**268**	P	**P**	**19 33 07.6**	**-0.7**
JNU	**Nakatsue**	**54.95**	**324**	*e*P	**P**	**19 33 15.3**	**-0.7**
	comp=Z,57nm,1.1s						
JNU	**Nakatsue**	**54.95**	**324**	P	**P**	**19 33 15.6**	**-0.4**
	comp=Z,26nm,0.9s,baz=160,slow=3.8,SNR=7.7						
TPUB	**Ta-pu**	**55.72**	**308**	*e*P	**P**	**19 33 20.8**	**-0.8**
	comp=Z,48nm,1.1s						
SSLB	**Suanglung**	**55.73**	**309**	*e*P	**P**	**19 33 21.7**	**0.0**
	comp=Z,81nm,1.8s						
TATO	**Taipei**	**55.98**	**310**	PFAKE		19 33 30.0	+6.6
TATO				LR	LR		
	comp=Z,2µm,19.0s						
ERM	**Erimo**	**56.58**	**340**	PFAKE		19 33 40.0	+13
ERM				LR	LR		
	comp=Z,2µm,21.0s						
YUK	**Yuzh-Kuril'sk**	**57.56**	**343**	P	**P**	**19 33 36.7**	**+2.4**
YUK				PPP	PPP	19 37 08.4	
YUK				S	**S**	**19 41 32.1**	**+1.7**
RKT	**Rikitea**	**57.62**	**110**	*e*LQ	LQ	19 48 09.4	
	comp=Z,2µm,27.8s						
RKT				*e*LR	LR	19 50 38.6	
	comp=Z,3µm,31.8s						
ASAJ	**Asahikawa**	**58.63**	**341**	P	**P**	**19 33 42.0**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,41nm,0.9s						
ASAJ	**Asahikawa**	**58.63**	**341**	P	**P**	**19 33 42.0**	**+0.2**
	comp=Z,41nm,0.9s,baz=219,slow=10,SNR=24						
SSE	**Sheshan**	**59.74**	**316**	PFAKE		19 34 00.0	+10
SSE				LR	LR		
	comp=Z,2µm,19.0s						
KSRS	**Korea Array**	**59.75**	**326**	P	**P**	**19 33 49.6**	**0.0**
	comp=Z,7.5nm,1.1s,baz=142,slow=6.9,SNR=9.8						
KSAR	**Wonju Array Be**	**59.76**	**326**	P	**P**	**19 33 49.6**	**-0.1**
KSAR	**Wonju Array Be**	**59.76**	**326**	P	**P**	**19 33 49.6**	**-0.1**
KS01	**Wonju Array Si**	**59.78**	**326**	*e*P	**P**	**19 33 49.1**	**-0.8**
YSS	**Yuzh-Sakhalins**	**61.12**	**342**	*e*P	**P**	**19 33 59.2**	**+0.4**
	comp=Z,67nm,1.1s						
YSS				LR	LR		
	comp=Z,2µm,21.0s						
YSS	**Yuzh-Sakhalins**	**61.12**	**342**	⇓*i*P	**P**	**19 33 59.6**	**+0.8**
YSS				*e*		19 34 15.6	
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
NJ2	**Nanjing**	**61.91**	**315**	*e*P	**P**	**19 34 03.8**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
QIZ	**Qiongzhong**	**62.62**	**298**	P	**P**	**19 34 12.5**	**+3.0**
QIZ				S	**S**	**19 42 41.6**	**+5.2**
QIZ				LR	LR		
	comp=Z,950nm,23.5s						
QIZ				LR	LR		
	comp=Z,1µm,19.0s						
QIZ				LR	LR		
	comp=Z,2µm,21.1s						
QIZ	**Qiongzhong**	**62.62**	**298**	PFAKE		19 34 20.0	+10
QIZ				LR	LR		
	comp=Z,272nm,22.0s						
USA0B	**Ussuriysk Arra**	**62.80**	**333**	*e*P	**P**	**19 34 10.4**	**+0.3**
	comp=Z,38nm,1.1s						
USRK	**Ussuriysk Ar.**	**62.80**	**333**	P	**P**	**19 34 09.8**	**-0.4**
	comp=Z,18nm,1.0s,baz=130,slow=7.7,SNR=16						
PET	**Petropavlovsk**	**63.92**	**355**	PFAKE		19 34 30.0	+13
PET				LR	LR		
	comp=Z,3µm,21.0s						
MDJ	**Mudanjiang**	**64.20**	**332**	P	**P**	**19 34 20.4**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.2s						
MDJ	**Mudanjiang**	**64.20**	**332**	*e*P	**P**	**19 34 17.7**	**-1.7**
	comp=Z,42nm,1.4s						
MDJ				LR	LR		
	comp=Z,1µm,20.0s						
DL2	**Dalian**	**64.35**	**323**	P	**P**	**19 34 24.6**	**+4.0**
DL2				pmax	pmax		
	comp=Z,49nm,1.1s						
DL2				pmax	pmax		
	comp=Z,420nm,9.0s						
DL2				LR	LR		
	comp=Z,2µm,17.6s						
DL2				LR	LR		
	comp=Z,1µm,18.4s						
DL2				LR	LR		
	comp=Z,2µm,19.2s						
TYV	**Tymovskoe**	**64.68**	**344**	*e*P	**P**	**19 34 21.1**	**-1.3**
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
SNY	**Shenyang**	**65.20**	**326**	⇑P	**P**	**19 34 28.4**	**+2.4**
SNY				pmax	pmax		
	comp=Z,430nm,11.0s						
BKNI	**Bangkinang**	**65.28**	**275**	*e*P	**P**	**19 34 25.9**	**-1.2**
	comp=Z,96nm,1.2s						
CN2	**Changchun**	**65.60**	**329**	*e*P	**P**	**19 34 28.9**	**+0.3**
CN2				*e*S	**S**	**19 43 12.5**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
IPM	**Ipoh**	**66.22**	**280**	*e*P	**P**	**19 34 32.1**	**-1.1**
	comp=Z,21nm,1.0s						
GRNR	**Gornyy**	**66.48**	**340**	*e*P	**P**	**19 34 35.2**	**+1.1**
GRNR				pmax	pmax		
	comp=Z,29nm,1.0s						
CASY	**Casey**	**66.56**	**201**	PFAKE		19 34 50.0	+16
CASY				LR	LR		
	comp=Z,324nm,19.0s						
VNDA	**Vanda**	**66.67**	**181**	P	**P**	**19 34 36.8**	**+1.8**
	comp=Z,4.9nm,0.9s,baz=15,slow=6.4,SNR=3.6						
KLR	**Kul'dur**	**66.90**	**336**	⇑*i*P	**P**	**19 34 38.0**	**+1.2**
SBA	**Scott Base**	**66.98**	**180**	PFAKE		19 34 50.0	+13
SBA				LR	LR		
	comp=Z,2µm,20.0s						
SKNT	**Sakolnakorn**	**67.05**	**294**	P	**P**	**19 34 39.6**	**+1.2**
	comp=Z,11nm,1.2s						
NKL	**Nikolayevsk**	**67.28**	**344**	*e*P	**P**	**19 34 39.0**	**-0.1**
NKL				*e*		19 34 46.8	
NKL				*e*		19 50 41.0	
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
NKL				MLR	MLR		
	comp=Z,1µm,14.0s						
NKL				MLR	MLR		
	comp=N,1µm,14.0s						
NKL				MLR	MLR		
	comp=E,1µm,14.0s						
COCO	**West Island**	**67.39**	**261**	PFAKE		19 34 50.0	+9.3
COCO				LR	LR		
	comp=Z,2µm,21.0s						
ENH	**Enshi**	**67.81**	**309**	PFAKE		19 34 50.0	+7.0
ENH				LR	LR		
	comp=Z,2µm,20.0s						
GYA	**Guiyang**	**68.34**	**304**	P	**P**	**19 34 45.4**	**-1.2**
GYA				PP	**PP**	**19 37 20.0**	**+2.3**
GYA				S	**S**	**19 43 47.8**	**+1.3**
GYA				SKS	**SKSac**	**19 44 42.1**	**-2.1**
GYA				SS	**SS**	**19 48 11.9**	**+1.4**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.4s						
GYA				LR	LR		
	comp=Z,550nm,18.0s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
GYA				LR	LR		
	comp=Z,530nm,18.8s						
BJT	**Baijiatuau**	**68.35**	**321**	*e*P	**P**	**19 34 46.0**	**-0.2**
	comp=Z,35nm,1.2s						
BJT				LR	LR		
	comp=Z,2µm,20.0s						
BJT	**Baijiatuau**	**68.35**	**321**	*e*P	**P**	**19 34 46.0**	**-0.2**
BJT				pmax	pmax		
	comp=Z,35nm,1.2s						
BJT				MLR	MLR		
	comp=Z,2µm,20.0s						
BJI	**Beijing**	**68.36**	**321**	⇓*i*P	**P**	**19 34 45.9**	**-0.3**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJI				LR	LR		
	comp=Z,2µm,17.6s						
BJI				LR	LR		
	comp=Z,640nm,18.8s						
BJI				LR	LR		
	comp=Z,2µm,31.4s						
PBKT	**Sadao Pong**	**69.64**	**292**	*e*P	**P**	**19 34 54.5**	**-0.1**
PBKT	**Sadao Pong**	**69.64**	**292**	P	**P**	**19 34 56.8**	**+2.2**
	comp=Z,8.9nm,0.9s,comp=Z,737nm						
XAN	**Xi'an**	**70.02**	**312**	P	**P**	**19 34 56.5**	**-0.2**
XAN				pP	pP	19 35 01.4	-3.7
XAN				PcP	**PcP**	**19 35 18.5**	**-0.3**
XAN				PP	**PP**	**19 37 29.8**	**-2.3**
XAN				S	**S**	**19 44 03.9**	**-2.0**
XAN				ScS	**ScS**	**19 44 57.1**	**-0.5**
XAN				SS	**SS**	**19 48 30.8**	**-5.2**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,490nm,6.4s						
XAN				LR	LR		
	comp=Z,1µm,17.7s						
XAN				LR	LR		
	comp=Z,1µm,19.8s						
XAN				LR	LR		
	comp=Z,2µm,21.0s						
XAN	**Xi'an**	**70.02**	**312**	*e*P	**P**	**19 34 53.9**	**-2.8**
	comp=Z,61nm,1.0s						
XAN	**Xi'an**	**70.02**	**312**	*e*P	**P**	**19 34 53.9**	**-2.8**
XAN				pmax	pmax		
	comp=Z,61nm,1.0s						
UTTA	**Uttaradit**	**70.39**	**293**	P	P	19 35 07.6	+8.4
UTHA	**Uthaitani**	**70.72**	**291**	P	**P**	**19 35 04.1**	**+2.8**
	comp=Z,2.5nm,0.9s						
KMI	**Kunming**	**71.05**	**301**	P	**P**	**19 35 04.9**	**+1.5**
KMI				pP	pP	19 35 13.3	+1.5
KMI				sP	sP	19 35 17.3	+2.7
KMI				S	**S**	**19 44 16.8**	**-1.9**
KMI				pmax	pmax		
	comp=Z,15nm,1.3s						
KMI				pmax	pmax		
	comp=Z,290nm,7.4s						
KMI				LR	LR		
	comp=Z,280nm,18.0s						
KMI				LR	LR		
	comp=Z,2µm,18.3s						
KMI				LR	LR		
	comp=Z,2µm,20.2s						
MA2	**Magadan**	**71.23**	**352**	*i* P	**P**	**19 35 03.4**	**-0.1**
MA2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**71.72**	**320**	SS	SS	19 49 12.4	+11
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.4s						
HHC				LR	LR		
	comp=N,2µm,16.7s						
HHC				LR	LR		
	comp=E,2µm,18.8s						
HHC				LR	LR		
	comp=Z,3µm,18.8s						
HHC	**Hu-ho-hao-te**	**71.72**	**320**	*e*P	**P**	**19 35 08.6**	**+1.6**
HHC				S	**S**	**19 44 26.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.5s						
HHC				LR	LR		
	comp=Z,2µm,17.0s						
HHC				LR	LR		
	comp=Z,2µm,18.7s						
HHC				LR	LR		
	comp=Z,3µm,18.2s						
CM01	**Chiang Mai Arr**	**72.04**	**293**	*e*P	**P**	**19 35 08.7**	**-0.5**
CM31	**Chiang Mai Arr**	**72.07**	**293**	*e*P	**P**	**19 35 07.7**	**-1.7**
CMAR	**Chiang Mai Arr**	**72.07**	**293**	P	**P**	**19 35 10.1**	**+0.7**
	comp=Z,5.6nm,1.0s,baz=116,slow=4.0,SNR=21						
CMMT	**Chiang Mai**	**72.18**	**294**	P	**P**	**19 35 11.3**	**+1.2**
	comp=Z,8.8nm,1.2s						
CHTO	**Chiang Mai**	**72.18**	**294**	*e*P	**P**	**19 35 08.2**	**-1.9**
	comp=Z,16nm,1.3s						
CHTO				LR	LR		
	comp=Z,1µm,21.0s						
CHTO	**Chiang Mai**	**72.18**	**294**	*e*P	**P**	**19 35 08.2**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,17nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
CHTO	**Chiang Mai**	**72.18**	**294**	P	**P**	**19 35 11.3**	**+1.2**
	comp=Z,54nm,1.4s						
ZEA	**Zeya**	**72.19**	**337**	*e*P	**P**	**19 35 10.2**	**+0.8**
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
HIA	**Hailar**	**72.23**	**330**	PFAKE		19 35 20.0	+10
HIA				LR	LR		
	comp=Z,2µm,20.0s						
CD2	**Chengdu**	**72.52**	**307**	P	**P**	**19 35 12.0**	**+0.1**
CD2				pP	pP	19 35 15.3	-5.0
CD2				sP	sP	19 35 16.5	-6.9
CD2				PP	**PP**	**19 37 52.8**	**-0.8**
CD2				S	**S**	**19 44 36.5**	**+1.5**
CD2				SKS	**ScS**	**19 45 16.4**	**-1.2**
CD2				SS	**SS**	**19 49 15.8**	**+1.4**
CD2				pmax	pmax		
	comp=Z,60nm,0.6s						
CD2				pmax	pmax		
	comp=Z,590nm,7.8s						
CD2				LR	LR		
	comp=Z,4µm,20.1s						
CD2				LR	LR		
	comp=Z,4µm,17.7s						
SEY	**Seymchan**	**74.30**	**354**	*ce*P	**P**	**19 35 22.3**	**+0.7**
LZH	**Lanzhou**	**74.66**	**312**	⇓P	**P**	**19 35 24.8**	**+0.3**
LZH				pP	pP	19 35 28.4	-4.5
LZH				sP	sP	19 35 29.5	-6.5
LZH				PP	**PP**	**19 38 13.1**	**+1.3**
LZH				*e*S	**S**	**19 45 00.0**	**+0.8**
LZH				sS	pS	19 45 07.6	-1.6
LZH				pmax	pmax		
	comp=Z,27nm,1.2s						
LZH				pmax	pmax		
	comp=Z,440nm,6.5s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,3µm,17.9s						
GAMB	**Gambell**	**76.39**	**10**	*e*P	**P**	**19 35 32.3**	**-1.2**
	comp=Z,40nm,1.2s						
KDAK	**Kodiak Island**	**76.40**	**21**	PFAKE		19 35 50.0	+16
KDAK				LR	LR		
	comp=Z,853nm,20.0s						
CIT	**Chita**	**77.02**	**330**	*e*P	**P**	**19 35 38.1**	**+0.6**
CIT				*e*		19 35 50.6	
SVW2	**Sparrevohn**	**77.93**	**18**	*e*P	**P**	**19 35 41.5**	**-0.9**
	comp=Z,49nm,1.2s						
ULN	**Ulaanbaatar**	**78.17**	**324**	*e*P	**P**	**19 35 43.9**	**-0.3**
	comp=Z,19nm,1.0s						
ULN				LR	LR		
	comp=Z,1µm,19.0s						
ULN	**Ulaanbaatar**	**78.17**	**324**	*ce*P	**P**	**19 35 44.3**	**+0.1**
ULN				pmax	pmax		
	comp=Z,19nm,1.0s						
ANM	**Nome**	**78.31**	**12**	*e*P	**P**	**19 35 44.8**	**+0.4**
	comp=Z,36nm,1.4s						
ANM	**Nome**	**78.31**	**12**	*e*P	**P**	**19 35 44.8**	**+0.4**
ANM				pmax	pmax		
	comp=Z,36nm,1.4s						
RSO	**Redoubt South**	**78.34**	**20**	*e*P	**P**	**19 35 46.1**	**+1.2**
SONM	**Songino Array**	**78.54**	**324**	P	**P**	**19 35 46.5**	**+0.3**
	comp=Z,8.3nm,1.0s,baz=138,slow=4.5,SNR=27						
SONM				PP	**PP**	**19 38 44.2**	**0.0**
	comp=Z,1.5nm,0.6s,baz=183,slow=9.4,SNR=6.8						
SONA1	**Songino Array**	**78.54**	**324**	*e*P	**P**	**19 35 45.7**	**-0.5**
BILL	**Bilibino**	**78.70**	**0**	*e*P	**P**	**19 35 46.5**	**0.0**
	comp=Z,25nm,1.0s						
BILL				LR	LR		
	comp=Z,797nm,20.0s						
BILL	**Bilibino**	**78.70**	**0**	⇑*i*P	**P**	**19 35 46.4**	**0.0**
BILL				pmax	pmax		
	comp=Z,32nm,1.1s						
GTA	**Gaotai**	**78.96**	**314**	*e*P	**P**	**19 35 49.1**	**+0.4**
GTA				pP	PcP	19 35 54.0	-3.2
GTA				sP	pP	19 35 56.4	-0.7
GTA				S	**S**	**19 45 45.3**	**-0.7**
GTA				sS	pS	19 45 53.5	-2.6
GTA				SKS	**SKSac**	**19 45 59.9**	**-3.0**
GTA				SS	**SS**	**19 50 52.4**	**+0.5**
GTA				pmax	pmax		
	comp=Z,11nm,1.4s						
GTA				pmax	pmax		
	comp=Z,240nm,7.1s						
GTA				LR	LR		
	comp=Z,1µm,17.5s						
GTA				LR	LR		
	comp=Z,2µm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,17.8s						
QSPA	**South Pole Qui**	**79.14**	**180**	*e*P	**P**	**19 35 49.4**	**+0.2**
QSPA				LR	LR		
	comp=Z,1µm,19.0s						
SUA	**Susitna One**	**79.75**	**20**	*e*P	**P**	**19 35 51.8**	**-0.7**
	comp=Z,30nm,1.2s						
BOD	**Bodaibo**	**80.38**	**335**	*e*P	**P**	**19 35 55.8**	**0.0**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SHL	**Shillong**	**80.46**	**298**	*e*P	**P**	**19 35 54.2**	**-3.0**
	comp=Z,31nm,1.4s						
SHL	**Shillong**	**80.46**	**298**	*e*P	**P**	**19 35 54.2**	**-3.0**
SHL				pmax	pmax		
	comp=Z,31nm,1.4s						
RPN	**Rapa Nui**	**80.62**	**116**	PFAKE		19 36 10.0	+12
RPN				LR	LR		
	comp=Z,825nm,19.0s						
CAST	**Castle Rocks**	**80.77**	**18**	*e*P	**P**	**19 35 57.3**	**-0.5**
	comp=Z,22nm,1.1s						
DIV	**Divide**	**81.23**	**22**	*e*P	**P**	**19 36 02.9**	**+2.6**
	comp=Z,29nm,1.0s						
TRF	**Thorofare Moun**	**81.34**	**18**	*e*P	**P**	**19 36 04.8**	**+3.8**
	comp=Z,96nm,1.9s						
ZAK	**Zakamensk**	**81.57**	**325**	*e*P	**P**	**19 36 01.1**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RND	**Reindeer**	**81.76**	**19**	*e*P	**P**	**19 36 03.6**	**+0.5**
	comp=Z,31nm,1.0s						
RND	**Reindeer**	**81.76**	**19**	*e*P	**P**	**19 36 03.6**	**+0.5**
RND				pmax	pmax		
	comp=Z,31nm,1.0s						
RDOG	**Red Dog Mine**	**81.84**	**11**	*e*P	**P**	**19 36 04.6**	**+1.2**
	comp=Z,26nm,1.1s						
MCK	**McKinley**	**81.96**	**19**	*e*P	**P**	**19 36 04.6**	**+0.4**
	comp=Z,31nm,1.2s						
MCK	**McKinley**	**81.96**	**19**	*e*P	**P**	**19 36 04.6**	**+0.4**
MCK				pmax	pmax		
	comp=Z,31nm,1.2s						
TLY	**Talaya**	**81.99**	**326**	*e*P	**P**	**19 36 04.2**	**-0.3**
	comp=Z,22nm,0.8s						
TLY				LR	LR		
	comp=Z,618nm,20.0s						
TLY	**Talaya**	**81.99**	**326**	*e*P	**P**	**19 36 04.7**	**+0.1**
TLY				pmax	pmax		
	comp=Z,24nm,0.9s						
DHY	**Denali Highway**	**82.00**	**20**	*e*P	**P**	**19 36 05.9**	**+1.3**
	comp=Z,17nm,1.1s						
IM3	**Indian Mountai**	**82.24**	**16**	*e*P	**P**	**19 36 05.0**	**-0.5**
LSA	**Lhasa**	**82.28**	**302**	*e*P	**P**	**19 36 06.6**	**-0.5**
	comp=Z,10nm,1.1s						
LSA				LR	LR		
	comp=Z,999nm,20.0s						
LSA	**Lhasa**	**82.28**	**302**	*e*P	**P**	**19 36 06.6**	**-0.5**

LSA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LSA				MLR	MLR		
	comp=Z,999nm,20.0s						
HARP	HAARP	82.30	21	*e*P	P	19 36 08.4	+2.4
	comp=Z,337nm,1.9s						
MLY	Manley	82.36	17	*e*P	P	19 36 06.3	+0.1
	comp=Z,27nm,1.6s						
WRH	Wood River Hil	82.75	18	*e*P	P	19 36 09.0	+0.8
	comp=Z,27nm,1.0s						
MDM	Murphy Dome	83.05	18	*e*P	P	19 36 09.8	0.0
	comp=Z,27nm,1.0s						
HDA	Harding Lake	83.06	19	P	P	19 36 09.7	-0.1
	baz=227,SNR=32						
TCOL	CIGO, UAF Yank	83.10	18	P	P	19 36 10.4	+0.4
	baz=226,SNR=9.2						
COLA	College	83.11	18	*e*P	P	19 36 10.2	+0.2
	comp=Z,51nm,0.9s						
COLA				LR	LR		
	comp=Z,1µm,20.0s						
COLA	College	83.11	18	*e*P	P	19 36 10.2	+0.2
COLA				pmax	pmax		
	comp=Z,51nm,0.9s						
COLA				MLR	MLR		
	comp=Z,1µm,20.0s						
O02D	Mt. Diablo Mer	83.15	47	P	P	19 36 11.2	+0.3
	baz=250						
MENT	Mentasta	83.15	21	*e*P	P	19 36 11.1	+0.7
	comp=Z,31nm,1.3s						
L02E	Cave Junction	83.27	45	P	P	19 36 12.4	+1.0
	baz=249						
RIDG	Independ'e Rid	83.30	20	*e*P	P	19 36 12.0	+0.9
	comp=Z,48nm,1.3s						
IL1	Eielson Array	83.33	18	*e*P	P	19 36 09.6	-1.6
ILAR	Eielson Array	83.33	18	P	P	19 36 10.7	-0.5
	comp=Z,12nm,0.8s,baz=229,slow=4.8,SNR=44						
ILB	Eielson Array	83.33	18	*e*P	P	19 36 11.1	-0.1
POKR	Poker Plat Res	83.40	18	P	P	19 36 11.8	+0.2
	baz=226,SNR=8.9						
K02D	Willamette Mer	83.42	44	P	P	19 36 12.7	+0.4
	baz=249						
MOY	Mondy	83.45	325	*e*P	P	19 36 13.3	+1.1
N02D	Trinity Center	83.48	46	P	P	19 36 13.2	+0.5
	baz=250						
M02C	Callahan	83.53	46	P	P	19 36 13.7	+0.9
	baz=250						
SBC	Santa Barbara	83.60	53	P	P	19 36 13.8	+0.5
	baz=252						
SCRK	Sand Creek	83.74	20	*e*P	P	19 36 13.7	+0.2
	comp=Z,33nm,1.2s						
YBH	Yreka Blue Hor	83.74	46	*e*P	P	19 36 16.2	+2.2
	comp=Z,10.0nm,0.9s						
ORV	Oroville	83.87	48	*e*P	P	19 36 15.0	+0.4
	comp=Z,12nm,1.1s						
ORV	Oroville	83.87	48	*e*P	P	19 36 15.0	+0.4
ORV				pmax	pmax		
	comp=Z,12nm,1.1s						
HUMO	Hull Mountain	83.88	45	*e*P	P	19 36 16.9	+2.3
	comp=Z,15nm,1.0s						
O03E	Paynes Creek	83.90	47	P	P	19 36 15.3	+0.6
	baz=250,SNR=9.1						
AFDM	Forest Hills D	84.06	49	*e*P	P	19 36 16.2	+0.6
	comp=Z,16nm,1.0s						
COLD	Coldfoot	84.12	16	*e*P	P	19 36 18.1	+2.9
	comp=Z,5.5nm,1.0s						
WRAK	Wrangell Islan	84.17	30	PFAKE		19 36 30.0	+14
WRAK				LR	LR		
	comp=Z,2µm,19.0s						
L04D	Klamath Falls	84.20	45	P	P	19 36 17.0	+0.6
	baz=250						
CMB	Columbia Colle	84.20	50	*e*P	P	19 36 17.5	+1.2
	comp=Z,11nm,1.0s						
CMB	Columbia Colle	84.20	50	*e*P	P	19 36 17.5	+1.2
CMB				pmax	pmax		
	comp=Z,11nm,1.0s						
HYT	Haines Junctio	84.21	24	*e*P	P	19 36 17.8	+1.8
	comp=Z,34nm,1.4s						
PRP	Porcupine Dome	84.26	18	*e*P	P	19 36 17.9	+1.8
	comp=Z,20nm,1.4s						
M04C	Macdoel	84.37	46	P	P	19 36 17.9	+0.6
	baz=250						
I04A	Tendick Farm,	84.67	44	P	P	19 36 19.7	+1.1
	baz=250						
J04D	Umpqua Nationa	84.68	44	P	P	19 36 20.3	+1.5
	baz=250						
H04D	Lebanon	84.70	43	P	P	19 36 20.4	+1.8
	baz=249						
BEKR	Beckworth	84.80	48	*e*P	P	19 36 20.7	+1.2
	comp=Z,9.5nm,0.9s						
MWC	Mount Wilson	84.85	54	*e*P	P	19 36 22.5	+2.6
	comp=Z,18nm,1.1s						
MWC	Mount Wilson	84.85	54	*e*P	P	19 36 22.5	+2.6
MWC				pmax	pmax		
	comp=Z,18nm,1.1s						
ISA	Isabella, Lake	84.94	52	P	P	19 36 21.3	+1.1
	baz=253						
NLWA	Neilton Lookou	85.01	40	PFAKE		19 36 30.0	+10
NLWA				LR	LR		
	comp=Z,2µm,22.0s						
WAKR	Walker	85.06	49	*e*P	P	19 36 21.8	+1.0
	comp=Z,15nm,1.0s						
MDPB	Devils Postpil	85.06	50	*e*P	P	19 36 22.8	+1.8
	comp=Z,18nm,1.0s						
EDW2	Edwards Air Fo	85.09	53	P	P	19 36 21.9	+1.0
	baz=253						
OMMB	Old Mammoth Mi	85.11	50	*e*P	P	19 36 22.8	+1.4
	comp=Z,12nm,1.2s						
PNTR	Pine Nut	85.12	49	*e*P	P	19 36 21.6	+0.5
	comp=Z,10nm,1.0s						
H04A	Detroit Lake	85.13	43	*e*P	P	19 36 22.2	+1.3
	comp=Z,19nm,1.4s						
VCNR	Virginia City	85.14	49	*e*P	P	19 36 25.5	+4.2
	comp=Z,6.6nm,1.0s						
BFSC	Mount Baldy Ra	85.17	54	P	P	19 36 22.4	+0.9
	baz=254						
EGAK	Eagle	85.20	20	*e*P	P	19 36 21.6	+0.9
	comp=Z,50nm,0.9s						
EGAK				LR	LR		
	comp=Z,1µm,22.0s						
109C	Camp Elliot, M	85.23	55	P	P	19 36 23.0	+1.4
	baz=254						
MLAC	Mammoth, Mammo	85.24	50	P	P	19 36 22.6	+0.7
	baz=253						
J05D	Fort Rock, OR	85.30	44	P	P	19 36 22.8	+0.9
	baz=251						
TOLK	Toolik Lake Re	85.31	15	P	P	19 36 22.7	+1.5
	baz=224						
YERR	Yerington	85.35	49	*e*P	P	19 36 23.5	+1.2
	comp=Z,16nm,1.5s						
MURC	Murrieta	85.36	55	P	P	19 36 23.6	+1.4
	baz=254						
DAWY	Dawson	85.38	21	*e*P	P	19 36 22.4	+0.7
	comp=Z,19nm,1.1s						
RAMN	Ramite	85.40	298	*e*P	P	19 36 22.4	-0.5
PAHR	Pah Rah Range	85.47	48	*e*P	P	19 36 23.9	+1.1
	comp=Z,18nm,1.4s						
CWC	Cottonwood Cre	85.47	52	P	P	19 36 23.6	+0.7
	baz=253						
MOD	Modoc Plateau	85.50	46	*e*P	P	19 36 24.1	+1.2
	comp=Z,11nm,1.0s						
LRMC	Laurel Mtn Rad	85.50	53	P	P	19 36 23.9	+0.8
	baz=254,SNR=6.7						
E04D	Cinebar	85.54	41	P	P	19 36 23.8	+1.0
	baz=249						
D03D	Eldon	85.55	40	P	P	19 36 24.2	+1.3
	baz=249						
I05D	Terrebonne, OR	85.58	43	P	P	19 36 24.4	+1.2
	baz=250						
PINE	Pine Mountain	85.67	44	*e*P	P	19 36 25.2	+1.4
	comp=Z,17nm,0.9s						
RYN	Ryan	85.78	50	*e*P	P	19 36 25.8	+1.3
	comp=Z,10nm,1.1s						
MONP2	Monument Peak	85.79	56	P	P	19 36 25.4	+0.8
	baz=254						
MPMC	Manual Prospec	85.82	52	P	P	19 36 25.4	+0.7
	baz=254,SNR=6.5						
NV01	Mina Array Sit	85.88	50	*e*P	P	19 36 24.8	-0.2
NVAR	Mina Array Bea	85.88	50	P	P	19 36 25.5	+0.5
	comp=Z,8.7nm,0.9s,baz=234,slow=6.9,SNR=19						
PFO	Pinyon Flats O	85.95	55	*e*P	P	19 36 27.9	+2.6
	comp=Z,8.2nm,1.1s						
PFO				LR	LR		
	comp=Z,1µm,19.0s						
PFO	Pinyon Flats O	85.95	55	P	P	19 36 26.5	+1.1
	baz=254						
XPFO	Pion Flat	85.96	55	*e*P	P	19 36 27.9	+2.6
	comp=Z,14nm,1.4s						
IKP	In-Ko-Pah, Jac	85.98	56	P	P	19 36 26.6	+1.2
	baz=255						
NV11	Mina Array Sit	86.00	50	*e*P	P	19 36 25.9	+0.4
	comp=Z,1.4nm,1.1s						
D05A	Enumclaw	86.13	41	*e*P	P	19 36 28.1	+2.4
	comp=Z,39nm,1.3s						
GSC	Goldstone, Bar	86.14	53	P	P	19 36 27.3	+1.1
	baz=254						
KVN	Kaiserville	86.22	49	*e*P	P	19 36 27.6	+1.0
	comp=Z,9.8nm,1.0s						
KVN	Kaiserville	86.22	49	*e*P	P	19 36 27.6	+1.0
KVN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GUN	Gumba	86.26	299	*e*P	P	19 36 26.6	-0.6
	comp=Z,16nm,0.8s						
SWSC	Sam W. Stewart	86.31	56	P	P	19 36 28.3	+1.4
	baz=255						
HEC	Hector,Ludlow	86.38	54	P	P	19 36 28.7	+1.3
	baz=254						
FURC	Furnace Creek,	86.42	52	P	P	19 36 28.7	+1.4
	baz=254						
BELC	Belle Mtn. Jos	86.43	55	P	P	19 36 28.4	+0.8
	baz=255,SNR=9.8						
B05A	Bryant	86.44	40	P	P	19 36 28.2	+1.0
	baz=250						
PALK	Pallekele	86.55	278	*e*P	P	19 36 30.3	+1.8
	comp=Z,17nm,1.1s						
PALK	Pallekele	86.55	278	*i* P	P	19 36 30.4	+1.8
PALK	Pallekele	86.55	278	P	P	19 36 29.0	+0.4
	comp=Z,10nm,1.1s,baz=116,slow=2.0,SNR=6.4						
PKI	Pulchoki	86.58	299	*e*P	P	19 36 28.1	-0.7
	comp=Z,22nm,1.1s						
PKIN	Phulchoki	86.59	299	*e*P	P	19 36 27.9	-0.9
	comp=Z,19nm,1.2s						
KKN	Kakani	86.74	299	*e*P	P	19 36 28.7	-0.8
	comp=Z,12nm,0.9s						
I07A	Izee	86.75	44	*e*P	P	19 36 29.6	+0.6
	comp=Z,9.7nm,0.9s						
BC3	Big Chuckawall	86.77	55	P	P	19 36 29.8	+0.4
	baz=255						
WVOR	Wild Horse Val	86.84	46	*e*P	P	19 36 30.3	+0.8
	comp=Z,13nm,1.1s						
WVOR				LR	LR		
	comp=Z,855nm,20.0s						
DMN	Daman	86.85	299	*e*P	P	19 36 29.7	-0.3
	comp=Z,44nm,1.2s						
TUQ	Turquoise Moun	86.87	53	P	P	19 36 30.6	+0.8
	baz=255,SNR=5.2						
GMRC	Granite Mounta	86.91	54	P	P	19 36 30.2	+0.2
	baz=255						
TPNV	Topopah Spring	87.03	52	P	P	19 36 31.0	+0.4
	baz=254						
GLA	Glamis	87.12	56	*e*P	P	19 36 33.1	+2.1
	comp=Z,20nm,0.9s						
GLA	Glamis	87.12	56	*e*P	P	19 36 33.1	+2.1
GLA				pmax	pmax		
	comp=Z,20nm,0.9s						
GLA	Glamis	87.12	56	P	P	19 36 31.5	+0.5
	baz=255						
IRM	Iron Mountain	87.15	55	P	P	19 36 31.7	+0.6
	baz=255,SNR=15						
J08A	Circle Bar Ran	87.23	45	*e*P	P	19 36 30.9	-0.4
	comp=Z,17nm,1.3s						
HAWA	Hanford	87.46	42	*e*P	P	19 36 33.6	+1.4
	comp=Z,14nm,1.1s						
HAWA				LR	LR		
	comp=Z,930nm,22.0s						
G08A	Pilot Rock	87.49	43	*e*P	P	19 36 32.9	+0.3
	comp=Z,15nm,1.1s						
Y12C	Blythe	87.55	55	*e*P	P	19 36 36.5	+3.5
	comp=Z,15nm,0.9s						
Y12C	Blythe	87.55	55	P	P	19 36 33.4	+0.4
	baz=255						
EPYK	Eagle Plains	87.63	20	P	P	19 36 33.6	+0.9
	baz=236						
SHPR	Sheep Range	87.75	52	*e*P	P	19 36 35.8	+1.7
	comp=Z,19nm,1.5s						
E08A	Dider Farm, El	87.80	42	*e*P	P	19 36 35.2	+1.4
	comp=Z,19nm,1.2s						
R11A	Troy Canyon, C	87.91	50	*e*P	P	19 36 35.7	+0.8
	comp=Z,25nm,2.0s						
R11A	Troy Canyon, C	87.91	50	P	P	19 36 35.1	+0.2
	baz=255						
PDMCI	Parker Dam,Lak	87.99	55	P	P	19 36 35.9	+0.9
	baz=256						
D08A	Wollman Farm,	88.06	41	*e*P	P	19 36 36.3	+1.2
	comp=Z,9.0nm,1.0s						
DANN	Dangsing	88.18	299	*e*P	P	19 36 34.9	-1.6
	comp=Z,24nm,1.1s						
W13A	Hualapai Mount	88.39	54	*e*P	P	19 36 38.8	+1.5
E09A	Wood Farm, Sta	88.41	42	*e*P	P	19 36 40.3	+3.6
	comp=Z,7.1nm,0.9s						
BMO	Blue Mountains	88.48	44	*e*P	P	19 36 38.9	+1.6
	comp=Z,33nm,2.0s						
BMO				LR	LR		
	comp=Z,999nm,22.0s						
BMO	Blue Mountains	88.48	44	*e*P	P	19 36 38.9	+1.6
BMO				pmax	pmax		
	comp=Z,33nm,2.0s						
BMO				MLR	MLR		
	comp=Z,999nm,22.0s						
214A	Organ Pipe Nat	88.51	57	P	P	19 36 38.0	+0.4
	baz=256,SNR=12						
PYUN	Piuthan	88.78	299	*e*P	P	19 36 37.6	-1.6
	comp=Z,25nm,1.1s						
ELK	Elko	88.80	48	*e*P	P	19 36 40.2	+1.2
	comp=Z,10.0nm,1.4s						
ELK	Elko	88.80	48	*e*P	P	19 36 40.3	+1.2
ELK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
Y14A	Wickenburg	88.82	55	*e*P	P	19 36 42.4	+3.3
	comp=Z,4.1nm,0.9s						
F10A	Beach Ranch, E	88.86	43	*e*P	P	19 36 40.0	+1.0
	comp=Z,8.4nm,0.9s						
WMQ	Urumqi	88.99	315	P	P	19 36 39.4	-0.3
WMQ				pP	PcP	19 36 43.1	+2.0
WMQ				S	S	19 47 23.1	-3.3
WMQ				SS	SS	19 53 22.5	+2.5
WMQ				pmax	pmax		
	comp=Z,25nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,63nm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,19.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.3s						
WMQ				LR	LR		
	comp=Z,2µm,27.3s						
PSUT	Pine Spring	89.27	51	*e*P	P	19 36 42.6	+1.4
	comp=Z,7.1nm,1.0s						
LCMT	Little Creek M	89.37	52	*e*P	P	19 36 43.4	+1.7
	comp=Z,11nm,1.1s						
CCUT	Cedar City	89.41	52	*e*P	P	19 36 43.8	+1.8
	comp=Z,12nm,1.0s						
NEW	Newport	89.59	41	*e*P	P	19 36 43.1	+0.8
	comp=Z,8.9nm,1.3s						
NEW				LR	LR		
	comp=Z,774nm,19.0s						
NEW	Newport	89.59	41	P	P	19 36 43.1	+0.8
NEW				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NEW	Newport	89.59	41	P	P	19 36 42.8	+0.4
	baz=253						
SZCU	Shurtz Canyon	89.63	52	*e*P	P	19 36 44.7	+1.7
	comp=Z,7.9nm,0.9s						
KNB	Kanab	89.70	52	*e*P	P	19 36 45.0	+1.7
	comp=Z,40nm,1.6s						
KNB	Kanab	89.70	52	*e*P	P	19 36 45.0	+1.7
KNB				pmax	pmax		
	comp=Z,40nm,1.6s						
INK	Inuvik	89.72	19	*e*P	P	19 36 41.6	-0.8
	comp=Z,8.9nm,1.2s						
INK	Inuvik	89.72	19	*e*P	P	19 36 41.6	-0.8
INK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HLID	Hailey	90.13	46	*e*P	P	19 36 46.6	+1.5
	comp=Z,25nm,1.9s						
HLID				LR	LR		
	comp=Z,820nm,20.0s						
HLID	Hailey	90.13	46	P	P	19 36 45.8	+0.6
	baz=255						
X16A	Lo Mia Camp, P	90.19	55	*e*P	P	19 36 47.5	+1.9
	comp=Z,8.8nm,0.9s						
PKCU	Pink Cliffs	90.19	52	*e*P	P	19 36 48.4	+2.6
	comp=Z,22nm,1.0s						
TUC	Tucson	90.26	57	*e*P	P	19 36 47.8	+1.9
	comp=Z,10nm,1.3s						
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	Tucson	90.26	57	*e*P	P	19 36 47.8	+1.9
TUC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s						
TUC	Tucson	90.26	57	P	P	19 36 46.7	+0.8
	baz=258						
MTPU	Mount Pierson	90.43	51	*e*P	P	19 36 49.1	+2.2
	comp=Z,14nm,1.0s						
DUG	Dugway, Tooele	90.46	49	*e*P	P	19 36 48.1	+1.4
	comp=Z,4.8nm,0.9s						
DUG				LR	LR		
	comp=Z,718nm,20.0s						
DUG	Dugway, Tooele	90.46	49	*e*P	P	19 36 48.1	+1.4
DUG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DUG				MLR	MLR		
	comp=Z,718nm,20.0s						
DUG	Dugway, Tooele	90.46	49	P	P	19 36 47.5	+0.8
	baz=256						
BGU	Big Grassy Mou	90.47	48	*e*P	P	19 36 47.5	+0.7
	comp=Z,7.1nm,1.0s						
WUAZ	Wupatki	90.49	54	*e*P	P	19 36 48.5	+1.6
	comp=Z,15nm,1.0s						
WUAZ				LR	LR		
	comp=Z,1µm,19.0s						
WUAZ	Wupatki	90.49	54	P	P	19 36 47.5	+0.5
	baz=257						
MSU	Marysvale	90.54	51	*e*P	P	19 36 48.7	+1.4
MSU	Marysvale	90.54	51	*e*P	P	19 36 48.7	+1.4
DGZ	Jazzator, Alta	90.78	321	*d i*P	P	19 36 47.1	-0.9
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NLU	North Lily Min	90.95	50	*e*P	P	19 36 50.4	+1.3
	comp=Z,11nm,1.1s						
MSO	Missoula	91.28	43	P	P	19 36 51.4	+1.1
	baz=256						
MPU	Maple Canyon	91.30	50	*e*P	P	19 36 52.1	+1.4
	comp=Z,21nm,1.5s						
CTU	Camp Tracy	91.36	49	*e*P	P	19 36 53.9	+2.9
	comp=Z,10nm,1.0s						
Q16A	Castle Valley	91.40	51	*e*P	P	19 36 53.6	+2.4
	comp=Z,11nm,1.1s						
TMUT	Trail Mountain	91.46	50	*e*P	P	19 36 54.8	+3.2
	comp=Z,14nm,1.0s						
MCMT	McKenzie Canyo	91.53	45	*e*P	P	19 36 53.3	+1.5
JLU	Jordanelle	91.56	49	*e*P	P	19 36 52.7	+0.8
	comp=Z,10nm,1.2s						
TCUT	Toone Canyon	91.71	49	*e*P	P	19 36 55.2	+2.6
	comp=Z,12nm,0.9s						
W18A	Petrified Fore	91.71	55	*e*P	P	19 36 55.0	+2.3
	comp=Z,14nm,0.9s						
W18A	Petrified Fore	91.71	55	P	P	19 36 53.1	+0.4
	baz=258						
DLMT	Dillon	91.83	44	*e*P	P	19 36 54.9	+1.9
	comp=Z,12nm,0.9s						
WALA	Waterton Lakes	91.85	40	*e*P	P	19 36 54.8	+1.8
	comp=Z,12nm,1.1s						
DGAR	Diego Garcia	91.86	262	PFAKE		19 37 00.0	+6.4
DGAR				LR	LR		
	comp=Z,688nm,19.0s						
SRU	San Rafael Swe	91.94	51	*e*P	P	19 36 58.1	+4.4
	comp=Z,7.6nm,1.2s						
SRU	San Rafael Swe	91.94	51	P	P	19 36 58.1	+4.4
SRU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SYO	Syowa Base	91.97	197⇑	*e*P	P	19 36 52.8	-0.1
LRM	Limekiln Ridge	92.04	44	*e*P	P	19 36 55.3	+1.2
AHID	Auburn Hatcher	92.30	47	PFAKE		19 37 10.0	+15
AHID				LR	LR		
	comp=Z,731nm,20.0s						
FXWY	Fox Creek	92.54	46	*e*P	P	19 36 58.2	+1.8
	comp=Z,8.5nm,1.3s						
BOZ	Bozeman (W)	92.55	44	*e*P	P	19 36 57.5	+1.2
	comp=Z,6.1nm,0.9s						
BOZ				LR	LR		
	comp=Z,1µm,20.0s						
BOZ	Bozeman (W)	92.55	44	*e*P	P	19 36 57.5	+1.2
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BOZ				MLR	MLR		
	comp=Z,1µm,20.0s						
BOZ	Bozeman (W)	92.55	44	P	P	19 36 57.3	+1.0
	baz=257						
IMW	Indian Meadow	92.66	46	*e*P	P	19 36 59.0	+2.0
	comp=Z,25nm,1.9s						
MOOW	Moose Ponds	92.76	46	*e*P	P	19 37 01.4	+4.0
	comp=Z,3.8nm,1.1s						
121A	Cookes Peak, D	92.79	58	P	P	19 36 58.7	+0.9
	baz=259						
LOHW	Long Hollow	92.83	46	*e*P	P	19 37 01.1	+3.3
	comp=Z,16nm,1.8s						
PV09	Paradox Valley	92.87	52	*e*P	P	19 37 01.9	+3.8
PV23	Carpenter Ridg	92.96	52	*e*P	P	19 37 01.7	+3.2
	comp=Z,9.3nm,0.9s						
H17A	Grant Village	93.02	46	*e*P	P	19 37 01.7	+3.1
	comp=Z,4.4nm,0.9s						
H17A	Grant Village	93.02	46	P	P	19 36 59.1	+0.4
	baz=258						
MVCO	Mesa Verde	93.11	53	PFAKE		19 37 10.0	+11
MVCO				LR	LR		
	comp=Z,908nm,19.0s						
MVCO	Mesa Verde	93.11	53	P	P	19 36 59.4	+0.2
	baz=259						
LKWY	Lake	93.18	45	PFAKE		19 37 10.0	+11
LKWY				LR	LR		
	comp=Z,1µm,20.0s						
MK01	Makanchi Array	93.40	317	*e*P	P	19 36 58.2	-1.8
BW06	Boulder Array	93.41	47	PFAKE		19 37 10.0	+10
BW06				LR	LR		
	comp=Z,593nm,20.0s						
PD31	Pinedale Array	93.41	47	*e*P	P	19 37 03.3	+2.9
PDAR	Pinedale Array	93.41	47	*e*P	P	19 36 59.6	-0.8
PDAR	Pinedale Array	93.41	47	P	P	19 36 59.1	-1.3
	comp=Z,2.2nm,0.9s,baz=177,slow=2.5,SNR=11						
MK31	Makanchi Array	93.41	317	*e*P	P	19 36 58.2	-1.9
MKAR	Makanchi Array	93.41	317	P	P	19 36 58.7	-1.4
	comp=Z,8.3nm,0.8s,baz=93,slow=5.9,SNR=28						
MKAR				PKKPbc	PKKPdf	19 54 06.4	-1.0
	comp=Z,1.5nm,0.8s,baz=271,slow=2.8,SNR=14						
ZAA0	Zalesovo Array	93.43	324	*e*P	P	19 36 58.8	-1.2
ZALV	Zalesovo Beam	93.43	324	*e*P	P	19 36 57.7	-2.2
ZALV	Zalesovo Beam	93.43	324	P	P	19 36 58.6	-1.3
	comp=Z,5.0nm,0.7s,baz=111,slow=3.5,SNR=18						
ZALV				LR	LR	20 15 54.2	
	comp=Z,803nm,21.7s,baz=78,slow=34						
MAKZ	Makanchi	93.62	317	*e*P	P	19 37 00.0	-1.0
	comp=Z,12nm,1.0s						
MAKZ	Makanchi	93.62	317	*e*P	P	19 37 00.0	-1.0
MAKZ				pmax	pmax		
	comp=Z,12nm,1.0s						
RLMT	Red Lodge	94.08	45	PFAKE		19 37 20.0	+17
RLMT				LR	LR		
	comp=Z,984nm,20.0s						
EGMT	Eagleton	94.31	42	PFAKE		19 37 20.0	+16
EGMT				LR	LR		
	comp=Z,718nm,20.0s						
ANMO	Albuquerque	94.32	55	*e*P	P	19 37 07.9	+3.1
	comp=Z,2.8nm,0.8s						
ANMO				LR	LR		
	comp=Z,987nm,19.0s						
ANMO	Albuquerque	94.32	55	*ce*P	P	19 37 06.2	+1.4
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANMO	Albuquerque	94.32	55	P	P	19 37 05.8	+1.0
	baz=260						
S22A	4UR Ranch, Cre	94.52	53	P	P	19 37 06.6	+0.9
	baz=260						
NVS	Novosibirsk	94.53	325	*e*P	P	19 37 04.4	-0.6
NVS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NVS				pmax	pmax		
	comp=N,5.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.8s						
MNTX	Cornudas Mount	94.64	59	*e*P	P	19 37 08.6	+2.5
	comp=E,7.7nm,1.4s						
MNTX				LR	LR		
	comp=Z,1µm,20.0s						
MNTX	Cornudas Mount	94.64	59	P	P	19 37 07.3	+1.2
	baz=260						
YKA	Yellowknife Ar	94.80	27	P	P	19 37 03.8	-2.2
	comp=Z,0.9nm,0.7s,baz=258,slow=4.5,SNR=11						
YKA				PKiKP	PKiKP	19 41 49.0	+0.9
	comp=Z,0.1nm,0.4s,baz=267,slow=1.1,SNR=4.3						
YKB5	Yellowknife Ar	94.80	27	*e*P	P	19 37 04.3	-1.7
SDCO	Great Sand Dun	95.55	53	PFAKE		19 37 20.0	+10

SDCO				LR	LR		
	comp=Z,897nm,20.0s						
SDCO	**Great Sand Dun**	**95.55**	**53**	P	**P**	**19 37 11.1**	**+0.7**
	baz=261						
TXAR	**Lajitas Array**	**95.72**	**61**	P	**P**	**19 37 10.3**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=234,slow=5.4,SNR=6.3						
TXAR				PP	**PP**	**19 41 05.8**	**+2.7**
	comp=Z,1.7nm,1.1s,baz=243,slow=5.5,SNR=6.4						
ISCO	**Idaho Springs**	**95.80**	**51**	PFAKE		19 37 20.0	+8.4
ISCO				LR	LR		
	comp=Z,1µm,20.0s						
PMSA	**Palmer Station**	**95.88**	**161**	PFAKE		19 37 20.0	+9.0
PMSA				LR	LR		
	comp=Z,1µm,19.0s						
NRIK	**Noril'sk**	**95.96**	**340**	P	**P**	**19 37 10.1**	**-1.1**
	comp=Z,2.9nm,0.4s,baz=122,slow=3.0,SNR=4.2						
LAO	**LASA Array**	**96.44**	**44**	PFAKE		19 37 30.0	+16
LAO				LR	LR		
	comp=Z,862nm,19.0s						
KURK	**Kurchatov**	**96.52**	**320**	PKKPbc	PKKPbc	19 54 00.3	+0.1
KURK				LR	LR		
	comp=Z,3µm,20.0s						
KURK	**Kurchatov**	**96.52**	**320**	*i* P	**P**	**19 37 15.6**	**+1.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**96.56**	**320**	PKKPbc	PKKPbc	19 54 00.3	+0.2
	comp=Z,1.5nm,0.8s,baz=279,slow=3.1,SNR=12						
NIL	**Nilore**	**98.01**	**303**	PFAKE		19 37 30.0	+8.6
NIL				LR	LR		
	comp=Z,441nm,20.0s						
DGMT	**Dagmar**	**98.05**	**42**	PFAKE		19 37 30.0	+8.8
DGMT				LR	LR		
	comp=Z,807nm,19.0s						
DGMT	**Dagmar**	**98.05**	**42**	P	Pdif	19 37 22.8	+1.5
	baz=263						
AAK	**Ala-Archa**	**98.20**	**312**	*e*P	Pdif	19 37 22.7	+0.5
	comp=Z,2.0nm,0.9s						
AAK				LR	LR		
	comp=Z,1µm,21.0s						
AAK	**Ala-Archa**	**98.20**	**312**	*e*P	Pdif	19 37 22.7	+0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK				MLR	MLR		
	comp=Z,1µm,21.0s						
AAK	**Ala-Archa**	**98.20**	**312**	P	**P**	**19 37 21.5**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=191,slow=2.3,SNR=7.0						
OGNE	**Ogallala**	**98.67**	**50**	PFAKE		19 37 40.0	+16
OGNE				LR	LR		
	comp=Z,1µm,19.0s						
JCT	**Junction City**	**99.20**	**61**	PFAKE		19 37 40.0	+13
JCT				LR	LR		
	comp=Z,1µm,20.0s						
FFC	**Flin Flon**	**100.07**	**36**	PFAKE		19 37 40.0	+10
FFC				LR	LR		
	comp=Z,1µm,19.0s						
CBKS	**Cedar Bluff**	**100.19**	**52**	PFAKE		19 37 40.0	+9.0
CBKS				LR	LR		
	comp=Z,1µm,19.0s						
KVTX	**Kingsville**	**100.50**	**64**	PFAKE		19 37 50.0	+17
KVTX				LR	LR		
	comp=Z,928nm,19.0s						
WMOK	**Wichita Mounta**	**100.54**	**57**	PFAKE		19 37 50.0	+17
WMOK				LR	LR		
	comp=Z,1µm,20.0s						
BVAR	**Borovoye Array**	**101.83**	**322**	P	**Pdif**	**19 37 36.7**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=74,slow=5.1,SNR=4.6						
BVAR				PP	**PP**	**19 41 49.7**	**+0.7**
	comp=Z,1.2nm,1.0s,baz=108,slow=9.5,SNR=4.8						
BVAR				PKKPbc	**PKKPbc**	**19 53 44.0**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=321,slow=2.1,SNR=4.1						
BRVK	**Borovoye**	**101.89**	**322**	PFAKE		19 37 50.0	+12
BRVK				LR	LR		
	comp=Z,1µm,19.0s						
KSU1	**Kansas State U**	**102.64**	**52**	PFAKE		19 37 50.0	+8.2
KSU1				LR	LR		
	comp=Z,1µm,20.0s						
ECSD	**EROS Data Cent**	**102.90**	**47**	PFAKE		19 38 00.0	+17
ECSD				LR	LR		
	comp=Z,976nm,19.0s						
AGMN	**Agassiz Nation**	**103.58**	**43**	PFAKE		19 38 00.0	+14
AGMN				LR	LR		
	comp=Z,880nm,19.0s						
NATX	**Nacogdoches**	**103.71**	**60**	PFAKE		19 38 00.0	+13
NATX				LR	LR		
	comp=Z,1µm,20.0s						
MIAR	**Mount Ida**	**104.80**	**57**	PFAKE		19 38 00.0	+8.5
MIAR				LR	LR		
	comp=Z,1µm,20.0s						
SCIA	**State Center**	**105.34**	**49**	PFAKE		19 42 20.0	+12
SCIA				LR	LR		
	comp=Z,1µm,20.0s						
W41B	**Gary Mavity, V**	**105.92**	**56**	PKiKP	**PKiKP**	**19 42 09.8**	**+0.9**
	baz=268						
EYMN	**Ely**	**106.51**	**43**	PFAKE		19 42 20.0	+10
EYMN				LR	LR		
	comp=Z,904nm,19.0s						
JFWS	**Jewell Farm**	**107.54**	**48**	PFAKE		19 42 20.0	+8.3
JFWS				LR	LR		
	comp=Z,898nm,21.0s						
COWI	**Conover**	**108.20**	**45**	PFAKE		19 42 30.0	+17
COWI				LR	LR		
	comp=Z,759nm,19.0s						
HDIL	**Hopedale**	**108.31**	**51**	PFAKE		19 42 30.0	+17
HDIL				LR	LR		
	comp=Z,1µm,21.0s						
ARU	**Arti**	**108.50**	**326**	PFAKE		19 42 30.0	+17
ARU				LR	LR		
	comp=Z,845nm,22.0s						
BRAL	**Brewton**	**110.18**	**61**	PFAKE		19 42 30.0	+13
BRAL				LR	LR		
	comp=Z,2µm,20.0s						
JTS	**JuntasAbangare**	**110.63**	**83**	PFAKE		19 42 30.0	+12
JTS				LR	LR		
	comp=Z,1µm,19.0s						
KBS	**Kingsbay**	**110.74**	**355**	PFAKE		19 42 30.0	+13
KBS				LR	LR		
	comp=Z,829nm,22.0s						
GLMI	**Grayling**	**111.48**	**46**	PFAKE		19 42 30.0	+11
GLMI				LR	LR		
	comp=Z,1µm,19.0s						
U50A	**Jamestown**	**111.94**	**55**	PKiKP	**PKiKP**	**19 42 20.5**	**+0.3**
	baz=273						
R50A	**Paris**	**112.25**	**53**	PKiKP	**PKiKP**	**19 42 21.2**	**+0.5**
	baz=274						
HOPE	**Hope Point**	**112.42**	**166**	PFAKE		19 42 30.0	+9.4
HOPE				LR	LR		
	comp=Z,498nm,19.0s						
AAM	**Ann Arbor**	**112.43**	**49**	PFAKE		19 42 30.0	+9.1
AAM				LR	LR		
	comp=Z,1µm,21.0s						
ABPO	**Ambohimpanom**	**112.55**	**244**	PFAKE		19 42 30.0	+7.9
ABPO				LR	LR		
	comp=Z,691nm,20.0s						
LCO	**Las Campanas**	**112.63**	**128**	PFAKE		19 42 30.0	+7.9
LCO				LR	LR		
	comp=Z,882nm,19.0s						
ACSO	**Alum Creek Sta**	**113.14**	**51**	PFAKE		19 42 30.0	+7.6
ACSO				LR	LR		
	comp=Z,2µm,19.0s						
GOGA	**Godfrey**	**113.19**	**58**	PFAKE		19 42 40.0	+17
GOGA				LR	LR		
	comp=Z,1µm,19.0s						
NNA	**Nana**	**113.79**	**108**	PFAKE		19 42 40.0	+16
NNA				LR	LR		
	comp=Z,353nm,20.0s						
TRQA	**Tornquist**	**113.98**	**140**	PFAKE		19 42 40.0	+16
TRQA				LR	LR		
	comp=Z,3.0nm,21.0s						
LVZ	**Lovozero**	**114.70**	**342**	PFAKE		19 42 40.0	+15
LVZ				LR	LR		
	comp=Z,753nm,21.0s						
758A	**Lake Helen**	**115.27**	**63**	PKiKP	**PKiKP**	**19 42 27.0**	**+0.3**
	baz=272						
OTAV	**Otavalo**	**115.33**	**95**	PFAKE		19 42 40.0	+12
OTAV				LR	LR		
	comp=Z,660nm,20.0s						
BLA	**Blacksburg**	**115.42**	**54**	PFAKE		19 42 40.0	+13
BLA				LR	LR		
	comp=Z,548nm,19.0s						
BCIP	**Isla Barro Col**	**115.47**	**85**	PFAKE		19 42 40.0	+12
BCIP				LR	LR		
	comp=Z,511nm,20.0s						
KEV	**Kevo**	**115.64**	**345**	PFAKE		19 42 40.0	+14
KEV				LR	LR		
	comp=Z,2µm,22.0s						
ALGO	**Algonquin Park**	**115.88**	**44**	PKiKP	**PKiKP**	**19 42 28.2**	**+0.7**
	baz=282						
LSQQ	**Lebel-sur-Quev**	**115.90**	**41**	PKiKP	**PKiKP**	**19 42 27.5**	**+0.1**
	baz=284						
NHSC	**New Hope**	**115.96**	**58**	PFAKE		19 42 40.0	+12
NHSC				LR	LR		
	comp=Z,2µm,20.0s						
ARCES	**ARCESS Array B**	**116.17**	**345**	PKP	**PKiKP**	**19 42 26.1**	**-1.2**
	comp=Z,2.7nm,0.7s,baz=73,slow=1.9,SNR=35						
ARCES				PKKPbc	**PKKPbc**	**19 52 59.0**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=116,slow=2.8,SNR=5.1						
O56A	**Blue Knob Stat**	**116.49**	**50**	PKiKP	**PKPdf**	**19 42 28.9**	**+0.1**
	baz=279						
D54A	**Lac Fusel, La**	**116.56**	**43**	PKiKP	**PKiKP**	**19 42 29.1**	**+0.4**
	baz=284						
KLMR	**Klimovskoe**	**116.60**	**334**	*e*PKIKP	**PKPdf**	**19 42 27.3**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KLMR	**Klimovskoe**	**116.60**	**334**	*e*PKPdf	**PKPdf**	**19 42 27.3**	**-1.0**
KLMR				AMP		19 42 35.3	
	comp=Z,9.0nm,1.4s						
LVC	**Limon Verde**	**116.94**	**122**	PFAKE		19 42 40.0	+9.3
LVC				LR	LR		
	comp=Z,644nm,20.0s						
CHGQ	**Chibougamau**	**117.32**	**39**	PKiKP	**PKPdf**	**19 42 29.8**	**-0.3**
	baz=287						
CNNC	**Cliffs of the**	**117.66**	**56**	PFAKE		19 42 40.0	+8.8
CNNC				LR	LR		
	comp=Z,437nm,19.0s						
CBN	**Corbin Frederi**	**117.70**	**53**	PFAKE		19 42 40.0	+8.8
CBN				LR	LR		
	comp=Z,918nm,20.0s						
MAK	**Makhachkala**	**117.95**	**313**	*i* PKIKP	PKPpre	19 42 26.4	
MAK				*e*		19 43 41.3	
MAK				pmax	pmax		
	comp=Z,37nm,0.7s						
LONY	**Lake Ozonia**	**118.56**	**45**	PKiKP	**PKiKP**	**19 42 33.2**	**+0.5**
	baz=284						
SFJD	**Kangerlussuaq**	**118.88**	**15**	PFAKE		19 42 40.0	+7.4
SFJD				LR	LR		
	comp=Z,772nm,20.0s						
VRH	**Novokhopyorsk**	**119.45**	**323**	*e*PKIKP	**PKPdf**	**19 42 32.0**	**-2.1**
VRH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VRH				MLR	MLR		
	comp=Z,700nm,17.0s						
SCHQ	**Schefferville**	**119.86**	**32**	PKP	**PKPdf**	**19 42 33.8**	**-1.1**
	comp=Z,4.2nm,0.9s,baz=0.0,slow=1.0,SNR=3.2						
LPAZ	**La Paz**	**120.23**	**116**	*e*PKPdf	**PKiKP**	**19 42 38.6**	**+1.1**
LPAZ	**La Paz**	**120.23**	**116**	PKP	**PKPdf**	**19 42 36.8**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=271,slow=2.8,SNR=8.6						
LPSR	**Galich'ya Gora**	**120.51**	**325**	*e*PKIKP	**PKPdf**	**19 42 35.9**	**-0.2**
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,1µm,21.0s						
GNI	**Garni**	**120.56**	**310**	PFAKE		19 42 50.0	+13
GNI				LR	LR		
	comp=Z,722nm,19.0s						
OBN	**Obninsk**	**120.67**	**329**	PFAKE		19 42 50.0	+14
OBN				LR	LR		
	comp=Z,691nm,19.0s						
VSR	**Storozhevoye**	**120.93**	**324**	*e*PKIKP	**PKPdf**	**19 42 34.9**	**-2.1**
VSR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KIV	**Kislovodsk**	**121.12**	**315**	PFAKE		19 42 50.0	+12
KIV				LR	LR		
	comp=Z,707nm,20.0s						
KIV	**Kislovodsk**	**121.12**	**315**	*i* PKIKP	**PKPdf**	**19 42 36.5**	**-1.2**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,775nm,23.0s						
FINES	**FINESS Array B**	**121.61**	**339**	PKP	**PKPdf**	**19 42 36.8**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=130,slow=3.0,SNR=9.1						
RAYN	**Ar Rayn**	**121.93**	**291**	PFAKE		19 42 50.0	+10
RAYN				LR	LR		
	comp=Z,749nm,21.0s						
PKME	**Peaks-Kenny Pk**	**121.99**	**43**	PFAKE		19 42 50.0	+11
PKME				LR	LR		
	comp=Z,1µm,19.0s						
PKME	**Peaks-Kenny Pk**	**121.99**	**43**	PKiKP	**PKiKP**	**19 42 39.7**	**+0.3**
	baz=289						
CPUP	**Villa Florida**	**124.12**	**132**	*e*PKPdf	**PKiKP**	**19 42 45.2**	**+1.0**
CPUP	**Villa Florida**	**124.12**	**132**	*e*PKIKP	**PKiKP**	**19 42 45.2**	**+1.0**
CPUP	**Villa Florida**	**124.12**	**132**	PKP	**PKiKP**	**19 42 44.4**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=289,slow=3.0,SNR=8.3						
SDV	**Santo Domingo**	**124.45**	**87**	*e*PKPdf	**PKiKP**	**19 42 46.4**	**+1.0**
SDV				LR	LR		
	comp=Z,405nm,21.0s						
SDDR	**Presa de Saban**	**124.47**	**74**	PFAKE		19 43 00.0	+15
SDDR				LR	LR		
	comp=Z,1µm,20.0s						
BOSA	**Boshof**	**125.27**	**223**	PKP	**PKPdf**	**19 42 46.5**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=114,slow=6.1,SNR=5.4						
IDID	**Didziasalis**	**125.29**	**333**	*e*P	**PKPdf**	**19 42 44.9**	**-0.3**
ISAL	**Salakas**	**125.40**	**333**	*e*P	**PKPdf**	**19 42 45.2**	**-0.2**
IIGN	**Ignalina**	**125.50**	**333**	*e*P	**PKPdf**	**19 42 45.4**	**-0.2**
SUR	**Sutherland**	**125.50**	**217**	PFAKE		19 43 00.0	+13
SUR				LR	LR		
	comp=Z,2µm,19.0s						
NB2	**NORSAR Subarra**	**126.54**	**345**	PKPdf	**PKPdf**	**19 42 46.7**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**126.54**	**345**	PKP	**PKPdf**	**19 42 46.5**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=34,slow=1.9,SNR=8.8						
AKASG	**Malin Array Be**	**126.73**	**327**	PKP	**PKPdf**	**19 42 47.3**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=59,slow=2.6,SNR=6.6						
KIEV	**Kiev**	**126.74**	**327**	*e*PKPdf	**PKPdf**	**19 42 48.0**	**-0.1**
KIEV				LR	LR		
	comp=Z,850nm,21.0s						
KIEV	**Kiev**	**126.74**	**327**	⇓*i*P	**PKiKP**	**19 42 48.6**	**0.0**
KIEV	**Kiev**	**126.74**	**327**	⇓PKIKP	**PKiKP**	**19 42 48.6**	**0.0**
KMBO	**Kilima Mbogo**	**127.45**	**260**	PFAKE		19 43 00.0	+8.5
KMBO				LR	LR		
	comp=Z,1µm,21.0s						
BRTR	**Keskin Array B**	**128.87**	**313**	PKP	**PKPdf**	**19 42 51.8**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=132,slow=1.8,SNR=6.2						
SJG	**San Juan**	**129.34**	**75**	PFAKE		19 43 10.0	+15
SJG				LR	LR		
	comp=Z,618nm,21.0s						
ANTO	**Ankara**	**129.42**	**313**	PFAKE		19 43 10.0	+16
ANTO				LR	LR		
	comp=Z,422nm,20.0s						
HUMP	**Col San Antoni**	**129.63**	**75**	*e*PKPdf	**PKPdf**	**19 42 55.0**	**+0.5**
BIZ	**Bicaz**	**130.51**	**324**	⇓*i*P	**PKiKP**	**19 42 56.9**	**+0.6**
LSZ	**Lusaka**	**130.61**	**239**	PKP	**PKPdf**	**19 42 57.1**	**+0.4**
LSZ				LR	LR		
	comp=Z,850nm,19.0s						
LSZ	**Lusaka**	**130.61**	**239**	PKIKP	**PKPdf**	**19 42 57.1**	**+0.4**
LSZ				MLR	MLR		
	comp=Z,850nm,19.0s						
LSZ	**Lusaka**	**130.61**	**239**	PKP	**PKPdf**	**19 42 57.1**	**+0.4**
	comp=Z,0.9nm,0.2s,baz=101,slow=5.2,SNR=2.6						
BUR04	**Bucovina Ar. S**	**130.63**	**326**	*e*PKPdf	**PKiKP**	**19 42 57.7**	**+1.0**
BURAR	**Bucovina Array**	**130.63**	**326**	⇓*i*P	**PKiKP**	**19 42 57.2**	**+0.5**
BURAR	**Bucovina Array**	**130.63**	**326**	⇓PKIKP	**PKiKP**	**19 42 57.2**	**+0.5**
UZH	**Uzhgorod**	**131.59**	**328**	*e*PKIKP	PKPpre	19 42 48.5	
UZH				*i*		19 43 04.0	
ARR	**Arges**	**132.23**	**323**	⇓*i*P	**PKiKP**	**19 43 01.9**	**+2.0**
TRIS	**Tristan da Cun**	**132.29**	**182**	PFAKE		19 43 10.0	+10
TRIS				LR	LR		
	comp=Z,1µm,20.0s						
DRGR		**132.50**	**326**	⇑*i*P	**PKiKP**	**19 43 01.3**	**+0.9**
DRGR		**132.50**	**326**	⇑PKIKP	**PKiKP**	**19 43 01.3**	**+0.9**
LANS	**Liptovska Anna**	**132.68**	**330**	*e*PKIKP	**PKiKP**	**19 43 02.3**	**+1.6**
LANS	**Liptovska Anna**	**132.68**	**330**	*e*PKP	**PKiKP**	**19 43 02.3**	**+1.6**
PTGA	**Pitinga**	**133.09**	**101**	PFAKE		19 43 10.0	+7.5
PTGA				LR	LR		
	comp=Z,12µm,20.0s						
MORC	**Moravsky Berou**	**133.16**	**332**	*e*PKP	**PKiKP**	**19 43 02.8**	**+1.2**
GZR	**Gura Zlata**	**133.29**	**324**	⇑*i*P	**PKiKP**	**19 43 03.2**	**+1.1**
GZR	**Gura Zlata**	**133.29**	**324**	⇑PKIKP	**PKiKP**	**19 43 03.2**	**+1.1**
VYHS	**Vyhne**	**133.43**	**330**	*e*PKIKP	**PKiKP**	**19 43 01.7**	**-0.5**
VYHS	**Vyhne**	**133.43**	**330**	*e*PKP	**PKiKP**	**19 43 01.7**	**-0.5**
ANWB	**Willy Bob**	**133.51**	**76**	PFAKE		19 43 10.0	+6.8
ANWB				LR	LR		
	comp=Z,640nm,20.0s						
GRGR	**Grenville**	**133.55**	**84**	PFAKE		19 43 10.0	+6.6
GRGR				LR	LR		
	comp=Z,530nm,22.0s						
MBAR	**Mbarara**	**133.88**	**259**	PFAKE		19 43 20.0	+16
MBAR				LR	LR		
	comp=Z,925nm,22.0s						
PVCC	**Panska Ves**	**133.92**	**335**	*e*PKPdf	**PKiKP**	**19 43 03.6**	**+0.5**
PVCC	**Panska Ves**	**133.92**	**335**	*e*PKIKP	**PKiKP**	**19 43 03.6**	**+0.5**
VRAC	**Vranov**	**133.93**	**332**	*e*PKP	**PKiKP**	**19 43 03.9**	**+0.7**
CLL	**Collm**	**133.95**	**336**	*e*PKPdf	**PKiKP**	**19 43 03.8**	**+0.7**
CLL	**Collm**	**133.95**	**336**	*i* PKPdf	**PKiKP**	**19 43 03.2**	**+0.1**
	comp=Z,8.0nm,1.1s						
CLL				*i* PKiKP	**PKPdf**	**19 43 05.6**	**+3.8**
	comp=Z,7.0nm,1.1s						
CLL	**Collm**	**133.95**	**336**	*e*PKIKP	**PKiKP**	**19 43 03.8**	**+0.7**
KRUC	**Moravsky**	**134.19**	**332**	*e*PKP	**PKiKP**	**19 43 04.2**	**+0.5**
MDVR	**Moldovita**	**134.26**	**324**	⇑*i*P	**PKiKP**	**19 43 04.1**	**+0.1**
MODS	**Modra-Piesok**	**134.27**	**331**	*e*PKIKP	**PKiKP**	**19 43 04.5**	**+0.6**
MODS	**Modra-Piesok**	**134.27**	**331**	*e*PKP	**PKiKP**	**19 43 04.5**	**+0.6**
VTS	**Vitosha**	**134.58**	**321**	⇑*i*P	**PKiKP**	**19 43 04.4**	**-0.5**
CONA	**Conrad Observa**	**135.25**	**331**	PKiKP	**PKPdf**	**19 43 05.3**	**+0.8**
	comp=Z,3.4nm,1.2s						
KHC	**Kasperske Hory**	**135.39**	**334**	*e*PKPdf	**PKiKP**	**19 43 05.9**	**-0.3**
KHC	**Kasperske Hory**	**135.39**	**334**	*e*PKPdf	**PKPdf**	**19 43 04.6**	**-0.1**
KHC				*e*pPKP	**pPKPdf**	**19 43 11.6**	**-1.7**
KHC	**Kasperske Hory**	**135.39**	**334**	*e*PKIKP	**PKPdf**	**19 43 04.6**	**-0.1**
KHC				*e*		19 43 11.6	
GERES	**GERESS Array B**	**135.56**	**334**	PKP	**PKPdf**	**19 43 05.5**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=52,slow=2.4,SNR=10						
ARSA	**Arzberg**	**135.90**	**331**	*e*PKPdf	**PKPdf**	**19 43 04.7**	**-0.9**
	comp=Z,2.7nm,1.1s						
MOA	**Molln**	**136.05**	**332**	*e*PKPdf	**PKPdf**	**19 43 03.9**	**-2.0**
	comp=Z,4.2nm,1.4s						
SOKA	**Soboth**	**136.54**	**331**	PKPdf	**PKPdf**	**19 43 06.8**	**-0.1**
	comp=Z,1.2nm,0.7s						
TSUM	**Tsumeb**	**136.69**	**227**	PKP	**PKiKP**	**19 43 09.2**	**-0.7**
TSUM				LR	LR		
	comp=Z,1µm,19.0s						
TSUM	**Tsumeb**	**136.69**	**227**	PKP	**PKiKP**	**19 43 09.2**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=97,slow=6.9,SNR=4.4						
BDFB	**Brasilia**	**137.42**	**128**	PKP	**PKPdf**	**19 43 09.7**	**+0.3**
	comp=Z,3.7nm,0.7s,baz=182,slow=2.3,SNR=5.1						
WATA	**Walderalm**	**137.63**	**334**	PKiKP	**PKPdf**	**19 43 09.7**	**+0.7**
	comp=Z,3.6nm,1.1s						
MOTA	**Moosalm**	**137.82**	**334**	PKiKP	**PKPdf**	**19 43 10.3**	**+0.9**
	comp=Z,4.1nm,0.9s						
SQTA	**Sankt Quirin**	**137.88**	**334**	*e*PKiKP	**PKiKP**	**19 43 10.7**	**-0.7**
	comp=Z,8.5nm,1.6s						
BFO	**Black Forest**	**138.15**	**337**	PFAKE		19 43 20.0	+8.2
BFO				LR	LR		
	comp=Z,28nm,20.0s						
FETA	**Feichten**	**138.24**	**334**	PKiKP	**PKPdf**	**19 43 10.9**	**+0.8**
	comp=Z,7.2nm,1.1s						
DAVA	**Damuels**	**138.38**	**335**	P	**PKiKP**	**19 43 14.8**	**+2.3**
	comp=Z,9.0nm,1.4s						
KEST	**Kesra**	**147.29**	**323**	PKPbc	**PKPbc**	**19 43 28.0**	**-0.7**
	comp=Z,18nm,0.9s,baz=306,slow=5.5,SNR=12						
PBRG	**Braganca**	**148.49**	**349**	*e*PKPdf	**PKPbc**	**19 43 32.5**	**+0.8**
POLO	**Lamas de Olo**	**149.09**	**351**	*e*PKPdf	**PKPbc**	**19 43 33.3**	**0.0**
MVO	**Moncorvo**	**149.16**	**349**	*e*PKPdf	**PKPbc**	**19 43 33.2**	**-0.2**
PVRL	**Vila Real**	**149.17**	**350**	*e*PKPdf	**PKPbc**	**19 43 33.7**	**+0.3**
PVIS	**Viseu**	**149.75**	**350**	*e*PKPdf	**PKPbc**	**19 43 34.9**	**0.0**
ESDC	**Sonseca Array**	**149.89**	**344**	PKPbc	**PKPbc**	**19 43 34.8**	**-0.5**
	comp=Z,6.5nm,0.9s,baz=8.3,slow=2.7,SNR=15						
MTE	**Manteigas**	**149.99**	**350**	*e*PKPdf	**PKPbc**	**19 43 34.3**	**-1.2**
PAB	**San Pablo**	**150.12**	**345**	*e*PKPbc	**PKPbc**	**19 43 35.9**	**0.0**
PAB				LR	LR		
	comp=Z,1µm,22.0s						
PAB	**San Pablo**	**150.12**	**345**	*e*PKP2	**PKPbc**	**19 43 35.9**	**0.0**
PAB				MLR	MLR		
	comp=Z,1µm,22.0s						
PCAS	**Casmilo, Conde**	**150.49**	**351**	*e*PKPdf	**PKPbc**	**19 43 36.6**	**0.0**
PCBR	**Castelo Branco**	**150.53**	**349**	*e*PKPdf	**PKPbc**	**19 43 36.5**	**-0.2**
PTOM	**Tomar**	**150.90**	**351**	*e*PKPdf	**PKPbc**	**19 43 37.9**	**+0.3**
PMRV	**Marv??o**	**150.91**	**349**	*e*PKPdf	**PKPbc**	**19 43 37.7**	**0.0**
PMTG	**Montargil**	**151.41**	**350**	*e*PKPdf	**PKPbc**	**19 43 38.7**	**-0.1**
PESTR	**Estremoz**	**151.49**	**349**	*e*PKPdf	**PKPbc**	**19 43 38.8**	**-0.2**
SHEL	**Horse Pasture**	**152.06**	**198**	PFAKE		19 43 50.0	-0.2
SHEL				LR	LR		
	comp=Z,656nm,19.0s						
PBEJ	**Beja**	**152.36**	**349**	*e*PKPdf	**PKPbc**	**19 43 39.6**	**-1.4**
MDT	**Midelt**	**156.43**	**339**	PKP	**PKPdf**	**19 43 39.9**	**-0.3**
	comp=Z,2.4nm,1.1s,baz=8.4,slow=5.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**164.26**	**280**	PKP	**PKPdf**	**19 43 48.6**	**-0.6**
	comp=Z,2.8nm,1.1s,baz=32,slow=1.9,SNR=8.4						
TORD				PKPab	**PKPab**	**19 44 42.6**	**-0.6**
	comp=Z,3.4nm,1.1s,baz=112,slow=5.0,SNR=5.0						
TORD				PP	**PP**	**19 48 22.1**	**-7.3**
	comp=Z,1.1nm,1.2s,baz=123,slow=9.7,SNR=5.4						
SACV	**Santiago Islan**	**169.98**	**65**	PFAKE		19 44 00.0	+6.6
SACV				LR	LR		
	comp=Z,374nm,19.0s						

IDC ***17*** *19:25:30.7±1.8, 7°.42S×27°.88E, h0^{km}, mb3.8/3, mb1 3.8/5, mb1mx3.5/37, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=34.8km s-min=29.6km az=122.0*

ISC 17 19:25:30.7±0.9**, 7°.39S**±0°.07×**28°.25E**±0°.07**, h8^{km}, n12,** σ**3^{s}.30**/14**, mb3.7**/3**, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**7.19**	**20**	Pn	**Pn**	**19 27 20.3**	**+3.9**
	0.9nm,0.3s,baz=240,slow=20,SNR=2.1						
MBAR				Sn	**Sn**	**19 28 35.1**	**-3.2**
	4.8nm,0.3s,baz=279,slow=21,SNR=3.6						
MBAR				Lg	Lg	19 29 14.0	
	8.2nm,0.3s,baz=286,slow=20,SNR=4.8						
LSZ	**Lusaka**	**7.84**	**180**	Sn	**Sn**	**19 28 50.8**	**-3.5**
	baz=58,slow=15						
LSZ				Lg	Lg	19 29 31.9	
	3.9nm,0.3s,baz=342,slow=19,SNR=3.5						
BBAT	**Babati**	**8.12**	**67**	*i* P	**Sn**	**19 29 00.4**	**-0.8**
BBAT				*i* S	**Sg**	**19 29 49.7**	**-1.7**
KIBA	**Kibaya**	**8.53**	**76**	*i* P	**Sn**	**19 29 08.2**	**-3.2**
KMBO	**Kilima Mbogo**	**10.92**	**56**	*i* P	**Pn**	**19 28 11.7**	**+4.0**
KMBO	**Kilima Mbogo**	**10.92**	**56**	Pn	**Pn**	**19 28 11.9**	**+4.3**
	0.7nm,0.3s,baz=231,slow=18,SNR=6.8						
KMBO				Sn	**Sn**	**19 30 07.5**	**-2.8**
	0.4nm,0.3s,baz=209,slow=19,SNR=2.8						
KMBO				Lg	Lg	19 31 18.2	
	1.0nm,0.3s,baz=353,slow=22,SNR=9.4						
BLWY	**Bulawayo**	**12.68**	**178**	*i* P	**Pn**	**19 28 35.7**	**+4.1**
MATP	**Matopo**	**12.96**	**179**	*i* P	**Pn**	**19 28 34.9**	**-0.6**
MATP	**Matopo**	**12.96**	**179**	Lg	Lg	19 32 19.6	
	0.5nm,0.3s,baz=75,slow=20,SNR=5.9						
BOSA	**Boshof**	**21.30**	**187**	P	**P**	**19 30 18.9**	**+0.9**
	2.3nm,0.7s,baz=7.8,slow=13,SNR=3.3						
TORD	**Torodi Ar. Bea**	**33.35**	**308**	P	**P**	**19 32 09.5**	**-0.2**
	0.4nm,0.4s,baz=135,slow=10,SNR=3.6						
DBIC	**Dimbokro**	**35.85**	**292**	P	**P**	**19 32 28.6**	**-2.8**
	2.1nm,0.8s,baz=111,slow=8.8,SNR=2.9						

TAP 17 19:28:24.6, 24°.68N×121°.98E, h58^{km}±1^{km}, ML1.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.14**	**238**	P	Pn	19 28 33.7	+0.3
	baz=235						
TWC				*e*S	Sn	19 28 40.2	+0.4
	baz=235						
EOS1	**EOS1**	**0.19**	**134**	*e*P	Pn	19 28 34.4	+0.7
	baz=133						
EOS1				*e*S	Sn	19 28 41.2	+1.0
	baz=133						
TWE	**Neicheng**	**0.29**	**278**	*e*P	Pn	19 28 35.0	+0.6
	baz=277						
TIPB	**Shuangxi**	**0.32**	**334**	P	Pn	19 28 35.0	+0.3
	baz=334						
TIPB				S	Sn	19 28 42.1	+0.1
	baz=334						
TWB1	**Santiao Chiao**	**0.33**	**2**	*e*P	Pn	19 28 34.4	-0.3
	baz=3.0						
NANB	**Nanao**	**0.33**	**219**	P	Pn	19 28 35.0	+0.3
	baz=219						
NANB				S	Sn	19 28 42.7	+0.7
	baz=219						
ENA	**Nanau**	**0.33**	**221**	P	Pn	19 28 35.0	+0.3
	baz=219						
ENA				S	Sn	19 28 42.6	+0.6
	baz=219						
ENTT	**Nioudou**	**0.38**	**264**	P	Pn	19 28 35.9	+0.7
	baz=263						
ENTT				*e*S	Sn	19 28 43.9	+1.1
	baz=263						
NDT	**Datong Townshi**	**0.43**	**260**	P	Pn	19 28 36.3	+0.7
	baz=259						
NWLT	**Wulai**	**0.44**	**282**	*e*P	Pn	19 28 36.5	+0.7
	baz=282						
TWA	**Mucha**	**0.47**	**310**	*e*P	Pn	19 28 36.4	+0.4
	baz=310						
NHDH	**Xindian Distri**	**0.50**	**304**	*e*P	Pn	19 28 36.9	+0.6
	baz=304						

YHNB	**Yeheng**	**0.55**	**269**	*e*P	Pn	19 28 37.6	+0.6
	baz=268						
YHNB				S	Sn	19 28 46.8	+0.8
	baz=268						
NSK	**Sanguang**	**0.56**	**270**	*e*P	Pn	19 28 37.2	+0.1
	baz=269						
NSK				*e*S	Sn	19 28 46.9	+0.6
	baz=269						
YM01	**YM01**	**0.59**	**321**	*e*P	Pn	19 28 37.5	0.0
	baz=321						
YM01				*e*S	Sn	19 28 46.2	-0.6
	baz=321						
NNSB	**Datong**	**0.60**	**245**	P	Pn	19 28 38.0	+0.4
	baz=244						
NNSB				S	Sn	19 28 47.7	+0.7
	baz=244						
NNS	**Nan Shan**	**0.60**	**247**	*e*P	Pn	19 28 37.9	+0.3
	baz=245						
NNS				S	Sn	19 28 47.8	+0.7
	baz=245						
YM11	**YM11**	**0.60**	**323**	*e*P	Pn	19 28 37.8	+0.2
	baz=322						
YM05	**YM05**	**0.61**	**322**	*e*P	Pn	19 28 37.8	+0.1
	baz=322						
NACB	**Ninganchiao**	**0.61**	**215**	*e*P	Pn	19 28 37.5	-0.2
	baz=214						
YM04	**YM04**	**0.62**	**320**	*e*P	Pn	19 28 38.1	+0.4
	baz=319						
ETLH	**Xiulin Townshi**	**0.65**	**224**	*e*P	Pn	19 28 38.3	+0.1
	baz=223						
WHP	**Taichung City**	**1.02**	**247**	*e*P	Pn	19 28 44.5	+1.6
	baz=246						
WHP				*e*S	Sn	19 28 57.8	+1.3
	baz=246						
OWD	**Renai**	**1.03**	**225**	*e*P	Pn	19 28 43.5	+0.4
	baz=225						
OWD				*e*S	Sn	19 28 56.4	-0.3
	baz=225						

TAP 17 19:28:30.7, 24°.86N×121°.62E, h101^{km}, ML2.0, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLBB	**Yuanshan**	**0.11**	**174**	*e*S	Sn	19 28 56.2	+0.7
	baz=174						
TWA	**Mucha**	**0.12**	**343**	P	Pn	19 28 45.1	+0.2
	baz=346						
TWA				S	Sn	19 28 55.6	+0.1
	baz=346						
TWA	**Mucha**	**0.12**	**343**	*e*S	Pn	19 28 45.1	+0.2
	baz=310						
NHDH	**Xindian Distri**	**0.13**	**318**	P	Pn	19 28 45.1	+0.2
	baz=318						
NHDH				S	Sn	19 28 55.5	0.0
	baz=318						
NHDH	**Xindian Distri**	**0.13**	**318**	*e*S	Pn	19 28 45.2	+0.3
	baz=304						
NWLT	**Wulai**	**0.14**	**232**	*e*P	Pn	19 28 45.1	+0.2
	baz=232						
NWLT				*e*S	Sn	19 28 55.2	-0.3
	baz=232						
NWLT	**Wulai**	**0.14**	**232**	*e*S	Pn	19 28 44.8	-0.1
	baz=282						
TWE	**Neicheng**	**0.15**	**164**	*e*P	Pn	19 28 45.4	+0.4
	baz=159						
TWE				*e*S	Sn	19 28 55.6	+0.2
	baz=159						
TATO	**Taipei**	**0.17**	**312**	*e*P	Pn	19 28 44.5	-0.4
	baz=313						
TATO				*e*S	Sn	19 28 55.8	+0.2
	baz=313						
TIPB	**Shuangxi**	**0.21**	**59**	*e*P	Pn	19 28 45.1	0.0
	baz=59						
TIPB				*e*S	Sn	19 28 55.8	-0.1
	baz=59						
ENTT	**Nioudou**	**0.23**	**193**	P	Pn	19 28 45.4	+0.1
	baz=191						
ENTT				S	Sn	19 28 55.9	-0.1
	baz=191						
NDT	**Datong Townshi**	**0.28**	**201**	*e*P	Pn	19 28 45.1	-0.2
	baz=201						
NDT				S	Sn	19 28 56.4	+0.1
	baz=201						
NDT	**Datong Townshi**	**0.28**	**201**	S	Pn	19 28 44.7	-0.7
	baz=259						
YM01	**YM01**	**0.29**	**350**	*e*P	Pn	19 28 45.5	0.0
	baz=350						
YM01				*e*S	Sn	19 28 56.7	+0.3
	baz=350						
YHNB	**Yeheng**	**0.30**	**229**	*e*P	Pn	19 28 45.4	-0.1
	baz=229						
YHNB				*e*S	Sn	19 28 56.5	-0.1
	baz=229						
NSK	**Sanguang**	**0.30**	**232**	*e*P	Pn	19 28 45.5	0.0
	baz=231						
NSK				S	Sn	19 28 56.5	-0.1
	baz=231						
YM05	**YM05**	**0.30**	**350**	*e*P	Pn	19 28 46.0	+0.4
	baz=350						
YM05				*e*S	Sn	19 28 56.5	-0.2
	baz=350						
TWB1	**Santiao Chiao**	**0.36**	**66**	*e*P	Pn	19 28 46.1	+0.4
	baz=67						
ENA	**Nanau**	**0.45**	**166**	*e*P	Pn	19 28 45.2	-1.1
	baz=165						
NANB	**Nanao**	**0.45**	**165**	*e*P	Pn	19 28 46.0	-0.3
	baz=165						
NANB				*i* S	Sn	19 28 58.0	+0.1
	baz=165						
NNS	**Nan Shan**	**0.48**	**208**	*e*P	Pn	19 28 47.0	+0.4
	baz=207						
NNS				*e*S	Sn	19 28 58.6	+0.1
	baz=207						
NNSB	**Datong**	**0.48**	**207**	*e*P	Pn	19 28 47.0	+0.3
	baz=206						
NNSB				*e*S	Sn	19 28 58.8	+0.2
	baz=206						
EOS1	**EOS1**	**0.56**	**124**	*e*P	Pn	19 28 46.1	-0.9
	baz=124						
EOS1				*e*S	Sn	19 29 01.0	+1.9
	baz=124						
LIOB	**Emei**	**0.59**	**249**	*e*P	Pn	19 28 47.0	-0.4
	baz=248						
LIOB				*e*S	Sn	19 28 59.7	-0.1
	baz=248						
NSTT	**Nanjuang**	**0.61**	**248**	*e*P	Pn	19 28 48.0	+0.5
	baz=247						
NSTT				*e*S	Sn	19 29 00.4	+0.3
	baz=247						
ETLH	**Xiulin Townshi**	**0.67**	**191**	*e*P	Pn	19 28 48.3	+0.2
	baz=191						
ETLH				S	Sn	19 29 01.2	+0.2
	baz=191						
ETLH	**Xiulin Townshi**	**0.67**	**191**	*e*S	Pn	19 28 48.2	+0.1
	baz=223						
NACB	**Ninganchiao**	**0.69**	**182**	*e*P	Pn	19 28 47.5	-0.6
	baz=182						
NACB				*e*S	Sn	19 29 00.8	-0.4
	baz=182						
NACB	**Ninganchiao**	**0.69**	**182**	*e*S	Pn	19 28 47.4	-0.7
	baz=214						
TYC	**Yuchr**	**1.18**	**216**	*e*P	Pn	19 28 53.8	+0.5
	baz=215						
SSLB	**Suanglung**	**1.23**	**210**	*e*P	Pn	19 28 54.3	+0.4
	baz=209						

IDC 17 19:29:23.0±1.9**, 10°.87S×166°.21E, h0^{km}, mb3.8**/3**, mb1 4.1**/4**, mb1mx3.6**/41**, mbtmp4.0**/4**, ML4.6**/1**, Error ellipse: s-maj=76.4km s-min=29.9km az=147.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.33**	**282**	Pn	Pn	19 30 57.8	+0.2
	14nm,0.3s,baz=141,slow=6.5,SNR=3.9						
WRA	**Warramunga Arr**	**31.97**	**250**	P	P	19 35 51.8	+0.8
	1.0nm,0.8s,baz=80,slow=8.6,SNR=3.7						
ASAR	**Alice Springs**	**33.27**	**243**	P	P	19 36 01.9	-0.6
	0.8nm,0.6s,baz=61,slow=11,SNR=7.2						
ILAR	**Eielson Array**	**83.20**	**18**	P	P	19 41 51.8	+0.9
	0.6nm,0.7s,baz=229,slow=6.0,SNR=5.8						
ARCES	**ARCESS Array B**	**116.28**	**346**	PKP	PKiKP	19 48 06.2	-1.7
	3.6nm,0.9s,baz=64,slow=2.8,SNR=5.6						

ISCJB ***17*** *19:29:24.5±0.8, 37°.21N±0°.05×72°.1E±0°.1, h250^{km}, Error ellipse: s-maj=14.4km s-min=5.0km az=161.4*

NNC ***17*** *19:29:28.5±2.5, 37°.52N×72°.11E, h244^{km}±20^{km}, mb2.7, mpv3.8, Error ellipse: s-maj=30.2km s-min=22.2km az=58.0*

ISC 17 19:29:26.0±1.4**, 37°.3N**±0°.1×**72°.1E**±0°.1**, h250^{km}, n29, σ1^{s}.51**/29**, 6C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**2.88**	**21**	⇑P	**Pn**	**19 30 17.7**	**+0.4**
	9.6nm,0.5s						
SFK				⇑S	**S**	**19 30 56.8**	**-1.3**
	67nm,0.3s						
AML	**Almayashu**	**4.94**	**14**	P	**Pn**	**19 30 42.4**	**+1.0**
	SNR=34						
MNAS	**Manas**	**5.15**	**3**	⇑P	**Pn**	**19 30 44.6**	**+0.9**
	9.3nm,0.5s						
MNAS				⇓S	**S**	**19 31 44.0**	**-1.7**
	15nm,0.4s						
UCH	**Uchtor**	**5.22**	**20**	P	**Pn**	**19 30 45.9**	**+1.1**
	SNR=16						
KZA	**Kyzart**	**5.31**	**26**	P	**Pn**	**19 30 46.6**	**+0.8**
	SNR=7.8						
EKS2	**Erkin-Say**	**5.47**	**13**	P	**Pn**	**19 30 49.0**	**+1.4**
	SNR=8.7						
AAK	**Ala-Archa**	**5.60**	**18**	P	**Pn**	**19 30 50.8**	**+1.6**
	SNR=10						
AAK	**Ala-Archa**	**5.60**	**18**	⇓P	**Pn**	**19 30 50.7**	**+1.5**
	6.6nm,0.4s						
AAK				⇓S	**S**	**19 31 56.3**	**+0.6**
	6.0nm,0.5s						
KBK	**Karagaybulak**	**5.74**	**21**	P	**Pn**	**19 30 52.9**	**+1.9**
	SNR=6.4						
ULHL	**Ulahol**	**5.84**	**32**	P	**Pn**	**19 30 53.6**	**+1.5**
	SNR=11						
KK31	**Karatay Array**	**5.89**	**348**	P	**Pn**	**19 30 53.1**	**+0.4**
	1.0nm,0.4s,baz=163,slow=11,SNR=16						
KK31				⇑S	**S**	**19 31 58.9**	**-3.2**
	3.0nm,0.3s,baz=165,slow=15,SNR=13						
CHMS	**Chumysh**	**6.00**	**19**	P	**Pn**	**19 30 55.3**	**+1.3**
	SNR=8.0						
TKM2	**Tokmak 2**	**6.18**	**24**	P	**Pn**	**19 30 58.0**	**+1.5**
	SNR=39						
TKM2	**Tokmak 2**	**6.18**	**24**	⇑P	**Pn**	**19 30 57.7**	**+1.2**
	17nm,0.7s						
MDOK	**Medeo**	**6.93**	**31**	P	**Pn**	**19 31 07.1**	**+1.3**
	6.6nm,0.6s						
MAKZ	**Makanchi**	**11.95**	**35**	⇓P	**Pn**	**19 32 07.6**	**-1.2**
	5.4nm,0.6s						
MK31	**Makanchi Array**	**12.09**	**35**	P	**Pn**	**19 32 06.8**	**-3.6**
	9.8nm,0.9s,baz=92,slow=6.3,SNR=63						
PYUN	**Piuthan**	**12.96**	**132**	*e*P	Pn	19 32 19.5	-2.2
	21nm,0.8s						
DANN	**Dangsing**	**13.25**	**129**	*e*P	Pn	19 32 23.4	-1.9
	5.3nm,0.3s						
KKN	**Kakani**	**14.60**	**127**	*e*P	P	19 32 40.3	-1.3
	6.6nm,0.5s						
DMN	**Daman**	**14.61**	**128**	*e*P	P	19 32 40.1	-1.7
PKIN	**Phulchoki**	**14.82**	**127**	*e*P	**P**	**19 32 43.7**	**-0.4**
	10.0nm,0.7s						
PKI	**Pulchoki**	**14.83**	**127**	*e*P	**P**	**19 32 43.5**	**-0.8**
	13nm,0.9s						
AB31	**Akbulak array**	**14.83**	**327**	P	**P**	**19 32 44.0**	**+0.3**
	0.3nm,0.5s,baz=135,slow=11,SNR=11						
GUN	**Gumba**	**14.90**	**125**	*e*P	**P**	**19 32 44.0**	**-1.1**
	13nm,0.5s						
JIRN	**Jiri**	**15.27**	**125**	*e*P	**P**	**19 32 48.8**	**-0.4**
	13nm,0.4s						
BVA0	**Borovoye Array**	**15.74**	**356**	⇑P	**Pn**	**19 32 56.4**	**+1.6**
	2.2nm,1.0s,baz=124,slow=5.9,SNR=5.8						
RAMN	**Ramite**	**16.02**	**126**	*e*P	**P**	**19 32 57.3**	**0.0**
	14nm,0.6s						
AKTO	**Aktyubinsk**	**16.55**	**327**	⇓P	**Pn**	**19 33 04.4**	**+0.1**
	2.4nm,0.9s						

IDC 17 19:29:58.0±4.0**, 9°.76S×164°.95E, h0^{km}, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.6**/40**, mbtmp3.8**/3**, Error ellipse: s-maj=239.2km s-min=31.1km az=139.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.22**	**248**	P	P	19 36 20.2	+0.7
	0.6nm,0.7s,baz=79,slow=9.3,SNR=2.4						
ASAR	**Alice Springs**	**32.70**	**241**	P	P	19 36 31.8	-0.7
	0.9nm,0.6s,baz=67,slow=9.7,SNR=5.3						
ILAR	**Eielson Array**	**82.55**	**19**	P	P	19 42 22.9	+0.4
	0.8nm,0.8s,baz=232,slow=5.4,SNR=5.3						
ARCES	**ARCESS Array B**	**114.89**	**345**	PKP	PKiKP	19 48 39.6	-0.7
	2.7nm,1.0s,baz=83,slow=2.8,SNR=4.4						

IDC 17 19:31:57.6±7.3**, 15°.87S×175°.31W, h0^{km}, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.6**/32**, mbtmp3.8**/3**, Error ellipse: s-maj=323.8km s-min=34.4km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.95**	**257**	P	P	19 40 37.7	-0.7
	0.5nm,0.8s,baz=93,slow=7.4,SNR=4.7						
ASAR	**Alice Springs**	**48.22**	**252**	P	P	19 40 40.8	+0.3
	1.9nm,0.5s,baz=90,slow=7.6,SNR=42						
ILAR	**Eielson Array**	**83.27**	**12**	P	P	19 44 25.7	0.0
	0.5nm,0.6s,baz=222,slow=5.4,SNR=12						

NEIC ***17*** *19:45:35.0±0.0, 16°.82N×93°.86W, h168^{km}, MD4.1(MEX), After MEX.*

MEX 17 19:45:35.0±1.0**, 16°.82N×93°.86W, h168^{km}**±11^{km}**, MD4.1, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**1.01**	**286**	*i* P	Pn	19 46 00.4	-1.2
CMIG				*i* S	Sn	19 46 20.2	-1.9
CMIG	**Matias Romero**	**1.01**	**286**	*i* P	Pn	19 46 00.4	-1.2
CMIG				*i* S	Sn	19 46 20.2	-1.9
PCIG		**1.27**	**151**	*e*P	Pn	19 46 03.0	-0.8
PCIG				*e*S	Sn	19 46 24.9	-1.2
PCIG		**1.27**	**151**	*e*P	Pn	19 46 03.0	-0.8
PCIG				*e*S	Sn	19 46 24.9	-1.2
TUIG	**Tuzandepetl**	**1.32**	**336**	*e*P	Pn	19 46 02.7	-1.6
TUIG				*i* S	Sn	19 46 24.3	-2.6
TUIG	**Tuzandepetl**	**1.32**	**336**	*e*P	Pn	19 46 02.7	-1.6
TUIG				*i* S	Sn	19 46 24.3	-2.6
CCIG	**Comitan**	**1.74**	**108**	*e*P	Pn	19 46 07.3	-1.3
CCIG				*i* S	Sn	19 46 31.8	-2.7
CCIG	**Comitan**	**1.74**	**108**	*e*P	Pn	19 46 07.3	-1.3
CCIG				*i* S	Sn	19 46 31.8	-2.7
HUIG	**Huatulco**	**2.40**	**244**	*e*P	Pn	19 46 12.9	-3.0
HUIG				*i* S	Sn	19 46 45.4	-2.1
HUIG	**Huatulco**	**2.40**	**244**	*e*P	Pn	19 46 12.9	-3.0
HUIG				*i* S	Sn	19 46 45.4	-2.1
VHO	**Vista Hermosa**	**2.76**	**276**	*e*P	Pn	19 46 19.9	-0.4
VHO				*i* S	Sn	19 46 53.6	-1.9
VHO	**Vista Hermosa**	**2.76**	**276**	*e*P	Pn	19 46 19.9	-0.4
VHO				*i* S	Sn	19 46 53.6	-1.9

IDC ***17*** *19:53:15.3±1.6, 10°.94S×165°.30E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.6/32, mbtmp3.7/6, ML4.2/2, MS3.9/1, Ms1 3.9/1, ms1mx3.2/22, Error ellipse: s-maj=40.1km s-min=29.2km az=129.0*

ISCJB ***17*** *19:53:17.9±1.2, 11°.1S±0°.1×165°.2E±0°.2, h30^{km}, mb3.5/4, Error ellipse: s-maj=25.6km s-min=18.0km az=149.7*

ISC 17 19:53:19.6±1.3**, 11°.0S**±0°.1×**165°.3E**±0°.2**, h30^{km}, n6, σ1^{s}.24**/6**, mb3.5**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.47**	**286**	Pn	**Pn**	**19 54 38.8**	**-0.3**
	7.3nm,0.3s,baz=126,slow=14,SNR=2.7						
DZM	**Mont Dzumac**	**11.06**	**174**	Pn	**Pn**	**19 55 55.4**	**-0.4**
	2.1nm,0.3s,baz=301,slow=9.2,SNR=17						
DZM				LR	LR	19 59 34.2	
	comp=Z,624nm,18.8s,baz=10,slow=34						
WRA	**Warramunga Arr**	**31.06**	**250**	P	**P**	**19 59 36.0**	**+0.8**
	0.3nm,0.7s,baz=83,slow=9.1,SNR=2.7						
ASAR	**Alice Springs**	**32.39**	**243**	P	**P**	**19 59 47.9**	**+0.9**
	0.4nm,0.7s,baz=63,slow=10,SNR=6.4						
ILAR	**Eielson Array**	**83.63**	**19**	P	**P**	**20 05 45.8**	**+1.0**
	0.2nm,0.5s,baz=234,slow=5.0,SNR=3.4						
MKAR	**Makanchi Array**	**93.18**	**317**	P	**P**	**20 06 29.6**	**-1.4**
	0.3nm,0.7s,baz=98,slow=5.1,SNR=2.7						

MEX 17 19:53:37.7±0.7**, 14°.58N×92°.85W, h67^{km}**±24^{km}**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.65**	**60**	*e*P	Pn	19 53 50.8	-1.1
THIG				*i* S	Sn	19 54 00.9	-1.4
PCIG		**1.18**	**342**	*i* P	Pn	19 53 57.4	-0.9
PCIG				*i* S	Sn	19 54 11.3	-2.5
CCIG	**Comitan**	**1.83**	**22**	*e*P	Pn	19 54 07.4	+0.2

IDC 17 20:06:50.1±1.7**, 10°.74S×165°.63E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.5**/44**, mbtmp3.7**/5**, ML4.2**/1**, Error ellipse: s-maj=52.4km s-min=30.7km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.29**	**176**	Pn	Pn	20 09 33.3	+0.3
	1.6nm,0.3s,baz=247,slow=11,SNR=9.9						
WRA	**Warramunga Arr**	**31.48**	**249**	P	P	20 13 14.3	+0.5
	0.4nm,0.6s,baz=82,slow=9.0,SNR=3.9						
ASAR	**Alice Springs**	**32.83**	**243**	P	P	20 13 25.1	-0.6
	0.8nm,0.8s,baz=65,slow=10,SNR=8.4						
ILAR	**Eielson Array**	**83.26**	**19**	P	P	20 19 18.2	-0.1
	0.2nm,0.8s,baz=239,slow=4.6,SNR=4.2						
MKAR	**Makanchi Array**	**93.22**	**317**	P	P	20 20 06.6	0.0
	0.2nm,0.7s,baz=108,slow=4.7,SNR=2.7						

BGR ***17*** *20:07:15.5±0.3, 49°.17N×8°.15E, h4^{km}, ML2.0/4, Error ellipse: s-maj=2.2km s-min=1.1km az=47.0*

STR ***17*** *20:07:15.6±0.4, 49°N±2°×°±°, h15^{km}±2^{km}, M2.5/7, MLv2.8/1, MLv2.2/7*

LDG ***17*** *20:07:15.5±0.0, 49°.16N×8°.12E, h4^{km}, Md2.9/2, Ml2.6/17, Error ellipse: s-maj=0.9km s-min=0.8km az=121.0*

PRU ***17*** *20:07:21.7±0.0, 49°.20N×8°.54E, h19^{km}*

ISC 17 20:07:15.3±0.9**, 49°.17N**±0°.01×**8°.13E**±0°.01**, h17^{km}**±3^{km}**, n83, σ1^{s}.44**/150**, 2C-3D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTD	**Kalmit**	**0.16**	**350**	Pg	**Pg**	**20 07 19.1**	**-0.5**
KTD	**Kalmit**	**0.16**	**350**	⇓P*	**Pg**	**20 07 19.1**	**-0.5**
KTD				S*	**Sg**	**20 07 21.7**	**-0.8**
LANF	**Langenberg**	**0.28**	**229**	Pg	**Pg**	**20 07 21.3**	**-0.1**
LANF	**Langenberg**	**0.28**	**229**	⇑P*	**Pg**	**20 07 21.3**	**-0.1**
LANF				S*	**Sg**	**20 07 25.6**	**0.0**
PEB	**Petersbachel**	**0.29**	**250**	⇑P*	**Pg**	**20 07 21.5**	**0.0**
PEB				S*	**Sg**	**20 07 25.9**	**+0.1**
BRET	**Bretten**	**0.40**	**112**	P*	**Pb**	**20 07 24.9**	**+1.1**
BRET				S*	**Sg**	**20 07 28.6**	**-0.5**
IMS	**Imsbach**	**0.45**	**341**	⇓P*	**Pg**	**20 07 24.4**	**0.0**
IMS				S*	**Sg**	**20 07 30.9**	**+0.2**
SWS	**Schriesheim-Wi**	**0.49**	**49**	P*	**Pb**	**20 07 26.7**	**+1.2**
SWS				S*	**Sn**	**20 07 34.7**	**-1.0**
TOD	**Tromm**	**0.62**	**45**	P*	**Pg**	**20 07 27.1**	**-0.5**
TOD				S*	**Sb**	**20 07 37.6**	**+1.4**
WBA	**Furth**	**0.67**	**42**	P*	**Pn**	**20 07 29.9**	**0.0**
LBG	**Lerchenberg**	**0.67**	**138**	P*	**Pg**	**20 07 28.1**	**-0.3**
LBG				PmP		20 07 29.8	
LBG				S*	**Sg**	**20 07 36.8**	**-0.5**
LBG				SmS		20 07 40.1	
OPP	**Oppenau**	**0.67**	**177**	Pg	**Pg**	**20 07 28.2**	**-0.3**
OPP	**Oppenau**	**0.67**	**177**	P*	**Pg**	**20 07 28.1**	**-0.3**
OPP				PmP		20 07 29.6	
OPP				SmS		20 07 40.0	
WBB	**Darmstadt**	**0.76**	**27**	P*	**Pn**	**20 07 32.0**	**+0.8**
STU	**Stuttgart**	**0.81**	**119**	*e*Sg	**Sg**	**20 07 41.1**	**-0.5**
ABH	**Alteburg**	**0.81**	**332**	Pg	**Pb**	**20 07 31.3**	**+0.4**
ABH	**Alteburg**	**0.81**	**332**	⇓P*	**Pb**	**20 07 31.3**	**+0.4**
ABH				PmP		20 07 32.8	
BFO	**Black Forest**	**0.85**	**171**	P*	**Pb**	**20 07 31.4**	**-0.1**
BFO				PmP		20 07 32.5	
BFO				*e*Sg	**Sg**	**20 07 43.0**	**+0.1**
BFO				SmS		20 07 44.8	
RUP	**Ruppelstein**	**0.88**	**308**	P*	**Pg**	**20 07 32.7**	**+0.3**
RUP				PmP		20 07 33.1	
WLS	**Welschbruch**	**0.91**	**215**	Pg	**Pb**	**20 07 33.2**	**+0.6**
WLS				Sg	**Sg**	**20 07 45.9**	**+1.0**
WLS	**Welschbruch**	**0.91**	**215**	P*	**Pb**	**20 07 33.1**	**+0.6**
WLS				PmP		20 07 33.8	
WLS				S*	**Sg**	**20 07 45.8**	**+0.9**
DUP	**Duppenweiler**	**0.91**	**286**	PmP		20 07 34.3	
DUP				SmS		20 07 47.8	
CDF	**Champ du Feu**	**0.94**	**217**	*e*Pg	**Pb**	**20 07 33.0**	**-0.1**
CDF	**Champ du Feu**	**0.94**	**217**	*e*P	**Pn**	**20 07 34.9**	**+1.1**
CDF				*e*Sg	**Sb**	**20 07 45.1**	**-0.2**
CDF				*e*Sn	**Sg**	**20 07 46.7**	**+0.8**
	12nm,0.2s						
SIND	**Sindeldorf**	**0.99**	**79**	P*	**Pb**	**20 07 33.5**	**-0.4**
SIND				PmP		20 07 34.4	
SIND				SmS		20 07 48.3	
RIVT	**Riveris**	**1.04**	**302**	P*	**Pb**	**20 07 35.6**	**+0.8**
RIVT				PmP		20 07 36.3	
TNS	**Taunus Mts**	**1.08**	**11**	P	**Pb**	**20 07 35.5**	**0.0**
TNS				PmP		20 07 36.5	
TNS				Sg	**Sn**	**20 07 51.1**	**+0.9**
BUCH	**Bad Urach**	**1.08**	**131**	Pg	**Pn**	**20 07 36.2**	**+0.6**
BUCH				SmS		20 07 51.3	
FSH	**Hochheid**	**1.13**	**324**	P	**Pn**	**20 07 37.0**	**+0.7**
FSH				Pg	**Pg**	**20 07 37.4**	**+0.3**
FSH				Sg	**Sn**	**20 07 52.5**	**+1.2**
ECH	**Echery**	**1.15**	**214**	P	**Pn**	**20 07 36.0**	**-0.5**
ECH				Pg	**Pb**	**20 07 37.5**	**+0.9**
ECH				S	**Sb**	**20 07 51.7**	**+0.5**
FACH	**Fachingen**	**1.20**	**356**	P	**Pb**	**20 07 37.9**	**+0.5**
FACH				Pg	**Pg**	**20 07 39.0**	**+0.6**
FACH				Sg	**Sg**	**20 07 54.7**	**+0.7**
KIZ	**Kirchzarten**	**1.22**	**187**	Pn	**Pn**	**20 07 37.4**	**-0.1**
KIZ	**Kirchzarten**	**1.22**	**187**	Pg	**Pn**	**20 07 38.4**	**+0.9**
KIZ				S	**Sb**	**20 07 52.7**	**-0.5**
KIZ				Sg	**Sn**	**20 07 54.9**	**+1.4**
GWBC	**Aumenau**	**1.23**	**4**	Pg	**Pg**	**20 07 39.9**	**+0.8**
GUT	**Gutenstein**	**1.28**	**149**	Pg	**Pb**	**20 07 39.8**	**+0.9**
GUT				Sg	**Sg**	**20 07 56.6**	**0.0**
BERGE	**Lenzkirch (DE)**	**1.29**	**178**	P	**Pn**	**20 07 38.3**	**-0.3**
BERGE				Sg	**Sg**	**20 07 57.4**	**+0.2**
WLF	**Walferdange**	**1.38**	**292**	Pg	**Pb**	**20 07 41.8**	**+1.2**
WLF				Sg	**Sg**	**20 08 00.3**	**+0.3**
SLE	**Schleitheim**	**1.42**	**170**	P	**Pn**	**20 07 40.1**	**-0.3**
SLE				Pg	**Pb**	**20 07 42.4**	**+1.1**
SLE				S	**Sn**	**20 07 57.6**	**-1.0**
MOF	**Molkenrain**	**1.47**	**207**	Pg	**Pb**	**20 07 42.9**	**+0.7**
MOF				Sg	**Sb**	**20 08 02.6**	**+2.0**
ENDD	**Endenburg**	**1.47**	**190**	P	**Pn**	**20 07 40.3**	**-0.8**
ENDD				Sg	**Sb**	**20 08 02.5**	**+1.9**
HDH	**Heidenheim-Cha**	**1.49**	**112**	Pg	**Pb**	**20 07 43.4**	**+0.9**
HDH				Sg	**Sg**	**20 08 02.8**	**-0.6**
BIW	**Bindweide**	**1.58**	**353**	Pg	**Pb**	**20 07 44.7**	**+0.7**
SISB	**Singen-Schiene**	**1.58**	**159**	Pg	**Pg**	**20 07 45.8**	**+0.1**
SISB				Sg	**Sg**	**20 08 06.0**	**-0.3**
HINF	**Hinteralfeld**	**1.59**	**213**	*e*Pn	**Pn**	**20 07 41.9**	**-0.8**
HINF	**Hinteralfeld**	**1.59**	**213**	*e*Pg	**Pb**	**20 07 44.6**	**+0.4**
HINF				*e*Sn	**Sn**	**20 08 02.2**	**-0.7**
HINF				*e*Sg	**Sb**	**20 08 05.9**	**+1.8**
	10nm,0.2s						
HAU	**Haudompre**	**1.66**	**226**	*e*Pn	**Pn**	**20 07 43.3**	**-0.2**
HAU	**Haudompre**	**1.66**	**226**	*e*Pg	**Pb**	**20 07 46.4**	**+1.1**
HAU				*e*Sn	**Sn**	**20 08 03.5**	**-0.9**
HAU				*e*Sg	**Sb**	**20 08 07.8**	**+1.9**
	31nm,0.4s						
PAGF	**Fort de Pagny**	**1.70**	**250**	*e*Pn	**Pn**	**20 07 44.1**	**0.0**
PAGF	**Fort de Pagny**	**1.70**	**250**	*e*P	**Pb**	**20 07 46.1**	**+0.1**
PAGF	**Fort de Pagny**	**1.70**	**250**	*e*Pg	**Pb**	**20 07 47.3**	**+1.3**
	baz=68						
PAGF				*e*Sg	**Sb**	**20 08 08.3**	**+1.2**
	13nm,0.3s						
THEF	**They Montfort**	**1.70**	**237**	Pn	**Pn**	**20 07 42.7**	**-1.4**
THEF				Pg	**Pb**	**20 07 46.8**	**+0.8**
THEF	**They Montfort**	**1.70**	**237**	Pg	**Pb**	**20 07 47.1**	**+1.0**
THEF				Sg	**Sb**	**20 08 09.1**	**+2.0**
LOMF	**Lomont**	**2.01**	**206**	Pg	**Pg**	**20 07 53.7**	**-0.2**
GRF	**Grafenberg Arr**	**2.09**	**74**	Pg	**Pg**	**20 07 54.6**	**-0.7**
MEZF	**Maizieres J'vi**	**2.14**	**253**	*e*Pn	**Pn**	**20 07 50.2**	**+0.1**
	baz=70						
MEZF				*e*Sn	**Sn**	**20 08 14.8**	**-1.4**
MEZF				*e*Sg	**Sb**	**20 08 22.2**	**+2.5**
	1.8nm,0.2s,baz=68						

SFTF	Sexfontaines	2.26	246	ePn	Pn	20 07 51.8	0.0
SFTF	Sexfontaines	2.26	246	ePg	Pb	20 07 57.1	+1.5
	baz=64						
SFTF				eSn	Sn	20 08 18.3	-1.0
	baz=62						
SFTF				eSg	Sb	20 08 26.6	+3.4
	8.0nm,0.2s,baz=66						
GIVF	Givet	2.34	295	ePn	Pn	20 07 52.9	-0.1
GIVF	Givet	2.34	295	ePg	Pb	20 07 58.8	+1.8
GIVF				eSn	Sn	20 08 19.8	-1.5
	3.1nm,0.2s						
GIVF				eSg	Sg	20 08 29.4	-1.2
	7.1nm,0.4s						
RETA	Reutte	2.43	133	Pg	Pg	20 08 01.8	-0.1
	0.5nm,0.2s						
RETA				Sg	Sg	20 08 33.0	-0.5
	0.8nm,0.2s						
MOTA	Moosalm	2.70	131	ePn	Pn	20 07 59.8	+1.8
	0.2nm,0.1s						
MOTA				ePg	Pg	20 08 06.6	-0.4
	0.7nm,0.3s						
BAIF	Baives	2.70	291	ePn	Pn	20 07 57.2	-0.7
BAIF	Baives	2.70	291	ePg	Pb	20 08 05.4	+2.3
BAIF				eSn	Sn	20 08 28.3	-1.8
BAIF				eSg	Sg	20 08 40.0	-2.0
	3.5nm,0.2s						
FETA	Feichten	2.77	140	Sg	Sg	20 08 43.9	-0.2
	0.5nm,0.3s						
SQTA	Sankt Quirin	2.83	132	Pn	Pn	20 08 02.9	+3.0
	0.2nm,0.3s						
SQTA				Pg	Pg	20 08 08.8	-0.8
	1.3nm,0.2s						
SQTA				Sn	Sn	20 08 34.1	+0.5
	0.9nm,0.2s						
SQTA				Sg	Sg	20 08 46.4	0.0
	0.7nm,0.3s						
CABF	La Chapelle	2.90	209	ePn	Pn	20 08 00.3	-0.4
CABF	La Chapelle	2.90	209	ePg	Pb	20 08 09.1	+2.5
CABF				eSn	Sn	20 08 34.6	-0.6
CABF				eSg	Sg	20 08 46.6	-1.8
	1.0nm,0.2s						
WATA	Walderalm	2.94	127	ePn	Pn	20 08 03.9	+2.6
	0.3nm,0.2s						
NKC	Novy Kostel	3.00	67	ePG	Pg	20 08 11.4	-1.4
NKC				eSG	Sg	20 08 48.9	-2.8
	comp=Z,6.1nm,0.3s						
LOR	Lormes	3.43	238	ePn	Pn	20 08 06.9	-1.0
	baz=56						
LOR	Lormes	3.43	238	ePg	Pb	20 08 18.6	+3.1
	baz=57						
LOR				eSn	Sn	20 08 46.2	-1.9
	baz=58						
LOR				eSg	Sg	20 09 03.2	-2.1
	3.5nm,0.2s,baz=56						
KHC	Kasperske Hory	3.58	88	ePN	Pn	20 08 12.0	+2.0
KHC				ePG	Pg	20 08 21.7	-2.1
KHC				eSN	Sn	20 08 51.2	-0.6
KHC				eSG	Sg	20 09 06.4	-3.7
SSF	Saint Saulge	3.74	238	ePn	Pn	20 08 11.6	-0.6
SSF	Saint Saulge	3.74	238	ePg	Pb	20 08 24.1	+3.2
SSF				eSn	Sn	20 08 54.2	-1.6
SSF				eSg	Sg	20 09 12.8	-2.6
	2.7nm,0.3s						
CLL	Collm	3.79	54	ePg	Pg	20 08 27.0	-0.9
CLL				eSg	Sg	20 09 15.0	-2.0
	comp=Z,3.0nm,0.9s						
SMF	Signal de Mont	3.83	230	ePn	Pn	20 08 12.3	-1.1
SMF	Signal de Mont	3.83	230	ePg	Pb	20 08 25.7	+3.4
SMF				eSn	Sn	20 08 56.3	-1.7
SMF				eSg	Sg	20 09 15.3	-2.9
	comp=Z,2.8nm,0.2s						
AVF	Avril sur Loir	3.99	235	ePn	Pn	20 08 14.7	-0.9
AVF	Avril sur Loir	3.99	235	ePg	Pb	20 08 28.4	+3.3
AVF				eSn	Sn	20 08 59.9	-2.0
AVF				eSg	Sg	20 09 20.6	-2.7
	comp=Z,0.9nm,0.2s						
BRG	Berggiesshubel	4.12	63	SG	Sg	20 09 28.2	+0.6
	comp=Z,2.1nm,0.6s						
BGF	Bois d'Agland	4.41	236	ePn	Pn	20 08 20.7	-0.6
BGF	Bois d'Agland	4.41	236	ePg	Pb	20 08 36.3	+4.1
BGF				eSn	Sn	20 09 09.8	-2.4
BGF				eSg	Sg	20 09 33.8	-2.9
	comp=Z,11nm,0.5s						
TCF	Toulx Ste Croi	4.92	236	ePg	Pb	20 08 46.0	+5.0
TCF				eSg	Sg	20 09 49.5	-3.7
	comp=Z,1.3nm,0.3s						

IDC 17 20:16:30.6±1.2, 5°.62S×151°.13E, h0^{km}, mb3.5/6, mb1 3.8/6, mb1mx3.6/32, mbtmp3.6/6, Error ellipse: s-maj=45.9km s-min=22.5km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.66	227	P	P	20 21 23.1	+0.1
	1.5nm,0.5s,baz=51,slow=10,SNR=24						
ASAR	Alice Springs	24.43	221	P	P	20 21 52.0	+0.7
	0.9nm,0.6s,baz=54,slow=9.0,SNR=18						
FITZ	Fitzroy Crossi	27.80	241	P	P	20 22 21.1	-0.7
	0.6nm,0.3s,baz=65,slow=7.6,SNR=9.1						
SONM	Songino Array	66.14	329	P	P	20 27 20.6	+0.6
	0.3nm,0.8s,baz=117,slow=8.4,SNR=2.8						
MKAR	Makanchi Array	79.85	319	P	P	20 28 41.1	-0.1
	0.2nm,0.8s,baz=119,slow=8.4,SNR=2.2						
ILAR	Eielson Array	83.54	22	P	P	20 29 00.2	-0.1
	0.2nm,0.6s,baz=239,slow=5.7,SNR=4.0						
TORD	Torodi Ar. Bea	148.95	286	PKPbc	PKPbc	20 36 20.3	-1.4
	0.7nm,0.7s,baz=64,slow=3.4,SNR=4.7						
BDFB	Brasilia	151.62	138	PKPbc	PKPbc	20 36 28.1	-0.1
	1.9nm,0.5s,baz=197,slow=2.3,SNR=6.5						

IDC 17 20:19:48.6±1.4, 10°.74S×165°.67E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.8/35, mbtmp3.9/7, ML4.2/1, Error ellipse: s-maj=46.7km s-min=25.8km az=125.0

ISCJB 17 20:19:51.7±1.1, 10°.9S±0°.1×165°.7E±0°.2, h31^{km}, mb3.7/6, Error ellipse: s-maj=28.3km s-min=18.1km az=1.2

ISC 17 20:19:53.4±1.1, 10°.8S±0°.1×165°.7E±0°.2, h31^{km}, n11, σ0^{s}.60/8, mb3.8/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.23	176	Pn	Pn	20 22 31.9	+0.1
	1.8nm,0.3s,baz=318,slow=19,SNR=11						
H11S2	WAKE ISLAND Hy	29.13	2	T	T	20 56 18.1	
	baz=181,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.13	2	T	T	20 56 18.3	
	baz=181,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	29.14	2	T	T	20 56 17.9	
	baz=181,slow=76,SNR=14						
WRA	Warramunga Arr	31.51	249	P	P	20 26 12.1	-0.8
	0.8nm,0.6s,baz=81,slow=9.1,SNR=6.4						
ASAR	Alice Springs	32.85	243	P	P	20 26 24.6	0.0
	1.2nm,0.8s,baz=64,slow=10,SNR=9.6						
FITZ	Fitzroy Crossi	39.39	255	P	P	20 27 20.8	+0.2
	1.6nm,0.8s,baz=104,slow=6.5,SNR=3.7						
SONM	Songino Array	78.44	324	P	P	20 31 51.4	0.0
	0.2nm,0.7s,baz=118,slow=6.2,SNR=2.9						
ILAR	Eielson Array	83.31	19	P	P	20 32 17.1	+0.3
	0.7nm,0.8s,baz=221,slow=7.6,SNR=6.2						
MKAR	Makanchi Array	93.31	317	P	P	20 33 05.6	+0.2
	0.5nm,0.8s,baz=98,slow=5.8,SNR=4.6						
ARCES	ARCESS Array B	116.09	345	PKP	PKiKP	20 38 31.9	-1.0
	3.7nm,1.0s,baz=69,slow=4.9,SNR=3.6						

IDC 17 20:23:08.1±1.6, 11°.18S×165°.36E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.7/34, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=50.4km s-min=30.2km az=123.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.88	175	Pn	Pn	20 25 45.0	-0.2
	1.1nm,0.3s,baz=334,slow=19,SNR=11						
WRA	Warramunga Arr	31.08	250	P	P	20 29 28.2	0.0
	1.4nm,0.9s,baz=81,slow=9.5,SNR=8.1						
ASAR	Alice Springs	32.39	243	P	P	20 29 39.5	-0.3
	0.5nm,0.8s,baz=62,slow=9.8,SNR=4.0						
ILAR	Eielson Array	83.76	19	P	P	20 35 38.5	-0.3
	0.5nm,0.7s,baz=240,slow=5.4,SNR=7.0						
MKAR	Makanchi Array	93.36	317	P	P	20 36 25.8	+0.6
	0.5nm,1.1s,baz=111,slow=7.9,SNR=2.0						

IDC 17 20:27:25.5±3.4, 4°.20S×135°.38E, h0^{km}, mb3.4/1, mb1 3.4/3, mb1mx3.2/25, mbtmp3.2/3, ML2.9/2, Error ellipse: s-maj=154.1km s-min=30.9km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.69	184	Pn	Pn	20 31 06.4	-1.6
	0.0nm,0.3s,baz=2.9,slow=13,SNR=5.1						
ASAR	Alice Springs	19.41	184	P	Pn	20 31 54.1	-0.4
	0.1nm,0.3s,baz=4.3,slow=10,SNR=10.0						
MKAR	Makanchi Array	68.98	324	P	P	20 38 32.8	0.0
	0.1nm,0.5s,baz=119,slow=8.4,SNR=2.5						

ISCJB 17 20:52:32.6±0.3, 67°.68N±0°.04×142°.0E±0°.1, h10^{km}, mb4.0/24, MS3.3/2, Error ellipse: s-maj=6.4km s-min=5.8km az=22.4

IDC 17 20:52:33.4±0.6, 67°.78N×141°.66E, h0^{km}, mb3.9/19, mb1 4.1/23, mb1mx4.0/46, mbtmp3.9/23, ML3.3/4, MS3.3/2, Ms1 3.4/2, ms1mx2.8/48, Error ellipse: s-maj=15.7km s-min=12.6km az=174.0

MOS 17 20:52:33.6±0.9, 67°.64N×142°.62E, h15^{km}, mb4.5/2, Error ellipse: s-maj=20.7km s-min=9.0km az=90.2

YARS 17 20:52:34.6, 67°.61N×142°.62E, h16^{km}

NEIC 17 20:52:34.7±0.3, 67°.79N×141°.64E, h10^{km}, mb4.1/2, Error ellipse: s-maj=9.0km s-min=7.3km az=184.0

ISC 17 20:52:34.2±0.4, 67°.68N±0°.04×141°.95E±0°.04, h10^{km}, n58, σ1^{s}.69/77, mb4.2/34, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.32	157	P	Pn	20 52 56.9	-1.7
MOMR						20 53 12.3	
MOMR				pmax	pmax		
	comp=Z,184nm,0.3s						
MOMR				smax	smax		
	comp=N,5µm,0.7s						
MOMR	Moma	1.32	157	ePg	Pn	20 52 56.9	-1.7
MOMR				ePg	Pn	20 52 56.9	-1.7
MOMR				ePg	Pn	20 52 56.9	-1.7
	comp=N,184nm,0.3s						
MOMR				eSg	Sb	20 53 12.3	-3.6
MOMR				eSg	Sb	20 53 12.3	-3.6
	comp=N,5µm,0.7s						
MOMR				eSg	Sb	20 53 12.3	-3.6
	comp=N,3µm,0.6s						
YBGR	Belaya Gora	1.81	60	ePg	Pn	20 53 04.4	-0.9
	comp=N,1µm,0.4s						
YBGR				ePg	Pn	20 53 04.4	-0.9
YBGR				ePg	Pn	20 53 04.4	-0.9
YBGR				eSg	Sn	20 53 25.5	-2.7
	comp=N,2µm,0.4s						
YBGR				eSg	Sn	20 53 25.5	-2.7
YBGR				eSg	Sn	20 53 25.5	-2.7
	comp=N,6µm,0.5s						
ATKR	Artyk	3.75	158	P	Pb	20 53 40.1	-0.3
ATKR						20 54 27.4	
ATKR				pmax	pmax		
	comp=Z,87nm,0.5s						
ATKR				smax	smax		
	comp=N,1µm,0.6s						
ATKR	Artyk	3.75	158	ePg	Pb	20 53 40.1	-0.3
ATKR				ePg	Pb	20 53 40.1	-0.3
	comp=N,87nm,0.5s						
ATKR				ePg	Pb	20 53 40.1	-0.3
ATKR				eSg	Sb	20 54 27.4	+1.5
ATKR				eSg	Sb	20 54 27.4	+1.5
	comp=N,1µm,0.6s						
ATKR				eSg	Sb	20 54 27.4	+1.5
	comp=N,1µm,0.8s						
SEY	Seymchan	6.46	133	Pn	Pn	20 54 12.1	+2.9
	comp=N,0.5nm,0.3s,baz=308,slow=22,SNR=5.1						
SEY				Pg	Pb	20 54 20.2	-6.4
	comp=N,0.6nm,0.3s,baz=302,slow=13,SNR=9.4						
SEY				Lg	Lg	20 55 55.4	
	comp=N,2.1nm,0.3s,baz=330,slow=6.3,SNR=9.0						
YAK	Yakutsk	7.70	228	eP	Pn	20 54 28.4	+2.2
YAK				e		20 55 52.6	
YAK				pmax	pmax		
	comp=Z,19nm,0.6s						
YAK				smax	smax		
	comp=N,231nm,0.6s						
YAK				smax	smax		
	comp=E,174nm,0.6s						
YAK	Yakutsk	7.70	228	ePg	Pg	20 54 56.8	-4.6
YAK				ePg	Pg	20 54 56.8	-4.6
	comp=E,264nm,0.9s						
YAK				ePg	Pg	20 54 56.8	-4.6
YAK				eSn	Sn	20 55 55.6	+2.4
YAK				eSn	Sn	20 55 55.6	+2.4
YAK				eSn	Sn	20 55 55.6	+2.4
YAK				eSg	Sg	20 56 38.3	-2.6
	comp=E,2µm,1.0s						
YAK				eSg	Sg	20 56 38.3	-2.6
YAK				eSg	Sg	20 56 38.3	-2.6
	comp=E,3µm,1.2s						
USMR	Ust'-Maya	7.97	207	P	Pn	20 54 31.4	+1.4
MA2	Magadan	9.02	150	Lg	Lg	20 57 16.3	
	comp=E,1.5nm,0.3s,baz=51,slow=16,SNR=7.7						
BILL	Bilibino	9.17	77	Pn	Pn	20 54 46.3	0.0
BILL	Bilibino	9.17	77	i P	Pn	20 54 49.7	+3.4
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZEA	Zeya	15.65	214	eP	P	20 56 18.4	-0.3
ZEA				pmax	pmax		
	comp=Z,15nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,500nm,10.0s						
ZEA				MLR	MLR		
	comp=N,600nm,8.0s						
BOD	Bodaibo	16.00	246	eP	Pn	20 56 17.5	-1.5
BOD				e		20 59 09.5	
BOD				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PETK	Petropavlovsk-	16.47	145	Pn	P	20 56 28.4	+0.7
	comp=Z,0.2nm,0.3s,baz=14,slow=18,SNR=3.9						
KLR	Kul'dur	19.21	201	P	Pn	20 57 00.0	+1.2
	comp=Z,0.1nm,0.3s,baz=350,slow=11,SNR=4.5						
KLR				Lg	Lg	21 02 38.7	
	comp=Z,0.1nm,0.3s,baz=276,slow=21,SNR=4.4						
NRIK	Noril'sk	19.45	300	P	P	20 57 00.9	+0.5
	comp=Z,0.4nm,0.3s,baz=77,slow=9.5,SNR=3.1						
NRIK				Lg	Lg	21 02 43.1	
	comp=Z,0.4nm,0.3s,baz=194,slow=6.9,SNR=4.1						
USRK	Ussuriysk Ar.	24.12	198	P	P	20 57 50.4	+0.6
	comp=Z,1.8nm,0.7s,baz=42,slow=8.9,SNR=4.8						
MOY	Mondy	25.48	252	eP	P	20 58 04.4	+2.1
MOY				pmax	pmax		
	comp=Z,19nm,1.5s						
ZAK	Zakamensk	25.73	247	eP	P	20 58 03.9	-0.6
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	Songino Array	26.84	240	P	P	20 58 15.0	+0.5
	comp=Z,0.6nm,0.6s,baz=22,slow=9.9,SNR=6.0						
ILAR	Eielson Array	27.39	62	P	P	20 58 20.1	+0.9
	comp=Z,1.3nm,0.8s,baz=296,slow=7.8,SNR=13						
ZALV	Zalesovo Beam	29.78	271	P	P	20 58 40.1	-0.4
	comp=Z,0.9nm,0.8s,baz=64,slow=6.6,SNR=3.4						
KSRS	Korea Array	31.29	202	LR	LR	21 11 43.5	
	comp=Z,46nm,18.5s,baz=5.0,slow=37						
ARCES	ARCESS Array B	36.36	328	P	P	20 59 37.2	-0.6
	comp=Z,4.1nm,1.0s,baz=24,slow=16,SNR=3.6						
MKAR	Makanchi Array	36.48	266	P	P	20 59 39.8	+0.7
	comp=Z,5.6nm,0.7s,baz=40,slow=7.4,SNR=24						
YKA	Yellowknife Ar	38.99	46	P	P	21 00 01.2	+1.2
	comp=Z,0.9nm,0.7s,baz=324,slow=7.9,SNR=16						
AAK	Ala-Archa	42.96	270	eP	P	21 00 32.9	-0.3
	comp=Z,4.4nm,0.8s						
AAK	Ala-Archa	42.96	270	eP	P	21 00 32.9	-0.3
FINES	FINESS Array B	43.08	321	P	P	21 00 33.4	-0.3
	comp=Z,1.5nm,0.8s,baz=10,slow=12,SNR=4.5						
NB2	NORSAR Subarra	46.68	330	P	P	21 01 02.4	0.0
	comp=Z,0.9nm,0.6s,baz=24,slow=7.9						
NOA	NORSAR Array B	46.68	330	P	P	21 01 02.6	+0.2
	comp=Z,2.5nm,0.9s,baz=24,slow=7.8,SNR=7.5						
NOA				LR	LR	21 23 44.5	
	comp=Z,37nm,20.0s,baz=170,slow=40						
LSA	Lhasa	48.27	245	eP	P	21 01 15.1	-0.5
	comp=Z,1.1nm,0.7s						
LSA	Lhasa	48.27	245	eP	P	21 01 15.1	-0.5
NIL	Nilore	51.28	265	P	P	21 01 35.1	-2.8
NIL	Nilore	51.28	265	P	P	21 01 35.2	-2.8
AKASG	Malin Array Be	51.73	312	P	P	21 01 40.7	-0.3
	comp=Z,0.6nm,0.4s,baz=28,slow=8.6,SNR=3.8						
GUN	Gumba	51.76	249	eP	P	21 01 43.6	+1.6
	comp=Z,37nm,1.0s						
JIRN	Jiri	51.87	249	eP	P	21 01 44.0	+1.1
	comp=Z,55nm,0.9s						
KKN	Kakani	52.08	250	eP	P	21 01 45.9	+1.7
	comp=Z,28nm,0.8s						
DANN	Dangsing	52.12	252	eP	P	21 01 46.2	+1.6
	comp=Z,30nm,0.7s						
PKIN	Phulchoki	52.23	250	eP	P	21 01 46.7	+1.3
	comp=Z,13nm,0.9s						
PKI	Pulchoki	52.23	250	eP	P	21 01 46.8	+1.3
	comp=Z,14nm,0.8s						
DMN	Daman	52.31	250	eP	P	21 01 47.6	+1.6
	comp=Z,26nm,0.9s						
RAMN	Ramite	52.38	248	eP	P	21 01 47.1	+0.6
	comp=Z,27nm,1.0s						
PYUN	Piuthan	52.63	252	eP	P	21 01 49.5	+1.2
	comp=Z,30nm,1.0s						
KOLN	Koldanda	52.70	251	eP	P	21 01 50.2	+1.4
	comp=Z,43nm,1.0s						
GEYT	Alibeck	53.26	281	P	P	21 01 50.7	-2.0
	comp=Z,2.4nm,0.8s,baz=17,slow=16,SNR=4.4						
KBZ	Khabaz	53.63	297	P	P	21 01 55.4	+0.2
	comp=Z,2.8nm,0.9s,baz=49,slow=6.5,SNR=5.3						
CLL	Collm	55.34	324	i P	P	21 02 07.5	0.0
	comp=Z,7.0nm,1.2s						
CLL				e(sP)	sP	21 02 13.0	+0.8
CMAR	Chiang Mai Arr	56.22	231	P	P	21 02 14.5	+0.2
	comp=Z,1.7nm,1.1s,baz=359,slow=9.2,SNR=6.3						
GERES	GERESS Array B	57.48	322	P	P	21 02 23.1	+0.1
	comp=Z,1.1nm,0.9s,baz=35,slow=4.9,SNR=6.8						
PDAR	Pinedale Array	57.59	56	P	P	21 02 23.7	-0.3
	comp=Z,1.3nm,0.7s,baz=5.2,slow=2.7,SNR=14						
NVAR	Mina Array Bea	58.58	65	P	P	21 02 32.3	+1.3
	comp=Z,1.1nm,0.7s,baz=321,slow=5.0,SNR=4.3						
BRTR	Keskin Array B	60.28	303	P	P	21 02 40.5	-2.1
	comp=Z,1.0nm,0.9s,baz=34,slow=4.3,SNR=4.9						
ESDC	Sonseca Array	69.91	333	P	P	21 03 44.9	-0.1
	comp=Z,1.5nm,0.9s,baz=12,slow=5.4,SNR=7.1						
TXAR	Lajitas Array	71.77	57	P	P	21 03 58.8	+2.2
	comp=Z,0.6nm,0.8s,baz=1.6,slow=2.3,SNR=4.6						
CPUP	Villa Florida	136.99	26	PKP	PKPdf	21 11 57.0	+0.5
	comp=Z,1.1nm,0.5s,baz=247,slow=5.4,SNR=3.5						

ISCJB 17 21:05:03.2±0.3, 43°.79N±0°.02×105°.26W±0°.03, h0^{km}, mb4.0/6, Error ellipse: s-maj=3.5km s-min=2.7km az=175.3

IDC 17 21:05:04.0±0.8, 43°.80N×105°.52W, h0^{km}, mb3.9/6, mb1 3.9/13, mb1mx3.7/49, mbtmp3.7/13, ML3.4/5, Error ellipse: s-maj=19.4km s-min=7.0km az=146.0

NEIC 17 21:05:04.8±0.3, 43°.82N×105°.24W, h0^{km}, ML3.5, Error ellipse: s-maj=3.6km s-min=3.2km az=76.0, Suspected Mining explosion.

NEIC 57 km [35 miles] SSE of Gillette.

ISC 17 21:05:04.0±0.5, 43°.81N±0°.03×105°.30W±0°.04, h0^{km}, n118, σ1^{s}.85/125, mb4.1/6, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
K22A	Casper	1.46	218	ePn	Pn	21 05 29.4	-2.5
K22A				eSg	Sg	21 05 51.1	0.0
PHWY	Pilot Hill	2.51	183	ePn	Pn	21 05 46.6	+0.2
PHWY				eSn	Sn	21 06 16.8	-1.1
RWWY	Rawlins	2.54	214	ePn	Pn	21 05 45.4	-1.4
RWWY				eSn	Sn	21 06 17.0	-1.6
LAO	LASA Array	2.95	348	ePn	Pn	21 05 53.3	+1.1
LAO				eSn	Sn	21 06 29.9	+1.6
N23A	Red Feather La	2.96	189	ePn	Pn	21 05 52.9	+0.4
N23A				eSn	Sn	21 06 28.4	-0.4
RLMT	Red Lodge	3.12	296	ePn	Pn	21 05 55.5	+0.8
RLMT				eSn	Sn	21 06 34.4	+1.5
BW06	Boulder Array	3.28	253	ePn	Pn	21 05 57.9	+1.1
BW06				eSn	Sn	21 06 35.3	-1.4
PD31	Pinedale Array	3.28	253	ePn	Pn	21 05 57.1	+0.3
PDAR	Pinedale Array	3.28	253	ePn	Pn	21 05 56.9	0.0
PDAR				eSn	Sn	21 06 36.7	+0.1
PDAR				Lg	Lg	21 06 42.0	
PDAR	Pinedale Array	3.28	253	Pn	Pn	21 05 57.0	+0.1
	11nm,0.3s,baz=76,slow=16,SNR=78						
PDAR				Lg	Lg	21 06 42.0	
	24nm,0.3s,baz=69,slow=29,SNR=9.5						
GCMT	Greycliff	3.68	304	ePn	Pn	21 06 04.2	+1.9
LKWY	Lake	3.74	283	ePn	Pn	21 06 06.0	+2.8
OGNE	Ogallala	3.75	139	ePn	Pn	21 06 04.6	+1.3
H17A	Grant Village	3.84	281	ePn	Pn	21 06 08.0	+3.4
LOHW	Long Hollow	3.85	269	ePn	Pn	21 06 06.9	+2.2
FLWY	Flagg Ranch	3.91	276	ePn	Pn	21 06 07.3	+1.8
MOOW	Moose Ponds	3.94	271	ePn	Pn	21 06 07.7	+1.7
YNR	Norris Junctio	3.96	285	ePb	Pb	21 06 14.3	-0.6
SNOW	Snow King Moun	3.97	267	ePn	Pn	21 06 08.7	+2.2
YPP	Pitchstone Pla	3.99	278	ePn	Pn	21 06 08.8	+2.0
ISCO	Idaho Springs	4.02	183	ePn	Pn	21 06 07.7	+0.6
YFT	Old Faithful	4.03	281	ePb	Pb	21 06 16.0	-0.1
REDW	Red Top Meadow	4.05	266	ePn	Pn	21 06 09.5	+1.9
IMW	Indian Meadow	4.08	273	ePn	Pn	21 06 10.2	+2.4
YHH	Holmes Hill	4.10	286	ePn	Pn	21 06 11.7	+3.5
TPAW	Teton Pass	4.11	267	ePn	Pn	21 06 08.8	+0.4
FXWY	Fox Creek	4.15	270	ePn	Pn	21 06 10.9	+2.0
YMR	Madison River	4.16	284	ePb	Pb	21 06 19.3	+1.1
O20A	White River Ci	4.28	212	ePn	Pn	21 06 10.0	-0.6
YHB	Horse Butte	4.33	285	ePn	Pn	21 06 11.5	+0.1
AHID	Auburn Hatcher	4.36	258	ePn	Pn	21 06 13.2	+1.5
DGMT	Dagmar	4.72	9	ePn	Pn	21 06 19.2	+2.7
SMCO	Snowmass	4.80	196	ePn	Pn	21 06 17.1	-0.8
Q24A	Divide	4.85	179	ePn	Pn	21 06 17.4	-1.1
Q24A				eSb	Sb	21 07 33.9	+4.9
BOZ	Bozeman (W)	4.85	294	ePn	Pn	21 06 18.3	-0.1
KSCO	Kaye Shedlock'	5.20	156	ePn	Pn	21 06 23.2	0.0
EGMT	Eagleton	5.23	325	ePn	Pn	21 06 25.0	+1.5
TCUT	Toone Canyon	5.26	241	ePn	Pn	21 06 23.6	-0.5
DLMT	Dillon	5.43	289	ePb	Pb	21 06 39.0	-0.9
HRY	Holter Researc	5.44	304	ePn	Pn	21 06 28.6	+2.1
LRM	Limekiln Ridge	5.47	294	ePb	Pb	21 06 44.0	+3.5
MCMT	McKenzie Canyo	5.51	283	ePb	Pb	21 06 45.2	+4.0
JLU	Jordanelle	5.58	237	ePb	Pb	21 06 42.2	-0.2
P18A	Preston Nutter	5.58	223	ePn	Pn	21 06 30.9	+2.3
MDND	Maddock	5.67	43	ePb	Pg	21 06 49.2	-3.4
CTU	Camp Tracy	5.71	239	ePn	Pn	21 06 32.4	+2.2
BGNE	Belgrade	5.80	112	ePb	Pb	21 06 47.7	+1.6
SPUT	South Promonto	5.84	247	ePn	Pn	21 06 26.4	-5.6
HVU	Hansel Valley	5.86	252	ePn	Pn	21 06 34.1	+1.8
PV21	Cone Mtn., Par	5.93	209	ePn	Pn	21 06 35.3	+1.9
PV07	Paradox Valley	5.93	206	ePn	Pn	21 06 34.9	+1.6
P17A	Butcher Ranch,	5.95	225	ePn	Pn	21 06 36.0	+2.5
P17A				ePb	Pb	21 06 50.9	+2.2
PV15	Paradox Valley	5.97	205	ePn	Pn	21 06 35.7	+1.8
PV23	Carpenter Ridg	6.04	209	ePn	Pn	21 06 37.0	+2.1
PV09	Paradox Valley	6.04	210	ePn	Pn	21 06 35.6	+0.7
MPU	Maple Canyon	6.06	233	ePn	Pn	21 06 36.2	+1.2
PV04	Paradox Valley	6.06	208	ePn	Pn	21 06 36.4	+1.3
SDCO	Great Sand Dun	6.06	181	ePn	Pn	21 06 35.7	+0.5
SRU	San Rafael Swe	6.12	222	ePn	Pn	21 06 36.6	+0.7
PV20	West Nyswonger	6.13	208	ePb	Pb	21 06 47.0	-4.7
PV11	David Mesa, Pa	6.13	207	ePn	Pn	21 06 36.8	+0.7
PV16	Nyswonger Mesa	6.14	208	ePn	Pn	21 06 36.8	+0.6
PV19	Morning Glory	6.16	208	ePn	Pn	21 06 37.0	+0.5
PV03	Paradox Valley	6.17	207	ePn	Pn	21 06 38.6	+2.1
S22A	4UR Ranch, Cre	6.17	191	ePn	Pn	21 06 38.4	+1.7
S22A				ePb	Pb	21 06 47.1	-5.5
PV02	Paradox Valley	6.17	206	ePn	Pn	21 06 38.1	+1.5
PV02				ePb	Pb	21 06 49.8	-2.7
PV01	Paradox Valley	6.19	205	ePn	Pn	21 06 37.5	+0.6
PV13	Radium Mtn., P	6.24	206	ePn	Pn	21 06 39.6	+1.9
ECSD	EROS Data Cent	6.29	88	ePn	Pn	21 06 39.3	+1.3
TMUT	Trail Mountain	6.32	226	ePn	Pn	21 06 39.4	+0.7
NLU	North Lily Min	6.35	235	ePn	Pn	21 06 40.3	+1.2
BGU	Big Grassy Mou	6.41	246	ePn	Pn	21 06 41.3	+1.5
PV05	Paradox Valley	6.41	208	ePn	Pn	21 06 39.4	-0.5
CBKS	Cedar Bluff	6.52	138	ePb	Pg	21 07 04.7	-4.2
Q16A	Castle Valley	6.59	224	ePn	Pn	21 06 42.9	+0.6
HLID	Hailey	6.61	271	ePn	Pn	21 06 45.0	+2.4
DUG	Dugway, Tooele	6.66	240	ePn	Pn	21 06 43.8	+0.6
T25A	Trinidad	6.70	174	ePn	Pn	21 06 45.0	+1.1
MSO	Missoula	6.79	299	ePn	Pn	21 06 46.0	+1.0
MSO				eSg	Sg	21 08 38.6	-3.5
MVCO	Mesa Verde	7.03	201	ePn	Pn	21 06 51.0	+2.6
MSU	Marysvale	7.41	227	ePn	Pn	21 06 54.9	+1.2
WALA	Waterton Lakes	7.93	314	ePn	Pn	21 07 01.1	+0.5
WALA				eSg	Sg	21 09 15.5	-2.9

ELK	Elko	7.98	251	Pn	Pn	21 07 02.3	+0.9
	0.8nm,0.3s,baz=68,slow=8.5,SNR=12						
ELK				Lg	Lg	21 09 09.0	
	0.1nm,0.3s,baz=160,slow=19,SNR=3.0						
KSU1	Kansas State U	8.05	123	ePb	Pg	21 07 32.4	-5.8
PSUT	Pine Spring	8.33	234	ePn	Pn	21 07 08.5	+2.3
CCUT	Cedar City	8.75	227	ePn	Pn	21 07 13.4	+1.4
U32A	Winter Ranch,	8.85	145	ePg	Pg	21 07 51.8	-1.8
ANMO	Albuquerque	8.90	186	Pg	Pg	21 07 46.3	-8.2
	0.2nm,0.3s,baz=359,slow=13,SNR=4.1						
I10CA	LAC DU BONNET	9.00	41	i		21 58 10.0	
	baz=216,slow=293,SNR=1.0						
ULM	Lac du Bonnet	9.10	42	ePn	Pn	21 07 15.7	-0.9
ULM				Pg		21 07 42.3	
ULM				Lg	Lg	21 09 45.8	
ULM	Lac du Bonnet	9.10	42	Pn	Pn	21 07 16.4	-0.2
	4.3nm,0.3s,baz=227,slow=12,SNR=48						
ULM				Pg		21 07 42.3	
	0.5nm,0.3s,baz=226,slow=17,SNR=3.1						
ULM				Lg	Lg	21 09 45.8	
	1.1nm,0.3s,baz=143,slow=20,SNR=3.0						
I39A	Houston	9.96	85	ePn	Pn	21 07 30.0	+1.6
KVN	Kaiserville	10.72	248	ePn	Pn	21 07 41.7	+2.8
FFC	Flin Flon	11.13	10	ePn	Pn	21 07 43.5	-0.9
NV01	Mina Array Sit	11.18	246	ePn	Pn	21 07 45.5	+0.2
NVAR	Mina Array Bea	11.18	246	Pn	Pn	21 07 45.5	+0.2
	0.4nm,0.3s,baz=52,slow=11,SNR=4.9						
CLNB	Carlsbad	11.58	174	eSn	Sn	21 10 05.2	+4.4
MDPB	Devils Postpil	12.13	244	eSn	Sn	21 10 08.1	-6.3
YBH	Yreka Blue Hor	12.96	267	Pn	Pn	21 08 11.2	+1.7
	0.1nm,0.3s,baz=77,slow=12,SNR=2.9						
GLA	Glamis	13.07	218	ePn	Pn	21 08 08.4	-2.5
T45A	Paducah	14.38	112	ePn	Pn	21 08 22.6	-6.2
LTX	Lajitas	14.51	174	ePn	Pn	21 08 32.2	+1.5
TXAR	Lajitas Array	14.51	174	Pn	Pn	21 08 32.2	+1.5
	baz=356,slow=12,SNR=2.2						
YKA	Yellowknife Ar	19.49	347	P	P	21 09 32.0	-0.3
	0.2nm,0.3s,baz=166,slow=12,SNR=12						
YKA				Lg	Lg	21 15 09.4	
	0.0nm,0.3s,baz=153,slow=28,SNR=3.3						
YKB5	Yellowknife Ar	19.49	347	eP	P	21 09 32.0	-0.2
656A	Willston	23.18	121	eP	P	21 10 15.6	+3.4
656A				eSn	Sn	21 14 49.1	+7.6
ARA0	ARCESS Array S	61.35	18	eP	P	21 15 21.3	+0.2
ARCES	ARCESS Array B	61.35	18	P	P	21 15 21.3	+0.2
	0.6nm,0.4s,baz=325,slow=6.1,SNR=9.2						
FIA0	FINESS Array S	67.97	23	eP	P	21 16 04.9	+0.5
FINES	FINESS Array B	67.97	23	P	P	21 16 04.9	+0.5
	1.2nm,1.0s,baz=335,slow=6.2,SNR=3.9						
AKASG	Malin Array Be	77.90	28	P	P	21 17 03.7	+0.3
	0.4nm,0.4s,baz=324,slow=5.0,SNR=2.6						
AKBB	Malin Array Si	77.90	28	eP	P	21 17 03.7	+0.3
ZAA1	Zalesovo Array	82.22	354	eP	P	21 17 26.4	-0.4
ZALV	Zalesovo Beam	82.23	354	P	P	21 17 26.4	-0.4
	1.3nm,0.6s,baz=354,slow=5.7,SNR=5.9						
SONA0	Songino Array	84.56	339	eP	P	21 17 38.7	-0.4
SONM	Songino Array	84.56	339	P	P	21 17 38.7	-0.4
	0.4nm,0.5s,baz=11,slow=5.1,SNR=4.6						
MK32	Makanchi Array	89.53	355	eP	P	21 18 02.8	-0.3
MKAR	Makanchi Array	89.53	355	P	P	21 18 02.8	-0.3
	0.7nm,0.6s,baz=16,slow=4.5,SNR=9.4						

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*DDA **17** 21:06:53.9, 39°.13N×33°.77E, h7km±2km, ML2.9*
*ISK **17** 21:06:53.9, 39°.12N×33°.75E, h5km, ML2.3/7*
ISC 17 21:06:54.4±1.2**, 39°.13N**±0°.03×**33°.76E**±0°.03**, h6**km±11km**,**
n24, σ0s.51/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAYX	Yaylak	0.19	167	PG	Pg	21 06 58.2	-0.1
SERE	Sereflikochisa	0.23	220	PG	Pg	21 06 59.2	+0.2
SERE				SG	Sg	21 07 02.7	+0.5
AKSY	AKSARAY - Alti	0.48	180	iP	Pg	21 07 03.5	-0.1
AKSY				IAML_P			
	comp=Z,604nm,0.1s						
KULU	Kulu	0.59	262	PG	Pg	21 07 05.8	0.0
AFSR	Afar-Bala (An	0.62	301	PG	Pg	21 07 06.3	0.0
AFSR				SG	Sb	21 07 15.6	-1.1
BBAL	Bala	0.64	310	iP	Pg	21 07 07.0	+0.2
BBAL				iS	Sb	21 07 17.0	-0.4
BBAL				IAML_P			
	comp=Z,2µm,0.1s						
KKUL	Konya-Kulu	0.65	274	iP	Pb	21 07 07.5	-0.7
KKUL				IAML_P			
	comp=Z,805nm,0.1s						
CDAG	Cicekdag	0.69	44	iP	Pg	21 07 08.0	+0.4
CDAG				IAML_P			
	comp=Z,1µm,0.1s						
CHBY	Cihanbeyli	0.87	231	PG	Pg	21 07 10.5	-0.5
DELI	KIRIKKALE	0.88	8	iP	Pg	21 07 11.2	-0.1
DELI				IAML_P			
	comp=Z,1µm,0.1s						
AVNS	Nevsehir-Avano	0.91	110	iP	Pn	21 07 13.9	+0.2
AVNS				iS	Sb	21 07 24.4	-0.6
AVNS				IAML_P			
	comp=Z,2µm,0.1s						
SULT	Sultanhani-AKS	0.95	192	PG	Pg	21 07 12.5	0.0
ANTO	Ankara	1.05	315	PG	Pb	21 07 14.8	-0.2
SIRC	Yozgat	1.10	79	iP	Pg	21 07 15.5	0.0
SIRC				iS	Sn	21 07 32.9	+0.9
YOZ	Yozgat	1.31	67	PN	Pg	21 07 19.6	0.0
ELDT	Eldivan	1.38	350	iP	Pg	21 07 20.9	0.0
ELDT				IAML_P			
	comp=Z,911nm,0.3s						
LADK	Ladik-KONYA	1.43	230	PN	Pb	21 07 21.4	-0.1
COAL	Corum-Alaca	1.47	40	iP	Pg	21 07 22.5	-0.1
KONT	Konya--Tatoy	1.61	223	PN	Pn	21 07 23.6	+0.3
BNN	Bunyan	1.65	99	PN	Pn	21 07 24.5	+0.5
CTAK	Corum_Osmancik	1.71	27	iP	Pn	21 07 13.9	-11
SVRH	Sivrihisar-ESK	1.76	281	PN	Pn	21 07 26.1	+0.6
CUSAR	Sarkisla-SIVAS	1.95	81	iP	Pb	21 07 29.4	-1.0
KARA	Karaisali	2.13	151	PN	Pn	21 07 31.1	+0.7

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*SOME **17** 21:16:25.6, 42°.50N×79°.68E, h15km*
*NNC **17** 21:16:25.6±0.8, 42°.55N×79°.65E, h0km, mb2.8, mpv2.6,*
Error ellipse: s-maj=5.0km s-min=3.0km az=139.0
KRNET 17 21:16:25.6±0.1**, 42°.55N×79°.64E, h13**km**, mb2.6, 12C-8D,**
Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.75	323	P	Pg	21 16 40.0	-0.2
	3.6nm,0.1s						
UZB				S	Sb	21 16 50.5	-0.4
	12nm,0.2s						
UZB	Uzynbulak	0.75	323	eP	Pg	21 16 40.0	-0.2
	baz=23						
UZB				eS	Sb	21 16 50.5	-0.4
	baz=23						
UZB	Uzynbulak	0.75	323	eP	Pg	21 16 40.0	-0.2
	3.6nm,0.1s						
UZB				eS	Sb	21 16 50.5	-0.4
	12nm,0.2s						
PDGK	Podgornoye	0.79	352	P	Pg	21 16 40.8	-0.1
	3.2nm,0.1s						
PDGK				S	Sb	21 16 51.8	-0.1
	1.5nm,0.3s						
PDGK	Podgornoye	0.79	352	⇓P	Pg	21 16 40.7	-0.2
	1.8nm,0.3s						
PDGK				⇑S	Sb	21 16 52.0	0.0
	1.5nm,0.4s						
PDGK	Podgornoye	0.79	352	⇓iP	Pg	21 16 40.7	-0.2
	baz=52						
PDGK				⇓iS	Sg	21 16 51.5	+0.2
	baz=52						
PRZ	Przheval'sk	0.92	266	⇑iP	Pg	21 16 42.8	-0.5
	baz=66						
PRZ				⇑iS	Sg	21 16 55.1	-0.3
	baz=66						
KTMS	Ketmen	1.04	30	P	Pb	21 16 45.5	0.0
	3.0nm,0.1s						
KTMS				S	Sg	21 16 59.8	+0.6
	3.5nm,0.1s						
KTMS	Ketmen	1.04	30	eP	Pb	21 16 45.5	0.0
	baz=29						
KTMS				eS	Sg	21 16 59.8	+0.5
	baz=29						
KTMS	Ketmen	1.04	30	eP	Pb	21 16 45.5	0.0
	3.0nm,0.1s						
KTMS				eS	Sg	21 16 59.8	+0.6
	3.5nm,0.1s						
SATY	Saty	1.04	300	P	Pg	21 16 45.7	+0.1
	2.4nm,0.2s						
SATY				S	Sn	21 17 00.3	-0.2
	9.1nm,0.1s						
SATY	Saty	1.04	300	eP	Pg	21 16 45.7	+0.1
	2.4nm,0.2s						
SATY				eS	Sn	21 17 00.3	-0.2
	9.1nm,0.1s						
DJR	Jarkent	1.79	3	P	Pb	21 16 58.6	+0.4
	0.7nm,0.3s						
DJR				S	Sg	21 17 22.5	-0.6
	1.2nm,0.2s						
DJR	Jarkent	1.79	3	eP	Pb	21 16 58.6	+0.4
	0.7nm,0.3s						
DJR				eS	Sg	21 17 22.5	-0.6
	1.2nm,0.2s						
KDJ	Kajisay	1.87	258	⇑iP	Pb	21 17 00.4	+0.7
	baz=58						
KDJ				⇑iS	Sg	21 17 25.3	-0.4
	baz=58						
MDOK	Medeo	2.00	289	Pg	Pb	21 17 02.2	+0.2
	1.6nm,0.4s						
MDOK				Lg	Lg	21 17 28.5	
	5.9nm,0.5s						
MDOK	Medeo	2.00	289	eP	Pb	21 17 02.2	+0.3
	baz=89						
MDOK				eS	Sg	21 17 28.6	-1.4
	baz=89						
MDOK	Medeo	2.00	289	eP	Pb	21 17 02.2	+0.2
	1.6nm,0.4s						
MDOK				eS	Sg	21 17 28.5	-1.4
	5.9nm,0.5s						
TNSS	Tian-Shan	2.04	285	Pg	Pb	21 17 02.8	0.0
	2.3nm,0.2s						
TNSS				Lg	Lg	21 17 29.4	
	3.8nm,0.2s						
TNSS	Tian-Shan	2.04	285	eP	Pb	21 17 02.8	+0.1
	baz=85						
TNSS				eS	Sb	21 17 29.4	+1.2
	baz=85						
TNSS	Tian-Shan	2.04	285	eP	Pb	21 17 02.8	0.0
	2.3nm,0.2s						
TNSS				eS	Sb	21 17 29.4	+1.2
	3.8nm,0.2s						
ARXS	Arharly	2.13	322	Pg	Pb	21 17 04.3	+0.3
	1.3nm,0.4s						
ARXS				Lg	Lg	21 17 32.3	
	10.0nm,0.4s						
ARXS	Arharly	2.13	322	eP	Pb	21 17 04.3	+0.3
	1.3nm,0.4s						
ARXS				eS	Sg	21 17 32.4	-1.6
	10.0nm,0.4s						
CHKK	Chushkaly	2.34	305	Pg	Pb	21 17 08.2	+0.6
	0.7nm,0.1s						
CHKK				Lg	Lg	21 17 38.8	
	12nm,0.2s						
CHKK	Chushkaly	2.34	305	eP	Pb	21 17 08.2	+0.6
	baz=5.0						
CHKK				eS	Sg	21 17 38.8	-1.9
	baz=5.0						
CHKK	Chushkaly	2.34	305	eP	Pb	21 17 08.2	+0.6
	0.7nm,0.1s						
CHKK				eS	Sg	21 17 38.8	-1.9
	12nm,0.2s						
KTBS	Karatobe	2.46	299	Pg	Pb	21 17 10.2	+0.6
	0.9nm,0.2s						
KTBS				Lg	Lg	21 17 42.5	
	7.0nm,0.3s						
KTBS	Karatobe	2.46	299	eP	Pb	21 17 10.2	+0.6
	baz=98						
KTBS				eS	Sg	21 17 42.5	-2.0
	baz=98						
KTBS	Karatobe	2.46	299	eP	Pb	21 17 10.2	+0.6
	0.9nm,0.2s						
KTBS				eS	Sg	21 17 42.5	-2.1
	7.0nm,0.3s						
ULHL	Ulahol	2.53	264	⇓iP	Pb	21 17 10.0	-1.0
	baz=64						
ULHL				⇓iS	Sb	21 17 42.2	0.0
	baz=64						
BOOM	Boomskoye usch	2.73	270	⇑iP	Pb	21 17 12.9	-1.5
	baz=70						
BOOM				⇑iS	Sb	21 17 46.8	-1.1
	baz=70						
KAPS	Kapalarasan	2.75	356	Pg	Pb	21 17 15.6	+1.1
	0.4nm,0.1s						
KAPS				Lg	Lg	21 17 51.6	
	1.6nm,0.4s						
KAPS	Kapalarasan	2.75	356	eP	Pb	21 17 15.6	+1.1
	0.4nm,0.1s						
KAPS				eS	Sg	21 17 51.6	-2.1
	1.6nm,0.4s						
KUU	Kurty	2.76	300	Pg	Pb	21 17 15.8	+1.0
	0.4nm,0.2s						
KUU				Lg	Lg	21 17 51.7	
	5.9nm,0.3s						
KUU	Kurty	2.76	300	eP	Pb	21 17 15.8	+1.0
	baz=0.0						
KUU				eS	Sg	21 17 51.7	-2.6
	baz=0.0						
KUU	Kurty	2.76	300	eP	Pb	21 17 15.8	+1.0
	0.4nm,0.2s						
KUU				eS	Sg	21 17 51.7	-2.6
	5.9nm,0.3s						
NRN	Naryn	2.93	249	⇑iP	Pb	21 17 16.3	-1.6
	baz=49						
NRN				⇑iS	Sb	21 17 52.6	-1.1
	baz=49						
TKM2	Tokmak 2	3.00	279	⇓Pg	Pb	21 17 18.9	-0.1
	1.2nm,0.8s						
TKM2				⇑Lg	Lg	21 18 00.7	
	2.1nm,0.6s						
TKM2	Tokmak 2	3.00	279	⇓eP	Pb	21 17 16.4	-2.6
	baz=79						
TKM2				⇓iS	Sb	21 17 53.5	-2.1
	baz=79						
KZA	Kyzart	3.29	263	⇑eP	Pb	21 17 20.6	-3.4
	baz=63						
KZA				⇑iS	Sb	21 18 00.8	-3.3
	baz=63						

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*ISCJB **17** 21:16:46.3±0.9, 10°.8S±0°.1×165°.80E±0°.09, h10km,*
mb3.9/6, MS3.7/2, Error ellipse: s-maj=17.4km
s-min=10.5km az=32.2
*IDC **17** 21:16:46.3±1.1, 10°.72S×165°.80E, h0km, mb4.0/7,*
mb1 4.2/9, mb1mx3.9/35, mbtmp4.1/9, ML4.5/2, MS3.6/3,
Ms1 3.6/3, ms1mx3.1/34, Error ellipse: s-maj=26.4km
s-min=22.9km az=117.0
ISC 17 21:16:47.8±1.0**, 10°.7S**±0°.1×**165°.9E**±0°.1**, h10**km**, n18,**
σ0s.82/11**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.96	282	Pn	Pn	21 18 16.3	+0.2
	11nm,0.3s,baz=143,slow=2.2,SNR=8.1						
HNR				Sn	Sn	21 19 25.0	+0.5
	baz=50,slow=17,SNR=1.8						
HNR				LR	LR	21 20 38.2	
	comp=Z,290nm,19.5s,baz=92,slow=39						
DZM	Mont Dzumac	11.30	177	Pn	Pn	21 19 29.9	+0.4
	3.8nm,0.3s,baz=314,slow=12,SNR=26						
CTA	Charters Tower	21.05	241	P	P	21 21 33.3	+1.1
	9.0nm,1.0s,baz=73,slow=13,SNR=4.4						
H11S2	WAKE ISLAND Hy	29.04	2	T	T	21 52 59.9	
	baz=181,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.04	2	T	T	21 53 00.1	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.06	2	T	T	21 53 01.3	
	baz=181,slow=76,SNR=18						
H11N1	WAKE ISLAND Hy	30.26	2	T	T	21 54 31.4	
	baz=182,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.27	2	T	T	21 54 31.8	
	baz=182,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	30.28	2	T	T	21 54 32.8	
	baz=182,slow=76,SNR=14						
WRA	Warramunga Arr	31.70	249	P	P	21 23 10.7	-1.2
	1.2nm,0.9s,baz=81,slow=8.8,SNR=7.0						
ASAR	Alice Springs	33.03	243	P	P	21 23 22.4	-1.3
	1.7nm,0.8s,baz=79,slow=9.6,SNR=15						
RPZ	Rata Peaks	33.18	173	P	P	21 23 24.6	0.0
	3.3nm,0.6s,baz=304,slow=5.3,SNR=5.3						
RAR	Rarotonga	34.58	112	LR	LR	21 35 11.5	
	comp=Z,83nm,18.6s,baz=274,slow=32						
NWAO	Narrogin (SRO)	49.73	236	LR	LR	21 47 01.0	
	comp=Z,132nm,18.1s,baz=323,slow=36						
SONM	Songino Array	78.47	324	P	P	21 28 48.9	-0.3
	0.6nm,0.9s,baz=147,slow=5.8,SNR=4.0						
ILAR	Eielson Array	83.17	18	P	P	21 29 14.5	+0.6
	1.1nm,0.8s,baz=237,slow=5.1,SNR=9.3						
MKAR	Makanchi Array	93.36	317	P	P	21 30 03.2	-0.1
	0.4nm,0.7s,baz=98,slow=6.7,SNR=5.4						
ARCES	ARCESS Array B	116.05	346	PKP	PKPdf	21 35 30.4	-0.3
	2.7nm,1.0s,baz=58,slow=4.6,SNR=9.7						

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*IDC **17** 21:19:21.6±1.5, 10°.75S×165°.68E, h0km, mb3.7/5,*
mb1 4.0/6, mb1mx3.8/33, mbtmp3.8/6, ML4.4/1, Error
ellipse: s-maj=48.8km s-min=27.6km az=120.0
*ISCJB **17** 21:19:24.6±1.1, 10°.9S±0°.1×165°.7E±0°.2, h31km, mb3.7/5,*
Error ellipse: s-maj=30.8km s-min=17.9km az=180.0
ISC 17 21:19:26.3±1.1**, 10°.8S**±0°.1×**165°.7E**±0°.3**, h31**km**, n13,**
σ0s.36/7**, mb3.9**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.23	176	Pn	Pn	21 22 05.0	+0.1
	2.9nm,0.3s,baz=330,slow=12,SNR=12						
H11S2	WAKE ISLAND Hy	29.12	2	T	T	21 55 26.7	
	baz=181,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.13	2	T	T	21 55 28.6	
	baz=181,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.14	2	T	T	21 55 29.1	
	baz=181,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.35	2	T	T	21 57 05.6	
	baz=182,slow=76,SNR=9.9						
H11N3	WAKE ISLAND Hy	30.35	2	T	T	21 57 06.4	
	baz=182,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.36	2	T	T	21 57 06.8	
	baz=182,slow=76,SNR=9.5						
WRA	Warramunga Arr	31.50	249	P	P	21 25 45.6	-0.1
	0.9nm,0.9s,baz=82,slow=9.2,SNR=4.7						
ASAR	Alice Springs	32.84	243	P	P	21 25 57.3	-0.2
	1.2nm,0.7s,baz=65,slow=10,SNR=13						
SONM	Songino Array	78.43	324	P	P	21 31 24.7	+0.5
	0.2nm,0.7s,baz=127,slow=5.7,SNR=2.2						
ILAR	Eielson Array	83.31	19	P	P	21 31 49.6	-0.1
	0.8nm,0.8s,baz=228,slow=6.8,SNR=5.4						
MKAR	Makanchi Array	93.30	317	P	P	21 32 38.3	+0.1
	0.3nm,0.6s,baz=96,slow=6.2,SNR=3.8						
ARCES	ARCESS Array B	116.08	345	PKP	PKiKP	21 38 05.4	-0.5
	2.6nm,1.0s,baz=70,slow=3.0,SNR=4.5						

IDC 17 21:21:53.1±3.0**, 9°.45S×160°.01E, h0**km**, mb3.9**/7**,**
mb1 4.0/7**, mb1mx3.8**/30**, mbtmp3.9**/7**, Error ellipse:**
s-maj=91.3km s-min=29.8km az=128.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.89	244	P	P	21 27 35.4	-0.7
	1.3nm,0.7s,baz=63,slow=9.7,SNR=12						
ASAR	Alice Springs	28.66	237	P	P	21 27 52.3	+0.4
	0.4nm,0.9s,baz=62,slow=9.1,SNR=2.9						
CMAR	Chiang Mai Arr	66.31	295	P	P	21 32 44.6	+0.6
	0.4nm,0.6s,baz=113,slow=5.1,SNR=7.8						
SONM	Songino Array	74.11	326	P	P	21 33 29.8	-1.6
	0.5nm,0.7s,baz=128,slow=7.5,SNR=4.3						
ILAR	Eielson Array	83.89	20	P	P	21 34 24.4	-0.1
	0.4nm,1.1s,baz=218,slow=5.7,SNR=1.4						
MKAR	Makanchi Array	88.53	318	P	P	21 34 48.2	+0.4
	2.2nm,0.7s,baz=101,slow=6.0,SNR=28						
ZALV	Zalesovo Beam	88.99	325	P	P	21 34 50.5	+0.7
	1.3nm,0.5s,baz=109,slow=5.9,SNR=7.3						

SJA 17 21:22:06.7±0.8**, 32°.52S×67°.54W, h20**km±3km**, ML2.0,**
MW3.7, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	1.08	307	eP	Pn	21 22 27.3	+0.7
RTCV				eS	Sn	21 22 42.6	+1.5
MRA	San Martin	1.54	87	eP	Pb	21 22 35.5	+0.9
MRA				eS	Sb	21 22 56.0	+2.3
MRA				IAML		21 22 57.2	
	comp=Z,24nm,0.2s						
RTLS	Leoncito	1.66	295	eP	Pb	21 22 37.8	+1.1
RTLS				eS	Sb	21 23 00.2	+2.9
RTLS				IAML		21 23 02.1	
	comp=Z,14nm,0.2s						
AMOG	MOGNA	1.78	332	eP	Pb	21 22 37.9	-0.8
AMOG				eS	Sb	21 23 02.3	+1.8
APLL	PUNTA DE LOS L	2.29	22	eP	Pb	21 22 46.2	-1.1

IDC 17 21:37:20.9±1.5**, 3°.03S×130°.26E, h0**km**, mb3.5**/2**,**
mb1 3.7/5**, mb1mx3.4**/39**, mbtmp3.5**/5**, ML3.3**/3**, Error**
ellipse: s-maj=47.3km s-min=22.8km az=90.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.37	25	Pn	Pn	21 38 00.6	-0.6
	2.0nm,0.3s,baz=211,slow=21,SNR=21						
SIJI				Sn	Sn	21 38 27.8	-3.2
	5.5nm,0.3s,baz=196,slow=22,SNR=10						
FITZ	Fitzroy Crossi	15.64	196	Pn	Pn	21 41 03.5	+0.5
	0.1nm,0.3s,baz=37,slow=11,SNR=2.4						
WRA	Warramunga Arr	17.28	167	P	Pn	21 41 23.7	-0.1
	0.3nm,0.3s,baz=347,slow=11,SNR=12						
WRA				S	Sn	21 44 24.0	-13
	0.1nm,0.3s,baz=8.6,slow=23,SNR=3.0						
ASAR	Alice Springs	20.82	171	P	P	21 42 03.8	-0.4
	1.6nm,0.4s,baz=353,slow=9.5,SNR=25						
MKAR	Makanchi Array	65.09	326	P	P	21 48 03.9	+0.5
	0.1nm,0.5s,baz=128,slow=7.4,SNR=3.6						

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*ISK **17** 21:44:32.9, 34°.11N×30°.65E, h21km, ML3.4/18*
*ISCJB **17** 21:44:35.8±0.3, 34°.18N±0°.02×30°.73E±0°.03, h33km, Error*
ellipse: s-maj=3.4km s-min=2.2km az=149.1
*HLW **17** 21:44:37.8, 34°.30N×30°.60E, h33km±36km, Ml3.5*
*GII **17** 21:44:39.3±0.0, 34°.15N×30°.94E, h25km, MD3.0/3*
*NIC **17** 21:44:40.5±0.1, 34°.52N×30°.74E, h25km, ML3.3*
*DDA **17** 21:45:03.9, 36°.38N×29°.56E, h15km±3km, ML2.6*
ISC 17 21:44:36.8±1.1**, 34°.21N**±0°.03×**30°.67E**±0°.03**, h35**km**, n77,**
σ1s.22/97**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPCY	Paphos	1.54	64	P	Pn	21 45 02.4	+0.7
	baz=255						
ALFC	Alefka	1.85	59	P	Pn	21 45 06.5	+0.5
	baz=247						
ALFC				S	Sn	21 45 26.5	-1.7
SZAC	Souni	1.91	73	P	Pn	21 45 08.0	+1.2
	baz=262						
SZAC				S	Sn	21 45 29.8	+0.2
MAMC	Mammari	2.31	65	P	Pn	21 45 13.2	+0.9
	baz=252						
CSS	Mathiatis	2.32	70	PN	Pn	21 45 12.1	-0.4
CSS				SN	Sn	21 45 40.1	+0.3
CSS	Mathiatis	2.32	70	S	Sn	21 45 39.9	+0.1
	baz=258						
CSS	Mathiatis	2.32	70	Pn	Pn	21 45 12.8	+0.3
LFK	Lefkose	2.58	65	PN	Pn	21 45 15.9	-0.3
ELL	Elmali	2.60	346	PN	Pn	21 45 16.6	+0.1
ELL				SN	Sn	21 45 48.3	+1.3
BOZY	Bozyazi-Mersin	2.67	44	PN	Pn	21 45 16.7	-0.6
TEKE	Tekeli-Mersin	2.78	45	PN	Pn	21 45 18.8	0.0
KORT	Korkueli	2.79	355	PN	Pn	21 45 19.6	+0.5
KORT	Korkueli	2.79	355	iP	Pn	21 45 21.1	+2.0
KORT				IAML_P			
	comp=Z,486nm,0.2s						
ARG	Arkhangelos	2.89	315	PN	Pn	21 45 19.9	-0.4
OREN	Orenkoy-Mersin	3.03	48	PN	Pn	21 45 22.3	+0.1
AKK2	Akkuyu-Mersin	3.04	50	PN	Pn	21 45 22.5	+0.1
AKKU	Akkuyu-Mersin	3.06	50	PN	Pn	21 45 22.7	+0.1
DALY	Dalyan (Mula)	3.08	328	PN	Pn	21 45 22.8	0.0
DALY	Dalyan (Mula)	3.08	328	iP	Pn	21 45 33.7	+11
TEPE	Tepekoy-Mersin	3.10	49	PN	Pn	21 45 23.4	+0.2
TURN	Turunc	3.15	328	PN	Pn	21 45 24.8	+1.0
TURN	Turunc	3.15	328	iP	Pn	21 45 25.6	+1.8
TURN				iS	Sn	21 46 00.7	+0.6
TURN				IAML_P			
	comp=Z,540nm,0.1s						
EREN	Erenkoy	3.16	64	PN	Pn	21 45 23.9	-0.1
TEVE	Tevekalti-Mers	3.17	45	PN	Pn	21 45 24.4	+0.1
IKL	Isikli	3.19	50	PN	Pn	21 45 24.6	+0.2
BCK	Bucak	3.24	359	PN	Pn	21 45 25.7	+0.5
KEBE	Keben-Mersin	3.34	47	PN	Pn	21 45 27.3	+0.7
YER	Yerkesik	3.50	327	PN	Pn	21 45 29.1	+0.3
BRDR	BURDUR-Merkez	3.51	352	iP	Pn	21 45 31.6	+2.7

BRDR				IAML_P			
	comp=Z,576nm,0.2s						
TAVA	DENIZLI_Tavas	3.55	337	iP	Pn	21 45 30.8	+1.3
DAT	Datca	3.56	316	iP	Pn	21 45 31.0	+1.3
DAT				iS	Sn	21 46 09.5	-1.0
DAT				IAML_P			
	comp=Z,211nm,0.1s						
ISP	Isparta	3.60	358	PN	Pn	21 45 30.9	+0.7
KIZK	Mersin	3.63	50	PN	Pn	21 45 30.8	+0.3
BAGO	Egridir - ISPA	3.77	1	iP	Pn	21 45 34.0	+1.5
HNTI	Hanita	3.92	105	Pn	Pn	21 45 34.5	0.0
HNTI				Sn	Sn	21 46 17.9	-1.4
OFRI	`Ofer	3.94	113	Pn	Pn	21 45 35.0	+0.2
KONT	Konya--Tatoy	3.97	20	PN	Pn	21 45 36.2	+1.0
KZIL	AFYON_Kizioren	4.06	354	iP	Pn	21 45 38.7	+2.2
KZIL				IAML_P			
	comp=Z,183nm,0.2s						
MERS	Mersin	4.11	49	PN	Pn	21 45 37.8	+0.7
AYDN	Tasoluk	4.12	327	iP	Pn	21 45 37.6	+0.3
AYDN				IAML_P			
	comp=Z,177nm,0.2s						
MMA0B	Mount Meron ar	4.12	106	Pn	Pn	21 45 37.6	+0.2
MMA0B				Sn	Sn	21 46 23.0	-1.4
SLTI	Sal'it	4.16	117	Pn	Pn	21 45 38.2	+0.5
SLTI				Sn	Sn	21 46 23.8	-1.3
LADK	Ladik-KONYA	4.21	19	PN	Pn	21 45 39.3	+0.8
KHAL	Karahalli	4.26	347	iP	Pn	21 45 40.7	+1.5
KHAL				IAML_P			
	comp=Z,72nm,0.1s						
KSDI	Kefar Szold	4.28	102	Pn	Pn	21 45 39.7	+0.3
NATI	Neve Ativ	4.33	101	Pn	Pn	21 45 40.3	+0.3
NATI				Sn	Sn	21 46 28.0	-1.2
SHUT	Suhut-Afyon	4.33	359	PN	Pn	21 45 41.2	+0.9
MMLI	Mount Malkishu	4.35	113	Pn	Pn	21 45 40.8	+0.3
KOT	Kottamia	4.38	167	P	Pn	21 45 43.1	+2.2
	baz=166						
HHAG	Hagoal	4.42	164	P	Pn	21 45 43.6	+2.2
	baz=163						
HHAG				S	Sn	21 46 30.3	-1.3
	baz=163						
GCAM	G?zelcaml?	4.46	322	iP	Pn	21 45 42.0	+0.1
AMAZ	Amatzia	4.46	126	Pn	Pn	21 45 43.1	+1.2
KSHT	Keshet	4.46	105	Pn	Pn	21 45 42.6	+0.6
HMDT	Nahal Hemdat	4.51	114	Pn	Pn	21 45 43.4	+0.8
HMDT				Sn	Sn	21 46 33.3	-0.6
KZIT	Kziot	4.56	135	Pn	Pn	21 45 44.8	+1.5
KZIT				Sn	Sn	21 46 33.8	-1.2
HNAT	Natroun	4.57	181	P	Pn	21 45 45.5	+2.1
	baz=179						
HNAT				S	Sn	21 46 34.5	-0.8
	baz=179						
KARA	Karaisali	4.69	48	PN	Pn	21 45 45.9	+0.9
YTIR	Yattir	4.70	126	Pn	Pn	21 45 46.3	+1.0
GLL	Jalalah	4.71	169	P	Pn	21 45 47.4	+2.1
	baz=168						
CHBY	Cihanbeyli	4.71	22	PN	Pn	21 45 46.3	+0.8
SUZ	Suez	4.73	157	P	Pn	21 45 47.9	+2.2
	baz=156						
DSI	Dead Sea	4.76	122	Pn	Pn	21 45 47.1	+1.1
DSI				Sn	Sn	21 46 39.2	-0.7
MZDA	Masada	4.90	125	Pn	Pn	21 45 48.9	+1.0
MZDA				Sn	Sn	21 46 42.5	-0.8
CEYT	Ceyhan	4.99	55	PN	Pn	21 45 49.8	+0.7
TAHT	Tahtakopru-Hat	5.00	63	PN	Pn	21 45 49.9	+0.6
GHAJ	Ghor Haditha	5.04	124	Pn	Pn	21 45 50.9	+1.0
HNKL	Nakhl	5.11	146	P	Pn	21 45 52.1	+1.2
	baz=145						
KOZT	Kozan	5.31	51	PN	Pn	21 45 53.8	+0.3
PRNI	Paran	5.32	135	Pn	Pn	21 45 54.7	+1.0
PRNI				Sn	Sn	21 46 52.3	-1.5
SLUM	Salum	5.33	241	P	Pn	21 45 54.8	+0.9
	baz=240						
SLUM				S	Sn	21 46 50.5	-3.6
	baz=240						
HRFI	Mount Harif	5.57	137	Pn	Pn	21 45 58.5	+1.3
HRFI				Sn	Sn	21 46 59.6	-0.5
NBNS	Bani Suef	5.60	174	P	Pn	21 45 59.6	+2.0
	baz=173						
MBRI	Mt Berech	5.69	140	Pn	Pn	21 46 00.4	+1.5
MBRI				Sn	Sn	21 47 01.7	-1.4
EIL	Elat	5.81	140	Pn	Pn	21 46 01.7	+1.2
HKAT	Jabal Katrina	6.34	153	P	Pn	21 46 09.8	+1.8
	baz=152						
TAMRE	El Minia	6.51	178	P	Pn	21 46 11.8	+1.7
	baz=177						
SWA2		6.65	223	P	Pn	21 46 12.8	+0.8
	baz=223						
SWA2				S	Sn	21 47 23.0	-3.7
	baz=223						

IDC 17 21:57:35.1±2.1, 7°.10S×129°.83E, h0^{km}, mb3.1/1, mb1 3.5/4, mb1mx3.3/35, mbtmp3.3/4, ML3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/14, Error ellipse: s-maj=85.2km s-min=28.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.67	200	Pn	Pn	22 00 24.8	+1.7
	0.2nm,0.3s,baz=31,slow=10,SNR=10						
FITZ				Sn	Sn	22 02 27.4	-6.8
	0.4nm,0.3s,baz=302,slow=18,SNR=7.1						
WRA	Warramunga Arr	13.49	162	Pn	Pn	22 00 46.5	-1.5
	0.2nm,0.3s,baz=342,slow=13,SNR=14						
WRA				Sn	Sn	22 03 07.1	-12
	0.7nm,0.3s,baz=335,slow=22,SNR=14						
ASAR	Alice Springs	16.93	167	Pn	Pn	22 01 33.4	-0.3
	0.1nm,0.3s,baz=339,slow=9.7,SNR=6.4						
ASAR				Sn	Sn	22 04 30.2	-12
	0.1nm,0.3s,baz=352,slow=28,SNR=4.2						
ASAR				LR	LR	22 08 58.8	
	comp=Z,62nm,20.8s,baz=240,slow=40						
MKAR	Makanchi Array	68.22	327	P	P	22 08 37.6	0.0
	0.1nm,0.6s,baz=112,slow=7.9,SNR=2.9						

IDC 17 22:01:47.2±0.9, 11°.29S×165°.17E, h0^{km}, mb4.2/11, mb1 4.4/13, mb1mx4.1/44, mbtmp4.2/13, ML4.2/2, MS4.2/2, Ms1 4.2/2, ms1mx3.1/30, Error ellipse: s-maj=29.0km s-min=19.2km az=132.0

NEIC 17 22:01:48.5±0.3, 11°.31S×165°.19E, h10^{km}, mb4.6/14, Error ellipse: s-maj=8.2km s-min=6.6km az=113.0

ISCJB 17 22:01:50.6±0.5, 11°.47S±0°.06×165°.12E±0°.07, h34^{km}, mb4.4/21, MS4.1/2, Error ellipse: s-maj=10.1km s-min=7.2km az=152.1

ISC 17 22:01:52.1±0.7, 11°.37S±0°.08×165°.17E±0°.09, h34^{km}, n42, σ0^s.72/44, mb4.5/21, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.49	290	ePn	Pn	22 03 10.8	-0.7
HNR				eSn	Sn	22 04 14.6	+1.1
HNR	Honiara	5.49	290	Pn	Pn	22 03 10.5	-1.0
	11nm,0.3s,baz=171,slow=19,SNR=2.5						
HNR				Sn	Sn	22 04 12.7	-0.8
	35nm,0.3s,baz=256,slow=23,SNR=7.4						
DZM	Mont Dzumac	10.71	174	Pn	Pn	22 04 23.8	+0.5
	1.3nm,0.3s,baz=342,slow=14,SNR=10						
DZM				Sn	Sn	22 06 20.3	-1.9
	0.3nm,0.3s,baz=252,slow=20,SNR=2.5						
CTA	Charters Tower	20.15	242	P	P	22 06 24.9	+1.3
	3.2nm,0.7s,baz=67,slow=13,SNR=3.1						
COEN	Coen	21.62	261	eP	P	22 06 40.7	+1.2
	30nm,1.4s						
RAO	Raoul Island	23.78	141	LR	LR	22 15 00.1	
	comp=Z,2μm,20.9s,baz=32,slow=33						
BKZ	Black Stump Fm	29.46	162	eP	P	22 07 53.6	+0.7
	8.9nm,1.1s						
H11S2	WAKE ISLAND Hy	29.71	3	T	T	22 39 14.2	
	baz=182						
H11S3	WAKE ISLAND Hy	29.71	3	T	T	22 39 16.5	
	baz=182						
H11S1	WAKE ISLAND Hy	29.72	3	T	T	22 39 17.7	
	baz=182						
STKA	Stephens Creek	29.82	223	eP	P	22 07 56.8	+0.6
	1.2nm,1.1s						
STKA	Stephens Creek	29.82	223	P	P	22 07 56.8	+0.6
	2.6nm,0.8s,baz=51,slow=9.3,SNR=8.1						
WB2	Warramunga Arr	30.84	250	eP	P	22 08 05.7	+0.4
WR1	Warramunga Arr	30.85	250	eP	P	22 08 05.1	-0.2
	12nm,0.9s						
WR1				ePcP	PcP	22 11 02.4	+0.4
WRA	Warramunga Arr	30.85	250	P	P	22 08 05.1	-0.3
	7.0nm,0.7s,baz=83,slow=8.9,SNR=48						
WRA				PcP	PcP	22 11 02.4	+0.4
	0.5nm,0.7s,baz=350,slow=1.6,SNR=5.5						
AS01	Alice Springs	32.11	243	eP	P	22 08 14.9	-1.5
AS31	Alice Springs	32.15	243	eP	P	22 08 16.0	-0.8
	1.2nm,0.6s						
AS31				ePcP	PcP	22 11 05.8	+0.3
ASAR	Alice Springs	32.15	243	P	P	22 08 16.0	-0.8
	3.7nm,0.8s,baz=64,slow=10,SNR=34						
ASAR				PcP	PcP	22 11 05.8	+0.3
	0.7nm,0.7s,baz=70,slow=3.0,SNR=6.9						
MTN	Manton Dam	33.30	264	eP	P	22 08 26.2	-0.8
	9.9nm,0.9s						
BBOO	Buckleboo	34.20	227	eP	P	22 08 34.1	-0.5
	14nm,1.3s						
PYZ	Puysegur Point	34.70	178	eP	P	22 08 39.1	+0.4
	48nm,1.0s						
FITZ	Fitzroy Crossi	38.76	255	eP	P	22 09 13.4	-0.2
	5.4nm,1.3s						
FITZ	Fitzroy Crossi	38.76	255	P	P	22 09 13.4	-0.2
	1.2nm,0.5s,baz=109,slow=7.1,SNR=12						
MBWA	Marble Bar	44.56	251	eP	P	22 10 01.6	+0.5
	21nm,1.5s						
NWAO	Narrogin (SRO)	48.82	236	LR	LR	22 30 56.3	
	comp=Z,84nm,19.4s,baz=3.5,slow=36						
CM31	Chiang Mai Arr	71.73	294	eP	P	22 13 12.2	+0.8
	7.1nm,0.4s						
CMAR	Chiang Mai Arr	71.73	294	P	P	22 13 12.2	+0.8
	2.0nm,0.3s,baz=122,slow=4.3,SNR=5.6						
SONA0	Songino Array	78.59	324	eP	P	22 13 50.8	+0.3
SONM	Songino Array	78.59	324	P	P	22 13 50.8	+0.3
	0.2nm,0.4s,baz=57,slow=5.5,SNR=4.1						
ILAR	Eielson Array	84.00	19	P	P	22 14 18.7	+0.1
	0.7nm,0.6s,baz=237,slow=5.3,SNR=7.4						
ILB	Eielson Array	84.00	19	eP	P	22 14 18.7	+0.1
	2.8nm,1.0s						
MK01	Makanchi Array	93.36	317	eP	P	22 15 03.9	0.0
MK31	Makanchi Array	93.37	317	eP	P	22 15 04.2	+0.3
	1.9nm,0.9s						
MK32	Makanchi Array	93.37	317	eP	P	22 15 04.2	+0.3
MKAR	Makanchi Array	93.37	317	P	P	22 15 04.2	+0.3
	2.0nm,0.8s,baz=101,slow=6.0,SNR=20						
ZALV	Zalesovo Beam	93.49	324	P	P	22 15 04.0	-0.2
	0.7nm,0.6s,baz=50,slow=2.3,SNR=5.1						
ZAA1	Zalesovo Array	93.49	324	eP	P	22 15 04.0	-0.2
MAKZ	Makanchi	93.58	317	eP	P	22 15 05.1	+0.3
	2.5nm,1.0s						
YKA	Yellowknife Ar	95.52	27	P	P	22 15 12.3	-1.0
	0.3nm,0.8s,baz=256,slow=4.5,SNR=4.3						
YKB5	Yellowknife Ar	95.52	27	eP	P	22 15 12.3	-1.0
KEST	Kesra	147.33	322	PKPbc	PKPbc	22 21 32.6	-0.2
	3.1nm,0.9s,baz=18,slow=3.2,SNR=4.9						
ESDC	Sonseca Array	150.21	343	PKPbc	PKiKP	22 21 40.5	-0.4
	0.1nm,0.3s,baz=24,slow=3.7,SNR=4.5						

GUC 17 22:08:51.4±0.5, 21°.52S×67°.44W, h271^{km}±8^{km}, ML3.6, 2C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.70	260	eP	Pn	22 09 35.3	+1.9
PB09				eS	S	22 10 08.6	+2.0
PB09				IAML		22 10 12.0	
	comp=N,43nm,0.5s						
PB01	IPOC Station P	1.97	284	eP	Pn	22 09 37.3	+1.8
PB01				eS	S	22 10 12.3	+1.9
PB01				IAML		22 10 13.8	
	comp=N,144nm,0.3s						
PB08	IPOC Station P	2.11	310	⇑iP	Pn	22 09 38.9	+1.8
PB08				eS	S	22 10 15.5	+2.3
PB08				IAML		22 10 17.2	
	comp=E,37nm,0.2s						
PB03	IPOC Station P	2.21	256	eP	Pn	22 09 39.9	+2.2
PB03				eS	S	22 10 16.3	+1.9
PB07	IPOC Station P	2.29	264	eP	Pn	22 09 40.6	+2.3
PB07				eS	S	22 10 17.8	+2.3
PB07				IAML		22 10 19.4	
	comp=N,146nm,0.2s						
PB02	IPOC Station P	2.30	274	eP	Pn	22 09 40.8	+2.4
PB02				eS	S	22 10 17.7	+2.1
PB02				IAML		22 10 19.4	
	comp=N,373nm,0.7s						
PB06	IPOC Station P	2.30	239	eP	Pn	22 09 40.5	+2.0
PB06				eS	S	22 10 17.9	+2.0
PB06				IAML		22 10 18.9	
	comp=E,144nm,0.2s						
PB15	IPOC Station P	2.52	228	eP	Pn	22 09 42.8	+2.1
PB15				eS	S	22 10 20.9	+1.2
PB04	IPOC Station P	2.64	252	eP	Pn	22 09 44.4	+2.7
PB04				eS	S	22 10 24.2	+2.4
PB11	IPOC Station P	2.71	310	⇑eP	Pn	22 09 44.5	+2.0
PB11				eS	S	22 10 25.0	+1.9
PB05	IPOC Station P	2.88	242	eP	Pn	22 09 46.8	+2.6
PB05				eS	S	22 10 28.2	+2.1
MNMC	Minye Minye	3.12	319	eP	Pn	22 09 49.3	+2.5
MNMC				eS	S	22 10 33.8	+2.9
PSGC	Pisagua	3.16	307	eP	Pn	22 09 49.0	+2.0
PSGC				eS	S	22 10 33.1	+1.9

ISCJB 17 22:23:05.7±0.7, 33°.85N±0°.05×26°.5E±0°.1, h25^{km}, Error ellipse: s-maj=13.9km s-min=5.7km az=16.6

HLW 17 22:23:08.5, 33°.94N×26°.55E, h22^{km}±29^{km}, Ml3.2

ISC 17 22:23:07.0±1.5, 33°.85N±0°.08×26°.55E±0°.10, h25^{km}, n13, σ1^s.66/15, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLUM	Salum	2.60	206	P	Pn	22 23 48.6	+1.0
	baz=206						
SLUM				S	Sn	22 24 17.6	-0.8
	baz=206						
DAT	Datca	3.00	16	iP	Pn	22 23 52.8	-0.3
DAT				IAML_P			
	comp=Z,126nm,0.2s						
DALY	Dalyan (Mula)	3.43	30	iP	Pn	22 24 00.2	+1.3
DALY				IAML_P			
	comp=Z,980nm,0.2s						
TURN	Turunc	3.46	28	iP	Pn	22 23 57.1	-2.1
TURN				IAML_P			
	comp=Z,1μm,0.1s						
AKAS	Kas	3.46	46	iP	Pn	22 24 00.4	+1.0
AKAS				IAML_P			
	comp=Z,1μm,0.1s						
TAVA	DENIZLI_Tavas	4.09	27	iP	Pn	22 24 08.9	+0.8
TAVA				IAML_P			
	comp=Z,278nm,0.2s						
SWA2		4.68	192	P	Pn	22 24 17.2	+1.1
	baz=192						
KHAL	Karahalli	5.10	27	iP	Pn	22 24 21.4	-0.6
KHAL				IAML_P			
	comp=Z,93nm,0.1s						
GLL	Jalalah	6.12	133	P	Pn	22 24 36.9	+1.1
	baz=133						
NBNS	Bani Suef	6.60	141	P	Pn	22 24 44.4	+1.8
	baz=141						
SUZ	Suez	6.67	125	P	Pn	22 24 44.3	+0.9
	baz=125						
HFRF	Wahat Farafira	6.84	167	P	Pn	22 24 47.0	+1.1
	baz=166						
HFRF				S	Sn	22 25 59.7	-3.3
	baz=166						
TAMRE	El Minia	7.20	147	P	Pn	22 24 52.8	+2.1
	baz=147						

IDC 17 22:24:47.7±5.2, 7°.22S×143°.74E, h0^{km}, mb3.6/2, mb1 3.8/4, mb1mx3.5/30, mbtmp3.6/4, ML3.0/2, Error ellipse: s-maj=104.0km s-min=33.3km az=98.0, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.59	215	Pn	Pn	22 28 29.1	0.0
	0.0nm,0.3s,baz=35,slow=12,SNR=3.1						
WRA				Lg	Lg	22 33 03.4	
	0.1nm,0.3s,baz=36,slow=27,SNR=3.8						
ASAR	Alice Springs	18.88	209	P	P	22 29 09.7	-0.2
	0.1nm,0.3s,baz=39,slow=9.7,SNR=9.7						
FITZ	Fitzroy Crossi	20.68	237	P	P	22 29 29.5	0.0
	0.7nm,0.4s,baz=61,slow=11,SNR=6.3						
CMAR	Chiang Mai Arr	51.02	301	P	P	22 33 51.9	0.0
	0.6nm,0.3s,baz=121,slow=4.3,SNR=4.8						

ISCJB 17 22:33:46.4±0.9, 21°.27S±0°.05×67°.7W±0°.2, h232^{km}±17^{km}, mb3.3/1, Error ellipse: s-maj=30.8km s-min=7.9km az=5.3

GUC 17 22:33:47.1±0.4, 21°.22S×67°.72W, h216^{km}±8^{km}, ML3.4

IDC 17 22:33:50.3±9.1, 20°.88S×66°.83W, h213^{km}±74^{km}, mb3.2/1, mb1 3.0/2, mb1mx2.8/23, mbtmp3.5/2, Error ellipse: s-maj=107.4km s-min=85.9km az=36.0

ISC 17 22:33:46.3±1.3, 21°.27S±0°.06×67°.6W±0°.2, h223^{km}±18^{km}, n15, σ0^s.69/24, 2C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.61	251	⇓iP	Pn	22 34 23.9	+0.6
PB09				IAML		22 34 54.9	
	comp=N,46nm,0.3s						
PB01	IPOC Station P	1.77	277	⇑iP	Pn	22 34 24.9	+0.4
PB01				iS	S	22 34 53.3	-0.9
PB01				IAML		22 34 56.3	
	comp=N,116nm,0.2s						
PB08	IPOC Station P	1.83	308	⇓iP	Pn	22 34 26.0	+0.5
PB08				iS	S	22 34 55.8	0.0
PB08				IAML		22 35 00.2	
	comp=N,46nm,0.2s						
PB02	IPOC Station P	2.13	268	eP	Pn	22 34 29.0	+0.9
PB02				iS	S	22 35 00.5	0.0
PB02				IAML		22 35 02.0	
	comp=N,303nm,0.1s						
PB03	IPOC Station P	2.14	248	eP	Pn	22 34 28.2	+0.1
PB03				iS	S	22 34 60.0	-0.7
PB03				IAML		22 35 01.2	
	comp=E,293nm,0.1s						
PB07	IPOC Station P	2.17	258	eP	Pn	22 34 29.1	+0.6
PB07				iS	S	22 35 01.1	-0.1
PB07				IAML		22 35 01.8	
	comp=N,256nm,0.1s						
PB06	IPOC Station P	2.31	232	⇑iP	Pn	22 34 29.8	-0.1
PB06				iS	S	22 35 03.3	-0.5
PB06				IAML		22 35 05.0	
	comp=N,89nm,0.2s						
PB11	IPOC Station P	2.44	308	⇓iP	Pn	22 34 31.7	+0.5
PB11				iS	S	22 35 05.8	-0.4
PB11				IAML		22 35 08.7	
	comp=N,146nm,0.2s						
PB04	IPOC Station P	2.59	245	IAML		22 35 09.6	
	comp=N,122nm,0.1s						
PB15	IPOC Station P	2.59	221	eP	Pn	22 34 32.7	-0.2
PB15				iS	S	22 35 09.0	-0.1
MNMC	Minye Minye	2.83	318	⇓iP	Pn	22 34 36.7	+1.0
MNMC				IAML		22 35 17.1	
	comp=E,141nm,0.1s						
PSGC	Pisagua	2.89	305	⇓iP	Pn	22 34 36.1	0.0
PSGC				iS	S	22 35 13.9	-1.0
PSGC				IAML		22 35 15.7	
	comp=N,46nm,0.2s						
LPAZ	La Paz	4.98	354	P	Pn	22 35 02.3	+0.5
	comp=N,0.7nm,0.3s,baz=143,slow=6.9,SNR=14						
LPAZ				S	S	22 35 59.6	-1.6
	comp=N,0.1nm,0.3s,baz=16,slow=18,SNR=3.7						
TORD	Torodi Ar. Bea	76.14	70	P	P	22 45 10.7	+0.5
	comp=N,0.3nm,0.4s,baz=253,slow=6.2,SNR=6.4						
MKAR	Makanchi Array	144.73	37	PKP	PKiKP	22 52 59.7	-0.6
	comp=N,0.3nm,0.6s,baz=325,slow=2.9,SNR=5.3						

IDC 17 22:56:15.8±0.6, 10°.63S×166°.12E, h0^{km}, mb4.3/14, mb1 4.5/16, mb1mx4.2/45, mbtmp4.4/16, ML4.8/2, MS3.8/13, Ms1 3.8/13, ms1mx3.6/31, Error ellipse: s-maj=20.6km s-min=15.9km az=109.0

ISCJB 17 22:56:16.1±0.3, 10°.70S±0°.05×166°.07E±0°.05, h10^{km}, mb4.5/39, MS3.8/12, Error ellipse: s-maj=7.5km s-min=6.5km az=172.5

NEIC 17 22:56:17.8±0.3, 10°.64S×166°.09E, h10^{km}, mb4.8/27, Error ellipse: s-maj=7.5km s-min=6.3km az=105.0

ISC 17 22:56:17.7±0.5, 10°.67S±0°.06×166°.19E±0°.07, h10^{km}, n79, σ1^s.31/72, mb4.7/39, MS3.8/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.27	281	eP	Pn	22 57 51.0	+0.7
HNR				eS	Sn	22 59 04.0	+2.0
HNR	Honiara	6.27	281	ePn	Pn	22 57 51.5	+1.2
HNR				eSn	Sn	22 59 05.5	+3.4
HNR	Honiara	6.27	281	Pn	Pn	22 57 50.7	+0.5
	29nm,0.3s,baz=163,slow=8.0,SNR=7.3						
HNR				Sn	Sn	22 59 02.1	+0.1
	11nm,0.3s,baz=114,slow=19,SNR=5.7						
HNR				LR	LR	23 00 21.9	
	comp=Z,1μm,19.6s,baz=106,slow=40						
DZM	Mont Dzumac	11.34	179	ePn	Pn	22 59 02.6	+2.7
	38nm,0.6s						
DZM				eSn	Sn	23 01 04.6	-2.2
	70nm,0.7s						
DZM				eLR	LR	23 01 39.0	
	comp=Z,1μm,24.1s						
DZM	Mont Dzumac	11.34	179	Pn	Pn	22 59 01.9	+1.9
	4.4nm,0.3s,baz=355,slow=17,SNR=30						
DZM				Sn	Sn	23 01 06.0	-0.8
	1.8nm,0.3s,baz=132,slow=21,SNR=3.6						
MSVF	Nonsavu	13.47	123	ePn	P	22 59 45.0	+6.5
EIDS	Eidsvold	20.46	222	eP	Pn	23 00 57.4	-0.4
	38nm,0.8s						
CTA	Charters Tower	21.36	242	P	P	23 01 05.7	+0.3
	9.8nm,0.8s,baz=69,slow=11,SNR=12						
CTAO	Charters Tower	21.36	242	eP	P	23 01 06.2	+0.8
	10nm,0.8s						
COEN	Coen	22.72	259	eP	P	23 01 19.6	-0.4
	16nm,1.4s						
ARMA	Armidale	23.86	212	eP	P	23 01 29.6	-1.9
	21nm,1.4s						
OUZ	Omahuta	25.35	166	eP	P	23 01 46.9	+2.0
	24nm,1.4s						
H11S2	WAKE ISLAND Hy	28.98	1	T	T	23 32 40.4	
	baz=181,slow=76,SNR=208						
H11S3	WAKE ISLAND Hy	28.98	1	T	T	23 32 40.7	
	baz=181,slow=76,SNR=103						
H11S1	WAKE ISLAND Hy	29.00	1	T	T	23 32 42.0	
	baz=181,slow=76,SNR=154						
URZ	Urewera	29.16	162	LR	LR	23 11 57.3	
	comp=Z,212nm,21.2s,baz=344,slow=32						
BKZ	Black Stump Fm	29.83	164	eP	P	23 02 25.4	+0.3
	35nm,1.4s						
H11N1	WAKE ISLAND Hy	30.20	1	T	T	23 34 12.0	
	baz=182,slow=76,SNR=122						
H11N3	WAKE ISLAND Hy	30.20	1	T	T	23 34 12.3	
	baz=182,slow=76,SNR=113						
H11N2	WAKE ISLAND Hy	30.22	1	T	T	23 34 13.2	
	baz=182,slow=76,SNR=81						
STKA	Stephens Creek	31.01	223	eP	P	23 02 36.0	+0.4
	1.0nm,0.8s						
STKA	Stephens Creek	31.01	223	P	P	23 02 36.0	+0.4
	3.0nm,0.8s,baz=48,slow=12,SNR=5.0						
STKA				LR	LR	23 14 39.2	
	comp=Z,547nm,18.2s,baz=29,slow=36						
BFZ	Birch Farm	31.19	165	eP	P	23 02 37.0	0.0
	12nm,0.7s						
THZ	Tophouse	31.53	170	eP	P	23 02 41.2	+1.1
	16nm,0.7s						
WRAB	Tennant Creek	32.01	249	eP	P	23 02 43.6	-1.0
	6.0nm,0.8s						
WB2	Warramunga Arr	32.01	249	eP	P	23 02 43.1	-1.5
WR1	Warramunga Arr	32.02	249	eP	P	23 02 43.4	-1.3
	6.3nm,0.8s						
WR1				ePcP	PcP	23 05 33.8	-0.8
WRA	Warramunga Arr	32.02	249	P	P	23 02 43.4	-1.3
	4.2nm,0.7s,baz=81,slow=9.1,SNR=44						
WRA				PcP	PcP	23 05 33.8	-0.8
	1.4nm,0.7s,baz=76,slow=3.3,SNR=8.9						
GUMO	Guam	32.07	318	LR	LR	23 13 27.3	
	comp=Z,110nm,21.8s,baz=91,slow=32						
KHZ	Kahutara	32.27	170	eP	P	23 02 45.4	-1.0
	17nm,0.9s						
LTZ	Lake Taylor	32.43	172	eP	P	23 02 48.5	+0.6
	15nm,0.8s						
FOZ	Fox Glacier	32.89	175	eP	P	23 02 53.0	+1.1
	22nm,0.8s						
OXZ	Oxford	32.93	172	eP	P	23 02 52.5	+0.2
	17nm,0.8s						
RPZ	Rata Peaks	33.19	174	eP	P	23 02 54.9	+0.3
RPZ	Rata Peaks	33.19	174	P	P	23 02 54.7	+0.1
	33nm,0.8s,baz=78,slow=0.9,SNR=23						
RPZ				LR	LR	23 16 20.4	
	comp=Z,231nm,18.2s,baz=357,slow=36						
AS01	Alice Springs	33.31	243	eP	P	23 02 55.3	-0.6
AS31	Alice Springs	33.35	243	eP	P	23 02 55.0	-1.3
	1.6nm,0.8s						
AS31				ePcP	PcP	23 05 37.1	-1.1

ASAR	Alice Springs	33.35	243	P	P	23 02 54.7	-1.6
	4.0nm,0.8s,baz=72,slow=9.4,SNR=32						
ASAR				PcP	PcP	23 05 37.1	-1.1
	1.9nm,0.6s,baz=73,slow=2.6,SNR=14						
ASAR				LR	LR	23 15 39.5	
	comp=Z,191nm,18.7s,baz=76,slow=35						
MQZ	McQueen’s Vall	33.39	171	*e*P	P	23 02 56.2	0.0
	23nm,0.8s						
LBZ	Lake Benmore	33.77	175	*e*P	P	23 02 59.2	-0.4
	18nm,1.2s						
RAR	Rarotonga	34.29	112	LR	LR	23 14 00.6	
	comp=Z,99nm,20.7s,baz=270,slow=31						
BBOO	Buckleboo	35.40	227	*e*P	P	23 03 14.3	+0.4
	18nm,1.0s						
FITZ	Fitzroy Crossi	39.90	255	*e*P	P	23 03 51.2	-1.0
	6.9nm,0.8s						
PPT	Papeete	43.36	104	LR	LR	23 18 00.7	
	comp=Z,80nm,19.1s,baz=290,slow=30						
PPT2	Papeete2	43.37	104	*e*LQ	LQ	23 14 43.8	
	326nm,27.8s						
PPT2				*e*LR	LR	23 16 32.1	
	comp=Z,119nm,22.5s						
MBWA	Marble Bar	45.73	251	*e*P	P	23 04 39.1	-0.3
	6.4nm,0.8s						
MJAR	Matsushiro Arr	53.84	332	P	P	23 05 39.6	-1.4
	2.2nm,0.8s,baz=166,slow=9.8,SNR=6.7						
MAJO	Matsushiro	53.84	332	*e*P	P	23 05 39.6	-1.4
ASAJ	Asahikawa	58.59	340	P	P	23 06 14.7	0.0
	8.2nm,0.8s,baz=218,slow=9.2,SNR=6.6						
ASAJ				LR	LR	23 26 52.0	
	comp=Z,105nm,20.8s,baz=174,slow=31						
KSRS	Korea Array	59.82	325	LR	LR	23 29 35.2	
	comp=Z,32nm,20.2s,baz=170,slow=34						
CM31	Chiang Mai Arr	72.36	293	*e*P	P	23 07 44.0	-0.4
	5.2nm,0.4s						
CMAR	Chiang Mai Arr	72.36	293	P	P	23 07 44.0	-0.4
	1.4nm,0.3s,baz=131,slow=4.6,SNR=8.0						
GAMB	Gambell	76.13	10	*e*P	P	23 08 04.5	-0.8
	6.0nm,0.8s						
SONA0	Songino Array	78.62	324	*e*P	P	23 08 19.9	-0.1
SONM	Songino Array	78.62	324	P	P	23 08 19.9	-0.1
	0.5nm,0.9s,baz=132,slow=6.0,SNR=3.3						
QSPA	South Pole Qui	79.33	180	P	P	23 08 23.4	-0.2
	2.7nm,0.8s,baz=24,slow=1.5,SNR=6.4						
ILAR	Eielson Array	83.02	18	P	P	23 08 43.0	+0.1
	1.1nm,0.7s,baz=240,slow=5.1,SNR=25						
ILB	Eielson Array	83.02	18	*e*P	P	23 08 43.0	+0.1
	9.9nm,1.4s						
AFDM	Forest Hills D	83.63	49	*e*P	P	23 08 48.8	+2.1
	4.6nm,1.0s						
EGAK	Eagle	84.88	20	*e*P	P	23 08 53.8	+1.4
	5.4nm,0.9s						
NV01	Mina Array Sit	85.45	50	*e*P	P	23 08 57.9	+1.8
NVAR	Mina Array Bea	85.45	50	P	P	23 08 57.1	+1.0
	1.9nm,0.7s,baz=235,slow=8.9,SNR=7.3						
NV11	Mina Array Sit	85.56	50	*e*P	P	23 08 58.7	+2.1
	0.3nm,1.0s						
319A	Douglas	90.87	58	*e*P	P	23 09 21.4	-0.7
	7.7nm,0.8s						
PDAR	Pinedale Array	92.98	47	*e*P	P	23 09 35.5	+3.7
PDAR	Pinedale Array	92.98	47	LR	LR	23 46 43.8	
	comp=Z,32nm,18.0s,baz=306,slow=33						
HPIG		93.12	63	*e*P	P	23 09 36.0	+3.3
	16nm,0.8s						
LAZ	Ladron	93.23	56	*e*P	P	23 09 33.4	+0.3
MK32	Makanchi Array	93.55	317	*e*P	P	23 09 32.5	-1.6
MKAR	Makanchi Array	93.55	317	P	P	23 09 32.5	-1.5
	0.6nm,0.7s,baz=93,slow=6.0,SNR=7.2						
YKA	Yellowknife Ar	94.44	27	P	P	23 09 36.9	-0.7
	0.2nm,0.7s,baz=262,slow=4.3,SNR=4.0						
YKA				LR	LR	23 47 03.8	
	comp=Z,8.5nm,19.6s,baz=247,slow=32						
YKB5	Yellowknife Ar	94.44	27	*e*P	P	23 09 36.9	-0.7
TXAR	Lajitas Array	95.27	61	LR	LR	23 44 58.8	
	comp=Z,94nm,20.1s,baz=0.0,slow=31						
ARA0	ARCESS Array S	116.08	346	*e*PKPdf	PKPdf	23 15 00.7	+0.1
ARCES	ARCESS Array B	116.08	346	PKP	PKPdf	23 15 00.7	+0.1
	2.0nm,1.0s,baz=90,slow=2.7,SNR=3.0						
BOSA	Boshof	125.69	223	PKP	PKPdf	23 15 19.3	-1.1
	2.3nm,1.0s,baz=56,slow=2.9,SNR=4.6						
ILGA	Ilgaz	128.49	315	*e*Pdif	Pdif	23 12 09.4	-1.0
KEST	Kesra	147.38	324	PKPbc	PKPdf	23 16 00.5	+0.6
	2.1nm,0.8s,baz=14,slow=4.2,SNR=2.9						
ESDC	Sonseca Array	149.82	345	PKPbc	PKPbc	23 16 07.0	-1.5
	0.3nm,0.6s,baz=14,slow=2.8,SNR=3.5						

IDC 17 22:59:53.6±1.1**, 26°.24S×71°.58E, h0^{km}, mb4.0**/7**, mb1 4.1**/7**, mb1mx3.7**/43**, mbtmp4.0**/7**, MS3.6**/4**, Ms1 3.6**/4**, ms1mx3.2**/27**, Error ellipse: s-maj=33.6km s-min=25.9km az=1.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.51	3	T	T	23 23 28.5	
	baz=183						
H08S2	Diego Garcia H	18.51	3	T	T	23 23 26.0	
	baz=183,slow=74						
H08S3	Diego Garcia H	18.53	3	T	T	23 23 27.3	
	baz=183,slow=74						
H01W2	Cape Leeuwin H	37.42	114	T	T	23 46 45.4	
	baz=271						
H01W3	Cape Leeuwin H	37.42	114	T	T	23 46 43.4	
	baz=271						
H01W1	Cape Leeuwin H	37.44	114	T	T	23 46 43.6	
	baz=271						
BOSA	Boshof	40.99	256	P	P	23 07 38.8	+0.1
	1.9nm,0.9s,baz=88,slow=11,SNR=3.2						
BOSA				LR	LR	23 20 49.5	
	comp=Z,109nm,18.6s,baz=159,slow=31						
CMAR	Chiang Mai Arr	51.77	34	P	P	23 09 04.1	+0.8
	0.3nm,0.3s,baz=214,slow=7.8,SNR=5.8						
CMAR				LR	LR	23 26 39.4	
	comp=Z,30nm,20.4s,baz=172,slow=31						
ASAR	Alice Springs	56.09	102	P	P	23 09 34.9	-0.1
	1.5nm,0.9s,baz=250,slow=6.3,SNR=8.3						
WRA	Warramunga Arr	57.60	98	P	P	23 09 45.7	-0.1
	2.3nm,0.9s,baz=252,slow=6.9,SNR=11						
GEYT	Alibeck	65.06	348	LR	LR	23 34 33.5	
	comp=Z,39nm,20.5s,baz=35,slow=32						
AAK	Ala-Archa	68.58	2	LR	LR	23 38 45.0	
	comp=Z,39nm,18.7s,baz=171,slow=34						
MKAR	Makanchi Array	73.33	8	P	P	23 11 26.9	-0.1
	1.3nm,0.7s,baz=192,slow=6.5,SNR=11						
SONM	Songino Array	80.10	23	P	P	23 12 05.2	-0.1
	0.3nm,0.7s,baz=195,slow=2.8,SNR=3.5						
ZALV	Zalesovo Beam	80.67	8	P	P	23 12 07.7	-0.4
	1.2nm,0.6s,baz=243,slow=3.0,SNR=6.7						
YKA	Yellowknife Ar	143.51	5	PKP	PKPdf	23 19 28.5	-1.2
	0.2nm,0.6s,baz=344,slow=2.9,SNR=3.8						

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*DDA **17** 23:00:24.7, 39°.68N×25°.58E, h21^{km}±1^{km}, ML3.6*
*ISK **17** 23:00:25.9, 39°.71N×25°.71E, h4^{km}, ML3.7/31*
*ISCJB **17** 23:00:26.1±0.4, 39°.68N±0°.01×25°.66E±0°.02, h8^{km}±3^{km}, Error ellipse: s-maj=2.1km s-min=2.0km az=145.6*
*THE **17** 23:00:26.5, 39°.69N×25°.70E, h8^{km}, ML3.2/9, Error ellipse: s-maj=0.8km s-min=0.4km az=79.0*
*ATH **17** 23:00:26.3, 39°.69N×25°.66E, h28^{km}±1^{km}, ML3.3/23, Error ellipse: s-maj=1.6km s-min=0.8km az=71.0*
ISC 17 23:00:26.8±1.0**, 39°.68N**±0°.02×**25°.68E**±0°.02**, h8**^{km}±8^{km}**, n213, σ1^{s}05**/233**, 18C-18D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.33	61	PG	Pg	23 00 32.5	-0.7
BOZC	Bozcaada	0.33	61	*i* P	Pg	23 00 33.2	0.0
BOZC				*i* S	Sg	23 00 37.9	+0.3
BOZC				IAML_P			
	comp=Z,33µm,0.2s						
LIA	Limnos Island	0.44	299	P	Pg	23 00 35.5	+0.1
LIA				S	Sg	23 00 41.6	+0.4
LIA				AML	AML	23 00 53.0	
	comp=N,7054µm,0.4s						
LIA				AML	AML	23 00 53.8	
	comp=E,7201µm,0.6s						
LIA	Limnos Island	0.44	299	P	Pg	23 00 35.4	+0.1
LIA				S	Sg	23 00 41.4	+0.2
SIGR	SIGRI	0.49	164	PG	Pg	23 00 36.3	0.0
SIGR	SIGRI	0.49	164	P	Pg	23 00 36.3	0.0
SIGR				S	Sb	23 00 44.2	-0.7
SIGR				AML	AML	23 00 44.8	
	comp=E,33334µm,0.5s						
SIGR				AML	AML	23 00 44.8	
	comp=N,34466µm,0.4s						
SIGR	SIGRI	0.49	164	P	Pg	23 00 36.2	0.0
SIGR				S	Sg	23 00 42.9	+0.3
EZN	Ezine	0.52	74	PG	Pg	23 00 36.1	-0.7
EZN				SG	Sg	23 00 43.0	-0.5
EZN	Ezine	0.52	74	P	Pg	23 00 36.1	-0.7
EZN				S	Sg	23 00 43.3	-0.2
EFSA	Agios Efstrati	0.56	255	P	Pb	23 00 38.8	+0.1
PRK	Paraskevi	0.63	134	P	Pb	23 00 40.0	0.0
PRK				S	Sb	23 00 49.0	+0.1
PRK				AML	AML	23 00 52.8	
	comp=E,7083µm,0.9s						
PRK				AML	AML	23 00 53.9	
	comp=N,7591µm,0.5s						
PRK	Paraskevi	0.63	134	P	Pb	23 00 40.0	0.0
BAYC	CANAKKALE_Bayr	0.67	85	*i* P	Pg	23 00 39.1	-0.5
SMTH	Samothraki Isl	0.80	352	P	Pg	23 00 41.6	-0.6
SMTH				S	Sg	23 00 53.0	+0.5
SMTH				AML	AML	23 00 59.9	
	comp=E,2361µm,0.4s						
SMTH				AML	AML	23 01 01.7	
	comp=N,2573µm,0.5s						
SMTH	Samothraki Isl	0.80	352	P	Pg	23 00 41.5	-0.6
SMTH				S	Sg	23 00 52.8	+0.3
AYVA	Ayvalik	0.86	115	*i* P	Pb	23 00 43.9	-0.1
AYVA				*i* S	Sn	23 00 56.7	-1.2
GELI	Tayfur-Gelibol	0.94	40	PG	Pg	23 00 43.9	-0.9
LPK	Lapseki	1.08	50	PG	Pg	23 00 46.1	-1.4
ENEZ	Enez	1.11	19	PG	Pb	23 00 47.3	-1.0
PSRA	Psara	1.14	185	P	Pb	23 00 48.9	+0.2
PSRA				AML	AML	23 01 08.8	
	comp=N,5118µm,0.3s						
PSRA				AML	AML	23 01 08.9	
	comp=E,5855µm,0.5s						
ERIK	Erikli-Kesan	1.17	32	PN	Pb	23 00 48.2	-1.1
THAS	Thassos island	1.18	322	P	Pb	23 00 48.5	-1.0
THAS				AML	AML	23 01 11.0	
	comp=N,1707µm,0.4s						
THAS				AML	AML	23 01 12.4	
	comp=E,1842µm,0.4s						
THAS	Thassos island	1.18	322	P	Pb	23 00 48.4	-1.0
THAS				S	Sb	23 01 04.5	-0.4
SKY	Skiros Island	1.19	228	P	Pb	23 00 48.5	-1.1
SKY				AML	AML	23 01 09.3	
	comp=E,4813µm,0.3s						
SKY				AML	AML	23 01 10.6	
	comp=N,3304µm,0.3s						
ALN	Alexandroupoli	1.25	13	PN	Pn	23 00 49.5	-1.0
ALN	Alexandroupoli	1.25	13	P	Pn	23 00 49.3	-1.2
ALN				AML	AML	23 01 08.2	
	comp=E,1645µm,0.3s						
ALN				AML	AML	23 01 08.7	
	comp=N,2622µm,0.5s						
ALN	Alexandroupoli	1.25	13	P	Pn	23 00 49.0	-1.5
ALN				S	Sb	23 01 06.1	-0.6
FOCM	Foa	1.26	140	PN	Pb	23 00 51.0	+0.2
KRBN	Karaburun	1.28	148	PN	Pb	23 00 51.3	+0.2
CHOS	Chios island	1.32	167	PN	Pb	23 00 52.0	+0.1
CHOS	Chios island	1.32	167	P	Pn	23 00 51.0	-0.7
CHOS				AML	AML	23 01 12.9	
	comp=N,3160µm,0.4s						
CHOS				AML	AML	23 01 16.3	
	comp=E,4210µm,0.3s						
CHOS	Chios island	1.32	167	P	Pn	23 00 50.9	-0.7
CHOS				S	Sb	23 01 08.8	-0.3
KESN	Edirne-Kesan	1.37	33	*i* P	Pn	23 00 51.7	-0.9
KESN				IAML_P			
	comp=Z,2µm,0.3s						
KRBG	Karabiga-Canak	1.43	60	PN	Pn	23 00 52.6	-0.4
OUR	Ouranopolis	1.46	297	PN	Pn	23 00 53.6	+0.2
OUR	Ouranopolis	1.46	297	P	Pn	23 00 52.9	-0.5
OUR				AML	AML	23 01 21.1	
	comp=N,3108µm,0.6s						
OUR				AML	AML	23 01 24.0	
	comp=E,2264µm,0.6s						
OUR	Ouranopolis	1.46	297	P	Pn	23 00 52.3	-1.1
OUR				S	Sn	23 01 12.5	-0.2
RDO	Rodhopi	1.47	356	PN	Pn	23 00 53.3	-0.2
RDO	Rodhopi	1.47	356	P	Pn	23 00 52.7	-0.8
RDO				AML	AML	23 01 22.7	
	comp=N,997µm,0.5s						
RDO				AML	AML	23 01 23.5	
	comp=E,843µm,0.7s						
RDO	Rodhopi	1.47	356	P	Pn	23 00 52.4	-1.1
AOS	Alonnisos	1.49	250	PN	Pn	23 00 54.1	+0.3
AOS	Alonnisos	1.49	250	P	Pn	23 00 52.9	-0.9
AOS	Alonnisos	1.49	250	P	Pn	23 00 52.8	-0.9
AOS				S	Sn	23 01 12.9	-0.5
BALY	Balya	1.49	87	*i* P	Pn	23 00 54.0	+0.1
BALY				IAML_P			
	comp=Z,5µm,0.2s						
URLA	Izmir	1.50	151	PN	Pn	23 00 53.3	-0.7
URLA	Izmir	1.50	151	*i* P	Pn	23 00 54.0	0.0
URLA				*i* S	Sn	23 01 13.8	+0.1
URLA				IAML_P			
	comp=Z,8µm,0.3s						
ALNA	Alonissos	1.50	250	P	Pn	23 00 53.8	-0.3
RKY	Sarkoy-Tekirda	1.52	48	PN	Pn	23 00 53.8	-0.5
SART	Tekirdag	1.52	48	*i* P	Pn	23 00 54.4	+0.1
SART				IAML_P			
	comp=Z,19µm,0.3s						
KNL	Balıkesir	1.53	67	*i* P	Pn	23 00 54.3	-0.1
KNL				IAML_P			
	comp=Z,8µm,0.3s						
PAIG	Paliouri	1.56	280	P	Pn	23 00 54.0	-0.9
PAIG				AML	AML	23 01 25.0	
	comp=N,883µm,0.6s						
PAIG				AML	AML	23 01 27.5	
	comp=E,572µm,0.5s						
PAIG	Paliouri	1.56	280	P	Pn	23 00 53.9	-0.9
PAIG				S	Sn	23 01 15.4	+0.2
ZEY	zmir	1.58	156	*i* P	Pn	23 00 55.0	+0.1
ZEY				*i* S	Sn	23 01 14.9	-0.7
ZEY				IAML_P			
	comp=Z,2µm,0.1s						
GONE	Gonen-Balikesi	1.58	76	PN	Pn	23 00 55.1	0.0
KAVA	Kavala	1.59	326	P	Pn	23 00 54.1	-1.0
KAVA				AML	AML	23 01 24.1	
	comp=E,817µm,0.4s						
KAVA				AML	AML	23 01 25.1	
	comp=N,804µm,0.7s						
KAVA	Kavala	1.59	326	P	Pn	23 00 54.0	-1.2
KVLA	Kavala	1.60	322	P	Pn	23 00 54.5	-0.8
STEP	BALIKESIR_Sava	1.60	100	*i* P	Pn	23 00 55.8	+0.4
STEP				IAML_P			
	comp=Z,6µm,0.2s						
BLCB	Balcova	1.67	140	PN	Pn	23 00 56.1	-0.2
SKIA	Skiathos	1.79	254	P	Pn	23 00 57.9	-0.1
SKIA	Skiathos	1.79	254	P	Pn	23 00 57.5	-0.5
EDC	Edincik	1.80	68	PN	Pn	23 00 57.9	-0.2
AKHS	Akhisar	1.84	115	*i* P	Pn	23 00 59.2	+0.6
AKHS				IAML_P			
	comp=Z,3µm,0.2s						
AKS	Akhisar	1.84	115	PN	Pn	23 00 58.9	+0.3
PLG	Polygyros	1.85	293	P	Pn	23 00 58.8	-0.1
PLG				AML	AML	23 01 33.7	
	comp=N,699µm,0.5s						
PLG				AML	AML	23 01 34.7	
	comp=E,736µm,0.6s						
PLG	Polygyros	1.85	293	P	Pn	23 00 58.0	-0.9
EREA	Eretria	1.86	228	P	Pn	23 00 57.9	-1.0
EREA				AML	AML	23 01 33.4	
	comp=E,832µm,0.4s						
EREA				AML	AML	23 01 34.4	
	comp=N,1259µm,0.4s						
EREA	Eretria	1.86	228	P	Pn	23 00 57.7	-1.2
GMLD	Gumuldur	1.87	149	PN	Pn	23 00 59.5	+0.5
DGB	zmir	1.88	150	*i* P	Pn	23 00 59.2	+0.1
DGB				*i* S	Sn	23 01 22.9	0.0
DGB				IAML_P			
	comp=Z,1µm,0.3s						
MRKA	Markates	1.90	240	P	Pn	23 00 59.2	-0.2
MRKA				AML	AML	23 01 37.0	
	comp=E,1237µm,1.1s						
MRKA				AML	AML	23 01 41.7	
	comp=N,844µm,0.6s						
MRKA	Markates	1.90	240	P	Pn	23 00 58.5	-1.0
NEO	Neokhori	1.94	260	P	Pn	23 00 59.4	-0.6
NEO				AML	AML	23 01 31.4	
	comp=N,990µm,0.4s						
NEO				AML	AML	23 01 32.4	
	comp=E,697µm,0.3s						
NEO	Neokhori	1.94	260	P	Pn	23 00 59.2	-0.8
XOR	Xorichti	1.95	261	P	Pn	23 00 59.2	-1.0
XOR	Xorichti	1.95	261	P	Pn	23 00 59.5	-0.7
KDZ	Kurdzhali	1.98	354	PN	Pn	23 01 00.7	+0.2
KDZ	Kurdzhali	1.98	354	*e*P	Pg	23 01 06.0	+1.3
GOMA	Golmarmara-Man	1.99	119	PN	Pn	23 01 01.3	+0.6
SMIA	Simia	2.08	248	P	Pn	23 01 02.1	+0.2
SMIA				AML	AML	23 01 48.0	
	comp=E,1918µm,0.9s						
SMIA				AML	AML	23 01 50.8	
	comp=N,2333µm,0.6s						
SMIA	Simia	2.08	248	P	Pn	23 01 01.6	-0.4
SOH	Sokhos	2.12	303	P	Pn	23 01 02.1	-0.3
SOH	Sokhos	2.12	303	P	Pn	23 01 02.0	-0.5
CRLT	Corlu	2.13	47	PN	Pn	23 01 02.0	-0.7
KCTX	Karacabey (Bur	2.13	73	PN	Pn	23 01 02.6	-0.1
RZN	Rozhen	2.13	340	*e*P	Pn	23 01 02.0	-0.9
FYTO	Fytoko, Volos	2.14	264	P	Pn	23 01 03.4	+0.7
DURS	Dursunbey	2.16	91	*i* P	Pn	23 01 03.6	+0.5
DURS				IAML_P			
	comp=Z,2µm,0.2s						
PTL	Penteli	2.16	222	P	Pn	23 01 01.9	-1.2
SMG	Samos	2.17	155	P	Pn	23 01 02.6	-0.5
SMG				AML	AML	23 01 39.5	
	comp=N,971µm,0.6s						
SMG				AML	AML	23 01 43.0	
	comp=E,966µm,0.6s						
SMG	Samos	2.17	155	P	Pn	23 01 02.6	-0.5
NVR	Nevrokopi	2.17	321	P	Pn	23 01 02.6	-0.6
NVR				AML	AML	23 01 42.9	
	comp=E,455µm,0.5s						
NVR				AML	AML	23 01 43.2	
	comp=N,540µm,0.7s						
NVR	Nevrokopi	2.17	321	P	Pn	23 01 02.5	-0.7
HORT	Hortiatis	2.18	296	PN	Pn	23 01 03.9	+0.5
ATHU	Athens Univers	2.27	221	P	Pn	23 01 03.3	-1.2
DST	Dursunbey	2.27	91	PN	Pn	23 01 04.9	+0.3
ATAL	Atalanti	2.29	245	P	Pn	23 01 04.1	-0.8
ATAL	Atalanti	2.29	245	P	Pn	23 01 04.1	-0.8
EDRB	Edirne	2.31	20	PN	Pn	23 01 05.4	+0.3
EDRB	Edirne	2.31	20	P	Pn	23 01 03.8	-1.3
GCAM	G?zelcaml?	2.32	148	PN	Pn	23 01 06.4	+1.2
GCAM	G?zelcaml?	2.32	148	*i* P	Pb	23 01 09.1	+0.3
GCAM				*i* S	Sg	23 01 40.5	-0.9
GCAM				IAML_P			
	comp=Z,801nm,0.2s						
VLY	Voula,Athens	2.35	220	P	Pn	23 01 04.5	-1.2
VLY	Voula,Athens	2.35	220	P	Pn	23 01 04.5	-1.2
DIM	Dimitrovgrad	2.37	357	*e*P	Pn	23 01 06.8	+0.9
VIL2	Platees	2.39	233	P	Pn	23 01 05.1	-1.1
VIL2				AML	AML	23 01 53.8	
	comp=E,677µm,0.5s						
VIL2				AML	AML	23 01 57.5	
	comp=N,526µm,0.7s						
VILL	Villia	2.39	231	P	Pn	23 01 04.9	-1.4
PHSR	Pinarhisar	2.40	35	PN	Pn	23 01 06.1	-0.2
MMB	Musomiste	2.42	323	*e*P	Pn	23 01 08.0	+1.4
DEMI	Demirci	2.44	104	*i* P	Pn	23 01 07.8	+0.8
DEMI				IAML_P			
	comp=Z,984nm,0.2s						
AYDB	Zeytinkoy-Aydi	2.44	134	PN	Pn	23 01 07.2	+0.1
SLVT	Silivri	2.47	50	PN	Pn	23 01 06.8	-0.5
ORLT	Orhaneli	2.50	81	PN	Pn	23 01 08.2	+0.5
PLD	Plovdiv	2.53	343	PN	Pn	23 01 08.7	+0.5
PLD	Plovdiv	2.53	343	*e*P	Pg	23 01 14.1	-1.2
MANT	Manisa	2.53	117	*i* P	Pn	23 01 09.5	+1.1
MANT				IAML_P			
	comp=Z,999nm,0.2s						
MDNY	Mudanya-Bursa	2.55	73	PN	Pn	23 01 08.7	+0.3
KNT	Kendrikon	2.59	306	P	Pn	23 01 09.0	+0.1
KNT				AML	AML	23 01 55.2	
	comp=N,392µm,0.8s						
KNT				AML	AML	23 01 57.5	
	comp=E,419µm,0.5s						
KNT	Kendrikon	2.59	306	P	Pn	23 01 07.8	-1.2
ARMT	Armutlu	2.59	69	PN	Pn	23 01 09.5	+0.5
KULA	Kula-Manisa	2.59	116	PN	Pn	23 01 09.7	+0.6
PROD	Prodromos	2.59	238	P	Pn	23 01 08.1	-0.9
PROD	Prodromos	2.59	238	P	Pn	23 01 07.9	-1.1
APE	Apeiranthos	2.61	183	P	Pn	23 01 08.7	-0.6
APE	Apeiranthos	2.61	183	⇑ *i*P	Pn	23 01 08.0	-1.3
APE	Apeiranthos	2.61	183	S	Sn	23 01 40.5	-0.7
AYDN	Tasoluk	2.65	139	*i* P	Pn	23 01 10.0	+0.2
AYDN				IAML_P			
	comp=Z,685nm,0.2s						
CTKS	Kestanelik-??a	2.66	53	PN	Pn	23 01 10.2	+0.4
CTYL	Yalikoy Yolu	2.67	47	PN	Pn	23 01 10.5	+0.4
AGG	Agios Georgios	2.68	257	P	Pn	23 01 09.8	-0.5
AGG	Agios Georgios	2.68	257	P	Pn	23 01 09.7	-0.5
KIYI	Yalıkoy-Catalc	2.69	47	PN	Pn	23 01 10.2	0.0
SERI	Serifos	2.69	201	P	Pn	23 01 10.0	-0.3
LTK	Loutraki	2.69	233	P	Pn	23 01 09.5	-0.9
LTK	Loutraki	2.69	233	P	Pn	23 01 09.4	-1.0
LOUT	Loutraki	2.71	232	P	Pn	23 01 10.0	-0.6
DSF	Desfina	2.77	244	P	Pn	23 01 10.8	-0.6
BGKT	Bogazkoy	2.79	57	PN	Pn	23 01 12.0	+0.3
GEMT	Gemlik	2.79	73	PN	Pn	23 01 12.3	+0.6
GRG	Griva	2.81	298	P	Pn	23 01 13.1	+1.0
GRG				AML	AML	23 02 07.6	
	comp=E,256µm,0.7s						
GRG				AML	AML	23 02 10.0	
	comp=N,320µm,0.7s						
SHAP	Saphane-Kutahy	2.82	102	PN	Pn	23 01 13.0	+0.8
THL	Klokotos Trika	2.84	269	P	Pn	23 01 12.6	+0.3
AMGA	Amorgos Island	2.85	177	P	Pn	23 01 11.7	-0.8
VAY	Valandovo	2.88	306	*e*Pn	Pn	23 01 15.2	+2.3
DID	Didima	2.90	222	P	Pn	23 01 12.4	-0.8
ISK	Istanbul-Kandi	2.92	61	PN	Pn	23 01 14.1	+0.5
KAVV	Kandilli-Istan	2.92	61	PN	Pn	23 01 13.8	+0.3
TVSB	Tavsanli	2.93	93	PN	Pn	23 01 14.1	+0.4
KKB	Krupnik	2.94	319	*e*P	Pb	23 01 21.3	+1.8
BDRM	Kayabasi	2.96	152	*i* P	Pn	23 01 14.9	+0.9
GEDZ	Gediz	2.96	101	PN	Pn	23 01 14.8	+0.7
YLV	Yalova	2.96	71	PN	Pn	23 01 14.8	+0.6
GDZ	Gediz	3.00	100	*i* P	Pn	23 01 15.5	+0.7
KLYT	Kilyos	3.00	57	PN	Pn	23 01 15.1	+0.5
PGB	Panagyurishte	3.09	339	*e*P	Pn	23 01 15.2	-0.6
SERG	Sergoula	3.10	247	P	Pn	23 01 15.6	-0.3
TRAZ	Trapeza	3.10	242	P	Pn	23 01 15.5	-0.5
EVR	Evrytania	3.10	257	P	Pn	23 01 16.3	+0.2
TRIZ	Trizonia	3.10	246	P	Pn	23 01 15.7	-0.3
TRIZ	Trizonia	3.10	246	P	Pn	23 01 15.5	-0.5
ANX	Ano Chora	3.12	251	P	Pn	23 01 16.4	+0.1
ANX	Ano Chora	3.12	251	P	Pn	23 01 16.2	-0.2
GUR	Goura	3.14	237	P	Pn	23 01 16.0	-0.6
GUR	Goura	3.14	237	P	Pn	23 01 15.8	-0.8
EFP	Efpalio	3.20	248	P	Pn	23 01 16.5	-0.8
KLV	Kalavryta, Ach	3.21	240	P	Pn	23 01 17.2	-0.3
LAKA	Lakka	3.23	245	P	Pn	23 01 17.8	0.0
KHAL	Karahalli	3.24	113	*i* P	Pn	23 01 19.6	+1.6
KHAL				IAML_P			
	comp=Z,1µm,0.3s						
STIP	Stip	3.33	308	*i* Pn	Pn	23 01 18.3	-0.8
TAVA	DENIZLI_Tavas	3.36	130	*i* P	Pn	23 01 20.2	+0.6
TAVA				IAML_P			
	comp=Z,347nm,0.3s						
TRIP	Tripoli	3.43	232	P	Pn	23 01 20.5	-0.1
VTS	Vitosha	3.47	329	⇑ *i*P	Pn	23 01 22.4	+1.2
SZH	Strazhica	3.59	3	*e*P	Pn	23 01 24.5	+1.8
TURN	Turunc	3.62	140	*i* P	Pn	23 01 22.9	-0.2
TURN				IAML_P			
	comp=Z,788nm,0.3s						
VLI	Veliai	3.67	217	P	Pn	23 01 22.6	-1.2
DALY	Dalyan (Mula)	3.69	140	*i* P	Pn	23 01 24.4	+0.3
DALY				IAML_P			
	comp=Z,303nm,0.5s						
PRD	Provadia	3.74	20	*e*P	Pn	23 01 26.3	+1.5
KRUS	Krusevo	3.78	298	*i* Pn	Pn	23 01 27.1	+1.7
BRDR	BURDUR-Merkez	3.96	119	*i* P	Pn	23 01 28.8	+1.0
BRDR				IAML_P			
	comp=Z,368nm,0.3s						
ISP	Isparta	4.21	115	⇑ *i*P	Pn	23 01 31.2	-0.2
VLAD	Vladila	4.42	348	⇓ *i*P	Pn	23 01 37.5	+3.4
RASA	Rasa	4.66	13	⇓ *i*P	Sn	23 02 31.4	-0.2
ICOR	Ion Corvin	4.70	19	⇑ *i*P	Pn	23 01 38.2	+0.2
HUMR	Humele	4.87	354	⇑ *i*P	Pn	23 01 41.0	+0.7
SULR		5.01	5	⇓ *i*P	Pn	23 01 44.6	+2.4
TIRR	Tirgusor	5.19	22	⇑ *i*P	Pn	23 01 45.8	+1.2
TLB	Topalu	5.20	19	⇓ *i*P	Pn	23 01 45.5	+0.7
HARR	Harsova	5.28	18	⇓ *i*P	Pn	23 01 48.0	+2.2
SRE	Strehaia	5.31	341	⇑ *i*P	Pn	23 01 48.7	+2.4
MTUR	Matau	5.56	355	⇑ *i*P	Pn	23 01 50.6	+0.8
HERR	Herculane	5.73	336	⇓ *i*P	Pn	23 01 52.1	0.0
ARR	Arges	5.74	353	⇑ *i*P	Pn	23 01 53.6	+1.4
VOIR		5.77	356	⇑ *i*P	Pn	23 01 52.9	+0.2

CFR	Carcaliu	5.78	17	⇓iP	Pn	23 01 54.4	+1.6
MLR	Muntele Rosu	5.81	2	⇑iP	Pn	23 01 55.2	+1.9
MDVR	Moldovita	5.89	331	⇑iP	Pn	23 01 54.1	-0.2
LOT	Lotru	5.93	347	⇑iP	Pn	23 01 54.4	-0.6
TLCR		5.97	22	⇑iP	Pn	23 01 57.9	+2.6
GZR	Gura Zlata	6.10	340	⇓iP	Pn	23 01 56.7	-0.5
ODBI	Odobesti	6.16	9	⇑iP	Pn	23 02 01.9	+3.9
PLOR	Plostina	6.21	6	⇓iP	Pn	23 02 00.8	+2.1
VRI	Vrincioaia	6.23	7	⇓iP	Pn	23 02 02.3	+3.3
DOPR	Dopca	6.29	358	⇓iP	Pn	23 02 00.6	+0.8
OZUR		6.41	1	⇑iP	Pn	23 02 02.6	+1.1
BZS	Buzias	6.64	335	⇑iP	Pn	23 02 04.1	-0.5
TESR	Tescani	6.86	6	⇓iP	Pn	23 02 08.5	+0.8
LEOM	Leova	7.04	15	⇓iP	Pn	23 02 15.8	+5.7
BIZ	Bicaz	7.26	2	⇓iP	Pn	23 02 16.3	+3.2
GIRR	Girov	7.29	4	⇑iP	Pn	23 02 16.6	+3.0
DRGR		7.43	344	⇓iP	Pn	23 02 18.4	+2.9
ARCR	ARCALIA	7.46	353	⇓iP	Pn	23 02 19.0	+3.1
MILM	Milestii Mici	7.58	16	⇓iP	Pn	23 02 22.0	+4.5
BURAR	Bucovina Array	7.94	358	⇓iP	Pn	23 02 24.5	+2.0

ISK 17 23:02:30.5, 36°.69N×29°.28E, h5^{km}, ML2.2/7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.17	253	PG	Pg	23 02 34.4	+0.6
FETY				SG	Sg	23 02 37.0	+1.0
FETY	Fethiye	0.17	253	i P	Pg	23 02 34.9	+1.1
ELL	Elmali	0.51	83	PG	Pg	23 02 40.6	+0.3
DALY	Dalyan (Mula)	0.52	285	PG	Pg	23 02 41.2	+0.7
DALY				SG	Sg	23 02 48.5	+1.2
AKAS	Kas	0.52	150	PG	Pb	23 02 41.4	-0.8
TURN	Turunc	0.57	289	PG	Pn	23 02 47.1	+1.8
KORT	Korkueli	0.92	70	PG	Pg	23 02 48.4	+0.3
YER	Yerkesik	0.92	300	PG	Pb	23 02 48.9	0.0
ARG	Arkhangelos	1.04	244	PG	Pb	23 02 50.9	-0.1
MLSB	Milas	1.35	297	PN	Pg	23 02 56.9	+0.5
DAT	Datca	1.37	272	PN	Pg	23 02 57.1	+0.4
BODT	Bodrum	1.62	284	PN	Pb	23 03 00.5	-0.4

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*ISCJB **17** 23:12:14.6±0.3, 10°.92S±0°.05×165°.72E±0°.06, h10^{km}, mb4.5/32, MS3.5/1, Error ellipse: s-maj=9.0km s-min=6.8km az=175.7*

*IDC **17** 23:12:14.2±0.7, 10°.91S×165°.89E, h0^{km}, mb4.3/15, mb1 4.5/17, mb1mx4.3/33, mbtmp4.4/17, ML4.7/2, MS3.6/2, Ms1 3.6/2, ms1mx3.1/19, Error ellipse: s-maj=21.4km s-min=15.5km az=106.0*

*NEIC **17** 23:12:16.3±0.3, 10°.80S×165°.78E, h10^{km}, mb4.8/21, Error ellipse: s-maj=8.1km s-min=6.4km az=101.0*

ISC 17 23:12:16.3±0.5**, 10°.84S**±0°.06×**165°.83E**±0°.08**, h10^{km}, n67, σ1^{s}54**/68**, mb4.6**/32**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.96	283	eP	Pn	23 13 45.0	+0.4
HNR				eS	Sn	23 14 50.0	-2.9
HNR	Honiara	5.96	283	ePn	Pn	23 13 46.4	+1.8
HNR				eSn	Sn	23 14 56.0	+3.1
HNR	Honiara	5.96	283	Pn	Pn	23 13 46.0	+1.4
	69nm,0.3s,baz=137,slow=3.4,SNR=14						
HNR				Sn	Sn	23 14 56.0	+3.1
	23nm,0.3s,baz=241,slow=13,SNR=2.3						
DZM	Mont Dzumac	11.19	177	ePn	Pn	23 14 59.2	+2.8
DZM				eSn	Sn	23 16 59.2	-2.5
DZM	Mont Dzumac	11.19	177	Pn	Pn	23 14 55.7	-0.8
	1.6nm,0.3s,baz=325,slow=18,SNR=17						
DZM				Sn	Sn	23 16 59.2	-2.5
	0.6nm,0.3s,baz=330,slow=20,SNR=2.9						
DZM				LR	LR	23 18 30.8	
	comp=Z,343nm,21.7s,baz=32,slow=34						
MANU	Manus Island	20.30	294	eP	P	23 16 51.6	-0.9
	51nm,0.8s						
CTA	Charters Tower	20.97	242	P	P	23 17 00.4	+0.7
	7.6nm,0.6s,baz=69,slow=11,SNR=12						
CTAO	Charters Tower	20.97	242	eP	Pn	23 17 00.9	-1.5
	11nm,0.8s						
URZ	Urewera	29.12	162	LR	LR	23 27 16.6	
	comp=Z,124nm,19.2s,baz=344,slow=31						
H11S2	WAKE ISLAND Hy	29.15	2	T	T	23 48 40.6	
	baz=181,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	29.16	2	T	T	23 48 39.5	
	baz=181,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	29.17	2	T	T	23 48 41.9	
	baz=181,slow=76,SNR=14						
BKZ	Black Stump Fm	29.77	163	eP	P	23 18 23.5	+0.3
	13nm,0.6s						
BKZ				eS	S	23 23 25.9	+6.2
H11N1	WAKE ISLAND Hy	30.38	2	T	T	23 50 09.4	
	baz=182,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	30.38	2	T	T	23 50 11.2	
	baz=182,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	30.39	2	T	T	23 50 09.9	
	baz=182,slow=76,SNR=7.1						
STKA	Stephens Creek	30.65	223	eP	P	23 18 30.2	-0.8
	3.5nm,1.5s						
STKA	Stephens Creek	30.65	223	P	P	23 18 30.2	-0.8
	2.8nm,0.8s,baz=35,slow=12,SNR=5.6						
THZ	Tophouse	31.43	170	eP	P	23 18 40.1	+2.3
	39nm,1.4s						
WRAB	Tennant Creek	31.62	250	eP	P	23 18 34.9	-4.8
	7.6nm,0.8s						
WB2	Warramunga Arr	31.62	250	eP	P	23 18 38.4	-1.4
	7.9nm,0.8s						
WR1	Warramunga Arr	31.63	250	eP	P	23 18 38.8	-1.0
	9.1nm,0.8s						
WR1				ePcP	PcP	23 21 31.8	-0.4
WRA	Warramunga Arr	31.63	250	P	P	23 18 38.8	-1.0
	5.6nm,0.7s,baz=81,slow=9.2,SNR=56						
WRA				PcP	PcP	23 21 31.8	-0.4
	0.7nm,0.9s,baz=76,slow=3.7,SNR=3.9						
KHZ	Kahutara	32.17	169	eP	P	23 18 42.4	-1.9
	20nm,1.0s						
LTZ	Lake Taylor	32.32	171	eP	P	23 18 47.4	+1.8
	15nm,0.8s						
AS01	Alice Springs	32.92	243	eP	P	23 18 50.1	-1.0
AS31	Alice Springs	32.96	243	eP	P	23 18 50.6	-0.8
	1.9nm,0.6s						
AS31				ePcP	PcP	23 21 35.1	-0.6
ASAR	Alice Springs	32.96	243	P	P	23 18 50.2	-1.3
	6.1nm,0.7s,baz=64,slow=10,SNR=50						
ASAR				PcP	PcP	23 21 35.1	-0.6
	0.7nm,0.7s,baz=48,slow=3.2,SNR=4.6						
RPZ	Rata Peaks	33.07	173	eP	P	23 18 53.0	+0.8
RPZ	Rata Peaks	33.07	173	P	P	23 18 51.2	-0.9
	10nm,0.6s,baz=13,slow=2.9,SNR=9.0						
BBOO	Buckleboo	35.03	227	eP	P	23 19 08.6	-0.8
	21nm,1.3s						
FITZ	Fitzroy Crossi	39.51	255	eP	P	23 19 46.8	-0.7
	7.0nm,0.8s						
CBIJ	Chichi jima	44.14	329	eP	P	23 20 25.7	+0.5
JCJ	Chichijima	44.14	329	P	P	23 20 25.7	+0.5
	52nm,0.7s,baz=248,slow=10.0,SNR=1.7						
MBWA	Marble Bar	45.34	251	eP	P	23 20 33.9	-1.1
	8.2nm,0.9s						
MJAR	Matsushiro Arr	53.82	332	P	P	23 21 39.1	-0.3
	3.1nm,0.7s,baz=175,slow=8.7,SNR=6.1						
MAJO	Matsushiro	53.83	332	eP	P	23 21 39.1	-0.3
ASAJ	Asahikawa	58.63	341	P	P	23 22 13.5	0.0
	5.4nm,0.8s,baz=256,slow=15,SNR=4.3						
KSRS	Korea Array	59.75	326	P	P	23 22 21.7	+0.2
	0.8nm,0.6s,baz=151,slow=8.0,SNR=3.3						
KS15	Wonju Array Si	59.76	325	eP	P	23 22 21.7	+0.1
	24nm,1.4s						
KSAR	Wonju Array Be	59.76	325	P	P	23 22 21.7	+0.1
CM31	Chiang Mai Arr	72.10	293	eP	P	23 23 42.1	+0.6
	5.2nm,0.4s						
CMAR	Chiang Mai Arr	72.10	293	P	P	23 23 42.1	+0.6
	1.6nm,0.3s,baz=128,slow=5.0,SNR=4.1						
ULN	Ulaanbaatar	78.18	324	eP	P	23 24 16.4	+0.2
	3.3nm,0.7s						
SONA0	Songino Array	78.55	324	eP	P	23 24 18.6	+0.4
SONM	Songino Array	78.55	324	P	P	23 24 18.6	+0.4
	1.8nm,0.9s,baz=144,slow=5.7,SNR=9.8						
IL1	Eielson Array	83.29	18	eP	P	23 24 42.7	-0.2
ILAR	Eielson Array	83.29	18	P	P	23 24 42.7	-0.2
	1.8nm,0.7s,baz=237,slow=5.0,SNR=19						
ILB	Eielson Array	83.29	18	eP	P	23 24 42.7	-0.2
	9.4nm,1.5s						
EGAK	Eagle	85.16	20	eP	P	23 24 53.5	+1.1
NV01	Mina Array Sit	85.83	50	eP	P	23 24 56.9	+0.2
NVAR	Mina Array Bea	85.83	50	P	P	23 24 56.9	+0.2
	0.2nm,0.4s,baz=234,slow=8.5,SNR=3.4						
MK01	Makanchi Array	93.41	317	eP	P	23 25 31.6	-0.5
MK31	Makanchi Array	93.43	317	eP	P	23 25 31.9	-0.1
	1.5nm,0.9s						
MK32	Makanchi Array	93.43	317	eP	P	23 25 31.8	-0.3
MKAR	Makanchi Array	93.43	317	P	P	23 25 31.8	-0.3
	1.4nm,0.7s,baz=96,slow=6.2,SNR=17						
ZALV	Zalesovo Beam	93.44	324	P	P	23 25 31.5	-0.4
	0.5nm,0.4s,baz=103,slow=4.7,SNR=3.8						
ZAA1	Zalesovo Array	93.44	324	eP	P	23 25 31.5	-0.4
MAKZ	Makanchi	93.64	317	eP	P	23 25 33.0	-0.1
	3.6nm,1.3s						
SMCO	Snowmass	94.60	51	eP	P	23 25 39.4	+1.3
	9.8nm,1.1s						
YKA	Yellowknife Ar	94.75	27	P	P	23 25 36.4	-1.3
	0.2nm,0.6s,baz=251,slow=4.9,SNR=3.8						
YKB5	Yellowknife Ar	94.75	27	eP	P	23 25 36.4	-1.3
ARA0	ARCESS Array S	116.15	346	ePKPdf	PKiKP	23 30 58.3	-1.0
ARCES	ARCESS Array B	116.15	346	PKP	PKiKP	23 30 58.3	-1.0
	1.6nm,0.9s,baz=56,slow=1.9,SNR=6.7						
ILGA	Ilgaz	128.35	314	ePKPpre	PKPpre	23 31 09.4	
KEST	Kesra	147.30	323	PKPbc	PKPbc	23 32 00.4	-0.3
	3.5nm,1.0s,baz=0.0,slow=4.0,SNR=3.8						
ESDC	Sonseca Array	149.88	344	PKPbc	PKPbc	23 32 06.2	-1.0
	0.5nm,0.6s,baz=10,slow=4.6,SNR=4.1						

IDC 17 23:22:04.2±4.0**, 11°.52S×166°.15E, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/28**, mbtmp3.5**/3**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.6**/13**, Error ellipse: s-maj=193.8km s-min=34.5km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.45	288	LR	LR	23 25 57.6	
	comp=Z,95nm,19.8s,baz=52,slow=36						
WRA	Warramunga Arr	31.70	251	P	P	23 28 29.9	0.0
	0.8nm,0.6s,baz=82,slow=8.7,SNR=9.3						
ASAR	Alice Springs	32.94	244	P	P	23 28 40.6	-0.2
	0.4nm,0.6s,baz=68,slow=9.7,SNR=5.3						
ILAR	Eielson Array	83.83	18	P	P	23 34 35.3	0.0
	0.2nm,0.8s,baz=232,slow=4.7,SNR=4.4						

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*IDC **17** 23:27:25.6±4.5, 38°.35N×76°.93E, h0^{km}, mb2.7/1, mb1 3.3/6, mb1mx3.1/36, mbtmp3.3/6, ML2.9/5, MS2.6/1, Ms1 2.6/1, ms1mx2.3/11, Error ellipse: s-maj=53.9km s-min=28.7km az=31.0*

*SOME **17** 23:27:36.0, 39°.35N×76°.90E, h0^{km}*

*KRNET **17** 23:27:38.0±0.1, 39°.32N×76°.91E, mb4.0*

*NNC **17** 23:27:38.6±0.6, 39°.47N×76°.92E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=4.8km s-min=2.6km az=150.0*

*BJI **17** 23:27:39.0, 39°.41N×77°.01E, h8^{km}, mb3.9/4, ML4.0/9*

ISC 17 23:27:39.5±0.7**, 39°.46N**±0°.04×**76°.99E**±0°.03**, h10^{km}, n94, σ2^{s}29**/129**, 30C-26D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.79	275	Pg	Pn	23 27 59.9	+3.1
KSH				Sg	Sn	23 28 16.4	+7.8
KSH				smax	smax		
	comp=N,3μm,1.0s						
KSH				smax	smax		
	comp=E,3μm,0.8s						
NRN	Naryn	2.11	339	⇓iP	Pb	23 28 17.0	-1.1
	baz=41						
NRN				⇓iS	Sb	23 28 46.3	+1.9
	baz=41						
TARG	Taragay, Kyrgy	2.35	15	⇓iP	Pb	23 28 21.7	-0.5
	baz=15						
TARG				⇓iS	Sb	23 28 53.0	+1.5
	baz=15						
KDJ	Kajisay	2.67	3	⇓iP	Pb	23 28 25.8	-1.7
	baz=4.0						
KDJ				⇓iS	Sb	23 29 00.5	0.0
	baz=4.0						
SFK	Sufi-Kurgan	2.74	283	⇑Pg	Pb	23 28 27.4	-1.3
	89nm,0.8s						
SFK				⇑Lg	Lg	23 29 03.3	
	109nm,0.5s						
SFK	Sufi-Kurgan	2.74	283	Pg	Pb	23 28 27.6	-1.1
	37nm,0.3s						
SFK				Lg	Lg	23 29 05.1	
	92nm,0.4s						
SFK	Sufi-Kurgan	2.74	283	⇑iP	Pn	23 28 24.5	+0.7
	baz=86						
SFK				⇑eS	Sn	23 28 58.4	+1.3
	baz=86						
ULHL	Ulahol	2.84	349	P	Pb	23 28 29.2	-1.2
	SNR=26						
ULHL	Ulahol	2.84	349	⇓iP	Pn	23 28 27.8	+2.7
	baz=50						
ULHL				⇓iS	Sb	23 29 04.1	-1.2
	baz=50						
KZA	Kyzart	2.93	334	P	Pb	23 28 30.0	-2.0
	SNR=32						
KZA	Kyzart	2.93	334	⇑iP	Pn	23 28 29.0	+2.5
	baz=36						
KZA				⇑iS	Sb	23 29 06.2	-1.9
	baz=36						
BOOM	Boomskoye usch	3.13	346	⇑iP	Pn	23 28 31.6	+2.5
	baz=47						
BOOM				⇑iS	Sb	23 29 11.0	-2.6
	baz=47						
ARLS	Aral	3.14	321	⇓iP	Pn	23 28 31.6	+2.4
	baz=23						
ARLS				⇓iS	Sn	23 29 10.2	+3.4
	baz=23						
UCH	Uchtor	3.34	327	P	Pn	23 28 34.6	+2.4
	SNR=10						
UCH	Uchtor	3.34	327	⇑iP	Pn	23 28 34.7	+2.4
	baz=29						
UCH				⇑iS	Sn	23 29 15.6	+3.4
	baz=29						
KBK	Karagaybulak	3.55	335	P	Pn	23 28 38.5	+3.7
	SNR=13						
KBK	Karagaybulak	3.55	335	⇓iP	Pn	23 28 37.3	+2.5
	baz=37						
KBK				⇓iS	Sn	23 29 20.5	+3.7
	baz=37						
TNSS	Tian-Shan	3.58	360	Pg	Pb	23 28 44.0	+0.9
	32nm,0.5s						
TNSS				Lg	Lg	23 29 32.8	
	88nm,0.8s						
TNSS	Tian-Shan	3.58	360	eP	Pb	23 28 44.0	+0.9
	32nm,0.5s						
TNSS				eS	Sg	23 29 32.8	-1.6
	88nm,0.8s						
ARSB	Arslanbob	3.58	303	⇑eP	Pn	23 28 36.5	+1.3
	baz=5.0						
ARSB				⇑eS	Sn	23 29 19.7	+2.1
	baz=5.0						
TKM2	Tokmak 2	3.61	344	P	Pn	23 28 39.8	+4.1
	SNR=7.2						
TKM2	Tokmak 2	3.61	344	⇑Pg	Pb	23 28 43.0	-0.6
	16nm,0.7s						
TKM2				⇓Lg	Lg	23 29 32.2	
	74nm,0.5s						
TKM2	Tokmak 2	3.61	344	⇓iP	Pn	23 28 38.6	+2.9
	baz=45						
TKM2				⇓iS	Sn	23 29 22.5	+3.9
	baz=45						
AML	Almayashu	3.66	318	P	Pb	23 28 45.2	+0.7
	SNR=11						
KST	Kastek	3.66	348	Pg	Pb	23 28 45.0	+0.6
	23nm,0.3s						
KST				Lg	Lg	23 29 34.9	
	134nm,0.4s						
KST	Kastek	3.66	348	eP	Pb	23 28 45.0	+0.6
	23nm,0.3s						
KST				eS	Sg	23 29 34.9	-2.2
	134nm,0.4s						
AAK	Ala-Archa	3.69	330	⇑Pg	Pb	23 28 46.3	+1.4
	19nm,0.5s						
AAK				⇓Lg	Lg	23 29 33.7	
	272nm,1.1s						
AAK	Ala-Archa	3.69	330	⇓iP	Pn	23 28 39.2	+2.4
	baz=32						
AAK				⇓iS	Sn	23 29 24.1	+3.7
	baz=32						
AAK	Ala-Archa	3.69	330	Pn	Pn	23 28 39.7	+2.9
	1.0nm,0.3s,baz=138,slow=7.1,SNR=13						
AAK				Sn	Sg	23 29 35.5	-2.6
	20nm,0.3s,baz=295,slow=19,SNR=11						
MTBS	Maitube	3.69	354	Pg	Pb	23 28 45.0	+0.1
	14nm,0.4s						
MTBS				Lg	Lg	23 29 34.9	
	96nm,0.5s						
MTBS	Maitube	3.69	354	eP	Pb	23 28 45.0	+0.1
	14nm,0.4s						
MTBS				eS	Sg	23 29 34.9	-3.1
	96nm,0.5s						
MDOK	Medeo	3.70	1	Pg	Pb	23 28 45.7	+0.6
	19nm,0.3s						
MDOK				Lg	Lg	23 29 35.8	
	111nm,0.7s						
MDOK	Medeo	3.70	1	eP	Pb	23 28 45.7	+0.6
	19nm,0.3s						
MDOK				eS	Sg	23 29 35.8	-2.5
	111nm,0.7s						
AAA	Alma-Ata	3.75	359	Pg	Pb	23 28 47.9	+2.1
	37nm,0.2s						
AAA				Lg	Lg	23 29 39.6	
	203nm,0.7s						
AAA	Alma-Ata	3.75	359	eP	Pb	23 28 47.9	+2.1
	37nm,0.2s						
AAA				eS	Sg	23 29 39.6	-0.2
	203nm,0.7s						
SATY	Saty	3.75	16	Pg	Pb	23 28 47.2	+1.3
	110nm,0.5s						
SATY				Lg	Lg	23 29 38.0	
	149nm,0.8s						
SATY	Saty	3.75	16	eP	Pb	23 28 47.2	+1.3
	110nm,0.5s						
SATY				eS	Sg	23 29 38.0	-2.0
	149nm,0.8s						
KNDC	Almaty	3.75	360	⇑Pg	Pb	23 28 46.9	+1.0
	57nm,0.6s						
KNDC				⇓Lg	Lg	23 29 37.6	
	272nm,0.6s						
KOTS	Kotyrbulak	3.77	1	Pg	Pb	23 28 47.8	+1.5
	39nm,0.3s						
KOTS				Lg	Lg	23 29 39.6	
	467nm,0.5s						
KOTS	Kotyrbulak	3.77	1	eP	Pb	23 28 47.8	+1.5
	39nm,0.3s						
KOTS				eS	Sg	23 29 39.6	-1.1
	467nm,0.5s						
DGS	Degeres	3.89	347	Pg	Pb	23 28 49.4	+1.1
	27nm,0.5s						
DGS				Lg	Lg	23 29 42.5	
	130nm,0.5s						
DGS	Degeres	3.89	347	eP	Pb	23 28 49.4	+1.1
	27nm,0.5s						
DGS				eS	Sg	23 29 42.5	-1.9
	130nm,0.5s						
CHMS	Chumysh	3.92	335	P	Pb	23 28 50.4	+1.7
	SNR=5.2						
CHMS	Chumysh	3.92	335	⇑iP	Pn	23 28 42.3	+2.6
	baz=37						
CHMS				⇑eS	Sn	23 29 29.2	+3.4
	baz=37						
UZB	Uzynbulak	3.99	22	Pg	Pb	23 28 51.7	+1.7
	36nm,0.5s						
UZB				Lg	Lg	23 29 46.1	
	70nm,0.5s						
UZB	Uzynbulak	3.99	22	eP	Pb	23 28 51.7	+1.7
	36nm,0.5s						
UZB				eS	Sg	23 29 46.1	-1.5
	70nm,0.5s						
EKS2	Erkin-Say	4.01	324	P	Pb	23 28 52.6	+2.2
	SNR=12						
EKS2	Erkin-Say	4.01	324	⇑eP	Pn	23 28 43.3	+2.1
	baz=26						
EKS2				⇑iS	Sn	23 29 31.6	+3.3
	baz=26						
KURS	Kuram	4.12	12	Pg	Pb	23 28 53.4	+1.3
	54nm,0.6s						
KURS				Lg	Lg	23 29 49.6	
	66nm,1.0s						
KURS	Kuram	4.12	12	eP	Pb	23 28 53.5	+1.3
	54nm,0.6s						
KURS				eS	Sg	23 29 49.6	-2.3
	66nm,1.0s						
USP	Ospenovka	4.24	335	P	Pb	23 28 56.3	+2.2
	SNR=10						
USP	Ospenovka	4.24	335	⇓eP	Pn	23 28 47.1	+2.9
	baz=36						
USP				⇓iS	Sn	23 29 37.1	+3.4
	baz=36						
KTBS	Karatobe	4.25	357	Pg	Pb	23 28 55.4	+0.9
	25nm,0.5s						
KTBS				Lg	Lg	23 29 52.8	
	88nm,0.6s						
KTBS	Karatobe	4.25	357	eP	Pb	23 28 55.4	+0.9
	25nm,0.5s						
KTBS				eS	Sg	23 29 52.8	-3.3
	88nm,0.6s						
PDGK	Podgornoye	4.30	25	Pg	Pb	23 28 57.8	+2.5
	18nm,0.4s						
PDGK				Lg	Lg	23 29 57.1	
	58nm,0.9s						
PDGK	Podgornoye	4.30	25	⇑Pn	Pn	23 28 46.2	+1.1
	1.3nm,0.4s						
PDGK				⇑Pg	Pb	23 28 56.0	+0.7
	28nm,0.5s						
PDGK				⇓Lg	Lg	23 29 54.7	
	134nm,0.7s						
MRKS	Merke	4.34	320	Pg	Pb	23 28 57.1	+1.2
	19nm,0.4s						
MRKS				Lg	Lg	23 29 55.6	
	102nm,0.8s						
MRKS	Merke	4.34	320	eP	Pb	23 28 57.1	+1.2
	19nm,0.4s						
MRKS				eS	Sg	23 29 55.6	-3.3
	102nm,0.8s						
SGDS	Sogindy	4.36	337	Pg	Pb	23 28 56.8	+0.4
	15nm,0.7s						
SGDS				Lg	Lg	23 29 55.3	
	68nm,0.7s						
CHKK	Chushkaly	4.39	0	Pg	Pb	23 28 58.7	+2.0
	18nm,0.5s						
CHKK				Lg	Lg	23 29 58.1	
	72nm,0.3s						
CHKK	Chushkaly	4.39	0	eP	Pb	23 28 58.7	+2.0
	18nm,0.5s						
CHKK				eS	Sg	23 29 58.1	-2.3
	72nm,0.3s						
KUU	Kurty	4.46	354	Pg	Pb	23 28 58.9	+1.0
	24nm,0.8s						
KUU				Lg	Lg	23 29 58.2	
	99nm,0.6s						
KUU	Kurty	4.46	354	eP	Pb	23 28 58.9	+1.0
	24nm,0.8s						
KUU				eS	Sg	23 29 58.2	-4.3
	99nm,0.6s						
MNAS	Manas	4.54	313	⇑Pg	Pb	23 29 01.0	+1.6
	12nm,0.8s						
MNAS				⇑Lg	Lg	23 30 00.4	
	57nm,0.8s						
MNAS	Manas	4.54	313	Pg	Pb	23 29 01.3	+1.8
	4.8nm,0.7s						
MNAS				Lg	Lg	23 30 03.0	
	18nm,0.8s						
ARXS	Arharly	4.79	7	Pg	Pb	23 29 06.4	+2.8
	12nm,0.5s						
ARXS				Lg	Lg	23 30 12.0	
	53nm,0.6s						
ARXS	Arharly	4.79	7	eP	Pb	23 29 06.4	+2.8
	12nm,0.5s						
ARXS				eS	Sg	23 30 12.0	-1.3
	53nm,0.6s						
DJR	Jarkent	5.30	22	Pg	Pb	23 29 15.7	+3.4
	8.5nm,0.7s						
DJR				Lg	Lg	23 30 27.3	
	22nm,0.7s						
DJR	Jarkent	5.30	22	eP	Pb	23 29 15.7	+3.4
	8.5nm,0.7s						
DJR				eS	Sg	23 30 27.3	-2.3
	22nm,0.7s						
BTLS	Baital	5.99	340	Pg	Pg	23 29 30.5	-3.6
	3.6nm,0.6s						
BTLS				Lg	Lg	23 30 53.2	
	31nm,0.4s						
BTLS	Baital	5.99	340	eP	Pg	23 29 30.5	-3.6
	3.6nm,0.6s						
BTLS				eS	Sg	23 30 53.2	+1.6
	31nm,0.4s						
KK31	Karatay Array	6.08	309	⇑Pn	Pn	23 29 10.3	+0.8
	0.3nm,0.3s,baz=126,slow=13,SNR=4.2						
KK31				⇑Pg	Pb	23 29 27.7	+2.1
	1.3nm,0.4s,baz=125,slow=16,SNR=9.4						
KK31				⇑Lg	Lg	23 30 50.2	
	12nm,0.7s,baz=129,slow=28,SNR=4.3						
CHCP	Chirah Chowk	6.52	208	P	Pn	23 29 17.6	+2.1

CEP	Cherat	6.95	218	P	Pn	23 29 22.8	+1.3
THW	Thamme Wali	7.89	214	P	Pn	23 29 34.8	+0.5
MAKZ	Makanchi	8.20	25	⇑Pg	Pg	23 30 08.7	-7.7
	4.7nm,1.2s						
MAKZ				⇓Lg	Lg	23 31 58.4	
	11nm,1.1s						
MK31	Makanchi Array	8.29	26	⇓Pn	Pn	23 29 40.1	+0.3
	0.3nm,0.6s,baz=196,slow=14,SNR=5.4						
MK31				⇓Pg	Pg	23 30 10.5	-7.6
	2.1nm,0.8s,baz=202,slow=14,SNR=4.3						
MK31				⇑Lg	Lg	23 32 01.4	
	8.3nm,0.8s,baz=207,slow=28,SNR=3.7						
MKAR	Makanchi Array	8.29	26	Pn	Pn	23 29 42.4	+2.6
	0.1nm,0.3s,baz=206,slow=14,SNR=4.3						
MKAR				Sn	Sn	23 31 26.1	+13
	0.2nm,0.3s,baz=204,slow=23,SNR=2.2						
MKAR				Lg	Lg	23 32 10.0	
	0.8nm,0.3s,baz=209,slow=26,SNR=6.1						
WMQ	Urumqi	9.12	58	*e*P	Pn	23 29 53.4	+2.1
WMQ				pP		23 29 56.3	
WMQ				S	Sn	23 31 33.8	-0.2
WMQ				sS		23 31 41.5	
OTUK	Ortayu	9.40	341	⇑Lg	Lg	23 32 35.5	
	30nm,1.0s						
KURBB	Kurchatov Arra	11.22	5	⇑Lg	Lg	23 33 32.4	
	19nm,0.8s						
KURBB	Kurchatov Arra	11.22	5	Pn	Pn	23 30 21.8	+2.1
	0.2nm,0.3s,baz=191,slow=14,SNR=4.7						
KURBB				Lg	Lg	23 33 42.1	
	0.1nm,0.3s,baz=190,slow=27,SNR=5.4						
PYUN	Piuthan	12.38	154	*e*P	Pn	23 30 33.7	-2.3
	5.3nm,0.3s						
DANN	Dangsing	12.42	151	*e*P	Pn	23 30 34.1	-2.6
KOLN	Koldanda	12.89	153	*e*P	Pn	23 30 40.2	-2.8
	2.8nm,0.4s						
PKIN	Phulchoki	13.76	147	*e*P	Pn	23 30 53.8	-1.1
	4.3nm,0.5s						
PKI	Pulchoki	13.77	147	*e*P	Pn	23 30 53.5	-1.6
	4.1nm,0.6s						
JIRN	Jiri	14.04	144	*e*P	Pn	23 30 58.4	-0.4
	5.2nm,0.4s						
BVA0	Borovoye Array	14.31	344	Pn	Pn	23 31 02.2	+0.2
	0.1nm,0.7s,baz=165,slow=11,SNR=11						
BVA0				⇓Lg	Lg	23 35 13.5	
	7.3nm,1.1s,baz=149,slow=26,SNR=4.8						
BVAR	Borovoye Array	14.31	344	Pn	Pn	23 31 02.3	+0.3
	0.0nm,0.3s,baz=158,slow=12,SNR=2.2						
BVAR				Lg	Lg	23 35 09.8	
	0.1nm,0.3s,baz=151,slow=29,SNR=6.1						
ZALV	Zalesovo Beam	15.44	18	Pn	Pn	23 31 18.3	+1.1
	0.1nm,0.3s,baz=220,slow=12,SNR=4.7						
ZALV				LR	LR	23 38 23.1	
	comp=Z,19nm,18.0s,baz=70,slow=40						
GTA	Gaotai	17.63	83	*e*P	P	23 31 47.8	+1.5
GTA				pP	sP	23 31 51.6	+0.7
GTA				sP	pP	23 31 54.1	+4.6
SONM	Songino Array	22.76	59	P	P	23 32 35.9	-6.0
	0.1nm,0.4s,baz=270,slow=7.2,SNR=3.5						
HHC	Hu-ho-hao-te	26.37	76	*e*P	P	23 33 16.9	+1.0

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*NEIC **17** 23:51:20.0±0.0, 17°.91N×98°.24W, h49^{km}, MD4.0(MEX), After MEX.*

MEX 17 23:51:20.0±0.5**, 17°.91N×98°.24W, h50**^{km}±3^{km}**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPIG	Tehuac#an	0.98	58	*e*P	Pn	23 51 35.9	-1.7
TPIG	Tehuac#an	0.98	58	*e*P	Pn	23 51 35.9	-1.7
PPM	Popocatepetl	1.21	342	*e*P	Pn	23 51 39.7	-1.4
PPM				*e*S	Sn	23 51 55.2	-1.4
PPM	Popocatepetl	1.21	342	*e*P	Pn	23 51 39.7	-1.4
PPM				*e*P		23 51 39.7	
PPM				*e*S	Sn	23 51 55.0	-1.6
PPM				*e*S		23 51 55.2	
YAIG	Yautepec	1.23	321	*e*P	Pn	23 51 39.4	-1.6
YAIG				*e*S	Sn	23 51 54.3	-2.4
YAIG	Yautepec	1.23	321	*e*P	Pn	23 51 39.4	-1.7
YAIG				*e*P		23 51 39.4	
YAIG				*i* S	Sn	23 51 54.3	-2.4
YAIG				*e*S		23 51 54.3	
PLIG	Platanillo	1.29	292	*e*P	Pn	23 51 40.4	-1.4
PLIG	Platanillo	1.29	292	*e*P	Pn	23 51 40.4	-1.4
MEIG	Mezcala	1.31	271	*e*P	Pn	23 51 40.3	-1.7
MEIG	Mezcala	1.31	271	*e*P	Pn	23 51 40.3	-1.7
VHO	Vista Hermosa	1.66	120	*e*P	Pn	23 51 46.0	-0.9
VHO	Vista Hermosa	1.66	120	*e*P	Pn	23 51 46.0	-0.9

KRSC 17 23:56:45.4±0.6**, 53°.74N×160°.76E, h40**^{km}±11^{km}**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.78	215	*e*P	Pn	23 57 00.8	+0.9
SPN				*e*S	Sn	23 57 11.1	+0.7
KII	Karymskiy	0.83	292	*e*P	Pn	23 57 02.0	+1.2
KII				*e*S	Sn	23 57 13.0	+1.1
MKZ	Mys Kozlova	1.00	34	*e*P	Pn	23 57 03.4	+0.5
MKZ				*e*S	Sn	23 57 15.7	-0.1
NLC	Nalytchevo	1.02	237	*e*P	Pn	23 57 04.3	+1.1
NLC				*e*S	Sn	23 57 17.4	+1.1
SDLR	Sedlovina	1.21	249	*e*P	Pn	23 57 07.7	+1.7
SDLR				*e*S	Sn	23 57 22.9	+1.7
SMAR	Somma	1.26	249	*e*P	Pn	23 57 08.1	+1.3
UGLR	Uglovaya	1.27	246	*e*P	Pn	23 57 08.8	+2.0
UGLR				*e*S	Sn	23 57 24.8	+2.1
AVH	Avacha	1.30	249	*e*P	Pn	23 57 09.2	+2.1
AVH				*e*S	Sn	23 57 25.4	+2.1
KRX	Arik	1.32	254	*e*P	Pn	23 57 09.1	+1.7
KRX				*e*S	Sn	23 57 25.2	+1.4
KOK	Koryaka	1.34	252	*e*P	Pn	23 57 09.6	+1.8
KOK				*e*S	Sn	23 57 26.2	+1.7
DALK	Dalny	1.40	240	*e*P	Pn	23 57 09.8	+1.4
DALK				*e*S	Sn	23 57 26.5	+1.0
KZV	Kizimen	1.41	349	*e*P	Pn	23 57 10.5	+1.8
KZV				*e*S	Sn	23 57 27.5	+1.4
PET	Petropavlovsk	1.45	241	*e*P	Pn	23 57 10.9	+1.8
PET				*e*S	Sn	23 57 28.6	+1.7
TUMD	Tumrok D	1.48	352	*e*P	Pn	23 57 11.3	+1.6
TUMD				*e*S	Sn	23 57 29.0	+1.2
TUMR	Tumrok	1.59	347	*e*P	Pn	23 57 13.6	+2.4
GNL	Ganaly	1.68	270	*e*P	Pn	23 57 14.3	+1.9
KRMR	Karymshinskiy	1.82	241	*e*P	Pn	23 57 16.4	+2.2
KRMR				*e*S	Sn	23 57 38.1	+2.0
MTVR	Mutnovka	2.00	232	*e*P	Pn	23 57 18.9	+2.1
MTVR				*e*S	Sn	23 57 42.2	+1.6
ZLN	Zelenaya	2.29	1	*e*P	Pn	23 57 23.7	+3.0
APC	Apacha	2.31	251	*e*P	Pn	23 57 23.6	+2.7
APC				*e*S	Sn	23 57 51.8	+3.8
ESO	Esso	2.50	332	*e*P	Pn	23 57 25.7	+2.2
KDTR	Khodutka, Kamc	2.53	221	*e*S	Sn	23 57 56.7	+3.3
KBTR	Krutoberegovo	2.75	25	*e*P	Pn	23 57 31.5	+4.6

IDC 17 23:59:59.2±17.0**, 25°.93S×71°.43E, h0**^{km}**, mb3.7**/4**, mb1 3.8**/4**, mb1mx3.4**/55**, mbtmp3.7**/4**, MS3.5**/4**, Ms1 3.5**/4**, ms1mx3.1**/41**, Error ellipse: s-maj=581.0km s-min=37.2km az=48.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.21	3	T	T	00 23 37.6	
	baz=183						
H08S2	Diego Garcia H	18.22	3	T	T	00 23 38.2	
	baz=183						
H08S3	Diego Garcia H	18.23	3	T	T	00 23 38.8	
	baz=183						
OPO	Ambohidratompo	23.58	283	LR	LR	00 12 21.1	
	comp=Z,141nm,21.5s,baz=48,slow=32						
PSI	Prapat	39.04	47	LR	LR	00 20 21.5	
	comp=Z,84nm,18.4s,baz=242,slow=31						
CMAR	Chiang Mai Arr	51.60	34	LR	LR	00 29 01.2	
	comp=Z,33nm,18.8s,baz=225,slow=34						
ASAR	Alice Springs	56.28	102	P	P	00 09 42.1	+0.1
	0.4nm,0.8s,baz=260,slow=5.5,SNR=3.7						
WRA	Warramunga Arr	57.78	98	P	P	00 09 52.5	-0.2
	1.1nm,0.9s,baz=249,slow=7.3,SNR=4.4						
MKAR	Makanchi Array	73.05	8	P	P	00 11 30.6	-0.3
	0.6nm,0.7s,baz=194,slow=6.1,SNR=6.7						
ZALV	Zalesovo Beam	80.39	8	P	P	00 12 12.6	+0.5
	0.2nm,0.3s,baz=199,slow=7.6,SNR=3.1						
KSRS	Korea Array	82.41	42	LR	LR	00 47 50.3	
	comp=Z,18nm,19.5s,baz=215,slow=35						

IDC 18 00:00:19.1±4.4**, 25°.86S×71°.58E, h0**^{km}**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.6**/55**, mbtmp3.8**/5**, Error ellipse: s-maj=125.7km s-min=33.6km az=52.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	51.46	34	P	P	00 09 26.4	0.0
	0.7nm,0.3s,baz=226,slow=7.4,SNR=2.1						
ASAR	Alice Springs	56.16	102	P	P	00 10 00.8	-0.1
	0.3nm,0.8s,baz=251,slow=5.8,SNR=4.5						
WRA	Warramunga Arr	57.65	98	P	P	00 10 11.4	-0.1
	0.8nm,0.8s,baz=254,slow=7.3,SNR=4.1						
MKAR	Makanchi Array	72.95	8	P	P	00 11 50.3	+0.1
	1.2nm,0.8s,baz=188,slow=6.1,SNR=9.4						
ZALV	Zalesovo Beam	80.30	8	P	P	00 12 31.2	-0.2
	0.4nm,0.6s,baz=189,slow=3.9,SNR=4.1						

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*ISCJB **18** 00:06:30.5±0.6, 30°.76S±0°.04×179°.3E±0°.1, h350^{km}, mb3.8/5, Error ellipse: s-maj=13.5km s-min=5.2km az=2.4*

*WEL **18** 00:06:35.6±0.8, 31°S±7°×18°0W±2°0, h329^{km}±12^{km}*

*IDC **18** 00:06:35.6±2.3, 31°.51S×180°.00W, h477^{km}±26^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.4/30, mbtmp4.5/7, Error ellipse: s-maj=32.3km s-min=19.5km az=5.0*

ISC 18 00:06:29.7±0.8**, 30°.82S**±0°.06×**179°.37E**±0°.10**, h350**^{km}**, n65,** σ**2**^{s}**52**/75**, mb3.8**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.81	57	P	Pn	00 07 29.2	+1.7
GLKZ				S	S	00 08 11.1	-2.7
WCZ	Waipu Caves	6.62	218	P	Pn	00 08 16.5	+9.0
MXZ	Matakaoa Point	6.79	187	P	Pn	00 08 11.2	+1.8
MXZ				S	S	00 09 30.6	+0.1
WIAZ	Waiheke Island	6.93	209	P	Pn	00 08 18.7	+7.6
WMGZ	Waiomatatini S	7.03	186	P	Pn	00 08 14.4	+2.1
WMGZ				S	S	00 09 36.7	+1.0
HAZ	Te Kaha	7.05	190	P	Pn	00 08 14.1	+1.7
HAZ				S	S	00 09 37.1	+1.0
PKGZ	Pakihiroa	7.13	188	P	Pn	00 08 17.6	+4.0
PKGZ				S	S	00 09 38.7	+0.5
RUGZ	Raukumara Rang	7.27	191	P	Pn	00 08 17.7	+2.5
RUGZ				S	S	00 09 39.8	-1.2
PUZ	Puketiti	7.30	187	P	Pn	00 08 16.7	+1.2
PUZ				S	S	00 09 40.2	-1.4
WHRZ	Whale Island	7.30	195	P	Pn	00 08 20.5	+5.1
OPRZ	Ohinepanea	7.39	198	P	Pn	00 08 21.2	+4.8
TWGZ	Tauwhareparae	7.43	189	P	Pn	00 08 19.8	+2.8
TWGZ				S	S	00 09 45.7	+1.2
TOZ	Tahuroa Road	7.60	204	P	Pn	00 08 27.1	+8.0
MWZ	Matawai	7.65	191	P	Pn	00 08 21.3	+1.6
MWZ				S	S	00 09 48.7	-0.6
URZ	Urewera	7.66	193	P	Pn	00 08 22.6	+2.9
	15nm,0.3s,baz=306,slow=2.6,SNR=47						
URZ				S	S	00 09 49.3	0.0
	30nm,0.3s,baz=94,slow=20,SNR=27						
URZ	Urewera	7.66	193	P	Pn	00 08 21.5	+1.8
URZ				S	S	00 09 49.2	0.0
TKGZ	Te Karaka	7.71	189	P	Pn	00 08 21.4	+1.1
TKGZ				S	S	00 09 48.8	-1.6
CNGZ	Carnagh Statio	7.71	187	P	Pn	00 08 22.4	+2.2
TARZ	Mount Tarawera	7.77	197	P	Pn	00 08 26.6	+5.5
RAGZ	Rawiri	7.83	191	P	Pn	00 08 24.9	+3.1
RAGZ				S	S	00 09 52.2	-0.9
MUGZ	Murupara	7.94	195	P	Pn	00 08 25.0	+2.0
MUGZ				S	S	00 09 56.1	+0.8
RIGZ	Rimuhau	7.98	189	P	Pn	00 08 25.4	+1.9
RIGZ				S	S	00 09 55.4	-0.9
RTZ	Ruatahuna	8.03	194	P	Pn	00 08 25.4	+1.3
RTZ				S	S	00 09 55.8	-1.6
ALRZ	Allen Road	8.12	197	P	P	00 08 29.3	+1.2
SNGZ	Shannon Statio	8.12	191	P	Pn	00 08 26.7	+1.6
SNGZ				S	S	00 09 59.2	-0.1
TLZ	Tolley Road	8.13	202	P	P	00 08 31.6	+3.3
PRGZ	Paritu Road	8.18	188	P	P	00 08 29.5	+0.7
PRGZ				S	S	00 10 00.6	-0.1
MTHZ	Maungataniwha	8.28	194	P	P	00 08 29.9	-0.1
RAHZ	Arahi	8.30	192	P	Pn	00 08 29.5	+2.3
RAHZ				S	S	00 10 02.2	-1.0
KNZ	Kokohu	8.30	189	P	P	00 08 29.6	-0.5
MHGZ	Mahia Peninsul	8.40	188	P	Pn	00 08 30.1	+1.6
WHHZ	Waihua	8.43	191	P	P	00 08 31.7	+0.2
NMHZ	Naumai	8.53	194	P	P	00 08 33.6	+0.9
ARHZ	Aropaoanui	8.65	192	P	P	00 08 33.5	-0.4
BKZ	Black Stump Fm	8.66	195	P	Pn	00 08 32.6	+1.1
KWHZ	Kaweka Forest	8.92	195	P	Pn	00 08 36.1	+1.4
FWVZ	Far West T-bar	8.98	199	P	P	00 08 37.8	-0.1
POWZ	Post Office Ro	9.99	196	P	S	00 10 37.0	-3.4
PRWZ	Pori Road	10.10	195	P	S	00 10 38.7	-4.1
MRZ	Mangatainoka R	10.29	196	P	S	00 10 37.0	-10
TIWZ	Tintock	10.33	195	P	S	00 10 44.4	-3.5
CPWZ	Castlepoint	10.39	193	P	S	00 10 48.2	-0.9
HOWZ	Holdsworth Sta	10.53	196	P	S	00 10 47.5	-4.8
OGWZ	Otaki Gorge	10.54	198	P	S	00 10 49.7	-2.8
TMWZ	Te Maipa	10.65	194	P	S	00 10 49.9	-4.9
KIW	Kapiti Island	10.65	199	P	S	00 10 51.0	-4.0
MTW	Mount Morrison	10.78	196	P	S	00 10 49.3	-8.5
CAW	Cannon Point	10.84	198	P	S	00 10 54.9	-4.2
TRWZ	Traveller	10.97	195	P	S	00 10 57.1	-4.8
PAWZ	Paruwai Farm	11.01	196	P	S	00 10 57.8	-5.2
MSWZ	Moikau Station	11.09	196	P	S	00 10 57.1	-7.4
TCW	Tory Channel	11.16	200	P	S	00 11 00.7	-5.4
DZM	Mont Dzumac	14.48	304	P	Pn	00 09 50.3	+10
	0.5nm,0.3s,baz=108,slow=20,SNR=4.5						
CTA	Charters Tower	31.65	282	P	P	00 12 24.2	+2.5
	4.1nm,0.3s,baz=112,slow=10,SNR=18						
STKA	Stephens Creek	32.18	258	P	P	00 12 27.8	+1.6
	2.2nm,0.4s,baz=100,slow=11,SNR=7.6						
ASAR	Alice Springs	40.83	269	P	P	00 13 39.0	+0.3
	0.9nm,0.4s,baz=106,slow=7.4,SNR=9.4						
WRA	Warramunga Arr	41.86	274	P	P	00 13 47.0	0.0
	1.7nm,0.3s,baz=111,slow=8.1,SNR=59						
WRA				S	S	00 19 34.4	-3.9
	0.2nm,0.7s,baz=109,slow=14,SNR=2.7						
BATI	Baumata	55.47	279	P	P	00 15 29.4	-0.2
	7.0nm,0.4s,baz=114,slow=10.0,SNR=3.0						
KBZ	Khabaz	143.45	303	PKP	PKPab	00 25 16.8	-3.3
	1.2nm,0.7s,baz=256,slow=4.2,SNR=3.5						
FINES	FINESS Array B	144.72	338	PKPbc	PKPbc	00 25 18.6	-5.6
	3.0nm,0.4s,baz=50,slow=3.9,SNR=37						
NB2	NORSAR Subarra	148.77	349	PKP	PKPdf	00 25 29.3	-1.9
	comp=Z,0.3nm,0.4s,baz=17,slow=4.3						
NOA	NORSAR Array B	148.77	349	PKPbc	PKPdf	00 25 29.0	-2.2
	comp=Z,0.8nm,0.6s,baz=15,slow=4.1,SNR=4.5						
HFS	Hagfors	149.15	346	PKPbc	PKPdf	00 25 30.1	-1.7
	comp=Z,1.0nm,0.4s,baz=212,slow=1.4,SNR=8.9						
AKASG	Malin Array Be	150.22	320	PKPbc	PKPdf	00 25 33.3	-0.4
	comp=Z,0.7nm,0.5s,baz=43,slow=3.4,SNR=4.0						
BRTR	Keskin Array B	150.79	297	PKPbc	PKPdf	00 25 35.8	+0.6
	comp=Z,0.5nm,0.6s,baz=136,slow=3.6,SNR=5.8						

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*IDC **18** 00:09:49.5±1.3, 34°.24N×24°.88E, h0^{km}, mb3.8/4, mb1 3.6/8, mb1mx3.4/43, mbtmp3.5/8, ML3.2/4, MS3.4/1, Ms1 3.4/1, ms1mx2.3/47, Error ellipse: s-maj=25.2km s-min=20.2km az=110.0*

*ATH **18** 00:09:49.3, 34°.08N×25°.06E, h22^{km}±3^{km}, ML2.8/2, Error ellipse: s-maj=6.7km s-min=2.0km az=356.0*

*ISCJB **18** 00:09:50.3±1.3, 34°.07N±0°.06×25°.04E±0°.05, h17^{km}±8^{km}, mb3.7/4, MS3.4/1, Error ellipse: s-maj=9.6km s-min=6.4km az=13.6*

*THE **18** 00:09:51.6, 34°.21N×25°.07E, h0^{km}±1^{km}, ML2.8/6, Error ellipse: s-maj=2.3km s-min=0.6km az=175.0*

ISC 18 00:09:51.4±1.8**, 34°.22N**±0°.07×**25°.04E**±0°.04**, h8**^{km}±10^{km}**, n25,** σ**0**^{s}**84**/36**, mb3.8**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMBK	Timbaki Herakl	0.88	345	P	Pb	00 10 09.2	+0.3
TMBK				S	Sn	00 10 22.7	-0.3
GVD	Gavdhos	1.00	308	P	Pg	00 10 10.4	-0.3
GVD				S	Sn	00 10 25.9	-0.1
GVD				AML	AML	00 10 27.4	
	comp=E,2517μm,0.5s						
GVD				AML	AML	00 10 29.3	
	comp=N,2180μm,0.5s						
GVD	Gavdhos	1.00	308	P	Pg	00 10 10.8	+0.2
GVD				S	Sn	00 10 26.5	+0.5
LAST	Lasithi	1.01	21	P	Pn	00 10 10.8	-1.1
LAST				S	Sn	00 10 26.6	+0.3
LAST				AML	AML	00 10 32.2	
	comp=N,447μm,0.7s						
LAST				AML	AML	00 10 34.4	
	comp=E,302μm,0.5s						
LAST	Lasithi	1.01	21	P	Pn	00 10 10.8	-1.1
LAST				S	Sn	00 10 25.9	-0.4
IDI	Anoyia	1.07	353	Pn	Pg	00 10 11.8	-0.3
	comp=E,8.8nm,0.3s,baz=247,slow=20,SNR=58						
IDI				Sn	Sb	00 10 26.4	-0.1
	comp=E,26nm,0.3s,baz=72,slow=20,SNR=16						
KSTL	Kastelli Herak	1.08	1	P	Pg	00 10 10.9	-1.3
KSTL				S	Sb	00 10 26.2	-0.5
NPS	Neapolis	1.14	24	P	Pn	00 10 13.3	-0.4
NPS	Neapolis	1.14	24	P	Pn	00 10 13.1	-0.6
NPS				S	Sn	00 10 30.1	+0.6
STIA	Sitia Lasithi	1.31	41	P	Pg	00 10 15.5	-1.0
STIA				S	Sn	00 10 34.2	+0.7
ZKR	Zakros	1.32	47	P	Pg	00 10 16.0	-0.7
ZKR	Zakros	1.32	47	P	Pg	00 10 16.0	-0.7
ZKR				S	Sn	00 10 34.9	+1.1
VAM	Vamos	1.37	330	P	Pn	00 10 16.9	0.0
VAM	Vamos	1.37	330	P	Pn	00 10 16.9	0.0
VAM				S	Sg	00 10 36.7	+1.1
IMMV	Iera Moni Meta	1.52	325	P	Pn	00 10 19.1	+0.3
IMMV	Iera Moni Meta	1.52	325	P	Pn	00 10 19.3	+0.5
IMMV				S	Sg	00 10 40.7	+0.6
MMAI	Mount Meron Ar	8.72	95	Pn	Pn	00 11 58.4	+0.5
	comp=E,0.3nm,0.3s,baz=276,slow=13,SNR=3.6						
BRTR	Keskin Array B	8.80	49	Pn	Pn	00 12 01.9	+2.8
	comp=E,0.0nm,0.3s,baz=215,slow=12,SNR=2.4						
KBZ	Khabaz	16.79	50	Pn	P	00 13 49.1	+0.1
	comp=E,0.1nm,0.3s,baz=245,slow=14,SNR=3.8						
GERES	GERESS Array B	16.87	333	Pn	Pn	00 13 47.9	+0.1
	comp=E,0.1nm,0.3s,baz=144,slow=12,SNR=5.7						
TORD	Torodi Ar. Bea	29.82	231	P	P	00 15 57.3	-1.7
	comp=E,0.8nm,0.6s,baz=96,slow=37,SNR=6.4						
MKAR	Makanchi Array	44.38	56	P	P	00 18 02.6	+0.4
	comp=E,0.7nm,0.6s,baz=281,slow=6.4,SNR=10						
ZALV	Zalesovo Beam	45.73	46	P	P	00 18 12.6	-0.2
	comp=E,0.7nm,0.4s,baz=267,slow=10,SNR=5.0						
TSUM	Tsumeb	53.59	189	LR	LR	00 41 28.0	
	comp=E,32nm,18.7s,baz=158,slow=35						
SONM	Songino Array	60.16	50	P	P	00 19 59.8	+0.2
	comp=E,0.4nm,0.5s,baz=253,slow=4.4,SNR=4.0						

ATH 18 00:11:42.1, 36°.33N×22°.14E, h26^{km}±1^{km}**, ML2.2**/4**, Error ellipse: s-maj=2.6km s-min=1.0km az=213.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MES2	Methoni	0.60	325	P	Pb	00 11 54.4	+0.3
MES2				S	Sn	00 12 03.7	-0.2
MES2				AML	AML	00 12 07.4	
	comp=E,731μm,0.6s						
MES2				AML	AML	00 12 08.6	
	comp=N,597μm,0.5s						
MES2	Methoni	0.60	325	P	Pn	00 11 54.6	-0.4
MES2				S	Sb	00 12 02.0	-0.3
PYL	PYLOS	0.65	331	P	Pb	00 11 55.0	+0.1
PYL				S	Sn	00 12 04.7	-0.4
PYL				AML	AML	00 12 09.1	
	comp=N,361μm,0.5s						
PYL				AML	AML	00 12 12.1	
	comp=E,264μm,0.4s						
PYL	PYLOS	0.65	331	P	Pb	00 11 55.0	+0.1
PYL				AML	AML	00 12 09.1	
	comp=N,361μm,0.5s						
PYL				AML	AML	00 12 12.1	
	comp=E,264μm,0.4s						
KYTH	Kithira	0.74	95	P	Pb	00 11 56.5	+0.2
KYTH				S	Sn	00 12 06.7	-0.5
KYTH	Kithira	0.74	95	P	Pn	00 11 57.5	+0.7
VLI	Veliai	0.75	59	P	Pn	00 11 56.8	-0.2
VLI				S	Sn	00 12 08.2	+0.6
VLI	Veliai	0.75	59	P	Pn	00 11 56.9	-0.1
VLI				S	Sn	00 12 07.4	-0.2
ITM	Ithomi	0.87	349	P	Pn	00 11 58.8	+0.2
ITM				S	Sn	00 12 11.4	+1.0
ITM	Ithomi	0.87	349	P	Pn	00 11 58.7	+0.1
ITM				S	Sn	00 12 10.3	-0.1
MES3	Kyparissia	0.99	338	P	Pb	00 12 01.1	+0.5
MES3	Kyparissia	0.99	338	P	Pb	00 12 01.1	+0.5
ANKY	Antikythira Is	1.05	116	P	Pb	00 12 02.5	+0.9
ANKY	Antikythira Is	1.05	116	P	Pb	00 12 02.7	+1.1
VLX	Vlachokerasia	1.06	11	P	Pb	00 12 02.4	+0.5
VLX				AML	AML	00 12 22.1	
	comp=E,223μm,0.6s						
VLX				AML	AML	00 12 22.7	
	comp=N,163μm,0.5s						
VLX	Vlachokerasia	1.06	11	P	Pb	00 12 02.3	+0.5
VLX				S	Sb	00 12 16.4	+1.1
VLX				AML	AML	00 12 22.1	
	comp=E,223μm,0.6s						
VLX				AML	AML	00 12 22.7	
	comp=N,163μm,0.5s						
TRIP	Tripoli	1.20	5	P	Pb	00 12 05.2	+1.0
TRIP				S	Sb	00 12 21.2	+1.8
TRIP	Tripoli	1.20	5	P	Pb	00 12 04.6	+0.3
TRIP				S	Sb	00 12 21.2	+1.8
AMT	Artemida-Makis	1.25	344	P	Pb	00 12 05.7	+0.7
AMT				S	Sb	00 12 22.9	+2.1
AMT				AML	AML	00 12 31.5	
	comp=N,236μm,0.4s						
AMT				AML	AML	00 12 36.8	
	comp=E,195μm,0.4s						
AMT	Artemida-Makis	1.25	344	P	Pb	00 12 05.4	+0.3
AMT				S	Sb	00 12 22.9	+2.1
AMT				AML	AML	00 12 31.5	
	comp=N,236μm,0.4s						
AMT				AML	AML	00 12 36.6	
	comp=E,195μm,0.4s						
DID	Didima	1.47	37	P	Pb	00 12 09.5	+0.7
DID	Didima	1.47	37	P	Pb	00 12 09.5	+0.7
DRO	Drossia	1.66	348	P	Pb	00 12 11.1	-0.9
DRO	Drossia	1.66	348	P	Pb	00 12 13.5	+1.5

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*ISCJB **18** 00:29:27.8±1.0, 10°.2S±0°.1×161°.6E±0°.1, h85^{km}, mb3.2/4, Error ellipse: s-maj=20.4km s-min=11.9km az=39.3*

*IDC **18** 00:29:30.0±2.8, 10°.19S×161°.54E, h94^{km}±21^{km}, mb3.1/4, mb1 3.4/6, mb1mx3.3/38, mbtmp3.6/6, Error ellipse: s-maj=32.6km s-min=22.6km az=64.0*

ISC 18 00:29:29.1±1.1**, 10°.2S**±0°.1×**161°.6E**±0°.1**, h85**^{km}**, n7,** σ**0**^{s}**79**/8**, mb3.3**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.78	294	P	Pn	00 29 58.7	+0.4
	46nm,0.3s,baz=98,slow=19,SNR=9.6						
HNR				S	Sn	00 30 21.2	+0.7
	361nm,0.3s,baz=47,slow=19,SNR=17						
DZM	Mont Dzumac	12.73	159	P	Pn	00 32 27.7	+0.7
	0.5nm,0.3s,baz=352,slow=11,SNR=17						
CTA	Charters Tower	17.79	235	P	Pn	00 33 31.0	-0.4
	0.2nm,0.3s,baz=54,slow=14,SNR=2.6						
WRA	Warramunga Arr	28.03	247	P	P	00 35 11.6	-0.9
	0.3nm,0.6s,baz=77,slow=9.2,SNR=4.0						
SONM	Songino Array	75.58	325	P	P	00 41 05.3	+0.5
	0.6nm,0.9s,baz=140,slow=6.6,SNR=3.9						
ILAR	Eielson Array	84.01	20	P	P	00 41 49.7	-0.1
	0.2nm,0.7s,baz=231,slow=4.3,SNR=4.1						
MKAR	Makanchi Array	90.10	318	P	P	00 42 18.9	-0.9
	0.2nm,0.8s,baz=100,slow=5.3,SNR=2.3						

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*IDC **18** 00:29:54.8±0.4, 5°.68N×32°.95W, h0^{km}, mb4.2/29, mb1 4.3/29, mb1mx4.2/47, mbtmp4.2/29, MS4.1/29, Ms1 4.1/29, ms1mx4.1/32, Error ellipse: s-maj=14.9km s-min=11.8km az=164.0*

*ISCJB **18** 00:29:55.5±0.3, 5°.60N±0°.07×32°.80W±0°.04, h10^{km}, mb4.5/126, MS4.1/30, Error ellipse: s-maj=9.9km s-min=6.1km az=172.6*

*MOS **18** 00:29:56.8±3.1, 5°.60N×32°.80W, h10^{km}, mb4.8/41, Error ellipse: s-maj=12.1km s-min=6.7km az=57.7*

*NEIC **18** 00:29:56.8±0.2, 5°.59N×32°.83W, h10^{km}, mb4.8/76, Error ellipse: s-maj=8.2km s-min=5.5km az=176.0*

*GCMT **18** 00:29:59.8±0.2, 5°.78N±0°.02×32°.90W±0°.01, h12^{km},* *MW4.9/100, Moment Tensor Solution. s27,c34; s100,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.12±.17; $M_{\theta\theta}$0.22±.10; $M_{\phi\phi}$2.90±.11; $M_{r\theta}$0.84±.33; $M_{\theta\phi}$-0.18±.06; $M_{\phi r}$0.29±.23; Best double couple: $M_0$3.13000×10^{16} NP1:ϕ_s190.00000°, δ49.00000°, λ-72.00000°. NP2:ϕ_s343.00000°, δ44.00000°, λ-110.00000°. Principal axes: T 2.9210, Plg2.0000°, Azm267.0000°; N 0.4150, Plg14.0000°, Azm358.0000°; P -3.3380, Plg76.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 00:29:56.9±0.4, **5°.57N**±0°.07×**32°.92W**±0°.06, **h10**^{km}, **n221**, σ**1^{s}50**/180, **mb4.7**/128, **MS4.1**/31, **11C, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**19.64**	**270**	LR	LR	00 40 23.2	
	comp=Z,582nm,21.5s,baz=99,slow=32						
H10N3	**ASCENSION HYDR**	**22.70**	**126**	T	T	00 58 28.9	
	baz=305,slow=75,SNR=96						
H10N2	**ASCENSION HYDR**	**22.70**	**126**	T	T	00 58 43.5	
	baz=305,slow=75,SNR=68						
H10N1	**ASCENSION HYDR**	**22.71**	**126**	T	T	00 58 30.4	
	baz=305,slow=75,SNR=93						
H10S3	**ASCENSION HYDR**	**23.23**	**128**	T	T	00 59 15.0	
	baz=308,slow=75,SNR=69						
H10S1	**ASCENSION HYDR**	**23.23**	**128**	T	T	00 59 15.3	
	baz=308,slow=75,SNR=78						
H10S2	**ASCENSION HYDR**	**23.24**	**128**	T	T	00 59 16.2	
	baz=308,slow=75,SNR=75						
BDFB	**Brasilia**	**25.83**	**215**	*e*P	**P**	**00 35 29.2**	**+0.3**
BDFB	**Brasilia**	**25.83**	**215**	*e*P	**P**	**00 35 29.2**	**+0.3**
BDFB	**Brasilia**	**25.83**	**215**	P	**P**	**00 35 28.9**	**+0.1**
	3.4nm,0.9s,baz=124,slow=7.9,SNR=4.8						
BDFB				LR	LR	00 44 40.4	
	comp=Z,795nm,19.9s,baz=83,slow=34						
PTGA	**Pitinga**	**27.72**	**258**	P	**P**	**00 35 45.4**	**-0.4**
	1.2nm,0.3s,baz=24,slow=8.7,SNR=3.7						
PTGA				LR	LR	00 46 13.4	
	comp=Z,782nm,18.6s,baz=68,slow=35						
DBIC	**Dimbokro**	**27.93**	**86**	*e*P	**P**	**00 35 46.5**	**-1.1**
	30nm,1.4s						
DBIC				*e*PcP	**PcP**	**00 39 02.1**	**-1.2**
DBIC	**Dimbokro**	**27.93**	**86**	*e*P	**P**	**00 35 46.6**	**-1.1**
DBIC				*e*		00 39 02.1	
DBIC				pmax	pmax		
	comp=Z,30nm,1.4s						
DBIC	**Dimbokro**	**27.93**	**86**	P	**P**	**00 35 46.5**	**-1.1**
	comp=Z,5.1nm,0.9s,baz=264,slow=8.1,SNR=4.7						
DBIC				PcP	**PcP**	**00 39 02.1**	**-1.2**
	comp=Z,3.4nm,0.8s,baz=65,slow=1.8,SNR=3.1						
DBIC				LR	LR	00 44 25.7	
	comp=Z,593nm,21.3s,baz=242,slow=31						
H05S1	**Guadeloupe/Mar**	**28.83**	**290**	T	T	01 06 00.9	
	SNR=23						
TOA1	**Torodi Ar. Sit**	**34.94**	**75**	*e*P	**P**	**00 36 47.3**	**-2.2**
TOA1				*e*PcP	**PcP**	**00 39 21.1**	**-1.0**
TOA0	**Torodi Ar. Sit**	**34.94**	**75**	*e*P	**P**	**00 36 47.9**	**-1.5**
TOA0				*e*PcP	**PcP**	**00 39 21.2**	**-0.9**
TORD	**Torodi Ar. Bea**	**34.94**	**75**	P	**P**	**00 36 47.3**	**-2.2**
	comp=Z,2.7nm,0.7s,baz=271,slow=8.4,SNR=18						
TORD				PcP	**PcP**	**00 39 21.1**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=296,slow=3.2,SNR=9.0						
TORD				LR	LR	00 49 13.9	
	comp=Z,633nm,20.7s,baz=295,slow=33						
SDV	**Santo Domingo**	**37.54**	**277**	P	P	00 37 09.6	-2.3
	comp=Z,2.2nm,0.5s,baz=74,slow=7.2,SNR=5.0						
SDV				LR	LR	00 52 28.6	
	comp=Z,283nm,20.9s,baz=90,slow=36						
MDT	**Midelt**	**37.83**	**41**	LR	LR	00 51 36.1	
	comp=Z,440nm,18.9s,baz=239,slow=34						
CPUP	**Villa Florida**	**39.56**	**216**	*e*P	**P**	**00 37 28.4**	**-0.1**
	comp=Z,10nm,1.3s						
CPUP	**Villa Florida**	**39.56**	**216**	*e*P	**P**	**00 37 28.4**	**-0.1**
CPUP				pmax	pmax		
	comp=Z,11nm,1.3s						
CPUP	**Villa Florida**	**39.56**	**216**	P	**P**	**00 37 28.4**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=45,slow=8.6,SNR=3.0						
CPUP				LR	LR	00 53 25.1	
	comp=Z,548nm,19.1s,baz=38,slow=36						
TAM	**Tamanrasset**	**40.84**	**61**	*e*P	**P**	**00 37 42.2**	**+2.8**
	comp=Z,3.0nm,0.9s						
TAM	**Tamanrasset**	**40.84**	**61**	*e*P	**P**	**00 37 42.2**	**+2.8**
TAM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPAZ	**La Paz**	**41.05**	**237**	*e*P	**P**	**00 37 42.7**	**+1.1**
	comp=Z,11nm,1.2s						
LPAZ	**La Paz**	**41.05**	**237**	*e*P	**P**	**00 37 42.7**	**+1.1**
LPAZ				pmax	pmax		
	comp=Z,11nm,1.2s						
LPAZ	**La Paz**	**41.05**	**237**	P	**P**	**00 37 41.6**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=82,slow=6.6,SNR=11						
LPAZ				LR	LR	00 54 14.0	
	comp=Z,636nm,18.7s,baz=64,slow=36						
ROSC	**El Rosal**	**41.23**	**271**	*e*P	**P**	**00 37 45.0**	**+2.1**
	comp=Z,15nm,1.3s						
ROSC	**El Rosal**	**41.23**	**271**	P	**P**	**00 37 43.5**	**+0.5**
	comp=Z,7.6nm,1.1s,baz=82,slow=7.6,SNR=4.5						
ROSC				LR	LR	00 55 21.5	
	comp=Z,266nm,19.9s,baz=98,slow=37						
ESDC	**Sonseca Array**	**42.83**	**33**	P	**P**	**00 37 54.0**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=221,slow=8.7,SNR=4.3						
ESDC				LR	LR	00 52 55.6	
	comp=Z,131nm,20.0s,baz=220,slow=32						
KEST	**Kesra**	**49.06**	**46**	*e*P	**P**	**00 38 45.1**	**+0.5**
	comp=Z,10.0nm,1.4s						
KEST	**Kesra**	**49.06**	**46**	P	**P**	**00 38 45.1**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=290,slow=12,SNR=2.8						
KEST				LR	LR	00 59 21.3	
	comp=Z,509nm,19.1s,baz=228,slow=36						
DAVA	**Damuels**	**55.41**	**34**	*i* P	P	00 39 38.2	+6.5
	comp=Z,18nm,2.1s						
TSUM	**Tsumeb**	**55.48**	**118**	P	**P**	**00 39 32.6**	**0.0**
	comp=Z,7.1nm,0.9s,baz=284,slow=5.4,SNR=7.4						
FETA	**Feichten**	**55.74**	**35**	*i* P	P	00 39 39.6	+5.6
	comp=Z,5.0nm,1.1s						
SQTA	**Sankt Quirin**	**56.12**	**35**	*i* P	P	00 39 43.5	+6.8
	comp=Z,8.5nm,1.2s						
MOTA	**Moosalm**	**56.13**	**35**	*i* pP	P	00 39 48.5	+12
	comp=Z,6.4nm,1.4s						
SCHQ	**Schefferville**	**56.18**	**337**	*e*P	**P**	**00 39 35.3**	**-1.6**
	comp=Z,34nm,1.4s						
SCHQ	**Schefferville**	**56.18**	**337**	P	**P**	**00 39 35.3**	**-1.6**
	comp=Z,8.0nm,0.9s,baz=139,slow=8.6,SNR=5.7						
SCHQ				LR	LR	01 00 40.6	
	comp=Z,68nm,19.1s,baz=317,slow=33						
WATA	**Walderalm**	**56.39**	**35**	*i* pP	P	00 39 49.0	+10
	comp=Z,3.1nm,1.0s						
ABTA	**Abfaltersbach**	**56.62**	**36**	*i* P	**P**	**00 39 44.7**	**+4.4**
	comp=Z,6.0nm,1.1s						
MYKA	**Terra Mystica**	**57.22**	**37**	*i* P	P	00 39 52.3	+7.8
	comp=Z,11nm,1.1s						
KBA	**Koelnbreinsper**	**57.27**	**36**	*i* P	P	00 39 51.4	+6.4
	comp=Z,6.6nm,1.2s						
GO06	**Curarrehue**	**57.29**	**215**	*e*P	**P**	**00 39 45.9**	**+0.8**
	comp=Z,30nm,1.4s						
OBKA	**Obir**	**57.70**	**37**	*i* P	P	00 39 54.7	+6.8
	comp=Z,10nm,1.4s						
SOKA	**Soboth**	**58.07**	**37**	*i* P	P	00 39 56.6	+6.1
	comp=Z,11nm,1.5s						
WET	**Wettzell**	**58.11**	**34**	P	P	00 39 57.7	+7.0
WET				pmax	pmax		
	comp=Z,6.0nm,2.6s						
MOA	**Molln**	**58.21**	**36**	*i* P	P	00 39 57.4	+6.0
	comp=Z,9.3nm,1.8s						
T47A	**Sharon Grove**	**58.39**	**310**	*e*P	**P**	**00 39 52.6**	**-0.3**
	comp=Z,14nm,0.9s						
GEA0	**GERESS Array S**	**58.40**	**34**	*e*P	**P**	**00 39 52.2**	**-0.6**
GEC2	**GERESS Array S**	**58.40**	**34**	*e*P	**P**	**00 39 53.0**	**+0.2**
	comp=Z,14nm,1.4s						
GEC2	**GERESS Array S**	**58.40**	**34**	*e*P	**P**	**00 39 53.0**	**+0.2**
GEC2				pmax	pmax		
	comp=Z,14nm,1.4s						
GERES	**GERESS Array B**	**58.40**	**34**	P	**P**	**00 39 51.7**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=246,slow=5.7,SNR=7.7						
GERES				LR	LR	01 01 50.3	
	comp=Z,149nm,21.0s,baz=265,slow=33						
KHC	**Kasperske Hory**	**58.49**	**34**	P	P	00 40 00.0	+6.7
KHC				pmax	pmax		
	comp=Z,3.0nm,1.8s						
CONA	**Conrad Observa**	**59.18**	**36**	*i* P	P	00 40 04.0	+5.8
	comp=Z,3.3nm,1.4s						
CLL	**Collm**	**59.36**	**32**	*e*S	**S**	**00 48 17.0**	**+9.0**
CLL				*e*SSS	SSS	00 54 44.0	
CLL				Lm	MLR	01 01 00.0	
	comp=N,100nm,19.5s						
CLL				Lm	MLR	01 01 00.0	
	comp=E,100nm,21.3s						
CLL				Lm	MLR	01 01 00.0	
	comp=Z,200nm,18.4s						
SOP	**Sopron**	**59.47**	**37**	P	P	00 40 07.9	+7.8
SOP				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BRG	**Berggiesshubel**	**59.62**	**32**	*e*P	P	00 40 07.6	+6.5
BRG				pmax	pmax		
	comp=Z,12nm,1.4s						
KRUC	**Moravsky**	**60.04**	**35**	P	P	00 40 10.7	+6.7
VRAC	**Vranov**	**60.28**	**35**	P	P	00 40 12.2	+6.5
VRAC				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KSP	**Ksiaz**	**60.87**	**33**	P	P	00 40 17.0	+7.3
KSP				pmax	pmax		
	comp=Z,6.0nm,1.6s						
MORC	**Moravsky Berou**	**61.05**	**35**	P	P	00 40 19.0	+8.1
MDVR	**Moldovita**	**61.45**	**41**	⇑*i*P	**P**	**00 40 15.8**	**+2.0**
PSZ	**Piszkesteto**	**61.58**	**38**	⇑*i*P	**P**	**00 40 15.0**	**+0.4**
PSZ	**Piszkesteto**	**61.58**	**38**	⇑P	**P**	**00 40 15.0**	**+0.4**
OJC	**Ojcow**	**62.54**	**35**	*e*P	**P**	**00 40 21.4**	**+0.4**
	comp=Z,10nm,1.1s						
OJC	**Ojcow**	**62.54**	**35**	*e*P	**P**	**00 40 21.4**	**+0.4**
OJC				pmax	pmax		
	comp=Z,11nm,1.1s						
DRGR		**62.87**	**40**	⇑*i*P	**P**	**00 40 25.0**	**+1.7**
DRGR		**62.87**	**40**	⇑P	**P**	**00 40 25.0**	**+1.7**
ARR	**Arges**	**63.59**	**42**	⇑*i*P	**P**	**00 40 28.7**	**+0.6**
VOIR		**63.89**	**42**	P	P	00 40 38.3	+8.2
VOIR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LSZ	**Lusaka**	**63.97**	**110**	*e*P	**P**	**00 40 34.1**	**+3.0**
	comp=Z,11nm,1.3s						
NB2	**NORSAR Subarra**	**64.42**	**22**	P	**P**	**00 40 32.5**	**-0.7**
	comp=Z,25nm,1.4s,baz=230,slow=6.9						
NB200	**NORSAR Array S**	**64.42**	**22**	*e*P	**P**	**00 40 32.5**	**-0.7**
NOA	**NORSAR Array B**	**64.42**	**22**	P	**P**	**00 40 32.5**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=230,slow=6.3,SNR=7.4						
NOA				LR	LR	01 05 36.7	
	comp=Z,116nm,19.3s,baz=215,slow=33						
MLR	**Muntele Rosu**	**64.50**	**42**	*e*P	**P**	**00 40 35.9**	**+1.7**
	comp=Z,23nm,1.2s						
MLR	**Muntele Rosu**	**64.50**	**42**	⇑*i*P	**P**	**00 40 35.6**	**+1.4**
MLR	**Muntele Rosu**	**64.50**	**42**	⇑P	**P**	**00 40 35.6**	**+1.4**
KLNR	**Kaliningrad**	**64.80**	**31**	*i* P	P	00 40 41.8	+6.1
KLNR				pmax	pmax		
	comp=Z,53nm,1.1s						
BOSA	**Boshof**	**65.45**	**125**	P	**P**	**00 40 40.4**	**-0.2**
	comp=Z,7.6nm,0.8s,baz=297,slow=5.8,SNR=13						
BOSA				LR	LR	01 03 44.7	
	comp=Z,187nm,20.0s,baz=264,slow=31						
SUW	**Suwalki**	**66.08**	**32**	*e*P	**P**	**00 40 43.5**	**-0.6**
	comp=Z,50nm,1.2s						
SUW	**Suwalki**	**66.08**	**32**	*e*P	**P**	**00 40 43.5**	**-0.6**
SUW				pmax	pmax		
	comp=Z,50nm,1.2s						
AK11	**Malin Array Si**	**68.24**	**37**	*e*P	**P**	**00 41 01.7**	**+3.9**
KIEV	**Kiev**	**68.27**	**37**	*i* P	P	00 41 03.2	+5.2
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AKASG	**Malin Array Be**	**68.28**	**37**	P	**P**	**00 40 56.7**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=251,slow=5.7,SNR=9.6						
AKASG				LR	LR	01 10 17.6	
	comp=Z,76nm,20.1s,baz=350,slow=36						
AKBB	**Malin Array Si**	**68.28**	**37**	*e*P	**P**	**00 40 56.7**	**-1.4**
	comp=Z,11nm,1.2s						
AKBB	**Malin Array Si**	**68.28**	**37**	*e*P	**P**	**00 40 56.7**	**-1.4**
AKBB				pmax	pmax		
	comp=Z,11nm,1.2s						
BR101	**Keskin Array S**	**68.49**	**50**	*e*P	**P**	**00 40 59.0**	**-0.8**
BRTR	**Keskin Array B**	**68.49**	**50**	P	**P**	**00 40 59.0**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=240,slow=5.5,SNR=6.7						
BRTR				LR	LR	01 12 50.4	
	comp=Z,58nm,18.8s,baz=248,slow=38						
ULM	**Lac du Bonnet**	**68.63**	**322**	P	**P**	**00 40 57.6**	**-2.7**
	comp=Z,1.8nm,0.8s,baz=117,slow=6.8,SNR=4.0						
ULM				LR	LR	01 05 46.3	
	comp=Z,112nm,20.8s,baz=154,slow=31						
KMBO	**Kilima Mbogo**	**70.39**	**93**	*e*P	**P**	**00 41 12.3**	**+0.2**
	comp=Z,4.9nm,1.4s						
KMBO	**Kilima Mbogo**	**70.39**	**93**	P	**P**	**00 41 12.3**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=289,slow=18,SNR=2.5						
KMBO				LR	LR	01 09 44.0	
	comp=Z,223nm,19.1s,baz=272,slow=34						
LTX	**Lajitas**	**70.51**	**299**	*e*P	**P**	**00 41 11.5**	**-1.0**
TXAR	**Lajitas Array**	**70.51**	**299**	P	**P**	**00 41 11.5**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=123,slow=6.1,SNR=5.8						
FCC	**Fort Churchill**	**70.58**	**331**	*e*P	**P**	**00 41 10.9**	**-1.3**
	comp=Z,11nm,1.0s						
FCC	**Fort Churchill**	**70.58**	**331**	*e*P	**P**	**00 41 10.9**	**-1.3**
FCC				pmax	pmax		
	comp=Z,11nm,1.0s						
FIA0	**FINESS Array S**	**70.68**	**26**	*e*P	**P**	**00 41 12.2**	**-0.4**
FIA0	**FINESS Array S**	**70.68**	**26**	*e*P	**P**	**00 41 12.3**	**-0.4**
FINES	**FINESS Array B**	**70.68**	**26**	P	**P**	**00 41 12.2**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=281,slow=1.0,SNR=10						
FINES				LR	LR	01 11 56.1	
	comp=Z,41nm,18.3s,baz=236,slow=36						
FIA1	**FINESS Array S**	**70.68**	**26**	*e*P	**P**	**00 41 12.4**	**-0.3**
SUF	**Sumiainen**	**71.26**	**25**	P	P	00 41 22.8	+6.6
SUF				pmax	pmax		
	comp=Z,15nm,1.3s						
DAG	**Danmarks Havn**	**71.58**	**3**	P	P	00 41 24.8	+6.9
DAG				pmax	pmax		
	comp=Z,7.0nm,2.3s						
ISCO	**Idaho Springs**	**73.17**	**310**	*e*P	**P**	**00 41 29.4**	**+0.9**
	comp=Z,2.8nm,1.0s						
ISCO	**Idaho Springs**	**73.17**	**310**	P	**P**	**00 41 30.0**	**+1.5**
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.9s						
ANMO	**Albuquerque**	**73.34**	**305**	*e*P	**P**	**00 41 31.0**	**+1.5**
	comp=Z,1.6nm,1.0s						
ANMO	**Albuquerque**	**73.34**	**305***c*	*e*P	**P**	**00 41 28.3**	**-1.2**
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.7s						
FFC	**Flin Flon**	**73.45**	**326**	*e*P	**P**	**00 41 28.6**	**-0.8**
	comp=Z,21nm,1.3s						
FFC	**Flin Flon**	**73.45**	**326**	*i* P	**P**	**00 41 29.0**	**-0.5**
DGMT	**Dagmar**	**73.47**	**319**	*e*P	**P**	**00 41 30.5**	**+0.8**
N23A	**Red Feather La**	**73.55**	**311**	*e*P	**P**	**00 41 32.1**	**+1.4**
	comp=Z,20nm,1.3s						
TULEG	**Thule**	**73.58**	**352**	*e*P	P	00 41 26.2	-3.6
	comp=Z,8.2nm,0.9s						
MSF	**Maaselka**	**73.75**	**22**	P	P	00 41 37.8	+6.8
OBN	**Obninsk**	**73.79**	**34**	*e*P	P	00 41 36.9	+5.5
OBN				*e*		00 41 52.8	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LAZ	**Ladron**	**73.86**	**304**	*e*P	**P**	**00 41 33.5**	**+1.0**
ARA0	**ARCESS Array S**	**74.13**	**18**	*e*P	**P**	**00 41 32.0**	**-1.1**
ARCES	**ARCESS Array B**	**74.13**	**18**	P	**P**	**00 41 32.1**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=273,slow=3.3,SNR=4.6						
SMCO	**Snowmass**	**74.14**	**309**	*e*P	**P**	**00 41 35.3**	**+0.9**
	comp=Z,7.8nm,1.3s						
VSR	**Storozhevoye**	**74.49**	**38**	*e*P	**P**	**00 41 40.4**	**+4.8**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MOS	**Moscow**	**74.52**	**34**	*e*P	**P**	**00 41 34.4**	**-1.3**
MOS				*e*		00 41 41.0	
LPSR	**Galich'ya Gora**	**74.61**	**37**	*e*P	P	00 41 42.3	+6.1
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
O20A	**White River Ci**	**75.21**	**310**	*e*P	**P**	**00 41 41.7**	**+1.4**
	comp=Z,16nm,1.1s						
NEY	**Neytrino**	**75.75**	**47**	*i* P	P	00 41 50.4	+7.1
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	**Kislovodsk**	**75.80**	**46**	*e*P	P	00 41 49.2	+5.7
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,55nm,18.0s						
KBZ	**Khabaz**	**75.93**	**46**	P	**P**	**00 41 44.2**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=339,slow=14,SNR=4.4						
KBZ				LR	LR	01 18 00.7	
	comp=Z,52nm,19.4s,baz=268,slow=38						
VRH	**Novokhopyorsk**	**76.07**	**39**	*e*P	P	00 41 50.6	+5.9
VRH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NCK	**Nalchik**	**76.41**	**47**	*i* P	P	00 41 55.0	+8.1
NCK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PD31	**Pinedale Array**	**76.43**	**313**	*e*P	**P**	**00 41 46.9**	**-0.4**
	comp=Z,13nm,1.4s						
PDAR	**Pinedale Array**	**76.43**	**313**	*e*P	**P**	**00 41 46.4**	**-0.8**
PDAR	**Pinedale Array**	**76.43**	**313**	P	**P**	**00 41 46.5**	**-0.7**
	comp=Z,1.9nm,1.0s,baz=85,slow=9.2,SNR=8.5						
PDAR				LR	LR	01 11 30.0	
	comp=Z,147nm,20.7s,baz=119,slow=33						
BW06	**Boulder Array**	**76.43**	**313**	*e*P	**P**	**00 41 46.9**	**-0.4**
	comp=Z,13nm,1.4s						
RLMT	**Red Lodge**	**76.44**	**315**	*e*P	**P**	**00 41 47.6**	**+0.3**
	comp=Z,8.1nm,1.0s						
KLMR	**Klimovskoe**	**76.64**	**29**	*e*P	**P**	**00 41 44.8**	**-3.0**
KLMR				pmax	pmax		
	comp=Z,13nm,1.0s						
KLMR	**Klimovskoe**	**76.64**	**29**	*e*P	**P**	**00 41 44.8**	**-3.0**
KLMR				AMP		00 41 54.8	
	comp=Z,13nm,1.1s						
TMCR	**Tamitsa**	**76.77**	**25**	*e*P	P	00 41 53.7	+5.3
TMCR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TUC	**Tucson**	**76.79**	**302**	*e*P	**P**	**00 41 50.2**	**+0.9**
	comp=Z,6.9nm,1.4s						
TUC	**Tucson**	**76.79**	**302**	*e*P	**P**	**00 41 50.2**	**+0.9**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.4s						
RAYN	**Ar Rayn**	**77.20**	**67**	*e*P	**P**	**00 41 53.6**	**+1.8**
	comp=Z,17nm,1.4s						
LOHW	**Long Hollow**	**77.26**	**313**	*e*P	**P**	**00 41 51.8**	**-0.2**
	comp=Z,7.4nm,1.0s						
FLWY	**Flagg Ranch**	**77.37**	**314**	*e*P	**P**	**00 41 53.2**	**+0.6**
	comp=Z,14nm,1.1s						
MOOW	**Moose Ponds**	**77.38**	**313**	*e*P	**P**	**00 41 52.6**	**0.0**
	comp=Z,6.2nm,1.1s						
X16A	**Lo Mia Camp, P**	**77.41**	**304**	*e*P	**P**	**00 41 54.5**	**+1.6**
	comp=Z,11nm,1.5s						
REDW	**Red Top Meadow**	**77.42**	**313**	*e*P	**P**	**00 41 52.7**	**-0.2**
	comp=Z,8.2nm,1.1s						
TMUT	**Trail Mountain**	**77.43**	**309**	*e*P	**P**	**00 41 52.1**	**-1.0**
	comp=Z,12nm,1.0s						
RES	**Resolute Bay**	**77.46**	**346**	*e*P	**P**	**00 41 51.5**	**-0.6**
	comp=Z,21nm,1.3s						
RES	**Resolute Bay**	**77.46**	**346**	*e*P	**P**	**00 41 51.5**	**-0.6**
RES				pmax	pmax		
	comp=Z,21nm,1.3s						
TPAW	**Teton Pass**	**77.50**	**313**	*e*P	**P**	**00 41 52.8**	**-0.6**
	comp=Z,5.6nm,1.0s						
IMW	**Indian Meadow**	**77.53**	**314**	*e*P	**P**	**00 41 53.9**	**+0.4**
	comp=Z,8.2nm,1.1s						
YHH	**Holmes Hill**	**77.53**	**315**	*e*P	**P**	**00 41 54.3**	**+0.7**
	comp=Z,8.3nm,1.2s						
FXWY	**Fox Creek**	**77.57**	**313**	*e*P	**P**	**00 41 53.3**	**-0.4**
	comp=Z,7.5nm,1.3s						
YMR	**Madison River**	**77.60**	**314**	*e*P	**P**	**00 41 55.0**	**+1.1**
	comp=Z,12nm,1.0s						
TCUT	**Toone Canyon**	**77.69**	**311**	*e*P	**P**	**00 41 55.3**	**+0.9**
	comp=Z,18nm,1.3s						
JLU	**Jordanelle**	**77.69**	**310**	*e*P	**P**	**00 41 55.3**	**+0.8**
	comp=Z,18nm,1.5s						
YHB	**Horse Butte**	**77.77**	**314**	*e*P	**P**	**00 41 56.2**	**+1.4**
	comp=Z,11nm,1.1s						
HWUT	**Hardware Ranch**	**77.83**	**311**	*e*P	**P**	**00 41 55.4**	**+0.3**
	comp=Z,5.8nm,0.9s						
NLU	**North Lily Min**	**78.13**	**310**	*e*P	**P**	**00 41 57.8**	**+1.0**
	comp=Z,11nm,1.3s						
MTPU	**Mount Pierson**	**78.14**	**308**	*e*P	**P**	**00 41 57.9**	**+0.8**
	comp=Z,14nm,1.3s						
BOZ	**Bozeman (W)**	**78.14**	**315**	*e*P	**P**	**00 41 57.3**	**+0.6**
	comp=Z,2.9nm,1.4s						
BOZ	**Bozeman (W)**	**78.14**	**315**	*e*P	**P**	**00 41 57.3**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SPUT	**South Promonto**	**78.48**	**311**	*e*P	**P**	**00 41 59.5**	**+0.8**
	comp=Z,7.6nm,1.2s						
DUG	**Dugway, Tooele**	**78.71**	**310**	*e*P	**P**	**00 42 01.4**	**+1.4**
	comp=Z,12nm,1.4s						
HVU	**Hansel Valley**	**78.75**	**311**	*e*P	**P**	**00 42 00.7**	**+0.5**
	comp=Z,12nm,1.5s						
HVU	**Hansel Valley**	**78.75**	**311**	*e*P	**P**	**00 42 00.7**	**+0.5**
HVU				pmax	pmax		
	comp=Z,12nm,1.5s						
SZCU	**Shurtz Canyon**	**78.84**	**307**	*e*P	**P**	**00 42 01.4**	**+0.6**
	comp=Z,8.7nm,1.2s						
BGU	**Big Grassy Mou**	**78.90**	**310**	*e*P	**P**	**00 42 01.4**	**+0.4**
	comp=Z,12nm,1.2s						
CCUT	**Cedar City**	**79.06**	**307**	*e*P	**P**	**00 42 03.4**	**+1.3**
	comp=Z,11nm,1.2s						
W13A	**Hualapai Mount**	**79.43**	**305**	*e*P	**P**	**00 42 05.7**	**+1.5**
	comp=Z,1.4nm,0.9s						
PSUT	**Pine Spring**	**79.47**	**308**	*e*P	**P**	**00 42 05.5**	**+1.3**
	comp=Z,7.4nm,1.1s						
SNAA	**Sanae**	**79.57**	**171**	*e*P	**P**	**00 42 03.5**	**-0.4**
	comp=Z,11nm,1.2s						
SNAA	**Sanae**	**79.57**	**171**	*e*P	**P**	**00 42 03.5**	**-0.4**
SNAA				pmax	pmax		
	comp=Z,11nm,1.2s						
SNAA	**Sanae**	**79.57**	**171**	P	**P**	**00 42 03.5**	**-0.4**
	comp=Z,2.9nm,1.0s,baz=338,slow=11,SNR=3.7						
PRGR	**Permogore**	**79.69**	**28**	*e*P	**P**	**00 42 03.0**	**-1.6**
PRGR				*e*		00 42 10.7	
PRGR				pmax	pmax		
	comp=Z,21nm,0.9s						
WALA	**Waterton Lakes**	**79.91**	**319**	*e*P	**P**	**00 42 05.8**	**-0.6**
	comp=Z,17nm,1.2s						
HLID	**Hailey**	**80.02**	**313**	*e*P	**P**	**00 42 07.2**	**+0.1**
	comp=Z,7.2nm,1.3s						
ELK	**Elko**	**80.57**	**310**	*e*P	**P**	**00 42 10.5**	**+0.3**
	comp=Z,4.9nm,1.2s						
ELK	**Elko**	**80.57**	**310**	*e*P	**P**	**00 42 10.5**	**+0.3**
ELK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
R11A	**Troy Canyon, C**	**80.82**	**308**	*e*P	**P**	**00 42 12.3**	**+0.8**
	comp=Z,6.4nm,1.4s						
YKA	**Yellowknife Ar**	**81.25**	**332**	P	**P**	**00 42 11.7**	**-1.3**
	comp=Z,2.2nm,0.9s,baz=93,slow=5.5,SNR=27						
YKA				LR	LR	01 17 22.3	
	comp=Z,6.7nm,18.1s,baz=98,slow=35						
YKB5	**Yellowknife Ar**	**81.25**	**332**	*e*P	**P**	**00 42 10.9**	**-2.1**
YKW3	**Yellowknife Ar**	**81.26**	**332**	*e*P	**P**	**00 42 11.9**	**-1.1**
	comp=Z,7.1nm,1.1s						
TPNV	**Topopah Spring**	**81.35**	**306**	*e*P	**P**	**00 42 15.8**	**+1.4**
	comp=Z,8.6nm,1.1s						
TPNV	**Topopah Spring**	**81.35**	**306**	*e*P	**P**	**00 42 15.8**	**+1.4**
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GSC	**Goldstone, Bar**	**81.83**	**305**	*e*P	**P**	**00 42 18.0**	**+1.2**
	comp=Z,6.3nm,1.1s						
NEW	**Newport**	**82.02**	**318**	*e*P	**P**	**00 42 17.4**	**0.0**
	comp=Z,10nm,1.3s						
NEW	**Newport**	**82.02**	**318**	*e*P	**P**	**00 42 17.5**	**0.0**
NEW				pmax	pmax		
	comp=Z,10.0nm,1.3s						
F10A	**Beach Ranch, E**	**82.07**	**316**	*e*P	**P**	**00 42 21.2**	**+3.4**
	comp=Z,7.7nm,1.1s						
BMO	**Blue Mountains**	**82.12**	**314**	*e*P	**P**	**00 42 19.1**	**+0.9**
	comp=Z,3.0nm,1.2s						
BMO	**Blue Mountains**	**82.12**	**314**	*e*P	**P**	**00 42 19.1**	**+0.9**
BMO				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NV01	**Mina Array Sit**	**82.96**	**308**	*e*P	**P**	**00 42 23.0**	**+0.2**
NVAR	**Mina Array Bea**	**82.96**	**308**	P	**P**	**00 42 22.2**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=117,slow=4.9,SNR=8.1						
NVAR				LR	LR	01 15 34.2	
	comp=Z,57nm,22.0s,baz=118,slow=33						
J08A	**Circle Bar Ran**	**82.98**	**313**	*e*P	**P**	**00 42 24.4**	**+1.7**
	comp=Z,6.8nm,1.0s						
MOD	**Modoc Plateau**	**84.37**	**311**	*e*P	**P**	**00 42 31.2**	**+1.3**
	comp=Z,17nm,1.4s						
BEKR	**Beckworth**	**84.50**	**309**	*e*P	**P**	**00 42 31.9**	**+1.2**
	comp=Z,8.2nm,1.2s						
PINE	**Pine Mountain**	**84.76**	**313**	*e*P	**P**	**00 42 33.5**	**+1.6**
	comp=Z,17nm,1.4s						
ORV	**Oroville**	**85.40**	**309**	*e*P	**P**	**00 42 35.4**	**+0.5**
	comp=Z,6.2nm,1.1s						
ORV	**Oroville**	**85.40**	**309**	*e*P	**P**	**00 42 35.4**	**+0.5**
ORV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARU	**Arti**	**86.23**	**34**	*e*P	**P**	**00 42 38.3**	**-0.3**
	comp=Z,6.6nm,0.9s						
ARU	**Arti**	**86.23**	**34***c*	*i*P	**P**	**00 42 38.7**	**+0.1**
ARU				S	S	00 53 03.6	-10
ARU				SS	**SS**	**00 58 48.4**	**-3.9**
ARU				pmax	pmax		
	comp=Z,18nm,2.5s						
GEYT	**Alibeck**	**87.44**	**52**	LR	LR	01 25 10.8	
	comp=Z,56nm,21.3s,baz=225,slow=38						
ABKAR	**Akbulak array**	**87.70**	**41**	*e*P	**P**	**00 42 47.5**	**+1.6**
	comp=Z,10nm,1.5s						
INK	**Inuvik**	**88.77**	**339**	*e*P	**P**	**00 42 49.4**	**-1.2**
	comp=Z,5.2nm,1.2s						

INK	Inuvik	88.77	339	eP	P	00 42 49.4	-1.2
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
INK	Inuvik	88.77	339	P	P	00 42 49.4	-1.2
	comp=Z,2.0nm,1.0s,baz=40,slow=3.7,SNR=5.5						
BRVK	Borovoye	93.46	36	i P	P	00 43 17.5	+4.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BVAR	Borovoye Array	93.53	36	LR	LR	01 23 09.6	
	comp=Z,70nm,20.5s,baz=280,slow=34						
ILAR	Eielson Array	94.94	337	P	P	00 43 17.9	-1.5
	comp=Z,1.5nm,0.9s,baz=58,slow=4.1,SNR=6.5						
ILAR				LR	LR	01 23 25.3	
	comp=Z,82nm,19.8s,baz=108,slow=34						
ILB	Eielson Array	94.94	337	eP	P	00 43 17.9	-1.5
	comp=Z,2.9nm,1.0s						
NRIK	Noril'sk	95.11	18	LR	LR	01 24 01.5	
	comp=Z,73nm,21.7s,baz=354,slow=34						
AAK	Ala-Archa	98.91	45	ceP	Pdif	00 43 45.1	+7.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
AAK	Ala-Archa	98.91	45	LR	LR	01 31 39.6	
	comp=Z,32nm,20.1s,baz=286,slow=38						
KURK	Kurchatov	99.09	37	i P	Pdif	00 43 45.5	+7.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL	Bilibino	105.33	353	i P	Pdif	00 44 04.6	-1.2
BILL				e		00 48 27.4	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CM31	Chiang Mai Arr	126.89	62	ePKPdf	PKPdf	00 49 02.2	+0.2
CMAR	Chiang Mai Arr	126.89	62	PKP	PKPdf	00 49 02.2	+0.2
	comp=Z,1.7nm,0.4s,baz=283,slow=3.8,SNR=12						
CM01	Chiang Mai Arr	126.91	62	ePKPdf	PKPdf	00 49 01.1	-1.0
ASAR	Alice Springs	157.98	146	PKP	PKPdf	00 49 54.2	-0.8
	comp=Z,2.0nm,1.0s,baz=232,slow=1.3,SNR=7.7						
ASAR				PKPab	PKPab	00 50 27.9	-0.1
	comp=Z,1.4nm,0.8s,baz=206,slow=4.4,SNR=5.9						
AS31	Alice Springs	157.98	146	ePKPdf	PKPdf	00 49 54.2	-0.8
AS31				ePKPab	PKPab	00 50 27.9	-0.1
AS01	Alice Springs	158.01	146	ePKPdf	PKPdf	00 49 53.8	-1.3
WR1	Warramunga Arr	161.09	140	ePKPdf	PKPdf	00 49 58.2	-0.4
WRA	Warramunga Arr	161.09	140	PKP	PKPdf	00 49 58.2	-0.5
	comp=Z,0.9nm,0.9s,baz=259,slow=1.1,SNR=4.7						
WB2	Warramunga Arr	161.09	140	ePKPdf	PKPdf	00 49 58.5	-0.1

SJA 18 00:37:46.9±0.4, 28°.79S×69°.39W, h116^{km}±2^{km}, ML3.7, MW3.8, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGUA	GUANDACOL	1.05	132	i P	Pn	00 38 10.0	+0.8
AGUA				i S	Sn	00 38 27.3	+1.1
LCO	Las Campanas	1.17	259	i P	Pn	00 38 11.4	+0.8
LCO				i S	Sn	00 38 29.8	+1.2
AROD	Rodeo	1.38	183	i P	Pn	00 38 14.4	+1.4
AROD				i S	Sn	00 38 34.6	+1.8
ACCO	Cerro Coronel	1.82	171	i P	Pn	00 38 19.6	+1.3
ACCO				i S	Sn	00 38 44.0	+1.8
RTLL	Cerro Villicun	2.66	163	i P	Pn	00 38 30.0	+1.4
RTLL				IAML		00 39 01.6	
	comp=N,804nm,0.5s						
RTLL				i S	Sn	00 39 01.6	+0.9
RTLS	Leoncito	3.00	178	i P	Pn	00 38 35.2	+1.8
RTLS				i S	Sn	00 39 10.5	+1.3
RTLS				IAML		00 39 13.8	
	comp=Z,99nm,0.3s						
RTCV	Cerro Valdivia	3.15	167	i P	Pn	00 38 36.5	+1.4
RTCV				i S	Sn	00 39 12.8	+0.5
CYA	Choya	3.17	85	i P	Pn	00 38 36.4	+1.0
CYA				IAML		00 38 37.6	
	comp=Z,137nm,0.4s						

*IDC **18** 00:38:13.6±4.1, 52°.82N×171°.49W, h94^{km}±36^{km}, mb3.8/15, mb1 4.0/18, mb1mx3.7/50, mbtmp4.2/18, Error ellipse: s-maj=24.5km s-min=12.6km az=3.0*

*NEIC **18** 00:38:15.3±0.0, 52°.74N×171°.32W, h104^{km}, mb4.4/4, ML4.3(AEIC), After AEIC.*

ISC 18 00:38:14.6±0.6, 52°.7N±0°.1×171°.34W±0°.04, h100^{km}, n63, $\sigma 2^{s}19$/66, mb4.1/18, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	1.53	80	P	Pn	00 38 42.7	+1.5
NIKH				S	Sn	00 39 02.4	+1.1
KOFP	Korovin Flat P	1.75	256	P	Pn	00 38 46.1	+2.1
KOKL	Mount Kliuchef	1.79	258	P	Pn	00 38 46.6	+2.0
OKSP	Okmok Steeple	1.92	73	P	Pn	00 38 47.8	+1.7
OKSP				S	Sn	00 39 12.5	+2.4
MCIR	Makushin Cirqu	2.93	64	P	Pn	00 39 01.0	+1.5
MREP	Makushin Rep't	2.96	67	P	Pn	00 39 01.4	+1.6
GSMY	Great Sitkin M	2.97	258	P	Pn	00 39 02.3	+2.3
GSMY				S	Sn	00 39 39.3	+4.4
MSW	Makushin Switc	2.98	65	P	Pn	00 39 01.4	+1.3
GSTD	Great Sitkin T	3.02	259	P	Pn	00 39 02.3	+1.7
GSSP	Great Sitkin S	3.03	260	P	Pn	00 39 02.7	+2.0
MTBL	Makushin Table	3.06	64	P	Pn	00 39 02.8	+1.7
UNV	Unalaska Valle	3.11	67	P	Pn	00 39 03.3	+1.5
UNV				S	Sn	00 39 42.2	+4.0
ETKA	Kagalaska Isla	3.23	256	P	Pn	00 39 05.2	+1.8
ADAG	Mount Adagdak	3.31	259	P	Pn	00 39 07.3	+2.8
ADK	Adak	3.39	258	P	Pn	00 39 07.7	+2.2
ADK				S	Sn	00 39 47.5	+2.7
AKRB	Akutan Reef Bi	3.45	64	P	Pn	00 39 08.7	+2.3
AKMO	Akutan Morgan	3.47	65	P	Pn	00 39 08.6	+2.0
ZRO	Akutan Zero	3.49	65	P	Pn	00 39 08.9	+2.1
AKGG	Akutan Green G	3.52	63	P	Pn	00 39 09.2	+1.9
AHB	Akutan Harbor	3.58	65	P	Pn	00 39 10.5	+2.4
AKUT	Akutan	3.62	65	P	Pn	00 39 10.7	+2.2
AKUT				S	Sn	00 39 54.3	+4.0
KIRH	Kanaga Island	3.63	259	P	Pn	00 39 11.3	+2.5
AKSA	Akutan Strait	3.66	65	P	Pn	00 39 11.2	+2.1
KIKV	Kanaga Island	3.68	259	P	Pn	00 39 11.9	+2.5
KIMD	Kanaga Island	3.75	257	P	Pn	00 39 12.4	+2.0
TAFP	Tanaga Falls P	4.16	261	P	Pn	00 39 18.4	+2.5
TAFP				S	Sn	00 40 07.3	+3.8
TASE	Tanaga Southea	4.21	260	P	Pn	00 39 18.9	+2.3
WECS	Westdahl Cape	4.30	63	P	Pn	00 39 20.0	+2.2
WESP	Westdahl Peak	4.32	63	P	Pn	00 39 20.5	+2.4
WESE	West Dahl East	4.38	64	P	Pn	00 39 20.9	+1.9
WESE				S	Sn	00 40 12.6	+3.7
SPIA	Saint Paul Isl	4.50	8	P	Pn	00 39 22.9	+2.5
SSBA	Shishaldin	4.75	62	P	Pn	00 39 25.4	+1.6
SSBA				S	Sn	00 40 22.5	+4.8
FALS	False Pass	5.16	62	P	Pn	00 39 31.5	+2.2
FALS				S	Sn	00 40 30.5	+3.0
KDAK	Kodiak Island	11.82	57	P	Pn	00 40 57.2	-2.4
	6.3nm,0.3s,baz=232,slow=6.7,SNR=37						
KDAK				S	Sn	00 43 02.3	-7.1
	0.6nm,0.3s,baz=234,slow=19,SNR=3.0						
ILAR	Eielson Array	17.35	37	P	P	00 42 08.1	-1.9
	0.6nm,0.3s,baz=232,slow=10,SNR=48						
PETK	Petropavlovsk-	18.61	284	P	P	00 42 20.9	-3.0
	0.2nm,0.3s,baz=90,slow=14,SNR=3.3						
EGAK	Eagle	19.52	40	eP	P	00 42 33.3	-0.4
	29nm,1.5s						
SEY	Seymchan	21.54	312	P	P	00 42 55.1	-0.3
	3.7nm,0.6s,baz=95,slow=9.8,SNR=10						
SEY				PcP	PcP	00 46 52.8	-0.7
	0.5nm,0.3s,baz=37,slow=2.3,SNR=4.1						
INK	Inuvik	23.72	35	eP	P	00 43 16.9	-0.1
	7.3nm,0.9s						
INK				PcP	PcP	00 46 56.3	-1.6
INK	Inuvik	23.72	35	P	P	00 43 16.2	-0.8
	1.5nm,0.5s,baz=251,slow=7.9,SNR=13						
INK				PcP	PcP	00 46 56.3	-1.6
	0.7nm,0.7s,baz=249,slow=1.7,SNR=4.3						
DLBC	Dease Lake	23.74	60	P	P	00 43 19.1	+1.6
	7.4nm,0.6s,baz=225,slow=8.5,SNR=25						
YKA	Yellowknife Ar	30.91	49	P	P	00 44 20.3	-1.0
	0.5nm,0.6s,baz=275,slow=9.1,SNR=11						
H11N2	WAKE ISLAND Hy	37.02	215	T	T	01 23 52.8	
	baz=20						
H11N3	WAKE ISLAND Hy	37.03	215	T	T	01 23 54.2	
	baz=20						
H11N1	WAKE ISLAND Hy	37.04	215	T	T	01 23 53.1	
	baz=20						
H11S1	WAKE ISLAND Hy	38.22	215	T	T	01 25 10.9	
	baz=20						
H11S2	WAKE ISLAND Hy	38.23	215	T	T	01 25 22.5	
	baz=20						
H11S3	WAKE ISLAND Hy	38.23	215	T	T	01 25 26.1	
	baz=20						
NVAR	Mina Array Bea	38.87	90	P	P	00 45 31.8	+1.5
	3.5nm,0.7s,baz=299,slow=7.8,SNR=20						
LKWY	Lake	39.98	77	eP	P	00 45 39.4	-0.1
	3.0nm,0.3s						
BW06	Boulder Array	41.51	78	eP	P	00 45 52.0	0.0
	5.6nm,0.9s						
PDAR	Pinedale Array	41.51	78	P	P	00 45 51.8	-0.3
	3.9nm,0.7s,baz=296,slow=3.8,SNR=42						
ULM	Lac du Bonnet	45.04	61	P	P	00 46 19.2	-0.8
	1.6nm,0.5s,baz=302,slow=7.9,SNR=8.4						
SONM	Songino Array	50.08	299	P	P	00 46 58.7	-0.5
	0.9nm,1.1s,baz=67,slow=5.2,SNR=3.8						
TXAR	Lajitas Array	53.94	88	P	P	00 47 28.2	+0.2
	2.6nm,0.7s,baz=296,slow=4.9,SNR=29						
ARCES	ARCESS Array B	57.42	353	P	P	00 47 51.4	-0.8
	1.6nm,0.8s,baz=20,slow=8.8,SNR=4.7						
MKAR	Makanchi Array	62.67	312	P	P	00 48 26.9	-1.5
	0.2nm,0.8s,baz=36,slow=5.4,SNR=3.0						
FINES	FINESS Array B	65.33	351	P	P	00 48 44.1	-1.3
	0.8nm,0.7s,baz=46,slow=8.1,SNR=3.3						
CMAR	Chiang Mai Arr	75.36	281	P	P	00 49 46.7	-0.5
	1.8nm,0.3s,baz=21,slow=7.8,SNR=4.8						
BRTR	Keskin Array B	85.40	341	P	P	00 50 38.8	-2.0
	0.3nm,0.7s,baz=17,slow=6.3,SNR=2.5						
WRA	Warramunga Arr	86.30	230	P	P	00 50 43.8	-1.4
	0.8nm,0.6s,baz=32,slow=5.7,SNR=14						
ASAR	Alice Springs	89.72	228	P	P	00 51 01.4	0.0
	3.1nm,0.7s,baz=29,slow=4.8,SNR=27						
TORD	Torodi Ar. Bea	114.12	7	PKiKP	PKiKP	00 56 39.9	-2.4
	0.2nm,0.5s,baz=330,slow=1.9,SNR=4.3						

IDC 18 00:40:49.6±1.0, 5°.72N×32°.83W, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.6/36, mbtmp3.7/7, MS3.8/7, Ms1 3.8/7, ms1mx3.3/37, Error ellipse: s-maj=48.0km s-min=21.9km az=138.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	19.73	269	LR	LR	00 52 22.8	
	comp=Z,130nm,18.9s,baz=96,slow=35						
H10N3	ASCENSION HYDR	22.71	126	T	T	01 09 32.3	
	baz=305,slow=75,SNR=25						
H10N2	ASCENSION HYDR	22.71	126	T	T	01 09 33.7	
	baz=305,slow=75,SNR=28						
H10N1	ASCENSION HYDR	22.73	126	T	T	01 09 37.8	
	baz=305,slow=75,SNR=30						
H10S3	ASCENSION HYDR	23.25	129	T	T	01 10 10.6	
	baz=308,slow=75,SNR=21						
H10S1	ASCENSION HYDR	23.25	129	T	T	01 10 11.0	
	baz=308,slow=75,SNR=20						
H10S2	ASCENSION HYDR	23.26	129	T	T	01 10 11.9	
	baz=308,slow=75,SNR=18						
BDFB	Brasilia	26.01	215	P	P	00 46 26.1	+1.5
	2.3nm,1.0s,baz=42,slow=12,SNR=2.6						
BDFB				LR	LR	00 55 35.9	
	comp=Z,151nm,18.5s,baz=88,slow=34						
DBIC	Dimbokro	27.82	87	LR	LR	00 55 20.7	
	comp=Z,181nm,20.4s,baz=240,slow=31						
PTGA	Pitinga	27.84	258	LR	LR	00 56 11.0	
	comp=Z,172nm,19.1s,baz=50,slow=33						
TORD	Torodi Ar. Bea	34.82	75	P	P	00 47 42.2	-0.4
	2.5nm,1.1s,baz=271,slow=8.9,SNR=8.5						
TORD				LR	LR	01 00 08.3	
	comp=Z,141nm,20.3s,baz=290,slow=33						
CPUP	Villa Florida	39.74	216	LR	LR	01 04 10.1	
	comp=Z,124nm,19.5s,baz=26,slow=35						
LPAZ	La Paz	41.20	237	P	P	00 48 35.6	-1.6
	2.4nm,1.1s,baz=36,slow=8.7,SNR=2.9						
LPAZ				LR	LR	01 05 09.3	
	comp=Z,175nm,18.6s,baz=65,slow=35						
GERES	GERESS Array B	58.23	34	P	P	00 50 46.2	+0.3
	1.2nm,1.1s,baz=244,slow=6.1,SNR=5.0						
AKASG	Malin Array Be	68.10	37	P	P	00 51 50.2	-1.1
	0.7nm,0.7s,baz=252,slow=7.0,SNR=7.6						
FINES	FINESS Array B	70.51	26	P	P	00 52 07.2	+1.2
	0.7nm,0.8s,baz=226,slow=5.6,SNR=3.2						
YKA	Yellowknife Ar	81.16	332	P	P	00 53 06.8	-0.1
	0.4nm,0.9s,baz=101,slow=5.5,SNR=4.9						

*ISCJB **18** 01:09:16.0±0.4, 5°.66N±0°.08×32°.91W±0°.04, h12^{km}, mb4.4/106, MS3.8/22, Error ellipse: s-maj=11.6km s-min=5.4km az=165.6*

*IDC **18** 01:09:15.6±0.5, 5°.67N×32°.88W, h0^{km}, mb4.3/27, mb1 4.4/27, mb1mx4.3/50, mbtmp4.3/27, MS3.7/22, Ms1 3.7/22, ms1mx3.6/32, Error ellipse: s-maj=17.4km s-min=12.4km az=164.0*

*MOS **18** 01:09:15.7±0.9, 5°.66N×32°.94W, h10^{km}, mb4.8/39, Error ellipse: s-maj=13.8km s-min=6.0km az=53.9*

*NEIC **18** 01:09:17.2±0.3, 5°.67N×32°.95W, h10^{km}, mb4.6/41, Error ellipse: s-maj=8.7km s-min=4.8km az=170.0*

ISC 18 01:09:17.4±0.4, 5°.72N±0°.09×32°.90W±0°.07, h12^{km}, n205, $\sigma 1^{s}41$/198, mb4.6/106, MS3.8/22, 13C-8D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SACV	Santiago Islan	12.95	44	ePn	Pn	01 12 21.2	-0.3
MDP	Montagnes des	19.67	269	LR	LR	01 19 43.8	
	comp=Z,194nm,21.4s,baz=52,slow=32						
H10N3	ASCENSION HYDR	22.77	126	T	T	01 37 58.6	
	baz=305,slow=75,SNR=20						
H10N2	ASCENSION HYDR	22.77	126	T	T	01 37 58.9	
	baz=305,slow=75,SNR=18						
H10N1	ASCENSION HYDR	22.79	126	T	T	01 38 00.2	
	baz=305,slow=75,SNR=20						
H10S3	ASCENSION HYDR	23.30	129	T	T	01 38 36.2	
	baz=308,slow=75,SNR=21						
H10S1	ASCENSION HYDR	23.30	129	T	T	01 38 39.4	
	baz=308,slow=75,SNR=11						
H10S2	ASCENSION HYDR	23.32	129	T	T	01 38 34.8	
	baz=308,slow=75,SNR=21						
BDFB	Brasilia	25.98	215	P	P	01 14 49.6	-0.8
	2.3nm,0.9s,baz=82,slow=15,SNR=2.4						
BDFB				LR	LR	01 24 01.6	
	comp=Z,252nm,20.1s,baz=92,slow=34						
PTGA	Pitinga	27.78	258	P	P	01 15 05.7	-0.9
	1.5nm,0.4s,baz=318,slow=20,SNR=3.9						
PTGA				LR	LR	01 25 33.8	
	comp=Z,236nm,18.2s,baz=60,slow=35						
DBIC	Dimbokro	27.89	87	eP	P	01 15 06.9	-0.7
	7.4nm,1.1s						
DBIC	Dimbokro	27.89	87	eP	P	01 15 06.9	-0.7
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DBIC	Dimbokro	27.89	87	P	P	01 15 06.2	-1.3
	comp=Z,5.8nm,1.1s,baz=316,slow=15,SNR=2.3						
DBIC				LR	LR	01 23 46.4	
	comp=Z,232nm,20.4s,baz=244,slow=31						
H05S1	Guadeloupe/Mar	28.81	290	T	T	01 45 17.9	
	SNR=5.8						
SJG	San Juan	34.71	294	LR	LR	01 27 14.7	
	comp=Z,181nm,21.6s,baz=96,slow=31						
TOA0	Torodi Ar. Sit	34.88	75	eP	P	01 16 09.9	+0.8
TOA0				ePcP	PcP	01 18 43.1	+1.0
TORD	Torodi Ar. Bea	34.88	75	P	P	01 16 08.4	-0.7
	comp=Z,5.0nm,1.1s,baz=278,slow=10,SNR=12						
TORD				PcP	PcP	01 18 41.8	-0.4
	comp=Z,3.0nm,1.0s,baz=315,slow=4.1,SNR=7.3						
TORD				LR	LR	01 28 24.5	
	comp=Z,236nm,21.1s,baz=295,slow=33						
SDV	Santo Domingo	37.55	277	P	P	01 16 32.8	+0.6
	comp=Z,1.1nm,0.4s,baz=38,slow=3.8,SNR=3.7						
SDV				LR	LR	01 31 18.5	
	comp=Z,51nm,19.1s,baz=83,slow=35						
MDT	Midelt	37.69	41	LR	LR	01 30 57.1	
	comp=Z,185nm,19.2s,baz=233,slow=34						
CPUP	Villa Florida	39.71	216	LR	LR	01 32 35.4	
	comp=Z,164nm,18.9s,baz=35,slow=35						
TAM	Tamanrasset	40.74	61	eP	P	01 16 59.8	+1.0
	comp=Z,1.0nm,0.9s						
TAM	Tamanrasset	40.74	61	eP	P	01 16 59.8	+1.0
TAM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
LPAZ	La Paz	41.15	237	eP	P	01 17 02.9	+0.2
	comp=Z,5.8nm,0.9s						
LPAZ	La Paz	41.15	237	eP	P	01 17 02.9	+0.2
LPAZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LPAZ	La Paz	41.15	237	P	P	01 17 03.1	+0.4
	comp=Z,4.3nm,0.9s,baz=70,slow=6.2,SNR=12						
LPAZ				LR	LR	01 33 34.5	
	comp=Z,217nm,19.0s,baz=59,slow=36						
ROSC	El Rosal	41.25	271	P	P	01 17 04.2	+0.8
	comp=Z,3.8nm,0.6s,baz=217,slow=20,SNR=3.7						
ROSC				LR	LR	01 34 41.5	
	comp=Z,108nm,19.3s,baz=74,slow=37						
ESDC	Sonseca Array	42.68	33	P	P	01 17 15.4	+1.1
	comp=Z,1.9nm,1.0s,baz=232,slow=8.1,SNR=11						
ES19	SONSECA Array	42.73	33	eP	P	01 17 15.6	+0.9
KEST	Kesra	48.93	47	P	P	01 18 04.2	+0.4
	comp=Z,2.9nm,0.9s,baz=307,slow=7.6,SNR=4.0						
KEST				LR	LR	01 39 38.7	
	comp=Z,130nm,18.2s,baz=262,slow=37						
BNI	Bardonecchia	52.15	35	eP	P	01 18 28.9	+0.8
	comp=Z,8.0nm,1.1s						
BNI	Bardonecchia	52.15	35	eP	P	01 18 28.9	+0.8
BNI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DOU	Dourbes	54.25	29	⇑P	P	01 18 44.6	+1.4
	comp=Z,8.7nm,1.4s						
ECH	Echery	54.33	32	P	P	01 18 46.6	+2.7
ECH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WLF	Walferdange	54.73	30	⇑P	P	01 18 45.5	-1.2
DAVA	Damuels	55.26	34	i P	P	01 18 52.2	+1.4
	comp=Z,10nm,1.2s						
MEM	Membach	55.27	29	⇑P	P	01 18 51.0	+0.4
	comp=Z,8.8nm,1.2s						
TSUM	Tsumeb	55.53	118	eP	P	01 18 53.7	+0.5
	comp=Z,12nm,1.2s						
TSUM	Tsumeb	55.53	118	P	P	01 18 53.4	+0.3
	comp=Z,8.1nm,1.0s,baz=280,slow=7.7,SNR=9.7						
FETA	Feichten	55.59	35	i P	P	01 18 52.7	-0.6
	comp=Z,7.9nm,1.1s						
RETA	Reutte	55.87	34	i P	P	01 18 56.9	+1.8
	comp=Z,7.1nm,1.3s						
SQTA	Sankt Quirin	55.98	35	i P	P	01 18 57.3	+1.3
	comp=Z,8.4nm,1.1s						
MOTA	Moosalm	55.98	35	i P	P	01 18 57.1	+1.1
	comp=Z,3.8nm,0.9s						
SCHQ	Schefferville	56.05	337	P	P	01 18 56.4	+0.2
	comp=Z,9.2nm,1.0s,baz=135,slow=7.3,SNR=5.6						
WTTA	Wattenberg	56.24	35	eP	P	01 18 59.3	+1.4
	comp=Z,2.7nm,0.6s						
WATA	Walderalm	56.25	35	eP	P	01 18 58.7	+0.8
	comp=Z,5.8nm,1.1s						
ABTA	Abfaltersbach	56.47	36	i P	P	01 19 00.8	+1.3
	comp=Z,8.9nm,1.5s						
MYKA	Terra Mystica	57.08	37	i P	P	01 19 05.7	+2.0
	comp=Z,20nm,1.4s						
KBA	Koelnbreinsper	57.13	36	i P	P	01 19 05.9	+1.7
	comp=Z,5.4nm,1.2s						
SOKA	Soboth	57.93	37	i P	P	01 19 11.4	+1.7
	comp=Z,12nm,1.2s						
WET	Wettzell	57.96	34	P	P	01 19 12.2	+2.4
WET				pmax	pmax		
	comp=Z,5.0nm,2.9s						
MOA	Molln	58.07	36	i P	P	01 19 09.4	-1.1
	comp=Z,6.9nm,1.2s						
GEA0	GERESS Array S	58.26	34	eP	P	01 19 12.5	+0.5
GEC2	GERESS Array S	58.26	34	eP	P	01 19 13.7	+1.7
	comp=Z,7.3nm,1.2s						
GEC2	GERESS Array S	58.26	34	eP	P	01 19 13.7	+1.7
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GERES	GERESS Array B	58.26	34	P	P	01 19 12.8	+0.8
	comp=Z,3.6nm,1.0s,baz=229,slow=5.1,SNR=17						
KHC	Kasperske Hory	58.34	34	eP	P	01 19 13.9	+1.3
	comp=Z,2.8nm,1.1s						
KHC	Kasperske Hory	58.34	34	eP	P	01 19 14.0	+1.5
KHC	Kasperske Hory	58.34	34	eP	P	01 19 14.0	+1.5
CONA	Conrad Observa	59.04	36	i P	P	01 19 19.1	+1.6
	comp=Z,5.4nm,1.3s						
CLL	Collm	59.22	32	eP	P	01 19 19.0	+0.5
CLL				eS	S	01 27 48.0	+22
CLL	Collm	59.22	32	eP	P	01 19 19.0	+0.5
PRU	Pruhonice	59.33	34	P	P	01 19 21.8	+2.5
PRU				pmax	pmax		
	comp=Z,2.0nm,2.1s						
BRG	Berggiesshubel	59.48	32	eP	P	01 19 21.4	+1.1
	comp=Z,17nm,1.6s						
BRG	Berggiesshubel	59.48	32	eP	P	01 19 21.4	+1.1
BRG				pmax	pmax		
	comp=Z,17nm,1.6s						
TREC	Trest	59.50	35	eP	P	01 19 22.1	+1.6
TREC				ex	x	01 19 27.6	
TREC	Trest	59.50	35	eP	P	01 19 22.1	+1.6
TREC				e		01 19 27.6	
KRUC	Moravsky	59.90	35	P	P	01 19 24.9	+1.6
KRUC				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KRUC	Moravsky	59.90	35	eP	P	01 19 24.2	+0.9
MODS	Modra-Piesok	60.08	36	eP	P	01 19 25.8	+1.2
MODS				pmax	pmax		
	comp=Z,25nm,1.7s						
MODS	Modra-Piesok	60.08	36	eP	P	01 19 25.8	+1.2
VRAC	Vranov	60.13	35	⇓iP	P	01 19 26.6	+1.7
VRAC	Vranov	60.13	35	⇓P	P	01 19 26.6	+1.7
VRAC	Vranov	60.13	35	eP	P	01 19 26.2	+1.3
UPC	Upice	60.41	34	eP	P	01 19 28.8	+2.1
UPC	Upice	60.41	34	eP	P	01 19 28.8	+2.1
SRO	Srobarova	60.44	37	eP	P	01 19 28.8	+1.8
SRO	Srobarova	60.44	37	eP	P	01 19 28.8	+1.8
KSP	Ksiaz	60.73	33	P	P	01 19 31.5	+2.6
KSP				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MORC	Moravsky Berou	60.90	35	eP	P	01 19 31.9	+1.7
VYHS	Vyhne	61.06	37	eP	P	01 19 33.2	+2.0
VYHS				pmax	pmax		
	comp=Z,12nm,2.1s						
VYHS	Vyhne	61.06	37	eP	P	01 19 33.2	+2.0
OKC	Ostrava-Krasne	61.28	35	P	P	01 19 36.3	+3.7
OKC				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MDVR	Moldovita	61.32	41	⇑iP	P	01 19 33.5	+0.4
PSZ	Piszkesteto	61.44	38	eP	P	01 19 35.8	+1.9
	comp=Z,12nm,1.1s						
PSZ	Piszkesteto	61.44	38	⇑iP	P	01 19 35.3	+1.4
PSZ	Piszkesteto	61.44	38	eP	P	01 19 35.8	+1.9
PSZ				pmax	pmax		
	comp=Z,12nm,1.1s						
BZS	Buzias	61.58	41	⇑iP	P	01 19 36.0	+1.2
BZS	Buzias	61.58	41	⇑P	P	01 19 36.0	+1.2
PUNG	Punghina	61.94	42	⇓iP	P	01 19 39.7	+2.5
NIE	Niedzica	62.33	36	P	P	01 19 42.7	+2.9
NIE				pmax	pmax		
	comp=Z,4.0nm,1.3s						
OJC	Ojcow	62.40	35	eP	P	01 19 42.1	+1.9
	comp=Z,7.1nm,1.1s						
OJC	Ojcow	62.40	35	eP	P	01 19 42.1	+1.9
OJC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DRGR		62.73	40	⇓iP	P	01 19 44.4	+1.8
DRGR		62.73	40	⇓P	P	01 19 44.4	+1.8
TRPA	Tarpa	63.14	38	⇓iP	P	01 19 44.7	-0.5
UZH	Uzhgorod	63.19	38	⇑eP	P	01 19 45.5	0.0
UZH				e		01 19 48.2	
UZH				e		01 19 52.4	
HUMR	Humele	63.40	43	⇑iP	P	01 19 47.8	+0.8
ARR	Arges	63.46	42	⇑iP	P	01 19 49.4	+2.0
VOIR		63.76	42	⇓iP	P	01 19 49.8	+0.4
VOIR		63.76	42	P	P	01 19 52.3	+2.9
VOIR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LSZ	Lusaka	64.00	110	eP	P	01 19 52.1	+0.6
	comp=Z,5.5nm,1.1s						
LSZ	Lusaka	64.00	110	eP	P	01 19 52.2	+0.6
LSZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NB2	NORSAR Subarra	64.26	22	P	P	01 19 53.6	+1.2
	comp=Z,14nm,1.2s,baz=230,slow=6.5						
NOA	NORSAR Array B	64.26	22	P	P	01 19 53.6	+1.2
	comp=Z,4.8nm,1.1s,baz=230,slow=6.3,SNR=9.2						
NOA				LR	LR	01 43 26.6	
	comp=Z,43nm,21.7s,baz=240,slow=32						
MLR	Muntele Rosu	64.37	42	eP	P	01 19 54.5	+1.0
	comp=Z,14nm,1.1s						
MLR	Muntele Rosu	64.37	42	⇑iP	P	01 19 55.3	+1.8
MLR	Muntele Rosu	64.37	42	⇑P	P	01 19 55.3	+1.8
BUR04	Bucovina Ar. S	64.62	39	eP	P	01 19 56.6	+1.6
BUR08	Bucovina Ar. S	64.62	39	eP	P	01 19 57.2	+2.1
LVV	L'vov	64.71	37	eP	P	01 19 56.7	+1.2
BOSA	Boshof	65.52	125	eP	P	01 20 00.7	-0.6
	comp=Z,7.8nm,1.0s						
BOSA	Boshof	65.52	125	eP	P	01 20 00.7	-0.6
BOSA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BOSA	Boshof	65.52	125	P	P	01 20 00.7	-0.6

	comp=Z,6.6nm,1.0s,baz=306,slow=6.8,SNR=6.3						
BOSA				LR	LR	01 42 57.3	
	comp=Z,60nm,20.0s,baz=208,slow=31						
CFR	Carcaliu	65.74	43⇑	iP	P	01 20 03.2	+1.0
CFR	Carcaliu	65.74	43	P	P	01 20 04.8	+2.6
CFR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SUW	Suwalki	65.94	32	eP	P	01 20 04.7	+1.4
	comp=Z,45nm,1.0s						
SUW	Suwalki	65.94	32	eP	P	01 20 04.7	+1.4
SUW				pmax	pmax		
	comp=Z,45nm,1.0s						
SUMG	Summit	66.87	358	eP	P	01 20 10.2	+0.7
	comp=Z,8.3nm,1.0s						
SUMG	Summit	66.87	358	eP	P	01 20 10.2	+0.7
SUMG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AK11	Malin Array Si	68.10	37	eP	P	01 20 17.9	+0.7
KIEV	Kiev	68.13	37	eP	P	01 20 17.4	+0.1
	comp=Z,9.7nm,1.1s						
KIEV	Kiev	68.13	37	i P	P	01 20 17.0	-0.3
KIEV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AKASG	Malin Array Be	68.14	37	i P	P	01 20 18.3	+0.9
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKASG	Malin Array Be	68.14	37	P	P	01 20 17.6	+0.2
	comp=Z,6.4nm,0.9s,baz=251,slow=6.2,SNR=16						
AKBB	Malin Array Si	68.14	37	eP	P	01 20 17.4	0.0
	comp=Z,11nm,1.1s						
AKBB	Malin Array Si	68.14	37	eP	P	01 20 17.4	0.0
AKBB				pmax	pmax		
	comp=Z,11nm,1.1s						
BR131	Keskin Array S	68.37	50	eP	P	01 20 19.8	+0.5
BRTR	Keskin Array B	68.37	50	i P	P	01 20 20.7	+1.4
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	68.37	50	P	P	01 20 18.8	-0.5
	comp=Z,2.5nm,1.0s,baz=259,slow=4.7,SNR=10						
BRTR				LR	LR	01 52 10.7	
	comp=Z,20nm,18.8s,baz=267,slow=38						
ULM	Lac du Bonnet	68.52	322	P	P	01 20 18.6	-1.2
	comp=Z,2.4nm,0.9s,baz=148,slow=4.8,SNR=4.4						
KMBO	Kilima Mbogo	70.37	93	LR	LR	01 49 14.0	
	comp=Z,94nm,18.1s,baz=280,slow=34						
FCC	Fort Churchill	70.46	331	eP	P	01 20 32.2	+0.6
	comp=Z,1.9nm,0.9s						
FCC	Fort Churchill	70.46	331	eP	P	01 20 32.2	+0.6
FCC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TXAR	Lajitas Array	70.46	299	P	P	01 20 32.7	+0.3
	comp=Z,0.8nm,1.1s,baz=106,slow=6.7,SNR=3.3						
TXAR				LR	LR	01 50 32.7	
	comp=Z,27nm,20.4s,baz=0.0,slow=35						
FINES	FINESS Array B	70.53	26	P	P	01 20 32.6	+0.6
	comp=Z,5.3nm,0.9s,baz=235,slow=6.3,SNR=9.5						
FIA1	FINESS Array S	70.53	26	eP	P	01 20 33.4	+1.4
ANMO	Albuquerque	73.27	305	i P	P	01 20 50.1	+0.8
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
FFC	Flin Flon	73.33	326	eP	P	01 20 49.7	+0.7
	comp=Z,5.3nm,0.9s						
FFC	Flin Flon	73.33	326	i P	P	01 20 50.1	+1.1
DGMT	Dagmar	73.37	319	eP	P	01 20 50.0	+0.6
	comp=Z,16nm,0.9s						
OBN	Obninsk	73.64	34	eP	P	01 20 50.2	-0.5
OBN				i		01 21 01.4	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ARCES	ARCESS Array B	73.97	18	LR	LR	01 48 56.3	
	comp=Z,49nm,21.4s,baz=264,slow=32						
VSR	Storozhevoye	74.35	38	eP	P	01 20 55.4	+0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MOS	Moscow	74.37	34	eP	P	01 20 55.4	+0.4
MOS				pmax	pmax		
	comp=Z,27nm,0.8s						
LPSR	Galich'ya Gora	74.47	37	eP	P	01 20 56.4	+0.8
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PV14	Lion Creek, Pa	75.59	308	eP	P	01 21 04.6	+1.8
	comp=Z,7.4nm,0.8s						
NEY	Neytrino	75.63	47	i P	P	01 21 04.9	+2.1
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV	Kislovodsk	75.67	46	eP	P	01 21 05.2	+2.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	Khabaz	75.80	46	P	P	01 21 04.3	+0.8
	comp=Z,3.6nm,1.0s,baz=162,slow=3.1,SNR=7.2						
KBZ				LR	LR	01 57 29.6	
	comp=Z,34nm,18.8s,baz=224,slow=38						
VRH	Novokhopyorsk	75.93	39	eP	P	01 21 04.8	+0.7
VRH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NCK	Nalchik	76.28	47	i P	P	01 21 06.5	+0.1
NCK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PDAR	Pinedale Array	76.34	312	eP	P	01 21 06.7	-0.3
PDAR	Pinedale Array	76.34	312	P	P	01 21 07.8	+0.8
	comp=Z,1.1nm,1.0s,baz=101,slow=6.2,SNR=6.5						
PDAR				LR	LR	01 50 30.0	
	comp=Z,50nm,21.8s,baz=98,slow=32						
KLMR	Klimovskoe	76.49	29	eP	P	01 21 03.8	-3.3
KLMR				pmax	pmax		
	comp=Z,12nm,0.9s						
KLMR	Klimovskoe	76.49	29	eP	P	01 21 03.9	-3.2
KLMR				AMP		01 21 09.7	
	comp=Z,12nm,0.9s						
TMCR	Tamitsa	76.61	25	eP	P	01 21 08.3	+0.6
TMCR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LOHW	Long Hollow	77.18	313	eP	P	01 21 12.9	+1.2
	comp=Z,3.3nm,1.0s						
FLWY	Flagg Ranch	77.28	314	eP	P	01 21 14.3	+2.0
	comp=Z,5.8nm,1.1s						
MOOW	Moose Ponds	77.29	313	eP	P	01 21 10.7	-1.6
	comp=Z,1.0nm,0.9s						
RES	Resolute Bay	77.31	346	eP	P	01 21 10.3	-1.2
	comp=Z,10nm,1.1s						
RES	Resolute Bay	77.31	346	eP	P	01 21 10.3	-1.2
RES				pmax	pmax		
	comp=Z,10.0nm,1.1s						
REDW	Red Top Meadow	77.34	313	eP	P	01 21 11.7	-0.8
	comp=Z,1.2nm,0.9s						
YPP	Pitchstone Pla	77.37	314	eP	P	01 21 13.0	+0.1
TPAW	Teton Pass	77.42	313	eP	P	01 21 13.2	+0.1
	comp=Z,4.1nm,1.0s						
IMW	Indian Meadow	77.44	314	eP	P	01 21 13.6	+0.4
	comp=Z,3.5nm,1.1s						
YHH	Holmes Hill	77.44	314	eP	P	01 21 13.9	+0.7
	comp=Z,5.4nm,1.2s						
FXWY	Fox Creek	77.48	313	eP	P	01 21 13.3	-0.1
	comp=Z,2.5nm,1.1s						
NLU	North Lily Min	78.06	309	eP	P	01 21 17.3	+0.6
	comp=Z,5.0nm,1.2s						
MTPU	Mount Pierson	78.06	308	eP	P	01 21 17.3	+0.4
	comp=Z,5.2nm,1.2s						
DUG	Dugway, Tooele	78.63	310	eP	P	01 21 19.7	0.0
DUG	Dugway, Tooele	78.63	310	eP	P	01 21 19.7	0.0
DLMT	Dillon	78.72	315	eP	P	01 21 20.2	+0.1
	comp=Z,6.6nm,1.1s						
SZCU	Shurtz Canyon	78.77	307	eP	P	01 21 19.4	-1.2
	comp=Z,1.5nm,1.1s						
BGU	Big Grassy Mou	78.82	310	eP	P	01 21 20.0	-0.8
	comp=Z,2.6nm,1.1s						
CCUT	Cedar City	78.98	307	eP	P	01 21 21.6	-0.2
	comp=Z,6.5nm,1.2s						
PSUT	Pine Spring	79.39	308	eP	P	01 21 23.9	-0.2
	comp=Z,2.6nm,1.0s						
PRGR	Permogore	79.54	28	eP	P	01 21 23.7	-0.3
PRGR				e		01 21 35.1	
PRGR				pmax	pmax		
	comp=Z,29nm,1.0s						
WALA	Waterton Lakes	79.81	319	eP	P	01 21 25.9	-0.1
	comp=Z,8.8nm,1.1s						
HLID	Hailey	79.94	313	eP	P	01 21 25.3	-1.6
	comp=Z,2.6nm,1.1s						
ELK	Elko	80.49	310	eP	P	01 21 29.6	-0.4
	comp=Z,2.2nm,1.1s						
ELK	Elko	80.49	310	eP	P	01 21 29.6	-0.4
ELK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
R11A	Troy Canyon, C	80.75	308	eP	P	01 21 31.2	-0.2
YKA	Yellowknife Ar	81.12	332	P	P	01 21 32.8	+0.2
	comp=Z,1.7nm,0.9s,baz=94,slow=5.4,SNR=15						
YKA				LR	LR	01 54 46.4	
	comp=Z,6.3nm,19.5s,baz=181,slow=34						
YKB5	Yellowknife Ar	81.12	332	eP	P	01 21 31.9	-0.6
KIRV	Kirov	81.13	32	P	P	01 21 32.8	+0.1
	comp=Z,4.3nm,0.6s,baz=107,slow=19,SNR=4.9						
NEW	Newport	81.92	318	eP	P	01 21 37.2	0.0
	comp=Z,6.9nm,1.1s						
NEW	Newport	81.92	318	eP	P	01 21 37.2	0.0
NEW				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NV01	Mina Array Sit	82.88	308	eP	P	01 21 41.9	-0.7
NVAR	Mina Array Bea	82.88	308	P	P	01 21 43.4	+0.8
	comp=Z,0.3nm,0.3s,baz=122,slow=5.6,SNR=7.7						
NVAR				LR	LR	01 54 28.1	
	comp=Z,38nm,22.0s,baz=25,slow=33						
J08A	Circle Bar Ran	82.89	313	eP	P	01 21 40.7	-1.8
	comp=Z,4.1nm,1.0s						
MOD	Modoc Plateau	84.29	311	eP	P	01 21 48.1	-1.6
	comp=Z,8.4nm,1.1s						
ARU	Arti	86.08	34	eP	P	01 21 59.0	+0.9
	comp=Z,6.9nm,1.0s						
ARU	Arti	86.08	34	d iP	P	01 21 59.6	+1.5
ARU						01 25 18.7	
ARU				S	S	01 32 25.6	-6.7
ARU				SS	SS	01 38 08.9	-1.3
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AKTO	Aktyubinsk	86.21	40	P	P	01 21 59.4	+0.4
	comp=Z,2.0nm,0.9s,baz=286,slow=5.5,SNR=4.7						
ABKAR	Akbulak array	87.56	41	eP	P	01 22 06.1	+0.6
BRVK	Borovoye	93.32	36	i P	P	01 22 33.1	+0.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BVAR	Borovoye Array	93.39	36	P	P	01 22 32.2	-0.5
	comp=Z,0.3nm,0.5s,baz=239,slow=2.6,SNR=3.8						
ILAR	Eielson Array	94.81	337	P	P	01 22 39.1	+0.1
	comp=Z,1.4nm,1.0s,baz=45,slow=3.2,SNR=8.1						
COLA	College	95.14	337	i P	P	01 22 40.0	-0.4
COLA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AAK	Ala-Archa	98.78	45	i P	P	01 22 56.7	-0.9
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BILL	Bilibino	105.17	353	i P	Pdif	01 23 24.6	-0.7
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
LZH	Lanzhou	121.93	41	ePKP	PKPdf	01 28 07.1	-5.4
LZH				pPKP	sPKPdf	01 28 17.3	+0.7
LZH				sPKP		01 28 21.6	
LZH				LR	LR		
	comp=N,130nm,17.9s						
LZH				LR	LR		
	comp=E,130nm,18.1s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
CMAR	Chiang Mai Arr	126.79	62	PKP	PKiKP	01 28 22.9	+0.3
	comp=Z,1.0nm,0.3s,baz=292,slow=3.9,SNR=11						
MBWA	Marble Bar	149.36	123	ePKPdf	PKPdf	01 29 03.7	+0.8
MBWA				ePKPbc	PKPbc	01 29 07.9	+0.6
ASAR	Alice Springs	158.10	146	PKP	PKPdf	01 29 15.2	-0.2
	comp=Z,2.1nm,1.1s,baz=217,slow=1.2,SNR=7.0						
ASAR				PKPab	PKPab	01 29 48.9	+0.2
	comp=Z,1.7nm,1.2s,baz=216,slow=4.5,SNR=7.0						

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*ISCJB **18** 01:16:56.8±0.3, 31°.06N±0°.03×56°.46E±0°.05, h11^{km}, mb3.4/2, MS3.4/1, Error ellipse: s-maj=5.7km s-min=4.2km az=167.6*

*IDC **18** 01:16:56.5±1.7, 31°.07N×56°.43E, h0^{km}, mb3.4/3, mb1 3.6/6, mb1mx3.3/46, mbtmp3.6/6, ML3.4/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/35, Error ellipse: s-maj=34.3km s-min=21.5km az=89.0*

*TEH **18** 01:16:56.3, 31°.12N×56°.44E, h8^{km}, ML3.8*

*THR **18** 01:16:57.0, 31°.13N×56°.38E, h14^{km}, ML3.6*

ISC 18 01:16:57.6±0.8**, 31°.08N**±0°.04×**56°.45E**±0°.04**, h11^{km}, n36, σ0^{s}.88**/36**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.71	178	ePg	Pg	01 17 10.1	-1.2
KHGB				IAMB	IAmb	01 17 21.9	
	comp=Z,0.0nm,0.2s						
TVBK	TV Kerman	1.13	166	ePg	Pb	01 17 18.3	-1.0
TVBK				IAMB	IAmb	01 17 36.8	
	comp=Z,0.0nm,0.2s						
KRBR	Kerman	1.13	166	eAML	AML	01 17 38.8	
	comp=E,1µm,0.2s						
KRBR				ePg	Pb	01 17 19.1	-0.2
NGRK	Negar Kerman	1.46	170	ePn	Pn	01 17 24.3	+0.1
NGRK				IAMB	IAmb	01 17 26.5	
	comp=Z,0.0nm,0.2s						
CHMN	Cheshme madani	1.54	142	ePn	Pn	01 17 25.2	-0.2
CHMN				IAMB	IAmb	01 17 53.8	
	comp=Z,0.0nm,0.4s						
IMEH	Mehriz	1.60	281	ePn	Pn	01 17 24.9	-1.2
IMEH				IAMB	IAmb	01 17 52.5	
	comp=Z,7µm,0.5s						
TPRV	Parvadeh(Tabas	1.95	6	ePn	Pn	01 17 30.6	-0.1
TPRV				IAMB	IAmb	01 18 01.6	
	comp=Z,0.0nm,0.6s						
YZKH	Yazd	2.05	310	ePn	Pn	01 17 32.5	+0.4
YZKH	Yazd	2.05	310	ePn	Pn	01 17 32.5	+0.4
YZKH				eSg	Sb	01 17 59.3	-1.1
ICHK	Chekchek	2.09	304	ePn	Pn	01 17 32.8	0.0
ICHK				IAMB	IAmb	01 18 08.9	
	comp=Z,7µm,0.5s						
ISAD	Sadrabad	2.50	290	ePn	Pn	01 17 38.6	+0.1
ISAD				IAMB	IAmb	01 18 22.3	
	comp=Z,3µm,0.5s						
IKOO	Kooshah	2.56	58	ePn	Pn	01 17 40.0	+0.8
IKOO				IAMB	IAmb	01 18 21.1	
	comp=Z,4µm,0.4s						
TKDS	Koohdasht(Taba	2.59	13	ePn	Pn	01 17 39.5	0.0
TKDS				IAMB	IAmb	01 18 24.5	
	comp=Z,0.0nm,0.7s						
TABS	Tabas	2.62	12	ePn	Pn	01 17 40.4	+0.4
TABS	Tabas	2.62	12	ePn	Pn	01 17 40.4	+0.4
ITEG	Tejag	2.66	47	ePn	Pn	01 17 40.3	-0.3
ITEG				IAMB	IAmb	01 18 29.7	
	comp=Z,3µm,0.6s						
TNSJ	Nastanj	2.87	3	ePn	Pn	01 17 43.7	+0.2
TNSJ				IAMB	IAmb	01 18 36.1	
	comp=Z,0.0nm,0.6s						
IDAH	Dahanechah	3.34	60	ePn	Pn	01 17 51.2	+1.1
IDAH				IAMB	IAmb	01 18 52.6	
	comp=Z,3µm,0.8s						
NIAN	Nian	3.53	174	ePn	Pn	01 17 53.3	+0.9
NIAN				IAMB	IAmb	01 19 26.3	
	comp=N,0.0nm,0.7s						
IRAM	Ramesheh	3.55	283	ePn	Pn	01 17 52.8	0.0
IRAM				IAMB	IAmb	01 19 00.4	
	comp=Z,1µm,0.8s						
IZEF	Zefreh	3.94	298	ePn	Pn	01 17 58.4	+0.2
IZEF				IAMB	IAmb	01 18 10.7	
	comp=Z,550nm,0.6s						
GHIR	Ghir-Karzin	4.10	228	ePn	Pn	01 18 01.4	+1.0
GHIR	Ghir-Karzin	4.10	228	ePn	Pn	01 18 01.4	+1.0
KLNJ	Kolanjah	4.17	270	ePn	Pn	01 18 02.9	+1.4
KLNJ				IAMB	IAmb	01 19 36.1	
	comp=E,0.0nm,1.0s						
IKLH	Kolahrood	4.69	300	ePn	Pn	01 18 10.9	+2.3
IKLH				IAMB	IAmb	01 19 42.0	
	comp=E,750nm,0.9s						
ROKH	ROKH	4.78	287	ePn	Pn	01 18 10.9	+1.1
ISFB	Sefidab	4.81	314	ePn	Pn	01 18 10.9	+0.8
ISFB				IAMB	IAmb	01 19 31.8	
	comp=Z,486nm,0.8s						
IPAY	Payeh	5.76	21	ePn	Pn	01 18 24.1	+0.9
IPAY				IAMB	IAmb	01 18 28.1	
	comp=Z,243nm,0.5s						
IKRD	Kardeh	5.93	16	ePn	Pn	01 18 32.3	+6.7
IKRD				IAMB	IAmb	01 20 28.0	
	comp=Z,235nm,0.9s						
GEYT	Alibeck	6.97	11	Pn	Pn	01 18 40.4	+0.8
	comp=Z,0.4nm,0.3s,baz=197,slow=14,SNR=8.4						
GEYT				Lg	Lg	01 20 38.7	
	comp=Z,0.3nm,0.3s,baz=208,slow=31,SNR=2.9						
WSAR	Wadi Sarin	8.05	166	Pn	Pn	01 18 55.6	+1.0
	comp=Z,0.7nm,0.3s,baz=354,slow=14,SNR=11						
WSAR				Sn	Sn	01 20 25.5	-0.2
	comp=Z,0.1nm,0.3s,baz=124,slow=15,SNR=2.2						
AKTO	Aktyubinsk	19.37	3	P	Pn	01 21 24.6	+0.3
	comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=4.7						
BRTR	Keskin Array B	20.45	301	P	P	01 21 36.0	+0.7
	comp=Z,0.8nm,0.7s,baz=112,slow=12,SNR=7.2						
MKAR	Makanchi Array	25.34	44	P	P	01 22 23.8	-0.6
	comp=Z,0.9nm,0.9s,baz=236,slow=11,SNR=5.7						
ZALV	Zalesovo Beam	30.62	33	P	P	01 23 12.9	+1.4
	comp=Z,0.4nm,0.5s,baz=243,slow=7.6,SNR=3.0						
GERES	GERESS Array B	36.69	311	LR	LR	01 41 01.2	
	comp=Z,63nm,21.1s,baz=262,slow=39						

IDC 18 01:18:34.1±1.5**, 5°.61N**×**32°.88W, h0^{km}, mb3.8**/6**, mb1 4.1**/6**, mb1mx3.6**/49**, mbtmp3.8**/6**, Error ellipse: s-maj=58.8km s-min=28.3km az=150.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	22.68	126	T	T	01 47 16.1	
	baz=305,slow=75						
H10N2	ASCENSION HYDR	22.69	126	T	T	01 47 17.7	
	baz=305,slow=75						
H10N1	ASCENSION HYDR	22.70	126	T	T	01 47 18.8	
	baz=305,slow=75						
H10S3	ASCENSION HYDR	23.22	128	T	T	01 47 56.8	
	baz=308,slow=75						
H10S1	ASCENSION HYDR	23.22	128	T	T	01 47 56.9	
	baz=308,slow=75						
H10S2	ASCENSION HYDR	23.23	128	T	T	01 47 57.9	
	baz=308,slow=75						
TORD	Torodi Ar. Bea	34.88	75	P	P	01 25 27.1	-0.6
	1.2nm,0.9s,baz=261,slow=9.0,SNR=4.0						
LPAZ	La Paz	41.11	237	P	P	01 26 21.1	+0.1
	1.2nm,0.8s,baz=83,slow=7.7,SNR=3.0						
GERES	GERESS Array B	58.34	34	P	P	01 28 31.6	+0.4
	0.9nm,1.0s,baz=251,slow=6.1,SNR=5.9						
NOA	NORSAR Array B	64.36	22	P	P	01 29 11.8	+0.1
	0.7nm,0.9s,baz=232,slow=6.5,SNR=3.2						
MLR	Muntele Rosu	64.44	42	P	P	01 29 12.8	+0.2
	1.8nm,0.8s,baz=250,slow=8.8,SNR=2.6						
YKA	Yellowknife Ar	81.23	332	P	P	01 30 51.2	-0.5
	0.5nm,0.9s,baz=101,slow=5.9,SNR=5.1						

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*ISCJB **18** 01:19:13.6±0.5, 5°.7N±0°.1×32°.83W±0°.08, h12^{km}, mb3.9/18, Error ellipse: s-maj=17.6km s-min=11.1km az=166.3*

*IDC **18** 01:19:13.6±0.7, 5°.70N×32°.89W, h0^{km}, mb4.0/16, mb1 4.2/16, mb1mx3.9/49, mbtmp4.0/16, Error ellipse: s-maj=23.4km s-min=17.6km az=156.0*

*NEIC **18** 01:19:14.9±0.4, 5°.70N×32°.91W, h10^{km}, mb4.2/4, Error ellipse: s-maj=13.3km s-min=8.5km az=166.0*

ISC 18 01:19:15.1±0.6**, 5°.7N**±0°.1×**32°.9W**±0°.1**, h12^{km}, n37, σ1^{s}.03**/34**, mb4.0**/18**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	22.72	126	T	T	01 47 51.2	
	baz=305						
H10N2	ASCENSION HYDR	22.73	126	T	T	01 47 50.5	
	baz=305						
H10N1	ASCENSION HYDR	22.74	126	T	T	01 47 54.9	
	baz=305						
H10S3	ASCENSION HYDR	23.26	129	T	T	01 48 31.7	
	baz=308						
H10S1	ASCENSION HYDR	23.26	128	T	T	01 48 33.0	
	baz=308						
H10S2	ASCENSION HYDR	23.27	128	T	T	01 48 33.1	
	baz=308						
BDFB	Brasilia	25.93	215	P	P	01 24 47.8	+0.1
	1.4nm,0.8s,baz=55,slow=13,SNR=2.3						
DBIC	Dimbokro	27.88	86	P	P	01 25 04.5	-0.6
	4.2nm,0.9s,baz=282,slow=14,SNR=2.8						
TOA1	Torodi Ar. Sit	34.88	75	eP	P	01 26 06.5	-0.3
TOA1				ePcP	PcP	01 28 40.0	+0.2
TORD	Torodi Ar. Bea	34.88	75	P	P	01 26 06.5	-0.3
	1.1nm,0.9s,baz=248,slow=7.6,SNR=3.6						
TORD				PcP	PcP	01 28 40.0	+0.2
	0.5nm,0.6s,baz=201,slow=1.0,SNR=6.4						
LPAZ	La Paz	41.13	237	P	P	01 27 00.7	+0.5
	2.5nm,0.9s,baz=93,slow=18,SNR=4.8						
TSUM	Tsumeb	55.49	118	P	P	01 28 51.9	+1.4
	3.8nm,1.0s,baz=301,slow=9.9,SNR=4.3						
GEA0	GERESS Array S	58.30	34	eP	P	01 29 10.8	+0.8
GEC2	GERESS Array S	58.30	34	eP	P	01 29 11.1	+1.1
	3.2nm,1.1s						
GERES	GERESS Array B	58.30	34	P	P	01 29 11.1	+1.1
	1.2nm,0.9s,baz=244,slow=6.5,SNR=7.6						
NB2	NORSAR Subarra	64.31	22	P	P	01 29 51.0	+0.6
	comp=Z,0.6nm,0.8s,baz=229,slow=6.9						
NB200	NORSAR Array S	64.31	22	eP	P	01 29 51.3	+0.9
NOA	NORSAR Array B	64.31	22	P	P	01 29 51.3	+0.9
	comp=Z,1.3nm,0.9s,baz=230,slow=6.4,SNR=4.5						
MLR	Muntele Rosu	64.41	42	P	P	01 29 52.5	+1.1
	comp=Z,7.8nm,1.1s,baz=186,slow=3.2,SNR=4.7						
AKASG	Malin Array Be	68.18	37	P	P	01 30 15.4	+0.1
	comp=Z,2.0nm,0.7s,baz=252,slow=6.0,SNR=6.9						
AKBB	Malin Array Si	68.18	37	eP	P	01 30 14.9	-0.4
	comp=Z,4.8nm,1.0s						
BR101	Keskin Array S	68.40	50	eP	P	01 30 16.9	-0.3
BRTR	Keskin Array B	68.40	50	P	P	01 30 16.9	-0.3
	comp=Z,0.8nm,0.9s,baz=264,slow=3.5,SNR=5.2						
LTX	Lajitas	70.50	299	eP	P	01 30 31.4	+1.1
TXAR	Lajitas Array	70.50	299	P	P	01 30 31.4	+1.1
	comp=Z,0.3nm,0.9s,baz=95,slow=5.5,SNR=2.5						
FIA0	FINESS Array S	70.58	26	eP	P	01 30 29.1	-0.9
FINES	FINESS Array B	70.58	26	P	P	01 30 29.0	-0.9
	comp=Z,2.4nm,0.8s,baz=220,slow=8.7,SNR=5.3						
PD31	Pinedale Array	76.39	313	eP	P	01 31 03.5	-1.5
	comp=Z,0.8nm,1.1s						
PDAR	Pinedale Array	76.39	313	P	P	01 31 05.0	+0.1
	comp=Z,0.6nm,0.9s,baz=87,slow=8.3,SNR=3.6						
LOHW	Long Hollow	77.22	313	eP	P	01 31 08.5	-1.1
	comp=Z,1.9nm,1.0s						
YKA	Yellowknife Ar	81.18	332	P	P	01 31 30.2	-0.2
	comp=Z,0.9nm,0.9s,baz=94,slow=5.2,SNR=8.0						
YKB5	Yellowknife Ar	81.18	332	eP	P	01 31 29.7	-0.8
NV01	Mina Array Sit	82.93	308	eP	P	01 31 39.5	-1.0
NVAR	Mina Array Bea	82.93	308	P	P	01 31 40.3	-0.2
	comp=Z,0.8nm,0.8s,baz=111,slow=8.1,SNR=3.6						
ILAR	Eielson Array	94.87	337	P	P	01 32 36.8	0.0
	comp=Z,0.6nm,0.9s,baz=73,slow=3.1,SNR=3.6						
CMAR	Chiang Mai Arr	126.81	62	PKP	PKiKP	01 38 21.0	+0.8
	comp=Z,0.8nm,0.4s,baz=294,slow=3.0,SNR=5.0						
ASAR	Alice Springs	158.04	146	PKP	PKPdf	01 39 09.2	-3.7
	comp=Z,1.1nm,1.0s,baz=224,slow=2.6,SNR=4.1						
ASAR				PKPab	PKPab	01 39 45.9	-0.2
	comp=Z,1.0nm,0.8s,baz=206,slow=4.6,SNR=4.9						

IDC 18 01:21:06.7±1.4**, 11°.65S**×**165°.09E, h0^{km}, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/25**, mbtmp3.7**/5**, ML3.4**/1**, Error ellipse: s-maj=50.5km s-min=27.6km az=132.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.44	173	Pn	Pn	01 23 37.5	-0.4
	0.3nm,0.3s,baz=357,slow=14,SNR=2.8						
WRA	Warramunga Arr	30.67	251	P	P	01 27 23.6	+0.3
	0.5nm,0.6s,baz=79,slow=8.9,SNR=7.9						
ASAR	Alice Springs	31.94	244	P	P	01 27 34.0	-0.5
	0.7nm,1.0s,baz=65,slow=9.6,SNR=4.0						
ILAR	Eielson Array	84.29	19	P	P	01 33 41.5	+1.4
	0.5nm,0.8s,baz=234,slow=5.6,SNR=6.2						
YKA	Yellowknife Ar	95.81	27	P	P	01 34 32.9	-1.7
	0.3nm,0.9s,baz=256,slow=4.6,SNR=3.8						

IDC 18 01:23:05.7±3.3**, 11°.83S**×**165°.64E, h0^{km}, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.7**/25**, mbtmp3.8**/4**, ML3.6**/1**, MS2.4**/1**, Ms1 2.4**/1**, ms1mx2.3**/25**, Error ellipse: s-maj=68.0km s-min=44.9km az=81.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.08	292	LR	LR	01 26 24.6	
	comp=Z,30nm,20.0s,baz=17,slow=33						
DZM	Mont Dzumac	10.22	176	Pn	Pn	01 25 34.6	+0.8
	0.5nm,0.3s,baz=348,slow=18,SNR=5.6						
WRA	Warramunga Arr	31.12	251	P	P	01 29 27.0	+0.7
	0.5nm,0.6s,baz=84,slow=9.4,SNR=9.4						
ASAR	Alice Springs	32.36	244	P	P	01 29 36.4	-0.8
	0.8nm,0.8s,baz=77,slow=9.5,SNR=5.8						
MKAR	Makanchi Array	94.02	317	P	P	01 36 25.5	-0.4
	0.3nm,0.6s,baz=87,slow=5.8,SNR=3.4						

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*NNC **18** 01:31:33.7±1.3, 42°.54N×79°.65E, h0^{km}, mb3.0, mpv2.5,*

Error ellipse: s-maj=8.5km s-min=4.8km az=148.0

*SOME **18** 01:31:34.6, 42°.52N×79°.70E, h15^{km}*

*KRNET **18** 01:31:34.9±0.1, 42°.58N×79°.63E, h14^{km}, mb2.2*

ISC 18 01:31:33.4±1.9, **42°.50N**±0°.06×**79°.66E**±0°.05, **h5**^{km}±15^{km}, **n27**, σ**1^{s}.18**/47, **8C-12D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**0.80**	**324**	P	**Pg**	**01 31 49.0**	**+0.3**
	3.4nm,0.1s						
UZB				S	**Sg**	**01 31 59.4**	**+0.3**
	9.0nm,0.3s						
UZB	**Uzynbulak**	**0.80**	**324**	*e*P	**Pg**	**01 31 49.0**	**+0.3**
	4.4nm,0.1s						
UZB				*e*S	**Sg**	**01 31 59.6**	**+0.5**
	10.0nm,0.2s						
PDGK	**Podgornoye**	**0.84**	**351**	P	**Pg**	**01 31 49.6**	**+0.1**
	0.8nm,0.2s						
PDGK				S	**Sg**	**01 32 00.5**	**+0.1**
	5.5nm,0.4s						
PDGK	**Podgornoye**	**0.84**	**351**	⇓P	**Pg**	**01 31 49.6**	**+0.1**
	0.3nm,0.2s						
PDGK				⇓S	**Sg**	**01 32 00.0**	**-0.3**
	1.3nm,0.3s						
PDGK	**Podgornoye**	**0.84**	**351**	⇓*i*P	**Pg**	**01 31 49.4**	**-0.1**
	baz=52						
PDGK				⇓*i*S	**Sg**	**01 32 00.1**	**-0.3**
	baz=52						
PRZ	**Przheval'sk**	**0.93**	**269**	⇓*i*P	**Pg**	**01 31 52.2**	**+0.9**
	baz=64						
PRZ				⇓*e*S	**Sb**	**01 32 04.8**	**-0.1**
	baz=64						
KTMS	**Ketmen**	**1.07**	**28**	P	**Pb**	**01 31 54.1**	**-0.4**
	2.9nm,0.1s						
KTMS				S	**Sb**	**01 32 08.1**	**-0.9**
	3.2nm,0.3s						
KTMS	**Ketmen**	**1.07**	**28**	*e*P	**Pb**	**01 31 54.1**	**-0.4**
	2.9nm,0.1s						
KTMS				*e*S	**Sb**	**01 32 08.1**	**-0.9**
	3.2nm,0.3s						
MNBS	**Baschi**	**1.82**	**330**	*e*P	**Pb**	**01 32 07.4**	**0.0**
	1.5nm,0.1s						
MNBS				*e*S	**Sg**	**01 32 31.2**	**-0.9**
	7.8nm,0.3s						
DJR	**Jarkent**	**1.83**	**3**	*e*P	**Pb**	**01 32 07.9**	**+0.4**
	0.3nm,0.3s						
DJR				*e*S	**Sg**	**01 32 31.6**	**-0.6**
	1.7nm,0.3s						
KDJ	**Kajisay**	**1.88**	**259**	⇑*i*P	**Pb**	**01 32 09.4**	**+1.1**
	baz=57						
KDJ				⇑*i*S	**Sg**	**01 32 34.8**	**+1.1**
	baz=57						
KOTS	**Kotyrbulak**	**2.01**	**292**	Pg	**Pb**	**01 32 11.1**	**+0.5**
	1.5nm,0.2s						
KOTS				Lg	Lg	01 32 37.1	
	16nm,0.5s						
KOTS	**Kotyrbulak**	**2.01**	**292**	*e*P	**Pb**	**01 32 11.1**	**+0.5**
	1.5nm,0.2s						
KOTS				*e*S	**Sg**	**01 32 37.1**	**-0.9**
	16nm,0.5s						
MDOK	**Medeo**	**2.03**	**290**	Pg	**Pn**	**01 32 09.1**	**+0.7**
	0.7nm,0.4s						
MDOK				Lg	Lg	01 32 38.8	
	1.1nm,0.4s						
ARXS	**Arharly**	**2.17**	**323**	Pg	**Pb**	**01 32 13.3**	**0.0**
	1.7nm,0.7s						
ARXS				Lg	Lg	01 32 41.4	
	5.1nm,0.5s						
ARXS	**Arharly**	**2.17**	**323**	*e*P	**Pb**	**01 32 13.3**	**0.0**
	1.7nm,0.7s						
ARXS				*e*S	**Sg**	**01 32 41.4**	**-1.8**
	5.1nm,0.5s						
IZV	**Izvestkoviy**	**2.31**	**284**	Pg	**Pb**	**01 32 16.5**	**+0.9**
	4.0nm,0.2s						
IZV				Lg	Lg	01 32 46.8	
	5.1nm,0.3s						
IZV	**Izvestkoviy**	**2.31**	**284**	*e*P	**Pb**	**01 32 16.5**	**+0.9**
	4.0nm,0.2s						
IZV				*e*S	**Sg**	**01 32 46.8**	**-0.7**
	5.1nm,0.3s						
KTBS	**Karatobe**	**2.49**	**300**	Pg	**Pb**	**01 32 19.7**	**+1.0**
	1.1nm,0.2s						
KTBS				Lg	Lg	01 32 52.0	
	4.9nm,0.3s						
KTBS	**Karatobe**	**2.49**	**300**	*e*P	**Pb**	**01 32 19.7**	**+1.0**
	1.2nm,0.2s						
KTBS				*e*S	**Sg**	**01 32 51.9**	**-1.7**
	3.5nm,0.2s						
ULHL	**Ulahol**	**2.55**	**265**	⇓*i*P	**Pb**	**01 32 19.1**	**-0.6**
	baz=64						
ULHL				⇓*i*S	**Sb**	**01 32 51.2**	**-0.2**
	baz=64						
BOOM	**Boomskoye usch**	**2.75**	**271**	⇓*i*P	**Pb**	**01 32 22.0**	**-1.2**
	baz=69						
BOOM				⇓*i*S	**Sb**	**01 32 56.0**	**-1.3**
	baz=69						
NRN	**Naryn**	**2.93**	**250**	⇑*i*P	**Pb**	**01 32 25.2**	**-1.1**
	baz=48						
NRN				⇑*i*S	**Sb**	**01 33 02.1**	**-0.5**
	baz=48						
DGS	**Degeres**	**2.95**	**286**	Pg	**Pb**	**01 32 28.0**	**+1.4**
	1.7nm,0.4s						
DGS				Lg	Lg	01 33 06.7	
	3.0nm,0.5s						
TKM2	**Tokmak 2**	**3.02**	**279**	⇑Pg	**Pn**	**01 32 24.8**	**+2.7**
	0.4nm,0.7s						
TKM2				⇑Lg	Lg	01 33 06.0	
	0.3nm,0.3s						
TKM2	**Tokmak 2**	**3.02**	**279**	⇓*e*P	**Pb**	**01 32 25.6**	**-2.3**
	baz=78						
TKM2				⇓*i*S	**Sb**	**01 33 02.9**	**-2.2**
	baz=78						
KZA	**Kyzart**	**3.30**	**264**	⇑*i*P	**Pb**	**01 32 30.0**	**-2.7**
	baz=63						
KZA				⇑*i*S	**Sb**	**01 33 10.2**	**-3.1**
	baz=63						

IDC 18 01:38:13.3±1.3, **1°.91N**×**126°.34E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.6**/23, **mbtmp3.6**/4, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.6**/27, **Error ellipse: s-maj=138.3km s-min=20.3km az=69.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.09**	**161**	P	P	01 43 20.3	-0.7
	1.2nm,0.4s,baz=339,slow=11,SNR=24						
ASAR	**Alice Springs**	**26.47**	**164**	P	P	01 43 53.0	+0.6
	0.3nm,0.3s,baz=341,slow=8.2,SNR=6.7						
KSRS	**Korea Array**	**35.40**	**2**	LR	LR	01 59 01.6	
	comp=Z,24nm,21.5s,baz=302,slow=35						
SONM	**Songino Array**	**48.89**	**342**	P	P	01 47 00.7	-0.4
	0.3nm,0.6s,baz=147,slow=8.6,SNR=2.9						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	01 48 13.9	+0.1
	0.3nm,0.3s,baz=119,slow=7.2,SNR=16						

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*DJA **18** 01:59:19.2±1.9, 9°S±9°×12°2E±°, h10^{km}, M3.0/2, MLv3.0/2*

*IDC **18** 01:59:20.6±1.8, 7°.99S×122°.18E, h0^{km}, mb3.5/1, mb1 3.5/4, mb1mx3.4/33, mbtmp3.4/4, ML2.7/3, Error ellipse: s-maj=160.5km s-min=27.0km az=60.0*

ISC 18 01:59:22.7±4.4, **8°.3S**±0°.3×**121°.7E**±0°.2, **h35**^{km}, **n6**, σ**2^{s}.36**/7, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**0.47**	**175**	P	**Pn**	**01 59 30.6**	**-2.5**
EDFI				S	**Sn**	**01 59 39.6**	**-0.7**
MMRI	**Maumere**	**0.69**	**122**	P	**Pn**	**01 59 34.5**	**-1.4**
MMRI				S	**Sn**	**01 59 45.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**10.51**	**159**	Pn	**Pn**	**02 01 53.4**	**+2.5**
	0.0nm,0.3s,baz=346,slow=12,SNR=2.5						
WRA	**Warramunga Arr**	**16.90**	**135**	Pn	**Pn**	**02 03 14.6**	**-2.0**
	0.0nm,0.3s,baz=310,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**19.29**	**144**	P	**Pn**	**02 03 47.8**	**+1.8**
	0.0nm,0.3s,baz=325,slow=13,SNR=6.2						
MKAR	**Makanchi Array**	**65.05**	**331**	P	P	02 10 02.7	+3.2
	0.3nm,0.7s,baz=129,slow=7.3,SNR=4.4						

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*IDC **18** 02:02:42.6±1.4, 8°.56S×109°.26E, h0^{km}, mb3.9/5, mb1 3.9/6, mb1mx3.7/38, mbtmp3.8/6, ML3.3/1, Error ellipse: s-maj=92.1km s-min=20.4km az=45.0*

*DJA **18** 02:02:50.0±0.6, 9°S±4°×11°0E±°, h10^{km}, M4.2/2, MLv4.2/2*

*ISCJB **18** 02:02:51.1±1.0, 8°.7S±0°.1×109°.57E±0°.04, h65^{km}±14^{km}, mb3.7/5, Error ellipse: s-maj=19.4km s-min=6.3km az=10.3*

ISC 18 02:02:51.8±1.4, **8°.7S**±0°.1×**109°.55E**±0°.05, **h65**^{km}±15^{km}, **n18**, σ**1^{s}.50**/23, **mb3.7**/5, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.22**	**52**	P	**Pn**	**02 03 12.6**	**-0.4**
UGM				S	**Sn**	**02 03 27.4**	**-1.5**
CMJI	**Cimerak**	**1.41**	**309**	P	**Pn**	**02 03 15.4**	**0.0**
CMJI				S	**Sn**	**02 03 32.0**	**-1.2**
KPJI	**Karang Pucung**	**1.47**	**335**	P	**Pn**	**02 03 16.9**	**+0.6**
KPJI				S	**Sn**	**02 03 36.3**	**+1.6**
WOJI	**Wonogiri, Jawa**	**1.59**	**58**	P	**Pn**	**02 03 17.2**	**-0.7**
WOJI				S	**Sn**	**02 03 34.7**	**-2.9**
PCJI	**Pacitan**	**1.68**	**73**	P	**Pn**	**02 03 19.1**	**+0.1**
PCJI				S	**Sn**	**02 03 38.8**	**-0.8**
SMRI	**Semarang**	**1.84**	**29**	P	**Pn**	**02 03 22.2**	**+0.9**
SMRI				S	**Sn**	**02 03 46.0**	**+2.4**
CISI	**Cisompet, Garu**	**2.05**	**303**	P	**Pn**	**02 03 24.4**	**+0.3**
NGJI	**Ngawi**	**2.29**	**56**	P	**Pn**	**02 03 29.4**	**+2.0**
PWJI	**Pagerwojo**	**2.32**	**74**	P	**Pn**	**02 03 27.9**	**+0.2**
PWJI				S	**Sn**	**02 03 54.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**18.22**	**123**	P	**P**	**02 07 01.8**	**+1.9**
	0.1nm,0.3s,baz=288,slow=16,SNR=4.9						
WRA	**Warramunga Arr**	**26.45**	**118**	P	**P**	**02 08 24.0**	**+1.0**
	1.3nm,0.6s,baz=290,slow=12,SNR=24						
WRA				PcP	**PcP**	**02 11 46.6**	**-0.4**
	0.1nm,0.4s,baz=302,slow=1.9,SNR=5.0						
ASAR	**Alice Springs**	**27.66**	**125**	P	**P**	**02 08 34.8**	**+1.0**
	1.0nm,0.7s,baz=309,slow=9.6,SNR=6.0						
H08S2	**Diego Garcia H**	**36.69**	**269**	T	T	02 49 03.9	
	baz=94						
H08S3	**Diego Garcia H**	**36.70**	**269**	T	T	02 49 04.7	
	baz=94						
H08S1	**Diego Carcia H**	**36.71**	**269**	T	T	02 48 55.8	
	baz=94						
STKA	**Stephens Creek**	**37.65**	**132**	P	**P**	**02 10 02.5**	**+1.7**
	1.7nm,0.5s,baz=303,slow=7.1,SNR=6.2						
MKAR	**Makanchi Array**	**60.34**	**339**	P	**P**	**02 12 51.8**	**-2.2**
	0.3nm,0.4s,baz=153,slow=8.5,SNR=8.2						
BRTR	**Keskin Array B**	**84.83**	**311**	P	**P**	**02 15 18.4**	**-1.4**
	0.4nm,0.6s,baz=126,slow=7.3,SNR=4.5						

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*ISCJB **18** 02:12:07.7±0.5, 15°.3S±0°.1×177°.5W±0°.1, h10^{km}, mb4.1/12, MS3.7/9, Error ellipse: s-maj=17.9km s-min=10.0km az=137.1*

*IDC **18** 02:12:07.7±0.8, 15°.36S×177°.37W, h0^{km}, mb4.1/10, mb1 4.4/10, mb1mx4.2/29, mbtmp4.1/10, MS3.7/9, Ms1 3.7/9, ms1mx3.5/28, Error ellipse: s-maj=39.8km s-min=18.0km az=138.0*

*NEIC **18** 02:12:08.9±0.4, 15°.33S×177°.44W, h10^{km}, mb4.3/2, Error ellipse: s-maj=14.5km s-min=8.0km az=136.0*

ISC 18 02:12:09.2±0.7, **15°.3S**±0°.1×**177°.4W**±0°.1, **h10**^{km}, **n33**, σ**1^{s}.23**/25, **mb4.1**/12, **MS3.8**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.00**	**240**	*e*Pn	**Pn**	**02 13 23.1**	**-1.4**
FUNA	**Funafuti**	**7.50**	**333**	*e*Pn	**Pn**	**02 13 58.4**	**-0.4**
DZM	**Mont Dzumac**	**16.73**	**244**	*e*P	**P**	**02 16 10.3**	**+4.1**
	73nm,1.4s						
DZM				*e*LR	LR	02 20 13.7	
	comp=Z,237nm,24.0s						
URZ	**Urewera**	**23.39**	**191**	P	**P**	**02 17 16.4**	**-1.8**
	6.3nm,0.7s,baz=348,slow=19,SNR=3.7						
PPT	**Papeete**	**26.77**	**99**	LR	LR	02 25 43.5	
	comp=Z,101nm,21.1s,baz=262,slow=30						
PPT2	**Papeete2**	**26.77**	**99**	*e*LQ	LQ	02 23 12.2	
	401nm,28.2s						
PPT2				*e*LR	LR	02 24 27.9	
	comp=Z,336nm,25.8s						
TBI	**Tubuai**	**27.51**	**111**	*e*LR	LR	02 24 55.8	
	comp=Z,552nm,28.0s						
STKA	**Stephens Creek**	**40.78**	**239**	P	**P**	**02 19 51.9**	**+1.1**
	22nm,0.9s,baz=63,slow=7.5,SNR=24						
STKA				LR	LR	02 34 15.7	
	comp=Z,55nm,21.3s,baz=51,slow=33						
WB2	**Warramunga Arr**	**46.11**	**257**	*e*P	**P**	**02 20 33.1**	**-0.9**
WR1	**Warramunga Arr**	**46.12**	**257**	*e*P	**P**	**02 20 33.1**	**-1.0**
	5.5nm,1.1s						
WR1				*e*PcP	**PcP**	**02 22 10.1**	**-0.2**
WRA	**Warramunga Arr**	**46.12**	**257**	P	**P**	**02 20 33.1**	**-1.0**
	1.5nm,0.9s,baz=88,slow=8.0,SNR=13						
WRA				PcP	**PcP**	**02 22 10.1**	**-0.2**
	1.4nm,1.1s,baz=80,slow=4.5,SNR=4.7						
AS31	**Alice Springs**	**46.48**	**252**	*e*P	**P**	**02 20 36.1**	**-0.9**
	1.7nm,0.8s						
ASAR	**Alice Springs**	**46.48**	**252**	P	**P**	**02 20 36.9**	**-0.2**
	4.4nm,0.6s,baz=85,slow=8.5,SNR=58						
MJAR	**Matsushiro Arr**	**66.42**	**322**	LR	LR	02 46 24.1	
	comp=Z,38nm,21.8s,baz=70,slow=31						
PETK	**Petropavlovsk-**	**71.42**	**344**	LR	LR	02 48 23.6	
	comp=Z,85nm,21.5s,baz=117,slow=30						
KSRS	**Korea Array**	**73.42**	**317**	LR	LR	02 49 37.5	
	comp=Z,54nm,21.9s,baz=126,slow=31						
USRK	**Ussuriysk Ar.**	**75.03**	**325**	LR	LR	02 53 57.4	
	comp=Z,45nm,18.7s,baz=110,slow=33						
NV01	**Mina Array Sit**	**76.87**	**44**	*e*P	**P**	**02 24 01.1**	**-0.9**
NVAR	**Mina Array Bea**	**76.87**	**44**	P	**P**	**02 24 01.9**	**-0.1**
	0.9nm,0.8s,baz=237,slow=5.6,SNR=3.9						
KLR	**Kul'dur**	**78.38**	**329**	LR	LR	02 52 44.3	
	comp=Z,106nm,21.6s,baz=183,slow=31						
IM3	**Indian Mountai**	**82.95**	**10**	*e*P	**P**	**02 24 33.7**	**-0.3**
IL1	**Eielson Array**	**83.13**	**13**	*e*P	**P**	**02 24 34.3**	**-0.7**
ILAR	**Eielson Array**	**83.13**	**13**	P	**P**	**02 24 34.3**	**-0.6**
	1.9nm,0.9s,baz=224,slow=5.9,SNR=11						
ILB	**Eielson Array**	**83.13**	**13**	*e*P	**P**	**02 24 34.4**	**-0.6**
LTX	**Lajitas**	**83.77**	**57**	*e*P	**P**	**02 24 39.7**	**+0.5**
TXAR	**Lajitas Array**	**83.77**	**57**	P	**P**	**02 24 39.7**	**+0.5**
	1.1nm,1.1s,baz=256,slow=7.3,SNR=4.3						
TXAR				LR	LR	02 54 23.6	
	comp=Z,55nm,20.6s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**84.79**	**43**	P	**P**	**02 24 46.1**	**+1.9**
	1.0nm,1.0s,baz=211,slow=0.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**88.93**	**289**	LR	LR	03 00 60.0	
	comp=Z,28nm,21.2s,baz=95,slow=33						
YKA	**Yellowknife Ar**	**91.56**	**24**	P	**P**	**02 25 16.1**	**+0.2**
	0.6nm,0.9s,baz=243,slow=4.6,SNR=4.6						
SONM	**Songino Array**	**92.22**	**319**	P	**P**	**02 25 19.3**	**-0.2**
	0.4nm,0.9s,baz=128,slow=4.0,SNR=3.4						
BRTR	**Keskin Array B**	**143.57**	**318**	PKP	PKPbc	02 31 42.8	+0.7
	1.4nm,1.0s,baz=148,slow=2.7,SNR=6.0						
GERES	**GERESS Array B**	**145.32**	**347**	PKPbc	**PKPdf**	**02 31 47.3**	**-0.3**
	3.5nm,1.1s,baz=50,slow=2.1,SNR=11						
MMAI	**Mount Meron Ar**	**145.46**	**307**	PKPbc	**PKPab**	**02 31 48.6**	**+0.2**
	6.2nm,0.8s,baz=50,slow=5.7,SNR=9.3						

IDC 18 02:30:48.1±4.1, **10°.92S**×**165°.99E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.5**/31, **mbtmp3.6**/4, **Error ellipse: s-maj=173.8km s-min=34.1km az=136.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.75**	**250**	P	P	02 37 14.0	-0.3
	0.4nm,0.5s,baz=82,slow=9.1,SNR=5.9						
ASAR	**Alice Springs**	**33.06**	**243**	P	P	02 37 25.9	+0.1
	0.6nm,1.0s,baz=65,slow=9.8,SNR=6.1						
ILAR	**Eielson Array**	**83.32**	**18**	P	P	02 43 16.4	-0.1
	0.5nm,0.9s,baz=225,slow=4.7,SNR=3.5						
MKAR	**Makanchi Array**	**93.59**	**317**	P	P	02 44 06.5	+0.2
	0.2nm,0.7s,baz=106,slow=5.2,SNR=2.8						

IDC 18 02:45:37.5±5.7, **26°.70S**×**71°.00E**, **h0**^{km}, **mb3.7**/5, **mb1 3.8**/5, **mb1mx3.5**/37, **mbtmp3.7**/5, **Error ellipse: s-maj=189.0km s-min=35.6km az=48.0**, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**19.00**	**4**	T	T	03 09 00.1	
	baz=184						
H08S2	**Diego Garcia H**	**19.00**	**5**	T	T	03 08 56.6	
	baz=184						
H08S3	**Diego Garcia H**	**19.02**	**5**	T	T	03 09 00.7	
	baz=184						
ASAR	**Alice Springs**	**56.49**	**102**	P	P	02 55 21.8	0.0
	0.4nm,0.8s,baz=238,slow=8.2,SNR=2.9						
WRA	**Warramunga Arr**	**58.05**	**98**	P	P	02 55 32.7	-0.1
	1.1nm,0.9s,baz=254,slow=6.7,SNR=5.3						
MKAR	**Makanchi Array**	**73.85**	**8**	P	P	02 57 13.8	-0.1
	0.7nm,0.8s,baz=190,slow=6.2,SNR=9.3						
SONM	**Songino Array**	**80.73**	**23**	P	P	02 57 52.7	+0.2
	0.1nm,0.5s,baz=198,slow=4.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**81.19**	**8**	P	P	02 57 54.9	+0.1
	0.4nm,0.4s,baz=185,slow=6.7,SNR=4.1						
YKA	**Yellowknife Ar**	**144.01**	**4**	PKP	PKPdf	03 05 13.8	-0.6
	0.2nm,0.8s,baz=322,slow=2.7,SNR=3.8						

IDC 18 02:45:58.1±15.0, **18°.00S**×**177°.81W**, **h557**^{km}±133^{km}, **mb3.1**/3, **mb1 3.4**/3, **mb1mx2.9**/33, **mbtmp4.0**/3, **Error ellipse: s-maj=190.9km s-min=41.4km az=132.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.18**	**260**	P	P	02 53 25.8	-0.3
	1.0nm,0.4s,baz=95,slow=7.1,SNR=60						
WRA				PcP	PcP	02 54 53.8	-0.7
	1.1nm,1.3s,baz=89,slow=3.7,SNR=5.6						
ASAR	**Alice Springs**	**45.32**	**254**	P	P	02 53 27.1	0.0
	3.4nm,0.6s,baz=88,slow=8.1,SNR=35						
ASAR				PcP	PcP	02 54 54.3	-0.6
	0.4nm,0.4s,baz=107,slow=3.6,SNR=4.9						
ILAR	**Eielson Array**	**85.85**	**13**	P	P	02 57 38.4	-0.4
	0.7nm,1.1s,baz=214,slow=4.9,SNR=6.7						
BRTR	**Keskin Array B**	**145.25**	**315**	PKPbc	PKPbc	03 04 33.8	-0.4
	0.9nm,0.8s,baz=119,slow=1.8,SNR=6.2						
GERES	**GERESS Array B**	**147.85**	**346**	PKPbc	PKPbc	03 04 40.6	-0.3
	0.5nm,0.6s,baz=36,slow=2.5,SNR=5.4						

IDC 18 03:03:05.9±2.0, **10°.25S**×**165°.33E**, **h0**^{km}, **mb3.8**/6, **mb1 4.0**/6, **mb1mx3.7**/40, **mbtmp3.7**/6, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.5**/35, **Error ellipse: s-maj=110.6km s-min=25.6km az=143.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.80**	**175**	LR	LR	03 09 34.6	
	comp=Z,74nm,19.6s,baz=197,slow=33						
H11S2	**WAKE ISLAND Hy**	**28.59**	**3**	T	T	03 39 32.2	
	baz=181,slow=76,SNR=9.1						
H11S3	**WAKE ISLAND Hy**	**28.59**	**3**	T	T	03 39 30.1	
	baz=181,slow=76,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**28.61**	**3**	T	T	03 39 33.5	
	baz=181,slow=76,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	**29.82**	**3**	T	T	03 41 01.8	
	baz=182,slow=76,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**29.82**	**3**	T	T	03 41 00.2	
	baz=182,slow=76,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**29.83**	**3**	T	T	03 41 04.2	
	baz=182,slow=76,SNR=7.3						
WRA	**Warramunga Arr**	**31.39**	**248**	P	P	03 09 29.9	+1.1
	0.7nm,0.7s,baz=78,slow=8.7,SNR=7.6						
ASAR	**Alice Springs**	**32.80**	**242**	P	P	03 09 40.4	-0.8
	1.0nm,0.7s,baz=70,slow=10,SNR=3.8						
ILAR	**Eielson Array**	**82.89**	**19**	P	P	03 15 33.9	+1.7
	0.9nm,0.7s,baz=231,slow=5.1,SNR=14						
NVAR	**Mina Array Bea**	**85.82**	**50**	P	P	03 15 47.4	-0.5
	0.5nm,0.7s,baz=224,slow=5.0,SNR=3.2						
MKAR	**Makanchi Array**	**92.67**	**317**	P	P	03 16 18.3	-1.6
	0.3nm,0.7s,baz=94,slow=5.8,SNR=1.8						
YKA	**Yellowknife Ar**	**94.46**	**27**	P	P	03 16 26.3	-1.4
	0.1nm,0.6s,baz=265,slow=4.3,SNR=3.5						
ARCES	**ARCESS Array B**	**115.47**	**345**	PKP	PKiKP	03 21 49.2	-0.1
	4.5nm,1.1s,baz=102,slow=1.7,SNR=6.1						

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*ISCJB **18** 03:06:20.1±0.5, 2°.66N±0°.07×122°.3E±0°.1, h550^{km}, mb4.0/10, Error ellipse: s-maj=15.4km s-min=7.2km az=156.2*

*IDC **18** 03:06:21.9±1.5, 2°.55N×122°.13E, h564^{km}±19^{km}, mb3.3/10, mb1 3.4/11, mb1mx3.1/42, mbtmp4.4/11, Error ellipse: s-maj=38.7km s-min=9.3km az=69.0*

*DJA **18** 03:06:22.3±1.1, 3°N±16°×12°2E±1°0, h503^{km}±13^{km}, M3.9/6, MLv3.9/6*

ISC 18 03:06:21.1±0.6, **2°.64N**±0°.09×**122°.2E**±0°.1, **h550**^{km}, **n26**, σ**1^{s}.25**/31, **mb4.2**/16, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**2.17**	**188**	P	**P**	**03 07 31.3**	**-0.4**
MRSI				S	**S**	**03 08 27.4**	**-1.5**
KMSI	**Cibinong**	**2.69**	**140**	P	**P**	**03 07 34.2**	**-0.2**
MPSI	**Mapaga**	**3.27**	**226**	P	**P**	**03 07 37.2**	**-0.7**
MPSI				S	**S**	**03 08 39.2**	**-1.2**
APSI	**Ampana**	**3.58**	**190**	P	**P**	**03 07 41.1**	**+1.1**
EDFI	**Ende, Flores**	**11.33**	**183**	P	**P**	**03 08 56.5**	**+3.6**
BATI	**Baumata**	**12.84**	**174**	P	**P**	**03 09 10.4**	**+2.0**
	9.7nm,0.3s,baz=303,slow=2.6,SNR=4.6						
FITZ	**Fitzroy Crossi**	**20.88**	**171**	P	**P**	**03 10 24.5**	**-0.7**
	1.2nm,0.2s,baz=7.2,slow=6.0,SNR=15						
JOW	**Kunigami**	**24.74**	**13**	P	**P**	**03 11 00.6**	**+1.0**
	3.1nm,0.5s,baz=231,slow=19,SNR=4.8						
WRA	**Warramunga Arr**	**25.39**	**153**	P	**P**	**03 11 04.0**	**-1.5**
	3.4nm,0.4s,baz=335,slow=9.6,SNR=81						
WRA				PcP	**PcP**	**03 14 18.1**	**-1.1**
	0.3nm,0.6s,baz=321,slow=2.3,SNR=3.2						
WRA				ScP	**ScP**	**03 17 04.3**	**-2.4**
	0.6nm,0.8s,baz=338,slow=2.9,SNR=6.0						
ASAR	**Alice Springs**	**28.51**	**157**	P	**P**	**03 11 32.2**	**-0.6**
	1.4nm,0.4s,baz=335,slow=7.6,SNR=29						
ASAR				ScP	**ScP**	**03 17 14.2**	**-2.0**
	0.4nm,0.4s,baz=353,slow=2.4,SNR=5.1						
CTA	**Charters Tower**	**32.65**	**135**	P	**P**	**03 12 08.8**	**+0.5**
	3.1nm,0.9s,baz=324,slow=8.7,SNR=3.4						
STKA	**Stephens Creek**	**38.94**	**153**	P	**P**	**03 13 00.5**	**+0.2**
	2.4nm,0.3s,baz=339,slow=7.4,SNR=14						
RAMN	**Ramite**	**41.81**	**309**	*e*P	**P**	**03 13 24.3**	**+0.7**
	24nm,0.7s						
GTA	**Gaotai**	**41.90**	**334**	*e*P	**P**	**03 13 25.1**	**+1.2**
GTA				pP	pP	03 13 30.4	-90
GTA				sP	sP	03 13 33.6	-148
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
JIRN	**Jiri**	**42.48**	**309**	*e*P	**P**	**03 13 29.4**	**+0.5**
	comp=Z,30nm,0.5s						
GUN	**Gumba**	**42.84**	**310**	*e*P	**P**	**03 13 32.1**	**+0.4**
	comp=Z,27nm,0.5s						
PKI	**Pulchoki**	**43.04**	**309**	*e*P	**P**	**03 13 33.2**	**-0.1**
KKN	**Kakani**	**43.25**	**309**	*e*P	**P**	**03 13 34.8**	**+0.1**
	comp=Z,12nm,0.4s						
DMN	**Daman**	**43.30**	**309**	*e*P	**P**	**03 13 35.4**	**+0.2**
KOLN	**Koldanda**	**44.55**	**308**	*e*P	**P**	**03 13 45.3**	**+0.5**
DANN	**Dangsing**	**44.69**	**309**	*e*P	**P**	**03 13 46.3**	**+0.3**
	comp=Z,37nm,0.6s						
PYUN	**Piuthan**	**45.18**	**308**	*e*P	**P**	**03 13 50.3**	**+0.6**
	comp=Z,31nm,0.5s						
SONM	**Songino Array**	**47.06**	**345**	P	**P**	**03 14 03.8**	**+0.4**
	comp=Z,3.0nm,0.7s,baz=162,slow=9.5,SNR=28						
MKAR	**Makanchi Array**	**55.98**	**328**	P	**P**	**03 15 08.1**	**+0.3**
	comp=Z,3.9nm,0.3s,baz=127,slow=8.2,SNR=130						
ZALV	**Zalesovo Beam**	**59.61**	**335**	P	**P**	**03 15 31.2**	**-0.9**
	comp=Z,1.7nm,0.3s,baz=132,slow=5.9,SNR=10						
ARCES	**ARCESS Array B**	**89.91**	**340**	P	**P**	**03 18 20.1**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=82,slow=6.5,SNR=2.4						

IDC 18 03:14:41.8±3.1, **10°.46S**×**165°.73E**, **h0**^{km}, **mb3.7**/3, **mb1 3.8**/4, **mb1mx3.5**/42, **mbtmp3.7**/4, **ML3.6**/1, **Error ellipse: s-maj=69.3km s-min=43.0km az=91.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.56**	**177**	Pn	Pn	03 17 28.8	+0.5
	0.4nm,0.3s,baz=336,slow=18,SNR=4.0						
WRA	**Warramunga Arr**	**31.68**	**249**	P	P	03 21 07.4	+0.1
	0.4nm,0.7s,baz=82,slow=9.3,SNR=4.9						
ASAR	**Alice Springs**	**33.05**	**242**	P	P	03 21 19.1	-0.2
	0.7nm,0.8s,baz=66,slow=10,SNR=7.4						
MKAR	**Makanchi Array**	**93.09**	**317**	P	P	03 27 57.5	-0.2
	0.6nm,1.0s,baz=116,slow=3.4,SNR=2.9						

MEX 18 03:16:04.2±0.6, **15°.85N**×**93°.12W**, **h133**^{km}±7^{km}, **MD3.8**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.17**	**214**	*e*P	Pn	03 16 20.8	-1.5
PCIG				*e*S	Sn	03 16 34.1	-2.0
CCIG	**Comitan**	**1.03**	**65**	*e*P	Pn	03 16 26.9	-1.1
CCIG				*e*S	Sn	03 16 43.6	-2.3
THIG		**1.25**	**139**	*e*P	Pn	03 16 29.0	-0.8
THIG				*e*S	Sn	03 16 47.2	-2.0
CMIG	**Matias Romero**	**2.10**	**306**	*e*P	Pn	03 16 38.6	-0.9

CMIG				*i* S	Sn	03 17 03.9	-2.7
VHO	**Vista Hermosa**	**3.68**	**290**	*e*P	Pn	03 16 58.0	-2.0
VHO				*i* S	Sn	03 17 40.3	-2.8

*ISCJB **18** 03:24:23.0±0.6,2°.88S±0°.07×127°.78E±0°.04,h38^{km},mb3.8/3,MS4.4/1,Error ellipse: s-maj=10.1km s-min=5.1km az=174.0*

*DJA **18** 03:24:24.4±0.7,3°S±5°×12°8E±°,h46^{km}±16^{km},M3.9/5,MLv3.9/5*

*IDC **18** 03:24:32.3±4.3,2°.90S×128°.31E,h127^{km}±49^{km},mb3.5/3,mb1 3.6/6,mb1mx3.3/37,mbtmp3.9/6,MS4.4/1,Ms1 4.4/1,ms1mx2.9/31,Error ellipse: s-maj=48.7km s-min=18.2km az=88.0*

ISC 18 03:24:24.2±0.9**,2°.85S**±0°.08×**127°.72E**±0°.04**,h38^{km},n12,** σ**1^{s}77**/15**,mb3.8**/3**,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.73**	**238**	P	**Pn**	**03 24 38.0**	**0.0**
NLAI				S	**Sn**	**03 24 48.6**	**+0.7**
SANI	**Sanana**	**1.90**	**295**	P	**Pn**	**03 24 54.3**	**+0.2**
SANI				S	**Sn**	**03 25 17.1**	**+0.2**
BNDI	**Bandanaira**	**2.74**	**127**	P	**Pn**	**03 25 08.6**	**+2.9**
SIJI	**Sorong**	**4.05**	**61**	P	**Pn**	**03 25 24.6**	**+0.9**
	8.5nm,0.3s,baz=253,slow=14,SNR=7.8						
SIJI				S	**Sn**	**03 26 09.5**	**-0.6**
	baz=233,slow=20,SNR=4.3						
FAKI	**Fak Fak**	**4.53**	**91**	P	**Pn**	**03 25 31.5**	**+1.2**
FAKI				S	**Sn**	**03 26 21.4**	**-0.3**
APSI	**Ampana**	**6.36**	**287**	P	**Pn**	**03 25 59.0**	**+3.5**
FITZ	**Fitzroy Crossi**	**15.29**	**188**	P	**P**	**03 28 03.2**	**+1.4**
	0.1nm,0.3s,baz=20,slow=15,SNR=3.6						
WRA	**Warramunga Arr**	**18.18**	**160**	P	**Pn**	**03 28 32.3**	**-1.5**
	0.7nm,0.3s,baz=342,slow=12,SNR=46						
ASAR	**Alice Springs**	**21.54**	**164**	P	**P**	**03 29 09.4**	**-1.0**
	2.5nm,0.6s,baz=340,slow=11,SNR=27						
STKA	**Stephens Creek**	**31.69**	**157**	P	**P**	**03 30 41.5**	**-2.8**
	1.2nm,0.4s,baz=326,slow=11,SNR=4.0						
JHJ	**Hachijo jima 2**	**37.55**	**17**	LR	LR	03 45 06.1	
	comp=Z,662nm,21.5s,baz=81,slow=33						
MKAR	**Makanchi Array**	**63.53**	**327**	P	**P**	**03 34 51.6**	**+0.8**
	0.3nm,0.6s,baz=130,slow=7.6,SNR=5.1						

*ISCJB **18** 03:38:27.6±0.6,5°.7N±0°.1×32°.82W±0°.07,h12^{km},mb3.9/21,Error ellipse: s-maj=19.1km s-min=10.6km az=4.8*

*IDC **18** 03:38:27.1±0.7,5°.61N×32°.92W,h0^{km},mb3.9/16,mb1 4.1/16,mb1mx3.9/36,mbtmp3.9/16,Error ellipse: s-maj=23.4km s-min=17.1km az=15.0*

*NEIC **18** 03:38:28.8±0.4,5°.65N×32°.86W,h10^{km},mb4.2/6,Error ellipse: s-maj=11.8km s-min=7.6km az=179.0*

ISC 18 03:38:29.1±0.7**,5°.7N**±0°.1×**32°.9W**±0°.1**,h12^{km},n42,** σ**0^{s}86**/35**,mb3.9**/21**,Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SACV	**Santiago Islan**	**12.95**	**44**	*e*Pn	**Pn**	**03 41 30.5**	**-2.6**
H10N3	**ASCENSION HYDR**	**22.72**	**126**	T	T	04 06 58.9	
	baz=305,slow=75,SNR=57						
H10N2	**ASCENSION HYDR**	**22.72**	**126**	T	T	04 06 58.9	
	baz=305,slow=75,SNR=48						
H10N1	**ASCENSION HYDR**	**22.74**	**126**	T	T	04 06 60.0	
	baz=305,slow=75,SNR=65						
H10S3	**ASCENSION HYDR**	**23.25**	**129**	T	T	04 07 41.8	
	baz=308,slow=74,SNR=28						
H10S1	**ASCENSION HYDR**	**23.26**	**129**	T	T	04 07 40.7	
	baz=308,slow=74,SNR=26						
H10S2	**ASCENSION HYDR**	**23.27**	**129**	T	T	04 07 41.2	
	baz=308,slow=74,SNR=27						
DBIC	**Dimbokro**	**27.86**	**87**	P	**P**	**03 44 18.9**	**0.0**
	4.8nm,0.9s,baz=246,slow=12,SNR=3.9						
H05S1	**Guadeloupe/Mar**	**28.85**	**290**	T	T	04 14 22.5	
	SNR=7.8						
TOA1	**Torodi Ar. Sit**	**34.85**	**75**	*e*P	**P**	**03 45 20.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**34.85**	**75**	P	**P**	**03 45 20.1**	**-0.4**
	0.9nm,0.7s,baz=274,slow=8.7,SNR=12						
LPAZ	**La Paz**	**41.17**	**237**	P	**P**	**03 46 13.3**	**-1.1**
	1.1nm,0.8s,baz=98,slow=5.4,SNR=3.6						
TSUM	**Tsumeb**	**55.48**	**118**	P	**P**	**03 48 05.8**	**+1.4**
	2.3nm,0.9s,baz=291,slow=8.9,SNR=4.7						
SCHQ	**Schefferville**	**56.09**	**337**	P	**P**	**03 48 08.8**	**+0.7**
	3.7nm,0.9s,baz=135,slow=10.0,SNR=2.8						
GEC2	**GERESS Array S**	**58.27**	**34**	*e*P	**P**	**03 48 24.5**	**+0.8**
	2.6nm,1.1s						
GERES	**GERESS Array B**	**58.27**	**34**	P	**P**	**03 48 24.5**	**+0.8**
	0.5nm,0.8s,baz=210,slow=7.7,SNR=3.7						
NB2	**NORSAR Subarra**	**64.28**	**22**	P	**P**	**03 49 04.9**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=231,slow=6.5						
NB200	**NORSAR Array S**	**64.28**	**22**	*e*P	**P**	**03 49 05.0**	**+0.8**
NOA	**NORSAR Array B**	**64.28**	**22**	P	**P**	**03 49 05.0**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=230,slow=6.5,SNR=5.1						
BOSA	**Boshof**	**65.47**	**125**	P	**P**	**03 49 12.5**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=278,slow=9.6,SNR=3.9						
AKASG	**Malin Array Be**	**68.14**	**37**	P	**P**	**03 49 29.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=252,slow=6.4,SNR=5.3						
AKBB	**Malin Array Si**	**68.14**	**37**	*e*P	**P**	**03 49 29.4**	**+0.3**
	comp=Z,1.6nm,0.9s						
BRTR	**Keskin Array B**	**68.36**	**50**	P	**P**	**03 49 31.8**	**+0.9**
	comp=Z,0.6nm,1.0s,baz=256,slow=4.3,SNR=3.3						
BR101	**Keskin Array S**	**68.36**	**50**	*e*P	**P**	**03 49 31.8**	**+0.9**
LTX	**Lajitas**	**70.51**	**299**	*e*P	**P**	**03 49 43.6**	**-0.7**
TXAR	**Lajitas Array**	**70.51**	**299**	P	**P**	**03 49 43.6**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=80,slow=5.6,SNR=2.2						
FIA0	**FINESS Array S**	**70.54**	**26**	*e*P	**P**	**03 49 44.4**	**+0.7**
FINES	**FINESS Array B**	**70.54**	**26**	P	**P**	**03 49 44.4**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=251,slow=5.8,SNR=6.2						
O20A	**White River Ci**	**75.18**	**310**	*e*P	**P**	**03 50 12.1**	**+0.1**
	comp=Z,1.8nm,0.8s						
PD31	**Pinedale Array**	**76.39**	**312**	*e*P	**P**	**03 50 19.4**	**+0.4**
PDAR	**Pinedale Array**	**76.39**	**312**	P	**P**	**03 50 19.4**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=76,slow=6.3,SNR=3.7						
REDW	**Red Top Meadow**	**77.39**	**313**	*e*P	**P**	**03 50 25.2**	**+0.7**
	comp=Z,0.3nm,0.8s						
IMW	**Indian Meadow**	**77.49**	**314**	*e*P	**P**	**03 50 24.8**	**-0.3**
	comp=Z,3.4nm,1.1s						
CCUT	**Cedar City**	**79.03**	**307**	*e*P	**P**	**03 50 34.0**	**+0.3**
	comp=Z,3.7nm,1.1s						
WALA	**Waterton Lakes**	**79.86**	**319**	*e*P	**P**	**03 50 38.5**	**+0.6**
YKA	**Yellowknife Ar**	**81.17**	**332**	P	**P**	**03 50 44.0**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=94,slow=5.3,SNR=11						
YKB5	**Yellowknife Ar**	**81.17**	**332**	*e*P	**P**	**03 50 44.0**	**-0.4**
NV01	**Mina Array Sit**	**82.93**	**308**	*e*P	**P**	**03 50 54.5**	**0.0**
NVAR	**Mina Array Bea**	**82.93**	**308**	P	**P**	**03 50 55.7**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=104,slow=5.1,SNR=4.5						
ILAR	**Eielson Array**	**94.86**	**337**	P	**P**	**03 51 51.2**	**+0.4**
	comp=Z,0.6nm,1.1s,baz=198,slow=12,SNR=4.2						
ASAR	**Alice Springs**	**158.05**	**146**	PKP	**PKPdf**	**03 58 25.7**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=281,slow=1.5,SNR=3.9						
WRA	**Warramunga Arr**	**161.14**	**140**	PKPab	**PKPab**	**03 59 12.8**	**-0.8**
	comp=Z,0.6nm,1.0s,baz=199,slow=1.5,SNR=3.4						

*MOS **18** 03:40:47.8±1.1,5°.66N×33°.01W,h10^{km},mb5.4/112,MS5.1/23,Error ellipse: s-maj=6.9km s-min=4.2km az=57.0*

*IDC **18** 03:40:47.0±0.3,5°.68N×32°.97W,h0^{km},mb4.7/32,mb1 4.8/33,mb1mx4.8/37,mbtmp4.7/33,ML3.9/1,MS5.2/25,Ms1 5.2/25,ms1mx5.2/25,Error ellipse: s-maj=12.6km s-min=9.8km az=162.0*

*ISCJB **18** 03:40:48.2±0.1,5°.69N±0°.02×33°.03W±0°.02,h13^{km},mb5.1/337,MS5.2/259,Error ellipse: s-maj=3.2km s-min=2.4km az=159.4*

*NEIC **18** 03:40:48.9±0.2,5°.54N×32°.96W,h10^{km},mb5.3/244,MS5.2/211,MW5.6,MW5.5,Error ellipse: s-maj=5.2km s-min=3.5km az=174.0,Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.33; M$_{\theta\theta}$-2.54; M$_{\phi\phi}$2.87; M$_{r\theta}$-0.87; M$_{\theta\phi}$-1.04; M$_{\phi r}$-0.09; Best double couple: M$_{0}$3.00000×10^{17} NP1:φ$_{s}$33.00000°,δ76.00000°,λ-12.00000°. NP2:φ$_{s}$126.00000°,δ78.00000°,λ-166.00000°. Principal axes: T 3.0700, Plg1.0000°, Azm259.0000°; N -0.0500, Plg72.0000°, Azm165.0000°; P -3.0200, Plg18.0000°, Azm350.0000°;*

*BJI **18** 03:40:49.0,5°.60N×32°.90W,h10^{km},mB5.9/18,mb5.4/1,Ms5.7/25,Ms7 5.4/26*

*NEIC **18** 03:40:49.0±0.0,5°.79N×32°.84W,h11^{km},Moment Tensor Solution. s17 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.06; M$_{\theta\theta}$-0.21; M$_{\phi\phi}$2.27; M$_{r\theta}$0.11; M$_{\theta\phi}$-0.08; M$_{\phi r}$0.29; Best double couple: M$_{0}$2.20000×10^{17} NP1:φ$_{s}$182.00000°,δ49.00000°,λ-85.00000°. NP2:φ$_{s}$355.00000°,δ41.00000°,λ-95.00000°. Principal axes: T 2.2900, Plg3.0000°, Azm268.0000°; N -0.2100, Plg3.0000°, Azm358.0000°; P -2.0800, Plg84.0000°, Azm131.0000°;*

*GCMT **18** 03:40:53.9±0.1,5°.75N±0°.01×32°.85W,h12^{km},MW5.6/137,Moment Tensor Solution. s106,c192; s137,c381; Duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.91±.03; M$_{\theta\theta}$-0.08±.03; M$_{\phi\phi}$2.99±.03; M$_{r\theta}$0.45±.08; M$_{\theta\phi}$-0.56±.02; M$_{\phi r}$-0.47±.07; Best double couple: M$_{0}$3.07000×10^{17} NP1:φ$_{s}$343.00000°,δ51.00000°,λ-99.00000°. NP2:φ$_{s}$177.00000°,δ40.00000°,λ-79.00000°. Principal axes: T 3.1360, Plg5.0000°, Azm79.0000°; N -0.1340, Plg7.0000°, Azm349.0000°; P -3.0050, Plg81.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 18 03:40:49.1±0.8**,5°.53N**±0°.05×**33°.01W**±0°.05**,h12**^{km}±4^{km}**,n1289,** σ**1^{s}34**/1183**,mb5.2**/341**,MS5.2**/261**,22C-23D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**11.64**	**194**	*e*Pn	**Pn**	**03 43 35.0**	**-0.1**
RCBR				*e*Sn	**Sn**	**03 45 40.6**	**-4.6**
RCBR	**Riachuelo**	**11.64**	**194**	*e*P	**Pn**	**03 43 37.2**	**+2.0**
SACV	**Santiago Islan**	**13.17**	**44**	*e*Pn	Pn	03 43 50.3	-5.7
NBCP	**Cabaceiras do**	**19.02**	**199**	*e*P	**Pn**	**03 45 12.6**	**+0.9**
MDP	**Montagnes des**	**19.55**	**270**	P	**Pn**	**03 45 18.2**	**0.0**
	0.4nm,0.3s,baz=168,slow=9.3,SNR=2.8						
MDP				LR	LR	03 51 17.3	
	comp=Z,7μm,21.3s,baz=110,slow=32						
H10N3	**ASCENSION HYDR**	**22.74**	**126**	T	T	04 09 18.7	
	baz=305,slow=75,SNR=358						
H10N2	**ASCENSION HYDR**	**22.74**	**126**	T	T	04 09 19.1	
	baz=305,slow=75,SNR=234						
H10N1	**ASCENSION HYDR**	**22.76**	**126**	T	T	04 09 17.9	
	baz=305,slow=75,SNR=258						
ASCN	**Ascension**	**22.91**	**126**	PFAKE		03 46 00.0	+7.0
ASCN				LR	LR		
	comp=Z,5μm,18.0s						
H10S3	**ASCENSION HYDR**	**23.27**	**128**	T	T	04 10 04.8	
	baz=308,slow=75,SNR=209						
H10S1	**ASCENSION HYDR**	**23.27**	**128**	T	T	04 10 04.8	
	baz=308,slow=75,SNR=219						
H10S2	**ASCENSION HYDR**	**23.28**	**128**	T	T	04 10 03.6	
	baz=308,slow=75,SNR=192						
MCI8	**Montes Claros**	**24.54**	**206**	*e*P	**P**	**03 46 09.8**	**+0.9**
MCI9	**Montes Claros**	**24.57**	**206**	*e*P	**P**	**03 46 09.9**	**+0.8**
MCI7	**Montes Claros**	**24.61**	**206**	*e*P	**P**	**03 46 10.6**	**+1.2**
MCI6	**Montes Claros**	**24.66**	**206**	*e*P	**P**	**03 46 11.1**	**+1.1**
SJMB	**Sao Joao De Ma**	**25.39**	**198**	*e*P	**P**	**03 46 18.0**	**+1.6**
BSFB	**Barra de Sao F**	**25.41**	**198**	*e*P	**P**	**03 46 18.0**	**+1.4**
RIB01	**Linhares ES**	**25.73**	**196**	*e*P	**P**	**03 46 21.1**	**+1.6**
BDFB	**Brasilia**	**25.75**	**215**	*e*P	**P**	**03 46 21.7**	**+1.8**
BDFB				pmax	pmax		
	comp=Z,71nm,1.4s						
BDFB	**Brasilia**	**25.75**	**215**	P	**P**	**03 46 21.2**	**+1.3**
	comp=Z,7.6nm,0.9s,baz=42,slow=9.2,SNR=9.7						
BDFB				LR	LR	03 55 34.1	
	comp=Z,8μm,20.0s,baz=43,slow=34						
ALF01	**Guarapari-ES**	**27.06**	**196**	*e*P	**P**	**03 46 33.4**	**+1.9**
BBGH	**Gun Hill**	**27.25**	**288**	PFAKE		03 46 50.0	+17
BBGH				LR	LR		
	comp=Z,5μm,20.0s						
PMNB	**Patos De Minas**	**27.33**	**209**	*e*P	**P**	**03 46 36.6**	**+2.4**
PTGA	**Pitinga**	**27.63**	**258**	P	**P**	**03 46 37.2**	**+0.4**
	comp=Z,6.6nm,0.5s,baz=95,slow=11,SNR=10.0						
PTGA				LR	LR	03 57 07.5	
	comp=Z,9μm,18.6s,baz=66,slow=35						
IPMB	**Ipameri, GO**	**27.77**	**212**	*e*P	**P**	**03 46 40.1**	**+2.1**
LIC	**Lamto**	**27.84**	**87**	*e*P	**P**	**03 46 36.5**	**-2.2**
	comp=Z,169nm,1.3s						
TIC	**Toumodi**	**27.85**	**86**	*e*P	**P**	**03 46 36.5**	**-2.3**
DBIC	**Dimbokro**	**28.01**	**86**	P	**P**	**03 46 38.4**	**-1.8**
	comp=Z,65nm,1.3s						
DBIC				PcP	**PcP**	**03 49 54.8**	**-0.4**
DBIC	**Dimbokro**	**28.01**	**86**	P	**P**	**03 46 38.4**	**-1.8**
DBIC						03 49 54.8	
DBIC				pmax	pmax		
	comp=Z,65nm,1.3s						
DBIC	**Dimbokro**	**28.01**	**86**	P	**P**	**03 46 38.4**	**-1.8**
	comp=Z,29nm,1.1s,baz=252,slow=11,SNR=11						
DBIC				PcP	**PcP**	**03 49 54.8**	**-0.4**
	comp=Z,9.9nm,0.9s,baz=214,slow=7.4,SNR=4.2						
DBIC				LR	LR	03 55 19.7	
	comp=Z,7μm,21.5s,baz=246,slow=31						
DBIC	**Dimbokro**	**28.01**	**86**	*e*P	**P**	**03 46 38.7**	**-1.5**
KIC	**Kosan Boka**	**28.12**	**87**	*e*P	**P**	**03 46 39.2**	**-2.0**
	comp=Z,165nm,1.4s						
CAM01	**Campos-RJ**	**28.47**	**197**	*e*P	**P**	**03 46 44.9**	**+0.8**
H05S1	**Guadeloupe/Mar**	**28.77**	**290**	T	T	04 16 49.8	
	SNR=53						
BSCB	**Bom Sucesso**	**28.78**	**203**	*e*P	**P**	**03 46 48.1**	**+1.1**
SVB	**Belmont**	**28.88**	**287**	PFAKE		03 47 00.0	+12
SVB				LR	LR		
	comp=Z,2μm,20.0s						
DUB01	**Friburgo-RJ**	**28.93**	**198**	*e*P	**P**	**03 46 49.5**	**+1.2**
GRGR	**Grenville**	**29.04**	**285**	PFAKE		03 47 00.0	+11
GRGR				LR	LR		
	comp=Z,2μm,21.0s						
FDF	**Fort de France**	**29.14**	**290**	PFAKE		03 47 00.0	+10
FDF				LR	LR		
	comp=Z,2μm,20.0s						
VAS01	**Vassouras-RJ**	**29.46**	**200**	*e*P	**P**	**03 46 55.6**	**+2.6**
H05N1	**Guadeloupe/Mar**	**29.51**	**294**	T	T	04 17 42.6	
	SNR=6.6						
KOWA	**Kowa**	**29.88**	**70**	PFAKE		03 47 10.0	+13
KOWA				LR	LR		
	comp=Z,700nm,22.0s						
ITRB	**Iturama**	**30.33**	**214**	*e*P	**P**	**03 47 03.8**	**+3.0**
ESAR	**Angra dos Reis**	**30.49**	**201**	*e*P	**P**	**03 47 05.2**	**+3.2**
BB19B	**Bebedouro**	**30.50**	**209**	*e*P	**P**	**03 47 05.2**	**+3.0**
ANWB	**Willy Bob**	**30.61**	**296**	PFAKE		03 47 20.0	+17
ANWB				LR	LR		
	comp=Z,4μm,22.0s						
FUL	**Funchal**	**30.89**	**27**	*e*T	T	04 18 50.3	
PMOZ	**Porto Moniz, M**	**30.90**	**27**	*e*LQ	LQ	03 53 27.1	
PMOZ				*e*LR	LR	03 54 52.7	
	comp=Z,3μm,20.0s						
PMOZ	**Porto Moniz, M**	**30.90**	**27**	*e*T	T	04 18 43.7	
PMAR	**Madeira**	**30.95**	**27**	*e*T	T	04 18 43.2	
SALV	**Santo Antonio**	**30.95**	**226**	*e*P	**P**	**03 47 09.3**	**+3.1**
C2SB	**Chapadao do Su**	**31.06**	**219**	*e*P	**P**	**03 47 10.1**	**+3.0**
RCLB	**Rio Claro- Sao**	**31.20**	**207**	*e*P	**P**	**03 47 11.3**	**+2.9**
SEUS	**St. Eustatius**	**31.63**	**295**	PFAKE		03 47 20.0	+7.8
SEUS				LR	LR		
	comp=Z,7μm,22.0s						
PSMA	**Santa Maria**	**32.14**	**12**	*e*T	T	04 20 18.3	
PSMN	**Pico do Norte,**	**32.16**	**12**	*e*T	T	04 20 17.1	
SPB	**Sao Paulo**	**32.19**	**205**	PFAKE		03 47 30.0	+13
SPB				LR	LR		
	comp=Z,5μm,19.0s						
CMLA	**Cha da Macela**	**32.80**	**11**	PFAKE		03 47 30.0	+7.7
CMLA				LR	LR		
	comp=Z,3μm,20.0s						
BART	**Pico Bartolome**	**32.89**	**11**	*e*T	T	04 21 16.4	
FRTB	**Fartura**	**32.94**	**209**	*e*P	**P**	**03 47 26.0**	**+2.4**
ABVI	**Anegada Island**	**33.24**	**296**	PFAKE		03 47 40.0	+14
ABVI				LR	LR		
	comp=Z,4μm,22.0s						
STVI	**Saint Thomas**	**33.68**	**295**	PFAKE		03 47 40.0	+10
STVI				LR	LR		
	comp=Z,4μm,20.0s						
CUPR	**Culebra, Puert**	**33.96**	**295**	*e*P	**P**	**03 47 31.6**	**-1.0**
	comp=Z,50nm,1.1s						
CUPR				LR	LR		
	comp=Z,5μm,22.0s						
TRCB	**Terra Rica**	**34.07**	**214**	*e*P	**P**	**03 47 35.5**	**+2.0**
AQDB	**Aquidauana**	**34.13**	**220**	*e*P	**P**	**03 47 36.9**	**+2.9**
MTP	**Monte Pirata**	**34.14**	**294**	*e*P	**P**	**03 47 31.9**	**-2.3**
	comp=Z,60nm,1.0s						
MTP				LR	LR		
	comp=Z,6μm,22.0s						
TIJ01	**Guaruva-PR**	**34.38**	**206**	*e*P	**P**	**03 47 39.2**	**+2.9**
SHEL	**Horse Pasture**	**34.41**	**129**	PFAKE		03 47 50.0	+13
SHEL				LR	LR		
	comp=Z,4μm,20.0s						
HUMP	**Col San Antoni**	**34.43**	**294**	*e*P	**P**	**03 47 37.1**	**+0.4**
	comp=Z,63nm,1.0s						
HUMP				LR	LR		
	comp=Z,7μm,22.0s						
CBYP	**Canovanas**	**34.47**	**294**	PFAKE		03 47 50.0	+13
CBYP				LR	LR		
	comp=Z,6μm,22.0s						
SJG	**San Juan**	**34.69**	**294**	*e*P	**P**	**03 47 39.4**	**+0.5**
	comp=Z,141nm,1.6s						
SJG				LR	LR		
	comp=Z,6μm,21.0s						
SJG	**San Juan**	**34.69**	**294**	*e*P	**P**	**03 47 38.2**	**-0.7**
SJG	**San Juan**	**34.69**	**294**	*e*P	**P**	**03 47 40.2**	**+1.3**
SJG				pmax	pmax		
	comp=Z,140nm,1.6s						
SJG	**San Juan**	**34.69**	**294**	*e*P	**P**	**03 47 38.2**	**-0.7**
SJG	**San Juan**	**34.69**	**294**	P	**P**	**03 47 38.0**	**-0.9**
	comp=Z,31nm,1.0s,baz=43,slow=6.7,SNR=3.7						
TOC5	**Torodi Ar. Sit**	**35.01**	**75**	PFAKE		03 47 50.0	+8.2
TOC5				LR	LR		
	comp=Z,9μm,20.0s						
TOC7	**Torodi Ar. Sit**	**35.02**	**75**	PFAKE		03 47 50.0	+8.1
TOC7				LR	LR		
	comp=Z,7μm,19.0s						
TOB4	**Torodi Ar. Sit**	**35.02**	**75**	PFAKE		03 47 50.0	+8.1
TOB4				LR	LR		
	comp=Z,7μm,19.0s						
TOB5	**Torodi Ar. Sit**	**35.02**	**75**	PFAKE		03 47 50.0	+8.1
TOB5				LR	LR		
	comp=Z,8μm,20.0s						
TOA1	**Torodi Ar. Sit**	**35.03**	**75**	PFAKE		03 47 50.0	+8.0
TOA1				LR	LR		
	comp=Z,7μm,20.0s						
TOA3	**Torodi Ar. Sit**	**35.03**	**75**	PFAKE		03 47 50.0	+8.0
TOA3				LR	LR		
	comp=Z,7μm,20.0s						
TOA0	**Torodi Ar. Sit**	**35.03**	**75**	*e*P	**P**	**03 47 38.7**	**-3.3**
TOA0				*e*sP	**P**	**03 47 40.1**	**-1.9**
TOA0				*e*PcP	**PcP**	**03 50 13.8**	**-0.3**
TOA0				LR	LR		
	comp=Z,8μm,20.0s						
TORD	**Torodi Ar. Bea**	**35.03**	**75**	P	**P**	**03 47 39.2**	**-2.8**
	comp=Z,8.8nm,0.7s,baz=274,slow=8.6,SNR=59						
TORD				PcP	**PcP**	**03 50 13.2**	**-1.0**
	comp=Z,5.0nm,0.9s,baz=290,slow=2.9,SNR=9.7						
TORD				LR	LR	03 59 57.4	
	comp=Z,8μm,21.9s,baz=295,slow=33						
TOC4	**Torodi Ar. Sit**	**35.04**	**75**	PFAKE		03 47 50.0	+8.0
TOC4				LR	LR		
	comp=Z,8μm,21.0s						
TOA2	**Torodi Ar. Sit**	**35.04**	**75**	PFAKE		03 47 50.0	+8.0
TOA2				LR	LR		
	comp=Z,8μm,20.0s						
TOB3	**Torodi Ar. Sit**	**35.04**	**75**	PFAKE		03 47 50.0	+7.9
TOB3				LR	LR		
	comp=Z,8μm,20.0s						
TOC1	**Torodi Ar. Sit**	**35.05**	**75**	PFAKE		03 47 50.0	+7.9
TOC1				LR	LR		
	comp=Z,9μm,20.0s						
TOB2	**Torodi Ar. Sit**	**35.05**	**75**	PFAKE		03 47 50.0	+7.9
TOB2				LR	LR		
	comp=Z,8μm,20.0s						
TOC3	**Torodi Ar. Sit**	**35.06**	**75**	PFAKE		03 47 50.0	+7.8
TOC3				LR	LR		
	comp=Z,8μm,20.0s						
TOC2	**Torodi Ar. Sit**	**35.06**	**75**	PFAKE		03 47 50.0	+7.8
TOC2				LR	LR		
	comp=Z,7μm,19.0s						
OBIP	**Obispado Ponce**	**35.09**	**294**	*e*P	**P**	**03 47 41.4**	**-1.0**
	comp=Z,48nm,1.0s						
OBIP				LR	LR		
	comp=Z,4μm,21.0s						
EMPR	**Esperanza - Ma**	**35.14**	**294**	PFAKE		03 48 00.0	+17
EMPR				LR	LR		
	comp=Z,5μm,21.0s						
PTGB	**Pitanga**	**35.33**	**211**	*e*P	**P**	**03 47 46.7**	**+2.3**
MPR	**Mayaguez**	**35.62**	**294**	PFAKE		03 48 00.0	+13
MPR				LR	LR		
	comp=Z,6μm,20.0s						
AGP	**Aguadilla**	**35.68**	**294**	PFAKE		03 48 00.0	+13
AGP				LR	LR		
	comp=Z,4μm,21.0s						
TER01	**Tubaro-SC**	**37.26**	**204**	*e*P	**P**	**03 48 03.7**	**+3.0**
RTC	**Rabat Centre**	**37.28**	**37**	PFAKE		03 48 10.0	+9.0
RTC				LR	LR		
	comp=Z,14μm,20.0s						
ITAB	**Concordia**	**37.45**	**209**	*e*P	**P**	**03 48 05.2**	**+2.7**
SDV	**Santo Domingo**	**37.47**	**277**	*e*P	**P**	**03 48 03.6**	**+0.6**
	comp=Z,31nm,0.9s						
SDV				LR	LR		
	comp=Z,4μm,20.0s						
SDV	**Santo Domingo**	**37.47**	**277**	*e*P	**P**	**03 48 03.7**	**+0.7**
SDV	**Santo Domingo**	**37.47**	**277**	*e*P	**P**	**03 48 03.7**	**+0.7**
SDV	**Santo Domingo**	**37.47**	**277**	P	**P**	**03 48 02.9**	**-0.2**
	comp=Z,10nm,0.9s,baz=29,slow=3.1,SNR=9.6						
MDT	**Midelt**	**37.91**	**41**	P	**P**	**03 48 06.3**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=235,slow=12,SNR=5.2						
SDD	**Santo Domingo**	**38.22**	**293**	PFAKE		03 48 20.0	+11
SDD				LR	LR		
	comp=Z,5μm,22.0s						
CNLB	**Canela**	**38.66**	**205**	*e*P	**P**	**03 48 14.7**	**+2.0**
PVAQ	**Vaqueiros**	**39.23**	**33**	*e*LQ	LQ	03 56 56.5	
PVAQ				*e*LR	LR	03 58 58.6	
	comp=Z,3μm,20.0s						
PAMC	**Pamplona, Colo**	**39.48**	**275**	*e*P	**P**	**03 48 22.1**	**+1.8**
PAMC	**Pamplona, Colo**	**39.48**	**275**	*e*P	**P**	**03 48 22.1**	**+1.8**
CPUP	**Villa Florida**	**39.48**	**216**	*e*P	**P**	**03 48 20.1**	**+0.5**
	comp=Z,22nm,1.3s						
CPUP				PcP	**PcP**	**03 50 26.9**	**-0.5**
CPUP	**Villa Florida**	**39.48**	**216**	*e*P	**P**	**03 48 20.1**	**+0.5**
CPUP				pmax	pmax		
	comp=Z,22nm,1.2s						
CPUP	**Villa Florida**	**39.48**	**216**	P	**P**	**03 48 20.8**	**+1.3**
	comp=Z,7.4nm,1.2s,baz=27,slow=8.6,SNR=8.1						
CPUP				PcP	**PcP**	**03 50 26.9**	**-0.5**
	comp=Z,6.8nm,1.0s,baz=51,slow=4.4,SNR=4.7						
CPUP				LR	LR	04 04 18.6	
	comp=Z,6μm,19.1s,baz=38,slow=36						
CPUP	**Villa Florida**	**39.48**	**216**	*e*P	**P**	**03 48 22.5**	**+2.9**
SDDR	**Presa de Saban**	**39.62**	**293**	*e*P	**P**	**03 48 21.8**	**+0.9**
	comp=Z,64nm,0.9s						
SDDR				LR	LR		
	comp=Z,5μm,22.0s						
GUVC	**San Jose del G**	**39.62**	**267**	*e*P	**P**	**03 48 21.3**	**+0.3**
GUVC	**San Jose del G**	**39.62**	**267**	*e*P	**P**	**03 48 21.3**	**+0.3**
RUSC	**La Rusia**	**39.87**	**273**	*e*P	**P**	**03 48 25.7**	**+2.1**
RUSC	**La Rusia**	**39.87**	**273**	*e*P	**P**	**03 48 25.7**	**+2.1**
BARC	**Barichara**	**39.96**	**274**	*e*P	**P**	**03 48 25.8**	**+1.8**
BARC	**Barichara**	**39.96**	**274**	*e*P	**P**	**03 48 25.8**	**+1.8**
OCAC	**Ocana**	**40.10**	**276**	*e*P	**P**	**03 48 24.6**	**-0.5**
OCAC	**Ocana**	**40.10**	**276**	*e*P	**P**	**03 48 24.6**	**-0.5**
GRTK	**Grand Turk**	**40.18**	**297**	PFAKE		03 48 40.0	+15
GRTK				LR	LR		
	comp=Z,2μm,19.0s						
PMTG	**Montargil**	**40.22**	**30**	*e*P	**P**	**03 48 26.4**	**+0.9**
	comp=Z,54nm,1.7s						
PESTR	**Estremoz**	**40.39**	**31**	*e*P	**P**	**03 48 30.5**	**+3.5**
	comp=Z,48nm,2.2s						
PESTR	**Estremoz**	**40.39**	**31**	PFAKE		03 48 40.0	+13
PESTR				LR	LR		
	comp=Z,2μm,19.0s						
BRRC	**Barranca, Sant**	**40.48**	**274**	*e*P	**P**	**03 48 26.3**	**-1.7**
BRRC	**Barranca, Sant**	**40.48**	**274**	*e*P	**P**	**03 48 26.3**	**-1.7**
PTOM	**Tomar**	**40.55**	**30**	*e*P	**P**	**03 48 31.3**	**+3.0**
	comp=Z,71nm,1.5s						
CHIC	**Chingaza**	**40.57**	**271**	*e*P	**P**	**03 48 29.2**	**0.0**
CHIC	**Chingaza**	**40.57**	**271**	*e*P	**P**	**03 48 29.2**	**0.0**
CPSB	**Cacapava Do Su**	**40.74**	**208**	*e*P	**P**	**03 48 32.3**	**+2.3**
SMLC	**San Martn de**	**40.86**	**277**	*e*P	**P**	**03 48 28.8**	**-2.4**
SMLC	**San Martn de**	**40.86**	**277**	*e*P	**P**	**03 48 28.8**	**-2.4**
PMRV	**Marv??o**	**40.91**	**31**	*e*P	**P**	**03 48 31.4**	**+0.1**
	comp=Z,77nm,1.6s						
PMRV				*e*LQ	LQ	03 57 35.3	
PMRV				*e*LR	LR	03 59 21.4	
	comp=Z,3μm,22.0s						
TAM	**Tamanrasset**	**40.94**	**61**	*e*P	**P**	**03 48 31.8**	**-0.1**
	comp=Z,30nm,1.4s						
TAM				LR	LR		
	comp=Z,6μm,19.0s						
TAM	**Tamanrasset**	**40.94**	**61**	*e*P	**P**	**03 48 31.8**	**-0.1**
TAM				pmax	pmax		
	comp=Z,30nm,1.4s						
LPAZ	**La Paz**	**40.95**	**237**	*e*P	**P**	**03 48 34.3**	**+1.7**
LPAZ				pmax	pmax		
	comp=Z,62nm,1.5s						
LPAZ	**La Paz**	**40.95**	**237**	P	**P**	**03 48 34.0**	**+1.4**
	comp=Z,8.5nm,0.8s,baz=56,slow=8.9,SNR=26						
LPAZ				PcP	**PcP**	**03 50 33.2**	**+0.1**
	comp=Z,4.5nm,0.9s,baz=34,slow=7.1,SNR=2.9						
LPAZ				LR	LR	04 05 08.1	
	comp=Z,7μm,18.9s,baz=62,slow=36						
LPAZ	**La Paz**	**40.95**	**237**	*e*P	**P**	**03 48 34.3**	**+1.7**

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SMRC  Santa Marta, M    41.13 281 eP     P      03 48 39.3 +5.9
SMRC  Santa Marta, M    41.13 281 eP     P      03 48 39.3 +5.9
ROSC  El Rosal          41.14 271 eP     P      03 48 33.9 -0.1
      comp=Z,46nm,1.4s
ROSC  El Rosal          41.14 271 eP     P      03 48 33.7 -0.3
ROSC  El Rosal          41.14 271 eP     P      03 48 33.7 -0.3
ROSC  El Rosal          41.14 271  P     P      03 48 35.5 +1.5
      comp=Z,9.5nm,0.9s,baz=106,slow=4.2,SNR=8.7
ROSC                               LR    LR     04 04 24.6
      comp=Z,4µm,21.8s,baz=106,slow=34
PTBC  PUERTO BERRIO,    41.22 274 eP     P      03 48 33.4 -0.9
PTBC  PUERTO BERRIO,    41.22 274 eP     P      03 48 33.4 -0.9
MTE   Manteigas         41.57  30 eLQ    LQ     03 57 47.3
MTE                               eLR    LR     03 59 48.1
      comp=Z,3µm,22.0s
MTE   Manteigas         41.57  30  PFAKE        03 48 50.0  +13
MTE                                LR    LR
      comp=Z,3µm,19.0s
ZARC  Zaragoza, Cauc    41.62 275 eP     P      03 48 37.1 -0.3
ZARC  Zaragoza, Cauc    41.62 275 eP     P      03 48 37.1 -0.3
PLTB  Pedras Altas      41.96 207 eP     P      03 48 40.9 +0.9
PTLC  Puerto Leguiza    42.06 264 eP     P      03 48 42.3 +1.2
PTLC  Puerto Leguiza    42.06 264 eP     P      03 48 42.3 +1.2
RREF  El Recreo         42.16 271 eP     P      03 48 42.5 -0.2
RREF  El Recreo         42.16 271 eP     P      03 48 42.5 -0.2
ANIL  Santa Ana         42.24 271 eP     P      03 48 40.1 -2.8
ANIL  Santa Ana         42.24 271 eP     P      03 48 40.1 -2.8
HELC  Santa Helena      42.30 273 eP     P      03 48 43.0 -0.4
HELC  Santa Helena      42.30 273 eP     P      03 48 43.0 -0.4
MVO   Moncorvo          42.41  29 eLQ    LQ     03 58 17.0
MVO                               eLR    LR     04 00 17.8
      comp=Z,3µm,22.0s
PGAV  Gavieira, Arco    42.44  28 eLQ    LQ     03 58 15.1
PGAV                              eLR    LR     04 00 12.7
      comp=Z,2µm,20.0s
PAB   San Pablo         42.60  33 eP     P      03 48 45.8 +0.5
      comp=Z,30nm,1.5s
PAB                                LR    LR
      comp=Z,3µm,20.0s
PAB   San Pablo         42.60  33 eP     P      03 48 45.8 +0.5
PAB                                pmax  pmax
      comp=Z,30nm,1.5s
PAB                                MLR   MLR
      comp=Z,3µm,20.0s
FLOC  Florencia         42.73 266 eP     P      03 48 45.4 -1.3
FLOC  Florencia         42.73 266 eP     P      03 48 45.4 -1.3
ESDC  Sonseca Array     42.91  33  P     P      03 48 46.6 -1.0
      comp=Z,7.3nm,1.1s,baz=227,slow=8.2,SNR=16
ESDC                               PcP   PcP    03 50 39.1 +0.7
      comp=Z,2.1nm,1.1s,baz=198,slow=1.5,SNR=4.0
ESDC                               LR    LR     04 03 39.3
      comp=Z,2µm,20.2s,baz=220,slow=32
ESLA  Sonseca Array     42.91  33 eP     P      03 48 46.4 -1.3
      comp=Z,41nm,1.6s
ESLA                               LR    LR
      comp=Z,2µm,19.0s
ES19  SONSECA Array     42.96  33 eP     P      03 48 47.6 -0.5
ES19                              ePcP   PcP    03 50 39.9 +1.2
PLMC  San Jos del P     43.09 271 eP     P      03 48 49.3 -0.3
PLMC  San Jos del P     43.09 271 eP     P      03 48 49.3 -0.3
YOTC  Yotoco, Valle     43.21 270 eP     P      03 48 48.3 -2.3
YOTC  Yotoco, Valle     43.21 270 eP     P      03 48 48.3 -2.3
CART  Cartagena         43.23  38  PFAKE        03 49 00.0  +10
CART                               LR    LR
      comp=Z,900nm,20.0s
GTBY  Guantanamo Bay    43.34 293  PFAKE        03 49 00.0 +8.6
GTBY                               LR    LR
      comp=Z,2µm,21.0s
PCON  Cinco Dias        43.40 268 eP     P      03 48 53.5 +0.9
PCON  Cinco Dias        43.40 268 eP     P      03 48 53.5 +0.9
MNMC  Minye Minye       43.57 235 eP     P      03 48 51.4 -2.2
      comp=Z,19nm,1.1s
MNMC                               LR    LR
      comp=Z,3µm,20.0s
SOTA  Rioblanco         43.62 267 eP     P      03 48 55.0 +0.7
SOTA  Rioblanco         43.62 267 eP     P      03 48 55.0 +0.7
POPC  Popayan, Colom    43.65 268 eP     P      03 48 53.0 -1.3
POPC  Popayan, Colom    43.65 268 eP     P      03 48 53.0 -1.3
PB11  IPOC Station P    43.94 234  PFAKE        03 49 10.0  +14
PB11                               LR    LR
      comp=Z,5µm,20.0s
CRUC  La Cruz           44.02 267 eP     P      03 49 00.2 +2.8
CRUC  La Cruz           44.02 267 eP     P      03 49 00.2 +2.8
GCUF  Volcan Galeras    44.45 266 eP     P      03 49 01.2 +0.1
GCUF  Volcan Galeras    44.45 266 eP     P      03 49 01.2 +0.1
PB01  IPOC Station P    44.48 232  PFAKE        03 49 10.0 +9.4
PB01                               LR    LR
      comp=Z,4µm,20.0s
LVC   Limon Verde       44.89 230 eP     P      03 49 04.4 +0.2
      comp=Z,14nm,1.0s
LVC                                LR    LR
      comp=Z,3µm,20.0s
LVC   Limon Verde       44.89 230 eP     P      03 49 04.4 +0.2
LVC                                pmax  pmax
      comp=Z,13nm,1.0s
LVC                                MLR   MLR
      comp=Z,3µm,20.0s
MTDJ  Mount Denham      45.23 290  PFAKE        03 49 20.0  +13
MTDJ                               LR    LR
      comp=Z,3µm,21.0s
OTAV  Otavalo           45.67 265 eP     P      03 49 11.7 +1.0
      comp=Z,16nm,1.1s
OTAV                              ePcP   PcP    03 50 49.8 +0.9
OTAV                               LR    LR
      comp=Z,3µm,22.0s
OTAV  Otavalo           45.67 265 eP     P      03 49 11.7 +1.0
OTAV                              e             03 50 49.8
OTAV                               pmax  pmax
      comp=Z,16nm,1.1s
OTAV                               MLR   MLR
      comp=Z,3µm,22.0s
PB04  IPOC Station P    45.69 231  PFAKE        03 49 20.0  +10
PB04                               LR    LR
      comp=Z,4µm,22.0s
BCIP  Isla Barro Col    46.56 277 eP     P      03 49 17.0 -0.1
      comp=Z,126nm,1.4s
BCIP                               LR    LR
      comp=Z,2µm,21.0s
PB10  IPOC Station P    46.65 230  PFAKE        03 49 30.0  +12
PB10                               LR    LR
      comp=Z,6µm,20.0s
GO02  Mina Guanaco      46.85 228 eP     P      03 49 19.0 -0.6
      comp=Z,72nm,1.3s
NNA   Nana              46.94 248  PFAKE        03 49 30.0  +10
NNA                                LR    LR
      comp=Z,4µm,18.0s
HAL   Halifax           47.25 330 eP     P      03 49 21.6 -0.4
      comp=Z,146nm,1.2s
HAL   Halifax           47.25 330 eP     P      03 49 21.6 -0.4
HAL                                pmax  pmax
      comp=Z,150nm,1.2s
KEST  Kesra             49.15  46  P     P      03 49 36.8 -0.2
      comp=Z,45nm,1.6s
KEST  Kesra             49.15  46  P     P      03 49 36.8 -0.2
      comp=Z,8.8nm,1.1s,baz=236,slow=3.4,SNR=6.3
KEST                               LR    LR     04 10 15.4
      comp=Z,6µm,19.4s,baz=215,slow=36
ROSF  Rostrenen         49.61  26 eP     P      03 49 43.9 +3.7
ROSF                               pmax  pmax
      comp=Z,86nm,1.3s
CAF   Calviac           49.75  32 eP     P      03 49 45.0 +3.6
CAF                                pmax  pmax
      comp=Z,76nm,1.8s
MFF   Saint Martin d    49.77  29 eP     P      03 49 45.0 +3.5
MFF                                pmax  pmax
      comp=Z,114nm,1.8s
060A  Indiantown        49.85 301  PFAKE        03 49 50.0 +7.6
060A                               LR    LR
      comp=Z,3µm,22.0s
060A  Indiantown        49.85 301  P     P      03 49 43.0 +0.6
      baz=107
SGMF  Saint Gilles      49.86  26 eP     P      03 49 43.4 +1.3
SGMF                               pmax  pmax
      comp=Z,110nm,1.4s
LCO   Las Campanas      49.93 224  PFAKE        03 50 00.0  +17
LCO                                LR    LR
      comp=Z,2µm,22.0s
061Z  Ochoppi           50.00 299  PFAKE        03 50 00.0  +16
061Z                               LR    LR
      comp=Z,2µm,21.0s
HRV   Adam Dziewonsk    50.20 323  P     P      03 49 45.5 +0.7
      baz=126
059A  Moore Haven       50.50 301  PFAKE        03 50 00.0  +13
059A                               LR    LR
      comp=Z,3µm,21.0s
059A  Moore Haven       50.50 301  P     P      03 49 47.4  0.0
      baz=106
PKME  Peaks-Kenny Pk    50.62 327  PFAKE        03 50 00.0  +12
PKME                               LR    LR
      comp=Z,1µm,19.0s
TCF   Toulx Ste Croi    50.74  31 eP     P      03 49 51.2 +2.4
TCF                                pmax  pmax
      comp=Z,41nm,1.5s
CNNC  Cliffs of the     50.78 312  PFAKE        03 50 00.0  +11
CNNC                               LR    LR
      comp=Z,3µm,21.0s
HDC   Heredia           50.79 278  PFAKE        03 50 00.0  +10
HDC                                LR    LR
      comp=Z,2µm,19.0s
PAL   Palisades         50.81 320  P     P      03 49 49.7 +0.3
      baz=123
TRQA  Tornquist         51.04 209  PFAKE        03 50 00.0 +8.8
TRQA                               LR    LR
      comp=Z,2.0nm,20.0s
ESPN  Las Esperanzas    51.05 281  PFAKE        03 50 00.0 +8.4
ESPN                               LR    LR
      comp=Z,1µm,20.0s
DWPF  Disney Wildern    51.07 302  PFAKE        03 50 00.0 +8.4
DWPF                               LR    LR
      comp=Z,4µm,22.0s
058A  Arcadia           51.09 300  P     P      03 49 52.3 +0.5
      baz=106
LDF   La Druitiere      51.21  28 eP     P      03 49 52.5 +0.2
LDF                                pmax  pmax
      comp=Z,62nm,1.4s
BGF   Bois d'Agland     51.25  31 eP     P      03 49 55.1 +2.5
BGF                                pmax  pmax
      comp=Z,56nm,1.4s
658A  Bunnell           51.32 304  PFAKE        03 50 10.0  +17
658A                               LR    LR
      comp=Z,4µm,22.0s
SSB   Saint Sauveur     51.32  33 eP     P      03 49 52.0 -1.3
SSB                               epP    P      03 49 55.3 +2.0
SSB                                LR    LR
      comp=Z,2µm,20.0s
SSB   Saint Sauveur     51.32  33 eP     P      03 49 52.0 -1.3
SSB                               e*PP   P      03 49 55.3 +2.0
JTS   JuntasAbangare    51.62 279  PFAKE        03 50 10.0  +14
JTS                                LR    LR
      comp=Z,2µm,19.0s
957A  Wimauma           51.63 301  PFAKE        03 50 10.0  +14
957A                               LR    LR
      comp=Z,3µm,20.0s
NHSC  New Hope          51.69 308  PFAKE        03 50 10.0  +14
NHSC                               LR    LR
      comp=Z,1µm,20.0s
CBN   Corbin Frederi    51.72 315  PFAKE        03 50 10.0  +14
CBN                                LR    LR
      comp=Z,2µm,21.0s
857A  Zephyrhills       51.79 302  P     P      03 49 57.3 +0.3
      baz=106
657A  Interlachen       51.87 303  P     P      03 49 58.3 +0.8
      baz=108
SSF   Saint Saulge      51.92  31 eP     P      03 49 59.9 +2.3
SSF                                pmax  pmax
      comp=Z,46nm,1.6s
CLF   Chambon-Foret     51.94  29 eP     P      03 49 55.4 -2.3
CLF                               epP    P      03 49 59.8 +2.1
CLF                                LR    LR
      comp=Z,2µm,18.0s
257A  Skidaway Islan    51.95 307  PFAKE        03 50 10.0  +12
257A                               LR    LR
      comp=Z,2µm,21.0s
N59A  State Game Lan    51.96 319  P     P      03 49 58.7 +0.6
      baz=121
R58B  Mineral           51.96 315 eP     P      03 49 58.8 +0.7
      comp=Z,38nm,1.3s
R58B                               LR    LR
      comp=Z,2µm,19.0s
R58B  Mineral           51.96 315  P     P      03 49 58.6 +0.5
      baz=117
LOR   Lormes            52.24  31 eP     P      03 50 00.2 +0.2
LOR                                pmax  pmax
      comp=Z,13nm,1.0s
SAOF  Saorge            52.26  36  P     P      03 50 00.3  0.0
SAOF                               pmax  pmax
      comp=Z,41nm,1.7s
456A  Hilliard          52.35 305  PFAKE        03 50 10.0 +8.9
456A                               LR    LR
      comp=Z,5µm,22.0s
656A  Willston          52.36 303  PFAKE        03 50 10.0 +8.8
656A                               LR    LR
      comp=Z,4µm,21.0s
BNI   Bardonecchia      52.38  35 eP     P      03 50 01.1 -0.2
      comp=Z,40nm,1.2s
BNI                                LR    LR
      comp=Z,3µm,20.0s
BNI   Bardonecchia      52.38  35 eP     P      03 50 01.1 -0.2
BNI                                pmax  pmax
      comp=Z,40nm,1.2s
PEL   Peldehue          52.49 220  PFAKE        03 50 10.0 +7.8
PEL                                LR    LR
      comp=Z,2µm,18.0s
LPG   La Plagne         52.68  34 eP     P      03 50 07.9 +4.2
LPG                                pmax  pmax
      comp=Z,29nm,1.5s
LPL   La Plagne         52.69  34 eP     P      03 50 07.7 +4.1
LPL                                pmax  pmax
      comp=Z,39nm,1.6s
BINY  Binghamton        52.76 320  PFAKE        03 50 20.0  +16
BINY                               LR    LR
      comp=Z,2µm,20.0s
BINY  Binghamton        52.76 320  P     P      03 50 03.9 -0.1
      baz=122
X56A  White Oak         52.86 310  P     P      03 50 04.7 -0.2
      baz=112
555A  McAlpin           52.94 304  PFAKE        03 50 20.0  +14
555A                               LR    LR
      comp=Z,4µm,22.0s
JSC   Jenkinsville      52.95 309 eP     P      03 50 08.8 +3.2
      comp=Z,98nm,1.8s
JSC                                LR    LR
      comp=Z,2µm,22.0s
JSC   Jenkinsville      52.95 309 eP     P      03 50 08.8 +3.2
JSC                                pmax  pmax
      comp=Z,98nm,1.7s
CABF  La Chapelle       52.99  33 eP     P      03 50 09.4 +3.6
CABF                               pmax  pmax
      comp=Z,67nm,1.6s
WDD   Wied Dalam        53.00  49  PFAKE        03 50 20.0  +14
WDD                                LR    LR
      comp=Z,4µm,18.0s
255A  Hazlehurst        53.10 306  PFAKE        03 50 20.0  +13
255A                               LR    LR
      comp=Z,2µm,19.0s
ESTN  Estel             53.11 282  PFAKE        03 50 20.0  +13
ESTN                               LR    LR
      comp=Z,2µm,22.0s
455A  Stateville        53.18 304  P     P      03 50 07.4 +0.2
      baz=108
SSPA  Standing Stone    53.21 318  P     P      03 50 07.8 +0.5
      baz=119
LONY  Lake Ozonia       53.22 324  PFAKE        03 50 20.0  +13
LONY                               LR    LR
      comp=Z,2µm,19.0s
X55A  Gracelyn & Ava    53.31 309  P     P      03 50 08.5 +0.3
      baz=111
155A  Kite              53.32 307  P     P      03 50 08.5 +0.2
      baz=109
KMSC  Kings Mountain    53.33 310 eP     P      03 50 08.4 +0.1
      comp=Z,49nm,1.5s
KMSC                               LR    LR
      comp=Z,3µm,20.0s
KMSC  Kings Mountain    53.33 310  P     P      03 50 08.6 +0.3
      baz=112
BLA   Blacksburg        53.46 313 eP     P      03 50 10.0 +0.7
      comp=Z,48nm,1.1s
BLA                                LR    LR
      comp=Z,2µm,22.0s
BLA   Blacksburg        53.46 313 eP     P      03 50 10.0 +0.7
BLA                                pmax  pmax
      comp=Z,48nm,1.1s
BLA                                MLR   MLR
      comp=Z,2µm,22.0s
BLA   Blacksburg        53.46 313  P     P      03 50 09.8 +0.5
      baz=114
O56A  Blue Knob Stat    53.49 317  P     P      03 50 10.1 +0.6
      baz=118
SENIN Lac Senin/Sane    53.51  34 eP     P      03 50 11.4 +1.8
      comp=Z,49nm,1.6s
SENIN                              LR    LR
      comp=Z,2µm,19.0s
PAULI Pauline           53.58 310  PFAKE        03 50 20.0  +10
PAULI                              LR    LR
      comp=Z,2µm,20.0s
454A  Quitman           53.67 304  P     P      03 50 10.8  0.0
      baz=107
HODGE Hodges            53.71 309 eP     P      03 50 11.8 +0.7
HODGE                             esP    P      03 50 12.2 +1.1
HODGE                              LR    LR
      comp=Z,1µm,20.0s
S55A  Lewisburg         53.75 314  P     P      03 50 12.3 +0.9
      baz=114
Z54A  Sparta            53.82 307  P     P      03 50 12.6 +0.7
      baz=110
154A  Montrose          53.83 307  PFAKE        03 50 20.0 +8.0
154A                               LR    LR
      comp=Z,1µm,19.0s
154A  Montrose          53.83 307  P     P      03 50 12.5 +0.5
      baz=109
LATQ  La Tuque          53.84 327  P     P      03 50 12.2 +0.4
      baz=128
TIGA  Tifton            53.85 305  PFAKE        03 50 20.0 +7.8
TIGA                               LR    LR
      comp=Z,4µm,22.0s
Y54A  Tignall           53.91 308  P     P      03 50 12.9 +0.2
      baz=110
ALFO  Alfred            53.97 325  P     P      03 50 13.2 +0.4
      baz=125
O55A  Ligonier          53.97 317  P     P      03 50 13.6 +0.6
      baz=117
Q55A  Buckhannon        53.97 315  P     P      03 50 13.8 +0.8
      baz=116
HAU   Haudompre         54.00  32 eP     P      03 50 13.8 +0.8
HAU                                pmax  pmax
      comp=Z,63nm,1.4s
P55A  Reedsville        54.01 316  P     P      03 50 14.2 +0.9
      baz=116
N55A  Marion Center     54.02 318  P     P      03 50 13.8 +0.5
      baz=118
VLC   Villacollemand    54.05  38  PFAKE        03 50 30.0  +16
VLC                                LR    LR
      comp=Z,700nm,19.0s
HINF  Hinteralfeld      54.15  32 eP     P      03 50 14.8 +0.6
HINF                               pmax  pmax
      comp=Z,43nm,1.5s
M55A  Ridgway           54.19 318  P     P      03 50 15.4 +0.9
      baz=118
T54A  Tazewell          54.24 312  P     P      03 50 15.5 +0.5
      baz=113
BAIF  Baives            54.26  29 eP     P      03 50 14.3 -0.5
BAIF                               pmax  pmax
      comp=Z,89nm,1.5s
R54A  Victor            54.27 314  P     P      03 50 15.0 -0.1
      baz=114
453A  Whigham           54.27 304  PFAKE        03 50 30.0  +15
453A                               LR    LR
      comp=Z,4µm,21.0s
353A  Camilla           54.33 305  P     P      03 50 16.1 +0.4
      baz=107
GOGA  Godfrey           54.37 307  PFAKE        03 50 30.0  +14
GOGA                               LR    LR
      comp=Z,1µm,20.0s
DOU   Dourbes           54.47  29  P     P      03 50 17.7 +1.3
DOU                                pmax  pmax
      comp=Z,33nm,1.1s
DOU   Dourbes           54.47  29 ⇓P     P      03 50 16.9 +0.6
      comp=Z,24nm,1.5s
253A  Americus          54.48 306  PFAKE        03 50 30.0  +13
253A                               LR    LR
      comp=Z,3µm,22.0s
Q54A  Coxs Mills        54.49 315  P     P      03 50 16.4 -0.3
      baz=115
P54A  Burton            54.51 316  P     P      03 50 17.3 +0.4
      baz=116
ECH   Echery            54.56  32 eP     P      03 50 18.3 +1.2
      comp=Z,38nm,1.3s
ECH   Echery            54.56  32 eP     P      03 50 18.3 +1.2
ECH                                pmax  pmax
      comp=Z,38nm,1.3s
GIVF  Givet             54.59  29 eP     P      03 50 17.8 +0.6
GIVF                               pmax  pmax
      comp=Z,34nm,1.0s
X53A  Estanollee        54.61 309  P     P      03 50 18.2 +0.5
      baz=110
Y53A  Monroe            54.61 308  P     P      03 50 18.5 +0.8
      baz=109
V53A  Saluda            54.65 310  PFAKE        03 50 30.0  +12
V53A                               LR    LR
      comp=Z,3µm,21.0s
V53A  Saluda            54.65 310  P     P      03 50 18.3 +0.3
      baz=111
O54A  Avella            54.69 316  P     P      03 50 18.4 +0.2
      baz=116
TUE   Stuetta           54.72  35  PFAKE        03 50 30.0  +11
TUE                                LR    LR
      comp=Z,2µm,18.0s
U53A  Fall Branch       54.72 311  P     P      03 50 19.0 +0.5
      baz=112
W53A  Cullowhee         54.73 310  P     P      03 50 19.1 +0.3
      baz=111
H55A  Tweed             54.74 322  P     P      03 50 19.0 +0.6
      baz=122
N54A  Moraine State     54.78 317  P     P      03 50 18.9 +0.1
      baz=117
M54A  Oil Creek Stat    54.81 318  P     P      03 50 19.6 +0.5
      baz=118
MEDO  Medina            54.82 320  P     P      03 50 19.5 +0.5
      baz=120
UCC   Uccle             54.83  28 eP     P      03 50 17.1 -1.9
      comp=Z,68nm,1.4s
UCC                                LR    LR
      comp=Z,2µm,18.0s
UCC   Uccle             54.83  28 eP     P      03 50 17.1 -1.9
UCC                                pmax  pmax
      comp=Z,69nm,1.4s
UCC   Uccle             54.83  28 ⇓P     P      03 50 19.6 +0.7
UCC                               ⇓pP    P      03 50 22.0 +3.0
S53A  Williamson        54.89 313  P     P      03 50 20.0 +0.3
      baz=113
T53A  Wise              54.92 312  P     P      03 50 20.3 +0.3
      baz=112
PLVO  Plevna            54.93 323  P     P      03 50 20.0 +0.2
      baz=122
252A  Lumpkin           54.95 305  P     P      03 50 20.8 +0.6
      baz=107
352A  Blakely           54.95 305  PFAKE        03 50 30.0  +10
352A                               LR    LR
      comp=Z,4µm,22.0s
352A  Blakely           54.95 305  P     P      03 50 20.4 +0.2
      baz=107
WLF   Walferdange       54.95  30 eP     P      03 50 21.1 +1.2
      comp=Z,125nm,1.3s
WLF                                LR    LR
      comp=Z,12µm,20.0s
WLF   Walferdange       54.95  30 eP     P      03 50 21.1 +1.2
WLF                                pmax  pmax
      comp=Z,130nm,1.3s
WLF   Walferdange       54.95  30 ⇑P     P      03 50 20.5 +0.6
CEL   Celeste           54.96  46  PFAKE        03 50 30.0  +10
CEL                                LR    LR
      comp=Z,2µm,19.0s
452A  Marianna          54.98 304  P     P      03 50 20.8 +0.4
      baz=106
Y52A  Lilburn           54.99 308  PFAKE        03 50 30.0  +10
Y52A                               LR    LR
      comp=Z,2µm,18.0s
Y52A  Lilburn           54.99 308  P     P      03 50 20.5  0.0
      baz=109
R53A  Hurricane         55.02 314  P     P      03 50 20.9 +0.3
      baz=114
BCLA  Clavier           55.03  29 ⇑P     P      03 50 19.3 -1.1
      comp=Z,24nm,1.4s
AQU   L'Aquila          55.04  41  PFAKE        03 50 30.0 +9.2
AQU                                LR    LR
      comp=Z,2µm,21.0s
Z52A  Williamson        55.06 307  P     P      03 50 20.9  0.0
      baz=108
ESK   Eskdalemuir       55.09  20  PFAKE        03 50 30.0 +9.2
ESK                                LR    LR
      comp=Z,4µm,21.0s
P53A  Whipple           55.10 315 eP     P      03 50 21.9 +0.8
      comp=Z,38nm,1.0s
P53A  Whipple           55.10 315  P     P      03 50 21.6 +0.5
      baz=115
X52A  Dahlonega         55.10 309  P     P      03 50 21.7 +0.4
      baz=110
152A  Waverly Hall      55.14 306  PFAKE        03 50 30.0 +8.5
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152A                                  LR       LR
      comp=Z,2µm,21.0s
152A  Waverly Hall      55.14 306     P        P          03 50 21.5   0.0
      baz=108
BFO   Black Forest      55.25  32    eP        P          03 50 21.7  -0.4
      comp=Z,40nm,1.3s
BFO                                   LR       LR
      comp=Z,3µm,20.0s
BFO   Black Forest      55.25  32    eP        P          03 50 22.4  +0.3
BFO                                   pmax     pmax
      comp=Z,40nm,1.3s
N53A  Lisbon            55.28 317     P        P          03 50 23.0  +0.5
      baz=116
STCO  Saint Catharin    55.30 320     P        P          03 50 23.2  +0.7
      baz=119
O53A  New Philadelph    55.30 316     P        P          03 50 23.1  +0.5
      baz=116
W52A  Murphy            55.30 309     PFAKE               03 50 40.0   +17
W52A                                  LR       LR
      comp=Z,2µm,20.0s
W52A  Murphy            55.30 309     P        P          03 50 23.5  +0.8
      baz=110
V52A  Sevierville       55.30 310     PFAKE               03 50 40.0   +17
V52A                                  LR       LR
      comp=Z,3µm,22.0s
V52A  Sevierville       55.30 310     P        P          03 50 23.5  +0.8
      baz=111
T52A  Hallie            55.30 312     P        P          03 50 23.5  +0.8
      baz=112
U52A  Thorn Hill        55.33 311     P        P          03 50 23.5  +0.6
      baz=111
FUORN Ofenpass-Fuorn    55.33  35    eP        P          03 50 25.2  +2.3
      comp=Z,16nm,1.0s
FUORN                                 LR       LR
      comp=Z,2µm,18.0s
DRCO  St. Marys Ceme    55.33 321     P        P          03 50 23.3  +0.6
      baz=120
DRWO  Darlington Wes    55.34 321     P        P          03 50 23.3  +0.5
      baz=120
TKL   Tuckaleechee C    55.37 310     P        P          03 50 21.4  -1.8
TKL                                   LR       LR
      comp=Z,2µm,20.0s
TKL   Tuckaleechee C    55.37 310     P        P          03 50 21.4  -1.8
TKL                                   MLR      MLR
      comp=Z,2µm,20.0s
TKL   Tuckaleechee C    55.37 310     P        P          03 50 21.4  -1.8
      comp=Z,5.8nm,0.9s,baz=142,slow=12,SNR=4.9
PEMO  Pembroke          55.38 324     P        P          03 50 24.1  +1.1
      baz=122
451A  Vernon            55.39 304     PFAKE               03 50 40.0   +17
451A                                  LR       LR
      comp=Z,4µm,22.0s
BANO  Bancroft          55.44 323     P        P          03 50 23.6  +0.2
      baz=121
M53A  WI Miller and     55.45 318     P        P          03 50 23.6   0.0
      baz=117
BEBN  Eben Emael        55.45  29    ⇓P        P          03 50 24.2  +0.8
BEBN                                 ⇓pP       P          03 50 26.9  +3.4
DAVA  Damuels           55.49  34    i P       P          03 50 23.2  -0.8
      comp=Z,12nm,1.1s
MEM   Membach           55.49  29     P        P          03 50 25.4  +1.7
MEM                                   pmax     pmax
      comp=Z,48nm,1.3s
MEM   Membach           55.49  29    ⇑P        P          03 50 24.3  +0.5
      comp=Z,32nm,1.5s
Q52A  Bidwell           55.50 314     P        P          03 50 24.2  +0.1
      baz=114
251A  Midway            55.52 305     P        P          03 50 24.0  -0.3
      baz=107
R52A  Catlettsburg      55.52 313     P        P          03 50 24.1  -0.1
      baz=113
TSUM  Tsumeb            55.53 118    eP        P          03 50 25.3  +0.5
      comp=Z,29nm,1.0s
TSUM                                  LR       LR
      comp=Z,4µm,21.0s
TSUM  Tsumeb            55.53 118     P        P          03 50 25.2  +0.5
      comp=Z,19nm,0.9s,baz=296,slow=8.1,SNR=26
HGN   Heimansgroeve     55.56  29    eP        P          03 50 23.7  -0.5
HGN                                  eS        S          03 58 17.1  +7.7
HGN                                  eL        L          04 07 03.5
      comp=Z,1µm,21.8s
TEIG  Tepich            55.57 291     PFAKE               03 50 40.0   +15
TEIG                                  LR       LR
      comp=Z,2µm,22.0s
151A  Opelika           55.58 306     P        P          03 50 24.5  -0.3
      baz=107
S52A  Salyersville      55.59 312     P        P          03 50 24.9  +0.2
      baz=112
PKRO  Pickering         55.60 321     P        P          03 50 24.8  +0.2
      baz=120
CUC   Castrocucco       55.62  44     PFAKE               03 50 40.0   +15
CUC                                   LR       LR
      comp=Z,2µm,22.0s
O52A  Adamsville        55.67 316    eP        P          03 50 26.0  +0.7
      comp=Z,54nm,1.3s
O52A  Adamsville        55.67 316     P        P          03 50 25.8  +0.5
      baz=115
P52A  Corning           55.68 315     P        P          03 50 25.5  +0.1
      baz=114
TYNO  Tyneside          55.69 320     P        P          03 50 26.0  +0.7
      baz=118
E54A  Lac Daplat, Po    55.75 324     P        P          03 50 25.9  +0.2
      baz=123
Y51A  Rockmart          55.79 308     P        P          03 50 26.3  +0.1
      baz=108
U51A  La Follette       55.81 311     P        P          03 50 26.1  -0.2
      baz=111
FETA  Feichten          55.82  35    i P       P          03 50 26.9  +0.5
      comp=Z,18nm,1.1s
X51A  Calhoun           55.84 308     P        P          03 50 26.2  -0.3
      baz=109
I53A  Kortright Cn E    55.86 321     P        P          03 50 26.9  +0.4
      baz=119
V51A  Loudon            55.86 310    eP        P          03 50 27.6  +0.9
      comp=Z,38nm,1.2s
V51A  Loudon            55.86 310     P        P          03 50 26.7   0.0
      baz=110
N52A  McGinn’s Farm,    55.87 316     P        P          03 50 26.7   0.0
      baz=116
CPCT  Cooper Cave       55.88 309     PFAKE               03 50 40.0   +13
CPCT                                  LR       LR
      comp=Z,2µm,20.0s
G53A  Haliburton        55.91 322     P        P          03 50 26.6  -0.3
      baz=121
TIP   Timpagrande       55.95  46     PFAKE               03 50 40.0   +13
TIP                                   LR       LR
      comp=Z,2µm,20.0s
S51A  Beattyville       55.95 312    eP        P          03 50 28.3  +1.0
      comp=Z,114nm,1.9s
S51A  Beattyville       55.95 312     P        P          03 50 27.3   0.0
      baz=112
M52A  Chesterland       55.96 317     P        P          03 50 27.4  +0.1
      baz=116
W51A  Cleveland         55.96 309     P        P          03 50 27.7  +0.2
      baz=109
T51A  Gray              55.97 311     P        P          03 50 27.4  -0.1
      baz=111
STU   Stuttgart         55.97  32     PFAKE               03 50 40.0   +13
STU                                   LR       LR
      comp=Z,3µm,18.0s
E53A  Dumoine, Ponti    56.00 324     P        P          03 50 27.1  -0.4
      baz=122
K52A  Tillsonburg       56.09 319     P        P          03 50 28.3  +0.1
      baz=118
RETA  Reutte            56.09  34    i P       P          03 50 29.0  +0.8
      comp=Z,24nm,1.5s
J52A  Paris             56.15 320     P        P          03 50 28.9  +0.2
      baz=118
150A  Eclectic          56.17 306     P        P          03 50 29.2  +0.3
      baz=107
250A  Grady             56.19 305     P        P          03 50 29.5  +0.4
      baz=106
SCHQ  Schefferville     56.19 337    eP        P          03 50 28.1  -0.6
SCHQ  Schefferville     56.19 337     P        P          03 50 27.1  -1.6
      comp=Z,18nm,0.9s,baz=141,slow=6.1,SNR=14
SCHQ                                  LR       LR         04 10 48.1
      comp=Z,765nm,21.7s,baz=140,slow=32
R51A  Hillsboro         56.19 313     P        P          03 50 29.3  +0.3
      baz=112
SQTA  Sankt Quirin      56.20  35    i P       P          03 50 27.9  -1.2
      comp=Z,30nm,1.2s
MOTA  Moosalm           56.21  35    i P       P          03 50 28.1  -1.1
      comp=Z,16nm,1.2s
O51A  Pataskala         56.22 315     P        P          03 50 29.7  +0.5
      baz=114
P51A  Williamsport      56.27 314    eP        P          03 50 30.2  +0.6
      comp=Z,29nm,1.0s
P51A  Williamsport      56.27 314     P        P          03 50 29.9  +0.4
      baz=114
Z50A  Ashland           56.28 307     P        P          03 50 29.8   0.0
      baz=107
Q51A  Peebles           56.30 314    eP        P          03 50 30.5  +0.7
      comp=Z,34nm,0.9s
Q51A  Peebles           56.30 314     P        P          03 50 30.3  +0.5
      baz=113
I52A  Shelburne         56.35 321     P        P          03 50 29.8  -0.2
      baz=119
V50A  Pikevile          56.39 310     P        P          03 50 30.2  -0.3
      baz=110
D53A  Lac Vacive, Po    56.40 325     P        P          03 50 30.0  -0.3
      baz=123
W50A  Signal Mountai    56.40 309     P        P          03 50 30.5  -0.2
      baz=109
M51A  Elyria            56.43 317     P        P          03 50 30.6   0.0
      baz=115
X50B  Fort Payne        56.43 308     P        P          03 50 31.0  +0.2
      baz=108
U50A  Jamestown         56.45 310     P        P          03 50 31.0  +0.1
      baz=110
WTTA  Wattenberg        56.47  35     P        P          03 50 31.6  +0.5
      comp=Z,16nm,1.3s
WATA  Walderalm         56.47  35     P        P          03 50 30.3  -0.8
      comp=Z,11nm,1.0s
ACSO  Alum Creek Sta    56.52 315    eP        P          03 50 31.6  +0.3
      comp=Z,29nm,0.9s
ACSO                                  LR       LR
      comp=Z,2µm,22.0s
ACSO  Alum Creek Sta    56.52 315     P        P          03 50 31.5  +0.1
      baz=114
S50A  Richmond          56.56 312     P        P          03 50 31.7  +0.1
      baz=111
BRAL  Brewton           56.61 304     PFAKE               03 50 40.0  +7.9
BRAL                                  LR       LR
      comp=Z,4µm,22.0s
T50A  Nancy             56.65 311     P        P          03 50 32.8  +0.5
      baz=110
F52A  Sundridge         56.68 323     P        P          03 50 32.2  -0.2
      baz=120
ABTA  Abfaltersbach     56.70  36    i P       P          03 50 32.5  -0.1
      comp=Z,30nm,1.2s,SNR=6.6
R50A  Paris             56.73 313     P        P          03 50 33.1  +0.3
      baz=112
Z49A  Columbiana        56.75 306     P        P          03 50 33.7  +0.6
      baz=107
D52A  ZEK Kipawa Sen    56.75 324     P        P          03 50 32.5  -0.4
      baz=122
WTSB  Winterswijk       56.75  28    eP        P          03 50 33.3  +0.6
I51A  Listowel          56.76 320     P        P          03 50 32.9  -0.1
      baz=118
349A  Repton            56.78 304     P        P          03 50 33.8  +0.5
      baz=105
149A  Jones             56.79 306     P        P          03 50 34.1  +0.7
      baz=106
Y49A  Blount Mountai    56.85 307     P        P          03 50 34.2  +0.4
      baz=107
P50A  Jamestown         56.85 314     P        P          03 50 34.4  +0.7
      baz=113
N50A  Nevada            56.85 316     P        P          03 50 34.4  +0.7
      baz=114
249A  Camden            56.89 305     P        P          03 50 34.8  +0.7
      baz=106
SWET  Sewanee           56.89 309    eP        P          03 50 35.1  +1.0
      comp=Z,26nm,1.1s
O50A  Cable             56.93 315     P        P          03 50 34.4  +0.1
      baz=113
X49A  Woodville         56.98 308     P        P          03 50 35.1  +0.4
      baz=108
KLBO  Killbear Provi    57.00 322     P        P          03 50 34.3  -0.3
      baz=120
V49A  McMinnville       57.04 309     P        P          03 50 35.0  -0.1
      baz=109
M50A  Fremont           57.04 317     P        P          03 50 35.1  +0.1
      baz=115
LRAL  Lakeview Retre    57.08 306    eP        P          03 50 35.4   0.0
      comp=Z,18nm,1.1s
LRAL  Lakeview Retre    57.08 306     P        P          03 50 35.6  +0.2
      baz=106
LSQQ  Lebel-sur-Quev    57.09 327     P        P          03 50 35.8  +0.6
      baz=125
W49A  Belvidere         57.12 309     P        P          03 50 35.9  +0.2
      baz=108
L50A  Kingsville        57.15 317     P        P          03 50 36.2  +0.4
      baz=115
E51A  G1948 Merrick     57.15 323     P        P          03 50 35.6  -0.2
      baz=121
U49A  Red Boiling Sp    57.19 310     P        P          03 50 36.1  -0.1
      baz=110
T49A  Edmonton          57.20 311    eP        P          03 50 37.1  +0.9
      comp=Z,20nm,1.3s
T49A  Edmonton          57.20 311     P        P          03 50 35.9  -0.3
      baz=110
GO06  Curarrehue        57.21 215    eP        P          03 50 37.0  +0.6
      comp=Z,34nm,1.0s
S49A  Springfield       57.26 312     P        P          03 50 36.3  -0.3
      baz=111
BMRO  Meriville Lake    57.26 321     P        P          03 50 36.4  -0.1
      baz=118
BASO  Ashfield          57.27 320     P        P          03 50 36.1  -0.4
      baz=117
MYKA  Terra Mystica     57.30  37    i P       P          03 50 37.2  +0.4
      comp=Z,61nm,1.4s,SNR=12
R49A  Shelbyville       57.35 312     P        P          03 50 37.2   0.0
      baz=111
KBA   Koelnbreinsper    57.36  36    i P       P          03 50 38.8  +1.4
      comp=Z,23nm,1.4s
D51A  Lot 18 Range I    57.37 324     P        P          03 50 37.0  -0.2
      baz=121
Q49A  Aurora            57.41 313     P        P          03 50 37.6   0.0
      baz=112
O49A  Covington         57.45 315    eP        P          03 50 38.2  +0.2
      comp=Z,32nm,1.3s
O49A  Covington         57.45 315     P        P          03 50 38.1  +0.1
      baz=113
Y48A  Jasper            57.47 307     P        P          03 50 38.3  +0.2
      baz=107
P49A  Miami Univ. Ec    57.48 314     P        P          03 50 38.3  +0.2
      baz=112
PLCA  Paso Flores       57.48 213    eP        P          03 50 39.9  +1.8
X48A  Hartselle         57.52 308     P        P          03 50 38.9  +0.3
      baz=107
GRFO  Grafenberg        57.59  32    eP        P          03 50 39.5  +0.8
      comp=Z,59nm,1.3s
GRFO  Grafenberg        57.59  32    eP        P          03 50 39.5  +0.8
GRFO                                  pmax     pmax
      comp=Z,59nm,1.3s
GRA1  Grafenberg Arr    57.59  32    eP        P          03 50 40.1  +1.3
      comp=Z,91nm,1.5s
GRF   Grafenberg Arr    57.59  32    eP        P          03 50 40.1  +1.3
GRF                                   pmax     pmax
      comp=Z,91nm,1.5s
N49A  Columbus Grove    57.63 316     P        P          03 50 39.2   0.0
      baz=113
W48A  Pulaski           57.64 308     P        P          03 50 39.0  -0.4
      baz=108
M49A  Liberty Center    57.71 316     P        P          03 50 40.0  +0.3
      baz=114
V48A  Smith Brothers    57.74 309    eP        P          03 50 40.8  +0.7
      comp=Z,64nm,1.6s
V48A  Smith Brothers    57.74 309     P        P          03 50 40.3  +0.2
      baz=108
TOBO  Tobermory, Bru    57.75 321     P        P          03 50 40.5  +0.6
      baz=118
U48A  Cassie Pea, Po    57.77 310     P        P          03 50 40.5  +0.2
      baz=109
OBKA  Obir              57.78  37    i P       P          03 50 39.3  -0.9
      comp=Z,35nm,1.3s
S48A  Wiedeman Farm,    57.78 311     P        P          03 50 40.6  +0.3
      baz=110
L49A  Milan             57.83 317     P        P          03 50 40.8  +0.3
      baz=114
AAM   Ann Arbor         57.83 317    eP        P          03 50 41.1  +0.5
      comp=Z,41nm,1.0s
AAM                                   LR       LR
      comp=Z,1µm,20.0s
AAM   Ann Arbor         57.83 317    eP        P          03 50 41.1  +0.5
AAM                                   pmax     pmax
      comp=Z,41nm,1.0s
AAM                                   MLR      MLR
      comp=Z,1µm,20.0s
AAM   Ann Arbor         57.83 317     P        P          03 50 40.9  +0.3
      baz=115
E50A  Wahnapitae        57.84 323     P        P          03 50 40.5   0.0
      baz=120
MATQ  Matagami          57.84 327     P        P          03 50 40.3  -0.2
      baz=124
T48A  Bowling Green     57.85 311     P        P          03 50 41.0  +0.1
      baz=109
K49A  Clarkson          57.90 318     P        P          03 50 41.2  +0.2
      baz=115
R48A  Northridge Ran    57.90 312     P        P          03 50 41.3  +0.2
      baz=110
J49A  Marlette          57.94 319     P        P          03 50 41.7  +0.4
      baz=116
P48A  Milroy            57.96 314     P        P          03 50 41.5   0.0
      baz=112
Q48A  North Vernon      57.99 313     P        P          03 50 42.0  +0.3
      baz=111
147A  Livingston        58.01 305     P        P          03 50 41.9  -0.1
      baz=105
O48A  Farmland          58.06 315     P        P          03 50 42.3  +0.1
      baz=112
SOKA  Soboth            58.16  37    i P       P          03 50 43.0  +0.1
      comp=Z,33nm,1.5s,SNR=11
WCI   Wyandotte Cave    58.16 312    eP        P          03 50 43.8  +0.9
      comp=Z,95nm,1.8s
WCI   Wyandotte Cave    58.16 312    eP        P          03 50 43.8  +0.9
WCI                                   pmax     pmax
      comp=Z,95nm,1.8s
WCI   Wyandotte Cave    58.16 312     P        P          03 50 42.9  -0.1
      baz=110
X47A  Russelville       58.19 307     P        P          03 50 42.8  -0.4
      baz=107
W47A  Westpoint         58.19 308     P        P          03 50 43.1  -0.1
      baz=107
N48A  Decatur           58.20 315     P        P          03 50 43.0  -0.2
      baz=113
L48A  N Adams           58.21 317     P        P          03 50 43.2  -0.1
      baz=114
MOA   Molln             58.29  36    eP        P          03 50 44.3  +0.6
      comp=Z,20nm,1.3s
V47A  Nunnelly          58.31 309     P        P          03 50 43.9  -0.1
      baz=108
U47A  Clarksville       58.32 310     P        P          03 50 44.1   0.0
      baz=108
F49A  Sandfield         58.32 322     P        P          03 50 43.5  -0.4
      baz=118
J48A  Bridge Port       58.34 318     P        P          03 50 39.6  -4.5
      baz=115
R47A  Wooly Knot Far    58.35 312     P        P          03 50 44.3  +0.1
      baz=110
K48A  Perry             58.35 318     P        P          03 50 43.9  -0.3
      baz=114
T47A  Sharon Grove      58.35 310    eP        P          03 50 45.0  +0.7
      comp=Z,26nm,0.8s
T47A  Sharon Grove      58.35 310     P        P          03 50 44.5  +0.1
      baz=109
S47A  Hartford          58.38 311     P        P          03 50 45.2  +0.7
      baz=109
GEA0  GERESS Array S    58.48  34    eP        P          03 50 43.7  -1.4
GEC2  GERESS Array S    58.48  34    eP        P          03 50 44.9  -0.2
      comp=Z,44nm,1.3s
GEC2  GERESS Array S    58.48  34    eP        P          03 50 44.9  -0.2
GEC2                                  pmax     pmax
      comp=Z,44nm,1.3s
GERES GERESS Array B    58.48  34     P        P          03 50 44.2  -0.9
      comp=Z,16nm,1.1s,baz=251,slow=4.0,SNR=23
GERES                                 LR       LR         04 13 14.9
      comp=Z,2µm,20.2s,baz=246,slow=33
Q47A  Bedord North L    58.50 313     P        P          03 50 44.9  -0.4
      baz=110
NKC   Novy Kostel       58.55  32    eS        S          03 58 59.3   +10
NKC                                   AMS      AMS        04 15 20.0
      comp=Z,2µm,18.5s
KHC   Kasperske Hory    58.57  34    eP        P          03 50 45.6  -0.1
      comp=Z,14nm,1.4s
KHC   Kasperske Hory    58.57  34    eP        P          03 50 46.2  +0.6
KHC                                  ex        x          03 50 55.7
KHC                                  eS        S          03 58 50.0  +0.6
KHC                                   AMS      AMS        04 12 00.0
      comp=Z,2µm,22.2s
KHC   Kasperske Hory    58.57  34    eP        P          03 50 46.2  +0.6
KHC                                  eS        S          03 58 50.0  +0.6
KHC                                   MLR      MLR
      comp=Z,2µm,22.2s
P47A  Martinsville      58.58 313     P        P          03 50 45.6  -0.3
      baz=111
BLY   Banja Luka        58.59  40    eP        P          03 50 49.4  +3.6
      comp=Z,32nm,1.5s
D49A  Beulah Townshi    58.63 323     P        P          03 50 46.1   0.0
      baz=119
WVT   Waverly           58.64 309    eP        P          03 50 46.5  +0.2
      comp=Z,11nm,0.8s
WVT   Waverly           58.64 309    eP        P          03 50 46.5  +0.2
WVT                                   pmax     pmax
      comp=Z,11nm,0.8s
WVT   Waverly           58.64 309     P        P          03 50 46.1  -0.2
      baz=108
BLO   Bloomington       58.65 313    eP        P          03 50 48.8  +2.4
      comp=Z,18nm,0.9s
BLO   Bloomington       58.65 313    eP        P          03 50 48.8  +2.4
BLO                                   pmax     pmax
      comp=Z,18nm,0.9s
I48A  Sherman Twp       58.66 319     P        P          03 50 46.0  -0.3
      baz=116
N47A  Urbana            58.67 315     P        P          03 50 46.3  -0.2
      baz=112
F48A  Evansville        58.71 321     P        P          03 50 46.2  -0.4
      baz=118
ARSA  Arzberg           58.73  37    eP        P          03 50 47.2  +0.4
      comp=Z,16nm,1.7s
E48A  Lockeyer          58.73 322     P        P          03 50 46.4  -0.4
      baz=118
L47A  Sherwood          58.75 316     P        P          03 50 46.8  -0.2
      baz=113
V46A  Holladay          58.76 309     P        P          03 50 47.1  -0.1
      baz=107
X46A  Booneville        58.77 307     P        P          03 50 46.8  -0.5
      baz=106
O47A  Sheridan          58.78 314     P        P          03 50 46.9  -0.4
      baz=111
M47A  Cromwell          58.80 316     P        P          03 50 47.4   0.0
      baz=112
D48A  Paudash Townsh    58.85 323     P        P          03 50 47.3  -0.3
      baz=119
K47A  Vermontville      58.89 317     P        P          03 50 47.6  -0.4
      baz=114
S46A  Don Dixon Farm    59.04 311     P        P          03 50 49.2  +0.2
      baz=109
R46A  Gibon Southern    59.05 312     P        P          03 50 49.2   0.0
      baz=109
I47A  Gladwin           59.12 319     P        P          03 50 49.1  -0.4
      baz=115
H47A  Mio               59.17 320     P        P          03 50 49.9  +0.1
      baz=115
CONA  Conrad Observa    59.26  36     P        P          03 50 49.8  -0.7
      comp=Z,19nm,1.4s
P46A  Rosedale          59.30 313     P        P          03 50 51.2  +0.3
      baz=110
M46A  Old House Fiel    59.33 315     P        P          03 50 51.2  +0.1
      baz=112
E47A  Iron Bridge       59.40 322     P        P          03 50 51.0  -0.4
      baz=117
N46A  Monticello        59.41 315     P        P          03 50 51.6   0.0
      baz=111
W45A  Hickory Valley    59.41 308     P        P          03 50 51.2  -0.5
      baz=106
OXF   Oxford            59.41 307     P        P          03 50 51.1  -0.6
      baz=106
U45A  Rockin P Farm,    59.42 309     P        P          03 50 51.0  -0.8
      baz=107
K46A  Dorr              59.43 317     P        P          03 50 51.7   0.0
      baz=113
CLL   Collm             59.44  32    eP        P          03 50 52.9  +1.3
      comp=Z,20nm,1.4s
CLL   Collm             59.44  32    eP        P          03 50 52.0  +0.4
      comp=Z,18nm,1.4s
CLL   Collm             59.44  32    eP        P          03 50 52.9  +1.3
CLL                                   pmax     pmax
      comp=Z,20nm,1.4s
SFIN  Lafayette         59.49 314    eP        P          03 50 52.4  +0.3
      comp=Z,110nm,1.8s
SFIN  Lafayette         59.49 314     P        P          03 50 52.2  +0.1
      baz=111
GLMI  Grayling          59.53 320     PFAKE               03 51 10.0   +18
GLMI                                  LR       LR
      comp=Z,2µm,21.0s
GLMI  Grayling          59.53 320     P        P          03 50 51.7  -0.6
      baz=115
SOP   Sopron            59.55  37    eP        P          03 50 55.1  +2.7
SOP                                  eS        S          03 59 06.0  +3.9
SOP   Sopron            59.55  37     P        P          03 50 54.7  +2.3
PRU   Pruhonice         59.55  34    eP        P          03 50 54.6  +2.2
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PRU				*e*x	x	03 51 08.0	
PRU				*e*S	**S**	03 58 58.2	-3.8
PRU				AMS	AMS	04 12 00.0	
	comp=Z,2µm,21.8s						
PRU	**Pruhonice**	59.55	34	*e*P	**P**	03 50 54.6	+2.2
PRU				*e*S	**S**	03 58 58.2	-3.8
PRU				MLR	MLR		
	comp=Z,2µm,21.8s						
D47A	**Chapleau**	59.58	323	P	**P**	03 50 52.0	-0.7
	baz=118						
J46A	**Howard City**	59.60	318	P	**P**	03 50 52.7	-0.2
	baz=114						
R45A	**Skylar, Fairfi**	59.65	311	P	**P**	03 50 53.1	-0.2
	baz=109						
OLIL	**Olney**	59.66	312	*e*P	**P**	03 50 53.6	+0.3
	comp=Z,30nm,0.9s						
P45A	**Graceland, Par**	59.66	313	*e*P	**P**	03 50 53.6	+0.3
	comp=Z,21nm,0.9s						
P45A	**Graceland, Par**	59.66	313	P	**P**	03 50 52.8	-0.5
	baz=110						
S45A	**Carrier Mills**	59.69	311	P	**P**	03 50 53.6	0.0
	baz=108						
BRG	**Berggiesshubel**	59.70	32	*e*P	**P**	03 50 53.2	-0.2
	comp=Z,49nm,1.9s						
BRG				S	**S**	03 59 03.0	-0.9
BRG				SS	**SS**	04 03 02.0	+2.3
BRG				*e*PKPPKP	P'P'df	04 20 12.9	-10
	comp=Z,7.5nm,1.5s						
	comp=N,1µm,18.2s						
	comp=E,706nm,14.5s						
	comp=Z,2µm,20.2s						
BRG	**Berggiesshubel**	59.70	32	*e*P	**P**	03 50 53.2	-0.2
BRG				S	**S**	03 59 03.0	-0.9
BRG				SS	**SS**	04 03 02.0	+2.3
BRG				pmax	pmax		
	comp=Z,49nm,1.9s						
BRG				MLR	MLR		
	comp=N,1µm,18.2s						
BRG				MLR	MLR		
	comp=E,706nm,14.5s						
BRG				MLR	MLR		
	comp=Z,2µm,20.2s						
I46A	**Reed City**	59.70	318	P	**P**	03 50 54.0	+0.4
	baz=114						
TREC	**Trest**	59.72	35	*e*P	**P**	03 50 55.9	+2.3
TREC				*e*S	**S**	03 59 05.8	+1.5
TREC				AMS	AMS	04 13 40.0	
	comp=Z,2µm,21.0s						
TREC	**Trest**	59.72	35	*e*P	**P**	03 50 55.9	+2.3
TREC				*e*S	**S**	03 59 05.8	+1.5
TREC				MLR	MLR		
	comp=Z,2µm,21.0s						
Q45A	**Warren Harvey,**	59.75	312	P	**P**	03 50 54.4	+0.4
	baz=109						
PVCC	**Panska Ves**	59.85	33	*e*P	**P**	03 50 56.9	+2.4
PVCC				AMS	AMS	04 12 00.0	
	comp=Z,2µm,25.1s						
PVCC	**Panska Ves**	59.85	33	*e*P	**P**	03 50 56.9	+2.4
PVCC				MLR	MLR		
	comp=Z,2µm,25.1s						
U44B	**Burton Farm, H**	59.88	309	P	**P**	03 50 55.9	+1.0
	baz=107						
N45A	**Kentland**	59.95	314	P	**P**	03 50 55.4	+0.1
	baz=111						
F46A	**Macinaw City C**	60.02	321	P	**P**	03 50 56.0	+0.2
	baz=116						
D46A	**Sault St. Mari**	60.07	322	P	**P**	03 50 55.6	-0.4
	baz=117						
ZST	**Bratislava**	60.12	36	*e*P	**P**	03 50 55.4	-0.9
ZST	**Bratislava**	60.12	36	*e*P	**P**	03 50 55.4	-0.9
KRUC	**Moravsky**	60.12	35	*e*P	**P**	03 50 55.3	-1.1
DIVS	**Divibare**	60.13	42	*e*P	**P**	03 50 56.4	-0.3
	comp=Z,16nm,1.2s						
MORH	**Mrgy, Hungar**	60.15	39	*e*P	**P**	03 50 56.1	-0.5
MORH				*e*S	**S**	03 59 13.0	+3.2
SIUC	**Southern Illin**	60.18	311	*e*P	**P**	03 50 56.8	-0.1
	comp=Z,27nm,1.2s						
S44A	**Carbondale**	60.20	311	P	**P**	03 50 56.9	-0.2
	baz=108						
R44A	**Waltonville**	60.24	311	P	**P**	03 50 57.1	-0.2
	baz=108						
P44A	**Sand Creek, Wi**	60.28	313	P	**P**	03 50 57.1	-0.5
	baz=109						
MODS	**Modra-Piesok**	60.30	36	*e*P	**P**	03 50 58.8	+1.2
MODS				pmax	pmax		
	comp=Z,35nm,1.4s						
MODS	**Modra-Piesok**	60.30	36	*e*P	**P**	03 50 58.8	+1.2
MODS				*e*L	L	04 15 19.0	
VRAC	**Vranov**	60.36	35	⇑*i*P	**P**	03 50 58.2	+0.2
VRAC	**Vranov**	60.36	35	⇑P	**P**	03 50 58.2	+0.2
VRAC	**Vranov**	60.36	35	*e*P	**P**	03 50 57.2	-0.8
N44A	**Piper City**	60.37	314	P	**P**	03 50 57.5	-0.7
	baz=110						
Q44A	**Meyer Farm, Va**	60.39	312	P	**P**	03 50 58.4	0.0
	baz=108						
O44A	**Mansfield**	60.39	313	P	**P**	03 50 57.9	-0.5
	baz=110						
M44A	**Midewin, Midew**	60.51	315	P	**P**	03 50 58.8	-0.4
	baz=110						
UPC	**Upice**	60.63	34	*e*P	**P**	03 51 02.4	+2.6
UPC				*e*S	**S**	03 59 21.9	+6.0
UPC				AMS	AMS	04 12 30.0	
	comp=Z,2µm,21.8s						
UPC	**Upice**	60.63	34	*e*P	**P**	03 51 02.4	+2.6
UPC				*e*S	**S**	03 59 21.9	+6.0
UPC				MLR	MLR		
	comp=Z,2µm,21.8s						
SRO	**Srobarova**	60.66	37	*e*P	**P**	03 50 59.9	-0.1
SRO	**Srobarova**	60.66	37	*e*P	**P**	03 50 59.9	-0.1
L44A	**Lake County Fo**	60.70	316	P	**P**	03 50 60.0	-0.4
	baz=111						
MUD	**Monsted U'grnd**	60.72	25	*i* P	**P**	03 51 00.6	+0.4
MUD	**Monsted U'grnd**	60.72	25	*e*P	**P**	03 51 00.6	+0.4
DPC	**Dobruska-Polom**	60.72	34	*e*P	**P**	03 51 02.9	+2.4
DPC				*e*S	**S**	03 59 15.2	-2.0
DPC				AMS	AMS	04 12 40.0	
	comp=Z,2µm,24.1s						
DPC	**Dobruska-Polom**	60.72	34	*e*P	**P**	03 51 02.9	+2.4
DPC				*e*S	**S**	03 59 15.2	-2.0
DPC				MLR	MLR		
	comp=Z,2µm,24.1s						
STIP	**Stip**	60.73	45	*i* P	**P**	03 51 01.6	+0.9
S43A	**Fulton Ridge,**	60.79	310	P	**P**	03 51 00.1	-1.0
	baz=107						
T43A	**Greenville**	60.81	310	P	**P**	03 51 00.5	-0.8
	baz=106						
EFI	**East Falkland**	60.88	198	PFAKE		03 51 10.0	+8.6
EFI				LR	LR		
	comp=Z,2µm,21.0s						
R43A	**Red Bud**	60.88	311	P	**P**	03 51 00.7	-1.0
	baz=107						
KSP	**Ksiaz**	60.95	33	*e*P	**P**	03 51 02.8	+0.8
KSP	**Ksiaz**	60.95	33	*e*P	**P**	03 51 02.8	+0.8
E44A	**Grand Marais A**	61.12	321	P	**P**	03 51 03.0	-0.1
	baz=115						
HDIL	**Hopedale**	61.12	314	PFAKE		03 51 20.0	+17
HDIL				LR	LR		
	comp=Z,2µm,20.0s						
HDIL	**Hopedale**	61.12	314	P	**P**	03 51 03.1	-0.3
	baz=109						
MORC	**Moravsky Berou**	61.13	35	*e*P	**P**	03 51 03.1	-0.2
	comp=Z,36nm,1.4s						
MORC	**Moravsky Berou**	61.13	35	⇓*i*P	**P**	03 51 05.1	+1.9
MORC	**Moravsky Berou**	61.13	35	⇓P	**P**	03 51 05.1	+1.9
MORC	**Moravsky Berou**	61.13	35	*e*P	**P**	03 51 02.7	-0.5
F44A	**Big Bay de Noc**	61.16	320	P	**P**	03 51 03.3	-0.2
	baz=114						
M43A	**Waltham Townsh**	61.17	315	P	**P**	03 51 03.1	-0.6
	baz=110						
K43A	**Burlington**	61.18	316	*e*P	**P**	03 51 06.7	+3.0
	comp=Z,51nm,1.3s						
K43A	**Burlington**	61.18	316	P	**P**	03 51 03.2	-0.5
	baz=111						
L43A	**Garden Prairie**	61.28	316	P	**P**	03 51 04.0	-0.4
	baz=110						
VYHS	**Vyhne**	61.28	37	*e*P	**P**	03 51 03.6	-0.7
VYHS	**Vyhne**	61.28	37	*e*P	**P**	03 51 03.6	-0.7
U42A	**Revenden**	61.34	309	P	**P**	03 51 04.0	-0.9
	baz=105						
S42A	**Caledonia**	61.39	310	P	**P**	03 51 04.2	-1.0
	baz=106						
T42A	**Van Buren**	61.41	309	*e*P	**P**	03 51 04.4	-0.9
	comp=Z,26nm,1.4s						
T42A	**Van Buren**	61.41	309	P	**P**	03 51 04.4	-0.9
	baz=106						
H43A	**Windswept, Lux**	61.45	318	P	**P**	03 51 05.2	-0.3
	baz=112						
I43A	**Langenfeld Bro**	61.48	318	P	**P**	03 51 05.5	-0.2
	baz=112						
J43A	**Natural Harves**	61.48	317	P	**P**	03 51 05.1	-0.6
	baz=111						
OKC	**Ostrava-Krasne**	61.50	35	*e*S	**S**	03 59 32.9	+5.9
OKC				AMS	AMS	04 15 00.0	
	comp=Z,1µm,20.4s						
Q42A	**Golden Eagle**	61.52	312	P	**P**	03 51 05.4	-0.7
	baz=107						
R42A	**Luebbering**	61.53	311	P	**P**	03 51 05.3	-0.9
	baz=107						
MDVR	**Moldovita**	61.54	41	⇓*i*P	**P**	03 51 06.3	+0.2
F43A	**Flat Rock, Esc**	61.58	320	P	**P**	03 51 06.3	0.0
	baz=114						
P42A	**Winchester**	61.58	312	*e*P	**P**	03 51 08.9	+2.5
	comp=Z,74nm,1.8s						
P42A	**Winchester**	61.58	312	P	**P**	03 51 06.2	-0.3
	baz=108						
PSZ	**Piszkesteto**	61.66	38	*e*P	**P**	03 51 07.1	+0.2
	comp=Z,129nm,1.6s						
PSZ	**Piszkesteto**	61.66	38	⇓*i*P	**P**	03 51 07.4	+0.5
PSZ	**Piszkesteto**	61.66	38	⇓P	**P**	03 51 07.4	+0.5
E43A	**Lone Tree Farm**	61.69	320	*e*P	**P**	03 51 07.1	+0.1
	comp=Z,39nm,1.1s						
E43A	**Lone Tree Farm**	61.69	320	P	**P**	03 51 06.6	-0.5
	baz=114						
N42A	**Yates City**	61.74	314	P	**P**	03 51 07.0	-0.5
	baz=109						
VTS	**Vitosha**	61.78	44	*e*P	**P**	03 51 08.5	+0.6
	comp=Z,19nm,1.4s						
VTS	**Vitosha**	61.78	44	⇑*i*P	**P**	03 51 07.2	-0.8
VTS	**Vitosha**	61.78	44	*e*P	**P**	03 51 08.5	+0.6
VTS				pmax	pmax		
	comp=Z,19nm,1.4s						
BZS	**Buzias**	61.80	40	⇓*i*P	**P**	03 51 08.2	+0.4
BZS	**Buzias**	61.80	40	⇓P	**P**	03 51 08.2	+0.4
CCM	**Cathedral Cave**	61.81	310	*e*P	**P**	03 51 07.2	-0.8
	comp=Z,13nm,0.8s						
CCM	**Cathedral Cave**	61.81	310	*e*P	**P**	03 51 07.6	-0.4
CCM				pmax	pmax		
	comp=Z,13nm,0.9s						
CCM	**Cathedral Cave**	61.81	310	P	**P**	03 51 07.4	-0.7
	baz=106						
UALR	**University of**	61.82	307	*e*P	**P**	03 51 08.0	-0.1
	comp=Z,25nm,1.2s						
W41B	**Gary Mavity, V**	61.84	307	*e*P	**P**	03 51 07.9	-0.4
	comp=Z,68nm,2.0s						
W41B	**Gary Mavity, V**	61.84	307	P	**P**	03 51 07.7	-0.6
	baz=104						
U41A	**Viola**	61.87	308	P	**P**	03 51 07.7	-0.9
	baz=105						
K42A	**Prairie Point,**	61.90	316	P	**P**	03 51 07.7	-0.9
	baz=110						
T41A	**Mountain View**	61.93	309	P	**P**	03 51 08.1	-0.9
	baz=105						
LANS	**Liptovska Anna**	61.95	36	*e*P	**P**	03 51 10.7	+1.9
LANS	**Liptovska Anna**	61.95	36	*e*P	**P**	03 51 10.7	+1.9
R41A	**Rosebud**	61.98	311	P	**P**	03 51 08.3	-0.9
	baz=106						
I42A	**Draeger Farm,**	62.00	317	*e*P	**P**	03 51 09.2	0.0
	comp=Z,22nm,0.9s						
I42A	**Draeger Farm,**	62.00	317	P	**P**	03 51 09.2	0.0
	baz=111						
Q41A	**Truxton**	62.06	311	P	**P**	03 51 08.9	-0.8
	baz=107						
S41A	**Jillco Farms,**	62.06	310	P	**P**	03 51 09.1	-0.7
	baz=106						
O41A	**Passleys Farm,**	62.14	313	P	**P**	03 51 09.1	-1.1
	baz=108						
P41A	**Barry, Barry**	62.14	312	P	**P**	03 51 09.2	-1.0
	baz=107						
X40A	**Basin Creek Fa**	62.15	306	P	**P**	03 51 09.7	-0.7
	baz=103						
E42A	**Champion**	62.30	320	P	**P**	03 51 10.5	-0.6
	baz=113						
N41A	**Harden Midland**	62.30	313	*e*P	**P**	03 51 10.4	-0.9
	comp=Z,32nm,1.0s						
N41A	**Harden Midland**	62.30	313	P	**P**	03 51 10.2	-1.1
	baz=108						
GZR	**Gura Zlata**	62.47	41	⇑*i*P	**P**	03 51 09.7	-2.7
GZR	**Gura Zlata**	62.47	41	⇑P	**P**	03 51 09.7	-2.7
L41A	**Preston**	62.47	315	P	**P**	03 51 11.9	-0.5
	baz=109						
K41A	**Shullsburg**	62.51	316	P	**P**	03 51 11.9	-0.7
	baz=109						
NIE	**Niedzica**	62.56	36	*e*P	**P**	03 51 13.5	+0.6
NIE	**Niedzica**	62.56	36	*e*P	**P**	03 51 13.5	+0.6
J41A	**Loganville**	62.56	316	P	**P**	03 51 11.8	-1.2
	baz=110						
JFWS	**Jewell Farm**	62.57	316	*e*P	**P**	03 51 12.5	-0.6
	comp=Z,34nm,1.3s						
JFWS				LR	LR		
	comp=Z,1µm,19.0s						
JFWS	**Jewell Farm**	62.57	316	*e*P	**P**	03 51 12.8	-0.3
JFWS				pmax	pmax		
	comp=Z,34nm,1.2s						
JFWS	**Jewell Farm**	62.57	316	P	**P**	03 51 12.6	-0.5
	baz=109						
U40A	**Yellville**	62.61	308	P	**P**	03 51 12.7	-0.8
	baz=104						
OJC	**Ojcow**	62.62	35	*e*P	**P**	03 51 13.3	+0.1
OJC	**Ojcow**	62.62	35	*e*P	**P**	03 51 13.3	+0.1
	comp=Z,54nm,1.4s						
OJC	**Ojcow**	62.62	35	*e*P	**P**	03 51 13.3	+0.1
G41A	**Antigo**	62.65	319	P	**P**	03 51 13.0	-0.6
	baz=111						
GKP	**Gorka Klasztor**	62.69	31	*e*P	**P**	03 51 15.5	+1.9
GKP	**Gorka Klasztor**	62.69	31	*e*P	**P**	03 51 15.5	+1.9
I41A	**Arkdale**	62.70	317	*e*P	**P**	03 51 13.8	-0.1
	comp=Z,56nm,1.5s						
I41A	**Arkdale**	62.70	317	P	**P**	03 51 13.6	-0.3
	baz=110						
H41A	**Junction City**	62.75	318	P	**P**	03 51 13.6	-0.7
	baz=111						
MIAR	**Mount Ida**	62.76	306	PFAKE		03 51 30.0	+16
MIAR				LR	LR		
	comp=Z,1µm,19.0s						
MIAR	**Mount Ida**	62.76	306	P	**P**	03 51 13.6	-0.9
	baz=103						
F41A	**Three Lakes**	62.80	319	*e*P	**P**	03 51 14.5	-0.1
	comp=Z,40nm,1.4s						
F41A	**Three Lakes**	62.80	319	P	**P**	03 51 13.9	-0.7
	baz=112						
N40A	**Mertquake, Sal**	62.88	313	P	**P**	03 51 14.1	-1.1
	baz=107						
DRGR		62.95	40	⇓*i*P	**P**	03 51 15.3	-0.3
DRGR		62.95	40	⇓P	**P**	03 51 15.3	-0.3
COWI	**Conover**	62.95	320	PFAKE		03 51 30.0	+14
COWI				LR	LR		
	comp=Z,1µm,20.0s						
E41A	**Kenton**	62.98	320	P	**P**	03 51 15.0	-0.7
	baz=112						
L40A	**Anamosa**	62.98	315	*e*P	**P**	03 51 15.1	-0.7
	comp=Z,18nm,0.8s						
L40A	**Anamosa**	62.98	315	P	**P**	03 51 14.8	-0.9
	baz=108						
M40A	**Post Highland**	62.98	314	P	**P**	03 51 14.9	-1.0
	baz=108						
W39A	**Magazine**	63.07	307	*e*P	**P**	03 51 16.6	+0.1
	comp=Z,35nm,1.4s						
W39A	**Magazine**	63.07	307	P	**P**	03 51 16.0	-0.5
	baz=103						
J40A	**Soldiers Grove**	63.07	316	P	**P**	03 51 16.1	-0.3
	baz=109						
NATX	**Nacogdoches**	63.08	303	PFAKE		03 51 30.0	+13
NATX				LR	LR		
	comp=Z,4µm,21.0s						
K40A	**Colesburg**	63.12	315	P	**P**	03 51 16.1	-0.6
	baz=109						
I40A	**Norwalk**	63.15	317	P	**P**	03 51 16.0	-0.9
	baz=110						
H40A	**Chili**	63.25	318	P	**P**	03 51 17.1	-0.5
	baz=110						
G40A	**Rib Lake**	63.35	318	P	**P**	03 51 17.8	-0.3
	baz=111						
UZH	**Uzhgorod**	63.42	38	⇑*i*P	**P**	03 51 18.0	-0.5
UZH				*i*		03 51 23.3	
UZH				*e*		03 51 53.4	
UZH				*e*		03 53 43.1	
UZH				*e*		03 55 08.4	
UZH				*e*S	**S**	03 59 47.0	-4.1
SUR	**Sutherland**	63.50	130	PFAKE		03 51 30.0	+10
SUR				LR	LR		
	comp=Z,3µm,22.0s						
E40A	**Wakefield**	63.57	320	P	**P**	03 51 19.3	-0.3
	baz=111						
K39A	**Oelwein**	63.65	315	P	**P**	03 51 19.4	-0.8
	baz=108						
J39A	**Decorah**	63.72	316	P	**P**	03 51 20.0	-0.7
	baz=108						
I39A	**Houston**	63.76	317	*e*P	**P**	03 51 20.4	-0.6
	comp=Z,48nm,1.6s						
I39A	**Houston**	63.76	317	P	**P**	03 51 20.3	-0.6
	baz=109						
H39A	**Augusta**	63.87	317	P	**P**	03 51 21.0	-0.6
	baz=109						
BEL	**Belsk**	63.91	34	*e*P	**P**	03 51 22.6	+0.9
BEL	**Belsk**	63.91	34	*e*P	**P**	03 51 22.6	+0.9
MBAR	**Mbarara**	63.94	93	*i* P	**P**	03 51 24.1	+1.2
E39A	**Mellen**	63.97	319	P	**P**	03 51 21.5	-0.8
	baz=111						
VOIR		63.98	42	⇑*i*P	**P**	03 51 22.3	-0.1
VOIR		63.98	42	⇑P	**P**	03 51 22.3	-0.1
G39A	**Holcombe**	63.99	318	P	**P**	03 51 21.8	-0.7
	baz=110						
LSZ	**Lusaka**	64.03	110	*e*P	**P**	03 51 24.8	+1.5
	comp=Z,11nm,0.9s						
LSZ				LR	LR		
	comp=Z,2µm,21.0s						
LSZ	**Lusaka**	64.03	110	*e*P	**P**	03 51 25.3	+2.0
LSZ				pmax	pmax		
	comp=Z,43nm,1.3s						
LSZ	**Lusaka**	64.03	110	P	**P**	03 51 24.4	+1.1
	SNR=7.0						
LSZ				P	**P**	03 51 24.4	+1.1
	SNR=7.0						
F39A	**Loretta**	64.05	319	P	**P**	03 51 21.9	-0.9
	baz=110						
NAO01	**NORSAR Array S**	64.23	22	*e*P	**P**	03 51 23.9	+0.1
NBO00	**NORSAR Array S**	64.31	22	*e*P	**P**	03 51 24.1	-0.2
SCIA	**State Center**	64.35	314	PFAKE		03 51 40.0	+15
SCIA				LR	LR		
	comp=Z,2µm,21.0s						
DOPR	**Dopca**	64.38	41	⇓*i*P	**P**	03 51 23.8	-1.2
G38A	**Ridgeland**	64.41	318	P	**P**	03 51 24.7	-0.5
	baz=109						
NC204	**NORSAR Array S**	64.47	22	*e*P	**P**	03 51 25.1	-0.2
NB2	**NORSAR Subarra**	64.48	22	P	**P**	03 51 24.0	-1.4
	comp=Z,2.5nm,0.7s,baz=231,slow=6.5						
NOA	**NORSAR Array B**	64.48	22	P	**P**	03 51 23.9	-1.4
	comp=Z,7.2nm,1.0s,baz=230,slow=6.4,SNR=18						
NOA				LR	LR	04 17 17.9	
	comp=Z,2µm,18.7s,baz=240,slow=34						
LBTB	**Lobatse**	64.52	121	*e*P	**P**	03 51 26.9	+0.6
	comp=Z,26nm,1.1s						
LBTB	**Lobatse**	64.52	121	*e*P	**P**	03 51 26.9	+0.6
LBTB				pmax	pmax		
	comp=Z,26nm,1.1s						
NB201	**NORSAR Array S**	64.52	22	*e*P	**P**	03 51 25.4	-0.2
H38A	**Maiden Rock**	64.54	317	P	**P**	03 51 25.3	-0.7
	baz=109						
MLR	**Muntele Rosu**	64.59	42	*e*P	**P**	03 51 26.3	-0.2
	comp=Z,166nm,1.6s						
MLR	**Muntele Rosu**	64.59	42	⇓*i*P	**P**	03 51 26.3	-0.2
MLR	**Muntele Rosu**	64.59	42	*e*P	**P**	03 51 26.3	-0.2
MLR				pmax	pmax		
	comp=Z,170nm,1.6s						
NC303	**NORSAR Array S**	64.66	22	*e*P	**P**	03 51 27.6	+1.1
NC405	**NORSAR Array S**	64.72	22	*e*P	**P**	03 51 26.4	-0.5
TUL1	**Leonard**	64.82	307	*e*P	**P**	03 51 27.5	-0.5
	comp=Z,22nm,1.1s						
TUL1	**Leonard**	64.82	307	P	**P**	03 51 27.3	-0.8
	baz=102						
BUR04	**Bucovina Ar. S**	64.84	39	*e*P	**P**	03 51 27.7	-0.4
BUR08	**Bucovina Ar. S**	64.84	39	*e*P	**P**	03 51 29.7	+1.6
BURAR	**Bucovina Array**	64.84	39	⇑*i*P	**P**	03 51 29.7	+1.6
BURAR	**Bucovina Array**	64.84	39	⇑P	**P**	03 51 29.7	+1.6
KLNR	**Kaliningrad**	64.88	31	*i* P	**P**	03 51 28.3	+0.3
KLNR				pmax	pmax		
	comp=Z,113nm,1.1s						
LVV	**L'vov**	64.93	37	*e*P	**P**	03 51 28.8	+0.3
SPMN	**Marine on St.**	65.06	318	*e*P	**P**	03 51 28.7	-0.8
	comp=Z,95nm,2.0s						
SPMN	**Marine on St.**	65.06	318	P	**P**	03 51 28.6	-0.8
	baz=108						
F37A	**Hinrichs Farm,**	65.11	318	P	**P**	03 51 29.3	-0.5
	baz=109						
EYMN	**Ely**	65.13	321	PFAKE		03 51 40.0	+10
EYMN				LR	LR		
	comp=Z,1µm,21.0s						
BIZ	**Bicaz**	65.18	40	⇑*i*P	**P**	03 51 30.4	+0.3
KVTX	**Kingsville**	65.22	298	PFAKE		03 51 40.0	+9.2
KVTX				LR	LR		
	comp=Z,2µm,21.0s						
VRI	**Vrincioaia**	65.23	42	⇓*i*P	**P**	03 51 32.9	+2.4
VRI	**Vrincioaia**	65.23	42	⇓P	**P**	03 51 32.9	+2.4
SCO	**Scoresbysund**	65.26	4	*e*P	**P**	03 51 30.2	0.0
	comp=Z,42nm,1.4s						
SCO	**Scoresbysund**	65.26	4	*i* P	**P**	03 51 29.8	-0.4
	comp=Z,34nm,1.3s						
SCO	**Scoresbysund**	65.26	4	*e*P	**P**	03 51 30.2	0.0
SCO				pmax	pmax		
	comp=Z,43nm,1.4s						
TESR	**Tescani**	65.39	41	⇑*i*P	**P**	03 51 30.2	-1.3
BOSA	**Boshof**	65.50	125	*e*P	**P**	03 51 32.4	-0.3
BOSA	**Boshof**	65.50	125	*e*P	**P**	03 51 32.4	-0.3
BOSA				pmax	pmax		
	comp=Z,28nm,0.8s						
BOSA	**Boshof**	65.50	125	P	**P**	03 51 32.2	-0.4
	comp=Z,29nm,0.8s,baz=290,slow=5.8,SNR=30						
BOSA				LR	LR	04 14 18.2	
	comp=Z,2µm,21.3s,baz=284,slow=31						
BOSA	**Boshof**	65.50	125	*e*P	**P**	03 51 33.0	+0.3
CFR	**Carcaliu**	65.96	43	⇓*i*P	**P**	03 51 34.7	-0.5
CFR	**Carcaliu**	65.96	43	⇓P	**P**	03 51 34.7	-0.5
KSU1	**Kansas State U**	66.14	310	PFAKE		03 51 50.0	+13
KSU1				LR	LR		
	comp=Z,2µm,22.0s						
SUW	**Suwalki**	66.16	32	*e*P	**P**	03 51 36.6	+0.3
SUW	**Suwalki**	66.16	32	*e*P	**P**	03 51 35.3	-1.0
	comp=Z,136nm,1.1s						
SUW	**Suwalki**	66.16	32	*e*P	**P**	03 51 36.6	+0.3
KIS	**Kishinev**	66.96	41	*e*P	**P**	03 51 40.0	-1.6
KIS				*e*S	S	04 00 02.0	-33
KIS	**Kishinev**	66.96	41	*e*P	**P**	03 51 40.0	-1.6
KIS				*e*		03 52 04.0	
KIS				*e*PS		04 00 42.0	
WMOK	**Wichita Mounta**	67.00	305	PFAKE		03 51 50.0	+7.8
WMOK				LR	LR		
	comp=Z,2µm,21.0s						
WMOK	**Wichita Mounta**	67.00	305	P	**P**	03 51 41.1	-1.1
	baz=100						
SUMG	**Summit**	67.06	358	*e*P	**P**	03 51 41.9	-0.3
	comp=Z,54nm,1.3s						
SUMG	**Summit**	67.06	358	*i* P	**P**	03 51 41.8	-0.4
	comp=Z,163nm,1.4s						
SUMG	**Summit**	67.06	358	*e*P	**P**	03 51 41.9	-0.3
SUMG				pmax	pmax		
	comp=Z,55nm,1.3s						
JCT	**Junction City**	67.24	301	*e*P	**P**	03 51 42.6	-1.2
	comp=Z,50nm,1.6s						
JCT				*e*PP	**PP**	03 54 05.2	-6.8
JCT				LR	LR		
	comp=Z,2µm,22.0s						
JCT	**Junction City**	67.24	301	*e*P	**P**	03 51 42.6	-1.2
JCT				pmax	pmax		
	comp=Z,50nm,1.6s						
JCT				MLR	MLR		
	comp=Z,2µm,22.0s						
JCT	**Junction City**	67.24	301	P	**P**	03 51 43.2	-0.5
	baz=97						
ECSD	**EROS Data Cent**	67.25	315	*e*P	**P**	03 51 42.7	-0.8
	comp=Z,13nm,0.9s						
ECSD				LR	LR		
	comp=Z,1µm,19.0s						
ECSD	**EROS Data Cent**	67.25	315	P	**P**	03 51 42.9	-0.7
	baz=105						
ABTX	**Abilene, Hawle**	67.39	303	P	**P**	03 51 44.0	-0.7
	baz=98						
BGNE	**Belgrade**	67.80	313	*e*P	**P**	03 51 46.6	-0.5
	comp=Z,48nm,0.8s						
BGNE	**Belgrade**	67.80	313	P	**P**	03 51 46.6	-0.5
	baz=103						
ANTO	**Ankara**	67.97	49	*e*P	**P**	03 51 47.7	-0.5
	comp=Z,105nm,1.4s						
ANTO				LR	LR		
	comp=Z,1µm,20.0s						
ANTO	**Ankara**	67.97	49	*e*P	**P**	03 51 50.7	+2.5
ANTO				pmax	pmax		
	comp=Z,55nm,1.7s						
AGMN	**Agassiz Nation**	68.01	320	*e*P	**P**	03 51 46.8	-1.4
	comp=Z,11nm,1.0s						

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AGMN                                LR     LR
      comp=Z,1µm,21.0s
AK11  Malin Array Si   68.32  37    eP     P      03 51 50.1  0.0
IIGN  Ignalina         68.32  32    eP     P      03 51 50.5 +0.5
IIGN                                IAmb   IAmb   03 51 57.2
      comp=Z,20nm,1.0s
KIEV  Kiev             68.35  37    eP     P      03 51 50.1 -0.1
      comp=Z,36nm,1.2s
KIEV                                LR     LR
      comp=Z,1µm,20.0s
KIEV  Kiev             68.35  37c   iP     P      03 51 49.4 -0.9
KIEV                                pmax   pmax
      comp=Z,29nm,1.2s
ISAL  Salakas          68.36  32    eP     P      03 51 50.8 +0.5
ISAL                                IAmb   IAmb   03 51 55.2
      comp=Z,13nm,1.1s
AKASG Malin Array Be   68.36  37    P      P      03 51 49.5 -0.8
      comp=Z,21nm,1.0s,baz=251,slow=6.3,SNR=38
AKASG                               LR     LR     04 21 11.7
      comp=Z,975nm,19.8s,baz=255,slow=36
AKBB  Malin Array Si   68.36  37    eP     P      03 51 50.4 +0.1
      comp=Z,41nm,1.3s
AKBB  Malin Array Si   68.36  37    eP     P      03 51 50.4 +0.1
AKBB                                pmax   pmax
      comp=Z,41nm,1.2s
CBKS  Cedar Bluff      68.47 310    eP     P      03 51 54.9 +3.5
      comp=Z,19nm,0.8s
CBKS                                LR     LR
      comp=Z,2µm,21.0s
CBKS  Cedar Bluff      68.47 310    eP     P      03 51 54.9 +3.5
CBKS                                pmax   pmax
      comp=Z,19nm,0.9s
CBKS  Cedar Bluff      68.47 310    P      P      03 51 51.2 -0.2
      baz=101
IZAR  Zarasai          68.49  31    eP     P      03 51 51.5 +0.5
IZAR                                IAmb   IAmb   03 51 56.2
      comp=Z,8.7nm,0.8s
BR131 Keskin Array S   68.58  50    eP     P      03 51 51.9 -0.3
BR131 Keskin Array S   68.58  50    P      P      03 51 51.9 -0.3
      SNR=7.6
BRTR  Keskin Array B   68.58  50    iP     P      03 51 51.5 -0.7
BRTR                                pmax   pmax
      comp=Z,5.0nm,1.0s
BRTR  Keskin Array B   68.58  50    P      P      03 51 51.9 -0.3
      comp=Z,4.6nm,1.0s,baz=232,slow=4.5,SNR=18
IDID  Didziasalis      68.58  32    eP     P      03 51 52.1 +0.4
IDID                                IAmb   IAmb   03 51 56.5
      comp=Z,24nm,1.2s
ULM   Lac du Bonnet    68.61 322    P      P      03 51 50.6 -1.3
      comp=Z,37nm,1.5s
ULM   Lac du Bonnet    68.61 322    P      P      03 51 50.6 -1.3
ULM                                 pmax   pmax
      comp=Z,37nm,1.5s
ULM   Lac du Bonnet    68.61 322    P      P      03 51 50.6 -1.3
      comp=Z,8.2nm,1.0s,baz=94,slow=6.7,SNR=7.2
ULM                                 LR     LR     04 16 41.4
      comp=Z,1µm,21.3s,baz=112,slow=31
ILGA  Ilgaz            68.89  48    eP     P      03 51 56.2 +2.0
      comp=Z,23nm,1.2s
VSU   Vasula           69.82  29c   eP     P      03 52 00.5 +1.3
VSU                                 pmax   pmax
      comp=Z,103nm,1.7s
VSU   Vasula           69.82  29    eP     P      03 51 59.5 +0.3
SIM   Simferopol'      69.99  44    eP     P      03 52 00.0 -0.6
SIM                                 eS     S      04 01 13.6 +2.7
SIM                                 pmax   pmax
      comp=Z,10.0nm,0.9s
SIM                                 MLR    MLR
      comp=Z,500nm,15.9s
MSTX  Muleshoe         70.16 304    eP     P      03 52 02.5 +0.5
      comp=Z,25nm,1.1s
MSTX  Muleshoe         70.16 304    P      P      03 52 02.2 +0.2
      baz=97
MDND  Maddock          70.30 319    P      P      03 52 02.3 -0.2
      baz=104
TXAR  Lajitas Array    70.46 299    P      P      03 52 03.8 -0.1
      comp=Z,1.1nm,0.7s,baz=112,slow=5.7,SNR=14
TXAR                                LR     LR     04 19 39.7
      comp=Z,826nm,21.5s,baz=0.0,slow=33
KMBO  Kilima Mbogo     70.47  93    eP     P      03 52 06.4 +1.9
      comp=Z,97nm,2.1s
KMBO  Kilima Mbogo     70.47  93    iP     P      03 52 07.1 +2.7
KMBO                                pmax   pmax
      comp=Z,3.0nm,0.9s
KMBO  Kilima Mbogo     70.47  93    P      P      03 52 06.4 +1.9
      SNR=11
KMBO                                P      P      03 52 06.4 +1.9
      SNR=11
KMBO  Kilima Mbogo     70.47  93    P      P      03 52 05.9 +1.5
      comp=Z,3.1nm,0.9s,baz=249,slow=4.5,SNR=8.4
KMBO                                LR     LR     04 20 37.8
      comp=Z,2µm,19.2s,baz=281,slow=34
FCC   Fort Churchill   70.58 331    eP     P      03 52 02.5 -1.4
      comp=Z,19nm,0.8s
FCC   Fort Churchill   70.58 331    eP     P      03 52 02.5 -1.4
FCC                                 pmax   pmax
      comp=Z,19nm,0.8s
OGNE  Ogallala         70.59 311    PFAKE         03 52 20.0 +16
OGNE                                LR     LR
      comp=Z,2µm,20.0s
OGNE  Ogallala         70.59 311    P      P      03 52 04.4 -0.1
      baz=100
KSCO  Kaye Shedlock'   70.73 309    P      P      03 52 05.6 +0.1
      baz=99
FINES FINESS Array B   70.75  26    P      P      03 52 04.2 -0.7
      comp=Z,11nm,0.9s,baz=241,slow=2.0,SNR=25
FIA1  FINESS Array S   70.75  26    eP     P      03 52 04.3 -0.6
DAG   Danmarks Havn    71.63   3    iP     P      03 52 08.3 -1.6
      comp=Z,27nm,1.3s
DAG   Danmarks Havn    71.63   3    iP     P      03 52 08.3 -1.6
DAG                                 pmax   pmax
      comp=Z,51nm,1.3s
T25A  Trinidad         71.87 307    eP     P      03 52 14.1 +1.6
      comp=Z,21nm,1.3s
T25A  Trinidad         71.87 307    P      P      03 52 13.0 +0.6
      baz=97
PUL   Pulkovo          72.02  28    iP     P      03 52 12.6  0.0
PUL                                 pmax   pmax
      comp=Z,73nm,1.0s
HPIG                   72.06 296    eP     P      03 52 14.3 +0.6
      comp=Z,7.9nm,0.8s
MNTX  Cornudas Mount   72.12 301    eP     P      03 52 13.3 -0.6
      comp=Z,6.5nm,1.0s
MNTX                                LR     LR
      comp=Z,2µm,21.0s
MNTX  Cornudas Mount   72.12 301    P      P      03 52 13.7 -0.2
      baz=95
ANN   Anapa            72.28  45    eP     P      03 52 12.2 -2.2
ANN                                 e*PP   pP     03 52 15.3 -2.2
ANN                                 eS     S      04 01 33.3 -4.0
ANN                                 pmax   pmax
      comp=Z,40nm,1.4s
ANN                                 MLR    MLR
      comp=E,69nm,20.0s
ANN                                 MLR    MLR
      comp=Z,1µm,20.0s
ANN                                 MLR    MLR
      comp=N,411nm,20.0s
RSSD  Black Hills      72.58 314    P      P      03 52 16.9 +0.3
      baz=99
Q24A  Divide           72.67 309    P      P      03 52 17.5 +0.1
      baz=97
VOZR  Vozrozhdenie     72.79  45    iP     P      03 52 18.9 +1.4
VOZR                                pmax   pmax
      comp=Z,32nm,1.2s
SDCO  Great Sand Dun   72.80 308    eP     P      03 52 18.5 +0.3
      comp=Z,18nm,1.4s
SDCO                                LR     LR
      comp=Z,1µm,20.0s
SDCO  Great Sand Dun   72.80 308    P      P      03 52 18.5 +0.3
      baz=96
ISCO  Idaho Springs    73.13 310    eP     P      03 52 20.8 +0.7
      comp=Z,38nm,1.4s
ISCO                                LR     LR
      comp=Z,2µm,19.0s
ISCO  Idaho Springs    73.13 310    eP     P      03 52 20.8 +0.7
ISCO                                pmax   pmax
      comp=Z,38nm,1.4s
ISCO  Idaho Springs    73.13 310    P      P      03 52 20.3 +0.2
      baz=97
ANMO  Albuquerque      73.29 305    eP     P      03 52 21.5 +0.6
      comp=Z,14nm,1.3s
ANMO                                LR     LR
      comp=Z,3µm,22.0s
ANMO  Albuquerque      73.29 305c   eP     P      03 52 21.6 +0.6
ANMO                                pmax   pmax
      comp=Z,21nm,2.5s
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ANMO  Albuquerque      73.29 305    P      P      03 52 21.5 +0.6
      baz=95
BNM   Barren Site      73.37 304    eP     P      03 52 24.4 +3.0
FFC   Flin Flon        73.43 326    eP     P      03 52 20.1 -1.0
      comp=Z,68nm,1.3s
FFC                                 LR     LR
      comp=Z,1µm,20.0s
FFC   Flin Flon        73.43 326    iP     P      03 52 20.7 -0.4
DGMT  Dagmar           73.44 319    eP     P      03 52 21.6 +0.3
      comp=Z,105nm,1.2s
DGMT                                LR     LR
      comp=Z,1µm,20.0s
DGMT  Dagmar           73.44 319    P      P      03 52 21.9 +0.5
      baz=101
N23A  Red Feather La   73.51 311    eP     P      03 52 23.1 +0.9
      comp=Z,37nm,1.2s
N23A  Red Feather La   73.51 311    P      P      03 52 22.4 +0.2
      baz=97
TULEG Thule            73.61 352    eP     P      03 52 20.6 -1.1
      comp=Z,33nm,1.1s
SOC   Sochi            73.71  46    eP     P      03 52 21.1 -1.9
SOC                                 e             03 55 05.6
SOC                                 ePPP   PPP    03 56 48.4
SOC                                 eS     SKiKP  04 01 49.7 -3.2
SOC                                 eSS    SS     04 06 39.6 +2.4
SOC                                 MLR    MLR
      comp=Z,521nm,19.0s
PMSA  Palmer Station   73.80 193    PFAKE         03 52 40.0 +17
PMSA                                LR     LR
      comp=Z,771nm,20.0s
LAZ   Ladron           73.81 304    eP     P      03 52 24.9 +0.9
S22A  4UR Ranch, Cre   73.85 308    eP     P      03 52 25.4 +1.1
      comp=Z,15nm,1.2s
S22A  4UR Ranch, Cre   73.85 308    P      P      03 52 24.6 +0.3
      baz=96
OBN   Obninsk          73.87  34    PFAKE         03 52 40.0 +16
OBN                                 LR     LR
      comp=Z,870nm,21.0s
OBN   Obninsk          73.87  34    eP     P      03 52 23.9 +0.3
OBN                                 e             03 52 41.1
OBN                                 e             03 55 07.4
OBN                                 pmax   pmax
      comp=Z,56nm,1.3s
OBN                                 MLR    MLR
      comp=Z,911nm,18.0s
SMCO  Snowmass         74.10 309    eP     P      03 52 26.9 +1.0
      comp=Z,27nm,1.3s
K22A  Casper           74.16 313    eP     P      03 52 26.2 +0.4
      comp=Z,50nm,1.8s
K22A  Casper           74.16 313    P      P      03 52 25.6 -0.2
      baz=97
ARCES ARCESS Array B   74.19  18    eP     P      03 52 25.6 +0.4
ARCES ARCESS Array B   74.19  18    eP     P      03 52 25.7 +0.4
ARCES ARCESS Array B   74.19  18    P      P      03 52 23.3 -2.0
      comp=Z,7.9nm,1.1s,baz=250,slow=3.6,SNR=8.6
121A  Cookes Peak, D   74.22 302    P      P      03 52 27.0 +0.6
      baz=94
LAO   LASA Array       74.50 317    eP     P      03 52 28.6 +1.0
      comp=Z,61nm,1.1s
LAO                                 LR     LR
      comp=Z,1µm,21.0s
LAO   LASA Array       74.50 317    P      P      03 52 28.0 +0.4
      baz=98
RWWY  Rawlins          74.55 312    eP     P      03 52 28.0 -0.3
      comp=Z,46nm,1.4s
VSR   Storozhevoye     74.57  38c   iP     P      03 52 26.9 -0.9
VSR                                 pmax   pmax
      comp=Z,36nm,1.2s
MOS   Moscow           74.60  34    eP     P      03 52 27.5 -0.4
MOS                                 pmax   pmax
      comp=Z,76nm,1.1s
MOS                                 MLR    MLR
      comp=Z,900nm,18.0s
LPSR  Galich'ya Gora   74.69  37    eP     P      03 52 27.4 -1.1
LPSR                                pmax   pmax
      comp=Z,20nm,1.0s
KEV   Kevo             74.76  18    PFAKE         03 52 40.0 +11
KEV                                 LR     LR
      comp=Z,890nm,21.0s
SIRT  Sirnak           75.11  53    eP     P      03 52 32.7 +1.3
      comp=Z,124nm,1.3s
MVCO  Mesa Verde       75.12 307    eP     P      03 52 32.5 +0.8
      comp=Z,15nm,1.0s
MVCO                                LR     LR
      comp=Z,1µm,20.0s
MVCO  Mesa Verde       75.12 307    P      P      03 52 32.3 +0.6
      baz=94
O20A  White River Ci   75.17 310    eP     P      03 52 32.8 +0.9
      comp=Z,48nm,1.3s
O20A  White River Ci   75.17 310    P      P      03 52 32.4 +0.6
      baz=95
PV15  Paradox Valley   75.20 308    eP     P      03 52 33.4 +1.2
      comp=Z,10nm,1.0s
PV01  Paradox Valley   75.25 308    eP     P      03 52 33.7 +1.3
      comp=Z,20nm,1.1s
PV02  Paradox Valley   75.39 308    eP     P      03 52 34.5 +1.3
      comp=Z,18nm,1.1s
PV12  Saucer Basin,    75.45 308    eP     P      03 52 35.3 +1.7
      comp=Z,61nm,1.8s
PV13  Radium Mtn., P   75.45 308    eP     P      03 52 34.8 +1.2
      comp=Z,24nm,1.1s
PV03  Paradox Valley   75.48 308    eP     P      03 52 34.4 +0.7
      comp=Z,14nm,1.2s
PV11  David Mesa, Pa   75.50 308    eP     P      03 52 35.1 +1.4
      comp=Z,20nm,1.2s
PV16  Nyswonger Mesa   75.54 308    eP     P      03 52 35.2 +1.2
      comp=Z,24nm,1.3s
PV19  Morning Glory    75.59 308    eP     P      03 52 35.5 +1.2
      comp=Z,22nm,1.3s
PV21  Cone Mtn., Par   75.61 308    eP     P      03 52 35.6 +1.2
      comp=Z,38nm,1.5s
PV23  Carpenter Ridg   75.62 308    eP     P      03 52 36.3 +1.7
      comp=Z,29nm,1.3s
PV10  Paradox Valley   75.64 308    eP     P      03 52 36.5 +1.9
      comp=Z,25nm,1.1s
PV05  Paradox Valley   75.67 308    eP     P      03 52 35.4 +0.6
      comp=Z,25nm,1.3s
PV09  Paradox Valley   75.72 308    eP     P      03 52 36.5 +1.3
NEY   Neytrino         75.84  47    iP     P      03 52 37.2 +1.6
NEY                                 pmax   pmax
      comp=Z,7.0nm,1.2s
KARS  Kars             75.86  50    eP     P      03 52 38.0 +2.3
      comp=Z,171nm,1.4s
KARS  Kars             75.86  50    eP     P      03 52 38.0 +2.3
KARS                                pmax   pmax
      comp=Z,170nm,1.4s
KIV   Kislovodsk       75.89  46    eP     P      03 52 35.6 -0.1
      comp=Z,47nm,1.3s
KIV                                 LR     LR
      comp=Z,804nm,21.0s
KIV   Kislovodsk       75.89  46    eP     P      03 52 35.9 +0.2
KIV                                 eS     S      04 02 17.5 -0.8
KIV                                 eSS    SS     04 07 09.4 -1.2
KIV                                 pmax   pmax
      comp=Z,29nm,1.1s
KIV                                 MLR    MLR
      comp=Z,620nm,18.0s
KIV   Kislovodsk       75.89  46    P      P      03 52 36.1 +0.3
      SNR=9.6
KIV                                 P      P      03 52 36.1 +0.3
      SNR=9.6
W18A  Petrified Fore   75.99 305    P      P      03 52 37.3 +0.7
      baz=93
KBZ   Khabaz           76.02  46    P      P      03 52 37.3 +1.0
      comp=Z,7.8nm,1.0s,baz=307,slow=0.4,SNR=12
APA   Apatity          76.04  21⇓   iP     P      03 52 32.0 -4.0
APA                                 pmax   pmax
      comp=Z,14nm,1.1s
VRH   Novokhopyorsk    76.15  39    eP     P      03 52 36.4 -0.5
VRH                                 pmax   pmax
      comp=Z,20nm,1.1s
GOF   Gofitskoye       76.26  45    eP     P      03 52 39.4 +1.7
GOF                                 pmax   pmax
      comp=Z,50nm,1.4s
BW06  Boulder Array    76.40 313    eP     P      03 52 38.2 -0.6
      comp=Z,19nm,1.2s
BW06                                LR     LR
      comp=Z,2µm,20.0s
BW06  Boulder Array    76.40 313    P      P      03 52 38.5 -0.4
      baz=95
PD31  Pinedale Array   76.40 313    eP     P      03 52 38.6 -0.2
PDAR  Pinedale Array   76.40 313    P      P      03 52 38.4 -0.4
      comp=Z,4.8nm,1.0s,baz=92,slow=6.9,SNR=17
PDAR                                LR     LR     04 21 42.5
      comp=Z,2µm,21.7s,baz=122,slow=32
RLMT  Red Lodge        76.41 315    eP     P      03 52 38.7 -0.2
      comp=Z,17nm,1.0s
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RLMT                                LR     LR
      comp=Z,1µm,21.0s
RLMT  Red Lodge        76.41 315    P      P      03 52 39.2 +0.4
      baz=96
NCK   Nalchik          76.50  47    iP     P      03 52 39.8 +0.7
NCK                                 pmax   pmax
      comp=Z,17nm,0.9s
LVZ   Lovozero         76.60  21    eP     P      03 52 43.8 +4.6
      comp=Z,58nm,1.5s
LVZ                                 LR     LR
      comp=Z,774nm,22.0s
LVZ   Lovozero         76.60  21    eP     P      03 52 43.8 +4.6
LVZ                                 pmax   pmax
      comp=Z,58nm,1.5s
ZEI   Tsey             76.66  47    eP     P      03 52 39.2 -1.1
ZEI                                 pmax   pmax
      comp=Z,15nm,1.1s
P18A  Preston Nutter   76.67 309    eP     P      03 52 41.9 +1.3
KBS   Kingsbay         76.70   8    PFAKE         03 52 50.0 +10
KBS                                 LR     LR
      comp=Z,670nm,20.0s
KLMR  Klimovskoe       76.72  29    eP     P      03 52 39.4 -0.5
KLMR                                pmax   pmax
      comp=Z,58nm,1.2s
KLMR  Klimovskoe       76.72  29    eP     P      03 52 39.4 -0.5
KLMR                                AMP           03 52 44.9
      comp=Z,58nm,1.2s
TUC   Tucson           76.74 302    eP     P      03 52 41.0 +0.2
      comp=Z,11nm,1.0s
TUC                                 LR     LR
      comp=Z,2µm,20.0s
TUC   Tucson           76.74 302    eP     P      03 52 41.9 +1.1
TUC                                 pmax   pmax
      comp=Z,11nm,1.0s
TUC   Tucson           76.74 302    P      P      03 52 41.0 +0.2
      baz=92
GCMT  Greycliff        76.76 316    eP     P      03 52 41.0 +0.3
TMCR  Tamitsa          76.84  25    eP     P      03 52 39.4 -1.1
TMCR                                pmax   pmax
      comp=Z,33nm,1.1s
SRU   San Rafael Swe   76.85 309    eP     P      03 52 42.2 +0.8
      comp=Z,21nm,1.2s
SRU   San Rafael Swe   76.85 309    eP     P      03 52 42.2 +0.8
SRU                                 pmax   pmax
      comp=Z,21nm,1.1s
P17A  Butcher Ranch,   77.04 309    eP     P      03 52 43.3 +0.8
      comp=Z,16nm,1.1s
EGMT  Eagleton         77.05 318    eP     P      03 52 42.7 +0.5
      comp=Z,26nm,1.2s
EGMT                                LR     LR
      comp=Z,1µm,19.0s
EGMT  Eagleton         77.05 318    P      P      03 52 41.9 -0.3
      baz=96
GNI   Garni            77.09  50    eP     P      03 52 43.0 +0.3
      comp=Z,56nm,1.5s
GNI                                 LR     LR
      comp=Z,1µm,21.0s
GNI   Garni            77.09  50c   eP     P      03 52 44.5 +1.8
GNI                                 pmax   pmax
      comp=Z,131nm,1.7s
LKWY  Lake             77.16 314    eP     P      03 52 43.9 +0.7
      comp=Z,18nm,1.2s
LKWY                                LR     LR
      comp=Z,3µm,20.0s
LOHW  Long Hollow      77.23 313    eP     P      03 52 43.6 +0.1
      comp=Z,33nm,1.3s
H17A  Grant Village    77.27 314    eP     P      03 52 45.4 +1.6
      comp=Z,18nm,1.2s
H17A  Grant Village    77.27 314    P      P      03 52 44.6 +0.9
      baz=95
RAYN  Ar Rayn          77.29  67    eP     P      03 52 44.7 +0.7
      comp=Z,28nm,1.2s
RAYN                                LR     LR
      comp=Z,5µm,19.0s
SNOW  Snow King Moun   77.33 313    eP     P      03 52 44.7 +0.6
      comp=Z,54nm,1.4s
FLWY  Flagg Ranch      77.33 314    eP     P      03 52 44.5 +0.4
      comp=Z,52nm,1.2s
MOOW  Moose Ponds      77.34 313    eP     P      03 52 43.9 -0.3
      comp=Z,24nm,1.2s
Q16A  Castle Valley    77.34 309    eP     P      03 52 45.0 +0.8
      comp=Z,14nm,1.2s
WUAZ  Wupatki          77.34 305    eP     P      03 52 45.2 +0.9
      comp=Z,34nm,1.3s
WUAZ                                LR     LR
      comp=Z,2µm,21.0s
WUAZ  Wupatki          77.34 305    P      P      03 52 44.9 +0.6
      baz=92
X16A  Lo Mia Camp, P   77.36 304    eP     P      03 52 45.7 +1.3
      comp=Z,22nm,1.4s
YNR   Norris Junctio   77.37 314    eP     P      03 52 45.9 +1.5
      comp=Z,19nm,1.4s
REDW  Red Top Meadow   77.39 313    eP     P      03 52 44.3 -0.1
      comp=Z,41nm,1.3s
YPP   Pitchstone Pla   77.43 314    eP     P      03 52 45.7 +1.0
      comp=Z,18nm,1.2s
YFT   Old Faithful     77.46 314    eP     P      03 52 46.7 +1.9
      comp=Z,38nm,1.2s
TPAW  Teton Pass       77.47 313    eP     P      03 52 43.9 -1.0
      comp=Z,41nm,1.3s
RES   Resolute Bay     77.47 346    eP     P      03 52 43.0 -0.9
      comp=Z,32nm,1.1s
RES                                 ePP    PP     03 55 40.7 +2.2
RES   Resolute Bay     77.47 346    eP     P      03 52 43.3 -0.6
RES                                 pmax   pmax
      comp=Z,33nm,1.1s
IMW   Indian Meadow    77.49 314    eP     P      03 52 45.5 +0.5
      comp=Z,36nm,1.2s
YHH   Holmes Hill      77.50 315    eP     P      03 52 45.6 +0.5
      comp=Z,33nm,1.3s
AHID  Auburn Hatcher   77.53 312    PFAKE         03 53 00.0 +15
AHID                                LR     LR
      comp=Z,3µm,20.0s
FXWY  Fox Creek        77.54 313    eP     P      03 52 45.1 -0.1
      comp=Z,20nm,1.2s
YMR   Madison River    77.57 314    eP     P      03 52 46.6 +1.2
      comp=Z,50nm,1.2s
TCUT  Toone Canyon     77.65 311    eP     P      03 52 46.6 +0.7
      comp=Z,86nm,1.3s
JLU   Jordanelle       77.65 310    eP     P      03 52 46.9 +0.9
      comp=Z,43nm,1.3s
YHB   Horse Butte      77.74 314    eP     P      03 52 47.6 +1.2
      comp=Z,18nm,1.0s
MPU   Maple Canyon     77.76 310    eP     P      03 52 47.4 +0.9
      comp=Z,16nm,1.3s
VNA1  Neumayer--Stat   77.81 172    P      P      03 52 47.5 +1.7
CTU   Camp Tracy       77.88 310    eP     P      03 52 47.9 +0.7
      comp=Z,18nm,1.1s
QLMT  Earthquake Lak   77.92 315    eP     P      03 52 48.6 +1.3
GROC  Groznyy          78.08  47    eP     P      03 52 47.7 -0.2
GROC                                e             03 52 57.3
GROC                                eS     S      04 02 43.5 +1.5
GROC                                pmax   pmax
      comp=Z,32nm,1.5s
NLU   North Lily Min   78.09 310    eP     P      03 52 49.4 +0.9
      comp=Z,38nm,1.3s
MTPU  Mount Pierson    78.09 308    eP     P      03 52 49.7 +1.0
      comp=Z,46nm,1.3s
MSU   Marysvale        78.11 308    eP     P      03 52 49.5 +1.0
MSU   Marysvale        78.11 308    eP     P      03 52 49.5 +1.0
BOZ   Bozeman (W)      78.11 315    eP     P      03 52 48.1 -0.2
      comp=Z,12nm,1.2s
BOZ                                 LR     LR
      comp=Z,993nm,21.0s
BOZ   Bozeman (W)      78.11 315    eP     P      03 52 48.1 -0.2
BOZ                                 pmax   pmax
      comp=Z,12nm,1.2s
BOZ                                 MLR    MLR
      comp=Z,993nm,21.0s
BOZ   Bozeman (W)      78.11 315    P      P      03 52 48.2 -0.1
      baz=94
VNA3  Neumayer Olymp   78.16 172    P      P      03 52 48.8 +1.0
VNA2  Neumayer--Watz   78.19 172    P      P      03 52 49.2 +1.3
      baz=339,slow=6.7
HRY   Holter Researc   78.33 316    eP     P      03 52 49.7 +0.3
SPUT  South Promonto   78.44 311    eP     P      03 52 50.6 +0.4
      comp=Z,22nm,1.3s
214A  Organ Pipe Nat   78.45 301    P      P      03 52 50.9 +0.6
      baz=91
KNB   Kanab            78.57 307    eP     P      03 52 51.6 +0.6
      comp=Z,17nm,1.3s
KNB   Kanab            78.57 307    eP     P      03 52 51.6 +0.6
KNB                                 pmax   pmax
      comp=Z,17nm,1.2s
Y14A  Wickenburg       78.64 303    eP     P      03 52 52.9 +1.5
      comp=Z,14nm,1.2s
DUG   Dugway, Tooele   78.67 310    eP     P      03 52 51.8 +0.3
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	comp=Z,26nm,1.3s						
DUG				LR	LR		
	comp=Z,1µm,20.0s						
DUG	Dugway, Tooele	78.67	310	eP	P	03 52 52.4	+0.9
DUG				pmax	pmax		
	comp=Z,26nm,1.2s						
DUG	Dugway, Tooele	78.67	310	P	P	03 52 51.8	+0.3
	baz=92						
LRM	Limekiln Ridge	78.70	315	eP	P	03 52 52.2	+0.5
HVU	Hansel Valley	78.71	311	eP	P	03 52 51.8	+0.1
	comp=Z,21nm,1.3s						
HVU	Hansel Valley	78.71	311	eP	P	03 52 51.8	+0.1
HVU				pmax	pmax		
	comp=Z,21nm,1.2s						
DLMT	Dillon	78.78	315	eP	P	03 52 52.9	+0.9
	comp=Z,45nm,1.3s						
SZCU	Shurtz Canyon	78.79	307	eP	P	03 52 53.4	+1.1
	comp=Z,33nm,1.3s						
BGU	Big Grassy Mou	78.86	310	eP	P	03 52 52.9	+0.3
	comp=Z,38nm,1.3s						
MCMT	McKenzie Canyo	78.92	314	eP	P	03 52 53.7	+0.8
CCUT	Cedar City	79.01	307	eP	P	03 52 55.1	+1.5
	comp=Z,34nm,1.2s						
MAK	Makhachkala	79.31	47	eP	P	03 52 48.8	-5.9
MAK				eS	S	04 02 45.4	-10
MAK				eSS	SS	04 08 00.5	-1.5
MAK				pmax	pmax		
	comp=Z,43nm,0.5s						
W13A	Hualapai Mount	79.39	305	eP	P	03 52 57.4	+1.7
	comp=Z,14nm,1.2s						
PSUT	Pine Spring	79.42	308	eP	P	03 52 56.9	+1.1
	comp=Z,21nm,1.2s						
SNAA	Sanae	79.54	171	P	P	03 52 56.5	+1.0
SNAA	Sanae	79.54	171	P	P	03 52 56.0	+0.6
	comp=Z,8.9nm,0.9s,baz=335,slow=7.0,SNR=14						
PDMCI	Parker Dam,Lak	79.59	304	P	P	03 52 56.9	+0.5
	baz=90						
PRGR	Permogore	79.76	28	eP	P	03 52 56.2	-0.6
PRGR				pmax	pmax		
	comp=Z,79nm,1.0s						
MSO	Missoula	79.79	316	eP	P	03 52 57.5	+0.1
	comp=Z,13nm,1.3s						
MSO	Missoula	79.79	316	P	P	03 52 57.0	-0.4
	baz=93						
WALA	Waterton Lakes	79.89	319	eP	P	03 52 57.6	-0.3
	comp=Z,39nm,1.3s						
Y12C	Blythe	79.91	303	eP	P	03 52 59.7	+1.5
	comp=Z,18nm,1.1s						
Y12C	Blythe	79.91	303	P	P	03 52 58.5	+0.3
	baz=90						
HLID	Hailey	79.99	313	eP	P	03 52 59.1	+0.4
	comp=Z,28nm,1.4s						
HLID				LR	LR		
	comp=Z,2µm,20.0s						
HLID	Hailey	79.99	313	P	P	03 52 58.9	+0.2
	baz=92						
LDFC	Landfair	80.39	305	eP	P	03 53 02.8	+1.8
	comp=Z,48nm,1.3s						
IRM	Iron Mountain	80.42	304	P	P	03 53 02.0	+0.9
	baz=90						
RPN	Rapa Nui	80.43	241	PFAKE		03 53 10.0	+8.9
RPN				LR	LR		
	comp=Z,1µm,19.0s						
SHPR	Sheep Range	80.44	306	eP	P	03 53 02.5	+1.3
	comp=Z,16nm,1.3s						
ELK	Elko	80.54	310	eP	P	03 53 02.1	+0.3
	comp=Z,21nm,1.3s						
ELK	Elko	80.54	310	eP	P	03 53 02.1	+0.3
ELK				pmax	pmax		
	comp=Z,21nm,1.2s						
BC3	Big Chuckawall	80.68	303	P	P	03 53 01.8	-0.7
	baz=90						
R11A	Troy Canyon, C	80.78	308	eP	P	03 53 04.1	+1.1
	comp=Z,18nm,1.3s						
R11A	Troy Canyon, C	80.78	308	P	P	03 53 03.3	+0.2
	baz=90						
GMRC	Granite Mounta	80.84	304	P	P	03 53 04.1	+0.7
	baz=90						
SWSC	Sam W. Stewart	80.98	302	P	P	03 53 04.5	+0.5
	baz=89						
TUQ	Turquoise Moun	81.06	305	P	P	03 53 05.2	+0.7
	baz=90						
BELC	Belle Mtn. Jos	81.13	303	P	P	03 53 05.4	+0.4
	baz=89						
YKA	Yellowknife Ar	81.24	332	P	P	03 53 03.2	-1.5
	comp=Z,5.9nm,1.0s,baz=95,slow=5.4,SNR=51						
YKA				PKKPbc	PKKPbc	04 11 39.6	-3.1
	comp=Z,0.3nm,0.8s,baz=287,slow=2.4,SNR=5.3						
YKB5	Yellowknife Ar	81.24	332	eP	P	03 53 02.5	-2.2
IKP	In-Ko-Pah, Jac	81.24	302	P	P	03 53 06.7	+1.2
	baz=89						
YKW3	Yellowknife Ar	81.25	332	eP	P	03 53 03.1	-1.6
	comp=Z,31nm,1.5s						
TPNV	Topopah Spring	81.31	306	eP	P	03 53 07.5	+1.7
	comp=Z,21nm,1.1s						
TPNV	Topopah Spring	81.31	306	eP	P	03 53 07.6	+1.7
TPNV				pmax	pmax		
	comp=Z,21nm,1.1s						
TPNV	Topopah Spring	81.31	306	P	P	03 53 06.9	+1.0
	baz=90						
SHOC	Shoshone, Teco	81.34	305	P	P	03 53 06.4	+0.5
	baz=89						
HEC	Hector,Ludlow	81.40	304	P	P	03 53 06.9	+0.6
	baz=89						
MONP2	Monument Peak	81.50	302	P	P	03 53 07.6	+0.6
	baz=89						
PFO	Pinyon Flats O	81.52	303	PFAKE		03 53 20.0	+13
PFO				LR	LR		
	comp=Z,1µm,19.0s						
PFO	Pinyon Flats O	81.52	303	P	P	03 53 07.5	+0.4
	baz=89						
NVL	N'lazarevskaya	81.74	166	eP	P	03 53 13.2	+6.1
NVL				pmax	pmax		
	comp=Z,15nm,0.9s						
GSC	Goldstone, Bar	81.78	305	eP	P	03 53 09.5	+1.2
	comp=Z,9.7nm,0.9s						
GSC	Goldstone, Bar	81.78	305	eP	P	03 53 09.5	+1.2
GSC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GSC	Goldstone, Bar	81.78	305	P	P	03 53 08.3	0.0
	baz=89						
FURC	Furnace Creek,	81.81	306	P	P	03 53 09.5	+1.3
	baz=89						
BBRC	Big Bear Solar	81.89	304	P	P	03 53 09.9	+0.8
	baz=89						
NEW	Newport	81.99	318	eP	P	03 53 08.4	-0.7
	comp=Z,13nm,1.1s						
NEW				LR	LR		
	comp=Z,947nm,19.0s						
NEW	Newport	81.99	318	eP	P	03 53 08.7	-0.3
NEW				pmax	pmax		
	comp=Z,29nm,1.2s						
NEW	Newport	81.99	318	P	P	03 53 08.8	-0.3
	baz=91						
F10A	Beach Ranch, E	82.04	316	eP	P	03 53 09.2	-0.3
	comp=Z,9.3nm,0.9s						
BMO	Blue Mountains	82.09	314	eP	P	03 53 09.4	-0.3
	comp=Z,12nm,1.1s						
BMO				LR	LR		
	comp=Z,1µm,19.0s						
BMO	Blue Mountains	82.09	314	eP	P	03 53 09.8	0.0
BMO				pmax	pmax		
	comp=Z,12nm,1.1s						
MURC	Murrieta	82.14	303	P	P	03 53 10.5	+0.3
	baz=88						
GRAC	Grapevine Rang	82.20	306	P	P	03 53 10.8	+0.3
	baz=89						
MPMC	Manual Prospec	82.32	306	P	P	03 53 11.7	+0.5
	baz=89						
LRMC	Laurel Mtn Rad	82.49	305	P	P	03 53 12.6	+0.5
	baz=88						
OPO	Ambohidratompo	82.50	109	LR	LR	04 25 19.7	
	comp=Z,1µm,21.6s,baz=286,slow=32						
BFSC	Mount Baldy Ra	82.50	304	P	P	03 53 12.6	+0.4
	baz=88						
ABPO	Ambohimpanom	82.60	110	PFAKE		03 53 20.0	+7.0
ABPO				LR	LR		
	comp=Z,387nm,20.0s						
E09A	Wood Farm, Sta	82.68	316	eP	P	03 53 12.5	-0.1
	comp=Z,33nm,1.3s						
KVN	Kaiserville	82.74	309	eP	P	03 53 13.5	+0.1
	comp=Z,7.4nm,0.9s						
KVN	Kaiserville	82.74	309	eP	P	03 53 13.5	+0.1
KVN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
C09A	Chrisman Ranch	82.76	317	eP	P	03 53 13.8	+0.8
	comp=Z,43nm,1.8s						
EDW2	Edwards Air Fo	82.76	304	P	P	03 53 14.2	+0.7
	baz=88						
CWC	Cottonwood Cre	82.79	306	P	P	03 53 14.3	+0.6
	baz=88						
NV11	Mina Array Sit	82.80	308	eP	P	03 53 14.2	+0.6
	comp=Z,1.2nm,1.1s						
NV01	Mina Array Sit	82.92	308	eP	P	03 53 14.7	+0.3
NVAR	Mina Array Bea	82.92	308	P	P	03 53 15.0	+0.6
	comp=Z,7.9nm,0.9s,baz=101,slow=5.5,SNR=23						
J08A	Circle Bar Ran	82.94	313	eP	P	03 53 15.3	+1.1
	comp=Z,18nm,1.1s						
WVOR	Wild Horse Val	83.08	312	eP	P	03 53 15.7	+0.7
	comp=Z,24nm,1.4s						
WVOR				LR	LR		
	comp=Z,2µm,20.0s						
WVOR	Wild Horse Val	83.08	312	eP	P	03 53 16.0	+1.0
WVOR				pmax	pmax		
	comp=Z,23nm,1.4s						
RYN	Ryan	83.08	308	eP	P	03 53 16.0	+0.8
	comp=Z,16nm,1.1s						
ISA	Isabella, Lake	83.13	305	eP	P	03 53 16.5	+1.2
	comp=Z,26nm,1.2s						
ISA	Isabella, Lake	83.13	305	eP	P	03 53 16.5	+1.2
ISA				pmax	pmax		
	comp=Z,26nm,1.2s						
ISA	Isabella, Lake	83.13	305	P	P	03 53 16.4	+1.1
	baz=88						
D08A	Wollman Farm,	83.20	317	eP	P	03 53 15.4	0.0
	comp=Z,46nm,1.8s						
G08A	Pilot Rock	83.26	315	eP	P	03 53 15.7	-0.2
	comp=Z,14nm,1.4s						
E08A	Dider Farm, El	83.31	316	eP	P	03 53 16.2	+0.4
	comp=Z,24nm,1.0s						
MLAC	Mammoth, Mammo	83.36	307	P	P	03 53 17.4	+0.8
	baz=88						
ARVC	Arvin	83.44	305	P	P	03 53 17.3	+0.5
	baz=88						
B08A	Colville Reser	83.46	318	eP	P	03 53 16.3	-0.5
	comp=Z,16nm,1.2s						
OMMB	Old Mammoth Mi	83.49	307	eP	P	03 53 18.7	+1.2
	comp=Z,16nm,1.3s						
MDPB	Devils Postpil	83.55	307	eP	P	03 53 19.1	+1.4
	comp=Z,15nm,1.3s						
HAWA	Hanford	83.64	316	eP	P	03 53 18.1	+0.5
	comp=Z,46nm,1.6s						
HAWA				LR	LR		
	comp=Z,1µm,19.0s						
I07A	Izee	83.67	314	eP	P	03 53 19.0	+1.0
	comp=Z,17nm,1.6s						
WAKR	Walker	83.80	308	eP	P	03 53 20.5	+1.6
	comp=Z,18nm,1.3s						
E07A	Sunnyside	83.86	316	eP	P	03 53 19.3	+0.6
	comp=Z,39nm,1.5s						
PNTR	Pine Nut	83.91	309	eP	P	03 53 20.8	+1.4
	comp=Z,21nm,0.9s						
F07A	Phinny Hill Vi	83.93	315	eP	P	03 53 19.9	+0.8
	comp=Z,51nm,1.4s						
VCNR	Virginia City	83.94	309	eP	P	03 53 21.0	+1.5
	comp=Z,11nm,1.1s						
PKM	Mcpherson Peak	84.26	304	P	P	03 53 21.5	+0.2
	baz=87						
MOD	Modoc Plateau	84.33	311	eP	P	03 53 22.7	+1.2
	comp=Z,31nm,1.3s						
SMMC	Simmler	84.39	305	P	P	03 53 21.3	-0.4
	baz=87						
BEKR	Beckworth	84.46	309	eP	P	03 53 23.1	+0.9
	comp=Z,26nm,1.3s						
CMB	Columbia Colle	84.57	308	eP	P	03 53 23.5	+0.9
	comp=Z,20nm,1.5s						
CMB	Columbia Colle	84.57	308	eP	P	03 53 23.5	+0.9
CMB				pmax	pmax		
	comp=Z,20nm,1.5s						
PINE	Pine Mountain	84.72	313	eP	P	03 53 25.2	+1.8
	comp=Z,39nm,1.5s						
B06A	Marblemount	84.89	318	eP	P	03 53 23.4	-0.5
	comp=Z,42nm,1.5s						
G05D	Wamic, OR	84.92	315	P	P	03 53 23.6	-0.6
	baz=87						
J05D	Fort Rock, OR	84.96	313	P	P	03 53 25.7	+1.1
	baz=87,SNR=12						
AFDM	Forest Hills D	84.98	309	eP	P	03 53 25.4	+0.8
	comp=Z,19nm,1.2s						
I05D	Terrebonne, OR	84.98	314	P	P	03 53 25.6	+1.0
	baz=87,SNR=12						
F05D	White Salmon	85.00	315	P	P	03 53 25.0	+0.4
	baz=87						
LLLB	Lillooet	85.06	320	eP	P	03 53 24.6	-0.2
	comp=Z,24nm,1.6s						
LON	Longmire	85.19	316	eP	P	03 53 26.0	+0.4
	comp=Z,18nm,1.2s						
LON	Longmire	85.19	316	eP	P	03 53 26.0	+0.4
LON				pmax	pmax		
	comp=Z,18nm,1.2s						
B05A	Bryant	85.31	318	P	P	03 53 24.9	-1.1
	baz=87						
ORV	Oroville	85.36	309	eP	P	03 53 27.0	+0.5
	comp=Z,36nm,1.4s						
ORV	Oroville	85.36	309	eP	P	03 53 27.0	+0.5
ORV				pmax	pmax		
	comp=Z,36nm,1.3s						
K04D	Chiloquin, OR	85.38	312	P	P	03 53 26.6	-0.1
	baz=87						
M04C	Macdoel	85.49	311	P	P	03 53 27.9	+0.6
	baz=87,SNR=17						
O03E	Paynes Creek	85.55	310	P	P	03 53 27.8	+0.3
	baz=86						
H04A	Detroit Lake	85.57	314	eP	P	03 53 28.0	+0.5
	comp=Z,34nm,1.1s						
J04D	Umpqua Nationa	85.60	313	P	P	03 53 28.5	+0.6
	baz=86,SNR=21						
E04D	Cinebar	85.73	316	P	P	03 53 28.4	+0.2
	baz=86						
I04A	Tendick Farm,	85.79	313	P	P	03 53 28.3	-0.3
	baz=86,SNR=17						
L04D	Klamath Falls	85.81	312	P	P	03 53 28.8	0.0
	baz=86,SNR=8.7						
D04E	Lakebay	85.83	317	P	P	03 53 29.0	+0.4
	baz=86						
H04D	Lebanon	85.97	314	P	P	03 53 29.7	+0.3
	baz=86						
D03D	Eldon	86.02	317	P	P	03 53 29.5	-0.1
	baz=86						
WDC	Whiskeytown Da	86.09	310	eP	P	03 53 29.2	-0.9
	comp=Z,21nm,1.4s						
WDC	Whiskeytown Da	86.09	310	eP	P	03 53 29.2	-0.9
WDC				pmax	pmax		
	comp=Z,21nm,1.4s						
YBH	Yreka Blue Hor	86.14	311	eP	P	03 53 29.9	-0.5
	comp=Z,13nm,0.9s						
YBH	Yreka Blue Hor	86.14	311	eP	P	03 53 29.9	-0.5
YBH				pmax	pmax		
	comp=Z,13nm,0.9s						
PGC	Sidney	86.19	318	eP	P	03 53 31.0	+0.7
	comp=Z,78nm,1.1s						
N02D	Trinity Center	86.19	311	P	P	03 53 30.0	-0.7
	baz=86						
HUMO	Hull Mountain	86.26	312	eP	P	03 53 30.9	0.0
	comp=Z,33nm,1.5s						
M02C	Callahan	86.27	311	P	P	03 53 30.8	-0.3
	baz=86						
G03D	McMinnville, O	86.30	315	P	P	03 53 32.2	+1.2
	baz=86						
ARU	Arti	86.31	34	eP	P	03 53 30.8	0.0
	comp=Z,41nm,1.3s						
ARU				LR	LR		
	comp=Z,883nm,22.0s						
ARU	Arti	86.31	34	ceP	P	03 53 30.9	+0.1
ARU				pmax	pmax		
	comp=Z,36nm,1.3s						
O02D	Mt. Diablo Mer	86.31	310	P	P	03 53 31.3	0.0
	baz=86						
I03D	Drain, OR	86.47	313	P	P	03 53 31.3	-0.6
	baz=86						
NLWA	Neilton Lookou	86.56	317	eP	P	03 53 33.4	+1.1
	comp=Z,49nm,1.2s						
NLWA				LR	LR		
	comp=Z,1µm,20.0s						
L02E	Cave Junction	86.77	312	P	P	03 53 33.9	+0.4
	baz=86						
K02D	Willamette Mer	86.78	312	P	P	03 53 33.8	+0.3
	baz=86						
I02D	Swisshome	86.80	314	P	P	03 53 33.6	+0.1
	baz=85						
ASHO	Ashiyiah	86.88	66	P	P	03 53 34.4	0.0
	SNR=6.1						
ASHO				P	P	03 53 34.4	0.0
	SNR=6.1						
HATD	Hatta, Dubai	86.93	65	P	P	03 53 35.3	+0.7
	SNR=9.4						
HATD				P	P	03 53 35.3	+0.7
	SNR=9.4						
UOSS	Minazif	86.99	65	P	P	03 53 35.3	+0.5
UOSS				P	P	03 53 35.3	+0.5
SVE	Sverdlovsk	87.41	33	eP	P	03 53 37.1	+0.9
SVE				pmax	pmax		
	comp=Z,37nm,1.5s						
GEYT	Alibeck	87.53	52	P	P	03 53 38.7	+1.5
	comp=Z,3.8nm,0.8s,baz=300,slow=10,SNR=5.7						
ABKAR	Akbulak array	87.78	41	eP	P	03 53 39.6	+1.5
DQM	DQM	88.66	70	P	P	03 53 42.3	-0.6
INK	Inuvik	88.78	339	eP	P	03 53 41.9	-0.5
	comp=Z,15nm,1.3s						
INK	Inuvik	88.78	339	eP	P	03 53 41.9	-0.5
INK				pmax	pmax		
	comp=Z,15nm,1.3s						
INK	Inuvik	88.78	339	LR	LR	04 29 36.6	
	comp=Z,429nm,21.8s,baz=77,slow=33						
BBB	Bella Bella	88.81	322	LR	LR	04 30 02.6	
	comp=Z,861nm,20.4s,baz=112,slow=33						
MHTO	MHTO	88.95	69	P	P	03 53 44.8	+0.6
MHTO				P	P	03 53 44.8	+0.6
SYO	Syowa Base	88.97	160⇓	eP	P	03 53 43.2	0.0
SYO	Syowa Base	88.97	160⇓	ipP	pP	03 53 46.0	-0.2
DLBC	Dease Lake	89.00	329	LR	LR	04 29 46.8	
	comp=Z,734nm,20.4s,baz=86,slow=33						
WSAR	Wadi Sarin	89.35	67	P	P	03 53 45.3	-0.8
EPYK	Eagle Plains	90.43	337	eP	P	03 53 50.0	-0.3
	comp=Z,67nm,1.8s						
EPYK	Eagle Plains	90.43	337	P	P	03 53 50.1	-0.2
	baz=75						
WRAK	Wrangell Islan	90.59	327	PFAKE		03 54 00.0	+8.9
WRAK				LR	LR		
	comp=Z,1µm,20.0s						
DAWY	Dawson	92.15	335	eP	P	03 53 57.8	-0.5
	comp=Z,28nm,1.3s						
MRIV	Mauritius Mete	92.36	110	eP	P	03 53 58.2	-1.9
	comp=Z,63nm,1.5s						
EGAK	Eagle	92.66	336	PFAKE		03 54 10.0	+9.4
EGAK				LR	LR		
	comp=Z,764nm,19.0s						
BRVK	Borovoye	93.55	36	eP	P	03 54 06.0	+1.1
	comp=Z,22nm,1.8s						
BRVK				LR	LR		
	comp=Z,575nm,20.0s						
BRVK	Borovoye	93.55	36	i P	P	03 54 06.0	+1.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SCRK	Sand Creek	94.09	336	eP	P	03 54 06.9	-0.5
	comp=Z,28nm,1.7s						
PRP	Porcupine Dome	94.12	337	eP	P	03 54 07.3	-0.2
	comp=Z,32nm,1.8s						
TOLK	Toolik Lake Re	94.25	341	eP	P	03 54 08.1	+0.2
	comp=Z,17nm,1.0s						
TOLK	Toolik Lake Re	94.25	341	P	P	03 54 07.4	-0.5
	baz=63						
IL1	Eielson Array	94.95	337	eP	P	03 54 08.7	-2.4
ILAR	Eielson Array	94.95	337	P	P	03 54 10.3	-0.8
	comp=Z,3.6nm,0.9s,baz=55,slow=3.9,SNR=24						
ILAR				PP	PP	03 58 00.7	+0.9
	comp=Z,0.9nm,1.0s,baz=63,slow=6.0,SNR=4.7						
ILAR				PKKPbc	PKKPdf	04 11 05.7	-2.8
	comp=Z,0.5nm,0.9s,baz=286,slow=4.1,SNR=4.5						
ILAR				LR	LR	04 34 10.0	
	comp=Z,927nm,20.7s,baz=88,slow=34						
ILB	Eielson Array	94.95	337	eP	P	03 54 10.4	-0.7
POKR	Poker Plat Res	95.02	337	P	P	03 54 10.3	-1.2
	baz=65						
NRIK	Noril'sk	95.17	18	LR	LR	04 35 06.2	
	comp=Z,851nm,21.7s,baz=309,slow=34						
COLA	College	95.28	337	PFAKE		03 54 20.0	+7.4
COLA				LR	LR		
	comp=Z,1µm,20.0s						
COLA	College	95.28	337	i P	P	03 54 12.4	-0.2
COLA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TCOL	CIGO, UAF Yank	95.29	337	P	P	03 54 12.5	-0.1
	baz=65						
MDM	Murphy Dome	95.39	337	eP	P	03 54 15.4	+2.3
	comp=Z,36nm,2.0s						
QSPA	South Pole Qui	95.56	180	eP	P	03 54 14.0	0.0
	comp=Z,74nm,1.4s						
QSPA				LR	LR		
	comp=Z,768nm,19.0s						
CHGR	Chuyangaron	96.01	50	eP	P	03 54 19.1	+2.5
	comp=Z,31nm,1.5s						
GAR	Garm	96.82	50	eP	P	03 54 22.8	+2.4
	comp=Z,20nm,1.3s						
GAR	Garm	96.82	50	eP	P	03 54 22.8	+2.4
GAR				pmax	pmax		
	comp=Z,20nm,1.2s						
IM3	Indian Mountai	96.95	339	eP	P	03 54 18.9	-1.3
BTK	Batken	96.96	49	eP	P	03 54 24.9	+3.9
	comp=Z,17nm,1.5s						
BTK	Batken	96.96	49	eP	P	03 54 24.9	+3.9
BTK				pmax	pmax		
	comp=Z,17nm,1.5s						
AAK	Ala-Archa	98.99	45	PFAKE		03 54 40.0	+10
AAK				LR	LR		
	comp=Z,653nm,20.0s						
AAK	Ala-Archa	98.99	45	ceP	Pdif	03 54 31.2	+1.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURK	Kurchatov	99.17	37	PFAKE		03 54 40.0	+10
KURK				LR	LR		
	comp=Z,2µm,22.0s						
KURK	Kurchatov	99.17	37	i P	Pdif	03 54 31.6	+1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
NIL	Nilore	100.35	54	PFAKE		03 54 50.0	+14
NIL				LR	LR		
	comp=Z,434nm,19.0s						
KSH	Kashi	100.94	48	P	Pdif	03 54 38.8	0.0
KSH				PP	PP	03 58 47.1	+0.4
KSH				SKS	SKSac	04 05 17.4	-0.9
KSH				S	Sdif	04 06 12.8	-4.6
KSH				SS	SS	04 13 13.1	-2.2
KSH				LR	LR		
	comp=Z,610nm,8.5s						
KSH				LR	LR		
	comp=Z,460nm,7.8s						
KSH				LR	LR		
	comp=Z,1µm,19.8s						
MKAR	Makanchi Array	102.87	40	P	Pdif	03 54 47.8	+0.7
	comp=Z,0.2nm,0.5s,baz=343,slow=4.5,SNR=3.3						
BILL	Bilibino	105.35	353	PFAKE		03 59 20.0	+8.6
BILL				LR	LR		
	comp=Z,678nm,20.0s						
BILL	Bilibino	105.35	353	i P	Pdif	03 54 57.0	-0.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,447nm,18.0s						
DGAR	Diego Garcia	105.99	96	PFAKE		03 59 30.0	+16
DGAR				LR	LR		
	comp=Z,584nm,22.0s						
WMQ	Urumqi	107.57	41	ePdif	Pdif	03 55 10.3	+2.2
WMQ				PP	PP	03 59 35.6	-0.1
WMQ				SS	SS	04 14 46.6	+1.0
WMQ				AMB	AMB		
	comp=Z,420nm,6.1s						
WMQ				LR	LR		
	comp=Z,2µm,25.7s						
WMQ				LR	LR		
	comp=Z,1µm,19.3s						
WMQ				LR	LR		
	comp=Z,2µm,28.5s						
TAOE	Nuku Hiva Isla	107.73	262	ePS	PS	04 09 01.5	+0.2
	comp=Z,298nm,26.8s						
TAOE				eSS	SS	04 14 44.3	-5.8
	comp=Z,304nm,25.2s						
TAOE	Nuku Hiva Isla	107.73	262	eLR	LR	04 30 40.6	
	comp=Z,1µm,26.4s						
TLY	Talaya	112.07	27	PFAKE		03 59 40.0	+16
TLY				LR	LR		
	comp=Z,527nm,22.0s						
CASY	Casey	114.29	165	PFAKE		03 59 40.0	+12
CASY				LR	LR		
	comp=Z,115nm,20.0s						
MA2	Magadan	115.03	358	PFAKE		03 59 40.0	+10
MA2				LR	LR		
	comp=Z,601nm,20.0s						
SONM	Songino Array	116.01	29	PKP	PKiKP	03 59 31.6	-0.7
	comp=Z,0.7nm,1.0s,baz=276,slow=1.4,SNR=3.2						
SONM				PP	PP	04 00 30.4	-5.5

	comp=Z,2.2nm,1.2s,baz=291,slow=4.5,SNR=4.6						
LSA	**Lhasa**	**116.05**	**53**	PFAKE		03 59 50.0	+17
LSA				LR	LR		
	comp=Z,981nm,20.0s						
ULN	**Ulaanbaatar**	**116.31**	**29**	PFAKE		03 59 40.0	+7.1
ULN				LR	LR		
	comp=Z,1µm,19.0s						
TBI	**Tubuai**	**116.44**	**247**	*e*PS	PS	04 10 22.8	-0.2
	comp=Z,559nm,29.5s						
TBI				*e*SS	SS	04 16 46.6	+1.3
	comp=Z,561nm,34.0s						
TBI	**Tubuai**	**116.44**	**247**	*e*LR	LR	04 34 49.9	
	comp=Z,822nm,37.5s						
PPT2	**Papeete2**	**116.96**	**253**	*e*PS	PS	04 10 27.9	-0.2
	comp=Z,838nm,27.0s						
PPT2				*e*SS	SS	04 16 54.3	+1.7
	comp=Z,1µm,28.2s						
PPT2	**Papeete2**	**116.96**	**253**	*e*LR	LR	04 35 03.5	
	comp=Z,2µm,22.2s,baz=87						
HIA	**Hailar**	**120.49**	**20**	PFAKE		03 59 50.0	+9.2
HIA				LR	LR		
	comp=Z,801nm,22.0s						
LZH	**Lanzhou**	**122.15**	**41**	*e*PKP	**PKPdf**	**03 59 39.0**	**-5.5**
LZH				sPKP		03 59 53.8	
LZH				SS	SS	04 17 57.3	-0.3
LZH				AMB	AMB		
	comp=Z,250nm,4.9s						
LZH				LR	LR		
	comp=Z,730nm,19.1s						
LZH				LR	LR		
	comp=Z,920nm,18.4s						
LZH				LR	LR		
	comp=Z,1µm,20.0s						
HHC	**Hu-ho-hao-te**	**123.57**	**32**	*e*PKP	**PKiKP**	**03 59 48.0**	**+0.7**
HHC				PP	**PP**	**04 01 33.3**	**+5.4**
HHC				AMB	AMB		
	comp=Z,29nm,6.1s						
HHC				LR	LR		
	comp=Z,820nm,22.5s						
HHC				LR	LR		
	comp=Z,320nm,15.6s						
HHC				LR	LR		
	comp=Z,1µm,19.9s						
CD2	**Chengdu**	**125.06**	**46**	PKP	**PKPdf**	**03 59 49.0**	**-1.1**
CD2				sPKP		03 59 53.6	
CD2				PP	**PP**	**04 01 37.0**	**-1.4**
CD2				SKS	**SKSdf**	**04 07 00.8**	**-1.4**
CD2				SKKS	**SKKSac**	**04 08 34.0**	**-3.6**
CD2				SS	**SS**	**04 18 33.5**	**-1.1**
CD2				AMB	AMB		
	comp=Z,440nm,6.9s						
CD2				LR	LR		
	comp=Z,2µm,27.5s						
CD2				LR	LR		
	comp=Z,2µm,19.6s						
CD2				LR	LR		
	comp=Z,2µm,18.6s						
BJI	**Beijing**	**126.51**	**29**	*e*PKP	**PKiKP**	**03 59 53.3**	**+0.4**
BJI				LR	LR		
	comp=Z,540nm,17.9s						
BJI				LR	LR		
	comp=Z,450nm,16.5s						
BJI				LR	LR		
	comp=Z,620nm,18.4s						
BJT	**Baijiatuau**	**126.53**	**29**	PFAKE		04 00 00.0	+7.0
BJT				LR	LR		
	comp=Z,1µm,19.0s						
XAN	**Xi'an**	**126.69**	**40**	PKP	**PKPdf**	**03 59 52.5**	**-0.6**
XAN				PP	**PP**	**04 01 50.9**	**+1.9**
XAN				LR	LR		
	comp=Z,380nm,30.4s						
XAN				LR	LR		
	comp=Z,540nm,21.6s						
XAN				LR	LR		
	comp=Z,650nm,23.8s						
CHTO	**Chiang Mai**	**126.84**	**62**	*e*PKPdf	**PKPdf**	**03 59 50.5**	**-3.2**
CHTO				LR	LR		
	comp=Z,658nm,22.0s						
CHTO	**Chiang Mai**	**126.84**	**62**	*e*PKIKP	**PKPdf**	**03 59 53.4**	**-0.3**
CHTO	**Chiang Mai**	**126.84**	**62**	PKP	**PKiKP**	**03 59 54.9**	**+0.7**
CHTO	**Chiang Mai**	**126.84**	**62**	P	**PKiKP**	**03 59 54.9**	**+0.7**
	comp=Z,41nm,1.4s						
CMMT	**Chiang Mai**	**126.85**	**62**	P	**PKiKP**	**03 59 54.9**	**+0.7**
	comp=Z,9.1nm,1.3s						
CMAR	**Chiang Mai Arr**	**126.98**	**62**	PKP	**PKPdf**	**03 59 54.0**	**0.0**
	comp=Z,6.5nm,0.9s,baz=287,slow=3.5,SNR=25						
CM01	**Chiang Mai Arr**	**127.01**	**62**	*e*PKPdf	**PKPdf**	**03 59 53.6**	**-0.4**
CN2	**Changchun**	**127.19**	**19**	PKP	**PKiKP**	**03 59 55.3**	**+1.1**
CN2				*e*PP	**PP**	**04 01 58.0**	**+6.5**
CN2				*e*SS	SS	04 19 05.0	+5.7
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,500nm,20.0s						
CN2				LR	LR		
	comp=Z,500nm,20.0s						
CN2				LR	LR		
	comp=Z,800nm,22.0s						
KMI	**Kunming**	**127.30**	**53**	PKP	**PKiKP**	**03 59 57.6**	**+2.4**
KMI				LR	LR		
	comp=Z,590nm,19.8s						
KMI				LR	LR		
	comp=Z,690nm,22.9s						
KMI				LR	LR		
	comp=Z,790nm,25.0s						
YSS	**Yuzh-Sakhalins**	**127.61**	**4**	PFAKE		04 00 10.0	+15
YSS				LR	LR		
	comp=Z,208nm,19.0s						
MDJ	**Mudanjiang**	**127.69**	**16**	PFAKE		04 00 10.0	+15
MDJ				LR	LR		
	comp=Z,537nm,19.0s						
SUKH	**Sukhothai**	**127.95**	**63**	P	**PKiKP**	**03 59 58.2**	**+1.8**
	comp=Z,2.0nm,0.8s						
UTHA	**Uthaitani**	**128.47**	**65**	P	**PKiKP**	**03 59 59.4**	**+1.9**
	comp=Z,3.0nm,1.1s						
UTTA	**Uttaradit**	**128.66**	**62**	P	**PKiKP**	**03 59 58.5**	**+0.7**
USRK	**Ussuriysk Ar.**	**128.69**	**14**	PKP	**PKPdf**	**03 59 54.9**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=268,slow=4.0,SNR=3.4						
ENH	**Enshi**	**129.43**	**43**	*e*PKPdf	**PKPdf**	**03 59 58.3**	**-0.1**
ENH				LR	LR		
	comp=Z,835nm,20.0s						
GYA	**Guiyang**	**129.63**	**49**	Pdif	**Pdif**	**03 56 45.3**	**-1.4**
GYA				PKP	**PKPdf**	**03 59 58.0**	**-1.0**
GYA				PP	**PP**	**04 02 11.4**	**+2.6**
GYA				AMB	AMB		
	comp=Z,150nm,7.9s						
PSI	**Prapat**	**131.28**	**81**	*e*PKPdf	**PKiKP**	**04 00 05.9**	**+2.5**
PSI	**Prapat**	**131.28**	**81**	*e*PKIKP	**PKiKP**	**04 00 05.9**	**+2.5**
WHN	**Wuhan**	**132.44**	**39**	PKP	**PKiKP**	**04 00 08.1**	**+3.0**
WHN				LR	LR		
	comp=Z,2µm,23.1s						
NJ2	**Nanjing**	**134.01**	**34**	*e*PKP	**PKiKP**	**04 00 08.8**	**+0.5**
QIZ	**Qiongzhong**	**136.02**	**55**	PKP	**PKPdf**	**04 00 11.8**	**+0.7**
QIZ				PP	**PP**	**04 02 50.1**	**+0.2**
QIZ				SS	SS	04 20 52.1	+2.4
QIZ				AMB	AMB		
	comp=Z,290nm,3.9s						
QIZ				LR	LR		
	comp=Z,440nm,20.1s						
QIZ				LR	LR		
	comp=Z,280nm,18.6s						
QIZ				LR	LR		
	comp=Z,770nm,20.1s						
QIZ	**Qiongzhong**	**136.02**	**55**	PFAKE		04 00 20.0	+7.3
QIZ				LR	LR		
	comp=Z,108nm,20.0s						
SSE	**Sheshan**	**136.02**	**33**	PFAKE		04 00 20.0	+7.6
SSE				LR	LR		
	comp=Z,690nm,20.0s						
SNZO	**South Karori**	**136.62**	**211**	PFAKE		04 00 20.0	+6.8
SNZO				LR	LR		
	comp=Z,922nm,19.0s						
TPRI	**Tanjung Pinang**	**137.11**	**83**	PKP	PKiKP	04 00 32.4	+17
MDSI	**Maura Dua**	**137.34**	**91**	PKP	**PKiKP**	**04 00 18.6**	**+3.1**
MAJO	**Matsushiro**	**137.35**	**10**	PFAKE		04 00 30.0	+15
MAJO				LR	LR		
	comp=Z,547nm,19.0s						
RAO	**Raoul Island**	**139.31**	**230**	PFAKE		04 00 30.0	+11
RAO				LR	LR		
	comp=Z,6µm,20.0s						
TATO	**Taipei**	**140.82**	**38**	PFAKE		04 00 30.0	+7.7
TATO				LR	LR		
	comp=Z,704nm,19.0s						
NWAO	**Narrogin (SRO)**	**141.12**	**138**	PFAKE		04 00 30.0	+7.2
NWAO				LR	LR		
	comp=Z,654nm,20.0s						
PCJI	**Pacitan**	**144.35**	**96**	PKP	**PKPab**	**04 00 20.5**	**-3.8**
PCJI				PKP	**PKiKP**	**04 00 29.5**	**-0.4**
SBUM	**Sibu**	**144.38**	**78**	*e*PKPdf	PKPbc	04 00 25.1	+0.4
NGJI	**Ngawi**	**144.65**	**95**	PKP	PKiKP	04 00 41.6	+11
PWJI	**Pagerwojo**	**144.98**	**96**	PKP	**PKPdf**	**04 00 28.0**	**+0.7**
GMJI	**Gumukmas**	**146.59**	**97**	PKP	**PKiKP**	**04 00 35.9**	**+1.4**
KKM	**Kota Kinabalu**	**147.19**	**70**	*e*PKPdf	**PKPab**	**04 00 34.6**	**-0.5**
MSVF	**Nonsavu**	**147.32**	**246**	*e*PKPdf	**PKPdf**	**04 00 32.2**	**+0.9**
MSVF				*e*PKPbc	**PKPab**	**04 00 34.9**	**-0.5**
MSVF				LR	LR		
	comp=Z,751nm,21.0s						
MSVF	**Nonsavu**	**147.32**	**246**	*e*PKIKP	**PKPdf**	**04 00 32.2**	**+0.9**
MSVF				*e*		04 00 34.9	
MSVF				MLR	MLR		
	comp=Z,751nm,21.0s						
FUNA	**Funafuti**	**147.91**	**263**	PFAKE		04 00 40.0	+2.2
FUNA				LR	LR		
	comp=Z,5µm,19.0s						
TOO	**Toolangi**	**148.07**	**178**	*e*PKPbc	**PKiKP**	**04 00 36.3**	**-0.7**
TOO	**Toolangi**	**148.07**	**178**	*e*PKP2	**PKiKP**	**04 00 36.3**	**-0.7**
WAKE	**Wake Island**	**148.65**	**322**	PFAKE		04 00 40.0	-0.5
WAKE				LR	LR		
	comp=Z,3µm,21.0s						
MBWA	**Marble Bar**	**149.34**	**123**	*e*PKPdf	**PKPdf**	**04 00 34.7**	**+0.3**
MBWA				*e*PKPbc	**PKPbc**	**04 00 38.5**	**-0.3**
MBWA				*e*PKPab	**PKPab**	**04 00 43.6**	**+0.2**
MBWA				LR	LR		
	comp=Z,1µm,21.0s						
CAN	**Canberra**	**150.29**	**183**	*e*PKPbc	**PKiKP**	**04 00 41.7**	**+0.1**
CAN	**Canberra**	**150.29**	**183**	*e*PKIKP	**PKiKP**	**04 00 41.7**	**+0.1**
PLAI	**Plampang**	**150.83**	**98**	PKP	**PKPbc**	**04 00 40.5**	**-2.1**
PLAI				PKP	**PKiKP**	**04 00 41.8**	**-1.4**
BBOO	**Buckleboo**	**151.00**	**161**	*e*PKPbc	**PKPbc**	**04 00 42.6**	**+0.1**
TTSI	**Tana Toraja**	**152.79**	**86**	PKP	**PKPdf**	**04 00 42.5**	**+2.6**
TTSI				PKP	**sPKPbc**	**04 00 51.7**	**+0.2**
SPSI	**Sidrap Palu**	**152.83**	**88**	PKP	**PKiKP**	**04 00 47.7**	**+0.3**
KAPI	**Kappang**	**152.87**	**90**	PFAKE		04 00 50.0	+2.5
KAPI				LR	LR		
	comp=Z,636nm,20.0s						
BNSI	**Bone**	**153.19**	**89**	PKP	**PKiKP**	**04 00 48.6**	**+0.5**
STKA	**Stephens Creek**	**153.30**	**170**	PKP	**PKPdf**	**04 00 39.9**	**-0.4**
	comp=Z,3.2nm,1.0s,baz=205,slow=2.3,SNR=3.3						
STKA				PKPbc	**PKiKP**	**04 00 48.3**	**+0.5**
	comp=Z,6.9nm,1.0s,baz=217,slow=3.1,SNR=5.9						
DZM	**Mont Dzumac**	**155.01**	**227**	*e*PP	PP	04 04 38.2	-4.4
	comp=Z,110nm,31.2s						
DZM	**Mont Dzumac**	**155.01**	**227**	*e*SS	SS	04 24 26.4	+0.4
	comp=Z,250nm,28.8s						
DZM	**Mont Dzumac**	**155.01**	**227**	*e*LR	LR	04 52 41.6	
	comp=Z,834nm,29.0s						
DAV	**Davao City (W)**	**155.24**	**60**	PFAKE		04 00 50.0	+6.6
DAV				LR	LR		
	comp=Z,580nm,22.0s						
KDI	**Kendari**	**155.66**	**87**	PKP	**PKPab**	**04 01 03.5**	**-6.7**
FITZ	**Fitzroy Crossi**	**155.69**	**123**	*e*PKPdf	**PKPdf**	**04 00 44.7**	**+0.9**
ASAR	**Alice Springs**	**158.00**	**146**	PKP	**PKPdf**	**04 00 46.4**	**-0.4**
	comp=Z,4.4nm,1.0s,baz=214,slow=0.5,SNR=17						
ASAR				PKPab	**PKPab**	**04 01 19.7**	**-0.1**
	comp=Z,6.0nm,1.0s,baz=208,slow=4.9,SNR=7.5						
AS31	**Alice Springs**	**158.00**	**146**	*e*PKPdf	**PKPdf**	**04 00 46.4**	**-0.4**
AS01	**Alice Springs**	**158.02**	**146**	*e*PKPdf	**PKPdf**	**04 00 45.9**	**-0.9**
WRA	**Warramunga Arr**	**161.11**	**140**	PKP	**PKPdf**	**04 00 48.1**	**-2.3**
	comp=Z,4.0nm,1.2s,baz=259,slow=1.3,SNR=9.4						
WRA				PKPab	**PKPab**	**04 01 33.0**	**-0.4**
	comp=Z,3.3nm,1.0s,baz=214,slow=2.7,SNR=7.2						
WB2	**Warramunga Arr**	**161.12**	**140**	*e*PKPdf	**PKPdf**	**04 00 49.6**	**-0.8**
WRAB	**Tennant Creek**	**161.12**	**140**	PFAKE		04 01 00.0	+10
WRAB				LR	LR		
	comp=Z,849nm,22.0s						
CTAO	**Charters Tower**	**165.51**	**177**	PFAKE		04 01 10.0	+15
CTAO				LR	LR		
	comp=Z,922nm,21.0s						
HNR	**Honiara**	**166.58**	**252**	PFAKE		04 01 10.0	+14
HNR				LR	LR		
	comp=Z,707nm,21.0s						

ISCJB ***18*** *03:59:41.9±1.1, 41°.60N±0°.04×20°.34E±0°.05, h13^{km}±12^{km}, Error ellipse: s-maj=7.5km s-min=6.2km az=37.2*

TIR ***18*** *03:59:41.9, 41°.61N×20°.29E, h2^{km}, Md2.6/4*

ISC 18 03:59:42.1±1.1**, 41°.60N**±0°.05×**20°.31E**±0°.05**, h9**^{km}±11^{km}**,**
n5, σ0^s.98/10**, 1C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.13**	**50**	*i* PG	**Pg**	**03 59 45.0**	**-0.1**
PHP				*i* SG	**Sg**	**03 59 47.2**	**0.0**
TIR	**Tirane**	**0.42**	**233**	*i* PG	**Pg**	**03 59 50.3**	**0.0**
TIR				*i* SG	**Sb**	**03 59 58.2**	**+0.1**
PUK	**Puka**	**0.54**	**325**	*i* PG	**Pg**	**03 59 52.1**	**-0.4**
PUK				*i* SG	**Sb**	**04 00 00.7**	**-0.9**
KRUS	**Krusevo**	**0.74**	**108**	⇑*i*Pg	**Pg**	**03 59 55.5**	**-1.0**
KRUS				*i* Sg	**Sg**	**04 00 07.4**	**+1.2**
KRUS				*e*Lg	Lg	04 00 08.2	
	comp=E,4.8nm,0.2s						
KRUS				*e*Lg	Lg	04 00 09.1	
	comp=N,3.3nm,0.2s						
BCI	**Bajram Curri**	**0.78**	**347**	*i* PG	**Pb**	**03 59 57.8**	**-0.1**
BCI				*i* SG	**Sb**	**04 00 10.2**	**+1.5**

MEX 18 04:02:22.0±0.5**, 14°.61N**×**92°.99W, h16**^{km}±30^{km}**, MD3.5, 1C,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.76**	**67**	⇑*e*P	Pg	04 02 33.2	-3.6
PCIG		**1.11**	**348**	*e*P	Pb	04 02 38.9	-3.9
CCIG	**Comitan**	**1.85**	**26**	*e*P	Pn	04 02 49.9	-3.4

IDC ***18*** *04:03:37.6±3.4, 44°.30N×86°.44E, h0^{km}, mb1 3.2/5, mb1mx3.0/45, mbtmp3.2/5, ML2.8/5, Error ellipse: s-maj=43.8km s-min=24.1km az=25.0*

NNC ***18*** *04:03:37.9±2.8, 44°.04N×86°.42E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=19.8km s-min=12.9km az=117.0*

ISC 18 04:03:41.5±1.5**, 44°.42N**±0°.10×**86°.44E**±0°.08**, h10**^{km}**, n16,**
σ2^s.37/18**, 9C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**3.23**	**341**	Pg	**Pg**	**04 04 46.0**	**+2.7**
	2.1nm,0.3s						
ZSN				Lg	Lg	04 05 33.1	
	27nm,0.8s						
MK31	**Makanchi Array**	**3.76**	**311**	⇑Pn	**Pn**	**04 04 39.5**	**-0.1**
	0.4nm,0.2s,baz=132,slow=9.9,SNR=30						
MK31				⇑Sn	**Sb**	**04 05 29.1**	**-4.5**
	1.3nm,0.2s,baz=0.0,slow=0.1,SNR=5.6						
MK31				Lg	Lg	04 05 49.6	
	4.3nm,0.3s,baz=130,slow=27,SNR=7.7						
MKAR	**Makanchi Array**	**3.76**	**311**	Pn	**Pn**	**04 04 39.8**	**+0.2**
	0.8nm,0.3s,baz=131,slow=15,SNR=39						
MKAR				Sn	**Sn**	**04 05 25.1**	**+1.2**
	1.5nm,0.3s,baz=131,slow=25,SNR=4.1						
MKAR				Lg	Lg	04 05 41.8	
	3.2nm,0.3s,baz=126,slow=27,SNR=12						
MAKZ	**Makanchi**	**3.94**	**309**	⇑Pn	**Pn**	**04 04 41.7**	**-0.4**
	2.1nm,0.5s						
MAKZ				⇑Sn	**Sn**	**04 05 33.6**	**+5.2**
	4.3nm,0.6s						
MAKZ				⇑Lg	Lg	04 05 53.6	
	11nm,0.6s						
KTMS	**Ketmen**	**4.50**	**260**	Pg	**Pb**	**04 04 58.4**	**-2.4**
	1.6nm,0.1s						
KTMS				Lg	Lg	04 05 54.9	
	14nm,0.4s						
DJR	**Jarkent**	**4.77**	**271**	Pg	**Pb**	**04 05 07.3**	**+2.0**
	1.0nm,0.9s						
DJR				Lg	Lg	04 06 09.4	
	5.6nm,0.5s						
KAPS	**Kapalarasan**	**5.11**	**282**	Pg	**Pb**	**04 05 11.0**	**-0.1**
	1.2nm,0.4s						
KAPS				Lg	Lg	04 06 18.1	
	8.7nm,0.5s						
PDGK	**Podgornoye**	**5.14**	**260**	⇑Pg	**Pb**	**04 05 13.0**	**+1.3**
	2.2nm,0.5s						
PDGK				⇓Lg	Lg	04 06 18.1	
	14nm,0.6s						
MNBS	**Baschi**	**5.79**	**269**	Pg	**Pb**	**04 05 24.0**	**+1.4**
	1.6nm,0.5s						
MNBS				Lg	Lg	04 06 37.8	
	6.9nm,0.4s						
KURBB	**Kurchatov Arra**	**8.20**	**322**	⇑Lg	Lg	04 08 07.4	
	14nm,0.7s						
KURBB	**Kurchatov Arra**	**8.20**	**322**	Pn	**Pn**	**04 05 38.9**	**-1.6**
	0.1nm,0.3s,baz=132,slow=13,SNR=8.7						
KURBB				Sn	**Sn**	**04 07 11.6**	**-1.5**
	0.1nm,0.3s,baz=143,slow=19,SNR=3.2						
KURBB				Lg	Lg	04 08 03.4	
	0.2nm,0.3s,baz=139,slow=28,SNR=6.2						
KURK	**Kurchatov**	**8.22**	**323**	⇑Lg	Lg	04 08 06.3	
	4.4nm,0.6s						
ZALV	**Zalesovo Beam**	**9.60**	**354**	Pn	**Pn**	**04 05 58.1**	**-1.5**
	0.2nm,0.3s,baz=175,slow=14,SNR=7.5						
ZALV				Sn	**Sn**	**04 07 48.0**	**+0.5**
	0.5nm,0.3s,baz=170,slow=25,SNR=3.8						
OTUK	**Ortayu**	**10.48**	**296**	⇑Lg	Lg	04 09 21.7	
	1.1nm,0.5s						
BVAR	**Borovoye Array**	**13.63**	**315**	Pn	**Pn**	**04 06 52.1**	**-2.7**
	0.1nm,0.3s,baz=114,slow=14,SNR=2.3						
SONM	**Songino Array**	**14.25**	**69**	Pn	**Pn**	**04 07 03.4**	**0.0**
	0.1nm,0.3s,baz=267,slow=12,SNR=5.9						

ISCJB ***18*** *04:04:17.4±1.2, 11°.16S±0°.09×165°.8E±0°.2, h10^{km}, mb3.8/5, MS4.4/1, Error ellipse: s-maj=29.3km s-min=12.1km az=171.6*

IDC ***18*** *04:04:17.9±1.5, 10°.88S×165°.68E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.8/31, mbtmp3.9/6, ML4.1/1, MS4.5/1, Ms1 4.5/1, ms1mx3.1/28, Error ellipse: s-maj=51.4km s-min=27.7km az=123.0*

ISC 18 04:04:19.3±1.2**, 11°.0S**±0°.1×**165°.8E**±0°.2**, h10**^{km}**, n11,**
σ1^s.61/8**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.98**	**177**	Pn	**Pn**	**04 06 58.5**	**+1.8**
	1.3nm,0.3s,baz=309,slow=9.3,SNR=17						
DZM				Sn	**Sn**	**04 08 57.3**	**-2.5**
	0.1nm,0.3s,baz=270,slow=20,SNR=1.7						
RAO	**Raoul Island**	**23.64**	**142**	LR	LR	04 17 25.8	
	comp=Z,1µm,18.7s,baz=66,slow=33						
H11S2	**WAKE ISLAND Hy**	**29.36**	**2**	T	T	04 40 39.7	
	baz=181,slow=76,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**29.36**	**2**	T	T	04 40 39.9	
	baz=181,slow=76,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**29.37**	**2**	T	T	04 40 40.9	
	baz=181,slow=76,SNR=6.1						
STKA	**Stephens Creek**	**30.50**	**223**	P	**P**	**04 10 33.8**	**+1.1**
	1.6nm,0.6s,baz=16,slow=7.4,SNR=3.2						
WRA	**Warramunga Arr**	**31.56**	**250**	P	**P**	**04 10 41.5**	**-0.7**
	1.1nm,0.6s,baz=81,slow=8.8,SNR=13						
ASAR	**Alice Springs**	**32.87**	**243**	P	**P**	**04 10 52.8**	**-0.9**
	0.5nm,0.6s,baz=64,slow=10,SNR=6.7						
ILAR	**Eielson Array**	**83.48**	**18**	P	**P**	**04 16 46.0**	**-0.9**
	0.8nm,1.1s,baz=236,slow=4.9,SNR=3.9						
MKAR	**Makanchi Array**	**93.57**	**317**	P	**P**	**04 17 35.7**	**0.0**
	0.1nm,0.4s,baz=100,slow=4.4,SNR=2.7						
ARCES	**ARCESS Array B**	**116.35**	**345**	PKP	**PKPdf**	**04 23 03.2**	**+0.5**
	1.8nm,1.0s,baz=25,slow=4.5,SNR=3.1						

IDC 18 04:12:38.8±20.0**, 25°.15S**×**72°.89E, h0**^{km}**, mb3.8**/3**,**
mb1 4.0/3**, mb1mx3.5**/37**, mbtmp3.8**/3**, Error ellipse:**
s-maj=671.1km s-min=43.9km az=49.0, Mid-Indian
Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**55.16**	**102**	P	P	04 22 13.7	+0.2
	0.4nm,0.8s,baz=253,slow=6.5,SNR=2.9						
WRA	**Warramunga Arr**	**56.58**	**98**	P	P	04 22 23.3	-0.4
	1.4nm,1.0s,baz=256,slow=6.6,SNR=2.9						
MKAR	**Makanchi Array**	**72.10**	**7**	P	P	04 24 04.9	+0.1
	0.4nm,0.6s,baz=197,slow=5.9,SNR=5.1						

MEX 18 04:14:59.4±0.6**, 15°.39N**×**94°.85W, h16**^{km}±999^{km}**, MD3.8,**
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.27**	**288**	*e*P	Pn	04 15 19.1	-3.4
HUIG				*i* S	Sb	04 15 33.2	-5.9
PCIG		**1.60**	**78**	*e*P	Pn	04 15 23.4	-3.7
PCIG				*e*S	Sn	04 15 42.1	-5.3
CMIG	**Matias Romero**	**1.70**	**359**	*e*P	Pn	04 15 25.1	-3.3
CMIG				*e*S	Sn	04 15 44.8	-5.0

IDC ***18*** *04:16:02.7±1.2, 26°.22S×71°.55E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.7/37, mbtmp3.9/7, MS3.9/1, Ms1 3.8/1, ms1mx3.3/39, Error ellipse: s-maj=43.3km s-min=25.6km az=83.0*

ISC 18 04:16:01.9±2.9**, 26°.6S**±0°.4×**71°.1E**±0°.5**, h10**^{km}**, n15,**
σ0^s.19/7**, mb4.0**/7**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**18.87**	**4**	T	T	04 39 27.4	
	baz=184,slow=76,SNR=4.4						
H08S2	**Diego Garcia H**	**18.87**	**4**	T	T	04 39 28.6	
	baz=184,slow=76,SNR=6.0						
H08S3	**Diego Garcia H**	**18.89**	**4**	T	T	04 39 28.1	
	baz=184,slow=76,SNR=14						
H01W2	**Cape Leeuwin H**	**37.65**	**113**	T	T	05 02 49.7	
	baz=271,slow=74						
H01W3	**Cape Leeuwin H**	**37.65**	**113**	T	T	05 02 52.7	
	baz=271						
H01W1	**Cape Leeuwin H**	**37.66**	**113**	T	T	05 02 50.9	
	baz=271,slow=74						
BOSA	**Boshof**	**40.52**	**256**	LR	LR	04 39 42.6	
	comp=Z,150nm,18.1s,baz=6.0,slow=35						
CMAR	**Chiang Mai Arr**	**52.27**	**34**	P	**P**	**04 25 13.5**	**-0.1**
	1.2nm,0.3s,baz=229,slow=7.8,SNR=3.6						
ASAR	**Alice Springs**	**56.40**	**102**	P	**P**	**04 25 43.7**	**-0.1**
	1.5nm,1.0s,baz=262,slow=5.5,SNR=6.8						
WRA	**Warramunga Arr**	**57.95**	**98**	P	**P**	**04 25 55.0**	**+0.2**
	1.4nm,0.9s,baz=254,slow=6.7,SNR=7.2						
QSPA	**South Pole Qui**	**63.56**	**180**	P	P	04 26 37.7	+5.2
	0.9nm,0.8s,baz=4.7,slow=1.7,SNR=5.4						
MKAR	**Makanchi Array**	**73.72**	**8**	P	**P**	**04 27 35.7**	**-0.1**
	0.9nm,0.7s,baz=196,slow=6.4,SNR=10						
SONM	**Songino Array**	**80.57**	**23**	P	**P**	**04 28 14.6**	**+0.2**
	0.2nm,0.4s,baz=193,slow=5.9,SNR=4.3						
ZALV	**Zalesovo Beam**	**81.06**	**8**	P	**P**	**04 28 16.7**	**0.0**
	0.9nm,0.7s,baz=177,slow=3.0,SNR=4.4						
YKA	**Yellowknife Ar**	**143.88**	**5**	PKP	**PKPdf**	**04 35 36.7**	**-0.1**
	0.2nm,0.8s,baz=340,slow=3.3,SNR=3.7						

ISCJB ***18*** *04:40:05.5±0.3, 5°.71N±0°.07×32°.78W±0°.05, h10^{km}, mb4.0/46, MS4.1/24, Error ellipse: s-maj=10.6km s-min=7.2km az=172.7*

IDC ***18*** *04:40:05.7±0.6, 5°.77N×32°.92W, h0^{km}, mb3.9/18, mb1 4.1/18, mb1mx4.0/44, mbtmp3.9/18, ML4.7/1, MS4.1/24, Ms1 4.1/24, ms1mx4.0/33, Error ellipse: s-maj=20.2km s-min=14.8km az=166.0*

NEIC ***18*** *04:40:07.2±0.2, 5°.74N×32°.84W, h10^{km}, mb4.2/30, Error ellipse: s-maj=7.8km s-min=5.2km az=171.0*

GCMT ***18*** *04:40:10.2±0.3, 5°.62N±0°.03×32°.78W±0°.02, h14^{km}±1^{km}, MW4.9/85, Moment Tensor Solution. s29,c32; s85,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.97±.20; $M_{\theta\theta}$0.47±.12; $M_{\phi\phi}$2.50±.13; $M_{r\theta}$0.20±.33; $M_{\theta\phi}$-0.65±.07; $M_{\phi r}$-0.75±.24; Best double couple: $M_0$2.93500×10^{16} NP1:ϕ_s344.00000°, δ53.00000°, λ-90.00000°. NP2: ϕ_s163.00000°, δ37.00000°, λ-91.00000°. Principal axes: T 2.7960, Plg8.0000°, Azm74.0000°; N 0.2780, Plg0.0000°, Azm164.0000°; P -3.0740, Plg82.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 04:40:07.1±0.5**, 5°.77N**±0°.09×**32°.86W**±0°.08**, h10**^{km}**, n89,**
σ0^s.84/70**, mb4.1**/46**, MS4.2**/24**, Central Mid-Atlantic**
Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**11.91**	**195**	Pn	**Pn**	**04 42 57.0**	**-0.2**
	5.1nm,0.3s,baz=354,slow=0.8,SNR=6.0						
SACV	**Santiago Islan**	**12.89**	**44**	*e*Pn	**Pn**	**04 43 09.5**	**-1.1**
MDP	**Montagnes des**	**19.71**	**269**	LR	LR	04 50 33.8	
	comp=Z,404nm,21.5s,baz=39,slow=32						
H10N3	**ASCENSION HYDR**	**22.76**	**126**	T	T	05 08 38.1	
	baz=305,slow=75,SNR=50						
H10N2	**ASCENSION HYDR**	**22.76**	**126**	T	T	05 08 38.4	
	baz=305,slow=75,SNR=40						

H10N1	ASCENSION HYDR	22.78	126	T	T	05 08 39.6	
	baz=305,slow=75,SNR=52						
H10S3	ASCENSION HYDR	23.30	129	T	T	05 09 20.9	
	baz=308,slow=75,SNR=34						
H10S1	ASCENSION HYDR	23.30	129	T	T	05 09 21.3	
	baz=308,slow=75,SNR=31						
H10S2	ASCENSION HYDR	23.31	129	T	T	05 09 21.9	
	baz=308,slow=75,SNR=22						
BDFB	Brasilia	26.03	215	LR	LR	04 54 50.4	
	comp=Z,815nm,20.1s,baz=85,slow=34						
PTGA	Pitinga	27.83	257	P	P	04 45 56.1	-0.8
	0.9nm,0.3s,baz=315,slow=19,SNR=2.4						
PTGA				LR	LR	04 56 24.2	
	comp=Z,685nm,18.9s,baz=63,slow=35						
DBIC	Dimbokro	27.85	87	*e*P	P	04 45 56.3	-0.9
DBIC	Dimbokro	27.85	87	LR	LR	04 54 36.3	
	comp=Z,448nm,21.5s,baz=230,slow=31						
SJG	San Juan	34.73	294	LR	LR	04 58 05.6	
	comp=Z,342nm,21.7s,baz=104,slow=31						
TOA1	Torodi Ar. Sit	34.83	75	*e*P	P	04 46 58.4	-0.2
TOA0	Torodi Ar. Sit	34.83	75	*e*P	P	04 46 57.1	-1.5
TORD	Torodi Ar. Bea	34.83	75	P	P	04 46 58.4	-0.2
	2.2nm,0.9s,baz=270,slow=7.4,SNR=9.4						
TORD				LR	LR	04 59 25.0	
	comp=Z,522nm,20.4s,baz=295,slow=33						
SDV	Santo Domingo	37.58	277	P	P	04 47 21.5	-1.0
	2.1nm,0.8s,baz=252,slow=20,SNR=2.6						
CPUP	Villa Florida	39.76	216	*e*P	P	04 47 41.0	+0.7
CPUP	Villa Florida	39.76	216	LR	LR	05 03 25.1	
	comp=Z,583nm,19.1s,baz=37,slow=35						
TAM	Tamanrasset	40.69	62	*e*P	P	04 47 48.5	+0.2
LPAZ	La Paz	41.21	237	P	P	04 47 53.5	+0.3
	2.0nm,0.8s,baz=83,slow=7.1,SNR=7.7						
LPAZ				LR	LR	05 04 33.4	
	comp=Z,526nm,18.5s,baz=71,slow=36						
ROSC	El Rosal	41.29	271	LR	LR	05 05 31.9	
	comp=Z,262nm,18.8s,baz=78,slow=37						
ESDC	Sonseca Array	42.63	33	P	P	04 48 04.2	+0.4
	0.3nm,0.7s,baz=224,slow=7.9,SNR=4.2						
ESDC				LR	LR	05 04 38.1	
	comp=Z,92nm,18.3s,baz=285,slow=34						
LVC	Limon Verde	45.16	230	LR	LR	05 08 00.6	
	comp=Z,235nm,20.4s,baz=48,slow=37						
NNA	Nana	47.16	248	LR	LR	05 08 39.7	
	comp=Z,316nm,18.1s,baz=64,slow=36						
ATAH	Atahualpa	47.21	255	LR	LR	05 08 55.0	
	comp=Z,545nm,18.2s,baz=80,slow=37						
KEST	Kesra	48.87	47	LR	LR	05 09 13.6	
	comp=Z,437nm,20.0s,baz=209,slow=36						
TSUM	Tsumeb	55.51	118	P	P	04 49 44.0	+1.0
TSUM	Tsumeb	55.51	118	P	P	04 49 44.0	+1.0
	3.2nm,0.9s,baz=260,slow=7.8,SNR=6.0						
SCHQ	Schefferville	56.03	337	P	P	04 49 46.8	+0.8
	4.8nm,1.0s,baz=122,slow=9.5,SNR=3.1						
GEC2	GERESS Array S	58.20	34	*e*P	P	04 50 02.5	+0.8
	4.9nm,1.2s						
GERES	GERESS Array B	58.20	34	P	P	04 50 02.5	+0.8
	0.4nm,0.7s,baz=238,slow=5.6,SNR=2.9						
GERES				LR	LR	05 12 02.5	
	comp=Z,192nm,20.9s,baz=267,slow=33						
NB2	NORSAR Subarra	64.21	22	P	P	04 50 42.9	+0.9
	comp=Z,0.5nm,0.7s,baz=231,slow=6.5						
NB200	NORSAR Array S	64.21	22	*e*P	P	04 50 42.3	+0.3
NOA	NORSAR Array B	64.21	22	P	P	04 50 42.3	+0.3
	comp=Z,1.0nm,0.8s,baz=231,slow=6.2,SNR=4.6						
NOA				LR	LR	05 16 45.6	
	comp=Z,136nm,18.7s,baz=240,slow=34						
MLR	Muntele Rosu	64.31	42	*e*P	P	04 50 44.4	+1.2
	comp=Z,7.4nm,1.0s						
BOSA	Boshof	65.51	125	P	P	04 50 51.2	0.0
	comp=Z,3.5nm,0.9s,baz=296,slow=7.7,SNR=5.6						
AKASG	Malin Array Be	68.08	37	P	P	04 51 07.7	+0.7
	comp=Z,0.3nm,0.4s,baz=251,slow=5.5,SNR=10						
AKBB	Malin Array Si	68.08	37	*e*P	P	04 51 07.7	+0.7
	comp=Z,1.4nm,0.8s						
BR101	Keskin Array S	68.31	50	*e*P	P	04 51 09.7	+0.7
BRTR	Keskin Array B	68.31	50	P	P	04 51 09.7	+0.7
	comp=Z,0.4nm,0.7s,baz=208,slow=2.4,SNR=3.8						
BRTR				LR	LR	05 23 30.7	
	comp=Z,70nm,18.2s,baz=228,slow=38						
KMBO	Kilima Mbogo	70.33	93	*e*P	P	04 51 21.0	-1.1
	comp=Z,1.8nm,1.1s						
KMBO	Kilima Mbogo	70.33	93	LR	LR	05 19 53.8	
	comp=Z,191nm,18.9s,baz=276,slow=34						
FIA0	FINESS Array S	70.47	26	*e*P	P	04 51 21.1	-0.5
FINES	FINESS Array B	70.47	26	P	P	04 51 21.1	-0.5
	comp=Z,1.4nm,0.8s,baz=243,slow=2.1,SNR=5.1						
FINES				LR	LR	05 19 37.1	
	comp=Z,66nm,19.6s,baz=246,slow=34						
LTX	Lajitas	70.47	299	*e*P	P	04 51 21.3	-1.2
TXAR	Lajitas Array	70.47	299	P	P	04 51 21.3	-1.2
	comp=Z,0.3nm,0.7s,baz=88,slow=8.2,SNR=4.3						
TXAR				LR	LR	05 19 30.0	
	comp=Z,98nm,22.0s,baz=0.0,slow=34						
ISCO	Idaho Springs	73.09	310	*e*P	P	04 51 38.3	0.0
ANMO	Albuquerque	73.28	305	*e*P	P	04 51 39.9	+0.5
DGMT	Dagmar	73.36	319	*e*P	P	04 51 40.3	+0.9
	comp=Z,10nm,1.0s						
S22A	4UR Ranch, Cre	73.82	308	*e*P	P	04 51 43.3	+0.7
	comp=Z,2.1nm,1.0s						
SMCO	Snowmass	74.07	309	*e*P	P	04 51 45.0	+0.8
	comp=Z,1.2nm,0.9s						
O20A	White River Ci	75.14	310	*e*P	P	04 51 50.7	+0.6
KBZ	Khabaz	75.75	46	LR	LR	05 28 12.3	
	comp=Z,53nm,19.8s,baz=301,slow=38						
PD31	Pinedale Array	76.35	312	*e*P	P	04 51 57.1	+0.1
	comp=Z,1.2nm,1.0s						
PDAR	Pinedale Array	76.35	312	P	P	04 51 57.1	+0.1
	comp=Z,0.5nm,0.7s,baz=95,slow=7.7,SNR=5.2						
PDAR				LR	LR	05 21 52.2	
	comp=Z,129nm,20.8s,baz=68,slow=33						
LOHW	Long Hollow	77.18	313	*e*P	P	04 52 02.5	+0.8
	comp=Z,3.3nm,1.0s						
FLWY	Flagg Ranch	77.28	314	*e*P	P	04 52 02.4	+0.1
MOOW	Moose Ponds	77.29	313	*e*P	P	04 52 02.1	-0.1
	comp=Z,3.3nm,1.1s						
REDW	Red Top Meadow	77.34	313	*e*P	P	04 52 02.4	-0.2
	comp=Z,1.4nm,0.9s						
X16A	Lo Mia Camp, P	77.35	304	*e*P	P	04 52 03.8	+1.0
	comp=Z,1.9nm,1.1s						
TPAW	Teton Pass	77.42	313	*e*P	P	04 52 03.4	+0.3
	comp=Z,2.3nm,1.0s						
IMW	Indian Meadow	77.44	314	*e*P	P	04 52 04.4	+1.2
	comp=Z,1.1nm,0.8s						
YHH	Holmes Hill	77.44	314	*e*P	P	04 52 04.0	+0.7
	comp=Z,1.9nm,1.0s						
FXWY	Fox Creek	77.48	313	*e*P	P	04 52 02.8	-0.6
	comp=Z,0.6nm,0.8s						
YMR	Madison River	77.51	314	*e*P	P	04 52 03.9	+0.3
	comp=Z,9.1nm,1.0s						
NLU	North Lily Min	78.06	309	*e*P	P	04 52 08.5	+1.9
	comp=Z,3.7nm,1.1s						
MTPU	Mount Pierson	78.07	308	*e*P	P	04 52 08.0	+1.0
	comp=Z,1.4nm,0.9s						
MSU	Marysvale	78.08	308	*e*P	P	04 52 09.0	+2.2
SPUT	South Promonto	78.40	311	*e*P	P	04 52 10.3	+1.8
	comp=Z,2.0nm,1.0s						
DUG	Dugway, Tooele	78.64	310	*e*P	P	04 52 09.9	+0.1
	comp=Z,1.8nm,1.1s						
DLMT	Dillon	78.71	315	*e*P	P	04 52 10.5	+0.5
	comp=Z,3.8nm,1.1s						
SZCU	Shurtz Canyon	78.77	307	*e*P	P	04 52 10.9	+0.2
	comp=Z,4.5nm,1.2s						
BGU	Big Grassy Mou	78.83	310	*e*P	P	04 52 10.5	-0.4
	comp=Z,2.5nm,1.1s						
PSUT	Pine Spring	79.40	308	*e*P	P	04 52 13.8	-0.2
	comp=Z,3.8nm,1.0s						
WALA	Waterton Lakes	79.81	319	*e*P	P	04 52 17.0	+1.0
HLID	Hailey	79.94	313	*e*P	P	04 52 16.5	-0.4
	comp=Z,0.5nm,0.9s						
ELK	Elko	80.50	310	*e*P	P	04 52 18.8	-1.2
	comp=Z,3.9nm,1.1s						
R11A	Troy Canyon, C	80.75	308	*e*P	P	04 52 20.9	-0.4
	comp=Z,0.5nm,0.9s						
YKA	Yellowknife Ar	81.10	332	P	P	04 52 22.1	-0.4
	comp=Z,1.0nm,0.9s,baz=94,slow=5.4,SNR=11						
YKA				LR	LR	05 26 08.9	
	comp=Z,6.4nm,20.6s,baz=76,slow=34						
YKB5	Yellowknife Ar	81.10	332	*e*P	P	04 52 22.1	-0.3
BMO	Blue Mountains	82.03	314	*e*P	P	04 52 26.0	-1.9
	comp=Z,2.7nm,1.1s						
NV01	Mina Array Sit	82.89	308	*e*P	P	04 52 33.0	+0.3
NVAR	Mina Array Bea	82.89	308	P	P	04 52 33.0	+0.4
	comp=Z,1.5nm,1.0s,baz=113,slow=3.3,SNR=7.8						
NVAR				LR	LR	05 27 00.5	
	comp=Z,56nm,20.8s,baz=11,slow=34						
BEKR	Beckworth	84.43	309	*e*P	P	04 52 41.1	+0.6
	comp=Z,4.7nm,1.2s						
ILAR	Eielson Array	94.79	337	P	P	04 53 28.7	-0.1
	comp=Z,0.5nm,0.8s,baz=64,slow=3.5,SNR=5.4						
NRIK	Noril'sk	94.90	18	LR	LR	05 34 14.3	
	comp=Z,76nm,21.6s,baz=98,slow=34						
CMAR	Chiang Mai Arr	126.73	62	PKP	PKiKP	04 59 13.1	+0.6
	comp=Z,0.9nm,0.4s,baz=293,slow=3.1,SNR=5.9						

*NEIC **18** 04:51:13.2±0.0, 18°.23N×67°.97W, h82^{km}, MD3.4(RSPR), After RSPR.*

RSPR 18 04:51:13.2, 18°.23N×67°.97W, h82^{km}±1^{km}, MD3.4/9, **2C-18D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSP	Las Mesas	0.84	93	⇓*e*P	Pn	04 51 30.0	-0.6
LSP	Las Mesas	0.84	93	*e*S	Sn	04 51 44.1	+0.6
LSP	Las Mesas	0.84	93	⇓*e*P	Pn	04 51 30.0	-0.6
LSP				*e*S	Sn	04 51 44.1	+0.6
AGPR	Aguadilla, PR	0.85	73	⇓*e*P	Pn	04 51 29.8	-0.8
AGPR	Aguadilla, PR	0.85	73	*e*S	Sn	04 51 43.7	+0.1
AGPR	Aguadilla, PR	0.85	73	⇓*e*P	Pn	04 51 29.8	-0.8
AGPR				*e*S	Sn	04 51 43.7	+0.1
OBIP	Obispado Ponce	1.31	98	⇑*e*P	Pn	04 51 34.6	-1.5
OBIP	Obispado Ponce	1.31	98	*e*S	Sn	04 51 52.7	-0.7
OBIP	Obispado Ponce	1.31	98	⇑*e*P	Pn	04 51 34.6	-1.5
OBIP				*e*S	Sn	04 51 52.7	-0.7
CELP	Cerrillos	1.33	96	⇓*e*P	Pn	04 51 35.8	-0.6
CELP				*e*S	Sn	04 51 53.7	-0.2
CELP	Cerrillos	1.33	96	⇓*e*P	Pn	04 51 35.8	-0.6
CELP				*e*S	Sn	04 51 53.7	-0.2
EMPR	Esperanza - Ma	1.39	79	⇓*e*P	Pn	04 51 36.4	-0.7
EMPR	Esperanza - Ma	1.39	79	*e*S	Sn	04 51 54.6	-0.6
EMPR	Esperanza - Ma	1.39	79	⇓*e*P	Pn	04 51 36.4	-0.7
EMPR				*e*S	Sn	04 51 54.6	-0.6
SJG	San Juan	1.73	93	*e*Pn	Pn	04 51 40.9	-0.7
SJG				*e*S	Sn	04 52 01.3	-1.9
CBYP	Canovanas	2.01	88	⇓*e*P	Pn	04 51 44.6	-0.7
CBYP	Canovanas	2.01	88	*e*S	Sn	04 52 08.9	-0.9
CBYP	Canovanas	2.01	88	⇓*e*P	Pn	04 51 44.6	-0.7
CBYP				*e*S	Sn	04 52 08.9	-0.9
HUMP	Col San Antoni	2.02	92	⇓*e*P	Pn	04 51 44.7	-0.6
HUMP	Col San Antoni	2.02	92	*e*S	Sn	04 52 09.7	-0.1
HUMP	Col San Antoni	2.02	92	⇓*e*P	Pn	04 51 44.7	-0.6
HUMP				*e*S	Sn	04 52 09.7	-0.1
MTP	Monte Pirata	2.30	93	⇓*e*P	Pn	04 51 49.1	0.0
MTP	Monte Pirata	2.30	93	*e*S	Sn	04 52 16.6	-0.1
MTP	Monte Pirata	2.30	93	⇓*e*P	Pn	04 51 49.1	0.0
MTP				*e*S	Sn	04 52 16.6	-0.1
CUPR	Culebra, Puert	2.55	88	⇓*e*P	Pn	04 51 52.5	0.0
CUPR	Culebra, Puert	2.55	88	*e*S	Sn	04 52 22.7	0.0
CUPR	Culebra, Puert	2.55	88	⇓*e*P	Pn	04 51 52.5	0.0
CUPR				*e*S	Sn	04 52 22.7	0.0
STVI	Saint Thomas	2.87	87	⇓*e*P	Pn	04 51 56.6	-0.2
STVI	Saint Thomas	2.87	87	*e*S	Sn	04 52 30.2	-0.1
STVI	Saint Thomas	2.87	87	⇓*e*P	Pn	04 51 56.6	-0.2
STVI				*e*S	Sn	04 52 30.2	-0.1
SDDR	Presa de Saban	3.24	284	*e*Pn	Pn	04 52 01.0	-0.8
SDDR				*e*S	Sn	04 52 40.1	+0.7

*ISCJB **18** 04:51:53.5±0.2, 3°.54S±0°.03×76°.95W±0°.03, h111^{km}, mb4.7/162, Error ellipse: s-maj=4.9km s-min=3.9km az=177.0*

*IDC **18** 04:51:55.3±0.6, 3°.62S×76°.96W, h114^{km}±5^{km}, mb4.1/16, mb1 4.3/22, mb1mx4.2/31, mbtmp4.5/22, Error ellipse: s-maj=16.4km s-min=11.6km az=42.0*

*NEIC **18** 04:51:55.4±0.6, 3°.54S×76°.88W, h110^{km}±5^{km}, mb4.7/146, Error ellipse: s-maj=6.0km s-min=3.9km az=63.0*

ISC 18 04:51:54.9±0.3, **3°.68S**±0°.05×**76°.83W**±0°.07, **h111**^{km}**, n641,** σ1^{s}**22**/652, **mb4.7**/164, **7C-3D, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	3.77	204	P	Pn	04 52 51.9	+0.3
	34nm,0.3s,baz=24,slow=9.7,SNR=355						
ATAH				S	Sn	04 53 32.8	-2.7
	30nm,0.3s,baz=45,slow=17,SNR=6.8						
OTAV	Otavalo	4.21	337	*e*Pn	Pn	04 52 56.2	-1.3
OTAV				*e*S	Sn	04 53 23.6	-22
OTAV	Otavalo	4.21	337	*e*P	Pn	04 52 56.1	-1.5
OTAV	Otavalo	4.21	337	*e*P	Pn	04 52 56.1	-1.5
PTLC	Puerto Leguiza	4.33	28	⇑*i*P	Pn	04 52 54.8	-3.9
PTLC	Puerto Leguiza	4.33	28	⇑*i*P	Pn	04 52 54.8	-3.9
CMBC	Cumbal	4.69	348	*e*P	Pn	04 53 04.7	+0.6
CMBC	Cumbal	4.69	348	*e*P	Pn	04 53 04.7	+0.6
GCUF	Volcan Galeras	4.89	354	⇓*e*P	Pn	04 53 07.2	+0.4
GCUF	Volcan Galeras	4.89	354	⇓*e*P	Pn	04 53 07.2	+0.4
CRUC	La Cruz	5.21	359	*e*P	Pn	04 53 09.8	-1.1
CRUC	La Cruz	5.21	359	*e*P	Pn	04 53 09.8	-1.1
FLOC	Florencia	5.35	13	⇑*e*P	Pn	04 53 11.6	-1.0
FLOC	Florencia	5.35	13	⇑*e*P	Pn	04 53 11.6	-1.0
SOTA	Rioblanco	5.78	2	*e*P	Pn	04 53 18.4	-0.4
SOTA	Rioblanco	5.78	2	*e*P	Pn	04 53 18.4	-0.4
POPC	Popayan, Colom	6.17	1	⇑*e*P	Pn	04 53 23.6	-0.3
POPC	Popayan, Colom	6.17	1	⇑*e*P	Pn	04 53 23.6	-0.3
MARP	Paez Belalcaza	6.53	8	*e*P	Pn	04 53 28.7	-0.1
MARP	Paez Belalcaza	6.53	8	*e*P	Pn	04 53 28.7	-0.1
GUVC	San Jose del G	7.47	34	*e*P	Pn	04 53 41.1	-0.1
GUVC	San Jose del G	7.47	34	*e*P	Pn	04 53 41.1	-0.1
YOTC	Yotoco, Valle	7.62	4	*e*P	Pn	04 53 43.1	-0.3
YOTC	Yotoco, Valle	7.62	4	*e*P	Pn	04 53 43.1	-0.3
MALC	Bahia Malaga	7.65	356	*e*P	Pn	04 53 45.7	+2.0
MALC	Bahia Malaga	7.65	356	*e*P	Pn	04 53 45.7	+2.0
ANIL	Santa Ana	8.24	10	*e*P	Pn	04 53 52.9	+1.0
ANIL	Santa Ana	8.24	10	*e*P	Pn	04 53 52.9	+1.0
NNA	Nana	8.26	180	*e*Pn	Pn	04 53 52.7	+0.7
NNA				*e*S	Sn	04 55 13.8	-10
NNA	Nana	8.26	180	P	Pn	04 53 52.5	+0.5
	11nm,0.3s,baz=326,slow=4.9,SNR=34						
NNA				S	Sn	04 55 16.7	-7.0
	11nm,0.3s,baz=178,slow=20,SNR=8.9						
VILC	Villavicencio,	8.35	22	*e*P	Pn	04 53 53.5	+0.3
VILC	Villavicencio,	8.35	22	*e*P	Pn	04 53 53.5	+0.3
PLMC	San Jos del P	8.54	4	*e*P	Pn	04 53 56.7	+0.8
PLMC	San Jos del P	8.54	4	*e*P	Pn	04 53 56.7	+0.8
RREF	El Recreo	8.65	10	*e*P	Pn	04 54 00.6	+2.8
RREF	El Recreo	8.65	10	*e*P	Pn	04 54 00.6	+2.8
CHIC	Chingaza	8.81	21	*e*P	Pn	04 53 59.7	-0.1
CHIC	Chingaza	8.81	21	*e*P	Pn	04 53 59.7	-0.1
ROSC	El Rosal	8.82	17	*e*P	Pn	04 54 01.6	+1.6
ROSC	El Rosal	8.82	17	*e*P	Pn	04 54 01.6	+1.6
ROSC	El Rosal	8.82	17	P	Pn	04 54 01.3	+1.4
	2.6nm,0.3s,baz=177,slow=6.9,SNR=16						
HELC	Santa Helena	9.89	8	*e*P	Pn	04 54 14.7	+0.4
HELC	Santa Helena	9.89	8	*e*P	Pn	04 54 14.7	+0.4
RUSC	La Rusia	10.21	22	*e*P	Pn	04 54 18.9	0.0
RUSC	La Rusia	10.21	22	*e*P	Pn	04 54 18.9	0.0
BRRC	Barranca, Sant	11.15	16	*e*P	Pn	04 54 32.0	+0.9
BRRC	Barranca, Sant	11.15	16	*e*P	Pn	04 54 32.0	+0.9
TAMC	Tame, Arauca	11.23	27	*e*P	Pn	04 54 31.5	-0.7
TAMC	Tame, Arauca	11.23	27	*e*P	Pn	04 54 31.5	-0.7
ZARC	Zaragoza, Cauc	11.27	10	*e*P	Pn	04 54 33.3	+0.6
ZARC	Zaragoza, Cauc	11.27	10	*e*P	Pn	04 54 33.3	+0.6
UREC	San Jos de Ur	11.42	7	*e*P	Pn	04 54 36.9	+2.1
UREC	San Jos de Ur	11.42	7	*e*P	Pn	04 54 36.9	+2.1
SDV	Santo Domingo	13.92	26	*e*Pn	Pn	04 55 07.3	-0.4
SDV	Santo Domingo	13.92	26	P	Pn	04 55 07.7	0.0
	6.0nm,0.3s,baz=143,slow=4.4,SNR=44						
LPAZ	La Paz	15.17	146	*e*Pn	P	04 55 27.6	+1.0
	3.7nm,0.7s						
LPAZ	La Paz	15.17	146	P	P	04 55 26.0	-0.5
	0.5nm,0.3s,baz=328,slow=14,SNR=10						
JTS	JuntasAbangare	16.06	330	P	Pn	04 55 34.0	-0.5
	0.6nm,0.3s,baz=209,slow=10,SNR=3.2						
MNMC	Minye Minye	16.91	156	*e*Pn	P	04 55 48.5	+3.1
	29nm,0.6s						
PTGA	Pitinga	17.10	81	P	P	04 55 46.2	-1.0
	2.8nm,0.3s,baz=316,slow=22,SNR=30						
PB11	IPOC Station P	17.45	157	*e*P	Pn	04 55 54.6	+3.0
	18nm,0.6s						
PB04	IPOC Station P	19.65	161	*e*P	P	04 56 15.0	-0.2
	28nm,1.1s						
LVC	Limon Verde	20.33	158	*e*P	Pn	04 56 26.0	+0.2
	11nm,0.9s						
LVC	Limon Verde	20.33	158	P	Pn	04 56 27.6	+1.8
	3.5nm,0.7s,baz=7.8,slow=4.1,SNR=3.4						
GRGR	Grenville	21.78	44	*e*P	P	04 56 35.7	-2.2
	99nm,1.0s						
APG	El Apazote	22.95	324	P	P	04 56 50.2	0.0
	16nm,1.0s,baz=158,slow=7.2,SNR=6.9						
MPR	Mayaguez	23.75	23	*e*P	P	04 56 58.1	+0.9
	52nm,0.5s						
OBIP	Obispado Ponce	23.82	25	*e*P	P	04 56 58.0	+0.2
	28nm,0.6s						
SJG	San Juan	24.07	26	*e*P	P	04 56 60.0	-0.1
	79nm,0.8s						
SJG	San Juan	24.07	26	P	P	04 57 00.4	+0.3
	73nm,0.5s,baz=182,slow=7.4,SNR=46						
HUMP	Col San Antoni	24.23	26	*e*P	P	04 57 02.0	+0.5
	22nm,0.7s						
MTP	Monte Pirata	24.32	27	*e*P	P	04 57 02.5	+0.1
	17nm,0.7s						
CBYP	Canovanas	24.34	26	*e*P	P	04 57 02.3	-0.3
	65nm,0.7s						
STVI	Saint Thomas	24.82	28	*e*P	P	04 57 06.0	-0.9
	22nm,0.8s						
CCIG	Comitan	24.95	323	*e*P	P	04 57 07.1	-1.1
	14nm,0.9s						
MDP	Montagnes des	25.69	70	P	P	04 57 17.5	+2.6
	37nm,0.8s,baz=260,slow=8.3,SNR=23						
TEIG	Tepich	26.28	335	*e*P	P	04 57 19.2	-0.9
	9.3nm,1.0s						
CMIG	Matias Romero	27.27	320	P	P	04 57 27.7	-1.3
	3.4nm,0.6s,baz=93,slow=7.3,SNR=6.4						
BDFB	Brasilia	30.74	115	P	P	04 58 01.9	+1.9
	1.2nm,0.4s,baz=306,slow=8.7,SNR=3.0						
058A	Arcadia	30.93	351	P	P	04 58 01.6	+0.3
	baz=170						
859A	Kempfer Cattle	31.79	353	P	P	04 58 09.5	+0.6
	baz=172						
DWPF	Disney Wildern	31.91	352	P	P	04 58 10.4	+0.5
	baz=171						
656A	Willston	33.31	351	P	P	04 58 22.7	+0.6
	baz=170						
556A	Lake Butler	33.91	351	P	P	04 58 28.0	+0.6
	baz=170						
555A	McAlpin	34.11	350	P	P	04 58 29.6	+0.5
	baz=169						
456A	Hilliard	34.56	352	P	P	04 58 33.3	+0.4
	baz=171						
454A	Quitman	34.81	350	P	P	04 58 36.0	+0.9
	baz=168						
452A	Marianna	35.24	347	P	P	04 58 38.7	-0.1
	baz=166						
450A	Crestview	35.53	345	P	P	04 58 41.0	-0.2
	baz=163						
353A	Camilla	35.53	349	P	P	04 58 41.4	+0.1
	baz=167						
256A	Glennville	35.78	353	P	P	04 58 43.7	+0.3
	baz=171						
LNIG	Linares	35.92	323	*e*P	P	04 58 44.4	-0.4
	12nm,0.8s						
349A	Repton	36.20	345	P	P	04 58 46.7	-0.3
	baz=162						
252A	Lumpkin	36.26	349	P	P	04 58 46.9	-0.6
	baz=167						
156A	Sylvania	36.40	353	P	P	04 58 48.6	0.0
	baz=172						
251A	Midway	36.49	348	P	P	04 58 48.6	-0.9
	baz=166,SNR=6.9						
250A	Grady	36.57	346	P	P	04 58 49.3	-0.8
	baz=164						
154A	Montrose	36.58	351	P	P	04 58 49.9	-0.3
	baz=170						
153A	Fort Valley	36.73	350	P	P	04 58 51.1	-0.4
	baz=168						
249A	Camden	36.78	345	P	P	04 58 51.3	-0.6
	baz=163						
151A	Opelika	36.90	348	P	P	04 58 52.0	-0.9
	baz=166						
152A	Waverly Hall	36.91	349	P	P	04 58 52.1	-0.9
	baz=167						
150A	Eclectic	37.12	347	P	P	04 58 53.8	-1.0
	baz=165						
Z54A	Sparta	37.15	352	P	P	04 58 54.5	-0.5
	baz=170						
149A	Jones	37.29	346	P	P	04 58 55.1	-1.1
	baz=164						
Z53A	Monticello	37.30	351	P	P	04 58 55.7	-0.7
	baz=169						
Z52A	Williamson	37.36	349	P	P	04 58 56.3	-0.5
	baz=168						
GOGA	Godfrey	37.41	351	P	P	04 58 56.6	-0.6
	baz=169						
Z51A	Franklin	37.63	349	P	P	04 58 58.4	-0.7
	baz=166						
Z50A	Ashland	37.72	348	*e*P	P	04 58 59.0	-0.9
	13nm,0.6s						
Z50A	Ashland	37.72	348	P	P	04 58 58.9	-0.9
	baz=165						
Y54A	Tignall	37.74	352	P	P	04 58 59.8	-0.2
	baz=170						
147A	Livingston	37.74	344	P	P	04 58 59.3	-0.7
	baz=161						
LRAL	Lakeview Retre	37.76	346	*e*P	P	04 58 59.1	-1.0
	17nm,1.1s						
LRAL	Lakeview Retre	37.76	346	P	P	04 58 59.2	-1.0
	baz=163						
Z49A	Columbiana	37.80	347	P	P	04 58 59.8	-0.7
	baz=164						
Y53A	Monroe	37.87	351	P	P	04 59 00.4	-0.7
	baz=169						
Y52A	Lilburn	37.96	350	P	P	04 59 01.2	-0.6
	baz=168						
X58A	Rowland	38.10	357	P	P	04 59 03.1	+0.1
	baz=176						
X56A	White Oak	38.17	354	P	P	04 59 03.5	-0.1
	baz=173						
Y51A	Rockmart	38.17	349	P	P	04 59 03.3	-0.3
	baz=167						
X55A	Gracelyn & Ava	38.21	354	P	P	04 59 03.9	-0.1
	baz=172						
Y50A	Piedmont	38.30	348	P	P	04 59 03.8	-0.9
	baz=166						
Y49A	Blount Mountai	38.41	347	P	P	04 59 04.5	-1.1
	baz=165						
X53A	Estanollee	38.46	351	P	P	04 59 05.5	-0.6
	baz=170						
833A	Chaparral WMA,	38.52	327	P	P	04 59 06.3	-0.3
	baz=142						
Y48A	Jasper	38.64	346	P	P	04 59 06.0	-1.5
	baz=163,SNR=5.9						
X52A	Dahlonega	38.65	351	P	P	04 59 06.7	-1.0
	baz=169						
X51A	Calhoun	38.78	349	P	P	04 59 07.9	-0.8
	baz=167						
X50B	Fort Payne	38.83	348	P	P	04 59 08.2	-1.0
	baz=166						
KMSC	Kings Mountain	38.84	354	P	P	04 59 09.4	+0.1
	baz=173						
X49A	Woodville	39.02	348	P	P	04 59 10.0	-0.7
	baz=165						
W53A	Cullowhee	39.09	352	P	P	04 59 11.3	-0.1
	baz=170,SNR=5.3						
NATX	Nacogdoches	39.11	336	P	P	04 59 10.8	-0.7
	baz=151						
X48A	Hartselle	39.12	347	*e*P	P	04 59 10.2	-1.4
	14nm,0.6s						
X48A	Hartselle	39.12	347	P	P	04 59 10.1	-1.4
	baz=164,SNR=5.9						
W52A	Murphy	39.14	351	P	P	04 59 11.1	-0.6
	baz=169						
W51A	Cleveland	39.34	350	P	P	04 59 12.8	-0.5
	baz=168						
X47A	Russelville	39.38	346	P	P	04 59 12.1	-1.6
	baz=163,SNR=6.0						
W50A	Signal Mountai	39.48	349	*e*P	P	04 59 13.8	-0.8
	16nm,0.8s						
W50A	Signal Mountai	39.48	349	P	P	04 59 13.7	-0.9
	baz=167,SNR=5.1						
V53A	Saluda	39.54	352	P	P	04 59 14.5	-0.6
	baz=171						
435B	Jarrell	39.58	331	P	P	04 59 14.8	-0.7
	baz=146						
W49A	Belvidere	39.59	348	P	P	04 59 14.1	-1.4
	baz=165						
X46A	Booneville	39.61	345	P	P	04 59 13.8	-1.8
	baz=162						
SWET	Sewanee	39.62	348	*e*P	P	04 59 14.8	-0.9
	14nm,0.7s						
W48A	Pulaski	39.76	347	P	P	04 59 15.5	-1.3
	baz=164,SNR=9.2						
OXF	Oxford	39.79	344	P	P	04 59 15.3	-1.8
	baz=160						
V52A	Sevierville	39.82	351	P	P	04 59 16.6	-0.8
	baz=170						
V51A	Loudon	39.90	350	P	P	04 59 17.2	-0.8
	baz=168						

V50A	Pikevile baz=167	39.90	349	P	P	04 59 17.2	-0.8
W47A	Westpoint baz=163,SNR=10.0	40.02	346	P	P	04 59 17.5	-1.5
W46A	Michie baz=162	40.10	345	P	P	04 59 17.5	-2.1
V49A	McMinnville baz=166,SNR=5.8	40.15	349	P	P	04 59 18.7	-1.4
U53A	Fall Branch baz=171	40.19	353	P	P	04 59 19.7	-0.8
V48A	Smith Brothers 47nm,0.6s	40.31	347	*e*P	P	04 59 20.1	-1.2
V48A	Smith Brothers baz=165,SNR=20	40.31	347	P	P	04 59 20.2	-1.2
U52A	Thorn Hill baz=170	40.33	352	P	P	04 59 20.6	-1.0
W45A	Hickory Valley baz=161,SNR=6.3	40.33	344	P	P	04 59 19.7	-1.9
JCT	Junction City 6.0nm,0.7s	40.44	329	*e*P	P	04 59 22.4	-0.2
TZTN	Tazewell 5.8nm,0.6s	40.50	352	*e*P	P	04 59 21.9	-1.0
TZTN	Tazewell baz=170	40.50	352	P	P	04 59 22.3	-0.7
WHTX	Lake Whitney, baz=147	40.53	333	P	P	04 59 21.7	-1.6
U50A	Jamestown baz=168	40.58	350	P	P	04 59 22.7	-0.9
T54A	Tazewell baz=173	40.77	354	P	P	04 59 24.4	-0.8
T53A	Wise baz=171	40.80	353	P	P	04 59 24.9	-0.6
V45A	Humboldt baz=161	40.82	345	P	P	04 59 23.6	-2.0
U49A	Red Boiling Sp baz=166	40.84	349	P	P	04 59 24.4	-1.4
WVT	Waverly 12nm,0.6s	40.91	346	*e*P	P	04 59 24.0	-2.3
WVT	Waverly baz=163	40.91	346	P	P	04 59 24.2	-2.2
UALR	University of 16nm,0.8s	40.94	340	*e*P	P	04 59 25.3	-1.3
T51A	Gray baz=169	40.97	351	P	P	04 59 26.3	-0.5
T52A	Hallie baz=171	40.98	352	P	P	04 59 26.4	-0.5
U48A	Cassie Pea, Po baz=165	40.99	348	P	P	04 59 25.7	-1.3
U47A	Clarksville baz=164	41.09	347	P	P	04 59 25.9	-1.8
MIAR	Mount Ida baz=154	41.16	339	P	P	04 59 27.4	-1.0
T50A	Nancy baz=168	41.17	350	P	P	04 59 27.2	-1.3
U46A	Springville baz=163	41.21	346	P	P	04 59 27.2	-1.6
W41B	Gary Mavity, V 14nm,1.0s	41.27	341	*e*P	P	04 59 27.9	-1.3
W41B	Gary Mavity, V baz=156,SNR=6.2	41.27	341	P	P	04 59 27.6	-1.7
T49A	Edmonton 4.1nm,0.6s	41.37	349	*e*P	P	04 59 28.8	-1.4
T49A	Edmonton baz=167	41.37	349	P	P	04 59 28.6	-1.5
S55A	Lewisburg baz=174	41.38	356	P	P	04 59 30.4	+0.2
WHAR	Wooly Hollow 20nm,1.0s	41.39	341	*e*P	P	04 59 28.9	-1.3
R58B	Mineral baz=178	41.44	359	P	P	04 59 30.8	+0.2
S53A	Williamson baz=172	41.44	354	P	P	04 59 30.4	-0.3
T48A	Bowling Green baz=166	41.54	348	P	P	04 59 30.5	-1.0
S52A	Salyersville baz=171	41.55	353	P	P	04 59 31.2	-0.4
T47A	Sharon Grove 20nm,0.9s	41.57	348	*e*P	P	04 59 29.9	-1.8
T47A	Sharon Grove baz=164,SNR=5.8	41.57	348	P	P	04 59 29.6	-2.1
S51A	Beattyville baz=170	41.58	352	P	P	04 59 30.9	-0.9
CBN	Corbin Frederi baz=179	41.67	359	P	P	04 59 33.0	+0.6
TXAR	Lajitas Array 2.6nm,0.7s,baz=146,slow=8.5,SNR=32	41.71	324	P	P	04 59 32.5	-0.6
TXAR	1.4nm,0.8s,baz=148,slow=8.1,SNR=4.0			pP	pP	04 59 58.5	-0.2
TXAR	2.1nm,0.7s,baz=145,slow=6.5,SNR=12			PcP	PcP	05 01 28.0	+0.2
S50A	Richmond baz=169,SNR=5.9	41.74	351	P	P	04 59 32.2	-0.9
T46A	Princeton baz=163	41.80	347	P	P	04 59 32.4	-1.2
W39A	Magazine 13nm,1.0s	41.82	339	*e*P	P	04 59 32.8	-1.0
W39A	Magazine baz=154	41.82	339	P	P	04 59 32.5	-1.2
R54A	Victor baz=174	41.82	355	P	P	04 59 33.5	-0.2
R55A	Marlinton baz=175	41.86	356	P	P	04 59 34.4	+0.3
S49A	Springfield baz=167	41.99	350	P	P	04 59 33.6	-1.5
S48A	Wiedeman Farm, baz=166	42.01	349	P	P	04 59 33.2	-2.0
U42A	Revenden baz=158,SNR=6.6	42.03	343	P	P	04 59 33.3	-2.2
ABTX	Abilene, Hawle 13nm,0.8s	42.09	331	*e*P	P	04 59 33.2	-2.9
ABTX	Abilene, Hawle baz=145	42.09	331	P	P	04 59 35.6	-0.4
S47A	Hartford baz=165,SNR=6.9	42.11	348	P	P	04 59 34.0	-2.0
R52A	Catlettsburg baz=171	42.15	353	P	P	04 59 35.2	-1.1
PBMO	Poplar Bluff 14nm,0.8s	42.20	344	*e*P	P	04 59 34.5	-2.4
R51A	Hillsboro baz=170	42.23	352	P	P	04 59 36.2	-0.8
U41A	Viola baz=157	42.24	342	P	P	04 59 35.0	-2.1
R50A	Paris baz=169	42.32	351	P	P	04 59 36.8	-1.0
S46A	Don Dixon Farm baz=164	42.37	347	P	P	04 59 36.1	-2.2
T43A	Greenville baz=160,SNR=9.1	42.44	344	P	P	04 59 36.6	-2.2
R49A	Shelbyville baz=168	42.46	350	P	P	04 59 37.5	-1.4
U40A	Yellville baz=156,SNR=8.7	42.55	341	P	P	04 59 38.0	-1.6
Q55A	Buckhannon baz=175	42.56	356	P	P	04 59 40.0	+0.2
S45A	Carrier Mills baz=163	42.57	346	P	P	04 59 37.7	-2.1
WCI	Wyandotte Cave 16nm,1.1s	42.61	349	*e*P	P	04 59 37.4	-2.7
WCI	Wyandotte Cave baz=166	42.61	349	P	P	04 59 38.1	-2.0
Q54A	Coxs Mills baz=174	42.61	355	P	P	04 59 39.9	-0.2
T42A	Van Buren 13nm,0.6s	42.62	343	*e*P	P	04 59 37.5	-2.8
T42A	Van Buren baz=159,SNR=11	42.62	343	P	P	04 59 38.0	-2.2
R48A	Northridge Ran baz=167	42.69	350	P	P	04 59 40.0	-0.9
Q52A	Bidwell baz=172	42.72	354	P	P	04 59 40.2	-0.8
S44A	Carbondale baz=162	42.75	345	P	P	04 59 39.2	-2.0
SIUC	Southern Illin 26nm,0.7s	42.76	345	*e*P	P	04 59 39.8	-1.5
Q50A	Georgetown baz=170	42.82	352	P	P	04 59 40.6	-1.2
T41A	Mountain View baz=158,SNR=5.0	42.83	342	P	P	04 59 39.9	-2.0
R46A	Gibon Southern baz=164	42.84	348	P	P	04 59 39.7	-2.2
S43A	Fulton Ridge, baz=160	42.84	344	P	P	04 59 39.8	-2.3
HHAR	Hobbs 13nm,1.0s	42.85	340	*e*P	P	04 59 40.9	-1.3
Q51A	Peebles baz=170	42.91	353	P	P	04 59 42.1	-0.5
P55A	Reedsville baz=176	43.06	357	P	P	04 59 44.0	+0.3
R45A	Skylar, Fairfi baz=163	43.08	347	P	P	04 59 42.4	-1.6
Q49A	Aurora baz=168	43.12	351	P	P	04 59 42.8	-1.4
P53A	Whipple baz=173	43.15	355	P	P	04 59 44.1	-0.4
Q48A	North Vernon baz=167	43.18	350	P	P	04 59 43.0	-1.7
P54A	Burton baz=175	43.19	356	P	P	04 59 44.7	-0.1
TUL1	Leonard 18nm,1.1s	43.20	337	*e*P	P	04 59 44.1	-0.8
TUL1	Leonard baz=152	43.20	337	P	P	04 59 43.7	-1.2
S42A	Caledonia baz=160	43.23	344	P	P	04 59 42.4	-2.7
R44A	Waltonville baz=162	43.23	346	P	P	04 59 43.2	-1.9
Q47A	Bedord North L baz=166,SNR=6.7	43.32	349	P	P	04 59 44.1	-1.8
P51A	Williamsport baz=171	43.33	353	P	P	04 59 44.9	-1.0
FVM	French Village 15nm,0.7s	43.33	344	*e*P	P	04 59 43.4	-2.5
S41A	Jillco Farms, baz=158	43.33	343	P	P	04 59 44.1	-1.9
P52A	Corning baz=172	43.37	354	P	P	04 59 45.5	-0.8
WMOK	Wichita Mounta 20nm,0.9s	43.43	333	*e*P	P	04 59 46.5	-0.4
WMOK	Wichita Mounta baz=147,SNR=13	43.43	333	P	P	04 59 46.2	-0.7
OLIL	Olney 14nm,0.7s	43.46	347	*e*P	P	04 59 45.2	-1.8
R43A	Red Bud baz=161	43.47	345	P	P	04 59 45.2	-1.8
P50A	Jamestown baz=170	43.55	352	P	P	04 59 46.4	-1.2
BLO	Bloomington 18nm,0.6s	43.56	349	*e*P	P	04 59 46.3	-1.4
P49A	Miami Univ. Ec baz=169	43.60	351	P	P	04 59 46.4	-1.7
CCM	Cathedral Cave 7.6nm,0.6s	43.62	343	*e*P	P	04 59 45.9	-2.4
CCM	Cathedral Cave baz=159	43.62	343	P	P	04 59 46.4	-1.9
Q45A	Warren Harvey, baz=164	43.63	347	P	P	04 59 46.4	-1.9
P48A	Milroy baz=168	43.65	350	P	P	04 59 46.4	-2.1
R42A	Luebbering baz=160	43.70	344	P	P	04 59 46.6	-2.3
O55A	Ligonier baz=176	43.73	357	P	P	04 59 49.6	+0.5
O56A	Blue Knob Stat 29nm,0.9s	43.76	358	*e*P	P	04 59 50.2	+0.8
O56A	Blue Knob Stat baz=178	43.76	358	P	P	04 59 50.5	+1.1
O54A	Avella baz=175	43.76	356	P	P	04 59 50.4	+1.0
O52A	Adamsville baz=173	43.82	354	P	P	04 59 49.1	-0.8
P47A	Martinsville baz=166,SNR=8.4	43.82	349	P	P	04 59 48.1	-1.8
Q44A	Meyer Farm, Va 22nm,0.8s	43.84	346	*e*P	P	04 59 48.0	-1.9
Q44A	Meyer Farm, Va baz=162	43.84	346	P	P	04 59 47.7	-2.3
R41A	Rosebud baz=159	43.88	343	P	P	04 59 48.6	-1.8
O53A	New Philadelph baz=174	43.90	355	P	P	04 59 49.9	-0.5
O51A	Pataskala baz=172	43.93	354	P	P	04 59 49.4	-1.3
Q43A	New Douglas baz=161	44.04	346	P	P	04 59 49.4	-2.2
O50A	Cable baz=170	44.05	353	P	P	04 59 50.5	-1.2
ACSO	Alum Creek Sta baz=171	44.06	353	P	P	04 59 51.4	-0.3
SSPA	Standing Stone baz=179	44.11	359	P	P	04 59 52.5	+0.4
O49A	Covington baz=169	44.19	352	P	P	04 59 51.3	-1.5
Q42A	Golden Eagle baz=160	44.23	345	P	P	04 59 51.1	-1.9
P44A	Sand Creek, Wi baz=163	44.28	347	P	P	04 59 51.4	-2.1
N55A	Marion Center baz=177,SNR=6.7	44.28	358	P	P	04 59 54.0	+0.4
O48A	Farmland baz=168,SNR=6.7	44.38	351	P	P	04 59 52.5	-1.8
N59A	State Game Lan baz=182	44.39	1	P	P	04 59 55.2	+0.8
N53A	Lisbon baz=174	44.42	356	P	P	04 59 53.4	-1.2
MNTX	Cornudas Mount 6.5nm,0.9s	44.45	324	*e*P	P	04 59 54.1	-0.9
MNTX	Cornudas Mount baz=137,SNR=8.5	44.45	324	P	P	04 59 54.1	-0.9
Q41A	Truxton baz=159,SNR=5.6	44.45	344	P	P	04 59 52.7	-2.2
N52A	McGinn’s Farm, baz=173	44.49	355	P	P	04 59 54.6	-0.6
N54A	Moraine State 19nm,0.6s	44.52	357	*e*P	P	04 59 55.8	+0.4
N54A	Moraine State baz=176	44.52	357	P	P	04 59 55.4	0.0
O47A	Sheridan baz=167,SNR=5.2	44.53	350	P	P	04 59 53.3	-2.2
N50A	Nevada baz=171	44.61	353	P	P	04 59 55.1	-1.0
P43A	Skaggs, Pawnee baz=162	44.66	346	P	P	04 59 54.6	-1.9
MSTX	Muleshoe 9.3nm,0.6s	44.73	329	*e*P	P	04 59 57.1	-0.3
MSTX	Muleshoe baz=142,SNR=7.2	44.73	329	P	P	04 59 56.6	-0.7
P42A	Winchester baz=161	44.81	345	P	P	04 59 55.4	-2.4
SFIN	Lafayette baz=166	44.84	349	P	P	04 59 55.9	-2.1
N49A	Columbus Grove baz=170	44.89	352	P	P	04 59 56.9	-1.4
O44A	Mansfield baz=164	44.90	347	P	P	04 59 56.3	-2.2
U32A	Winter Ranch, 42nm,1.0s	44.91	334	*e*P	P	04 59 57.8	-0.9
N48A	Decatur baz=168	44.95	351	P	P	04 59 57.0	-1.8
M55A	Ridgway baz=177	44.96	358	P	P	04 59 58.8	-0.1
M53A	WI Miller and baz=175	45.03	356	P	P	04 59 58.9	-0.6
M54A	Oil Creek Stat 27nm,0.8s	45.04	357	*e*P	P	04 59 59.8	+0.2
M54A	Oil Creek Stat baz=176	45.04	357	P	P	04 59 59.6	0.0
N47A	Urbana baz=168,SNR=5.3	45.08	351	P	P	04 59 57.8	-2.1
P41A	Barry, Barry baz=160,SNR=5.2	45.08	344	P	P	04 59 57.4	-2.5
M52A	Chesterland baz=174	45.19	355	P	P	04 59 59.9	-0.8
M50A	Fremont baz=171	45.22	353	P	P	04 59 59.8	-1.1
N46A	Monticello baz=166	45.27	349	P	P	04 59 59.9	-1.5
O42A	Bath baz=161	45.32	346	P	P	04 59 59.6	-2.1
N45A	Kentland baz=165	45.37	349	P	P	05 00 00.1	-2.1
M49A	Liberty Center baz=170	45.40	352	P	P	05 00 01.5	-0.8
O41A	Passleys Farm, baz=160	45.45	345	P	P	05 00 00.8	-1.9
N44A	Piper City baz=164	45.45	348	P	P	05 00 00.8	-2.0
HDIL	Hopedale 19nm,0.6s	45.48	347	*e*P	P	05 00 00.8	-2.2
HDIL	Hopedale baz=162	45.48	347	P	P	05 00 00.6	-2.3
L53A	Girard baz=175	45.52	356	P	P	05 00 02.7	-0.6
M47A	Cromwell baz=168	45.53	351	P	P	05 00 01.8	-1.6
BINY	Binghamton baz=181	45.66	1	P	P	05 00 05.1	+0.6
L55A	Hinsdale baz=178,SNR=5.3	45.66	358	P	P	05 00 04.5	0.0
ERPA	Erie baz=176	45.67	357	P	P	05 00 04.0	-0.5
N43A	Stutzman Famil baz=163	45.81	347	P	P	05 00 04.1	-1.5
L50A	Kingsville baz=172	45.83	354	P	P	05 00 04.0	-1.7
N42A	Yates City baz=162	45.91	346	P	P	05 00 04.2	-2.2
L48A	N Adams baz=170	45.93	352	P	P	05 00 04.4	-2.1
N41A	Harden Midland baz=160	46.00	345	P	P	05 00 04.6	-2.5
L49A	Milan baz=170	46.00	353	P	P	05 00 06.1	-0.9
L47A	Sherwood baz=168,SNR=5.6	46.07	351	P	P	05 00 05.9	-1.8
K55A	Perry baz=178	46.20	359	P	P	05 00 08.5	-0.2
M43A	Waltham Townsh baz=163	46.24	347	P	P	05 00 06.5	-2.4
L46A	Eue Claire baz=167	46.28	350	P	P	05 00 07.1	-2.1
KSU1	Kansas State U 13nm,0.8s	46.31	339	*e*P	P	05 00 08.3	-1.3
KSU1	Kansas State U baz=152,SNR=6.2	46.31	339	P	P	05 00 08.1	-1.5
K52A	Tillsonburg baz=175	46.37	356	P	P	05 00 08.9	-1.1
K51A	Iona Station baz=174	46.38	355	P	P	05 00 08.7	-1.3
121A	Cookes Peak, D baz=135,SNR=5.6	46.46	323	P	P	05 00 11.2	+0.1
M41A	Milan baz=161	46.55	346	P	P	05 00 09.5	-1.9
K49A	Clarkson baz=171	46.63	353	P	P	05 00 10.6	-1.4
TYNO	Tyneside baz=176	46.63	357	P	P	05 00 11.2	-0.8
STCO	Saint Catharin baz=177	46.72	358	P	P	05 00 12.2	-0.4
K47A	Vermontville baz=169,SNR=5.6	46.72	352	P	P	05 00 11.0	-1.7
K48A	Perry baz=170,SNR=6.2	46.73	353	P	P	05 00 11.3	-1.5
J52A	Paris baz=175	46.81	356	P	P	05 00 11.6	-1.8
M40A	Post Highland baz=160	46.82	345	P	P	05 00 11.4	-2.1
ELFO	Elginfield baz=174	46.83	356	P	P	05 00 12.1	-1.5
K46A	Dorr baz=168	46.85	351	P	P	05 00 11.6	-2.2
L43A	Garden Prairie baz=164,SNR=5.1	46.91	348	P	P	05 00 11.8	-2.4
L42A	Oliver, Polo baz=162	46.94	347	P	P	05 00 11.9	-2.5
M39A	Webster baz=159	47.07	344	P	P	05 00 12.9	-2.5
J48A	Bridge Port baz=171	47.18	353	P	P	05 00 14.8	-1.4
L41A	Preston baz=161,SNR=5.6	47.20	346	P	P	05 00 14.0	-2.5
J47A	Sunmer baz=169,SNR=8.0	47.25	352	P	P	05 00 15.3	-1.5
K43A	Burlington baz=164	47.33	348	P	P	05 00 15.6	-1.8
DRWO	Darlington Wes baz=178	47.36	358	P	P	05 00 17.4	-0.2
DRCO	St. Marys Ceme baz=178	47.36	358	P	P	05 00 17.3	-0.4
L40A	Anamosa baz=160	47.37	345	P	P	05 00 15.9	-1.9
WLVO	Wesleyville baz=178	47.40	358	P	P	05 00 17.6	-0.4
I51A	Listowel baz=174	47.41	356	P	P	05 00 17.0	-1.1
ANMO	Albuquerque 14nm,0.8s	47.44	327	*e*P	P	05 00 18.7	0.0
ANMO	Albuquerque baz=138	47.44	327	P	P	05 00 18.7	0.0
PKRO	Pickering baz=177	47.47	358	P	P	05 00 17.7	-0.8
J46A	Howard City baz=168	47.48	351	P	P	05 00 16.5	-2.1
K42A	Prairie Point, baz=163	47.61	348	P	P	05 00 18.2	-1.4
I52A	Shelburne baz=176	47.62	357	P	P	05 00 18.7	-1.0
BASO	Ashfield baz=174	47.67	355	P	P	05 00 19.4	-0.6
BWLO	Walkerton baz=174	47.73	356	P	P	05 00 19.8	-0.8
BRCO	Bruce Peninsul baz=174	47.88	356	P	P	05 00 21.3	-0.4
LBNH	Lisbon baz=187	47.90	5	P	P	05 00 22.4	+0.6
JFWS	Jewell Farm baz=162	47.94	347	P	P	05 00 20.1	-2.1
K40A	Colesburg baz=161	47.95	346	P	P	05 00 20.2	-2.0
I47A	Gladwin baz=170	47.98	353	P	P	05 00 20.7	-1.7
DELO	Deloro Mine baz=179	47.98	359	P	P	05 00 21.7	-0.7
H55A	Tweed baz=180	48.01	360	P	P	05 00 22.5	-0.1
I46A	Reed City baz=168	48.03	352	P	P	05 00 20.7	-2.1
T25A	Trinidad 13nm,0.9s	48.04	330	*e*P	P	05 00 23.6	+0.3
T25A	Trinidad baz=142,SNR=5.8	48.04	330	P	P	05 00 23.5	+0.1
I48A	Sherman Twp baz=171	48.04	353	P	P	05 00 21.4	-1.5
H56A	Elgin baz=181	48.05	1	P	P	05 00 23.2	+0.2
TUC	Tucson 7.8nm,0.8s	48.16	321	*e*P	P	05 00 23.5	-0.7
TUC	Tucson baz=132	48.16	321	P	P	05 00 23.8	-0.3
J41A	Loganville baz=162	48.31	347	P	P	05 00 22.9	-2.2
I43A	Langenfeld Bro baz=165	48.43	349	P	P	05 00 24.0	-1.9
PLVO	Plevna baz=180	48.50	360	P	P	05 00 25.7	-0.7
J40A	Soldiers Grove baz=161	48.51	346	P	P	05 00 24.1	-2.4
H48A	Harrisville baz=171	48.51	354	P	P	05 00 25.3	-1.2
H47A	Mio baz=170	48.51	353	P	P	05 00 25.3	-1.3
H46A	Fife Lake baz=169	48.58	352	P	P	05 00 25.3	-1.7
I42A	Draeger Farm, baz=164	48.58	348	P	P	05 00 25.2	-1.9
G53A	Haliburton baz=178	48.61	358	P	P	05 00 26.4	-0.9
J39A	Decorah baz=160	48.68	346	P	P	05 00 25.5	-2.4
KSCO	Kaye Shedlock’ baz=145	48.69	333	P	P	05 00 27.5	-0.7
G55A	Calabogie baz=180	48.71	0	P	P	05 00 27.8	-0.2
BGNE	Belgrade 27nm,0.7s	48.90	339	*e*P	P	05 00 28.9	-0.8
BGNE	Belgrade baz=151	48.90	339	P	P	05 00 28.3	-1.3
KLBO	Killbear Provi baz=176	48.91	357	P	P	05 00 28.2	-1.3
BUKO	Buck Lake baz=177	48.95	358	P	P	05 00 28.8	-1.1
SDCO	Great Sand Dun 14nm,1.1s	49.06	330	*e*P	P	05 00 30.9	-0.3
SDCO	Great Sand Dun baz=141,SNR=15	49.06	330	P	P	05 00 31.3	+0.1
H42A	Shiocton baz=165	49.10	349	P	P	05 00 29.4	-1.6
I39A	Houston baz=160	49.13	346	P	P	05 00 29.6	-1.7
PEMO	Pembroke baz=180	49.14	360	P	P	05 00 30.8	-0.4
214A	Organ Pipe Nat baz=129	49.24	319	P	P	05 00 32.0	-0.3
ALGO	Algonquin Park baz=178	49.42	359	P	P	05 00 32.7	-0.8

W18A	Petrified Fore 28nm,1.0s	49.43	324	*e*P	P	05 00 34.5	+0.5
W18A	Petrified Fore baz=134,SNR=7.3	49.43	324	P	P	05 00 34.0	+0.1
H41A	Junction City baz=163	49.43	348	P	P	05 00 31.7	-1.8
F48A	Evansville baz=172	49.55	355	P	P	05 00 32.7	-1.8
H40A	Chili baz=162	49.59	347	P	P	05 00 33.0	-1.8
F46A	Macinaw City C baz=170	49.73	353	P	P	05 00 34.0	-1.8
S22A	4UR Ranch, Cre 6.6nm,1.1s	49.74	329	*e*P	P	05 00 36.3	-0.1
S22A	4UR Ranch, Cre baz=139,SNR=6.4	49.74	329	P	P	05 00 36.1	-0.2
F45A	CMU Biological baz=169	49.75	352	P	P	05 00 34.8	-1.1
E53A	Dumoine, Ponti baz=179	49.84	359	P	P	05 00 36.0	-0.6
H39A	Augusta baz=161	49.85	347	P	P	05 00 34.3	-2.4
E54A	Lac Daplat, Po baz=180	49.89	360	P	P	05 00 36.6	-0.4
G41A	Antigo baz=164	49.90	349	P	P	05 00 35.6	-1.6
X16A	Lo Mia Camp, P 8.8nm,0.8s	49.97	322	*e*P	P	05 00 38.1	0.0
E50A	Wahnapitae baz=175	50.00	356	P	P	05 00 36.3	-1.5
E51A	G1948 Merrick baz=177	50.05	358	P	P	05 00 37.3	-0.9
H38A	Maiden Rock baz=160	50.08	346	P	P	05 00 36.4	-2.1
E48A	Lockeyer baz=173	50.16	355	P	P	05 00 37.4	-1.6
MVCO	Mesa Verde 5.0nm,0.9s	50.23	327	*e*P	P	05 00 39.2	-0.8
MVCO	Mesa Verde baz=137	50.23	327	P	P	05 00 39.5	-0.5
E47A	Iron Bridge baz=172	50.24	354	P	P	05 00 38.3	-1.3
F41A	Three Lakes baz=164	50.40	349	P	P	05 00 39.2	-1.7
G39A	Holcombe baz=161	50.40	347	P	P	05 00 39.2	-1.7
ECSD	EROS Data Cent 6.5nm,0.7s	50.44	341	*e*P	P	05 00 39.5	-1.7
ECSD	EROS Data Cent baz=154	50.44	341	P	P	05 00 39.1	-2.1
G38A	Ridgeland baz=160	50.45	346	P	P	05 00 39.0	-2.2
D52A	ZEK Kipawa Sen baz=178	50.45	359	P	P	05 00 40.8	-0.5
D53A	Lac Vacive, Po baz=179	50.54	359	P	P	05 00 41.5	-0.5
D54A	Lac Fusel, La baz=180	50.61	0	P	P	05 00 41.9	-0.5
Y14A	Wickenburg 4.7nm,0.8s	50.63	321	*e*P	P	05 00 43.0	+0.1
E43A	Lone Tree Farm baz=167	50.64	351	P	P	05 00 40.7	-1.9
WUAZ	Wupatki 20nm,0.8s	50.67	323	*e*P	P	05 00 43.7	+0.4
WUAZ	Wupatki baz=133,SNR=8.3	50.67	323	P	P	05 00 43.4	+0.1
ISCO	Idaho Springs 4.2nm,0.7s	50.71	331	*e*P	P	05 00 42.8	-0.9
ISCO	Idaho Springs baz=142,SNR=6.0	50.71	331	P	P	05 00 43.4	-0.3
SPMN	Marine on St. baz=159	50.73	345	P	P	05 00 41.2	-2.2
D46A	Sault St. Mari baz=171	50.75	354	P	P	05 00 41.3	-2.1
F40A	Park Falls baz=163	50.77	348	P	P	05 00 41.6	-2.0
D47A	Chapleau baz=172	50.82	354	P	P	05 00 42.1	-1.9
D48A	Paudash Townsh baz=174	50.82	356	P	P	05 00 42.5	-1.5
F37A	Hinrichs Farm, baz=160	51.15	346	P	P	05 00 44.7	-1.8
F38A	Pierce - Schro baz=161	51.19	347	P	P	05 00 44.9	-1.9
E40A	Wakefield baz=163	51.23	348	P	P	05 00 45.8	-1.3
E39A	Mellen baz=162	51.30	348	P	P	05 00 46.0	-1.6
Y12C	Blythe baz=129	51.48	319	P	P	05 00 49.3	+0.1
PDMCI	Parker Dam,Lak baz=130	51.58	320	P	P	05 00 50.1	+0.2
N23A	Red Feather La baz=142	51.73	332	P	P	05 00 50.6	-0.6
E38A	The Farm, Brul 16nm,1.0s	51.73	347	*e*P	P	05 00 49.2	-1.6
E38A	The Farm, Brul baz=161	51.73	347	P	P	05 00 49.3	-1.6
SUSD	Miller baz=152	51.85	340	P	P	05 00 50.3	-1.4
IKP	In-Ko-Pah, Jac baz=127	51.87	317	P	P	05 00 51.9	-0.3
W13A	Hualapai Mount 10.0nm,0.8s	51.93	321	*e*P	P	05 00 53.1	+0.3
BC3	Big Chuckawall baz=128	52.03	319	P	P	05 00 53.0	-0.4
IRM	Iron Mountain baz=128	52.14	319	P	P	05 00 53.9	-0.3
NEE2	Needles Airpor baz=129	52.18	320	P	P	05 00 54.1	-0.3
MONP2	Monument Peak baz=126	52.22	317	P	P	05 00 54.6	-0.3
O20A	White River Ci 6.6nm,0.9s	52.26	330	*e*P	P	05 00 55.1	+0.1
O20A	White River Ci baz=139	52.26	330	P	P	05 00 55.4	+0.3
LSQQ	Lebel-sur-Quev baz=180	52.52	360	P	P	05 00 56.3	-0.3
KNB	Kanab 5.8nm,0.9s	52.55	324	*e*P	P	05 00 57.8	+0.6
BELC	Belle Mtn. Jos baz=128	52.60	319	P	P	05 00 57.6	-0.1
PFO	Pinyon Flats O baz=127	52.67	318	P	P	05 00 58.0	-0.1
SRU	San Rafael Swe 12nm,1.1s	52.70	327	*e*P	P	05 00 58.5	+0.2
LCMT	Little Creek M 5.8nm,0.8s	52.79	323	*e*P	P	05 00 59.5	+0.5
GMRC	Granite Mounta baz=128,SNR=5.4	52.86	320	P	P	05 00 59.5	-0.1
EYMN	Ely baz=162	52.99	348	P	P	05 01 00.7	+0.6
P17A	Butcher Ranch, 13nm,1.0s	53.08	327	*e*P	P	05 01 01.2	+0.1
SZCU	Shurtz Canyon 5.4nm,0.9s	53.09	324	*e*P	P	05 01 01.6	+0.3
MURC	Murrieta baz=126	53.16	318	P	P	05 01 01.3	-0.4
CCUT	Cedar City 5.6nm,0.8s	53.22	324	*e*P	P	05 01 03.1	+0.8
MATQ	Matagami baz=179	53.22	359	P	P	05 01 00.8	-1.0
HEC	Hector,Ludlow baz=128	53.33	319	P	P	05 01 03.3	+0.4
BBRC	Big Bear Solar baz=127	53.37	318	P	P	05 01 03.8	+0.4
K22A	Casper 5.5nm,0.7s	53.37	333	*e*P	P	05 01 03.2	0.0
K22A	Casper baz=142	53.37	333	P	P	05 01 02.9	-0.4
CHGQ	Chibougamau baz=183	53.41	2	P	P	05 01 03.0	-0.2
TUQ	Turquoise Moun baz=128,SNR=5.1	53.43	320	P	P	05 01 03.5	-0.3
RSSD	Black Hills 11nm,0.6s	53.48	336	*e*P	P	05 01 04.4	+0.4
RSSD	Black Hills baz=146	53.48	336	P	P	05 01 04.3	+0.2
SHPR	Sheep Range 10nm,1.1s	53.63	322	*e*P	P	05 01 05.2	+0.1
BFSC	Mount Baldy Ra baz=126	53.85	318	P	P	05 01 06.3	-0.5
GSC	Goldstone, Bar 7.5nm,0.8s	53.92	319	*e*P	P	05 01 07.7	+0.4
GSC	Goldstone, Bar baz=128,SNR=5.4	53.92	319	P	P	05 01 07.3	0.0
MPU	Maple Canyon 7.2nm,1.1s	53.95	327	*e*P	P	05 01 07.5	0.0
PSUT	Pine Spring 7.1nm,1.0s	54.17	324	*e*P	P	05 01 09.6	+0.4
JLU	Jordanelle 11nm,0.9s	54.26	328	*e*P	P	05 01 10.1	+0.3
EDW2	Edwards Air Fo baz=126,SNR=5.1	54.45	318	P	P	05 01 10.7	-0.3
TPNV	Topopah Spring 9.3nm,0.8s	54.58	321	*e*P	P	05 01 12.7	+0.5
TPNV	Topopah Spring baz=129,SNR=8.0	54.58	321	P	P	05 01 12.3	+0.2
LRMC	Laurel Mtn Rad baz=127	54.60	319	P	P	05 01 12.0	-0.2
TCUT	Toone Canyon 33nm,0.7s	54.61	328	*e*P	P	05 01 12.6	+0.2
FURC	Furnace Creek, baz=128	54.67	321	P	P	05 01 12.7	+0.2
DUG	Dugway, Tooele 6.5nm,0.8s	54.72	327	*e*P	P	05 01 12.8	-0.2
DUG	Dugway, Tooele baz=134,SNR=9.4	54.72	327	P	P	05 01 13.0	+0.1
MPMC	Manual Prospec baz=127	54.82	320	P	P	05 01 13.3	-0.5
BW06	Boulder Array 5.0nm,0.8s	54.89	331	*e*P	P	05 01 13.0	-1.3
BW06	Boulder Array baz=139,SNR=9.4	54.89	331	P	P	05 01 13.4	-0.9
PD31	Pinedale Array	54.89	331	*e*P	P	05 01 13.6	-0.7
PDAR	Pinedale Array	54.89	331	*e*P	P	05 01 12.9	-1.4
PDAR				PcP	PcP	05 02 14.4	-0.7
PDAR	Pinedale Array 4.7nm,0.8s,baz=121,slow=8.5,SNR=35	54.89	331	P	P	05 01 13.3	-1.0
PDAR	1.0nm,0.5s,baz=128,slow=5.8,SNR=8.8			PcP	PcP	05 02 14.4	-0.7
MDND	Maddock 38nm,1.1s	55.06	341	*e*P	P	05 01 15.1	-0.1
MDND	Maddock baz=152	55.06	341	P	P	05 01 14.9	-0.2
R11A	Troy Canyon, C 4.4nm,0.8s	55.07	323	*e*P	P	05 01 15.8	+0.1
R11A	Troy Canyon, C baz=130,SNR=9.8	55.07	323	P	P	05 01 15.7	+0.1
ISA	Isabella, Lake baz=126	55.23	319	P	P	05 01 16.5	-0.2
SPUT	South Promonto 6.0nm,0.7s	55.30	328	*e*P	P	05 01 16.9	-0.3
BGU	Big Grassy Mou 3.9nm,0.8s	55.34	327	*e*P	P	05 01 17.4	-0.1
CWC	Cottonwood Cre baz=127	55.43	320	P	P	05 01 18.1	-0.2
AHID	Auburn Hatcher 9.3nm,0.8s	55.65	330	*e*P	P	05 01 18.5	-1.2
VES	Vestal, Richgr baz=126	55.73	319	P	P	05 01 20.2	0.0
HVU	Hansel Valley 2.4nm,0.8s	55.80	328	*e*P	P	05 01 20.3	-0.5
TIN	Tinemaha, Big baz=127	55.90	320	P	P	05 01 21.3	-0.2
SNOW	Snow King Moun 5.5nm,0.6s	55.99	331	*e*P	P	05 01 21.8	-0.4
LOHW	Long Hollow 9.6nm,1.1s	56.03	331	*e*P	P	05 01 21.9	-0.5
TPAW	Teton Pass 3.6nm,0.6s	56.11	331	*e*P	P	05 01 21.4	-1.6
ULM	Lac du Bonnet 5.1nm,0.5s,baz=159,slow=8.1,SNR=16	56.16	345	P	P	05 01 21.1	-1.9
MOOW	Moose Ponds 2.1nm,0.8s	56.20	331	*e*P	P	05 01 22.8	-0.8
FXWY	Fox Creek 2.6nm,0.8s	56.25	331	*e*P	P	05 01 23.4	-0.7
IMW	Indian Meadow 6.0nm,0.7s	56.40	331	*e*P	P	05 01 24.7	-0.5
FLWY	Flagg Ranch 20nm,1.1s	56.42	331	*e*P	P	05 01 25.1	-0.1
ELK	Elko 1.6nm,0.7s	56.44	325	*e*P	P	05 01 25.1	-0.4
RLMT	Red Lodge 2.6nm,0.8s	56.54	333	*e*P	P	05 01 25.7	-0.3
RLMT	Red Lodge baz=140	56.54	333	P	P	05 01 25.8	-0.2
H17A	Grant Village 4.1nm,1.0s	56.60	332	*e*P	P	05 01 27.3	+0.8
H17A	Grant Village baz=138	56.60	332	P	P	05 01 26.6	+0.1
YPP	Pitchstone Pla 3.7nm,0.9s	56.62	331	*e*P	P	05 01 27.0	+0.3
NV11	Mina Array Sit 0.4nm,0.8s	56.69	322	*e*P	P	05 01 27.4	+0.3
OMMB	Old Mammoth Mi 8.2nm,0.9s	56.72	320	*e*P	P	05 01 27.7	+0.1
YFT	Old Faithful 13nm,1.2s	56.77	331	*e*P	P	05 01 30.2	+2.5
NV01	Mina Array Sit	56.78	322	*e*P	P	05 01 27.5	-0.4
NVAR	Mina Array Bea 5.9nm,0.8s,baz=128,slow=7.0,SNR=38	56.78	322	P	P	05 01 27.5	-0.3
NVAR	1.6nm,0.7s,baz=128,slow=7.3,SNR=3.3			pP	pP	05 01 55.3	+0.6
NVAR	1.8nm,0.6s,baz=126,slow=4.6,SNR=5.5			PcP	PcP	05 02 22.2	-0.3
MDPB	Devils Postpil 9.3nm,1.2s	56.78	320	*e*P	P	05 01 27.8	-0.2
YMR	Madison River 5.2nm,0.8s	56.99	331	*e*P	P	05 01 29.9	+0.7
YHH	Holmes Hill 5.7nm,0.9s	57.02	332	*e*P	P	05 01 30.1	+0.5
KVN	Kaiserville 3.5nm,0.7s	57.04	322	*e*P	P	05 01 29.2	-0.4
DGMT	Dagmar baz=147	57.16	339	P	P	05 01 30.0	-0.1
YHB	Horse Butte 14nm,0.9s	57.16	331	*e*P	P	05 01 31.4	+0.9
GCMT	Greycliff	57.23	333	*e*P	P	05 01 30.9	+0.1
QLMT	Earthquake Lak	57.33	331	*e*P	P	05 01 32.5	+0.9
YERR	Yerington 4.7nm,0.8s	57.70	322	*e*P	P	05 01 34.5	+0.2
HLID	Hailey 7.0nm,0.9s	57.91	328	*e*P	P	05 01 35.1	-0.6
HLID	Hailey baz=134,SNR=14	57.91	328	P	P	05 01 35.5	-0.2
BOZ	Bozeman (W) 13nm,0.8s	57.99	332	*e*P	P	05 01 34.8	-1.4
BOZ	Bozeman (W) baz=138,SNR=12	57.99	332	P	P	05 01 35.9	-0.3
MCMT	McKenzie Canyo	58.02	330	*e*P	P	05 01 36.9	+0.4
VCNR	Virginia City 7.1nm,1.0s	58.14	322	*e*P	P	05 01 37.8	+0.4
PAHR	Pah Rah Range 5.4nm,1.2s	58.22	322	*e*P	P	05 01 38.1	+0.2
DLMT	Dillon 5.6nm,1.0s	58.28	331	*e*P	P	05 01 38.3	+0.1
SCHQ	Schefferville 8.8nm,0.6s,baz=212,slow=4.9,SNR=21	58.89	7	P	P	05 01 42.2	+0.2
HRY	Holter Researc	58.91	333	*e*P	P	05 01 42.3	-0.2
BEKR	Beckworth 6.6nm,1.0s	58.92	322	*e*P	P	05 01 42.9	+0.1
EGMT	Eagleton 6.4nm,0.6s	58.99	335	*e*P	P	05 01 42.3	-0.6
EGMT	Eagleton baz=141	58.99	335	P	P	05 01 42.4	-0.6
ORV	Oroville 21nm,1.1s	59.45	321	*e*P	P	05 01 46.4	+0.2
WVOR	Wild Horse Val 9.1nm,0.9s	59.48	325	*e*P	P	05 01 45.8	-0.7
MSO	Missoula 18nm,1.0s	59.99	331	*e*P	P	05 01 49.8	-0.1
MSO	Missoula baz=136,SNR=11	59.99	331	P	P	05 01 49.6	-0.3
O03E	Paynes Creek baz=126	60.07	321	P	P	05 01 49.9	-0.6
BMO	Blue Mountains 3.8nm,1.0s	60.32	328	*e*P	P	05 01 51.1	-1.0
O02D	Mt. Diablo Mer baz=125	60.62	321	P	P	05 01 53.0	-1.2
M04C	Macdoel baz=126,SNR=5.1	60.96	323	P	P	05 01 56.0	-0.6
I07A	Izee 12nm,1.0s	61.01	326	*e*P	P	05 01 56.9	0.0
F10A	Beach Ranch, E 9.3nm,1.0s	61.03	329	*e*P	P	05 01 56.7	-0.2
G08A	Pilot Rock 12nm,1.0s	61.49	327	*e*P	P	05 02 00.2	+0.2
L04D	Klamath Falls baz=126	61.50	323	P	P	05 01 59.5	-0.8
J05D	Fort Rock, OR baz=127,SNR=5.2	61.50	324	P	P	05 02 00.0	-0.2
WALA	Waterton Lakes 8.1nm,0.8s	61.59	333	*e*P	P	05 02 00.3	-0.4
PINE	Pine Mountain 8.2nm,0.8s	61.64	325	*e*P	P	05 02 01.8	+0.5
FFC	Flin Flon 6.0nm,0.8s	61.82	344	*e*P	P	05 02 01.4	-0.6
J04D	Umpqua Nationa baz=127	61.98	324	P	P	05 02 03.3	-0.2
I05D	Terrebonne, OR baz=128	62.20	325	P	P	05 02 04.8	0.0
NEW	Newport 11nm,0.9s	62.53	331	*e*P	P	05 02 06.4	-0.5
NEW	Newport baz=133,SNR=10.0	62.53	331	P	P	05 02 06.4	-0.5
K02D	Willamette Mer baz=125	62.59	323	P	P	05 02 07.2	-0.2
G05D	Wamic, OR baz=128	62.75	326	P	P	05 02 08.8	+0.4
E07A	Sunnyside 8.8nm,0.9s	62.78	328	*e*P	P	05 02 09.1	+0.5
I03D	Drain, OR baz=126	62.98	324	P	P	05 02 09.9	0.0
F05D	White Salmon baz=128	63.22	327	P	P	05 02 12.0	+0.5
B08A	Colville Reser 4.1nm,0.6s	63.69	330	*e*P	P	05 02 14.4	-0.1
FCC	Fort Churchill 5.4nm,0.8s	63.75	350	*e*P	P	05 02 13.4	-1.2
D05A	Enumclaw 10nm,0.8s	64.32	328	*e*P	P	05 02 18.8	+0.2
B05A	Bryant baz=129	65.04	328	P	P	05 02 22.8	-0.4
D03D	Eldon baz=127	65.12	327	P	P	05 02 23.4	-0.4
A04D	Lummi Island baz=128	65.64	329	P	P	05 02 26.9	-0.2
LLLB	Lillooet 2.5nm,0.8s	66.41	331	*e*P	P	05 02 32.5	+0.4
YKA	Yellowknife Ar 3.3nm,0.7s,baz=140,slow=6.1,SNR=55	71.95	343	P	P	05 03 04.6	-1.4
YKA	1.1nm,0.7s,baz=140,slow=5.4,SNR=3.8			pP	pP	05 03 33.5	-0.4
YKW3	Yellowknife Ar 4.3nm,0.7s	72.00	343	*e*P	P	05 03 05.3	-1.0
LIC	Lamto 74nm,1.4s	72.36	82	*e*P	P	05 03 17.5	+8.0
TIC	Toumodi	72.41	82	*e*P	P	05 03 19.0	+9.2
DBIC	Dimbokro 11nm,1.1s,baz=254,slow=5.9,SNR=6.8	72.58	82	P	P	05 03 12.0	+1.3
KIC	Kosan Boka 21nm,0.4s	72.66	82	*e*P	P	05 03 19.6	+8.4
ESDC	Sonseca Array 0.6nm,0.6s,baz=260,slow=5.8,SNR=6.9	79.26	49	P	P	05 03 48.1	-0.1
VNA3	Neumayer Olymp	79.31	162	P	P	05 03 49.2	+1.4
ES19	SONSECA Array	79.31	49	*e*P	P	05 03 49.9	+1.3
TOA0	Torodi Ar. Sit	79.69	76	*e*P	P	05 03 51.2	+0.2
TORD	Torodi Ar. Bea 2.1nm,0.6s,baz=284,slow=5.8,SNR=40	79.69	76	P	P	05 03 50.2	-0.8
TORD	1.9nm,0.5s,baz=293,slow=5.7,SNR=3.2			pP	pP	05 04 20.1	+0.6
VNA2	Neumayer--Watz baz=288,slow=5.4	79.90	162	P	P	05 03 52.3	+1.3
SUMG	Summit 11nm,1.0s	79.92	11	*e*P	P	05 03 52.2	+0.6
SUMG	Summit 24nm,0.9s	79.92	11	*i* P	P	05 03 52.0	+0.4
TULEG	Thule 9.2nm,1.1s	80.23	2	*e*P	P	05 03 53.4	+0.7
SNAA	Sanae	81.52	162	P	P	05 04 01.0	+1.2
DAWY	Dawson 5.8nm,0.9s	81.66	337	*e*P	P	05 04 00.5	-0.1
INK	Inuvik 19nm,1.1s	81.68	342	*e*P	P	05 04 00.6	+0.1
EPYK	Eagle Plains baz=119	81.75	339	P	P	05 04 00.7	-0.2
EGAK	Eagle 12nm,0.8s	82.66	337	*e*P	P	05 04 05.2	-0.5
SCRK	Sand Creek 5.0nm,0.8s	83.47	336	*e*P	P	05 04 10.2	+0.1
RIDG	Independ'e Rid 19nm,1.0s	83.73	335	*e*P	P	05 04 11.6	+0.3
HDA	Harding Lake	84.83	336	*e*P	P	05 04 16.5	-0.3
HDA	Harding Lake baz=110	84.83	336	P	P	05 04 16.5	-0.3
IL1	Eielson Array	84.93	336	*e*P	P	05 04 16.4	-0.8
ILAR	Eielson Array 2.3nm,0.8s,baz=133,slow=4.2,SNR=23	84.93	336	P	P	05 04 16.7	-0.6
ILAR	1.0nm,0.8s,baz=126,slow=4.5,SNR=3.7			pP	pP	05 04 46.7	+0.7
ILAR	1.1nm,0.9s,baz=106,slow=7.2,SNR=8.9			PP	PP	05 07 34.5	-1.0
ILB	Eielson Array	84.93	336	*e*P	P	05 04 16.8	-0.6
POKR	Poker Plat Res baz=109	85.27	336	P	P	05 04 18.8	-0.2
MDM	Murphy Dome 6.1nm,0.9s	85.53	336	*e*P	P	05 04 20.3	0.0
QSPA	South Pole Qui	86.40	180	*e*P	P	05 04 25.6	+0.9
MLY	Manley 8.2nm,0.8s	86.57	336	*e*P	P	05 04 25.3	-0.1
DAG	Danmarks Havn 3.9nm,0.6s	86.60	11	⇓*i*P	P	05 04 25.4	+0.1
PPLA	Purkeypile 29nm,1.2s	86.62	334	*e*P	P	05 04 25.8	-0.1
CAST	Castle Rocks 8.3nm,0.7s	86.71	334	*e*P	P	05 04 25.4	-0.7
COLD	Coldfoot 8.6nm,1.1s	86.99	338	*e*P	P	05 04 28.0	+0.7
TOLK	Toolik Lake Re baz=107	87.18	339	P	P	05 04 28.3	0.0
IM3	Indian Mountai	88.03	336	*e*P	P	05 04 29.9	-2.4
FETA	Feichten 4.7nm,1.1s	90.99	43	*e*PcP	P	05 04 48.3	+1.4
SQTA	Sankt Quirin 3.2nm,0.7s	91.33	43	*e*P	P	05 04 48.5	+0.1
GERES	GERESS Array B 0.5nm,0.8s,baz=262,slow=6.8,SNR=3.4	93.09	41	P	P	05 04 57.2	+0.7
CONA	Conrad Observa 0.2nm,0.2s	94.51	42	*e*PcP	P	05 05 03.9	+1.0
SYO	Syowa Base	95.78	161	⇑*e*P	P	05 05 08.8	+0.6
ARCES	ARCESS Array B 1.4nm,0.8s,baz=325,slow=1.5,SNR=6.7	97.73	20	P	P	05 05 16.3	-0.7
ZALV	Zalesovo Beam 3.5nm,0.5s,baz=312,slow=1.9,SNR=23	127.68	14	PKP	PKPdf	05 10 47.3	+0.2
ZALV	2.0nm,0.7s,baz=251,slow=3.5,SNR=3.9			pPKP	pPKPdf	05 11 18.0	+0.6
KURK	Kurchatov	128.77	20	*e*PKPdf	PKiKP	05 10 49.9	-0.1
MKAR	Makanchi Array 1.5nm,0.5s,baz=299,slow=2.5,SNR=26	133.39	20	PKP	PKPdf	05 10 58.5	+0.2
SONM	Songino Array 1.5nm,0.8s,baz=22,slow=0.7,SNR=11	135.92	357	PKP	PKPdf	05 11 03.6	+0.5
KSRS	Korea Array 2.6nm,0.8s,baz=355,slow=1.0,SNR=4.4	139.44	329	PKP	PKPdf	05 11 09.4	-0.3
KSAR	Wonju Array Be	139.47	329	PKP	PKPdf	05 11 09.4	-0.4
ASAR	Alice Springs 0.3nm,0.4s,baz=123,slow=3.4,SNR=3.9	139.56	226	PKhKP	PKPpre	05 11 01.2	
ASAR	2.2nm,0.8s,baz=119,slow=1.9,SNR=10			PKP	PKPdf	05 11 10.1	-0.3
WRA	Warramunga Arr 1.3nm,0.6s,baz=116,slow=2.6,SNR=17	141.42	231	PKhKP	PKPpre	05 11 07.2	
WRA	2.6nm,0.7s,baz=118,slow=2.1,SNR=15			PKP	PKPdf	05 11 13.8	0.0
WRA	1.6nm,0.8s,baz=127,slow=1.5,SNR=4.0			pPKP	pPKPdf	05 11 44.1	0.0
LZH	Lanzhou	147.74	359	*e*PKPbc	PKPdf	05 11 24.8	+0.3
LZH				pPKP	sPKPdf	05 12 07.3	+1.0
LZH				sPKP		05 12 16.9	
XAN	Xi'an	149.32	351	PKPbc	PKPbc	05 11 31.3	-0.1
XAN				pPKP	pPKPbc	05 12 02.0	+0.5
XAN	Xi'an	149.32	351	*e*PKPdf	PKPdf	05 11 27.5	+0.5
XAN				*e*PKPbc	PKPbc	05 11 31.4	-0.1
XAN				*e*PKPab	PKPab	05 11 36.1	-0.1
CD2	Chengdu	152.90	359	PKPbc	PKPdf	05 11 31.0	-1.6
CMAR	Chiang Mai Arr 1.8nm,0.3s,baz=290,slow=1.9,SNR=9.8	164.74	15	PKP	PKPdf	05 11 46.9	+0.2
CMAR	1.2nm,0.4s,baz=328,slow=5.4,SNR=7.6			PKPab	PKPab	05 12 42.3	-0.2

ISCJB ***18*** *05:21:58.6±0.7, 26°.4S±0°.2×71°.7E±0°.1, $h10^{km}$, mb4.0/12, MS4.0/10, Error ellipse: s-maj=22.3km s-min=15.5km az=2.9*

IDC ***18*** *05:21:58.8±1.1, 26°.42S×71°.65E, $h0^{km}$, mb3.9/9, mb1 4.1/9, mb1mx3.8/36, mbtmp3.9/9, MS4.0/10, Ms1 4.0/10, ms1mx3.6/35, Error ellipse: s-maj=34.9km s-min=23.7km az=8.0*

NEIC ***18*** *05:22:00.2±0.6, 26°.43S×71°.67E, $h10^{km}$, mb4.5/3, Error ellipse: s-maj=17.3km s-min=12.2km az=183.0*

ISC 18 05:22:00.4±1.1, **26°.4S**±0°.2×**71°.7E**±0°.2, **$h10^{km}$, n32,** σ**$0^{s}.69$**/19, **mb4.1**/12, **MS4.0**/10, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.70**	**2**	T	T	05 45 21.6	
	baz=184,slow=75,SNR=13						
H08S2	**Diego Garcia H**	**18.70**	**3**	T	T	05 45 19.3	
	baz=184,slow=75,SNR=16						
H08S3	**Diego Garcia H**	**18.72**	**2**	T	T	05 45 20.7	
	baz=184,slow=75,SNR=36						
OPO	**Ambohidratompo**	**23.91**	**284**	LR	LR	05 34 11.0	
	comp=Z,320nm,19.2s,baz=106,slow=31						
H01W2	**Cape Leeuwin H**	**37.26**	**114**	T	T	06 08 51.5	
	baz=272,slow=75,SNR=7.0						
H01W3	**Cape Leeuwin H**	**37.26**	**114**	T	T	06 08 45.2	
	baz=272,slow=75,SNR=8.2						
H01W1	**Cape Leeuwin H**	**37.28**	**114**	T	T	06 08 48.9	
	baz=272,slow=75,SNR=7.8						
BOSA	**Boshof**	**41.03**	**256**	P	**P**	**05 29 44.2**	**0.0**
	4.2nm,1.0s,baz=59,slow=5.9,SNR=3.8						
BOSA				LR	LR	05 44 23.1	
	comp=Z,292nm,18.2s,baz=101,slow=33						
MAW	**Mawson**	**41.54**	**185**	LR	LR	05 43 35.6	
	comp=Z,414nm,18.7s,baz=15,slow=31						
CM01	**Chiang Mai Arr**	**51.86**	**34**	*e*P	**P**	**05 31 08.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**51.89**	**34**	P	**P**	**05 31 10.4**	**+1.1**
	1.4nm,0.3s,baz=216,slow=8.9,SNR=4.4						
CMAR				LR	LR	05 51 29.9	
	comp=Z,95nm,19.7s,baz=192,slow=34						
ASAR	**Alice Springs**	**55.96**	**102**	P	**P**	**05 31 39.9**	**+0.6**
	1.0nm,0.9s,baz=240,slow=6.4,SNR=7.2						
ASAR				LR	LR	05 53 20.2	
	comp=Z,85nm,18.5s,baz=257,slow=34						
WR1	**Warramunga Arr**	**57.49**	**98**	*e*P	**P**	**05 31 49.7**	**-0.5**
	6.9nm,1.2s						
WRA	**Warramunga Arr**	**57.49**	**98**	P	**P**	**05 31 49.7**	**-0.5**
	1.7nm,0.8s,baz=255,slow=6.7,SNR=9.7						
WRA				LR	LR	05 53 11.1	
	comp=Z,125nm,21.5s,baz=350,slow=33						
MK01	**Makanchi Array**	**73.49**	**8**	*e*P	**P**	**05 33 32.2**	**-0.8**
MK31	**Makanchi Array**	**73.51**	**8**	*e*P	**P**	**05 33 31.7**	**-1.4**
	3.5nm,1.3s						
MK32	**Makanchi Array**	**73.51**	**8**	*e*P	**P**	**05 33 32.9**	**-0.2**
MKAR	**Makanchi Array**	**73.51**	**8**	P	**P**	**05 33 32.9**	**-0.3**
	1.7nm,0.7s,baz=195,slow=6.5,SNR=18						
BR101	**Keskin Array S**	**74.76**	**330**	*e*P	**P**	**05 33 41.1**	**+0.4**
BRTR	**Keskin Array B**	**74.76**	**330**	P	**P**	**05 33 41.1**	**+0.4**
	0.3nm,0.7s,baz=162,slow=5.9,SNR=2.8						
KURK	**Kurchatov**	**77.05**	**5**	*e*P	**P**	**05 33 53.8**	**+0.5**
	7.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.53**	**291**	P	**P**	**05 34 02.3**	**-0.1**
	1.0nm,1.2s,baz=105,slow=7.3,SNR=2.7						
TOA1	**Torodi Ar. Sit**	**78.53**	**291**	*e*P	**P**	**05 34 02.3**	**-0.2**
SONA0	**Songino Array**	**80.25**	**23**	*e*P	**P**	**05 34 11.5**	**+0.2**
SONM	**Songino Array**	**80.25**	**23**	P	**P**	**05 34 11.5**	**+0.2**
	0.3nm,0.5s,baz=224,slow=6.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**80.85**	**8**	P	**P**	**05 34 13.2**	**-1.0**
	1.1nm,0.6s,baz=206,slow=5.2,SNR=5.1						
ZAA1	**Zalesovo Array**	**80.85**	**8**	*e*P	**P**	**05 34 13.2**	**-1.0**
KSRS	**Korea Array**	**82.62**	**42**	LR	LR	06 10 34.6	
	comp=Z,76nm,19.5s,baz=243,slow=35						
MJAR	**Matsushiro Arr**	**88.56**	**48**	LR	LR	06 14 35.1	
	comp=Z,39nm,19.0s,baz=295,slow=36						
USRK	**Ussuriysk Ar.**	**89.32**	**39**	LR	LR	06 16 07.8	
	comp=Z,68nm,18.2s,baz=175,slow=36						
NRIK	**Noril'sk**	**96.19**	**6**	LR	LR	06 18 03.5	
	comp=Z,100nm,20.6s,baz=190,slow=35						
YKA	**Yellowknife Ar**	**143.70**	**5**	PKP	PKPbc	05 41 32.9	+0.4
	0.5nm,1.0s,baz=344,slow=3.4,SNR=5.2						

ISCJB ***18*** *05:24:33.7±0.7, 26°.4S±0°.1×71°.5E±0°.2, h10^{km}, mb4.0/11, Error ellipse: s-maj=19.8km s-min=17.9km az=179.8*

IDC ***18*** *05:24:33.8±0.9, 26°.38S×71°.38E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.8/36, mbtmp3.9/8, Error ellipse: s-maj=29.0km s-min=24.4km az=105.0*

NEIC ***18*** *05:24:35.2±0.5, 26°.42S×71°.36E, h10^{km}, mb4.4/3, Error ellipse: s-maj=15.6km s-min=14.1km az=91.0*

ISC 18 05:24:35.5±0.9**, 26°.4S**±0°.2×**71°.4E**±0°.2**, h10**^{km}**, n24, σ0^{s}.44**/17**, mb4.0**/11**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.69**	**3**	T	T	05 47 56.3	
	baz=183,slow=76,SNR=8.8						
H08S2	**Diego Garcia H**	**18.69**	**3**	T	T	05 48 05.1	
	baz=183,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**18.71**	**3**	T	T	05 47 58.1	
	baz=183,slow=76,SNR=13						
H01W2	**Cape Leeuwin H**	**37.51**	**114**	T	T	06 11 21.4	
	baz=272						
H01W3	**Cape Leeuwin H**	**37.51**	**114**	T	T	06 11 23.0	
	baz=272						
H01W1	**Cape Leeuwin H**	**37.52**	**114**	T	T	06 11 24.1	
	baz=272						
BOSA	**Boshof**	**40.78**	**256**	P	**P**	**05 32 17.0**	**-0.2**
	2.6nm,0.9s,baz=113,slow=7.7,SNR=3.3						
CM01	**Chiang Mai Arr**	**51.99**	**34**	*e*P	**P**	**05 33 45.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**52.01**	**34**	P	**P**	**05 33 45.3**	**0.0**
	0.5nm,0.4s,baz=232,slow=6.7,SNR=4.3						
ASAR	**Alice Springs**	**56.22**	**102**	P	**P**	**05 34 15.7**	**-0.5**
	0.9nm,0.8s,baz=260,slow=5.3,SNR=5.6						
WRA	**Warramunga Arr**	**57.75**	**98**	P	**P**	**05 34 27.0**	**0.0**
	1.3nm,0.8s,baz=254,slow=6.9,SNR=6.7						
WR1	**Warramunga Arr**	**57.75**	**98**	*e*P	**P**	**05 34 27.0**	**0.0**
	17nm,1.5s						
QSPA	**South Pole Qui**	**63.72**	**180**	P	**P**	**05 35 07.5**	**+0.4**
	1.0nm,0.9s,baz=270,slow=7.1,SNR=3.5						
MK01	**Makanchi Array**	**73.50**	**8**	*e*P	**P**	**05 36 08.1**	**-0.1**
MK31	**Makanchi Array**	**73.52**	**8**	*e*P	**P**	**05 36 08.6**	**+0.3**
	1.9nm,1.0s						
MK32	**Makanchi Array**	**73.52**	**8**	*e*P	**P**	**05 36 07.9**	**-0.3**
MKAR	**Makanchi Array**	**73.52**	**8**	P	**P**	**05 36 07.9**	**-0.3**
	1.4nm,0.8s,baz=196,slow=5.9,SNR=13						
KURK	**Kurchatov**	**77.05**	**5**	*e*P	**P**	**05 36 29.1**	**+0.7**
	3.9nm,1.1s						
SONA0	**Songino Array**	**80.33**	**23**	*e*P	**P**	**05 36 46.9**	**+0.2**
SONM	**Songino Array**	**80.33**	**23**	P	**P**	**05 36 46.9**	**+0.2**
	0.2nm,0.4s,baz=204,slow=3.2,SNR=2.7						
ZALV	**Zalesovo Beam**	**80.86**	**8**	*e*P	**P**	**05 36 48.2**	**-1.1**
ZALV	**Zalesovo Beam**	**80.86**	**8**	P	**P**	**05 36 49.0**	**-0.2**
	1.5nm,0.7s,baz=183,slow=5.6,SNR=6.4						
ZAA1	**Zalesovo Array**	**80.87**	**8**	*e*P	**P**	**05 36 49.0**	**-0.2**
YKA	**Yellowknife Ar**	**143.70**	**5**	PKP	PKPbc	05 44 07.4	-0.2
	0.2nm,0.7s,baz=345,slow=3.6,SNR=5.4						

IDC 18 05:34:51.2±3.5**, 11°.01S**×**117°.87E, h0**^{km}**, mb3.6**/2**, mb1 3.5**/5**, mb1mx3.4**/25**, mbtmp3.4**/5**, ML3.3**/3**, Error ellipse: s-maj=233.8km s-min=23.8km az=48.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.31**	**134**	Pn	Pn	05 37 19.3	-1.2
	0.3nm,0.3s,baz=314,slow=16,SNR=10						
WRA	**Warramunga Arr**	**18.18**	**121**	P	Pn	05 39 05.2	-0.1
	0.1nm,0.3s,baz=292,slow=13,SNR=8.2						
WRA				S	Sn	05 42 13.7	-15
	0.1nm,0.3s,baz=290,slow=25,SNR=3.9						
ASAR	**Alice Springs**	**19.79**	**132**	P	Pn	05 39 24.6	-0.3
	0.0nm,0.3s,baz=309,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**65.74**	**334**	P	P	05 45 38.1	+0.2
	0.1nm,0.3s,baz=146,slow=6.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**70.52**	**340**	P	P	05 46 07.4	-0.4
	0.4nm,0.4s,baz=131,slow=7.9,SNR=2.5						

ISCJB ***18*** *05:38:45.1±0.4, 62°.63N±0°.01×150°.04W±0°.04, h14^{km}±3^{km}, mb3.3/1, Error ellipse: s-maj=3.2km s-min=2.3km az=176.5*

IDC ***18*** *05:38:45.9±1.4, 62°.76N×150°.24W, h0^{km}, mb3.4/1, mb1 3.4/5, mb1mx3.2/46, mbtmp3.1/5, ML2.7/4, Error ellipse: s-maj=24.0km s-min=10.0km az=111.0*

NEIC ***18*** *05:38:46.0±0.0, 62°.63N×150°.04W, h16^{km}, ML3.1(AEIC), After AEIC.*

ISC 18 05:38:45.7±1.5**, 62°.64N**±0°.02×**150°.06W**±0°.03**, h12**^{km}±11^{km}**, n74, σ1^{s}.34**/115**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUR	**Hurricane**	**0.39**	**30**	*e*Pg	**Pb**	**05 38 54.4**	**-0.1**
HUR				*e*Sg	**Sb**	**05 38 59.9**	**-0.6**
TRF	**Thorofare Moun**	**0.82**	**353**	*e*Pg	**Pb**	**05 39 02.0**	**+0.1**
TRF				*e*Sg	**Sb**	**05 39 13.3**	**+0.3**
RND	**Reindeer**	**0.94**	**35**	*e*Pg	**Pb**	**05 39 03.8**	**-0.2**
RND				*e*Sg	**Sn**	**05 39 17.3**	**-1.0**
PPLA	**Purkeypile**	**1.01**	**286**	*e*Pg	**Pb**	**05 39 05.0**	**-0.2**
PPLA				*e*Sg	**Sn**	**05 39 18.8**	**-1.2**
GHO	**Glory Hole Cre**	**1.02**	**148**	*e*Pg	**Pb**	**05 39 04.1**	**-1.2**
GHO				*e*Sn	**Sb**	**05 39 17.8**	**-1.0**
GHO				*e*Sg	**Sg**	**05 39 18.3**	**-0.3**
PMR	**Palmer**	**1.14**	**157**	*e*Pn	**Pn**	**05 39 06.2**	**-1.2**
PMR				*e*Sg	**Sb**	**05 39 21.2**	**-0.8**
SML	**Sawmill**	**1.16**	**135**	*e*Pn	**Pn**	**05 39 06.6**	**-1.2**
SML				*e*Sn	**Sb**	**05 39 22.4**	**-0.4**
SML				*e*Sg	**Sn**	**05 39 22.9**	**-0.7**
CAST	**Castle Rocks**	**1.21**	**311**	*e*Pn	**Pn**	**05 39 08.3**	**-0.1**
CAST				*e*Sg	**Sn**	**05 39 25.3**	**+0.6**
MCK	**McKinley**	**1.21**	**24**	*e*Pn	**Pn**	**05 39 08.3**	**-0.1**
MCK				*e*Sg	**Sg**	**05 39 25.1**	**+0.5**
SUA	**Susitna One**	**1.23**	**196**	*e*Pn	**Pn**	**05 39 07.6**	**-1.1**
SUA				*e*Sg	**Sb**	**05 39 24.2**	**-0.4**
DHY	**Denali Highway**	**1.31**	**69**	*e*Pn	**Pn**	**05 39 09.1**	**-0.8**
DHY				*e*Sg	**Sb**	**05 39 27.3**	**+0.3**
KNK	**Knik Glacier**	**1.45**	**148**	*e*Pn	**Pn**	**05 39 11.3**	**-0.3**
KNK				*e*Sn	**Sn**	**05 39 29.9**	**-0.6**
SCM	**Sheep Creek Mo**	**1.52**	**121**	*e*Pn	**Pn**	**05 39 11.8**	**-0.8**
SCM				*e*Sn	**Sn**	**05 39 30.6**	**-1.7**
BWN	**Browne**	**1.56**	**10**	*e*Pn	**Pb**	**05 39 14.4**	**-0.1**
BWN				*e*Sn	**Sn**	**05 39 32.9**	**-0.4**
RC01	**Rabbit Creek A**	**1.57**	**174**	*e*Pn	**Pn**	**05 39 12.6**	**-0.6**
RC01				*e*Sn	**Sn**	**05 39 31.9**	**-1.5**
CHUM	**Lake Minchumin**	**1.61**	**322**	*e*Pn	**Pn**	**05 39 14.2**	**+0.3**
SPCR	**Spurr Chakacha**	**1.77**	**216**	P	**Pn**	**05 39 16.7**	**+0.6**
SPWE	**Spurr West**	**1.81**	**222**	P	**Pn**	**05 39 17.0**	**+0.3**
PWL	**Port Wells**	**1.97**	**155**	*e*Pn	**Pn**	**05 39 19.2**	**+0.4**
WRH	**Wood River Hil**	**2.04**	**25**	*e*Pn	**Pn**	**05 39 19.4**	**-0.3**
WRH				*e*Sn	**Sg**	**05 39 49.7**	**-1.4**
PAX	**Paxson**	**2.13**	**79**	*e*Pn	**Pn**	**05 39 20.8**	**-0.3**
PAX				*e*Sn	**Sb**	**05 39 51.7**	**+0.9**
SLKM	**Skilak Lake**	**2.14**	**182**	*e*Pn	**Pn**	**05 39 22.0**	**+0.8**
PS11	**TAPS Pump St11**	**2.21**	**103**	*e*Pn	**Pn**	**05 39 23.1**	**+1.0**
HDA	**Harding Lake**	**2.26**	**37**	*e*Pn	**Pn**	**05 39 22.6**	**-0.2**
HDA				*e*Sn	**Sg**	**05 39 57.6**	**-0.5**
KLU	**Klutina**	**2.26**	**119**	*e*Pn	**Pn**	**05 39 24.4**	**+1.5**
KLU				*e*Sn	**Sb**	**05 39 57.5**	**+3.0**
HARP	**HAARP**	**2.29**	**94**	*e*Pn	**Pn**	**05 39 24.3**	**+1.1**
HARP				*e*Pg	**Pb**	**05 39 25.1**	**-1.7**
JPK	**Jack Peak**	**2.29**	**133**	*e*Pn	**Pn**	**05 39 24.0**	**+0.8**
PS08	**TAPS Pump Stn8**	**2.40**	**36**	*e*Pn	**Pn**	**05 39 24.4**	**-0.2**
MLY	**Manley**	**2.42**	**353**	*e*Pn	**Pn**	**05 39 24.9**	**-0.1**
MLY				*e*Sn	**Sg**	**05 40 02.5**	**-0.7**
COLA	**College**	**2.45**	**23**	*e*Pn	**Pn**	**05 39 25.1**	**-0.2**
MDM	**Murphy Dome**	**2.46**	**18**	*e*Pn	**Pn**	**05 39 25.5**	**-0.1**
MDM				*e*Sn	**Sn**	**05 39 55.1**	**-0.6**
MDM				*e*Lg	Lg	05 40 04.3	
DIV	**Divide**	**2.54**	**125**	*e*Pn	**Pn**	**05 39 27.4**	**+0.7**
DIV				*e*Sn	**Sn**	**05 39 56.1**	**-1.3**
DIV				*e*Sg	**Sb**	**05 40 05.4**	**+3.2**
RDWB	**Redoubt West**	**2.54**	**213**	*e*Pn	**Pn**	**05 39 27.5**	**+0.7**
RSO	**Redoubt South**	**2.54**	**212**	*e*Pn	**Pn**	**05 39 27.8**	**+1.0**
ILAR	**Eielson Array**	**2.56**	**32**	Pn	**Pn**	**05 39 26.1**	**-0.9**
	1.2nm,0.3s,baz=218,slow=14,SNR=64						
ILAR				Pg	**Pb**	**05 39 30.6**	**-0.9**
	2.7nm,0.3s,baz=214,slow=13,SNR=69						
ILAR				Sn	**Sn**	**05 39 56.6**	**-1.4**
	4.7nm,0.3s,baz=218,slow=20,SNR=9.6						
ILAR				Lg	Lg	05 40 05.7	
	12nm,0.3s,baz=220,slow=29,SNR=12						
ILB	**Eielson Array**	**2.56**	**32**	*e*Pn	**Pn**	**05 39 26.5**	**-0.5**
ILB				*e*Sn	**Sg**	**05 40 07.8**	**-0.1**
IL1	**Eielson Array**	**2.56**	**32**	*e*Pn	**Pn**	**05 39 26.7**	**-0.3**
IL1				*e*Sn	**Sn**	**05 39 56.2**	**-1.8**
IL1				*e*Lg	Lg	05 40 08.6	
SEW	**Seward**	**2.56**	**173**	*e*Pn	**Pn**	**05 39 29.6**	**+2.7**
RIDG	**Independ'e Rid**	**2.61**	**63**	*e*Pn	**Pn**	**05 39 28.6**	**+0.9**
RIDG				*e*Sn	**Sg**	**05 40 10.3**	**+0.9**
TT01	**Tatalina**	**2.75**	**278**	*e*Pn	**Pn**	**05 39 29.6**	**0.0**
DOT	**Dot Lake**	**2.90**	**67**	*e*Pn	**Pn**	**05 39 33.6**	**+2.0**
BRLK	**Bradley Lake**	**2.92**	**188**	*e*Pn	**Pn**	**05 39 34.5**	**+2.7**
MENT	**Mentasta**	**2.93**	**81**	*e*Pn	**Pn**	**05 39 33.4**	**+1.4**
EYAK	**Cordova Ski Ar**	**2.94**	**134**	*e*Pn	**Pn**	**05 39 34.5**	**+2.3**
SVW2	**Sparrevohn**	**3.04**	**242**	*e*Pn	**Pn**	**05 39 33.0**	**-0.5**
SCRK	**Sand Creek**	**3.05**	**61**	*e*Pn	**Pn**	**05 39 35.0**	**+1.2**
HOM	**Homer**	**3.09**	**195**	*e*Pn	**Pn**	**05 39 35.6**	**+1.4**
PRP	**Porcupine Dome**	**3.51**	**33**	*e*Pn	**Pn**	**05 39 40.1**	**+0.1**
HMT	**Hamilton**	**3.62**	**127**	*e*Pn	**Pn**	**05 39 43.7**	**+2.3**
HMT				*e*Sn	**Sn**	**05 40 22.7**	**-1.3**
IM3	**Indian Mountai**	**3.72**	**336**	*e*Pn	**Pn**	**05 39 43.4**	**+0.6**
BCA3	**Beaver Creek A**	**3.82**	**80**	*e*Pn	**Pn**	**05 39 45.5**	**+1.3**
BALM	**Baldy**	**4.00**	**110**	*e*Pn	**Pn**	**05 39 49.0**	**+2.3**
FYU	**Fort Yukon**	**4.45**	**26**	*e*Pn	**Pn**	**05 39 52.7**	**-0.2**
EGAK	**Eagle**	**4.50**	**58**	*e*Pn	**Pn**	**05 39 54.9**	**+1.3**
COLD	**Coldfoot**	**4.61**	**359**	*e*Pn	**Pn**	**05 39 51.9**	**-3.1**
COLD				*e*Sn	**Sn**	**05 40 43.2**	**-5.1**
DAWY	**Dawson**	**5.01**	**69**	*e*Pn	**Pn**	**05 40 01.6**	**+1.0**
DAWY				*e*Sn	**Sn**	**05 40 57.8**	**-0.6**
KDAK	**Kodiak Island**	**5.04**	**196**	*e*Pn	**Pn**	**05 40 00.8**	**-0.1**
KDAK				*e*Sn	**Sn**	**05 40 57.6**	**-1.3**
KDAK	**Kodiak Island**	**5.04**	**196**	Pn	**Pn**	**05 40 01.2**	**+0.4**
	0.6nm,0.3s,baz=45,slow=11,SNR=6.5						
KDAK				Sn	**Sn**	**05 40 57.6**	**-1.3**
	0.8nm,0.3s,baz=105,slow=20,SNR=2.1						
BM3	**Burnt Mountain**	**5.32**	**23**	*e*Pn	**Pn**	**05 40 05.2**	**+0.3**
PCA	**Pinnacle**	**5.36**	**114**	*e*Pn	**Pn**	**05 40 07.5**	**+2.1**
OHAK	**Old Harbor**	**5.67**	**198**	*e*Pn	**Pn**	**05 40 09.4**	**-0.2**
TOLK	**Toolik Lake Re**	**6.03**	**2**	*e*Pn	**Pn**	**05 40 16.4**	**+1.8**
TOLK				*e*Sn	**Sn**	**05 41 23.5**	**0.0**
HYT	**Haines Junctio**	**6.24**	**101**	*e*Pn	**Pn**	**05 40 19.4**	**+1.9**
ANM	**Nome**	**7.09**	**293**	*e*Pn	**Pn**	**05 40 29.8**	**+0.7**
ANM				*e*Sn	**Sn**	**05 41 47.6**	**-1.9**
WHY	**Whitehorse**	**7.49**	**99**	*e*Pn	**Pn**	**05 40 35.3**	**+0.6**
WHY				*e*Sn	**Sn**	**05 41 58.2**	**-1.4**
SKAG	**Skagway**	**7.82**	**107**	*e*Pn	**Pn**	**05 40 40.0**	**+0.9**
BESE	**Bessie Mountai**	**8.51**	**112**	*e*Pn	**Pn**	**05 40 48.1**	**-0.5**
JIS	**Juneau Island**	**8.89**	**112**	*e*Pn	**Pn**	**05 40 53.2**	**-0.5**
INK	**Inuvik**	**8.90**	**43**	*e*Pn	**Pn**	**05 40 54.3**	**+0.5**
INK				*e*Sn	**Sn**	**05 42 30.4**	**-3.3**
INK	**Inuvik**	**8.90**	**43**	Pn	**Pn**	**05 40 54.6**	**+0.8**
	0.0nm,0.3s,baz=235,slow=12,SNR=3.7						
INK				Sn	**Sn**	**05 42 37.7**	**+3.9**
	0.1nm,0.3s,baz=41,slow=20,SNR=2.3						
YKA	**Yellowknife Ar**	**16.21**	**75**	Pn	**P**	**05 42 35.7**	**-0.4**
	0.0nm,0.3s,baz=286,slow=10,SNR=3.4						
YKB5	**Yellowknife Ar**	**16.21**	**75**	*e*Pn	**P**	**05 42 35.7**	**-0.4**
NV01	**Mina Array Sit**	**30.96**	**127**	*e*P	**P**	**05 45 03.9**	**+1.3**
NVAR	**Mina Array Bea**	**30.96**	**127**	P	**P**	**05 45 03.9**	**+1.3**
	0.3nm,0.6s,baz=313,slow=7.3,SNR=3.1						

NNC 18 05:40:44.3±7.3**, 38°.31N**×**71°.14E, h0**^{km}**, mb3.8, mpv3.4, 2C-8D, Error ellipse: s-maj=59.5km s-min=39.8km az=172.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.50**	**47**	⇓Pg	Pn	05 41 27.1	+0.6
	17nm,0.4s						
SFK				⇑Lg	Lg	05 42 02.4	
	19nm,0.4s						
MNAS	**Manas**	**4.30**	**14**	⇓Pn	Pn	05 41 46.9	-4.2
	3.6nm,0.5s						
MNAS				⇓Sn	Sn	05 42 44.4	+2.4
	3.1nm,0.4s						
KK31	**Karatay Array**	**4.81**	**355**	⇓Pn	Pn	05 41 59.0	+1.0
	1.4nm,0.5s,baz=174,slow=12						
KK31				⇓Sn	Sn	05 42 59.2	+4.8
	1.7nm,0.3s,baz=179,slow=23,SNR=4.6						
KK31				⇑Lg	Lg	05 43 15.8	
	2.8nm,0.5s,baz=177,slow=30,SNR=4.0						
AAK	**Ala-Archa**	**5.02**	**30**	⇓Pn	Pn	05 42 05.9	+4.9
	8.4nm,0.7s						
AAK				Lg	Lg	05 43 20.4	
	4.6nm,0.6s						
TKM2	**Tokmak 2**	**5.72**	**35**	⇓Pn	Pn	05 42 14.4	+3.8
	1.6nm,0.6s						
TKM2				⇓Lg	Lg	05 43 41.6	
	2.2nm,0.8s						

ISCJB ***18*** *05:43:47.1±0.5, 5°.76N±0°.10×32°.83W±0°.08, h10^{km}, mb4.0/17, MS3.8/11, Error ellipse: s-maj=14.3km s-min=10.7km az=168.2*

IDC ***18*** *05:43:47.8±0.7, 5°.82N×32°.86W, h0^{km}, mb3.9/15, mb1 4.1/15, mb1mx3.9/47, mbtmp3.9/15, MS3.8/12, Ms1 3.8/12, ms1mx3.5/31, Error ellipse: s-maj=25.0km s-min=18.8km az=18.0*

NEIC ***18*** *05:43:48.8±0.3, 5°.75N×32°.87W, h10^{km}, mb4.8/2, Error ellipse: s-maj=9.7km s-min=8.2km az=153.0*

ISC 18 05:43:48.9±0.5**, 5°.76N**±0°.10×**32°.87W**±0°.10**, h10**^{km}**, n43, σ0^{s}.85**/30**, mb4.0**/17**, MS3.7**/11**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**11.90**	**195**	*e*Pn	**Pn**	**05 46 37.6**	**-1.2**
SACV	**Santiago Islan**	**12.91**	**44**	*e*Pn	**Pn**	**05 46 50.5**	**-2.0**
MDP	**Montagnes des**	**19.69**	**269**	LR	LR	05 55 21.8	
	comp=Z,163nm,18.2s,baz=64,slow=35						
H10N3	**ASCENSION HYDR**	**22.77**	**126**	T	T	06 12 31.3	
	baz=305,slow=75,SNR=56						
H10N2	**ASCENSION HYDR**	**22.77**	**126**	T	T	06 12 31.7	
	baz=305,slow=75,SNR=66						
H10N1	**ASCENSION HYDR**	**22.79**	**126**	T	T	06 12 32.9	
	baz=305,slow=75,SNR=66						
H10S3	**ASCENSION HYDR**	**23.31**	**129**	T	T	06 13 08.0	
	baz=308,slow=75,SNR=31						
H10S1	**ASCENSION HYDR**	**23.31**	**129**	T	T	06 13 07.7	
	baz=308,slow=75,SNR=26						
H10S2	**ASCENSION HYDR**	**23.33**	**129**	T	T	06 13 14.8	
	baz=308,slow=75,SNR=32						
BDFB	**Brasilia**	**26.02**	**215**	LR	LR	05 58 34.8	
	comp=Z,226nm,19.7s,baz=84,slow=34						
PTGA	**Pitinga**	**27.81**	**257**	LR	LR	06 00 07.1	
	comp=Z,184nm,19.2s,baz=60,slow=35						
DBIC	**Dimbokro**	**27.86**	**87**	LR	LR	05 58 17.2	
	comp=Z,184nm,21.2s,baz=180,slow=31						
TOA1	**Torodi Ar. Sit**	**34.84**	**75**	*e*P	**P**	**05 50 40.4**	**-0.1**
TOA1				*e*PcP	**PcP**	**05 53 14.6**	**+0.8**
TOA0	**Torodi Ar. Sit**	**34.85**	**75**	*e*P	**P**	**05 50 40.3**	**-0.2**
TORD	**Torodi Ar. Bea**	**34.85**	**75**	P	**P**	**05 50 40.4**	**-0.2**
	1.0nm,0.6s,baz=276,slow=8.7,SNR=8.6						
TORD				PcP	**PcP**	**05 53 14.6**	**+0.8**
	0.7nm,0.9s,baz=274,slow=3.0,SNR=3.1						
TORD				LR	LR	06 04 30.6	
	comp=Z,154nm,18.6s,baz=305,slow=36						
CPUP	**Villa Florida**	**39.75**	**216**	LR	LR	06 07 09.6	
	comp=Z,151nm,19.5s,baz=54,slow=35						
LPAZ	**La Paz**	**41.19**	**237**	*e*P	**P**	**05 51 35.1**	**+0.3**
LPAZ	**La Paz**	**41.19**	**237**	P	**P**	**05 51 35.8**	**+1.0**
	1.7nm,0.8s,baz=52,slow=9.1,SNR=4.0						
LPAZ				LR	LR	06 08 08.3	
	comp=Z,177nm,19.2s,baz=84,slow=35						
ROSC	**El Rosal**	**41.27**	**271**	LR	LR	06 07 24.6	
	comp=Z,105nm,21.9s,baz=90,slow=34						
KEST	**Kesra**	**48.89**	**47**	LR	LR	06 12 52.8	
	comp=Z,156nm,19.7s,baz=286,slow=36						
ESPN	**Las Esperanzas**	**51.13**	**281**	*e*P	**P**	**05 52 50.6**	**-1.8**
	31nm,1.2s						
TSUM	**Tsumeb**	**55.52**	**118**	P	**P**	**05 53 25.6**	**+0.8**
	3.6nm,0.9s,baz=296,slow=6.2,SNR=6.0						
SCHQ	**Schefferville**	**56.02**	**337**	P	**P**	**05 53 28.1**	**+0.4**
	5.6nm,0.9s,baz=162,slow=6.4,SNR=3.2						
GERES	**GERESS Array B**	**58.22**	**34**	P	**P**	**05 53 42.6**	**-0.9**
	0.3nm,0.6s,baz=224,slow=6.9,SNR=3.9						
NB200	**NORSAR Array S**	**64.22**	**22**	*e*P	**P**	**05 54 24.4**	**+0.5**
NOA	**NORSAR Array B**	**64.22**	**22**	P	**P**	**05 54 24.4**	**+0.5**
	0.9nm,0.9s,baz=233,slow=6.7,SNR=3.1						
BOSA	**Boshof**	**65.52**	**125**	P	**P**	**05 54 33.5**	**+0.5**
	4.4nm,1.1s,baz=296,slow=9.0,SNR=2.9						
WMOK	**Wichita Mounta**	**66.98**	**305**	*e*P	**P**	**05 54 41.6**	**-0.6**
	5.1nm,1.3s						
AKASG	**Malin Array Be**	**68.09**	**37**	P	**P**	**05 54 50.0**	**+1.2**
	0.7nm,0.7s,baz=264,slow=7.4,SNR=3.8						
BR101	**Keskin Array S**	**68.33**	**50**	*e*P	**P**	**05 54 50.9**	**+0.1**
BRTR	**Keskin Array B**	**68.33**	**50**	P	**P**	**05 54 50.9**	**+0.1**
	0.6nm,0.9s,baz=231,slow=6.9,SNR=3.2						
BRTR				LR	LR	06 26 40.1	
	comp=Z,35nm,19.5s,baz=161,slow=38						
LTX	**Lajitas**	**70.46**	**299**	*e*P	**P**	**05 55 05.0**	**+0.9**
TXAR	**Lajitas Array**	**70.46**	**299**	P	**P**	**05 55 05.0**	**+0.9**
	0.1nm,0.5s,baz=116,slow=6.1,SNR=3.6						
PDAR	**Pinedale Array**	**76.33**	**312**	P	**P**	**05 55 39.0**	**+0.3**
	0.8nm,1.0s,baz=77,slow=5.6,SNR=4.0						
RES	**Resolute Bay**	**77.28**	**346**	P	**P**	**05 55 43.8**	**+0.8**
	2.3nm,1.1s,baz=52,slow=8.5,SNR=4.6						
YKA	**Yellowknife Ar**	**81.09**	**332**	P	**P**	**05 56 04.0**	**-0.1**
	0.8nm,0.9s,baz=92,slow=5.3,SNR=7.5						
NVAR	**Mina Array Bea**	**82.88**	**308**	P	**P**	**05 56 13.5**	**-0.9**
	0.8nm,0.9s,baz=96,slow=5.6,SNR=4.1						
AKTO	**Aktyubinsk**	**86.17**	**40**	LR	LR	06 36 35.4	
	comp=Z,23nm,18.3s,baz=305,slow=37						
ILAR	**Eielson Array**	**94.78**	**337**	P	**P**	**05 57 10.9**	**+0.3**
	0.6nm,1.0s,baz=47,slow=3.9,SNR=4.1						
AAK	**Ala-Archa**	**98.73**	**45**	LR	LR	06 44 36.3	
	comp=Z,113nm,21.9s,baz=56,slow=37						
CMAR	**Chiang Mai Arr**	**126.75**	**62**	PKP	**PKiKP**	**06 02 55.1**	**+0.8**
	0.4nm,0.3s,baz=300,slow=2.2,SNR=5.0						
WRA	**Warramunga Arr**	**161.21**	**140**	PKPab	**PKPab**	**06 04 33.6**	**-0.5**
	0.6nm,0.9s,baz=214,slow=3.0,SNR=3.6						
WR1	**Warramunga Arr**	**161.21**	**140**	*e*PKPab	**PKPab**	**06 04 33.6**	**-0.5**

SJA 18 05:44:57.0±0.5**, 33°.23S**×**70°.28W, h100**^{km}±7^{km}**, ML2.7, MW3.5, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.67**	**292**	*i* P	Pn	05 45 15.2	+0.8
ROC1				*i* S	Sn	05 45 28.8	+1.2
AUSP	**Uspallata**	**1.25**	**37**	*i* P	Pn	05 45 22.1	+1.5
AUSP				*i* S	Sn	05 45 40.5	+2.1
RTLS	**Leoncito**	**1.65**	**30**	*i* P	Pn	05 45 27.2	+1.8
RTLS				IAML		05 45 28.0	
	comp=Z,66nm,0.3s						
RTLS				*i* S	Sn	05 45 49.1	+2.1
RTCV	**Cerro Valdivia**	**2.00**	**48**	*i* P	Pn	05 45 30.8	+1.1
AMOG	**MOGNA**	**2.74**	**34**	*i* P	Pn	05 45 40.4	+1.0
AROD	**Rodeo**	**3.13**	**13**	*i* P	Pn	05 45 46.9	+2.1

IDC 18 05:51:43.5±3.2**, 6°.72S**×**154°.99E, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/38**, mbtmp3.8**/4**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.9**/26**, Error ellipse: s-maj=93.2km s-min=35.3km az=112.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**22.54**	**334**	LR	LR	06 04 47.1	
	comp=Z,117nm,18.7s,baz=111,slow=35						
WRA	**Warramunga Arr**	**23.96**	**235**	P	P	05 56 59.7	-0.1
	1.5nm,0.4s,baz=56,slow=9.6,SNR=34						
ASAR	**Alice Springs**	**26.35**	**228**	P	P	05 57 21.2	-0.3
	0.8nm,0.8s,baz=63,slow=9.2,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**27.59**	**25**	T	T	06 26 17.1	
	baz=208,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.59**	**25**	T	T	06 26 15.1	
	baz=208,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.61**	**25**	T	T	06 26 16.5	
	baz=208						
CMAR	**Chiang Mai Arr**	**60.66**	**295**	P	P	06 01 58.3	+1.3
	0.9nm,0.6s,baz=119,slow=5.6,SNR=3.5						
MKAR	**Makanchi Array**	**83.19**	**319**	P	P	06 04 11.7	-0.1
	0.4nm,0.6s,baz=104,slow=5.1,SNR=5.4						
MKAR				LR	LR	06 41 55.7	
	comp=Z,20nm,21.5s,baz=327,slow=36						
TORD	**Torodi Ar. Bea**	**152.94**	**286**	PKPbc	PKPbc	06 11 42.9	-1.0
	0.2nm,0.4s,baz=59,slow=2.6,SNR=3.3						

ISCJB ***18*** *05:54:43.5±0.9, 11°.00S±0°.08×165°.9E±0°.1, h10^{km}, mb4.2/9, Error ellipse: s-maj=16.3km s-min=9.6km az=153.9*

NEIC ***18*** *05:54:45.3±1.0, 10°.85S×165°.84E, h10^{km}, mb4.5/4, Error ellipse: s-maj=20.4km s-min=15.0km az=50.0*

IDC ***18*** *05:54:53.2±3.7, 11°.07S×165°.83E, h73^{km}±31^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.6/39, mbtmp4.2/8, Error ellipse: s-maj=30.6km s-min=18.5km az=52.0*

ISC 18 05:54:45.6±1.1**, 10°.9S**±0°.1×**165°.9E**±0°.1**, h10**^{km}**, n21, σ2^{s}.60**/19**, mb4.4**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.03**	**283**	*e*Pn	**Pn**	**05 56 13.2**	**-1.6**
HNR				*e*Sn	**Sn**	**05 57 17.1**	**-6.9**
HNR	**Honiara**	**6.03**	**283**	P	**Pn**	**05 56 18.4**	**+3.5**
	18nm,0.3s,baz=94,slow=3.7,SNR=2.4						
HNR				S	**Sn**	**05 57 28.1**	**+4.1**
	4.7nm,0.3s,baz=133,slow=19,SNR=3.0						
DZM	**Mont Dzumac**	**11.16**	**177**	P	**Pn**	**05 57 27.8**	**+2.4**
	0.9nm,0.3s,baz=318,slow=12,SNR=25						
DZM				S	**Sn**	**05 59 29.4**	**-0.9**

	0.2nm,0.3s,baz=108,slow=20,SNR=2.3						
CTA	Charters Tower	21.02	242	P	P	05 59 30.8	+1.2
	5.7nm,0.8s,baz=60,slow=11,SNR=5.9						
H11S2	WAKE ISLAND Hy	29.18	2	T	T	06 31 04.8	
	baz=181,slow=76,SNR=240						
H11S3	WAKE ISLAND Hy	29.18	2	T	T	06 31 06.6	
	baz=181,slow=76,SNR=89						
H11S1	WAKE ISLAND Hy	29.20	2	T	T	06 31 06.6	
	baz=181,slow=76,SNR=204						
BKZ	Black Stump Fm	29.73	163	eP	P	06 00 50.2	-2.0
	5.4nm,0.9s						
H11N1	WAKE ISLAND Hy	30.40	2	T	T	06 32 36.7	
	baz=182,slow=76,SNR=149						
H11N3	WAKE ISLAND Hy	30.41	2	T	T	06 32 35.8	
	baz=182,slow=76,SNR=142						
H11N2	WAKE ISLAND Hy	30.42	2	T	T	06 32 36.8	
	baz=182,slow=76,SNR=117						
WB2	Warramunga Arr	31.67	250	eP	P	06 01 07.6	-2.0
WRAB	Tennant Creek	31.67	250	eP	P	06 01 09.0	-0.5
	6.9nm,1.0s						
WR1	Warramunga Arr	31.68	250	eP	P	06 01 08.6	-1.1
	6.5nm,0.8s						
WRA	Warramunga Arr	31.68	250	P	P	06 01 08.6	-1.1
	5.8nm,0.8s,baz=80,slow=9.0,SNR=33						
ASAR	Alice Springs	33.01	243	P	P	06 01 20.1	-1.1
	3.6nm,0.9s,baz=73,slow=9.7,SNR=21						
RPZ	Rata Peaks	33.03	173	P	P	06 01 19.1	-2.0
	5.2nm,0.8s,baz=359,slow=17,SNR=4.1						
FITZ	Fitzroy Crossi	39.57	255	eP	P	06 02 16.9	-0.5
	7.1nm,0.8s						
FITZ				eS	S	06 08 22.4	+2.0
ILAR	Eielson Array	83.30	18	P	P	06 07 12.9	+0.7
	0.4nm,0.9s,baz=236,slow=5.2,SNR=4.1						
MK32	Makanchi Array	93.49	317	eP	P	06 08 01.6	-0.1
MKAR	Makanchi Array	93.49	317	P	P	06 08 01.6	-0.1
	0.2nm,0.7s,baz=106,slow=5.1,SNR=2.8						

MEX 18 06:13:34.6±0.4, 14°.78N×93°.54W, h16^{km}±999^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.97	19	i P	Pb	06 13 49.9	-3.2
PCIG				i S	Sb	06 14 01.3	-4.3
CCIG	Comitan	2.02	42	eP	Pn	06 14 04.9	-3.2
CCIG				eS	Sn	06 14 28.9	-4.2

ISCJB 18 06:14:13.4±0.5, 11°.44N±0°.06×85°.88W±0°.08, h139^{km}±4^{km}, mb3.4/6, Error ellipse: s-maj=15.4km s-min=5.7km az=145.4

UCR 18 06:14:14.7±0.8, 11°.45N×85°.89W, h126^{km}±4^{km}, MD4.0, ML2.7

IDC 18 06:14:18.5±11.0, 11°.81N×85°.51W, h182^{km}±117^{km}, mb3.1/6, mb1 3.4/6, mb1mx3.1/23, mbtmp3.6/6, Error ellipse: s-maj=49.5km s-min=23.0km az=45.0

ISC 18 06:14:13.3±0.8, 11°.46N±0°.06×85°.88W±0°.07, h138^{km}±6^{km}, n40, σ0^{s}92/47, mb3.3/6, 2C-3D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONN	Concepcion	0.27	67	eP	Pn	06 14 32.6	+0.2
MASN	Masaya	0.59	333	eP	Pn	06 14 34.2	+0.2
MGAN	Managua	0.78	332	eP	Pn	06 14 35.7	+0.5
BUAI	Buenos Aires	0.79	137	i P	Pn	06 14 35.6	+0.3
GBS3	Finca Las Img	0.79	148	i P	Pn	06 14 35.5	+0.1
GBS3				i S	Sn	06 14 51.6	-0.4
BUEV	Buena Vista	0.80	145	i P	Pn	06 14 34.9	-0.6
BUEV				i S	Sn	06 14 52.4	+0.1
LAPC	Finca la Perla	0.81	147	i P	Pn	06 14 35.5	0.0
LAPC				i S	Sn	06 14 51.6	-0.8
XAVN	Gruta Xavier	0.82	327	eP	Pn	06 14 35.9	+0.4
GPS1	Guardaparques	0.85	143	i P	Pn	06 14 36.5	+0.5
GPS1				i S	Sn	06 14 52.8	-0.2
ACON	Acoyapa	0.86	54	⇓iP	Pn	06 14 36.3	+0.5
ACON				eS	Sn	06 14 53.3	+0.4
ACON				IAML		06 14 54.0	
	comp=E,118nm,0.6s						
GPS3	Bodega del ICE	0.86	144	i P	Pn	06 14 36.6	+0.6
GPS2	Hotel Rincn d	0.87	144	i P	Pn	06 14 36.6	+0.6
NY14	Universidad de	0.87	157	i P	Pn	06 14 36.5	+0.6
NY14				i S	Sn	06 14 53.1	0.0
LIM1	Limonal	0.97	141	i P	Pn	06 14 37.4	+0.5
MESS	Mesas	0.98	137	i P	Pn	06 14 37.5	+0.6
GUAB	Guayabo de Bag	0.98	139	i P	Pn	06 14 37.5	+0.6
COPN	Copaltepe	1.00	316	eP	Pn	06 14 37.2	+0.2
BOAB	BOACO BROADBAN	1.01	12	eP	Pn	06 14 37.6	+0.5
COLC	Colonia	1.03	140	i P	Pn	06 14 38.7	+1.3
CUI	Cuipilapa	1.06	138	⇑iP	Pn	06 14 38.3	+0.6
PTEN	Parque Tenorio	1.14	130	i P	Pn	06 14 39.3	+0.8
MOMN	Momotombo	1.15	326	eP	Pn	06 14 38.7	+0.2
ACAL	Aguas Claras	1.16	135	i P	Pn	06 14 39.5	+0.9
CNGN	Cerro Negro	1.31	322	⇑eP	Pn	06 14 40.7	+0.6
MATN	Matagalpa	1.47	358	⇓iP	Pn	06 14 42.4	+0.6
JTS	JuntasAbangare	1.47	142	eP	Pn	06 14 42.5	+0.7
TELN	Telica	1.47	321	eP	Pn	06 14 42.6	+0.8
ARE1	Arenal 1	1.51	131	⇓eP	Pn	06 14 43.1	+0.9
CRIN	San Cristobal	1.69	317	eP	Pn	06 14 44.7	+0.5
CRIN				eS	Sn	06 15 08.8	+1.0
ESTN	Estel	1.70	344	eP	Pn	06 14 45.6	+1.1
ESPN	Las Esperanzas	1.71	64	eP	Pn	06 14 45.4	+1.0
LCR2	La Lucha 2	2.51	133	eP	Pn	06 14 55.6	+1.3
TXAR	Lajitas Array	24.32	320	P	P	06 19 19.4	+1.0
	comp=E,0.7nm,0.6s,baz=144,slow=11,SNR=9.0						
NVAR	Mina Array Bea	39.46	318	P	P	06 21 32.6	+2.2
	comp=E,0.4nm,0.7s,baz=129,slow=7.2,SNR=2.7						
SCHQ	Schefferville	45.80	15	P	P	06 22 19.5	-1.6
	comp=E,3.0nm,0.7s,baz=240,slow=8.1,SNR=5.5						
BDFB	Brasilia	46.15	125	P	P	06 22 24.4	-0.1
	comp=E,0.8nm,0.5s,baz=307,slow=5.1,SNR=3.5						
YKA	Yellowknife Ar	54.98	344	P	P	06 23 27.1	-2.8
	comp=E,0.1nm,0.4s,baz=139,slow=7.1,SNR=6.5						
ILAR	Eielson Array	67.55	336	P	P	06 24 53.5	-1.0
	comp=E,0.4nm,0.9s,baz=93,slow=3.9,SNR=2.6						
ASAR	Alice Springs	140.31	247	PKP	PKPdf	06 33 27.9	+1.2
	comp=E,0.4nm,0.6s,baz=113,slow=2.0,SNR=5.1						
WRA	Warramunga Arr	140.46	253	PKP	PKPdf	06 33 28.4	+1.3
	comp=E,0.4nm,0.5s,baz=89,slow=2.3,SNR=12						

ISCJB 18 06:23:12.6±0.9, 0°.44N±0°.10×123°.62E±0°.09, h250^{km}, mb3.7/4, Error ellipse: s-maj=14.6km s-min=10.8km az=35.1

DJA 18 06:23:15.8±0.7, 0°N±6°×12°4E±°, h212^{km}±8^{km}, M3.5/6, MLv3.5/6

IDC 18 06:23:19.1±3.5, 0°.28N×123°.29E, h301^{km}±33^{km}, mb3.3/4, mb1 3.3/5, mb1mx3.0/35, mbtmp3.8/5, Error ellipse: s-maj=101.7km s-min=11.0km az=63.0

ISC 18 06:23:13.1±1.0, 0°.3N±0°.1×123°.74E±0°.09, h250^{km}, n10, σ2^{s}42/16, mb3.8/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.66	216	P	Pn	06 23 52.7	0.0
LUWI				S	S	06 24 21.6	-2.3
MRSI	Marisa	1.81	275	P	Pn	06 23 53.2	-0.7
APSI	Ampana	2.42	240	P	Pn	06 23 59.9	+0.3
APSI				S	S	06 24 34.5	-1.8
SANI	Sanana	3.25	136	P	Pn	06 24 09.5	+1.1
SANI				S	S	06 24 46.3	-5.8
MPSI	Mapaga	3.85	270	P	Pn	06 24 16.0	+0.9
FITZ	Fitzroy Crossi	18.39	174	P	Pn	06 27 12.4	-1.0
	0.3nm,0.3s,baz=3.7,slow=9.8,SNR=7.4						
WRA	Warramunga Arr	22.65	153	P	P	06 27 56.3	+3.1
	1.6nm,0.3s,baz=331,slow=11,SNR=75						
WRA				S	S	06 31 43.1	+0.7
	0.5nm,0.7s,baz=334,slow=16,SNR=3.1						
ASAR	Alice Springs	25.80	158	P	P	06 28 25.6	+3.9
	0.4nm,0.5s,baz=335,slow=8.9,SNR=6.6						
ASAR				PcP	PcP	06 31 46.2	+1.8
	0.3nm,0.8s,baz=336,slow=2.0,SNR=3.2						
MKAR	Makanchi Array	58.74	328	P	P	06 32 44.1	-0.9
	0.9nm,0.4s,baz=120,slow=7.8,SNR=24						
MKAR				PcP	PcP	06 33 31.4	-0.6
	0.1nm,0.5s,baz=131,slow=2.4,SNR=4.0						
KURBB	Kurchatov Arra	63.07	330	P	P	06 33 13.2	-0.8
	1.4nm,0.8s,baz=135,slow=6.2,SNR=9.7						

ISCJB 18 06:44:19.9±0.3, 32°.23N±0°.04×105°.35E±0°.06, h14^{km}, mb3.9/17, Error ellipse: s-maj=7.6km s-min=4.6km az=147.8

IDC 18 06:44:19.6±0.8, 32°.32N×105°.49E, h0^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.7/55, mbtmp3.8/14, ML3.3/1, Error ellipse: s-maj=30.4km s-min=15.7km az=58.0

BJI 18 06:44:20.0, 32°.34N×105°.04E, h24^{km}, mb3.6/4, ML3.7/21, Ms3.6/4, Ms7 3.4/3

NEIC 18 06:44:23.9±2.7, 32°.26N×105°.34E, h28^{km}±20^{km}, mb4.4/6, Error ellipse: s-maj=10.1km s-min=7.5km az=58.0

ISC 18 06:44:21.1±0.5, 32°.20N±0°.03×105°.23E±0°.04, h14^{km}, n45, σ1^{s}68/58, mb3.9/17, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	1.80	225	Pg	Pb	06 44 52.3	-1.5
CD2				Sg	Sb	06 45 17.3	+1.1
CD2				smax	smax		
	comp=N,2µm,0.6s						
CD2				smax	smax		
	comp=E,2µm,0.6s						
CD2	Chengdu	1.80	225	Pg	Pb	06 44 52.3	-1.5
CD2				Sg	Sb	06 45 17.3	+1.1
XAN	Xi'an	3.60	58	Pn	Pn	06 45 17.3	+0.7
XAN				Pg	Pb	06 45 26.0	+1.4
XAN				Sn	Sn	06 46 01.3	+2.4
XAN				Sg	Sg	06 46 11.8	-5.0
XAN				smax	smax		
	comp=N,260nm,0.5s						
XAN				smax	smax		
	comp=E,400nm,0.5s						
XAN				LR	LR		
	comp=Z,300nm,5.7s						
XAN	Xi'an	3.60	58	ePn	Pn	06 45 17.2	+0.7
XAN				eSn	Sn	06 45 55.6	-3.3
LZH	Lanzhou	4.05	344	⇑Pn	Pn	06 45 23.1	+0.3
LZH				Pg	Pb	06 45 31.4	-0.9
LZH				Sn	Sn	06 46 08.8	-1.4
LZH				Sg	Sb	06 46 21.9	+0.7
LZH				smax	smax		
	comp=N,580nm,0.9s						
LZH				smax	smax		
	comp=E,1µm,1.0s						
ENH	Enshi	4.12	117	ePn	Pn	06 45 25.8	+2.1
ENH				eSn	Sn	06 46 10.2	-1.5
GYA	Guiyang	5.85	167	Pn	Pn	06 45 49.4	+1.8
GYA				Sn	Sn	06 46 55.0	+0.5
GYA				Sg	Sg	06 47 27.8	-1.2
GYA				smax	smax		
	comp=N,60nm,0.6s						
GYA				smax	smax		
	comp=E,90nm,0.6s						
WHN	Wuhan	7.97	100	P	Pb	06 46 37.0	-2.0
WHN				S	Sb	06 48 14.4	+0.7
GTA	Gaotai	8.44	330	eP	Pn	06 46 20.6	-2.5
GTA				pP	Pb	06 46 25.4	-22
GTA				sP	Pg	06 46 27.9	-35
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				smax	smax		
	comp=N,9.0nm,1.0s						
GTA				smax	smax		
	comp=E,8.0nm,0.9s						
CMAR	Chiang Mai Arr	14.81	204	Pn	P	06 47 54.6	-1.5
	baz=20,slow=11,SNR=4.3						
SONA0	Songino Array	15.65	3	ePn	Pn	06 48 00.4	-0.8
SONM	Songino Array	15.65	3	Pn	Pn	06 48 00.4	-0.8
	0.1nm,0.3s,baz=182,slow=8.7,SNR=3.1						
WMQ	Urumqi	18.01	315	eP	Pn	06 48 27.8	-3.2
KSAR	Wonju Array Be	19.30	68	P	Pn	06 48 46.5	-0.2
KSRS	Korea Array	19.34	68	P	Pn	06 48 46.5	-0.6
	0.3nm,0.3s,baz=250,slow=13,SNR=2.9						
MK01	Makanchi Array	22.80	316	eP	P	06 49 23.0	-0.4
MK31	Makanchi Array	22.82	316	eP	P	06 49 25.5	+1.9
	1.9nm,0.8s						
MK32	Makanchi Array	22.82	316	eP	P	06 49 23.0	-0.6
MKAR	Makanchi Array	22.82	316	eP	P	06 49 25.0	+1.4
	16nm,1.0s						
MKAR	Makanchi Array	22.82	316	P	P	06 49 23.0	-0.6
	1.6nm,0.7s,baz=114,slow=12,SNR=12						
NRN	Naryn	25.06	300	eP	P	06 49 48.8	+3.4
	4.0nm,0.8s						
KLR	Kul'dur	26.14	42	P	P	06 49 54.2	-0.5
	0.8nm,0.6s,baz=252,slow=13,SNR=2.9						
ZALV	Zalesovo Beam	26.18	332	P	P	06 49 56.0	+0.9
	0.6nm,0.3s,baz=144,slow=10.0,SNR=4.1						
ZAA1	Zalesovo Array	26.19	332	eP	P	06 49 56.0	+0.9
KURBB	Kurchatov Arra	26.98	321	P	P	06 50 04.0	+1.8
	1.5nm,0.8s,baz=129,slow=8.5,SNR=11						
KURK	Kurchatov	26.98	321	eP	P	06 50 04.0	+1.7
ARA0	ARCESS Array S	56.66	336	eP	P	06 54 05.2	+1.7
ARCES	ARCESS Array B	56.66	336	P	P	06 54 05.2	+1.7
	1.1nm,0.8s,baz=79,slow=9.3,SNR=4.8						
BR101	Keskin Array S	57.05	299	eP	P	06 54 09.1	+2.2
BRTR	Keskin Array B	57.05	299	P	P	06 54 09.1	+2.2
	0.7nm,0.7s,baz=76,slow=6.1,SNR=3.5						
FIA1	FINESS Array S	57.20	326	eP	P	06 54 09.8	+2.4
FIA0	FINESS Array S	57.20	326	eP	P	06 54 06.3	-1.1
FINES	FINESS Array B	57.20	326	P	P	06 54 06.3	-1.1
	1.2nm,0.7s,baz=95,slow=7.0,SNR=7.0						
AKASG	Malin Array Be	57.35	313	P	P	06 54 10.4	+1.7
	0.4nm,0.4s,baz=67,slow=7.4,SNR=3.2						
COEN	Coen	58.53	136	eP	P	06 54 18.1	+0.8
	3.3nm,0.9s						
WRAB	Tennant Creek	58.86	148	eP	P	06 54 20.5	+1.0
	5.3nm,1.3s						
WR1	Warramunga Arr	58.86	148	eP	P	06 54 20.0	+0.5
	2.7nm,0.6s						
WRA	Warramunga Arr	58.86	148	P	P	06 54 20.0	+0.5
	0.9nm,0.5s,baz=339,slow=7.7,SNR=28						
WB2	Warramunga Arr	58.87	148	eP	P	06 54 17.4	-2.2
ASAR	Alice Springs	61.94	150	P	P	06 54 41.1	+0.6
	0.6nm,0.5s,baz=325,slow=6.4,SNR=10.0						
AS01	Alice Springs	61.96	150	eP	P	06 54 41.7	+1.1
NB200	NORSAR Array S	64.26	327	eP	P	06 54 56.6	+1.0
NOA	NORSAR Array B	64.26	327	P	P	06 54 56.6	+1.0
	0.4nm,0.4s,baz=74,slow=6.4,SNR=2.9						
YKA	Yellowknife Ar	80.37	18	P	P	06 56 30.8	-0.9
	0.7nm,0.5s,baz=327,slow=5.1,SNR=24						
YKB5	Yellowknife Ar	80.37	18	eP	P	06 56 30.6	-1.0

IDC 18 06:45:53.7±3.6, 26°.54S×71°.17E, h0^{km}, mb3.8/7, mb1 4.0/7, mb1mx3.7/50, mbtmp3.8/7, MS3.7/7, Ms1 3.7/7, ms1mx3.3/32, Error ellipse: s-maj=110.9km s-min=32.0km az=49.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.83	4	T	T	07 09 25.8	
	baz=184,slow=76,SNR=5.1						
H08S2	Diego Garcia H	18.83	4	T	T	07 09 22.1	
	baz=184,slow=76,SNR=6.8						
H08S3	Diego Garcia H	18.85	4	T	T	07 09 30.5	
	baz=184,slow=76,SNR=9.6						
H01W2	Cape Leeuwin H	37.63	113	T	T	07 32 53.8	
	baz=272						
H01W3	Cape Leeuwin H	37.64	113	T	T	07 32 39.4	
	baz=272						
H01W1	Cape Leeuwin H	37.65	113	T	T	07 32 49.2	
	baz=272						
BOSA	Boshof	40.56	256	LR	LR	07 08 35.7	
	comp=Z,132nm,18.3s,baz=91,slow=34						
MAW	Mawson	41.40	185	LR	LR	07 07 11.5	
	comp=Z,210nm,20.1s,baz=50,slow=31						
CMAR	Chiang Mai Arr	52.23	34	P	P	06 55 06.9	+0.1
	1.0nm,0.3s,baz=204,slow=8.7,SNR=3.3						
CMAR				LR	LR	07 14 29.5	
	comp=Z,44nm,18.8s,baz=202,slow=33						
ASAR	Alice Springs	56.38	102	P	P	06 55 37.4	+0.2
	0.6nm,0.9s,baz=245,slow=6.1,SNR=4.9						
WRA	Warramunga Arr	57.92	98	P	P	06 55 47.7	-0.4
	1.7nm,0.9s,baz=253,slow=7.3,SNR=7.0						
GEYT	Alibeck	65.28	349	LR	LR	07 22 07.7	
	comp=Z,31nm,18.6s,baz=190,slow=33						
MKAR	Makanchi Array	73.67	8	P	P	06 57 28.8	-0.2
	0.8nm,0.8s,baz=181,slow=7.0,SNR=4.9						
KURBB	Kurchatov Arra	77.09	5	P	P	06 57 49.0	+0.5
	0.3nm,0.5s,baz=203,slow=7.2,SNR=2.3						
SONM	Songino Array	80.52	23	P	P	06 58 08.2	+0.5
	1.0nm,1.2s,baz=228,slow=5.6,SNR=1.0						
DBIC	Dimbokro	80.58	282	LR	LR	07 32 13.7	
	comp=Z,44nm,18.2s,baz=111,slow=34						
ZALV	Zalesovo Beam	81.02	8	P	P	06 58 09.3	-0.6
	0.7nm,0.8s,baz=183,slow=5.1,SNR=3.5						
KSRS	Korea Array	83.00	42	LR	LR	07 32 25.5	
	comp=Z,28nm,21.5s,baz=267,slow=34						
OBN	Obninsk	86.56	341	LR	LR	07 35 12.0	
	comp=Z,38nm,20.7s,baz=358,slow=34						
YKA	Yellowknife Ar	143.84	5	PKP	PKPdf	07 05 30.4	+0.2
	0.2nm,0.9s,baz=356,slow=3.0,SNR=3.5						

KRNET 18 06:51:48.9±0.1, 42°.57N×79°.70E, h8^{km}, mb3.4

SOME 18 06:51:49.4, 42°.57N×79°.70E, h20^{km}

NNC 18 06:51:49.0±1.2, 42°.59N×79°.65E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=8.0km s-min=4.5km az=152.0

ISCJB 18 06:51:50.6±0.7, 42°.59N±0°.04×79°.73E±0°.04, h10^{km}, Error ellipse: s-maj=6.2km s-min=2.8km az=141.0

ISC 18 06:51:49.5±1.1, 42°.55N±0°.04×79°.70E±0°.04, h10^{km}, n65, σ1^{s}39/112, 32C-17D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.78	321	P	Pg	06 52 03.4	-1.2
	17nm,0.1s						
UZB				S	Sg	06 52 13.4	-1.3
	281nm,0.2s						
UZB	Uzynbulak	0.78	321	eP	Pg	06 52 03.4	-1.2
	baz=19						
UZB				eS	Sg	06 52 13.4	-1.3
	baz=19						
UZB	Uzynbulak	0.78	321	eP	Pg	06 52 03.4	-1.2
	17nm,0.1s						
UZB				eS	Sg	06 52 13.4	-1.3
	281nm,0.2s						
PDGK	Podgornoye	0.80	349	P	Pg	06 52 03.8	-1.1
	21nm,0.3s						
PDGK				S	Sg	06 52 14.2	-1.1
	57nm,0.2s						
PDGK	Podgornoye	0.80	349	⇓P	Pg	06 52 03.6	-1.3
	15nm,0.4s						
PDGK				⇑S	Sg	06 52 14.2	-1.1
	24nm,0.2s						
PDGK	Podgornoye	0.80	349	⇓iP	Pg	06 52 03.8	-1.1
	baz=48						
PDGK				⇓iS	Sg	06 52 14.4	-0.9
	baz=48						
PRZ	Przheval'sk	0.96	267	⇑iP	Pg	06 52 07.4	-0.6
	baz=65						
PRZ				⇑iS	Sg	06 52 19.9	-0.6
	baz=65						
KTMS	Ketmen	1.02	28	P	Pg	06 52 08.0	-1.2
	28nm,0.1s						
KTMS				S	Sg	06 52 21.4	-1.0
	138nm,0.2s						
KTMS	Ketmen	1.02	28	eP	Pg	06 52 08.0	-1.2
	baz=27						
KTMS				eS	Sg	06 52 21.5	-1.0
	baz=27						
KTMS	Ketmen	1.02	28	eP	Pg	06 52 08.0	-1.2
	28nm,0.1s						
KTMS				eS	Sg	06 52 21.4	-1.0
	138nm,0.2s						
SATY	Saty	1.08	299	P	Pg	06 52 08.5	-1.7
	16nm,0.1s						
SATY				S	Sg	06 52 22.3	-2.1
	126nm,0.2s						
SATY	Saty	1.08	299	eP	Pg	06 52 08.5	-1.7
	16nm,0.1s						
SATY				eS	Sg	06 52 22.3	-2.1
	126nm,0.2s						
DJR	Jarkent	1.79	2	eP	Pb	06 52 21.4	-1.0
	24nm,0.2s						
DJR				eS	Sb	06 52 44.8	-0.1
	27nm,0.3s						
MNBS	Baschi	1.80	329	P	Pb	06 52 21.5	-1.1
	32nm,0.2s						
MNBS				S	Sb	06 52 44.9	-0.4
	198nm,0.3s						
MNBS	Baschi	1.80	329	eP	Pb	06 52 21.5	-1.1
	baz=28						
MNBS				eS	Sb	06 52 44.9	-0.4
	baz=28						
MNBS	Baschi	1.80	329	eP	Pb	06 52 21.5	-1.1
	32nm,0.2s						
MNBS				eS	Sb	06 52 44.9	-0.4
	198nm,0.3s						
KDJ	Kajisay	1.91	258	⇑iP	Pb	06 52 24.5	-0.1
	baz=58						
KDJ				⇑iS	Sg	06 52 49.4	-1.6
	baz=58						
KOTS	Kotyrbulak	2.02	291	Pg	Pb	06 52 25.4	-1.0
	14nm,0.2s						
KOTS				Lg	Lg	06 52 51.5	
	264nm,0.5s						
KOTS	Kotyrbulak	2.02	291	eP	Pb	06 52 25.4	-1.0
	baz=90						
KOTS				eS	Sb	06 52 51.5	-0.2
	baz=90						
KOTS	Kotyrbulak	2.02	291	eP	Pb	06 52 25.4	-1.0
	14nm,0.2s						
KOTS				eS	Sb	06 52 51.5	-0.2
	264nm,0.5s						
MDOK	Medeo	2.04	288	⇑Pg	Pb	06 52 25.6	-1.2
	8.4nm,0.5s						
MDOK				⇑Lg	Lg	06 52 52.1	
	18nm,0.5s						
MDOK	Medeo	2.04	288	eP	Pb	06 52 25.4	-1.4
	baz=88						
MDOK				eS	Sb	06 52 51.7	-0.7
	baz=88						
MDOK	Medeo	2.04	288	eP	Pb	06 52 25.4	-1.4
	9.9nm,0.3s						
MDOK				eS	Sb	06 52 51.6	-0.7
	39nm,0.5s						
TNSS	Tian-Shan	2.08	285	eP	Pb	06 52 26.2	-1.4
	baz=84						
TNSS				eS	Sb	06 52 53.0	-0.7
	baz=84						
TNSS	Tian-Shan	2.08	285	eP	Pb	06 52 26.2	-1.4
	17nm,0.4s						
TNSS				eS	Sb	06 52 53.0	-0.7
	56nm,0.3s						
ARXS	Arharly	2.15	321	Pg	Pb	06 52 27.9	-0.8
	8.7nm,0.4s						
ARXS				Lg	Lg	06 52 55.3	
	108nm,0.3s						
ARXS	Arharly	2.15	321	eP	Pb	06 52 27.9	-0.8
	8.7nm,0.4s						
ARXS				eS	Sb	06 52 55.3	-0.2
	108nm,0.3s						
IZV	Izvestkoviy	2.32	283	Pg	Pb	06 52 30.8	-0.8
	22nm,0.3s						
IZV				Lg	Lg	06 53 00.5	
	114nm,0.3s						
IZV	Izvestkoviy	2.32	283	eP	Pb	06 52 30.8	-0.8
	baz=83						
IZV				eS	Sb	06 53 00.5	+0.1
	baz=83						
IZV	Izvestkoviy	2.32	283	eP	Pb	06 52 30.8	-0.8
	22nm,0.3s						
IZV				eS	Sb	06 53 00.5	+0.1
	114nm,0.3s						
CHKK	Chushkaly	2.37	304	eP	Pb	06 52 31.2	-1.1
	baz=4.0						
CHKK				eS	Sb	06 53 01.2	-0.5
	baz=4.0						
CHKK	Chushkaly	2.37	304	eP	Pb	06 52 31.2	-1.1
	1.8nm,0.2s						
CHKK				eS	Sb	06 53 01.2	-0.5
	68nm,0.2s						
MTBS	Maitube	2.47	285	eP	Pb	06 52 33.0	-1.1
	baz=84						
MTBS				eS	Sb	06 53 04.6	0.0
	baz=84						
MTBS	Maitube	2.47	285	eP	Pb	06 52 33.0	-1.1
	15nm,0.3s						
MTBS				eS	Sb	06 53 04.6	0.0
	44nm,0.3s						
KTBS	Karatobe	2.50	299	Pg	Pb	06 52 33.6	-0.8
	8.5nm,0.2s						
KTBS				Lg	Lg	06 53 05.3	
	76nm,0.3s						
KTBS	Karatobe	2.50	299	eP	Pb	06 52 33.7	-0.8
	baz=97						
KTBS				eS	Sb	06 53 05.4	+0.1
	baz=97						
KTBS	Karatobe	2.50	299	eP	Pb	06 52 33.6	-0.8
	8.5nm,0.2s						
KTBS				eS	Sb	06 53 05.3	+0.1
	76nm,0.3s						
ULHL	Ulahol	2.58	264	⇓iP	Pb	06 52 33.9	-2.0
	baz=64						
ULHL				⇓iS	Sb	06 53 05.6	-2.1

	baz=64						
BOOM	Boomskoye usch	2.78	270	⇑iP	Pb	06 52 36.5	-2.8
	baz=70						
BOOM				⇑iS	Sb	06 53 10.7	-2.8
	baz=70						
KST	Kastek	2.79	281	eP	Pb	06 52 38.4	-1.2
	baz=81						
KST				eS	Sb	06 53 13.9	0.0
	baz=81						
KST	Kastek	2.79	281	eP	Pb	06 52 38.4	-1.2
	11nm,0.2s						
KST				eS	Sb	06 53 13.9	0.0
	45nm,0.5s						
KUU	Kurty	2.80	300	eP	Pb	06 52 38.9	-0.7
	baz=99						
KUU				eS	Sb	06 53 14.1	+0.1
	baz=99						
KUU	Kurty	2.80	300	eP	Pb	06 52 38.9	-0.7
	0.9nm,0.3s						
KUU				eS	Sb	06 53 14.1	+0.1
	39nm,0.2s						
DGS	Degeres	2.97	285	Pg	Pb	06 52 42.1	-0.4
	14nm,0.3s						
DGS				Lg	Lg	06 53 19.4	
	66nm,0.5s						
DGS	Degeres	2.97	285	eP	Pb	06 52 42.1	-0.4
	baz=84						
DGS				eS	Sb	06 53 19.4	+0.5
	baz=84						
DGS	Degeres	2.97	285	eP	Pb	06 52 42.1	-0.4
	14nm,0.3s						
DGS				eS	Sb	06 53 19.4	+0.5
	66nm,0.5s						
NRN	Naryn	2.97	249	⇑eP	Pb	06 52 40.1	-2.6
	baz=49						
NRN				⇑iS	Sb	06 53 16.4	-2.8
	baz=49						
TKM2	Tokmak 2	3.04	278	⇑Pg	Pb	06 52 45.0	+1.1
	2.4nm,0.3s						
TKM2				⇓Lg	Lg	06 53 22.2	
	11nm,0.3s						
TKM2	Tokmak 2	3.04	278	⇓iP	Pn	06 52 40.1	+2.2
	baz=78						
TKM2				⇓iS	Sn	06 53 16.6	+2.1
	baz=78						
KZA	Kyzart	3.33	263	⇑iP	Pn	06 52 44.6	+2.6
	baz=63						
KZA				⇑iS	Sn	06 53 24.1	+2.2
	baz=63						
KBK	Karagaybulak	3.51	273	⇑iP	Pn	06 52 46.6	+2.3
	baz=73						
KBK				⇑iS	Sn	06 53 28.1	+2.2
	baz=73						
CHMS	Chumysh	3.67	279	⇓eP	Pn	06 52 48.6	+2.3
	baz=78						
CHMS				⇓iS	Sn	06 53 31.4	+1.7
	baz=78						
AAK	Ala-Archa	3.84	273	⇑Pg	Pb	06 52 59.1	+1.7
	1.7nm,0.5s						
AAK				⇓Lg	Lg	06 53 46.8	
	3.7nm,0.5s						
AAK	Ala-Archa	3.84	273	⇑eP	Pn	06 52 51.2	+2.4
	baz=73						
AAK				⇑iS	Sn	06 53 35.4	+1.3
	baz=73						
UCH	Uchtor	3.85	267	⇓iP	Pn	06 52 51.9	+2.6
	baz=67						
UCH				⇓iS	Sn	06 53 36.6	+1.8
	baz=67						
ARLS	Aral	4.05	262	⇑eP	Pn	06 52 54.1	+2.4
	baz=62						
ARLS				⇑iS	Sn	06 53 41.3	+2.0
	baz=62						
EKS2	Erkin-Say	4.37	274	⇑iP	Pn	06 52 58.4	+2.3
	baz=73						
EKS2				⇑iS	Sn	06 53 48.1	+1.0
	baz=73						
AML	Almayashu	4.47	267	⇑eP	Pn	06 53 00.0	+2.3
	baz=66						
AML				⇑iS	Sn	06 53 51.4	+1.5
	baz=66						
MAKZ	Makanchi	4.56	20	⇑Pn	Pn	06 52 59.7	+1.2
	1.1nm,0.2s						
MAKZ				⇑Sn	Sn	06 53 53.4	+1.8
	0.5nm,0.3s						
MAKZ				⇑Lg	Lg	06 54 07.3	
	1.1nm,0.4s						
MK31	Makanchi Array	4.63	23	⇓Pn	Pn	06 53 00.9	+1.4
	0.2nm,0.2s,baz=208,slow=12,SNR=52						
MK31				⇑Sn	Sn	06 53 55.1	+1.8
	0.4nm,0.3s,baz=205,slow=24,SNR=4.7						
MK31				⇓Lg	Lg	06 54 13.2	
	1.2nm,0.3s,baz=207,slow=26,SNR=4.9						
MNAS	Manas	5.32	272	⇓Lg	Lg	06 54 34.1	
	1.1nm,0.4s						
KK31	Karatay Array	6.78	278	⇑Lg	Lg	06 55 20.0	
	1.0nm,0.6s,baz=94,slow=28,SNR=5.7						
OTUK	Ortayu	7.70	320	⇑Lg	Lg	06 55 46.6	
	1.3nm,0.5s						
KURBB	Kurchatov Arra	8.12	355	⇓Lg	Lg	06 55 58.2	
	1.4nm,0.7s						
KURK	Kurchatov	8.21	355	⇑Lg	Lg	06 56 06.3	
	2.1nm,0.8s						

*IDC **18** 06:53:27.6±1.9, 59°.74S×26°.31W, h0^{km}, mb3.8/2, mb1 3.9/2, mb1mx3.7/22, mbtmp3.8/2, Error ellipse: s-maj=81.1km s-min=45.4km az=10.0*

ISC 18 06:53:31.4±0.9**, 59°.9S**±0°.2×**26°.5W**±0°.3**, h26^{km}, n13, σ1^{s}.57**/14**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	13.12	153	P	P	06 56 45.6	-0.1
VNA1	Neumayer--Stat	13.12	153	S	Sn	06 59 01.9	+1.4
VNA3	Neumayer Olymp	13.26	156	P	P	06 56 46.9	-0.3
VNA3				S	Sn	06 59 03.1	-0.9
VNA2	Neumayer--Watz	13.52	153	P	P	06 56 50.6	+0.5
	baz=313,slow=14						
VNA2	Neumayer--Watz	13.52	153	S	Sn	06 59 07.7	-2.6
	baz=310,slow=24						
SNAA	Sanae	15.11	151	P	P	06 57 11.8	+4.0
SNAA	Sanae	15.11	151	S	Sn	06 59 49.3	+0.2
LPAZ	La Paz	52.96	307	P	P	07 02 46.3	+0.1
	0.7nm,0.5s,baz=136,slow=7.5,SNR=4.6						
TORD	Torodi Ar. Bea	76.26	28	P	P	07 05 16.7	-0.7
	0.5nm,0.6s,baz=193,slow=7.0,SNR=6.5						
ARCES	ARCESS Array B	134.38	23	PKP	PKPdf	07 12 45.2	+0.1
	2.7nm,1.0s,baz=211,slow=1.6,SNR=4.1						
YKA	Yellowknife Ar	139.23	315	PKP	PKPdf	07 12 54.5	+0.2
	0.2nm,0.6s,baz=127,slow=2.2,SNR=4.4						
SONM	Songino Array	150.37	93	PKPbc	PKPbc	07 13 19.7	+0.3
	0.2nm,0.4s,baz=222,slow=1.9,SNR=4.0						
ILAR	Eielson Array	152.84	306	PKPbc	PKPbc	07 13 24.0	-0.3
	0.3nm,0.6s,baz=143,slow=1.9,SNR=4.2						

MEX 18 07:25:24.4±0.6**, 16°.39N**×**98°.39W, h10^{km}**±4^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.25	89	eP	Pg	07 25 28.9	-0.6
PNIG				eS	Sg	07 25 33.2	+0.2
VHO	Vista Hermosa	1.73	66	eP	Pn	07 25 52.0	-2.8
VHO				eS	Sn	07 26 13.2	-3.8
CAIG	El Cayaco	1.92	290	eP	Pn	07 25 55.5	-1.7
CAIG				eS	Sb	07 26 22.5	-1.0
HUIG	Huatulco	2.28	105	i P	Pn	07 26 02.1	-0.1
CMIG	Matias Romero	3.43	78	eP	Pn	07 26 14.8	-3.2

*NIED **18** 07:55:00, 37°.40N×142°.30E, h8^{km}, Mw3.8 Best double couple: $M_0$5.20000×10^{14} NP1:ϕ_s134.00000°, δ39.00000°, λ-89.00000°. NP2:ϕ_s312.00000°, δ52.00000°, λ-91.00000°.*

*ISCJB **18** 07:55:06.7±1.4, 37°.36N±0°.04×142°.37E±0°.04, h13^{km}±9^{km}, mb4.0/21, MS3.4/2, Error ellipse: s-maj=6.0km s-min=5.1km az=162.1*

*IDC **18** 07:55:06.2±0.8, 37°.26N×142°.37E, h0^{km}, mb3.8/16, mb1 3.9/19, mb1mx3.8/50, mbtmp3.8/19, ML3.5/3, MS3.3/3, Ms1 3.3/3, ms1mx2.7/51, Error ellipse: s-maj=19.8km s-min=15.6km az=111.0*

*JMA **18** 07:55:07.4±0.2, 37°.35N×142°.31E, h22^{km}±3^{km}, M4.2*

*NEIC **18** 07:55:11.1±0.5, 37°.21N×142°.37E, h35^{km}, mb4.5/5, Error ellipse: s-maj=10.8km s-min=7.3km az=118.0*

ISC 18 07:55:06.6±3.4**, 37°.35N**±0°.04×**142°.24E**±0°.06**, h1^{km}**±21^{km}**, n60, σ1^{s}.47**/62**, mb3.9**/21**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	1.09	271	P	Pb	07 55 28.0	-0.3
JFK				eS	Sb	07 55 42.6	-0.4
JIKH	Ishinomakikobu	1.14	328	P	Pb	07 55 28.3	-0.8
JIKH				eS	Sb	07 55 42.9	-1.5
ONAJ	Iwakimizuishiy	1.18	258	P	Pn	07 55 29.2	-1.1
ONAJ				eS	Sb	07 55 45.0	-0.6
JMM	Marumori	1.26	294	P	Pn	07 55 30.6	-0.7
JIO	Ouri	1.31	328	P	Pn	07 55 31.0	-1.0
JIO				eS	Sb	07 55 47.6	-1.7
JFT	Otama	1.53	277	P	Pb	07 55 35.4	-0.3
JFT				eS	Sn	07 55 55.3	-0.2
JOU	Okura	1.61	310	P	Pn	07 55 36.1	-0.1
JOU				eS	Sn	07 55 56.8	-0.8
JMK	Ichinoseki	1.79	334	P	Pn	07 55 38.1	-0.5
JYS	Shirataka	1.93	297	P	Pb	07 55 41.7	-0.9
JYS				eS	Sb	07 56 07.2	0.0
JFY	Yanaizu	2.02	272	P	Pn	07 55 42.5	+0.7
JFY				eS	Sn	07 56 08.7	+0.9
JOM	Ohasama	2.25	341	P	Pn	07 55 44.6	-0.3
MJAR	Matsushiro Arr	3.33	257	Pn	Pn	07 56 02.3	+2.5
	0.8nm,0.3s,baz=84,slow=15,SNR=28						
MJAR				Sn	Sb	07 56 44.0	-3.5
	0.6nm,0.3s,baz=79,slow=26,SNR=7.7						
MAJO	Matsushiro	3.33	257	ePn	Pn	07 56 02.8	+2.9
MAJO				eSn	Sb	07 56 44.0	-3.5
MAT	Matsushiro	3.33	257	P	Pn	07 56 01.9	+2.0
MAT				S	Sn	07 56 35.9	-4.2
MJB9	Matsu-Tunnel	3.33	257	ePn	Pn	07 56 02.7	+2.8
INU	Inuyama	4.67	246	ePn	Pn	07 56 19.0	+0.8
JHJ2	Mitsune	4.67	206	ePn	Pn	07 56 13.2	-5.1
JHJ	Hachijo jima 2	4.68	206	Pn	Pn	07 56 19.5	+1.2
	15nm,0.3s,baz=41,slow=20,SNR=3.1						
JHJ				Sn	Sn	07 57 09.4	-3.9
	12nm,0.3s,baz=66,slow=20,SNR=2.8						
ERM	Erimo	4.71	8	ePn	Pn	07 56 18.8	+0.1
ASAJ	Asahikawa	6.76	2	Pn	Pn	07 56 49.2	+2.2
	1.4nm,0.3s,baz=246,slow=14,SNR=6.7						
ASAJ				Sn	Sn	07 58 02.3	-2.3
	0.4nm,0.3s,baz=217,slow=20,SNR=2.2						
KLR	Kul'dur	14.10	331	LR	LR	08 03 42.6	
	comp=Z,55nm,19.4s,baz=65,slow=36						
MA2	Magadan	22.91	11	LR	LR	08 10 22.0	
	comp=Z,28nm,19.4s,baz=62,slow=40						
SEY	Seymchan	26.36	10	P	P	08 00 45.3	+1.4
	1.1nm,0.6s,baz=207,slow=8.7,SNR=8.5						
H11N2	WAKE ISLAND Hy	27.75	122	T	T	08 29 44.8	
	baz=315,slow=75,SNR=117						
H11N1	WAKE ISLAND Hy	27.76	122	T	T	08 29 48.9	
	baz=315,slow=75,SNR=78						
H11N3	WAKE ISLAND Hy	27.77	122	T	T	08 29 55.7	
	baz=315,slow=75,SNR=89						
SONA1	Songino Array	28.16	303	eP	P	08 01 02.0	+1.6
SONA0	Songino Array	28.16	303	eP	P	08 01 01.6	+1.1
SONM	Songino Array	28.16	303	P	P	08 01 01.6	+1.1
	0.7nm,0.6s,baz=99,slow=7.8,SNR=5.9						
H11S1	WAKE ISLAND Hy	28.48	125	T	T	08 30 43.1	
	baz=316,slow=76,SNR=72						
H11S3	WAKE ISLAND Hy	28.49	125	T	T	08 30 53.1	
	baz=316,slow=76,SNR=59						
H11S2	WAKE ISLAND Hy	28.50	125	T	T	08 30 55.2	
	baz=316,slow=76,SNR=69						
ZAA1	Zalesovo Array	42.19	312	eP	P	08 03 01.2	+0.5
ZALV	Zalesovo Beam	42.19	312	P	P	08 03 01.2	+0.5
	1.2nm,0.6s,baz=95,slow=3.4,SNR=4.8						
SHL	Shillong	44.07	269	eP	P	08 03 20.9	+4.3
	26nm,0.9s						
MK01	Makanchi Array	44.51	302	eP	P	08 03 20.1	+0.6
MK31	Makanchi Array	44.51	302	eP	P	08 03 20.4	+0.7
	1.4nm,0.8s						
MK32	Makanchi Array	44.51	302	eP	P	08 03 20.3	+0.7
MKAR	Makanchi Array	44.51	302	eP	P	08 03 20.4	+0.7
	9.8nm,0.6s						
MKAR	Makanchi Array	44.51	302	P	P	08 03 20.3	+0.7
	0.8nm,0.7s,baz=89,slow=8.8,SNR=11						
KURK	Kurchatov	46.26	308	eP	P	08 03 34.1	+0.7
KURBB	Kurchatov Arra	46.33	308	P	P	08 03 33.8	-0.1
	1.4nm,0.4s,baz=80,slow=8.1,SNR=7.4						
ILAR	Eielson Array	48.87	33	P	P	08 03 53.1	-0.3
	0.4nm,0.7s,baz=272,slow=5.8,SNR=4.9						
MMRI	Maumere	49.44	206	eP	P	08 03 58.6	+0.3
	228nm,0.8s						
BVAR	Borovoye Array	50.85	312	P	P	08 04 08.9	+0.2
	0.5nm,0.6s,baz=60,slow=8.5,SNR=3.5						
INK	Inuvik	53.80	27	P	P	08 04 31.0	+0.6
	0.6nm,0.8s,baz=232,slow=1.8,SNR=3.0						
WB2	Warramunga Arr	57.47	189	eP	P	08 04 57.0	-0.3
WR1	Warramunga Arr	57.47	189	eP	P	08 04 56.1	-1.2
	8.1nm,1.5s						
WRA	Warramunga Arr	57.47	189	P	P	08 04 56.1	-1.2
	0.9nm,0.5s,baz=6.3,slow=7.3,SNR=15						
ABKAR	Akbulak array	58.24	310	eP	P	08 05 03.0	+0.5
	3.3nm,1.4s						
ASAR	Alice Springs	61.20	189	P	P	08 05 22.1	-1.0
	0.7nm,0.9s,baz=2.1,slow=5.8,SNR=8.2						
YKA	Yellowknife Ar	63.20	30	P	P	08 05 36.2	+0.2
	0.2nm,0.7s,baz=303,slow=6.9,SNR=3.8						
FIA1	FINESS Array S	68.84	332	eP	P	08 06 12.1	-0.2
FIA0	FINESS Array S	68.84	332	eP	P	08 06 12.7	+0.4
FINES	FINESS Array B	68.84	332	P	P	08 06 12.7	+0.4
	1.8nm,0.7s,baz=43,slow=6.5,SNR=6.2						
KBZ	Khabaz	71.20	311	P	P	08 06 28.2	+1.1
	0.7nm,0.6s,baz=72,slow=13,SNR=2.7						
AKASG	Malin Array Be	74.45	323	P	P	08 06 46.3	+0.1
	0.8nm,0.5s,baz=47,slow=6.0,SNR=5.0						
PDAR	Pinedale Array	76.97	46	P	P	08 07 01.1	-0.1
	0.3nm,0.8s,baz=339,slow=2.0,SNR=3.2						
RAR	Rarotonga	79.81	127	LR	LR	08 34 00.6	
	comp=Z,103nm,21.3s,baz=78,slow=29						
GERES	GERESS Array B	82.79	329	P	P	08 07 32.5	0.0
	0.3nm,0.4s,baz=58,slow=7.3,SNR=3.2						

IDC 18 08:01:40.2±5.5**, 26°.79S**×**70°.75E, h0^{km}, mb3.7**/4**, mb1 3.8**/4**, mb1mx3.5**/49**, mbtmp3.7**/4**, Error ellipse: s-maj=191.5km s-min=37.6km az=47.0, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	19.11	5	T	T	08 25 00.8	
	baz=183,slow=74						
H08S2	Diego Garcia H	19.12	5	T	T	08 24 59.4	
	baz=183						
H08S3	Diego Garcia H	19.13	5	T	T	08 25 00.6	
	baz=183,slow=74						
H01W2	Cape Leeuwin H	37.88	113	T	T	08 48 38.0	
	baz=272						
H01W3	Cape Leeuwin H	37.88	113	T	T	08 48 33.0	
	baz=272						
H01W1	Cape Leeuwin H	37.90	113	T	T	08 48 42.8	
	baz=272						
ASAR	Alice Springs	56.70	102	P	P	08 11 26.1	+0.2
	1.1nm,0.9s,baz=254,slow=6.2,SNR=4.1						
WRA	Warramunga Arr	58.26	98	P	P	08 11 36.7	-0.3
	0.5nm,0.8s,baz=252,slow=6.7,SNR=3.7						
MKAR	Makanchi Array	73.98	8	P	P	08 13 17.4	+0.1
	0.6nm,0.7s,baz=192,slow=6.1,SNR=6.9						
ZALV	Zalesovo Beam	81.32	8	P	P	08 13 58.2	+0.1
	0.7nm,0.6s,baz=187,slow=7.3,SNR=3.1						
YKA	Yellowknife Ar	144.13	4	PKP	PKPdf	08 21 16.6	-0.7
	0.1nm,0.6s,baz=339,slow=3.7,SNR=4.3						

IDC 18 08:02:37.4±19.0**, 26°.16S**×**71°.70E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.4**/52**, mbtmp3.6**/4**, Error ellipse: s-maj=648.0km s-min=37.2km az=47.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	18.43	2	T	T	08 26 04.2	
	baz=180						
H08S2	Diego Garcia H	18.43	2	T	T	08 25 58.8	
	baz=180						
H08S3	Diego Garcia H	18.44	2	T	T	08 26 02.8	
	baz=180						
H01W2	Cape Leeuwin H	37.35	114	T	T	08 49 20.2	
	baz=274						
H01W3	Cape Leeuwin H	37.35	114	T	T	08 49 22.5	
	baz=274						
H01W1	Cape Leeuwin H	37.37	114	T	T	08 49 24.2	
	baz=274						
ASAR	Alice Springs	56.00	102	P	P	08 12 18.2	+0.1
	0.5nm,0.7s,baz=250,slow=7.5,SNR=2.6						
WRA	Warramunga Arr	57.51	98	P	P	08 12 28.6	-0.3
	0.9nm,1.0s,baz=253,slow=6.3,SNR=2.8						
MKAR	Makanchi Array	73.24	8	P	P	08 14 09.7	-0.5
	0.7nm,0.8s,baz=194,slow=4.6,SNR=3.5						
KURBB	Kurchatov Arra	76.68	4	P	P	08 14 30.2	+0.4
	0.6nm,0.8s,baz=198,slow=6.0						

*ISCJB **18** 08:14:16.7±0.9, 29°.56N±0°.05×102°.25E±0°.06, h10^{km}, MS3.1/3, Error ellipse: s-maj=8.3km s-min=5.9km az=146.0*

*IDC **18** 08:14:20.1±1.6, 29°.80N×101°.96E, h0^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.3/55, mbtmp3.4/4, ML3.7/1, MS3.1/4, Ms1 3.2/4, ms1mx2.8/32, Error ellipse: s-maj=76.5km s-min=26.0km az=60.0*

*BJI **18** 08:14:21.9, 29°.94N×101°.97E, h6^{km}, mb3.5/1, ML3.7/14, Ms3.7/4, Ms7 3.5/2*

ISC 18 08:14:19.3±1.1**, 29°.45N**±0°.07×**102°.06E**±0°.09**, h10^{km}, n12, σ2^{s}.82**/12**, MS3.2**/3**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	2.07	45	Pg	Pn	08 14 54.8	+0.6
CD2				Sg	Sn	08 15 18.8	-1.3
CD2				smax	smax		
	comp=N,4μm,0.7s						
CD2				smax	smax		
	comp=E,3μm,0.6s						
GYA	Guiyang	5.05	125	ePn	Pn	08 15 32.5	-2.7
GYA				Pg	Pg	08 16 02.8	+6.8
GYA				Sn	Sn	08 16 32.3	-1.4
GYA				Sg	Sg	08 17 02.3	+0.9
GYA				smax	smax		
	comp=N,60nm,0.8s						
GYA				smax	smax		
	comp=E,60nm,0.8s						
XAN	Xi'an	7.42	50	Pn	Pn	08 16 11.3	+3.5
XAN				Sn	Sn	08 17 28.3	-3.8
XAN				Sg	Sg	08 18 11.4	-6.2
XAN				smax	smax		
	comp=E,60nm,1.2s						
XAN				smax	smax		
	comp=E,64nm,1.0s						
CMAR	Chiang Mai Arr	11.30	195	LR	LR	08 22 01.4	
	comp=E,78nm,19.3s,baz=26,slow=40						
WMQ	Urumqi	18.36	325	eP	P	08 18 32.6	-1.5
SONM	Songino Array	18.66	9	P	P	08 18 35.1	-2.4
	comp=E,0.2nm,0.3s,baz=196,slow=10,SNR=11						
KSRS	Korea Array	22.96	63	LR	LR	08 28 46.1	
	comp=E,28nm,19.8s,baz=170,slow=38						
MKAR	Makanchi Array	23.17	324	P	P	08 19 24.2	-1.7
	comp=E,0.3nm,0.8s,baz=140,slow=12,SNR=2.2						
ZALV	Zalesovo Beam	27.51	338	LR	LR	08 31 31.3	
	comp=E,63nm,19.6s,baz=64,slow=38						
KURBB	Kurchatov Arra	27.57	327	P	P	08 20 06.6	+0.3
	comp=E,0.2nm,0.3s,baz=137,slow=9.9,SNR=2.9						
JCJ	Chichijima	35.30	84	LR	LR	08 36 52.1	
	comp=E,49nm,18.8s,baz=124,slow=38						
WRA	Warramunga Arr	58.14	144	P	P	08 24 18.0	+4.6
	comp=E,0.6nm,0.7s,baz=331,slow=7.8,SNR=4.9						

IDC 18 08:41:11.1±3.2**, 54°.51N**×**86°.36E, h0^{km}, mb1 2.8**/2**, mb1mx2.8**/34**, mbtmp2.8**/2**, ML2.4**/2**, Error ellipse: s-maj=24.6km s-min=14.8km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.07	239	i		08 47 30.0	
	baz=60,slow=341,SNR=1.1						
ZALV	Zalesovo Beam	1.07	239	Pg	Pg	08 41 30.1	-1.4
	0.5nm,0.3s,baz=59,slow=16,SNR=7.3						
ZALV				Lg	Lg	08 41 46.5	
	3.1nm,0.3s,baz=54,slow=30,SNR=6.4						
KURBB	Kurchatov Arra	6.16	234	Pn	Pn	08 42 44.0	+0.8
	0.0nm,0.3s,baz=48,slow=14,SNR=5.7						
KURBB				Lg	Lg	08 44 28.6	
	0.1nm,0.3s,baz=52,slow=31,SNR=5.5						
MKAR	Makanchi Array	8.15	200	Pn	Pn	08 43 11.5	+1.0
	0.2nm,0.3s,baz=14,slow=18,SNR=4.0						
MKAR				Lg	Lg	08 45 30.6	
	0.1nm,0.3s,baz=24,slow=27,SNR=3.8						

*ISCJB **18** 08:53:11.6±0.6, 5°.7N±0°.1×32°.83W±0°.07, h12^{km}, mb4.1/20, MS3.6/10, Error ellipse: s-maj=19.1km s-min=10.1km az=5.3*

*IDC **18** 08:53:11.1±0.7, 5°.56N×32°.96W, h0^{km}, mb4.0/16, mb1 4.2/16, mb1mx4.0/41, mbtmp4.0/16, MS3.6/11, Ms1 3.6/11, ms1mx3.4/30, Error ellipse: s-maj=26.5km s-min=16.5km az=10.0*

*NEIC **18** 08:53:12.1±0.6, 5°.47N×32°.95W, h10^{km}, mb4.4/5, Error ellipse: s-maj=18.7km s-min=10.5km az=181.0*

ISC 18 08:53:12.6±0.6**, 5°.5N**±0°.1×**32°.96W**±0°.09**, h12^{km}, n43, σ1^{s}.38**/31**, mb4.1**/20**, MS3.6**/10**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SACV	Santiago Islan	13.15	44	ePn	Pn	08 56 17.0	-2.4
MDP	Montagnes des	19.61	270	LR	LR	09 03 50.0	
	comp=Z,78nm,19.3s,baz=52,slow=33						
H10N3	ASCENSION HYDR	22.68	126	T	T	09 21 47.6	
	baz=305,slow=75,SNR=84						
H10N2	ASCENSION HYDR	22.69	126	T	T	09 21 42.7	
	baz=305,slow=75,SNR=63						
H10N1	ASCENSION HYDR	22.70	126	T	T	09 21 49.6	
	baz=305,slow=75,SNR=94						
H10S3	ASCENSION HYDR	23.21	128	T	T	09 22 25.7	
	baz=308,slow=74,SNR=34						
H10S1	ASCENSION HYDR	23.21	128	T	T	09 22 24.2	
	baz=308,slow=74,SNR=39						
H10S2	ASCENSION HYDR	23.23	128	T	T	09 22 27.9	
	baz=308,slow=74,SNR=47						
BDFB	Brasilia	25.76	215	LR	LR	09 08 06.3	
	comp=Z,159nm,19.4s,baz=353,slow=35						
PTGA	Pitinga	27.68	258	LR	LR	09 09 20.2	
	comp=Z,114nm,19.6s,baz=48,slow=35						
DBIC	Dimbokro	27.96	86	P	P	08 59 03.0	-0.3
	2.8nm,0.7s,baz=244,slow=12,SNR=3.2						
DBIC				LR	LR	09 07 30.9	
	comp=Z,138nm,21.8s,baz=244,slow=31						
TOA1	Torodi Ar. Sit	34.99	75	eP	P	09 00 04.1	-1.1
TOA1				ePcP	PcP	09 02 37.7	+0.1
TOA0	Torodi Ar. Sit	34.99	75	eP	P	09 00 05.1	-0.1
	4.3nm,1.0s						
TORD	Torodi Ar. Bea	34.99	75	P	P	09 00 04.1	-1.1
	1.4nm,0.5s,baz=274,slow=9.3,SNR=12						
TORD				PcP	PcP	09 02 37.7	+0.1
	0.4nm,0.5s,baz=291,slow=2.7,SNR=4.0						
TORD				LR	LR	09 12 40.1	
	comp=Z,135nm,18.6s,baz=305,slow=33						
SDV	Santo Domingo	37.52	277	P	P	09 00 27.1	0.0
	2.8nm,0.8s,baz=70,slow=5.5,SNR=3.9						
CPUP	Villa Florida	39.49	216	LR	LR	09 16 40.4	
	comp=Z,158nm,18.4s,baz=34,slow=36						
LPAZ	La Paz	40.98	238	eP	P	09 00 52.5	-3.9
LPAZ				esP	P	09 00 52.7	-3.8
LPAZ	La Paz	40.98	238	P	P	09 00 56.9	+0.4
	1.6nm,0.7s,baz=84,slow=9.2,SNR=7.2						
LPAZ				LR	LR	09 17 29.8	
	comp=Z,104nm,18.4s,baz=68,slow=36						
ROSC	El Rosal	41.20	271	LR	LR	09 16 46.3	
	comp=Z,78nm,20.4s,baz=74,slow=34						
H09W1	TRISTAN DA CUN	46.55	157	T	T	09 50 17.5	
	SNR=2.5						
KEST	Kesra	49.13	46	LR	LR	09 22 28.4	
	comp=Z,122nm,20.0s,baz=262,slow=36						
TSUM	Tsumeb	55.48	118	P	P	09 02 48.8	+0.8
	1.5nm,0.3s,baz=286,slow=7.4,SNR=2.8						
SCHQ	Schefferville	56.23	337	P	P	09 02 53.1	+0.5
	1.6nm,0.6s,baz=140,slow=9.0,SNR=5.4						
NOA	NORSAR Array B	64.49	22	LR	LR	09 30 17.3	
	comp=Z,33nm,18.6s,baz=20,slow=34						
BOSA	Boshof	65.44	125	P	P	09 03 57.4	+1.5
	2.0nm,0.7s,baz=303,slow=8.2,SNR=4.4						
AKASG	Malin Array Be	68.35	37	P	P	09 04 15.7	+1.8
	0.3nm,0.3s,baz=248,slow=6.5,SNR=4.8						
BRTR	Keskin Array B	68.56	49	LR	LR	09 34 54.3	

	comp=Z,15nm,20.6s,baz=300,slow=36						
LTX	Lajitas	70.52	299	*e*P	P	09 04 28.6	+0.7
TXAR	Lajitas Array	70.52	299	P	P	09 04 28.6	+0.7
	0.2nm,0.5s,baz=115,slow=6.6,SNR=5.9						
FCC	Fort Churchill	70.63	331	*e*P	P	09 04 27.8	0.0
	6.8nm,0.8s						
FIA0	FINESS Array S	70.75	26	*e*P	P	09 04 28.7	+0.2
FINES	FINESS Array B	70.75	26	P	P	09 04 28.7	+0.2
	2.1nm,0.9s,baz=204,slow=4.2,SNR=4.1						
DGMT	Dagmar	73.49	319	*e*P	P	09 04 46.0	+0.7
	16nm,1.1s						
PD31	Pinedale Array	76.45	313	*e*P	P	09 05 01.3	-1.5
	1.2nm,0.9s						
PDAR	Pinedale Array	76.45	313	P	P	09 05 02.9	+0.1
	1.0nm,1.0s,baz=90,slow=6.3,SNR=3.8						
RES	Resolute Bay	77.51	346	P	P	09 05 08.0	+0.2
	1.6nm,0.7s,baz=117,slow=6.8,SNR=4.1						
IMW	Indian Meadow	77.55	314	*e*P	P	09 05 10.6	+1.6
	1.0nm,0.6s						
YKA	Yellowknife Ar	81.29	332	P	P	09 05 28.2	-0.3
	1.0nm,0.9s,baz=94,slow=5.6,SNR=11						
YKB5	Yellowknife Ar	81.29	332	*e*P	P	09 05 27.9	-0.6
NV01	Mina Array Sit	82.97	308	*e*P	P	09 05 39.1	+0.9
NVAR	Mina Array Bea	82.97	308	P	P	09 05 38.1	-0.1
	0.7nm,0.8s,baz=106,slow=6.7,SNR=4.5						
YBH	Yreka Blue Hor	86.20	311	P	P	09 05 54.2	-0.1
	2.0nm,0.9s,baz=76,slow=8.9,SNR=4.1						
ILAR	Eielson Array	94.99	337	P	P	09 06 35.5	+0.6
	0.4nm,0.7s,baz=64,slow=5.1,SNR=2.2						

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*BJI **18** 08:59:53.3, 47°29N×156°58E, h6^{km}, mB4.9/29, mb4.5/39, Ms4.5/13, Ms7 4.2/13*

*IDC **18** 08:59:53.1±0.5, 46°90N×156°59E, h0^{km}, mb4.2/27, mb1 4.4/31, mb1mx4.3/51, mbtmp4.2/31, ML3.5/4, MS3.6/15, Ms1 3.6/15, ms1mx3.4/39, Error ellipse: s-maj=15.3km s-min=10.5km az=147.0*

*SKHL **18** 08:59:54.4±0.6, 47°11N×156°34E, h16^{km}±3^{km}, mb5.0/3, msh5.2/3*

*MOS **18** 08:59:54.5±1.8, 47°15N×156°40E, h18^{km}, mb4.8/30, MS3.8/5, Error ellipse: s-maj=7.3km s-min=5.5km az=76.9*

*ISCJB **18** 08:59:54.7±0.2, 47°06N±0°03×156°55E±0°04, h18^{km}, mb4.5/100, MS3.8/16, Error ellipse: s-maj=4.8km s-min=2.9km az=147.2*

*NEIC **18** 08:59:55.1±0.2, 47°01N×156°54E, h10^{km}, mb4.6/54, Error ellipse: s-maj=6.2km s-min=3.5km az=146.0*

ISC 18 08:59:54.3±1.2**, 47°02N**±0°05×**156°62E**±0°05**, h4**^{km}±7^{km}**, n240, σ1^{s}89**/263**, mb4.6**/107**, MS3.8**/16**, 6C-10D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	3.68	355	*e*P	Pn	09 00 49.9	-2.0
SKR				AMB	AMB	09 00 53.4	
	120nm,0.2s						
SKR				*e*S	Sn	09 01 31.1	-4.6
SKR				A	A	09 01 40.3	
	1μm,0.6s						
SKR				A	A	09 01 40.3	
	550nm,0.6s						
SKR	Severo-Kuril's	3.68	355	*e*PN	Pn	09 00 50.3	-1.6
SKR				*e*S	Sn	09 01 32.0	-3.7
SKR				pmax	pmax		
	comp=Z,212nm,0.7s						
SKR				smax	smax		
	comp=N,1μm,0.6s						
SKR				smax	smax		
	comp=E,547nm,0.3s						
PAU	Pauzhetka	4.45	2	*e*P	Pn	09 01 00.5	-2.0
PAU				AMB	AMB	09 01 01.2	
	comp=E,120nm,0.5s						
PAU				*e*S	Sn	09 01 50.5	-4.2
PAU				A	A	09 01 51.5	
	comp=E,110nm,0.8s						
PAU				A	A	09 01 51.5	
	comp=E,960nm,0.8s						
PEA0B	Petropavlovsk-	6.13	6	*e*Pn	Pn	09 01 24.6	-1.0
PEA0B				*e*Sn	Sn	09 02 37.3	+1.1
PETK	Petropavlovsk-	6.13	6	Pn	Pn	09 01 24.3	-1.3
	comp=E,2.8nm,0.3s,baz=171,slow=15,SNR=65						
PETK				Sn	Sn	09 02 35.6	-0.5
	comp=E,2.5nm,0.3s,baz=196,slow=26,SNR=2.8						
PEA1	Petropavlovsk-	6.14	6	*e*Pn	Pn	09 01 24.3	-1.4
PEA1				*e*Sn	Sn	09 02 35.6	-0.6
PET	Petropavlovsk	6.15	12	*e*Pn	Pn	09 01 24.0	-1.8
PET				*e*Sn	Sn	09 02 32.6	-4.0
PET	Petropavlovsk	6.15	12	*e*P	Pn	09 01 24.0	-1.8
PET				AMB	AMB	09 01 24.0	
	comp=E,130nm,4.0s						
PET				AMB	AMB	09 01 27.5	
	comp=E,50nm,0.5s						
PET				*e*S	Sn	09 02 31.1	-5.4
PET				A	A	09 02 35.7	
	comp=E,200nm,0.5s						
PET				A	A	09 02 35.7	
	comp=E,210nm,0.5s						
PET				A	A	09 02 36.0	
	comp=E,2μm,4.0s						
PET				A	A	09 02 36.0	
	comp=E,810nm,4.0s						
PET				AMS	AMS	09 03 14.2	
	comp=E,1μm,7.0s						
PET	Petropavlovsk	6.15	12	*e*PN	Pn	09 01 23.4	-2.4
PET				pmax	pmax		
	comp=Z,46nm,0.5s						
PET				MLR	MLR		
	comp=Z,1μm,7.0s						
KUR	Kuril'sk	6.34	257	*i* P	Pn	09 01 26.9	-1.5
KUR				AMB	AMB	09 01 27.9	
	comp=Z,70nm,0.6s						
KUR				AMB	AMB	09 01 27.9	
	comp=Z,40nm,0.6s						
KUR				AMB	AMB	09 01 27.9	
	comp=Z,220nm,0.6s						
KUR				AMB	AMB	09 01 28.9	
	comp=Z,130nm,3.0s						
KUR				*i* S	Sn	09 02 35.0	-6.2
KUR				A	A	09 02 40.1	
	comp=Z,270nm,0.5s						
KUR				A	A	09 02 40.1	
	comp=Z,60nm,0.5s						
KUR				A	A	09 02 40.5	
	comp=Z,1μm,3.0s						
KUR				A	A	09 02 40.5	
	comp=Z,790nm,3.0s						
KUR	Kuril'sk	6.34	257	*d i*PN	Pn	09 01 26.6	-1.8
KUR				pmax	pmax		
	comp=Z,216nm,0.5s						
KUR				pmax	pmax		
	comp=N,65nm,0.6s						
KUR				pmax	pmax		
	comp=E,39nm,0.4s						
SHO	Shikotan	7.57	249	*e*P	Pn	09 01 41.1	-4.2
SHO				AMB	AMB	09 01 51.9	
	comp=E,20nm,0.4s						
SHO				AMB	AMB	09 01 51.9	
	comp=E,10.0nm,0.4s						
SHO				AMB	AMB	09 01 51.9	
	comp=E,40nm,0.4s						
SHO	Shikotan	7.57	249	*e*PN	Pn	09 01 41.1	-4.2
SHO				pmax	pmax		
	comp=Z,45nm,0.4s						
SHO				pmax	pmax		
	comp=N,23nm,0.3s						
SHO				pmax	pmax		
	comp=E,13nm,0.3s						
YUK	Yuzh-Kuril'sk	8.12	252	*e*P	Pn	09 01 51.1	-1.8
YUK				AMB	AMB	09 01 58.7	
	comp=E,40nm,0.4s						
YUK				AMB	AMB	09 01 58.7	
	comp=E,30nm,0.4s						
YUK				AMB	AMB	09 01 58.7	
	comp=E,120nm,0.4s						
YUK				*e*S	Sn	09 03 18.8	-6.3
YUK	Yuzh-Kuril'sk	8.12	252	*e*PN	Pn	09 01 51.1	-1.8
YUK				pmax	pmax		
	comp=Z,124nm,0.4s						
YUK				pmax	pmax		
	comp=E,27nm,0.2s						
YUK				pmax	pmax		
	comp=N,36nm,0.3s						
GRPR	Tuman	8.20	252	*e*P	Pn	09 01 51.7	-2.2
GRPR				AMB	AMB	09 02 03.2	
	comp=N,60nm,0.4s						
GRPR				AMB	AMB	09 02 03.2	
	comp=N,70nm,0.4s						
GRPR				AMB	AMB	09 02 03.2	
	comp=N,80nm,0.4s						
GRPR	Tuman	8.20	252	*d i*PN	Pn	09 01 51.7	-2.2
GRPR				pmax	pmax		
	comp=E,70nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,108nm,0.3s						
GRPR				pmax	pmax		
	comp=N,62nm,0.2s						
GLVR	Golovnino	8.47	251	*e*P	Pn	09 01 54.7	-3.0
GLVR				AMB	AMB	09 02 09.8	
	comp=N,70nm,0.6s						
GLVR				AMB	AMB	09 02 09.8	
	comp=N,100nm,0.6s						
GLVR				AMB	AMB	09 02 09.8	
	comp=N,150nm,0.6s						
GLVR	Golovnino	8.47	251	*e*PN	Pn	09 01 54.7	-3.0
GLVR				pmax	pmax		
	comp=N,68nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,148nm,0.5s						
GLVR				pmax	pmax		
	comp=E,103nm,0.6s						
YSS	Yuzh-Sakhalins	9.48	275	*e*Pn	Pn	09 02 12.7	+1.2
YSS	Yuzh-Sakhalins	9.48	275	*e*P	Pn	09 02 10.5	-1.0
YSS				AMB	AMB	09 02 14.1	
	comp=E,100nm,1.0s						
YSS				*e*S	Sn	09 03 51.0	-7.4
YSS				AMS	AMS	09 06 48.0	
	comp=E,300nm,16.0s						
YSS				AMS	AMS	09 06 48.0	
	comp=E,400nm,16.0s						
YSS	Yuzh-Sakhalins	9.48	275	⇓*e*PN	Pn	09 02 13.6	+2.1
YSS				*e*S	Sn	09 04 00.0	+1.6
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
TYV	Tymovskoe	9.96	298	*e*P	Pn	09 02 15.1	-2.9
TYV				AMB	AMB	09 02 21.6	
	comp=E,400nm,4.0s						
TYV				*e*S	Sn	09 04 01.8	-8.3
TYV				A	A	09 04 11.2	
	comp=E,60nm,0.8s						
TYV	Tymovskoe	9.96	298	*e*PN	Pn	09 02 19.8	+1.8
UGL	Uglegorsk	9.96	287	*e*P	Pn	09 02 17.2	-0.9
UGL				AMB	AMB	09 02 23.4	
	comp=E,40nm,0.8s						
UGL				*e*S	Sn	09 04 01.6	-8.6
UGL				A	A	09 04 08.0	
	comp=E,360nm,4.0s						
UGL				A	A	09 04 08.0	
	comp=E,320nm,4.0s						
UGL				AMS	AMS	09 08 06.0	
	comp=E,2μm,20.0s						
UGL	Uglegorsk	9.96	287	*e*PN	Pn	09 02 20.4	+2.3
UGL				*e*S	Sn	09 04 13.4	+3.2
UGL				pmax	pmax		
	comp=Z,37nm,1.2s						
UGL				smax	smax		
	comp=E,46nm,0.4s						
UGL				MLR	MLR		
	comp=Z,2μm,16.0s						
ASAJ	Asahikawa	10.25	259	Pn	Pn	09 02 20.4	-1.7
	comp=Z,1.2nm,0.3s,baz=98,slow=14,SNR=12						
ASAJ				Sn	Sn	09 04 19.2	+1.8
	baz=143,slow=20,SNR=2.0						
ERM	Erimo	10.83	247	*e*Pn	Pn	09 02 28.9	-1.2
ERM				*e*Sn	Sn	09 04 18.2	-13
ERM	Erimo	10.83	247	⇓*i*PN	Pn	09 02 27.9	-2.1
MA2	Magadan	13.05	347	⇓*e*PN	Pn	09 03 03.1	+2.9
MA2				pmax	pmax		
	comp=Z,24nm,2.8s						
MA2	Magadan	13.05	347	Pn	Pn	09 02 58.8	-1.4
	comp=Z,0.8nm,0.3s,baz=150,slow=7.2,SNR=3.6						
MA2				LR	LR	09 08 22.4	
	comp=Z,287nm,18.0s,baz=196,slow=39						
SEY	Seymchan	16.12	353	*e*P	Pn	09 03 40.3	-1.2
SEY	Seymchan	16.12	353	⇑*i*P	Pn	09 03 40.3	-1.2
SEY	Seymchan	16.12	353	Pn	Pn	09 03 39.9	-1.6
	comp=Z,0.3nm,0.3s,baz=158,slow=9.5,SNR=12						
EKMR	Ekimchan	16.32	300	*e*P	Pn	09 03 40.0	-4.2
EKMR				AMB	AMB	09 03 48.9	
	comp=Z,20nm,0.8s						
KLR	Kul'dur	16.73	287	⇓*e*P	Pn	09 03 50.0	+0.6
KLR	Kul'dur	16.73	287	Pn	Pn	09 03 49.7	+0.3
	comp=Z,0.2nm,0.3s,baz=93,slow=12,SNR=20						
KLR				LR	LR	09 10 29.9	
	comp=Z,105nm,20.0s,baz=94,slow=38						
MJAR	Matsushiro Arr	17.23	239	P	Pn	09 03 52.3	-3.4
	comp=Z,0.0nm,0.3s,baz=26,slow=12,SNR=4.4						
MJB9	Matsu-Tunnel	17.23	239	*e*Pn	Pn	09 03 54.0	-1.7
	comp=Z,16nm,1.1s						
MAJO	Matsushiro	17.23	239	*e*P	Pn	09 03 55.3	-0.4
MAJO	Matsushiro	17.23	239	*e*P	Pn	09 03 55.3	-0.4
USA0B	Ussuriysk Arra	17.44	270	*e*Pn	Pn	09 03 57.4	-0.9
	comp=Z,6.5nm,0.8s						
USRK	Ussuriysk Ar.	17.44	270	P	Pn	09 03 56.0	-2.3
	comp=Z,0.5nm,0.3s,baz=67,slow=13,SNR=17						
USRK				LR	LR	09 09 33.1	
	comp=Z,39nm,21.0s,baz=63,slow=33						
BMKR	Bomnak	19.05	304	*e*P	P	09 04 16.8	-0.4
ZEA	Zeya	19.80	301	*e*P	P	09 04 24.0	-1.4
ZEA	Zeya	19.80	301	*e*P	P	09 04 24.0	-1.4
KROS	Kirovskiy	20.07	303	*e*P	P	09 04 25.7	-2.7
KROS				AMB	AMB	09 04 28.6	
	comp=Z,20nm,0.9s						
YAK	Yakutsk	21.45	324	*e*P	P	09 04 43.3	+0.1
YAK	Yakutsk	21.45	324	*e*P	P	09 04 43.3	+0.1
YAK				*e**PP	pwP	09 04 52.0	+2.6
YAK				*e*		09 05 03.6	
YAK				*e*S	S	09 08 40.5	-0.9
YAK				*e*		09 08 50.1	
YAK				*e*SS	SnSn	09 09 09.3	+5.4
YAK				*e*SSS	SSS	09 09 21.2	
YAK				*e*		09 16 04.8	
YAK				pmax	pmax		
	comp=Z,25nm,0.8s						
YAK				pmax	pmax		
	comp=E,29nm,0.9s						
YAK				pmax	pmax		
	comp=Z,445nm,3.8s						
YAK				pmax	pmax		
	comp=N,695nm,3.7s						
YAK				pmax	pmax		
	comp=E,393nm,3.3s						
YAK				smax	smax		
	comp=N,571nm,3.5s						
YAK				smax	smax		
	comp=E,140nm,2.3s						
BILL	Bilibino	21.65	10	*e*P	P	09 04 46.2	+0.8
	comp=E,15nm,1.0s						
BILL	Bilibino	21.65	10	*e*P	P	09 04 46.6	+1.3
BILL	Bilibino	21.65	10	*de*P	P	09 04 46.6	+1.3
BILL				pmax	pmax		
	comp=Z,15nm,1.7s						
KSRS	Korea Array	23.19	256	P	P	09 05 01.9	+0.1
	comp=Z,3.8nm,0.8s,baz=50,slow=11,SNR=7.1						
GAMB	Gambell	24.21	35	*e*P	P	09 05 12.2	+0.7
	comp=Z,12nm,1.1s						
ANM	Nome	27.05	36	*e*P	P	09 05 38.4	+1.1
	comp=Z,6.8nm,0.8s						
ANM	Nome	27.05	36	*e*P	P	09 05 38.4	+1.1
ANM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H11N2	WAKE ISLAND Hy	28.49	159	T	T	09 35 25.8	
	baz=346,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	28.50	159	T	T	09 35 27.2	
	baz=346,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	28.50	159	T	T	09 35 32.7	
	baz=346,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.62	160	T	T	09 36 57.6	
	baz=346,slow=76,SNR=68						
H11S3	WAKE ISLAND Hy	29.63	160	T	T	09 37 00.4	
	baz=346,slow=76,SNR=63						
H11S2	WAKE ISLAND Hy	29.64	160	T	T	09 37 03.2	
	baz=346,slow=76,SNR=61						
SVW2	Sparrevohn	30.60	45	*e*P	P	09 06 09.4	+0.4
	comp=Z,9.2nm,1.3s						
IM3	Indian Mountai	32.13	36	*e*P	P	09 06 22.2	-0.2
NJ2	Nanjing	32.39	256	*e*P	P	09 06 27.1	+2.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC	Hu-ho-hao-te	32.67	276	*e*P	P	09 06 28.1	+0.7
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.3s						
MLY	Manley	33.22	38	*e*P	P	09 06 33.1	+1.2
	comp=Z,2.6nm,0.8s						
TRF	Thorofare Moun	33.26	41	*e*P	P	09 06 32.6	+0.1
	comp=Z,15nm,1.4s						
SONA1	Songino Array	33.49	290	*e*P	P	09 06 35.4	+0.7
SONA0	Songino Array	33.50	290	*e*P	P	09 06 34.3	-0.4
SONA0				*e*PcP	PcP	09 09 14.3	-1.1
SONM	Songino Array	33.50	290	P	P	09 06 34.3	-0.4
	comp=Z,1.0nm,0.8s,baz=78,slow=8.2,SNR=7.7						
SONM				PcP	PcP	09 09 14.3	-1.1
	comp=Z,0.2nm,0.5s,baz=92,slow=3.3,SNR=4.3						
SONM				LR	LR	09 20 54.1	
	comp=Z,75nm,20.6s,baz=58,slow=38						
BWN	Browne	33.68	40	*e*P	P	09 06 36.7	+0.8
	comp=Z,34nm,0.8s						
GHO	Glory Hole Cre	33.83	44	*e*P	P	09 06 37.0	-0.3
	comp=Z,7.9nm,1.0s						
MCK	McKinley	33.88	40	*e*P	P	09 06 37.8	+0.1
	comp=Z,13nm,1.2s						
MCK	McKinley	33.88	40	*e*P	P	09 06 37.8	+0.1
MCK	McKinley	33.88	40	*e*P	P	09 06 37.8	+0.1
MCK				pmax	pmax		
	comp=Z,13nm,1.2s						
RND	Reindeer	33.90	41	*e*P	P	09 06 38.4	+0.4
	comp=Z,10.0nm,0.8s						
RND	Reindeer	33.90	41	*e*P	P	09 06 38.4	+0.4
RND				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KNK	Knik Glacier	34.05	45	*e*P	P	09 06 38.3	-0.9
	comp=Z,24nm,1.4s						
SML	Sawmill	34.11	44	*e*P	P	09 06 39.3	-0.4
	comp=Z,15nm,0.8s						
SML	Sawmill	34.11	44	*e*P	P	09 06 39.3	-0.4
SML	Sawmill	34.11	44	*e*P	P	09 06 39.3	-0.4
SML				pmax	pmax		
	comp=Z,15nm,0.8s						
TLY	Talaya	34.19	298	*e*P	P	09 06 40.5	0.0
TLY	Talaya	34.19	298	⇑*e*P	P	09 06 40.5	0.0
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TOLK	Toolik Lake Re	34.25	32	*e*P	P	09 06 41.7	+0.8
	comp=Z,3.7nm,0.9s						
MDM	Murphy Dome	34.27	38	*e*P	P	09 06 41.9	+0.8
	comp=Z,4.1nm,0.8s						
WRH	Wood River Hil	34.30	39	*e*P	P	09 06 41.9	+0.6
	comp=Z,8.2nm,1.2s						
COLA	College	34.43	39	*e*P	P	09 06 43.0	+0.7
COLA	College	34.43	39	⇑*i*P	P	09 06 43.0	+0.7
COLA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DHY	Denali Highway	34.56	42	*e*P	P	09 06 44.0	+0.2
	comp=Z,6.3nm,0.8s						
SCM	Sheep Creek Mo	34.59	44	*e*P	P	09 06 44.4	+0.5
	comp=Z,21nm,1.2s						
SCM	Sheep Creek Mo	34.59	44	*e*P	P	09 06 44.4	+0.5
SCM				pmax	pmax		
	comp=Z,21nm,1.2s						
HDA	Harding Lake	34.79	39	*e*P	P	09 06 45.7	+0.2
	comp=Z,3.8nm,0.6s						
IL1	Eielson Array	34.83	39	*e*P	P	09 06 45.8	-0.1
ILAR	Eielson Array	34.83	39	P	P	09 06 45.2	-0.7
	comp=Z,1.9nm,0.7s,baz=248,slow=7.6,SNR=14						
ILB	Eielson Array	34.83	39	*e*P	P	09 06 45.8	-0.1
	comp=Z,2.5nm,0.7s						
KLU	Klutina	35.27	44	*e*P	P	09 06 50.1	+0.3
	comp=Z,9.7nm,1.0s						
PRP	Porcupine Dome	35.45	37	*e*P	P	09 06 52.2	+0.9
	comp=Z,3.4nm,0.8s						
HARP	HAARP	35.59	43	*e*P	P	09 06 53.0	+0.5
	comp=Z,33nm,1.4s						
SCRK	Sand Creek	36.08	40	*e*P	P	09 06 56.1	-0.6
	comp=Z,2.8nm,0.9s						
EGAK	Eagle	37.29	39	*e*P	P	09 07 07.0	+0.1
	comp=Z,12nm,0.8s						
XAN	Xi'an	37.93	268	P	P	09 07 12.6	-0.2
XAN				pP	pwP	09 07 20.8	+1.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
EPYK	Eagle Plains	39.04	36	*e*P	P	09 07 23.1	+1.4
	comp=Z,18nm,1.2s						
HYT	Haines Junctio	39.40	45	*e*P	P	09 07 26.1	+1.2
	comp=Z,9.9nm,1.0s						
NRIK	Noril'sk	39.77	329	P	P	09 07 28.4	+0.7
	comp=Z,3.2nm,0.6s,baz=122,slow=9.5,SNR=3.6						
NRIK				LR	LR	09 25 08.8	
	comp=Z,61nm,19.8s,baz=38,slow=38						
INK	Inuvik	40.13	33	*e*P	P	09 07 31.8	+1.1
	comp=Z,9.3nm,0.7s						
INK	Inuvik	40.13	33	P	P	09 07 31.6	+1.0
	comp=Z,8.2nm,0.8s,baz=294,slow=7.0,SNR=39						
LZH	Lanzhou	40.28	274	*e*P	P	09 07 33.8	+1.3
LZH				pP	pwP	09 07 37.8	-0.8
LZH				sP	pP	09 07 41.3	+9.0
LZH				PP	PnPn	09 09 12.8	+4.3
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
GTA	Gaotai	41.29	281	*e*P	P	09 07 42.3	+1.5
GTA				pP	pwP	09 07 46.3	-0.7
GTA				sP	pP	09 07 49.1	+8.5
GTA				PcP	PcP	09 09 39.6	+0.2
GTA				S	S	09 13 56.0	+0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,140nm,5.6s						
GTA				LR	LR		
	comp=Z,130nm,17.5s						
GTA				LR	LR		
	comp=Z,140nm,18.7s						
GTA				LR	LR		
	comp=Z,130nm,18.7s						
CD2	Chengdu	43.30	268	*e*P	P	09 07 56.5	-0.6
DLBC	Dease Lake	43.67	47	P	P	09 08 00.3	+0.5
	comp=Z,2.0nm,0.3s,baz=281,slow=13,SNR=4.1						
ZAA1	Zalesovo Array	44.39	307	*e*P	P	09 08 05.1	-0.5
ZALV	Zalesovo Beam	44.39	307	P	P	09 08 05.1	-0.5
	comp=Z,1.2nm,0.7s,baz=66,slow=7.0,SNR=4.6						
ZALV				LR	LR	09 26 52.5	
	comp=Z,96nm,22.0s,baz=70,slow=36						
DGZ	Jazzator, Alta	44.56	300	⇑*e*P	P	09 08 08.1	+0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
WMQ	Urumqi	47.06	293	*e*P	P	09 08 30.4	+3.5
WMQ				sP	pwP	09 08 37.1	+4.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.7s						
WMQ				LR	LR		
	comp=Z,330nm,21.7s						
WMQ				LR	LR		
	comp=Z,190nm,22.5s						
WMQ				LR	LR		
	comp=Z,120nm,20.1s						
KMI	Kunming	47.66	262	P	P	09 08 33.0	+1.0
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK32	Makanchi Array	48.94	299	*e*P	P	09 08 41.3	-0.1
MK32				*e*PcP	PcP	09 10 05.3	-0.2
MKAR	Makanchi Array	48.94	299	P	P	09 08 41.3	-0.1
	comp=Z,3.2nm,0.8s,baz=63,slow=8.3,SNR=17						
MKAR				PcP	PcP	09 10 05.3	-0.2
	comp=Z,1.4nm,0.7s,baz=59,slow=4.8,SNR=2.7						
MKAR				LR	LR	09 30 28.4	
	comp=Z,67nm,18.5s,baz=54,slow=38						
MK01	Makanchi Array	48.94	299	*e*P	P	09 08 41.0	-0.3
KURK	Kurchatov	49.20	305	*e*P	P	09 08 43.6	+0.4
	comp=Z,7.2nm,0.8s						
KURK	Kurchatov	49.20	305	*e*P	P	09 08 42.9	-0.3
KURK	Kurchatov	49.20	305	*d i*P	P	09 08 42.9	-0.3
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
YKW3	Yellowknife Ar	49.22	38	*e*P	P	09 08 43.6	+0.4
	comp=Z,13nm,1.1s						
YKA	Yellowknife Ar	49.25	38	P	P	09 08 43.7	+0.3
	comp=Z,5.1nm,0.7s,baz=293,slow=7.5,SNR=63						

YKB5	Yellowknife Ar	49.25	38	eP	P	09 08 43.0	-0.4
RES	Resolute Bay	49.80	19	eP	P	09 08 48.9	+1.4
	comp=Z,8.8nm,1.4s						
RES	Resolute Bay	49.80	19	eP	P	09 08 48.9	+1.4
RES				pmax	pmax		
	comp=Z,9.0nm,1.4s						
RES	Resolute Bay	49.80	19	P	P	09 08 48.5	+1.0
	comp=Z,2.1nm,0.7s,baz=301,slow=6.7,SNR=8.8						
BVAR	Borovoye Array	52.53	311	LR	LR	09 32 43.7	
	comp=Z,104nm,18.7s,baz=56,slow=38						
BRVK	Borovoye	52.56	311	eP	P	09 09 09.2	+0.7
	comp=Z,4.8nm,0.8s						
BRVK	Borovoye	52.56	311	eP	P	09 09 09.1	+0.5
BRVK	Borovoye	52.56	311	eP	P	09 09 09.2	+0.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SPA0	Spitsbergen Ar	52.76	350	eP	P	09 09 10.5	+0.9
	comp=Z,34nm,1.3s						
TULEG	Thule	53.38	12	eP	P	09 09 13.9	-0.3
	comp=Z,16nm,1.5s						
PAYA	Payao	53.52	259	P	P	09 09 17.6	+1.5
	comp=Z,4.8nm,0.8s						
UTTA	Uttaradit	54.20	257	P	P	09 09 21.7	+0.7
CMMT	Chiang Mai	54.52	259	P	P	09 09 24.3	+0.9
	comp=Z,11nm,1.7s						
CHTO	Chiang Mai	54.53	259	P	P	09 09 24.4	+1.0
CHTO	Chiang Mai	54.53	259	P	P	09 09 24.4	+1.0
	comp=Z,48nm,1.8s						
CM31	Chiang Mai Arr	54.78	259	eP	P	09 09 25.3	+0.1
	comp=Z,7.8nm,0.8s						
CMAR	Chiang Mai Arr	54.78	259	eP	P	09 09 25.8	+0.6
CMAR	Chiang Mai Arr	54.78	259	i P	P	09 09 25.8	+0.6
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	54.78	259	P	P	09 09 25.6	+0.4
	comp=Z,4.7nm,0.7s,baz=35,slow=7.7,SNR=15						
CMAR				PcP	PcP	09 10 28.4	+0.7
	comp=Z,2.1nm,0.6s,baz=13,slow=3.0,SNR=6.1						
SHL	Shillong	54.78	271	eP	P	09 09 25.4	0.0
	comp=Z,13nm,0.6s						
SHL	Shillong	54.78	271	eP	P	09 09 25.4	0.0
SHL				pmax	pmax		
	comp=Z,13nm,0.6s						
CM01	Chiang Mai Arr	54.79	259	eP	P	09 09 25.5	+0.2
PINE	Pine Mountain	55.38	61	eP	P	09 09 30.8	+1.3
	comp=Z,6.1nm,1.0s						
YBH	Yreka Blue Hor	55.48	64	P	P	09 09 29.9	-0.3
	comp=Z,2.3nm,0.8s,baz=9.8,slow=3.4,SNR=6.8						
AAK	Ala-Archa	55.85	298⇓	eP	P	09 09 34.6	+1.7
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARU	Arti	56.42	319	eP	P	09 09 36.4	0.0
ARU	Arti	56.42	319c	i P	P	09 09 36.5	0.0
ARU						09 10 30.6	
ARU						09 11 39.5	
ARU				S	S	09 17 29.8	+2.2
ARU				SS	SS	09 21 14.8	+1.0
ARU				pmax	pmax		
	comp=Z,12nm,0.9s						
UMPA	Umpang Tak	56.43	257	P	P	09 09 40.4	+3.3
DAG	Danmarks Havn	56.45	359	i P	P	09 09 37.2	+0.8
DAG	Danmarks Havn	56.45	359	i P	P	09 09 37.2	+0.8
KSH	Kashi	56.76	294	P	P	09 09 43.8	+4.5
KSH				pP	pwP	09 09 49.6	+4.1
KSH				PP	PP	09 11 53.0	+7.8
KSH				S	S	09 17 36.6	+3.8
KSH				sS	pS	09 17 45.8	+13
KSH				SS	SS	09 21 24.9	+4.8
KSH				pmax	pmax		
	comp=Z,220nm,4.1s						
KSH				LR	LR		
	comp=Z,150nm,4.7s						
KSH				LR	LR		
	comp=Z,280nm,4.8s						
KSH				LR	LR		
	comp=Z,220nm,6.3s						
BRDH	Bariadhala	56.85	268	P	P	09 09 39.2	-0.8
	comp=Z,29nm,0.3s,baz=66,slow=12,SNR=3.6						
MOD	Modoc Plateau	56.85	62	eP	P	09 09 40.8	+0.7
	comp=Z,3.0nm,0.8s						
JIRN	Jiri	57.31	277	eP	P	09 09 44.5	+0.8
	comp=Z,76nm,1.0s						
GUN	Gumba	57.36	277	eP	P	09 09 44.7	+0.6
	comp=Z,33nm,0.8s						
RAMN	Ramite	57.49	276	eP	P	09 09 45.3	+0.5
	comp=Z,49nm,0.9s						
KKN	Kakani	57.85	278	eP	P	09 09 48.4	+1.1
KEV	Kevo	57.87	342	eP	P	09 09 47.3	+0.8
	comp=Z,14nm,1.2s						
KEV	Kevo	57.87	342	eP	P	09 09 47.3	+0.8
KEV				pmax	pmax		
	comp=Z,14nm,1.2s						
PKI	Pulchoki	57.90	277	eP	P	09 09 48.2	+0.4
PKIN	Phulchoki	57.91	277	eP	P	09 09 48.3	+0.5
DMN	Daman	58.08	277	eP	P	09 09 50.0	+1.0
	comp=Z,91nm,1.0s						
ARA0	ARCESS Array S	58.37	342	eP	P	09 09 50.4	+0.3
ARCES	ARCESS Array B	58.37	342	eP	P	09 09 48.5	-1.6
ARCES	ARCESS Array B	58.37	342	P	P	09 09 50.4	+0.3
	comp=Z,1.4nm,0.5s,baz=31,slow=5.4,SNR=9.3						
PRGR	Permogore	58.42	328	eP	P	09 09 50.5	0.0
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
DANN	Dangsing	58.52	279	eP	P	09 09 53.2	+1.1
	comp=Z,57nm,0.6s						
PNTR	Pine Nut	58.96	65	eP	P	09 09 55.9	+1.0
	comp=Z,12nm,1.4s						
FFC	Flin Flon	58.96	42	eP	P	09 09 55.5	+1.1
FFC	Flin Flon	58.96	42	i P	P	09 09 55.5	+1.1
KOLN	Koldanda	59.00	279	eP	P	09 09 56.1	+0.8
	comp=Z,64nm,1.0s						
PYUN	Piuthan	59.20	279	eP	P	09 09 57.5	+0.8
	comp=Z,68nm,1.1s						
YERR	Yerington	59.24	64	eP	P	09 09 58.0	+1.1
	comp=Z,3.8nm,1.0s						
BOZ	Bozeman (W)	59.69	54	eP	P	09 10 00.6	+0.8
BOZ	Bozeman (W)	59.69	54	P	P	09 10 00.6	+0.8
FCC	Fort Churchill	59.69	35	eP	P	09 09 59.4	0.0
	comp=Z,4.6nm,0.9s						
FCC	Fort Churchill	59.69	35	eP	P	09 09 59.4	0.0
FCC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KVN	Kaiserville	59.90	64	P	P	09 10 02.2	+0.8
ABKAR	Akbulak array	60.08	311	eP	P	09 10 01.9	-0.3
	comp=Z,2.6nm,0.7s						
NV01	Mina Array Sit	60.16	64	eP	P	09 10 04.2	+1.0
NVAR	Mina Array Bea	60.16	64	P	P	09 10 03.9	+0.7
	comp=Z,2.3nm,0.7s,baz=292,slow=7.0,SNR=17						
SUMG	Summit	60.24	5	i P	P	09 10 04.1	+0.7
	comp=Z,46nm,1.0s						
SUMG	Summit	60.24	5	i P	P	09 10 04.1	+0.7
KLMR	Klimovskoe	61.09	330	eP	P	09 10 07.8	-1.1
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	Klimovskoe	61.09	330	eP	P	09 10 07.9	-1.0
KLMR				AMP		09 10 10.6	
	comp=Z,6.0nm,1.1s						
REDW	Red Top Meadow	61.51	56	eP	P	09 10 13.7	+1.3
	comp=Z,13nm,1.4s						
R11A	Troy Canyon, C	61.88	63	eP	P	09 10 15.3	+0.4
	comp=Z,5.7nm,1.5s						
COEN	Coen	61.89	195	eP	P	09 10 13.6	-1.1
	comp=Z,15nm,1.4s						
NIL	Nilore	62.09	290	eP	P	09 10 16.6	+0.5
	comp=Z,27nm,0.9s						
NIL	Nilore	62.09	290	eP	P	09 10 16.6	+0.5
NIL				pmax	pmax		
	comp=Z,27nm,0.9s						
TPNV	Topopah Spring	62.36	65	eP	P	09 10 18.6	+0.5
	comp=Z,4.4nm,1.0s						
TPNV	Topopah Spring	62.36	65	eP	P	09 10 18.6	+0.5
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DUG	Dugway, Tooele	62.38	60	eP	P	09 10 18.6	+0.5
DUG	Dugway, Tooele	62.38	60	P	P	09 10 18.6	+0.5
BW06	Boulder Array	62.62	56	eP	P	09 10 20.6	+0.7
	comp=Z,3.0nm,1.0s						
PDAR	Pinedale Array	62.62	56	eP	P	09 10 20.3	+0.4
PDAR	Pinedale Array	62.62	56	P	P	09 10 19.8	-0.1
	comp=Z,1.1nm,0.8s,baz=275,slow=3.4,SNR=9.3						
KNB	Kanab	64.41	63	P	P	09 10 33.2	+1.5
SRU	San Rafael Swe	64.42	59	P	P	09 10 32.3	+0.5
FIA1	FINESS Array S	64.79	336	eP	P	09 10 33.5	0.0
FIA0	FINESS Array S	64.79	336	eP	P	09 10 32.9	-0.6
FIA0	FINESS Array S	64.79	336	eP	P	09 10 32.9	-0.6
FINES	FINESS Array B	64.79	336	P	P	09 10 32.9	-0.6
	comp=Z,2.4nm,0.8s,baz=18,slow=6.4,SNR=5.5						
FINES				LR	LR	09 41 34.3	
	comp=Z,76nm,20.1s,baz=18,slow=38						
OBN	Obninsk	66.42	327	eP	P	09 10 46.8	+2.7
OBN				e		09 11 14.2	
OBN				e		09 13 13.1	
OBN				ePPP	PPP	09 14 48.6	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,57nm,18.0s						
CTA	Charters Tower	67.45	191	P	P	09 10 49.1	-1.8
	comp=Z,1.8nm,0.6s,baz=18,slow=5.2,SNR=4.2						
NB2	NORSAR Subarra	68.72	343	P	P	09 11 03.0	+4.4
	comp=Z,1.5nm,0.6s,baz=25,slow=6.5						
NB200	NORSAR Array S	68.72	343	eP	P	09 10 59.6	+1.0
NOA	NORSAR Array B	68.72	343	P	P	09 10 59.6	+1.0
	comp=Z,0.8nm,0.7s,baz=25,slow=6.4,SNR=3.7						
NOA				LR	LR	09 45 09.4	
	comp=Z,48nm,21.0s,baz=25,slow=40						
WRAB	Tennant Creek	69.60	202⇓	iP	P	09 11 02.4	-2.1
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WB2	Warramunga Arr	69.61	202	eP	P	09 11 02.4	-2.1
WR1	Warramunga Arr	69.62	202	eP	P	09 11 02.6	-2.0
	comp=Z,8.5nm,1.0s						
WRA	Warramunga Arr	69.62	202	i P	P	09 11 01.7	-2.9
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	69.62	202	P	P	09 11 02.6	-2.0
	comp=Z,3.8nm,0.9s,baz=20,slow=6.6,SNR=23						
WC3	Warramunga Arr	69.62	202	eP	P	09 11 03.2	-1.4
	comp=Z,11nm,1.3s						
FITZ	Fitzroy Crossi	70.56	211	eP	P	09 11 10.0	-0.4
	comp=Z,6.5nm,0.7s						
FITZ	Fitzroy Crossi	70.56	211	P	P	09 11 09.4	-1.0
	comp=Z,6.4nm,0.7s,baz=24,slow=5.5,SNR=18						
KIV	Kislovodsk	72.30	316	eP	P	09 11 18.5	-2.4
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,57nm,18.0s						
KBZ	Khabaz	72.37	316	P	P	09 11 21.3	+0.2
	comp=Z,3.8nm,0.8s,baz=65,slow=2.0,SNR=12						
KBZ				LR	LR	09 46 20.4	
	comp=Z,49nm,21.9s,baz=23,slow=38						
ZEI	Tsey	72.60	315	eP	P	09 11 20.4	-2.4
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	72.62	328	P	P	09 11 21.8	-0.8
	comp=Z,0.6nm,0.4s,baz=27,slow=6.2,SNR=2.8						
AKASG				LR	LR	09 46 33.7	
	comp=Z,51nm,19.0s,baz=315,slow=38						
NEY	Neytrino	72.82	316⇑	eP	P	09 11 26.0	+1.9
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AS01	Alice Springs	73.28	202	eP	P	09 11 26.0	-0.6
AS31	Alice Springs	73.29	202	eP	P	09 11 25.2	-1.5
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	73.29	202	P	P	09 11 25.7	-1.0
	comp=Z,4.3nm,0.6s,baz=16,slow=5.4,SNR=70						
LTX	Lajitas	75.25	63	eP	P	09 11 38.2	-0.2
LTX	Lajitas	75.25	63	eP	P	09 11 38.2	-0.2
TXAR	Lajitas Array	75.25	63	P	P	09 11 38.2	-0.2
	comp=Z,2.7nm,0.8s,baz=301,slow=4.4,SNR=27						
GERES	GERESS Array B	79.22	336	P	P	09 12 00.8	+0.3
	comp=Z,0.2nm,0.3s,baz=95,slow=7.1,SNR=3.8						
GERES				LR	LR	09 51 07.2	
	comp=Z,100nm,19.4s,baz=4.5,slow=39						
STKA	Stephens Creek	79.69	193	LR	LR	09 49 11.4	
	comp=Z,28nm,18.2s,baz=26,slow=37						
BR101	Keskin Array S	79.80	319	eP	P	09 12 01.9	-1.8
BRTR	Keskin Array B	79.80	319	P	P	09 12 01.9	-1.8
	comp=Z,0.9nm,1.0s,baz=98,slow=4.4,SNR=3.6						
ESDC	Sonseca Array	91.96	345	P	P	09 13 03.2	-0.9
	comp=Z,0.2nm,0.3s,baz=357,slow=4.9,SNR=6.7						
ESDC				LR	LR	09 59 01.7	
	comp=Z,43nm,21.1s,baz=120,slow=38						
LPAZ	La Paz	132.06	66	PKP	PKPdf	09 19 09.3	-0.8
	comp=Z,1.3nm,0.8s,baz=0.0,slow=7.1,SNR=4.4						
CPUP	Villa Florida	146.21	64	PKPbc	PKPdf	09 19 35.0	+0.3
	comp=Z,1.7nm,0.8s,baz=296,slow=7.7,SNR=5.1						
SNAA	Sanae	153.45	194	PKP	PKPbc	09 19 50.9	-1.6
VNA2	Neumayer--Watz	154.82	192	PKP	PKPbc	09 19 52.8	-2.6

IDC ***18*** *09:06:46.7±0.6, 11°.79N×125°.52E, h0^{km}, mb4.1/21, mb1 4.3/21, mb1mx4.2/46, mbtmp4.1/21, MS3.5/4, Ms1 3.5/4, ms1mx2.9/47, Error ellipse: s-maj=27.1km s-min=13.0km az=76.0*

MAN ***18*** *09:06:51.9, 11°.90N×125°.53E, h15^{km}, MS3.5*

MAN INTENSITY III - BORONGAN CITY; ORAS SAN POLICARPO & CAN-AVID EASTERN SAMAR; INTENSITY II - LLORENTE EASTERN SAMAR.

ISCJB ***18*** *09:06:52.2±0.7, 11°.88N±0°.04×125°.63E±0°.05, h52^{km}±6^{km}, mb4.3/36, Error ellipse: s-maj=9.4km s-min=5.5km az=159.7*

NEIC ***18*** *09:06:55.1±2.2, 11°.73N×125°.52E, h65^{km}±21^{km}, mb4.4/15, Error ellipse: s-maj=9.7km s-min=4.5km az=67.0*

NEIC Felt [III PIVS] at Borongan, Can-Avid, Oras and San Policarpio; [II PIVS] at Llorente.

ISC 18 09:06:52.7±0.5**, 11°.95N**±0°.05×**125°.62E**±0°.07**, h38**^{km}±2^{km}**, n88, σ1^{s}.52**/94**, mb4.5**/45**, 3C-5D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.39	207	eP	Pn	09 06 59.8	-1.9
BESP				eS	Sn	09 07 05.9	-2.5
PLP	Palo	1.00	219⇓	eP	Pn	09 07 08.0	-2.2
CNP	Catarman	1.09	301	eP	Pn	09 07 11.7	+0.2
CNP				eS	Sn	09 07 28.2	+2.9
OCLP	Ormoc	1.33	228	eP	Pn	09 07 14.3	-0.5
OCLP				eS	Sn	09 07 33.8	+2.6
MSLP	Maasin	1.95	203	eP	Pn	09 07 23.6	+0.3
MSLP				eS	Sn	09 07 51.2	+4.7
SCPH	Surigao	2.15	183⇑	eP	Pn	09 07 25.9	-0.2
PVCP	Virac	2.17	319	eP	Pn	09 07 26.7	+0.3
PVCP				eS	Sn	09 08 02.9	+11
LLP	Lapu-Lapu	2.29	225⇑	eP	Pn	09 07 27.6	-0.4
LLP				eS	Sn	09 07 56.5	+1.5
TBP	Tagbilaran	2.83	218	eP	Pn	09 07 34.4	-1.0
RCP	Roxas	2.84	263⇑	eP	Pn	09 07 36.2	+0.7
RCP				eS	Sn	09 08 09.2	+0.7
BUTP	Butuan	2.96	180	eP	Pn	09 07 39.3	+2.1
BUTP				eS	Sn	09 08 21.9	+10
SNPH	Sibulan	3.49	222⇓	eP	Pn	09 07 43.6	-1.0
SNPH				i S	Sn	09 08 30.7	+6.0
OTRP	Odiongan	3.54	277	eP	Pn	09 07 45.3	+0.1
CGP	Cagayan de Oro	3.59	195⇓	eP	Pn	09 07 47.5	+1.6
CGP				eS	Sn	09 08 29.1	+2.1
DCPH	Dipolog City	4.02	214⇓	eP	Sn	09 08 53.7	+16
BUKP	Musuan	4.08	188	eP	Pn	09 07 53.9	+1.3
BUKP				eS	Sn	09 08 45.0	+5.8
KCP	Kidapawan	4.93	186⇓	eP	Sn	09 09 13.1	+13
ENH	Enshi	23.59	323	eP	P	09 12 01.1	+1.0
	10nm,0.9s						
MTN	Manton Dam	25.23	167	eP	P	09 12 13.5	-1.7
	6.8nm,1.0s						
KSAR	Wonju Array Be	25.47	4	P	P	09 12 18.6	+1.4
KSRS	Korea Array	25.48	4	P	P	09 12 18.6	+1.3
	1.8nm,0.8s,baz=184,slow=11,SNR=3.4						
CM01	Chiang Mai Arr	26.50	287	eP	P	09 12 25.8	-1.0
CMAR	Chiang Mai Arr	26.52	287	P	P	09 12 27.2	+0.3
	2.4nm,0.7s,baz=102,slow=7.3,SNR=8.8						
CMAR				LR	LR	09 22 36.9	
	comp=Z,25nm,18.6s,baz=92,slow=36						
XAN	Xi'an	26.75	328	eP	P	09 12 29.1	+0.2
	7.9nm,0.8s						
PSI	Prapat	27.96	253	LR	LR	09 25 46.2	
	comp=Z,80nm,18.2s,baz=91,slow=41						
FITZ	Fitzroy Crossi	29.85	180	eP	P	09 12 54.9	-1.7
	3.6nm,0.8s						
FITZ	Fitzroy Crossi	29.85	180	P	P	09 12 54.6	-2.0
	3.7nm,0.8s,baz=1.1,slow=8.2,SNR=7.3						
USRK	Ussuriysk Ar.	32.60	9	P	P	09 13 22.0	+1.4
USRK	Ussuriysk Ar.	32.60	9	P	P	09 13 22.0	+1.4
	1.3nm,0.7s,baz=213,slow=10,SNR=3.9						
WR1	Warramunga Arr	32.83	165	eP	P	09 13 20.1	-2.7
	2.2nm,0.8s						
WR1				ePcP	PcP	09 16 06.5	-0.8
WRA	Warramunga Arr	32.83	165	P	P	09 13 20.1	-2.7
	0.5nm,0.7s,baz=337,slow=10,SNR=3.4						
WRA				PcP	PcP	09 16 06.5	-0.8
	0.1nm,0.5s,baz=344,slow=3.0,SNR=8.1						
BRDH	Bariadhala	34.07	293	LR	LR	09 28 46.6	
	comp=Z,88nm,18.1s,baz=124,slow=39						
AS31	Alice Springs	36.31	167	eP	P	09 13 51.6	-1.4
	0.8nm,0.8s						
ASAR	Alice Springs	36.31	167	P	P	09 13 51.9	-1.1
	1.3nm,0.6s,baz=346,slow=7.7,SNR=14						
ASAR				PcP	PcP	09 16 16.4	-0.9
	0.8nm,0.5s,baz=338,slow=3.1,SNR=6.4						
KLR	Kul'dur	37.52	7	PcP	PcP	09 16 20.8	+0.3
	0.5nm,0.6s,baz=166,slow=4.2,SNR=3.3						
ODAN	Odare	38.81	298	eP	P	09 14 14.3	-0.1
	39nm,0.7s						
SONA0	Songino Array	39.23	339	eP	P	09 14 18.4	+0.9
SONA0				ePcP	PcP	09 16 25.7	-0.3
SONM	Songino Array	39.23	339	P	P	09 14 18.4	+0.9
	0.6nm,0.4s,baz=155,slow=9.6,SNR=4.9						
SONM				PcP	PcP	09 16 25.7	-0.3
	0.5nm,0.5s,baz=153,slow=4.5,SNR=3.6						
RAMN	Ramite	39.52	298	eP	P	09 14 20.3	0.0
	24nm,0.7s						
JIRN	Jiri	40.05	299	eP	P	09 14 24.8	-0.1
	55nm,0.4s						
H11N1	WAKE ISLAND Hy	40.37	74	T	T	09 57 51.5	
	baz=265,slow=74,SNR=26						
H11N2	WAKE ISLAND Hy	40.38	74	T	T	09 57 47.9	
	baz=265,slow=74,SNR=9.0						
GUN	Gumba	40.38	299	eP	P	09 14 27.4	-0.2
	40nm,0.8s						
H11N3	WAKE ISLAND Hy	40.39	74	T	T	09 57 53.4	
	baz=265,slow=74,SNR=7.9						
PKI	Pulchoki	40.70	298	eP	P	09 14 29.4	-0.8
	14nm,0.5s						
PKIN	Phulchoki	40.71	299	eP	P	09 14 29.4	-0.9
	12nm,0.5s						
KKN	Kakani	40.87	299	eP	P	09 14 30.8	-0.7
DMN	Daman	40.97	298	eP	P	09 14 31.7	-0.7
DANN	Dangsing	42.30	299	eP	P	09 14 42.7	-0.6
	50nm,0.9s						
KOLN	Koldanda	42.30	298	eP	P	09 14 42.8	-0.4
	28nm,0.9s						
PYUN	Piuthan	42.91	298	eP	P	09 14 47.6	-0.5
	49nm,1.0s						
STKA	Stephens Creek	46.19	161	eP	P	09 15 12.6	-1.3
	1.4nm,1.1s						
STKA	Stephens Creek	46.19	161	P	P	09 15 13.2	-0.7
	3.2nm,0.7s,baz=338,slow=9.9,SNR=7.5						
MK01	Makanchi Array	50.30	322	eP	P	09 15 46.3	+0.8
MK31	Makanchi Array	50.32	322	eP	P	09 15 47.0	+1.3
	6.0nm,0.8s						
MK32	Makanchi Array	50.32	322	eP	P	09 15 46.9	+1.2
MKAR	Makanchi Array	50.32	322	P	P	09 15 46.9	+1.2
	8.5nm,0.8s,baz=121,slow=8.2,SNR=55						
MAKZ	Makanchi	50.51	322	eP	P	09 15 48.3	+1.1
	6.9nm,1.0s						
NIL	Nilore	52.27	303	eP	P	09 15 59.6	-1.0
ZALV	Zalesovo Beam	52.86	331	eP	P	09 16 04.7	+0.2
ZALV	Zalesovo Beam	52.86	331	P	P	09 16 04.9	+0.4
	1.0nm,0.5s,baz=121,slow=7.3,SNR=4.9						
ZAA1	Zalesovo Array	52.86	331	eP	P	09 16 04.8	+0.4
KURK	Kurchatov	54.33	325	eP	P	09 16 16.3	+1.0
	23nm,0.9s						
SEY	Seymchan	54.37	15	P	P	09 16 17.1	+1.7
	1.4nm,0.7s,baz=182,slow=2.2,SNR=5.8						
CHGR	Chuyangaron	56.54	309	eP	P	09 16 31.3	-0.3
	9.3nm,1.2s						
KK31	Karatay Array	56.63	314	eP	P	09 16 32.6	+0.5
	5.1nm,0.8s						
KKAR	Karatay Array	56.63	314	eP	P	09 16 32.0	0.0
	5.1nm,0.8s						
BRVK	Borovoye	60.00	325	eP	P	09 16 56.1	+0.7
	9.3nm,0.8s						
NRIK	Noril'sk	62.24	346	P	P	09 17 10.8	+0.5
	1.5nm,0.3s,baz=84,slow=5.2,SNR=4.1						
ABKAR	Akbulak array	65.20	319	eP	P	09 17 30.2	+0.1
	5.3nm,0.8s						
ARU	Arti	67.48	326	eP	P	09 17 44.6	-0.1
	6.8nm,0.7s						
RAYN	Ar Rayn	76.36	291	eP	P	09 18 37.5	-1.0
	12nm,1.0s						
KBZ	Khabaz	76.61	312	P	P	09 18 38.5	-1.0
	2.4nm,0.8s,baz=11,slow=1.8,SNR=5.1						
ILAR	Eielson Array	78.22	26	P	P	09 18 48.4	+0.3
	0.5nm,0.7s,baz=243,slow=6.2,SNR=6.7						
ARA0	ARCESS Array S	82.41	340	eP	P	09 19 10.9	+0.4
ARCES	ARCESS Array B	82.41	340	P	P	09 19 11.0	+0.4
	3.7nm,0.7s,baz=88,slow=7.4,SNR=11						
INK	Inuvik	82.97	22	P	P	09 19 14.4	+0.9
	0.8nm,0.6s,baz=331,slow=3.7,SNR=5.6						
OPO	Ambohidratompo	83.05	249	LR	LR	09 54 31.0	
	comp=Z,82nm,18.8s,baz=304,slow=35						
BR101	Keskin Array S	83.98	309	eP	P	09 19 18.8	-0.7
BRTR	Keskin Array B	83.98	309	P	P	09 19 18.8	-0.7
	1.9nm,0.7s,baz=100,slow=4.2,SNR=9.1						
FIA1	FINESS Array S	84.12	332	eP	P	09 19 19.9	+0.4
FIA0	FINESS Array S	84.12	332	eP	P	09 19 19.8	+0.3
FINES	FINESS Array B	84.12	332	P	P	09 19 19.8	+0.3
	5.6nm,0.8s,baz=88,slow=4.2,SNR=24						
AKASG	Malin Array Be	84.87	321	P	P	09 19 22.8	-0.8
	1.9nm,0.5s,baz=65,slow=5.0,SNR=5.4						
NB2	NORSAR Subarra	90.98	334	P	P	09 19 51.7	-1.0
	comp=Z,0.7nm,0.6s,baz=66,slow=4.4						
NB200	NORSAR Array S	90.98	334	eP	P	09 19 51.7	-1.0
NOA	NORSAR Array B	90.98	334	P	P	09 19 51.7	-1.0
	comp=Z,1.0nm,0.7s,baz=63,slow=4.6,SNR=3.9						
YKA	Yellowknife Ar	92.49	24	P	P	09 20 00.5	+0.9
	comp=Z,0.1nm,0.4s,baz=304,slow=4.5,SNR=4.5						

ISCJB ***18*** *09:16:16.3±2.2, 12°.0S±0°.2×165°.9E±0°.3, h30^{km}, mb3.8/4, Error ellipse: s-maj=40.3km s-min=17.6km az=149.1*

IDC ***18*** *09:16:21.3±4.7, 12°.06S×165°.90E, h62^{km}±34^{km}, mb3.5/5, mb1 3.8/7, mb1mx3.4/46, mbtmp3.9/7, ML4.1/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/22, Error ellipse: s-maj=54.1km s-min=35.4km az=66.0*

ISC 18 09:16:17.7±2.4**, 11°.9S**±0°.2×**166°.0E**±0°.3**, h30**^{km}**, n7, σ1^{s}.57**/7**, mb3.7**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.45	292	P	Pn	09 17 52.7	+2.0
	9.6nm,0.3s,baz=74,slow=2.2,SNR=4.0						
HNR				LR	LR	09 20 13.2	
	comp=Z,98nm,19.7s,baz=123,slow=36						
DZM	Mont Dzumac	10.09	178	P	Pn	09 18 42.1	+1.3
	0.7nm,0.3s,baz=310,slow=6.4,SNR=9.2						
CTA	Charters Tower	20.62	244	P	P	09 20 54.7	-0.2
	1.5nm,0.7s,baz=58,slow=13,SNR=3.3						
WRA	Warramunga Arr	31.43	251	P	P	09 22 35.4	-1.2
	0.5nm,0.5s,baz=84,slow=9.2,SNR=12						
ASAR	Alice Springs	32.63	245	P	P	09 22 45.7	-1.6
	0.9nm,0.7s,baz=72,slow=9.5,SNR=12						
FITZ	Fitzroy Crossi	39.40	256	P	P	09 23 44.9	-0.3
	0.9nm,0.7s,baz=112,slow=10,SNR=3.8						
MKAR	Makanchi Array	94.34	317	P	P	09 29 34.0	-0.5
	0.7nm,0.6s,baz=94,slow=5.9,SNR=4.3						

IDC ***18*** *09:17:13.6±0.7, 55°.39N×166°.30E, h0^{km}, mb3.9/23, mb1 4.1/24, mb1mx4.0/50, mbtmp4.0/24, ML3.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/45, Error ellipse: s-maj=21.6km s-min=12.2km az=168.0*

ISCJB ***18*** *09:17:15.0±0.2, 55°.30N±0°.04×166°.39E±0°.03, h20^{km}, mb4.0/42, Error ellipse: s-maj=5.4km s-min=2.3km az=161.6*

KRSC ***18*** *09:17:14.4±1.6, 55°.21N×166°.09E, h7^{km}±23^{km}, ML4.4*

MOS ***18*** *09:17:15.2±0.8, 55°.19N×166°.09E, h12^{km}, mb4.3/9, Error ellipse: s-maj=9.3km s-min=7.0km az=147.3*

NEIC ***18*** *09:17:18.5±1.4, 55°.38N×166°.36E, h33^{km}±11^{km}, mb4.0/20, Error ellipse: s-maj=7.8km s-min=2.9km az=157.0*

ISC 18 09:17:16.9±0.5**, 55°.41N**±0°.05×**166°.36E**±0°.05**, h20**^{km}**, n129, σ0^{s}.96**/148**, mb4.0**/42**, 2C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	2.15	293	eP	Pn	09 17 49.9	-1.7
KBTR				eS	Sn	09 18 17.3	-0.4
KBTR	Krutoberegovo	2.15	293	PN	Pn	09 17 49.9	-1.7
KBTR				S	Sn	09 18 17.3	-0.4
KBG	Krutoberegovo	2.23	294	eS	Sb	09 18 20.9	-2.6
SMKR	Semkarok	2.99	295	eP	Pn	09 18 03.5	+0.4
SMKR				eS	Sn	09 18 40.1	+1.7

SMKR	Semkarok	2.99	295	PN	Pn	09 18 03.5	+0.4
SMKR				S	Sn	09 18 40.1	+1.7
BDR	Baidarnaya	3.12	294	*e*P	Pn	09 18 05.9	+1.0
BDR	Baidarnaya	3.12	294	PN	Pn	09 18 05.9	+1.0
SRKR	Sorokina	3.17	295	*e*P	Pn	09 18 05.6	0.0
SRKR				*e*S	Sn	09 18 44.7	+1.9
SRKR	Sorokina	3.17	295	PN	Pn	09 18 05.6	0.0
SRKR				S	Sn	09 18 44.7	+1.9
ZLN	Zelenaya	3.20	283	*e*P	Pn	09 18 07.3	+1.2
ZLN				*e*S	Sn	09 18 45.9	+2.2
ZLN	Zelenaya	3.20	283	PN	Pn	09 18 07.3	+1.2
ZLN				S	Sn	09 18 45.9	+2.2
KLY	Klyuchi	3.34	288	*e*P	Pn	09 18 07.0	-0.9
KLY				*e*S	Sn	09 18 46.1	-0.9
KLY	Klyuchi	3.34	288	PN	Pn	09 18 07.0	-0.9
KLY				S	Sn	09 18 46.1	-0.9
BZWR	Bezymyannyi-We	3.37	282	*e*S	Sn	09 18 50.3	+2.5
TUMD	Tumrok D	3.42	269	*e*P	Pn	09 18 09.3	+0.4
TUMD				*e*S	Sn	09 18 49.6	+0.8
KZV	Kizimen	3.48	268	*e*P	Pn	09 18 10.4	+0.4
KZV				*e*S	Sn	09 18 51.0	+0.3
KZV	Kizimen	3.48	268	PN	Pn	09 18 10.4	+0.4
KZV				S	Sn	09 18 51.0	+0.3
TUMR	Tumrok	3.55	270	*e*P	Pn	09 18 12.1	+1.2
TUMR	Tumrok	3.55	270	PN	Pn	09 18 12.1	+1.2
KII	Karymskiy	4.24	254	*e*P	Pn	09 18 21.4	+1.1
KII	Karymskiy	4.24	254	PN	Pn	09 18 21.4	+1.1
OSSR	Ossora	4.24	336	*e*S	Sb	09 19 18.6	-2.8
ESO	Esso	4.37	280	*e*P	Pn	09 18 24.4	+2.4
ESO	Esso	4.37	280	PN	Pn	09 18 24.4	+2.4
SPN	Mys Shipunski	4.38	241	*e*S	Sn	09 19 10.7	-1.9
SDLR	Sedlovina	4.87	247	*e*P	Pn	09 18 28.6	-0.4
SDLR				*e*S	Sn	09 19 24.2	-0.6
SDLR	Sedlovina	4.87	247	PN	Pn	09 18 28.6	-0.4
SMAR	Somma	4.92	247	*e*P	Pn	09 18 29.9	+0.1
SMAR	Somma	4.92	247	PN	Pn	09 18 29.9	+0.1
UGLR	Uglovaya	4.94	247	*e*P	Pn	09 18 30.4	+0.5
UGLR	Uglovaya	4.94	247	PN	Pn	09 18 30.4	+0.5
AVH	Avacha	4.95	247	*e*P	Pn	09 18 30.6	+0.5
AVH				*e*S	Sn	09 19 25.7	-1.1
AVH	Avacha	4.95	247	PN	Pn	09 18 30.6	+0.5
KRX	Arik	4.96	249	*e*P	Pn	09 18 30.1	-0.1
KRX	Arik	4.96	249	PN	Pn	09 18 30.1	-0.1
KOK	Koryaka	4.99	248	*e*P	Pn	09 18 30.9	+0.2
KOK				*e*S	Sn	09 19 26.7	-1.1
KOK	Koryaka	4.99	248	PN	Pn	09 18 30.9	+0.2
DALK	Dalny	5.06	245	*e*P	Pn	09 18 31.2	-0.3
DALK				*e*S	Sn	09 19 28.6	-0.7
DALK	Dalny	5.06	245	PN	Pn	09 18 31.2	-0.3
PET	Petropavlovsk	5.12	245	*e*Pn	Pn	09 18 32.8	+0.6
PET	Petropavlovsk	5.12	245	*e*S	Sn	09 19 29.0	-1.7
PET	Petropavlovsk	5.12	245	*e*PN	Pn	09 18 32.2	-0.1
GNL	Ganaly	5.19	254	*e*P	Pn	09 18 34.1	+0.6
GNL	Ganaly	5.19	254	PN	Pn	09 18 34.1	+0.6
KRMR	Karymshinskiy	5.49	245	*e*P	Pn	09 18 37.9	+0.5
KRMR				*e*S	Sn	09 19 40.3	+0.5
KRMR	Karymshinskiy	5.49	245	PN	Pn	09 18 37.9	+0.5
PEA1	Petropavlovsk-	5.58	249	*e*Pn	Pn	09 18 38.7	+0.1
PEA1				*e*Sn	Sn	09 19 43.4	+1.4
PEA0B	Petropavlovsk-	5.58	249	*e*Pn	Pn	09 18 39.3	+0.7
PETK	Petropavlovsk-	5.58	249	*e*Pn	Pn	09 18 39.3	+0.6
PETK				Sn	Sn	09 19 43.4	+1.3
PETK	Petropavlovsk-	5.58	249	Pn	Pn	09 18 38.7	+0.1
	3.4nm,0.3s,baz=78,slow=19,SNR=39						
PETK				Sn	Sn	09 19 43.4	+1.3
	2.5nm,0.3s,baz=87,slow=20,SNR=5.0						
MTVR	Mutnovka	5.65	242	*e*P	Pn	09 18 39.9	+0.1
MTVR				*e*S	Sn	09 19 42.9	-1.2
MTVR	Mutnovka	5.65	242	PN	Pn	09 18 39.9	+0.1
SKR	Severo-Kuril's	7.78	237	⇑*e*PN	Pn	09 19 10.7	+1.9
MA2	Magadan	9.37	303	LR	LR	09 22 49.1	
	comp=Z,100nm,20.8s,baz=102,slow=36						
GAMB	Gambell	13.84	44	*e*Pn	Pn	09 20 30.6	-1.0
YSS	Yuzh-Sakhalins	16.98	250	*e*P	Pn	09 21 00.7	-12
ASAJ	Asahikawa	18.96	243	P	Pn	09 21 40.1	+2.8
	0.2nm,0.3s,baz=127,slow=20,SNR=2.0						
IM3	Indian Mountai	21.78	45	*e*P	P	09 22 07.7	+0.7
KLR	Kul'dur	21.87	268	P	P	09 22 09.1	+1.0
	0.9nm,0.8s,baz=97,slow=8.1,SNR=2.8						
PPLA	Purkeypile	22.18	53	*e*P	P	09 22 11.8	+0.4
	9.7nm,1.2s						
KDAK	Kodiak Island	22.48	67	P	P	09 22 15.1	+0.6
	9.7nm,0.8s,baz=256,slow=19,SNR=2.8						
SUA	Susitna One	22.90	57	*e*P	P	09 22 19.4	+0.2
TRF	Thorofare Moun	23.05	52	*e*P	P	09 22 21.2	+0.6
	3.8nm,1.2s						
COLD	Coldfoot	23.38	42	*e*P	P	09 22 24.6	+0.8
	2.1nm,1.0s						
TOLK	Toolik Lake Re	23.87	39	*e*P	P	09 22 29.1	+0.5
	7.8nm,0.8s						
MDM	Murphy Dome	23.97	48	*e*P	P	09 22 29.6	0.0
	2.2nm,0.8s						
KNK	Knik Glacier	24.00	57	*e*P	P	09 22 29.6	-0.2
	1.7nm,0.6s						
SML	Sawmill	24.02	56	*e*P	P	09 22 30.1	+0.1
	4.9nm,0.8s						
SML	Sawmill	24.02	56	*e*P	P	09 22 30.1	+0.1
SML				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRH	Wood River Hil	24.02	49	*e*P	P	09 22 30.7	+0.7
	comp=Z,4.4nm,1.2s						
COLA	College	24.13	48	⇑*e*P	P	09 22 30.7	-0.2
COLA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DHY	Denali Highway	24.37	53	*e*P	P	09 22 33.0	-0.4
SCM	Sheep Creek Mo	24.49	56	*e*P	P	09 22 34.2	-0.2
	comp=Z,20nm,1.0s						
SCM	Sheep Creek Mo	24.49	56	*e*P	P	09 22 34.2	-0.2
SCM				pmax	pmax		
	comp=Z,20nm,1.0s						
HDA	Harding Lake	24.52	50	*e*P	P	09 22 34.6	+0.1
	comp=Z,3.7nm,1.2s						
ILAR	Eielson Array	24.54	49	*e*P	P	09 22 34.1	-0.7
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ILAR	Eielson Array	24.54	49	P	P	09 22 34.5	-0.3
	comp=Z,4.7nm,0.9s,baz=249,slow=7.2,SNR=33						
ILB	Eielson Array	24.54	49	*e*P	P	09 22 34.5	-0.3
	comp=Z,6.0nm,0.8s						
IL1	Eielson Array	24.54	49	*e*P	P	09 22 33.8	-0.9
PRP	Porcupine Dome	25.12	47	*e*P	P	09 22 40.5	+0.3
	comp=Z,6.6nm,1.2s						
KLU	Klutina	25.20	56	*e*P	P	09 22 40.9	+0.1
	comp=Z,2.7nm,0.9s						
FYU	Fort Yukon	25.27	44	*e*P	P	09 22 41.8	+0.5
HARP	HAARP	25.45	54	*e*P	P	09 22 43.5	+0.5
SCRK	Sand Creek	25.83	50	*e*P	P	09 22 45.8	-0.7
	comp=Z,2.8nm,1.0s						
MJB9	Matsu-Tunnel	26.89	237	*e*P	P	09 22 54.9	-1.3
	comp=Z,8.4nm,1.0s						
MAJO	Matsushiro	26.89	237	*e*P	P	09 22 55.0	-1.2
	comp=Z,12nm,1.1s						
MAJO	Matsushiro	26.89	237	*e*P	P	09 22 55.0	-1.2
MAJO				pmax	pmax		
	comp=Z,12nm,1.1s						
EGAK	Eagle	26.99	48	*e*P	P	09 22 56.1	-0.8
	comp=Z,2.5nm,0.8s						
INK	Inuvik	29.75	41	*e*P	P	09 23 21.7	+0.3
	comp=Z,2.0nm,1.1s						
INK	Inuvik	29.75	41	*e*P	P	09 23 21.7	+0.3
INK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
INK	Inuvik	29.75	41	P	P	09 23 21.7	+0.3
	comp=Z,1.2nm,0.4s,baz=286,slow=6.7,SNR=12						
H11N2	WAKE ISLAND Hy	35.62	179	T	T	10 01 28.5	
	baz=0.2,slow=76,SNR=66						
H11N3	WAKE ISLAND Hy	35.64	179	T	T	10 01 31.7	
	baz=0.2,slow=76,SNR=97						
H11N1	WAKE ISLAND Hy	35.64	179	T	T	10 01 31.9	
	baz=0.2,slow=76,SNR=75						
NRIK	Noril'sk	36.17	324	P	P	09 24 17.2	-0.1
	comp=Z,1.6nm,0.5s,baz=156,slow=10.0,SNR=2.2						
SONA0	Songino Array	36.93	284	*e*P	P	09 24 25.1	+0.8
SONM	Songino Array	36.93	284	P	P	09 24 25.1	+0.8
	comp=Z,0.7nm,0.7s,baz=67,slow=9.5,SNR=3.6						
YKA	Yellowknife Ar	38.93	47	P	P	09 24 41.2	+0.5
	comp=Z,0.8nm,0.6s,baz=296,slow=8.1,SNR=12						
DGZ	Jazzator, Alta	45.91	297	⇓*e*P	P	09 25 37.9	+0.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	49.58	303	*e*P	P	09 26 06.4	+0.3
KURK	Kurchatov	49.58	303	*e*P	P	09 26 06.4	+0.3
KURBB	Kurchatov Arra	49.68	303	P	P	09 26 06.4	-0.5
	comp=Z,2.6nm,0.8s,baz=51,slow=7.4,SNR=5.4						
MK32	Makanchi Array	50.41	298	*e*P	P	09 26 11.7	-0.8
MKAR	Makanchi Array	50.41	298	P	P	09 26 11.7	-0.8
	comp=Z,0.7nm,0.6s,baz=55,slow=7.5,SNR=7.1						
NV01	Mina Array Sit	51.55	76	*e*P	P	09 26 21.3	-0.1
NVAR	Mina Array Bea	51.55	76	P	P	09 26 22.2	+0.8
	comp=Z,1.0nm,0.8s,baz=297,slow=7.0,SNR=6.8						
BVAR	Borovoye Array	51.77	310	P	P	09 26 22.1	-0.5
	comp=Z,1.4nm,0.5s,baz=39,slow=5.5,SNR=8.4						
ARA0	ARCESS Array S	52.16	344	*e*P	P	09 26 26.3	+1.0
ARA0				*e*PcP	PcP	09 27 36.2	-0.5
ARCES	ARCESS Array B	52.16	344	P	P	09 26 26.3	+1.0
	comp=Z,1.1nm,0.8s,baz=11,slow=10,SNR=2.8						
ARCES				PcP	PcP	09 27 36.2	-0.5
	comp=Z,3.7nm,1.0s,baz=31,slow=4.2,SNR=3.7						
PDAR	Pinedale Array	53.20	66	P	P	09 26 34.4	+0.8
	comp=Z,0.2nm,0.4s,baz=329,slow=2.6,SNR=4.9						
AAK	Ala-Archa	57.27	299	P	P	09 27 02.4	-0.4
	comp=Z,0.9nm,0.6s,baz=108,slow=3.2,SNR=4.2						
AKTO	Aktyubinsk	58.88	315	P	P	09 27 13.7	-0.2
	comp=Z,0.4nm,0.3s,baz=135,slow=2.9,SNR=2.6						
FIA0	FINESS Array S	59.36	339	*e*P	P	09 27 16.6	-0.4
FIA0	FINESS Array S	59.36	339	*e*P	P	09 27 16.6	-0.4
FINES	FINESS Array B	59.36	339	P	P	09 27 16.6	-0.4
	comp=Z,0.8nm,0.4s,baz=12,slow=7.9,SNR=7.0						
SCHQ	Schefferville	61.81	32	*e*P	P	09 27 33.4	-0.5
	comp=Z,3.0nm,0.9s						
SCHQ	Schefferville	61.81	32	P	P	09 27 33.4	-0.5
	comp=Z,5.9nm,1.0s,baz=326,slow=11,SNR=4.9						
NB2	NORSAR Subarra	62.24	347	P	P	09 27 36.0	-0.6
	comp=Z,0.7nm,0.4s,baz=17,slow=6.9						
NB200	NORSAR Array S	62.24	347	*e*P	P	09 27 36.3	-0.3
NOA	NORSAR Array B	62.24	347	P	P	09 27 36.3	-0.3
	comp=Z,0.8nm,0.4s,baz=18,slow=6.8,SNR=5.9						
LTX	Lajitas	66.38	72	*e*P	P	09 28 04.8	+0.5
LTX	Lajitas	66.38	72	*e*P	P	09 28 04.8	+0.5
TXAR	Lajitas Array	66.38	72	P	P	09 28 04.8	+0.5
	comp=Z,3.2nm,0.5s,baz=301,slow=5.1,SNR=52						
AKASG	Malin Array Be	68.40	332	P	P	09 28 16.0	-0.6
AKASG	Malin Array Be	68.40	332	P	P	09 28 16.0	-0.6
	comp=Z,1.1nm,0.5s,baz=23,slow=6.1,SNR=3.7						
WR1	Warramunga Arr	79.84	210	*e*P	P	09 29 22.5	-1.2
	comp=Z,2.9nm,1.1s						
WRA	Warramunga Arr	79.84	210	P	P	09 29 22.5	-1.2
	comp=Z,0.5nm,0.8s,baz=24,slow=6.2,SNR=6.1						
ASAR	Alice Springs	83.50	210	P	P	09 29 42.6	-0.2
	comp=Z,0.5nm,0.8s,baz=11,slow=5.1,SNR=4.4						
ESDC	Sonseca Array	84.92	353	P	P	09 29 50.0	-0.2
	comp=Z,0.7nm,0.4s,baz=12,slow=7.6,SNR=8.2						

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*IDC **18** 09:23:57.6±9.2, 33°.55S×148°.92E, h0^{km}, mb1 3.3/3, mb1mx3.3/24, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=169.7km s-min=47.6km az=178.0*
*ISCJB **18** 09:23:58.1±0.6, 33°.40S±0°.05×148°.85E±0°.05, h10^{km}, Error ellipse: s-maj=7.0km s-min=5.4km az=6.7*
*AUST **18** 09:23:58.6±0.9, 33°.50S×148°.99E, h0^{km}, Error ellipse: s-maj=11.7km s-min=3.3km az=142.0*
ISC 18 09:23:58.4±0.9, **33°.45S**±0°.06×**148°.98E**±0°.04, **h10**^{km}**, n8, σ0ˢ.96**/13, **New South Wales**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YNG	Young	0.98	210	P	Pg	09 24 16.7	-0.5
	baz=0.9,SNR=27						
YNG				S	Sg	09 24 29.4	-0.5
	baz=0.9,SNR=11						
MGCD	Mangrove Creek	1.80	83	P	Pb	09 24 31.1	-0.3
	baz=1.8,SNR=39						
MGCD				S	Sg	09 24 55.6	-0.7
	baz=1.8,SNR=17						
RIV	Riverview	1.86	102	P	Pn	09 24 30.4	+0.1
	baz=1.8,SNR=10						
RIV				S	Sb	09 24 56.9	+1.2
	baz=1.8,SNR=16						
CNB	Canberra Magne	1.89	170	P	Pn	09 24 31.2	+0.4
	baz=1.8,SNR=11						
CNB				S	Sb	09 24 56.4	-0.3
	baz=1.8,SNR=12						
MILA	Mila	3.60	178	P	Pn	09 24 56.1	+1.7
	baz=3.6,SNR=4.3						
STKA	Stephens Creek	6.42	282	Pn	Pn	09 25 34.2	+1.1
	0.2nm,0.3s,baz=101,slow=16,SNR=2.4						
STKA				Sn	Sn	09 26 45.1	-1.4
	0.6nm,0.3s,baz=10,slow=20,SNR=3.0						
STKA				Lg	Lg	09 27 21.3	
	0.7nm,0.3s,baz=180,slow=20,SNR=3.3						
ASAR	Alice Springs	16.43	303	Pn	Pn	09 27 49.5	+0.4
	0.1nm,0.3s,baz=132,slow=12,SNR=3.7						
WRA	Warramunga Arr	18.73	312	P	Pn	09 28 17.9	+0.1
	0.0nm,0.3s,baz=143,slow=10,SNR=3.4						

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*GUC **18** 09:27:14.8±0.3, 32°.62S×71°.37W, h33^{km}±2^{km}, ML2.5*
*SJA **18** 09:27:14.0±0.7, 32°.86S×71°.59W, h37^{km}±2^{km}, ML2.5, MW3.9*
ISC 18 09:27:13.6±2.3, **32°.63S**±0°.05×**71°.5W**±0°.1, **h32**^{km}±14^{km}, **n11, σ0ˢ.97**/19, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	0.56	128	*i* P	Pn	09 27 25.8	+0.2
ROC1				*i* S	Sn	09 27 34.3	+0.4
ROCH	El Roble	0.56	127	*e*P	Pn	09 27 25.9	+0.3
ROCH				*e*S	Sn	09 27 34.2	+0.3
ROCH				IAML		09 27 35.4	
	comp=N,644nm,0.2s						
PEL	Peldehue	0.88	125	*i* P	Pb	09 27 30.5	0.0
PEL				*i* S	Sb	09 27 43.0	+0.9
PEL	Peldehue	0.88	125	*e*P	Pb	09 27 30.3	-0.2
PEL				*e*S	Sb	09 27 42.0	-0.1
PEL				IAML		09 27 43.5	
	comp=E,317nm,0.1s						
CLCH	Cerro Calan	1.14	132	*e*P	Pb	09 27 34.6	-0.1
CLCH				*e*S	Sb	09 27 49.4	+0.2
CLCH				IAML		09 27 59.8	
	comp=E,159nm,0.4s						
FCH	Farellones	1.26	124	*e*P	Pb	09 27 36.4	-0.6
FCH				*e*S	Sb	09 27 52.8	-0.3
FCH				IAML		09 27 54.6	
	comp=E,190nm,0.1s						
CMCH	Combarbala	1.53	18	*e*P	Pb	09 27 41.2	-0.1
CMCH				*e*S	Sb	09 28 01.3	+1.0
LMEL	Las Melosas	1.65	137	*e*P	Pb	09 27 42.6	-0.9
LMEL				*e*S	Sb	09 28 03.8	-0.2
LMEL				IAML		09 28 08.0	
	comp=E,221nm,0.2s						
AUSP	Uspallata	1.87	78	*i* P	Pb	09 27 48.0	+0.7
RTLS	Leoncito	2.08	67	*i* P	Pb	09 27 51.4	+0.5
RTLS				IAML		09 28 03.1	
	comp=Z,31nm,0.3s						
AMOG	MOGNA	3.10	58	*i* P	Pb	09 28 04.9	-3.1

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*DDA **18** 09:32:52.6, 40°.72N×41°.12E, h7^{km}±4^{km}, ML2.9*
*ISK **18** 09:32:52.8, 40°.68N×41°.25E, h17^{km}, ML2.4/6*
*ISCJB **18** 09:32:53.5±0.5, 40°.68N±0°.03×41°.20E±0°.03, h8^{km}±6^{km}, Error ellipse: s-maj=4.6km s-min=3.5km az=144.0*
*TIF **18** 09:32:54.1, 40°.74N×41°.24E, h15^{km}±2^{km}*
ISC 18 09:32:52.9±1.2, **40°.71N**±0°.03×**41°.23E**±0°.03, **h17**^{km}±11^{km}, **n19, σ0ˢ.82**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDEM	Demirkent	0.44	65	*i* P	Pb	09 33 02.7	+0.4
DDEM				*i* S	Sn	09 33 10.6	-1.6
DDEM				IAML_P			
	comp=Z,2μm,0.1s						
DBAD	Bademkaya	0.47	49	*i* P	Pb	09 33 03.3	+0.5
DBAD				*i* S	Sn	09 33 11.5	-1.5
CHOM	Cayeli-Rize	0.52	318	PG	Pb	09 33 04.3	+0.6
CHOM				SG	Sn	09 33 12.9	-1.4
CHAY	Cayeli-Rize	0.54	315	PG	Pb	09 33 03.9	0.0
CHAY				SG	Sn	09 33 13.3	-1.2
DAGI	Agillar	0.64	55	*i* P	Pn	09 33 06.8	-0.6
DAGI				*i* S	Sn	09 33 15.7	-1.5
DAGI				IAML_P			
	comp=Z,2μm,0.1s						
ARTV	Artvin	0.71	48	*i* P	Pn	09 33 08.6	+0.1
ARTV				*i* S	Sn	09 33 19.7	+0.5
ARTV				IAML_P			
	comp=Z,4μm,0.1s						
DBOC	Borcka	0.72	27	*i* P	Pn	09 33 08.0	-0.4
DBOC				*i* S	Sb	09 33 17.4	+0.8
BCA	Borcka	0.79	22	PG	Pn	09 33 09.2	-0.2
BCA				SG	Sn	09 33 20.8	-0.1
HOMI	Horasan	0.84	142	*i* P	Pn	09 33 10.1	-0.2
HOMI				*i* S	Sn	09 33 23.1	+0.7
HOMI				IAML_P			
	comp=Z,811nm,0.1s						
KOPR	Koprukoy-ERZUR	0.86	146	PG	Pg	09 33 09.7	0.0
BAYB	BAYBURT	0.87	239	*i* P	Pb	09 33 09.2	-0.5
BAYB				*i* S	Sg	09 33 20.3	-0.9
SENK	Senkaya-Erzuru	0.87	99	PG	Pb	09 33 09.6	-0.1
BAYT	Aydıntepe-Bayb	0.89	249	PG	Pb	09 33 09.6	-0.4
KOPT	Kop Dagi	0.89	219	*i* P	Pg	09 33 10.6	+0.3
KOPT				*i* S	Sn	09 33 24.8	+1.2
BATM	Batumi	0.96	21	PG	Pn	09 33 12.2	+0.5
BATM	Batumi	0.96	21	P	Pn	09 33 12.2	+0.5
BATM				S	Sn	09 33 25.7	+0.7
MACK	Trabzon	1.13	282	*i* P	Pg	09 33 15.6	+0.8
KTUT	Trabzon	1.14	285	PN	Pg	09 33 14.8	-0.2
KELT	Kelkit	1.61	250	*i* P	Pb	09 33 22.2	0.0
KELT				*i* S	Sb	09 33 43.2	+0.9

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*NNC **18** 09:41:09.5±1.7, 36°.83N×71°.00E, h213^{km}±23^{km}, mb2.6, mpv3.8, Error ellipse: s-maj=19.1km s-min=14.2km az=54.0*
ISC 18 09:41:08.1±3.1, **36°.7N**±0°.2×**71°.1E**±0°.1, **h200**^{km}**, n15, σ0ˢ.78**/19, **5C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.82	29	⇓P	Pn	09 42 08.4	+0.5
	6.0nm,0.2s						
SFK				⇑S	Sn	09 42 56.4	+1.5
	9.8nm,0.5s						
AML	Almayashu	5.79	20	P	Pn	09 42 33.1	+0.1
	SNR=73						
MNAS	Manas	5.89	10	⇓P	Pn	09 42 34.4	+0.4
	6.7nm,0.4s						
MNAS				⇓S	Sn	09 43 41.6	-0.3
	5.7nm,0.4s						
UCH	Uchtor	6.13	25	P	Pn	09 42 37.1	-0.3
	SNR=39						
KZA	Kyzart	6.27	30	P	Pn	09 42 38.2	-1.0
	SNR=10						
EKS2	Erkin-Say	6.31	19	P	Pn	09 42 40.0	+0.6
	SNR=15						
KK31	Karatay Array	6.41	356	P	Pn	09 42 41.0	+0.4
	0.9nm,0.4s,baz=178,slow=13,SNR=26						
KK31				⇑S	Sn	09 43 52.6	-1.4
	4.1nm,0.3s,baz=176,slow=21,SNR=14						
AAK	Ala-Archa	6.49	23	P	Pn	09 42 42.4	+0.5
	SNR=12						
AAK	Ala-Archa	6.49	23	⇑P	Pn	09 42 42.0	+0.2
	4.0nm,0.3s						
AAK				⇑S	Sn	09 43 56.2	0.0
	1.8nm,0.6s						
KBK	Karagaybulak	6.66	26	P	Pn	09 42 44.5	+0.5
	SNR=8.0						
ULHL	Ulahol	6.83	34	P	Pn	09 42 45.4	-1.0
	SNR=5.9						
TKM2	Tokmak 2	7.12	28	P	Pn	09 42 49.9	-0.2
	SNR=7.1						
TKM2	Tokmak 2	7.12	28	⇓P	Pn	09 42 49.4	-0.7
	6.6nm,0.5s						
AB31	Akbulak array	14.94	331	⇑P	P	09 44 30.6	+0.5
	0.1nm,0.3s,baz=139,slow=12,SNR=9.6						
AKTO	Aktyubinsk	16.63	330	⇓P	P	09 44 47.8	-1.0
	1.2nm,0.5s						

IDC 18 09:46:56.7±12.0, **26°.39S**×**71°.14E, h0**^{km}**, mb3.7**/4, **mb1 3.9**/4, **mb1mx3.5**/52, **mbtmp3.7**/4, **Error ellipse: s-maj=398.1km s-min=36.5km az=48.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.68	4	T	T	10 10 35.7	
	baz=182						
H08S2	Diego Garcia H	18.68	4	T	T	10 10 35.4	
	baz=182						
H08S3	Diego Garcia H	18.70	4	T	T	10 10 25.7	
	baz=182,SNR=6.7						
ASAR	Alice Springs	56.44	102	P	P	09 56 40.5	-0.1
	0.5nm,1.0s,baz=253,slow=6.5,SNR=3.5						
WRA	Warramunga Arr	57.97	98	P	P	09 56 51.4	0.0
	1.1nm,0.3s,baz=252,slow=7.4,SNR=6.3						
MKAR	Makanchi Array	73.53	8	P	P	09 58 31.0	-0.2
	0.4nm,0.7s,baz=205,slow=7.9,SNR=4.6						
KURBB	Kurchatov Arra	76.95	5	P	P	09 58 51.0	+0.3
	0.4nm,0.7s,baz=201,slow=7.0,SNR=3.6						

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*WEL **18** 09:47:28.2±1.0, 38°S±7°×17°9E±°, h33^{km}, ML4.0/16*
*IDC **18** 09:47:30.3±4.4, 38°.34S×179°.34E, h85^{km}±30^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.5/34, mbtmp3.9/3, Error ellipse: s-maj=37.5km s-min=30.9km az=82.0*
ISC 18 09:47:22.2±2.3, **37°.90S**±0°.06×**179°.82E**±0°.10, **h28**^{km}±14^{km}, **n113, σ1ˢ.73**/126, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.11	273	P	Pb	09 47 43.2	+0.4
MXZ	Matakaoa Point	1.24	285	P	Pn	09 47 44.3	+0.6
MXZ				S	Sn	09 47 56.3	-3.2
PUZ	Puketiti	1.25	261	P	Pb	09 47 45.6	+0.5
PUZ				S	Sn	09 47 58.8	-0.8
PKGZ	Pakihiroa	1.38	270	P	Pn	09 47 46.8	+1.2
PKGZ				S	Sn	09 48 00.3	-2.6
CNGZ	Carnagh Statio	1.40	245	P	Pb	09 47 49.0	+1.4
TWGZ	Tauwhareparae	1.48	258	P	Pb	09 47 49.1	0.0
TWGZ				S	Sn	09 48 05.0	-0.4
HAZ	Te Kaha	1.62	274	P	Pn	09 47 49.8	+1.0
TKGZ	Te Karaka	1.64	250	P	Pb	09 47 51.6	-0.2
TKGZ				S	Sn	09 48 10.0	+0.5
RUGZ	Raukumara Rang	1.69	267	P	Pn	09 47 51.2	+1.2
RIGZ	Rimuhau	1.81	243	P	Pb	09 47 54.3	-0.4
RIGZ				S	Sn	09 48 14.7	+1.2
PRGZ	Paritu Road	1.83	235	P	Pb	09 47 54.8	-0.3
MWZ	Matawai	1.86	256	P	Pn	09 47 53.7	+1.5
MWZ				S	Sn	09 48 13.6	-1.2
MHGZ	Mahia Peninsul	1.96	229	P	Pn	09 47 56.8	+3.3
MHGZ				P	Pb	09 47 56.7	-0.5
RAGZ	Rawiri	1.98	252	P	Pn	09 47 56.1	+2.1
RAGZ				S	Sn	09 48 17.1	-0.9
KNZ	Kokohu	2.02	236	P	Pn	09 47 57.0	+2.6
KNZ				S	Sn	09 48 19.5	+0.7
SNGZ	Shannon Statio	2.14	245	P	Pn	09 47 58.4	+2.3
URZ	Urewera	2.17	260	P	Pn	09 47 58.3	+2.0
	26nm,0.3s,baz=92,slow=3.8,SNR=142						
URZ				S	Sn	09 48 21.3	-1.0
	46nm,0.3s,baz=162,slow=20,SNR=26						
URZ	Urewera	2.17	260	P	Pn	09 47 58.4	+2.0
WHRZ	Whale Island	2.25	270	P	Pn	09 47 59.8	+2.3
WHHZ	Waihua	2.34	239	P	Pn	09 48 01.7	+2.8
RTZ	Ruatahuna	2.35	251	P	Pn	09 48 01.5	+2.5
RAHZ	Arahi	2.38	244	P	Pn	09 48 01.9	+2.5
EDRZ	Edgecumbe	2.44	264	P	Pn	09 48 01.6	+1.3
EDRZ				P	Pb	09 48 02.1	-3.3
MUGZ	Murupara	2.47	255	P	Pn	09 48 02.4	+1.8
MTHZ	Maungataniwha	2.53	247	P	Pn	09 48 03.8	+2.4
OPRZ	Ohinepanea	2.58	270	P	Pn	09 48 02.5	+0.4
ARHZ	Aropaoanui	2.60	237	P	Pn	09 48 05.0	+2.6
TARZ	Mount Tarawera	2.63	262	P	Pn	09 48 04.6	+1.6
RRRZ	Republican Roa	2.64	259	P	Pn	09 48 04.6	+1.6
NMHZ	Naumai	2.65	242	P	Pn	09 48 05.6	+2.5
CKHZ	Cape Kidnapper	2.77	230	P	Pn	09 48 07.1	+2.4
ALRZ	Allen Road	2.82	255	P	Pn	09 48 07.2	+1.8
TGRZ	Tauranga	2.82	272	P	Pn	09 48 05.8	+0.4
KARZ	Kaharoa	2.83	266	P	Pn	09 48 06.3	+0.8
MRHZ	Matea Rd	2.83	250	P	Pn	09 48 07.8	+2.2
HSRZ	Hossack Road	2.85	261	P	Pn	09 48 07.9	+2.1
MCHZ	McNeill Hill	2.89	237	P	Pn	09 48 08.9	+2.5
BKZ	Black Stump Fm	2.90	243	P	Pn	09 48 08.8	+2.2
KAHZ	Kahuranaki	2.98	230	P	Pn	09 48 09.9	+2.3
KWHZ	Kaweka Forest	3.06	239	P	Pn	09 48 11.0	+2.1
KMRZ	Kaimai	3.07	270	P	Pn	09 48 10.5	+1.6
PXZ	Pawanui	3.14	226	P	Pn	09 48 11.4	+1.6
RITZ	Rihia Road	3.29	250	P	Pn	09 48 14.2	+2.3
BHHZ	Black Hill Sta	3.34	240	P	Pn	09 48 14.5	+1.9
WPHZ	Waipukurau	3.41	229	P	Pn	09 48 15.3	+1.8
WPHZ	Waipukurau	3.41	229	P	Sn	09 48 54.0	+1.0
TOZ	Tahuroa Road	3.42	271	P	Pn	09 48 14.4	+0.7
PRHZ	Porangahau	3.43	225	P	Pn	09 48 15.2	+1.5

KUZ	Kuaotunu	3.46	288	P	Pn	09 48 14.1	-0.1
KRVZ	Karewarewa	3.49	249	P	Pn	09 48 16.6	+1.9
MOVZ	Moawhango	3.52	243	P	Pn	09 48 17.9	+2.8
TUVZ	Tukino	3.54	246	P	Pn	09 48 17.9	+2.5
NGZ	Ngauruhoe	3.54	248	P	Pn	09 48 17.6	+2.1
FWVZ	Far West T-bar	3.61	247	P	Pn	09 48 19.5	+3.0
TRVZ	Turoa	3.63	246	P	Pn	09 48 18.6	+1.9
TWVZ	Taurewa	3.63	250	P	Pn	09 48 19.5	+2.8
ANWZ	Angora Road	3.65	224	P	Pn	09 48 18.6	+1.9
ANWZ	Angora Road	3.65	224	P	Sn	09 48 55.0	-3.9
TSZ	Takapari Road	3.70	233	P	Pn	09 48 18.6	+1.1
MTVZ	Mangateitei	3.71	245	P	Pn	09 48 19.6	+1.9
DVHZ	Dannevirke	3.72	229	P	Pn	09 48 19.0	+1.2
DVHZ	Dannevirke	3.72	229	P	Sn	09 48 55.9	-4.7
PKVZ	Pokaka	3.77	247	P	Pn	09 48 20.9	+2.3
MKAZ	Moumakai	3.79	281	P	Pn	09 48 19.1	+0.5
GRZ	Great Barrier	3.85	294	P	Pn	09 48 19.8	+0.2
WIAZ	Waiheke Island	3.89	285	P	Pn	09 48 20.6	+0.5
BFZ	Birch Farm	3.93	224	P	Pn	09 48 21.4	+0.7
HIZ	Hauiti	3.96	260	P	Pn	09 48 23.2	+2.2
PRWZ	Pori Road	4.00	227	P	Pn	09 48 23.1	+1.5
ETAZ	East Tamaki Re	4.00	282	P	Pn	09 48 22.5	+0.8
POWZ	Post Office Ro	4.01	230	P	Pn	09 48 24.0	+2.2
MBAZ	Motutapu North	4.08	285	P	Pn	09 48 23.6	+0.9
VRZ	Vera Road	4.15	251	P	Pn	09 48 26.2	+2.5
HBAZ	Herne Bay Bore	4.18	283	P	Pn	09 48 25.4	+1.3
TIWZ	Tintock	4.19	225	P	Pn	09 48 25.5	+1.3
AWAZ	Awhitu Peninsu	4.20	280	P	Pn	09 48 25.8	+1.4
WAZ	Wanganui	4.21	242	P	Pn	09 48 27.0	+2.5
WTAZ	Waiatarua	4.28	281	P	Pn	09 48 27.8	+2.3
MRZ	Mangatainoka R	4.29	229	P	Pn	09 48 26.5	+0.8
TMWZ	Te Maipa	4.42	222	P	Pn	09 48 27.7	+0.3
HOWZ	Holdsworth Sta	4.48	227	P	Pn	09 48 29.0	+0.8
OGWZ	Otaki Gorge	4.63	230	P	Pn	09 48 30.9	+0.6
MTW	Mount Morrison	4.66	224	P	Pn	09 48 30.9	+0.2
PKE	Pukeiti	4.75	252	P	Pn	09 48 35.6	+3.6
KHEZ	Kahui Hut	4.76	251	P	Pn	09 48 35.3	+3.2
WCZ	Waipu Caves	4.80	292	P	Pn	09 48 33.3	+0.7
KIW	Kapiti Island	4.82	231	P	Pn	09 48 33.4	+0.5
PAWZ	Paruwai Farm	4.86	223	P	Pn	09 48 33.3	-0.1
CAW	Cannon Point	4.88	227	P	Pn	09 48 33.6	0.0
MSWZ	Moikau Station	4.98	224	P	Pn	09 48 34.8	-0.3
PLWZ	Palliser	5.08	222	P	Pn	09 48 36.2	-0.3
BHW	Baring Head	5.18	226	P	Pn	09 48 38.0	+0.1
TCW	Tory Channel	5.41	231	P	Pn	09 48 41.5	+0.5
DUWZ	D'Urville Isla	5.41	236	P	Pn	09 48 41.1	+0.1
OUZ	Omahuta	5.67	296	P	Pn	09 48 45.7	+1.1
TUWZ	Tuamarina	5.74	230	P	Pn	09 48 44.9	-0.6
BSWZ	Blackbirch Sta	5.96	228	P	Pn	09 48 48.5	0.0
NNZ	Nelson	5.98	234	P	Pn	09 48 48.7	-0.1
QRZ	Quartz Range	6.36	240	P	Pn	09 48 53.4	-0.6
THZ	Tophouse	6.57	232	P	Pn	09 48 56.5	-0.5
KHZ	Kahutara	6.59	225	P	Pn	09 48 56.1	-1.1
LTZ	Lake Taylor	7.55	227	P	Pn	09 49 09.7	-0.7
OKCZ	Okains Bay	7.75	219	P	Pn	09 49 11.4	-1.8
MQZ	McQueen's Vall	7.95	221	P	Pn	09 49 15.6	-0.2
INZ	Inchbonnie	8.01	230	P	Pn	09 49 16.0	-0.7
OXZ	Oxford	8.03	225	P	Pn	09 49 16.5	-0.4
RPZ	Rata Peaks	8.83	226	P	Pn	09 49 27.5	-0.4
	0.3nm,0.3s,baz=142,slow=19,SNR=7.3						
RPZ				S	Sn	09 50 58.3	-8.0
	2.9nm,0.3s,baz=150,slow=20,SNR=23						
ODZ	Otahua Downs	9.91	221	P	Pn	09 49 42.0	-0.7
JCZ	Jackson Bay	10.37	230	P	Pn	09 49 49.0	-0.1
ASAR	Alice Springs	41.51	276	P	P	09 55 06.8	-0.3
	1.2nm,0.7s,baz=125,slow=8.2,SNR=12						
WRA	Warramunga Arr	43.18	281	P	P	09 55 20.0	-0.7
	1.3nm,0.5s,baz=123,slow=7.6,SNR=17						
ARCES	ARCESS Array B	145.42	344	PKPbc	PKPab	10 06 58.2	+1.6
	1.9nm,0.9s,baz=49,slow=4.1,SNR=9.9						
FINES	FINESS Array B	151.32	334	PKPbc	PKiKP	10 07 14.3	+1.6
	1.0nm,0.7s,baz=66,slow=3.5,SNR=3.0						
FINES				PKPab	PKPab	10 07 20.7	+0.4
	0.5nm,0.6s,baz=67,slow=4.7,SNR=3.2						

IDC ***18*** *09:57:11.7±3.8, 32°.82N×139°.68E, h151^{km}±40^{km}, mb3.1/5, mb1 3.3/6, mb1mx2.9/42, mbtmp3.6/6, Error ellipse: s-maj=85.0km s-min=21.0km az=76.0*

ISCJB ***18*** *09:57:15.3±0.7, 32°.77N±0°.07×139°.5E±0°.1, h200^{km}, mb3.1/5, Error ellipse: s-maj=14.0km s-min=8.4km az=25.7*

JMA ***18*** *09:57:16.3±0.3, 32°.86N×139°.46E, h200^{km}±3^{km}, M3.2*

ISC 18 09:57:16.8±1.0**, 32°.81N**±0°.09×**139°.46E**±0°.09**, h200**^{km}**, n16,** σ**0^{s}67**/19**, mb3.2**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	0.43	45	P	Pn	09 57 43.3	-0.3
JHJ2				eS	Sn	09 58 03.8	-0.7
BSO3	Boso 3	2.17	23	P	Pn	09 57 56.4	-0.4
BSO3				eS	Sn	09 58 27.2	-0.9
BSO1	Boso 1	2.23	34	P	Pn	09 57 56.6	-0.5
BSO1				eS	Sn	09 58 27.8	-1.0
BSO4	Boso 4	2.30	18	P	Pn	09 57 58.3	0.0
BSO4				eS	Sn	09 58 30.5	-0.3
JOD2	Odawara 2	2.47	353	P	Pn	09 58 00.4	+0.1
JNY	Yasuok	2.87	333	P	Pn	09 58 04.9	0.0
JKN2	Miekihoku	3.02	299	P	Pn	09 58 05.2	-1.4
JRY	Ryogami san	3.23	352	P	Pn	09 58 09.5	+0.3
JYTA	Yamagatataniai	3.58	322	P	Pn	09 58 13.1	-0.2
JAG	Ashikaga	3.61	360	P	Pn	09 58 12.7	-1.0
JCJ	Chichijima	6.16	157	P	Pn	09 58 39.8	-6.5
	4.3nm,0.3s,baz=294,slow=20,SNR=7.7						
JCJ				S	Sn	09 59 45.1	-12
	2.8nm,0.3s,baz=245,slow=19,SNR=3.1						
KURBB	Kurchatov Arra	47.44	311	P	P	10 05 31.8	+0.7
	0.2nm,0.5s,baz=86,slow=7.8,SNR=3.7						
WRA	Warramunga Arr	52.68	186	P	P	10 06 10.5	-0.3
	0.4nm,0.8s,baz=3.2,slow=8.7,SNR=5.2						
ASAR	Alice Springs	56.41	186	P	P	10 06 37.8	+0.2
	0.4nm,0.9s,baz=355,slow=5.0,SNR=4.1						
FINES	FINESS Array B	71.80	332	P	P	10 08 17.8	+0.7
	0.7nm,0.5s,baz=55,slow=5.3,SNR=4.3						
NOA	NORSAR Array B	77.45	337	P	P	10 08 50.1	+0.5
	0.3nm,0.5s,baz=58,slow=6.1,SNR=2.9						

IDC ***18*** *10:00:06.9±0.4, 33°.93S×72°.11W, h0^{km}, mb4.7/26, mb1 4.7/29, mb1mx4.7/36, mbtmp4.7/29, ML4.5/3, MS5.0/20, Ms1 5.0/20, ms1mx4.8/31, Error ellipse: s-maj=18.5km s-min=11.4km az=90.0*

GUC ***18*** *10:00:08.2±0.5, 33°.95S×72°.56W, h37^{km}±5^{km}, ML5.4*

VAO ***18*** *10:00:08.3±0.6, 33°.89S×72°.26W, h10^{km}, mb5.0*

MOS ***18*** *10:00:09.2±1.0, 33°.94S×72°.16W, h21^{km}, mb5.3/35, Error ellipse: s-maj=12.7km s-min=6.8km az=93.4*

ISCJB ***18*** *10:00:11.7±0.5, 33°.91S±0°.02×72°.12W±0°.04, h43^{km}±4^{km}, mb5.1/160, MS5.1/21, Error ellipse: s-maj=5.0km s-min=4.0km az=177.4*

SJA ***18*** *10:00:11.5±0.7, 33°.80S×72°.33W, h47^{km}±12^{km}, ML5.0, MW6.0*

NEIC ***18*** *10:00:11.1±0.1, 33°.95S×72°.05W, mb5.2/142, ML5.4(GUC), Error ellipse: s-maj=4.4km s-min=2.8km az=83.0*

NEIC Felt [IV] at El Tabo, Navidad, Pichilemu and Santa Cruz; [III] at Constitucion, Curico, Linares, San Antonio, Santo Domingo, Talca, Valparaiso, Villa Alegre and Vina del Mar; [II] at Hualane, Iloca, Parral, Rancagua, San Fernando and Villa Alemana.

BJI ***18*** *10:00:12.0, 33°.90S×72°.10W, h22^{km}, mB5.3/14, Ms5.5/16, Ms7 5.3/16*

GCMT ***18*** *10:00:13.1±0.1, 34°.05S±0°.01×72°.39W±0°.01, h17^{km}, MW5.4/100, Moment Tensor Solution. s89,c136; s100,c170; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.02±.02; M$_{\theta\theta}$0.05±.01; M$_{\phi\phi}$-1.06±.02; M$_{r\theta}$0.01±.04; M$_{\theta\phi}$-0.05±.01; M$_{\phi r}$-1.46±.07; Best double couple: M$_{0}$1.79300×10^{17} NP1:ϕ_s180.00000°, δ72.00000°, λ89.00000°. NP2:ϕ_s5.00000°, δ18.00000°, λ95.00000°. Principal axes: T 1.7730, Plg63.0000°, Azm88.0000°; N 0.0490, Plg1.0000°, Azm181.0000°; P -1.8130, Plg27.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 10:00:11.0±0.6**, 33°.98S**±0°.03×**72°.26W**±0°.04**, h26**^{km}±3^{km}**, n861,** σ**1^{s}00**/868**, mb5.2**/160**, MS5.1**/21**, 16C-9D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHPI	Pichilemu	0.46	153	⇑iP	Pb	10 00 20.1	-0.5
CHPI				eS	Sn	10 00 29.0	-0.3
ROC1	El Roble	1.44	46	ePn	Pn	10 00 35.3	-0.3
ROC1				eSn	Sn	10 00 53.2	-0.6
ROC1	El Roble	1.44	46	i P	Pn	10 00 35.6	0.0
ROC1				i S	Sn	10 00 53.9	+0.1
ROCH	El Roble	1.44	46	⇑iP	Pn	10 00 35.3	-0.3
ROCH				eS	Sb	10 00 56.2	+0.8
ROCH				IAML		10 01 03.8	
	comp=N,88μm,0.4s						
CLCH	Cerro Calan	1.55	69	⇑iP	Pn	10 00 37.3	+0.4
CLCH				eS	Sb	10 00 59.2	+1.1
CLCH				IAML		10 01 12.7	
	comp=E,47μm,0.6s						
PEL	Peldehue	1.55	58	ePn	Pn	10 00 37.3	+0.4
PEL				eSn	Sn	10 00 55.7	-0.6
PEL	Peldehue	1.55	58	i P	Pn	10 00 37.6	+0.6
PEL	Peldehue	1.55	58	eP	Pn	10 00 37.3	+0.4
PEL				e		10 00 55.7	
PEL	Peldehue	1.55	58	⇑iP	Pn	10 00 37.3	+0.4
PEL				eS	Sb	10 00 59.2	+0.9
PEL				IAML		10 01 08.9	
	comp=N,75μm,0.4s						
LMEL	Las Melosas	1.71	86	⇑iP	Pn	10 00 40.0	+0.7
LMEL				eS	Sb	10 01 04.5	+1.5
LMEL				IAML		10 01 11.2	
	comp=N,43μm,0.4s						
FCH	Farellones	1.76	69	⇑eP	Pn	10 00 40.4	+0.3
FCH				eS	Sb	10 01 05.2	+0.5
CCHI	Chillan	2.62	177	eP	Pn	10 00 50.8	-0.9
CCHI				eS	Sb	10 01 27.0	-2.1
AUSP	Uspallata	2.98	55	i P	Pn	10 00 58.5	+1.8
RTLS	Leoncito	3.30	50	i P	Pn	10 01 03.5	+2.3
RTLS				IAML		10 02 03.5	
	comp=Z,3μm,0.7s						
RTCV	Cerro Valdivia	3.77	57	i P	Pn	10 01 09.4	+2.0
GO04	Tololo Observa	3.99	18	ePn	Pn	10 01 09.5	-1.2
GO04	Tololo Observa	3.99	18	eP	Pn	10 01 09.4	-1.3
RTLL	Cerro Villicun	4.14	51	eP	Pn	10 01 13.4	+0.8
ACCO	Cerro Coronel	4.33	40	i P	Pn	10 01 17.2	+1.8
AMOG	MOGNA	4.39	47	i P	Pn	10 01 17.7	+1.7
AROD	Rodeo	4.47	33	i P	Pn	10 01 18.7	+1.3
ACAN	Cantantal	4.58	70	i P	Pn	10 01 21.2	+2.6
ACDV	Cuesta del Vie	4.63	36	i P	Pn	10 01 20.8	+1.3
LCO	Las Campanas	5.12	15	ePn	Pn	10 01 24.9	-1.4
LCO				eSn	Sn	10 02 24.0	-0.7
LCO	Las Campanas	5.12	15	eP	Pn	10 01 24.9	-1.4
LCO				e		10 02 24.0	
LCO	Las Campanas	5.12	15	eP	Pn	10 01 24.1	-2.2
GO06	Curarrehue	5.63	174	ePn	Pn	10 01 33.3	+0.2
PLCA	Paso Flores	6.88	169	ePn	Pn	10 01 50.2	0.0
PLCA	Paso Flores	6.88	169	eP	Pn	10 01 50.2	0.0
PLCA	Paso Flores	6.88	169	eP	Pn	10 01 50.3	0.0
GO02	Mina Guanaco	9.08	15	ePn	Pn	10 02 16.8	-3.9
GO07	Milladeo Hill,	9.19	186	ePn	Pn	10 02 21.7	-0.1
PB10	IPOC Station P	10.53	9	ePn	Pn	10 02 40.3	0.0
LVC	Limon Verde	11.70	15	ePn	Pn	10 02 50.6	-6.0
LVC				ePn	Pn	10 02 53.1	-3.5
LVC	Limon Verde	11.70	15	Pn	Pn	10 02 53.1	-3.5
	comp=Z,2.0nm,0.3s,baz=235,slow=5.5,SNR=12						
LVC				LR	LR	10 07 31.4	
	comp=Z,6μm,20.0s,baz=206,slow=38						
PB04	IPOC Station P	11.75	10	ePn	Pn	10 02 57.9	+0.9
PB01	IPOC Station P	13.11	11	ePn	Pn	10 03 14.7	-1.0
PB11	IPOC Station P	14.35	10	ePn	Pn	10 03 31.8	-0.8
MNMC	Minye Minye	14.97	10	ePn	Pn	10 03 41.3	+0.1
CPUP	Villa Florida	14.98	63	Pn	Pn	10 03 40.0	-1.0
	comp=Z,0.4nm,0.3s,baz=243,slow=13,SNR=11						
CPUP				Sn	Sn	10 06 27.4	+1.3
	comp=Z,0.5nm,0.3s,baz=251,slow=16,SNR=2.7						
CPUP				LR	LR	10 10 18.5	
	comp=Z,9μm,18.5s,baz=241,slow=41						
CPUP	Villa Florida	14.98	63	eP	Pn	10 03 40.1	-1.0
PLTB	Pedras Altas	15.83	87	eP	Pn	10 03 50.0	-2.1
CPSB	Cacapava Do Su	16.32	83	eP	Pn	10 03 58.5	+0.1
LPAZ	La Paz	18.00	13	ePn	P	10 04 20.4	0.0
	comp=Z,156nm,1.4s						
LPAZ	La Paz	18.00	13	eP	P	10 04 20.4	0.0
LPAZ				pmax	pmax		
	comp=Z,156nm,1.4s						
LPAZ	La Paz	18.00	13	P	P	10 04 20.2	-0.2
	comp=Z,1.0nm,0.3s,baz=187,slow=7.5,SNR=44						
LPAZ	La Paz	18.00	13	eP	Pn	10 04 19.4	-0.5
ITAB	Concordia	18.57	74	eP	P	10 04 25.6	-0.3
CNLB	Canela	18.80	82	eP	P	10 04 28.8	+0.3
PTGB	Pitanga	19.84	68	eP	P	10 04 39.8	-0.2
AQDB	Aquidauana	19.90	52	eP	P	10 04 39.8	-0.7
EFI	East Falkland	20.46	154	eP	P	10 04 45.2	-1.2
	comp=Z,61nm,0.6s						
EFI	East Falkland	20.46	154	⇓iP	P	10 04 45.2	-1.2
TER01	Tubaro-SC	20.49	81	eP	P	10 04 46.2	-0.8
TRCB	Terra Rica	20.51	62	eP	P	10 04 46.5	-0.8
SIV	San Ignacio	20.55	32	P	P	10 04 46.4	-1.2
	comp=Z,28nm,0.7s,baz=226,slow=9.6,SNR=60						
SIV				LR	LR	10 14 10.0	
	comp=Z,9μm,18.8s,baz=228,slow=41						
USHA	Ushuaia	21.02	174	P	P	10 04 53.6	+1.1
	comp=Z,17nm,0.8s,baz=355,slow=8.7,SNR=2.8						
USHA				LR	LR	10 14 27.9	
	comp=Z,3μm,19.1s,baz=358,slow=41						
NNA	Nana	22.29	348	i P	P	10 05 08.1	+1.7
NNA	Nana	22.29	348	P	P	10 05 05.5	-0.8
	comp=Z,12nm,0.6s,baz=208,slow=5.6,SNR=6.0						
FRTB	Fartura	22.51	68	eP	P	10 05 08.1	-0.6
C2SB	Chapadao do Su	23.00	54	eP	P	10 05 12.5	-1.4
SALV	Santo Antonio	23.38	44	eP	P	10 05 15.6	-2.0
SPB	Sao Paulo	24.04	71	eP	P	10 05 22.4	-1.5
	comp=Z,176nm,1.1s						
ITRB	Iturama	24.09	59	eP	P	10 05 22.9	-1.6
RCLB	Rio Claro- Sao	24.58	69	eP	P	10 05 27.7	-1.3
BB19B	Bebedouro	24.59	65	eP	P	10 05 27.1	-2.0
ESAR	Angra dos Reis	26.69	73	eP	P	10 05 48.7	+0.7
IPMB	Ipameri, GO	26.75	59	eP	P	10 05 46.8	-1.9
ATAH	Atahualpa	27.31	347	P	P	10 05 53.3	-0.7
	comp=Z,3.0nm,0.7s,baz=133,slow=19,SNR=2.7						
BSCB	Bom Sucesso	27.50	69	eP	P	10 05 54.7	-0.7
PMNB	Patos De Minas	27.69	63	eP	P	10 05 56.1	-1.0
VAS01	Vassouras-RJ	27.86	73	eP	P	10 05 59.0	+0.4
BDFB	Brasilia	28.47	56	eP	P	10 06 02.6	-1.5
BDFB				eP	P	10 06 02.8	-1.3
BDFB	Brasilia	28.47	56	P	P	10 06 02.6	-1.5
	comp=Z,12nm,0.6s,baz=235,slow=8.5,SNR=15						
BDFB				LR	LR	10 18 22.0	
	comp=Z,6μm,20.0s,baz=234,slow=39						
DUB01	Friburgo-RJ	28.81	74	eP	P	10 06 08.1	+1.0
CAM01	Campos-RJ	29.51	74	eP	P	10 06 13.9	+0.7
MCI6	Montes Claros	30.66	63	eP	P	10 06 22.3	-1.1
MCI9	Montes Claros	30.72	63	eP	P	10 06 22.7	-1.3
MCI7	Montes Claros	30.73	63	eP	P	10 06 23.0	-1.1
MCI8	Montes Claros	30.73	63	eP	P	10 06 22.7	-1.4
ALF01	Guarapari-ES	30.88	73	eP	P	10 06 26.0	+0.6
PMSA	Palmer Station	31.23	173	LR	LR	10 19 00.1	
	comp=Z,3μm,18.4s,baz=328,slow=36						
JANB	Januaria	31.48	60	eP	P	10 06 29.5	-1.2
SJMB	Sao Joao De Ma	31.57	69	eP	P	10 06 30.6	-0.9
BSFB	Barra de Sao F	31.77	70	eP	P	10 06 32.3	-0.9
RIB01	Linhares ES	31.85	71	eP	P	10 06 33.4	-0.5
RPN	Rapa Nui	32.52	272	LR	LR	10 16 16.2	
	comp=Z,4μm,19.0s,baz=54,slow=30						
OTAV	Otavalo	34.53	349	eP	P	10 06 57.5	-0.2
	comp=Z,23nm,1.4s						
OTAV	Otavalo	34.53	349	eP	P	10 06 57.5	-0.2
OTAV				pmax	pmax		
	comp=Z,23nm,1.4s						
PTGA	Pitinga	35.02	22	eP	P	10 07 00.9	-0.7
	comp=Z,94nm,1.3s						
PTGA	Pitinga	35.02	22	P	P	10 07 00.5	-1.0
	comp=Z,8.9nm,0.6s,baz=192,slow=11,SNR=14						
PTGA				LR	LR	10 23 44.7	
	comp=Z,3μm,18.6s,baz=194,slow=41						
PTGA	Pitinga	35.02	22	eP	P	10 07 00.8	-0.7
FLOC	Florencia	35.51	354	eP	P	10 07 06.1	+0.3
FLOC	Florencia	35.51	354	eP	P	10 07 06.1	+0.3
SOTA	Rioblanco	36.15	353	eP	P	10 07 21.9	+10
SOTA	Rioblanco	36.15	353	eP	P	10 07 21.9	+10
PCON	Cinco Dias	36.32	353	eP	P	10 07 14.6	+1.3
PCON	Cinco Dias	36.32	353	eP	P	10 07 14.6	+1.3
NBCP	Cabaceiras do	36.84	63	eP	P	10 07 15.8	-1.3
YOTC	Yotoco, Valle	37.95	353	eP	P	10 07 27.2	+0.6
YOTC	Yotoco, Valle	37.95	353	eP	P	10 07 27.2	+0.6
CHIC	Chingaza	38.42	358	eP	P	10 07 32.4	+1.5
CHIC	Chingaza	38.42	358	eP	P	10 07 32.4	+1.5
ROSC	El Rosal	38.66	357	eP	P	10 07 32.6	-0.3
	comp=Z,12nm,1.0s						
ROSC	El Rosal	38.66	357	P	P	10 07 32.6	-0.3
	comp=Z,4.9nm,0.7s,baz=131,slow=19,SNR=2.1						
RREF	El Recreo	38.78	355	eP	P	10 07 43.9	+10
RREF	El Recreo	38.78	355	eP	P	10 07 43.9	+10
PLMC	San Jos del P	38.86	354	eP	P	10 07 33.9	-0.3
PLMC	San Jos del P	38.86	354	eP	P	10 07 33.9	-0.3
RUSC	La Rusia	39.66	359	eP	P	10 07 42.5	+1.2
RUSC	La Rusia	39.66	359	eP	P	10 07 42.5	+1.2
HELC	Santa Helena	40.07	355	eP	P	10 07 36.6	-8.0
HELC	Santa Helena	40.07	355	eP	P	10 07 36.6	-8.0
TAMC	Tame, Arauca	40.19	1	eP	P	10 07 35.9	-9.4
TAMC	Tame, Arauca	40.19	1	eP	P	10 07 35.9	-9.4
PTBC	PUERTO BERRIO,	40.35	357	eP	P	10 07 47.2	+0.6
PTBC	PUERTO BERRIO,	40.35	357	eP	P	10 07 47.2	+0.6
ZARC	Zaragoza, Cauc	41.31	356	eP	P	10 07 54.0	-0.5
ZARC	Zaragoza, Cauc	41.31	356	eP	P	10 07 54.0	-0.5
SMLC	San Martn de	42.58	357	eP	P	10 08 03.1	-1.7
SMLC	San Martn de	42.58	357	eP	P	10 08 03.1	-1.7
SDV	Santo Domingo	42.65	2	eP	P	10 08 05.2	-0.4
	comp=Z,40nm,1.3s						
SDV	Santo Domingo	42.65	2	eP	P	10 08 03.8	-1.8
SDV	Santo Domingo	42.65	2	eP	P	10 08 03.8	-1.8
SDV	Santo Domingo	42.65	2	P	P	10 08 05.0	-0.6
	comp=Z,7.0nm,0.9s,baz=180,slow=8.8,SNR=5.1						
MDP	Montagnes des	43.06	29	P	P	10 08 08.2	-0.5
	comp=Z,23nm,0.6s,baz=207,slow=8.8,SNR=14						
RCBR	Riachuelo	43.78	58	eP	P	10 08 14.3	-0.4
	comp=Z,61nm,1.4s						
RCBR	Riachuelo	43.78	58	eP	P	10 08 14.3	-0.4
RCBR				pmax	pmax		
	comp=Z,61nm,1.4s						
RCBR	Riachuelo	43.78	58	eP	P	10 08 14.8	+0.1
JTS	JuntasAbangare	45.65	342	⇓eP	P	10 08 29.9	+0.5
JTS	JuntasAbangare	45.65	342	P	P	10 08 29.4	0.0
	comp=Z,3.8nm,0.7s,baz=18,slow=20,SNR=2.5						
VNA3	Neumayer Olymp	49.45	158	P	P	10 08 58.9	+0.5
VNA1	Neumayer--Stat	49.77	157	P	P	10 09 07.6	+6.9
VNA2	Neumayer--Watz	50.10	157	P	P	10 09 03.8	+0.5
	baz=288,slow=8.7						
SNAA	Sanae	51.68	158	P	P	10 09 15.6	+0.3
SNAA	Sanae	51.68	158	eP	P	10 09 15.2	0.0
SNAA				epP	pP	10 09 22.7	-0.5
SNAA	Sanae	51.68	158	⇑iP	P	10 09 15.4	+0.2
SNAA	Sanae	51.68	158	P	P	10 09 15.3	0.0
	comp=Z,22nm,1.0s,baz=252,slow=5.6,SNR=29						
APG	El Apazote	51.70	337	P	P	10 09 16.9	+0.7
	comp=Z,3.5nm,0.7s,baz=176,slow=19,SNR=4.3						
ICMP	Isla Caja de M	51.86	7	eP	P	10 09 17.1	+0.1
ICMP				epP	pP	10 09 24.7	-0.2
OBIP	Obispado Ponce	52.01	7	eP	P	10 09 17.4	-0.7
	comp=Z,57nm,0.8s						
SJG	San Juan	52.12	7	eP	P	10 09 17.9	-1.1
SJG				eP	P	10 09 18.0	-1.0
SJG	San Juan	52.12	7	P	P	10 09 17.9	-1.1
	comp=Z,19nm,0.2s,baz=207,slow=4.1,SNR=4.3						
MPR	Mayaguez	52.12	6	eP	P	10 09 18.0	-1.0
	comp=Z,102nm,1.3s						
CBYP	Canovanas	52.31	8	eP	P	10 09 19.0	-1.5
	comp=Z,60nm,1.1s						
RKT	Rikitea	55.40	264	eLR	LR	10 25 44.2	
	comp=Z,1μm,28.2s						
RKT	Rikitea	55.40	264	eT	T	11 09 30.7	
	comp=Z,2.3nm,0.2s						
TEIG	Tepich	56.02	342	eP	P	10 09 47.5	+0.1
	comp=Z,98nm,1.3s						
QSPA	South Pole Qui	56.26	180	eP	P	10 09 49.5	+0.6
QSPA				eP	P	10 09 49.9	+1.0
QSPA	South Pole Qui	56.26	180	P	P	10 09 49.5	+0.6
	comp=Z,24nm,1.0s,baz=147,slow=3.6,SNR=34						
NVL	N'lazarevskaya	56.41	157	eP	P	10 09 49.6	-0.1
060Z	West Palm Beac	60.57	351	P	P	10 10 19.4	+0.3
	baz=172						
060A	Indiantown	61.16	352	P	P	10 10 22.9	-0.2
	baz=172						
059A	Moore Haven	61.19	351	P	P	10 10 23.5	+0.1
	baz=171						
959A	Okeechobee	61.71	351	P	P	10 10 27.3	+0.5
	baz=172						
859A	Kempfer Cattle	62.24	351	P	P	10 10 31.0	+0.6
	baz=172						
DWPF	Disney Wildern	62.36	351	P	P	10 10 31.0	-0.2
	baz=171						
757A	Oxford	63.26	350	P	P	10 10 37.5	+0.3
	baz=171						
656A	Willston	63.75	350	eP	P	10 10 40.7	+0.3
	comp=Z,76nm,1.1s						
656A	Willston	63.75	350	P	P	10 10 40.8	+0.4
	baz=170						
657A	Interlachen	63.87	351	P	P	10 10 41.9	+0.8
	baz=171						
655A	Horseshoe Beac	63.99	349	P	P	10 10 42.7	+0.7
	baz=170						
VNDA	Vanda	64.09	191	P	P	10 10 43.9	+1.7
	comp=Z,8.0nm,1.1s,baz=45,slow=7.1,SNR=2.9						
VNDA				LR	LR	10 36 09.8	
	comp=Z,450nm,18.3s,baz=135,slow=34						
557A	Orange Park	64.27	351	P	P	10 10 44.1	+0.3
	baz=171						
556A	Lake Butler	64.35	350	P	P	10 10 45.4	+1.1
	baz=170						
555A	McAlpin	64.55	350	P	P	10 10 46.4	+0.8
	baz=170						
457A	Yulee	64.85	351	P	P	10 10 49.0	+1.5
	baz=171						
553A	Crawfordville	64.85	348	P	P	10 10 48.5	+0.9
	baz=169						
552A	Lynn Haven	64.94	348	P	P	10 10 49.1	+0.9
	baz=168						
456A	Hilliard	65.01	351	P	P	10 10 48.8	+0.2
	baz=171						
455A	Stateville	65.17	350	P	P	10 10 50.1	+0.5
	baz=170						
454A	Quitman	65.23	349	P	P	10 10 50.3	+0.2
	baz=170						
453A	Whigham	65.48	349	P	P	10 10 52.6	+0.9
	baz=169						
451A	Vernon	65.50	347	P	P	10 10 52.9	+1.2
	baz=168						
356A	Blackshear	65.62	351	P	P	10 10 53.1	+0.6
	baz=171						
452A	Marianna	65.62	348	P	P	10 10 53.4	+0.8
	baz=168						
355A	Pearson	65.73	350	P	P	10 10 53.9	+0.6
	baz=170						
TIGA	Tifton	65.94	349	P	P	10 10 55.2	+0.6
	baz=170						
353A	Camilla	65.95	349	P	P	10 10 54.7	0.0
	baz=169						
SYO	Syowa Base	65.95	159	⇑eP	P	10 10 51.1	-3.2
SYO	Syowa Base	65.95	159	⇑epP	pP	10 10 59.3	-3.2
351A	Pinckard	66.11	348	P	P	10 10 56.5	+0.8
	baz=168						
257A	Skidaway Islan	66.12	352	P	P	10 10 55.8	0.0
	baz=172						
352A	Blakely	66.19	348	eP	P	10 10 56.1	-0.2
	comp=Z,73nm,1.3s						
352A	Blakely	66.19	348	P	P	10 10 56.6	+0.4
	baz=168						
256A	Glennville	66.23	351	P	P	10 10 56.5	0.0
	baz=171						
255A	Hazlehurst	66.25	351	P	P	10 10 56.6	0.0
	baz=171						
BRAL	Brewton	66.28	346	P	P	10 10 57.0	+0.1
	baz=166						
350A	Dozier	66.39	347	P	P	10 10 57.6	+0.1
	baz=167						
254A	Abbeville	66.39	350	P	P	10 10 57.7	+0.3
	baz=170						
349A	Repton	66.49	346	P	P	10 10 58.0	-0.1
	baz=166						
253A	Americus	66.63	349	eP	P	10 10 59.0	0.0
	comp=Z,61nm,1.0s						
253A	Americus	66.63	349	P	P	10 10 59.3	+0.3
	baz=169						
252A	Lumpkin	66.67	348	P	P	10 10 59.3	0.0
	baz=169						
TAOE	Nuku Hiva Isla	66.79	275	eS	S	10 19 42.0	-10
	comp=Z,642nm,23.5s						
TAOE	Nuku Hiva Isla	66.79	275	eLR	LR	10 31 02.7	
	comp=Z,1μm,22.0s,baz=129						
156A	Sylvania	66.84	352	P	P	10 11 00.5	+0.1
	baz=172						

251A	Midway baz=168	66.88	348	P	P	10 11 00.2	-0.4
250A	Grady baz=167	66.92	347	P	P	10 11 00.9	0.0
155A	Kite baz=171	66.94	351	P	P	10 11 00.7	-0.3
154A	Montrose comp=Z,116nm,1.2s	67.02	350	*e*P	P	10 11 01.8	+0.3
154A	Montrose baz=170	67.02	350	P	P	10 11 01.4	-0.1
249A	Camden baz=166	67.08	346	P	P	10 11 02.0	+0.2
833A	Chaparral WMA, comp=Z,73nm,1.1s	67.08	334	*e*P	P	10 11 02.8	+0.7
833A	Chaparral WMA, baz=156	67.08	334	P	P	10 11 02.7	+0.7
NHSC	New Hope baz=173	67.14	353	P	P	10 11 02.5	+0.3
TBI	Tubuai comp=Z,733nm,26.5s	67.15	257	*e*S	S	10 19 43.2	-12
TBI	Tubuai comp=Z,3μm,27.2s,baz=120	67.15	257	*e*LR	LR	10 31 07.0	
TBI	Tubuai comp=Z,5.4nm,0.2s	67.15	257	*e*T	T	11 24 07.8	
153A	Fort Valley baz=169	67.16	349	P	P	10 11 02.3	-0.1
151A	Opelika baz=168	67.28	348	P	P	10 11 02.8	-0.4
152A	Waverly Hall baz=169	67.32	349	P	P	10 11 03.2	-0.2
HKT	Hockley comp=Z,28nm,1.4s	67.37	338	*e*P	P	10 11 04.4	+0.7
HKT HKT	Hockley comp=Z,28nm,1.4s	67.37	338	*e*P pmax	P pmax	10 11 04.4	+0.7
150A	Eclectic baz=168	67.48	347	P	P	10 11 04.4	-0.1
Z55A	Blythe baz=171	67.48	351	P	P	10 11 04.2	-0.2
Z54A	Sparta baz=170	67.59	350	P	P	10 11 05.1	-0.1
149A	Jones baz=167	67.62	347	P	P	10 11 05.0	-0.3
Z53A	Monticello baz=170,SNR=5.8	67.74	350	P	P	10 11 06.2	+0.2
Z52A	Williamson baz=169	67.78	349	P	P	10 11 06.2	-0.1
GOGA	Godfrey baz=170,SNR=5.1	67.86	350	P	P	10 11 07.2	+0.4
147A	Livingston comp=Z,53nm,1.3s	67.99	345	*e*P	P	10 11 08.0	+0.4
147A	Livingston baz=166	67.99	345	P	P	10 11 08.0	+0.4
Z51A	Franklin baz=168	68.03	348	P	P	10 11 07.6	-0.3
VBMS	Vicksburg comp=Z,31nm,0.8s	68.05	343	*e*P	P	10 11 09.1	+1.1
VBMS	Vicksburg baz=164	68.05	343	P	P	10 11 08.1	+0.1
LRAL	Lakeview Retre baz=167	68.08	347	P	P	10 11 08.2	-0.1
Z50A	Ashland comp=Z,47nm,1.1s	68.10	348	*e*P	P	10 11 07.6	-0.7
Z50A	Ashland baz=168	68.10	348	P	P	10 11 08.1	-0.2
Z49A	Columbiana baz=167	68.15	347	P	P	10 11 08.3	-0.3
Y54A	Tignall baz=170	68.19	351	P	P	10 11 07.9	-1.0
Y53A	Monroe baz=170	68.31	350	P	P	10 11 09.3	-0.3
HPIG		68.37	328	*e*P	P	10 11 10.8	+0.4
HPIG				*e*pP	pP	10 11 19.2	+0.9
Y52A	Lilburn comp=Z,67nm,1.1s	68.39	349	*e*P	P	10 11 09.9	-0.2
Y52A	Lilburn baz=169	68.39	349	P	P	10 11 09.6	-0.5
X59A	McDuffie Farm, baz=174	68.45	354	P	P	10 11 10.0	-0.5
HODGE	Hodges comp=Z,41nm,1.4s	68.50	351	*e*P	P	10 11 11.3	+0.5
X58A	Rowland baz=174	68.50	354	P	P	10 11 10.6	-0.2
Y51A	Rockmart baz=168	68.58	349	P	P	10 11 11.5	+0.1
X56A	White Oak baz=172	68.61	352	P	P	10 11 11.6	+0.2
X55A	Gracelyn & Ava baz=172	68.65	352	P	P	10 11 11.9	+0.2
Y50A	Piedmont baz=168,SNR=5.4	68.69	348	P	P	10 11 12.3	+0.3
435B	Jarrell comp=Z,23nm,0.9s	68.71	337	*e*P	P	10 11 12.5	+0.3
435B	Jarrell baz=158	68.71	337	P	P	10 11 12.7	+0.6
Y49A	Blount Mountai comp=Z,21nm,1.0s	68.77	347	*e*P	P	10 11 12.3	-0.3
Y49A	Blount Mountai baz=167	68.77	347	P	P	10 11 12.1	-0.4
X53A	Estanollee baz=170	68.90	350	P	P	10 11 12.8	-0.5
Y48A	Jasper baz=167	68.97	347	P	P	10 11 13.5	-0.3
PAULI	Pauline comp=Z,42nm,1.2s	69.02	352	*e*P	P	10 11 14.3	+0.3
CNNC	Cliffs of the baz=175	69.06	355	P	P	10 11 14.5	+0.3
X52A	Dahlonega baz=170,SNR=6.7	69.09	350	P	P	10 11 15.3	+0.8
JCT	Junction City comp=Z,122nm,1.5s	69.19	335	*e*P	P	10 11 15.2	0.0
JCT JCT	Junction City comp=Z,122nm,1.5s	69.19	335	*e*P pmax	P pmax	10 11 15.2	0.0
JCT	Junction City baz=156	69.19	335	P	P	10 11 15.3	0.0
X51A	Calhoun comp=Z,84nm,1.0s	69.20	349	*e*P	P	10 11 14.9	-0.2
X51A	Calhoun baz=169,SNR=5.7	69.20	349	P	P	10 11 15.0	-0.2
X50B	Fort Payne baz=168	69.23	348	P	P	10 11 15.1	-0.3
KMSC	Kings Mountain baz=172	69.28	352	P	P	10 11 15.0	-0.6
X49A	Woodville baz=167	69.40	348	P	P	10 11 15.9	-0.5
X48A	Hartselle comp=Z,65nm,1.2s	69.47	347	*e*P	P	10 11 17.2	+0.4
X48A	Hartselle baz=167,SNR=5.6	69.47	347	P	P	10 11 16.8	0.0
W53A	Cullowhee baz=170	69.54	350	P	P	10 11 17.3	-0.1
W52A	Murphy baz=170	69.57	350	P	P	10 11 17.1	-0.4
Z41A	Richland Creek comp=Z,83nm,1.3s	69.61	342	*e*P	P	10 11 19.3	+1.6
Z41A	Richland Creek baz=162	69.61	342	P	P	10 11 17.0	-0.7
LTX	Lajitas	69.62	331	*e*P	P	10 11 18.8	+0.8
LTX	Lajitas	69.62	331	*e*P	P	10 11 18.8	+0.8
TXAR	Lajitas Array comp=Z,2.2nm,0.7s,baz=153,slow=8.0,SNR=28	69.62	331	P	P	10 11 18.8	+0.8
TXAR	comp=Z,1μm,18.3s,baz=0.0,slow=32			LR	LR	10 37 31.1	
X47A	Russelville baz=166,SNR=7.5	69.69	346	P	P	10 11 17.7	-0.5
TVO	Taravao comp=Z,1.5nm,0.2s	69.69	262	*e*T	T	11 27 20.8	
W51A	Cleveland baz=169,SNR=5.1	69.77	349	P	P	10 11 18.4	-0.3
Y43A	Makayla and Ka baz=163	69.77	344	P	P	10 11 18.5	-0.1
WHTX	Lake Whitney, baz=158	69.78	337	P	P	10 11 18.5	-0.3
X46A	Booneville baz=166	69.87	346	P	P	10 11 19.5	+0.2
TIAR	Tiarei comp=Z,3.5nm,0.2s	69.88	262	*e*T	T	11 27 35.2	
W50A	Signal Mountai comp=Z,42nm,0.8s	69.89	349	*e*P	P	10 11 19.6	+0.1
W50A	Signal Mountai baz=168	69.89	349	P	P	10 11 19.4	-0.1
W49A	Belvidere baz=168	69.98	348	P	P	10 11 20.0	+0.1
V53A	Saluda comp=Z,37nm,1.2s	69.98	351	*e*P	P	10 11 19.9	-0.2
V53A	Saluda baz=170	69.98	351	P	P	10 11 19.8	-0.2
OXF	Oxford comp=Z,94nm,1.0s	70.00	345	*e*P	P	10 11 20.4	+0.3
OXF OXF	Oxford comp=Z,94nm,1.0s	70.00	345	*e*P pmax	P pmax	10 11 20.4	+0.3
OXF	Oxford baz=165	70.00	345	P	P	10 11 19.7	-0.4
CPCT	Cooper Cave comp=Z,42nm,1.1s	70.01	349	*e*P	P	10 11 20.4	+0.3
SWET	Sewanee comp=Z,68nm,1.0s	70.01	348	*e*P	P	10 11 20.7	+0.5
PPT2	Papeete2 comp=Z,711nm,24.5s	70.06	262	*e*S	S	10 20 18.7	-12
PPT2	Papeete2 comp=Z,2μm,28.0s,baz=120	70.06	262	*e*LR	LR	10 32 30.4	
PPT	Papeete comp=Z,1μm,18.5s,baz=118,slow=30	70.07	262	LR	LR	10 34 58.8	
WLAR	White Oak Lake comp=Z,42nm,1.0s	70.10	342	*e*P	P	10 11 22.0	+1.3
TKL	Tuckaleechee C comp=Z,45nm,1.3s	70.11	350	*e*P	P	10 11 20.9	+0.2
TKL TKL	Tuckaleechee C comp=Z,45nm,1.3s	70.11	350	*e*P pmax	P pmax	10 11 20.9	+0.2
W48A	Pulaski baz=167	70.11	347	P	P	10 11 20.8	-0.1
PLAL	Pickwick Lake comp=Z,30nm,0.9s	70.18	346	*e*P	P	10 11 20.7	-0.5
V52A	Sevierville comp=Z,61nm,1.4s	70.26	350	*e*P	P	10 11 21.7	0.0
V52A	Sevierville baz=170	70.26	350	P	P	10 11 21.2	-0.5
V50A	Pikevile baz=169	70.32	349	P	P	10 11 22.0	-0.1
V51A	Loudon baz=169	70.33	350	P	P	10 11 21.8	-0.3
W47A	Westpoint baz=166	70.35	347	P	P	10 11 21.7	-0.5
V49A	McMinnville baz=168,SNR=6.6	70.55	348	P	P	10 11 22.9	-0.5
W45A	Hickory Valley baz=165	70.58	345	P	P	10 11 23.9	+0.3
U53A	Fall Branch baz=171	70.64	351	P	P	10 11 24.3	+0.2
V48A	Smith Brothers comp=Z,97nm,0.9s	70.68	347	*e*P	P	10 11 23.5	-0.7
V48A	Smith Brothers baz=167,SNR=13	70.68	347	P	P	10 11 23.9	-0.4
U52A	Thorn Hill baz=170	70.77	351	P	P	10 11 24.6	-0.2
U51A	La Follette baz=170	70.85	350	P	P	10 11 25.0	-0.3
V47A	Nunnelly baz=166,SNR=12	70.89	347	P	P	10 11 24.8	-0.7
UALR	University of	70.94	343	*e*pP	pP	10 11 34.8	+1.1
V46A	Holladay baz=166	70.98	346	P	P	10 11 25.9	-0.1
U50A	Jamestown baz=169	71.01	349	P	P	10 11 26.1	-0.2
MIAR	Mount Ida comp=Z,38nm,1.4s	71.03	341	*e*P	P	10 11 27.1	+0.7
MIAR MIAR	Mount Ida comp=Z,38nm,1.4s	71.03	341	*e*P pmax	P pmax	10 11 27.1	+0.7
MIAR	Mount Ida baz=161	71.03	341	P	P	10 11 26.9	+0.5
ABTX	Abilene, Hawle comp=Z,46nm,1.0s	71.08	336	*e*P	P	10 11 27.6	+0.7
ABTX	Abilene, Hawle baz=156	71.08	336	P	P	10 11 27.1	+0.3
V45A	Humboldt baz=165	71.09	346	P	P	10 11 26.6	-0.1
T54A	Tazewell baz=172	71.21	352	P	P	10 11 27.1	-0.4
BLA	Blacksburg baz=173	71.23	353	P	P	10 11 27.4	-0.2
T53A	Wise baz=171	71.24	351	P	P	10 11 27.7	0.0
WVT	Waverly comp=Z,109nm,1.0s	71.25	347	*e*P	P	10 11 27.2	-0.4
WVT WVT	Waverly comp=Z,109nm,1.0s	71.25	347	*e*P pmax	P pmax	10 11 27.3	-0.4
WVT	Waverly baz=166	71.25	347	P	P	10 11 27.7	+0.1
U49A	Red Boiling Sp baz=168	71.25	349	P	P	10 11 27.8	+0.1
W41B	Gary Mavity, V baz=162	71.29	343	P	P	10 11 28.1	+0.2
U48A	Cassie Pea, Po baz=167	71.38	348	P	P	10 11 29.1	+0.6
WHAR	Wooly Hollow comp=Z,53nm,1.2s	71.41	343	*e*P	P	10 11 28.6	0.0
T51A	Gray baz=170	71.42	350	P	P	10 11 29.1	+0.4
T52A	Hallie baz=170	71.42	351	P	P	10 11 29.2	+0.5
U47A	Clarksville baz=167,SNR=11	71.45	347	P	P	10 11 28.8	0.0
V43A	Jonesboro baz=164	71.48	344	P	P	10 11 29.4	+0.3
U46A	Springville baz=166	71.53	346	P	P	10 11 29.7	+0.3
T50A	Nancy baz=169	71.60	349	P	P	10 11 30.0	+0.2
U45A	Rockin P Farm, baz=166,SNR=5.3	71.64	346	P	P	10 11 29.9	-0.1
W39A	Magazine comp=Z,84nm,1.1s	71.70	342	*e*P	P	10 11 31.2	+0.7
W39A	Magazine baz=161	71.70	342	P	P	10 11 31.1	+0.7
R58B	Mineral baz=175	71.77	355	P	P	10 11 31.4	+0.6
T49A	Edmonton comp=Z,60nm,1.4s	71.79	349	*e*P	P	10 11 30.9	-0.1
T49A	Edmonton baz=168	71.79	349	P	P	10 11 30.6	-0.4
S55A	Lewisburg baz=173	71.80	353	P	P	10 11 31.6	+0.6
S53A	Williamson baz=171	71.88	352	P	P	10 11 31.8	+0.2
T48A	Bowling Green baz=168	71.94	348	P	P	10 11 31.1	-0.7
T47A	Sharon Grove comp=Z,37nm,1.0s	71.94	348	*e*P	P	10 11 31.6	-0.3
T47A	Sharon Grove baz=167	71.94	348	P	P	10 11 31.4	-0.5
U44A	Portageville baz=165	71.98	345	P	P	10 11 32.2	+0.1
S52A	Salyersville baz=170	72.00	351	P	P	10 11 31.9	-0.3
S51A	Beattyville comp=Z,20nm,0.9s	72.03	351	*e*P	P	10 11 32.8	+0.5
S51A	Beattyville baz=170	72.03	351	P	P	10 11 32.2	-0.2
T46A	Princeton baz=166	72.14	347	P	P	10 11 33.0	0.0
U42A	Revenden baz=163	72.17	344	P	P	10 11 33.2	0.0
S50A	Richmond baz=169	72.18	350	P	P	10 11 33.3	+0.1
R54A	Victor baz=172	72.25	353	P	P	10 11 34.1	+0.4
R55A	Marlinton baz=173	72.26	354	P	P	10 11 33.7	-0.1
T45A	Paducah baz=166	72.27	346	P	P	10 11 34.0	+0.2
U41A	Viola baz=163	72.33	343	P	P	10 11 34.5	+0.3
MNTX	Cornudas Mount comp=Z,36nm,1.6s	72.40	331	*e*P	P	10 11 34.6	-0.1
MNTX	Cornudas Mount baz=152,SNR=7.5	72.40	331	P	P	10 11 34.7	-0.1
PBMO	Poplar Bluff comp=Z,20nm,0.8s	72.40	345	*e*P	P	10 11 35.0	+0.5
S48A	Wiedeman Farm, baz=168	72.42	349	P	P	10 11 34.3	-0.4
S49A	Springfield baz=168	72.42	349	P	P	10 11 34.3	-0.4
S47A	Hartford baz=167	72.50	348	P	P	10 11 34.5	-0.6
R53A	Hurricane baz=171	72.50	352	P	P	10 11 34.5	-0.6
T44A	Benton baz=165	72.52	346	P	P	10 11 35.6	+0.3
U40A	Yellville baz=162,SNR=7.3	72.56	343	P	P	10 11 35.5	-0.1
R52A	Catlettsburg baz=171	72.59	351	P	P	10 11 35.1	-0.6
T43A	Greenville baz=164,SNR=6.1	72.67	345	P	P	10 11 36.0	-0.1
R51A	Hillsboro baz=170	72.68	351	P	P	10 11 35.8	-0.4
S46A	Don Dixon Farm baz=166	72.73	347	P	P	10 11 36.4	-0.1
WMOK	Wichita Mounta comp=Z,22nm,1.2s	72.73	337	*e*P	P	10 11 37.0	+0.4
WMOK WMOK	Wichita Mounta comp=Z,22nm,1.2s	72.73	337	*e*P pmax	P pmax	10 11 37.1	+0.4
WMOK	Wichita Mounta baz=157	72.73	337	P	P	10 11 36.5	-0.1
R50A	Paris baz=169	72.76	350	P	P	10 11 36.9	+0.2
HHAR	Hobbs comp=Z,30nm,1.2s	72.77	342	*e*P	P	10 11 37.5	+0.7
T42A	Van Buren comp=Z,34nm,1.4s	72.79	344	*e*P	P	10 11 37.6	+0.7
T42A	Van Buren baz=164	72.79	344	P	P	10 11 37.2	+0.3
S45A	Carrier Mills baz=166	72.89	347	P	P	10 11 37.6	+0.1
R49A	Shelbyville baz=169	72.90	349	P	P	10 11 37.4	-0.1
TUL1	Leonard comp=Z,29nm,1.0s	72.92	340	*e*P	P	10 11 37.9	+0.2
TUL1	Leonard baz=160	72.92	340	P	P	10 11 38.0	+0.3
T41A	Mountain View baz=163	72.96	344	P	P	10 11 38.0	+0.1
Q55A	Buckhannon baz=173	72.97	354	P	P	10 11 38.1	+0.1
USIN	University of comp=Z,55nm,0.9s	73.00	347	*e*P	P	10 11 38.0	-0.1
WCI	Wyandotte Cave comp=Z,34nm,1.2s	73.01	348	*e*P	P	10 11 40.0	+1.8
WCI WCI	Wyandotte Cave comp=Z,34nm,1.2s	73.01	348	*e*P pmax	P pmax	10 11 40.0	+1.8
WCI	Wyandotte Cave baz=168	73.01	348	P	P	10 11 38.6	+0.4
S44A	Carbondale baz=165	73.04	346	P	P	10 11 38.8	+0.5
S43A	Fulton Ridge, baz=164,SNR=7.1	73.09	345	P	P	10 11 38.2	-0.5
R48A	Northridge Ran baz=168	73.11	349	P	P	10 11 39.1	+0.3
R47A	Wooly Knot Far baz=168	73.12	348	P	P	10 11 39.0	+0.2
Q52A	Bidwell baz=171	73.16	352	P	P	10 11 39.4	+0.3
R46A	Gibon Southern baz=167	73.21	347	P	P	10 11 39.4	+0.1
MAW	Mawson comp=Z,1μm,18.1s,baz=230,slow=38	73.25	164	LR	LR	10 46 36.6	
Q51A	Peebles comp=Z,28nm,0.9s	73.36	351	*e*P	P	10 11 40.6	+0.4
Q51A	Peebles baz=170	73.36	351	P	P	10 11 40.0	-0.3
MSTX	Muleshoe comp=Z,24nm,0.9s	73.41	334	*e*P	P	10 11 41.0	+0.2
MSTX	Muleshoe baz=154	73.41	334	P	P	10 11 40.3	-0.5
R45A	Skylar, Fairfi baz=166	73.43	347	P	P	10 11 40.4	-0.2
S42A	Caledonia baz=164	73.44	345	P	P	10 11 40.5	-0.3
P55A	Reedsville baz=173	73.45	354	P	P	10 11 40.6	-0.2
S41A	Jillco Farms, baz=163,SNR=7.6	73.47	344	P	P	10 11 40.7	-0.3
Q49A	Aurora baz=169	73.55	350	P	P	10 11 41.2	-0.1
FVM	French Village comp=Z,52nm,1.1s	73.56	345	*e*P	P	10 11 41.3	-0.2
FVM FVM	French Village comp=Z,52nm,1.1s	73.56	345	*e*P pmax	P pmax	10 11 41.3	-0.2
P53A	Whipple baz=172	73.58	353	P	P	10 11 41.4	-0.1
MCWV	Mont Chateau baz=173	73.60	354	P	P	10 11 41.5	-0.2
P54A	Burton baz=173	73.61	353	P	P	10 11 41.5	-0.1
Q48A	North Vernon baz=168	73.61	349	P	P	10 11 41.1	-0.6
R43A	Red Bud baz=165	73.74	346	P	P	10 11 42.5	0.0
P51A	Williamsport comp=Z,38nm,1.0s	73.77	351	*e*P	P	10 11 42.2	-0.4
P51A	Williamsport baz=170	73.77	351	P	P	10 11 42.6	0.0
319A	Douglas comp=Z,54nm,1.6s	73.78	328	*e*P	P	10 11 44.2	+1.2
CCM	Cathedral Cave comp=Z,46nm,1.0s	73.81	344	*e*P	P	10 11 42.9	0.0
CCM CCM	Cathedral Cave comp=Z,46nm,1.0s	73.81	344	*e*P pmax	P pmax	10 11 42.9	0.0
CCM	Cathedral Cave baz=164	73.81	344	P	P	10 11 42.8	-0.1
P52A	Corning baz=171	73.81	352	P	P	10 11 42.8	0.0
OLIL	Olney	73.82	347	*e*pP	pP	10 11 51.1	+0.2
AMTX	Amarillo comp=Z,47nm,1.3s	73.84	335	*e*P	P	10 11 44.5	+1.2
AMTX	Amarillo baz=155	73.84	335	P	P	10 11 43.4	+0.1
R42A	Luebbering baz=164	73.92	345	P	P	10 11 44.0	+0.4
Q45A	Warren Harvey, baz=166	73.99	347	P	P	10 11 43.6	-0.3
P50A	Jamestown baz=170	73.99	351	P	P	10 11 44.2	+0.3
P49A	Miami Univ. Ec baz=169	74.05	350	P	P	10 11 43.9	-0.4
R41A	Rosebud baz=163,SNR=7.9	74.07	344	P	P	10 11 44.7	+0.3
P48A	Milroy baz=168	74.08	349	P	P	10 11 44.1	-0.4
O55A	Ligonier baz=174	74.10	354	P	P	10 11 44.5	-0.1
O56A	Blue Knob Stat baz=174	74.11	355	P	P	10 11 44.2	-0.5
121A	Cookes Peak, D baz=150	74.12	329	P	P	10 11 45.4	+0.3
O52A	Adamsville	74.25	352	*e*pP	pP	10 11 53.8	+0.4
O52A	Adamsville baz=172	74.25	352	P	P	10 11 45.9	+0.4
U32A	Winter Ranch, comp=Z,36nm,1.1s	74.31	338	*e*P	P	10 11 45.6	-0.3
O53A	New Philadelph baz=172	74.32	353	P	P	10 11 46.2	+0.4
Q43A	New Douglas baz=165	74.33	346	P	P	10 11 45.9	0.0
O51A	Pataskala baz=171	74.37	352	P	P	10 11 46.2	+0.1
Q42A	Golden Eagle baz=164	74.48	345	P	P	10 11 46.4	-0.3
O50A	Cable baz=170	74.50	351	P	P	10 11 46.5	-0.4
ACSO	Alum Creek Sta comp=Z,32nm,0.8s	74.50	351	*e*P	P	10 11 46.7	-0.2
ACSO	Alum Creek Sta baz=171	74.50	351	P	P	10 11 46.6	-0.2
P46A	Rosedale baz=167	74.52	348	P	P	10 11 46.9	-0.1
P45A	Graceland, Par	74.53	348	*e*pP	pP	10 11 55.0	0.0
P45A	Graceland, Par baz=167	74.53	348	P	P	10 11 46.9	-0.1
N59A	State Game Lan baz=177	74.59	357	P	P	10 11 48.0	+0.6
PAL	Palisades baz=178	74.63	359	P	P	10 11 47.7	+0.2
P44A	Sand Creek, Wi baz=166	74.63	347	P	P	10 11 47.4	-0.2
O49A	Covington comp=Z,116nm,1.5s	74.64	350	*e*P	P	10 11 47.2	-0.5
O49A	Covington baz=170	74.64	350	P	P	10 11 47.6	0.0
N55A	Marion Center baz=174	74.65	355	P	P	10 11 47.9	+0.1
Q41A	Truxton baz=164,SNR=6.0	74.67	345	P	P	10 11 47.5	-0.3
O48A	Farmland baz=169	74.82	350	P	P	10 11 49.0	+0.3

N53A	Lisbon	74.83	353	P	P	10 11 48.9	+0.1
	baz=172						
N54A	Moraine State	74.91	354	P	P	10 11 48.6	-0.6
	baz=173						
N52A	McGinn’s Farm,	74.93	353	P	P	10 11 49.6	+0.3
	baz=172						
LIC	Lamto	74.94	72	*e*P	P	10 11 49.6	-0.5
	comp=Z,71nm,1.2s						
O47A	Sheridan	74.95	349	P	P	10 11 49.5	0.0
	baz=168						
P43A	Skaggs, Pawnee	74.97	346	P	P	10 11 49.6	0.0
	baz=165						
SUR	Sutherland	75.00	119	*e*P	P	10 11 51.9	+1.4
	comp=Z,47nm,1.1s						
N50A	Nevada	75.05	351	P	P	10 11 50.0	0.0
	baz=170						
P42A	Winchester	75.08	346	*e*pP	pP	10 11 58.9	+0.6
P42A	Winchester	75.08	346	P	P	10 11 50.3	0.0
	baz=164						
TIC	Toumodi	75.20	71	*e*P	P	10 11 51.1	-0.5
O45A	Potomac	75.23	348	P	P	10 11 51.4	+0.3
	baz=167						
SFIN	Lafayette	75.25	348	P	P	10 11 51.6	+0.5
	baz=167						
KIC	Kosan Boka	75.25	72	*e*P	P	10 11 51.5	-0.3
	comp=Z,60nm,1.1s						
TUC	Tucson	75.25	327	*e*P	P	10 11 52.9	+1.4
	comp=Z,21nm,1.4s						
TUC	Tucson	75.25	327	*e*P	P	10 11 52.9	+1.4
TUC				pmax	pmax		
	comp=Z,21nm,1.4s						
TUC	Tucson	75.25	327	P	P	10 11 52.1	+0.6
	baz=148						
O44A	Mansfield	75.27	347	P	P	10 11 51.5	+0.2
	baz=166						
M55A	Ridgway	75.31	355	P	P	10 11 51.8	+0.3
	baz=174						
P41A	Barry, Barry	75.32	345	P	P	10 11 52.0	+0.3
	baz=164						
N49A	Columbus Grove	75.34	351	*e*P	P	10 11 51.4	-0.3
	comp=Z,37nm,0.9s						
N49A	Columbus Grove	75.34	351	P	P	10 11 51.1	-0.6
	baz=170						
DBIC	Dimbokro	75.34	71	*e*P	P	10 11 52.1	-0.2
	comp=Z,42nm,1.4s						
DBIC	Dimbokro	75.34	71	P	P	10 11 52.2	-0.2
	comp=Z,12nm,0.8s,baz=208,slow=4.4,SNR=14						
DBIC				LR	LR	10 43 41.2	
	comp=Z,837nm,18.9s,baz=214,slow=35						
DBIC	Dimbokro	75.34	71	*e*P	P	10 11 51.5	-0.8
N48A	Decatur	75.39	350	P	P	10 11 51.5	-0.5
	baz=169						
M54A	Oil Creek Stat	75.42	354	P	P	10 11 52.5	+0.3
	baz=174						
M53A	WI Miller and	75.44	353	P	P	10 11 52.9	+0.6
	baz=173						
LAZ	Ladron	75.47	331	*e*P	P	10 11 52.0	-0.9
M51A	Elyria	75.49	352	P	P	10 11 52.7	+0.1
	baz=171						
N47A	Urbana	75.51	350	P	P	10 11 52.4	-0.2
	baz=168						
O43A	Sugar Creek Fa	75.55	347	P	P	10 11 53.1	+0.1
	baz=165						
M52A	Chesterland	75.61	353	P	P	10 11 53.3	+0.1
	baz=172						
O42A	Bath	75.62	346	P	P	10 11 53.4	+0.1
	baz=165						
M50A	Fremont	75.67	352	P	P	10 11 53.3	-0.2
	baz=171						
ANMO	Albuquerque	75.67	332	*e*P	P	10 11 55.8	+1.7
	comp=Z,15nm,1.3s						
ANMO	Albuquerque	75.67	332⇓	*e*P	P	10 11 55.4	+1.4
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ANMO	Albuquerque	75.67	332	P	P	10 11 54.2	+0.2
	baz=151						
N46A	Monticello	75.69	349	P	P	10 11 53.8	+0.1
	baz=168						
O41A	Passleys Farm,	75.71	345	P	P	10 11 53.9	+0.1
	baz=164						
N45A	Kentland	75.77	348	P	P	10 11 54.3	+0.1
	baz=167						
HDIL	Hopedale	75.81	347	P	P	10 11 54.0	-0.5
	baz=165						
N44A	Piper City	75.83	348	P	P	10 11 53.8	-0.7
	baz=166						
M49A	Liberty Center	75.85	351	P	P	10 11 54.6	0.0
	baz=170						
BINY	Binghamton	75.88	357	P	P	10 11 55.2	+0.4
	baz=177						
214A	Organ Pipe Nat	75.89	325	P	P	10 11 55.4	+0.3
	baz=146						
L53A	Girard	75.92	354	P	P	10 11 55.4	+0.4
	baz=173						
L55A	Hinsdale	76.00	355	P	P	10 11 56.1	+0.6
	baz=175						
N43A	Stutzman Famil	76.16	347	P	P	10 11 56.7	+0.3
	baz=166						
N42A	Yates City	76.22	346	P	P	10 11 57.4	+0.7
	baz=165						
L50A	Kingsville	76.27	352	P	P	10 11 57.5	+0.6
	baz=171						
N41A	Harden Midland	76.27	346	P	P	10 11 57.2	+0.2
	baz=164						
L48A	N Adams	76.37	351	P	P	10 11 57.3	-0.3
	baz=170						
M44A	Midewin, Midew	76.39	348	*e*pP	pP	10 12 06.1	+0.5
M44A	Midewin, Midew	76.39	348	P	P	10 11 57.8	+0.2
	baz=166						
L49A	Milan	76.45	351	P	P	10 11 58.1	+0.1
	baz=170						
RAR	Rarotonga	76.48	253	LR	LR	10 38 11.9	
	comp=Z,884nm,18.1s,baz=128,slow=30						
L47A	Sherwood	76.51	350	P	P	10 11 58.2	-0.1
	baz=169						
N40A	Mertquake, Sal	76.59	345	P	P	10 11 58.7	-0.1
	baz=164						
M43A	Waltham Townsh	76.60	347	P	P	10 11 57.4	-1.5
	baz=166						
AAM	Ann Arbor	76.62	351	P	P	10 11 58.4	-0.6
	baz=170						
K52A	Tillsonburg	76.78	354	P	P	10 11 59.4	-0.5
	baz=173						
K51A	Iona Station	76.80	353	P	P	10 11 59.4	-0.6
	baz=172						
T25A	Trinidad	76.83	334	*e*P	P	10 12 01.9	+1.3
	comp=Z,48nm,1.3s						
T25A	Trinidad	76.83	334	P	P	10 12 00.2	-0.4
	baz=153,SNR=5.6						
M41A	Milan	76.85	346	P	P	10 11 59.6	-0.7
	baz=164						
W18A	Petrified Fore	77.17	329	*e*P	P	10 12 04.5	+2.1
	comp=Z,36nm,1.4s						
W18A	Petrified Fore	77.17	329	P	P	10 12 02.6	+0.1
	baz=149						
K48A	Perry	77.18	351	P	P	10 12 02.4	+0.3
	baz=170						
J52A	Paris	77.21	354	P	P	10 12 03.1	+0.8
	baz=173						
ELFO	Elginfield	77.25	353	P	P	10 12 03.5	+1.1
	baz=172						
L42A	Oliver, Polo	77.28	347	*e*pP	pP	10 12 11.4	+0.7
M39A	Webster	77.29	345	P	P	10 12 03.1	+0.3
	baz=163						
X16A	Lo Mia Camp, P	77.32	328	*e*P	P	10 12 04.9	+1.5
	comp=Z,12nm,0.9s						
L41A	Preston	77.51	346	P	P	10 12 03.9	-0.1
	baz=164						
J49A	Marlette	77.61	352	P	P	10 12 04.2	-0.2
	baz=171						
J48A	Bridge Port	77.62	351	P	P	10 12 03.7	-0.9
	baz=170						
Y14A	Wickenburg	77.63	326	*e*P	P	10 12 06.7	+1.8
	comp=Z,10.0nm,1.1s						
L40A	Anamosa	77.65	346	*e*P	P	10 12 03.9	-0.9
	comp=Z,26nm,0.9s						
L40A	Anamosa	77.65	346	P	P	10 12 04.4	-0.3
	baz=164						
J47A	Sunmer	77.70	351	P	P	10 12 03.6	-1.4
	baz=169						
DRWO	Darlington Wes	77.70	355	P	P	10 12 04.5	-0.4
	baz=174						
I53A	Kortright Cn E	77.72	355	P	P	10 12 04.4	-0.7
	baz=174						
SDCO	Great Sand Dun	77.77	334	*e*P	P	10 12 08.0	+2.0
	comp=Z,6.3nm,0.9s						
SDCO	Great Sand Dun	77.77	334	P	P	10 12 05.7	-0.3
	baz=152						
PKRO	Pickering	77.82	355	P	P	10 12 05.7	+0.1
	baz=174						
I51A	Listowel	77.82	354	P	P	10 12 06.3	+0.6
	baz=172						
LBNH	Lisbon	77.85	0	P	P	10 12 06.4	+0.6
	baz=180						
L39A	Vinton	77.87	345	P	P	10 12 06.5	+0.6
	baz=163						
KSCO	Kaye Shedlock’	77.89	336	P	P	10 12 06.2	-0.1
	baz=154						
J46A	Howard City	77.92	350	P	P	10 12 06.2	0.0
	baz=168						
K42A	Prairie Point,	77.97	347	P	P	10 12 06.6	+0.1
	baz=165						
K41A	Shullsburg	77.99	346	P	P	10 12 06.6	0.0
	baz=165						
I52A	Shelburne	78.01	354	P	P	10 12 07.0	+0.3
	baz=173						
IKP	In-Ko-Pah, Jac	78.06	323	P	P	10 12 08.3	+0.9
	baz=144						
Y12C	Blythe	78.18	325	*e*P	P	10 12 09.1	+1.2
	comp=Z,12nm,1.1s						
WUAZ	Wupatki	78.21	328	*e*P	P	10 12 09.3	+1.0
	comp=Z,11nm,1.0s						
WUAZ	Wupatki	78.21	328	P	P	10 12 08.5	+0.3
	baz=148						
K40A	Colesburg	78.24	346	P	P	10 12 08.2	+0.1
	baz=164						
S22A	4UR Ranch, Cre	78.27	333	*e*P	P	10 12 09.3	+0.6
	comp=Z,22nm,1.6s						
S22A	4UR Ranch, Cre	78.27	333	P	P	10 12 09.4	+0.7
	baz=151						
JFWS	Jewell Farm	78.27	347	*e*P	P	10 12 09.1	+0.9
	comp=Z,41nm,1.3s						
JFWS	Jewell Farm	78.27	347	*e*P	P	10 12 09.1	+0.9
JFWS				pmax	pmax		
	comp=Z,41nm,1.3s						
JFWS	Jewell Farm	78.27	347	P	P	10 12 08.9	+0.7
	baz=165						
K39A	Oelwein	78.40	345	P	P	10 12 09.6	+0.7
	baz=163						
MONP2	Monument Peak	78.41	323	P	P	10 12 10.3	+0.8
	baz=144						
I47A	Gladwin	78.42	351	P	P	10 12 09.7	+0.7
	baz=170						
J42A	Columbus	78.45	348	P	P	10 12 09.4	+0.2
	baz=166						
MVCO	Mesa Verde	78.46	331	*e*P	P	10 12 10.8	+1.1
	comp=Z,17nm,1.1s						
MVCO	Mesa Verde	78.46	331	P	P	10 12 10.6	+0.9
	baz=150						
PDMCI	Parker Dam,Lak	78.46	326	P	P	10 12 09.9	+0.4
	baz=146						
I48A	Sherman Twp	78.49	352	P	P	10 12 10.5	+1.1
	baz=170						
BC3	Big Chuckawall	78.55	324	P	P	10 12 10.5	+0.4
	baz=144						
J41A	Loganville	78.66	347	P	P	10 12 11.1	+0.8
	baz=165						
I45A	Fountain	78.68	350	P	P	10 12 10.9	+0.5
	baz=168						
Q24A	Divide	78.72	334	*e*P	P	10 12 12.8	+1.6
	comp=Z,21nm,1.2s						
Q24A	Divide	78.72	334	P	P	10 12 11.7	+0.5
	baz=152						
IRM	Iron Mountain	78.81	325	P	P	10 12 12.1	+0.7
	baz=145						
PKME	Peaks-Kenny Pk	78.92	2	P	P	10 12 12.0	+0.3
	baz=182						
G53A	Haliburton	78.94	355	P	P	10 12 12.7	+0.9
	baz=174						
W13A	Hualapai Mount	78.99	326	*e*P	P	10 12 14.2	+1.5
	comp=Z,22nm,1.6s						
PFO	Pinyon Flats O	79.01	324	P	P	10 12 14.2	+1.6
	baz=144						
BELC	Belle Mtn. Jos	79.10	324	P	P	10 12 14.5	+1.4
	baz=144						
ALFO	Alfred	79.27	358	P	P	10 12 14.3	+0.8
	baz=178						
KLBO	Killbear Provi	79.29	354	P	P	10 12 14.4	+0.7
	baz=173						
TSUM	Tsumeb	79.39	106	*e*P	P	10 12 15.6	+0.4
	comp=Z,31nm,1.4s						
I39A	Houston	79.43	346	*e*P	P	10 12 14.1	-0.5
	comp=Z,28nm,1.1s						
I39A	Houston	79.43	346	P	P	10 12 14.7	+0.2
	baz=164						
GMRC	Granite Mounta	79.57	325	P	P	10 12 16.9	+1.2
	baz=144						
SMCO	Snowmass	79.58	333	*e*P	P	10 12 17.4	+1.4
	comp=Z,15nm,1.0s						
ISCO	Idaho Springs	79.62	334	*e*P	P	10 12 17.1	+1.0
	comp=Z,14nm,1.3s						
ISCO	Idaho Springs	79.62	334	*e*P	P	10 12 17.1	+1.0
ISCO				pmax	pmax		
	comp=Z,14nm,1.3s						
ISCO	Idaho Springs	79.62	334	P	P	10 12 17.3	+1.2
	baz=152						
F49A	Sandfield	79.86	353	P	P	10 12 17.7	+0.9
	baz=172						
HEC	Hector,Ludlow	79.93	324	P	P	10 12 17.7	+0.2
	baz=144						
H40A	Chili	79.95	347	P	P	10 12 18.1	+0.8
	baz=165						
BFSC	Mount Baldy Ra	80.11	323	P	P	10 12 17.9	-0.7
	baz=143						
KNB	Kanab	80.11	328	*e*P	P	10 12 20.0	+1.4
	comp=Z,24nm,1.3s						
KNB	Kanab	80.11	328	*e*P	P	10 12 20.0	+1.4
KNB				pmax	pmax		
	comp=Z,24nm,1.3s						
E54A	Lac Daplat, Po	80.16	357	P	P	10 12 18.5	0.0
	baz=176						
H39A	Augusta	80.17	346	P	P	10 12 19.3	+0.8
	baz=164						
TUQ	Turquoise Moun	80.22	325	P	P	10 12 20.0	+0.8
	baz=144						
BOSA	Boshof	80.24	118	*i* P	P	10 12 20.4	+0.7
BOSA	Boshof	80.24	118	*e*P	P	10 12 19.6	-0.1
	comp=Z,43nm,1.1s						
BOSA				*e*P	P	10 12 19.9	+0.2
BOSA	Boshof	80.24	118	*e*P	P	10 12 19.6	-0.1
BOSA				pmax	pmax		
	comp=Z,43nm,1.1s						
BOSA	Boshof	80.24	118	*i* P	P	10 12 10.7	-9.0
BOSA	Boshof	80.24	118	P	P	10 12 19.9	+0.2
	comp=Z,6.1nm,0.7s,baz=265,slow=2.8,SNR=16						
BOSA				LR	LR	10 45 38.8	
	comp=Z,517nm,18.0s,baz=222,slow=34						
LCMT	Little Creek M	80.29	328	*e*P	P	10 12 20.7	+1.1
	comp=Z,12nm,1.3s						
H38A	Maiden Rock	80.37	346	P	P	10 12 19.9	+0.3
	baz=163						
E50A	Wahnapitae	80.39	354	P	P	10 12 20.1	+0.4
	baz=173						
E51A	G1948 Merrick	80.40	355	P	P	10 12 20.4	+0.6
	baz=174						
ECSD	EROS Data Cent	80.47	342	*e*P	P	10 12 20.1	-0.1
	comp=Z,31nm,1.2s						
ECSD	EROS Data Cent	80.47	342	P	P	10 12 20.4	+0.2
	baz=160						
GSC	Goldstone, Bar	80.54	324	P	P	10 12 21.3	+0.5
	baz=144						
E48A	Lockeyer	80.58	353	P	P	10 12 21.2	+0.5
	baz=172						
F44A	Big Bay de Noc	80.60	350	P	P	10 12 21.4	+0.5
	baz=168						
F42A	Maple Grove Fa	80.66	349	P	P	10 12 21.3	+0.2
	baz=167						
E47A	Iron Bridge	80.68	352	P	P	10 12 21.2	0.0
	baz=171						
MTPU	Mount Pierson	80.69	329	*e*P	P	10 12 22.6	+0.7
	comp=Z,12nm,1.2s						
SZCU	Shurtz Canyon	80.70	328	*e*P	P	10 12 22.8	+0.9
	comp=Z,32nm,1.8s						
E46A	Sault Ste Mari	80.71	352	P	P	10 12 20.9	-0.5
	baz=170						
N23A	Red Feather La	80.71	335	P	P	10 12 20.7	-1.2
	baz=152						
G39A	Holcombe	80.74	347	P	P	10 12 21.4	-0.2
	baz=164						
SHPR	Sheep Range	80.74	326	*e*P	P	10 12 23.1	+1.1
	comp=Z,10.0nm,1.1s						
D52A	ZEK Kipawa Sen	80.77	356	P	P	10 12 21.6	-0.1
	baz=175						
CCUT	Cedar City	80.79	328	*e*P	P	10 12 24.3	+2.0
	comp=Z,11nm,1.1s						
F41A	Three Lakes	80.80	348	P	P	10 12 21.5	-0.4
	baz=166						
D53A	Lac Vacive, Po	80.83	356	P	P	10 12 21.8	-0.2
	baz=175						
O20A	White River Ci	80.89	333	P	P	10 12 22.7	-0.1
	baz=150						
PHWY	Pilot Hill	80.90	335	*e*P	P	10 12 23.3	+0.4
	comp=Z,7.7nm,0.8s						
SRU	San Rafael Swe	80.90	331	*e*P	P	10 12 23.3	+0.4
	comp=Z,8.4nm,1.0s						
SRU	San Rafael Swe	80.90	331	*e*P	P	10 12 23.3	+0.4
SRU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
Q16A	Castle Valley	81.00	330	*e*P	P	10 12 24.3	+0.9
	comp=Z,17nm,1.2s						
SPMN	Marine on St.	81.00	345	P	P	10 12 23.3	+0.3
	baz=163						
E43A	Lone Tree Farm	81.08	350	P	P	10 12 24.2	+0.9
	baz=168						
MSU	Marysvale	81.08	329	*e*P	P	10 12 24.9	+1.0
MSU	Marysvale	81.08	329	*e*P	P	10 12 24.9	+1.0
F40A	Park Falls	81.15	347	P	P	10 12 24.4	+0.6
	baz=165						
D48A	Paudash Townsh	81.24	353	P	P	10 12 23.7	-0.5
	baz=172						
D47A	Chapleau	81.25	353	P	P	10 12 24.1	-0.2
	baz=171						
E42A	Champion	81.27	349	P	P	10 12 24.9	+0.5
	baz=167						
D49A	Beulah Townshi	81.29	354	P	P	10 12 25.0	+0.5
	baz=172						
F39A	Loretta	81.29	347	P	P	10 12 24.9	+0.4
	baz=164						
P17A	Butcher Ranch,	81.30	331	*e*P	P	10 12 25.5	+0.5
	comp=Z,10nm,1.0s						
F37A	Hinrichs Farm,	81.44	346	P	P	10 12 25.5	+0.2
	baz=163						
MPMC	Manual Prospec	81.48	324	P	P	10 12 26.2	+0.2
	baz=143						
FURC	Furnace Creek,	81.50	325	P	P	10 12 26.2	+0.4
	baz=144						
F38A	Pierce - Schro	81.52	346	P	P	10 12 26.0	+0.3
	baz=164						
TPNV	Topopah Spring	81.61	326	*e*P	P	10 12 27.5	+0.9
TPNV	Topopah Spring	81.61	326	*e*P	P	10 12 27.5	+0.9
TPNV	Topopah Spring	81.61	326	P	P	10 12 27.5	+0.9
	baz=144						
E40A	Wakefield	81.62	348	P	P	10 12 27.2	+1.0
	baz=165						
ISA	Isabella, Lake	81.64	324	*e*P	P	10 12 28.2	+1.5
	comp=Z,6.6nm,0.9s						
ISA	Isabella, Lake	81.64	324	*e*P	P	10 12 28.2	+1.5
ISA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ISA	Isabella, Lake	81.64	324	P	P	10 12 27.4	+0.7
	baz=143						
E39A	Mellen	81.67	347	P	P	10 12 26.9	+0.4
	baz=165						
VLDQ	Val d'Or	81.85	356	*e*P	P	10 12 28.0	+0.6
VLDQ				*e*pP	pP	10 12 35.9	+0.5
D41A	Chassel	81.99	349	P	P	10 12 28.4	+0.3
	baz=166						
CWC	Cottonwood Cre	82.07	324	P	P	10 12 28.8	-0.2
	baz=143						
VES	Vestal, Richgr	82.09	323	P	P	10 12 29.8	+0.9
	baz=142						
MPU	Maple Canyon	82.12	331	*e*P	P	10 12 30.9	+1.6
	comp=Z,10nm,1.1s						
NLU	North Lily Min	82.25	330	*e*P	P	10 12 30.8	+0.8
	comp=Z,18nm,1.6s						
R11A	Troy Canyon, C	82.44	327	*e*P	P	10 12 32.5	+1.5
	comp=Z,15nm,1.4s						
R11A	Troy Canyon, C	82.44	327	P	P	10 12 31.1	+0.2
	baz=145						
K22A	Casper	82.46	335	*e*P	P	10 12 31.8	+0.8
	comp=Z,20nm,1.3s						
K22A	Casper	82.46	335	P	P	10 12 31.1	+0.1
	baz=152						
LBTB	Lobatse	82.48	115	*e*P	P	10 12 31.4	-0.2
	comp=Z,41nm,1.2s						
LBTB	Lobatse	82.48	115	*e*P	P	10 12 31.4	-0.2
LBTB				pmax	pmax		
	comp=Z,41nm,1.2s						
DUG	Dugway, Tooele	82.76	330	*e*P	P	10 12 33.2	+0.7
	comp=Z,17nm,1.3s						
DUG	Dugway, Tooele	82.76	330	*e*P	P	10 12 33.2	+0.7
DUG				pmax	pmax		
	comp=Z,17nm,1.3s						
DUG	Dugway, Tooele	82.76	330	P	P	10 12 33.3	+0.7
	baz=147						
LSQQ	Lebel-sur-Quev	82.77	357	P	P	10 12 32.5	+0.3
	baz=176						
C40A	Isle Royale Na	82.92	349	P	P	10 12 32.9	0.0
	baz=166						
RSSD	Black Hills	82.94	338	*e*pP	pP	10 12 41.5	-0.1
RSSD	Black Hills	82.94	338	P	P	10 12 34.2	+0.7
	baz=154						
TCUT	Toone Canyon	82.97	331	*e*P	P	10 12 34.8	+1.0
	comp=Z,40nm,1.5s						
BKZ	Black Stump Fm	83.35	227	*e*pP	pP	10 12 46.4	+2.2
OMMB	Old Mammoth Mi	83.44	324	*e*P	P	10 12 37.0	+0.6
	comp=Z,9.6nm,1.2s						
BGU	Big Grassy Mou	83.46	330	*e*P	P	10 12 36.6	+0.4
	comp=Z,13nm,1.4s						
LTZ	Lake Taylor	83.49	222	*e*P	P	10 12 37.8	+1.4
	comp=Z,108nm,2.0s						
MATQ	Matagami	83.50	356	P	P	10 12 36.0	0.0
	baz=175						
CHGQ	Chibougamau	83.54	359	P	P	10 12 36.8	+0.6
	baz=178						
URZ	Urewera	83.54	228	P	P	10 12 37.8	+1.1
	comp=Z,2.8nm,0.9s,baz=152,slow=17,SNR=2.0						
URZ				LR	LR	10 42 20.1	
	comp=Z,962nm,18.2s,baz=22,slow=30						
RPZ	Rata Peaks	83.55	221	*e*P	P	10 12 37.6	+0.9
RPZ				*e*P	P	10 12 38.0	+1.4
RPZ	Rata Peaks	83.55	221	P	P	10 12 37.6	+0.9
	comp=Z,11nm,0.9s,baz=48,slow=11,SNR=2.9						
SPUT	South Promonto	83.55	331	*e*P	P	10 12 37.8	+1.1
	comp=Z,24nm,1.4s						
PD31	Pinedale Array	83.66	333	*e*P	P	10 12 37.5	+0.3
PDAR	Pinedale Array	83.66	333	*e*P	P	10 12 36.8	-0.5
PDAR	Pinedale Array	83.66	333	P	P	10 12 37.8	+0.5
	comp=Z,1.5nm,1.0s,baz=182,slow=4.5,SNR=6.7						
PDAR				LR	LR	10 46 29.6	
	comp=Z,772nm,18.1s,baz=162,slow=33						
BW06	Boulder Array	83.66	333	*e*P	P	10 12 37.9	+0.6
	comp=Z,4.0nm,0.6s						
BW06	Boulder Array	83.66	333	P	P	10 12 38.0	+0.7
	baz=150						
NV01	Mina Array Sit	83.76	325	*e*P	P	10 12 39.1	+1.3
NVAR	Mina Array Bea	83.76	325	P	P	10 12 39.0	+1.2
	comp=Z,1.2nm,0.8s,baz=156,slow=5.9,SNR=7.4						
NVAR				LR	LR	10 43 08.7	
	comp=Z,260nm,20.9s,baz=152,slow=31						
HVU	Hansel Valley	84.07	331	*e*P	P	10 12 39.5	+0.2
	comp=Z,8.9nm,1.0s						
HVU	Hansel Valley	84.07	331	*e*P	P	10 12 39.5	+0.2
HVU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KVN	Kaiserville	84.16	326	*e*P	P	10 12 40.7	+0.8
	comp=Z,6.7nm,1.0s						
KVN	Kaiserville	84.16	326	*e*P	P	10 12 40.7	+0.8
KVN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ELK	Elko	84.25	329	*e*P	P	10 12 41.2	+0.9
	comp=Z,6.0nm,1.0s						
ELK	Elko	84.25	329	*e*P	P	10 12 41.2	+0.9
ELK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TOA0	Torodi Ar. Sit	84.37	70	*e*P	P	10 12 39.0	-2.2
TOA0				*e*P	P	10 12 41.0	-0.2
TOA0				*e*S	S	10 22 59.3	-6.6
TORD	Torodi Ar. Bea	84.37	70	P	P	10 12 40.0	-1.3
	comp=Z,17nm,1.0s,baz=190,slow=3.3,SNR=45						
TORD				LR	LR	10 49 43.3	
	comp=Z,972nm,18.3s,baz=280,slow=35						
TOA1	Torodi Ar. Sit	84.37	70	*e*P	P	10 12 40.0	-1.3
YERR	Yerington	84.65	325	*e*P	P	10 12 43.5	+1.2
	comp=Z,21nm,1.6s						
REDW	Red Top Meadow	84.66	333	*e*P	P	10 12 42.8	+0.5
	comp=Z,15nm,1.3s						
LOHW	Long Hollow	84.78	333	*e*P	P	10 12 44.1	+1.2
	comp=Z,10nm,1.4s						
TPAW	Teton Pass	84.80	333	*e*P	P	10 12 42.4	-0.7
	comp=Z,8.6nm,1.0s						
MOOW	Moose Ponds	84.95	333	*e*P	P	10 12 44.8	+1.1
	comp=Z,4.7nm,1.1s						

MDND	Maddock	85.06	342	P	P	10 12 45.2	+1.2
	baz=157						
IMW	Indian Meadow	85.15	333	eP	P	10 12 45.8	+0.9
	comp=Z,12nm,1.3s						
FLWY	Flagg Ranch	85.22	333	eP	P	10 12 46.2	+1.1
	comp=Z,9.5nm,0.8s						
PAHR	Pah Rah Range	85.28	325	eP	P	10 12 46.6	+1.2
	comp=Z,12nm,1.2s						
AFDM	Forest Hills D	85.45	324	eP	P	10 12 47.4	+1.2
	comp=Z,12nm,1.3s						
RLMT	Red Lodge	85.59	335	eP	P	10 12 47.8	+0.8
	comp=Z,15nm,1.2s						
RLMT	Red Lodge	85.59	335	P	P	10 12 48.0	+1.1
	baz=150						
YMR	Madison River	85.81	333	eP	P	10 12 48.6	+0.5
	comp=Z,22nm,1.2s						
BEKR	Beckworth	85.87	325	eP	P	10 12 50.7	+2.3
	comp=Z,15nm,1.5s						
YHH	Holmes Hill	85.87	334	eP	P	10 12 49.3	+0.9
	comp=Z,22nm,1.2s						
LAO	LASA Array	85.93	337	epP	pP	10 12 57.7	+1.1
ORV	Oroville	86.18	324	eP	P	10 12 50.8	+1.1
	comp=Z,11nm,1.0s						
ORV	Oroville	86.18	324	P	P	10 12 51.7	+2.0
ORV				pmax	pmax		
	comp=Z,11nm,1.1s						
HLID	Hailey	86.23	331	eP	P	10 12 50.7	+0.6
	comp=Z,11nm,1.1s						
HLID	Hailey	86.23	331	P	P	10 12 51.2	+1.2
	baz=146						
ULM	Lac du Bonnet	86.43	345	eP	P	10 12 50.2	-0.4
	comp=Z,20nm,1.2s						
ULM	Lac du Bonnet	86.43	345	eP	P	10 12 50.2	-0.4
ULM				pmax	pmax		
	comp=Z,20nm,1.2s						
ULM	Lac du Bonnet	86.43	345	P	P	10 12 49.9	-0.7
	comp=Z,5.0nm,1.0s,baz=156,slow=3.7,SNR=4.4						
MCMT	McKenzie Canyo	86.66	332	eP	P	10 12 52.9	+0.7
BOZ	Bozeman (W)	86.85	334	P	P	10 12 54.0	+1.0
	baz=148						
DGMT	Dagmar	86.90	339	eP	P	10 12 53.7	+0.6
	comp=Z,43nm,1.0s						
DGMT	Dagmar	86.90	339	P	P	10 12 54.0	+1.0
	baz=154						
O03E	Paynes Creek	86.90	324	P	P	10 12 53.5	+0.2
	baz=141						
DLMT	Dillon	87.02	333	eP	P	10 12 55.2	+1.4
	comp=Z,15nm,1.3s						
WVOR	Wild Horse Val	87.11	328	eP	P	10 12 55.4	+1.0
	comp=Z,13nm,1.4s						
WVOR	Wild Horse Val	87.11	328	eP	P	10 12 55.4	+1.0
WVOR				pmax	pmax		
	comp=Z,13nm,1.4s						
MATP	Matopo	87.28	113	i P	P	10 12 56.4	+0.5
LRM	Limekiln Ridge	87.35	333	eP	P	10 13 00.3	+4.7
MOD	Modoc Plateau	87.44	326	eP	P	10 12 56.4	+0.4
	comp=Z,6.1nm,0.8s						
WDC	Whiskeytown Da	87.48	324	eP	P	10 12 56.4	+0.4
	comp=Z,7.6nm,0.8s						
WDC	Whiskeytown Da	87.48	324	eP	P	10 12 56.4	+0.4
WDC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BLWY	Bulawayo	87.52	113	i P	P	10 12 56.4	-0.7
J08A	Circle Bar Ran	87.77	328	eP	P	10 12 58.5	+1.0
	comp=Z,12nm,0.9s						
N02D	Trinity Center	87.86	324	P	P	10 12 59.8	+1.8
	baz=140						
M04C	Macdoel	88.07	325	P	P	10 13 01.0	+2.0
	baz=141						
BMO	Blue Mountains	88.48	330	epP	pP	10 13 10.9	+1.9
SCHQ	Schefferville	88.57	3	eP	P	10 13 00.3	-0.5
	comp=Z,88nm,1.8s						
SCHQ	Schefferville	88.57	3	P	P	10 13 00.3	-0.5
	comp=Z,7.1nm,1.1s,baz=185,slow=6.0,SNR=3.6						
L04D	Klamath Falls	88.62	325	P	P	10 13 03.6	+2.0
	baz=140						
I07A	Izee	88.80	328	epP	pP	10 13 11.4	+0.8
J05D	Fort Rock, OR	88.95	327	P	P	10 13 04.5	+1.4
	baz=141						
L02E	Cave Junction	89.20	324	P	P	10 13 05.5	+1.3
	baz=140						
PINE	Pine Mountain	89.22	327	eP	P	10 13 06.4	+1.9
	comp=Z,9.6nm,1.0s						
LSZ	Lusaka	89.98	108	eP	P	10 13 10.4	+1.7
	comp=Z,19nm,1.3s						
LSZ	Lusaka	89.98	108	eP	P	10 13 10.4	+1.7
LSZ				pmax	pmax		
	comp=Z,19nm,1.3s						
HAWA	Hanford	90.64	329	epP	pP	10 13 19.3	+0.3
TAM	Tamanrasset	92.98	65	eP	P	10 13 22.3	-0.1
	comp=Z,4.5nm,0.7s						
TAM	Tamanrasset	92.98	65	eP	P	10 13 22.3	-0.1
TAM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ESDC	Sonseca Array	96.69	46	P	P	10 13 38.2	-0.7
	comp=Z,0.9nm,0.8s,baz=246,slow=5.5,SNR=3.6						
ESDC				LR	LR	10 56 36.6	
	comp=Z,652nm,19.2s,baz=260,slow=35						
DZM	Mont Dzumac	101.11	234	ePS	PS	10 26 56.2	-14
	comp=Z,239nm,24.8s						
DZM	Mont Dzumac	101.11	234	eLR	LR	10 46 43.3	
	comp=Z,1µm,28.5s						
YKA	Yellowknife Ar	101.98	341	P	Pdif	10 14 01.6	-0.2
	comp=Z,0.1nm,0.4s,baz=104,slow=18,SNR=3.9						
YKA				PP	PP	10 18 13.7	-0.2
	comp=Z,0.3nm,0.8s,baz=142,slow=7.6,SNR=4.1						
CLL	Collm	112.95	43	ePP	PP	10 19 36.0	+1.5
CLL				eSKSac	SKSac	10 25 29.0	+1.9
CLL				eSKKSac	SKKSac	10 26 35.0	+1.0
CLL				eSdif	Sdif	10 27 24.0	+10
CLL				ePS	PS	10 29 10.0	+0.6
CLL				e(PPS)		10 30 31.0	
CLL				eSS	SS	10 35 13.0	-3.4
CLL				eSSS	SSS	10 39 18.0	
CLL				eSSSS		10 43 12.0	
CLL				LmV		11 11 00.0	
	comp=Z,500nm,18.3s						
ILAR	Eielson Array	114.09	333	PKP	PKiKP	10 18 47.6	+0.7
	comp=Z,0.6nm,1.0s,baz=217,slow=0.9,SNR=3.6						
COLA	College	114.50	333	⇓iPKIKP	PKiKP	10 18 48.4	+0.8
TOLK	Toolik Lake Re	116.79	336	P	PKiKP	10 18 52.8	+0.7
	baz=115						
ASAR	Alice Springs	117.51	207	PKP	PKPdf	10 18 53.5	-1.5
	comp=Z,0.3nm,0.7s,baz=133,slow=1.7,SNR=5.3						
KLNR	Kaliningrad	118.24	41	⇑ePKIKP	PKiKP	10 18 55.5	+0.4
BUR04	Bucovina Ar. S	118.86	50	ePKPdf	PKPdf	10 18 56.5	-0.2
WB2	Warramunga Arr	120.69	209	ePKPdf	PKPdf	10 19 00.1	-0.9
WR1	Warramunga Arr	120.69	209	ePKPdf	PKPdf	10 19 00.0	-1.1
WRA	Warramunga Arr	120.69	209	PKP	PKPdf	10 19 00.0	-1.1
	comp=Z,1.2nm,0.8s,baz=154,slow=1.7,SNR=16						
BR101	Keskin Array S	121.98	61	ePKPdf	PKPdf	10 19 02.2	-0.8
BRTR	Keskin Array B	121.98	61	PKP	PKPdf	10 19 02.2	-0.9
	comp=Z,1.4nm,0.8s,baz=188,slow=3.7,SNR=8.2						
KIEV	Kiev	122.30	48	ePKPdf	PKPdf	10 19 02.1	-1.0
KIEV	Kiev	122.30	48	⇑iPKIKP	PKPdf	10 19 01.5	-1.5
AKASG	Malin Array Be	122.31	48	PKP	PKPdf	10 19 02.0	-1.0
	comp=Z,0.5nm,0.3s,baz=268,slow=2.5,SNR=7.7						
AKBB	Malin Array Si	122.31	48	ePKPdf	PKPdf	10 19 02.1	-1.0
AKBB	Malin Array Si	122.31	48	ePKIKP	PKPdf	10 19 02.1	-1.0
VSU	Vasula	122.78	38	⇓ePKIKP	PKPdf	10 19 03.1	-0.6
FIA0	FINESS Array S	123.07	35	ePKPdf	PKPdf	10 19 03.8	-0.4
FIA0	FINESS Array S	123.07	35	ePKIKP	PKPdf	10 19 03.8	-0.4
FINES	FINESS Array B	123.07	35	PKP	PKPdf	10 19 03.8	-0.4
	comp=Z,2.2nm,0.9s,baz=8.6,slow=14,SNR=4.2						
ARA0	ARCESS Array S	124.07	25	ePKPdf	PKPdf	10 19 05.8	-0.2
ARCES	ARCESS Array B	124.07	25	PKP	PKPdf	10 19 05.8	-0.2
	comp=Z,0.4nm,0.4s,baz=246,slow=3.9,SNR=15						
H11S2	WAKE ISLAND Hy	125.59	269	T	T	12 38 23.5	
	baz=118,slow=74,SNR=23						
H11S1	WAKE ISLAND Hy	125.60	269	T	T	12 38 11.7	
	baz=118,slow=74,SNR=16						
H11S3	WAKE ISLAND Hy	125.61	269	T	T	12 38 24.8	
	baz=118,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	126.00	271	T	T	12 38 27.5	
	baz=115,slow=78,SNR=4.3						
H11N1	WAKE ISLAND Hy	126.02	271	T	T	12 38 20.3	
	baz=115,slow=78,SNR=5.2						
H11N2	WAKE ISLAND Hy	126.02	271	T	T	12 38 22.5	
	baz=115,slow=78,SNR=5.8						
OBN	Obninsk	127.54	43	ePKIKP	PKPdf	10 19 11.6	-1.3
OBN				e		10 21 10.2	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MOS	Moscow	128.21	43	ePKIKP	PKPdf	10 19 10.8	-3.4
MOS				MLR	MLR		
	comp=Z,800nm,21.0s						
VSR	Storozhevoye	128.56	48	ePKIKP	PKPdf	10 19 13.5	-1.5
VSR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LPSR	Galich'ya Gora	128.61	47	ePKIKP	PKPdf	10 19 14.0	-1.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLMR	Klimovskoe	129.49	36	ePKIKP	PKPdf	10 19 14.9	-1.6
KLMR				pmax	pmax		
	comp=Z,33nm,1.3s						
KLMR	Klimovskoe	129.49	36	ePKPdf	PKPdf	10 19 14.9	-1.6
KLMR				AMP		10 19 27.4	
	comp=Z,33nm,1.2s						
KLMR				eSKP		10 22 34.1	
NEY	Neytrino	129.51	59	⇑ePKIKP	PKPdf	10 19 15.6	-1.8
KIV	Kislovodsk	129.63	58	i PKIKP	PKiKP	10 19 18.4	+0.2
KIV				e		10 21 27.7	
KIV				ePS	PS	10 31 37.8	-1.1
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,408nm,23.0s						
KBZ	Khabaz	129.73	59	PKP	PKPdf	10 19 17.3	-0.2
	comp=Z,2.7nm,1.0s,baz=153,slow=4.6,SNR=5.6						
ZEI	Tsey	130.25	60	i PKIKP	PKPdf	10 19 17.5	-1.3
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GNI	Garni	130.27	64	⇑ePKIKP	PKPdf	10 19 18.9	0.0
PRGR	Permogore	132.40	35	ePKIKP	PKPdf	10 19 21.7	-0.3
PRGR				pmax	pmax		
	comp=Z,19nm,1.3s						
BILL	Bilibino	132.74	334	⇓ePKIKP	PKPdf	10 19 22.4	-0.1
ARU	Arti	139.84	41	i PKIKP	PKPdf	10 19 36.1	+0.1
ARU						10 22 29.1	
ARU				MLR	MLR		
	comp=Z,619nm,21.0s						
SEY	Seymchan	139.92	330	PKP	PKPdf	10 19 36.8	+0.9
	baz=17,slow=8.6						
GEYT	Alibeck	140.01	70	PKP	PKPdf	10 19 36.5	-0.5
	comp=Z,1.4nm,0.3s,baz=266,slow=39,SNR=3.0						
AB31	Akbulak array	141.81	52	PKHKP	PKPpre	10 19 33.7	
AB31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ABKAR	Akbulak array	141.81	52	ePKPpre	PKPpre	10 19 33.9	
MA2	Magadan	142.00	326	⇑ePKIKP	PKPdf	10 19 40.1	+0.3
PALK	Pallekele	143.54	131	ePKPpre	PKPab	10 19 40.8	+0.4
PALK	Pallekele	143.54	131	ePKIKP	PKPab	10 19 40.8	+0.4
POO	Poona	146.12	108	eP	PKPdf	10 19 47.0	-1.3
GSI	Gunungsitoli	146.13	162	ePKPdf	PKPbc	10 19 49.2	-0.2
BRVK	Borovoye	147.31	43	ePKPdf	PKPbc	10 19 51.1	-0.5
BRVK	Borovoye	147.31	43	c iPKP2	PKPbc	10 19 51.9	+0.3
BVA0	Borovoye Array	147.39	43	i PKIKP	PKPdf	10 19 49.8	+0.5
BVA0				pmax	pmax		
	comp=Z,39nm,1.5s						
BVAR	Borovoye Array	147.39	43	PKPbc	PKPdf	10 19 50.4	+1.0
	comp=Z,3.4nm,0.3s,baz=304,slow=1.6,SNR=27						
PSI	Prapat	147.91	163	ePKPdf	PKPbc	10 19 53.7	-0.9
PSI	Prapat	147.91	163	ePKP2	PKPbc	10 19 53.7	-0.9
YAK	Yakutsk	148.65	340	ePKP2	PKPbc	10 19 53.5	-1.3
YAK				e		10 23 28.2	
YAK				eSS	SS	10 42 35.8	+3.8
YAK				pmax	pmax		
	comp=Z,109nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,14nm,0.9s						
YAK				pmax	pmax		
	comp=Z,503nm,3.5s						
YAK				pmax	pmax		
	comp=N,243nm,3.2s						
YAK				pmax	pmax		
	comp=E,318nm,3.3s						
CHGR	Chuyangaron	148.72	70	ePKPdf	PKPdf	10 19 53.0	+0.9
KCP	Kidapawan	148.74	215	⇓iP	PKPab	10 20 01.9	+1.6
HYB	Hyderabad	149.10	115	i PKP	PKPbc	10 19 57.0	-0.4
KK31	Karatay Array	149.69	61	i PKP2	PKPbc	10 19 57.4	-0.7
KK31				pmax	pmax		
	comp=Z,15nm,1.1s						
KKAR	Karatay Array	149.69	61	ePKPbc	PKPbc	10 19 57.9	-0.2
NKL	Nikolayevsk	149.78	319	ePKP2	PKPbc	10 19 57.5	-0.4
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
IPM	Ipoh	149.99	167	ePKPbc	PKPbc	10 19 59.2	-0.5
OTUK	Ortayu	150.05	51	PKP2	PKPbc	10 19 58.8	0.0
OTUK				pmax	pmax		
	comp=Z,53nm,1.4s						
YSS	Yuzh-Sakhalins	150.63	307	⇓ePKIKP	PKPdf	10 19 55.3	+0.6
ASAJ	Asahikawa	151.29	301	PKPbc	PKPbc	10 20 01.7	-0.1
	comp=Z,7.2nm,0.9s,baz=104,slow=4.0,SNR=3.3						
NIL	Nilore	151.42	81	ePKPbc	PKPbc	10 20 02.6	0.0
ARSB	Arslanbob	151.66	65	ePKPdf	PKPdf	10 19 58.1	+1.4
ARSB				ePKPbc	PKiKP	10 20 03.2	-0.2
AML	Almayashu	152.12	63	P	PKiKP	10 20 04.7	0.0
	SNR=6.2						
EKS2	Erkin-Say	152.12	62	P	PKiKP	10 20 04.8	+0.5
	SNR=5.6						
USP	Ospenovka	152.57	60	P	PKiKP	10 20 05.1	-0.1
	SNR=6.2						
AAK	Ala-Archa	152.65	62	P	PKiKP	10 20 05.9	+0.4
	SNR=9.7						
AAK	Ala-Archa	152.65	62	ePKPdf	PKPdf	10 19 58.8	+0.6
AAK				ePKPbc	PKiKP	10 20 05.5	0.0
AAK	Ala-Archa	152.65	62	dePKIKP	PKPdf	10 19 59.2	+1.0
AAK	Ala-Archa	152.65	62	PKPbc	PKiKP	10 20 05.5	0.0
	comp=Z,15nm,1.0s,baz=208,slow=1.6,SNR=20						
FRU	Bishkek	152.72	61	ePKIKP	PKiKP	10 20 06.0	+0.6
UCH	Uchtor	152.72	63	P	PKPdf	10 19 59.3	+0.7
	SNR=5.8						
KURBB	Kurchatov Arra	152.98	43	PKP	PKPdf	10 19 57.6	-0.6
	comp=Z,2.1nm,1.1s,baz=288,slow=1.6,SNR=6.3						
KURBB				PKPbc	PKPbc	10 20 05.5	0.0
	comp=Z,2.7nm,0.3s,baz=300,slow=2.7,SNR=30						
KURK	Kurchatov	152.99	43	ePKPdf	PKPdf	10 19 57.6	-0.5
KURK				ePKPdf	PKPdf	10 19 58.3	+0.2
KURK				ePKPbc	PKPbc	10 20 05.2	-0.2
KURK				ePKPbc	PKPbc	10 20 05.5	0.0
KURK	Kurchatov	152.99	43	ePKIKP	PKPdf	10 19 57.6	-0.5
KURK				e		10 20 05.2	
KURK				e		10 20 05.5	
NVS	Novosibirsk	153.02	32	ePKIKP	PKiKP	10 20 05.6	+0.1
NVS				pmax	pmax		
	comp=Z,45nm,1.3s						
NVS				pmax	pmax		
	comp=N,5.0nm,1.0s						
KZA	Kyzart	153.28	63	P	PKiKP	10 20 07.1	0.0
	SNR=6.2						
NRN	Naryn	153.91	64	ePKPdf	PKPdf	10 19 60.0	-0.3
NRN				ePKPbc	PKiKP	10 20 08.4	+0.1
ULHL	Ulahol	153.99	62	P	PKiKP	10 20 09.2	+0.9
	SNR=5.4						
KSH	Kashi	154.03	68	PKPbc	PKPbc	10 20 06.5	-1.8
KSH				SKS	SKSdf	10 26 59.4	-6.0
KSH				SKKS	SKKSac	10 30 43.9	-1.2
KSH				AMB	AMB		
	comp=N,570nm,5.2s						
KSH				LR	LR		
	comp=N,130nm,6.0s						
KSH				LR	LR		
	comp=N,90nm,5.1s						
KSH				LR	LR		
	comp=N,630nm,8.0s						
ZAA1	Zalesovo Array	154.30	32	ePKPdf	PKPdf	10 19 59.5	-0.4
ZAA1				ePKPbc	PKPbc	10 20 08.0	-0.2
ZAA0	Zalesovo Array	154.30	32	ePKPdf	PKPdf	10 19 59.6	-0.3
ZAA0				ePKPbc	PKiKP	10 20 08.3	0.0
ZALV	Zalesovo Beam	154.30	32	ePKPdf	PKPdf	10 19 59.1	-0.7
ZALV				ePKPbc	PKiKP	10 20 08.3	+0.1
ZALV	Zalesovo Beam	154.30	32	ePKIKP	PKPdf	10 19 59.2	-0.7
ZALV				e		10 20 08.3	
ZALV	Zalesovo Beam	154.30	32	PKP	PKPdf	10 19 59.5	-0.4
	comp=N,4.8nm,1.1s,baz=300,slow=2.9,SNR=12						
ZALV				PKPbc	PKPbc	10 20 08.0	-0.2
	comp=N,6.9nm,0.6s,baz=294,slow=3.4,SNR=18						
BOD	Bodaibo	155.78	352	ePKP2	PKPab	10 20 27.2	-1.2
BOD				pmax	pmax		
	comp=Z,18nm,1.2s						
KLR	Kul'dur	156.59	318	PKP	PKPdf	10 20 02.3	-0.9
	comp=Z,3.0nm,1.2s,baz=307,slow=20,SNR=3.1						
MAKZ	Makanchi	156.68	49	ePKPdf	PKPdf	10 20 03.2	-0.2
MK32	Makanchi Array	156.88	49	ePKPdf	PKPdf	10 20 03.4	-0.3
MK32				ePKPab	PKPab	10 20 33.2	-0.5
MKAR	Makanchi Array	156.88	49	PKP	PKPdf	10 20 03.4	-0.3
	comp=Z,2.0nm,1.0s,baz=307,slow=2.6,SNR=8.5						
MKAR				PKPab	PKPab	10 20 33.2	-0.5
	comp=Z,2.5nm,0.5s,baz=278,slow=3.1,SNR=13						
DGZ	Jazzator, Alta	158.29	38	⇑ePKIKP	PKPdf	10 20 07.7	+2.2
WMQ	Urumqi	161.60	52	ePKP	PKPdf	10 20 08.3	-1.0
WMQ				pPKP	pPKPdf	10 20 17.3	-0.7
WMQ				PKPab	PKPab	10 20 55.1	+0.8
WMQ				SKKS		10 31 25.6	
WMQ				SS	SS	10 44 59.0	+5.0
WMQ				AMB	AMB		
	comp=Z,310nm,8.3s						
WMQ				LR	LR		
	comp=Z,750nm,22.7s						
WMQ				LR	LR		
	comp=Z,890nm,22.7s						
WMQ				LR	LR		
	comp=Z,870nm,22.7s						
TLY	Talaya	162.06	8	ePKIKP	PKPdf	10 20 13.8	+4.3
TLY				ePPS	PPS	10 38 13.3	
CM01	Chiang Mai Arr	162.63	151	ePKPdf	PKPdf	10 20 10.6	-0.4
CMAR	Chiang Mai Arr	162.66	151	PKP	PKPdf	10 20 10.8	-0.3
	comp=Z,0.9nm,0.3s,baz=249,slow=2.0,SNR=11						
CN2	Changchun	163.11	311	ePKP	PKPdf	10 20 10.9	+0.2
SHL	Shillong	163.89	117	eP	PKPab	10 21 05.5	+0.5
SONA1	Songino Array	166.11	4	ePKPab	PKPab	10 21 14.6	+0.6
NJ2	Nanjing	170.47	261	ePKP	PKPdf	10 20 14.5	-2.1
BJI	Beijing	170.94	314	PKP	PKPdf	10 20 17.5	+0.9
BJI				LR	LR		
	comp=Z,550nm,15.7s						
BJI				LR	LR		
	comp=Z,390nm,16.3s						
BJI				LR	LR		
	comp=Z,230nm,18.6s						
GTA	Gaotai	171.64	47	ePKP	PKPdf	10 20 17.5	+0.3
GTA				PKPab	PKPab	10 21 39.9	+1.1
GTA				PP	PP	10 25 30.5	+0.7
GTA				SKS	SKSdf	10 27 19.6	+0.7
GTA				SKKS	SKKSac	10 32 18.4	+3.6
GTA				SS	SS	10 46 33.8	-1.8
GTA				AMB	AMB		
	comp=Z,170nm,7.9s						
GTA				LR	LR		
	comp=Z,340nm,19.4s						
GTA				LR	LR		
	comp=Z,530nm,22.5s						
GTA				LR	LR		
	comp=Z,700nm,20.6s						
GYA	Guiyang	172.45	173	PKP	PKPdf	10 20 18.0	0.0
GYA				PKPab	PKPab	10 21 44.4	+1.9
GYA				PKS		10 23 49.8	
GYA				PP	PP	10 25 36.3	+3.5
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
HHC	Hu-ho-hao-te	172.50	337	ePKP	PKPdf	10 20 16.3	-1.2
HHC				PP	PP	10 25 35.8	+2.5
HHC				SS	SS	10 46 41.3	-1.3
HHC				AMB	AMB		
	comp=Z,220nm,6.9s						
HHC				LR	LR		
	comp=Z,290nm,14.7s						
HHC				LR	LR		
	comp=Z,450nm,16.4s						
HHC				LR	LR		
	comp=Z,800nm,18.1s						
CD2	Chengdu	175.45	131	PKP	PKPdf	10 20 19.0	+0.2
CD2				pPKP	pPKPdf	10 20 26.5	-0.7
CD2				sPKP		10 20 29.3	
CD2				PP	PP	10 25 48.5	+0.2
CD2				SKS	SKSdf	10 27 20.8	+0.6
CD2				SKKS	SKKSac	10 32 33.0	-0.2
CD2				SS	SS	10 47 13.1	+0.7
CD2				AMB	AMB		
	comp=Z,220nm,5.6s						
CD2				LR	LR		
	comp=Z,1µm,15.3s						
CD2				LR	LR		
	comp=Z,1µm,18.1s						
CD2				LR	LR		
	comp=Z,1µm,19.6s						
LZH	Lanzhou	176.17	56	ePKP	PKPdf	10 20 16.0	-3.0
LZH				pPKP	sPKPdf	10 20 28.4	-1.8
LZH				sPKP		10 20 31.8	
LZH				LR	LR		
	comp=Z,230nm,18.0s						
LZH				LR	LR		
	comp=Z,290nm,18.1s						
LZH				LR	LR		
	comp=Z,300nm,20.3s						
XAN	Xi'an	179.02	274	PKP	PKPdf	10 20 18.9	-0.4
XAN				pPKP	sPKPdf	10 20 28.8	-1.7
XAN				PKPab	pPKPab	10 22 18.8	-1.3
XAN				PP	PP	10 26 07.0	+1.0
XAN				SKKS		10 32 50.0	
XAN				LR	LR		
	comp=Z,390nm,22.1s						
XAN				LR	LR		
	comp=Z,520nm,23.0s						
XAN				LR	LR		
	comp=Z,800nm,25.5s						
XAN	Xi'an	179.02	274	ePKPdf	PKPdf	10 20 19.2	-0.1
XAN	Xi'an	179.02	274	ePKIKP	PKPdf	10 20 19.2	-0.1

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*ISCJB **18** 10:04:36.7±2.2, 33°.96S±0°.06×72°.50W±0°.09, h14^{km}±17^{km}, mb3.7/2, Error ellipse: s-maj=13.3km s-min=9.6km az=155.0*

*IDC **18** 10:04:36.9±1.8, 33°.79S×72°.03W, h0^{km}, mb3.7/2, mb1 4.3/4, mb1mx3.9/37, mbtmp4.2/4, ML3.5/1, Error ellipse: s-maj=65.8km s-min=45.7km az=80.0*

*GUC **18** 10:04:37.7±0.6, 34°.02S×72°.50W, h38^{km}±6^{km}, ML3.9*

ISC 18 10:04:38.1±2.4, 34°.0S±0°.1×72°.40W±0°.10, h13^{km}±17^{km}, n13, σ0^{s}57/18, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.55	143	eP	Pg	10 04 48.8	0.0
CHPI				eS	Sg	10 04 56.4	+0.4
ROCH	El Roble	1.52	50	eP	Pn	10 05 04.8	-0.5
ROCH				eS	Sn	10 05 25.8	+0.9
ROCH				IAML		10 05 38.7	
	comp=N,2µm,0.4s						
PEL	Peldehue	1.65	61	eP	Pn	10 05 06.6	-0.2
PEL				eS	Sn	10 05 28.3	+0.5
PEL				IAML		10 05 36.8	
	comp=N,2µm,0.6s						
CLCH	Cerro Calan	1.65	71	eP	Pn	10 05 06.4	-0.5
CLCH				eS	Sn	10 05 28.4	+0.3
CLCH				IAML		10 05 40.1	
	comp=E,2µm,0.3s						
LMEL	Las Melosas	1.83	87	eP	Pn	10 05 09.0	-0.5
LMEL				eS	Sn	10 05 32.9	+0.3
LMEL				IAML		10 05 35.9	
	comp=N,2µm,0.2s						
FCH	Farellones	1.87	71	eP	Pn	10 05 09.6	-0.5
FCH				eS	Sn	10 05 34.2	+0.5
FCH				IAML		10 05 41.0	
	comp=E,2µm,0.3s						
LVC	Limon Verde	11.71	16	Pn	Pn	10 07 20.6	-4.6
	baz=286,slow=18,SNR=1.0						
LPAZ	La Paz	18.01	13	P	Pn	10 08 48.2	-0.6
	comp=E,0.1nm,0.3s,baz=200,slow=12,SNR=2.4						
TXAR	Lajitas Array	69.55	331	P	P	10 15 47.7	+1.0
	comp=E,0.3nm,0.8s,baz=152,slow=9.7,SNR=2.8						
TORD	Torodi Ar. Bea	84.48	70	P	P	10 17 10.1	-0.9
	comp=E,1.1nm,0.8s,baz=251,slow=4.2,SNR=2.9						
BVAR	Borovoye Array	147.45	43	PKPbc	PKPbc	10 24 21.4	+0.2
	comp=E,1.3nm,0.7s,baz=304,slow=3.3,SNR=3.5						
KURBB	Kurchatov Arra	153.04	43	PKPbc	PKPbc	10 24 35.0	+0.2
	comp=E,1.2nm,0.7s,baz=296,slow=3.0,SNR=4.8						
ZALV	Zalesovo Beam	154.35	32	PKPbc	PKPbc	10 24 37.5	-0.1
	comp=E,1.7nm,0.8s,baz=307,slow=5.2,SNR=4.7						

GUC 18 10:09:22.2±0.6, 34°.05S×72°.35W, h36^{km}±7^{km}, ML3.5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.45	140	eP	Pn	10 09 31.4	-0.6
CHPI				eS	Sn	10 09 38.4	-0.5
ROCH	El Roble	1.55	47	eS	Sn	10 10 08.7	+2.2
ROCH				IAML		10 10 18.4	
	comp=E,982nm,0.5s						
CLCH	Cerro Calan	1.65	67	eP	Pn	10 09 49.0	+0.4
CLCH				eS	Sn	10 10 09.8	+1.2
PEL	Peldehue	1.66	58	eS	Sn	10 10 10.3	+1.5

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
PEL				IAML		10 10 19.2	
	comp=E,797nm,0.6s						
LMEL	**Las Melosas**	**1.80**	**84**	eP	Pn	10 09 52.0	+1.2
LMEL				eS	Sn	10 10 14.6	+2.2
LMEL				IAML		10 10 22.0	
	comp=N,645nm,0.5s						
FCH	**Farellones**	**1.86**	**68**	eS	Sn	10 10 16.1	+1.8
FCH				IAML		10 10 23.0	
	comp=N,629nm,0.7s						

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*ISCJB **18** 10:10:44.6±0.7, 24°.39S±0°.04×70°.10W±0°.07, h67^{km}±7^{km}, mb3.2/2, Error ellipse: s-maj=11.1km s-min=6.5km az=1.0*

*GUC **18** 10:10:44.2±0.7, 24°.37S×70°.03W, h60^{km}±8^{km}, ML3.6*

*IDC **18** 10:10:45.1±1.1, 24°.64S×69°.44W, h72^{km}±6^{km}, mb3.0/2, mb1 3.6/5, mb1mx3.5/33, mbtmp3.6/5, MS3.6/1, Ms1 3.6/1, ms1mx3.4/7, Error ellipse: s-maj=36.1km s-min=11.2km az=107.0*

ISC 18 10:10:44.7±0.8, 24°.38S±0°.04×70°.05W±0°.07, h58^{km}±6^{km}, n18, σ1^{s}.22/25, mb3.5/4, 1C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB14	**IPOC Station P**	**0.41**	**233**	eP	**Pn**	**10 10 56.4**	**+0.5**
PB14				eS	**Sn**	**10 11 04.9**	**+0.9**
PB14				IAML		10 11 05.9	
	comp=E,5µm,0.7s						
GO02	**Mina Guanaco**	**0.89**	**152⇓**	eP	**Pn**	**10 11 01.8**	**+0.3**
GO02				eS	**Sn**	**10 11 14.8**	**+0.9**
GO02				IAML		10 11 16.1	
	comp=N,5µm,0.2s						
PB10	**IPOC Station P**	**0.98**	**332⇑**	iP	**Pn**	**10 11 02.1**	**-0.3**
PB10				eS	**Sn**	**10 11 16.2**	**+0.8**
PB10				IAML		10 11 22.4	
	comp=N,3µm,0.7s						
PB15	**IPOC Station P**	**1.28**	**25**	eP	**Pn**	**10 11 06.8**	**+0.2**
PB15				eS	**Sn**	**10 11 23.6**	**+0.7**
PB05	**IPOC Station P**	**1.53**	**355**	eP	**Pn**	**10 11 09.5**	**-0.3**
PB05				eS	**Sn**	**10 11 30.5**	**+1.7**
PB05				IAML		10 11 36.9	
	comp=E,1µm,0.4s						
PB06	**IPOC Station P**	**1.72**	**15⇓**	eP	**Pn**	**10 11 12.7**	**+0.1**
PB06				eS	**Sn**	**10 11 34.7**	**+1.1**
PB06				IAML		10 11 43.1	
	comp=N,1µm,0.6s						
LVC	**Limon Verde**	**2.05**	**31**	P	**Pn**	**10 11 18.3**	**+1.1**
	comp=N,24nm,0.3s,baz=202,slow=12,SNR=233						
LVC				S	**Sn**	**10 11 43.9**	**+2.1**
	comp=N,173nm,0.3s,baz=294,slow=13,SNR=10						
LPAZ	**La Paz**	**8.25**	**13**	P	**Pn**	**10 12 42.9**	**+0.6**
	comp=N,0.1nm,0.3s,baz=189,slow=8.7,SNR=3.6						
SIV	**San Ignacio**	**11.86**	**47**	P	**Pn**	**10 13 27.7**	**-3.4**
	comp=N,1.7nm,0.3s,baz=236,slow=9.6,SNR=21						
ATAH	**Atahualpa**	**18.92**	**334**	LR	LR	10 21 34.0	
	comp=N,180nm,19.0s,baz=168,slow=33						
TXAR	**Lajitas Array**	**62.42**	**327**	P	**P**	**10 21 03.4**	**+1.4**
	comp=N,0.2nm,0.8s,baz=150,slow=5.9,SNR=2.3						
TXAR				pP	**sP**	**10 21 24.6**	**-0.4**
	comp=N,0.3nm,0.7s,baz=148,slow=7.4,SNR=3.6						
PDAR	**Pinedale Array**	**76.09**	**331**	P	**P**	**10 22 27.0**	**+0.6**
	comp=N,0.2nm,0.5s,baz=102,slow=7.5,SNR=2.7						
PDAR				pP	**sP**	**10 22 49.4**	**-0.2**
	comp=N,0.2nm,0.5s,baz=144,slow=7.8,SNR=2.6						
TORD	**Torodi Ar. Bea**	**79.31**	**70**	pP	pP	10 23 00.2	-1.1
	comp=N,2.1nm,0.6s,baz=227,slow=5.0,SNR=9.6						
YKA	**Yellowknife Ar**	**93.55**	**341**	pP	pP	10 24 15.8	+5.0
	comp=N,0.1nm,0.7s,baz=141,slow=4.4,SNR=4.1						
KURBB	**Kurchatov Arra**	**144.30**	**35**	PKP	**PKPdf**	**10 30 12.8**	**-1.2**
	comp=N,0.1nm,0.3s,baz=316,slow=3.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**144.99**	**26**	PKP	**PKPab**	**10 30 13.8**	**-0.8**
	comp=N,1.5nm,0.8s,baz=323,slow=3.8,SNR=4.3						
ZALV				pPKP	**pPKPdf**	**10 30 32.9**	**+0.2**
	comp=N,0.9nm,0.6s,baz=352,slow=2.9,SNR=3.0						
AAK	**Ala-Archa**	**145.60**	**49**	pPKP	pPKPdf	10 30 34.7	+0.1
	comp=N,1.3nm,0.7s,baz=305,slow=5.1,SNR=2.5						
MKAR	**Makanchi Array**	**148.56**	**38**	PKPbc	**PKPbc**	**10 30 24.4**	**-0.7**
	comp=N,0.4nm,0.7s,baz=320,slow=2.2,SNR=3.4						
MKAR				pPKPbc	**pPKPbc**	**10 30 41.8**	**-0.8**
	comp=N,0.7nm,0.7s,baz=313,slow=2.9,SNR=7.4						

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*IDC **18** 10:11:05.1±1.6, 10°.86S×165°.68E, h0^{km}, mb3.9/4, mb1 4.2/6, mb1mx3.8/39, mbtmp4.1/6, ML4.2/2, MS3.2/1, Ms1 3.2/1, ms1mx2.7/38, Error ellipse: s-maj=41.9km s-min=26.7km az=135.0*

*ISCJB **18** 10:11:07.8±1.4, 11°.0S±0°.1×165°.7E±0°.2, h30^{km}, mb3.8/3, Error ellipse: s-maj=24.1km s-min=17.7km az=145.0*

ISC 18 10:11:09.7±1.5, 10°.9S±0°.2×165°.7E±0°.2, h30^{km}, n12, σ1^{s}.26/6, mb3.9/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.84**	**284**	Pn	**Pn**	**10 12 34.7**	**+0.4**
	15nm,0.3s,baz=108,slow=5.5,SNR=5.3						
HNR				LR	LR	10 14 57.7	
	comp=Z,214nm,20.6s,baz=120,slow=40						
DZM	**Mont Dzumac**	**11.13**	**176**	Pn	**Pn**	**10 13 47.3**	**+0.2**
	0.6nm,0.3s,baz=302,slow=22,SNR=14						
CTA	**Charters Tower**	**20.82**	**242**	P	**P**	**10 15 50.2**	**+1.2**
	5.1nm,0.9s,baz=70,slow=12,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**29.22**	**2**	T	T	10 47 33.5	
	baz=176,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.22**	**2**	T	T	10 47 33.6	
	baz=176						
H11S1	**WAKE ISLAND Hy**	**29.24**	**2**	T	T	10 47 36.2	
	baz=176,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.44**	**2**	T	T	10 49 05.2	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**30.45**	**2**	T	T	10 49 13.4	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	10 49 06.2	
	baz=182						
WRA	**Warramunga Arr**	**31.48**	**250**	P	**P**	**10 17 27.8**	**-1.3**
	1.2nm,0.9s,baz=80,slow=9.1,SNR=8.1						
ASAR	**Alice Springs**	**32.81**	**243**	P	**P**	**10 17 39.6**	**-1.2**
	1.3nm,0.6s,baz=64,slow=10,SNR=35						
ILAR	**Eielson Array**	**83.39**	**19**	P	**P**	**10 23 33.9**	**+0.1**
	0.5nm,0.6s,baz=237,slow=5.0,SNR=13						

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*NEIC **18** 10:24:24.9±0.4, 11°.55S×166°.57E, h10^{km}, mb4.8/26, Error ellipse: s-maj=9.6km s-min=6.4km az=70.0*

*BJI **18** 10:24:27.4, 11°.68S×166°.55E, h36^{km}, mB5.1/16, mb4.8/29, Ms5.0/6, Ms7 4.7/6*

*ISCJB **18** 10:24:30.5±1.3, 11°.80S±0°.06×166°.42E±0°.06, h62^{km}±11^{km}, mb4.6/47, Error ellipse: s-maj=11.8km s-min=6.4km az=137.4*

*IDC **18** 10:24:31.8±0.7, 11°.73S×166°.48E, h63^{km}±6^{km}, mb4.2/19, mb1 4.3/21, mb1mx4.1/49, mbtmp4.5/21, MS4.0/4, Ms1 4.0/4, ms1mx3.3/41, Error ellipse: s-maj=13.8km s-min=13.1km az=46.0*

ISC 18 10:24:31.9±0.6, 11°.72S±0°.07×166°.46E±0°.07, h62^{km}±5^{km}, h63^{km}:pP-P, n82, σ0^{s}.91/94, mb4.7/47, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.80**	**289**	eP	**Pn**	**10 26 11.0**	**+1.9**
HNR				eS	**Sn**	**10 27 24.0**	**-1.1**
HNR	**Honiara**	**6.80**	**289**	ePn	**Pn**	**10 26 09.9**	**+0.9**
HNR				eSn	**Sn**	**10 27 23.6**	**-1.5**
HNR				eSn	Sn	10 27 25.3	+0.2
HNR	**Honiara**	**6.80**	**289**	P	**Pn**	**10 26 10.0**	**+0.9**
	59nm,0.3s,baz=147,slow=7.9,SNR=18						
HNR				S	**Sn**	**10 27 23.6**	**-1.5**
	92nm,0.3s,baz=173,slow=22,SNR=9.2						
HNR				LR	LR	10 29 06.4	
	comp=Z,360nm,20.2s,baz=116,slow=40						
MARNC	**Mare, Loyalty**	**9.82**	**171**	ePn	**Pn**	**10 26 50.6**	**+0.2**
DZM	**Mont Dzumac**	**10.29**	**180**	ePn	**Pn**	**10 26 57.5**	**+0.6**
DZM	**Mont Dzumac**	**10.29**	**180**	P	**Pn**	**10 26 57.8**	**+0.8**
	9.1nm,0.3s,baz=319,slow=24,SNR=76						
DZM				LR	LR	10 30 07.7	
	comp=Z,331nm,21.3s,baz=326,slow=33						
OUENC	**Ouen Island, N**	**10.64**	**178**	ePn	**Pn**	**10 27 01.6**	**-0.1**
PINNC	**Pines Island,**	**10.87**	**175**	ePn	**Pn**	**10 27 04.9**	**+0.1**
MSVF	**Nonsavu**	**12.70**	**119**	ePn	**Pn**	**10 27 30.5**	**+0.7**
RABL	**Rabaul**	**16.01**	**297**	ePn	**Pn**	**10 28 13.6**	**+0.2**
	39nm,0.5s						
EIDS	**Eidsvold**	**19.89**	**225**	eP	**Pn**	**10 28 59.8**	**-0.8**
	6.3nm,0.6s						
CTA	**Charters Tower**	**21.12**	**244**	P	**P**	**10 29 12.6**	**+0.9**
	19nm,0.7s,baz=74,slow=12,SNR=32						
CTAO	**Charters Tower**	**21.12**	**244**	eP	**P**	**10 29 12.5**	**+0.7**
	21nm,0.7s						
MANU	**Manus Island**	**21.24**	**296**	eP	**P**	**10 29 13.2**	**+0.1**
	30nm,0.6s						
COEN	**Coen**	**22.81**	**262**	eP	**P**	**10 29 29.7**	**-0.2**
	20nm,0.8s						
ARMA	**Armidale**	**23.14**	**214**	eP	**P**	**10 29 34.2**	**+1.0**
	16nm,0.8s						
OUZ	**Omahuta**	**24.27**	**166**	eP	**P**	**10 29 44.9**	**+1.5**
	6.0nm,0.7s						
HIZ	**Hauiti**	**27.71**	**166**	eP	**P**	**10 30 14.5**	**+0.1**
	24nm,1.1s						
URZ	**Urewera**	**28.09**	**162**	eP	**P**	**10 30 16.9**	**-0.9**
URZ				eP	**P**	**10 30 17.2**	**-0.6**
URZ	**Urewera**	**28.09**	**162**	P	**P**	**10 30 16.9**	**-0.9**
	1.3nm,0.3s,baz=270,slow=7.1,SNR=4.5						
BKZ	**Black Stump Fm**	**28.75**	**164**	eP	**P**	**10 30 23.0**	**-0.8**
	5.8nm,0.9s						
BFZ	**Birch Farm**	**30.11**	**165**	eP	**P**	**10 30 34.6**	**-1.1**
	9.4nm,0.8s						
STKA	**Stephens Creek**	**30.45**	**225**	eP	**P**	**10 30 39.0**	**+0.2**
	1.9nm,0.8s						
STKA	**Stephens Creek**	**30.45**	**225**	P	**P**	**10 30 39.6**	**+0.8**
	8.7nm,0.7s,baz=46,slow=8.4,SNR=21						
THZ	**Tophouse**	**30.45**	**170**	eP	**P**	**10 30 38.7**	**-0.1**
	13nm,0.9s						
LTZ	**Lake Taylor**	**31.35**	**172**	eP	**P**	**10 30 46.3**	**-0.4**
	17nm,0.7s						
OXZ	**Oxford**	**31.86**	**172**	eP	**P**	**10 30 50.9**	**-0.2**
	14nm,0.7s						
WRAB	**Tennant Creek**	**31.91**	**251**	eP	**P**	**10 30 50.9**	**-0.9**
	6.6nm,0.6s						
WB2	**Warramunga Arr**	**31.91**	**251**	eP	**P**	**10 30 50.2**	**-1.7**
WR1	**Warramunga Arr**	**31.92**	**251**	eP	**P**	**10 30 50.8**	**-1.2**
	7.7nm,0.6s						
WRA	**Warramunga Arr**	**31.92**	**251**	P	**P**	**10 30 50.8**	**-1.2**
	5.1nm,0.5s,baz=84,slow=9.2,SNR=99						
RPZ	**Rata Peaks**	**32.12**	**174**	eP	**P**	**10 30 52.9**	**-0.5**
	20nm,0.9s						
RPZ				eP	**P**	**10 30 53.4**	**0.0**
RPZ	**Rata Peaks**	**32.12**	**174**	P	**P**	**10 30 53.4**	**0.0**
	14nm,0.7s,baz=329,slow=3.9,SNR=14						
RPZ				LR	LR	10 42 21.4	
	comp=Z,1µm,19.0s,baz=88,slow=33						
AS31	**Alice Springs**	**33.12**	**245**	eP	**P**	**10 31 01.4**	**-1.1**
	1.8nm,0.7s						
ASAR	**Alice Springs**	**33.13**	**245**	P	**P**	**10 31 01.1**	**-1.4**
	5.1nm,0.7s,baz=68,slow=9.7,SNR=49						
ASAR				PcP	**PcP**	**10 33 44.1**	**-0.5**
	1.1nm,0.5s,baz=80,slow=2.2,SNR=7.6						
MTN	**Manton Dam**	**34.52**	**264**	eP	**P**	**10 31 14.8**	**+0.2**
	7.7nm,0.6s						
SIJI	**Sorong**	**36.55**	**285**	P	**P**	**10 31 31.6**	**-0.5**
	6.0nm,0.5s,baz=114,slow=13,SNR=3.6						
FITZ	**Fitzroy Crossi**	**39.89**	**256**	eP	**P**	**10 31 59.7**	**-0.4**
	17nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.89**	**256**	P	**P**	**10 31 59.5**	**-0.5**
	18nm,0.7s,baz=98,slow=6.6,SNR=45						
BATI	**Baumata**	**42.02**	**268**	P	**P**	**10 32 18.6**	**+0.9**
	baz=140,slow=3.7						
MBWA	**Marble Bar**	**45.65**	**252**	eP	**P**	**10 32 46.9**	**+0.2**
	16nm,0.9s						
NWAO	**Narrogin (SRO)**	**49.67**	**237**	P	**P**	**10 33 17.3**	**-0.5**
	7.4nm,0.6s,baz=279,slow=4.5,SNR=7.5						
ASAJ	**Asahikawa**	**59.66**	**340**	LR	LR	10 57 10.9	
	comp=Z,266nm,20.0s,baz=187,slow=33						
KSRS	**Korea Array**	**60.83**	**325**	P	**P**	**10 34 37.9**	**0.0**
	1.1nm,0.7s,baz=104,slow=5.9,SNR=2.9						
KSAR	**Wonju Array Be**	**60.84**	**325**	P	**P**	**10 34 37.9**	**-0.1**
NJ2	**Nanjing**	**62.99**	**315**	eP	**P**	**10 34 52.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
CN2	**Changchun**	**66.68**	**329**	eP	**P**	**10 35 18.5**	**+2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ENH	**Enshi**	**68.87**	**309**	eP	**P**	**10 35 29.8**	**-0.6**
	12nm,0.8s						
XAN	**Xi'an**	**71.09**	**312**	P	**P**	**10 35 44.4**	**+0.4**
XAN				pP	pP	10 35 54.4	-6.0
XAN				pmax	pmax		
	comp=Z,13nm,0.7s						
XAN	**Xi'an**	**71.09**	**312**	eP	**P**	**10 35 44.4**	**+0.4**
	9.5nm,0.6s						
KMI	**Kunming**	**72.07**	**301**	P	**P**	**10 35 51.4**	**+1.1**
KMI				pmax	pmax		
	comp=Z,15nm,1.3s						
PAYA	**Payao**	**72.49**	**295**	P	**P**	**10 35 53.8**	**+1.2**
	6.5nm,0.8s,91nm						
HHC	**Hu-ho-hao-te**	**72.80**	**319**	eP	**P**	**10 35 56.3**	**+2.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,6.1s						
CM01	**Chiang Mai Arr**	**73.00**	**293**	eP	**P**	**10 35 56.7**	**+1.1**
CM31	**Chiang Mai Arr**	**73.02**	**294**	eP	**P**	**10 35 56.4**	**+0.6**
	13nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.02**	**294**	P	**P**	**10 35 57.2**	**+1.5**
	12nm,0.8s,baz=129,slow=4.6,SNR=55						
CMAR				pP	**pwP**	**10 36 14.8**	**-0.3**
	3.0nm,0.8s,baz=118,slow=4.9,SNR=2.1						
CMMT	**Chiang Mai**	**73.13**	**294**	P	**P**	**10 35 57.1**	**+0.7**
	14nm,1.0s						
CHTO	**Chiang Mai**	**73.14**	**294**	eP	**P**	**10 35 56.6**	**+0.1**
	8.8nm,0.6s						
CHTO	**Chiang Mai**	**73.14**	**294**	P	**P**	**10 35 57.3**	**+0.8**
	65nm,1.0s						
CD2	**Chengdu**	**73.57**	**307**	eP	**P**	**10 35 59.0**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
LZH	**Lanzhou**	**75.73**	**312**	eP	**P**	**10 36 12.5**	**+1.1**
LZH				pP	PcP	10 36 24.9	+1.1
LZH				sP	pP	10 36 28.5	+0.6
LZH				PP	**PP**	**10 39 02.0**	**-0.1**
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,340nm,4.3s						
LZH				LR	LR		
	comp=N,130nm,17.0s						
LZH				LR	LR		
	comp=E,140nm,17.4s						
LZH				LR	LR		
	comp=Z,170nm,19.6s						
QSPA	**South Pole Qui**	**78.29**	**180**	P	**P**	**10 36 25.0**	**-0.2**
	1.2nm,0.4s,baz=233,slow=0.5,SNR=5.8						
QSPA				pP	**pP**	**10 36 41.2**	**-0.5**
	2.7nm,0.9s,baz=9.0,slow=2.7,SNR=4.4						
SONA0	**Songino Array**	**79.62**	**324**	eP	**P**	**10 36 32.9**	**+0.1**
SONM	**Songino Array**	**79.62**	**324**	P	**P**	**10 36 32.9**	**+0.1**
	0.8nm,0.5s,baz=143,slow=6.3,SNR=5.8						
GTA	**Gaotai**	**80.03**	**314**	eP	**P**	**10 36 36.4**	**+1.3**
GTA				pP	PcP	10 36 47.1	+4.7
GTA				sP	pP	10 36 51.4	-0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,67nm,7.8s						
GTA				LR	LR		
	comp=N,100nm,17.5s						
GTA				LR	LR		
	comp=E,210nm,19.7s						
GTA				LR	LR		
	comp=Z,130nm,20.0s						
ILAR	**Eielson Array**	**83.93**	**18**	P	**P**	**10 36 54.5**	**-0.3**
	0.4nm,0.4s,baz=260,slow=5.1,SNR=8.9						
ILB	**Eielson Array**	**83.93**	**18**	eP	**P**	**10 36 54.5**	**-0.3**
NVAR	**Mina Array Bea**	**85.92**	**50**	P	**P**	**10 37 05.8**	**0.0**
	0.4nm,0.6s,baz=257,slow=7.9,SNR=2.9						
NVAR				pP	**pP**	**10 37 23.4**	**+0.7**
	0.8nm,0.8s,baz=239,slow=7.0,SNR=3.8						
PALK	**Pallekele**	**87.34**	**278**	P	**P**	**10 37 13.3**	**+0.4**
	2.5nm,0.5s,baz=117,slow=6.9,SNR=2.9						
WMQ	**Urumqi**	**90.07**	**315**	eP	**P**	**10 37 27.5**	**+2.3**
WMQ				LR	LR		
	comp=N,850nm,20.1s						
WMQ				LR	LR		
	comp=E,550nm,23.1s						
WMQ				LR	LR		
	comp=Z,570nm,28.7s						
MK01	**Makanchi Array**	**94.48**	**317**	eP	**P**	**10 37 45.1**	**-0.4**
MK31	**Makanchi Array**	**94.49**	**317**	eP	**P**	**10 37 45.3**	**-0.2**
MK32	**Makanchi Array**	**94.49**	**317**	eP	**P**	**10 37 45.3**	**-0.3**
MK32				epP	**pP**	**10 38 02.0**	**-0.7**
MKAR	**Makanchi Array**	**94.49**	**317**	eP	**P**	**10 37 45.3**	**-0.3**
	24nm,0.6s						
MKAR				pP	**pP**	**10 38 02.0**	**-0.7**
MKAR	**Makanchi Array**	**94.49**	**317**	P	**P**	**10 37 45.3**	**-0.3**
	3.5nm,0.5s,baz=89,slow=6.3,SNR=44						
MKAR				pP	**pP**	**10 38 02.0**	**-0.7**
	0.7nm,0.6s,baz=92,slow=7.2,SNR=3.3						
ZALV	**Zalesovo Beam**	**94.51**	**324**	P	**P**	**10 37 44.6**	**-0.8**
	0.7nm,0.6s,baz=92,slow=4.5,SNR=3.9						
ZAA1	**Zalesovo Array**	**94.51**	**324**	eP	**P**	**10 37 44.6**	**-0.8**
YKA	**Yellowknife Ar**	**95.25**	**27**	P	**P**	**10 37 46.7**	**-1.9**
	0.1nm,0.5s,baz=260,slow=4.9,SNR=4.1						
ARA0	**ARCESS Array S**	**117.16**	**346**	ePKPdf	**PKPdf**	**10 43 08.3**	**-1.3**
ARCES	**ARCESS Array B**	**117.16**	**346**	PKP	**PKPdf**	**10 43 08.3**	**-1.3**
	1.9nm,0.7s,baz=77,slow=2.3,SNR=17						
FIA0	**FINESS Array S**	**122.65**	**339**	ePKPdf	**PKPdf**	**10 43 19.1**	**-1.2**
FINES	**FINESS Array B**	**122.65**	**339**	PKP	**PKPdf**	**10 43 19.1**	**-1.2**
	1.1nm,0.8s,baz=336,slow=4.2,SNR=3.8						

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*SJA **18** 10:31:28.2±0.5, 34°.05S×72°.46W, h12^{km}±4^{km}, ML4.2, MW4.8*

*IDC **18** 10:31:29.9±0.7, 33°.97S×72°.08W, h0^{km}, mb4.2/12, mb1 4.3/15, mb1mx4.2/31, mbtmp4.2/15, ML4.0/3, MS4.3/1, Ms1 4.2/1, ms1mx3.4/21, Error ellipse: s-maj=25.6km s-min=16.7km az=84.0*

*VAO **18** 10:31:31.5±0.7, 33°.95S×72°.25W, h10^{km}, mb4.6*

*GUC **18** 10:31:31.5±0.6, 33°.96S×72°.54W, h34^{km}±3^{km}, ML4.4*

*NEIC **18** 10:31:32.7±2.3, 33°.98S×72°.12W, h17^{km}±13^{km}, mb4.7/7, ML4.4(GUC), Error ellipse: s-maj=11.9km s-min=5.7km az=86.0*

NEIC Felt [III] at Linares and Talca and [II] at Constitucion and Curico.

ISC 18 10:31:33.3±1.2, 33°.95S±0°.04×72°.30W±0°.07, h22^{km}±8^{km}, n121, σ1^{s}.35/133, mb4.4/14, 5C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHPI	**Pichilemu**	**0.50**	**151⇑**	iP	**Pb**	**10 31 43.4**	**0.0**
CHPI				eS	**Sn**	**10 31 51.5**	**-1.5**
ROC1	**El Roble**	**1.45**	**48**	ePn	**Pb**	**10 31 58.5**	**-1.1**
ROC1	**El Roble**	**1.45**	**48**	iP	**Pb**	**10 31 58.6**	**-1.1**
ROCH	**El Roble**	**1.46**	**48⇑**	eP	**Pn**	**10 31 58.5**	**+0.1**
ROCH				eS	**Sb**	**10 32 19.6**	**+1.7**
ROCH				IAML		10 32 28.2	
	comp=N,9µm,0.6s						
CLCH	**Cerro Calan**	**1.57**	**70⇑**	iP	**Pb**	**10 32 00.6**	**-1.1**
CLCH				eS	**Sb**	**10 32 22.7**	**+1.5**
CLCH				IAML		10 32 42.4	
	comp=E,6µm,0.4s						
PEL	**Peldehue**	**1.57**	**60**	ePn	**Pb**	**10 32 00.7**	**-1.0**
PEL	**Peldehue**	**1.57**	**60**	iP	**Pb**	**10 32 00.2**	**-1.4**
PEL	**Peldehue**	**1.57**	**60⇑**	iP	**Pb**	**10 32 00.7**	**-1.0**
PEL				eS	**Sb**	**10 32 23.2**	**+2.0**
PEL				IAML		10 32 31.8	
	comp=N,7µm,0.5s						
LMEL	**Las Melosas**	**1.75**	**87⇑**	iP	**Pb**	**10 32 03.4**	**-1.4**
LMEL				eS	**Sb**	**10 32 27.6**	**+1.3**
LMEL				IAML		10 32 33.8	
	comp=N,5µm,0.4s						
FCH	**Farellones**	**1.79**	**70**	eP	**Pb**	**10 32 03.9**	**-1.7**
FCH				eS	**Sb**	**10 32 29.1**	**+1.4**
FCH				IAML		10 32 37.9	
	comp=E,4µm,0.4s						
AUSP	**Uspallata**	**2.99**	**56**	iP	**Pn**	**10 32 21.4**	**+1.8**
RTLS	**Leoncito**	**3.32**	**50**	iP	**Pn**	**10 32 26.1**	**+1.9**
RTLS				iS	**Sb**	**10 33 08.4**	**-3.2**
RTLS				IAML		10 33 32.8	
	comp=Z,507nm,0.6s						
RTCV	**Cerro Valdivia**	**3.79**	**58**	iP	**Pn**	**10 32 32.0**	**+1.6**
GO04	**Tololo Observa**	**3.98**	**19**	ePn	**Pn**	**10 32 32.6**	**-0.6**
RTLL	**Cerro Villicun**	**4.15**	**52**	iP	**Pn**	**10 32 36.8**	**+1.4**
ACCO	**Cerro Coronel**	**4.33**	**40**	iP	**Pn**	**10 32 40.5**	**+2.5**
AMOG	**MOGNA**	**4.40**	**48**	iP	**Pn**	**10 32 40.3**	**+1.4**
AROD	**Rodeo**	**4.47**	**33**	iP	**Pn**	**10 32 42.1**	**+2.1**
ACAN	**Cantantal**	**4.60**	**70**	iP	**Pn**	**10 32 43.4**	**+1.8**
LCO	**Las Campanas**	**5.11**	**16**	ePn	**Pn**	**10 32 47.6**	**-1.2**
GO06	**Curarrehue**	**5.66**	**173**	ePn	**Pn**	**10 32 54.8**	**-1.3**
GO03	**Copiap**	**6.58**	**16**	ePn	**Pn**	**10 33 07.5**	**-1.3**
PLCA	**Paso Flores**	**6.91**	**169**	ePn	**Pn**	**10 33 12.9**	**-0.4**
PLCA	**Paso Flores**	**6.91**	**169**	eP	**Pn**	**10 33 13.2**	**-0.1**
GO02	**Mina Guanaco**	**9.07**	**16**	ePn	**Pn**	**10 33 42.5**	**-0.7**
LVC	**Limon Verde**	**11.69**	**16**	ePn	**Pn**	**10 34 16.2**	**-2.8**
LVC				ePn	Pn	10 34 18.1	-0.9
LVC	**Limon Verde**	**11.69**	**16**	Pn	**Pn**	**10 34 16.2**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=229,slow=13,SNR=3.7						
PB01	**IPOC Station P**	**13.10**	**12**	ePn	**Pn**	**10 34 38.9**	**+0.8**
PB11	**IPOC Station P**	**14.33**	**10**	ePn	**Pn**	**10 34 55.6**	**+0.6**
MNMC	**Minye Minye**	**14.96**	**10**	ePn	**Pn**	**10 35 03.3**	**-0.3**
CPUP	**Villa Florida**	**15.01**	**64**	Pn	**Pn**	**10 35 02.8**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=198,slow=13,SNR=3.1						
CPUP				Sn	**Sn**	**10 37 53.2**	**+3.7**
	comp=Z,0.2nm,0.3s,baz=256,slow=18,SNR=2.5						
CPUP	**Villa Florida**	**15.01**	**64**	eP	**Pn**	**10 35 03.8**	**-0.2**
PLTB	**Pedras Altas**	**15.87**	**87**	eP	**Pn**	**10 35 14.1**	**-1.1**
CPSB	**Cacapava Do Su**	**16.36**	**83**	eP	**Pn**	**10 35 20.8**	**-0.7**
LPAZ	**La Paz**	**17.99**	**13**	ePn	**Pn**	**10 35 42.5**	**-0.1**
	comp=Z,13nm,0.9s						
LPAZ	**La Paz**	**17.99**	**13**	P	**P**	**10 35 42.8**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=190,slow=6.3,SNR=14						
LPAZ	**La Paz**	**17.99**	**13**	eP	**P**	**10 35 42.8**	**-0.2**
ITAB	**Concordia**	**18.59**	**74**	eP	**P**	**10 35 48.6**	**-0.4**
CNLB	**Canela**	**18.83**	**82**	eP	**P**	**10 35 51.3**	**-0.3**
PTGB	**Pitanga**	**19.87**	**68**	eP	**P**	**10 36 03.2**	**+0.2**
AQDB	**Aquidauana**	**19.92**	**52**	eP	**P**	**10 36 03.5**	**0.0**
EFI	**East Falkland**	**20.50**	**154**	eP	**P**	**10 36 08.3**	**-1.2**
	comp=Z,42nm,1.0s						
TER01	**Tubaro-SC**	**20.52**	**81**	eP	**P**	**10 36 09.6**	**-0.4**
TRCB	**Terra Rica**	**20.53**	**62**	eP	**P**	**10 36 09.8**	**-0.3**
SIV	**San Ignacio**	**20.55**	**32**	P	**P**	**10 36 09.5**	**-0.9**
	comp=Z,6.3nm,0.7s,baz=224,slow=9.6,SNR=33						
TIJ01	**Guaruva-PR**	**21.96**	**73**	eP	**P**	**10 36 25.0**	**-0.7**
NNA	**Nana**	**22.25**	**348**	P	**P**	**10 36 30.5**	**+1.7**
	comp=Z,8.6nm,0.8s,baz=197,slow=6.2,SNR=4.1						
FRTB	**Fartura**	**22.53**	**68**	eP	**P**	**10 36 31.6**	**-0.2**
C2SB	**Chapadao do Su**	**23.02**	**54**	eP	**P**	**10 36 36.6**	**-0.2**
SALV	**Santo Antonio**	**23.39**	**44**	eP	**P**	**10 36 38.7**	**-1.8**
ITRB	**Iturama**	**24.11**	**60**	eP	**P**	**10 36 46.1**	**-1.4**
RCLB	**Rio Claro- Sao**	**24.61**	**69**	eP	**P**	**10 36 51.7**	**-0.3**
BB19B	**Bebedouro**	**24.61**	**65**	eP	**P**	**10 36 50.7**	**-1.4**
ESAR	**Angra dos Reis**	**26.72**	**73**	eP	**P**	**10 37 10.7**	**-0.3**
IPMB	**Ipameri, GO**	**26.77**	**60**	eP	**P**	**10 37 09.4**	**-2.3**
BSCB	**Bom Sucesso**	**27.52**	**69**	eP	**P**	**10 37 17.8**	**-0.7**
VAS01	**Vassouras-RJ**	**27.89**	**73**	eP	**P**	**10 37 21.8**	**+0.2**
BDFB	**Brasilia**	**28.49**	**56**	P	**P**	**10 37 25.7**	**-1.4**
	comp=Z,3.3nm,0.5s,baz=223,slow=8.8,SNR=6.5						
BDFB				LR	LR	10 49 53.1	
	comp=Z,577nm,18.1s,baz=278,slow=39						
DUB01	**Friburgo-RJ**	**28.84**	**74**	eP	**P**	**10 37 29.9**	**-0.3**
MCI6	**Montes Claros**	**30.68**	**63**	eP	**P**	**10 37 46.3**	**-0.2**
JANB	**Januaria**	**31.50**	**60**	eP	**P**	**10 37 52.3**	**-1.4**
SJMB	**Sao Joao De Ma**	**31.60**	**69**	eP	**P**	**10 37 53.9**	**-0.6**
BSFB	**Barra de Sao F**	**31.79**	**70**	eP	**P**	**10 37 55.5**	**-0.7**
PTGA	**Pitinga**	**35.01**	**22**	eP	**P**	**10 38 24.1**	**-0.1**
NBCP	**Cabaceiras do**	**36.86**	**63**	eP	**P**	**10 38 39.7**	**-0.4**
SDV	**Santo Domingo**	**42.63**	**2**	P	**P**	**10 39 28.1**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=346,slow=13,SNR=3.4						
RCBR	**Riachuelo**	**43.80**	**59**	eP	**P**	**10 39 37.8**	**+0.1**
VNA3	**Neumayer Olymp**	**49.48**	**158**	P	P	10 40 26.7	+5.2
VNA1	**Neumayer--Stat**	**49.80**	**157**	P	**P**	**10 40 26.5**	**+2.6**
VNA2	**Neumayer--Watz**	**50.14**	**157**	P	**P**	**10 40 26.8**	**+0.4**
	baz=300,slow=8.8						
SNAA	**Sanae**	**51.71**	**158**	P	**P**	**10 40 38.5**	**+0.1**
SNAA	**Sanae**	**51.71**	**158**	eP	**P**	**10 40 38.7**	**+0.3**
	comp=Z,8.1nm,1.0s						
SNAA	**Sanae**	**51.71**	**158**	P	**P**	**10 40 38.3**	**0.0**
	comp=Z,5.0nm,0.9s,baz=262,slow=9.9,SNR=17						
QSPA	**South Pole Qui**	**56.28**	**180**	P	**P**	**10 41 12.3**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=145,slow=4.7,SNR=3.9						
LTX	**Lajitas**	**69.59**	**331**	eP	**P**	**10 42 41.5**	**+0.8**
TXAR	**Lajitas Array**	**69.59**	**331**	P	**P**	**10 42 41.5**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=146,slow=6.5,SNR=7.3						
V48A	**Smith Brothers**	**70.65**	**348**	eP	**P**	**10 42 47.1**	**+0.2**
	comp=Z,15nm,1.0s						
WVT	**Waverly**	**71.22**	**347**	eP	**P**	**10 42 50.2**	**-0.1**
	comp=Z,13nm,0.8s						
MNTX	**Cornudas Mount**	**72.36**	**331**	eP	**P**	**10 43 00.5**	**+3.1**
	comp=Z,3.9nm,0.9s						
DBIC	**Dimbokro**	**75.37**	**71**	eP	**P**	**10 43 14.5**	**-0.9**
	comp=Z,9.9nm,1.1s						
DBIC	**Dimbokro**	**75.37**	**71**	P	**P**	**10 43 15.0**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=216,slow=8.5,SNR=5.2						
DBIC	**Dimbokro**	**75.37**	**71**	eP	**P**	**10 43 15.3**	**-0.1**
BOSA	**Boshof**	**80.28**	**118**	P	**P**	**10 43 43.0**	**+0.1**

	comp=Z,2.7nm,0.5s,baz=228,slow=2.2,SNR=9.3						
PDAR	Pinedale Array	83.62	333	P	P	10 44 01.1	+1.1
	comp=Z,0.5nm,0.9s,baz=68,slow=5.0,SNR=2.2						
NVAR	Mina Array Bea	83.72	325	P	P	10 44 02.1	+1.6
	comp=Z,0.6nm,0.7s,baz=148,slow=8.6,SNR=2.3						
TOA0	Torodi Ar. Sit	84.40	70	eP	P	10 44 02.5	-1.8
TOA0				eP	P	10 44 04.2	-0.1
TOA1	Torodi Ar. Sit	84.40	70	eP	P	10 44 02.3	-1.9
TORD	Torodi Ar. Bea	84.40	70	P	P	10 44 02.3	-1.9
	comp=Z,3.7nm,0.7s,baz=281,slow=4.0,SNR=19						
WR1	Warramunga Arr	120.70	209	ePKPdf	PKPdf	10 50 23.0	-1.0
WRA	Warramunga Arr	120.70	209	PKP	PKPdf	10 50 23.0	-1.0
	comp=Z,0.3nm,0.6s,baz=175,slow=1.5,SNR=8.2						
BR101	Keskin Array S	122.00	61	ePKPdf	PKPdf	10 50 25.1	-0.8
BRTR	Keskin Array B	122.00	61	PKP	PKPdf	10 50 25.2	-0.8
	comp=Z,0.8nm,0.8s,baz=189,slow=4.4,SNR=4.3						
AKASG	Malin Array Be	122.32	48	PKP	PKPdf	10 50 25.2	-0.8
	comp=Z,0.3nm,0.3s,baz=278,slow=0.7,SNR=3.2						
ARA0	ARCESS Array S	124.06	25	ePKPdf	PKPdf	10 50 28.6	-0.2
ARCES	ARCESS Array B	124.06	25	PKP	PKPdf	10 50 28.6	-0.2
	comp=Z,1.3nm,0.9s,baz=232,slow=4.4,SNR=3.3						
H11S2	WAKE ISLAND Hy	125.55	269	T	T	13 09 07.7	
	baz=118						
H11S1	WAKE ISLAND Hy	125.57	269	T	T	13 09 07.2	
	baz=118						
H11S3	WAKE ISLAND Hy	125.57	269	T	T	13 09 11.5	
	baz=118						
BRVK	Borovoye	147.32	43	ePKPdf	PKPbc	10 51 14.6	0.0
GAR	Garm	149.67	70	ePKPbc	PKPbc	10 51 21.6	+0.3
KK31	Karatay Array	149.71	61	ePKPbc	PKPbc	10 51 21.2	+0.1
KKAR	Karatay Array	149.71	61	ePKPbc	PKPbc	10 51 21.2	+0.1
ARSB	Arslanbob	151.68	65	ePKPbc	PKiKP	10 51 26.7	+0.4
AAK	Ala-Archa	152.67	62	ePKPbc	PKiKP	10 51 29.1	+0.7
KURK	Kurchatov	152.99	43	ePKPbc	PKPbc	10 51 28.5	+0.2
KSH	Kashi	154.06	68	PKPbc	PKPab	10 51 43.8	-1.1
KSH				PKS	PKSdf	10 54 57.9	+0.4
KSH				PP	PP	10 55 24.8	+4.7
KSH				SKS	SKSdf	10 58 24.3	-4.4
KSH	Kashi	154.06	68	SKKS	SKKSac	11 02 07.9	-0.6
ZAA1	Zalesovo Array	154.30	32	ePKPbc	PKPbc	10 51 30.4	-0.7
ZALV	Zalesovo Beam	154.30	32	ePKPdf	PKPdf	10 51 22.7	-0.2
ZALV				ePKPbc	PKPbc	10 51 30.7	-0.4
ZALV	Zalesovo Beam	154.30	32	PKPbc	PKPbc	10 51 30.4	-0.7
	comp=Z,3.3nm,0.6s,baz=303,slow=3.0,SNR=15						
MK31	Makanchi Array	156.90	49	ePKPdf	PKPdf	10 51 28.0	+1.4
MK32	Makanchi Array	156.90	49	ePKPdf	PKPdf	10 51 26.4	-0.2
MK32				ePKPab	PKPab	10 51 56.6	0.0
MKAR	Makanchi Array	156.90	49	ePKPdf	PKPdf	10 51 27.9	+1.3
MKAR				PKPab	PKPab	10 51 56.6	0.0
MKAR	Makanchi Array	156.90	49	PKP	PKPdf	10 51 26.4	-0.2
	comp=Z,0.2nm,0.7s,baz=56,slow=1.5,SNR=3.3						
MKAR				PKPab	PKPab	10 51 56.6	0.0
	comp=Z,1.3nm,0.5s,baz=280,slow=3.0,SNR=16						
MK01	Makanchi Array	156.91	49	ePKPdf	PKPdf	10 51 27.2	+0.6
CMAR	Chiang Mai Arr	162.70	151	PKP	PKPdf	10 51 34.0	+0.1
	comp=Z,0.4nm,0.3s,baz=205,slow=0.8,SNR=4.0						
SONA0	Songino Array	166.10	4	ePKPab	PKPab	10 52 37.2	+0.4
SONM	Songino Array	166.10	4	PKPab	PKPab	10 52 37.2	+0.4
	comp=Z,0.4nm,0.7s,baz=36,slow=2.8,SNR=3.6						
NJ2	Nanjing	170.44	262	eP	PKPdf	10 51 42.3	+2.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	Chengdu	175.49	131	PKP	PKPdf	10 51 44.0	+2.3
LZH	Lanzhou	176.19	55	ePKP	PKPdf	10 51 39.3	-2.6
LZH				pPKP	sPKPdf	10 51 51.1	-0.5
LZH				sPKP		10 51 55.5	

ISK ***18*** *10:40:09.0, 39°.93N×33°.09E, h13^{km}, ML1.9/5*
ISCJB ***18*** *10:40:10.6±0.6, 39°.87N±0°.04×33°.08E±0°.05, h9^{km}, Error ellipse: s-maj=6.1km s-min=4.6km az=32.3*
DDA ***18*** *10:40:10.8, 39°.87N×33°.06E, h7^{km}±2^{km}, ML2.5*
ISC 18 10:40:10.5±1.0**, 39°.89N**±0°.04×**33°.08E**±0°.04**, h9^{km}, n12, σ0^{s}.52**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTO	Ankara	0.22	266	PG	Pg	10 40 14.5	-0.5
ANTO				SG	Sg	10 40 18.6	+0.6
LOD	Lodumlu	0.24	271	PG	Pg	10 40 14.8	-0.6
LOD				SG	Sg	10 40 19.0	+0.3
BBAL	Bala	0.34	174	i P	Pb	10 40 18.1	-0.8
AFSR	Afar-Bala (An	0.44	180	PG	Pg	10 40 19.1	0.0
DELI	KIRIKKALE	0.66	80	i P	Pb	10 40 24.1	-0.2
DELI				IAML_P			
	comp=Z,269nm,0.1s						
ELDT	Eldivan	0.66	24	i P	Pb	10 40 24.1	-0.3
ELDT				IAML_P			
	comp=Z,563nm,0.1s						
KULU	Kulu	0.84	184	PG	Pg	10 40 26.8	+0.1
KULU				SG	Sb	10 40 39.6	+0.8
SERE	Sereflikochisa	1.01	158	PG	Pg	10 40 29.4	-0.5
CDAG	Cicekdag	1.03	104	i P	Pg	10 40 30.2	-0.1
CDAG				IAML_P			
	comp=Z,396nm,0.1s						
KIBS	BOLU	1.08	300	i P	Pn	10 40 32.5	+0.5
KIBS				IAML_P			
	comp=Z,571nm,0.1s						
YAYX	Yaylak	1.10	149	PN	Pg	10 40 31.1	-0.6
BCAM	Yenicaga	1.21	321	i P	Pn	10 40 33.7	0.0
BCAM				IAML_P			
	comp=Z,325nm,0.1s						

BJI ***18*** *10:50:38.8, 10°.54S×165°.87E, h9^{km}, mB5.3/41, mb4.9/54, Ms5.1/36, Ms7 4.9/36*
NEIC ***18*** *10:50:40.5±0.1, 10°.79S×165°.60E, h10^{km}, mb5.1/111, Error ellipse: s-maj=3.8km s-min=2.8km az=111.0*
ISCJB ***18*** *10:50:42.0±0.1, 10°.90S±0°.03×165°.53E±0°.03, h30^{km}, mb5.0/158, MS5.0/46, Error ellipse: s-maj=4.3km s-min=3.7km az=20.7*
MOS ***18*** *10:50:43.5±0.9, 10°.81S×165°.55E, h41^{km}, mb5.3/39, Error ellipse: s-maj=8.6km s-min=7.9km az=67.3*
GCMT ***18*** *10:50:44.5±0.2, 10°.84S±0°.02×165°.60E±0°.01, h33^{km}±1^{km}, MW5.3/94, Moment Tensor Solution. s80,c104; s94,c155; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.01±.02; $M_{\theta\theta}$0.22±.02; $M_{\phi\phi}$-0.21±.02; $M_{r\theta}$0.26±.03; $M_{\theta\phi}$-0.43±.01; $M_{\phi r}$-1.04±.06; Best double couple: $M_0$1.17300×10^{17} NP1:ϕ_s346.00000°, δ90.00000°, λ-66.00000°. NP2:ϕ_s77.00000°, δ24.00000°, λ-180.00000°. Principal axes: T 1.1740, Plg40.0000°, Azm54.0000°; N -0.0020, Plg24.0000°, Azm166.0000°; P -1.1720, Plg40.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***18*** *10:50:44.7±2.1, 10°.88S×165°.70E, h40^{km}±17^{km}, mb4.5/25, mb1 4.7/27, mb1mx4.6/43, mbtmp4.8/27, ML5.3/2, MS4.9/27, Ms1 4.9/27, ms1mx4.7/43 Error ellipse: s-maj=16.9km s-min=12.0km az=90.0*
ISC 18 10:50:43.5±0.3**, 10°.86S**±0°.05×**165°.72E**±0°.05**, h30^{km}, n342, σ1^{s}.31**/359**, mb5.0**/158**, MS4.9**/46**, 12C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.86	283	eP	Pn	10 52 10.0	+1.6
HNR				eS	Sn	10 53 16.0	+1.4
HNR	Honiara	5.86	283	ePn	Pn	10 52 09.7	+1.3
HNR				ePn	Pn	10 52 10.0	+1.6
HNR				eSn	Sn	10 53 18.8	+4.2
HNR	Honiara	5.86	283	P	Pn	10 52 10.0	+1.6
	128nm,0.3s,baz=138,slow=4.4,SNR=37						
HNR				S	Sn	10 53 18.8	+4.2
	baz=17,slow=19,SNR=2.9						
HNR				LR	LR	10 54 35.5	
	comp=Z,27μm,20.4s,baz=133,slow=40						
MARNC	Mare, Loyalty	10.79	168	ePn	Pn	10 53 17.0	+0.9
DZM	Mont Dzumac	11.17	177	ePn	Pn	10 53 22.3	+0.9
	190nm,0.6s						
DZM				eSn	Sn	10 55 22.0	-3.4
	63nm,0.6s						
DZM				eLR	LR	10 55 59.0	
	comp=Z,9μm,23.4s						
DZM	Mont Dzumac	11.17	177	P	Pn	10 53 23.0	+1.6
	16nm,0.3s,baz=314,slow=11,SNR=122						
DZM				S	Sn	10 55 24.5	-0.9
	5.5nm,0.3s,baz=299,slow=18,SNR=5.6						
DZM				LR	LR	10 57 13.3	
	comp=Z,7μm,21.8s,baz=7.0,slow=35						
OUENC	Ouen Island, N	11.55	175	ePn	Pn	10 53 27.4	+1.0
PINNC	Pines Island,	11.81	172	ePn	Pn	10 53 31.4	+1.5
MSVF	Nonsavu	13.76	121	ePn	Pn	10 53 58.7	+1.9
MSVF	Nonsavu	13.76	121	eP	Pn	10 53 58.7	+1.9
TARA	Tarawa	14.09	31	ePn	Pn	10 54 00.0	-1.2
RABL	Rabaul	14.98	295	ePn	Pn	10 54 11.5	-1.8
EIDS	Eidsvold	20.02	222	eP	P	10 55 13.7	-0.3
	201nm,1.2s						
CTA	Charters Tower	20.86	242	P	Pn	10 55 24.5	-1.4
	132nm,1.1s,baz=69,slow=13,SNR=29						
CTA				LR	LR	11 02 50.0	
	comp=Z,5μm,18.2s,baz=67,slow=35						
CTAO	Charters Tower	20.86	242	eP	P	10 55 24.4	+1.1
	121nm,1.0s						
CTAO	Charters Tower	20.86	242	eP	P	10 55 24.4	+1.1
CTAO				pmax	pmax		
	comp=Z,121nm,1.0s						
COEN	Coen	22.23	260	eP	P	10 55 37.8	-0.2
	comp=Z,56nm,1.2s						
ARMA	Armidale	23.46	212	eP	P	10 55 50.8	0.0
	comp=Z,47nm,1.0s						
RAO	Raoul Island	23.84	142	LR	LR	11 03 30.9	
	comp=Z,2μm,18.5s,baz=333,slow=32						
OUZ	Omahuta	25.29	165	eP	P	10 56 09.2	+1.9
	comp=Z,29nm,1.0s						
JAY	Jayapura	26.17	287	P	P	10 56 12.7	-3.0
	comp=Z,244nm,1.2s						
JAY	Jayapura	26.17	287	LR	LR	11 08 04.5	
	comp=Z,2μm,18.7s,baz=93,slow=40						
CAN	Canberra	28.71	209	eP	P	10 56 38.6	+0.4
	comp=Z,65nm,1.7s						
CAN	Canberra	28.71	209	eP	P	10 56 38.7	+0.4
CAN				pmax	pmax		
	comp=Z,65nm,1.7s						
HIZ	Hauiti	28.73	165	eP	P	10 56 39.5	+1.2
	comp=Z,61nm,1.1s						
MXZ	Matakaoa Point	28.90	159	eP	P	10 56 39.9	+0.1
	comp=Z,44nm,1.0s						
URZ	Urewera	29.13	161	eP	P	10 56 40.9	-0.9
URZ				eP	P	10 56 41.3	-0.5
URZ	Urewera	29.13	161	P	P	10 56 40.9	-0.9
	comp=Z,13nm,0.5s,baz=18,slow=1.3,SNR=12						
URZ				LR	LR	11 07 40.1	
	comp=Z,1μm,18.2s,baz=348,slow=35						
BKZ	Black Stump Fm	29.78	163	eP	P	10 56 47.1	-0.6
	comp=Z,54nm,0.5s						
BKZ				eS	S	11 01 43.6	+1.2
STKA	Stephens Creek	30.56	223	eP	P	10 56 54.1	-0.5
	comp=Z,7.2nm,1.0s						
STKA	Stephens Creek	30.56	223	eP	P	10 56 54.1	-0.5
STKA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
STKA	Stephens Creek	30.56	223	P	P	10 56 54.1	-0.5
	comp=Z,20nm,0.9s,baz=32,slow=9.8,SNR=18						
STKA				LR	LR	11 08 47.6	
	comp=Z,5μm,18.5s,baz=39,slow=36						
BFZ	Birch Farm	31.13	164	eP	P	10 56 58.5	-1.0
	comp=Z,175nm,1.6s						
SNZO	South Karori	31.35	167	eP	P	10 57 01.0	-0.4
	comp=Z,131nm,1.4s						
THZ	Tophouse	31.43	170	eP	P	10 57 02.7	+0.5
	comp=Z,55nm,0.9s						
WRAB	Tennant Creek	31.51	250	eP	P	10 57 02.7	-0.5
	comp=Z,44nm,0.9s						
WRAB	Tennant Creek	31.51	250	⇑eP	P	10 57 02.9	-0.3
WRAB				pmax	pmax		
	comp=Z,53nm,1.0s						
WB2	Warramunga Arr	31.51	250	eP	P	10 57 01.8	-1.4
WR1	Warramunga Arr	31.52	250	eP	P	10 57 02.0	-1.2
	comp=Z,48nm,0.9s						
WRA	Warramunga Arr	31.52	250	P	P	10 57 02.0	-1.2
	comp=Z,28nm,0.8s,baz=80,slow=9.1,SNR=119						
WRA				ScP	ScP	11 03 35.5	-1.6
	comp=Z,0.6nm,0.8s,baz=81,slow=3.3,SNR=2.7						
WRA				LR	LR	11 10 03.3	
	comp=Z,5μm,18.3s,baz=85,slow=37						
GUMO	Guam	31.90	319	LR	LR	11 10 43.4	
	comp=Z,856nm,18.3s,baz=138,slow=38						
KHZ	Kahutara	32.17	169	eP	P	10 57 08.0	-0.7
	comp=Z,33nm,0.9s						
TOO	Toolangi	32.22	211	eP	P	10 57 09.7	+0.5
	comp=Z,24nm,0.8s						
TOO	Toolangi	32.22	211	eP	P	10 57 09.7	+0.5
TOO				pmax	pmax		
	comp=Z,24nm,0.8s						
LTZ	Lake Taylor	32.31	171	eP	P	10 57 10.1	+0.2
	comp=Z,68nm,0.7s						
FOZ	Fox Glacier	32.75	174	eP	P	10 57 14.9	+1.3
	comp=Z,52nm,1.0s						
OXZ	Oxford	32.81	171	eP	P	10 57 14.6	+0.4
	comp=Z,44nm,0.7s						
AS01	Alice Springs	32.81	243	eP	P	10 57 13.0	-1.6
AS31	Alice Springs	32.85	243	eP	P	10 57 13.9	-1.1
	comp=Z,13nm,1.0s						
ASAR	Alice Springs	32.85	243	P	P	10 57 13.8	-1.2
	comp=Z,24nm,0.8s,baz=65,slow=10.0,SNR=129						
ASAR				PcP	PcP	10 59 59.4	-0.1
	comp=Z,2.9nm,0.9s,baz=68,slow=2.7,SNR=6.5						
ASAR				ScP	ScP	11 03 41.2	-0.5
	comp=Z,1.4nm,0.9s,baz=66,slow=4.2,SNR=5.8						
ASAR				LR	LR	11 09 48.6	
	comp=Z,3μm,18.8s,baz=78,slow=35						
RPZ	Rata Peaks	33.06	173	eP	P	10 57 16.0	-0.5
RPZ				eP	pP	10 57 16.5	-7.9
RPZ	Rata Peaks	33.06	173	P	P	10 57 16.0	-0.5
	comp=Z,28nm,0.7s,baz=312,slow=3.3,SNR=25						
RPZ				LR	LR	11 10 59.0	
	comp=Z,2μm,18.5s,baz=346,slow=37						
MQZ	McQueen's Vall	33.28	171	eP	P	10 57 18.0	-0.3
	comp=Z,98nm,1.2s						
LBZ	Lake Benmore	33.63	174	eP	P	10 57 22.1	+0.7
	comp=Z,19nm,0.9s						
MTN	Manton Dam	33.89	263	eP	P	10 57 22.8	-1.3
	comp=Z,14nm,1.0s						
ODZ	Otahua Downs	34.33	174	eP	P	10 57 28.2	+0.8
	comp=Z,45nm,1.5s						
SIJI	Sorong	35.64	284	LR	LR	11 14 35.8	
	comp=Z,2μm,18.6s,baz=118,slow=40						
FITZ	Fitzroy Crossi	39.40	255	eP	P	10 58 10.2	-0.8
	comp=Z,41nm,0.9s						
FITZ	Fitzroy Crossi	39.40	255	LR	LR	11 13 44.1	
	comp=Z,3μm,20.3s,baz=86,slow=35						
SANI	Sanana	40.39	280	P	P	10 58 17.9	-1.4
	comp=Z,36nm,1.2s						
BATI	Baumata	41.33	267	P	P	10 58 26.9	-0.1
	comp=Z,20nm,1.3s						
DAV	Davao City (W)	43.74	292	LR	LR	11 16 43.9	
	comp=Z,706nm,20.3s,baz=130,slow=36						
PPT	Papeete	43.77	104	LR	LR	11 12 47.6	
	comp=Z,2μm,20.4s,baz=256,slow=30						
PPT2	Papeete2	43.77	104	eS	S	11 05 27.7	+12
	comp=Z,578nm,27.8s						
PPT2				eLQ	LQ	11 09 13.3	
	comp=Z,2μm,30.0s						
PPT2				eLR	LR	11 11 22.4	
	comp=Z,4μm,24.5s,baz=274						
TBI	Tubuai	44.42	112	eS	S	11 05 36.5	+11
	comp=Z,472nm,29.5s						
TBI				eLQ	LQ	11 09 38.1	
	comp=Z,1μm,28.2s						
TBI				eLR	LR	11 11 34.0	
	comp=Z,6μm,27.5s,baz=285						
MBWA	Marble Bar	45.23	251	eP	P	10 58 58.0	-0.5
	comp=Z,42nm,1.1s						
BNSI	Bone	45.62	274	P	P	10 59 00.2	-1.4
PCI	Palu	46.63	279	P	P	10 59 09.8	+0.2
	comp=Z,72nm,1.2s						
PLAI	Plampang	47.24	268	P	P	10 59 12.2	-2.2
	comp=Z,32nm,1.6s						
NWAO	Narrogin (SRO)	49.55	236	eP	P	10 59 31.7	-0.2
	comp=Z,65nm,0.9s						
NWAO	Narrogin (SRO)	49.55	236	eP	P	10 59 31.7	-0.2
NWAO				pmax	pmax		
	comp=Z,65nm,0.9s						
NWAO	Narrogin (SRO)	49.55	236	LR	LR	11 20 48.0	
	comp=Z,7μm,18.0s,baz=318,slow=36						
MORW	Morawa	49.69	241	eP	P	10 59 33.1	+0.1
	comp=Z,92nm,1.0s						
TAOE	Nuku Hiva Isla	53.31	93	eS	S	11 07 39.5	+8.8
	comp=Z,448nm,27.1s						
TAOE				eLR	LR	11 15 36.2	
	comp=Z,2μm,25.1s,baz=268						
MJAR	Matsushiro Arr	53.79	333	P	P	11 00 03.1	-0.3
	comp=Z,11nm,0.8s,baz=168,slow=7.9,SNR=15						
MAJO	Matsushiro	53.80	333	eP	P	11 00 03.1	-0.4
MAJO	Matsushiro	53.80	333	d iP	P	11 00 03.3	-0.2
MAJO				pmax	pmax		
	comp=Z,23nm,1.0s						
MAT	Matsushiro	53.80	333	P	P	11 00 01.8	-1.7
JNU	Nakatsue	54.91	324	eP	P	11 00 10.2	-1.6
	comp=Z,36nm,0.8s						
JNU	Nakatsue	54.91	324	P	P	11 00 12.0	+0.3
	comp=Z,16nm,0.9s,baz=212,slow=4.0,SNR=4.5						
ERM	Erimo	56.55	340	deP	P	11 00 21.2	-2.0
ERM				pmax	pmax		
	comp=Z,119nm,2.6s						
RKT	Rikitea	57.68	110	eLR	LR	11 17 43.0	
	comp=Z,5μm,27.2s						
ASAJ	Asahikawa	58.61	341	P	P	11 00 38.1	+0.4
	comp=Z,20nm,0.8s,baz=222,slow=11,SNR=14						
KSRS	Korea Array	59.71	326	P	P	11 00 45.5	+0.2
	comp=Z,1.8nm,0.9s,baz=160,slow=7.7,SNR=5.3						
KSAR	Wonju Array Be	59.72	326	P	P	11 00 45.5	+0.1
KSAR	Wonju Array Be	59.72	326	P	P	11 00 45.6	+0.1
YSS	Yuzh-Sakhalins	61.10	342	eP	P	11 00 55.4	+0.6
	comp=Z,57nm,1.3s						
YSS	Yuzh-Sakhalins	61.10	342	⇑eP	P	11 00 55.3	+0.6
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
QIZ	Qiongzhong	62.57	298	P	P	11 01 05.0	-0.2
QIZ				S	S	11 09 34.9	+3.4
QIZ				pmax	pmax		
	comp=E,11nm,0.9s						
QIZ				LR	LR		
	comp=E,340nm,27.5s						
QIZ				LR	LR		
	comp=E,660nm,23.0s						
QIZ				LR	LR		
	comp=E,1μm,23.0s						
USRK	Ussuriysk Ar.	62.77	333	P	P	11 01 06.6	+0.6
	comp=E,11nm,1.0s,baz=144,slow=6.5,SNR=9.9						
PETK	Petropavlovsk-	64.08	355	P	P	11 01 15.0	+0.5
	comp=E,4.6nm,0.8s,baz=184,slow=8.7,SNR=3.0						
PETK				LR	LR	11 24 07.8	
	comp=E,526nm,20.4s,baz=160,slow=31						
PEA1	Petropavlovsk-	64.08	355	eP	P	11 01 15.0	+0.5
CN2	Changchun	65.57	329	⇑P	P	11 01 24.4	0.0
CN2				esP	pP	11 01 30.0	-3.7
CN2				eS	S	11 10 07.8	0.0
CN2				pmax	pmax		
	comp=E,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=E,200nm,5.0s						
CN2				LR	LR		
	comp=E,400nm,16.0s						
CN2				LR	LR		
	comp=E,500nm,16.0s						
CN2				LR	LR		
	comp=E,800nm,18.0s						
GRNR	Gornyy	66.46	340	eP	P	11 01 30.8	+0.8
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
VNDA	Vanda	66.68	181	eP	P	11 01 30.8	-0.3
VNDA	Vanda	66.68	181	eP	P	11 01 30.8	-0.3
VNDA	Vanda	66.68	181	P	P	11 01 31.9	+0.8
	comp=Z,14nm,1.2s,baz=9.5,slow=6.1,SNR=3.4						
VNDA				LR	LR	11 27 26.9	
	comp=Z,378nm,18.0s,baz=324,slow=33						
KLR	Kul'dur	66.88	337	⇑eP	P	11 01 32.0	-0.7
KLR	Kul'dur	66.88	337	P	P	11 01 32.6	-0.1
	comp=Z,6.3nm,0.9s,baz=124,slow=5.1,SNR=15						
SKNT	Sakolnakorn	67.00	294	P	P	11 01 34.2	+0.1
	comp=Z,6.8nm,1.3s						
NKL	Nikolayevsk	67.25	344	eP	P	11 01 35.0	+0.1
GYA	Guiyang	68.29	304	P	P	11 01 44.3	+2.0
GYA				PP	PP	11 04 17.6	+4.2
GYA				S	S	11 10 44.0	+2.4
GYA				SKS	ScS	11 11 39.8	-0.3
GYA				SS	SS	11 15 09.4	+3.9
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.4s						
GYA				LR	LR		
	comp=Z,550nm,18.0s						
GYA				LR	LR		
	comp=Z,510nm,18.4s						
GYA				LR	LR		
	comp=Z,530nm,18.8s						
BJI	Beijing	68.32	321	eP	P	11 01 42.0	0.0
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJI				LR	LR		
	comp=Z,280nm,24.6s						
BJI				LR	LR		
	comp=Z,350nm,14.5s						
BJI				LR	LR		
	comp=Z,280nm,28.4s						
XAN	Xi'an	69.98	312	P	P	11 01 51.8	-0.6
XAN				pP	pP	11 01 59.0	-2.6
XAN				S	S	11 11 01.3	+0.2
XAN				pmax	pmax		
	comp=Z,11nm,1.4s						
XAN				pmax	pmax		
	comp=Z,220nm,5.3s						
XAN				LR	LR		
	comp=Z,390nm,21.7s						
XAN				LR	LR		
	comp=Z,380nm,20.6s						
XAN				LR	LR		
	comp=Z,550nm,20.6s						
XAN	Xi'an	69.98	312	eP	P	11 01 51.9	-0.6
	comp=Z,11nm,1.0s						
XAN	Xi'an	69.98	312	eP	P	11 01 51.9	-0.6
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
NANT	Nan	70.55	294	P	P	11 01 56.0	-0.2
	comp=Z,7.8nm,0.5s						
NANT	Nan	70.55	294	P	P	11 01 56.0	-0.2
	comp=Z,7.8nm,0.5s						
KMI	Kunming	71.00	301	P	P	11 02 00.0	+0.8
KMI				pP	pP	11 02 09.9	+1.6
KMI				PP	PP	11 04 36.6	-0.3
KMI				S	S	11 11 15.3	+1.5
KMI				pmax	pmax		
	comp=Z,14nm,1.2s						
KMI				LR	LR		
	comp=Z,270nm,21.9s						
KMI				LR	LR		
	comp=Z,400nm,22.4s						
KMI				LR	LR		
	comp=Z,480nm,22.4s						
HHC	Hu-ho-hao-te	71.67	320	eP	P	11 02 04.9	+2.2
HHC				S	S	11 11 23.8	+3.1
HHC				SS	SS	11 15 57.9	+0.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC				LR	LR		
	comp=Z,300nm,15.6s						
HHC				LR	LR		
	comp=Z,530nm,16.4s						
HHC				LR	LR		
	comp=Z,320nm,13.8s						
CMAR	Chiang Mai Arr	72.02	293	P	P	11 02 05.2	+0.1
	comp=Z,1.9nm,0.6s,baz=116,slow=4.3,SNR=18						
CMAR				LR	LR	11 34 39.9	
	comp=Z,273nm,19.1s,baz=160,slow=37						
CMMT	Chiang Mai	72.12	294	P	P	11 02 06.5	+0.7
	comp=Z,4.4nm,1.5s,comp=Z,322nm						
CMMT	Chiang Mai	72.12	294	P	P	11 02 06.5	+0.7
	comp=Z,4.4nm,1.5s,comp=Z,322nm						
CHTO	Chiang Mai	72.13	294	P	P	11 02 06.6	+0.8
	comp=Z,42nm,1.7s						
CHTO	Chiang Mai	72.13	294	P	P	11 02 06.6	+0.8
	comp=Z,42nm,1.7s						
ZEA	Zeya	72.16	337	eP	P	11 02 05.7	+0.5
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
HIA	Hailar	72.20	330	⇑eP	P	11 02 05.6	0.0
HIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2	Chengdu	72.47	307	P	P	11 02 08.3	+0.7
CD2				pP	pP	11 02 11.8	-5.0
CD2				sP	sP	11 02 13.3	-6.9
CD2				PP	PP	11 04 49.3	+0.1
CD2				S	S	11 11 33.3	+3.2

CD2				SS	SS	11 16 13.1	+3.6
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=Z,1µm,16.2s						
CD2				LR	LR		
	comp=Z,1µm,17.2s						
CD2				LR	LR		
	comp=Z,1µm,20.1s						
SEY	Seymchan	74.29	354⇓	eP	P	11 02 15.4	-2.2
SEY	Seymchan	74.29	354	P	P	11 02 17.5	-0.1
	comp=Z,2.2nm,0.8s,baz=153,slow=6.5,SNR=7.2						
LZH	Lanzhou	74.61	312 ⇑	P	P	11 02 21.3	+1.0
LZH				pP	pP	11 02 29.1	-0.4
LZH				sP	sP	11 02 31.1	-1.8
LZH				PP	PP	11 05 03.5	-4.0
LZH				S	S	11 11 55.6	+1.2
LZH				sS	pS	11 12 03.8	-1.8
LZH				SS	SS	11 16 38.5	-3.7
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,200nm,4.3s						
LZH				LR	LR		
	comp=Z,500nm,18.1s						
LZH				LR	LR		
	comp=Z,780nm,17.9s						
LZH				LR	LR		
	comp=Z,1µm,19.1s						
GAMB	Gambell	76.39	10	eP	P	11 02 29.7	+0.1
	comp=Z,18nm,1.0s						
ANM	Nome	78.31	12	eP	P	11 02 40.4	0.0
	comp=Z,11nm,1.2s						
ANM	Nome	78.31	12	eP	P	11 02 40.4	0.0
ANM				pmax	pmax		
	comp=Z,11nm,1.2s						
SONA0	Songino Array	78.50	324	eP	P	11 02 41.9	-0.1
SONM	Songino Array	78.50	324	P	P	11 02 41.9	-0.1
	comp=Z,4.6nm,1.0s,baz=137,slow=5.2,SNR=22						
SONA1	Songino Array	78.50	324	eP	P	11 02 41.4	-0.6
BILL	Bilibino	78.69	0	eP	P	11 02 42.4	-0.1
	comp=Z,10nm,0.8s						
BILL	Bilibino	78.69	0⇑	iP	P	11 02 42.3	-0.1
BILL				pmax	pmax		
	comp=Z,17nm,1.1s						
GTA	Gaotai	78.91	314	eP	P	11 02 44.5	+0.1
GTA				pP	PcP	11 02 49.1	-3.9
GTA				sP	pP	11 02 51.6	-2.1
GTA				S	S	11 12 40.0	-1.2
GTA				sS	pS	11 12 46.8	-5.7
GTA				SKS	SKSac	11 12 55.5	-2.7
GTA				SS	SS	11 17 49.3	+2.3
GTA				pmax	pmax		
	comp=Z,13nm,1.3s						
GTA				pmax	pmax		
	comp=Z,170nm,6.7s						
GTA				LR	LR		
	comp=Z,320nm,19.0s						
GTA				LR	LR		
	comp=Z,520nm,20.6s						
GTA				LR	LR		
	comp=Z,700nm,19.7s						
QSPA	South Pole Qui	79.15	180	eP	P	11 02 45.1	-0.2
	comp=Z,34nm,1.1s						
BRDH	Bariadhala	79.80	296	LR	LR	11 35 31.6	
	comp=Z,757nm,22.0s,baz=137,slow=34						
CAST	Castle Rocks	80.78	18	eP	P	11 02 53.9	0.0
	comp=Z,8.3nm,0.8s						
TRF	Thorofare Moun	81.35	18	eP	P	11 02 56.5	-0.6
	comp=Z,60nm,1.9s						
ZAK	Zakamensk	81.53	325	eP	P	11 02 56.9	-1.4
ZAK				e		11 06 01.6	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TLY	Talaya	81.95	326	eP	P	11 02 59.8	-0.6
	comp=Z,18nm,1.0s						
TLY	Talaya	81.95	326	eP	P	11 02 59.9	-0.5
TLY				pmax	pmax		
	comp=Z,17nm,1.0s						
MCK	McKinley	81.97	19	eP	P	11 03 01.1	+0.9
	comp=Z,81nm,2.0s						
MCK	McKinley	81.97	19	eP	P	11 03 01.1	+0.9
MCK				pmax	pmax		
	comp=Z,81nm,2.0s						
IM3	Indian Mountai	82.25	16	eP	P	11 03 00.8	-0.8
WRH	Wood River Hil	82.76	18	eP	P	11 03 03.4	-0.8
	comp=Z,10nm,0.9s						
MDM	Murphy Dome	83.06	18	eP	P	11 03 04.3	-1.5
	comp=Z,9.9nm,0.9s						
HDA	Harding Lake	83.08	19	eP	P	11 03 05.7	-0.3
	comp=Z,19nm,0.8s						
HDA	Harding Lake	83.08	19	P	P	11 03 06.1	+0.2
	baz=227						
TCOL	CIGO, UAF Yank	83.11	18	P	P	11 03 06.0	-0.1
	baz=226						
COLA	College	83.12	18	eP	P	11 03 05.8	-0.3
	comp=Z,20nm,0.8s						
COLA	College	83.12	18	eP	P	11 03 05.8	-0.3
COLA				pmax	pmax		
	comp=Z,20nm,0.8s						
O02D	Mt. Diablo Mer	83.19	47	P	P	11 03 09.2	+2.0
	baz=250						
RIDG	Independ'e Rid	83.31	20	eP	P	11 03 07.4	+0.2
	comp=Z,80nm,1.9s						
ILAR	Eielson Array	83.34	19	P	P	11 03 07.0	-0.3
ILAR	Eielson Array	83.34	19	P	P	11 03 07.0	-0.3
	comp=Z,5.6nm,0.8s,baz=230,slow=5.0,SNR=48						
ILAR				LR	LR	11 34 13.9	
	comp=Z,285nm,20.5s,baz=262,slow=31						
ILB	Eielson Array	83.34	19	eP	P	11 03 06.5	-0.8
IL1	Eielson Array	83.34	19	eP	P	11 03 06.6	-0.7
POKR	Poker Plat Res	83.41	18	P	P	11 03 07.3	-0.3
	baz=226						
N02D	Trinity Center	83.52	46	P	P	11 03 09.0	+0.1
	baz=250						
SCRK	Sand Creek	83.75	20	eP	P	11 03 09.3	-0.2
	comp=Z,22nm,1.3s						
YBH	Yreka Blue Hor	83.78	46	eP	P	11 03 10.4	+0.2
	comp=Z,10nm,1.0s						
YBH	Yreka Blue Hor	83.78	46	eP	P	11 03 10.4	+0.2
YBH				pmax	pmax		
	comp=Z,11nm,1.0s						
ORV	Oroville	83.91	48	eP	P	11 03 11.6	+0.8
	comp=Z,7.8nm,1.1s						
ORV	Oroville	83.91	48	eP	P	11 03 11.6	+0.8
ORV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HUMO	Hull Mountain	83.92	45	eP	P	11 03 11.6	+0.8
	comp=Z,10nm,0.9s						
O03E	Paynes Creek	83.94	47	P	P	11 03 12.2	+1.2
	baz=250						
AFDM	Forest Hills D	84.10	49	eP	P	11 03 12.7	+0.9
	comp=Z,10nm,0.9s						
L04D	Klamath Falls	84.23	45	P	P	11 03 13.9	+1.4
	baz=250						
CMB	Columbia Colle	84.24	50	eP	P	11 03 13.4	+0.9
	comp=Z,9.7nm,1.0s						
CMB	Columbia Colle	84.24	50	eP	P	11 03 13.4	+0.9
CMB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
M04C	Macdoel	84.41	46	P	P	11 03 14.6	+1.2
	baz=250						
I04A	Tendick Farm,	84.70	44	P	P	11 03 14.1	-0.7
	baz=250						
J04D	Umpqua Nationa	84.72	44	P	P	11 03 15.9	+0.8
	baz=250						
BEKR	Beckworth	84.84	48	eP	P	11 03 16.2	+0.4
	comp=Z,9.3nm,0.9s						
MAW	Mawson	84.89	202	LR	LR	11 38 13.9	
	comp=Z,325nm,18.7s,baz=100,slow=34						
KNGR	Kungurtug, Tuv	84.94	324⇑	eP	P	11 03 15.1	-0.8
ISA	Isabella, Lake	84.98	52	eP	P	11 03 17.2	+0.9
	comp=Z,8.9nm,1.0s						
ISA	Isabella, Lake	84.98	52	eP	P	11 03 17.3	+0.9
ISA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WAKR	Walker	85.10	49	eP	P	11 03 17.8	+0.7
	comp=Z,17nm,1.3s						
MDPB	Devils Postpil	85.10	50	eP	P	11 03 18.0	+0.8
	comp=Z,12nm,1.0s						
EDW2	Edwards Air Fo	85.13	53	P	P	11 03 18.1	+1.0
	baz=253						
OMMB	Old Mammoth Mi	85.15	50	eP	P	11 03 18.2	+0.7
	comp=Z,31nm,1.8s						
PNTR	Pine Nut	85.16	49	eP	P	11 03 18.3	+0.9
	comp=Z,9.3nm,0.9s						
VCNR	Virginia City	85.18	49	eP	P	11 03 17.3	-0.2
	comp=Z,4.4nm,0.9s						
EGAK	Eagle	85.21	20	eP	P	11 03 16.7	0.0
	comp=Z,19nm,0.9s						
BFSC	Mount Baldy Ra	85.21	54	P	P	11 03 18.8	+1.2
	baz=254						
J05D	Fort Rock, OR	85.33	44	P	P	11 03 19.0	+1.0
	baz=251						
YERR	Yerington	85.39	49	eP	P	11 03 18.5	0.0
	comp=Z,4.9nm,0.8s						
PAHR	Pah Rah Range	85.50	48	eP	P	11 03 19.8	+0.8
	comp=Z,8.2nm,0.9s						
CWC	Cottonwood Cre	85.51	52	P	P	11 03 20.0	+0.9
	baz=253						
MOD	Modoc Plateau	85.53	46	eP	P	11 03 19.7	+0.6
	comp=Z,8.1nm,0.9s						
LRMC	Laurel Mtn Rad	85.54	53	P	P	11 03 19.6	+0.3
	baz=254						
I05D	Terrebonne, OR	85.62	43	P	P	11 03 20.6	+1.3
	baz=250						
PINE	Pine Mountain	85.70	44	eP	P	11 03 20.5	+0.5
	comp=Z,10.0nm,0.9s						
BBRC	Big Bear Solar	85.80	54	P	P	11 03 21.7	+0.9
	baz=254						
RYN	Ryan	85.82	50	eP	P	11 03 21.6	+1.0
	comp=Z,7.3nm,1.1s						
MONP2	Monument Peak	85.83	56	P	P	11 03 21.8	+0.9
	baz=254						
MPMC	Manual Prospec	85.86	52	P	P	11 03 21.8	+0.9
	baz=254						
NV01	Mina Array Sit	85.92	50	eP	P	11 03 21.6	+0.4
NVAR	Mina Array Bea	85.92	50	P	P	11 03 22.1	+0.9
	comp=Z,4.6nm,0.8s,baz=233,slow=7.8,SNR=18						
NVAR				LR	LR	11 34 43.3	
	comp=Z,1µm,20.0s,baz=251,slow=31						
PFO	Pinyon Flats O	86.00	55	P	P	11 03 22.7	+1.2
	baz=254						
NV11	Mina Array Sit	86.03	50	eP	P	11 03 22.1	+0.4
	comp=Z,1.2nm,1.3s						
KVN	Kaiserville	86.26	49	eP	P	11 03 23.8	+1.0
	comp=Z,39nm,1.9s						
KVN	Kaiserville	86.26	49	eP	P	11 03 23.8	+1.0
KVN				pmax	pmax		
	comp=Z,39nm,1.9s						
HEC	Hector,Ludlow	86.42	54	P	P	11 03 23.5	0.0
	baz=254						
BELC	Belle Mtn. Jos	86.47	55	P	P	11 03 24.9	+1.0
	baz=255						
I07A	Izee	86.78	44	eP	P	11 03 25.1	-0.1
	comp=Z,10nm,1.1s						
BC3	Big Chuckawall	86.82	55	P	P	11 03 26.7	+1.1
	baz=255						
WVOR	Wild Horse Val	86.88	46	eP	P	11 03 26.4	+0.7
	comp=Z,27nm,1.8s						
WVOR	Wild Horse Val	86.88	46	eP	P	11 03 26.4	+0.7
WVOR				pmax	pmax		
	comp=Z,27nm,1.8s						
TUQ	Turquoise Moun	86.91	53	P	P	11 03 26.4	+0.4
	baz=254						
GMRC	Granite Mounta	86.95	54	P	P	11 03 27.1	+0.9
	baz=255						
LTY	Liberty	87.03	41	eP	P	11 03 26.4	+0.1
	comp=Z,4.0nm,0.9s						
TPNV	Topopah Spring	87.06	52	eP	P	11 03 27.7	+0.9
	comp=Z,24nm,1.8s						
TPNV	Topopah Spring	87.06	52	eP	P	11 03 27.7	+0.9
TPNV				pmax	pmax		
	comp=Z,24nm,1.8s						
TPNV	Topopah Spring	87.06	52	P	P	11 03 27.8	+1.0
	baz=254						
GLA	Glamis	87.17	56	eP	P	11 03 28.4	+1.2
	comp=Z,14nm,1.0s						
GLA	Glamis	87.17	56	eP	P	11 03 28.4	+1.2
GLA				pmax	pmax		
	comp=Z,14nm,1.0s						
GLA	Glamis	87.17	56	P	P	11 03 28.3	+1.0
	baz=255						
IRM	Iron Mountain	87.19	55	P	P	11 03 28.0	+0.7
	baz=255						
J08A	Circle Bar Ran	87.27	45	eP	P	11 03 28.6	+1.1
	comp=Z,8.0nm,1.0s						
E07A	Sunnyside	87.33	42	eP	P	11 03 28.9	+1.3
	comp=Z,11nm,1.1s						
LDFC	Landfair	87.46	54	eP	P	11 03 29.0	+0.4
	comp=Z,26nm,1.1s						
HAWA	Hanford	87.49	42	eP	P	11 03 29.3	+0.9
	comp=Z,8.2nm,1.1s						
G08A	Pilot Rock	87.53	43	eP	P	11 03 28.6	-0.1
	comp=Z,6.9nm,1.1s						
Y12C	Blythe	87.59	55	P	P	11 03 30.2	+1.1
	baz=255						
EPYK	Eagle Plains	87.64	20	P	P	11 03 29.3	+0.5
	baz=236						
NEE2	Needles Airpor	87.77	54	P	P	11 03 31.0	+1.0
	baz=255						
SHPR	Sheep Range	87.79	52	eP	P	11 03 31.6	+1.3
	comp=Z,15nm,1.6s						
R11A	Troy Canyon, C	87.95	50	eP	P	11 03 31.9	+0.9
	comp=Z,5.5nm,1.2s						
R11A	Troy Canyon, C	87.95	50	P	P	11 03 31.7	+0.7
	baz=255						
PDMCI	Parker Dam,Lak	88.03	55	P	P	11 03 32.1	+0.9
	baz=256						
W13A	Hualapai Mount	88.44	54	eP	P	11 03 34.2	+0.7
	comp=Z,14nm,1.4s						
BMO	Blue Mountains	88.51	44	eP	P	11 03 33.4	-0.1
	comp=Z,4.3nm,1.1s						
BMO	Blue Mountains	88.51	44	eP	P	11 03 33.4	-0.1
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
214A	Organ Pipe Nat	88.55	57	P	P	11 03 35.0	+1.2
	baz=256						
ELK	Elko	88.84	48	eP	P	11 03 35.9	+0.7
	comp=Z,25nm,1.9s						
ELK	Elko	88.84	48	eP	P	11 03 35.9	+0.7
ELK				pmax	pmax		
	comp=Z,25nm,1.9s						
Y14A	Wickenburg	88.86	55	eP	P	11 03 35.9	+0.6
	comp=Z,6.0nm,1.3s						
F10A	Beach Ranch, E	88.89	43	eP	P	11 03 35.4	+0.2
	comp=Z,6.8nm,1.1s						
WMQ	Urumqi	88.95	315	eP	P	11 03 34.6	-0.9
WMQ				SKS	SKSac	11 14 06.9	+3.8
WMQ				SS	SS	11 20 12.4	-2.7
WMQ				pmax	pmax		
	comp=Z,25nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,310nm,6.5s						
WMQ				LR	LR		
	comp=Z,600nm,22.7s						
WMQ				LR	LR		
	comp=Z,980nm,16.7s						
WMQ				LR	LR		
	comp=Z,880nm,27.3s						
PSUT	Pine Spring	89.31	51	eP	P	11 03 37.9	+0.4
	comp=Z,5.8nm,1.0s						
LCMT	Little Creek M	89.41	52	eP	P	11 03 38.4	+0.5
	comp=Z,8.2nm,1.1s						
CCUT	Cedar City	89.45	52	eP	P	11 03 39.0	+0.8
	comp=Z,8.7nm,1.0s						
SZCU	Shurtz Canyon	89.67	52	eP	P	11 03 39.9	+0.7
	comp=Z,8.8nm,1.0s						
KNB	Kanab	89.74	52	eP	P	11 03 40.6	+1.1
	comp=Z,31nm,1.5s						
KNB	Kanab	89.74	52	eP	P	11 03 40.6	+1.1
KNB				pmax	pmax		
	comp=Z,31nm,1.5s						
HLID	Hailey	90.16	46	eP	P	11 03 42.3	+1.0
	comp=Z,7.7nm,1.1s						
HLID	Hailey	90.16	46	P	P	11 03 42.6	+1.3
	baz=255						
X16A	Lo Mia Camp, P	90.23	55	eP	P	11 03 42.9	+1.0
	comp=Z,4.2nm,0.9s						
PKCU	Pink Cliffs	90.23	52	eP	P	11 03 43.5	+1.6
	comp=Z,20nm,1.3s						
TUC	Tucson	90.30	57	eP	P	11 03 42.9	+0.8
	comp=Z,3.8nm,1.0s						
TUC	Tucson	90.30	57	eP	P	11 03 42.9	+0.8
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TUC	Tucson	90.30	57	P	P	11 03 42.9	+0.8
	baz=258						
TCRU	Three Creeks R	90.40	51	eP	P	11 03 44.4	+1.8
	comp=Z,9.3nm,0.8s						
MTPU	Mount Pierson	90.47	51	eP	P	11 03 44.6	+1.6
	comp=Z,8.7nm,1.1s						
DUG	Dugway, Tooele	90.50	49	eP	P	11 03 43.8	+0.9
	comp=Z,10.0nm,1.4s						
DUG	Dugway, Tooele	90.50	49	eP	P	11 03 43.8	+0.9
DUG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
DUG	Dugway, Tooele	90.50	49	P	P	11 03 43.8	+0.9
	baz=256						
BGU	Big Grassy Mou	90.51	48	eP	P	11 03 43.6	+0.6
	comp=Z,6.0nm,1.0s						
WUAZ	Wupatki	90.53	54	eP	P	11 03 44.0	+0.8
	comp=Z,6.8nm,1.0s						
WUAZ	Wupatki	90.53	54	P	P	11 03 44.5	+1.3
	baz=257						
MSU	Marysvale	90.58	51	eP	P	11 03 44.4	+0.9
MSU	Marysvale	90.58	51	eP	P	11 03 44.4	+0.9
DGZ	Jazzator, Alta	90.74	321d	iP	P	11 03 43.3	-0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HVU	Hansel Valley	90.90	48	eP	P	11 03 45.6	+0.9
	comp=Z,9.9nm,1.0s						
HVU	Hansel Valley	90.90	48	eP	P	11 03 45.6	+0.9
HVU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NLU	North Lily Min	90.99	50	eP	P	11 03 46.6	+1.3
	comp=Z,6.9nm,1.0s						
MPU	Maple Canyon	91.33	50	eP	P	11 03 48.4	+1.5
	comp=Z,15nm,1.5s						
CTU	Camp Tracy	91.40	49	eP	P	11 03 47.9	+0.7
	comp=Z,5.6nm,1.0s						
Q16A	Castle Valley	91.44	51	eP	P	11 03 48.5	+1.1
	comp=Z,8.1nm,1.1s						
TMUT	Trail Mountain	91.50	50	eP	P	11 03 48.8	+1.1
	comp=Z,6.1nm,1.1s						
MCMT	McKenzie Canyo	91.57	45	eP	P	11 03 47.9	0.0
JLU	Jordanelle	91.60	49	eP	P	11 03 48.5	+0.4
	comp=Z,9.1nm,1.2s						
DLMT	Dillon	91.86	44	eP	P	11 03 49.5	+0.4
	comp=Z,8.4nm,0.9s						
SYO	Syowa Base	91.95	197⇑	eP	P	11 03 47.0	-1.9
SYO	Syowa Base	91.95	197⇑	ePcP	PcP	11 03 50.6	+0.9
LRM	Limekiln Ridge	92.07	44	eP	P	11 03 50.7	+0.5
FXWY	Fox Creek	92.57	46	eP	P	11 03 53.2	+0.6
	comp=Z,3.3nm,0.9s						
BOZ	Bozeman (W)	92.58	44	eP	P	11 03 53.5	+1.0
	comp=Z,5.0nm,0.9s						
BOZ	Bozeman (W)	92.58	44	P	P	11 03 53.5	+1.0
BOZ	Bozeman (W)	92.58	44	P	P	11 03 53.5	+1.0
	baz=257						
IMW	Indian Meadow	92.69	46	eP	P	11 03 54.4	+1.2
	comp=Z,3.7nm,1.1s						
HRY	Holter Researc	92.69	43	eP	P	11 03 54.0	+1.1
H17A	Grant Village	93.05	46	P	P	11 03 56.3	+1.5
	baz=258						
MK01	Makanchi Array	93.36	317	eP	P	11 03 54.6	-1.2
MK31	Makanchi Array	93.37	317	eP	P	11 03 54.8	-1.1
MK32	Makanchi Array	93.37	317	eP	P	11 03 54.5	-1.4
MKAR	Makanchi Array	93.37	317	eP	P	11 03 54.8	-1.1
	comp=Z,35nm,0.8s						
MKAR	Makanchi Array	93.37	317c	eP	P	11 03 54.7	-1.1
MKAR	Makanchi Array	93.37	317	P	P	11 03 54.5	-1.4
	comp=Z,5.1nm,0.8s,baz=93,slow=5.9,SNR=49						
ZAA0	Zalesovo Array	93.39	324	eP	P	11 03 54.0	-1.7
	comp=Z,12nm,1.4s						
ZALV	Zalesovo Beam	93.39	324	eP	P	11 03 53.4	-2.4
ZALV	Zalesovo Beam	93.39	324	eP	P	11 03 53.4	-2.4
ZALV	Zalesovo Beam	93.39	324	P	P	11 03 54.1	-1.7
	comp=Z,3.3nm,0.9s,baz=111,slow=4.4,SNR=14						
ZAA1	Zalesovo Array	93.39	324	eP	P	11 03 54.1	-1.7
BW06	Boulder Array	93.44	47	eP	P	11 03 56.4	-0.2
	comp=Z,14nm,1.8s						
PD31	Pinedale Array	93.44	47	eP	P	11 03 56.9	+0.3
PDAR	Pinedale Array	93.44	47	eP	P	11 03 56.8	+0.2
PDAR	Pinedale Array	93.44	47	P	P	11 03 57.0	+0.3
	comp=Z,1.6nm,0.8s,baz=233,slow=2.4,SNR=13						
PDAR				LR	LR	11 43 06.1	
	comp=Z,308nm,18.3s,baz=270,slow=34						
MAKZ	Makanchi	93.58	317	eP	P	11 03 55.7	-1.2
	comp=Z,14nm,1.3s						
MAKZ	Makanchi	93.58	317	eP	P	11 03 55.7	-1.2
MAKZ				pmax	pmax		
	comp=Z,14nm,1.3s						
EGMT	Eagleton	94.35	42	P	P	11 04 01.5	+1.0
	baz=259						
NVS	Novosibirsk	94.49	325	eP	P	11 03 58.0	-2.8
YKA	Yellowknife Ar	94.82	27	P	P	11 04 00.2	-1.9
	comp=Z,0.7nm,0.6s,baz=255,slow=4.7,SNR=15						
YKB5	Yellowknife Ar	94.82	27	eP	P	11 04 00.3	-1.8
LTX	Lajitas	95.76	61	eP	P	11 04 08.0	+0.6
LTX				ePP	PP	11 07 58.8	-0.7
LTX	Lajitas	95.76	61	eP	P	11 04 08.0	+0.6
LTX				e		11 07 58.8	
TXAR	Lajitas Array	95.76	61	P	P	11 04 08.0	+0.6
	comp=Z,0.3nm,0.6s,baz=221,slow=5.8,SNR=5.0						
TXAR				PP	PP	11 07 58.8	-0.7
	comp=Z,2.5nm,1.2s,baz=240,slow=7.1,SNR=9.1						
TXAR				LR	LR	11 43 30.0	
	comp=Z,955nm,18.0s,baz=0.0,slow=33						
NRIK	Noril'sk	95.94	340	LR	LR	11 49 14.3	
	comp=Z,172nm,18.6s,baz=207,slow=37						
KURK	Kurchatov	96.48	320	eP	P	11 04 08.2	-1.7
KURK	Kurchatov	96.48	320⇓	eP	P	11 04 07.9	-2.1
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KURBB	Kurchatov Arra	96.52	320	P	P	11 04 08.2	-1.9
	comp=Z,0.4nm,0.6s,baz=103,slow=5.2,SNR=4.9						
KSH	Kashi	96.62	309	P	P	11 04 13.8	+2.7
KSH				pP	pP	11 04 16.1	-4.3
KSH				pmax	pmax		
	comp=Z,180nm,6.5s						
NVL	N'lazarevskaya	96.65	188	eP	P	11 04 09.3	-1.1
NVL				eS	SKSac	11 14 47.4	+2.5
NVL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARA0	ARCESS Array S	116.15	345	ePKPdf	PKiKP	11 09 21.5	-1.8
ARCES	ARCESS Array B	116.15	345	PKP	PKiKP	11 09 21.5	-1.8
	comp=Z,1.5nm,0.5s,baz=79,slow=1.7,SNR=23						
KIV	Kislovodsk	121.08	315	i PKIKP	PKPdf	11 09 33.1	-0.5
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,268nm,23.0s						
NEY	Neytrino	121.24	314⇓	iPKIKP	PKiKP	11 09 35.8	+1.6
FIA0	FINESS Array S	121.59	339	ePKPdf	PKPdf	11 09 32.8	-1.1
FIA0	FINESS Array S	121.59	339	ePKIKP	PKPdf	11 09 32.8	-1.1
FINES	FINESS Array B	121.59	339	PKP	PKPdf	11 09 32.8	-1.1
	comp=Z,1.8nm,1.0s,baz=324,slow=1.9,SNR=4.5						
BOSA	Boshof	125.23	223	PKP	PKiKP	11 09 42.5	0.0
	comp=Z,1.1nm,0.5s,baz=98,slow=2.4,SNR=2.8						
NB2	NORSAR Subarra	126.52	345	PKPdf	PKPdf	11 09 42.5	-1.0
	comp=Z,1.0nm,0.7s,baz=34,slow=1.9						
NB200	NORSAR Array S	126.52	345	ePKPdf	PKPdf	11 09 42.3	-1.2
NOA	NORSAR Array B	126.52	345	PKP	PKPdf	11 09 42.3	-1.2
	comp=Z,1.4nm,0.8s,baz=33,slow=2.0,SNR=6.0						
AKASG	Malin Array Be	126.69	327c	iPKIKP	PKPdf	11 09 43.4	-0.6
AKASG	Malin Array Be	126.69	327	PKP	PKPdf	11 09 42.7	-1.3
	comp=Z,0.2nm,0.3s,baz=68,slow=2.9,SNR=4.6						
KIEV	Kiev	126.70	327⇓	ePKIKP	PKPdf	11 09 43.3	-0.7
BR101	Keskin Array S	128.82	313	ePKPdf	PKPdf	11 09 48.0	-0.7
BRTR	Keskin Array B	128.82	313	PKP	PKPdf	11 09 48.0	-0.7
	comp=Z,1.2nm,1.0s,baz=143,slow=4.3,SNR=4.5						
OKC	Ostrava-Krasne	132.80	332	AMS	AMS	11 12 30.0	
	comp=Z,700nm,19.9s						
DPC	Dobruska-Polom	133.26	333	AMS	AMS	11 07 20.0	
	comp=Z,700nm,20.2s						
UPC	Upice	133.28	334	AMS	AMS	11 07 20.0	
	comp=Z,700nm,20.0s						
PVCC	Panska Ves	133.89	335	AMS	AMS	11 06 10.0	
	comp=Z,800nm,19.1s						
CLL	Collm	133.92	336	ePKPdf	PKPdf	11 09 57.0	-0.7
CLL				ePP	PP	11 12 27.0	-0.2
CLL				eSS	SS	11 30 12.0	-0.4
CLL				e		11 32 48.0	
CLL				eSSS	SSS	11 35 06.0	
CLL				Lm	MLR	12 15 00.0	
	comp=N,200nm,18.1s						
CLL				Lm	MLR	12 15 00.0	
	comp=E,100nm,20.4s						
CLL				Lm	MLR	12 15 00.0	
	comp=Z,300nm,18.1s						
CLL	Collm	133.92	336	ePKIKP	PKPdf	11 09 56.0	-1.7
CLL				MLR	MLR		
	comp=Z,300nm,18.1s						
PRU	Pruhonice	134.30	334	AMS	AMS	11 06 50.0	
	comp=Z,900nm,20.3s						

TREC	**Trest**	**134.41**	**333**	AMS	AMS	11 15 00.0	
	comp=Z,700nm,19.4s						
KHC	**Kasperske Hory**	**135.36**	**334**	AMS	AMS	11 10 00.0	
	comp=Z,600nm,19.1s						
GERES	**GERESS Array B**	**135.53**	**334**	PKP	**PKPdf**	**11 10 01.4**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=22,slow=1.4,SNR=5.3						
KEST	**Kesra**	**147.25**	**323**	PKPbc	**PKPbc**	**11 10 24.5**	**-0.1**
	comp=Z,8.8nm,0.8s,baz=328,slow=5.9,SNR=9.2						
ES19	**SONSECA Array**	**149.83**	**344**	*e*PKPbc	**PKPbc**	**11 10 30.9**	**-0.2**
ESDC	**Sonseca Array**	**149.87**	**344**	PKPbc	**PKPbc**	**11 10 30.8**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=17,slow=2.2,SNR=10						
TORD	**Torodi Ar. Bea**	**164.21**	**280**	PKP	**PKPdf**	**11 10 45.1**	**0.0**
	comp=Z,0.5nm,0.8s,baz=324,slow=0.4,SNR=4.7						
TORD				PKPab	**PKPab**	**11 11 38.7**	**-0.2**
	comp=Z,1.6nm,1.1s,baz=28,slow=6.7,SNR=5.3						
TOA1	**Torodi Ar. Sit**	**164.21**	**280**	*e*PKPdf	**PKPdf**	**11 10 45.1**	**0.0**
TOA1				*e*PKPab	**PKPab**	**11 11 38.7**	**-0.3**

NIED ***18*** *10:59:00, 32.°20N×138.°60E, h8km, Mw4.6 Best double couple: M0 9.29000×10¹⁵ NP1:φs58.00000°, δ32.00000°, λ6.00000°. NP2:φs323.00000°, δ87.00000°, λ122.00000°.*

IDC ***18*** *10:59:34.2±0.4, 32.°09N×138.°79E, h0km, mb4.3/30, mb1 4.4/37, mb1mx4.4/51, mbtmp4.3/37, ML3.7/7, MS4.0/7, Ms1 4.0/7, ms1mx3.6/48, Error ellipse: s-maj=12.4km s-min=10.0km az=100.0*

ISCJB ***18*** *10:59:34.7±0.8, 32.°16N±0.°02×138.°66E±0.°02, h11km±5km, mb4.5/98, MS4.1/2, Error ellipse: s-maj=3.1km s-min=3.1km az=148.9*

JMA ***18*** *10:59:34.6±0.1, 32.°10N×138.°63E, h24km, M4.8*

JMA Felt I J1.

MOS ***18*** *10:59:37.1±1.0, 32.°12N×138.°63E, h28km, mb4.7/43, Error ellipse: s-maj=9.0km s-min=5.0km az=106.8*

NEIC ***18*** *10:59:39.6±0.2, 32.°10N×138.°72E, h35km, mb4.6/49, Error ellipse: s-maj=4.0km s-min=3.6km az=140.0*

NEIC Recorded [1 JMA] in Shizuoka and Tokyo.

ISC 18 10:59:34.8±1.3**, 32.°15N**±0.°04×**138.°70E**±0.°04**, h1**km±8km**, n256, σ1.ˢ55**/294**, mb4.6**/98**, 9C-3D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**0.96**	**71**	⇑P	**Pg**	**10 59 53.2**	**0.0**
JAOM				S	**Sg**	**11 00 06.3**	**+0.7**
JHCJ	**Hachijojimakas**	**1.31**	**45**	P	**Pg**	**10 59 59.1**	**-0.8**
JHCJ				S	**Sg**	**11 00 16.4**	**-0.5**
JHJ	**Hachijo jima 2**	**1.33**	**43**	Pn	**Pg**	**10 59 59.4**	**-1.0**
	4μm,0.3s,baz=80,slow=6.4,SNR=258						
JHJ				Sn	**Sg**	**11 00 18.1**	**+0.4**
	5μm,0.3s,baz=115,slow=23,SNR=32						
JHJ2	**Mitsune**	**1.35**	**44**	*e*Pn	**Pg**	**10 59 59.5**	**-1.1**
JHJ2				*e*Sn	**Sg**	**11 00 17.9**	**-0.3**
JHJ2	**Mitsune**	**1.35**	**44**	P	**Pg**	**10 59 59.2**	**-1.5**
JHJ2				S	**Sg**	**11 00 17.1**	**-1.0**
TK01	**Tokai 1**	**1.86**	**330**	P	**Pn**	**11 00 05.7**	**-1.9**
TK01				S	**Sn**	**11 00 28.7**	**-2.9**
TK02	**Tokai 2**	**1.96**	**336**	P	**Pn**	**11 00 07.5**	**-1.5**
TK02				S	**Sn**	**11 00 32.0**	**-2.2**
TTO3	**TONANKAI O.B.S**	**2.03**	**328**	P	**Pn**	**11 00 08.7**	**-1.3**
TTO3				S	**Sn**	**11 00 34.0**	**-2.0**
TTO4	**TONANKAI O.B.S**	**2.09**	**333**	⇑P	**Pn**	**11 00 09.2**	**-1.6**
TTO4				S	**Sn**	**11 00 35.1**	**-2.3**
TK03	**Tokai 3**	**2.10**	**343**	P	**Pn**	**11 00 09.9**	**-1.2**
TK03				S	**Sn**	**11 00 35.8**	**-2.0**
TTO2	**TONANKAI O.B.S**	**2.11**	**319**	⇑P	**Pn**	**11 00 09.7**	**-1.4**
TTO2				S	**Sn**	**11 00 35.6**	**-2.3**
TTO1	**TONANKAI O.B.S**	**2.18**	**313**	⇑P	**Pn**	**11 00 10.6**	**-1.4**
TTO1				S	**Sn**	**11 00 36.9**	**-2.6**
JIE	**Ise**	**2.79**	**324**	P	**Pn**	**11 00 18.8**	**-1.8**
JIE				S	**Sn**	**11 00 51.1**	**-3.9**
JFNN	**Fujinakano**	**3.04**	**360**	P	**Pn**	**11 00 23.3**	**-0.8**
JFNN				S	**Sn**	**11 00 59.4**	**-1.7**
JTNC	**Tanabenakahech**	**3.08**	**304**	P	**Pn**	**11 00 23.6**	**-1.1**
JOD2	**Odawara 2**	**3.12**	**6**	P	**Pn**	**11 00 25.8**	**+0.5**
BSO1	**Boso 1**	**3.14**	**37**	P	**Pn**	**11 00 23.8**	**-1.2**
JWY	**Kouya**	**3.32**	**309**	⇑P	**Pn**	**11 00 26.7**	**-1.3**
JWY				*e*S	**Sn**	**11 01 02.8**	**-5.4**
JYN	**Shimob**	**3.34**	**358**	⇓P	**Pn**	**11 00 27.9**	**-0.4**
JYN				*e*S	**Sn**	**11 01 06.6**	**-2.1**
INU	**Inuyama**	**3.48**	**337**	*e*Pn	**Pn**	**11 00 28.8**	**-1.4**
JYTA	**Yamagatataniai**	**3.80**	**335**	P	**Pn**	**11 00 33.4**	**-1.2**
JYTA				S	**Sn**	**11 01 16.7**	**-3.3**
JRY	**Ryogami san**	**3.86**	**2**	P	**Pn**	**11 00 35.7**	**+0.3**
JAI	**Aioi**	**3.93**	**296**	P	**Pn**	**11 00 34.9**	**-1.4**
JAI				S	**Sn**	**11 01 17.8**	**-5.2**
JWT	**Wachi**	**4.16**	**320**	⇑P	**Pn**	**11 00 38.8**	**-0.7**
JWT				S	**Sn**	**11 01 24.9**	**-3.9**
JMN	**Monobe**	**4.35**	**293**	P	**Pn**	**11 00 40.7**	**-1.4**
JMN				*e*S	**Sn**	**11 01 28.6**	**-4.8**
MJAR	**Matsushiro Arr**	**4.40**	**355**	Pn	**Pn**	**11 00 43.5**	**+0.7**
	3.4nm,0.3s,baz=177,slow=14,SNR=170						
MJAR				Sn	**Sn**	**11 01 33.4**	**-1.4**
	3.8nm,0.3s,baz=119,slow=12,SNR=6.1						
MJAR				LR	LR	11 02 36.3	
	comp=Z,1μm,19.0s,baz=180,slow=41						
MAJO	**Matsushiro**	**4.40**	**355**	*e*Pn	**Pn**	**11 00 43.4**	**+0.6**
MAJO				*e*Sn	**Sn**	**11 01 33.4**	**-1.4**
MAJO	**Matsushiro**	**4.40**	**355**	*e*P	**Pn**	**11 00 43.4**	**+0.6**
MAJO				*e*		11 01 33.4	
MJB9	**Matsu-Tunnel**	**4.41**	**355**	*e*Pn	**Pn**	**11 00 43.8**	**+0.9**
CBIJ	**Chichi jima**	**5.88**	**148**	*e*Pn	**Pn**	**11 01 01.3**	**-1.9**
CBIJ				*e*Sn	**Sn**	**11 02 10.9**	**-0.3**
JCJ	**Chichijima**	**5.88**	**148**	Pn	**Pn**	**11 01 01.3**	**-1.9**
	5.0nm,0.3s,baz=294,slow=20,SNR=3.1						
JCJ				Sn	**Sn**	**11 02 10.9**	**-0.4**
	baz=180,slow=20,SNR=1.5						
JNU	**Nakatsue**	**6.67**	**280**	*e*Pn	**Pn**	**11 01 15.2**	**+1.2**
JNU				*e*Sn	**Sn**	**11 02 27.9**	**-2.8**
JNU	**Nakatsue**	**6.67**	**280**	Pn	**Pn**	**11 01 13.5**	**-0.4**
	1.7nm,0.3s,baz=139,slow=5.2,SNR=16						
JNU				Sn	**Sn**	**11 02 27.9**	**-2.8**
	0.5nm,0.3s,baz=236,slow=8.4,SNR=1.9						
JNU				LR	LR	11 03 44.0	
	comp=Z,1μm,21.4s,baz=151,slow=37						
TJN	**Taejon**	**10.28**	**297**	*e*P	**Pn**	**11 02 02.4**	**-1.1**
KSRS	**Korea Array**	**10.31**	**304**	Pn	**Pn**	**11 02 03.8**	**-0.2**
	0.6nm,0.3s,baz=114,slow=14,SNR=11						
KSRS				Sn	Sn	11 03 51.1	-9.1
	0.1nm,0.3s,baz=206,slow=36,SNR=2.4						
KSRS				LR	LR	11 06 09.7	
	comp=Z,363nm,18.1s,baz=118,slow=38						
KS15	**Wonju Array Si**	**10.34**	**304**	*e*Pn	**Pn**	**11 02 03.8**	**-0.5**
KSAR	**Wonju Array Be**	**10.34**	**304**	Pn	**Pn**	**11 02 03.8**	**-0.5**
KSAR				Sn	Sn	11 03 51.1	-10
KSAR	**Wonju Array Be**	**10.34**	**304**	P	**Pn**	**11 02 03.8**	**-0.5**
ERM	**Erimo**	**10.47**	**19**	*e*Pn	**Pn**	**11 02 06.7**	**+0.7**
ERM	**Erimo**	**10.47**	**19**	*e*P	**Pn**	**11 02 06.7**	**+0.7**
JOW	**Kunigami**	**10.51**	**242**	Pn	**Pn**	**11 02 07.7**	**+1.0**
	0.9nm,0.3s,baz=100,slow=17,SNR=16						
ASAJ	**Asahikawa**	**12.33**	**13**	Pn	**Pn**	**11 02 29.9**	**-1.6**
	0.6nm,0.3s,baz=222,slow=11,SNR=5.1						
ASAJ				LR	LR	11 08 36.1	
	comp=Z,568nm,19.0s,baz=162,slow=44						
USRK	**Ussuriysk Ar.**	**13.13**	**338**	Pn	**Pn**	**11 02 47.0**	**+4.5**
	0.1nm,0.3s,baz=156,slow=11,SNR=4.1						
USRK				LR	LR	11 06 54.2	
	comp=Z,202nm,21.6s,baz=138,slow=33						
YSS	**Yuzh-Sakhalins**	**15.11**	**11**	*e*Pn	**Pn**	**11 03 07.2**	**-2.2**
	37nm,1.0s						
YSS	**Yuzh-Sakhalins**	**15.11**	**11**	⇑*e*P	**Pn**	**11 03 05.7**	**-3.7**
YSS				MLR	MLR		
	comp=Z,800nm,14.0s						
YSS				MLR	MLR		
	comp=N,700nm,16.0s						
YSS				MLR	MLR		
	comp=E,1μm,15.0s						
DL2	**Dalian**	**15.44**	**301**	P	**P**	**11 03 19.9**	**+1.4**
DL2				*e*S	**S**	**11 06 17.5**	**-4.3**
DL2				pmax	pmax		
	comp=Z,55nm,0.9s						
DL2				LR	LR		
	comp=N,530nm,16.0s						
DL2				LR	LR		
	comp=E,690nm,18.6s						
DL2				LR	LR		
	comp=Z,540nm,19.5s						
CN2	**Changchun**	**15.61**	**322**	*e*P	**Pn**	**11 03 18.0**	**+2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2	**Nanjing**	**16.82**	**275**	*e*P	**Pn**	**11 03 31.3**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YHNB	**Yeheng**	**16.95**	**248**	*e*Pn	**Pn**	**11 03 32.6**	**-0.8**
	comp=Z,16nm,0.9s						
UGL	**Uglegorsk**	**17.10**	**8**	P	**P**	**11 03 38.8**	**+1.9**
UGL				*e*S	**Sn**	**11 06 48.5**	**+2.8**
UGL				pmax	pmax		
	comp=Z,46nm,1.0s						
UGL				smax	smax		
	comp=N,34nm,1.3s						
KLR	**Kul'dur**	**17.84**	**345**	*c i*P	**Pn**	**11 03 43.0**	**-1.3**
KLR	**Kul'dur**	**17.84**	**345**	P	**Pn**	**11 03 43.2**	**-1.2**
	comp=N,0.5nm,0.3s,baz=147,slow=9.7,SNR=25						
TIA	**Tai'an**	**18.30**	**289**	P	**P**	**11 03 52.8**	**+2.6**
TIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR	**Gornyy**	**18.68**	**355**	*e*P	**Pn**	**11 03 55.8**	**+1.2**
GRNR				pmax	pmax		
	comp=Z,31nm,1.0s						
TYV	**Tymovskoe**	**18.93**	**8**	*e*P	**Pn**	**11 03 59.8**	**+2.3**
TYV				pmax	pmax		
	comp=Z,16nm,1.6s						
TYV				pmax	pmax		
	comp=Z,200nm,5.4s						
BJT	**Baijiatuau**	**19.80**	**300**	*e*P	**P**	**11 04 07.3**	**+0.8**
	comp=Z,49nm,1.0s						
BJT	**Baijiatuau**	**19.80**	**300**	*e*P	**P**	**11 04 07.4**	**+0.8**
BJT				pmax	pmax		
	comp=Z,49nm,1.0s						
BJI	**Beijing**	**19.80**	**300**	⇓*i*P	**Pn**	**11 04 09.3**	**+1.2**
BJI				S	**Sn**	**11 07 55.9**	**+4.9**
BJI				pmax	pmax		
	comp=Z,34nm,1.0s						
BJI				pmax	pmax		
	comp=Z,140nm,3.1s						
BJI				LR	LR		
	comp=N,600nm,18.6s						
BJI				LR	LR		
	comp=E,390nm,15.7s						
BJI				LR	LR		
	comp=Z,230nm,18.6s						
NKL	**Nikolayevsk**	**21.04**	**3**	*e*P	**P**	**11 04 21.0**	**+1.1**
NKL				pmax	pmax		
	comp=Z,20nm,1.0s						
HIA	**Hailar**	**22.23**	**326**	*e*P	**P**	**11 04 34.1**	**+1.2**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZEA	**Zeya**	**23.09**	**343**	*e*P	**P**	**11 04 42.6**	**+0.7**
ZEA				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC	**Hu-ho-hao-te**	**23.40**	**299**	*e*P	**P**	**11 04 46.3**	**+0.9**
HHC				S	**S**	**11 08 54.3**	**-5.3**
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
HHC				LR	LR		
	comp=N,660nm,17.3s						
HHC				LR	LR		
	comp=E,310nm,13.8s						
HHC				LR	LR		
	comp=Z,1μm,14.7s						
BTO	**Baotou**	**24.50**	**298**	*e*P	**P**	**11 04 55.4**	**-0.4**
XAN	**Xi'an**	**24.98**	**282**	P	**P**	**11 05 00.8**	**+0.7**
XAN				pP		11 05 05.1	
XAN				S	**S**	**11 09 26.6**	**+1.8**
XAN				pmax	pmax		
	comp=Z,24nm,1.0s						
XAN				pmax	pmax		
	comp=Z,170nm,4.7s						
XAN				LR	LR		
	comp=N,270nm,12.3s						
XAN				LR	LR		
	comp=E,250nm,15.2s						
XAN				LR	LR		
	comp=Z,180nm,10.3s						
XAN	**Xi'an**	**24.98**	**282**	*e*P	**P**	**11 05 00.7**	**+0.6**
	comp=Z,24nm,1.0s						
ENH	**Enshi**	**25.02**	**273**	*e*P	**P**	**11 05 01.3**	**+0.8**
	comp=Z,28nm,0.8s						
PETK	**Petropavlovsk-**	**25.04**	**28**	P	**P**	**11 05 00.5**	**+0.1**
	comp=Z,5.6nm,0.9s,baz=305,slow=5.1,SNR=3.8						
PEA1	**Petropavlovsk-**	**25.04**	**28**	*e*P	**P**	**11 05 00.5**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**28.12**	**109**	T	T	11 34 49.5	
	baz=302,slow=75,SNR=178						
H11N1	**WAKE ISLAND Hy**	**28.13**	**109**	T	T	11 35 01.4	
	baz=302,slow=75,SNR=142						
H11N3	**WAKE ISLAND Hy**	**28.14**	**109**	T	T	11 34 59.2	
	baz=302,slow=75,SNR=221						
MA2	**Magadan**	**28.60**	**13**	*e*P	**P**	**11 05 32.6**	**+0.3**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MA2	**Magadan**	**28.60**	**13**	P	**P**	**11 05 33.4**	**+1.0**
	comp=Z,2.8nm,0.5s,baz=330,slow=20,SNR=2.7						
H11S3	**WAKE ISLAND Hy**	**28.62**	**112**	T	T	11 35 33.8	
	baz=304,slow=75,SNR=904						
H11S1	**WAKE ISLAND Hy**	**28.62**	**112**	T	T	11 35 33.9	
	baz=304,slow=75,SNR=1449						
ULN	**Ulaanbaatar**	**28.62**	**312**	*e*P	**P**	**11 05 34.0**	**+1.1**
	comp=Z,8.8nm,1.0s						
ULN	**Ulaanbaatar**	**28.62**	**312**	*e*P	**P**	**11 05 34.0**	**+1.1**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**28.64**	**112**	T	T	11 35 34.2	
	baz=304,slow=75,SNR=552						
LZH	**Lanzhou**	**29.02**	**287**	*e*P	**P**	**11 05 36.4**	**-0.2**
LZH				pP		11 05 42.8	
LZH				sP		11 05 46.4	
LZH				PP	**PnPn**	**11 06 23.0**	**-5.1**
LZH				*e*S	**S**	**11 10 25.4**	**-3.6**
LZH				sS		11 10 35.6	
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,180nm,4.8s						
LZH				LR	LR		
	comp=N,520nm,15.7s						
LZH				LR	LR		
	comp=E,530nm,15.2s						
LZH				LR	LR		
	comp=Z,440nm,16.6s						
SONA1	**Songino Array**	**29.02**	**312**	*e*P	**P**	**11 05 37.5**	**+1.1**
SONA0	**Songino Array**	**29.03**	**312**	*e*P	**P**	**11 05 38.0**	**+1.5**
SONM	**Songino Array**	**29.03**	**312**	P	**P**	**11 05 38.0**	**+1.5**
SONM	**Songino Array**	**29.03**	**312**	P	**P**	**11 05 38.0**	**+1.5**
	comp=Z,3.5nm,0.9s,baz=117,slow=8.2,SNR=12						
CD2	**Chengdu**	**29.73**	**277**	P	**P**	**11 05 42.9**	**+0.1**
CD2				pP		11 05 46.0	
CD2				PP	**PP**	**11 06 53.8**	**+4.1**
CD2				S	**S**	**11 10 39.4**	**-0.5**
CD2				sS		11 10 44.6	
CD2				SS	**SS**	**11 12 53.0**	**+7.2**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
CD2				LR	LR		
	comp=N,1μm,16.2s						
CD2				LR	LR		
	comp=E,1μm,17.2s						
CD2				LR	LR		
	comp=Z,1μm,20.1s						
SEY	**Seymchan**	**32.01**	**12**	*e*P	**P**	**11 06 03.2**	**+0.7**
SEY	**Seymchan**	**32.01**	**12**	P	**P**	**11 06 03.5**	**+1.0**
	comp=Z,1.8nm,1.0s,baz=248,slow=18,SNR=2.9						
TLY	**Talaya**	**32.14**	**318**	*e*P	**P**	**11 06 05.7**	**+1.9**
TLY				pmax	pmax		
	comp=Z,24nm,2.0s						
TLY				MLR	MLR		
	comp=Z,573nm,15.0s						
GTA	**Gaotai**	**32.18**	**294**	*e*P	**P**	**11 06 04.8**	**+0.4**
GTA				pP		11 06 08.9	
GTA				sP		11 06 11.9	
GTA				S	**S**	**11 11 14.9**	**-3.3**
GTA				sS		11 11 22.3	
GTA				SS	**SnSn**	**11 13 07.8**	**-0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,7.3s						
GTA				LR	LR		
	comp=N,240nm,15.9s						
GTA				LR	LR		
	comp=E,310nm,18.4s						
GTA				LR	LR		
	comp=Z,290nm,18.1s						
KMI	**Kunming**	**32.22**	**267**	P	**P**	**11 06 06.6**	**+1.6**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SKNT	**Sakolnakorn**	**34.82**	**253**	P	**P**	**11 06 29.3**	**+1.8**
	comp=Z,3.1nm,2.1s,comp=Z,705nm						
CHAI	**Chaiyaphum**	**37.01**	**253**	P	**P**	**11 06 47.7**	**+1.4**
	comp=Z,3.4nm,0.8s						
SRAK	**Srakaew**	**38.01**	**250**	P	**P**	**11 06 53.0**	**-1.7**
	comp=Z,23nm,1.0s						
CMMT	**Chiang Mai**	**38.04**	**259**	P	**P**	**11 06 56.0**	**+0.9**
	comp=Z,13nm,1.3s						
CHTO	**Chiang Mai**	**38.05**	**259**	*e*P	**P**	**11 06 55.8**	**+0.7**
	comp=Z,9.3nm,0.8s						
CHTO	**Chiang Mai**	**38.05**	**259**	*e*P	**P**	**11 06 55.8**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	**Chiang Mai**	**38.05**	**259**	P	**P**	**11 06 56.1**	**+1.0**
	comp=Z,58nm,0.9s						
CM31	**Chiang Mai Arr**	**38.22**	**259**	*e*P	**P**	**11 06 57.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**38.22**	**259**	P	**P**	**11 06 57.6**	**+1.1**
	comp=Z,4.1nm,0.6s,baz=51,slow=7.4,SNR=24						
CM01	**Chiang Mai Arr**	**38.22**	**259**	*e*P	**P**	**11 06 56.4**	**-0.1**
BILL	**Bilibino**	**39.33**	**16**	*e*P	**P**	**11 07 07.4**	**+2.2**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ	**Urumqi**	**41.26**	**301**	*e*P	**P**	**11 07 23.5**	**+1.9**
WMQ				sP		11 07 32.3	
WMQ				pmax	pmax		
	comp=Z,22nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.7s						
WMQ				LR	LR		
	comp=N,670nm,20.9s						
WMQ				LR	LR		
	comp=E,980nm,23.9s						
WMQ				LR	LR		
	comp=Z,720nm,23.9s						
DGZ	**Jazzator, Alta**	**41.63**	**310**	⇓*i*P	**P**	**11 07 25.0**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZALV	**Zalesovo Beam**	**43.72**	**316**	*e*P	**P**	**11 07 40.9**	**-0.5**
ZALV	**Zalesovo Beam**	**43.72**	**316**	P	**P**	**11 07 41.1**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=111,slow=8.1,SNR=4.9						
ZALV				PcP	**PcP**	**11 09 27.5**	**-0.9**
	comp=Z,2.4nm,0.8s,baz=106,slow=3.1,SNR=3.3						
ZAA1	**Zalesovo Array**	**43.72**	**316**	*e*P	**P**	**11 07 41.1**	**-0.4**
ZAA1				*e*PcP	**PcP**	**11 09 27.5**	**-0.9**
BATI	**Baumata**	**44.50**	**201**	P	**P**	**11 07 47.4**	**-0.7**
	comp=Z,9.0nm,0.5s,baz=76,slow=4.2,SNR=3.0						
NVS	**Novosibirsk**	**44.75**	**317**	*e*P	**P**	**11 07 49.4**	**-0.3**
MK01	**Makanchi Array**	**44.98**	**306**	*e*P	**P**	**11 07 51.8**	**+0.1**
MK31	**Makanchi Array**	**44.99**	**306**	*e*P	**P**	**11 07 51.9**	**+0.1**
MK31	**Makanchi Array**	**44.99**	**306**	*e*P	**P**	**11 07 51.9**	**+0.1**
MK32	**Makanchi Array**	**44.99**	**306**	*e*P	**P**	**11 07 52.1**	**+0.4**
MK32				*e*PcP	**PcP**	**11 09 33.1**	**+0.2**
MKAR	**Makanchi Array**	**44.99**	**306**	*e*P	**P**	**11 07 52.0**	**+0.2**
	comp=Z,26nm,0.8s						
MKAR				PcP	**PcP**	**11 09 33.1**	**+0.2**
MKAR	**Makanchi Array**	**44.99**	**306**	P	**P**	**11 07 52.1**	**+0.4**
	comp=Z,5.7nm,0.9s,baz=91,slow=9.9,SNR=26						
MKAR				PcP	**PcP**	**11 09 33.1**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=84,slow=5.0,SNR=3.8						
MAKZ	**Makanchi**	**45.20**	**306**	*e*P	**P**	**11 07 54.0**	**+0.6**
	comp=Z,3.8nm,0.8s						
MAKZ	**Makanchi**	**45.20**	**306**	*e*P	**P**	**11 07 54.0**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MTN	**Manton Dam**	**45.32**	**190**	*e*P	**P**	**11 07 53.8**	**-0.8**
	comp=Z,15nm,0.9s						
JIRN	**Jiri**	**45.37**	**279**	*e*P	**P**	**11 07 55.9**	**+0.5**
	comp=Z,21nm,0.8s						
GUN	**Gumba**	**45.55**	**279**	*e*P	**P**	**11 07 57.3**	**+0.5**
	comp=Z,20nm,0.8s						
PKI	**Pulchoki**	**46.05**	**279**	*e*P	**P**	**11 08 00.5**	**-0.3**
DMN	**Daman**	**46.30**	**279**	*e*P	**P**	**11 08 02.4**	**-0.2**
NRIK	**Noril'sk**	**46.84**	**338**	P	**P**	**11 08 06.4**	**+0.4**
	comp=Z,1.7nm,0.3s,baz=129,slow=7.4,SNR=3.7						
DANN	**Dangsing**	**47.18**	**280**	*e*P	**P**	**11 08 10.0**	**+0.4**
	comp=Z,28nm,0.7s						
PDGK	**Podgornoye**	**47.24**	**301**	P	**P**	**11 08 09.5**	**-0.1**
PDGK				pmax	pmax		
	comp=Z,15nm,0.9s						
KURK	**Kurchatov**	**47.33**	**311**	*e*P	**P**	**11 08 09.9**	**-0.2**
	comp=Z,11nm,0.9s						
KURK				*e*P	**P**	**11 08 10.6**	**+0.6**
KURK	**Kurchatov**	**47.33**	**311**	*c i*P	**P**	**11 08 09.8**	**-0.2**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.39**	**311**	P	**P**	**11 08 10.6**	**+0.1**
	comp=Z,5.5nm,0.9s,baz=92,slow=7.8,SNR=30						
KOLN	**Koldanda**	**47.50**	**280**	*e*P	**P**	**11 08 12.1**	**+0.1**
	comp=Z,16nm,0.8s						
PYUN	**Piuthan**	**47.91**	**280**	*e*P	**P**	**11 08 15.4**	**+0.3**
	comp=Z,38nm,0.8s						
NRN	**Naryn**	**50.08**	**299**	*e*P	**P**	**11 08 32.2**	**+0.5**
	comp=Z,3.9nm,1.0s						
NRN	**Naryn**	**50.08**	**299**	*e*P	**P**	**11 08 32.3**	**+0.5**
NRN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH	**Kashi**	**50.48**	**297**	P	**P**	**11 08 38.6**	**+4.0**
KSH				pP		11 08 42.8	
KSH				PP	**PP**	**11 10 36.3**	**+6.2**
KSH				S	**S**	**11 15 51.6**	**+2.1**
KSH				sS		11 16 01.4	
KSH	**Kashi**	**50.48**	**297**	SS	**SS**	**11 19 26.8**	**+3.7**
KSH				pmax	pmax		
	comp=Z,260nm,4.6s						
KSH				LR	LR		
	comp=N,160nm,4.9s						
KSH				LR	LR		
	comp=E,120nm,4.4s						
KSH				LR	LR		
	comp=Z,1μm,11.4s						
AAK	**Ala-Archa**	**50.96**	**301**	P	**P**	**11 08 38.3**	**0.0**
	comp=Z,3.7nm,0.8s,baz=124,slow=4.2,SNR=10						
FITZ	**Fitzroy Crossi**	**51.50**	**196**	*e*P	**P**	**11 08 41.9**	**-0.3**
	comp=Z,4.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.50**	**196**	P	**P**	**11 08 41.6**	**-0.5**
	comp=Z,3.9nm,0.8s,baz=19,slow=6.9						
OTUK	**Ortayu**	**51.59**	**309**	P	**P**	**11 08 43.0**	**+0.3**
OTUK				pmax	pmax		
	comp=Z,12nm,0.9s						
WRAB	**Tennant Creek**	**51.95**	**185**	*e*P	**P**	**11 08 44.4**	**-1.2**
	comp=Z,6.3nm,0.8s						
WRAB	**Tennant Creek**	**51.95**	**185**	*i* P	**P**	**11 08 44.0**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WB2	**Warramunga Arr**	**51.96**	**185**	*e*P	**P**	**11 08 44.2**	**-1.4**
WB2				*e*P	**P**	**11 08 44.9**	**-0.8**
WR1	**Warramunga Arr**	**51.96**	**185**	*e*P	**P**	**11 08 44.4**	**-1.3**
	comp=Z,8.7nm,0.7s						
WRA	**Warramunga Arr**	**51.96**	**185**	P	**P**	**11 08 44.4**	**-1.3**
	comp=Z,7.0nm,0.8s,baz=0.9,slow=7.6,SNR=64						
SFK	**Sufi-Kurgan**	**52.23**	**298**	P	**P**	**11 08 48.1**	**+0.2**
SFK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KDAK	**Kodiak Island**	**52.26**	**39**	*e*P	**P**	**11 08 47.2**	**-0.2**
	comp=Z,42nm,1.1s						
KDAK	**Kodiak Island**	**52.26**	**39**	*i* P	**P**	**11 08 47.4**	**-0.1**
KDAK	**Kodiak Island**	**52.26**	**39**	P	**P**	**11 08 47.2**	**-0.2**
	comp=Z,12nm,0.7s,baz=331,slow=2.3,SNR=4.5						
ARSB	**Arslanbob**	**52.33**	**300**	*e*P	**P**	**11 08 49.4**	**+0.9**
	comp=Z,9.5nm,1.0s						
KK31	**Karatay Array**	**53.74**	**303**	*e*P	**P**	**11 08 58.7**	**0.0**
KK31	**Karatay Array**	**53.74**	**303**	*e*P	**P**	**11 08 58.7**	**0.0**
KKAR	**Karatay Array**	**53.74**	**303**	*e*P	**P**	**11 08 58.7**	**0.0**
KKAR	**Karatay Array**	**53.74**	**303**	*e*P	**P**	**11 08 58.7**	**0.0**
TOLK	**Toolik Lake Re**	**53.83**	**26**	*e*P	**P**	**11 08 58.8**	**-0.2**
	comp=Z,4.7nm,1.0s						
MDM	**Murphy Dome**	**54.24**	**30**	*e*P	**P**	**11 09 01.9**	**-0.2**
	comp=Z,7.2nm,1.0s						
ILAR	**Eielson Array**	**54.82**	**30**	P	**P**	**11 09 05.8**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=266,slow=5.8,SNR=9.3						
ILB	**Eielson Array**	**54.82**	**30**	*e*P	**P**	**11 09 06.7**	**+0.5**
	comp=Z,3.9nm,1.1s						
GAR	**Garm**	**54.87**	**298**	*e*P	**P**	**11 09 06.0**	**-1.1**
	comp=Z,14nm,0.9s						
GAR	**Garm**	**54.87**	**298**	*e*P	**P**	**11 09 06.0**	**-1.1**
GAR				pmax	pmax		
	comp=Z,14nm,0.9s						
AS01	**Alice Springs**	**55.69**	**185**	*e*P	**P**	**11 09 11.6**	**-1.2**
AS31	**Alice Springs**	**55.69**	**185**	*e*P	**P**	**11 09 11.9**	**-1.0**
	comp=Z,1.1nm,0.6s						
ASAR	**Alice Springs**	**55.69**	**185**	P	**P**	**11 09 11.7**	**-1.3**
	comp=Z,3.2nm,0.8s,baz=3.9,slow=6.0,SNR=27						
CHGR	**Chuyangaron**	**55.83**	**298**	*e*P	**P**	**11 09 13.7**	**-0.3**
	comp=Z,25nm,0.8s						

KBL	Kabul	57.16	293	P	P	11 09 23.9	+0.2
KBL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARU	Arti	58.60	320	P	P	11 09 39.2	+6.1
EPYK	Eagle Plains	58.88	28	eP	P	11 09 36.0	+0.9
	comp=Z,11nm,0.7s						
ABKAR	Akbulak array	59.44	312	eP	P	11 09 39.0	-0.2
INK	Inuvik	59.75	25	eP	P	11 09 41.0	+0.1
	comp=Z,3.2nm,0.8s						
INK	Inuvik	59.75	25	eP	P	11 09 41.0	+0.1
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	Inuvik	59.75	25	P	P	11 09 41.0	+0.1
	comp=Z,1.7nm,0.5s,baz=296,slow=6.3,SNR=7.8						
DZM	Mont Dzumac	60.10	150	P	P	11 09 41.3	-2.6
	comp=Z,6.7nm,1.0s,baz=307,slow=20						
STKA	Stephens Creek	63.74	177	eP	P	11 10 07.0	-1.2
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	63.74	177	eP	P	11 10 07.0	-1.2
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	63.74	177	P	P	11 10 07.0	-1.2
	comp=Z,3.5nm,0.7s,baz=352,slow=6.4,SNR=4.7						
STKA				LR	LR	11 35 17.1	
	comp=Z,196nm,20.8s,baz=13,slow=34						
KBS	Kingsbay	65.08	350	P	P	11 10 16.0	-0.4
KBS				pmax	pmax		
	comp=Z,22nm,0.7s						
KLMR	Klimovskoe	66.70	328	eP	P	11 10 25.9	-1.3
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KLMR	Klimovskoe	66.70	328	eP	P	11 10 25.9	-1.3
KLMR				AMP		11 10 41.5	
	comp=Z,10.0nm,1.4s						
ARA0	ARCESS Array S	67.78	340	eP	P	11 10 33.9	0.0
ARCES	ARCESS Array B	67.78	340	P	P	11 10 33.9	0.0
	comp=Z,1.0nm,0.5s,baz=71,slow=7.8,SNR=7.3						
RES	Resolute Bay	67.87	13	eP	P	11 10 34.6	+0.3
	comp=Z,5.5nm,1.0s						
RES	Resolute Bay	67.87	13	eP	P	11 10 34.6	+0.3
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MSF	Maaselka	68.54	335	P	P	11 10 38.7	0.0
MSF				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SGF	Sodankyl	68.59	337	P	P	11 10 39.0	0.0
SGF				pmax	pmax		
	comp=Z,17nm,2.8s						
YKA	Yellowknife Ar	69.15	28	P	P	11 10 42.2	-0.4
	comp=Z,0.7nm,0.8s,baz=296,slow=5.7,SNR=7.5						
YKB5	Yellowknife Ar	69.15	28	eP	P	11 10 41.8	-0.7
JOF	Joensuu	69.22	332	P	P	11 10 42.6	-0.3
JOF				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DAG	Danmarks Havn	70.42	355	i P	P	11 10 50.3	+0.1
	comp=Z,2.1nm,0.8s						
DAG	Danmarks Havn	70.42	355	i P	P	11 10 50.3	+0.1
DAG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SUF	Sumiainen	71.33	333	P	P	11 10 55.4	-0.5
SUF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FIA1	FINESS Array S	72.08	332	eP	P	11 11 00.1	-0.4
FIA0	FINESS Array S	72.08	332	eP	P	11 11 00.1	-0.4
FIA0	FINESS Array S	72.08	332	eP	P	11 11 00.1	-0.4
FINES	FINESS Array B	72.08	332	P	P	11 11 00.1	-0.4
	comp=Z,5.0nm,0.6s,baz=86,slow=7.8,SNR=15						
KBZ	Khabaz	72.38	311	P	P	11 11 03.1	+0.5
	comp=Z,3.6nm,0.9s,baz=158,slow=4.1,SNR=6.7						
KIV	Kislovodsk	72.41	311	eP	P	11 11 00.4	-2.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VAF	Ylistaro	72.44	335	P	P	11 11 02.5	0.0
VAF				pmax	pmax		
	comp=Z,16nm,1.9s						
PINE	Pine Mountain	75.25	47	eP	P	11 11 18.3	-1.3
	comp=Z,9.9nm,0.9s						
SUMG	Summit	75.54	359	i P	P	11 11 27.9	+6.8
	comp=Z,18nm,0.8s						
SUMG	Summit	75.54	359	i P	P	11 11 27.9	+6.8
SUMG				pmax	pmax		
	comp=Z,18nm,0.8s						
AKASG	Malin Array Be	76.77	322	P	P	11 11 26.9	-1.1
	comp=Z,0.3nm,0.3s,baz=50,slow=6.1,SNR=3.7						
BMO	Blue Mountains	76.92	45	eP	P	11 11 28.6	-0.5
	comp=Z,3.7nm,1.0s						
BMO	Blue Mountains	76.92	45	eP	P	11 11 28.6	-0.5
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
J08A	Circle Bar Ran	77.00	47	eP	P	11 11 29.1	-0.5
	comp=Z,5.8nm,0.9s						
NC204	NORSAR Array S	77.77	337	eP	P	11 11 32.9	-0.6
NB2	NORSAR Subarra	77.80	337	P	P	11 11 32.8	-0.8
	comp=Z,1.4nm,0.5s,baz=43,slow=5.6						
NB2	NORSAR Subarra	77.80	337	P	P	11 11 32.8	-0.8
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB200	NORSAR Array S	77.80	337	eP	P	11 11 32.9	-0.7
NOA	NORSAR Array B	77.80	337	P	P	11 11 32.9	-0.7
	comp=Z,3.4nm,0.7s,baz=44,slow=5.5,SNR=13						
DLMT	Dillon	79.41	43	eP	P	11 11 41.6	-1.3
	comp=Z,6.5nm,1.1s						
NV01	Mina Array Sit	79.75	51	eP	P	11 11 44.4	-0.7
NVAR	Mina Array Bea	79.75	51	P	P	11 11 45.1	+0.1
	comp=Z,2.0nm,0.8s,baz=293,slow=5.4,SNR=6.1						
BOZ	Bozeman (W)	79.83	42	eP	P	11 11 44.6	-0.6
	comp=Z,4.3nm,1.1s						
BOZ	Bozeman (W)	79.83	42	eP	P	11 11 44.6	-0.6
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BR101	Keskin Array S	80.38	311	eP	P	11 11 48.4	+0.1
BR131	Keskin Array S	80.38	311	eP	P	11 11 48.0	-0.3
	comp=Z,4.1nm,0.9s						
BRTR	Keskin Array B	80.38	311	P	P	11 11 48.4	+0.1
	comp=Z,3.2nm,0.8s,baz=114,slow=4.9,SNR=12						
RAYN	Ar Rayn	80.40	292	eP	P	11 11 48.1	-0.4
	comp=Z,9.5nm,0.7s						
RAYN	Ar Rayn	80.40	292	eP	P	11 11 48.1	-0.4
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ELK	Elko	80.45	48	eP	P	11 11 49.4	+0.7
	comp=Z,2.8nm,0.9s						
ELK	Elko	80.45	48	eP	P	11 11 49.4	+0.7
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YHB	Horse Butte	80.58	43	eP	P	11 11 50.0	+0.6
	comp=Z,4.0nm,0.9s						
BUR04	Bucovina Ar. S	80.72	321	eP	P	11 11 50.0	+0.1
IMW	Indian Meadow	81.23	43	eP	P	11 11 52.8	-0.1
	comp=Z,2.6nm,0.9s						
HVU	Hansel Valley	81.38	46	eP	P	11 11 53.0	-0.6
	comp=Z,2.5nm,0.8s						
HVU	Hansel Valley	81.38	46	eP	P	11 11 53.0	-0.6
HVU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TPNV	Topopah Spring	81.93	51	eP	P	11 11 56.0	-0.6
	comp=Z,5.0nm,0.8s						
TPNV	Topopah Spring	81.93	51	eP	P	11 11 56.0	-0.6
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FRB	Frobisher Bay	82.02	12	P	P	11 11 55.9	-0.4
DUG	Dugway, Tooele	82.28	47	eP	P	11 11 59.0	+0.6
	comp=Z,4.7nm,0.8s						
DUG	Dugway, Tooele	82.28	47	eP	P	11 11 59.0	+0.6
DUG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PD31	Pinedale Array	82.71	44	eP	P	11 11 59.9	-0.8
PDAR	Pinedale Array	82.71	44	P	P	11 11 59.9	-0.8
	comp=Z,0.6nm,0.7s,baz=276,slow=2.7,SNR=7.1						
NLU	North Lily Min	82.88	47	eP	P	11 12 01.3	-0.3
	comp=Z,2.5nm,0.8s						
MPU	Maple Canyon	83.11	47	eP	P	11 12 03.4	+0.6
	comp=Z,4.3nm,1.0s						
DPC	Dobruska-Polom	83.36	327	eP	P	11 12 04.1	+0.5
DPC				epP	PcP	11 12 07.9	-0.2
DPC	Dobruska-Polom	83.36	327	eP	P	11 12 04.1	+0.5
MTPU	Mount Pierson	83.94	49	eP	P	11 12 07.4	+0.1
	comp=Z,2.3nm,0.9s						
P17A	Butcher Ranch,	83.99	47	eP	P	11 12 07.2	0.0
	comp=Z,5.0nm,0.9s						
Q16A	Castle Valley	84.06	47	eP	P	11 12 07.2	-0.5
	comp=Z,2.9nm,0.9s						
KNB	Kanab	84.13	50	eP	P	11 12 08.4	+0.4
	comp=Z,5.8nm,1.0s						
KNB	Kanab	84.13	50	eP	P	11 12 08.4	+0.4
KNB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL	Collm	84.17	329	eP	P	11 12 08.0	+0.3
CLL	Collm	84.17	329	eP	P	11 12 08.0	+0.3
SRU	San Rafael Swe	84.34	47	eP	P	11 12 08.6	-0.5
	comp=Z,5.1nm,0.6s						
SRU	San Rafael Swe	84.34	47	eP	P	11 12 08.6	-0.5
SRU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GLA	Glamis	85.10	54	eP	P	11 12 13.3	+0.5
	comp=Z,6.0nm,1.0s						
GLA	Glamis	85.10	54	eP	P	11 12 13.3	+0.5
GLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GEC2	GERESS Array S	85.63	327	eP	P	11 12 14.5	-0.8
	comp=Z,1.9nm,0.8s						
GEC2	GERESS Array S	85.63	327	eP	P	11 12 14.5	-0.8
GEC2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	85.63	327	P	P	11 12 14.5	-0.8
	comp=Z,0.9nm,0.8s,baz=39,slow=6.8,SNR=5.9						
SCHQ	Schefferville	90.63	14	LR	LR	11 57 33.4	
	comp=Z,586nm,19.4s,baz=298,slow=38						
SSB	Saint Sauveur	92.42	330	P	P	11 12 47.1	-0.3
LTX	Lajitas	94.90	51	eP	P	11 12 59.5	+0.2
LTX	Lajitas	94.90	51	eP	P	11 12 59.5	+0.2
TXAR	Lajitas Array	94.90	51	P	P	11 12 59.5	+0.2
	comp=Z,1.7nm,0.7s,baz=295,slow=3.2,SNR=21						
BLO	Bloomington	97.55	34	eP	P	11 13 10.6	-0.3
	comp=Z,16nm,0.4s						
BLO	Bloomington	97.55	34	eP	P	11 13 10.6	-0.3
LPAZ	La Paz	151.00	63	ePKPbc	PKPbc	11 19 30.7	-0.2
LPAZ	La Paz	151.00	63	PKPbc	PKPbc	11 19 31.1	+0.2
	comp=Z,1.7nm,0.8s,baz=344,slow=7.2,SNR=6.2						

ISCJB **18** *11:00:15.6±0.5, 50°.17N±0°.02×12°.66E±0°.03, h0^{km}, Error ellipse: s-maj=3.6km s-min=2.9km az=143.1*

VIE **18** *11:00:16.9±0.2, 50°.14N×12°.58E, h0^{km}, mb2.3/6, ml2.5/14, Error ellipse: s-maj=3.0km s-min=1.2km az=59.0, Suspected Mining explosion.*

PRU **18** *11:00:17.7±0.0, 50°.20N×12°.59E, h0^{km}, Explosion-mine Jiri, Felt In Sokolov Mining explosion.*

ISC 18 11:00:17.1±0.9**, 50°.20N**±0°.04×**12°.62E**±0°.03**, h0**^{km}**, n22, σ1.^{s}16**/42**, 4C, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NKC	Novy Kostel	0.11	286	⇑iPG	Pg	11 00 19.5	+0.2
NKC				eSG	Sg	11 00 20.9	+0.1
	comp=Z,638nm,0.6s						
KHC	Kasperske Hory	1.24	149	⇑ePG	Pg	11 00 40.2	-0.7
KHC				eSG	Sg	11 00 56.9	0.0
	comp=Z,23nm,0.5s						
PRU	Pruhonice	1.26	99	⇑ePG	Pg	11 00 40.7	-0.5
PRU				eSG	Sg	11 00 57.8	+0.3
	comp=Z,25nm,0.3s						
PVCC	Panska Ves	1.29	75	⇑ePG	Pg	11 00 41.3	-0.5
PVCC				eSG	Sg	11 00 59.1	+0.5
	comp=Z,41nm,0.5s						
KSP	Ksiaz	2.43	73	ePg	Pb	11 01 01.9	+0.2
KSP				eSg	Sb	11 01 33.8	+1.6
MOA	Molln	2.59	155	ePn	Pn	11 00 59.5	-0.8
	0.1nm,0.1s						
MOA				Sn	Sn	11 01 32.6	+0.1
	1.8nm,0.3s						
KRUC	Moravsky	2.71	113	ePN	Pb	11 01 06.4	0.0
KRUC				eSG	Sb	11 01 38.5	-1.6
VRAC	Vranov	2.73	108	ePN	Pb	11 01 06.8	0.0
VRAC				eSG	Sb	11 01 42.7	+1.9
WATA	Walderalm	2.95	194	Pn	Pn	11 01 04.4	-1.0
	1.9nm,0.3s						
WATA				Sg	Sg	11 01 52.6	+0.7
	1.5nm,0.2s						
RETA	Reutte	2.98	205	ePn	Pn	11 01 04.1	-1.6
	0.8nm,0.3s						
RETA				Sn	Sn	11 01 40.2	-2.0
	8.4nm,0.5s						
WTTA	Wattenberg	3.01	193	Pn	Pn	11 01 05.6	-0.7
	1.2nm,0.2s						
WTTA				Sg	Sg	11 01 55.7	+1.9
	3.7nm,0.4s						
MOTA	Moosalm	3.03	200	Pn	Pn	11 01 05.9	-0.6
	1.2nm,0.3s						
MOTA				Sg	Sg	11 01 56.3	+1.9
	5.9nm,0.5s						
CONA	Conrad Observa	3.12	136	i Pn	Pn	11 01 07.5	-0.1
	0.6nm,0.2s						
CONA				Sg	Sg	11 01 57.3	0.0
	9.7nm,0.5s						
SQTA	Sankt Quirin	3.13	198	ePn	Pn	11 01 07.1	-0.6
	1.2nm,0.3s						
SQTA				Sg	Sg	11 01 59.2	+1.7
	3.2nm,0.4s						
KBA	Koelnbreinsper	3.16	171	eSg	Sg	11 01 59.4	+0.7
	0.8nm,0.1s						
MORC	Moravsky Berou	3.21	96	ePN	Pb	11 01 16.2	+1.3
MORC				eSG	Sb	11 01 56.1	+1.6
FETA	Feichten	3.42	202	ePn	Pn	11 01 10.3	-1.6
	0.9nm,0.4s						
FETA				eSg	Sg	11 02 07.1	+0.1
	0.8nm,0.2s						
DAVA	Damuels	3.44	213	Sg	Sg	11 02 08.7	+1.3
	2.5nm,0.2s						
ABTA	Abfaltersbach	3.46	181	i Pn	Pn	11 01 11.5	-0.8
	2.7nm,0.4s						
ABTA				eSg	Sg	11 02 09.3	+1.1
	3.2nm,0.4s						
ARSA	Arzberg	3.52	146	i Pn	Pn	11 01 11.3	-1.8
	1.1nm,0.3s						
ARSA				Sg	Sg	11 02 11.4	+1.1
	0.6nm,0.2s						
MYKA	Terra Mystica	3.64	169	i Pn	Pn	11 01 13.7	-1.0
	1.0nm,0.3s						
MYKA				eSg	Sg	11 02 15.1	+1.1
	3.2nm,0.4s						
OBKA	Obir	3.91	160	i Pn	Pn	11 01 17.8	-0.8
	0.4nm,0.2s						
OBKA				eSg	Sg	11 02 24.9	+2.1
	2.9nm,0.4s						

NIED **18** *11:06:00, 38°.80N×142°.10E, h47^{km}, Mw4.2 Best double couple: $M_0$2.40000×10^{15} NP1:ϕ_s131.00000°, δ29.00000°, λ22.00000°. NP2:ϕ_s21.00000°, δ79.00000°, λ117.00000°.*

BJI **18** *11:06:40.5, 38°.56N×142°.55E, h61^{km}, mB4.9/22, mb4.6/44, Ms4.5/12, Ms7 4.3/12*

ISCJB **18** *11:06:41.8±0.5, 38°.83N±0°.03×142°.18E±0°.05, h51^{km}±3^{km}, mb4.5/70, MS4.7/1, Error ellipse: s-maj=7.0km s-min=4.0km az=30.8*

MOS **18** *11:06:41.8±1.0, 38°.90N×142°.14E, h48^{km}, mb4.7/42, Error ellipse: s-maj=8.2km s-min=5.1km az=102.7*

JMA **18** *11:06:43.0±0.1, 38°.84N×142°.12E, h44^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s8.00000°, δ69.00000°, λ90.00000°. NP2:ϕ_s188.00000°, δ21.00000°, λ90.00000°. Principal axes: T Plg66.0000°, Azm278.0000°; N Plg0.0000°, Azm8.0000°; P Plg24.0000°, Azm98.0000°;*

JMA Felt II J1.

NEIC **18** *11:06:44.7±0.3, 38°.81N×142°.18E, mb4.6/30 Error ellipse: s-maj=6.5km s-min=4.3km az=116.0*

NEIC Recorded [2 JMA] in Iwate and Miyagi.

IDC **18** *11:06:44.8±2.0, 38°.81N×142°.07E, h60^{km}±17^{km}, mb3.8/19, mb1 4.0/24, mb1mx3.9/57, mbtmp4.1/24, Error ellipse: s-maj=18.8km s-min=11.0km az=105.0*

ISC 18 11:06:42.9±0.7**, 38°.84N**±0°.05×**142°.15E**±0°.05**, h44**^{km}±5^{km}**, n172, σ1.^{s}39**/186**, mb4.5**/70**, 13C-15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.44	303	⇓P	Pn	11 06 53.2	+0.1
OFUJ				eS	Sn	11 07 00.0	-0.3
JKMT	Kesennumamotoy	0.53	267	P	Pn	11 06 54.0	-0.1
JKMT				eS	Sn	11 07 01.3	-0.8
JMK	Ichinoseki	0.73	279	⇓P	Pn	11 06 56.8	-0.1
JMK				S	Sn	11 07 06.3	-0.6
JIO	Ouri	0.73	238	⇓P	Pn	11 06 56.6	-0.3
JIO				eS	Sn	11 07 05.7	-1.3
JOM	Ohasama	0.92	314	⇓P	Pn	11 06 59.6	+0.2
JOM				eS	Sn	11 07 11.3	-0.1
JOU	Okura	1.25	248	⇓P	Pn	11 07 04.0	0.0
JOU				S	Sn	11 07 19.8	+0.1
JRG	Rokugo	1.30	296	⇓P	Pn	11 07 04.9	+0.3
JYK	Kaneyama	1.40	274	⇓P	Pn	11 07 06.1	+0.2
JMM	Marumori	1.44	228	⇓P	Pn	11 07 06.2	-0.4
JMM				eS	Sn	11 07 23.6	-0.7
JANG	Nango	1.60	343	P	Pn	11 07 08.8	0.0
JANG				S	Sn	11 07 29.2	+0.9
ERM	Erimo	3.26	13	ePn	Pn	11 07 32.6	+1.1
ERM				eSn	Sn	11 08 12.5	+3.5
ERM	Erimo	3.26	13	deP	Pn	11 07 32.6	+1.1
MAJO	Matsushiro	3.88	235	ePn	Pn	11 07 42.0	+2.0
MAJO	Matsushiro	3.88	235	⇑eP	Pn	11 07 42.6	+2.6
MAT	Matsushiro	3.88	235	P	Pn	11 07 41.8	+1.8
MAT				S	Sn	11 08 29.4	+5.1
MJAR	Matsushiro Arr	3.88	235	P	Pn	11 07 41.7	+1.6
	1.7nm,0.3s,baz=34,slow=13,SNR=42						
MJB9	Matsu-Tunnel	3.88	235	ePn	Pn	11 07 42.0	+2.0
ASAJ	Asahikawa	5.28	4	P	Pn	11 08 00.2	+0.9
	3.2nm,0.3s,baz=207,slow=13,SNR=17						
ASAJ				S	Sn	11 09 02.7	+3.9
	3.1nm,0.3s,baz=165,slow=20,SNR=3.0						
INU	Inuyama	5.38	231	ePn	Pn	11 08 02.9	+2.2
YUK	Yuzh-Kuril'sk	5.89	27	⇑iP	Pn	11 08 07.7	+0.1
YUK				i S	Sn	11 09 10.8	-3.0
YUK				pmax	pmax		
	comp=Z,94nm,0.4s						
YUK				pmax	pmax		
	comp=N,19nm,0.2s						
YUK				pmax	pmax		
	comp=E,25nm,0.2s						
YUK				smax	smax		
	comp=N,360nm,0.5s						
YUK				smax	smax		
	comp=E,274nm,0.4s						
SHO	Shikotan	6.13	34	eP	Pn	11 08 09.1	-1.9
SHO				i S	Sn	11 09 13.6	-6.2
SHO				pmax	pmax		
	comp=N,11nm,0.3s						
SHO				pmax	pmax		
	comp=Z,14nm,0.3s						
SHO				pmax	pmax		
	comp=E,15nm,0.2s						
SHO				smax	smax		
	comp=E,113nm,0.2s						
SHO				smax	smax		
	comp=N,167nm,0.5s						
KUR	Kuril'sk	7.67	32	⇑iP	Pn	11 08 31.4	-0.6
KUR				i S	Sn	11 09 53.0	-4.6
KUR				pmax	pmax		
	comp=Z,26nm,0.7s						
YSS	Yuzh-Sakhalins	8.12	3	eP	Pn	11 08 39.4	+1.2
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MSHR	Mys Shultsa	9.14	298	⇓eP	Pn	11 08 52.7	+0.5
USA0B	Ussuriysk Arra	9.31	308	ePn	Pn	11 08 57.0	+2.6
USRK	Ussuriysk Ar.	9.31	308	P	Pn	11 08 55.0	+0.6
	comp=Z,1.1nm,0.3s,baz=118,slow=14,SNR=27						
MDJ	Mudanjiang	11.01	306	P	Pn	11 09 21.8	+4.1
MDJ				pmax	pmax		
	comp=Z,19nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,350nm,2.9s						
MDJ	Mudanjiang	11.01	306	ePn	Pn	11 09 20.8	+3.1
KSRS	Korea Array	11.29	267	P	Pn	11 09 24.6	+3.0
	comp=Z,0.6nm,0.3s,baz=76,slow=14,SNR=9.6						
KS15	Wonju Array Si	11.32	267	ePn	Pn	11 09 24.1	+2.1
KLR	Kul'dur	12.78	328	⇑eP	Pn	11 09 41.9	0.0
KLR	Kul'dur	12.78	328	P	Pn	11 09 42.6	+0.7
	comp=Z,0.1nm,0.3s,baz=140,slow=14,SNR=5.7						
CN2	Changchun	13.49	297	eP	Pn	11 09 55.5	+3.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA	Zeya	18.05	330	eP	Pn	11 10 48.2	-2.1
ZEA				pmax	pmax		
	comp=Z,32nm,1.4s						
HIA	Hailar	19.11	310	⇓eP	P	11 11 02.0	0.0
HIA				pmax	pmax		
	comp=Z,20nm,3.1s						
BJI	Beijing	20.08	282	eP	P	11 11 13.1	+0.6
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NJ2	Nanjing	20.12	257	eP	Pn	11 11 14.3	-0.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MA2	Magadan	21.47	12	eP	P	11 11 28.0	+0.6
	comp=Z,7.7nm,0.8s						
MA2	Magadan	21.47	12	⇓eP	P	11 11 28.4	+1.0
MA2				pmax	pmax		
	comp=Z,13nm,1.3s						
MA2	Magadan	21.47	12	P	P	11 11 27.2	-0.1
	comp=Z,7.4nm,0.8s,baz=204,slow=10.0,SNR=5.9						
YULB	Yu-li	23.49	235	eP	P	11 11 49.5	+0.7
	comp=Z,30nm,1.5s						
HHC	Hu-ho-hao-te	23.51	285	eP	P	11 11 49.1	+0.1
HHC				S	S	11 15 55.3	-4.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
HHC				LR	LR		
	comp=Z,280nm,15.6s						
HHC				LR	LR		
	comp=Z,310nm,15.6s						
HHC				LR	LR		
	comp=Z,540nm,14.7s						
YAK	Yakutsk	24.45	346	eP	P	11 11 55.8	-1.5
YAK				pmax	pmax		
	comp=Z,29nm,0.6s						
YAK				pmax	pmax		
	comp=N,15nm,0.8s						
YAK				pmax	pmax		
	comp=E,11nm,0.8s						
SEY	Seymchan	24.91	11	⇓eP	P	11 12 02.8	+1.3
SEY	Seymchan	24.91	11	P	P	11 12 03.0	+1.5
	comp=E,6.4nm,1.0s,baz=207,slow=6.8,SNR=14						
BOD	Bodaibo	26.34	325	eP	P	11 12 12.1	-2.4
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN	Xi'an	27.06	270	P	P	11 12 20.3	-1.0
XAN				pP	pP	11 12 34.0	+1.1
XAN				S	S	11 16 52.0	-4.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN				LR	LR		
	comp=Z,140nm,14.1s						
XAN				LR	LR		
	comp=Z,100nm,12.7s						
XAN				LR	LR		
	comp=Z,150nm,7.9s						
XAN	Xi'an	27.06	270	eP	P	11 12 20.4	-1.0
	comp=Z,5.4nm,0.6s						
XAN	Xi'an	27.06	270	eP	P	11 12 20.4	-0.9
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SONA1	Songino Array	27.30	301	eP	P	11 12 23.7	+0.3
SONA0	Songino Array	27.30	301	eP	P	11 12 23.9	+0.4
SONM	Songino Array	27.30	301	P	P	11 12 23.9	+0.4
	comp=Z,1.4nm,0.6s,baz=99,slow=8.9,SNR=11						
ENH	Enshi	28.11	262	eP	P	11 12 29.9	-0.8
	comp=Z,14nm,0.7s						
H11N2	WAKE ISLAND Hy	28.64	125	T	T	11 43 01.4	
	baz=317,slow=75,SNR=173						
H11N1	WAKE ISLAND Hy	28.64	125	T	T	11 43 02.0	
	baz=317,slow=75,SNR=210						
H11N3	WAKE ISLAND Hy	28.65	125	T	T	11 43 02.5	
	baz=317,slow=75,SNR=120						
H11S1	WAKE ISLAND Hy	29.41	127	T	T	11 43 59.8	
	baz=318,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	29.41	127	T	T	11 43 59.2	
	baz=318,slow=76,SNR=61						
H11S2	WAKE ISLAND Hy	29.43	127	T	T	11 44 01.0	
	baz=318,slow=76,SNR=47						
TLY	Talaya	29.62	308	eP	P	11 12 43.7	-0.3
	comp=Z,3.6nm,0.8s						
TLY	Talaya	29.62	308	eP	P	11 12 44.0	+0.1
TLY				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ZAK	Zakamensk	29.64	306	eP	P	11 12 43.6	-0.6
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	Lanzhou	30.38	277	eP	P	11 12 52.0	+1.1
LZH				pP	sP	11 13 06.5	-1.3
LZH				sP	pP	11 13 16.3	+14
LZH				PP	PnPn	11 13 51.3	+0.9
LZH				pmax	pmax		

	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,230nm,4.3s						
LZH				LR	LR		
	comp=Z,520nm,15.7s						
LZH				LR	LR		
	comp=Z,530nm,15.2s						
LZH				LR	LR		
	comp=Z,640nm,16.6s						
BILL	Bilibino	32.13	17	⇓eP	P	11 13 06.4	+0.6
BILL				pmax	pmax		
	comp=Z,9.0nm,1.8s						
CD2	Chengdu	32.29	268	P	P	11 13 07.3	-0.3
CD2				pP	sP	11 13 22.3	-2.2
CD2				sP	pP	11 13 29.8	+10
CD2				S	S	11 18 17.3	-1.0
CD2				sS	sS	11 18 43.5	+5.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,4.8s						
CD2				LR	LR		
	comp=Z,1µm,16.2s						
CD2				LR	LR		
	comp=Z,1µm,17.2s						
CD2				LR	LR		
	comp=Z,1µm,20.1s						
GTA	Gaotai	32.63	285	eP	P	11 13 12.0	+1.4
GTA				pP	pP	11 13 24.3	+2.0
GTA				sP	sP	11 13 29.5	+2.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,87nm,6.2s						
GTA				LR	LR		
	comp=Z,170nm,15.6s						
GTA				LR	LR		
	comp=Z,190nm,15.2s						
GTA				LR	LR		
	comp=Z,190nm,16.8s						
KNGR	Kungurtug, Tuv	33.33	305	⇑iP	P	11 13 15.8	-0.8
ANM	Nome	39.76	32	eP	P	11 14 12.0	+1.0
	comp=Z,5.9nm,1.4s						
ANM	Nome	39.76	32	eP	P	11 14 12.0	+1.0
ANM				pmax	pmax		
	comp=Z,6.0nm,1.4s						
DGZ	Jazzator, Alta	39.83	304	c iP	P	11 14 13.1	+1.1
DGZ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ	Urumqi	40.57	295	P	P	11 14 18.6	+0.5
WMQ				pP	sP	11 14 33.1	-2.1
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.5s						
WMQ				LR	LR		
	comp=Z,740nm,21.1s						
WMQ				LR	LR		
	comp=Z,850nm,21.1s						
WMQ				LR	LR		
	comp=Z,880nm,27.3s						
WMQ	Urumqi	40.57	295	eP	P	11 14 18.7	+0.6
	comp=Z,9.7nm,0.8s						
WMQ	Urumqi	40.57	295	eP	P	11 14 18.7	+0.6
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZAA0	Zalesovo Array	41.15	311	eP	P	11 14 22.3	-0.4
	comp=Z,7.1nm,0.6s						
ZAA1	Zalesovo Array	41.15	311	eP	P	11 14 22.9	+0.2
ZALV	Zalesovo Beam	41.15	311	eP	P	11 14 22.4	-0.3
ZALV	Zalesovo Beam	41.15	311	P	P	11 14 22.9	+0.2
	comp=Z,5.6nm,0.4s,baz=90,slow=8.2,SNR=33						
NVS	Novosibirsk	42.03	312	eP	P	11 14 29.0	-0.8
MK01	Makanchi Array	43.67	301	eP	P	11 14 43.3	0.0
MK31	Makanchi Array	43.67	301	eP	P	11 14 43.0	-0.3
MK31				epP	sP	11 14 59.4	-1.1
MK31	Makanchi Array	43.67	301	eP	P	11 14 43.0	-0.3
MK31				e*PP	sP	11 14 59.4	-1.1
MK32	Makanchi Array	43.67	301	eP	P	11 14 43.4	+0.1
MKAR	Makanchi Array	43.67	301	P	P	11 14 43.4	+0.1
	comp=Z,4.6nm,0.5s,baz=81,slow=10,SNR=64						
CHBT	CHBT	43.76	245	P	P	11 14 37.4	-6.9
	comp=Z,805nm,1.8s,comp=Z,53µm						
MAKZ	Makanchi	43.88	301	eP	P	11 14 45.0	0.0
	comp=Z,7.8nm,1.0s						
MAKZ				epP	sP	11 15 00.9	-1.2
MAKZ	Makanchi	43.88	301	eP	P	11 14 45.0	0.0
MAKZ				e*PP	sP	11 15 00.9	-1.2
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	Kurchatov	45.29	307	eP	P	11 14 55.8	-0.4
	comp=Z,24nm,0.9s						
KURK	Kurchatov	45.29	307	c iP	P	11 14 55.9	-0.2
KURK				pmax	pmax		
	comp=Z,19nm,0.7s						
PDGK	Podgornoye	46.46	297	P	P	11 15 05.4	-0.2
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GUN	Gumba	47.57	274	eP	P	11 15 14.6	-0.2
	comp=Z,15nm,0.4s						
KKN	Kakani	48.10	275	eP	P	11 15 17.8	-0.9
SURA	Surathani	48.15	244	P	P	11 15 20.6	+1.7
DANN	Dangsing	49.01	276	eP	P	11 15 26.1	+0.3
	comp=Z,48nm,0.6s						
KOLN	Koldanda	49.41	276	eP	P	11 15 29.2	+0.4
	comp=Z,9.0nm,0.5s						
PYUN	Piuthan	49.73	276	eP	P	11 15 31.4	+0.2
	comp=Z,26nm,0.8s						
OTUK	Ortayu	49.85	305	P	P	11 15 31.9	+0.3
OTUK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	49.85	311	eP	P	11 15 31.6	+0.1
	comp=Z,7.4nm,0.6s						
BRVK	Borovoye	49.85	311	c iP	P	11 15 31.6	+0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
EGAK	Eagle	50.11	33	eP	P	11 15 31.4	-1.8
	comp=Z,11nm,1.0s						
AAK	Ala-Archa	50.16	297	⇓eP	P	11 15 35.0	+0.8
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MNAS	Manas	51.59	298	P	P	11 15 45.6	+0.7
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BATI	Baumata	51.75	203	eP	P	11 15 42.9	-3.3
SFK	Sufi-Kurgan	51.80	294	P	P	11 15 46.7	+0.1
SFK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	Inuvik	52.52	28	eP	P	11 15 52.5	+1.3
	comp=Z,8.8nm,1.6s						
INK	Inuvik	52.52	28	eP	P	11 15 52.5	+1.3
INK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
INK	Inuvik	52.52	28	P	P	11 15 52.5	+1.3
	comp=Z,0.7nm,0.5s,baz=278,slow=5.7,SNR=6.1						
KK31	Karatay Array	52.73	299	eP	P	11 15 53.4	+0.1
	comp=Z,2.9nm,0.8s						
KK31	Karatay Array	52.73	299	eP	P	11 15 53.4	+0.1
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	52.73	299	eP	P	11 15 53.4	+0.1
	comp=Z,2.9nm,0.8s						
KKAR	Karatay Array	52.73	299	eP	P	11 15 53.4	+0.1
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SVE	Sverdlovsk	54.19	318	eP	P	11 16 04.4	+0.8
SVE				pmax	pmax		
	comp=Z,17nm,0.9s						
ARU	Arti	55.40	318	eP	P	11 16 12.4	0.0
	comp=Z,11nm,1.0s						
ARU	Arti	55.40	318	ceP	P	11 16 12.3	-0.1
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHGR	Chuyangaron	55.43	295	eP	P	11 16 13.2	+0.2
	comp=Z,7.1nm,0.7s						
ABKAR	Akbulak array	57.23	309	eP	P	11 16 25.3	-0.3
	comp=Z,6.4nm,0.6s						
FITZ	Fitzroy Crossi	58.71	198	eP	P	11 16 35.6	-0.6
	comp=Z,9.5nm,1.5s						
FITZ	Fitzroy Crossi	58.71	198	P	P	11 16 35.0	-1.1
	comp=Z,1.2nm,0.6s,baz=350,slow=6.1,SNR=4.0						
WRAB	Tennant Creek	58.92	189	eP	P	11 16 37.0	-0.6
	comp=Z,4.1nm,0.9s						
WRAB	Tennant Creek	58.92	189	⇑eP	P	11 16 37.2	-0.4
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WB2	Warramunga Arr	58.93	189	eP	P	11 16 37.1	-0.5
	comp=Z,6.5nm,1.0s						
WR1	Warramunga Arr	58.93	189	eP	P	11 16 37.3	-0.4
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	58.93	189	P	P	11 16 37.3	-0.4
	comp=Z,2.5nm,0.5s,baz=6.5,slow=7.0,SNR=45						
PRGR	Permogore	59.57	327	eP	P	11 16 41.1	-0.6
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
RES	Resolute Bay	60.71	15	eP	P	11 16 49.6	+0.3
	comp=Z,8.2nm,1.5s						
RES	Resolute Bay	60.71	15	eP	P	11 16 49.6	+0.3
RES				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RES	Resolute Bay	60.71	15	P	P	11 16 49.6	+0.3
	comp=Z,0.6nm,0.4s,baz=328,slow=5.7,SNR=5.8						
YKA	Yellowknife Ar	61.96	31	P	P	11 16 58.7	+0.8
	comp=Z,0.4nm,0.6s,baz=300,slow=6.5,SNR=7.2						
ARA0	ARCESS Array S	62.51	339	eP	P	11 17 01.0	-0.5
ARCES	ARCESS Array B	62.51	339	P	P	11 17 01.0	-0.5
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	ARCESS Array B	62.51	339	P	P	11 17 01.0	-0.5
	comp=Z,2.9nm,1.0s,baz=52,slow=7.3,SNR=2.1						
AS31	Alice Springs	62.66	189	eP	P	11 17 02.9	-0.1
	comp=Z,2.2nm,1.4s						
ASAR	Alice Springs	62.66	189	P	P	11 17 03.0	0.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	62.66	189	P	P	11 17 03.0	0.0
	comp=Z,1.1nm,0.6s,baz=1.1,slow=5.1,SNR=18						
JOF	Joensuu	64.64	332	P	P	11 17 15.5	-0.2
JOF				pmax	pmax		
	comp=Z,9.0nm,2.6s						
SUF	Sumiainen	66.63	333	P	P	11 17 28.3	-0.2
SUF				pmax	pmax		
	comp=Z,11nm,1.7s						
OBN	Obninsk	67.00	323	eP	P	11 17 30.3	-0.6
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FIA1	FINESS Array S	67.49	332	eP	P	11 17 33.7	-0.2
	comp=Z,8.8nm,1.2s						
FIA0	FINESS Array S	67.49	332	eP	P	11 17 33.5	-0.4
FIA0	FINESS Array S	67.49	332	eP	P	11 17 33.6	-0.4
FINES	FINESS Array B	67.49	332	i P	P	11 17 34.0	+0.1
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FINES	FINESS Array B	67.49	332	P	P	11 17 33.5	-0.4
	comp=Z,3.7nm,0.6s,baz=42,slow=8.8,SNR=12						
SUMG	Summit	68.88	0	eP	P	11 17 42.8	-0.2
	comp=Z,9.9nm,1.4s						
SUMG	Summit	68.88	0	eP	P	11 17 42.8	-0.2
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KIV	Kislovodsk	70.16	311	eP	P	11 17 50.8	-0.2
	comp=Z,25nm,1.4s						
KIV	Kislovodsk	70.16	311	eP	P	11 17 52.2	+1.2
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KBZ	Khabaz	70.17	310	P	P	11 17 51.3	+0.4
	comp=Z,3.6nm,0.9s,baz=358,slow=0.6,SNR=7.7						
FCC	Fort Churchill	72.13	27	eP	P	11 18 02.8	+0.3
	comp=Z,8.8nm,1.4s						
FCC	Fort Churchill	72.13	27	eP	P	11 18 02.8	+0.3
FCC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
NB200	NORSAR Array S	72.74	337	eP	P	11 18 06.0	-0.2
NOA	NORSAR Array B	72.74	337	P	P	11 18 06.0	-0.2
	comp=Z,0.5nm,0.5s,baz=38,slow=6.0,SNR=3.6						
AKASG	Malin Array Be	73.22	322	P	P	11 18 08.8	-0.3
	comp=Z,2.0nm,0.6s,baz=47,slow=6.7,SNR=7.3						
AKBB	Malin Array Si	73.22	322	eP	P	11 18 08.9	-0.2
	comp=Z,8.4nm,1.3s						
AKBB	Malin Array Si	73.22	322	eP	P	11 18 08.9	-0.2
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KIEV	Kiev	73.23	322	⇑eP	P	11 18 08.7	-0.5
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
FRB	Frobisher Bay	74.88	14	P	P	11 18 18.7	+0.1
BER	Bergen	74.97	339	P	P	11 18 17.3	-1.8
BER				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BUR04	Bucovina Ar. S	77.25	322	eP	P	11 18 32.5	0.0
BR101	Keskin Array S	78.09	312	eP	P	11 18 37.5	+0.1
BRTR	Keskin Array B	78.09	312	P	P	11 18 37.5	+0.1
	comp=Z,1.1nm,0.4s,baz=118,slow=3.4,SNR=11						
KSP	Ksiaz	78.87	328	P	P	11 18 41.5	+0.2
KSP				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MORC	Moravsky Berou	79.16	327	P	P	11 18 43.3	+0.3
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	Collm	79.82	330	eP	P	11 18 46.0	-0.4
CLL	Collm	79.82	330	eP	P	11 18 44.0	-2.4
KHC	Kasperske Hory	81.30	329	eP	P	11 18 55.4	+0.9
KHC	Kasperske Hory	81.30	329	eP	P	11 18 55.4	+0.9
GERES	GERESS Array B	81.48	328	P	P	11 18 55.3	-0.2
	comp=Z,0.4nm,0.5s,baz=28,slow=6.0,SNR=4.7						
GEA0	GERESS Array S	81.48	328	eP	P	11 18 55.2	-0.4
VTS	Vitosha	81.80	319	P	P	11 18 58.1	+0.7
VTS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MEM	Membach	82.95	334	⇑P	P	11 19 02.2	-0.9
DOU	Dourbes	83.87	334	⇑P	P	11 19 06.3	-1.5
FUORN	Ofenpass-Fuorn	84.65	329	eP	P	11 19 11.7	-0.5
	comp=Z,6.0nm,0.8s						
TXAR	Lajitas Array	88.56	53	P	P	11 19 32.4	+1.0
	comp=Z,0.3nm,0.6s,baz=298,slow=2.7,SNR=4.8						

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*NIED **18** 11:10:00, 38°.70N×142°.40E, h41^{km}, Mw4.4 Best double couple: M$_0$3.81000×10^{15} NP1:φ$_s$232.00000°, δ26.00000°, λ133.00000°. NP2:φ$_s$6.00000°, δ71.00000°, λ71.00000°.*

*JMA **18** 11:10:46.8±0.1, 38°.69N×142°.41E, h35^{km}±2^{km}, M4.4*

JMA Felt II J1.

*MOS **18** 11:10:47.6±1.0, 38°.74N×142°.28E, h46^{km}, mb4.7/48, Error ellipse: s-maj=8.4km s-min=5.2km az=114.7*

*ISCJB **18** 11:10:47.3±0.6, 38°.71N±0°.03×142°.35E±0°.05, h46^{km}±4^{km}, mb4.5/92, MS4.8/1, Error ellipse: s-maj=6.6km s-min=3.9km az=27.1*

*NEIC **18** 11:10:49.5±0.4, 38°.72N×142°.25E, h49^{km}±3^{km}, mb4.5/39, Error ellipse: s-maj=4.7km s-min=2.9km az=124.0*

NEIC Recorded [2 JMA] in Iwate and Miyagi.

*IDC **18** 11:10:50.4±1.9, 38°.66N×142°.25E, h57^{km}±17^{km}, mb3.9/23, mb1 4.1/29, mb1mx4.0/57, mbtmp4.2/29, Error ellipse: s-maj=15.5km s-min=10.3km az=116.0*

ISC 18 11:10:48.0±0.6, **38°.75N**±0°.05×**142°.35E**±0°.05, **h37**^{km}±1^{km}, **n215,** σ1^{s}**48**/228, **mb4.5**/92, **15C-16D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.63	302	⇓P	Pn	11 11 00.3	-0.3
OFUJ				S	Sn	11 11 09.8	+0.5
JKMT	Kesennumamotoy	0.69	276	P	Pn	11 11 00.8	-0.5
JKMT				S	Sn	11 11 10.4	-0.3
JIKH	Ishinomakikobu	0.82	238	P	Pn	11 11 02.1	-0.9
JIKH				eS	Sn	11 11 12.4	-1.6
JIO	Ouri	0.84	250	⇓P	Pn	11 11 02.5	-0.8
JIO				eS	Sn	11 11 13.5	-0.9
JMK	Ichinoseki	0.91	283	⇓P	Pn	11 11 04.3	+0.1
JMK				eS	Sn	11 11 16.5	+0.4
JOM	Ohasama	1.10	312	⇓P	Pn	11 11 07.5	+0.6
JOM				eS	Sn	11 11 22.5	+1.7
JTH	Tanohata	1.25	342	⇓P	Pn	11 11 08.8	-0.1
JTH				eS	Sn	11 11 25.1	+0.6
JOU	Okura	1.38	254	⇓P	Pn	11 11 10.7	0.0
JRG	Rokugo	1.49	296	⇓P	Pn	11 11 13.1	+0.9
JMM	Marumori	1.51	235	⇓P	Pn	11 11 11.6	-0.9
JMM				eS	Sn	11 11 31.1	+0.2
JYK	Kaneyama	1.57	277	P	Pn	11 11 13.9	+0.6
ERM	Erimo	3.32	10	ePn	Pn	11 11 38.2	+0.8
ERM	Erimo	3.32	10	⇓eP	Pn	11 11 38.2	+0.8
MJAR	Matsushiro Arr	3.96	237	P	Pn	11 11 48.1	+1.9
	3.6nm,0.3s,baz=35,slow=13,SNR=59						
MJAR				S	Sn	11 12 34.7	+3.4
	baz=30,slow=26,SNR=3.0						
MAJO	Matsushiro	3.96	238	ePn	Pn	11 11 46.7	+0.5
MAJO				eSn	Sn	11 12 34.7	+3.4
MAJO	Matsushiro	3.96	238	ceP	Pn	11 11 48.1	+1.9
MAT	Matsushiro	3.96	238	P	Pn	11 11 47.7	+1.5
MAT				S	Sn	11 12 38.6	+7.3
MJB9	Matsu-Tunnel	3.96	238	ePn	Pn	11 11 47.3	+1.1
ASAJ	Asahikawa	5.37	2	P	Pn	11 12 07.5	+2.0
	6.5nm,0.3s,baz=222,slow=8.8,SNR=11						
ASAJ				S	Sn	11 13 11.9	+5.8
	5.9nm,0.3s,baz=23,slow=19,SNR=5.9						
INU	Inuyama	5.45	233	ePn	Pn	11 12 08.0	+1.4
YUK	Yuzh-Kuril'sk	5.91	25	P	Pn	11 12 11.8	-1.1
YUK				eS	Sn	11 13 15.4	-3.8
YUK				pmax	pmax		
	comp=E,104nm,0.5s						
YUK				pmax	pmax		
	comp=Z,176nm,0.5s						
YUK				pmax	pmax		
	comp=N,99nm,0.3s						
YUK				smax	smax		
	comp=N,520nm,0.3s						
YUK				smax	smax		
	comp=E,361nm,0.3s						
SHO	Shikotan	6.13	32	eP	Pn	11 12 13.4	-2.5
SHO				pmax	pmax		
	comp=Z,44nm,0.3s						
TEY	Ternei	7.61	328	⇑eP	Pn	11 12 43.7	+7.5
TEY				pmax	pmax		
	comp=N,80nm,0.9s						
TEY				pmax	pmax		
	comp=E,60nm,0.9s						
TEY				pmax	pmax		
	comp=Z,90nm,0.8s						
KUR	Kuril'sk	7.67	31	P	Pn	11 12 35.9	-1.2
KUR				eS	Sn	11 13 57.4	-5.3
KUR				pmax	pmax		
	comp=Z,47nm,0.4s						
KUR				pmax	pmax		
	comp=N,17nm,0.3s						
KUR				pmax	pmax		
	comp=E,23nm,0.3s						
KUR				smax	smax		
	comp=N,220nm,0.3s						
KUR				smax	smax		
	comp=E,123nm,0.3s						
YSS	Yuzh-Sakhalins	8.21	2	ePn	Pn	11 12 46.0	+1.6
YSS	Yuzh-Sakhalins	8.21	2	⇑eP	Pn	11 12 46.7	+2.2
YSS				eS	Sn	11 14 14.5	-1.4
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
VLA	Vladivostok	9.04	302	⇑eP	Pn	11 12 57.7	+1.8
USA0B	Ussuriysk Arra	9.49	308	ePn	Pn	11 13 02.6	+0.5
USRK	Ussuriysk Ar.	9.49	308	P	Pn	11 13 05.0	+2.9
	comp=Z,2.8nm,0.3s,baz=123,slow=14,SNR=40						
JNU	Nakatsue	10.86	242	ePn	Pn	11 13 21.8	+0.8
JNU	Nakatsue	10.86	242	P	Pn	11 13 21.4	+0.4
	comp=Z,0.7nm,0.3s,baz=12,slow=2.6,SNR=9.6						
MDJ	Mudanjiang	11.20	306	P	Pn	11 13 31.5	+6.1
MDJ				pmax	pmax		
	comp=Z,26nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,320nm,4.6s						
MDJ	Mudanjiang	11.20	306	ePn	Pn	11 13 26.8	+1.4
KSRS	Korea Array	11.45	268	P	Pn	11 13 30.8	+2.0
	comp=Z,0.5nm,0.3s,baz=88,slow=14,SNR=9.8						
KS01	Wonju Array Si	11.46	268	ePn	Pn	11 13 28.4	-0.7
KLR	Kul'dur	12.95	327	⇑iP	Pn	11 13 49.9	+0.6
KLR	Kul'dur	12.95	327	P	Pn	11 13 50.6	+1.2
	comp=Z,0.3nm,0.3s,baz=133,slow=12,SNR=8.8						
DL2	Dalian	16.15	277	eP	P	11 14 34.3	-0.7
DL2				pmax	pmax		
	comp=Z,43nm,1.1s						
ZEA	Zeya	18.21	330	eP	P	11 14 56.8	-0.9
ZEA				pmax	pmax		
	comp=E,31nm,0.8s						
ZEA				pmax	pmax		
	comp=N,30nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,39nm,0.6s						
SSE	Sheshan	18.93	253	eP	P	11 15 05.0	-0.7
	comp=Z,96nm,1.1s						
BJI	Beijing	20.25	282	eP	P	11 15 21.1	+1.0
BJI				pmax	pmax		
	comp=Z,12nm,0.8s						
BJI				LR	LR		
	comp=N,250nm,16.1s						
BJI				LR	LR		
	comp=E,360nm,16.1s						
BJI				LR	LR		
	comp=Z,220nm,21.3s						
NJ2	Nanjing	20.26	258	eP	P	11 15 18.3	-1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	Baijiatuau	20.26	282	eP	P	11 15 19.3	-0.9
	comp=Z,12nm,0.6s						
BJT	Baijiatuau	20.26	282	eP	P	11 15 19.3	-0.9
BJT				pmax	pmax		
	comp=Z,12nm,0.6s						
MA2	Magadan	21.53	12	eP	P	11 15 34.1	+0.5
	comp=Z,16nm,1.1s						
MA2	Magadan	21.53	12	⇑eP	P	11 15 33.9	+0.3
MA2				pmax	pmax		
	comp=Z,19nm,1.2s						
MA2	Magadan	21.53	12	P	P	11 15 34.4	+0.7
	comp=Z,6.3nm,0.6s,baz=189,slow=11,SNR=11						
NACB	Ninganchiao	22.83	237	eP	P	11 15 47.6	-0.3
	comp=Z,21nm,1.0s						
SSLB	Suanglung	23.52	237	eP	P	11 15 54.1	-0.7
	comp=Z,10nm,0.9s						
YULB	Yu-li	23.57	236	eP	P	11 15 54.4	-0.8
	comp=Z,11nm,1.0s						
HHC	Hu-ho-hao-te	23.69	285	eP	P	11 15 52.9	-3.5
HHC				S	S	11 19 51.1	-18
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,6.1s						
HHC				LR	LR		
	comp=N,280nm,14.7s						
HHC				LR	LR		
	comp=E,500nm,15.6s						
HHC				LR	LR		
	comp=Z,560nm,16.4s						
YAK	Yakutsk	24.58	346	eP	P	11 16 03.6	-0.6
YAK				e*PP	pP	11 16 15.5	+1.1
YAK				e		11 19 41.2	
YAK				eS	S	11 20 15.6	-6.8
YAK				e		11 27 04.0	
YAK				pmax	pmax		
	comp=Z,28nm,0.6s						
YAK				pmax	pmax		
	comp=N,20nm,0.8s						
YAK				pmax	pmax		
	comp=E,12nm,0.9s						
YAK				smax	smax		
	comp=N,298nm,3.2s						
YAK				smax	smax		
	comp=E,183nm,2.8s						
SEY	Seymchan	24.97	11	⇓eP	P	11 16 09.9	+2.2
SEY	Seymchan	24.97	11	P	P	11 16 09.4	+1.7
	comp=E,11nm,0.9s,baz=196,slow=7.1,SNR=24						
BOD	Bodaibo	26.51	325	eP	P	11 16 21.6	-0.2
BOD				pmax	pmax		
	comp=Z,8.0nm,1.4s						
XAN	Xi'an	27.23	270	P	P	11 16 29.3	+0.8
XAN				pP	pP	11 16 38.8	0.0
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,160nm,4.0s						
XAN	Xi'an	27.23	270	eP	P	11 16 28.0	-0.5
	comp=Z,4.9nm,0.6s						
XAN	Xi'an	27.23	270	eP	P	11 16 28.0	-0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SONA1	Songino Array	27.49	301	eP	P	11 16 30.3	-0.6
SONA0	Songino Array	27.49	301	eP	P	11 16 31.4	+0.5
SONM	Songino Array	27.49	301	P	P	11 16 31.4	+0.5
	comp=Z,2.2nm,0.6s,baz=95,slow=9.2,SNR=17						
ENH	Enshi	28.25	263	eP	P	11 16 37.0	-0.7
	comp=Z,31nm,0.6s						
H11N2	WAKE ISLAND Hy	28.45	125	T	T	11 46 34.4	
	baz=318,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	28.46	125	T	T	11 46 35.2	
	baz=318,slow=75,SNR=28						
H11N3	WAKE ISLAND Hy	28.47	125	T	T	11 46 36.2	
	baz=318,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	29.23	127	T	T	11 48 06.0	
	baz=318,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.23	127	T	T	11 48 04.9	

	baz=318,slow=76,SNR=29						
H11S2	WAKE ISLAND Hy	29.24	127	T	T	11 48 08.0	
	baz=318,slow=76,SNR=22						
TLY	Talaya	29.81	308	⇓iP	P	11 16 52.4	+1.1
TLY				pmax	pmax		
	comp=Z,21nm,0.9s						
ZAK	Zakamensk	29.83	306	eP	P	11 16 51.4	-0.2
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LZH	Lanzhou	30.55	277	eP	P	11 16 58.8	+0.6
LZH				pP	pP	11 17 10.3	+1.8
LZH				sP	sP	11 17 15.8	+2.7
LZH				PP	PnPn	11 17 49.5	-8.4
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=N,450nm,15.3s						
LZH				LR	LR		
	comp=E,470nm,16.0s						
LZH				LR	LR		
	comp=Z,580nm,16.5s						
MOY	Mondy	31.44	308	eP	P	11 17 06.4	+0.6
BILL	Bilibino	32.18	17	⇑eP	P	11 17 13.1	+1.2
BILL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GYA	Guiyang	32.27	258	P	P	11 17 12.8	-0.5
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2	Chengdu	32.45	268	eP	P	11 17 13.0	-1.8
GTA	Gaotai	32.81	285	eP	P	11 17 18.5	+0.6
GTA				pP	sP	11 17 30.8	-2.1
GTA				sP	pP	11 17 36.0	+7.7
GTA				S	S	11 22 22.6	-10
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,7.1s						
GTA				LR	LR		
	comp=N,330nm,17.5s						
GTA				LR	LR		
	comp=E,320nm,16.8s						
GTA				LR	LR		
	comp=Z,280nm,18.4s						
KNGR	Kungurtug, Tuv	33.52	306	⇓iP	P	11 17 24.4	+0.4
DGZ	Jazzator, Alta	40.02	304	c iP	P	11 18 20.7	+1.4
DGZ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ	Urumqi	40.76	295	P	P	11 18 26.3	+0.9
WMQ				pP	pP	11 18 34.6	-1.3
WMQ				sP	sP	11 18 45.3	+4.6
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.3s						
WMQ				LR	LR		
	comp=N,750nm,22.3s						
WMQ				LR	LR		
	comp=E,1μm,17.1s						
WMQ				LR	LR		
	comp=Z,880nm,26.3s						
ZAA0	Zalesovo Array	41.33	311	eP	P	11 18 30.1	+0.2
	comp=Z,8.3nm,0.8s						
ZAA1	Zalesovo Array	41.33	311	eP	P	11 18 30.5	+0.6
ZALV	Zalesovo Beam	41.33	311	eP	P	11 18 30.1	+0.2
ZALV	Zalesovo Beam	41.33	311	P	P	11 18 30.5	+0.6
	comp=Z,6.7nm,0.5s,baz=88,slow=7.8,SNR=26						
CHAI	Chaiyaphum	42.01	249	P	P	11 18 37.1	+1.2
NVS	Novosibirsk	42.22	312	eP	P	11 18 37.6	+0.5
CMMT	Chiang Mai	42.44	255	P	P	11 18 40.8	+1.4
	comp=Z,7.9nm,0.8s						
CHTO	Chiang Mai	42.45	255	eP	P	11 18 39.5	+0.1
	comp=Z,5.7nm,0.6s						
CHTO	Chiang Mai	42.45	255	eP	P	11 18 39.5	+0.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHTO	Chiang Mai	42.45	255	P	P	11 18 40.9	+1.5
	comp=Z,34nm,0.9s						
CM31	Chiang Mai Arr	42.66	254	eP	P	11 18 41.4	+0.2
	comp=Z,3.7nm,0.9s						
CMAR	Chiang Mai Arr	42.66	254	ceP	P	11 18 41.2	0.0
CMAR	Chiang Mai Arr	42.66	254	P	P	11 18 39.9	-1.3
	comp=Z,1.2nm,0.6s,baz=42,slow=7.6,SNR=8.4						
LSA	Lhasa	42.81	274	eP	P	11 18 42.9	0.0
	comp=Z,4.1nm,0.6s						
LSA	Lhasa	42.81	274	eP	P	11 18 42.9	0.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK01	Makanchi Array	43.86	301	eP	P	11 18 50.7	+0.1
MK31	Makanchi Array	43.86	301	eP	P	11 18 50.4	-0.2
	comp=Z,4.6nm,0.6s						
MK31	Makanchi Array	43.86	301	eP	P	11 18 50.4	-0.2
MK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK32	Makanchi Array	43.86	301	eP	P	11 18 51.0	+0.4
MKAR	Makanchi Array	43.86	301	eP	P	11 18 50.5	-0.1
	comp=Z,45nm,0.6s						
MKAR	Makanchi Array	43.86	301	P	P	11 18 51.0	+0.4
	comp=Z,3.0nm,0.5s,baz=85,slow=10,SNR=32						
MAKZ	Makanchi	44.07	301	eP	P	11 18 51.5	-0.7
	comp=Z,9.6nm,1.1s						
MAKZ	Makanchi	44.07	301	eP	P	11 18 51.5	-0.7
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
UMPA	Umpang Tak	44.12	252	P	P	11 18 55.7	+2.7
	comp=Z,5.0nm,0.7s						
SHL	Shillong	44.19	268	eP	P	11 18 53.3	-0.4
	comp=Z,6.4nm,0.9s						
SHL	Shillong	44.19	268	eP	P	11 18 53.3	-0.4
SHL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IM3	Indian Mountai	44.80	31	eP	P	11 18 58.6	+0.8
KURK	Kurchatov	45.48	307	eP	P	11 19 02.9	-0.5
	comp=Z,21nm,0.8s						
KURK	Kurchatov	45.48	307	c iP	P	11 19 03.4	0.0
KURK				pmax	pmax		
	comp=Z,19nm,0.7s						
TOLK	Toolik Lake Re	46.61	28	eP	P	11 19 13.5	+1.4
	comp=Z,5.7nm,1.0s						
PDGK	Podgornoye	46.65	297	P	P	11 19 12.7	-0.2
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
JIRN	Jiri	47.62	274	eP	P	11 19 21.5	+0.6
	comp=Z,17nm,0.5s						
ILAR	Eielson Array	47.65	33	P	P	11 19 21.2	+1.0
	comp=Z,1.2nm,0.7s,baz=269,slow=6.3,SNR=5.3						
ILB	Eielson Array	47.65	33	eP	P	11 19 21.6	+1.4
	comp=Z,5.5nm,0.8s						
IL1	Eielson Array	47.66	33	eP	P	11 19 21.8	+1.6
GUN	Gumba	47.74	275	eP	P	11 19 22.1	+0.3
	comp=Z,17nm,0.4s						
KKN	Kakani	48.27	275	eP	P	11 19 25.8	+0.1
	comp=Z,16nm,0.5s						
SCRK	Sand Creek	48.97	34	eP	P	11 19 31.1	+0.6
	comp=Z,3.9nm,0.8s						
DANN	Dangsing	49.19	276	eP	P	11 19 33.6	+0.7
	comp=Z,44nm,0.6s						
KOLN	Koldanda	49.58	276	eP	P	11 19 36.3	+0.5
	comp=Z,24nm,1.0s						
PYUN	Piuthan	49.90	276	eP	P	11 19 38.7	+0.4
	comp=Z,45nm,0.9s						
BRVK	Borovoye	50.04	311	i P	P	11 19 39.0	+0.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OTUK	Ortayu	50.04	305	P	P	11 19 39.2	+0.4
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	Ala-Archa	50.35	297	⇓eP	P	11 19 41.1	-0.3
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MNAS	Manas	51.78	298	P	P	11 19 53.1	+1.0
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SFK	Sufi-Kurgan	51.98	295	P	P	11 19 54.0	+0.2
SFK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
COEN	Coen	52.43	179	eP	P	11 19 57.7	+0.7
	comp=Z,7.6nm,0.9s						
INK	Inuvik	52.53	28	eP	P	11 19 58.0	+1.0
	comp=Z,6.0nm,1.3s						
INK	Inuvik	52.53	28	P	P	11 19 58.4	+1.4
	comp=Z,0.9nm,0.5s,baz=284,slow=6.7,SNR=10						
KKAR	Karatay Array	52.92	299	eP	P	11 19 59.3	-1.2
	comp=Z,5.5nm,1.2s						
KKAR	Karatay Array	52.92	299	eP	P	11 19 59.3	-1.2
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SVE	Sverdlovsk	54.37	318	eP	P	11 20 10.8	+0.1
SVE				pmax	pmax		
	comp=Z,12nm,0.9s						
NIL	Nilore	54.80	288	eP	P	11 20 13.2	-1.1
	comp=Z,12nm,0.6s						
NIL	Nilore	54.80	288	eP	P	11 20 13.2	-1.1
NIL				pmax	pmax		
	comp=Z,11nm,0.6s						
ARU	Arti	55.58	318	eP	P	11 20 18.8	-0.8
	comp=Z,10nm,1.0s						
ARU	Arti	55.58	318	c iP	P	11 20 19.9	+0.4
ARU				*PP	pP	11 20 30.4	+0.1
ARU						11 21 17.1	
ARU						11 22 21.8	
ARU				S	S	11 28 03.4	+1.0
ARU				SS	SS	11 31 46.1	-1.0
ARU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHGR	Chuyangaron	55.61	295	eP	P	11 20 19.5	-0.7
	comp=Z,31nm,1.5s						
ABKAR	Akbulak array	57.41	310	eP	P	11 20 32.3	-0.4
	comp=Z,6.4nm,0.6s						
FITZ	Fitzroy Crossi	58.67	199	eP	P	11 20 41.6	-0.2
	comp=Z,2.2nm,0.8s						
FITZ	Fitzroy Crossi	58.67	199	P	P	11 20 41.5	-0.2
	comp=Z,1.3nm,0.7s,baz=10,slow=6.8,SNR=5.8						
WRAB	Tennant Creek	58.85	189	eP	P	11 20 42.1	-0.9
	comp=Z,6.3nm,0.8s						
WRAB	Tennant Creek	58.85	189	⇓eP	P	11 20 42.0	-0.9
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WB2	Warramunga Arr	58.86	189	eP	P	11 20 42.5	-0.5
	comp=Z,6.6nm,0.8s						
WR1	Warramunga Arr	58.86	189	eP	P	11 20 42.0	-1.1
	comp=Z,6.6nm,0.7s						
WRA	Warramunga Arr	58.86	189	i P	P	11 20 42.0	-1.0
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRA	Warramunga Arr	58.86	189	P	P	11 20 42.0	-1.0
	comp=Z,3.9nm,0.8s,baz=6.9,slow=7.2,SNR=26						
WC3	Warramunga Arr	58.87	189	eP	P	11 20 41.9	-1.2
	comp=Z,7.7nm,0.8s						
PRGR	Permogore	59.74	327	eP	P	11 20 48.1	-0.5
PRGR				pmax	pmax		
	comp=Z,11nm,0.9s						
RES	Resolute Bay	60.76	15	P	P	11 20 51.7	-3.8
	comp=Z,2.4nm,0.5s,baz=337,slow=1.5,SNR=19						
TMCR	Tamitsa	61.60	331	eP	P	11 21 01.8	+0.5
TMCR				pmax	pmax		
	comp=Z,12nm,1.1s						
YKA	Yellowknife Ar	61.96	31	P	P	11 21 04.3	+0.6
	comp=Z,0.2nm,0.5s,baz=299,slow=5.8,SNR=7.7						
YKB5	Yellowknife Ar	61.96	31	eP	P	11 21 03.9	+0.2
AS31	Alice Springs	62.59	189	eP	P	11 21 08.2	-0.2
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	62.59	189	P	P	11 21 07.9	-0.5
	comp=Z,1.7nm,0.7s,baz=8.7,slow=5.8,SNR=15						
ARA0	ARCESS Array S	62.66	339	eP	P	11 21 08.4	+0.1
ARCES	ARCESS Array B	62.66	339	P	P	11 21 08.4	+0.1
	comp=Z,1.4nm,0.7s,baz=57,slow=8.8,SNR=7.5						
KLMR	Klimovskoe	62.71	328	eP	P	11 21 07.5	-1.3
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLMR	Klimovskoe	62.71	328	eP	P	11 21 07.5	-1.3
KLMR				AMP		11 21 09.8	
	comp=Z,6.0nm,0.9s						
GEYT	Alibeck	63.66	299	P	P	11 21 14.4	-1.1
	comp=Z,2.9nm,0.4s,baz=0.0,slow=1.8,SNR=4.7						
SGF	Sodankyl	63.66	337	P	P	11 21 15.4	+0.4
MSF	Maaselka	63.81	335	P	P	11 21 16.3	+0.3
MSF				pmax	pmax		
	comp=Z,9.0nm,2.0s						
JOF	Joensuu	64.81	332	P	P	11 21 22.7	+0.2
JOF				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OUL	Oulu	65.35	335	P	P	11 21 26.3	+0.3
OUL				pmax	pmax		
	comp=Z,10.0nm,1.9s						
SUF	Sumiainen	66.79	333	P	P	11 21 35.3	0.0
OBN	Obninsk	67.17	323	eP	P	11 21 37.2	-0.6
OBN				e		11 22 05.7	
OBN				e		11 24 09.8	
OBN				pmax	pmax		
	comp=Z,12nm,0.4s						
FIA0	FINESS Array S	67.65	332	eP	P	11 21 40.9	+0.1
FIA0	FINESS Array S	67.65	332	eP	P	11 21 40.9	+0.1
FINES	FINESS Array B	67.65	332	P	P	11 21 40.9	+0.1
	comp=Z,3.2nm,0.6s,baz=49,slow=8.8,SNR=14						
VSR	Storozhevoye	68.14	319	⇓eP	P	11 21 43.7	-0.3
ZEI	Tsey	70.29	309	eP	P	11 21 55.8	-2.0
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	Kislovodsk	70.35	311	eP	P	11 21 59.6	+1.6
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
KBZ	Khabaz	70.35	311	eP	P	11 21 59.0	+1.1
KBZ	Khabaz	70.35	311	P	P	11 21 59.0	+1.1
	comp=Z,6.3nm,0.9s,baz=68,slow=3.5,SNR=14						
NEY	Neytrino	70.73	310	⇑eP	P	11 22 01.7	+1.2
GNI	Garni	71.28	307	⇓eP	P	11 22 05.9	+2.1
GNI				pmax	pmax		
	comp=Z,16nm,0.8s						
NB2	NORSAR Subarra	72.89	337	P	P	11 22 12.8	-0.1
	comp=Z,1.3nm,0.6s,baz=39,slow=6.2						
NB200	NORSAR Array S	72.89	337	eP	P	11 22 13.0	0.0
NOA	NORSAR Array B	72.89	337	P	P	11 22 13.0	0.0
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	72.89	337	P	P	11 22 13.0	0.0
	comp=Z,1.9nm,0.6s,baz=38,slow=6.0,SNR=4.8						
KVN	Kaiserville	73.14	53	eP	P	11 22 15.2	+0.2
	comp=Z,3.2nm,1.0s						
KVN	Kaiserville	73.14	53	eP	P	11 22 15.2	+0.2
KVN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NV01	Mina Array Sit	73.38	54	eP	P	11 22 17.8	+1.4
NVAR	Mina Array Bea	73.38	54	P	P	11 22 18.1	+1.7
	comp=Z,0.6nm,0.8s,baz=320,slow=7.5,SNR=3.1						
AKASG	Malin Array Be	73.40	322	P	P	11 22 16.1	+0.1
	comp=Z,4.7nm,0.6s,baz=45,slow=6.3,SNR=19						
AKBB	Malin Array Si	73.40	322	eP	P	11 22 15.8	-0.2
	comp=Z,7.6nm,0.9s						
AKBB	Malin Array Si	73.40	322	eP	P	11 22 15.8	-0.2
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KIEV	Kiev	73.41	322	⇑eP	P	11 22 16.0	-0.1
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AK11	Malin Array Si	73.44	322	eP	P	11 22 16.1	-0.2
PD31	Pinedale Array	75.94	46	eP	P	11 22 31.8	+0.5
	comp=Z,1.4nm,1.0s						
PDAR	Pinedale Array	75.94	46	eP	P	11 22 31.1	-0.2
PDAR	Pinedale Array	75.94	46	P	P	11 22 31.8	+0.5
	comp=Z,0.4nm,0.5s,baz=277,slow=1.1,SNR=9.2						
P17A	Butcher Ranch,	77.37	49	eP	P	11 22 40.5	+1.2
	comp=Z,7.4nm,1.4s						
BUR08	Bucovina Ar. S	77.42	322	eP	P	11 22 39.5	+0.2
	comp=Z,3.7nm,0.9s						
BUR04	Bucovina Ar. S	77.43	322	eP	P	11 22 39.6	+0.3
SRU	San Rafael Swe	77.73	50	eP	P	11 22 41.9	+0.5
	comp=Z,11nm,1.6s						
SRU	San Rafael Swe	77.73	50	eP	P	11 22 41.9	+0.5
SRU				pmax	pmax		
	comp=Z,11nm,1.6s						
BR101	Keskin Array S	78.27	312	eP	P	11 22 44.8	+0.5
BRTR	Keskin Array B	78.27	312	ceP	P	11 22 44.5	+0.2
BRTR	Keskin Array B	78.27	312	P	P	11 22 44.8	+0.5
	comp=Z,1.2nm,0.5s,baz=76,slow=3.5,SNR=5.0						
ISR	Istrita	78.51	319	P	P	11 22 46.7	+1.3
ISR				pmax	pmax		
	comp=Z,15nm,0.9s						
MORC	Moravsky Berou	79.33	327	eP	P	11 22 49.9	+0.2
	comp=Z,4.9nm,0.9s						
MORC	Moravsky Berou	79.33	327	eP	P	11 22 49.9	+0.2
MORC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VYHS	Vyhne	79.74	326	eP	P	11 22 53.5	+1.6
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.2s						
VYHS	Vyhne	79.74	326	eP	P	11 22 53.5	+1.6
BRG	Berggiesshubel	79.95	330	eP	P	11 22 54.1	+1.1
	comp=Z,14nm,1.4s						
	comp=N,296nm,20.2s						
	comp=E,310nm,20.7s						
	comp=Z,377nm,16.5s						
BRG	Berggiesshubel	79.95	330	eP	P	11 22 54.2	+1.1
BRG				pmax	pmax		
	comp=Z,14nm,1.4s						
BRG				MLR	MLR		
	comp=N,296nm,20.2s						
BRG				MLR	MLR		
	comp=E,310nm,20.7s						
BRG				MLR	MLR		
	comp=Z,377nm,16.5s						
CLL	Collm	79.98	330	eP	P	11 22 53.0	-0.2
	comp=Z,7.0nm,0.9s						
CLL	Collm	79.98	330	eP	P	11 22 53.0	-0.2
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TREC	Trest	80.56	328	P	P	11 22 57.7	+1.3
TREC				pmax	pmax		
	comp=Z,5.0nm,2.0s						
KHC	Kasperske Hory	81.47	329	P	P	11 23 02.1	+0.8
GERES	GERESS Array B	81.64	329	P	P	11 23 02.2	0.0
	comp=Z,1.1nm,0.6s,baz=36,slow=5.0,SNR=7.5						
GEA0	GERESS Array S	81.65	329	eP	P	11 23 02.3	+0.1
VTS	Vitosha	81.97	319	P	P	11 23 05.3	+1.1
VTS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BFO	Black Forest	84.17	331	ceP	P	11 23 16.4	+1.1
TXAR	Lajitas Array	88.49	53	P	P	11 23 37.2	+0.3
	comp=Z,0.2nm,0.5s,baz=290,slow=3.0,SNR=6.2						
LPAZ	La Paz	145.18	59	PKPbc	PKPbc	11 30 22.2	-0.2
	comp=Z,0.8nm,0.5s,baz=14,slow=4.2,SNR=2.7						

IDC 18 11:12:47.9±9.6**,20°.89S**×**178°.15W,h578**^{km}±118^{km}**,**
mb2.8/4**,mb1 3.1**/5**,mb1mx2.8**/41**,mbtmp3.9**/5**,Error**
ellipse: s-maj=61.8km s-min=34.3km az=28.0,Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	17.79	192	P	P	11 16 22.0	-0.3
	0.4nm,0.3s,baz=168,slow=18,SNR=4.6						
CTA	Charters Tower	33.31	265	P	P	11 18 38.8	-0.4
	2.1nm,1.0s,baz=83,slow=8.5,SNR=4.2						
ASAR	Alice Springs	44.29	257	P	P	11 20 08.1	+0.5
	0.8nm,0.6s,baz=88,slow=9.0,SNR=11						
WRA	Warramunga Arr	44.41	262	P	P	11 20 08.1	-0.4
	0.5nm,0.5s,baz=95,slow=7.9,SNR=9.9						
ILAR	Eielson Array	88.72	13	P	P	11 24 40.6	+0.6
	0.6nm,0.7s,baz=215,slow=6.2,SNR=6.2						
AKASG	Malin Array Be	143.28	331	PKP	PKPab	11 31 14.9	-0.1
	1.1nm,0.4s,baz=43,slow=4.3,SNR=9.3						

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*IDC **18** 11:17:56.9±4.3, 14°.17N×93°.10W, h0^{km}, mb3.4/2,*
mb1 3.7/5, mb1mx3.5/37, mbtmp3.3/5, ML3.2/3, Error
ellipse: s-maj=79.5km s-min=24.7km az=14.0
*MEX **18** 11:18:03.0±0.5, 14°.66N×92°.87W, h101^{km}±21^{km}, MD3.7*
ISC 18 11:18:04.3±2.0**,14°.4N**±0°.2×**93°.01W**±0°.08**,h51**^{km}**,n8,**
σ**2^{s}94**/11**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.89	54	eP	Pn	11 18 18.2	-2.3
THIG				eS	Sn	11 18 30.8	-1.6
PCIG		1.32	351	eP	Pn	11 18 23.1	-3.3
CCIG	Comitan	2.06	24	eP	Pn	11 18 36.1	-0.6
APG	El Apazote	2.54	76	Pn	Pn	11 18 41.4	-1.8
	2.9nm,0.3s,baz=196,slow=14,SNR=29						
APG				Sn	Sn	11 19 17.6	+4.5
	7.9nm,0.3s,baz=298,slow=14,SNR=6.3						
CMIG	Matias Romero	3.23	326	Pn	Pn	11 18 50.1	-2.5
	2.6nm,0.3s,baz=159,slow=13,SNR=41						
CMIG				Sn	Sn	11 19 34.2	+4.3
	8.0nm,0.3s,baz=47,slow=12,SNR=6.3						
TXAR	Lajitas Array	17.84	328	P	Pn	11 22 08.4	-0.6
	0.0nm,0.3s,baz=153,slow=12,SNR=2.7						
NVAR	Mina Array Bea	32.76	322	P	P	11 24 33.8	+1.1
	0.3nm,0.6s,baz=121,slow=8.5,SNR=2.9						
YKA	Yellowknife Ar	50.43	347	P	P	11 26 56.6	+0.2
	0.5nm,0.7s,baz=150,slow=7.5,SNR=6.4						

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*ISCJB **18** 11:26:38.9±0.3, 40°.80N±0°.02×21°.40E±0°.03, h6^{km}±3^{km},*
Error ellipse: s-maj=3.3km s-min=2.7km az=171.4
*SKO **18** 11:26:38.3, 40°.79N×21°.41E, h15^{km}, M2.2, ML2.7*
*THE **18** 11:26:38.3, 40°.83N×21°.35E, h3^{km}±2^{km}, ML2.7/5, Error*
ellipse: s-maj=2.1km s-min=0.6km az=321.0
*ATH **18** 11:26:38.5, 40°.79N×21°.37E, h15^{km}±2^{km}, ML2.6/4, Error*
ellipse: s-maj=3.1km s-min=1.2km az=141.0
*BEO **18** 11:26:40.7±0.4, 40°.83N×21°.52E, h10^{km}, ML2.5/6*
ISC 18 11:26:39.0±0.9**,40°.78N**±0°.02×**21°.34E**±0°.02**,h16**^{km}±8^{km}**,**
n40,σ**1^{s}41**/61**,3C-1D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	Bitola	0.24	356	⇑iPg	Pb	11 26 44.2	-0.9
BIA				i Sg	Sb	11 26 48.5	-0.7
BIA				eLg	Lg	11 26 49.4	
	comp=N,914nm,0.3s						
BIA				eLg	Lg	11 26 49.8	
	comp=E,783nm,0.2s						
NEST	Nestorio	0.42	212	P	Pg	11 26 47.0	-0.7
NEST				S	Sb	11 26 53.6	-0.8
NEST				AML	AML	11 26 54.8	
	comp=E,2368μm,0.2s						
NEST				AML	AML	11 26 57.5	
	comp=N,1719μm,0.6s						
NEST	Nestorio	0.42	212	P	Pg	11 26 47.0	-0.7
NEST				S	Sb	11 26 54.4	0.0
OHR	Ohrid	0.53	309	i Pg	Pb	11 26 49.1	-0.9
OHR				i Sg	Sn	11 26 58.9	-1.8
OHR				eLg	Lg	11 26 59.7	
	comp=N,457nm,0.4s						
OHR				eLg	Lg	11 27 00.0	
	comp=E,554nm,0.4s						
KZN	Kozani	0.57	145	P	Pg	11 26 49.7	-0.6
KZN				S	Sg	11 26 57.8	-0.2
KZN				AML	AML	11 27 00.2	
	comp=N,4855μm,0.3s						
KZN				AML	AML	11 27 00.7	
	comp=E,2652μm,0.4s						
KRUS	Krusevo	0.60	353	⇑iPg	Pg	11 26 50.0	-0.9
KRUS				i Sg	Sb	11 26 59.2	-0.1
KRUS				eLg	Lg	11 26 59.5	
	comp=E,271nm,0.4s						
KRUS				eLg	Lg	11 26 59.8	
	comp=N,288nm,0.4s						
PENT	Pentalofos	0.60	195	P	Pg	11 26 50.5	-0.5
PENT				S	Sb	11 26 59.7	+0.3
PENT				AML	AML	11 27 03.5	
	comp=N,688μm,0.6s						
PENT				AML	AML	11 27 05.1	
	comp=E,1013μm,0.5s						
KPRO	Kipourio	0.82	179	P	Pg	11 26 55.1	+0.1
KPRO	Kipourio	0.82	179	P	Pg	11 26 55.1	+0.1
KPRO				S	Sn	11 27 07.7	-0.1
GRG	Griva	0.82	77	P	Pb	11 26 53.9	-1.0
GRG				S	Sg	11 27 05.7	-0.2
GRG				AML	AML	11 27 13.0	
	comp=N,932μm,0.8s						
GRG				AML	AML	11 27 13.3	
	comp=E,408μm,0.3s						
GRG	Griva	0.82	77	P	Pb	11 26 54.0	-1.0
GRG	Griva	0.82	77	i Pg	Pb	11 26 53.8	-1.1
GRG				i Sg	Sg	11 27 06.3	+0.4
VAY	Valandovo	1.08	59	⇓iPg	Pb	11 26 58.6	-0.6
VAY				i Sg	Sn	11 27 13.1	-0.8
VAY				eLg	Lg	11 27 17.9	
	comp=N,77nm,0.8s						
VAY				eLg	Lg	11 27 18.1	
	comp=E,164nm,1.0s						
LIT	Litokhoron	1.10	127	P	Pn	11 26 59.3	-0.5
LIT	Litokhoron	1.10	127	P	Pn	11 26 59.2	-0.5
LIT				S	Sg	11 27 15.8	+1.0
LIT	Litokhoron	1.10	127	i Pg	Pn	11 26 59.3	-0.5
LIT				i Sg	Sg	11 27 15.8	+1.0
STIP	Stip	1.12	34	⇑iPg	Pg	11 27 02.3	+1.7
STIP				i Sg	Sg	11 27 20.3	+5.1
STIP				eLg	Lg	11 27 21.8	
	comp=N,27nm,0.3s						
STIP				eLg	Lg	11 27 22.2	
	comp=E,26nm,0.3s						
PHP	Peshkopia	1.14	323	P	Pb	11 26 58.7	-1.6
PHP				S	Sg	11 27 14.4	-1.4

KNT	Kendrikon	1.24	71	P	Pb	11 27 01.5	-0.5
KNT	Kendrikon	1.24	71	P	Pb	11 27 01.5	-0.5
KNT				S	Sg	11 27 18.5	-0.6
KNT	Kendrikon	1.24	71	*i* Pg	Pb	11 27 01.5	-0.5
KNT				*i* Sg	Sg	11 27 18.5	-0.6
THL	Klokotos Trika	1.31	157	P	Pn	11 27 02.5	-0.1
HORT	Hortiatis	1.35	97	P	Pb	11 27 03.5	-0.4
IGT	Igoumenitsa	1.46	212	*e*Pg	Pg	11 27 10.2	+3.0
IGT				*e*Sg	Sg	11 27 30.7	+4.4
SOH	Sokhos	1.53	88	P	Pb	11 27 06.5	-0.5
SOH	Sokhos	1.53	88	*i* Pn	Pb	11 27 06.5	-0.5
PLG	Polygyros	1.65	103	P	Pb	11 27 08.9	-0.2
AGG	Agios Georgios	1.91	156	P	Pb	11 27 12.1	-1.3
AGG	Agios Georgios	1.91	156	P	Pb	11 27 12.0	-1.5
AGG				S	Sb	11 27 37.8	+0.8
ANX	Ano Chora	2.23	168	P	Pb	11 27 17.6	-1.3
VTS	Vitosha	2.29	37	*e*Pn	Pn	11 27 16.7	+0.5
VTS				*e*Sn	Sn	11 27 44.2	+0.1
EFP	Efpalio	2.39	169	P	Pb	11 27 20.1	-1.5
SELS	Selova	2.45	356	*e*Pn	Pb	11 27 21.2	-1.4
ZAPS	Zavoj	2.67	21	*e*Pn	Pn	11 27 22.7	+1.3
SJES	Sjenica	2.69	338	*e*Pn	Pb	11 27 24.9	-1.8
SJES				*e*Sn	Sb	11 27 57.3	-2.2
BOVS	Bovan	2.87	5	*e*Pn	Pn	11 27 25.3	+1.2
IVAS	Ivanjica	2.94	343	*e*Pn	Pn	11 27 26.0	+1.0
BBLS	Lazići	3.41	336	*e*Pn	Pn	11 27 34.2	+2.7
SVIS	Svilajnac	3.49	358	*e*Pn	Pn	11 27 33.4	+0.8
TRUS	Trudelj	3.51	349	*e*Pn	Pn	11 27 34.4	+1.5

IDC 18 11:33:37.8±2.3**, 7°.12S×147°.82E, h0^{km}, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.3**/36**, mbtmp3.3**/3**, ML3.7**/1**, Error ellipse: s-maj=167.4km s-min=30.1km az=125.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.26	224	P	Pn	11 37 52.1	-0.7
	0.2nm,0.3s,baz=56,slow=12,SNR=12						
ASAR	Alice Springs	21.20	218	P	P	11 38 26.1	+1.0
	0.4nm,0.5s,baz=53,slow=9.6,SNR=7.4						
ILAR	Eielson Array	86.19	23	P	P	11 46 21.2	+0.5
	0.4nm,0.6s,baz=253,slow=5.2,SNR=8.8						
TORD	Torodi Ar. Bea	146.14	283	PKPbc	PKPdf	11 53 19.3	-0.9
	0.3nm,0.4s,baz=75,slow=4.7,SNR=4.9						

JMA 18 11:34:18.5±0.8**, 45°.53N×150°.98E, h30^{km}, M4.1, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.33	242	P	Pn	11 35 21.5	-0.7
NEM2				*e*S	Sn	11 36 08.4	-3.2
JRA	Rausu	4.47	251	P	Pn	11 35 26.2	+2.1
JNK	Nakash	4.88	249	P	Pn	11 35 30.7	+0.9
JAK	Akkeshi	5.17	243	P	Pn	11 35 32.6	-1.2
JAK				*e*S	Sn	11 36 28.3	-4.2
JTKR	Abashiri--Toko	5.27	255	P	Pn	11 35 37.5	+2.3
JAR	Ashorobuto	5.63	249	P	Pn	11 35 41.8	+1.7
JAR				*e*S	Sn	11 36 43.7	+0.1
JMP	Maruseppu	5.63	257	P	Pn	11 35 43.1	+2.9
JOB	Onbets	5.77	245	P	Pn	11 35 42.2	+0.2
JKK2	Kamakawa 2	6.10	257	P	Pn	11 35 49.5	+3.0
JCH	Churui	6.21	245	P	Pn	11 35 48.3	+0.2

SKO ***18*** *11:35:34.6, 40°.77N×21°.38E, h15^{km}, M2.2, ML2.5*
ISCJB ***18*** *11:35:35.6±0.3, 40°.79N±0°.02×21°.39E±0°.03, h7^{km}±3^{km}, Error ellipse: s-maj=3.5km s-min=2.9km az=2.4*
THE ***18*** *11:35:35.3, 40°.79N×21°.35E, h8^{km}, ML2.5/4, Error ellipse: s-maj=1.0km s-min=0.6km az=244.0*
ATH ***18*** *11:35:35.0, 40°.81N×21°.34E, h8^{km}±1^{km}, ML2.9/3, Error ellipse: s-maj=3.1km s-min=1.3km az=135.0*
BEO ***18*** *11:35:37.9±0.4, 40°.87N×21°.42E, h10^{km}, ML2.4/6*
ISC 18 11:35:35.4±0.8**, 40°.80N**±0°.02×**21°.39E**±0°.02**, h6^{km}**±4^{km}**, n38, σ1^{s}.32**/58**, 2C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.01	215	P	Pg	11 35 36.9	+0.2
FNA				S	Sg	11 35 38.0	+0.4
FNA				AML	AML	11 35 38.1	
	comp=N,53141µm,0.2s						
FNA				AML	AML	11 35 38.2	
	comp=E,71343µm,0.4s						
FNA	Florina	0.01	215	P	Pg	11 35 36.9	+0.2
FNA				S	Sg	11 35 37.8	+0.2
FNA	Florina	0.01	215	⇓*i*Pg	Pg	11 35 36.9	+0.2
FNA				*i* Sg	Sg	11 35 38.0	+0.4
BIA	Bitola	0.23	348	*i* Pg	Pg	11 35 40.9	+0.9
BIA				*i* Sg	Sg	11 35 45.0	+1.9
BIA				*e*Lg	Lg	11 35 45.7	
	comp=E,549nm,0.3s						
BIA				*e*Lg	Lg	11 35 45.8	
	comp=N,434nm,0.2s						
NEST	Nestorio	0.46	214	P	Pg	11 35 43.7	-0.6
NEST				S	Sg	11 35 50.0	-0.3
NEST				AML	AML	11 35 51.5	
	comp=N,1577µm,0.3s						
NEST				AML	AML	11 35 51.5	
	comp=E,2638µm,0.2s						
NEST	Nestorio	0.46	214	P	Pg	11 35 43.8	-0.6
NEST				S	Sg	11 35 50.3	0.0
OHR	Ohrid	0.55	306	*i* Pg	Pg	11 35 45.8	-0.1
OHR				*i* Sg	Sb	11 35 54.7	-0.9
OHR				*e*Lg	Lg	11 35 56.2	
	comp=N,276nm,0.3s						
OHR				*e*Lg	Lg	11 35 56.6	
	comp=E,467nm,0.5s						
KZN	Kozani	0.57	149	P	Pg	11 35 46.3	-0.1
KZN				S	Sb	11 35 55.7	-0.5
KZN				AML	AML	11 35 56.6	
	comp=E,2157µm,0.4s						
KZN				AML	AML	11 35 56.8	
	comp=N,3439µm,0.3s						
KRUS	Krusevo	0.58	350	⇑*i*Pg	Pg	11 35 46.6	0.0
KRUS				*i* Sg	Sb	11 35 55.7	-0.9
KRUS				*e*Lg	Lg	11 35 55.9	
	comp=E,265nm,0.6s						
KRUS				*e*Lg	Lg	11 35 57.4	
	comp=N,217nm,0.4s						
PENT	Pentalofos	0.63	198	P	Pg	11 35 47.1	-0.5
PENT				S	Sg	11 35 56.2	+0.4
GRG	Griva	0.79	78	P	Pg	11 35 50.6	+0.1
GRG	Griva	0.79	78	P	Pg	11 35 50.6	+0.1
GRG	Griva	0.79	78	*i* Pg	Pg	11 35 50.4	-0.1
GRG				*i* Sg	Sb	11 36 02.6	+0.2
KPRO	Kipourio	0.84	181	P	Pg	11 35 51.5	0.0
KPRO	Kipourio	0.84	181	P	Pg	11 35 51.2	-0.4
KPRO				S	Sg	11 36 02.4	-0.1
VAY	Valandovo	1.04	59	*i* Pg	Pg	11 35 55.1	-0.2
VAY				*i* Sg	Sn	11 36 10.2	-1.0
VAY				*e*Lg	Lg	11 36 11.7	
	comp=N,49nm,0.6s						
VAY				*e*Lg	Lg	11 36 14.7	
	comp=E,134nm,0.7s						
STIP	Stip	1.08	34	⇑*i*Pg	Pn	11 35 58.9	+1.8
STIP				*i* Sg	Sn	11 36 17.6	+5.2
STIP				*e*Lg	Lg	11 36 19.0	
	comp=E,18nm,0.3s						
STIP				*e*Lg	Lg	11 36 19.1	
	comp=N,14nm,0.4s						
LIT	Litokhoron	1.09	129	P	Pb	11 35 55.9	-0.8
LIT	Litokhoron	1.09	129	P	Pb	11 35 55.9	-0.8
LIT				S	Sn	11 36 12.0	-0.6
LIT	Litokhoron	1.09	129	*i* Pg	Pb	11 35 55.8	-0.8
PHP	Peshkopia	1.14	322	P	Pb	11 35 56.0	-1.6
PHP				S	Sn	11 36 12.9	-1.0
KNT	Kendrikon	1.20	72	P	Pg	11 35 58.4	-0.1
KNT	Kendrikon	1.20	72	P	Pg	11 35 58.4	-0.1
KNT				S	Sn	11 36 15.1	-0.2
KNT	Kendrikon	1.20	72	⇓*i*Pg	Pg	11 35 58.4	-0.1
KNT				*i* Sg	Sn	11 36 15.2	-0.2
HORT	Hortiatis	1.32	98	P	Pg	11 36 00.9	+0.2
SOH	Sokhos	1.49	88	*i* Pn	Pg	11 36 04.2	+0.2
IGT	Igoumenitsa	1.50	213	*e*Pg	Pg	11 36 06.5	+2.4
IGT				*e*Sg	Sg	11 36 27.7	+4.1
IGT	Igoumenitsa	1.50	213	*e*Pn	Pb	11 36 03.1	-0.5
AGG	Agios Georgios	1.91	157	P	Pn	11 36 08.2	-0.4
VTS	Vitosha	2.25	37	*e*Pn	Pb	11 36 14.6	-2.0
VTS				*e*Sn	Sn	11 36 40.8	-0.7
SELS	Selova	2.43	355	*e*Pn	Pb	11 36 17.0	-2.5
ZAPS	Zavoj	2.65	20	*e*Pn	Pn	11 36 20.2	+1.6
SJES	Sjenica	2.68	337	*e*Pn	Pb	11 36 21.3	-2.5
BOVS	Bovan	2.85	5	*e*Pn	Pn	11 36 22.0	+0.6
IVAS	Ivanjica	2.93	342	*e*Pn	Pn	11 36 22.6	+0.1
DIVS	Divibare	3.46	343	*e*Pn	Pn	11 36 31.5	+1.6
SVIS	Svilajnac	3.47	358	*e*Pn	Pn	11 36 31.3	+1.4
TRUS	Trudelj	3.50	348	*e*Pn	Pn	11 36 30.8	+0.4

IDC ***18*** *11:38:02.3±0.8, 32°.76N×94°.55E, h0^{km}, mb3.7/14, mb1 3.8/18, mb1mx3.7/46, mbtmp3.7/18, ML3.5/4, Error ellipse: s-maj=30.3km s-min=16.0km az=53.0*
ISCJB ***18*** *11:38:05.4±0.5, 32°.81N±0°.06×94°.60E±0°.08, h33^{km}, mb3.7/14, Error ellipse: s-maj=10.6km s-min=7.2km az=31.2*
ISC 18 11:38:07.5±0.7**, 32°.82N**±0°.09×**94°.6E**±0°.1**, h35^{km}, n27, σ0^{s}.71**/27**, mb3.8**/14**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	Gumba	9.00	239	*e*P	Pn	11 40 16.2	+0.9
	27nm,0.5s						
KKN	Kakani	9.51	241	*e*P	Pn	11 40 23.1	+1.0
	17nm,0.4s						
PKI	Pulchoki	9.54	239	*e*P	Pn	11 40 23.4	+0.8
	33nm,0.4s						
PKIN	Phulchoki	9.54	239	*e*P	Pn	11 40 23.3	+0.7
	28nm,0.4s						
DMN	Daman	9.73	240	*e*P	Pn	11 40 25.8	+0.5
	13nm,0.4s						
DANN	Dangsing	10.37	247	*e*P	Pn	11 40 35.1	+1.1
	40nm,0.4s						
KOLN	Koldanda	10.78	245	*e*P	Pn	11 40 39.9	+0.4
	9.9nm,0.5s						
PYUN	Piuthan	11.09	248	*e*P	Pn	11 40 43.8	+0.1
	9.7nm,0.4s						
CMAR	Chiang Mai Arr	14.82	164	Pn	Pn	11 41 33.5	-1.0
	0.3nm,0.3s,baz=343,slow=12,SNR=2.8						
MKAR	Makanchi Array	16.84	330	Pn	Pn	11 41 59.4	-1.0
	0.1nm,0.3s,baz=134,slow=10,SNR=4.2						
SONM	Songino Array	17.45	27	P	Pn	11 42 08.1	+0.1
	0.1nm,0.3s,baz=208,slow=13,SNR=6.1						
AAK	Ala-Archa	18.66	307	P	P	11 42 22.4	-0.1
	0.1nm,0.3s,baz=110,slow=12,SNR=2.9						
KURBB	Kurchatov Arra	21.39	331	P	P	11 42 51.4	-0.4
	6.3nm,0.7s,baz=138,slow=11,SNR=37						
ZALV	Zalesovo Beam	22.25	345	P	P	11 43 02.0	+1.0
	0.4nm,0.4s,baz=158,slow=9.6,SNR=3.5						
BVAR	Borovoye Array	26.66	326	P	P	11 43 41.9	-0.9
	0.5nm,0.6s,baz=132,slow=12,SNR=2.4						
BRTR	Keskin Array B	48.83	296	P	P	11 46 49.4	-0.1
	0.9nm,0.9s,baz=48,slow=7.6,SNR=3.0						
AKASG	Malin Array Be	50.27	311	P	P	11 46 59.7	-0.5
	0.2nm,0.3s,baz=80,slow=6.1,SNR=5.2						
FINES	FINESS Array B	51.61	325	P	P	11 47 10.3	+0.2
	1.6nm,0.8s,baz=106,slow=6.2,SNR=4.2						
ARCES	ARCESS Array B	52.38	335	P	P	11 47 15.9	+0.2
	1.7nm,0.9s,baz=84,slow=9.2,SNR=3.3						
NB2	NORSAR Subarra	58.79	326	P	P	11 48 01.5	-0.4
	comp=Z,1.2nm,0.9s,baz=77,slow=6.9						
NOA	NORSAR Array B	58.79	326	P	P	11 48 01.6	-0.4
	comp=Z,0.7nm,0.6s,baz=78,slow=7.0,SNR=4.8						
GERES	GERESS Array B	60.48	311	P	P	11 48 14.0	+0.1
	comp=Z,1.0nm,0.7s,baz=77,slow=6.0,SNR=5.7						
WRA	Warramunga Arr	64.75	138	P	P	11 48 42.5	0.0
	comp=Z,0.4nm,0.9s,baz=323,slow=8.1,SNR=5.0						
ASAR	Alice Springs	67.52	141	P	P	11 49 00.9	+0.7
	comp=Z,0.6nm,0.8s,baz=324,slow=6.1,SNR=6.4						
ILAR	Eielson Array	71.62	23	P	P	11 49 26.5	+1.5
	comp=Z,0.5nm,0.8s,baz=306,slow=4.7,SNR=5.8						
YKA	Yellowknife Ar	82.15	13	P	P	11 50 23.7	-0.5
	comp=Z,0.3nm,0.8s,baz=325,slow=5.1,SNR=6.3						
TORD	Torodi Ar. Bea	85.42	283	P	P	11 50 41.7	-0.2
	comp=Z,0.6nm,0.7s,baz=77,slow=4.5,SNR=3.2						

SOME ***18*** *11:38:13.7, 41°.12N×71°.00E, h10^{km}*
NNC ***18*** *11:38:15.3±0.7, 41°.23N×71°.00E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=6.0km s-min=3.5km az=34.0*
KRNET ***18*** *11:38:16.2±0.1, 41°.31N×71°.14E, h17^{km}, mb2.3*
ISC 18 11:38:15.4±1.4**, 41°.27N**±0°.03×**71°.04E**±0°.04**, h5^{km}**±11^{km}**, n20, σ1^{s}.03**/34**, 16C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.87	53	⇓*i*P	Pg	11 38 31.2	-0.9
	baz=53						
ARK				⇓*i*S	Sg	11 38 42.2	-1.2
	baz=53						
IUG	Iuzhnay	1.15	319	P	Pb	11 38 37.1	-0.8
	12nm,0.2s						
IUG				S	Sn	11 38 53.9	-0.8
	16nm,0.3s						
IUG	Iuzhnay	1.15	319	*e*P	Pb	11 38 37.0	-1.0
	8.5nm,0.4s						
IUG				*e*S	Sn	11 38 53.5	-1.1
	11nm,0.8s						
BTK	Batken	1.23	188	⇓*e*P	Pg	11 38 40.2	+1.3
	baz=91						
BTK				⇓*i*S	Sn	11 38 57.4	+1.0
	baz=91						
ARSB	Arslanbob	1.47	87	⇓*e*P	Pn	11 38 42.1	-0.6
	baz=89						
ARSB				⇓*i*S	Sn	11 39 00.7	-1.6
	baz=89						
MNAS	Manas	1.63	42	⇑Pg	Pb	11 38 45.9	-0.2
	0.9nm,0.3s						
MNAS				⇑Lg	Lg	11 39 09.9	
	1.7nm,0.3s						
MNAS	Manas	1.63	42	P	Pb	11 38 46.0	-0.2
	1.4nm,0.3s						
MNAS				S	Sg	11 39 09.0	+1.1
	1.6nm,0.3s						
MNAS	Manas	1.63	42	⇑*e*P	Pn	11 38 45.0	0.0
	baz=40						
MNAS				⇑*i*S	Sn	11 39 06.1	-0.4
	baz=40						
KK31	Karatay Array	1.87	348	Pg	Pb	11 38 50.2	+0.1
	2.3nm,0.3s,baz=168,slow=18,SNR=66						
KK31				Lg	Lg	11 39 16.8	
	6.6nm,0.5s,baz=162,slow=29,SNR=13						
AML	Almayashu	2.17	66	⇑*i*P	Pn	11 38 53.7	+1.2
	baz=66						
AML				⇑*i*S	Sn	11 39 21.0	+1.0
	baz=66						
MRKS	Merke	2.19	47	Pg	Pb	11 38 56.6	+0.8
	4.2nm,0.3s						
MRKS				Lg	Lg	11 39 27.6	
	4.4nm,0.3s						
MRKS	Merke	2.19	47	*e*P	Pb	11 38 56.5	+0.8
	2.2nm,0.3s						
MRKS				*e*S	Sg	11 39 27.5	+1.5
	4.7nm,0.3s						
SFK	Sufi-Kurgan	2.26	123	⇑Pg	Pg	11 38 58.1	-0.6
	0.1nm,0.2s						
SFK				⇑Lg	Lg	11 39 28.3	
	1.3nm,0.3s						
SFK	Sufi-Kurgan	2.26	123	Pg	Pb	11 38 56.1	-0.7
	0.5nm,0.1s						
SFK				Lg	Lg	11 39 26.7	
	2.3nm,0.3s						
SFK	Sufi-Kurgan	2.26	123	⇑*i*P	Pb	11 38 55.2	-1.7
	baz=25						
SFK				⇑*e*S	Sb	11 39 23.7	-1.5
	baz=25						
EKS2	Erkin-Say	2.47	55	⇑*e*P	Pn	11 38 57.4	+0.9
	baz=55						
EKS2				⇑*i*S	Sn	11 39 27.7	+0.6
	baz=55						
ARLS	Aral	2.53	76	⇓*i*P	Pn	11 38 58.5	+1.1
	baz=76						
ARLS				⇓*i*S	Sn	11 39 29.8	+1.1
	baz=76						
UCH	Uchtor	2.77	69	⇑*i*P	Pn	11 39 02.0	+1.1
	baz=69						
UCH				⇑*i*S	Sn	11 39 35.3	+0.4
	baz=69						
AAK	Ala-Archa	2.92	61	⇑Pg	Pb	11 39 07.6	-0.4
	1.0nm,0.4s						
AAK				⇑Lg	Lg	11 39 46.9	
	1.9nm,0.6s						
AAK	Ala-Archa	2.92	61	⇓*i*P	Pn	11 39 03.8	+1.2
	baz=61						
AAK				⇓*i*S	Sn	11 39 38.6	+0.5
	baz=61						

IDC 18 11:50:14.5±1.8**, 11°.53S×165°.08E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.6**/28**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=51.8km s-min=33.3km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.56	173	Pn	Pn	11 52 47.9	+0.6
	0.3nm,0.3s,baz=198,slow=20,SNR=4.3						
WRA	Warramunga Arr	30.70	250	P	P	11 56 31.9	+0.5
	1.0nm,1.1s,baz=84,slow=8.6,SNR=5.4						
ASAR	Alice Springs	31.99	244	P	P	11 56 42.1	-0.6
	0.3nm,0.8s,baz=72,slow=10,SNR=4.1						
ILAR	Eielson Array	84.18	19	P	P	12 02 47.3	-0.1
	0.4nm,0.9s,baz=234,slow=4.2,SNR=4.7						

ISCJB ***18*** *11:59:23.9±1.4, 34°.1S±0°.1×72°.3W±0°.1, h30^{km}±22^{km}, Error ellipse: s-maj=28.1km s-min=14.0km az=31.1*
GUC ***18*** *11:59:24.4±0.6, 34°.06S×72°.15W, h37^{km}±5^{km}, ML3.4*
SJA ***18*** *11:59:24.0±0.8, 33°.89S×72°.19W, h21^{km}±6^{km}, ML3.5, MW4.0*
ISC 18 11:59:25.2±2.1**, 34°.01S**±0°.07×**72°.2W**±0°.1**, h15^{km}**±15^{km}**, n13, σ0^{s}.73**/21**, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.40	160	⇑*e*P	Pg	11 59 33.3	0.0
CHPI				*e*S	Sb	11 59 40.0	+0.1
ROC1	El Roble	1.42	43	*i* P	Pn	11 59 49.2	-1.4
ROC1				*i* S	Sn	12 00 08.6	-0.4
ROCH	El Roble	1.42	43	⇓*e*P	Pn	11 59 49.2	-1.4
ROCH				*e*S	Sn	12 00 08.7	-0.4
ROCH				IAML		12 00 18.0	
	comp=N,1µm,0.4s						
CLCH	Cerro Calan	1.50	66	*e*P	Pn	11 59 51.1	-0.4
CLCH				*e*S	Sb	12 00 11.4	0.0
CLCH				IAML		12 00 16.4	
	comp=E,902nm,0.3s						
PEL	Peldehue	1.51	56	*i* P	Pn	11 59 51.1	-0.6
PEL				*i* S	Sn	12 00 11.5	+0.3
PEL	Peldehue	1.51	56	⇓*e*P	Pn	11 59 51.4	-0.3
PEL				*e*S	Sb	12 00 12.3	+0.3
PEL				IAML		12 00 20.6	
	comp=E,816nm,0.5s						
LMEL	Las Melosas	1.65	85	*e*P	Pn	11 59 53.0	-0.6
LMEL				*e*S	Sn	12 00 14.8	+0.2
LMEL				IAML		12 00 18.3	
	comp=N,988nm,0.3s						
FCH	Farellones	1.71	67	*e*P	Pn	11 59 54.6	-0.1
FCH				*e*S	Sb	12 00 17.7	-0.2
FCH				IAML		12 00 18.8	
	comp=E,528nm,0.3s						
AUSP	Uspallata	2.94	53	*i* P	Pn	12 00 12.6	+1.0
RTLS	Leoncito	3.27	48	*i* P	Pn	12 00 17.1	+0.9
RTLS				IAML		12 01 12.1	
	comp=Z,112nm,0.5s						
RTCV	Cerro Valdivia	3.73	56	*i* P	Pn	12 00 23.1	+0.8
AMOG	MOGNA	4.37	46	*i* P	Pn	12 00 31.5	+0.5
AROD	Rodeo	4.46	32	*i* P	Pn	12 00 33.3	+0.7

BJI ***18*** *12:01:44.9, 1°.73N×98°.90E, h119^{km}, mB4.9/21, mb4.6/36*
ISCJB ***18*** *12:01:47.3±0.3, 1°.82N±0°.03×99°.04E±0°.04, h137^{km}±3^{km}, mb4.6/67, Error ellipse: s-maj=6.4km s-min=4.0km az=155.8*
IDC ***18*** *12:01:47.2±0.6, 1°.82N×99°.08E, h119^{km}±3^{km}, mb4.2/22, mb1 4.3/24, mb1mx4.1/40, mbtmp4.6/24, Error ellipse: s-maj=15.4km s-min=8.6km az=55.0*
NEIC ***18*** *12:01:48.0±0.4, 1°.81N×99°.05E, h130^{km}±3^{km}, mb4.8/41, Error ellipse: s-maj=6.7km s-min=3.5km az=54.0*
DJA ***18*** *12:01:49.4±0.4, 2°N±2°×9°9E±°, h114^{km}±6^{km}, M4.6/13, mb4.8/1, mB4.7/1, MLv4.5/13, Mw(mB)4.0/1*
ISC 18 12:01:47.8±0.5**, 1°.91N**±0°.04×**99°.02E**±0°.04**, h123^{km}**±4^{km}**, h124^{km}:pP-P, n156, σ1^{s}.27**/178**, mb4.7**/74**, 2C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	0.89	354	*e*Pn	Pn	12 02 08.9	-0.3
PSI				*e*Sn	Sn	12 02 24.0	-1.4
PSI	Prapat	0.89	354	P	Pn	12 02 09.5	+0.3
	292nm,0.3s,baz=360,slow=10,SNR=557						
PSI				S	Sn	12 02 24.8	-0.6
	116nm,0.3s,baz=180,slow=4.6,SNR=45						
PSI				LR	LR	12 02 31.4	
	comp=Z,265nm,21.4s,baz=202,slow=50						
MNSI	Mandailing Nat	1.24	153	P	Pn	12 02 13.7	+1.2
GSI	Gunungsitoli	1.56	247	*e*Pn	Pn	12 02 16.9	+0.8
GSI				*e*Sn	Sn	12 02 38.9	+1.1
GSI	Gunungsitoli	1.56	247	P	Pn	12 02 17.3	+1.2
GSI				S	Sn	12 02 38.4	+0.6
TSI	Tuntungan	1.64	344	P	Pn	12 02 19.1	+2.0
KCSI	Kotacane, Aceh	2.03	322	P	Pn	12 02 22.7	+0.9
KCSI				S	Sn	12 02 47.5	-0.3
PBSI	Pulau Batu	2.09	201	P	Pn	12 02 23.7	+1.2
PBSI				S	Sn	12 02 49.3	+0.2
TPTI		2.27	306	P	Pn	12 02 25.8	+1.0
BKNI	Bangkinang	2.56	128	*e*Pn	Pn	12 02 28.8	+0.4
BKNI	Bangkinang	2.56	128	P	Pn	12 02 30.1	+1.6
SNSI	Sinabang, Aceh	2.74	280	P	Pn	12 02 31.7	+1.0
PDSI	Padang	3.15	153	P	Pn	12 02 37.5	+1.3
SISI	Saibi	3.22	179	P	Pn	12 02 35.8	-1.2
IPM	Ipoh	3.24	38	*e*Pn	Pn	12 02 39.4	+2.0
IPM				*e*Sn	Sn	12 03 13.5	-2.2
SDSI	Sungai Dareh	3.71	140	P	Pn	12 02 46.1	+2.5
KULM	Kulim	3.73	26	*e*Pn	Pn	12 02 45.2	+1.4
LHMI	Lhok Sumawe	3.89	328	*e*Pn	Pn	12 02 46.7	+0.8
LHMI	Lhok Sumawe	3.89	328	P	Pn	12 02 47.2	+1.3
KRJI	Kerinci	4.67	148	P	Pn	12 02 59.9	+3.5
SKLT	Songkhla	5.46	17	P	Pn	12 03 08.1	+1.1
	100nm,0.8s,930nm0.3nm						
TRTT	Trang	5.92	6	P	Pn	12 03 13.8	+0.6
	139nm,0.8s,1µm0.5nm						
PKDT	Phuket	5.98	353	P	Pn	12 03 14.2	+0.2
	21nm,0.9s,4µm0.2nm						
MNAI	Manna	7.37	148	*e*Pn	Pn	12 03 31.2	-1.5
PHET	Kaeng Krachan	10.94	3	P	Pn	12 04 23.4	+2.4
	13nm,0.6s						
SRAK	Srakaew	12.39	14	P	P	12 04 47.7	+0.8
SBUM	Sibu	13.20	87	*e*P	Pn	12 04 53.1	+2.5
UTHA	Uthaitani	13.57	2	P	P	12 04 59.2	-0.8
	20nm,0.9s,177nm						
UMPA	Umpang Tak	14.21	359	P	P	12 05 06.7	-0.4
	9.7nm,1.0s,782nm						
CHAI	Chaiyaphum	14.21	12	P	P	12 05 08.9	+1.8
	6.0nm,0.8s						
SUKH	Sukhothai	15.48	2	P	P	12 05 22.6	+1.3
	36nm,0.8s						
SKNT	Sakolnakorn	15.74	18	P	P	12 05 24.8	+0.6
	8.5nm,0.9s						
UTTA	Uttaradit	15.81	5	P	P	12 05 25.5	+0.7
	18nm,0.7s,127nm						
CM01	Chiang Mai Arr	16.41	360	*e*Pn	P	12 05 32.3	+0.8
CM31	Chiang Mai Arr	16.44	360	*e*Pn	P	12 05 32.6	+0.7
	46nm,0.8s						
CMAR	Chiang Mai Arr	16.44	360	P	P	12 05 33.1	+1.2
	6.1nm,0.3s,baz=192,slow=11,SNR=187						
CMMT	Chiang Mai	16.80	360	P	P	12 05 36.4	+0.6
	19nm,0.7s						
CHTO	Chiang Mai	16.80	360	*e*Pn	P	12 05 36.1	+0.2
	17nm,0.9s						
CHTO	Chiang Mai	16.80	360	P	P	12 05 36.5	+0.7
	88nm,0.8s						
PALK	Pallekele	19.01	287	*e*P	Pn	12 06 01.9	-0.4
	14nm,0.6s						
PALK	Pallekele	19.01	287	P	Pn	12 06 02.8	+0.5
	2.1nm,0.3s,baz=116,slow=9.7,SNR=15						
BRDH	Bariadhala	21.85	341	P	P	12 06 32.5	+1.9
	62nm,0.3s,baz=165,slow=7.6,SNR=4.9						
KMI	Kunming	23.36	9	P	P	12 06 46.8	+1.2
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
LUWI	Luwuk	23.93	97	*e*P	P	12 06 49.5	-1.1
	102nm,0.5s						
SHL	Shillong	24.50	344	*e*P	P	12 06 55.7	-0.2
	40nm,0.8s						
BATI	Baumata	27.33	117	P	P	12 07 20.2	-1.1
	14nm,0.4s,baz=294,slow=3.3,SNR=5.8						
JIRN	Jiri	28.40	336	*e*P	P	12 07 31.8	+0.7
	17nm,0.6s						
LSA	Lhasa	28.63	346	*e*P	P	12 07 34.1	+0.8

	32nm,0.6s						
GUN	Gumba	28.75	335	*e*P	P	12 07 34.8	+0.6
	16nm,0.4s						
KKN	Kakani	28.90	334	*e*P	P	12 07 35.7	+0.3
CD2	Chengdu	29.19	8	*e*P	P	12 07 39.5	+1.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KOLN	Koldanda	29.65	332	*e*P	P	12 07 42.7	+0.7
	23nm,0.7s						
ENH	Enshi	29.90	18	*e*P	P	12 07 43.9	-0.1
	15nm,1.4s						
DANN	Dangsing	30.06	332	*e*P	P	12 07 46.2	+0.4
	18nm,0.3s						
PYUN	Piuthan	30.21	331	*e*P	P	12 07 47.5	+0.5
	17nm,0.6s						
SIJI	Sorong	32.36	95	P	P	12 08 05.9	+0.1
	14nm,0.6s,baz=296,slow=8.4,SNR=8.3						
FITZ	Fitzroy Crossi	32.90	128	P	P	12 08 08.3	-2.2
	8.1nm,0.8s,baz=293,slow=5.3,SNR=18						
FITZ				PcP	PcP	12 10 52.2	-0.1
	1.3nm,0.5s,baz=6.2,slow=18,SNR=4.9						
XAN	Xi'an	33.28	15	P	P	12 08 12.8	-0.8
XAN				pP	pP	12 08 36.9	-4.0
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN				pmax	pmax		
	comp=Z,270nm,3.9s						
XAN	Xi'an	33.28	15	*e*P	P	12 08 12.8	-0.8
	9.5nm,0.6s						
LZH	Lanzhou	34.30	7	*e*P	P	12 08 25.8	+3.3
LZH				pP	pP	12 08 52.4	+2.6
LZH				sP	sP	12 09 08.8	+4.5
LZH				PP	PP	12 09 47.6	+4.9
LZH				pmax	pmax		
	comp=Z,13nm,1.4s						
LZH				pmax	pmax		
	comp=Z,250nm,4.9s						
MTN	Manton Dam	35.08	116	*e*P	P	12 08 27.9	-1.5
	4.9nm,0.5s						
NJ2	Nanjing	35.33	30	*e*P	P	12 08 30.9	-0.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GTA	Gaotai	37.33	1	*e*P	P	12 08 49.8	+1.5
GTA				pP	pP	12 09 19.6	+3.5
GTA				sP	sP	12 09 34.9	+4.6
GTA				ScP	ScP	12 14 41.1	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,6.2s						
GTA				LR	LR		
	comp=N,120nm,15.6s						
GTA				LR	LR		
	comp=E,140nm,17.1s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
NWAO	Narrogin (SRO)	38.69	155	P	P	12 08 59.3	-0.4
	7.6nm,0.7s,baz=238,slow=7.2,SNR=5.2						
NIL	Nilore	39.73	325	*e*P	P	12 09 07.9	-0.5
	30nm,1.1s						
HHC	Hu-ho-hao-te	40.39	15	*e*P	P	12 09 16.0	+2.2
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,6.1s						
WRA	Warramunga Arr	40.89	124	P	P	12 09 16.8	-1.4
	28nm,0.4s,baz=302,slow=9.1,SNR=216						
WRA				PcP	PcP	12 11 16.1	-0.5
	2.3nm,0.7s,baz=316,slow=2.5,SNR=5.6						
WR1	Warramunga Arr	40.89	124	*e*P	P	12 09 16.8	-1.4
	35nm,0.6s						
WR1				*e*PcP	PcP	12 11 16.1	-0.5
WRAB	Tennant Creek	40.90	124	*e*P	P	12 09 17.2	-1.0
	47nm,0.5s						
WB2	Warramunga Arr	40.90	124	*e*P	P	12 09 16.9	-1.3
WB2				*e*PcP	PcP	12 11 16.3	-0.3
BJI	Beijing	41.03	20⇑	*i*P	P	12 09 20.0	+1.1
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AS31	Alice Springs	42.40	129	*e*P	P	12 09 28.6	-1.8
	1.9nm,0.6s						
ASAR	Alice Springs	42.40	129	P	P	12 09 28.9	-1.5
	5.6nm,0.6s,baz=296,slow=7.8,SNR=108						
ASAR				PcP	PcP	12 11 20.8	-0.8
	2.3nm,0.7s,baz=302,slow=3.1,SNR=9.3						
AS01	Alice Springs	42.43	129	*e*P	P	12 09 28.9	-1.7
AS01				*e*PcP	PcP	12 11 21.7	0.0
FORT	Forrest	42.68	142	*e*P	P	12 09 31.2	-1.3
	40nm,1.1s						
KSH	Kashi	42.91	334	P	P	12 09 33.8	-0.6
KSH				pP	pP	12 10 06.3	+3.5
KSH				PP	PcP	12 11 21.8	-1.2
KSH				S	S	12 15 45.4	-4.8
KSH				sS	sS	12 16 39.8	+0.7
KSH				SS	SS	12 19 01.3	-5.3
KSH				pmax	pmax		
	comp=Z,25nm,0.6s						
KSH				pmax	pmax		
	comp=Z,210nm,4.5s						
KSH				LR	LR		
	comp=N,240nm,4.5s						
KSH				LR	LR		
	comp=E,190nm,5.3s						
KSH				LR	LR		
	comp=Z,480nm,5.9s						
WMQ	Urumqi	42.93	348⇑	*i*P	P	12 09 35.8	+1.4
WMQ				pP	pP	12 10 02.4	-0.4
WMQ				pmax	pmax		
	comp=Z,68nm,0.9s						
WMQ	Urumqi	42.93	348	*e*P	P	12 09 35.1	+0.7
	20nm,0.7s						
TARG	Taragay, Kyrgy	44.00	337	*e*P	P	12 09 44.2	+0.8
	16nm,0.6s						
KSRS	Korea Array	44.24	33	P	P	12 09 45.8	+0.9
	2.1nm,0.4s,baz=221,slow=8.1,SNR=8.3						
NRN	Naryn	44.48	335	*e*P	P	12 09 47.9	+0.7
	28nm,0.8s						
KDJ	Kajisay	44.58	337	*e*P	P	12 09 49.1	+1.3
	20nm,0.8s						
ULHL	Ulahol	45.05	336	P	P	12 09 53.0	+1.4
	SNR=12						
GAR	Garm	45.26	328	*e*P	P	12 09 53.4	+0.2
	24nm,1.2s						
KZA	Kyzart	45.33	335	P	P	12 09 55.1	+1.1
	SNR=12						
CHGR	Chuyangaron	45.63	327	*e*P	P	12 09 55.5	-0.6
	53nm,1.6s						
ARSB	Arslanbob	45.72	332	*e*P	P	12 09 57.6	+0.8
	31nm,0.9s						
UCH	Uchtor	45.76	335	P	P	12 09 58.7	+1.2
	SNR=24						
BTK	Batken	45.79	330	*e*P	P	12 09 59.4	+2.1
	15nm,1.3s						
TKM2	Tokmak 2	45.88	336	P	P	12 09 59.1	+1.1
	SNR=15						
KBK	Karagaybulak	45.93	335	P	P	12 10 00.0	+1.6
	SNR=28						
AML	Almayashu	46.04	334	P	P	12 10 01.1	+1.5
	SNR=16						
AAK	Ala-Archa	46.11	335	P	P	12 10 02.3	+2.5
	SNR=7.9						
AAK	Ala-Archa	46.11	335	*e*P	P	12 10 00.7	+0.9
	8.7nm,0.8s						
SONA0	Songino Array	46.19	7	*e*P	P	12 10 01.2	+0.9
SONM	Songino Array	46.19	7	P	P	12 10 01.2	+0.9
	4.2nm,0.6s,baz=189,slow=8.9,SNR=30						
SONM				ScP	ScP	12 15 15.8	-0.3
	2.0nm,0.8s,baz=203,slow=4.4,SNR=12						
SONA1	Songino Array	46.20	7	*e*P	P	12 10 00.7	+0.3
CHMS	Chumysh	46.29	335	P	P	12 10 02.9	+1.8
	SNR=6.4						
EKS2	Erkin-Say	46.43	334	P	P	12 10 03.7	+1.4
	SNR=20						
USP	Ospenovka	46.62	335	P	P	12 10 04.6	+0.9
	SNR=28						
MK01	Makanchi Array	47.00	344	*e*P	P	12 10 06.9	+0.4
MK31	Makanchi Array	47.02	344	*e*P	P	12 10 07.2	+0.5
	10nm,0.8s						
MK32	Makanchi Array	47.02	344	*e*P	P	12 10 07.2	+0.5
MKAR	Makanchi Array	47.02	344	*e*P	P	12 10 07.2	+0.5
	222nm,1.4s						
MKAR	Makanchi Array	47.02	344	P	P	12 10 07.2	+0.5
	11nm,0.7s,baz=155,slow=7.9,SNR=98						
MKAR				pP	pP	12 10 34.8	-0.8
	3.3nm,0.7s,baz=148,slow=7.1,SNR=2.9						
MKAR				ScP	ScP	12 15 19.4	-0.1
	0.4nm,0.6s,baz=141,slow=6.2,SNR=4.2						
MAKZ	Makanchi	47.12	344	*e*P	P	12 10 07.7	+0.2
	9.1nm,0.7s						
KK31	Karatay Array	48.26	332	*e*P	P	12 10 16.8	+0.6
	13nm,1.5s						
KKAR	Karatay Array	48.26	332	*e*P	P	12 10 17.0	+0.7
	13nm,1.5s						
BBOO	Buckleboo	49.16	138	*e*P	P	12 10 21.4	-1.9
	61nm,1.4s						
MAJO	Matsushiro	49.95	42	*e*P	P	12 10 28.1	-1.2
MJAR	Matsushiro Arr	49.95	42	P	P	12 10 28.1	-1.2
	1.0nm,0.6s,baz=182,slow=6.6,SNR=3.6						
USRK	Ussuriysk Ar.	51.24	30	P	P	12 10 39.5	+0.7
	2.1nm,0.6s,baz=225,slow=7.6,SNR=5.1						
KURK	Kurchatov	51.60	344	*e*P	P	12 10 42.0	+0.6
	11nm,0.8s						
GEYT	Alibeck	51.86	319	P	P	12 10 44.0	+0.4
	7.8nm,0.7s,baz=134,slow=6.4,SNR=6.8						
STKA	Stephens Creek	52.50	133	*e*P	P	12 10 47.2	-1.2
	2.8nm,1.4s						
STKA	Stephens Creek	52.50	133	P	P	12 10 47.4	-1.0
	4.1nm,0.6s,baz=314,slow=6.4,SNR=12						
ZAA0	Zalesovo Array	53.17	350	*e*P	P	12 10 53.3	+0.4
	16nm,0.8s						
ZALV	Zalesovo Beam	53.17	350	*e*P	P	12 10 53.1	+0.2
ZALV	Zalesovo Beam	53.17	350	P	P	12 10 53.4	+0.5
	9.2nm,0.4s,baz=176,slow=6.6,SNR=72						
ZALV				pP	pP	12 11 22.2	-0.1
	3.5nm,0.6s,baz=177,slow=5.9,SNR=2.4						
ZAA1	Zalesovo Array	53.17	350	*e*P	P	12 10 53.4	+0.4
RAYN	Ar Rayn	56.04	297	*e*P	P	12 11 14.9	+0.6
	5.0nm,1.1s						
BRVK	Borovoye	56.26	340	*e*P	P	12 11 15.1	-0.1
	6.2nm,0.5s						
ABKAR	Akbulak array	57.77	331	*e*P	P	12 11 25.7	-0.2
	14nm,0.6s						
ABKAR				*e*pP	pP	12 11 54.8	-1.0
ARU	Arti	63.26	336	*e*P	P	12 12 03.0	-0.1
	6.3nm,0.8s						
KBZ	Khabaz	64.74	318	P	P	12 12 12.6	-0.4
	4.5nm,0.8s,baz=122,slow=5.2,SNR=14						
KBZ				pP	pP	12 12 43.0	-0.5
	4.5nm,0.8s,baz=129,slow=7.5,SNR=6.4						
MA2	Magadan	69.91	25	P	P	12 12 46.1	+0.8
	2.0nm,0.6s,baz=218,slow=7.7,SNR=6.0						
BR101	Keskin Array S	69.99	312	*e*P	P	12 12 46.0	-0.4
BRTR	Keskin Array B	69.99	312	P	P	12 12 46.0	-0.4
	1.2nm,0.6s,baz=135,slow=7.2,SNR=7.9						
BRTR				pP	pP	12 13 15.4	-1.9
	1.2nm,0.7s,baz=131,slow=7.4,SNR=3.4						
PETK	Petropavlovsk-	70.14	33	*e*P	P	12 12 46.8	0.0
PETK	Petropavlovsk-	70.14	33	P	P	12 12 47.1	+0.2
	6.5nm,0.8s,baz=207,slow=2.1,SNR=8.0						
PEA1	Petropavlovsk-	70.15	33	*e*P	P	12 12 47.1	+0.2
PET	Petropavlovsk	70.63	34	*e*P	P	12 12 49.8	0.0
	63nm,1.2s						
SEY	Seymchan	72.40	23	P	P	12 13 00.5	+0.3
	1.2nm,0.6s,baz=269,slow=7.4,SNR=7.0						
AKASG	Malin Array Be	75.81	322	pP	pP	12 13 50.2	-1.5
	1.7nm,0.7s,baz=90,slow=4.8,SNR=3.4						
BUR04	Bucovina Ar. S	77.70	318	*e*P	P	12 13 31.9	+0.7
BUR08	Bucovina Ar. S	77.72	318	*e*P	P	12 13 31.3	+0.1
	3.2nm,1.0s						
RPZ	Rata Peaks	78.42	135	*e*P	P	12 13 34.6	-0.5
	29nm,1.4s						
THZ	Tophouse	79.31	133	*e*P	P	12 13 39.4	-0.6
	29nm,1.5s						
FIA0	FINESS Array S	80.22	332	*e*P	P	12 13 44.5	+0.1
FINES	FINESS Array B	80.22	332	P	P	12 13 44.5	+0.1
	2.7nm,0.5s,baz=106,slow=6.3,SNR=16						
FINES				pP	pP	12 14 15.2	-0.8
	3.3nm,0.6s,baz=108,slow=6.2,SNR=5.3						
BKZ	Black Stump Fm	81.51	130	*e*P	P	12 13 51.3	-0.6
	12nm,0.6s						
ARA0	ARCESS Array S	82.49	340	*e*P	P	12 13 56.5	+0.2
ARCES	ARCESS Array B	82.49	340	P	P	12 13 56.5	+0.2
	1.5nm,0.7s,baz=93,slow=6.1,SNR=10.0						
GERES	GERESS Array B	85.48	319	P	P	12 14 14.1	+2.1
	0.3nm,0.5s,baz=111,slow=5.4,SNR=2.6						
NB2	NORSAR Subarra	87.27	331	P	pP	12 14 51.4	-1.1
	comp=Z,1.6nm,0.7s,baz=95,slow=4.6						
NOA	NORSAR Array B	87.27	331	pP	pP	12 14 51.7	-0.9
	comp=Z,2.6nm,0.7s,baz=94,slow=5.0,SNR=8.0						
ULM	Lac du Bonnet	126.49	12	PKP	PKPdf	12 20 36.1	-0.3
	comp=Z,1.4nm,0.4s,baz=344,slow=5.0,SNR=4.5						
NV01	Mina Array Sit	127.14	37	*e*PKPdf	PKPdf	12 20 37.9	-0.4
NVAR	Mina Array Bea	127.14	37	PKP	PKPdf	12 20 38.2	-0.1
	comp=Z,1.5nm,0.8s,baz=269,slow=2.1,SNR=8.1						
PDAR	Pinedale Array	128.60	27	PKP	PKPdf	12 20 41.0	+0.1
	comp=Z,0.4nm,0.6s,baz=160,slow=1.7,SNR=4.5						
LTX	Lajitas	142.09	33	*e*PKPpre	PKPpre	12 21 02.5	
TXAR	Lajitas Array	142.09	33	PKhKP	PKPpre	12 21 02.5	
	comp=Z,0.3nm,0.4s,baz=251,slow=0.5,SNR=11						
TXAR				SKPbc	SKPbc	12 24 31.8	-0.9
	comp=Z,1.3nm,0.9s,baz=292,slow=1.0,SNR=7.3						
BDFB	Brasilia	144.76	245	PKP	PKPdf	12 21 11.0	-0.3
	comp=Z,4.5nm,0.6s,baz=182,slow=4.3,SNR=6.3						
833A	Chaparral WMA,	145.12	29	*e*PKPbc	PKPdf	12 21 11.6	+0.1
CPUP	Villa Florida	146.74	221	*e*PKPdf	PKPdf	12 21 15.1	+0.8
CPUP	Villa Florida	146.74	221	PKPbc	PKPbc	12 21 16.4	+0.3
	comp=Z,2.8nm,0.8s,baz=116,slow=3.2,SNR=7.3						

WEL **18** *12:19:11.9±0.9, 31°S±3°×17°7W±1°4, h0^{km}, ML6.6/6*

ISCJB **18** *12:19:11.9±0.7, 30.°76S±0.°01×178.°17W±0.°02, h1^{km}±4^{km}, mb5.8/296, MS5.5/310, Error ellipse: s-maj=3.8km s-min=1.9km az=29.0*

BJI **18** *12:19:17.4, 30.°12S×177.°74W, h34^{km}, mB6.0/56, mb5.5/62, Ms5.6/61, Ms7 5.4/60*

MOS **18** *12:19:17.6±0.8, 30.°63S×178.°19W, h35^{km}, mb6.0/76, MS5.5/35, Error ellipse: s-maj=7.9km s-min=6.5km az=78.4*

NEIC **18** *12:19:18.1±0.1, 30.°77S×178.°12W, h35^{km}, mb5.8/231, ME5.5, MS5.5/260, MW5.9, MW5.9, Error ellipse: s-maj=3.5km s-min=2.3km az=134.0, Apparent Stress 0.18 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC **18** *12:19:19.0±0.0, 30.°68S×178.°13W, h40^{km}, Moment Tensor Solution. s54 Moment tensor: Scale 10^{17}Nm; M_{rr}6.57; $M_{\theta\theta}$-1.77; $M_{\phi\phi}$-4.79; $M_{r\theta}$-0.15; $M_{\theta\phi}$-2.48; $M_{\phi r}$4.94; Best double couple: $M_0$8.10000×10^{17} NP1:ϕ_s12.00000°, δ64.00000°, λ76.00000°. NP2:ϕ_s222.00000°, δ30.00000°, λ117.00000°. Principal axes: T 8.5100, Plg67.0000°, Azm254.0000°; N -0.9700, Plg12.0000°, Azm18.0000°; P -7.5400, Plg17.0000°, Azm112.0000°;*

IDC **18** *12:19:21.0±1.3, 30.°50S×178.°11W, h53^{km}±10^{km}, mb5.4/30, mb1 5.4/32, mb1mx5.3/34, mbtmp5.6/32, MS5.2/29, Ms1 5.2/29, ms1mx5.0/35 Error ellipse: s-maj=12.7km s-min=12.2km az=163.0*

GCMT **18** *12:19:22.1±0.1, 30.°66S±0.°01×177.°88W±0.°01, h50^{km}, MW5.8/136, Moment Tensor Solution. s136,c268; s133,c373; Duration: 2^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}6.24±.06; $M_{\theta\theta}$-0.74±.04; $M_{\phi\phi}$-5.50±.04; $M_{r\theta}$0.69±.04; $M_{\theta\phi}$-2.23±.04; $M_{\phi r}$1.56±.04; Best double couple: $M_0$6.53700×10^{17} NP1:ϕ_s22.00000°, δ53.00000°, λ91.00000°. NP2:ϕ_s201.00000°, δ37.00000°, λ89.00000°. Principal axes: T 6.4670, Plg82.0000°, Azm296.0000°; N 0.1420, Plg1.0000°, Azm202.0000°; P -6.6080, Plg8.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC **18** *12:19:35.9±0.0, 30.°59S×178.°75W, h49^{km}, Moment Tensor Solution. s53 Moment tensor: Scale 10^{17}Nm; M_{rr}8.26; $M_{\theta\theta}$-2.04; $M_{\phi\phi}$-6.22; $M_{r\theta}$0.87; $M_{\theta\phi}$-2.33; $M_{\phi r}$-2.77; Best double couple: $M_0$8.30000×10^{17} NP1:ϕ_s192.00000°, δ54.00000°, λ77.00000°. NP2:ϕ_s34.00000°, δ38.00000°, λ107.00000°. Principal axes: T 8.9300, Plg77.0000°, Azm59.0000°; N -1.3600, Plg10.0000°, Azm200.0000°; P -7.5700, Plg8.0000°, Azm292.0000°;*

ISC 18 12:19:18.5±0.2**, 30.°66S**±0.°03×**177.°96W**±0.°04**, h35**^{km}±1^{km}**, h36**^{km}**:pP-P, n1765, σ1^{s}66**/1740**, mb5.8**/288**, MS5.5**/312**, 82C-22D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.39	1	P	Pn	12 19 41.6	+0.2
GLKZ				S	Sn	12 19 57.0	-1.5
RAO	Raoul Island	1.40	1	*e*Pn	Pn	12 19 41.5	0.0
RAO				*e*Sn	Sn	12 19 59.5	+0.8
RAO	Raoul Island	1.40	1	P	Pn	12 19 41.6	+0.1
	3µm,0.3s,baz=139,slow=6.2,SNR=79						
RIZ	Raoul Island	1.41	1	P	Pn	12 19 42.4	+0.8
RIZ				S	Sn	12 20 00.2	+1.3
MXZ	Matakaoa Point	7.55	203	*e*Pn	Pn	12 21 02.8	-3.2
MXZ				*e*Sn	Sn	12 22 31.2	+0.9
MXZ	Matakaoa Point	7.55	203	P	Pn	12 21 02.3	-3.6
MXZ				S	Sn	12 22 27.7	-2.6
WMGZ	Waiomatatini S	7.75	202	P	Pn	12 21 06.4	-2.3
WMGZ				S	Sn	12 22 36.1	+0.9
GRZ	Great Barrier	7.83	223	P	Pn	12 21 15.0	+5.1
HAZ	Te Kaha	7.91	205	P	Pn	12 21 08.3	-2.6
HAZ				S	Sn	12 22 40.2	+1.0
HAZ	Te Kaha	7.91	205	P	Sn	12 22 41.8	+2.6
PKGZ	Pakihiroa	7.92	203	P	Pn	12 21 08.7	-2.4
PKGZ				S	Sn	12 22 38.5	-1.0
PKGZ	Pakihiroa	7.92	203	P	Sn	12 22 37.5	-2.1
PUZ	Puketiti	8.03	202	P	Pn	12 21 08.6	-4.0
PUZ				S	Sn	12 22 39.5	-2.6
PUZ	Puketiti	8.03	202	P	Sn	12 22 39.1	-3.0
KUZ	Kuaotunu	8.04	219	P	Pn	12 21 17.0	+4.3
RUGZ	Raukumara Rang	8.13	205	P	Pn	12 21 11.1	-3.0
RUGZ				S	Sn	12 22 43.2	-1.6
RUGZ	Raukumara Rang	8.13	205	P	Sn	12 22 44.3	-0.5
MYRZ	Mayor Island	8.17	215	P	Pn	12 21 18.6	+4.1
MYRZ				P	Pn	12 21 20.6	+6.1
TWGZ	Tauwhareparae	8.22	203	P	Pn	12 21 11.8	-3.4
TWGZ				S	Sn	12 22 46.0	-0.7
TWGZ	Tauwhareparae	8.22	203	P	Sn	12 22 47.3	+0.5
WHRZ	Whale Island	8.31	209	P	Pn	12 21 16.5	0.0
WHRZ				S	Sn	12 22 50.3	+1.2
WHRZ	Whale Island	8.31	209	P	Sn	12 22 49.3	+0.1
WCZ	Waipu Caves	8.32	229	P	Pn	12 21 23.1	+6.5
CNGZ	Carnagh Statio	8.42	201	P	Pn	12 21 14.6	-3.3
CNGZ				S	Sn	12 22 49.1	-2.7
OUZ	Omahuta	8.43	235	*e*Pn	Pn	12 21 22.4	+4.3
OUZ	Omahuta	8.43	235	P	Pn	12 21 24.7	+6.6
OPRZ	Ohinepanea	8.48	211	P	Pn	12 21 18.7	0.0
OPRZ				P	Pn	12 21 18.3	-0.5
TKGZ	Te Karaka	8.50	203	P	Pn	12 21 14.3	-4.6
TKGZ				S	Sn	12 22 51.9	-1.7
TKGZ	Te Karaka	8.50	203	P	Sn	12 22 52.7	-0.9
MWZ	Matawai	8.51	205	P	Pn	12 21 15.1	-4.1
MWZ				S	Sn	12 22 51.5	-2.6
MWZ	Matawai	8.51	205	P	Sn	12 22 53.3	-0.8
TGRZ	Tauranga	8.52	213	P	Pn	12 21 19.5	+0.1
MARZ	Manawahe	8.55	210	P	Pn	12 21 18.7	-1.0
MARZ	Manawahe	8.55	210	P	Sn	12 22 57.4	+2.4
URZ	Urewera	8.61	207	P	Pn	12 21 17.5	-2.9
	6.3nm,0.3s,baz=270,slow=4.3,SNR=103						
URZ				S	Sn	12 22 53.8	-2.5
	232nm,0.3s,baz=248,slow=22,SNR=23						
URZ				LR	LR	12 24 39.2	
	comp=Z,14µm,21.6s,baz=56,slow=37						
URZ	Urewera	8.61	207	P	Pn	12 21 17.2	-3.2
URZ				S	Sn	12 22 54.1	-2.1
URZ	Urewera	8.61	207	P	Sn	12 22 55.8	-0.4
EDRZ	Edgecumbe	8.62	209	P	Pn	12 21 21.9	+1.1
EDRZ	Edgecumbe	8.62	209	P	Sn	12 22 55.8	-1.0
RAGZ	Rawiri	8.70	205	P	Pn	12 21 18.0	-3.8
RAGZ				S	Sn	12 22 56.6	-2.1
RAGZ	Rawiri	8.70	205	P	Sn	12 22 57.8	-0.9
MKRZ	Makatiti	8.77	210	P	Pn	12 21 24.4	+1.6
RIGZ	Rimuhau	8.77	203	P	Pn	12 21 18.5	-4.2
RIGZ				S	Sn	12 22 58.0	-2.3
RIGZ	Rimuhau	8.77	203	P	Sn	12 22 53.7	-6.6
KARZ	Kaharoa	8.77	212	P	Pn	12 21 23.1	+0.4
OMRZ	Omania	8.78	211	P	Pn	12 21 26.0	+3.1
TARZ	Mount Tarawera	8.83	210	P	Pn	12 21 24.4	+0.8
TARZ	Mount Tarawera	8.83	210	P	Sn	12 23 01.9	-0.1
NGRZ	Ngongotaha	8.86	212	P	Pn	12 21 28.0	+4.0
TOZ	Tahuroa Road	8.89	216	P	Pn	12 21 27.3	+2.9
RRRZ	Republican Roa	8.91	209	P	Pn	12 21 22.7	-2.1
RRRZ	Republican Roa	8.91	209	P	Sn	12 23 06.1	+2.1
PRGZ	Paritu Road	8.93	201	P	Pn	12 21 20.5	-4.4
PRGZ	Paritu Road	8.93	201	P	Sn	12 22 57.9	-6.2
MUGZ	Murupara	8.93	208	P	Pn	12 21 20.8	-4.1
MUGZ	Murupara	8.93	208	P	Sn	12 22 59.1	-5.1
RTZ	Ruatahuna	8.96	206	P	Pn	12 21 21.7	-3.8
RTZ	Ruatahuna	8.96	206	P	Sn	12 23 03.7	-1.5
SNGZ	Shannon Statio	8.98	204	P	Pn	12 21 21.7	-3.9
SNGZ	Shannon Statio	8.98	204	P	Sn	12 23 05.1	-0.3
HSRZ	Hossack Road	9.01	211	P	Pn	12 21 30.3	+4.3
HSRZ				P	Pn	12 21 30.3	+4.3
KNZ	Kokohu	9.08	202	P	Pn	12 21 22.5	-4.5
KNZ	Kokohu	9.08	202	P	Sn	12 22 59.2	-8.7
PRRZ	Plateau Road	9.10	209	P	Pn	12 21 25.9	-1.4
MHGZ	Mahia Peninsul	9.13	201	P	Pn	12 21 22.7	-4.9
MHGZ	Mahia Peninsul	9.13	201	P	Sn	12 23 01.6	-7.5
ALRZ	Allen Road	9.18	209	P	Pn	12 21 25.9	-2.4
RAHZ	Arahi	9.19	205	P	Pn	12 21 25.1	-3.4
RAHZ	Arahi	9.19	205	P	Sn	12 23 04.2	-6.5
WPRZ	Whakapapatarin	9.22	210	P	Pn	12 21 29.7	+0.8
MTHZ	Maungataniwha	9.22	206	P	Pn	12 21 25.3	-3.6
WHHZ	Waihua	9.28	204	P	Pn	12 21 25.8	-3.9
KUTZ	Kaahu Road	9.34	212	P	Pn	12 21 32.8	+2.2
TLZ	Tolley Road	9.35	213	P	Pn	12 21 31.6	+1.0
MRHZ	Matea Rd	9.38	208	P	Pn	12 21 29.9	-1.2
WHTZ	Whakaora	9.43	210	P	Pn	12 21 33.5	+1.7
NMHZ	Naumai	9.45	206	P	Pn	12 21 28.0	-4.1
ARHZ	Aropaoanui	9.53	204	P	Pn	12 21 28.3	-4.8
HATZ	Hinemaiaia	9.56	209	P	Pn	12 21 30.4	-3.2
WATZ	Wairara	9.56	211	P	Pn	12 21 33.0	-0.6
BKZ	Black Stump Fm	9.63	207	*e*Pn	Pn	12 21 30.6	-4.0
BKZ				*e*Sn	Sn	12 23 20.2	-1.3
BKZ	Black Stump Fm	9.63	207	P	Pn	12 21 29.7	-4.9
RITZ	Rihia Road	9.73	210	P	Pn	12 21 34.3	-1.6
MCHZ	McNeill Hill	9.80	205	P	Pn	12 21 33.1	-3.7
MCHZ				P	Pn	12 21 33.2	-3.6
KATZ	Kakaramea	9.80	210	P	Pn	12 21 36.0	-1.0
HIZ	Hauiti	9.82	215	*e*Pn	Pn	12 21 36.0	-1.1
HIZ	Hauiti	9.82	215	P	Pn	12 21 38.5	+1.4
HIZ				P	Pn	12 21 39.6	+2.5
CKHZ	Cape Kidnapper	9.85	203	P	Pn	12 21 32.6	-4.9
KWHZ	Kaweka Forest	9.88	206	P	Pn	12 21 32.5	-5.5
KRVZ	Karewarewa	9.92	210	P	Pn	12 21 38.1	-0.5
WTVZ	West Tongariro	9.96	210	P	Pn	12 21 38.3	-0.8
WTVZ				P	Pn	12 21 38.3	-0.8
TWVZ	Taurewa	9.99	211	P	Pn	12 21 39.4	-0.2
NGZ	Ngauruhoe	10.01	210	P	Pn	12 21 37.2	-2.6
KAHZ	Kahuranaki	10.04	203	P	Pn	12 21 34.8	-5.4
COVZ	Chateau Observ	10.05	210	P	Pn	12 21 40.3	-0.1
TUVZ	Tukino	10.06	210	P	Pn	12 21 38.7	-1.8
BHHZ	Black Hill Sta	10.08	207	P	Pn	12 21 36.1	-4.6
FWVZ	Far West T-bar	10.09	210	P	Pn	12 21 38.2	-2.8
WHVZ	Whangaehu Hut	10.10	210	P	Pn	12 21 41.9	+0.7
DRZ	Dome Shelter	10.10	210	P	Pn	12 21 45.9	+4.6
TRVZ	Turoa	10.13	210	P	Pn	12 21 38.8	-2.8
MOVZ	Moawhango	10.13	209	P	Pn	12 21 37.8	-3.7
PKVZ	Pokaka	10.21	211	P	Pn	12 21 42.4	-0.1
PXZ	Pawanui	10.26	203	P	Pn	12 21 37.0	-6.1
VRZ	Vera Road	10.35	213	P	Pn	12 21 44.8	+0.5
WPHZ	Waipukurau	10.44	204	P	Pn	12 21 41.0	-4.6
PRHZ	Porangahau	10.55	203	P	Pn	12 21 40.6	-6.5
TSZ	Takapari Road	10.61	206	P	Pn	12 21 39.4	-8.6
DREZ	Durham Road	10.67	215	P	Pn	12 22 04.1	+15
DVHZ	Dannevirke	10.74	205	P	Pn	12 21 43.9	-5.8
WAZ	Wanganui	10.75	211	P	Pn	12 21 47.4	-2.5
PKE	Pukeiti	10.78	216	P	Pn	12 21 55.2	+5.0
ANWZ	Angora Road	10.78	203	P	Pn	12 21 44.7	-5.4
PREZ	Palmer Road	10.80	215	P	Pn	12 21 55.0	+4.4
KHEZ	Kahui Hut	10.84	215	P	Pn	12 21 54.0	+2.8
NBEZ	Newall Road No	10.89	216	P	Pn	12 22 00.6	+8.8
POWZ	Post Office Ro	10.97	206	P	Pn	12 21 48.6	-4.3
NMEZ	Namu Road	11.00	215	P	Pn	12 22 03.4	+10
PRWZ	Pori Road	11.04	205	P	Pn	12 21 47.9	-5.9
BFZ	Birch Farm	11.05	204	*e*Pn	Pn	12 21 49.6	-4.3
BFZ				*e*Sn	Sn	12 23 48.7	-7.6
BFZ	Birch Farm	11.05	204	P	Pn	12 21 46.6	-7.4
TIWZ	Tintock	11.26	205	P	Pn	12 21 50.5	-6.3
MRZ	Mangatainoka R	11.28	206	P	Pn	12 21 49.1	-8.0
HOWZ	Holdsworth Sta	11.51	206	P	Pn	12 21 52.7	-7.5
TMWZ	Te Maipa	11.55	204	P	Pn	12 21 54.1	-6.8
OGWZ	Otaki Gorge	11.57	207	P	Pn	12 21 54.2	-6.8
KIW	Kapiti Island	11.71	208	P	Pn	12 21 55.8	-7.1
MTW	Mount Morrison	11.74	205	P	Pn	12 21 55.4	-7.9
CAW	Cannon Point	11.86	207	P	Pn	12 21 56.9	-8.1
TRWZ	Traveller	11.88	204	P	Pn	12 21 59.5	-5.8
PAWZ	Paruwai Farm	11.96	205	P	Pn	12 21 59.9	-6.5
MSWZ	Moikau Station	12.05	205	P	Pn	12 22 00.7	-7.0
DUWZ	D'Urville Isla	12.07	211	P	Pn	12 22 02.3	-5.7

SNZO	South Karori	12.17	207	*e*Pn	Pn	12 22 04.2	-5.1
SNZO				*e*Sn	Sn	12 24 14.1	-9.5
PLWZ	Palliser	12.19	205	P	Pn	12 22 01.4	-8.2
BHW	Baring Head	12.19	206	P	Pn	12 22 03.9	-5.6
TCW	Tory Channel	12.26	209	P	Pn	12 22 03.2	-7.2
NFK	Norfolk Island	12.35	274	P	Pn	12 22 15.6	+3.8
	baz=12,SNR=9.4						
TUWZ	Tuamarina	12.58	209	P	Pn	12 22 07.3	-7.6
NNZ	Nelson	12.65	211	P	Pn	12 22 08.5	-7.3
CMWZ	Cape Campbell	12.74	208	P	Pn	12 22 15.3	-1.7
BSWZ	Blackbirch Sta	12.85	209	P	Pn	12 22 11.1	-7.4
THZ	Tophouse	13.30	211	*e*Pn	Pn	12 22 20.7	-4.0
THZ				*e*Sn	Sn	12 24 43.7	-7.6
THZ	Tophouse	13.30	211	P	Pn	12 22 20.4	-4.4
MSVF	Nonsavu	13.37	343	*e*Pn	Pn	12 22 26.1	+0.2
MSVF	Nonsavu	13.37	343	*e*P	Pn	12 22 26.1	+0.2
KHZ	Kahutara	13.57	208	*e*Pn	Pn	12 22 24.4	-3.9
KHZ				*e*Sn	Sn	12 24 47.4	-10
KHZ	Kahutara	13.57	208	P	Pn	12 22 19.7	-8.6
NIUE	Niue	13.63	34	P	Pn	12 22 25.2	-4.1
	baz=14,SNR=10						
NIUE	Niue	13.63	34	*e*Pn	Pn	12 22 25.0	-4.4
NIUE				*e*Sn	Sn	12 24 47.2	-12
DSZ	Denniston Nort	13.80	214	P	Pn	12 22 29.5	-2.0
LTZ	Lake Taylor	14.40	210	*e*Pn	Pn	12 22 37.9	-1.9
LTZ	Lake Taylor	14.40	210	P	Pn	12 22 34.1	-5.6
AMCZ	Amberley	14.56	208	P	Pn	12 22 36.6	-5.3
INZ	Inchbonnie	14.72	212	P	Pn	12 22 37.1	-7.0
OKCZ	Okains Bay	14.86	206	P	Pn	12 22 36.4	-10
CRLZ	Canterbury Las	14.91	208	*e*Pn	Pn	12 22 46.1	-0.3
CRLZ				*e*Sn	Sn	12 25 17.6	-13
CRLZ	Canterbury Las	14.91	208	P	Pn	12 22 39.2	-7.2
OXZ	Oxford	14.94	209	*e*Pn	Pn	12 22 42.4	-4.6
OXZ	Oxford	14.94	209	P	Pn	12 22 40.1	-6.9
MQZ	McQueen’s Vall	15.01	207	*e*Pn	Pn	12 22 41.0	-6.8
MQZ	McQueen’s Vall	15.01	207	P	Pn	12 22 38.5	-9.3
AKCZ	Akaroa Harbour	15.05	206	P	Pn	12 22 40.1	-8.3
PINNC	Pines Island,	15.30	298	*e*Pn	Pn	12 22 52.8	+0.9
	491nm,1.1s						
WVZ	Waitaha Valley	15.32	213	P	Pn	12 22 47.7	-4.3
MARNC	Mare, Loyalty	15.54	303	*e*Pn	Pn	12 22 53.5	-1.5
	610nm,0.8s						
RPZ	Rata Peaks	15.68	211	*e*Pn	Pn	12 22 53.6	-3.0
RPZ				*e*Sn	Sn	12 25 33.0	-16
RPZ	Rata Peaks	15.68	211	P	Pn	12 22 51.8	-4.8
	2.7nm,0.3s,baz=65,slow=2.3,SNR=12						
RPZ				S	Sn	12 25 33.0	-16
	14nm,0.3s,baz=302,slow=15,SNR=12						
RPZ				LR	LR	12 29 35.3	
	comp=Z,8μm,20.2s,baz=47,slow=39						
RPZ	Rata Peaks	15.68	211	P	Pn	12 22 57.0	+0.4
RPZ				P	P	12 22 59.2	-1.1
RPZ	Rata Peaks	15.68	211	P	Pn	12 22 48.8	-7.8
OUENC	Ouen Island, N	15.88	298	*e*Pn	Pn	12 22 59.1	-0.1
	607nm,1.0s						
FOZ	Fox Glacier	16.11	214	*e*Pn	Pn	12 22 59.0	-3.2
	60nm,0.7s						
FOZ	Fox Glacier	16.11	214	P	Pn	12 22 56.2	-5.9
ONTNC	Ouen Toro	16.23	297	*e*Pn	Pn	12 23 03.9	0.0
	424nm,1.1s						
DZM	Mont Dzumac	16.38	298	*e*P	P	12 23 08.2	-0.1
	951nm,1.2s						
DZM				*e*LQ	LQ	12 26 14.3	
	20μm,27.7s						
DZM				*e*LR	LR	12 26 54.9	
	comp=Z,63μm,25.3s						
DZM	Mont Dzumac	16.38	298	*e*Pn	Pn	12 23 06.8	+1.0
	721nm,1.4s						
DZM	Mont Dzumac	16.38	298	P	Pn	12 23 05.9	+0.1
	0.2nm,0.3s,baz=215,slow=12,SNR=2.2						
DZM				LR	LR	12 28 21.2	
	comp=Z,31μm,18.2s,baz=132,slow=33						
LBZ	Lake Benmore	16.59	211	*e*Pn	Pn	12 23 05.8	-2.5
	26nm,0.6s						
LBZ	Lake Benmore	16.59	211	P	Pn	12 23 04.7	-3.7
ODZ	Otahua Downs	16.92	209	*e*Pn	Pn	12 23 09.5	-2.9
	64nm,0.7s						
ODZ	Otahua Downs	16.92	209	P	Pn	12 23 05.0	-7.5
WKZ	Wanaka	17.46	212	*e*Pn	Pn	12 23 14.9	-4.3
	217nm,1.8s						
WKZ	Wanaka	17.46	212	P	Pn	12 23 14.3	-4.9
HHSZ	Highcliff Hill	17.63	207	P	Pn	12 23 20.6	-0.6
EAZ	Earnscleugh	17.64	211	P	Pn	12 23 19.5	-1.9
MSZ	Milford Sound	17.87	215	P	Pn	12 23 21.0	-3.1
TUZ	Tuapeka	18.08	209	P	Pn	12 23 22.6	-4.1
MLZ	Mavora Lakes	18.29	213	*e*P	P	12 23 26.4	-2.9
	67nm,1.1s						
MLZ	Mavora Lakes	18.29	213	P	P	12 23 25.7	-3.5
WHZ	Wether Hill Ro	18.77	212	*e*P	P	12 23 31.6	-2.8
	77nm,1.1s						
WHZ	Wether Hill Ro	18.77	212	P	P	12 23 30.8	-3.6
DCZ	Deep Cove	18.82	214	*e*P	P	12 23 32.3	-2.7
	42nm,1.1s						
RAR	Rarotonga	18.84	64	*e*P	P	12 23 34.7	-0.7
	235nm,1.2s						
RAR	Rarotonga	18.84	64	P	Pn	12 23 37.1	+0.9
	3.0nm,0.3s,baz=209,slow=2.7,SNR=17						
RAR				S	Sn	12 26 49.6	-17
	2.9nm,0.3s,baz=235,slow=16,SNR=3.7						
RAR				LR	LR	12 30 30.3	
	comp=Z,3μm,19.2s,baz=242,slow=35						
LHI	Lord Howe Isla	19.70	262	P	Pn	12 23 49.5	+3.2
	baz=20,SNR=7.7						
ARMA	Armidale	26.16	263	P	P	12 24 52.5	+2.8
	baz=26,SNR=52						
ARMA	Armidale	26.16	263	*e*P	P	12 24 48.9	-0.8
	181nm,1.1s						
ARMA				LR	LR		
	comp=Z,11μm,21.0s						
RIV	Riverview	26.27	255	P	P	12 24 51.3	+0.8
	baz=26,SNR=4.6						
MGCD	Mangrove Creek	26.33	256	P	P	12 24 54.0	+3.0
	baz=26,SNR=76						
TBI	Tubuai	26.36	81	*e*S	S	12 29 18.3	-4.0
	comp=Z,5μm,32.2s						
TBI				*e*LQ	LQ	12 30 06.1	
	comp=Z,14μm,27.0s						
TBI				*e*LR	LR	12 31 31.2	
	comp=Z,21μm,26.5s,baz=248						
TBI	Tubuai	26.36	81	*e*T	T	12 52 24.7	
	comp=Z,366nm,0.3s						
CNB	Canberra Magne	27.73	252	P	P	12 25 06.0	+2.3
	baz=28,SNR=47						
EIDS	Eidsvold	27.79	273	P	P	12 25 06.0	+1.8
	baz=28,SNR=25						
EIDS	Eidsvold	27.79	273	*e*P	P	12 25 03.7	-0.5
	comp=Z,179nm,1.0s						
EIDS				LR	LR		
	comp=Z,13μm,20.0s						
MILA	Mila	27.95	248	P	P	12 25 07.9	+2.2
	baz=28,SNR=25						
CAN	Canberra	28.03	252	*e*P	P	12 25 06.2	-0.2
	comp=Z,189nm,1.0s						
CAN				LR	LR		
	comp=Z,8μm,22.0s						
CAN	Canberra	28.03	252	*e*P	P	12 25 06.2	-0.2
CAN				pmax	pmax		
	comp=Z,189nm,1.0s						
CAN				MLR	MLR		
	comp=Z,8μm,22.0s						
YNG	Young	28.54	254	P	P	12 25 12.9	+2.0
	baz=28,SNR=51						
PAE	Paea	28.85	70	*e*P	P	12 25 15.3	+1.6
	comp=Z,27nm,1.2s						
PAE	Paea	28.85	70	*e*T	T	12 55 27.3	
	comp=Z,92nm,0.3s						
PPT2	Papeete2	28.89	70	*e*P	P	12 25 16.1	+1.9
	comp=Z,196nm,1.2s						
PPT2				*e*S	S	12 29 58.5	-3.9
	comp=Z,4μm,27.8s						
PPT2				*e*LQ	LQ	12 31 16.0	
	comp=Z,9μm,24.8s						
PPT2				*e*LR	LR	12 32 30.9	
	comp=Z,22μm,27.8s,baz=236						
PPT2	Papeete2	28.89	70	*e*T	T	12 55 31.7	
	comp=Z,64nm,0.3s						
PPT	Papeete	28.90	70	P	P	12 25 16.1	+1.9
	comp=Z,143nm,1.1s,baz=359,slow=6.9,SNR=5.1						
PPT				LR	LR	12 36 20.1	
	comp=Z,2μm,18.1s,baz=240,slow=35						
MCQ	Macquarie Isla	29.01	208	PFAKE		12 25 30.0	+15
MCQ				LR	LR		
	comp=Z,6μm,20.0s						
TVO	Taravao	29.05	70	*e*P	P	12 25 17.3	+1.7
	comp=Z,30nm,0.9s						
TVO	Taravao	29.05	70	*e*T	T	12 55 43.0	
	comp=Z,19nm,0.3s						
TIAR	Tiarei	29.09	70	*e*P	P	12 25 17.8	+1.9
TIAR	Tiarei	29.09	70	*e*T	T	12 55 45.8	
	comp=Z,12nm,0.3s						
RMQ	Roma	29.46	270	P	P	12 25 21.5	+2.3
	baz=29,SNR=44						
HNR	Honiara	29.50	311	*e*P	P	12 25 20.0	+0.5
HNR	Honiara	29.50	311	*e*P	P	12 25 19.4	-0.1
HNR	Honiara	29.50	311	*e*P	P	12 25 19.8	+0.3
HNR				pmax	pmax		
	comp=Z,230nm,1.1s						
HNR	Honiara	29.50	311	P	P	12 25 17.9	-1.5
	comp=Z,137nm,1.0s,baz=155,slow=9.5,SNR=5.4						
HNR				LR	LR	12 35 11.8	
	comp=Z,6μm,21.7s,baz=153,slow=32						
MOO	Moorlands	30.16	237	P	P	12 25 26.6	+1.4
	baz=30,SNR=6.4						
TAU	Tasmania Unive	30.17	236	*e*P	P	12 25 25.5	+0.4
	comp=Z,94nm,1.0s						
TAU				LR	LR		
	comp=Z,8μm,20.0s						
TAU	Tasmania Unive	30.17	236	*e*P	P	12 25 25.5	+0.4
TAU				pmax	pmax		
	comp=Z,94nm,1.0s						
TAU				MLR	MLR		
	comp=Z,8μm,20.0s						
TOO	Toolangi	30.90	247	P	P	12 25 33.1	+1.4
	baz=31,SNR=36						
TOO	Toolangi	30.90	247	*e*P	P	12 25 32.1	+0.4
	comp=Z,190nm,1.3s						
TOO				LR	LR		
	comp=Z,7μm,20.0s						
TOO	Toolangi	30.90	247	*e*P	P	12 25 32.1	+0.4
TOO				pmax	pmax		
	comp=Z,190nm,1.3s						
TOO				MLR	MLR		
	comp=Z,7μm,20.0s						
CMSA	Cobar Meteorol	31.05	259	P	P	12 25 34.9	+1.7
	baz=31,SNR=284						
PMOR	Pomariorio Ree	31.66	67	*e*P	P	12 25 40.5	+2.0
	comp=Z,333nm,1.4s						
PMOR	Pomariorio Ree	31.66	67	*e*T	T	12 58 57.3	
	comp=Z,20nm,0.2s						
VAH	Vaihoa	31.74	68	*e*P	P	12 25 40.8	+1.6
	comp=Z,216nm,1.1s						
VAH	Vaihoa	31.74	68	*e*T	T	12 59 02.9	
	comp=Z,659nm,0.2s						
TARA	Tarawa	33.00	343	PFAKE		12 26 00.0	+10
TARA				LR	LR		
	comp=Z,15μm,20.0s						
ARPS	Mount Arapiles	33.81	249	P	P	12 25 58.1	+0.9
	baz=34,SNR=35						
CTA	Charters Tower	33.88	280	*e*P	P	12 25 59.0	+1.0
CTA	Charters Tower	33.88	280	P	P	12 25 59.0	+1.0
	comp=Z,237nm,0.7s,baz=101,slow=12						
CTA				LR	LR	12 38 33.7	
	comp=Z,11μm,18.1s,baz=122,slow=34						
CTAO	Charters Tower	33.88	280	*e*P	P	12 25 58.1	+0.1
	comp=Z,630nm,1.1s						
CTAO				LR	LR		
	comp=Z,12μm,20.0s						
CTAO	Charters Tower	33.88	280	*e*P	P	12 25 59.1	+1.0
CTAO				pmax	pmax		
	comp=Z,630nm,1.1s						
STKA	Stephens Creek	34.46	257	P	P	12 26 04.2	+1.3
	baz=34,SNR=417						
STKA	Stephens Creek	34.46	257	*e*P	P	12 26 03.1	+0.2
	comp=Z,175nm,1.0s						
STKA	Stephens Creek	34.46	257	P	P	12 26 04.2	+1.3
	comp=Z,686nm,0.9s,baz=101,slow=9.9,SNR=403						
STKA				LR	LR	12 38 54.1	
	comp=Z,9μm,19.4s,baz=91,slow=34						
MTSU	Mount Surprise	36.38	281	P	P	12 26 20.8	+1.2
	baz=36,SNR=287						
HTT	Hallett	36.47	254	P	P	12 26 21.0	+0.8
	baz=36,SNR=79						
RABL	Rabaul	38.55	307	*e*P	P	12 26 37.7	-0.3
	comp=Z,111nm,0.8s						
RABL				LR	LR		
	comp=Z,6μm,22.0s						
RKT	Rikitea	38.88	90	*e*S	S	12 32 35.8	-0.7
	comp=Z,3μm,34.5s						
RKT				*e*LQ	LQ	12 35 42.4	
	comp=Z,4μm,23.6s						
RKT				*e*LR	LR	12 37 22.6	
	comp=Z,16μm,27.8s						
RKT	Rikitea	38.88	90	*e*T	T	13 08 04.1	
	comp=Z,9.3nm,0.2s						
BBOO	Buckleboo	38.94	255	P	P	12 26 41.0	0.0
	baz=39,SNR=54						
BBOO	Buckleboo	38.94	255	*e*P	P	12 26 40.7	-0.3
	comp=Z,571nm,1.2s						
BBOO				LR	LR		
	comp=Z,6μm,20.0s						
QIS	Mount Isa	39.37	275	P	P	12 26 44.9	+0.1
	baz=39,SNR=81						
COEN	Coen	39.38	286	P	P	12 26 45.5	+0.7
	baz=39,SNR=185						
COEN	Coen	39.38	286	*e*P	P	12 26 45.6	+0.7
	comp=Z,166nm,0.8s						
COEN				LR	LR		
	comp=Z,7μm,22.0s						
TAOE	Nuku Hiva Isla	41.38	66	*e*S	S	12 33 10.0	-4.1
	comp=Z,3μm,29.2s						
TAOE				*e*LQ	LQ	12 36 38.9	
	comp=Z,4μm,28.6s						
TAOE				*e*LR	LR	12 38 27.8	
	comp=Z,11μm,26.6s,baz=239						
AS01	Alice Springs	43.09	267	*e*P	P	12 27 14.2	-1.3
AS31	Alice Springs	43.13	267	*e*P	P	12 27 14.6	-1.1
	comp=Z,20nm,0.8s						
AS31				*e*S	S	12 33 38.7	-1.2
ASAR	Alice Springs	43.13	267	P	P	12 27 15.2	-0.5
	comp=Z,42nm,0.5s,baz=104,slow=7.5,SNR=476						
ASAR				PcP	PcP	12 29 04.8	-0.3
	comp=Z,29nm,1.1s,baz=106,slow=4.2,SNR=4.2						
ASAR				ScP	ScP	12 32 51.5	-2.2
	comp=Z,4.4nm,0.8s,baz=109,slow=4.4,SNR=5.4						
ASAR				S	S	12 33 38.7	-1.2
	comp=Z,3.7nm,1.1s,baz=93,slow=16,SNR=3.0						
ASAR				LR	LR	12 45 06.2	
	comp=Z,10μm,18.1s,baz=124,slow=36						
MANU	Manus Island	43.43	304	*e*P	P	12 27 17.4	-0.7
	comp=Z,110nm,0.9s						
WB2	Warramunga Arr	44.13	272	*e*P	P	12 27 22.6	-1.2
	comp=Z,591nm,1.3s						
WRAB	Tennant Creek	44.14	272	*e*P	P	12 27 22.6	-1.2
	comp=Z,528nm,1.3s						
WRAB				LR	LR		
	comp=Z,8μm,21.0s						
WRAB	Tennant Creek	44.14	272⇑	*e*P	P	12 27 22.8	-1.0
WRAB				pmax	pmax		
	comp=Z,404nm,1.3s						
WR1	Warramunga Arr	44.15	272	*e*P	P	12 27 22.9	-1.0
	comp=Z,662nm,1.3s						
WR1				*e*PP	PcP	12 29 08.3	-0.2
WR1				*e*S	S	12 33 55.3	+0.6
WRA	Warramunga Arr	44.15	272	P	P	12 27 22.9	-1.0
WRA						12 29 08.3	
WRA				S	S	12 33 55.3	+0.6
WRA				pmax	pmax		
	comp=Z,198nm,0.7s						
WRA				smax	smax		
	comp=N,13nm,1.0s						
WRA				MLR	MLR		
	comp=Z,7μm,18.0s						
WRA	Warramunga Arr	44.15	272	P	P	12 27 22.9	-1.0
	comp=Z,201nm,0.7s,baz=111,slow=8.0,SNR=714						
WRA				PcP	PcP	12 29 08.3	-0.2
	comp=Z,19nm,0.8s,baz=110,slow=3.0,SNR=5.2						
WRA				ScP	ScP	12 32 55.3	-2.5
	comp=Z,8.9nm,1.0s,baz=111,slow=3.7,SNR=5.1						
WRA				S	S	12 33 55.3	+0.6
	comp=Z,13nm,1.0s,baz=109,slow=15,SNR=5.3						
WRA				LR	LR	12 45 08.1	
	comp=Z,7μm,18.0s,baz=110,slow=35						
FORT	Forrest	46.02	255	P	P	12 27 37.6	-1.0
	baz=46,SNR=33						
FORT	Forrest	46.02	255	*e*P	P	12 27 37.1	-1.5
	comp=Z,591nm,1.3s						
FORT				LR	LR		
	comp=Z,6μm,18.0s						
WRKA	Warakurna	47.48	263	P	P	12 27 48.7	-1.6
	baz=47,SNR=114						
SBA	Scott Base	47.78	184	P	P	12 27 52.8	+1.1
SBA				pmax	pmax		
	comp=Z,236nm,2.5s						
VNDA	Vanda	47.84	186	*e*P	P	12 27 52.4	+0.2
VNDA	Vanda	47.84	186	*e*P	P	12 27 52.4	+0.2
VNDA	Vanda	47.84	186	P	P	12 27 54.8	+2.6
	comp=Z,17nm,0.9s,baz=20,slow=7.5,SNR=11						
VNDA				LR	LR	12 44 46.1	
	comp=Z,1μm,21.4s,baz=26,slow=32						
JAY	Jayapura	48.05	297	P	P	12 27 53.4	-1.3
JAY				pmax	pmax		
	comp=Z,96nm,1.2s						
JAY	Jayapura	48.05	297	P	P	12 27 54.8	+0.1
	comp=Z,1μm,1.2s,comp=Z,16μm						
JAY	Jayapura	48.05	297	LR	LR	12 48 03.2	
	comp=Z,1μm,19.4s,baz=114,slow=36						
GENI	Genyem	48.41	297	P	P	12 27 58.0	+0.6
	comp=Z,391nm,1.2s,comp=Z,5μm						
MTN	Manton Dam	50.06	279	PFAKE		12 28 20.0	+10
MTN				LR	LR		
	comp=Z,10μm,20.0s						
KNRA	Kununurra	50.76	275	P	P	12 28 14.8	-0.5
	baz=51,SNR=20						
WAKE	Wake Island	51.81	341	*e*P	P	12 28 23.2	+0.3
	comp=Z,223nm,0.8s						
WAKE				LR	LR		
	comp=Z,6μm,21.0s						
SRPI	Serui, Papua	51.91	294	P	P	12 28 23.6	-0.4
	comp=Z,132nm,0.6s						
FITZ	Fitzroy Crossi	52.40	270	P	P	12 28 26.6	-0.9
	baz=52,SNR=87						
FITZ	Fitzroy Crossi	52.40	270	*e*P	P	12 28 26.2	-1.4
	comp=Z,330nm,1.4s						
FITZ				LR	LR		
	comp=Z,6μm,21.0s						
FITZ	Fitzroy Crossi	52.40	270	LR	LR	12 49 31.0	
	comp=Z,6μm,20.6s,baz=108,slow=35						
SAUI	Saumlaki	52.41	285	*e*P	P	12 28 27.0	-0.6
	comp=Z,343nm,1.1s						
SAUI				LR	LR		
	comp=Z,6μm,20.0s						
SAUI	Saumlaki	52.41	285	P	P	12 28 28.8	+1.2
	comp=Z,350nm,1.2s,comp=Z,5μm						
RKGY	Rocky Gully	54.09	247	P	P	12 28 40.1	+0.3
	baz=54,SNR=5.8						
KHLU	Kahalu`u	54.28	26	*e*P	P	12 28 41.5	+0.2
	comp=Z,2μm,1.9s						
KLBR	Kellerberrin	54.30	251	P	P	12 28 39.6	-1.8
	baz=54,SNR=18						
RIM	Rim	54.34	27	*e*P	P	12 28 42.0	+0.2
	comp=Z,361nm,0.9s						
PUH	Pauahi	54.34	27	*e*P	P	12 28 42.5	+0.8
	comp=Z,397nm,1.0s						
NWAO	Narrogin (SRO)	54.34	249	P	P	12 28 39.9	-1.8
	baz=54,SNR=4.1						
NWAO	Narrogin (SRO)	54.34	249	*e*P	P	12 28 40.6	-1.1
	comp=Z,197nm,1.6s						
NWAO				LR	LR		
	comp=Z,3μm,20.0s						
NWAO	Narrogin (SRO)	54.34	249	*e*P	P	12 28 40.7	-1.0
NWAO				pmax	pmax		
	comp=Z,200nm,1.6s						
KKO	Keanakako`i	54.34	27	*e*P	P	12 28 42.6	+0.8
	comp=Z,856nm,1.4s						
MLOA	Mauna Loa Obse	54.35	26	*e*P	P	12 28 42.3	+0.1
	comp=Z,610nm,1.6s						
BYL	Byron's Ledge	54.36	27	PFAKE		12 29 00.0	+18
BYL				LR	LR		
	comp=Z,3μm,19.0s						
MLH	Mauna Loa	54.38	26	*e*P	P	12 28 43.0	+0.7
	comp=Z,282nm,0.9s						
MLH	Mauna Loa	54.38	26	*e*P	P	12 28 44.6	+2.4
MLH				pmax	pmax		
	comp=Z,280nm,0.9s						
HUH	Hualalai	54.39	26	*e*P	P	12 28 43.3	+1.0
	comp=Z,618nm,1.5s						
NPOC	North of Pu‘u	54.40	27	PFAKE		12 29 00.0	+18
NPOC				LR	LR		
	comp=Z,2μm,21.0s						
HMH	Humu‘ula Sheep	54.45	26	*e*P	P	12 28 42.1	-0.7
	comp=Z,545nm,0.9s						
FAKI	Fak Fak	54.46	290	*e*P	P	12 28 41.6	-1.1
	comp=Z,113nm,1.0s						
FAKI				LR	LR		
	comp=Z,2μm,21.0s						
FAKI	Fak Fak	54.46	290	P	P	12 28 43.1	+0.3
	comp=Z,124nm,1.5s,comp=Z,2μm						
POHA	Pohakuloa	54.57	26	*e*P	P	12 28 43.9	+0.3
	comp=Z,333nm,1.1s						
HPAH	Hawaii Prepara	54.75	26	*e*P	P	12 28 44.3	-0.4
	comp=Z,381nm,0.9s						
MHA	Mahukona	54.82	26	*e*P	P	12 28 45.2	+0.1
MHA	Mahukona	54.82	26	*e*P	P	12 28 48.3	+3.2
CASY	Casey	54.93	208	*e*P	P	12 28 44.6	-0.8
	comp=Z,211nm,0.8s						
CASY				LR	LR		
	comp=Z,2μm,18.0s						
MEEK	Meekatharra	55.16	257	P	P	12 28 45.8	-1.9
	baz=55,SNR=17						
KEKH	Kekaha	55.20	21	*e*P	P	12 28 47.9	+0.1
	comp=Z,479nm,1.2s						
KIP	Kipapa	55.22	23	*e*P	P	12 28 48.0	+0.1
	comp=Z,569nm,1.3s						
KIP	Kipapa	55.22	23	*e*P	P	12 28 50.1	+2.2
KIP				pmax	pmax		
	comp=Z,570nm,1.2s						
MUN	Mundaring	55.45	250	P	P	12 28 47.6	-2.0
	baz=55,SNR=11						
BLDU	Ballidu	55.45	252	P	P	12 28 47.5	-2.2
	baz=55,SNR=10						
MBWA	Marble Bar	56.23	264	*e*P	P	12 28 53.5	-1.9
	comp=Z,34nm,0.9s						
MBWA				LR	LR		
	comp=Z,8μm,18.0s						
SWI	Sorong	56.47	292	P	P	12 28 58.1	+0.9
SWI				pmax	pmax		
	comp=Z,82nm,1.4s						
SWI	Sorong	56.47	292	P	P	12 28 55.0	-2.2
	comp=Z,83nm,1.4s,comp=Z,4μm						
SWI				pP	pP	12 29 07.3	+0.3
	comp=Z,83nm,1.4s,comp=Z,4μm						
MORW	Morawa	56.49	254	P	P	12 28 55.8	-1.5
	baz=56,SNR=15						
MORW	Morawa	56.49	254	*e*P	P	12 28 55.1	-2.1
	comp=Z,154nm,1.3s						
MORW				LR	LR		
	comp=Z,6μm,18.0s						
GUMO	Guam	56.69	315	P	P	12 28 57.4	-1.2
	comp=Z,270nm,0.9s,baz=191,slow=14,SNR=3.8						
SOEI	Soe	57.43	278	*e*P	P	12 29 04.3	+0.2
	comp=Z,119nm,1.0s						
SOEI				LR	LR		
	comp=Z,11μm,22.0s						
SOEI	Soe	57.43	278	P	P	12 29 05.3	+1.2
	comp=Z,116nm,0.9s,comp=Z,3μm						
BATI	Baumata	57.72	277	P	P	12 29 07.9	+1.8
	comp=Z,43nm,0.9s,comp=Z,828nm						
ANA2	Anatahan	58.36	318	PFAKE		12 29 20.0	+10
ANA2				LR	LR		
	comp=Z,4μm,19.0s						
NLAI	Namlea	58.49	287	P	P	12 29 13.2	+1.8
	comp=Z,85nm,1.0s						
PALU	Palau	59.19	302	P	P	12 29 14.9	-1.3
	baz=59,SNR=6.0						
QSPA	South Pole Qui	59.45	180	*e*P	P	12 29 18.6	+1.1
	comp=Z,455nm,1.0s						
QSPA				*e*S	S	12 37 28.5	+4.3
QSPA				LR	LR		
	comp=Z,3μm,19.0s						
QSPA	South Pole Qui	59.45	180	P	P	12 29 19.7	+2.1
	comp=Z,137nm,1.0s,baz=43,slow=1.9,SNR=135						
QSPA				S	S	12 37 28.5	+4.3
	comp=Z,3.2nm,1.0s,baz=235,slow=23,SNR=3.2						
MMRI	Maumere	59.72	278	*e*P	P	12 29 19.3	-0.7
	comp=Z,634nm,1.9s						
MMRI				LR	LR		
	comp=Z,4μm,18.0s						
MMRI	Maumere	59.72	278	P	P	12 29 21.6	+1.6
	comp=Z,135nm,1.5s,comp=Z,3μm						
SANI	Sanana	60.07	287	P	P	12 29 22.5	+0.1
	comp=Z,108nm,1.1s,comp=Z,2μm						
EDFI	Ende, Flores	60.13	278	P	P	12 29 22.9	0.0
	comp=Z,39nm,0.8s,comp=Z,7μm						
GIRL	Giralia	60.34	260	P	P	12 29 24.7	+0.6
	baz=60,SNR=5.7						
GIRL	Giralia	60.34	260	PFAKE		12 29 30.0	+5.9
GIRL				LR	LR		
	comp=Z,5μm,22.0s						
WSI	Waingapu	60.87	276	P	P	12 29 27.8	0.0
	comp=Z,259nm,0.7s,comp=Z,17μm						

BKSI	**Bulukumba**	**63.22**	**280**	P	**P**	**12 29 43.0**	**-0.6**
	comp=Z,36nm,1.8s,comp=Z,836nm						
LUWI	**Luwuk**	**63.30**	**286**	P	**P**	**12 29 45.8**	**+1.7**
	comp=Z,140nm,1.1s,comp=Z,12µm						
APSI	**Ampana**	**64.30**	**285**	P	**P**	**12 29 50.1**	**-0.6**
	comp=Z,52nm,1.2s,comp=Z,957nm						
DNP	**Denpasar**	**65.72**	**274**	P	**P**	**12 30 00.2**	**+0.3**
DNP				pmax	pmax		
	comp=Z,383nm,1.3s						
PCI	**Palu**	**65.81**	**284**	P	**P**	**12 30 01.0**	**+0.4**
PCI				pmax	pmax		
	comp=Z,231nm,1.2s						
PCI	**Palu**	**65.81**	**284**	P	**P**	**12 29 59.4**	**-1.2**
	comp=Z,232nm,1.2s,comp=Z,3µm						
PCI				pP	**pP**	**12 30 11.8**	**+1.2**
	comp=Z,232nm,1.2s,comp=Z,3µm						
KCP	**Kidapawan**	**66.11**	**294**	⇑*i*P	**P**	**12 30 00.6**	**-1.9**
BUKP	**Musuan**	**66.67**	**295**	*e*P	**P**	**12 30 05.0**	**-1.1**
JAGI	**Jajag, Banyuwa**	**66.73**	**274**	*e*P	**P**	**12 30 04.9**	**-1.5**
	comp=Z,251nm,1.2s						
JAGI				LR	LR		
	comp=Z,4µm,20.0s						
BUTP	**Butuan**	**66.91**	**297**	*e*P	**P**	**12 30 06.1**	**-1.3**
MSLP	**Maasin**	**68.22**	**297**	*e*P	**P**	**12 30 13.4**	**-2.3**
CBIJ	**Chichi jima**	**68.91**	**322**	*e*P	**P**	**12 30 18.6**	**-1.2**
JCJ	**Chichijima**	**68.91**	**322**	P	**P**	**12 30 18.6**	**-1.2**
	comp=Z,118nm,0.8s,baz=295,slow=14,SNR=3.9						
PWJI	**Pagerwojo**	**68.97**	**273**	P	**P**	**12 30 19.1**	**-1.4**
	comp=Z,188nm,1.2s,comp=Z,2µm						
LLP	**Lapu-Lapu**	**69.02**	**297**	⇓*e*P	**P**	**12 30 20.1**	**-0.7**
PCJI	**Pacitan**	**69.42**	**273**	P	**P**	**12 30 22.2**	**-1.1**
	comp=Z,756nm,1.2s,comp=Z,7µm						
NGJI	**Ngawi**	**69.59**	**274**	P	**P**	**12 30 25.0**	**+0.6**
	comp=Z,122nm,0.9s						
WOJI	**Wonogiri, Jawa**	**69.82**	**273**	P	**P**	**12 30 24.9**	**-0.9**
	comp=Z,260nm,1.1s						
UGM	**Wanagama**	**70.13**	**273**	*e*P	**P**	**12 30 26.0**	**-1.7**
	comp=Z,281nm,1.2s						
UGM				LR	LR		
	comp=Z,4µm,22.0s						
UGM	**Wanagama**	**70.13**	**273**	P	**P**	**12 30 26.0**	**-1.7**
	comp=Z,214nm,1.3s						
TSM	**Tawau**	**70.33**	**288**	P	**P**	**12 30 28.5**	**-0.4**
RCP	**Roxas**	**70.72**	**297**	⇑*e*P	**P**	**12 30 30.1**	**-1.1**
SDKM	**Sandakan**	**71.64**	**288**	P	**P**	**12 30 36.2**	**-0.7**
CMJI	**Cimerak**	**71.98**	**272**	P	**P**	**12 30 37.3**	**-1.6**
	comp=Z,160nm,1.2s						
PMSA	**Palmer Station**	**72.01**	**156**	LR	LR	12 55 37.5	
	comp=Z,2µm,21.0s,baz=258,slow=30						
MAW	**Mawson**	**72.08**	**201**	*e*P	**P**	**12 30 38.0**	**-0.6**
	comp=Z,102nm,1.8s						
MAW	**Mawson**	**72.08**	**201**	P	**P**	**12 30 39.1**	**+0.5**
	comp=Z,82nm,1.1s,baz=107,slow=8.0,SNR=3.7						
MAW				LR	LR	13 00 54.6	
	comp=Z,4µm,20.6s,baz=115,slow=34						
BOAC	**Boac**	**72.58**	**298**	*e*P	**P**	**12 30 40.1**	**-2.2**
CISI	**Cisompet, Garu**	**72.63**	**271**	*e*P	**P**	**12 30 40.8**	**-2.1**
	comp=Z,561nm,1.4s						
CISI				LR	LR		
	comp=Z,3µm,20.0s						
KKM	**Kota Kinabalu**	**72.67**	**288**	*e*P	**P**	**12 30 41.3**	**-1.8**
	comp=Z,159nm,1.2s						
KKM	**Kota Kinabalu**	**72.67**	**288**	P	**P**	**12 30 43.5**	**+0.3**
ENPP	**El Nido**	**73.09**	**294**	*e*P	**P**	**12 30 41.9**	**-3.6**
TGY	**Tagaytay City**	**73.67**	**298**	P	**P**	**12 30 49.1**	**+0.2**
	comp=Z,838nm,0.9s,baz=328,slow=2.4,SNR=20						
SBUM	**Sibu**	**74.01**	**283**	*e*P	**P**	**12 30 49.6**	**-1.4**
	comp=Z,56nm,1.2s						
SBUM				LR	LR		
	comp=Z,1µm,22.0s						
SBUM	**Sibu**	**74.01**	**283**	P	**P**	**12 30 51.0**	**0.0**
DBJI	**Dramaga**	**74.05**	**272**	P	**P**	**12 30 49.5**	**-1.7**
	comp=Z,121nm,0.8s						
PALP	**Palanan**	**74.40**	**301**	*e*P	**P**	**12 30 51.0**	**-2.0**
CAUP	**Cauayan**	**74.77**	**301**	*e*P	**P**	**12 30 51.9**	**-3.3**
KSM	**Kuching**	**75.11**	**281**	*e*P	**P**	**12 30 55.7**	**-1.6**
	comp=Z,147nm,1.1s						
KSM	**Kuching**	**75.11**	**281**	P	**P**	**12 30 57.6**	**+0.3**
SMPP	**San Manuel, Pa**	**75.13**	**299**	*e*P	**P**	**12 30 54.4**	**-2.9**
GO10	**Punta Arenas**	**75.28**	**143**	*e*P	**P**	**12 30 58.0**	**+0.3**
	comp=Z,221nm,1.0s						
USHA	**Ushuaia**	**75.69**	**146**	LR	LR	12 57 58.4	
	comp=Z,578nm,20.0s,baz=240,slow=30						
APYP	**Conner**	**75.78**	**301**	*e*P	**P**	**12 30 58.9**	**-2.0**
BLSI	**Bandar Lampung**	**75.93**	**272**	P	**P**	**12 31 00.2**	**-1.9**
	comp=Z,253nm,0.6s						
KASI	**Kota Agung**	**76.50**	**272**	P	**P**	**12 31 02.7**	**-2.6**
KLI	**Kotabumi**	**76.52**	**272**	P	**P**	**12 31 04.5**	**-0.9**
KLI				pmax	pmax		
	comp=Z,305nm,1.1s						
JOW	**Kunigami**	**76.86**	**312**	P	**P**	**12 31 06.6**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=153,slow=12,SNR=6.4						
SYO	**Syowa Base**	**76.87**	**193**	⇓*i*P	**P**	**12 31 05.0**	**-1.4**
MDSI	**Maura Dua**	**77.29**	**272**	P	**P**	**12 31 07.1**	**-2.6**
SNAA	**Sanae**	**77.90**	**178**	P	**P**	**12 31 12.6**	**+0.3**
SNAA				S	**S**	**12 41 08.0**	**+5.5**
SNAA	**Sanae**	**77.90**	**178**	*e*P	**P**	**12 31 12.1**	**-0.1**
	comp=Z,278nm,1.2s						
SNAA				LR	LR		
	comp=Z,2µm,22.0s						
SNAA	**Sanae**	**77.90**	**178**	*e*P	**P**	**12 31 12.1**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,278nm,1.2s						
SNAA				MLR	MLR		
	comp=Z,2µm,22.0s						
SNAA	**Sanae**	**77.90**	**178**	LR	LR	13 05 36.8	
	comp=Z,1µm,18.1s,baz=193,slow=36						
VNA3	**Neumayer Olymp**	**78.05**	**176**	P	**P**	**12 31 13.5**	**+0.5**
VNA3				S	**S**	**12 41 09.9**	**+5.8**
INU	**Inuyama**	**78.13**	**324**	*e*P	**P**	**12 31 12.9**	**-0.9**
	comp=Z,77nm,1.0s						
MNAI	**Manna**	**78.41**	**272**	PFAKE		12 31 30.0	+14
MNAI				LR	LR		
	comp=Z,2µm,20.0s						
MJAR	**Matsushiro Arr**	**78.47**	**325**	P	**P**	**12 31 14.8**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,63nm,1.1s						
MJAR	**Matsushiro Arr**	**78.47**	**325**	P	**P**	**12 31 14.8**	**-1.0**
	comp=Z,60nm,1.1s,baz=167,slow=5.4,SNR=25						
MJAR				LR	LR	13 00 45.0	
	comp=Z,763nm,21.5s,baz=140,slow=32						
MAJO	**Matsushiro**	**78.48**	**325**	*e*P	**P**	**12 31 15.1**	**-0.7**
	comp=Z,103nm,1.1s						
MAJO	**Matsushiro**	**78.48**	**325**	*de*P	**P**	**12 31 16.5**	**+0.7**
MAT	**Matsushiro**	**78.48**	**325**	P	**P**	**12 31 13.6**	**-2.2**
MJB9	**Matsu-Tunnel**	**78.48**	**325**	*e*P	**P**	**12 31 15.1**	**-0.7**
	comp=Z,105nm,1.1s						
VNA2	**Neumayer--Watz**	**78.48**	**177**	P	**P**	**12 31 16.1**	**+0.7**
	baz=171,slow=5.6						
VNA2				S	**S**	**12 41 15.7**	**+7.0**
NVL	**N'lazarevskaya**	**78.62**	**183**	*e*P	**P**	**12 31 15.8**	**-0.3**
NVL				*e*S	**S**	**12 41 01.8**	**-8.3**
NVL				pmax	pmax		
	comp=Z,135nm,1.2s						
NVL				MLR	MLR		
	comp=Z,1µm,18.0s						
VNA1	**Neumayer--Stat**	**78.71**	**177**	P	**P**	**12 31 17.7**	**+1.1**
YOJ	**Yonaguni jima**	**78.75**	**307**	*e*P	**P**	**12 31 16.1**	**-1.4**
	comp=Z,225nm,1.2s						
YOJ	**Yonaguni jima**	**78.75**	**307**	*e*P	**P**	**12 31 17.0**	**-0.5**
YOJ				pmax	pmax		
	comp=Z,230nm,1.2s						
DSRI	**Dabo**	**78.98**	**276**	P	**P**	**12 31 17.6**	**-1.5**
TWG	**Pinlang**	**79.04**	**305**	*e*P	**P**	**12 31 16.9**	**-2.2**
	comp=Z,247nm,0.9s						
YULB	**Yu-li**	**79.25**	**305**	*e*P	**P**	**12 31 18.3**	**-1.9**
	comp=Z,25nm,0.8s						
NACB	**Ninganchiao**	**79.54**	**306**	*e*P	**P**	**12 31 20.0**	**-1.8**
	comp=Z,139nm,1.3s						
MASI	**Maura Aman, Be**	**79.63**	**272**	P	**P**	**12 31 21.2**	**-1.5**
TPUB	**Ta-pu**	**79.66**	**305**	*e*P	**P**	**12 31 20.4**	**-2.1**
	comp=Z,114nm,0.8s						
TPUB				LR	LR		
	comp=Z,1µm,19.0s						
SSLB	**Suanglung**	**79.74**	**305**	*e*P	**P**	**12 31 20.4**	**-2.5**
	comp=Z,63nm,0.8s						
JNU	**Nakatsue**	**79.77**	**318**	*e*P	**P**	**12 31 21.4**	**-1.5**
	comp=Z,75nm,1.1s						
JNU	**Nakatsue**	**79.77**	**318**	P	**P**	**12 31 21.2**	**-1.7**
	comp=Z,53nm,1.0s,baz=129,slow=3.3,SNR=8.8						
COCO	**West Island**	**79.81**	**262**	PFAKE		12 31 30.0	+6.4
COCO				LR	LR		
	comp=Z,4µm,18.0s						
TATO	**Taipei**	**80.13**	**307**	*e*P	**P**	**12 31 24.0**	**-1.0**
	comp=Z,239nm,1.4s						
ERM	**Erimo**	**80.71**	**332**	PFAKE		12 31 40.0	+12
ERM				LR	LR		
	comp=Z,3µm,21.0s						
ERM	**Erimo**	**80.71**	**332**	⇑*e*P	**P**	**12 31 28.6**	**+0.9**
ERM				pmax	pmax		
	comp=Z,109nm,1.9s						
MYKOM	**Kota Tinggi**	**80.77**	**278**	*e*P	**P**	**12 31 27.8**	**-0.9**
	comp=Z,159nm,1.1s						
MYKOM				LR	LR		
	comp=Z,2µm,20.0s						
MYKOM	**Kota Tinggi**	**80.77**	**278**	P	**P**	**12 31 29.1**	**+0.4**
KGM	**Kluang**	**81.33**	**278**	P	**P**	**12 31 31.8**	**0.0**
YUK	**Yuzh-Kuril'sk**	**81.36**	**334**	*e*P	**P**	**12 31 27.6**	**-3.5**
YUK				*e*		12 34 39.0	
YUK				*e*PPP	PPP	12 36 29.3	
YUK				*i* S	**S**	**12 41 34.9**	**-4.5**
YUK				*e*SS	**SS**	**12 46 51.6**	**-5.1**
YUK				*e*SSS	SSS	12 50 26.4	
YUK				pmax	pmax		
	comp=Z,166nm,9.3s						
YUK				pmax	pmax		
	comp=Z,156nm,0.9s						
YUK				pmax	pmax		
	comp=N,59nm,0.8s						
YUK				pmax	pmax		
	comp=E,82nm,0.8s						
KUR	**Kuril'sk**	**81.68**	**336**	*e*P	**P**	**12 31 31.4**	**-1.4**
KUR				*e*		12 31 39.0	
KUR				S	**S**	**12 41 41.4**	**-1.2**
KUR				MLR	MLR		
	comp=Z,2µm,16.0s						
QZH	**Quanzhou**	**82.14**	**305**	⇑*i*P	**P**	**12 31 35.8**	**+0.1**
QZH				S	**S**	**12 41 47.0**	**-1.2**
QZH				pmax	pmax		
	comp=Z,58nm,1.5s						
QZH				LR	LR		
	comp=Z,690nm,18.0s						
QZH				LR	LR		
	comp=Z,920nm,21.3s						
QZH				LR	LR		
	comp=Z,1µm,18.9s						
KIWB	**Kanaga Island**	**82.16**	**1**	*e*P	**P**	**12 31 35.3**	**+0.2**
ADK	**Adak**	**82.19**	**1**	*e*P	**P**	**12 31 35.2**	**-0.1**
	comp=Z,223nm,0.8s						
ADK	**Adak**	**82.19**	**1**	*e*P	**P**	**12 31 35.8**	**+0.5**
ADK				pmax	pmax		
	comp=Z,220nm,0.9s						
PDSI	**Padang**	**82.29**	**274**	P	**P**	**12 31 33.0**	**-3.9**
PLCA	**Paso Flores**	**82.30**	**133**	*e*P	**P**	**12 31 37.3**	**+0.7**
	comp=Z,204nm,1.5s						
PLCA	**Paso Flores**	**82.30**	**133**	*e*P	**P**	**12 31 37.3**	**+0.7**
PLCA				pmax	pmax		
	comp=Z,204nm,1.5s						
PLCA	**Paso Flores**	**82.30**	**133**	*e*P	**P**	**12 31 38.0**	**+1.4**
GO06	**Curarrehue**	**82.35**	**132**	*e*P	**P**	**12 31 37.5**	**+0.5**
	comp=Z,82nm,1.1s						
GO06				LR	LR		
	comp=Z,3µm,21.0s						
BKNI	**Bangkinang**	**82.42**	**275**	*e*P	**P**	**12 31 35.5**	**-2.0**
	comp=Z,284nm,1.1s						
BKNI				LR	LR		
	comp=Z,3µm,21.0s						
EFI	**East Falkland**	**82.55**	**147**	*e*P	**P**	**12 31 38.2**	**+0.7**
	comp=Z,232nm,1.4s						
EFI	**East Falkland**	**82.55**	**147**	*e*P	**P**	**12 31 38.9**	**+1.3**
EFI				pmax	pmax		
	comp=Z,230nm,1.4s						
ASAJ	**Asahikawa**	**82.69**	**333**	P	**P**	**12 31 38.8**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,69nm,1.0s						
ASAJ	**Asahikawa**	**82.69**	**333**	P	**P**	**12 31 38.8**	**+0.7**
	comp=Z,82nm,1.1s,baz=234,slow=3.8,SNR=13						
KTGM	**Kuala Trenggan**	**83.21**	**280**	P	**P**	**12 31 42.0**	**+0.4**
FRIM	**Kepong**	**83.41**	**278**	P	**P**	**12 31 42.1**	**-0.5**
NIKH	**Nikolski High**	**83.66**	**6**	*e*P	**P**	**12 31 43.0**	**+0.1**
	comp=Z,389nm,0.7s						
TJN	**Taejon**	**84.12**	**319**	⇑*e*P	**P**	**12 31 45.8**	**+0.1**
SNCC	**San Nicolas Is**	**84.19**	**46**	P	**P**	**12 31 47.5**	**+1.3**
	baz=227						
SSE	**Sheshan**	**84.31**	**311**	PFAKE		12 32 00.0	+13
SSE				LR	LR		
	comp=Z,2µm,21.0s						
IPM	**Ipoh**	**84.56**	**278**	*e*P	**P**	**12 31 46.8**	**-1.7**
	comp=Z,138nm,1.1s						
IPM				LR	LR		
	comp=Z,2µm,21.0s						
IPM	**Ipoh**	**84.56**	**278**	P	**P**	**12 31 47.9**	**-0.6**
KSRS	**Korea Array**	**84.57**	**320**	P	**P**	**12 31 48.2**	**+0.4**
	comp=Z,28nm,1.1s,baz=137,slow=5.5,SNR=24						
KSRS				LR	LR	13 05 25.9	
	comp=Z,839nm,21.4s,baz=138,slow=33						
KS15	**Wonju Array Si**	**84.58**	**320**	*e*P	**P**	**12 31 48.4**	**+0.4**
KS01	**Wonju Array Si**	**84.60**	**320**	*e*P	**P**	**12 31 47.5**	**-0.6**
SCI2	**San Clemente I**	**84.62**	**47**	P	**P**	**12 31 49.8**	**+1.4**
	baz=228						
SCZ2	**Santa Cruz Isl**	**84.63**	**45**	P	**P**	**12 31 49.8**	**+1.4**
	baz=227						
UNV	**Unalaska Valle**	**84.74**	**7**	*e*P	**P**	**12 31 49.2**	**+0.8**
	comp=Z,195nm,1.2s						
GZH	**Guangzhou**	**84.81**	**301**	*e*P	**P**	**12 31 46.3**	**-3.2**
SBC	**Santa Barbara**	**84.88**	**45**	P	**P**	**12 31 50.7**	**+1.1**
	baz=227						
CIS	**Catalina Islan**	**84.99**	**46**	P	**P**	**12 31 51.2**	**+1.0**
	baz=228						
YSS	**Yuzh-Sakhalins**	**85.00**	**334**	*e*P	**P**	**12 31 49.9**	**+0.2**
	comp=Z,280nm,1.3s						
YSS				LR	LR		
	comp=Z,1µm,22.0s						
YSS	**Yuzh-Sakhalins**	**85.00**	**334**	*ce*P	**P**	**12 31 50.0**	**+0.2**
YSS				*e**PP	**pP**	**12 32 00.1**	**+0.2**
YSS				*e**SP	**pwP**	**12 32 05.5**	**+1.4**
YSS				*e*		12 35 05.4	
YSS				*e*PPP	PPP	12 37 08.3	
YSS				*e*S	**S**	**12 42 17.4**	**+1.3**
YSS				*e*SS	**SS**	**12 47 47.0**	**-3.5**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				pmax	pmax		
	comp=E,30nm,1.2s						
YSS				pmax	pmax		
	comp=Z,900nm,4.1s						
YSS				pmax	pmax		
	comp=N,200nm,3.9s						
YSS				pmax	pmax		
	comp=E,200nm,3.7s						
YSS				smax	smax		
	comp=N,700nm,8.0s						
YSS				smax	smax		
	comp=E,400nm,5.4s						
YSS				MLR	MLR		
	comp=N,700nm,16.0s						
YSS				MLR	MLR		
	comp=Z,1µm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
BLG	**Laguna Peak, P**	**85.05**	**45**	P	**P**	**12 31 52.3**	**+1.8**
	baz=228						
PKM	**Mcpherson Peak**	**85.12**	**44**	P	**P**	**12 31 52.9**	**+1.8**
	baz=227						
QIZ	**Qiongzhong**	**85.14**	**295**	P	**P**	**12 31 51.6**	**+0.4**
QIZ				pP	**pP**	**12 32 02.0**	**+0.6**
QIZ				SKS	**SKSac**	**12 42 07.1**	**-6.5**
QIZ				S	**S**	**12 42 17.6**	**-1.1**
QIZ				SS	**SS**	**12 47 55.3**	**+1.8**
QIZ				pmax	pmax		
	comp=E,39nm,1.0s						
QIZ				LR	LR		
	comp=E,490nm,27.9s						
QIZ				LR	LR		
	comp=E,580nm,27.0s						
QIZ				LR	LR		
	comp=E,1µm,31.9s						
QIZ	**Qiongzhong**	**85.14**	**295**	*e*P	**P**	**12 31 49.8**	**-1.5**
	comp=E,48nm,1.1s						
QIZ				LR	LR		
	comp=Z,700nm,20.0s						
SRIG	**Santa Rosalia**	**85.20**	**54**	*e*P	**P**	**12 31 52.3**	**+1.0**
	comp=Z,213nm,1.5s						
FMP	**Fort Macarthur**	**85.27**	**46**	P	**P**	**12 31 52.6**	**+1.1**
	baz=228						
KULM	**Kulim**	**85.30**	**279**	*e*P	**P**	**12 31 51.1**	**-1.1**
	comp=Z,196nm,1.3s						
KULM				LR	LR		
	comp=Z,2µm,20.0s						
KULM	**Kulim**	**85.30**	**279**	P	**P**	**12 31 52.4**	**+0.2**
SMMC	**Simmler**	**85.30**	**44**	P	**P**	**12 31 53.0**	**+1.2**
	baz=227						
PAGB	**Antelope Grade**	**85.44**	**44**	*e*P	**P**	**12 31 53.0**	**+0.7**
	comp=Z,121nm,1.3s						
PAGB				LR	LR		
	comp=Z,2µm,19.0s						
SAO	**San Andreas Ge**	**85.44**	**42**	*e*P	**P**	**12 31 53.5**	**+1.1**
	comp=Z,71nm,1.3s						
SAO				LR	LR		
	comp=Z,3µm,22.0s						
SAO	**San Andreas Ge**	**85.44**	**42**	*e*P	**P**	**12 31 53.9**	**+1.5**
SAO				pmax	pmax		
	comp=Z,71nm,1.2s						
109C	**Camp Elliot, M**	**85.47**	**47**	P	**P**	**12 31 53.5**	**+0.9**
	baz=229						
PSI	**Prapat**	**85.50**	**276**	*e*P	**P**	**12 31 51.2**	**-2.1**
	comp=Z,161nm,1.2s						
PSI				LR	LR		
	comp=Z,4µm,21.0s						
PSI	**Prapat**	**85.50**	**276**	*e*P	**P**	**12 31 51.3**	**-2.1**
MCCM	**Marconi Confer**	**85.59**	**40**	PFAKE		12 32 00.0	+7.0
MCCM				LR	LR		
	comp=Z,2µm,19.0s						
DECC	**Green Verdugo**	**85.60**	**46**	P	**P**	**12 31 54.2**	**+0.9**
	baz=228						
OSI	**Osito Audit: C**	**85.60**	**45**	*e*P	**P**	**12 31 54.2**	**+0.9**
	comp=Z,57nm,1.0s						
OSI	**Osito Audit: C**	**85.60**	**45**	P	**P**	**12 31 54.9**	**+1.6**
	baz=228						
BAR	**Barrett**	**85.61**	**48**	*e*P	**P**	**12 31 54.4**	**+1.0**
	comp=Z,67nm,1.4s						
PASC	**Pasadena Art C**	**85.64**	**46**	*e*P	**P**	**12 31 54.4**	**+0.9**
	comp=Z,58nm,1.1s						
MWC	**Mount Wilson**	**85.75**	**46**	*e*P	**P**	**12 31 54.8**	**+0.6**
	comp=Z,104nm,1.4s						
MWC	**Mount Wilson**	**85.75**	**46**	*e*P	**P**	**12 31 55.9**	**+1.7**
MWC				pmax	pmax		
	comp=Z,100nm,1.4s						
PET	**Petropavlovsk**	**85.79**	**346**	*e*P	**P**	**12 31 54.3**	**+0.6**
	comp=Z,349nm,2.0s						
PET	**Petropavlovsk**	**85.79**	**346**	*e*P	**P**	**12 31 54.0**	**+0.4**
PET				*e*		12 42 16.3	
PET				*e*S	**S**	**12 42 22.4**	**-1.2**
PET				*e*PS	**PnS**	**12 43 21.9**	**-2.5**
PET				*e*PPS	PPS	12 43 42.4	
PET				pmax	pmax		
	comp=Z,73nm,0.5s						
PET				pmax	pmax		
	comp=Z,800nm,15.3s						
ARVC	**Arvin**	**85.88**	**45**	P	**P**	**12 31 56.0**	**+1.5**
	baz=228,SNR=18						
MURC	**Murrieta**	**85.88**	**47**	P	**P**	**12 31 55.9**	**+1.2**
	baz=229,SNR=23						
GSI	**Gunungsitoli**	**85.89**	**274**	*e*P	**P**	**12 31 54.0**	**-1.2**
	comp=Z,410nm,1.1s						
GSI				LR	LR		
	comp=Z,3µm,20.0s						
GSI	**Gunungsitoli**	**85.89**	**274**	P	**P**	**12 31 53.8**	**-1.4**
MONP2	**Monument Peak**	**85.91**	**48**	P	**P**	**12 31 57.0**	**+2.0**
	baz=229,SNR=19						
IKP	**In-Ko-Pah, Jac**	**85.95**	**48**	P	**P**	**12 31 56.8**	**+1.7**
	baz=230,SNR=18						
BFSC	**Mount Baldy Ra**	**86.01**	**46**	P	**P**	**12 31 56.4**	**+1.0**
	baz=228,SNR=17						
PEA0B	**Petropavlovsk-**	**86.07**	**346**	*e*P	**P**	**12 31 55.4**	**+0.3**
	comp=Z,235nm,1.1s						
PETK	**Petropavlovsk-**	**86.07**	**346**	P	**P**	**12 31 55.4**	**+0.4**
	comp=Z,91nm,0.7s,baz=117,slow=4.9,SNR=24						
PETK				LR	LR	13 03 03.8	
	comp=Z,1µm,21.6s,baz=159,slow=30						
PEA1	**Petropavlovsk-**	**86.08**	**346**	*e*P	**P**	**12 31 55.4**	**+0.4**
HOPS	**Hopland Field**	**86.08**	**40**	*e*P	**P**	**12 31 56.8**	**+1.3**
	comp=Z,132nm,1.1s						
HOPS				LR	LR		
	comp=Z,2µm,18.0s						
GDXM	**Geysers**	**86.11**	**40**	*e*P	**P**	**12 31 56.9**	**+1.2**
	comp=Z,64nm,1.0s						
GDXM				LR	LR		
	comp=Z,2µm,19.0s						
VES	**Vestal, Richgr**	**86.21**	**44**	P	**P**	**12 31 57.2**	**+1.0**
	baz=228,SNR=35						
EDW2	**Edwards Air Fo**	**86.23**	**46**	P	**P**	**12 31 57.3**	**+0.9**
	baz=228,SNR=35						
KCPM	**Cahto Peak**	**86.30**	**39**	*e*P	**P**	**12 31 57.3**	**+0.6**
	comp=Z,108nm,1.2s						
KCPM				LR	LR		
	comp=Z,2µm,22.0s						
SKLT	**Songkhla**	**86.30**	**281**	P	**P**	**12 31 58.2**	**+1.1**
ROC1	**El Roble**	**86.34**	**126**	*e*P	**P**	**12 31 58.2**	**+0.8**
	comp=Z,171nm,0.5s						
SWSC	**Sam W. Stewart**	**86.34**	**48**	P	**P**	**12 31 58.7**	**+1.8**
	baz=230,SNR=12						
VOG	**Valley Oaks Go**	**86.35**	**44**	P	**P**	**12 31 57.5**	**+0.7**
	baz=227						
PFO	**Pinyon Flats O**	**86.35**	**47**	*e*P	**P**	**12 31 58.6**	**+1.5**
	comp=Z,85nm,1.4s						
PFO	**Pinyon Flats O**	**86.35**	**47**	*e*P	**P**	**12 31 58.6**	**+1.5**
PFO				pmax	pmax		
	comp=Z,85nm,1.4s						
PFO	**Pinyon Flats O**	**86.35**	**47**	P	**P**	**12 31 58.6**	**+1.5**
	baz=229,SNR=19						
XPFO	**Pion Flat**	**86.36**	**47**	*e*P	**P**	**12 31 58.8**	**+1.6**
	comp=Z,99nm,1.4s						
NJ2	**Nanjing**	**86.44**	**311**	⇑*i*P	**P**	**12 31 57.8**	**+0.4**
NJ2				S	**S**	**12 42 28.5**	**-2.5**
NJ2				pmax	pmax		
	comp=Z,61nm,1.4s						
NJ2				LR	LR		
	comp=Z,2µm,16.0s						
NJ2				LR	LR		
	comp=Z,1µm,17.3s						
NJ2				LR	LR		
	comp=Z,2µm,19.5s						
ISA	**Isabella, Lake**	**86.45**	**45**	*e*P	**P**	**12 31 58.6**	**+1.1**
	comp=Z,78nm,1.0s						
ISA				LR	LR		
	comp=Z,1µm,20.0s						
ISA	**Isabella, Lake**	**86.45**	**45**	*e*P	**P**	**12 31 59.2**	**+1.7**
ISA				pmax	pmax		
	comp=Z,79nm,1.0s						
ISA	**Isabella, Lake**	**86.45**	**45**	P	**P**	**12 31 59.1**	**+1.6**
	baz=228,SNR=69						
PEL	**Peldehue**	**86.48**	**127**	*e*P	**P**	**12 31 58.4**	**+0.5**
	comp=Z,282nm,1.3s						
PEL	**Peldehue**	**86.48**	**127**	*e*P	**P**	**12 31 58.6**	**+0.7**
BBRC	**Big Bear Solar**	**86.49**	**47**	P	**P**	**12 31 59.1**	**+1.2**
	baz=229,SNR=14						
MSHR	**Mys Shultsa**	**86.59**	**325**	*c i*P	**P**	**12 31 58.6**	**+0.8**
KMRM	**Mail Ridge**	**86.61**	**38**	*e*P	**P**	**12 31 59.6**	**+1.4**
	comp=Z,89nm,1.1s						
KMRM				LR	LR		
	comp=Z,2µm,21.0s						
VLA	**Vladivostok**	**86.64**	**326**	⇑*e*P	**P**	**12 31 58.3**	**+0.3**
VLA				pmax	pmax		
	comp=Z,95nm,1.7s						
LRMC	**Laurel Mtn Rad**	**86.81**	**45**	P	**P**	**12 32 00.5**	**+1.1**
	baz=228,SNR=57						
RRX	**Edison Barstow**	**86.84**	**46**	P	**P**	**12 32 00.8**	**+1.5**
	baz=229						
KCSI	**Kotacane, Aceh**	**86.85**	**276**	P	**P**	**12 31 57.2**	**-2.7**
BELC	**Belle Mtn. Jos**	**86.90**	**47**	P	**P**	**12 32 01.4**	**+1.6**
	baz=230,SNR=50						
CMB	**Columbia Colle**	**86.93**	**42**	*e*P	**P**	**12 32 00.3**	**+0.6**
	comp=Z,55nm,1.0s						
CMB				LR	LR		
	comp=Z,2µm,22.0s						
CMB	**Columbia Colle**	**86.93**	**42**	*e*P	**P**	**12 32 00.3**	**+0.6**
CMB				pmax	pmax		
	comp=Z,55nm,1.0s						
SDPT	**Sand Point**	**86.96**	**10**	*e*P	**P**	**12 31 59.8**	**+0.4**
	comp=Z,305nm,1.0s						
BC3	**Big Chuckawall**	**87.02**	**48**	P	**P**	**12 32 02.5**	**+2.2**
	baz=230,SNR=38						
GLA	**Glamis**	**87.04**	**49**	*e*P	**P**	**12 32 01.4**	**+1.0**
	comp=Z,263nm,1.8s						
GLA	**Glamis**	**87.04**	**49**	*e*P	**P**	**12 32 02.1**	**+1.7**
GLA				pmax	pmax		
	comp=Z,260nm,1.8s						
GLA	**Glamis**	**87.04**	**49**	P	**P**	**12 32 02.5**	**+2.1**
	baz=230,SNR=14						
KHMM	**Horse Mountain**	**87.06**	**38**	*e*P	**P**	**12 32 01.3**	**+0.9**
	comp=Z,55nm,1.0s						
O02D	**Mt. Diablo Mer**	**87.07**	**39**	P	**P**	**12 32 02.3**	**+1.9**
	baz=225,SNR=32						
CWC	**Cottonwood Cre**	**87.21**	**44**	P	**P**	**12 32 02.3**	**+1.0**
	baz=228						
AFDM	**Forest Hills D**	**87.22**	**41**	*e*P	**P**	**12 32 01.7**	**+0.6**
	comp=Z,42nm,1.1s						
AFDM				LR	LR		

	comp=Z,2µm,18.0s						
HEC	Hector,Ludlow	87.22	46	P	P	12 32 02.7	+1.5
	baz=229,SNR=42						
TPTI		87.23	275	P	P	12 31 58.9	-2.8
GSC	Goldstone, Bar	87.24	46	eP	P	12 32 02.5	+1.2
	comp=Z,103nm,1.3s						
GSC				LR	LR		
	comp=Z,1µm,20.0s						
GSC	Goldstone, Bar	87.24	46	eP	P	12 32 02.9	+1.5
GSC				pmax	pmax		
	comp=Z,100nm,1.3s						
GSC	Goldstone, Bar	87.24	46	P	P	12 32 02.8	+1.5
	baz=229,SNR=35						
MPMC	Manual Prospec	87.31	45	P	P	12 32 03.2	+1.4
	baz=228,SNR=43						
ORV	Oroville	87.34	40	eP	P	12 32 02.3	+0.7
	comp=Z,39nm,1.1s						
ORV				LR	LR		
	comp=Z,1µm,18.0s						
ORV	Oroville	87.34	40	eP	P	12 32 02.6	+1.0
ORV				pmax	pmax		
	comp=Z,39nm,1.1s						
DAC	Darwin (Calif)	87.40	45	PFAKE		12 32 10.0	+7.8
DAC				LR	LR		
	comp=Z,1µm,21.0s						
USRK	Ussuriysk Ar.	87.40	326	P	P	12 32 01.4	-0.3
	comp=Z,72nm,1.1s,baz=145,slow=3.6,SNR=30						
USRK				LR	LR	13 05 26.8	
	comp=Z,1µm,21.7s,baz=135,slow=32						
MDPB	Devils Postpil	87.41	43	eP	P	12 32 02.9	+0.6
	comp=Z,50nm,1.2s						
MDPB				LR	LR		
	comp=Z,2µm,19.0s						
TRTT	Trang	87.43	281	P	P	12 32 02.2	-0.4
WDC	Whiskeytown Da	87.49	39	eP	P	12 32 02.7	+0.4
	comp=Z,42nm,1.0s						
WDC				LR	LR		
	comp=Z,2µm,21.0s						
WDC	Whiskeytown Da	87.49	39	eP	P	12 32 02.7	+0.4
WDC				pmax	pmax		
	comp=Z,42nm,1.0s						
TIN	Tinemaha, Big	87.53	44	P	P	12 32 03.5	+0.8
	baz=228,SNR=11						
IRM	Iron Mountain	87.54	48	P	P	12 32 04.6	+1.8
	baz=230,SNR=64						
MLAC	Mammoth, Mammo	87.56	43	P	P	12 32 04.5	+1.5
	baz=228,SNR=18						
GMRC	Granite Mounta	87.62	47	P	P	12 32 04.8	+1.6
	baz=230,SNR=36						
214A	Organ Pipe Nat	87.67	51	P	P	12 32 05.3	+1.8
	baz=231						
Y12C	Blythe	87.68	48	eP	P	12 32 05.0	+1.6
	comp=Z,67nm,1.1s						
Y12C				LR	LR		
	comp=Z,1µm,18.0s						
Y12C	Blythe	87.68	48	P	P	12 32 04.9	+1.6
	baz=230,SNR=26						
N02D	Trinity Center	87.68	39	P	P	12 32 04.9	+1.6
	baz=225,SNR=18						
O03E	Paynes Creek	87.69	39	P	P	12 32 04.1	+0.8
	baz=226,SNR=33						
RUBR	Rubicon Trail	87.75	41	eP	P	12 32 04.5	+0.6
	comp=Z,59nm,1.0s						
RUBR				LR	LR		
	comp=Z,2µm,22.0s						
WAKR	Walker	87.79	42	eP	P	12 32 05.1	+1.1
	comp=Z,82nm,1.1s						
WAKR				LR	LR		
	comp=Z,2µm,22.0s						
TUQ	Turquoise Moun	87.87	46	P	P	12 32 06.0	+1.6
	baz=230,SNR=31						
M02C	Callahan	87.90	38	P	P	12 32 05.9	+1.6
	baz=225,SNR=14						
SHOC	Shoshone, Teco	87.95	46	P	P	12 32 05.9	+1.2
	baz=229,SNR=12						
FURC	Furnace Creek,	87.96	45	P	P	12 32 05.6	+1.0
	baz=229,SNR=22						
GRAC	Grapevine Rang	88.01	44	P	P	12 32 06.4	+1.4
	baz=229,SNR=8.3						
L02E	Cave Junction	88.05	37	P	P	12 32 06.4	+1.5
	baz=224						
GO04	Tololo Observa	88.07	124	eP	P	12 32 06.1	+0.2
	comp=Z,193nm,1.5s						
GO04				LR	LR		
	comp=Z,3µm,21.0s						
PNTR	Pine Nut	88.10	42	eP	P	12 32 06.4	+0.9
	comp=Z,82nm,0.9s						
PNTR				LR	LR		
	comp=Z,2µm,22.0s						
LDFC	Landfair	88.15	47	eP	P	12 32 06.9	+1.2
	comp=Z,157nm,1.1s						
LDFC				LR	LR		
	comp=Z,2µm,20.0s						
BEKR	Beckworth	88.20	41	eP	P	12 32 06.5	+0.5
	comp=Z,32nm,1.0s						
BEKR				LR	LR		
	comp=Z,2µm,21.0s						
CHGN	Chignik	88.20	11	eP	P	12 32 05.6	+0.3
	comp=Z,121nm,0.8s						
VCNR	Virginia City	88.21	41	eP	P	12 32 07.1	+1.1
	comp=Z,33nm,1.0s						
VCNR				LR	LR		
	comp=Z,2µm,22.0s						
YBH	Yreka Blue Hor	88.21	38	eP	P	12 32 06.7	+0.8
	comp=Z,24nm,0.8s						
YBH				LR	LR		
	comp=Z,2µm,20.0s						
YBH	Yreka Blue Hor	88.21	38	eP	P	12 32 07.6	+1.8
YERR	Yerington	88.23	42	eP	P	12 32 06.9	+0.8
	comp=Z,51nm,0.9s						
YERR				LR	LR		
	comp=Z,2µm,22.0s						
NEE2	Needles Airpor	88.26	47	P	P	12 32 07.9	+1.7
	baz=230						
PDMCI	Parker Dam,Lak	88.27	48	P	P	12 32 08.1	+2.0
	baz=231,SNR=32						
TYV	Tymovskoe	88.31	336	eP	P	12 32 06.1	+0.2
TYV				pmax	pmax		
	comp=Z,1µm,4.5s						
TYV				pmax	pmax		
	comp=Z,59nm,1.0s						
K02D	Willamette Mer	88.40	37	P	P	12 32 08.0	+1.4
	baz=224,SNR=6.1						
NV01	Mina Array Sit	88.40	43	eP	P	12 32 07.3	+0.3
NVAR	Mina Array Bea	88.40	43	P	P	12 32 08.4	+1.4
	comp=Z,36nm,0.9s,baz=222,slow=8.3,SNR=150						
NVAR				PKKPbc	PKKPbc	12 49 50.9	+0.4
	comp=Z,1.1nm,0.6s,baz=92,slow=2.1,SNR=5.8						
NVAR				PKPPKP	P'P'df	12 57 58.8	+4.2
	comp=Z,3.5nm,0.9s,baz=92,slow=1.9,SNR=12						
NVAR				LR	LR	13 06 09.9	
	comp=Z,1µm,19.0s,baz=218,slow=32						
RYN	Ryan	88.41	42	eP	P	12 32 07.6	+0.7
	comp=Z,32nm,1.1s						
RYN				LR	LR		
	comp=Z,2µm,22.0s						
LHMI	Lhok Sumawe	88.43	277	eP	P	12 32 06.6	-0.9
	comp=Z,235nm,1.2s						
LHMI				LR	LR		
	comp=Z,2µm,20.0s						
NV11	Mina Array Sit	88.49	43	eP	P	12 32 08.0	+0.7
	comp=Z,3.4nm,1.0s						
NV11				LR	LR		
	comp=Z,200nm,22.0s						
WHN	Wuhan	88.53	307	⇓P	P	12 32 08.8	+1.3
WHN				S	S	12 42 40.0	-11
WHN				LR	LR		
	comp=Z,3µm,20.6s						
J01E	Myrtle Point	88.59	36	P	P	12 32 09.0	+1.5
	baz=224						
PKDT	Phuket	88.61	280	P	P	12 32 08.8	+0.6
PAHR	Pah Rah Range	88.64	41	eP	P	12 32 08.6	+0.6
	comp=Z,43nm,1.1s						
PAHR				LR	LR		
	comp=Z,2µm,18.0s						
TPNV	Topopah Spring	88.65	45	eP	P	12 32 08.8	+0.7
	comp=Z,61nm,1.2s						
TPNV				LR	LR		
	comp=Z,1µm,22.0s						
TPNV	Topopah Spring	88.65	45	eP	P	12 32 09.5	+1.4
TPNV	Topopah Spring	88.65	45	P	P	12 32 09.4	+1.3
	baz=229,SNR=41						
SKNT	Sakolnakorn	88.66	291	P	P	12 32 08.4	0.0
SRAK	Srakaew	88.67	287	P	P	12 32 06.7	-1.8
HUMO	Hull Mountain	88.70	37	eP	P	12 32 09.0	+0.9
	comp=Z,139nm,1.6s						
HUMO				LR	LR		
	comp=Z,1µm,20.0s						
M04C	Macdoel	88.71	38	P	P	12 32 09.2	+0.9
	baz=226,SNR=18						
L04D	Klamath Falls	88.77	38	P	P	12 32 09.4	+0.9
	baz=225,SNR=14						
Y14A	Wickenburg	88.78	49	eP	P	12 32 09.8	+1.2
	comp=Z,74nm,1.0s						
LCO	Las Campanas	88.80	123	eP	P	12 32 09.8	+0.4
	comp=Z,143nm,1.3s						
LCO				LR	LR		
	comp=Z,4µm,22.0s						
LCO	Las Campanas	88.80	123	eP	P	12 32 10.8	+1.4
MDJ	Mudanjiang	88.86	326	P	P	12 32 09.3	+0.6
MDJ				pmax	pmax		
	comp=Z,41nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,1µm,4.9s						
KVN	Kaiserville	88.94	42	eP	P	12 32 10.4	+0.9
	comp=Z,54nm,1.1s						
KVN				LR	LR		
	comp=Z,2µm,21.0s						
KVN	Kaiserville	88.94	42	eP	P	12 32 10.8	+1.3
W13A	Hualapai Mount	88.94	48	eP	P	12 32 10.7	+1.1
	comp=Z,63nm,1.1s						
SHPR	Sheep Range	89.03	46	eP	P	12 32 10.6	+0.6
	comp=Z,151nm,1.8s						
PATY	Pattaya	89.08	286	P	P	12 32 12.0	+1.6
DL2	Dalian	89.17	317	⇑iP	P	12 32 08.9	-1.3
DL2				SKS	SKSac	12 42 32.8	-4.5
DL2				S	S	12 42 53.9	-2.8
DL2				pmax	pmax		
	comp=Z,75nm,1.3s						
DL2				pmax	pmax		
	comp=Z,730nm,4.3s						
DL2				LR	LR		
	comp=Z,830nm,24.4s						
DL2				LR	LR		
	comp=Z,1µm,24.4s						
DL2				LR	LR		
	comp=Z,2µm,26.3s						
TUC	Tucson	89.24	51	eP	P	12 32 12.2	+1.2
	comp=Z,250nm,1.6s						
TUC	Tucson	89.24	51	eP	P	12 32 13.1	+2.2
TUC	Tucson	89.24	51	P	P	12 32 13.1	+2.2
	baz=232						
I03D	Drain, OR	89.27	36	P	P	12 32 11.8	+1.2
	baz=225,SNR=13						
I02D	Swisshome	89.31	36	P	P	12 32 12.3	+1.5
	baz=224						
K04D	Chiloquin, OR	89.34	38	P	P	12 32 12.2	+1.1
	baz=226						
J04D	Umpqua Nationa	89.59	37	P	P	12 32 13.7	+1.3
	baz=225,SNR=15						
MOD	Modoc Plateau	89.62	39	eP	P	12 32 12.3	-0.2
	comp=Z,62nm,1.1s						
MOD				LR	LR		
	comp=Z,2µm,21.0s						
HPIG		89.69	58	eP	P	12 32 13.8	+0.6
	comp=Z,56nm,1.4s						
319A	Douglas	89.70	53	PFAKE		12 32 30.0	+17
319A				LR	LR		
	comp=Z,1µm,19.0s						
CHAI	Chaiyaphum	89.71	289	P	P	12 32 13.5	+0.1
I04A	Tendick Farm,	89.82	37	P	P	12 32 14.2	+1.0
	baz=225,SNR=39						
COR	Corvallis	89.93	36	PFAKE		12 32 30.0	+16
COR				LR	LR		
	comp=Z,3µm,22.0s						
COR	Corvallis	89.93	36	eP	P	12 32 15.7	+2.0
GO03	Copiap	89.94	122	PFAKE		12 32 30.0	+16
GO03				LR	LR		
	comp=Z,3µm,21.0s						
R11A	Troy Canyon, C	89.96	44	PFAKE		12 32 30.0	+16
R11A				LR	LR		
	comp=Z,1µm,20.0s						
R11A	Troy Canyon, C	89.96	44	P	P	12 32 15.4	+1.1
	baz=230,SNR=12						
SNY	Shenyang	90.02	320	⇑P	P	12 32 14.1	0.0
SNY				S	S	12 43 02.5	-1.9
SNY				pmax	pmax		
	comp=Z,48nm,1.2s						
SNY				pmax	pmax		
	comp=Z,540nm,5.9s						
SNY				LR	LR		
	comp=Z,1µm,21.7s						
SNY				LR	LR		
	comp=Z,830nm,21.6s						
SNY				LR	LR		
	comp=Z,2µm,24.1s						
J05D	Fort Rock, OR	90.08	38	P	P	12 32 15.8	+1.1
	baz=226,SNR=41						
X16A	Lo Mia Camp, P	90.09	49	eP	P	12 32 16.4	+1.4
	comp=Z,78nm,1.0s						
PHET	Kaeng Krachan	90.10	285	P	P	12 32 16.5	+1.3
H04D	Lebanon	90.17	36	P	P	12 32 15.5	+0.7
	baz=225,SNR=21						
TIA	Tai'an	90.17	313	P	P	12 32 15.6	+0.5
TIA				pmax	pmax		
	comp=Z,35nm,1.0s						
BMN	Battle Mountai	90.36	42	PFAKE		12 32 30.0	+14
BMN				LR	LR		
	comp=Z,2µm,22.0s						
G03D	McMinnville, O	90.39	35	P	P	12 32 17.1	+1.3
	baz=225,SNR=5.5						
UNM	Universidad Na	90.49	68	PFAKE		12 32 30.0	+13
UNM				LR	LR		
	comp=Z,2µm,22.0s						
GRNR	Gornyy	90.53	333	eP	P	12 32 17.2	+0.8
GRNR				pmax	pmax		
	comp=Z,31nm,1.0s						
H04A	Detroit Lake	90.56	36	eP	P	12 32 17.1	+0.4
	comp=Z,75nm,1.0s						
H04A				LR	LR		
	comp=Z,2µm,21.0s						
PINE	Pine Mountain	90.58	37	eP	P	12 32 17.5	+0.4
	comp=Z,133nm,1.1s						
KDAK	Kodiak Island	90.65	13	eP	P	12 32 19.1	+2.4
KDAK	Kodiak Island	90.65	13	P	P	12 32 18.5	+1.8
	comp=Z,31nm,0.9s,baz=252,slow=5.9,SNR=5.8						
I05D	Terrebonne, OR	90.75	37	P	P	12 32 18.7	+1.0
	baz=226,SNR=31						
WUAZ	Wupatki	90.81	48	eP	P	12 32 19.8	+1.5
	comp=Z,72nm,1.0s						
WUAZ				LR	LR		
	comp=Z,900nm,20.0s						
WUAZ	Wupatki	90.81	48	P	P	12 32 20.1	+1.8
	baz=232						
CCUT	Cedar City	90.81	46	eP	P	12 32 19.6	+1.3
	comp=Z,62nm,1.5s						
KNB	Kanab	90.81	47	eP	P	12 32 19.2	+0.9
	comp=Z,68nm,1.2s						
KNB	Kanab	90.81	47	eP	P	12 32 20.2	+1.9
NKL	Nikolayevsk	90.89	337	eP	P	12 32 17.0	-0.9
NKL				e		12 43 13.0	
NKL				pmax	pmax		
	comp=Z,65nm,1.0s						
NKL				MLR	MLR		
	comp=N,1µm,16.0s						
NKL				MLR	MLR		
	comp=E,1µm,16.0s						
NKL				MLR	MLR		
	comp=Z,3µm,16.0s						
WVOR	Wild Horse Val	90.89	40	eP	P	12 32 19.1	+0.7
	comp=Z,97nm,1.6s						
WVOR				LR	LR		
	comp=Z,1µm,20.0s						
WVOR	Wild Horse Val	90.89	40	eP	P	12 32 19.8	+1.4
SZCU	Shurtz Canyon	91.00	46	PFAKE		12 32 30.0	+11
SZCU				LR	LR		
	comp=Z,1µm,21.0s						
CRZF	Crozet Islands	91.04	212	PFAKE		12 32 30.0	+11
CRZF				LR	LR		
	comp=Z,700nm,20.0s						
PSUT	Pine Spring	91.12	45	eP	P	12 32 20.8	+1.1
	comp=Z,24nm,0.7s						
PSUT				LR	LR		
	comp=Z,1µm,18.0s						
F04D	Rainier, OR	91.14	35	P	P	12 32 20.2	+1.0
	baz=225						
KLR	Kul'dur	91.28	330c	iP	P	12 32 20.4	+0.6
KLR	Kul'dur	91.28	330	P	P	12 32 20.2	+0.4
	comp=Z,22nm,0.9s,baz=92,slow=2.1,SNR=36						
G05D	Wamic, OR	91.39	36	P	P	12 32 21.9	+1.3
	baz=226						
PKCU	Pink Cliffs	91.39	46	eP	P	12 32 22.1	+0.9
	comp=Z,87nm,1.3s						
PKCU				LR	LR		
	comp=Z,1µm,20.0s						
121A	Cookes Peak, D	91.41	53	P	P	12 32 22.9	+1.8
	baz=234						
I07A	Izee	91.54	38	eP	P	12 32 22.1	+0.7
	comp=Z,41nm,0.9s						
J08A	Circle Bar Ran	91.60	39	eP	P	12 32 22.4	+0.7
	comp=Z,50nm,1.1s						
J08A				LR	LR		
	comp=Z,2µm,19.0s						
UTHA	Uthaitani	91.62	287	P	P	12 32 24.3	+2.1
W18A	Petrified Fore	91.63	50	P	P	12 32 23.6	+1.5
	baz=233						
NLWA	Neilton Lookou	91.65	33	eP	P	12 32 23.1	+1.4
	comp=Z,42nm,1.1s						
NLWA				LR	LR		
	comp=Z,2µm,21.0s						
E04D	Cinebar	91.69	35	P	P	12 32 23.1	+1.3
	baz=225,SNR=11						
ELK	Elko	91.71	42	eP	P	12 32 22.6	+0.3
	comp=Z,27nm,1.0s						
ELK				LR	LR		
	comp=Z,2µm,22.0s						
ELK	Elko	91.71	42	eP	P	12 32 23.7	+1.3
GYA	Guiyang	91.71	300	⇑iP	P	12 32 21.6	-1.0
GYA				pP	pwP	12 32 35.0	-1.7
GYA				PP	PP	12 36 05.4	+3.5
GYA				SKS	SKSac	12 42 49.9	-3.0
GYA				S	S	12 43 20.0	-1.0
GYA				SS	SS	12 49 31.3	+1.9
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,300nm,6.8s						
GYA				LR	LR		
	comp=Z,3µm,18.0s						
GYA				LR	LR		
	comp=Z,3µm,18.4s						
GYA				LR	LR		
	comp=Z,3µm,18.8s						
F05D	White Salmon	91.77	36	P	P	12 32 23.1	+0.9
	baz=226,SNR=6.0						
ENH	Enshi	91.78	304	eP	P	12 32 22.4	-0.4
	comp=Z,214nm,1.4s						
ENH				LR	LR		
	comp=Z,800nm,21.0s						
GO02	Mina Guanaco	91.81	121	eP	P	12 32 24.6	+1.2
	comp=Z,50nm,1.1s						
GO02				LR	LR		
	comp=Z,2µm,20.0s						
MTPU	Mount Pierson	91.84	46	eP	P	12 32 24.8	+1.6
	comp=Z,47nm,1.1s						
MTPU				LR	LR		
	comp=Z,1µm,19.0s						
UTTA	Uttaradit	91.84	289	P	P	12 32 25.9	+2.7
CMBY	CAMPBELL BAY	91.92	277	eP	P	12 32 23.4	-0.3
PB10	IPOC Station P	92.02	119	PFAKE		12 32 40.0	+16
PB10				LR	LR		
	comp=Z,3µm,22.0s						
D04E	Lakebay	92.03	34	P	P	12 32 25.5	+2.1
	baz=225,SNR=5.8						
TCRU	Three Creeks R	92.03	46	eP	P	12 32 25.3	+1.3
	comp=Z,29nm,1.1s						
D03D	Eldon	92.13	34	P	P	12 32 25.3	+1.4
	baz=225,SNR=10						
LON	Longmire	92.19	35	PFAKE		12 32 40.0	+16
LON				LR	LR		
	comp=Z,1µm,21.0s						
LON	Longmire	92.19	35	eP	P	12 32 25.1	+0.8
D05A	Enumclaw	92.41	34	eP	P	12 32 26.5	+1.4
	comp=Z,82nm,1.1s						
UMPA	Umpang Tak	92.43	287	P	P	12 32 27.8	+1.8
SUKH	Sukhothai	92.46	289	P	P	12 32 30.1	+4.0
LTX	Lajitas	92.50	57	eP	P	12 32 27.7	+1.6
LTX	Lajitas	92.50	57	eP	P	12 32 27.7	+1.6
TXAR	Lajitas Array	92.50	57	P	P	12 32 27.7	+1.6
	comp=Z,9.8nm,1.0s,baz=208,slow=5.6,SNR=42						
TXAR				PKKPbc	PKKPbc	12 49 41.0	+1.5
	comp=Z,2.1nm,1.0s,baz=95,slow=4.3,SNR=7.4						
TXAR				LR	LR	13 09 58.9	
	comp=Z,824nm,18.0s,baz=0.0,slow=33						
MNTX	Cornudas Mount	92.60	54	eP	P	12 32 27.0	+0.5
	comp=Z,55nm,1.6s						
MNTX	Cornudas Mount	92.60	54	P	P	12 32 27.8	+1.3
	baz=235						
G08A	Pilot Rock	92.64	37	eP	P	12 32 27.1	+0.6
	comp=Z,60nm,1.1s						
PGC	Sidney	92.75	33	eP	P	12 32 27.2	+0.6
	comp=Z,88nm,1.7s						
DUG	Dugway, Tooele	92.79	44	eP	P	12 32 27.9	+0.6
	comp=Z,11nm,1.1s						
DUG				LR	LR		
	comp=Z,1µm,22.0s						
DUG	Dugway, Tooele	92.79	44	eP	P	12 32 28.6	+1.3
DUG	Dugway, Tooele	92.79	44	P	P	12 32 28.8	+1.5
	baz=231						
Y22D	IRIS PASSCAL I	92.89	52	P	P	12 32 29.5	+1.6
	baz=235						
LVIG	Laguna Verde	92.91	69	PFAKE		12 32 40.0	+12
LVIG				LR	LR		
	comp=Z,1µm,22.0s						
LENM	Lemitar	92.91	52	eP	P	12 32 29.0	+0.9
PB04	IPOC Station P	93.00	118	PFAKE		12 32 40.0	+11
PB04				LR	LR		
	comp=Z,2µm,22.0s						
Q16A	Castle Valley	93.01	46	eP	P	12 32 29.6	+1.2
	comp=Z,52nm,1.6s						
Q16A				LR	LR		
	comp=Z,1µm,19.0s						
E07A	Sunnyside	93.04	36	eP	P	12 32 29.2	+1.0
	comp=Z,197nm,2.0s						
NLU	North Lily Min	93.09	45	eP	P	12 32 29.1	+0.3
	comp=Z,23nm,1.4s						
NLU				LR	LR		
	comp=Z,1µm,19.0s						
HAWA	Hanford	93.09	36	eP	P	12 32 28.8	+0.5
	comp=Z,119nm,1.8s						
HAWA				LR	LR		
	comp=Z,2µm,21.0s						
LTY	Liberty	93.11	35	eP	P	12 32 28.8	+0.3
	comp=Z,22nm,1.2s						
LTY				LR	LR		
	comp=Z,2µm,21.0s						
B05A	Bryant	93.12	34	P	P	12 32 29.8	+1.4
	baz=226,SNR=11						
RSO	Redoubt South	93.12	12	eP	P	12 32 28.8	+0.5
BGU	Big Grassy Mou	93.12	43	eP	P	12 32 29.3	+0.5
	comp=Z,22nm,1.3s						
BGU				LR	LR		
	comp=Z,2µm,18.0s						
BJT	Baijiatuau	93.12	315	eP	P	12 32 28.5	-0.1
	comp=Z,78nm,1.2s						
BJT				LR	LR		
	comp=Z,2µm,22.0s						
BJT	Baijiatuau	93.12	315	eP	P	12 32 28.5	-0.1
BJT				pmax	pmax		
	comp=Z,78nm,1.2s						
BJT				MLR	MLR		
	comp=Z,2µm,22.0s						
BJI	Beijing	93.13	315	⇑iP	P	12 32 28.9	+0.2
BJI				PP	PP	12 36 09.0	-3.7
BJI				SKS	SKSac	12 42 58.8	-1.1
BJI				S	ScS	12 43 34.8	+0.3
BJI				SS	SS	12 49 47.8	-1.2
BJI				pmax	pmax		
	comp=Z,38nm,1.1s						
BJI				pmax	pmax		
	comp=Z,320nm,6.1s						
BJI				LR	LR		
	comp=Z,550nm,23.0s						
BJI				LR	LR		
	comp=Z,840nm,22.6s						
BJI				LR	LR		
	comp=Z,2µm,27.9s						
A04D	Lummi Island	93.15	33	P	P	12 32 30.2	+1.7
	baz=225						
TMUT	Trail Mountain	93.22	46	eP	P	12 32 30.2	+0.7
	comp=Z,24nm,0.7s						
TMUT				LR	LR		
	comp=Z,1µm,20.0s						
BMO	Blue Mountains	93.22	38	eP	P	12 32 29.2	+0.1
	comp=Z,16nm,1.0s						
BMO				LR	LR		
	comp=Z,1µm,21.0s						
BMO	Blue Mountains	93.22	38	eP	P	12 32 29.9	+0.8
LNIG	Linares	93.23	63	PFAKE		12 32 40.0	+10
LNIG				LR	LR		
	comp=Z,900nm,18.0s						
LPM	Los Pinos Moun	93.23	52	eP	P	12 32 30.6	+1.1

NNA	Nana	93.31	106	LR	LR	13 05 02.7	
	comp=Z,2µm,21.8s,baz=258,slow=29						
MPU	Maple Canyon	93.39	45	*e*P	P	12 32 30.9	+0.7
	comp=Z,36nm,1.6s						
C06D	Leavenworth	93.46	34	P	P	12 32 31.4	+1.3
	baz=226						
CM01	Chiang Mai Arr	93.49	289	*e*P	P	12 32 30.6	-0.2
CM31	Chiang Mai Arr	93.52	289	*e*P	P	12 32 30.5	-0.5
	comp=Z,26nm,1.1s						
CM31	Chiang Mai Arr	93.52	289	PcP	PcP	12 32 31.4	-0.1
	SNR=12						
CMAR	Chiang Mai Arr	93.52	289	*i* P	P	12 32 30.3	-0.7
CMAR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CMAR	Chiang Mai Arr	93.52	289	P	P	12 32 31.0	0.0
	comp=Z,8.3nm,1.1s,baz=146,slow=2.9,SNR=21						
CMAR				PP	PP	12 36 08.5	-7.6
	comp=Z,6.2nm,1.1s,baz=135,slow=5.2,SNR=5.8						
CMAR				PKKPbc	PKKPbc	12 49 38.4	+2.2
	comp=Z,0.9nm,0.5s,baz=293,slow=4.6,SNR=6.6						
CMAR				LR	LR	13 18 03.7	
	comp=Z,424nm,19.4s,baz=162,slow=38						
SRU	San Rafael Swe	93.53	46	*e*P	P	12 32 31.4	+0.6
	comp=Z,69nm,1.6s						
SRU				LR	LR		
	comp=Z,1µm,20.0s						
SRU	San Rafael Swe	93.53	46	*e*P	P	12 32 32.2	+1.4
MA2	Magadan	93.55	345	*e*P	P	12 32 29.4	-0.7
	comp=Z,25nm,0.9s						
MA2				LR	LR		
	comp=Z,2µm,20.0s						
MA2	Magadan	93.55	345*c*	*i*P	P	12 32 29.4	-0.7
MA2				pmax	pmax		
	comp=Z,19nm,1.1s						
MA2	Magadan	93.55	345	P	P	12 32 29.5	-0.7
	comp=Z,22nm,0.9s,baz=168,slow=7.2,SNR=5.6						
B06A	Marblemount	93.58	34	*e*P	P	12 32 31.5	+1.0
	comp=Z,14nm,0.9s						
B06A				LR	LR		
	comp=Z,2µm,22.0s						
P17A	Butcher Ranch,	93.61	46	*e*P	P	12 32 32.0	+0.9
	comp=Z,45nm,1.5s						
P17A				LR	LR		
	comp=Z,1µm,22.0s						
MVCO	Mesa Verde	93.68	49	PFAKE		12 32 40.0	+8.4
MVCO				LR	LR		
	comp=Z,900nm,19.0s						
MVCO	Mesa Verde	93.68	49	P	P	12 32 32.3	+0.8
	baz=234						
CMMT	Chiang Mai	93.70	290	P	P	12 32 32.4	+0.6
SPUT	South Promonto	93.70	43	*e*P	P	12 32 32.4	+0.9
	comp=Z,32nm,1.1s						
SPUT				LR	LR		
	comp=Z,2µm,22.0s						
CHTO	Chiang Mai	93.70	290	*e*P	P	12 32 31.3	-0.5
	comp=Z,23nm,1.3s						
CHTO	Chiang Mai	93.70	290	*e*P	P	12 32 32.4	+0.6
CHTO	Chiang Mai	93.70	290	PcP	PcP	12 32 32.9	+0.6
	SNR=10						
CHTO	Chiang Mai	93.70	290	P	P	12 32 32.5	+0.6
	comp=Z,70nm,1.3s,comp=Z,2µm						
ANMO	Albuquerque	93.71	51	*e*P	P	12 32 32.5	+0.8
	comp=Z,65nm,1.7s						
ANMO	Albuquerque	93.71	51	*e*P	P	12 32 33.0	+1.3
ANMO	Albuquerque	93.71	51	P	P	12 32 32.8	+1.1
	baz=235						
CTU	Camp Tracy	93.74	44	*e*P	P	12 32 32.3	+0.6
	comp=Z,12nm,1.0s						
CTU				LR	LR		
	comp=Z,1µm,19.0s						
LVC	Limon Verde	93.78	119	*e*P	P	12 32 33.2	+0.5
	comp=Z,76nm,1.4s						
LVC				LR	LR		
	comp=Z,3µm,21.0s						
LVC	Limon Verde	93.78	119	*e*P	P	12 32 35.0	+2.3
HVU	Hansel Valley	93.80	43	*e*P	P	12 32 32.7	+0.8
	comp=Z,54nm,1.1s						
HVU				LR	LR		
	comp=Z,2µm,22.0s						
HVU	Hansel Valley	93.80	43	*e*P	P	12 32 33.4	+1.5
D08A	Wollman Farm,	93.85	36	*e*P	P	12 32 32.3	+0.5
	comp=Z,26nm,0.8s						
D08A				LR	LR		
	comp=Z,2µm,18.0s						
JLU	Jordanelle	93.86	44	*e*P	P	12 32 32.8	+0.4
	comp=Z,35nm,1.6s						
JLU				LR	LR		
	comp=Z,1µm,20.0s						
E09A	Wood Farm, Sta	93.88	37	*e*P	P	12 32 32.4	+0.4
	comp=Z,44nm,1.4s						
KMI	Kunming	93.97	297	P	P	12 32 31.1	-2.1
KMI				pP	pP	12 32 42.9	-0.6
KMI				sP	pwP	12 32 47.1	-0.2
KMI				PP	PP	12 36 19.6	-0.2
KMI				SKS	SKSac	12 42 58.1	-7.6
KMI				S	ScS	12 43 42.0	-0.7
KMI				pmax	pmax		
	comp=Z,18nm,1.7s						
KMI				pmax	pmax		
	comp=Z,370nm,6.9s						
KMI				LR	LR		
	comp=Z,730nm,21.3s						
KMI				LR	LR		
	comp=Z,490nm,18.9s						
KMI				LR	LR		
	comp=Z,750nm,21.3s						
KMI	Kunming	93.97	297	PFAKE		12 32 40.0	+6.8
KMI				LR	LR		
	comp=Z,1µm,22.0s						
HLID	Hailey	93.98	41	*e*P	P	12 32 33.5	+0.8
	comp=Z,33nm,1.0s						
HLID				LR	LR		
	comp=Z,1µm,18.0s						
HLID	Hailey	93.98	41	P	P	12 32 34.1	+1.4
	baz=231						
F10A	Beach Ranch, E	94.00	38	*e*P	P	12 32 32.4	-0.3
	comp=Z,35nm,0.9s						
TIY	Taiyuan	94.07	312	*e*P	P	12 32 34.6	+1.4
TIY				S	S	12 43 43.4	+2.1
TIY				pmax	pmax		
	comp=Z,80nm,1.1s						
TIY				pmax	pmax		
	comp=Z,420nm,5.5s						
TIY				LR	LR		
	comp=Z,1µm,19.6s						
TIY				LR	LR		
	comp=Z,2µm,24.9s						
TIY				LR	LR		
	comp=Z,2µm,23.7s						
TCUT	Toone Canyon	94.20	44	*e*P	P	12 32 34.3	+0.4
	comp=Z,48nm,1.0s						
TCUT				LR	LR		
	comp=Z,3µm,20.0s						
PB01	IPOC Station P	94.24	117	PFAKE		12 32 50.0	+16
PB01				LR	LR		
	comp=Z,2µm,21.0s						
GAMB	Gambell	94.24	3	*e*P	P	12 32 33.8	+0.6
	comp=Z,55nm,1.0s						
GAMB				LR	LR		
	comp=Z,2µm,22.0s						
RC01	Rabbit Creek A	94.27	13	*e*P	P	12 32 33.8	+0.4
	comp=Z,123nm,1.4s						
XAN	Xi'an	94.30	307	P	P	12 32 36.4	+2.1
XAN				pP	sP	12 32 49.0	+0.6
XAN				SKS	SKSac	12 43 06.1	-0.6
XAN				S	ScS	12 43 45.8	+1.2
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN				pmax	pmax		
	comp=Z,390nm,4.9s						
XAN				LR	LR		
	comp=Z,480nm,16.2s						
XAN				LR	LR		
	comp=Z,750nm,21.7s						
XAN				LR	LR		
	comp=Z,970nm,12.0s						
XAN	Xi'an	94.30	307	*e*P	P	12 32 34.2	0.0
	comp=Z,20nm,1.0s						
XAN				LR	LR		
	comp=Z,1µm,20.0s						
XAN	Xi'an	94.30	307	*e*P	P	12 32 34.3	0.0
XAN				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN				MLR	MLR		
	comp=Z,1µm,20.0s						
SUA	Susitna One	94.42	13	PFAKE		12 32 50.0	+16
SUA				LR	LR		
	comp=Z,2µm,22.0s						
B08A	Colville Reser	94.52	35	*e*P	P	12 32 34.6	-0.3
	comp=Z,13nm,1.0s						
C09A	Chrisman Ranch	94.67	36	*e*P	P	12 32 35.7	+0.1
	comp=Z,15nm,0.9s						
C09A				LR	LR		
	comp=Z,2µm,20.0s						
PB11	IPOC Station P	94.84	116	*e*P	P	12 32 37.7	+0.3
	comp=Z,54nm,1.0s						
PB11				LR	LR		
	comp=Z,2µm,21.0s						
PMR	Palmer	94.85	13	*e*P	P	12 32 36.2	+0.2
LLLB	Lillooet	94.86	32	*e*P	P	12 32 37.3	+0.9
	comp=Z,12nm,1.0s						
LLLB				LR	LR		
	comp=Z,2µm,21.0s						
S22A	4UR Ranch, Cre	95.07	49	P	P	12 32 39.0	+1.0
	baz=235						
833A	Chaparral WMA,	95.10	60	P	P	12 32 38.9	+0.9
	baz=238						
DIV	Divide	95.14	15	*e*P	P	12 32 37.9	+0.4
	comp=Z,65nm,1.4s						
MNMC	Minye Minye	95.24	116	*e*P	P	12 32 39.4	0.0
	comp=Z,115nm,1.6s						
MNMC				LR	LR		
	comp=Z,2µm,21.0s						
PBA	Port Blair	95.25	280	PFAKE		12 32 50.0	+11
PBA				LR	LR		
	comp=Z,3µm,22.0s						
PBA	Port Blair	95.25	280	*e*P	P	12 32 37.2	-1.8
AHID	Auburn Hatcher	95.39	43	*e*P	P	12 32 39.4	+0.2
	comp=Z,28nm,1.1s						
AHID				LR	LR		
	comp=Z,2µm,21.0s						
ANM	Nome	95.42	5	*e*P	P	12 32 37.7	-0.9
	comp=Z,50nm,1.9s						
ANM				LR	LR		
	comp=Z,1µm,20.0s						
ANM	Nome	95.42	5	*e*P	P	12 32 38.3	-0.3
SCM	Sheep Creek Mo	95.44	14	*e*P	P	12 32 39.8	+1.0
PPLA	Purkeypile	95.48	12	PFAKE		12 32 50.0	+11
PPLA				LR	LR		
	comp=Z,2µm,20.0s						
O20A	White River Ci	95.55	46	P	P	12 32 41.5	+1.4
	baz=234						
NEW	Newport	95.56	36	PFAKE		12 32 50.0	+10
NEW				LR	LR		
	comp=Z,2µm,21.0s						
NEW	Newport	95.56	36	*e*P	P	12 32 41.0	+1.3
NEW	Newport	95.56	36	P	P	12 32 40.4	+0.7
	baz=229						
NEW	Newport	95.56	36	P	P	12 32 39.6	-0.1
	comp=Z,5.4nm,0.9s,baz=207,slow=3.0,SNR=7.2						
MCMT	McKenzie Canyo	95.65	40	*e*P	P	12 32 40.7	+0.3
MSTX	Muleshoe	95.69	54	*e*P	P	12 32 40.3	-0.4
	comp=Z,19nm,0.9s						
MSTX	Muleshoe	95.69	54	P	P	12 32 41.1	+0.3
	baz=237						
BALM	Baldy	95.87	17	PFAKE		12 32 50.0	+9.1
BALM				LR	LR		
	comp=Z,2µm,22.0s						
BESE	Bessie Mountai	95.89	21	PFAKE		12 32 50.0	+9.1
BESE				LR	LR		
	comp=Z,2µm,19.0s						
REDW	Red Top Meadow	95.89	42	*e*P	P	12 32 41.9	+0.3
	comp=Z,35nm,1.2s						
REDW				LR	LR		
	comp=Z,2µm,21.0s						
TPAW	Teton Pass	95.91	42	PFAKE		12 32 50.0	+8.3
TPAW				LR	LR		
	comp=Z,2µm,21.0s						
JCT	Junction City	95.93	58	*e*P	P	12 32 42.3	+0.4
	comp=Z,54nm,1.8s						
JCT				LR	LR		
	comp=Z,1µm,18.0s						
JCT	Junction City	95.93	58	*e*P	P	12 32 42.9	+1.1
JCT	Junction City	95.93	58	P	P	12 32 42.0	+0.2
	baz=238						
SDCO	Great Sand Dun	95.93	49	*e*P	P	12 32 42.6	+0.6
	comp=Z,16nm,1.5s						
SDCO	Great Sand Dun	95.93	49	P	P	12 32 43.1	+1.2
	baz=236						
FXWY	Fox Creek	95.95	42	*e*P	P	12 32 42.3	+0.5
	comp=Z,18nm,1.2s						
CAST	Castle Rocks	95.99	11	*e*P	P	12 32 40.4	-0.8
	comp=Z,58nm,1.4s						
CAST				LR	LR		
	comp=Z,1µm,19.0s						
SNOW	Snow King Moun	96.01	42	*e*P	P	12 32 42.9	+0.7
	comp=Z,39nm,1.2s						
SNOW				LR	LR		
	comp=Z,2µm,21.0s						
DLMT	Dillon	96.12	40	*e*P	P	12 32 42.8	+0.4
	comp=Z,25nm,1.3s						
IMW	Indian Meadow	96.16	42	*e*P	P	12 32 43.6	+0.7
	comp=Z,18nm,1.1s						
LOHW	Long Hollow	96.19	42	*e*P	P	12 32 43.0	+0.1
	comp=Z,20nm,1.1s						
LOHW				LR	LR		
	comp=Z,2µm,22.0s						
MOOW	Moose Ponds	96.19	42	PFAKE		12 32 50.0	+7.1
MOOW				LR	LR		
	comp=Z,2µm,22.0s						
SEY	Seymchan	96.24	347⇓	*e*P	P	12 32 40.8	-1.5
SEY	Seymchan	96.24	347	P	P	12 32 41.9	-0.5
	comp=Z,16nm,0.7s,baz=155,slow=5.2,SNR=20						
CD2	Chengdu	96.26	302	P	P	12 32 45.4	+2.1
CD2				pP	pwP	12 32 56.1	-1.3
CD2				sP	sP	12 33 00.3	+2.9
CD2				PP	PP	12 36 38.9	+1.6
CD2				SKS	SKSac	12 43 19.0	+1.7
CD2				S	ScS	12 44 02.8	+1.7
CD2				SS	SS	12 50 37.3	+3.3
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
CD2				LR	LR		
	comp=Z,1µm,22.6s						
CD2				LR	LR		
	comp=Z,2µm,20.6s						
CD2				LR	LR		
	comp=Z,1µm,19.6s						
BW06	Boulder Array	96.30	44	*e*P	P	12 32 43.6	+0.2
	comp=Z,18nm,1.3s						
BW06				LR	LR		
	comp=Z,2µm,22.0s						
BW06	Boulder Array	96.30	44	P	P	12 32 43.3	-0.1
	baz=234						
MSO	Missoula	96.30	38	*e*P	P	12 32 43.9	+0.7
	comp=Z,15nm,1.4s						
MSO				LR	LR		
	comp=Z,2µm,21.0s						
MSO	Missoula	96.30	38	P	P	12 32 44.4	+1.2
	baz=231						
PD31	Pinedale Array	96.30	44	*e*P	P	12 32 43.6	+0.2
	comp=Z,16nm,1.3s						
PDAR	Pinedale Array	96.30	44	*e*P	P	12 32 43.5	+0.2
PDAR	Pinedale Array	96.30	44	P	P	12 32 43.9	+0.5
	comp=Z,6.2nm,0.9s,baz=210,slow=3.4,SNR=24						
PDAR				PP	PP	12 36 39.0	+1.5
	comp=Z,1.9nm,1.0s,baz=233,slow=6.9,SNR=5.4						
PDAR				PKKPbc	PKKPbc	12 49 29.4	-0.8
	comp=Z,4.0nm,0.8s,baz=78,slow=4.5,SNR=15						
PDAR				PKPPKP		12 57 41.0	
	comp=Z,0.6nm,0.9s,baz=20,slow=1.7,SNR=3.6						
PDAR				LR	LR	13 08 42.6	
	comp=Z,1µm,21.9s,baz=242,slow=31						
T25A	Trinidad	96.31	50	*e*P	P	12 32 44.2	+0.6
	comp=Z,46nm,1.8s						
T25A	Trinidad	96.31	50	P	P	12 32 44.5	+0.9
	baz=236						
TRF	Thorofare Moun	96.33	12	*e*P	P	12 32 42.6	-0.4
	comp=Z,25nm,0.8s						
TRF				LR	LR		
	comp=Z,2µm,20.0s						
FLWY	Flagg Ranch	96.41	42	*e*P	P	12 32 44.8	+0.9
	comp=Z,30nm,1.2s						
FLWY				LR	LR		
	comp=Z,2µm,21.0s						
HHC	Hu-ho-hao-te	96.44	314	*e*P	P	12 32 46.8	+2.8
HHC				pP	pwP	12 32 57.3	-0.8
HHC				SKS	SKSac	12 43 18.3	+0.4
HHC				S	ScS	12 44 02.3	0.0
HHC				sS	sS	12 44 19.5	-0.4
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,6.9s						
HHC				LR	LR		
	comp=Z,700nm,19.9s						
HHC				LR	LR		
	comp=Z,720nm,25.1s						
HHC				LR	LR		
	comp=Z,1µm,19.0s						
QLMT	Earthquake Lak	96.45	41	*e*P	P	12 32 45.1	+1.1
SKAG	Skagway	96.46	20	PFAKE		12 33 00.0	+17
SKAG				LR	LR		
	comp=Z,2µm,20.0s						
YPP	Pitchstone Pla	96.47	42	*e*P	P	12 32 44.9	+0.7
	comp=Z,26nm,1.5s						
YPP				LR	LR		
	comp=Z,2µm,22.0s						
ZEA	Zeya	96.49	331	*e*P	P	12 32 43.0	-0.7
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
YHB	Horse Butte	96.53	41	*e*P	P	12 32 45.8	+1.3
	comp=Z,54nm,1.8s						
YFT	Old Faithful	96.56	42	*e*P	P	12 32 45.9	+1.3
	comp=Z,18nm,1.2s						
YFT				LR	LR		
	comp=Z,2µm,18.0s						
RND	Reindeer	96.56	13	*e*P	P	12 32 44.0	+0.1
	comp=Z,41nm,1.1s						
RND				LR	LR		
	comp=Z,2µm,22.0s						
RND	Reindeer	96.56	13	*e*P	P	12 32 44.0	+0.1
YMR	Madison River	96.61	41	*e*P	P	12 32 45.5	+0.7
	comp=Z,33nm,1.3s						
YMR				LR	LR		
	comp=Z,1µm,21.0s						
H17A	Grant Village	96.67	42	PFAKE		12 33 00.0	+15
H17A				LR	LR		
	comp=Z,2µm,22.0s						
H17A	Grant Village	96.67	42	P	P	12 32 45.5	+0.4
	baz=233						
YHH	Holmes Hill	96.75	41	*e*P	P	12 32 46.1	+0.6
	comp=Z,27nm,1.3s						
YHH				LR	LR		
	comp=Z,1µm,20.0s						
BOZ	Bozeman (W)	96.80	40	*e*P	P	12 32 46.1	+0.6
	comp=Z,18nm,1.0s						
BOZ	Bozeman (W)	96.80	40	*e*P	P	12 32 46.8	+1.3
BOZ	Bozeman (W)	96.80	40	P	P	12 32 46.9	+1.3
	baz=233						
YNR	Norris Junctio	96.80	41	*e*P	P	12 32 47.0	+1.3
	comp=Z,40nm,1.8s						
YNR				LR	LR		
	comp=Z,2µm,21.0s						
MCK	McKinley	96.84	13	*e*P	P	12 32 45.2	+0.1
	comp=Z,37nm,1.2s						
MCK				LR	LR		
	comp=Z,2µm,20.0s						
MCK	McKinley	96.84	13	*e*P	P	12 32 45.5	+0.4
LKWY	Lake	96.87	42	PFAKE		12 33 00.0	+14
LKWY				LR	LR		
	comp=Z,2µm,18.0s						
HIA	Hailar	96.95	324	PFAKE		12 33 00.0	+14
HIA				LR	LR		
	comp=Z,1µm,21.0s						
HYT	Haines Junctio	96.95	19	PFAKE		12 33 00.0	+14
HYT				LR	LR		
	comp=Z,2µm,20.0s						
ISCO	Idaho Springs	97.02	48	*e*P	Pdif	12 32 49.6	+2.6
ISCO	Idaho Springs	97.02	48	P	Pdif	12 32 48.0	+1.0
	baz=236						
RWWY	Rawlins	97.09	45	*e*P	P	12 32 46.7	-0.4
	comp=Z,64nm,1.8s						
RWWY				LR	LR		
	comp=Z,2µm,19.0s						
BWN	Browne	97.14	12	*e*P	Pdif	12 32 46.5	0.0
	comp=Z,70nm,1.3s						
BWN				LR	LR		
	comp=Z,2µm,19.0s						
ABTX	Abilene, Hawle	97.18	56	P	Pdif	12 32 48.5	+1.0
	baz=238						
MENT	Mentasta	97.20	15	PFAKE		12 33 00.0	+13
MENT				LR	LR		
	comp=Z,2µm,20.0s						
DLBC	Dease Lake	97.34	23	P	P	12 32 47.4	-0.2
	comp=Z,2.6nm,0.8s,baz=138,slow=14,SNR=2.8						
HRY	Holter Researc	97.36	39	*e*P	Pdif	12 32 48.7	+0.6
N23A	Red Feather La	97.42	47	P	Pdif	12 32 48.7	0.0
	baz=236						
WHY	Whitehorse	97.56	20	PFAKE		12 33 00.0	+11
WHY				LR	LR		
	comp=Z,2µm,19.0s						
TGUH	Tegucigalpa,Un	97.61	78	PFAKE		12 33 00.0	+10
TGUH				LR	LR		
	comp=Z,2µm,22.0s						
WRH	Wood River Hil	97.67	13	*e*P	Pdif	12 32 48.9	+0.1
	comp=Z,32nm,1.1s						
MLY	Manley	97.71	11	*e*P	Pdif	12 32 49.1	0.0
	comp=Z,50nm,1.9s						
JTS	JuntasAbangare	97.73	83	PFAKE		12 33 00.0	+10
JTS				LR	LR		
	comp=Z,2µm,20.0s						
HDA	Harding Lake	97.83	13	*e*P	P	12 32 49.0	-0.6
	comp=Z,13nm,0.8s						
HDA				LR	LR		
	comp=Z,1µm,19.0s						
HDA	Harding Lake	97.83	13	P	Pdif	12 32 49.7	+0.1
	baz=207						
RLMT	Red Lodge	97.85	42	P	P	12 32 49.4	-1.0
	baz=234						
ESTN	Estel	97.91	80	PFAKE		12 33 00.0	+8.8
ESTN				LR	LR		
	comp=Z,1µm,22.0s						
LPAZ	La Paz	98.00	114	*e*P	P	12 32 52.2	-0.1
	comp=Z,11nm,1.3s						
LPAZ	La Paz	98.00	114	P	Pdif	12 32 54.2	+1.9
	comp=Z,3.3nm,0.6s,baz=187,slow=3.3,SNR=11						
LPAZ				LR	LR	13 08 49.1	
	comp=Z,840nm,21.7s,baz=210,slow=30						
LPAZ	La Paz	98.00	114	*e*P	Pdif	12 32 54.3	+1.9
K22A	Casper	98.05	45	*e*P	Pdif	12 32 51.5	+0.1
	comp=Z,14nm,0.9s						
K22A				LR	LR		
	comp=Z,2µm,22.0s						
K22A	Casper	98.05	45	Pdiff	P	12 32 51.2	-0.1
	baz=236						
TCOL	CIGO, UAF Yank	98.08	12	Pdiff	Pdif	12 32 51.0	+0.3
	baz=206						
COLA	College	98.08	12	*e*P	P	12 32 49.8	-0.8
	comp=Z,18nm,1.0s						
COLA				LR	LR		
	comp=Z,2µm,20.0s						
COLA	College	98.08	12⇑	*i*P	Pdif	12 32 50.9	+0.3
COLA				pmax	pmax		
	comp=Z,16nm,1.0s						
MDM	Murphy Dome	98.08	12	*e*P	P	12 32 50.2	-0.5
	comp=Z,70nm,1.6s						
MDM				LR	LR		
	comp=Z,2µm,20.0s						
IM3	Indian Mountai	98.12	10	*e*P	Pdif	12 32 50.9	+0.1
IL1	Eielson Array	98.17	13	*e*P	P	12 32 49.9	-1.1
ILAR	Eielson Array	98.17	13	P	P	12 32 49.8	-1.3
	comp=Z,3.9nm,0.9s,baz=223,slow=5.6,SNR=26						
ILAR				PKKPbc	PKKPbc	12 49 24.9	-0.6
	comp=Z,1.4nm,0.8s,baz=354,slow=3.0,SNR=8.0						
ILAR				LR	LR	13 11 26.8	
	comp=Z,418nm,20.9s,baz=218,slow=32						
ILB	Eielson Array	98.17	13	*e*P	P	12 32 50.6	-0.4
BOAB	BOACO BROADBAN	98.18	80	PFAKE		12 33 00.0	+7.7
BOAB				LR	LR		
	comp=Z,5µm,19.0s						
OTAV	Otavalo	98.30	95	PFAKE		12 33 00.0	+6.5
OTAV				LR	LR		
	comp=Z,1µm,22.0s						
POKR	Poker Plat Res	98.38	13	Pdiff	Pdif	12 32 52.2	+0.2
	baz=206						
WHTX	Lake Whitney,	98.43	58	PFAKE		12 33 00.0	+6.9
WHTX				LR	LR		
	comp=Z,2µm,18.0s						
WHTX	Lake Whitney,	98.43	58	Pdiff	P	12 32 52.8	-0.2
	baz=239						
KSCO	Kaye Shedlock’	98.51	50	Pdiff	Pdif	12 32 54.4	+1.0
	baz=237						
PLTB	Pedras Altas	98.53	135	*e*P	Pdif	12 32 57.6	+3.8
WMOK	Wichita Mounta	98.89	55	Pdiff	Pdif	12 32 56.1	+1.1
	baz=239						
LZH	Lanzhou	98.91	307	*e*P	Pdif	12 32 56.8	+1.5
LZH				pP	pwP	12 33 07.8	-1.6
LZH				sP	sP	12 33 10.8	+1.4

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LZH                                  SKS      SKSac    12 43 28.8 -2.1
LZH                                  S        ScS      12 44 23.0 -0.2
LZH                                  sS       sS       12 44 42.0 +0.9
LZH                                  SS       SS       12 51 12.9 +1.5
LZH                                  pmax     pmax
      comp=Z,29nm,1.3s
LZH                                  pmax     pmax
      comp=Z,280nm,4.8s
LZH                                  LR       LR
      comp=Z,860nm,18.1s
LZH                                  LR       LR
      comp=Z,850nm,18.8s
LZH                                  LR       LR
      comp=Z,1µm,19.3s
MYIG  Mrida              98.94  71   PFAKE             12 33 10.0  +14
MYIG                                 LR       LR
      comp=Z,1µm,22.0s
RDOG  Red Dog Mine       99.05   6  eP        Pdif     12 32 55.9 +1.0
      comp=Z,40nm,1.6s
RDOG                                 LR       LR
      comp=Z,2µm,21.0s
PRP   Porcupine Dome     99.10  13  eP        Pdif     12 32 55.0 -0.3
      comp=Z,28nm,1.4s
BILL  Bilibino           99.10 354  eP        Pdif     12 32 54.7 -0.4
      comp=Z,9.7nm,1.0s
BILL  Bilibino           99.10 354ceP         Pdif     12 32 55.5 +0.4
BILL                                 pmax     pmax
      comp=Z,24nm,1.9s
EGMT  Eagleton           99.28  39   PFAKE             12 33 10.0  +13
EGMT                                 LR       LR
      comp=Z,2µm,19.0s
EGMT  Eagleton           99.28  39   Pdiff    Pdif     12 32 57.9 +1.4
      baz=234
EGAK  Eagle              99.37  15  eP        Pdif     12 32 57.1 +0.7
      comp=Z,17nm,1.0s
EGAK                                 LR       LR
      comp=Z,2µm,20.0s
CPUP  Villa Florida      99.80 128   P        Pdif     12 33 00.7 +1.3
      comp=Z,4.3nm,1.0s,baz=242,slow=5.8,SNR=6.6
CPUP                                 PKKPbc   PKKPbc   12 49 17.8 -1.1
      comp=Z,3.9nm,0.8s,baz=46,slow=1.4,SNR=6.6
CPUP                                 LR       LR       13 10 10.9
      comp=Z,1µm,21.5s,baz=246,slow=30
CPUP  Villa Florida      99.80 128  eP        Pdif     12 33 02.9 +3.5
FYU   Fort Yukon        100.08  13   PFAKE             12 33 10.0  +10
FYU                                  LR       LR
      comp=Z,1µm,19.0s
CBKS  Cedar Bluff       100.33  51   Pdiff    Pdif     12 33 02.0 +0.6
      baz=239
RSSD  Black Hills       100.38  45  ePdif     Pdif     12 33 02.3 +0.6
RSSD                                 LR       LR
      comp=Z,2µm,19.0s
RSSD  Black Hills       100.38  45  eP        Pdif     12 33 02.3 +0.6
RSSD                                 MLR      MLR
      comp=Z,2µm,19.0s
RSSD  Black Hills       100.38  45   Pdiff    Pdif     12 33 02.7 +1.0
      baz=237
LAO   LASA Array        100.49  42   PFAKE             12 33 10.0 +8.1
LAO                                  LR       LR
      comp=Z,1µm,20.0s
LAO   LASA Array        100.49  42   Pdiff    Pdif     12 33 03.0 +1.1
      baz=236
TOLK  Toolik Lake Re    101.21  10  ePdif     Pdif     12 33 05.9 +1.3
TOLK                                 LR       LR
      comp=Z,1µm,19.0s
TOLK  Toolik Lake Re    101.21  10   Pdiff    Pdif     12 33 06.5 +1.9
      baz=205
X37A  Clayton           101.24  57   PFAKE             12 33 20.0  +15
X37A                                 LR       LR
      comp=Z,2µm,21.0s
YAK   Yakutsk           101.50 338  eP        Pdif     12 33 05.6 -0.3
YAK                                  pmax     pmax
      comp=Z,38nm,0.9s
YAK                                  pmax     pmax
      comp=N,5.0nm,0.9s
YAK                                  pmax     pmax
      comp=E,23nm,1.1s
EPYK  Eagle Plains      101.72  16   Pdiff    Pdif     12 33 08.6 +1.7
      baz=216
Z41A  Richland Creek    102.47  59   Pdiff    Pdif     12 33 11.1 +0.1
      baz=241
MIAR  Mount Ida         102.52  57   Pdiff    Pdif     12 33 11.2  0.0
      baz=241
DGMT  Dagmar            102.61  41   Pdiff    Pdif     12 33 12.2 +0.9
      baz=238
W39A  Magazine          102.68  57   PFAKE             12 33 20.0 +8.2
W39A                                 LR       LR
      comp=Z,3µm,22.0s
SHL   Shillong          102.71 292   PFAKE             12 33 20.0 +7.6
SHL                                  LR       LR
      comp=Z,1µm,22.0s
SHL   Shillong          102.71 292  eP        Pdif     12 33 12.5  0.0
X40A  Basin Creek Fa    103.03  58   PFAKE             12 33 30.0  +17
X40A                                 LR       LR
      comp=Z,1µm,19.0s
SONA0 Songino Array     103.36 318  ePdif     Pdif     12 33 14.1 -0.6
SONM  Songino Array     103.36 318   Pdiff    Pdif     12 33 14.1 -0.6
      comp=Z,0.6nm,0.5s,baz=134,slow=4.3,SNR=6.4
SONM                                 PKKPbc   PKKPbc   12 49 10.2 +0.3
      comp=Z,1.5nm,0.8s,baz=278,slow=2.3,SNR=6.8
SONA1 Songino Array     103.36 318  ePdif     Pdif     12 33 14.2 -0.6
PALK  Pallekele         103.41 271   PFAKE             12 33 30.0  +14
PALK                                 LR       LR
      comp=Z,2µm,20.0s
WHAR  Wooly Hollow      103.80  57   PFAKE             12 33 30.0  +13
WHAR                                 LR       LR
      comp=Z,1µm,20.0s
INK   Inuvik            104.02  16  ePdif     Pdif     12 33 17.6 +0.7
INK   Inuvik            104.02  16  eP        Pdif     12 33 18.3 +1.3
INK   Inuvik            104.02  16   Pdiff    Pdif     12 33 16.8 -0.1
      comp=Z,4.3nm,1.1s,baz=199,slow=6.8,SNR=5.6
INK                                  PP       PKiKP    12 37 33.1 -0.9
      comp=Z,8.1nm,1.0s,baz=192,slow=5.5,SNR=7.9
ROSC  El Rosal          104.18  93   PFAKE             12 33 30.0  +10
ROSC                                 LR       LR
      comp=Z,1µm,22.0s
LSA   Lhasa             105.18 296   PFAKE             12 37 50.0  +12
LSA                                  LR       LR
      comp=Z,801nm,22.0s
T42A  Van Buren         105.46  56   PFAKE             12 37 50.0  +12
T42A                                 LR       LR
      comp=Z,2µm,20.0s
OXF   Oxford            105.55  59   PFAKE             12 37 50.0  +12
OXF                                  LR       LR
      comp=Z,2µm,20.0s
147A  Livingston        105.58  61   PFAKE             12 37 50.0  +12
147A                                 LR       LR
      comp=Z,1µm,22.0s
YKA   Yellowknife Ar    105.66  26   Pdiff    Pdif     12 33 24.5 +0.1
      comp=Z,1.0nm,1.0s,baz=234,slow=3.9,SNR=7.1
YKA                                  PKiKP    PKiKP    12 37 37.7 +0.5
      comp=Z,1.1nm,0.6s,baz=261,slow=1.7,SNR=24
YKA                                  PKKPbc   PKKPbc   12 48 59.3 -3.9
      comp=Z,4.3nm,0.7s,baz=34,slow=3.3,SNR=12
YKA                                  PKPPKP            12 57 25.7
      comp=Z,0.8nm,0.9s,baz=50,slow=2.3,SNR=6.7
HALT  Halls             106.22  58   PFAKE             12 37 50.0  +11
HALT                                 LR       LR
      comp=Z,1µm,22.0s
ZAK   Zakamensk         106.40 319  eP        Pdif     12 33 27.6 -0.5
ZAK                                  pmax     pmax
      comp=Z,2.0nm,1.0s
MDRS  Chennai           106.60 276  eP        Pdif     12 33 27.8 -1.9
BOK   Bokaro            106.75 288  eP        Pdif     12 33 29.5 -0.7
TLY   Talaya            106.81 320   PFAKE             12 37 50.0  +10
TLY                                  LR       LR
      comp=Z,901nm,21.0s
TLY   Talaya            106.81 320  eP        Pdif     12 33 35.2 +5.4
TLY                                 eSS       SS       12 53 02.6 +3.1
TLY                                  pmax     pmax
      comp=Z,6.0nm,0.9s
TLY                                  MLR      MLR
      comp=Z,1µm,18.0s
TRD   Trivandrum        107.24 270  eP        Pdif     12 33 30.7 -1.9
SPB   Sao Paulo         108.17 133   PFAKE             12 37 50.0 +6.8
SPB                                  LR       LR
      comp=Z,2µm,22.0s
L42A  Oliver, Polo      108.61  52   PKiKP    PKiKP    12 37 45.3 +1.9
      baz=245
SDV   Santo Domingo     109.35  91   PFAKE             12 38 00.0  +14
SDV                                  LR       LR
      comp=Z,3µm,19.0s
F39A  Loretta           109.40  48   PKiKP    PKiKP    12 37 47.2 +2.5
      baz=246
154A  Montrose          109.49  63   PFAKE             12 38 00.0  +15
154A                                 LR       LR
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      comp=Z,1µm,20.0s
HMDM  Hanimaadhoo       109.64 266   PFAKE             12 38 00.0  +14
HMDM                                 LR       LR
      comp=Z,2µm,22.0s
E39A  Mellen            109.82  47   PKiKP    PKiKP    12 37 47.1 +1.6
      baz=246
EYMN  Ely               109.87  46   PKiKP    PKiKP    12 37 47.4 +1.9
      baz=246
155A  Kite              109.99  63   PKiKP    PKiKP    12 37 47.5 +1.3
      baz=246
HYB   Hyderabad         110.05 279  eP        Pdif     12 33 43.0 -2.1
E40A  Wakefield         110.26  47   PKiKP    PKiKP    12 37 48.0 +1.6
      baz=247
MNCI  Minicoy           110.49 268   PFAKE             12 38 00.0  +12
MNCI                                 LR       LR
      comp=Z,3µm,21.0s
F41A  Three Lakes       110.49  48   PKiKP    PKiKP    12 37 49.0 +2.1
      baz=247
S50A  Richmond          110.56  58   PKiKP    PKiKP    12 37 48.4 +1.2
      baz=247
R50A  Paris             110.85  57   PKiKP    PKiKP    12 37 49.5 +1.8
      baz=247
V53A  Saluda            110.94  60   PKiKP    PKiKP    12 37 49.8 +1.7
      baz=247
U53A  Fall Branch       111.39  60   PKiKP    PKiKP    12 37 50.3 +1.4
      baz=247
N49A  Columbus Grove    111.97  55   PKiKP    PKiKP    12 37 50.8 +1.1
      baz=248
GOA   Goa               113.23 275  eP        PKiKP    12 37 51.0 -1.8
O52A  Adamsville        113.33  56   PFAKE             12 38 00.0 +7.6
O52A                                 LR       LR
      comp=Z,2µm,22.0s
L50A  Kingsville        113.33  54   PKiKP    PKiKP    12 37 54.1 +1.8
      baz=249
BDFB  Brasilia          113.39 126   PFAKE             12 38 00.0 +6.6
BDFB                                 LR       LR
      comp=Z,3µm,21.0s
BDFB  Brasilia          113.39 126   PKKPbc   PKKPbc   12 48 39.3 +2.1
      comp=Z,4.5nm,0.7s,baz=152,slow=7.3,SNR=3.5
WMQ   Urumqi            113.42 308   PKP      PKiKP    12 37 51.8 -0.7
WMQ                                  PP       PP       12 38 48.9 +4.5
WMQ                                  PKS               12 41 28.0
WMQ                                  SS       SS       12 54 28.8 +0.2
WMQ                                  AMB      AMB
      comp=Z,930nm,6.3s
WMQ                                  LR       LR
      comp=Z,970nm,27.1s
WMQ                                  LR       LR
      comp=Z,960nm,34.7s
WMQ                                  LR       LR
      comp=Z,1µm,23.3s
PTGA  Pitinga           113.45 106   PFAKE             12 38 10.0  +17
PTGA                                 LR       LR
      comp=Z,1µm,22.0s
BHPL  Bhopal            113.52 284  eP        PKiKP    12 37 52.5 -0.8
G47A  Hillman           113.72  50   PKiKP    PKiKP    12 37 55.3 +2.4
      baz=250
E46A  Sault Ste Mari    113.83  49   PKiKP    PKiKP    12 37 55.1 +1.9
      baz=250
R55A  Marlinton         113.92  59   PKiKP    PKiKP    12 37 54.8 +1.1
      baz=249
P54A  Burton            114.13  57   PKiKP    PKiKP    12 37 55.1 +1.1
      baz=249
M52A  Chesterland       114.18  55   PKiKP    PKiKP    12 37 55.3 +1.3
      baz=250
ABPO  Ambohimpanom      114.22 227   PFAKE             12 38 10.0  +15
ABPO                                 LR       LR
      comp=Z,2µm,20.0s
N53A  Lisbon            114.29  56   PKiKP    PKiKP    12 37 55.4 +1.2
      baz=250
O54A  Avella            114.40  57   PKiKP    PKiKP    12 37 55.6 +1.1
      baz=250
POO   Poona             114.56 278  eP        PKPdf    12 37 52.5 -2.9
M53A  WI Miller and     114.62  55   PKiKP    PKiKP    12 37 55.9 +1.1
      baz=250
F48A  Evansville        114.76  50   PKiKP    PKiKP    12 37 56.5 +1.6
      baz=251
ELFO  Elginfield        114.77  53   PKiKP    PKiKP    12 37 56.6 +1.6
      baz=250
D47A  Chapleau          114.84  49   PKiKP    PKiKP    12 37 55.9 +0.8
      baz=251
L53A  Girard            115.09  55   PKiKP    PKiKP    12 37 56.6 +0.8
      baz=250
BWLO  Walkerton         115.19  52   PKiKP    PKiKP    12 37 57.6 +1.7
      baz=251
TOBO  Tobermory, Bru    115.29  51   PKiKP    PKiKP    12 37 57.6 +1.7
      baz=251
M54A  Oil Creek Stat    115.36  55   PKiKP    PKiKP    12 37 57.6 +1.4
      baz=251
R58B  Mineral           115.47  60   PKiKP    PKiKP    12 37 58.1 +1.5
      baz=250
DGZ   Jazzator, Alta    115.52 314d iPKIKP    PKPdf    12 37 55.5 -1.0
N55A  Marion Center     115.61  56   PKiKP    PKiKP    12 37 58.3 +1.6
      baz=251
D48A  Paudash Townsh    115.72  49   PKiKP    PKiKP    12 37 58.2 +1.5
      baz=252
O56A  Blue Knob Stat    115.74  57   PKiKP    PKiKP    12 37 58.4 +1.3
      baz=251
ACTO  Acton             115.77  53   PKiKP    PKiKP    12 37 57.7 +0.8
      baz=251
DDI   Dehra Dun         115.78 291  eP        PKPdf    12 37 57.0 -0.5
M55A  Ridgway           115.99  56   PKiKP    PKiKP    12 37 58.2 +0.7
      baz=251
D49A  Beulah Townshi    116.04  49   PKiKP    PKiKP    12 37 57.7 +0.3
      baz=252
E50A  Wahnapitae        116.19  50   PKiKP    PKiKP    12 37 58.1 +0.4
      baz=252
SSPA  Standing Stone    116.35  57   PKiKP    PKiKP    12 37 58.5 +0.3
      baz=251
L55A  Hinsdale          116.45  55   PKiKP    PKiKP    12 37 58.8 +0.4
      baz=252
PKRO  Pickering         116.56  53   PKiKP    PKiKP    12 37 59.1 +0.7
      baz=252
F51A  Arnstein          116.58  51   PKiKP    PKiKP    12 37 58.6 +0.2
      baz=252
MPR   Mayaguez          116.66  84   PFAKE             12 38 10.0  +11
MPR                                  LR       LR
      comp=Z,1µm,21.0s
AGP   Aguadilla         116.74  84   PFAKE             12 38 10.0  +10
AGP                                  LR       LR
      comp=Z,900nm,22.0s
DRWO  Darlington Wes    116.77  53   PKiKP    PKiKP    12 37 58.9  0.0
      baz=252
BUKO  Buck Lake         116.78  51   PKiKP    PKiKP    12 37 59.0 +0.1
      baz=253
DRCO  St. Marys Ceme    116.79  53   PKiKP    PKiKP    12 37 59.1 +0.2
      baz=252
SMLA  Simla             116.79 292  eP        PKPdf    12 37 57.9 -1.3
K55A  Perry             116.88  54   PKiKP    PKiKP    12 37 59.3 +0.1
      baz=252
BOSA  Boshof            117.04 203   PKIKP    PKPdf    12 38 00.0 -0.2
BOSA                                 pmax     pmax
      comp=Z,18nm,0.9s
BOSA  Boshof            117.04 203  i P       Pdif     12 34 06.5  -10
BOSA  Boshof            117.04 203   PKP      PKPdf    12 37 60.0 -0.2
      comp=Z,18nm,0.9s,baz=130,slow=4.6,SNR=4.8
E51A  G1948 Merrick     117.04  50   PKiKP    PKiKP    12 37 59.7 +0.4
      baz=253
G53A  Haliburton        117.21  52   PKiKP    PKPdf    12 37 59.5 -0.2
      baz=253
D51A  Lot 18 Range I    117.28  49   PKiKP    PKiKP    12 37 59.8 +0.1
      baz=253
EMPR  Esperanza - Ma    117.30  84   PFAKE             12 38 10.0 +9.4
EMPR                                 LR       LR
      comp=Z,1µm,21.0s
SJG   San Juan          117.47  84  ePKPdf    PKPdf    12 38 00.7 -0.3
SJG                                  LR       LR
      comp=Z,900nm,21.0s
RES   Resolute Bay      117.48  17  ePKPdf    PKPdf    12 37 58.6 -0.7
RES   Resolute Bay      117.48  17   PKP      PKPdf    12 37 58.4 -1.0
      comp=Z,15nm,0.9s,baz=245,slow=2.9,SNR=35
RES                                  PKKPbc   PKKPbc   12 48 26.6 +2.6
      comp=Z,6.8nm,0.9s,baz=39,slow=6.7,SNR=12
E52A  Mattawa           117.52  51   PKiKP    PKPdf    12 37 60.0 -0.3
      baz=254
BANO  Bancroft          117.65  52   PKiKP    PKiKP    12 38 00.9 +0.3
      baz=253
HUMP  Col San Antoni    117.74  84   PFAKE             12 38 10.0 +8.5
HUMP                                 LR       LR
      comp=Z,800nm,20.0s
CBYP  Canovanas         117.79  84   PFAKE             12 38 10.0 +8.3
CBYP                                 LR       LR
      comp=Z,900nm,21.0s
ALGO  Algonquin Park    117.83  51   PKiKP    PKPdf    12 38 00.6 -0.3
      baz=254
DHRM  DHARAMSHALA       117.88 293  eP        PKPdf    12 38 00.7 -1.0
DHRM                                 IAmb     IAmb     12 38 06.4
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      comp=Z,128nm,1.4s
DHRM                                 IAMs_20  IAMs_20  13 34 14.6
      comp=Z,1µm,15.6s
D52A  ZEK Kipawa Sen    117.88  50   PKiKP    PKPdf    12 38 00.4 -0.5
      baz=254
MK01  Makanchi Array    117.95 310  ePdif     Pdif     12 34 19.7 +0.2
MK01                                ePKPdf    PKPdf    12 37 59.4 -1.7
N59A  State Game Lan    117.96  57   PKiKP    PKPdf    12 38 00.7 -0.6
      baz=252
MK31  Makanchi Array    117.97 310  ePdif     Pdif     12 34 18.9 -0.7
MK31                                ePKPdf    PKPdf    12 37 59.2 -2.0
MK31  Makanchi Array    117.97 310  i PKIKP   PKPdf    12 37 59.1 -2.0
MK31                                 pmax     pmax
      comp=Z,11nm,0.7s
MK32  Makanchi Array    117.97 310  ePKPdf    PKPdf    12 37 59.3 -1.8
MKAR  Makanchi Array    117.97 310  ePKPdf    PKPdf    12 37 59.6 -1.6
MKAR  Makanchi Array    117.97 310  eP        Pdif     12 34 21.8 +2.2
MKAR                                 pmax     pmax
      comp=Z,1.0nm,0.6s
MKAR  Makanchi Array    117.97 310   PKP      PKPdf    12 37 59.3 -1.8
      comp=Z,19nm,1.0s,baz=85,slow=2.6,SNR=50
MKAR                                 PKKPbc   PKKPab   12 48 22.4 -0.2
      comp=Z,2.0nm,0.9s,baz=275,slow=3.5,SNR=8.7
MTP   Monte Pirata      117.97  85   PFAKE             12 38 10.0 +8.1
MTP                                  LR       LR
      comp=Z,1µm,22.0s
H55A  Tweed             118.03  53   PKiKP    PKPdf    12 38 01.0 -0.2
      baz=254
MAKZ  Makanchi          118.18 310  ePKPdf    PKPdf    12 37 59.6 -1.9
BINY  Binghamton        118.19  56   PKiKP    PKPdf    12 38 01.5 -0.2
      baz=253
E53A  Dumoine, Ponti    118.21  51   PKiKP    PKiKP    12 38 01.8 +0.2
      baz=254
PLVO  Plevna            118.24  52   PKiKP    PKPdf    12 38 01.4 -0.2
      baz=254
ZAA0  Zalesovo Array    118.25 318  ePKPdf    PKPdf    12 37 59.6 -1.8
ZAA1  Zalesovo Array    118.25 318  ePKPdf    PKPdf    12 38 00.2 -1.2
ZALV  Zalesovo Beam     118.25 318  ePKPdf    PKPdf    12 37 59.5 -1.9
ZALV  Zalesovo Beam     118.25 318   PKP      PKPdf    12 38 00.2 -1.2
      comp=Z,12nm,0.8s,baz=207,slow=1.3,SNR=25
CUPR  Culebra, Puert    118.29  85   PFAKE             12 38 10.0 +7.4
CUPR                                 LR       LR
      comp=Z,1µm,21.0s
PEMO  Pembroke          118.30  51   PKiKP    PKPdf    12 38 01.4 -0.3
      baz=254
D53A  Lac Vacive, Po    118.38  50   PKiKP    PKPdf    12 38 01.4 -0.5
      baz=254
G55A  Calabogie         118.54  52   PKiKP    PKiKP    12 38 02.4 +0.1
      baz=254
E54A  Lac Daplat, Po    118.54  51   PKiKP    PKiKP    12 38 02.5 +0.2
      baz=254
GRGR  Grenville         118.64  93   PFAKE             12 38 10.0 +6.6
GRGR                                 LR       LR
      comp=Z,1µm,22.0s
H56A  Elgin             118.67  53   PKiKP    PKiKP    12 38 03.1 +0.5
      baz=254
VLDQ  Val d'Or          118.81  49  ePKPdf    PKPdf    12 38 02.2 -0.5
PDGK  Podgornoye        118.92 306   PKIKP    PKPdf    12 38 00.6 -2.6
PDGK                                 pmax     pmax
      comp=Z,40nm,1.3s
F55A  Otter Lake        118.94  52   PKiKP    PKiKP    12 38 03.1 +0.1
      baz=255
D54A  Lac Fusel, La     119.08  50   PKiKP    PKiKP    12 38 03.3  0.0
      baz=255
MATQ  Matagami          119.10  47   PKiKP    PKiKP    12 38 03.3 +0.1
      baz=256
CPNY  Central Park      119.24  58   PFAKE             12 38 20.0  +16
CPNY                                 LR       LR
      comp=Z,3µm,21.0s
PAL   Palisades         119.34  57   PKiKP    PKPdf    12 38 03.6 -0.2
      baz=253
LSQQ  Lebel-sur-Quev    119.35  48   PKiKP    PKPdf    12 38 03.6 -0.1
      baz=256
NVS   Novosibirsk       119.36 319  ePKIKP    PKPdf    12 38 02.4 -1.1
NVS                                 e                  12 44 52.6
NVS                                  pmax     pmax
      comp=Z,48nm,1.2s
NVS                                  pmax     pmax
      comp=E,21nm,1.0s
PRZ   Przheval'sk       119.46 304  ePKPdf    PKPdf    12 38 04.0 -0.3
SVB   Belmont           119.52  92   PFAKE             12 38 20.0  +15
SVB                                  LR       LR
      comp=Z,900nm,18.0s
TARG  Taragay, Kyrgy    119.68 303  ePKPdf    PKPdf    12 38 04.4 -0.7
ALFO  Alfred            119.89  52   PKiKP    PKiKP    12 38 05.0 +0.2
      baz=255
NRIK  Noril'sk          119.89 336   PKP      PKPdf    12 38 03.3 -0.8
      comp=Z,27nm,0.8s,baz=84,slow=1.2,SNR=20
BHJ   Bhuj              120.07 281  eP        PKPdf    12 38 05.0 -0.9
BHJ                                  IAMs_20  IAMs_20  13 35 18.5
      comp=Z,1µm,10.5s
SMRT  St. Maarten       120.08  86   PFAKE             12 38 20.0  +14
SMRT                                 LR       LR
      comp=Z,700nm,22.0s
YLE   Yale              120.13  57   PFAKE             12 38 20.0  +15
YLE                                  LR       LR
      comp=Z,3µm,22.0s
KDJ   Kajisay           120.23 304  ePKPdf    PKiKP    12 38 05.8 -0.2
FDF   Fort de France    120.28  90   PFAKE             12 38 20.0  +13
FDF                                  LR       LR
      comp=Z,700nm,22.0s
KSH   Kashi             120.40 300   PKP      PKiKP    12 38 07.1 +0.8
KSH                                  sPKP              12 38 22.3
KSH                                  PP       PP       12 39 32.4 -1.0
KSH                                  SKS      SKSdf    12 45 14.4 -1.2
KSH                                  SKKS     SKKSac   12 46 25.6 -4.4
KSH                                  SS       SS       12 56 00.5 +0.4
KSH                                  AMB      AMB
      comp=Z,390nm,6.5s
KSH                                  LR       LR
      comp=Z,510nm,8.0s
KSH                                  LR       LR
      comp=Z,500nm,6.4s
KSH                                  LR       LR
      comp=Z,830nm,9.2s
NIL   Nilore            120.76 293  ePKPdf    PKPdf    12 38 05.9 -1.0
NRN   Naryn             120.90 303  ePKPdf    PKPdf    12 38 06.4 -1.0
ULHL  Ulahol            120.94 304   P        PKiKP    12 38 07.4  0.0
      SNR=42
CHGQ  Chibougamau       121.19  47   PKiKP    PKiKP    12 38 08.1 +0.8
      baz=258
KURK  Kurchatov         121.25 314  ePdif     Pdif     12 34 35.1 +1.1
KURK                                ePKPdf    PKPdf    12 38 06.0 -1.3
KURK                                ePP       PP       12 39 35.8 -2.8
KURK                                 LR       LR
      comp=Z,799nm,22.0s
KURK  Kurchatov         121.25 314c iPKIKP    PKiKP    12 38 08.3 +0.9
KURBB Kurchatov Arra    121.29 314   PKP      PKPdf    12 38 06.0 -1.4
      comp=Z,27nm,0.9s,baz=101,slow=1.8,SNR=79
KURBB                                PP       PP       12 39 36.3 -2.6
      comp=Z,10nm,1.1s,baz=106,slow=6.4,SNR=4.5
HRV   Adam Dziewonsk    121.43  56   PKiKP    PKiKP    12 38 08.5 +0.5
      baz=256
NBCP  Cabaceiras do     121.52 131  eP        PKiKP    12 38 11.7 +2.6
TKM2  Tokmak 2          121.57 304   P        PKPdf    12 38 07.1 -1.4
      SNR=39
TKM2  Tokmak 2          121.57 304   PKIKP    PKPdf    12 38 06.6 -1.8
TKM2                                 pmax     pmax
      comp=Z,30nm,0.7s
LBNH  Lisbon            121.59  54   PKiKP    PKiKP    12 38 08.2 -0.1
      baz=256
KZA   Kyzart            121.61 303   P        PKPdf    12 38 08.5 -0.3
      SNR=51
LATQ  La Tuque          121.70  50   PKiKP    PKiKP    12 38 08.8 +0.5
      baz=258
KBK   Karagaybulak      121.97 304   P        PKPdf    12 38 09.0 -0.2
      SNR=18
UCH   Uchtor            122.18 303   P        PKPdf    12 38 09.3 -0.6
      SNR=59
CHMS  Chumysh           122.19 304   P        PKPdf    12 38 08.0 -1.3
      SNR=24
FRU1  Bishkek           122.23 304  ePKPdf    PKPdf    12 38 08.9 -0.6
FRU1                                 LR       LR
      comp=Z,900nm,20.0s
FRU1  Bishkek           122.23 304  ePKIKP    PKPdf    12 38 08.9 -0.6
FRU1                                 MLR      MLR
      comp=Z,900nm,20.0s
FRU   Bishkek           122.25 304  ePKIKP    PKPdf    12 38 07.0 -2.5
FRU                                  pmax     pmax
      comp=Z,68nm,1.5s
AAK   Ala-Archa         122.29 304   P        PKPdf    12 38 09.6 -0.1
      SNR=16
AAK   Ala-Archa         122.29 304  i PKPdf   PKPdf    12 38 09.6 -0.1
      SNR=33
AAK   Ala-Archa         122.29 304dePKIKP     PKPdf    12 38 09.1 -0.7
AAK   Ala-Archa         122.29 304   PKKPbc   PKKPbc   12 48 06.5 +0.8
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              comp=Z,5.6nm,0.9s,baz=223,slow=3.2,SNR=9.7
SFK    Sufi-Kurgan       122.37 300    PKIKP    PKPdf   12 38 09.0 -1.1
SFK                                    pmax     pmax
              comp=Z,65nm,1.1s
USP    Ospenovka         122.43 304    P        PKPdf   12 38 08.7 -1.1
              SNR=30
AML    Almayashu         122.75 303    P        PKPdf   12 38 10.5 -0.5
              SNR=58
EKS2   Erkin-Say         122.81 304    P        PKPdf   12 38 10.1 -0.6
              SNR=39
ARSB   Arslanbob         123.07 302   ePKPdf    PKPdf   12 38 10.2 -1.1
ARSB                                  ePP       PP      12 39 46.4 -5.1
MATP   Matopo            123.20 210   i P       Pdif    12 34 38.1 -5.7
BLWY   Bulawayo          123.40 210   i P       Pdif    12 34 41.0 -3.7
PKME   Peaks-Kenny Pk    123.64  53    PKiKP    PKiKP   12 38 13.1 +0.8
              baz=259
MNAS   Manas             123.69 303    PKIKP    PKPdf   12 38 11.2 -1.2
MNAS                                   pmax     pmax
              comp=Z,34nm,0.7s
TULEG  Thule             124.02  15   ePKPdf    PKPdf   12 38 10.9 -1.0
TULEG                                 ePP       PP      12 39 54.1 -2.4
KBL    Kabul             124.36 293   ePKPdf    PKPdf   12 38 13.3 -0.7
KBL                                    LR       LR
              comp=Z,500nm,22.0s
KBL    Kabul             124.36 293   ePKIKP    PKPdf   12 38 13.3 -0.7
KBL                                    MLR      MLR
              comp=Z,500nm,22.0s
BTK    Batken            124.38 300   ePKPdf    PKiKP   12 38 14.3 +0.3
GAR    Garm              124.51 299   ePKPdf    PKPdf   12 38 13.5 -0.6
GAR    Garm              124.51 299   ePKIKP    PKPdf   12 38 13.5 -0.6
KK31   Karatay Array     125.25 303   i PKIKP   PKPdf   12 38 14.3 -0.9
KK31                                   pmax     pmax
              comp=Z,28nm,0.6s
KKAR   Karatay Array     125.25 303   ePKPdf    PKPdf   12 38 14.2 -1.0
KKAR   Karatay Array     125.25 303   ePKIKP    PKPdf   12 38 14.2 -1.0
CHGR   Chuyangaron       125.31 298   ePKPdf    PKPdf   12 38 14.4 -1.2
BATG   Bathurst New B    126.19  52   ePKPdf    PKiKP   12 38 17.1 -0.2
SCHQ   Schefferville     126.41  42   ePKPdf    PKPdf   12 38 17.0 -0.1
SCHQ   Schefferville     126.41  42    PKP      PKPdf   12 38 16.6 -0.4
              comp=Z,34nm,1.0s,baz=356,slow=4.0,SNR=12
BVA0   Borovoye Array    126.61 316    PKIKP    PKPdf   12 38 16.1 -1.4
BVA0                                   pmax     pmax
              comp=Z,80nm,1.2s
BRVK   Borovoye          126.68 316   ePKPdf    PKPdf   12 38 16.6 -1.0
BRVK   Borovoye          126.68 316c iPKIKP     PKPdf   12 38 16.0 -1.6
LMN    Caledonia Moun    126.85  53   ePKPdf    PKiKP   12 38 18.5 -0.1
KULLO  Kullorsuaq        127.35  17   i P       PKPdf   12 38 18.2 -0.1
              comp=Z,31nm,1.0s
KULLO  Kullorsuaq        127.35  17   i PKIKP   PKPdf   12 38 18.2 -0.1
KULLO                                  pmax     pmax
              comp=Z,31nm,1.0s
LSZ    Lusaka            127.86 213   ePKPdf    PKiKP   12 38 21.7 -0.1
LSZ                                    LR       LR
              comp=Z,1μm,20.0s
LSZ    Lusaka            127.86 213   ePKIKP    PKiKP   12 38 21.7 -0.1
LSZ                                    MLR      MLR
              comp=Z,1μm,20.0s
TSUM   Tsumeb            128.22 199   ePKPdf    PKPdf   12 38 22.0 +0.1
TSUM                                  ePP       PP      12 40 22.5 -1.8
TSUM                                   LR       LR
              comp=Z,2μm,20.0s
JLN    Jalan Bani Buh    128.39 275    PKiKP    PKiKP   12 38 22.4  0.0
              SNR=6.7
RCBR   Riachuelo         128.68 128   ePKPdf    PKPdf   12 38 22.8 +0.1
RCBR                                   LR       LR
              comp=Z,2μm,20.0s
RCBR   Riachuelo         128.68 128   ePKIKP    PKPdf   12 38 22.8 +0.1
RCBR                                   MLR      MLR
              comp=Z,2μm,20.0s
RCBR   Riachuelo         128.68 128   eP        PKiKP   12 38 26.5 +3.1
MHTO   MHTO              129.19 273    PKPdf    PKPdf   12 38 22.4 -1.0
              SNR=10
WSAR   Wadi Sarin        129.46 276    PKP      PKiKP   12 38 24.3 -0.3
              comp=Z,22nm,1.1s,baz=154,slow=2.3,SNR=4.8
BIDO   Bidbid            129.99 276    PKPdf    PKPdf   12 38 23.9 -1.0
              SNR=5.3
DMTO   DMTO              130.46 268    PKPdf    PKPdf   12 38 25.6 -0.3
ILULI  Ilulissat         131.18  22   ePKPdf    PKPdf   12 38 26.0 +0.3
ILULI  Ilulissat         131.18  22   i P       PKiKP   12 38 26.3 -0.3
              comp=Z,45nm,1.0s
ILULI  Ilulissat         131.18  22   i PKIKP   PKiKP   12 38 26.3 -0.3
ILULI                                  pmax     pmax
              comp=Z,45nm,1.0s
KBS    Kingsbay          131.45 357   ePKPdf    PKiKP   12 38 27.1 +0.2
KBS                                    LR       LR
              comp=Z,1μm,21.0s
KBS    Kingsbay          131.45 357d iPKIKP     PKiKP   12 38 27.5 +0.5
KBS    Kingsbay          131.45 357   ePKPdf    PKPdf   12 38 26.3 +0.3
SPA0   Spitsbergen Ar    131.96 356   ePKPdf    PKiKP   12 38 28.0 -0.1
SPA0   Spitsbergen Ar    131.96 356   ePKPdf    PKPdf   12 38 26.9 -0.2
SPITS  Spitsbergen Ar    131.96 356    PKP      PKPdf   12 38 27.3 +0.3
              comp=Z,46nm,0.8s,baz=130,slow=11,SNR=22
SVE    Sverdlovsk        132.12 321c iPKIKP     PKiKP   12 38 28.9  0.0
SVE                                    pmax     pmax
              comp=Z,42nm,0.9s
UOSS   Minazif           132.13 277   ePKPdf    PKPdf   12 38 29.0 +0.1
UOSS                                   LR       LR
              comp=Z,800nm,22.0s
UOSS   Minazif           132.13 277   i PKiKP   PKiKP   12 38 30.0  0.0
              SNR=6.7
HATD   Hatta, Dubai      132.15 277   i PKiKP   PKiKP   12 38 31.3 +1.3
              SNR=6.0
HATD   Hatta, Dubai      132.15 277    PKPdf    PKPdf   12 38 27.2 -1.8
              SNR=6.1
ASHO   Ashiyiah          132.17 277   i PKiKP   PKiKP   12 38 30.7 +0.6
              SNR=7.6
ASHO   Ashiyiah          132.17 277    PKPdf    PKPdf   12 38 28.8 -0.2
              SNR=6.1
ALNE   Al Ain            132.22 276    PKiKP    PKiKP   12 38 32.9 +2.8
SFJD   Kangerlussuaq     132.22  25   ePKPdf    PKiKP   12 38 28.4 -0.4
SFJD   Kangerlussuaq     132.22  25   i P       PKiKP   12 38 28.1 -0.7
              comp=Z,19nm,1.0s
SFJD   Kangerlussuaq     132.22  25   ePKIKP    PKiKP   12 38 28.4 -0.4
MSFE   Esma-Masafi       132.31 278    PKiKP    PKiKP   12 38 31.0 +0.7
FAQ    Al Faqa, Dubai    132.59 277    PKiKP    PKiKP   12 38 33.4 +2.5
NAZ    Nazwa, Dubai      132.61 277    PKiKP    PKiKP   12 38 31.2 +0.3
ASUD   Al Ashush, Dub    132.77 276    PKiKP    PKiKP   12 38 33.9 +2.7
DAG    Danmarks Havn     132.80   6   i P       PKPdf   12 38 27.5 -1.1
              comp=Z,17nm,0.9s
DAG    Danmarks Havn     132.80   6   i PKIKP   PKPdf   12 38 27.5 -1.1
DAG                                    pmax     pmax
              comp=Z,14nm,0.9s
SUMG   Summit            132.94  16   ePKPdf    PKPdf   12 38 29.5  0.0
SUMG   Summit            132.94  16   i P       PKiKP   12 38 30.4 -0.2
              comp=Z,118nm,1.2s
SUMG   Summit            132.94  16   ePKIKP    PKPdf   12 38 29.5  0.0
ABKAR  Akbulak array     133.10 311   ePKPdf    PKPdf   12 38 29.7 -0.2
HSPB   Hornsund (broa    133.15 356   ePKPdf    PKPdf   12 38 28.3 -1.0
ARU    Arti              133.31 320   ePKPdf    PKPdf   12 38 29.7 -0.4
ARU                                    LR       LR
              comp=Z,2μm,22.0s
ARU    Arti              133.31 320c iPKIKP     PKPdf   12 38 29.5 -0.6
GEYT   Alibeck           133.70 295    PKP      PKPdf   12 38 30.1 -1.4
              comp=Z,32nm,0.9s,baz=236,slow=1.6,SNR=12
GEYT                                   SKP              12 42 01.1
              comp=Z,41nm,1.1s,baz=75,slow=1.7,SNR=9.8
GYA0B  ALIBECK ARRAY     133.70 295   ePKPdf    PKPdf   12 38 31.5  0.0
KMBO   Kilima Mbogo      133.95 233   ePKPdf    PKPdf   12 38 32.2 -0.8
KMBO                                   LR       LR
              comp=Z,1μm,20.0s
KMBO   Kilima Mbogo      133.95 233   i PKiKP   PKiKP   12 38 35.4 +1.1
              SNR=5.1
KMBO   Kilima Mbogo      133.95 233    PKIKP    PKPdf   12 38 32.0 -1.0
KMBO                                   pmax     pmax
              comp=Z,12nm,1.0s
KMBO   Kilima Mbogo      133.95 233    PKP      PKPdf   12 38 31.9 -1.0
              comp=Z,5.2nm,0.9s,baz=93,slow=4.0,SNR=14
KMBO                                   SKPbc    SKPbc   12 41 57.6 -1.8
              comp=Z,3.8nm,0.7s,baz=79,slow=3.7,SNR=4.7
AKTO   Aktyubinsk        134.30 312    PKIKP    PKPdf   12 38 31.2 -1.0
AKTO                                   pmax     pmax
              comp=Z,32nm,0.8s
ATD    Arta Tunnel       137.74 252   ePKPdf    PKiKP   12 38 41.1 -0.6
ATD                                    LR       LR
              comp=Z,1μm,20.0s
ATD    Arta Tunnel       137.74 252    PKP      PKiKP   12 38 41.1 -0.6
              comp=Z,13nm,0.9s,baz=212,slow=22,SNR=4.2
SCO    Scoresbysund      137.94  12   ePKPdf    PKPdf   12 38 38.5 +0.2
SCO    Scoresbysund      137.94  12   i P       PKiKP   12 38 40.3  0.0
              comp=Z,27nm,1.0s
SCO    Scoresbysund      137.94  12   i PKIKP   PKiKP   12 38 40.3  0.0
SCO                                    pmax     pmax
              comp=Z,27nm,1.0s
PRGR   Permogore         138.06 330   ePKIKP    PKPdf   12 38 33.4 -5.3
PRGR                                   pmax     pmax
              comp=Z,53nm,0.8s
LVZ    Lovozero          138.10 342   ePKPdf    PKPdf   12 38 38.7  0.0
LVZ                                    LR       LR
              comp=Z,1μm,22.0s
LVZ    Lovozero          138.10 342c iPKIKP     PKPdf   12 38 38.1 -0.6
HAMF   Hammerfest        138.20 349   ePKPdf    PKPdf   12 38 36.3 -2.5
KEV    Kevo              138.38 347   ePKPpre   PKPpre  12 38 31.1
KEV                                   ePKPdf    PKPdf   12 38 39.8 +0.7
KEV                                    LR       LR
              comp=Z,1μm,22.0s
KEV    Kevo              138.38 347   ePKHKP    PKPpre  12 38 31.1
KEV                                   e                 12 38 39.8
KEV                                    MLR      MLR
              comp=Z,1μm,22.0s
MBAR   Mbarara           138.64 227   ePKPdf    PKPdf   12 38 40.5 -1.1
MBAR                                   LR       LR
              comp=Z,400nm,19.0s
MBAR   Mbarara           138.64 227    PKIKP    PKiKP   12 38 42.6 -1.1
MBAR                                   pmax     pmax
              comp=Z,2.0nm,0.3s
MBAR   Mbarara           138.64 227    PKP      PKiKP   12 38 42.6 -1.1
              comp=Z,3.2nm,0.3s,baz=132,slow=5.3,SNR=10.0
MBAR                                   SKPbc    SKPbc   12 42 12.7 -0.9
              comp=Z,2.9nm,0.2s,baz=7.0,slow=1.6,SNR=5.2
ARA0   ARCESS Array S    138.85 348   ePKPpre   PKPpre  12 38 32.2
ARCES  ARCESS Array B    138.85 348   ePKPpre   PKPpre  12 38 31.4
ARCES                                 ePKPdf    PKPdf   12 38 40.6 +0.5
ARCES  ARCESS Array B    138.85 348   ePKHKP    PKPpre  12 38 31.4
ARCES                                 e                 12 38 40.6
ARCES  ARCESS Array B    138.85 348    PKhKP    PKPpre  12 38 32.2
              comp=Z,16nm,0.8s,baz=49,slow=2.7,SNR=31
ARCES                                  SKPab    SKiKP   12 42 16.6 +1.0
              comp=Z,3.1nm,0.6s,baz=35,slow=3.2,SNR=6.1
ARE0   ARCESS Array S    138.85 348   ePKPpre   PKPpre  12 38 31.3
ARE0                                  ePKPdf    PKPdf   12 38 40.8 +0.8
ARE0   ARCESS Array S    138.85 348   ePdif     Pdif    12 35 52.6 +0.7
ARE0                                  ePP       PP      12 41 32.9 +0.8
FURI   Furi              139.57 245    PFAKE            12 38 50.0 +4.2
FURI                                   LR       LR
              comp=Z,2μm,21.0s
TMCR   Tamitsa           139.60 337   ePKIKP    PKPdf   12 38 36.8 -4.7
KTK1   Kautokeino        139.71 348   ePKPdf    PKiKP   12 38 43.4 -0.6
TRO    Tromso            139.81 351   ePKPdf    PKPdf   12 38 40.6 -1.1
RAYN   Ar Rayn           140.85 270   ePKPpre   PKPpre  12 38 37.2
RAYN                                  ePKPdf    PKPdf   12 38 44.6 -0.6
RAYN                                   LR       LR
              comp=Z,800nm,20.0s
RAYN   Ar Rayn           140.85 270   ePKHKP    PKPpre  12 38 37.2
RAYN                                  e                 12 38 44.6
RAYN                                   MLR      MLR
              comp=Z,800nm,20.0s
KLMR   Klimovskoe        141.01 332   ePKIKP    PKPdf   12 38 40.0 -4.1
KLMR                                   pmax     pmax
              comp=Z,108nm,1.5s
KLMR   Klimovskoe        141.01 332   ePKPdf    PKPdf   12 38 40.1 -4.1
KLMR                                   AMP              12 38 49.8
              comp=Z,108nm,1.5s
KLMR                                  ePP       PP      12 41 35.5  -10
STEI   Steigen           141.89 352   ePKPdf    PKPdf   12 38 42.3 -3.2
MAK    Makhachkala       142.02 302d eP         Pdif    12 36 04.2 -2.4
MAK                                   i                 12 38 48.0
MAK                                   e                 12 41 49.8
MAK                                   e                 12 45 57.0
MAK                                    pmax     pmax
              comp=Z,52nm,0.5s
GROC   Groznyy           143.25 302   ePKIKP    PKPab   12 38 44.9 +0.3
GROC                                  e                 12 41 56.7
GROC                                   pmax     pmax
              comp=Z,56nm,0.8s
KONS   Konsvik           143.51 353   ePKPdf    PKPdf   12 38 47.7 -0.7
MOR8   Moi Rana          143.66 352   ePKPdf    PKPbc   12 38 45.8 -0.5
TBLG   Delisi            144.15 300   eP        PKPab   12 38 47.1 -1.0
TBLG   Delisi            144.15 300   ePKPdf    PKPab   12 38 48.1  0.0
TBLG   Delisi            144.15 300   ePKIKP    PKPab   12 38 48.1  0.0
GNI    Garni             144.22 297   eP        PKPab   12 38 47.7 -0.9
GNI    Garni             144.22 297   eP        PKPab   12 38 47.7 -0.9
GNI    Garni             144.22 297   ePKPdf    PKPab   12 38 48.6 -0.1
GNI                                    LR       LR
              comp=Z,900nm,22.0s
GNI    Garni             144.22 297   i PKPdf   PKPbc   12 38 49.1  0.0
              SNR=17
GNI    Garni             144.22 297c iPKIKP     PKPab   12 38 47.7 -0.9
VRH    Novokhopyorsk     144.26 317   ePKIKP    PKPbc   12 38 49.2 +0.7
VRH                                    pmax     pmax
              comp=Z,120nm,1.0s
MOS    Moscow            144.57 325   ePKIKP    PKPab   12 38 48.1 -1.1
MOS                                    pmax     pmax
              comp=Z,180nm,1.0s
MOS                                    MLR      MLR
              comp=E,2μm,23.0s
MOS                                    MLR      MLR
              comp=Z,2μm,23.0s
TASB   TASBURUN-IGDIR144.61 297       eP        PKPab   12 38 48.8 -1.2
TASB   TASBURUN-IGDIR144.61 297       eP        PKPab   12 38 48.8 -1.2
ZEI    Tsey              144.67 302   i PKHKP   PKPpre  12 38 45.9
ZEI                                    pmax     pmax
              comp=Z,129nm,1.0s
NCK    Nalchik           144.81 303⇑iPKIKP      PKPbc   12 38 50.7 +0.1
CLDR   Caldiran          144.88 296   eP        PKPab   12 38 50.8 -0.4
CLDR   Caldiran          144.88 296   i P       PKPab   12 38 50.8 -0.4
CLDR   Caldiran          144.88 296   i P       PKPdf   12 38 51.8 -0.2
CLDR                                   IAML_P
              comp=Z,6μm,1.0s
GOF    Gofitskoye        144.97 306   ePKIKP    PKPbc   12 38 50.4 -0.6
GOF                                    pmax     pmax
              comp=Z,200nm,0.8s
DYDN   Diyadin           145.05 296   i P       PKPdf   12 38 52.4 +0.1
EAK    Akyaka            145.06 298   i P       PKPdf   12 38 51.9 -0.3
EAK                                    IAML_P
              comp=Z,3μm,0.9s
CUKT   Cukurca           145.11 292   eP        PKPbc   12 38 51.2 -0.7
CUKT   Cukurca           145.11 292    P        PKPbc   12 38 51.2 -0.7
CUKT   Cukurca           145.11 292   i P       PKPbc   12 38 51.4 -0.6
CUKT                                   IAML_P
              comp=Z,8μm,0.9s
VMUR   Van-Muradiye      145.15 295   i P       PKPbc   12 38 51.9 -0.2
VMUR                                   IAML_P
              comp=Z,3.0nm,0.2s
PUL    Pulkovo           145.25 335d iPKIKP     PKPdf   12 38 51.6  0.0
DIGO   Kars              145.26 298   i P       PKPdf   12 38 52.8 +0.1
DIGO                                   IAML_P
              comp=Z,2μm,0.4s
KBZ    Khabaz            145.28 304    PKPbc    PKPbc   12 38 50.9 -1.2
              comp=Z,140nm,1.0s,baz=101,slow=1.2,SNR=69
LPSR   Galich'ya Gora    145.33 320   ePKP2     PKPbc   12 38 50.7 -1.2
LPSR                                   pmax     pmax
              comp=Z,270nm,1.0s
FIA1   FINESS Array S    145.40 340   ePKPbc    PKPbc   12 38 51.1 -0.7
FIA0   FINESS Array S    145.40 340   ePKPbc    PKPbc   12 38 50.3 -1.5
FIA0   FINESS Array S    145.40 340   ePKP2     PKPbc   12 38 50.3 -1.5
FINES  FINESS Array B    145.40 340    PKPbc    PKPbc   12 38 50.3 -1.5
              comp=Z,276nm,0.8s,baz=52,slow=3.1,SNR=326
KIV    Kislovodsk        145.40 304   eP        PKPbc   12 38 51.6 -1.0
KIV    Kislovodsk        145.40 304    P        PKPbc   12 38 51.6 -1.0
KIV    Kislovodsk        145.40 304   ePKPbc    PKPbc   12 38 50.8 -1.8
KIV    Kislovodsk        145.40 304⇑iP          PKPbc   12 38 51.2 -1.4
KIV    Kislovodsk        145.40 304   i PKPbc   PKPbc   12 38 51.4 -1.2
              SNR=25
KIV    Kislovodsk        145.40 304   i PKP2    PKPbc   12 38 50.9 -1.7
KIV                                    pmax     pmax
              comp=Z,149nm,1.1s
KIV                                    MLR      MLR
              comp=Z,862nm,24.0s
OBN    Obninsk           145.40 325   ePKPbc    PKPbc   12 38 50.9 -1.1
OBN    Obninsk           145.40 325c iPKP2      PKPbc   12 38 50.5 -1.5
OBN                                   e                 12 42 10.1
OBN                                    pmax     pmax
              comp=Z,202nm,0.9s
NEY    Neytrino          145.48 303c ePKIKP     PKPdf   12 38 52.1 -0.8
NSS    Namsos            145.54 352   ePKPbc    PKPbc   12 38 52.0 -0.2
VORR   Voronezh          145.55 318    PKP2     PKPdf   12 38 51.0 -1.4
VORR                                   pmax     pmax
              comp=Z,400nm,1.2s
GEVA   Gevas             145.56 294   i P       PKPab   12 38 53.7  0.0
GEVA                                   IAML_P
              comp=Z,3μm,1.0s
AKDM   Akdamar-Van       145.62 294   eP        PKPdf   12 38 52.9 -0.4
AKDM   Akdamar-Van       145.62 294   eP        PKPdf   12 38 52.9 -0.4
TUTA   Tutak             145.73 296   i P       PKPab   12 38 54.2 -0.1
VSR    Storozhevoye      145.75 318   ePKIKP    PKPdf   12 38 51.1 -1.7
VSR                                    pmax     pmax
              comp=Z,310nm,0.9s
VSR                                    MLR      MLR
              comp=Z,2μm,25.0s
ADCV   BITLIS_Adilcev    145.82 295   i P       PKPbc   12 38 54.1 -0.1
ADCV                                   IAML_P
              comp=Z,19nm,0.1s
MLAZ   Malazgirt-MUS     145.95 296   eP        PKPdf   12 38 52.3 -1.5
MLAZ   Malazgirt-MUS     145.95 296   eP        PKPdf   12 38 52.3 -1.5
SENK   Senkaya-Erzuru    146.03 298   eP        PKPbc   12 38 54.5 -0.3
SENK   Senkaya-Erzuru    146.03 298   eP        PKPbc   12 38 54.5 -0.3
SIRN   Sırnak            146.07 293   i P       PKPbc   12 38 54.9  0.0
SIRN                                   IAML_P
              comp=Z,3μm,0.6s
ARTV   Artvin            146.30 299   i P       PKPbc   12 38 55.0 -0.6
ARTV                                   IAML_P
              comp=Z,52nm,0.1s
DAGI   Agillar           146.32 299   i P       PKPdf   12 38 54.6 +0.3
DAGI                                   IAML_P
              comp=Z,26nm,0.2s
GURO   Guroymak-BITLI    146.37 295   eP        PKPbc   12 38 55.5 -0.3
GURO   Guroymak-BITLI    146.37 295   eP        PKPbc   12 38 55.5 -0.3
HOMI   Horasan           146.40 297   i P       PKPbc   12 38 55.6 -0.4
HOMI                                   IAML_P
              comp=Z,62nm,0.3s
BATM   Batumi            146.43 300   eP        PKPbc   12 38 55.4 -0.3
BATM   Batumi            146.43 300   eP        PKPbc   12 38 55.4 -0.3
KOPR   Koprukoy-ERZUR146.44 297       eP        PKPbc   12 38 55.2 -0.8
KOPR   Koprukoy-ERZUR146.44 297       eP        PKPbc   12 38 55.2 -0.8
DDEM   Demirkent         146.46 299   i P       PKPab   12 38 56.4 -0.5
DDEM                                   IAML_P
              comp=Z,61nm,0.2s
SRTM   Siirt_Merkez      146.46 294   i P       PKPdf   12 38 55.1 +0.5
SRTM                                   IAML_P
              comp=Z,4μm,0.8s
DBAD   Bademkaya         146.49 299   i P       PKPab   12 38 57.7 +0.7
DBAD                                   IAML_P
              comp=Z,3μm,0.9s
BCA    Borcka            146.50 300   eP        PKPdf   12 38 53.9 -0.6
BCA    Borcka            146.50 300   eP        PKPdf   12 38 53.9 -0.6
TBLU   Trondheim         146.97 353   ePKPbc    PKPbc   12 38 56.2 -0.3
BTMN   Batman            146.98 293   i P       PKPbc   12 38 57.4 -0.1
BTMN                                   IAML_P
              comp=Z,1μm,0.8s
SVAN   Silvan-Diyarba    147.03 294   eP        PKPab   12 38 58.3 -0.9
SVAN   Silvan-Diyarba    147.03 294   eP        PKPab   12 38 58.3 -0.9
SVAN   Silvan-Diyarba    147.03 294   i P       PKPbc   12 38 56.5 -1.0
SVAN                                   IAML_P
              comp=Z,107nm,0.5s
ECAT   Cat-ERZURUM       147.14 297   i P       PKPbc   12 38 57.5 -0.6
CHOM   Cayeli-Rize       147.18 299   eP        PKPbc   12 38 58.3 +0.4
CHOM   Cayeli-Rize       147.18 299   eP        PKPbc   12 38 57.6 -0.3
MARD   Mardin            147.37 292   i P       PKPdf   12 38 57.2 +1.0
MARD                                   IAML_P
              comp=Z,2μm,0.9s
BNGB   Bingl             147.41 295   eP        PKPdf   12 38 57.1 +0.9
BNGB   Bingl             147.41 295   eP        PKPdf   12 38 57.1 +0.9
BGOL   Bingol            147.41 295   i P       PKPbc   12 38 58.8 +0.1
BGOL                                   IAML_P
              comp=Z,66nm,0.1s
VSU    Vasula            147.48 336c ePKIKP     PKPdf   12 38 55.3 -0.2
VSU    Vasula            147.48 336   eP        PKPdf   12 38 55.6 +0.2
VSU                                    IAmb     IAmb    12 39 04.8
              comp=Z,877nm,0.6s
KOPT   Kop Dagi          147.48 297   i P       PKPab   12 39 00.5 -0.7
KOPT                                   IAML_P
              comp=Z,898nm,0.3s
SOC    Sochi             147.59 304c iPKP2      PKPbc   12 38 58.4 -0.5
SOC                                   eSS       SS      13 01 22.4 -5.0
SOC                                    MLR      MLR
              comp=Z,703nm,21.0s
MAZI   Mazidag           147.63 293   eP        PKPdf   12 38 57.7 +1.1
MAZI   Mazidag           147.63 293   eP        PKPdf   12 38 57.7 +1.1
BAYB   BAYBURT           147.64 298   i P       PKPbc   12 38 58.8 -0.6
BAYB                                   IAML_P
              comp=Z,1μm,1.0s
HANI   Diyarbakir_Han    147.65 294   i P       PKPdf   12 38 57.7 +1.1
HANI                                   IAML_P
              comp=Z,185nm,0.3s
MOL    Molde             147.88 355   ePKPbc    PKPbc   12 38 58.7 -0.3
DIYA   Diyarbakir        147.88 293   i P       PKPdf   12 38 57.1 +0.1
DIYA                                   IAML_P
              comp=Z,1μm,0.1s
KTUT   Trabzon           147.94 299   eP        PKPdf   12 38 57.6 +0.8
ERZN   Erzincan          148.11 297   eP        PKPdf   12 38 58.2 +0.9
DOMB   Dombas            148.27 354   ePKPbc    PKPbc   12 38 59.2 -1.0
TNCL   Tunceli-Merkez    148.28 296   i P       PKPab   12 39 04.8 +0.6
TNCL                                   IAML_P
              comp=Z,714nm,0.9s
AKN    Aaknes            148.31 356   ePKPdf    PKPdf   12 38 57.5 +0.7
KELT   Kelkit            148.42 298   i P       PKPdf   12 38 59.3 +1.3
KELT                                   IAML_P
              comp=Z,5.7nm,0.2s
ELZG   Elazig            148.76 295   i P       PKPbc   12 39 02.4  0.0
ELZG                                   IAML_P
              comp=Z,13nm,0.4s
SANL   SANLIURFA_Merk148.80 292       i P       PKPbc   12 39 02.2 -0.1
SANL                                   IAML_P
              comp=Z,198nm,0.4s
NC303  NORSAR Array S 148.81 351      ePKPdf    PKPdf   12 38 57.7 +0.1
NC204  NORSAR Array S 148.84 352      ePKPdf    PKPdf   12 38 58.4 +0.7
REFA   Refahiye_ERZN     148.86 296   i P       PKiKP   12 39 03.3 -0.7
REFA                                   IAML_P
              comp=Z,2μm,0.9s
NC405  NORSAR Array S 148.87 351      ePKPdf    PKPdf   12 38 58.3 +0.5
ANN    Anapa             148.92 307   i PKIKP   PKPdf   12 39 00.0 +1.7
ANN                                    pmax     pmax
              comp=Z,270nm,1.4s
URFA   Urfa              148.93 293   eP        PKPdf   12 38 58.9 +0.2
URFA   Urfa              148.93 293   eP        PKPdf   12 38 58.9 +0.2
FOO    Floro             148.99 357   ePKPbc    PKPbc   12 39 01.5 -0.4
NB201  NORSAR Array S 148.99 351      ePKPdf    PKPdf   12 38 58.2 +0.3
NB2    NORSAR Subarra149.01 351        PKP      PKPbc   12 39 01.3 -0.8
              comp=Z,360nm,1.1s,baz=14,slow=2.6
NB2    NORSAR Subarra149.01 351       e         PKPbc   12 39 01.3 -0.8
              baz=14,slow=2.6
NB200  NORSAR Array S 149.01 351      ePKPbc    PKPbc   12 39 01.5 -0.6
NOA    NORSAR Array B 149.01 351       PKPbc    PKPbc   12 39 01.5 -0.6
              comp=Z,89nm,0.8s,baz=14,slow=4.2,SNR=71
NBO00  NORSAR Array S 149.08 352      ePKPdf    PKPdf   12 38 58.4 +0.3
KEMA   Kemaliye          149.09 296   i P       PKiKP   12 39 03.9 -0.4
KEMA                                   IAML_P
              comp=Z,2μm,0.9s
SURC   SANLIURFA_SURC149.11 292       i P       PKPdf   12 38 59.4 +0.5
SURC                                   IAML_P
              comp=Z,18nm,0.4s
SUSE   Susehri           149.21 298   i P       PKPdf   12 39 00.2 +1.0
SUSE                                   IAML_P
              comp=Z,16nm,0.1s
NAO01  NORSAR Array S 149.24 352      ePKPdf    PKPdf   12 38 58.6 +0.2
NC602  NORSAR Array S 149.26 351      ePKPdf    PKPdf   12 38 58.6 +0.2
NC602  NORSAR Array S 149.26 351      ePKPdf    PKPdf   12 38 58.4 +0.1
NC602                                 ePKPbc    PKPbc   12 39 02.7 +0.1
ATAB   Bozova            149.35 293   i P       PKPbc   12 39 03.9 +0.2
ATAB                                   IAML_P
              comp=Z,620nm,0.3s
HYA    Hoyanger          149.36 356   ePKPbc    PKiKP   12 39 03.4 -0.6
HEKM   Malatya_Hekimh    149.53 295   i P       PKPbc   12 39 02.7 -1.6
HEKM                                   IAML_P
              comp=Z,78nm,0.3s
SUE    Sulen             149.54 357   ePKPbc    PKPbc   12 39 02.5 -0.8
CUZAR  Zara_SIVAS        149.58 297   i P       PKiKP   12 39 05.8 +0.4
AKCD   Akcadag           149.60 294   i P       PKPbc   12 39 04.5 +0.1
AKCD                                   IAML_P
              comp=Z,44nm,0.4s
SLIT   Slitere, Latvi    149.61 338   eP        PKPbc   12 39 01.2 -2.4
SLIT                                   IAmb     IAmb    12 39 05.1
              comp=Z,766nm,1.2s
IZAR   Zarasai           149.64 333   eP        PKPbc   12 39 03.1 -0.7
IZAR                                   IAmb     IAmb    12 39 09.3
              comp=Z,130nm,1.0s
IDID   Didziasalis       149.75 332   eP        PKPbc   12 39 03.2 -0.8
IDID                                   IAmb     IAmb    12 39 06.1
              comp=Z,125nm,1.2s
ISAL   Salakas           149.82 333   eP        PKPbc   12 39 03.6 -0.6
ISAL                                   IAmb     IAmb    12 39 09.7
              comp=Z,88nm,0.9s
MICGM  Minsk             149.82 330⇓eP          PKPdf   12 39 00.0 +0.6
MICGM                                  PM               12 39 04.0
              comp=Z,1.0nm,1.0s
MICGM                                 eLR       LR      13 42 35.0
MNK    Minsk             149.82 330⇓ePKHKP      PKPdf   12 39 00.0 +0.6
MNK                                    pmax     pmax
              comp=Z,990nm,1.0s
RSDY   Resadiye-TOKAT 149.85 299      eP        PKPbc   12 39 04.8  0.0
RSDY   Resadiye-TOKAT 149.85 299      eP        PKPbc   12 39 04.8  0.0
CUKAN  kangal_SIVAS      149.87 296   i P       PKPbc   12 39 04.5 -0.6
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DARE  Darende-Malaty   149.93 295  eP        PKPdf    12 39 01.6 +1.3
DARE  Darende-Malaty   149.93 295  eP        PKPdf    12 39 01.6 +1.3
GZT   Gaziantep        149.93 292  i P       PKPbc    12 39 04.8 -0.4
GZT                                 IAML_P
      comp=Z,2µm,0.9s
IIGN  Ignalina         149.94 332  eP        PKPbc    12 39 03.9 -0.6
IIGN                                IAmb     IAmb     12 39 10.0
      comp=Z,123nm,1.0s
NACGM Naroch           150.02 331  e         PKPbc    12 39 04.0 -0.7
NACGM                              eLQ       LQ       13 21 08.0
NACGM                              eLR       LR       13 23 20.0
CUGUR Gurin_SVAS       150.08 295  i P       PKiKP    12 39 06.9 +0.4
ASK   Askoy            150.10 357  ePKPbc    PKPbc    12 39 04.7 +0.1
SVSK  Karacayir        150.17 298  eP        PKPdf    12 39 02.2 +1.8
SVSK  Karacayir        150.17 298  eP        PKPdf    12 39 02.2 +1.8
BER   Bergen           150.19 357  ePKPbc    PKPbc    12 39 04.9  0.0
ELBS  KAHRAMANMARAS_150.22 294     i P       PKPbc    12 39 03.5 -2.4
ELBS                                IAML_P
      comp=Z,62nm,0.2s
GAZ   Gaziantep        150.22 292  eP        PKPbc    12 39 04.4 -1.5
GAZ   Gaziantep        150.22 292  i P       PKPbc    12 39 04.4 -1.5
ERBA  Erbaa            150.25 299  i P       PKPbc    12 39 06.0 +0.2
ERBA                                IAML_P
      comp=Z,1µm,0.9s
KUZU  Kuzuini          150.34 291  i P       PKPdf    12 39 02.1 +1.2
KUZU                                IAML_P
      comp=Z,391nm,0.1s
CUALT Altinyayla-SIV   150.43 296  i P       PKiKP    12 39 07.2  0.0
LRW   Lerwick          150.44   3  eP        PKPbc    12 39 05.7 +0.2
TOKT  Tokat            150.46 299  eP        PKPbc    12 39 04.8 -1.5
TOKT  Tokat            150.46 299  eP        PKPbc    12 39 04.8 -1.5
KONO  Kongsberg        150.56 352  ePKPdf    PKPdf    12 39 00.7 +0.3
KONO                                LR       LR
      comp=Z,900nm,21.0s
KONO  Kongsberg        150.56 352  ePKIKP    PKPdf    12 39 00.7 +0.3
KONO                                MLR      MLR
      comp=Z,900nm,21.0s
KONO  Kongsberg        150.56 352  ePKPbc    PKPbc    12 39 04.8 -1.1
ODD1  Odda             150.58 355  ePKPbc    PKPbc    12 39 05.5 -0.5
KVT   Kavak            150.71 300  eP        PKiKP    12 39 08.0 +0.5
KVT   Kavak            150.71 300  eP        PKPbc    12 39 06.5 -0.4
CUSAR Sarkisla-SIVAS   150.80 297  i P       PKPdf    12 39 01.9 +0.2
ANDN  Andirin          150.89 293  i P       PKPdf    12 39 02.9 +1.1
ANDN                                IAML_P
      comp=Z,25nm,0.4s
HAVZ  Havza            150.96 300  i P       PKPbc    12 39 07.0 -0.4
HAVZ                                IAML_P
      comp=Z,2µm,0.8s
PBUR  Paburg           151.02 337  eP        PKPbc    12 39 04.9 -2.1
PBUR                                IAmb     IAmb     12 39 08.8
      comp=Z,435nm,0.9s
HSNJ  Maan             151.06 278   P        PKiKP    12 39 09.2 +0.5
TAHT  Tahtakopru-Hat   151.07 291  eP        PKPbc    12 39 07.7 -0.1
TAHT  Tahtakopru-Hat   151.07 291   P        PKPbc    12 39 07.7 -0.1
SAIM  ADANA            151.07 294  i P       PKiKP    12 39 08.1 -0.4
SAIM                                IAML_P
      comp=Z,232nm,0.2s
BLS5  Blasjo           151.08 355  ePKPbc    PKPbc    12 39 07.2  0.0
SIM   Simferopol'      151.14 309d iPKIKP    PKPdf    12 39 02.4 +0.6
SIM                                i                  12 39 07.6
SIM                                i                  12 39 15.8
SIM                                 pmax     pmax
      comp=Z,170nm,13.8s
SNOP  Sinop            151.15 302  ePKPdf    PKPdf    12 39 01.5 -0.4
SNOP                               ePKPbc    PKPbc    12 39 07.7 -0.1
SNOP                                LR       LR
      comp=Z,400nm,21.0s
SINO  SINOP_Merkez     151.16 302  i P       PKiKP    12 39 08.1 -0.2
SINO                                IAML_P
      comp=Z,3µm,0.9s
RCY   Rachaya          151.30 285  eP        PKiKP    12 39 08.8 -0.4
KOZT  Kozan            151.31 293  eP        PKPbc    12 39 07.0 -1.4
KOZT  Kozan            151.31 293  eP        PKPbc    12 39 07.0 -1.4
KMY   Karmoy           151.36 357  ePKPbc    PKiKP    12 39 08.1 -0.1
SHBL  Chebaa           151.37 284  eP        PKPbc    12 39 08.3 -0.5
CEYT  Ceyhan           151.40 292  eP        PKPbc    12 39 07.2 -1.3
CEYT  Ceyhan           151.40 292  eP        PKPbc    12 39 07.2 -1.3
BHL   Bhannes          151.47 285  eP        PKPbc    12 39 08.5 -0.5
YOZ   Yozgat           151.49 297  eP        PKPbc    12 39 08.3 -0.6
YOZ   Yozgat           151.49 297  i P       PKPbc    12 39 08.3 -0.6
YURE  YUREGIR          151.50 292  eP        PKiKP    12 39 09.5 +0.2
YURE  YUREGIR          151.50 292  eP        PKiKP    12 39 09.5 +0.2
YURE  YUREGIR          151.50 292  i P       PKiKP    12 39 10.0 +0.7
AQBJ  Aqaba            151.51 277   P        PKiKP    12 39 09.8 +0.3
      comp=Z,725nm,1.0s,comp=Z,2.3nm
AKASG Malin Array Be   151.53 322   PKP      PKPdf    12 39 00.6 -1.6
      comp=Z,7.6nm,0.8s,baz=41,slow=1.6,SNR=35
AKASG                               PKPbc    PKPbc    12 39 07.7 -0.7
      comp=Z,174nm,0.9s,baz=48,slow=2.4,SNR=101
AKBB  Malin Array Si   151.53 322  ePKPdf    PKPdf    12 39 01.1 -1.1
AKBB                               ePKPbc    PKPbc    12 39 08.1 -0.2
AKBB  Malin Array Si   151.53 322  ePKIKP    PKPdf    12 39 01.1 -1.1
AKBB                               e                  12 39 08.1
KIEV  Kiev             151.54 322⇓iP        PKPdf    12 39 02.5 +0.3
KIEV  Kiev             151.54 322  i PKPdf   PKPdf    12 39 02.6 +0.5
      SNR=68
KIEV  Kiev             151.54 322d iPKIKP    PKPdf    12 39 01.8 -0.4
HRFI  Mount Harif      151.57 277   P        PKPdf    12 39 02.2 -0.8
      comp=Z,298nm,1.0s,comp=Z,1.0nm
EIL   Elat             151.58 276   P        PKPdf    12 39 02.0 -1.0
EIL   Elat             151.58 276   PKPbc    PKPbc    12 39 08.8 -0.4
      baz=90,slow=2.4
YAHY  KAYSERI_Yahyal151.63 294     i P       PKiKP    12 39 09.9 +0.2
YAHY                                IAML_P
      comp=Z,2µm,0.9s
COAL  Corum-Alaca      151.65 299  i P       PKPdf    12 39 00.6 -2.3
COAL                                IAML_P
      comp=Z,72nm,0.6s
SIRC  Yozgat           151.66 297  i P       PKPbc    12 39 09.0 -0.3
SIRC                                IAML_P
      comp=Z,143nm,0.5s
CTAK  Corum_Osmancik151.73 300     i P       PKPdf    12 38 57.2 -5.8
CTAK                                IAML_P
      comp=Z,580nm,0.7s
SACV  Santiago Islan   151.76 118   PFAKE             12 39 10.0  0.0
SACV                                LR       LR
      comp=Z,1µm,22.0s
BIGH  Upper Bighouse   151.87   7  eP        PKPbc    12 39 08.4 -0.4
KARA  Karaisali        151.94 292  eP        PKPdf    12 39 06.4 +3.1
KARA  Karaisali        151.94 292  eP        PKPdf    12 39 06.4 +3.1
AVNS  Nevsehir-Avano   151.96 296  i P       PKPbc    12 39 09.9  0.0
AVNS                                IAML_P
      comp=Z,2µm,0.9s
HOMB  Homborsund       152.04 353  ePKPbc    PKiKP    12 39 09.7 +0.1
SNART Snartemo         152.10 354  ePKPbc    PKPbc    12 39 09.2 -0.2
MLA1  Latheron         152.11   6  eP        PKPbc    12 39 09.2 -0.3
SUW   Suwalki          152.12 333  ePKPdf    PKPdf    12 39 03.0  0.0
SUW                                ePKPbc    PKPbc    12 39 09.4 -0.3
SUW   Suwalki          152.12 333  ePKPdf    PKPdf    12 39 02.8 -0.1
SUW                                ePKPbc    PKiKP    12 39 09.9 -0.1
SUW   Suwalki          152.12 333  ePKIKP    PKPdf    12 39 02.9  0.0
GULE  Gulek            152.16 293  i P       PKiKP    12 39 11.0 +0.1
GULE                                IAML_P
      comp=Z,7µm,0.5s
CDAG  Cicekdag         152.21 298  i P       PKPbc    12 39 09.9 -0.6
CDAG                                IAML_P
      comp=Z,2µm,0.9s
KZIT  Kziot            152.25 279   P        PKPdf    12 39 03.1 -0.8
      comp=Z,642nm,0.9s,comp=Z,1.8nm
ILGA  Ilgaz            152.45 301  ePKPdf    PKPdf    12 39 03.5 -0.7
ILGA                               ePKPbc    PKiKP    12 39 11.4  0.0
ILGA                                LR       LR
      comp=Z,1µm,22.0s
ILGA  Ilgaz            152.45 301  i P       PKPbc    12 39 11.1  0.0
ILGA                                IAML_P
      comp=Z,2µm,0.4s
DELI  KIRIKKALE        152.50 299  i P       PKPdf    12 39 03.9 -0.3
DELI                                IAML_P
      comp=Z,157nm,0.9s
KERG  Konya-Eregli     152.66 293  i P       PKPbc    12 39 10.9 -0.7
KERG                                IAML_P
      comp=Z,472nm,0.5s
KIZK  Mersin           152.71 291  i P       PKPbc    12 39 08.0 -3.6
KIZK                                IAML_P
      comp=Z,813nm,0.9s
KLNR  Kaliningrad      152.75 337d iPKIKP    PKPdf    12 39 04.7 +0.9
BR101 Keskin Array S   152.75 298  ePKPdf    PKPdf    12 39 03.5 -1.0
BR101                              ePKPbc    PKPbc    12 39 11.1 -0.7
BR131 Keskin Array S   152.75 298  ePKPdf    PKPdf    12 39 03.9 -0.7
BR131                              ePKPbc    PKPbc    12 39 10.7 -1.0
BRTR  Keskin Array B   152.75 298   PKP      PKPdf    12 39 03.5 -1.0
      comp=Z,3.7nm,0.9s,baz=103,slow=2.7,SNR=19
BRTR                                PKPbc    PKPbc    12 39 11.1 -0.7
      comp=Z,66nm,0.9s,baz=135,slow=3.1,SNR=50
ELDT  Eldivan          152.78 300  i P       PKiKP    12 39 12.0  0.0
ELDT                                IAML_P
      comp=Z,745nm,0.5s
AKSY  AKSARAY - Alti   152.82 296  i P       PKPbc    12 39 11.1 -0.7
AKSY                                IAML_P
      comp=Z,841nm,0.9s
MCD   Coleburn Disti   152.83   6  eP        PKPbc    12 39 10.9 -0.2
GULN  MERSIN_Gulnar    153.21 290  i P       PKPbc    12 39 10.1 -2.5
GULN                                IAML_P
      comp=Z,401nm,0.6s
KBUK  KARABUK-Merkez153.21 302     i P       PKiKP    12 39 13.0 +0.3
KBUK                                IAML_P
      comp=Z,2µm,0.4s
ANTO  Ankara           153.37 299  ePKPdf    PKPdf    12 39 04.8 -0.6
ANTO                               ePKPbc    PKiKP    12 39 13.1  0.0
ANTO                                LR       LR
      comp=Z,1µm,22.0s
ANTO  Ankara           153.37 299⇑iP        PKPdf    12 39 04.2 -1.2
ANTO  Ankara           153.37 299  ePKIKP    PKPdf    12 39 04.8 -0.6
ANTO                               e                  12 39 13.1
ANTO                                MLR      MLR
      comp=Z,1µm,22.0s
BR231 Keskin MP Arra   153.39 299  ePKPdf    PKPdf    12 39 05.4 -0.1
BR231                              ePKPbc    PKiKP    12 39 13.5 +0.3
KKUL  Konya-Kulu       153.40 297  i P       PKPdf    12 39 06.1 +0.6
KKUL                                IAML_P
      comp=Z,12nm,0.2s
CSS   Mathiatis        153.41 288  ePKPdf    PKPdf    12 39 05.6  0.0
CSS                                ePKPbc    PKiKP    12 39 13.8 +0.5
CSS                                 LR       LR
      comp=Z,2µm,21.0s
CSS   Mathiatis        153.41 288   P        PKPdf    12 39 05.8 +0.3
CSS   Mathiatis        153.41 288   P        PKPdf    12 39 03.9 -1.6
      comp=Z,44nm,0.9s,comp=Z,0.1nm
KIS   Kishinev         153.70 316  ePKP      PKPbc    12 39 10.0 -3.3
KIS   Kishinev         153.70 316  ePKIKP    PKPbc    12 39 10.0 -3.3
KIS                                e                  12 39 25.0
BCAM  Yenicaga         153.72 301  i P       PKPdf    12 39 05.1 -0.8
BCAM                                IAML_P
      comp=Z,5.8nm,0.1s
MUD   Monsted U'grnd   153.73 351  i P       PKiKP    12 39 13.7 +0.6
      comp=Z,161nm,1.3s
MUD                                i                  12 39 26.5
MUD   Monsted U'grnd   153.73 351  i PKIKP   PKiKP    12 39 13.7 +0.6
MUD                                i                  12 39 26.5
MUD                                 pmax     pmax
      comp=Z,160nm,1.3s
LAWE  Loch Awe, Argy   153.88   9  eP        PKPbc    12 39 13.2 -0.2
BSD   Bornholm Skovb   153.89 343  i P       PKPbc    12 39 13.2 -0.2
      comp=Z,111nm,1.0s
      comp=Z,1µm,25.0s
BSD   Bornholm Skovb   153.89 343  i PKIKP   PKPbc    12 39 13.2 -0.2
BSD                                 pmax     pmax
      comp=Z,110nm,1.0s
BSD                                 MLR      MLR
      comp=Z,1µm,25.0s
COP   Copenhagen       153.92 347  i P       PKiKP    12 39 13.9 +0.3
      comp=Z,1µm,24.0s
COP   Copenhagen       153.92 347  ePKIKP    PKiKP    12 39 13.9 +0.3
COP                                 MLR      MLR
      comp=Z,1µm,24.0s
KIBS  BOLU             153.97 300  i P       PKPbc    12 39 12.3 -2.0
KIBS                                IAML_P
      comp=Z,1.6nm,0.3s
KDHN  Kadinhani        154.11 296  i P       PKPdf    12 39 05.3 -1.3
KDHN                                IAML_P
      comp=Z,108nm,1.0s
LEOM  Leova            154.30 315⇑iP        PKPbc    12 39 12.7 -1.9
LEOM  Leova            154.30 315 ⇑PKIKP    PKPbc    12 39 12.7 -1.9
TLCR                   154.53 312⇑iP        PKPdf    12 39 07.6 +0.9
TLCR                   154.53 312 ⇑PKIKP    PKPdf    12 39 07.6 +0.9
ESY   Stoneypath       154.54   6  eP        PKiKP    12 39 15.1 +0.2
IDGL  Inch Island, C   154.66  13  eP        PKPdf    12 39 02.2 -4.4
IDGL                               ePs                12 39 31.7
LVV   L'vov            154.71 325  ePKIKP    PKPdf    12 39 06.6 -0.2
LVV                                e                  12 39 15.7
LVV                                e                  12 39 29.8
BEL   Belsk            154.72 332  ePKPdf    PKPdf    12 39 08.0 +1.2
BEL                                ePKPbc    PKiKP    12 39 16.0 +0.6
BEL   Belsk            154.72 332  ePKIKP    PKPdf    12 39 08.0 +1.2
RGN   Rugen            154.79 344   PFAKE             12 39 20.0 +4.6
RGN                                 LR       LR
      comp=Z,1µm,20.0s
LIC   Lamto            154.80 163  ePKIKP    PKPdf    12 39 08.2 +0.1
      comp=Z,124nm,0.9s
GKP   Gorka Klasztor   154.84 338  ePKPbc    PKiKP    12 39 16.3 +0.7
GKP   Gorka Klasztor   154.84 338  ePKIKP    PKiKP    12 39 16.3 +0.7
CFR   Carcaliu         154.97 313⇑iP        PKPdf    12 39 05.8 -1.5
CFR   Carcaliu         154.97 313 ⇑PKIKP    PKPdf    12 39 05.8 -1.5
KIC   Kosan Boka       155.00 164  ePKIKP    PKPdf    12 39 08.4  0.0
      comp=Z,127nm,1.0s
ESK   Eskdalemuir      155.07   7  eP        PKPab    12 39 31.5 -0.2
TIRR  Tirgusor         155.10 311   PFAKE             12 39 20.0  -12
TIRR                                LR       LR
      comp=Z,1µm,21.0s
TIRR  Tirgusor         155.10 311⇑iP        PKPdf    12 39 07.9 +0.4
TIRR  Tirgusor         155.10 311 ⇑PKIKP    PKPdf    12 39 07.9 +0.4
TIC   Toumodi          155.21 163  ePKIKP    PKPdf    12 39 08.7  0.0
TESR  Tescani          155.24 317⇑iP        PKPdf    12 39 08.4 +0.7
DBIC  Dimbokro         155.27 163  ePKPdf    PKPdf    12 39 08.2 -0.5
DBIC  Dimbokro         155.27 163  ePKIKP    PKPdf    12 39 08.2 -0.5
DBIC  Dimbokro         155.27 163   PKP      PKPdf    12 39 08.7  0.0
      comp=Z,21nm,0.9s,baz=245,slow=3.9,SNR=13
DBIC                                PKPab    PKPab    12 39 34.0 +0.4
      comp=Z,21nm,0.8s,baz=198,slow=8.2,SNR=5.3
DBIC  Dimbokro         155.27 163  eP        PKPdf    12 39 15.2 +6.5
PETR  Petresti         155.28 315⇓iP        PKPdf    12 39 19.6  +12
TLB   Topalu           155.28 311⇑iP        PKPdf    12 39 06.6 -1.2
TLB   Topalu           155.28 311 ⇑PKIKP    PKPdf    12 39 06.6 -1.2
HARR  Harsova          155.31 312⇑iP        PKPdf    12 39 11.6 +3.8
HARR  Harsova          155.31 312 ⇑PKIKP    PKPdf    12 39 11.6 +3.8
BIZ   Bicaz            155.33 318⇑iP        PKPdf    12 39 09.2 +1.4
BUR08 Bucovina Ar. S   155.44 320  ePKPdf    PKPdf    12 39 08.6 +0.5
BURAR Bucovina Array   155.45 320⇑iP        PKPdf    12 39 09.3 +1.2
BURAR Bucovina Array   155.45 320 ⇑PKIKP    PKPdf    12 39 09.3 +1.2
ISP   Isparta          155.46 295   PFAKE             12 39 20.0  +12
ISP                                 LR       LR
      comp=Z,1µm,22.0s
KWP   Kalwaria Pacla   155.47 326  ePKPdf    PKPdf    12 39 09.2 +1.3
KWP                                epPKPdf   pPKPdf   12 39 17.3 -1.1
KWP                                ePKPab    PKPab    12 39 33.6 -0.1
KWP   Kalwaria Pacla   155.47 326  ePKPdf    PKPdf    12 39 08.6 +0.7
KWP   Kalwaria Pacla   155.47 326  ePKIKP    PKPdf    12 39 09.2 +1.3
KWP                                e                  12 39 17.3
VRI   Vrincioaia       155.51 315⇓iP        PKPdf    12 39 07.6 -0.5
VRI   Vrincioaia       155.51 315 ⇓PKIKP    PKPdf    12 39 07.6 -0.5
PLOR  Plostina         155.57 315⇓iP        PKPab    12 39 34.8 +0.5
PLOR  Plostina         155.57 315 ⇓PKP2     PKPab    12 39 34.8 +0.5
KESW  Keswick, Cumbr   155.80   7  eP        PKPab    12 39 34.9  0.0
PGOR  Pogoanele        155.81 313⇑iP        PKPab    12 39 36.3 +1.0
MLR   Muntele Rosu     156.18 315  ePKPdf    PKPdf    12 39 09.2 +0.1
MLR   Muntele Rosu     156.18 315⇑iP        PKPdf    12 39 09.4 +0.2
MLR   Muntele Rosu     156.18 315 ⇑PKIKP    PKPdf    12 39 09.4 +0.2
DOPR  Dopca            156.27 317⇑iP        PKPdf    12 39 10.4 +1.3
PRD   Provadia         156.28 309  eP        PKPdf    12 39 09.4 +0.3
SECR                   156.33 314⇑iP        PKPab    12 39 38.2 +0.7
UZH   Uzhgorod         156.35 325  ePKIKP    PKPdf    12 39 11.3 +2.2
UZH                                e                  12 39 18.3
UZH                                e                  12 46 11.3
UZH                                e                  12 46 49.2
OJC   Ojcow            156.35 331  ePKPdf    PKPdf    12 39 08.1 -0.9
OJC                                ePKPab    PKPab    12 39 37.1 -0.4
OJC   Ojcow            156.35 331  ePKPdf    PKPdf    12 39 08.4 -0.7
OJC   Ojcow            156.35 331  ePKIKP    PKPdf    12 39 08.4 -0.7
SULR                   156.38 313⇑iP        PKPab    12 39 38.2 +0.5
RUE   Ruedersdorf      156.56 342  eP        PKPdf    12 39 08.1 -1.1
RUE                                 IAmb     IAmb     12 39 11.4
      comp=Z,27nm,0.7s
TRPA  Tarpa            156.56 324⇑iP        PKPdf    12 39 09.5 +0.2
TRPA  Tarpa            156.56 324  ePKPdf    PKPdf    12 39 08.0 -1.3
HPK   Haverah Park     156.56   5  eP        PKPab    12 39 37.5 -0.6
DSB   Dublin           156.61  13  eP        PKPdf    12 39 09.1 -0.2
DSB                                ePs                12 39 38.3
NIE   Niedzica         156.73 329  ePKPdf    PKPdf    12 39 08.7 -0.9
NIE                                epPKPdf   pPKPdf   12 39 20.6 +0.5
NIE   Niedzica         156.73 329  ePKIKP    PKPdf    12 39 08.7 -0.9
NIE                                e                  12 39 20.6
VOIR                   156.75 316⇑iP        PKPdf    12 39 10.5 +0.7
VOIR                   156.75 316 ⇑PKIKP    PKPdf    12 39 10.5 +0.7
KULA  Kula-Manisa      156.78 297   P        PKPdf    12 39 07.8 -2.3
KULA  Kula-Manisa      156.78 297   P        PKPdf    12 39 07.8 -2.3
MANT  Manisa           156.87 297  ePKPdf    PKPdf    12 39 09.7 -0.7
VAL   Valentia         156.88  20  eP        PKPdf    12 39 06.6 -3.0
ARR   Arges            157.03 316⇑iP        PKPdf    12 39 11.1 +0.9
LBWR  Ladybower, Pea   157.11   6  eP        PKPab    12 39 40.2 -0.3
KSP   Ksiaz            157.21 336  ePKPdf    PKPdf    12 39 10.8 +0.7
KSP                                epPKPdf   pPKPdf   12 39 22.6 +1.9
KSP                                ePKPab    PKPab    12 39 41.4 +0.3
KSP   Ksiaz            157.21 336  ePKIKP    PKPdf    12 39 10.8 +0.7
KSP                                e                  12 39 22.5
EDRB  Edirne           157.24 306   P        PKPdf    12 39 07.9 -2.6
EDRB  Edirne           157.24 306   P        PKPdf    12 39 07.9 -2.6
HUMR  Humele           157.25 314⇑iP        PKPdf    12 39 24.8  +14
LANS  Liptovska Anna   157.30 329  ePKIKP    PKPdf    12 39 11.1 +0.7
LANS  Liptovska Anna   157.30 329  ePKP      PKPdf    12 39 11.0 +0.7
LANS                               e                  12 39 42.9
DRGR                   157.31 321⇑iP        PKPdf    12 39 08.9 -1.6
DRGR                   157.31 321 ⇑PKIKP    PKPdf    12 39 08.9 -1.6
OKC   Ostrava-Krasne   157.33 332  ePKPDF    PKPdf    12 39 07.6 -2.7
OKC                                ePP       PP       12 43 20.5 +0.2
OKC                                 AMS      AMS      13 44 20.0
      comp=Z,1µm,22.9s
OKC   Ostrava-Krasne   157.33 332  ePKIKP    PKPdf    12 39 07.6 -2.7
OKC                                e                  12 43 20.5
OKC                                 MLR      MLR
      comp=Z,1µm,22.9s
LLW   Llanuwychllyn    157.44   9  eP        PKPab    12 39 41.6 -0.3
FOEL  Foel Wylfa       157.46   8  eP        PKPab    12 39 42.1  0.0
LOT   Lotru            157.50 317⇑iP        PKPab    12 39 32.3  -10
UPC   Upice            157.58 336  ePKPDF    PKPdf    12 39 11.4 +0.8
UPC                                ePKPAB    PKPab    12 39 43.5 +0.8
UPC                                ePP       PP       12 43 17.8 -3.8
UPC                                 AMS      AMS      13 50 00.0
      comp=Z,1µm,18.5s
UPC   Upice            157.58 336  ePKIKP    PKPdf    12 39 11.4 +0.8
UPC                                e                  12 43 17.8
UPC                                 MLR      MLR
      comp=Z,1µm,18.5s
DPC   Dobruska-Polom   157.61 335  ePKPDF    PKPdf    12 39 11.5 +0.8
DPC                                ePKPAB    PKPab    12 39 43.6 +0.7
DPC                                ePP       PP       12 43 19.7 -2.1
DPC                                 AMS      AMS      13 49 20.0
      comp=Z,2µm,23.8s
DPC   Dobruska-Polom   157.61 335  ePKIKP    PKPdf    12 39 11.5 +0.8
DPC                                e                  12 43 19.7
DPC                                 MLR      MLR
      comp=Z,2µm,23.8s
MORC  Moravsky Berou   157.62 333  ePKPdf    PKPdf    12 39 11.2 +0.5
MORC                                LR       LR
      comp=Z,1µm,20.0s
MORC  Moravsky Berou   157.62 333⇑iP        PKPdf    12 39 12.1 +1.4
MORC  Moravsky Berou   157.62 333 ⇑PKIKP    PKPdf    12 39 12.1 +1.4
MORC  Moravsky Berou   157.62 333  ePKP      PKPdf    12 39 11.7 +1.0
CWF   Charnwood Fore   157.80   5  eP        PKPab    12 39 43.3 -0.2
CLL   Collm            157.82 342  ePKPdf    PKPdf    12 39 11.1 +0.3
CLL                                 LR       LR
      comp=Z,900nm,20.0s
CLL   Collm            157.82 342  ePKPdf    PKPdf    12 39 11.0 +0.1
      comp=Z,60nm,1.7s
CLL                                ePKPdf(2)          12 39 15.0
CLL                                i PKPdiff pPKPdf   12 39 22.0 +0.7
      comp=Z,35nm,1.1s
CLL                                i PKPdiff2         12 39 25.7
CLL                                e                  12 39 35.0
CLL                                i PKPab   PKPab    12 39 43.2 -0.5
      comp=Z,59nm,0.9s
CLL                                i PKPab(2)         12 39 46.2
      comp=Z,74nm,0.8s
CLL                                ePP       PP       12 43 22.0 -0.8
CLL                                e                  12 45 30.0
CLL                                ePPP      PPP      12 46 54.0
CLL                                ePPPP              12 49 18.0
CLL                                ePPPrev            12 52 00.0
CLL                                eSKKSacre          12 53 29.0
CLL                                ePSKS              12 53 48.0
CLL                                ePPS      PPS      12 56 37.0
CLL                                e                  12 58 24.0
CLL                                e                  12 59 42.0
CLL                                e                  13 01 06.0
CLL                                eSS       SS       13 03 30.0  +12
CLL                                ePSPS              13 04 54.0
CLL                                eSSS      SSS      13 09 42.0
CLL                                eSPSrev            13 11 52.0
CLL                                eSSSS              13 13 48.0
CLL                                 LmV               14 04 00.0
      comp=Z,800nm,20.5s
CLL   Collm            157.82 342  ePKIKP    PKPdf    12 39 11.0 +0.1
CLL                                i                  12 39 22.0
CLL                                i                  12 39 43.2
CLL                                 pmax     pmax
      comp=Z,60nm,1.7s
CLL                                 pmax     pmax
      comp=Z,59nm,0.9s
CLL                                 MLR      MLR
      comp=Z,800nm,20.5s
BRG   Berggiesshubel   157.94 340  ePKP      PKPdf    12 39 10.7 -0.3
      comp=Z,71nm,1.6s
BRG   Berggiesshubel   157.94 340  i PKP     PKPab    12 39 46.9 +2.7
      comp=Z,67nm,0.9s
BRG                                 PP       PP       12 43 19.0 -4.5
BRG                                 SS       SS       13 03 46.0  +27
      comp=N,695nm,19.7s
      comp=E,342nm,22.9s
      comp=Z,754nm,22.6s
BRG   Berggiesshubel   157.94 340  ePKIKP    PKPdf    12 39 10.7 -0.3
BRG                                                   12 43 19.0
BRG                                 pmax     pmax
      comp=Z,71nm,1.6s
BRG                                 MLR      MLR
      comp=N,695nm,19.7s
BRG                                 MLR      MLR
      comp=E,342nm,22.9s
BRG                                 MLR      MLR
      comp=Z,754nm,22.6s
PSZ   Piszkesteto      158.00 327  ePKPdf    PKPdf    12 39 11.2 -0.1
PSZ                                ePKPab    PKPab    12 39 44.0 -0.7
PSZ   Piszkesteto      158.00 327⇑iP        PKPdf    12 39 12.0 +0.7
PSZ   Piszkesteto      158.00 327 ⇑PKIKP    PKPdf    12 39 12.0 +0.7
PSZ   Piszkesteto      158.00 327  ePKPdf    PKPdf    12 39 11.0 -0.3
PVCC  Panska Ves       158.05 338  ePKPAB    PKPab    12 39 44.9 +0.2
PVCC                                AMS      AMS      13 45 00.0
      comp=Z,1µm,21.0s
PVCC  Panska Ves       158.05 338  ePKP2     PKPab    12 39 44.9 +0.2
PVCC                                MLR      MLR
      comp=Z,1µm,21.0s
VYHS  Vyhne            158.07 329  ePKIKP    PKPdf    12 39 10.8 -0.5
VYHS                               e                  12 39 44.8
VYHS  Vyhne            158.07 329  ePKP      PKPdf    12 39 10.8 -0.5
VYHS                               e                  12 39 44.8
ALN   Alexandroupoli   158.07 304   P        PKPdf    12 39 09.5 -2.0
ALN                                 LR       LR
      comp=Z,400nm,20.0s
ALN   Alexandroupoli   158.07 304   P        PKPdf    12 39 09.5 -2.0
ALN   Alexandroupoli   158.07 304   PKIKP    PKPdf    12 39 09.5 -2.0
ALN                                 MLR      MLR
      comp=Z,400nm,20.0s
GZR   Gura Zlata       158.11 318⇑iP        PKPdf    12 39 10.5 -1.0
GZR   Gura Zlata       158.11 318 ⇑PKIKP    PKPdf    12 39 10.5 -1.0
RSBS  Rosebush, Pemb   158.14  11  eP        PKPab    12 39 45.7 +0.7
SIRR  Siria            158.21 321⇓iP        PKPdf    12 39 09.8 -1.7
SRE   Strehaia         158.27 316⇑iP        PKPab    12 39 44.5 -1.4
SRE   Strehaia         158.27 316 ⇑PKP2     PKPab    12 39 44.5 -1.4
MCH1  Michaelchurch    158.36   8  eP        PKPab    12 39 45.5 -0.4
VRAC  Vranov           158.36 334⇑iP        PKPdf    12 39 07.6 -4.0
VRAC  Vranov           158.36 334 ⇑PKIKP    PKPdf    12 39 07.6 -4.0
VRAC  Vranov           158.36 334  ePKP      PKPdf    12 39 12.2 +0.6
VRAC                               e                  12 39 46.5
KARP  Karpathos        158.42 290   PFAKE             12 39 20.0 +7.8
KARP                                LR       LR
      comp=Z,1µm,21.0s
PRU   Pruhonice        158.52 338  ePKPDF    PKPdf    12 39 11.8  0.0
PRU                                ePKPAB    PKPab    12 39 48.6 +1.8
PRU                                ePP       PP       12 43 24.3 -2.4
PRU                                 AMS      AMS      13 45 20.0
      comp=Z,1µm,22.3s
PRU   Pruhonice        158.52 338  ePKIKP    PKPdf    12 39 11.8  0.0
PRU                                e                  12 39 48.6
PRU                                e                  12 43 24.3
PRU                                 MLR      MLR
      comp=Z,1µm,22.3s
MONM  Monmouth         158.54   8  eP        PKPab    12 39 46.6 -0.1
HERR  Herculane        158.61 317⇑iP        PKPdf    12 39 12.3 +0.3
BZS   Buzias           158.63 320⇑iP        PKPdf    12 39 11.6 -0.4
BZS   Buzias           158.63 320 ⇑PKIKP    PKPdf    12 39 11.6 -0.4
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KRUC	**Moravsky**	**158.64**	**333**	*e*PKP	**PKPdf**	**12 39 12.4**	**+0.5**
KRUC				*e*		12 39 47.1	
STRD	**Stroud**	**158.67**	**7**	*e*P	**PKPab**	**12 39 47.5**	**+0.2**
RZN	**Rozhen**	**158.71**	**307**	*e*P	**PKPdf**	**12 39 11.2**	**-1.3**
TREC	**Trest**	**158.78**	**335**	AMS	AMS	13 50 30.0	
	comp=Z,2µm,23.9s						
MODS	**Modra-Piesok**	**158.83**	**331**	*e*PKIKP	**PKPdf**	**12 39 12.6**	**+0.4**
MODS				*e*		12 39 48.5	
MODS	**Modra-Piesok**	**158.83**	**331**	*e*PKP	**PKPdf**	**12 39 12.6**	**+0.4**
MODS				*e*		12 39 48.5	
NKC	**Novy Kostel**	**158.94**	**341**	*e*PKPAB	**PKPab**	**12 39 48.6**	**0.0**
NKC	**Novy Kostel**	**158.94**	**341**	*e*PKP2	**PKPab**	**12 39 48.6**	**0.0**
ZST	**Bratislava**	**159.04**	**331**	*e*PKIKP	**PKPdf**	**12 39 11.9**	**-0.5**
ZST				*e*		12 39 48.2	
ZST	**Bratislava**	**159.04**	**331**	*e*PKP	**PKPdf**	**12 39 11.9**	**-0.5**
ZST				*e*		12 39 48.2	
MDVR	**Moldovita**	**159.08**	**318**	⇑*i*P	**PKPdf**	**12 39 13.1**	**+0.4**
KAVA	**Kavala**	**159.12**	**306**	P	**PKPdf**	**12 39 10.2**	**-2.6**
KAVA	**Kavala**	**159.12**	**306**	P	**PKPdf**	**12 39 10.2**	**-2.6**
HKB	**Herkenbosch**	**159.26**	**353**	PKPdf	**PKPab**	**12 39 49.8**	**-0.1**
VTS	**Vitosha**	**159.29**	**311**	*e*PKPdf	**PKPdf**	**12 39 12.2**	**-0.9**
VTS				LR	LR		
	comp=Z,1µm,21.0s						
VTS	**Vitosha**	**159.29**	**311**	⇑*i*P	**PKPdf**	**12 39 12.4**	**-0.7**
VTS	**Vitosha**	**159.29**	**311**	P	**PKPdf**	**12 39 10.1**	**-3.0**
VTS	**Vitosha**	**159.29**	**311**	⇑PKIKP	**PKPdf**	**12 39 12.5**	**-0.7**
VTS	**Vitosha**	**159.29**	**311**	*e*P	**PKPdf**	**12 39 11.9**	**-1.2**
MMB	**Musomiste**	**159.42**	**308**	*e*P	**PKPdf**	**12 39 10.7**	**-2.5**
KHC	**Kasperske Hory**	**159.58**	**338**	*e*PKPdf	**PKPdf**	**12 39 12.4**	**-0.7**
KHC				*e*PKPab	**PKPab**	**12 39 51.8**	**+0.4**
KHC	**Kasperske Hory**	**159.58**	**338**	*e*PKPDF	**PKPdf**	**12 39 13.4**	**+0.3**
KHC				*e*PKPAB	**PKPab**	**12 39 51.6**	**+0.2**
KHC				*e*PP	**PP**	**12 43 28.6**	**-3.9**
KHC				AMS	AMS	13 47 10.0	
	comp=Z,1µm,21.3s						
KHC	**Kasperske Hory**	**159.58**	**338**	*e*PKIKP	**PKPdf**	**12 39 13.4**	**+0.3**
KHC				*e*		12 39 51.6	
KHC				*e*		12 43 28.6	
KHC				MLR	MLR		
	comp=Z,1µm,21.3s						
SOP	**Sopron**	**159.67**	**331**	*e*PKPdf	**PKPdf**	**12 39 13.0**	**-0.2**
BEBN	**Eben Emael**	**159.70**	**353**	PKPdf	**PKPab**	**12 39 51.4**	**-0.3**
BEBN				x	x	12 39 56.3	
CONA	**Conrad Observa**	**159.76**	**332**	*i* PKPdf	**PKPdf**	**12 39 12.8**	**-0.6**
	comp=Z,18nm,1.2s						
CONA				*i* PKPab	**PKPab**	**12 39 52.3**	**0.0**
	comp=Z,24nm,0.8s						
GRA1	**Grafenberg Arr**	**159.76**	**343**	PFAKE		12 39 20.0	+6.7
GRA1				LR	LR		
	comp=Z,900nm,22.0s						
GRFO	**Grafenberg**	**159.77**	**343**	*e*PKPdf	**PKPdf**	**12 39 13.0**	**-0.2**
GRFO				*e*PKPab	**PKPab**	**12 39 51.9**	**-0.2**
GRFO				LR	LR		
	comp=Z,800nm,20.0s						
GEC2	**GERESS Array S**	**159.79**	**337**	*e*PKPdf	**PKPdf**	**12 39 12.8**	**-0.7**
GEC2				*e*PKPab	**PKPab**	**12 39 51.5**	**-0.9**
GEC2				LR	LR		
	comp=Z,1µm,21.0s						
GERES	**GERESS Array B**	**159.79**	**337**	PKP	**PKPdf**	**12 39 12.5**	**-0.9**
	comp=Z,3.7nm,0.9s,baz=101,slow=1.4,SNR=22						
GERES				PKPab	**PKPab**	**12 39 51.0**	**-1.4**
	comp=Z,11nm,0.7s,baz=27,slow=4.5,SNR=6.1						
GEA0	**GERESS Array S**	**159.79**	**337**	*e*PKPdf	**PKPdf**	**12 39 11.9**	**-1.5**
MORH	**Mrgy, Hungar**	**159.81**	**325**	⇑*e*PKPdf	**PKPdf**	**12 39 10.1**	**-3.3**
MEM	**Membach**	**159.85**	**353**	PKPdf	**PKPab**	**12 39 52.1**	**-0.4**
MEM				x	x	12 39 57.4	
MEM				x	x	12 39 59.1	
BLCH	**La Chartreuse**	**159.86**	**353**	PKPdf	**PKPab**	**12 39 52.2**	**-0.3**
BSTI	**Sart Tilman**	**159.92**	**353**	PKPdf	**PKPab**	**12 39 53.2**	**+0.5**
BSKQ	**Steenkerk**	**159.97**	**356**	PKPdf	**PKPab**	**12 39 52.6**	**-0.3**
BSKQ				x	x	12 39 56.8	
BRQR	**Ronquire**	**160.01**	**356**	PKPdf	**PKPab**	**12 39 53.0**	**-0.1**
BRQR				x	x	12 39 56.7	
BHOU	**Houvegnez**	**160.10**	**353**	PKPdf	**PKPab**	**12 39 52.9**	**-0.7**
BHOU				pPKP	**pPKPab**	**12 40 04.2**	**+0.4**
BCLA	**Clavier**	**160.11**	**354**	PKPdf	**PKPab**	**12 39 52.7**	**-0.9**
BGES	**Gesves**	**160.16**	**354**	PKPdf	**PKPab**	**12 39 52.7**	**-1.1**
BGES				pPKP	**pPKPab**	**12 40 03.4**	**-0.6**
KNT	**Kendrikon**	**160.17**	**308**	P	**PKPdf**	**12 39 11.3**	**-2.7**
BBOU	**Bougnies**	**160.24**	**356**	PKPdf	**PKPab**	**12 39 54.2**	**0.0**
BBOU				x	x	12 39 58.0	
HORT	**Hortiatis**	**160.26**	**306**	P	**PKPdf**	**12 39 11.6**	**-2.6**
HORT	**Hortiatis**	**160.26**	**306**	P	**PKPdf**	**12 39 11.6**	**-2.6**
BMRD	**Maredsous**	**160.27**	**355**	PKPdf	**PKPab**	**12 39 54.0**	**-0.3**
VAY	**Valandovo**	**160.32**	**308**	*i* P	**PKPab**	**12 39 53.7**	**-1.2**
LKLB	**Kalborn**	**160.34**	**352**	PKPdf	**PKPab**	**12 39 54.9**	**+0.3**
STIP	**Stip**	**160.41**	**310**	*i* P	**PKPab**	**12 39 54.1**	**-1.2**
MOA	**Molln**	**160.44**	**335**	*i* PKPdf	**PKPdf**	**12 39 14.7**	**+0.6**
	comp=Z,12nm,1.1s,SNR=5.2						
MOA				*i* PKPab	**PKPab**	**12 39 54.8**	**-0.4**
	comp=Z,32nm,1.4s						
ARSA	**Arzberg**	**160.44**	**332**	*i* PKPdf	**PKPdf**	**12 39 13.8**	**-0.3**
	comp=Z,18nm,1.2s						
ARSA				*i* PKPab	**PKPab**	**12 39 55.4**	**+0.2**
	comp=Z,16nm,1.1s						
GIVF	**Givet**	**160.47**	**355**	*e*PKIKP	**PKPdf**	**12 39 13.5**	**-0.5**
GIVF				pmax	pmax		
	comp=Z,128nm,1.9s						
DIVS	**Divibare**	**160.47**	**318**	*e*PKPdf	**PKPdf**	**12 39 13.6**	**-0.7**
DIVS				*e*PKPab	**PKPab**	**12 39 53.9**	**-1.7**
DOU	**Dourbes**	**160.49**	**355**	PKPdf	**PKPab**	**12 39 54.0**	**-1.3**
DOU				x	x	12 40 01.1	
LVIA	**Vianden**	**160.49**	**352**	PKPdf	**PKPab**	**12 39 55.7**	**+0.5**
LVIA				x	x	12 39 58.9	
LVIA				pPKP	**pPKPab**	**12 40 06.0**	**+0.6**
BAIF	**Baives**	**160.55**	**356**	*e*PKIKP	**PKPdf**	**12 39 13.7**	**-0.4**
BAIF				pmax	pmax		
	comp=Z,38nm,1.3s						
GRG	**Griva**	**160.59**	**308**	P	PKPpre	12 39 09.8	
GRG	**Griva**	**160.59**	**308**	P	PKPpre	12 39 09.8	
GRG	**Griva**	**160.59**	**308**	PKIKP	PKPpre	12 39 09.8	
KOGS	**Kog**	**160.76**	**329**	*i* PKPdf	**PKPdf**	**12 39 13.9**	**-0.5**
WLF	**Walferdange**	**160.76**	**352**	*e*PKPdf	**PKPdf**	**12 39 14.2**	**-0.2**
WLF				*e*PKPab	**PKPab**	**12 39 56.2**	**-0.2**
WLF	**Walferdange**	**160.76**	**352**	PKPdf	**PKPab**	**12 39 56.5**	**0.0**
LIT	**Litokhoron**	**160.89**	**305**	*e*PKPdf	**PKPdf**	**12 39 13.9**	**-0.9**
LIT				*e*PKPab	**PKPab**	**12 39 56.3**	**-1.2**
LIT	**Litokhoron**	**160.89**	**305**	P	PKPpre	12 39 11.1	
ATAL	**Atalanti**	**161.00**	**301**	P	**PKPdf**	**12 39 11.8**	**-3.2**
ATAL	**Atalanti**	**161.00**	**301**	P	**PKPdf**	**12 39 11.8**	**-3.2**
SOKA	**Soboth**	**161.10**	**331**	*i* PKPdf	**PKPdf**	**12 39 14.5**	**-0.4**
	comp=Z,31nm,1.6s,SNR=11						
SOKA				*i* PKPab	**PKPab**	**12 39 58.1**	**-0.1**
	comp=Z,26nm,1.3s						
STU	**Stuttgart**	**161.11**	**345**	*e*PKPdf	**PKPdf**	**12 39 14.6**	**-0.1**
STU				*e*PKPab	**PKPab**	**12 39 58.1**	**+0.1**
DID	**Didima**	**161.18**	**297**	P	PKPpre	12 39 11.1	
DID	**Didima**	**161.18**	**297**	P	PKPpre	12 39 11.1	
AXAR	**Agios Charalam**	**161.25**	**301**	*e*PKPdf	**PKPdf**	**12 39 15.6**	**+0.4**
AXAR	**Agios Charalam**	**161.25**	**301**	P	**PKPdf**	**12 39 15.6**	**+0.4**
AGG	**Agios Georgios**	**161.40**	**302**	*e*PKPdf	**PKPdf**	**12 39 15.0**	**-0.4**
AGG	**Agios Georgios**	**161.40**	**302**	P	PKPpre	12 39 12.1	
KBA	**Koelnbreinsper**	**161.43**	**335**	*i* PKPdf	**PKPdf**	**12 39 14.9**	**-0.5**
	comp=Z,33nm,1.2s,SNR=7.4						
KBA				*i* PKPab	**PKPab**	**12 40 00.3**	**+0.6**
	comp=Z,12nm,0.7s						
KBA	**Koelnbreinsper**	**161.43**	**335**	PKIKP	**PKPdf**	**12 39 15.6**	**+0.2**
OBKA	**Obir**	**161.44**	**332**	*i* PKPdf	**PKPdf**	**12 39 14.7**	**-0.6**
	comp=Z,15nm,1.5s						
OBKA				*i* PKPab	**PKPab**	**12 40 00.6**	**+1.0**
	comp=Z,8.5nm,0.9s						
DSF	**Desfina**	**161.46**	**300**	P	PKPpre	12 39 11.1	
DSF	**Desfina**	**161.46**	**300**	P	PKPpre	12 39 11.1	
PHP	**Peshkopia**	**161.56**	**312**	P	**PKPdf**	**12 39 13.2**	**-2.3**
PHP	**Peshkopia**	**161.56**	**312**	P	**PKPdf**	**12 39 13.2**	**-2.3**
PHP	**Peshkopia**	**161.56**	**312**	PKIKP	**PKPdf**	**12 39 13.2**	**-2.3**
BLY	**Banja Luka**	**161.57**	**324**	*e*PKPdf	**PKPdf**	**12 39 14.7**	**-0.7**
BLY	**Banja Luka**	**161.57**	**324**	⇑*i*P	**PKPdf**	**12 39 13.9**	**-1.5**
MYKA	**Terra Mystica**	**161.69**	**334**	*i* PKPdf	**PKPdf**	**12 39 15.7**	**+0.1**
	comp=Z,24nm,1.5s						
MYKA				*i* PKPab	**PKPab**	**12 40 00.5**	**-0.2**
	comp=Z,25nm,1.3s						
GUR	**Goura**	**161.74**	**299**	P	**PKPdf**	**12 39 12.8**	**-3.1**
WATA	**Walderalm**	**161.80**	**339**	*i* PKPdf	**PKPdf**	**12 39 15.6**	**-0.1**
	comp=Z,8.3nm,0.9s						
TRIZ	**Trizonia**	**161.81**	**300**	P	**PKPdf**	**12 39 14.5**	**-1.3**
FLN	**La Foliniere**	**161.82**	**5**	*e*PKIKP	**PKPdf**	**12 39 15.0**	**-0.5**
FLN				pmax	pmax		
	comp=Z,38nm,1.2s						
LJU	**Ljubljana**	**161.82**	**331**	*i* PKPdf	**PKPdf**	**12 39 15.6**	**0.0**
LJU				*e*PKPab	**PKPab**	**12 40 02.8**	**+1.5**
CDF	**Champ du Feu**	**161.82**	**349**	*e*PKIKP	**PKPdf**	**12 39 14.5**	**-1.1**
CDF				pmax	pmax		
	comp=Z,27nm,1.4s						
WTTA	**Wattenberg**	**161.84**	**339**	*i* PKPdf	**PKPdf**	**12 39 16.7**	**+0.9**
	comp=Z,29nm,1.5s,SNR=5.9						
WTTA				*i* PKPab	**PKPab**	**12 40 02.3**	**+0.8**
	comp=Z,37nm,0.9s						
ANX	**Ano Chora**	**161.85**	**301**	P	**PKPdf**	**12 39 15.8**	**-0.2**
VLX	**Vlachokerasia**	**161.88**	**297**	P	**PKPdf**	**12 39 13.6**	**-2.5**
VLX	**Vlachokerasia**	**161.88**	**297**	P	**PKPdf**	**12 39 13.6**	**-2.5**
ROSF	**Rostrenen**	**161.88**	**11**	*e*PKIKP	**PKPdf**	**12 39 18.3**	**+2.7**
ROSF				pmax	pmax		
	comp=Z,205nm,2.0s						
PDG	**Podgorica**	**161.89**	**315**	⇑*i*P	**PKPab**	**12 40 01.1**	**-0.6**
RETA	**Reutte**	**161.90**	**341**	*i* PKPab	**PKPab**	**12 40 01.9**	**+0.3**
	comp=Z,69nm,0.9s,SNR=10.0						
EFP	**Efpalio**	**161.92**	**301**	P	**PKPdf**	**12 39 13.5**	**-2.4**
TRIP	**Tripoli**	**161.92**	**298**	P	**PKPdf**	**12 39 14.6**	**-1.5**
LAKA	**Lakka**	**161.92**	**300**	P	**PKPdf**	**12 39 13.4**	**-2.6**
LAKA	**Lakka**	**161.92**	**300**	P	**PKPdf**	**12 39 13.4**	**-2.6**
MOTA	**Moosalm**	**161.93**	**340**	*i* PKPdf	**PKPdf**	**12 39 15.7**	**-0.2**
	comp=Z,11nm,1.0s						
MOTA				*i* PKPab	**PKPab**	**12 40 02.2**	**+0.3**
	comp=Z,106nm,1.1s,SNR=6.5						
CADS	**Cadrg**	**161.99**	**333**	*i* PKPdf	**PKPdf**	**12 39 14.5**	**-1.3**
ABTA	**Abfaltersbach**	**162.00**	**336**	*i* PKPdf	**PKPdf**	**12 39 15.0**	**-0.9**
	comp=Z,37nm,1.5s,SNR=8.0						
ABTA				*i* PKPab	**PKPab**	**12 40 02.2**	**0.0**
	comp=Z,61nm,1.2s						
LDF	**La Druitiere**	**162.01**	**5**	*e*PKIKP	**PKPdf**	**12 39 17.5**	**+1.8**
LDF				pmax	pmax		
	comp=Z,20nm,1.1s						
SQTA	**Sankt Quirin**	**162.01**	**339**	*i* PKPdf	**PKPdf**	**12 39 15.6**	**-0.4**
	comp=Z,25nm,1.6s						
SQTA				*i* PKPab	**PKPab**	**12 40 02.3**	**+0.1**
	comp=Z,58nm,0.9s						
ECH	**Echery**	**162.03**	**349**	*e*PKPdf	**PKPdf**	**12 39 15.6**	**-0.2**
ECH				*e*PKPab	**PKPab**	**12 40 01.8**	**-0.3**
DRO	**Drossia**	**162.22**	**299**	P	**PKPdf**	**12 39 16.5**	**+0.2**
QUIF	**Quistinic**	**162.31**	**12**	*e*PKIKP	**PKPdf**	**12 39 16.5**	**+0.5**
QUIF				pmax	pmax		
	comp=Z,43nm,1.2s						
DAVA	**Damuels**	**162.33**	**342**	*i* PKPdf	**PKPdf**	**12 39 15.8**	**-0.5**
	comp=Z,23nm,1.2s						
DAVA				*i* PKPab	**PKPab**	**12 40 03.4**	**-0.3**
	comp=Z,112nm,1.2s,SNR=6.4						
FETA	**Feichten**	**162.34**	**340**	*i* PKPdf	**PKPdf**	**12 39 15.3**	**-0.9**
	comp=Z,26nm,1.3s,SNR=8.4						
FETA				*i* PKPab	**PKPab**	**12 40 03.8**	**+0.2**
	comp=Z,73nm,1.1s,SNR=6.2						
HAU	**Haudompre**	**162.36**	**350**	*e*PKIKP	**PKPdf**	**12 39 15.5**	**-0.6**
HAU				pmax	pmax		
	comp=Z,85nm,1.6s						
HINF	**Hinteralfeld**	**162.47**	**349**	*e*PKIKP	**PKPdf**	**12 39 15.4**	**-0.8**
HINF				pmax	pmax		
	comp=Z,81nm,1.6s						
TOA0	**Torodi Ar. Sit**	**162.57**	**179**	*e*PKPdf	**PKPdf**	**12 39 15.8**	**-1.5**
TOA0				*e*PKPab	**PKPab**	**12 40 04.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**162.57**	**179**	PKP	**PKPdf**	**12 39 15.7**	**-1.6**
	comp=Z,16nm,1.1s,baz=166,slow=0.2,SNR=39						
TORD				PKPab	**PKPab**	**12 40 04.9**	**-0.3**
	comp=Z,75nm,1.1s,baz=181,slow=2.3,SNR=12						
TORD				PP	**PP**	**12 43 52.0**	**+3.8**
	comp=Z,12nm,1.2s,baz=157,slow=7.4,SNR=4.6						
TOA1	**Torodi Ar. Sit**	**162.57**	**179**	*e*PKPab	**PKPab**	**12 40 04.9**	**-0.3**
IGT	**Igoumenitsa**	**162.63**	**306**	P	**PKPdf**	**12 39 14.1**	**-2.5**
IGT	**Igoumenitsa**	**162.63**	**306**	P	**PKPdf**	**12 39 14.1**	**-2.5**
IGT	**Igoumenitsa**	**162.63**	**306**	PKIKP	**PKPdf**	**12 39 14.1**	**-2.5**
FUORN	**Ofenpass-Fuorn**	**162.83**	**340**	*e*PKPdf	**PKPdf**	**12 39 16.5**	**-0.4**
FUORN				*e*PKPab	**PKPab**	**12 40 05.5**	**-0.5**
TUE	**Stuetta**	**163.22**	**342**	*e*PKPdf	**PKPdf**	**12 39 17.0**	**-0.2**
TUE				*e*PKPab	**PKPab**	**12 40 07.8**	**+0.2**
LOR	**Lormes**	**163.35**	**356**	*e*PKIKP	**PKPdf**	**12 39 16.8**	**-0.3**
LOR				pmax	pmax		
	comp=Z,61nm,1.3s						
SSF	**Saint Saulge**	**163.58**	**356**	*e*PKIKP	**PKPdf**	**12 39 16.9**	**-0.4**
SSF				pmax	pmax		
	comp=Z,92nm,1.6s						
CABF	**La Chapelle**	**163.76**	**350**	*e*PKIKP	**PKPdf**	**12 39 17.5**	**-0.1**
CABF				pmax	pmax		
	comp=Z,106nm,1.5s						
SENIN	**Lac Senin/Sane**	**163.79**	**347**	*e*PKPdf	**PKPdf**	**12 39 18.0**	**+0.2**
SENIN				*e*PKPab	**PKPab**	**12 40 10.4**	**+0.3**
AVF	**Avril sur Loir**	**163.86**	**357**	*e*PKIKP	**PKPdf**	**12 39 17.3**	**-0.2**
AVF				pmax	pmax		
	comp=Z,41nm,1.5s						
SMF	**Signal de Mont**	**163.98**	**356**	*e*PKIKP	**PKPdf**	**12 39 17.1**	**-0.6**
SMF				pmax	pmax		
	comp=Z,42nm,1.4s						
MFF	**Saint Martin d**	**163.99**	**5**	*e*PKIKP	**PKPdf**	**12 39 18.7**	**+1.0**
MFF				pmax	pmax		
	comp=Z,63nm,1.4s						
BGF	**Bois d'Agland**	**164.11**	**358**	*e*PKIKP	**PKPdf**	**12 39 17.5**	**-0.3**
BGF				pmax	pmax		
	comp=Z,77nm,1.6s						
TCF	**Toulx Ste Croi**	**164.39**	**360**	*e*PKIKP	**PKPdf**	**12 39 17.6**	**-0.5**
TCF				pmax	pmax		
	comp=Z,44nm,1.4s						
MATE	**Matera**	**164.48**	**314**	⇑*i*P	**PKPdf**	**12 39 19.1**	**+0.8**
LPL	**La Plagne**	**164.72**	**347**	*e*PKIKP	**PKPdf**	**12 39 19.7**	**+1.0**
LPL				pmax	pmax		
	comp=Z,21nm,1.2s						
LPG	**La Plagne**	**164.73**	**347**	*e*PKIKP	**PKPdf**	**12 39 20.3**	**+1.5**
LPG				pmax	pmax		
	comp=Z,16nm,1.1s						
BNI	**Bardonecchia**	**165.18**	**347**	*e*PKPdf	**PKPdf**	**12 39 18.9**	**0.0**
BNI				*e*PKPab	**PKPab**	**12 40 15.9**	**-0.3**
BNI	**Bardonecchia**	**165.18**	**347**	*e*PKIKP	**PKPdf**	**12 39 19.0**	**0.0**
BNI				*e*		12 40 15.9	
TIP	**Timpagrande**	**165.25**	**309**	*e*PKPdf	**PKPdf**	**12 39 19.4**	**+0.2**
TIP				*e*PKPab	**PKPab**	**12 40 16.4**	**-0.3**
TIP	**Timpagrande**	**165.25**	**309**	⇑*i*P	**PKPdf**	**12 39 19.8**	**+0.7**
TIP	**Timpagrande**	**165.25**	**309**	P	**PKPdf**	**12 39 16.6**	**-2.5**
SSB	**Saint Sauveur**	**165.27**	**353**	*e*PKPdf	**PKPdf**	**12 39 19.3**	**+0.4**
SSB				*e*PKPab	**PKPab**	**12 40 16.1**	**-0.3**
SSB	**Saint Sauveur**	**165.27**	**353**	*e*PKIKP	**PKPdf**	**12 39 19.3**	**+0.4**
SSB				*e*		12 40 16.1	
RJF	**Les Rejaudoux**	**165.37**	**1**	*e*PKIKP	**PKPdf**	**12 39 18.8**	**-0.1**
RJF				pmax	pmax		
	comp=Z,47nm,1.4s						
CUC	**Castrocucco**	**165.42**	**313**	*e*PKPab	**PKPab**	**12 40 16.6**	**-0.8**
ORIF	**Oris-en-Rattie**	**165.45**	**349**	*e*PKIKP	**PKPdf**	**12 39 20.0**	**+0.9**
ORIF				pmax	pmax		
	comp=Z,29nm,1.3s						
MBDF	**Montbardon**	**165.47**	**346**	*e*PKIKP	**PKPdf**	**12 39 20.0**	**+0.8**
MBDF				pmax	pmax		
	comp=Z,39nm,1.4s						
VIVF	**Saint-Julien-l**	**165.68**	**352**	*e*PKIKP	**PKPdf**	**12 39 19.2**	**0.0**
VIVF				pmax	pmax		
	comp=Z,45nm,1.6s						
LFF	**La Frestale**	**165.71**	**4**	*e*PKIKP	**PKPdf**	**12 39 19.6**	**+0.4**
LFF				pmax	pmax		
	comp=Z,4.0nm,0.3s						
CAF	**Calviac**	**165.76**	**360**	*e*PKIKP	**PKPdf**	**12 39 19.3**	**0.0**
CAF				pmax	pmax		
	comp=Z,49nm,1.4s						
PGAV	**Gavieira, Arco**	**166.00**	**33**	*e*PKPdf	**PKPdf**	**12 39 21.2**	**+1.5**
PGAV	**Gavieira, Arco**	**166.00**	**33**	*e*PP	PP	12 44 12.1	+5.2
PGAV	**Gavieira, Arco**	**166.00**	**33**	A	A	13 57 38.8	
	comp=Z,682nm,20.0s						
SBF	**Sospel**	**166.14**	**344**	*e*PKIKP	**PKPdf**	**12 39 18.7**	**-1.0**
SBF				pmax	pmax		
	comp=Z,39nm,1.0s						
PCAB	**Cabril**	**166.31**	**34**	*e*PKPdf	**PKPdf**	**12 39 21.4**	**+1.6**
PCAB	**Cabril**	**166.31**	**34**	*e*PKPab	**PKPab**	**12 40 22.2**	**+1.0**
POLO	**Lamas de Olo**	**166.68**	**34**	*e*PKPdf	**PKPdf**	**12 39 21.9**	**+1.7**
POLO	**Lamas de Olo**	**166.68**	**34**	*e*PKPab	**PKPab**	**12 40 23.7**	**+0.8**
PBRG	**Braganca**	**166.82**	**30**	*e*PKPdf	**PKPdf**	**12 39 19.7**	**-0.6**
PBRG	**Braganca**	**166.82**	**30**	*e*PKPab	**PKPab**	**12 40 23.6**	**+0.2**
PVIS	**Viseu**	**167.13**	**36**	*e*PKPdf	**PKPdf**	**12 39 21.6**	**+1.1**
PVIS	**Viseu**	**167.13**	**36**	*e*PKPab	**PKPab**	**12 40 28.3**	**+3.4**
MVO	**Moncorvo**	**167.20**	**33**	*e*PKPdf	**PKPdf**	**12 39 21.9**	**+1.3**
MVO	**Moncorvo**	**167.20**	**33**	*e*PKPab	**PKPab**	**12 40 25.9**	**+0.7**
MVO	**Moncorvo**	**167.20**	**33**	*e*PP	PP	12 44 22.9	+10
MVO	**Moncorvo**	**167.20**	**33**	*e*LR	LR	13 39 23.8	
	comp=Z,1µm,20.0s						
PCAS	**Casmilo, Conde**	**167.29**	**40**	*e*PKPdf	**PKPdf**	**12 39 17.9**	**-2.7**
PCAS	**Casmilo, Conde**	**167.29**	**40**	*e*PKPab	**PKPab**	**12 40 26.4**	**+0.9**
SJPF	**Ste Jean**	**167.30**	**11**	*e*PKIKP	**PKPdf**	**12 39 22.4**	**+1.9**
SJPF				pmax	pmax		
	comp=Z,52nm,1.3s						
MTLF	**Montolieu**	**167.34**	**359**	*e*PKIKP	**PKPdf**	**12 39 21.8**	**+1.3**
MTLF				pmax	pmax		
	comp=Z,38nm,1.4s						
MTE	**Manteigas**	**167.54**	**36**	*e*PKPdf	**PKPdf**	**12 39 22.1**	**+1.2**
MTE	**Manteigas**	**167.54**	**36**	*e*PP	PP	12 44 19.8	+4.9
MTE	**Manteigas**	**167.54**	**36**	*e*LR	LR	13 47 50.2	
	comp=Z,1µm,20.0s						
MTE	**Manteigas**	**167.54**	**36**	*e*PKPdf	**PKPdf**	**12 39 21.5**	**+0.7**
EPF	**Esparros**	**167.58**	**6**	*e*PKIKP	**PKPdf**	**12 39 21.0**	**+0.2**
EPF				pmax	pmax		
	comp=Z,41nm,1.3s						
ETSF	**Etsaut**	**167.61**	**9**	*e*PKIKP	**PKPdf**	**12 39 22.8**	**+2.0**
ETSF				pmax	pmax		
	comp=Z,13nm,0.9s						
PTOM	**Tomar**	**167.63**	**41**	*e*PKPdf	**PKPdf**	**12 39 22.5**	**+1.7**
PTOM	**Tomar**	**167.63**	**41**	*e*PKPab	**PKPab**	**12 40 27.8**	**+0.7**
LIS	**Lisbon**	**167.78**	**46**	*e*PKPdf	**PKPdf**	**12 39 21.3**	**+0.4**
LIS				AMS	AMS	13 54 15.7	
	comp=E,2µm,13.3s						
LIS	**Lisbon**	**167.78**	**46**	*e*PKIKP	**PKPdf**	**12 39 21.3**	**+0.4**
PCBR	**Castelo Branco**	**167.99**	**38**	*e*PKPdf	**PKPdf**	**12 39 22.8**	**+1.7**
PCBR	**Castelo Branco**	**167.99**	**38**	*e*PKPab	**PKPab**	**12 40 31.2**	**+2.6**
PMTG	**Montargil**	**168.11**	**42**	*e*PKPdf	**PKPdf**	**12 39 22.5**	**+1.3**
PMTG	**Montargil**	**168.11**	**42**	*e*PKPab	**PKPab**	**12 40 29.4**	**+0.2**
PMRV	**Marv??o**	**168.33**	**39**	*e*PKPdf	**PKPdf**	**12 39 23.2**	**+1.8**
PMRV	**Marv??o**	**168.33**	**39**	*e*PKPab	**PKPab**	**12 40 30.4**	**+0.2**
PMRV	**Marv??o**	**168.33**	**39**	*e*PP	PP	12 44 22.2	+3.2
PMRV	**Marv??o**	**168.33**	**39**	*e*LR	LR	13 38 19.1	
	comp=E,1µm,20.0s						
PNCL	**Nicolau / Gran**	**168.54**	**47**	*e*PKPdf	**PKPdf**	**12 39 22.6**	**+1.1**
PNCL	**Nicolau / Gran**	**168.54**	**47**	*e*PKPab	**PKPab**	**12 40 31.5**	**+0.4**
PESTR	**Estremoz**	**168.61**	**41**	*e*PKPdf	**PKPdf**	**12 39 23.2**	**+1.6**
PESTR	**Estremoz**	**168.61**	**41**	*e*PKPab	**PKPab**	**12 40 33.5**	**+2.0**
PESTR	**Estremoz**	**168.61**	**41**	*e*PKPdf	**PKPdf**	**12 39 22.1**	**+0.6**
PTEO	**Sao Teotonio**	**168.74**	**50**	*e*PKPdf	**PKPdf**	**12 39 22.4**	**+0.8**
MESJ	**Messejana**	**168.90**	**47**	*e*PKPdf	**PKPdf**	**12 39 21.8**	**+0.1**
MESJ				*e*PP	**PP**	**12 44 23.3**	**+1.2**
MESJ				AMS	AMS	13 53 10.8	
	comp=Z,827nm,19.8s						
MESJ	**Messejana**	**168.90**	**47**	*e*PKPdf	**PKPdf**	**12 39 23.4**	**+1.7**
MESJ	**Messejana**	**168.90**	**47**	*e*PKPab	**PKPab**	**12 40 33.2**	**+0.5**
MESJ	**Messejana**	**168.90**	**47**	*e*PKIKP	**PKPdf**	**12 39 21.8**	**+0.1**
MESJ				*e*		12 44 23.3	
PFVI	**Vila Bisbo**	**168.90**	**52**	*e*PKPdf	**PKPdf**	**12 39 21.5**	**-0.3**
PFVI	**Vila Bisbo**	**168.90**	**52**	*e*PKPab	**PKPab**	**12 40 33.9**	**+1.1**
MORF	**Marmelete**	**168.93**	**50**	*e*PKPdf	**PKPdf**	**12 39 21.9**	**0.0**
MORF				*e*PP	**PP**	**12 44 23.5**	**+1.1**
MORF				AMS	AMS	13 53 25.3	
	comp=Z,1µm,24.4s						
MORF	**Marmelete**	**168.93**	**50**	*e*PKPdf	**PKPdf**	**12 39 22.9**	**+1.0**
MORF	**Marmelete**	**168.93**	**50**	*e*PKIKP	**PKPdf**	**12 39 21.8**	**0.0**
MORF				*e*		12 44 23.5	
PBEJ	**Beja**	**169.00**	**45**	*e*PKPdf	**PKPdf**	**12 39 24.5**	**+2.7**
PBEJ	**Beja**	**169.00**	**45**	*e*PKPab	**PKPab**	**12 40 34.1**	**+0.9**
PBDV	**Barranco-do-Ve**	**169.43**	**49**	*e*PKPdf	**PKPdf**	**12 39 24.2**	**+2.1**
PBDV	**Barranco-do-Ve**	**169.43**	**49**	*e*PKPab	**PKPab**	**12 40 29.9**	**-5.3**
PVAQ	**Vaqueiros**	**169.48**	**48**	*e*PKPdf	**PKPdf**	**12 39 23.2**	**+1.1**
PVAQ	**Vaqueiros**	**169.48**	**48**	*e*PKPab	**PKPab**	**12 40 37.9**	**+2.6**
PAB	**San Pablo**	**169.71**	**29**	*e*PKPdf	**PKPdf**	**12 39 22.3**	**0.0**
PAB	**San Pablo**	**169.71**	**29**	*e*PKIKP	**PKPdf**	**12 39 22.3**	**0.0**
ESDC	**Sonseca Array**	**169.75**	**27**	PKP	**PKPdf**	**12 39 22.0**	**-0.3**
	comp=Z,13nm,1.1s,baz=346,slow=2.6,SNR=39						
ESDC				PKPab	**PKPab**	**12 40 36.2**	**-0.2**
	comp=Z,8.1nm,0.8s,baz=325,slow=3.7,SNR=8.5						
ESDC				PP	**PP**	**12 44 26.3**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=337,slow=4.5,SNR=7.2						
ESLA	**Sonseca Array**	**169.75**	**27**	*e*PKPdf	**PKPdf**	**12 39 22.4**	**+0.1**
ES19	**SONSECA Array**	**169.75**	**27**	*e*PKPdf	**PKPdf**	**12 39 22.6**	**+0.3**
ES19				*e*PKPab	**PKPab**	**12 40 36.6**	**+0.1**
TAM	**Tamanrasset**	**171.57**	**202**	*e*PKPdf	**PKPdf**	**12 39 23.6**	**-0.3**
TAM	**Tamanrasset**	**171.57**	**202**	*e*PKIKP	**PKPdf**	**12 39 23.6**	**-0.3**
KEST	**Kesra**	**172.06**	**312**	*e*PKPdf	**PKPdf**	**12 39 23.7**	**0.0**
KEST				*e*PKPab	**PKPab**	**12 40 47.3**	**+0.3**
KEST	**Kesra**	**172.06**	**312**	PKP	**PKPdf**	**12 39 23.6**	**0.0**
	comp=Z,12nm,0.9s,baz=254,slow=0.6,SNR=11						
KEST				PP	**PP**	**12 44 40.1**	**+2.1**
	comp=Z,31nm,1.4s,baz=278,slow=8.3,SNR=4.8						

NIED ***18*** *12:26:00, 36°.00N×139°.90E, h95^{km}, Mw3.9   Best double couple: M$_0$7.43000×10^{14} NP1:ϕ_s19.00000°, δ33.00000°, λ82.00000°.   NP2:ϕ_s209.00000°, δ57.00000°, λ95.00000°.*

ISCJB ***18*** *12:26:22.7±0.4, 35°.89N±0°.03×139°.96E±0°.05, h87^{km}±3^{km}, mb3.8/14, Error ellipse: s-maj=6.9km s-min=5.0km az=174.1*

IDC ***18*** *12:26:22.8±1.5, 35°.88N×140°.06E, h75^{km}±14^{km}, mb3.6/14, mb1 3.8/21, mb1mx3.6/56, mbtmp3.9/21, MS3.7/5, Ms1 3.7/5, ms1mx3.3/54, Error ellipse: s-maj=17.5km s-min=11.9km az=80.0*

JMA ***18*** *12:26:24.1±0.1, 35°.95N×139°.94E, h76^{km}±2^{km}, M3.7 Broadband fault plane solution: P waves.   NP1: ϕ_s206.00000°, δ70.00000°, λ95.00000°.   NP2:ϕ_s12.00000°, δ21.00000°, λ77.00000°.   Principal axes: T Plg65.0000°, Azm124.0000°; N Plg5.0000°, Azm24.0000°; P Plg25.0000°, Azm292.0000°;*

JMA   Felt I J1.

ISC 18 12:26:23.0±0.7**, 35°.88N**±0°.04×**140°.03E**±0°.05**, h79^{km}**±6^{km}**, n41, σ1^{s}.58**/50**, mb3.8**/14**, 8C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.29**	**228**	⇑P	**Pn**	**12 26 37.1**	**+2.1**
JYT	**Yasato**	**0.37**	**22**	⇑P	**Pn**	**12 26 36.2**	**+0.6**
JYT				S	**Sn**	**12 26 45.3**	**+0.4**
JAG	**Ashikaga**	**0.71**	**320**	⇑P	**Pn**	**12 26 38.6**	**-0.1**
JAG				S	**Sn**	**12 26 49.6**	**-0.7**
JRY	**Ryogami san**	**0.92**	**279**	⇑P	**Pn**	**12 26 41.4**	**+0.4**
JRY				S	**Sn**	**12 26 54.4**	**-0.1**
JOD2	**Odawara 2**	**0.98**	**231**	⇑P	**Pn**	**12 26 42.0**	**+0.2**
JOD2				S	**Sn**	**12 26 55.2**	**-0.6**
JKT	**Katashina**	**1.08**	**325**	⇑P	**Pn**	**12 26 42.9**	**-0.1**
JKT				S	**Sn**	**12 26 57.6**	**-0.5**
BSO3	**Boso 3**	**1.15**	**160**	P	**Pn**	**12 26 45.5**	**+2.0**
JIM2	**Oshima 3**	**1.26**	**203**	P	**Pn**	**12 26 45.6**	**+0.4**
JIM2				S	**Sn**	**12 27 02.1**	**+0.2**
JYN	**Shimob**	**1.27**	**253**	⇑P	**Pn**	**12 26 45.7**	**+0.4**
JYN				S	**Sn**	**12 27 01.7**	**-0.4**
JFNN	**Fujinakano**	**1.29**	**238**	P	**Pn**	**12 26 46.0**	**+0.4**
JFNN				S	**Sn**	**12 27 03.0**	**+0.5**
BSO1	**Boso 1**	**1.45**	**147**	P	**Pn**	**12 26 49.3**	**+2.2**
MJAR	**Matsushiro Arr**	**1.61**	**295**	P	**Pn**	**12 26 49.3**	**-0.4**
	8.0nm,0.3s,baz=106,slow=8.9,SNR=467						
MJAR				S	**Sn**	**12 27 09.4**	**-0.5**
	13nm,0.3s,baz=141,slow=24,SNR=18						
MJAR				LR	LR	12 27 26.4	
	comp=Z,120nm,21.2s,baz=305,slow=40						
MAT	**Matsushiro**	**1.61**	**295**	P	**Pn**	**12 26 49.9**	**+0.2**
MAT				S	**Sn**	**12 27 08.9**	**-1.0**
MAT	**Matsushiro**	**1.61**	**295**	P	**Pn**	**12 26 49.9**	**+0.2**
MAT				*e*S	**Sn**	**12 27 09.1**	**-0.8**
JFT	**Otama**	**1.65**	**9**	⇑P	**Pn**	**12 26 51.4**	**+1.2**
JHJ	**Hachijo jima 2**	**2.77**	**184**	P	**Pn**	**12 27 05.9**	**+0.8**
	179nm,0.3s,baz=314,slow=20,SNR=17						
JHJ				S	**Sn**	**12 27 38.7**	**+1.2**
	91nm,0.3s,baz=24,slow=20,SNR=8.4						
JNU	**Nakatsue**	**8.04**	**253**	P	**Pn**	**12 28 16.4**	**-0.6**
	0.2nm,0.3s,baz=31,slow=19,SNR=3.5						
JNU				LR	LR	12 31 38.6	
	comp=Z,365nm,18.4s,baz=20,slow=39						
ASAJ	**Asahikawa**	**8.46**	**13**	P	**Pn**	**12 28 20.8**	**-1.8**
	0.9nm,0.3s,baz=194,slow=11,SNR=12						
ASAJ				S	**Sn**	**12 29 51.2**	**-5.1**
	0.2nm,0.3s,baz=348,slow=20,SNR=3.1						
ASAJ				LR	LR	12 32 06.2	
	comp=Z,555nm,21.7s,baz=117,slow=41						
JCJ	**Chichijima**	**8.95**	**168**	P	**Pn**	**12 28 27.4**	**-2.1**
	9.8nm,0.3s,baz=282,slow=22,SNR=6.6						
JCJ				S	**Sn**	**12 30 01.9**	**-6.8**
	6.0nm,0.3s,baz=342,slow=19,SNR=3.6						
KSRS	**Korea Array**	**9.85**	**283**	P	**Pn**	**12 28 43.6**	**+2.0**
	0.4nm,0.3s,baz=96,slow=13,SNR=4.5						
KSRS				LR	LR	12 32 15.8	
	comp=Z,490nm,21.9s,baz=39,slow=36						
USRK	**Ussuriysk Ar.**	**10.34**	**326**	P	**Pn**	**12 28 49.6**	**+1.3**
	0.2nm,0.3s,baz=138,slow=11,SNR=2.4						
USRK				LR	LR	12 32 28.6	
	comp=Z,421nm,21.0s,baz=271,slow=35						
KLR	**Kul'dur**	**14.65**	**338**	P	**Pn**	**12 29 47.3**	**+1.3**
	0.1nm,0.3s,baz=173,slow=16,SNR=3.4						
GUMO	**Guam**	**22.62**	**168**	LR	LR	12 39 12.6	
	comp=Z,299nm,19.9s,baz=302,slow=34						
MA2	**Magadan**	**24.72**	**13**	P	**P**	**12 31 37.3**	**+0.8**
	4.5nm,0.9s,baz=222,slow=5.0,SNR=6.1						
SONM	**Songino Array**	**27.53**	**306**	P	**P**	**12 32 02.5**	**+0.3**

	0.6nm,0.6s,baz=106,slow=8.7,SNR=6.0						
H11N2	WAKE ISLAND Hy	28.57	117	T	T	13 02 18.7	
	baz=308,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	28.58	117	T	T	13 02 00.8	
	baz=308,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	28.59	117	T	T	13 02 21.0	
	baz=308,slow=75,SNR=18						
ZALV	Zalesovo Beam	41.88	313	P	P	12 34 05.0	-0.1
	0.7nm,0.4s,baz=114,slow=7.7,SNR=5.9						
MKAR	Makanchi Array	43.79	303	P	P	12 34 20.7	-0.1
	0.5nm,0.5s,baz=80,slow=8.2,SNR=13						
KURBB	Kurchatov Arra	45.84	309	P	P	12 34 36.6	-0.3
	0.9nm,0.4s,baz=86,slow=8.0,SNR=9.2						
ILAR	Eielson Array	51.06	32	P	P	12 35 15.9	-0.9
	0.7nm,0.8s,baz=274,slow=6.9,SNR=3.2						
FITZ	Fitzroy Crossi	55.39	197	P	P	12 35 49.5	+0.5
	2.8nm,0.6s,baz=211,slow=23,SNR=6.8						
WRA	Warramunga Arr	55.78	186	P	P	12 35 51.5	-0.4
	2.3nm,0.8s,baz=2.6,slow=7.6,SNR=13						
ASAR	Alice Springs	59.51	187	P	P	12 36 18.2	+0.2
	0.8nm,0.8s,baz=21,slow=9.6,SNR=4.7						
FINES	FINESS Array B	69.31	332	P	P	12 37 21.3	-0.1
	0.7nm,0.7s,baz=74,slow=4.9,SNR=2.4						
AKASG	Malin Array Be	74.52	322	P	P	12 37 54.0	+1.2
	0.3nm,0.3s,baz=52,slow=6.5,SNR=3.5						
NVAR	Mina Array Bea	76.57	52	P	P	12 38 05.8	+0.7
	1.4nm,0.8s,baz=290,slow=3.7,SNR=4.1						
PDAR	Pinedale Array	79.27	45	P	P	12 38 21.1	+1.0
	0.6nm,0.7s,baz=169,slow=0.8,SNR=3.7						
GHAJ	Ghor Haditha	82.64	303	P	P	12 38 44.5	+6.7
TXAR	Lajitas Array	91.71	52	P	P	12 39 22.5	+0.4
	0.2nm,0.5s,baz=329,slow=3.4,SNR=3.0						

MEX 18 12:38:43.3±0.3**, 17°.87N×101°.66W, h16**^{km}±80^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.32	145	iP	Pg	12 38 48.9	-1.1
ZIIG				iS	Sg	12 38 53.5	-1.2
ARIG	Puente Sto Nin	1.31	72	eP	Pn	12 39 03.2	-3.9
ARIG				iS	Sn	12 39 18.6	-5.7
MEIG	Mezcala	1.94	88	eP	Pn	12 39 12.7	-3.1
PLIG	Platanillo	2.12	75	iP	Pn	12 39 15.2	-3.0

*ISCJB **18** 12:40:19.8±0.8, 38°.71N±0°.03×25°.44E±0°.04, h12^{km}±6^{km}, Error ellipse: s-maj=6.2km s-min=4.8km az=40.0*
*THE **18** 12:40:19.1, 38°.72N×25°.45E, h2^{km}±2^{km}, ML2.5/3, Error ellipse: s-maj=2.4km s-min=0.7km az=97.0*
*ATH **18** 12:40:19.2, 38°.71N×25°.44E, h20^{km}±2^{km}, ML2.6/3, Error ellipse: s-maj=3.8km s-min=1.4km az=93.0*
*DDA **18** 12:40:20.0, 38°.72N×25°.54E, h7^{km}±2^{km}, ML2.8*
ISC 18 12:40:19.8±1.0**, 38°.73N**±0°.04×**25°.47E**±0°.04**, h15**^{km}±8^{km}**, n15, σ0^{s}.78**/26**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PSRA	Psara	0.20	158	P	Pg	12 40 24.8	+0.4
PSRA				S	Sg	12 40 27.6	0.0
SIGR	SIGRI	0.57	32	P	Pg	12 40 30.5	-0.5
SIGR				S	Sb	12 40 38.9	-0.5
SIGR				AML	AML	12 40 41.7	
	comp=N,1002μm,0.3s						
SIGR				AML	AML	12 40 42.9	
	comp=E,970μm,0.4s						
SIGR	SIGRI	0.57	32	P	Pg	12 40 30.5	-0.5
SIGR				S	Sb	12 40 38.8	-0.5
CHOS	Chios island	0.57	126	P	Pg	12 40 30.6	-0.5
CHOS				S	Sg	12 40 38.4	-0.3
CHOS				AML	AML	12 40 41.6	
	comp=N,1771μm,0.3s						
CHOS				AML	AML	12 40 41.9	
	comp=E,2416μm,0.4s						
CHOS	Chios island	0.57	126	P	Pg	12 40 30.5	-0.5
CHOS				S	Sg	12 40 38.4	-0.3
PRK	Paraskevi	0.81	50	P	Pb	12 40 35.8	+0.3
PRK				S	Sb	12 40 47.7	+1.4
PRK				AML	AML	12 40 51.2	
	comp=E,1178μm,1.0s						
PRK				AML	AML	12 40 52.6	
	comp=N,888μm,0.7s						
ZEY	zmir	0.95	121	iP	Pg	12 40 37.3	-0.8
ZEY				iS	Sb	12 40 50.5	+0.4
ZEY				IAML_P			
	comp=Z,1μm,0.2s						
URLA	Izmir	0.95	112	iP	Pb	12 40 38.5	+0.5
URLA				iS	Sb	12 40 50.7	+0.2
URLA				IAML_P			
	comp=Z,4μm,0.3s						
AYVA	Ayvalik	1.11	58	iP	Pn	12 40 41.6	+0.8
AYVA				iS	Sn	12 40 56.5	+0.7
LIA	Limnos Island	1.19	349	P	Pb	12 40 42.0	0.0
EREA	Eretria	1.25	256	P	Pn	12 40 41.7	-0.9
DGB	zmir	1.30	121	iP	Pn	12 40 41.1	-2.2
DGB				iS	Sg	12 41 02.0	+0.3
BAYC	CANAKKALE_Bayr	1.31	39	iP	Pn	12 40 36.3	-7.2
BAYC				iS	Sn	12 41 01.5	+0.7
AOS	Alonnisos	1.32	290	P	Pn	12 40 43.2	-0.4
AOS				S	Sg	12 41 02.7	+0.4
APE	Apeiranthos	1.66	178	P	Pn	12 40 49.0	+0.7

*ISCJB **18** 12:54:32.9±0.6, 26°.4S±0°.2×71°.7E±0°.1, h10^{km}, mb4.4/12, MS4.9/3, Error ellipse: s-maj=23.2km s-min=12.3km az=167.6*
*IDC **18** 12:54:33.3±1.2, 26°.37S×71°.65E, h0^{km}, mb4.3/6, mb1 4.4/6, mb1mx3.9/56, mbtmp4.3/6, MS4.8/3, Ms1 4.8/3, ms1mx3.8/43, Error ellipse: s-maj=38.4km s-min=24.6km az=155.0*
*NEIC **18** 12:54:34.7±0.4, 26°.37S×71°.64E, h10^{km}, mb4.5/9, Error ellipse: s-maj=14.4km s-min=7.5km az=168.0*
ISC 18 12:54:34.7±0.9**, 26°.4S**±0°.2×**71°.6E**±0°.1**, h10**^{km}**, n26, σ0^{s}.20**/17**, mb4.5**/12**, MS4.9**/3**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.63	3	T	T	13 18 07.0	
	baz=183,slow=76,SNR=4.8						
H08S2	Diego Garcia H	18.63	3	T	T	13 17 47.8	
	baz=183,slow=76,SNR=7.4						
H08S3	Diego Garcia H	18.65	3	T	T	13 18 04.5	
	baz=183,slow=76,SNR=12						
H01W2	Cape Leeuwin H	37.31	114	T	T	13 41 16.4	
	baz=272,slow=75,SNR=17						
H01W3	Cape Leeuwin H	37.31	114	T	T	13 41 14.4	
	baz=272,slow=75,SNR=11						
H01W1	Cape Leeuwin H	37.33	114	T	T	13 41 16.5	
	baz=272,slow=75,SNR=15						
CISI	Cisompet, Garu	39.13	68	eP	P	13 02 02.6	-0.2
	39nm,1.0s						
PSI	Prapat	39.19	46	LR	LR	13 15 12.8	
	comp=Z,952nm,19.0s,baz=91,slow=32						
BOSA	Boshof	41.02	256	eP	P	13 02 18.3	-0.1
	6.1nm,0.9s						
LBTB	Lobatse	41.35	261	eP	P	13 02 21.2	0.0
	9.2nm,1.3s						
SUR	Sutherland	44.37	250	eP	P	13 02 45.7	0.0
	27nm,1.2s						
SUR	Sutherland	44.37	250	P	P	13 02 45.8	0.0
	8.6nm,0.9s,baz=112,slow=10,SNR=5.8						
CM01	Chiang Mai Arr	51.82	34	eP	P	13 03 43.2	+0.1
CMAR	Chiang Mai Arr	51.84	34	P	P	13 03 43.4	+0.1
	0.5nm,0.3s,baz=216,slow=6.9,SNR=5.5						
ASAR	Alice Springs	56.00	102	P	P	13 04 13.9	0.0
	3.5nm,1.0s,baz=251,slow=6.5,SNR=24						
AS31	Alice Springs	56.00	102	eP	P	13 04 13.5	-0.4
	1.0nm,0.9s						
AS01	Alice Springs	56.04	102	eP	P	13 04 14.1	-0.1
WRA	Warramunga Arr	57.52	98	P	P	13 04 25.0	+0.3
	5.4nm,0.9s,baz=253,slow=7.1,SNR=26						
WR1	Warramunga Arr	57.53	98	eP	P	13 04 25.0	+0.3
	6.2nm,1.0s						
WRAB	Tennant Creek	57.54	98	eP	P	13 04 24.5	-0.2
	8.1nm,1.2s						
STKA	Stephens Creek	60.41	113	eP	P	13 04 44.8	+0.3
	2.6nm,1.3s						
STKA	Stephens Creek	60.41	113	P	P	13 04 44.5	-0.1
	4.6nm,1.0s,baz=191,slow=14,SNR=3.9						
QSPA	South Pole Qui	63.77	180	eP	P	13 05 06.6	-0.2
	5.1nm,0.9s						
QSPA	South Pole Qui	63.77	180	P	P	13 05 06.9	+0.2
	2.5nm,0.7s,baz=250,slow=1.5,SNR=11						
AKTO	Aktyubinsk	77.40	351	LR	LR	13 35 50.1	
	comp=Z,1μm,21.7s,baz=69,slow=32						
GERES	GERESS Array B	90.97	326	LR	LR	13 49 19.5	
	comp=Z,403nm,20.1s,baz=26,slow=36						

IDC 18 12:59:32.9±17.0**, 19°.91S**×**178°.05W, h482**^{km}±194^{km}**, mb3.3**/6**, mb1 3.5**/6**, mb1mx3.2**/33**, mbtmp4.2**/6**, Error ellipse: s-maj=70.0km s-min=29.9km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CTA	Charters Tower	33.51	263	P	P	13 05 31.8	+0.2
	2.9nm,0.4s,baz=87,slow=10,SNR=15						
STKA	Stephens Creek	38.01	243	P	P	13 06 08.8	-0.2
	3.0nm,0.5s,baz=73,slow=14,SNR=13						
ASAR	Alice Springs	44.61	256	P	P	13 07 01.4	-0.3
	4.8nm,0.6s,baz=95,slow=8.2,SNR=100						
WRA	Warramunga Arr	44.64	261	P	P	13 07 01.3	-0.6
	0.9nm,0.3s,baz=95,slow=7.4,SNR=88						
FITZ	Fitzroy Crossi	53.06	262	P	P	13 08 05.0	+0.4
	1.5nm,0.8s,baz=126,slow=5.3,SNR=5.9						
QSPA	South Pole Qui	70.16	180	P	P	13 09 56.0	0.0
	baz=180,slow=1.0						
ILAR	Eielson Array	87.75	13	P	P	13 11 29.2	0.0
	0.2nm,0.4s,baz=223,slow=5.3,SNR=11						

*IDC **18** 13:00:27.9±0.6, 40°.01N×77°.71E, h0^{km}, mb4.4/19, mb1 4.6/25, mb1mx4.4/52, mbtmp4.5/25, ML3.8/6, MS4.2/5, Ms1 4.2/5, ms1mx3.7/48, Error ellipse: s-maj=12.5km s-min=11.4km az=89.0*
*BJI **18** 13:00:28.8, 40°.13N×77°.80E, h7^{km}, mb4.6/37, mB4.7/27, ML4.9/10, Ms4.5/30, Ms7 4.4/29*
*SOME **18** 13:00:29.7, 40°.07N×77°.65E, h15^{km}, MS4.9*
*KRNET **18** 13:00:29.5±0.1, 40°.02N×77°.57E, mb5.4*
*ISCJB **18** 13:00:30.3±0.8, 39°.93N±0°.02×77°.67E±0°.02, h23^{km}±6^{km}, mb4.7/124, MS4.5/14, Error ellipse: s-maj=3.5km s-min=2.3km az=143.9*
*MOS **18** 13:00:31.4±1.4, 40°.10N×77°.75E, h27^{km}, mb5.0/65, MS4.3/9, Error ellipse: s-maj=5.6km s-min=3.4km az=117.1*
*NNC **18** 13:00:32.1±1.0, 40°.18N×77°.56E, h0^{km}, mb5.4, mpv5.0, Error ellipse: s-maj=9.0km s-min=4.5km az=143.0*
*NEIC **18** 13:00:33.5±1.2, 40°.04N×77°.70E, h35^{km}±9^{km}, mb4.9/32, Error ellipse: s-maj=5.2km s-min=4.3km az=181.0*
ISC 18 13:00:29.1±1.1**, 40°.09N**±0°.03×**77°.65E**±0°.02**, h2**^{km}±7^{km}**, n382, σ2^{s}.03**/434**, mb4.8**/125**, MS4.5**/14**, 52C-32D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KSH	Kashi	1.41	247	Pg	Pg	13 01 04.3	+8.1
KSH				Sg	Sg	13 01 30.8	+16
KSH				smax	smax		
	comp=N,39μm,0.6s						
KSH				smax	smax		
	comp=E,42μm,0.6s						
NRN	Naryn	1.84	317	⇓iP	Pn	13 01 03.2	+1.2
	baz=20						
NRN				⇓iS	Sg	13 01 28.7	+0.6
	baz=20						
KDJ	Kajisay	2.07	350	ePn	Pb	13 01 07.7	+0.2
KDJ	Kajisay	2.07	350	ePN	Pb	13 01 07.7	+0.2
KDJ	Kajisay	2.07	350	⇑iP	Pb	13 01 07.6	+0.1
	baz=53						
KDJ				⇑iS	Sg	13 01 35.2	-0.4
	baz=53						
ULHL	Ulahol	2.40	334	P	Pb	13 01 12.6	-0.6
	SNR=1985						
ULHL	Ulahol	2.40	334	⇓eP	Pb	13 01 12.4	-0.8
	baz=36						
ULHL				⇓iS	Sb	13 01 42.8	-0.6
	baz=36						
PRZ	Przheval'sk	2.46	13	ePn	Pn	13 01 12.8	+2.4
PRZ	Przheval'sk	2.46	13	ePN	Pn	13 01 12.8	+2.4
PRZ	Przheval'sk	2.46	13	⇑iP	Pn	13 01 13.4	+3.0
	baz=14						
PRZ				⇑iS	Sb	13 01 44.8	-0.1
	baz=14						
KZA	Kyzart	2.69	318	P	Pb	13 01 16.6	-1.6
	SNR=3101						
KZA	Kyzart	2.69	318	⇑iP	Pn	13 01 16.3	+2.5
	baz=20						
KZA				⇑iS	Sb	13 01 49.5	-2.3
	baz=20						
BOOM	Boomskoye usch	2.72	332	⇑iP	Pn	13 01 16.5	+2.5
	baz=34						
BOOM				⇑iS	Sb	13 01 50.3	-2.2
	baz=34						
TNSS	Tian-Shan	2.99	350	eP	Pb	13 01 24.5	+1.2
	5μm,0.7s						
TNSS				eS	Sg	13 02 04.0	-1.3
	4μm,0.9s						
SATY	Saty	3.02	11	eP	Pb	13 01 24.6	+1.0
	6μm,0.9s						
SATY				eS	Sg	13 02 04.0	-2.1
	3μm,1.0s						
IZV	Izvestkoviy	3.04	346	Pg	Pb	13 01 26.2	+2.1
	1μm,1.0s						
IZV				Lg	Lg	13 02 06.6	
	2μm,0.5s						
IZV	Izvestkoviy	3.04	346	eP	Pb	13 01 26.0	+1.9
	709nm,0.6s						
IZV				eS	Sg	13 02 06.6	-0.4
	2μm,0.5s						
ARLS	Aral	3.08	306	⇓iP	Pn	13 01 20.4	+1.5
	baz=8.0						
ARLS				⇓iS	Sn	13 01 57.8	+1.4
	baz=8.0						
MDOK	Medeo	3.10	352	⇓Pg	Pb	13 01 26.4	+1.3
MDOK				Lg	Lg	13 02 07.1	
MDOK	Medeo	3.10	352	eP	Pb	13 01 26.5	+1.4
	2μm,0.7s						
MDOK				eS	Sg	13 02 07.2	-1.6
	4μm,0.5s						
AAA	Alma-Ata	3.16	350	ePN	Pb	13 01 28.1	+2.0
AAA				eS	Sg	13 02 11.5	+0.7
AAA				pmax	pmax		
	comp=Z,2μm,0.4s						
AAA				smax	smax		
	comp=N,5μm,0.6s						
KNDC	Almaty	3.17	351	⇓Pn	Pn	13 01 23.4	+3.4
KNDC				⇓Lg	Lg	13 02 10.7	
KOTS	Kotyrbulak	3.17	353	Pg	Pb	13 01 28.3	+2.0
	comp=N,1μm,0.8s						
KOTS				Lg	Lg	13 02 09.7	
	comp=N,10μm,0.7s						
KOTS	Kotyrbulak	3.17	353	eP	Pb	13 01 28.1	+1.9
	comp=N,1μm,0.8s						
KOTS				eS	Sg	13 02 10.0	-0.8
	comp=N,10μm,0.7s						
MTBS	Maitube	3.17	344	eP	Pb	13 01 28.6	+2.3
	comp=N,572nm,0.7s						
MTBS				eS	Sg	13 02 10.6	-0.4
	comp=N,1μm,0.3s						
SFK	Sufi-Kurgan	3.18	270	⇑Pn	Pn	13 01 23.3	+2.8
	comp=N,68nm,0.5s						
SFK				⇑Pg	Pb	13 01 29.0	+2.5
	comp=N,774nm,0.7s						
SFK				⇓Lg	Lg	13 02 11.0	
	comp=N,3μm,0.7s						
SFK	Sufi-Kurgan	3.18	270	Pg	Pb	13 01 29.1	+2.5
	comp=N,404nm,0.8s						
SFK				Lg	Lg	13 02 11.5	
	comp=N,1μm,0.5s						
SFK	Sufi-Kurgan	3.18	270	iPN	Pn	13 01 23.2	+2.8
SFK				pmax	pmax		
	comp=Z,68nm,0.5s						
SFK	Sufi-Kurgan	3.18	270	⇑iP	Pn	13 01 21.6	+1.2
	baz=71						
SFK				⇑iS	Sn	13 01 59.0	-0.1
	baz=71						
UCH	Uchtor	3.19	313	P	Pn	13 01 23.8	+3.1
	SNR=116						
UCH	Uchtor	3.19	313	⇑iP	Pn	13 01 23.2	+2.5
	baz=15						
UCH				⇑iS	Sn	13 02 01.4	+1.9
	baz=15						
KST	Kastek	3.21	337	eP	Pb	13 01 28.4	+1.4
	comp=Z,1μm,0.9s						
KST				eS	Sg	13 02 10.5	-1.7
	comp=Z,3μm,0.6s						
TKM2	Tokmak 2	3.22	332	P	Pn	13 01 24.3	+3.3
	SNR=561						
TKM2	Tokmak 2	3.22	332	⇓iP	Pn	13 01 23.7	+2.8
	baz=34						
TKM2				⇓iS	Sb	13 02 02.3	-4.6
	baz=34						
UZB	Uzynbulak	3.22	18	eP	Pb	13 01 26.4	-0.7
	comp=Z,744nm,0.7s						
UZB				eS	Sb	13 02 06.7	-0.2
	comp=Z,2μm,1.1s						
KBK	Karagaybulak	3.27	322	P	Pn	13 01 25.0	+3.4
	SNR=164						
KBK	Karagaybulak	3.27	322	⇓eP	Pn	13 01 24.1	+2.5
	baz=24						
KBK				⇓iS	Sn	13 02 03.2	+2.0
	baz=24						
KURS	Kuram	3.42	6	eP	Pb	13 01 31.4	+0.9
	comp=Z,1μm,1.2s						
KURS				eS	Sb	13 02 15.7	+3.3
	comp=Z,2μm,1.0s						
DGS	Degeres	3.45	337	Pg	Pb	13 01 33.7	+2.8
	comp=Z,720nm,1.1s						
DGS				Lg	Lg	13 02 19.0	
	comp=Z,3μm,0.6s						
DGS	Degeres	3.45	337	eP	Pb	13 01 33.4	+2.4
	comp=Z,645nm,0.8s						
DGS				eS	Sg	13 02 19.0	-0.9
	comp=Z,3μm,0.6s						
AAK	Ala-Archa	3.48	318	P	Pn	13 01 27.8	+3.4
	SNR=176						
AAK	Ala-Archa	3.48	318	ePn	Pn	13 01 27.6	+3.2
AAK	Ala-Archa	3.48	318	⇑Pg	Pb	13 01 31.2	-0.3
	comp=Z,795nm,0.8s						
AAK				⇓Lg	Lg	13 02 20.9	
AAK	Ala-Archa	3.48	318	c iPN	Pn	13 01 27.6	+3.2
AAK				pmax	pmax		
	comp=Z,131nm,0.7s						
AAK	Ala-Archa	3.48	318	⇑eP	Pn	13 01 26.7	+2.2
	baz=20						
AAK				⇑iS	Sn	13 02 07.8	+1.5
	baz=20						
AAK	Ala-Archa	3.48	318	Pn	Pn	13 01 27.4	+3.0
	comp=Z,17nm,0.3s,baz=112,slow=7.4,SNR=148						
AAK				LR	LR	13 03 03.0	
	comp=Z,3μm,21.3s,baz=150,slow=43						
PDGK	Podgornoye	3.52	22	⇑Pn	Pn	13 01 27.2	+2.2
	comp=Z,461nm,0.7s						
PDGK				⇑Sn	Sb	13 02 12.2	-3.2
	comp=Z,3μm,0.9s						
PDGK	Podgornoye	3.52	22	PN	Pn	13 01 27.1	+2.2
PDGK						13 01 33.8	
PDGK				pmax	pmax		
	comp=Z,461nm,0.7s						
PDGK				pmax	pmax		
	comp=Z,812nm,0.6s						
PDGK	Podgornoye	3.52	22	⇑iP	Pn	13 01 27.2	+2.2
	baz=23						
PDGK				⇑iS	Sn	13 02 10.3	+3.1
	baz=23						
FRU1	Bishkek	3.54	321	ePn	Pn	13 01 28.7	+3.5
FRU1	Bishkek	3.54	321	ePN	Pn	13 01 28.7	+3.5
FRU1	Bishkek	3.54	321	⇑eP	Pn	13 01 27.7	+2.5
	baz=23						
FRU1				⇑iS	Sn	13 02 09.4	+1.7
	baz=23						
FRU	Bishkek	3.56	321	⇑ePN	Pn	13 01 29.0	+3.5
FRU				eS	Sb	13 02 14.0	-2.6
FRU				i		13 02 25.0	
FRU				pmax	pmax		
	comp=E,2μm,4.0s						
FRU				pmax	pmax		
	comp=Z,700nm,2.0s						
FRU				smax	smax		
	comp=E,10μm,2.5s						
FRU				smax	smax		
	comp=N,2μm,1.6s						
AML	Almayashu	3.62	306	P	Pn	13 01 30.2	+3.7
	SNR=156						
AML	Almayashu	3.62	306	⇑eP	Pn	13 01 28.5	+1.9
	baz=7.0						
AML				⇑iS	Sn	13 02 11.4	+1.4
	baz=7.0						
CHMS	Chumysh	3.63	324	P	Pn	13 01 29.8	+3.4
	SNR=87						
CHMS	Chumysh	3.63	324	⇓eP	Pn	13 01 28.8	+2.4
	baz=26						
CHMS				⇓iS	Sn	13 02 11.5	+1.7
	baz=26						
KTBS	Karatobe	3.69	349	Pg	Pb	13 01 37.4	+2.3
	comp=N,1μm,0.9s						
KTBS				Lg	Lg	13 02 25.8	
	comp=N,1μm,0.6s						
KTBS	Karatobe	3.69	349	eP	Pb	13 01 36.8	+1.7
	comp=N,1μm,1.0s						
KTBS				eS	Sg	13 02 25.1	-2.5
	comp=N,922nm,0.8s						
ARSB	Arslanbob	3.76	291	ePn	Pn	13 01 31.1	+2.9
ARSB	Arslanbob	3.76	291	⇑eP	Pn	13 01 29.7	+1.5
	baz=92						
ARSB				⇑iS	Sn	13 02 13.4	+0.3
	baz=92						
CHKK	Chushkaly	3.79	353	eP	Pb	13 01 38.4	+1.6
	comp=N,742nm,0.7s						
CHKK				eS	Sg	13 02 27.6	-3.3
	comp=N,3μm,0.8s						
EKS2	Erkin-Say	3.88	313	P	Pn	13 01 33.6	+3.7
	SNR=336						
EKS2	Erkin-Say	3.88	313	⇓eP	Pn	13 01 32.0	+2.0
	baz=14						
EKS2				⇓iS	Sn	13 02 17.5	+1.3
	baz=14						
KTMS	Ketmen	3.91	30	Pg	Pb	13 01 41.5	+2.6
	comp=N,16nm,0.1s						
KTMS				Lg	Lg	13 02 32.4	
	comp=N,973nm,0.9s						
KTMS	Ketmen	3.91	30	eP	Pb	13 01 41.5	+2.6
	comp=N,16nm,0.1s						
KTMS				eS	Sg	13 02 32.4	-2.4
	comp=N,973nm,0.9s						
USP	Ospenovka	3.96	324	P	Pn	13 01 34.1	+3.2
	SNR=29						
USP	Ospenovka	3.96	324	⇑iP	Pn	13 01 33.4	+2.5
	baz=26						
USP				⇑iS	Sn	13 02 19.4	+1.6
	baz=26						
MNBS	Baschi	4.03	8	Pg	Pb	13 01 43.9	+3.1
	comp=N,413nm,0.8s						
MNBS				Lg	Lg	13 02 36.8	
	comp=N,2μm,1.1s						
MNBS	Baschi	4.03	8	eP	Pb	13 01 43.9	+3.1
	comp=N,413nm,0.8s						
MNBS				eS	Sg	13 02 36.8	-1.6
	comp=N,2μm,1.1s						
ARXS	Arharly	4.12	2	Pg	Pb	13 01 45.1	+2.7
	comp=N,585nm,0.9s						
ARXS				Lg	Lg	13 02 38.5	
	comp=N,1μm,0.7s						
ARXS	Arharly	4.12	2	eP	Pb	13 01 45.1	+2.7
	comp=N,585nm,0.9s						
ARXS				eS	Sg	13 02 38.5	-3.0
	comp=N,1μm,0.7s						
MRKS	Merke	4.25	310	Pg	Pb	13 01 47.4	+2.7
	comp=N,651nm,0.8s						
MRKS				Lg	Lg	13 02 43.2	
	comp=N,1μm,0.6s						
MRKS	Merke	4.25	310	eP	Pb	13 01 47.4	+2.7
	comp=N,651nm,0.8s						
MRKS				eS	Sg	13 02 43.2	-2.6
	comp=N,1μm,0.6s						
DJR	Jarkent	4.53	20	eP	Pb	13 01 51.4	+2.1
	comp=N,116nm,0.9s						
DJR				eS	Sg	13 02 50.2	-4.2
	comp=N,325nm,0.6s						
MNAS	Manas	4.56	303	⇓Pn	Pn	13 01 42.4	+3.1
	comp=N,38nm,0.4s						
MNAS				⇑Pg	Pb	13 01 53.0	+3.1
	comp=N,831nm,0.9s						
MNAS				⇑Lg	Lg	13 02 52.2	
	comp=N,868nm,0.8s						
MNAS	Manas	4.56	303	Pg	Pb	13 01 53.2	+3.3
	comp=N,335nm,1.1s						
MNAS				Lg	Lg	13 02 53.2	
	comp=N,300nm,0.7s						
MNAS	Manas	4.56	303	iPN	Pn	13 01 42.3	+3.1
MNAS				pmax	pmax		
	comp=Z,38nm,0.4s						
BTK	Batken	5.24	272	ePn	Pn	13 01 51.4	+2.8
BTK	Batken	5.24	272	ePN	Pn	13 01 51.4	+2.8

KAPS	**Kapalarasan**	**5.34**	**13**	*e*P	**Pb**	**13 02 03.7**	**+0.5**
	comp=Z,382nm,0.9s						
KAPS				*e*S	**Sb**	**13 03 11.1**	**+3.3**
	comp=Z,384nm,1.0s						
BTLS	**Baital**	**5.62**	**333**	*e*P	**Pb**	**13 02 12.1**	**+4.2**
	comp=Z,326nm,0.8s						
BTLS				*e*S	**Sg**	**13 03 25.5**	**-4.0**
	comp=Z,472nm,0.6s						
GAR	**Garm**	**5.77**	**261**	*e*Pn	**Pn**	**13 01 57.2**	**+1.3**
GAR	**Garm**	**5.77**	**261**	*e*PN	**Pn**	**13 01 57.2**	**+1.3**
IUG	**Iuzhnay**	**6.11**	**292**	Pg	**Pg**	**13 02 23.5**	**-2.6**
	comp=Z,422nm,0.8s						
KK31	**Karatay Array**	**6.14**	**302**	*e*Pn	**Pn**	**13 02 03.2**	**+2.4**
KK31	**Karatay Array**	**6.14**	**302**	Pn	**Pn**	**13 02 03.1**	**+2.3**
	comp=Z,26nm,0.8s,baz=116,slow=12,SNR=192						
KK31				⇑Pg	**Pb**	**13 02 20.8**	**+4.0**
	comp=Z,126nm,0.7s,baz=128,slow=15,SNR=22						
KK31				⇑Lg	Lg	13 03 42.5	
	comp=Z,232nm,0.6s,baz=122,slow=28,SNR=7.2						
KK31	**Karatay Array**	**6.14**	**302**	*e*PN	**Pn**	**13 02 03.1**	**+2.3**
KK31				*e*		13 02 20.7	
KK31				pmax	pmax		
	comp=Z,26nm,0.8s						
KK31				pmax	pmax		
	comp=Z,126nm,0.7s						
KKAR	**Karatay Array**	**6.14**	**302**	*e*Pn	**Pn**	**13 02 03.2**	**+2.4**
KKAR	**Karatay Array**	**6.14**	**302**	*e*PN	**Pn**	**13 02 03.3**	**+2.4**
CHGR	**Chuyangaron**	**6.73**	**260**	*e*Pn	**Pn**	**13 02 08.9**	**-0.2**
CHCP	**Chirah Chowk**	**7.32**	**210**	P	**Pn**	**13 02 19.8**	**+2.7**
NIL	**Nilore**	**7.33**	**210**	*e*Pn	**Pn**	**13 02 19.3**	**+2.1**
NIL	**Nilore**	**7.33**	**210**	P	**Pn**	**13 02 19.3**	**+2.1**
NIL				pmax	pmax		
	comp=Z,267nm,1.2s						
MAKZ	**Makanchi**	**7.41**	**24**	*e*Pn	**Pn**	**13 02 19.0**	**+0.7**
MAKZ	**Makanchi**	**7.41**	**24**	*e*P	**Pn**	**13 02 19.0**	**+0.7**
MK01	**Makanchi Array**	**7.48**	**25**	*e*Pn	**Pn**	**13 02 20.0**	**+0.7**
MK31	**Makanchi Array**	**7.50**	**25**	*e*Pn	**Pn**	**13 02 20.1**	**+0.6**
MK31	**Makanchi Array**	**7.50**	**25**	Pn	**Pn**	**13 02 20.9**	**+1.4**
	comp=Z,23nm,0.7s,baz=202,slow=13,SNR=178						
MK31				⇑Sn	**Sn**	**13 03 44.4**	**-0.8**
	comp=Z,131nm,1.0s,baz=204,slow=12,SNR=5.7						
MK31				⇑Lg	Lg	13 04 27.5	
	comp=Z,124nm,0.8s						
MK31	**Makanchi Array**	**7.50**	**25**	*i* P	**Pn**	**13 02 20.9**	**+1.4**
MK31						13 03 44.3	
MK31				pmax	pmax		
	comp=Z,23nm,0.7s						
MK31				smax	smax		
	comp=N,131nm,1.0s						
MKAR	**Makanchi Array**	**7.50**	**25**	*e*Pn	**Pn**	**13 02 20.1**	**+0.5**
MKAR				Sn	**Sn**	**13 03 45.2**	**0.0**
MKAR				Lg	Lg	13 04 29.1	
MKAR	**Makanchi Array**	**7.50**	**25**	*i* P	**Pn**	**13 02 20.5**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,15nm,0.6s						
MKAR	**Makanchi Array**	**7.50**	**25**	Pn	**Pn**	**13 02 20.5**	**+1.0**
	comp=Z,2.7nm,0.3s,baz=196,slow=14,SNR=128						
MKAR				Sn	**Sn**	**13 03 45.2**	**0.0**
	comp=Z,3.1nm,0.3s,baz=200,slow=21,SNR=9.9						
MKAR				Lg	Lg	13 04 29.1	
	comp=Z,4.8nm,0.3s,baz=211,slow=25,SNR=3.5						
MKAR				LR	LR	13 05 11.0	
	comp=Z,406nm,20.1s,baz=211,slow=38						
DHRM	**DHARAMSHALA**	**7.90**	**188**	*e*P	**Pn**	**13 02 26.6**	**+1.3**
DHRM				*e*S	**Sn**	**13 03 53.8**	**-1.5**
WMQ	**Urumqi**	**8.36**	**60**	P	**Pn**	**13 02 31.8**	**+0.4**
WMQ				S	**Sn**	**13 04 02.1**	**-4.3**
WMQ				pmax	pmax		
	comp=Z,43nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,370nm,6.3s						
WMQ				smax	smax		
	comp=N,440nm,1.3s						
WMQ				smax	smax		
	comp=E,780nm,1.1s						
WMQ				LR	LR		
	comp=N,3µm,7.1s						
WMQ				LR	LR		
	comp=E,3µm,7.9s						
WMQ				LR	LR		
	comp=Z,3µm,6.5s						
WMQ	**Urumqi**	**8.36**	**60**	P	**Pn**	**13 02 32.3**	**+0.9**
WMQ				pP	Pb	13 02 38.3	-16
WMQ				S	**Sn**	**13 04 06.0**	**-0.4**
WMQ				sS	Sb	13 04 18.1	-16
WMQ				pmax	pmax		
	comp=Z,60nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,460nm,6.1s						
WMQ				smax	smax		
	comp=Z,470nm,1.3s						
WMQ				smax	smax		
	comp=Z,650nm,1.3s						
WMQ				LR	LR		
	comp=Z,3µm,7.7s						
WMQ				LR	LR		
	comp=Z,3µm,6.9s						
WMQ				LR	LR		
	comp=Z,550nm,22.1s						
WMQ	**Urumqi**	**8.36**	**60**	*e*Pn	**Pn**	**13 02 31.3**	**0.0**
WMQ	**Urumqi**	**8.36**	**60**	*e*P	**Pn**	**13 02 31.3**	**0.0**
THW	**Thamme Wali**	**8.70**	**215**	P	**Pn**	**13 02 35.4**	**-0.6**
KBL	**Kabul**	**8.81**	**234**	*e*Pn	**Pn**	**13 02 38.5**	**+0.8**
KBL	**Kabul**	**8.81**	**234**	*e*P	**Pn**	**13 02 38.5**	**+0.8**
SMLA	**Simla**	**8.95**	**183**	*e*P	**Pn**	**13 02 39.9**	**+0.5**
SMLA				*e*S	Sn	13 04 15.3	-5.5
OTUK	**Ortayu**	**9.00**	**337**	⇓Pn	**Pn**	**13 02 42.8**	**+2.7**
	comp=Z,71nm,1.1s						
OTUK				⇑Lg	Lg	13 05 11.8	
	comp=Z,855nm,1.0s						
OTUK	**Ortayu**	**9.00**	**337**	P	**Pn**	**13 02 42.7**	**+2.7**
OTUK				pmax	pmax		
	comp=Z,71nm,1.1s						
SARP	**Sargodha**	**9.09**	**208**	P	**Pn**	**13 02 40.7**	**-0.7**
DDI	**Dehra Dun**	**9.75**	**178**	*e*P	**Pn**	**13 02 50.1**	**-0.4**
DDI				*e*S	**Sn**	**13 04 35.4**	**-5.2**
KURBB	**Kurchatov Arra**	**10.55**	**3**	⇑Pn	**Pn**	**13 03 01.6**	**+0.4**
	comp=Z,44nm,0.8s						
KURBB				⇑Lg	Lg	13 06 10.0	
	comp=Z,448nm,0.9s						
KURBB	**Kurchatov Arra**	**10.55**	**3**	Pn	**Pn**	**13 03 00.3**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=194,slow=12,SNR=74						
KURBB				Lg	Lg	13 06 05.4	
	comp=Z,0.6nm,0.3s,baz=192,slow=30,SNR=15						
KURK	**Kurchatov**	**10.65**	**3**	*e*Pn	**Pn**	**13 03 01.8**	**-0.8**
KURK				Lg	Lg	13 06 05.4	
KURK	**Kurchatov**	**10.65**	**3**	*c i*P	**Pn**	**13 03 02.9**	**+0.3**
KURK				pmax	pmax		
	comp=Z,100nm,1.0s						
NDI	**New Delhi**	**11.38**	**182**	*e*P	**Pn**	**13 03 12.5**	**-0.3**
NDI				*e*x	x	13 05 14.0	
DGZ	**Jazzator, Alta**	**11.84**	**33**	⇓*e*P	**Pn**	**13 03 19.4**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PYUN	**Piuthan**	**12.75**	**158**	*e*P	Pn	13 03 28.4	-3.2
	comp=Z,116nm,0.8s						
DANN	**Dangsing**	**12.75**	**155**	*e*P	Pn	13 03 28.0	-3.7
	comp=Z,51nm,0.5s						
KOLN	**Koldanda**	**13.24**	**156**	*e*P	Pn	13 03 34.5	-3.8
	comp=Z,39nm,0.7s						
KKN	**Kakani**	**13.80**	**150**	*e*P	Pn	13 03 42.0	-4.0
	comp=Z,44nm,0.5s						
BVA0	**Borovoye Array**	**13.86**	**341**	Pn	**Pn**	**13 03 45.6**	**-0.8**
	comp=Z,69nm,1.2s,baz=152,slow=11,SNR=174						
BVA0	**Borovoye Array**	**13.86**	**341**	*i* P	**Pn**	**13 03 45.6**	**-0.8**
BVA0				pmax	pmax		
	comp=Z,69nm,1.2s						
BVAR	**Borovoye Array**	**13.86**	**341**	Pn	**Pn**	**13 03 45.6**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=146,slow=11,SNR=47						
BVAR				Lg	Lg	13 07 49.6	
	comp=Z,1.9nm,0.3s,baz=163,slow=27,SNR=6.4						
DMN	**Daman**	**13.90**	**151**	*e*P	Pn	13 03 43.1	-4.2
	comp=Z,64nm,0.8s						
BRVK	**Borovoye**	**13.91**	**341**	*e*Pn	**Pn**	**13 03 45.5**	**-1.7**
BRVK	**Borovoye**	**13.91**	**341**	*c i*P	**Pn**	**13 03 46.6**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,36nm,1.0s						
GUN	**Gumba**	**13.93**	**148**	*e*P	Pn	13 03 44.8	-3.0
	comp=Z,171nm,0.9s						
PKIN	**Phulchoki**	**14.03**	**150**	*e*P	Pn	13 03 46.0	-3.2
	comp=Z,50nm,0.5s						
PKI	**Pulchoki**	**14.04**	**150**	*e*P	Pn	13 03 45.4	-4.0
	comp=Z,64nm,0.6s						
JIRN	**Jiri**	**14.27**	**148**	*e*P	Pn	13 03 49.1	-3.5
	comp=Z,228nm,0.7s						
ZAA0	**Zalesovo Array**	**14.69**	**17**	*e*Pn	**Pn**	**13 03 55.9**	**-1.9**
ZALV	**Zalesovo Beam**	**14.69**	**17**	*e*Pn	**Pn**	**13 03 55.7**	**-2.0**
ZALV				Lg	Lg	13 08 16.0	
ZALV	**Zalesovo Beam**	**14.69**	**17**	P	**Pn**	**13 03 57.0**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,970nm,19.2s						
ZALV	**Zalesovo Beam**	**14.69**	**17**	Pn	**Pn**	**13 03 57.0**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=202,slow=11,SNR=50						
ZALV				Lg	Lg	13 08 16.0	
	comp=Z,0.3nm,0.3s,baz=220,slow=31,SNR=2.7						
ZALV				LR	LR	13 09 53.3	
	comp=Z,970nm,19.1s,baz=273,slow=38						
RAMN	**Ramite**	**15.07**	**148**	*e*P	Pn	13 03 58.8	-4.5
	comp=Z,165nm,0.7s						
LSA	**Lhasa**	**15.15**	**129**	*e*Pn	**Pn**	**13 04 04.3**	**-0.3**
	comp=Z,23nm,1.1s						
LSA	**Lhasa**	**15.15**	**129**	*e*P	**Pn**	**13 04 04.3**	**-0.3**
LSA				pmax	pmax		
	comp=Z,23nm,1.1s						
NVS	**Novosibirsk**	**15.22**	**12**	⇑*i*P	**Pn**	**13 04 06.3**	**+1.3**
NVS				*e*		13 07 01.7	
GEYT	**Alibeck**	**15.34**	**268**	Pn	**Pn**	**13 04 02.7**	**-4.0**
	comp=Z,0.6nm,0.3s,baz=82,slow=11,SNR=7.4						
GEYT				Sn	**Sn**	**13 06 54.1**	**-3.1**
	comp=Z,1.4nm,0.3s,baz=63,slow=16,SNR=5.3						
GYA0B	**ALIBECK ARRAY**	**15.34**	**268**	*e*Pn	**Pn**	**13 04 03.5**	**-3.1**
AB31	**Akbulak array**	**15.54**	**312**	Pn	**Pn**	**13 04 08.3**	**-0.9**
	comp=Z,44nm,1.1s,baz=118,slow=11,SNR=249						
AB31	**Akbulak array**	**15.54**	**312**	*i* P	**Pn**	**13 04 08.3**	**-0.9**
AB31				pmax	pmax		
	comp=Z,44nm,1.1s						
ABKAR	**Akbulak array**	**15.54**	**312**	*e*Pn	**Pn**	**13 04 07.5**	**-1.8**
BHPL	**Bhopal**	**16.80**	**181**	*e*P	**Pn**	**13 04 25.2**	**-0.4**
BHPL				IAmb	IAmb	13 04 29.7	
	comp=Z,184nm,1.5s						
BHPL				*e*x	x	13 07 22.5	
JBP	**Jabalpur**	**16.99**	**173**	*e*P	**Pn**	**13 04 24.1**	**-3.8**
JBP				AMB	AMB	13 04 30.8	
	comp=Z,34nm,0.9s						
JBP				*e*x	x	13 07 29.5	
GTA	**Gaotai**	**17.06**	**85**	*e*P	**Pn**	**13 04 26.1**	**-2.7**
GTA				pP	P	13 04 30.6	-0.1
GTA				sP	pP	13 04 33.3	+1.5
GTA				S	**Sn**	**13 07 35.8**	**-3.2**
GTA				sS	S	13 07 42.8	-6.3
GTA				SS		13 07 58.8	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,6.4s						
GTA				LR	LR		
	comp=Z,630nm,10.8s						
GTA				LR	LR		
	comp=Z,880nm,12.4s						
GTA				LR	LR		
	comp=Z,1µm,10.8s						
AKTO	**Aktyubinsk**	**17.21**	**313**	⇓Pn	**Pn**	**13 04 30.6**	**0.0**
	comp=Z,37nm,0.9s						
AKTO	**Aktyubinsk**	**17.21**	**313**	P	**Pn**	**13 04 30.5**	**0.0**
AKTO				pmax	pmax		
	comp=Z,37nm,0.9s						
AKTO	**Aktyubinsk**	**17.21**	**313**	P	**Pn**	**13 04 29.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=126,slow=12,SNR=23						
KNGR	**Kungurtug, Tuv**	**17.42**	**46**	⇓*e*P	**P**	**13 04 36.2**	**+1.5**
BOK	**Bokaro**	**17.67**	**154**	*e*P	Pn	13 04 32.0	-4.4
SHL	**Shillong**	**18.75**	**136**	*e*P	**P**	**13 04 47.3**	**-2.2**
	comp=Z,55nm,1.0s						
SHL	**Shillong**	**18.75**	**136**	*e*P	**P**	**13 04 47.3**	**-2.2**
SHL				pmax	pmax		
	comp=Z,55nm,1.0s						
SHL	**Shillong**	**18.75**	**136**	*e*P	P	13 04 42.2	-7.3
SHL				*e*P	**Pn**	**13 04 50.0**	**+0.2**
SHL				IAmb	IAmb	13 04 55.1	
	comp=Z,164nm,1.8s						
NGP	**Nagpur**	**18.92**	**176**	*e*P	**P**	**13 04 49.0**	**-2.2**
NGP				IAmb	IAmb	13 04 51.7	
	comp=Z,25nm,0.8s						
SVE	**Sverdlovsk**	**20.10**	**332**	*e*P	**Pn**	**13 05 05.4**	**-0.2**
SVE				pmax	pmax		
	comp=Z,27nm,0.9s						
SVE				MLR	MLR		
	comp=Z,2µm,13.0s						
ARU	**Arti**	**20.59**	**329**	*e*P	**P**	**13 05 08.0**	**-1.2**
	comp=Z,22nm,0.7s						
ARU	**Arti**	**20.59**	**329**	*c i*P	**P**	**13 05 10.3**	**+1.1**
ARU						13 05 30.7	
ARU				S	Sn	13 09 03.7	-0.2
ARU				SS	**SnSn**	**13 09 24.6**	**+6.2**
ARU				pmax	pmax		
	comp=Z,14nm,0.8s						
ARU				MLR	MLR		
	comp=Z,366nm,9.0s						
ZAK	**Zakamensk**	**20.68**	**52**	*e*P	**P**	**13 05 10.0**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,17nm,1.2s						
BWNR	**Bhubaneshwar**	**20.93**	**158**	*e*P	P	13 05 08.7	-4.4
BWNR				IAmb	IAmb	13 05 12.3	
	comp=Z,47nm,0.9s						
LZH	**Lanzhou**	**20.97**	**93**	⇑P	**P**	**13 05 14.3**	**+0.6**
LZH				pP	sP	13 05 24.8	+10
LZH				PP	pP	13 05 38.1	+23
LZH				S	**S**	**13 09 03.5**	**-4.6**
LZH				SS	**SnSn**	**13 09 35.3**	**+7.0**
LZH				pmax	pmax		
	comp=Z,44nm,2.1s						
LZH				pmax	pmax		
	comp=Z,210nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,13.6s						
LZH				LR	LR		
	comp=Z,3µm,17.9s						
TLY	**Talaya**	**21.36**	**49**	*e*P	P	13 05 27.3	+10
TLY				*e*S	Sn	13 09 28.1	+5.5
TLY				pmax	pmax		
	comp=Z,19nm,1.1s						
TLY				MLR	MLR		
	comp=Z,1µm,16.0s						
POO	**Poona**	**21.74**	**190**	*e*P	**P**	**13 05 20.0**	**-1.8**
POO				*e*P	**P**	**13 05 21.5**	**-0.4**
POO				IAmb	IAmb	13 05 26.0	
IRK	**Irkutsk**	**21.94**	**48**	*e*P	**P**	**13 05 29.8**	**+6.0**
IRK				pmax	pmax		
	comp=Z,88nm,4.0s						
SONM	**Songino Array**	**22.00**	**60**	P	**P**	**13 05 25.4**	**+0.8**
	comp=Z,12nm,1.0s,baz=261,slow=11,SNR=18						
SONA1	**Songino Array**	**22.01**	**60**	*e*P	**P**	**13 05 23.7**	**-1.0**
HYB	**Hyderabad**	**22.61**	**178**	*i* P	**P**	**13 05 31.0**	**-0.2**
HYB				*e*S	**S**	**13 09 40.0**	**+0.3**
HYB	**Hyderabad**	**22.61**	**178**	*e*P	**P**	**13 05 29.3**	**-1.9**
HYB				IAmb	IAmb	13 05 36.9	
	comp=Z,71nm,1.3s						
MAK	**Makhachkala**	**22.69**	**287**	*e*P	**P**	**13 05 34.9**	**+3.0**
MAK				*e*		13 05 56.5	
MAK				*e*S	**S**	**13 09 44.4**	**+3.5**
MAK				*e*SS	**SnSn**	**13 10 15.0**	**+4.9**
MAK				pmax	pmax		
	comp=Z,77nm,0.8s						
MAK				MLR	MLR		
	comp=Z,1µm,14.0s						
CD2	**Chengdu**	**23.08**	**105**	P	**P**	**13 05 34.3**	**-1.8**
CD2				S	**S**	**13 09 45.1**	**-2.9**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,120nm,4.2s						
CD2				LR	LR		
	comp=Z,1µm,13.7s						
CD2				LR	LR		
	comp=Z,2µm,14.7s						
CD2				LR	LR		
	comp=Z,940nm,15.2s						
WSAR	**Wadi Sarin**	**23.25**	**229**	P	**P**	**13 05 36.7**	**-1.2**
	comp=Z,6.1nm,0.9s,baz=101,slow=9.7,SNR=4.2						
GROC	**Groznyy**	**23.93**	**288**	*e*P	**P**	**13 05 45.3**	**+0.9**
GROC				*e*		13 06 12.6	
GROC				*e*S	**S**	**13 10 02.7**	**+1.1**
GROC				pmax	pmax		
	comp=Z,17nm,0.4s						
BTO	**Baotou**	**24.61**	**78**	*e*P	P	13 05 45.8	-5.0
GNI	**Garni**	**25.09**	**281**	*e*P	**P**	**13 05 55.6**	**+0.3**
	comp=Z,40nm,1.0s						
GNI	**Garni**	**25.09**	**281**	*de*P	**P**	**13 05 59.0**	**+3.8**
GNI				pmax	pmax		
	comp=Z,46nm,1.1s						
GNI	**Garni**	**25.09**	**281**	P	**P**	**13 05 54.5**	**-0.8**
	comp=Z,2.3nm,0.4s,baz=315,slow=20,SNR=1.6						
ZEI	**Tsey**	**25.35**	**287**	*e*P	**P**	**13 05 52.7**	**-4.9**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NCK	**Nalchik**	**25.51**	**289**	⇑*e*P	**P**	**13 05 59.3**	**+0.4**
NCK				pmax	pmax		
	comp=Z,15nm,0.3s						
XAN	**Xi'an**	**25.59**	**94**	P	**P**	**13 05 59.6**	**-0.1**
XAN				pP	sP	13 06 09.8	+8.5
XAN				pmax	pmax		
	comp=Z,18nm,1.4s						
XAN				pmax	pmax		
	comp=Z,230nm,5.9s						
XAN	**Xi'an**	**25.59**	**94**	*e*P	**P**	**13 05 59.7**	**0.0**
	comp=Z,38nm,1.4s						
XAN	**Xi'an**	**25.59**	**94**	*e*P	**P**	**13 05 59.7**	**0.0**
XAN				pmax	pmax		
	comp=Z,38nm,1.4s						
HHC	**Hu-ho-hao-te**	**25.72**	**77**	*e*P	**P**	**13 06 04.8**	**+3.9**
HHC				S	**S**	**13 10 28.3**	**-2.2**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,5.2s						
HHC				LR	LR		
	comp=Z,590nm,14.7s						
HHC				LR	LR		
	comp=Z,570nm,14.7s						
HHC				LR	LR		
	comp=Z,1µm,19.9s						
KMI	**Kunming**	**25.76**	**118**	P	**P**	**13 06 03.1**	**+1.6**
KMI				pmax	pmax		
	comp=Z,17nm,1.3s						
KIRV	**Kirov**	**25.78**	**325**	P	**P**	**13 06 00.6**	**-0.5**
	comp=Z,46nm,0.9s,baz=124,slow=6.1,SNR=15						
KBZ	**Khabaz**	**26.00**	**290**	P	**P**	**13 06 02.5**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=90,slow=5.3,SNR=3.7						
KIV	**Kislovodsk**	**26.14**	**290**	*e*P	**P**	**13 06 07.0**	**+2.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,458nm,15.0s						
NEY	**Neytrino**	**26.17**	**288**	⇓*e*P	**P**	**13 06 08.5**	**+3.5**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GYA	**Guiyang**	**27.66**	**111**	⇑*i*P	**P**	**13 06 19.1**	**+0.5**
GYA				pP	sP	13 06 29.4	+9.2
GYA				PP	**PnPn**	**13 07 08.0**	**+4.3**
GYA				S	**S**	**13 10 57.8**	**-3.6**
GYA				SS	**SnSn**	**13 12 16.0**	**+3.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=Z,550nm,17.0s						
GYA				LR	LR		
	comp=Z,510nm,17.4s						
GYA				LR	LR		
	comp=Z,530nm,17.8s						
CHTO	**Chiang Mai**	**28.03**	**133**	P	**P**	**13 06 21.1**	**-0.6**
	comp=Z,5.3nm,1.0s						
CHTO	**Chiang Mai**	**28.03**	**133**	P	**P**	**13 06 21.1**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CHTO	**Chiang Mai**	**28.03**	**133**	P	**P**	**13 06 25.1**	**+3.4**
	comp=Z,32nm,1.0s						
CMMT	**Chiang Mai**	**28.04**	**133**	P	**P**	**13 06 25.1**	**+3.3**
	comp=Z,7.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**28.32**	**133**	*i* P	**P**	**13 06 26.2**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**28.32**	**133**	P	**P**	**13 06 22.4**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=319,slow=8.8,SNR=8.4						
CM01	**Chiang Mai Arr**	**28.36**	**133**	*e*P	**P**	**13 06 23.7**	**-0.9**
VSR	**Storozhevoye**	**28.79**	**306**	⇑*e*P	**P**	**13 06 27.7**	**-0.5**
VSR				pmax	pmax		
	comp=Z,18nm,1.3s						
PRGR	**Permogore**	**29.05**	**329**	*e*P	**P**	**13 06 26.6**	**-3.8**
PRGR				*e*S	**S**	**13 11 14.0**	**-8.3**
PRGR				pmax	pmax		
	comp=Z,27nm,0.9s						
LPSR	**Galich'ya Gora**	**29.14**	**308**	*e*P	**P**	**13 06 30.3**	**-1.0**
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BOD	**Bodaibo**	**29.25**	**40**	*e*P	**P**	**13 06 33.5**	**+1.3**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.8s						
NRIK	**Noril'sk**	**29.78**	**7**	P	**P**	**13 06 35.1**	**-1.7**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NRIK	**Noril'sk**	**29.78**	**7**	P	**P**	**13 06 35.1**	**-1.7**
	comp=Z,8.8nm,1.0s,baz=194,slow=6.3,SNR=9.6						
ANN	**Anapa**	**29.83**	**292**	*e*P	**P**	**13 06 37.1**	**-0.4**
ANN				*e*		13 07 33.3	
ANN				*e*S	**S**	**13 11 35.0**	**+0.1**
ANN				*e*SS	**SnSn**	**13 13 05.9**	**+1.5**
ANN				pmax	pmax		
	comp=Z,24nm,1.0s						
ANN				MLR	MLR		
	comp=E,91nm,17.0s						
ANN				MLR	MLR		
	comp=N,645nm,17.0s						
ANN				MLR	MLR		
	comp=Z,598nm,17.0s						
PBKT	**Sadao Pong**	**30.97**	**132**	P	**P**	**13 06 50.2**	**+2.4**
	comp=Z,8.2nm,2.6s						
OBN	**Obninsk**	**30.99**	**313**	*e*P	**P**	**13 06 48.8**	**+1.2**
OBN				*e*		13 07 50.6	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
WHN	**Wuhan**	**31.24**	**96**	⇑P	**P**	**13 06 52.3**	**+2.2**
KLMR	**Klimovskoe**	**31.27**	**324**	*e*P	**P**	**13 06 49.4**	**-0.6**
KLMR				*e*		13 07 52.9	
KLMR				pmax	pmax		
	comp=Z,43nm,1.2s						
KLMR	**Klimovskoe**	**31.27**	**324**	*e*P	**P**	**13 06 49.4**	**-0.6**
KLMR				AMP		13 06 55.1	
	comp=Z,43nm,1.2s						
KLMR				*e*PP	**PnPn**	**13 07 52.9**	**+1.2**
TRD	**Trivandrum**	**31.45**	**181**	*e*P	P	13 06 47.5	-4.6
CHAI	**Chaiyaphum**	**32.09**	**132**	P	**P**	**13 07 00.7**	**+3.1**
	comp=Z,3.0nm,0.9s						
SKNT	**Sakolnakorn**	**32.42**	**128**	P	**P**	**13 07 02.1**	**+1.5**
	comp=Z,5.4nm,1.1s						
PALK	**Pallekele**	**32.79**	**174**	*i* P	**P**	**13 07 06.0**	**+2.2**
TMCR	**Tamitsa**	**33.33**	**329**	*e*P	**P**	**13 07 08.9**	**+0.9**
TMCR				pmax	pmax		
	comp=Z,81nm,1.1s						
BR131	**Keskin Array S**	**33.50**	**284**	*e*P	**P**	**13 07 08.0**	**-2.1**
BRTR	**Keskin Array B**	**33.50**	**284**	P	**P**	**13 07 11.0**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=97,slow=8.0,SNR=11						
NJ2	**Nanjing**	**34.01**	**90**	*e*P	**P**	**13 07 15.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AKASG	**Malin Array Be**	**35.04**	**304**	*i* P	**P**	**13 07 23.5**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**35.04**	**304**	P	**P**	**13 07 22.6**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=76,slow=8.4,SNR=15						
AKASG				PP	**PP**	**13 08 42.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=74,slow=10.0,SNR=4.1						
AKBB	**Malin Array Si**	**35.04**	**304**	*e*P	**P**	**13 07 21.6**	**-1.4**
	comp=Z,9.9nm,1.0s						
KIEV	**Kiev**	**35.05**	**304**	*e*P	**P**	**13 07 21.5**	**-1.6**
	comp=Z,10nm,1.1s						
KIEV	**Kiev**	**35.05**	**304**	⇓*i*P	**P**	**13 07 23.5**	**+0.4**
KIEV				pmax	pmax		
	comp=Z,11nm,1.1s						
CN2	**Changchun**	**35.35**	**68**	*e*P	**P**	**13 07 28.4**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JOF	**Joensuu**	**35.63**	**325**	P	**P**	**13 07 28.6**	**+0.6**
JOF				pmax	pmax		
	comp=Z,27nm,0.8s						
ZEA	**Zeya**	**35.77**	**51**	*e*P	**P**	**13 07 31.3**	**+2.0**
LVZ	**Lovozero**	**36.28**	**334**	*e*P	**P**	**13 07 33.1**	**-0.5**
	comp=Z,39nm,1.0s						
LVZ	**Lovozero**	**36.28**	**334**	*d i*P	**P**	**13 07 34.3**	**+0.7**
LVZ				pmax	pmax		
	comp=Z,54nm,1.3s						
APA	**Apatity**	**36.56**	**333**	⇑*i*P	**P**	**13 07 35.8**	**-0.1**
APA				pmax	pmax		

	comp=Z,7.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,2μm,10.0s						
VSU	Vasula	36.88	317⇑	eP	P	13 07 40.9	+2.2
VSU				pmax	pmax		
	comp=Z,13nm,0.5s						
MSF	Maaselka	37.52	330	P	P	13 07 43.8	-0.3
MSF				pmax	pmax		
	comp=Z,10.0nm,1.4s						
FIA1	FINESS Array S	37.66	322	eP	P	13 07 44.6	-0.6
FINES	FINESS Array B	37.66	322	P	P	13 07 45.5	+0.2
	comp=Z,3.3nm,0.5s,baz=103,slow=9.4,SNR=16						
MLR	Muntele Rosu	37.78	296	eP	P	13 07 45.8	-0.9
	comp=Z,10nm,1.1s						
MLR	Muntele Rosu	37.78	296	eP	P	13 07 45.8	-0.9
MLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SUF	Sumiainen	37.87	324	P	P	13 07 47.8	+0.7
SUF				pmax	pmax		
	comp=Z,19nm,1.4s						
BUR04	Bucovina Ar. S	37.93	299	eP	P	13 07 47.0	-0.9
BUR08	Bucovina Ar. S	37.93	299	eP	P	13 07 46.5	-1.4
YAK	Yakutsk	37.98	37	eP	P	13 07 50.3	+2.3
YAK				pmax	pmax		
	comp=Z,38nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,24nm,1.0s						
LVV	L'vov	38.42	303	eP	P	13 07 52.9	+1.0
LVV				e		13 09 21.3	
LVV				MLR	MLR		
	comp=E,600nm,16.0s						
LVV				MLR	MLR		
	comp=Z,500nm,16.0s						
OUL	Oulu	38.53	328	P	P	13 07 52.8	+0.2
OUL				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SUW	Suwalki	38.65	310	P	P	13 07 54.9	+1.1
KLR	Kul'dur	38.80	58	eP	P	13 07 55.8	+0.7
SGF	Sodankyl	38.96	331	P	P	13 07 57.6	+1.4
SGF				pmax	pmax		
	comp=Z,12nm,1.1s						
KWP	Kalwaria Pacla	39.30	303	P	P	13 08 00.3	+1.0
KWP				pmax	pmax		
	comp=Z,13nm,0.9s						
VAF	Ylistaro	39.50	324	P	P	13 08 01.3	+0.6
VAF				pmax	pmax		
	comp=Z,28nm,0.9s						
TRPA	Tarpa	39.63	301	eP	P	13 08 18.1	+16
DRGR		39.75	298	P	P	13 08 04.0	+0.9
DRGR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARCES	ARCESS Array B	40.00	334	eP	P	13 08 04.4	-0.4
ARCES	ARCESS Array B	40.00	334	P	P	13 08 05.2	+0.4
	comp=Z,15nm,0.7s,baz=103,slow=8.5,SNR=74						
ARE0	ARCESS Array S	40.00	334	eP	P	13 08 05.0	+0.2
	comp=Z,1.2nm,0.9s						
ARE0	ARCESS Array S	40.00	334	eP	P	13 08 05.1	+0.2
KLNR	Kaliningrad	40.37	311⇓	eP	P	13 08 11.3	+3.3
KLNR				pmax	pmax		
	comp=Z,198nm,1.4s						
KTK1	Kautokeino	40.60	333	eP	P	13 08 09.8	0.0
BZS	Buzias	40.73	297	P	P	13 08 12.2	+1.0
BZS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NIE	Niedzica	40.88	303	eP	P	13 08 13.6	+1.2
NIE	Niedzica	40.88	303	eP	P	13 08 13.6	+1.2
HAMF	Hammerfest	40.95	336	eP	P	13 08 13.0	+0.3
OJC	Ojcow	41.08	304	eP	P	13 08 16.3	+2.3
OJC	Ojcow	41.08	304	eP	P	13 08 12.6	-1.4
	comp=Z,13nm,1.0s						
OJC	Ojcow	41.08	304	eP	P	13 08 16.3	+2.3
DIVS	Divibare	42.22	295	eP	P	13 08 22.8	-0.8
	comp=Z,20nm,1.3s						
TRO	Tromso	42.24	334	eP	P	13 08 23.2	0.0
MORC	Moravsky Berou	42.59	304	eP	P	13 08 25.3	-1.1
	comp=Z,28nm,1.7s						
MORC	Moravsky Berou	42.59	304	eP	P	13 08 25.3	-1.1
MORC				pmax	pmax		
	comp=Z,28nm,1.7s						
MORC	Moravsky Berou	42.59	304	eP	P	13 08 27.2	+0.8
MORH	Mrgy, Hungar	42.62	298	eP	P	13 08 27.0	+0.4
KSP	Ksiaz	43.18	306	P	P	13 08 34.9	+3.8
VRAC	Vranov	43.28	303	eP	P	13 08 33.6	+1.6
MOR8	Moi Rana	43.40	328	eP	P	13 08 32.2	-0.5
KRUC	Moravsky	43.46	303	P	P	13 08 34.1	+0.7
KRUC				pmax	pmax		
	comp=Z,12nm,2.2s						
KRUC	Moravsky	43.46	303	eP	P	13 08 34.4	+1.0
SOP	Sopron	43.66	301	P	P	13 08 35.7	+0.6
SOP				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CONA	Conrad Observa	44.06	302	eP	P	13 08 40.2	+1.9
	comp=Z,14nm,1.0s						
ARSA	Arzberg	44.45	301	eP	P	13 08 44.3	+2.9
	comp=Z,6.6nm,1.0s						
PRU	Pruhonice	44.45	305	P	P	13 08 42.3	+1.0
PRU				pmax	pmax		
	comp=Z,3.0nm,1.3s						
NC405	NORSAR Array S	44.55	321	eP	P	13 08 41.7	-0.3
BRG	Berggiesshubel	44.64	306	eP	P	13 08 45.2	+2.4
	comp=Z,19nm,1.5s						
BRG	Berggiesshubel	44.64	306	eP	P	13 08 45.2	+2.4
BRG				pmax	pmax		
	comp=Z,19nm,1.5s						
NC303	NORSAR Array S	44.71	321	eP	P	13 08 44.5	+1.2
NB201	NORSAR Array S	44.76	321	eP	P	13 08 44.8	+1.1
NB2	NORSAR Subarra	44.80	321	P	P	13 08 43.0	-1.0
	comp=Z,3.2nm,0.8s,baz=88,slow=7.9						
NB2	NORSAR Subarra	44.80	321	P	P	13 08 43.0	-1.0
	baz=88,slow=7.9						
NOA	NORSAR Array B	44.80	321	P	P	13 08 43.7	-0.3
	comp=Z,8.9nm,0.9s,baz=87,slow=7.9,SNR=10.0						
SOKA	Soboth	44.92	300	eP	P	13 08 46.8	+1.6
	comp=Z,24nm,1.3s						
MOA	Molln	45.12	302	eP	P	13 08 48.3	+1.5
	comp=Z,6.6nm,1.1s						
CLL	Collm	45.13	307	eP	P	13 08 48.0	+1.3
CLL				ePP	PP	13 10 31.0	-0.9
CLL	Collm	45.13	307	eP	P	13 08 48.0	+1.3
GEC2	GERESS Array S	45.24	303	eP	P	13 08 48.6	+0.8
	comp=Z,16nm,1.1s						
GERES	GERESS Array B	45.24	303	P	P	13 08 48.4	+0.6
	comp=Z,4.5nm,0.8s,baz=76,slow=7.0,SNR=19						
GEA0	GERESS Array S	45.24	303	eP	P	13 08 47.7	-0.1
KHC	Kasperske Hory	45.25	304	eP	P	13 08 48.0	+0.2
	comp=Z,6.9nm,1.5s						
KHC	Kasperske Hory	45.25	304	eP	P	13 08 48.5	+0.7
KHC	Kasperske Hory	45.25	304	eP	P	13 08 48.5	+0.7
OBKA	Obir	45.28	300	i P	P	13 08 49.9	+1.7
	comp=Z,15nm,1.2s						
WET	Wettzell	45.69	304	P	P	13 08 51.7	+0.4
PDSI	Padang	45.82	147	P	P	13 08 53.8	+1.2
KBA	Koelnbreinsper	45.93	301	P	P	13 08 52.7	-0.7
MOX	Moxa	46.13	306	P	P	13 08 56.1	+1.4
YSS	Yuzh-Sakhalins	46.48	59⇓	eP	P	13 09 03.9	+6.4
YSS				e		13 09 10.3	
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
ABTA	Abfaltersbach	46.57	301	eP	P	13 08 59.8	+1.5
	comp=Z,13nm,1.3s						
GRF	Grafenberg Arr	46.61	305	P	P	13 08 59.0	+0.5
GRF				pmax	pmax		
	comp=Z,20nm,1.1s						
WTTA	Wattenberg	46.99	302	eP	P	13 09 02.5	+0.8
	comp=Z,10nm,1.3s						
WATA	Walderalm	47.01	302	eP	P	13 09 04.4	+2.6
	comp=Z,7.0nm,1.0s						
SQTA	Sankt Quirin	47.28	302	eP	P	13 09 04.7	+0.8
	comp=Z,10nm,1.1s						
MOTA	Moosalm	47.32	302	i P	P	13 09 05.1	+0.8
	comp=Z,4.5nm,0.6s						
RETA	Reutte	47.50	302	eP	P	13 09 05.9	+0.3
	comp=Z,11nm,0.9s						
FETA	Feichten	47.66	302	eP	P	13 09 07.1	+0.3
	comp=Z,11nm,1.2s						
DAVA	Damuels	48.13	302	eP	P	13 09 11.6	+1.1
	comp=Z,28nm,1.1s						
KKM	Kota Kinabalu	48.42	124	eP	P	13 09 13.8	+0.8
	comp=Z,130nm,1.7s						
VLC	Villacollemand	48.80	298	eP	P	13 09 16.3	+0.7
	comp=Z,28nm,1.2s						
BFO	Black Forest	48.81	304	eP	P	13 09 16.7	+1.1
	comp=Z,46nm,1.9s						
BFO	Black Forest	48.81	304	i P	P	13 09 18.9	+3.3
CDF	Champ du Feu	49.46	304	eP	P	13 09 23.0	+2.4
CDF				pmax	pmax		
	comp=Z,15nm,1.2s						
HINF	Hinteralfeld	49.91	304	eP	P	13 09 24.0	-0.1
HINF				pmax	pmax		
	comp=Z,21nm,1.3s						
SENIN	Lac Senin/Sane	50.10	302	eP	P	13 09 26.2	+0.4
	comp=Z,16nm,1.3s						
HAU	Haudompre	50.17	304	eP	P	13 09 28.3	+2.3
HAU				pmax	pmax		
	comp=Z,22nm,1.4s						
LPG	La Plagne	50.76	301	eP	P	13 09 33.5	+2.7
LPG				pmax	pmax		
	comp=Z,22nm,1.2s						
LPL	La Plagne	50.77	301	eP	P	13 09 31.0	+0.2
LPL				pmax	pmax		
	comp=Z,31nm,1.2s						
SAOF	Saorge	50.77	299	eP	P	13 09 31.7	+1.1
SAOF				pmax	pmax		
	comp=Z,33nm,1.5s						
BNI	Bardonecchia	50.97	300	eP	P	13 09 32.4	+0.2
	comp=Z,30nm,1.2s						
BNI	Bardonecchia	50.97	300	eP	P	13 09 32.4	+0.2
BNI				pmax	pmax		
	comp=Z,30nm,1.2s						
MBDF	Montbardon	51.02	300	eP	P	13 09 35.3	+2.7
MBDF				pmax	pmax		
	comp=Z,17nm,1.2s						
JMIC	Jan Mayen	51.47	335	LR	LR	13 31 35.3	
	comp=Z,395nm,20.1s,baz=353,slow=36						
LOR	Lormes	52.01	304	eP	P	13 09 41.4	+1.6
LOR				pmax	pmax		
	comp=Z,28nm,1.8s						
SMF	Signal de Mont	52.24	303	eP	P	13 09 41.1	-0.5
SMF				pmax	pmax		
	comp=Z,31nm,1.4s						
SSF	Saint Saulge	52.31	304	eP	P	13 09 41.5	-0.5
SSF				pmax	pmax		
	comp=Z,24nm,1.4s						
VIVF	Saint-Julien-l	52.36	301	eP	P	13 09 44.8	+2.3
VIVF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AVF	Avril sur Loir	52.50	304	eP	P	13 09 43.0	-0.5
AVF				pmax	pmax		
	comp=Z,20nm,1.0s						
DAG	Danmarks Havn	52.78	343	i P	P	13 09 44.7	-0.4
	comp=Z,30nm,1.3s						
DAG	Danmarks Havn	52.78	343	i P	P	13 09 44.7	-0.4
DAG				pmax	pmax		
	comp=Z,59nm,1.3s						
BGF	Bois d'Agland	52.91	303	eP	P	13 09 49.4	+2.9
BILL	Bilibino	53.04	28	eP	P	13 09 48.3	+1.2
	comp=Z,10.0nm,1.1s						
BILL	Bilibino	53.04	28⇓	eP	P	13 09 47.8	+0.7
BILL				pmax	pmax		
	comp=Z,12nm,1.3s						
TCF	Toulx Ste Croi	53.42	303	eP	P	13 09 51.1	+0.8
TCF				pmax	pmax		
	comp=Z,60nm,2.0s						
CAF	Calviac	54.05	302	eP	P	13 09 57.5	+2.6
CAF				pmax	pmax		
	comp=Z,28nm,1.4s						
RJF	Les Rejaudoux	54.25	302	eP	P	13 09 59.2	+2.8
RJF				pmax	pmax		
	comp=Z,28nm,1.3s						
LFF	La Frestale	54.90	302	eP	P	13 10 01.9	+0.8
LFF				pmax	pmax		
	comp=Z,14nm,1.0s						
MPSI	Mapaga	55.14	125	P	P	13 10 06.4	+3.3
SGMF	Saint Gilles	55.64	307	eP	P	13 10 08.5	+2.1
SGMF				pmax	pmax		
	comp=Z,55nm,1.6s						
EPF	Esparros	55.96	300	eP	P	13 10 11.9	+3.1
EPF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MRSI	Marisa	56.33	123	P	P	13 10 15.1	+3.5
ETSF	Etsaut	56.62	301	eP	P	13 10 16.0	+2.5
ETSF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BORG	Borgarnes	58.12	330	LR	LR	13 35 22.3	
	comp=Z,908nm,20.1s,baz=333,slow=36						
SUMG	Summit	59.34	342	eP	P	13 10 33.6	+1.0
	comp=Z,31nm,1.4s						
SUMG	Summit	59.34	342	i P	P	13 10 34.9	+2.4
	comp=Z,66nm,1.2s						
SUMG	Summit	59.34	342	i P	P	13 10 34.9	+2.4
SUMG				pmax	pmax		
	comp=Z,66nm,1.2s						
ES19	SONSECA Array	60.32	299	eP	P	13 10 38.4	-1.0
ESDC	Sonseca Array	60.38	299	P	P	13 10 39.0	-0.8
	comp=Z,5.1nm,0.8s,baz=56,slow=7.1,SNR=20						
ESLA	Sonseca Array	60.38	299	eP	P	13 10 39.3	-0.6
	comp=Z,31nm,1.8s						
SANI	Sanana	60.87	121	P	P	13 10 45.8	+2.5
TULEG	Thule	61.72	352	eP	P	13 10 47.7	-0.6
	comp=Z,22nm,1.4s						
TOLK	Toolik Lake Re	66.05	17	eP	P	13 11 16.7	-0.2
	comp=Z,8.2nm,1.0s						
COLD	Coldfoot	67.02	18	eP	P	13 11 23.2	+0.2
	comp=Z,8.8nm,1.2s						
IM3	Indian Mountai	67.08	20	eP	P	13 11 23.0	-0.5
INK	Inuvik	69.42	12	eP	P	13 11 37.5	-0.6
	comp=Z,13nm,1.2s						
INK	Inuvik	69.42	12	eP	P	13 11 37.5	-0.6
INK				pmax	pmax		
	comp=Z,13nm,1.2s						
COLA	College	69.48	19⇓	eP	P	13 11 38.6	+0.1
COLA				pmax	pmax		
	comp=Z,32nm,4.0s						
IL1	Eielson Array	69.81	19	eP	P	13 11 39.1	-1.5
ILAR	Eielson Array	69.81	19	P	P	13 11 39.4	-1.2
	comp=Z,2.1nm,0.9s,baz=326,slow=3.7,SNR=19						
ILB	Eielson Array	69.81	19	eP	P	13 11 40.1	-0.5
TOA0	Torodi Ar. Sit	70.95	271	eP	P	13 11 47.5	-0.9
TORD	Torodi Ar. Bea	70.95	271	P	P	13 11 47.4	-1.0
	comp=Z,9.7nm,0.9s,baz=40,slow=5.3,SNR=25						
HARP	HAARP	72.20	19	eP	P	13 11 55.5	+0.3
	comp=Z,64nm,1.3s						
YKW3	Yellowknife Ar	77.22	6	eP	P	13 12 23.7	-0.5
	comp=Z,6.7nm,1.1s						
YKA	Yellowknife Ar	77.29	6	P	P	13 12 23.4	-1.2
	comp=Z,4.9nm,0.8s,baz=346,slow=5.5,SNR=52						
YKB5	Yellowknife Ar	77.29	6	eP	P	13 12 23.3	-1.3
WRA	Warramunga Arr	79.70	127	i P	P	13 12 38.0	-0.5
WRA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WRA	Warramunga Arr	79.70	127	P	P	13 12 37.8	-0.6
	comp=Z,2.5nm,0.7s,baz=324,slow=5.2,SNR=16						
WRAB	Tennant Creek	79.70	127⇑	iP	P	13 12 37.8	-0.7
WRAB				pmax	pmax		
	comp=Z,13nm,1.7s						
FCC	Fort Churchill	81.27	356	eP	P	13 12 47.1	+0.7
	comp=Z,24nm,1.5s						
FCC	Fort Churchill	81.27	356	eP	P	13 12 47.1	+0.7
FCC				pmax	pmax		
	comp=Z,24nm,1.5s						
ASAR	Alice Springs	82.26	130	P	P	13 12 50.8	-1.3
	comp=Z,2.8nm,0.7s,baz=314,slow=5.2,SNR=27						
AS01	Alice Springs	82.28	130	eP	P	13 12 50.7	-1.5
FFC	Flin Flon	85.56	360	i P	P	13 13 10.0	+1.4
B08A	Colville Reser	90.65	11	eP	P	13 13 34.1	+1.0
	comp=Z,20nm,1.9s						
BOZ	Bozeman (W)	94.29	7	eP	P	13 13 51.3	+1.2
	comp=Z,16nm,1.9s						
BOZ	Bozeman (W)	94.29	7	eP	P	13 13 51.3	+1.2
BOZ				pmax	pmax		
	comp=Z,16nm,1.9s						
PB11	IPOC Station P	145.45	296	ePKPdf	PKPbc	13 20 09.5	+0.3

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*IDC **18** 13:05:08.8±1.7, 5°.77S×153°.34E, h0^{km}, mb3.9/7,*
mb1 4.2/7, mb1mx3.9/37, mbtmp4.0/7, Error ellipse:
s-maj=57.8km s-min=21.0km az=115.0
*NEIC **18** 13:05:10.8±0.9, 5°.75S×153°.18E, h10^{km}, mb4.2/5, Error*
ellipse: s-maj=22.1km s-min=8.6km az=108.0
*ISCJB **18** 13:05:12.6±1.2, 5°.75S±0°.09×153°.2E±0°.2, h32^{km},*
mb3.8/10, Error ellipse: s-maj=28.8km s-min=11.3km
az=14.7

ISC 18 13:05:14.2±1.4, **5°.7S**±0°.1×**153°.1E**±0°.2, **h32**^{km}, **n17,**
σ**1^{s}.02**/17, **mb3.9**/10, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.77	330	ePn	Pn	13 05 41.5	-1.2
COEN	Coen	12.71	229	ePn	Pn	13 08 11.9	-1.0
MTN	Manton Dam	22.75	250	eP	P	13 10 14.9	+0.9
	12nm,1.1s						
WRAB	Tennant Creek	23.03	230	eP	P	13 10 17.2	+0.3
	12nm,1.1s						
WB2	Warramunga Arr	23.04	230	eP	P	13 10 16.9	-0.1
WR1	Warramunga Arr	23.04	230	eP	P	13 10 17.6	+0.6
WRA	Warramunga Arr	23.05	230	P	P	13 10 17.6	+0.6
	5.8nm,1.0s,baz=52,slow=10.0,SNR=19						
AS31	Alice Springs	25.66	224	eP	P	13 10 40.7	-0.6
	1.0nm,0.8s						
ASAR	Alice Springs	25.66	224	P	P	13 10 42.3	+0.9
	2.0nm,0.8s,baz=60,slow=8.9,SNR=21						
STKA	Stephens Creek	28.14	201	eP	P	13 11 02.8	-0.8
	4.3nm,1.4s						
STKA	Stephens Creek	28.14	201	P	P	13 11 03.7	+0.1
	4.6nm,1.1s,baz=8.9,slow=13,SNR=3.1						
FITZ	Fitzroy Crossi	29.46	243	P	P	13 11 16.1	+0.7
	5.0nm,0.6s,baz=73,slow=7.8,SNR=23						
SONA0	Songino Array	67.25	328	eP	P	13 16 06.1	+0.4
SONM	Songino Array	67.25	328	P	P	13 16 06.1	+0.4
	0.3nm,0.5s,baz=139,slow=3.8,SNR=2.4						
MK32	Makanchi Array	81.19	319	eP	P	13 17 28.8	+1.8
MKAR	Makanchi Array	81.19	319	P	P	13 17 28.8	+1.8
	0.3nm,0.7s,baz=108,slow=5.3,SNR=2.9						
ILAR	Eielson Array	82.92	22	P	P	13 17 34.5	-1.1
	0.5nm,0.8s,baz=237,slow=6.2,SNR=3.5						

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*IDC **18** 13:06:40.6±3.9, 15°.47S×177°.16W, h360^{km}±41^{km},*
mb4.0/14, mb1 4.1/15, mb1mx3.8/39, mbtmp4.7/15, Error
ellipse: s-maj=20.6km s-min=11.3km az=168.0
*ISCJB **18** 13:06:43.1±0.2, 15°.59S±0°.06×177°.18W±0°.05, h400^{km},*
mb4.3/89, Error ellipse: s-maj=9.2km s-min=4.7km
az=145.4
*NEIC **18** 13:06:44.1±1.0, 15°.52S×177°.15W, h397^{km}±11^{km},*
mb4.4/75, Error ellipse: s-maj=9.8km s-min=4.5km
az=158.0

ISC 18 13:06:43.8±0.4, **15°.51S**±0°.08×**177°.09W**±0°.07, **h400**^{km},
n152, σ**1^{s}.28**/154, **mb4.4**/89, **7C-6D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	7.71	118	ePn	P	13 08 35.8	-0.2
RAO	Raoul Island	13.70	183	eP	Pn	13 09 42.9	-1.7
MARNC	Mare, Loyalty	15.30	245	eP	P	13 09 58.9	-0.7
	382nm,1.4s						
OUENC	Ouen Island, N	16.67	243	eP	P	13 10 16.4	+2.1
	28nm,0.7s						
DZM	Mont Dzumac	16.89	245	eP	P	13 10 17.6	+0.8
	19nm,0.8s						
DZM	Mont Dzumac	16.89	245	P	P	13 10 18.5	+1.8
	1.3nm,0.3s,baz=299,slow=22,SNR=12						
ONTNC	Ouen Toro	16.96	244	eP	P	13 10 19.5	+2.0
	46nm,1.0s						
RAR	Rarotonga	17.38	112	P	P	13 10 22.1	+0.2
	1.1nm,0.3s,baz=270,slow=2.0,SNR=2.5						
URZ	Urewera	23.23	192	eP	P	13 11 15.7	-1.8
	12nm,0.7s						
URZ	Urewera	23.23	192	P	P	13 11 16.0	-1.5
	9.0nm,0.4s,baz=29,slow=0.8,SNR=22						
LTZ	Lake Taylor	28.67	196	eP	P	13 12 05.0	-0.9
	13nm,0.7s						
OXZ	Oxford	29.24	196	eP	P	13 12 09.5	-1.3
	83nm,2.0s						
RPZ	Rata Peaks	29.87	197	P	P	13 12 14.9	-1.4
	3.2nm,0.5s,baz=356,slow=1.5,SNR=5.2						
FOZ	Fox Glacier	30.08	199	eP	P	13 12 17.7	-0.5
	20nm,0.6s						
CTA	Charters Tower	35.15	257	P	P	13 13 01.9	-0.1
	10nm,0.4s,baz=88,slow=10,SNR=39						
CTAO	Charters Tower	35.15	257	eP	P	13 13 01.9	-0.1
	16nm,0.6s						
COEN	Coen	38.42	267	eP	P	13 13 29.8	+0.5
	19nm,1.3s						
STKA	Stephens Creek	40.91	239	P	P	13 13 49.7	+0.4
	6.1nm,0.7s,baz=80,slow=10,SNR=14						
JAY	Jayapura	43.53	283	P	P	13 14 09.4	-1.0
	10.0nm,0.6s,baz=173,slow=5.5,SNR=5.3						
WB2	Warramunga Arr	46.34	257	eP	P	13 14 32.0	-0.2
WRAB	Tennant Creek	46.34	257	eP	P	13 14 31.6	-0.6
	15nm,0.7s						
WRA	Warramunga Arr	46.35	257	P	P	13 14 32.0	-0.2
	8.6nm,0.5s,baz=83,slow=6.1,SNR=154						
WRA				S	S	13 20 49.9	+0.8
	0.7nm,0.8s,baz=90,slow=15,SNR=5.6						
AS01	Alice Springs	46.65	252	eP	P	13 14 34.5	0.0
AS31	Alice Springs	46.69	252	eP	P	13 14 35.1	+0.2
	29nm,0.5s						
ASAR	Alice Springs	46.69	252	P	P	13 14 35.4	+0.5
	83nm,0.6s,baz=85,slow=8.1,SNR=1271						
ASAR				S	S	13 20 54.0	+0.1
	2.5nm,0.9s,baz=82,slow=16,SNR=12						
MTN	Manton Dam	50.17	266	eP	P	13 15 00.7	-0.4
	17nm,0.4s						
SIJI	Sorong	52.97	281	P	P	13 15 19.8	-1.8
	26nm,0.7s,baz=110,slow=13,SNR=10.0						
FITZ	Fitzroy Crossi	54.70	259	P	P	13 15 34.7	+0.8
	2.0nm,0.3s,baz=117,slow=4.6,SNR=21						
SOEI	Soe	57.37	268	eP	P	13 15 54.1	+1.3
	36nm,0.8s						
BATI	Baumata	57.85	268	P	P	13 15 58.5	+2.5
	15nm,0.5s,baz=164,slow=3.8,SNR=5.2						
PETK	Petropavlovsk-	71.71	344	P	P	13 17 22.8	-0.7
	5.2nm,0.9s,baz=122,slow=9.2,SNR=4.2						
QSPA	South Pole Qui	74.53	180	eP	P	13 17 43.0	+3.2
	10nm,0.8s						
YBH	Yreka Blue Hor	75.88	39	eP	P	13 17 49.1	+1.4
	15nm,1.3s						
MDPB	Devils Postpil	75.89	44	eP	P	13 17 49.2	+1.1
	4.9nm,0.8s						
BEKR	Beckworth	76.27	41	eP	P	13 17 51.2	+1.1
	6.9nm,1.2s						
PNTR	Pine Nut	76.33	42	eP	P	13 17 51.8	+1.3
	8.1nm,0.8s						
YERR	Yerington	76.51	43	eP	P	13 17 52.6	+1.1
	5.1nm,0.6s						
NV01	Mina Array Sit	76.83	44	eP	P	13 17 54.2	+0.9
NVAR	Mina Array Bea	76.83	44	P	P	13 17 54.6	+1.3
	4.5nm,0.8s,baz=227,slow=9.1,SNR=26						
NV11	Mina Array Sit	76.93	44	eP	P	13 17 54.8	+1.0
	0.6nm,1.1s						
KVN	Kaiserville	77.30	43	eP	P	13 17 56.7	+0.9
	9.2nm,1.2s						
TPNV	Topopah Spring	77.46	46	eP	P	13 17 57.6	+1.0
	5.2nm,0.8s						
Y14A	Wickenburg	78.31	50	eP	P	13 18 02.7	+1.4
	3.0nm,0.8s						
R11A	Troy Canyon, C	78.62	45	eP	P	13 18 04.1	+1.1
	3.3nm,1.1s						
WVOR	Wild Horse Val	78.77	40	eP	P	13 18 04.7	+1.0
	19nm,1.8s						
I07A	Izee	79.16	38	eP	P	13 18 06.7	+1.1
	4.6nm,0.8s						
TUC	Tucson	79.24	52	eP	P	13 18 08.4	+2.1
	4.4nm,0.7s						
J08A	Circle Bar Ran	79.38	39	eP	P	13 18 07.5	+0.6
	6.7nm,1.2s						
X16A	Lo Mia Camp, P	79.69	50	eP	P	13 18 10.6	+1.8
	1.9nm,0.7s						
CCUT	Cedar City	79.76	46	eP	P	13 18 10.7	+1.5
	2.6nm,0.8s						
PSUT	Pine Spring	79.89	45	eP	P	13 18 10.9	+1.1
	3.2nm,0.7s						
319A	Douglas	80.00	54	eP	P	13 18 12.1	+1.6
	11nm,1.0s						
ELK	Elko	80.05	43	eP	P	13 18 11.8	+1.1
	3.6nm,1.0s						
G08A	Pilot Rock	80.15	37	eP	P	13 18 12.0	+1.1
	32nm,1.9s						
E07A	Sunnyside	80.35	36	eP	P	13 18 12.1	+0.3
	5.8nm,0.8s						
HAWA	Hanford	80.44	36	eP	P	13 18 12.6	+0.4
	5.6nm,0.8s						
PKCU	Pink Cliffs	80.44	47	eP	P	13 18 15.3	+2.4
	8.9nm,1.2s						
MTPU	Mount Pierson	80.81	46	eP	P	13 18 16.2	+1.3
	16nm,1.7s						
BMO	Blue Mountains	80.89	38	eP	P	13 18 15.3	+0.5
	3.8nm,1.0s						
MSU	Marysvale	81.04	46	eP	P	13 18 16.3	+0.5
CAST	Castle Rocks	81.04	11	eP	P	13 18 13.7	-1.4
	34nm,2.0s						
DUG	Dugway, Tooele	81.40	44	eP	P	13 18 18.6	+1.0
	5.1nm,1.1s						
F10A	Beach Ranch, E	81.54	38	eP	P	13 18 18.6	+0.4

	6.3nm,0.7s						
HLID	**Hailey**	82.00	41	*e*P	P	13 18 21.9	+1.2
	7.6nm,0.8s						
TMUT	**Trail Mountain**	82.07	46	*e*P	P	13 18 22.9	+1.6
	10.0nm,0.8s						
MPU	**Maple Canyon**	82.11	45	*e*P	P	13 18 22.7	+1.4
	4.5nm,1.0s						
SPUT	**South Promonto**	82.17	43	*e*P	P	13 18 22.6	+1.1
	8.3nm,1.2s						
HVU	**Hansel Valley**	82.18	43	*e*P	P	13 18 22.9	+1.3
	7.1nm,0.9s						
CTU	**Camp Tracy**	82.34	44	*e*P	P	13 18 23.0	+0.5
	7.4nm,1.0s						
SRU	**San Rafael Swe**	82.46	46	*e*P	P	13 18 24.3	+1.2
	10nm,0.8s						
JLU	**Jordanelle**	82.51	44	*e*P	P	13 18 24.0	+0.6
	6.0nm,0.8s						
MLY	**Manley**	82.76	11	*e*P	P	13 18 23.0	-0.9
	3.7nm,0.7s						
WRH	**Wood River Hil**	82.77	12	*e*P	P	13 18 23.5	-0.4
	41nm,1.9s						
TCUT	**Toone Canyon**	82.77	44	*e*P	P	13 18 26.0	+1.3
	29nm,0.7s						
HDA	**Harding Lake**	82.95	13	*e*P	P	13 18 24.4	-0.4
	7.6nm,0.7s						
IM3	**Indian Mountai**	83.12	9	*e*P	P	13 18 25.8	+0.2
MNTX	**Cornudas Mount**	83.17	55	*e*P	P	13 18 27.3	+0.6
	8.4nm,1.3s						
COLA	**College**	83.18	12	*e*P	P	13 18 25.5	-0.4
	17nm,0.6s						
MDM	**Murphy Dome**	83.18	12	*e*P	P	13 18 25.4	-0.5
	8.9nm,1.1s						
SCRK	**Sand Creek**	83.24	14	*e*P	P	13 18 26.4	-0.1
	27nm,1.9s						
IL1	**Eielson Array**	83.28	13	*e*P	P	13 18 25.7	-0.8
ILAR	**Eielson Array**	83.28	13	P	P	13 18 26.0	-0.5
	5.7nm,0.8s,baz=211,slow=5.4,SNR=58						
ILB	**Eielson Array**	83.28	13	*e*P	P	13 18 25.9	-0.5
MCMT	**McKenzie Canyo**	83.61	40	*e*P	P	13 18 29.1	+0.2
ANMO	**Albuquerque**	83.62	51	*e*P	P	13 18 29.6	+0.4
	5.7nm,1.0s						
TXAR	**Lajitas Array**	83.65	57	P	P	13 18 31.9	+2.7
	4.7nm,0.7s,baz=220,slow=6.9,SNR=54						
DLMT	**Dillon**	84.02	40	*e*P	P	13 18 31.8	+1.0
	4.7nm,0.7s						
TPAW	**Teton Pass**	84.17	42	*e*P	P	13 18 32.0	+0.2
	6.3nm,0.9s						
REDW	**Red Top Meadow**	84.18	42	*e*P	P	13 18 32.3	+0.6
	9.0nm,1.0s						
BILL	**Bilibino**	84.19	354	*e*P	P	13 18 30.6	-0.4
	11nm,1.3s						
FXWY	**Fox Creek**	84.19	42	*e*P	P	13 18 32.8	+0.9
	4.9nm,1.0s						
SNOW	**Snow King Moun**	84.29	42	*e*P	P	13 18 33.7	+1.4
	9.3nm,0.9s						
IMW	**Indian Meadow**	84.37	42	*e*P	P	13 18 33.9	+1.1
	8.3nm,0.9s						
MOOW	**Moose Ponds**	84.42	42	*e*P	P	13 18 33.6	+0.6
	3.0nm,1.0s						
DAWY	**Dawson**	84.45	16	*e*P	P	13 18 32.7	+0.3
	5.5nm,0.8s						
QLMT	**Earthquake Lak**	84.49	41	*e*P	P	13 18 34.8	+1.5
YHB	**Horse Butte**	84.60	41	*e*P	P	13 18 34.8	+0.9
	11nm,0.9s						
FLWY	**Flagg Ranch**	84.61	42	*e*P	P	13 18 35.0	+1.2
	7.1nm,0.9s						
YMR	**Madison River**	84.71	41	*e*P	P	13 18 36.1	+1.8
	7.9nm,0.8s						
BOZ	**Bozeman (W)**	84.73	40	*e*P	P	13 18 35.6	+1.2
	9.9nm,1.3s						
BW06	**Boulder Array**	84.75	43	*e*P	P	13 18 35.1	+0.5
	2.9nm,0.7s						
PD31	**Pinedale Array**	84.75	43	*e*P	P	13 18 35.2	+0.6
PDAR	**Pinedale Array**	84.75	43	*e*P	P	13 18 35.0	+0.4
PDAR	**Pinedale Array**	84.75	43	P	P	13 18 35.1	+0.6
	1.8nm,0.6s,baz=214,slow=3.7,SNR=23						
YHH	**Holmes Hill**	84.84	41	*e*P	P	13 18 36.0	+0.9
	6.0nm,1.2s						
HRY	**Holter Researc**	85.14	39	*e*P	P	13 18 37.2	+0.9
RLMT	**Red Lodge**	85.99	41	*e*P	P	13 18 42.1	+1.5
	12nm,1.1s						
HHC	**Hu-ho-hao-te**	86.52	314	*e*P	P	13 18 42.9	-0.2
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,5.2s						
RSSD	**Black Hills**	88.97	44	*e*P	P	13 18 54.6	-0.1
	comp=Z,6.7nm,0.8s						
LZH	**Lanzhou**	90.44	307	*e*P	P	13 19 02.6	+1.0
LZH				pP	pP	13 20 32.6	-0.7
LZH				sP	sP	13 21 12.4	-2.0
LZH				PP	PP	13 22 44.8	+1.8
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
LZH				pmax	pmax		
	comp=Z,890nm,4.3s						
YKA	**Yellowknife Ar**	91.64	24	P	P	13 19 06.4	+0.1
	comp=Z,0.4nm,0.7s,baz=241,slow=4.7,SNR=6.0						
MKAR	**Makanchi Array**	108.37	315	PKiKP	PKiKP	13 24 25.6	+0.1
	comp=Z,0.3nm,0.5s,baz=76,slow=1.4,SNR=5.3						
ARCES	**ARCESS Array B**	124.18	351	PKP	PKiKP	13 24 55.8	+0.4
	comp=Z,3.1nm,0.6s,baz=19,slow=1.1,SNR=28						
FINES	**FINESS Array B**	131.22	345	PKP	PKiKP	13 25 09.8	+0.1
	comp=Z,0.6nm,0.4s,baz=48,slow=2.8,SNR=7.4						
BURAR	**Bucovina Array**	143.05	335	⇓*i*P	PKiKP	13 25 33.4	-1.0
CLL	**Collm**	143.38	349	*e*PKPdf	PKPdf	13 25 31.0	-0.3
TRPA	**Tarpa**	143.67	338	⇓*i*P	PKPdf	13 25 31.0	-0.9
ARCR	**ARCALIA**	143.82	335	⇓*i*P	PKPdf	13 25 32.1	-0.1
BR131	**Keskin Array S**	143.93	318	*e*PKPdf	PKPdf	13 25 32.4	-0.4
BRTR	**Keskin Array B**	143.93	318	PKP	PKPdf	13 25 32.5	-0.4
	comp=Z,4.1nm,0.8s,baz=78,slow=2.1,SNR=20						
CEI	**Carei**	144.07	337	⇑*i*P	PKPab	13 25 14.6	-17
DOPR	**Dopca**	144.27	333	⇑*i*P	PKiKP	13 25 34.0	-2.8
MLR	**Muntele Rosu**	144.38	332	PKP	PKPdf	13 25 33.3	-0.1
	comp=Z,3.4nm,0.6s,baz=339,slow=9.7,SNR=6.8						
ISR	**Istrita**	144.39	331	⇑*i*P	PKPdf	13 25 32.7	-0.6
VRAC	**Vranov**	144.49	345	⇑*i*P	PKiKP	13 25 33.7	-3.5
VYHS	**Vyhne**	144.60	342	*e*PKP	PKiKP	13 25 34.1	-3.3
DRGR		144.72	336	⇑*i*P	PKPab	13 25 34.2	+0.1
VOIR		144.83	333	⇑*i*P	PKiKP	13 25 35.9	-2.2
ARR	**Arges**	145.07	333	⇓*i*P	PKiKP	13 25 36.7	-1.8
MODS	**Modra-Piesok**	145.16	343	*e*PKP	PKiKP	13 25 36.6	-2.0
KHC	**Kasperske Hory**	145.35	348	*e*PKPdf	PKiKP	13 25 36.4	-2.6
KHC	**Kasperske Hory**	145.35	348	*e*PKP	PKiKP	13 25 36.7	-2.3
GERES	**GERESS Array B**	145.60	347	PKPbc	PKiKP	13 25 37.0	-2.6
	comp=Z,1.7nm,0.5s,baz=24,slow=4.2,SNR=15						
GEA0	**GERESS Array S**	145.61	347	*e*PKPdf	PKPab	13 25 36.7	-0.8
GZR	**Gura Zlata**	145.84	335	⇓*i*P	PKiKP	13 25 38.0	-2.1
CONA	**Conrad Observa**	145.95	344	*i* PKPab	PKiKP	13 25 39.0	-1.3
	comp=Z,5.1nm,1.0s						
BZS	**Buzias**	146.12	336	⇓*i*P	PKiKP	13 25 38.7	-1.9
HERR	**Herculane**	146.40	335	⇑*i*P	PKiKP	13 25 39.4	-1.8
MOA	**Molln**	146.41	346	*i* PKPab	PKiKP	13 25 40.0	-1.2
	comp=Z,3.0nm,0.5s						
SOKA	**Soboth**	147.32	344	*i* PKPbc	PKiKP	13 25 41.9	-1.3
	comp=Z,4.6nm,1.0s						
KBA	**Koelnbreinsper**	147.35	347	*i* PKPbc	PKiKP	13 25 41.9	-1.5
	comp=Z,3.7nm,0.6s						
RETA	**Reutte**	147.46	350	*i* PKiKP	PKPab	13 25 42.6	-2.2
	comp=Z,3.7nm,0.9s						
WTTA	**Wattenberg**	147.52	349	*i* PKiKP	PKPab	13 25 43.0	-2.2
	comp=Z,5.6nm,0.6s						
MOTA	**Moosalm**	147.54	350	*i* PKiKP	PKiKP	13 25 42.8	-0.9
	comp=Z,4.4nm,0.8s						
OBKA	**Obir**	147.60	345	*i* PKiKP	PKPab	13 25 43.4	-2.0
	comp=Z,11nm,1.2s						
SQTA	**Sankt Quirin**	147.64	349	*i* PKiKP	PKiKP	13 25 43.0	-0.8
	comp=Z,5.6nm,0.9s						
MYKA	**Terra Mystica**	147.71	346	*i* PKPbc	PKiKP	13 25 42.6	-1.4
	comp=Z,8.1nm,1.0s						
DAVA	**Damuels**	147.79	351	*i* PKiKP	PKiKP	13 25 43.3	-1.0
	comp=Z,3.8nm,0.7s						
ABTA	**Abfaltersbach**	147.84	348	*i* PKPbc	PKiKP	13 25 43.1	-1.1
	comp=Z,8.2nm,0.9s						
DAVOX	**Davos/Dischmat**	148.29	351	PKPbc	PKiKP	13 25 44.7	-0.6
	comp=Z,5.9nm,0.6s,baz=335,slow=3.4,SNR=9.6						
FUORN	**Ofenpass-Fuorn**	148.38	350	*e*PKPbc	PKiKP	13 25 45.5	-0.1
BNI	**Bardonecchia**	150.38	355	*e*PKPbc	PKiKP	13 25 50.4	+0.8

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*ISCJB **18** 13:13:45.5±0.3, 9.°25N±0.°04×69.°75W±0.°04, h7km, mb4.1/15, MS5.0/2, Error ellipse: s-maj=6.8km s-min=3.3km az=43.4*

*IDC **18** 13:13:46.3±0.8, 9.°22N×69.°84W, h0km, mb3.8/8, mb1 4.2/11, mb1mx3.9/47, mbtmp3.9/11, ML3.7/3, MS3.4/1, Ms1 3.4/1, ms1mx3.0/34, Error ellipse: s-maj=17.7km s-min=9.7km az=145.0*

*NEIC **18** 13:13:47.7±0.4, 9.°17N×69.°75W, h10km, mb4.6/7, Error ellipse: s-maj=7.7km s-min=4.9km az=130.0*

ISC 18 13:13:46.9±0.6**, 9.°21N**±0.°05×**69.°77W**±0.°05**, h7km, n74, σ1.°55**/87**, mb4.3**/15**, 2C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDV	**Santo Domingo**	0.92	249	*e*Pg	Pg	13 14 03.5	-1.0
SDV				Lg	Lg	13 14 14.1	
SDV	**Santo Domingo**	0.92	249	*e*P	Pg	13 14 02.9	-1.6
SDV				*e*S	Sg	13 14 14.2	-2.3
SDV	**Santo Domingo**	0.92	249	*e*P	Pg	13 14 02.9	-1.6
SDV				*e*S	Sg	13 14 14.2	-2.3
SDV	**Santo Domingo**	0.92	249	Pg	Pg	13 14 03.2	-1.4
	270nm,0.3s,baz=116,slow=2.4,SNR=1000						
SDV				Lg	Lg	13 14 14.1	
	830nm,0.3s,baz=318,slow=19,SNR=91						
TAMC	**Tame, Arauca**	3.41	216	*e*P	Pn	13 14 41.7	+1.1
TAMC	**Tame, Arauca**	3.41	216	*e*P	Pn	13 14 41.7	+1.1
PAMC	**Pamplona, Colo**	3.45	238	⇑*i*P	Pn	13 14 42.6	+1.0
PAMC				*e*S	Sb	13 15 31.9	+1.0
PAMC				*i*		13 15 37.2	
	comp=N,1µm,0.4s						
PAMC	**Pamplona, Colo**	3.45	238	⇑*i*P	Pn	13 14 42.6	+1.0
PAMC				*e*S	Sb	13 15 31.9	+1.0
PAMC				*i*		13 15 37.2	
	comp=N,1µm,0.4s						
OCAC	**Ocana**	3.64	255	*e*P	Pn	13 14 45.4	+1.5
OCAC				*e*S	Sb	13 15 38.2	+1.9
OCAC				*i*		13 15 46.0	
	comp=N,8µm,0.7s						
OCAC	**Ocana**	3.64	255	*e*P	Pn	13 14 45.4	+1.5
OCAC				*e*S	Sb	13 15 38.2	+1.9
OCAC				*i*		13 15 46.0	
	comp=N,8µm,0.7s						
CODC	**Agustn Codazz**	3.70	282	*e*P	Pn	13 14 45.2	+0.6
CODC				*e*S	Sn	13 15 28.1	-0.3
CODC				*i*		13 15 31.2	
	comp=N,483nm,0.4s						
CODC	**Agustn Codazz**	3.70	282	*e*P	Pn	13 14 45.2	+0.6
CODC				*e*S	Sn	13 15 28.1	-0.3
CODC				*i*		13 15 31.2	
	comp=N,483nm,0.4s						
BARC	**Barichara**	4.27	233	*e*P	Pn	13 14 53.8	+1.2
BARC				*i*		13 16 04.8	
	comp=Z,478nm,0.5s						
BARC	**Barichara**	4.27	233	*e*P	Pn	13 14 53.8	+1.2
BARC				*i*		13 16 04.8	
	comp=Z,478nm,0.5s						
SMLC	**San Martn de**	4.27	265	*e*P	Pn	13 14 53.2	+0.7
SMLC	**San Martn de**	4.27	265	*e*P	Pn	13 14 53.2	+0.7
BRRC	**Barranca, Sant**	4.43	242	*e*P	Pn	13 14 56.2	+1.5
BRRC				*i*		13 16 17.8	
	comp=N,361nm,0.5s						
BRRC	**Barranca, Sant**	4.43	242	*e*P	Pn	13 14 56.2	+1.5
BRRC				*i*		13 16 17.8	
	comp=N,361nm,0.5s						
RUSC	**La Rusia**	4.66	225	*e*P	Pn	13 14 58.5	+0.4
RUSC	**La Rusia**	4.66	225	*e*P	Pn	13 14 58.5	+0.4
SMRC	**Santa Marta, M**	4.80	294	*e*P	Pn	13 14 59.5	-0.2
SMRC	**Santa Marta, M**	4.80	294	*e*P	Pn	13 14 59.5	-0.2
PTBC	**PUERTO BERRIO,**	5.35	241	*e*P	Pn	13 15 06.7	-0.6
PTBC	**PUERTO BERRIO,**	5.35	241	*e*P	Pn	13 15 06.7	-0.6
CHIC	**Chingaza**	6.02	221	*e*P	Pn	13 15 16.5	-0.3
CHIC				*e*S	Sn	13 16 23.4	-2.8
CHIC	**Chingaza**	6.02	221	*e*P	Pn	13 15 16.5	-0.3
CHIC				*e*S	Sn	13 16 23.4	-2.8
ROSC	**El Rosal**	6.27	226	*e*Pn	Pn	13 15 19.8	-0.5
ROSC				Sn	Sn	13 16 34.1	+1.7
ROSC				Lg	Lg	13 17 05.6	
ROSC	**El Rosal**	6.27	226	*e*P	Pn	13 15 23.5	+3.3
ROSC	**El Rosal**	6.27	226	*e*P	Pn	13 15 23.5	+3.3
ROSC	**El Rosal**	6.27	226	Pn	Pn	13 15 21.2	+1.0
	comp=N,18nm,0.3s,baz=62,slow=18,SNR=45						
ROSC				Sn	Sn	13 16 34.1	+1.7
	comp=N,5.8nm,0.3s,baz=195,slow=20,SNR=1.8						
ROSC				Lg	Lg	13 17 05.6	
	comp=N,7.1nm,0.3s,baz=37,slow=20,SNR=2.2						
HELC	**Santa Helena**	6.45	243	*e*P	Pn	13 15 23.8	+1.0
HELC	**Santa Helena**	6.45	243	*e*P	Pn	13 15 23.8	+1.0
BANI	**BANI**	9.14	356	*e*Pn	Pn	13 15 59.8	+0.3
ICMP	**Isla Caja de M**	9.18	20	*e*Pn	Pn	13 15 59.9	0.0
SVB	**Belmont**	9.28	63	*e*Pn	Pn	13 16 01.3	+0.1
OBIP	**Obispado Ponce**	9.30	19	*e*Pn	Pn	13 16 00.5	-1.1
MPR	**Mayaguez**	9.30	16	*e*Pn	Pn	13 16 01.3	-0.3
AGP	**Aguadilla**	9.49	15	*e*Pn	Pn	13 16 04.1	-0.1
SJG	**San Juan**	9.52	21	Pn	Pn	13 16 05.3	+0.8
	comp=N,22nm,0.3s,baz=194,slow=12,SNR=15						
SJG				Sn	Sn	13 17 48.5	-3.4
	comp=N,7.8nm,0.3s,baz=30,slow=19,SNR=6.5						
HUMP	**Col San Antoni**	9.66	23	*e*Pn	Pn	13 16 07.2	+0.8
EMPR	**Esperanza - Ma**	9.73	18	*e*Pn	Pn	13 16 08.5	+1.1
MTP	**Monte Pirata**	9.73	24	*e*Pn	Pn	13 16 08.6	+1.1
CBYP	**Canovanas**	9.77	22	*e*Pn	Pn	13 16 08.7	+0.6
SDDR	**Presa de Saban**	9.82	352	*e*Pn	Pn	13 16 11.0	+2.3
BCIP	**Isla Barro Col**	9.94	271	*e*Pn	Pn	13 16 10.9	+0.6
CUPR	**Culebra, Puert**	10.04	25	*e*Pn	Pn	13 16 12.8	+1.2
FDF	**Fort de France**	10.06	56	*e*Pn	Pn	13 16 12.3	+0.3
STVI	**Saint Thomas**	10.22	27	*e*Pn	Pn	13 16 15.2	+1.1
PTLC	**Puerto Leguiza**	10.28	209	*e*P	Pn	13 16 17.6	+2.5
PTLC	**Puerto Leguiza**	10.28	209	*e*P	Pn	13 16 17.6	+2.5
PTGA	**Pitinga**	13.89	135	Pn	Pn	13 17 04.1	-0.3
	comp=N,0.4nm,0.3s,baz=313,slow=19,SNR=6.3						
ATAH	**Atahualpa**	18.37	208	P	P	13 18 03.2	+0.3
	comp=N,0.7nm,0.3s,baz=63,slow=10.0,SNR=7.1						
ATAH				LR	LR	13 26 35.9	
	comp=N,136nm,22.0s,slow=42						
LPAZ	**La Paz**	25.39	176	P	P	13 19 17.1	+1.3
	comp=N,2.9nm,0.7s,baz=355,slow=9.0,SNR=9.1						
FVM	**French Village**	34.16	330	*e*P	P	13 20 34.9	+2.0
	comp=N,13nm,0.9s						
TXAR	**Lajitas Array**	37.53	307	P	P	13 21 02.0	0.0
	comp=N,0.2nm,0.7s,baz=118,slow=7.6,SNR=3.8						
ULM	**Lac du Bonnet**	46.28	337	P	P	13 22 13.8	+0.7
	comp=N,2.0nm,0.7s,baz=173,slow=10,SNR=3.4						
BW06	**Boulder Array**	48.22	321	*e*P	P	13 22 30.2	+1.5
	comp=N,5.3nm,1.2s						
PD31	**Pinedale Array**	48.22	321	*e*P	P	13 22 30.4	+1.6
PDAR	**Pinedale Array**	48.22	321	*e*P	P	13 22 30.3	+1.6
PDAR	**Pinedale Array**	48.22	321	P	P	13 22 29.1	+0.4
	comp=N,1.1nm,0.6s,baz=112,slow=11,SNR=5.6						
NLU	**North Lily Min**	48.48	316	*e*P	P	13 22 30.7	+0.1
	comp=N,14nm,1.9s						
PSUT	**Pine Spring**	49.09	314	*e*P	P	13 22 38.0	+2.6
	comp=N,2.9nm,0.9s						
LOHW	**Long Hollow**	49.32	321	*e*P	P	13 22 39.1	+2.0
	comp=N,30nm,2.0s						
FXWY	**Fox Creek**	49.59	321	*e*P	P	13 22 40.1	+0.9
	comp=N,5.8nm,1.3s						
MCMT	**McKenzie Canyo**	51.33	321	*e*P	P	13 22 53.5	+1.1
NVAR	**Mina Array Bea**	52.28	312	P	P	13 23 00.3	+0.8
	comp=N,0.5nm,0.6s,baz=115,slow=6.1,SNR=3.1						
C09A	**Chrisman Ranch**	56.05	322	*e*P	P	13 23 26.5	-0.1
	comp=N,4.3nm,0.9s						
YKA	**Yellowknife Ar**	62.23	338	P	P	13 24 08.6	-0.5
	comp=N,1.0nm,0.6s,baz=123,slow=7.1,SNR=12						
TORD	**Torodi Ar. Bea**	70.02	79	P	P	13 25 01.8	+1.7
	comp=N,0.9nm,0.9s,baz=304,slow=3.4,SNR=4.8						
ILAR	**Eielson Array**	76.23	335	P	P	13 25 36.1	+0.2
	comp=N,0.4nm,0.8s,baz=90,slow=4.6,SNR=4.0						
WMQ	**Urumqi**	123.39	19	*e*P	PKPdf	13 32 44.8	-0.5
WMQ				LR	LR		
	comp=N,460nm,25.3s						
WMQ				LR	LR		
	comp=E,730nm,23.5s						
WMQ				LR	LR		
	comp=Z,660nm,25.3s						
LZH	**Lanzhou**	134.54	7	*e*PKP	PKPdf	13 33 01.1	-5.8
LZH				pPKP	sPKPdf	13 33 11.1	+0.8
LZH				sPKP		13 33 13.4	
LZH				LR	LR		
	comp=N,130nm,17.9s						
LZH				LR	LR		
	comp=E,130nm,18.1s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
ASAR	**Alice Springs**	153.19	235	PKPbc	PKPbc	13 33 44.6	-2.0
	comp=Z,0.5nm,0.9s,baz=114,slow=2.3,SNR=4.4						
WRA	**Warramunga Arr**	154.38	243	PKPbc	PKPbc	13 33 48.4	-0.8
	comp=Z,0.2nm,0.4s,baz=107,slow=2.8,SNR=5.6						

IDC 18 13:23:42.1±989.0**, 56.°34N**×**2.°24E, h0km, Error ellipse: s-maj=422.3km s-min=173.6km az=117.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	10.23	132	*i*		14 25 00.0	
	baz=322,slow=339,SNR=1.2						
I43RU	**DUBNA INFRASON**	19.17	74	*i*		15 22 10.0	
	baz=287,slow=336,SNR=0.4						
I31KZ	**AKTYUBINSK INF**	33.01	76	*i*		16 50 40.0	
	baz=300,slow=347,SNR=0.3						

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*IDC **18** 13:33:45.7±1.0, 39.°94N×77.°67E, h0km, mb3.6/7, mb1 3.7/13, mb1mx3.5/42, mbtmp3.6/13, ML3.1/6, Error ellipse: s-maj=18.3km s-min=14.0km az=70.0*

*BJI **18** 13:33:46.1, 40.°14N×77.°78E, h8km, mb3.9/9, ML3.9/9, Ms3.6/1, Ms7 3.6/1*

*SOME **18** 13:33:47.3, 40.°10N×77.°70E, h10km*

*KRNET **18** 13:33:49.5±0.1, 40.°16N×77.°48E, mb4.2*

*NNC **18** 13:33:49.5±1.0, 40.°20N×77.°65E, h0km, mb4.6, mpv4.3, Error ellipse: s-maj=8.6km s-min=4.7km az=146.0*

ISC 18 13:33:48.5±2.0**, 40.°00N**±0.°04×**77.°77E**±0.°03**, h14km**±13km**, n87, σ1.°43**/126**, mb3.6**/7**, 36C-23D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	1.46	251	Pg	Pg	13 34 22.1	+5.4
KSH				Sg	Sg	13 34 47.1	+11
KSH				smax	smax		
	comp=N,4µm,0.5s						
KSH				smax	smax		
	comp=E,3µm,0.6s						
NRN	**Naryn**	1.97	317	⇑*i*P	Pn	13 34 20.9	-0.9
	baz=18						
NRN				⇑*i*S	Sn	13 34 44.2	-2.2
	baz=18						
KDJ	**Kajisay**	2.18	348	⇑*i*P	Pn	13 34 26.1	+1.6
	baz=54						
KDJ				⇑*i*S	Sn	13 34 53.0	+1.6
	baz=54						
ULHL	**Ulahol**	2.52	333	P	Pn	13 34 30.9	+1.5
	SNR=228						
ULHL	**Ulahol**	2.52	333	⇑*i*P	Pn	13 34 30.4	+1.0
	baz=36						
ULHL				⇑*i*S	Sn	13 35 00.3	+0.2
	baz=36						
PRZ	**Przheval'sk**	2.53	11	⇑*i*P	Pn	13 34 31.8	+2.4
	baz=17						
PRZ				⇑*i*S	Sn	13 35 03.2	+3.1
	baz=17						
KZA	**Kyzart**	2.82	318	P	Pn	13 34 34.5	+0.9
	SNR=315						
KZA	**Kyzart**	2.82	318	⇓*i*P	Pn	13 34 34.3	+0.7
	baz=19						
KZA				⇓*i*S	Sn	13 35 06.7	-0.9
	baz=19						
BOOM	**Boomskoye usch**	2.85	332	⇑*e*P	Pn	13 34 34.9	+1.2
	baz=34						
BOOM				⇑*e*S	Sn	13 35 07.8	-0.1
	baz=34						
SATY	**Saty**	3.10	9	*e*P	Pb	13 34 42.2	-1.2
	625nm,0.9s						
SATY				*e*S	Sb	13 35 21.4	+0.3
	303nm,0.8s						
TNSS	**Tian-Shan**	3.10	349	*e*P	Pb	13 34 42.0	-1.7
	705nm,0.6s						
TNSS				*e*S	Sb	13 35 21.1	-0.4
	228nm,0.8s						
IZV	**Izvestkoviy**	3.16	344	Pg	Pb	13 34 43.0	-1.5
	271nm,0.5s						
IZV				Lg	Lg	13 35 23.8	
	263nm,0.6s						
IZV	**Izvestkoviy**	3.16	344	*e*P	Pb	13 34 42.9	-1.7
	271nm,0.5s						
IZV				*e*S	Sb	13 35 23.0	+0.1
	263nm,0.6s						
ARLS	**Aral**	3.21	307	⇑*e*P	Pn	13 34 39.4	+0.7
	baz=7.0						
ARLS				⇑*i*S	Sn	13 35 15.4	-1.4
	baz=7.0						
MDOK	**Medeo**	3.21	351	⇓Pg	Pn	13 34 43.3	+4.6
	254nm,0.5s						
MDOK				Lg	Lg	13 35 25.0	
	322nm,0.8s						
MDOK	**Medeo**	3.21	351	*e*P	Pb	13 34 44.0	-1.4
	326nm,0.6s						
MDOK				*e*S	Sb	13 35 24.8	+0.4
	201nm,0.6s						
AAA	**Alma-Ata**	3.27	349	Pg	Pb	13 34 45.5	-1.0
	568nm,0.4s						
AAA				Lg	Lg	13 35 27.3	
	321nm,0.6s						
AAA	**Alma-Ata**	3.27	349	*e*P	Pb	13 34 45.5	-1.0
	568nm,0.4s						
AAA				*e*S	Sb	13 35 27.3	+1.1
	321nm,0.6s						
KOTS	**Kotyrbulak**	3.27	352	Pg	Pb	13 34 45.1	-1.3
	212nm,0.5s						
KOTS				Lg	Lg	13 35 26.9	
	1µm,0.6s						
KOTS	**Kotyrbulak**	3.27	352	*e*P	Pb	13 34 45.1	-1.3
	212nm,0.5s						
KOTS				*e*S	Sb	13 35 26.9	+0.6
	1µm,0.6s						
KNDC	**Almaty**	3.27	350	⇓Pn	Pn	13 34 41.5	+2.0
KNDC				⇓Lg	Lg	13 35 28.8	
	784nm,0.9s						
SFK	**Sufi-Kurgan**	3.28	272	⇑Pg	Pb	13 34 46.7	+0.1
	39nm,0.6s						
SFK				⇓Lg	Lg	13 35 28.5	
	125nm,0.7s						
SFK	**Sufi-Kurgan**	3.28	272	Pg	Pb	13 34 46.4	-0.1
	22nm,0.5s						
SFK				Lg	Lg	13 35 29.3	
	60nm,0.3s						
UZB	**Uzynbulak**	3.29	16	Pg	Pb	13 34 45.4	-1.3
	101nm,0.7s						
UZB				Lg	Lg	13 35 27.3	
	160nm,0.6s						
UZB	**Uzynbulak**	3.29	16	*e*P	Pb	13 34 45.4	-1.3
	101nm,0.7s						
UZB				*e*S	Sb	13 35 27.3	+0.7
	160nm,0.6s						
MTBS	**Maitube**	3.29	343	*e*P	Pb	13 34 45.1	-1.6
	90nm,0.4s						
MTBS				*e*S	Sb	13 35 27.3	+0.7
	72nm,0.4s						
UCH	**Uchtor**	3.32	313	P	Pn	13 34 41.6	+1.1
	SNR=37						
UCH	**Uchtor**	3.32	313	⇑*i*P	Pn	13 34 41.0	+0.5
	baz=14						
UCH				⇑*i*S	Sn	13 35 18.4	-1.6
	baz=14						
KST	**Kastek**	3.33	337	*e*P	Pb	13 34 45.8	-1.7
	108nm,0.5s						
KST				*e*S	Sb	13 35 28.1	+0.2
	237nm,0.5s						
TKM2	**Tokmak 2**	3.35	332	P	Pn	13 34 42.2	+1.6
	SNR=70						
KBK	**Karagaybulak**	3.40	322	P	Pn	13 34 43.7	+2.3
	SNR=46						
KBK	**Karagaybulak**	3.40	322	⇑*i*P	Pn	13 34 42.3	+0.9
	baz=23						
KBK				⇑*i*S	Sn	13 35 20.6	-1.0
	baz=23						
KURS	**Kuram**	3.50	5	*e*P	Pb	13 34 48.3	-2.0
	93nm,0.5s						
KURS				*e*S	Sb	13 35 31.9	-0.9
	86nm,0.7s						
PDGK	**Podgornoye**	3.57	21	⇑Pn	Pn	13 34 45.3	+1.7
	58nm,0.6s						
PDGK				⇓Pg	Pb	13 34 51.1	-0.4
	74nm,0.5s						
PDGK				⇓Lg	Lg	13 35 36.4	
	236nm,0.7s						
DGS	**Degeres**	3.57	336	Pg	Pb	13 34 50.3	-1.2
	99nm,0.6s						
DGS				Lg	Lg	13 35 35.9	
	268nm,0.7s						
DGS	**Degeres**	3.57	336	*e*P	Pb	13 34 50.3	-1.2
	99nm,0.6s						
DGS				*e*S	Sb	13 35 35.9	+1.1
	268nm,0.7s						
AAK	**Ala-Archa**	3.61	318	P	Pn	13 34 46.1	+1.8
	SNR=14						
AAK	**Ala-Archa**	3.61	318	⇑Pg	Pb	13 34 50.7	-1.5

	56nm,0.9s						
AAK				⇑Lg	Lg	13 35 38.0	
	424nm,0.9s						
AAK	Ala-Archa	3.61	318	⇑iP	Pn	13 34 44.9	+0.7
	baz=19						
AAK				⇑iS	Sn	13 35 25.3	-1.5
	baz=19						
AAK	Ala-Archa	3.61	318	Pn	Pn	13 34 45.9	+1.7
	3.3nm,0.3s,baz=126,slow=8.4,SNR=50						
AAK				Lg	Lg	13 35 37.9	
	19nm,0.3s,baz=274,slow=18,SNR=20						
FRU1	Bishkek	3.67	321	⇑iP	Pn	13 34 45.9	+0.9
	baz=22						
FRU1				⇑iS	Sn	13 35 26.5	-1.6
	baz=22						
AML	Almayashu	3.75	306	P	Pn	13 34 47.8	+1.5
	SNR=40						
AML	Almayashu	3.75	306	⇑iP	Pn	13 34 47.0	+0.7
	baz=6.0						
AML				⇑iS	Sn	13 35 28.6	-1.8
	baz=6.0						
CHMS	Chumysh	3.76	324	P	Pn	13 34 47.9	+1.8
	SNR=17						
CHMS	Chumysh	3.76	324	⇑eP	Pn	13 34 47.2	+1.1
	baz=25						
CHMS				⇑iS	Sn	13 35 29.1	-1.1
	baz=25						
KTBS	Karatobe	3.80	348	Pg	Pb	13 34 54.1	-1.3
	131nm,0.6s						
KTBS				Lg	Lg	13 35 43.0	
	124nm,0.8s						
KTBS	Karatobe	3.80	348	eP	Pb	13 34 54.4	-1.0
	131nm,0.6s						
KTBS				eS	Sb	13 35 43.0	+1.7
	124nm,0.8s						
ARSB	Arslanbob	3.87	292	⇓iP	Pn	13 34 48.6	+0.8
	baz=90						
ARSB				⇓iS	Sn	13 35 32.9	-0.3
	baz=90						
CHKK	Chushkaly	3.90	352	eP	Pb	13 34 55.6	-1.5
	127nm,0.5s						
CHKK				eS	Sb	13 35 44.6	+0.5
	194nm,0.4s						
KTMS	Ketmen	3.95	28	Pg	Pb	13 34 56.7	-1.4
	4.8nm,0.1s						
KTMS				Lg	Lg	13 35 46.9	
	138nm,0.8s						
KTMS	Ketmen	3.95	28	eP	Pb	13 34 56.7	-1.4
	4.8nm,0.1s						
KTMS				eS	Sb	13 35 46.9	+1.1
	138nm,0.8s						
EKS2	Erkin-Say	4.01	313	P	Pn	13 34 52.0	+2.3
	SNR=15						
EKS2	Erkin-Say	4.01	313	⇓iP	Pn	13 34 50.5	+0.8
	baz=13						
EKS2				⇓iS	Sn	13 35 35.1	-1.6
	baz=13						
KUU	Kurty	4.04	345	eP	Pb	13 34 57.9	-1.5
	66nm,0.6s						
KUU				eS	Sb	13 35 48.7	+0.6
	143nm,0.7s						
USP	Ospenovka	4.08	324	P	Pn	13 34 52.7	+2.0
	SNR=5.6						
USP	Ospenovka	4.08	324	⇓eP	Pn	13 34 51.7	+1.1
	baz=25						
USP				⇓iS	Sn	13 35 36.8	-1.4
	baz=25						
MNBS	Baschi	4.11	6	Pg	Pb	13 35 00.4	-0.3
	81nm,0.7s						
MNBS				Lg	Lg	13 35 53.0	
	135nm,0.7s						
MNBS	Baschi	4.11	6	eP	Pb	13 35 00.3	-0.3
	81nm,0.7s						
MNBS				eS	Sb	13 35 53.0	+2.8
	135nm,0.7s						
ARXS	Arharly	4.21	1	Pg	Pb	13 35 01.5	-0.9
	77nm,0.7s						
ARXS				Lg	Lg	13 35 54.9	
	83nm,0.6s						
ARXS	Arharly	4.21	1	eP	Pb	13 35 01.6	-0.9
	77nm,0.7s						
ARXS				eS	Sb	13 35 54.9	+1.7
	83nm,0.6s						
MRKS	Merke	4.38	310	Pg	Pb	13 35 05.3	-0.1
	35nm,0.5s						
MRKS				Lg	Lg	13 36 01.3	
	54nm,0.7s						
MRKS	Merke	4.38	310	eP	Pb	13 35 05.3	-0.1
	35nm,0.5s						
MRKS				eS	Sb	13 36 01.3	+3.2
	54nm,0.7s						
DJR	Jarkent	4.58	18	eP	Pb	13 35 08.8	+0.1
	10nm,0.8s						
DJR				eS	Sb	13 36 07.3	+3.4
	25nm,1.0s						
MNAS	Manas	4.68	304	⇓Pn	Pn	13 35 00.9	+1.9
	4.2nm,0.4s						
MNAS				⇓Pg	Pb	13 35 12.7	+2.2
	58nm,1.2s						
MNAS				⇓Lg	Lg	13 36 11.0	
	48nm,0.7s						
MNAS	Manas	4.68	304	Pg	Pb	13 35 12.1	+1.6
	16nm,0.9s						
MNAS				Lg	Lg	13 36 13.0	
	19nm,0.8s						
MNAS	Manas	4.68	304	⇑iP	Pn	13 34 59.6	+0.6
	baz=4.0						
MNAS				⇑iS	Sn	13 35 50.9	-2.3
	baz=4.0						
BTK	Batken	5.34	273	⇓iP	Pn	13 35 09.1	+1.2
	baz=71						
BTK				⇓iS	Sn	13 36 07.2	-2.0
	baz=71						
KK31	Karatay Array	6.27	302	⇓Pg	Pb	13 35 39.6	+2.2
	4.7nm,0.7s,baz=128,slow=17,SNR=16						
KK31				⇑Lg	Lg	13 36 58.9	
	13nm,0.6s,baz=130,slow=29,SNR=7.4						
MK31	Makanchi Array	7.55	24	⇑Pn	Pn	13 35 38.6	+0.5
	1.5nm,0.5s,baz=198,slow=9.7,SNR=18						
MK31				⇑Pg	Pb	13 36 04.1	+4.9
	2.9nm,0.6s,baz=208,slow=15,SNR=4.3						
MK31				⇓Sn	Sn	13 37 03.6	0.0
	16nm,0.9s,baz=200,slow=14,SNR=6.4						
MK31				⇑Lg	Lg	13 37 45.0	
	18nm,1.1s,baz=203,slow=15,SNR=6.2						
MKAR	Makanchi Array	7.55	24	Pn	Pn	13 35 38.8	+0.6
	0.4nm,0.3s,baz=189,slow=15,SNR=21						
MKAR				Sn	Sn	13 37 05.7	+2.2
	0.5nm,0.3s,baz=202,slow=22,SNR=10.0						
MKAR				Lg	Lg	13 37 47.8	
	0.6nm,0.3s,baz=216,slow=25,SNR=4.3						
WMQ	Urumqi	8.33	59	eP	Pn	13 35 48.3	-0.6
WMQ				smax	smax		
	comp=N,48nm,0.7s						
WMQ				smax	smax		
	comp=E,84nm,0.9s						
KURBB	Kurchatov Arra	10.64	3	⇓Pn	Pn	13 36 20.0	-0.4
	4.5nm,0.8s						
KURBB				⇑Lg	Lg	13 39 22.9	
	22nm,0.8s						
KURBB	Kurchatov Arra	10.64	3	Pn	Pn	13 36 19.4	-1.0
	0.1nm,0.3s,baz=194,slow=12,SNR=19						
KURBB				Lg	Lg	13 39 25.9	
	0.1nm,0.3s,baz=166,slow=29,SNR=9.9						
BVAR	Borovoye Array	13.97	341	Pn	Pn	13 37 03.8	-2.2
	0.1nm,0.3s,baz=170,slow=18,SNR=4.0						
BVAR				Lg	Lg	13 40 59.6	
	0.1nm,0.3s,baz=151,slow=25,SNR=5.4						
ZALV	Zalesovo Beam	14.75	17	Pn	Pn	13 37 14.8	-1.8
	0.1nm,0.3s,baz=213,slow=11,SNR=8.4						
AB31	Akbulak array	15.67	312	⇓Pn	Pn	13 37 32.0	+3.1
	0.6nm,0.5s,baz=118,slow=12,SNR=10.0						
GTA	Gaotai	16.98	85	eP	P	13 37 49.1	+1.5
GTA				pP	pP	13 37 53.6	+1.8
GTA				sP	sP	13 37 56.3	+2.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKTO	Aktyubinsk	17.34	314	⇑Pn	Pn	13 37 50.7	+0.7
	1.1nm,0.7s						
AKTO	Aktyubinsk	17.34	314	P	Pn	13 37 49.9	-0.2
	0.1nm,0.3s,baz=101,slow=14,SNR=4.8						
LZH	Lanzhou	20.88	92	eP	P	13 38 32.3	+1.9
LZH				pP	sP	13 38 40.3	+3.8
LZH				sP	pP	13 38 43.6	+9.0
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
SONM	Songino Array	21.97	60	P	P	13 38 43.0	+1.0
	0.3nm,0.3s,baz=255,slow=10,SNR=5.1						
FINES	FINESS Array B	37.79	322	P	P	13 41 03.5	-0.4
	1.6nm,0.9s,baz=111,slow=10,SNR=3.9						
ARCES	ARCESS Array B	40.12	334	P	P	13 41 22.7	-0.8
	0.8nm,0.5s,baz=104,slow=8.9,SNR=11						
TORD	Torodi Ar. Bea	71.05	271	P	P	13 45 05.1	-1.3
	0.8nm,0.8s,baz=32,slow=6.3,SNR=4.0						
YKA	Yellowknife Ar	77.37	6	P	P	13 45 41.6	-0.9
	0.2nm,0.6s,baz=343,slow=5.7,SNR=4.5						
WRA	Warramunga Arr	79.57	127	P	P	13 45 54.8	-0.4
	0.4nm,0.9s,baz=331,slow=5.4,SNR=3.1						
ASAR	Alice Springs	82.13	130	P	P	13 46 08.2	-0.7
	0.4nm,0.8s,baz=322,slow=5.1,SNR=4.7						

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*ISK **18** 13:34:17.4, 39°.36N×40°.77E, h5^{km}, ML3.4/12*

*DDA **18** 13:34:18.2, 39°.38N×40°.77E, h13^{km}±1^{km}, ML3.5*

ISC 18 13:34:19.0±1.1**, 39°.40N**±0°.02×**40°.78E**±0°.02**, h4**^{km}±10^{km}**, n50, σ0^{s}.98**/69**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECAT	Cat-ERZURUM	0.26	36	i P	Pg	13 34 24.8	+0.7
ECAT				i S	Sg	13 34 28.5	+1.0
BNGB	Bingl	0.41	191	PG	Pg	13 34 26.1	-0.8
BNGB				SG	Sg	13 34 31.7	-0.6
BGOL	Bingol	0.42	192	i P	Pg	13 34 26.1	-1.0
BGOL				i S	Sg	13 34 32.4	0.0
BGOL				IAML_P			
	comp=Z,9μm,0.1s						
KOPT	Kop Dagi	0.66	341	i P	Pb	13 34 32.1	-1.1
KOPT				i S	Sb	13 34 42.1	-0.8
KOPT				IAML_P			
	comp=Z,19μm,0.3s						
ERZN	Erzincan	0.84	283	PG	Pg	13 34 34.0	-1.1
BAYB	BAYBURT	0.95	335	i P	Pb	13 34 37.5	-0.7
BAYB				i S	Sn	13 34 51.6	-1.9
BAYB				IAML_P			
	comp=Z,7μm,0.2s						
TNCL	Tunceli-Merkez	1.00	254	i P	Pn	13 34 40.5	+0.6
TNCL				i S	Sn	13 34 55.2	+0.6
TNCL				IAML_P			
	comp=Z,3μm,0.4s						
KOPR	Koprukoy-ERZUR	1.02	54	PG	Pg	13 34 37.8	-0.8
HANI	Diyarbakir_Han	1.02	197	i P	Pg	13 34 38.0	-0.6
HANI				IAML_P			
	comp=Z,4μm,0.4s						
HOMI	Horasan	1.08	53	i P	Pg	13 34 39.5	-0.3
HOMI				i S	Sn	13 34 56.6	-0.2
HOMI				IAML_P			
	comp=Z,1μm,0.1s						
BAYT	Aydıntepe-Bayb	1.11	334	PN	Pb	13 34 40.2	-0.7
SVAN	Silvan-Diyarba	1.29	165	PN	Pg	13 34 43.0	-0.6
SVAN				SN	Sg	13 35 00.7	+0.4
SVAN	Silvan-Diyarba	1.29	165	i P	Pg	13 34 43.2	-0.5
SVAN				i S	Sb	13 35 01.1	+0.4
SVAN				IAML_P			
	comp=Z,9μm,0.2s						
GURO	Guroymak-BITLI	1.29	130	PN	Pg	13 34 41.8	-1.9
KELT	Kelkit	1.39	303	i P	Pn	13 34 44.1	-1.3
KELT				IAML_P			
	comp=Z,3μm,0.4s						
MLAZ	Malazgirt-MUS	1.40	100	PN	Pn	13 34 44.7	-0.7
MLAZ				SN	Sn	13 35 05.6	+1.2
BTMN	Batman	1.55	165	i P	Pg	13 34 48.8	+0.1
BTMN				IAML_P			
	comp=Z,4μm,0.3s						
DIYA	Diyarbakir	1.56	200	i P	Pg	13 34 48.7	-0.2
DIYA				i S	Sg	13 35 10.3	+1.2
DIYA				IAML_P			
	comp=Z,9μm,0.2s						
REFA	Refahiye_ERZN	1.56	271	i P	Pg	13 34 48.1	-0.8
REFA				i S	Sg	13 35 13.6	+4.4
REFA				IAML_P			
	comp=Z,2μm,0.4s						
TUTA	Tutak	1.58	89	i P	Pn	13 34 47.8	-0.2
TUTA				i S	Sg	13 35 11.4	+1.7
ADCV	BITLIS_Adilcev	1.62	111	i P	Pn	13 34 48.3	-0.3
ADCV				i S	Sn	13 35 10.5	+0.4
ELZG	Elazig	1.66	238	i P	Pn	13 34 48.7	-0.3
ELZG				IAML_P			
	comp=Z,3μm,0.3s						
SRTM	Siirt_Merkez	1.67	147	i P	Pb	13 34 50.1	-0.2
SRTM				IAML_P			
	comp=Z,10μm,0.5s						
DDEM	Demirkent	1.67	26	i P	Pb	13 34 49.9	-0.4
DDEM				i S	Sg	13 35 12.6	0.0
DDEM				IAML_P			
	comp=Z,10μm,0.3s						
SENK	Senkaya-Erzuru	1.68	46	PN	Pn	13 34 48.9	-0.4
CHOM	Cayeli-Rize	1.70	360	PN	Pb	13 34 50.5	-0.3
AGRB	Hanur-Agry	1.72	83	PN	Pn	13 34 50.2	+0.3
MACK	Trabzon	1.73	334	i P	Pg	13 34 52.4	+0.3
MACK				IAML_P			
	comp=Z,9μm,0.2s						
DBAD	Bademkaya	1.77	23	i P	Pb	13 34 51.3	-0.7
DBAD				i S	Sn	13 35 13.4	-0.1
DBAD				IAML_P			
	comp=Z,6μm,0.3s						
KTUT	Trabzon	1.77	334	PN	Pb	13 34 50.8	-1.2
KEMA	Kemaliye	1.78	267	i P	Pb	13 34 51.6	-0.6
KEMA				i S	Sg	13 35 15.7	-0.4
KEMA				IAML_P			
	comp=Z,3μm,0.5s						
DAGI	Agillar	1.89	27	i P	Pb	13 34 53.0	-1.2
DAGI				i S	Sb	13 35 18.6	+0.4
DAGI				IAML_P			
	comp=Z,5μm,0.4s						
MAZI	Mazidag	1.95	188	PN	Pn	13 34 52.9	-0.1
ARTV	Artvin	1.99	26	i P	Pb	13 34 54.8	-1.1
ARTV				IAML_P			
	comp=Z,2μm,0.2s						
AKDM	Akdamar-Van	2.02	121	PN	Pn	13 34 54.4	+0.4
DBOC	Borcka	2.06	19	i P	Pn	13 34 55.3	+0.8
DBOC				IAML_P			
	comp=Z,2μm,0.2s						
MARD	Mardin	2.08	180	i P	Pb	13 34 56.6	-0.8
MARD				i S	Sb	13 35 24.9	+1.3
MARD				IAML_P			
	comp=Z,6μm,0.3s						
SUSE	Susehri	2.14	293	i P	Pn	13 34 56.1	+0.4
SUSE				IAML_P			
	comp=Z,905nm,0.6s						
BCA	Borcka	2.15	17	PN	Pn	13 34 55.9	+0.3
HEKM	Malatya_Hekimh	2.25	258	i P	Pn	13 34 58.2	+0.9
DYDN	Diyadin	2.26	85	i P	Pb	13 34 59.7	-0.7
DYDN				IAML_P			
	comp=Z,5μm,0.4s						
SIRN	Sırnak	2.29	145	i P	Pb	13 35 00.3	-0.7
SIRN				IAML_P			
	comp=Z,4μm,0.2s						
CUZAR	Zara_SIVAS	2.37	283	i P	Pb	13 35 02.0	-0.4
CLDR	Caldiran	2.45	95	PN	Pn	13 35 00.9	+0.9
CLDR	Caldiran	2.45	95	i P	Pn	13 35 01.6	+1.7
CLDR				IAML_P			
	comp=Z,604nm,0.1s						
URFA	Urfa	2.48	219	PN	Pn	13 35 00.2	-0.1
AKCD	Akcadag	2.49	245	i P	Pn	13 35 00.6	+0.2
EAK	Akyaka	2.52	58	i P	Pb	13 35 04.1	-0.9
EAK				IAML_P			
	comp=Z,398nm,0.3s						
CUKAN	kangal_SIVAS	2.57	269	i P	Pb	13 35 05.8	+0.1
DARE	Darende-Malaty	2.70	253	PN	Pn	13 35 03.6	+0.3

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*IDC **18** 13:49:10.2±2.2, 13°.73N×92°.10W, h0^{km}, mb3.3/1, mb1 3.6/5, mb1mx3.4/46, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=40.1km s-min=23.7km az=19.0*

*ISCJB **18** 13:49:11.4±1.4, 13°.5N±0°.1×92°.17W±0°.07, h37^{km}, mb3.3/1, Error ellipse: s-maj=16.3km s-min=9.2km az=20.2*

ISC 18 13:49:14.4±1.3**, 13°.6N**±0°.1×**92°.11W**±0°.08**, h37**^{km}**, n6, σ1^{s}.26**/8**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APG	El Apazote	2.09	49	Pn	Pn	13 49 46.4	-0.8
	14nm,0.3s,baz=207,slow=8.7,SNR=101						
APG				Sn	Sn	13 50 13.2	+1.1
	19nm,0.3s,baz=301,slow=16,SNR=20						
CMIG	Matias Romero	4.35	322	Pn	Pn	13 50 16.9	-1.1
	0.3nm,0.3s,baz=142,slow=14,SNR=3.9						
CMIG				Sn	Sn	13 51 09.5	+2.0
	1.7nm,0.3s,baz=92,slow=8.2,SNR=6.0						
JTS	JuntasAbangare	7.75	115	Pn	Pn	13 51 05.2	+0.4
	0.4nm,0.3s,baz=322,slow=19,SNR=2.7						
JTS				Lg	Lg	13 53 08.2	
	1.2nm,0.3s,baz=220,slow=3.2,SNR=4.2						
TXAR	Lajitas Array	18.94	327	P	Pn	13 53 33.5	+0.2
	0.0nm,0.3s,baz=141,slow=11,SNR=4.8						
YKA	Yellowknife Ar	51.35	347	P	P	13 58 14.1	-0.8
	0.3nm,0.7s,baz=149,slow=7.4,SNR=6.0						
CMAR	Chiang Mai Arr	146.30	341	PKPbc	PKPab	14 08 53.0	+0.2
	0.4nm,0.3s,baz=347,slow=3.2,SNR=6.2						

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*ISCJB **18** 13:50:54.8±0.7, 29°.2N±0°.2×139°.7E±0°.3, h423^{km}, mb3.2/9, Error ellipse: s-maj=41.5km s-min=11.0km az=138.3*

*IDC **18** 13:50:54.8±1.0, 29°.17N×139°.32E, h388^{km}±22^{km}, mb3.0/9, mb1 3.1/10, mb1mx2.8/55, mbtmp3.8/10, Error ellipse: s-maj=52.4km s-min=19.2km az=69.0*

ISC 18 13:50:56.0±0.9**, 29°.2N**±0°.2×**139°.9E**±0°.3**, h423**^{km}**, n10, σ1^{s}.36**/11**, mb3.3**/9**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	2.94	136	P	P	13 52 00.3	-0.2
	13nm,0.3s,baz=291,slow=22,SNR=17						
JCJ				S	S	13 52 51.6	-1.1
	22nm,0.3s,baz=114,slow=23,SNR=13						
SONM	Songino Array	31.78	315	P	P	13 56 42.7	-0.8
	0.3nm,0.4s,baz=125,slow=8.3,SNR=2.3						
ZALV	Zalesovo Beam	46.55	318	P	P	13 58 41.7	-1.7
	0.5nm,0.4s,baz=102,slow=5.7,SNR=3.2						
MKAR	Makanchi Array	47.56	308	P	P	13 58 49.8	-1.5
	0.1nm,0.3s,baz=88,slow=9.3,SNR=4.1						
WRA	Warramunga Arr	49.18	187	P	P	13 59 04.4	+0.8
	0.1nm,0.3s,baz=3.4,slow=7.7,SNR=5.4						
KURBB	Kurchatov Arra	50.11	313	P	P	13 59 09.5	-0.7
	0.6nm,0.4s,baz=96,slow=6.8,SNR=15						
BVAR	Borovoye Array	55.11	316	P	P	13 59 45.5	-0.7
	1.0nm,0.4s,baz=90,slow=7.1,SNR=7.3						
AKTO	Aktyubinsk	63.09	315	P	P	14 00 41.6	+1.3
	0.5nm,0.5s,baz=64,slow=12,SNR=3.6						
ARCES	ARCESS Array B	70.86	340	P	P	14 01 30.1	+1.9
	2.0nm,0.8s,baz=73,slow=8.1,SNR=5.7						
FINES	FINESS Array B	75.14	333	P	P	14 01 53.8	+0.8
	0.8nm,0.5s,baz=64,slow=4.4,SNR=6.5						

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*IDC **18** 14:24:55.5±0.8, 9°.94S×119°.04E, h0^{km}, mb4.4/9, mb1 4.2/12, mb1mx4.0/39, mbtmp4.2/12, ML3.7/3, Error ellipse: s-maj=32.4km s-min=17.1km az=60.0*

*ISCJB **18** 14:24:58.1±0.3, 10°.15S±0°.04×118°.87E±0°.03, h33^{km}, mb4.6/23, MS4.5/2, Error ellipse: s-maj=6.1km s-min=3.6km az=21.7*

*NEIC **18** 14:25:00.4±0.7, 9°.94S×119°.03E, h36^{km}±8^{km}, mb4.6/17, Error ellipse: s-maj=8.6km s-min=5.1km az=211.0*

*DJA **18** 14:25:03.6±0.3, 10°S±3°×11°9E±°, h51^{km}±18^{km}, M4.7/14, mb4.8/7, mB4.9/1, MLv4.6/14, Mw(mB)4.2/1*

ISC 18 14:25:00.2±0.4**, 10°.19S**±0°.05×**118°.89E**±0°.04**, h33**^{km}**, n79, σ2^{s}.25**/85**, mb4.6**/29**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	Waingapu	1.48	70	P	Pb	14 25 26.4	-0.8
WSI				S	Sb	14 25 47.7	+2.0
BASI	Baing, Sumba	1.66	91	P	Pb	14 25 30.4	+0.1
PLAI	Plampang	1.74	321	P	Pb	14 25 30.5	-1.1
PLAI				S	Sb	14 25 52.8	-0.3
EDFI	Ende, Flores	3.11	63	P	Pn	14 25 45.9	-1.2
MMRI	Maumere	3.65	65	ePn	Pn	14 25 48.9	-5.5
MMRI	Maumere	3.65	65	P	Pn	14 25 49.6	-4.8
DNP	Denpasar	3.93	292	P	Pn	14 26 03.2	+5.0
SRBI	Singaraja	4.19	300	P	Pn	14 26 06.0	+4.2
BATI	Baumata	4.70	91	P	Pn	14 26 11.3	+2.4
BATI				S	Sn	14 27 05.6	+3.2
BATI	Baumata	4.70	91	Pn	Pn	14 26 10.8	+1.8
	16nm,0.3s,baz=337,slow=1.3,SNR=16						
BATI				Sn	Sn	14 27 01.2	-1.1
	9.9nm,0.3s,baz=176,slow=14,SNR=3.4						
JAGI	Jajag, Banyuwa	4.97	290	ePn	Pn	14 26 14.4	+1.7
JAGI	Jajag, Banyuwa	4.97	290	P	Pn	14 26 12.6	-0.1
JAGI				S	Sn	14 27 09.6	+0.5
BKSI	Bulukumba	4.99	14	P	Pn	14 26 14.7	+1.9
BKSI				S	Sn	14 27 10.3	+1.0
SOEI	Soe	5.32	86	ePn	Pn	14 26 18.1	+0.6
SOEI	Soe	5.32	86	P	Pn	14 26 20.7	+3.2
	104nm,0.7s						
BNSI	Bone	5.88	12	P	Pn	14 26 30.1	+5.1
	78nm,0.6s						
BNSI				S	Sn	14 27 37.1	+5.8
	78nm,0.6s						
SPSI	Sidrap Palu	6.24	8	P	Pn	14 26 35.0	+4.9
	25nm,0.5s						
PWJI	Pagerwojo	7.32	287	P	Pn	14 26 48.3	+3.4
PWJI				S	Sn	14 28 07.1	+0.2
UGM	Wanagama	8.56	285	ePn	Pn	14 27 04.3	+2.3
FITZ	Fitzroy Crossi	10.23	141	ePn	Pn	14 27 25.0	+0.2
FITZ				Sn	Sn	14 29 09.6	-8.9
FITZ	Fitzroy Crossi	10.23	141	Pn	Pn	14 27 23.6	-1.3
	0.7nm,0.3s,baz=328,slow=9.5,SNR=8.6						
FITZ				Sn	Sn	14 29 09.6	-8.9
	4.2nm,0.3s,baz=259,slow=18,SNR=12						
CISI	Cisompet, Garu	11.25	283	ePn	Pn	14 27 39.8	+0.9
MTN	Manton Dam	12.29	104	ePn	Pn	14 27 52.3	-0.7
GIRL	Giralia	13.16	199	ePn	Pn	14 28 06.8	+1.9
FAKI	Fak Fak	15.10	62	ePn	P	14 28 33.9	-2.3
KKM	Kota Kinabalu	16.34	351	ePn	P	14 28 50.2	+0.2
	30nm,1.1s						
MNAI	Manna	16.82	289	ePn	Pn	14 28 53.9	+0.4
	222nm,1.0s						
WRA	Warramunga Arr	17.78	125	P	Pn	14 29 04.2	-1.2
	0.1nm,0.3s,baz=294,slow=14,SNR=5.2						
WRA				S	Sn	14 32 04.6	-18
	0.2nm,0.3s,baz=293,slow=19,SNR=3.2						
WRAB	Tennant Creek	17.78	125	ePn	P	14 29 06.5	+0.5
	10nm,1.2s						
WB2	Warramunga Arr	17.79	125	ePn	Pn	14 29 05.3	-0.2
MORW	Morawa	18.97	188	eP	Pn	14 29 22.6	+2.8
	77nm,1.6s						
MYKOM	Kota Tinggi	19.12	308	eP	P	14 29 20.6	0.0
	38nm,1.3s						
AS31	Alice Springs	19.62	135	eP	Pn	14 29 27.6	0.0
	6.2nm,1.6s						
ASAR	Alice Springs	19.62	135	P	Pn	14 29 27.6	0.0
	0.5nm,0.3s,baz=317,slow=11,SNR=14						
ASAR				S	S	14 32 53.8	-12
	0.2nm,0.3s,baz=308,slow=22,SNR=5.0						
AS01	Alice Springs	19.65	135	eP	Pn	14 29 27.7	-0.3
NWAO	Narrogin (SRO)	22.68	184	P	P	14 30 01.7	+2.8
	8.5nm,1.0s,baz=304,slow=7.3,SNR=3.8						
NWAO				S	S	14 33 59.0	-6.2
	5.9nm,0.4s,baz=304,slow=7.3,SNR=6.3						
SURA	Surathani	27.15	314	P	P	14 30 46.6	+5.9
CMAR	Chiang Mai Arr	34.61	325	P	P	14 31 46.4	0.0
	1.4nm,0.4s,baz=156,slow=6.8,SNR=12						
CMAR				PcP	PcP	14 34 22.1	+1.5
	0.3nm,0.3s,baz=175,slow=2.8,SNR=4.2						
ENH	Enshi	41.23	348	eP	P	14 32 38.9	-3.3
	9.2nm,0.6s						
PALK	Pallekele	41.80	293	P	P	14 32 47.2	+0.1
	7.0nm,0.6s,baz=117,slow=8.0,SNR=7.0						
NJ2	Nanjing	42.00	360	eP	P	14 32 45.6	-2.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	44.99	348	P	P	14 33 11.3	-1.3
XAN				pP	sP	14 33 25.0	-0.1
XAN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
XAN	Xi'an	44.99	348	eP	P	14 33 09.9	-2.7
	comp=Z,6.0nm,0.6s						
H08S2	Diego Garcia H	45.88	269	T	T	15 22 43.4	
	baz=96,slow=76,SNR=14						
H08S3	Diego Garcia H	45.89	269	T	T	15 22 42.2	
	baz=96,slow=76,SNR=23						
H08S1	Diego Carcia H	45.89	269	T	T	15 22 43.8	
	baz=96,slow=76,SNR=7.7						
LZH	Lanzhou	48.16	344	eP	P	14 33 39.1	+1.5
LZH				pP	sP	14 33 54.1	+4.0
LZH				sP	pwP	14 33 58.4	+8.9
LZH				PP	PP	14 35 34.3	+4.1
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=N,560nm,14.2s						
LZH				LR	LR		
	comp=E,550nm,14.3s						

LZH				LR	LR		
	comp=Z,700nm,17.0s						
RAMN	Ramite	48.42	320	*e*P	P	14 33 39.1	-0.7
	comp=Z,5.9nm,0.6s						
JIRN	Jiri	49.18	321	*e*P	P	14 33 44.5	-1.3
	comp=Z,11nm,0.5s						
GUN	Gumba	49.55	321	*e*P	P	14 33 47.4	-1.2
PKI	Pulchoki	49.61	320	*e*P	P	14 33 47.3	-1.7
	comp=Z,3.4nm,0.4s						
PKIN	Phulchoki	49.62	320	*e*P	P	14 33 47.3	-1.7
	comp=Z,4.3nm,0.4s						
KOLN	Koldanda	50.91	319	*e*P	P	14 33 57.1	-1.6
DANN	Dangsing	51.20	319	*e*P	P	14 33 59.5	-1.5
	comp=Z,12nm,0.5s						
HHC	Hu-ho-hao-te	51.23	353	*e*P	P	14 34 02.6	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,6.1s						
PYUN	Piuthan	51.52	319	*e*P	P	14 34 01.8	-1.6
	comp=Z,5.3nm,0.4s						
GTA	Gaotai	52.44	341	*e*P	P	14 34 09.6	-0.2
GTA				pP	sP	14 34 21.3	-1.1
GTA				sP	pwP	14 34 25.5	+3.8
GTA				S	S	14 41 33.4	-0.5
GTA				sS	sS	14 41 52.9	+3.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,6.2s						
GTA				LR	LR		
	comp=N,150nm,18.1s						
GTA				LR	LR		
	comp=E,130nm,18.7s						
GTA				LR	LR		
	comp=Z,150nm,18.4s						
USRK	Ussuriysk Ar.	55.42	11	P	P	14 34 29.7	-1.7
	comp=Z,2.3nm,0.5s,baz=193,slow=6.8,SNR=7.8						
SONM	Songino Array	58.82	350	P	P	14 34 54.7	-0.9
	comp=Z,4.9nm,0.7s,baz=168,slow=8.7,SNR=43						
SONA1	Songino Array	58.83	350	*e*P	P	14 34 54.5	-1.2
WMQ	Urumqi	60.77	335	*e*P	P	14 35 10.8	+1.8
KSH	Kashi	63.49	324	P	P	14 35 26.9	-0.5
KSH				pP	sP	14 35 42.5	+2.4
KSH				PP	PP	14 37 52.8	+5.4
KSH				S	S	14 43 52.6	-6.0
KSH				sS	sS	14 44 21.9	+8.3
KSH	Kashi	63.49	324	SS	SS	14 48 07.4	+1.0
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,350nm,5.7s						
KSH				LR	LR		
	comp=N,110nm,3.8s						
KSH				LR	LR		
	comp=E,150nm,4.1s						
KSH				LR	LR		
	comp=Z,340nm,8.4s						
MK01	Makanchi Array	65.44	333	*e*P	P	14 35 38.6	-1.2
MK31	Makanchi Array	65.46	333	*e*P	P	14 35 38.7	-1.2
MKAR	Makanchi Array	65.46	333	*e*P	P	14 35 38.7	-1.3
	comp=Z,32nm,0.8s						
MKAR	Makanchi Array	65.46	333	P	P	14 35 39.0	-0.9
	comp=Z,5.6nm,0.7s,baz=146,slow=7.6,SNR=73						
MAKZ	Makanchi	65.61	333	*e*P	P	14 35 39.4	-1.5
	comp=Z,7.3nm,1.5s						
AAK	Ala-Archa	66.39	326	*e*P	P	14 35 45.5	-0.7
	comp=Z,3.2nm,0.8s						
ARSB	Arslanbob	66.40	324	*e*P	P	14 35 45.3	-1.0
	comp=Z,8.2nm,0.8s						
GAR	Garm	66.58	320	*e*P	P	14 35 46.1	-1.4
	comp=Z,11nm,0.9s						
KURK	Kurchatov	70.01	334	*e*P	P	14 36 07.2	-1.3
	comp=Z,6.0nm,1.0s						
ZAA0	Zalesovo Array	70.11	339	*e*P	P	14 36 06.9	-2.1
	comp=Z,7.5nm,0.6s						
ZALV	Zalesovo Beam	70.11	339	*e*P	P	14 36 06.8	-2.2
ZALV	Zalesovo Beam	70.11	339	P	P	14 36 07.2	-1.8
	comp=Z,10nm,0.7s,baz=143,slow=4.7,SNR=45						
PETK	Petropavlovsk-	71.20	24	P	P	14 36 14.9	-0.9
	comp=Z,2.3nm,0.8s,baz=207,slow=2.9,SNR=3.6						
GEYT	Alibeck	74.18	314	P	P	14 36 34.0	+0.1
	comp=Z,1.7nm,0.7s,baz=106,slow=5.1,SNR=3.0						
BRVK	Borovoye	75.36	332	*e*P	P	14 36 38.3	-1.9
	comp=Z,12nm,1.8s						
ABKAR	Akbulak array	78.46	325	*e*P	P	14 36 56.4	-1.4

IDC 18 14:35:27.4±4.1**, 17°.10S×175°.73W, h0^{km}, mb3.9**/3**, mb1 4.3**/3**, mb1mx3.7**/43**, mbtmp3.9**/3**, Error ellipse: s-maj=192.6km s-min=35.8km az=141.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.29	258	P	P	14 44 02.2	-0.8
	1.0nm,0.7s,baz=95,slow=7.0,SNR=14						
ASAR	Alice Springs	47.47	253	P	P	14 44 05.5	+1.1
	3.4nm,0.6s,baz=86,slow=8.5,SNR=107						
ASAR				PcP	PcP	14 45 34.2	-0.6
	0.2nm,0.6s,baz=104,slow=4.0,SNR=3.9						
ILAR	Eielson Array	84.56	12	P	P	14 48 03.1	+1.1
	0.6nm,0.9s,baz=228,slow=4.8,SNR=4.6						
BRTR	Keskin Array B	145.98	317	PKPbc	PKPdf	14 55 07.0	-1.8
	1.0nm,0.8s,baz=70,slow=1.7,SNR=5.9						

MEX 18 14:40:24.6±0.6**, 16°.19N×98°.32W, h3^{km}, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.27	41	*i* P	Pg	14 40 29.1	-0.8
PNIG				*i* S	Sg	14 40 33.8	+0.3
VHO	Vista Hermosa	1.75	60	*e*P	Pn	14 40 53.4	-2.7
VHO				*e*S	Sn	14 41 14.6	-4.5

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*IDC **18** 14:54:09.1±1.6, 33°.96S×72°.66W, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.7/23, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=58.9km s-min=51.5km az=78.0*

*ISCJB **18** 14:54:13.0±1.4, 33°.96S±0°.04×72°.42W±0°.08, h22^{km}±12^{km}, mb3.5/2, Error ellipse: s-maj=10.8km s-min=7.0km az=17.0*

*GUC **18** 14:54:13.2±0.7, 33°.96S×72°.30W, h31^{km}±5^{km}, ML3.4*

*SJA **18** 14:54:20.9±0.5, 33°.29S×71°.95W, h12^{km}±4^{km}, ML3.1, MW4.0*

ISC 18 14:54:12.4±2.6**, 33°.94S**±0°.06×**72°.43W**±0°.08**, h17**^{km}±15^{km}**, n22,** σ**1.^{s}80**/29**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.57	142	*i* S	Sg	14 54 30.4	-1.0
ROC1	El Roble	1.52	51	*i* P	Pn	14 54 37.5	-1.7
ROCH	El Roble	1.53	51	*e*P	Pn	14 54 38.9	-0.3
ROCH				*i* S	Sn	14 54 58.3	-0.5
ROCH				IAML		14 55 07.2	
	comp=N,844nm,0.5s						
PEL	Peldehue	1.66	62	*e*P	Pn	14 54 40.6	-0.2
PEL				*i* S	Sn	14 55 02.5	+0.7
PEL				IAML		14 55 08.8	
	comp=E,927nm,0.5s						
CLCH	Cerro Calan	1.67	72	*e*P	Pn	14 54 40.7	-0.3
CLCH				*i* S	Sn	14 55 01.3	-0.8
CLCH				IAML		14 55 12.4	
	comp=E,820nm,0.7s						
LMEL	Las Melosas	1.85	88	*e*P	Pn	14 54 43.6	-0.1
LMEL				*i* S	Sn	14 55 07.4	+0.6
FCH	Farellones	1.89	72	*e*P	Pn	14 54 44.1	-0.1
FCH				*i* S	Sn	14 55 07.9	+0.1
FCH				IAML		14 55 15.2	
	comp=E,856nm,0.2s						
CCHI	Chillan	2.67	174	*e*P	Pn	14 54 55.4	+0.7
CCHI				*i* S	Sn	14 55 28.1	+1.4
AUSP	Uspallata	3.08	57	*i* P	Pn	14 55 03.1	+2.6
AUSP				*i* S	Sn	14 55 34.5	-2.6
RTLS	Leoncito	3.39	52	*i* P	Pn	14 55 07.2	+2.3
RTLS				IAML		14 56 07.3	
	comp=Z,67nm,0.4s						
RTCV	Cerro Valdivia	3.87	59	*i* P	Pn	14 55 14.5	+3.3
ACCO	Cerro Coronel	4.39	41	*i* P	Pn	14 55 20.9	+2.2
AMOG	MOGNA	4.48	49	*i* P	Pn	14 55 21.7	+2.1
AROD	Rodeo	4.52	35	*i* P	Pn	14 55 22.8	+2.3
ACAN	Cantantal	4.70	71	*i* P	Pn	14 55 27.0	+4.3
AGUA	GUANDACOL	5.56	38	*i* P	Pn	14 55 36.6	+2.0
LPAZ	La Paz	18.00	13	P	P	14 58 23.5	+0.5
	comp=Z,0.1nm,0.3s,baz=194,slow=7.7,SNR=3.1						
TXAR	Lajitas Array	69.52	331	P	P	15 05 18.4	-1.9
	comp=Z,0.1nm,0.4s,baz=150,slow=9.3,SNR=2.4						
TORD	Torodi Ar. Bea	84.50	70	P	P	15 06 44.0	-0.8
	comp=Z,0.9nm,0.9s,baz=250,slow=4.2,SNR=4.7						
WRA	Warramunga Arr	120.66	210	PKP	PKPdf	15 13 03.6	-0.4
	comp=Z,0.4nm,1.1s,baz=154,slow=1.7,SNR=3.0						
ZALV	Zalesovo Beam	154.35	32	PKPbc	PKiKP	15 14 12.2	+0.9
	comp=Z,0.8nm,0.5s,baz=276,slow=2.6,SNR=5.4						
MKAR	Makanchi Array	156.97	49	PKPab	PKPab	15 14 37.3	+0.3
	comp=Z,0.2nm,0.8s,baz=278,slow=4.9,SNR=3.9						

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*ISCJB **18** 14:57:29.5±0.6, 10°.87S±0°.07×165°.78E±0°.07, h10^{km}, mb3.9/7, Error ellipse: s-maj=11.5km s-min=8.0km az=41.1*

*IDC **18** 14:57:29.6±1.1, 10°.89S×165°.81E, h0^{km}, mb4.0/7, mb1 4.2/9, mb1mx3.9/47, mbtmp4.1/9, ML4.6/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/32, Error ellipse: s-maj=31.9km s-min=22.2km az=129.0*

*NEIC **18** 14:57:31.1±0.5, 10°.78S×165°.82E, h10^{km}, mb4.2/4, Error ellipse: s-maj=11.0km s-min=9.7km az=75.0*

ISC 18 14:57:31.0±0.7**, 10°.8S**±0°.1×**165°.83E**±0°.08**, h10**^{km}**, n29,** σ**1.^{s}10**/27**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.95	283	Pn	Pn	14 59 00.7	+1.4
	24nm,0.3s,baz=144,slow=7.2,SNR=13						
HNR				Sn	Sn	15 00 07.5	0.0
	baz=52,slow=19,SNR=1.9						
HNR				LR	LR	15 01 20.5	
	comp=Z,286nm,18.3s,baz=56,slow=39						
DZM	Mont Dzumac	11.23	177	*e*Pn	Pn	15 00 12.1	+0.3
DZM	Mont Dzumac	11.23	177	Pn	Pn	15 00 12.2	+0.5
	3.3nm,0.3s,baz=320,slow=12,SNR=33						
ONTNC	Ouen Toro	11.46	177	*e*Pn	Pn	15 00 16.1	+1.2
OUENC	Ouen Island, N	11.60	175	*e*Pn	Pn	15 00 18.3	+1.5
PINNC	Pines Island,	11.85	173	*e*Pn	Pn	15 00 21.5	+1.3
FUNA	Funafuti	13.37	81	*e*Pn	Pn	15 00 40.3	-0.6
RABL	Rabaul	15.05	295	*e*Pn	P	15 01 07.9	-1.4
	16nm,0.8s						
CTA	Charters Tower	20.99	242	P	P	15 02 15.9	+1.1
	7.6nm,0.9s,baz=76,slow=9.5,SNR=7.7						
CTAO	Charters Tower	20.99	242	*e*P	P	15 02 15.4	+0.6
	15nm,1.1s						
H11S2	WAKE ISLAND Hy	29.11	2	T	T	15 33 42.5	
	baz=181,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	29.12	2	T	T	15 33 42.8	
	baz=181,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	29.13	2	T	T	15 33 43.9	
	baz=181,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	30.34	2	T	T	15 35 13.5	
	baz=182,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	30.34	2	T	T	15 35 14.1	
	baz=182,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	30.35	2	T	T	15 35 15.6	
	baz=182,slow=76,SNR=12						
STKA	Stephens Creek	30.68	223	*e*P	P	15 03 44.7	-1.3
	3.8nm,1.4s						
STKA	Stephens Creek	30.68	223	P	P	15 03 44.5	-1.5
	1.4nm,0.7s,baz=73,slow=11,SNR=3.9						
WR1	Warramunga Arr	31.65	249	*e*P	P	15 03 53.5	-1.2
WR1				*e*PcP	PcP	15 06 46.9	-0.1
WRA	Warramunga Arr	31.65	249	P	P	15 03 53.5	-1.2
	1.2nm,0.6s,baz=81,slow=9.0,SNR=17						
WRA				PcP	PcP	15 06 46.9	-0.1
	0.4nm,0.8s,baz=78,slow=3.0,SNR=3.8						
AS31	Alice Springs	32.98	243	*e*P	P	15 04 05.0	-1.5
	0.9nm,0.6s						
ASAR	Alice Springs	32.98	243	P	P	15 04 05.2	-1.3
	2.2nm,0.7s,baz=64,slow=10,SNR=47						
ASAR				PcP	PcP	15 06 50.5	0.0
	1.0nm,1.1s,baz=73,slow=2.2,SNR=4.8						
SONA0	Songino Array	78.52	324	*e*P	P	15 09 34.3	+1.6
SONM	Songino Array	78.52	324	P	P	15 09 34.3	+1.6
	0.4nm,0.7s,baz=127,slow=5.0,SNR=3.3						
ILAR	Eielson Array	83.25	18	P	P	15 09 57.9	+0.4
	1.2nm,0.8s,baz=227,slow=6.2,SNR=6.9						
MK32	Makanchi Array	93.40	317	*e*P	P	15 10 46.5	-0.2
MKAR	Makanchi Array	93.40	317	P	P	15 10 46.5	-0.2
	0.3nm,0.6s,baz=91,slow=5.7,SNR=5.2						
ARA0	ARCESS Array S	116.12	346	*e*PKPdf	PKiKP	15 16 13.4	-0.6
ARCES	ARCESS Array B	116.12	346	PKP	PKiKP	15 16 13.4	-0.6
	1.7nm,0.9s,baz=106,slow=2.6,SNR=5.8						

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*ISCJB **18** 15:04:38.9±0.3, 56°.16N±0°.08×161°.52W±0°.09, h168^{km}±5^{km}, mb3.6/11, Error ellipse: s-maj=15.5km s-min=4.7km az=152.1*

*NEIC **18** 15:04:38.4±0.0, 55°.78N×161°.17W, h182^{km}, ML3.6(AEIC), After AEIC.*

*IDC **18** 15:04:40.0±3.1, 56°.31N×161°.54W, h159^{km}±27^{km}, mb3.4/11, mb1 3.5/14, mb1mx3.3/52, mbtmp3.8/14, Error ellipse: s-maj=27.0km s-min=14.9km az=24.0*

ISC 18 15:04:39.9±0.7**, 56°.1N**±0°.1×**161°.43W**±0°.06**, h165**^{km}±8^{km}**, n42,** σ**1.^{s}14**/51**, mb3.6**/11**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVV	Pavlof Volcano	0.78	195	P	Pn	15 05 04.5	0.0
PS4A	Pavlof South-4	0.82	197	P	Pn	15 05 04.6	-0.1
SDPT	Sand Point	0.95	145	P	Pn	15 05 05.2	-0.4
SDPT				S	Sn	15 05 24.2	-1.1
DOL	Dolgoi Island	1.01	194	P	Pn	15 05 05.6	-0.5
DOL				S	Sn	15 05 26.1	-0.2
VNFG	Veniaminof 2	1.06	81	P	Pn	15 05 08.0	+1.3
VNSS	Veniaminof 8	1.11	84	P	Pn	15 05 08.2	+1.1
DT1	Dutton Round H	1.13	206	P	Pn	15 05 06.8	-0.3
DRIA	Deer Island	1.26	202	P	Pn	15 05 07.7	-0.6
DRIA				S	Sn	15 05 29.4	-0.6
CHGN	Chignik	1.69	83	P	Pn	15 05 12.8	+0.3
CHGN				S	Sn	15 05 38.5	+0.8
FALS	False Pass	1.70	222	P	Pn	15 05 11.8	-0.8
FALS				S	Sn	15 05 36.8	-1.0
WESE	West Dahl East	2.45	229	P	Pn	15 05 21.4	+0.2
WESE				S	Sn	15 05 54.6	+1.5
PLK1	Peulik 1	3.13	56	P	Pn	15 05 31.0	+1.7
AKUT	Akutan	3.19	233	P	Pn	15 05 30.4	+0.3
AKUT				S	Sn	15 06 09.0	-0.2
AHB	Akutan Harbor	3.23	233	P	Pn	15 05 30.8	+0.2
ZRO	Akutan Zero	3.31	234	P	Pn	15 05 31.8	+0.1
AKMO	Akutan Morgan	3.33	234	P	Pn	15 05 31.9	+0.1
CNTC	Contact Creek	3.70	52	P	Pn	15 05 38.5	+1.9
UNV	Unalaska Valle	3.71	234	P	Pn	15 05 36.0	-0.7
MTBL	Makushin Table	3.71	237	P	Pn	15 05 37.1	+0.3
MSW	Makushin Switc	3.79	236	P	Pn	15 05 37.4	-0.4
MCIR	Makushin Cirqu	3.82	238	P	Pn	15 05 38.2	0.0
MREP	Makushin Rep't	3.84	235	P	Pn	15 05 38.2	-0.3
CAHL	Cahill	3.86	57	P	Pn	15 05 40.0	+1.4
SII	Sitkinak Islan	4.06	81	P	Pn	15 05 40.4	-0.8
KDAK	Kodiak Island	5.12	67	*e*Pn	Pn	15 05 54.2	-0.7
	66nm,0.3s						
KDAK	Kodiak Island	5.12	67	P	Pn	15 05 54.3	-0.7
	20nm,0.3s,baz=219,slow=3.1,SNR=628						
KDAK				S	Sn	15 06 48.7	-5.0
	1.3nm,0.3s,baz=315,slow=20,SNR=3.1						
NIKH	Nikolski High	5.35	237	P	Pn	15 05 57.5	-0.6
ILAR	Eielson Array	11.22	34	P	Pn	15 07 13.6	-1.8
	0.2nm,0.3s,baz=220,slow=13,SNR=9.5						
ILAR				S	Sn	15 09 10.9	-8.7
	0.1nm,0.3s,baz=185,slow=9.4,SNR=4.3						
DLBC	Dease Lake	17.05	69	P	Pn	15 08 34.7	+6.4
	0.4nm,0.3s,baz=297,slow=6.9,SNR=13						
INK	Inuvik	17.62	35	P	P	15 08 32.4	-1.0
	0.2nm,0.3s,baz=210,slow=7.6,SNR=6.5						
SEY	Seymchan	23.92	306	P	P	15 09 37.8	-0.4
	0.4nm,0.5s,baz=91,slow=21,SNR=4.1						
YKA	Yellowknife Ar	24.26	55	P	P	15 09 42.0	+0.8
	0.6nm,0.5s,baz=279,slow=9.6,SNR=13						
YKA				PcP	PcP	15 13 16.0	-0.4
	0.2nm,0.5s,baz=290,slow=2.1,SNR=3.5						
NVAR	Mina Array Bea	33.51	103	P	P	15 11 05.5	+1.9
	0.5nm,0.7s,baz=312,slow=9.4,SNR=3.5						
NVAR				PcP	PcP	15 13 40.4	0.0
	0.1nm,0.4s,baz=308,slow=3.2,SNR=2.7						
PDAR	Pinedale Array	35.40	90	P	P	15 11 21.5	+1.6
	0.4nm,0.5s,baz=346,slow=2.9,SNR=6.2						
TXAR	Lajitas Array	48.35	99	P	P	15 13 05.9	+1.2
	1.6nm,1.0s,baz=291,slow=3.9,SNR=8.2						
JNU	Nakatsue	51.02	273	P	P	15 13 25.4	+0.6
	6.6nm,0.7s,baz=108,slow=5.2,SNR=4.6						
ARCES	ARCESS Array B	54.54	357	P	P	15 13 49.7	-0.4
	3.8nm,1.0s,baz=354,slow=7.4,SNR=2.4						
FINES	FINESS Array B	62.62	356	P	P	15 14 45.3	-0.6
	0.7nm,0.5s,baz=4.2,slow=7.8,SNR=8.5						
NB2	NORSAR Subarra	63.03	4	P	P	15 14 48.8	+0.1
	comp=Z,0.3nm,0.5s,baz=356,slow=6.5						
NOA	NORSAR Array B	63.03	4	P	P	15 14 48.9	+0.2
	comp=Z,0.7nm,0.7s,baz=356,slow=6.7,SNR=3.7						
MKAR	Makanchi Array	64.43	317	P	P	15 14 57.5	-0.6
	comp=Z,0.3nm,0.9s,baz=42,slow=5.1,SNR=3.6						
AKASG	Malin Array Be	73.17	353	P	P	15 15 51.2	-0.7
	comp=Z,1.1nm,0.4s,baz=9.1,slow=5.8,SNR=5.7						

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*ISCJB **18** 15:22:07.7±0.3, 4°.97N±0°.04×95°.74E±0°.04, h10^{km}, mb4.2/24, MS3.7/4, Error ellipse: s-maj=7.0km s-min=4.2km az=43.7*

*IDC **18** 15:22:07.7±0.7, 5°.10N×95°.92E, h0^{km}, mb4.0/14, mb1 4.1/16, mb1mx3.9/37, mbtmp4.0/16, ML3.7/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/48, Error ellipse: s-maj=38.1km s-min=12.8km az=45.0*

*NEIC **18** 15:22:09.2±0.3, 5°.06N×95°.90E, h10^{km}, mb4.5/8, Error ellipse: s-maj=10.0km s-min=4.3km az=39.0*

*DJA **18** 15:22:10.4±0.8, 5°N±4°×9°6E±°, h10^{km}, M4.6/7, mB4.9/1, mb4.6/4, MLv4.7/7, Mw(mB)4.2/1*

ISC 18 15:22:09.4±0.4**, 4°.98N**±0°.05×**95°.82E**±0°.05**, h10**^{km}**, n64,** σ**1.^{s}78**/63**, mb4.2**/24**, MS3.8**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.15	78	*e*Pn	Pb	15 22 30.7	-0.8
LHMI	Lhok Sumawe	1.15	78	P	Pb	15 22 31.1	-0.3
LHMI				S	Sb	15 22 47.0	+0.5
TPTI		2.19	142	P	Pn	15 22 47.3	+1.4
TPTI				S	Sb	15 23 16.5	+0.3
KCSI	Kotacane, Aceh	2.43	127	P	Pn	15 22 52.0	+2.8
SNSI	Sinabang, Aceh	2.61	169	P	Pn	15 22 54.0	+2.3
TSI	Tuntungan	3.11	118	P	Pb	15 23 06.2	+1.3
PSI	Prapat	3.78	125	*e*Pn	Pn	15 23 09.6	+1.7
PSI				Sn	Sn	15 23 54.3	+1.7
PSI	Prapat	3.78	125	Pn	Pn	15 23 10.2	+2.2
	14nm,0.3s,baz=358,slow=4.9,SNR=29						
PSI				Sn	Sn	15 23 54.3	+1.7
	16nm,0.3s,baz=358,slow=1.0,SNR=3.6						
PSI				LR	LR	15 25 01.1	
	comp=Z,286nm,20.8s,baz=3.0,slow=45						
PKDT	Phuket	3.82	41	P	Pn	15 23 12.2	+3.8
GSI	Gunungsitoli	4.05	154	*e*Pn	Pn	15 23 11.3	-0.3
GSI	Gunungsitoli	4.05	154	P	Pn	15 23 12.3	+0.7
TRTT	Trang	4.78	53	P	Pn	15 23 25.2	+3.6
KULM	Kulim	4.82	86	*e*Pn	Pn	15 23 21.3	-0.8
IPM	Ipoh	5.21	95	*e*Pn	Pn	15 23 26.2	-1.4
PBSI	Pulau Batu	5.58	154	P	Pn	15 23 33.5	+1.0
MNSI	Mandailing Nat	5.60	138	P	Pn	15 23 35.7	+2.8
	51nm,0.6s,1μm						
BKNI	Bangkinang	6.97	131	*e*Pn	Pn	15 23 52.7	+1.0
PBA	Port Blair	7.29	336	*e*Pn	Pn	15 24 01.4	+5.3
PDSI	Padang	7.47	141	P	Pn	15 24 01.3	+2.7
MYKOM	Kota Tinggi	8.62	111	*e*Pn	Pn	15 24 13.3	-1.1
SRAK	Srakaew	10.87	34	P	Pn	15 24 52.0	+6.8
	62nm,0.5s,826nm						
MNAI	Manna	11.70	142	*e*Pn	Pn	15 24 58.4	+1.7
CMAR	Chiang Mai Arr	13.74	13	Pn	Pn	15 25 27.4	+3.0
	0.2nm,0.3s,baz=197,slow=13,SNR=4.8						
CHTO	Chiang Mai	14.08	12	P	P	15 25 47.1	+10
CMMT	Chiang Mai	14.08	12	P	P	15 25 44.4	+7.4
	4.1nm,1.3s						
KSM	Kuching	14.88	103	*e*Pn	Pn	15 25 38.7	-1.4
PALK	Pallekele	15.20	279	Pn	Pn	15 25 45.4	+1.0
	0.2nm,0.3s,baz=117,slow=14,SNR=2.5						
PALK				Sn	Sn	15 28 27.0	-6.1
	0.2nm,0.3s,baz=115,slow=16,SNR=2.8						
PALK				LR	LR	15 31 37.5	
	comp=Z,74nm,18.2s,baz=114,slow=37						
UGM	Wanagama	19.48	131	*e*P	P	15 26 34.0	-2.8
	309nm,1.9s						
KKM	Kota Kinabalu	20.33	86	*e*P	P	15 26 40.9	-5.2
	31nm,1.3s						
LSA	Lhasa	24.98	350	*e*P	P	15 27 34.0	+0.1
	19nm,2.0s						
H08S2	Diego Garcia H	26.44	242	T	T	15 54 53.9	
	baz=62,slow=75,SNR=14						
H08S3	Diego Garcia H	26.44	242	T	T	15 54 53.1	
	baz=62,slow=75,SNR=31						
H08S1	Diego Carcia H	26.45	242	T	T	15 54 58.2	
	baz=62,slow=75,SNR=8.8						
CD2	Chengdu	26.85	15	*e*P	P	15 27 50.0	-0.4
XAN	Xi'an	31.37	21	P	P	15 28 31.5	+0.9
XAN				pP	sP	15 28 47.5	+12
XAN				pmax	pmax		
	comp=Z,4.0nm,2.6s						
XAN				pmax	pmax		
	comp=Z,250nm,4.3s						
LZH	Lanzhou	31.82	12	*e*P	P	15 28 36.4	+1.7
LZH				pP	sP	15 28 52.4	+13
LZH				sP	pP	15 29 00.0	+22
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,240nm,4.3s						
LZH				LR	LR		
	comp=N,360nm,14.1s						
LZH				LR	LR		
	comp=E,330nm,14.6s						
LZH				LR	LR		
	comp=Z,440nm,16.4s						
GTA	Gaotai	34.46	5	*e*P	P	15 29 02.3	+4.7
GTA				pP	sP	15 29 15.4	+13
GTA				sP	pP	15 29 20.5	+19
GTA				S	S	15 34 28.3	+2.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,80nm,7.3s						
GTA				LR	LR		
	comp=N,150nm,16.8s						
GTA				LR	LR		
	comp=E,130nm,16.5s						
GTA				LR	LR		
	comp=Z,100nm,16.8s						
FITZ	Fitzroy Crossi	37.30	129	*e*P	P	15 29 20.3	-1.7
	comp=Z,5.4nm,0.8s						
HHC	Hu-ho-hao-te	38.41	19	*e*P	P	15 29 31.4	+0.1
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,280nm,6.1s						
WMQ	Urumqi	39.34	351	*e*P	P	15 29 39.4	+0.4
WMQ				LR	LR		
	comp=N,130nm,19.5s						
WMQ				LR	LR		
	comp=E,130nm,20.3s						
WMQ				LR	LR		
	comp=Z,73nm,18.7s						
WSAR	Wadi Sarin	40.19	301	P	P	15 29 46.5	+0.1
	comp=Z,1.2nm,0.7s,baz=196,slow=13,SNR=1.9						
CHGR	Chuyangaron	41.34	328	*e*P	P	15 29 55.0	-0.8
	comp=Z,7.6nm,0.6s						
MK31	Makanchi Array	43.26	346	*e*P	P	15 30 10.2	-1.0
MKAR	Makanchi Array	43.26	346	*e*P	P	15 30 10.2	-1.0
	comp=Z,6.7nm,0.9s						
MKAR	Makanchi Array	43.26	346	P	P	15 30 10.2	-1.0
	comp=Z,0.7nm,0.6s,baz=170,slow=7.4,SNR=9.2						
KSRS	Korea Array	43.63	38	LR	LR	15 51 40.2	
	comp=Z,22nm,19.1s,baz=335,slow=41						
SONM	Songino Array	43.65	10	P	P	15 30 13.6	-0.8
	comp=Z,0.6nm,0.7s,baz=190,slow=7.4,SNR=4.1						
WRA	Warramunga Arr	45.25	124	P	P	15 30 26.7	-0.8
	comp=Z,3.1nm,0.7s,baz=302,slow=9.2,SNR=34						
WRA				PcP	PcP	15 32 07.2	-0.3
	comp=Z,0.6nm,0.5s,baz=318,slow=2.7,SNR=6.3						
WRAB	Tennant Creek	45.25	124	*e*P	P	15 30 26.3	-1.2
	comp=Z,1.8nm,0.4s						
ASAR	Alice Springs	46.80	129	P	P	15 30 39.4	-0.3
	comp=Z,12nm,0.5s,baz=301,slow=7.9,SNR=606						
ASAR				PcP	PcP	15 32 12.2	-0.7
	comp=Z,0.6nm,0.5s,baz=320,slow=3.5,SNR=3.3						
AS31	Alice Springs	46.80	129	*e*P	P	15 30 39.1	-0.6
	comp=Z,7.8nm,0.4s						
AS01	Alice Springs	46.84	129	*e*P	P	15 30 39.2	-0.8
GEYT	Alibeck	47.46	319	P	P	15 30 44.8	+0.2
	comp=Z,5.9nm,0.7s,baz=128,slow=8.5,SNR=7.6						
ZALV	Zalesovo Beam	49.63	351	P	P	15 31 00.8	-0.2
	comp=Z,0.6nm,0.6s,baz=169,slow=8.0,SNR=2.8						

ABKAR	Akbulak array	53.55	331	eP	P	15 31 30.1	-0.4
STKA	Stephens Creek	56.92	133	P	P	15 31 54.3	-0.8
	comp=Z,3.0nm,0.7s,baz=314,slow=12,SNR=5.3						
KBZ	Khabaz	60.34	318	P	P	15 32 17.6	-1.1
	comp=Z,2.0nm,0.8s,baz=55,slow=18,SNR=4.1						
BR131	Keskin Array S	65.57	311	eP	P	15 32 53.2	-0.6
BRTR	Keskin Array B	65.57	311	P	P	15 32 53.4	-0.4
	comp=Z,1.1nm,0.5s,baz=121,slow=6.3,SNR=9.0						
AKASG	Malin Array Be	71.44	322	P	P	15 33 29.8	-0.3
	comp=Z,0.2nm,0.3s,baz=88,slow=4.5,SNR=4.1						
FINES	FINESS Array B	76.03	332	P	P	15 33 55.6	-1.2
	comp=Z,0.8nm,0.6s,baz=106,slow=6.8,SNR=5.1						
ARCES	ARCESS Array B	78.53	340	P	P	15 34 09.5	-1.2
	comp=Z,2.3nm,0.9s,baz=89,slow=6.2,SNR=5.7						
GERES	GERESS Array B	81.08	319	P	P	15 34 25.0	-0.1
	comp=Z,0.2nm,0.4s,baz=125,slow=5.1,SNR=3.5						
TORD	Torodi Ar. Bea	92.88	283	P	P	15 35 25.4	+1.9
	comp=Z,0.2nm,0.6s,baz=82,slow=6.1,SNR=2.4						

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*ISK **18** 15:31:00.1, 38°.51N×40°.70E, h1^{km}, ML2.2/6*
*DDA **18** 15:31:01.8, 38°.53N×40°.74E, h7^{km}±4^{km}, ML2.7*
ISC 18 15:31:01.1±1.4, **38°.53N**±0°.03×**40°.72E**±0°.03, **h7**^{km}±12^{km}, **n13**, σ**0^{s}67**/22, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HANI	Diyarbakir_Han	0.27	245	i P	Pg	15 31 07.1	+0.6
HANI				i S	Sb	15 31 12.8	-0.5
HANI				IAML_P			
	comp=Z,2μm,0.1s						
BGOL	Bingol	0.46	356	i P	Pb	15 31 11.1	-0.5
BGOL				i S	Sb	15 31 18.5	-0.2
BGOL				IAML_P			
	comp=Z,623nm,0.3s						
BNGB	Bingl	0.46	356	PG	Pg	15 31 10.5	+0.4
BNGB				SG	Sb	15 31 18.3	-0.5
SVAN	Silvan-Diyarba	0.54	135	PG	Pg	15 31 11.7	+0.3
SVAN				SG	Sb	15 31 19.7	-1.1
SVAN	Silvan-Diyarba	0.54	135	i P	Pb	15 31 12.9	0.0
SVAN				i S	Sb	15 31 20.6	-0.2
SVAN				IAML_P			
	comp=Z,1μm,0.1s						
DIYA	Diyarbakir	0.77	218	i P	Pn	15 31 17.9	-0.5
DIYA				i S	Sn	15 31 29.7	-0.5
DIYA				IAML_P			
	comp=Z,2μm,0.1s						
YEDI	Yedisu-Bingol	0.92	352	PG	Pg	15 31 18.3	-0.5
YEDI				SG	Sb	15 31 32.6	+0.6
GURO	Guroymak-BITLI	1.03	88	PG	Pg	15 31 20.5	-0.4
MAZI	Mazidag	1.09	191	PG	Pg	15 31 21.4	-0.6
SRTM	Siirt_Merkez	1.09	119	i P	Pn	15 31 22.7	-0.3
SRTM				i S	Sn	15 31 39.3	+0.9
SRTM				IAML_P			
	comp=Z,933nm,0.1s						
MARD	Mardin	1.21	178	i P	Pn	15 31 24.9	+0.3
MARD				i S	Sn	15 31 42.8	+1.4
MARD				IAML_P			
	comp=Z,1μm,0.1s						
AKDM	Akdamar-Van	1.79	96	PN	Pn	15 31 33.2	+0.6
URFA	Urfa	1.85	235	PN	Pn	15 31 33.8	+0.5

MEX 18 15:37:01.3±0.6, **16°.41N**×**98°.20W**, **h20**^{km}±5^{km}, **MD3.9**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.07	103	eP	Pb	15 37 04.0	-1.1
PNIG				i S	Sb	15 37 06.4	-1.3
VHO	Vista Hermosa	1.55	65	eP	Pn	15 37 25.1	-2.8
VHO				eS	Sn	15 37 44.2	-3.3

IDC 18 15:38:53.1±2.3, **22°.06N**×**143°.06E**, **h234**^{km}±23^{km}, **mb3.0**/5, **mb1 3.2**/6, **mb1mx2.9**/37, **mbtmp3.7**/6, **Error ellipse: s-maj=48.1km s-min=15.4km az=95.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.08	351	P	Pn	15 40 10.3	+1.0
	5.1nm,0.3s,baz=120,slow=22,SNR=7.4						
JCJ				S	S	15 41 09.3	-0.6
	2.6nm,0.3s,baz=252,slow=20,SNR=3.0						
KLR	Kul'dur	28.57	344	P	P	15 44 28.7	+1.5
	0.4nm,0.5s,baz=167,slow=11,SNR=3.7						
WRA	Warramunga Arr	42.60	192	P	P	15 46 26.4	-0.1
	0.5nm,0.6s,baz=16,slow=9.3,SNR=20						
ASAR	Alice Springs	46.31	192	P	P	15 46 55.5	-0.2
	0.3nm,0.8s,baz=13,slow=8.2,SNR=6.1						
ZALV	Zalesovo Beam	53.86	322	P	P	15 47 50.8	-1.1
	0.4nm,0.4s,baz=100,slow=7.9,SNR=2.8						
ILAR	Eielson Array	61.77	27	P	P	15 48 46.5	-0.2
	0.4nm,0.7s,baz=252,slow=5.6,SNR=6.7						

MEX 18 15:43:50.1±1.0, **16°.80N**×**99°.90W**, **h3**^{km}±28^{km}, **MD3.9**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.43	305	eP	Pg	15 43 57.5	-0.8
CAIG				i S	Sg	15 44 04.6	+0.6
MEIG	Mezcala	1.15	13	eP	Pg	15 44 09.2	-3.0
MEIG				eS	Sg	15 44 23.3	-3.8
ARIG	Puente Sto Nin	1.53	344	eP	Pn	15 44 15.3	-3.0
ARIG				i S	Sn	15 44 33.2	-5.6
PLIG	Platanillo	1.63	13	eP	Pn	15 44 17.0	-2.8
PLIG				eS	Sn	15 44 35.7	-5.5

IDC 18 15:44:27.0±4.7, **21°.47N**×**145°.03E**, **h123**^{km}±32^{km}, **mb3.4**/6, **mb1 3.5**/7, **mb1mx3.2**/43, **mbtmp3.8**/7, **Error ellipse: s-maj=98.8km s-min=17.5km az=82.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	6.18	336	P	Pn	15 45 57.8	+2.0
	5.6nm,0.3s,baz=228,slow=20,SNR=7.0						
JCJ				S	Sn	15 47 03.4	-1.7
	2.2nm,0.3s,baz=140,slow=19,SNR=3.3						
WRA	Warramunga Arr	42.46	195	P	P	15 52 09.8	-0.2
	0.4nm,0.6s,baz=15,slow=8.5,SNR=8.5						
ASAR	Alice Springs	46.15	194	P	P	15 52 38.8	-0.5
	0.4nm,0.8s,baz=12,slow=6.3,SNR=5.7						
ZALV	Zalesovo Beam	55.46	321	P	P	15 53 50.2	+1.5
	0.8nm,0.6s,baz=111,slow=8.4,SNR=3.6						
MKAR	Makanchi Array	56.12	313	P	P	15 53 53.4	-0.2
	0.5nm,0.6s,baz=88,slow=8.5,SNR=8.1						
ARCES	ARCESS Array B	79.68	342	P	P	15 56 20.5	0.0
	1.6nm,0.8s,baz=70,slow=7.8,SNR=2.6						
FINES	FINESS Array B	84.12	335	P	P	15 56 43.2	-0.7
	0.4nm,0.5s,baz=64,slow=6.3,SNR=5.2						

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*IDC **18** 15:57:24.3±1.3, 9°.35S×109°.28W, h0^{km}, mb3.7/8, mb1 4.0/8, mb1mx3.9/26, mbtmp3.7/8, Error ellipse: s-maj=47.8km s-min=26.2km az=51.0*
ISC 18 15:57:25.3±1.3, **9°.4S**±0°.3×**109°.3W**±0°.3, **h10**^{km}, **n19**, σ**0^{s}86**/14, **mb3.7**/8, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	30.42	269	eLR	LR	16 11 05.8	
	comp=Z,565nm,25.5s						
TXAR	Lajitas Array	38.91	8	P	P	16 04 50.6	-0.9
	0.1nm,0.3s,baz=187,slow=6.4,SNR=4.5						
TXAR				PcP	PcP	16 07 03.5	+1.2
	0.2nm,0.7s,baz=183,slow=3.2,SNR=2.0						
PPT2	Papeete2	39.89	254	eLQ	LQ	16 13 52.5	
	598nm,26.8s						
PPT2				eLR	LR	16 15 31.7	
	comp=Z,313nm,27.0s						
LPAZ	La Paz	40.70	104	P	P	16 05 06.7	-0.4
	0.3nm,0.4s,baz=254,slow=7.5,SNR=2.5						
TBI	Tubuai	40.75	245	eLQ	LQ	16 14 16.8	
	550nm,34.0s						
TBI				eLR	LR	16 15 51.6	
	comp=Z,191nm,41.8s						
SIV	San Ignacio	47.45	103	P	P	16 06 01.4	+0.7
	0.4nm,0.5s,baz=260,slow=13,SNR=2.1						
NVAR	Mina Array Bea	48.33	351	P	P	16 06 08.2	+0.9
	2.2nm,0.8s,baz=175,slow=8.8,SNR=8.4						
PDAR	Pinedale Array	51.93	360	P	P	16 06 34.9	+0.3
	1.3nm,1.0s,baz=146,slow=6.6,SNR=3.4						
ULM	Lac du Bonnet	60.57	10	P	P	16 07 35.8	-0.1
	3.3nm,0.9s,baz=217,slow=5.6,SNR=3.9						
YKA	Yellowknife Ar	71.81	357	P	P	16 08 47.4	-0.4
	0.4nm,0.8s,baz=167,slow=5.6,SNR=4.6						
ILAR	Eielson Array	79.14	345	P	P	16 09 30.5	+0.6
	0.8nm,0.9s,baz=172,slow=3.3,SNR=5.0						
H11S2	WAKE ISLAND Hy	87.28	289	T	T	17 46 03.9	
	baz=110,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	87.29	289	T	T	17 46 01.7	
	baz=110,slow=75,SNR=29						
H11S3	WAKE ISLAND Hy	87.30	289	T	T	17 46 01.1	
	baz=110,slow=75,SNR=28						
SONM	Songino Array	131.28	328	PKP	PKPdf	16 16 37.6	-0.5
	0.2nm,0.8s,baz=3.8,slow=2.2,SNR=2.3						
BRTR	Keskin Array B	135.32	41	PKP	PKPdf	16 16 46.4	+0.5
	0.3nm,0.7s,baz=339,slow=6.2,SNR=2.7						
MKAR	Makanchi Array	141.46	347	PKP	PKPdf	16 16 55.0	-1.9
	0.2nm,0.5s,baz=41,slow=2.7,SNR=3.2						
GEYT	Alibeck	149.44	20	PKPbc	PKPbc	16 17 15.2	0.0
	0.6nm,0.4s,baz=305,slow=5.1,SNR=2.7						
CMAR	Chiang Mai Arr	151.15	291	PKPbc	PKiKP	16 17 20.4	0.0
	4.1nm,0.8s,baz=4.1,slow=0.7,SNR=14						

IDC 18 15:58:23.7±2.6, **9°.28S**×**109°.65W**, **h0**^{km}, **mb3.5**/3, **mb1 4.0**/3, **mb1mx3.6**/26, **mbtmp3.5**/3, **MS3.8**/4, **Ms1 3.8**/4, **ms1mx3.5**/22, **Error ellipse: s-maj=152.8km s-min=58.4km az=95.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	17.75	179	LR	LR	16 07 29.0	
	comp=Z,329nm,19.2s,baz=354,slow=31						
LVC	Limon Verde	41.20	114	LR	LR	16 18 28.8	
	comp=Z,386nm,19.1s,baz=316,slow=29						
SDV	Santo Domingo	42.84	66	LR	LR	16 21 58.0	
	comp=Z,76nm,21.3s,baz=18,slow=33						
NVAR	Mina Array Bea	48.15	351	P	P	16 07 06.9	+0.9
	0.3nm,0.3s,baz=184,slow=11,SNR=4.5						
SJG	San Juan	50.84	58	LR	LR	16 23 14.2	
	comp=Z,58nm,21.3s,baz=259,slow=29						
YKA	Yellowknife Ar	71.66	358	P	P	16 09 46.3	-0.7
	0.2nm,0.5s,baz=170,slow=5.6,SNR=2.5						
ILAR	Eielson Array	78.93	345	P	P	16 10 28.4	-0.4
	0.8nm,1.0s,baz=160,slow=5.5,SNR=2.6						
H11S2	WAKE ISLAND Hy	86.95	289	T	T	17 46 57.6	
	baz=104						
H11S1	WAKE ISLAND Hy	86.96	289	T	T	17 47 00.4	
	baz=104						
H11S3	WAKE ISLAND Hy	86.97	289	T	T	17 47 00.4	
	baz=104						
BRTR	Keskin Array B	135.42	41	PKP	PKPdf	16 17 46.8	+0.5
	0.3nm,0.8s,baz=270,slow=2.9,SNR=2.5						
MKAR	Makanchi Array	141.25	347	PKP	PKPdf	16 17 55.9	-0.8
	0.2nm,0.6s,baz=35,slow=3.5,SNR=2.1						
CMAR	Chiang Mai Arr	150.82	291	PKPbc	PKPbc	16 18 19.0	-0.2
	0.7nm,0.8s,baz=53,slow=1.2,SNR=2.4						

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*NIED **18** 16:01:00, 24°.80N×125°.40E, h47^{km}, Mw4.4 Best double couple: M$_0$4.39000×10^{15} NP1:φ$_s$196.00000°, δ16.00000°, λ53.00000°. NP2:φ$_s$55.00000°, δ77.00000°, λ100.00000°.*
*ISCJB **18** 16:01:58.0±0.3, 25°.09N±0°.05×125°.27E±0°.04, h41^{km}±5^{km}, mb4.5/89, MS3.5/9, Error ellipse: s-maj=9.4km s-min=4.3km az=156.1*
*JMA **18** 16:01:58.3±0.1, 24°.81N×125°.38E, h49^{km}±1^{km}, M4.5*
JMA Felt III J1.
*NEIC **18** 16:01:58.3±0.3, 25°.61N×125°.05E, h10^{km}, mb4.8/38, Error ellipse: s-maj=7.6km s-min=5.3km az=154.0*
NEIC Recorded [3 JMA] on Miyako-jima.
*MOS **18** 16:01:59.8±1.2, 25°.50N×125°.09E, h34^{km}, mb4.8/35, Error ellipse: s-maj=8.6km s-min=5.9km az=114.9*
*IDC **18** 16:01:59.0±2.3, 24°.87N×125°.39E, h48^{km}±21^{km}, mb4.0/27, mb1 4.1/30, mb1mx4.0/55, mbtmp4.2/30, ML3.1/4, MS3.3/11, Ms1 3.3/11, ms1mx3.1/51, Error ellipse: s-maj=16.2km s-min=14.4km az=86.0*
ISC 18 16:01:58.6±0.5, **24°.89N**±0°.07×**125°.33E**±0°.05, **h45**^{km}±4^{km}, **n189**, σ**1^{s}35**/192, **mb4.5**/95, **MS3.5**/10, **13C-10D**, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ	Miyako jima 2	0.08	207	⇑P	Pn	16 02 05.8	+0.1
JMJ				S	Sn	16 02 11.2	+0.5
JIKM	Ikemajima	0.09	297	P	Pn	16 02 06.2	+0.5
JIKM				S	Sn	16 02 12.1	+1.4
JOGS	Gusukube	0.14	151	⇑P	Pn	16 02 05.7	-0.3
JOGS				S	Sn	16 02 11.3	+0.1
JIRB	Irabujima	0.15	249	P	Pn	16 02 06.2	+0.1
JIRB				S	Sn	16 02 11.9	+0.6
JTJ	Tarama	0.62	247	⇓P	Pn	16 02 11.3	+0.2
JTJ				S	Sn	16 02 20.8	+0.7
JISG	Ishigakijimahi	0.97	253	P	Pn	16 02 15.7	-0.2
JISG				S	Sn	16 02 29.3	+0.8
JIJ	Ishigaki jima	1.20	245	⇓P	Pn	16 02 19.0	+0.1
JIJ				eS	Sn	16 02 34.6	+0.5
JKRS	Kuro-shima	1.37	242	⇓P	Pn	16 02 21.7	+0.5
IRIF	Iriomote-Funau	1.56	250	⇓P	Pn	16 02 23.7	-0.1
HATJ	Hateruma jima	1.62	240	P	Pn	16 02 26.3	+1.7
YOJ	Yonaguni jima	2.15	259	ePn	Pn	16 02 32.1	+0.1
YOJ	Yonaguni jima	2.15	259	eP	Pn	16 02 32.1	+0.1
JOW	Kunigami	3.29	53	ePn	Pn	16 02 47.0	-0.5
JOW	Kunigami	3.29	53	P	Pn	16 02 48.0	+0.5
	1.5nm,0.3s,baz=214,slow=17,SNR=10						
NACB	Ninganchiao	3.48	259	ePn	Pn	16 02 50.3	+0.1
TATO	Taipei	3.49	272	ePn	Pn	16 02 53.0	+2.6
YHNB	Yeheng	3.60	267	ePn	Pn	16 02 53.8	+1.8
YULB	Yu-li	3.97	249	ePn	Pn	16 02 55.1	-2.0
SSLB	Suanglung	4.14	256	ePn	Pn	16 02 58.7	-0.7
TWG	Pinlang	4.41	243	eP	Pn	16 03 00.7	-2.4
TPUB	Ta-pu	4.58	251	ePn	Pn	16 03 05.6	+0.2
NJ2	Nanjing	9.13	323	eP	Pn	16 04 00.9	-6.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JNU	Nakatsue	9.53	29	ePn	Pn	16 04 08.8	-4.5
JNU	Nakatsue	9.53	29	P	Pn	16 04 13.8	+0.5
	comp=Z,0.3nm,0.3s,baz=232,slow=18,SNR=3.2						
JNU				LR	LR	16 08 30.9	
	comp=Z,37nm,18.6s,baz=182,slow=41						
KSAR	Wonju Array Be	12.71	9	P	Pn	16 04 58.1	+1.5
KSAR	Wonju Array Be	12.71	9	P	Pn	16 04 58.1	+1.5
KSRS	Korea Array	12.72	9	P	Pn	16 04 58.1	+1.3
	comp=Z,0.1nm,0.3s,baz=121,slow=24,SNR=6.5						
KSRS				LR	LR	16 10 06.2	
	comp=Z,88nm,19.4s,baz=174,slow=38						
ENH	Enshi	15.04	294	ePn	Pn	16 05 24.5	-3.7
JCJ	Chichijima	15.31	78	LR	LR	16 10 29.7	
	comp=Z,135nm,18.8s,baz=290,slow=34						
MAJO	Matsushiro	16.03	41	ePn	Pn	16 05 39.1	-1.8
	comp=Z,40nm,1.5s						
MAJO	Matsushiro	16.03	41	eP	Pn	16 05 39.2	-1.8
MAJO				pmax	pmax		
	comp=Z,40nm,1.5s						
MJAR	Matsushiro Arr	16.03	41	P	Pn	16 05 41.8	+0.9
	comp=Z,0.1nm,0.3s,baz=231,slow=12,SNR=12						
MJAR				LR	LR	16 11 51.9	
	comp=Z,72nm,18.3s,baz=55,slow=37						
MJB9	Matsu-Tunnel	16.03	41	ePn	Pn	16 05 39.1	-1.9
	comp=Z,43nm,1.6s						
XAN	Xi'an	16.94	306	P	P	16 05 55.6	+1.7
XAN				pP	pwP	16 06 07.3	+3.2
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN	Xi'an	16.94	306	P	Pn	16 05 48.0	-4.4
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN				LR	LR		
	comp=Z,270nm,17.3s						
XAN				LR	LR		
	comp=Z,250nm,15.7s						
XAN	Xi'an	16.94	306	eP	Pn	16 05 50.6	-1.7
	comp=Z,22nm,0.8s						
XAN	Xi'an	16.94	306	eP	Pn	16 05 50.7	-1.7
XAN				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC	Hu-ho-hao-te	19.64	328	eP	P	16 06 19.5	-4.1
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.9s						
CD2	Chengdu	19.98	292	P	P	16 06 25.4	-1.9
CD2				S	S	16 10 04.8	-4.9
CD2				sS	Sn	16 10 10.5	-2.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,320nm,4.7s						
CD2				LR	LR		
	comp=Z,430nm,4.7s						
CD2				LR	LR		
	comp=Z,450nm,4.7s						
USRK	Ussuriysk Ar.	20.02	14	P	P	16 06 27.8	+0.2
	comp=Z,3.1nm,0.8s,baz=212,slow=9.0,SNR=4.4						
USRK				LR	LR	16 13 44.6	
	comp=Z,106nm,21.6s,baz=219,slow=35						
KMI	Kunming	20.48	275	P	Pn	16 06 35.5	+0.1
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GUMO	Guam	21.57	118	LR	LR	16 13 19.4	
	comp=Z,56nm,21.7s,baz=70,slow=32						
LZH	Lanzhou	21.57	306	eP	P	16 06 42.1	-2.5
LZH				pP	pP	16 06 48.0	-7.0
LZH				sP	sP	16 06 50.5	-10
LZH				PP	PnPn	16 07 05.8	-0.6
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,350nm,4.8s						
LZH				LR	LR		
	comp=Z,560nm,12.1s						
LZH				LR	LR		
	comp=Z,530nm,12.6s						
LZH				LR	LR		
	comp=Z,640nm,14.4s						
CHAI	Chaiyaphum	23.61	252	P	P	16 07 06.4	+0.7
	comp=Z,4.3nm,0.7s						
ASAJ	Asahikawa	23.80	32	P	P	16 07 07.1	-0.1
	comp=Z,6.1nm,0.7s,baz=234,slow=10,SNR=14						
PBKT	Sadao Pong	24.21	255	P	P	16 07 15.3	+4.1
	comp=Z,4.3nm,1.2s						
HIA	Hailar	24.73	351	i P	P	16 07 15.2	-0.5
HIA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLR	Kul'dur	24.82	10	⇑eP	P	16 07 18.1	+1.7
KLR	Kul'dur	24.82	10	P	P	16 07 15.8	-0.6
	comp=Z,1.1nm,0.6s,baz=173,slow=8.3,SNR=5.5						
KLR				PcP	PcP	16 10 52.0	+0.3
	comp=Z,1.0nm,0.6s,baz=273,slow=2.5,SNR=5.9						
SUKH	Sukhothai	25.04	258	P	P	16 07 22.7	+3.9
	comp=Z,3.3nm,0.6s						
CMMT	Chiang Mai	25.20	261	P	P	16 07 21.3	+1.1
	comp=Z,5.7nm,0.8s						
CHTO	Chiang Mai	25.20	261	eP	P	16 07 20.8	+0.5
	comp=Z,4.1nm,0.8s						
CHTO	Chiang Mai	25.20	261	eP	P	16 07 20.8	+0.5
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	25.20	261	P	P	16 07 21.4	+1.1
	comp=Z,25nm,0.8s						
CMAR	Chiang Mai Arr	25.32	261	P	P	16 07 22.2	+0.9
	comp=Z,2.5nm,0.9s,baz=60,slow=7.7,SNR=17						
CMAR				LR	LR	16 17 17.0	
	comp=Z,48nm,21.4s,baz=80,slow=36						
GTA	Gaotai	25.90	310	⇑P	P	16 07 26.1	-0.4
GTA				pP	pP	16 07 31.0	-7.2
GTA				sP	sP	16 07 33.1	-10
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,7.1s						
GTA				LR	LR		
	comp=Z,140nm,15.9s						
GTA				LR	LR		
	comp=Z,140nm,17.8s						
GTA				LR	LR		
	comp=Z,120nm,16.2s						
YSS	Yuzh-Sakhalins	26.04	28	eP	P	16 07 25.6	-1.9
YSS				e		16 07 34.4	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	Songino Array	27.37	332	P	P	16 07 39.4	-0.3
	comp=Z,1.4nm,0.5s,baz=155,slow=10,SNR=13						
SONM				PcP	PcP	16 10 58.1	+0.2
	comp=Z,0.5nm,0.6s,baz=155,slow=5.1,SNR=3.3						
SONM				LR	LR	16 20 06.8	
	comp=Z,129nm,20.0s,baz=171,slow=40						
SONA1	Songino Array	27.38	332	eP	P	16 07 38.6	-1.2
LSA	Lhasa	30.68	287	eP	P	16 08 11.7	+2.0
	comp=Z,2.0nm,0.8s						
LSA	Lhasa	30.68	287	eP	P	16 08 11.7	+2.0
LSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TLY	Talaya	31.47	334	eP	P	16 08 15.1	-0.8
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MOY	Mondy	32.57	332	eP	P	16 08 25.4	-0.2
RAMN	Ramite	34.81	282	eP	P	16 08 46.6	+1.0
	comp=Z,5.7nm,0.6s						
JIRN	Jiri	35.11	283	eP	P	16 08 49.6	+1.3
	comp=Z,24nm,1.0s						
GUN	Gumba	35.37	284	eP	P	16 08 51.6	+1.1
	comp=Z,5.3nm,0.5s						
PKI	Pulchoki	35.81	283	eP	P	16 08 54.9	+0.6
PKIN	Phulchoki	35.82	283	eP	P	16 08 54.8	+0.5
WMQ	Urumqi	35.97	311	eP	P	16 08 56.0	+0.9
WMQ				pP	pP	16 09 00.1	-6.9
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,350nm,4.1s						
WMQ				LR	LR		
	comp=Z,92nm,19.9s						
WMQ				LR	LR		
	comp=Z,140nm,17.5s						
WMQ				LR	LR		
	comp=Z,120nm,19.1s						
DMN	Daman	36.07	283	eP	P	16 08 56.6	+0.2
DANN	Dangsing	37.20	285	eP	P	16 09 07.2	+1.1
	comp=Z,9.4nm,0.6s						
PETK	Petropavlovsk-	37.22	32	P	P	16 09 05.3	-0.2
	comp=Z,4.7nm,0.9s,baz=224,slow=8.0,SNR=5.0						
KOLN	Koldanda	37.39	284	eP	P	16 09 08.6	+1.0
	comp=Z,11nm,0.9s						
PYUN	Piuthan	37.90	284	eP	P	16 09 13.0	+1.1
	comp=Z,15nm,0.9s						
MA2	Magadan	38.95	20	⇓iP	P	16 09 20.1	0.0
MA2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK01	Makanchi Array	40.51	314	eP	P	16 09 32.6	-0.6
MK31	Makanchi Array	40.52	314	eP	P	16 09 33.0	-0.3
MK31	Makanchi Array	40.52	314	eP	P	16 09 33.1	-0.3
MKAR	Makanchi Array	40.52	314	eP	P	16 09 33.0	-0.3
	comp=Z,31nm,0.6s						
MKAR	Makanchi Array	40.52	314	P	P	16 09 33.4	0.0
	comp=Z,3.9nm,0.5s,baz=101,slow=10,SNR=56						
MKAR				LR	LR	16 27 27.8	
	comp=Z,56nm,18.6s,baz=66,slow=38						
MAKZ	Makanchi	40.73	314	eP	P	16 09 34.6	-0.5
	comp=Z,6.7nm,0.8s						
MAKZ	Makanchi	40.73	314	eP	P	16 09 34.6	-0.5
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PDGK	Podgornoye	41.60	308	P	P	16 09 42.8	+0.4
PDGK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAA0	Zalesovo Array	41.78	325	eP	P	16 09 42.3	-1.2
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	41.78	325	eP	P	16 09 42.1	-1.4
ZALV	Zalesovo Beam	41.78	325	eP	P	16 09 42.1	-1.4
ZALV	Zalesovo Beam	41.78	325	P	P	16 09 42.9	-0.6
	comp=Z,3.0nm,0.5s,baz=115,slow=8.3,SNR=20						
ZALV				LR	LR	16 28 25.5	
	comp=Z,47nm,19.3s,baz=64,slow=38						
SEY	Seymchan	42.09	18	⇓eP	P	16 09 45.9	0.0
COEN	Coen	42.35	154	eP	pP	16 10 00.3	-0.4
	comp=Z,13nm,0.8s						
KDJ	Kajisay	43.08	306	eP	P	16 09 54.6	+0.1
	comp=Z,4.2nm,0.8s						
KDJ	Kajisay	43.08	306	eP	P	16 09 54.6	+0.1
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH	Kashi	43.72	302	P	P	16 10 03.8	+4.2
KSH				PP	PcP	16 11 45.4	-0.6
KSH				pmax	pmax		
	comp=Z,220nm,5.7s						
NRN	Naryn	43.87	305	eP	P	16 10 01.5	+0.4
	comp=Z,4.2nm,0.8s						
KURK	Kurchatov	44.03	318	eP	P	16 10 00.8	-1.0

	comp=Z,5.5nm,1.3s						
KURK	Kurchatov	44.03	318	eP	P	16 10 00.8	-1.0
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	45.12	306⇓	eP	P	16 10 11.9	+1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WRAB	Tennant Creek	45.40	168	eP	pP	16 10 24.2	-1.1
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	45.40	168	eP	pP	16 10 24.2	-1.1
WRAB				pmax	pmax		
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	45.41	168	ceP	pP	16 10 23.3	-2.1
WRA	Warramunga Arr	45.41	168	P	P	16 10 11.9	-1.1
	comp=Z,1.2nm,0.8s,baz=349,slow=8.8,SNR=13						
WB2	Warramunga Arr	45.41	168	eP	pP	16 10 24.3	-1.1
	comp=Z,16nm,0.8s						
NIL	Nilore	45.86	294	eP	P	16 10 16.8	+0.2
	comp=Z,7.7nm,0.8s						
NIL	Nilore	45.86	294	eP	P	16 10 16.8	+0.2
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MNAS	Manas	46.57	306	P	P	16 10 24.3	+2.1
MNAS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
OTUK	Ortayu	47.42	314	P	P	16 10 29.6	+1.0
OTUK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GAR	Garm	48.08	301	eP	P	16 10 34.3	+0.2
	comp=Z,5.4nm,0.7s						
GAR	Garm	48.08	301	eP	P	16 10 34.3	+0.2
GAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AS31	Alice Springs	48.97	170	eP	pP	16 10 52.4	-0.8
	comp=Z,5.8nm,0.4s						
ASAR	Alice Springs	48.97	170	P	P	16 10 40.5	-0.2
	comp=Z,0.3nm,0.5s,baz=358,slow=7.4,SNR=17						
AS01	Alice Springs	48.98	170	eP	pP	16 10 52.6	-0.6
CHGR	Chuyangaron	48.99	300	eP	P	16 10 41.4	+0.4
	comp=Z,6.6nm,0.8s						
CTAO	Charters Tower	49.12	154	eP	pP	16 10 53.7	-0.6
	comp=Z,36nm,1.1s						
CTAO	Charters Tower	49.12	154	eP	pP	16 10 53.7	-0.6
CTAO				pmax	pmax		
	comp=Z,36nm,1.1s						
KBL	Kabul	49.28	295	eP	P	16 10 44.5	+1.1
	comp=Z,8.7nm,1.1s						
KBL	Kabul	49.28	295	eP	P	16 10 44.5	+1.1
KBL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BRVK	Borovoye	49.63	320⇑	eP	P	16 10 46.2	+0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NRIK	Noril'sk	49.76	343	P	P	16 10 45.6	-0.6
	comp=Z,3.9nm,0.8s,baz=127,slow=8.4,SNR=10						
NRIK				LR	LR	16 33 53.6	
	comp=Z,95nm,19.1s,baz=71,slow=38						
BILL	Bilibino	49.77	19⇑	eP	P	16 10 46.6	+0.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ABKAR	Akbulak array	55.67	314	eP	P	16 11 30.4	+0.2
ARU	Arti	56.84	322	eP	P	16 11 37.9	-0.5
	comp=Z,4.5nm,0.6s						
ARU	Arti	56.84	322	d iP	P	16 11 38.2	-0.2
ARU						16 12 34.0	
ARU						16 13 41.8	
ARU				S	S	16 19 26.6	-1.9
ARU				SS	SS	16 23 15.0	-1.8
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GEYT	Alibeck	57.70	300	P	P	16 11 45.9	+1.0
	comp=Z,7.0nm,0.7s,baz=38,slow=2.6,SNR=11						
GYA0B	ALIBECK ARRAY	57.70	300	eP	P	16 11 45.5	+0.6
	comp=Z,8.3nm,0.8s						
ANM	Nome	58.93	28	eP	P	16 11 54.1	+1.2
	comp=Z,8.4nm,0.8s						
ANM	Nome	58.93	28	eP	P	16 11 54.1	+1.2
ANM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
IM3	Indian Mountai	63.87	27	eP	P	16 12 27.0	+0.8
MLY	Manley	65.19	28	eP	P	16 12 36.3	+1.4
	comp=Z,7.1nm,0.7s						
TOLK	Toolik Lake Re	65.30	24	eP	P	16 12 37.6	+1.9
	comp=Z,14nm,1.2s						
RND	Reindeer	66.20	29	eP	P	16 12 41.4	-0.2
	comp=Z,13nm,0.8s						
RND	Reindeer	66.20	29	eP	P	16 12 41.4	-0.2
RND				pmax	pmax		
	comp=Z,13nm,0.8s						
MDM	Murphy Dome	66.25	28	eP	P	16 12 43.1	+1.3
	comp=Z,12nm,0.7s						
COLA	College	66.42	28⇓	eP	P	16 12 45.2	+2.4
COLA				pmax	pmax		
	comp=Z,19nm,1.9s						
IL1	Eielson Array	66.85	28	eP	P	16 12 46.0	+0.4
ILAR	Eielson Array	66.85	28	P	P	16 12 45.4	-0.2
	comp=Z,1.1nm,0.6s,baz=249,slow=4.6,SNR=44						
ILB	Eielson Array	66.85	28	eP	P	16 12 46.5	+0.9
VRH	Novokhopyorsk	67.12	317	eP	P	16 12 46.4	-1.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEI	Tsey	67.49	308	eP	P	16 12 49.8	-0.5
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NCK	Nalchik	67.54	309⇑	eP	P	16 12 51.6	+1.2
NCK				pmax	pmax		
	comp=Z,14nm,0.6s						
KBZ	Khabaz	67.98	309	P	P	16 12 54.4	+1.3
	comp=Z,6.9nm,0.7s,baz=99,slow=4.6,SNR=25						
KIV	Kislovodsk	68.07	309	eP	P	16 12 54.3	+0.5
	comp=Z,14nm,0.7s						
KIV	Kislovodsk	68.07	309	eP	P	16 12 54.6	+0.8
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
NEY	Neytrino	68.22	309⇑	eP	P	16 12 56.5	+1.6
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LPSR	Galich'ya Gora	68.51	319	eP	P	16 12 55.7	-0.5
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VSR	Storozhevoye	68.68	318	eP	P	16 12 55.7	-1.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
EGAK	Eagle	69.25	27	eP	P	16 13 02.7	+2.0
	comp=Z,4.4nm,0.8s						
OBN	Obninsk	69.28	322	eP	P	16 12 59.6	-1.4
OBN				e		16 13 27.7	
OBN				e		16 15 30.6	
OBN				ePPP	PPP	16 17 09.9	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SPITS	Spitsbergen Ar	69.60	348	P	P	16 13 02.4	-0.2
	comp=Z,4.0nm,0.8s,baz=90,slow=3.5,SNR=6.6						
DAWY	Dawson	70.18	28	eP	P	16 13 07.1	+0.7
	comp=Z,26nm,1.8s						
ARCES	ARCESS Array B	70.29	338	P	P	16 13 07.4	+0.4
	comp=Z,3.4nm,0.9s,baz=76,slow=7.5,SNR=4.2						
EPYK	Eagle Plains	70.59	25	eP	P	16 13 09.4	+0.5
	comp=Z,7.8nm,0.7s						
INK	Inuvik	71.14	23	eP	P	16 13 12.5	+0.4
	comp=Z,5.8nm,0.8s						
INK	Inuvik	71.14	23	eP	P	16 13 12.5	+0.4
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FINES	FINESS Array B	72.73	330	iP	P	16 13 22.3	+0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	72.73	330	P	P	16 13 22.1	+0.3
	comp=Z,1.8nm,0.5s,baz=66,slow=5.8,SNR=20						
VSU	Vasula	73.46	327⇓	eP	P	16 13 25.2	-0.9
VSU				pmax	pmax		
	comp=Z,43nm,1.4s						
AKASG	Malin Array Be	74.84	319	P	P	16 13 34.0	-0.3
	comp=Z,4.2nm,0.6s,baz=57,slow=6.3,SNR=10						
AKBB	Malin Array Si	74.84	319	eP	P	16 13 33.6	-0.7
	comp=Z,4.9nm,0.6s						
KIEV	Kiev	74.85	319	eP	P	16 13 33.6	-0.8
	comp=Z,4.8nm,0.6s						
KIEV	Kiev	74.85	319	ceP	P	16 13 34.0	-0.4
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AK11	Malin Array Si	74.88	319	eP	P	16 13 34.1	-0.4
BR131	Keskin Array S	75.78	307	eP	P	16 13 40.3	+0.1
BRTR	Keskin Array B	75.78	307	P	P	16 13 40.8	+0.6
	comp=Z,6.9nm,0.8s,baz=93,slow=5.9,SNR=37						
RES	Resolute Bay	77.34	10	eP	P	16 13 48.3	+0.2
	comp=Z,22nm,1.8s						
RES	Resolute Bay	77.34	10	eP	P	16 13 48.3	+0.2
RES				pmax	pmax		
	comp=Z,22nm,1.8s						
BUR08	Bucovina Ar. S	78.45	317	eP	P	16 13 54.4	-0.6
BUR04	Bucovina Ar. S	78.45	317	eP	P	16 13 54.8	-0.1
HFS	Hagfors	78.78	332	P	P	16 13 56.7	+0.3
	comp=Z,2.6nm,0.7s,baz=94,slow=5.9,SNR=8.0						
MLR	Muntele Rosu	78.86	315	P	P	16 13 58.2	+1.0
	comp=Z,2.5nm,0.7s,baz=67,slow=5.9,SNR=4.7						
NB2	NORSAR Subarra	79.34	333	P	P	16 13 59.2	-0.3
	comp=Z,1.2nm,0.6s,baz=55,slow=5.6						
NOA	NORSAR Array B	79.34	333	P	P	16 13 59.2	-0.3
	comp=Z,1.8nm,0.7s,baz=55,slow=5.5,SNR=7.6						
YKA	Yellowknife Ar	80.83	24	P	P	16 14 08.0	+0.6
	comp=Z,1.1nm,0.7s,baz=302,slow=5.5,SNR=17						
VTS	Vitosha	81.85	313	eP	P	16 14 13.9	+0.5
	comp=Z,5.9nm,0.9s						
VTS	Vitosha	81.85	313	eP	P	16 14 13.9	+0.5
VTS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VYHS	Vyhne	81.90	320	eP	P	16 14 14.3	+0.9
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VYHS	Vyhne	81.90	320	eP	P	16 14 14.3	+0.9
SUMG	Summit	82.17	355	eP	P	16 14 15.4	+0.6
	comp=Z,11nm,0.8s						
SUMG	Summit	82.17	355	eP	P	16 14 15.4	+0.6
SUMG				pmax	pmax		
	comp=Z,11nm,0.8s						
VRAC	Vranov	82.80	321	P	P	16 14 19.2	+1.2
	comp=Z,1.4nm,0.4s,baz=23,slow=16,SNR=4.0						
BRG	Berggiesshubel	83.46	324	e(P)	P	16 14 22.0	+0.5
	comp=Z,2.9nm,0.9s						
BRG	Berggiesshubel	83.46	324	eP	P	16 14 22.0	+0.5
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CLL	Collm	83.73	324⇑	iP	P	16 14 23.3	+0.5
	comp=Z,5.0nm,0.9s						
CLL				e		16 14 34.0	
CLL	Collm	83.73	324⇑	iP	P	16 14 23.3	+0.5
CLL				e		16 14 34.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GERES	GERESS Array B	84.66	322	P	P	16 14 28.3	+0.5
	comp=Z,1.5nm,0.8s,baz=57,slow=4.9,SNR=9.8						
GEA0	GERESS Array S	84.67	322	eP	P	16 14 28.1	+0.3
DAVOX	Davos/Dischmat	87.95	322	P	P	16 14 44.1	+0.1
	comp=Z,1.7nm,0.5s,baz=32,slow=7.0,SNR=4.3						
FFC	Flin Flon	90.94	25	ceP	P	16 15 01.7	+4.1
FFC				pmax	pmax		
	comp=Z,31nm,2.5s						
HLID	Hailey	92.59	39	eP	P	16 15 07.1	+1.3
	comp=Z,2.3nm,0.8s						
NVAR	Mina Array Bea	93.31	45	P	P	16 15 10.3	+1.1
	comp=Z,0.5nm,0.7s,baz=302,slow=5.2,SNR=3.8						
SDV	Santo Domingo	143.00	27	PKP	PKPdf	16 21 25.9	-2.7
	comp=Z,2.9nm,0.6s,baz=27,slow=6.4,SNR=4.3						

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*ISCJB **18** 16:02:31.6±1.4, 8°.3S±0°.1×121°.7E±0°.1, h10^{km}, mb3.4/1, Error ellipse: s-maj=22.4km s-min=11.7km az=36.9*

*IDC **18** 16:02:33.0±1.6, 7°.55S×122°.73E, h0^{km}, mb3.3/1, mb1 3.3/4, mb1mx3.2/39, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=156.9km s-min=23.9km az=61.0*

*DJA **18** 16:02:34.7±0.6, 8°S±7°×12°2E±°, h10^{km}, M2.9/4, MLv2.9/4*

ISC 18 16:02:33.1±1.5, **8°.4S**±0°.1×**121°.66E**±0°.09, **h10**^{km}**, n7,** σ**0^{s}.95**/9, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.39	176	P	Pb	16 02 42.0	-0.2
MMRI	Maumere	0.63	116	P	Pg	16 02 45.6	+0.2
MMRI				S	Sb	16 02 54.9	-0.3
BATI	Baumata	2.70	133	Pn	Pb	16 03 20.1	-1.5
	2.3nm,0.3s,baz=90,slow=2.0,SNR=4.4						
BATI				Sn	Sg	16 04 01.1	+1.3
	0.8nm,0.3s,baz=105,slow=19,SNR=1.8						
SOEI	Soe	2.92	119	P	Pb	16 03 25.6	+0.1
WRA	Warramunga Arr	16.83	135	Pn	Pn	16 06 28.0	-1.0
	0.0nm,0.3s,baz=309,slow=15,SNR=4.2						
ASAR	Alice Springs	19.21	144	P	Pn	16 06 59.0	+0.5
	0.1nm,0.3s,baz=328,slow=13,SNR=8.2						
MKAR	Makanchi Array	65.13	331	P	P	16 13 14.5	+0.3
	0.3nm,0.8s,baz=146,slow=6.3,SNR=2.8						

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*STR **18** 16:03:19.5±0.2, 50°N±2°×°±°, h2^{km}, M3.4/13, mb3.7/2, mb3.6/6, MLv3.3/13, MLv3.2/6*

*BGS **18** 16:03:20.5±0.7, 49°.58N×0°.22W, h5^{km}, ML2.1*

ISC 18 16:03:18.5±3.0, **49°.51N**±0°.04×**0°.09W**±0°.04, **h3**^{km}±23^{km}**, n36,** σ**1^{s}.32**/45, **France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JDG	Jersey Dam (Ga	1.31	257	eP	Pn	16 03 43.3	-0.5
JDG	Jersey Dam (Ga	1.31	257	eP	Pn	16 03 43.3	-0.5
JDC	Jersey Dam (Cr	1.32	257	eP	Pn	16 03 43.3	-0.5
JDC	Jersey Dam (Cr	1.32	257	eP	Pn	16 03 43.3	-0.5
JRS	Jersey	1.34	257	eP	Pn	16 03 43.5	-0.7
JRS				eS	Sb	16 04 00.1	-1.8
JRS	Jersey	1.34	257	eP	Pn	16 03 43.5	-0.7
JRS				eS	Sb	16 04 00.1	-1.8
JSA	Saint Aubin	1.40	258	eP	Pn	16 03 44.3	-0.5
JSA				eS	Sb	16 04 01.0	-2.4
JSA				IAML		16 04 06.0	
	comp=N,26nm,0.2s						
JSA				IAML		16 04 08.9	
	comp=E,32nm,0.2s						
JSA	Saint Aubin	1.40	258	eP	Pn	16 03 44.3	-0.5
JSA				eS	Sb	16 04 01.0	-2.4
JSA				IAML		16 04 06.0	
	comp=N,26nm,0.2s						
JSA				IAML		16 04 08.9	
	comp=E,32nm,0.2s						
JSA	Saint Aubin	1.40	258	Pn	Pn	16 03 44.4	-0.5
JSA				Sg	Sg	16 04 05.1	+1.8
RENF	Rennes	1.72	217	Pn	Pn	16 03 50.1	+0.7
RENF				Sn	Sb	16 04 13.9	+1.1
ELSH	Elham, Standar	1.82	25	eP	Pn	16 03 50.6	-0.2
ELSH				IAML		16 04 18.7	
	comp=E,23nm,0.2s						
ELSH				IAML		16 04 19.2	
	comp=N,22nm,0.2s						
ELSH	Elham, Standar	1.82	25	eP	Pn	16 03 50.6	-0.2
ELSH				IAML		16 04 18.7	
	comp=E,23nm,0.2s						
ELSH				IAML		16 04 19.2	
	comp=N,22nm,0.2s						
ELSH	Elham, Standar	1.82	25	Pn	Pn	16 03 50.5	-0.3
ELSH				Sn	Sb	16 04 15.8	+0.1
ROSF	Rostrenen	2.40	242	Pn	Pn	16 03 58.5	-0.3
DYA	Yadsworthy	2.65	292	eP	Pn	16 04 01.5	-0.6
DYA				IAML		16 04 47.0	
	comp=N,15nm,0.2s						
DYA				IAML		16 04 48.2	
	comp=E,8.5nm,0.2s						
DYA	Yadsworthy	2.65	292	eP	Pn	16 04 01.5	-0.6
DYA				IAML		16 04 47.0	
	comp=N,15nm,0.2s						
DYA				IAML		16 04 48.2	
	comp=E,8.5nm,0.2s						
DYA	Yadsworthy	2.65	292	Pn	Pn	16 04 01.4	-0.6
OLDB	Oldbury-Upon-S	2.67	325	eP	Pn	16 04 01.9	-0.4
OLDB	Oldbury-Upon-S	2.67	325	eP	Pn	16 04 01.9	-0.4
MONM	Monmouth	2.90	325	eP	Pn	16 04 05.2	-0.4
MONM				IAML		16 04 40.6	
	comp=E,7.4nm,0.4s						
MONM				IAML		16 05 06.0	
	comp=N,14nm,0.8s						
MONM	Monmouth	2.90	325	eP	Pn	16 04 05.2	-0.4
MONM				IAML		16 04 40.6	
	comp=E,7.4nm,0.4s						
MONM				IAML		16 05 06.0	
	comp=N,14nm,0.8s						
DOU	Dourbes	3.09	77	Pn	Pn	16 04 08.1	-0.1
MCH1	Michaelchurch	3.10	325	eP	Pn	16 04 07.7	-0.7
MCH1				IAML		16 04 48.1	
	comp=E,4.1nm,0.1s						
MCH1				IAML		16 05 07.4	
	comp=N,5.5nm,0.3s						
MCH1	Michaelchurch	3.10	325	eP	Pn	16 04 07.7	-0.7
MCH1				IAML		16 04 48.1	
	comp=E,4.1nm,0.1s						
MCH1				IAML		16 05 07.4	
	comp=N,5.5nm,0.3s						
CCA1	Carnmenellis	3.39	284	Pn	Pn	16 04 12.0	-0.4
AGO	Saint Agoulin	4.08	147	P	Pn	16 04 20.6	-1.2
THEF	They Montfort	4.21	105	P	Pn	16 04 22.4	-1.2
PYM	Petit Puy Mans	4.30	150	Pn	Pn	16 04 23.6	-1.4
PYM				P	Pn	16 04 23.6	-1.4
PYM				S	Sn	16 05 19.4	+3.8
ABH	Alteburg	4.97	83	Pn	Pn	16 04 32.5	-1.6
MOF	Molkenrain	5.07	106	P	Pn	16 04 34.8	-0.6
LOMF	Lomont	5.09	112	P	Pn	16 04 34.1	-1.6
OG02	Monnetier-Morn	5.42	126	Pn	Pn	16 04 39.2	-1.0
OGSM	Saint Maurice	5.53	133	Pn	Pn	16 04 40.8	-1.0
RSL	Roselend	5.94	128	Pn	Pn	16 04 46.9	-0.5
ORIF	Oris-en-Rattie	6.13	136	Pn	Pn	16 04 49.6	-0.5
OGAG	Argentiere	6.79	136	Pn	Pn	16 04 55.4	-3.8

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*ISCJB **18** 16:07:41.0±0.7, 3°.43S±0°.08×138°.56E±0°.08, h71^{km}, mb3.0/2, Error ellipse: s-maj=13.0km s-min=9.5km az=143.2*

*IDC **18** 16:07:42.6±2.1, 3°.38S×138°.57E, h68^{km}±24^{km}, mb3.4/3, mb1 3.9/9, mb1mx3.5/34, mbtmp4.0/9, MS2.7/1, Ms1 2.7/1, ms1mx2.5/16, Error ellipse: s-maj=24.4km s-min=19.2km az=118.0*

ISC 18 16:07:41.8±0.8, **3°.43S**±0°.09×**138°.53E**±0°.07, **h71**^{km}**, n9,** σ**2^{s}.97**/12, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.36	67	P	Pn	16 08 18.8	+0.4
	18nm,0.3s,baz=242,slow=14,SNR=85						
JAY				S	Sn	16 08 43.3	-3.1
	13nm,0.3s,baz=151,slow=13,SNR=3.2						
JAY				LR	LR	16 09 32.3	
	comp=Z,164nm,18.1s,baz=250,slow=48						
SIJI	Sorong	7.69	289	P	Pn	16 09 32.0	+0.8
	1.8nm,0.3s,baz=124,slow=16,SNR=6.9						
SIJI				S	Sn	16 10 53.2	-3.6
	0.4nm,0.3s,baz=111,slow=12,SNR=3.7						
BATI	Baumata	16.21	245	P	P	16 11 28.1	+0.8
	2.6nm,0.3s,baz=219,slow=2.5,SNR=6.4						
WRA	Warramunga Arr	16.91	194	P	Pn	16 11 33.9	-0.1
	1.6nm,0.3s,baz=14,slow=12,SNR=28						
WRA				S	Sn	16 14 29.2	-12
	0.4nm,0.3s,baz=10,slow=22,SNR=6.8						
CTA	Charters Tower	18.19	156	P	Pn	16 11 51.3	+1.6
	0.4nm,0.3s,baz=330,slow=12,SNR=8.7						
FITZ	Fitzroy Crossi	19.28	220	P	P	16 12 02.5	+1.5
	0.1nm,0.3s,baz=39,slow=12,SNR=4.0						
FITZ				S	S	16 15 25.8	-10
	0.3nm,0.3s,baz=308,slow=18,SNR=8.2						
ASAR	Alice Springs	20.61	192	P	P	16 12 17.4	+2.0
	7.7nm,0.5s,baz=18,slow=10,SNR=67						
ASAR				S	S	16 15 55.2	-6.7
	0.6nm,1.0s,baz=19,slow=27,SNR=3.0						
MKAR	Makanchi Array	70.24	323	P	P	16 18 48.9	+1.5
	0.1nm,0.4s,baz=107,slow=7.5,SNR=2.4						
ILAR	Eielson Array	86.56	24	P	P	16 20 16.9	0.0
	0.1nm,0.5s,baz=267,slow=4.1,SNR=5.1						

MEX 18 16:14:33.2±0.6, **16°.58N**×**98°.40W, h9**^{km}±10^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.32	124	eP	Pg	16 14 39.0	-0.6
PNIG				iS	Sg	16 14 44.3	+0.4
VHO	Vista Hermosa	1.68	73	iP	Pn	16 14 59.8	-3.1

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*ISCJB **18** 16:19:46.7±0.3, 15°.63S±0°.04×72°.18W±0°.05, h114^{km}, mb4.5/10, Error ellipse: s-maj=6.9km s-min=4.2km az=148.5*

*NEIC **18** 16:19:49.6±0.6, 15°.72S×72°.10W, h126^{km}±6^{km}, mb4.6/9, Error ellipse: s-maj=12.1km s-min=7.0km az=66.0*

*IDC **18** 16:19:52.4±1.0, 15°.53S×71°.88W, h143^{km}±6^{km}, mb3.9/5, mb1 4.0/10, mb1mx3.7/37, mbtmp4.3/10, Error ellipse: s-maj=29.6km s-min=15.4km az=27.0*

*VAO **18** 16:19:53.6±3.8, 15°.68S×71°.83W, h144^{km}±28^{km}, mb4.7*

ISC 18 16:19:48.2±0.4, **15°.76S**±0°.06×**72°.23W**±0°.06, **h114**^{km}**, n78,** σ**1^{s}.59**/87, **mb4.3**/11, **12C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	3.37	148⇑	iP	Pn	16 20 41.0	+1.7
LPAZ	La Paz	3.98	98	iP	Pn	16 20 49.1	+1.2
LPAZ	La Paz	3.98	98	P	Pn	16 20 50.8	+2.9
	9.1nm,0.3s,baz=288,slow=11,SNR=172						
LPAZ				S	Sn	16 21 32.5	-1.6
	3.9nm,0.3s,baz=274,slow=17,SNR=2.0						
MNMC	Minye Minye	4.19	144	ePn	Pn	16 20 51.8	+1.3
MNMC	Minye Minye	4.19	144⇑	iP	Pn	16 20 51.9	+1.4
PSGC	Pisagua	4.32	153⇑	iP	Pn	16 20 52.6	+0.7
PB11	IPOC Station P	4.68	149	ePn	Pn	16 20 57.5	+0.6
PB11	IPOC Station P	4.68	149	iP	Pn	16 20 58.1	+1.2
PB08	IPOC Station P	5.25	147⇑	iP	Pn	16 21 06.2	+1.4
NNA	Nana	5.84	309	ePn	Pn	16 21 13.1	+0.7
NNA				S	Sn	16 22 15.5	-2.7
NNA	Nana	5.84	309	P	Pn	16 21 13.8	+1.3
	53nm,0.3s,baz=140,slow=10,SNR=86						
NNA				S	Sn	16 22 15.5	-2.7
	23nm,0.3s,baz=60,slow=20,SNR=6.4						
PB01	IPOC Station P	5.87	154	ePn	Pn	16 21 12.6	-0.2
PB01	IPOC Station P	5.87	154⇑	iP	Pn	16 21 12.5	-0.4
PB02	IPOC Station P	5.96	159⇑	iP	Pn	16 21 14.5	+0.4
PB07	IPOC Station P	6.34	160⇑	iP	Pn	16 21 19.6	+0.3
PB09	IPOC Station P	6.64	155⇓	iP	Pn	16 21 24.8	+1.4
PB03	IPOC Station P	6.68	160⇑	iP	Pn	16 21 24.2	+0.2
PB04	IPOC Station P	6.83	164	ePn	Pn	16 21 25.8	-0.2
PB04	IPOC Station P	6.83	164	iP	Pn	16 21 25.8	-0.2
PB05	IPOC Station P	7.31	165⇑	iP	Pn	16 21 32.4	0.0
PB06	IPOC Station P	7.35	160⇑	iP	Pn	16 21 29.8	-3.2
LVC	Limon Verde	7.50	156	ePn	Pn	16 21 36.2	+1.0
LVC				S	Sn	16 22 55.9	-3.1
LVC	Limon Verde	7.50	156	P	Pn	16 21 36.7	+1.5
	4.2nm,0.3s,baz=0.2,slow=8.5,SNR=82						
LVC				S	Sn	16 22 55.9	-3.1
	44nm,0.3s,baz=83,slow=19,SNR=28						
PB15	IPOC Station P	7.86	161	iP	Pn	16 21 40.5	+0.6
PB10	IPOC Station P	7.88	169	ePn	Pn	16 21 39.8	-0.1
PB10	IPOC Station P	7.88	169⇑	iP	Pn	16 21 39.8	-0.1
PB14	IPOC Station P	8.99	169⇑	iP	Pn	16 21 55.6	+0.3
GO02	Mina Guanaco	9.68	166	ePn	Pn	16 22 04.7	0.0
ATAH	Atahualpa	10.48	324	P	Pn	16 22 18.6	+3.0
	0.6nm,0.3s,baz=160,slow=15,SNR=5.1						
ATAH				S	Sn	16 24 09.9	-1.6
	0.7nm,0.3s,baz=306,slow=19,SNR=3.2						
SIV	San Ignacio	10.74	93	P	Pn	16 22 16.6	-2.2
	2.8nm,0.3s,baz=290,slow=10,SNR=36						
GO03	Copiap	11.92	171	ePn	Pn	16 22 36.1	+1.6
GO04	Tololo Observa	14.41	175	ePn	P	16 23 09.4	-1.2
AQDB	Aquidauana	16.40	109	eP	Pn	16 23 31.2	-0.5
ROC1	El Roble	17.18	177	eP	Pn	16 23 42.9	+1.5
	31nm,1.2s						
CPUP	Villa Florida	17.42	130	eP	Pn	16 23 45.4	+1.3
CPUP	Villa Florida	17.42	130	P	P	16 23 43.1	-0.6
	0.5nm,0.3s,baz=303,slow=11,SNR=8.9						
PTGA	Pitinga	19.22	40	eP	P	16 24 02.0	-1.5
	26nm,1.2s						
PTGA	Pitinga	19.22	40	P	P	16 24 01.2	-2.3
	2.6nm,0.3s,baz=212,slow=14,SNR=27						
TRCB	Terra Rica	19.77	114	eP	P	16 24 08.5	-0.9
PTGB	Pitanga	20.89	118	eP	P	16 24 22.4	+0.8
ITRB	Iturama	21.20	104	eP	P	16 24 24.8	0.0
ITAB	Concordia	21.88	125	eP	P	16 24 31.3	-0.7
CPSB	Cacapava Do Su	22.56	134	eP	P	16 24 40.4	+1.4
FRTB	Fartura	22.64	113	eP	P	16 24 39.5	-0.3
IPMB	Ipameri, GO	23.09	99	eP	P	16 24 43.0	-1.3
BB19B	Bebedouro	23.09	107	eP	P	16 24 42.7	-1.5
PLTB	Pedras Altas	23.28	136	eP	P	16 24 46.0	+0.2
BDFB	Brasilia	23.31	93	eP	P	16 24 46.2	-0.2
	16nm,1.5s						
BDFB	Brasilia	23.31	93	P	P	16 24 45.1	-1.3
	4.5nm,0.5s,baz=268,slow=10,SNR=8.9						
PEXB	Peixe	23.50	84	eP	P	16 24 47.1	-1.0
TIJ01	Guaruva-PR	23.71	117	eP	P	16 24 49.6	-0.3
GO06	Curarrehue	23.75	179	eP	P	16 24 53.5	+3.3
	38nm,0.9s						
RCLB	Rio Claro- Sao	24.25	110	eP	P	16 24 55.1	+0.3
SDV	Santo Domingo	24.54	4	eP	P	16 24 57.3	-0.2
	9.6nm,1.0s						

SDV	Santo Domingo	24.54	4	P	P	16 24 57.5	-0.1
	5.8nm,0.8s,baz=211,slow=6.6,SNR=5.5						
PLCA	Paso Flores	24.93	177	eP	P	16 25 03.6	+2.8
	16nm,0.9s						
X48A	Hartselle	51.88	344	ePcP	PcP	16 29 57.0	+0.8
TXAR	Lajitas Array	54.14	326	pP	pP	16 29 34.5	+4.0
	1.5nm,0.9s,baz=134,slow=8.9,SNR=6.3						
HHAR	Hobbs	55.68	339	eP	P	16 29 10.7	-2.0
	62nm,1.7s						
WMOK	Wichita Mounta	56.20	334	eP	P	16 29 15.4	-1.0
WMOK				ePcP	PcP	16 30 12.6	-0.2
DBIC	Dimbokro	70.32	77	P	P	16 30 48.8	-1.1
	2.6nm,0.5s,baz=243,slow=5.4,SNR=6.8						
QSPA	South Pole Qui	74.40	180	eP	P	16 31 14.9	+1.4
	12nm,1.1s						
TOA0	Torodi Ar. Sit	78.54	73	eP	P	16 31 36.0	-1.6
TORD	Torodi Ar. Bea	78.54	73	P	P	16 31 36.0	-1.5
	2.7nm,0.7s,baz=264,slow=5.5,SNR=18						
TORD				pP	pP	16 32 12.4	+4.5
	1.0nm,0.7s,baz=254,slow=5.7,SNR=3.0						
YKA	Yellowknife Ar	84.77	342	P	P	16 32 09.4	+0.2
	0.9nm,0.8s,baz=137,slow=5.1,SNR=15						
YKA				pP	pP	16 32 44.7	+4.8
	1.5nm,0.8s,baz=135,slow=5.3,SNR=6.8						
EPYK	Eagle Plains	94.58	339	eP	P	16 32 55.1	-0.4
	25nm,1.5s						
ASAR	Alice Springs	133.22	214	PKP	PKiKP	16 38 52.5	-0.1
	0.5nm,0.7s,baz=137,slow=2.4,SNR=6.7						
WB2	Warramunga Arr	135.94	217	ePKPdf	PKiKP	16 38 57.2	-1.0
WRA	Warramunga Arr	135.94	217	PKP	PKiKP	16 38 57.8	-0.4
	2.2nm,1.0s,baz=154,slow=1.2,SNR=11						
ZALV	Zalesovo Beam	137.88	20	PKP	PKPdf	16 38 59.3	+0.3
	0.8nm,0.6s,baz=326,slow=9.7,SNR=3.6						
MBWA	Marble Bar	141.48	198	eP	PKiKP	16 39 08.1	-1.4
MKAR	Makanchi Array	142.50	29	PKP	PKPdf	16 39 07.0	-0.7
	0.4nm,0.8s,baz=338,slow=3.1,SNR=3.3						
MJAR	Matsushiro Arr	145.95	313	PKPbc	PKPab	16 39 15.8	+0.2
	6.2nm,0.9s,baz=276,slow=0.5,SNR=7.8						
SONM	Songino Array	147.99	2	PKPbc	PKPbc	16 39 19.4	-1.1
	2.2nm,1.0s,baz=320,slow=3.2,SNR=12						
SONM				pPKPbc	pPKPab	16 39 57.6	+2.6
	1.9nm,0.9s,baz=311,slow=1.3,SNR=6.2						
KSRS	Korea Array	151.98	324	PKPbc	PKiKP	16 39 31.1	+0.6
	2.7nm,0.8s,baz=349,slow=2.7,SNR=5.5						
KSAR	Wonju Array Be	152.01	324	PKPbc	PKiKP	16 39 31.1	+0.5
HHC	Hu-ho-hao-te	154.78	353	eP	PKPdf	16 39 28.5	+0.8
LZH	Lanzhou	159.45	9	ePKP	PKPdf	16 39 31.9	-2.0
LZH				pPKP	pPKPdf	16 40 02.1	-3.9
LZH				sPKP		16 40 11.1	

ISCJB ***18*** *16:26:04.8*±*0.3,24°.43N*±*0°.02*×*122°.01E*±*0°.02,h3*^{km}±*3*^{km}*,*
Error ellipse: s-maj=2.8km s-min=2.2km az=140.0
TAP ***18*** *16:26:05.4,24°.46N*×*121°.95E,h13*^{km}*,ML2.8,B*
JMA ***18*** *16:26:05.3*±*0.1,24°.43N*×*121°.97E,h15*^{km}*,M2.2*
ISC 18 16:26:05.0±0.9**,24°.44N**±0°.02×**121°.99E**±0°.02**,h13**^{km}±6^{km}**,**
n80,σ**0**^{s}**.63**/119**,8C-11D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.17	49	⇓P	Pg	16 26 09.8	+0.9
	baz=52						
EOS1				S	Sb	16 26 13.5	+0.2
	baz=52						
TWC	Suao	0.21	324	⇑iP	Pg	16 26 09.7	0.0
	baz=337						
TWC				S	Sg	16 26 12.1	-0.7
	baz=337						
ENA	Nanau	0.22	268	⇓iP	Pg	16 26 09.8	0.0
	baz=268						
ENA				S	Sg	16 26 12.7	-0.5
	baz=268						
ILA	Ilan	0.39	326	P	Pg	16 26 13.4	+0.5
	baz=329						
ILA				eS	Sb	16 26 19.4	-0.2
	baz=329						
TWE	Neicheng	0.41	314	⇑iP	Pg	16 26 13.2	+0.1
	baz=320						
TWE				S	Sg	16 26 18.1	-0.5
	baz=320						
EGS		0.41	353	eP	Pg	16 26 13.5	+0.4
	baz=350						
EGS				eS	Sg	16 26 18.6	-0.1
	baz=350						
ENTT	Nioudou	0.43	298	⇑iP	Pg	16 26 13.8	+0.2
	baz=297						
ENTT				S	Sg	16 26 19.2	-0.3
	baz=297						
NTC	Toucheng	0.44	341	eP	Pb	16 26 14.3	-0.3
	baz=353						
NACB	Ninganchiao	0.44	234	⇓P	Pg	16 26 13.8	0.0
	baz=230						
NACB				S	Sg	16 26 19.9	+0.1
	baz=230						
NDT	Datong Townshi	0.46	291	⇑iP	Pg	16 26 14.4	+0.3
	baz=290						
NDT				S	Sg	16 26 19.9	-0.4
	baz=290						
TWD	Chiawan	0.50	225	⇓P	Pg	16 26 14.9	0.0
	baz=221						
TWD				eS	Sg	16 26 21.7	+0.1
	baz=221						
ETLH	Xiulin Townshi	0.52	244	⇓P	Pg	16 26 15.0	-0.1
	baz=241						
ETLH				eS	Sg	16 26 22.4	+0.4
	baz=241						
NNSB	Datong	0.55	269	⇓P	Pg	16 26 15.8	0.0
	baz=267						
NNSB				eS	Sg	16 26 22.6	-0.5
	baz=267						
TIPB	Shuangxi	0.55	345	eP	Pg	16 26 16.0	+0.2
	baz=353						
TIPB				eS	Sg	16 26 23.2	0.0
	baz=353						
NWLT	Wulai	0.56	308	eP	Pg	16 26 16.1	+0.2
	baz=300						
NWLT				eS	Sg	16 26 23.0	-0.3
	baz=300						
NNS	Nan Shan	0.56	270	⇓P	Pg	16 26 16.0	0.0
	baz=268						
NNS				S	Sg	16 26 22.9	-0.5
	baz=268						
TWB1	Santiao Chiao	0.57	0	eP	Pg	16 26 16.4	+0.3
	baz=354						
TWB1				eS	Sg	16 26 24.0	+0.3
	baz=354						
YHNB	Yeheng	0.60	293	⇑P	Pb	16 26 17.2	-0.2
	baz=297						
YHNB				eS	Sg	16 26 23.9	-0.9
	baz=297						
NSK	Sanguang	0.62	293	⇑iP	Pb	16 26 17.4	-0.3
	baz=297						
NSK				S	Sg	16 26 24.6	-0.8
	baz=297						
TWA	Mucha	0.65	326	eP	Pb	16 26 18.2	0.0
	baz=327						
NWF	Wu-fen Shan	0.66	344	⇑P	Pb	16 26 18.8	+0.5
	baz=333						
NWF				eS	Sb	16 26 27.2	-0.3
	baz=333						
WFSB	Wu-fen Shan	0.66	344	eP	Pb	16 26 18.7	+0.4
	baz=333						
WFSB				eS	Sb	16 26 27.0	-0.4
	baz=333						
NHDH	Xindian Distri	0.67	321	eP	Pb	16 26 18.8	+0.3
	baz=315						
TATO	Taipei	0.70	320	eP	Pb	16 26 19.3	+0.3
	baz=313						
WHF	Hehuan Shan	0.72	246	P	Pg	16 26 19.0	-0.1
	baz=244						
WHF				S	Sb	16 26 29.1	-0.5
	baz=244						
TDCB	Techi	0.78	257	eP	Pb	16 26 20.6	+0.2
	baz=255						
TDCB				eS	Sg	16 26 29.6	-0.8
	baz=255						
WLTB	Daxi	0.79	302	⇑eP	Pn	16 26 21.4	-0.3
	baz=301						
WLTB				eS	Sn	16 26 32.1	-1.2
	baz=301						
ESL	Shilin	0.80	219	eP	Pg	16 26 20.2	-0.3
	baz=224						
YM01	YM01	0.80	332	P	Pn	16 26 21.6	-0.4
	baz=332						
YM01				eS	Sb	16 26 32.3	+0.8
	baz=332						
YM11	YM11	0.82	333	P	Pn	16 26 21.9	-0.3
	baz=333						
YM05	YM05	0.82	332	P	Pn	16 26 21.9	-0.4
	baz=342						
YM04	YM04	0.82	330	eP	Pn	16 26 21.9	-0.4
	baz=316						
YM04				eS	Sn	16 26 33.9	-0.4
	baz=316						
YM08	YM08	0.83	334	eP	Pb	16 26 21.7	+0.5
	baz=335						
CHGB	Renai	0.83	243	⇓P	Pg	16 26 21.3	+0.2
	baz=251						
CHGB				eS	Sg	16 26 32.0	-0.1
	baz=251						
TWS1	Kuangyinshan	0.84	322	eP	Pn	16 26 22.5	0.0
	baz=322						
JYNG	Yonagunijimaku	0.87	89	P	Pb	16 26 22.1	+0.2
JYNG				S	Sg	16 26 33.1	-0.2
NTST	Danshui	0.87	326	eP	Pb	16 26 22.3	+0.3
	baz=326						
OWD	Renai	0.88	237	⇓P	Pg	16 26 22.0	-0.1
	baz=230						
NCU	National Centr	0.90	306	eP	Pn	16 26 23.8	+0.5
	baz=310						
NCUH	Zhongli	0.90	306	eP	Pn	16 26 23.7	+0.4
	baz=295						
TWY	Chenhua	0.91	337	⇓P	Pn	16 26 23.5	+0.1
	baz=337						
TWY				eS	Sn	16 26 36.6	+0.3
	baz=337						
LIOB	Emei	0.91	283	eP	Pb	16 26 22.6	0.0
	baz=283						
LIOB				eS	Sg	16 26 34.0	-0.4
	baz=283						
NSTT	Nanjuang	0.92	282	eP	Pn	16 26 23.4	-0.1
	baz=281						
NSTT				eS	Sb	16 26 34.5	-0.4
	baz=281						
EGFH	Guangfu	0.92	214	eP	Pb	16 26 22.7	-0.1
	baz=225						
YOJ	Yonaguni jima	0.93	88	P	Pb	16 26 23.1	+0.1
	baz=89						
YOJ				eS	Sb	16 26 35.6	+0.4
	baz=89						
YOJ	Yonaguni jima	0.93	88	P	Pb	16 26 23.1	+0.1
YOJ				S	Sb	16 26 35.5	+0.2
WHP	Taichung City	0.96	261	eP	Pn	16 26 24.1	-0.1
	baz=259						
WHP				eS	Sg	16 26 36.0	-0.2
	baz=259						
SBCB	Hsinchu	0.98	291	eP	Pn	16 26 25.2	+0.8
	baz=284						
VWDT	VWDT	1.03	229	eP	Pb	16 26 24.6	0.0
	baz=234						
HGSD	Ruisui	1.07	209	eP	Pg	16 26 26.5	+0.8
	baz=208						
NMLH	Miaoli	1.09	275	eP	Pg	16 26 27.9	+1.8
	baz=274						
EHY	Hungye	1.11	213	eP	Pb	16 26 25.9	-0.1
	baz=225						
TWQ1	Liyutan	1.11	266	eP	Pg	16 26 28.4	+2.0
	baz=264						
NSY	Sanyi	1.12	269	eP	Pg	16 26 29.0	+2.5
	baz=268						
SMLT	Sun Moon Lake	1.14	241	eP	Pg	16 26 27.0	+0.1
	baz=240						
SSLB	Suanglung	1.14	236	⇓P	Pn	16 26 26.8	+0.1
	baz=243						
SSLB				eS	Sb	16 26 40.7	-0.7
	baz=243						
TYC	Yuchr	1.16	243	eP	Pb	16 26 26.9	0.0
	baz=242						
YULB	Yu-li	1.22	211	eP	Pn	16 26 27.9	+0.2
	baz=211						
TWF1	Yuli	1.25	210	eP	Pn	16 26 28.4	+0.3
	baz=225						
WHYT	Xinyi Township	1.27	235	eP	Pb	16 26 29.0	+0.3
	baz=234						
WJS	Zhushan	1.30	242	eP	Pg	16 26 30.8	+0.7
	baz=234						
WNT	Mingjian	1.31	245	eP	Pg	16 26 31.7	+1.5
	baz=238						
CHN5	Tsauling	1.46	235	eP	Pg	16 26 33.4	+0.3
	baz=237						
CHN5				eS	Sg	16 26 54.9	+2.8
	baz=237						
ELDTW	Lidau	1.53	216	eP	Pb	16 26 33.6	+0.5
	baz=203						
IRIF	Iriomote-Funau	1.59	93	P	Pn	16 26 32.3	-0.5
IRIF				eS	Sn	16 26 51.8	-1.4
CHN4	Tsaushan	1.67	230	eP	Pg	16 26 37.3	+0.3
	baz=231						
TPUB	Ta-pu	1.68	228	eP	Pg	16 26 36.9	-0.4
	baz=229						
STYT	Tauyuan	1.70	222	eP	Pb	16 26 36.7	+0.7
	baz=223						
WTP	Ta-pu	1.73	227	eP	Pb	16 26 37.3	+0.8
	baz=228						
TWK	Hsinying	1.80	230	eP	Pg	16 26 39.2	-0.3
	baz=231						
SNST	Tainan City	1.82	229	eP	Pg	16 26 39.4	-0.6
	baz=231						
CHN1	Nanshi	1.83	227	eP	Pg	16 26 40.5	+0.4
	baz=229						
JKRS	Kuro-shima	1.85	96	P	Pn	16 26 36.8	+0.4
JKRS				S	Sn	16 26 59.5	-0.2
SGST	Jiashian	1.86	224	eP	Pb	16 26 39.2	+0.3
	baz=225						
SLGT	Liugui	1.89	221	eP	Pb	16 26 40.2	+0.9
	baz=222						
JIJ	Ishigaki jima	1.97	92	P	Pn	16 26 37.9	-0.1
JIJ				eS	Sn	16 27 01.1	-1.4
JISG	Ishigakijimahi	2.12	85	P	Pn	16 26 39.8	-0.3
JISG				eS	Sn	16 27 05.5	-0.8
MASBT	Mashibuluo	2.20	215	eP	Pb	16 26 44.6	0.0
	baz=217						
VWUC	VWUC	2.37	284	eP	Pn	16 26 43.9	+0.4
	baz=282						
JTJ	Tarama	2.48	85	eS	Sn	16 27 14.9	-0.3

ISCJB ***18*** *16:27:59.3*±*0.3,24°.43N*±*0°.01*×*122°.03E*±*0°.02,h2*^{km}±*2*^{km}*,*
Error ellipse: s-maj=2.6km s-min=2.2km az=142.5
TAP ***18*** *16:27:59.9,24°.44N*×*121°.97E,h12*^{km}*,ML3.1,B*
JMA ***18*** *16:27:59.6*±*0.1,24°.41N*×*121°.98E,h7*^{km}*,M2.7*
ISC 18 16:27:59.7±0.9**,24°.42N**±0°.02×**122°.01E**±0°.02**,h13**^{km}±7^{km}**,**
n97,σ**0**^{s}**.62**/137**,25C-9D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.17	39	⇓P	Pb	16 28 04.5	-0.1
	baz=44						
EOS1				eS	Sb	16 28 08.3	+0.4
	baz=44						
TWC	Suao	0.24	322	⇑iP	Pg	16 28 04.5	-0.3
	baz=329						
TWC				S	Sg	16 28 07.5	-0.8
	baz=329						
ENA	Nanau	0.25	272	eP	Pg	16 28 04.8	-0.2
	baz=274						
ENA				S	Sg	16 28 07.7	-0.9
	baz=274						
ILA	Ilan	0.42	325	⇑P	Pg	16 28 08.3	+0.2
	baz=318						
EGS		0.43	350	⇑eP	Pg	16 28 08.3	+0.1
	baz=348						
EGS				eS	Sg	16 28 13.3	-0.7
	baz=348						
TWE	Neicheng	0.44	314	⇑iP	Pg	16 28 08.2	-0.2
	baz=317						
NACB	Ninganchiao	0.45	238	⇓P	Pg	16 28 08.6	0.0
	baz=234						
NACB				eS	Sg	16 28 14.8	+0.1
	baz=234						
ENTT	Nioudou	0.46	299	⇑iP	Pg	16 28 08.8	-0.1
	baz=299						
NTC	Toucheng	0.47	339	eP	Pg	16 28 09.1	+0.2
	baz=352						
NDT	Datong Townshi	0.49	292	⇑iP	Pg	16 28 09.4	0.0
	baz=291						
NDT				S	Sg	16 28 15.1	-0.8
	baz=291						
TWD	Chiawan	0.51	229	⇓P	Pg	16 28 09.8	+0.1
	baz=232						
ETLH	Xiulin Townshi	0.53	247	eP	Pg	16 28 10.0	0.0
	baz=244						
ETLH				eS	Sg	16 28 17.5	+0.3
	baz=244						
NNSB	Datong	0.57	271	⇑P	Pg	16 28 10.8	-0.1
	baz=269						
NNSB				S	Sg	16 28 17.6	-1.0
	baz=269						
TIPB	Shuangxi	0.58	343	⇑P	Pg	16 28 11.0	0.0
	baz=344						
TIPB				S	Sg	16 28 18.1	-0.6
	baz=344						
NNS	Nan Shan	0.58	272	⇑iP	Pg	16 28 11.0	-0.2
	baz=270						
NNS				eS	Sg	16 28 17.9	-1.0
	baz=270						
NWLT	Wulai	0.59	308	⇑P	Pg	16 28 11.2	0.0
	baz=300						
NWLT				eS	Sg	16 28 18.2	-0.8
	baz=300						
TWB1	Santiao Chiao	0.59	358	eP	Pg	16 28 11.1	-0.1
	baz=351						
TWB1				eS	Sg	16 28 18.5	-0.5
	baz=351						
YHNB	Yeheng	0.63	293	⇑P	Pg	16 28 12.1	+0.1
	baz=293						
YHNB				eS	Sg	16 28 18.9	-1.5
	baz=293						
ENLB	Shoufeng	0.64	216	eP	Pn	16 28 14.0	-0.4
	baz=222						
NSK	Sanguang	0.65	293	⇑iP	Pg	16 28 12.3	-0.1
	baz=293						
NSK				eS	Sg	16 28 19.8	-1.2
	baz=293						
TWA	Mucha	0.68	325	⇑P	Pg	16 28 13.2	+0.2
	baz=327						
NWF	Wu-fen Shan	0.68	342	⇑iP	Pb	16 28 13.7	+0.2
	baz=333						
WFSB	Wu-fen Shan	0.68	342	⇑P	Pb	16 28 13.7	+0.2
	baz=332						
WFSB				eS	Sg	16 28 21.9	-0.1
	baz=332						
NHDH	Xindian Distri	0.70	321	eP	Pb	16 28 13.7	-0.1
	baz=315						
TATO	Taipei	0.73	319	⇑P	Pb	16 28 14.1	-0.1
	baz=309						
TATO				eS	Sg	16 28 23.1	-0.4
	baz=309						
WHF	Hehuan Shan	0.73	248	⇓iP	Pg	16 28 13.9	-0.1
	baz=246						
WHF				eS	Sg	16 28 23.3	-0.4
	baz=246						
TWT	Tachien	0.78	258	eP	Pb	16 28 15.2	0.0
	baz=250						
TDCB	Techi	0.80	258	eP	Pb	16 28 15.4	-0.1
	baz=257						
TDCB				eS	Sg	16 28 24.3	-1.3
	baz=257						
ESL	Shilin	0.80	221	eP	Pg	16 28 15.1	-0.2
	baz=226						
WLTB	Daxi	0.82	302	⇑P	Pn	16 28 16.5	-0.4
	baz=302						
WLTB				eS	Sb	16 28 26.5	-0.1
	baz=302						
YM01	YM01	0.83	331	⇑eP	Pn	16 28 16.5	-0.6
	baz=332						
YM11	YM11	0.84	332	⇑eP	Pb	16 28 16.5	+0.3
	baz=333						
CHGB	Renai	0.84	245	⇓P	Pg	16 28 16.1	0.0
	baz=254						
CHGB				S	Sb	16 28 27.3	-0.3
	baz=254						
YM05	YM05	0.85	331	⇑eP	Pb	16 28 16.6	+0.3
	baz=331						
YM05				eS	Sb	16 28 27.6	0.0
	baz=331						
JYNG	Yonagunijimaku	0.85	88	P	Pb	16 28 16.7	+0.4
JYNG				S	Sb	16 28 27.9	+0.3
YM04	YM04	0.85	329	eP	Pb	16 28 16.7	+0.3
	baz=339						
YM04				eS	Sb	16 28 28.3	+0.6
	baz=339						
YM08	YM08	0.86	333	eP	Pb	16 28 16.5	0.0
	baz=335						
TWS1	Kuangyinshan	0.87	322	⇑P	Pn	16 28 17.4	-0.1
	baz=315						
TWS1				eS	Sn	16 28 29.9	-0.2
	baz=315						
OWD	Renai	0.89	239	eP	Pg	16 28 16.9	-0.1
	baz=237						
OWD				eS	Sb	16 28 28.8	-0.2
	baz=237						
NTST	Danshui	0.90	326	eP	Pn	16 28 18.2	+0.2
	baz=326						
YOJ	Yonaguni jima	0.91	87	P	Pg	16 28 17.7	+0.5
	baz=75						
YOJ				eS	Sb	16 28 29.4	0.0
	baz=75						
YOJ	Yonaguni jima	0.91	87	P	Pg	16 28 17.6	+0.3
YOJ				eS	Sg	16 28 29.7	+0.5
EGFH	Guangfu	0.92	216	eP	Pg	16 28 17.5	+0.1
	baz=226						
NCU	National Centr	0.93	306	eP	Pn	16 28 18.5	0.0
	baz=306						
NCU				eS	Sn	16 28 32.4	+0.8
	baz=306						
NCUH	Zhongli	0.93	306	eP	Pn	16 28 18.9	+0.5
	baz=296						
TWY	Chenhua	0.93	336	⇓P	Pn	16 28 18.5	0.0
	baz=336						
TWY				eS	Sg	16 28 30.2	+0.3
	baz=336						
LIOB	Emei	0.94	284	⇑P	Pb	16 28 17.5	-0.3
	baz=283						
LIOB				eS	Sb	16 28 29.1	-1.0
	baz=283						
NSTT	Nanjuang	0.95	283	⇑iP	Pn	16 28 18.4	-0.3
	baz=282						
NSTT				i S	Sb	16 28 29.7	-0.6
	baz=282						
WHP	Taichung City	0.98	262	eP	Pn	16 28 19.2	-0.1
	baz=261						
WHP				eS	Sb	16 28 31.4	-0.2
	baz=261						
SBCB	Hsinchu	1.01	292	eP	Pn	16 28 20.2	+0.8
	baz=285						
SBCB				eS	Sn	16 28 34.6	+1.1
	baz=285						
HSN	Hsinchu	1.02	292	eP	Pn	16 28 20.2	+0.5
	baz=287						
HSN				eS	Sn	16 28 34.6	+0.7
	baz=287						
VWDT	VWDT	1.04	230	⇑P	Pg	16 28 19.6	-0.1
	baz=236						
HGSD	Ruisui	1.07	210	eP	Pg	16 28 21.2	+1.0
	baz=207						
EHY	Hungye	1.11	215	eP	Pb	16 28 20.4	-0.3
	baz=225						
NMLH	Miaoli	1.12	276	eP	Pg	16 28 22.6	+1.4
	baz=275						
TWQ1	Liyutan	1.13	267	eP	Pg	16 28 22.6	+1.1
	baz=266						
NSY	Sanyi	1.14	270	eP	Pg	16 28 23.4	+1.8
	baz=269						
SMLT	Sun Moon Lake	1.15	243	⇓P	Pg	16 28 21.8	0.0
	baz=249						
SSLB	Suanglung	1.15	237	⇓P	Pg	16 28 21.7	-0.2
	baz=244						
SSLB				eS	Sb	16 28 35.9	-0.5
	baz=244						
TYC	Yuchr	1.17	244	⇓P	Pg	16 28 22.1	-0.2
	baz=243						
PCYT	Pengchaiyu	1.21	2	eP	Pn	16 28 22.0	-0.3
	baz=5.0						
YULB	Yu-li	1.21	213	eP	Pn	16 28 21.9	-0.5
	baz=210						
TWF1	Yuli	1.25	212	eP	Pn	16 28 22.5	-0.3
	baz=225						
TCU	Taichung	1.25	258	eP	Pg	16 28 24.5	+0.8
	baz=257						
WDJ	Dajia District	1.25	267	eP	Pg	16 28 25.6	+1.8
	baz=266						
WHYT	Xinyi Township	1.28	236	eP	Pg	16 28 24.4	0.0
	baz=235						
WJS	Zhushan	1.32	243	eP	Pg	16 28 25.9	+0.9
	baz=235						
WNT	Mingjian	1.33	246	eP	Pg	16 28 26.1	+0.8
	baz=239						
ALS	Alishan	1.43	231	eP	Pb	16 28 26.7	+0.4
	baz=215						
CHN5	Tsauling	1.47	236	⇑P	Pg	16 28 28.7	+0.8
	baz=238						

CHN5				eS	Sg	16 28 48.9	+1.9
	baz=238						
ELDTW	Lidau	1.53	217	eP	Pn	16 28 27.0	+0.2
	baz=215						
WDLH	Douliu	1.53	242	eP	Pg	16 28 28.7	-0.4
	baz=242						
IRIF	Iriomote-Funau	1.57	93	P	Pn	16 28 27.0	-0.2
IRIF				eS	Sn	16 28 46.4	-0.9
RLNB	Erlin	1.60	251	eP	Pb	16 28 29.6	+0.5
	baz=264						
CHN4	Tsaushan	1.68	231	eP	Pg	16 28 32.1	+0.2
	baz=231						
TPUB	Ta-pu	1.69	229	eP	Pg	16 28 31.7	-0.3
	baz=229						
STYT	Tauyuan	1.70	223	eP	Pb	16 28 31.1	+0.3
	baz=223						
WTP	Ta-pu	1.73	228	eP	Pg	16 28 32.3	-0.6
	baz=228						
TWK	Hsinying	1.81	231	eP	Pg	16 28 33.6	-0.8
	baz=231						
JKRS	Kuro-shima	1.83	95	P	Pn	16 28 31.3	+0.5
JKRS				S	Sn	16 28 53.3	-0.5
SNST	Tainan City	1.83	230	eP	Pg	16 28 34.3	-0.5
	baz=230						
CHN1	Nanshi	1.83	228	eP	Pb	16 28 33.3	+0.2
	baz=229						
SGST	Jiashian	1.87	225	eP	Pb	16 28 34.1	+0.5
	baz=225						
SLGT	Liugui	1.89	222	eP	Pb	16 28 34.0	-0.1
	baz=222						
JIJ	Ishigaki jima	1.94	91	P	Pn	16 28 32.5	+0.1
JIJ				eS	Sn	16 28 55.2	-1.4
ECL	Taimali	2.06	208	eP	Pb	16 28 36.6	-0.3
	baz=193						
JISG	Ishigakijimahi	2.10	85	P	Pn	16 28 34.2	-0.3
JISG				eS	Sn	16 28 59.4	-1.1
MASBT	Mashibuluo	2.20	215	eP	Pb	16 28 38.2	-1.1
	baz=215						
EAST	Anshuo	2.29	208	eP	Pn	16 28 38.4	+1.2
	baz=192						
SSPT	Xinbi	2.34	215	eP	Pb	16 28 41.6	-0.1
	baz=215						
VWUC	VWUC	2.40	284	eP	Pn	16 28 38.8	+0.1
	baz=283						
PNG	Penghu	2.40	250	eP	Pn	16 28 39.7	+1.0
	baz=252						
SCZT	Fangliau	2.41	212	eP	Pb	16 28 42.4	-0.4
	baz=195						
JTJ	Tarama	2.46	84	eS	Sn	16 29 09.1	-0.3
MATB	Ma-tsu	2.55	313	eP	Pn	16 28 40.8	+0.2
	baz=311						
VCHM	Qimei	2.66	244	eP	Pn	16 28 43.7	+1.5
	baz=247						
KNMB	Chin-men Tao	3.30	272	eP	Pn	16 28 52.1	+1.0
	baz=270						

IDC 18 16:30:27.2±2.3, 6°.79S×129°.54E, h0^{km}, mb3.2/1, mb1 3.4/4, mb1mx3.2/37, mbtmp3.2/4, ML2.9/3, Error ellipse: s-maj=80.2km s-min=30.6km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.87	198	Pn	Pn	16 33 19.0	+1.2
	0.1nm,0.3s,baz=18,slow=13,SNR=3.1						
FITZ				Sn	Sn	16 35 18.1	-13
	0.1nm,0.3s,baz=75,slow=19,SNR=4.6						
WRA	Warramunga Arr	13.88	161	Pn	Pn	16 33 44.1	-1.3
	0.1nm,0.3s,baz=338,slow=14,SNR=12						
WRA				Sn	Sn	16 36 06.3	-14
	0.2nm,0.3s,baz=335,slow=23,SNR=9.2						
ASAR	Alice Springs	17.30	166	Pn	Pn	16 34 30.2	0.0
	0.0nm,0.3s,baz=352,slow=10,SNR=4.4						
ASAR				Sn	Sn	16 37 27.6	-16
	0.0nm,0.3s,baz=346,slow=24,SNR=3.1						
MKAR	Makanchi Array	67.80	327	P	P	16 41 27.0	0.0
	0.2nm,0.5s,baz=110,slow=8.2,SNR=1.6						

*WEL **18** 16:32:40.9±0.9, 31°S±3°×17°7W±1°3, h33^{km}, ML6.5/4*

*MOS **18** 16:32:45.0±1.0, 30°.57S×178°.22W, h33^{km}, mb5.7/78, MS5.0/21, Error ellipse: s-maj=8.5km s-min=7.0km az=75.4*

*NEIC **18** 16:32:46.0±0.0, 30°.89S×178°.14W, h30^{km}, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}1.93; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$-1.69; $M_{r\theta}$0.19; $M_{\theta\phi}$-0.31; $M_{\phi r}$1.75; Best double couple: $M_0$2.60000×10^{17} NP1:ϕ_s8.00000°, δ67.00000°, λ87.00000°. NP2:ϕ_s194.00000°, δ23.00000°, λ96.00000°. Principal axes: T 2.6400, Plg67.0000°, Azm273.0000°; N -0.1800, Plg2.0000°, Azm8.0000°; P -2.4600, Plg21.0000°, Azm99.0000°;*

*NEIC **18** 16:32:47.1±0.1, 30°.74S×178°.15W, h50^{km}, mb5.6/222, MW5.5 Error ellipse: s-maj=5.0km s-min=3.0km az=163.0*

*IDC **18** 16:32:49.2±1.2, 30°.53S×178°.17W, h63^{km}±9^{km}, mb5.2/33, mb1 5.1/34, mb1mx5.1/36, mbtmp5.4/34, MS4.8/32, Ms1 4.8/32, ms1mx4.8/38, Error ellipse: s-maj=12.4km s-min=10.6km az=160.0*

*ISCJB **18** 16:32:49.2±0.1, 30°.92S±0°.02×178°.20W±0°.03, h80^{km}, mb5.5/270, Error ellipse: s-maj=3.7km s-min=2.0km az=37.6*

*BJI **18** 16:32:50.1, 30°.44S×177°.65W, h90^{km}, mB5.7/44, mb5.3/48*

*GCMT **18** 16:32:50.1±0.1, 30°.66S±0°.01×177°.89W±0°.01, h52^{km}, MW5.5/120, Moment Tensor Solution. s110,c193; s120,c229; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.85±.03; $M_{\theta\theta}$-0.05±.02; $M_{\phi\phi}$-1.80±.02; $M_{r\theta}$0.23±.02; $M_{\theta\phi}$-0.55±.02; $M_{\phi r}$0.00±.02; Best double couple: $M_0$1.91900×10^{17} NP1:ϕ_s23.00000°, δ46.00000°, λ100.00000°. NP2:ϕ_s189.00000°, δ44.00000°, λ80.00000°. Principal axes: T 1.8800, Plg83.0000°, Azm8.0000°; N 0.0830, Plg7.0000°, Azm196.0000°; P -1.9580, Plg1.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 18 16:32:45.6±0.2, 30°.68S±0°.04×178°.07W±0°.04, h36^{km}±1^{km}, h37^{km}:pP-P, n1285, σ1s58/1370, mb5.6/265, MS4.9/57, 52C-31D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.42	5	P	Pn	16 33 09.1	+0.2
GLKZ				S	Sn	16 33 24.7	-1.6
RAO	Raoul Island	1.43	5	eP	Pn	16 33 09.2	+0.2
RAO	Raoul Island	1.43	5	P	Pn	16 33 09.4	+0.3
	3µm,0.3s,baz=101,slow=7.9,SNR=98						
RIZ	Raoul Island	1.44	5	P	Pn	16 33 09.7	+0.6
RIZ				S	Sn	16 33 25.4	-1.4
MXZ	Matakaoa Point	7.49	203	ePn	Pn	16 34 29.7	-2.6
MXZ	Matakaoa Point	7.49	203	P	Pn	16 34 30.4	-1.9
MXZ				S	Sn	16 35 56.1	+0.2
WMGZ	Waiomatatini S	7.69	201	P	Pn	16 34 33.0	-2.1
WMGZ				S	Sn	16 36 02.2	+1.4
HAZ	Te Kaha	7.84	205	P	Pn	16 34 36.1	-1.0
HAZ				S	Sn	16 36 05.5	+0.9
PKGZ	Pakihiroa	7.86	203	P	Pn	16 34 35.0	-2.4
PKGZ				S	Sn	16 36 03.9	-1.3
PKGZ	Pakihiroa	7.86	203	P	Sn	16 36 04.2	-0.9
PUZ	Puketiti	7.97	201	P	Pn	16 34 36.1	-2.8
PUZ				S	Sn	16 36 06.7	-1.1
RUGZ	Raukumara Rang	8.07	205	P	Pn	16 34 38.4	-2.0
RUGZ				S	Sn	16 36 10.0	-0.4
RUGZ	Raukumara Rang	8.07	205	P	Sn	16 36 11.5	+1.1
TWGZ	Tauwhareparae	8.15	202	P	Pn	16 34 38.8	-2.7
TWGZ				S	Sn	16 36 12.8	+0.5
TWGZ	Tauwhareparae	8.15	202	P	Sn	16 36 10.2	-2.2
WCZ	Waipu Caves	8.23	228	P	Pn	16 34 49.9	+7.4
WHRZ	Whale Island	8.24	208	P	Pn	16 34 44.3	+1.6
WHRZ	Whale Island	8.24	208	P	Sn	16 36 18.3	+3.8
OUZ	Omahuta	8.33	235	ePn	Pn	16 34 50.2	+6.3
OUZ	Omahuta	8.33	235	P	Pn	16 34 51.6	+7.7
CNGZ	Carnagh Statio	8.36	200	P	Pn	16 34 41.8	-2.5
CNGZ				S	Sn	16 36 12.1	-5.3
TKGZ	Te Karaka	8.44	202	P	Pn	16 34 41.9	-3.4
TKGZ	Te Karaka	8.44	202	P	Sn	16 36 18.3	-0.9
MWZ	Matawai	8.45	204	P	Pn	16 34 42.7	-2.8
MWZ	Matawai	8.45	204	P	Sn	16 36 19.3	-0.3
MARZ	Manawahe	8.48	209	P	Pn	16 34 46.6	+0.7
URZ	Urewera	8.54	206	P	Pn	16 34 44.3	-2.3
	4.3nm,0.3s,baz=267,slow=3.4,SNR=82						
URZ				S	Sn	16 36 20.3	-1.4
	51nm,0.3s,baz=12,slow=19,SNR=13						
URZ				LR	LR	16 38 04.7	
	comp=Z,5µm,20.8s,baz=48,slow=36						
URZ	Urewera	8.54	206	P	Pn	16 34 44.4	-2.3
RAGZ	Rawiri	8.63	204	P	Pn	16 34 45.2	-2.9
KMRZ	Kaimai	8.69	213	P	Pn	16 34 55.4	+6.5
KARZ	Kaharoa	8.70	211	P	Pn	16 34 51.9	+3.0
KARZ				P	Pn	16 34 52.0	+3.2
MKRZ	Makatiti	8.70	210	P	Pn	16 34 52.5	+3.6
RIGZ	Rimuhau	8.71	202	P	Pn	16 34 46.6	-2.5
RIGZ	Rimuhau	8.71	202	P	Sn	16 36 24.2	-1.7
OMRZ	Omania	8.71	210	P	Pn	16 34 54.0	+4.9
TARZ	Mount Tarawera	8.76	209	P	Pn	16 34 50.4	+0.6
NGRZ	Ngongotaha	8.79	211	P	Pn	16 34 58.3	+8.1
TOZ	Tahuroa Road	8.81	215	P	Pn	16 34 54.8	+4.3
RRRZ	Republican Roa	8.85	209	P	Pn	16 34 52.1	+1.2
RRRZ	Republican Roa	8.85	209	P	Sn	16 36 28.6	-0.7
MUGZ	Murupara	8.86	207	P	Pn	16 34 48.1	-2.9
MUGZ	Murupara	8.86	207	P	Sn	16 36 29.3	-0.3
PRGZ	Paritu Road	8.87	201	P	Pn	16 34 47.4	-3.8
PRGZ				P	Pn	16 34 48.1	-3.1
PRGZ	Paritu Road	8.87	201	P	Sn	16 36 23.8	-6.0
RTZ	Ruatahuna	8.90	206	P	Pn	16 34 48.5	-3.2
RTZ	Ruatahuna	8.90	206	P	Sn	16 36 26.4	-4.3
SNGZ	Shannon Statio	8.92	204	P	Pn	16 34 48.6	-3.3
SNGZ	Shannon Statio	8.92	204	P	Sn	16 36 31.0	-0.1
HSRZ	Hossack Road	8.94	210	P	Pn	16 34 58.5	+6.3
KNZ	Kokohu	9.02	202	P	Pn	16 34 50.4	-2.9
PRRZ	Plateau Road	9.03	209	P	Pn	16 34 53.7	+0.2
MHGZ	Mahia Peninsul	9.07	200	P	Pn	16 34 50.7	-3.3
MHGZ	Mahia Peninsul	9.07	200	P	Sn	16 36 28.3	-6.5
ALRZ	Allen Road	9.11	209	P	Pn	16 34 53.8	-0.7
RAHZ	Arahi	9.13	205	P	Pn	16 34 52.1	-2.7
RAHZ	Arahi	9.13	205	P	Sn	16 36 30.2	-6.0
MTHZ	Maungataniwha	9.16	206	P	Pn	16 34 52.7	-2.5
WHHZ	Waihua	9.22	203	P	Pn	16 34 53.6	-2.3
TLZ	Tolley Road	9.27	213	P	Pn	16 34 59.8	+3.1
WHTZ	Whakaora	9.36	210	P	Pn	16 35 00.2	+2.2
ARHZ	Aropaoanui	9.47	204	P	Pn	16 34 56.4	-3.0
HATZ	Hinemaiaia	9.49	209	P	Pn	16 34 57.9	-1.8
HATZ				P	Pn	16 35 00.2	+0.4
WATZ	Wairara	9.49	211	P	Pn	16 34 60.0	+0.2
BKZ	Black Stump Fm	9.56	206	ePn	Pn	16 34 56.8	-4.0
BKZ	Black Stump Fm	9.56	206	P	Pn	16 34 56.8	-4.0
RATZ	Rangitukua	9.60	210	P	Pn	16 35 03.7	+2.4
RITZ	Rihia Road	9.66	209	P	Pn	16 35 03.0	+1.0
KATZ	Kakaramea	9.73	210	P	Pn	16 35 03.3	+0.2
MCHZ	McNeill Hill	9.73	205	P	Pn	16 34 59.7	-3.4
HIZ	Hauiti	9.74	215	ePn	Pn	16 35 02.8	-0.4
CKHZ	Cape Kidnapper	9.79	203	P	Pn	16 34 59.9	-4.0
KWHZ	Kaweka Forest	9.82	206	P	Pn	16 35 01.8	-2.4
KRVZ	Karewarewa	9.85	210	P	Pn	16 35 04.3	-0.5
WTVZ	West Tongariro	9.89	210	P	Pn	16 35 04.8	-0.5
TWVZ	Taurewa	9.92	211	P	Pn	16 35 06.2	+0.5
NGZ	Ngauruhoe	9.93	210	P	Pn	16 35 05.7	-0.3
COVZ	Chateau Observ	9.98	210	P	Pn	16 35 10.0	+3.5
KAHZ	Kahuranaki	9.98	203	P	Pn	16 35 02.0	-4.5
TUVZ	Tukino	9.99	209	P	Pn	16 35 05.5	-1.2
BHHZ	Black Hill Sta	10.01	207	P	Pn	16 35 03.5	-3.4
FWVZ	Far West T-bar	10.02	210	P	Pn	16 35 05.6	-1.6
TRVZ	Turoa	10.06	210	P	Pn	16 35 06.6	-1.1
MOVZ	Moawhango	10.06	208	P	Pn	16 35 05.1	-2.5
PKVZ	Pokaka	10.14	210	P	Pn	16 35 09.1	+0.4
MTVZ	Mangateitei	10.16	210	P	Pn	16 35 06.6	-2.4
PXZ	Pawanui	10.20	203	P	Pn	16 35 04.5	-4.9
VRZ	Vera Road	10.27	213	P	Pn	16 35 16.3	+5.9
WPHZ	Waipukurau	10.37	204	P	Pn	16 35 08.0	-3.8
PRHZ	Porangahau	10.49	203	P	Pn	16 35 07.9	-5.5
TSZ	Takapari Road	10.54	206	P	Pn	16 35 08.7	-5.4
DVHZ	Dannevirke	10.68	204	P	Pn	16 35 11.6	-4.4
WAZ	Wanganui	10.68	210	P	Pn	16 35 17.3	+1.3
LREZ	Lake Rotokare	10.70	213	P	Pn	16 35 21.9	+5.5
LREZ				P	Pn	16 35 22.0	+5.6
ANWZ	Angora Road	10.71	203	P	Pn	16 35 11.0	-5.5
KHEZ	Kahui Hut	10.76	215	P	Pn	16 35 23.0	+5.8
KHEZ				P	Pn	16 35 23.3	+6.1
POWZ	Post Office Ro	10.91	206	P	Pn	16 35 15.7	-3.4
PRWZ	Pori Road	10.97	205	P	Pn	16 35 16.0	-4.0
BFZ	Birch Farm	10.99	203	eP	Pn	16 35 14.9	-5.4
BFZ	Birch Farm	10.99	203	P	Pn	16 35 14.2	-6.1
TIWZ	Tintock	11.20	204	P	Pn	16 35 17.6	-5.6
CPWZ	Castlepoint	11.21	203	P	Pn	16 35 18.5	-4.8
TMWZ	Te Maipa	11.49	204	P	Pn	16 35 21.5	-5.6
TRWZ	Traveller	11.82	204	P	Pn	16 35 25.6	-6.1
SNZO	South Karori	12.10	207	eP	Pn	16 35 28.5	-6.9
PLWZ	Palliser	12.12	205	P	Pn	16 35 29.3	-6.5
BHW	Baring Head	12.12	206	P	Pn	16 35 30.5	-5.3
NFK	Norfolk Island	12.25	274	P	Pn	16 35 42.8	+5.2
	baz=13,SNR=9.0						
CMWZ	Cape Campbell	12.67	207	P	Pn	16 35 43.6	+0.4
BSWZ	Blackbirch Sta	12.78	208	P	Pn	16 35 39.8	-4.9
THZ	Tophouse	13.23	211	ePn	Pn	16 35 45.8	-5.1
KHZ	Kahutara	13.50	208	ePn	Pn	16 35 48.7	-5.9
NIUE	Niue	13.71	34	P	Pn	16 35 50.2	-7.3
	baz=13,SNR=9.0						
NIUE	Niue	13.71	34	eP	Pn	16 35 50.1	-7.4
LTZ	Lake Taylor	14.33	210	ePn	Pn	16 36 01.7	-4.2
AMCZ	Amberley	14.50	208	P	Pn	16 36 04.3	-3.8
CRLZ	Canterbury Las	14.84	207	ePn	Pn	16 36 09.1	-3.6
OXZ	Oxford	14.87	209	ePn	Pn	16 36 07.9	-5.2
MQZ	McQueen's Vall	14.94	207	ePn	Pn	16 36 07.0	-7.1
MARNC	Mare, Loyalty	15.47	303	ePn	P	16 36 25.1	-0.2
	1µm,1.5s						
RPZ	Rata Peaks	15.61	211	ePn	Pn	16 36 17.2	-5.7
	54nm,0.6s						
RPZ				S	Sn	16 38 59.2	-15
RPZ	Rata Peaks	15.61	211	P	Pn	16 36 14.4	-8.5
	0.3nm,0.3s,baz=23,slow=12,SNR=6.5						
RPZ				S	Sn	16 38 59.2	-15
	3.3nm,0.3s,baz=261,slow=19,SNR=6.2						
RPZ				LR	LR	16 43 01.1	
	comp=Z,2µm,19.9s,baz=46,slow=39						
OUENC	Ouen Island, N	15.80	298	ePn	P	16 36 29.8	+1.0
FOZ	Fox Glacier	16.03	214	ePn	Pn	16 36 23.5	-4.8
	59nm,1.1s						
DZM	Mont Dzumac	16.30	298	eP	P	16 36 37.0	+2.5
	915nm,1.6s						
DZM				eLQ	LQ	16 39 43.2	
	6µm,27.2s						
DZM				eLR	LR	16 40 25.0	
	comp=Z,21µm,25.4s						
DZM	Mont Dzumac	16.30	298	ePn	P	16 36 36.7	+2.1
	532nm,1.4s						
DZM	Mont Dzumac	16.30	298	P	P	16 36 37.0	+2.5
	0.6nm,0.3s,baz=127,slow=11,SNR=20						
DZM				LR	LR	16 41 47.5	
	comp=Z,11µm,18.3s,baz=132,slow=33						
LBZ	Lake Benmore	16.52	211	ePn	Pn	16 36 32.9	-1.6
	75nm,1.5s						
ODZ	Otahua Downs	16.85	209	ePn	Pn	16 36 34.3	-4.4
	31nm,0.7s						
WKZ	Wanaka	17.39	212	eP	Pn	16 36 41.4	-4.0
	29nm,0.7s						
MLZ	Mavora Lakes	18.21	213	eP	P	16 36 53.6	-1.9
	29nm,0.8s						
WHZ	Wether Hill Ro	18.69	212	eP	P	16 36 59.2	-1.5
	206nm,1.9s						
DCZ	Deep Cove	18.74	214	eP	P	16 36 58.6	-2.6
	43nm,1.1s						
RAR	Rarotonga	18.95	64	P	Pn	16 37 04.3	-0.2
	27nm,0.9s						
RAR				S	Sn	16 40 15.8	-20
RAR	Rarotonga	18.95	64	P	Pn	16 37 04.3	-0.2
RAR				pmax	pmax		
	comp=Z,27nm,0.9s						
RAR	Rarotonga	18.95	64	P	Pn	16 37 04.3	-0.2
	comp=Z,1.4nm,0.3s,baz=222,slow=7.8,SNR=12						
RAR				S	Sn	16 40 15.8	-20
	comp=Z,1.9nm,0.3s,baz=66,slow=20,SNR=2.7						
PYZ	Puysegur Point	19.48	213	eP	P	16 37 08.9	-0.5
	comp=Z,211nm,1.6s						
LHI	Lord Howe Isla	19.59	262	eP	Pn	16 37 12.5	+0.3
	comp=Z,175nm,0.9s						
ARMA	Armidale	26.06	263	P	P	16 38 19.9	+4.1
	baz=27,SNR=43						
ARMA	Armidale	26.06	263	eP	P	16 38 20.0	+4.1
	comp=Z,130nm,1.1s						
RIV	Riverview	26.16	255	P	P	16 38 21.0	+4.4
	baz=27,SNR=5.9						
MGCD	Mangrove Creek	26.23	256	P	P	16 38 21.6	+4.4
	baz=27,SNR=56						
TBI	Tubuai	26.47	81	eS	S	16 42 46.0	-5.0
	comp=Z,1µm,33.0s						
TBI				eLQ	LQ	16 43 47.2	
	comp=Z,3µm,24.8s						
TBI				eLR	LR	16 44 56.3	
	comp=Z,7µm,28.0s,baz=242						
TBI	Tubuai	26.47	81	eT	T	17 05 44.6	
	comp=Z,177nm,0.3s						
CNB	Canberra Magne	27.63	252	P	P	16 38 33.5	+3.7
	baz=28,SNR=28						
EIDS	Eidsvold	27.69	273	P	P	16 38 33.0	+2.6
	baz=28,SNR=17						
EIDS	Eidsvold	27.69	273	eP	P	16 38 32.7	+2.3
	comp=Z,124nm,1.2s						
MILA	Mila	27.85	248	P	P	16 38 35.3	+3.5
	baz=28,SNR=29						
CAN	Canberra	27.92	252	P	P	16 38 36.1	+3.6
	baz=28						
CAN	Canberra	27.92	252	eP	P	16 38 35.1	+2.6
	comp=Z,69nm,0.9s						
CAN	Canberra	27.92	252	eP	P	16 38 35.1	+2.6
CAN				pmax	pmax		
	comp=Z,69nm,0.9s						
CAN				MLR	MLR		
	comp=Z,3µm,22.0s						
YNG	Young	28.44	254	P	P	16 38 40.6	+3.6
	baz=29,SNR=36						
PAE	Paea	28.95	70	eP	P	16 38 42.3	+0.6
	comp=Z,10.0nm,0.9s						
PAE	Paea	28.95	70	eT	T	17 08 47.4	
	comp=Z,62nm,0.3s						
PPT2	Papeete2	28.99	70	eP	P	16 38 42.9	+0.7
	comp=Z,94nm,1.1s						
PPT2				eS	S	16 43 26.5	-4.5
	comp=Z,1µm,26.9s						
PPT2				eLR	LR	16 46 01.8	
	comp=Z,7µm,27.2s,baz=236						
PPT2	Papeete2	28.99	70	eT	T	17 08 51.3	
	comp=Z,40nm,0.3s						
PPTF	Pamatai, Papee	29.00	70	eP	P	16 38 42.5	+0.2
	comp=Z,164nm,1.2s						
PPT	Papeete	29.00	70	P	P	16 38 45.2	+3.0
	comp=Z,104nm,1.1s,baz=60,slow=6.7,SNR=4.5						
TVO	Taravao	29.16	71	eP	P	16 38 44.4	+0.8
	comp=Z,39nm,1.3s						
TVO	Taravao	29.16	71	eT	T	17 09 03.5	
	comp=Z,12nm,0.3s						
TIAR	Tiarei	29.20	70	eP	P	16 38 44.7	+0.8
	comp=Z,33nm,0.8s						
TIAR	Tiarei	29.20	70	eT	T	17 09 05.7	
	comp=Z,8.6nm,0.3s						
RMQ	Roma	29.36	270	P	P	16 38 48.9	+3.6
	baz=30,SNR=34						
HNR	Honiara	29.44	311	eP	P	16 38 46.3	+0.3
	comp=Z,84nm,0.9s						
HNR				S	S	16 43 36.2	-1.7
HNR	Honiara	29.44	311	P	P	16 38 46.7	+0.7
HNR				S	S	16 43 36.2	-1.7
HNR				pmax	pmax		
	comp=Z,66nm,0.6s						
HNR				smax	smax		
	comp=N,10.0nm,0.6s						
HNR				MLR	MLR		
	comp=Z,2µm,21.8s						
HNR	Honiara	29.44	311	P	P	16 38 46.7	+0.7
	comp=Z,66nm,0.6s,baz=201,slow=2.3,SNR=7.7						
HNR				S	S	16 43 36.2	-1.7
	comp=Z,9.8nm,0.6s,baz=86,slow=19,SNR=4.0						
HNR				LR	LR	16 48 38.1	
	comp=Z,2µm,21.8s,baz=149,slow=32						
MOO	Moorlands	30.07	237	P	P	16 38 53.4	+2.0
	baz=31,SNR=4.7						
TOO	Toolangi	30.80	247	P	P	16 39 00.6	+2.7
	baz=31,SNR=40						
TOO	Toolangi	30.80	247	eP	P	16 39 00.4	+2.5
	comp=Z,51nm,0.8s						
TOO	Toolangi	30.80	247	eP	P	16 39 00.4	+2.5
TOO				pmax	pmax		
	comp=Z,51nm,0.9s						
TOO				MLR	MLR		
	comp=Z,3µm,22.0s						
CMSA	Cobar Meteorol	30.95	259	P	P	16 39 02.6	+3.3
	baz=32,SNR=385						
PMOR	Pomariorio Ree	31.76	67	eT	T	17 12 16.9	
	comp=Z,16nm,0.3s						
VAH	Vaihoa	31.84	68	eP	P	16 39 07.7	+0.5
	comp=Z,167nm,1.2s						
VAH	Vaihoa	31.84	68	eT	T	17 12 23.0	
	comp=Z,497nm,0.2s						
ARPS	Mount Arapiles	33.71	249	P	P	16 39 25.5	+2.0
	baz=34,SNR=24						
CTA	Charters Tower	33.78	280	P	P	16 39 26.1	+1.8
	comp=Z,169nm,0.7s,baz=104,slow=11,SNR=347						
CTA				S	S	16 44 44.9	-0.9
	comp=Z,4.0nm,0.9s,baz=96,slow=19,SNR=3.0						
CTA				ScP	ScP	16 45 43.4	-1.7
	comp=Z,5.7nm,0.8s,baz=79,slow=5.2,SNR=2.7						
CTA				PKiKP	PKiKP	16 49 25.7	-2.1
	comp=Z,1.5nm,0.7s,baz=90,slow=1.0,SNR=3.7						
CTA				LR	LR	16 51 10.8	
	comp=Z,4µm,21.0s,baz=128,slow=33						
CTAO	Charters Tower	33.78	280	eP	P	16 39 26.8	+2.5
	comp=Z,196nm,0.8s						
CTAO	Charters Tower	33.78	280	eP	P	16 39 26.8	+2.5
CTAO				pmax	pmax		
	comp=Z,200nm,0.8s						
STKA	Stephens Creek	34.35	257	P	P	16 39 31.8	+2.7
	baz=35,SNR=368						
STKA	Stephens Creek	34.35	257	eP	P	16 39 31.8	+2.7
	comp=Z,68nm,0.8s						
STKA				S	S	16 44 54.5	+0.1
STKA				ScP	ScP	16 45 45.0	-1.8
STKA				PKiKP	PKiKP	16 49 26.4	-1.4
STKA	Stephens Creek	34.35	257	eP	P	16 39 31.8	+2.7
STKA				pmax	pmax		
	comp=Z,68nm,0.8s						
STKA	Stephens Creek	34.35	257	P	P	16 39 31.0	+1.9
	comp=Z,323nm,0.7s,baz=100,slow=9.8,SNR=466						
STKA				S	S	16 44 54.5	+0.1
	comp=Z,6.1nm,0.9s,baz=0.0,slow=20,SNR=3.1						
STKA				ScP	ScP	16 45 45.0	-1.8
	comp=Z,3.7nm,0.9s,baz=104,slow=8.3,SNR=1.7						
STKA				PKiKP	PKiKP	16 49 26.4	-1.4
	comp=Z,1.8nm,0.9s,baz=24,slow=3.2,SNR=3.1						
STKA				LR	LR	16 52 19.3	
	comp=Z,3µm,19.3s,baz=89,slow=34						
MTSU	Mount Surprise	36.29	281	P	P	16 39 48.2	+2.4
	baz=37,SNR=178						
HTT	Hallett	36.36	254	P	P	16 39 48.0	+1.6
	baz=37,SNR=113						
RABL	Rabaul	38.49	307	eP	P	16 40 04.6	+0.1
	comp=Z,72nm,0.6s						
BBOO	Buckleboo	38.83	255	P	P	16 40 08.5	+1.2
	baz=39,SNR=180						
BBOO	Buckleboo	38.83	255	eP	P	16 40 08.1	+0.8
	comp=Z,157nm,0.6s						
RKT	Rikitea	38.98	90	eT	T	17 21 25.0	
	comp=Z,15nm,0.3s						
QIS	Mount Isa	39.27	275	P	P	16 40 12.5	+1.4
	baz=40,SNR=62						
COEN	Coen	39.29	286	eP	P	16 40 12.9	+1.7
	comp=Z,108nm,1.1s						
TAOE	Nuku Hiva Isla	41.48	67	eP	P	16 40 29.9	+0.5
	comp=Z,311nm,1.3s						
TAOE				eS	S	16 46 38.9	-3.8
	comp=Z,746nm,31.3s						
TAOE				eLQ	LQ	16 50 06.7	
	comp=Z,2µm,25.4s						
TAOE				eLR	LR	16 51 46.0	
	comp=Z,4µm,28.0s,baz=232						
AS01	Alice Springs	42.99	267	eP	P	16 40 42.4	+0.7
AS31	Alice Springs	43.03	267	eP	P	16 40 42.4	+0.4
	comp=Z,22nm,0.6s						
ASAR	Alice Springs	43.03	267	P	P	16 40 42.7	+0.7
	comp=Z,57nm,0.6s,baz=105,slow=7.4,SNR=844						
ASAR				PcP	PcP	16 42 29.7	-2.1
	comp=Z,5.7nm,0.7s,baz=106,slow=5.6,SNR=2.5						
ASAR				ScP	ScP	16 46 17.4	-2.9
	comp=Z,5.7nm,0.9s,baz=115,slow=4.4,SNR=7.5						
ASAR				S	S	16 47 03.2	-2.2
	comp=Z,1.5nm,0.8s,baz=86,slow=15,SNR=2.6						
ASAR				PKiKP	PKiKP	16 49 34.5	-1.0
	comp=Z,0.8nm,0.6s,baz=100,slow=1.5,SNR=4.2						
ASAR				LR	LR	16 58 31.5	
	comp=Z,3µm,18.1s,baz=121,slow=36						
ASAR				PKPPKP	P'P'df	17 12 38.2	-2.2
	comp=Z,1.2nm,1.0s,baz=256,slow=1.9,SNR=4.3						
MANU	Manus Island	43.36	304	eP	P	16 40 45.2	+0.6
	comp=Z,134nm,1.4s						

WB2	Warramunga Arr	44.03	272	*e*P	P	16 40 50.0	0.0
WRAB	Tennant Creek	44.04	272	*e*P	P	16 40 50.5	+0.4
	comp=Z,309nm,1.2s						
WRAB	Tennant Creek	44.04	272*c*	*i*P	P	16 40 50.9	+0.8
WRAB				pmax	pmax		
	comp=Z,309nm,1.3s						
WRA	Warramunga Arr	44.05	272	P	P	16 40 50.8	+0.6
	comp=Z,86nm,0.4s,baz=111,slow=8.1,SNR=575						
WRA				PcP	PP	16 42 33.4	+0.2
	comp=Z,19nm,0.9s,baz=118,slow=3.3,SNR=2.3						
WRA				ScP	ScP	16 46 21.8	-2.6
	comp=Z,3.3nm,0.7s,baz=109,slow=4.2,SNR=6.9						
WRA				S	S	16 47 16.1	-4.2
	comp=Z,6.2nm,0.8s,baz=113,slow=14,SNR=6.9						
WRA				PKiKP	PKiKP	16 49 35.4	-1.0
	comp=Z,0.9nm,0.5s,baz=94,slow=0.6,SNR=7.5						
WRA				LR	LR	16 58 42.4	
	comp=Z,2µm,18.0s,baz=105,slow=35						
FORT	Forrest	45.91	255	*e*P	P	16 41 04.9	0.0
	comp=Z,154nm,0.8s						
VNDA	Vanda	47.81	186	*e*P	P	16 41 17.7	-1.3
	comp=Z,175nm,1.9s						
VNDA	Vanda	47.81	186	P	P	16 41 22.1	+3.1
	comp=Z,11nm,0.6s,baz=10,slow=6.1,SNR=16						
VNDA				LR	LR	16 58 11.9	
	comp=Z,480nm,21.2s,baz=24,slow=32						
JAY	Jayapura	47.97	298	P	P	16 41 22.7	+1.6
JAY	Jayapura	47.97	298	P	P	16 41 21.8	+0.7
	comp=Z,48nm,0.7s,baz=195,slow=1.5,SNR=12						
JAY				LR	LR	17 01 08.8	
	comp=Z,421nm,19.8s,baz=130,slow=36						
GENI	Genyem	48.33	297	P	P	16 41 25.3	+1.4
MTN	Manton Dam	49.96	279	*e*P	P	16 41 36.0	-0.4
	comp=Z,39nm,0.8s						
FITZ	Fitzroy Crossi	52.30	270	*e*P	P	16 41 53.6	-0.3
	comp=Z,154nm,1.2s						
FITZ				ScP	ScP	16 46 56.1	-3.1
FITZ				S	S	16 49 15.5	-1.4
FITZ	Fitzroy Crossi	52.30	270	P	P	16 41 53.9	0.0
	comp=Z,57nm,0.9s,baz=157,slow=6.5,SNR=5.3						
FITZ				ScP	ScP	16 46 56.1	-3.1
	comp=Z,9.8nm,1.1s,baz=117,slow=9.0,SNR=1.9						
FITZ				S	S	16 49 15.5	-1.4
	comp=Z,2.1nm,0.9s,baz=264,slow=9.9,SNR=6.2						
FITZ				LR	LR	17 03 06.5	
	comp=Z,2µm,21.0s,baz=112,slow=35						
SAUI	Saumlaki	52.31	285	*e*P	P	16 41 53.8	-0.2
	comp=Z,136nm,1.1s						
SAUI	Saumlaki	52.31	285	P	P	16 41 55.8	+1.8
RKPI	Ransiki, Papua	53.68	293	P	P	16 42 04.8	+0.7
NWAO	Narrogin (SRO)	54.24	250	P	P	16 42 06.9	-1.1
	comp=Z,9.5nm,0.7s,baz=312,slow=7.3,SNR=5.6						
NWAO				LR	LR	17 03 26.8	
	comp=Z,1µm,20.0s,baz=336,slow=34						
KHLU	Kahalu`u	54.35	26	*e*P	P	16 42 10.6	+1.8
	comp=Z,303nm,1.1s						
FAKI	Fak Fak	54.38	290	*e*P	P	16 42 08.5	-0.7
	comp=Z,107nm,1.4s						
PUH	Pauahi	54.41	27	*e*P	P	16 42 09.9	+0.6
	comp=Z,256nm,0.8s						
MLH	Mauna Loa	54.45	27	*e*P	P	16 42 11.3	+1.5
	comp=Z,256nm,0.8s						
MLH	Mauna Loa	54.45	27	*e*P	P	16 42 11.3	+1.5
MLH				pmax	pmax		
	comp=Z,260nm,0.8s						
HMH	Humu‘ula Sheep	54.51	26	*e*P	P	16 42 11.8	+1.5
	comp=Z,381nm,0.8s						
POHA	Pohakuloa	54.63	26	*e*P	P	16 42 12.3	+1.2
	comp=Z,260nm,1.1s						
HPAH	Hawaii Prepara	54.82	26	*e*P	P	16 42 13.5	+1.2
	comp=Z,522nm,1.2s						
CASY	Casey	54.86	208	*e*P	P	16 42 12.3	+0.3
	comp=Z,200nm,0.9s						
MHA	Mahukona	54.89	26	*e*P	P	16 42 14.2	+1.6
MHA	Mahukona	54.89	26	*e*P	P	16 42 14.3	+1.6
KIP	Kipapa	55.28	23	*e*P	P	16 42 15.9	+0.5
	comp=Z,312nm,1.3s						
KIP	Kipapa	55.28	23⇓	*e*P	P	16 42 16.3	+0.9
KIP				pmax	pmax		
	comp=Z,296nm,1.3s						
MBWA	Marble Bar	56.13	264	*e*P	P	16 42 21.1	-0.7
MORW	Morawa	56.39	254	*e*P	P	16 42 22.5	-1.1
	comp=Z,59nm,1.0s						
GUMO	Guam	56.63	315	P	P	16 42 24.4	-0.9
	comp=Z,107nm,0.7s,baz=163,slow=12,SNR=4.2						
GUMO				LR	LR	17 04 32.5	
	comp=Z,683nm,19.6s,baz=134,slow=34						
SOEI	Soe	57.33	278	*e*P	P	16 42 31.2	+0.6
	comp=Z,91nm,0.9s						
SOEI	Soe	57.33	278	P	P	16 42 33.7	+3.2
	comp=Z,135nm,1.1s,comp=Z,1µm						
BATI	Baumata	57.62	278	P	P	16 42 35.3	+2.8
	comp=Z,45nm,0.8s						
BATI	Baumata	57.62	278	LR	LR	17 07 30.5	
	comp=Z,5µm,19.3s,baz=136,slow=36						
QSPA	South Pole Qui	59.43	180	*e*P	P	16 42 46.5	+2.0
	comp=Z,181nm,0.8s						
QSPA	South Pole Qui	59.43	180	P	P	16 42 46.7	+2.3
	comp=Z,47nm,0.7s,baz=30,slow=1.2,SNR=295						
MMRI	Maumere	59.62	278	*e*P	P	16 42 46.7	+0.4
	comp=Z,449nm,1.1s						
MMRI	Maumere	59.62	278	P	P	16 42 48.7	+2.3
	comp=Z,92nm,1.1s,comp=Z,2µm						
SANI	Sanana	59.98	287	P	P	16 42 49.4	+0.6
EDFI	Ende, Flores	60.03	278	P	P	16 42 51.6	+2.3
	comp=Z,37nm,0.7s,comp=Z,3µm						
BASI	Baing, Sumba	60.26	276	P	P	16 42 54.0	+3.3
	comp=Z,156nm,0.9s						
WSI	Waingapu	60.77	276	P	P	16 42 56.4	+2.2
	comp=Z,267nm,0.7s						
PLAI	Plampang	63.34	276	P	P	16 43 11.8	+0.3
	comp=Z,164nm,0.8s,comp=Z,1µm						
DAV	Davao City (W)	65.69	295	P	P	16 43 26.3	-0.5
	comp=Z,140nm,0.4s,baz=164,slow=4.1,SNR=4.7						
DAV				LR	LR	17 11 25.7	
	comp=Z,231nm,20.3s,baz=132,slow=35						
PCI	Palu	65.72	284	P	P	16 43 28.7	+1.6
KCP	Kidapawan	66.03	295⇓	*i*P	P	16 43 28.6	-0.4
PAGZ	Pagadian	67.88	294	*e*P	P	16 43 39.8	-0.9
MSLP	Maasin	68.14	297	*e*P	P	16 43 40.8	-1.6
CBIJ	Chichi jima	68.87	322	P	P	16 43 46.8	+0.1
JCJ	Chichijima	68.87	322	P	P	16 43 46.8	+0.1
	comp=Z,52nm,0.8s,baz=291,slow=10,SNR=2.4						
UGM	Wanagama	70.03	273	*e*P	P	16 43 54.2	0.0
	comp=Z,309nm,1.6s						
TSM	Tawau	70.24	288	P	P	16 43 56.0	+0.6
SDKM	Sandakan	71.55	288	P	P	16 44 03.3	-0.2
MAW	Mawson	72.02	201	P	P	16 44 06.3	+1.0
	comp=Z,62nm,0.9s,baz=118,slow=7.7,SNR=7.8						
MAW				LR	LR	17 14 19.8	
	comp=Z,1µm,20.6s,baz=108,slow=34						
SJMP	San Jose	72.45	297	*e*P	P	16 44 06.9	-1.8
CISI	Cisompet, Garu	72.53	272	*e*P	P	16 44 07.5	-1.9
	comp=Z,198nm,1.2s						
KKM	Kota Kinabalu	72.58	288	*e*P	P	16 44 08.4	-1.3
	comp=Z,66nm,1.1s						
KKM	Kota Kinabalu	72.58	288	P	P	16 44 10.0	+0.3
POLP	Polilio Island	73.22	299	*e*P	P	16 44 11.1	-2.2
TGY	Tagaytay City	73.59	298	P	P	16 44 15.1	-0.5
	comp=Z,124nm,0.3s,baz=307,slow=2.5,SNR=12						
TGY				LR	LR	17 15 15.6	
	comp=Z,184nm,20.4s,baz=106,slow=35						
SBUM	Sibu	73.92	283	*e*P	P	16 44 16.4	-1.1
	comp=Z,49nm,1.5s						
SBUM	Sibu	73.92	283	P	P	16 44 17.9	+0.4
CAUP	Cauayan	74.70	301	*e*P	P	16 44 26.7	+4.9
KSM	Kuching	75.01	281	*e*P	P	16 44 22.9	-0.9
	comp=Z,75nm,1.2s						
KSM	Kuching	75.01	281	P	P	16 44 23.8	-0.1
SMPP	San Manuel, Pa	75.05	299	*e*P	P	16 44 21.6	-2.4
APYP	Conner	75.70	301	*e*P	P	16 44 25.9	-1.7
SYO	Syowa Base	76.83	193⇓	*i*P	P	16 44 32.4	-0.8
SNAA	Sanae	77.88	178	P	P	16 44 40.0	+0.8
SNAA	Sanae	77.88	178	*e*P	P	16 44 39.7	+0.5
	comp=Z,135nm,1.2s						
SNAA	Sanae	77.88	178*c*	*i*P	P	16 44 40.2	+1.0
VNA3	Neumayer Olymp	78.03	176	P	P	16 44 40.8	+0.8
VNA3				S	S	16 54 36.4	+5.5
INU	Inuyama	78.09	324	*e*P	P	16 44 40.6	-0.1
	comp=Z,38nm,0.9s						
MJAR	Matsushiro Arr	78.44	325	P	P	16 44 41.7	-1.0
	comp=Z,24nm,1.0s,baz=167,slow=5.3,SNR=21						
MJAR				LR	LR	17 14 11.0	
	comp=Z,252nm,21.6s,baz=140,slow=32						
MAJO	Matsushiro	78.44	325	*e*P	P	16 44 43.5	+0.9
	comp=Z,35nm,1.0s						
MAJO	Matsushiro	78.44	325*c*	*i*P	P	16 44 43.7	+1.1
MAJO				pmax	pmax		
	comp=Z,69nm,1.6s						
MAT	Matsushiro	78.44	325	P	P	16 44 40.9	-1.7
MJB9	Matsu-Tunnel	78.44	325	*e*P	P	16 44 43.5	+0.9
	comp=Z,36nm,1.0s						
VNA2	Neumayer--Watz	78.46	177	P	P	16 44 43.4	+1.0
	baz=164,slow=4.6						
VNA2				S	S	16 54 41.7	+6.2
NVL	N'lazarevskaya	78.59	183	*e*P	P	16 44 42.7	-0.4
NVL				pmax	pmax		
	comp=Z,79nm,0.9s						
NVL				MLR	MLR		
	comp=Z,423nm,18.0s						
VNA1	Neumayer--Stat	78.69	177	P	P	16 44 44.8	+1.2
VNA1				S	S	16 54 44.6	+6.8
TWG	Pinlang	78.97	305	*e*P	P	16 44 43.8	-2.1
	comp=Z,127nm,0.9s						
YULB	Yu-li	79.18	305	*e*P	P	16 44 45.0	-2.0
	comp=Z,35nm,1.3s						
NACB	Ninganchiao	79.47	306	*e*P	P	16 44 46.8	-1.8
	comp=Z,100nm,0.3s						
TPUB	Ta-pu	79.59	305	*e*P	P	16 44 46.8	-2.5
	comp=Z,102nm,1.1s						
SSLB	Suanglung	79.67	305	*e*P	P	16 44 48.0	-1.7
	comp=Z,35nm,0.7s						
JNU	Nakatsue	79.72	318	*e*P	P	16 44 50.1	+0.3
	comp=Z,66nm,1.1s						
MYKOM	Kota Tinggi	80.67	278	*e*P	P	16 44 54.3	-1.0
	comp=Z,72nm,1.1s						
MYKOM	Kota Tinggi	80.67	278	P	P	16 44 55.8	+0.5
KGM	Kluang	81.24	278	P	P	16 44 58.6	+0.2
YUK	Yuzh-Kuril'sk	81.34	335	*e*P	P	16 44 54.5	-3.6
YUK				*e*		16 48 00.0	
YUK				*e*S	S	16 55 02.1	-4.1
YUK				*e*SS	SS	17 00 24.2	+0.8
YUK				pmax	pmax		
	comp=Z,145nm,1.1s						
YUK				pmax	pmax		
	comp=N,44nm,1.0s						
YUK				pmax	pmax		
	comp=E,52nm,1.0s						
YUK				pmax	pmax		
	comp=Z,201nm,3.1s						
KUR	Kuril'sk	81.66	336	*i* P	P	16 44 59.7	-0.1
QZH	Quanzhou	82.06	305	*e*P	P	16 45 05.9	+3.5
QZH				S	S	16 55 09.8	-4.7
QZH				LR	LR		
	comp=Z,570nm,19.3s						
ADK	Adak	82.22	1	*e*P	P	16 45 01.8	-0.7
	comp=Z,85nm,0.7s						
ADK	Adak	82.22	1	*e*P	P	16 45 01.8	-0.7
ADK				pmax	pmax		
	comp=Z,85nm,0.7s						
PLCA	Paso Flores	82.36	133	*e*P	P	16 45 05.6	+1.6
	comp=Z,105nm,1.4s						
PLCA	Paso Flores	82.36	133	*e*P	P	16 45 05.6	+1.6
PLCA				pmax	pmax		
	comp=Z,110nm,1.3s						
GO06	Curarrehue	82.41	132	*e*P	P	16 45 05.2	+0.8
	comp=Z,58nm,1.4s						
EFI	East Falkland	82.59	147	*e*P	P	16 45 05.8	+1.0
	comp=Z,106nm,1.0s						
EFI	East Falkland	82.59	147⇓	*e*P	P	16 45 06.3	+1.5
EFI				pmax	pmax		
	comp=Z,105nm,1.3s						
ASAJ	Asahikawa	82.66	333	P	P	16 45 05.4	+0.3
ASAJ				pmax	pmax		
	comp=Z,66nm,1.2s						
ASAJ				MLR	MLR		
	comp=Z,553nm,18.7s						
ASAJ	Asahikawa	82.66	333	P	P	16 45 05.4	+0.3
	comp=Z,49nm,1.1s,baz=207,slow=6.6,SNR=16						
ASAJ				LR	LR	17 19 30.5	
	comp=Z,552nm,18.7s,baz=184,slow=34						
KTGM	Kuala Trenggan	83.11	280	P	P	16 45 08.7	+0.6
FRIM	Kepong	83.31	278	P	P	16 45 09.5	+0.2
SMY	Shemya	83.34	355	*e*P	P	16 45 08.9	+0.6
	comp=Z,322nm,1.1s						
SMY	Shemya	83.34	355	*e*P	P	16 45 12.0	+3.7
SMY				pmax	pmax		
	comp=Z,320nm,1.1s						
NIKH	Nikolski High	83.69	6	*e*P	P	16 45 10.4	+0.3
	comp=Z,277nm,0.8s						
TJN	Taejon	84.07	319⇑	*e*P	P	16 45 12.4	-0.1
SNCC	San Nicolas Is	84.28	46	P	P	16 45 15.6	+1.9
	baz=228						
IPM	Ipoh	84.47	278	*e*P	P	16 45 13.7	-1.4
	comp=Z,49nm,1.0s						
IPM	Ipoh	84.47	278	P	P	16 45 14.6	-0.6
KSRS	Korea Array	84.52	320	P	P	16 45 15.3	+0.6
	comp=Z,12nm,0.9s,baz=140,slow=4.9,SNR=18						
KSAR	Wonju Array Be	84.53	320	P	P	16 45 15.3	+0.5
KSAR	Wonju Array Be	84.53	320	P	P	16 45 15.4	+0.5
KS01	Wonju Array Si	84.55	320	*e*P	P	16 45 14.6	-0.3
SCI2	San Clemente I	84.71	47	P	P	16 45 17.1	+1.3
	baz=228						
SCZ2	Santa Cruz Isl	84.72	45	P	P	16 45 17.2	+1.3
	baz=227						
GZH	Guangzhou	84.74	301	P	P	16 45 16.5	+0.3
LPIG	La Paz	84.74	58	P	P	16 45 17.3	+1.1
	comp=Z,20nm,0.3s,baz=66,slow=3.5,SNR=5.7						
LPIG				LR	LR	17 18 50.3	
	comp=Z,428nm,18.0s,baz=228,slow=33						
SBC	Santa Barbara	84.97	45	P	P	16 45 18.8	+1.7
	baz=227						
YSS	Yuzh-Sakhalins	84.97	334	*e*P	P	16 45 16.8	+0.1
	comp=Z,145nm,1.3s						
YSS	Yuzh-Sakhalins	84.97	334	*e*P	P	16 45 17.7	+0.9
YSS				*e**SP	pwP	16 45 30.3	-0.3
YSS				*e*		16 55 38.3	
YSS				*e*S	S	16 55 42.0	-0.9
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				pmax	pmax		
	comp=Z,100nm,8.8s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,16.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
QIZ	Qiongzhong	85.06	295	P	P	16 45 17.6	-0.3
QIZ				S	S	16 55 43.4	-1.6
QIZ				SS	SS	17 01 18.9	-0.4
QIZ				pmax	pmax		
	comp=E,11nm,1.0s						
QIZ				pmax	pmax		
	comp=E,340nm,4.3s						
QIZ				LR	LR		
	comp=E,250nm,31.4s						
QIZ				LR	LR		
	comp=E,290nm,30.4s						
QIZ				LR	LR		
	comp=E,560nm,33.3s						
QIZ	Qiongzhong	85.06	295	*e*P	P	16 45 17.4	-0.5
	comp=E,23nm,0.8s						
CIS	Catalina Islan	85.08	46	P	P	16 45 18.9	+1.2
	baz=228						
BLG	Laguna Peak, P	85.14	46	P	P	16 45 19.2	+1.1
	baz=228						
KULM	Kulim	85.20	279	*e*P	P	16 45 17.7	-1.1
	comp=E,76nm,1.1s						
KULM	Kulim	85.20	279	P	P	16 45 18.6	-0.2
PKM	Mcpherson Peak	85.21	45	P	P	16 45 20.2	+1.7
	baz=227						
FMP	Fort Macarthur	85.36	46	P	P	16 45 20.7	+1.6
	baz=228						
SMMC	Simmler	85.39	44	P	P	16 45 21.0	+1.7
	baz=227						
PSI	Prapat	85.40	276	*e*P	P	16 45 17.6	-2.4
	comp=E,111nm,1.3s						
PSI	Prapat	85.40	276	P	P	16 45 17.8	-2.2
	comp=E,44nm,1.1s,baz=180,slow=6.4,SNR=21						
PAGB	Antelope Grade	85.52	44	*e*P	P	16 45 21.3	+1.4
	comp=E,175nm,1.6s						
SAO	San Andreas Ge	85.53	42	*e*P	P	16 45 21.4	+1.5
	comp=E,51nm,1.3s						
SAO	San Andreas Ge	85.53	42	*e*P	P	16 45 21.4	+1.5
SAO				pmax	pmax		
	comp=Z,51nm,1.2s						
109C	Camp Elliot, M	85.56	48	P	P	16 45 21.4	+1.3
	baz=229						
DECC	Green Verdugo	85.69	46	P	P	16 45 21.7	+1.0
	baz=228						
OSI	Osito Audit: C	85.69	45	*e*P	P	16 45 21.6	+0.8
	comp=Z,40nm,1.0s						
OSI	Osito Audit: C	85.69	45	P	P	16 45 22.3	+1.5
	baz=228						
BAR	Barrett	85.70	48	*e*P	P	16 45 21.8	+0.9
	comp=Z,76nm,1.6s						
PAS	Pasadena	85.72	46	P	P	16 45 21.5	+0.6
PASC	Pasadena Art C	85.73	46	*e*P	P	16 45 21.5	+0.6
	comp=Z,41nm,1.1s						
PET	Petropavlovsk	85.79	346	*e*P	P	16 45 22.0	+1.3
PET				*e*S	S	16 55 49.5	-1.1
PET				pmax	pmax		
	comp=Z,49nm,0.6s						
GSI	Gunungsitoli	85.80	274	*e*P	P	16 45 21.3	-0.5
	comp=Z,125nm,0.8s						
MWC	Mount Wilson	85.84	46	*e*P	P	16 45 22.6	+0.9
	comp=Z,60nm,1.3s						
MWC	Mount Wilson	85.84	46	*e*P	P	16 45 22.6	+0.9
MWC				pmax	pmax		
	comp=Z,61nm,1.2s						
ARVC	Arvin	85.97	45	P	P	16 45 23.6	+1.5
	baz=228						
MURC	Murrieta	85.97	47	P	P	16 45 23.6	+1.4
	baz=229,SNR=12						
MONP2	Monument Peak	86.00	48	P	P	16 45 24.2	+1.6
	baz=229,SNR=27						
IKP	In-Ko-Pah, Jac	86.04	48	P	P	16 45 24.5	+1.9
	baz=230,SNR=10						
PEA0B	Petropavlovsk-	86.07	346	*e*P	P	16 45 22.5	+0.3
	comp=Z,179nm,1.4s						
PETK	Petropavlovsk-	86.07	346	*e*P	P	16 45 21.6	-0.5
PETK	Petropavlovsk-	86.07	346	P	P	16 45 22.0	-0.1
PETK				pmax	pmax		
	comp=Z,39nm,0.6s						
PETK				MLR	MLR		
	comp=Z,447nm,21.9s						
PETK	Petropavlovsk-	86.07	346	P	P	16 45 22.0	-0.1
	comp=Z,36nm,0.9s,baz=128,slow=6.2,SNR=30						
PETK				LR	LR	17 16 52.4	
	comp=Z,447nm,21.9s,baz=159,slow=31						
BFSC	Mount Baldy Ra	86.10	46	P	P	16 45 24.0	+1.1
	baz=228,SNR=21						
HOPS	Hopland Field	86.17	40	*e*P	P	16 45 24.0	+1.1
	comp=Z,74nm,1.0s						
GDXM	Geysers	86.19	40	*e*P	P	16 45 24.6	+1.4
	comp=Z,38nm,1.0s						
SKLT	Songkhla	86.20	281	P	P	16 45 26.2	+2.5
VES	Vestal, Richgr	86.29	44	P	P	16 45 24.8	+1.1
	baz=228						
EDW2	Edwards Air Fo	86.32	46	P	P	16 45 25.1	+1.2
	baz=228,SNR=34						
KCPM	Cahto Peak	86.38	39	*e*P	P	16 45 23.6	-0.6
	comp=Z,73nm,1.2s						
NJ2	Nanjing	86.38	311	*e*P	P	16 45 24.6	+0.4
NJ2				pmax	pmax		
	comp=Z,39nm,0.7s						
ROC1	El Roble	86.41	126	*e*P	P	16 45 25.7	+0.8
	comp=Z,55nm,0.9s						
SWSC	Sam W. Stewart	86.43	48	P	P	16 45 25.8	+1.4
	baz=230						
VOG	Valley Oaks Go	86.44	44	P	P	16 45 25.2	+0.9
	baz=227						
PFO	Pinyon Flats O	86.44	47	*e*P	P	16 45 25.8	+1.1
	comp=Z,50nm,1.3s						
PFO	Pinyon Flats O	86.44	47	*e*P	P	16 45 26.3	+1.7
PFO				pmax	pmax		
	comp=Z,50nm,1.3s						
PFO	Pinyon Flats O	86.44	47	P	P	16 45 26.0	+1.4
	baz=229,SNR=18						
PFO	Pinyon Flats O	86.44	47	LR	LR	17 15 03.9	
	comp=Z,466nm,21.9s,baz=240,slow=29						
XPFO	Pion Flat	86.44	47	*e*P	P	16 45 25.9	+1.3
	comp=Z,49nm,1.3s						
ISA	Isabella, Lake	86.54	45	*e*P	P	16 45 26.4	+1.3
	comp=Z,68nm,1.1s						
ISA	Isabella, Lake	86.54	45	*e*P	P	16 45 26.6	+1.6
ISA				pmax	pmax		
	comp=Z,68nm,1.1s						
ISA	Isabella, Lake	86.54	45	P	P	16 45 26.3	+1.3
	baz=228,SNR=46						
PEL	Peldehue	86.54	127	*e*P	P	16 45 25.7	+0.4
	comp=Z,76nm,0.7s						
PEL	Peldehue	86.54	127	*e*P	P	16 45 25.7	+0.4
PEL				pmax	pmax		
	comp=Z,76nm,0.7s						
BBRC	Big Bear Solar	86.58	47	P	P	16 45 26.6	+1.2
	baz=229						
VLA	Vladivostok	86.60	326⇑	*e*P	P	16 45 27.2	+2.2
VLA				pmax	pmax		
	comp=Z,69nm,1.7s						
KMRM	Mail Ridge	86.69	39	*e*P	P	16 45 26.4	+0.8
	comp=Z,74nm,1.1s						
LRMC	Laurel Mtn Rad	86.90	45	P	P	16 45 28.4	+1.5
	baz=228,SNR=45						
RRX	Edison Barstow	86.93	46	P	P	16 45 28.3	+1.4
	baz=229,SNR=6.2						
BELC	Belle Mtn. Jos	86.99	47	P	P	16 45 29.3	+2.0
	baz=230,SNR=43						
SDPT	Sand Point	87.00	10	*e*P	P	16 45 26.9	+0.3
	comp=Z,401nm,1.4s						
CMB	Columbia Colle	87.01	42	*e*P	P	16 45 27.4	+0.2
	comp=Z,37nm,1.0s						
CMB	Columbia Colle	87.01	42	*e*P	P	16 45 28.4	+1.2
CMB				pmax	pmax		
	comp=Z,37nm,1.0s						
BC3	Big Chuckawall	87.11	48	P	P	16 45 29.9	+2.0
	baz=230,SNR=32						
GLA	Glamis	87.13	49	*e*P	P	16 45 29.1	+1.2
	comp=Z,89nm,1.3s						
GLA	Glamis	87.13	49	*e*P	P	16 45 30.2	+2.3
GLA				pmax	pmax		
	comp=Z,89nm,1.3s						
GLA	Glamis	87.13	49	P	P	16 45 29.9	+2.0
	baz=230,SNR=11						
KHMM	Horse Mountain	87.14	38	*e*P	P	16 45 28.9	+1.0
	comp=Z,43nm,1.1s						
O02D	Mt. Diablo Mer	87.16	39	P	P	16 45 29.1	+1.2
	baz=225,SNR=27						
CWC	Cottonwood Cre	87.30	44	P	P	16 45 30.1	+1.3
	baz=228						
AFDM	Forest Hills D	87.31	41	*e*P	P	16 45 28.9	+0.3
	comp=Z,49nm,1.3s						
HEC	Hector,Ludlow	87.31	47	P	P	16 45 30.1	+1.3
	baz=229,SNR=26						
GSC	Goldstone, Bar	87.33	46	*e*P	P	16 45 29.9	+1.1
	comp=Z,50nm,1.0s						
GSC	Goldstone, Bar	87.33	46	*e*P	P	16 45 30.5	+1.6
GSC				pmax	pmax		
	comp=Z,50nm,1.0s						
GSC	Goldstone, Bar	87.33	46	P	P	16 45 30.4	+1.6
	baz=229,SNR=26						
TRTT	Trang	87.33	281	P	P	16 45 29.6	+0.3
USA0B	Ussuriysk Arra	87.36	327	*e*P	P	16 45 28.8	+0.1
	comp=Z,112nm,1.5s						
USRK	Ussuriysk Ar.	87.36	327	P	P	16 45 28.9	+0.3
	comp=Z,26nm,1.0s,baz=166,slow=2.6,SNR=20						
USRK				LR	LR	17 18 53.8	
	comp=Z,486nm,22.0s,baz=138,slow=32						
MPMC	Manual Prospec	87.40	45	P	P	16 45 30.8	+1.4
	baz=229,SNR=28						
ORV	Oroville	87.43	40	*e*P	P	16 45 29.5	+0.3
	comp=Z,55nm,1.5s						
ORV	Oroville	87.43	40	*e*P	P	16 45 30.6	+1.5
ORV				pmax	pmax		
	comp=Z,55nm,1.5s						
MDPB	Devils Postpil	87.50	43	*e*P	P	16 45 30.6	+0.7
	comp=Z,46nm,1.3s						
WDC	Whiskeytown Da	87.57	39	*e*P	P	16 45 30.5	+0.7
	comp=Z,62nm,1.4s						
WDC	Whiskeytown Da	87.57	39	*e*P	P	16 45 31.0	+1.2
WDC				pmax	pmax		
	comp=Z,62nm,1.4s						
TIN	Tinemaha, Big	87.62	44	P	P	16 45 31.4	+1.1
	baz=228,SNR=8.8						
IRM	Iron Mountain	87.63	48	P	P	16 45 32.4	+2.1
	baz=230,SNR=51						
MLAC	Mammoth, Mammo	87.64	43	P	P	16 45 32.0	+1.5
	baz=228						
GMRC	Granite Mounta	87.71	47	P	P	16 45 32.4	+1.7
	baz=230,SNR=30						
N02D	Trinity Center	87.76	39	P	P	16 45 32.5	+1.8
	baz=225,SNR=15						
214A	Organ Pipe Nat	87.76	51	P	P	16 45 32.7	+1.8
	baz=231						
Y12C	Blythe	87.77	48	*e*P	P	16 45 31.8	+0.9
	comp=Z,79nm,1.4s						
Y12C	Blythe	87.77	48	P	P	16 45 32.8	+1.9
	baz=230						

O03E	Paynes Creek	87.78	40	P	P	16 45 31.6	+0.7
	baz=226,SNR=16						
RUBR	Rubicon Trail	87.84	41	eP	P	16 45 31.5	+0.1
	comp=Z,28nm,0.7s						
WAKR	Walker	87.88	42	eP	P	16 45 32.4	+0.9
	comp=Z,125nm,1.5s						
TUQ	Turquoise Moun	87.96	46	P	P	16 45 33.7	+1.8
	baz=230,SNR=23						
M02C	Callahan	87.98	38	P	P	16 45 33.6	+1.8
	baz=225,SNR=19						
SHOC	Shoshone, Teco	88.04	46	P	P	16 45 33.5	+1.3
	baz=229						
FURC	Furnace Creek,	88.05	45	P	P	16 45 33.5	+1.4
	baz=229,SNR=9.4						
GRAC	Grapevine Rang	88.09	44	P	P	16 45 34.1	+1.6
	baz=229,SNR=19						
L02E	Cave Junction	88.12	37	P	P	16 45 34.0	+1.6
	baz=224						
GO04	Tololo Observa	88.14	124	eP	P	16 45 33.5	+0.2
	comp=Z,27nm,0.8s						
PNTR	Pine Nut	88.18	42	eP	P	16 45 33.8	+0.7
	comp=Z,39nm,0.9s						
LDFC	Landfair	88.24	47	eP	P	16 45 35.0	+1.8
	comp=Z,135nm,1.1s						
CHGN	Chignik	88.24	11	eP	P	16 45 32.6	+0.1
	comp=Z,128nm,1.1s						
BEKR	Beckworth	88.28	41	eP	P	16 45 33.3	-0.1
	comp=Z,22nm,1.1s						
TYV	Tymovskoe	88.29	336	eP	P	16 45 33.5	+0.6
TYV				e		16 56 12.5	
TYV				pmax	pmax		
	comp=Z,29nm,1.2s						
TYV				pmax	pmax		
	comp=Z,700nm,5.6s						
VCNR	Virginia City	88.29	41	eP	P	16 45 34.0	+0.5
	comp=Z,18nm,0.6s						
YBH	Yreka Blue Hor	88.29	38	eP	P	16 45 33.5	+0.2
	comp=Z,16nm,0.8s						
YBH	Yreka Blue Hor	88.29	38	eP	P	16 45 34.9	+1.6
YBH				pmax	pmax		
	comp=Z,17nm,0.9s						
YBH	Yreka Blue Hor	88.29	38	LR	LR	17 16 12.0	
	comp=Z,433nm,21.5s,baz=234,slow=30						
YERR	Yerington	88.32	42	eP	P	16 45 34.3	+0.7
	comp=Z,37nm,1.1s						
NEE2	Needles Airpor	88.35	47	P	P	16 45 35.6	+2.0
	baz=230						
PDMCI	Parker Dam,Lak	88.36	48	P	P	16 45 35.7	+2.0
	baz=231,SNR=21						
WHN	Wuhan	88.47	307	⇑P	P	16 45 32.5	-1.7
K02D	Willamette Mer	88.48	37	P	P	16 45 35.6	+1.5
	baz=224						
NV01	Mina Array Sit	88.49	43	eP	P	16 45 34.8	+0.3
NVAR	Mina Array Bea	88.49	43	P	P	16 45 35.8	+1.3
	comp=Z,31nm,0.9s,baz=222,slow=8.2,SNR=98						
NVAR				PKKPbc	PKKPbc	17 03 18.1	+0.7
	comp=Z,1.2nm,0.6s,baz=41,slow=3.8,SNR=7.1						
NVAR				PKPPKP	P'P'df	17 11 25.0	+3.4
	comp=Z,1.3nm,0.7s,baz=85,slow=6.4,SNR=7.1						
NVAR				LR	LR	17 21 45.1	
	comp=Z,414nm,18.2s,baz=219,slow=33						
RYN	Ryan	88.49	42	eP	P	16 45 35.2	+0.8
	comp=Z,44nm,1.5s						
SKNT	Sakolnakorn	88.58	291	P	P	16 45 35.7	+0.6
NV11	Mina Array Sit	88.58	43	eP	P	16 45 35.7	+0.9
	comp=Z,2.6nm,1.1s						
SRAK	Srakaew	88.58	287	P	P	16 45 34.6	-0.6
J01E	Myrtle Point	88.67	36	P	P	16 45 36.6	+1.7
	baz=224						
PAHR	Pah Rah Range	88.72	41	eP	P	16 45 36.0	+0.6
	comp=Z,22nm,1.0s						
TPNV	Topopah Spring	88.74	45	eP	P	16 45 36.5	+0.8
	comp=Z,107nm,1.8s						
TPNV	Topopah Spring	88.74	45	eP	P	16 45 37.2	+1.6
TPNV				pmax	pmax		
	comp=Z,110nm,1.7s						
TPNV	Topopah Spring	88.74	45	P	P	16 45 37.4	+1.8
	baz=229,SNR=24						
HUMO	Hull Mountain	88.78	37	eP	P	16 45 36.6	+1.1
	comp=Z,84nm,1.5s						
M04C	Macdoel	88.79	38	P	P	16 45 37.1	+1.4
	baz=226,SNR=10						
MDJ	Mudanjiang	88.82	326	P	P	16 45 38.3	+2.7
MDJ				pmax	pmax		
	comp=Z,28nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,630nm,4.1s						
MDJ	Mudanjiang	88.82	326	eP	P	16 45 35.0	-0.6
	comp=Z,21nm,0.8s						
L04D	Klamath Falls	88.85	38	P	P	16 45 36.9	+0.9
	baz=225,SNR=11						
Y14A	Wickenburg	88.87	49	eP	P	16 45 37.6	+1.4
	comp=Z,60nm,1.1s						
LCO	Las Campanas	88.87	123	eP	P	16 45 37.0	+0.2
	comp=Z,54nm,1.3s						
LCO	Las Campanas	88.87	123	eP	P	16 45 37.8	+1.0
LCO				pmax	pmax		
	comp=Z,54nm,1.3s						
PATY	Pattaya	88.99	286	P	P	16 45 40.3	+3.2
KVN	Kaiserville	89.02	42	eP	P	16 45 37.6	+0.7
	comp=Z,24nm,0.9s						
KVN	Kaiserville	89.02	42	eP	P	16 45 38.0	+1.1
KVN				pmax	pmax		
	comp=Z,24nm,0.9s						
W13A	Hualapai Mount	89.03	48	eP	P	16 45 38.2	+1.1
	comp=Z,34nm,1.0s						
DL2	Dalian	89.11	317	⇑P	P	16 45 37.3	+0.2
DL2				sP	sP	16 46 07.0	+15
DL2				S	S	16 56 20.3	-2.9
DL2				pmax	pmax		
	comp=Z,50nm,1.3s						
DL2				pmax	pmax		
	comp=Z,430nm,4.4s						
DL2				LR	LR		
	comp=Z,430nm,23.6s						
DL2				LR	LR		
	comp=Z,460nm,18.9s						
DL2				LR	LR		
	comp=Z,680nm,26.8s						
SHPR	Sheep Range	89.12	46	eP	P	16 45 38.9	+1.5
	comp=Z,66nm,1.5s						
TUC	Tucson	89.34	51	eP	P	16 45 40.2	+1.8
	comp=Z,102nm,1.4s						
TUC	Tucson	89.34	51	eP	P	16 45 40.8	+2.4
TUC				pmax	pmax		
	comp=Z,100nm,1.4s						
TUC	Tucson	89.34	51	P	P	16 45 40.7	+2.2
	baz=232						
I03D	Drain, OR	89.35	36	P	P	16 45 39.5	+1.4
	baz=225,SNR=9.8						
I02D	Swisshome	89.39	36	P	P	16 45 40.1	+1.8
	baz=224						
K04D	Chiloquin, OR	89.42	38	P	P	16 45 40.0	+1.3
	baz=226						
CHAI	Chaiyaphum	89.62	289	P	P	16 45 40.6	+0.6
J04D	Umpqua Nationa	89.67	37	P	P	16 45 40.9	+1.1
	baz=226,SNR=14						
MOD	Modoc Plateau	89.70	39	eP	P	16 45 40.6	+0.6
	comp=Z,30nm,1.0s						
HPIG		89.79	58	eP	P	16 45 41.5	+0.7
	comp=Z,42nm,1.5s						
319A	Douglas	89.80	53	eP	P	16 45 42.1	+1.5
	comp=Z,52nm,1.1s						
I04A	Tendick Farm,	89.90	37	P	P	16 45 42.0	+1.3
	baz=225,SNR=21						
PHET	Kaeng Krachan	90.01	285	P	P	16 45 44.5	+2.7
OHAK	Old Harbor	90.03	13	eP	P	16 45 41.8	+0.9
	comp=Z,307nm,1.8s						
R11A	Troy Canyon, C	90.05	44	eP	P	16 45 42.2	+0.4
	comp=Z,36nm,1.9s						
R11A	Troy Canyon, C	90.05	44	P	P	16 45 42.5	+0.7
	baz=230,SNR=9.0						
TIA	Tai'an	90.12	313	P	P	16 45 42.3	+0.4
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
J05D	Fort Rock, OR	90.16	38	P	P	16 45 43.1	+1.0
	baz=226,SNR=25						
X16A	Lo Mia Camp, P	90.18	49	eP	P	16 45 43.6	+1.1
	comp=Z,74nm,1.3s						
H04D	Lebanon	90.25	36	P	P	16 45 43.8	+1.5
	baz=225,SNR=8.3						
CN2	Changchun	90.33	323	eP	P	16 45 41.8	-0.9
CN2				esP	sP	16 46 13.0	+16
CN2				eS	S	16 56 28.3	-6.0
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,19.0s						
G03D	McMinnville, O	90.47	35	P	P	16 45 44.8	+1.5
	baz=225						
GRNR	Gornyy	90.51	333	eP	P	16 45 44.4	+1.1
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
LCMT	Little Creek M	90.63	46	eP	P	16 45 45.5	+1.1
	comp=Z,17nm,1.0s						
H04A	Detroit Lake	90.64	36	eP	P	16 45 44.7	+0.5
	comp=Z,60nm,1.0s						
PINE	Pine Mountain	90.66	37	eP	P	16 45 45.7	+1.2
	comp=Z,86nm,1.1s						
KDAK	Kodiak Island	90.70	13	P	P	16 45 44.3	+0.3
	comp=Z,32nm,1.1s,baz=224,slow=2.7,SNR=3.2						
KDAK				LR	LR	17 19 56.6	
	comp=Z,259nm,20.8s,baz=173,slow=31						
PBKT	Sadao Pong	90.81	289	P	P	16 45 47.2	+1.7
I05D	Terrebonne, OR	90.83	37	P	P	16 45 46.2	+1.1
	baz=226,SNR=20						
NKL	Nikolayevsk	90.87	337	eP	P	16 45 45.0	+0.1
NKL				pmax	pmax		
	comp=Z,30nm,1.0s						
NKL				MLR	MLR		
	comp=Z,1µm,16.0s						
CCUT	Cedar City	90.90	46	eP	P	16 45 47.1	+1.3
	comp=Z,19nm,1.1s						
WUAZ	Wupatki	90.90	49	eP	P	16 45 47.1	+1.4
	comp=Z,50nm,1.1s						
WUAZ	Wupatki	90.90	49	P	P	16 45 47.7	+1.9
	baz=232						
KNB	Kanab	90.90	47	eP	P	16 45 47.3	+1.6
	comp=Z,33nm,1.0s						
KNB	Kanab	90.90	47	eP	P	16 45 47.8	+2.0
KNB				pmax	pmax		
	comp=Z,33nm,1.0s						
WVOR	Wild Horse Val	90.98	40	eP	P	16 45 46.6	+0.8
	comp=Z,58nm,1.5s						
WVOR	Wild Horse Val	90.98	40	eP	P	16 45 47.2	+1.3
WVOR				pmax	pmax		
	comp=Z,58nm,1.5s						
SZCU	Shurtz Canyon	91.09	46	eP	P	16 45 47.6	+0.9
	comp=Z,55nm,1.6s						
PSUT	Pine Spring	91.21	45	eP	P	16 45 48.3	+1.1
	comp=Z,16nm,0.7s						
F04D	Rainier, OR	91.21	35	P	P	16 45 48.2	+1.5
	baz=225						
KLR	Kul'dur	91.25	330	⇑eP	P	16 45 47.1	+0.3
KLR	Kul'dur	91.25	330	P	P	16 45 46.9	+0.1
	comp=Z,13nm,0.6s,baz=123,slow=3.2,SNR=31						
KLR				PKKPbc	PKKPbc	17 03 10.3	-0.3
	comp=Z,1.8nm,0.9s,baz=10,slow=4.6,SNR=4.7						
KLR				LR	LR	17 20 10.2	
	comp=Z,372nm,22.0s,baz=165,slow=31						
G05D	Wamic, OR	91.47	36	P	P	16 45 49.3	+1.3
	baz=226						
PKCU	Pink Cliffs	91.48	47	eP	P	16 45 49.4	+0.8
	comp=Z,31nm,1.0s						
121A	Cookes Peak, D	91.51	53	P	P	16 45 50.5	+1.9
	baz=234						
UTHA	Uthaitani	91.53	287	P	P	16 45 51.4	+2.5
I07A	Izee	91.62	38	eP	P	16 45 49.6	+0.8
	comp=Z,32nm,1.0s						
GYA	Guiyang	91.64	300	⇑iP	P	16 45 49.3	0.0
GYA				pP	sP	16 46 13.3	+9.0
GYA				SKS	SKSac	16 56 13.8	-5.7
GYA				S	SKKSac	16 56 40.6	+4.9
GYA				sS	sS	16 57 20.4	+15
GYA				SS	SS	17 02 54.0	-1.3
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,180nm,6.0s						
GYA				LR	LR		
	comp=Z,850nm,18.0s						
GYA				LR	LR		
	comp=Z,810nm,18.4s						
GYA				LR	LR		
	comp=Z,930nm,18.8s						
J08A	Circle Bar Ran	91.68	39	eP	P	16 45 49.5	+0.4
	comp=Z,52nm,1.4s						
ENH	Enshi	91.71	304	eP	P	16 45 49.5	0.0
	comp=Z,280nm,1.8s						
W18A	Petrified Fore	91.72	50	P	P	16 45 51.2	+1.6
	baz=233						
NLWA	Neilton Lookou	91.73	33	eP	P	16 45 50.0	+0.9
	comp=Z,22nm,0.9s						
UTTA	Uttaradit	91.76	289	P	P	16 45 53.5	+3.6
E04D	Cinebar	91.77	35	P	P	16 45 50.9	+1.7
	baz=225						
ELK	Elko	91.79	43	eP	P	16 45 50.2	+0.3
	comp=Z,21nm,1.2s						
ELK	Elko	91.79	43	eP	P	16 45 50.9	+1.0
ELK				pmax	pmax		
	comp=Z,21nm,1.2s						
F05D	White Salmon	91.84	36	P	P	16 45 50.9	+1.2
	baz=226						
GO02	Mina Guanaco	91.88	121	eP	P	16 45 51.4	+0.5
	comp=Z,24nm,0.9s						
MTPU	Mount Pierson	91.93	46	eP	P	16 45 51.3	+0.6
	comp=Z,34nm,1.1s						
D04E	Lakebay	92.10	34	P	P	16 45 52.8	+2.0
	baz=225						
D03D	Eldon	92.20	34	P	P	16 45 52.8	+1.6
	baz=225						
MSU	Marysvale	92.23	46	eP	P	16 45 53.1	+1.2
MSU	Marysvale	92.23	46	eP	P	16 45 54.0	+2.1
LON	Longmire	92.27	35	eP	P	16 45 51.8	+0.1
	comp=Z,12nm,1.0s						
LON	Longmire	92.27	35	eP	P	16 45 52.4	+0.7
LON				pmax	pmax		
	comp=Z,12nm,1.0s						
UMPA	Umpang Tak	92.34	287	P	P	16 45 55.7	+3.0
D05A	Enumclaw	92.49	35	eP	P	16 45 53.8	+1.2
	comp=Z,60nm,1.0s						
TX31	Lajitas Ar. Si	92.59	57	eP	P	16 45 54.2	+0.5
TXAR	Lajitas Array	92.59	57	P	P	16 45 55.0	+1.3
	comp=Z,6.3nm,1.0s,baz=210,slow=7.2,SNR=18						
TXAR				PP	PP	16 49 37.0	+1.1
	comp=Z,0.7nm,0.9s,baz=216,slow=4.5,SNR=3.6						
TXAR				PKKPbc	PKKPbc	17 03 06.5	+0.2
	comp=Z,1.4nm,1.0s,baz=116,slow=2.9,SNR=4.7						
TXAR				LR	LR	17 18 30.9	
	comp=Z,315nm,21.9s,baz=0.0,slow=30						
F07A	Phinny Hill Vi	92.63	36	eP	P	16 45 54.0	+0.7
	comp=Z,84nm,1.9s						
MNTX	Cornudas Mount	92.69	55	eP	P	16 45 54.4	+0.4
	comp=Z,6.6nm,0.7s						
MNTX	Cornudas Mount	92.69	55	P	P	16 45 54.9	+1.0
	baz=235						
G08A	Pilot Rock	92.72	37	eP	P	16 45 54.5	+0.7
	comp=Z,36nm,1.0s						
BRLK	Bradley Lake	92.87	13	eP	P	16 45 54.4	+0.3
	comp=Z,230nm,1.8s						
DUG	Dugway, Tooele	92.88	44	eP	P	16 45 54.6	-0.2
	comp=Z,7.9nm,1.2s						
DUG	Dugway, Tooele	92.88	44	eP	P	16 45 56.3	+1.5
DUG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DUG	Dugway, Tooele	92.88	44	P	P	16 45 55.6	+0.8
	baz=232						
LENM	Lemitar	93.01	52	eP	P	16 45 56.1	+0.5
LAZ	Ladron	93.03	51	eP	P	16 45 55.7	0.0
BJT	Baijiatuau	93.07	315	eP	P	16 45 55.2	-0.3
	comp=Z,26nm,1.0s						
BJT	Baijiatuau	93.07	315	eP	P	16 45 55.2	-0.3
BJT				pmax	pmax		
	comp=Z,26nm,1.0s						
BJI	Beijing	93.08	315	⇑P	P	16 45 55.5	0.0
BJI				S	S	16 56 59.9	+0.6
BJI				pmax	pmax		
	comp=Z,18nm,1.3s						
BJI				LR	LR		
	comp=Z,300nm,26.5s						
BJI				LR	LR		
	comp=Z,320nm,28.4s						
BJI				LR	LR		
	comp=Z,680nm,30.3s						
Q16A	Castle Valley	93.10	46	eP	P	16 45 55.8	-0.1
	comp=Z,47nm,1.7s						
E07A	Sunnyside	93.12	36	eP	P	16 45 55.9	+0.3
	comp=Z,39nm,1.2s						
HAWA	Hanford	93.17	36	eP	P	16 45 55.4	-0.3
	comp=Z,26nm,1.1s						
NLU	North Lily Min	93.18	45	eP	P	16 45 55.1	-1.1
	comp=Z,9.1nm,1.2s						
LTY	Liberty	93.19	35	eP	P	16 45 56.2	+0.3
	comp=Z,13nm,1.0s						
B05A	Bryant	93.19	34	P	P	16 45 56.9	+1.1
	baz=226						
BGU	Big Grassy Mou	93.20	43	eP	P	16 45 56.4	+0.1
	comp=Z,24nm,1.5s						
A04D	Lummi Island	93.22	33	P	P	16 45 57.3	+1.4
	baz=225						
BNM	Barren Site	93.23	52	eP	P	16 45 56.8	+0.1
BMO	Blue Mountains	93.30	38	eP	P	16 45 56.8	+0.2
	comp=Z,25nm,1.5s						
BMO	Blue Mountains	93.30	38	eP	P	16 45 57.2	+0.6
BMO				pmax	pmax		
	comp=Z,25nm,1.5s						
TMUT	Trail Mountain	93.30	46	eP	P	16 45 58.0	+1.0
	comp=Z,15nm,0.8s						
LNIG	Linares	93.33	63	eP	P	16 45 57.1	0.0
	comp=Z,33nm,1.3s						
CM01	Chiang Mai Arr	93.40	289	eP	P	16 45 56.2	-1.3
CM31	Chiang Mai Arr	93.43	289	P	P	16 45 57.0	-0.7
	SNR=7.2						
CMAR	Chiang Mai Arr	93.43	289	P	P	16 45 56.8	-0.9
	comp=Z,7.7nm,1.1s,baz=142,slow=2.6,SNR=15						
CMAR				PP	PP	16 49 44.5	+2.1
	comp=Z,5.5nm,1.0s,baz=135,slow=5.4,SNR=8.2						
CMAR				PKKPbc	PKKPbc	17 03 05.2	+1.7
	comp=Z,1.3nm,0.9s,baz=284,slow=4.4,SNR=8.6						
CMAR				LR	LR	17 28 47.4	
	comp=Z,212nm,21.0s,baz=166,slow=36						
E08A	Dider Farm, El	93.48	36	eP	P	16 45 56.9	-0.3
	comp=Z,64nm,1.9s						
C06D	Leavenworth	93.53	34	P	P	16 45 58.3	+0.9
	baz=226						
MA2	Magadan	93.55	345	eP	P	16 45 56.0	-1.2
	comp=Z,15nm,1.0s						
MA2	Magadan	93.55	345	⇑eP	P	16 45 55.7	-1.5
MA2				pmax	pmax		
	comp=Z,16nm,1.4s						
MA2	Magadan	93.55	345	P	P	16 45 55.1	-2.1
	comp=Z,3.3nm,0.7s,baz=142,slow=19,SNR=3.5						
CMMT	Chiang Mai	93.61	290	P	P	16 45 59.7	+1.2
SRU	San Rafael Swe	93.61	46	eP	P	16 45 58.4	+0.1
	comp=Z,64nm,1.7s						
SRU	San Rafael Swe	93.61	46	eP	P	16 45 59.9	+1.6
SRU				pmax	pmax		
	comp=Z,64nm,1.7s						
CHTO	Chiang Mai	93.62	290	eP	P	16 45 57.6	-0.9
	comp=Z,12nm,1.3s						
CHTO	Chiang Mai	93.62	290	eP	P	16 45 59.4	+0.9
CHTO				pmax	pmax		
	comp=Z,12nm,1.2s						
CHTO	Chiang Mai	93.62	290	P	P	16 45 58.3	-0.2
	SNR=5.6						
CHTO	Chiang Mai	93.62	290	P	P	16 45 59.8	+1.3
	comp=Z,25nm,0.9s						
P17A	Butcher Ranch,	93.70	46	eP	P	16 45 59.0	+0.3
	comp=Z,52nm,1.8s						
MVCO	Mesa Verde	93.77	49	P	P	16 45 59.9	+0.8
	baz=234						
SPUT	South Promonto	93.79	43	eP	P	16 45 59.4	+0.4
	comp=Z,47nm,1.4s						
ANMO	Albuquerque	93.80	51	eP	P	16 45 59.2	0.0
	comp=Z,10.0nm,1.0s						
ANMO	Albuquerque	93.80	51	eP	P	16 46 00.1	+0.8
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ANMO	Albuquerque	93.80	51	P	P	16 46 00.4	+1.1
	baz=235						
LVC	Limon Verde	93.86	119	eP	P	16 45 59.5	-0.6
	comp=Z,34nm,1.3s						
LVC	Limon Verde	93.86	119	eP	P	16 46 04.0	+3.9
LVC				pmax	pmax		
	comp=Z,34nm,1.3s						
HVU	Hansel Valley	93.89	43	eP	P	16 45 59.9	+0.5
	comp=Z,34nm,1.1s						
HVU	Hansel Valley	93.89	43	eP	P	16 46 00.6	+1.2
HVU				pmax	pmax		
	comp=Z,34nm,1.0s						
KMI	Kunming	93.89	297	P	P	16 46 00.6	+0.7
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
D08A	Wollman Farm,	93.93	36	eP	P	16 45 59.7	+0.4
	comp=Z,19nm,0.9s						
JLU	Jordanelle	93.95	44	eP	P	16 45 59.9	0.0
	comp=Z,36nm,1.6s						
E09A	Wood Farm, Sta	93.96	37	eP	P	16 45 59.2	-0.2
	comp=Z,26nm,1.2s						
HLID	Hailey	94.06	41	eP	P	16 46 00.7	+0.5
	comp=Z,18nm,1.0s						
HLID	Hailey	94.06	41	P	P	16 46 01.4	+1.2
	baz=231						
F10A	Beach Ranch, E	94.08	38	eP	P	16 46 00.1	0.0
	comp=Z,25nm,0.8s						
XAN	Xi'an	94.23	307	P	P	16 46 02.6	+1.5
XAN				pP	sP	16 46 21.1	+5.0
XAN				S	S	16 57 05.6	-4.3
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
XAN				pmax	pmax		
	comp=Z,160nm,5.4s						
XAN				LR	LR		
	comp=Z,290nm,19.5s						
XAN				LR	LR		
	comp=Z,310nm,19.6s						
XAN	Xi'an	94.23	307	eP	P	16 46 02.2	+1.2
	comp=Z,16nm,1.2s						
XAN	Xi'an	94.23	307	eP	P	16 46 02.3	+1.2
XAN				pmax	pmax		
	comp=Z,16nm,1.2s						
GAMB	Gambell	94.27	3	eP	P	16 46 01.0	+0.6
	comp=Z,110nm,1.8s						
TCUT	Toone Canyon	94.29	44	eP	P	16 46 01.5	+0.1
	comp=Z,95nm,1.6s						
RC01	Rabbit Creek A	94.32	13	eP	P	16 46 00.5	-0.2
	comp=Z,149nm,1.8s						
SUA	Susitna One	94.47	13	eP	P	16 46 01.1	-0.4
	comp=Z,20nm,0.8s						
B08A	Colville Reser	94.60	35	eP	P	16 46 01.9	-0.4
	comp=Z,9.2nm,0.8s						
EYAK	Cordova Ski Ar	94.68	15	eP	P	16 46 02.6	+0.3
	comp=Z,222nm,1.8s						
C09A	Chrisman Ranch	94.75	36	eP	P	16 46 02.8	-0.3
	comp=Z,9.1nm,0.9s						
PMR	Palmer	94.90	13	eP	P	16 46 03.4	+0.1
	comp=Z,48nm,1.6s						
PMR	Palmer	94.90	13	eP	P	16 46 04.4	+1.1
PMR				pmax	pmax		
	comp=Z,48nm,1.6s						
PB11	IPOC Station P	94.92	116	eP	P	16 46 04.8	+0.1
	comp=Z,38nm,1.3s						
S22A	4UR Ranch, Cre	95.16	49	eP	P	16 46 05.9	+0.4
	comp=Z,16nm,1.4s						
S22A	4UR Ranch, Cre	95.16	49	P	P	16 46 06.7	+1.1
	baz=235						
DIV	Divide	95.19	15	eP	P	16 46 04.9	+0.1
	comp=Z,34nm,1.4s						
833A	Chaparral WMA,	95.20	60	P	P	16 46 06.1	+0.6
	baz=238						
ANM	Nome	95.45	5	eP	P	16 46 05.9	+0.1
	comp=Z,6.6nm,1.1s						
ANM	Nome	95.45	5	eP	P	16 46 06.7	+0.9
ANM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AHID	Auburn Hatcher	95.47	43	eP	P	16 46 07.2	+0.5
	comp=Z,102nm,1.9s						
SCM	Sheep Creek Mo	95.49	14	eP	P	16 46 06.6	+0.5
	comp=Z,134nm,1.8s						
SCM	Sheep Creek Mo	95.49	14	eP	P	16 46 08.9	+2.8
SCM				pmax	pmax		
	comp=Z,130nm,1.8s						
NEW	Newport	95.64	36	eP	P	16 46 07.4	+0.3
	comp=Z,6.6nm,1.0s						
NEW	Newport	95.64	36	eP	P	16 46 09.4	+2.3
NEW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NEW	Newport	95.64	36	P	P	16 46 08.8	+1.6
	baz=229						
NEW	Newport	95.64	36	P	P	16 46 07.2	+0.1
	comp=Z,3.7nm,0.8s,baz=235,slow=4.9,SNR=6.0						
O20A	White River Ci	95.64	46	eP	P	16 46 07.5	-0.1
	comp=Z,46nm,1.8s						
O20A	White River Ci	95.64	46	P	P	16 46 08.2	+0.6
	baz=234						

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MCMT  McKenzie Canyo  95.73  40  eP       P        16 46 07.8 -0.1
MSTX  Muleshoe        95.78  54  eP       P        16 46 08.4 +0.1
      comp=Z,14nm,1.0s
MSTX  Muleshoe        95.78  54   P       P        16 46 08.2  0.0
      baz=237
SMCO  Snowmass        95.89  48  eP       P        16 46 09.1 +0.2
      comp=Z,14nm,1.4s
REDW  Red Top Meadow  95.98  43  eP       P        16 46 09.6 +0.6
      comp=Z,50nm,1.6s
TPAW  Teton Pass      96.00  42  eP       P        16 46 09.0 -0.1
      comp=Z,11nm,1.1s
SDCO  Great Sand Dun  96.03  50  eP       P        16 46 09.1 -0.4
      comp=Z,6.5nm,1.3s
SDCO  Great Sand Dun  96.03  50   P       P        16 46 10.1 +0.6
      baz=236
JCT   Junction City   96.03  58   P       P        16 46 09.2 -0.1
      baz=238
CAST  Castle Rocks    96.03  11  eP       P        16 46 07.5 -1.0
      comp=Z,49nm,1.7s
FXWY  Fox Creek       96.04  42  eP       P        16 46 09.9 +0.6
      comp=Z,8.4nm,0.9s
SNOW  Snow King Moun  96.09  43  eP       P        16 46 08.4 -1.2
      comp=Z,13nm,0.8s
CD2   Chengdu         96.18 302   P       P        16 46 10.8 +0.7
CD2                               pP      sP       16 46 33.5 +8.4
CD2                               sP      pwP      16 46 42.8  +19
CD2                               S       S        16 57 23.3 -3.7
CD2                               SS      SS       17 03 59.0 -1.0
CD2                               pmax    pmax
      comp=Z,20nm,0.6s
CD2                               pmax    pmax
      comp=Z,140nm,5.2s
CD2                               LR      LR
      comp=Z,610nm,17.6s
CD2                               LR      LR
      comp=Z,580nm,14.7s
DLMT  Dillon          96.20  40  eP       P        16 46 09.8 -0.1
      comp=Z,9.2nm,0.9s
SEY   Seymchan        96.24 347⇓iP       P        16 46 09.5 +0.1
SEY   Seymchan        96.24 347   P       P        16 46 08.8 -0.5
      comp=Z,7.3nm,0.8s,baz=164,slow=7.0,SNR=16
IMW   Indian Meadow   96.25  42  eP       P        16 46 10.4 +0.1
      comp=Z,19nm,1.4s
MOOW  Moose Ponds     96.27  42  eP       P        16 46 10.6 +0.3
      comp=Z,24nm,1.8s
LOHW  Long Hollow     96.27  42  eP       P        16 46 10.3 -0.1
      comp=Z,9.9nm,1.3s
TRF   Thorofare Moun  96.38  12  eP       P        16 46 10.2 -0.1
      comp=Z,15nm,0.8s
BW06  Boulder Array   96.38  44  eP       P        16 46 09.6 -1.3
      comp=Z,5.3nm,1.0s
BW06  Boulder Array   96.38  44   P       P        16 46 11.0 +0.1
      baz=234
PD31  Pinedale Array  96.38  44  eP       P        16 46 10.0 -0.9
PDAR  Pinedale Array  96.38  44  eP       P        16 46 10.1 -0.8
PDAR                              PP      PP       16 50 05.2 -0.1
PDAR                              PKKPbc  PKKPbc   17 02 56.5 -0.4
PDAR  Pinedale Array  96.38  44   P       P        16 46 11.1 +0.2
      comp=Z,5.5nm,1.1s,baz=207,slow=2.5,SNR=14
PDAR                              PP      PP       16 50 05.2 -0.1
      comp=Z,1.5nm,0.9s,baz=237,slow=4.2,SNR=4.3
PDAR                              PKKPbc  PKKPbc   17 02 56.5 -0.4
      comp=Z,2.8nm,0.6s,baz=71,slow=3.8,SNR=20
PDAR                              LR      LR       17 22 00.2
      comp=Z,503nm,21.9s,baz=254,slow=31
HHC   Hu-ho-hao-te    96.38 314  eP       P        16 46 13.3 +2.5
HHC                               pmax    pmax
      comp=Z,6.0nm,1.0s
HHC                               pmax    pmax
      comp=Z,230nm,6.9s
HHC                               LR      LR
      comp=Z,220nm,15.6s
HHC                               LR      LR
      comp=Z,260nm,13.0s
HHC                               LR      LR
      comp=Z,880nm,21.6s
T25A  Trinidad        96.41  51  eP       P        16 46 10.4 -0.8
      comp=Z,6.6nm,0.8s
T25A  Trinidad        96.41  51   P       P        16 46 11.5 +0.3
      baz=236
ZEA   Zeya            96.46 331  eP       P        16 46 09.8 -0.8
ZEA                               pmax    pmax
      comp=Z,23nm,1.0s
ZEA                               MLR     MLR
      comp=N,700nm,16.0s
ZEA                               MLR     MLR
      comp=Z,600nm,16.0s
FLWY  Flagg Ranch     96.50  42  eP       P        16 46 11.3 -0.1
      comp=Z,32nm,1.4s
QLMT  Earthquake Lak  96.53  41  eP       P        16 46 12.7 +1.2
LRM   Limekiln Ridge  96.56  40  eP       P        16 46 12.8 +1.1
DHY   Denali Highway  96.60  14  eP       P        16 46 11.6 +0.4
      comp=Z,37nm,1.5s
RND   Reindeer        96.60  13  eP       P        16 46 10.9 -0.2
      comp=Z,20nm,0.8s
RND   Reindeer        96.60  13  eP       P        16 46 11.6 +0.4
RND                               pmax    pmax
      comp=Z,20nm,0.8s
YHB   Horse Butte     96.61  41  eP       P        16 46 11.8 -0.1
      comp=Z,42nm,2.0s
H17A  Grant Village   96.75  42   P       P        16 46 13.8 +1.3
      baz=233
YHH   Holmes Hill     96.83  41  eP       P        16 46 13.9 +0.9
      comp=Z,16nm,1.2s
BOZ   Bozeman (W)     96.88  40  eP       P        16 46 13.8 +0.8
      comp=Z,33nm,1.5s
BOZ   Bozeman (W)     96.88  40  eP       P        16 46 14.1 +1.1
BOZ                               pmax    pmax
      comp=Z,33nm,1.5s
BOZ   Bozeman (W)     96.88  40   P       P        16 46 13.9 +0.8
      baz=233
YNR   Norris Junctio  96.89  42  eP       P        16 46 14.3 +1.1
      comp=Z,34nm,1.9s
HIA   Hailar          96.91 324⇓eP       P        16 46 11.5 -1.4
HIA                               pmax    pmax
      comp=Z,7.0nm,1.3s
RWWY  Rawlins         97.17  45  eP       P        16 46 13.4 -1.1
      comp=Z,29nm,1.2s
RIDG  Independ'e Rid  97.71  14  eP       Pdif     16 46 16.5 +0.3
      comp=Z,14nm,1.1s
WRH   Wood River Hil  97.72  13  eP       P        16 46 15.7 -0.3
      comp=Z,27nm,1.2s
MLY   Manley          97.75  11  eP       P        16 46 16.2 -0.1
      comp=Z,20nm,1.6s
WALA  Waterton Lakes  97.78  37  eP       Pdif     16 46 17.2 +0.2
      comp=Z,31nm,1.8s
HDA   Harding Lake    97.88  13  eP       P        16 46 16.1 -0.7
      comp=Z,73nm,2.0s
HDA   Harding Lake    97.88  13   Pdiff   P        16 46 16.8  0.0
      baz=207
LPAZ  La Paz          98.09 114  eP       P        16 46 17.3 -2.5
      comp=Z,3.9nm,0.8s
LPAZ  La Paz          98.09 114  eP       Pdif     16 46 21.5 +1.7
LPAZ                              pmax    pmax
      comp=Z,4.0nm,0.8s
LPAZ  La Paz          98.09 114   P       Pdif     16 46 20.9 +1.1
      comp=Z,3.0nm,0.7s,baz=202,slow=5.5,SNR=12
LPAZ                              LR      LR       17 22 05.8
      comp=Z,259nm,21.0s,baz=217,slow=30
SCRK  Sand Creek      98.10  14  eP       P        16 46 17.5 -0.5
      comp=Z,9.4nm,0.9s
TCOL  CIGO, UAF Yank  98.12  13   Pdiff   Pdif     16 46 18.0 +0.1
      baz=206
COLA  College         98.12  13  eP       P        16 46 17.4 -0.5
      comp=Z,57nm,1.7s
COLA  College         98.12  13  eP       Pdif     16 46 19.3 +1.4
COLA                              pmax    pmax
      comp=Z,57nm,1.7s
MDM   Murphy Dome     98.13  12  eP       P        16 46 17.1 -0.9
      comp=Z,52nm,1.6s
K22A  Casper          98.14  45  eP       P        16 46 18.2 -0.6
      comp=Z,148nm,1.5s
K22A  Casper          98.14  45   Pdiff   P        16 46 17.7 -1.1
      baz=236
IM3   Indian Mountai  98.16  10  eP       Pdif     16 46 18.4 +0.4
IL1   Eielson Array   98.22  13  eP       P        16 46 17.5 -0.9
ILAR  Eielson Array   98.22  13   P       P        16 46 17.8 -0.6
      comp=Z,2.6nm,0.8s,baz=223,slow=5.3,SNR=25
ILAR                              PKiKP   PKiKP    16 50 50.5 -0.2
      comp=Z,1.1nm,0.5s,baz=303,slow=2.8,SNR=14
ILAR                              PKKPbc  PKKPbc   17 02 52.5 +0.1
      comp=Z,1.3nm,0.9s,baz=24,slow=2.7,SNR=6.8
ILAR                              LR      LR       17 29 00.1
      comp=Z,144nm,19.0s,baz=201,slow=34
ILB   Eielson Array   98.22  13  eP       P        16 46 17.2 -1.1
POKR  Poker Plat Res  98.42  13   Pdiff   P        16 46 19.0 -0.2
      baz=206
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PLTB  Pedras Altas    98.59 135  eP       Pdif     16 46 21.8 +0.7
LZH   Lanzhou         98.84 307  eP       Pdif     16 46 24.4 +2.3
LZH                               pP      sP       16 46 46.8  +10
LZH                               sP      pwP      16 46 52.4  +16
LZH                               pmax    pmax
      comp=Z,18nm,1.5s
LZH                               pmax    pmax
      comp=Z,360nm,4.3s
LZH                               LR      LR
      comp=Z,760nm,18.1s
LZH                               LR      LR
      comp=Z,750nm,18.8s
LZH                               LR      LR
      comp=Z,1μm,19.3s
RDOG  Red Dog Mine    99.09   6  eP       Pdif     16 46 22.2  0.0
      comp=Z,6.3nm,0.6s
BILL  Bilibino        99.11 354⇓eP       Pdif     16 46 22.7 +0.4
BILL                              pmax    pmax
      comp=Z,12nm,2.0s
PRP   Porcupine Dome  99.15  13  eP       Pdif     16 46 22.0 -0.6
      comp=Z,16nm,1.4s
EGAK  Eagle           99.42  15  ePdif    Pdif     16 46 23.1 -0.6
      comp=Z,5.8nm,0.9s
CPSB  Cacapava Do Su  99.63 134  eP       Pdif     16 46 29.8 +4.0
CPUP  Villa Florida   99.86 128   PKKPbc  PKKPbc   17 02 45.0 -0.8
      comp=Z,2.7nm,0.7s,baz=29,slow=6.6,SNR=4.3
RSSD  Black Hills    100.46  45  ePdif    Pdif     16 46 29.4 +0.2
RSSD  Black Hills    100.46  45  eP       Pdif     16 46 29.4 +0.2
RSSD  Black Hills    100.46  45   Pdiff   Pdif     16 46 29.5 +0.2
      baz=237
TOLK  Toolik Lake Re 101.25  10   Pdiff   Pdif     16 46 33.0 +1.2
      baz=205
YAK   Yakutsk        101.48 338  eP       Pdif     16 46 32.7 -0.2
YAK                               pmax    pmax
      comp=Z,39nm,0.9s
YAK                               pmax    pmax
      comp=N,10.0nm,1.0s
YAK                               pmax    pmax
      comp=E,10.0nm,1.0s
EPYK  Eagle Plains   101.77  16   Pdiff   Pdif     16 46 34.9 +0.7
      baz=216
CNLB  Canela         101.99 135  eP       Pdif     16 46 37.1 +0.8
ITAB  Concordia      102.66 132  eP       Pdif     16 46 42.7 +3.5
GTA   Gaotai         103.27 308  eP       PKiKP    16 51 02.0 +1.1
GTA                               pP      PP       16 51 05.8 +8.2
GTA                               sP               16 51 08.3
GTA                               pmax    pmax
      comp=Z,3.0nm,0.7s
SONM  Songino Array  103.31 318   Pdiff   Pdif     16 46 40.4 -1.2
      comp=Z,0.4nm,0.5s,baz=95,slow=7.2,SNR=5.1
SONM                              PKiKP   PKiKP    16 51 00.5 -0.2
      comp=Z,1.3nm,0.9s,baz=98,slow=1.5,SNR=5.8
SONM                              PKKPbc  PKKPbc   17 02 37.4 +0.2
      comp=Z,1.9nm,1.0s,baz=262,slow=1.8,SNR=8.7
PALK  Pallekele      103.31 271   PP      PKiKP    16 50 57.6 -4.0
      comp=Z,5.1nm,0.8s,baz=114,slow=8.7,SNR=3.9
TER01 Tubaro-SC      103.60 135  eP       Pdif     16 46 43.5 +0.1
INK   Inuvik         104.07  16   Pdiff   Pdif     16 46 44.7 +0.4
      comp=Z,1.3nm,0.6s,baz=280,slow=6.1,SNR=3.5
PTGB  Pitanga        104.45 131  eP       Pdif     16 46 50.3 +2.9
AQDB  Aquidauana     104.83 125  eP       Pdif     16 46 51.3 +2.3
S41A  Jillco Farms,  105.34  55   PKiKP   PKiKP    16 51 04.6 +0.1
      baz=243
YKA   Yellowknife Ar 105.72  26   Pdiff   Pdif     16 46 52.6 +0.8
      comp=Z,1.1nm,1.1s,baz=238,slow=4.2,SNR=7.0
YKA                               PKiKP   PKiKP    16 51 04.4  0.0
      comp=Z,1.7nm,0.5s,baz=253,slow=1.6,SNR=25
YKA                               PKKPbc  PKKPbc   17 02 26.3 -3.7
      comp=Z,5.7nm,1.0s,baz=39,slow=3.4,SNR=20
YKA                               PKKPab  PKKPab   17 02 44.5 +1.9
      comp=Z,2.8nm,0.9s,baz=48,slow=4.2,SNR=7.6
YKA                               PKPPKP  P'P'df   17 10 52.7 +5.2
      comp=Z,0.6nm,0.8s,baz=47,slow=2.6,SNR=6.6
CCM   Cathedral Cave 105.91  55   PKiKP   PKiKP    16 51 05.8 +0.2
      baz=243
349A  Repton         105.92  63   PKiKP   PKiKP    16 51 05.0 -0.8
      baz=244
TIJ01 Guaruva-PR     105.99 133  eP       Pdif     16 46 57.2 +3.0
RAMN  Ramite         107.47 291  eP       PKiKP    16 51 08.0 -1.1
      comp=Z,12nm,0.6s
JIRN  Jiri           108.11 292  eP       PKiKP    16 51 07.9 -2.6
      comp=Z,14nm,0.6s
I39A  Houston        108.24  49   PKiKP   PKiKP    16 51 09.6 -0.1
      baz=245
ULM   Lac du Bonnet  108.31  42   PKKP    PKKPdf   17 02 35.4 -1.0
      comp=Z,6.1nm,0.9s,baz=73,slow=6.1,SNR=6.8
GUN   Gumba          108.47 292  eP       PKiKP    16 51 08.4 -2.7
      comp=Z,13nm,0.7s
PKI   Pulchoki       108.70 291  eP       PKiKP    16 51 10.3 -1.2
      comp=Z,9.0nm,0.6s
PKIN  Phulchoki      108.71 291  eP       PKiKP    16 51 10.5 -1.0
      comp=Z,6.8nm,0.6s
059A  Moore Haven    108.77  69   PKiKP   PKiKP    16 51 10.1 -1.1
      baz=244
F38A  Pierce - Schro 108.90  47   PKiKP   PKiKP    16 51 10.4 -0.5
      baz=245
R47A  Wooly Knot Far 109.37  56   PKiKP   PKiKP    16 51 11.7 -0.3
      baz=246
W51A  Cleveland      109.38  60   PKiKP   PKiKP    16 51 12.0 -0.1
      baz=246
EYMN  Ely            109.96  46   PKiKP   PKiKP    16 51 11.5 -1.3
      baz=246
L44A  Lake County Fo 109.97  52   PKiKP   PKiKP    16 51 11.6 -1.4
      baz=246
Z54A  Sparta         110.05  63   PKiKP   PKiKP    16 51 12.3 -1.1
      baz=246
KOLN  Koldanda       110.23 291  eP       PKiKP    16 51 14.3 +0.1
DANN  Dangsing       110.35 291  eP       PKiKP    16 51 13.3 -1.3
      comp=Z,16nm,0.7s
PYUN  Piuthan        110.86 291  eP       PKiKP    16 51 15.3 -0.1
WMQ   Urumqi         113.35 308  ePKP     PKiKP    16 51 19.3 -0.2
WMQ                               AMB     AMB
      comp=Z,360nm,4.9s
WMQ                               LR      LR
      comp=Z,260nm,26.9s
WMQ                               LR      LR
      comp=Z,360nm,25.7s
WMQ                               LR      LR
      comp=Z,530nm,24.7s
BDFB  Brasilia       113.46 127   PKKPbc  PKKPbc   17 02 04.2 +0.3
      comp=Z,2.4nm,0.4s,baz=9.5,slow=6.1,SNR=4.0
SUR   Sutherland     114.78 198   PKKPbc  PKKPbc   17 01 58.9 -1.1
      comp=Z,8.1nm,0.8s,baz=253,slow=0.9,SNR=4.0
D47A  Chapleau       114.93  49   PKiKP   PKPdf    16 51 21.5 -0.8
      baz=251
MCI6  Montes Claros  115.42 130  eP       Pdif     16 47 38.0 +1.8
DGZ   Jazzator, Alta 115.47 314c iPKIKP   PKPdf    16 51 22.6 -0.9
D48A  Paudash Townsh 115.81  49   PKiKP   PKPdf    16 51 22.8 -1.2
      baz=252
E50A  Wahnapitae     116.28  50   PKiKP   PKPdf    16 51 24.1 -0.8
      baz=252
SSPA  Standing Stone 116.44  57   PKiKP   PKPdf    16 51 24.3 -1.1
      baz=251
L55A  Hinsdale       116.54  55   PKiKP   PKPdf    16 51 24.0 -1.6
      baz=252
BOSA  Boshof         116.98 203  ePKIKP   PKiKP    16 51 28.2 +1.0
BOSA  Boshof         116.98 203   PKP     PKiKP    16 51 27.5 +0.3
      comp=Z,12nm,0.8s,baz=140,slow=2.1,SNR=12
BOSA                              PKKPbc  PKKPbc   17 01 53.2 +1.0
      comp=Z,4.5nm,0.8s,baz=48,slow=0.9,SNR=6.2
WLVO  Wesleyville    117.11  53   PKiKP   PKPdf    16 51 25.9 -0.7
      baz=252
RES   Resolute Bay   117.53  17  ePKPdf   PKPdf    16 51 25.2 -1.3
RES   Resolute Bay   117.53  17  ePKIKP   PKPdf    16 51 26.0 -0.6
RES   Resolute Bay   117.53  17   PKP     PKPdf    16 51 25.9 -0.6
      comp=Z,12nm,0.8s,baz=255,slow=2.1,SNR=22
E52A  Mattawa        117.62  51   PKiKP   PKPdf    16 51 26.8 -0.7
      baz=254
BANO  Bancroft       117.75  52   PKiKP   PKPdf    16 51 26.9 -0.9
      baz=253
MK01  Makanchi Array 117.89 310  ePKPdf   PKPdf    16 51 26.4 -1.7
MK31  Makanchi Array 117.91 310  ePKPdf   PKPdf    16 51 26.4 -1.7
MK31  Makanchi Array 117.91 310  ePKIKP   PKPdf    16 51 27.0 -1.1
MKAR  Makanchi Array 117.91 310  ePKPdf   PKPdf    16 51 26.0 -2.1
MKAR                              PKKPab  PKKPab   17 01 52.5 +2.6
MKAR                              P4KP             17 23 28.8
MKAR  Makanchi Array 117.91 310   PKIKP   PKPdf    16 51 27.3 -0.8
MKAR                              pmax    pmax
      comp=Z,7.0nm,0.7s
MKAR  Makanchi Array 117.91 310   PKP     PKPdf    16 51 27.3 -0.8
      comp=Z,8.3nm,0.8s,baz=228,slow=1.4,SNR=36
MKAR                              PKKPab  PKKPab   17 01 52.5 +2.6
      comp=Z,1.6nm,0.6s,baz=280,slow=3.8,SNR=15
MKAR                              P4KP             17 23 28.8
      comp=Z,0.3nm,0.5s,baz=324,slow=2.6,SNR=4.4
D52A  ZEK Kipawa Sen 117.97  50   PKiKP   PKPdf    16 51 27.4 -0.7
      baz=254
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MAKZ  Makanchi       118.12 310  ePKPdf   PKPdf    16 51 27.0 -1.5
MAKZ  Makanchi       118.12 310  ePKIKP   PKPdf    16 51 27.3 -1.2
ZAA0  Zalesovo Array 118.20 318  ePKPdf   PKPdf    16 51 26.6 -1.8
ZALV  Zalesovo Beam  118.20 318  ePKPdf   PKPdf    16 51 26.1 -2.2
ZALV                             e                 17 23 04.2
ZALV  Zalesovo Beam  118.20 318   PKP     PKPdf    16 51 27.1 -1.3
      comp=Z,4.9nm,0.6s,baz=26,slow=0.6,SNR=20
ZALV                              P4KPbc           17 23 04.2
      comp=Z,1.6nm,0.7s,baz=294,slow=1.8,SNR=7.4
BINY  Binghamton     118.28  56   PKiKP   PKPdf    16 51 28.3 -0.6
      baz=253
E53A  Dumoine, Ponti 118.30  51   PKiKP   PKPdf    16 51 28.1 -0.8
      baz=254
PLVO  Plevna         118.33  52   PKiKP   PKPdf    16 51 28.0 -0.9
      baz=254
PEMO  Pembroke       118.39  52   PKiKP   PKPdf    16 51 27.9 -1.1
      baz=254
D53A  Lac Vacive, Po 118.47  50   PKiKP   PKPdf    16 51 27.8 -1.3
      baz=254
E54A  Lac Daplat, Po 118.64  51   PKiKP   PKPdf    16 51 27.9 -1.5
      baz=254
PDGK  Podgornoye     118.85 306   PKIKP   PKPdf    16 51 28.4 -1.8
PDGK                              pmax    pmax
      comp=Z,18nm,1.0s
VLDQ  Val d'Or       118.90  49  ePKPdf   PKPdf    16 51 28.5 -1.4
D54A  Lac Fusel, La  119.17  50   PKiKP   PKPdf    16 51 29.3 -1.2
      baz=255
MATQ  Matagami       119.19  47   PKiKP   PKPdf    16 51 29.3 -1.1
      baz=256
NVS   Novosibirsk    119.31 319  ePKIKP   PKPdf    16 51 29.5 -0.9
NVS                              e                 16 58 20.8
NVS                               pmax    pmax
      comp=E,26nm,1.3s
NVS                               pmax    pmax
      comp=E,14nm,1.5s
PRZ   Przheval'sk    119.39 304  ePKPdf   PKPdf    16 51 30.7 -0.6
PRZ   Przheval'sk    119.39 304  ePKIKP   PKPdf    16 51 30.7 -0.6
LSQQ  Lebel-sur-Quev 119.44  48   PKiKP   PKPdf    16 51 30.0 -0.9
      baz=256
ORIO  Orleans, Innes 119.51  52   PKiKP   PKPdf    16 51 30.1 -1.0
      baz=255
NRIK  Noril'sk       119.87 336   PKIKP   PKPdf    16 51 30.0 -1.2
NRIK                              pmax    pmax
      comp=Z,7.0nm,0.5s
NRIK  Noril'sk       119.87 336   PKP     PKPdf    16 51 29.9 -1.2
      comp=Z,6.9nm,0.5s,baz=95,slow=0.9,SNR=12
ALFO  Alfred         119.98  52   PKiKP   PKPdf    16 51 31.0 -1.0
      baz=256
LBTB  Lobatse        120.16 205  ePKPdf   PKPdf    16 51 32.3 -1.1
LBTB  Lobatse        120.16 205  ePKIKP   PKiKP    16 51 34.2 +0.8
KDJ   Kajisay        120.16 304  ePKPdf   PKPdf    16 51 32.1 -0.7
KDJ   Kajisay        120.16 304  ePKIKP   PKiKP    16 51 33.3 +0.4
KSH   Kashi          120.33 300   PKP     PKPdf    16 51 33.0 -0.1
KSH                               sPKP             16 52 04.5
KSH                               PP      PP       16 53 04.3 +4.3
KSH                               SKS     SKSac    16 58 27.5 -0.3
KSH                               SKKS    SKKSac   16 59 42.9  -14
KSH                               SS      SKKSdf   17 09 23.3 +0.2
KSH                               AMB     AMB
      comp=Z,240nm,5.5s
NIL   Nilore         120.67 293  ePKPdf   PKPdf    16 51 32.6 -1.3
NIL   Nilore         120.67 293  ePKIKP   PKPdf    16 51 32.6 -1.3
NRN   Naryn          120.83 303  ePKPdf   PKPdf    16 51 33.2 -1.1
ULHL  Ulahol         120.87 304   P       PKPdf    16 51 34.0 -0.1
      SNR=30
KURK  Kurchatov      121.20 314  ePKPdf   PKPdf    16 51 33.0 -1.3
KURK  Kurchatov      121.20 314c iPKIKP   PKPdf    16 51 33.8 -0.4
KURK  Kurchatov      121.20 314   P       PKPdf    16 51 33.2 -1.0
      SNR=14
CHGQ  Chibougamau    121.28  47   PKiKP   PKPdf    16 51 33.3 -1.1
      baz=258
TKM2  Tokmak 2       121.50 304   P       PKPdf    16 51 34.6 -0.8
      SNR=26
TKM2  Tokmak 2       121.50 304   PKIKP   PKPdf    16 51 34.2 -1.2
TKM2                              pmax    pmax
      comp=Z,16nm,0.9s
KZA   Kyzart         121.54 303   P       PKPdf    16 51 35.8  0.0
      SNR=30
KBK   Karagaybulak   121.90 304   P       PKPdf    16 51 35.6 -0.5
      SNR=21
UCH   Uchtor         122.11 303   P       PKPdf    16 51 36.9  0.0
      SNR=43
CHMS  Chumysh        122.12 304   P       PKPdf    16 51 35.6 -0.7
      SNR=21
FRU1  Bishkek        122.16 304  ePKPdf   PKPdf    16 51 35.9 -0.6
FRU1  Bishkek        122.16 304  ePKIKP   PKPdf    16 51 36.5  0.0
FRU   Bishkek        122.17 304  ePKIKP   PKPdf    16 51 35.0 -1.4
FRU                               pmax    pmax
      comp=Z,54nm,1.8s
AAK   Ala-Archa      122.22 304   P       PKPdf    16 51 36.4 -0.4
      SNR=21
AAK   Ala-Archa      122.22 304  i PKPdf  PKPdf    16 51 36.0 -0.6
      SNR=30
AAK   Ala-Archa      122.22 304c iPKIKP   PKPdf    16 51 36.1 -0.6
AAK   Ala-Archa      122.22 304   P       PKPdf    16 51 36.3 -0.4
      SNR=8.2
AAK   Ala-Archa      122.22 304   PKP     PKPdf    16 51 35.9 -0.8
      comp=Z,11nm,0.7s,baz=124,slow=2.2,SNR=4.1
AAK                               PKKPab  PKKPbc   17 01 34.4 +1.3
      comp=Z,5.1nm,1.0s,baz=237,slow=3.7,SNR=16
SFK   Sufi-Kurgan    122.30 300   PKIKP   PKPdf    16 51 35.9 -1.1
SFK                               pmax    pmax
      comp=Z,37nm,1.0s
USP   Ospenovka      122.36 304   P       PKPdf    16 51 36.1 -0.7
      SNR=28
AML   Almayashu      122.67 303   P       PKPdf    16 51 37.8 -0.1
      SNR=47
EKS2  Erkin-Say      122.74 304   P       PKPdf    16 51 37.5 -0.2
      SNR=25
ARSB  Arslanbob      123.00 302  ePKPdf   PKPdf    16 51 37.5 -0.7
MNAS  Manas          123.61 303   PKIKP   PKPdf    16 51 38.7 -0.7
MNAS                              pmax    pmax
      comp=Z,30nm,1.3s
TULEG Thule          124.07  15  ePKPdf   PKPdf    16 51 38.3 -0.7
KBL   Kabul          124.27 293  ePKPdf   PKPdf    16 51 40.5 -0.5
KBL   Kabul          124.27 293  ePKIKP   PKiKP    16 51 41.2 -0.1
BTK   Batken         124.31 300  ePKPdf   PKiKP    16 51 41.2 +0.2
BTK   Batken         124.31 300  ePKIKP   PKiKP    16 51 42.5 +1.5
GAR   Garm           124.43 299  ePKPdf   PKPdf    16 51 40.8 -0.2
GAR   Garm           124.43 299  ePKIKP   PKPdf    16 51 41.1 +0.1
OTUK  Ortayu         124.80 310   PKIKP   PKPdf    16 51 40.2 -1.1
OTUK                              pmax    pmax
      comp=Z,28nm,1.0s
KK31  Karatay Array  125.18 303  ePKPdf   PKPdf    16 51 41.5 -0.6
KK31  Karatay Array  125.18 303  ePKIKP   PKPdf    16 51 42.0 -0.2
KKAR  Karatay Array  125.18 303  ePKPdf   PKPdf    16 51 41.4 -0.8
KKAR  Karatay Array  125.18 303  ePKIKP   PKPdf    16 51 42.0 -0.2
CHGR  Chuyangaron    125.23 298  ePKPdf   PKPdf    16 51 41.7 -0.8
BATG  Bathurst New B 126.28  52  ePKPdf   PKPdf    16 51 43.8 -0.3
SCHQ  Schefferville  126.49  42  ePKPdf   PKPdf    16 51 44.2 -0.1
SCHQ  Schefferville  126.49  42   PKP     PKPdf    16 51 44.3  0.0
      comp=Z,25nm,1.0s,baz=293,slow=2.6,SNR=9.4
BVA0  Borovoye Array 126.56 316  i PKIKP  PKPdf    16 51 43.3 -1.2
BVA0                              pmax    pmax
      comp=Z,57nm,1.4s
BRVK  Borovoye       126.63 316  ePKPdf   PKPdf    16 51 43.8 -0.8
BRVK  Borovoye       126.63 316  i PKIKP  PKPdf    16 51 43.9 -0.7
BRVK  Borovoye       126.63 316   P       PKPdf    16 51 44.1 -0.5
      SNR=20
LSZ   Lusaka         127.78 213  ePKPdf   PKPdf    16 51 47.4 -0.8
LSZ   Lusaka         127.78 213  ePKIKP   PKiKP    16 51 49.0 +0.3
LSZ   Lusaka         127.78 213   P       PKPdf    16 51 45.6 -2.5
      SNR=9.0
TSUM  Tsumeb         128.17 199  ePKPdf   PKPdf    16 51 48.5 -0.3
RCBR  Riachuelo      128.74 129  ePKPdf   PKPdf    16 51 49.9 -0.1
RCBR  Riachuelo      128.74 129  ePKIKP   PKiKP    16 51 52.4 +1.8
MHTO  MHTO           129.09 273   P       PKPdf    16 51 48.9 -1.4
      SNR=7.9
WSAR  Wadi Sarin     129.36 276   PKP     PKiKP    16 51 51.1 -0.3
      comp=Z,6.1nm,0.7s,baz=134,slow=1.5,SNR=3.4
ILULI Ilulissat      131.24  22  ePKPdf   PKPdf    16 51 52.6 -0.3
ILULI Ilulissat      131.24  22  ePKIKP   PKiKP    16 51 53.7 -0.1
KBS   Kingsbay       131.47 357  ePKPdf   PKPdf    16 51 53.1  0.0
KBS   Kingsbay       131.47 357  ePKIKP   PKiKP    16 51 53.9 -0.2
KBS   Kingsbay       131.47 357  ePKPdf   PKiKP    16 51 53.6 -0.5
SOHO  SOHO           131.48 276   P       PKPdf    16 51 53.6 -1.1
      SNR=8.4
SPA0  Spitsbergen Ar 131.98 356  ePKPdf   PKPdf    16 51 53.4 -0.8
SPA0  Spitsbergen Ar 131.98 356  ePKPdf   PKPdf    16 51 53.4 -0.8
SPITS Spitsbergen Ar 131.98 356   PKIKP   PKPdf    16 51 54.0 -0.2
SPITS Spitsbergen Ar 131.98 356   PKP     PKPdf    16 51 54.0 -0.2
      comp=Z,24nm,0.8s,baz=87,slow=3.0,SNR=13
UOSS  Minazif        132.03 277  ePKPdf   PKPdf    16 51 54.2 -1.6
UOSS  Minazif        132.03 277   PKPdf   PKPdf    16 51 55.0 -0.7
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HATD	Hatta, Dubai	132.06	277	*i* PKiKP	PKPdf	16 51 55.8	0.0
	SNR=9.5						
ASHO	Ashiyiah	132.07	277	PKiKP	PKPdf	16 51 55.8	-0.1
SVE	Sverdlovsk	132.07	321	*e*PKIKP	PKPdf	16 51 54.9	+0.1
SVE				pmax	pmax		
	comp=Z,32nm,1.5s						
HOPEN	Hopen	132.81	353	*e*PKPdf	PKPdf	16 51 55.7	0.0
DAG	Danmarks Havn	132.83	6	*i* P	PKPdf	16 51 54.6	-1.1
	comp=Z,13nm,0.9s						
DAG	Danmarks Havn	132.83	6	*i* PKIKP	PKPdf	16 51 54.6	-1.1
DAG				pmax	pmax		
	comp=Z,11nm,0.9s						
SUMG	Summit	132.99	15	*e*PKPdf	PKPdf	16 51 56.6	0.0
SUMG	Summit	132.99	15	*i* P	PKiKP	16 51 58.4	+0.6
SUMG	Summit	132.99	15	*i* PKIKP	PKiKP	16 51 58.4	+0.6
ABKAR	Akbulak array	133.04	310	*e*PKPdf	PKPdf	16 51 57.4	+0.5
ARU	Arti	133.27	320	*e*PKPdf	PKPdf	16 51 57.5	+0.4
ARU	Arti	133.27	320	*i* PKIKP	PKPdf	16 51 56.4	-0.7
ARU						16 54 21.6	
ARU				MLR	MLR		
	comp=Z,427nm,23.0s						
GEYT	Alibeck	133.62	295	PKP	PKPdf	16 51 58.1	-0.3
	comp=Z,11nm,0.7s,baz=202,slow=1.6,SNR=14						
GEYT				SKP		16 55 26.2	
	comp=Z,15nm,1.0s,baz=182,slow=4.0,SNR=12						
GYA0B	ALIBECK ARRAY	133.62	295	*e*PKPdf	PKPdf	16 51 57.9	-0.5
KMBO	Kilima Mbogo	133.85	233	PKP	PKPdf	16 51 59.7	-0.2
	comp=Z,3.8nm,0.7s,baz=123,slow=2.8,SNR=11						
KMBO				SKPbc	SKPbc	16 55 23.0	-3.1
	comp=Z,3.4nm,0.8s,baz=281,slow=5.2,SNR=2.9						
SCO	Scoresbysund	137.99	12	*e*PKPdf	PKPdf	16 52 06.1	+0.6
SCO	Scoresbysund	137.99	12	*i* P	PKiKP	16 52 07.3	-0.2
	comp=Z,12nm,0.9s						
SCO	Scoresbysund	137.99	12	*i* PKIKP	PKiKP	16 52 07.3	-0.2
SCO				pmax	pmax		
	comp=Z,12nm,0.9s						
PRGR	Permogore	138.03	330	*e*PKIKP	PKPdf	16 52 04.4	-1.4
PRGR				pmax	pmax		
	comp=Z,22nm,0.7s						
LVZ	Lovozero	138.09	342	*de*PKIKP	PKPdf	16 52 05.5	-0.3
HAMF	Hammerfest	138.20	349	*e*	PKPpre	16 52 00.4	
MBAR	Mbarara	138.55	227	SKPbc	SKPbc	16 55 38.0	-2.4
	comp=Z,4.6nm,0.5s,baz=107,slow=3.7,SNR=10						
ARCES	ARCESS Array B	138.85	348	*e*PKPpre	PKPpre	16 51 57.7	
ARCES				SKPbc	SKPbc	16 55 36.3	-2.9
ARCES	ARCESS Array B	138.85	348	PKhKP	PKPpre	16 52 00.1	
	comp=Z,6.4nm,0.5s,baz=56,slow=2.2,SNR=38						
ARCES				SKPbc	SKPbc	16 55 36.3	-2.9
	comp=Z,2.9nm,0.7s,baz=29,slow=2.8,SNR=4.6						
ARE0	ARCESS Array S	138.85	348	*e*PKPpre	PKPpre	16 51 57.5	
ARE0	ARCESS Array S	138.85	348	*e*PKPdf	PKPdf	16 52 06.7	-0.4
TMCR	Tamitsa	139.59	337	*e*PKIKP	PKPpre	16 52 03.5	
TMCR				pmax	pmax		
	comp=Z,18nm,1.5s						
KTK1	Kautokeino	139.71	348	*e*Pdif	Pdif	16 49 22.8	0.0
KTK1				*e*		16 52 01.5	
TRO	Tromso	139.82	351	*e*PKPdf	PKPdf	16 52 08.5	-0.3
KLMR	Klimovskoe	140.98	332	*e*PKIKP	PKPpre	16 52 08.1	
KLMR				pmax	pmax		
	comp=Z,68nm,1.5s						
KLMR	Klimovskoe	140.98	332	*e*PKPdf	PKPpre	16 52 08.1	
KLMR				AMP		16 52 16.5	
	comp=Z,68nm,1.4s						
KLMR				*e*SKP		16 55 51.4	
LOF	Lofoten	141.90	353	*e*PKPdf	PKPdf	16 52 12.7	+0.1
STEI	Steigen	141.90	352	*e*PKPdf	PKPdf	16 52 11.0	-1.6
GROC	Groznyy	143.18	302	*e*PKHKP	PKPpre	16 52 10.8	
GROC				*e*		16 55 27.6	
GROC				pmax	pmax		
	comp=Z,37nm,0.9s						
KONS	Konsvik	143.52	352	*e*PKPdf	PKPdf	16 52 14.7	-0.8
MOR8	Moi Rana	143.67	351	*e*PKPdf	PKPab	16 52 12.8	+0.1
TBLG	Delisi	144.07	300	*e*PKPdf	PKPbc	16 52 15.6	+0.2
TBLG	Delisi	144.07	300	*e*PKIKP	PKPbc	16 52 15.6	+0.2
GNI	Garni	144.14	297	*e*P	PKPab	16 52 15.6	+0.2
GNI	Garni	144.14	297	*e*PKPdf	PKPbc	16 52 16.6	+0.7
GNI	Garni	144.14	297	PKPdf	PKPbc	16 52 16.4	+0.6
GNI	Garni	144.14	297	c *i*PKIKP	PKPab	16 52 15.6	+0.2
GNI	Garni	144.14	297	P	PKPbc	16 52 16.2	+0.3
	SNR=9.0						
GNI	Garni	144.14	297	PKP	PKPbc	16 52 16.0	+0.2
	comp=Z,14nm,0.6s,baz=70,slow=3.1						
VRH	Novokhopyorsk	144.20	316	*e*PKIKP	PKPab	16 52 15.1	+0.1
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
MOS	Moscow	144.53	325	*e*PKIKP	PKPab	16 52 14.7	-1.4
MOS				pmax	pmax		
	comp=Z,110nm,1.0s						
ZEI	Tsey	144.60	302	*i* PKHKP	PKPpre	16 52 14.6	
ZEI				pmax	pmax		
	comp=Z,62nm,0.7s						
NCK	Nalchik	144.74	303	⇑*e*PKIKP	PKPab	16 52 17.4	0.0
CLDR	Caldiran	144.80	296	*i* P	PKPbc	16 52 18.4	+0.3
GOF	Gofitskoye	144.91	306	*e*PKIKP	PKPab	16 52 17.7	-0.2
GOF				pmax	pmax		
	comp=Z,250nm,1.0s						
CUKT	Cukurca	145.03	292	P	PKPbc	16 52 18.4	-0.3
KBZ	Khabaz	145.21	304	PKPbc	PKPbc	16 52 17.8	-1.1
	comp=Z,38nm,0.7s,baz=83,slow=3.5,SNR=48						
PUL	Pulkovo	145.23	335	⇓*i*PKIKP	PKPbc	16 52 18.3	-0.1
LPSR	Galich'ya Gora	145.29	320	*e*PKP2	PKPbc	16 52 18.1	-0.7
LPSR				pmax	pmax		
	comp=Z,190nm,1.0s						
KIV	Kislovodsk	145.33	304	*e*PKPbc	PKPbc	16 52 18.6	-0.9
KIV	Kislovodsk	145.33	304	*i* PKPab	PKPbc	16 52 19.1	-0.4
	SNR=15						
KIV	Kislovodsk	145.33	304	*i* PKP2	PKPbc	16 52 18.6	-0.9
KIV				pmax	pmax		
	comp=Z,82nm,1.1s						
KIV				MLR	MLR		
	comp=Z,269nm,24.0s						
KIV	Kislovodsk	145.33	304	P	PKPbc	16 52 19.2	-0.2
	SNR=26						
OBN	Obninsk	145.37	325	*e*PKPdf	PKPbc	16 52 18.2	-0.8
OBN	Obninsk	145.37	325	⇑*i*P	PKPbc	16 52 18.2	-0.8
OBN	Obninsk	145.37	325	c *i*PKP2	PKPbc	16 52 18.3	-0.7
OBN				*e*		16 55 38.6	
OBN				pmax	pmax		
	comp=Z,136nm,0.9s						
OBN				MLR	MLR		
	comp=Z,317nm,22.0s						
FIA1	FINESS Array S	145.39	340	*e*PKPdf	PKPbc	16 52 17.9	-1.0
FINES	FINESS Array B	145.39	340	PKPbc	PKPbc	16 52 18.1	-0.8
	comp=Z,181nm,0.5s,baz=58,slow=3.3,SNR=363						
NEY	Neytrino	145.41	303	c *i*PKIKP	PKPbc	16 52 19.7	-0.1
VORR	Voronezh	145.50	318	*e*PKP2	PKPdf	16 52 18.0	-1.4
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
AGRB	Hanur-Agry	145.51	296	*e*P	PKPbc	16 52 20.4	+0.1
AKDM	Akdamar-Van	145.54	294	*e*P	PKPbc	16 52 20.4	0.0
NSS	Namsos	145.55	352	*e*PKPbc	PKPdf	16 52 18.6	-0.5
TUTA	Tutak	145.65	296	*i* P	PKPab	16 52 21.7	+0.5
TUTA				IAML_P			
	comp=Z,3µm,0.9s						
VSR	Storozhevoye	145.70	318	*e*PKIKP	PKPdf	16 52 18.6	-1.2
VSR				pmax	pmax		
	comp=Z,270nm,1.8s						
MLAZ	Malazgirt-MUS	145.87	296	*e*P	PKPab	16 52 22.1	+0.2
SENK	Senkaya-Erzuru	145.95	298	*i* P	PKPab	16 52 23.1	+0.9
SIRN	Sırnak	145.99	293	*i* P	PKPab	16 52 22.0	-0.3
SIRN				IAML_P			
	comp=Z,1µm,0.1s						
ARTV	Artvin	146.22	299	*i* P	PKPdf	16 52 21.2	-0.2
ARTV				IAML_P			
	comp=Z,545nm,0.5s						
DAGI	Agillar	146.24	299	*i* P	PKPbc	16 52 21.8	-0.6
DAGI				IAML_P			
	comp=Z,181nm,0.6s						
GURO	Guroymak-BITLI	146.28	294	*e*P	PKPab	16 52 23.3	-0.1
HOMI	Horasan	146.32	297	*i* P	PKPdf	16 52 22.1	+0.6
HOMI				IAML_P			
	comp=Z,50nm,0.2s						
BATM	Batumi	146.35	300	*e*P	PKPbc	16 52 22.6	+0.1
KOPR	Koprukoy-ERZUR	146.37	297	*e*P	PKPbc	16 52 22.8	-0.1
SRTM	Siirt_Merkez	146.38	293	*i* P	PKPbc	16 52 23.1	+0.2
SRTM				IAML_P			
	comp=Z,2µm,0.5s						
DBOC	Borcka	146.40	300	*i* P	PKPdf	16 52 21.9	+0.5
DBOC				IAML_P			
	comp=Z,126nm,0.3s						
DBAD	Bademkaya	146.41	299	*i* P	PKPdf	16 52 22.2	+0.7
DBAD				IAML_P			
	comp=Z,36nm,0.3s						
BCA	Borcka	146.42	300	*e*P	PKPbc	16 52 22.8	0.0
BTMN	Batman	146.89	293	*i* P	PKPbc	16 52 24.1	-0.3
BTMN				IAML_P			
	comp=Z,489nm,0.7s						
SVAN	Silvan-Diyarba	146.95	294	*e*P	PKPbc	16 52 25.0	+0.6
TBLU	Trondheim	146.98	353	*e*PKPbc	PKPbc	16 52 23.0	-0.6
ECAT	Cat-ERZURUM	147.06	296	*i* P	PKPab	16 52 26.1	-0.4
CHOM	Cayeli-Rize	147.10	299	*e*P	PKPbc	16 52 24.9	+0.2
MARD	Mardin	147.29	292	*i* P	PKPbc	16 52 25.2	-0.4
MARD				IAML_P			
	comp=Z,1µm,0.6s						
BNGB	Bingl	147.33	295	*e*P	PKPdf	16 52 23.6	+0.5
KOPT	Kop Dagi	147.40	297	*i* P	PKPbc	16 52 26.6	+0.7
KOPT				IAML_P			
	comp=Z,76nm,0.2s						
YEDI	Yedisu-Bingol	147.41	296	P	PKPbc	16 52 26.4	+0.6
VSU	Vasula	147.46	336	c *i*PKIKP	PKPdf	16 52 21.4	-1.1
VSU	Vasula	147.46	336	*e*P	PKPbc	16 52 24.6	-0.4
VSU				IAmb	IAmb	16 52 26.8	
	comp=Z,902nm,1.4s						
SOC	Sochi	147.52	304	*e*PKP2	PKPbc	16 52 24.9	-0.8
SOC				*e*		16 55 51.9	
SOC				MLR	MLR		
	comp=Z,157nm,14.0s						
MAZI	Mazidag	147.55	293	*e*P	PKPbc	16 52 26.3	+0.1
BAYB	BAYBURT	147.57	298	*i* P	PKPbc	16 52 27.1	+0.8
BAYB				IAML_P			
	comp=Z,1µm,1.0s						
HANI	Diyarbakir_Han	147.57	294	*i* P	PKPbc	16 52 25.2	-1.0
HANI				IAML_P			
	comp=Z,35nm,0.3s						
BAYT	Aydıntepe-Bayb	147.64	298	*e*P	PKPbc	16 52 27.3	+0.8
KTUT	Trabzon	147.87	299	*e*P	PKPdf	16 52 24.8	+1.0
MOL	Molde	147.89	355	*e*PKPbc	PKPbc	16 52 25.9	-0.3
EUZM	Uzumlu	148.04	297	*i* P	PKiKP	16 52 28.4	-0.8
EUZM				IAML_P			
	comp=Z,205nm,0.2s						
TNCL	Tunceli-Merkez	148.20	296	*i* P	PKPab	16 52 32.6	+1.6
TNCL				IAML_P			
	comp=Z,43nm,0.2s						
DOMB	Dombas	148.29	354	*e*PKPbc	PKPbc	16 52 27.0	-0.3
AKN	Aaknes	148.32	355	*e*PKPbc	PKPbc	16 52 27.6	+0.2
KELT	Kelkit	148.34	298	*i* P	PKiKP	16 52 29.3	-0.7
KELT				IAML_P			
	comp=Z,100nm,0.5s						
ELZG	Elazig	148.67	295	*i* P	PKiKP	16 52 30.8	+0.2
ELZG				IAML_P			
	comp=Z,41nm,0.5s						
SANL	SANLIURFA_Merk	148.72	292	*i* P	PKPbc	16 52 29.5	+0.4
SANL				IAML_P			
	comp=Z,2µm,1.0s						
REFA	Refahiye_ERZN	148.78	296	*i* P	PKiKP	16 52 30.7	-0.1
REFA				IAML_P			
	comp=Z,1µm,0.8s						
NC303	NORSAR Array S	148.82	351	*e*PKPdf	PKPdf	16 52 24.4	-0.4
NC303				*e*PKPbc	PKPbc	16 52 28.4	-0.2
NC303				*e*PKPab	PKPab	16 52 33.0	+0.4
URFA	Urfa	148.84	293	*e*P	PKPbc	16 52 30.1	+0.5
NC204	NORSAR Array S	148.85	352	*e*PKPdf	PKPdf	16 52 23.9	-0.9
NC204				*e*PKPbc	PKPbc	16 52 28.3	-0.5
ANN	Anapa	148.85	307	*i* PKP2	PKPbc	16 52 28.6	-0.6
ANN				pmax	pmax		
	comp=Z,164nm,1.0s						
NC405	NORSAR Array S	148.88	351	*e*PKPbc	PKPbc	16 52 28.1	-0.7
NB201	NORSAR Array S	149.00	351	*e*PKPdf	PKPdf	16 52 24.2	-0.9
NB201				*e*PKPbc	PKPbc	16 52 28.7	-0.4
KEMA	Kemaliye	149.00	296	*i* P	PKiKP	16 52 31.1	-0.2
KEMA				IAML_P			
	comp=Z,1µm,0.8s						
FOO	Floro	149.01	357	*e*PKPbc	PKPbc	16 52 29.0	-0.1
NOA	NORSAR Array B	149.02	351	PKPbc	PKPbc	16 52 29.0	-0.2
	comp=Z,37nm,0.8s,baz=14,slow=4.2,SNR=50						
SURC	SANLIURFA_SURC	149.02	291	*i* P	PKPbc	16 52 29.7	-0.2
SURC				IAML_P			
	comp=Z,422nm,0.5s						
NBO00	NORSAR Array S	149.08	352	*e*PKPdf	PKPdf	16 52 24.3	-0.9
NBO00				*e*PKPbc	PKPbc	16 52 28.9	-0.4
SUSE	Susehri	149.14	298	*i* P	PKPbc	16 52 30.1	-0.2
SUSE				IAML_P			
	comp=Z,15nm,0.5s						
NAO01	NORSAR Array S	149.25	351	*e*PKPdf	PKPdf	16 52 24.2	-1.2
NC602	NORSAR Array S	149.27	351	*e*PKPdf	PKPdf	16 52 25.3	-0.2
NC602				*e*PKPbc	PKPbc	16 52 28.9	-0.8
NC602	NORSAR Array S	149.27	351	*e*PKPbc	PKPbc	16 52 29.2	-0.5
HYA	Hoyanger	149.38	356	*e*PKPbc	PKPbc	16 52 30.0	0.0
HEKM	Malatya_Hekimh	149.45	295	*i* P	PKiKP	16 52 32.1	-0.2
HEKM				IAML_P			
	comp=Z,60nm,0.1s						
CUZAR	Zara_SIVAS	149.50	297	*i* P	PKiKP	16 52 32.6	+0.3
HFS	Hagfors	149.51	348	PKP	PKPdf	16 52 24.7	-1.1
	comp=Z,11nm,0.9s,baz=90,slow=1.7,SNR=43						
HFS				PKPbc	PKPbc	16 52 29.5	-0.8
	comp=Z,68nm,0.7s,baz=98,slow=2.9,SNR=57						
AKCD	Akcadag	149.52	294	*i* P	PKPbc	16 52 31.7	+0.4
AKCD				IAML_P			
	comp=Z,579nm,0.5s						
SUE	Sulen	149.56	357	*e*PKPbc	PKPbc	16 52 30.5	0.0
SLIT	Slitere, Latvi	149.60	338	*e*P	PKPbc	16 52 29.5	-1.1
SLIT				IAmb	IAmb	16 52 31.7	
	comp=Z,1µm,1.5s						
IZAR	Zarasai	149.62	333	*e*P	PKPbc	16 52 30.8	0.0
IZAR				IAmb	IAmb	16 52 32.6	
	comp=Z,136nm,1.5s						
IDID	Didziasalis	149.72	332	*e*P	PKPbc	16 52 30.8	-0.3
IDID				IAmb	IAmb	16 52 36.2	
	comp=Z,48nm,1.2s						
RSDY	Resadiye-TOKAT	149.78	298	*e*P	PKiKP	16 52 32.4	-0.3
ISAL	Salakas	149.79	332	*e*P	PKPbc	16 52 31.2	0.0
ISAL				IAmb	IAmb	16 52 36.4	
	comp=Z,40nm,0.9s						
CUKAN	kangal_SIVAS	149.79	296	*i* P	PKiKP	16 52 32.7	-0.3
MICGM	Minsk	149.79	330	⇓*e*P	PKPbc	16 52 29.0	-2.2
MICGM				PM		16 52 31.0	
	comp=Z,0.9nm,1.1s						
MNK	Minsk	149.79	330	⇓*e*PKHKP	PKPbc	16 52 29.0	-2.2
MNK				pmax	pmax		
	comp=Z,890nm,1.1s						
DARE	Darende-Malaty	149.84	295	*e*P	PKiKP	16 52 32.9	-0.1
GZT	Gaziantep	149.85	292	*i* P	PKPbc	16 52 32.3	+0.2
GZT				IAML_P			
	comp=Z,2µm,0.8s						
IIGN	Ignalina	149.91	332	*e*P	PKPbc	16 52 31.5	0.0
IIGN				IAmb	IAmb	16 52 36.7	
	comp=Z,43nm,0.8s						
NACGM	Naroch	149.99	331	*e*P	PKPbc	16 52 30.0	-1.7
NACGM				PM		16 52 32.0	
	comp=Z,0.3nm,1.0s						
CUGUR	Gurin_SVAS	150.00	295	*i* P	PKiKP	16 52 34.0	+0.6
SVSK	Karacayir	150.09	298	*e*P	PKiKP	16 52 33.5	+0.2
ASK	Askoy	150.12	357	*e*PKPbc	PKPbc	16 52 31.7	-0.1
GAZ	Gaziantep	150.13	292	*e*P	PKiKP	16 52 33.4	-0.2
ELBS	KAHRAMANMARAS	150.14	294	*i* P	PKiKP	16 52 33.5	-0.1
ELBS				IAML_P			
	comp=Z,628nm,0.9s						
ERBA	Erbaa	150.17	299	*i* P	PKiKP	16 52 33.6	+0.1
ERBA				IAML_P			
	comp=Z,632nm,0.5s						
BER	Bergen	150.21	357	*e*PKPbc	PKPbc	16 52 32.4	+0.4
KUZU	Kuzuini	150.26	291	*i* P	PKiKP	16 52 33.6	-0.3
KUZU				IAML_P			
	comp=Z,144nm,0.1s						
CUALT	Altinyayla-SIV	150.35	296	*i* P	PKiKP	16 52 33.7	-0.4
TOKT	Tokat	150.38	298	*e*P	PKPbc	16 52 32.8	-0.4
KONO	Kongsberg	150.57	352	*e*PKPbc	PKPbc	16 52 32.6	-0.3
KONO	Kongsberg	150.57	352	*e*PKIKP	PKPdf	16 52 29.2	+1.7
KONO	Kongsberg	150.57	352	*e*PKPbc	PKPbc	16 52 32.8	-0.1
ODD1	Odda	150.60	355	*e*PKPbc	PKPbc	16 52 33.4	+0.3
KVT	Kavak	150.64	300	*e*P	PKiKP	16 52 34.3	-0.2
CUSAR	Sarkisla-SIVAS	150.72	297	*i* P	PKPbc	16 52 34.1	-0.1
ANDN	Andirin	150.81	293	*i* P	PKPdf	16 52 29.2	+0.5
ANDN				IAML_P			
	comp=Z,21nm,0.2s						
HAVZ	Havza	150.88	300	*i* P	PKPbc	16 52 34.4	+0.1
HAVZ				IAML_P			
	comp=Z,804nm,0.6s						
TAHT	Tahtakopru-Hat	150.98	291	*e*P	PKPdf	16 52 28.8	-0.1
SAIM	ADANA	150.99	294	*i* P	PKiKP	16 52 35.3	0.0
SAIM				IAML_P			
	comp=Z,606nm,0.3s						
PBUR	Paburg	151.01	337	*e*P	PKPbc	16 52 33.7	-0.3
SIM	Simferopol'	151.07	309	c *i*PKIKP	PKPbc	16 52 34.8	+0.2
SIM				*i*		16 52 42.5	
SIM				pmax	pmax		
	comp=Z,122nm,1.8s						
SNOP	Sinop	151.08	302	*e*P	PKPdf	16 52 29.7	+0.8
SNOP	Sinop	151.08	302	*e*PKPbc	PKPbc	16 52 34.8	0.0
BLS5	Blasjo	151.10	355	*e*PKPbc	PKPbc	16 52 34.4	+0.2
DIKM	Dikmen	151.12	302	*e*P	PKiKP	16 52 35.1	-0.3
HWQ	Hawqa	151.16	286	*e*P	PKPbc	16 52 34.6	-0.7
RCY	Rachaya	151.21	285	*e*P	PKPbc	16 52 35.6	+0.1
KOZT	Kozan	151.22	293	*e*P	PKiKP	16 52 35.5	-0.3
CEYT	Ceyhan	151.31	292	*e*P	PKiKP	16 52 36.1	+0.2
QRWL	Qaraoun	151.34	285	*e*P	PKiKP	16 52 36.2	0.0
BHL	Bhannes	151.38	285	*e*P	PKPbc	16 52 35.9	+0.1
KMY	Karmoy	151.38	356	*e*PKPbc	PKiKP	16 52 35.1	-0.2
YOZ	Yozgat	151.41	297	*e*P	PKPbc	16 52 35.5	-0.3
YURE	YUREGIR	151.41	291	*e*P	PKiKP	16 52 38.2	+2.0
YURE	YUREGIR	151.41	291	*i* P	PKiKP	16 52 36.9	+0.7
AKASG	Malin Array Be	151.49	322	PKP	PKPdf	16 52 28.1	-1.1
	comp=Z,5.3nm,0.8s,baz=53,slow=1.8,SNR=27						
AKASG				PKPbc	PKPbc	16 52 34.9	-0.5
	comp=Z,97nm,0.8s,baz=47,slow=2.8,SNR=83						
AKBB	Malin Array Si	151.49	322	*e*PKPdf	PKPdf	16 52 27.0	-2.2
AKBB				*e*PKPbc	PKPbc	16 52 34.8	-0.6
KIEV	Kiev	151.50	322	*e*PKPdf	PKPdf	16 52 27.0	-2.2
KIEV				*e*PKPbc	PKPbc	16 52 34.8	-0.6
KIEV	Kiev	151.50	322	⇑*i*P	PKPdf	16 52 29.4	+0.2
KIEV	Kiev	151.50	322	*de*PKIKP	PKPdf	16 52 27.2	-2.0
AK11	Malin Array Si	151.53	322	*e*PKPdf	PKPdf	16 52 27.6	-1.6
AK11				*e*PKPbc	PKPbc	16 52 34.8	-0.6
YAHY	KAYSERI_Yahyal	151.54	294	*i* P	PKiKP	16 52 37.0	+0.4
YAHY				IAML_P			
	comp=Z,15nm,0.5s						
COAL	Corum-Alaca	151.57	299	*i* P	PKPdf	16 52 31.5	+1.7
COAL				IAML_P			
	comp=Z,40nm,0.8s						
SIRC	Yozgat	151.58	297	*i* P	PKiKP	16 52 36.8	+0.2
SIRC				IAML_P			
	comp=Z,1µm,0.6s						
KRTS	Karatas	151.63	291	*e*P	PKiKP	16 52 37.2	+0.6
KARA	Karaisali	151.85	292	*e*P	PKPbc	16 52 36.1	-0.6
AVNS	Nevsehir-Avano	151.88	296	*i* P	PKPbc	16 52 36.9	0.0
AVNS				IAML_P			
	comp=Z,2µm,0.7s						
HOMB	Homborsund	152.05	353	*e*PKPbc	PKiKP	16 52 36.5	-0.2
GULE	Gulek	152.07	293	*i* P	PKiKP	16 52 38.1	+0.3
GULE				IAML_P			
	comp=Z,5µm,0.5s						
SUW	Suwalki	152.10	333	*e*PKPdf	PKPdf	16 52 29.7	-0.3
SUW				*e*PKPbc	PKPbc	16 52 36.5	-0.2
SUW	Suwalki	152.10	333	*e*PKPdf	PKPdf	16 52 28.5	-1.5
SUW				*e*PKPbc	PKPbc	16 52 36.3	-0.3
SUW	Suwalki	152.10	333	*e*PKIKP	PKPdf	16 52 31.3	+1.3
SNART	Snartemo	152.11	354	*e*PKPbc	PKPbc	16 52 36.5	0.0
CDAG	Cicekdag	152.13	298	*i* P	PKPbc	16 52 36.9	-0.4
CDAG				IAML_P			
	comp=Z,943nm,1.0s						
MERS	Mersin	152.30	292	*e*P	PKPbc	16 52 37.5	-0.3
ILGA	Ilgaz	152.37	301	*e*PKPdf	PKPdf	16 52 30.3	-0.9
ILGA				*e*PKPbc	PKPbc	16 52 37.9	-0.1
DELI	KIRIKKALE	152.42	298	*i* P	PKPdf	16 52 32.3	+1.1
DELI				IAML_P			
	comp=Z,115nm,0.8s						
KERG	Konya-Eregli	152.58	293	*i* P	PKPbc	16 52 37.9	-0.6
KERG				IAML_P			
	comp=Z,316nm,0.4s						
BR131	Keskin Array S	152.68	298	*e*PKPdf	PKPdf	16 52 30.2	-1.4
BR131				*e*PKPbc	PKPbc	16 52 37.7	-0.9
BR131	Keskin Array S	152.68	298	P	PKPdf	16 52 30.2	-1.4
	SNR=32						
BRTR	Keskin Array B	152.68	298	PKP	PKPdf	16 52 30.2	-1.4
	comp=Z,3.3nm,1.0s,baz=318,slow=3.9,SNR=12						
BRTR				PKPbc	PKPbc	16 52 37.8	-0.9
	comp=Z,24nm,0.8s,baz=139,slow=4.6,SNR=40						
KLNR	Kaliningrad	152.73	337	⇓*e*PKIKP	PKPdf	16 52 29.4	-1.5
AKSY	AKSARAY - Alti	152.74	296	*i* P	PKPbc	16 52 38.1	-0.6
AKSY				IAML_P			
	comp=Z,271nm,0.7s						
PHNC	Paralimni	152.75	288	P	PKiKP	16 52 41.2	+2.2
ANTO	Ankara	153.29	299	*e*PKPdf	PKPdf	16 52 31.4	-0.9
ANTO				*e*PKPbc	PKPbc	16 52 39.8	-0.1
ANTO	Ankara	153.29	299	⇑*i*P	PKPdf	16 52 32.4	0.0
ANTO	Ankara	153.29	299	*e*PKIKP	PKPdf	16 52 34.8	+2.4
ANTO	Ankara	153.29	299	P	PKPdf	16 52 31.8	-0.6
	SNR=21						
BR231	Keskin MP Arra	153.31	298	*e*PKPdf	PKPdf	16 52 31.5	-1.0
BR231				*e*PKPbc	PKPbc	16 52 40.0	0.0
KKUL	Konya-Kulu	153.32	297	*i* P	PKiKP	16 52 40.4	+0.2
KKUL				IAML_P			
	comp=Z,486nm,0.6s						
CSS	Mathiatis	153.33	288	*e*PKPbc	PKPbc	16 52 39.6	-0.5
CSS	Mathiatis	153.33	288	P	PKiKP	16 52 43.6	+3.4
SZAC	Souni	153.70	287	P	PKiKP	16 52 44.0	+3.0
MUD	Monsted U'grnd	153.74	351	*i* P	PKiKP	16 52 40.3	+0.1
	comp=Z,109nm,1.3s						
MUD	Monsted U'grnd	153.74	351	*e*PKIKP	PKiKP	16 52 40.3	+0.1
MUD				pmax	pmax		
	comp=Z,110nm,1.3s						
BSD	Bornholm Skovb	153.88	343	*i* P	PKPbc	16 52 40.4	-0.1
	comp=Z,43nm,0.7s						
BSD	Bornholm Skovb	153.88	343	*i* PKIKP	PKPbc	16 52 40.4	-0.1
BSD				pmax	pmax		
	comp=Z,43nm,0.7s						
ALFC	Alefka	153.92	288	P	PKiKP	16 52 44.0	+2.6
LVV	L'vov	154.67	325	*e*PKIKP	PKPdf	16 52 33.7	-0.2
LVV				*e*		16 52 56.8	
BEL	Belsk	154.69	332	*e*PKP	PKiKP	16 52 42.7	+0.3
BEL	Belsk	154.69	332	*e*PKIKP	PKiKP	16 52 42.7	+0.3
LIC	Lamto	154.81	164	*e*PKIKP	PKPdf	16 52 35.8	+0.6
	comp=Z,118nm,0.9s						
GKP	Gorka Klasztor	154.83	338	*e*PKPdf	PKPdf	16 52 33.7	-0.3
GKP				*e*PKPbc	PKiKP	16 52 42.9	+0.3
GKP	Gorka Klasztor	154.83	338	*e*PKIKP	PKPdf	16 52 33.7	-0.3
CFR	Carcaliu	154.91	313	⇓*i*P	PKPdf	16 52 33.3	-1.0
CFR	Carcaliu	154.91	313	⇓PKIKP	PKPdf	16 52 33.3	-1.0
KIC	Kosan Boka	155.01	164	*e*PKIKP	PKPdf	16 52 36.1	+0.6
	comp=Z,65nm,0.7s						
TIRR	Tirgusor	155.04	311	⇑*i*P	PKPdf	16 52 34.9	+0.4
TIRR	Tirgusor	155.04	311	⇑PKIKP	PKPdf	16 52 34.9	+0.4
EKA	Eskdalemuir Ar	155.10	7	PKP	PKPdf	16 52 34.0	-0.3
	comp=Z,1.2nm,0.6s,baz=315,slow=0.5,SNR=4.5						
EKA				PKPab	sPKPbc	16 52 57.3	-0.2
	comp=Z,28nm,0.9s,baz=326,slow=2.7,SNR=6.9						
ESK	Eskdalemuir	155.11	7	*e*PKPab	PKPab	16 52 58.8	-0.2
ESK	Eskdalemuir	155.11	7	*e*PKP2	PKPab	16 52 59.2	+0.3
TESR	Tescani	155.18	317	⇓*i*P	PKPdf	16 52 34.0	-0.7
TIC	Toumodi	155.21	163	*e*PKIKP	PKPdf	16 52 36.4	+0.6
TLB	Topalu	155.22	311	⇑*i*P	PKPdf	16 52 34.7	-0.1
TLB	Topalu	155.22	311	⇑PKIKP	PKPdf	16 52 34.7	-0.1
BIZ	Bicaz	155.28	318	⇑*i*P	PKPdf	16 52 35.0	+0.2
DBIC	Dimbokro	155.28	164	*e*PKPdf	PKPdf	16 52 36.3	+0.5
DBIC	Dimbokro	155.28	164	*e*PKIKP	PKPdf	16 52 37.0	+1.2
DBIC	Dimbokro	155.28	164	PKP	PKPdf	16 52 36.4	+0.6
	comp=Z,8.6nm,0.5s,baz=151,slow=3.0,SNR=15						
BUR08	Bucovina Ar. S	155.40	320	*e*PKPdf	PKPdf	16 52 34.7	-0.4
BURAR	Bucovina Array	155.40	320	⇑*i*P	PKPdf	16 52 35.2	+0.1
BURAR	Bucovina Array	155.40	320	⇑PKIKP	PKPdf	16 52 35.2	+0.1
BUR04	Bucovina Ar. S	155.41	320	*e*PKPdf	PKPdf	16 52 33.9	-1.2
BUR04				*e*PKPbc	pPKPdf	16 52 45.2	-0.6
KWP	Kalwaria Pacla	155.43	326	*e*PKP	PKPdf	16 52 33.8	-1.2
KWP	Kalwaria Pacla	155.43	326	*e*PKIKP	PKPdf	16 52 33.8	-1.2
VRI	Vrincioaia	155.46	315	⇑*i*P	PKPdf	16 52 35.1	0.0
VRI	Vrincioaia	155.46	315	⇑PKIKP	PKPdf	16 52 35.1	0.0
PLOR	Plostina	155.51	315	⇑*i*P	PKPdf	16 52 35.8	+0.6
PLOR	Plostina	155.51	315	⇑PKIKP	PKPdf	16 52 35.8	+0.6
OZUR		155.91	316	⇑*i*P	PKPdf	16 52 35.8	+0.1
MLR	Muntele Rosu	156.12	315	⇑*i*P	PKPdf	16 52 35.4	-0.8
MLR	Muntele Rosu	156.12	315	⇑PKIKP	PKPdf	16 52 35.4	-0.8
MLR	Muntele Rosu	156.12	315	PKP	PKPdf	16 52 34.4	-1.7
	comp=Z,9.3nm,1.2s,baz=301,slow=2.4,SNR=8.1						
MLR				PKPab	PKPab	16 53 03.6	-0.2
	comp=Z,14nm,0.9s,baz=20,slow=6.7,SNR=5.3						
DOPR	Dopca	156.21	316	⇑*i*P	PKPdf	16 52 36.7	+0.6
PRD	Provadia	156.22	309	*e*P	PKPdf	16 52 36.0	-0.1
UZH	Uzhgorod	156.31	325	*e*PKIKP	PKPdf	16 52 37.8	+1.7
UZH				*i*		16 52 45.2	
UZH				*e*		16 52 52.0	
UZH				*i*		16 53 02.6	
OJC	Ojcow	156.32	331	*e*PKP	PKPdf	16 52 34.8	-1.3
OJC	Ojcow	156.32	331	*e*PKPdf	PKPdf	16 52 35.3	-0.8
OJC	Ojcow	156.32	331	*e*PKIKP	PKPdf	16 52 36.0	-0.1
TRPA	Tarpa	156.51	324	⇑*i*P	PKPdf	16 52 36.0	-0.4
VOIR		156.69	316	⇓*i*P	PKPdf	16 52 37.2	+0.4
VOIR		156.69	316	⇓PKIKP	PKPdf	16 52 37.2	+0.4
NIE	Niedzica	156.70	329	*e*PKP	PKPdf	16 52 36.7	0.0
NIE	Niedzica	156.70	329	*e*PKIKP	PKPdf	16 52 36.7	0.0

MANT	Manisa	156.79	297	ePKPdf	PKPdf	16 52 36.4	-1.0
MANT				ePKPab	PKPab	16 53 06.9	-0.2
ARR	Arges	156.98	316	⇑iP	PKPdf	16 52 37.5	+0.3
KSP	Ksiaz	157.19	336	ePKP	PKPdf	16 52 36.8	-0.4
KSP	Ksiaz	157.19	336	ePKIKP	PKPdf	16 52 36.8	-0.4
LANS	Liptovska Anna	157.27	329	ePKIKP	PKPdf	16 52 37.4	0.0
LANS	Liptovska Anna	157.27	329	ePKP	PKPdf	16 52 37.4	0.0
LANS				e		16 53 10.7	
DRGR		157.27	321	⇑iP	PKPdf	16 52 36.6	-0.9
DRGR		157.27	321	⇑PKIKP	PKPdf	16 52 36.6	-0.9
OKC	Ostrava-Krasne	157.30	332	AMS	AMS	17 57 40.0	
	comp=Z,500nm,19.9s						
UPC	Upice	157.56	336	ePKPAB	PKPab	16 53 09.7	0.0
UPC				AMS	AMS	18 02 40.0	
	comp=Z,500nm,22.7s						
UPC	Upice	157.56	336	ePKP2	PKPab	16 53 09.7	0.0
UPC				MLR	MLR		
	comp=Z,500nm,22.7s						
PVL	Pavlikeni	157.58	310	eP	PKPdf	16 52 35.2	-2.7
DPC	Dobruska-Polom	157.59	335	ePKPDF	PKPdf	16 52 40.7	+2.9
DPC				ePKPAB	PKPab	16 53 12.5	+2.6
DPC				AMS	AMS	18 03 00.0	
	comp=Z,700nm,22.2s						
DPC	Dobruska-Polom	157.59	335	ePKIKP	PKPdf	16 52 40.7	+2.9
DPC				MLR	MLR		
	comp=Z,700nm,22.2s						
MORC	Moravsky Berou	157.59	333	ePKPdf	PKPdf	16 52 36.9	-0.8
MORC	Moravsky Berou	157.59	333	⇓iP	PKPdf	16 52 36.7	-1.1
MORC	Moravsky Berou	157.59	333	ePKIKP	PKPdf	16 52 37.8	0.0
MORC	Moravsky Berou	157.59	333	ePKP	PKPdf	16 52 37.6	-0.2
KRLC	Kraliky	157.64	334	ePKPDF	PKPdf	16 52 38.8	+1.0
KRLC				ePKPAB	PKPab	16 53 11.5	+1.4
KRLC	Kraliky	157.64	334	ePKIKP	PKPdf	16 52 38.8	+1.0
CLL	Collm	157.81	341	ePKPdf	PKPdf	16 52 37.0	-0.9
CLL				ePKPab	PKPab	16 53 09.9	-0.8
CLL	Collm	157.81	341	ePKPdf	PKPdf	16 52 37.0	-0.9
	comp=Z,32nm,1.5s						
CLL				i PKPdf(2)		16 52 41.4	
CLL				i PKPdiff	pPKPdf	16 52 49.0	+0.4
	comp=Z,20nm,1.2s						
CLL				i PKPdiff2		16 52 53.3	
	comp=Z,17nm,1.0s						
CLL				e		16 53 04.0	
CLL				⇓iPKPab	PKPab	16 53 10.2	-0.5
	comp=Z,57nm,1.4s						
CLL				i PKPab(2)		16 53 12.9	
	comp=Z,60nm,1.4s						
CLL				ePP	PP	16 56 54.0	+4.2
CLL				e		16 58 57.0	
CLL				eSKSdf	SKSdf	16 59 48.0	+7.2
CLL				epPPPP		17 03 00.0	
CLL				ePSKS		17 07 15.0	
CLL				ePPPPrev		17 08 37.0	
CLL				ePPS	PPS	17 10 04.0	
CLL				e		17 12 54.0	
CLL				eSS	SS	17 16 54.0	+9.5
CLL				ePSPS		17 18 18.0	
CLL				eSSS	SSS	17 22 48.0	
CLL				eSPSrev		17 25 24.0	
CLL				e		17 26 18.0	
CLL				eSSSS		17 27 12.0	
CLL				LmV		18 18 00.0	
	comp=Z,300nm,19.6s						
CLL	Collm	157.81	341	ePKIKP	PKPdf	16 52 37.6	-0.3
BRG	Berggiesshubel	157.93	339	ePKP	PKPdf	16 52 37.9	-0.2
	comp=Z,54nm,1.7s						
BRG	Berggiesshubel	157.93	339	i PKP	PKPab	16 53 11.0	-0.2
	comp=Z,66nm,1.5s						
BRG	Berggiesshubel	157.93	339	ePKIKP	PKPdf	16 52 37.9	-0.2
BRG				i		16 53 11.0	
BRG				pmax	pmax		
	comp=Z,54nm,1.7s						
PSZ	Piszkesteto	157.96	326	ePKPdf	PKPdf	16 52 37.3	-1.1
PSZ				ePKPab	PKPab	16 53 11.5	-0.2
PSZ	Piszkesteto	157.96	326	⇑iP	PKPdf	16 52 38.6	+0.3
PSZ	Piszkesteto	157.96	326	⇑PKIKP	PKPdf	16 52 38.6	+0.3
PSZ	Piszkesteto	157.96	326	⇑ePKPdf	PKPdf	16 52 36.1	-2.3
ALN	Alexandroupoli	158.00	304	ePKPab	PKPab	16 53 13.0	+1.1
ALN	Alexandroupoli	158.00	304	ePKP2	PKPab	16 53 13.9	+1.9
PVCC	Panska Ves	158.03	338	ePKPAB	PKPab	16 53 13.5	+1.8
PVCC				AMS	AMS	17 59 40.0	
	comp=Z,500nm,21.2s						
PVCC	Panska Ves	158.03	338	ePKP2	PKPab	16 53 13.5	+1.8
PVCC				MLR	MLR		
	comp=Z,500nm,21.2s						
VYHS	Vyhne	158.03	329	ePKIKP	PKPdf	16 52 37.5	-0.8
VYHS				e		16 53 12.0	
VYHS	Vyhne	158.03	329	ePKP	PKPdf	16 52 37.5	-0.8
VYHS				e		16 53 12.0	
GZR	Gura Zlata	158.06	318	⇓iP	PKPdf	16 52 38.0	-0.5
GZR	Gura Zlata	158.06	318	⇓PKIKP	PKPdf	16 52 38.0	-0.5
VRAC	Vranov	158.34	333	⇓iP	PKPdf	16 52 39.2	+0.5
VRAC	Vranov	158.34	333	⇓PKIKP	PKPdf	16 52 39.2	+0.5
VRAC	Vranov	158.34	333	ePKP	PKPdf	16 52 39.1	+0.4
VRAC				e		16 53 12.9	
VRAC	Vranov	158.34	333	PKP	PKPdf	16 52 38.1	-0.6
	comp=Z,1.3nm,0.4s,baz=48,slow=2.3,SNR=8.7						
VRAC				PKPab	PKPab	16 53 12.7	-0.4
	comp=Z,4.1nm,0.5s,baz=42,slow=3.7,SNR=6.9						
PRU	Pruhonice	158.51	337	ePKPAB	PKPab	16 53 15.3	+1.5
PRU				AMS	AMS	18 00 00.0	
	comp=Z,600nm,20.7s						
PRU	Pruhonice	158.51	337	ePKP2	PKPab	16 53 15.3	+1.5
PRU				MLR	MLR		
	comp=Z,600nm,20.7s						
BZS	Buzias	158.59	320	⇓iP	PKPdf	16 52 38.2	-0.9
BZS	Buzias	158.59	320	⇓PKIKP	PKPdf	16 52 38.2	-0.9
KRUC	Moravsky	158.61	333	PKIKP	PKPdf	16 52 38.8	-0.2
KRUC	Moravsky	158.61	333	ePKP	PKPdf	16 52 38.5	-0.5
KRUC				e		16 53 14.0	
PGB	Panagyurishte	158.65	310	eP	PKPab	16 53 14.5	-0.3
TREC	Trest	158.76	335	AMS	AMS	18 03 50.0	
	comp=Z,600nm,21.0s						
TREC	Trest	158.76	335	PKIKP	PKPdf	16 52 39.9	+0.7
MOX	Moxa	158.78	343	PKIKP	PKPdf	16 52 39.9	+0.7
MODS	Modra-Piesok	158.80	331	ePKIKP	PKPdf	16 52 38.7	-0.6
MODS				e		16 53 15.5	
MODS	Modra-Piesok	158.80	331	ePKP	PKPdf	16 52 38.7	-0.6
MODS				e		16 53 15.5	
MDVR	Moldovita	159.03	318	⇓iP	PKPdf	16 52 38.6	-1.1
VTS	Vitosha	159.23	311	ePKPdf	PKPdf	16 52 38.0	-2.1
VTS				ePKPab	PKPab	16 53 17.4	0.0
VTS	Vitosha	159.23	311	⇑iP	PKPdf	16 52 39.4	-0.7
VTS	Vitosha	159.23	311	⇑PKIKP	PKPdf	16 52 39.4	-0.7
VTS	Vitosha	159.23	311	eP	PKPdf	16 52 38.0	-2.1
MMB	Musomiste	159.36	308	eP	PKPdf	16 52 38.0	-2.2
KHC	Kasperske Hory	159.56	338	ePKPdf	PKPdf	16 52 39.5	-0.7
KHC				ePKPab	PKPab	16 53 18.4	0.0
KHC	Kasperske Hory	159.56	338	ePKPDF	PKPdf	16 52 40.1	-0.1
KHC				ePKPAB	PKPab	16 53 18.7	+0.3
KHC				AMS	AMS	18 01 00.0	
	comp=Z,500nm,20.6s						
KHC	Kasperske Hory	159.56	338	ePKIKP	PKPdf	16 52 40.1	-0.1
KHC				e		16 53 18.7	
KHC				MLR	MLR		
	comp=Z,500nm,20.6s						
SOP	Sopron	159.64	331	ePKPdf	PKPdf	16 52 38.1	-2.1
KKB	Krupnik	159.67	309	eP	PKPdf	16 52 51.2	+11
BEBN	Eben Emael	159.71	353	⇓PKP	PKPab	16 53 18.6	-0.3
BEBN				⇑pPKP	sPKPab	16 53 39.5	+6.0
CONA	Conrad Observa	159.74	332	ePKPdf	PKPdf	16 52 39.8	-0.7
	comp=Z,19nm,1.8s						
CONA				ePKPab	PKPab	16 53 19.9	+0.6
	comp=Z,18nm,1.4s						
GRA1	Grafenberg Arr	159.76	342	ePKPdf	PKPdf	16 52 40.2	-0.2
GRA1				ePKPab	PKPab	16 53 19.2	0.0
GRF	Grafenberg Arr	159.76	342	ePKIKP	PKPdf	16 52 40.2	-0.2
GRF				e		16 53 19.2	
GRFO	Grafenberg	159.76	342	ePKPdf	PKPdf	16 52 40.0	-0.3
GRFO				ePKPab	PKPab	16 53 19.2	0.0
GRFO	Grafenberg	159.76	342	ePKIKP	PKPdf	16 52 40.0	-0.3
GRFO				e		16 53 19.2	
MORH	Mrgy, Hungar	159.77	325	⇑ePKPdf	PKPdf	16 52 39.0	-1.4
GEC2	GERESS Array S	159.77	337	ePKPdf	PKPdf	16 52 39.7	-0.8
GEC2				ePKPab	PKPab	16 53 18.8	-0.6
GEC2	GERESS Array S	159.77	337	ePKIKP	PKPdf	16 52 39.7	-0.8
GEC2				e		16 53 18.8	
GERES	GERESS Array B	159.77	337	PKP	PKPdf	16 52 39.7	-0.8
	comp=Z,0.9nm,0.7s,baz=70,slow=1.6,SNR=9.4						
GERES				PKPab	PKPab	16 53 18.8	-0.6
	comp=Z,4.8nm,0.6s,baz=37,slow=5.5,SNR=12						
WET	Wettzell	159.78	339	PKIKP	PKPdf	16 52 40.0	-0.4
GEA0	GERESS Array S	159.78	337	ePKPdf	PKPdf	16 52 38.9	-1.6
UCC	Uccle	159.82	356	⇓PKP	PKPab	16 53 19.2	-0.2
MEM	Membach	159.86	352	⇓PKP	PKPab	16 53 19.2	-0.4
BCLA	Clavier	160.12	354	PKPdf	PKPab	16 53 20.4	-0.3
BCLA				x	x	16 53 24.3	
IDI	Anoyia	160.21	289	⇑iP	PKPdf	16 52 40.3	-1.1
IDI	Anoyia	160.21	289	PKP	PKPdf	16 52 40.3	-1.1
	comp=Z,13nm,0.9s,baz=53,slow=11,SNR=5.3						
IDI				PKPab	PKPab	16 53 20.6	-1.2
	comp=Z,14nm,0.8s,baz=276,slow=3.6,SNR=4.4						
ARSA	Arzberg	160.41	331	ePKPdf	PKPdf	16 52 40.3	-0.9
	comp=Z,15nm,1.6s						
ARSA				ePKPab	PKPab	16 53 22.2	0.0
	comp=Z,8.4nm,1.1s						
MOA	Molln	160.42	335	ePKPdf	PKPdf	16 52 40.3	-0.8
	comp=Z,12nm,1.3s						
MOA				ePKPab	PKPab	16 53 22.7	+0.5
	comp=Z,20nm,1.4s						
DIVS	Divibare	160.43	318	ePKPdf	PKPdf	16 52 40.7	-0.7
DOU	Dourbes	160.50	355	⇓PKP	PKPab	16 53 21.9	-0.5
DOU				⇑pPKP	sPKPab	16 53 42.9	+6.0
WLF	Walferdange	160.77	352	ePKPdf	PKPdf	16 52 41.3	-0.2
WLF				ePKPab	PKPab	16 53 23.3	-0.2
WLF	Walferdange	160.77	352	ePKP2	PKPab	16 53 24.2	+0.6
WLF	Walferdange	160.77	352	⇑PKP	PKPab	16 53 23.6	+0.1
SOKA	Soboth	161.07	331	ePKPdf	PKPdf	16 52 41.8	-0.1
	comp=Z,21nm,1.4s,SNR=6.3						
SOKA				ePKPab	PKPab	16 53 25.0	-0.1
	comp=Z,19nm,1.6s						
DOBS	Dobrina	161.31	329	ePKPdf	PKPdf	16 52 41.1	-1.0
AGG	Agios Georgios	161.33	302	ePKPdf	PKPdf	16 52 40.5	-1.9
AGG	Agios Georgios	161.33	302	ePKIKP	PKPdf	16 52 42.2	-0.2
KBA	Koelnbreinsper	161.41	335	ePKPdf	PKPdf	16 52 41.8	-0.6
	comp=Z,16nm,1.3s						
OBKA	Obir	161.41	332	ePKPdf	PKPdf	16 52 42.1	-0.2
	comp=Z,5.3nm,1.0s						
BLY	Banja Luka	161.53	324	ePKPdf	PKPdf	16 52 41.8	-0.6
MYKA	Terra Mystica	161.67	334	ePKPdf	PKPdf	16 52 42.3	-0.3
	comp=Z,17nm,1.7s						
MYKA				ePKPab	PKPab	16 53 28.2	+0.5
	comp=Z,14nm,0.7s						
BFO	Black Forest	161.71	346	ePKPab	PKPab	16 53 26.9	-0.9
BFO	Black Forest	161.71	346	ePKP2	PKPab	16 53 27.8	0.0
WATA	Walderalm	161.78	339	ePKPdf	PKPdf	16 52 42.1	-0.6
	comp=Z,2.6nm,0.6s						
WATA				i PKPab	PKPab	16 53 28.4	+0.1
	comp=Z,11nm,0.5s						
LJU	Ljubljana	161.79	331	ePKPdf	PKPdf	16 52 42.2	-0.5
WTTA	Wattenberg	161.83	338	ePKPdf	PKPdf	16 52 42.8	0.0
	comp=Z,16nm,1.1s						
WTTA				ePKPab	PKPab	16 53 28.9	+0.4
	comp=Z,27nm,1.6s						
TTG	Podgorica	161.84	315	ePKPab	PKPab	16 53 28.2	-0.4
TTG	Podgorica	161.84	315	ePKP2	PKPab	16 53 28.4	-0.2
RETA	Reutte	161.89	340	ePKPdf	PKPdf	16 52 42.5	-0.3
	comp=Z,13nm,1.6s						
RETA				ePKPab	PKPab	16 53 28.8	+0.1
	comp=Z,49nm,1.1s,SNR=8.4						
MOTA	Moosalm	161.92	340	ePKPdf	PKPdf	16 52 42.9	0.0
	comp=Z,8.1nm,1.1s						
MOTA				i PKPab	PKPab	16 53 28.7	-0.2
	comp=Z,42nm,1.0s						
ABTA	Abfaltersbach	161.99	336	ePKPdf	PKPdf	16 52 42.4	-0.5
	comp=Z,30nm,1.5s,SNR=7.0						
ABTA				ePKPab	PKPab	16 53 30.0	+0.9
	comp=Z,15nm,0.7s						
SQTA	Sankt Quirin	162.00	339	ePKPab	PKPab	16 53 29.6	+0.4
	comp=Z,36nm,1.1s,SNR=8.7						
ECH	Echery	162.04	349	ePKPdf	PKPdf	16 52 41.5	-1.4
ECH				ePKPab	PKPab	16 53 28.6	-0.6
ECH	Echery	162.04	349	ePKIKP	PKPdf	16 52 41.5	-1.4
ECH				e		16 53 28.6	
DAVA	Damuels	162.32	342	ePKPdf	PKPdf	16 52 42.7	-0.6
	comp=Z,14nm,1.6s						
DAVA				ePKPab	PKPab	16 53 31.0	+0.3
	comp=Z,67nm,1.5s						
FETA	Feichten	162.32	340	ePKPdf	PKPdf	16 52 42.9	-0.5
	comp=Z,24nm,1.6s						
FETA				ePKPab	PKPab	16 53 31.2	+0.5
	comp=Z,38nm,1.1s						
TOA0	Torodi Ar. Sit	162.55	179	ePKPdf	PKPdf	16 52 43.0	-1.3
TOA0				ePKPdf	PKPdf	16 52 43.9	-0.4
TOA0				ePKPab	PKPab	16 53 31.1	-1.1
TOA0				ePKPab	PKPab	16 53 31.2	-1.0
TOA0	Torodi Ar. Sit	162.55	179	P	PKPdf	16 52 44.6	+0.2
	SNR=7.2						
TORD	Torodi Ar. Bea	162.55	179	PKP	PKPdf	16 52 42.9	-1.4
	comp=Z,15nm,1.1s,baz=134,slow=8.4,SNR=28						
TORD				PKPab	PKPab	16 53 31.2	-1.0
	comp=Z,29nm,1.0s,baz=174,slow=3.1,SNR=16						
TORD				PP	PP	16 57 18.0	+2.8
	comp=Z,4.8nm,1.1s,baz=190,slow=6.4,SNR=4.7						
CLF	Chambon-Foret	162.68	359	ePKPdf	PKPdf	16 52 44.0	+0.5
DAVOX	Davos/Dischmat	162.79	341	PKP	PKPdf	16 52 43.1	-0.8
	comp=Z,6.8nm,0.9s,baz=265,slow=4.6,SNR=6.9						
DAVOX				PKPab	PKPab	16 53 31.6	-1.2
	comp=Z,25nm,0.7s,baz=298,slow=4.6,SNR=11						
FUORN	Ofenpass-Fuorn	162.82	340	ePKPab	PKPab	16 53 32.7	-0.3
TUE	Stuetta	163.21	342	ePKPdf	PKPdf	16 52 42.8	-1.5
TUE				ePKPab	PKPab	16 53 34.6	0.0
SENIN	Lac Senin/Sane	163.79	347	ePKPdf	PKPdf	16 52 44.1	-0.7
SENIN				ePKPab	PKPab	16 53 36.2	-1.0
BNI	Bardonecchia	165.18	347	ePKPdf	PKPdf	16 52 45.2	-0.8
BNI				ePKPab	PKPab	16 53 43.1	-0.1
BNI	Bardonecchia	165.18	347	ePKIKP	PKPdf	16 52 45.7	-0.3
TIP	Timpagrande	165.19	309	ePKPdf	PKPdf	16 52 46.3	+0.2
TIP				ePKPab	PKPab	16 53 43.3	-0.3
SSB	Saint Sauveur	165.28	353	ePKPdf	PKPdf	16 52 44.5	-1.5
SSB				ePKPab	PKPab	16 53 43.1	-0.5
SSB	Saint Sauveur	165.28	353	ePKIKP	PKPdf	16 52 47.1	+1.1
CUC	Castrocucco	165.36	313	ePKPdf	PKPdf	16 52 44.9	-1.3
PCAB	Cabril	166.38	33	ePKPdf	PKPdf	16 52 50.1	+3.1
PCAB	Cabril	166.38	33	ePKPab	PKPab	16 53 50.9	+2.3
POLO	Lamas de Olo	166.76	34	ePKPdf	PKPdf	16 52 50.5	+3.1
POLO	Lamas de Olo	166.76	34	ePKPab	PKPab	16 53 52.3	+2.0
PVRL	Vila Real	166.87	34	eLQ	LQ	16 52 58.5	
PBRG	Braganca	166.89	30	ePKPab	PKPab	16 53 51.2	+0.4
PVIS	Viseu	167.21	36	ePKPdf	PKPdf	16 52 50.5	+2.8
PVIS	Viseu	167.21	36	ePKPab	PKPab	16 53 53.6	+1.3
MVO	Moncorvo	167.28	32	ePKPdf	PKPdf	16 52 49.2	+1.5
MVO	Moncorvo	167.28	32	ePKPab	PKPab	16 53 53.0	+0.4
PCAS	Casmilo, Conde	167.37	39	ePKPdf	PKPdf	16 52 51.2	+3.5
MTE	Manteigas	167.62	36	ePKPdf	PKPdf	16 52 51.0	+3.0
PTOM	Tomar	167.72	41	ePKPdf	PKPdf	16 52 51.8	+3.8
PTOM	Tomar	167.72	41	ePKPab	PKPab	16 53 57.4	+2.9
PCBR	Castelo Branco	168.07	37	ePKPdf	PKPdf	16 52 48.8	+0.6
PCBR	Castelo Branco	168.07	37	ePKPab	PKPab	16 53 56.5	+0.5
PMTG	Montargil	168.20	42	ePKPdf	PKPdf	16 52 55.7	+7.4
PMTG	Montargil	168.20	42	ePKPab	PKPab	16 53 58.5	+1.8
PMRV	Marv??o	168.41	39	ePKPdf	PKPdf	16 52 49.5	+1.0
PMRV	Marv??o	168.41	39	ePKPab	PKPab	16 53 57.6	0.0
PNCL	Nicolau / Gran	168.63	47	ePKPdf	PKPdf	16 52 50.5	+1.9
PNCL	Nicolau / Gran	168.63	47	ePKPab	PKPab	16 53 58.8	+0.2
PESTR	Estremoz	168.70	41	ePKPdf	PKPdf	16 52 50.2	+1.5
PESTR	Estremoz	168.70	41	ePKPab	PKPab	16 54 02.3	+3.4
PTEO	Sao Teotonio	168.84	49	ePKPdf	PKPdf	16 52 52.1	+3.3
MESJ	Messejana	168.99	47	ePKPdf	PKPdf	16 52 47.8	-1.1
MESJ				AMS	AMS	18 11 08.5	
	comp=Z,338nm,23.4s						
MESJ	Messejana	168.99	47	ePKPdf	PKPdf	16 52 51.0	+2.1
MESJ	Messejana	168.99	47	ePKPab	PKPab	16 53 59.9	-0.3
MESJ	Messejana	168.99	47	ePKIKP	PKPdf	16 52 47.7	-1.1
MORF	Marmelete	169.02	50	ePKPdf	PKPdf	16 52 47.8	-1.3
MORF				AMS	AMS	18 06 51.4	
	comp=Z,355nm,19.8s						
MORF	Marmelete	169.02	50	ePKPdf	PKPdf	16 52 51.0	+2.0
MORF	Marmelete	169.02	50	ePKPab	PKPab	16 53 58.6	-1.9
MORF	Marmelete	169.02	50	ePKIKP	PKPdf	16 52 47.7	-1.3
PBEJ	Beja	169.09	45	ePKPdf	PKPdf	16 52 51.0	+2.0
PBDV	Barranco-do-Ve	169.53	49	ePKPdf	PKPdf	16 52 51.3	+2.0
PVAQ	Vaqueiros	169.57	47	ePKPdf	PKPdf	16 52 50.8	+1.5
PAB	San Pablo	169.78	28	ePKPdf	PKPdf	16 52 50.1	+0.7
PAB	San Pablo	169.78	28	ePKIKP	PKPdf	16 52 50.6	+1.2
ESDC	Sonseca Array	169.82	27	PKP	PKPdf	16 52 50.3	+0.9
	comp=Z,5.4nm,0.9s,baz=349,slow=2.5,SNR=24						
ESDC				PKPab	PKPab	16 54 03.6	-0.2
	comp=Z,3.9nm,0.7s,baz=322,slow=3.9,SNR=9.6						
ESDC				PP	PP	16 57 54.2	+0.9
	comp=Z,1.4nm,0.8s,baz=343,slow=5.2,SNR=5.8						
ESLA	Sonseca Array	169.82	27	ePKPdf	PKPdf	16 52 49.9	+0.5
ES19	SONSECA Array	169.82	26	ePKPdf	PKPdf	16 52 49.7	+0.3
ES19				ePKPab	PKPab	16 54 02.8	-1.0
TAM	Tamanrasset	171.51	203	ePKPdf	PKPdf	16 52 51.3	+0.4
TAM	Tamanrasset	171.51	203	ePKIKP	PKPdf	16 52 51.3	+0.4
KEST	Kesra	172.00	311	PKP	PKPdf	16 52 51.0	+0.3
	comp=Z,5.8nm,0.8s,baz=182,slow=3.2,SNR=7.2						
KEST				PKPab	PKPab	16 54 13.9	+0.2
	comp=Z,10nm,0.8s,baz=78,slow=1.6,SNR=5.6						
KEST				PP	PP	16 58 06.3	+1.4
	comp=Z,4.6nm,1.1s,baz=252,slow=6.9,SNR=4.6						
MDT	Midelt	174.04	67	PKP	PKPdf	16 52 52.7	+1.0
	comp=Z,17nm,0.9s,baz=3.1,slow=0.3,SNR=22						
MDT				PKPab	PKPab	16 54 23.4	+0.3
	comp=Z,4.5nm,1.1s,baz=348,slow=7.3,SNR=2.6						

IDC ***18*** *16:47:42.2±3.4, 11°.31S×166°.27E, h124km±27km, mb3.5/8, mb1 3.6/10, mb1mx3.4/44, mbtmp3.9/10, Error ellipse: s-maj=27.7km s-min=18.5km az=55.0*

ISCJB ***18*** *16:47:43.6±1.0, 11°.4S±0°.1×166°.2E±0°.1, h150km, Error ellipse: s-maj=19.0km s-min=10.5km az=41.7*

ISC 18 16:47:45.0±1.1**, 11°.5S**±0°.1×**166°.1E**±0°.1**, h150**km**, n10, σ1s.95**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.43	288	P	Pn	16 49 16.1	-1.3
	7.9nm,0.3s,baz=156,slow=6.6,SNR=7.6						
HNR				S	Sn	16 50 28.2	-1.6
	baz=183,slow=19,SNR=1.4						
DZM	Mont Dzumac	10.49	178	P	Pn	16 50 11.7	0.0
	0.9nm,0.3s,baz=322,slow=10,SNR=17						
DZM				S	Sn	16 52 04.2	-3.6
	baz=202,slow=19,SNR=1.7						
CTA	Charters Tower	20.92	244	P	P	16 52 18.1	+2.2
	4.9nm,1.0s,baz=77,slow=14,SNR=4.6						
WRA	Warramunga Arr	31.68	251	P	P	16 53 56.1	+1.6
	2.2nm,0.8s,baz=83,slow=9.0,SNR=19						
RPZ	Rata Peaks	32.36	173	P	P	16 54 02.0	+1.8
	2.0nm,0.4s,baz=357,slow=6.6,SNR=4.5						
ASAR	Alice Springs	32.92	244	P	P	16 54 05.5	+0.1
	0.9nm,0.7s,baz=65,slow=10.0,SNR=16						
FITZ	Fitzroy Crossi	39.62	256	P	P	16 55 04.0	+1.8
	2.8nm,0.8s,baz=83,slow=8.1,SNR=4.1						
CMAR	Chiang Mai Arr	72.65	294	P	P	16 58 57.7	+0.9
	0.4nm,0.7s,baz=136,slow=5.8,SNR=4.6						
ILAR	Eielson Array	83.84	18	P	P	16 59 55.8	-1.6
	0.2nm,0.5s,baz=220,slow=5.4,SNR=4.5						
MKAR	Makanchi Array	94.13	317	P	P	17 00 46.1	-0.5
	0.2nm,0.5s,baz=101,slow=5.6,SNR=3.9						

IDC ***18*** *16:49:38.8±3.4, 5°.52S×105°.58E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/63, mbtmp3.7/5, Error ellipse: s-maj=154.8km s-min=22.2km az=57.0*

DJA ***18*** *16:50:05.9±1.2, 5°S±10°×10°6E±°, h26km±15km, M3.5/6, MLv3.5/6*

ISC 18 16:49:59.4±0.9**, 5°.0S**±0°.1×**106°.41E**±0°.08**, h150**km**, n14, σ2s.53**/17**, mb3.5**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLSI	Bandar Lampung	1.21	254	P	Pn	16 50 26.1	0.0
KLI	Kotabumi	1.56	276	P	Pn	16 50 31.9	+2.3
SKJI	Sukabumi	1.96	176	P	Pn	16 50 36.2	+2.1
KASI	Kota Agung	1.97	256	P	Pn	16 50 35.4	+1.2
KASI				S	Sn	16 50 59.0	-1.9
MDSI	Maura Dua	2.29	284	P	Pn	16 50 41.7	+3.7
LWLI	Liwa	2.35	270	P	Pn	16 50 41.0	+2.2
LWLI				S	Sn	16 51 09.6	+0.5
CISI	Cisompet, Garu	2.86	151	P	Pn	16 50 48.3	+3.2
CISI				S	Sn	16 51 23.0	+2.5
LHSI	Lahat	3.12	293	P	Pn	16 50 51.7	+3.3
MNAI	Manna	3.51	281	P	Pn	16 50 57.5	+4.1
WRA	Warramunga Arr	30.95	121	P	P	16 56 01.8	-0.8
	0.7nm,0.8s,baz=310,slow=8.9,SNR=4.8						
ASAR	Alice Springs	32.32	128	P	P	16 56 13.1	-1.5
	0.7nm,0.8s,baz=301,slow=7.7,SNR=9.2						
STKA	Stephens Creek	42.39	133	P	P	16 57 37.7	-1.5
	2.4nm,0.7s,baz=319,slow=9.3,SNR=3.6						
SONM	Songino Array	52.65	360	P	P	16 58 58.9	+0.7
	0.5nm,0.9s,baz=184,slow=4.3,SNR=3.5						
MKAR	Makanchi Array	55.85	340	P	P	16 59 18.8	-2.5
	0.3nm,0.5s,baz=156,slow=8.7,SNR=4.7						

IDC 18 16:51:56.1±5.1**, 31°.23S**×**177°.49W, h0**km**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/34**, mbtmp3.7**/3**, Error ellipse: s-maj=199.9km s-min=56.3km az=161.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	34.37	280	P	P	16 58 45.8	+0.9
	3.9nm,1.1s,baz=124,slow=3.6,SNR=3.1						
ASAR	Alice Springs	43.50	268	P	P	17 00 01.4	-0.1
	0.2nm,0.6s,baz=107,slow=7.2,SNR=5.6						
WRA	Warramunga Arr	44.57	273	P	P	17 00 09.0	-1.1
	0.4nm,0.5s,baz=110,slow=8.1,SNR=11						
FINES	FINESS Array B	146.07	340	PKPbc	PKPdf	17 11 36.5	+0.2
	1.5nm,0.8s,baz=70,slow=6.1,SNR=5.1						

IDC ***18*** *16:58:40.0±4.5, 23°.19N×121°.14E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/53, mbtmp3.4/3, Error ellipse: s-maj=327.1km s-min=27.5km az=60.0*

TAP ***18*** *16:58:45.3, 22°.61N×119°.88E, h46km, ML3.7, B*

ISC 18 16:58:45.2±1.3**, 22°.61N**±0°.03×**119°.86E**±0°.03**, h23**km±11km**, n106, σ0s.83**/143**, mb3.4**/3**, 4C-27D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAU	Kaohsiung	0.42	95	eP	Pn	16 58 55.6	-0.2
	baz=96						
KAU				eS	Sn	16 59 03.6	+0.8
	baz=96						
SNJT	Kaohsiung City	0.46	72	eP	Pn	16 58 56.1	-0.3
	baz=68						
TWP	Hsiaoliuchiu	0.54	119	eP	Pn	16 58 57.4	0.0
	baz=127						
TWP				eS	Sn	16 59 06.1	+0.3
	baz=127						
WLCH	Liuqiu	0.55	118	eP	Pn	16 58 57.5	0.0
	baz=126						
WLCH				eS	Sn	16 59 06.4	+0.4
	baz=126						
TAI1	Yung-k'ang	0.55	38	P	Pn	16 58 57.6	+0.1
	baz=38						
TAI1				eS	Sn	16 59 06.5	+0.5
	baz=38						
TWM1	Shoushan	0.56	68	eP	Pn	16 58 58.3	+0.4
	baz=67						
SGLT	Jiouru	0.60	79	⇓eP	Pn	16 58 58.2	0.0
	baz=79						
SCLT	Jiali	0.64	29	eP	Pn	16 58 58.9	0.0
	baz=28						
SCLT				eS	Sn	16 59 08.5	0.0
	baz=28						
CHN3	Shinhua	0.66	45	P	Pn	16 58 59.2	+0.1
	baz=44						
CHN3				eS	Sn	16 59 08.8	-0.1
	baz=44						
SSPT	Xinbi	0.67	101	eP	Pn	16 58 58.9	-0.4
	baz=101						
WDGT	Dungji	0.67	344	⇑iP	Pb	16 58 58.4	+0.1
	baz=343						
WDGT				eS	Sb	16 59 07.8	+0.6
	baz=343						
MASBT	Mashibuluo	0.72	90	⇓P	Pb	16 58 59.3	+0.4
	baz=89						
MASBT				eS	Sn	16 59 09.9	-0.4
	baz=89						
VCHM	Qimei	0.72	327	⇑P	Pb	16 58 58.9	-0.1
	baz=325						
VCHM				eS	Sb	16 59 08.2	-0.2
	baz=325						
SSD	Sandimen	0.73	79	⇓iP	Pn	16 58 59.7	-0.4
	baz=79						
SSD				eS	Sb	16 59 09.6	+0.9
	baz=79						
SCZT	Fangliau	0.74	108	⇓eP	Pb	16 58 59.7	+0.2
	baz=109						
CHN8	Yiju	0.80	24	eP	Pn	16 59 01.2	+0.1
	baz=11						
CHN8				eS	Sn	16 59 12.4	+0.1
	baz=11						
SGST	Jiashian	0.82	55	⇓P	Pb	16 59 01.0	+0.3
	baz=54						
SLGT	Liugui	0.82	62	⇓eP	Pb	16 59 00.7	-0.1

	baz=61						
CHN1	Nanshi	0.84	47	⇓iP	Pb	16 59 01.2	0.0
	baz=46						
CHN1				eS	Sb	16 59 12.1	0.0
	baz=46						
SNST	Tainan City	0.85	44	⇓iP	Pb	16 59 01.4	+0.2
	baz=42						
TWK	Hsinying	0.88	41	⇓P	Pn	16 59 01.7	-0.4
	baz=41						
TWK				eS	Sb	16 59 13.5	+0.4
	baz=41						
PHUB	P'eng-hu	0.94	344	⇑P	Pn	16 59 02.0	-1.0
	baz=343						
PHUB				eS	Sb	16 59 12.6	-2.2
	baz=343						
EAST	Anshuo	0.94	104	⇓iP	Pn	16 59 02.8	-0.3
	baz=104						
WTP	Ta-pu	0.94	48	⇓iP	Pn	16 59 02.4	-0.7
	baz=39						
TPUB	Ta-pu	0.99	46	⇓eP	Pn	16 59 02.9	-0.9
	baz=45						
TPUB				eS	Sb	16 59 14.8	-1.6
	baz=45						
TAW	Tawu	0.99	104	eP	Pn	16 59 03.2	-0.5
	baz=105						
PNG	Penghu	0.99	344	⇑iP	Pn	16 59 02.9	-0.9
	baz=352						
STYT	Tauyuan	1.00	56	eP	Pn	16 59 03.2	-0.6
	baz=55						
CHN4	Tsaushan	1.00	42	⇓P	Pn	16 59 03.3	-0.6
	baz=41						
CHN4				eS	Sn	16 59 16.5	-0.8
	baz=41						
HEN	Hengchun	1.01	126	eP	Pn	16 59 03.3	-0.6
	baz=116						
HEN				eS	Sn	16 59 17.1	-0.4
	baz=116						
ECL	Taimali	1.01	90	⇓P	Pn	16 59 03.7	-0.3
	baz=90						
CHY	Chiayi	1.03	30	eP	Pn	16 59 04.1	-0.1
	baz=18						
WSF	Szhu	1.08	18	eP	Pn	16 59 04.3	-0.6
	baz=9.0						
WSF				eS	Sn	16 59 18.4	-0.8
	baz=9.0						
CHN2	Minshiung	1.08	32	eP	Pn	16 59 04.4	-0.6
	baz=41						
TWK1	Hengchun	1.10	127	⇓P	Pn	16 59 04.8	-0.4
	baz=117						
TWK1				S	Sn	16 59 18.6	-1.1
	baz=117						
TWKBT	Hengchun	1.11	127	⇓P	Pn	16 59 04.8	-0.5
	baz=117						
TWKBT				S	Sn	16 59 18.8	-1.1
	baz=117						
TWG	Pinlang	1.14	79	⇓eP	Pn	16 59 05.8	0.0
	baz=79						
TWG				eS	Sn	16 59 19.4	-1.3
	baz=79						
TWGBT	Beinan	1.15	79	⇓P	Pn	16 59 05.7	-0.1
	baz=79						
TWGBT				eS	Sn	16 59 20.0	-0.9
	baz=79						
TSEB	Hengchuen, Pin	1.20	126	eP	Pn	16 59 05.0	-1.5
	baz=118						
TSEB				eS	Sn	16 59 19.9	-2.2
	baz=118						
TTN	Taitung	1.20	83	eP	Pb	16 59 07.5	+0.3
	baz=83						
ELDTW	Lidau	1.22	61	P	Pn	16 59 06.5	-0.4
	baz=51						
CHN5	Tsauling	1.24	37	⇓iP	Pn	16 59 06.6	-0.6
	baz=37						
CHN5				S	Sn	16 59 22.2	-1.1
	baz=37						
WDLH	Douliu	1.25	30	eP	Pn	16 59 07.0	-0.2
	baz=40						
WGK	Gukeng	1.25	31	⇓P	Pn	16 59 07.1	-0.2
	baz=40						
WGK				eS	Sn	16 59 22.7	-0.8
	baz=40						
WTCT	Ta-ch'eng	1.31	17	eP	Pb	16 59 08.8	-0.2
	baz=17						
WTCT				eS	Sn	16 59 23.8	-1.0
	baz=17						
RLNB	Erlin	1.36	20	eP	Pn	16 59 08.6	-0.1
	baz=11						
WHYT	Xinyi Township	1.42	40	eP	Pn	16 59 09.2	-0.5
	baz=47						
WJS	Zhushan	1.45	33	eP	Pn	16 59 09.8	-0.3
	baz=32						
WNT	Mingjian	1.48	31	eP	Pn	16 59 09.9	-0.4
	baz=39						
TWF1	Yuli	1.52	61	⇓iP	Pn	16 59 11.0	0.0
	baz=53						
TWF1				eS	Sn	16 59 28.6	-1.5
	baz=53						
YULB	Yu-li	1.54	59	⇓P	Pn	16 59 11.1	-0.1
	baz=59						
YULB				eS	Sn	16 59 29.0	-1.6
	baz=59						
SSLB	Suanglung	1.55	40	⇓P	Pn	16 59 10.9	-0.5
	baz=50						
SSLB				eS	Sn	16 59 28.6	-2.2
	baz=50						
TYC	Yuchr	1.58	35	⇓eP	Pn	16 59 11.7	-0.1
	baz=35						
TYC				eS	Sn	16 59 29.6	-2.0
	baz=35						
SMLT	Sun Moon Lake	1.59	37	eP	Pn	16 59 11.9	-0.2
	baz=47						
SMLT				eS	Sn	16 59 30.6	-1.4
	baz=47						
EHY	Hungye	1.62	56	eP	Pn	16 59 12.4	+0.1
	baz=56						
VWDT	VWDT	1.64	46	⇓eP	Pn	16 59 12.6	-0.1
	baz=45						
VWDT				eS	Sn	16 59 31.6	-1.5
	baz=45						
LAY	Lan-yu	1.67	110	eP	Pn	16 59 11.7	-1.3
	baz=109						
LAY				eS	Sn	16 59 30.7	-3.1
	baz=109						
HGSD	Ruisui	1.69	58	⇓eP	Pn	16 59 14.2	+0.9
	baz=47						
TCU	Taichung	1.71	26	eP	Pn	16 59 13.8	+0.2
	baz=25						
EGFH	Guangfu	1.79	54	eP	Pn	16 59 14.8	+0.1
	baz=53						
OWD	Renai	1.81	42	eP	Pn	16 59 15.0	0.0
	baz=41						
WDJ	Dajia District	1.88	22	eP	Pn	16 59 16.7	+0.9
	baz=13						
ESL	Shilin	1.88	50	eP	Pn	16 59 16.1	+0.1
	baz=50						
CHGB	Renai	1.89	40	eP	Pn	16 59 16.4	+0.2
	baz=48						
CHGB				eS	Sn	16 59 37.9	-1.6
	baz=48						
TWQ1	Liyutan	1.93	26	eP	Pn	16 59 16.8	+0.3
	baz=25						
WHP	Taichung City	1.94	31	eP	Pn	16 59 17.1	+0.3
	baz=30						
NSY	Sanyi	1.98	25	eP	Pn	16 59 19.0	+1.6
	baz=24						
WHF	Hehuan Shan	2.00	40	eP	Pn	16 59 19.0	+1.0
	baz=39						
TDCB	Techi	2.03	36	eP	Pn	16 59 18.1	0.0
	baz=45						
TWT	Tachien	2.04	36	eP	Pn	16 59 18.5	+0.2
	baz=44						
TWT				eS	Sn	16 59 42.5	-0.5
	baz=44						
TWD	Chiawan	2.17	47	eP	Pn	16 59 20.3	+0.4
	baz=56						
ETLH	Xiulin Townshi	2.18	43	eP	Pn	16 59 21.5	+1.4
	baz=42						
KNM	Kinmen	2.23	324	eP	Pn	16 59 21.2	+0.5
	baz=320						
NACB	Ninganchiao	2.23	45	eP	Pn	16 59 21.2	+0.4
	baz=57						
NSTT	Nanjuang	2.27	27	eP	Pn	16 59 21.3	0.0
	baz=26						
KNMB	Chin-men Tao	2.29	324	eP	Pn	16 59 20.7	-0.8
	baz=322						
LIOB	Emei	2.29	27	eP	Pn	16 59 20.6	-1.0
	baz=26						
NNSB	Datong	2.29	37	eP	Pn	16 59 22.0	+0.3
	baz=26						
NNS	Nan Shan	2.29	37	eP	Pn	16 59 22.5	+0.7
	baz=25						
VWUC	VWUC	2.40	351	eP	Pn	16 59 22.6	-0.5
	baz=350						
NSK	Sanguang	2.48	33	eP	Pn	16 59 24.9	+0.7
	baz=24						
YHNB	Yeheng	2.48	34	⇓eP	Pn	16 59 24.6	+0.4
	baz=24						
NDT	Datong Townshi	2.50	37	eP	Pn	16 59 25.1	+0.6
	baz=24						
ENA	Nanau	2.50	43	eP	Pn	16 59 25.0	+0.4
	baz=53						
ENTT	Nioudou	2.56	37	eP	Pn	16 59 26.1	+0.9
	baz=24						
WLTB	Daxi	2.57	29	eP	Pn	16 59 25.4	-0.1
	baz=28						
QZH	Quanzhou	2.60	334	Pn	Pn	16 59 26.1	+0.3
QZH				Sn	Sb	17 00 02.3	-0.2
QZH				smax	smax		
	comp=N,30nm,0.6s						
QZH				smax	smax		
	comp=E,66nm,0.6s						
NWLT	Wulai	2.63	35	eP	Pn	16 59 26.8	+0.4
	baz=34						
TWE	Neicheng	2.68	38	eP	Pn	16 59 28.0	+1.1
	baz=23						
TWC	Suao	2.70	42	eP	Pn	16 59 28.4	+1.2
	baz=43						
TWC				eS	Sn	16 59 59.9	+0.7
	baz=43						
EOS1	EOS1	2.84	47	eP	Pn	16 59 31.1	+2.0
	baz=47						
TWA	Mucha	2.84	33	eP	Pn	16 59 29.1	0.0
	baz=20						
EGS		2.93	40	eP	Pn	16 59 32.2	+1.9
	baz=50						
YM04	YM04	2.96	31	eP	Pn	16 59 31.4	+0.6
	baz=30						
TIPB	Shuangxi	2.96	37	eP	Pn	16 59 31.4	+0.5
	baz=24						
YM01	YM01	2.97	31	eP	Pn	16 59 30.8	-0.2
	baz=18						
YM05	YM05	2.99	31	eP	Pn	16 59 31.1	-0.2
	baz=18						
YM11	YM11	2.99	31	eP	Pn	16 59 31.0	-0.3
	baz=18						
TWB1	Santiao Chiao	3.08	39	eP	Pn	16 59 33.3	+0.8
	baz=25						
YOJ	Yonaguni jima	3.43	57	eP	Pn	16 59 38.4	+1.1
	baz=58						
VDOS	Pratas Island	3.47	237	eP	Pn	16 59 39.0	+1.1
	baz=239						
MATB	Ma-tsu	3.53	1	eP	Pn	16 59 38.6	0.0
	baz=1.0						
HHC	Hu-ho-hao-te	19.49	341	eP	Pn	17 03 12.8	+0.8
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.3s						
MKAR	Makanchi Array	38.65	318	P	P	17 06 08.2	+1.2
	comp=Z,0.6nm,0.8s,baz=109,slow=9.5,SNR=4.7						
WRA	Warramunga Arr	44.59	160	P	P	17 06 55.3	-0.5
	comp=Z,0.4nm,0.9s,baz=342,slow=8.8,SNR=4.4						
ASAR	Alice Springs	47.98	163	P	P	17 07 22.4	0.0
	comp=Z,0.3nm,0.6s,baz=348,slow=6.8,SNR=11						

ISCJB ***18*** *16:58:58.2±0.5, 33°.71N±0°.05×135°.00E±0°.04, h46km±4km, mb3.3/7, Error ellipse: s-maj=8.8km s-min=5.3km az=165.9*

JMA ***18*** *16:58:59.1, 33°.73N×135°.01E, h39km±1km, M3.5*

JMA Felt I J1.

IDC ***18*** *16:59:00.0±2.3, 33°.75N×135°.02E, h46km±23km, mb3.2/7, mb1 3.4/10, mb1mx3.3/59, mbtmp3.4/10, ML3.2/3, Error ellipse: s-maj=22.7km s-min=19.5km az=98.0*

ISC 18 16:58:58.9±0.9**, 33°.69N**±0°.06×**134°.99E**±0°.03**, h35**km±3km**, n21, σ1s.16**/30**, mb3.4**/7**, 5C-3D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	Minabe	0.34	63	⇑P	Pn	16 59 07.2	-0.1
JWM				S	Sn	16 59 13.0	-0.5
JAI	Aioi	0.46	283	⇓P	Pn	16 59 09.4	+0.5
JAI				S	Sn	16 59 16.5	+0.6
JTNC	Tanabenakahech	0.53	76	P	Pn	16 59 09.8	-0.3
JTNC				S	Sn	16 59 17.1	-0.8
JWY	Kouya	0.73	44	⇑P	Pn	16 59 12.3	-0.4
JAJ2	Tsuna	0.73	353	⇑P	Pn	16 59 12.6	-0.1
JAJ2				S	Sn	16 59 22.1	-0.5
JMN	Monobe	0.92	272	⇓P	Pn	16 59 15.7	+0.3
JMN				S	Sn	16 59 27.4	-0.1
JJS	Sakaide	1.11	308	⇓P	Pn	16 59 17.8	-0.1
JHE	Heguri	1.12	31	⇑P	Pn	16 59 17.6	-0.5
JHE				S	Sn	16 59 31.7	-0.5
JKN2	Miekihoku	1.20	63	⇑P	Pn	16 59 18.5	-0.7
JKS	Kasai	1.29	355	P	Pn	16 59 20.1	-0.3
JKS				S	Sn	16 59 35.2	-1.3
JNU	Nakatsue	3.48	262	P	Pn	16 59 51.5	+0.9
	3.8nm,0.3s,baz=40,slow=5.9,SNR=55						
JNU				S	Sn	17 00 28.1	-2.6
	2.6nm,0.3s,baz=349,slow=8.2,SNR=4.6						
MAT	Matsushiro	3.88	42	P	Pn	16 59 57.0	+1.0
MAT				S	Sn	17 00 44.3	+4.0
MJAR	Matsushiro Arr	3.88	42	P	Pn	16 59 57.2	+1.1
	0.7nm,0.3s,baz=327,slow=33,SNR=32						
MJAR				Lg	Lg	17 00 54.1	
	baz=220,slow=26,SNR=3.0						
KSRS	Korea Array	6.87	305	P	Pn	17 00 37.5	+0.4
	0.4nm,0.3s,baz=121,slow=15,SNR=5.0						
SONM	Songino Array	25.68	312	P	P	17 04 26.0	+0.5
	0.4nm,0.6s,baz=108,slow=9.3,SNR=3.6						
MKAR	Makanchi Array	41.55	305	P	P	17 06 43.6	+0.6
	0.6nm,0.6s,baz=90,slow=10,SNR=5.6						
WRA	Warramunga Arr	53.34	181	P	P	17 08 14.7	0.0
	0.6nm,0.7s,baz=355,slow=7.9,SNR=9.0						
ILAR	Eielson Array	55.08	31	P	P	17 08 27.2	+0.3
	0.6nm,1.0s,baz=265,slow=6.2,SNR=4.1						
ASAR	Alice Springs	57.05	181	P	P	17 08 42.3	+0.9
	0.3nm,0.8s,baz=9.3,slow=12,SNR=5.4						
YKA	Yellowknife Ar	69.26	28	P	P	17 10 00.2	-1.8
	0.1nm,0.5s,baz=298,slow=6.5,SNR=4.4						
AKASG	Malin Array Be	73.61	320	P	P	17 10 27.9	-0.5
	0.1nm,0.4s,baz=52,slow=6.3,SNR=2.8						

ATH ***18*** *17:01:51.9, 40°.81N×21°.36E, h9km±2km, ML3.1/3, Error ellipse: s-maj=3.0km s-min=1.4km az=318.0*

SKO ***18*** *17:01:51.2, 40°.77N×21°.38E, h15km, M2.6, ML3.0*

THE ***18*** *17:01:52.2, 40°.82N×21°.36E, h4km, ML2.6/10, Error ellipse: s-maj=1.1km s-min=0.6km az=149.0*

ISCJB ***18*** *17:01:52.2±0.3, 40°.80N±0°.02×21°.40E±0°.02, h4km±2km, Error ellipse: s-maj=2.8km s-min=2.6km az=21.9*

BEO ***18*** *17:01:55.7±0.3, 41°.00N×20°.98E, h5km, ML2.6/9*

SOF ***18*** *17:02:00.8, 40°.97N×22°.08E, h10km*

ISC 18 17:01:52.6±0.8**, 40°.79N**±0°.02×**21°.39E**±0°.02**, h6**km±4km**, n65, σ1s.01**/93**, 9C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.01	244	P	Pg	17 01 53.7	-0.1
FNA				S	Sg	17 01 54.8	+0.1
FNA				AML	AML	17 01 54.9	
FNA				AML	AML	17 01 55.0	
FNA	Florina	0.01	244	P	Pg	17 01 53.7	-0.1
FNA				S	Sg	17 01 54.8	+0.1
FNA	Florina	0.01	244	⇓iPg	Pg	17 01 53.7	-0.1
FNA				iSg	Sg	17 01 54.8	+0.1
BIA	Bitola	0.24	348	iPg	Pg	17 01 57.6	+0.4
BIA				iSg	Sg	17 02 02.0	+1.6
BIA				eLg	Lg	17 02 02.9	
	comp=N,2μm,0.3s						
BIA				eLg	Lg	17 02 03.2	
	comp=E,1μm,0.2s						
NEST	Nestorio	0.45	215	P	Pg	17 02 00.5	-0.9
NEST				S	Sg	17 02 07.7	+0.4
NEST				AML	AML	17 02 08.7	
	comp=E,1756μm,0.4s						
NEST				AML	AML	17 02 11.0	
	comp=N,1633μm,0.5s						
NEST	Nestorio	0.45	215	P	Pg	17 02 00.4	-0.9
NEST				S	Sg	17 02 08.1	+0.8
OHR	Ohrid	0.55	306	iPg	Pg	17 02 02.6	-0.6
OHR				iSg	Sb	17 02 11.8	-1.0
OHR				eLg	Lg	17 02 13.2	
	comp=N,686nm,0.4s						
OHR				eLg	Lg	17 02 13.8	
	comp=E,890nm,0.3s						
KZN	Kozani	0.56	149	P	Pg	17 02 03.1	-0.3
KZN				S	Sg	17 02 11.7	+1.0
KZN				AML	AML	17 02 13.8	
	comp=N,4663μm,0.3s						
KZN				AML	AML	17 02 14.0	
	comp=E,3170μm,0.5s						
KRUS	Krusevo	0.59	350	⇑iPg	Pg	17 02 03.5	-0.4
KRUS				iSg	Sb	17 02 12.5	-1.4
KRUS				eLg	Lg	17 02 12.8	
	comp=E,648nm,0.6s						
KRUS				eLg	Lg	17 02 12.8	
	comp=N,428nm,0.4s						
PENT	Pentalofos	0.62	198	P	Pg	17 02 04.0	-0.5
GRG	Griva	0.79	77	P	Pg	17 02 07.3	-0.4
GRG	Griva	0.79	77	P	Pg	17 02 07.3	-0.4
GRG				S	Sb	17 02 19.2	-0.4
GRG	Griva	0.79	77	⇑iPg	Pg	17 02 07.3	-0.4
GRG				iSg	Sg	17 02 18.3	+0.4
KPRO	Kipourio	0.83	181	P	Pg	17 02 08.3	-0.2
KPRO	Kipourio	0.83	181	P	Pg	17 02 08.3	-0.2
KPRO				S	Sb	17 02 21.1	+0.2
VAY	Valandovo	1.04	59	iPg	Pg	17 02 11.9	-0.6
VAY				iSg	Sb	17 02 26.5	-0.3
VAY				eLg	Lg	17 02 28.1	
	comp=N,187nm,0.6s						
VAY				eLg	Lg	17 02 31.6	
	comp=E,272nm,0.6s						
LIT	Litokhoron	1.09	129	P	Pg	17 02 12.8	-0.6
LIT	Litokhoron	1.09	129	P	Pg	17 02 12.6	-0.8
LIT				S	Sn	17 02 29.4	-0.2
LIT	Litokhoron	1.09	129	iPg	Pg	17 02 12.5	-0.8
LIT				iSg	Sg	17 02 26.5	-0.9
STIP	Stip	1.09	33	iPg	Pn	17 02 15.5	+1.2
STIP				iSg	Sn	17 02 33.5	+3.8
STIP				eLg	Lg	17 02 34.2	
	comp=E,52nm,0.3s						
STIP				eLg	Lg	17 02 35.2	
	comp=N,48nm,0.3s						
PHP	Peshkopia	1.15	322	P	Pg	17 02 12.9	-1.6
KNT	Kendrikon	1.20	71	P	Pg	17 02 14.9	-0.7
KNT	Kendrikon	1.20	71	P	Pg	17 02 14.9	-0.7
KNT				S	Sn	17 02 32.0	-0.5
KNT	Kendrikon	1.20	71	iPg	Pg	17 02 14.7	-0.9
KNT				iSg	Sn	17 02 31.7	-0.8
THE	Thessaloniki	1.21	97	P	Pn	17 02 16.2	+0.3
THE				S	Sn	17 02 33.4	+0.8
THE	Thessaloniki	1.21	97	iPg	Pg	17 02 14.4	-1.3
TIR	Tirane	1.28	296	⇑iP	Pn	17 02 16.1	-0.8
TIR	Tirane	1.28	296	S	Sn	17 02 34.8	+0.4
HORT	Hortiatis	1.31	98	P	Pn	17 02 16.6	-0.9
HORT				S	Sn	17 02 35.9	+0.5
SRN	Sarande	1.40	230	P	Pn	17 02 17.9	-0.6
SOH	Sokhos	1.49	88	P	Pn	17 02 19.9	0.0
SOH				S	Sg	17 02 40.6	+0.1
SOH	Sokhos	1.49	88	iPg	Pn	17 02 20.0	+0.1
SOH				iSg	Sg	17 02 40.7	+0.2
IGT	Igoumenitsa	1.49	213	ePg	Pg	17 02 23.6	+2.4
IGT				eSg	Sg	17 02 44.9	+4.4
IGT	Igoumenitsa	1.49	213	P	Pn	17 02 18.9	-1.0
IGT				S	Sg	17 02 40.6	+0.1
KKB	Krupnik	1.67	49	iPn	Pn	17 02 22.3	0.0
KKB				iSn	Sb	17 02 44.9	-0.1
KKB	Krupnik	1.67	49	iP	Pn	17 02 22.5	+0.2
AGG	Agios Georgios	1.91	157	P	Pn	17 02 25.4	-0.2
MMB	Musomiste	1.94	65	iPn	Pn	17 02 26.6	+0.6
MMB				iSn	Sb	17 02 51.5	-1.2
MMB	Musomiste	1.94	65	iP	Pn	17 02 26.5	+0.5
BARS	Barje	2.05	9	ePn	Pn	17 02 27.9	+0.3
PDG	Podgorica	2.29	316	⇑iP	Pb	17 02 33.8	-0.5
PDG	Podgorica	2.29	316	S	Sb	17 03 01.7	-1.1
VTS	Vitosha	2.29	36	ePn	Pb	17 02 34.7	+0.3
VTS				eSn	Sb	17 03 03.0	0.0
VTS	Vitosha	2.29	36	⇑iP	Pn	17 02 31.2	+0.2
VTS	Vitosha	2.29	36	S	Sn	17 03 00.2	+0.6
VTS	Vitosha	2.29	36	eP	Pb	17 02 34.0	-0.4
SELS	Selova	2.44	355	ePn	Pn	17 02 33.0	+0.1
ZAPS	Zavoj	2.65	20	ePn	Pn	17 02 37.1	+1.3
RZN	Rozhen	2.67	69	eP	Pb	17 02 38.8	-2.0
SJES	Sjenica	2.69	337	ePn	Pn	17 02 35.3	-1.1
PLD	Plovdiv	2.82	61	ePn	Pb	17 02 44.5	+1.3
PLD				eSn	Sb	17 03 20.0	+2.0
BOVS	Bovan	2.85	5	ePn	Pn	17 02 38.4	-0.2
IVAS	Ivanjica	2.93	342	ePn	Pn	17 02 39.8	+0.1
ZAGS	Zajecar	3.09	11	ePn	Pn	17 02 43.7	+1.9
GRUS	Gruza	3.14	351	ePn	Pn	17 02 42.8	+0.3
BBLS	Lazići	3.41	335	ePn	Pn	17 02 44.9	-1.4
DIVS	Divibare	3.46	343	ePn	Pn	17 02 46.5	-0.6
TRUS	Trudelj	3.51	348	ePn	Pn	17 02 47.8	+0.2
SRE	Strehaia	4.10	18	⇑iP	Pn	17 02 55.7	0.0
FRGS	Fruska Gora	4.52	346	ePn	Pn	17 03 00.3	-1.2
GZR	Gura Zlata	4.71	12	⇑iP	Pn	17 03 04.4	+0.2
BZS	Buzias	4.83	2	⇓iP	Pn	17 03 06.2	+0.5
ARR	Arges	5.16	26	⇑iP	Pn	17 03 10.3	0.0
VOIR		5.36	29	⇓iP	Pn	17 03 13.3	+0.2
MLR	Muntele Rosu	5.76	34	⇑iP	Pn	17 03 18.5	-0.1

IDC 18 17:02:14.0±47.0**, 16°.75S**×**177°.19W, h0**km**, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.6**/44**, mbtmp3.9**/3**, Error ellipse: s-maj=868.9km s-min=166.8km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.21	240	P	P	17 09 52.1	-0.3
	1.7nm,0.7s,baz=91,slow=8.9,SNR=3.5						
WRA	Warramunga Arr	45.99	258	P	P	17 10 39.0	-0.5
	0.1nm,0.2s,baz=93,slow=7.9,SNR=9.1						
ASAR	Alice Springs	46.23	253	P	P	17 10 41.7	+0.3
	1.3nm,0.5s,baz=88,slow=8.0,SNR=65						

GUC ***18*** *17:03:04.9±0.5, 34°.02S×72°.37W, h40km±8km, ML3.6*

ISC 18 17:03:01.2±2.1**, 34°.23S**±0°.07×**72°.9W**±0°.1**, h22**km±7km**, n17, σ3s.04**/30**, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.74	103	eP	Pb	17 03 16.0	+0.6
CHPI				eS	Sb	17 03 23.7	-1.5
ROC1	El Roble	2.00	52	eP	Pn	17 03 33.7	-0.1
ROC1				eS	Sb	17 04 01.1	-0.3
ROCH	El Roble	2.00	52	⇓eP	Pn	17 03 32.4	-1.6
ROCH				eS	Sn	17 03 53.8	-4.6
ROCH				IAML		17 04 03.4	
	comp=E,1μm,0.7s						
CLCH	Cerro Calan	2.12	68	⇑eP	Pn	17 03 33.7	-1.7
CLCH				eS	Sn	17 03 55.5	-5.7
CLCH				IAML		17 04 13.1	
	comp=E,1μm,0.7s						
PEL	Peldehue	2.13	60	eP	Pn	17 03 34.4	-1.1
PEL				eS	Sb	17 04 06.4	+1.4
LMEL	Las Melosas	2.25	81	eP	Pn	17 03 36.1	-1.3
LMEL				eS	Sn	17 03 59.7	-4.9
LMEL				IAML		17 04 06.8	
	comp=N,1μm,0.3s						
FCH	Farellones	2.34	68	⇓eP	Pn	17 03 37.3	-1.3
FCH				eS	Sn	17 04 01.4	-5.4
FCH				IAML		17 04 10.7	
	comp=E,536nm,0.5s						
AUSP	Uspallata	3.54	57	eP	Pn	17 03 56.3	+1.1
AUSP				eS	Sn	17 04 40.4	+3.7
RTLS	Leoncito	3.86	52	eP	Pn	17 04 00.1	+0.5
RTLS				eS	Sn	17 04 47.0	+2.5
RTLS				IAML		17 04 58.8	
	comp=Z,142nm,0.8s						
CANA	Caviahue	3.94	159	eP	Pb	17 04 10.8	+0.9
RTCV	Cerro Valdivia	4.34	58	eP	Pn	17 04 07.1	+1.1
RTCV				eS	Sn	17 04 59.1	+3.2
ACCO	Cerro Coronel	4.86	43	eP	Pn	17 04 12.9	-0.4
AMOG	MOGNA	4.95	50	eP	Pn	17 04 14.4	+0.1
AROD	Rodeo	4.97	36	eP	Pn	17 04 13.3	-1.6
ACAN	Cantantal	5.15	69	eP	Pn	17 04 19.5	+2.5
ACAN				eS	Sn	17 05 22.1	+6.2
MRA	San Martin	6.26	75	eP	Pn	17 04 33.6	+1.2
MRA				eS	Sn	17 05 49.2	+5.9
MRA				IAML		17 06 31.5	
	comp=Z,18nm,0.5s						
APLL	PUNTA DE LOS L	6.60	56	eP	Pn	17 04 35.6	-1.3

APLL				eS	Sn	17 05 51.9	+0.4
APLL				IAML		17 06 16.6	
	comp=Z,20nm,0.7s						

MOS ***18*** *17:10:05.5±0.9, 35.°57N×140.°27E, h64^{km}, mb4.7/37, Error ellipse: s-maj=9.4km s-min=5.5km az=118.0*

ISCJB ***18*** *17:10:07.1±0.3, 35.°57N±0.°03×140.°17E±0.°04, h75^{km}±2^{km}, mb4.3/56, Error ellipse: s-maj=4.9km s-min=4.1km az=153.9*

JMA ***18*** *17:10:07.7±0.2, 35.°64N×140.°12E, h70^{km}±2^{km}, M3.8*

JMA Felt II J1.

NEIC ***18*** *17:10:07.7±0.5, 35.°60N×140.°23E, h66^{km}±4^{km}, mb4.6/21, Error ellipse: s-maj=6.1km s-min=5.0km az=107.0*

NEIC Recorded [2 JMA] in Chiba and Kanagawa.

IDC ***18*** *17:10:08.8±1.5, 35.°52N×140.°15E, h75^{km}±12^{km}, mb3.8/17, mb1 3.9/22, mb1mx3.8/44, mbtmp4.1/22, Error ellipse: s-maj=20.6km s-min=6.7km az=69.0*

ISC 18 17:10:07.2±0.6**, 35.°59N**±0.°04×**140.°22E**±0.°04**, h62**^{km}±5^{km}**, n161, σ1^{s}55**/182**, mb4.4**/61**, 12C-15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.17	186	⇓P	Pn	17 10 19.0	+2.3
JCN				eS	Sn	17 10 27.6	+4.0
JSMT	Sammumatsuo	0.19	72	P	Pn	17 10 19.2	+2.4
JSMT				S	Sn	17 10 27.6	+3.8
TOK	Tokyo	0.39	285	P	Pn	17 10 19.9	+1.7
TOK				eS	Sn	17 10 29.0	+2.7
BSO3	Boso 3	0.82	163	⇓P	Pn	17 10 24.4	+1.7
BSO3				eX		17 10 36.4	
JOD2	Odawara 2	0.98	251	⇓P	Pn	17 10 25.3	+0.2
JOD2				S	Sn	17 10 37.7	-0.7
JAG	Ashikaga	1.05	324	⇑P	Pn	17 10 26.0	+0.1
JAG				eS	Sn	17 10 39.4	-0.4
JIM2	Oshima 3	1.08	217	P	Pn	17 10 26.3	-0.1
JIM2				eS	Sn	17 10 40.3	-0.4
BSO1	Boso 1	1.12	146	P	Pn	17 10 28.1	+1.8
BSO1				eS	Sn	17 10 43.7	+3.1
JRY	Ryogami san	1.16	292	⇑P	Pn	17 10 28.0	+0.6
JFNN	Fujinakano	1.32	253	P	Pn	17 10 29.8	+0.3
JFNN				eS	Sn	17 10 46.0	-0.2
JYN	Shimob	1.37	267	⇓P	Pn	17 10 30.5	+0.2
JYN				S	Sn	17 10 47.4	-0.2
JIZS	Izushimoda	1.40	232	⇓P	Pn	17 10 30.8	+0.2
JIZS				eS	Sn	17 10 47.2	-1.0
JKT	Katashina	1.42	326	P	Pn	17 10 31.1	+0.2
JKT				eS	Sn	17 10 47.8	-1.0
MJA0	Matsu Arr-Jizo	1.86	301	eP	Pn	17 10 37.6	+0.7
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MJAR	Matsushiro Arr	1.89	301	P	Pn	17 10 37.7	+0.4
	comp=Z,5.1nm,0.3s,baz=137,slow=13,SNR=140						
MJAR				S	Sn	17 11 01.7	+1.6
	comp=Z,9.1nm,0.3s,baz=156,slow=12,SNR=16						
MAJO	Matsushiro	1.89	301	ePn	Pn	17 10 37.8	+0.5
MAJO				eSn	Sn	17 11 01.7	+1.6
MAJO	Matsushiro	1.89	301	deP	Pn	17 10 38.2	+0.9
MAT	Matsushiro	1.89	301	P	Pn	17 10 37.9	+0.6
MAT				S	Sn	17 11 01.0	+0.9
MJB9	Matsu-Tunnel	1.90	301	ePn	Pn	17 10 38.0	+0.7
JHJ	Hachijo jima 2	2.49	189	P	Pn	17 10 46.5	+1.1
	comp=Z,246nm,0.3s,baz=116,slow=23,SNR=30						
JHJ				S	Sn	17 11 14.8	+0.3
	comp=Z,170nm,0.3s,baz=40,slow=23,SNR=8.4						
JHJ2	Mitsune	2.49	188	ePn	Pn	17 10 46.1	+0.7
INU	Inuyama	2.63	266	ePn	Pn	17 10 47.7	+0.5
ERM	Erimo	6.82	19	ePn	Pn	17 11 43.0	-1.5
ERM	Erimo	6.82	19	⇓eP	Pn	17 11 43.8	-0.7
JNU	Nakatsue	8.11	255	P	Pn	17 12 03.9	+1.6
	comp=Z,0.6nm,0.3s,baz=58,slow=6.0,SNR=6.8						
CBIJ	Chichi jima	8.63	168	eSn	Sn	17 13 37.5	-7.7
JCJ	Chichijima	8.63	168	P	Pn	17 12 07.6	-1.8
	comp=Z,29nm,0.3s,baz=295,slow=22,SNR=22						
JCJ				S	Sn	17 13 37.5	-7.7
	comp=Z,6.7nm,0.3s,baz=294,slow=20,SNR=3.2						
ASAJ	Asahikawa	8.71	11	P	Pn	17 12 09.3	-1.1
	comp=Z,1.3nm,0.3s,baz=202,slow=12,SNR=40						
ASAJ				S	Sn	17 13 42.5	-4.6
	comp=Z,1.6nm,0.3s,baz=21,slow=28,SNR=7.1						
YUK	Yuzh-Kuril'sk	9.48	25	P	Pn	17 12 23.9	+2.9
YUK				eS	Sn	17 13 58.9	-7.1
YUK				pmax	pmax		
	comp=Z,59nm,0.5s						
SHO	Shikotan	9.71	30	eP	Pn	17 12 24.2	+0.2
SHO				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSRS	Korea Array	10.08	284	P	Pn	17 12 30.7	+1.7
	comp=Z,0.2nm,0.3s,baz=101,slow=14,SNR=10						
KSAR	Wonju Array Be	10.11	284	P	Pn	17 12 30.7	+1.2
KSAR	Wonju Array Be	10.11	284	P	Pn	17 12 30.7	+1.2
USRK	Ussuriysk Ar.	10.67	326	P	Pn	17 12 39.6	+2.4
	comp=Z,0.1nm,0.3s,baz=150,slow=13,SNR=4.7						
KUR	Kuril'sk	11.26	29	P	Pn	17 12 45.1	0.0
KUR				eS	Sn	17 14 42.7	-6.5
KUR				smax	smax		
	comp=N,28nm,0.5s						
KUR				smax	smax		
	comp=E,14nm,0.6s						
YSS	Yuzh-Sakhalins	11.52	9	⇓eP	Pn	17 12 40.3	-8.4
YSS				pmax	pmax		
	comp=Z,70nm,1.2s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
KLR	Kul'dur	14.99	338	P	Pn	17 13 35.4	+0.2
	comp=Z,0.2nm,0.3s,baz=168,slow=8.1,SNR=4.9						
ZEA	Zeya	20.30	337	eP	Pn	17 14 45.7	+5.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PETK	Petropavlovsk-	21.42	30	eP	P	17 14 49.3	-0.5
PETK				pmax	pmax		
	comp=Z,11nm,1.0s						
MA2	Magadan	24.97	13	⇓eP	P	17 15 26.2	+1.5
MA2				pmax	pmax		
	comp=Z,20nm,2.2s						
MA2	Magadan	24.97	13	P	P	17 15 25.7	+1.0
	comp=Z,3.1nm,0.6s,baz=212,slow=6.4,SNR=4.3						
ENH	Enshi	26.28	267	eP	P	17 15 36.1	-0.7
	comp=Z,27nm,1.8s						
SONA1	Songino Array	27.83	307	eP	P	17 15 49.9	-0.9
SONA0	Songino Array	27.84	307	eP	P	17 15 50.0	-0.8
SONM	Songino Array	27.84	307	P	P	17 15 50.0	-0.8
SONM	Songino Array	27.84	307	P	P	17 15 50.0	-0.8
	comp=Z,0.8nm,0.5s,baz=107,slow=9.1,SNR=8.1						
BOD	Bodaibo	28.27	330	eP	P	17 15 54.4	+0.1
BOD				pmax	pmax		
	comp=Z,8.0nm,1.6s						
H11N2	WAKE ISLAND Hy	28.29	117	T	T	17 45 43.4	
	baz=308,slow=75,SNR=74						
H11N1	WAKE ISLAND Hy	28.30	117	T	T	17 45 43.7	
	baz=308,slow=75,SNR=50						
H11N3	WAKE ISLAND Hy	28.31	117	T	T	17 45 44.5	
	baz=308,slow=75,SNR=65						
TLY	Talaya	30.59	313	eP	P	17 16 16.1	+1.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,735nm,20.0s						
GTA	Gaotai	32.10	289	eP	P	17 16 29.0	+0.5
GTA				pP	pP	17 16 32.8	-11
GTA				sP	sP	17 16 35.3	-16
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PBKT	Sadao Pong	39.69	252	eP	P	17 17 32.6	-0.9
DGZ	Jazzator, Alta	40.48	307	c iP	P	17 17 41.3	+1.4
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZAA0	Zalesovo Array	42.20	314	eP	P	17 17 53.5	-0.2
	comp=Z,7.7nm,1.0s						
ZALV	Zalesovo Beam	42.20	314	eP	P	17 17 54.0	+0.3
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZALV	Zalesovo Beam	42.20	314	P	P	17 17 53.5	-0.2
	comp=Z,3.7nm,0.7s,baz=93,slow=6.4,SNR=20						
ZALV				PcP	PcP	17 19 47.0	+0.2
	comp=Z,1.0nm,0.4s,baz=110,slow=2.9,SNR=4.1						
ZAA1	Zalesovo Array	42.20	314	eP	P	17 17 53.5	-0.2
ZAA1				ePcP	PcP	17 19 47.0	+0.2
NVS	Novosibirsk	43.16	315	eP	P	17 18 00.3	-1.1
MK01	Makanchi Array	44.09	303	eP	P	17 18 08.0	-1.1
MK31	Makanchi Array	44.09	303	eP	P	17 18 09.1	0.0
MK31	Makanchi Array	44.09	303	eP	P	17 18 09.1	0.0
MK32	Makanchi Array	44.09	303	eP	P	17 18 09.3	+0.2
MKAR	Makanchi Array	44.09	303	eP	P	17 18 09.0	-0.1
	comp=Z,36nm,0.9s						
MKAR	Makanchi Array	44.09	303	eP	P	17 18 09.5	+0.4
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	44.09	303	P	P	17 18 09.3	+0.2
	comp=Z,7.0nm,0.9s,baz=89,slow=9.9,SNR=49						
NRIK	Noril'sk	44.19	336	P	P	17 18 09.8	+0.3
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NRIK	Noril'sk	44.19	336	P	P	17 18 09.8	+0.3
	comp=Z,1.9nm,0.3s,baz=106,slow=9.7,SNR=4.5						
MAKZ	Makanchi	44.30	303	eP	P	17 18 10.8	0.0
	comp=Z,6.0nm,0.9s						
MAKZ	Makanchi	44.30	303	eP	P	17 18 10.8	0.0
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	Kurchatov	46.08	309	eP	P	17 18 24.7	-0.1
	comp=Z,11nm,0.8s						
KURK	Kurchatov	46.08	309	c iP	P	17 18 24.7	-0.1
KURK				pmax	pmax		
	comp=Z,18nm,1.3s						
RAMN	Ramite	46.16	275	eP	P	17 18 26.0	0.0
	comp=Z,20nm,0.7s						
JIRN	Jiri	46.20	276	eP	P	17 18 26.8	+0.3
GUN	Gumba	46.35	276	eP	P	17 18 27.7	+0.1
PDGK	Podgornoye	46.62	299	P	P	17 18 29.1	-0.2
PDGK				pmax	pmax		
	comp=Z,11nm,0.9s						
PKI	Pulchoki	46.87	276	eP	P	17 18 31.4	-0.3
	comp=Z,8.6nm,0.8s						
PKIN	Phulchoki	46.88	276	eP	P	17 18 31.3	-0.4
	comp=Z,7.1nm,0.9s						
DMN	Daman	47.10	276	eP	P	17 18 33.0	-0.4
PRZ	Przheval'sk	47.58	298	eP	P	17 18 37.5	+0.6
	comp=Z,11nm,0.8s						
PRZ	Przheval'sk	47.58	298	eP	P	17 18 37.5	+0.6
PRZ				pmax	pmax		
	comp=Z,11nm,0.8s						
DANN	Dangsing	47.89	278	eP	P	17 18 40.0	+0.4
	comp=Z,20nm,0.5s						
TARG	Taragay, Kyrgy	48.19	297	eP	P	17 18 42.7	+0.9
	comp=Z,9.4nm,1.0s						
KOLN	Koldanda	48.25	277	eP	P	17 18 42.4	+0.1
KDJ	Kajisay	48.55	298	eP	P	17 18 44.1	-0.2
	comp=Z,3.7nm,0.9s						
KDJ	Kajisay	48.55	298	eP	P	17 18 44.1	-0.2
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PYUN	Piuthan	48.61	278	eP	P	17 18 45.3	+0.3
	comp=Z,29nm,0.8s						
NRN	Naryn	49.58	297	eP	P	17 18 52.5	+0.1
	comp=Z,4.7nm,1.3s						
NRN	Naryn	49.58	297	eP	P	17 18 52.5	+0.1
NRN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	50.34	299	eP	P	17 18 58.4	+0.5
	comp=Z,2.3nm,0.8s						
AAK	Ala-Archa	50.34	299	deP	P	17 18 58.7	+0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
OTUK	Ortayu	50.51	307	P	P	17 18 59.1	+0.2
OTUK				pmax	pmax		
	comp=Z,73nm,1.6s						
BRVK	Borovoye	50.90	313	⇓iP	P	17 19 03.9	+2.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	51.23	32	eP	P	17 19 06.4	+2.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	51.23	32	P	P	17 19 05.5	+1.5
	comp=Z,0.5nm,0.9s,baz=270,slow=6.2,SNR=7.0						
ILB	Eielson Array	51.23	32	eP	P	17 19 04.2	+0.1
	comp=Z,20nm,1.8s						
ARSB	Arslanbob	51.79	298	eP	P	17 19 09.3	+0.5
MNAS	Manas	51.80	299	P	P	17 19 08.8	-0.1
MNAS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SFK	Sufi-Kurgan	51.80	296	P	P	17 19 08.7	-0.3
SFK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
KK31	Karatay Array	53.03	301	eP	P	17 19 17.9	+0.1
	comp=Z,7.7nm,1.3s						
KK31	Karatay Array	53.03	301	eP	P	17 19 17.9	+0.1
KK31				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KKAR	Karatay Array	53.03	301	eP	P	17 19 17.4	-0.4
	comp=Z,7.7nm,1.3s						
KKAR	Karatay Array	53.03	301	eP	P	17 19 17.4	-0.4
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CHGR	Chuyangaron	55.43	296	eP	P	17 19 35.3	-0.1
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	55.49	187	⇑eP	P	17 19 35.9	+0.1
WRAB				pmax	pmax		
	comp=Z,14nm,2.3s						
WB2	Warramunga Arr	55.50	187	eP	P	17 19 36.1	+0.2
WR1	Warramunga Arr	55.50	187	eP	P	17 19 35.8	-0.1
WRA	Warramunga Arr	55.50	187	i P	P	17 19 36.2	+0.3
WRA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
WRA	Warramunga Arr	55.50	187	P	P	17 19 35.8	-0.1
	comp=Z,2.0nm,0.3s,baz=0.8,slow=7.5,SNR=90						
ARU	Arti	56.81	319	eP	P	17 19 44.7	-0.2
	comp=Z,8.8nm,0.9s						
ARU	Arti	56.81	319	c iP	P	17 19 45.0	+0.1
ARU				*PP	pP	17 20 00.2	-1.0
ARU						17 21 47.5	
ARU				S	S	17 27 34.8	+1.6
ARU				SS	SS	17 31 25.9	+4.4
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	58.14	311	eP	P	17 19 54.0	-0.3
ASAR	Alice Springs	59.23	187	P	P	17 20 02.2	+0.1
	comp=Z,1.2nm,0.5s,baz=20,slow=11,SNR=43						
PRGR	Permogore	61.46	327	eP	P	17 20 16.7	-0.1
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARA0	ARCESS Array S	65.01	339	eP	P	17 20 40.4	+0.2
ARCES	ARCESS Array B	65.01	339	P	P	17 20 40.4	+0.2
	comp=Z,2.9nm,0.9s,baz=63,slow=6.5,SNR=3.7						
SGF	Sodankyl	65.92	337	P	P	17 20 46.5	+0.4
SGF				pmax	pmax		
	comp=Z,17nm,1.4s						
MSF	Maaselka	65.96	335	P	P	17 20 47.1	+0.7
MSF				pmax	pmax		
	comp=Z,12nm,2.6s						
JOF	Joensuu	66.79	332	P	P	17 20 51.5	-0.2
JOF				pmax	pmax		
	comp=Z,8.0nm,1.4s						
VRH	Novokhopyorsk	68.01	318	eP	P	17 20 58.6	-1.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OBN	Obninsk	68.68	323	eP	P	17 21 02.3	-1.4
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LPSR	Galich'ya Gora	68.80	320	eP	P	17 21 03.5	-1.0
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VSR	Storozhevoye	69.39	319	eP	P	17 21 06.1	-2.1
VSR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FIA0	FINESS Array S	69.64	332	eP	P	17 21 09.8	+0.2
FIA0	FINESS Array S	69.64	332	eP	P	17 21 09.8	+0.2
FINES	FINESS Array B	69.64	332	i P	P	17 21 10.1	+0.5
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	FINESS Array B	69.64	332	P	P	17 21 09.8	+0.2
	comp=Z,4.9nm,0.8s,baz=73,slow=4.3,SNR=10						
KBZ	Khabaz	71.11	311	P	P	17 21 19.9	+1.0
	comp=Z,3.1nm,0.9s,baz=29,slow=1.8,SNR=8.5						
KIV	Kislovodsk	71.13	311	eP	P	17 21 20.6	+1.5
	comp=Z,8.8nm,1.1s						
KIV	Kislovodsk	71.13	311	eP	P	17 21 20.4	+1.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AKASG	Malin Array Be	74.85	322	eP	P	17 21 40.6	-0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	74.85	322	P	P	17 21 40.8	-0.1
	comp=Z,1.8nm,0.5s,baz=49,slow=6.2,SNR=14						
AKBB	Malin Array Si	74.85	322	eP	P	17 21 40.6	-0.3
	comp=Z,7.4nm,1.1s						
KIEV	Kiev	74.86	322	eP	P	17 21 40.6	-0.4
	comp=Z,7.2nm,1.1s						
KIEV	Kiev	74.86	322	⇑iP	P	17 21 40.8	-0.1
KIEV	Kiev	74.86	322	⇑P	P	17 21 40.8	-0.1
NB2	NORSAR Subarra	75.14	337	P	P	17 21 42.8	+0.3
	comp=Z,1.0nm,0.5s,baz=40,slow=5.6						
NB200	NORSAR Array S	75.14	337	eP	P	17 21 43.0	+0.5
NOA	NORSAR Array B	75.14	337	P	P	17 21 43.0	+0.5
NOA	NORSAR Array B	75.14	337	P	P	17 21 43.0	+0.5
	comp=Z,0.7nm,0.6s,baz=40,slow=5.9,SNR=4.7						
TESR	Tescani	78.82	320	⇑iP	P	17 22 03.8	+0.5
BUR08	Bucovina Ar. S	78.83	321	eP	P	17 22 04.1	+0.6
	comp=Z,11nm,1.8s						
BUR04	Bucovina Ar. S	78.84	321	eP	P	17 22 03.9	+0.3
BURAR	Bucovina Array	78.84	321	⇑iP	P	17 22 04.4	+0.8
BURAR	Bucovina Array	78.84	321	⇑P	P	17 22 04.4	+0.8
BR101	Keskin Array S	79.08	311	eP	P	17 22 05.8	+0.8
BRTR	Keskin Array B	79.09	311	eP	P	17 22 05.6	+0.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	79.09	311	P	P	17 22 05.8	+0.8
	comp=Z,1.1nm,0.8s,baz=46,slow=3.6,SNR=7.4						
PD31	Pinedale Array	79.37	45	eP	P	17 22 06.8	+0.2
	comp=Z,9.7nm,1.6s						
PDAR	Pinedale Array	79.37	45	P	P	17 22 07.8	+1.1
	comp=Z,0.3nm,0.5s,baz=338,slow=1.5,SNR=4.2						
OZUR		79.55	320	⇑iP	P	17 22 08.4	+1.0
TRPA	Tarpa	79.84	323	⇓iP	P	17 22 10.2	+1.4
RAYN	Ar Rayn	80.31	292	eP	P	17 22 11.5	-0.4
	comp=Z,8.5nm,1.7s						
RAYN	Ar Rayn	80.31	292	eP	P	17 22 11.5	-0.4
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ARR	Arges	80.64	320	⇓iP	P	17 22 14.8	+1.5
MORC	Moravsky Berou	81.04	326	P	P	17 22 16.0	+0.7
MORC				pmax	pmax		
	comp=Z,4.0nm,2.1s						
CLL	Collm	81.87	330	⇓iP	P	17 22 20.1	+0.5
	comp=Z,5.0nm,1.1s						
CLL				i pP	pP	17 22 35.5	-1.3
CLL	Collm	81.87	330	⇓iP	P	17 22 20.1	+0.5
CLL				i *PP	pP	17 22 35.5	-1.3
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GERES	GERESS Array B	83.43	328	eP	P	17 22 28.2	+0.3
GERES	GERESS Array B	83.43	328	P	P	17 22 26.5	-1.4
	comp=Z,0.2nm,0.3s,baz=56,slow=6.0,SNR=4.7						
SCHQ	Schefferville	86.99	15	P	P	17 22 45.5	+0.1
	comp=Z,6.5nm,0.9s,baz=281,slow=6.8,SNR=3.5						

SJA 18 17:10:36.8±0.7**, 30.°32S×69.°37W, h21**^{km}±1^{km}**, ML3.5, MW3.8, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AROD	Rodeo	0.17	330	eP	Pb	17 10 42.9	-0.2
AROD				eS	Sb	17 10 47.1	-0.4
ACDV	Cuesta del Vie	0.26	56	eP	Pb	17 10 43.8	+0.6
ACDV				eS	Sb	17 10 48.3	+0.6
ACCO	Cerro Coronel	0.38	136	eP	Pb	17 10 46.0	+1.1
AMOG	MOGNA	0.98	129	eP	Pn	17 10 55.6	+0.2
AMOG				eS	Sn	17 11 09.8	+1.1
RTLL	Cerro Villicun	1.27	143	eP	Pb	17 11 01.2	+1.1
RTLL				eS	Sb	17 11 18.3	+2.3
RTLL				IAML		17 11 20.4	
	comp=E,1µm,0.4s						
ZON	Zonda	1.36	154	eP	Pb	17 11 02.5	+0.9
RTLS	Leoncito	1.48	178	eP	Pb	17 11 05.1	+1.3
CFA	Coronel Fontan	1.61	143	eP	Pb	17 11 06.1	+0.2
CFA				eS	Sb	17 11 27.5	+1.7
RTCV	Cerro Valdivia	1.70	155	eP	Pb	17 11 07.3	-0.1
LCO	Las Campanas	1.74	318	eP	Pb	17 11 08.4	+0.2
LCO				eS	Sb	17 11 31.1	+1.4
ACLC	CERRO LA CRUZ	2.28	68	eP	Pb	17 11 16.2	-1.2
APLL	PUNTA DE LOS L	2.46	93	eP	Pb	17 11 18.5	-1.9
APLL				IAML		17 11 52.2	
	comp=Z,353nm,0.4s						
ACAN	Cantantal	2.70	137	eP	Pb	17 11 22.0	-2.5
MRA	San Martin	3.76	125	eP	Pn	17 11 36.6	+2.9
MRA				IAML		17 12 36.5	
	comp=Z,146nm,0.4s						

MEX 18 17:16:42.3±0.4**, 16.°19N×98.°11W, h5**^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.21	356	i P	Pg	17 16 46.1	-0.2
PNIG				i S	Sg	17 16 49.1	0.0

SAR ***18*** *17:20:25.7±0.3, 44.°99N×16.°95E, h4^{km}±3^{km}, ML2.1/9*

VIE ***18*** *17:20:31.8±1.1, 45.°30N×16.°60E, h8^{km}, ml1.5/2, Error ellipse: s-maj=9.0km s-min=6.1km az=71.0*

ISC 18 17:20:25.3±1.3**, 44.°99N**±0.°04×**16.°94E**±0.°03**, h3**^{km}±11^{km}**, n13, σ0^{s}55**/25**, 2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLY	Banja Luka	0.30	144	⇑iPg	Pg	17 20 31.1	+0.1
BLY				eSg	Sg	17 20 34.9	0.0
UDBI	Udbina	0.95	241	ePg	Pg	17 20 43.4	-0.1
UDBI				Sg	Sg	17 20 55.1	-0.8
OZLJ	Ozalj	1.21	302	ePn	Pg	17 20 47.7	-0.7
CRES	Cresnjev	1.34	309	ePg	Pn	17 20 49.7	-1.1
CRES				eSg	Sg	17 21 08.7	+0.5
NVLJ	Novalja	1.53	255	ePn	Pn	17 20 54.0	+0.5
NVLJ				Sn	Sg	17 21 14.9	+0.5
HAPS	Han Pijesak,BI	1.70	121	⇑iPn	Pn	17 20 56.2	+0.3
HAPS				eSn	Sn	17 21 17.7	-0.6
MORH	Mrgy, Hungar	1.71	44	ePn	Pn	17 20 56.1	+0.1
MORH				eSn	Sn	17 21 18.0	-0.4
CEY	Cerknica	1.92	294	ePn	Pn	17 20 59.3	+0.4
CEY				eSn	Sn	17 21 23.4	-0.2
FRGS	Fruska Gora	2.04	84	ePn	Pn	17 21 01.0	+0.4
FRGS				eSn	Sn	17 21 26.8	+0.2
BBLS	Lazići	2.10	122	eSn	Sn	17 21 27.5	-0.5
SOKA	Soboth	2.15	322	Pn	Pn	17 21 02.1	0.0
	0.3nm,0.2s						
SOKA				eSg	Sn	17 21 29.7	+0.4
	0.2nm,0.1s						
OBKA	Obir	2.26	313	ePn	Pn	17 21 04.7	+1.1
	0.2nm,0.1s						
OBKA				ePg	Pg	17 21 08.6	0.0
	1.8nm,0.4s						
OBKA				Sg	Sn	17 21 32.2	+0.2
	2.4nm,0.3s						
DIVS	Divibare	2.36	111	ePn	Pn	17 21 05.2	+0.2
DIVS				eSn	Sn	17 21 34.0	-0.5

ISCJB ***18*** *17:31:28.1±0.5, 5.°20S±0.°04×130.°07E±0.°07, h200^{km}, mb3.1/3, Error ellipse: s-maj=9.6km s-min=5.9km az=4.6*

IDC ***18*** *17:31:28.8±1.8, 5.°15S×129.°89E, h183^{km}±21^{km}, mb3.0/3, mb1 3.2/8, mb1mx3.0/45, mbtmp3.7/8, Error ellipse: s-maj=36.2km s-min=16.1km az=92.0*

DJA ***18*** *17:31:31.4±1.4, 5°S±14°×13°0E±°, h188^{km}±6^{km}, M3.9/6, MLv3.9/6*

ISC 18 17:31:29.6±0.9**, 5.°07S**±0.°08×**130.°05E**±0.°09**, h200**^{km}**, n14, σ1^{s}31**/16**, mb3.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.56	345	P	Pn	17 31 56.9	-0.1
BNDI				S	Sn	17 32 19.3	+1.0
FAKI	Fak Fak	3.06	46	P	Pn	17 32 20.5	+0.5
FAKI				S	Sn	17 32 58.3	-1.2
NLAI	Namlea	3.46	302	P	Pn	17 32 25.3	+0.5
SIJI	Sorong	4.34	16	P	Pn	17 32 36.0	+0.2
	2.0nm,0.3s,baz=130,slow=6.8,SNR=59						
SIJI				S	Sn	17 33 24.9	-3.0
	11nm,0.3s,baz=241,slow=22,SNR=31						
SWI	Sorong	4.35	16	P	Pn	17 32 36.3	+0.5
SANI	Sanana	5.04	306	P	Pn	17 32 43.9	-0.7
RKPI	Ransiki, Papua	5.43	50	P	Pn	17 32 51.0	+1.4
BATI	Baumata	8.13	231	P	Pn	17 33 23.5	-1.2
	1.4nm,0.3s,baz=15,slow=17,SNR=3.6						
FITZ	Fitzroy Crossi	13.65	198	P	Pn	17 34 31.9	-3.4
	0.1nm,0.3s,baz=24,slow=11,SNR=4.4						
FITZ				S	S	17 36 49.4	-18
	0.1nm,0.3s,baz=25,slow=17,SNR=2.3						
WRA	Warramunga Arr	15.36	165	P	Pn	17 34 54.4	-2.0

	0.1nm,0.3s,baz=341,slow=13,SNR=15						
WRA				S	S	17 37 38.6	-8.4
	0.1nm,0.3s,baz=334,slow=21,SNR=5.3						
ASAR	**Alice Springs**	**18.86**	**169**	P	**P**	**17 35 35.5**	**+0.7**
	0.4nm,0.3s,baz=349,slow=11,SNR=62						
ASAR				S	S	17 38 50.0	-8.7
	0.0nm,0.3s,baz=342,slow=20,SNR=3.1						
SONM	**Songino Array**	**56.64**	**341**	P	**P**	**17 40 53.0**	**+1.0**
	0.1nm,0.4s,baz=151,slow=5.5,SNR=2.5						
MKAR	**Makanchi Array**	**66.65**	**326**	P	**P**	**17 41 59.5**	**+0.7**
	0.3nm,0.5s,baz=117,slow=8.2,SNR=8.4						
KURBB	**Kurchatov Arra**	**70.90**	**328**	P	**P**	**17 42 25.6**	**+0.7**
	0.3nm,0.3s,baz=126,slow=4.9,SNR=5.1						

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*ISCJB **18** 17:52:38.9±0.9, 10°.93S±0°.08×164°.76E±0°.10, h29^{km}, mb3.6/6, MS3.6/1, Error ellipse: s-maj=16.0km s-min=8.2km az=143.9*

*IDC **18** 17:52:42.9±3.2, 10°.91S×164°.73E, h48^{km}±28^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.5/32, mbtmp3.7/7, ML4.8/2, MS3.5/2, Ms1 3.5/2, ms1mx3.0/21, Error ellipse: s-maj=32.1km s-min=18.6km az=51.0*

ISC 18 17:52:40.7±1.1, 10°.8S±0°.1×164°.8E±0°.1, h29^{km}, n15, σ1^{s}.14/10, mb3.6/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.99**	**286**	P	**Pn**	**17 53 54.6**	**+0.9**
	42nm,0.3s,baz=147,slow=7.8,SNR=15						
HNR				S	**Sn**	**17 54 50.4**	**-0.1**
	10.0nm,0.3s,baz=204,slow=19,SNR=2.4						
HNR				LR	LR	17 55 59.4	
	comp=Z,334nm,20.9s,baz=166,slow=40						
DZM	**Mont Dzumac**	**11.30**	**172**	P	**Pn**	**17 55 21.9**	**+1.5**
	5.9nm,0.3s,baz=328,slow=7.6,SNR=91						
DZM				S	**Sn**	**17 57 24.9**	**-0.9**
	0.2nm,0.3s,baz=6.0,slow=19,SNR=2.1						
H11S2	**WAKE ISLAND Hy**	**29.18**	**4**	T	T	18 28 48.3	
	baz=184,slow=76,SNR=75						
H11S3	**WAKE ISLAND Hy**	**29.18**	**4**	T	T	18 28 49.0	
	baz=184,slow=76,SNR=30						
H11S1	**WAKE ISLAND Hy**	**29.20**	**4**	T	T	18 28 50.6	
	baz=184,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy**	**30.41**	**4**	T	T	18 30 21.2	
	baz=184,slow=76,SNR=31						
H11N3	**WAKE ISLAND Hy**	**30.41**	**4**	T	T	18 30 20.8	
	baz=184,slow=76,SNR=28						
H11N2	**WAKE ISLAND Hy**	**30.42**	**4**	T	T	18 30 20.9	
	baz=184,slow=76,SNR=32						
WRA	**Warramunga Arr**	**30.71**	**249**	P	**P**	**17 58 51.9**	**-1.6**
	0.2nm,0.5s,baz=80,slow=9.3,SNR=5.3						
ASAR	**Alice Springs**	**32.09**	**242**	P	**P**	**17 59 04.3**	**-1.2**
	0.5nm,0.9s,baz=62,slow=9.9,SNR=8.1						
SIJI	**Sorong**	**34.77**	**284**	LR	LR	18 15 04.5	
	comp=Z,98nm,18.4s,baz=296,slow=39						
CMAR	**Chiang Mai Arr**	**71.19**	**294**	P	**P**	**18 03 58.2**	**+0.7**
	0.5nm,0.8s,baz=115,slow=5.6,SNR=5.7						
SONM	**Songino Array**	**77.95**	**324**	P	**P**	**18 04 36.6**	**+0.3**
	0.4nm,0.9s,baz=134,slow=8.3,SNR=2.8						
ILAR	**Eielson Array**	**83.59**	**19**	P	**P**	**18 05 05.2**	**-0.6**
	0.7nm,0.8s,baz=248,slow=4.8,SNR=4.7						
MKAR	**Makanchi Array**	**92.73**	**317**	P	**P**	**18 05 49.9**	**-0.4**
	0.7nm,0.7s,baz=109,slow=5.4,SNR=4.7						

SJA 18 17:56:46.8±0.7, 31°.14S×68°.64W, h106^{km}±5^{km}, ML1.8, MW2.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLL	**Cerro Villicun**	**0.23**	**143**	*e*P	Pn	17 57 02.8	+1.0
RTLL				*e*S	Sn	17 57 13.6	+0.5
AMOG	**MOGNA**	**0.24**	**32**	*e*P	Pn	17 57 03.1	+1.2
AMOG				*e*S	Sn	17 57 13.9	+0.7
AMOG	**MOGNA**	**0.24**	**32**	*e*P	Pn	17 57 03.0	+1.1
AMOG				*e*S	Sn	17 57 14.1	+0.9
CFA	**Coronel Fontan**	**0.57**	**143**	*e*P	Pn	17 57 04.6	+0.8
CFA				*e*S	Sn	17 57 17.2	+0.7
ACCO	**Cerro Coronel**	**0.66**	**326**	*e*P	Pn	17 57 06.3	+1.5
ACCO				*e*S	Sn	17 57 20.1	+1.7
ACCO	**Cerro Coronel**	**0.66**	**326**	*e*P	Pn	17 57 06.2	+1.3
ACCO				*e*S	Sn	17 57 19.9	+1.5
RTCV	**Cerro Valdivia**	**0.72**	**173**	*e*P	Pn	17 57 06.0	+1.0
RTCV				*e*S	Sn	17 57 19.7	+1.0
RTCV	**Cerro Valdivia**	**0.72**	**173**	*e*P	Pn	17 57 05.8	+0.7
RTCV				*e*S	Sn	17 57 19.7	+1.0
RTLS	**Leoncito**	**0.86**	**221**	*e*P	Pn	17 57 08.1	+1.5
RTLS				*e*S	Sn	17 57 23.3	+1.8
RTLS				IAML		17 57 26.1	
	comp=Z,18nm,0.3s						
RTLS	**Leoncito**	**0.86**	**221**	*e*P	Pn	17 57 08.0	+1.4
RTLS				*e*S	Sn	17 57 23.2	+1.7
RTLS				IAML		17 57 26.1	
	comp=Z,18nm,0.3s						
ACAN	**Cantantal**	**1.67**	**133**	*e*P	Pn	17 57 16.9	+1.4
ACAN				*e*S	Sn	17 57 38.6	+1.2
MRA	**San Martin**	**2.79**	**118**	*e*P	Pn	17 57 31.0	+1.0

JMA 18 17:58:58.3±0.1, 32°.14N×138°.61E, h16^{km}, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.03**	**71**	*e*S	Sb	17 59 30.8	-0.2
JHJ2	**Mitsune**	**1.41**	**46**	P	Pn	17 59 23.6	+0.3
JHJ2				S	Sb	17 59 42.1	+0.2
TK01	**Tokai 1**	**1.83**	**332**	P	Pn	17 59 29.6	+0.7
TK01				S	Sb	17 59 52.9	-1.0
TK02	**Tokai 2**	**1.94**	**339**	P	Pn	17 59 31.3	+0.9
TK02				S	Sb	17 59 56.0	-1.0
TTO3	**TONANKAI O.B.S**	**2.00**	**330**	*e*S	Sb	17 59 57.4	-1.4
TTO4	**TONANKAI O.B.S**	**2.07**	**335**	P	Pn	17 59 32.9	+0.8
TTO4				S	Sn	17 59 58.4	+0.9
TTO2	**TONANKAI O.B.S**	**2.07**	**320**	P	Pb	17 59 33.8	-1.6
TTO2				*e*S	Sb	17 59 59.6	-1.2
TK03	**Tokai 3**	**2.09**	**345**	*e*S	Sb	17 59 59.9	-1.6
TTO1	**TONANKAI O.B.S**	**2.13**	**314**	P	Pn	17 59 34.4	+1.4
TTO1				*e*S	Sn	18 00 00.7	+1.7
TK04	**Tokai 4**	**2.32**	**345**	P	Pn	17 59 37.1	+1.3
TK04				S	Sn	18 00 05.2	+1.3
JIZS	**Izushimoda**	**2.58**	**5**	P	Pn	17 59 41.1	+1.7
JIZS				*e*S	Sn	18 00 12.1	+1.6
JKN2	**Miekihoku**	**2.87**	**318**	P	Pn	17 59 44.3	+1.0
JKN2				S	Sn	18 00 16.4	-1.1
JTNC	**Tanabenakahech**	**3.03**	**304**	P	Pn	17 59 46.8	+1.2
JTNC				S	Sn	18 00 20.1	-1.4
JWY	**Kouya**	**3.27**	**310**	P	Pn	17 59 50.7	+1.7
JWY				*e*S	Sn	18 00 26.4	-1.2
JYN	**Shimob**	**3.35**	**359**	P	Pn	17 59 51.8	+1.7
JYN				*e*S	Sn	18 00 29.6	+0.1
MAT	**Matsushiro**	**4.40**	**356**	P	Pn	18 00 07.4	+2.9
MAT				S	Sn	18 00 57.7	+2.2

IDC 18 18:02:01.6±602.0, 57°.97N×12°.74E, h0^{km}, Error ellipse: s-maj=240.9km s-min=172.9km az=134.0, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	**9.15**	**176**	*i*		19 04 00.0	
	baz=354,slow=336,SNR=1.9						
I43RU	**DUBNA INFRASON**	**13.25**	**85**	*i*		19 17 50.0	
	baz=285,slow=339,SNR=0.5						
I31KZ	**AKTYUBINSK INF**	**27.11**	**86**	*i*		20 48 10.0	
	baz=299,slow=378,SNR=1.0						

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*ISCJB **18** 18:08:19.4±1.2, 11°.9S±0°.1×164°.9E±0°.1, h10^{km}, mb3.5/4, Error ellipse: s-maj=24.5km s-min=11.7km az=42.1*

*IDC **18** 18:08:19.7±1.4, 11°.71S×164°.94E, h0^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.6/38, mbtmp3.7/6, ML3.8/2, Error ellipse: s-maj=32.6km s-min=28.6km az=137.0*

ISC 18 18:08:21.0±1.3, 11°.8S±0°.1×164°.9E±0°.1, h10^{km}, n6, σ1^{s}.20/7, mb3.4/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.43**	**295**	Pn	**Pn**	**18 09 40.5**	**-1.6**
	1.9nm,0.3s,baz=122,slow=14,SNR=2.1						
HNR				Sn	**Sn**	**18 10 45.6**	**+1.0**
	1.9nm,0.3s,baz=300,slow=20,SNR=2.2						
DZM	**Mont Dzumac**	**10.35**	**172**	Pn	**Pn**	**18 10 49.4**	**-0.3**
	1.5nm,0.3s,baz=310,slow=12,SNR=19						
WRA	**Warramunga Arr**	**30.50**	**251**	P	**P**	**18 14 34.3**	**-0.3**
	0.3nm,0.6s,baz=77,slow=8.3,SNR=4.2						
ASAR	**Alice Springs**	**31.77**	**244**	P	**P**	**18 14 47.0**	**+1.3**
	0.4nm,0.7s,baz=72,slow=10,SNR=7.0						
ILAR	**Eielson Array**	**84.44**	**19**	P	**P**	**18 20 53.5**	**0.0**
	0.6nm,0.6s,baz=238,slow=5.1,SNR=15						
MKAR	**Makanchi Array**	**93.50**	**317**	P	**P**	**18 21 37.8**	**+0.7**
	0.1nm,0.6s,baz=98,slow=5.3,SNR=2.1						

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*IDC **18** 18:11:01.4±1.9, 15°.19S×168°.28E, h0^{km}, mb4.1/9, mb1 4.2/10, mb1mx4.0/35, mbtmp4.1/10, ML4.4/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/32, Error ellipse: s-maj=47.1km s-min=25.5km az=121.0*

*ISCJB **18** 18:11:05.3±0.9, 15°.36S±0°.06×168°.1E±0°.1, h33^{km}, mb4.1/12, MS3.5/1, Error ellipse: s-maj=20.4km s-min=8.4km az=178.5*

*NEIC **18** 18:11:07.1±0.8, 15°.24S×168°.08E, h35^{km}, mb4.5/3, Error ellipse: s-maj=19.2km s-min=10.3km az=88.0*

ISC 18 18:11:06.5±1.3, 15°.29S±0°.08×168°.3E±0°.2, h35^{km}, n20, σ1^{s}.28/20, mb4.1/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**6.16**	**182**	*e*Pn	**Pn**	**18 12 35.0**	**+0.1**
DZM	**Mont Dzumac**	**6.96**	**194**	*e*Pn	**Pn**	**18 12 46.8**	**+0.7**
DZM				Sn	**Sn**	**18 14 03.0**	**-1.1**
DZM	**Mont Dzumac**	**6.96**	**194**	Pn	**Pn**	**18 12 47.1**	**+1.0**
	7.3nm,0.3s,baz=52,slow=16,SNR=40						
DZM				Sn	**Sn**	**18 14 03.0**	**-1.1**
	baz=7.6,slow=15,SNR=2.6						
DZM				LR	LR	18 15 05.4	
	comp=Z,116nm,19.1s,baz=348,slow=35						
OUENC	**Ouen Island, N**	**7.21**	**191**	*e*Pn	**Pn**	**18 12 51.6**	**+2.1**
CTA	**Charters Tower**	**21.50**	**254**	P	**P**	**18 15 53.8**	**+1.2**
	5.4nm,1.0s,baz=85,slow=13,SNR=6.3						
STKA	**Stephens Creek**	**29.38**	**231**	P	**P**	**18 17 07.2**	**+0.8**
	3.7nm,0.9s,baz=39,slow=8.1,SNR=4.3						
WB2	**Warramunga Arr**	**32.62**	**257**	*e*P	**P**	**18 17 32.6**	**-2.6**
WR1	**Warramunga Arr**	**32.63**	**257**	*e*P	**P**	**18 17 34.1**	**-1.2**
	37nm,1.9s						
WRA	**Warramunga Arr**	**32.63**	**257**	P	**P**	**18 17 34.1**	**-1.3**
	2.3nm,0.7s,baz=86,slow=9.2,SNR=28						
AS01	**Alice Springs**	**33.34**	**250**	*e*P	**P**	**18 17 40.1**	**-1.4**
AS31	**Alice Springs**	**33.38**	**250**	*e*P	**P**	**18 17 41.6**	**-0.3**
	2.0nm,0.8s						
ASAR	**Alice Springs**	**33.39**	**250**	P	**P**	**18 17 41.5**	**-0.4**
	5.1nm,0.9s,baz=79,slow=8.7,SNR=51						
ASAR				LR	LR	18 29 43.2	
	comp=Z,97nm,21.4s,baz=96,slow=34						
SIJI	**Sorong**	**39.24**	**288**	P	**P**	**18 18 31.8**	**-0.1**
	5.3nm,0.7s,baz=106,slow=3.2,SNR=4.9						
FITZ	**Fitzroy Crossi**	**40.87**	**260**	*e*P	**P**	**18 18 43.6**	**-1.8**
	9.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**76.06**	**294**	P	**P**	**18 22 52.1**	**+1.1**
	0.4nm,0.9s,baz=133,slow=6.3,SNR=3.9						
SONA0	**Songino Array**	**83.53**	**323**	*e*P	**P**	**18 23 31.0**	**+0.1**
SONM	**Songino Array**	**83.53**	**323**	P	**P**	**18 23 31.0**	**+0.1**
	0.9nm,1.0s,baz=137,slow=4.1,SNR=4.4						
ILAR	**Eielson Array**	**86.77**	**18**	P	**P**	**18 23 45.9**	**-0.7**
	0.3nm,0.8s,baz=230,slow=4.2,SNR=3.5						
MK32	**Makanchi Array**	**98.28**	**316**	*e*P	Pdif	18 24 40.6	+0.2
MKAR	**Makanchi Array**	**98.28**	**316**	P	Pdif	18 24 40.6	+0.2
	0.3nm,0.7s,baz=97,slow=6.2,SNR=4.4						

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*NEIC **18** 18:26:14.7±2.5, 18°.25S×174°.62W, h56^{km}±26^{km}, mb4.7/5, Error ellipse: s-maj=32.2km s-min=11.6km az=155.0*

*IDC **18** 18:26:19.9±9.3, 18°.39S×174°.58W, h104^{km}±84^{km}, mb3.8/7, mb1 4.1/7, mb1mx3.7/27, mbtmp4.2/7, Error ellipse: s-maj=47.7km s-min=23.7km az=158.0*

*ISCJB **18** 18:26:21.2±1.0, 18°.4S±0°.2×174°.7W±0°.2, h130^{km}, mb4.0/10, Error ellipse: s-maj=31.7km s-min=18.3km az=141.6*

ISC 18 18:26:22.6±1.1, 18°.4S±0°.2×174°.6W±0°.2, h130^{km}, n19, σ0^{s}.44/21, mb4.3/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.48**	**99**	*e*Pn	Pn	18 27 20.5	-8.2
URZ	**Urewera**	**21.02**	**198**	P	**P**	**18 30 55.8**	**-0.1**
	6.1nm,0.4s,baz=32,slow=9.4,SNR=10.0						
CTA	**Charters Tower**	**36.93**	**261**	P	**P**	**18 33 19.4**	**+0.2**
	2.9nm,0.5s,baz=104,slow=10,SNR=14						
CTAO	**Charters Tower**	**36.93**	**261**	*e*P	**P**	**18 33 19.8**	**+0.6**
	6.3nm,0.4s						
WB2	**Warramunga Arr**	**48.08**	**259**	*e*P	**P**	**18 34 48.3**	**-1.0**
WRAB	**Tennant Creek**	**48.08**	**259**	*e*P	**P**	**18 34 49.1**	**-0.3**
	1.3nm,0.4s						
WR1	**Warramunga Arr**	**48.09**	**259**	*e*P	**P**	**18 34 49.2**	**-0.2**
	6.9nm,0.4s						
WR1				*e*PcP	**PcP**	**18 36 15.4**	**+0.1**
WRA	**Warramunga Arr**	**48.09**	**259**	P	**P**	**18 34 49.2**	**-0.2**
	2.6nm,0.3s,baz=98,slow=6.2,SNR=189						
WRA				PcP	**PcP**	**18 36 15.4**	**+0.1**
	0.2nm,0.7s,baz=90,slow=3.7,SNR=2.4						
AS31	**Alice Springs**	**48.13**	**254**	*e*P	**P**	**18 34 49.6**	**-0.1**
	1.2nm,0.6s						
ASAR	**Alice Springs**	**48.13**	**254**	P	**P**	**18 34 50.0**	**+0.3**
	3.5nm,0.7s,baz=94,slow=8.2,SNR=46						
ASAR				PcP	**PcP**	**18 36 15.5**	**+0.1**
	0.2nm,0.4s,baz=103,slow=4.2,SNR=4.2						
FITZ	**Fitzroy Crossi**	**56.50**	**260**	*e*P	**P**	**18 35 51.0**	**-0.6**
	30nm,1.9s						
FITZ	**Fitzroy Crossi**	**56.50**	**260**	P	**P**	**18 35 52.2**	**+0.6**
	1.0nm,0.4s,baz=79,slow=5.2,SNR=11						
NVAR	**Mina Array Bea**	**77.35**	**42**	P	**P**	**18 38 03.8**	**+0.4**
	0.6nm,0.7s,baz=226,slow=5.9,SNR=3.2						
ILAR	**Eielson Array**	**85.64**	**12**	P	**P**	**18 38 45.5**	**-0.5**
	0.4nm,0.6s,baz=228,slow=6.1,SNR=12						
MK32	**Makanchi Array**	**112.11**	**314**	*e*PKiKP	**PKiKP**	**18 44 42.4**	**-0.2**
MKAR	**Makanchi Array**	**112.11**	**314**	PKiKP	**PKiKP**	**18 44 42.4**	**-0.2**
	0.2nm,0.5s,baz=76,slow=1.9,SNR=4.1						
CLL	**Collm**	**146.66**	**351**	*e*PKPbc	**PKPab**	**18 45 50.0**	**-0.2**
BR101	**Keskin Array S**	**147.68**	**317**	*e*PKPdf	**PKPbc**	**18 45 52.8**	**+0.4**
BRTR	**Keskin Array B**	**147.68**	**317**	PKPbc	**PKPbc**	**18 45 52.8**	**+0.4**
	0.6nm,0.6s,baz=62,slow=3.0,SNR=4.3						

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*IDC **18** 18:35:16.4±1.4, 11°.80S×165°.14E, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.7/37, mbtmp3.8/7, ML4.0/2, Error ellipse: s-maj=32.6km s-min=27.3km az=140.0*

*ISCJB **18** 18:35:19.8±1.2, 11°.9S±0°.1×165°.0E±0°.1, h33^{km}, mb3.6/5, Error ellipse: s-maj=23.6km s-min=11.4km az=42.7*

ISC 18 18:35:21.6±1.3, 11°.9S±0°.1×165°.1E±0°.1, h35^{km}, n7, σ0^{s}.80/8, mb3.9/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.60**	**295**	Pn	**Pn**	**18 36 41.5**	**-0.9**
	3.8nm,0.3s,baz=125,slow=12,SNR=2.5						
HNR				Sn	**Sn**	**18 37 45.7**	**+0.1**
	3.2nm,0.3s,baz=157,slow=18,SNR=2.8						
DZM	**Mont Dzumac**	**10.23**	**173**	Pn	**Pn**	**18 37 45.8**	**-0.3**
	1.7nm,0.3s,baz=346,slow=12,SNR=12						
WRA	**Warramunga Arr**	**30.60**	**251**	P	**P**	**18 41 32.9**	**+0.4**
	0.5nm,0.6s,baz=81,slow=8.8,SNR=5.2						
ASAR	**Alice Springs**	**31.85**	**244**	P	**P**	**18 41 43.3**	**-0.3**
	0.4nm,0.9s,baz=74,slow=9.5,SNR=6.1						
FITZ	**Fitzroy Crossi**	**38.55**	**256**	P	**P**	**18 42 42.4**	**+1.2**
	1.5nm,0.8s,baz=88,slow=8.2,SNR=4.1						
ILAR	**Eielson Array**	**84.49**	**19**	P	**P**	**18 47 50.2**	**-0.3**
	0.7nm,0.7s,baz=240,slow=5.4,SNR=14						
MKAR	**Makanchi Array**	**93.67**	**317**	P	**P**	**18 48 35.3**	**+0.7**
	0.3nm,0.7s,baz=106,slow=4.4,SNR=3.5						

IDC 18 19:12:14.2±5.7, 18°.37S×177°.24W, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.6/29, mbtmp3.6/3, Error ellipse: s-maj=258.4km s-min=45.9km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.64**	**260**	P	P	19 20 37.1	+0.2
	0.2nm,0.3s,baz=95,slow=7.8,SNR=18						
ASAR	**Alice Springs**	**45.74**	**255**	P	P	19 20 37.1	-0.5
	0.9nm,0.7s,baz=97,slow=8.7,SNR=7.5						
CMAR	**Chiang Mai Arr**	**90.08**	**289**	P	P	19 25 17.0	+0.3
	0.3nm,0.8s,baz=102,slow=3.8,SNR=3.6						
AKASG	**Malin Array Be**	**141.48**	**333**	PKhKP	PKPpre	19 31 40.8	
	0.2nm,0.3s,baz=48,slow=4.8,SNR=6.0						
BRTR	**Keskin Array B**	**145.89**	**315**	PKPbc	PKPdf	19 31 54.9	-0.7
	0.5nm,0.6s,baz=97,slow=4.5,SNR=4.1						
GERES	**GERESS Array B**	**148.33**	**346**	PKPbc	PKPbc	19 32 02.0	-0.6
	0.2nm,0.4s,baz=54,slow=1.7,SNR=4.2						

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*ISCJB **18** 19:16:32.7±0.9, 43°.47N±0°.07×146°.90E±0°.08, h52^{km}±6^{km}, mb3.5/9, MS3.2/1, Error ellipse: s-maj=13.9km s-min=6.5km az=145.6*

*JMA **18** 19:16:32.8±0.3, 43°.35N×146°.87E, h42^{km}±4^{km}, M3.6*

*MOS **18** 19:16:32.0±1.2, 43°.42N×146°.94E, h41^{km}, mb4.3/1, Error ellipse: s-maj=19.2km s-min=12.4km az=117.3*

*SKHL **18** 19:16:33.6±0.2, 43°.51N×146°.91E, h51^{km}±4^{km}, mb4.3/5*

*IDC **18** 19:16:35.0±4.4, 43°.48N×146°.97E, h58^{km}±38^{km}, mb3.3/9, mb1 3.5/10, mb1mx3.3/40, mbtmp3.6/10, ML3.3/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/30, Error ellipse: s-maj=32.5km s-min=26.6km az=143.0*

ISC 18 19:16:32.9±1.0, 43°.42N±0°.09×146°.95E±0°.07, h39^{km}±7^{km}, n31, σ1^{s}.58/43, mb3.5/9, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.46**	**349**	*i* P	**Pn**	**19 16 43.0**	**0.0**
SHO				AMB	AMB	19 16 43.0	
	70nm,0.3s						
SHO				AMB	AMB	19 16 43.0	
	50nm,0.3s						
SHO				AMB	AMB	19 16 43.0	
	220nm,0.3s						
SHO				*i* S	**Sn**	**19 16 50.0**	**-0.1**
SHO				A	A	19 16 50.0	
	2µm,0.2s						
SHO				A	A	19 16 50.0	
	270nm,0.2s						
SHO	**Shikotan**	**0.46**	**349**	*i* PN	**Pn**	**19 16 43.5**	**+0.5**
SHO				*i* S	**Sn**	**19 16 50.5**	**+0.4**
SHO				pmax	pmax		
	comp=N,687nm,0.2s						
SHO				pmax	pmax		
	comp=E,458nm,0.2s						
SHO				pmax	pmax		
	comp=Z,2µm,0.2s						
SHO				smax	smax		
	comp=E,12µm,0.2s						
SHO				smax	smax		
	comp=N,15µm,0.3s						
NEM2	**Nemuro 2**	**0.88**	**267**	P	**Pn**	**19 16 48.1**	**-0.7**
NEM2				*e*S	**Sn**	**19 16 59.2**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**1.00**	**308**	*i* P	**Pn**	**19 16 50.0**	**-0.4**
YUK				AMB	AMB	19 16 50.0	
	comp=N,170nm,0.2s						
YUK				AMB	AMB	19 16 50.0	
	comp=N,180nm,0.2s						
YUK				*i* S	**Sn**	**19 17 02.0**	**-1.3**
YUK				A	A	19 17 03.0	
	comp=N,190nm,0.3s						
YUK				A	A	19 17 03.0	
	comp=N,2µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.00**	**308***d*	*i*PN	**Pn**	**19 16 50.4**	**0.0**
YUK				*i* S	**Sn**	**19 17 02.7**	**-0.6**
YUK				pmax	pmax		
	comp=Z,2µm,0.2s						
YUK				pmax	pmax		
	comp=N,167nm,0.1s						
YUK				pmax	pmax		
	comp=E,177nm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.2s						
GRPR	**Tuman**	**1.03**	**304**	*i* P	**Pn**	**19 16 50.0**	**-0.8**
GRPR				AMB	AMB	19 16 51.0	
	comp=E,20nm,0.2s						
GRPR				AMB	AMB	19 16 51.0	
	comp=E,30nm,0.2s						
GRPR				AMB	AMB	19 16 51.0	
	comp=E,80nm,0.2s						
GRPR				*i* S	**Sn**	**19 17 02.5**	**-1.5**
GRPR				A	A	19 17 04.0	
	comp=E,1µm,0.3s						
GRPR				A	A	19 17 04.0	
	comp=E,190nm,0.3s						
GRPR	**Tuman**	**1.03**	**304**⇓	*i*PN	**Pn**	**19 16 50.6**	**-0.2**
GRPR				*i* S	**Sn**	**19 17 03.1**	**-0.9**
GRPR				pmax	pmax		
	comp=E,317nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,805nm,0.2s						
GRPR				pmax	pmax		
	comp=N,234nm,0.1s						
GRPR				smax	smax		
	comp=E,2µm,0.3s						
GRPR				smax	smax		
	comp=N,1µm,0.2s						
GLVR	**Golovnino**	**1.09**	**287**	*i* P	**Pn**	**19 16 51.0**	**-0.6**
GLVR				AMB	AMB	19 16 51.0	
	comp=N,30nm,0.1s						
GLVR				AMB	AMB	19 16 51.0	
	comp=N,20nm,0.1s						
GLVR				AMB	AMB	19 16 51.0	
	comp=N,40nm,0.1s						
GLVR				*i* S	**Sn**	**19 17 04.0**	**-1.4**
GLVR				A	A	19 17 05.0	
	comp=N,2µm,0.3s						
GLVR				A	A	19 17 05.0	
	comp=N,560nm,0.3s						
GLVR	**Golovnino**	**1.09**	**287**⇑	*i*PN	**Pn**	**19 16 51.2**	**-0.4**
GLVR				*i* S	**Sn**	**19 17 04.1**	**-1.4**
GLVR				pmax	pmax		
	comp=N,29nm,0.1s						
GLVR				pmax	pmax		
	comp=E,21nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,385nm,0.1s						
GLVR				smax	smax		
	comp=N,1µm,0.4s						
GLVR				smax	smax		
	comp=E,563nm,0.2s						
JKHN	**Kushirohamanak**	**1.35**	**256**	P	**Pn**	**19 16 55.4**	**+0.2**
JRA	**Rausu**	**1.42**	**292**	P	**Pn**	**19 16 56.3**	**+0.1**
JNK	**Nakash**	**1.63**	**277**	P	**Pn**	**19 16 58.7**	**-0.4**
JNK				*e*S	**Sn**	**19 17 18.2**	**-0.7**
JAK	**Akkeshi**	**1.70**	**256**	P	**Pn**	**19 16 59.5**	**-0.6**
KUR	**Kuril'sk**	**1.93**	**20**	*i* P	**Pn**	**19 17 03.1**	**0.0**
KUR				AMB	AMB	19 17 08.0	
	comp=E,30nm,0.2s						
KUR				AMB	AMB	19 17 08.0	
	comp=E,20nm,0.2s						
KUR				AMB	AMB	19 17 08.0	
	comp=E,40nm,0.2s						
KUR				*e*S	**Sn**	**19 17 25.0**	**-1.1**
KUR				A	A	19 17 29.0	
	comp=E,310nm,0.3s						
KUR				A	A	19 17 29.0	
	comp=E,220nm,0.3s						
KUR	**Kuril'sk**	**1.93**	**20**	*e*PN	**Pn**	**19 17 05.0**	**+1.9**
KUR				*e*S	**Sn**	**19 17 27.0**	**+0.9**
KUR				pmax	pmax		
	comp=E,22nm,0.2s						
KUR				pmax	pmax		
	comp=Z,43nm,0.2s						
KUR				pmax	pmax		
	comp=N,29nm,0.3s						
KUR				smax	smax		
	comp=N,306nm,0.2s						
KUR				smax	smax		
	comp=E,222nm,0.3s						
JTKR	**Abashiri--Toko**	**2.27**	**285**	P	**Pn**	**19 17 09.0**	**+1.1**
JAR	**Ashorobuto**	**2.32**	**268**	P	**Pn**	**19 17 09.0**	**+0.4**
JMP	**Maruseppu**	**2.67**	**284**	P	**Pn**	**19 17 14.7**	**+1.3**
HRK	**Horoka**	**2.78**	**272**	*e*P	**Pn**	**19 17 16.5**	**+1.5**
JKA	**Kamikawa-asahi**	**3.23**	**284**	*e*P	**Pn**	**19 17 23.0**	**+2.0**
ASAJ	**Asahikawa**	**3.23**	**284**	P	**Pn**	**19 17 23.0**	**+2.0**
	comp=E,2.4nm,0.3s,baz=138,slow=11,SNR=23						
ASAJ				S	**Sn**	**19 18 06.0**	**+7.7**
	comp=E,1.2nm,0.3s,baz=18,slow=20,SNR=2.8						
SONM	**Songino Array**	**28.46**	**293**	P	**P**	**19 22 25.3**	**+1.1**
	comp=E,0.3nm,0.5s,baz=90,slow=11,SNR=4.4						
GUMO	**Guam**	**29.78**	**184**	LR	LR	19 32 14.5	
	comp=E,56nm,19.9s,baz=86,slow=32						
ILAR	**Eielson Array**	**41.84**	**36**	P	**P**	**19 24 18.9**	**+0.4**
	comp=E,0.4nm,0.7s,baz=278,slow=10,SNR=6.2						
MKAR	**Makanchi Array**	**44.61**	**298**	P	**P**	**19 24 40.3**	**-0.9**
	comp=E,0.2nm,0.5s,baz=79,slow=7.5,SNR=6.0						
YKA	**Yellowknife Ar**	**56.16**	**34**	P	**P**	**19 26 06.6**	**-1.5**
	comp=E,0.2nm,0.6s,baz=301,slow=7.5,SNR=3.1						
ARCES	**ARCESS Array B**	**59.50**	**340**	P	**P**	**19 26 31.3**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=E,2.8nm,1.0s,baz=76,slow=7.7,SNR=2.7						
WRA	**Warramunga Arr**	**64.11**	**193**	P	**P**	**19 27 03.5**	**+0.5**
	comp=E,0.7nm,1.1s,baz=6.7,slow=6.6,SNR=2.7						
FINES	**FINESS Array B**	**65.10**	**333**	P	**P**	**19 27 08.9**	**-0.1**
	comp=E,1.0nm,0.7s,baz=28,slow=6.3,SNR=2.8						
NOA	**NORSAR Array B**	**69.86**	**339**	P	**P**	**19 27 39.3**	**+0.2**
	comp=E,1.2nm,1.0s,baz=33,slow=6.6,SNR=4.8						
AKASG	**Malin Array Be**	**71.76**	**324**	P	**P**	**19 27 50.1**	**-0.7**
	comp=E,0.2nm,0.4s,baz=51,slow=5.9,SNR=2.7						

IDC 18 19:22:48.0±6.3**,16°.96S**×**178°.77W,h544**^{km}±69^{km}**, mb3.3**/5**,mb1 3.5**/6**,mb1mx3.1**/30**,mbtmp4.2**/6**,Error ellipse: s-maj=87.0km s-min=28.8km az=143.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.84**	**248**	P	P	19 25 56.3	+0.3
	0.4nm,0.3s,baz=90,slow=20,SNR=3.5						
STKA	**Stephens Creek**	**38.80**	**240**	P	P	19 29 26.0	-0.4
	3.7nm,0.4s,baz=88,slow=9.7,SNR=21						
WRA	**Warramunga Arr**	**44.48**	**259**	P	P	19 30 11.1	-0.3
	2.2nm,0.4s,baz=95,slow=7.0,SNR=78						
ASAR	**Alice Springs**	**44.73**	**253**	P	P	19 30 13.3	0.0
	21nm,0.6s,baz=87,slow=8.1,SNR=296						
ASAR				PcP	PcP	19 31 43.9	0.0
	0.4nm,0.7s,baz=81,slow=5.7,SNR=3.4						
ILAR	**Eielson Array**	**85.05**	**13**	P	P	19 34 25.4	-0.5
	0.4nm,0.9s,baz=230,slow=5.6,SNR=3.5						
PDAR	**Pinedale Array**	**86.90**	**44**	P	P	19 34 35.8	+0.2
	0.2nm,0.5s,baz=242,slow=1.7,SNR=2.2						

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*IDC **18** 19:38:02.0±4.3,26°.43S×71°.37E,h0^{km},mb3.9/6, mb1 4.1/6,mb1mx3.7/47,mbtmp3.9/6,MS3.7/4,Ms1 3.6/4, ms1mx3.1/29,Error ellipse: s-maj=126.5km s-min=32.0km az=51.0*

*NEIC **18** 19:38:04.3±2.2,26°.39S×71°.50E,h10^{km},mb4.7/4,Error ellipse: s-maj=69.5km s-min=14.1km az=49.0*

ISC 18 19:38:04.4±4.2**,26°.4S**±0°.6×**71°.5E**±0°.7**,h10**^{km}**,n25,** σ**0**^{s}**.52**/15**,mb4.0**/9**,MS3.6**/4**,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.66**	**3**	T	T	20 01 34.4	
	baz=184,slow=76,SNR=7.6						
H08S2	**Diego Garcia H**	**18.66**	**3**	T	T	20 01 20.9	
	baz=184,slow=76,SNR=8.4						
H08S3	**Diego Garcia H**	**18.67**	**3**	T	T	20 01 32.1	
	baz=184,slow=76,SNR=11						
H01W2	**Cape Leeuwin H**	**37.40**	**114**	T	T	20 24 58.1	
	baz=271						
H01W3	**Cape Leeuwin H**	**37.40**	**114**	T	T	20 25 01.5	
	baz=271						
H01W1	**Cape Leeuwin H**	**37.41**	**114**	T	T	20 24 56.9	
	baz=271						
BOSA	**Boshof**	**40.91**	**256**	LR	LR	20 00 09.6	
	comp=Z,77nm,20.8s,baz=230,slow=33						
MAW	**Mawson**	**41.58**	**185**	LR	LR	19 59 17.9	
	comp=Z,214nm,20.1s,baz=356,slow=31						
CMAR	**Chiang Mai Arr**	**51.92**	**34**	P	**P**	**19 47 13.3**	**-0.3**
	0.7nm,0.3s,baz=217,slow=10,SNR=5.4						
ASAR	**Alice Springs**	**56.10**	**102**	P	**P**	**19 47 44.0**	**-0.3**
	0.7nm,0.9s,baz=264,slow=7.3,SNR=6.1						
WRA	**Warramunga Arr**	**57.62**	**98**	P	**P**	**19 47 55.4**	**+0.3**
	1.4nm,0.9s,baz=254,slow=6.4,SNR=6.7						
WR1	**Warramunga Arr**	**57.62**	**98**	*e*P	**P**	**19 47 55.4**	**+0.3**
	24nm,1.9s						
NRN	**Naryn**	**67.60**	**4**	*e*P	**P**	**19 49 02.2**	**+0.7**
	2.6nm,1.1s						
MK01	**Makanchi Array**	**73.46**	**8**	*e*P	**P**	**19 49 36.5**	**-0.3**
MK31	**Makanchi Array**	**73.48**	**8**	*e*P	**P**	**19 49 37.0**	**0.0**
	11nm,2.0s						
MK32	**Makanchi Array**	**73.48**	**8**	*e*P	**P**	**19 49 36.7**	**-0.3**
MKAR	**Makanchi Array**	**73.48**	**8**	*e*P	**P**	**19 49 37.2**	**+0.2**
	13nm,1.1s						
MKAR	**Makanchi Array**	**73.48**	**8**	P	**P**	**19 49 36.7**	**-0.3**
	1.6nm,0.9s,baz=196,slow=6.9,SNR=16						
SONA0	**Songino Array**	**80.25**	**23**	*e*P	**P**	**19 50 15.7**	**+0.4**
SONM	**Songino Array**	**80.25**	**23**	P	**P**	**19 50 15.7**	**+0.4**
	0.6nm,1.0s,baz=215,slow=4.0,SNR=4.6						
ZALV	**Zalesovo Beam**	**80.82**	**8**	*e*P	**P**	**19 50 17.7**	**-0.3**
ZALV	**Zalesovo Beam**	**80.82**	**8**	P	**P**	**19 50 17.1**	**-0.9**
	1.5nm,0.8s,baz=177,slow=7.2,SNR=6.7						
ZAA1	**Zalesovo Array**	**80.82**	**8**	*e*P	**P**	**19 50 17.1**	**-0.9**
DBIC	**Dimbokro**	**80.87**	**282**	LR	LR	20 24 41.8	
	comp=Z,28nm,18.0s,baz=231,slow=35						
KSRS	**Korea Array**	**82.67**	**42**	LR	LR	20 27 19.8	
	comp=Z,24nm,18.9s,baz=80,slow=36						

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*IDC **18** 19:48:06.8±1.7,6°.84S×131°.98E,h0^{km},mb3.8/4, mb1 3.9/9,mb1mx3.8/28,mbtmp3.8/9,ML3.8/5,MS3.0/2, Ms1 3.0/2,ms1mx2.6/26,Error ellipse: s-maj=49.4km s-min=22.1km az=90.0*

*ISCJB **18** 19:48:08.7±0.6,6°.94S±0°.04×132°.04E±0°.09,h33^{km}, mb3.6/4,MS3.3/1,Error ellipse: s-maj=12.9km s-min=6.4km az=177.0*

*DJA **18** 19:48:12.8±0.6,7°S±4°×13°2E±°,h101^{km}±18^{km},M4.2/6, mb4.1/6,MLv4.2/6*

ISC 18 19:48:10.3±0.8**,6°.92S**±0°.05×**132°.00E**±0°.10**,h35**^{km}**,n17,** σ**2**^{s}**.35**/20**,mb3.7**/4**,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.27**	**213**	P	Pn	19 48 37.7	+6.2
BNDI	**Bandanaira**	**3.16**	**319**	P	**Pn**	**19 48 59.6**	**+2.0**
FAKI	**Fak Fak**	**3.98**	**4**	P	**Pn**	**19 49 08.5**	**-0.3**
RKPI	**Ransiki, Papua**	**5.79**	**22**	P	**Pn**	**19 49 35.0**	**+1.2**
SIJI	**Sorong**	**6.05**	**353**	Pn	**Pn**	**19 49 36.5**	**-0.9**
	3.1nm,0.3s,baz=180,slow=22,SNR=12						
SIJI				Sn	**Sn**	**19 50 39.2**	**-6.2**
	2.2nm,0.3s,baz=32,slow=22,SNR=8.2						
SANI	**Sanana**	**7.70**	**309**	P	**Pn**	**19 50 01.0**	**+1.1**
SOEI	**Soe**	**8.15**	**249**	P	**Pn**	**19 50 08.4**	**+2.1**
BATI	**Baumata**	**8.86**	**248**	P	**Pn**	**19 50 18.1**	**+2.1**
BATI	**Baumata**	**8.86**	**248**	Pn	**Pn**	**19 50 17.2**	**+1.2**
	1.5nm,0.3s,baz=155,slow=4.7,SNR=5.4						
BATI				Sn	**Sn**	**19 51 53.4**	**-1.4**
	0.7nm,0.3s,baz=102,slow=19,SNR=2.1						
FITZ	**Fitzroy Crossi**	**12.72**	**209**	Pn	**Pn**	**19 51 09.3**	**+0.5**
	0.6nm,0.3s,baz=26,slow=11,SNR=20						
FITZ				Sn	**Sn**	**19 53 25.6**	**-3.7**
	1.0nm,0.3s,baz=145,slow=19,SNR=9.8						
FITZ				LR	LR	19 55 45.1	
	comp=Z,32nm,21.2s,baz=351,slow=36						
WRA	**Warramunga Arr**	**13.15**	**170**	Pn	**Pn**	**19 51 15.8**	**+1.1**
	0.4nm,0.3s,baz=347,slow=14,SNR=29						
WRA				Sn	**Sn**	**19 53 37.4**	**-2.4**
	0.9nm,0.3s,baz=352,slow=23,SNR=8.4						
ASAR	**Alice Springs**	**16.76**	**174**	Pn	**P**	**19 52 04.5**	**+0.1**
	0.2nm,0.3s,baz=349,slow=8.5,SNR=14						
ASAR				Sn	**Sn**	**19 55 05.0**	**-2.6**
	0.3nm,0.3s,baz=0.2,slow=24,SNR=5.8						
HNR	**Honiara**	**27.78**	**97**	LR	LR	20 04 50.0	
	comp=Z,79nm,19.1s,baz=206,slow=36						
CMAR	**Chiang Mai Arr**	**41.22**	**308**	P	**P**	**19 55 52.6**	**+0.5**
	0.3nm,0.6s,baz=123,slow=6.6,SNR=3.7						
SONM	**Songino Array**	**59.01**	**340**	P	**P**	**19 58 08.0**	**+1.3**
	0.2nm,0.4s,baz=116,slow=3.4,SNR=3.5						
MKAR	**Makanchi Array**	**69.25**	**326**	P	**P**	**19 59 16.1**	**+2.3**
	1.3nm,0.4s,baz=112,slow=8.5,SNR=74						
ZALV	**Zalesovo Beam**	**72.40**	**333**	P	**P**	**19 59 33.7**	**+1.0**
	0.5nm,0.5s,baz=131,slow=6.5,SNR=4.4						

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*DDA **18** 19:56:41.5,39°.71N×25°.52E,h7^{km}±6^{km},ML2.6*

*ISK **18** 19:56:42.5,39°.74N×25°.58E,h3^{km},ML2.6/9*

*ISCJB **18** 19:56:43.5±0.5,39°.73N±0°.02×25°.57E±0°.02,h5^{km}±4^{km}, Error ellipse: s-maj=3.5km s-min=3.0km az=136.3*

*ATH **18** 19:56:43.3,39°.74N×25°.54E,h26^{km}±1^{km},ML2.3/9,Error ellipse: s-maj=1.7km s-min=1.0km az=234.0*

*THE **18** 19:56:43.8,39°.73N×25°.58E,h7^{km},ML2.1/9,Error ellipse: s-maj=0.9km s-min=0.4km az=204.0*

ISC 18 19:56:43.6±1.0**,39°.73N**±0°.02×**25°.56E**±0°.02**,h12**^{km}±8^{km}**, n55,** σ**0**^{s}**.70**/82**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.34**	**300**	P	**Pg**	**19 56 50.5**	**+0.2**
LIA				S	**Sg**	**19 56 55.9**	**+1.0**
LIA				AML	AML	19 57 00.5	
	comp=N,1286μm,0.4s						
LIA				AML	AML	19 57 03.5	
	comp=E,1124μm,0.7s						
LIA	**Limnos Island**	**0.34**	**300**	P	**Pg**	**19 56 50.5**	**+0.2**
LIA				S	**Sb**	**19 56 56.0**	**-0.8**
BOZC	**Bozcaada**	**0.39**	**74**	PG	**Pg**	**19 56 50.9**	**-0.5**
BOZC				SG	**Sg**	**19 56 56.8**	**+0.1**
BOZC	**Bozcaada**	**0.39**	**74**	*i* P	**Pg**	**19 56 51.2**	**-0.2**
BOZC				*i* S	**Sb**	**19 56 57.6**	**-0.9**
BOZC				IAML_P			
	comp=Z,3μm,0.2s						
SIGR	**SIGRI**	**0.57**	**156**	PG	**Pg**	**19 56 54.2**	**-0.4**
SIGR				SG	**Sb**	**19 57 03.0**	**-0.4**
SIGR	**SIGRI**	**0.57**	**156**	P	**Pg**	**19 56 54.2**	**-0.4**
SIGR				AML	AML	19 57 03.0	
	comp=E,751μm,0.4s						
SIGR				S	**Sb**	**19 57 03.1**	**-0.4**
SIGR				AML	AML	19 57 03.5	
	comp=N,1077μm,0.6s						
SIGR	**SIGRI**	**0.57**	**156**	P	**Pg**	**19 56 54.1**	**-0.5**
SIGR				S	**Sb**	**19 57 03.0**	**-0.4**
EZN	**Ezine**	**0.60**	**81**	PG	**Pg**	**19 56 54.6**	**-0.6**
EZN				SG	**Sg**	**19 57 03.1**	**0.0**
EZN	**Ezine**	**0.60**	**81**	P	**Pg**	**19 56 54.6**	**-0.6**
EZN				S	**Sb**	**19 57 03.3**	**-1.0**
PRK	**Paraskevi**	**0.73**	**131**	P	**Pb**	**19 56 58.2**	**-0.1**
PRK				S	**Sb**	**19 57 09.3**	**+1.1**
PRK				AML	AML	19 57 12.8	
	comp=E,1022μm,0.6s						
PRK				AML	AML	19 57 14.2	
	comp=N,730μm,0.5s						
PRK	**Paraskevi**	**0.73**	**131**	P	**Pb**	**19 56 58.1**	**-0.1**
PRK				S	**Sb**	**19 57 08.3**	**+0.1**
SMTH	**Samothraki Isl**	**0.74**	**358**	P	**Pb**	**19 56 57.9**	**-0.5**
SMTH				AML	AML	19 57 11.4	
	comp=E,223μm,0.4s						
SMTH				AML	AML	19 57 15.7	
	comp=N,143μm,0.3s						
SMTH	**Samothraki Isl**	**0.74**	**358**	P	**Pg**	**19 56 57.8**	**-0.1**
SMTH				S	**Sb**	**19 57 08.7**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.76**	**89**	*i* P	**Pg**	**19 56 57.9**	**-0.4**
BAYC				*i* S	**Sb**	**19 57 09.3**	**+0.2**
BAYC				IAML_P			
	comp=Z,837nm,0.1s						
GELI	**Tayfur-Gelibol**	**0.97**	**46**	PG	**Pg**	**19 57 01.6**	**-0.6**
GELI				SG	**Sn**	**19 57 16.3**	**-0.3**
AYVA	**Ayvalik**	**0.97**	**115**	*i* P	**Pb**	**19 57 02.2**	**-0.1**
AYVA				IAML_P			
	comp=Z,115nm,0.2s						
THAS	**Thassos island**	**1.09**	**324**	P	**Pg**	**19 57 04.1**	**-0.4**
THAS				S	**Sn**	**19 57 19.7**	**+0.1**
THAS				AML	AML	19 57 24.0	
	comp=N,144μm,0.4s						
THAS				AML	AML	19 57 25.1	
	comp=E,253μm,0.6s						
THAS	**Thassos island**	**1.09**	**324**	P	**Pg**	**19 57 04.1**	**-0.4**
THAS				S	**Sn**	**19 57 19.7**	**+0.1**
ENEZ	**Enez**	**1.10**	**24**	PN	**Pg**	**19 57 03.6**	**-1.2**
LPK	**Lapseki**	**1.12**	**55**	PN	**Pb**	**19 57 04.8**	**-0.1**
SKY	**Skiros Island**	**1.16**	**223**	P	**Pg**	**19 57 04.9**	**-1.0**
SKY				S	**Sn**	**19 57 22.1**	**+0.8**
SKY				AML	AML	19 57 28.2	
	comp=E,372μm,0.6s						
SKY				AML	AML	19 57 31.2	
	comp=N,222μm,0.7s						
ERIK	**Erikli-Kesan**	**1.19**	**38**	PN	**Pg**	**19 57 05.5**	**-0.9**
ALN	**Alexandroupoli**	**1.22**	**17**	PN	**Pb**	**19 57 06.0**	**-0.6**
ALN	**Alexandroupoli**	**1.22**	**17**	P	**Pb**	**19 57 06.5**	**-0.1**
ALN				S	**Sn**	**19 57 23.4**	**+0.5**
ALN				AML	AML	19 57 24.7	
	comp=E,93μm,0.3s						
ALN				AML	AML	19 57 29.1	
	comp=N,115μm,0.8s						
ALN	**Alexandroupoli**	**1.22**	**17**	P	**Pb**	**19 57 06.3**	**-0.3**
ALN				S	**Sn**	**19 57 22.9**	**0.0**
OUR	**Ouranopolis**	**1.35**	**297**	PN	**Pb**	**19 57 09.0**	**+0.1**
OUR	**Ouranopolis**	**1.35**	**297**	P	**Pn**	**19 57 08.2**	**-0.1**
OUR				S	**Sb**	**19 57 26.7**	**+0.6**
OUR				AML	AML	19 57 33.7	
	comp=N,285μm,0.4s						
OUR				AML	AML	19 57 34.4	
	comp=E,177μm,0.5s						
OUR	**Ouranopolis**	**1.35**	**297**	P	**Pn**	**19 57 08.2**	**-0.1**
KESN	**Edirne-Kesan**	**1.39**	**38**	*i* P	**Pn**	**19 57 09.3**	**+0.2**
KESN				IAML_P			
	comp=Z,228nm,0.2s						
CHOS	**Chios island**	**1.40**	**164**	PN	**Pg**	**19 57 10.4**	**0.0**
CHOS	**Chios island**	**1.40**	**164**	P	**Pn**	**19 57 08.6**	**-0.3**
CHOS				S	**Sg**	**19 57 29.3**	**+0.7**
CHOS				AML	AML	19 57 35.5	
	comp=E,394μm,0.7s						
CHOS				AML	AML	19 57 39.1	
	comp=N,169μm,0.5s						
CHOS	**Chios island**	**1.40**	**164**	P	**Pn**	**19 57 08.6**	**-0.3**
CHOS				S	**Sb**	**19 57 27.9**	**+0.5**
RDO	**Rodhopi**	**1.41**	**359**	PN	**Pn**	**19 57 09.2**	**+0.1**
RDO	**Rodhopi**	**1.41**	**359**	P	**Pn**	**19 57 09.2**	**+0.1**
RDO	**Rodhopi**	**1.41**	**359**	P	**Pn**	**19 57 09.2**	**+0.1**
RDO				S	**Sg**	**19 57 28.9**	**-0.2**
AOS	**Alonnisos**	**1.42**	**247**	P	**Pb**	**19 57 10.3**	**+0.4**
PAIG	**Paliouri**	**1.46**	**278**	P	**Pn**	**19 57 09.3**	**-0.5**
KRBG	**Karabiga-Canak**	**1.49**	**63**	PN	**Pn**	**19 57 10.6**	**+0.5**
KAVA	**Kavala**	**1.50**	**328**	P	**Pn**	**19 57 10.1**	**-0.2**
KAVA				S	**Sn**	**19 57 29.0**	**-0.7**
KAVA	**Kavala**	**1.50**	**328**	P	**Pn**	**19 57 10.2**	**0.0**
KAVA				S	**Sb**	**19 57 30.8**	**+0.6**
SART	**Tekirdag**	**1.56**	**52**	*i* P	**Pn**	**19 57 11.5**	**+0.3**
SART				*i* S	**Sg**	**19 57 35.5**	**+1.5**
SART				IAML_P			
	comp=Z,789nm,0.2s						
URLA	**Izmir**	**1.59**	**149**	PN	**Pn**	**19 57 12.0**	**+0.5**
KNL	**Balıkesir**	**1.60**	**70**	*i* P	**Pg**	**19 57 13.4**	**-0.9**
KNL				*i* S	**Sg**	**19 57 35.5**	**+0.4**
KNL				IAML_P			
	comp=Z,704nm,0.3s						
ZEY	**zmir**	**1.66**	**153**	*i* P	**Pn**	**19 57 12.1**	**-0.4**
ZEY				IAML_P			
	comp=Z,318nm,0.3s						
GONE	**Gonen-Balikesi**	**1.66**	**78**	PN	**Pn**	**19 57 13.2**	**+0.7**
STEP	**BALIKESIR_Sava**	**1.70**	**101**	*i* P	**Pn**	**19 57 13.6**	**+0.5**
STEP				IAML_P			
	comp=Z,348nm,0.3s						
KDZ	**Kurdzhali**	**1.92**	**357**	*e*P	**Pg**	**19 57 22.8**	**+2.4**
RZN	**Rozhen**	**2.06**	**342**	*e*P	**Pn**	**19 57 19.4**	**+1.2**
DURS	**Dursunbey**	**2.25**	**92**	*i* P	**Pn**	**19 57 21.9**	**+1.2**
DURS				IAML_P			
	comp=Z,217nm,0.3s						
EDRB	**Edirne**	**2.30**	**23**	PN	**Pn**	**19 57 22.6**	**+1.4**
MMB	**Musomiste**	**2.32**	**324**	*e*P	**Pb**	**19 57 24.8**	**-0.6**
ARMT	**Armutlu**	**2.66**	**71**	PN	**Pn**	**19 57 27.4**	**+1.1**
KKB	**Krupnik**	**2.84**	**319**	*e*P	**Pb**	**19 57 32.8**	**-1.5**
VTS	**Vitosha**	**3.37**	**329**	*e*P	**Pb**	**19 57 41.2**	**-2.0**
PVL	**Pavlikeni**	**3.49**	**357**	*e*P	**Pn**	**19 57 37.2**	**-0.4**

SJA 18 20:27:09.0±0.8**,33°.93S**×**73°.16W,h9**^{km}±46^{km}**,ML3.6, MW3.9,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	**2.03**	**63**	*e*P	Pb	20 27 45.2	-1.0
ROC1				*e*S	Sb	20 28 12.7	+1.0
AUSP	**Uspallata**	**3.59**	**63**	*e*P	Pb	20 28 09.3	-3.6
AUSP				*e*S	Sb	20 28 52.7	-4.1
RTLS	**Leoncito**	**3.88**	**58**	*e*P	Pn	20 28 12.7	+3.5
RTLS				*e*S	Sb	20 29 00.1	-5.0
RTLS				IAML		20 29 08.1	
	comp=Z,98nm,0.6s						
RTCV	**Cerro Valdivia**	**4.40**	**63**	*e*P	Pn	20 28 19.5	+3.5
ZON	**Zonda**	**4.46**	**59**	*e*P	Pn	20 28 19.9	+3.1
CFA	**Coronel Fontan**	**4.75**	**62**	*e*P	Pn	20 28 24.2	+3.3
ACCO	**Cerro Coronel**	**4.81**	**47**	*e*P	Pn	20 28 26.0	+4.1
AROD	**Rodeo**	**4.88**	**41**	*e*P	Pn	20 28 26.8	+3.9
AMOG	**MOGNA**	**4.94**	**54**	*e*P	Pn	20 28 25.9	+2.4
ACAN	**Cantantal**	**5.28**	**73**	*e*P	Pn	20 28 31.6	+3.6
AGUA	**GUANDACOL**	**5.95**	**43**	*e*P	Pn	20 28 40.8	+3.5
ACLC	**CERRO LA CRUZ**	**6.94**	**51**	*e*P	Pn	20 28 54.5	+3.5

IDC 18 20:33:35.4±2.9**,4°.56N**×**94°.63E,h0**^{km}**,mb3.4**/3**,mb1 3.6**/5**, mb1mx3.3**/50**,mbtmp3.4**/5**,ML3.6**/2**,Error ellipse: s-maj=91.8km s-min=27.9km az=58.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.62**	**112**	Pn	Pn	20 34 46.5	-0.2
	2.2nm,0.3s,baz=359,slow=9.7,SNR=3.8						
PSI				Sn	Sn	20 35 31.1	-10
	1.7nm,0.3s,baz=0.0,slow=14,SNR=2.3						
CMAR	**Chiang Mai Arr**	**14.44**	**17**	Pn	Pn	20 37 03.2	+1.9
	0.1nm,0.3s,baz=197,slow=15,SNR=3.6						
MKAR	**Makanchi Array**	**43.41**	**348**	P	P	20 41 39.1	-0.7
	0.1nm,0.4s,baz=152,slow=6.4,SNR=2.3						
WRA	**Warramunga Arr**	**45.99**	**123**	P	P	20 41 59.9	-1.0
	0.4nm,0.7s,baz=301,slow=9.3,SNR=2.5						
ASAR	**Alice Springs**	**47.46**	**128**	P	P	20 42 13.4	+1.1
	1.0nm,0.6s,baz=303,slow=7.5,SNR=4.1						

IDC 18 20:36:49.6±2.9**,23°.08S**×**179°.38E,h644**^{km}±43^{km}**,mb3.4**/7**, mb1 3.5**/7**,mb1mx3.1**/32**,mbtmp4.5**/7**,Error ellipse: s-maj=56.9km s-min=18.4km az=173.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	**Papeete**	**29.59**	**85**	P	P	20 42 05.9	+0.2
	52nm,0.8s,baz=253,slow=19,SNR=3.5						
CTA	**Charters Tower**	**30.91**	**269**	P	P	20 42 17.4	+0.4
	8.5nm,0.3s,baz=94,slow=11,SNR=34						
STKA	**Stephens Creek**	**34.51**	**247**	P	P	20 42 47.0	0.0
	1.0nm,0.5s,baz=99,slow=9.1,SNR=4.1						
ASAR	**Alice Springs**	**41.61**	**260**	P	P	20 43 44.8	+0.5
	1.8nm,0.6s,baz=95,slow=8.2,SNR=19						
WRA	**Warramunga Arr**	**41.90**	**265**	P	P	20 43 46.1	-0.5
	1.2nm,0.3s,baz=95,slow=8.4,SNR=15						
JAY	**Jayapura**	**42.67**	**293**	P	P	20 43 52.0	-0.6
	9.8nm,0.6s,baz=136,slow=8.8,SNR=4.3						
SONM	**Songino Array**	**96.11**	**320**	P	P	20 49 11.4	+1.2
	0.1nm,0.3s,baz=120,slow=5.7,SNR=3.4						
AKASG	**Malin Array Be**	**143.98**	**327**	PKP	PKPbc	20 55 11.0	-1.9
	0.2nm,0.3s,baz=39,slow=3.4,SNR=4.3						
BRTR	**Keskin Array B**	**146.63**	**308**	PKPbc	PKPbc	20 55 20.7	-0.3
	0.6nm,0.9s,baz=60,slow=5.7,SNR=3.5						

MEX 18 20:40:30.4±0.4**,16°.25N**×**98°.19W,h12**^{km}±2^{km}**,MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.16**	**22**	*i* P	Pg	20 40 33.5	-0.6
PNIG				*i* S	Sg	20 40 36.3	-0.5

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*ISCJB **18** 20:53:21.2±1.4,11°.12S±0°.10×166°.0E±0°.2,h10^{km}, mb3.5/4,Error ellipse: s-maj=24.5km s-min=11.5km az=159.6*

*IDC **18** 20:53:21.3±2.0,10°.91S×166°.01E,h0^{km},mb3.5/4, mb1 3.9/6,mb1mx3.6/31,mbtmp3.8/6,ML4.1/2,MS2.7/2, Ms1 2.7/2,ms1mx2.6/14,Error ellipse: s-maj=43.2km s-min=32.6km az=132.0*

ISC 18 20:53:23.1±1.6**,11°.0S**±0°.1×**166°.1E**±0°.2**,h10**^{km}**,n6,** σ**1**^{s}**.71**/7**,mb3.5**/4**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.21**	**284**	Pn	**Pn**	**20 54 55.1**	**+0.2**
	7.1nm,0.3s,baz=135,slow=5.7,SNR=2.2						
HNR				LR	LR	20 56 46.9	
	comp=Z,55nm,20.7s,baz=332,slow=33						
DZM	**Mont Dzumac**	**11.01**	**178**	Pn	**Pn**	**20 56 02.7**	**+1.9**
	0.9nm,0.3s,baz=214,slow=14,SNR=5.9						
DZM				Sn	**Sn**	**20 58 02.1**	**-2.0**
	0.2nm,0.3s,baz=131,slow=20,SNR=1.5						
DZM				LR	LR	20 59 56.7	
	comp=Z,58nm,19.5s,baz=38,slow=36						
CTA	**Charters Tower**	**21.09**	**242**	P	**P**	**20 58 09.0**	**+1.1**
	1.5nm,0.7s,baz=51,slow=6.5,SNR=2.9						
WRA	**Warramunga Arr**	**31.78**	**250**	P	**P**	**20 59 47.4**	**-0.6**
	1.1nm,0.6s,baz=81,slow=9.3,SNR=16						
ASAR	**Alice Springs**	**33.08**	**243**	P	**P**	**20 59 57.9**	**-1.5**
	0.3nm,0.5s,baz=64,slow=10,SNR=7.9						
ILAR	**Eielson Array**	**83.38**	**18**	P	**P**	**21 05 49.7**	**-0.4**
	0.3nm,0.9s,baz=228,slow=3.4,SNR=3.0						

IDC 18 21:01:49.6±8.2**,51°.79N**×**174°.03E,h0**^{km}**,mb3.4**/3**, mb1 3.7**/3**,mb1mx3.2**/31**,mbtmp3.5**/3**,Error ellipse: s-maj=193.4km s-min=40.2km az=166.0,Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**23.83**	**42**	P	P	21 07 03.8	-0.2
	0.2nm,0.6s,baz=252,slow=7.8,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**32.48**	**193**	T	T	21 43 30.5	
	baz=8.3,slow=76,SNR=4.1						
H11N3	**WAKE ISLAND Hy**	**32.49**	**193**	T	T	21 43 32.1	
	baz=8.3,slow=76,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**32.50**	**193**	T	T	21 43 32.1	
	baz=8.3,slow=76,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**33.71**	**193**	T	T	21 44 57.4	
	baz=7.9						
H11S3	**WAKE ISLAND Hy**	**33.73**	**193**	T	T	21 45 02.2	
	baz=7.9						
H11S2	**WAKE ISLAND Hy**	**33.73**	**193**	T	T	21 45 01.8	
	baz=7.9						
MKAR	**Makanchi Array**	**56.18**	**304**	P	P	21 11 31.1	+0.1
	0.1nm,0.3s,baz=52,slow=7.0,SNR=4.9						
ARCES	**ARCESS Array B**	**56.81**	**347**	P	P	21 11 35.0	-0.1
	3.4nm,1.0s,baz=24,slow=9.0,SNR=2.6						

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*SOME **18** 21:10:43.2,40°.73N×72°.20E,h0^{km}*

*KRNET **18** 21:10:43.1±0.1,40°.65N×72°.25E,h15^{km},mb2.5*

*NNC **18** 21:10:44.2±1.1,40°.68N×72°.29E,h0^{km},mb3.2,mpv3.0, Error ellipse: s-maj=10.2km s-min=4.9km az=59.0*

ISC 18 21:10:42.6±1.4**,40°.67N**±0°.03×**72°.27E**±0°.03**,h1**^{km}±14^{km}**, n34,** σ**1**^{s}**.42**/53**,28C-10D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.85**	**39**	⇑*i*P	**Pg**	**21 10 59.6**	**+0.7**
	baz=39						
ARSB				⇑*i*S	**Sb**	**21 11 11.8**	**-0.4**
	baz=39						
SFK	**Sufi-Kurgan**	**1.15**	**124**	⇓P	**Pb**	**21 11 05.6**	**+0.2**
	2.8nm,0.2s						
SFK				⇑S	**Sg**	**21 11 20.6**	**+1.1**
	8.1nm,0.3s						
SFK	**Sufi-Kurgan**	**1.15**	**124**	Pg	**Pn**	**21 11 06.9**	**+0.9**
	6.7nm,0.1s						
SFK				Lg	Lg	21 11 24.1	
	85nm,0.2s						
SFK	**Sufi-Kurgan**	**1.15**	**124**	⇑*i*P	**Pb**	**21 11 04.9**	**-0.5**
	baz=23						
SFK				⇑*i*S	**Sg**	**21 11 20.5**	**+1.0**
	baz=23						
ARK	**Arkit**	**1.15**	**349**	⇑*i*P	**Pb**	**21 11 04.9**	**-0.5**
	baz=50						
ARK				⇑*i*S	**Sb**	**21 11 20.6**	**-0.3**
	baz=50						
BTK	**Batken**	**1.26**	**242**	⇑*i*P	**Pn**	**21 11 06.6**	**-0.8**
	baz=42						
BTK				⇑*i*S	**Sb**	**21 11 23.7**	**-0.3**
	baz=42						
AML	**Almayashu**	**1.82**	**36**	⇑*i*P	**Pb**	**21 11 17.4**	**+0.6**
	baz=36						
AML				⇑*i*S	**Sg**	**21 11 42.1**	**+1.2**
	baz=36						
MNAS	**Manas**	**1.83**	**6**	⇑Pg	**Pg**	**21 11 17.9**	**+0.2**
	2.4nm,0.4s						
MNAS				⇑Lg	Lg	21 11 42.3	
	10nm,0.3s						
MNAS	**Manas**	**1.83**	**6**	P	**Pb**	**21 11 17.4**	**+0.6**
	2.0nm,0.2s						
MNAS				S	**Sg**	**21 11 42.4**	**+1.1**
	17nm,0.2s						
MNAS	**Manas**	**1.83**	**6**	⇑*i*P	**Pb**	**21 11 17.5**	**+0.6**
	baz=6.0						
MNAS				⇑*i*S	**Sg**	**21 11 42.1**	**+0.8**
	baz=6.0						
ARLS	**Aral**	**1.96**	**52**	⇑*i*P	**Pb**	**21 11 19.5**	**+0.4**
	baz=51						
ARLS				⇑*i*S	**Sg**	**21 11 46.3**	**+0.8**
	baz=51						
MRKS	**Merke**	**2.20**	**19**	Pg	**Pb**	**21 11 24.0**	**+0.8**
	5.9nm,0.3s						
MRKS				Lg	Lg	21 11 53.5	
	31nm,0.3s						

MRKS	Merke	2.20	19	*e*P	Pb	21 11 24.0	+0.8
	5.9nm,0.3s						
MRKS				*e*S	Sg	21 11 53.5	+0.3
	31nm,0.3s						
IUG	Iuzhnay	2.24	312	Pg	Pb	21 11 23.6	-0.3
	40nm,0.2s						
IUG				Lg	Lg	21 11 53.1	
	30nm,0.3s						
IUG	Iuzhnay	2.24	312	*e*P	Pb	21 11 23.6	-0.3
	40nm,0.2s						
IUG				*e*S	Sb	21 11 53.1	+1.0
	30nm,0.3s						
EKS2	Erkin-Say	2.29	29	⇑*i*P	Pb	21 11 24.0	-0.8
	baz=29						
EKS2				⇑*i*S	Sb	21 11 53.7	0.0
	baz=29						
UCH	Uchtor	2.30	47	⇑*i*P	Pb	21 11 24.5	-0.6
	baz=47						
UCH				⇑*i*S	Sb	21 11 54.7	+0.5
	baz=47						
AAK	Ala-Archa	2.58	40	⇓Pg	Pg	21 11 31.8	-0.2
	1.3nm,0.4s						
AAK				⇓Lg	Lg	21 12 05.8	
	12nm,0.6s						
AAK	Ala-Archa	2.58	40	⇑*e*P	Pb	21 11 28.1	-1.7
	baz=40						
AAK				⇑*i*S	Sb	21 12 01.0	-1.0
	baz=40						
CHM	Chimkent	2.59	310	*e*P	Pb	21 11 30.9	+1.0
	20nm,0.2s						
CHM				*e*S	Sg	21 12 04.6	-1.3
	80nm,0.4s						
KZA	Kyzart	2.65	57	⇓*e*P	Pb	21 11 29.3	-1.8
	baz=57						
KZA				⇓*i*S	Sb	21 12 02.8	-1.5
	baz=57						
KK31	Karatay Array	2.77	332	⇓Pg	Pb	21 11 33.3	+0.5
	1.1nm,0.4s,baz=149,slow=17						
KK31				⇑Lg	Lg	21 12 09.5	
	2.6nm,0.3s,baz=144,slow=28						
KBK	Karagaybulak	2.83	44	⇓*i*P	Pb	21 11 32.0	-1.9
	baz=44						
KBK				⇓*i*S	Sb	21 12 07.1	-2.0
	baz=44						
USP	Ospenovka	3.09	32	⇑*i*P	Pn	21 11 34.7	+2.2
	baz=32						
USP				⇑*i*S	Sb	21 12 13.1	-3.3
	baz=32						
SGDS	Sogindy	3.29	32	Pg	Pg	21 11 44.2	-1.5
	2.9nm,0.4s						
SGDS				Lg	Lg	21 12 28.0	
	5.5nm,0.4s						
TKM2	Tokmak 2	3.36	47	⇑Pg	Pg	21 11 48.7	+1.7
	2.2nm,0.6s						
TKM2				⇓Lg	Lg	21 12 29.8	
	1.8nm,0.3s						
DGS	Degeres	3.67	44	Pg	Pb	21 11 49.7	+1.4
	1.9nm,0.8s						
DGS				Lg	Lg	21 12 37.4	
	6.3nm,0.6s						
DGS	Degeres	3.67	44	*e*P	Pb	21 11 50.4	+2.1
	1.9nm,0.8s						
DGS				*e*S	Sg	21 12 38.3	-2.1
	6.3nm,0.6s						
KUU	Kurty	4.42	42	*e*P	Pb	21 12 03.9	+3.0
	0.6nm,0.3s						
KUU				*e*S	Sg	21 13 02.2	-2.3
	3.9nm,0.5s						
KOTS	Kotyrbulak	4.43	53	Pg	Pb	21 12 03.7	+2.5
	6.8nm,0.4s						
KOTS				Lg	Lg	21 13 02.1	
	7.7nm,0.6s						
KTBS	Karatobe	4.47	46	Pg	Pg	21 12 06.0	-2.4
	0.5nm,0.4s						
KTBS				Lg	Lg	21 13 05.3	
	8.5nm,0.5s						
KTBS	Karatobe	4.47	46	*e*P	Pg	21 12 06.0	-2.4
	0.5nm,0.4s						
KTBS				*e*S	Sg	21 13 05.3	-1.0
	8.5nm,0.5s						
PDGK	Podgornoye	6.00	61	⇑Lg	Lg	21 13 53.4	
	2.2nm,1.0s						
OTUK	Ortayu	7.58	0	⇓Lg	Lg	21 14 44.4	
	1.8nm,0.7s						

IDC 18 21:12:17.2±2.4, **18°.87N×39°.18E, h0^{km}, mb3.2**/4, **mb1 3.3**/4, **mb1mx3.1**/38, **mbtmp3.3**/4, **MS3.6**/1, **Ms1 3.8**/1, **ms1mx2.6**/17, **Error ellipse: s-maj=67.8km s-min=28.9km az=155.0, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	Keskin Array B	21.33	348	P	P	21 17 05.8	-0.1
	0.8nm,0.9s,baz=165,slow=12,SNR=5.1						
TORD	Torodi Ar. Bea	36.43	267	P	P	21 19 23.9	-0.1
	0.3nm,0.7s,baz=80,slow=10,SNR=2.6						
MKAR	Makanchi Array	44.88	42	P	P	21 20 33.9	+0.4
	0.4nm,0.7s,baz=240,slow=6.9,SNR=4.7						
CMAR	Chiang Mai Arr	56.37	80	LR	LR	21 46 10.7	
	comp=Z,50nm,20.8s,baz=345,slow=36						
SONM	Songino Array	61.01	45	P	P	21 22 32.1	-0.6
	0.2nm,0.9s,baz=262,slow=8.6,SNR=2.6						

BJI ***18*** *21:24:11.9, 40°.11N×77°.76E, h7^{km}, mB4.8/30, mb4.6/36, ML5.0/8, Ms4.4/37, Ms7 4.1/34*

IDC ***18*** *21:24:11.0±0.6, 39°.97N×77°.69E, h0^{km}, mb4.4/21, mb1 4.5/27, mb1mx4.3/49, mbtmp4.4/27, ML4.1/6, MS4.0/24, Ms1 4.0/24, ms1mx3.8/40, Error ellipse: s-maj=14.5km s-min=11.5km az=48.0*

SOME ***18*** *21:24:12.0, 40°.10N×77°.68E, h5^{km}, MS4.7*

MOS ***18*** *21:24:13.4±1.4, 40°.09N×77°.81E, h17^{km}, mb4.8/50, Error ellipse: s-maj=5.6km s-min=3.5km az=120.4*

NNC ***18*** *21:24:15.0±1.2, 40°.20N×77°.66E, h0^{km}, mb5.4, mpv5.1, Error ellipse: s-maj=10.2km s-min=5.8km az=134.0*

KRNET ***18*** *21:24:14.2±0.1, 40°.11N×77°.61E, mb5.2*

NEIC ***18*** *21:24:15.2±2.2, 40°.06N×77°.76E, h19^{km}±14^{km}, mb4.7/27, Error ellipse: s-maj=6.3km s-min=5.5km az=174.0*

ISCJB ***18*** *21:24:15.6±0.3, 39°.95N±0°.02×77°.73E±0°.02, h35^{km}±3^{km}, mb4.6/101, MS4.1/38, Error ellipse: s-maj=3.4km s-min=2.6km az=144.0*

ISC 18 21:24:13.2±0.7, **40°.08N**±0°.03×**77°.65E**±0°.02, **h6^{km}**±4^{km}, **n396,** σ**2^{s}.21**/454, **mb4.6**/103, **MS4.0**/38, **74C-38D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.41	247	*i* Pn	Pg	21 24 47.4	+7.2
KSH				Sn	Sg	21 25 10.5	+12
NRN	Naryn	1.84	318	*e*Pn	Pn	21 24 46.4	+0.7
NRN	Naryn	1.84	318	*e*PN	Pn	21 24 46.4	+0.7
NRN	Naryn	1.84	318	⇑*i*P	Pn	21 24 46.4	+0.7
	baz=17						
NRN				⇑*i*S	Sb	21 25 11.8	+0.8
	baz=17						
KDJ	Kajisay	2.08	350	*e*Pn	Pb	21 24 51.1	-0.4
KDJ	Kajisay	2.08	350	*e*PN	Pb	21 24 51.1	-0.4
KDJ	Kajisay	2.08	350	⇑*i*P	Pb	21 24 51.5	0.0
	baz=51						
KDJ				⇑*i*S	Sb	21 25 18.7	+1.0
	baz=51						
ULHL	Ulahol	2.41	334	P	Pb	21 24 56.2	-1.0
	SNR=862						
ULHL	Ulahol	2.41	334	⇑*i*P	Pb	21 24 56.1	-1.0
	baz=35						
ULHL				⇑*i*S	Sb	21 25 26.6	-0.6
	baz=35						
PRZ	Przheval'sk	2.47	13	*e*Pn	Pb	21 24 57.3	-0.8
PRZ	Przheval'sk	2.47	13	*e*PN	Pb	21 24 57.3	-0.8
PRZ	Przheval'sk	2.47	13	⇑*i*P	Pb	21 24 57.0	-1.1
	baz=14						
PRZ				⇑*i*S	Sb	21 25 28.2	-0.6
	baz=14						
KZA	Kyzart	2.70	319	P	Pn	21 25 00.0	+2.5
	SNR=3625						
KZA	Kyzart	2.70	319	⇑*i*P	Pn	21 25 00.3	+2.8
	baz=19						
KZA				⇑*e*S	Sn	21 25 33.4	+2.7
	baz=19						
BOOM	Boomskoye usch	2.73	332	⇓*e*P	Pn	21 25 00.4	+2.6
	baz=33						
BOOM				⇓*i*S	Sn	21 25 34.3	+3.1
	baz=33						
TNSS	Tian-Shan	3.00	350	*e*P	Pb	21 25 07.3	0.0
	9µm,0.6s						
TNSS				*e*S	Sg	21 25 47.8	-1.9
	5µm,0.9s						
SATY	Saty	3.03	11	*e*P	Pb	21 25 07.9	+0.2
	10µm,0.7s						
SATY				*e*S	Sb	21 25 47.9	+2.9
	3µm,1.0s						
IZV	Izvestkoviy	3.06	346	Pg	Pb	21 25 08.3	+0.1
	732nm,0.5s						
IZV				Lg	Lg	21 25 49.3	
	4µm,0.6s						
IZV	Izvestkoviy	3.06	346	*e*P	Pb	21 25 08.0	-0.1
	714nm,0.6s						
IZV				*e*S	Sb	21 25 48.4	+2.7
	2µm,0.5s						
ARLS	Aral	3.08	306	⇓*e*P	Pn	21 25 05.4	+2.8
	baz=6.0						
ARLS				⇓*i*S	Sn	21 25 43.4	+3.5
	baz=6.0						
MDOK	Medeo	3.12	352	⇑Pn	Pn	21 25 05.7	+2.7
MDOK				⇓Pg	Pb	21 25 09.2	+0.1
MDOK				⇑Lg	Lg	21 25 50.0	
MDOK	Medeo	3.12	352	*e*P	Pb	21 25 09.2	+0.1
	4µm,0.6s						
MDOK				*e*S	Sb	21 25 50.5	+3.1
	8µm,0.8s						
AAA	Alma-Ata	3.18	350	Pg	Pb	21 25 10.7	+0.6
	7µm,0.4s						
AAA				Lg	Lg	21 25 52.9	
	6µm,0.6s						
AAA	Alma-Ata	3.18	350	*e*PN	Pb	21 25 11.4	+1.3
AAA				*e*S	Sg	21 25 53.2	-2.0
AAA				pmax	pmax		
	comp=Z,7µm,0.5s						
AAA				smax	smax		
	comp=E,6µm,0.5s						
AAA	Alma-Ata	3.18	350	*e*P	Pb	21 25 10.7	+0.6
	comp=E,7µm,0.4s						
AAA				*e*S	Sb	21 25 52.9	+3.8
	comp=E,6µm,0.6s						
KNDC	Almaty	3.18	351	⇑Pn	Pn	21 25 07.2	+3.4
KNDC				⇓Pg	Pb	21 25 10.8	+0.7
KNDC				⇑Lg	Lg	21 25 52.1	
KOTS	Kotyrbulak	3.18	353	Pg	Pb	21 25 11.0	+0.8
	comp=E,3µm,0.5s						
KOTS				Lg	Lg	21 25 53.6	
	comp=E,14µm,0.7s						
KOTS	Kotyrbulak	3.18	353	*e*P	Pb	21 25 11.1	+0.8
	comp=E,3µm,0.5s						
KOTS				*e*S	Sg	21 25 53.6	-1.7
	comp=E,14µm,0.7s						
MTBS	Maitube	3.18	344	*e*P	Pb	21 25 10.8	+0.6
	comp=E,1µm,0.3s						
MTBS				*e*S	Sb	21 25 52.7	+3.4
	comp=E,2µm,0.6s						
SFK	Sufi-Kurgan	3.18	270	⇓Pn	Pn	21 25 06.2	+2.2
	comp=E,68nm,0.6s						
SFK				⇓Pg	Pb	21 25 11.5	+1.2
	comp=E,620nm,0.6s						
SFK				⇑Lg	Lg	21 25 53.6	
	comp=E,2µm,0.8s						
SFK	Sufi-Kurgan	3.18	270	Pg	Pb	21 25 11.7	+1.3
	comp=E,330nm,0.4s						
SFK				Lg	Lg	21 25 54.6	
	comp=E,828nm,0.6s						
SFK	Sufi-Kurgan	3.18	270	*i* PN	Pn	21 25 06.2	+2.2
SFK				pmax	pmax		
	comp=Z,68nm,0.5s						
UCH	Uchtor	3.20	313	P	Pn	21 25 07.2	+2.8
	SNR=376						
UCH	Uchtor	3.20	313	⇑*i*P	Pn	21 25 06.9	+2.5
	baz=13						
UCH				⇑*i*S	Sn	21 25 45.5	+2.4
	baz=13						
KST	Kastek	3.22	337	Pg	Pb	21 25 11.7	+0.8
KST				Lg	Lg	21 25 55.1	
	comp=Z,5µm,0.8s						
KST	Kastek	3.22	337	*e*P	Pb	21 25 11.7	+0.8
	comp=Z,1µm,0.6s						
KST				*e*S	Sg	21 25 55.1	-1.6
	comp=Z,5µm,0.8s						
TKM2	Tokmak 2	3.23	332	P	Pn	21 25 07.8	+3.2
	SNR=112						
TKM2	Tokmak 2	3.23	332	⇑Pn	Pn	21 25 07.6	+3.0
	comp=Z,97nm,0.4s						
TKM2				⇑Pg	Pb	21 25 11.5	+0.4
	comp=Z,481nm,0.4s						
TKM2				⇓Lg	Lg	21 25 55.9	
	comp=Z,9µm,0.8s						
TKM2	Tokmak 2	3.23	332	*i* PN	Pn	21 25 07.6	+3.0
TKM2				pmax	pmax		
	comp=Z,97nm,0.4s						
TKM2	Tokmak 2	3.23	332	⇑*e*P	Pn	21 25 07.7	+3.0
	baz=32						
TKM2				⇑*i*S	Sn	21 25 46.3	+2.7
	baz=32						
UZB	Uzynbulak	3.23	18	*e*P	Pb	21 25 10.3	-0.8
	comp=Z,2µm,0.6s						
UZB				*e*S	Sb	21 25 52.3	+1.4
	comp=Z,2µm,1.0s						
KBK	Karagaybulak	3.28	323	P	Pn	21 25 08.6	+3.3
	SNR=202						
KBK	Karagaybulak	3.28	323	⇑*e*P	Pn	21 25 08.5	+3.2
	baz=23						
KBK				⇑*i*S	Sn	21 25 47.1	+2.3
	baz=23						
KURS	Kuram	3.43	6	*e*P	Pb	21 25 14.2	-0.2
	comp=Z,1µm,0.8s						
KURS				*e*S	Sb	21 25 59.2	+2.9
	comp=Z,1µm,0.7s						
DGS	Degeres	3.46	337	Pg	Pb	21 25 15.4	+0.5
	comp=Z,1µm,0.5s						
DGS				Lg	Lg	21 26 01.2	
	comp=Z,6µm,0.6s						
DGS	Degeres	3.46	337	*e*P	Pb	21 25 15.4	+0.5
	comp=Z,1µm,0.5s						
DGS				*e*S	Sb	21 26 01.2	+3.9
	comp=Z,6µm,0.6s						
AAK	Ala-Archa	3.49	318	P	Pn	21 25 11.3	+3.1
	SNR=203						
AAK	Ala-Archa	3.49	318	*e*Pn	Pn	21 25 11.5	+3.3
AAK				*e*S	Sb	21 26 00.4	+2.2
AAK				Lg	Lg	21 26 03.3	
AAK	Ala-Archa	3.49	318	⇑Pn	Pn	21 25 11.1	+2.9
	comp=Z,41nm,0.3s						
AAK				⇑Pg	Pb	21 25 16.2	+0.7
	comp=Z,419nm,0.5s						
AAK				⇑Lg	Lg	21 26 03.2	
	comp=Z,7µm,0.8s						
AAK	Ala-Archa	3.49	318	PN	Pn	21 25 11.6	+3.4
AAK				PG	Pb	21 25 16.2	+0.7
AAK				pmax	pmax		
	comp=Z,41nm,0.3s						
AAK				pmax	pmax		
	comp=Z,419nm,0.5s						
AAK	Ala-Archa	3.49	318	⇑*i*P	Pn	21 25 11.2	+3.0
	baz=18						
AAK				⇑*i*S	Sn	21 25 52.2	+2.3
	baz=18						
AAK	Ala-Archa	3.49	318	Pn	Pn	21 25 10.9	+2.8
	comp=Z,49nm,0.3s,baz=119,slow=7.1,SNR=408						
AAK				Pg	Pb	21 25 16.8	+1.3
	comp=Z,127nm,0.3s,baz=153,slow=13,SNR=88						
AAK				Lg	Lg	21 26 03.3	
	comp=Z,206nm,0.3s,baz=225,slow=19,SNR=28						
AAK				LR	LR	21 26 40.4	
	comp=Z,2µm,19.3s,baz=126,slow=42						
PDGK	Podgornoye	3.53	22	⇑*i*P	Pn	21 25 11.0	+2.3
	baz=23						
PDGK				⇑*i*S	Sn	21 25 53.6	+2.8
	baz=23						
FRU1	Bishkek	3.55	321	*e*Pn	Pn	21 25 12.8	+3.9
FRU1	Bishkek	3.55	321	*e*PN	Pn	21 25 12.8	+3.9
FRU1	Bishkek	3.55	321	⇑*i*P	Pn	21 25 11.8	+2.9
	baz=21						
FRU1				⇑*i*S	Sn	21 25 53.7	+2.5
	baz=21						
FRU	Bishkek	3.57	321	*e*PN	Pn	21 25 12.0	+2.8
FRU				*e*S	Sn	21 25 57.0	+5.2
FRU				*i*		21 26 05.0	
FRU				smax	smax		
	comp=E,16µm,2.0s						
AML	Almayashu	3.62	306	P	Pn	21 25 13.6	+3.4
	SNR=106						
AML	Almayashu	3.62	306	⇑*i*P	Pn	21 25 13.2	+3.0
	baz=6.0						
AML				⇑*i*S	Sn	21 25 55.7	+2.2
	baz=6.0						
CHMS	Chumysh	3.64	324	P	Pn	21 25 13.3	+3.2
	SNR=36						
CHMS	Chumysh	3.64	324	⇑*i*P	Pn	21 25 13.1	+3.0
	baz=24						
CHMS				⇑*i*S	Sn	21 25 55.9	+2.5
	baz=24						
KTBS	Karatobe	3.70	349	Pg	Pb	21 25 19.8	+0.7
	comp=E,1µm,0.5s						
KTBS				Lg	Lg	21 26 08.6	
	comp=E,3µm,0.5s						
KTBS	Karatobe	3.70	349	*e*P	Pb	21 25 19.8	+0.7
	comp=E,1µm,0.5s						
KTBS				*e*S	Sb	21 26 08.6	+4.4
	comp=E,3µm,0.5s						
ARSB	Arslanbob	3.76	291	*e*Pn	Pn	21 25 14.9	+3.0
ARSB	Arslanbob	3.76	291	⇑*i*P	Pn	21 25 14.8	+2.9
	baz=90						
ARSB				⇑*i*S	Sn	21 25 59.4	+2.9
	baz=90						
EKS2	Erkin-Say	3.89	313	P	Pn	21 25 17.3	+3.6
	SNR=171						
EKS2	Erkin-Say	3.89	313	⇑*i*P	Pn	21 25 16.5	+2.8
	baz=13						
EKS2				⇑*i*S	Sn	21 26 01.9	+2.1
	baz=13						
KTMS	Ketmen	3.92	30	Pg	Pb	21 25 22.2	-0.7
	comp=E,31nm,0.2s						
KTMS				Lg	Lg	21 26 13.1	
	comp=E,2µm,0.9s						
KTMS	Ketmen	3.92	30	*e*P	Pb	21 25 22.2	-0.7
	comp=E,9.3nm,0.6s						
KTMS				*e*S	Sb	21 26 13.1	+2.4
	comp=E,2µm,0.9s						
KUU	Kurty	3.94	346	*e*P	Pb	21 25 23.4	+0.4
	comp=E,704nm,0.7s						
KUU				*e*S	Sb	21 26 14.4	+3.5
	comp=E,1µm,0.6s						
USP	Ospenovka	3.96	325	P	Pn	21 25 18.3	+3.7
	SNR=48						
USP	Ospenovka	3.96	325	⇑*i*P	Pn	21 25 17.4	+2.8
	baz=25						
USP				⇑*i*S	Sn	21 26 03.4	+2.0
	baz=25						
MNBS	Baschi	4.04	8	Pg	Pb	21 25 24.8	0.0
	comp=E,320nm,0.5s						
MNBS				Lg	Lg	21 26 17.7	
	comp=E,2µm,0.8s						
MNBS	Baschi	4.04	8	*e*P	Pb	21 25 24.8	0.0
	comp=E,320nm,0.5s						
MNBS				*e*S	Sb	21 26 17.7	+3.8
	comp=E,2µm,0.8s						
ARXS	Arharly	4.13	2	Pg	Pb	21 25 26.6	+0.2
	comp=E,1µm,0.7s						
ARXS				Lg	Lg	21 26 19.9	
	comp=E,1µm,0.9s						
ARXS	Arharly	4.13	2	*e*P	Pb	21 25 26.6	+0.2
	comp=E,1µm,0.7s						
ARXS				*e*S	Sb	21 26 19.9	+3.3
	comp=E,1µm,0.9s						
MRKS	Merke	4.26	310	Pg	Pb	21 25 30.9	+2.3
	comp=E,273nm,0.6s						
MRKS				Lg	Lg	21 26 27.5	
	comp=E,733nm,0.6s						
MRKS	Merke	4.26	310	*e*P	Pb	21 25 30.9	+2.3
	comp=E,273nm,0.6s						
MRKS				*e*S	Sg	21 26 27.5	-2.6
	comp=E,733nm,0.6s						
DJR	Jarkent	4.54	20	*e*P	Pb	21 25 34.5	+1.2
	comp=E,252nm,0.9s						
DJR				*e*S	Sb	21 26 33.7	+5.4
	comp=E,312nm,0.8s						
DRK	Karamyk	4.55	264	⇓*e*P	Pn	21 25 25.8	+3.0
	baz=64						
DRK				⇓*e*S	Sn	21 26 17.9	+1.8
	baz=64						
MNAS	Manas	4.56	303	⇓Pn	Pn	21 25 26.3	+3.4
	comp=E,58nm,0.5s						
MNAS				⇓Pg	Pg	21 25 39.0	-1.7
	comp=E,873nm,1.3s						
MNAS				⇑Lg	Lg	21 26 35.8	
	comp=E,708nm,0.7s						
MNAS	Manas	4.56	303	*i* PN	Pn	21 25 26.3	+3.4
MNAS				pmax	pmax		
	comp=Z,58nm,0.4s						
MNAS	Manas	4.56	303	⇑*i*P	Pn	21 25 25.9	+3.0
	baz=3.0						
MNAS				⇑*i*S	Sn	21 26 17.7	+1.4
	baz=3.0						
ARK	Arkit	4.64	294	⇑*e*P	Pn	21 25 26.8	+2.9
	baz=93						
ARK				⇑*i*S	Sn	21 26 19.0	+0.9
	baz=93						
TDK	Taldyqorghan	4.95	6	*e*P	Pb	21 25 40.9	+0.6
	comp=Z,2µm,0.7s						
TDK				*e*S	Sb	21 26 44.6	+4.5
	comp=Z,1µm,0.6s						
BTK	Batken	5.24	272	*e*Pn	Pn	21 25 34.4	+2.2
BTK	Batken	5.24	272	*e*PN	Pn	21 25 34.4	+2.2
BTK	Batken	5.24	272	⇓*i*P	Pn	21 25 35.2	+3.0
	baz=72						
BTK				⇓*i*S	Sn	21 26 34.1	+1.1
	baz=72						
KAPS	Kapalarasan	5.35	13	*e*P	Pb	21 25 49.8	+2.7
	comp=Z,902nm,0.8s						
KAPS				*e*S	Sg	21 26 59.8	-5.3
	comp=Z,281nm,0.7s						
GAR	Garm	5.77	262	*e*Pn	Pn	21 25 40.5	+1.0
GAR	Garm	5.77	262	*e*PN	Pn	21 25 40.5	+1.0
KK31	Karatay Array	6.15	302	⇑Pn	Pn	21 25 46.6	+2.0
	comp=Z,23nm,0.8s,baz=133,slow=12						
KK31				⇑Pg	Pb	21 26 02.7	+2.1
	comp=Z,124nm,0.9s,baz=118,slow=16						
KK31				⇑Lg	Lg	21 27 25.2	
	comp=Z,230nm,0.7s,baz=112,slow=29,SNR=4.5						
KKAR	Karatay Array	6.15	302	*e*Pn	Pn	21 25 47.0	+2.5
KKAR	Karatay Array	6.15	302	*e*PN	Pn	21 25 47.1	+2.5
TAS	Tashkent	6.48	284	PN	Pn	21 25 54.9	+5.8
TAS				pmax	pmax		
	comp=Z,507nm,1.4s						
CHGR	Chuyangaron	6.73	261	*e*Pn	Pn	21 25 52.6	0.0
CHCP	Chirah Chowk	7.31	210	P	Pn	21 26 03.0	+2.5
NIL	Nilore	7.32	210	*e*Pn	Pn	21 26 03.0	+2.3
NIL				*e*S	Sn	21 27 20.9	-3.2
NIL	Nilore	7.32	210	P	Pn	21 26 03.0	+2.3
MAKZ	Makanchi	7.43	24	*e*Pn	Pn	21 26 02.7	+0.6
MAKZ	Makanchi	7.43	24	⇑Pn	Pn	21 26 02.6	+0.6
	comp=Z,46nm,0.9s						
MAKZ				⇓Pg	Pb	21 26 27.4	+4.9
	comp=Z,59nm,0.9s						
MAKZ				⇓Lg	Lg	21 28 07.8	
	comp=Z,152nm,1.0s						
MAKZ	Makanchi	7.43	24	*e*P	Pn	21 26 02.7	+0.6
MK01	Makanchi Array	7.50	25	*e*Pn	Pn	21 26 03.5	+0.5
MK31	Makanchi Array	7.51	25	*e*Pn	Pn	21 26 03.9	+0.6
MK31	Makanchi Array	7.51	25	⇓Pn	Pn	21 26 03.8	+0.5
	comp=Z,28nm,0.6s,baz=197,slow=14						
MK31				⇑Pg	Pb	21 26 29.9	+5.9
	comp=Z,86nm,0.8s,baz=204,slow=13						
MK31				⇓Sn	Sn	21 27 28.0	-0.8
	comp=Z,195nm,0.8s						
MK31				⇓Lg	Lg	21 28 07.8	
	comp=Z,191nm,0.8s,baz=219,slow=23						
MK31	Makanchi Array	7.51	25	*e*P	Pn	21 26 03.9	+0.6
MKAR	Makanchi Array	7.51	25	*i* P	Pn	21 26 04.0	+0.7
MKAR				pmax	pmax		
	comp=Z,24nm,0.6s						
MKAR	Makanchi Array	7.51	25	Pn	Pn	21 26 04.0	+0.7
	comp=Z,5.8nm,0.3s,baz=191,slow=15,SNR=216						
MKAR				Sn	Sn	21 27 28.6	-0.2
	comp=Z,6.5nm,0.3s,baz=210,slow=24,SNR=7.9						
MKAR				Lg	Lg	21 28 10.0	
	comp=Z,4.7nm,0.3s,baz=200,slow=31,SNR=3.3						
MKAR				LR	LR	21 29 05.9	
	comp=Z,1µm,18.2s,baz=204,slow=39						
CEP	Cherat	7.75	218	P	Pn	21 26 08.2	+1.5
CEP				S	Sg	21 28 19.0	-3.0
DHRM	DHARAMSHALA	7.89	188	*e*P	Pn	21 26 10.6	+1.9
WMQ	Urumqi	8.37	60	P	Pn	21 26 15.3	+0.2
WMQ				S	Sn	21 27 47.5	-2.3
WMQ				pmax	pmax		
	comp=Z,84nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.7s						
WMQ				smax	smax		
	comp=N,440nm,1.1s						
WMQ				smax	smax		

	comp=E,720nm,1.1s						
WMQ				LR	LR		
	comp=N,11µm,10.1s						
WMQ				LR	LR		
	comp=E,7µm,8.9s						
WMQ				LR	LR		
	comp=Z,1µm,20.7s						
WMQ	Urumqi	8.37	60	P	Pn	21 26 15.1	+0.1
WMQ				S	Sn	21 27 47.6	-2.3
WMQ				pmax	pmax		
	comp=Z,55nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,230nm,3.7s						
WMQ				smax	smax		
	comp=Z,450nm,0.9s						
WMQ				smax	smax		
	comp=Z,700nm,0.9s						
WMQ				LR	LR		
	comp=Z,6µm,6.7s						
WMQ				LR	LR		
	comp=Z,6µm,7.3s						
WMQ				LR	LR		
	comp=Z,1µm,16.1s						
WMQ	Urumqi	8.37	60	ePn	Pn	21 26 15.2	+0.1
WMQ				eS	Sn	21 27 40.0	-10
WMQ	Urumqi	8.37	60	eP	Pn	21 26 15.2	+0.2
WMQ				eS	Sn	21 27 40.0	-10
THW	Thamme Wali	8.69	215	P	Pn	21 26 19.6	+0.2
KBL	Kabul	8.80	234	ePn	Pn	21 26 22.8	+1.6
KBL	Kabul	8.80	234	eP	Pn	21 26 22.8	+1.6
SMLA	Simla	8.94	183	eP	Pn	21 26 22.7	-0.2
OTUK	Ortayu	9.01	337	⇓Pn	Pn	21 26 24.9	+1.1
	comp=Z,19nm,0.9s						
OTUK				⇑Pg		21 26 57.2	
	comp=Z,17nm,0.6s						
OTUK				⇓Lg	Lg	21 28 52.8	
	comp=Z,1µm,1.1s						
OTUK	Ortayu	9.01	337	P	Pn	21 26 24.9	+1.1
OTUK				pmax	pmax		
	comp=Z,19nm,0.9s						
DDI	Dehra Dun	9.74	178	eP	Pn	21 26 34.3	+0.4
DDI				IAmb	IAmb	21 26 36.2	
	comp=Z,466nm,0.1s						
KURBB	Kurchatov Arra	10.56	3	Pn	Pn	21 26 44.6	-0.5
	comp=Z,0.8nm,0.3s,baz=193,slow=12,SNR=123						
KURBB				Lg	Lg	21 29 45.2	
	comp=Z,0.8nm,0.3s,baz=194,slow=27,SNR=4.8						
KURK	Kurchatov	10.66	3	ePn	Pn	21 26 45.8	-0.5
KURK				eS	Sn	21 28 36.3	-10
KURK				Lg	Lg	21 29 45.2	
KURK	Kurchatov	10.66	3	⇑Pn	Pn	21 26 44.9	-1.5
	comp=Z,71nm,0.9s						
KURK				⇑Lg	Lg	21 29 49.2	
	comp=Z,361nm,1.0s						
KURK	Kurchatov	10.66	3c	iP	Pn	21 26 45.9	-0.5
KURK				pmax	pmax		
	comp=Z,73nm,0.8s						
NDI	New Delhi	11.37	182	eP	Pn	21 26 56.0	-0.2
NDI				eS	Sn	21 28 53.0	-11
DGZ	Jazzator, Alta	11.85	32d	iP	Pn	21 27 03.2	+0.4
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PYUN	Piuthan	12.74	158	eP	Pn	21 27 11.7	-3.4
	comp=Z,74nm,0.7s						
DANN	Dangsing	12.74	155	eP	Pn	21 27 11.1	-4.1
KOLN	Koldanda	13.23	156	eP	Pn	21 27 17.7	-4.1
	comp=Z,44nm,0.7s						
KKN	Kakani	13.79	150	eP	Pn	21 27 25.6	-3.8
	comp=Z,26nm,0.5s						
BVA0	Borovoye Array	13.87	341	Pn	Pn	21 27 29.1	-1.1
	comp=Z,44nm,1.1s,baz=143,slow=7.9,SNR=72						
BVA0	Borovoye Array	13.87	341	P	Pn	21 27 29.8	-0.4
BVA0				pmax	pmax		
	comp=Z,44nm,1.1s						
BVAR	Borovoye Array	13.87	341	Pn	Pn	21 27 29.0	-1.2
	comp=Z,1.2nm,0.3s,baz=150,slow=12,SNR=47						
BVAR				Sn	Sn	21 29 58.4	-6.1
	comp=Z,0.3nm,0.3s,baz=142,slow=26,SNR=2.5						
BVAR				Lg	Lg	21 31 25.1	
	comp=Z,1.8nm,0.3s,baz=146,slow=32,SNR=4.5						
DMN	Daman	13.89	151	eP	Pn	21 27 26.5	-4.3
	comp=Z,27nm,0.6s						
GUN	Gumba	13.91	148	eP	Pn	21 27 28.3	-3.0
	comp=Z,59nm,0.5s						
BRVK	Borovoye	13.93	341	ePn	Pn	21 27 30.0	-1.0
BRVK	Borovoye	13.93	341d	iP	Pn	21 27 29.7	-1.3
BRVK				pmax	pmax		
	comp=Z,13nm,0.7s						
PKIN	Phulchoki	14.02	150	eP	Pn	21 27 28.4	-4.3
	comp=Z,19nm,0.5s						
PKI	Pulchoki	14.03	150	eP	Pn	21 27 28.7	-4.2
	comp=Z,21nm,0.4s						
JIRN	Jiri	14.26	148	eP	Pn	21 27 32.5	-3.6
ZAA0	Zalesovo Array	14.70	17	ePn	Pn	21 27 39.7	-1.8
ZALV	Zalesovo Beam	14.70	17	i P	Pn	21 27 39.7	-1.8
ZALV				pmax	pmax		
	comp=Z,30nm,0.8s						
ZALV	Zalesovo Beam	14.70	17	Pn	Pn	21 27 39.3	-2.2
	comp=Z,0.9nm,0.3s,baz=203,slow=12,SNR=56						
ZALV				Lg	Lg	21 31 55.6	
	comp=Z,0.3nm,0.3s,baz=201,slow=28,SNR=3.4						
ZALV				LR	LR	21 33 33.6	
	comp=Z,913nm,19.5s,baz=250,slow=38						
RAMN	Ramite	15.06	148	eP	Pn	21 27 41.6	-5.2
	comp=Z,150nm,0.9s						
LSA	Lhasa	15.14	129	ePn	Pn	21 27 48.1	0.0
	comp=Z,9.4nm,0.8s						
LSA	Lhasa	15.14	129	eP	Pn	21 27 48.1	0.0
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GEYT	Alibeck	15.34	268	Pn	Pn	21 27 45.0	-5.2
	comp=Z,0.5nm,0.3s,baz=107,slow=7.9,SNR=6.1						
GEYT				Sn	Sn	21 30 33.3	-7.2
	comp=Z,0.5nm,0.3s,baz=82,slow=23,SNR=2.5						
GEYT				LR	LR	21 34 28.7	
	comp=Z,327nm,18.3s,baz=85,slow=40						
GYA0B	ALIBECK ARRAY	15.34	268	ePn	Pn	21 27 45.9	-4.3
	comp=Z,16nm,0.8s						
AB31	Akbulak array	15.55	312	⇓Pn	Pn	21 27 52.2	-0.8
	comp=Z,40nm,1.2s						
AB31	Akbulak array	15.55	312	P	Pn	21 27 52.1	-0.8
AB31				pmax	pmax		
	comp=Z,40nm,1.2s						
ABKAR	Akbulak array	15.55	312	ePn	Pn	21 27 51.8	-1.2
BHPL	Bhopal	16.79	181	eP	Pn	21 28 08.2	-0.8
BHPL				IAmb	IAmb	21 28 12.9	
	comp=Z,310nm,1.9s						
JBP	Jabalpur	16.98	173	eP	Pn	21 28 11.5	+0.2
GTA	Gaotai	17.06	85	⇑P	Pn	21 28 08.3	-4.1
GTA				pP	P	21 28 11.8	-2.4
GTA				sP	pP	21 28 14.8	-1.7
GTA				S	Sn	21 31 19.3	-3.0
GTA				SS	S	21 31 40.8	+8.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,190nm,6.7s						
GTA				LR	LR		
	comp=Z,790nm,16.5s						
GTA				LR	LR		
	comp=Z,640nm,15.2s						
GTA				LR	LR		
	comp=Z,870nm,15.5s						
AKTO	Aktyubinsk	17.22	313	⇑Pn	Pn	21 28 14.1	-0.1
	comp=Z,26nm,0.9s						
AKTO	Aktyubinsk	17.22	313	P	Pn	21 28 13.6	-0.6
	comp=Z,0.7nm,0.3s,baz=105,slow=15,SNR=16						
BOK	Bokaro	17.66	154	eP	Pn	21 28 18.8	-1.1
SHL	Shillong	18.74	136	eP	P	21 28 31.1	-1.8
	comp=Z,21nm,0.8s						
SHL	Shillong	18.74	136	eP	P	21 28 31.1	-1.8
SHL				pmax	pmax		
	comp=Z,21nm,0.8s						
SHL	Shillong	18.74	136	eP	P	21 28 31.8	-1.1
SHL				IAmb	IAmb	21 28 34.3	
	comp=Z,16nm,0.9s						
NGP	Nagpur	18.91	176	eP	P	21 28 34.6	0.0
MOY	Mondy	19.86	47	eP	Pn	21 28 47.4	+0.8
MOY				pmax	pmax		
	comp=Z,25nm,1.9s						
SVE	Sverdlovsk	20.11	332	eP	P	21 28 47.5	+0.1
SVE				eS	Sn	21 32 38.6	+3.1
SVE				pmax	pmax		
	comp=Z,22nm,1.3s						
SVE				MLR	MLR		
	comp=Z,576nm,10.0s						
ARU	Arti	20.60	329	eP	P	21 28 53.4	+0.6
	comp=Z,18nm,0.9s						
ARU	Arti	20.60	329c	iP	Pn	21 28 56.9	+1.9
ARU						21 29 16.7	
ARU				SS	Sn	21 33 16.1	+29
ARU				pmax	pmax		
	comp=Z,21nm,0.9s						
ZAK	Zakamensk	20.68	52	eP	P	21 28 53.3	-0.6
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH	Lanzhou	20.97	93	⇑P	P	21 28 57.0	-0.2
LZH				pP	sP	21 29 06.0	+5.6
LZH				sP	Pn	21 29 09.0	+9.2
LZH				PP	PnPn	21 29 21.5	+5.8
LZH				S	S	21 32 52.8	+1.6
LZH				sS	Sn	21 32 57.1	+0.2
LZH				SS	SnSn	21 33 21.5	+10
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,260nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,17.1s						
LZH				LR	LR		
	comp=Z,2µm,18.4s						
TLY	Talaya	21.37	48	eP	P	21 29 04.4	+3.2
TLY				eS	S	21 32 54.6	-4.1
TLY				pmax	pmax		
	comp=Z,14nm,1.1s						
TLY				MLR	MLR		
	comp=Z,460nm,13.0s						
POO	Poona	21.72	190	eP	P	21 29 05.0	-0.2
POO				eP	P	21 29 05.4	+0.2
POO				IAmb	IAmb	21 29 09.0	
IRK	Irkutsk	21.95	47	eP	P	21 29 09.9	+2.5
IRK				pmax	pmax		
	comp=Z,40nm,2.6s						
SONM	Songino Array	22.00	60	P	P	21 29 08.2	+0.1
	comp=Z,6.4nm,0.7s,baz=260,slow=10,SNR=21						
SONM				LR	LR	21 38 07.0	
	comp=Z,390nm,19.9s,baz=238,slow=38						
SONA1	Songino Array	22.01	60	eP	P	21 29 08.6	+0.3
LKRN	Lenkeran, Azer	22.32	276	P	P	21 29 13.2	+1.8
HYB	Hyderabad	22.59	178	i P	P	21 29 15.0	+0.4
HYB				e		21 33 18.0	
HYB	Hyderabad	22.59	178	eP	P	21 29 14.2	-0.3
HYB				IAmb	IAmb	21 29 19.9	
	comp=Z,34nm,0.9s						
MAK	Makhachkala	22.70	287	eP	P	21 29 12.9	-2.5
MAK				eS	S	21 33 20.3	-3.8
MAK				pmax	pmax		
	comp=Z,38nm,0.5s						
MAK				MLR	MLR		
	comp=Z,312nm,14.0s						
CD2	Chengdu	23.07	105	P	P	21 29 18.8	-0.8
CD2				pP	sP	21 29 23.8	+1.0
CD2				sP	pP	21 29 26.1	+4.3
CD2				S	S	21 33 28.8	-2.3
CD2				sS	sS	21 33 37.3	+2.3
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				pmax	pmax		
	comp=Z,300nm,4.7s						
CD2				LR	LR		
	comp=Z,950nm,15.2s						
CD2				LR	LR		
	comp=Z,1µm,14.2s						
CD2				LR	LR		
	comp=Z,880nm,8.8s						
SEKA	Sheki	23.08	283	P	P	21 29 20.6	+1.0
WSAR	Wadi Sarin	23.24	229	P	P	21 29 20.5	-0.8
	comp=Z,8.6nm,1.0s,baz=84,slow=7.9,SNR=5.5						
GROC	Groznyy	23.93	288	eP	P	21 29 28.0	+0.1
GROC				e		21 29 56.7	
GROC				e		21 33 08.7	
GROC				pmax	pmax		
	comp=Z,38nm,1.4s						
BTO	Baotou	24.61	78	eP	P	21 29 31.6	-2.7
GOA	Goa	24.72	189	eP	P	21 29 34.5	-0.8
GOA				IAmb	IAmb	21 29 42.1	
	comp=Z,27nm,1.3s						
GNI	Garni	25.09	281	eP	P	21 29 40.6	+1.8
	comp=Z,107nm,1.6s						
GNI	Garni	25.09	281	⇓eP	P	21 29 42.3	+3.6
GNI				pmax	pmax		
	comp=Z,77nm,1.3s						
GNI	Garni	25.09	281	P	P	21 29 40.4	+1.7
	comp=Z,5.9nm,0.8s,baz=352,slow=1.8,SNR=5.6						
ZEI	Tsey	25.35	287	eP	P	21 29 44.9	+3.8
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
XAN	Xi'an	25.59	94	P	P	21 29 42.4	-0.8
XAN				pP	sP	21 29 48.9	+2.4
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN				pmax	pmax		
	comp=Z,320nm,5.9s						
XAN				LR	LR		
	comp=Z,740nm,20.1s						
XAN				LR	LR		
	comp=Z,580nm,19.1s						
XAN				LR	LR		
	comp=Z,610nm,22.8s						
XAN	Xi'an	25.59	94	eP	P	21 29 42.3	-0.8
	comp=Z,12nm,0.8s						
XAN	Xi'an	25.59	94	eP	P	21 29 42.3	-0.9
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC	Hu-ho-hao-te	25.73	77	eP	P	21 29 45.3	+0.9
HHC				S	S	21 34 10.5	-3.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,130nm,6.0s						
HHC				LR	LR		
	comp=Z,400nm,12.1s						
HHC				LR	LR		
	comp=Z,210nm,10.4s						
HHC				LR	LR		
	comp=Z,180nm,11.2s						
KMI	Kunming	25.75	118	P	P	21 29 44.9	0.0
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
KMI	Kunming	25.75	118	eP	P	21 29 45.4	+0.5
	comp=Z,13nm,0.9s						
KMI	Kunming	25.75	118	eP	P	21 29 45.4	+0.5
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
KIRV	Kirov	25.79	325	P	P	21 29 44.8	+0.2
	comp=Z,21nm,0.6s,baz=69,slow=2.9,SNR=7.6						
KBZ	Khabaz	26.00	290	LR	LR	21 42 02.2	
	comp=Z,333nm,18.6s,baz=86,slow=41						
KIV	Kislovodsk	26.14	290	eP	P	21 29 48.2	+0.1
	comp=Z,22nm,1.0s						
KIV	Kislovodsk	26.14	290	eP	P	21 29 52.3	+4.1
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,328nm,15.0s						
MDRS	Chennai	27.00	174	eP	P	21 29 55.5	-0.4
TIY	Taiyuan	27.07	84	eP	P	21 30 00.1	+3.5
VRH	Novokhopyorsk	27.21	306	eP	P	21 29 58.3	+0.8
VRH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GYA	Guiyang	27.66	111	⇑iP	P	21 30 01.8	-0.2
GYA				PP	PnPn	21 30 52.0	+4.8
GYA				S	S	21 34 43.3	-1.1
GYA				SS	SnSn	21 36 01.8	+6.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.2s						
GYA				LR	LR		
	comp=Z,260nm,16.5s						
GYA				LR	LR		
	comp=Z,280nm,16.2s						
GYA				LR	LR		
	comp=Z,310nm,16.8s						
CHTO	Chiang Mai	28.02	133	eP	P	21 30 02.9	-2.2
	comp=Z,4.4nm,0.8s						
CHTO	Chiang Mai	28.02	133	eP	P	21 30 02.9	-2.2
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	28.02	133	P	P	21 30 10.2	+5.1
	comp=Z,30nm,0.9s						
CMMT	Chiang Mai	28.03	133	P	P	21 30 10.1	+4.9
	comp=Z,6.6nm,0.9s						
CMAR	Chiang Mai Arr	28.31	133c	eP	P	21 30 10.1	+2.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	28.31	133	P	P	21 30 05.8	-1.9
	comp=Z,0.4nm,0.5s,baz=313,slow=10,SNR=3.4						
CM01	Chiang Mai Arr	28.35	133	eP	P	21 30 08.2	+0.2
VSR	Storozhevoye	28.80	306	⇓iP	P	21 30 12.5	+0.8
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PRGR	Permogore	29.06	329	eP	P	21 30 12.9	-1.0
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s						
LPSR	Galich'ya Gora	29.15	308	eP	P	21 30 15.9	+1.0
LPSR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BOD	Bodaibo	29.26	40	eP	P	21 30 16.1	+0.4
BOD				pmax	pmax		
	comp=Z,4.0nm,1.5s						
NRIK	Noril'sk	29.80	7	P	P	21 30 19.9	-0.5
	comp=Z,5.2nm,0.6s,baz=188,slow=4.7,SNR=4.5						
NRIK				LR	LR	21 43 25.8	
	comp=Z,186nm,18.6s,baz=206,slow=39						
ANN	Anapa	29.83	292	eP	P	21 30 20.5	-0.5
ANN				e*PP	pP	21 30 23.8	+0.4
ANN				ePPP	PPP	21 31 25.7	
ANN				e		21 33 20.9	
ANN				eS	S	21 35 17.8	-0.2
ANN				pmax	pmax		
	comp=Z,25nm,1.0s						
ANN				MLR	MLR		
	comp=N,207nm,15.0s						
ANN				MLR	MLR		
	comp=E,48nm,15.0s						
ANN				MLR	MLR		
	comp=Z,321nm,15.0s						
MOS	Moscow	30.55	314	eP	P	21 30 27.6	+0.4
PBKT	Sadao Pong	30.96	132	P	P	21 30 44.5	+13
	comp=Z,4.9nm,0.9s,comp=Z,664nm						
OBN	Obninsk	31.00	313	eP	P	21 30 31.8	+0.7
OBN				e		21 31 32.0	
OBN				pmax	pmax		
	comp=Z,11nm,1.1s						
OBN				MLR	MLR		
	comp=Z,177nm,17.0s						
KLMR	Klimovskoe	31.28	324	eP	P	21 30 33.2	-0.3
KLMR				e		21 31 33.9	
KLMR				pmax	pmax		
	comp=Z,18nm,1.0s						
KLMR	Klimovskoe	31.28	324	eP	P	21 30 33.3	-0.3
KLMR				AMP		21 30 36.7	
	comp=Z,18nm,1.1s						
KLMR				ePP	PP	21 31 34.0	-10
RAYN	Ar Rayn	31.70	248	eP	P	21 30 38.1	+0.4
	comp=Z,21nm,1.1s						
RAYN	Ar Rayn	31.70	248	eP	P	21 30 38.1	+0.4
RAYN				pmax	pmax		
	comp=Z,21nm,1.1s						
SKNT	Sakolnakorn	32.42	128	P	P	21 30 49.3	+5.3
	comp=Z,4.7nm,0.7s						
TMCR	Tamitsa	33.34	329	eP	P	21 30 52.0	+0.4
TMCR				pmax	pmax		
	comp=Z,28nm,1.0s						
BR131	Keskin Array S	33.51	284	eP	P	21 30 54.3	+0.7
BRTR	Keskin Array B	33.51	284c	eP	P	21 30 54.2	+0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	33.51	284	P	P	21 30 53.5	0.0
	comp=Z,1.3nm,0.7s,baz=90,slow=8.2,SNR=9.1						
BRTR				LR	LR	21 46 36.6	
	comp=Z,64nm,18.5s,baz=78,slow=40						
QIZ	Qiongzhong	34.70	118	P	P	21 31 05.8	+1.9
QIZ				S	S	21 36 35.0	+0.7
QIZ				LR	LR		
	comp=Z,180nm,20.6s						
QIZ				LR	LR		
	comp=Z,240nm,18.1s						
QIZ				LR	LR		
	comp=Z,190nm,22.6s						
AKASG	Malin Array Be	35.04	304c	eP	P	21 31 07.5	+1.0
AKASG	Malin Array Be	35.04	304	P	P	21 31 06.1	-0.4
	comp=Z,0.4nm,0.3s,baz=76,slow=8.6,SNR=8.5						
AKASG				LR	LR	21 46 39.4	
	comp=Z,218nm,19.1s,baz=65,slow=38						
AKBB	Malin Array Si	35.04	304	eP	P	21 31 07.8	+1.2
	comp=Z,4.4nm,0.6s						
KIEV	Kiev	35.05	304	eP	P	21 31 06.6	0.0
	comp=Z,4.3nm,0.6s						
KIEV	Kiev	35.05	304	⇓eP	P	21 31 08.1	+1.5
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
JOF	Joensuu	35.65	325	P	P	21 31 12.8	+1.2
JOF				pmax	pmax		
	comp=Z,18nm,0.8s						
LVZ	Lovozero	36.30	334d	eP	P	21 31 17.1	-0.1
LVZ				pmax	pmax		
	comp=Z,38nm,1.2s						
CFR	Carcaliu	36.32	295	⇑iP	P	21 31 19.3	+1.7
CFR	Carcaliu	36.32	295	P	P	21 31 19.3	+1.7
VSU	Vasula	36.88	317	⇑eP	P	21 31 24.2	+2.0
VSU				pmax	pmax		
	comp=Z,38nm,0.9s						
TESR	Tescani	37.13	297	⇑iP	P	21 31 25.6	+1.1
GIRR	Girov	37.16	298	⇓iP	P	21 31 25.2	+0.4
VRI	Vrincioaia	37.18	296	⇓iP	P	21 31 26.0	+1.1
VRI	Vrincioaia	37.18	296	P	P	21 31 26.0	+1.1
PLOR	Plostina	37.24	296	⇓iP	P	21 31 26.4	+1.0
PLOR	Plostina	37.24	296	P	P	21 31 26.3	+0.9
BIZ	Bicaz	37.43	298	⇑iP	P	21 31 28.0	+0.9
FINES	FINESS Array B	37.67	322	i P	P	21 31 28.8	0.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	FINESS Array B	37.67	322	P	P	21 31 28.7	-0.1
	comp=Z,3.1nm,0.5s,baz=108,slow=8.2,SNR=24						
MLR	Muntele Rosu	37.79	296	eP	P	21 31 32.7	+2.5
	comp=Z,10nm,1.1s						
MLR	Muntele Rosu	37.79	296	⇑iP	P	21 31 32.5	+2.3
MLR	Muntele Rosu	37.79	296	eP	P	21 31 32.7	+2.5
MLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BURAR	Bucovina Array	37.93	299	⇑iP	P	21 31 31.7	+0.3
BURAR	Bucovina Array	37.93	299	P	P	21 31 31.6	+0.2
BUR04	Bucovina Ar. S	37.93	299	eP	P	21 31 33.5	+2.0
BUR08	Bucovina Ar. S	37.94	299	eP	P	21 31 34.1	+2.7
DOPR	Dopca	38.08	297	⇑iP	P	21 31 34.4	+1.8
VOIR		38.42	296	⇑iP	P	21 31 36.7	+1.2
VOIR		38.42	296	P	P	21 31 36.7	+1.2
ARR	Arges	38.72	296	⇓iP	P	21 31 40.0	+2.0
KSRS	Korea Array	38.87	77	LR	LR	21 49 17.1	
	comp=Z,233nm,18.4s,baz=292,slow=39						
KWP	Kalwaria Pacla	39.30	303	P	P	21 31 45.6	+2.8
KWP				pmax	pmax		
	comp=Z,12nm,1.6s						
VAF	Ylistaro	39.51	324	P	P	21 31 47.5	+3.2
VAF				pmax	pmax		
	comp=Z,28nm,1.4s						
TRPA	Tarpa	39.63	301	⇓iP	P	21 31 45.6	+0.1
DRGR		39.75	298	⇑iP	P	21 31 47.4	+0.8
DRGR		39.75	298	P	P	21 31 47.3	+0.7
USRK	Ussuriysk Ar.	39.89	66	LR	LR	21 50 40.3	
	comp=Z,188nm,18.1s,baz=259,slow=40						
GZR	Gura Zlata	39.99	296	⇑iP	P	21 31 49.4	+0.8
GZR	Gura Zlata	39.99	296	P	P	21 31 49.3	+0.7
ARCES	ARCESS Array B	40.01	334	eP	P	21 31 48.8	+0.4
ARCES	ARCESS Array B	40.01	334	eP	P	21 31 48.8	+0.4
ARCES	ARCESS Array B	40.01	334	P	P	21 31 48.4	0.0
	comp=Z,14nm,0.8s,baz=101,slow=7.7,SNR=39						
ARE0	ARCESS Array S	40.01	334	eP	P	21 31 48.6	+0.2
HEF	Hetta	40.30	332	eP	P	21 31 50.9	+0.1
KTK1	Kautokeino	40.62	333	eP	P	21 31 53.5	+0.1
MDVR	Moldovita	40.86	296	⇓iP	P	21 31 57.1	+1.3
NIE	Niedzica	40.89	303	P	P	21 31 58.5	+2.6
NIE				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HAMF	Hammerfest	40.97	336	eP	P	21 31 56.8	+0.6
OJC	Ojcow	41.08	304	eP	P	21 31 59.2	+1.7
	comp=Z,7.4nm,0.9s						
OJC	Ojcow	41.08	304	eP	P	21 31 59.2	+1.7
OJC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VYHS	Vyhne	42.00	302	eP	P	21 32 07.6	+2.5
VYHS				pmax	pmax		

	comp=Z,5.0nm,1.5s						
VYHS	Vyhne	42.00	302	eP	P	21 32 07.6	+2.5
OKC	Ostrava-Krasne	42.20	304	AMS	AMS	21 47 40.0	
	comp=Z,300nm,13.4s						
TRO	Tromso	42.25	334	eP	P	21 32 07.0	+0.2
MORC	Moravsky Berou	42.59	304	eP	P	21 32 11.8	+1.9
	comp=Z,4.4nm,0.9s						
MORC	Moravsky Berou	42.59	304	⇓iP	P	21 32 11.6	+1.7
MORC	Moravsky Berou	42.59	304	eP	P	21 32 11.8	+1.9
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MORC	Moravsky Berou	42.59	304	eP	P	21 32 11.4	+1.5
DPC	Dobruska-Polom	43.26	305	AMS	AMS	21 51 10.0	
	comp=Z,400nm,22.8s						
STEI	Steigen	43.28	331	eP	P	21 32 16.0	+0.9
MOR8	Moi Rana	43.41	328	eP	P	21 32 15.3	-0.9
UPC	Upice	43.42	305	AMS	AMS	21 51 10.0	
	comp=Z,500nm,20.2s						
KRUC	Moravsky	43.47	303	P	P	21 32 19.9	+3.0
KRUC				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KRUC	Moravsky	43.47	303	eP	P	21 32 16.1	-0.8
LOF	Lofoten	43.94	331	eP	P	21 32 20.6	+0.2
TREC	Trest	44.00	304	AMS	AMS	21 51 40.0	
	comp=Z,400nm,18.7s						
CONA	Conrad Observa	44.06	302	eP	P	21 32 22.4	+0.5
	comp=Z,9.8nm,1.2s						
PVCC	Panska Ves	44.32	305	AMS	AMS	21 51 40.0	
	comp=Z,500nm,18.7s						
NSS	Namsos	44.37	326	eP	P	21 32 23.8	-0.1
PRU	Pruhonice	44.45	305	AMS	AMS	21 52 00.0	
	comp=Z,200nm,14.2s						
NC602	NORSAR Array S	44.66	320	eP	P	21 32 27.6	+1.2
NORES	NORESS Array B	44.66	320	P	P	21 32 28.7	+2.3
NORES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	NORSAR Subarra	44.80	321	P	P	21 32 26.8	-0.8
	comp=Z,1.6nm,0.6s,baz=87,slow=7.9						
NB2	NORSAR Subarra	44.80	321	P	P	21 32 26.8	-0.8
	baz=87,slow=7.9						
NOA	NORSAR Array B	44.80	321	P	P	21 32 27.1	-0.5
	comp=Z,7.6nm,1.1s,baz=87,slow=7.9,SNR=9.2						
NOA				LR	LR	21 51 40.5	
	comp=Z,164nm,18.7s,baz=85,slow=37						
SOKA	Soboth	44.92	300	eP	P	21 32 30.1	+1.3
	comp=Z,9.0nm,1.2s						
HSPB	Hornsund (broa	45.10	344	eP	P	21 32 29.7	0.0
CLL	Collm	45.13	307	eP	P	21 32 31.0	+0.8
CLL				epP	sP	21 32 36.0	+2.2
	comp=Z,5.0nm,1.1s						
CLL				ePP	PP	21 34 18.0	+2.5
CLL				ePPP	PPP	21 34 55.0	
CLL				eS	S	21 39 24.0	+14
CLL				eSS	SS	21 42 36.0	+4.4
CLL				LmH		21 49 00.0	
	comp=N,300nm,19.7s						
CLL				LmH		21 49 00.0	
	comp=E,100nm,21.1s						
CLL				LmV		21 52 00.0	
	comp=Z,200nm,18.3s						
CLL	Collm	45.13	307	eP	P	21 32 31.0	+0.8
CLL				e		21 32 36.0	
GEC2	GERESS Array S	45.25	303	eP	P	21 32 34.0	+2.8
	comp=Z,9.7nm,1.2s						
GEC2	GERESS Array S	45.25	303	eP	P	21 32 34.1	+2.8
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GERES	GERESS Array B	45.25	303	P	P	21 32 31.6	+0.3
	comp=Z,3.9nm,0.9s,baz=69,slow=7.3,SNR=21						
GERES				LR	LR	21 54 25.3	
	comp=Z,194nm,18.8s,baz=83,slow=40						
GEA0	GERESS Array S	45.25	303	eP	P	21 32 31.7	+0.4
SPA0	Spitsbergen Ar	45.29	345	eP	P	21 32 30.8	-0.4
WET	Wettzell	45.70	304	P	P	21 32 38.1	+3.3
WET				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KONO	Kongsberg	45.73	319	eP	P	21 32 35.3	+0.5
DOMB	Dombas	45.76	322	eP	P	21 32 35.4	+0.3
AKN	Aaknes	46.72	323	eP	P	21 32 43.2	+0.6
MJAR	Matsushiro Arr	46.85	74	LR	LR	21 53 54.3	
	comp=Z,92nm,18.2s,baz=265,slow=38						
MOTA	Moosalm	47.32	302	eP	P	21 32 49.6	+1.9
	comp=Z,5.3nm,1.0s						
BLS5	Blasjo	47.34	319	eP	P	21 32 48.4	+0.9
RETA	Reutte	47.50	302	eP	P	21 32 50.7	+1.7
	comp=Z,7.5nm,1.0s						
FETA	Feichten	47.66	302	eP	P	21 32 52.0	+1.7
	comp=Z,3.9nm,1.1s						
ASK	Askoy	47.80	320	eP	P	21 32 52.0	+0.9
SUE	Sulen	47.92	321	eP	P	21 32 50.9	-1.0
KMY	Karmoy	47.99	319	eP	P	21 32 53.2	+0.8
FUORN	Ofenpass-Fuorn	48.09	301	eP	P	21 32 55.1	+1.3
	comp=Z,12nm,1.3s						
DAVA	Damuels	48.14	302	eP	P	21 32 55.5	+1.5
	comp=Z,8.0nm,1.1s						
CDF	Champ du Feu	49.46	304	eP	P	21 33 05.4	+1.3
CDF				pmax	pmax		
	comp=Z,9.0nm,1.4s						
HINF	Hinteralfeld	49.92	304	eP	P	21 33 08.8	+1.2
HINF				pmax	pmax		
	comp=Z,20nm,1.4s						
HAU	Haudompre	50.18	304	eP	P	21 33 11.7	+2.2
HAU				pmax	pmax		
	comp=Z,31nm,1.7s						
LPG	La Plagne	50.77	301	eP	P	21 33 14.9	+0.6
LPG				pmax	pmax		
	comp=Z,14nm,1.4s						
LPL	La Plagne	50.77	301	eP	P	21 33 16.0	+1.7
LPL				pmax	pmax		
	comp=Z,14nm,1.2s						
CABF	La Chapelle	50.81	302	eP	P	21 33 17.3	+2.9
CABF				pmax	pmax		
	comp=Z,58nm,2.2s						
BAIF	Baives	50.86	307	eP	P	21 33 17.0	+2.5
BAIF				pmax	pmax		
	comp=Z,23nm,1.7s						
BNI	Bardonecchia	50.97	300	eP	P	21 33 16.9	+1.2
	comp=Z,25nm,1.3s						
BNI	Bardonecchia	50.97	300	eP	P	21 33 16.9	+1.2
BNI				pmax	pmax		
	comp=Z,25nm,1.3s						
SMF	Signal de Mont	52.25	303	eP	P	21 33 25.0	-0.1
SMF				pmax	pmax		
	comp=Z,13nm,1.2s						
SSF	Saint Saulge	52.31	304	eP	P	21 33 27.2	+1.7
SSF				pmax	pmax		
	comp=Z,80nm,2.7s						
VIVF	Saint-Julien-l	52.37	301	eP	P	21 33 27.4	+1.4
VIVF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AVF	Avril sur Loir	52.51	304	eP	P	21 33 26.0	-1.0
AVF				pmax	pmax		
	comp=Z,13nm,1.1s						
DAG	Danmarks Havn	52.80	343	i P	P	21 33 28.0	-0.6
	comp=Z,12nm,1.0s						
DAG	Danmarks Havn	52.80	343	i P	P	21 33 28.0	-0.6
DAG				pmax	pmax		
	comp=Z,12nm,1.0s						
KEST	Kesra	52.87	289	LR	LR	21 59 55.1	
	comp=Z,70nm,19.6s,baz=291,slow=40						
BILL	Bilibino	53.05	28	⇓eP	P	21 33 30.7	+0.1
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
EKA	Eskdalemuir Ar	53.39	315	P	P	21 33 32.6	-0.7
TCF	Toulx Ste Croi	53.43	303	eP	P	21 33 35.1	+1.3
TCF				pmax	pmax		
	comp=Z,14nm,1.4s						
DAV	Davao City (W)	53.94	114	LR	LR	21 58 53.2	
	comp=Z,123nm,19.8s,baz=338,slow=39						
LDF	La Druitiere	54.02	307	eP	P	21 33 40.7	+2.6
LDF				pmax	pmax		
	comp=Z,54nm,1.7s						
CAF	Calviac	54.05	302	eP	P	21 33 40.0	+1.6
CAF				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GRR	Gorron	54.55	307	eP	P	21 33 42.7	+0.8
GRR				pmax	pmax		
	comp=Z,67nm,1.8s						
LFF	La Frestale	54.91	302	eP	P	21 33 45.0	+0.4
LFF				pmax	pmax		
	comp=Z,18nm,1.3s						
KMBO	Kilima Mbogo	55.13	232	P	P	21 33 48.2	+1.5
	comp=Z,0.8nm,0.4s,baz=88,slow=12,SNR=4.2						
SGMF	Saint Gilles	55.65	307	eP	P	21 33 49.3	-0.5
SGMF				pmax	pmax		
	comp=Z,183nm,2.2s						
SUMG	Summit	59.35	342	eP	P	21 34 18.4	+2.4
	comp=Z,10nm,1.1s						
SUMG	Summit	59.35	342	i P	P	21 34 16.2	+0.1
SUMG	Summit	59.35	342	i P	P	21 34 16.2	+0.1
ES19	SONSECA Array	60.33	299	eP	P	21 34 22.4	-0.5
ESDC	Sonseca Array	60.38	299	P	P	21 34 22.4	-0.9
	comp=Z,1.0nm,0.5s,baz=63,slow=7.6,SNR=13						
TAM	Tamanrasset	62.33	277	eP	P	21 34 39.1	+2.3
	comp=Z,5.4nm,1.3s						
TAM	Tamanrasset	62.33	277	eP	P	21 34 39.1	+2.3
TAM				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ANM	Nome	64.65	25	eP	P	21 34 53.9	+2.6
	comp=Z,20nm,1.8s						
ANM	Nome	64.65	25	eP	P	21 34 53.9	+2.6
ANM				pmax	pmax		
	comp=Z,21nm,1.8s						
TOLK	Toolik Lake Re	66.06	17	eP	P	21 35 02.0	+1.6
	comp=Z,32nm,1.8s						
SFJD	Kangerlussuaq	66.24	340	P	P	21 34 59.8	-1.7
	comp=Z,6.1nm,0.8s,baz=63,slow=6.8,SNR=3.4						
COLD	Coldfoot	67.03	18	eP	P	21 35 08.3	+1.8
	comp=Z,19nm,1.8s						
IM3	Indian Mountai	67.09	20	eP	P	21 35 08.0	+1.0
INK	Inuvik	69.44	12	eP	P	21 35 21.4	-0.2
	comp=Z,13nm,1.1s						
INK	Inuvik	69.44	12	eP	P	21 35 21.4	-0.2
INK				pmax	pmax		
	comp=Z,13nm,1.1s						
INK	Inuvik	69.44	12	P	P	21 35 20.9	-0.7
	comp=Z,7.7nm,1.1s,baz=359,slow=10,SNR=10.0						
COLA	College	69.49	19	⇓eP	P	21 35 22.4	+0.4
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
IL1	Eielson Array	69.82	19	eP	P	21 35 22.5	-1.5
ILAR	Eielson Array	69.82	19	P	P	21 35 22.9	-1.2
	comp=Z,1.8nm,1.0s,baz=306,slow=5.4,SNR=15						
ILAR				LR	LR	22 10 21.5	
	comp=Z,177nm,21.9s,baz=301,slow=40						
ILB	Eielson Array	69.82	19	eP	P	21 35 25.1	+1.0
TOA0	Torodi Ar. Sit	70.95	271	eP	P	21 35 31.1	-0.6
TORD	Torodi Ar. Bea	70.95	271	P	P	21 35 29.2	-2.6
	comp=Z,6.6nm,0.6s,baz=42,slow=5.0,SNR=58						
FITZ	Fitzroy Crossi	73.12	132	P	P	21 35 45.7	+1.2
	comp=Z,1.4nm,0.6s,baz=354,slow=2.1,SNR=5.7						
YKW3	Yellowknife Ar	77.23	6	eP	P	21 36 06.9	-0.8
	comp=Z,9.8nm,1.3s						
YKA	Yellowknife Ar	77.30	6	P	P	21 36 07.0	-1.1
YKA	Yellowknife Ar	77.30	6	P	P	21 36 06.9	-1.1
	comp=Z,2.0nm,0.5s,baz=346,slow=5.5,SNR=39						
YKB5	Yellowknife Ar	77.30	6	eP	P	21 36 06.3	-1.7
DLBC	Dease Lake	79.16	14	LR	LR	22 17 02.2	
	comp=Z,154nm,18.4s,baz=158,slow=40						
WRA	Warramunga Arr	79.69	127	i P	P	21 36 21.7	-0.1
WRA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WRA	Warramunga Arr	79.69	127	P	P	21 36 20.4	-1.5
	comp=Z,2.5nm,0.7s,baz=327,slow=5.5,SNR=19						
SCHQ	Schefferville	80.69	340	LR	LR	22 13 46.5	
	comp=Z,99nm,18.2s,baz=316,slow=37						
ASAR	Alice Springs	82.25	130	P	P	21 36 33.8	-1.7
	comp=Z,2.4nm,0.8s,baz=322,slow=5.3,SNR=15						
AS01	Alice Springs	82.28	130	eP	P	21 36 34.1	-1.5
BOSA	Boshof	83.91	224	LR	LR	22 18 17.5	
	comp=Z,53nm,18.2s,baz=71,slow=39						
FFC	Flin Flon	85.57	360	eP	P	21 36 51.0	-1.0
	comp=Z,8.8nm,1.0s						
FFC	Flin Flon	85.57	360	eP	P	21 36 51.0	-1.0
FFC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CTA	Charters Tower	87.47	119	P	P	21 37 01.2	-0.6
	comp=Z,3.1nm,1.0s,baz=319,slow=11,SNR=3.0						
ULM	Lac du Bonnet	89.87	356	LR	LR	22 21 36.6	
	comp=Z,160nm,18.1s,baz=348,slow=38						
STKA	Stephens Creek	92.88	130	LR	LR	22 28 25.6	
	comp=Z,38nm,18.2s,baz=16,slow=42						
SADO	Sadowa	92.99	344	LR	LR	22 22 55.4	
	comp=Z,95nm,18.8s,baz=10,slow=38						
HLID	Hailey	96.03	9	eP	P	21 37 41.0	-0.6
	comp=Z,2.6nm,0.8s						
PDAR	Pinedale Array	97.28	5	P	P	21 37 46.6	-0.7
	comp=Z,0.4nm,0.9s,baz=42,slow=4.1,SNR=2.9						
PDAR				LR	LR	22 25 57.1	
	comp=Z,71nm,18.1s,baz=321,slow=38						
O49A	Covington	98.44	346	eP	Pdif	21 37 53.5	+1.2
	comp=Z,90nm,1.9s						
PB11	IPOC Station P	145.46	296	ePKPdf	PKPab	21 43 53.5	+0.6

JMA ***18*** *21:25:55.3, 23°.50N×120°.87E, h0^{km}, M3.4*
TAP ***18*** *21:25:55.6, 23°.48N×120°.88E, h3^{km}, ML3.6, B*
ISCJB ***18*** *21:25:56.6±0.2, 23°.478N±0°.010×120°.90E±0°.01, h8^{km}±1^{km}, Error ellipse: s-maj=1.8km s-min=1.5km az=42.7*
ISC 18 21:25:56.1±0.8**, 23°.49N**±0°.01×**120°.87E**±0°.01**, h7**^{km}±6^{km}**, n131, σ0^{s}.77**/193**, 25C-14D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALS	Alishan	0.07	287	⇓eP	Pg	21 25 57.9	-0.4
	baz=293						
ALS				S	Sg	21 25 59.3	-0.5
	baz=293						
WHYT	Xinyi Township	0.20	355	⇓P	Pg	21 26 00.6	+0.3
	baz=355						
WHYT				S	Sg	21 26 03.8	+0.6
	baz=355						
CHN5	Tsauling	0.21	301	⇑P	Pg	21 26 00.8	+0.5
	baz=302						
CHN5				S	Sg	21 26 04.3	+1.1
	baz=302						
CHN4	Tsaushan	0.29	242	⇑iP	Pb	21 26 02.6	-1.1
	baz=242						
CHN4				i S	Sb	21 26 07.1	-1.6
	baz=242						
TPUB	Ta-pu	0.29	230	⇑P	Pb	21 26 02.4	-1.3
	baz=230						
TPUB				S	Sg	21 26 06.7	+0.8
	baz=230						
SSLB	Suanglung	0.30	14	⇓P	Pg	21 26 02.1	0.0
	baz=27						
SSLB				eS	Sg	21 26 06.3	+0.1
	baz=27						
ELDTW	Lidau	0.33	156	⇑iP	Pg	21 26 02.8	+0.2
	baz=155						
ELDTW				S	Sg	21 26 07.1	+0.1
	baz=155						
WTP	Ta-pu	0.34	224	⇑iP	Pb	21 26 03.4	-1.2
	baz=236						
WTP				S	Sg	21 26 08.3	+0.9
	baz=236						
STYT	Tauyuan	0.34	198	⇑iP	Pg	21 26 03.1	+0.2
	baz=198						
STYT				i S	Sg	21 26 08.0	+0.6
	baz=198						
WGK	Gukeng	0.34	304	⇓iP	Pb	21 26 04.4	-0.2
	baz=306						
WGK				i S	Sb	21 26 10.8	+0.5
	baz=306						
WJS	Zhushan	0.35	338	eP	Pb	21 26 04.5	-0.3
	baz=339						
WJS				S	Sb	21 26 10.9	+0.3
	baz=339						
VWDT	VWDT	0.36	43	⇓P	Pb	21 26 03.6	-1.2
	baz=42						
VWDT				S	Sg	21 26 08.0	+0.1
	baz=42						
WDLH	Douliu	0.36	303	P	Pb	21 26 05.0	+0.1
	baz=304						
WDLH				S	Sb	21 26 11.9	+1.1
	baz=304						
CHN2	Minshiung	0.37	276	eP	Pb	21 26 04.9	-0.1
	baz=277						
CHN2				S	Sb	21 26 11.5	+0.6
	baz=277						
SMLT	Sun Moon Lake	0.39	4	⇓iP	Pb	21 26 04.3	-1.1
	baz=16						
SMLT				i S	Sb	21 26 10.3	-1.4
	baz=16						
YULB	Yu-li	0.40	104	⇑P	Pb	21 26 04.3	-1.2
	baz=103						
YULB				eS	Sg	21 26 09.5	+0.3
	baz=103						
CHY	Chiayi	0.41	271	P	Pb	21 26 05.6	-0.1
	baz=272						
CHY				i S	Sb	21 26 12.8	+0.7
	baz=272						
EHY	Hungye	0.41	88	⇑P	Pb	21 26 04.8	-1.0
	baz=94						
EHY				eS	Sg	21 26 10.0	+0.4
	baz=94						
TYC	Yuchr	0.41	358	⇓iP	Pb	21 26 04.8	-0.9
	baz=11						
TYC				S	Sb	21 26 11.6	-0.5
	baz=11						
TWF1	Yuli	0.41	109	P	Pb	21 26 04.7	-1.0
	baz=119						
TWF1				eS	Sg	21 26 10.1	+0.5
	baz=119						
TWK	Hsinying	0.42	238	⇑iP	Pb	21 26 05.1	-0.7
	baz=236						
TWK				S	Sb	21 26 11.8	-0.6
	baz=236						
WNT	Mingjian	0.42	336	⇓iP	Pb	21 26 06.1	+0.2
	baz=338						
WNT				S	Sb	21 26 13.4	+0.9
	baz=338						
SNST	Tainan City	0.44	232	⇑eP	Pb	21 26 05.5	-0.7
	baz=232						
SNST				S	Sb	21 26 12.2	-0.7
	baz=232						
CHN1	Nanshi	0.44	226	⇑iP	Pb	21 26 05.6	-0.6
	baz=226						
CHN1				i S	Sb	21 26 12.8	-0.2
	baz=226						
SGST	Jiashian	0.49	213	⇑iP	Pb	21 26 06.4	-0.6
	baz=203						
SGST				eS	Sb	21 26 14.0	-0.4
	baz=203						
HGSD	Ruisui	0.51	90	⇓eP	Pb	21 26 06.9	-0.4
	baz=89						
HGSD				eS	Sb	21 26 14.8	0.0
	baz=89						
SLGT	Liugui	0.54	203	⇑P	Pb	21 26 07.1	-0.8
	baz=195						
SLGT				eS	Sg	21 26 14.1	+0.5
	baz=195						
EGFH	Guangfu	0.54	71	eP	Pb	21 26 07.2	-0.6
	baz=60						
EGFH				eS	Sg	21 26 14.1	+0.5
	baz=60						
OWD	Renai	0.54	31	⇑eP	Pg	21 26 06.5	-0.1
	baz=31						
OWD				eS	Sg	21 26 12.5	-1.2
	baz=31						
CHKT	Chengkung	0.60	131	eP	Pb	21 26 09.3	+0.4
	baz=138						
CHKT				eS	Sb	21 26 18.5	+1.0
	baz=138						
ESL	Shilin	0.61	58	P	Pb	21 26 08.2	-0.8
	baz=58						
ESL				S	Sg	21 26 15.4	-0.3
	baz=58						
WSF	Szhu	0.61	284	eP	Pb	21 26 08.6	-0.6
	baz=284						
WSF				eS	Sb	21 26 18.8	+0.8
	baz=284						
RLNB	Erlin	0.62	310	⇑P	Pb	21 26 09.3	+0.1
	baz=311						
CHN3	Shinhua	0.62	229	eP	Pb	21 26 10.0	+0.7
	baz=228						
CHN3				eS	Sn	21 26 21.1	-0.4
	baz=228						
CHN8	Yiju	0.62	257	eP	Pb	21 26 09.3	0.0
	baz=257						
CHN8				eS	Sb	21 26 19.5	+1.2
	baz=257						
CHGB	Renai	0.63	26	P	Pg	21 26 08.2	-0.2
	baz=38						
CHGB				eS	Sg	21 26 15.5	-1.1
	baz=38						
WCHH	Zhanghua	0.65	334	eP	Pb	21 26 09.9	0.0
	baz=334						
WTCT	Ta-ch'eng	0.66	304	eP	Pb	21 26 09.7	-0.2
	baz=306						
WTCT				eS	Sb	21 26 20.2	+0.9
	baz=306						
WMLT	Mailiao	0.67	298	eP	Pg	21 26 09.0	-0.1
	baz=298						
WMLT				eS	Sb	21 26 20.7	+1.1
	baz=298						
TCU	Taichung	0.68	345	⇓P	Pb	21 26 10.7	+0.5
	baz=346						
TWG	Pinlang	0.69	165	⇑iP	Pb	21 26 09.8	-0.7
	baz=165						
TWGBT	Beinan	0.70	164	⇑P	Pb	21 26 09.6	-1.0
	baz=160						
TWGBT				eS	Sg	21 26 19.0	+0.4
	baz=160						
SCLT	Jiali	0.70	243	eP	Pb	21 26 10.8	+0.2
	baz=243						
SCLT				eS	Sn	21 26 22.6	-0.8
	baz=243						
WHF	Hehuan Shan	0.74	29	eP	Pg	21 26 10.3	-0.2
	baz=40						
TAI1	Yung-k'ang	0.74	233	eP	Pb	21 26 11.9	+0.5
	baz=232						
SSD	Sandimen	0.77	197	⇑iP	Pb	21 26 11.2	-0.7
	baz=190						
TTN	Taitung	0.78	161	eP	Pb	21 26 11.3	-0.6
	baz=160						
TWM1	Shoushan	0.78	212	⇑eP	Pn	21 26 13.1	-0.5
	baz=211						
ENLB	Shoufeng	0.78	58	eP	Pb	21 26 11.2	-0.8
	baz=50						
ENLB				eS	Sb	21 26 22.2	-0.7
	baz=50						
WHP	Taichung City	0.79	5	eP	Pb	21 26 12.3	+0.1
	baz=16						
WHP				eS	Sn	21 26 24.8	-0.9
	baz=16						
TDCB	Techi	0.80	19	eP	Pg	21 26 11.1	-0.5
	baz=19						
TWT	Tachien	0.81	20	eP	Pg	21 26 11.4	-0.3
	baz=19						
HWA	Hwalien	0.83	54	eP	Pb	21 26 12.4	-0.4
	baz=55						
SGLT	Jiouru	0.84	205	eP	Pn	21 26 13.8	-0.5
	baz=205						
TWQ1	Liyutan	0.86	354	⇓iP	Pn	21 26 14.1	-0.5
	baz=356						
TWQ1				S	Sn	21 26 26.9	-0.6
	baz=356						
WDJ	Dajia District	0.88	346	⇓P	Pn	21 26 14.7	-0.2
	baz=348						
WDJ				S	Sn	21 26 28.2	+0.3
	baz=348						
TWD	Chiawan	0.88	48	eP	Pb	21 26 13.3	-0.4
	baz=58						
TWD				eS	Sg	21 26 23.9	-0.7
	baz=58						
SNJT	Kaohsiung City	0.89	214	eP	Pn	21 26 15.4	+0.5
	baz=214						
ECL	Taimali	0.89	175	⇑P	Pg	21 26 12.8	-0.5
	baz=166						
MASBT	Mashibuluo	0.90	194	⇑P	Pb	21 26 13.4	-0.7
	baz=189						
ETLH	Xiulin Townshi	0.91	38	eP	Pg	21 26 12.4	-1.1
	baz=38						
NSY	Sanyi	0.93	354	P	Pn	21 26 15.5	-0.1
	baz=356						
NSY				S	Sn	21 26 29.6	+0.5
	baz=356						
NACB	Ninganchiao	0.95	44	⇑P	Pg	21 26 13.9	-0.5
	baz=57						
NACB				eS	Sb	21 26 28.5	+0.9
	baz=57						
SSPT	Xinbi	1.04	196	eP	Pb	21 26 16.6	+0.2
	baz=185						
NNSB	Datong	1.04	26	⇑eP	Pg	21 26 15.3	-0.9
	baz=19						
NMLH	Miaoli	1.04	356	eP	Pn	21 26 17.6	+0.4
	baz=358						
NMLH				eS	Sn	21 26 33.0	+1.0
	baz=358						
NNS	Nan Shan	1.05	26	eP	Pg	21 26 15.7	-0.7
	baz=19						
EAST	Anshuo	1.10	181	eP	Pg	21 26 16.9	-0.4
	baz=172						
TAW	Tawu	1.13	179	eP	Pn	21 26 18.2	-0.1
	baz=170						
SCZT	Fangliau	1.14	192	eP	Pb	21 26 18.0	-0.1
	baz=191						
SCZT				eS	Sn	21 26 36.2	+2.0
	baz=191						

WDGT	Dungji baz=258	1.14	259	⇑P	Pg	21 26 17.3	-0.7
WDGT	baz=258			*e*S	Sg	21 26 32.5	-0.3
NSTT	Nanjuang baz=7.0	1.14	6	⇓*i*P	Pn	21 26 18.8	+0.3
NSTT	baz=7.0			S	Sn	21 26 34.9	+0.6
LIOB	Emei baz=9.0	1.16	6	⇓P	Pb	21 26 18.3	-0.2
LIOB	baz=9.0			*e*S	Sn	21 26 35.3	+0.5
PHUB	P'eng-hu baz=271	1.20	271	⇑P	Pg	21 26 17.9	-1.2
PHUB	baz=271			S	Sb	21 26 34.7	0.0
PNG	Penghu baz=274	1.21	274	*e*P	Pg	21 26 18.6	-0.8
PNG	baz=274			*e*S	Sg	21 26 34.7	-0.5
WLCH	Liuqiu baz=204	1.22	202	*e*P	Pn	21 26 21.1	+1.5
ENA	Nanau baz=57	1.23	40	*e*P	Pb	21 26 19.3	-0.3
TWP	Hsiaoliuchiu baz=204	1.23	203	*e*P	Pn	21 26 20.9	+1.2
NDT	Datong Townshi baz=20	1.25	28	*e*P	Pg	21 26 19.3	-0.9
NSK	Sanguang baz=29	1.26	20	*e*P	Pg	21 26 19.1	-1.2
NSK	baz=29			*e*S	Sb	21 26 37.3	+0.6
YHNB	Yeheng baz=22	1.26	21	*e*P	Pg	21 26 19.4	-1.0
SBCB	Hsinchu baz=344	1.30	4	*e*P	Pb	21 26 20.7	-0.2
ENTT	Nioudou baz=23	1.31	29	*e*P	Pg	21 26 19.8	-1.4
VCHM	Qimei baz=259	1.36	258	*e*P	Pn	21 26 20.4	-1.0
VCHM	baz=259			*e*S	Sg	21 26 39.2	-0.6
WLTB	Daxi baz=25	1.40	14	*e*P	Pb	21 26 23.0	+0.4
WLTB	baz=25			*e*S	Sn	21 26 44.1	+3.4
NWLT	Wulai baz=25	1.40	24	*e*P	Pb	21 26 22.6	-0.1
TWE	Neicheng baz=42	1.42	30	*e*P	Pg	21 26 23.3	-0.1
TWC	Suao baz=55	1.43	39	*e*P	Pg	21 26 23.1	-0.5
HEN	Hengchun baz=178	1.48	185	*e*P	Pg	21 26 24.4	-0.2
NCUH	Zhongli baz=12	1.50	11	*e*P	Pg	21 26 24.6	-0.3
ILA	Ilan baz=42	1.50	32	*e*P	Pg	21 26 25.4	+0.5
NCU	National Centr baz=12	1.50	11	*e*P	Pn	21 26 23.7	+0.3
TWK1	Hengchun baz=197	1.54	182	*e*P	Pn	21 26 24.1	+0.1
TWKBT	Hengchun baz=200	1.54	182	*e*P	Pb	21 26 24.9	-0.1
EOS1	EOS1 baz=47	1.56	47	*e*P	Pg	21 26 25.8	-0.2
LAY	Lan-yu baz=154	1.57	156	*e*P	Pn	21 26 23.8	-0.7
TATO	Taipei baz=28	1.58	21	*e*P	Pg	21 26 26.4	-0.1
TATO	baz=28			*e*S	Sg	21 26 48.5	+1.5
NHDH	Xindian Distri baz=23	1.58	22	*e*P	Pg	21 26 26.3	-0.2
TSEB	Hengchuen, Pin baz=195	1.58	179	*e*P	Pg	21 26 26.6	+0.1
NTC	Toucheng baz=41	1.61	33	*e*P	Pn	21 26 25.5	+0.5
TWA	Mucha baz=5.0	1.62	23	*e*P	Pg	21 26 26.4	-0.8
TWS1	Kuangyinshan baz=1.0	1.68	17	*e*P	Pb	21 26 26.7	-0.7
TIPB	Shuangxi baz=17	1.71	30	*e*P	Pg	21 26 28.7	-0.3
NTST	Danshui baz=1.0	1.75	17	*e*P	Pn	21 26 27.1	+0.3
YM04	YM04 baz=3.0	1.76	20	*e*P	Pn	21 26 27.2	+0.1
YM01	YM01 baz=5.0	1.77	21	*e*P	Pn	21 26 27.8	+0.7
NWF	Wu-fen Shan baz=8.0	1.78	28	*e*P	Pg	21 26 29.2	-1.0
WFSB	Wu-fen Shan baz=7.0	1.78	28	*e*P	Pg	21 26 29.4	-0.8
YM05	YM05 baz=4.0	1.78	21	*e*P	Pn	21 26 28.0	+0.6
YM11	YM11 baz=5.0	1.79	21	*e*P	Pn	21 26 27.9	+0.5
YM08	YM08 baz=21	1.81	21	*e*P	Pn	21 26 27.5	-0.2
TWB1	Santiao Chiao baz=49	1.82	34	*e*P	Pb	21 26 29.2	-0.5
TWY	Chenhua baz=4.0	1.90	20	*e*P	Pb	21 26 30.0	-1.0
VWUC	VWUC baz=321	1.98	319	*e*P	Pn	21 26 29.3	-0.7
JYNG	Yonagunijimaku	2.12	63	P	Pn	21 26 33.0	+1.0
JYNG				*e*S	Sn	21 26 59.7	+1.1
YOJ	Yonaguni jima baz=79	2.18	63	*e*P	Pn	21 26 33.0	+0.3
YOJ	Yonaguni jima	2.18	63	P	Pn	21 26 34.1	+1.3
YOJ				*e*S	Sn	21 27 00.5	+0.5
PTMZ	Houxiangcun baz=316	2.22	314	*e*P	Pn	21 26 32.1	-1.2
PTTC	Pingtan baz=335	2.24	334	*e*P	Pn	21 26 32.3	-1.3
KNM	Kinmen baz=293	2.42	293	*e*P	Pn	21 26 37.4	+1.4
KNMB	Chin-men Tao baz=295	2.47	294	*e*P	Pn	21 26 35.7	-1.1
IRIF	Iriomote-Funau	2.75	72	P	Pn	21 26 42.0	+1.5
IRIF				*e*S	Sn	21 27 13.2	-0.8
MATB	Ma-tsu baz=345	2.78	343	*e*P	Pn	21 26 41.4	+0.4
ZPLA	Ao Xicun baz=281	2.90	279	*e*P	Pn	21 26 41.4	-1.2
JKRS	Kuro-shima	2.97	75	P	Pn	21 26 45.3	+1.7
AXDP	Jialang baz=300	3.00	298	*e*P	Pn	21 26 43.6	-0.5
MHZQ	Yeshan baz=329	3.09	328	*e*P	Pn	21 26 45.8	+0.5
JIJ	Ishigaki jima	3.12	73	P	Pn	21 26 46.1	+0.5
JIJ				*e*S	Sn	21 27 23.0	-0.1
LYJJ	Jianjiangzhen baz=344	3.21	342	*e*P	Pn	21 26 46.8	-0.1
JISG	Ishigakijimahi	3.33	70	P	Pn	21 26 49.1	+0.6
JISG				*e*S	Sn	21 27 27.6	-0.7
XPSS	Dashiqiu baz=353	3.48	350	*e*P	Pn	21 26 50.2	-0.4

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*SOME **18** 21:38:13.1, 40°.05N×77°.75E, h15^{km}*

*KRNET **18** 21:38:13.5±0.1, 39°.98N×77°.49E, mb2.8*

*NNC **18** 21:38:14.1±1.4, 40°.14N×77°.75E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=11.1km s-min=5.8km az=137.0*

ISC 18 21:38:11.9±1.9**, 39°.87N**±0°.08×**77°.62E**±0°.05**, h8**^{km}±14^{km}**, n37, σ0^{s}.93**/60**, 16C-17D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn baz=22	1.99	322	⇑*i*P	Pn	21 38 46.6	+0.5
NRN	baz=22			⇑*i*S	Sn	21 39 10.9	-0.4
KDJ	Kajisay baz=54	2.28	352	⇑*i*P	Pn	21 38 51.0	+1.0
KDJ	baz=54			⇑*i*S	Sn	21 39 18.2	-0.1
ULHL	Ulahol baz=38	2.59	337	⇓*i*P	Pn	21 38 55.6	+1.3
ULHL	baz=38			⇓*e*S	Sn	21 39 26.4	+0.4
PRZ	Przheval'sk baz=15	2.67	12	⇓*i*P	Pn	21 38 57.2	+1.8
PRZ	baz=15			⇓*i*S	Sn	21 39 29.2	+1.1
KZA	Kyzart baz=22	2.84	322	⇑*i*P	Pn	21 38 58.6	+0.7
KZA	baz=22			⇑*i*S	Sn	21 39 31.7	-0.8
BOOM	Boomskoye usch baz=36	2.91	335	⇓*i*P	Pn	21 38 59.7	+1.1
BOOM	baz=36			⇓*i*S	Sn	21 39 33.1	-0.7
SFK	Sufi-Kurgan 0.6nm,0.3s	3.17	274	⇑Pg	Pg	21 39 12.5	-0.2
SFK	2.4nm,0.3s			⇑Lg	Lg	21 39 57.2	
SFK	Sufi-Kurgan 0.7nm,0.3s	3.17	274	Pg	Pg	21 39 12.8	+0.2
SFK	4.7nm,0.3s			Lg	Lg	21 39 55.6	
SFK	Sufi-Kurgan baz=72	3.17	274	⇑*e*P	Pn	21 39 03.6	+1.3
SFK	baz=72			⇑*i*S	Sn	21 39 40.3	-0.1
TNSS	Tian-Shan 22nm,0.6s	3.20	351	*e*P	Pb	21 39 08.3	-0.9
TNSS	11nm,0.7s			*e*S	Sb	21 39 48.3	-0.2
SATY	Saty 14nm,0.8s	3.24	10	*e*P	Pb	21 39 08.8	-0.9
SATY	7.5nm,0.5s			*e*S	Sb	21 39 49.1	-0.2
IZV	Izvestkoviy 7.3nm,0.5s	3.25	347	Pg	Pb	21 39 09.6	-0.3
IZV	12nm,0.4s			Lg	Lg	21 39 50.3	
IZV	Izvestkoviy 7.1nm,0.5s	3.25	347	*e*P	Pb	21 39 09.3	-0.6
IZV	11nm,0.5s			*e*S	Sb	21 39 50.2	+0.5
MDOK	Medeo 6.0nm,0.5s	3.32	353	Pg	Pb	21 39 10.1	-0.9
MDOK	6.9nm,0.7s			⇓Lg	Lg	21 39 50.8	
MDOK	Medeo 8.1nm,0.5s	3.32	353	*e*P	Pb	21 39 10.0	-1.0
MDOK	12nm,0.6s			*e*S	Sb	21 39 50.6	-0.9
UCH	Uchtor baz=16	3.33	316	⇓*e*P	Pn	21 39 05.0	+0.4
UCH	baz=16			⇓*e*S	Sn	21 39 42.9	-1.6
KNDC	Almaty 7.6nm,0.4s	3.38	352	⇑Pg	Pb	21 39 11.4	-0.6
KNDC	13nm,0.5s			⇓Lg	Lg	21 39 54.2	
KOTS	Kotyrbulak 5.6nm,0.5s	3.38	354	Pg	Pb	21 39 11.7	-0.4
KOTS	34nm,0.5s			Lg	Lg	21 39 53.9	
KOTS	Kotyrbulak 6.1nm,0.6s	3.38	354	*e*P	Pb	21 39 11.7	-0.4
KOTS	38nm,0.5s			*e*S	Sb	21 39 54.0	+0.6
KST	Kastek 4.1nm,0.4s	3.40	339	Pg	Pb	21 39 12.4	-0.1
KST	10nm,0.6s			Lg	Lg	21 39 55.0	
KST	Kastek 2.3nm,0.3s	3.40	339	*e*P	Pb	21 39 12.1	-0.4
KST	11nm,0.7s			*e*S	Sb	21 39 55.0	+0.9
TKM2	Tokmak 2 baz=35	3.41	334	⇓*i*P	Pn	21 39 06.7	+1.2
TKM2	baz=35			⇓*e*S	Sn	21 39 45.6	-0.5
KBK	Karagaybulak baz=25	3.44	325	⇑*i*P	Pn	21 39 06.7	+0.9
KBK	baz=25			⇑*i*S	Sn	21 39 45.7	-1.1
UZB	Uzynbulak 4.6nm,0.6s	3.44	17	*e*P	Pb	21 39 11.2	-1.9
UZB	4.9nm,0.8s			*e*S	Sb	21 39 53.0	-2.0
AAK	Ala-Archa 0.9nm,0.5s	3.63	321	⇑Pg	Pg	21 39 21.6	+0.1
AAK	11nm,0.8s			⇓Lg	Lg	21 40 03.9	
DGS	Degeres 3.0nm,0.5s	3.64	338	Pg	Pb	21 39 16.7	+0.1
DGS	15nm,0.5s			Lg	Lg	21 40 02.4	
DGS	Degeres 3.2nm,0.4s	3.64	338	*e*P	Pb	21 39 16.2	-0.4
DGS	17nm,0.6s			*e*S	Sb	21 40 01.6	+0.7
PDGK	Podgornoye 3.3nm,0.6s	3.73	21	⇓Pg	Pb	21 39 17.4	-0.6
PDGK	5.2nm,0.8s			⇓Lg	Lg	21 40 00.8	
PDGK	Podgornoye baz=23	3.73	21	⇓*i*P	Pn	21 39 11.4	+1.6
PDGK	baz=23			⇓*i*S	Sn	21 39 54.5	+0.6
AML	Almayashu baz=8.0	3.73	308	⇑*e*P	Pn	21 39 10.5	+0.4
AML	baz=8.0			⇑*e*S	Sn	21 39 52.5	-1.9
KTBS	Karatobe 4.3nm,0.4s	3.90	350	Pg	Pb	21 39 21.1	+0.2
KTBS	8.6nm,0.3s			Lg	Lg	21 40 09.6	
KTBS	Karatobe 4.6nm,0.3s	3.90	350	*e*P	Pb	21 39 20.7	-0.2
KTBS	6.8nm,0.3s			*e*S	Sb	21 40 09.2	+0.9
CHKK	Chushkaly 4.9nm,0.6s	4.01	353	*e*P	Pb	21 39 21.9	-0.8
CHKK	8.3nm,0.5s			*e*S	Sb	21 40 11.2	-0.1
KTMS	Ketmen 0.3nm,0.1s	4.11	29	Pg	Pb	21 39 23.5	-1.1
KTMS	4.6nm,0.8s			Lg	Lg	21 40 13.9	
KTMS	Ketmen 0.3nm,0.1s	4.11	29	*e*P	Pb	21 39 23.5	-1.1
KTMS	4.6nm,0.8s			*e*S	Sb	21 40 13.9	-0.6
MNBS	Baschi 3.0nm,0.6s	4.24	8	Pg	Pb	21 39 25.5	-1.3
MNBS	3.3nm,0.3s			Lg	Lg	21 40 17.2	
ARXS	Arharly 6.6nm,0.5s	4.34	2	Pg	Pb	21 39 27.9	-0.6
ARXS	2.4nm,0.5s			Lg	Lg	21 40 21.6	

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*KRNET **18** 21:44:01.2±0.1, 42°.27N×71°.02E, h14^{km}, mb2.2*

*SOME **18** 21:44:02.6, 42°.25N×70°.97E, h20^{km}*

*NNC **18** 21:44:02.7±0.9, 42°.35N×71°.05E, h0^{km}, mb2.6, mpv2.0, Error ellipse: s-maj=8.2km s-min=5.1km az=175.0*

ISC 18 21:43:58.6±1.4**, 42°.30N**±0°.04×**70°.91E**±0°.04**, h4**^{km}±12^{km}**, n20, σ1^{s}.16**/36**, 20C-12D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay baz=61	0.67	257	*e*P	Pn	21 44 15.5	+0.6
IUG	baz=61			*e*S	Sn	21 44 25.0	-0.9
IUG	Iuzhnay 9.3nm,0.1s	0.67	257	*e*P	Pn	21 44 15.5	+0.6
IUG	39nm,0.2s			*e*S	Sn	21 44 25.0	-0.9
KK31	Karatay Array 0.2nm,0.2s,baz=155,slow=15,SNR=18	0.86	340	⇑P	Pn	21 44 19.6	+2.1
KK31	1.0nm,0.2s,baz=152,slow=28,SNR=8.1			⇑S	Sn	21 44 30.2	-0.2
ARK	Arkit baz=24	0.93	122	⇑*i*P	Pn	21 44 18.0	-0.5
ARK	baz=24			⇑*i*S	Sb	21 44 29.2	-0.8
MNAS	Manas 0.1nm,0.1s	1.20	80	⇓Pg	Pn	21 44 23.3	+1.1
MNAS	2.2nm,0.3s			⇓Lg	Lg	21 44 37.9	
MNAS	Manas baz=78	1.20	80	⇓*i*P	Pn	21 44 22.9	+0.7
MNAS	baz=78			⇓*i*S	Sb	21 44 37.7	-0.1
MRKS	Merke baz=73	1.77	75	*e*P	Pg	21 44 33.6	+1.1
MRKS	baz=73			*e*S	Sg	21 44 55.9	+0.4
MRKS	Merke 1.2nm,0.2s	1.77	75	*e*P	Pg	21 44 33.6	+1.1
MRKS	3.8nm,0.3s			*e*S	Sg	21 44 55.8	+0.4
ARSB	Arslanbob baz=22	1.83	121	⇓*i*P	Pg	21 44 33.6	0.0
ARSB	baz=22			⇓*i*S	Sb	21 44 56.3	+0.4
AML	Almayashu baz=93	2.08	94	⇑*i*P	Pg	21 44 38.4	0.0
AML	baz=93			⇑*i*S	Sg	21 45 04.4	-0.9
EKS2	Erkin-Say baz=78	2.15	79	⇑*i*P	Pg	21 44 40.1	+0.3
EKS2	baz=78			⇑*i*S	Sg	21 45 06.6	-1.1
BTK	Batken baz=84	2.24	182	⇑*i*P	Pg	21 44 41.5	0.0
BTK	baz=84			⇑*i*S	Sg	21 45 10.3	-0.1
ARLS	Aral baz=98	2.58	99	⇑*i*P	Pb	21 44 45.1	-0.4
ARLS	baz=98			⇑*i*S	Sb	21 45 16.5	-1.0
AAK	Ala-Archa 1.2nm,0.6s	2.67	81	⇓Pg	Pg	21 44 49.6	-0.2
AAK	0.7nm,0.5s			⇓Lg	Lg	21 45 25.5	
AAK	Ala-Archa baz=81	2.67	81	⇓*i*P	Pb	21 44 46.8	-0.3
AAK	baz=81			⇓*i*S	Sb	21 45 19.2	-1.1
UCH	Uchtor baz=90	2.68	90	⇑*i*P	Pb	21 44 46.5	-0.8
UCH	baz=90			⇑*i*S	Sb	21 45 19.3	-1.3
USP	Ospenovka baz=68	2.81	69	⇑*e*P	Pb	21 44 49.2	-0.2
USP	baz=68			⇑*i*S	Sb	21 45 23.0	-1.2
SFK	Sufi-Kurgan 0.3nm,0.4s	3.01	138	⇓Pg	Pg	21 44 59.3	+3.1
SFK	0.6nm,0.3s			⇓Lg	Lg	21 45 34.5	
SFK	Sufi-Kurgan baz=39	3.01	138	⇑*i*P	Pb	21 44 51.2	-1.6
SFK	baz=39			⇑*i*S	Sn	21 45 26.8	+3.1
TKM2	Tokmak 2 0.6nm,0.6s	3.52	78	⇑Pg	Pg	21 45 05.0	-1.0
TKM2	0.4nm,0.3s			⇑Lg	Lg	21 45 49.5	

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*ISCJB **18** 21:44:54.5±0.6, 3°.87S±0°.05×136°.24E±0°.06, h10^{km}, mb3.8/5, Error ellipse: s-maj=8.6km s-min=6.4km az=163.6*

*IDC **18** 21:44:55.5±1.1, 3°.84S×136°.49E, h0^{km}, mb3.9/5, mb1 4.2/10, mb1mx4.0/25, mbtmp4.1/10, ML4.2/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/24, Error ellipse: s-maj=33.1km s-min=21.4km az=78.0*

*DJA **18** 21:44:57.2±1.0, 4°S±4°×13°6E±°, h14^{km}±7^{km}, M4.5/5, mb4.7/5, mB5.1/2, MLv4.3/5, Mw(mB)4.4/2*

ISC 18 21:44:56.9±0.8**, 3°.81S**±0°.07×**136°.33E**±0°.09**, h10**^{km}**, n18, σ1^{s}.89**/20**, mb4.0**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.93	357	P	Pn	21 45 29.1	-0.7
SRPI				S	Sn	21 45 52.7	-1.4
BAKI	Biak	2.61	355	P	Pn	21 45 38.7	-0.5
RKPI	Ransiki, Papua	3.14	317	P	Pn	21 45 43.6	-2.9
GENI	Genyem	4.01	73	P	Pn	21 45 58.3	-0.2
FAKI	Fak Fak	4.17	282	P	Pn	21 46 00.9	+0.2
SIJI	Sorong 11nm,0.3s,baz=125,slow=8.7,SNR=26	5.84	300	Pn	Pn	21 46 23.4	-0.3
SIJI	2.6nm,0.3s,baz=233,slow=20,SNR=3.8			Sn	Sn	21 47 28.6	-2.2
SWI	Sorong 66nm,0.7s	5.85	300	P	Pn	21 46 23.0	-0.8
SANI	Sanana	10.48	279	P	Pn	21 47 25.2	-2.1
BATI	Baumata 1.5nm,0.3s,baz=129,slow=6.5,SNR=2.4	14.09	243	Pn	Pn	21 48 18.6	+1.9
WRA	Warramunga Arr 0.3nm,0.3s,baz=1.4,slow=13,SNR=17	16.16	187	Pn	Pn	21 48 40.4	-3.9
WRA	0.3nm,0.3s,baz=3.1,slow=22,SNR=5.8			Sn	Sn	21 51 31.7	-12
WRA	0.2nm,0.3s,baz=11,slow=34,SNR=4.3			Lg	Lg	21 53 21.0	
FITZ	Fitzroy Crossi 0.5nm,0.3s,baz=35,slow=13,SNR=10	17.65	216	P	Pn	21 49 01.9	-1.1
FITZ	0.6nm,0.3s,baz=172,slow=14,SNR=5.3			S	Sn	21 52 07.0	-13
CTA	Charters Tower 0.2nm,0.3s,baz=312,slow=15,SNR=4.1	18.85	150	P	P	21 49 17.6	+0.2
CTA	0.1nm,0.3s,baz=232,slow=19,SNR=2.0			Lg	Lg	21 54 52.7	
ASAR	Alice Springs 1.4nm,0.3s,baz=11,slow=11,SNR=41	19.88	187	P	P	21 49 28.7	+0.1
ASAR	0.1nm,0.3s,baz=7.5,slow=29,SNR=3.6			S	S	21 53 01.7	-11
ASAR	0.1nm,0.3s,baz=20,slow=30,SNR=4.5			Lg	Lg	21 55 18.5	
ASAR	comp=Z,69nm,20.3s,baz=9.5,slow=42			LR	LR	21 58 40.8	
CMAR	Chiang Mai Arr 0.9nm,0.3s,baz=132,slow=6.3,SNR=6.2	42.97	302	P	P	21 52 58.7	+2.1
SONM	Songino Array 0.4nm,0.9s,baz=152,slow=7.5,SNR=3.2	57.73	337	P	P	21 54 50.4	+2.2
MKAR	Makanchi Array 0.8nm,0.6s,baz=94,slow=9.1,SNR=11	69.23	324	P	P	21 56 04.0	-0.1
ZALV	Zalesovo Beam 0.8nm,0.6s,baz=120,slow=5.2,SNR=4.7	71.71	331	P	P	21 56 21.6	+2.5
ILAR	Eielson Array 1.1nm,0.9s,baz=267,slow=4.5,SNR=8.0	87.81	25	P	P	21 57 44.3	-1.9

IDC 18 21:55:16.6±2.1**, 5°.98S**×**130°.32E, h0**^{km}**, mb4.1**/1**, mb1 3.8**/4**, mb1mx3.5**/26**, mbtmp3.7**/4**, ML3.4**/3**, Error ellipse: s-maj=92.9km s-min=27.0km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=15,slow=11,SNR=13	12.88	200	Pn	Pn	21 58 20.9	-0.2
WRA	Warramunga Arr 0.1nm,0.3s,baz=348,slow=13,SNR=11	14.42	165	Pn	Pn	21 58 42.0	-0.2
WRA	0.8nm,0.3s,baz=332,slow=23,SNR=9.5			Sn	Sn	22 01 07.9	-15
ASAR	Alice Springs 0.2nm,0.3s,baz=349,slow=12,SNR=8.2	17.92	169	P	Pn	21 59 27.7	+0.2
ASAR	0.1nm,0.3s,baz=348,slow=25,SNR=3.7			S	Sn	22 02 34.0	-14
MKAR	Makanchi Array 1.0nm,0.5s,baz=126,slow=7.3,SNR=28	67.55	326	P	P	22 06 15.0	0.0

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*DDA **18** 21:55:25.9, 41°.15N×44°.06E, h7^{km}±2^{km}, ML2.6*

*NORS **18** 21:55:27.7±0.0, 41°.40N×44°.07E, h1^{km}, MPVA3.5*

ISC 18 21:55:25.9±1.1**, 41°.14N**±0°.03×**44°.05E**±0°.04**, h11**^{km}±12^{km}**, n14, σ0^{s}.62**/23**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRLG	Trialeti	0.40	6	P	Pg	21 55 34.0	0.0
TRLG				S	Sg	21 55 39.3	0.0
EAK	Akyaka	0.56	216	*i* P	Pb	21 55 38.3	+0.5
EAK	comp=Z,608nm,0.2s			IAML_P			
DIGO	Kars	0.89	215	*i* P	Pn	21 55 44.4	-0.1
DIGO				*i* S	Sn	21 55 56.9	-0.6
DIGO	comp=Z,1µm,0.1s			IAML_P			
EPOS	Posof	1.06	291	*i* P	Pg	21 55 46.2	0.0
EPOS				*i* S	Sn	21 56 01.6	+0.1
IGDI	IGDIR	1.27	179	*i* P	Pg	21 55 50.8	+0.5
IGDI	comp=Z,122nm,0.1s			IAML_P			
ARTV	Artvin	1.60	272	*i* P	Pg	21 55 56.6	0.0
ARTV	comp=Z,899nm,0.1s			IAML_P			
ZEI	Tsey	1.65	356	*e*Pg	Pb	21 55 56.8	+0.3
ZEI				*e*Sg	Sg	21 56 18.7	-0.3

LACR	Lac	1.70	6	ePg	Pb	21 55 57.7	+0.5
LACR				eSg	Sg	21 56 20.4	-0.1
DDEM	Demirkent	1.75	263	i P	Pg	21 55 59.2	-0.4
DBAD	Bademkaya	1.78	267	i P	Pg	21 55 59.8	-0.3
DBAD	 comp=Z,272nm,0.1s			IAML_P			
LGD	Lagodekhi	1.79	66	P	Pb	21 55 59.2	+0.5
LGD				S	Sg	21 56 23.4	-0.1
DIGR	Digorskoe uzhe	1.79	349	ePg	Pg	21 56 00.0	-0.3
DIGR				eSg	Sg	21 56 23.7	+0.1
BTLR	Botlikh	2.23	46	ePg	Pb	21 56 07.0	+0.9
BTLR				eSg	Sg	21 56 36.4	-1.1
AKT	Akhty	2.80	82	ePn	Pb	21 56 16.6	+0.7
AKT				eSn	Sg	21 56 54.0	-1.7

*ISCJB **18** 22:09:58.5±1.4, 11°.00S±0°.10×165°.8E±0°.2, h10km, mb3.6/3, Error ellipse: s-maj=28.1km s-min=13.3km az=167.4*

*IDC **18** 22:09:58.5±1.5, 10°.71S×165°.71E, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.7/32, mbtmp3.8/5, ML4.2/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/23, Error ellipse: s-maj=52.4km s-min=27.5km az=131.0*

ISC 18 22:10:00.1±1.3, 10°.9S±0°.1×165°.7E±0°.3, h10km, n7, σ1s84/6, mb3.6/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara comp=Z,329nm,18.5s,baz=95,slow=40	5.86	284	LR	LR	22 13 52.2	
DZM	Mont Dzumac 1.6nm,0.3s,baz=15,slow=19,SNR=15	11.16	177	Pn	Pn	22 12 42.0	+2.0
DZM	 0.6nm,0.3s,baz=300,slow=20,SNR=6.4			Sn	Sn	22 14 42.7	-2.2
CTA	Charters Tower 1.8nm,0.6s,baz=80,slow=11,SNR=3.2	20.86	242	P	Pn	22 14 44.8	-0.1
WRA	Warramunga Arr 0.7nm,0.8s,baz=82,slow=8.8,SNR=6.5	31.52	250	P	P	22 16 22.9	+0.2
ASAR	Alice Springs 0.5nm,0.6s,baz=66,slow=9.9,SNR=7.1	32.85	243	P	P	22 16 34.0	-0.3
ILAR	Eielson Array 0.5nm,0.7s,baz=234,slow=5.6,SNR=5.8	83.35	19	P	P	22 22 26.9	-0.2
ARCES	ARCESS Array B 4.6nm,1.1s,baz=26,slow=2.3,SNR=2.9	116.16	345	PKP	PKPdf	22 28 42.2	-1.0

*SOME **18** 22:18:35.5, 40°.17N×77°.68E, h10km*

*IDC **18** 22:18:36.7±5.6, 40°.27N×77°.65E, h0km, mb2.7/1, mb1 3.1/3, mb1mx3.0/30, mbtmp3.1/3, ML2.8/2, Error ellipse: s-maj=91.3km s-min=39.0km az=96.0*

*NNC **18** 22:18:36.4±1.0, 40°.20N×77°.66E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=7.6km s-min=4.7km az=141.0*

ISC 18 22:18:37.3±1.5, 40°.09N±0°.07×77°.80E±0°.05, h10km, n48, σ1s44/67, 12C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol SNR=58	2.45	332	P	Pn	22 19 18.5	+1.0
KZA	Kyzart SNR=56	2.76	317	P	Pn	22 19 23.5	+1.6
SATY	Saty 191nm,0.6s	3.00	9	eP	Pb	22 19 29.4	-1.4
SATY	 92nm,0.7s			eS	Sb	22 20 07.9	+0.3
TNSS	Tian-Shan 233nm,0.5s	3.01	348	eP	Pb	22 19 29.2	-1.9
TNSS	 124nm,0.6s			eS	Sb	22 20 07.9	-0.3
IZV	Izvestkoviy 86nm,0.5s	3.07	344	Pg	Pb	22 19 30.5	-1.6
IZV	 114nm,0.6s			Lg	Lg	22 20 09.9	
IZV	Izvestkoviy 86nm,0.5s	3.07	344	eP	Pb	22 19 30.4	-1.6
IZV	 114nm,0.6s			eS	Sb	22 20 09.9	+0.2
MDOK	Medeo 96nm,0.5s	3.12	350	⇑Pg	Pb	22 19 31.1	-1.7
MDOK	 154nm,0.7s			Lg	Lg	22 20 12.4	
MDOK	Medeo 117nm,0.5s	3.12	350	eP	Pb	22 19 31.2	-1.7
MDOK	 136nm,0.7s			eS	Sb	22 20 11.4	+0.4
KOTS	Kotyrbulak 81nm,0.6s	3.18	351	Pg	Pb	22 19 32.6	-1.4
KOTS	 432nm,0.6s			Lg	Lg	22 20 14.0	
KOTS	Kotyrbulak 81nm,0.6s	3.18	351	eP	Pb	22 19 32.6	-1.4
KOTS	 432nm,0.6s			eS	Sb	22 20 14.0	+1.2
AAA	Alma-Ata 228nm,0.4s	3.18	348	Pg	Pb	22 19 32.9	-1.0
AAA	 138nm,0.5s			Lg	Lg	22 20 14.4	
AAA	Alma-Ata 228nm,0.4s	3.18	348	eP	Pb	22 19 32.9	-1.0
AAA	 138nm,0.5s			eS	Sb	22 20 14.4	+1.7
KNDC	Almaty 84nm,0.5s	3.18	349	⇑Pg	Pb	22 19 32.8	-1.1
KNDC	 105nm,0.5s			⇑Lg	Lg	22 20 14.9	
UZB	Uzynbulak 46nm,0.6s	3.19	16	eP	Pb	22 19 32.6	-1.5
UZB	 37nm,0.6s			eS	Sb	22 20 13.5	+0.5
MTBS	Maitube 30nm,0.3s	3.20	342	eP	Pb	22 19 32.8	-1.5
MTBS	 63nm,0.5s			eS	Sb	22 20 14.2	+0.8
KST	Kastek 34nm,0.4s	3.25	336	Pg	Pb	22 19 33.2	-2.0
KST	 103nm,0.7s			Lg	Lg	22 20 14.6	
KST	Kastek 34nm,0.4s	3.25	336	eP	Pb	22 19 33.2	-2.0
KST	 103nm,0.7s			eS	Sb	22 20 14.6	-0.2
UCH	Uchtor SNR=17	3.27	312	P	Pn	22 19 30.3	+1.3
TKM2	Tokmak 2 SNR=28	3.27	330	P	Pn	22 19 29.6	+0.8
TKM2	Tokmak 2 14nm,0.7s	3.27	330	⇓Pg	Pb	22 19 33.2	-2.3
TKM2	 76nm,0.8s			⇑Lg	Lg	22 20 17.1	
SFK	Sufi-Kurgan 9.2nm,0.5s	3.29	270	⇑Pg	Pb	22 19 34.1	-1.9
SFK	 29nm,0.4s			⇑Lg	Lg	22 20 16.3	
SFK	Sufi-Kurgan 7.8nm,0.3s	3.29	270	Pg	Pb	22 19 33.9	-2.0
SFK	 26nm,0.4s			Lg	Lg	22 20 15.5	
KBK	Karagaybulak SNR=24	3.34	321	P	Pb	22 19 34.7	-1.9
PDGK	Podgornoye 25nm,0.5s	3.47	21	⇑Pn	Pn	22 19 32.8	+1.3
PDGK	 29nm,0.4s			⇑Pg	Pb	22 19 38.2	-0.7
PDGK	 67nm,0.9s			⇑Lg	Lg	22 20 22.4	
DGS	Degeres 27nm,0.5s	3.49	335	Pg	Pb	22 19 37.7	-1.6
DGS	 149nm,0.6s			Lg	Lg	22 20 22.7	
DGS	Degeres 27nm,0.5s	3.49	335	eP	Pb	22 19 37.6	-1.6
DGS	 149nm,0.6s			eS	Sb	22 20 22.6	+0.9
AAK	Ala-Archa SNR=5.1	3.55	317	P	Pn	22 19 34.3	+1.7
AAK	Ala-Archa 6.8nm,0.5s	3.55	317	⇑Pg	Pb	22 19 39.3	-1.0
AAK	 184nm,0.9s			⇓Lg	Lg	22 20 25.2	
CHMS	Chumysh SNR=7.7	3.69	323	P	Pb	22 19 41.5	-1.1
AML	Almayashu SNR=12	3.71	305	P	Pn	22 19 36.0	+1.0
KTBS	Karatobe 32nm,0.5s	3.71	347	Pg	Pb	22 19 41.9	-1.0
KTBS	 62nm,0.5s			Lg	Lg	22 20 29.3	
KTBS	Karatobe 32nm,0.5s	3.71	347	eP	Pb	22 19 41.9	-1.0
KTBS	 62nm,0.5s			eS	Sb	22 20 29.3	+1.4
CHKK	Chushkaly 22nm,0.4s	3.81	351	eP	Pb	22 19 42.9	-1.6
CHKK	 76nm,0.5s			eS	Sb	22 20 31.5	+0.8
KTMS	Ketmen 1.6nm,0.3s	3.86	29	Pg	Pb	22 19 44.7	-0.8
KTMS	 42nm,0.8s			Lg	Lg	22 20 33.9	
KTMS	Ketmen 1.6nm,0.3s	3.86	29	eP	Pb	22 19 44.7	-0.8
KTMS	 42nm,0.8s			eS	Sb	22 20 33.9	+1.6
KUU	Kurty 21nm,0.6s	3.95	345	eP	Pb	22 19 45.3	-1.6
KUU	 65nm,0.7s			eS	Sb	22 20 35.3	+0.5
MNBS	Baschi 33nm,0.6s	4.01	6	Pg	Pb	22 19 46.6	-1.4
MNBS	 33nm,0.6s			Lg	Lg	22 20 38.1	
MNBS	Baschi 33nm,0.6s	4.01	6	eP	Pb	22 19 46.6	-1.4
MNBS	 33nm,0.6s			eS	Sb	22 20 38.1	+1.6
USP	Ospenovka SNR=60	4.02	323	P	Pb	22 19 46.6	-1.5
ARXS	Arharly 28nm,0.5s	4.12	0	Pg	Pb	22 19 49.7	-0.1
ARXS	 47nm,0.5s			Lg	Lg	22 20 43.6	
ARXS	Arharly 28nm,0.5s	4.12	0	eP	Pb	22 19 49.7	-0.1
ARXS	 47nm,0.5s			eS	Sb	22 20 43.6	+3.9
MRKS	Merke 6.2nm,0.4s	4.34	309	eP	Pb	22 19 51.8	-1.8
MRKS	 17nm,0.8s			eS	Sb	22 20 46.9	+0.9
MNAS	Manas 7.2nm,0.7s	4.65	303	⇑Pg	Pb	22 20 00.8	+1.8
MNAS	 21nm,1.0s			⇓Lg	Lg	22 20 59.0	
KK31	Karatay Array 0.9nm,0.4s,baz=140,slow=14,SNR=4.2	6.23	301	⇓Pg	Pb	22 20 26.3	+0.4
KK31	 7.0nm,0.8s,baz=114,slow=26,SNR=7.3			⇓Lg	Lg	22 21 47.0	
MK31	Makanchi Array 1.0nm,0.6s,baz=189,slow=14,SNR=17	7.45	25	⇑Pn	Pn	22 20 25.9	-0.1
MKAR	Makanchi Array 0.2nm,0.3s,baz=207,slow=14,SNR=19	7.45	25	Pn	Pn	22 20 26.1	0.0
MKAR	 0.2nm,0.3s,baz=207,slow=24,SNR=8.2			Sn	Sn	22 21 48.5	-2.1
MKAR	 0.3nm,0.3s,baz=199,slow=26,SNR=3.4			Lg	Lg	22 22 30.8	
ZALV	Zalesovo Beam 0.1nm,0.3s,baz=198,slow=14,SNR=4.2	14.65	17	Pn	Pn	22 22 02.8	-1.7
SONM	Songino Array 0.2nm,0.6s,baz=253,slow=9.7,SNR=2.8	21.90	60	P	P	22 23 31.8	+1.3

*IDC **18** 22:20:19.2±4.2, 35°.93N×68°.49E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.2/30, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=83.1km s-min=27.6km az=172.0*

*ISCJB **18** 22:20:21.6±2.6, 36°.1N±0°.3×68°.47E±0°.09, h30km, mb3.3/2, Error ellipse: s-maj=39.8km s-min=8.0km az=169.3*

ISC 18 22:20:23.4±3.0, 36°.0N±0°.4×68°.53E±0°.10, h30km, n13, σ1s14/14, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu SNR=7.9	7.37	31	P	Pn	22 22 09.2	-0.1
UCH	Uchtor SNR=14	7.81	35	P	Pn	22 22 15.5	+0.1
EKS2	Erkin-Say SNR=15	7.84	30	P	Pn	22 22 16.3	+0.8
KZA	Kyzart SNR=7.5	8.05	38	P	Pn	22 22 20.2	+1.5
AAK	Ala-Archa SNR=6.8	8.12	33	P	Pn	22 22 19.8	+0.4
KBK	Karagaybulak SNR=11	8.34	35	P	Pn	22 22 23.7	+1.2
CHMS	Chumysh SNR=8.0	8.53	32	P	Pn	22 22 24.9	0.0
GEYT	Alibeck 0.4nm,0.3s,baz=107,slow=12,SNR=2.8	8.57	286	Pn	Pn	22 22 24.7	-0.7
GEYT	 0.3nm,0.3s,baz=110,slow=16,SNR=3.3			Sn	Sn	22 24 02.1	+1.0
USP	Ospenovka SNR=9.4	8.64	30	P	Pn	22 22 25.7	-0.7
ULHL	Ulahol SNR=5.0	8.69	41	P	Pn	22 22 27.4	+0.2
MKAR	Makanchi Array baz=234,slow=12,SNR=3.3	14.95	39	Pn	Pn	22 23 50.0	-2.5
ZALV	Zalesovo Beam 1.5nm,0.5s,baz=223,slow=9.7,SNR=7.3	21.28	27	P	P	22 25 06.6	-0.7
SONM	Songino Array 0.2nm,0.5s,baz=267,slow=8.5,SNR=3.2	30.29	55	P	P	22 26 33.1	+1.1

*ISCJB **18** 22:27:47.8±0.6, 16°.71S±0°.07×69°.83W±0°.06, h150km, mb3.7/6, Error ellipse: s-maj=10.9km s-min=6.9km az=31.3*

*IDC **18** 22:27:51.9±1.3, 16°.72S×69°.77W, h171km±9km, mb3.5/7, mb1 3.8/10, mb1mx3.6/24, mbtmp4.2/10, Error ellipse: s-maj=24.3km s-min=15.6km az=16.0*

ISC 18 22:27:49.8±0.7, 16°.74S±0°.09×69°.87W±0°.07, h150km, n12, σ2s01/16, mb3.9/7, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz 7.6nm,0.3s,baz=222,slow=15,SNR=99	1.73	75	P	Pn	22 28 26.2	+3.7
LPAZ	 16nm,0.3s,baz=26,slow=8.2,SNR=18			S	Sn	22 28 50.6	+3.1
LVC	Limon Verde 40nm,0.3s,baz=8.6,slow=8.6,SNR=380	5.91	171	P	Pn	22 29 17.7	+2.0
LVC	 7.4nm,0.3s,baz=128,slow=19,SNR=12			S	Sn	22 30 21.0	-1.8
NNA	Nana 5.0nm,0.3s,baz=151,slow=13,SNR=6.7	8.24	304	P	Pn	22 29 47.7	+1.1
NNA	 4.5nm,0.3s,baz=224,slow=18,SNR=5.8			S	Sn	22 31 15.9	-2.4
SIV	San Ignacio 0.9nm,0.3s,baz=289,slow=10,SNR=17	8.48	86	P	Pn	22 29 48.9	-0.8
SIV	 0.1nm,0.3s,baz=191,slow=11,SNR=4.4			S	Sn	22 31 21.2	-2.9
BDFB	Brasilia 1.4nm,0.3s,baz=284,slow=14,SNR=3.9	21.02	90	P	P	22 32 21.4	-0.6
TXAR	Lajitas Array 0.4nm,0.5s,baz=154,slow=9.9,SNR=5.1	56.24	324	P	P	22 37 14.8	+0.1
DBIC	Dimbokro 2.6nm,0.7s,baz=258,slow=9.3,SNR=4.9	68.35	76	P	P	22 38 34.4	-1.2
PDAR	Pinedale Array 0.4nm,0.4s,baz=126,slow=8.7,SNR=6.6	69.56	330	P	P	22 38 43.1	+0.4
ULM	Lac du Bonnet 1.0nm,0.3s,baz=165,slow=6.0,SNR=3.6	70.53	343	P	P	22 38 47.1	-1.0
TORD	Torodi Ar. Bea 0.9nm,0.6s,baz=256,slow=5.2,SNR=8.1	76.68	72	P	P	22 39 23.4	-1.4
YKA	Yellowknife Ar 0.9nm,0.5s,baz=133,slow=5.1,SNR=24	86.42	341	P	P	22 40 15.0	+0.1
SONM	Songino Array 0.7nm,0.7s,baz=313,slow=2.4,SNR=6.6	148.84	5	PKPbc	PKPbc	22 47 20.5	+0.6

*IDC **18** 22:33:27.9±11.0, 36°.09N×70°.27E, h149km±104km, mb3.0/5, mb1 3.2/6, mb1mx2.9/37, mbtmp3.5/6, Error ellipse: s-maj=50.9km s-min=24.8km az=25.0*

*ISCJB **18** 22:33:33.4±0.6, 36°.50N±0°.04×70°.43E±0°.08, h204km, mb3.0/4, Error ellipse: s-maj=9.3km s-min=4.1km az=159.6*

*NNC **18** 22:33:35.0±6.0, 37°.06N×69°.94E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=58.2km s-min=37.1km az=152.0*

ISC 18 22:33:33.3±0.8, 36°.46N±0°.06×70°.49E±0°.08, h204km, n35, σ2s52/42, mb3.1/4, 6C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 1.6nm,0.3s	4.26	33	⇑P	Pn	22 34 39.7	+1.1
SFK	 17nm,0.4s			⇑S	S	22 35 29.4	-0.3
AML	Almayashu SNR=61	6.18	23	P	Pn	22 35 03.7	+0.5
MNAS	Manas 3.6nm,0.4s	6.21	14	⇑P	Pn	22 35 03.6	+0.2
MNAS	 19nm,0.4s			⇓S	S	22 36 11.8	-2.8
DHRM	DHARAMSHALA	6.38	130	eP	Pn	22 35 07.4	+1.7
DHRM				eS	S	22 36 18.8	+0.1
DHRM	 comp=E,94nm,0.4s			IAML		22 36 20.2	
DHRM	 comp=N,98nm,0.2s			IAML		22 36 21.1	
UCH	Uchtor SNR=18	6.55	27	P	Pn	22 35 08.9	+0.9
KK31	Karatay Array comp=N,1.7nm,0.3s,baz=194,slow=15,SNR=44	6.63	0	⇑P	Pn	22 35 08.4	-0.3
KK31	 comp=N,2.8nm,0.3s,baz=207,slow=28,SNR=7.2			⇑S	S	22 36 19.4	-4.8
EKS2	Erkin-Say SNR=26	6.69	21	P	Pn	22 35 10.3	+0.8
KZA	Kyzart SNR=7.9	6.71	32	P	Pn	22 35 10.8	+0.7
AAK	Ala-Archa SNR=12	6.90	25	P	Pn	22 35 13.3	+1.1
AAK	Ala-Archa comp=N,2.7nm,0.4s	6.90	25	P	Pn	22 35 13.0	+0.7
AAK	 comp=N,18nm,0.7s			⇑S	S	22 36 28.9	-1.8
KBK	Karagaybulak SNR=8.2	7.08	28	P	Pn	22 35 15.9	+1.3
USP	Ospenovka SNR=8.5	7.46	23	P	Pn	22 35 20.2	+0.8
TKM2	Tokmak 2 SNR=5.6	7.55	30	P	Pn	22 35 22.2	+1.4
TKM2	Tokmak 2 comp=N,7.3nm,0.5s	7.55	30	⇓P	Pn	22 35 21.6	+0.8
TKM2	 comp=N,4.2nm,0.7s			⇓S	S	22 36 40.9	-5.5
SMLA	Simla	7.69	132	eP	Pn	22 35 23.7	+1.3
SMLA				eS	S	22 36 47.6	-1.7
SMLA	 comp=E,22nm,1.1s			IAML		22 36 51.4	
KKR	Kurukshetra	8.37	139	ex	S	22 36 56.2	-9.5
BHGR	Bahadurgarh	9.47	143	eS	S	22 37 26.0	-5.8
JOSI	Joshimath	9.59	125	eP	Pn	22 35 49.9	+2.5
JOSI				eS	S	22 37 32.3	-2.7
JOSI	 comp=N,98nm,1.0s			IAML		22 37 36.6	
KUDL	Kundal	9.72	147	eP	Pn	22 35 48.5	-0.3
KUDL				eS	S	22 37 31.3	-6.5
KUDL	 comp=N,290nm,1.4s			IAML		22 37 37.6	
KALG	Kalgarh	9.81	133	eS	S	22 37 36.0	-3.9
PYUN	Piuthan comp=N,3.3nm,0.3s	13.45	125	eP	P	22 36 39.5	+0.5
MKAR	Makanchi Array comp=N,0.2nm,0.3s,baz=216,slow=12,SNR=10	13.56	37	P	P	22 36 39.3	-0.5
DANN	Dangsing	13.81	122	eP	P	22 36 43.1	0.0
KOLN	Koldanda	14.08	124	eP	P	22 36 47.6	+1.7
AB31	Akbulak array comp=N,0.6nm,0.3s,baz=148,slow=12,SNR=36	14.92	332	P	Pn	22 36 53.1	-1.0
DMN	Daman comp=N,2.2nm,0.3s	15.20	121	eP	P	22 37 02.0	+3.6
PKIN	Phulchoki	15.42	121	eP	P	22 37 04.8	+3.9
PKI	Pulchoki	15.43	121	eP	P	22 37 04.5	+3.4
JIRN	Jiri comp=N,8.9nm,0.4s	15.93	119	eP	Pn	22 37 10.1	+3.2
AKTO	Aktyubinsk comp=N,3.4nm,0.8s	16.61	331	⇓P	Pn	22 37 14.7	+0.2
ZALV	Zalesovo Beam comp=N,0.9nm,0.5s,baz=214,slow=11,SNR=5.1	20.12	25	P	Pn	22 37 54.4	-1.6
ARCES	ARCESS Array B comp=N,2.6nm,0.9s,baz=119,slow=9.4,SNR=2.6	41.02	338	P	P	22 40 58.3	+2.2
NOA	NORSAR Array B comp=N,0.1nm,0.3s,baz=110,slow=8.1,SNR=2.2	44.16	323	P	P	22 41 22.7	+1.2
TORD	Torodi Ar. Bea comp=N,0.2nm,0.5s,baz=56,slow=6.0,SNR=3.7	65.31	268	P	P	22 43 53.1	-0.7
WRA	Warramunga Arr comp=N,0.2nm,0.6s,baz=324,slow=5.1,SNR=4.4	82.32	122	P	P	22 45 32.9	+0.6

*IDC **18** 22:46:06.4±1.5, 10°.34S×160°.53E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/38, mbtmp3.8/7, Error ellipse: s-maj=36.5km s-min=24.9km az=121.0*

*ISCJB **18** 22:46:11.7±1.0, 10°.24S±0°.08×160°.4E±0°.1, h42km, mb3.6/7, Error ellipse: s-maj=20.7km s-min=11.5km az=171.4*

ISC 18 22:46:13.4±1.2, 10°.2S±0°.1×160°.4E±0°.2, h42km, n10, σ0s94/12, mb3.7/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.87	330	i P	Pn	22 46 30.0	+0.9
HNR				i S	Sn	22 46 40.0	-0.6
HNR	Honiara 151nm,0.3s,baz=169,slow=3.9,SNR=38	0.87	330	Pn	Pn	22 46 28.1	-1.0
HNR	 846nm,0.3s,baz=150,slow=20,SNR=50			Sn	Sn	22 46 40.4	-0.2
HNR	 comp=Z,445nm,18.5s,baz=127,slow=51			LR	LR	22 47 01.2	
CTA	Charters Tower 0.4nm,0.3s,baz=57,slow=13,SNR=8.5	16.80	233	Pn	P	22 50 08.1	+0.6
WRA	Warramunga Arr 1.1nm,0.7s,baz=74,slow=9.5,SNR=10	26.92	246	P	P	22 51 50.1	-0.8
ASAR	Alice Springs 0.3nm,0.6s,baz=61,slow=10,SNR=5.2	28.59	239	P	P	22 52 04.5	-1.3
CMAR	Chiang Mai Arr 0.2nm,0.4s,baz=137,slow=6.8,SNR=3.1	66.96	295	P	P	22 57 03.3	+1.0
SONM	Songino Array 1.1nm,0.6s,baz=140,slow=5.6,SNR=10	74.92	326	P	P	22 57 51.3	+1.2
ILAR	Eielson Array 0.4nm,0.6s,baz=243,slow=4.9,SNR=7.9	84.45	20	P	P	22 58 40.6	-0.6
MKAR	Makanchi Array 0.4nm,0.6s,baz=103,slow=5.8,SNR=5.8	89.32	318	P	P	22 59 05.3	-0.1
YKA	Yellowknife Ar 0.3nm,0.8s,baz=258,slow=4.7,SNR=3.6	96.66	28	P	P	22 59 38.6	-0.2

IDC 18 23:14:02.3±2.0, 7°.81S×122°.47E, h0km, mb3.5/1, mb1 3.5/3, mb1mx3.3/24, mbtmp3.3/3, ML2.7/2, MS2.7/1, Ms1 2.9/1, ms1mx2.4/25, Error ellipse: s-maj=292.2km s-min=28.9km az=56.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.0nm,0.3s,baz=310,slow=14,SNR=3.1	16.66	138	Pn	Pn	23 17 55.9	-1.6
ASAR	Alice Springs 0.1nm,0.3s,baz=328,slow=12,SNR=5.5	19.21	146	P	Pn	23 18 29.0	+0.1
CMAR	Chiang Mai Arr comp=Z,12nm,20.9s,baz=0.0,slow=37	34.93	319	LR	LR	23 35 45.9	
MKAR	Makanchi Array 0.6nm,1.0s,baz=133,slow=6.3,SNR=3.1	65.04	331	P	P	23 24 44.4	0.0

IDC 18 23:16:53.0±7.3, 49°.70N×113°.59W, h0km, mb2.7/1, mb1 3.6/2, mb1mx3.1/30, mbtmp3.2/2, ML3.6/1, Error ellipse: s-maj=110.1km s-min=51.1km az=119.0, Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I10CA	LAC DU BONNET baz=272,slow=329,SNR=0.7	11.33	81	i		00 33 50.0	
YKA	Yellowknife Ar 0.4nm,0.3s,baz=180,slow=13,SNR=22	12.84	358	Pn	Pn	23 19 52.4	-4.1
YKA	 0.0nm,0.3s,baz=175,slow=28,SNR=5.7			Lg	Lg	23 23 28.2	
ILAR	Eielson Array 0.3nm,0.8s,baz=95,slow=10.0,SNR=3.8	23.11	323	P	P	23 22 00.0	-0.1

IDC 18 23:25:55.8±2.1, 7°.84S×122°.47E, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.2/45, mbtmp3.3/3, ML2.9/2, MS3.0/1, Ms1 3.0/1, ms1mx2.7/10, Error ellipse: s-maj=279.3km s-min=30.2km az=56.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.0nm,0.3s,baz=311,slow=14,SNR=3.2	16.64	137	Pn	Pn	23 29 49.5	-1.2
ASAR	Alice Springs 0.1nm,0.3s,baz=325,slow=13,SNR=6.6	19.18	146	P	Pn	23 30 21.9	-0.1
MJAR	Matsushiro Arr comp=Z,15nm,18.2s,baz=115,slow=43	46.56	18	LR	LR	23 59 18.4	
MKAR	Makanchi Array	65.06	331	P	P	23 36 38.0	-0.1

0.3nm,0.9s,baz=128,slow=6.2,SNR=4.1

IDC 18 23:32:27.2±11.0, 20.°90S×178.°60W, h475km±116km, mb2.8/4, mb1 3.1/4, mb1mx2.9/24, mbtmp3.7/4, Error ellipse: s-maj=56.3km s-min=30.5km az=61.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.88	257	P	P	23 39 51.0	+0.2
	0.5nm,0.4s,baz=96,slow=8.5,SNR=5.6						
WRA	Warramunga Arr	43.99	263	P	P	23 39 51.4	-0.3
	0.3nm,0.8s,baz=96,slow=7.6,SNR=12						
QSPA	South Pole Qui	69.17	180	P	P	23 42 45.1	0.0
	1.4nm,1.0s,baz=27,slow=2.3,SNR=4.0						
ILAR	Eielson Array	88.83	13	P	P	23 44 29.7	+0.3
	0.3nm,0.5s,baz=214,slow=6.2,SNR=5.2						
BVAR	Borovoye Array	119.02	320	PKP	PKPdf	23 50 19.8	-1.3
	0.2nm,0.3s,baz=104,slow=3.2,SNR=3.1						
ARCES	ARCESS Array B	129.21	349	PKP	PKPdf	23 50 39.6	-0.6
	4.5nm,1.0s,baz=0.0,slow=3.6,SNR=4.2						
HFS	Hagfors	139.84	350	PKhKP	PKPpre	23 50 53.3	
	0.8nm,0.7s,baz=8.5,slow=2.9,SNR=5.0						
MMAI	Mount Meron Ar	147.52	299	PKPbc	PKPbc	23 51 17.9	0.0
	0.5nm,0.4s,baz=95,slow=6.1,SNR=3.7						

DRS ***18*** *23:40:41.8±0.0, 43.°11N×48.°90E, h20km*
NORS ***18*** *23:40:43.7±0.0, 42.°86N×48.°39E, h12km, MPVA3.6*
MOS ***18*** *23:40:44.4±0.9, 42.°86N×48.°37E, h12km, mb4.0/1, Error ellipse: s-maj=9.1km s-min=6.2km az=151.5*
MOS ***18*** *23:40:44.2±0.0, 42.°87N×48.°46E, h18km, MPVA3.6*
ISC 18 23:40:44.5±1.5, 42.°93N±0.°04×48.°52E±0.°05, h12km±10km, n49, σ1ˢ01/80, 9C-4D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAK	Makhachkala	0.75	273	*e*PG	Pn	23 40 59.8	-1.0
MAK				*e*		23 41 10.6	
MAK				pmax	pmax		
	comp=Z,53nm,0.3s						
MAK				smax	smax		
	comp=E,77nm,0.3s						
MAK				smax	smax		
	comp=E,97nm,0.4s						
MAK	Makhachkala	0.75	273	*e*Pg	Pg	23 40 59.4	+0.4
MAK				*e*Sg	Sn	23 41 11.4	-0.6
DRN	Derbent	0.91	189	*e*PG	Pg	23 41 01.8	-0.2
DRN				*e*S	Sn	23 41 15.1	-0.9
DRN				pmax	pmax		
	comp=Z,48nm,0.4s						
DRN	Derbent	0.91	189	*e*Pg	Pg	23 41 01.7	-0.4
DRN				*e*Sg	Sg	23 41 14.7	+0.8
URKR	Urkarakh	1.00	221	⇑*e*PG	Pb	23 41 03.2	-0.7
URKR				*e*		23 41 17.3	
URKR	Urkarakh	1.00	221	*e*Pg	Pb	23 41 03.3	-0.6
URKR				*e*Sg	Sb	23 41 18.1	+1.0
BUJR	Buynaksk	1.04	265	PG	Pn	23 41 04.0	-0.9
BUJR				*e*S	Sb	23 41 19.0	+0.9
BUJR	Buynaksk	1.04	265	*e*Pg	Pn	23 41 04.0	-0.9
BUJR				*e*Sg	Sb	23 41 19.0	+0.9
ARKR	Arakani	1.17	254	PG	Pn	23 41 06.0	-0.7
ARKR				*e*S	Sb	23 41 22.5	+0.7
ARKR	Arakani	1.17	254	*e*Pg	Pn	23 41 06.0	-0.7
ARKR				*e*Sg	Sb	23 41 22.5	+0.7
KRNR	Karanay	1.19	266	*e*PG	Pb	23 41 06.5	-0.5
KRNR				*i* S	Sb	23 41 23.0	+0.6
KRNR	Karanay	1.19	266	*e*Pg	Pb	23 41 06.5	-0.5
KRNR				*i* Sg	Sb	23 41 23.0	+0.6
DBC	Dubki	1.24	275	⇑*e*PG	Pn	23 41 06.5	-1.2
DBC				*e*		23 41 23.7	
DBC	Dubki	1.24	275	*e*Pg	Pn	23 41 06.5	-1.2
DBC				*e*Sg	Sn	23 41 23.2	-1.3
GNBR	Gunib	1.27	245	⇑*e*PG	Pn	23 41 07.5	-0.6
GNBR				*e*		23 41 24.8	
GNBR				pmax	pmax		
	comp=Z,14nm,0.7s						
GNBR				smax	smax		
	comp=N,45nm,0.5s						
GNBR	Gunib	1.27	245	*e*Pg	Pn	23 41 07.3	-0.7
GNBR				*e*Sg	Sn	23 41 23.6	-1.4
UNCR	Uncukul	1.29	261	*e*PG	Pn	23 41 07.0	-1.3
UNCR				*e*S	Sn	23 41 24.0	-1.5
UNCR	Uncukul	1.29	261	*e*Pg	Pn	23 41 07.0	-1.3
UNCR				*e*Sg	Sn	23 41 24.0	-1.5
KMKR	Kumukh	1.32	233	*e*PG	Pb	23 41 09.0	-0.3
KMKR				*e*S	Sb	23 41 27.0	+0.8
KMKR	Kumukh	1.32	233	*e*Pg	Pb	23 41 09.0	-0.3
KMKR				*e*Sg	Sb	23 41 27.0	+0.8
KSMR	Kasumkent	1.35	193	*e*PG	Pb	23 41 09.0	-0.8
KSMR				*e*S	Sb	23 41 27.5	+0.4
KSMR	Kasumkent	1.35	193	*e*Pg	Pb	23 41 09.0	-0.8
KSMR				*e*Sg	Sb	23 41 27.5	+0.4
XNZR	Khunzakh	1.39	255	*e*PG	Pn	23 41 09.6	-0.2
XNZR				*e*S	Sn	23 41 28.6	+0.3
XNZR	Khunzakh	1.39	255	*e*Pg	Pn	23 41 09.7	-0.2
XNZR				*e*Pg	Pn	23 41 09.7	-0.2
XNZR				*e*Sg	Sn	23 41 28.5	+0.3
XNZR				*e*Sg	Sn	23 41 28.6	+0.3
AKT	Akhty	1.56	202	⇑*e*PG	Pb	23 41 12.5	-0.9
AKT				*e*		23 41 33.1	
AKT				pmax	pmax		
	comp=Z,25nm,0.2s						
AKT				smax	smax		
	comp=N,92nm,0.5s						
AKT	Akhty	1.56	202	*e*Pg	Pb	23 41 12.3	-1.0
AKT				*e*Sg	Sb	23 41 33.0	-0.1
BTLR	Botlikh	1.71	262	⇑*e*PN	Pb	23 41 14.8	-1.1
BTLR				*e*		23 41 38.5	
BTLR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BTLR				smax	smax		
	comp=N,35nm,15.7s						
BTLR	Botlikh	1.71	262	*e*Pg	Pb	23 41 14.7	-1.1
BTLR				*e*Sg	Sn	23 41 36.8	+0.9
DVE	Vedeno	1.76	272	*ce*PN	Pb	23 41 15.1	-1.6
DVE	Vedeno	1.76	272	*e*Pg	Pb	23 41 15.2	-1.5
DVE				*e*Sg	Sb	23 41 39.6	+0.8
LGD	Lagodekhi	2.01	238	P	Pb	23 41 20.0	-1.0
LGD				S	Sb	23 41 46.8	+0.9
LGD	Lagodekhi	2.01	238	*e*PN	Pb	23 41 20.0	-1.0
LGD				*e*S	Sb	23 41 46.8	+0.9
LGD	Lagodekhi	2.01	238	*e*Pg	Pb	23 41 20.0	-1.0
LGD				*e*Sg	Sb	23 41 46.8	+0.9
GROC	Groznyy	2.02	279	*e*PN	Pb	23 41 20.1	-0.9
GROC				*e*S	Sb	23 41 47.1	+1.1
GROC				pmax	pmax		
	comp=Z,4.0nm,0.2s						
GROC				smax	smax		
	comp=E,13nm,2.8s						
GROC				smax	smax		
	comp=E,23nm,1.3s						
GROC	Groznyy	2.02	279	*e*Pg	Pb	23 41 20.2	-0.8
GROC				*e*Sg	Sb	23 41 46.9	+0.9
VLKR	Vladikavkaz	2.82	274	⇓*e*PN	Pn	23 41 29.8	+0.4
VLKR	Vladikavkaz	2.82	274	*e*Pn	Pn	23 41 29.8	+0.4
LACR	Lac	3.11	270	⇑*e*PN	Pn	23 41 35.4	+2.0
LACR	Lac	3.11	270	*e*Pn	Pn	23 41 34.9	+1.5
LACR				*e*Sn	Sn	23 42 12.3	+1.9
NEY	Neytrino	4.26	276	⇓*e*PN	Pn	23 41 49.4	+0.1
NEY	Neytrino	4.26	276	*e*Pn	Pn	23 41 49.4	+0.1
SHA1	Shidzhatmaz	4.35	283	⇑*e*PN	Pn	23 41 49.9	-0.7
SHA1	Shidzhatmaz	4.35	283	*e*Pn	Pn	23 41 49.8	-0.8
ANN	Anapa	8.23	287	*e*P	Pn	23 42 41.8	-1.8
ANN				*e*S	Sn	23 44 14.6	-1.8
ANN				pmax	pmax		
	comp=Z,22nm,1.0s						
OBN	Obninsk	14.47	332	*e*P	Pn	23 44 08.2	-0.7
OBN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRVK	Borovoye	17.68	47	⇑*e*P	P	23 44 54.0	+2.8
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KLNR	Kaliningrad	21.85	312	⇓*e*P	P	23 45 37.0	+0.4
KURK	Kurchatov	21.91	59	⇓*e*P	P	23 45 38.3	+1.0
KURK				pmax	pmax		
	comp=Z,5.0nm,1.9s						
FFC	Flin Flon	79.52	343	*i* P	P	23 52 53.9	+3.2

IDC ***18*** *23:53:03.9±1.5, 3.°11S×122.°84E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/44, mbtmp3.6/4, Error ellipse: s-maj=181.1km s-min=21.9km az=57.0*
ISCJB ***18*** *23:53:04.5±0.7, 3.°68S±0.°07×122.°26E±0.°05, h10km, mb3.7/3, Error ellipse: s-maj=10.9km s-min=6.0km az=20.0*
DJA ***18*** *23:53:06.2±0.5, 4°S±8°×12°2E±1°1, h24km±15km, M3.6/6, MLv3.6/6*
ISC 18 23:53:05.3±0.9, 3.°73S±0.°07×122.°29E±0.°06, h10km, n11, σ1ˢ52/12, mb3.6/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDI	Kendari	0.40	124	P	Pb	23 53 13.7	-0.8
KDI				S	Sb	23 53 20.0	-0.7
BBSI	Bau Bau	1.77	171	P	Pg	23 53 47.1	+7.9
BNSI	Bone	2.27	253	P	Pn	23 53 41.7	-1.2
BNSI				S	Sn	23 54 10.6	-0.4
SPSI	Sidrap Palu	2.52	265	P	Pn	23 53 45.9	-0.4
TTSI	Tana Toraja	2.56	285	P	Pn	23 53 48.8	+2.0
BKSI	Bulukumba	2.67	234	P	Pn	23 53 48.9	+0.5
LUWI	Luwuk	2.72	10	P	Pn	23 53 49.2	+0.2
WRA	Warramunga Arr	19.94	145	P	Pn	23 57 39.6	+0.3
	1.8nm,1.1s,baz=322,slow=11,SNR=15						
ASAR	Alice Springs	22.77	152	P	P	23 58 11.5	+3.4
	1.6nm,0.8s,baz=334,slow=12,SNR=10						
CMAR	Chiang Mai Arr	31.86	315	P	P	23 59 30.6	-0.2
	0.9nm,0.3s,baz=140,slow=7.1,SNR=4.4						
MKAR	Makanchi Array	61.43	330	P	P	00 03 20.4	-1.5
	0.3nm,0.9s,baz=134,slow=6.2,SNR=3.6						

IDC 18 23:54:53.7±5.4, 26.°00S×70.°61E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/57, mbtmp3.5/3, MS3.4/1, Ms1 3.4/1, ms1mx2.8/27, Error ellipse: s-maj=146.4km s-min=43.2km az=56.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.34	6	T	T	00 18 27.5	
	baz=184						
H08S2	Diego Garcia H	18.34	6	T	T	00 18 23.4	
	baz=184						
H08S3	Diego Garcia H	18.36	6	T	T	00 18 25.3	
	baz=184						
CMAR	Chiang Mai Arr	52.07	35	P	P	00 04 05.4	-0.2
	0.4nm,0.4s,baz=225,slow=6.2,SNR=3.4						
ASAR	Alice Springs	56.98	102	P	P	00 04 41.5	0.0
	0.4nm,0.8s,baz=242,slow=7.2,SNR=3.6						
WRA	Warramunga Arr	58.49	98	LR	LR	00 26 38.8	
	comp=Z,36nm,21.0s,baz=330,slow=33						
MKAR	Makanchi Array	73.22	8	P	P	00 06 26.4	+0.1
	0.2nm,0.6s,baz=195,slow=6.0,SNR=3.0						

IDC 19 00:00:15.9±17.0, 26.°03S×71.°78E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/50, mbtmp3.7/4, MS3.4/2, Ms1 3.5/2, ms1mx2.9/42, Error ellipse: s-maj=588.8km s-min=35.0km az=48.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.29	2	T	T	00 23 50.4	
	baz=183						
H08S2	Diego Garcia H	18.29	2	T	T	00 23 50.8	
	baz=183						
H08S3	Diego Garcia H	18.31	2	T	T	00 23 51.9	
	baz=183						
H01W2	Cape Leeuwin H	37.34	114	T	T	00 47 10.1	
	baz=271						
H01W3	Cape Leeuwin H	37.34	114	T	T	00 47 11.1	
	baz=271						
H01W1	Cape Leeuwin H	37.36	114	T	T	00 47 14.2	
	baz=271						
CMAR	Chiang Mai Arr	51.50	34	LR	LR	00 29 00.7	
	comp=Z,27nm,18.1s,baz=175,slow=34						
ASAR	Alice Springs	55.95	102	P	P	00 09 56.4	0.0
	0.6nm,0.8s,baz=258,slow=7.0,SNR=5.5						
WRA	Warramunga Arr	57.45	98	P	P	00 10 06.8	-0.2
	0.8nm,0.9s,baz=252,slow=6.7,SNR=5.6						
MKAR	Makanchi Array	73.10	8	P	P	00 11 47.8	-0.1
	0.4nm,0.6s,baz=193,slow=4.4,SNR=5.1						
MKAR				LR	LR	00 41 54.3	
	comp=Z,32nm,19.7s,baz=98,slow=34						
ZALV	Zalesovo Beam	80.44	8	P	P	00 12 29.2	+0.1
	0.3nm,0.4s,baz=193,slow=5.9,SNR=3.4						

IDC ***19*** *00:10:32.4±2.0, 50.°67N×174.°90W, h0km, mb3.3/5, mb1 3.7/7, mb1mx3.5/60, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=61.0km s-min=21.7km az=180.0*
ISCJB ***19*** *00:10:33.9±0.9, 50.°55N±0.°07×174.°99W±0.°08, h21km, mb3.5/4, Error ellipse: s-maj=10.4km s-min=7.1km az=15.2*
NEIC ***19*** *00:10:37.3±0.0, 50.°68N×175.°13W, h29km, ML2.9(AEIC), After AEIC.*
ISC 19 00:10:35.9±1.1, 50.°69N±0.°09×174.°99W±0.°06, h21km, n22, σ0ˢ68/20, mb3.5/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	Igitkin Island	1.43	336	P	Pn	00 11 00.9	+0.4
GSMY	Great Sitkin M	1.51	334	P	Pb	00 11 02.4	-0.7
GSTD	Great Sitkin T	1.55	333	P	Pb	00 11 03.0	-0.8
GSTD				S	Sb	00 11 22.9	-0.1
ADK	Adak	1.60	319	*e*Pn	Pn	00 11 02.6	-0.3
ADK				*e*S	Sn	00 11 22.2	-0.7
KOFP	Korovin Flat P	1.68	19	P	Pb	00 11 05.6	-0.5
KOFP				S	Sb	00 11 27.7	+0.8
KOWE	Korovin West	1.74	15	P	Pb	00 11 06.6	-0.5
KIWB	Kanaga Island	1.79	312	P	Pn	00 11 06.0	+0.5
TASE	Tanaga Southea	2.23	302	P	Pn	00 11 12.4	+0.8
TAFP	Tanaga Falls P	2.23	304	P	Pn	00 11 12.2	+0.6
TAFP				S	Sn	00 11 39.2	+0.6
KDAK	Kodiak Island	14.85	53	Pn	Pn	00 14 04.8	+0.4
	0.3nm,0.3s,baz=231,slow=6.5,SNR=4.1						
PETK	Petropavlovsk-	16.99	289	Pn	P	00 14 33.9	+0.1
	0.2nm,0.3s,baz=101,slow=15,SNR=5.6						
ILAR	Eielson Array	20.34	36	P	P	00 15 11.0	+0.6
	0.3nm,0.4s,baz=232,slow=8.9,SNR=11						
H11N2	WAKE ISLAND Hy	34.06	212	T	T	00 53 02.3	
	baz=20						
H11N3	WAKE ISLAND Hy	34.07	211	T	T	00 53 04.0	
	baz=20						
H11N1	WAKE ISLAND Hy	34.08	212	T	T	00 53 05.7	
	baz=20						
H11S1	WAKE ISLAND Hy	35.26	211	T	T	00 54 36.8	
	baz=19						
H11S2	WAKE ISLAND Hy	35.28	211	T	T	00 54 42.9	
	baz=19						
H11S3	WAKE ISLAND Hy	35.28	211	T	T	00 54 40.0	
	baz=19						
PDAR	Pinedale Array	44.21	74	P	P	00 18 43.3	-0.2
	0.4nm,0.7s,baz=311,slow=3.3,SNR=4.6						
SONM	Songino Array	49.09	299	P	P	00 19 22.6	+1.1
	0.3nm,0.7s,baz=48,slow=6.4,SNR=3.2						
TXAR	Lajitas Array	56.36	83	P	P	00 20 14.7	-0.8
	0.4nm,0.7s,baz=285,slow=4.9,SNR=3.7						
MKAR	Makanchi Array	62.33	311	P	P	00 20 55.4	-0.9
	0.4nm,0.6s,baz=46,slow=4.9,SNR=7.0						

ISCJB ***19*** *00:12:49.9±0.3, 0.°56N±0.°03×126.°43E±0.°03, h47km, mb4.3/21, Error ellipse: s-maj=4.8km s-min=4.4km az=44.9*
DJA ***19*** *00:12:50.0±0.3, 0°N±3°×12°6E±°, h10km, M4.5/7, mb4.5/7, mB4.8/2, MLv4.4/7, Mw(mB)4.0/2*
IDC ***19*** *00:12:52.5±4.3, 0.°45N×126.°36E, h58km±40km, mb4.0/12, mb1 4.1/14, mb1mx3.8/45, mbtmp4.3/14, ML3.6/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/35, Error ellipse: s-maj=28.4km s-min=14.9km az=85.0*
NEIC ***19*** *00:12:52.8±0.8, 0.°54N×126.°50E, h60km±8km, mb4.2/10, Error ellipse: s-maj=9.2km s-min=6.4km az=65.0*
ISC 19 00:12:51.7±0.5, 0.°54N±0.°05×126.°45E±0.°05, h47km, n52, σ1ˢ14/61, mb4.3/21, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.94	76	*e*Pn	Pn	00 13 08.1	-0.5
TNTI				*e*Sn	Sn	00 13 20.6	-0.4
TNTI	Ternate	0.94	76	P	Pn	00 13 08.1	-0.5
TNTI				S	Sn	00 13 21.8	+0.8
KMSI	Cibinong	2.47	271	P	Pn	00 13 29.8	+0.3
SANI	Sanana	2.61	190	P	Pn	00 13 30.6	-0.9
SANI				S	Sn	00 14 01.7	-0.3
NLAI	Namlea	3.81	170	P	Pn	00 13 49.1	+1.2
NLAI				S	Sn	00 14 31.3	-0.1
LUWI	Luwuk	4.00	247	*e*Pn	Pn	00 13 53.0	+2.5
LUWI	Luwuk	4.00	247	P	Pn	00 13 55.6	+5.1
MRSI	Marisa	4.51	269	P	Pn	00 14 01.3	+3.8
SIJI	Sorong	5.01	106	P	Pn	00 14 07.1	+2.7
	2.3nm,0.3s,baz=214,slow=22,SNR=9.4						
SIJI				S	Sn	00 15 03.1	+2.0
	0.8nm,0.3s,baz=139,slow=20,SNR=2.0						
SIJI				LR	LR	00 16 30.1	
	comp=Z,280nm,19.5s,baz=261,slow=43						
APSI	Ampana	5.02	253	P	Pn	00 14 05.3	+0.9
	67nm,0.6s,984nm						
MPSI	Mapaga	6.56	268	P	Pn	00 14 25.6	0.0
	7.8nm,0.7s						
FAKI	Fak Fak	6.74	121	*e*Pn	Pn	00 14 28.9	+0.8
FAKI				*e*Sn	Sn	00 15 42.9	-0.6
TTSI	Tana Toraja	7.53	242	P	Pn	00 14 39.2	+0.3
	43nm,0.9s						
BNSI	Bone	8.02	232	P	Pn	00 14 46.9	+1.2
	34nm,0.8s						
SPSI	Sidrap Palu	8.04	236	P	Pn	00 14 46.9	+0.9
	32nm,0.6s						
BKSI	Bulukumba	8.60	227	P	Pn	00 14 55.9	+2.3
KSM	Kuching	16.17	273	*e*Pn	P	00 16 38.3	-0.1
	21nm,0.8s						
FITZ	Fitzroy Crossi	18.54	182	P	P	00 17 03.7	-0.8
	0.2nm,0.3s,baz=29,slow=5.9,SNR=2.8						
WRAB	Tennant Creek	21.77	160	*e*P	P	00 17 39.8	+0.2
	7.8nm,0.6s						
WR1	Warramunga Arr	21.77	160	*e*P	P	00 17 39.1	-0.6
	7.4nm,0.6s						
WRA	Warramunga Arr	21.77	160	P	P	00 17 39.1	-0.6
	8.7nm,0.5s,baz=339,slow=11,SNR=105						
WB2	Warramunga Arr	21.78	160	*e*P	P	00 17 38.9	-0.8
COEN	Coen	21.95	132	*e*P	P	00 17 42.6	+1.0
	5.1nm,0.7s						
AS31	Alice Springs	25.13	164	*e*P	P	00 18 14.1	+1.6
	3.7nm,0.4s						
ASAR	Alice Springs	25.13	164	P	P	00 18 12.2	-0.3
	5.7nm,0.6s,baz=344,slow=10,SNR=48						
AS01	Alice Springs	25.14	164	*e*P	P	00 18 13.2	+0.6
STKA	Stephens Creek	35.29	157	P	P	00 19 41.6	-0.6
	5.3nm,0.8s,baz=354,slow=5.8,SNR=6.8						
USRK	Ussuriysk Ar.	43.75	6	P	P	00 20 53.8	+1.3
	2.4nm,0.6s,baz=177,slow=7.7,SNR=6.4						
SONA0	Songino Array	50.23	343	*e*P	P	00 21 43.5	+0.3
SONA0				*e*PcP	PcP	00 23 01.1	-0.6
SONM	Songino Array	50.23	343	P	P	00 21 43.5	+0.3
	0.6nm,0.4s,baz=157,slow=8.0,SNR=9.4						
SONM				PcP	PcP	00 23 01.1	-0.6
	0.8nm,1.0s,baz=178,slow=3.8,SNR=2.8						
PETK	Petropavlovsk-	58.47	22	P	P	00 22 44.1	+1.3
	2.3nm,0.5s,baz=190,slow=4.9,SNR=6.2						
PEA1	Petropavlovsk-	58.48	22	*e*P	P	00 22 44.1	+1.3
MK01	Makanchi Array	60.00	326	*e*P	P	00 22 52.8	-0.8
MK31	Makanchi Array	60.02	326	*e*P	P	00 22 53.3	-0.4
	1.6nm,0.6s						
MK32	Makanchi Array	60.02	326	*e*P	P	00 22 53.2	-0.5
MK32				*e*PcP	PcP	00 23 39.3	0.0
MKAR	Makanchi Array	60.02	326	P	P	00 22 53.2	-0.5
	2.1nm,0.4s,baz=122,slow=7.4,SNR=103						
MKAR				PcP	PcP	00 23 39.3	0.0
	1.1nm,0.7s,baz=113,slow=4.9,SNR=3.7						
MAKZ	Makanchi	60.20	326	*e*P	P	00 22 54.5	-0.5
	2.7nm,1.0s						
MA2	Magadan	61.85	14	P	P	00 23 05.6	-0.2
	2.9nm,0.4s,baz=208,slow=7.5,SNR=4.7						
ZALV	Zalesovo Beam	63.30	334	P	P	00 23 14.2	-1.4
	1.0nm,0.5s,baz=136,slow=5.7,SNR=6.1						
ZAA1	Zalesovo Array	63.30	334	*e*P	P	00 23 14.2	-1.5
KURK	Kurchatov	64.28	328	*e*P	P	00 23 21.6	-0.5
SEY	Seymchan	65.18	13	P	P	00 23 28.5	+0.8
	1.5nm,0.5s,baz=155,slow=3.8,SNR=4.1						
BRVK	Borovoye	69.91	328	*e*P	P	00 23 58.3	+0.5
	3.7nm,1.0s						
NRIK	Noril'sk	73.44	347	P	P	00 24 18.9	+0.2
	3.9nm,0.5s,baz=118,slow=5.7,SNR=12						
ABKAR	Akbulak array	74.44	321	*e*P	P	00 24 23.9	-1.1
	2.2nm,1.1s						
RAYN	Ar Rayn	81.48	294	*e*P	P	00 25 04.4	-0.3
	2.1nm,0.8s						
ILAR	Eielson Array	88.08	25	P	P	00 25 35.8	-1.1
	0.4nm,0.6s,baz=248,slow=4.7,SNR=9.5						
ILB	Eielson Array	88.08	25	*e*P	P	00 25 35.8	-1.1
YKA	Yellowknife Ar	102.50	25	P	Pdif	00 26 43.1	+0.4
	0.1nm,0.3s,baz=296,slow=4.4,SNR=3.8						
TORD	Torodi Ar. Bea	123.59	286	PKP	PKPdf	00 31 43.2	-1.9
	0.5nm,0.7s,baz=101,slow=2.4,SNR=4.8						
TOA1	Torodi Ar. Sit	123.59	286	*e*PKPdf	PKPdf	00 31 43.2	-1.9
TXAR	Lajitas Array	123.73	54	PKP	PKiKP	00 31 45.8	+0.4
	0.3nm,0.7s,baz=248,slow=0.7,SNR=3.5						

DJA 19 00:17:04.5±0.3, 0°S±2°×10°0E±°, h10km, M3.9/9, MLv3.9/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPI	Padang Panjang	0.09	182	P	Pg	00 17 06.8	-0.1
PPI				S	Sg	00 17 09.5	+0.8
PDSI	Padang	0.54	173	P	Pg	00 17 15.1	0.0
PDSI				S	Sb	00 17 23.3	-0.7
BKNI	Bangkinang	0.94	43	P	Pg	00 17 21.0	-1.7
MNSI	Mandailing Nat	1.42	325	P	Pn	00 17 28.5	-1.9
MNSI				S	Sb	00 17 49.6	+0.4
SISI	Saibi	1.62	234	P	Pn	00 17 32.3	-0.8
SISI				S	Sb	00 17 55.2	+0.2
RGRI	Rengat	1.93	89	P	Pb	00 17 40.2	+0.3
KRJI	Kerinci	2.01	148	P	Pg	00 17 42.3	-0.8
PBSI	Pulau Batu	2.14	278	P	Pn	00 17 41.0	+0.7
PPSI	Pulau Pagai	2.41	189	P	Pn	00 17 45.0	+1.0
GSI	Gunungsitoli	3.28	300	P	Pn	00 17 57.2	+1.2
MASI	Maura Aman, Be	3.31	146	P	Pg	00 18 06.4	-1.6
DSRI	Dabo	4.18	92	P	Pn	00 18 09.9	+1.5

ISCJB ***19*** *00:17:58.3±0.3, 7.°58S±0.°03×128.°34E±0.°04, h151km, mb4.0/20, Error ellipse: s-maj=5.2km s-min=4.1km az=173.3*
IDC ***19*** *00:17:59.9±1.5, 7.°53S×128.°27E, h151km±14km, mb3.7/11, mb1 3.8/14, mb1mx3.7/32, mbtmp4.2/14, Error ellipse: s-maj=14.8km s-min=10.8km az=93.0*
DJA ***19*** *00:17:59.9±0.5, 8°S±4°×12°8E±°, h182km±19km, M4.4/8, mb4.2/6, mB4.9/4, MLv4.6/8, Mw(mB)4.2/4*
NEIC ***19*** *00:17:59.5±0.7, 7.°57S×128.°38E, h149km±7km, mb4.2/12, Error ellipse: s-maj=8.8km s-min=6.8km az=67.0*
ISC 19 00:17:59.2±0.4, 7.°64S±0.°05×128.°39E±0.°05, h151km, n60, σ1ˢ70/70, mb4.1/27, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.91	97	*e*Pn	Pn	00 18 45.8	+0.4
SAUI				*e*Sn	Sn	00 19 18.2	-3.0
SAUI	Saumlaki	2.91	97	P	Pn	00 18 48.6	+3.2
NLAI	Namlea	4.56	344	P	Pn	00 19 08.3	+1.5
SOEI	Soe	4.58	242	*e*Pn	Pn	00 19 08.7	+1.4
SOEI				*e*Sn	Sn	00 19 58.9	-1.4
SOEI	Soe	4.58	242	P	Pn	00 19 08.4	+1.1
BATI	Baumata	5.32	241	P	Pn	00 19 17.9	+1.0
	115nm,0.6s,1µm0.5nm						
BATI	Baumata	5.32	241	P	Pn	00 19 18.2	+1.3
	60nm,0.3s,baz=261,slow=0.3,SNR=31						
BATI				S	Sn	00 20 16.3	-1.3
	34nm,0.3s,baz=78,slow=23,SNR=12						
MTN	Manton Dam	5.83	153	*e*Pn	Pn	00 19 25.6	+1.9
MTN				*e*Sn	Sn	00 20 30.0	+0.1
SANI	Sanana	6.05	337	P	Pn	00 19 26.7	+0.1
	49nm,0.9s,1µm0.2nm						
FAKI	Fak Fak	6.07	40	*e*Pn	Pn	00 19 26.3	-0.6
FAKI				*e*Sn	Sn	00 20 30.6	-4.9
FAKI	Fak Fak	6.07	40	P	Pn	00 19 27.1	+0.2
	25nm,0.5s,0.2nm						
EDFI	Ende, Flores	6.72	260	P	Pn	00 19 36.9	+1.2
	14nm,0.7s,0.9nm						
SIJI	Sorong	7.31	23	P	Pn	00 19 44.3	+0.8
	7.3nm,0.3s,baz=277,slow=24,SNR=23						
SIJI				S	Sn	00 21 03.3	-2.1
	3.0nm,0.3s,baz=253,slow=24,SNR=7.8						
PLAI	Plampang	10.57	263	P	Pn	00 20 25.4	-1.4
FITZ	Fitzroy Crossi	10.73	194	P	Pn	00 20 27.6	-1.3
	6.1nm,0.3s,baz=17,slow=11,SNR=103						
FITZ				S	Sn	00 22 21.1	-6.6

	3.5nm,0.3s,baz=40,slow=6.9,SNR=6.4						
WRAB	Tennant Creek	13.52	155	*e*Pn	Pn	00 21 04.8	-0.2
WRA	Warramunga Arr	13.52	155	P	Pn	00 21 04.7	-0.5
	6.4nm,0.3s,baz=330,slow=12,SNR=69						
WRA				S	Sn	00 23 29.6	-5.3
	3.9nm,0.3s,baz=331,slow=22,SNR=5.1						
WB2	Warramunga Arr	13.53	155	*e*Pn	Pn	00 21 04.9	-0.3
COEN	Coen	15.82	115	*e*Pn	Pn	00 21 35.5	+1.7
	9.2nm,0.9s						
MBWA	Marble Bar	15.83	211	*e*Pn	P	00 21 35.5	+0.9
	7.6nm,0.4s						
AS31	Alice Springs	16.79	162	*e*P	Pn	00 21 47.4	+1.8
	7.2nm,0.5s						
ASAR	Alice Springs	16.79	162	P	P	00 21 47.0	+1.7
	2.9nm,0.3s,baz=336,slow=10.0,SNR=58						
ASAR				S	S	00 24 50.5	-1.8
	1.1nm,0.3s,baz=346,slow=25,SNR=4.1						
AS01	Alice Springs	16.80	162	*e*P	Pn	00 21 48.1	+2.4
CTA	Charters Tower	21.28	127	P	P	00 22 36.3	+2.4
	1.2nm,0.5s,baz=301,slow=12,SNR=2.8						
STKA	Stephens Creek	27.07	155	P	P	00 23 30.7	+2.9
	3.5nm,0.5s,baz=329,slow=7.3,SNR=11						
STKA				PcP	PcP	00 26 44.2	-0.8
	1.6nm,0.5s,baz=332,slow=5.2,SNR=2.6						
CMAR	Chiang Mai Arr	38.94	312	P	P	00 25 10.2	-0.6
	0.8nm,0.3s,baz=143,slow=6.7,SNR=4.4						
KSRS	Korea Array	44.86	359	P	P	00 25 58.7	+0.3
	1.2nm,0.5s,baz=177,slow=9.7,SNR=3.4						
XAN	Xi'an	45.38	337	*e*P	P	00 26 02.3	-0.3
	4.3nm,0.7s						
USRK	Ussuriysk Ar.	51.70	3	P	P	00 26 50.4	-0.3
	1.4nm,0.4s,baz=188,slow=7.5,SNR=5.1						
GUN	Gumba	54.19	312	*e*P	P	00 27 09.9	+0.2
	16nm,0.7s						
PKI	Pulchoki	54.34	312	*e*P	P	00 27 10.9	+0.1
	4.1nm,0.5s						
PKIN	Phulchoki	54.35	312	*e*P	P	00 27 10.7	-0.2
	3.2nm,0.5s						
KKN	Kakani	54.56	312	*e*P	P	00 27 12.4	+0.1
	4.2nm,0.5s						
DMN	Daman	54.59	312	*e*P	P	00 27 12.4	-0.1
	5.1nm,0.5s						
KOLN	Koldanda	55.79	311	*e*P	P	00 27 21.3	+0.2
	7.0nm,0.5s						
PYUN	Piuthan	56.43	311	*e*P	P	00 27 25.9	+0.3
	10nm,0.7s						
ULN	Ulaanbaatar	58.40	343	*e*P	P	00 27 40.4	+1.5
	5.5nm,1.1s						
SONM	Songino Array	58.56	343	P	P	00 27 40.3	+0.2
	1.6nm,0.9s,baz=165,slow=7.4,SNR=10						
SONA1	Songino Array	58.57	343	*e*P	P	00 27 41.1	+1.0
PETK	Petropavlovsk-	65.44	19	P	P	00 28 26.7	+1.0
	2.5nm,0.8s,baz=188,slow=7.3,SNR=3.8						
MK01	Makanchi Array	67.88	328	*e*P	P	00 28 41.7	+0.4
MK31	Makanchi Array	67.90	328	*e*P	P	00 28 41.4	-0.1
	1.5nm,0.9s						
MKAR	Makanchi Array	67.90	328	P	P	00 28 42.1	+0.6
	1.3nm,0.5s,baz=119,slow=8.3,SNR=35						
MAKZ	Makanchi	68.07	328	*e*P	P	00 28 43.0	+0.5
	1.6nm,0.9s						
ZAA0	Zalesovo Array	71.46	335	*e*P	P	00 29 02.9	-0.2
	3.8nm,1.0s						
ZALV	Zalesovo Beam	71.46	335	P	P	00 29 02.8	-0.3
	2.0nm,0.5s,baz=125,slow=4.1,SNR=12						
KURK	Kurchatov	72.24	329	*e*P	P	00 29 08.7	+1.0
	6.9nm,0.8s						
BRVK	Borovoye	77.83	328	*e*P	P	00 29 40.7	+0.9
	3.7nm,0.9s						
NRIK	Noril'sk	81.80	346	P	P	00 30 00.8	0.0
	1.5nm,0.5s,baz=157,slow=8.7,SNR=4.8						
ABKAR	Akbulak array	82.02	322	*e*P	P	00 30 02.9	+0.4
	3.0nm,1.1s						
ARU	Arti	85.41	328	*e*P	P	00 30 19.2	-0.3
	3.6nm,0.6s						
ILAR	Eielson Array	94.61	25	P	P	00 31 01.9	-0.6
	0.3nm,0.7s,baz=276,slow=4.7,SNR=3.8						
YKA	Yellowknife Ar	109.03	26	PKiKP	PKiKP	00 36 09.0	-1.5
	0.2nm,0.5s,baz=313,slow=1.7,SNR=4.3						
GERES	GERESS Array B	111.88	320	PKiKP	PKiKP	00 36 15.7	-0.8
	0.2nm,0.4s,baz=27,slow=3.6,SNR=4.3						
PDAR	Pinedale Array	118.47	45	PKP	PKPdf	00 36 29.4	-0.2
	0.3nm,0.5s,baz=22,slow=1.6,SNR=3.7						
TXAR	Lajitas Array	126.63	59	PKP	PKPdf	00 36 43.9	-1.5
	0.2nm,0.6s,baz=298,slow=1.9,SNR=3.8						
TORD	Torodi Ar. Bea	127.36	281	PKP	PKPdf	00 36 46.7	-0.3
	0.6nm,0.6s,baz=66,slow=1.9,SNR=7.4						
CPUP	Villa Florida	145.78	171	PKPbc	PKPab	00 37 23.3	+1.5
	1.5nm,0.4s,baz=229,slow=2.2,SNR=3.6						
LPAZ	La Paz	151.15	146	PKPbc	PKiKP	00 37 38.6	+1.7
	2.7nm,0.4s,baz=25,slow=3.6,SNR=11						
SIV	San Ignacio	154.72	158	PKPab	PKPab	00 37 59.5	+0.7
	0.9nm,0.6s,baz=211,slow=8.7,SNR=4.2						

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*IDC **19** 00:21:16.0±1.6, 11°.01S×164°.81E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.9/30, mbtmp3.9/7, ML3.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/24, Error ellipse: s-maj=49.2km s-min=26.7km az=123.0*

*ISCJB **19** 00:21:18.7±1.1, 11°.2S±0°.1×164°.8E±0°.2, h31^{km}, mb3.9/5, Error ellipse: s-maj=25.3km s-min=17.8km az=4.4*

ISC 19 00:21:20.6±1.2**, 11°.1S**±0°.1×**164°.8E**±0°.2**, h31^{km}, n11, σ0^{s}.39**/7**, mb4.0**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.06	289	LR	LR	00 24 27.9	
	comp=Z,173nm,22.0s,baz=75,slow=38						
DZM	Mont Dzumac	10.99	172	Pn	Pn	00 23 56.0	+0.1
	0.4nm,0.3s,baz=53,slow=5.9,SNR=3.4						
CTA	Charters Tower	19.93	241	P	Pn	00 25 51.6	-0.3
	5.6nm,0.8s,baz=60,slow=13,SNR=7.4						
H11S2	WAKE ISLAND Hy	29.50	4	T	T	00 58 20.9	
	baz=184,slow=76,SNR=6.4						
H11S3	WAKE ISLAND Hy	29.50	4	T	T	00 58 20.2	
	baz=184,slow=76,SNR=6.9						
H11S1	WAKE ISLAND Hy	29.51	4	T	T	00 58 18.0	
	baz=184,slow=76,SNR=8.5						
WRA	Warramunga Arr	30.57	250	P	P	00 27 31.8	0.0
	2.2nm,0.8s,baz=76,slow=9.3,SNR=4.1						
ASAR	Alice Springs	31.92	243	P	P	00 27 43.6	-0.1
	2.2nm,0.8s,baz=77,slow=13,SNR=3.3						
SONM	Songino Array	78.18	324	P	P	00 33 17.2	0.0
	0.6nm,0.9s,baz=139,slow=5.2,SNR=3.5						
ILAR	Eielson Array	83.89	19	P	P	00 33 46.6	-0.4
	0.7nm,0.9s,baz=229,slow=4.8,SNR=5.6						
MKAR	Makanchi Array	92.94	317	P	P	00 34 31.4	+0.6
	0.5nm,0.8s,baz=101,slow=6.3,SNR=5.4						

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*IDC **19** 00:35:59.8±0.6, 42°.46N×79°.61E, h0^{km}, mb3.9/19, mb1 4.1/27, mb1mx4.0/52, mbtmp4.0/27, ML3.9/8, MS3.4/8, Ms1 3.4/8, ms1mx3.0/44, Error ellipse: s-maj=10.7km s-min=7.9km az=168.0*

*BJI **19** 00:36:00.0, 42°.59N×79°.55E, h7^{km}, mB4.4/2, mb4.3/11, ML4.2/10, Ms3.7/3*

*SOME **19** 00:36:01.7, 42°.53N×79°.65E, h15^{km}, MS3.3*

*KRNET **19** 00:36:01.3±0.1, 42°.55N×79°.67E, h7^{km}, mb4.9*

*MOS **19** 00:36:01.4±1.3, 42°.60N×79°.72E, h16^{km}, mb4.2/6, Error ellipse: s-maj=5.7km s-min=5.0km az=133.0*

*NNC **19** 00:36:02.2±0.7, 42°.60N×79°.60E, h0^{km}, mb5.0, mpv4.8, Error ellipse: s-maj=4.6km s-min=2.5km az=133.0*

*NEIC **19** 00:36:06.4±0.5, 42°.60N×79°.58E, h47^{km}±6^{km}, mb4.0/3, Error ellipse: s-maj=7.1km s-min=4.6km az=149.0*

ISC 19 00:36:01.3±1.1**, 42°.53N**±0°.03×**79°.66E**±0°.02**, h9**^{km}±7^{km}**, n233,** σ**1^{s}.81**/310**, mb4.0**/25**, 72C-20D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.77	323	P	Pg	00 36 15.9	-0.3
	906nm,0.2s						
UZB				S	Sg	00 36 25.8	-0.5
	9µm,0.3s						
UZB	Uzynbulak	0.77	323	*e*P	Pg	00 36 15.9	-0.3
	baz=22						
UZB				*e*S	Sg	00 36 25.9	-0.5
	baz=22						
UZB	Uzynbulak	0.77	323	*e*P	Pg	00 36 15.9	-0.3
	195nm,0.2s						
UZB				*e*S	Sg	00 36 25.8	-0.5
	9µm,0.3s						
PDGK	Podgornoye	0.81	351	P	Pg	00 36 16.6	-0.4
	378nm,0.2s						
PDGK				S	Sg	00 36 26.8	-0.6
	2µm,0.3s						
PDGK	Podgornoye	0.81	351	⇑P	Pg	00 36 16.5	-0.4
	173nm,0.3s						
PDGK				⇑S	Sg	00 36 26.9	-0.6
	2µm,0.7s						
PDGK	Podgornoye	0.81	351	PG	Pg	00 36 16.5	-0.4
PDGK				S	Sg	00 36 26.8	-0.6
PDGK				pmax	pmax		
	comp=Z,173nm,0.3s						
PDGK				smax	smax		
	comp=N,2µm,0.7s						
PDGK	Podgornoye	0.81	351	⇑*i*P	Pg	00 36 16.5	-0.4
	baz=50						
PDGK				⇑*i*S	Sg	00 36 26.7	-0.6
	baz=50						
PRZ	Przheval'sk	0.93	267	*e*Pn	Pg	00 36 19.2	-0.1
PRZ				*e*Sn	Sg	00 36 31.0	-0.3
PRZ	Przheval'sk	0.93	267	*e*PG	Pg	00 36 19.2	-0.1
PRZ				*e*		00 36 31.0	
PRZ	Przheval'sk	0.93	267	⇑*i*P	Pg	00 36 19.1	-0.1
	baz=66						
PRZ				⇑*i*S	Sg	00 36 31.4	+0.1
	baz=66						
KTMS	Ketmen	1.05	29	P	Pg	00 36 21.0	-0.5
	comp=N,161nm,0.1s						
KTMS				S	Sg	00 36 34.6	-0.5
	comp=N,2µm,0.3s						
KTMS	Ketmen	1.05	29	*e*P	Pg	00 36 21.0	-0.5
	baz=28						
KTMS				*e*S	Sg	00 36 34.6	-0.5
	baz=28						
KTMS	Ketmen	1.05	29	*e*P	Pg	00 36 21.0	-0.5
	comp=N,161nm,0.1s						
KTMS				*e*S	Sg	00 36 34.6	-0.5
	comp=N,2µm,0.3s						
SATY	Saty	1.06	300	P	Pg	00 36 20.7	-1.0
	comp=N,655nm,0.1s						
SATY				S	Sg	00 36 34.6	-0.9
	comp=N,7µm,0.1s						
SATY	Saty	1.06	300	*e*P	Pg	00 36 20.7	-1.0
	comp=N,459nm,0.3s						
SATY				*e*S	Sg	00 36 34.5	-1.0
	comp=N,5µm,0.2s						
TARG	Taragay, Kyrgy	1.59	240	*e*Pn	Pn	00 36 29.6	-0.5
TARG				*e*Sn	Sn	00 36 45.8	-5.2
MNBS	Baschi	1.80	330	P	Pb	00 36 34.0	-0.6
	comp=N,175nm,0.2s						
MNBS				S	Sb	00 36 56.6	-0.6
	comp=N,2µm,0.3s						
MNBS	Baschi	1.80	330	*e*P	Pb	00 36 34.0	-0.6
	baz=29						
MNBS				*e*S	Sb	00 36 56.6	-0.6
	baz=29						
MNBS	Baschi	1.80	330	*e*P	Pb	00 36 34.0	-0.6
	comp=N,175nm,0.2s						
MNBS				*e*S	Sb	00 36 56.6	-0.6
	comp=N,2µm,0.3s						
DJR	Jarkent	1.80	3	P	Pb	00 36 34.5	-0.1
	comp=N,235nm,0.3s						
DJR				S	Sg	00 36 58.2	-1.1
	comp=N,938nm,0.2s						
DJR	Jarkent	1.80	3	*e*P	Pb	00 36 34.5	-0.1
	comp=N,235nm,0.3s						
DJR				*e*S	Sg	00 36 58.2	-1.1
	comp=N,938nm,0.2s						
KDJ	Kajisay	1.88	259	*e*Pn	Pg	00 36 36.8	-0.5
KDJ	Kajisay	1.88	259	*e*PN	Pg	00 36 36.8	-0.5
KDJ	Kajisay	1.88	259	⇑*i*P	Pb	00 36 36.6	+0.7
	baz=58						
KDJ				⇑*i*S	Sg	00 37 00.9	-0.8
	baz=58						
KOTS	Kotyrbulak	2.00	291	Pg	Pb	00 36 37.8	-0.1
	comp=N,1µm,0.3s						
KOTS				Lg	Lg	00 37 03.8	
	comp=N,8µm,0.4s						
KOTS	Kotyrbulak	2.00	291	*e*P	Pb	00 36 37.8	-0.1
	baz=91						
KOTS				*e*S	Sb	00 37 03.7	+0.8
	baz=91						
KOTS	Kotyrbulak	2.00	291	*e*P	Pb	00 36 37.8	-0.1
	comp=N,1µm,0.3s						
KOTS				*e*S	Sb	00 37 03.8	+0.8
	comp=N,8µm,0.4s						
MDOK	Medeo	2.02	289	Pn	Pb	00 36 37.5	-0.8
	comp=N,647nm,0.5s						
MDOK				Sn	Sb	00 37 02.5	-1.1
	comp=N,1µm,0.5s						
MDOK	Medeo	2.02	289	Pg	Pb	00 36 37.9	-0.4
	comp=N,1µm,0.2s						
MDOK				Lg	Lg	00 37 03.0	
	comp=N,2µm,0.4s						
MDOK	Medeo	2.02	289	*e*P	Pb	00 36 37.6	-0.7
	baz=88						
MDOK				*e*S	Sb	00 37 03.1	-0.5
	baz=88						
MDOK	Medeo	2.02	289	*e*P	Pb	00 36 37.5	-0.7
	comp=N,762nm,0.5s						
MDOK				*e*S	Sb	00 37 03.0	-0.5
	comp=N,1µm,0.4s						
TNSS	Tian-Shan	2.06	285	Pg	Pb	00 36 38.6	-0.5
	comp=N,1µm,0.4s						
TNSS				Lg	Lg	00 37 05.7	
	comp=N,2µm,0.4s						
TNSS	Tian-Shan	2.06	285	*e*P	Pb	00 36 38.4	-0.7
	baz=84						
TNSS				*e*S	Sb	00 37 04.5	-0.4
	baz=84						
TNSS	Tian-Shan	2.06	285	*e*P	Pb	00 36 38.4	-0.7
	comp=N,1µm,0.4s						
TNSS				*e*S	Sb	00 37 04.5	-0.4
	comp=N,1µm,0.4s						
KNDC	Almaty	2.09	290	⇑Pn	Pb	00 36 39.2	-0.3
	comp=N,2µm,0.6s						
KNDC				⇑Lg	Lg	00 37 07.7	
	comp=N,2µm,0.6s						
AAA	Alma-Ata	2.12	290	Pg	Pb	00 36 40.4	+0.3
	comp=N,3µm,0.2s						
AAA				Lg	Lg	00 37 08.5	
	comp=N,2µm,0.3s						
AAA	Alma-Ata	2.12	290	*e*PN	Pb	00 36 40.3	+0.3
AAA				*e*S	Sg	00 37 08.5	-1.1
AAA				pmax	pmax		
	comp=Z,3µm,0.2s						
AAA				smax	smax		
	comp=E,2µm,0.3s						
AAA	Alma-Ata	2.12	290	*e*P	Pb	00 36 40.0	-0.1
	baz=89						
AAA				*e*S	Sb	00 37 07.4	+0.8
	baz=89						
ARXS	Arharly	2.15	322	Pg	Pb	00 36 40.4	0.0
	comp=E,495nm,0.4s						
ARXS				Lg	Lg	00 37 07.6	
	comp=E,4µm,0.6s						
ARXS	Arharly	2.15	322	*e*P	Pb	00 36 40.4	0.0
	comp=E,495nm,0.4s						
ARXS				*e*S	Sb	00 37 07.6	+0.4
	comp=E,4µm,0.6s						
IZV	Izvestkoviy	2.29	284	Pg	Pb	00 36 43.2	+0.2
	comp=E,508nm,0.2s						
IZV				Lg	Lg	00 37 12.6	
	comp=E,2µm,0.4s						
IZV	Izvestkoviy	2.29	284	*e*P	Pb	00 36 43.2	+0.2
	baz=83						
IZV				*e*S	Sb	00 37 12.6	+1.0
	baz=83						
IZV	Izvestkoviy	2.29	284	*e*P	Pb	00 36 43.2	+0.2
	comp=E,508nm,0.2s						
IZV				*e*S	Sb	00 37 12.6	+1.0
	comp=E,2µm,0.4s						
CHKK	Chushkaly	2.36	305	Pg	Pb	00 36 43.6	-0.4
	comp=E,247nm,0.2s						
CHKK				Lg	Lg	00 37 14.8	
	comp=E,4µm,0.2s						
CHKK	Chushkaly	2.36	305	*e*P	Pb	00 36 43.8	-0.2
	baz=5.0						
CHKK				*e*S	Sb	00 37 14.0	+0.8
	baz=5.0						
CHKK	Chushkaly	2.36	305	*e*P	Pb	00 36 43.8	-0.2
	comp=E,142nm,0.4s						
CHKK				*e*S	Sb	00 37 14.0	+0.8
	comp=E,3µm,0.3s						
KTBS	Karatobe	2.48	299	Pg	Pb	00 36 46.0	0.0
	comp=E,430nm,0.3s						
KTBS				Lg	Lg	00 37 17.2	
	comp=E,7µm,0.6s						
KTBS	Karatobe	2.48	299	*e*P	Pb	00 36 46.0	0.0
	baz=98						
KTBS				*e*S	Sb	00 37 17.2	+0.6
	baz=98						
KTBS	Karatobe	2.48	299	*e*P	Pb	00 36 46.0	0.0
	comp=E,430nm,0.3s						
KTBS				*e*S	Sb	00 37 17.2	+0.6
	comp=E,7µm,0.6s						
ULHL	Ulahol	2.54	265	P	Pn	00 36 44.9	+2.0
	SNR=482						
ULHL	Ulahol	2.54	265	⇑*i*P	Pn	00 36 45.0	+2.0
	baz=64						
ULHL				⇑*i*S	Sb	00 37 17.1	-1.7
	baz=64						
TDK	Taldyqorghan	2.63	340	Pg	Pb	00 36 48.2	-0.5
	comp=E,1µm,0.4s						
TDK				Lg	Lg	00 37 22.4	
	comp=E,3µm,0.6s						
TDK	Taldyqorghan	2.63	340	*e*P	Pb	00 36 48.0	-0.6
	comp=E,1µm,0.5s						
TDK				*e*S	Sb	00 37 20.9	-0.1
	comp=E,3µm,0.5s						
BOOM	Boomskoye usch	2.75	270	⇑*i*P	Pn	00 36 47.6	+1.8
	baz=70						
BOOM				⇑*i*S	Sn	00 37 21.6	+2.4
	baz=70						
KAPS	Kapalarasan	2.76	356	Pg	Pb	00 36 51.3	+0.4
	comp=E,102nm,0.3s						
KAPS				Lg	Lg	00 37 26.6	
	comp=E,665nm,0.5s						
KAPS	Kapalarasan	2.76	356	*e*P	Pb	00 36 51.3	+0.4
	comp=E,102nm,0.3s						
KAPS				*e*S	Sb	00 37 26.6	+1.7
	comp=E,665nm,0.5s						
KST	Kastek	2.77	282	Pg	Pb	00 36 51.2	+0.2
	comp=E,1µm,0.2s						
KST				Lg	Lg	00 37 26.5	
	comp=E,2µm,0.5s						
KST	Kastek	2.77	282	*e*P	Pb	00 36 51.2	+0.2
	baz=81						
KST				⇑*i*S	Sb	00 37 26.5	+1.4
	baz=81						
KST	Kastek	2.77	282	*e*P	Pb	00 36 51.2	+0.2
	comp=E,1µm,0.2s						
KST				⇑*i*S	Sb	00 37 26.5	+1.4
	comp=E,2µm,0.5s						
KUU	Kurty	2.78	300	Pg	Pb	00 36 51.2	0.0
	comp=E,136nm,0.2s						
KUU				Lg	Lg	00 37 26.4	
	comp=E,2µm,0.3s						
KUU	Kurty	2.78	300	*e*P	Pb	00 36 51.2	0.0
	baz=0.0						
KUU				*e*S	Sb	00 37 26.4	+1.0
	baz=0.0						
KUU	Kurty	2.78	300	*e*P	Pb	00 36 51.2	0.0
	comp=E,136nm,0.2s						
KUU				*e*S	Sb	00 37 26.4	+1.0
	comp=E,2µm,0.3s						
NRN	Naryn	2.94	249	*e*Pn	Pn	00 36 51.3	+2.8
NRN	Naryn	2.94	249	*e*PN	Pn	00 36 51.3	+2.8
NRN	Naryn	2.94	249	⇓*i*P	Pb	00 36 51.8	-2.3
	baz=49						
NRN				⇓*i*S	Sb	00 37 27.4	-2.8
	baz=49						
DGS	Degeres	2.94	285	Pg	Pb	00 36 54.2	+0.2
	comp=E,1µm,0.4s						
DGS				Lg	Lg	00 37 31.2	
	comp=E,4µm,0.4s						
DGS	Degeres	2.94	285	*e*P	Pb	00 36 54.2	+0.2
	baz=85						
DGS				*e*S	Sb	00 37 31.3	+1.2
	baz=85						
DGS	Degeres	2.94	285	*e*P	Pb	00 36 54.2	+0.2
	comp=E,1µm,0.4s						
DGS				*e*S	Sb	00 37 31.2	+1.2
	comp=E,4µm,0.4s						
TKM2	Tokmak 2	3.02	279	P	Pn	00 36 52.4	+2.8
	SNR=250						
TKM2	Tokmak 2	3.02	279	⇑Pn	Pn	00 36 52.3	+2.8
	comp=E,454nm,0.3s						
TKM2				⇑Lg	Lg	00 37 34.4	
	comp=E,989nm,0.1s						
TKM2	Tokmak 2	3.02	279	PN	Pn	00 36 52.3	+2.8
TKM2				pmax	pmax		
	comp=Z,454nm,0.4s						
TKM2	Tokmak 2	3.02	279	⇑*i*P	Pn	00 36 52.3	+2.8
	baz=78						
TKM2				⇑*i*S	Sn	00 37 28.2	+2.4
	baz=78						
KZA	Kyzart	3.30	264	P	Pn	00 36 56.6	+3.0
	SNR=177						
KZA	Kyzart	3.30	264	⇓*i*P	Pn	00 36 56.5	+2.9
	baz=63						
KZA				⇓*i*S	Sn	00 37 35.4	+2.3
	baz=63						
KBK	Karagaybulak	3.48	274	P	Pn	00 36 58.6	+2.8
	SNR=343						
KBK	Karagaybulak	3.48	274	⇑*i*P	Pn	00 36 58.6	+2.8
	baz=73						
KBK				⇑*i*S	Sn	00 37 39.4	+2.2
	baz=73						
CHMS	Chumysh	3.64	279	P	Pn	00 37 00.3	+2.4
	SNR=18						
CHMS	Chumysh	3.64	279	⇓*i*P	Pn	00 37 00.3	+2.4
	baz=79						
CHMS				⇓*i*S	Sn	00 37 42.9	+1.9
	baz=79						
FRU1	Bishkek	3.72	276	*e*Pn	Pn	00 37 01.9	+2.9
FRU1	Bishkek	3.72	276	*e*PN	Pn	00 37 01.9	+2.9
FRU1	Bishkek	3.72	276	⇑*i*P	Pn	00 37 01.7	+2.7
	baz=76						
FRU1				⇑*i*S	Sn	00 37 44.7	+1.8
	baz=76						
FRU	Bishkek	3.73	276	*e*PN	Pn	00 37 03.0	+3.9
FRU				*e*		00 37 55.0	
FRU				pmax	pmax		
	comp=Z,270nm,1.4s						
FRU				smax	smax		
	comp=N,870nm,1.4s						
AAK	Ala-Archa	3.81	273	P	Pn	00 37 02.9	+2.4
	SNR=70						
AAK	Ala-Archa	3.81	273	⇑Pn	Pn	00 37 02.7	+2.3
	comp=N,60nm,0.2s						
AAK				⇑Pg	Pb	00 37 10.0	+1.1
	comp=N,189nm,0.2s						
AAK				⇑Lg	Lg	00 37 58.3	
	comp=N,527nm,0.3s						
AAK	Ala-Archa	3.81	273	PN	Pn	00 37 02.7	+2.3
AAK						00 37 10.0	
AAK				pmax	pmax		
	comp=Z,60nm,0.2s						
AAK				pmax	pmax		
	comp=Z,189nm,0.3s						
AAK	Ala-Archa	3.81	273	⇑*i*P	Pn	00 37 02.8	+2.4
	baz=73						
AAK				⇑*i*S	Sn	00 37 47.1	+1.7
	baz=73						
AAK	Ala-Archa	3.81	273	Pn	Pn	00 37 02.3	+2.0
	comp=Z,20nm,0.3s,baz=103,slow=6.7,SNR=128						
AAK				Pg	Pb	00 37 11.3	+2.4
	comp=Z,72nm,0.3s,baz=88,slow=18,SNR=44						
AAK				Lg	Lg	00 37 57.9	
	comp=Z,96nm,0.3s,baz=261,slow=19,SNR=11						
UCH	Uchtor	3.82	267	P	Pn	00 37 03.9	+3.1
	SNR=123						
UCH	Uchtor	3.82	267	⇑*i*P	Pn	00 37 03.8	+3.1
	baz=67						
UCH				⇑*i*S	Sn	00 37 48.4	+2.3
	baz=67						
USP	Ospenovka	3.86	283	P	Pn	00 37 03.1	+2.2
	SNR=54						
USP	Ospenovka	3.86	283	⇑*i*P	Pn	00 37 03.2	+2.2
	baz=82						
USP				⇑*i*S	Sn	00 37 48.1	+1.7
	baz=82						
ARLS	Aral	4.02	262	⇓*i*P	Pn	00 37 06.3	+3.1
	baz=62						
ARLS				⇓*i*S	Sn	00 37 52.1	+1.6
	baz=62						
EKS2	Erkin-Say	4.34	274	P	Pn	00 37 09.8	+2.2
	SNR=21						
EKS2	Erkin-Say	4.34	274	⇑*i*P	Pn	00 37 09.8	+2.2
	baz=73						
EKS2				⇑*i*S	Sn	00 38 00.1	+1.7
	baz=73						
AML	Almayashu	4.44	267	P	Pn	00 37 12.4	+3.2
	SNR=31						
AML	Almayashu	4.44	267	⇑*i*P	Pn	00 37 12.4	+3.2
	baz=67						
AML				⇑*i*S	Sn	00 38 02.9	+1.7
	baz=67						
MAKZ	Makanchi	4.59	20	*e*Pn	Pn	00 37 13.2	+2.3

MAKZ	Makanchi	4.59	20	⇑Pn	Pn	00 37 13.1	+2.3
	comp=Z,15nm,0.3s						
MAKZ				⇑Sn	Sn	00 38 07.5	+3.3
	comp=Z,26nm,0.5s						
MAKZ				⇓Lg	Lg	00 38 25.4	
MAKZ	Makanchi	4.59	20	*e*PN	Pn	00 37 13.2	+2.3
MK01	Makanchi Array	4.64	23	*e*Pn	Pn	00 37 13.9	+2.2
MK31	Makanchi Array	4.66	23	*e*Pn	Pn	00 37 14.3	+2.4
MK31				*e*Sn	Sn	00 38 04.6	-1.4
MK31	Makanchi Array	4.66	23	⇑Pn	Pn	00 37 14.3	+2.4
	comp=Z,12nm,0.3s,baz=206,slow=13,SNR=803						
MK31				⇑Sn	Sn	00 38 08.6	+2.5
	comp=Z,28nm,0.3s,baz=201,slow=26,SNR=4.1						
MK31				⇑Lg	Lg	00 38 24.4	
	comp=Z,44nm,0.4s,baz=197,slow=29						
MK31	Makanchi Array	4.66	23	*e*PN	Pn	00 37 14.3	+2.4
MK31				*e*		00 38 04.6	
MK32	Makanchi Array	4.66	23	*e*Pn	Pn	00 37 14.3	+2.4
MK32				*e*Sn	Sn	00 38 07.7	+1.6
MKAR	Makanchi Array	4.66	23	Pn	Pn	00 37 14.3	+2.4
	comp=Z,13nm,0.3s,baz=212,slow=15,SNR=426						
MKAR				Sn	Sn	00 38 07.7	+1.7
	comp=Z,27nm,0.3s,baz=205,slow=28,SNR=9.9						
MKAR				Lg	Lg	00 38 26.9	
	comp=Z,22nm,0.3s,baz=205,slow=30,SNR=6.1						
MRKS	Merke	4.75	275	Pg	Pb	00 37 26.5	+1.7
	comp=Z,201nm,0.4s						
MRKS				Lg	Lg	00 38 27.8	
	comp=Z,404nm,0.4s						
ARSB	Arslanbob	5.12	259	*e*Pn	Pn	00 37 21.5	+3.1
ARSB				*e*Sn	Sn	00 38 10.1	-7.6
SFK	Sufi-Kurgan	5.27	244	⇑Pn	Pn	00 37 22.5	+2.0
	comp=Z,5.1nm,0.5s						
SFK				⇑Pg	Pb	00 37 37.1	+3.3
	comp=Z,39nm,0.6s						
SFK				⇑Lg	Lg	00 38 49.9	
	comp=Z,175nm,1.2s						
SFK	Sufi-Kurgan	5.27	244	PN	Pn	00 37 22.5	+2.0
SFK						00 37 37.1	
SFK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SFK				pmax	pmax		
	comp=Z,39nm,0.6s						
MNAS	Manas	5.29	272	⇑Pn	Pn	00 37 22.9	+2.2
	comp=Z,6.6nm,0.5s						
MNAS				⇓Pg	Pb	00 37 36.5	+2.5
	comp=Z,44nm,0.5s						
MNAS				⇑Lg	Lg	00 38 45.5	
	comp=Z,134nm,0.6s						
MNAS	Manas	5.29	272	PN	Pn	00 37 22.8	+2.2
MNAS						00 37 36.4	
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MNAS				pmax	pmax		
	comp=Z,45nm,0.5s						
WMQ	Urumqi	6.02	75	Pn	Pn	00 37 33.4	+2.8
WMQ				Sn	Sn	00 38 41.8	+2.1
WMQ				smax	smax		
	comp=Z,300nm,0.9s						
WMQ				smax	smax		
	comp=Z,300nm,0.9s						
WMQ				LR	LR		
	comp=Z,980nm,5.7s						
WMQ				LR	LR		
	comp=Z,630nm,5.3s						
WMQ	Urumqi	6.02	75	*e*Pn	Pn	00 37 34.5	+4.0
WMQ	Urumqi	6.02	75	*e*PN	Pn	00 37 34.6	+4.0
KK31	Karatay Array	6.75	278	*e*Pn	Pn	00 37 44.8	+4.2
KK31	Karatay Array	6.75	278	⇑Pg	Pb	00 38 02.8	+4.0
	comp=Z,32nm,0.6s,baz=90,slow=16,SNR=40						
KK31				⇑Lg	Lg	00 39 31.4	
	comp=Z,51nm,0.5s,baz=88,slow=14,SNR=11						
KK31	Karatay Array	6.75	278	*e*PN	Pn	00 37 44.8	+4.2
KKAR	Karatay Array	6.75	278	*e*Pn	Pn	00 37 44.8	+4.2
KKAR	Karatay Array	6.75	278	*e*PN	Pn	00 37 44.8	+4.2
BTK	Batken	7.10	253	*e*Pn	Pn	00 37 46.2	+0.7
BTK	Batken	7.10	253	*e*PN	Pn	00 37 46.2	+0.7
OTUK	Ortayu	7.69	320	⇓Pn	Pn	00 37 54.1	+0.6
	comp=Z,19nm,0.6s						
OTUK				⇑Lg	Lg	00 40 00.8	
	comp=Z,161nm,1.1s						
OTUK	Ortayu	7.69	320	P	Pn	00 37 54.1	+0.6
OTUK				pmax	pmax		
	comp=Z,19nm,0.6s						
OTUK				pmax	pmax		
	comp=Z,12nm,0.8s						
GAR	Garm	7.92	247	*e*Pn	Pn	00 37 59.8	+3.1
GAR	Garm	7.92	247	*e*P	Pn	00 37 59.8	+3.1
KURBB	Kurchatov Arra	8.13	355	⇑Pn	Pn	00 38 01.1	+1.6
	comp=Z,3.2nm,0.5s						
KURBB				⇑Pg	Pb	00 38 28.7	+6.4
	comp=Z,12nm,0.8s						
KURBB				⇑Lg	Lg	00 40 15.1	
	comp=Z,208nm,0.6s						
KURBB	Kurchatov Arra	8.13	355	Pn	Pn	00 38 00.8	+1.3
	comp=Z,0.3nm,0.3s,baz=163,slow=31,SNR=15						
KURBB				Lg	Lg	00 40 14.7	
	comp=Z,1.5nm,0.3s,baz=209,slow=27,SNR=8.5						
KURK	Kurchatov	8.22	355	Pn	Pn	00 38 00.8	+0.1
KURK				Lg	Lg	00 40 14.7	
KURK	Kurchatov	8.22	355	⇑Pn	Pn	00 38 01.6	+1.0
	comp=Z,2.1nm,0.5s						
KURK				⇓Pg	Pb	00 38 30.9	+7.1
	comp=Z,7.2nm,0.6s						
KURK				⇑Lg	Lg	00 40 16.8	
	comp=Z,162nm,1.2s						
KURK	Kurchatov	8.22	355	P	Pn	00 38 00.8	+0.1
CHGR	Chuyangaron	8.87	248	*e*Pn	Pn	00 38 10.8	+1.0
DGZ	Jazzator, Alta	8.97	34	*e*P	Pn	00 38 13.3	+2.1
NIL	Nilore	10.20	212	*e*Pn	Pn	00 38 30.0	+2.1
NIL	Nilore	10.20	212	*e*P	Pn	00 38 30.0	+2.1
KBL	Kabul	11.51	230	*e*Pn	Pn	00 38 42.4	-3.7
KBL	Kabul	11.51	230	*e*P	Pn	00 38 42.4	-3.7
ZAA0	Zalesovo Array	11.93	15	*e*Pn	Pn	00 38 52.8	+1.3
ZAA0				*e*Sn	Sn	00 40 59.9	-4.7
ZAA0	Zalesovo Array	11.93	15	⇑Pn	Pn	00 38 53.1	+1.6
	comp=Z,11nm,0.7s						
ZAA0				⇓Sn	Sn	00 41 03.2	-1.4
	comp=Z,15nm,0.7s						
ZALV	Zalesovo Beam	11.93	15	Pn	Pn	00 38 51.8	+0.3
	comp=Z,1.0nm,0.3s,baz=206,slow=13,SNR=13						
ZALV				Sn	Sn	00 41 00.5	-4.0
	comp=Z,1.7nm,0.3s,baz=204,slow=25,SNR=4.8						
ZALV				Lg	Lg	00 42 13.2	
	baz=213,slow=30,SNR=2.1						
ZAA1	Zalesovo Array	11.93	15	*e*Pn	Pn	00 38 51.8	+0.2
ZAA1				*e*Sn	Sn	00 41 00.5	-4.1
BVA0	Borovoye Array	12.20	333	⇑Pn	Pn	00 38 54.8	-0.3
	comp=Z,2.2nm,0.5s						
BVA0				⇑Lg	Lg	00 42 28.3	
	comp=Z,35nm,1.0s,baz=135,slow=26,SNR=3.6						
BVA0	Borovoye Array	12.20	333	P	Pn	00 38 54.8	-0.3
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BVAR	Borovoye Array	12.20	333	Pn	Pn	00 38 55.0	-0.1
	comp=Z,1.7nm,0.3s,baz=144,slow=14,SNR=40						
BVAR				Sn	Sn	00 41 04.7	-6.5
	comp=Z,0.9nm,0.3s,baz=150,slow=26,SNR=4.3						
BVAR				Lg	Lg	00 42 24.7	
	comp=Z,1.2nm,0.3s,baz=133,slow=25,SNR=5.4						
BVAR				LR	LR	00 43 38.7	
	comp=Z,164nm,18.6s,baz=136,slow=38						
BRVK	Borovoye	12.26	332	*e*Pn	Pn	00 38 55.4	-0.6
BRVK	Borovoye	12.26	332	⇑Pn	Pn	00 38 55.5	-0.6
	comp=Z,6.7nm,0.7s						
BRVK				⇑Lg	Lg	00 42 29.3	
	comp=Z,24nm,1.2s						
BRVK	Borovoye	12.26	332	*e*P	Pn	00 38 55.4	-0.6
NVS	Novosibirsk	12.54	10	*e*P	Pn	00 39 01.3	+1.5
NVS				*e*		00 41 20.3	
PYUN	Piuthan	14.65	168	*e*P	Pn	00 39 27.1	-1.9
	comp=Z,12nm,0.5s						
KOLN	Koldanda	15.07	166	*e*P	Pn	00 39 32.8	-1.9
	comp=Z,9.7nm,0.6s						
AB31	Akbulak array	15.26	303	⇓Pn	Pn	00 39 35.6	-1.3
	comp=Z,1.1nm,0.3s,baz=109,slow=13,SNR=53						
AB31				⇑Lg	Lg	00 44 01.0	
	comp=Z,5.7nm,0.8s						
AB31	Akbulak array	15.26	303	P	Pn	00 39 35.5	-1.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ABKAR	Akbulak array	15.26	303	*e*Pn	Pn	00 39 35.6	-1.2
GUN	Gumba	15.44	159	*e*P	Pn	00 39 39.1	-0.6
	comp=Z,10.0nm,0.4s						
GTA	Gaotai	15.54	95	*e*P	Pn	00 39 41.3	+0.6
GTA				pP	P	00 39 45.8	+0.7
GTA				sP	pP	00 39 48.3	-0.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
PKIN	Phulchoki	15.64	161	*e*P	Pn	00 39 40.6	-1.6
	comp=Z,4.7nm,0.4s						
PKI	Pulchoki	15.64	161	*e*P	Pn	00 39 40.9	-1.4
	comp=Z,12nm,0.8s						
JIRN	Jiri	15.76	158	*e*P	Pn	00 39 42.7	-1.2
	comp=Z,15nm,0.5s						
LSA	Lhasa	15.80	140	*e*Pn	P	00 39 49.0	+0.7
	comp=Z,6.9nm,0.8s						
LSA	Lhasa	15.80	140	*e*P	P	00 39 49.1	+0.7
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RAMN	Ramite	16.55	158	*e*P	Pn	00 39 50.1	-3.8
	comp=Z,13nm,0.5s						
AKTO	Aktyubinsk	16.83	305	⇓Pn	Pn	00 39 55.9	-1.1
	comp=Z,3.0nm,0.7s						
AKTO				⇓Lg	Lg	00 44 53.3	
	comp=Z,14nm,1.2s						
AKTO	Aktyubinsk	16.83	305	Pn	Pn	00 39 54.0	-3.0
	comp=Z,0.3nm,0.3s,baz=106,slow=12,SNR=12						
AKTO				Lg	Lg	00 44 48.6	
	comp=Z,0.1nm,0.3s,baz=252,slow=19,SNR=2.0						
AKTO				LR	LR	00 46 37.3	
	comp=Z,135nm,18.5s,baz=102,slow=38						
GEYT	Alibeck	17.07	262	P	Pn	00 40 00.0	-0.1
	comp=Z,0.2nm,0.3s,baz=74,slow=11,SNR=2.9						
GEYT				LR	LR	00 47 33.9	
	comp=Z,132nm,18.5s,baz=70,slow=41						
SVE	Sverdlovsk	18.77	326	*e*P	Pn	00 40 22.7	+1.7
ARU	Arti	19.41	323	*e*P	P	00 40 27.7	+0.1
ARU	Arti	19.41	323	P	P	00 40 28.0	+0.4
ARU				S	S	00 44 07.2	+0.2
ARU				MLR	MLR		
	comp=Z,127nm,12.0s						
SONA0	Songino Array	19.53	65	*e*P	Pn	00 40 29.9	-0.4
SONM	Songino Array	19.53	65	P	Pn	00 40 29.9	-0.4
	comp=Z,1.5nm,0.3s,baz=263,slow=11,SNR=42						
SONM				S	S	00 44 13.5	+3.7
	comp=Z,0.1nm,0.3s,baz=268,slow=24,SNR=3.1						
SONM				LR	LR	00 48 47.8	
	comp=Z,110nm,18.9s,baz=209,slow=39						
SONA1	Songino Array	19.54	65	*e*P	Pn	00 40 30.9	+0.4
SHL	Shillong	19.69	145	*e*P	P	00 40 28.8	-2.2
SHL	Shillong	19.69	145	*e*P	P	00 40 28.8	-2.2
ULN	Ulaanbaatar	19.98	65	*e*P	P	00 40 34.4	+0.4
ULN	Ulaanbaatar	19.98	65	*e*P	P	00 40 34.4	+0.4
LKRN	Lenkeran, Azer	23.68	271	P	P	00 41 15.3	+2.1
SEKA	Sheki	24.13	278	P	P	00 41 18.7	+1.1
MNGR	Mingechevir, A	24.32	277	P	P	00 41 21.1	+1.9
ZKTA	Zakatala	24.45	279	P	P	00 41 22.2	+1.8
GANJ	Ganja	24.91	277	P	P	00 41 26.4	+1.7
TBLG	Delisi	25.80	280	*e*P	P	00 41 31.1	-1.6
TBLG	Delisi	25.80	280	*e*P	P	00 41 31.1	-1.6
NAX	Nakhchivan	25.95	274	P	P	00 41 35.9	+1.8
WSAR	Wadi Sarin	25.99	229	P	P	00 41 33.6	-0.8
	comp=Z,3.9nm,1.1s,baz=45,slow=5.7,SNR=2.3						
GNI	Garni	26.21	277	P	P	00 41 37.2	+0.6
	comp=Z,4.3nm,0.8s,baz=122,slow=9.5,SNR=3.4						
KBZ	Khabaz	26.72	285	P	P	00 41 41.6	+0.7
	comp=Z,0.8nm,0.7s,baz=80,slow=9.5,SNR=2.8						
KBZ				LR	LR	00 54 45.3	
	comp=Z,37nm,21.1s,baz=18,slow=42						
ENH	Enshi	26.80	107	*e*P	P	00 41 42.3	+0.4
	comp=Z,2.4nm,0.3s						
KVAR	Kislovodsk Arr	26.82	286	P	P	00 41 41.3	-0.7
	comp=Z,0.6nm,0.4s,baz=69,slow=14,SNR=1.8						
KIV	Kislovodsk	26.83	286	*e*P	P	00 41 42.5	+0.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,28nm,15.0s						
VSR	Storozhevoye	28.69	302	⇓*e*P	P	00 41 58.5	0.0
CMAR	Chiang Mai Arr	29.05	140	P	P	00 42 01.5	-0.5
	comp=Z,1.5nm,0.4s,baz=324,slow=9.1,SNR=4.7						
CMAR				LR	LR	00 55 45.7	
	comp=Z,29nm,18.4s,baz=240,slow=41						
OBN	Obninsk	30.52	309	*e*P	P	00 42 16.1	+1.5
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	Ar Rayn	34.03	247	*e*P	P	00 42 46.8	+1.0
	comp=Z,1.2nm,0.6s						
RAYN	Ar Rayn	34.03	247	*e*P	P	00 42 46.8	+1.0
RAYN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BR101	Keskin Array S	34.45	281	*e*P	P	00 42 50.1	+0.7
BRTR	Keskin Array B	34.45	281	P	P	00 42 50.1	+0.7
	comp=Z,3.7nm,0.8s,baz=100,slow=9.0,SNR=29						
AKASG	Malin Array Be	34.99	301	P	P	00 42 53.1	-0.7
	comp=Z,1.4nm,0.6s,baz=69,slow=8.7,SNR=3.8						
KIEV	Kiev	35.00	301	⇓*e*P	P	00 42 53.5	-0.4
KIEV				pmax	pmax		
	comp=Z,8.0nm,2.1s						
FIA0	FINESS Array S	36.72	320	*e*P	P	00 43 08.3	-0.2
FIA0	FINESS Array S	36.72	320	*e*P	P	00 43 08.3	-0.2
FINES	FINESS Array B	36.72	320	P	P	00 43 08.3	-0.2
	comp=Z,1.8nm,0.6s,baz=95,slow=7.7,SNR=17						
KSAR	Wonju Array Be	36.90	81	P	P	00 43 10.2	-0.1
KSAR	Wonju Array Be	36.90	81	P	P	00 43 10.2	-0.1
KSRS	Korea Array	36.93	81	P	P	00 43 10.2	-0.3
	comp=Z,1.2nm,0.6s,baz=293,slow=6.5,SNR=3.3						
TESR	Tescani	37.41	295	⇑*i*P	P	00 43 14.8	+0.2
VRI	Vrincioaia	37.52	294	⇑*i*P	P	00 43 17.6	+2.1
VRI	Vrincioaia	37.52	294	⇑P	P	00 43 17.7	+2.2
PLOR	Plostina	37.57	294	⇑*i*P	P	00 43 17.3	+1.3
PLOR	Plostina	37.57	294	⇑P	P	00 43 17.3	+1.3
BURAR	Bucovina Array	38.11	297	⇑*i*P	P	00 43 20.8	+0.2
BURAR	Bucovina Array	38.11	297	⇑P	P	00 43 20.8	+0.2
MLR	Muntele Rosu	38.14	293	⇓*i*P	P	00 43 22.4	+1.5
MLR	Muntele Rosu	38.14	293	⇓P	P	00 43 22.4	+1.5
ARA0	ARCESS Array S	38.49	333	*e*P	P	00 43 22.1	-1.3
ARCES	ARCESS Array B	38.49	333	P	P	00 43 22.1	-1.3
	comp=Z,1.6nm,0.7s,baz=103,slow=10,SNR=7.2						
VOIR		38.77	294	⇑*i*P	P	00 43 26.9	+0.8
VOIR		38.77	294	⇑P	P	00 43 26.9	+0.8
ARR	Arges	39.07	294	⇑*i*P	P	00 43 29.5	+0.9
TRPA	Tarpa	39.74	298	⇑*i*P	P	00 43 34.8	+0.7
NORES	NORESS Array B	43.78	319	P	P	00 44 06.5	-0.5
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NB2	NORSAR Subarra	43.90	319	P	P	00 44 07.6	-0.4
	comp=Z,1.4nm,0.5s,baz=82,slow=8.6						
NB200	NORSAR Array S	43.90	319	*e*P	P	00 44 07.4	-0.6
NOA	NORSAR Array B	43.90	319	P	P	00 44 07.4	-0.6
	comp=Z,1.9nm,0.6s,baz=84,slow=8.0,SNR=16						
NOA				LR	LR	01 03 08.8	
	comp=Z,83nm,18.2s,baz=75,slow=37						
CLL	Collm	44.91	305	*e*P	P	00 44 16.0	-0.1
CLL	Collm	44.91	305	*e*P	P	00 44 16.0	-0.1
GERES	GERESS Array B	45.20	302	P	P	00 44 18.0	-0.6
GERES	GERESS Array B	45.20	302	P	P	00 44 18.0	-0.6
	comp=Z,0.4nm,0.6s,baz=57,slow=9.7,SNR=4.7						
GERES				LR	LR	01 06 58.8	
	comp=Z,60nm,19.2s,baz=296,slow=41						
EKA	Eskdalemuir Ar	52.73	315	P	P	00 45 14.8	-1.3
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ESDC	Sonseca Array	60.55	298	P	P	00 46 11.1	-1.0
	comp=Z,0.2nm,0.4s,baz=56,slow=7.8,SNR=6.1						
SIJI	Sorong	63.33	119	P	P	00 46 31.5	+0.6
	comp=Z,4.4nm,0.5s,baz=252,slow=20,SNR=2.9						
ILAR	Eielson Array	67.01	20	P	P	00 46 56.3	+2.2
	comp=Z,0.2nm,0.7s,baz=313,slow=5.8,SNR=2.8						
TORD	Torodi Ar. Bea	72.40	272	P	P	00 47 26.4	-1.6
	comp=Z,1.0nm,0.5s,baz=45,slow=5.6,SNR=20						
YKA	Yellowknife Ar	74.70	7	P	P	00 47 40.4	-0.5
	comp=Z,0.3nm,0.5s,baz=343,slow=5.8,SNR=6.9						
WRA	Warramunga Arr	80.00	129	P	P	00 48 10.4	-0.7
	comp=Z,1.2nm,1.0s,baz=328,slow=5.3,SNR=6.6						
ASAR	Alice Springs	82.70	131	P	P	00 48 25.2	-0.2
	comp=Z,0.5nm,0.9s,baz=328,slow=4.6,SNR=3.8						

ISK 19 00:41:26.8, 39°.13N×29°.03E, h15^{km}±2^{km}, ML1.2/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.05	237	PG	Pg	00 41 29.7	0.0
SMAA				SG	Sg	00 41 32.2	+0.5
SHAP	Saphane-Kutahy	0.18	125	PG	Pb	00 41 31.8	-0.1
SHAP				SG	Sg	00 41 34.7	+0.5
TVSB	Tavsanli	0.46	46	PG	Pb	00 41 36.7	0.0
TVSB				SG	Sg	00 41 42.9	+0.5
KULA	Kula-Manisa	0.68	206	PG	Pb	00 41 40.8	+0.4
KULA				SG	Sb	00 41 49.6	0.0

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*IDC **19** 00:43:22.0±0.9, 11°.46S×165°.19E, h0^{km}, mb4.1/11, mb1 4.3/13, mb1mx4.1/33, mbtmp4.1/13, ML4.6/2, MS3.7/13, Ms1 3.7/13, ms1mx3.5/30, Error ellipse: s-maj=27.8km s-min=18.8km az=137.0*

*ISCJB **19** 00:43:25.6±0.5, 11°.56S±0°.06×165°.08E±0°.07, h34^{km}, mb4.0/15, MS3.6/10, Error ellipse: s-maj=10.0km s-min=7.7km az=142.3*

*NEIC **19** 00:43:25.6±3.6, 11°.44S×165°.12E, h21^{km}±26^{km}, mb4.3/7, Error ellipse: s-maj=13.0km s-min=9.7km az=215.0*

ISC 19 00:43:27.3±0.7**, 11°.48S**±0°.09×**165°.13E**±0°.09**, h34^{km}, n43, σ1^{s}.00**/34**, mb4.0**/15**, MS3.6**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.49	291	Pn	Pn	00 44 45.3	-1.5
	36nm,0.3s,baz=221,slow=3.2,SNR=4.2						
HNR				Sn	Sn	00 45 49.9	+1.2
	29nm,0.3s,baz=68,slow=17,SNR=4.0						
HNR				LR	LR	00 47 08.2	
	comp=Z,1μm,20.0s,baz=148,slow=41						
DZM	Mont Dzumac	10.61	173	*e*Pn	Pn	00 45 57.3	+0.2
	19nm,0.5s						
DZM				*e*LR	LR	00 48 31.5	
	comp=Z,479nm,21.4s						
DZM	Mont Dzumac	10.61	173	Pn	Pn	00 45 56.6	-0.5
	2.3nm,0.3s,baz=304,slow=20,SNR=11						
DZM				LR	LR	00 49 42.5	
	comp=Z,808nm,18.2s,baz=22,slow=36						
OUENC	Ouen Island, N	11.00	172	*e*Pn	Pn	00 46 02.8	+0.4
PINNC	Pines Island,	11.29	169	*e*Pn	Pn	00 46 06.8	+0.4
MANU	Manus Island	19.96	297	*e*P	P	00 47 56.4	-0.4
	28nm,1.1s						
CTA	Charters Tower	20.07	242	P	P	00 47 58.2	+0.2
	7.4nm,0.9s,baz=72,slow=15,SNR=7.2						
CTA				LR	LR	00 55 19.6	
	comp=Z,301nm,21.2s,baz=68,slow=36						
CTAO	Charters Tower	20.07	242	*e*P	P	00 47 56.1	-1.9
	17nm,1.1s						
COEN	Coen	21.56	261	*e*P	P	00 48 15.2	+1.1
	10.0nm,1.1s						
ARMA	Armidale	22.64	212	*e*P	P	00 48 26.9	+1.2
	1.2nm,0.8s						
STKA	Stephens Creek	29.72	223	P	P	00 49 30.8	+0.3
	1.7nm,0.6s,baz=24,slow=10,SNR=5.5						
STKA				LR	LR	01 00 29.9	
	comp=Z,101nm,20.5s,baz=28,slow=34						
H11S2	WAKE ISLAND Hy	29.82	3	T	T	01 20 55.9	
	baz=184,slow=76,SNR=8.8						
H11S3	WAKE ISLAND Hy	29.82	3	T	T	01 20 54.3	
	baz=184,slow=76,SNR=8.1						
H11S1	WAKE ISLAND Hy	29.83	3	T	T	01 20 55.4	
	baz=184,slow=76,SNR=8.7						
WR1	Warramunga Arr	30.77	250	*e*P	P	00 49 39.5	-0.4
	5.2nm,1.1s						
WR1				*e*PcP	PcP	00 52 37.7	+0.7
WRA	Warramunga Arr	30.77	250	P	P	00 49 39.5	-0.4
	1.5nm,0.6s,baz=83,slow=8.8,SNR=28						
WRA				PcP	PcP	00 52 37.7	+0.7
	0.3nm,0.8s,baz=75,slow=3.3,SNR=5.1						
WRA				LR	LR	01 01 49.6	
	comp=Z,152nm,18.2s,baz=125,slow=36						
H11N1	WAKE ISLAND Hy	31.04	3	T	T	01 22 24.0	
	baz=182,slow=76,SNR=9.0						
H11N3	WAKE ISLAND Hy	31.05	3	T	T	01 22 26.3	
	baz=182,slow=76,SNR=6.8						
H11N2	WAKE ISLAND Hy	31.06	3	T	T	01 22 20.3	
	baz=182,slow=76,SNR=8.0						
AS01	Alice Springs	32.02	244	*e*P	P	00 49 49.9	-1.1
ASAR	Alice Springs	32.06	244	P	P	00 49 49.9	-1.4
	1.8nm,0.9s,baz=74,slow=9.6,SNR=11						
ASAR				PcP	PcP	00 52 41.0	+0.6
	0.4nm,0.7s,baz=80,slow=2.0,SNR=4.8						
ASAR				LR	LR	01 02 00.9	
	comp=Z,179nm,19.5s,baz=78,slow=35						
RPZ	Rata Peaks	32.53	172	LR	LR	01 02 03.4	
	comp=Z,267nm,18.0s,baz=292,slow=34						
RAR	Rarotonga	34.97	111	LR	LR	01 01 35.6	
	comp=Z,106nm,19.9s,baz=276,slow=31						
PPT2	Papeete2	44.18	103	*e*LR	LR	01 03 57.0	
	comp=Z,316nm,31.8s						
TBI	Tubuai	44.73	112	*e*LR	LR	01 04 14.5	
	comp=Z,302nm,28.8s						
TAOE	Nuku Hiva Isla	53.86	93	*e*LR	LR	01 08 13.9	
	comp=Z,254nm,33.2s						
JNU	Nakatsue	55.08	325	*e*P	P	00 52 55.0	-1.2
JNU	Nakatsue	55.08	325	LR	LR	01 13 18.3	
	comp=Z,27nm,18.9s,baz=136,slow=33						
KSRS	Korea Array	59.89	326	LR	LR	01 18 32.3	
	comp=Z,24nm,19.6s,baz=136,slow=35						
CMAR	Chiang Mai Arr	71.73	294	P	P	00 54 47.8	+1.1
	1.0nm,0.3s,baz=120,slow=4.1,SNR=6.4						
CMAR				LR	LR	01 26 49.4	
	comp=Z,17nm,19.3s,baz=148,slow=36						
SONA0	Songino Array	78.66	324	*e*P	P	00 55 26.7	+0.6
SONM	Songino Array	78.66	324	P	P	00 55 26.7	+0.6
	1.4nm,0.9s,baz=140,slow=5.8,SNR=8.4						
BILL	Bilibino	79.31	0	*e*P	P	00 55 31.4	+2.4
	3.3nm,1.1s						
ILAR	Eielson Array	84.11	19	P	P	00 55 54.5	+0.1
	0.3nm,0.5s,baz=230,slow=5.5,SNR=11						
ILAR				LR	LR	01 33 16.3	
	comp=Z,60nm,18.2s,baz=171,slow=36						
NV01	Mina Array Sit	86.76	50	*e*P	P	00 56 07.3	-1.2
NVAR	Mina Array Bea	86.76	50	P	P	00 56 07.3	-1.3
	0.6nm,0.8s,baz=226,slow=6.2,SNR=3.2						
MK01	Makanchi Array	93.41	317	*e*P	P	00 56 39.4	+0.1
MK31	Makanchi Array	93.42	317	*e*P	P	00 56 39.7	+0.4
	1.5nm,0.9s						
MK32	Makanchi Array	93.42	317	*e*P	P	00 56 40.2	+0.8
MKAR	Makanchi Array	93.42	317	P	P	00 56 40.2	+0.8
	2.2nm,0.9s,baz=103,slow=6.5,SNR=14						
ZALV	Zalesovo Beam	93.55	324	P	P	00 56 39.0	-0.7
	0.9nm,0.7s,baz=102,slow=6.6,SNR=7.3						
ZALV				LR	LR	01 38 12.1	
	comp=Z,21nm,20.2s,baz=70,slow=35						
ZAA1	Zalesovo Array	93.55	324	*e*P	P	00 56 39.0	-0.7
YKA	Yellowknife Ar	95.63	27	P	P	00 56 48.2	-0.8
	0.1nm,0.5s,baz=268,slow=4.5,SNR=2.8						

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*SOME **19** 00:47:45.4, 40°.10N×77°.68E, h10^{km}*

*KRNET **19** 00:47:45.7±0.1, 40°.16N×77°.67E, mb2.8*

*NNC **19** 00:47:51.9±1.4, 40°.40N×77°.80E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=11.8km s-min=6.6km az=130.0*

ISC 19 00:47:48.7±1.6**, 40°.20N**±0°.06×**77°.62E**±0°.05**, h10^{km}, n45, σ1^{s}.63**/72**, 19C-21D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.53	5	⇓*i*P	Pn	00 48 15.7	-0.9
	baz=3.0						
TARG				⇓*i*S	Sb	00 48 37.0	-0.2
	baz=3.0						
NRN	Naryn	1.74	316	⇑*i*P	Pn	00 48 19.5	+0.2
	baz=15						
NRN				⇑*i*S	Sb	00 48 44.3	+1.3
	baz=15						
KDJ	Kajisay	1.96	350	⇓*i*P	Pb	00 48 23.2	-1.4
	baz=50						
KDJ				⇓*i*S	Sb	00 48 50.4	+1.3
	baz=50						
ULHL	Ulahol	2.29	333	⇓*i*P	Pn	00 48 28.1	+1.3
	baz=33						
ULHL				⇓*i*S	Sb	00 48 58.7	-0.1
	baz=33						
KZA	Kyzart	2.59	317	⇑*i*P	Pn	00 48 32.1	+1.0
	baz=17						
KZA				⇑*i*S	Sb	00 49 06.4	-1.3
	baz=17						
BOOM	Boomskoye usch	2.62	332	⇑*i*P	Pn	00 48 32.6	+1.4
	baz=31						
BOOM				⇑*i*S	Sb	00 49 06.4	-1.6
	baz=31						
TNSS	Tian-Shan	2.88	350	Pg	Pb	00 48 40.4	-0.1
	32nm,0.6s						
TNSS				Lg	Lg	00 49 20.1	
	9.6nm,0.8s						
TNSS	Tian-Shan	2.88	350	*e*P	Pb	00 48 40.4	-0.1
	32nm,0.6s						
TNSS				*e*S	Sg	00 49 20.1	-1.2
	9.6nm,0.8s						
SATY	Saty	2.92	11	Pg	Pb	00 48 41.0	+0.2

	22nm,0.6s						
SATY				Lg	Lg	00 49 21.2	
	14nm,0.6s						
SATY	**Saty**	**2.92**	**11**	*e*P	**Pb**	**00 48 41.0**	**+0.2**
	22nm,0.6s						
SATY				*e*S	**Sg**	**00 49 21.2**	**-1.2**
	14nm,0.6s						
IZV	**Izvestkoviy**	**2.93**	**345**	Pg	**Pb**	**00 48 41.8**	**+0.6**
	9.5nm,0.5s						
IZV				Lg	Lg	00 49 22.3	
	16nm,0.5s						
IZV	**Izvestkoviy**	**2.93**	**345**	*e*P	**Pb**	**00 48 41.8**	**+0.6**
	9.5nm,0.5s						
IZV				*e*S	**Sg**	**00 49 22.3**	**-0.6**
	16nm,0.5s						
MDOK	**Medeo**	**2.99**	**352**	Pn	**Pb**	**00 48 39.2**	**-3.0**
	12nm,0.5s						
MDOK				Lg	Lg	00 49 22.9	
	9.9nm,0.6s						
MDOK	**Medeo**	**2.99**	**352**	Pg	**Pb**	**00 48 42.3**	**+0.1**
	17nm,0.5s						
MDOK				Lg	Lg	00 49 23.2	
	11nm,0.6s						
MDOK	**Medeo**	**2.99**	**352**	*e*P	**Pb**	**00 48 42.3**	**+0.1**
	17nm,0.5s						
MDOK				*e*S	**Sg**	**00 49 23.2**	**-1.7**
	11nm,0.6s						
ARLS	**Aral**	**3.00**	**305**	⇑*i*P	**Pn**	**00 48 37.7**	**+1.3**
	baz=5.0						
ARLS				⇑*i*S	**Sn**	**00 49 15.5**	**+3.0**
	baz=5.0						
KOTS	**Kotyrbulak**	**3.06**	**353**	Pg	**Pb**	**00 48 44.0**	**+0.7**
	8.6nm,0.4s						
KOTS				Lg	Lg	00 49 26.1	
	35nm,0.5s						
KOTS	**Kotyrbulak**	**3.06**	**353**	*e*P	**Pb**	**00 48 44.0**	**+0.7**
	8.6nm,0.4s						
KOTS				*e*S	**Sg**	**00 49 26.1**	**-0.7**
	35nm,0.5s						
UCH	**Uchtor**	**3.10**	**312**	⇑*e*P	**Pn**	**00 48 39.3**	**+1.2**
	baz=12						
UCH				⇑*i*S	**Sn**	**00 49 18.1**	**+2.7**
	baz=12						
KST	**Kastek**	**3.10**	**337**	Pg	**Pb**	**00 48 44.3**	**+0.3**
	5.7nm,0.3s						
KST				Lg	Lg	00 49 26.6	
	12nm,0.6s						
KST	**Kastek**	**3.10**	**337**	*e*P	**Pb**	**00 48 44.3**	**+0.3**
	5.7nm,0.3s						
KST				*e*S	**Sg**	**00 49 26.6**	**-1.8**
	12nm,0.6s						
TKM2	**Tokmak 2**	**3.11**	**331**	⇑Pn	**Pb**	**00 48 41.0**	**-3.3**
	3.9nm,0.8s						
TKM2				⇑Lg	Lg	00 49 26.9	
	7.9nm,0.8s						
TKM2	**Tokmak 2**	**3.11**	**331**	⇓*i*P	**Pn**	**00 48 39.5**	**+1.4**
	baz=31						
TKM2				⇓*i*S	**Sn**	**00 49 18.7**	**+3.2**
	baz=31						
UZB	**Uzynbulak**	**3.13**	**19**	*e*P	**Pb**	**00 48 44.2**	**-0.2**
	4.4nm,0.5s						
UZB				*e*S	**Sg**	**00 49 26.3**	**-2.9**
	7.8nm,0.9s						
SFK	**Sufi-Kurgan**	**3.16**	**268**	⇑Pn	**Pb**	**00 48 44.4**	**-0.8**
	1.5nm,0.7s						
SFK				⇑Sn	**Sg**	**00 49 27.6**	**-2.7**
	4.1nm,0.6s						
SFK	**Sufi-Kurgan**	**3.16**	**268**	⇓*i*P	**Pn**	**00 48 39.6**	**+0.8**
	baz=69						
SFK				⇓*i*S	**Sn**	**00 49 19.5**	**+2.8**
	baz=69						
KBK	**Karagaybulak**	**3.17**	**322**	⇓*e*P	**Pn**	**00 48 39.9**	**+1.0**
	baz=22						
KBK				⇓*i*S	**Sn**	**00 49 19.9**	**+3.0**
	baz=22						
KURS	**Kuram**	**3.31**	**7**	Pg	**Pb**	**00 48 47.7**	**+0.2**
	3.8nm,0.4s						
KURS				Lg	Lg	00 49 32.6	
	3.8nm,0.5s						
KURS	**Kuram**	**3.31**	**7**	*e*P	**Pb**	**00 48 47.8**	**+0.2**
	3.8nm,0.4s						
KURS				*e*S	**Sg**	**00 49 32.6**	**-2.4**
	3.8nm,0.5s						
DGS	**Degeres**	**3.34**	**336**	Pg	**Pb**	**00 48 48.2**	**+0.1**
	3.4nm,0.5s						
DGS				Lg	Lg	00 49 33.5	
	10nm,0.6s						
DGS	**Degeres**	**3.34**	**336**	*e*P	**Pb**	**00 48 48.2**	**+0.1**
	3.4nm,0.5s						
DGS				*e*S	**Sg**	**00 49 33.5**	**-2.5**
	10nm,0.6s						
AAK	**Ala-Archa**	**3.38**	**317**	⇓Pn	**Pb**	**00 48 49.3**	**+0.4**
	3.1nm,1.1s						
AAK				⇓Lg	Lg	00 49 35.0	
	19nm,1.1s						
AAK	**Ala-Archa**	**3.38**	**317**	⇓*i*P	**Pn**	**00 48 43.0**	**+1.2**
	baz=17						
AAK				⇓*i*S	**Sn**	**00 49 24.8**	**+2.7**
	baz=17						
PDGK	**Podgornoye**	**3.42**	**23**	Pg	**Pb**	**00 48 49.2**	**-0.4**
	3.3nm,0.4s						
PDGK				Lg	Lg	00 49 35.2	
	3.4nm,0.6s						
PDGK	**Podgornoye**	**3.42**	**23**	⇓Pn	**Pn**	**00 48 43.9**	**+1.6**
	2.7nm,0.4s						
PDGK				⇑Lg	Lg	00 49 33.3	
	8.7nm,0.7s						
AML	**Almayashu**	**3.54**	**304**	⇑*i*P	**Pn**	**00 48 45.2**	**+1.1**
	baz=5.0						
AML				⇑*i*S	**Sn**	**00 49 29.1**	**+3.0**
	baz=5.0						
KTBS	**Karatobe**	**3.58**	**349**	Pg	**Pb**	**00 48 53.3**	**+1.2**
	4.4nm,0.4s						
KTBS				Lg	Lg	00 49 42.3	
	7.6nm,0.4s						
KTBS	**Karatobe**	**3.58**	**349**	*e*P	**Pb**	**00 48 53.3**	**+1.2**
	4.4nm,0.4s						
KTBS				*e*S	**Sg**	**00 49 42.3**	**-1.3**
	7.6nm,0.4s						
CHKK	**Chushkaly**	**3.68**	**353**	Pg	**Pb**	**00 48 54.5**	**+0.7**
	4.5nm,0.3s						
CHKK				Lg	Lg	00 49 44.3	
	9.5nm,0.3s						
CHKK	**Chushkaly**	**3.68**	**353**	*e*P	**Pb**	**00 48 54.5**	**+0.7**
	4.5nm,0.3s						
CHKK				*e*S	**Sg**	**00 49 44.3**	**-2.6**
	9.5nm,0.3s						
ARSB	**Arslanbob**	**3.70**	**289**	⇑*i*P	**Pn**	**00 48 47.4**	**+1.3**
	baz=90						
ARSB				⇑*i*S	**Sn**	**00 49 32.3**	**+2.5**
	baz=90						
KUU	**Kurty**	**3.81**	**346**	Pg	**Pb**	**00 48 56.5**	**+0.4**
	3.0nm,0.5s						
KUU				Lg	Lg	00 49 47.2	
	7.1nm,0.6s						
KUU	**Kurty**	**3.81**	**346**	*e*P	**Pb**	**00 48 57.0**	**+0.9**
	3.0nm,0.5s						
KUU				*e*S	**Sg**	**00 49 48.5**	**-2.6**
	7.1nm,0.6s						
MNAS	**Manas**	**4.48**	**302**	⇓Pg	**Pg**	**00 49 12.3**	**-2.2**
	1.0nm,0.5s						
MNAS				⇓Lg	Lg	00 50 09.9	
	2.4nm,1.0s						
KK31	**Karatay Array**	**6.06**	**301**	⇓Pg	**Pg**	**00 49 43.3**	**-1.6**
	0.2nm,0.5s,baz=110,slow=16,SNR=5.5						
KK31				⇓Lg	Lg	00 51 05.5	
	0.5nm,0.6s,baz=114,slow=26						

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*LDG **19** 00:53:35.3±0.1, 42°.74N×1°.71W, h2^{km}, Md1.9/2, Ml1.8/4, Error ellipse: s-maj=2.5km s-min=1.8km az=113.0*

MDD 19 00:53:35.0±0.5**, 42°.73N×1°.70W, h0^{km}, mbLg1.4**/9**, Error ellipse: s-maj=4.2km s-min=3.4km az=146.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EARA	**Aranguren**	**0.10**	**66**	Pg	Pg	00 53 36.5	-0.4
	31nm,0.3s,SNR=40						
EARA				Lg	Lg	00 53 38.2	
	69nm,0.5s						
EORO	**Oroz-Betelu**	**0.33**	**61**	Pg	Pg	00 53 41.9	+0.6
	1.8nm,0.1s,SNR=7.9						
EORO				Lg	Lg	00 53 45.5	
	4.4nm,0.1s,SNR=7.9						
IELO	**Elcoad**	**0.36**	**72**	Pg	Pg	00 53 41.8	-0.1
	2.0nm,0.1s,SNR=7.9						
IELO				Lg	Lg	00 53 47.9	
	7.5nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**0.51**	**16**	Pg	Pg	00 53 44.7	0.0
	2.6nm,0.2s,SNR=11						
EALK				Lg	Lg	00 53 52.0	
	7.4nm,0.4s						
SJPF	**Ste Jean**	**0.52**	**42**	*e*Pg	Pg	00 53 45.4	+0.5
SJPF				*e*Sg	Sg	00 53 51.6	0.0
	5.5nm,0.2s						
SJPF	**Ste Jean**	**0.52**	**42**	Pg	Pg	00 53 45.4	+0.5
SJPF				Lg	Lg	00 53 51.6	
	2.8nm,0.2s						
ATE	**Arette**	**0.81**	**64**	Pg	Pg	00 53 50.7	+0.1
	0.5nm,0.1s,SNR=7.9						
ATE				Lg	Lg	00 54 02.5	
	1.9nm,0.1s,SNR=7.9						
ETSF	**Etsaut**	**0.85**	**79**	*e*Pg	Pb	00 53 52.3	-0.5
ETSF				*e*Sg	Sg	00 54 03.2	+0.7
	2.2nm,0.2s						
ETSF	**Etsaut**	**0.85**	**79**	Pg	Pb	00 53 52.3	-0.5
ETSF				Lg	Lg	00 54 03.2	
	1.1nm,0.2s						
ESAC	**San Caprasio**	**1.36**	**138**	Pg	Pg	00 54 00.7	-0.4
	5.5nm,0.3s,SNR=5.6						
ESAC				Lg	Lg	00 54 17.8	
	25nm,0.2s,SNR=15						
ELAN	**Lanestosa**	**1.37**	**292**	Pg	Pg	00 53 59.8	-1.4
	2.7nm,0.6s,SNR=18						
ELAN				Lg	Lg	00 54 18.7	
	6.3nm,0.7s,SNR=6.1						
ECHI	**Chisagues Biel**	**1.40**	**92**	Pg	Pg	00 54 01.6	-0.2
	0.5nm,0.1s,SNR=7.9						
ECHI				Lg	Lg	00 54 19.9	
	1.4nm,0.1s,SNR=7.9						
EPF	**Esparros**	**1.53**	**78**	*e*Pg	Pb	00 54 04.0	-0.2
EPF				*e*Sg	Sn	00 54 24.7	+0.5
	2.0nm,0.2s						
EPF	**Esparros**	**1.53**	**78**	Pg	Pb	00 54 04.0	-0.2
EPF				Lg	Lg	00 54 24.7	
	1.0nm,0.2s						
ETOR	**Torete**	**1.93**	**188**	Pn	Pn	00 54 08.5	-0.7
	2.1nm,0.3s,SNR=6.3						
ETOR				Pg	Pb	00 54 11.3	+0.2
	0.5nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	00 54 36.6	
	3.6nm,0.3s,SNR=10.0						
ETOR	**Torete**	**1.93**	**188**	Sn	Sg	00 54 55.3	+18
	0.5nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	00 54 56.9	
	2.8nm,0.1s,SNR=7.9						
CSOR	**Sort**	**2.12**	**99**	Pg	Pb	00 54 14.0	-0.4
	0.1nm,0.1s,SNR=7.9						
CSOR				Lg	Lg	00 54 42.1	
	0.4nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**2.34**	**139**	Pn	Pn	00 54 13.2	-1.6
	0.2nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	00 54 41.2	-2.9
	0.3nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	00 54 49.3	
	0.7nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**2.78**	**222**	Pg	Pn	00 54 18.8	-2.1
	1.4nm,0.1s,SNR=7.9						
GUD				Lg	Lg	00 54 24.0	
	2.5nm,0.3s,SNR=6.0						
MTLF	**Montolieu**	**2.94**	**77**	*e*Sg	Sg	00 55 07.8	-1.5
	0.3nm,0.2s						
MTLF	**Montolieu**	**2.94**	**77**	Lg	Lg	00 55 07.8	
	0.2nm,0.2s						
CAF	**Calviac**	**3.50**	**50**	*e*Sg	Sg	00 55 25.1	-2.2
	0.4nm,0.2s						
CAF	**Calviac**	**3.50**	**50**	Lg	Lg	00 55 25.1	
	0.2nm,0.2s						
ESDC	**Sonseca Array**	**3.50**	**210**	Pg	Pn	00 54 23.6	-7.2
	1.7nm,0.3s,baz=8.7,slow=18,SNR=17						
ESDC				Lg	Lg	00 54 32.7	
	0.6nm,0.2s,baz=12,slow=14,SNR=11						
PAB	**San Pablo**	**3.76**	**213**	Pg	Pn	00 54 27.8	-6.6
	2.0nm,0.1s,SNR=7.9						
PAB				Lg	Lg	00 54 39.9	
	1.7nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**3.82**	**260**	Lg	Lg	00 55 36.3	
	0.6nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.09**	**178**	Pg	Pg	00 54 56.2	+2.9
	0.1nm,0.1s,SNR=7.9						
ETOB				Lg	Lg	00 55 28.6	
	1.5nm,0.3s,SNR=9.7						
EPLA	**Plasencia**	**4.24**	**232**	Pg	Pn	00 54 43.1	+2.3
	0.4nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	00 55 07.4	
	2.5nm,0.5s,SNR=5.5						
EQES	**Quesada**	**5.04**	**192**	Pg	Pb	00 54 58.9	-5.2
	0.2nm,0.4s,SNR=7.9						
EQES				Lg	Lg	00 55 32.2	
	0.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**5.06**	**207**	Pg	Pn	00 54 51.5	-0.6
	0.3nm,0.1s,SNR=7.9						
EADA				Lg	Lg	00 55 21.4	
	2.3nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.45**	**213**	Pg	Pn	00 54 58.0	+0.5
	0.1nm,0.2s,SNR=7.9						
ECAB				Sn	Pg	00 55 21.3	+1.8
	1.7nm,0.7s,SNR=7.3						
ECAB				Lg	Lg	00 55 29.8	
	0.4nm,0.1s,SNR=7.9						

MEX 19 01:18:59.9±0.5**, 16°.30N×98°.12W, h15^{km}**±3^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.09**	**356**	*e*P	Pg	01 19 02.1	-1.0
PNIG				*i* S	Sg	01 19 04.6	-0.6
VHO	**Vista Hermosa**	**1.53**	**60**	*e*P	Pn	01 19 25.3	-1.7
VHO				*e*S	Sn	01 19 44.9	-1.9

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*IDC **19** 01:22:45.4±1.0, 11°.43S×165°.12E, h0^{km}, mb3.9/9, mb1 4.1/11, mb1mx4.0/30, mbtmp4.0/11, ML4.4/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/33, Error ellipse: s-maj=34.3km s-min=21.5km az=139.0*

*NEIC **19** 01:22:46.9±0.4, 11°.46S×165°.10E, h10^{km}, mb4.2/6, Error ellipse: s-maj=10.6km s-min=8.5km az=139.0*

*ISCJB **19** 01:22:48.9±0.5, 11°.58S±0°.08×165°.01E±0°.06, h34^{km}, mb4.1/15, MS3.3/3, Error ellipse: s-maj=11.1km s-min=8.7km az=15.0*

ISC 19 01:22:50.5±0.6**, 11°.5S**±0°.1×**165°.07E**±0°.09**, h34^{km}, n33,** σ**0^{s}.62**/29**, mb4.0**/15**, MS3.3**/3**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.44**	**292**	Pn	**Pn**	**01 24 09.6**	**+0.3**
	34nm,0.3s,baz=122,slow=5.0,SNR=3.3						
HNR				Sn	**Sn**	**01 25 11.0**	**+0.3**
	18nm,0.3s,baz=345,slow=19,SNR=3.5						
HNR				LR	LR	01 26 08.7	
	comp=Z,258nm,19.9s,baz=154,slow=37						
DZM	**Mont Dzumac**	**10.60**	**173**	Pn	**Pn**	**01 25 20.8**	**+0.7**
	0.8nm,0.3s,baz=191,slow=19,SNR=6.5						
DZM				LR	LR	01 29 05.8	
	comp=Z,122nm,18.6s,baz=358,slow=36						
CTA	**Charters Tower**	**20.01**	**242**	P	**Pn**	**01 27 22.2**	**-0.1**
	3.4nm,0.7s,baz=78,slow=7.8,SNR=4.9						
COEN	**Coen**	**21.50**	**261**	*e*P	**P**	**01 27 36.2**	**-0.4**
	6.4nm,1.0s						
STKA	**Stephens Creek**	**29.66**	**223**	LR	LR	01 39 54.4	
	comp=Z,99nm,18.4s,baz=26,slow=35						
H11S2	**WAKE ISLAND Hy**	**29.84**	**3**	T	T	02 00 15.4	
	baz=182,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.84**	**3**	T	T	02 00 17.3	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**29.86**	**3**	T	T	02 00 16.7	
	baz=182,slow=74						
BFZ	**Birch Farm**	**30.70**	**163**	*e*P	**P**	**01 29 01.7**	**-0.4**
	9.9nm,1.0s						
WB2	**Warramunga Arr**	**30.70**	**250**	*e*P	**P**	**01 29 00.3**	**-2.2**
	5.0nm,1.1s						
WR1	**Warramunga Arr**	**30.71**	**250**	*e*P	**P**	**01 29 02.4**	**-0.1**
	3.9nm,1.1s						
WR1				*e*PcP	**PcP**	**01 32 00.2**	**+0.2**
WRA	**Warramunga Arr**	**30.71**	**250**	P	**P**	**01 29 02.4**	**-0.2**
	1.2nm,0.9s,baz=82,slow=9.0,SNR=9.8						
WRA				PcP	**PcP**	**01 32 00.2**	**+0.2**
	0.5nm,0.8s,baz=81,slow=3.7,SNR=3.9						
WRA				LR	LR	01 41 22.3	
	comp=Z,58nm,18.1s,baz=60,slow=36						
H11N1	**WAKE ISLAND Hy**	**31.06**	**3**	T	T	02 01 52.9	
	baz=188,slow=74						
H11N3	**WAKE ISLAND Hy**	**31.07**	**3**	T	T	02 01 53.5	
	baz=188						
H11N2	**WAKE ISLAND Hy**	**31.08**	**3**	T	T	02 01 59.4	
	baz=188,slow=74						
AS31	**Alice Springs**	**32.00**	**244**	*e*P	**P**	**01 29 13.3**	**-0.6**
	0.9nm,1.0s						
AS31				*e*PcP	**PcP**	**01 32 03.9**	**+0.4**
ASAR	**Alice Springs**	**32.00**	**244**	P	**P**	**01 29 13.3**	**-0.6**
	0.9nm,0.8s,baz=72,slow=8.8,SNR=6.1						
ASAR				PcP	**PcP**	**01 32 03.9**	**+0.4**
	0.5nm,0.7s,baz=90,slow=2.5,SNR=5.2						
FITZ	**Fitzroy Crossi**	**38.63**	**255**	LR	LR	01 44 26.5	
	comp=Z,42nm,20.1s,baz=46,slow=34						
SONA0	**Songino Array**	**78.64**	**324**	*e*P	**P**	**01 34 49.5**	**+0.4**
SONM	**Songino Array**	**78.64**	**324**	P	**P**	**01 34 49.5**	**+0.4**
	0.3nm,0.5s,baz=172,slow=12,SNR=3.8						
ILAR	**Eielson Array**	**84.15**	**19**	P	**P**	**01 35 17.8**	**0.0**
	0.4nm,0.5s,baz=241,slow=4.7,SNR=12						
ILB	**Eielson Array**	**84.15**	**19**	*e*P	**P**	**01 35 17.8**	**0.0**
NV01	**Mina Array Sit**	**86.82**	**50**	*e*P	**P**	**01 35 32.1**	**+0.2**
NVAR	**Mina Array Bea**	**86.82**	**50**	P	**P**	**01 35 32.1**	**+0.2**
	0.9nm,0.9s,baz=234,slow=6.4,SNR=4.1						
C09A	**Chrisman Ranch**	**89.64**	**41**	*e*P	**P**	**01 35 44.9**	**0.0**
	38nm,0.3s						
SYO	**Syowa Base**	**91.16**	**197**	⇓*e*P	P	01 36 02.0	+10
MK31	**Makanchi Array**	**93.40**	**317**	*e*P	**P**	**01 36 03.1**	**+0.8**
	1.0nm,0.8s						
MK32	**Makanchi Array**	**93.40**	**317**	*e*P	**P**	**01 36 03.0**	**+0.7**
MKAR	**Makanchi Array**	**93.40**	**317**	P	**P**	**01 36 03.0**	**+0.7**
	1.0nm,0.8s,baz=97,slow=6.3,SNR=10						
ZALV	**Zalesovo Beam**	**93.53**	**324**	P	**P**	**01 36 02.5**	**-0.3**
	0.4nm,0.6s,baz=132,slow=4.3,SNR=3.3						
ZAA1	**Zalesovo Array**	**93.53**	**324**	*e*P	**P**	**01 36 02.5**	**-0.3**
YKA	**Yellowknife Ar**	**95.67**	**27**	P	**P**	**01 36 11.6**	**-0.7**
	0.2nm,0.7s,baz=266,slow=4.8,SNR=4.4						
YKB5	**Yellowknife Ar**	**95.67**	**27**	*e*P	**P**	**01 36 11.7**	**-0.7**

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*ISCJB **19** 01:47:59.3±0.6, 23°.38S±0°.09×179°.9W±0°.1, h500^{km}, mb3.9/11, Error ellipse: s-maj=15.1km s-min=11.1km az=30.7*

*IDC **19** 01:48:02.6±2.1, 23°.10S×179°.96E, h524^{km}±22^{km}, mb3.4/11, mb1 3.7/12, mb1mx3.5/36, mbtmp4.3/12, Error ellipse: s-maj=25.9km s-min=15.6km az=156.0*

ISC 19 01:47:59.8±0.7**, 23°.4S**±0°.1×**179°.9W**±0°.1**, h500^{km}, n17,** σ**2^{s}.09**/21**, mb3.9**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.63**	**273**	P	**P**	**01 50 47.0**	**+1.8**
	0.3nm,0.3s,baz=300,slow=20,SNR=2.5						
URZ	**Urewera**	**15.04**	**189**	P	**P**	**01 51 11.7**	**+1.5**
	2.9nm,0.3s,baz=75,slow=3.3,SNR=10.0						
URZ				S	**S**	**01 53 43.0**	**-4.2**
	0.8nm,0.3s,baz=164,slow=15,SNR=2.4						
RPZ	**Rata Peaks**	**21.59**	**198**	P	**P**	**01 52 16.9**	**+4.2**
	2.8nm,0.5s,baz=16,slow=7.4,SNR=5.2						
CTA	**Charters Tower**	**31.53**	**269**	P	**P**	**01 53 41.9**	**+1.4**
	22nm,0.5s,baz=93,slow=10,SNR=60						
STKA	**Stephens Creek**	**34.96**	**247**	P	**P**	**01 54 10.9**	**+1.4**
	3.5nm,0.4s,baz=93,slow=10,SNR=14						
ASAR	**Alice Springs**	**42.17**	**260**	P	**P**	**01 55 08.8**	**+0.5**
	5.5nm,0.6s,baz=93,slow=7.1,SNR=23						
ASAR				ScP	**ScP**	**01 59 52.6**	**-1.4**
	1.0nm,0.8s,baz=104,slow=5.0,SNR=4.2						
ASAR				S	**S**	**02 00 49.4**	**-2.4**
	0.4nm,0.6s,baz=98,slow=13,SNR=3.6						
WRA	**Warramunga Arr**	**42.49**	**266**	P	**P**	**01 55 10.9**	**+0.1**
	8.7nm,0.6s,baz=90,slow=5.9,SNR=41						
WRA				ScP	**ScP**	**01 59 53.9**	**-1.4**
	0.7nm,0.9s,baz=102,slow=3.9,SNR=3.1						
WRA				S	**S**	**02 00 52.2**	**-4.3**
	0.7nm,1.0s,baz=101,slow=14,SNR=2.9						
FITZ	**Fitzroy Crossi**	**50.92**	**265**	P	**P**	**01 56 14.4**	**-0.2**
	2.5nm,0.5s,baz=73,slow=3.1,SNR=9.3						
YBH	**Yreka Blue Hor**	**83.66**	**39**	P	**P**	**01 59 35.4**	**-0.1**
	0.9nm,0.7s,baz=0.9,slow=1.6,SNR=3.5						
NVAR	**Mina Array Bea**	**84.35**	**44**	P	**P**	**01 59 39.3**	**+0.2**
	0.4nm,0.6s,baz=213,slow=7.1,SNR=3.7						
TXAR	**Lajitas Array**	**90.12**	**58**	P	**P**	**02 00 07.1**	**+0.6**
	0.9nm,0.7s,baz=216,slow=6.7,SNR=11						
ILAR	**Eielson Array**	**91.52**	**14**	P	**P**	**02 00 10.6**	**-1.4**
	0.4nm,0.9s,baz=209,slow=7.2,SNR=3.7						
PDAR	**Pinedale Array**	**92.29**	**44**	P	**P**	**02 00 16.4**	**+0.1**
	0.4nm,0.8s,baz=194,slow=2.5,SNR=4.3						
MKAR	**Makanchi Array**	**111.84**	**313**	PKiKP	**PKiKP**	**02 05 36.2**	**-1.3**
	0.2nm,0.6s,baz=191,slow=1.7,SNR=2.8						
AKASG	**Malin Array Be**	**144.57**	**328**	PKP	PKPbc	02 06 37.9	-0.9
	1.4nm,0.4s,baz=45,slow=4.2,SNR=11						
GERES	**GERESS Array B**	**152.39**	**340**	PKPbc	**PKPbc**	**02 06 57.6**	**-1.3**
	0.3nm,0.5s,baz=342,slow=8.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**169.70**	**189**	PKPab	**PKPab**	**02 08 27.7**	**+0.1**
	0.5nm,0.9s,baz=164,slow=5.9,SNR=2.7						

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*BJI **19** 01:49:38.2, 2°.22S×127°.14E, h45^{km}, mB5.1/11, mb4.8/27, Ms4.6/2*

*IDC **19** 01:49:40.1±0.5, 1°.42S×126°.55E, h0^{km}, mb4.6/19, mb1 4.6/23, mb1mx4.5/40, mbtmp4.5/23, ML4.0/4, MS3.8/4, Ms1 3.8/4, ms1mx3.1/40, Error ellipse: s-maj=20.2km s-min=11.8km az=74.0*

*ISCJB **19** 01:49:43.6±0.6, 1°.46S±0°.03×126°.66E±0°.03, h34^{km}±5^{km}, mb4.8/69, MS4.0/3, Error ellipse: s-maj=5.5km s-min=4.7km az=32.5*

*MOS **19** 01:49:44.1±0.9, 1°.31S×126°.67E, h33^{km}, mb5.0/36, Error ellipse: s-maj=13.1km s-min=6.7km az=115.5*

*DJA **19** 01:49:45.0±0.4, 2°S±3°×12°7E±°, h10^{km}, M4.9/15, mb5.2/9, mB5.2/10, MLv5.0/15, Mw(mB)4.6/10*

*NEIC **19** 01:49:45.6±0.8, 1°.46S×126°.66E, h37^{km}±8^{km}, mb4.8/39, Error ellipse: s-maj=8.7km s-min=5.4km az=65.0*

ISC 19 01:49:43.0±1.5**, 1°.41S**±0°.05×**126°.62E**±0°.04**, h16^{km}**±9^{km}**, n179,** σ**1^{s}.31**/190**, mb4.8**/79**, MS3.9**/3**, 3C-2D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	**Sanana**	**0.89**	**225**	P	**Pg**	**01 49 59.0**	**-1.3**
NLAI	**Namlea**	**1.88**	**165**	P	**Pn**	**01 50 15.6**	**+1.2**
TNTI	**Ternate**	**2.29**	**19**	*e*Pn	**Pb**	**01 50 22.3**	**-1.8**
TNTI				*e*Sn	**Sn**	**01 50 47.0**	**-1.1**
TNTI	**Ternate**	**2.29**	**19**	P	**Pb**	**01 50 24.6**	**+0.6**
KMSI	**Cibinong**	**3.30**	**307**	P	**Pb**	**01 50 41.3**	**+0.2**
LUWI	**Luwuk**	**3.87**	**275**	*e*Pn	**Pn**	**01 50 41.1**	**-0.7**
LUWI				*e*Sn	**Sn**	**01 51 26.4**	**-0.6**
LUWI	**Luwuk**	**3.87**	**275**	P	**Pn**	**01 50 42.2**	**+0.4**
SIJI	**Sorong**	**4.67**	**83**	Pn	**Pn**	**01 50 54.0**	**+1.0**
	8.1nm,0.3s,baz=278,slow=14,SNR=3.9						
SIJI				Sn	**Sn**	**01 51 50.2**	**+3.2**
	3.7nm,0.3s,baz=75,slow=20,SNR=2.5						
SIJI				LR	LR	01 53 16.2	
	comp=Z,638nm,21.3s,baz=269,slow=46						
KDI	**Kendari**	**4.73**	**238**	P	**Pn**	**01 50 54.6**	**+0.9**
APSI	**Ampana**	**5.00**	**276**	P	**Pn**	**01 50 57.8**	**+0.4**
	578nm,0.6s,10µm4.0nm						
MRSI	**Marisa**	**5.04**	**292**	P	**Pn**	**01 50 58.6**	**+0.6**
	137nm,0.6s,5µm1.7nm						
FAKI	**Fak Fak**	**5.82**	**105**	*e*Pn	**Pn**	**01 51 09.5**	**+0.7**
FAKI				*e*Sn	**Sn**	**01 52 14.4**	**-0.8**
FAKI	**Fak Fak**	**5.82**	**105**	P	**Pn**	**01 51 09.4**	**+0.7**
PCI	**Palu**	**6.80**	**274**	P	**Pn**	**01 51 23.8**	**+1.6**
PCI				pmax	pmax		
	comp=Z,589nm,0.8s						
PCI	**Palu**	**6.80**	**274**	P	**Pn**	**01 51 23.8**	**+1.6**
	comp=Z,590nm,0.8s,comp=Z,4µmcomp=Z,2.8nm						
MPSI	**Mapaga**	**6.95**	**284**	P	**Pn**	**01 51 27.6**	**+3.4**
	comp=Z,35nm,0.8s,comp=Z,684nmcomp=Z,0.3nm						
TTSI	**Tana Toraja**	**6.99**	**256**	P	**Pn**	**01 51 25.4**	**+0.6**
	comp=Z,218nm,0.7s,comp=Z,2µmcomp=Z,0.7nm						
BNSI	**Bone**	**7.15**	**245**	P	Pn	01 51 32.0	+5.0
	comp=Z,66nm,0.7s,comp=Z,957nmcomp=Z,0.3nm						
SPSI	**Sidrap Palu**	**7.30**	**250**	P	**Pn**	**01 51 30.8**	**+1.8**
BKSI	**Bulukumba**	**7.56**	**239**	P	**Pn**	**01 51 35.9**	**+3.3**
	comp=Z,58nm,0.7s,comp=Z,489nmcomp=Z,0.2nm						
KCP	**Kidapawan**	**8.51**	**350**	⇑*e*P	**Pn**	**01 51 49.5**	**+3.8**
SOEI	**Soe**	**8.61**	**196**	*e*Pn	**Pn**	**01 51 48.1**	**+0.9**
BATI	**Baumata**	**9.22**	**198**	Pn	**Pn**	**01 51 55.2**	**-0.2**
	comp=Z,5.1nm,0.3s,baz=57,slow=8.8,SNR=2.4						
BATI				LR	LR	01 55 42.7	
	comp=Z,714nm,18.5s,baz=9.5,slow=40						
BKB	**Balikpapan**	**9.72**	**271**	P	**Pn**	**01 52 06.2**	**+3.9**
KSM	**Kuching**	**16.56**	**280**	*e*Pn	**P**	**01 53 39.8**	**+2.5**
	comp=Z,55nm,1.1s						
FITZ	**Fitzroy Crossi**	**16.61**	**183**	*e*Pn	**P**	**01 53 38.6**	**+0.8**

```
                comp=Z,9.2nm,1.0s
FITZ  Fitzroy Crossi   16.61 183  Pn     Pn      01 53 34.3 -1.0
                comp=Z,0.1nm,0.3s,baz=18,slow=8.8,SNR=11
WRAB  Tennant Creek    19.90 158  eP     P       01 54 11.5 -2.5
                comp=Z,13nm,0.9s
WRAB  Tennant Creek    19.90 158  eP     P       01 54 11.5 -2.5
WRAB                              pmax   pmax
                comp=Z,13nm,0.9s
WR1   Warramunga Arr   19.90 158  eP     P       01 54 13.4 -0.6
                comp=Z,20nm,0.9s
WRA   Warramunga Arr   19.90 158  P      P       01 54 13.4 -0.6
                comp=Z,0.4nm,0.3s,baz=339,slow=12,SNR=55
WB2   Warramunga Arr   19.91 158  eP     P       01 54 13.8 -0.2
                comp=Z,18nm,0.9s
COEN  Coen             20.57 128  eP     P       01 54 21.2 -0.2
                comp=Z,17nm,0.8s
MBWA  Marble Bar       20.74 198  eP     P       01 54 23.2 +0.1
                comp=Z,26nm,1.5s
AS31  Alice Springs    23.22 163  eP     P       01 54 49.0 -0.5
                comp=Z,7.4nm,0.8s
ASAR  Alice Springs    23.22 163  P      P       01 54 48.7 -0.9
                comp=Z,26nm,0.8s,baz=343,slow=10.0,SNR=165
AS01  Alice Springs    23.23 163  eP     P       01 54 47.6 -2.1
CTA   Charters Tower   26.70 135  P      P       01 55 22.4 +0.7
                comp=Z,3.7nm,0.7s,baz=319,slow=11,SNR=3.9
CTAO  Charters Tower   26.70 135  eP     P       01 55 24.8 +3.0
                comp=Z,9.3nm,1.1s
CTAO  Charters Tower   26.70 135  eP     P       01 55 24.8 +3.0
CTAO                              pmax   pmax
                comp=Z,9.0nm,1.1s
STKA  Stephens Creek   33.43 156  eP     P       01 56 21.2  0.0
                comp=Z,4.1nm,1.4s
STKA  Stephens Creek   33.43 156  P      P       01 56 21.2  0.0
                comp=Z,0.7nm,0.3s,baz=324,slow=17,SNR=2.3
CM31  Chiang Mai Arr   33.63 307  eP     P       01 56 21.0 -2.1
                comp=Z,12nm,0.4s
CM31                              ePcP   PcP     01 59 04.4 +1.0
CMAR  Chiang Mai Arr   33.63 307  P      P       01 56 21.0 -2.1
                comp=Z,0.8nm,0.3s,baz=130,slow=9.6,SNR=3.0
CMAR                              PcP    PcP     01 59 04.4 +1.0
                comp=Z,2.8nm,0.7s,baz=148,slow=1.4,SNR=12
KMI   Kunming          35.09 320  P      P       01 56 38.1 +2.2
KMI                               pmax   pmax
                comp=Z,12nm,0.8s
KS15  Wonju Array Si   38.68   2  eP     P       01 57 05.7 -0.3
                comp=Z,24nm,1.4s
KS15                              ePcP   PcP     01 59 18.0  0.0
KSAR  Wonju Array Be   38.68   2  P      P       01 57 05.7 -0.3
KSAR                              PcP    PcP     01 59 18.0  0.0
KSAR  Wonju Array Be   38.68   2  P      P       01 57 05.7 -0.3
KSAR                                             01 59 18.0
KSRS  Korea Array      38.69   2  P      P       01 57 05.7 -0.4
                comp=Z,2.7nm,0.8s,baz=183,slow=10,SNR=6.2
KSRS                              PcP    PcP     01 59 18.0  0.0
                comp=Z,0.8nm,0.4s,baz=254,slow=1.5,SNR=5.4
XAN   Xi'an            39.00 336  P      P       01 57 08.4 -0.5
XAN                               pmax   pmax
                comp=Z,11nm,1.0s
XAN   Xi'an            39.00 336  eP     P       01 57 08.8 -0.1
                comp=Z,9.2nm,0.9s
XAN   Xi'an            39.00 336  eP     P       01 57 08.8 -0.1
XAN                               pmax   pmax
                comp=Z,9.0nm,0.9s
MAJO  Matsushiro       39.27  15  eP     P       01 57 09.4 -1.7
MAJO                              ePcP   PcP     01 59 20.3 +0.4
MAJO  Matsushiro       39.27  15  eP     P       01 57 09.4 -1.7
MAJO                              e              01 59 20.3
MJAR  Matsushiro Arr   39.27  15  P      P       01 57 09.4 -1.7
                comp=Z,2.7nm,0.6s,baz=189,slow=9.2,SNR=6.2
MJAR                              PcP    PcP     01 59 20.3 +0.4
                comp=Z,5.6nm,0.8s,baz=182,slow=2.9,SNR=7.1
LZH   Lanzhou          42.93 333  eP     P       01 57 43.5 +2.1
LZH                               pP     pwP     01 57 53.4 +4.4
LZH                               sP     sP      01 57 59.3  +12
LZH                               pmax   pmax
                comp=Z,27nm,1.2s
HHC   Hu-ho-hao-te     44.24 344  eP     P       01 57 56.4 +4.5
HHC                               pmax   pmax
                comp=Z,11nm,0.8s
HHC                               pmax   pmax
                comp=Z,140nm,4.7s
USRK  Ussuriysk Ar.    45.66   5  P      P       01 58 02.4 -0.5
                comp=Z,8.1nm,0.7s,baz=186,slow=6.6,SNR=18
ERM   Erimo            45.75  17⇓eP     P       01 58 05.2 +1.6
ERM                               pmax   pmax
                comp=Z,35nm,1.3s
GTA   Gaotai           47.49 332  eP     P       01 58 18.8 +1.3
GTA                               pP     pwP     01 58 27.8 +2.5
GTA                               sP     sP      01 58 31.4 +8.2
GTA                               pmax   pmax
                comp=Z,25nm,1.0s
GTA                               pmax   pmax
                comp=Z,150nm,7.0s
GTA                               LR     LR
                comp=Z,190nm,16.8s
GTA                               LR     LR
                comp=Z,190nm,17.5s
ASAJ  Asahikawa        47.53  16  P      P       01 58 17.9 +0.3
                comp=Z,5.4nm,0.4s,baz=228,slow=13,SNR=7.4
RAMN  Ramite           47.75 309  eP     P       01 58 19.8 -0.1
                comp=Z,34nm,0.8s
JIRN  Jiri             48.42 310  eP     P       01 58 25.0 -0.3
                comp=Z,27nm,0.8s
GUN   Gumba            48.78 310  eP     P       01 58 28.2 +0.2
                comp=Z,32nm,0.7s
PKI   Pulchoki         48.98 309  eP     P       01 58 30.0 +0.5
                comp=Z,22nm,1.2s
PKIN  Phulchoki        48.99 309  eP     P       01 58 29.9 +0.4
                comp=Z,4.7nm,0.5s
KKN   Kakani           49.19 309  eP     P       01 58 30.9 -0.1
                comp=Z,12nm,0.7s
DMN   Daman            49.23 309  eP     P       01 58 31.5 +0.1
                comp=Z,18nm,0.8s
YSS   Yuzh-Sakhalins   50.21  14  eP     P       01 58 36.3 -1.8
KOLN  Koldanda         50.48 308  eP     P       01 58 41.0 +0.2
                comp=Z,64nm,0.7s
DANN  Dangsing         50.63 309  eP     P       01 58 42.2 +0.2
                comp=Z,56nm,0.8s
HYB   Hyderabad        50.91 294  i P    P       01 58 43.0 -1.0
PYUN  Piuthan          51.12 308  eP     P       01 58 45.2 -0.4
                comp=Z,59nm,0.8s
ULN   Ulaanbaatar      51.97 343  eP     P       01 58 52.3 +0.8
                comp=Z,10nm,0.8s
ULN   Ulaanbaatar      51.97 343  eP     P       01 58 52.3 +0.8
ULN                               pmax   pmax
                comp=Z,10.0nm,0.8s
SONA0 Songino Array    52.13 343  eP     P       01 58 52.9 +0.2
SONA0                             ePcP   PcP     02 00 03.6 -0.9
SONM  Songino Array    52.13 343  P      P       01 58 52.9 +0.2
                comp=Z,5.8nm,0.7s,baz=152,slow=8.7,SNR=40
SONM                              PcP    PcP     02 00 03.6 -0.9
                comp=Z,1.7nm,0.7s,baz=164,slow=3.3,SNR=2.5
SONA1 Songino Array    52.14 343  eP     P       01 58 53.2 +0.5
NKL   Nikolayevsk      55.63  10  eP     P       01 59 18.0  0.0
NKL                               pmax   pmax
                comp=Z,25nm,0.8s
TLY   Talaya           56.37 343  eP     P       01 59 24.3 +0.9
TLY                               pmax   pmax
                comp=Z,8.0nm,1.0s
WMQ   Urumqi           56.91 327  eP     P       01 59 29.1 +1.7
                comp=Z,15nm,0.7s
WMQ   Urumqi           56.91 327  eP     P       01 59 29.1 +1.7
WMQ                               pmax   pmax
                comp=Z,15nm,0.7s
MOY   Mondy            57.17 341  eP     P       01 59 30.1 +0.9
MOY                               pmax   pmax
                comp=Z,21nm,2.7s
SKR   Severo-Kuril’s   57.68  22⇑eP     P       01 59 31.7 -0.9
BKZ   Black Stump Fm   58.91 136  eP     P       01 59 42.8 +1.2
                comp=Z,6.4nm,0.8s
URZ   Urewera          58.95 135  LR     LR      02 24 41.2
                comp=Z,63nm,18.7s,baz=329,slow=36
PETK  Petropavlovsk-   60.22  21  P      P       01 59 50.5 +0.2
                comp=Z,2.8nm,0.6s,baz=186,slow=6.5,SNR=9.6
PEA1  Petropavlovsk-   60.23  21  eP     P       01 59 50.5 +0.2
DGZ   Jazzator, Alta   61.02 332  i P    P       01 59 56.7 +0.7
DGZ                               pmax   pmax
                comp=Z,5.0nm,0.8s
PDGK  Podgornoye       61.34 322  P      P       01 59 58.8 +0.5
PDGK                              pmax   pmax
                comp=Z,12nm,0.8s
TARG  Taragay, Kyrgy   61.55 320  eP     P       02 00 01.7 +1.7
                comp=Z,5.7nm,0.8s
PRZ   Przheval'sk      61.56 321  eP     P       02 00 02.2 +2.4
                comp=Z,15nm,0.8s
MK01  Makanchi Array   61.72 327  eP     P       02 00 01.1 +0.5
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MK31  Makanchi Array   61.74 327  eP     P       02 00 01.4 +0.6
                comp=Z,10nm,0.8s
MK31  Makanchi Array   61.74 327  eP     P       02 00 01.4 +0.6
MK31                              pmax   pmax
                comp=Z,10.0nm,0.8s
MK32  Makanchi Array   61.74 327  eP     P       02 00 01.3 +0.6
MKAR  Makanchi Array   61.74 327  eP     P       02 00 01.4 +0.6
                comp=Z,90nm,0.8s
MKAR  Makanchi Array   61.74 327  eP     P       02 00 01.4 +0.6
MKAR                              pmax   pmax
                comp=Z,90nm,0.8s
MKAR  Makanchi Array   61.74 327  P      P       02 00 01.3 +0.6
                comp=Z,17nm,0.7s,baz=118,slow=8.1,SNR=189
MAKZ  Makanchi         61.92 327  eP     P       02 00 02.1 +0.1
                comp=Z,11nm,0.6s
MAKZ  Makanchi         61.92 327  eP     P       02 00 02.1 +0.1
MAKZ                              pmax   pmax
                comp=Z,11nm,0.6s
KDJ   Kajisay          62.15 320  eP     P       02 00 06.2 +2.4
                comp=Z,12nm,0.8s
KDJ   Kajisay          62.15 320  eP     P       02 00 06.2 +2.4
KDJ                               pmax   pmax
                comp=Z,12nm,0.8s
NRN   Naryn            62.56 319  eP     P       02 00 07.5 +0.8
                comp=Z,8.2nm,0.8s
NRN   Naryn            62.56 319  eP     P       02 00 07.6 +0.8
NRN                               pmax   pmax
                comp=Z,8.0nm,0.8s
KZA   Kyzart           63.37 319  P      P       02 00 13.8 +1.6
                SNR=17
TKM2  Tokmak 2         63.56 320  P      P       02 00 14.3 +1.0
                SNR=16
TKM2  Tokmak 2         63.56 320  P      P       02 00 13.8 +0.6
TKM2                              pmax   pmax
                comp=Z,8.0nm,0.6s
SFK   Sufi-Kurgan      63.57 317  P      P       02 00 14.2 +0.8
SFK                               pmax   pmax
                comp=Z,8.0nm,0.7s
MA2   Magadan          63.69  13  eP     P       02 00 15.2 +1.7
                comp=Z,24nm,0.9s
MA2   Magadan          63.69  13  eP     P       02 00 15.2 +1.7
MA2                               pmax   pmax
                comp=Z,24nm,0.9s
MA2   Magadan          63.69  13  P      P       02 00 13.8 +0.3
                comp=Z,20nm,0.9s,baz=189,slow=7.2,SNR=13
KBK   Karagaybulak     63.85 320  P      P       02 00 16.2 +1.2
                SNR=6.9
UCH   Uchtor           63.92 319  P      P       02 00 17.2 +1.3
                SNR=15
AAK   Ala-Archa        64.13 320  P      P       02 00 17.8 +0.9
                SNR=7.8
AAK   Ala-Archa        64.13 320  eP     P       02 00 18.2 +1.3
                comp=Z,8.1nm,1.0s
AAK   Ala-Archa        64.13 320  eP     P       02 00 18.2 +1.3
AAK                               pmax   pmax
                comp=Z,8.0nm,1.0s
AML   Almayashu        64.41 319  P      P       02 00 20.4 +1.3
                SNR=19
USP   Ospenovka        64.43 320  P      P       02 00 19.6 +0.9
                SNR=18
ARSB  Arslanbob        64.52 318  eP     P       02 00 20.4 +0.9
                comp=Z,15nm,0.9s
EKS2  Erkin-Say        64.61 319  P      P       02 00 21.4 +1.4
                SNR=17
KBL   Kabul            64.62 310  eP     P       02 00 20.8 +0.4
                comp=Z,13nm,0.8s
KBL   Kabul            64.62 310  eP     P       02 00 20.8 +0.4
KBL                               pmax   pmax
                comp=Z,13nm,0.8s
ZAA0  Zalesovo Array   65.12 334  eP     P       02 00 22.3 -0.7
                comp=Z,8.0nm,0.9s
ZALV  Zalesovo Beam    65.12 334  eP     P       02 00 22.1 -0.8
ZALV  Zalesovo Beam    65.12 334  eP     P       02 00 22.1 -0.8
ZALV  Zalesovo Beam    65.12 334  P      P       02 00 22.3 -0.7
                comp=Z,6.5nm,0.8s,baz=123,slow=5.4,SNR=24
ZAA1  Zalesovo Array   65.12 334  eP     P       02 00 22.3 -0.7
MNAS  Manas            65.36 319  P      P       02 00 25.3 +0.4
MNAS                              pmax   pmax
                comp=Z,15nm,1.1s
GAR   Garm             65.37 315  eP     P       02 00 25.5 +0.5
                comp=Z,31nm,1.0s
GAR   Garm             65.37 315  eP     P       02 00 25.5 +0.5
GAR                               pmax   pmax
                comp=Z,31nm,1.0s
BTK   Batken           65.45 316  eP     P       02 00 28.1 +2.6
                comp=Z,8.2nm,0.8s
BTK   Batken           65.45 316  eP     P       02 00 28.1 +2.6
BTK                               pmax   pmax
                comp=Z,8.0nm,0.8s
KURK  Kurchatov        66.03 329  eP     P       02 00 29.1 +0.3
                comp=Z,26nm,0.8s
KURK  Kurchatov        66.03 329  eP     P       02 00 29.1 +0.3
KURK                              pmax   pmax
                comp=Z,26nm,0.8s
CHGR  Chuyangaron      66.06 314  eP     P       02 00 29.7 +0.2
                comp=Z,20nm,0.8s
KK31  Karatay Array    66.95 319  eP     P       02 00 35.2 +0.3
                comp=Z,8.2nm,0.9s
KK31  Karatay Array    66.95 319  P      P       02 00 35.3 +0.3
KK31                              pmax   pmax
                comp=Z,7.0nm,0.9s
KKAR  Karatay Array    66.95 319  eP     P       02 00 35.2 +0.2
                comp=Z,8.2nm,0.9s
KKAR  Karatay Array    66.95 319  eP     P       02 00 35.2 +0.2
KKAR                              pmax   pmax
                comp=Z,8.0nm,0.9s
SEY   Seymchan         67.04  12  P      P       02 00 36.1 +1.1
                comp=Z,13nm,0.9s,baz=218,slow=5.5,SNR=37
OTUK  Ortayu           68.17 324  P      P       02 00 42.5 -0.1
OTUK                              pmax   pmax
                comp=Z,9.0nm,0.8s
BVA0  Borovoye Array   71.57 328  i P    P       02 01 03.0 -0.4
BVA0                              pmax   pmax
                comp=Z,8.0nm,1.0s
BRVK  Borovoye         71.64 328  eP     P       02 01 03.8  0.0
                comp=Z,10nm,1.0s
BRVK  Borovoye         71.64 328  eP     P       02 01 03.8  0.0
BRVK                              pmax   pmax
                comp=Z,10.0nm,1.0s
GEYT  Alibeck          74.06 310  P      P       02 01 18.5  0.0
                comp=Z,4.1nm,0.7s,baz=110,slow=3.5,SNR=7.9
BILL  Bilibino         74.53  14  eP     P       02 01 20.9 +0.3
BILL                              e              02 01 35.7
BILL                              e              02 04 07.8
BILL                              pmax   pmax
                comp=Z,1.0nm,0.9s
NRIK  Noril'sk         75.37 347  P      P       02 01 24.8 -0.6
                comp=Z,6.8nm,0.7s,baz=129,slow=6.7,SNR=9.0
AB31  Akbulak array    76.07 322  P      P       02 01 29.3 -0.5
AB31                              pmax   pmax
                comp=Z,6.0nm,0.9s
ABKAR Akbulak array    76.07 322  eP     P       02 01 29.5 -0.3
                comp=Z,6.5nm,0.9s
AKTO  Aktyubinsk       77.62 322  P      P       02 01 38.2 -0.4
AKTO                              pmax   pmax
                comp=Z,10.0nm,0.8s
ARU   Arti             79.22 328c iP     P       02 01 45.9 -1.3
ARU                               S      S       02 11 47.0 +0.4
ARU                               pmax   pmax
                comp=Z,5.0nm,0.9s
RAYN  Ar Rayn          82.42 294  eP     P       02 02 05.2  0.0
                comp=Z,4.0nm,1.0s
RAYN  Ar Rayn          82.42 294  eP     P       02 02 05.2  0.0
RAYN                              pmax   pmax
                comp=Z,4.0nm,1.0s
ZEI   Tsey             85.60 313  eP     P       02 02 16.4 -4.8
ZEI                               pmax   pmax
                comp=Z,7.0nm,1.3s
KIV   Kislovodsk       86.60 314  eP     P       02 02 25.5 -0.5
KIV                               pmax   pmax
                comp=Z,5.0nm,1.1s
QSPA  South Pole Qui   88.53 180  eP     P       02 02 35.3 +0.5
                comp=Z,10.0nm,1.4s
ILAR  Eielson Array    89.77  25  P      P       02 02 39.0 -1.5
ILAR  Eielson Array    89.77  25  P      P       02 02 39.0 -1.5
                comp=Z,0.6nm,0.6s,baz=239,slow=5.5,SNR=10.0
ILAR                              LR     LR      02 41 41.0
                comp=Z,52nm,21.1s,baz=165,slow=35
ILB   Eielson Array    89.77  25  eP     P       02 02 39.0 -1.5
                comp=Z,0.7nm,0.6s
OBN   Obninsk          91.18 325  eP     P       02 02 47.5 +0.3
OBN                               e              02 06 23.8
OBN                               pmax   pmax
                comp=Z,2.0nm,0.9s
INK   Inuvik           94.96  22  eP     P       02 03 03.2 -1.1
                comp=Z,3.8nm,1.1s
```

```
INK   Inuvik           94.96  22  eP     P       02 03 03.2 -1.1
INK                               pmax   pmax
                comp=Z,4.0nm,1.1s
INK   Inuvik           94.96  22  P      P       02 03 03.2 -1.1
                comp=Z,1.2nm,0.7s,baz=284,slow=3.4,SNR=4.5
ARA0  ARCESS Array S   95.21 340  eP     P       02 03 03.5 -2.0
ARCES ARCESS Array B   95.21 340  P      P       02 03 03.5 -2.0
                comp=Z,2.2nm,0.9s,baz=90,slow=3.6,SNR=4.1
KIEV  Kiev             95.79 321⇓eP     P       02 03 09.7 +1.1
KIEV                              pmax   pmax
                comp=Z,4.0nm,1.2s
YKA   Yellowknife Ar  104.19  25  Pdiff  Pdif    02 03 44.2 -1.7
                comp=Z,0.1nm,0.8s,baz=316,slow=5.2,SNR=3.1
YKB5  Yellowknife Ar  104.19  25  ePdif  Pdif    02 03 44.2 -1.7
PD31  Pinedale Array  115.23  43  ePKiKP PKiKP   02 08 21.9 -2.6
PDAR  Pinedale Array  115.23  43  PKP    PKiKP   02 08 21.9 -2.6
                comp=Z,0.2nm,0.5s,baz=282,slow=1.8,SNR=3.2
TOA0  Torodi Ar. Sit  124.27 285  ePKPdf PKPdf   02 08 42.1 -0.1
TORD  Torodi Ar. Bea  124.27 285  PKP    PKPdf   02 08 40.9 -1.3
                comp=Z,1.8nm,0.8s,baz=57,slow=2.2,SNR=10.0
TOA1  Torodi Ar. Sit  124.27 285  ePKPdf PKPdf   02 08 40.9 -1.3
TXAR  Lajitas Array   124.73  55  PKP    PKPdf   02 08 42.1 -0.8
                comp=Z,0.4nm,0.7s,baz=347,slow=3.7,SNR=6.8
N54A  Moraine State   133.86  28  ePKPdf PKPdf   02 08 57.7 -2.1
CPUP  Villa Florida   152.16 172  ePKPbc PKiKP   02 09 39.5 +0.6
CPUP  Villa Florida   152.16 172  ePKIKP PKiKP   02 09 39.6 +0.6
CPUP  Villa Florida   152.16 172  PKPbc  PKPbc   02 09 38.8 +0.2
                comp=Z,5.5nm,0.8s,baz=166,slow=0.9,SNR=9.9
```

SOME ***19*** *02:02:38.8, 42°.15N×76°.90E, h20^{km}*

NNC ***19*** *02:02:39.3±0.8, 42°.25N×76°.90E, h0^{km}, mb2.0, mpv2.5,*

Error ellipse: s-maj=5.3km s-min=2.9km az=168.0

KRNET 19 02:02:38.3±0.1, 42°.17N×76°.90E, h19^{km}, mb2.3, 14C-12D,

Lake Issyk-Kul region

```
Code  Station Name       Δ°   AZ°     Phase ID        Time     Res
                                     Op     ISC      h  m  s   ISC
KDJ   Kajisay           0.21 100⇑iP     Pg       02 02 43.7  0.0
                baz=0.0
KDJ                           ⇑iS      Sg       02 02 47.0 -0.4
                baz=0.0
ULHL  Ulahol            0.49 279⇑iP     Pg       02 02 48.0 -0.5
                baz=79
ULHL                          ⇑iS      Sg       02 02 54.9 -0.4
                baz=79
BOOM  Boomskoye usch    0.78 295⇓eP     Pb       02 02 53.1 -0.3
                baz=95
BOOM                          ⇓iS      Sb       02 03 03.6 -0.1
                baz=95
TARG  Taragay, Kyrgy    0.81 123⇑iP     Pb       02 02 53.5 -0.5
                baz=23
TARG                          ⇑iS      Sb       02 03 04.3 -0.3
                baz=23
TNSS  Tian-Shan         0.87   2  P      Pb       02 02 54.6 -0.4
                3.6nm,0.1s
TNSS                              S      Sb       02 03 06.1 -0.3
                5.7nm,0.3s
TNSS  Tian-Shan         0.87   2 eP      Pb       02 02 54.6 -0.5
                baz=2.0
TNSS                             eS      Sb       02 03 06.0 -0.5
                baz=2.0
TNSS  Tian-Shan         0.87   2 eP      Pb       02 02 54.6 -0.4
                3.6nm,0.1s
TNSS                             eS      Sb       02 03 06.0 -0.5
                5.7nm,0.3s
IZV   Izvestkoviy       0.89 346  P      Pb       02 02 55.5 +0.2
                1.7nm,0.1s
IZV                               S      Sg       02 03 07.4 -0.3
                5.2nm,0.2s
IZV   Izvestkoviy       0.89 346 eP      Pb       02 02 55.5 +0.2
                baz=46
IZV                              eS      Sg       02 03 07.4 -0.3
                baz=46
IZV   Izvestkoviy       0.89 346 eP      Pb       02 02 55.5 +0.2
                0.5nm,0.1s
IZV                              eS      Sg       02 03 07.4 -0.3
                5.2nm,0.2s
NRN   Naryn             0.99 223⇑eP     Pb       02 02 56.8 -0.3
                baz=23
NRN                           ⇑iS      Sg       02 03 10.8 -0.1
                baz=23
MDOK  Medeo             1.00   6  Pg     Pb       02 02 57.0 -0.2
                1.8nm,0.1s
MDOK                              Lg     Lg       02 03 09.9
                3.4nm,0.4s
MDOK  Medeo             1.00   6 eP      Pb       02 02 57.0 -0.2
                baz=6.0
MDOK                             eS      Sb       02 03 10.0  0.0
                baz=6.0
MDOK  Medeo             1.00   6 eP      Pb       02 02 57.0 -0.2
                1.5nm,0.2s
MDOK                             eS      Sb       02 03 10.0 -0.1
                3.4nm,0.5s
KOTS  Kotyrbulak        1.08   8  P      Pn       02 02 58.7 +0.1
                5.0nm,0.1s
KOTS                              S      Sn       02 03 13.0 -0.1
                7.8nm,0.3s
KOTS  Kotyrbulak        1.08   8 eP      Pn       02 02 58.7 +0.1
                baz=8.0
KOTS                             eS      Sn       02 03 13.0 -0.1
                baz=8.0
KOTS  Kotyrbulak        1.08   8 eP      Pn       02 02 58.7 +0.1
                5.0nm,0.1s
KOTS                             eS      Sn       02 03 13.0 -0.1
                7.8nm,0.3s
KST   Kastek            1.11 322  P      Pb       02 02 59.3 +0.2
                1.0nm,0.3s
KST                               S      Sn       02 03 13.8 -0.2
                1.9nm,0.2s
KST   Kastek            1.11 322 eP      Pb       02 02 59.3 +0.2
                baz=22
KST                              eS      Sn       02 03 13.8 -0.2
                baz=22
KST   Kastek            1.11 322 eP      Pb       02 02 59.3 +0.2
                0.6nm,0.1s
KST                              eS      Sn       02 03 13.8 -0.2
                1.5nm,0.3s
TKM2  Tokmak 2          1.22 308 ⇓P     Pg       02 03 01.8 -0.2
                0.2nm,0.3s
TKM2                             ⇓S     Sn       02 03 17.2 +0.5
                0.7nm,0.3s
TKM2  Tokmak 2          1.22 308⇑eP     Pb       02 03 01.1 +0.1
                baz=8.0
TKM2                          ⇑iS      Sg       02 03 17.6 -0.5
                baz=8.0
KZA   Kyzart            1.23 266⇓iP     Pb       02 03 01.2  0.0
                baz=66
KZA                           ⇓iS      Sg       02 03 17.8 -0.6
                baz=66
DGS   Degeres           1.36 323  P      Pb       02 03 03.8 +0.6
                0.8nm,0.4s
DGS                               S      Sg       02 03 21.7 -0.6
                2.3nm,0.2s
DGS   Degeres           1.36 323 eP      Pb       02 03 03.8 +0.6
                baz=23
DGS                              eS      Sg       02 03 21.7 -0.6
                baz=23
DGS   Degeres           1.36 323 eP      Pb       02 03 03.8 +0.6
                0.8nm,0.4s
DGS                              eS      Sg       02 03 21.7 -0.6
                2.3nm,0.2s
SATY  Saty              1.43  51  P      Pb       02 03 04.6 +0.2
                4.3nm,0.2s
SATY                              S      Sb       02 03 23.2 +1.0
                9.2nm,0.1s
SATY  Saty              1.43  51 eP      Pb       02 03 04.6 +0.2
                4.3nm,0.2s
SATY                             eS      Sb       02 03 23.2 +1.0
                9.2nm,0.1s
KBK   Karagaybulak      1.52 289⇑iP     Pb       02 03 06.5 +0.4
                baz=89
KBK                           ⇑iS      Sg       02 03 26.7 -1.0
                baz=89
KTBS  Karatobe          1.55 354  P      Pb       02 03 07.3 +0.8
                1.6nm,0.1s
KTBS                              S      Sg       02 03 27.7 -0.8
                3.7nm,0.3s
KTBS  Karatobe          1.55 354 eP      Pb       02 03 07.3 +0.8
                baz=49
KTBS                             eS      Sg       02 03 27.7 -0.8
                baz=49
KTBS  Karatobe          1.55 354 eP      Pb       02 03 07.3 +0.8
                1.6nm,0.1s
KTBS                             eS      Sg       02 03 27.7 -0.8
                3.7nm,0.3s
CHKK  Chushkaly         1.69   2  P      Pb       02 03 09.4 +0.7
                1.7nm,0.2s
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CHKK	4.3nm,0.2s			S	Sg	02 03 31.5	-1.3
CHKK	Chushkaly baz=3.0	1.69	2	eP	Pb	02 03 09.4	+0.6
CHKK	baz=3.0			eS	Sg	02 03 31.5	-1.3
CHKK	Chushkaly 1.7nm,0.2s	1.69	2	eP	Pb	02 03 09.4	+0.7
CHKK	4.3nm,0.2s			eS	Sg	02 03 31.5	-1.3
KUU	Kurty 1.6nm,0.2s	1.77	347	P	Pb	02 03 10.9	+0.6
KUU	3.7nm,0.4s			S	Sg	02 03 33.8	-1.7
KUU	Kurty baz=47	1.77	347	eP	Pb	02 03 10.9	+0.7
KUU	baz=47			eS	Sb	02 03 33.8	+1.7
KUU	Kurty 1.6nm,0.2s	1.77	347	eP	Pb	02 03 10.9	+0.7
KUU	3.7nm,0.4s			eS	Sg	02 03 33.8	-1.7
UCH	Uchtor baz=73	1.77	273	⇓eP	Pb	02 03 10.5	0.0
UCH	baz=73			⇓iS	Sg	02 03 34.6	-1.1
AAK	Ala-Archa 1.1nm,0.8s	1.84	286	⇓Pn	Pg	02 03 13.7	0.0
AAK	0.6nm,0.3s			⇑Sn	Sg	02 03 37.5	-0.3
UZB	Uzynbulak baz=57	1.85	57	eP	Pb	02 03 12.3	+0.7
UZB	baz=57			eS	Sb	02 03 36.1	+1.7
UZB	Uzynbulak 2.5nm,0.3s	1.85	57	eP	Pb	02 03 12.3	+0.7
UZB	3.5nm,0.2s			eS	Sb	02 03 36.1	+1.7
USP	Ospenovka baz=3.0	2.08	303	⇓iP	Pb	02 03 14.6	-0.9
USP	baz=3.0			⇓iS	Sb	02 03 41.4	+0.4
ARXS	Arharly 1.6nm,0.2s	2.15	18	eP	Pb	02 03 18.1	+1.3
ARXS	1.5nm,0.2s			eS	Sg	02 03 46.0	-1.7
PDGK	Podgornoye 0.5nm,0.3s	2.23	58	Pg	Pb	02 03 19.4	+1.2
PDGK	0.8nm,0.3s			Lg	Lg	02 03 48.4	
PDGK	Podgornoye 0.5nm,0.4s	2.23	58	⇑Pg	Pb	02 03 17.0	-1.1
PDGK	0.9nm,0.4s			⇓Lg	Lg	02 03 47.9	

DJA 19 02:05:04.2±1.1**, 1°S**±4°×**12°2E**±°**, h67**km±21km**, M3.6**/7**, MLv3.6**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.53	131	P	Pn	02 05 18.6	+1.5
MRSI	Marisa	1.24	340	P	Pn	02 05 25.0	-0.6
PCI	Palu	2.54	265	P	Pn	02 05 41.5	-1.7
PCI				S	Sn	02 06 14.2	+1.1
MPSI	Mapaga	2.67	292	P	Pn	02 05 45.3	+0.4
KDI	Kendari	3.25	176	P	Pn	02 06 04.4	+12
TTSI	Tana Toraja	3.46	227	P	Pn	02 05 56.5	+0.8
SPSI	Sidrap Palu	4.16	219	P	Pn	02 06 05.5	+0.2
SPSI				S	Sn	02 06 52.8	+0.1

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*ISCJB **19** 02:05:38.5±0.6, 7°.71S±0°.05×128°.50E±0°.07, h150km, mb4.0/5, Error ellipse: s-maj=9.7km s-min=6.6km az=7.7*

*IDC **19** 02:05:42.7±3.0, 7°.91S×128°.35E, h173km±28km, mb3.6/4, mb1 3.7/8, mb1mx3.4/38, mbtmp4.2/8, MS3.7/1, Ms1 3.7/1, ms1mx2.6/31, Error ellipse: s-maj=29.0km s-min=17.8km az=68.0*

ISC 19 02:05:40.2±0.8**, 7°.90S**±0°.07×**128°.50E**±0°.10**, h150**km**, n11, σ1§66**/14**, mb4.0**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata 26nm,0.3s,baz=107,slow=2.9,SNR=12	5.30	244	P	Pn	02 06 57.9	+0.2
BATI	13nm,0.3s,baz=320,slow=13,SNR=13			S	Sn	02 07 59.0	+0.8
SIJI	Sorong 1.2nm,0.3s,baz=198,slow=20,SNR=2.4	7.50	22	S	Sn	02 08 45.3	-5.7
FITZ	Fitzroy Crossi 1.4nm,0.3s,baz=27,slow=9.7,SNR=42	10.52	195	P	Pn	02 08 08.4	+1.3
FITZ	1.7nm,0.3s,baz=246,slow=10.0,SNR=6.4			S	Sn	02 10 00.5	-3.0
WRA	Warramunga Arr 0.6nm,0.3s,baz=341,slow=12,SNR=34	13.24	155	P	Pn	02 08 44.6	+2.0
WRA	2.3nm,0.3s,baz=328,slow=23,SNR=15			S	Sn	02 11 07.4	-1.9
ASAR	Alice Springs 0.5nm,0.3s,baz=335,slow=10,SNR=22	16.51	162	P	Pn	02 09 26.4	+3.1
ASAR	0.6nm,0.3s,baz=320,slow=15,SNR=6.4			S	S	02 12 26.7	-0.2
CTA	Charters Tower comp=Z,172nm,18.7s,baz=38,slow=42	21.03	127	LR	LR	02 20 33.0	
SONM	Songino Array 0.3nm,0.5s,baz=156,slow=6.1,SNR=3.6	58.84	343	P	P	02 15 23.0	-0.1
PETK	Petropavlovsk- 3.2nm,0.8s,baz=193,slow=5.8,SNR=3.0	65.64	19	P	P	02 16 07.9	-0.2
MKAR	Makanchi Array 0.7nm,0.4s,baz=121,slow=8.0,SNR=23	68.17	328	P	P	02 16 24.2	-0.1
MKAR	0.3nm,0.8s,baz=124,slow=4.9,SNR=2.9			PcP	PcP	02 16 49.2	+0.1
ZALV	Zalesovo Beam 1.2nm,0.4s,baz=135,slow=4.6,SNR=4.8	71.74	335	P	P	02 16 44.8	-1.0
MAW	Mawson 10nm,0.3s,baz=80,slow=19,SNR=13	73.58	201	P	P	02 16 55.7	-0.8

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*IDC **19** 02:07:09.8±1.3, 11°.00S×166°.08E, h0km, mb4.2/8, mb1 4.3/10, mb1mx4.0/41, mbtmp4.3/10, ML4.6/2, MS3.6/7, Ms1 3.6/7, ms1mx3.3/37, Error ellipse: s-maj=26.0km s-min=24.6km az=108.0*

*ISCJB **19** 02:07:10.4±0.8, 11°.17S±0°.08×165°.96E±0°.08, h10km, mb4.3/13, MS3.6/6, Error ellipse: s-maj=14.2km s-min=7.4km az=138.7*

*NEIC **19** 02:07:11.4±0.6, 11°.02S×166°.08E, h10km, mb4.5/8, Error ellipse: s-maj=12.6km s-min=9.3km az=54.0*

ISC 19 02:07:11.6±1.0**, 11°.04S**±0°.10×**166°.0E**±0°.1**, h10**km**, n32, σ1§46**/23**, mb4.3**/14**, MS3.5**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 27nm,0.3s,baz=180,slow=2.0,SNR=3.5	6.21	284	Pn	Pn	02 08 43.8	+0.4
HNR	10nm,0.3s,baz=190,slow=16,SNR=1.8			Sn	Sn	02 09 53.8	-0.7
HNR	comp=Z,966nm,19.6s,baz=160,slow=39			LR	LR	02 11 15.6	
DZM	Mont Dzumac 29nm,0.7s	10.98	178	ePn	Pn	02 09 51.7	+2.8
DZM	comp=Z,136nm,22.4s			eLR	LR	02 12 21.6	
DZM	Mont Dzumac 2.1nm,0.3s,baz=337,slow=13,SNR=15	10.98	178	Pn	Pn	02 09 49.9	+1.0
DZM	0.2nm,0.3s,baz=144,slow=19,SNR=2.3			Sn	Sn	02 11 50.1	-1.7
CTA	Charters Tower 1.6nm,0.4s,baz=11,slow=16,SNR=4.5	21.06	242	P	P	02 11 57.0	+0.9
H11S2	WAKE ISLAND Hy baz=181,slow=76,SNR=85	29.35	1	T	T	02 43 35.1	
H11S3	WAKE ISLAND Hy baz=181,slow=76,SNR=54	29.36	1	T	T	02 43 35.3	
H11S1	WAKE ISLAND Hy baz=181,slow=76,SNR=41	29.37	1	T	T	02 43 36.4	
BKZ	Black Stump Fm 14nm,1.4s	29.52	163	eP	P	02 13 17.4	+1.1
H11N1	WAKE ISLAND Hy baz=182,slow=76,SNR=50	30.57	2	T	T	02 45 06.7	
H11N3	WAKE ISLAND Hy baz=182,slow=76,SNR=28	30.58	2	T	T	02 45 07.0	
H11N2	WAKE ISLAND Hy baz=182,slow=76,SNR=22	30.59	2	T	T	02 45 08.0	
STKA	Stephens Creek 1.6nm,1.1s	30.64	224	eP	P	02 13 26.4	+0.1
STKA	Stephens Creek 4.0nm,1.1s,baz=44,slow=8.2,SNR=2.8	30.64	224	P	P	02 13 26.4	+0.1
STKA	comp=Z,103nm,18.7s,baz=24,slow=36			LR	LR	02 25 32.1	
BFZ	Birch Farm 13nm,1.1s	30.87	165	eP	P	02 13 27.6	-0.5
THZ	Tophouse 6.8nm,0.8s	31.19	170	eP	P	02 13 32.1	+1.0
WR1	Warramunga Arr 11nm,1.3s	31.76	250	eP	P	02 13 36.0	-0.3
WRA	Warramunga Arr 2.8nm,0.7s,baz=81,slow=9.2,SNR=3.2	31.76	250	P	P	02 13 36.0	-0.3
WRA	comp=Z,92nm,19.8s,baz=85,slow=36			LR	LR	02 26 22.6	
KHZ	Kahutara	31.94	169	eP	P	02 13 33.2	-4.3
RPZ	Rata Peaks 2.1nm,0.4s,baz=0.0,slow=4.0,SNR=2.7	32.84	173	P	P	02 13 45.0	-0.5
AS31	Alice Springs 1.2nm,0.7s	33.05	243	eP	P	02 13 47.6	0.0
ASAR	Alice Springs 1.2nm,0.7s,baz=69,slow=10,SNR=3.1	33.05	243	P	P	02 13 47.6	0.0
ASAR	comp=Z,89nm,18.2s,baz=94,slow=37			LR	LR	02 27 33.1	
MLZ	Mavora Lakes 40nm,1.4s	34.25	177	eP	P	02 13 55.1	-2.7
FITZ	Fitzroy Crossi 2.7nm,0.5s,baz=72,slow=6.7,SNR=3.5	39.66	255	P	P	02 14 44.3	+0.2
BATI	Baumata comp=Z,89nm,21.0s,baz=80,slow=36	41.64	267	LR	LR	02 32 24.6	
PPT	Papeete comp=Z,56nm,21.4s,baz=298,slow=31	43.41	104	LR	LR	02 29 45.7	
PPT2	Papeete2 comp=Z,124nm,22.2s	43.41	104	eLR	LR	02 27 46.3	
TBI	Tubuai comp=Z,185nm,29.5s	44.06	112	eLR	LR	02 28 07.5	
ILAR	Eielson Array 0.7nm,0.7s,baz=231,slow=4.7,SNR=8.3	83.42	18	P	P	02 19 38.4	-0.5
ILB	Eielson Array	83.42	18	eP	P	02 19 38.4	-0.5
MK32	Makanchi Array	93.72	317	eP	P	02 20 29.1	+0.3
MKAR	Makanchi Array 1.1nm,0.7s,baz=97,slow=6.0,SNR=6.9	93.72	317	P	P	02 20 29.1	+0.3
TXAR	Lajitas Array comp=Z,38nm,18.7s,baz=0.0,slow=32	95.57	61	LR	LR	02 57 36.3	

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*NEIC **19** 02:08:59.7±0.0, 15°.63N×95°.92W, h20km, MD4.1(MEX), After MEX.*

MEX 19 02:08:59.7±0.5**, 15°.63N**×**95°.92W, h20**km±10km**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.23	306	iP	Pb	02 09 04.4	-0.9
HUIG				eS	Sb	02 09 07.9	-1.2
HUIG	Huatulco	0.23	306	iP	Pb	02 09 04.4	-0.9
HUIG				eS	Sb	02 09 07.9	-1.2
VHO	Vista Hermosa	1.63	331	eP	Pn	02 09 24.9	-2.6
VHO				eS	Sn	02 09 43.5	-4.5
VHO	Vista Hermosa	1.63	331	eP	Pn	02 09 24.9	-2.6
VHO				eS	Sn	02 09 43.5	-4.5
CMIG	Matias Romero	1.76	34	eP	Pn	02 09 26.0	-3.1
CMIG				eS	Sn	02 09 46.9	-3.9
CMIG	Matias Romero	1.76	34	eP	Pn	02 09 26.0	-3.1
CMIG				eS	Sn	02 09 46.9	-3.9
PNIG	Pinotepa	2.25	290	eP	Pn	02 09 33.5	-2.4
PNIG				eS	Sn	02 10 00.0	-3.2
PNIG	Pinotepa	2.25	290	eP	Pn	02 09 33.5	-2.4
PNIG				eS	Sn	02 10 00.0	-3.2
PCIG		2.60	88	eP	Pn	02 09 39.5	-1.2
PCIG				eS	Sn	02 10 08.0	-3.7
PCIG		2.60	88	eP	Pn	02 09 39.5	-1.2
PCIG				eS	Sn	02 10 08.0	-3.7

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*NIED **19** 02:12:00, 23°.40N×120°.50E, h20km, Mw4.1 Best double couple: $M_0$1.72000×10^15 NP1:ϕ_s308.00000°, δ50.00000°, λ-1.00000°. NP2:ϕ_s39.00000°, δ89.00000°, λ-140.00000°.*

*IDC **19** 02:12:42.3±0.6, 23°.28N×120°.75E, h0km, mb3.8/13, mb1 3.9/15, mb1mx3.8/38, mbtmp3.8/15, ML3.1/2, MS2.7/2, Ms1 2.8/2, ms1mx2.6/35, Error ellipse: s-maj=23.2km s-min=14.7km az=70.0*

*BJI **19** 02:12:44.7, 23°.37N×120°.53E, h9km, mb4.1/10, mB4.4/1, ML4.3/8, Ms4.2/9, Ms7 4.2/8*

*JMA **19** 02:12:44.4±0.1, 23°.40N×120°.52E, h0km, M4.6*

*ASIES **19** 02:12:45.9, 23°.36N×120°.57E, h15km, MW3.8*

*TAP **19** 02:12:45.6, 23°.35N×120°.55E, h15km, ML4.6, B*

*NEIC **19** 02:12:45.9±0.0, 23°.36N×120°.57E, h16km, mb4.5/5, ML4.5(TAP), After TAP.*

NEIC Felt at Kaohsiung. Recorded [4 TAP] in Chiayi, [3 TAP] in Yunlin, [2 TAP] in Taitung and [1 TAP] in Changhua, Hualien and Penghu.

*ISCJB **19** 02:12:46.2±0.1, 23°.356N±0°.009×120°.51E±0°.01, h25km±1km, mb4.0/15, MS2.5/1, Error ellipse: s-maj=1.8km s-min=1.5km az=19.4*

ISC 19 02:12:45.4±0.6**, 23°.36N**±0°.01×**120°.54E**±0°.01**, h18**km±3km**, n185, σ1§06**/273**, mb4.1**/15**, 25C-36D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN4	Tsaushan baz=92	0.05	100	⇓iP	Pg	02 12 48.9	+0.2
CHN4	baz=92			S	Sg	02 12 51.2	+0.3
TPUB	Ta-pu	0.10	126	ePg	Pg	02 12 49.1	0.0
TPUB				eSg	Sg	02 12 51.0	-0.6
TPUB	Ta-pu baz=127	0.10	126	⇓P	Pg	02 12 49.1	0.0
TPUB	baz=127			S	Sg	02 12 51.6	0.0
TWK	Hsinying baz=208	0.10	209	⇑iP	Pg	02 12 49.3	+0.1
TWK	baz=208			S	Sg	02 12 51.8	+0.1
WTP	Ta-pu baz=150	0.13	150	⇓iP	Pb	02 12 49.7	+1.0
WTP	baz=150			iS	Sb	02 12 52.5	+1.8
SNST	Tainan City baz=193	0.14	197	⇑iP	Pg	02 12 49.9	+0.3
SNST	baz=193			iS	Sb	02 12 52.9	+1.6
CHN1	Nanshi baz=188	0.17	184	⇑iP	Pb	02 12 50.3	+0.6
CHN1	baz=188			iS	Sb	02 12 53.8	+1.2
CHY	Chiayi baz=322	0.18	322	eP	Pb	02 12 50.6	+0.9
CHY	baz=322			S	Sb	02 12 54.7	+2.2
CHN2	Minshiung baz=338	0.18	340	⇓iP	Pb	02 12 51.0	+1.1
CHN2	baz=338			iS	Sb	02 12 55.2	+2.4
CHN5	Tsauling baz=25	0.27	28	⇓iP	Pb	02 12 52.1	+0.4
CHN5	baz=25			iS	Sb	02 12 56.9	+1.0
STYT	Tauyuan baz=125	0.28	135	⇓iP	Pb	02 12 52.1	+0.3
STYT	baz=125			iS	Sb	02 12 56.7	+0.6
SGST	Jiashian baz=173	0.28	172	⇓iP	Pb	02 12 52.2	+0.4
SGST	baz=173			iS	Sb	02 12 57.4	+1.2
CHN8	Yiju baz=269	0.30	268	⇓iP	Pg	02 12 52.6	+0.5
CHN8	baz=269			iS	Sb	02 12 58.7	+1.7
CHN3	Shinhua baz=221	0.33	210	⇑iP	Pb	02 12 53.8	+1.0
CHN3	baz=221			S	Sb	02 12 59.8	+2.2
WGK	Gukeng baz=2.0	0.33	3	P	Pb	02 12 53.5	+0.7
WGK	baz=2.0			S	Sb	02 12 59.4	+1.7
WDLH	Douliu baz=357	0.33	359	eP	Pb	02 12 53.6	+0.8
WDLH	baz=357			S	Sb	02 12 59.5	+1.7
SCLT	Jiali baz=241	0.37	240	⇓P	Pb	02 12 54.0	+0.6
SCLT	baz=241			S	Sb	02 13 01.0	+2.1
SLGT	Liugui baz=157	0.38	165	⇓P	Pb	02 12 53.9	+0.3
SLGT	baz=157			eS	Sb	02 12 60.0	+0.8
WSF	Szhu baz=313	0.41	313	⇓iP	Pb	02 12 54.4	+0.4
WSF	baz=313			S	Sb	02 13 01.2	+1.3
TAI1	Yung-k'ang baz=233	0.43	222	eP	Pb	02 12 55.7	+1.2
TAI1	baz=233			eS	Sb	02 13 03.2	+2.6
WHYT	Xinyi Township baz=45	0.44	40	⇓P	Pb	02 12 55.2	+0.5
WHYT	baz=45			S	Sb	02 13 01.8	+0.8
ELDTW	Lidau baz=102	0.47	111	⇓iP	Pb	02 12 55.5	+0.3
ELDTW	baz=102			S	Sb	02 13 02.2	+0.4
WJS	Zhushan baz=18	0.49	20	⇑P	Pb	02 12 56.4	+0.9
WJS	baz=18			eS	Sb	02 13 03.8	+1.4
WMLT	Mailiao baz=325	0.53	327	P	Pg	02 12 56.6	+0.5
WMLT	baz=325			eS	Sb	02 13 04.9	+1.4
WNT	Mingjian baz=12	0.53	14	⇑iP	Pb	02 12 57.1	+0.9
WNT	baz=12			S	Sb	02 13 05.4	+1.9
TWM1	Shoushan baz=181	0.55	192	eP	Pn	02 12 58.5	+0.2
TWM1	baz=181			eS	Sn	02 13 06.9	-0.1
RLNB	Erlin baz=331	0.56	342	⇓P	Pb	02 12 57.0	+0.4
RLNB	baz=331			S	Sb	02 13 05.6	+1.4
WTCT	Ta-ch'eng baz=334	0.56	334	⇓eP	Pg	02 12 56.9	+0.3
WTCT	baz=334			S	Sb	02 13 05.4	+1.2
SSLB	Suanglung	0.57	41	ePg	Pb	02 12 57.1	+0.3
SSLB				eSg	Sg	02 13 03.7	-0.8
SSLB	Suanglung baz=40	0.57	41	⇑P	Pb	02 12 57.3	+0.5
SSLB	baz=40			S	Sb	02 13 05.5	+0.9
TYC	Yuchr baz=27	0.61	28	⇑iP	Pb	02 12 58.4	+0.8
TYC	baz=27			S	Sn	02 13 07.9	-0.7
SMLT	Sun Moon Lake baz=31	0.62	32	⇑iP	Pb	02 12 58.4	+0.7
SMLT	baz=31			S	Sb	02 13 07.5	+1.5
SSD	Sandimen baz=173	0.62	172	⇓iP	Pb	02 12 58.5	+0.9
SSD	baz=173			S	Sb	02 13 07.5	+1.6
SGLT	Jiouru baz=174	0.63	184	eP	Pn	02 13 00.0	+0.5
SGLT	baz=174			eS	Sn	02 13 10.2	+1.1
SNJT	Kaohsiung City baz=215	0.63	198	eP	Pn	02 12 59.7	+0.2
SNJT	baz=215			eS	Sn	02 13 10.7	+1.6
VWDT	VWDT baz=58	0.68	54	⇓P	Pb	02 12 59.5	+0.9
VWDT	baz=58			S	Sb	02 13 08.6	+1.0
TWF1	Yuli baz=90	0.69	90	⇓iP	Pb	02 12 59.5	+0.6
TWF1	baz=90			S	Sb	02 13 08.8	+0.6
YULB	Yu-li	0.69	87	ePg	Pb	02 12 58.9	-0.1
YULB				eSg	Sg	02 13 07.7	-0.6
YULB	Yu-li baz=95	0.69	87	⇓P	Pb	02 12 59.4	+0.4
YULB	baz=95			S	Sb	02 13 08.6	+0.4
WCHH	Zhanghua baz=359	0.72	1	eP	Pb	02 13 00.1	+0.7
WCHH	baz=359			eS	Sb	02 13 10.6	+1.7
TWG	Pinlang	0.72	138	ePg	Pb	02 13 00.2	+0.7
TWG				eSn	Sb	02 13 09.2	+0.1
TWG	Pinlang baz=128	0.72	138	⇓iP	Pb	02 13 00.3	+0.7
TWG	baz=128			S	Sb	02 13 10.1	+1.0
EHY	Hungye baz=86	0.73	78	⇓iP	Pb	02 13 00.2	+0.6
EHY	baz=86			S	Sb	02 13 09.9	+0.7
TWGBT	Beinan baz=128	0.73	137	⇓P	Pb	02 13 00.2	+0.6
TWGBT	baz=128			S	Sb	02 13 10.4	+1.1
MASBT	Mashibuluo baz=167	0.75	174	⇓P	Pb	02 13 00.6	+0.7
MASBT	baz=167			S	Sn	02 13 11.5	-0.4
TCU	Taichung baz=355	0.79	9	eP	Pb	02 13 01.3	+0.6
TCU	baz=355			eS	Sb	02 13 12.6	+1.5
CHKT	Chengkung baz=109	0.80	109	eP	Pn	02 13 02.1	+0.3
CHKT	baz=109			eS	Sn	02 13 13.8	+0.6
KAU	Kaohsiung baz=197	0.82	195	eP	Pg	02 13 01.7	+0.3
KAU	baz=197			eS	Sn	02 13 15.5	+1.9
WDGT	Dungji baz=264	0.82	263	⇓iP	Pb	02 13 00.9	-0.1
WDGT	baz=264			eS	Sg	02 13 12.1	-0.1
HGSD	Ruisui baz=87	0.82	81	⇓P	Pn	02 13 02.3	+0.3
HGSD	baz=87			eS	Sn	02 13 13.5	-0.3
TTN	Taitung baz=138	0.82	137	⇓P	Pn	02 13 02.8	+0.7
TTN	baz=138			S	Sn	02 13 14.6	+0.9
OWD	Renai baz=32	0.83	44	P	Pb	02 13 02.0	+0.6
OWD	baz=32			eS	Sb	02 13 13.1	+0.9
EGFH	Guangfu baz=61	0.87	69	P	Pn	02 13 02.8	0.0
EGFH	baz=61			S	Sn	02 13 14.4	-0.6
SSPT	Xinbi baz=167	0.87	178	⇑P	Pn	02 13 03.3	+0.6
PHUB	P'eng-hu baz=280	0.91	280	⇓P	Pb	02 13 02.1	-0.5
PHUB	baz=280			S	Sb	02 13 13.9	-0.3
CHGB	Renai baz=38	0.91	40	⇑P	Pg	02 13 03.0	-0.1
CHGB	baz=38			eS	Sb	02 13 14.7	+0.1
PNG	Penghu baz=283	0.93	283	⇓iP	Pb	02 13 02.8	-0.2
PNG	baz=283			S	Sb	02 13 15.4	+0.4
ESL	Shilin baz=73	0.93	61	P	Pn	02 13 03.7	+0.1
ESL	baz=73			S	Sn	02 13 16.3	-0.3
SCZT	Fangliau baz=169	0.98	176	P	Pn	02 13 04.9	+0.6
SCZT	baz=169			S	Sn	02 13 19.1	+1.2
WHP	Taichung City baz=20	0.99	22	⇑eP	Pg	02 13 04.5	-0.2
WHP	baz=20			eS	Sn	02 13 19.1	+1.1
WDJ	Dajia District baz=3.0	0.99	5	P	Pg	02 13 04.8	+0.1
WDJ	baz=3.0			S	Sn	02 13 19.2	+1.3
TWQ1	Liyutan baz=357	1.01	12	⇑iP	Pn	02 13 05.1	+0.4

TWQ1				*e*S	**Sn**	**02 13 18.9**	**+0.5**
	baz=357						
EAST	**Anshuo**	**1.01**	**164**	⇑P	**Pn**	**02 13 05.2**	**+0.5**
	baz=165						
EAST				*e*S	**Sn**	**02 13 19.6**	**+1.0**
	baz=165						
WLCH	**Liuqiu**	**1.01**	**189**	*e*P	**Pn**	**02 13 06.2**	**+1.5**
	baz=212						
TWP	**Hsiaoliuchiu**	**1.02**	**189**	*e*P	**Pg**	**02 13 05.8**	**+0.5**
	baz=213						
TWP				*e*S	**Sn**	**02 13 20.2**	**+1.5**
	baz=213						
WHF	**Hehuan Shan**	**1.02**	**40**	*e*P	**Pg**	**02 13 05.2**	**-0.2**
	baz=39						
WHF				*e*S	**Sn**	**02 13 19.5**	**+0.1**
	baz=39						
VCHM	**Qimei**	**1.03**	**262**	⇓P	**Pb**	**02 13 04.1**	**-0.6**
	baz=262						
VCHM				*e*S	**Sb**	**02 13 17.8**	**-0.2**
	baz=262						
TAW	**Tawu**	**1.05**	**162**	*e*P	**Pg**	**02 13 06.0**	**+0.3**
	baz=169						
TAW				*e*S	**Sn**	**02 13 20.5**	**+1.1**
	baz=169						
TDCB	**Techi**	**1.05**	**32**	*e*P	**Pb**	**02 13 05.2**	**0.0**
	baz=30						
TDCB				S	**Sn**	**02 13 19.9**	**+0.1**
	baz=30						
TWT	**Tachien**	**1.06**	**33**	*e*P	**Pb**	**02 13 05.6**	**+0.2**
	baz=31						
TWT				*e*S	**Sn**	**02 13 20.1**	**+0.1**
	baz=31						
NSY	**Sanyi**	**1.07**	**11**	⇑P	**Pg**	**02 13 06.3**	**+0.1**
	baz=358						
NSY				*e*S	**Sn**	**02 13 21.6**	**+1.6**
	baz=358						
ENLB	**Shoufeng**	**1.11**	**61**	*e*P	**Pg**	**02 13 07.3**	**+0.3**
	baz=50						
ENLB				S	**Sn**	**02 13 22.2**	**+1.2**
	baz=50						
HWA	**Hwalien**	**1.15**	**58**	*e*P	**Pg**	**02 13 08.3**	**+0.6**
	baz=57						
HWA				*e*S	**Sg**	**02 13 24.3**	**+1.5**
	baz=57						
NMLH	**Miaoli**	**1.19**	**11**	*e*P	**Pb**	**02 13 07.9**	**+0.4**
	baz=358						
NMLH				*e*S	**Sg**	**02 13 24.0**	**-0.2**
	baz=358						
TWD	**Chiawan**	**1.20**	**53**	*e*P	**Pg**	**02 13 08.2**	**-0.5**
	baz=52						
TWD				S	**Sg**	**02 13 24.5**	**+0.1**
	baz=52						
ETLH	**Xiulin Townshi**	**1.21**	**45**	*e*P	**Pb**	**02 13 07.9**	**+0.1**
	baz=38						
ETLH				*e*S	**Sg**	**02 13 24.3**	**-0.2**
	baz=38						
NACB	**Ninganchiao**	**1.26**	**50**	*e*Pn	**Pb**	**02 13 08.7**	**0.0**
NACB				*e*Sn	**Sb**	**02 13 24.1**	**-0.4**
NACB	**Ninganchiao**	**1.26**	**50**	⇓*e*P	**Pb**	**02 13 08.9**	**+0.3**
	baz=48						
NACB				S	**Sg**	**02 13 25.4**	**-0.9**
	baz=48						
NNSB	**Datong**	**1.31**	**36**	*e*P	**Pb**	**02 13 09.9**	**+0.3**
	baz=34						
NNSB				*e*S	**Sg**	**02 13 27.4**	**-0.6**
	baz=34						
NNS	**Nan Shan**	**1.32**	**35**	*e*P	**Pb**	**02 13 09.7**	**0.0**
	baz=23						
NNS				*e*S	**Sg**	**02 13 27.4**	**-0.8**
	baz=23						
NSTT	**Nanjuang**	**1.33**	**18**	⇑P	**Pn**	**02 13 09.7**	**+0.5**
	baz=16						
NSTT				S	**Sg**	**02 13 27.9**	**-0.7**
	baz=16						
LIOB	**Emei**	**1.35**	**19**	⇑P	**Pn**	**02 13 09.2**	**-0.2**
	baz=16						
LIOB				*e*S	**Sn**	**02 13 27.0**	**+0.1**
	baz=16						
HEN	**Hengchun**	**1.36**	**172**	*e*P	**Pn**	**02 13 10.3**	**+0.8**
	baz=192						
TWK1	**Hengchun**	**1.43**	**170**	⇑P	**Pn**	**02 13 11.2**	**+0.7**
	baz=171						
TWKBT	**Hengchun**	**1.43**	**170**	⇑P	**Pn**	**02 13 11.1**	**+0.6**
	baz=171						
SBCB	**Hsinchu**	**1.48**	**16**	*e*P	**Pn**	**02 13 11.8**	**+0.6**
	baz=13						
SBCB				*e*S	**Sb**	**02 13 32.0**	**+1.0**
	baz=13						
TSEB	**Hengchuen, Pin**	**1.49**	**167**	*e*P	**Pg**	**02 13 14.1**	**-0.1**
	baz=183						
NSK	**Sanguang**	**1.51**	**29**	⇑P	**Pb**	**02 13 12.7**	**-0.3**
	baz=29						
YHNB	**Yeheng**	**1.51**	**30**	*e*Pn	**Pb**	**02 13 12.7**	**-0.2**
YHNB				*e*Sn	**Sn**	**02 13 31.3**	**+0.4**
YHNB	**Yeheng**	**1.51**	**30**	⇑P	**Pb**	**02 13 12.6**	**-0.3**
	baz=10.0						
YHNB				*e*S	**Sb**	**02 13 32.6**	**+0.8**
	baz=10.0						
NDT	**Datong Townshi**	**1.52**	**35**	*e*P	**Pb**	**02 13 12.9**	**-0.2**
	baz=24						
NDT				*e*S	**Sg**	**02 13 34.4**	**-0.2**
	baz=24						
ENA	**Nanau**	**1.53**	**46**	⇑P	**Pb**	**02 13 13.4**	**+0.2**
	baz=44						
ENA				*e*S	**Sg**	**02 13 34.4**	**-0.4**
	baz=44						
ENTT	**Nioudou**	**1.58**	**36**	P	**Pb**	**02 13 14.3**	**+0.2**
	baz=25						
ENTT				*e*S	**Sg**	**02 13 37.5**	**+1.0**
	baz=25						
LAY	**Lan-yu**	**1.61**	**144**	*e*P	**Pn**	**02 13 13.0**	**0.0**
	baz=145						
WLTB	**Daxi**	**1.62**	**23**	*e*P	**Pn**	**02 13 13.9**	**+0.8**
	baz=8.0						
NWLT	**Wulai**	**1.66**	**32**	*e*P	**Pb**	**02 13 14.9**	**-0.6**
	baz=41						
TWE	**Neicheng**	**1.70**	**37**	*e*P	**Pb**	**02 13 16.3**	**+0.1**
	baz=36						
NCU	**National Centr**	**1.71**	**20**	*e*P	**Pn**	**02 13 14.3**	**0.0**
	baz=5.0						
SLBB	**Yuanshan**	**1.71**	**36**	*e*P	**Pb**	**02 13 16.2**	**-0.2**
	baz=16						
TWC	**Suao**	**1.73**	**44**	*e*P	**Pb**	**02 13 16.7**	**+0.1**
	baz=34						
TWC				*e*S	**Sg**	**02 13 39.5**	**-1.6**
	baz=34						
ILA	**Ilan**	**1.78**	**38**	*e*P	**Pb**	**02 13 18.0**	**+0.5**
	baz=29						
TATO	**Taipei**	**1.83**	**28**	*e*Pn	**Pn**	**02 13 16.2**	**+0.3**
TATO				*e*Sn	**Sn**	**02 13 38.1**	**-0.5**
TATO	**Taipei**	**1.83**	**28**	*e*P	**Pn**	**02 13 16.6**	**+0.7**
	baz=11						
NHDH	**Xindian Distri**	**1.83**	**29**	*e*P	**Pb**	**02 13 17.6**	**-0.8**
	baz=10.0						
EOS1	**EOS1**	**1.87**	**50**	*e*P	**Pb**	**02 13 19.7**	**+0.6**
	baz=48						
TWA	**Mucha**	**1.87**	**30**	*e*P	**Pn**	**02 13 17.9**	**+1.4**
	baz=38						
NTC	**Toucheng**	**1.90**	**38**	*e*P	**Pb**	**02 13 19.1**	**-0.4**
	baz=19						
VWUC	**VWUC**	**1.91**	**329**	*e*P	**Pn**	**02 13 16.5**	**-0.6**
	baz=329						
TWS1	**Kuangyinshan**	**1.91**	**25**	*e*P	**Pn**	**02 13 18.1**	**+1.0**
	baz=8.0						
EGS		**1.95**	**40**	*e*P	**Pb**	**02 13 20.8**	**+0.4**
	baz=38						
TIPB	**Shuangxi**	**1.99**	**36**	*e*P	**Pn**	**02 13 19.8**	**+1.6**
	baz=19						
YM04	**YM04**	**2.00**	**27**	*e*P	**Pn**	**02 13 18.9**	**+0.5**
	baz=9.0						
YM01	**YM01**	**2.01**	**28**	*e*P	**Pn**	**02 13 19.2**	**+0.7**
	baz=10.0						
YM05	**YM05**	**2.02**	**27**	⇑*e*P	**Pn**	**02 13 19.4**	**+0.7**
	baz=7.0						
YM05				*e*S	**Sn**	**02 13 44.9**	**+1.3**
	baz=7.0						
YM11	**YM11**	**2.03**	**27**	⇑P	**Pn**	**02 13 19.3**	**+0.5**
	baz=9.0						
NWF	**Wu-fen Shan**	**2.04**	**33**	*e*P	**Pn**	**02 13 20.4**	**+1.4**
	baz=32						
WFSB	**Wu-fen Shan**	**2.04**	**33**	*e*P	**Pb**	**02 13 22.6**	**+0.6**
	baz=32						
YM08	**YM08**	**2.06**	**27**	*e*P	**Pn**	**02 13 19.5**	**+0.4**
	baz=10.0						
TWB1	**Santiao Chiao**	**2.11**	**39**	*e*P	**Pn**	**02 13 21.4**	**+1.6**
	baz=20						
PTMZ	**Houxiangcun**	**2.12**	**322**	⇓*e*P	**Pn**	**02 13 19.5**	**-0.5**
	baz=323						
TWY	**Chenhua**	**2.14**	**27**	*e*P	**Pn**	**02 13 20.4**	**+0.2**
	baz=10.0						
KNM	**Kinmen**	**2.20**	**299**	⇓*e*P	**Pn**	**02 13 22.1**	**+1.1**
	baz=299						
PTTC	**Pingtan**	**2.25**	**342**	*e*P	**Pn**	**02 13 21.4**	**-0.2**
	baz=340						
PTTC				*e*S	**Sn**	**02 13 48.4**	**-0.5**
	baz=340						
KNMB	**Chin-men Tao**	**2.26**	**300**	⇓*e*P	**Pn**	**02 13 21.3**	**-0.6**
	baz=301						
QZH	**Quanzhou**	**2.38**	**312**	⇓*i*Pn	**Pn**	**02 13 22.8**	**-0.7**
QZH				Sn	**Sn**	**02 13 50.0**	**-2.2**
QZH				smax	smax		
	comp=N,990nm,0.4s						
QZH				smax	smax		
	comp=E,990nm,0.6s						
JYNG	**Yonagunijimaku**	**2.45**	**63**	P	**Pn**	**02 13 26.4**	**+1.9**
JYNG				*e*S	**Sb**	**02 13 57.3**	**-1.6**
ZPLA	**Ao Xicun**	**2.62**	**283**	⇓*e*P	**Pn**	**02 13 26.5**	**-0.4**
	baz=284						
AXDP	**Jialang**	**2.81**	**304**	⇓*e*P	**Pn**	**02 13 29.1**	**-0.3**
	baz=306						
MATB	**Ma-tsu**	**2.83**	**349**	*e*P	**Pn**	**02 13 29.7**	**0.0**
	baz=348						
ZZJH	**Jiuhuzhen**	**2.89**	**293**	*e*P	**Pn**	**02 13 30.1**	**-0.4**
	baz=295						
MHZQ	**Yeshan**	**3.06**	**334**	*e*P	**Pn**	**02 13 32.8**	**0.0**
	baz=334						
HATJ	**Hateruma jima**	**3.07**	**76**	P	**Pn**	**02 13 34.8**	**+1.8**
HATJ				*e*S	**Sn**	**02 14 11.8**	**+2.5**
IRIF	**Iriomote-Funau**	**3.08**	**71**	P	**Pn**	**02 13 35.2**	**+2.1**
IRIF				*e*S	**Sn**	**02 14 12.6**	**+3.2**
LYJJ	**Jianjiangzhen**	**3.25**	**348**	*e*P	**Pn**	**02 13 35.5**	**-0.1**
	baz=347						
JKRS	**Kuro-shima**	**3.29**	**74**	P	**Pn**	**02 13 38.6**	**+2.5**
JKRS				*e*S	**Sn**	**02 14 18.8**	**+4.0**
JIJ	**Ishigaki jima**	**3.44**	**72**	P	**Pn**	**02 13 39.3**	**+1.1**
JIJ				*e*S	**Sn**	**02 14 19.7**	**+1.2**
XPSS	**Dashiqiu**	**3.57**	**355**	*e*P	**Pn**	**02 13 39.8**	**-0.1**
	baz=6.0						
JISG	**Ishigakijimahi**	**3.66**	**70**	P	**Pn**	**02 13 42.5**	**+1.4**
JISG				S	**Sn**	**02 14 26.4**	**+2.6**
JTJ	**Tarama**	**4.01**	**71**	P	**Pn**	**02 13 48.0**	**+2.0**
JTJ				*e*S	**Sn**	**02 14 34.9**	**+2.4**
VDOS	**Pratas Island**	**4.42**	**234**	*e*P	**Pn**	**02 13 52.8**	**+1.2**
	baz=235						
SSE	**Sheshan**	**7.73**	**4**	*e*Pn	**Pn**	**02 14 36.6**	**-0.4**
JOW	**Kunigami**	**7.81**	**62**	*e*Pn	**Pn**	**02 14 38.7**	**+0.4**
JOW	**Kunigami**	**7.81**	**62**	Pn	**Pn**	**02 14 35.6**	**-2.6**
	0.4nm,0.3s,baz=150,slow=12,SNR=5.3						
NJ2	**Nanjing**	**8.79**	**351**	*e*P	Pn	02 15 01.8	+10
NJ2				pmax	pmax		
	comp=Z,21nm,0.7s						
NJ2				smax	smax		
	comp=N,130nm,0.8s						
NJ2				smax	smax		
	comp=E,98nm,1.0s						
WHN	**Wuhan**	**9.04**	**324**	⇑P	**Pn**	**02 14 54.5**	**-0.5**
WHN				LR	LR		
	comp=E,1µm,3.8s						
WHN				LR	LR		
	comp=E,860nm,3.4s						
WHN				LR	LR		
	comp=E,1µm,11.3s						
QIZ	**Qiongzhong**	**10.87**	**249**	*e*Pn	**Pn**	**02 15 19.1**	**-1.1**
GYA	**Guiyang**	**12.97**	**287**	P	Pn	02 15 54.8	+5.8
GYA				pmax	pmax		
	comp=E,10.0nm,0.7s						
GYA				LR	LR		
	comp=E,260nm,9.0s						
GYA				LR	LR		
	comp=E,530nm,9.9s						
GYA				LR	LR		
	comp=E,550nm,8.4s						
KSAR	**Wonju Array Be**	**15.39**	**23**	Pn	**Pn**	**02 16 20.3**	**-1.3**
KSRS	**Korea Array**	**15.41**	**23**	Pn	**Pn**	**02 16 20.3**	**-1.6**
	comp=E,0.2nm,0.3s,baz=196,slow=11,SNR=2.8						
KSRS				LR	LR	02 21 58.4	
	comp=E,28nm,20.1s,baz=180,slow=36						
CD2	**Chengdu**	**16.71**	**300**	P	**Pn**	**02 16 39.5**	**+0.7**
CD2				S	**Sn**	**02 19 45.5**	**+1.4**
CD2				pmax	pmax		
	comp=E,10.0nm,0.5s						
CD2				LR	LR		
	comp=E,640nm,7.3s						
CD2				LR	LR		
	comp=E,580nm,6.7s						
CD2				LR	LR		
	comp=E,970nm,9.8s						
HHC	**Hu-ho-hao-te**	**19.00**	**339**	*e*P	**Pn**	**02 17 09.6**	**+2.6**
HHC				S	**S**	**02 20 43.9**	**+2.5**
HHC				pmax	pmax		
	comp=E,8.0nm,1.1s						
HHC				LR	LR		
	comp=E,210nm,8.1s						
HHC				LR	LR		
	comp=E,230nm,6.3s						
HHC				LR	LR		
	comp=E,530nm,9.2s						
NANT	**Nan**	**19.06**	**260**	P	Pn	02 17 17.0	+9.3
MJAR	**Matsushiro Arr**	**20.13**	**45**	P	**P**	**02 17 18.8**	**+0.3**
	comp=E,0.9nm,0.6s,baz=241,slow=9.7,SNR=3.2						
CHTO	**Chiang Mai**	**20.65**	**261**	*e*P	**P**	**02 17 24.1**	**-0.1**
	comp=E,7.1nm,0.8s						
CHTO	**Chiang Mai**	**20.65**	**261**	P	Pn	02 17 35.8	+9.2
CM01	**Chiang Mai Arr**	**20.75**	**260**	*e*P	**P**	**02 17 26.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**20.75**	**260**	P	Pn	02 17 28.6	+0.8
	comp=E,1.2nm,0.3s,baz=50,slow=9.9,SNR=5.7						
CMAR				LR	LR	02 25 33.5	
	comp=E,25nm,21.7s,baz=86,slow=37						
UMPA	**Umpang Tak**	**21.59**	**255**	P	P	02 17 46.5	+12
KSM	**Kuching**	**23.91**	**206**	*e*P	**P**	**02 17 55.1**	**-3.3**
	comp=E,18nm,1.2s						
SONM	**Songino Array**	**26.91**	**339**	P	**P**	**02 18 26.3**	**+0.8**
	comp=E,1.2nm,1.0s,baz=161,slow=8.7,SNR=4.7						
SONA1	**Songino Array**	**26.92**	**339**	*e*P	**P**	**02 18 25.2**	**-0.4**
PBA	**Port Blair**	**28.89**	**251**	*e*P	P	02 18 41.7	-1.8
	comp=E,90nm,1.3s						
MTN	**Manton Dam**	**37.44**	**163**	*e*P	**P**	**02 19 56.1**	**-1.8**
	comp=E,6.9nm,0.9s						
MK01	**Makanchi Array**	**38.51**	**317**	*e*P	**P**	**02 20 07.4**	**+0.7**
MK31	**Makanchi Array**	**38.53**	**317**	*e*P	**P**	**02 20 06.8**	**0.0**
MKAR	**Makanchi Array**	**38.53**	**317**	P	**P**	**02 20 07.8**	**+1.0**
	comp=E,0.4nm,0.6s,baz=109,slow=11,SNR=5.8						
ZALV	**Zalesovo Beam**	**40.62**	**328**	P	**P**	**02 20 24.0**	**-0.1**
	comp=E,1.0nm,0.5s,baz=120,slow=9.4,SNR=5.1						
H11N1	**WAKE ISLAND Hy**	**43.13**	**86**	T	T	03 06 00.7	
	baz=283,slow=74,SNR=9.5						
H11N2	**WAKE ISLAND Hy**	**43.13**	**86**	T	T	03 06 07.5	
	baz=283,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**43.14**	**86**	T	T	03 06 04.6	
	baz=283,slow=74,SNR=12						
COEN	**Coen**	**43.20**	**147**	*e*P	**P**	**02 20 44.5**	**-1.1**
	comp=E,8.1nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**43.23**	**87**	T	T	03 06 10.6	
	baz=284,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**43.24**	**87**	T	T	03 06 25.5	
	baz=284,slow=74,SNR=8.8						
H11S2	**WAKE ISLAND Hy**	**43.25**	**87**	T	T	03 06 20.4	
	baz=284,slow=74,SNR=9.4						
WRA	**Warramunga Arr**	**45.09**	**162**	P	**P**	**02 20 58.7**	**-2.0**
	comp=E,1.6nm,0.6s,baz=344,slow=8.7,SNR=23						
WRA				PcP	**PcP**	**02 22 39.7**	**-1.6**
	comp=E,0.5nm,0.6s,baz=348,slow=3.9,SNR=4.8						
WB2	**Warramunga Arr**	**45.10**	**162**	*e*P	**P**	**02 20 59.8**	**-0.9**
ASAR	**Alice Springs**	**48.51**	**164**	P	**P**	**02 21 25.8**	**-1.6**
	comp=E,0.8nm,0.4s,baz=337,slow=6.8,SNR=9.0						
ASAR				PcP	**PcP**	**02 22 52.2**	**-1.1**
	comp=E,1.2nm,0.7s,baz=339,slow=2.8,SNR=7.6						
CTA	**Charters Tower**	**49.94**	**148**	P	**P**	**02 21 36.9**	**-1.5**
	comp=E,0.7nm,0.3s,baz=350,slow=11,SNR=2.5						
STKA	**Stephens Creek**	**58.50**	**159**	P	**P**	**02 22 40.0**	**-0.6**
	comp=E,1.7nm,0.6s,baz=319,slow=10,SNR=4.9						
ILAR	**Eielson Array**	**70.21**	**27**	P	**P**	**02 23 57.4**	**+0.4**
	comp=E,0.2nm,0.6s,baz=281,slow=6.3,SNR=2.8						
FINES	**FINESS Array B**	**71.86**	**330**	P	**P**	**02 24 07.3**	**+0.4**
	comp=E,1.7nm,0.8s,baz=17,slow=2.0,SNR=4.4						
BRTR	**Keskin Array B**	**73.19**	**306**	P	**P**	**02 24 16.9**	**+1.3**
	comp=E,0.5nm,0.6s,baz=92,slow=6.2,SNR=3.7						
CLL	**Collm**	**82.35**	**323**	*e*pP	pP	02 25 14.0	+1.7
YKA	**Yellowknife Ar**	**83.95**	**23**	P	**P**	**02 25 13.9**	**-0.3**
	comp=E,0.5nm,0.4s,baz=314,slow=4.9,SNR=15						
YKB5	**Yellowknife Ar**	**83.95**	**23**	*e*P	**P**	**02 25 14.1**	**-0.1**

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*DDA **19** 02:19:07.1, 39°.52N×27°.67E, h8^{km}±2^{km}, ML2.6*

*ISK **19** 02:19:07.5, 39°.54N×27°.74E, h5^{km}, ML2.1/14*

*ISCJB **19** 02:19:08.0±0.5, 39°.53N±0°.02×27°.71E±0°.04, h0^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=3.9km az=6.3*

ISC 19 02:19:07.9±1.0**, 39°.52N**±0°.03×**27°.71E**±0°.03**, h9**^{km}±9^{km}**, n23, σ0^{s}.71**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEP	**BALIKESIR_Sava**	**0.14**	**178**	*i* P	**Pg**	**02 19 11.5**	**+0.4**
STEP				*i* S	**Sg**	**02 19 13.5**	**+0.2**
STEP				IAML_P			
	comp=Z,12µm,0.1s						
GONE	**Gonen-Balikesi**	**0.52**	**358**	PG	**Pb**	**02 19 18.7**	**-0.6**
DURS	**Dursunbey**	**0.59**	**82**	*i* P	**Pb**	**02 19 19.9**	**-0.7**
DURS				*i* S	**Sb**	**02 19 28.2**	**-1.0**
DURS				IAML_P			
	comp=Z,176nm,0.1s						
AKHS	**Akhisar**	**0.65**	**173**	*i* P	**Pb**	**02 19 20.9**	**-0.5**
AKHS				*i* S	**Sb**	**02 19 30.1**	**-0.5**
AKHS				IAML_P			
	comp=Z,535nm,0.1s						
ZEDA	**zmir-Bergama**	**0.74**	**222**	*i* P	**Pg**	**02 19 21.6**	**-0.6**
ZEDA				IAML_P			
	comp=Z,414nm,0.1s						
AYVA	**Ayvalik**	**0.82**	**255**	*i* P	**Pb**	**02 19 23.7**	**-0.7**
AYVA				IAML_P			
	comp=Z,246nm,0.1s						
EDC	**Edincik**	**0.83**	**8**	PG	**Pb**	**02 19 24.3**	**-0.3**
EDC				SG	**Sb**	**02 19 35.5**	**-0.4**
KCTX	**Karacabey (Bur**	**0.89**	**34**	PG	**Pb**	**02 19 24.8**	**-0.9**
KCTX				SG	**Sb**	**02 19 38.3**	**+0.6**
DEMI	**Demirci**	**0.92**	**121**	*i* P	**Pn**	**02 19 26.8**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.93**	**284**	*i* P	**Pn**	**02 19 26.8**	**-0.4**
BAYC				IAML_P			
	comp=Z,753nm,0.2s						
KRBG	**Karabiga-Canak**	**0.93**	**340**	PG	**Pn**	**02 19 26.3**	**-0.9**
EZN	**Ezine**	**1.11**	**286**	PN	**Pn**	**02 19 29.9**	**+0.2**
MANT	**Manisa**	**1.22**	**147**	*i* P	**Pn**	**02 19 31.5**	**0.0**
MANT				IAML_P			
	comp=Z,392nm,0.1s						
MDNY	**Mudanya-Bursa**	**1.24**	**46**	PN	**Pn**	**02 19 31.9**	**+0.5**
KULA	**Kula-Manisa**	**1.25**	**143**	PN	**Pn**	**02 19 32.1**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.29**	**313**	PN	**Pg**	**02 19 34.1**	**+1.4**
TVSB	**Tavsanli**	**1.36**	**93**	PN	**Pg**	**02 19 34.4**	**+0.4**
TVSB				SN	**Sn**	**02 19 53.3**	**+1.9**
ARMT	**Armutlu**	**1.37**	**40**	PN	**Pg**	**02 19 33.9**	**-0.2**
SBT5	**Esenkoy-Cinarc**	**1.43**	**39**	PN	**Pg**	**02 19 34.9**	**-0.4**
ERIK	**Erikli-Kesan**	**1.47**	**322**	PN	**Pg**	**02 19 35.9**	**-0.2**
SIGR	**SIGRI**	**1.47**	**258**	PN	**Pg**	**02 19 36.4**	**+0.3**
YLV	**Yalova**	**1.65**	**50**	PN	**Pb**	**02 19 37.9**	**-0.7**
ALN	**Alexandroupoli**	**1.87**	**318**	PN	**Pb**	**02 19 42.4**	**+0.1**

IDC 19 02:29:31.4±1.6**, 0°.71N×127°.97E, h0**^{km}**, mb3.2**/4**, mb1 3.4**/4**, mb1mx3.3**/33**, mbtmp3.3**/4**, Error ellipse: s-maj=128.0km s-min=24.1km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.45**	**163**	P	P	02 34 20.8	-0.7
	0.5nm,0.7s,baz=342,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**24.91**	**167**	P	P	02 34 56.7	+0.4
	0.6nm,0.8s,baz=353,slow=14,SNR=3.8						
SONM	**Songino Array**	**50.54**	**341**	P	P	02 38 30.4	-1.3
	0.3nm,0.6s,baz=152,slow=6.5,SNR=3.1						
MKAR	**Makanchi Array**	**60.73**	**326**	P	P	02 39 45.9	+1.0
	0.3nm,0.8s,baz=115,slow=6.1,SNR=3.7						

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*IDC **19** 02:40:00.5±5.4, 16°.06N×101°.27W, h0^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.4/39, mbtmp3.3/5, ML2.7/2, Error ellipse: s-maj=103.3km s-min=25.1km az=9.0*

*MEX **19** 02:40:13.8±0.4, 17°.12N×101°.46W, h16^{km}±9^{km}, MD4.2*

*NEIC **19** 02:40:13.7±0.0, 17°.12N×101°.46W, h17^{km}, MD4.2(MEX), After MEX.*

ISC 19 02:40:10.0±2.0**, 17°.18N**±0°.07×**101°.41W**±0°.07**, h7**^{km}±12^{km}**, n19, σ1^{s}.00**/27**, mb3.6**/3**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.43**	**353**	*e*P	**Pn**	**02 40 21.9**	**-0.7**
ZIIG				*e*S	**Sb**	**02 40 28.2**	**+1.6**
ZIIG	**Zihuatanejo**	**0.43**	**353**	*e*P	**Pn**	**02 40 21.9**	**-0.7**
ZIIG				*e*S	**Sb**	**02 40 28.2**	**+1.6**
CAIG	**El Cayaco**	**1.10**	**97**	*e*P	**Pg**	**02 40 30.9**	**-0.2**
CAIG				*i* S	**Sg**	**02 40 45.0**	**-0.4**
CAIG	**El Cayaco**	**1.10**	**97**	*e*P	**Pg**	**02 40 30.9**	**-0.2**
CAIG				*i* S	**Sg**	**02 40 45.0**	**-0.4**
ARIG	**Puente Sto Nin**	**1.49**	**43**	*e*P	**Pn**	**02 40 37.5**	**+0.2**
ARIG				*e*S	**Sn**	**02 40 55.7**	**-1.3**
ARIG	**Puente Sto Nin**	**1.49**	**43**	*e*P	**Pn**	**02 40 37.5**	**+0.2**
ARIG				*e*S	**Sn**	**02 40 55.7**	**-1.3**
MEIG	**Mezcala**	**1.86**	**66**	*e*P	**Pn**	**02 40 43.0**	**+0.7**
MEIG				*i* S	**Sn**	**02 41 05.3**	**-0.9**
MEIG	**Mezcala**	**1.86**	**66**	*e*P	**Pn**	**02 40 43.0**	**+0.7**
MEIG				*i* S	**Sn**	**02 41 05.3**	**-0.9**
PLIG	**Platanillo**	**2.18**	**56**	*e*P	**Pn**	**02 40 47.5**	**+0.7**
PLIG				*e*S	**Sn**	**02 41 13.6**	**-0.5**
PLIG	**Platanillo**	**2.18**	**56**	*e*P	**Pn**	**02 40 47.5**	**+0.7**
PLIG				*e*S	**Sn**	**02 41 13.6**	**-0.5**
PNIG	**Pinotepa**	**3.24**	**104**	*e*P	**Pn**	**02 41 01.9**	**+0.6**
PNIG				*i* S	**Sn**	**02 41 39.1**	**-1.0**
PNIG	**Pinotepa**	**3.24**	**104**	*e*P	**Pn**	**02 41 01.9**	**+0.6**
PNIG				*i* S	**Sn**	**02 41 39.1**	**-1.0**
CMIG	**Matias Romero**	**6.24**	**90**	Pn	Pn	02 41 33.2	-9.4
	0.0nm,0.3s,baz=282,slow=16,SNR=1.5						
CMIG				Lg	Lg	02 43 19.1	
	0.8nm,0.3s,baz=77,slow=17,SNR=4.9						
H06E1	**SOCORRO T-PHAS**	**9.20**	**281**	T	T	02 52 05.8	
	SNR=55						
H06S1	**SOCORRO T**	**9.22**	**281**	T	T	02 52 01.8	
	SNR=8.8						
TXAR	**Lajitas Array**	**12.28**	**351**	Pn	Pn	02 43 13.5	+8.1
	0.0nm,0.3s,baz=172,slow=14,SNR=2.4						
TXAR				Lg	Lg	02 46 50.5	
	0.0nm,0.3s,baz=161,slow=29,SNR=5.9						
NVAR	**Mina Array Bea**	**25.83**	**328**	P	**P**	**02 45 44.2**	**+2.0**
	1.2nm,0.9s,baz=148,slow=11,SNR=2.9						
YKA	**Yellowknife Ar**	**46.20**	**352**	P	**P**	**02 48 35.5**	**+0.2**
	0.6nm,0.8s,baz=161,slow=7.1,SNR=6.6						
INK	**Inuvik**	**55.00**	**346**	P	**P**	**02 49 40.2**	**-1.5**
	0.5nm,0.6s,baz=141,slow=6.5,SNR=3.1						

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*ISCJB **19** 02:46:57.9±0.7, 27°.22N±0°.02×102°.99E±0°.02, h0^{km}±4^{km}, mb4.9/163, MS4.5/49, Error ellipse: s-maj=3.0km s-min=2.9km az=29.4*

*MOS **19** 02:47:00.4±1.3, 27°.24N×103°.04E, h18^{km}, mb5.1/75, MS4.5/16, Error ellipse: s-maj=6.2km s-min=3.9km az=115.7*

*BJI **19** 02:47:00.2, 27°.10N×103°.10E, h10^{km}, mb4.7/56, mB5.0/40, ML4.9/11, Ms4.9/66, Ms7 4.6/63*

*NEIC **19** 02:47:01.2±0.2, 27°.23N×103°.07E, h10^{km}, mb4.9/72, ML4.9(BJI), Error ellipse: s-maj=4.5km s-min=4.1km az=63.0*

NEIC Eight people injured, 72 houses destroyed and 949 houses damaged in Qiaojia, Yunnan.

*GCMT **19** 02:47:02.2±0.2, 27°.17N±0°.01×103°.16E±0°.01, h21^{km}±1^{km}, MW4.9/91, Moment Tensor Solution. s27,c32; s91,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.21±.11; M$_{\theta\theta}$-0.88±.09; M$_{\phi\phi}$1.09±.09; M$_{r\theta}$0.05±.16; M$_{\theta\phi}$-2.92±.09; M$_{\phi r}$-0.80±.17; Best double couple: M$_0$3.18100×10^{16} NP1:φ$_s$189.00000°, δ88.00000°, λ14.00000°. NP2: φ$_s$99.00000°, δ76.00000°, λ178.00000°. Principal axes: T 3.3190, Plg11.0000°, Azm55.0000°; N -0.2800, Plg76.0000°, Azm196.0000°; P -3.0430, Plg9.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **19** 02:47:03.5±2.4, 27°.24N×103°.10E, h28^{km}±16^{km}, mb4.3/36, mb1 4.3/38, mb1mx4.3/47, mbtmp4.4/38, ML4.3/2, MS4.3/28, Ms1 4.3/28, ms1mx4.1/38 Error ellipse: s-maj=12.0km s-min=9.7km az=41.0*

ISC 19 02:47:01.9±0.5**, 27°.19N**±0°.03×**102°.97E**±0°.03**, h12**^{km}±2^{km}**, h12**^{km}**:pP-P, n429, σ1^{s}.86**/483**, mb4.8**/165**, MS4.5**/50**, 33C-19D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

KMI	**Kunming**	**2.07**	**186**	Pn	**Pn**	**02 47 36.3**	**-0.3**
KMI				Pg	**Pb**	**02 47 39.8**	**+0.3**
KMI				Sn	**Sn**	**02 48 03.8**	**+1.4**
KMI				smax	smax		
	comp=N,8µm,0.8s						
KMI				smax	smax		
	comp=E,12µm,0.9s						
KMI	**Kunming**	**2.07**	**186**	*e*Pn	**Pn**	**02 47 36.4**	**-0.2**
KMI				*e*Sn	**Sn**	**02 48 02.9**	**+0.5**
KMI	**Kunming**	**2.07**	**186**	*e*P	**Pn**	**02 47 36.4**	**-0.2**
KMI				*e*		02 48 02.9	
GYA	**Guiyang**	**3.38**	**102**	⇑*i*Pn	**Pn**	**02 47 55.1**	**+0.5**
GYA				Sn	**Sn**	**02 48 37.4**	**+2.8**
GYA				Sg	**Sg**	**02 48 49.1**	**-1.3**
GYA				smax	smax		
	comp=N,5µm,1.2s						
GYA				smax	smax		
	comp=E,5µm,1.2s						
GYA				LR	LR		
	comp=N,10µm,5.9s						
GYA				LR	LR		
	comp=E,10µm,5.9s						
GYA				LR	LR		
	comp=Z,12µm,7.8s						
GYA	**Guiyang**	**3.38**	**102**	⇑*i*Pn	**Pn**	**02 47 55.1**	**+0.5**
GYA				Sn	**Sn**	**02 48 37.4**	**+2.8**
GYA				Sg	**Sg**	**02 48 49.1**	**-1.3**
CD2	**Chengdu**	**3.77**	**10**	Pn	**Pn**	**02 48 01.8**	**+1.9**
CD2				Sn	**Sn**	**02 48 43.8**	**-0.4**
CD2				Sg	**Sg**	**02 49 01.5**	**-1.5**
CD2	**Chengdu**	**3.77**	**10**	Pn	**Pn**	**02 48 01.8**	**+1.9**
CD2				Sn	**Sn**	**02 48 43.8**	**-0.4**
CD2				Sg	**Sg**	**02 49 01.5**	**-1.5**
SLVN	**Son La**	**5.89**	**172**	Pn	**Pn**	**02 48 28.6**	**-0.5**
SLVN				Sn	**Sn**	**02 49 39.9**	**+3.4**
ENH	**Enshi**	**6.49**	**60**	*e*Pn	**Pn**	**02 48 37.8**	**+0.5**
ENH				*e*Sn	Sn	02 49 40.2	-11
XAN	**Xi'an**	**8.54**	**35**	P	**Pn**	**02 49 04.0**	**-1.3**
XAN				pP	Pg	02 49 07.8	-37
XAN				S	**Sn**	**02 50 40.0**	**-1.6**
XAN				LR	LR		
	comp=N,14µm,8.7s						
XAN				LR	LR		
	comp=E,11µm,6.7s						
XAN				LR	LR		
	comp=Z,3µm,4.9s						
XAN	**Xi'an**	**8.54**	**35**	*e*Pn	**Pn**	**02 49 04.1**	**-1.3**
XAN				*e*Sn	**Sn**	**02 50 35.2**	**-6.4**
XAN	**Xi'an**	**8.54**	**35**	*e*P	**Pn**	**02 49 04.1**	**-1.3**
XAN				*e*		02 50 35.2	
LZH	**Lanzhou**	**8.90**	**5**	⇑P	**Pn**	**02 49 12.9**	**+2.4**
LZH				pP	Pg	02 49 17.3	-35
LZH				sP		02 49 19.8	
LZH				S	**Sn**	**02 50 49.8**	**-1.0**
LZH				sS	Sg	02 51 00.6	-47
LZH				pmax	pmax		
	comp=Z,47nm,1.0s						
LZH				pmax	pmax		
	comp=Z,310nm,4.9s						
LZH				smax	smax		
	comp=N,430nm,1.1s						
LZH				smax	smax		
	comp=E,540nm,1.4s						
LZH				LR	LR		
	comp=Z,8µm,11.4s						
CHTO	**Chiang Mai**	**9.12**	**205**	*e*Pn	**Pn**	**02 49 16.8**	**+3.4**
CHTO	**Chiang Mai**	**9.12**	**205**	*e*P	**Pn**	**02 49 16.8**	**+3.4**
CHTO	**Chiang Mai**	**9.12**	**205**	P	**Pn**	**02 49 16.9**	**+3.5**
	SNR=14						
CHTO	**Chiang Mai**	**9.12**	**205**	P	**Pn**	**02 49 16.8**	**+3.4**
	107nm,1.1s,2µm0.9nm						
CMMT	**Chiang Mai**	**9.12**	**205**	P	**Pn**	**02 49 16.7**	**+3.3**
	24nm,1.0s,588nm0.2nm						
CM31	**Chiang Mai Arr**	**9.45**	**204**	*e*Pn	**Pn**	**02 49 19.8**	**+1.9**
CM31	**Chiang Mai Arr**	**9.45**	**204**	P	**Pn**	**02 49 21.5**	**+3.6**
	SNR=13						
CMAR	**Chiang Mai Arr**	**9.45**	**204**	Pn	**Pn**	**02 49 19.7**	**+1.8**
	0.3nm,0.3s,baz=15,slow=13,SNR=46						
CMAR				Pg		02 49 56.0	
	1.0nm,0.3s,baz=13,slow=16,SNR=13						
CMAR				Lg	Lg	02 52 05.0	
	1.9nm,0.3s,baz=21,slow=31,SNR=7.4						
CMAR				LR	LR	02 53 14.0	
	comp=Z,3µm,18.8s,baz=19,slow=39						
CM01	**Chiang Mai Arr**	**9.48**	**204**	*e*Pn	**Pn**	**02 49 20.9**	**+2.7**
UTTA	**Uttaradit**	**9.66**	**194**	P	**Pn**	**02 49 22.7**	**+1.9**
	4.8nm,0.8s,61nm0.0nm						
SHL	**Shillong**	**10.07**	**263**	*e*Pn	**Pn**	**02 49 30.3**	**+3.7**
SHL	**Shillong**	**10.07**	**263**	*e*P	**Pn**	**02 49 30.3**	**+3.7**
SUKH	**Sukhothai**	**10.14**	**198**	P	**Pn**	**02 49 30.3**	**+2.9**
	6.8nm,0.8s,0.0nm						
SKNT	**Sakolnakorn**	**10.21**	**175**	P	**Pn**	**02 49 31.1**	**+2.8**
	14nm,0.9s,896nm0.1nm						
GZH	**Guangzhou**	**10.24**	**111**	P	**Pn**	**02 49 28.1**	**-0.6**
GZH				S	**Sn**	**02 51 19.8**	**-3.7**
GZH				LR	LR		
	comp=N,7µm,5.2s						
GZH				LR	LR		
	comp=E,2µm,6.4s						
QIZ	**Qiongzhong**	**10.29**	**141**	P	**Pn**	**02 49 29.0**	**-0.4**
QIZ				S	**Sn**	**02 51 31.4**	**+6.7**
QIZ				pmax	pmax		
	comp=Z,180nm,3.2s						
QIZ				LR	LR		
	comp=N,3µm,6.2s						
QIZ				LR	LR		
	comp=E,3µm,6.3s						
QIZ				LR	LR		
	comp=Z,3µm,8.6s						
WHN	**Wuhan**	**10.52**	**69**	⇑P	**Pn**	**02 49 32.1**	**-0.4**
WHN				S	**Sn**	**02 51 24.4**	**-5.8**
WHN				LR	LR		
	comp=N,10µm,9.8s						
WHN				LR	LR		
	comp=E,9µm,8.8s						
WHN				LR	LR		
	comp=Z,7µm,5.5s						
LSA	**Lhasa**	**10.70**	**286**	P	**Pn**	**02 49 38.4**	**+3.0**
LSA	**Lhasa**	**10.70**	**286**	*e*Pn	**Pn**	**02 49 35.1**	**-0.3**
LSA	**Lhasa**	**10.70**	**286**	*e*P	**Pn**	**02 49 35.1**	**-0.3**
PBKT	**Sadao Pong**	**10.73**	**190**	*e*Pn	**Pn**	**02 49 37.0**	**+1.6**
PBKT				*e*Sn	**Sn**	**02 51 35.1**	**-0.3**
PBKT	**Sadao Pong**	**10.73**	**190**	P	**Pn**	**02 49 37.2**	**+1.8**
	21nm,0.7s						
BRDH	**Bariadhala**	**11.22**	**249**	Pn	**Pn**	**02 49 43.8**	**+1.7**
	7.7nm,0.3s,baz=85,slow=5.6,SNR=2.6						
BRDH				LR	LR	02 55 30.2	
	comp=Z,3µm,18.0s,baz=70,slow=45						
HKPS	**Hong Kong Po S**	**11.27**	**113**	Pn	**Pn**	**02 49 39.7**	**-3.1**
CHAI	**Chaiyaphum**	**11.27**	**185**	P	**Pn**	**02 49 44.5**	**+1.7**
	6.5nm,0.8s,203nm						
UTHA	**Uthaitani**	**12.03**	**197**	P	**Pn**	**02 49 56.3**	**+3.1**
	4.2nm,1.1s,61nm						
GTA	**Gaotai**	**12.47**	**349**	⇑P	**Pn**	**02 50 00.3**	**+1.0**
GTA				pP	P	02 50 05.0	-6.2
GTA				sP		02 50 07.3	
GTA				S	**Sn**	**02 52 21.6**	**+3.4**
GTA				sS		02 52 27.6	
GTA				SS	**SnSn**	**02 52 36.5**	**+5.9**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,6.7s						
GTA				LR	LR		
	comp=N,2µm,14.6s						
GTA				LR	LR		
	comp=E,5µm,14.0s						
GTA				LR	LR		
	comp=Z,2µm,12.7s						
SRAK	**Srakaew**	**13.14**	**184**	P	**Pn**	**02 50 11.4**	**+3.0**
	31nm,0.9s						
TIY	**Taiyuan**	**13.18**	**35**	*e*P	**Pn**	**02 50 08.5**	**-0.4**
TIY				S	**Sn**	**02 52 41.5**	**+6.1**
TIY				pmax	pmax		
	comp=Z,26nm,0.5s						
TIY				LR	LR		
	comp=N,4µm,8.1s						
TIY				LR	LR		
	comp=E,4µm,8.4s						
QZH	**Quanzhou**	**14.22**	**96**	*e*P	**Pn**	**02 50 21.6**	**-1.5**
QZH				S	**Sn**	**02 53 03.4**	**+2.7**
QZH				LR	LR		
	comp=N,14µm,11.2s						
QZH				LR	LR		
	comp=E,4µm,9.4s						
QZH				LR	LR		
	comp=Z,3µm,6.3s						
PHET	**Kaeng Krachan**	**14.55**	**193**	P	**P**	**02 50 37.2**	**+3.0**
RAMN	**Ramite**	**14.59**	**273**	*e*P	**Pn**	**02 50 26.0**	**-2.4**
	72nm,0.7s						
BTO	**Baotou**	**14.60**	**22**	*e*P	**Pn**	**02 50 25.9**	**-2.4**
NJ2	**Nanjing**	**14.63**	**67**	*e*P	**Pn**	**02 50 29.3**	**+0.5**
NJ2				S	**Sn**	**02 53 11.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,14nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,640nm,4.3s						
NJ2				LR	LR		
	comp=N,8µm,11.0s						
NJ2				LR	LR		
	comp=E,3µm,10.6s						
NJ2				LR	LR		
	comp=Z,5µm,12.3s						
JIRN	**Jiri**	**14.91**	**276**	*e*P	**Pn**	**02 50 30.5**	**-2.4**
	191nm,0.9s						
TIA	**Tai'an**	**15.02**	**50**	P	**Pn**	**02 50 32.3**	**-1.7**
TIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIA				LR	LR		
	comp=N,560nm,9.7s						
TIA				LR	LR		
	comp=E,1µm,12.2s						
TIA				LR	LR		
	comp=Z,1µm,13.2s						
GUN	**Gumba**	**15.18**	**277**	*e*P	**Pn**	**02 50 34.6**	**-1.9**
	139nm,0.9s						
HHC	**Hu-ho-hao-te**	**15.36**	**25**	*e*P	**Pn**	**02 50 37.6**	**-1.0**
HHC				sP	pP	02 50 45.8	-1.4
HHC				PP	**sP**	**02 50 50.4**	**+1.4**
HHC				S	**Sn**	**02 53 32.9**	**+4.2**
HHC				SS	**S**	**02 53 50.0**	**+5.0**
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,4.1s						
HHC				LR	LR		
	comp=Z,3µm,10.1s						
PKI	**Pulchoki**	**15.61**	**275**	*e*P	**Pn**	**02 50 39.1**	**-3.0**
	176nm,1.0s						
PKIN	**Phulchoki**	**15.62**	**275**	*e*P	**Pn**	**02 50 39.5**	**-2.7**
	134nm,1.0s						
KKN	**Kakani**	**15.72**	**276**	*e*P	**Pn**	**02 50 41.0**	**-2.4**
	96nm,0.7s						
DMN	**Daman**	**15.88**	**276**	*e*P	**Pn**	**02 50 42.6**	**-2.9**
	118nm,0.9s						
SSE	**Sheshan**	**16.38**	**72**	P	**Pn**	**02 50 50.3**	**-1.4**
SSE				S	**Sn**	**02 53 52.8**	**-0.6**
SSE				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SSE				pmax	pmax		
	comp=Z,350nm,4.8s						
SSE				LR	LR		
	comp=N,3µm,12.3s						
SSE				LR	LR		
	comp=E,1µm,9.3s						
SSLB	**Suanglung**	**16.58**	**98**	*e*Pn	**Pn**	**02 50 53.7**	**-0.6**
	33nm,1.1s						
BJT	**Baijiatuau**	**16.84**	**37**	*e*Pn	**Pn**	**02 50 56.9**	**-0.6**
	58nm,1.1s						
BJT	**Baijiatuau**	**16.84**	**37**	*e*P	**Pn**	**02 50 56.9**	**-0.6**
BJT				pmax	pmax		
	comp=Z,57nm,1.1s						
BJI	**Beijing**	**16.86**	**37**	P	**Pn**	**02 50 56.8**	**-0.9**
BJI				S	**Sn**	**02 54 05.6**	**+0.7**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI				LR	LR		
	comp=Z,2µm,15.2s						
BJI				LR	LR		
	comp=Z,3µm,14.0s						
DANN	**Dangsing**	**17.05**	**278**	*e*P	**Pn**	**02 50 58.5**	**-1.9**
	comp=Z,81nm,0.6s						
KOLN	**Koldanda**	**17.20**	**276**	*e*P	**Pn**	**02 50 59.6**	**-2.7**
	comp=Z,108nm,1.0s						
PYUN	**Piuthan**	**17.73**	**278**	*e*P	**Pn**	**02 51 05.6**	**-3.3**
	comp=Z,173nm,1.0s						
DL2	**Dalian**	**19.48**	**48**	P	**Pn**	**02 51 31.8**	**+2.0**
DL2				pmax	pmax		
	comp=Z,110nm,1.3s						
DL2				pmax	pmax		
	comp=Z,750nm,4.3s						
DL2				LR	LR		
	comp=Z,2µm,13.8s						
DL2				LR	LR		
	comp=Z,1µm,12.6s						
DL2				LR	LR		
	comp=Z,1µm,15.0s						
TRTT	**Trang**	**19.50**	**190**	P	**Pn**	**02 51 34.0**	**+3.8**
	comp=Z,13nm,1.6s						
WMQ	**Urumqi**	**20.68**	**327**	P	**P**	**02 51 41.9**	**+0.1**
WMQ				sP	sP	02 51 49.6	+1.9
WMQ				PP	pP	02 52 03.3	+17
WMQ				S	**S**	**02 55 30.0**	**-2.6**
WMQ				pmax	pmax		
	comp=Z,100nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,450nm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.7s						
WMQ				LR	LR		
	comp=Z,2µm,12.9s						
WMQ				LR	LR		
	comp=Z,2µm,24.3s						
WMQ	**Urumqi**	**20.68**	**327**	*e*P	**P**	**02 51 41.7**	**-0.1**
	comp=Z,64nm,1.2s						
WMQ	**Urumqi**	**20.68**	**327**	*e*P	**P**	**02 51 41.7**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,64nm,1.2s						
SONA0	**Songino Array**	**20.78**	**7**	*e*P	**P**	**02 51 42.3**	**-0.6**
SONM	**Songino Array**	**20.78**	**7**	P	**P**	**02 51 42.3**	**-0.6**
	comp=Z,13nm,1.0s,baz=192,slow=11,SNR=31						
SONM				LR	LR	03 00 36.2	
	comp=Z,968nm,18.2s,baz=184,slow=39						
SONA1	**Songino Array**	**20.80**	**7**	*e*P	**P**	**02 51 42.4**	**-0.6**
ULN	**Ulaanbaatar**	**20.89**	**8**	*e*P	**P**	**02 51 43.9**	**-0.1**
	comp=Z,22nm,0.9s						
ULN	**Ulaanbaatar**	**20.89**	**8**	*e*P	**P**	**02 51 43.9**	**-0.1**
ULN				pmax	pmax		
	comp=Z,22nm,0.9s						
ULN	**Ulaanbaatar**	**20.89**	**8**	P	**P**	**02 51 43.9**	**-0.1**
	SNR=11						
KULM	**Kulim**	**21.89**	**186**	*e*P	**P**	**02 51 59.8**	**+4.9**
	comp=Z,21nm,1.0s						
SNY	**Shenyang**	**22.32**	**44**	⇑P	**P**	**02 52 02.3**	**+3.0**
SNY				S	**S**	**02 56 01.8**	**-2.6**
SNY				pmax	pmax		
	comp=Z,18nm,0.6s						
SNY				pmax	pmax		
	comp=Z,150nm,5.0s						
SNY				LR	LR		
	comp=Z,730nm,15.3s						
SNY				LR	LR		
	comp=Z,1µm,12.4s						
SNY				LR	LR		
	comp=Z,2µm,13.2s						
JOW	**Kunigami**	**22.54**	**85**	*e*P	**P**	**02 51 59.0**	**-2.8**
	comp=Z,48nm,1.1s						
JOW	**Kunigami**	**22.54**	**85**	P	**P**	**02 51 58.9**	**-2.9**
	comp=Z,1.4nm,0.3s,baz=129,slow=14,SNR=7.5						
TJN	**Taejon**	**22.62**	**60**	⇑*e*P	**P**	**02 52 00.5**	**-2.0**
IPM	**Ipoh**	**22.66**	**185**	*e*P	**P**	**02 52 01.5**	**-1.6**
	comp=Z,32nm,0.7s						
ZAK	**Zakamensk**	**23.16**	**1**	*e*P	**P**	**02 52 07.8**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,19nm,1.0s						
KS15	**Wonju Array Si**	**23.34**	**58**	*e*P	**P**	**02 52 07.6**	**-2.5**
	comp=Z,14nm,0.8s						
KSAR	**Wonju Array Be**	**23.34**	**58**	P	**P**	**02 52 08.1**	**-2.0**
KSAR	**Wonju Array Be**	**23.34**	**58**	P	**P**	**02 52 08.1**	**-2.0**
KS01	**Wonju Array Si**	**23.36**	**58**	*e*P	**P**	**02 52 11.2**	**+1.0**
KSRS	**Korea Array**	**23.38**	**58**	P	**P**	**02 52 08.0**	**-2.3**
	comp=Z,8.0nm,0.7s,baz=245,slow=10,SNR=13						
KSRS				LR	LR	03 02 25.9	
	comp=Z,1µm,20.8s,baz=268,slow=40						
KNGR	**Kungurtug, Tuv**	**23.75**	**351**	⇓*e*P	**P**	**02 52 13.4**	**-0.7**
KCSI	**Kotacane, Aceh**	**24.05**	**193**	P	**P**	**02 52 14.8**	**-2.3**
TLY	**Talaya**	**24.47**	**1**	*e*P	**P**	**02 52 22.2**	**+1.6**
TLY				*e*S	**S**	**02 56 42.3**	**+1.9**
TLY				*e*SS	**SnSn**	**02 57 29.0**	**+4.3**
TLY				*e*SSS	SSS	02 57 43.5	
TLY				pmax	pmax		
	comp=Z,37nm,1.7s						
TLY				MLR	MLR		
	comp=Z,1µm,11.0s						
MOY	**Mondy**	**24.49**	**357**	*e*P	**P**	**02 52 20.6**	**-0.4**
MOY				pmax	pmax		
	comp=Z,38nm,2.3s						
KKM	**Kota Kinabalu**	**24.52**	**147**	*e*P	**P**	**02 52 19.3**	**-2.1**
	comp=Z,89nm,1.5s						
HYB	**Hyderabad**	**24.56**	**252**	*i* P	**P**	**02 52 21.0**	**-0.8**
PSI	**Prapat**	**24.56**	**190**	*e*P	**P**	**02 52 22.8**	**+1.0**
	comp=Z,27nm,1.2s						
PSI	**Prapat**	**24.56**	**190**	*e*P	**P**	**02 52 22.8**	**+1.0**
PSI				pmax	pmax		
	comp=Z,27nm,1.2s						
CN2	**Changchun**	**24.57**	**42**	*e*P	**P**	**02 52 21.5**	**-0.1**
CN2				*e*S	**S**	**02 56 41.4**	**-0.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,1µm,12.0s						
CN2				LR	LR		
	comp=Z,1µm,12.0s						
CN2				LR	LR		
	comp=Z,1µm,12.0s						
JNU	**Nakatsue**	**24.80**	**69**	*e*P	**P**	**02 52 23.3**	**-0.5**
	comp=Z,49nm,0.9s						
JNU	**Nakatsue**	**24.80**	**69**	P	**P**	**02 52 22.9**	**-1.0**
	comp=Z,21nm,0.7s,baz=201,slow=3.0,SNR=11						
PDGK	**Podgornoye**	**24.92**	**316**	P	**P**	**02 52 25.1**	**+0.2**
PDGK				pmax	pmax		
	comp=Z,133nm,0.8s						
IRK	**Irkutsk**	**25.04**	**2**	*e*P	**P**	**02 52 25.3**	**-0.5**
IRK				pmax	pmax		
	comp=Z,81nm,2.2s						
PRZ	**Przheval'sk**	**25.17**	**314**	*e*P	**P**	**02 52 29.2**	**+2.0**
	comp=Z,56nm,1.1s						
PRZ	**Przheval'sk**	**25.17**	**314**	*e*P	**P**	**02 52 29.3**	**+2.0**
PRZ				pmax	pmax		
	comp=Z,56nm,1.1s						
TARG	**Taragay, Kyrgy**	**25.20**	**312**	*e*P	**P**	**02 52 29.0**	**+1.2**
	comp=Z,33nm,0.9s						
MK01	**Makanchi Array**	**25.45**	**326**	*e*P	**P**	**02 52 29.5**	**-0.1**
DGZ	**Jazzator, Alta**	**25.46**	**336**	⇑*e*P	**P**	**02 52 30.4**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,47nm,1.0s						
MK31	**Makanchi Array**	**25.47**	**326**	*e*P	**P**	**02 52 29.5**	**-0.3**
	comp=Z,25nm,1.0s						
MK31	**Makanchi Array**	**25.47**	**326**	*e*P	**P**	**02 52 29.5**	**-0.3**
MK31				pmax	pmax		
	comp=Z,25nm,1.0s						
MK32	**Makanchi Array**	**25.47**	**326**	*e*P	**P**	**02 52 29.5**	**-0.3**
MK32				*e*PcP	**PcP**	**02 56 01.0**	**-0.4**
MK32				*e*ScP	**ScP**	**02 59 36.6**	**-4.0**
MKAR	**Makanchi Array**	**25.47**	**326**	*e*P	**P**	**02 52 29.5**	**-0.3**
	comp=Z,133nm,0.9s						
MKAR	**Makanchi Array**	**25.47**	**326**	*e*P	**P**	**02 52 29.5**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,133nm,0.9s						
MKAR	**Makanchi Array**	**25.47**	**326**	P	**P**	**02 52 29.5**	**-0.3**
	comp=Z,28nm,0.9s,baz=129,slow=9.5,SNR=125						
MKAR				PcP	**PcP**	**02 56 01.0**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=109,slow=4.2,SNR=2.5						
MKAR				ScP	**ScP**	**02 59 36.6**	**-4.0**
	comp=Z,3.5nm,1.0s,baz=123,slow=4.5,SNR=10						
MKAR				LR	LR	03 03 39.4	
	comp=Z,1µm,20.9s,baz=122,slow=39						
HIA	**Hailar**	**25.57**	**26**	*e*P	**P**	**02 52 30.6**	**0.0**
	comp=Z,35nm,0.6s						
HIA	**Hailar**	**25.57**	**26**	*e*P	**P**	**02 52 30.6**	**0.0**
HIA				pmax	pmax		
	comp=Z,35nm,0.6s						
KSH	**Kashi**	**25.58**	**306**	P	**P**	**02 52 33.8**	**+2.8**
KSH				pP	sP	02 52 37.6	+0.5
KSH				PP	**PnPn**	**02 53 13.1**	**+6.3**
KSH				S	**S**	**02 56 58.5**	**-0.3**
KSH				sS	sS	02 57 08.6	+2.4
KSH				SS	SnSn	02 58 07.3	+15
KSH				pmax	pmax		
	comp=Z,74nm,0.7s						
KSH				LR	LR		
	comp=Z,1µm,10.6s						
KSH				LR	LR		
	comp=Z,1µm,11.0s						
KSH				LR	LR		
	comp=Z,2µm,11.6s						
MAKZ	**Makanchi**	**25.64**	**325**	*e*P	**P**	**02 52 30.9**	**-0.4**
	comp=Z,15nm,0.8s						
MAKZ	**Makanchi**	**25.64**	**325**	P	**P**	**02 52 30.0**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,25nm,1.1s						
KDJ	**Kajisay**	**25.80**	**312**	*e*P	**P**	**02 52 30.8**	**-2.2**
	comp=Z,27nm,0.9s						
KDJ				*e*pP	**pP**	**02 52 35.2**	**-2.2**
KDJ	**Kajisay**	**25.80**	**312**	*e*P	**P**	**02 52 30.8**	**-2.2**
KDJ				*e**PP	**pP**	**02 52 35.2**	**-2.2**
KDJ				pmax	pmax		
	comp=Z,27nm,0.9s						
SBUM	**Sibu**	**26.15**	**159**	*e*P	**P**	**02 52 36.4**	**+0.3**
	comp=Z,7.4nm,1.0s						
NRN	**Naryn**	**26.29**	**310**	*e*P	**P**	**02 52 37.5**	**-0.1**
	comp=Z,24nm,1.0s						
NRN	**Naryn**	**26.29**	**310**	*e*P	**P**	**02 52 37.5**	**-0.1**
NRN				pmax	pmax		
	comp=Z,24nm,1.0s						
NIL	**Nilore**	**26.37**	**291**	*e*P	**P**	**02 52 38.0**	**-0.1**
	comp=Z,38nm,0.6s						
NIL	**Nilore**	**26.37**	**291**	*e*P	**P**	**02 52 38.0**	**-0.1**
NIL				pmax	pmax		
	comp=Z,38nm,0.6s						
ULHL	**Ulahol**	**26.47**	**311**	P	**P**	**02 52 40.3**	**+1.2**
	SNR=9.6						
KZA	**Kyzart**	**27.07**	**310**	P	**P**	**02 52 45.9**	**+1.2**
	SNR=20						
TKM2	**Tokmak 2**	**27.20**	**312**	P	**P**	**02 52 46.2**	**+0.6**
	SNR=11						
KBK	**Karagaybulak**	**27.51**	**311**	P	**P**	**02 52 49.7**	**+1.3**
	SNR=16						
MDJ	**Mudanjiang**	**27.52**	**44**	P	**P**	**02 52 48.3**	**+0.1**
MDJ				pP	sP	02 52 59.6	+5.4
MDJ				PP	**PnPn**	**02 53 33.3**	**+0.3**
MDJ				S	**S**	**02 57 31.8**	**+2.8**
MDJ				sS	sS	02 57 37.0	+0.5
MDJ				SS	**SnSn**	**02 58 45.5**	**+6.2**
MDJ				PcS	**PcS**	**02 59 44.4**	**-3.4**
MDJ				ScS	**ScS**	**03 03 36.1**	**-2.1**
MDJ				pmax	pmax		
	comp=Z,15nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,340nm,5.6s						
MDJ				LR	LR		
	comp=Z,910nm,17.5s						
MDJ				LR	LR		
	comp=Z,1µm,16.7s						
MDJ				LR	LR		
	comp=Z,1µm,17.5s						
UCH	**Uchtor**	**27.63**	**310**	P	**P**	**02 52 50.9**	**+1.1**
	SNR=8.6						
AAK	**Ala-Archa**	**27.81**	**311**	P	**P**	**02 52 52.1**	**+1.0**
	SNR=13						
AAK	**Ala-Archa**	**27.81**	**311**	*e*P	**P**	**02 52 52.1**	**+1.0**
	comp=Z,16nm,1.1s						
AAK	**Ala-Archa**	**27.81**	**311**	P	**P**	**02 52 52.2**	**+1.1**
	SNR=9.6						
AAK				P	**P**	**02 52 52.2**	**+1.1**
	SNR=9.6						
AAK	**Ala-Archa**	**27.81**	**311**	P	**P**	**02 52 52.2**	**+1.1**
	comp=Z,8.8nm,0.8s,baz=112,slow=6.0,SNR=31						
AAK				LR	LR	03 04 04.4	
	comp=Z,347nm,20.7s,baz=110,slow=37						
FRU	**Bishkek**	**27.81**	**312**	*e*P	**P**	**02 52 50.5**	**-0.4**
SDSI	**Sungai Dareh**	**28.00**	**183**	P	**P**	**02 52 51.2**	**-1.5**
USP	**Ospenovka**	**28.07**	**312**	P	**P**	**02 52 54.0**	**+0.7**
	SNR=16						
AML	**Almayashu**	**28.15**	**310**	P	**P**	**02 52 55.6**	**+1.2**
	SNR=12						
EKS2	**Erkin-Say**	**28.30**	**311**	P	**P**	**02 52 56.5**	**+1.1**
	SNR=17						
ARSB	**Arslanbob**	**28.35**	**308**	*e*P	**P**	**02 52 55.9**	**0.0**
	comp=Z,8.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**28.83**	**46**	P	**P**	**02 52 59.2**	**-0.8**
	comp=Z,9.8nm,1.0s,baz=250,slow=8.5,SNR=10.0						
USRK				LR	LR	03 04 50.6	
	comp=Z,441nm,18.2s,baz=230,slow=37						
PALK	**Pallekele**	**28.96**	**231**	*e*P	**P**	**02 53 02.2**	**+0.7**

```
      comp=Z,15nm,1.1s
PALK  Pallekele         28.96 231  eP      P      02 53 02.2 +0.7
PALK                                pmax   pmax
      comp=Z,15nm,1.1s
PALK  Pallekele         28.96 231   P      P      02 53 02.2 +0.7
      comp=Z,3.6nm,0.8s,baz=113,slow=2.1,SNR=2.7
PALK                                LR     LR     03 06 41.5
      comp=Z,552nm,19.1s,baz=116,slow=40
MNAS  Manas             29.10 310   P      P      02 53 03.4 +0.8
MNAS                                pmax   pmax
      comp=Z,10.0nm,1.7s
BTK   Batken            29.52 304  eP      P      02 53 08.9 +2.6
      comp=Z,18nm,1.2s
BTK   Batken            29.52 304   P      P      02 53 08.9 +2.6
BTK                                 pmax   pmax
      comp=Z,18nm,1.2s
GAR   Garm              29.63 302  eP      P      02 53 07.3  0.0
      comp=Z,39nm,1.2s
GAR   Garm              29.63 302  eP      P      02 53 07.3  0.0
GAR                                 pmax   pmax
      comp=Z,39nm,1.2s
ZAA0  Zalesovo Array    29.90 338  eP      P      02 53 08.6 -0.7
      comp=Z,8.7nm,1.0s
ZALV  Zalesovo Beam     29.90 338  eP      P      02 53 08.0 -1.3
ZALV  Zalesovo Beam     29.90 338  eP      P      02 53 08.0 -1.3
ZALV  Zalesovo Beam     29.90 338   P      P      02 53 07.5 -1.8
      comp=Z,2.4nm,0.6s,baz=147,slow=10,SNR=13
ZALV                                LR     LR     03 05 51.3
      comp=Z,520nm,20.1s,baz=150,slow=38
KURBB Kurchatov Arra    29.90 328   P      P      02 53 08.7 -0.6
      comp=Z,13nm,0.8s,baz=136,slow=9.3,SNR=132
KURBB                               ScP    ScP    02 59 50.6 -3.4
      comp=Z,1.7nm,1.1s,baz=148,slow=2.9,SNR=4.6
ZAA1  Zalesovo Array    29.90 338  eP      P      02 53 07.5 -1.8
KURK  Kurchatov         29.92 328  eP      P      02 53 08.8 -0.7
KURK                               eScP    ScP    02 59 50.6 -3.5
KURK  Kurchatov         29.92 328  eP      P      02 53 08.8 -0.7
KURK  Kurchatov         29.92 328   P      P      02 53 09.0 -0.5
      SNR=7.8
KBL   Kabul             29.93 293  eP      P      02 53 10.5 +0.4
      comp=Z,29nm,1.4s
KBL   Kabul             29.93 293  eP      P      02 53 10.5 +0.4
KBL                                 pmax   pmax
      comp=Z,29nm,1.4s
CHGR  Chuyangaron       30.44 301  eP      P      02 53 14.3 -0.1
      comp=Z,39nm,1.1s
KK31  Karatay Array     30.69 310  eP      P      02 53 16.4  0.0
KK31  Karatay Array     30.69 310  eP      P      02 53 16.5  0.0
KKAR  Karatay Array     30.69 310  eP      P      02 53 16.4  0.0
KKAR                               epP     P      02 53 16.7 +0.2
KKAR  Karatay Array     30.69 310  eP      P      02 53 16.5  0.0
LHSI  Lahat             30.84 179   P      P      02 53 21.2 +3.3
      comp=Z,64nm,0.9s
MAJO  Matsushiro        31.20  64  eP      P      02 53 18.5 -2.6
MAJO  Matsushiro        31.20  64  eP      P      02 53 18.5 -2.6
MJAR  Matsushiro Arr    31.20  64   P      P      02 53 18.5 -2.6
      comp=Z,1.6nm,0.9s,baz=264,slow=9.7,SNR=3.0
MJAR                                LR     LR     03 07 14.0
      comp=Z,1µm,18.5s,baz=260,slow=39
MDSI  Maura Dua         31.51 178   P      P      02 53 21.9 -1.9
ZEA   Zeya              32.01  27  eP      P      02 53 28.8 +0.9
ZEA                                 pmax   pmax
      comp=E,21nm,0.8s
ZEA                                 pmax   pmax
      comp=Z,35nm,1.0s
ZEA                                 MLR    MLR
      comp=Z,2µm,11.0s
ZEA                                 MLR    MLR
      comp=E,2µm,9.0s
ZEA                                 MLR    MLR
      comp=N,1µm,10.0s
BVA0  Borovoye Array    35.36 326  i P     P      02 53 55.6 -1.5
BVA0                                pmax   pmax
      comp=Z,7.0nm,1.0s
BVAR  Borovoye Array    35.36 326   P      P      02 53 56.0 -1.1
      comp=Z,2.3nm,0.6s,baz=120,slow=10,SNR=16
BRVK  Borovoye          35.43 326  eP      P      02 53 56.6 -1.1
BRVK                               epP     P      02 53 57.4 -0.3
BRVK  Borovoye          35.43 326  eP      P      02 53 56.6 -1.1
BRVK                               e*PP    P      02 53 57.4 -0.3
BRVK  Borovoye          35.43 326   P      P      02 53 57.3 -0.3
      SNR=5.1
BRVK                                P      P      02 53 57.3 -0.3
      SNR=5.1
YSS   Yuzh-Sakhalins    36.87  47  eP      P      02 54 11.5 +1.5
YSS                                e*SP    sP     02 54 15.8 -0.2
YSS                                e              02 55 37.3
YSS                                eS      S      02 59 58.0 +3.7
YSS                                 MLR    MLR
      comp=Z,1µm,16.0s
YSS                                 MLR    MLR
      comp=E,800nm,15.0s
JAGI  Jajag, Banyuwa    37.07 161  eP      P      02 54 06.8 -5.2
      comp=E,69nm,0.8s
JAGI  Jajag, Banyuwa    37.07 161   P      P      02 54 04.0 -8.0
NKL   Nikolayevsk       38.07  37  eP      P      02 54 19.0 -1.1
NKL                                 pmax   pmax
      comp=Z,17nm,1.0s
NKL                                 MLR    MLR
      comp=E,800nm,13.0s
NKL                                 MLR    MLR
      comp=Z,1µm,13.0s
TYV   Tymovskoe         38.19  41  eP      P      02 54 24.0 +2.8
TYV                                 pmax   pmax
      comp=Z,8.0nm,1.2s
TYV                                 pmax   pmax
      comp=Z,500nm,4.7s
TYV                                 MLR    MLR
      comp=E,1µm,16.0s
GEYT  Alibeck           38.97 298   P      P      02 54 28.2 +0.3
      comp=E,7.3nm,0.7s,baz=116,slow=6.9,SNR=13
GEYT                                LR     LR     03 10 43.9
      comp=E,413nm,19.2s,baz=75,slow=36
GYA0B ALIBECK ARRAY     38.97 298  eP      P      02 54 28.9 +0.9
      comp=E,15nm,1.0s
YAK   Yakutsk           39.11  20  eP      P      02 54 32.7 +4.0
YAK                                e*PP    sP     02 54 43.9 +9.1
YAK                                eS      S      03 00 29.3 +1.4
YAK                                 pmax   pmax
      comp=Z,75nm,0.7s
YAK                                 pmax   pmax
      comp=N,22nm,0.8s
YAK                                 pmax   pmax
      comp=E,32nm,1.0s
YAK                                 smax   smax
      comp=E,1µm,3.8s
YAK                                 smax   smax
      comp=N,528nm,3.2s
YAK                                 MLR    MLR
      comp=Z,1µm,15.0s
AB31  Akbulak array     39.65 316   P      P      02 54 32.9 -0.6
AB31                                pmax   pmax
      comp=Z,9.0nm,0.9s
ABKAR Akbulak array     39.65 316  eP      P      02 54 32.9 -0.5
ABKAR                              epP     P      02 54 33.5 +0.1
AKTO  Aktyubinsk        41.19 317   P      P      02 54 46.1 -0.1
      comp=Z,7.2nm,0.7s,baz=99,slow=12,SNR=18
SVE   Sverdlovsk        42.13 326  eP      P      02 54 53.9 +0.1
SVE                                 pmax   pmax
      comp=Z,38nm,1.2s
ARU   Arti              43.00 325  eP      P      02 55 00.5 -0.4
      comp=Z,42nm,1.1s
ARU   Arti              43.00 325d iP      P      02 55 00.3 -0.6
ARU                                               02 56 40.3
ARU                                 S      S      03 01 29.1 +3.2
ARU                                 pmax   pmax
      comp=Z,40nm,1.0s
ARU                                 MLR    MLR
      comp=Z,553nm,20.0s
NRIK  Noril'sk          43.14 352   P      P      02 55 01.3 -0.5
      comp=Z,9.2nm,0.6s,baz=117,slow=6.0,SNR=8.7
NRIK                                LR     LR     03 14 11.9
      comp=Z,346nm,20.2s,baz=166,slow=38
SKR   Severo-Kuril's    46.33  45  eP      P      02 55 13.5  -14
SKR                                e              02 56 55.5
SKR                                eS      S      03 02 13.0 -1.3
SKR                                 pmax   pmax
      comp=Z,107nm,1.4s
SKR                                 MLR    MLR
      comp=Z,1µm,16.0s
JAY   Jayapura          46.84 123   LR     LR     03 17 22.4
      comp=Z,117nm,18.1s,baz=310,slow=39
MAK   Makhachkala       47.21 305c iP      P      02 55 28.0 -6.5
MAK                                e              02 57 19.7
MAK                                eS      S      03 02 18.1 -9.1
MAK                                eSS     SS     03 05 47.8 -6.5
MAK                                 pmax   pmax
      comp=Z,23nm,0.4s
MAK                                 MLR    MLR
      comp=Z,656nm,16.0s
PEA1  Petropavlovsk-    47.72  42  eP      P      02 55 37.6 -0.8
PETK  Petropavlovsk-    47.72  42   P      P      02 55 37.6 -0.8
      comp=Z,5.5nm,1.0s,baz=282,slow=5.0,SNR=3.5
PETK                                LR     LR     03 17 43.7
      comp=Z,424nm,18.1s,baz=246,slow=39
SEY   Seymchan          47.99  28⇓eP      P      02 55 39.6 -0.7
KIRV  Kirov             48.37 326   P      P      02 55 42.5 -0.8
      comp=Z,29nm,0.5s,baz=108,slow=4.8,SNR=12
GNI   Garni             49.35 301⇑eP      P      02 55 52.1 +0.7
GNI                                 pmax   pmax
      comp=Z,67nm,1.6s
ZEI   Tsey              49.86 304  eP      P      02 55 55.1 -0.2
FITZ  Fitzroy Crossi    50.10 151  eP      P      02 55 55.3 -1.7
      comp=Z,17nm,1.5s
GOF   Gofitskoye        50.44 307  eP      P      02 55 59.1 -0.2
GOF                                 pmax   pmax
      comp=Z,20nm,0.9s
KBZ   Khabaz            50.56 306   P      P      02 55 59.3 -1.0
      comp=Z,1.0nm,0.7s,baz=208,slow=13,SNR=5.2
KBZ                                 LR     LR     03 21 07.1
      comp=Z,270nm,18.5s,baz=108,slow=40
NEY   Neytrino          50.71 305⇑eP      P      02 56 02.1 +0.5
NEY                                 pmax   pmax
      comp=Z,2.0nm,0.8s
KIV   Kislovodsk        50.71 306  eP      P      02 56 01.5  0.0
      comp=Z,24nm,1.1s
KIV   Kislovodsk        50.71 306  eP      P      02 56 01.2 -0.3
KIV                                 pmax   pmax
      comp=Z,20nm,1.1s
KIV                                 MLR    MLR
      comp=Z,167nm,16.0s
KIV   Kislovodsk        50.71 306   P      P      02 56 02.6 +1.0
      SNR=6.8
MBWA  Marble Bar        50.73 160  eP      P      02 56 00.3 -1.3
      comp=Z,16nm,0.8s
PRGR  Permogore         51.03 329⇑iP      P      02 56 03.1 -0.4
PRGR                                pmax   pmax
      comp=Z,28nm,0.7s
VRH   Novokhopyorsk     51.48 315  eP      P      02 56 05.0 -2.0
VRH                                 pmax   pmax
      comp=Z,10.0nm,0.6s
RAYN  Ar Rayn           51.68 279  eP      P      02 56 12.2 +3.2
      comp=Z,5.2nm,1.0s
RAYN  Ar Rayn           51.68 279  eP      P      02 56 12.2 +3.2
RAYN                                pmax   pmax
      comp=Z,5.0nm,1.0s
VSR   Storozhevoye      53.08 315  eP      P      02 56 15.9 -3.1
VSR                                 pmax   pmax
      comp=Z,7.0nm,0.6s
LPSR  Galich'ya Gora    53.28 317  eP      P      02 56 19.5 -0.9
LPSR                                pmax   pmax
      comp=Z,30nm,1.7s
KLMR  Klimovskoe        53.76 327  eP      P      02 56 20.7 -3.1
KLMR                               eS      S      03 03 55.9 -1.8
KLMR                                pmax   pmax
      comp=Z,76nm,1.3s
KLMR  Klimovskoe        53.76 327  eP      P      02 56 20.7 -3.1
KLMR                                AMP           02 56 27.4
      comp=Z,76nm,1.2s
KLMR                               eS      S      03 03 55.9 -1.8
KLMR                               eS      S      03 03 55.9 -1.8
MOS   Moscow            54.20 321  eP      P      02 56 26.4 -0.7
MOS                                e              02 57 28.3
MOS                                 pmax   pmax
      comp=Z,42nm,0.7s
ANN   Anapa             54.43 307  eP      P      02 56 27.4 -1.5
ANN                                eS      S      03 04 06.1 -1.1
ANN                                 pmax   pmax
      comp=Z,24nm,0.9s
ANN                                 MLR    MLR
      comp=Z,495nm,23.0s
OBN   Obninsk           54.77 320  eP      P      02 56 30.9 -0.3
OBN                                e              02 57 32.0
OBN                                ePPP    PPP    02 59 45.8
OBN                                 pmax   pmax
      comp=Z,49nm,1.7s
OBN                                 MLR    MLR
      comp=Z,275nm,17.0s
TMCR  Tamitsa           54.98 331  eP      P      02 56 30.9 -1.7
TMCR                                pmax   pmax
      comp=Z,54nm,1.4s
BILL  Bilibino          55.13  24  eP      P      02 56 33.3 -0.4
      comp=Z,13nm,1.4s
BILL  Bilibino          55.13  24  eP      P      02 56 32.8 -0.9
BILL                               e              02 57 34.5
BILL                               e              02 58 31.8
BILL                               ePPP    PPP    02 59 46.3
BILL                                pmax   pmax
      comp=Z,3.0nm,0.9s
BILL                                MLR    MLR
      comp=Z,813nm,17.0s
WRAB  Tennant Creek     55.84 144  eP      P      02 56 37.8 -1.6
      comp=Z,15nm,0.7s
WRAB  Tennant Creek     55.84 144  eP      P      02 56 37.8 -1.6
WRAB                                pmax   pmax
      comp=Z,15nm,0.7s
WR1   Warramunga Arr    55.85 144  eP      P      02 56 37.8 -1.6
      comp=Z,18nm,0.6s
WRA   Warramunga Arr    55.85 144   P      P      02 56 37.8 -1.6
      comp=Z,9.6nm,0.7s,baz=332,slow=8.3,SNR=127
WB2   Warramunga Arr    55.85 144  eP      P      02 56 37.9 -1.6
      comp=Z,16nm,0.6s
BR101 Keskin Array S    57.88 302  eP      P      02 56 52.8 -1.1
BR131 Keskin Array S    57.88 302  eP      P      02 56 55.4 +1.6
BRTR  Keskin Array B    57.88 302   P      P      02 56 52.8 -1.1
      comp=Z,1.7nm,1.0s,baz=108,slow=4.0,SNR=6.3
BRTR                                LR     LR     03 25 13.3
      comp=Z,94nm,19.8s,baz=85,slow=40
AS31  Alice Springs     58.72 147  eP      P      02 56 58.8 -0.9
      comp=Z,1.9nm,0.6s
ASAR  Alice Springs     58.73 147   P      P      02 56 58.5 -1.2
      comp=Z,4.4nm,0.6s,baz=329,slow=6.6,SNR=49
AS01  Alice Springs     58.75 146  eP      P      02 56 57.8 -2.1
AKASG Malin Array Be    59.38 315   P      P      02 57 02.6 -1.3
      comp=Z,3.7nm,0.6s,baz=74,slow=6.6,SNR=19
AKASG                               LR     LR     03 23 43.8
      comp=Z,272nm,19.7s,baz=75,slow=37
AKBB  Malin Array Si    59.38 315  eP      P      02 57 03.0 -1.0
      comp=Z,6.3nm,0.7s
KIEV  Kiev              59.40 315  eP      P      02 57 03.0 -1.1
      comp=Z,6.1nm,0.7s
KIEV  Kiev              59.40 315⇓iP      P      02 57 02.8 -1.2
KIEV  Kiev              59.40 315⇓eP      P      02 57 02.6 -1.4
KIEV                                pmax   pmax
      comp=Z,12nm,1.3s
AK11  Malin Array Si    59.42 315  eP      P      02 57 03.0 -1.2
VSU   Vasula            60.13 324⇑eP      P      02 57 08.5 -0.5
VSU                                 pmax   pmax
      comp=Z,29nm,0.7s
FIA0  FINESS Array S    60.29 327  eP      P      02 57 08.8 -1.2
FIA0  FINESS Array S    60.29 327  eP      P      02 57 08.8 -1.2
FINES FINESS Array B    60.29 327   P      P      02 57 08.8 -1.2
      comp=Z,3.5nm,0.6s,baz=92,slow=6.5,SNR=25
FINES                               LR     LR     03 24 40.2
      comp=Z,205nm,20.8s,baz=100,slow=37
NACGM Naroch            60.41 320  e       P      02 57 11.0 +0.1
ARA0  ARCESS Array S    60.43 337  eP      P      02 57 09.8 -1.1
ARCES ARCESS Array B    60.43 337   P      P      02 57 09.8 -1.2
      comp=Z,1.7nm,0.5s,baz=91,slow=7.9,SNR=18
ARCES                               LR     LR     03 22 56.3
      comp=Z,220nm,18.4s,baz=154,slow=36
TLCR                    60.44 309⇓iP      P      02 57 10.7 -0.6
LEOM  Leova             60.62 310⇑iP      P      02 57 11.6 -0.9
TIRR  Tirgusor          60.85 308⇑iP      P      02 57 13.2 -0.9
CFR   Carcaliu          60.92 309⇓iP      P      02 57 13.2 -1.4
ICOR  Ion Corvin        61.35 307⇓iP      P      02 57 17.0 -0.5
ODBI  Odobesti          61.56 309⇑iP      P      02 57 18.6 -0.3
TESR  Tescani           61.70 310⇓iP      P      02 57 19.0 -0.9
VRI   Vrincioaia        61.76 310⇓iP      P      02 57 19.4 -0.9
PLOR  Plostina          61.82 310⇑iP      P      02 57 20.6 -0.2
BIZ   Bicaz             61.99 311⇑iP      P      02 57 20.9 -0.9
ISR   Istrita           62.03 309⇑iP      P      02 57 21.6 -0.6
OZUR                    62.36 310⇑iP      P      02 57 24.1 -0.3
MLR   Muntele Rosu      62.37 309  eP      P      02 57 24.3 -0.3
      comp=Z,31nm,1.0s
MLR   Muntele Rosu      62.37 309⇓iP      P      02 57 23.8 -0.8
MLR   Muntele Rosu      62.37 309  eP      P      02 57 24.3 -0.3
MLR                                 pmax   pmax
      comp=Z,31nm,1.0s
BURAR Bucovina Array    62.45 312⇓iP      P      02 57 23.8 -1.3
BUR04 Bucovina Ar. S    62.45 312  eP      P      02 57 24.0 -1.1
BUR08 Bucovina Ar. S    62.46 312  eP      P      02 57 24.1 -0.9
SUW   Suwalki           62.61 319  eP      P      02 57 25.0 -0.8
SUW   Suwalki           62.61 319  eP      P      02 57 25.1 -0.8
      comp=Z,27nm,1.0s
SUW   Suwalki           62.61 319  eP      P      02 57 25.1 -0.7
SUW                                 pmax   pmax
      comp=Z,27nm,1.0s
DOPR  Dopca             62.66 310⇑iP      P      02 57 26.2 -0.2
LVV   L'vov             62.81 314  eP      P      02 57 25.9 -1.4
CTA   Charters Tower    62.98 134   P      P      02 57 27.9 -0.9
      comp=Z,3.2nm,0.4s,baz=322,slow=7.0,SNR=6.8
CTAO  Charters Tower    62.98 134  eP      P      02 57 30.6 +1.9
      comp=Z,6.8nm,0.8s
CTAO  Charters Tower    62.98 134  eP      P      02 57 30.6 +1.9
CTAO                                pmax   pmax
      comp=Z,7.0nm,0.8s
VOIR                    63.00 309⇑iP      P      02 57 27.8 -0.9
MTUR  Matau             63.04 309⇑iP      P      02 57 28.0 -1.0
ARR   Arges             63.30 309⇓iP      P      02 57 29.9 -0.8
KWP   Kalwaria Pacla    63.69 314  eP      P      02 57 32.5 -0.6
KWP   Kalwaria Pacla    63.69 314  eP      P      02 57 32.8 -0.3
      comp=Z,216nm,0.9s
KWP   Kalwaria Pacla    63.69 314  eP      P      02 57 32.8 -0.3
TRPA  Tarpa             64.11 313⇓iP      P      02 57 35.3 -0.6
UZH   Uzhgorod          64.17 313  eP      P      02 57 34.2 -2.0
UZH                                e              02 57 38.2
UZH                                e              02 57 43.8
DRGR                    64.29 311⇓iP      P      02 57 36.6 -0.6
GZR   Gura Zlata        64.57 310⇑iP      P      02 57 38.2 -0.9
PUNG  Punghina          64.73 309⇑iP      P      02 57 39.0 -1.0
SANT  Santorini         64.93 300⇑iP      P      02 57 39.0 -2.5
VTS   Vitosha           64.93 307  eP      P      02 57 41.3 -0.2
      comp=Z,10.0nm,1.0s
VTS   Vitosha           64.93 307⇑iP      P      02 57 41.1 -0.4
VTS   Vitosha           64.93 307  eP      P      02 57 41.3 -0.2
VTS                                 pmax   pmax
      comp=Z,10.0nm,1.0s
HERR  Herculane         64.94 309⇑iP      P      02 57 40.9 -0.5
NIE   Niedzica          65.27 315  eP      P      02 57 43.9 +0.4
NIE   Niedzica          65.27 315  eP      P      02 57 43.9 +0.4
BZS   Buzias            65.31 310⇓iP      P      02 57 43.0 -0.8
BZS   Buzias            65.31 310   P      P      02 57 42.9 -0.8
OJC   Ojcow             65.40 315  eP      P      02 57 43.5 -0.8
OJC   Ojcow             65.40 315  eP      P      02 57 43.6 -0.7
      comp=Z,11nm,1.0s
OJC   Ojcow             65.40 315  eP      P      02 57 43.6 -0.7
OJC                                 pmax   pmax
      comp=Z,11nm,1.0s
MDVR  Moldovita         65.45 309⇑iP      P      02 57 44.3 -0.5
GKP   Gorka Klasztor    66.22 319  eP      P      02 57 47.2 -2.3
GKP   Gorka Klasztor    66.22 319  eP      P      02 57 47.2 -2.3
VYHS  Vyhne             66.43 314  eP      P      02 57 50.5 -0.5
VYHS                                pmax   pmax
      comp=Z,9.0nm,1.7s
VYHS  Vyhne             66.43 314  eP      P      02 57 50.5 -0.5
ANM   Nome              66.50  28  eP      P      02 57 52.1 +1.1
      comp=Z,3.0nm,0.9s
ANM   Nome              66.50  28  eP      P      02 57 52.1 +1.1
ANM                                 pmax   pmax
      comp=Z,3.0nm,0.9s
OKC   Ostrava-Krasne    66.52 315  eP      P      02 57 54.7 +3.2
OKC   Ostrava-Krasne    66.52 315  eP      P      02 57 54.7 +3.2
DIVS  Divibare          66.82 309  eP      P      02 57 57.6 +4.0
      comp=Z,9.7nm,1.0s
MORC  Moravsky Berou    66.92 315  eP      P      02 57 53.8 -0.3
      comp=Z,7.4nm,0.9s
MORC  Moravsky Berou    66.92 315⇓iP      P      02 57 53.5 -0.5
MORC  Moravsky Berou    66.92 315  eP      P      02 57 53.8 -0.3
MORC                                pmax   pmax
      comp=Z,7.0nm,0.9s
MORC  Moravsky Berou    66.92 315  eP      P      02 57 53.6 -0.5
NC405 NORSAR Array S    67.18 328  eP      P      02 57 54.5 -1.1
NC602 NORSAR Array S    67.36 328  eP      P      02 57 55.4 -1.2
NORES NORESS Array B    67.36 328   P      P      02 57 55.0 -1.6
KSP   Ksiaz             67.41 317  eP      P      02 57 56.4 -0.7
KSP   Ksiaz             67.41 317  eP      P      02 57 56.4 -0.7
NB2   NORSAR Subarra    67.44 328   P      P      02 57 55.4 -1.8
      comp=Z,1.1nm,0.5s,baz=74,slow=6.5
NB200 NORSAR Array S    67.44 328  eP      P      02 57 55.5 -1.6
NOA   NORSAR Array B    67.44 328   P      P      02 57 55.5 -1.6
      comp=Z,3.3nm,0.8s,baz=75,slow=6.3,SNR=14
NOA                                 LR     LR     03 27 44.3
      comp=Z,143nm,19.8s,baz=80,slow=36
DPC   Dobruska-Polom    67.52 316  eP      P      02 58 00.1 +2.2
DPC                                ex      x      02 58 07.8
DPC                                 AMS    AMS    03 29 00.0
      comp=Z,300nm,15.5s
DPC   Dobruska-Polom    67.52 316  eP      P      02 58 00.1 +2.2
DPC                                e              02 58 07.8
DPC                                 MLR    MLR
      comp=Z,300nm,15.5s
NC204 NORSAR Array S    67.58 329  eP      P      02 57 57.0 -1.1
VRAC  Vranov            67.64 315  eP      P      02 57 57.8 -0.8
UPC   Upice             67.67 316   AMS    AMS    03 29 20.0
      comp=Z,400nm,18.9s
KRUC  Moravsky          67.83 315  eP      P      02 57 59.6 -0.2
SOP   Sopron            68.12 313   P      P      02 58 05.0 +3.3
SOP                                 pmax   pmax
      comp=Z,7.0nm,1.3s
CONA  Conrad Observa    68.50 314  i P     P      02 58 03.9 -0.2
      comp=Z,12nm,1.2s
GOPC  GO Pecny, Ondr    68.59 316   AMS    AMS    03 29 40.0
      comp=Z,400nm,18.3s
PRU   Pruhonice         68.72 316  eP      P      02 58 06.3 +0.9
PRU                                epP     pP     02 58 09.6 -0.5
PRU                                 AMS    AMS    03 29 50.0
      comp=Z,400nm,13.4s
PRU   Pruhonice         68.72 316  eP      P      02 58 06.3 +0.9
PRU                                e              02 58 09.6
PRU                                 MLR    MLR
      comp=Z,400nm,13.4s
BRG   Berggiesshubel    68.83 317  eP      P      02 58 10.2 +4.1
      comp=Z,5.7nm,0.8s
      comp=N,357nm,19.1s
      comp=E,316nm,23.1s
      comp=Z,454nm,19.2s
BRG   Berggiesshubel    68.83 317  eP      P      02 58 10.1 +4.1
BRG                                 pmax   pmax
      comp=Z,6.0nm,0.8s
BRG                                 MLR    MLR
      comp=N,357nm,19.1s
BRG                                 MLR    MLR
      comp=E,316nm,23.1s
BRG                                 MLR    MLR
      comp=Z,454nm,19.2s
ARSA  Arzberg           68.92 313  i pP    P      02 58 08.3 +1.6
      comp=Z,3.6nm,0.9s
KMBO  Kilima Mbogo      69.06 257  eP      P      02 58 08.1 -0.3
      comp=Z,6.4nm,1.0s
KMBO  Kilima Mbogo      69.06 257   P      P      02 58 08.1 -0.3
      comp=Z,3.6nm,1.0s,baz=46,slow=7.2,SNR=6.0
CLL   Collm             69.26 318  eP      P      02 58 08.0 -0.7
      comp=Z,13nm,1.4s
CLL                                ePP     PP     03 00 42.0 +0.6
CLL   Collm             69.26 318  eP      P      02 58 08.0 -0.7
CLL                                 pmax   pmax
      comp=Z,13nm,1.4s
STKA  Stephens Creek    69.32 145  eP      P      02 58 07.8 -1.4
      comp=Z,0.8nm,1.1s
STKA  Stephens Creek    69.32 145   P      P      02 58 07.8 -1.4
      comp=Z,1.9nm,0.6s,baz=338,slow=7.3,SNR=4.9
STKA                                LR     LR     03 32 14.8
      comp=Z,185nm,19.0s,baz=304,slow=39
SOKA  Soboth            69.41 313  i pP    pP     02 58 12.1 -2.4
      comp=Z,5.5nm,1.0s
MOA   Molln             69.55 314  i P     P      02 58 09.9 -0.7
      comp=Z,7.9nm,1.2s
KHC   Kasperske Hory    69.58 316  eP      P      02 58 14.8 +4.0
KHC                                ex      x      02 58 23.4
KHC                                 AMS    AMS    03 31 00.0
      comp=Z,300nm,18.7s
KHC   Kasperske Hory    69.58 316  eP      P      02 58 14.8 +4.0
KHC                                e              02 58 23.4
KHC                                 MLR    MLR
      comp=Z,300nm,18.7s
GEC2  GERESS Array S    69.59 315  eP      P      02 58 09.1 -1.9
      comp=Z,6.7nm,1.2s
GEC2  GERESS Array S    69.59 315  eP      P      02 58 09.1 -1.9
GEC2                                pmax   pmax
      comp=Z,7.0nm,1.2s
GERES GERESS Array B    69.59 315   P      P      02 58 09.1 -1.9
      comp=Z,0.8nm,0.5s,baz=66,slow=5.5,SNR=8.5
GERES                               LR     LR     03 31 14.4
      comp=Z,293nm,19.5s,baz=82,slow=38
GEA0  GERESS Array S    69.59 315  eP      P      02 58 10.1 -0.8
```

OBKA	**Obir**	**69.78**	**313**	*i* P	**P**	**02 58 14.8**	**+2.7**
	comp=Z,13nm,1.6s						
WET	**Wettzell**	**70.01**	**316**	P	**P**	**02 58 17.2**	**+3.8**
KBA	**Koelnbreinsper**	**70.38**	**313**	*i* P	**P**	**02 58 15.0**	**-1.0**
	comp=Z,7.5nm,1.2s						
DAG	**Danmarks Havn**	**70.44**	**348**	P	**P**	**02 58 17.5**	**+1.9**
DAG				pmax	pmax		
	comp=Z,8.0nm,2.1s						
IM3	**Indian Mountai**	**70.67**	**25**	*e*P	**P**	**02 58 16.5**	**-0.6**
ABTA	**Abfaltersbach**	**71.03**	**313**	*i* P	**P**	**02 58 17.9**	**-1.9**
	comp=Z,4.6nm,1.0s						
TOLK	**Toolik Lake Re**	**71.03**	**22**	*e*P	**P**	**02 58 20.5**	**+1.1**
	comp=Z,3.8nm,0.9s						
WTTA	**Wattenberg**	**71.42**	**314**	*i* P	**P**	**02 58 19.1**	**-3.1**
	comp=Z,11nm,1.4s						
SQTA	**Sankt Quirin**	**71.71**	**314**	*i* P	**P**	**02 58 22.9**	**-1.0**
	comp=Z,9.0nm,0.7s						
MOTA	**Moosalm**	**71.73**	**314**	*i* P	**P**	**02 58 22.9**	**-1.1**
	comp=Z,5.0nm,0.7s						
FETA	**Feichten**	**72.08**	**314**	*i* P	**P**	**02 58 25.1**	**-1.1**
	comp=Z,6.1nm,1.0s						
MLY	**Manley**	**72.21**	**25**	*e*P	**P**	**02 58 26.0**	**-0.5**
	comp=Z,20nm,1.5s						
FUORN	**Ofenpass-Fuorn**	**72.53**	**314**	*e*P	**P**	**02 58 30.2**	**+1.2**
	comp=Z,15nm,1.4s						
BFO	**Black Forest**	**73.12**	**316**	*e*P	**P**	**02 58 31.4**	**-0.8**
	comp=Z,1.9nm,1.2s						
BFO	**Black Forest**	**73.12**	**316**	*e*P	**P**	**02 58 31.4**	**-0.8**
BFO				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MDM	**Murphy Dome**	**73.19**	**25**	*e*P	**P**	**02 58 32.2**	**-0.1**
	comp=Z,16nm,0.9s						
COLA	**College**	**73.38**	**25**	⇑*e*P	**P**	**02 58 33.5**	**+0.2**
COLA				pmax	pmax		
	comp=Z,25nm,2.1s						
CCB	**Clear Creek Bu**	**73.50**	**25**	*e*P	**P**	**02 58 34.3**	**+0.2**
	comp=Z,5.2nm,1.2s						
MCK	**McKinley**	**73.50**	**26**	*e*P	**P**	**02 58 35.0**	**+0.8**
	comp=Z,14nm,1.4s						
MCK	**McKinley**	**73.50**	**26**	P	**P**	**02 58 35.0**	**+0.8**
MCK				pmax	pmax		
	comp=Z,14nm,1.4s						
RND	**Reindeer**	**73.69**	**26**	*e*P	**P**	**02 58 35.4**	**+0.1**
	comp=Z,21nm,1.3s						
RND	**Reindeer**	**73.69**	**26**	P	**P**	**02 58 35.4**	**+0.1**
RND				pmax	pmax		
	comp=Z,21nm,1.3s						
CDF	**Champ du Feu**	**73.74**	**316**	*e*P	**P**	**02 58 34.2**	**-1.7**
CDF				pmax	pmax		
	comp=Z,20nm,1.4s						
IL1	**Eielson Array**	**73.79**	**25**	*e*P	**P**	**02 58 36.8**	**+1.1**
ILAR	**Eielson Array**	**73.79**	**25**	P	**P**	**02 58 33.4**	**-2.4**
	comp=Z,0.6nm,0.5s,baz=289,slow=4.4,SNR=15						
ILAR				LR	LR	03 33 32.2	
	comp=Z,246nm,20.4s,baz=297,slow=38						
ILB	**Eielson Array**	**73.79**	**25**	*e*P	**P**	**02 58 35.4**	**-0.4**
SUA	**Susitna One**	**73.81**	**29**	*e*P	**P**	**02 58 39.1**	**+3.0**
	comp=Z,25nm,1.2s						
PRP	**Porcupine Dome**	**73.91**	**24**	*e*P	**P**	**02 58 36.3**	**-0.4**
	comp=Z,11nm,0.7s						
WLF	**Walferdange**	**73.93**	**318**	*e*P	**P**	**02 58 37.2**	**+0.3**
	comp=Z,130nm,1.3s						
WLF	**Walferdange**	**73.93**	**318**	*e*P	**P**	**02 58 37.2**	**+0.3**
WLF				pmax	pmax		
	comp=Z,130nm,1.3s						
WLF	**Walferdange**	**73.93**	**318**	⇑P	**P**	**02 58 36.6**	**-0.3**
WLF	**Walferdange**	**73.93**	**318**	⇑pP	pP	02 58 39.2	-2.4
WLF	**Walferdange**	**73.93**	**318**	⇓sP	sP	02 58 41.4	-1.9
BCLA	**Clavier**	**74.14**	**319**	⇑P	**P**	**02 58 37.7**	**-0.4**
HINF	**Hinteralfeld**	**74.23**	**316**	*e*P	**P**	**02 58 41.5**	**+2.8**
HINF				pmax	pmax		
	comp=Z,23nm,1.7s						
KDAK	**Kodiak Island**	**74.65**	**33**	*i* P	**P**	**02 58 39.8**	**-1.1**
DOU	**Dourbes**	**74.69**	**319**	⇓P	**P**	**02 58 40.3**	**-1.0**
PGF	**Pioggiola**	**74.89**	**310**	*e*P	**P**	**02 58 45.9**	**+3.1**
PGF				pmax	pmax		
	comp=Z,68nm,1.5s						
RIDG	**Independ'e Rid**	**75.08**	**25**	*e*P	**P**	**02 58 41.5**	**-1.9**
	comp=Z,10nm,0.7s						
CABF	**La Chapelle**	**75.19**	**315**	*e*P	**P**	**02 58 46.4**	**+2.0**
CABF				pmax	pmax		
	comp=Z,72nm,2.2s						
SCRK	**Sand Creek**	**75.28**	**25**	*e*P	**P**	**02 58 43.3**	**-1.3**
	comp=Z,4.0nm,0.7s						
SBF	**Sospel**	**75.42**	**312**	*e*P	**P**	**02 58 49.3**	**+3.5**
SBF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MBDF	**Montbardon**	**75.51**	**313**	*e*P	**P**	**02 58 48.9**	**+2.5**
MBDF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLU	**Klutina**	**75.82**	**27**	*e*P	**P**	**02 58 48.6**	**+0.8**
	comp=Z,15nm,0.8s						
ORIF	**Oris-en-Rattie**	**76.01**	**313**	*e*P	**P**	**02 58 50.0**	**+0.9**
ORIF				pmax	pmax		
	comp=Z,23nm,1.5s						
INK	**Inuvik**	**76.17**	**19**	*e*P	**P**	**02 58 49.5**	**+0.1**
	comp=Z,13nm,1.1s						
INK	**Inuvik**	**76.17**	**19**	*e*P	**P**	**02 58 49.5**	**+0.1**
INK				pmax	pmax		
	comp=Z,13nm,1.1s						
LOR	**Lormes**	**76.31**	**316**	*e*P	**P**	**02 58 50.9**	**+0.2**
LOR				pmax	pmax		
	comp=Z,27nm,1.9s						
SMF	**Signal de Mont**	**76.58**	**316**	*e*P	**P**	**02 58 50.3**	**-1.9**
SMF				pmax	pmax		
	comp=Z,38nm,1.6s						
EKA	**Eskdalemuir Ar**	**76.61**	**326**	P	**P**	**02 58 50.1**	**-2.1**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SSF	**Saint Saulge**	**76.61**	**316**	*e*P	**P**	**02 58 51.3**	**-1.1**
SSF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VIVF	**Saint-Julien-l**	**76.82**	**314**	*e*P	**P**	**02 58 56.5**	**+2.9**
VIVF				pmax	pmax		
	comp=Z,19nm,1.5s						
AVF	**Avril sur Loir**	**76.82**	**316**	*e*P	**P**	**02 58 51.7**	**-1.9**
AVF				pmax	pmax		
	comp=Z,31nm,1.6s						
DAWY	**Dawson**	**76.91**	**24**	*e*P	**P**	**02 58 54.2**	**+0.5**
	comp=Z,5.8nm,1.0s						
KEST	**Kesra**	**77.39**	**304**	*e*P	**P**	**02 58 57.4**	**+0.3**
	comp=Z,7.7nm,1.1s						
KEST	**Kesra**	**77.39**	**304**	P	**P**	**02 58 57.4**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=50,slow=9.0,SNR=3.3						
RES	**Resolute Bay**	**77.71**	**5**	*e*P	**P**	**02 59 00.3**	**+2.3**
	comp=Z,6.0nm,1.0s						
RES	**Resolute Bay**	**77.71**	**5**	*e*P	**P**	**02 59 00.3**	**+2.3**
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TCF	**Toulx Ste Croi**	**77.75**	**316**	*e*P	**P**	**02 58 57.3**	**-1.6**
TCF				pmax	pmax		
	comp=Z,11nm,1.0s						
LDF	**La Druitiere**	**78.12**	**319**	*e*P	**P**	**02 59 01.7**	**+0.9**
LDF				pmax	pmax		
	comp=Z,160nm,2.2s						
CAF	**Calviac**	**78.45**	**315**	*e*P	**P**	**02 59 04.1**	**+1.3**
CAF				pmax	pmax		
	comp=Z,14nm,1.0s						
RJF	**Les Rejaudoux**	**78.63**	**315**	*e*P	**P**	**02 59 05.2**	**+1.5**
RJF				pmax	pmax		
	comp=Z,24nm,1.3s						
GRR	**Gorron**	**78.65**	**319**	*e*P	**P**	**02 59 04.6**	**+0.9**
GRR				pmax	pmax		
	comp=Z,192nm,2.3s						
SGMF	**Saint Gilles**	**79.71**	**319**	*e*P	**P**	**02 59 08.4**	**-1.1**
SGMF				pmax	pmax		
	comp=Z,115nm,2.0s						
ETSF	**Etsaut**	**81.08**	**314**	*e*P	**P**	**02 59 18.4**	**+1.3**
ETSF				pmax	pmax		
	comp=Z,35nm,1.7s						
SJPF	**Ste Jean**	**81.40**	**314**	*e*P	**P**	**02 59 20.5**	**+1.8**
SJPF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LSZ	**Lusaka**	**83.88**	**249**	*e*P	**P**	**02 59 33.6**	**+1.5**
	comp=Z,8.6nm,1.0s						
LSZ	**Lusaka**	**83.88**	**249**	*e*P	**P**	**02 59 33.6**	**+1.5**
LSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ES19	**SONSECA Array**	**84.85**	**312**	*e*P	**P**	**02 59 38.2**	**+1.5**
ESDC	**Sonseca Array**	**84.91**	**312**	P	**P**	**02 59 35.5**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=44,slow=4.2,SNR=6.7						
YKA	**Yellowknife Ar**	**85.71**	**16**	P	**P**	**02 59 39.5**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=327,slow=4.7,SNR=18						
YKA				LR	LR	03 42 32.6	
	comp=Z,15nm,18.4s,baz=308,slow=39						
YKB5	**Yellowknife Ar**	**85.71**	**16**	*e*P	**P**	**02 59 41.8**	**+1.4**
BOSA	**Boshof**	**92.86**	**239**	P	**P**	**03 00 15.7**	**+0.7**
	comp=Z,5.2nm,1.1s,baz=45,slow=4.3,SNR=2.3						
BOSA				LR	LR	03 42 22.6	
	comp=Z,106nm,19.1s,baz=63,slow=36						
TOA1	**Torodi Ar. Sit**	**93.84**	**287**	*e*P	**P**	**03 00 20.8**	**+1.2**
TORD	**Torodi Ar. Bea**	**93.84**	**287**	P	**P**	**03 00 20.8**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=12,slow=4.2,SNR=4.0						
TORD				LR	LR	03 48 14.2	
	comp=Z,82nm,18.7s,baz=335,slow=39						
URZ	**Urewera**	**95.08**	**131**	P	**P**	**03 00 23.8**	**-1.0**
	comp=Z,2.6nm,0.5s,baz=304,slow=3.6,SNR=2.0						
SCHQ	**Schefferville**	**97.85**	**354**	LR	LR	03 48 40.2	
	comp=Z,170nm,18.1s,baz=326,slow=38						
MAW	**Mawson**	**99.13**	**194**	LR	LR	03 43 32.6	
	comp=Z,125nm,18.4s,baz=13,slow=34						
TXAR	**Lajitas Array**	**118.27**	**26**	PKP	**PKPdf**	**03 05 47.4**	**-2.3**
	comp=Z,0.4nm,0.5s,baz=96,slow=0.6,SNR=13						
BANI	**BANI**	**134.23**	**351**	*e*PKPpre	PKPpre	03 06 06.0	
SDV	**Santo Domingo**	**143.61**	**349**	*e*PKPdf	PKPbc	03 06 35.1	+0.1
ROSC	**El Rosal**	**148.05**	**355**	*e*PKPbc	**PKPbc**	**03 06 48.7**	**+0.1**
ROSC	**El Rosal**	**148.05**	**355**	PKPbc	**PKPbc**	**03 06 48.0**	**-0.7**
	comp=Z,9.5nm,0.7s,baz=108,slow=20,SNR=6.6						
BDFB	**Brasilia**	**150.72**	**287**	*e*PKPbc	**PKPbc**	**03 06 54.9**	**0.0**
BDFB				*e*PKPab	**sPKPbc**	**03 07 01.3**	**-0.1**
BDFB	**Brasilia**	**150.72**	**287**	*e*PKIKP	**PKPbc**	**03 06 54.9**	**0.0**
BDFB				*e*		03 07 01.3	
BDFB	**Brasilia**	**150.72**	**287**	PKPbc	**PKPbc**	**03 06 54.9**	**0.0**
	comp=Z,4.4nm,0.8s,baz=187,slow=1.5,SNR=4.5						

IDC ***19*** *03:09:07.5±0.9, 10°.78S×164°.56E, h0^{km}, mb4.3/13, mb1 4.4/16, mb1mx4.2/44, mbtmp4.3/16, ML4.6/3, MS3.5/12, Ms1 3.5/12, ms1mx3.3/32, Error ellipse: s-maj=26.4km s-min=17.7km az=120.0*

NEIC ***19*** *03:09:08.8±0.4, 10°.85S×164°.59E, h10^{km}, mb4.7/24, Error ellipse: s-maj=12.5km s-min=7.4km az=125.0*

ISCJB ***19*** *03:09:09.9±0.3, 10°.93S±0°.04×164°.53E±0°.06, h29^{km}, mb4.5/34, MS3.5/11, Error ellipse: s-maj=7.8km s-min=6.1km az=175.7*

BJI ***19*** *03:09:12.1, 10°.64S×165°.08E, h55^{km}, mb4.6/20, mB5.0/14, Ms4.9/2, Ms7 4.7/1*

ISC 19 03:09:11.9±0.5**, 10°.85S**±0°.06×**164°.59E**±0°.08**, h29^{km}, n80, σ1^{s}04**/71**, mb4.6**/34**, MS3.5**/11**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.78**	**287**	*e*P	**Pn**	**03 10 22.0**	**0.0**
HNR				*e*S	**Sn**	**03 11 16.0**	**-0.4**
HNR	**Honiara**	**4.78**	**287**	*e*Pn	**Pn**	**03 10 23.0**	**+1.0**
HNR				*e*Sn	**Sn**	**03 11 17.7**	**+1.3**
HNR	**Honiara**	**4.78**	**287**	Pn	**Pn**	**03 10 22.2**	**+0.2**
	86nm,0.3s,baz=27,slow=1.6,SNR=9.4						
HNR				Sn	**Sn**	**03 11 17.7**	**+1.3**
	102nm,0.3s,baz=193,slow=13,SNR=3.7						
HNR				LR	LR	03 12 08.6	
	comp=Z,754nm,21.0s,baz=116,slow=38						
DZM	**Mont Dzumac**	**11.30**	**171**	*e*Pn	**Pn**	**03 11 53.4**	**+1.8**
	27nm,0.5s						
DZM				*e*LR	LR	03 14 26.7	
	comp=Z,339nm,24.1s						
DZM	**Mont Dzumac**	**11.30**	**171**	Pn	**Pn**	**03 11 53.1**	**+1.5**
	3.0nm,0.3s,baz=321,slow=10,SNR=22						
DZM				Sn	**Sn**	**03 13 56.0**	**-1.1**
	0.4nm,0.3s,baz=344,slow=20,SNR=2.5						
DZM				LR	LR	03 16 02.8	
	comp=Z,401nm,18.1s,baz=24,slow=36						
PATS	**Pohnpei**	**18.64**	**340**	*e*P	**P**	**03 13 25.9**	**-1.6**
	361nm,1.5s						
MANU	**Manus Island**	**19.20**	**296**	*e*P	**Pn**	**03 13 35.1**	**+0.3**
	85nm,0.9s						
EIDS	**Eidsvold**	**19.30**	**220**	*e*P	**Pn**	**03 13 36.2**	**+0.4**
	46nm,1.2s						
CTA	**Charters Tower**	**19.90**	**240**	P	**Pn**	**03 13 42.4**	**-0.6**
	0.7nm,0.3s,baz=73,slow=15,SNR=14						
CTAO	**Charters Tower**	**19.90**	**240**	*e*P	**Pn**	**03 13 43.4**	**+0.4**
	12nm,0.9s						
COEN	**Coen**	**21.14**	**259**	*e*P	**P**	**03 13 54.7**	**-0.1**
	13nm,1.3s						
ARMA	**Armidale**	**22.90**	**210**	*e*P	**P**	**03 14 12.7**	**-0.9**
	10nm,1.0s						
JAY	**Jayapura**	**25.10**	**288**	LR	LR	03 25 51.5	
	comp=Z,86nm,18.2s,baz=116,slow=40						
H11S2	**WAKE ISLAND Hy**	**29.22**	**4**	T	T	03 45 34.3	
	baz=184,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**29.23**	**4**	T	T	03 45 35.3	
	baz=184,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**29.24**	**4**	T	T	03 45 34.6	
	baz=184,slow=76,SNR=14						
URZ	**Urewera**	**29.52**	**160**	LR	LR	03 26 21.7	
	comp=Z,147nm,18.4s,baz=18,slow=35						
STKA	**Stephens Creek**	**29.82**	**222**	*e*P	**P**	**03 15 17.9**	**+1.4**
	3.9nm,1.5s						
STKA	**Stephens Creek**	**29.82**	**222**	P	**P**	**03 15 17.9**	**+1.4**
	2.9nm,0.8s,baz=357,slow=13,SNR=4.0						
BKZ	**Black Stump Fm**	**30.14**	**161**	*e*P	**P**	**03 15 20.2**	**+0.9**
	12nm,1.2s						
H11N1	**WAKE ISLAND Hy**	**30.45**	**4**	T	T	03 46 59.3	
	baz=184,slow=76,SNR=24						
H11N3	**WAKE ISLAND Hy**	**30.46**	**4**	T	T	03 47 10.3	
	baz=184,slow=76,SNR=19						
WC3	**Warramunga Arr**	**30.46**	**249**	*e*P	**P**	**03 15 20.2**	**-2.2**
	6.6nm,1.3s						
H11N2	**WAKE ISLAND Hy**	**30.47**	**4**	T	T	03 47 09.1	
	baz=184,slow=76,SNR=17						
WRAB	**Tennant Creek**	**30.48**	**249**	*e*P	**P**	**03 15 19.8**	**-2.7**
	9.5nm,1.4s						
WB2	**Warramunga Arr**	**30.48**	**249**	*e*P	**P**	**03 15 20.2**	**-2.4**
WR1	**Warramunga Arr**	**30.49**	**249**	*e*P	**P**	**03 15 21.1**	**-1.5**
	4.9nm,0.9s						
WR1				*e*PcP	**PcP**	**03 18 21.6**	**0.0**
WRA	**Warramunga Arr**	**30.49**	**249**	P	**P**	**03 15 21.1**	**-1.5**
	2.0nm,0.8s,baz=80,slow=8.9,SNR=20						
WRA				PcP	**PcP**	**03 18 21.6**	**-0.1**
	0.6nm,0.9s,baz=73,slow=3.5,SNR=3.5						
WRA				LR	LR	03 27 56.4	
	comp=Z,106nm,19.8s,baz=325,slow=37						
GUMO	**Guam**	**31.18**	**321**	LR	LR	03 26 02.5	
	comp=Z,135nm,21.6s,baz=152,slow=33						
TOO	**Toolangi**	**31.67**	**210**	*e*P	**P**	**03 15 30.5**	**-2.3**
	20nm,1.4s						
AS31	**Alice Springs**	**31.87**	**242**	*e*P	**P**	**03 15 33.0**	**-1.8**
	2.2nm,1.4s						
ASAR	**Alice Springs**	**31.87**	**242**	P	**P**	**03 15 33.0**	**-1.8**
	0.8nm,0.6s,baz=65,slow=10,SNR=9.9						
RAR	**Rarotonga**	**35.69**	**111**	LR	LR	03 27 37.2	
	comp=Z,87nm,20.9s,baz=238,slow=31						
FITZ	**Fitzroy Crossi**	**38.33**	**255**	*e*P	**P**	**03 16 28.9**	**-1.6**
	4.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**38.33**	**255**	LR	LR	03 31 29.5	
	comp=Z,99nm,19.1s,baz=9.5,slow=35						
TBI	**Tubuai**	**45.46**	**112**	*e*LR	LR	03 30 23.8	
	comp=Z,166nm,27.2s						
MJAR	**Matsushiro Arr**	**53.28**	**333**	P	**P**	**03 18 27.1**	**-1.0**
	5.9nm,1.0s,baz=168,slow=8.9,SNR=5.9						
MJAR				LR	LR	03 41 38.3	
	comp=Z,20nm,18.9s,baz=95,slow=37						
MAJO	**Matsushiro**	**53.28**	**333**	*e*P	**P**	**03 18 27.1**	**-1.0**
JNU	**Nakatsue**	**54.26**	**325**	*e*P	**P**	**03 18 34.9**	**-0.6**
	20nm,1.3s						
JNU	**Nakatsue**	**54.26**	**325**	P	**P**	**03 18 34.9**	**-0.6**
	8.8nm,0.8s,baz=115,slow=4.1,SNR=2.5						
ASAJ	**Asahikawa**	**58.24**	**342**	P	**P**	**03 19 03.3**	**-0.3**
	15nm,1.0s,baz=212,slow=13,SNR=5.5						
KSRS	**Korea Array**	**59.08**	**326**	LR	LR	03 40 59.5	
	comp=Z,17nm,21.7s,baz=180,slow=32						
NJ2	**Nanjing**	**61.08**	**316**	*e*P	**P**	**03 19 24.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**62.26**	**334**	P	**P**	**03 19 31.1**	**-0.1**
	5.2nm,1.1s,baz=102,slow=5.8,SNR=4.2						
PETK	**Petropavlovsk-**	**63.97**	**355**	LR	LR	03 41 28.4	
	comp=Z,53nm,21.8s,baz=96,slow=30						
HHC	**Hu-ho-hao-te**	**70.95**	**320**	*e*P	**P**	**03 20 28.3**	**+1.5**
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,180nm,7.3s						
CM31	**Chiang Mai Arr**	**70.99**	**294**	*e*P	**P**	**03 20 28.1**	**+0.6**
	8.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**70.99**	**294**	P	**P**	**03 20 28.1**	**+0.6**
	1.4nm,0.7s,baz=103,slow=3.9,SNR=7.3						
CD2	**Chengdu**	**71.58**	**308**	*e*P	**P**	**03 20 30.5**	**-0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CHGN	**Chignik**	**73.61**	**20**	*e*P	**P**	**03 20 42.4**	**+0.2**
LZH	**Lanzhou**	**73.78**	**313**	*e*P	**P**	**03 20 44.8**	**+0.8**
LZH				pP	PcP	03 21 00.4	+0.9
LZH				sP	pwP	03 21 08.3	+9.0
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,96nm,4.4s						
LZH				LR	LR		
	comp=N,290nm,16.8s						
LZH				LR	LR		
	comp=E,260nm,16.6s						
LZH				LR	LR		
	comp=Z,320nm,17.0s						
ULN	**Ulaanbaatar**	**77.47**	**324**	*e*P	**P**	**03 21 05.2**	**+0.4**
	5.4nm,1.1s						
SONA0	**Songino Array**	**77.83**	**324**	*e*P	**P**	**03 21 07.2**	**+0.4**
SONM	**Songino Array**	**77.83**	**324**	P	**P**	**03 21 07.2**	**+0.4**
	1.5nm,0.9s,baz=138,slow=5.9,SNR=7.1						
SONA1	**Songino Array**	**77.84**	**324**	*e*P	**P**	**03 21 07.5**	**+0.7**
GTA	**Gaotai**	**78.10**	**314**	*e*P	**P**	**03 21 09.5**	**+1.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IM3	**Indian Mountai**	**82.54**	**16**	*e*P	**P**	**03 21 31.6**	**0.0**
MDM	**Murphy Dome**	**83.40**	**18**	*e*P	**P**	**03 21 35.8**	**-0.3**
	7.7nm,1.1s						
HDA	**Harding Lake**	**83.42**	**19**	*e*P	**P**	**03 21 36.3**	**+0.1**
	10.0nm,1.0s						
IL1	**Eielson Array**	**83.69**	**19**	*e*P	**P**	**03 21 36.8**	**-0.8**
ILAR	**Eielson Array**	**83.69**	**19**	P	**P**	**03 21 37.6**	**0.0**
	2.9nm,0.9s,baz=235,slow=5.2,SNR=18						
ILB	**Eielson Array**	**83.69**	**19**	*e*P	**P**	**03 21 38.3**	**+0.7**
	9.0nm,1.3s						
EGAK	**Eagle**	**85.58**	**20**	*e*P	**P**	**03 21 48.4**	**+1.3**
	9.4nm,1.2s						
WMQ	**Urumqi**	**88.15**	**315**	*e*P	**P**	**03 22 01.0**	**+0.8**
MK01	**Makanchi Array**	**92.59**	**317**	*e*P	**P**	**03 22 20.3**	**-0.5**
MK31	**Makanchi Array**	**92.60**	**317**	*e*P	**P**	**03 22 20.8**	**-0.1**
	4.2nm,1.3s						
MK32	**Makanchi Array**	**92.60**	**317**	*e*P	**P**	**03 22 20.7**	**-0.1**
MKAR	**Makanchi Array**	**92.60**	**317**	*e*P	**P**	**03 22 20.8**	**-0.1**
	24nm,1.3s						
MKAR	**Makanchi Array**	**92.60**	**317**	P	**P**	**03 22 20.7**	**-0.1**
	1.2nm,0.7s,baz=99,slow=5.4,SNR=14						
ZALV	**Zalesovo Beam**	**92.73**	**324**	P	**P**	**03 22 20.5**	**-0.7**
	1.2nm,0.9s,baz=110,slow=6.5,SNR=3.7						
ZAA1	**Zalesovo Array**	**92.73**	**324**	*e*P	**P**	**03 22 20.5**	**-0.7**
MAKZ	**Makanchi**	**92.81**	**317**	*e*P	P	03 22 17.0	-4.8
	3.8nm,1.0s						
YKA	**Yellowknife Ar**	**95.32**	**27**	P	**P**	**03 22 33.1**	**+0.1**
	0.1nm,0.6s,baz=263,slow=4.2,SNR=3.5						
YKA				LR	LR	04 06 50.3	
	comp=Z,5.4nm,18.1s,baz=206,slow=36						
YKB5	**Yellowknife Ar**	**95.32**	**27**	*e*P	**P**	**03 22 33.1**	**+0.2**
ARA0	**ARCESS Array S**	**115.85**	**345**	*e*PKPdf	**PKiKP**	**03 27 50.1**	**-1.1**
ARCES	**ARCESS Array B**	**115.85**	**345**	PKP	**PKiKP**	**03 27 50.1**	**-1.1**
	4.3nm,1.0s,baz=346,slow=1.4,SNR=5.2						
CLL	**Collm**	**133.46**	**336**	*e*PKPdf	**PKPdf**	**03 28 25.0**	**-0.4**
KEST	**Kesra**	**146.56**	**322**	PKPbc	**PKPbc**	**03 28 50.8**	**-0.4**
	5.3nm,1.0s,baz=135,slow=2.9,SNR=4.6						
ES19	**SONSECA Array**	**149.49**	**342**	*e*PKPbc	**PKPbc**	**03 28 59.3**	**+0.5**
ESDC	**Sonseca Array**	**149.54**	**342**	PKPbc	**PKPbc**	**03 28 59.1**	**+0.2**
	0.5nm,0.6s,baz=33,slow=2.9,SNR=6.6						

IDC 19 03:18:20.1±1.4**, 1°.96N**×**128°.13E, h0^{km}, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.5**/35**, mbtmp3.9**/4**, Error ellipse: s-maj=121.7km s-min=21.1km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.60**	**165**	P	P	03 23 22.6	+0.1
	0.4nm,0.4s,baz=344,slow=11,SNR=15						
STKA	**Stephens Creek**	**36.00**	**160**	P	P	03 25 22.5	-0.4
	1.7nm,0.4s,baz=342,slow=8.9,SNR=6.4						
SONM	**Songino Array**	**49.41**	**341**	P	P	03 27 12.0	+0.1
	0.5nm,0.6s,baz=157,slow=8.5,SNR=3.7						
MKAR	**Makanchi Array**	**59.80**	**325**	P	P	03 28 27.2	0.0
	1.2nm,0.4s,baz=115,slow=8.0,SNR=43						

IDC 19 03:21:32.8±2.6**, 7°.98N**×**93°.86E, h0^{km}, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.3**/40**, mbtmp3.5**/4**, ML4.3**/1**, Error ellipse: s-maj=86.0km s-min=30.5km az=63.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.53**	**25**	Pn	Pn	03 24 19.4	+0.6
	0.6nm,0.3s,baz=212,slow=16,SNR=5.3						
H08S3	**Diego Garcia H**	**26.35**	**234**	T	T	03 54 09.0	
	baz=54,slow=74,SNR=5.1						
H08S2	**Diego Garcia H**	**26.36**	**234**	T	T	03 54 02.9	
	baz=54,slow=74,SNR=4.8						
H08S1	**Diego Carcia H**	**26.37**	**234**	T	T	03 54 15.1	
	baz=54						
MKAR	**Makanchi Array**	**39.92**	**348**	P	P	03 29 09.9	+1.2
	0.3nm,0.7s,baz=149,slow=7.7,SNR=2.5						
ZALV	**Zalesovo Beam**	**46.41**	**353**	P	P	03 29 59.1	-1.9
	0.6nm,0.5s,baz=165,slow=6.0,SNR=3.0						
WRA	**Warramunga Arr**	**48.55**	**125**	P	P	03 30 18.3	+0.1
	0.2nm,0.5s,baz=304,slow=8.8,SNR=4.8						

DDA ***19*** *03:29:01.3, 38°.97N×29°.90E, h7^{km}±1^{km}, ML2.5*

ISCJB ***19*** *03:29:02.0±0.6, 38°.92N±0°.05×29°.88E±0°.03, h3^{km}±7^{km}, Error ellipse: s-maj=7.9km s-min=4.1km az=14.0*

ISK ***19*** *03:29:02.0, 38°.89N×29°.87E, h8^{km}, ML1.9/8*

ISC 19 03:29:01.6±1.3**, 38°.93N**±0°.04×**29°.86E**±0°.03**, h5^{km}**±14^{km}**, n16, σ0^{s}79**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.34**	**299**	*i* P	**Pg**	**03 29 08.6**	**+0.4**
GDZ				IAML_P			
	comp=Z,867nm,0.1s						
SHAP	**Saphane-Kutahy**	**0.51**	**281**	PG	**Pb**	**03 29 12.8**	**-0.3**
SHAP				SG	**Sb**	**03 29 20.1**	**-0.7**
TVSB	**Tavsanli**	**0.61**	**330**	PG	**Pb**	**03 29 14.7**	**-0.1**
KHAL	**Karahalli**	**0.62**	**208**	*i* P	**Pb**	**03 29 14.9**	**-0.2**
KHAL				IAML_P			
	comp=Z,857nm,0.2s						
SHUT	**Suhut-Afyon**	**0.66**	**124**	PG	**Pb**	**03 29 15.1**	**-0.6**
SHUT				SG	**Sb**	**03 29 23.8**	**-1.4**
KZIL	**AFYON_Kizioren**	**0.70**	**162**	*i* P	**Pb**	**03 29 16.9**	**+0.5**
KZIL				IAML_P			
	comp=Z,1µm,0.2s						
BOLV	**Bolvadin**	**0.88**	**103**	*i* P	**Pg**	**03 29 18.5**	**+0.1**
BOLV				IAML_P			
	comp=Z,375nm,0.1s						
DEMI	**Demirci**	**0.90**	**278**	*i* P	**Pg**	**03 29 17.2**	**-1.7**
DEMI				*i* S	**Sb**	**03 29 32.9**	**+0.8**
KULA	**Kula-Manisa**	**1.02**	**247**	PG	**Pb**	**03 29 21.9**	**0.0**
KULA				SG	**Sb**	**03 29 35.8**	**+0.1**
BORA	**Eskisehir**	**1.06**	**26**	*i* P	**Pg**	**03 29 21.1**	**-0.8**
BORA				IAML_P			
	comp=Z,1µm,0.1s						
MANT	**Manisa**	**1.11**	**247**	*i* P	**Pg**	**03 29 23.1**	**+0.2**
MANT				IAML_P			
	comp=Z,283nm,0.1s						
DURS	**Dursunbey**	**1.27**	**303**	*i* P	**Pb**	**03 29 26.2**	**+0.1**
DURS				*i* S	**Sn**	**03 29 44.7**	**+1.0**
DURS				IAML_P			
	comp=Z,148nm,0.1s						
SVRH	**Sivrihisar-ESK**	**1.39**	**68**	PN	**Pg**	**03 29 28.0**	**-0.4**
SVRH				SN	**Sg**	**03 29 47.8**	**+1.4**
GULT	**Gulveren**	**1.59**	**18**	PN	**Pg**	**03 29 31.9**	**-0.2**
ARMT	**Armutlu**	**1.81**	**335**	PN	**Pb**	**03 29 34.9**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.83**	**238**	PN	**Pb**	**03 29 34.9**	**-0.8**

NAO ***19*** *03:33:46.2±1.8, 67°.24N×33°.37E, ML3.0*

HEL ***19*** *03:33:47.1±0.5, 67°.65N×34°.07E, h0^{km}, ML2.1, Explosion*

ISC 19 03:33:49.2±2.0**, 67°.72N**±0°.04×**33°.56E**±0°.09**, h0^{km}, n24, σ1^{s}32**/42**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APZ9	**Apatity**	**0.16**	**202**	Pg	**Pb**	**03 33 52.0**	**-0.2**
APZ9				Lg	Lg	03 33 55.9	
APZ9				Rg	Rg	03 33 59.5	
APZ9	**Apatity**	**0.16**	**202**	Pg	**Pb**	**03 33 52.0**	**-0.2**
APZ9				Sg	**Sb**	**03 33 55.9**	**+1.7**
APZ9				Rg	Rg	03 33 59.5	
APA0	**Apatity Array**	**0.24**	**244**	Pg	**Pb**	**03 33 54.6**	**+0.8**
APA0				Lg	Lg	03 33 58.8	
APA0				Rg	Rg	03 34 01.8	

APA0	**Apatity Array**	**0.24**	**244**	Pg	**Pb**	**03 33 54.6**	**+0.8**
APA0				Sg	**Sg**	**03 33 58.8**	**+1.8**
APA0				Rg	Rg	03 34 01.8	
VRF	**Varrio**	**1.51**	**273**	PG	**Pg**	**03 34 17.6**	**-0.4**
	baz=88						
VRF				MSG		03 34 38.2	
	comp=Z,22nm,0.2s						
VRF				SG	**Sb**	**03 34 39.2**	**+1.6**
KU6	**Riekki**	**2.23**	**222**	PG	**Pb**	**03 34 28.1**	**-2.2**
	baz=48						
KU6				MSG		03 34 55.8	
	comp=Z,6.1nm,0.2s						
MSF	**Maaselka**	**2.55**	**227**	PG	**Pb**	**03 34 34.2**	**-1.5**
MSF				SG	**Sg**	**03 35 09.2**	**-1.7**
SGF	**Sodankyl**	**2.71**	**267**	PG	**Pb**	**03 34 37.8**	**-0.7**
	baz=78						
SGF				SG	**Sg**	**03 35 17.6**	**+1.4**
RNF	**Rovaniemi**	**3.15**	**253**	PN	**Pn**	**03 34 40.2**	**+0.3**
	baz=65						
RNF				SB	**Sb**	**03 35 24.8**	**0.0**
KEV	**Kevo**	**3.15**	**314**	Pn	**Pn**	**03 34 41.7**	**+1.8**
KEV	**Kevo**	**3.15**	**314**	Pn	**Pn**	**03 34 41.7**	**+1.8**
KEV	**Kevo**	**3.15**	**314**	PN	**Pn**	**03 34 41.4**	**+1.5**
KEV				SB	**Sb**	**03 35 25.1**	**+0.4**
ARA0	**ARCESS Array S**	**3.47**	**305**	Pn	**Pn**	**03 34 45.3**	**+0.9**
	baz=123,slow=16						
ARA0				Pg	**Pb**	**03 34 49.6**	**-1.8**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**03 35 26.9**	**+0.9**
	baz=125,slow=22						
ARA0				Lg	Lg	03 35 40.8	
	baz=120,slow=37						
ARA0	**ARCESS Array S**	**3.47**	**305**	Pn	**Pn**	**03 34 45.3**	**+0.9**
	baz=123,slow=16						
ARA0				Pg	**Pb**	**03 34 49.6**	**-1.8**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**03 35 26.9**	**+0.9**
	baz=125,slow=22						
ARA0				Sg	**Sg**	**03 35 40.8**	**+0.3**
	baz=120,slow=37						
ARE0	**ARCESS Array S**	**3.47**	**305**	PN	**Pn**	**03 34 45.3**	**+0.9**
	baz=121						
HEF	**Hetta**	**3.78**	**285**	Pn	**Pn**	**03 34 48.6**	**-0.1**
HEF				Sn	**Sn**	**03 35 34.9**	**+1.1**
HEF				Lg	Lg	03 35 50.2	
HEF	**Hetta**	**3.78**	**285**	Pn	**Pn**	**03 34 48.6**	**-0.1**
HEF				Sn	**Sn**	**03 35 34.9**	**+1.1**
HEF				Sg	**Sg**	**03 35 50.2**	**-0.3**
HEF	**Hetta**	**3.78**	**285**	PN	**Pn**	**03 34 49.1**	**+0.5**
TOF	**Tornio**	**3.99**	**250**	SG	**Sg**	**03 35 54.9**	**-2.4**
KTK1	**Kautokeino**	**4.04**	**294**	*e*P	**Pn**	**03 34 52.1**	**0.0**
KTK1				*e*S	**Sn**	**03 35 40.0**	**-0.1**
KTK1				IAML		03 36 03.4	
	comp=Z,16nm,0.5s						
LANU	**Lannavaara**	**4.39**	**280**	PN	**Pn**	**03 34 56.9**	**-0.1**
ERTU	**Ertsjaerv**	**4.59**	**261**	PN	**Pn**	**03 35 00.6**	**+0.9**
KIF	**Kilpisjarvi**	**4.90**	**291**	Pn	**Pn**	**03 35 01.2**	**-2.7**
KIF				Sn	**Sn**	**03 36 02.1**	**+0.9**
KIF	**Kilpisjarvi**	**4.90**	**291**	Pn	**Pn**	**03 35 01.2**	**-2.7**
KIF				Sn	**Sn**	**03 36 02.1**	**+0.9**

*GUC **19** 03:38:26.4±0.4, 35°.87S×72°.43W, h29^{km}±3^{km}, ML3.7*
ISC 19 03:38:22.9±1.8**, 35°.85S**±0°.05×**72°.6W**±0°.2**, h54^{km}, n13,**
σ**3^{s}.20**/19**, 5C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**0.87**	**150**	⇑*i*P	**Pn**	**03 38 36.4**	**-2.7**
CCHI				*i* S	**Sn**	**03 38 50.8**	**-0.2**
CCHI				IAML		03 38 54.1	
	comp=N,3μm,0.3s						
AGCH	**Angol**	**1.96**	**182**	*e*P	**Pn**	**03 38 54.4**	**+0.7**
AGCH				*i* S	**Sn**	**03 39 18.4**	**+1.3**
LMEL	**Las Melosas**	**2.82**	**46**	⇓*i*P	**Pn**	**03 39 03.7**	**-1.9**
LMEL				*i* S	**Sn**	**03 39 41.7**	**+3.2**
LMEL				IAML		03 39 51.4	
	comp=N,444nm,0.6s						
CLCH	**Cerro Calan**	**2.99**	**36**	⇑*i*P	**Pn**	**03 39 05.6**	**-2.3**
CLCH				*i* S	**Sn**	**03 39 46.4**	**+3.7**
PEL	**Peldehue**	**3.14**	**31**	*e*P	**Pn**	**03 39 06.9**	**-3.0**
PEL				*i* S	**Sn**	**03 39 50.2**	**+4.0**
ROC1	**El Roble**	**3.16**	**25**	*i* P	**Pn**	**03 39 06.3**	**-4.1**
ROC1				*i* S	Sn	03 39 56.8	+10
ROCH	**El Roble**	**3.17**	**25**	⇑*i*P	**Pn**	**03 39 06.4**	**-4.1**
ROCH				*i* S	**Sn**	**03 39 51.5**	**+4.4**
FCH	**Farellones**	**3.17**	**38**	⇑*i*P	**Pn**	**03 39 08.2**	**-2.4**
FCH				*i* S	**Sn**	**03 39 51.2**	**+3.9**
GO06	**Curarrehue**	**3.84**	**167**	⇑*i*P	**Pn**	**03 39 18.6**	**-1.0**
GO06				*i* S	Sn	03 40 16.0	+12
AUSP	**Uspallata**	**4.51**	**38**	*i* P	**Pn**	**03 39 27.1**	**-1.8**
AUSP				*i* S	Sn	03 40 33.8	+14
RTLS	**Leoncito**	**4.90**	**35**	*i* P	**Pn**	**03 39 32.2**	**-2.1**
RTLS				IAML		03 41 01.7	
	comp=Z,38nm,0.5s						
AMOG	**MOGNA**	**5.99**	**36**	*i* P	**Pn**	**03 39 45.5**	**-3.6**
AROD	**Rodeo**	**6.25**	**26**	*i* P	Pn	03 39 47.3	-5.6

*ISCJB **19** 03:43:00.3±0.8, 36°.21N±0°.05×70°.93E±0°.10, h213^{km},*
Error ellipse: s-maj=11.6km s-min=5.5km az=161.9
*NNC **19** 03:43:01.5±4.0, 36°.47N×70°.12E, h113^{km}±92^{km}, mb3.1,*
mpv3.6, Error ellipse: s-maj=33.2km s-min=31.0km
az=89.0
ISC 19 03:42:59.9±1.4**, 36°.27N**±0°.09×**70°.7E**±0°.1**, h213^{km}, n20,**
σ**2^{s}.31**/27**, 5C-9D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.34**	**30**	⇓P	**Pn**	**03 44 07.1**	**+0.6**
	13nm,0.3s						
SFK				⇓S	**S**	**03 44 58.5**	**-0.2**
	11nm,0.4s						
AML	**Almayashu**	**6.30**	**21**	P	**Pn**	**03 44 31.9**	**+0.5**
	SNR=17						
MNAS	**Manas**	**6.37**	**12**	⇑P	**Pn**	**03 44 32.5**	**+0.4**
	1.0nm,0.4s						
MNAS				⇓S	**S**	**03 45 43.3**	**-1.9**
	6.0nm,0.4s						
UCH	**Uchtor**	**6.64**	**25**	P	**Pn**	**03 44 36.9**	**+1.0**
	SNR=9.7						
KZA	**Kyzart**	**6.79**	**30**	P	**Pn**	**03 44 39.1**	**+1.3**
	SNR=8.5						
EKS2	**Erkin-Say**	**6.81**	**19**	P	**Pn**	**03 44 39.3**	**+1.5**
	SNR=12						
KK31	**Karatay Array**	**6.83**	**359**	⇓P	**Pn**	**03 44 37.6**	**-0.3**
	1.4nm,0.5s,baz=181,slow=13,SNR=16						
KK31				⇓S	**S**	**03 45 52.9**	**-2.9**
	3.4nm,0.5s,baz=188,slow=24,SNR=4.2						
AAK	**Ala-Archa**	**7.00**	**24**	P	**Pn**	**03 44 42.5**	**+2.2**
	SNR=5.6						
AAK	**Ala-Archa**	**7.00**	**24**	⇓P	**Pn**	**03 44 40.5**	**+0.2**
	3.2nm,0.7s						
AAK				⇑S	**S**	**03 46 00.1**	**-0.1**
	7.0nm,0.8s						
TKM2	**Tokmak 2**	**7.64**	**28**	P	**Pn**	**03 44 50.4**	**+1.8**
	SNR=5.3						
TKM2	**Tokmak 2**	**7.64**	**28**	⇑P	**Pn**	**03 44 49.4**	**+0.8**
	1.7nm,0.5s						
TKM2				⇓S	**S**	**03 46 14.9**	**-0.4**
	3.3nm,0.9s						
DANN	**Dangsing**	**13.56**	**122**	*e*P	**Pn**	**03 46 01.4**	**-2.8**
KOLN	**Koldanda**	**13.82**	**124**	*e*P	**Pn**	**03 46 04.2**	**-3.2**
KKN	**Kakani**	**14.96**	**120**	*e*P	**Pn**	**03 46 20.4**	**-0.9**
	5.5nm,0.5s						
PKIN	**Phulchoki**	**15.17**	**121**	*e*P	**Pn**	**03 46 22.6**	**-1.3**
	3.0nm,0.4s						
AB31	**Akbulak array**	**15.18**	**332**	⇓P	**P**	**03 46 25.8**	**+2.2**
	1.8nm,0.5s,baz=156,slow=13,SNR=35						
AB31				⇑S	**S**	**03 49 03.9**	**-7.3**
	0.4nm,0.5s,baz=158,slow=22,SNR=4.6						
PKI	**Pulchoki**	**15.19**	**121**	*e*P	**Pn**	**03 46 23.3**	**-0.9**
	6.1nm,0.7s						
JIRN	**Jiri**	**15.68**	**119**	*e*P	**Pn**	**03 46 30.5**	**+0.3**
	12nm,0.4s						
RAMN	**Ramite**	**16.40**	**120**	*e*P	**Pn**	**03 46 39.1**	**+0.4**
	4.3nm,0.4s						
AKTO	**Aktyubinsk**	**16.87**	**331**	⇑P	**Pn**	**03 46 47.8**	**+4.2**
	1.8nm,0.7s						
AKTO				⇓S	**S**	**03 49 49.0**	**+1.8**
	2.8nm,1.1s						

*SJA **19** 03:48:44.7±0.7, 31°.66S×69°.89W, h116^{km}±4^{km}, ML3.3,*
MW3.6
*ISCJB **19** 03:48:45.4±0.9, 31°.64S±0°.03×69°.92W±0°.05, h118^{km}±9^{km},*
Error ellipse: s-maj=7.1km s-min=4.5km az=26.2
*GUC **19** 03:48:45.8±0.4, 31°.64S×70°.11W, h105^{km}±14^{km}, ML3.3*
ISC 19 03:48:46.5±1.8**, 31°.64S**±0°.04×**69°.92W**±0°.05**,**
h109^{km}±15^{km}**, n19,** σ**0^{s}.85**/33**, 1C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.56**	**107**	*i* P	**Pn**	**03 49 03.9**	**-0.1**
RTLS				*i* S	**Sn**	**03 49 18.3**	**+1.1**
RTLS				IAML		03 49 18.4	
	comp=Z,467nm,0.2s						
AUSP	**Uspallata**	**0.74**	**142**	*i* P	**Pn**	**03 49 05.5**	**+0.1**
AUSP				*i* S	**Sn**	**03 49 20.0**	**+0.3**
CMCH	**Combarbala**	**1.03**	**296**	*e*P	**Pn**	**03 49 08.4**	**+0.4**
CMCH				*e*S	**Sn**	**03 49 23.2**	**-1.1**
RTCV	**Cerro Valdivia**	**1.20**	**101**	*i* P	**Pn**	**03 49 09.3**	**-0.5**
RTCV				*i* S	**Sn**	**03 49 26.7**	**-0.7**
RTLL	**Cerro Villicun**	**1.27**	**76**	*i* P	**Pn**	**03 49 09.7**	**-0.9**
RTLL				*i* S	**Sn**	**03 49 28.6**	**-0.3**
RTLL				IAML		03 49 29.4	
	comp=N,574nm,0.4s						
ACCO	**Cerro Coronel**	**1.28**	**35**	*i* P	**Pn**	**03 49 10.8**	**-0.2**
ACCO				*i* S	**Sn**	**03 49 30.3**	**+0.8**
AMOG	**MOGNA**	**1.41**	**61**	*i* P	**Pn**	**03 49 11.6**	**-0.6**
CFA	**Coronel Fontan**	**1.44**	**89**	*i* P	**Pn**	**03 49 11.5**	**-1.0**
AROD	**Rodeo**	**1.51**	**15**	*i* P	**Pn**	**03 49 14.1**	**+0.3**
AROD				*i* S	**Sn**	**03 49 35.3**	**+0.9**
ACDV	**Cuesta del Vie**	**1.61**	**25**	*i* P	**Pn**	**03 49 14.7**	**-0.1**
ROCH	**El Roble**	**1.62**	**214**	*e*P	**Pn**	**03 49 14.1**	**-0.8**
ROCH				*i* S	**Sn**	**03 49 36.0**	**-0.5**
ROCH				IAML		03 49 38.2	
	comp=N,474nm,0.4s						
ROC1	**El Roble**	**1.63**	**214**	*i* P	**Pn**	**03 49 14.2**	**-0.8**
ROC1				*i* S	**Sn**	**03 49 36.7**	**0.0**
PEL	**Peldehue**	**1.64**	**203**	*i* P	**Pn**	**03 49 14.2**	**-0.7**
PEL	**Peldehue**	**1.64**	**203**	*e*P	**Pn**	**03 49 14.2**	**-0.7**
PEL				*i* S	**Sn**	**03 49 36.1**	**-0.5**
PEL				IAML		03 49 38.2	
	comp=E,326nm,0.3s						
GO04	**Tololo Observa**	**1.64**	**332**	⇑*i*P	**Pn**	**03 49 15.1**	**-0.2**
GO04				*i* S	**Sn**	**03 49 36.9**	**-0.1**
GO04				IAML		03 49 40.2	
	comp=N,764nm,0.2s						
FCH	**Farellones**	**1.71**	**190**	*e*P	**Pn**	**03 49 16.3**	**+0.1**
FCH				*i* S	**Sn**	**03 49 39.8**	**+1.0**
FCH				IAML		03 49 41.7	
	comp=E,445nm,0.2s						
CLCH	**Cerro Calan**	**1.83**	**196**	*e*P	**Pn**	**03 49 17.1**	**-0.3**
CLCH				*i* S	**Sn**	**03 49 40.8**	**-0.1**
CLCH				IAML		03 49 44.9	
	comp=N,298nm,0.5s						
LMEL	**Las Melosas**	**2.22**	**186**	*e*P	**Pn**	**03 49 22.4**	**+0.1**
LMEL				*i* S	**Sn**	**03 49 52.9**	**+3.1**
LMEL				IAML		03 49 57.3	
	comp=N,235nm,0.1s						
AGUA	**GUANDACOL**	**2.47**	**30**	*i* P	**Pn**	**03 49 25.7**	**+0.1**

MEX 19 03:53:51.0±0.3**, 14°.33N**×**92°.21W, h8^{km}**±88^{km}**, MD3.5,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.68**	**325**	*e*P	Pn	03 54 17.1	-3.6

*NNC **19** 03:54:03.3±0.7, 42°.86N×78°.53E, h3^{km}±3^{km}, mb2.4,*
mpv2.3, Error ellipse: s-maj=6.3km s-min=2.1km az=0.0
*SOME **19** 03:54:04.3, 42°.90N×78°.50E, h10^{km}*
KRNET 19 03:54:04.6±0.1**, 43°.05N**×**78°.61E, h35^{km}, mb1.9, 11C-5D,**
Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.15**	**274**	P	Pn	03 54 08.8	-2.4
	20nm,0.1s						
SATY				S	Sn	03 54 12.1	-3.6
	261nm,0.1s						
SATY	**Saty**	**0.15**	**274**	*e*P	Pn	03 54 08.8	-2.4
	16nm,0.1s						
SATY				*e*S	Sn	03 54 12.1	-3.5
	261nm,0.1s						
UZB	**Uzynbulak**	**0.32**	**72**	P	Pn	03 54 13.1	+0.1
	2.5nm,0.2s						
UZB				S	Sn	03 54 19.5	+0.8
	25nm,0.2s						
UZB	**Uzynbulak**	**0.32**	**72**	*e*P	Pn	03 54 13.9	+0.9
	baz=72						
UZB				*e*S	Sn	03 54 21.4	+2.7
	baz=72						
UZB	**Uzynbulak**	**0.32**	**72**	*e*P	Pn	03 54 13.1	+0.1
	2.5nm,0.2s						
UZB				*e*S	Sn	03 54 19.5	+0.8
	25nm,0.2s						
KURS	**Kuram**	**0.54**	**324**	P	Pn	03 54 16.9	+1.0
	0.9nm,0.1s						
KURS				S	Sn	03 54 26.0	+2.1
	7.3nm,0.3s						
KURS	**Kuram**	**0.54**	**324**	*e*P	Pn	03 54 16.9	+1.0
	baz=24						
KURS				*e*S	Sn	03 54 26.0	+2.1
	baz=24						
KURS	**Kuram**	**0.54**	**324**	*e*P	Pn	03 54 16.9	+1.0
	0.9nm,0.1s						
KURS				*e*S	Sn	03 54 26.0	+2.1
	7.3nm,0.3s						
PRZ	**Przheval'sk**	**0.59**	**195**	⇓*i*P	Pn	03 54 17.1	+0.5
	baz=94						
PRZ				⇓*i*S	Sn	03 54 27.0	+1.9
	baz=94						
PDGK	**Podgornoye**	**0.70**	**66**	P	Pn	03 54 19.8	+1.6
	0.5nm,0.1s						
PDGK				S	Sn	03 54 30.8	+2.9
	2.2nm,0.1s						
PDGK	**Podgornoye**	**0.70**	**66**	⇑P	Pn	03 54 19.7	+1.5
	0.3nm,0.3s						
PDGK				⇑S	Sn	03 54 31.5	+3.5
	1.7nm,0.4s						
PDGK	**Podgornoye**	**0.70**	**66**	⇑*i*P	Pn	03 54 18.9	+0.7
	baz=66						
PDGK				⇑*i*S	Sn	03 54 29.9	+2.0
	baz=66						
TNSS	**Tian-Shan**	**1.22**	**270**	P	Pn	03 54 25.7	+0.2
	0.7nm,0.1s						
TNSS				S	Sn	03 54 41.0	+0.1
	2.5nm,0.3s						
TNSS	**Tian-Shan**	**1.22**	**270**	*e*P	Pn	03 54 25.7	+0.2
	baz=70						
TNSS				*e*S	Sn	03 54 42.0	+1.1
	baz=70						
TNSS	**Tian-Shan**	**1.22**	**270**	*e*P	Pn	03 54 25.7	+0.2
	0.7nm,0.1s						
TNSS				*e*S	Sn	03 54 41.0	+0.1
	2.5nm,0.3s						
ARXS	**Arharly**	**1.29**	**334**	P	Pn	03 54 30.6	+4.3
	1.1nm,0.3s						
ARXS				S	Sn	03 54 49.4	+6.9
	6.7nm,0.2s						
ARXS	**Arharly**	**1.29**	**334**	*e*P	Pn	03 54 30.6	+4.3
	1.1nm,0.3s						
ARXS				*e*S	Sn	03 54 49.4	+6.9
	6.7nm,0.2s						
KDJ	**Kajisay**	**1.40**	**229**	⇑*i*P	Pn	03 54 28.2	+0.4
	baz=29						
KDJ				⇑*i*S	Sn	03 54 46.7	+1.6
	baz=29						
CHKK	**Chushkaly**	**1.43**	**305**	P	Pn	03 54 31.5	+3.5
	1.2nm,0.1s						
CHKK				S	Sn	03 54 50.9	+5.3
	12nm,0.2s						
CHKK	**Chushkaly**	**1.43**	**305**	*e*P	Pn	03 54 31.5	+3.5
	1.2nm,0.1s						
CHKK				*e*S	Sn	03 54 50.9	+5.3
	12nm,0.2s						
KTBS	**Karatobe**	**1.55**	**296**	P	Pn	03 54 33.3	+3.5
	0.9nm,0.2s						
KTBS				S	Sn	03 54 53.9	+5.2
	4.5nm,0.2s						
KTBS	**Karatobe**	**1.55**	**296**	*e*P	Pn	03 54 33.3	+3.5
	0.9nm,0.2s						
KTBS				*e*S	Sn	03 54 53.9	+5.2
	4.5nm,0.2s						
KUU	**Kurty**	**1.85**	**298**	P	Pn	03 54 38.4	+4.5
	0.7nm,0.3s						
KUU				S	Sn	03 55 02.8	+6.7
	5.3nm,0.2s						
KUU	**Kurty**	**1.85**	**298**	*e*P	Pn	03 54 38.4	+4.5
	0.7nm,0.3s						
KUU				*e*S	Sn	03 55 02.8	+6.7
	5.3nm,0.2s						
ULHL	**Ulahol**	**1.92**	**246**	⇓*e*P	Pn	03 54 35.9	+0.9
	baz=46						
ULHL				⇓*i*S	Sn	03 54 59.7	+1.7
	baz=46						
BOOM	**Boomskoye usch**	**2.04**	**255**	⇑*i*P	Pn	03 54 37.3	+0.7
	baz=55						
BOOM				⇑*i*S	Sn	03 55 02.6	+1.6
	baz=55						
TKM2	**Tokmak 2**	**2.21**	**268**	⇓Pg	Pn	03 54 41.5	+2.5
	0.4nm,0.6s						
TKM2				⇑Lg	Lg	03 55 12.2	
	0.6nm,0.3s						
TKM2	**Tokmak 2**	**2.21**	**268**	⇑*i*P	Pn	03 54 40.0	+1.0
	baz=68						
TKM2				⇑*i*S	Sn	03 55 06.9	+1.7
	baz=68						

*SOME **19** 04:05:43.6, 42°.47N×78°.45E, h20^{km}*
*NNC **19** 04:05:44.2±0.8, 42°.58N×78°.41E, h0^{km}, mb2.8, mpv2.6,*
Error ellipse: s-maj=6.2km s-min=2.3km az=167.0
KRNET 19 04:05:43.0±0.1**, 42°.47N**×**78°.46E, h21^{km}, mb2.5, 21C-14D,**
Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.04**	**284**	⇑*e*P	Pb	04 05 45.7	-1.3
	baz=90						
PRZ				⇑*i*S	Sb	04 05 47.7	-2.0
	baz=90						
SATY	**Saty**	**0.59**	**356**	P	Pb	04 05 54.1	-0.7
	6.4nm,0.2s						
SATY				S	Sb	04 06 01.6	-1.2
	58nm,0.2s						
SATY	**Saty**	**0.59**	**356**	*e*P	Pb	04 05 54.1	-0.7
	6.4nm,0.2s						
SATY				*e*S	Sb	04 06 01.6	-1.2
	54nm,0.2s						
UZB	**Uzynbulak**	**0.79**	**32**	P	Pb	04 05 58.1	-0.1
	1.2nm,0.1s						
UZB				S	Sb	04 06 08.6	0.0
	22nm,0.1s						
UZB	**Uzynbulak**	**0.79**	**32**	*e*P	Pb	04 05 58.1	-0.1
	baz=32						
UZB				*e*S	Sb	04 06 08.6	0.0
	baz=32						
UZB	**Uzynbulak**	**0.79**	**32**	*e*P	Pb	04 05 58.1	-0.1
	0.6nm,0.1s						
UZB				*e*S	Sb	04 06 08.6	0.0
	22nm,0.1s						
TARG	**Taragay, Kyrgy**	**0.89**	**213**	⇑*i*P	Pb	04 05 59.0	-1.0
	baz=13						
TARG				⇑*i*S	Sb	04 06 10.8	-0.7
	baz=13						
KDJ	**Kajisay**	**1.01**	**251**	⇑*i*P	Pb	04 06 01.8	0.0
	baz=50						
KDJ				⇑*i*S	Sn	04 06 15.6	-0.1
	baz=50						
KURS	**Kuram**	**1.04**	**348**	P	Pn	04 06 02.4	0.0
	1.8nm,0.2s						
KURS				S	Sb	04 06 15.7	+0.3
	5.8nm,0.3s						
KURS	**Kuram**	**1.04**	**348**	*e*P	Pn	04 06 02.4	0.0
	baz=48						
KURS				*e*S	Sb	04 06 15.7	+0.2
	baz=48						
KURS	**Kuram**	**1.04**	**348**	*e*P	Pn	04 06 02.4	0.0
	1.8nm,0.2s						
KURS				*e*S	Sb	04 06 15.8	+0.3
	5.8nm,0.3s						
PDGK	**Podgornoye**	**1.14**	**41**	P	Pb	04 06 04.4	+0.2
	1.1nm,0.2s						
PDGK				S	Sn	04 06 19.3	+0.2
	2.7nm,0.3s						
PDGK	**Podgornoye**	**1.14**	**41**	⇑P	Pb	04 06 06.7	+2.5
	0.6nm,0.3s						
PDGK				⇑S	Sn	04 06 19.1	0.0
	2.6nm,0.4s						
PDGK	**Podgornoye**	**1.14**	**41**	⇓*i*P	Pb	04 06 04.2	0.0
	baz=41						
PDGK				⇓*i*S	Sn	04 06 19.6	+0.5
	baz=41						
MDOK	**Medeo**	**1.24**	**304**	P	Pb	04 06 05.8	-0.1
	0.9nm,0.3s						
MDOK				⇑S	Sb	04 06 21.4	-0.1
	9.5nm,0.5s						
MDOK	**Medeo**	**1.24**	**304**	Pg	Pb	04 06 05.9	0.0
	2.4nm,0.2s						
MDOK				Lg	Lg	04 06 21.8	
	14nm,0.4s						
MDOK	**Medeo**	**1.24**	**304**	*e*P	Pb	04 06 05.9	0.0
	baz=4.0						
MDOK				*e*S	Sn	04 06 21.7	+0.1
	baz=4.0						
MDOK	**Medeo**	**1.24**	**304**	*e*P	Pb	04 06 05.9	0.0
	2.4nm,0.2s						
MDOK				*e*S	Sn	04 06 21.8	+0.2
	14nm,0.4s						
TNSS	**Tian-Shan**	**1.25**	**297**	P	Pb	04 06 06.2	+0.1
	2.3nm,0.2s						
TNSS				S	Sn	04 06 22.2	+0.3
	11nm,0.3s						
TNSS	**Tian-Shan**	**1.25**	**297**	*e*P	Pb	04 06 06.2	+0.1
	baz=97						
TNSS				*e*S	Sn	04 06 22.2	+0.3
	baz=97						
TNSS	**Tian-Shan**	**1.25**	**297**	*e*P	Pb	04 06 06.2	+0.1
	2.3nm,0.2s						
TNSS				*e*S	Sn	04 06 22.2	+0.3
	11nm,0.3s						
KOTS	**Kotyrbulak**	**1.25**	**308**	P	Pb	04 06 06.1	+0.2
	2.6nm,0.2s						
KOTS				S	Sn	04 06 22.1	+0.5
	40nm,0.3s						
KOTS	**Kotyrbulak**	**1.25**	**308**	*e*P	Pb	04 06 06.1	+0.2
	baz=8.0						
KOTS				*e*S	Sn	04 06 22.1	+0.5
	baz=8.0						
KOTS	**Kotyrbulak**	**1.25**	**308**	*e*P	Pb	04 06 06.1	+0.2
	2.6nm,0.2s						
KOTS				*e*S	Sn	04 06 22.1	+0.5
	40nm,0.3s						
IZV	**Izvestkoviy**	**1.47**	**293**	P	Pb	04 06 10.8	+1.1
	3.9nm,0.1s						
IZV				S	Sb	04 06 30.2	+2.2
	24nm,0.3s						
IZV	**Izvestkoviy**	**1.47**	**293**	*e*P	Pb	04 06 10.8	+1.1
	baz=93						
IZV				*e*S	Sb	04 06 30.2	+2.2
	baz=93						
IZV	**Izvestkoviy**	**1.47**	**293**	*e*P	Pb	04 06 10.8	+1.1
	3.9nm,0.1s						
IZV				*e*S	Sb	04 06 30.2	+2.2
	24nm,0.3s						
ULHL	**Ulahol**	**1.66**	**263**	⇑*i*P	Pb	04 06 13.1	+0.1
	baz=63						
ULHL				⇑*i*S	Sb	04 06 34.9	+1.5
	baz=63						
CHKK	**Chushkaly**	**1.75**	**323**	P	Pb	04 06 15.3	+0.9
	4.9nm,0.2s						
CHKK				S	Sb	04 06 37.8	+1.9
	53nm,0.2s						
CHKK	**Chushkaly**	**1.75**	**323**	*e*P	Pb	04 06 15.3	+0.9
	baz=23						
CHKK				*e*S	Sb	04 06 37.8	+1.9
	baz=23						
CHKK	**Chushkaly**	**1.75**	**323**	*e*P	Pb	04 06 15.3	+0.9
	4.9nm,0.2s						
CHKK				*e*S	Sb	04 06 37.8	+1.9
	53nm,0.2s						
KTBS	**Karatobe**	**1.79**	**314**	P	Pb	04 06 16.1	+0.9
	4.0nm,0.3s						
KTBS				S	Sb	04 06 39.6	+2.4
	23nm,0.2s						
KTBS	**Karatobe**	**1.79**	**314**	*e*P	Pb	04 06 16.1	+0.9
	baz=12						
KTBS				*e*S	Sb	04 06 39.6	+2.3
	baz=12						
KTBS	**Karatobe**	**1.79**	**314**	*e*P	Pb	04 06 16.1	+0.9
	4.0nm,0.3s						
KTBS				*e*S	Sb	04 06 39.6	+2.4
	23nm,0.2s						

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ARXS  Arharly              1.80 345    P      Pb     04 06 16.3 +1.0
      3.7nm,0.4s
ARXS                                   S      Sb     04 06 39.6 +2.2
      15nm,0.3s
ARXS  Arharly              1.80 345   eP      Pb     04 06 16.3 +1.0
      3.7nm,0.4s
ARXS                                  eS      Sb     04 06 39.6 +2.2
      15nm,0.3s
BOOM  Boomskoye usch       1.86 271⇑iP      Pb     04 06 16.4  0.0
      baz=71
BOOM                                ⇑iS      Sb     04 06 40.9 +1.6
      baz=71
KST   Kastek               1.92 288    P      Pb     04 06 18.6 +1.1
      6.8nm,0.3s
KST                                    S      Sb     04 06 43.4 +2.4
      13nm,0.3s
KST   Kastek               1.92 288   eP      Pb     04 06 18.6 +1.2
      baz=88
KST                                   eS      Sb     04 06 43.5 +2.5
      baz=88
KST   Kastek               1.92 288   eP      Pb     04 06 18.6 +1.1
      6.8nm,0.3s
KST                                   eS      Sb     04 06 43.4 +2.4
      13nm,0.3s
DJR   Jarkent              2.10  27    Pg     Pb     04 06 21.6 +1.3
      1.0nm,0.2s
DJR                                    Lg     Lg     04 06 48.8
      6.6nm,0.2s
DJR   Jarkent              2.10  27   eP      Pb     04 06 21.6 +1.3
      1.0nm,0.2s
DJR                                   eS      Sb     04 06 48.8 +2.8
      6.6nm,0.2s
KUU   Kurty                2.10 313    Pg     Pb     04 06 21.5 +1.1
      3.1nm,0.4s
KUU                                    Lg     Lg     04 06 48.4
      17nm,0.2s
KUU   Kurty                2.10 313   eP      Pb     04 06 21.5 +1.1
      baz=13
KUU                                   eS      Sb     04 06 48.4 +2.4
      baz=13
KUU   Kurty                2.10 313   eP      Pb     04 06 21.5 +1.1
      3.1nm,0.4s
KUU                                   eS      Sb     04 06 48.4 +2.4
      17nm,0.2s
NRN   Naryn                2.10 241⇑eP      Pb     04 06 20.0 -0.7
      baz=41
NRN                                 ⇑iS      Sb     04 06 47.1 +0.6
      baz=41
DGS   Degeres              2.12 292    Pg     Pb     04 06 21.4 +0.6
      4.2nm,0.4s
DGS                                    Lg     Lg     04 06 48.7
      18nm,0.4s
DGS   Degeres              2.12 292   eP      Pb     04 06 21.4 +0.7
      baz=92
DGS                                   eS      Sb     04 06 48.7 +2.1
      baz=92
DGS   Degeres              2.12 292   eP      Pb     04 06 21.4 +0.6
      4.2nm,0.4s
DGS                                   eS      Sb     04 06 48.7 +2.1
      18nm,0.4s
TKM2  Tokmak 2             2.15 283  ⇑Pn      Pb     04 06 21.2 -0.2
      1.2nm,0.5s
TKM2                                 ⇓Sn      Sb     04 06 49.4 +1.6
      3.4nm,0.5s
TKM2  Tokmak 2             2.15 283⇑iP      Pb     04 06 21.2 -0.2
      baz=83
TKM2                                ⇑iS      Sb     04 06 48.7 +0.9
      baz=83
KZA   Kyzart               2.41 262⇓eP      Pb     04 06 24.6 -1.3
      baz=62
KZA                                 ⇓iS      Sb     04 06 54.7 -0.7
      baz=62
KBK   Karagaybulak         2.60 275⇓eP      Pb     04 06 27.1 -1.9
      baz=75
KBK                                 ⇓iS      Sb     04 06 59.2 -1.3
      baz=75
KAPS  Kapalarasan          2.89  13    Pg     Pb     04 06 35.2 +1.4
      0.9nm,0.3s
KAPS                                   Lg     Lg     04 07 12.0
      3.8nm,0.2s
KAPS  Kapalarasan          2.89  13   eP      Pb     04 06 35.2 +1.4
      0.9nm,0.3s
KAPS                                  eS      Sb     04 07 12.0 +3.3
      3.8nm,0.2s
AAK   Ala-Archa            2.93 275  ⇑Pn      Pn     04 06 30.1 +1.6
      1.1nm,0.9s
AAK                                  ⇓Lg      Lg     04 07 14.0
      1.3nm,0.6s
UCH   Uchtor               2.93 267⇓iP      Pn     04 06 31.7 +2.9
      baz=67
UCH                                 ⇓iS      Sb     04 07 07.5 -2.9
      baz=67
MAKZ  Makanchi             5.01  29  ⇓Pn      Pn     04 06 59.9 +3.0
      0.2nm,0.3s
MAKZ                                 ⇓Sn      Sn     04 07 56.0 +1.8
      0.4nm,0.5s
MAKZ                                 ⇓Lg      Lg     04 08 17.1
      0.9nm,0.8s
MK31  Makanchi Array       5.11  31  ⇑Pn      Pn     04 07 02.8 +4.4
      0.1nm,0.3s,baz=208,slow=13,SNR=6.9
MK31                                 ⇑Sn      Sn     04 08 01.5 +4.8
      0.1nm,0.3s
MK31                                 ⇓Lg      Lg     04 08 19.3
      0.4nm,0.4s,baz=214,slow=28,SNR=4.1
```

IDC 19 04:29:44.3±3.0**, 29°.33N**×**101°.69E, h0**km**, mb3.2**/2**, mb1 3.5**/4**, mb1mx3.2**/36**, mbtmp3.3**/4**, ML3.8**/2**, Error ellipse: s-maj=77.4km s-min=33.6km az=93.0, Sichuan**

```
Code  Station Name          Δ°   AZ°    Phase ID              Time    Res
                                        Op     ISC          h  m  s   ISC
CMAR  Chiang Mai Arr      11.11 194    Pn     Pn     04 32 24.8 +0.3
      0.3nm,0.3s,baz=8.9,slow=16,SNR=4.7
SONM  Songino Array       18.84  10    P      Pn     04 34 06.2  0.0
      0.2nm,0.3s,baz=183,slow=10,SNR=3.7
MKAR  Makanchi Array      23.08 324    P      P      04 34 52.0 +0.6
      0.2nm,0.6s,baz=132,slow=9.9,SNR=2.7
KURBB Kurchatov Arra      27.50 327    P      P      04 35 31.5 -0.7
      0.4nm,0.3s,baz=133,slow=7.8,SNR=2.7
```

ISN ***19*** *04:55:44.1±1.0, 32°.57N×48°.38E, h0km±12km, ML4.4*

TEH ***19*** *04:55:47.9, 32°.65N×48°.24E, h12km, ML4.4*

THR ***19*** *04:55:48.5, 32°.59N×48°.22E, h16km, ML4.4*

NEIC ***19*** *04:55:48.9±0.0, 32°.66N×48°.27E, h10km, mb4.5/46, MN4.4(TEH), After TEH.*

MOS ***19*** *04:55:48.7±1.4, 32°.61N×48°.23E, h29km, mb4.6/34, Error ellipse: s-maj=6.0km s-min=3.9km az=107.5*

IDC ***19*** *04:55:50.3±2.8, 32°.72N×48°.30E, h27km±18km, mb4.1/29, mb1 4.1/38, mb1mx4.1/53, mbtmp4.1/38, ML3.6/7, MS3.7/23, Ms1 3.7/23, ms1mx3.5/42, Error ellipse: s-maj=15.6km s-min=10.3km az=165.0*

DSN ***19*** *04:55:51.7±3.8, 32°.40N×48°.60E, h10km, mb4.8/1, Error ellipse: s-maj=52.4km s-min=13.1km az=98.0*

OMAN ***19*** *04:55:52.2±1.6, 32°.00N×47°.94E, h34km±44km, Error ellipse: s-maj=55.4km s-min=7.7km az=339.0*

ISC 19 04:55:48.2±0.8**, 32°.61N**±0°.03×**48°.24E**±0°.03**, h16**km±5km**, n437, σ1ˢ.65**/445**, mb4.5**/105**, MS3.7**/19**, 33C-18D, Western Iran**

```
Code  Station Name          Δ°   AZ°    Phase ID              Time    Res
                                        Op     ISC          h  m  s   ISC
SHGR  Shooshtar-Gavs       0.69 136   ePg     Pg     04 56 02.1 +0.3
SHGR  Shooshtar-Gavs       0.69 136   ePg     Pg     04 56 02.0 +0.3
IKMR  Kamar-syah           0.91   7    IAMB   IAmb   04 56 22.6
      comp=Z,0.0nm,0.7s
IKMR                                  ePg     Pg     04 56 04.2 -1.7
IKFM  Kafar-mosalman       0.97 340    IAMB   IAmb   04 56 26.4
      comp=Z,0.0nm,0.2s
IKFM                                  ePg     Pg     04 56 05.8 -1.2
AHWZ  Ahwaz                1.32 165   ePg     Pg     04 56 14.8 +1.1
AHWZ                                   IAMB   IAmb   04 56 15.4
      comp=Z,0.0nm,0.3s
HSAM  Samen                1.62  11   ePn     Pb     04 56 17.0 -1.0
HSAM                                   IAMB   IAmb   04 56 43.4
      comp=N,0.0nm,0.6s
IKOM  Komasi               1.67 339   ePn     Pb     04 56 18.5 -0.3
IKOM                                   IAMB   IAmb   04 56 48.0
      comp=Z,0.0nm,1.0s
KHMZ  Khomeyn              1.83  52   ePn     Pb     04 56 21.7 +0.3
KHMZ  Khomeyn              1.83  52   ePn     Pb     04 56 21.7 +0.3
KHMZ                                  eSg     Sg     04 56 47.4 +0.2
IBZA  Bozab                1.88 350   ePn     Pb     04 56 22.0 -0.3
KCHF  Cheshme Sefid,       1.94 329   ePn     Pb     04 56 22.6 -0.7
KCHF                                   IAMB   IAmb   04 57 00.9
      comp=Z,0.0nm,0.6s
IBDR  Badra                2.01 285   ePn     Pb     04 56 23.0 -1.3
IBDR                                  eSn     Sg     04 56 51.0 -1.8
IGHG  Ghaleghazi           2.21 321   ePn     Pn     04 56 25.7 +1.2
IGHG                                   IAMB   IAmb   04 57 07.7
      comp=Z,68µm,0.8s
IVIS  Veis                 2.23 329   ePn     Pb     04 56 26.2 -2.1
IVIS                                   IAMB   IAmb   04 57 03.9
      comp=Z,26µm,0.8s
IPIR  Pirpir               2.24  87   ePn     Pb     04 56 27.8 -0.7
IPIR                                   IAMB   IAmb   04 57 06.7
      comp=Z,11µm,0.3s
ZNGN  Zangian              2.27 102   ePn     Pn     04 56 27.4 +2.1
HAGD  Aghdareh             2.33  19   ePn     Pb     04 56 28.7 -1.3
HAGD                                   IAMB   IAmb   04 57 05.1
      comp=Z,0.0nm,0.8s
ROKH  ROKH                 2.38  96   ePn     Pn     04 56 28.9 +2.2
ROKH                                   IAMB   IAmb   04 57 10.2
      comp=Z,0.0nm,0.5s
NSR   Nassriya             2.40 229   ePn     Pn     04 56 27.0 +0.2
NSR                                   eSn     Sn     04 56 57.0 +1.2
ASAO  Ashtian              2.44  37   ePn     Pb     04 56 30.6 -1.3
ASAO  Ashtian              2.44  37   ePn     Pb     04 56 30.6 -1.3
ILIN  Lien                 2.54 336   ePn     Pb     04 56 31.6 -1.9
ILIN                                   IAMB   IAmb   04 57 12.4
      comp=Z,18µm,0.5s
SNGE  Sanandaj             2.58 344   ePn     Pb     04 56 32.3 -2.0
SNGE  Sanandaj             2.58 344   ePn     Pb     04 56 32.3 -2.0
SNGE                                  eSg     Sg     04 57 09.9 -1.5
HSRG  Sareghieh            2.62   1   ePn     Pb     04 56 32.5 -2.5
HSRG                                   IAMB   IAmb   04 57 18.4
      comp=N,0.0nm,0.8s
IKLH  Kolahrood            2.89  75   ePn     Pn     04 56 36.3 +2.4
IKLH  Kolahrood            2.89  75   ePn     Pn     04 56 35.9 +2.0
IKLH                                   IAMB   IAmb   04 56 38.5
      comp=Z,6µm,0.2s
IRAZ  Razeghan             3.12  26   ePn     Pb     04 56 40.4 -3.0
IRAZ                                   IAMB   IAmb   04 56 41.1
      comp=Z,10µm,0.3s
GHVR  GHOM                 3.16  53   ePn     Pn     04 56 40.3 +2.9
GHVR  GHOM                 3.16  53   eP      Pn     04 56 40.3 +2.9
IGAR  Gharneh              3.22  93   ePn     Pn     04 56 40.4 +2.1
IGAR                                   IAMB   IAmb   04 57 28.9
      comp=Z,7µm,0.2s
KLNJ  Kolanjah             3.27 118   ePn     Pn     04 56 40.5 +1.4
BHD   Baghdad              3.31 282   ePn     Pn     04 56 41.0 +1.7
BHD                                   eSn     Sn     04 57 22.0 +3.7
IZEF  Zefreh               3.46  84   ePn     Pn     04 56 43.5 +1.9
IZEF  Zefreh               3.46  84   ePn     Pn     04 56 43.7 +2.1
IZEF                                   IAMB   IAmb   04 56 52.3
      comp=Z,2µm,0.2s
KRSH  Karshahi             3.53  66   ePn     Pn     04 56 44.8 +2.2
IRAM  Ramesheh             3.60 102   ePn     Pn     04 56 44.6 +1.0
IRAM                                   IAMB   IAmb   04 57 31.8
      comp=Z,3µm,0.3s
IMHD  Mahdasht             3.67  33   ePn     Pn     04 56 46.5 +2.1
IMHD                                   IAMB   IAmb   04 56 48.0
      comp=Z,4µm,0.2s
ISFB  Sefidab              3.77  61   ePn     Pn     04 56 47.7 +2.0
ISFB                                   IAMB   IAmb   04 57 49.5
      comp=Z,2µm,0.5s
IHSB  Hasanabad            3.78  41   ePn     Pn     04 56 48.3 +2.4
IHSB                                   IAMB   IAmb   04 58 05.6
      comp=Z,0.0nm,1.6s
THKV  Tehran--Karaj        3.96  33   ePn     Pn     04 56 51.1 +2.7
THKV  Tehran--Karaj        3.96  33   ePn     Pn     04 56 51.1 +2.7
ZNJK  Zanjan               4.07   5   ePn     Pn     04 56 53.0 +3.0
ZNJK  Zanjan               4.07   5   ePn     Pn     04 56 53.0 +3.0
IKAZ  Kazeroun             4.18 132   ePn     Pn     04 56 52.9 +1.2
IKAZ                                   IAMB   IAmb   04 57 49.0
      comp=Z,4µm,0.3s
IKRK  Kirkuk               4.27 312   ePn     Pn     04 56 54.0 +1.5
IKRK                                  eSn     Sn     04 57 45.5 +3.5
IDMV  Damavand             4.32  46   ePn     Pn     04 56 55.7 +2.2
IDMV                                   IAMB   IAmb   04 56 56.7
      comp=Z,3µm,0.4s
ANAR  Anarak               4.65  81   ePn     Pn     04 56 59.3 +1.4
ANAR                                   IAMB   IAmb   04 58 50.4
      comp=Z,0.0nm,5.0s
ISAD  Sadrabad             4.67  97   ePn     Pn     04 57 00.2 +1.9
ISAD                                   IAMB   IAmb   04 58 24.4
      comp=E,3µm,1.2s
ILAS  Lasjerd              4.80  54   ePn     Pn     04 57 01.3 +1.3
IFIR  Firoozkooh           4.81  50    IAMB   IAmb   04 57 17.3
      comp=Z,1µm,0.2s
IFIR                                  ePn     Pn     04 57 02.2 +2.0
IPRN  Peran                4.96  42    IAMB   IAmb   04 57 34.1
      comp=Z,2µm,0.8s
IPRN                                  ePn     Pn     04 57 05.2 +3.1
IALA  Alasht               5.13  46   ePn     Pn     04 57 06.9 +2.3
IBST  Bostanabad           5.20 348    IAMB   IAmb   04 57 43.8
      comp=Z,607nm,0.7s
IBST                                  ePn     Pn     04 57 07.3 +1.8
ISRB  Sarab                5.22 355    IAMB   IAmb   04 57 30.2
      comp=Z,930nm,0.6s
ISRB                                  ePn     Pn     04 57 08.2 +2.4
ICHK  Chekchek             5.23  92    IAMB   IAmb   04 57 13.1
      comp=Z,1µm,0.2s
ICHK                                  ePn     Pn     04 57 07.3 +1.4
ISHM  Shahmirzad           5.26  51   ePn     Pn     04 57 09.2 +2.8
IANJ  Anjilo               5.50  57   ePn     Pn     04 57 11.2 +1.5
IMEH  Mehriz               5.55 101   ePn     Pn     04 57 11.5 +1.1
MSL   Mosul                5.67 313   ePn     Pn     04 57 13.0 +1.1
MSL                                   eSn     Sn     04 58 19.0 +2.3
IHRS  Heris                5.78 351   ePn     Pn     04 57 16.1 +2.6
IHRS                                   IAMB   IAmb   04 57 44.3
      comp=Z,603nm,0.5s
ITBZ  Tabriz               5.86 344   ePn     Pn     04 57 17.7 +3.1
ITBZ                                   IAMB   IAmb   04 57 36.0
      comp=Z,467nm,0.4s
GHIR  Ghir-Karzin          5.95 135   ePn     Pn     04 57 16.8 +1.1
GHIR  Ghir-Karzin          5.95 135   eAML    AML    04 58 26.9
      comp=N,126nm,0.3s
GHIR  Ghir-Karzin          5.95 135   ePn     Pn     04 57 16.8 +1.1
CUKT  Cukurca              5.99 322   eP      Pn     04 57 16.9 +0.6
LKRN  Lenkeran, Azer       6.10   4    P      Pn     04 57 20.0 +2.3
RTB   Rutbah               6.69 276   ePn     Pn     04 57 27.0 +1.2
RTB                                   eSn     Sn     04 58 43.5 +1.7
SIRN  Sırnak               6.82 317   i P     Pn     04 57 28.7 +1.0
SIRN                                   IAML_P
      comp=Z,676nm,0.3s
GEVA  Gevas                7.08 325   i P     Pn     04 57 33.7 +2.3
GEVA                                   IAML_P
      comp=Z,676nm,0.4s
TVAN  Van                  7.09 328   i P     Pn     04 57 34.6 +3.0
TVAN                                   IAML_P
      comp=Z,708nm,0.6s
TPRV  Parvadeh(Tabas       7.12  84   ePn     Pn     04 57 33.3 +1.5
AKDM  Akdamar-Van          7.14 325   eP      Pn     04 57 34.9 +2.8
TNSJ  Nastanj              7.14  77   ePn     Pn     04 57 33.7 +1.7
CLDR  Caldiran             7.40 333   eP      Pn     04 57 40.0 +4.2
TKDS  Koohdasht(Taba       7.52  80   ePn     Pn     04 57 38.3 +1.0
MARD  Mardin               7.71 310   i P     Pn     04 57 40.6 +0.6
MARD                                   IAML_P
      comp=Z,2µm,0.5s
SVAN  Silvan-Diyarba       7.97 316   eP      Pn     04 57 42.3 -1.1
SVAN  Silvan-Diyarba       7.97 316   i P     Pn     04 57 43.1 -0.4
SVAN                                   IAML_P
      comp=Z,114nm,0.1s
MAZI  Mazidag              8.01 309   eP      Pn     04 57 54.7  +11
GNI   Garni                8.03 340   eP      Pn     04 57 53.5 +9.1
GNI   Garni                8.03 340   ePn     Pn     04 57 44.1 -0.3
GNI                                   eSn     Sn     04 59 11.9 -3.0
GNI   Garni                8.03 340   eP      Pn     04 57 44.1 -0.3
GNI                                   e              04 59 11.9
GNI   Garni                8.03 340    Pn     Pn     04 57 46.1 +1.7
      comp=Z,0.4nm,0.3s,baz=172,slow=14,SNR=1.8
GNI                                    LR     LR     05 01 32.7
      comp=Z,498nm,20.3s,baz=159,slow=43
TUTA  Tutak                8.07 329   i P     Pn     04 57 46.8 +1.8
TUTA                                   IAML_P
      comp=Z,194nm,0.5s
AGRB  Hanur-Agry           8.14 330   eP      Pn     04 57 50.7 +4.8
SBZV  Sabzevar             8.60  61   ePn     Pn     04 57 53.8 +1.5
SEKA  Sheki                8.62 355    P      Pn     04 57 56.1 +3.8
ITEG  Tejag                8.86  85   ePn     Pn     04 57 56.4 +0.7
SURC  SANLIURFA_SURC       8.99 301   i P     Pn     04 57 57.8 +0.4
SURC                                   IAML_P
      comp=Z,350nm,0.6s
HOMI  Horasan              9.01 327   i P     Pn     04 58 03.6 +5.8
HOMI                                   IAML_P
      comp=Z,155nm,0.3s
IKOO  Kooshah              9.09  88   ePn     Pn     04 58 00.3 +1.3
URFA  Urfa                 9.10 305   eP      Pn     04 58 05.6 +6.6
ISFR  Sfrayin              9.16  58   ePn     Pn     04 58 03.0 +3.0
YEDI  Yedisu-Bingol        9.23 320   eP      Pn     04 58 04.9 +4.1
SENK  Senkaya-Erzuru       9.24 331   eP      Pn     04 58 04.9 +4.0
RAYN  Ar Rayn              9.37 196   ePn     Pn     04 58 01.9 -0.8
RAYN                                  eSn     Sn     04 59 44.4 -3.4
RAYN  Ar Rayn              9.37 196   eP      Pn     04 58 01.9 -0.8
RAYN                                  e              04 59 44.4
SHME  Shamm                9.50 131   ePn     Pn     04 58 03.5 -0.9
IAKL  Akhelmad             9.54  62   ePn     Pn     04 58 06.9 +1.8
ASF   Jabal al Asfar       9.60 270    P      Pn     04 58 05.0 -0.8
      comp=Z,14nm,0.6s
ASF   Jabal al Asfar       9.60 270    Pn     Pn     04 58 07.1 +1.2
      comp=Z,1.2nm,0.3s,baz=50,slow=13,SNR=10
ASF                                    Sn     Sn     04 59 54.5 +1.1
      comp=Z,0.8nm,0.3s,baz=315,slow=20,SNR=3.3
ASF                                    Lg     Lg     05 00 50.0
      comp=Z,1.0nm,0.3s,baz=292,slow=19,SNR=2.6
IMON  Monand               9.63  83   ePn     Pn     04 58 08.2 +1.9
GEYT  Alibeck              9.66  54    Pn     Pn     04 58 05.8 -0.8
      comp=Z,1.7nm,0.3s,baz=271,slow=7.3,SNR=6.6
KOPT  Kop Dagi             9.67 322   i P     Pn     04 58 12.2 +5.2
KOPT                                   IAML_P
      comp=Z,101nm,0.4s
BANOM Banah                9.69 131   i P     Pn     04 58 05.7 -1.3
      SNR=44
BANOM Banah                9.69 131    P      Pn     04 58 06.1 -1.0
DDEM  Demirkent            9.76 330   i P     Pn     04 58 13.7 +5.6
DDEM                                   IAML_P
      comp=Z,203nm,0.4s
IEMG  Emamgholi            9.79  58   ePn     Pn     04 58 11.1 +2.5
DAGI  Agillar              9.85 331   i P     Pn     04 58 14.5 +5.3
DAGI                                   IAML_P
      comp=Z,213nm,0.7s
DBAD  Bademkaya            9.89 330   i P     Pn     04 58 14.6 +4.8
DBAD                                   IAML_P
      comp=Z,252nm,0.6s
GZT   Gaziantep            9.95 301   i P     Pn     04 58 12.2 +1.5
GZT                                    IAML_P
      comp=Z,599nm,0.5s
BAYB  BAYBURT              9.97 322   i P     Pn     04 58 15.4 +4.4
BAYB                                   IAML_P
      comp=Z,421nm,0.7s
NAZ   Nazwa, Dubai        10.00 138   i P     Pn     04 58 12.2 +0.9
      SNR=14
NAZ   Nazwa, Dubai        10.00 138   ePn     Pn     04 58 11.7 +0.5
MSFE  Esma-Masafi         10.01 134    P      Pn     04 58 11.3 -0.1
MSFE  Esma-Masafi         10.01 134   ePn     Pn     04 58 10.5 -0.9
MDH   Madha               10.14 134   ePn     Pn     04 58 12.5 -0.7
AKCD  Akcadag             10.14 307   i P     Pn     04 58 14.6 +1.3
AKCD                                   IAML_P
      comp=Z,422nm,0.5s
FAQ   Al Faqa, Dubai      10.15 139   ePn     Pn     04 58 13.5 +0.2
REFA  Refahiye_ERZN       10.23 314   i P     Pn     04 58 23.4 +8.9
REFA                                   IAML_P
      comp=Z,38nm,0.4s
BCA   Borcka              10.28 331   eP      Pn     04 58 20.9 +5.9
MAK   Makhachkala         10.35 357   eP      Pn     04 58 16.9 +1.0
MAK                                   eS      Sn     05 00 14.8 +3.3
MAK                                    pmax   pmax
      comp=Z,30nm,0.5s
MAK                                    MLR    MLR
      comp=Z,932nm,16.0s
UOSS  Minazif             10.35 136   ePn     Pn     04 58 15.6 -0.4
UOSS                                  eSn     Sn     05 00 06.8 -4.9
UOSS  Minazif             10.35 136    P      Pn     04 58 14.9 -1.1
UOSS  Minazif             10.35 136   ePn     Pn     04 58 15.4 -0.6
HATD  Hatta, Dubai        10.40 136    P      Pn     04 58 16.2 -0.5
HATD  Hatta, Dubai        10.40 136   ePn     Pn     04 58 16.7  0.0
KELT  Kelkit              10.44 319   i P     Pn     04 58 21.7 +4.4
KELT                                   IAML_P
      comp=Z,280nm,0.6s
ASHO  Ashiyiah            10.46 137   i P     Pn     04 58 17.5 -0.1
      SNR=13
ASHO  Ashiyiah            10.46 137   ePn     Pn     04 58 17.5 -0.1
MZR   Muzera              10.63 153   eP      Pn     04 58 20.4 +0.4
      SNR=11
MZR   Muzera              10.63 153   ePn     Pn     04 58 20.3 +0.4
GROC  Groznyy             10.75 350   eP      Pn     04 58 21.3 -0.1
GROC                                  eS      Sn     05 00 23.5 +2.2
GROC                                   pmax   pmax
      comp=Z,70nm,1.9s
ALNE  Al Ain              10.79 140    P      Pn     04 58 21.0 -1.0
ALNE  Al Ain              10.79 140   ePn     Pn     04 58 21.6 -0.4
MMAI  Mount Meron Ar      10.81 276    Pn     Pn     04 58 22.9 +0.5
      comp=Z,0.2nm,0.3s,baz=83,slow=16,SNR=2.8
MMAI                                   Lg     Lg     05 01 33.9
      comp=Z,1.1nm,0.3s,baz=110,slow=39,SNR=3.5
MMAI                                   LR     LR     05 03 54.5
      comp=Z,294nm,18.2s,baz=90,slow=45
SUSE  Susehri             11.08 316   i P     Pn     04 58 30.7 +4.6
SUSE                                   IAML_P
      comp=Z,12nm,0.1s
NEY   Neytrino            11.47 339⇓eP      Pn     04 58 38.6 +7.1
NEY                                    pmax   pmax
      comp=Z,2.0nm,0.8s
EIL   Elat                11.76 259    Pn     Pn     04 58 36.4 +1.1
      comp=Z,0.7nm,0.3s,baz=52,slow=12,SNR=3.8
EIL                                    Lg     Lg     05 02 01.1
      comp=Z,0.7nm,0.3s,baz=282,slow=20,SNR=2.6
KBZ   Khabaz              11.86 341    Pn     Pn     04 58 40.1 +3.5
      comp=Z,0.1nm,0.3s,baz=157,slow=7.7,SNR=3.0
KBZ                                    LR     LR     05 03 39.6
      comp=Z,464nm,19.3s,baz=138,slow=40
HOQ   Hoqain              12.04 136   ePn     Pn     04 58 42.6 +3.5
KIV   Kislovodsk          12.13 341   eP      P      04 58 47.0 -6.1
KIV                                    pmax   pmax
      comp=Z,10.0nm,1.1s
KIV                                    MLR    MLR
      comp=Z,201nm,10.0s
BSY   Bisya               12.63 139    P      Pn     04 58 46.8 -0.4
BSY                                    S      Sn     05 01 00.7 -6.9
SOC   Sochi               12.84 331   eP      Pn     04 58 53.1 +3.1
SOC                                   e              05 01 13.4
SOC                                    pmax   pmax
      comp=Z,21nm,0.9s
SOC                                    MLR    MLR
      comp=Z,457nm,12.0s
WSAR  Wadi Sarin          13.09 133    P      Pn     04 58 51.9 -1.6
WSAR  Wadi Sarin          13.09 133    Pn     Pn     04 58 52.1 -1.4
      comp=Z,1.9nm,0.3s,baz=316,slow=10,SNR=13
WSAR                                   Sn     Sn     05 01 08.5  -10
      comp=Z,0.6nm,0.3s,baz=166,slow=19,SNR=3.9
WSAR                                   LR     LR     05 04 43.1
      comp=Z,302nm,18.7s,baz=330,slow=41
BR101 Keskin Array S      13.76 305   ePn     Pn     04 59 05.0 +2.4
BRTR  Keskin Array B      13.76 305    Pn     Pn     04 59 05.0 +2.4
      comp=Z,0.1nm,0.3s,baz=121,slow=12,SNR=6.3
BRTR                                   LR     LR     05 04 33.6
      comp=Z,48nm,22.0s,baz=110,slow=38
BR131 Keskin Array S      13.76 305   ePn     Pn     04 59 06.5 +3.9
MHTO  MHTO                14.46 141    P      Pn     04 59 10.9 -1.4
      SNR=10
ANN   Anapa               14.79 328   eP      Pn     04 59 18.0 +1.4
ANN                                   eS      Sn     05 02 03.8 +3.8
ANN                                    pmax   pmax
      comp=Z,32nm,1.2s
ANN                                    MLR    MLR
      comp=Z,350nm,15.0s
DMTO  DMTO                16.02 156    P      Pn     04 59 29.8 -3.1
      SNR=16
MANT  Manisa              17.05 296   ePn     P      04 59 48.3 +0.5
      comp=Z,105nm,1.3s
KBL   Kabul               17.44  78    P      P      04 59 53.5 +1.3
KBL                                    pmax   pmax
      comp=Z,14nm,1.0s
CHGR  Chuyangaron         18.03  65   ePn     P      04 59 59.4 +0.8
      comp=Z,8.9nm,0.8s
ABKAR Akbulak array       18.79  24   eP      Pn     05 00 07.2 -0.1
      comp=Z,8.3nm,0.8s
GAR   Garm                18.99  64   eP      Pn     05 00 11.6 +1.8
SANT  Santorini           19.14 288⇑iP      P      05 00 11.3 +0.6
VRH   Novokhopyorsk       19.18 347   eP      Pn     05 00 11.7 -0.3
VRH                                    pmax   pmax
      comp=Z,70nm,0.6s
AKTO  Aktyubinsk          19.22  19    P      P      05 00 11.1 -0.4
      comp=Z,0.6nm,0.3s,baz=205,slow=11,SNR=20
TIRR  Tirgusor            19.45 313   eP      Pn     05 00 14.9 -0.2
      comp=Z,5.4nm,0.8s
TIRR  Tirgusor            19.45 313⇑iP      Pn     05 00 15.0 -0.2
TIRR  Tirgusor            19.45 313   eP      Pn     05 00 14.9 -0.2
TIRR                                   pmax   pmax
      comp=Z,5.0nm,0.8s
PRD   Provadia            19.50 309   eP      Pn     05 00 17.5 +1.7
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IDI   Anoyia           19.55 284  eP    Pn     05 00 17.0 +0.5
      comp=Z,58nm,1.5s
IDI   Anoyia           19.55 284⇓iP    Pn     05 00 17.2 +0.7
IDI   Anoyia           19.55 284   P    Pn     05 00 16.6 +0.1
      comp=Z,1.6nm,0.3s,baz=76,slow=12,SNR=16
ALN   Alexandroupoli   19.57 301  eP    Pn     05 00 17.6 +0.8
      comp=Z,14nm,1.3s
ALN   Alexandroupoli   19.57 301  eP    Pn     05 00 17.6 +0.8
ALN                               pmax  pmax
      comp=Z,14nm,1.3s
TLCR                   19.59 315⇑iP    P      05 00 16.0 +0.5
TLCR                   19.59 315   P    P      05 00 16.0 +0.5
BTK   Batken           19.62  61  eP    Pn     05 00 20.4 +3.1
      comp=Z,10nm,1.0s
BTK   Batken           19.62  61  eP    Pn     05 00 20.5 +3.1
BTK                               pmax  pmax
      comp=Z,10.0nm,1.0s
TLB   Topalu           19.74 313⇑iP    Pn     05 00 19.0 +0.3
TLB   Topalu           19.74 313   P    Pn     05 00 19.0 +0.3
VSR   Storozhevoye     19.75 343  eP    P      05 00 15.5 -1.7
VSR                               pmax  pmax
      comp=Z,10.0nm,0.6s
CFR   Carcaliu         19.99 315⇓iP    P      05 00 19.9  0.0
CFR   Carcaliu         19.99 315   P    Pn     05 00 20.8 -0.8
CFR                               pmax  pmax
      comp=Z,17nm,0.8s
KK31  Karatay Array    20.41  53  eP    Pn     05 00 26.3 -0.3
      comp=Z,8.0nm,1.0s
KK31  Karatay Array    20.41  53  eP    Pn     05 00 26.3 -0.3
KK31                              pmax  pmax
      comp=Z,8.0nm,1.0s
KKAR  Karatay Array    20.41  53  eP    Pn     05 00 26.3 -0.3
      comp=Z,8.0nm,1.0s
KKAR  Karatay Array    20.41  53  eP    Pn     05 00 26.3 -0.3
KKAR                              pmax  pmax
      comp=Z,8.0nm,1.0s
SZH   Strazhica        20.50 308  eP    Pn     05 00 27.3 -0.3
LEOM  Leova            20.64 318⇑iP    P      05 00 27.0  0.0
LEOM  Leova            20.64 318   P    P      05 00 26.9  0.0
PETR  Petresti         20.82 315⇑iP    Pn     05 00 30.5 -0.8
SULR                   20.90 312⇑iP    P      05 00 30.9 +1.1
ISR   Istrita          20.93 313⇓iP    Pn     05 00 32.0 -0.7
ISR   Istrita          20.93 313   P    Pn     05 00 34.2 +1.5
ODBI  Odobesti         20.95 315⇓iP    Pn     05 00 32.0 -0.8
NIL   Nilore           20.96  80  eP    P      05 00 31.2 +0.6
      comp=Z,32nm,0.8s
NIL   Nilore           20.96  80  eP    P      05 00 31.2 +0.6
NIL                               pmax  pmax
      comp=Z,32nm,0.8s
LPSR  Galich'ya Gora   21.09 344  eP    P      05 00 31.0 -0.7
LPSR                              eS    S      05 04 24.4 -1.3
LPSR                              pmax  pmax
      comp=Z,90nm,0.6s
LPSR                              smax  smax
      comp=N,30nm,1.7s
SECR                   21.19 312⇑iP    P      05 00 35.5 +2.6
VRI   Vrincioaia       21.20 315⇑iP    P      05 00 34.1 +1.1
VRI   Vrincioaia       21.20 315   P    P      05 00 34.0 +1.1
PLOR  Plostina         21.23 315⇓iP    P      05 00 34.9 +1.5
PLOR  Plostina         21.23 315   P    P      05 00 34.9 +1.5
MMB   Musomiste        21.45 302  eP    P      05 00 37.8 +2.0
MLR   Muntele Rosu     21.48 313⇑iP    P      05 00 38.6 +2.4
MLR   Muntele Rosu     21.48 313  eP    P      05 00 37.0 +0.8
MLR   Muntele Rosu     21.48 313   P    P      05 00 37.0 +0.8
      comp=N,7.5nm,0.6s,baz=150,slow=23,SNR=12
MLR                               LR    LR     05 11 13.9
      comp=N,172nm,19.3s,baz=84,slow=43
ARSB  Arslanbob        21.54  59  eP    P      05 00 37.7 +0.8
      comp=N,7.7nm,0.9s
MNAS  Manas            21.55  56   P    P      05 00 40.6 +3.6
MNAS                              pmax  pmax
      comp=Z,4.0nm,0.9s
ATD   Arta Tunnel      21.56 195  LR    LR     05 09 26.3
      comp=Z,213nm,18.9s,baz=358,slow=38
TESR  Tescani          21.58 316⇓iP    P      05 00 37.8 +0.7
SFK   Sufi-Kurgan      21.61  63   P    P      05 00 39.2 +1.5
SFK                               pmax  pmax
      comp=Z,12nm,0.8s
VLAD  Vladila          21.81 308⇓iP    P      05 00 41.8 +2.3
OZUR                   21.88 314⇓iP    P      05 00 41.4 +1.1
MTUR  Matau            21.91 312⇑iP    P      05 00 42.7 +2.0
KKB   Krupnik          21.99 302  eP    P      05 00 41.3 -0.3
VOIR                   22.01 312⇑iP    P      05 00 43.3 +1.4
VOIR                   22.01 312   P    P      05 00 43.2 +1.4
VOIR                              pmax  pmax
      comp=Z,38nm,1.1s
DOPR  Dopca            22.05 314⇑iP    P      05 00 44.3 +2.1
VTS   Vitosha          22.11 304  eP    P      05 00 43.1 +0.2
      comp=Z,4.5nm,0.8s
VTS   Vitosha          22.11 304⇑iP    P      05 00 44.2 +1.2
VTS   Vitosha          22.11 304  eP    P      05 00 43.2 +0.2
VTS                               pmax  pmax
      comp=Z,5.0nm,0.8s
VTS   Vitosha          22.11 304  eP    P      05 00 46.7 +3.7
BIZ   Bicaz            22.13 317⇑iP    P      05 00 43.0  0.0
ARR   Arges            22.24 312⇑iP    P      05 00 45.3 +1.0
GRG   Griva            22.25 299  eP    P      05 00 47.3 +3.0
GRG                               pmax  pmax
      comp=Z,37nm,0.8s
STIP  Stip             22.59 301  i P   P      05 00 48.9 +0.9
LOT   Lotru            22.82 311⇑iP    P      05 00 51.0 +0.5
AKASG Malin Array Be   22.87 328   P    P      05 00 49.5 -1.3
      comp=Z,2.0nm,0.5s,baz=137,slow=9.3,SNR=13
AKBB  Malin Array Si   22.87 328  eP    P      05 00 49.5 -1.2
      comp=Z,7.1nm,0.6s
AKBB  Malin Array Si   22.87 328  eP    P      05 00 49.6 -1.2
AKBB                              pmax  pmax
      comp=Z,7.0nm,0.6s
KIEV  Kiev             22.88 328  eP    P      05 00 50.0 -0.9
      comp=Z,36nm,1.4s
KIEV  Kiev             22.88 328⇓iP    P      05 00 49.9 -0.9
KIEV  Kiev             22.88 328⇓eP    P      05 00 50.3 -0.5
KIEV                              pmax  pmax
      comp=Z,5.0nm,0.7s
AK11  Malin Array Si   22.88 328  eP    P      05 00 49.0 -2.0
FNA   Florina          22.97 298  eP    P      05 00 52.6 +0.6
      comp=Z,36nm,1.4s
FNA   Florina          22.97 298  eP    P      05 00 52.6 +0.6
FNA                               pmax  pmax
      comp=Z,36nm,1.4s
AAK   Ala-Archa        23.00  57   P    P      05 00 51.2 -1.2
      comp=Z,0.5nm,0.3s,baz=231,slow=14,SNR=2.6
AAK                               LR    LR     05 11 19.9
      comp=Z,541nm,18.0s,baz=248,slow=41
BURAR Bucovina Array   23.00 317⇓iP    P      05 00 52.9 +0.6
BURAR Bucovina Array   23.00 317   P    P      05 00 52.8 +0.5
BUR04 Bucovina Ar. S   23.00 317  eP    P      05 00 52.0 -0.3
BUR08 Bucovina Ar. S   23.02 317  eP    P      05 00 52.8 +0.2
      comp=Z,7.4nm,0.8s
BIA   Bitola           23.06 299  i P   P      05 00 56.3 +3.4
FRU   Bishkek          23.14  56  eP    P      05 00 50.0 -3.7
KRUS  Krusevo          23.19 300  i P   P      05 00 57.1 +2.8
ARCR  ARCALIA          23.23 315⇑iP    P      05 00 55.5 +1.0
GZR   Gura Zlata       23.43 310⇓iP    P      05 00 56.5 -0.2
GZR   Gura Zlata       23.43 310   P    P      05 00 56.5 -0.2
HERR  Herculane        23.46 309⇓iP    P      05 00 57.6 +0.7
OHR   Ohrid            23.46 299  i P   P      05 00 59.0 +2.0
CJR   Cluj-Napoca      23.50 314⇑iP    P      05 00 58.0 +0.6
CJR   Cluj-Napoca      23.50 314   P    P      05 00 57.9 +0.6
NRN   Naryn            23.77  60  eP    P      05 01 01.9 +1.6
      comp=Z,9.6nm,0.8s
NRN   Naryn            23.77  60  eP    P      05 01 01.9 +1.6
NRN                               pmax  pmax
      comp=Z,10.0nm,0.8s
MDVR  Moldovita        23.89 308⇑iP    P      05 01 02.1 +1.0
OTUK  Ortayu           23.95  42   P    P      05 01 02.5 +0.9
OTUK                              pmax  pmax
      comp=Z,9.0nm,1.1s
OBN   Obninsk          23.95 343  eP    P      05 01 01.7 +0.3
      comp=Z,27nm,0.4s
OBN   Obninsk          23.95 343  eP    P      05 01 04.0 +2.6
OBN                               pmax  pmax
      comp=Z,66nm,2.2s
OBN   Obninsk          23.95 343   P    P      05 01 01.7 +0.3
      comp=Z,3.9nm,0.3s,baz=22,slow=14,SNR=4.7
DRGR                   24.08 313⇓iP    P      05 01 04.1 +1.2
DRGR                   24.08 313   P    P      05 01 03.6 +0.7
DRGR                              pmax  pmax
      comp=Z,37nm,0.9s
TIR   Tirane           24.20 299⇑iP    P      05 01 05.4 +1.4
BZS   Buzias           24.27 310⇑iP    P      05 01 04.8 +0.2
BZS   Buzias           24.27 310   P    P      05 01 09.6 +5.0
BZS                               pmax  pmax
      comp=Z,5.0nm,1.8s
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MOS   Moscow           24.29 345  eP    P      05 01 04.1 -0.5
MOS                               pmax  pmax
      comp=Z,42nm,0.7s
SIRR  Siria            24.50 312⇑iP    P      05 01 08.4 +1.7
TRPA  Tarpa            24.81 316⇑iP    P      05 01 10.3 +0.9
TRPA  Tarpa            24.81 316  eP    P      05 01 10.1 +0.7
DIVS  Divibare         24.82 306  eP    P      05 01 11.9 +2.2
ARU   Arti             24.87  14  eP    P      05 01 10.4 +0.6
ARU   Arti             24.87  14c iP    P      05 01 10.0 +0.1
ARU                               *PP   sP     05 01 23.9 +6.8
ARU                                            05 01 44.8
ARU                               S     S      05 05 31.0 -1.0
ARU                               SS    SnSn   05 06 23.1 +3.3
ARU                               pmax  pmax
      comp=Z,11nm,0.9s
ARU                               MLR   MLR
      comp=Z,222nm,17.0s
LVV   L'vov            24.87 321  eP    P      05 01 10.6 +0.6
DRME  Dracevica, Mon   24.88 301  eP    P      05 01 08.8 -1.3
PDG   Podgorica        24.89 302⇑iP    P      05 01 11.2 +1.1
PDG   Podgorica        24.89 302  eP    P      05 01 10.8 +0.7
PLE   Pljevlja         25.02 304   P    P      05 01 14.8 +3.3
TARG  Taragay, Kyrgy   25.16  60  eP    P      05 01 14.4 +1.3
      comp=Z,9.1nm,0.7s
BBLS  Lazi&#263;i      25.16 305  eP    P      05 01 13.5 +0.8
UZH   Uzhgorod         25.20 317  eP    P      05 01 16.0 +3.1
UZH                               e            05 01 25.2
UZH                               e            05 01 28.8
FRGS  Fruska Gora      25.29 308  eP    P      05 01 14.1 +0.3
HCY   Herceg Novi      25.44 301  eP    P      05 01 14.9 -0.3
KWP   Kalwaria Pacla   25.49 319  eP    P      05 01 18.4 +2.8
KWP   Kalwaria Pacla   25.49 319  eP    P      05 01 15.9 +0.4
      comp=Z,162nm,0.6s
KWP   Kalwaria Pacla   25.49 319  eP    P      05 01 15.9 +0.4
BRY   Bratogost        25.51 302  eP    P      05 01 15.9 -0.1
HAPS  Han Pijesak,Bl   25.53 305  eP    P      05 01 15.8 -0.4
TREB  Trebinje         25.60 302  eP    P      05 01 16.8 +0.1
BRVK  Borovoye         25.86  31  eP    P      05 01 19.5 +0.6
      comp=Z,8.7nm,0.8s
BRVK  Borovoye         25.86  31⇓eP    P      05 01 19.5 +0.6
BVAR  Borovoye Array   25.89  31   P    P      05 01 19.0 -0.2
BVAR  Borovoye Array   25.89  31   P    P      05 01 19.0 -0.2
      comp=Z,6.8nm,0.8s,baz=224,slow=8.2,SNR=19
BVAR                              ScP   ScP    05 08 24.5 -2.1
      comp=Z,1.7nm,0.8s,baz=241,slow=1.5,SNR=7.3
BVAR                              LR    LR     05 13 20.5
      comp=Z,190nm,18.1s,baz=224,slow=41
KIRV  Kirov            25.99   1   P    P      05 01 19.7 -0.2
      comp=Z,23nm,0.6s,baz=263,slow=2.3,SNR=6.5
TIP   Timpagrande      26.25 293  eP    P      05 01 23.7 +1.1
      comp=Z,18nm,1.0s
TIP   Timpagrande      26.25 293⇑iP    P      05 01 23.3 +0.7
PSZ   Piszkesteto      26.29 314  eP    P      05 01 24.8 +1.9
PSZ   Piszkesteto      26.29 314⇑iP    P      05 01 24.5 +1.5
PSZ   Piszkesteto      26.29 314  eP    P      05 01 26.0 +3.0
PSZ   Piszkesteto      26.29 314  eP    P      05 01 24.8 +1.9
MORH  Mrgy, Hungar     26.42 310  eP    P      05 01 24.1  0.0
MORH  Mrgy, Hungar     26.42 310  eP    P      05 01 24.8 +0.8
MATE  Matera           26.44 297⇑iP    P      05 01 26.2 +1.9
NIE   Niedzica         26.73 317  eP    P      05 01 31.2 +4.4
NIE   Niedzica         26.73 317  eP    P      05 01 31.2 +4.4
LANS  Liptovska Anna   27.09 316  eP    P      05 01 31.7 +1.6
LANS  Liptovska Anna   27.09 316  eP    P      05 01 31.7 +1.6
VYHS  Vyhne            27.18 314  eP    P      05 01 32.9 +2.0
VYHS  Vyhne            27.18 314  eP    P      05 01 32.9 +2.0
OJC   Ojcow            27.40 318  eP    P      05 01 35.4 +2.6
OJC   Ojcow            27.40 318  eP    P      05 01 35.1 +2.3
      comp=Z,13nm,0.9s
OJC   Ojcow            27.40 318  eP    P      05 01 35.1 +2.3
OJC                               pmax  pmax
      comp=Z,13nm,0.9s
KURBB Kurchatov Arra   28.64  42   P    P      05 01 43.9 +0.1
      comp=Z,3.0nm,0.8s,baz=244,slow=9.7,SNR=9.3
KURK  Kurchatov        28.73  42  eP    P      05 01 45.5 +0.8
KURK  Kurchatov        28.73  42  eP    P      05 01 45.0 +0.4
CONA  Conrad Observa   28.80 312  i P   P      05 01 45.1 -0.3
      comp=Z,2.9nm,0.9s
KLMR  Klimovskoe       28.83 351  eP    P      05 01 43.5 -1.9
KLMR                              pmax  pmax
      comp=Z,8.0nm,0.7s
KLMR  Klimovskoe       28.83 351  eP    P      05 01 43.5 -1.9
KLMR                              AMP          05 01 45.4
      comp=Z,8.0nm,0.7s
VRAC  Vranov           28.86 315  LR    LR     05 13 28.2
      comp=Z,40nm,21.0s,baz=113,slow=37
PRGR  Permogore        29.09 357  eP    P      05 01 46.3 -1.4
PRGR                              pmax  pmax
      comp=Z,13nm,0.8s
OBKA  Obir             29.20 308   P    P      05 01 50.6 +1.6
      comp=Z,9.4nm,1.2s
MAKZ  Makanchi         29.32  51  eP    P      05 01 51.0 +1.0
      comp=Z,2.5nm,0.9s
MAKZ  Makanchi         29.32  51  eP    P      05 01 51.0 +1.0
MAKZ                              pmax  pmax
      comp=Z,3.0nm,0.9s
DPC   Dobruska-Polom   29.45 316  eP    P      05 01 51.0 -0.1
DPC                               ex    x      05 02 09.3
DPC   Dobruska-Polom   29.45 316  eP    P      05 01 51.0 -0.1
MK01  Makanchi Array   29.52  51  eP    P      05 01 52.4 +0.6
MK31  Makanchi Array   29.52  51  eP    P      05 01 52.8 +1.0
      comp=Z,6.0nm,0.8s
MK31  Makanchi Array   29.52  51  eP    P      05 01 52.8 +1.0
MK31                              pmax  pmax
      comp=Z,6.0nm,0.8s
MK32  Makanchi Array   29.52  51  eP    P      05 01 52.3 +0.5
MK32                              ePcP  PcP    05 04 56.0 -0.8
MK32                              eScP  ScP    05 08 35.9 -2.0
MKAR  Makanchi Array   29.52  51  eP    P      05 01 52.8 +1.0
      comp=Z,53nm,0.7s
MKAR                              PcP   PcP    05 04 56.0 -0.8
MKAR                              ScP   ScP    05 08 35.9 -2.0
MKAR  Makanchi Array   29.52  51   P    P      05 01 52.3 +0.5
      comp=Z,7.4nm,0.7s,baz=247,slow=7.5,SNR=80
MKAR                              PcP   PcP    05 04 56.0 -0.8
      comp=Z,0.4nm,0.7s,baz=222,slow=1.9,SNR=3.1
MKAR                              ScP   ScP    05 08 35.9 -2.0
      comp=Z,0.5nm,0.8s,baz=264,slow=2.9,SNR=3.0
MKAR                              LR    LR     05 15 38.9
      comp=Z,79nm,21.4s,baz=245,slow=40
VSU   Vasula           29.65 337⇑eP    P      05 01 52.6 -0.1
VSU                               pmax  pmax
      comp=Z,49nm,0.8s
MOA   Molln            29.79 311  i P   P      05 01 54.8 +0.7
      comp=Z,3.2nm,0.6s
MYKA  Terra Mystica    29.84 308   P    P      05 01 56.1 +1.4
      comp=Z,11nm,1.8s
KBA   Koelnbreinsper   30.16 309  i P   P      05 01 58.3 +0.7
      comp=Z,3.7nm,0.6s
PYUN  Piuthan          30.24  89  eP    P      05 01 57.5 -1.0
      comp=Z,9.7nm,0.8s
GEC2  GERESS Array S   30.46 312  eP    P      05 02 00.4 +0.2
      comp=Z,2.6nm,1.0s
GEC2                              ePcP  PcP    05 04 59.2  0.0
GEC2  GERESS Array S   30.46 312  eP    P      05 02 00.4 +0.2
GEC2                              e            05 04 59.2
GEC2                              pmax  pmax
      comp=Z,3.0nm,1.0s
GERES GERESS Array B   30.46 312   P    P      05 02 00.4 +0.2
      comp=Z,1.0nm,0.6s,baz=104,slow=8.5,SNR=4.1
GERES                             PcP   PcP    05 04 59.2  0.0
      comp=Z,0.6nm,0.6s,baz=40,slow=1.7,SNR=2.7
GERES                             LR    LR     05 15 54.7
      comp=Z,67nm,18.7s,baz=114,slow=40
KHC   Kasperske Hory   30.64 313  eP    P      05 02 02.2 +0.6
KHC                               epP   pP     05 02 05.9 -0.8
KHC   Kasperske Hory   30.64 313  eP    P      05 02 02.2 +0.6
KHC                               e            05 02 05.9
DANN  Dangsing         30.82  88  eP    P      05 02 04.1 +0.4
      comp=Z,34nm,0.8s
KOLN  Koldanda         30.85  90  eP    P      05 02 03.8 -0.2
      comp=Z,11nm,1.0s
WTTA  Wattenberg       31.33 309  i P   P      05 02 07.6 -0.3
      comp=Z,3.3nm,0.6s
SQTA  Sankt Quirin     31.60 308  i P   P      05 02 10.1 -0.1
      comp=Z,6.8nm,0.5s
MOTA  Moosalm          31.70 309  i P   P      05 02 10.7 -0.5
      comp=Z,3.4nm,0.6s
CLL   Collm            31.76 317  eP    P      05 02 08.0 -3.5
CLL   Collm            31.76 317  eP    P      05 02 08.0 -3.5
FETA  Feichten         31.87 308  i P   P      05 02 12.8 +0.1
      comp=Z,2.4nm,0.6s
RETA  Reutte           31.96 309  i P   P      05 02 12.9 -0.5
      comp=Z,1.8nm,0.6s
DMN   Daman            32.17  89  eP    P      05 02 15.8 +0.2
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      comp=Z,19nm,0.8s
KEST  Kesra            32.19 286  eP    P      05 02 16.6 +1.1
      comp=Z,8.2nm,1.3s
KEST  Kesra            32.19 286   P    P      05 02 16.6 +1.1
      comp=Z,2.0nm,0.6s,baz=16,slow=6.7,SNR=5.5
FIA0  FINESS Array S   32.22 340  eP    P      05 02 15.2 -0.2
FIA0  FINESS Array S   32.22 340  eP    P      05 02 15.2 -0.2
FIA1  FINESS Array S   32.22 340  eP    P      05 02 15.1 -0.3
FINES FINESS Array B   32.22 340   P    P      05 02 15.2 -0.2
      comp=Z,6.3nm,0.5s,baz=147,slow=8.8,SNR=48
FINES                             LR    LR     05 16 42.3
      comp=Z,156nm,18.3s,baz=182,slow=39
PKIN  Phulchoki        32.43  89  eP    P      05 02 17.8 -0.1
      comp=Z,14nm,0.7s
DAVA  Damuels          32.50 308  i P   P      05 02 17.9 -0.3
      comp=Z,5.2nm,0.5s
GUN   Gumba            32.73  88  eP    P      05 02 20.7  0.0
      comp=Z,29nm,0.9s
JIRN  Jiri             33.07  88  eP    P      05 02 23.8 +0.1
      comp=Z,32nm,0.7s
ZAA0  Zalesovo Array   33.57  40  eP    P      05 02 27.4 +0.2
      comp=Z,5.2nm,1.2s
ZALV  Zalesovo Beam    33.57  40  eP    P      05 02 26.9 -0.3
ZALV  Zalesovo Beam    33.57  40  i P   P      05 02 30.2 +3.0
ZALV                              pmax  pmax
      comp=Z,2.0nm,0.4s
ZALV  Zalesovo Beam    33.57  40   P    P      05 02 26.7 -0.5
      comp=Z,2.4nm,0.7s,baz=252,slow=7.9,SNR=7.1
ZALV                              LR    LR     05 17 52.5
      comp=Z,88nm,18.7s,baz=263,slow=40
ZAA1  Zalesovo Array   33.57  40  eP    P      05 02 26.7 -0.5
DGZ   Jazzator, Alta   33.63  48  i P   P      05 02 29.2 +1.2
DGZ                               pmax  pmax
      comp=Z,2.0nm,0.7s
SENIN Lac Senin/Sane   34.06 306  eP    P      05 02 32.3 +0.4
      comp=Z,8.2nm,1.0s
BNI   Bardonecchia     34.31 303  eP    P      05 02 33.6 -0.4
      comp=Z,18nm,0.6s
BNI   Bardonecchia     34.31 303  eP    P      05 02 33.6 -0.4
BNI                               pmax  pmax
      comp=Z,18nm,0.6s
NB2   NORSAR Subarra   37.20 331   P    P      05 02 57.4 -1.1
      comp=Z,1.6nm,0.6s,baz=124,slow=8.6
NB200 NORSAR Array S   37.20 331  eP    P      05 02 57.8 -0.7
NOA   NORSAR Array B   37.20 331   P    P      05 02 57.8 -0.7
      comp=Z,1.8nm,0.6s,baz=124,slow=8.5,SNR=14
NOA                               LR    LR     05 19 36.6
      comp=Z,191nm,18.6s,baz=125,slow=38
ARA0  ARCESS Array S   39.12 348  eP    P      05 03 14.0 -0.4
ARA0                              ePcP  PcP    05 05 23.2 -0.6
ARCES ARCESS Array B   39.12 348   P    P      05 03 14.0 -0.4
      comp=Z,4.4nm,0.7s,baz=141,slow=7.8,SNR=25
ARCES                             PcP   PcP    05 05 23.2 -0.6
      comp=Z,3.1nm,0.8s,baz=142,slow=4.6,SNR=3.3
KNGR  Kungurtug, Tuv   40.16  48⇓iP    P      05 03 24.6 +1.1
GTA   Gaotai           41.80  66  eP    P      05 03 38.1 +0.9
GTA                               pP    sP     05 03 47.6 +3.2
GTA                               sP    pP     05 03 51.1 +8.7
GTA                               pmax  pmax
      comp=Z,6.0nm,0.7s
EKA   Eskdalemuir Ar   42.18 318   P    P      05 03 39.0 -0.9
EKA                               pmax  pmax
      comp=Z,2.0nm,0.5s
ESDC  Sonseca Array    42.24 295   P    P      05 03 41.4 +0.7
      comp=Z,0.7nm,0.5s,baz=69,slow=7.8,SNR=7.1
ESDC                              PcP   PcP    05 05 34.7 +0.2
      comp=Z,0.4nm,0.5s,baz=56,slow=3.9,SNR=3.8
MOY   Mondy            42.46  47  eP    P      05 03 43.7 +1.3
NRIK  Noril'sk         42.84  19   P    P      05 03 44.7 -0.4
      comp=Z,4.2nm,0.4s,baz=207,slow=6.8,SNR=3.7
NRIK                              LR    LR     05 27 43.4
      comp=Z,47nm,18.9s,baz=206,slow=45
PBRG  Braganca         44.09 298  eP    P      05 03 56.1 +0.5
      comp=Z,20nm,2.1s
PCBR  Castelo Branco   44.90 296  eP    P      05 04 03.0 +0.9
      comp=Z,19nm,1.8s
POLO  Lamas de Olo     44.92 298  eP    P      05 04 03.3 +1.0
      comp=Z,14nm,1.4s
PCAB  Cabril           45.05 298  eP    P      05 04 05.0 +1.7
PGAV  Gavieira, Arco   45.20 299  eP    P      05 04 05.6 +1.1
      comp=Z,50nm,1.8s
PBEJ  Beja             45.51 293  eP    P      05 04 12.7 +5.7
      comp=Z,30nm,1.9s
PTOM  Tomar            45.65 296  eP    P      05 04 09.3 +1.3
      comp=Z,32nm,1.5s
SONA0 Songino Array    45.86  53  eP    P      05 04 09.4 -0.4
SONA0                             ePcP  PcP    05 05 46.0 -0.8
SONM  Songino Array    45.86  53   P    P      05 04 09.4 -0.4
      comp=Z,0.6nm,0.6s,baz=291,slow=9.0,SNR=5.7
SONM                              PcP   PcP    05 05 46.0 -0.8
      comp=Z,0.4nm,0.7s,baz=239,slow=4.7,SNR=4.1
SONM                              LR    LR     05 26 20.8
      comp=Z,59nm,19.8s,baz=28,slow=40
ULN   Ulaanbaatar      46.30  53  eP    P      05 04 13.2  0.0
      comp=Z,4.5nm,1.0s
ULN   Ulaanbaatar      46.30  53  eP    P      05 04 13.2  0.0
ULN                               pmax  pmax
      comp=Z,4.0nm,1.0s
TOA0  Torodi Ar. Sit   46.63 257  eP    P      05 04 17.1 +1.1
TOA1  Torodi Ar. Sit   46.63 257  eP    P      05 04 16.4 +0.4
TORD  Torodi Ar. Bea   46.63 257   P    P      05 04 16.4 +0.4
      comp=Z,1.1nm,0.6s,baz=67,slow=6.7,SNR=12
TORD                              LR    LR     05 26 35.3
      comp=Z,90nm,20.3s,baz=25,slow=40
CM31  Chiang Mai Arr   47.46  94  eP    P      05 04 22.0 -0.5
      comp=Z,9.2nm,0.6s
CMAR  Chiang Mai Arr   47.46  94   P    P      05 04 22.0 -0.4
CMAR  Chiang Mai Arr   47.46  94   P    P      05 04 22.0 -0.4
      comp=Z,1.4nm,0.4s,baz=289,slow=4.4,SNR=4.2
CMAR                              LR    LR     05 28 30.1
      comp=Z,44nm,18.1s,baz=195,slow=41
XAN   Xi'an            50.06  71   P    P      05 04 42.0 -0.3
XAN                               pP    sP     05 04 52.8 +3.2
XAN                               pmax  pmax
      comp=Z,6.0nm,0.8s
BOD   Bodaibo          50.32  39  eP    P      05 04 42.7 -1.2
BOD                               pmax  pmax
      comp=Z,5.0nm,1.9s
HHC   Hu-ho-hao-te     50.44  62  eP    P      05 04 46.8 +1.6
HHC                               pmax  pmax
      comp=Z,7.0nm,0.9s
HHC                               pmax  pmax
      comp=Z,55nm,4.1s
SURA  Surathani        52.78 104   P    P      05 05 02.0 -0.8
      comp=Z,1µm,1.1s
DAG   Danmarks Havn    53.26 345  i P   P      05 05 04.6 -0.9
      comp=Z,3.8nm,0.5s
DAG   Danmarks Havn    53.26 345  i P   P      05 05 04.6 -0.9
DAG                               pmax  pmax
      comp=Z,3.0nm,0.5s
DBIC  Dimbokro         55.58 254  eP    P      05 05 25.1 +1.8
      comp=Z,12nm,1.3s
DBIC  Dimbokro         55.58 254  eP    P      05 05 25.1 +1.8
DBIC                              pmax  pmax
      comp=Z,13nm,1.3s
DBIC  Dimbokro         55.58 254   P    P      05 05 25.1 +1.8
      comp=Z,2.2nm,0.7s,baz=36,slow=6.1,SNR=5.0
DBIC                              LR    LR     05 32 07.2
      comp=Z,148nm,18.1s,baz=32,slow=39
SUMG  Summit           58.26 339  eP    P      05 05 42.1 +0.2
      comp=Z,7.8nm,0.8s
SUMG  Summit           58.26 339  i P   P      05 05 41.1 -0.8
SUMG  Summit           58.26 339  eP    P      05 05 42.1 +0.2
SUMG                              pmax  pmax
      comp=Z,8.0nm,0.8s
KS15  Wonju Array Si   63.55  61  eP    P      05 06 17.3 -0.7
      comp=Z,17nm,1.0s
KSAR  Wonju Array Be   63.55  61   P    P      05 06 17.3 -0.7
KSAR  Wonju Array Be   63.55  61   P    P      05 06 17.3 -0.7
KSRS  Korea Array      63.57  61   P    P      05 06 17.3 -0.8
      comp=Z,2.3nm,0.6s,baz=286,slow=7.4,SNR=7.4
KSRS                              LR    LR     05 38 22.2
      comp=Z,60nm,18.8s,baz=40,slow=40
USRK  Ussuriysk Ar.    63.98  53   P    P      05 06 19.3 -1.4
      comp=Z,1.4nm,0.7s,baz=298,slow=4.1,SNR=4.4
BOSA  Boshof           64.69 202   P    P      05 06 27.5 +2.0
      comp=Z,2.9nm,0.7s,baz=359,slow=7.3,SNR=5.3
BOSA                              LR    LR     05 36 21.8
      comp=Z,240nm,18.1s,baz=32,slow=38
SEY   Seymchan         67.50  29⇓iP    P      05 06 43.8 +0.7
MA2   Magadan          68.38  32⇑eP    P      05 06 50.9 +2.3
MA2                               pmax  pmax
      comp=Z,5.0nm,1.0s
BILL  Bilibino         69.65  21  eP    P      05 06 56.9 +0.5
      comp=Z,4.7nm,0.8s
BILL  Bilibino         69.65  21  eP    P      05 06 55.5 -0.9
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BILL				*e*		05 07 18.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	69.80	47⇑	*e*P	P	05 06 57.7	0.0
RES	**Resolute Bay**	70.27	350	*e*P	P	05 07 00.5	+0.4
	comp=Z,1.6nm,1.0s						
RES	**Resolute Bay**	70.27	350	*e*P	P	05 07 00.5	+0.4
RES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RES	**Resolute Bay**	70.27	350	P	P	05 07 00.5	+0.4
	comp=Z,0.6nm,0.6s,baz=45,slow=7.1,SNR=4.1						
MJAR	**Matsushiro Arr**	71.44	58	LR	LR	05 40 49.5	
	comp=Z,52nm,18.5s,baz=80,slow=38						
TOLK	**Toolik Lake Re**	78.19	7	*e*P	P	05 07 47.3	+0.9
	comp=Z,12nm,0.8s						
COLD	**Coldfoot**	79.49	7	*e*P	P	05 07 54.1	+0.5
	comp=Z,5.5nm,1.2s						
IM3	**Indian Mountai**	80.27	9	*e*P	P	05 07 57.7	-0.1
MLY	**Manley**	81.55	8	*e*P	P	05 08 05.6	+0.8
	comp=Z,4.6nm,1.0s						
COLA	**College**	82.02	7⇑	*e*P	P	05 08 06.8	-0.3
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IL1	**Eielson Array**	82.22	6	*e*P	P	05 08 07.3	-0.8
ILAR	**Eielson Array**	82.22	6	P	P	05 08 07.8	-0.4
	comp=Z,1.1nm,0.8s,baz=320,slow=3.8,SNR=15						
ILB	**Eielson Array**	82.22	6	*e*P	P	05 08 07.8	-0.4
	comp=Z,1.4nm,0.8s						
CAST	**Castle Rocks**	82.94	9	*e*P	P	05 08 12.9	+0.9
	comp=Z,6.3nm,0.9s						
SCRK	**Sand Creek**	83.25	5	*e*P	P	05 08 14.3	+0.6
	comp=Z,5.0nm,0.8s						
YKA	**Yellowknife Ar**	84.22	352	P	P	05 08 18.0	-0.5
	comp=Z,1.3nm,0.8s,baz=14,slow=5.4,SNR=21						
YKB5	**Yellowknife Ar**	84.22	352	*e*P	P	05 08 18.8	+0.3
SUA	**Susitna One**	84.99	9	*e*P	P	05 08 23.0	+0.4
	comp=Z,7.8nm,0.8s						
DLBC	**Dease Lake**	89.29	359	P	P	05 08 44.2	+0.8
	comp=Z,2.3nm,0.9s,baz=329,slow=9.9,SNR=3.7						
WR1	**Warramunga Arr**	97.35	109	*e*P	P	05 09 21.2	+0.1
	comp=Z,3.3nm,1.4s						
WRA	**Warramunga Arr**	97.35	109	P	P	05 09 21.2	+0.1
	comp=Z,0.4nm,0.8s,baz=311,slow=4.0,SNR=4.6						
WRA				PKKPbc	PKKPbc	05 25 58.6	0.0
	comp=Z,0.2nm,0.8s,baz=122,slow=2.4,SNR=4.6						
AS31	**Alice Springs**	98.95	112	*e*P	P	05 09 27.3	-1.0
	comp=Z,0.8nm,1.0s						
ASAR	**Alice Springs**	98.95	112	P	P	05 09 27.3	-0.9
	comp=Z,0.2nm,0.6s,baz=316,slow=3.9,SNR=3.9						

*IDC **19** 04:59:42.4±0.7, 48˚.38N×83˚.29W, h0^{km}, mb3.2/4, mb1 3.8/9, mb1mx3.5/53, mbtmp3.6/9, ML3.1/4, Error ellipse: s-maj=12.5km s-min=9.5km az=31.0*
*NEIC **19** 04:59:44.0±0.0, 48˚.43N×83˚.30W, h8^{km}, mb4.1/1, MN3.8(OTT), After OTT.*
*OTT **19** 04:59:44.2±0.2, 48˚.43N×83˚.30W, h8^{km}, MN3.8/12, 66km northeast from Chapleau, On*
*ANF **19** 04:59:45.8±0.7, 48˚.27N×83˚.27W, h20^{km}±6^{km}, ML4.1/53*
ISC 19 04:59:44.3±1.5, **48˚.44N**±0˚.03×**83˚.27W**±0˚.03, **h31^{km}**±13^{km}, **n176, σ1^{s}70**/217, **mb3.3**/4, **Ontario**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPO	**Kapuskasing**	1.13	26	PG	Pn	05 00 04.6	+0.6
KAPO				SG	Sb	05 00 20.0	+0.3
KAPO				Trac		05 00 21.7	
	comp=Z,408nm,0.1s						
D47A	**Chapleau**	1.39	175	P	Pn	05 00 06.9	-0.7
	baz=354,SNR=806						
D47A				S	Sn	05 00 23.2	-1.6
	baz=354						
D48A	**Paudash Townsh**	1.60	142	P	Pn	05 00 11.0	+0.5
	baz=321						
D48A				S	Sn	05 00 30.3	+0.2
	baz=321						
D46A	**Sault St. Mari**	1.63	199	P	Pn	05 00 11.0	+0.1
	baz=18,SNR=345						
D46A				S	Sn	05 00 29.9	-0.9
	baz=18						
D49A	**Beulah Townshi**	1.73	131	P	Pn	05 00 13.6	+1.2
	baz=312,SNR=114						
D49A				S	Sb	05 00 34.9	-2.0
	baz=312						
E47A	**Iron Bridge**	1.98	180	P	Pn	05 00 16.4	+0.7
	baz=359,SNR=170						
E47A				Sb	Sn	05 00 40.5	+1.0
	baz=359						
PNPO	**Pukaskwa Natio**	2.01	276	PN	Pn	05 00 18.0	+1.8
PNPO				SN	Sn	05 00 42.5	+2.2
PNPO				Trac		05 00 45.6	
	comp=Z,152nm,0.1s						
E48A	**Lockeyer**	2.09	159	P	Pn	05 00 18.2	+1.0
	baz=339						
E48A				Sb	Sb	05 00 44.7	-2.5
	baz=339						
E46A	**Sault Ste Mari**	2.19	199	P	Pn	05 00 19.4	+0.9
	baz=18,SNR=182						
E46A				Sb	Sn	05 00 46.8	+2.2
	baz=18						
KILO	**Kirkland Lake**	2.36	87	PN	Pn	05 00 23.3	+2.4
KILO				Trac		05 00 58.4	
	comp=Z,182nm,0.2s						
E45A	**Wooded Hills,**	2.45	213	P	Pn	05 00 23.7	+1.5
	baz=31,SNR=95						
E45A				Sb	Sb	05 00 54.9	-2.7
	baz=31						
E44A	**Grand Marais A**	2.56	226	*e*Pn	Pn	05 00 26.1	+2.5
E44A				*e*Sn	Sn	05 00 52.3	-1.4
E44A	**Grand Marais A**	2.56	226	P	Pn	05 00 25.8	+2.1
	baz=44,SNR=176						
E50A	**Wahnapitae**	2.65	139	P	Pn	05 00 26.6	+1.8
	baz=320,SNR=81						
E50A				S	Sn	05 00 56.8	+1.0
	baz=320						
F48A	**Evansville**	2.65	170	P	Pn	05 00 26.5	+1.6
	baz=350,SNR=57						
F48A				Sb	Sb	05 00 59.1	-4.0
	baz=350						
GTO	**Geraldton**	2.76	300	PN	Pn	05 00 28.4	+2.0
GTO				SN	Sn	05 00 59.9	+1.3
GTO				Trac		05 01 08.8	
	comp=Z,175nm,0.2s						
MALO	**McAlpine Lake**	2.79	54	PN	Pn	05 00 30.0	+3.2
MALO				SG	Sb	05 01 07.8	+0.5
MALO				Trac		05 01 17.4	
	comp=Z,89nm,0.1s						
F49A	**Sandfield**	2.80	162	P	Pn	05 00 28.1	+1.1
	baz=342,SNR=135						
F46A	**Macinaw City C**	2.85	201	P	Pn	05 00 28.1	+0.4
	baz=20,SNR=19						
D51A	**Lot 18 Range I**	2.95	116	P	Pn	05 00 30.6	+1.6
	baz=298,SNR=35						
E51A	**G1948 Merrick**	3.19	125	P	Pn	05 00 33.9	+1.6
	baz=308,SNR=66						
E51A				S	Sn	05 01 11.3	+2.1
	baz=308						
E43A	**Lone Tree Farm**	3.27	232	*e*Pn	Pn	05 00 34.8	+1.5
E43A				*e*Sn	Sn	05 01 11.8	+0.6
E43A	**Lone Tree Farm**	3.27	232	P	Pn	05 00 34.6	+1.3
	baz=49						
E43A				S	Sn	05 01 12.7	+1.6
	baz=49						
F44A	**Big Bay de Noc**	3.27	222	P	Pn	05 00 34.6	+1.2
	baz=40,SNR=90						
F44A				S	Sn	05 01 12.2	+0.9
	baz=40						
G47A	**Hillman**	3.29	187	P	Pn	05 00 34.4	+0.7
	baz=6.4,SNR=60						
EEO	**Eldee**	3.36	121	PN	Pn	05 00 36.5	+1.8
EEO				SN	Sn	05 01 15.4	+1.9
EEO				LG	Lg	05 01 24.5	
EEO				Trac		05 01 29.3	
	comp=Z,63nm,0.2s						
F51A	**Arnstein**	3.39	136	P	Pn	05 00 36.8	+1.7
	baz=318,SNR=85						
F51A				S	Sn	05 01 16.0	+1.7
	baz=318						
TOBO	**Tobermory, Bru**	3.43	159	P	Pn	05 00 36.8	+1.2
	baz=340						
D52A	**ZEK Kipawa Sen**	3.59	112	P	Pn	05 00 39.0	+1.2
	baz=295,SNR=73						
D52A				S	Sn	05 01 20.8	+1.7
	baz=295						
KLBO	**Killbear Provi**	3.72	145	P	Pn	05 00 41.4	+1.7
	baz=326,SNR=46						
F43A	**Flat Rock, Esc**	3.73	227	P	Pn	05 00 41.0	+1.3
	baz=44						
GLMI	**Grayling**	3.73	195	*e*Pn	Pn	05 00 40.0	+0.2
GLMI				*e*Sn	Sn	05 01 12.4	-10
GLMI	**Grayling**	3.73	195	P	Pn	05 00 40.1	+0.3
	baz=14						
H48A	**Harrisville**	3.74	181	P	Pn	05 00 40.3	+0.5
	baz=0.2,SNR=15						
E42A	**Champion**	3.74	239	P	Pn	05 00 41.1	+1.2
	baz=56						
F52A	**Sundridge**	3.77	133	P	Pn	05 00 42.0	+1.7
	baz=315						
G45A	**Suttons Bay**	3.77	207	P	Pn	05 00 41.5	+1.2
	baz=25,SNR=42						
E52A	**Mattawa**	3.80	123	P	Pn	05 00 42.0	+1.3
	baz=306,SNR=72						
E52A				S	Sn	05 01 25.6	+1.3
	baz=306						
D41A	**Chassel**	3.83	251	*e*Pn	Pn	05 00 42.8	+1.6
D41A				*e*Sn	Sn	05 01 28.4	+3.3
D41A	**Chassel**	3.83	251	P	Pn	05 00 42.9	+1.8
	baz=67						
D41A				S	Sn	05 01 28.0	+2.9
	baz=67						
H47A	**Mio**	3.89	190	P	Pn	05 00 42.6	+0.6
	baz=8.9,SNR=12						
VLDQ	**Val d'Or**	3.90	93	*e*Pn	Pn	05 00 41.8	-0.2
VLDQ				*e*Sn	Sn	05 01 22.7	-3.9
VLDQ	**Val d'Or**	3.90	93	Trac		05 01 38.8	
	comp=Z,140nm,0.4s						
MATQ	**Matagami**	3.93	68	P	Pn	05 00 44.4	+1.9
	baz=252						
C40A	**Isle Royale Na**	3.97	265	*e*Pn	Pn	05 00 46.2	+3.1
C40A				*e*Sn	Sn	05 01 30.3	+1.8
C40A	**Isle Royale Na**	3.97	265	P	Pn	05 00 45.6	+2.6
	baz=80						
C40A				S	Sn	05 01 32.6	+4.0
	baz=80						
D53A	**Lac Vacive, Po**	3.99	108	P	Pn	05 00 44.7	+1.4
	baz=292						
D53A				S	Sn	05 01 29.7	+0.7
	baz=292						
BUKO	**Buck Lake**	4.00	137	P	Pn	05 00 44.8	+1.3
	baz=320,SNR=41						
TBO	**Thunder Bay**	4.09	275	PN	Pn	05 00 46.3	+1.7
TBO				Trac		05 01 51.4	
	comp=Z,56nm,0.2s						
BMRO	**Meriville Lake**	4.09	159	P	Pn	05 00 45.3	+0.6
	baz=340						
H46A	**Fife Lake**	4.12	200	P	Pn	05 00 45.9	+0.8
	baz=18,SNR=12						
LSQQ	**Lebel-sur-Quev**	4.21	79	P	Pn	05 00 48.5	+2.2
	baz=264						
H45A	**Beulah**	4.27	208	P	Pn	05 00 48.6	+1.4
	baz=25						
H45A				S	Sn	05 01 36.0	+0.1
	baz=25						
F42A	**Maple Grove Fa**	4.27	233	S	Sn	05 01 36.3	+0.4
	baz=49						
E53A	**Dumoine, Ponti**	4.33	116	P	Pn	05 00 49.6	+1.7
	baz=300,SNR=54						
ALGO	**Algonquin Park**	4.34	123	P	Pn	05 00 49.8	+1.7
	baz=306,SNR=74						
ALGO				S	Sn	05 01 39.2	+1.7
	baz=306						
E41A	**Kenton**	4.34	245	P	Pn	05 00 49.3	+1.2
	baz=61						
E41A				S	Sn	05 01 38.2	+0.6
	baz=61						
G43A	**Wallace**	4.39	225	*e*Pn	Pn	05 00 50.1	+1.2
G43A				*e*Sn	Sn	05 01 36.5	-2.4
G43A	**Wallace**	4.39	225	P	Pn	05 00 49.5	+0.6
	baz=42						
G43A				S	Sn	05 01 38.4	-0.6
	baz=42						
VIMO	**Victor Mine**	4.40	356	PN	Pn	05 00 51.3	+2.4
VIMO				Trac		05 02 01.6	
	comp=Z,54nm,0.2s						
I47A	**Gladwin**	4.50	192	P	Pn	05 00 50.5	+0.1
	baz=10						
I49A	**Point Hope**	4.51	176	P	Pn	05 00 50.9	+0.5
	baz=356						
BASO	**Ashfield**	4.56	165	P	Pn	05 00 51.6	+0.5
	baz=346						
E54A	**Lac Daplat, Po**	4.59	114	P	Pn	05 00 52.9	+1.4
	baz=298,SNR=53						
G53A	**Haliburton**	4.60	134	P	Pn	05 00 53.1	+1.4
	baz=317,SNR=26						
COWI	**Conover**	4.63	242	*e*Pn	Pn	05 00 54.5	+2.4
COWI				*e*Sn	Sn	05 01 45.9	+1.1
D54A	**Lac Fusel, La**	4.64	104	P	Pn	05 00 53.4	+1.2
	baz=288						
SADO	**Sadowa**	4.64	141	*e*Pn	Pn	05 00 53.3	+1.0
SADO				*e*Sn	Sn	05 01 41.9	-3.2
SADO	**Sadowa**	4.64	141	PN	Pn	05 00 53.5	+1.3
SADO				Trac		05 02 03.5	
	comp=Z,97nm,0.6s						
SADO	**Sadowa**	4.64	141	Pn	Pn	05 00 53.1	+0.9
	1.3nm,0.3s,baz=308,slow=4.9,SNR=29						
SADO				Sn	Sn	05 01 45.0	-0.1
	2.8nm,0.3s,baz=6.8,slow=2.9,SNR=4.7						
SADO				Lg	Lg	05 02 02.6	
	14nm,0.3s,baz=264,slow=18,SNR=21						
CRLO	**Chalk River**	4.67	119	PN	Pn	05 00 54.4	+1.7
CRLO				Trac		05 02 07.8	
	comp=Z,50nm,0.2s						
I46A	**Reed City**	4.75	199	P	Pn	05 00 53.7	0.0
	baz=18						
G42A	**Mountain**	4.77	230	*e*Pn	Pn	05 00 54.4	+0.4
G42A				*e*Sn	Sn	05 01 48.1	-0.1
G42A	**Mountain**	4.77	230	P	Pn	05 00 55.3	+1.2
	baz=46						
F41A	**Three Lakes**	4.81	238	*e*Pn	Pn	05 00 56.5	+1.8
F41A	**Three Lakes**	4.81	238	P	Pn	05 00 55.9	+1.2
	baz=54						
I51A	**Listowel**	4.89	161	P	Pn	05 00 56.9	+1.3
	baz=342						
PEMO	**Pembroke**	4.95	122	P	Pn	05 00 58.2	+1.7
	baz=306,SNR=72						
BANO	**Bancroft**	5.01	131	P	Pn	05 00 58.6	+1.2
	baz=315,SNR=51						
H43A	**Windswept, Lux**	5.04	220	*e*Pn	Pn	05 00 59.0	+1.2
H43A				*e*Sn	Sn	05 01 53.1	-1.8
H43A	**Windswept, Lux**	5.04	220	P	Pn	05 00 58.8	+1.0
	baz=36						
J49A	**Marlette**	5.08	179	P	Pn	05 00 58.3	0.0
	baz=359						
G41A	**Antigo**	5.18	234	P	Pn	05 01 00.3	+0.6
	baz=49						
F40A	**Park Falls**	5.31	244	P	Pn	05 01 02.6	+1.1
	baz=59						
J47A	**Sunmer**	5.31	192	P	Pn	05 01 01.6	+0.2
	baz=11						
ACTO	**Acton**	5.32	154	P	Pn	05 01 02.9	+1.3
	baz=336						
PKRO	**Pickering**	5.34	145	P	Pn	05 01 03.1	+1.3
	baz=328						
GRQ	**Grand Remous**	5.34	107	Trac		05 02 34.2	
	comp=Z,38nm,0.3s						
E39A	**Mellen**	5.36	250	P	Pn	05 01 03.5	+1.4
	baz=65						
F55A	**Otter Lake**	5.39	116	P	Pn	05 01 04.0	+1.5
	baz=301,SNR=16						
PLVO	**Plevna**	5.44	126	*e*Pn	Pn	05 01 04.4	+1.2
PLVO				*e*Sn	Sn	05 02 04.7	-0.2
PLVO	**Plevna**	5.44	126	P	Pn	05 01 04.5	+1.2
	baz=310,SNR=37						
G55A	**Calabogie**	5.50	123	P	Pn	05 01 05.3	+1.1
	baz=307,SNR=23						
EYMN	**Ely**	5.53	268	*e*Pn	Pn	05 01 05.3	+0.8
EYMN				*e*Sn	Sn	05 02 07.0	+0.1
EYMN	**Ely**	5.53	268	P	Pn	05 01 05.4	+1.0
	baz=82						
DELO	**Deloro Mine**	5.53	133	P	Pn	05 01 05.0	+0.5
	baz=317,SNR=15						
WLVO	**Wesleyville**	5.64	141	P	Pn	05 01 07.0	+1.0
	baz=325						
K49A	**Clarkson**	5.66	181	P	Pn	05 01 06.2	0.0
	baz=1.0						
I43A	**Langenfeld Bro**	5.67	218	P	Pn	05 01 07.0	+0.6
	baz=35						
G40A	**Rib Lake**	5.71	239	*e*Pn	Pn	05 01 08.3	+1.3
G40A				*e*Sn	Sn	05 02 08.9	-2.7
G40A	**Rib Lake**	5.71	239	P	Pn	05 01 07.9	+0.9
	baz=54						
H55A	**Tweed**	5.72	131	P	Pn	05 01 07.7	+0.6
	baz=315,SNR=21						
I55A	**Frankford**	5.72	135	P	Pn	05 01 07.9	+0.7
	baz=319						
F39A	**Loretta**	5.79	247	P	Pn	05 01 10.1	+2.0
	baz=62						
H41A	**Junction City**	5.83	231	*e*Pn	Pn	05 01 08.2	-0.4
H41A				*e*Sn	Sn	05 02 13.7	-0.7
H41A	**Junction City**	5.83	231	P	Pn	05 01 08.4	-0.2
	baz=47						
K47A	**Vermontville**	5.89	193	P	Pn	05 01 08.9	-0.6
	baz=11						
I42A	**Draeger Farm,**	6.00	223	P	Pn	05 01 11.2	+0.2
	baz=39						
CHGQ	**Chibougamau**	6.01	72	P	Pn	05 01 12.2	+1.1
	baz=259						
ORIO	**Orleans, Innes**	6.09	116	PN	Pn	05 01 12.9	+0.8
ORIO	**Orleans, Innes**	6.09	116	P	Pn	05 01 13.0	+0.8
	baz=302						
AAM	**Ann Arbor**	6.14	183	P	Pn	05 01 12.8	0.0
	baz=2.2						
H56A	**Elgin**	6.18	126	P	Pn	05 01 14.5	+1.1
	baz=311,SNR=11						
J43A	**Natural Harves**	6.20	217	P	Pn	05 01 14.5	+0.7
	baz=33						
MEDO	**Medina**	6.25	146	P	Pn	05 01 15.6	+1.2
	baz=329						
TRQ	**Mont Tremblant**	6.32	107	*e*Pn	Pn	05 01 15.9	+0.5
TRQ				*e*Sn	Sn	05 02 25.1	-1.4
ALFO	**Alfred**	6.38	113	PN	Pn	05 01 16.8	+0.7
ALFO	**Alfred**	6.38	113	P	Pn	05 01 17.1	+1.0
	baz=299						
L48A	**N Adams**	6.54	188	P	Pn	05 01 17.5	-0.9
	baz=6.6						
J42A	**Columbus**	6.55	221	P	Pn	05 01 19.6	+1.1
	baz=36						
H39A	**Augusta**	6.68	239	P	Pn	05 01 21.5	+1.2
	baz=53						
ERPA	**Erie**	6.73	159	*e*Pn	Pn	05 01 20.7	-0.2
ERPA				*e*Sb	Sb	05 03 06.7	+6.4
G38A	**Ridgeland**	6.74	244	P	Pn	05 01 21.8	+0.7
	baz=58						
K43A	**Burlington**	6.74	214	P	Pn	05 01 21.5	+0.3
	baz=30						
K55A	**Perry**	6.77	146	P	Pn	05 01 22.0	+0.4
	baz=329						
I40A	**Norwalk**	6.83	231	P	Pn	05 01 24.1	+1.7
	baz=46						
J41A	**Loganville**	6.92	225	P	Pn	05 01 24.2	+0.7
	baz=40						
M52A	**Chesterland**	7.03	168	P	Pn	05 01 25.0	0.0
	baz=349						
K42A	**Prairie Point,**	7.08	219	P	Pn	05 01 26.5	+0.7
	baz=35						
LONY	**Lake Ozonia**	7.10	119	P	Pn	05 01 26.7	+0.6
	baz=305,SNR=8.2						
L55A	**Hinsdale**	7.12	150	P	Pn	05 01 26.6	+0.3
	baz=333						
ALLY	**Alegheny Colle**	7.14	161	*e*Sb	Sb	05 03 19.7	+7.6
J40A	**Soldiers Grove**	7.25	229	P	Pn	05 01 29.0	+0.9
	baz=43						
H38A	**Maiden Rock**	7.26	242	P	Pn	05 01 29.0	+0.7
	baz=56						
I39A	**Houston**	7.34	234	*e*Pn	Pn	05 01 30.3	+1.0
I39A				*e*Sn	Sn	05 02 47.9	-3.6
I39A	**Houston**	7.34	234	P	Pn	05 01 29.9	+0.6
	baz=48						
JFWS	**Jewell Farm**	7.37	224	*e*Pn	Pn	05 01 30.7	+0.9
JFWS				*e*Sn	Sn	05 02 52.6	+0.3
JFWS	**Jewell Farm**	7.37	224	P	Pn	05 01 30.5	+0.7
	baz=39						
N49A	**Columbus Grove**	7.54	185	P	Pn	05 01 31.6	-0.5
	baz=4.4						
K41A	**Shullsburg**	7.64	223	P	Pn	05 01 34.1	+0.7
	baz=38						
M55A	**Ridgway**	7.66	154	P	Pn	05 01 34.3	+0.5
	baz=337						
J39A	**Decorah**	7.79	232	P	Pn	05 01 36.1	+0.6
	baz=46						
N54A	**Moraine State**	7.83	161	P	Pn	05 01 36.0	-0.1
	baz=344						
L42A	**Oliver, Polo**	7.86	217	*e*Pn	Pn	05 01 36.5	+0.1
BINY	**Binghamton**	8.07	138	P	Pn	05 01 39.8	+0.4
	baz=323						
N55A	**Marion Center**	8.24	157	P	Pn	05 01 41.8	+0.1
	baz=340						
O53A	**New Philadelph**	8.32	169	P	Pn	05 01 42.3	-0.4
	baz=350						
VT1	**Waterbury**	8.35	116	*e*Pn	Pn	05 01 43.6	+0.5
VT1				*e*Sn	Sn	05 03 16.4	+0.2
O52A	**Adamsville**	8.38	172	P	Pn	05 01 42.6	-1.0
	baz=353						
ULM	**Lac du Bonnet**	8.43	287	*e*Pn	Pn	05 01 44.1	-0.2
ULM				*e*Sn	Sn	05 03 14.5	-3.8
ULM	**Lac du Bonnet**	8.43	287	Pn	Pn	05 01 43.5	-0.7
	1.5nm,0.3s,baz=86,slow=14,SNR=25						
ULM				Sn	Sn	05 03 11.7	-6.6
	2.1nm,0.3s,baz=38,slow=12,SNR=6.8						
ULM				Lg	Lg	05 03 59.7	
	4.4nm,0.3s,baz=6.9,slow=21,SNR=8.9						
L40A	**Anamosa**	8.49	224	P	Pn	05 01 45.8	+0.7
	baz=38						
MCWV	**Mont Chateau**	9.11	163	*e*Pn	Pn	05 01 53.0	-0.7
MCWV				*e*Sn	Sn	05 03 13.9	-21
P55A	**Reedsville**	9.26	163	P	Pn	05 01 54.7	-1.0
	baz=346						
Q52A	**Bidwell**	9.50	175	P	Pn	05 01 57.6	-1.3
	baz=356						
Q49A	**Aurora**	9.50	188	P	Pn	05 01 57.0	-2.0
	baz=6.4						
R53A	**Hurricane**	10.15	174	P	Pn	05 02 06.0	-1.8
	baz=355						
R48A	**Northridge Ran**	10.21	192	P	Pn	05 02 06.8	-1.9
	baz=9.7						
ECSD	**EROS Data Cent**	10.39	248	P	Pn	05 02 11.7	+0.5
	baz=58						
S49A	**Springfield**	10.75	189	P	Pn	05 02 14.5	-1.6
	baz=7.1						
S48A	**Wiedeman Farm,**	10.96	192	P	Pn	05 02 16.6	-2.4
	baz=9.7						
Q41A	**Truxton**	11.09	214	P	Pn	05 02 19.4	-1.3
	baz=28						
SCHQ	**Schefferville**	12.04	52	Pn	Pn	05 02 32.4	-1.2
	1.8nm,0.3s,baz=243,slow=10.0,SNR=33						
SCHQ				Sn	Sn	05 04 40.1	-6.4
	1.1nm,0.3s,baz=342,slow=11,SNR=6.0						
SCHQ				Lg	Lg	05 05 49.7	
	2.2nm,0.3s,baz=335,slow=16,SNR=6.7						
TKL	**Tuckaleechee C**	12.78	182	Pn	Pn	05 02 42.0	-1.8
	0.3nm,0.3s,baz=5.7,slow=10,SNR=3.0						
TKL				Lg	Lg	05 06 12.2	
	0.3nm,0.3s,baz=91,slow=18,SNR=3.1						
LAO	**LASA Array**	15.59	272	*e*Pn	Pn	05 03 19.2	-2.5
	9.5nm,0.8s						
FRB	**Frobisher Bay**	17.33	22	P	Pn	05 03 43.9	+0.4
	0.1nm,0.3s,baz=221,slow=11,SNR=4.1						
FRB				S	Sn	05 06 45.9	-9.2
	0.2nm,0.3s,baz=299,slow=19,SNR=3.2						
FRB				Lg	Lg	05 08 31.7	
	0.1nm,0.3s,baz=102,slow=11,SNR=3.4						
EGMT	**Eagleton**	17.63	279	*e*Pn	Pn	05 03 43.4	-4.1
RLMT	**Red Lodge**	18.08	269	*e*Pn	Pn	05 03 52.1	-1.2
PD31	**Pinedale Array**	19.20	263	*e*P	P	05 04 06.0	+0.3
PDAR	**Pinedale Array**	19.20	263	P	P	05 04 06.0	+0.3
	0.2nm,0.3s,baz=61,slow=12,SNR=5.5						
MVCO	**Mesa Verde**	21.54	248	*e*P	P	05 04 35.9	+4.7
YKA	**Yellowknife Ar**	22.36	321	P	P	05 04 41.2	+1.8
	1.3nm,0.7s,baz=111,slow=9.5,SNR=17						
YKA				S	S	05 08 40.8	-2.2
	0.5nm,0.7s,baz=106,slow=23,SNR=6.7						
YKA				Lg	Lg	05 11 14.0	
	0.5nm,0.7s,baz=104,slow=31,SNR=3.9						
YKB5	**Yellowknife Ar**	22.36	321	*e*P	P	05 04 41.2	+1.8
ELK	**Elko**	23.90	263	P	P	05 04 57.7	+2.3
	0.4nm,0.3s,baz=42,slow=9.6,SNR=5.0						
TXAR	**Lajitas Array**	24.69	227	P	P	05 05 04.4	+1.8
	0.6nm,0.8s,baz=39,slow=8.8,SNR=6.4						
ILAR	**Eielson Array**	36.79	320	P	P	05 06 50.0	+1.2
	0.2nm,0.8s,baz=73,slow=6.7,SNR=2.9						

IDC 19 05:14:43.2±2.4, **53˚.94N×81˚.93E, h0^{km}, mb1 3.0**/2, **mb1mx2.9**/38, **mbtmp3.0**/2, **ML2.2**/2, **2C-2D, Error ellipse: s-maj=27.5km s-min=11.6km az=150.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.71	89	*i*		05 24 38.0	

	baz=269,slow=325,SNR=11						
ZALV	Zalesovo Beam	1.71	89	Pg	Pn	05 15 14.0	-0.2
	4.1nm,0.3s,baz=275,slow=16,SNR=62						
ZALV				Lg	Lg	05 15 37.9	
	2.9nm,0.3s,baz=275,slow=28,SNR=18						
KURBB	Kurchatov Arra	3.92	213	Pn	Pn	05 15 44.6	0.0
	0.1nm,0.3s,baz=31,slow=18,SNR=2.1						
KURBB				Lg	Lg	05 16 47.2	
	0.2nm,0.3s,baz=35,slow=29,SNR=9.1						
MAKZ	Makanchi	7.14	180	⇓Pn	Pn	05 16 26.1	-2.8
	2.0nm,1.1s						
MAKZ				⇑Lg	Lg	05 18 27.7	
	1.3nm,0.9s						
MK31	Makanchi Array	7.16	178	⇑Pn	Pn	05 16 29.8	+0.7
	0.4nm,0.5s,baz=5.8,slow=12,SNR=7.7						
MK31				⇓Lg	Lg	05 18 27.4	
	0.8nm,0.7s,baz=357,slow=26,SNR=4.0						
MKAR	Makanchi Array	7.16	178	Pn	Pn	05 16 29.3	+0.2
	0.1nm,0.3s,baz=1.5,slow=12,SNR=5.8						
MKAR				Lg	Lg	05 18 30.8	
	0.1nm,0.3s,baz=3.3,slow=27,SNR=3.0						

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*SOME **19** 05:15:11.2, 42.°55N×79.°67E, h20^{km}*

*NNC **19** 05:15:11.4±1.0, 42.°59N×79.°59E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=6.1km s-min=3.2km az=132.0*

KRNET 19 05:15:10.5±0.1**, 42.°55N×79.°63E, h18^{km}, mb2.3, 18C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.75	324	P	Pb	05 15 25.1	0.0
	1.2nm,0.2s						
UZB				S	Sg	05 15 35.2	0.0
	7.8nm,0.2s						
UZB	Uzynbulak	0.75	324	*e*P	Pb	05 15 25.1	0.0
	baz=24						
UZB				*e*S	Sg	05 15 35.2	0.0
	baz=24						
UZB	Uzynbulak	0.75	324	*e*P	Pb	05 15 25.1	0.0
	0.7nm,0.2s						
UZB				*e*S	Sg	05 15 35.2	0.0
	8.5nm,0.3s						
PDGK	Podgornoye	0.79	353	P	Pb	05 15 25.8	+0.1
	1.0nm,0.3s						
PDGK				S	Sg	05 15 36.4	-0.1
	3.6nm,0.2s						
PDGK	Podgornoye	0.79	353	⇓P	Pb	05 15 25.6	-0.2
	0.9nm,0.4s						
PDGK				⇑S	Sb	05 15 36.1	-0.1
	2.9nm,0.3s						
PDGK	Podgornoye	0.79	353	⇓*i*P	Pb	05 15 25.4	-0.4
	baz=52						
PDGK				⇓*i*S	Sb	05 15 36.0	-0.2
	baz=52						
PRZ	Przheval'sk	0.91	266	⇓*i*P	Pb	05 15 27.5	-0.4
	baz=66						
PRZ				⇓*i*S	Sb	05 15 39.8	+0.1
	baz=66						
SATY	Saty	1.03	300	P	Pg	05 15 30.5	-0.1
	1.9nm,0.2s						
SATY				S	Sn	05 15 44.3	-0.1
	11nm,0.1s						
SATY	Saty	1.03	300	*e*P	Pg	05 15 30.5	-0.1
	0.8nm,0.1s						
SATY				*e*S	Sn	05 15 44.3	0.0
	9.8nm,0.1s						
KURS	Kuram	1.42	312	P	Pg	05 15 37.8	-0.2
	1.6nm,0.5s						
KURS				S	Sg	05 15 57.0	+0.4
	2.3nm,0.4s						
KURS	Kuram	1.42	312	*e*P	Pg	05 15 37.8	-0.2
	baz=12						
KURS				*e*S	Sg	05 15 57.0	+0.5
	baz=12						
KURS	Kuram	1.42	312	*e*P	Pg	05 15 37.8	-0.2
	1.1nm,0.4s						
KURS				*e*S	Sg	05 15 57.0	+0.4
	1.1nm,0.2s						
DJR	Jarkent	1.79	4	P	Pg	05 15 44.2	-0.7
	0.8nm,0.1s						
DJR				S	Sg	05 16 07.9	-0.3
	3.8nm,0.2s						
DJR	Jarkent	1.79	4	*e*P	Pg	05 15 44.2	-0.7
	0.8nm,0.1s						
DJR				*e*S	Sg	05 16 07.9	-0.3
	3.8nm,0.2s						
KDJ	Kajisay	1.86	258	⇑*i*P	Pb	05 15 44.4	+0.3
	baz=58						
KDJ				⇑*i*S	Sg	05 16 09.1	-1.4
	baz=58						
KOTS	Kotyrbulak	1.97	291	Pg	Pb	05 15 46.8	+0.8
	4.2nm,0.3s						
KOTS				Lg	Lg	05 16 12.4	
	7.6nm,0.4s						
KOTS	Kotyrbulak	1.97	291	*e*P	Pb	05 15 46.8	+0.8
	baz=91						
KOTS				*e*S	Sg	05 16 12.4	-1.6
	baz=91						
KOTS	Kotyrbulak	1.97	291	*e*P	Pb	05 15 46.8	+0.8
	4.2nm,0.3s						
KOTS				*e*S	Sg	05 16 12.4	-1.6
	7.6nm,0.4s						
MDOK	Medeo	1.99	289	Pg	Pg	05 15 47.6	-1.2
	3.2nm,0.2s						
MDOK				Lg	Lg	05 16 14.1	
	2.7nm,0.3s						
MDOK	Medeo	1.99	289	*e*P	Pg	05 15 47.6	-1.2
	baz=89						
MDOK				*e*S	Sg	05 16 14.1	-0.6
	baz=89						
MDOK	Medeo	1.99	289	*e*P	Pg	05 15 47.6	-1.2
	2.8nm,0.2s						
MDOK				*e*S	Sg	05 16 14.1	-0.6
	2.1nm,0.4s						
TNSS	Tian-Shan	2.03	285	Pg	Pb	05 15 48.0	+0.9
	2.2nm,0.4s						
TNSS				Lg	Lg	05 16 14.7	
	4.9nm,0.4s						
TNSS	Tian-Shan	2.03	285	⇑*i*P	Pb	05 15 48.0	+0.8
	baz=85						
TNSS				⇑*e*S	Sg	05 16 14.7	-1.3
	baz=85						
TNSS	Tian-Shan	2.03	285	⇑*i*P	Pb	05 15 48.0	+0.9
	2.2nm,0.4s						
TNSS				*e*S	Sg	05 16 14.7	-1.3
	4.9nm,0.4s						
ARXS	Arharly	2.12	322	Pg	Pb	05 15 49.3	+0.9
	1.7nm,0.4s						
ARXS				Lg	Lg	05 16 16.9	
	5.6nm,0.4s						
ARXS	Arharly	2.12	322	*e*P	Pb	05 15 49.3	+0.9
	1.7nm,0.4s						
ARXS				*e*S	Sg	05 16 16.9	-1.9
	5.6nm,0.4s						
CHKK	Chushkaly	2.33	305	Pg	Pb	05 15 53.5	+1.5
	1.3nm,0.1s						
CHKK				Lg	Lg	05 16 23.7	
	4.4nm,0.2s						
CHKK	Chushkaly	2.33	305	*e*P	Pb	05 15 53.5	+1.5
	baz=5.0						
CHKK				*e*S	Sg	05 16 23.8	-1.7
	baz=5.0						
CHKK	Chushkaly	2.33	305	*e*P	Pb	05 15 53.5	+1.5
	1.3nm,0.1s						
CHKK				*e*S	Sg	05 16 23.7	-1.7
	4.4nm,0.2s						
KTBS	Karatobe	2.45	299	Pg	Pb	05 15 55.3	+1.2
	0.7nm,0.3s						
KTBS				Lg	Lg	05 16 27.0	
	6.8nm,0.2s						
KTBS	Karatobe	2.45	299	*e*P	Pb	05 15 55.3	+1.2
	baz=98						
KTBS				*e*S	Sg	05 16 27.1	-2.2
	baz=98						
KTBS	Karatobe	2.45	299	*e*P	Pb	05 15 55.2	+1.2
	0.7nm,0.3s						
KTBS				*e*S	Sg	05 16 27.0	-2.3
	6.8nm,0.2s						
ULHL	Ulahol	2.52	264	⇑*i*P	Pb	05 15 54.3	-1.1
	baz=64						
ULHL				⇑*i*S	Sb	05 16 26.1	-0.2
	baz=64						
BOOM	Boomskoye usch	2.73	270	⇑*i*P	Pb	05 15 57.0	-1.8
	baz=70						
BOOM				⇑*i*S	Sb	05 16 30.7	-1.3
	baz=70						
KUU	Kurty	2.75	300	Pg	Pg	05 16 01.3	-2.0
	0.5nm,0.5s						
KUU				Lg	Lg	05 16 37.0	
	4.3nm,0.3s						
KUU	Kurty	2.75	300	*e*P	Pg	05 16 01.3	-2.0
	baz=0.0						
KUU				*e*S	Sg	05 16 37.0	-2.0
	baz=0.0						
KUU	Kurty	2.75	300	*e*P	Pg	05 16 01.3	-2.0
	0.3nm,0.6s						
KUU				*e*S	Sg	05 16 37.0	-2.0
	4.7nm,0.3s						
NRN	Naryn	2.92	249	⇑*i*P	Pb	05 16 00.0	-2.3
	baz=49						
NRN				⇑*i*S	Sb	05 16 36.2	-1.6
	baz=49						
TKM2	Tokmak 2	2.99	279	⇑Pg	Pb	05 16 01.9	-1.5
	0.9nm,0.7s						
TKM2				⇑Lg	Lg	05 16 42.9	
	0.9nm,0.5s						
TKM2	Tokmak 2	2.99	279	⇑*e*P	Pb	05 16 00.4	-3.0
	baz=79						
TKM2				⇑*i*S	Sb	05 16 37.4	-2.3
	baz=79						
KZA	Kyzart	3.28	263	⇑*i*P	Pb	05 16 05.0	-3.4
	baz=63						
KZA				⇑*i*S	Sb	05 16 44.3	-3.9
	baz=63						

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*ISCJB **19** 05:19:22.3±0.7, 17.°34S±0.°06×69.°82W±0.°10, h157^{km}±7^{km}, mb3.2/4, Error ellipse: s-maj=16.7km s-min=7.7km az=23.2*

*IDC **19** 05:19:23.3±1.4, 17.°40S×69.°69W, h154^{km}±14^{km}, mb3.1/4, mb1 3.4/6, mb1mx3.2/23, mbtmp3.7/6, Error ellipse: s-maj=27.6km s-min=11.6km az=102.0*

*GUC **19** 05:19:23.7±0.6, 17.°24S×69.°67W, h112^{km}±7^{km}, ML3.6*

ISC 19 05:19:23.0±0.9**, 17.°32S**±0.°06×**69.°8W**±0.°1**, h148**^{km}±9^{km}**, n15,** σ**1.^{s}04**/23**, mb3.2**/4**, 1C-5D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	IPOC Station P	1.37	201	⇓*i*P	Pn	05 19 51.2	-0.1
PB12				*i* S	Sn	05 20 12.0	-0.9
PB12				IAML		05 20 13.7	
	comp=N,444nm,0.2s						
MNMC	Minye Minye	1.81	174	⇓*i*P	Pn	05 19 57.4	+1.3
MNMC				*i* S	Sn	05 20 22.3	+0.8
MNMC				IAML		05 20 25.7	
	comp=N,865nm,0.2s						
LPAZ	La Paz	1.91	58	⇑*i*P	Pn	05 19 58.6	+1.0
LPAZ				*e*S	Sn	05 20 22.7	-1.4
LPAZ	La Paz	1.91	58	P	Pn	05 19 58.5	+0.9
	comp=N,5.6nm,0.3s,baz=234,slow=8.7,SNR=112						
LPAZ				S	Sn	05 20 24.1	0.0
	comp=N,5.3nm,0.3s,baz=126,slow=21,SNR=17						
PSGC	Pisagua	2.28	187	*e*P	Pn	05 20 01.3	-0.2
PSGC				*i* S	Sn	05 20 29.4	-1.7
PSGC				IAML		05 20 32.1	
	comp=E,148nm,0.3s						
PB11	IPOC Station P	2.43	177	⇓*i*P	Pn	05 20 04.0	+0.7
PB11				*i* S	Sn	05 20 34.6	+0.2
PB11				IAML		05 20 36.9	
	comp=E,333nm,0.2s						
PB08	IPOC Station P	2.87	168	⇓*i*P	Pn	05 20 10.5	+1.5
PB08				*i* S	Sn	05 20 45.2	+0.6
PB08				IAML		05 20 46.9	
	comp=E,255nm,0.2s						
PB01	IPOC Station P	3.71	175	*e*P	Pn	05 20 19.7	+0.1
PB02	IPOC Station P	3.98	181	⇓*i*P	Pn	05 20 23.1	+0.1
LVC	Limon Verde	5.33	171	P	Pn	05 20 41.8	+0.7
	comp=E,7.6nm,0.3s,baz=342,slow=11,SNR=143						
LVC				S	Sn	05 21 39.6	-2.3
	comp=E,9.0nm,0.3s,baz=142,slow=18,SNR=18						
SIV	San Ignacio	8.48	82	P	Pn	05 21 21.9	-1.0
	comp=E,3.0nm,0.3s,baz=277,slow=14,SNR=72						
TXAR	Lajitas Array	56.74	324	P	P	05 28 52.3	+0.6
	comp=E,0.1nm,0.6s,baz=148,slow=8.6,SNR=2.7						
ULM	Lac du Bonnet	71.10	343	P	P	05 30 24.7	-0.3
	comp=E,0.9nm,0.4s,baz=141,slow=5.2,SNR=3.8						
TORD	Torodi Ar. Bea	76.80	72	P	P	05 30 58.3	-0.7
	comp=E,0.2nm,0.6s,baz=244,slow=4.2,SNR=2.7						
YKA	Yellowknife Ar	86.98	341	P	P	05 31 51.3	+0.3
	comp=E,0.3nm,0.6s,baz=136,slow=5.0,SNR=7.3						

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*IDC **19** 05:22:11.9±1.7, 10.°85S×164.°67E, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.7/26, mbtmp3.9/6, ML3.8/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/23, Error ellipse: s-maj=49.3km s-min=28.6km az=127.0*

*ISCJB **19** 05:22:14.3±1.2, 11.°1S±0.°1×164.°7E±0.°2, h29^{km}, mb3.7/4, Error ellipse: s-maj=26.2km s-min=20.4km az=2.4*

ISC 19 05:22:16.1±1.3**, 11.°0S**±0.°2×**164.°7E**±0.°2**, h29^{km}, n7,** σ**0.^{s}19**/6**, mb3.7**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.94	287	LR	LR	05 24 56.4	
	comp=Z,68nm,21.4s,baz=132,slow=34						
DZM	Mont Dzumac	11.18	172	Pn	Pn	05 24 54.1	0.0
	0.7nm,0.3s,baz=350,slow=17,SNR=6.9						
CTA	Charters Tower	19.96	241	P	P	05 26 46.2	+0.1
	baz=63,slow=12,SNR=3.2						
WRA	Warramunga Arr	30.57	249	P	P	05 28 27.4	-0.2
	0.3nm,0.5s,baz=78,slow=9.0,SNR=4.8						
ASAR	Alice Springs	31.94	243	P	P	05 28 39.7	0.0
	0.8nm,0.6s,baz=62,slow=10,SNR=11						
ILAR	Eielson Array	83.75	19	P	P	05 34 42.0	-0.1
	0.4nm,0.8s,baz=225,slow=4.8,SNR=4.9						
MKAR	Makanchi Array	92.77	317	P	P	05 35 26.0	+0.2
	0.5nm,0.9s,baz=106,slow=6.4,SNR=4.0						

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*NNC **19** 05:36:35.8±2.9, 53.°68N×90.°30E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=24.8km s-min=21.3km az=178.0, Suspected Mining explosion.*

IDC 19 05:36:28.3±2.8**, 55.°40N×86.°43E, h0^{km}, mb1 3.0**/3**, mb1mx2.9**/36**, mbtmp3.0**/3**, ML2.8**/3**, 6C-3D, Error ellipse: s-maj=26.2km s-min=19.4km az=75.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.73	213	*i*		05 47 18.7	
	baz=30,slow=315,SNR=19						
ZALV	Zalesovo Beam	1.73	213	Pg	Pn	05 36 59.0	-0.6
	5.3nm,0.3s,baz=33,slow=16,SNR=54						
ZALV				Lg	Lg	05 37 24.1	
	4.2nm,0.3s,baz=30,slow=30,SNR=16						
KURK	Kurchatov	6.65	228	⇓Pn	Pb	05 38 29.6	+4.9
	1.1nm,0.6s						
KURK				⇓Sn	Sg	05 39 59.3	-2.4
	3.9nm,0.9s						
KURBB	Kurchatov Arra	6.75	228	⇑Pn	Pg	05 38 33.0	-4.7
	0.8nm,0.3s						
KURBB				⇑Sn	Sg	05 40 01.7	-3.4
	10nm,0.9s						
KURBB	Kurchatov Arra	6.75	228	Pn	Pn	05 38 08.5	-0.1
	0.1nm,0.3s,baz=46,slow=14,SNR=3.7						
KURBB				Lg	Lg	05 40 02.6	
	0.1nm,0.3s,baz=46,slow=27,SNR=4.3						
MK31	Makanchi Array	9.00	198	⇓Pn	Pn	05 38 40.1	+0.6
	0.7nm,0.8s,baz=23,slow=12,SNR=6.0						
MK31				⇑Lg	Lg	05 41 09.0	
	3.9nm,1.0s,baz=32,slow=30,SNR=3.8						
MKAR	Makanchi Array	9.00	198	Pn	Pn	05 38 39.8	+0.3
	0.1nm,0.3s,baz=19,slow=13,SNR=7.0						
MKAR				Lg	Lg	05 41 13.0	
	0.0nm,0.3s,baz=29,slow=30,SNR=5.2						
MAKZ	Makanchi	9.05	200	⇑Pn	Pn	05 38 42.4	+2.3
	0.5nm,0.9s						
MAKZ				⇑Sn	Sn	05 40 23.8	+1.1
	1.1nm,1.0s						
MAKZ				⇑Lg	Lg	05 41 12.1	
	4.0nm,1.1s						
BVAR	Borovoye Array	9.70	262	Pn	Pn	05 38 48.2	-0.8
	0.2nm,0.3s,baz=64,slow=15,SNR=4.5						

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*IDC **19** 06:06:03.8±2.2, 32.°42N×48.°00E, h0^{km}, mb3.9/6, mb1 3.9/9, mb1mx3.5/40, mbtmp3.9/9, ML3.7/3, MS3.3/2, Ms1 3.3/2, ms1mx2.5/54, Error ellipse: s-maj=44.2km s-min=26.4km az=19.0*

*ISN **19** 06:06:04.1±1.3, 32.°59N×48.°26E, h0^{km}±15^{km}, ML3.3*

*TEH **19** 06:06:06.8, 32.°63N×48.°18E, h8^{km}, ML3.3*

*ISCJB **19** 06:06:07.9±0.4, 32.°61N±0.°03×48.°14E±0.°03, h15^{km}, mb3.9/6, MS4.3/1, Error ellipse: s-maj=4.8km s-min=3.6km az=11.7*

*THR **19** 06:06:08.3, 32.°61N×48.°21E, h14^{km}, ML3.1*

ISC 19 06:06:07.3±0.7**, 32.°59N**±0.°03×**48.°15E**±0.°03**, h15^{km}, n47,** σ**1.^{s}69**/51**, mb4.0**/6**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	Shooshtar-Gavs	0.73	131	*e*Pg	Pb	06 06 21.9	0.0
SHGR	Shooshtar-Gavs	0.73	131	*e*Pg	Pb	06 06 21.9	0.0
IKMR	Kamar-syah	0.94	12	*e*Pg	Pb	06 06 23.5	-1.9
IKMR				*e*Sg	Sb	06 06 37.5	-0.2
IKMR				IAMB	IAmb	06 06 39.9	
	comp=E,0.0nm,0.4s						
IKFM	Kafar-mosalman	0.96	345	*e*Pg	Pb	06 06 24.5	-1.2
IKFM				IAMB	IAmb	06 06 45.1	
	comp=Z,0.0nm,0.5s						
HSAM	Samen	1.66	13	*e*Pn	Pb	06 06 37.2	-0.6
HSAM				IAMB	IAmb	06 07 04.6	
	comp=E,0.0nm,0.5s						
IKOM	Komasi	1.67	342	*e*Pn	Pb	06 06 38.5	+0.7
IKOM				IAMB	IAmb	06 07 04.3	
	comp=N,0.0nm,0.7s						
KHMZ	Khomeyn	1.90	53	*e*Pn	Pb	06 06 42.0	+0.1
KHMZ	Khomeyn	1.90	53	*e*Pn	Pb	06 06 42.0	+0.1
KHMZ				*e*Sg	Sg	06 07 07.2	-1.5
KCHF	Cheshme Sefid,	1.92	331	*e*Pn	Pb	06 06 41.3	-0.8
KCHF				IAMB	IAmb	06 07 12.9	
	comp=Z,0.0nm,0.5s						
KCHF				IAMB	IAmb	06 07 17.1	
	comp=E,0.0nm,0.5s						
IBDR	Badra	1.94	286	*e*Pn	Pn	06 06 41.0	+1.3
IBDR				*e*Sn	Sg	06 07 09.0	-0.6
IGHG	Ghaleghazi	2.18	323	*e*Pn	Pn	06 06 45.1	+1.8
IGHG				IAMB	IAmb	06 07 31.6	
	comp=Z,2µm,0.5s						
IVIS	Veis	2.21	331	*e*Pn	Pn	06 06 45.3	+1.7
IVIS				IAMB	IAmb	06 07 25.7	
	comp=Z,980nm,0.4s						
NSR	Nassriya	2.33	228	*e*Pn	Pn	06 06 46.0	+1.0
NSR				*e*Sn	Sb	06 07 16.0	-1.5
ZNGN	Zangian	2.34	101	*e*Pn	Pn	06 06 47.1	+1.5
HAGD	Aghdareh	2.37	20	*e*Pn	Pn	06 06 47.8	+1.8
HAGD				IAMB	IAmb	06 07 24.1	
	comp=Z,0.0nm,0.5s						
ROKH	ROKH	2.46	95	*e*Pn	Pn	06 06 48.6	+1.5
ROKH				IAMB	IAmb	06 07 27.8	
	comp=Z,0.0nm,0.4s						
ASAO	Ashtian	2.50	38	*e*Pn	Pb	06 06 50.1	-2.1
ASAO	Ashtian	2.50	38	*e*AML	AML	06 07 31.1	
	comp=E,101nm,0.6s						
ASAO	Ashtian	2.50	38	*e*Pn	Pb	06 06 50.0	-2.1
ILIN	Lien	2.52	337	*e*Pn	Pn	06 06 50.4	+2.4
ILIN				IAMB	IAmb	06 07 31.5	
	comp=Z,1µm,0.5s						
SNGE	Sanandaj	2.58	345	*e*Pn	Pb	06 06 51.8	-1.7
SNGE	Sanandaj	2.58	345	*e*AML	AML	06 07 41.2	
	comp=E,78nm,0.5s						
SNGE	Sanandaj	2.58	345	*e*Pn	Pb	06 06 51.8	-1.7
HSRG	Sareghieh	2.65	2	*e*Pn	Pn	06 06 51.2	+1.4
HSRG				IAMB	IAmb	06 07 36.7	
	comp=N,0.0nm,0.7s						
IKLH	Kolahrood	2.98	75	*e*Pn	Pn	06 06 56.3	+2.0
IKLH				IAMB	IAmb	06 07 48.1	
	comp=Z,572nm,0.3s						
IRAZ	Razeghan	3.17	27	*e*Pn	Pn	06 06 59.8	+2.9
IRAZ				IAMB	IAmb	06 07 01.9	
	comp=Z,1µm,0.3s						
BHD	Baghdad	3.24	283	*e*Pn	Pn	06 06 59.0	+1.4
BHD				*e*Sn	Sn	06 07 39.0	+3.1
IGAR	Gharneh	3.30	92	*e*Pn	Pn	06 07 00.0	+1.3
IGAR				IAMB	IAmb	06 07 41.6	
	comp=Z,560nm,0.2s						
KLNJ	Kolanjah	3.33	117	*e*Pn	Pn	06 07 00.8	+1.6
IZEF	Zefreh	3.54	84	IAMB	IAmb	06 07 13.9	
	comp=Z,310nm,0.5s						
IZEF				*e*Pn	Pn	06 07 04.4	+2.4
KRSH	Karshahi	3.61	67	*e*Pn	Pn	06 07 04.7	+1.8
IKRK	Kirkuk	4.22	313	*e*Pn	Pn	06 07 13.0	+1.8
IKRK				*e*Sn	Sn	06 08 04.0	+3.8
IKAZ	Kazeroun	4.23	131	*e*Pn	Pn	06 07 13.9	+2.3
IKAZ				IAMB	IAmb	06 08 09.1	
	comp=Z,567nm,0.4s						
IFIR	Firoozkooh	4.88	50	*e*Pn	Pn	06 07 21.9	+1.4
IFIR				IAMB	IAmb	06 07 43.6	
	comp=Z,131nm,0.4s						
MSL	Mosul	5.63	314	*e*Pn	Pn	06 07 32.0	+1.5
MSL				*e*Sn	Sn	06 08 37.0	+2.1
RTB	Rutbah	6.61	276	*e*Pn	Pn	06 07 46.0	+1.9
RTB				*e*Sn	Sn	06 09 01.0	+1.8
GNI	Garni	8.03	341	LR	LR	06 11 57.1	
	comp=Z,23nm,18.9s,baz=10,slow=43						
WSAR	Wadi Sarin	13.13	133	Pn	Pn	06 09 11.2	-2.2
	comp=Z,0.4nm,0.3s,baz=323,slow=11,SNR=3.4						
AKTO	Aktyubinsk	19.27	19	P	Pn	06 10 33.5	+1.3
	comp=Z,0.1nm,0.3s,baz=180,slow=5.1,SNR=3.4						
IDI	Anoyia	19.48	284	P	P	06 10 32.4	-1.3
	comp=Z,0.4nm,0.3s,baz=69,slow=17,SNR=3.7						
AKASG	Malin Array Be	22.85	328	P	P	06 11 08.3	-1.5
	comp=Z,0.2nm,0.3s,baz=130,slow=9.8,SNR=2.7						
MKAR	Makanchi Array	29.59	51	P	P	06 12 11.9	+0.2
	comp=Z,0.3nm,0.5s,baz=248,slow=9.3,SNR=7.4						
FINES	FINESS Array B	32.22	340	P	P	06 12 34.1	-0.5
	comp=Z,1.6nm,0.6s,baz=142,slow=7.9,SNR=9.2						
HFS	Hagfors	35.66	331	P	P	06 13 03.9	-0.6
	comp=Z,1.0nm,0.4s,baz=117,slow=8.6,SNR=9.0						
ARCES	ARCESS Array B	39.12	348	P	P	06 13 33.5	-0.3
	comp=Z,2.9nm,0.9s,baz=152,slow=9.7,SNR=4.4						
SPITS	Spitsbergen Ar	47.74	352	P	P	06 14 43.4	+0.2
	comp=Z,4.9nm,0.9s,baz=133,slow=6.3,SNR=13						
JHJ	Hachijo jima 2	74.26	61	LR	LR	06 53 03.1	
	comp=Z,134nm,18.8s,baz=86,slow=38						

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*IDC **19** 06:11:12.4±3.5, 67.°08N×142.°73E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/45, mbtmp3.4/4, Error ellipse: s-maj=158.1km s-min=21.5km az=164.0*

*ISCJB **19** 06:11:13.4±0.9, 67.°66N±0.°06×142.°6E±0.°2, h10^{km}, mb3.3/4, Error ellipse: s-maj=12.4km s-min=7.7km az=18.3*

*YARS **19** 06:11:13.9±0.5, 67.°67N±0.°01×142.°70E±0.°09, h10^{km}*

ISC 19 06:11:14.6±0.9**, 67.°56N**±0.°06×**142.°8E**±0.°1**, h10^{km}, n7,** σ**1.^{s}42**/9**, mb3.4**/4**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.11	171	*e*P	Pb	06 11 35.8	-0.1
MOMR				*e*S	Sn	06 11 52.0	+0.5
YBGR	Belaya Gora	1.61	51	*e*P	Pn	06 11 41.9	-1.1
YBGR				*e*S	Sn	06 12 02.5	-1.3
ATKR	Artyk	3.53	163	*e*S	Sg	06 13 06.8	-1.0
ILAR	Eielson Array	27.17	62	P	P	06 16 59.2	+1.5
	0.8nm,0.8s,baz=294,slow=7.9,SNR=9.3						
BVAR	Borovoye Array	36.29	283	P	P	06 18 17.6	-0.1
	0.4nm,0.7s,baz=38,slow=7.5,SNR=2.8						
MKAR	Makanchi Array	36.79	267	P	P	06 18 21.1	-1.0
	0.7nm,0.8s,baz=44,slow=8.1,SNR=7.9						
YKA	Yellowknife Ar	38.84	46	P	P	06 18 41.3	+2.1
	0.2nm,0.7s,baz=324,slow=8.3,SNR=3.7						

MAN 19 06:43:16.4, 14.°17N×121.°21E, h8^{km}, mb4.4, ML3.2, MS3.0, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.27	256	⇓*i*P	Pg	06 43 22.5	+0.7
TGY				*i* S	Sb	06 43 28.3	-0.1
POLP	Polilio Island	0.90	52	*e*P	Pg	06 43 33.6	-0.1
POLP				*e*S	Sg	06 43 44.0	-1.4
GQP	Guinayangan	1.23	102	⇑*e*P	Pb	06 43 37.6	-2.2
AUQP	San Andres	1.65	120	*e*P	Pn	06 43 46.3	+0.6
SJMP	San Jose	1.70	183	*e*P	Pn	06 43 46.1	-0.3
SJMP				*e*S	Sb	06 44 08.9	-0.5
SMPP	San Manuel, Pa	2.04	346	*e*P	Pn	06 43 51.3	+0.4

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*ISK **19** 06:46:38.9, 34.°34N×32.°33E, h15^{km}, ML3.0/8*

*NIC **19** 06:46:39.1±0.2, 34.°42N×31.°94E, h25^{km}, ML3.4*

*DDA **19** 06:46:41.6, 35.°00N×31.°93E, h7^{km}±2^{km}, ML3.0*

ISC 19 06:46:36.5±3.6**, 34.°3N**±0.°1×**32.°11E**±0.°05**, h9**^{km}±28^{km}**, n35,**

σ1^{s}.23/43, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPCY	Paphos	0.60	18	P	Pb	06 46 49.7	+0.5
	baz=215						
SZAC	Souni	0.77	55	P	Pn	06 46 53.6	0.0
	baz=246						
SZAC				S	Sn	06 47 05.4	0.0
ALFC	Alefka	0.93	25	P	Pb	06 46 54.9	+0.1
	baz=216						
ALFC				S	Sb	06 47 06.7	-0.6
LEF	Lefka	1.03	38	PG	Pb	06 46 56.8	+0.4
LEF				SG	Sb	06 47 09.3	-0.8
LEF	Lefka	1.03	38	PG	Pb	06 46 56.0	-0.4
LEF	Lefka	1.03	38	*i* P	Pb	06 46 56.9	+0.5
LEF				*i* S	Sb	06 47 08.1	-2.0
CSS	Mathiatis	1.20	57	PG	Pn	06 46 59.6	+0.2
CSS				SG	Sb	06 47 13.3	-1.6
CSS	Mathiatis	1.20	57	PG	Pn	06 46 59.6	+0.2
CSS	Mathiatis	1.20	57	*i* P	Pn	06 46 59.7	+0.3
	baz=245						
CSS				S	Sb	06 47 15.4	+0.5
AKIN	Akıncılar- Kıb	1.32	57	PN	Pn	06 47 01.7	+0.7
AKIN	Akıncılar- Kıb	1.32	57	PG	Pn	06 47 00.9	-0.1
LFK	Lefkose	1.52	50	PN	Pn	06 47 03.8	0.0
LFK				SN	Sn	06 47 22.9	-0.8
LFK	Lefkose	1.52	50	PG	Pn	06 47 01.5	-2.3
TEKE	Tekeli-Mersin	2.00	24	PN	Pn	06 47 11.4	+1.0
TEKE	Tekeli-Mersin	2.00	24	PG	Pn	06 47 11.4	+1.0
TEKE				SG	Sn	06 47 25.2	-10
EREN	Erenkoy	2.08	54	PN	Pn	06 47 12.3	+0.8
EREN	Erenkoy	2.08	54	PG	Pn	06 47 12.3	+0.8
AKKU	Akkuyu-Mersin	2.19	32	PN	Pn	06 47 13.5	+0.5
AKKU	Akkuyu-Mersin	2.19	32	PG	Pn	06 47 13.5	+0.5
GULN	MERSIN_Gulnar	2.21	32	*i* P	Pn	06 47 13.2	0.0
GULN				*i* S	Sn	06 47 40.7	+0.1
IKL	Isikli	2.31	33	PN	Pn	06 47 15.3	+0.6
IKL	Isikli	2.31	33	PN	Pn	06 47 15.3	+0.6
IKL				SN	Sn	06 47 32.3	-11
TEVE	Tevekalti-Mers	2.38	27	PN	Pn	06 47 16.9	+1.2
TEVE	Tevekalti-Mers	2.38	27	PN	Pn	06 47 16.9	+1.2
KEBE	Keben-Mersin	2.50	31	PN	Pn	06 47 18.6	+1.2
KEBE	Keben-Mersin	2.50	31	PN	Pn	06 47 18.6	+1.2
KEPZ	Antalya-Kepez	2.62	351	*i* P	Pn	06 47 18.6	-0.4
KIZK	Mersin	2.73	37	PN	Pn	06 47 21.5	+1.1
KIZK	Mersin	2.73	37	PN	Pn	06 47 21.5	+1.1
AKAS	Kas	2.81	314	*i* P	Pn	06 47 22.8	+1.1
AKAS				IAML_P			
	comp=Z,956nm,0.3s						
KORT	Korkueli	3.04	332	*i* P	Pb	06 47 29.0	-1.9
FETY	Fethiye	3.39	314	*i* P	Pn	06 47 30.9	+1.4
KERG	Konya-Eregli	3.50	27	*i* P	Pn	06 47 34.5	+3.3
GULE	Gulek	3.67	35	*i* P	Pn	06 47 37.1	+3.5
GULE				IAML_P			
	comp=Z,189nm,0.2s						
YAYL	Yayladag	3.70	61	*i* P	Pn	06 47 34.8	+0.9

NIED ***19*** *06:52:00, 22°.90N×120°.50E, h32km, Mw4.4 Best double couple: $M_0 4.73000\times10^{15}$ NP1: ϕ_s304.00000°, δ50.00000°, λ18.00000°. NP2: ϕ_s202.00000°, δ76.00000°, λ139.00000°.*

IDC ***19*** *06:52:36.4±0.5, 22°.83N×120°.78E, h0km, mb4.0/21, mb1 4.2/23, mb1mx4.0/51, mbtmp4.1/23, ML3.2/3, MS3.6/19, Ms1 3.6/19, ms1mx3.4/60, Error ellipse: s-maj=18.7km s-min=11.1km az=73.0*

JMA ***19*** *06:52:37.0±0.2, 22°.90N×120°.46E, h0km, M4.9*

BJI ***19*** *06:52:38.7, 22°.82N×120°.63E, h20km, mb4.0/15, mB4.4/6, ML4.1/6, Ms4.1/9, Ms7 4.1/5*

ISCJB ***19*** *06:52:39.9±0.2, 22°.86N±0°.01×120°.56E±0°.01, h28km±1km, mb4.1/30, MS3.5/16, Error ellipse: s-maj=2.1km s-min=1.8km az=4.0*

TAP ***19*** *06:52:39.4, 22°.91N×120°.60E, h16km, ML4.7, B*

NEIC ***19*** *06:52:40.4±0.6, 22°.82N×120°.73E, h26km±4km, mb4.4/15, Error ellipse: s-maj=4.6km s-min=4.0km az=80.0*

ASIES ***19*** *06:52:40.0, 22°.90N×120°.61E, h17km, MW4.0*

ISC 19 06:52:39.5±0.8**, 22°.91N**±0°.01×**120°.61E**±0°.02**, h16**km±5km**, n216,** σ1^{s}.**27**/289**, mb4.1**/30**, MS3.6**/16**, 30C-17D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLGT	Liugui	0.09	21	⇓P	Pg	06 52 43.3	+0.5
	baz=37						
SLGT				S	Sg	06 52 46.0	+1.1
	baz=37						
SSD	Sandimen	0.17	174	⇓*i*P	Pb	06 52 44.2	-0.1
	baz=166						
SSD				S	Sb	06 52 47.5	+0.1
	baz=166						
SGST	Jiashian	0.17	351	⇑*i*P	Pb	06 52 44.6	+0.2
	baz=357						
SGST				*i* S	Sb	06 52 48.3	+0.7
	baz=357						
TWM1	Shoushan	0.20	243	⇑*i*P	Pb	06 52 45.0	+0.2
	baz=241						
TWM1				*e*S	Sb	06 52 50.1	+1.9
	baz=241						
SGLT	Jiouru	0.22	211	⇑P	Pb	06 52 45.7	+0.6
	baz=200						
SGLT				*e*S	Sb	06 52 50.7	+1.9
	baz=200						
CHN3	Shinhua	0.28	306	⇓P	Pb	06 52 47.1	+1.0
	baz=313						
CHN3				*e*S	Sn	06 52 53.5	-1.4
	baz=313						
CHN1	Nanshi	0.28	344	⇑*i*P	Pb	06 52 46.6	+0.4
	baz=352						
CHN1				*e*S	Sb	06 52 51.9	+1.1
	baz=352						
STYT	Tauyuan	0.28	28	⇓*i*P	Pb	06 52 46.6	+0.3
	baz=36						
STYT				*e*S	Sb	06 52 51.7	+0.8
	baz=36						
MASBT	Mashibuluo	0.30	176	⇑P	Pb	06 52 46.3	-0.2
	baz=174						
MASBT				S	Sb	06 52 50.9	-0.3
	baz=174						
SNJT	Kaohsiung City	0.30	238	*e*P	Pb	06 52 47.6	+1.1
	baz=237						
SNJT				S	Sn	06 52 54.2	-1.1
	baz=237						
SNST	Tainan City	0.32	341	⇑P	Pb	06 52 47.4	+0.5
	baz=344						
SNST				*e*S	Sb	06 52 53.0	+1.1
	baz=344						
WTP	Ta-pu	0.33	0	⇑*i*P	Pb	06 52 47.5	+0.4
	baz=4.0						
WTP				*e*S	Sb	06 52 53.1	+0.8
	baz=4.0						
TWK	Hsinying	0.37	342	⇑P	Pb	06 52 48.1	+0.3
	baz=359						
TWK				*e*S	Sb	06 52 54.7	+1.3
	baz=359						
TAI1	Yung-k'ang	0.38	290	*e*P	Pb	06 52 48.1	+0.3
	baz=291						
TPUB	Ta-pu	0.39	2	*e*Pg	Pb	06 52 48.2	+0.1
TPUB				*e*Sg	Sb	06 52 55.0	+1.2
TPUB	Ta-pu	0.39	2	⇑P	Pb	06 52 48.2	+0.1
	baz=4.0						
TPUB				S	Sb	06 52 54.8	+1.0
	baz=4.0						
SSPT	Xinbi	0.43	185	⇑P	Pb	06 52 48.9	+0.2
	baz=174						
TWG	Pinlang	0.43	102	*e*Pg	Pb	06 52 49.4	+0.6
TWG				*e*Sg	Sn	06 52 56.6	-2.1
TWG	Pinlang	0.43	102	⇓*i*P	Pb	06 52 49.4	+0.6
	baz=104						
TWG				S	Sn	06 52 56.2	-2.5
	baz=104						
CHN4	Tsaushan	0.44	358	⇑*i*P	Pb	06 52 49.1	+0.2
	baz=360						
CHN4				*e*S	Sb	06 52 56.1	+0.8
	baz=360						
TWGBT	Beinan	0.44	102	⇓P	Pb	06 52 49.4	+0.5
	baz=104						
TWGBT				S	Sb	06 52 56.3	+1.0
	baz=104						
KAU	Kaohsiung	0.44	219	*e*P	Pb	06 52 49.6	+0.7
	baz=227						
ECL	Taimali	0.44	135	⇓*i*P	Pb	06 52 49.1	+0.1
	baz=139						
ECL				*i* S	Sb	06 52 55.2	-0.2
	baz=139						
ELDTW	Lidau	0.46	53	*e*P	Pb	06 52 50.0	+0.6
	baz=46						
ELDTW				*e*S	Sb	06 52 57.0	+0.9
	baz=46						
SCLT	Jiali	0.47	304	*e*P	Pb	06 52 49.6	+0.3
	baz=307						
SCLT				*e*S	Sn	06 52 58.3	-1.1
	baz=307						
TTN	Taitung	0.52	108	*e*P	Pn	06 52 51.5	-0.7
	baz=109						
TTN				*e*S	Sn	06 53 00.1	-0.6
	baz=109						
SCZT	Fangliau	0.54	179	⇑P	Pb	06 52 50.5	-0.1
	baz=168						
SCZT				*e*S	Sb	06 52 58.5	+0.4
	baz=168						
EAST	Anshuo	0.57	157	⇑*i*P	Pb	06 52 51.4	+0.2
	baz=150						
EAST				*e*S	Sb	06 52 59.7	+0.7
	baz=150						
WLCH	Liuqiu	0.60	201	⇓P	Pn	06 52 54.0	+0.7
	baz=200						
WLCH				*e*S	Sn	06 53 05.2	+2.5
	baz=200						
TWP	Hsiaoliuchiu	0.61	202	⇓*i*P	Pn	06 52 54.1	+0.7
	baz=201						
TWP				S	Sn	06 53 05.3	+2.3
	baz=201						
CHY	Chiayi	0.61	343	*e*P	Pb	06 52 52.3	+0.5
	baz=346						
CHY				*e*S	Sb	06 53 01.5	+1.4
	baz=346						
TAW	Tawu	0.61	155	P	Pb	06 52 52.1	+0.3
	baz=148						
TAW				*e*S	Sb	06 53 00.8	+0.7
	baz=148						
ALS	Alishan	0.62	17	⇑*i*P	Pb	06 52 52.4	+0.2
	baz=18						
ALS				*e*S	Sb	06 53 01.8	+1.0
	baz=18						
CHN2	Minshiung	0.63	348	⇓*e*P	Pn	06 52 53.0	-0.8
	baz=350						
CHN2				*e*S	Sn	06 53 03.3	-0.2
	baz=350						
WLGB	Puzi	0.63	333	*e*P	Pb	06 52 52.2	+0.1
	baz=346						
WLGB				*e*S	Sn	06 53 02.5	-1.1
	baz=346						
YUS	Yu-Shan	0.65	28	⇑*i*P	Pb	06 52 53.2	+0.4
	baz=30						
YUS				*e*S	Sn	06 53 03.4	-1.5
	baz=30						
CHN5	Tsauling	0.69	5	*e*P	Pb	06 52 53.3	+0.1
	baz=6.0						
CHN5				*e*S	Sn	06 53 04.5	-0.6
	baz=6.0						
CHKT	Chengkung	0.72	75	⇑*e*P	Pn	06 52 54.9	-0.2
	baz=67						
CHKT				*e*S	Sn	06 53 06.1	+0.4
	baz=67						
TWF1	Yuli	0.77	55	⇑*i*P	Pn	06 52 55.2	-0.5
	baz=63						
TWF1				S	Sn	06 53 06.0	-1.0
	baz=63						
WGK	Gukeng	0.77	357	*e*P	Pn	06 52 55.3	-0.5
	baz=358						
WGK				*e*S	Sn	06 53 07.4	+0.3
	baz=358						
WDLH	Douliu	0.78	355	*e*P	Pn	06 52 55.5	-0.3
	baz=356						
WDLH				*e*S	Sn	06 53 07.5	+0.4
	baz=356						
YULB	Yu-li	0.79	53	*e*Pg	Pn	06 52 55.3	-0.7
YULB				*e*Sg	Sg	06 53 05.1	-0.3
YULB	Yu-li	0.79	53	⇑P	Pn	06 52 55.4	-0.6
	baz=60						
YULB				S	Sg	06 53 06.1	+0.7
	baz=60						
WSF	Szhu	0.81	334	⇓P	Pb	06 52 55.1	0.0
	baz=336						
WSF				S	Sn	06 53 07.5	-0.4
	baz=336						
WHYT	Xinyi Township	0.81	16	⇑P	Pg	06 52 55.6	+0.3
	baz=17						
WHYT				*e*S	Sn	06 53 07.1	-1.0
	baz=17						
EHY	Hungye	0.88	48	P	Pn	06 52 57.1	-0.2
	baz=55						
EHY				S	Sn	06 53 09.1	-0.6
	baz=55						
HEN	Hengchun	0.91	173	P	Pn	06 52 58.0	+0.4
	baz=167						
HEN				*e*S	Sn	06 53 12.0	+1.6
	baz=167						
WJS	Zhushan	0.91	7	*e*P	Pn	06 52 57.5	-0.2
	baz=8.0						
WJS				*e*S	Sn	06 53 10.6	0.0
	baz=8.0						
SSLB	Suanglung	0.93	20	*e*Pn	Pg	06 52 57.5	-0.1
SSLB				*e*Sg	Sn	06 53 11.5	+0.6
SSLB	Suanglung	0.93	20	⇑P	Pg	06 52 57.4	-0.1
	baz=20						
SSLB				*e*S	Sn	06 53 10.5	-0.4
	baz=20						
WDGT	Dungji	0.94	292	⇓*i*P	Pb	06 52 56.4	-1.0
	baz=293						
WDGT				*e*S	Sb	06 53 09.3	-0.4
	baz=293						
HGSD	Ruisui	0.94	52	⇑P	Pn	06 52 58.8	+0.6
	baz=47						
HGSD				*e*S	Sn	06 53 12.5	+1.2
	baz=47						
WMLT	Mailiao	0.96	338	*e*P	Pb	06 52 57.6	-0.1
	baz=340						
WNT	Mingjian	0.96	4	*e*P	Pn	06 52 58.2	-0.2
	baz=5.0						
WNT				*e*S	Sn	06 53 11.8	0.0
	baz=5.0						
VWDT	VWDT	0.97	30	⇑P	Pg	06 52 58.3	0.0
	baz=23						
VWDT				*e*S	Sn	06 53 12.3	+0.5
	baz=23						
TWK1	Hengchun	0.98	169	⇑P	Pn	06 52 58.9	+0.2
	baz=167						
TWK1				*e*S	Sn	06 53 12.9	+0.8
	baz=167						
TWKBT	Hengchun	0.98	169	⇑P	Pn	06 52 58.6	0.0
	baz=167						
TWKBT				*e*S	Sn	06 53 13.3	+1.0
	baz=167						
WTCT	Ta-ch'eng	1.00	342	*e*P	Pb	06 52 57.9	-0.5
	baz=344						
WTCT				*e*S	Sg	06 53 12.3	+0.5
	baz=344						
RLNB	Erlin	1.00	347	*e*P	Pb	06 52 58.7	+0.2
	baz=348						
RLNB				*e*S	Sb	06 53 12.0	+0.6
	baz=348						
SMLT	Sun Moon Lake	1.00	15	*e*P	Pg	06 52 59.1	+0.1
	baz=16						
SMLT				S	Sn	06 53 14.5	+1.5
	baz=16						
TYC	Yuchr	1.01	13	*e*P	Pg	06 52 59.1	-0.1
	baz=14						
TYC				*e*S	Sn	06 53 13.6	+0.6
	baz=14						
TSEB	Hengchuen, Pin	1.04	165	*e*P	Pg	06 52 59.5	-0.1
	baz=166						
TSEB				*e*S	Sn	06 53 14.9	+1.2
	baz=166						
EGFH	Guangfu	1.06	45	*e*P	Pg	06 53 00.1	+0.1
	baz=45						
EGFH				*e*S	Sn	06 53 14.7	+0.4
	baz=45						
PHUB	P'eng-hu	1.13	302	⇓*e*P	Pn	06 52 58.9	-1.8
	baz=311						
VCHM	Qimei	1.13	285	⇓P	Pn	06 52 59.0	-1.7
	baz=288						
OWD	Renai	1.16	26	*e*P	Pg	06 53 01.6	-0.4
	baz=27						
OWD				*e*S	Sg	06 53 17.8	+0.6
	baz=27						
WCHH	Zhanghua	1.16	358	*e*P	Pb	06 53 01.6	+0.3
	baz=358						
PNG	Penghu	1.17	304	⇓*e*P	Pn	06 52 59.5	-1.8
	baz=306						
PNG				*e*S	Sb	06 53 14.6	-1.7
	baz=306						
ESL	Shilin	1.17	40	⇑P	Pg	06 53 02.1	-0.1
	baz=40						
ESL				*e*S	Sg	06 53 18.0	+0.5
	baz=40						
LAY	Lan-yu	1.23	135	*e*P	Pb	06 53 01.8	-0.5
	baz=122						
TCU	Taichung	1.23	3	*e*P	Pb	06 53 02.5	0.0
	baz=353						
CHGB	Renai	1.25	24	⇑P	Pg	06 53 03.3	-0.5
	baz=14						
CHGB				S	Sg	06 53 20.5	+0.3
	baz=14						
ENLB	Shoufeng	1.34	42	⇑*e*P	Pg	06 53 04.8	-0.6
	baz=34						
ENLB				*e*S	Sg	06 53 23.6	+0.7
	baz=34						
WHF	Hehuan Shan	1.37	26	⇓P	Pg	06 53 05.5	-0.4
	baz=17						
WHF				*e*S	Sg	06 53 25.6	+1.9
	baz=17						
WHP	Taichung City	1.39	13	*e*P	Pb	06 53 05.1	-0.1
	baz=14						
WHP				*e*S	Sg	06 53 24.7	+0.1
	baz=14						
HWA	Hwalien	1.40	40	*e*P	Pb	06 53 05.6	+0.3
	baz=32						
TDCB	Techi	1.43	20	⇑*e*P	Pb	06 53 05.3	-0.5
	baz=21						
TDCB				*e*S	Sb	06 53 24.0	+0.2
	baz=21						
WDJ	Dajia District	1.43	1	*e*P	Pb	06 53 05.4	-0.4
	baz=353						
WDJ				*e*S	Sg	06 53 25.2	-0.5
	baz=353						
TWT	Tachien	1.43	21	*e*P	Pb	06 53 05.8	-0.2
	baz=21						
TWT				*e*S	Sb	06 53 24.4	+0.3
	baz=21						
TWD	Chiawan	1.47	38	*e*P	Pb	06 53 06.1	-0.5
	baz=38						
TWD				*e*S	Sb	06 53 25.6	+0.6
	baz=38						
NSY	Sanyi	1.50	5	*e*P	Pb	06 53 06.6	-0.5
	baz=356						
ETLH	Xiulin Townshi	1.52	32	*e*P	Pb	06 53 07.5	+0.1
	baz=31						
NACB	Ninganchiao	1.55	35	*e*Pn	Pb	06 53 07.4	-0.4
NACB	Ninganchiao	1.55	35	⇑P	Pb	06 53 07.3	-0.4
	baz=36						
NACB				*e*S	Sb	06 53 26.9	-0.2
	baz=36						
NMLH	Miaoli	1.63	6	*e*P	Pb	06 53 08.7	-0.5
	baz=356						
NNSB	Datong	1.67	25	⇑*e*P	Pb	06 53 08.9	-1.0
	baz=13						
NNSB				*e*S	Sb	06 53 31.4	+0.6
	baz=13						
NNS	Nan Shan	1.67	24	*e*P	Pb	06 53 09.7	-0.4
	baz=13						
NNS				*e*S	Sb	06 53 31.9	+1.0
	baz=13						
NSTT	Nanjuang	1.75	12	*e*P	Pn	06 53 09.7	+0.5
	baz=356						
LIOB	Emei	1.77	12	*e*P	Pn	06 53 09.2	-0.3
	baz=356						
ENA	Nanau	1.83	34	*e*P	Pb	06 53 11.3	-1.3
	baz=34						
NDT	Datong Townshi	1.87	26	*e*P	Pb	06 53 13.2	-0.2
	baz=9.0						
NSK	Sanguang	1.88	21	*e*P	Pb	06 53 12.5	-1.1
	baz=21						
YHNB	Yeheng	1.89	22	*e*Pn	Pb	06 53 12.3	-1.3
YHNB	Yeheng	1.89	22	*e*P	Pn	06 53 12.2	+1.0
	baz=22						
SBCB	Hsinchu	1.90	10	*e*P	Pb	06 53 14.0	+0.1
	baz=354						
ENTT	Nioudou	1.93	27	⇓*e*P	Pb	06 53 14.0	-0.4
	baz=27						
ENTT				*e*S	Sg	06 53 40.0	-1.7
	baz=27						
WLTB	Daxi	2.02	17	*e*P	Pb	06 53 16.6	+0.7
	baz=17						
NWLT	Wulai	2.03	24	*e*P	Pb	06 53 14.8	-1.3
	baz=23						
TWC	Suao	2.04	34	*e*P	Pb	06 53 14.4	-1.7
	baz=42						
TWE	Neicheng	2.04	28	*e*P	Pb	06 53 15.8	-0.5
	baz=28						
EOS1	EOS1	2.14	40	*e*P	Pb	06 53 17.4	-0.5
	baz=56						
TATO	Taipei	2.21	21	*e*Pn	Pb	06 53 17.9	-1.2
TATO	Taipei	2.21	21	*e*P	Pb	06 53 19.1	+0.1
	baz=21						
NHDH	Xindian Distri	2.21	22	*e*P	Pb	06 53 18.0	-1.0
	baz=22						
NTC	Toucheng	2.23	30	*e*P	Pb	06 53 17.7	-1.7
	baz=45						
TWA	Mucha	2.24	23	*e*P	Pb	06 53 20.3	+0.7
	baz=23						
TWS1	Kuangyinshan	2.30	19	*e*P	Pb	06 53 20.3	-0.4
	baz=19						
VWUC	VWUC	2.33	333	*e*P	Pn	06 53 15.9	-1.2
	baz=335						
TIPB	Shuangxi	2.33	28	*e*P	Pn	06 53 18.9	+1.6
	baz=10.0						
YM01	YM01	2.39	21	*e*P	Pn	06 53 18.5	+0.5
	baz=21						
NWF	Wu-fen Shan	2.40	26	*e*P	Pb	06 53 20.6	-1.8
	baz=10.0						
WFSB	Wu-fen Shan	2.40	26	*e*P	Pb	06 53 21.2	-1.1
	baz=10.0						
YM05	YM05	2.41	21	*e*P	Pn	06 53 19.9	+1.6
	baz=21						
YM11	YM11	2.41	21	*e*P	Pb	06 53 21.0	-1.6
	baz=21						
TWB1	Santiao Chiao	2.44	31	*e*P	Pn	06 53 20.6	+1.9
	baz=31						
KNM	Kinmen	2.50	307	*e*P	Pn	06 53 20.2	+0.7
	baz=309						
KNMB	Chin-men Tao	2.56	308	*e*P	Pn	06 53 19.4	-0.9
	baz=311						
JYNG	Yonagunijimaku	2.63	54	P	Pb	06 53 24.5	-1.8
JYNG				*e*S	Sb	06 53 58.1	-0.3
YOJ	Yonaguni jima	2.69	54	*e*Pn	Pn	06 53 22.1	0.0
YOJ	Yonaguni jima	2.69	54	*e*P	Pb	06 53 24.7	-2.5
	baz=55						
YOJ				*e*S	Sn	06 53 56.5	+2.2
	baz=55						
YOJ	Yonaguni jima	2.69	54	P	Pn	06 53 24.3	+2.2
YOJ				*e*S	Sb	06 53 58.4	-1.6
QZH	Quanzhou	2.74	318	Pn	Pn	06 53 22.1	-0.7
QZH				Sn	Sn	06 53 52.5	-3.1
QZH				smax	smax		
	comp=N,370nm,1.1s						
QZH				smax	smax		
	comp=E,400nm,0.8s						
HATJ	Hateruma jima	3.15	68	P	Pn	06 53 30.1	+1.7
HATJ				*e*S	Sn	06 54 08.2	+2.6
IRIF	Iriomote-Funau	3.19	63	P	Pn	06 53 31.6	+2.6
IRIF				*e*S	Sb	06 54 10.8	-3.7
MATB	Ma-tsu	3.28	349	*e*P	Pn	06 53 29.9	-0.4
	baz=338						
JKRS	Kuro-shima	3.38	66	P	Pn	06 53 33.1	+1.4
JKRS				*e*S	Sn	06 54 15.0	+3.5
JIJ	Ishigaki jima	3.54	65	P	Pn	06 53 35.0	+1.1
JIJ				S	Sn	06 54 16.9	+1.4
JISG	Ishigakijimahi	3.78	63	P	Pn	06 53 38.1	+1.0
JISG				S	Sn	06 54 24.2	+3.0
JTJ	Tarama	4.12	65	P	Pn	06 53 43.6	+1.8
JTJ				*e*S	Sn	06 54 32.3	+2.5
VDOS	Pratas Island	4.22	239	*e*P	Pn	06 53 43.0	-0.3
	baz=238						
JIRB	Irabujima	4.59	65	P	Pn	06 53 49.4	+1.1
JIRB				*e*S	Sn	06 54 42.6	+1.3
JMJ	Miyako jima 2	4.69	65	P	Pn	06 53 51.7	+2.1
JMJ				*e*S	Sn	06 54 46.3	+2.7
JIKM	Ikemajima	4.69	64	P	Pn	06 53 50.9	+1.2
JIKM				S	Sn	06 54 47.1	+3.3
JOGS	Gusukube	4.76	66	P	Pn	06 53 51.4	+0.8
JOW	Kunigami	7.98	59	Pn	Pn	06 54 33.3	-1.5
	0.6nm,0.3s,baz=152,slow=14,SNR=5.1						
NJ2	Nanjing	9.24	351	*e*P	Pn	06 54 56.8	+4.7
NJ2				smax	smax		
	comp=N,130nm,1.4s						
NJ2				smax	smax		
	comp=E,120nm,1.1s						
QIZ	Qiongzhong	10.78	251	*e*Pn	Pn	06 55 14.1	+0.8
JNU	Nakatsue	13.62	39	Pn	Pn	06 55 51.2	-0.9

	0.1nm,0.3s,baz=225,slow=7.1,SNR=2.5						
JNU				LR	LR	07 01 33.1	
	comp=Z,228nm,18.4s,baz=206,slow=40						
XAN	Xi'an	15.10	320	P	P	06 56 24.6	+7.1
XAN				pP	sP	06 56 31.9	+7.8
XAN				LR	LR		
	comp=N,520nm,10.8s						
XAN				LR	LR		
	comp=E,400nm,9.3s						
XAN				LR	LR		
	comp=Z,540nm,14.6s						
KSAR	Wonju Array Be	15.78	22	Pn	Pn	06 56 20.8	-0.2
KSRS	Korea Array	15.80	22	Pn	Pn	06 56 20.8	-0.5
	comp=Z,0.1nm,0.3s,baz=198,slow=11,SNR=2.9						
KSRS				LR	LR	07 02 49.7	
	comp=Z,179nm,19.0s,baz=209,slow=39						
DAV	Davao City (W)	16.46	162	LR	LR	07 02 57.0	
	comp=Z,238nm,20.8s,baz=350,slow=38						
CD2	Chengdu	17.00	302	P	Pn	06 56 37.0	+0.3
CD2				pP	pP	06 56 44.4	+1.3
CD2				sP	sP	06 56 47.3	+2.1
CD2				S	Sn	06 59 47.0	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1µm,6.1s						
CD2				LR	LR		
	comp=Z,1µm,7.8s						
LZH	Lanzhou	19.59	316	eP	Pn	06 57 13.8	+5.2
LZH				pP	sP	06 57 21.3	+7.4
LZH				sP	pP	06 57 25.6	+14
LZH				pmax	pmax		
	comp=Z,11nm,1.2s						
JHJ	Hachijo jima 2	19.72	55	LR	LR	07 03 42.8	
	comp=Z,127nm,20.6s,baz=79,slow=34						
MAJO	Matsushiro	20.40	44	eP	P	06 57 14.4	-1.4
MAT	Matsushiro	20.40	44	P	Pn	06 57 18.6	+0.7
MJAR	Matsushiro Arr	20.40	44	P	P	06 57 14.4	-1.4
	comp=Z,6.0nm,0.9s,baz=232,slow=8.6,SNR=3.8						
MJAR				LR	LR	07 06 18.4	
	comp=Z,39nm,20.1s,baz=235,slow=40						
CMMT	Chiang Mai	20.65	263	P	Pn	06 57 25.3	+4.3
	comp=Z,6.3nm,0.9s,comp=Z,417nm						
CHTO	Chiang Mai	20.65	263	eP	Pn	06 57 19.9	-1.1
	comp=Z,8.7nm,1.1s						
CHTO	Chiang Mai	20.65	263	P	Pn	06 57 25.4	+4.4
	comp=Z,30nm,0.9s						
CM01	Chiang Mai Arr	20.74	262	eP	P	06 57 20.3	+0.7
CMAR	Chiang Mai Arr	20.75	262	P	P	06 57 20.4	+0.7
	comp=Z,1.0nm,0.3s,baz=61,slow=9.0,SNR=6.5						
CMAR				LR	LR	07 06 56.5	
	comp=Z,264nm,18.1s,baz=78,slow=41						
GTA	Gaotai	24.14	318	eP	P	06 57 56.3	+1.3
GTA				pP	sP	06 58 01.6	-0.3
GTA				sP	pP	06 58 04.9	+5.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,51nm,6.0s						
GTA				LR	LR		
	comp=Z,200nm,14.6s						
GTA				LR	LR		
	comp=Z,330nm,18.1s						
GTA				LR	LR		
	comp=Z,380nm,17.1s						
SIJI	Sorong	25.81	155	P	P	06 58 08.2	-2.0
	comp=Z,8.3nm,0.5s,baz=356,slow=5.3,SNR=4.1						
SHL	Shillong	26.31	282	eP	P	06 58 14.7	-0.1
	comp=Z,9.0nm,0.6s						
BRDH	Bariadhala	26.69	275	LR	LR	07 09 46.8	
	comp=Z,113nm,19.7s,baz=124,slow=38						
NLAI	Namlea	26.75	165	P	P	06 58 15.7	-2.9
ULN	Ulaanbaatar	27.16	340	eP	P	06 58 22.7	+0.5
	comp=Z,2.2nm,1.0s						
LSA	Lhasa	27.21	291	eP	P	06 58 23.8	+0.5
	comp=Z,4.9nm,0.6s						
SONA0	Songino Array	27.35	339	eP	P	06 58 24.6	+0.7
SONM	Songino Array	27.35	339	P	P	06 58 24.6	+0.7
	comp=Z,1.0nm,0.8s,baz=151,slow=10.0,SNR=8.6						
SONM				LR	LR	07 10 33.7	
	comp=Z,143nm,18.6s,baz=190,slow=39						
SONA1	Songino Array	27.35	339	eP	P	06 58 25.1	+1.1
KLR	Kul'dur	27.70	16	P	P	06 58 27.9	+1.0
	comp=Z,0.5nm,0.6s,baz=180,slow=18,SNR=2.6						
KLR				LR	LR	07 10 44.0	
	comp=Z,172nm,18.4s,baz=205,slow=39						
ASAJ	Asahikawa	27.83	35	LR	LR	07 10 11.5	
	comp=Z,252nm,19.4s,baz=256,slow=38						
MASI	Maura Aman, Be	31.50	217	P	P	06 59 01.4	+0.5
JAY	Jayapura	31.98	140	LR	LR	07 10 18.5	
	comp=Z,108nm,21.7s,baz=9.0,slow=33						
MK01	Makanchi Array	38.88	317	eP	P	07 00 05.0	+0.8
MK31	Makanchi Array	38.90	317	eP	P	07 00 04.7	+0.4
	comp=Z,1.8nm,1.0s						
MK32	Makanchi Array	38.90	317	eP	P	07 00 05.1	+0.7
MK32				ePcP	PcP	07 02 15.1	+0.1
MKAR	Makanchi Array	38.90	317	eP	P	07 00 05.4	+1.1
	comp=Z,8.7nm,1.0s						
MKAR				PcP	PcP	07 02 15.1	+0.1
MKAR	Makanchi Array	38.90	317	P	P	07 00 05.1	+0.7
	comp=Z,0.7nm,0.6s,baz=111,slow=10,SNR=9.8						
MKAR				PcP	PcP	07 02 15.1	+0.1
	comp=Z,0.8nm,0.9s,baz=94,slow=4.8,SNR=4.2						
MKAR				LR	LR	07 19 03.9	
	comp=Z,30nm,20.6s,baz=82,slow=41						
ZALV	Zalesovo Beam	41.03	328	eP	P	07 00 22.1	+0.2
ZALV	Zalesovo Beam	41.03	328	P	P	07 00 22.3	+0.4
	comp=Z,1.8nm,0.7s,baz=106,slow=9.5,SNR=6.4						
ZAA1	Zalesovo Array	41.04	328	eP	P	07 00 22.3	+0.4
FITZ	Fitzroy Crossi	41.05	173	P	P	07 00 20.1	-2.2
	comp=Z,1.5nm,0.5s,baz=16,slow=6.7,SNR=9.8						
PETK	Petropavlovsk-	41.21	33	LR	LR	07 16 53.3	
	comp=Z,84nm,21.5s,baz=237,slow=35						
KURK	Kurchatov	42.74	321	eP	P	07 00 36.5	+0.6
KURBB	Kurchatov Arra	42.75	321	P	P	07 00 36.5	+0.5
	comp=Z,1.0nm,0.8s,baz=123,slow=6.5,SNR=4.0						
COEN	Coen	42.79	147	eP	P	07 00 35.2	-1.5
	comp=Z,13nm,0.7s						
H11N1	WAKE ISLAND Hy	43.10	85	T	T	07 46 09.8	
	baz=282,slow=74,SNR=10						
H11N2	WAKE ISLAND Hy	43.10	85	T	T	07 46 02.4	
	baz=282,slow=74,SNR=18						
H11N3	WAKE ISLAND Hy	43.12	85	T	T	07 46 03.7	
	baz=282,slow=74,SNR=16						
H11S3	WAKE ISLAND Hy	43.19	87	T	T	07 46 28.7	
	baz=284,slow=74,SNR=25						
H11S1	WAKE ISLAND Hy	43.20	87	T	T	07 46 23.2	
	baz=284,slow=74,SNR=13						
H11S2	WAKE ISLAND Hy	43.21	87	T	T	07 46 28.7	
	baz=284,slow=74,SNR=12						
WRAB	Tennant Creek	44.65	161	eP	P	07 00 49.6	-1.9
	comp=Z,12nm,0.6s						
WR1	Warramunga Arr	44.65	161	eP	P	07 00 49.6	-2.0
	comp=Z,16nm,0.6s						
WR1				ePcP	PcP	07 02 33.0	-1.3
WRA	Warramunga Arr	44.65	161	P	P	07 00 49.6	-2.0
	comp=Z,11nm,0.6s,baz=344,slow=8.7,SNR=111						
WRA				PcP	PcP	07 02 33.0	-1.3
	comp=Z,1.5nm,0.8s,baz=335,slow=3.6,SNR=4.6						
WRA				LR	LR	07 19 35.2	
	comp=Z,42nm,20.1s,baz=135,slow=36						
WB2	Warramunga Arr	44.66	161	eP	P	07 00 48.7	-2.9
AS31	Alice Springs	48.07	164	eP	P	07 01 17.2	-1.2
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	48.07	164	P	P	07 01 17.3	-1.1
	comp=Z,3.5nm,0.5s,baz=355,slow=14,SNR=64						
ASAR				PcP	PcP	07 02 45.2	-0.9
	comp=Z,1.8nm,0.7s,baz=358,slow=3.7,SNR=5.9						
AS01	Alice Springs	48.08	163	eP	P	07 01 17.0	-1.5
BVAR	Borovoye Array	48.33	322	P	P	07 01 21.2	+1.0
	comp=Z,0.5nm,0.5s,baz=91,slow=10,SNR=4.1						
CTA	Charters Tower	49.52	148	P	P	07 01 28.7	-1.0
	comp=Z,3.6nm,0.7s,baz=344,slow=8.8,SNR=7.8						
CTAO	Charters Tower	49.52	148	eP	P	07 01 28.8	-0.9
	comp=Z,5.7nm,0.9s						
ABKAR	Akbulak array	53.96	315	eP	P	07 02 02.7	+0.2
	comp=Z,1.9nm,1.0s						
GEYT	Alibeck	54.99	301	LR	LR	07 29 16.2	
	comp=Z,61nm,18.4s,baz=75,slow=40						
STKA	Stephens Creek	58.06	159	eP	P	07 02 30.4	-1.5
	comp=Z,0.5nm,0.6s						
STKA	Stephens Creek	58.06	159	P	P	07 02 30.4	-1.5
	comp=Z,2.2nm,0.6s,baz=338,slow=5.5,SNR=10						
GNI	Garni	65.09	305	LR	LR	07 36 35.7	
	comp=Z,28nm,19.3s,baz=95,slow=40						
KBZ	Khabaz	65.87	309	P	P	07 03 25.4	+1.0
	comp=Z,0.7nm,0.6s,baz=135,slow=2.9,SNR=2.3						
KDAK	Kodiak Island	69.24	35	P	P	07 03 44.8	-0.7
	comp=Z,4.6nm,0.7s,baz=246,slow=7.9,SNR=4.6						
ARA0	ARCESS Array S	70.52	338	eP	P	07 03 54.4	+1.2
ARCES	ARCESS Array B	70.52	338	P	P	07 03 54.4	+1.2
	comp=Z,6.0nm,1.0s,baz=59,slow=5.7,SNR=4.6						
ILAR	Eielson Array	70.58	27	P	P	07 03 52.5	-1.1
	comp=Z,0.7nm,0.7s,baz=287,slow=6.9,SNR=8.1						
SPITS	Spitsbergen Ar	70.61	348	LR	LR	07 39 15.1	
	comp=Z,54nm,18.1s,baz=185,slow=40						
FIA0	FINESS Array S	72.28	330	eP	P	07 04 04.3	+0.4
FINES	FINESS Array B	72.28	330	P	P	07 04 04.3	+0.4
	comp=Z,1.2nm,0.7s,baz=61,slow=6.5,SNR=2.7						
AKASG	Malin Array Be	73.47	318	P	P	07 04 11.3	+0.1
	comp=Z,0.1nm,0.2s,baz=56,slow=6.4,SNR=2.8						
INK	Inuvik	74.60	22	eP	P	07 04 16.6	-0.8
	comp=Z,5.2nm,0.9s						
INK	Inuvik	74.60	22	P	P	07 04 16.5	-0.9
	comp=Z,4.4nm,0.9s,baz=298,slow=6.5,SNR=16						
MLR	Muntele Rosu	77.15	314	LR	LR	07 39 43.8	
	comp=Z,38nm,18.5s,baz=34,slow=37						
NOA	NORSAR Array B	79.10	332	LR	LR	07 43 02.3	
	comp=Z,33nm,18.9s,baz=60,slow=38						
YKA	Yellowknife Ar	84.34	23	P	P	07 05 09.9	-0.7
	comp=Z,1.1nm,0.6s,baz=311,slow=4.8,SNR=35						
YKB5	Yellowknife Ar	84.34	23	eP	P	07 05 09.1	-1.5

IDC ***19*** *06:53:07.3±1.5, 11°.00S×164°.66E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.8/41, mbtmp3.9/7, ML3.7/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/31, Error ellipse: s-maj=44.8km s-min=24.8km az=122.0*

ISCJB ***19*** *06:53:09.7±1.0, 11°.2S±0°.1×164°.7E±0°.2, h29^{km}, mb3.7/5, MS4.0/1, Error ellipse: s-maj=24.5km s-min=17.4km az=4.1*

ISC 19 06:53:11.6±1.2**, 11°.1S**±0°.1×**164°.7E**±0°.2**, h29^{km}, n15, σ0^{s}.37**/7**, mb3.8**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.93	289	LR	LR	06 56 12.8	
	comp=Z,114nm,19.2s,baz=83,slow=38						
DZM	Mont Dzumac	11.04	171	Pn	Pn	06 55 47.9	+0.1
	0.6nm,0.3s,baz=354,slow=9.8,SNR=16						
DZM				LR	LR	06 59 07.5	
	comp=Z,56nm,20.7s,baz=196,slow=32						
CTA	Charters Tower	19.84	241	P	Pn	06 57 42.2	+0.2
	0.2nm,0.3s,baz=65,slow=8.2,SNR=5.5						
H11S2	WAKE ISLAND Hy	29.47	4	T	T	07 30 11.3	
	baz=185						
H11S3	WAKE ISLAND Hy	29.48	4	T	T	07 30 14.7	
	baz=185						
H11S1	WAKE ISLAND Hy	29.49	4	T	T	07 30 11.2	
	baz=185						
WRA	Warramunga Arr	30.47	250	P	P	06 59 21.9	-0.2
	2.1nm,0.6s,baz=79,slow=9.1,SNR=19						
H11N1	WAKE ISLAND Hy	30.70	4	T	T	07 31 51.6	
	baz=183						
H11N3	WAKE ISLAND Hy	30.70	4	T	T	07 31 42.2	
	baz=183						
H11N2	WAKE ISLAND Hy	30.72	4	T	T	07 31 47.2	
	baz=183						
ASAR	Alice Springs	31.82	243	P	P	06 59 33.7	-0.4
	0.9nm,0.7s,baz=63,slow=10,SNR=11						
RAR	Rarotonga	35.53	111	LR	LR	07 11 26.9	
	comp=Z,302nm,20.9s,baz=301,slow=31						
SONM	Songino Array	78.08	324	P	P	07 05 08.4	+0.5
	0.4nm,0.7s,baz=124,slow=7.7,SNR=3.0						
ILAR	Eielson Array	83.91	19	P	P	07 05 38.1	-0.3
	0.4nm,0.8s,baz=224,slow=5.0,SNR=2.9						
MKAR	Makanchi Array	92.83	317	P	P	07 06 21.6	-0.1
	0.3nm,0.8s,baz=96,slow=5.9,SNR=2.8						

ISN ***19*** *07:00:43.2±0.6, 32°.68N×48°.37E, h3^{km}±7^{km}, ML3.5*

TEH ***19*** *07:00:45.0, 32°.65N×48°.24E, h8^{km}, ML3.4*

ISCJB ***19*** *07:00:46.6±0.3, 32°.65N±0°.03×48°.24E±0°.03, h15^{km}, mb3.5/5, Error ellipse: s-maj=4.9km s-min=3.5km az=9.6*

IDC ***19*** *07:00:46.2±2.4, 33°.07N×48°.20E, h0^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.5/29, mbtmp3.5/6, Error ellipse: s-maj=47.2km s-min=31.4km az=164.0*

THR ***19*** *07:00:47.0, 32°.69N×48°.21E, h17^{km}, ML3.4*

ISC 19 07:00:47.0±0.7**, 32°.67N**±0°.04×**48°.24E**±0°.03**, h15^{km}, n40, σ1^{s}.51**/46**, mb3.4**/5**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	Shooshtar-Gavs	0.74	139	ePg	Pg	07 01 01.6	+0.2
SHGR	Shooshtar-Gavs	0.74	139	ePg	Pg	07 01 01.6	+0.2
IKMR	Kamar-syah	0.85	8	ePg	Pb	07 01 01.1	-2.4
IKMR				IAMB	IAmb	07 01 19.7	
	comp=Z,0.0nm,0.5s						
IKFM	Kafar-mosalman	0.91	339	ePg	Pb	07 01 02.4	-2.0
IKFM				IAMB	IAmb	07 01 20.4	
	comp=Z,0.0nm,0.4s						
AHWZ	Ahwaz	1.38	165	ePg	Pn	07 01 11.7	0.0
AHWZ				IAMB	IAmb	07 01 34.7	
	comp=Z,0.0nm,0.1s						
HSAM	Samen	1.57	11	ePn	Pb	07 01 15.3	-0.5
HSAM				IAMB	IAmb	07 01 40.1	
	comp=N,0.0nm,0.8s						
IKOM	Komasi	1.62	338	ePn	Pb	07 01 16.2	-0.4
IKOM				IAMB	IAmb	07 01 44.4	
	comp=Z,0.0nm,0.9s						
KHMZ	Khomeyn	1.79	53	ePn	Pb	07 01 19.1	-0.6
KHMZ	Khomeyn	1.79	53	ePn	Pb	07 01 19.1	-0.6
KHMZ				eSg	Sg	07 01 44.7	-0.1
IBDR	Badra	1.99	283	ePn	Pn	07 01 21.0	+1.0
IBDR				eSn	Sb	07 01 49.0	+1.6
IGHG	Ghaleghazi	2.16	320	ePn	Pb	07 01 24.4	-1.5
IGHG				IAMB	IAmb	07 02 04.0	
	comp=Z,5µm,0.9s						
IVIS	Veis	2.18	328	ePn	Pn	07 01 23.2	+0.4
IVIS				IAMB	IAmb	07 02 03.4	
	comp=Z,2µm,0.8s						
HAGD	Aghdareh	2.27	19	ePn	Pn	07 01 25.8	+1.6
HAGD				IAMB	IAmb	07 02 02.3	
	comp=Z,0.0nm,0.6s						
ZNGN	Zangian	2.28	103	ePn	Pn	07 01 24.1	-0.3
ROKH	ROKH	2.39	97	ePn	Pn	07 01 26.5	+0.7
ROKH				IAMB	IAmb	07 02 08.8	
	comp=Z,0.0nm,0.5s						
ASAO	Ashtian	2.39	38	ePn	Pn	07 01 27.5	+1.6
ASAO	Ashtian	2.39	38	eAML	AML	07 02 08.5	
	comp=E,286nm,0.9s						
ASAO	Ashtian	2.39	38	ePn	Pn	07 01 27.5	+1.6
NSR	Nassriya	2.43	228	ePn	Pn	07 01 26.0	-0.2
NSR				eSn	Sn	07 01 57.0	+1.3
SNGE	Sanandaj	2.52	343	ePn	Pb	07 01 30.0	-2.1
SNGE	Sanandaj	2.52	343	eAML	AML	07 02 18.3	
	comp=E,128nm,0.6s						
SNGE	Sanandaj	2.52	343	ePn	Pb	07 01 30.0	-2.1
SNGE				eSg	Sg	07 02 05.2	-3.0
IKLH	Kolahrood	2.88	76	ePn	Pn	07 01 33.8	+1.2
IKLH				IAMB	IAmb	07 02 35.7	
	comp=Z,698nm,1.0s						
IRAZ	Razeghan	3.07	27	ePn	Pn	07 01 37.4	+2.3
IRAZ				IAMB	IAmb	07 02 41.1	
	comp=Z,1µm,0.8s						
IGAR	Gharneh	3.23	94	ePn	Pn	07 01 37.6	+0.3
IGAR				IAMB	IAmb	07 01 44.3	
	comp=Z,498nm,0.3s						
BHD	Baghdad	3.29	281	ePn	Pn	07 01 39.0	+1.0
BHD				eSn	Sn	07 02 20.0	+3.1
KLNJ	Kolanjah	3.30	119	ePn	Pn	07 01 38.4	-0.1
KLNJ				IAMB	IAmb	07 02 53.1	
	comp=Z,0.0nm,0.5s						
IZEF	Zefreh	3.46	85	ePn	Pn	07 01 41.7	+1.2
IZEF				IAMB	IAmb	07 02 05.8	
	comp=Z,200nm,0.4s						
KRSH	Karshahi	3.51	67	ePn	Pn	07 01 42.0	+0.8
IRAM	Ramesheh	3.62	103	ePn	Pn	07 01 42.2	-0.5
IRAM				IAMB	IAmb	07 02 32.6	
	comp=Z,237nm,0.4s						
IKAZ	Kazeroun	4.22	132	ePn	Pn	07 01 51.6	+0.5
IKAZ				IAMB	IAmb	07 03 28.9	
	comp=Z,576nm,0.9s						
IKRK	Kirkuk	4.23	311	ePn	Pn	07 01 52.0	+1.2
IKRK				eSn	Sn	07 02 42.0	+2.1
MSL	Mosul	5.63	313	ePn	Pn	07 02 11.0	+0.9
MSL				eSn	Sn	07 03 15.0	+0.5
RTB	Rutbah	6.68	275	ePn	Pn	07 02 26.0	+1.4
RTB				eSn	Sn	07 03 41.0	+0.5
BRTR	Keskin Array B	13.72	305	Pn	Pn	07 04 03.2	+2.2
	baz=123,slow=10,SNR=1.8						
AKASG	Malin Array Be	22.82	328	P	P	07 05 45.8	-3.4
	comp=Z,0.1nm,0.3s,baz=126,slow=9.6,SNR=1.5						
MKAR	Makanchi Array	29.49	51	P	P	07 06 49.9	-0.5
	comp=Z,0.4nm,0.7s,baz=247,slow=10,SNR=4.7						
FINES	FINESS Array B	32.17	340	P	P	07 07 12.1	-1.7
	comp=Z,4.0nm,1.1s,baz=148,slow=8.2,SNR=4.0						
ARCES	ARCESS Array B	39.06	348	P	P	07 08 11.7	-1.1
	comp=Z,1.5nm,0.7s,baz=162,slow=9.2,SNR=1.4						
TORD	Torodi Ar. Bea	46.64	257	P	P	07 09 17.0	+2.0
	comp=Z,0.2nm,0.5s,baz=72,slow=9.3,SNR=1.5						

NNC 19 07:02:11.2±1.9**, 41°.63N**×**78°.09E, h0^{km}, mb3.0, mpv2.6, 5C-1D, Error ellipse: s-maj=14.7km s-min=6.9km az=170.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	Podgornoye	1.99	31	Pg	Pn	07 02 45.2	-1.0
	1.5nm,0.2s						
PDGK				Lg	Lg	07 03 11.6	
	1.0nm,0.3s						
PDGK	Podgornoye	1.99	31	⇓Pn	Pn	07 02 45.9	-0.4
	0.8nm,0.3s						
PDGK				⇑Sn	Sb	07 03 14.2	+0.4
	0.9nm,0.4s						
KST	Kastek	2.11	313	Pg	Pb	07 02 50.3	-0.2
	1.8nm,0.3s						
KST				Lg	Lg	07 03 20.1	
	3.3nm,0.4s						
TKM2	Tokmak 2	2.25	306	⇑Pg	Pb	07 02 52.0	-0.9
	1.0nm,0.6s						
TKM2				⇑Lg	Lg	07 03 25.4	
	2.0nm,0.3s						
KTBS	Karatobe	2.32	334	Pg	Pb	07 02 53.0	-1.0
	1.7nm,0.3s						
KTBS				Lg	Lg	07 03 25.2	
	4.6nm,0.2s						
DGS	Degeres	2.35	314	Pg	Pb	07 02 54.8	+0.3
	1.8nm,0.2s						
DGS				Lg	Lg	07 03 28.0	
	5.4nm,0.3s						
CHKK	Chushkaly	2.36	340	Pg	Pb	07 02 53.3	-1.3
	4.2nm,0.2s						
CHKK				Lg	Lg	07 03 25.7	
	22nm,0.3s						
ARXS	Arharly	2.59	356	Pg	Pb	07 02 57.3	-1.2
	3.4nm,0.5s						
ARXS				Lg	Lg	07 03 32.0	
	6.9nm,0.4s						
KUU	Kurty	2.60	331	Pg	Pb	07 02 58.4	-0.4
	1.1nm,0.3s						
KUU				Lg	Lg	07 03 33.9	
	3.3nm,0.3s						
AAK	Ala-Archa	2.85	292	⇑Pg	Pg	07 03 04.7	-1.2
	1.5nm,0.9s						
AAK				⇑Lg	Lg	07 03 37.8	
	1.1nm,0.6s						

KRNET ***19*** *07:15:10.5±0.1, 42°.04N×79°.14E, h16^{km}, mb2.4*

SOME ***19*** *07:15:11.7, 42°.08N×79°.15E, h15^{km}*

NNC ***19*** *07:15:11.4±0.7, 42°.12N×79°.15E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=5.0km s-min=2.4km az=149.0*

ISC 19 07:15:09.2±1.9**, 42°.02N**±0°.05×**79°.17E**±0°.05**, h5^{km}**±11^{km}**, n39, σ1^{s}.22**/69**, 9C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.73	309	⇓iP	Pg	07 15 24.0	+0.6
	baz=9.0						
PRZ				⇓iS	Sg	07 15 33.4	+0.5
	baz=9.0						
TARG	Taragay, Kyrgy	1.06	254	⇑iP	Pb	07 15 30.2	-0.2
	baz=53						
TARG				⇑iS	Sb	07 15 44.3	-0.5
	baz=53						
UZB	Uzynbulak	1.13	354	P	Pb	07 15 31.2	-0.2
	3.3nm,0.2s						
UZB				S	Sb	07 15 45.6	-0.8
	4.4nm,0.3s						
UZB	Uzynbulak	1.13	354	eP	Pb	07 15 31.2	-0.2
	baz=55						
UZB				eS	Sg	07 15 46.2	+0.7
	baz=55						
UZB	Uzynbulak	1.13	354	eP	Pb	07 15 31.2	-0.2
	3.7nm,0.2s						
UZB				eS	Sb	07 15 45.1	-1.3
	4.8nm,0.3s						
SATY	Saty	1.18	331	P	Pn	07 15 31.9	-0.7
	1.4nm,0.2s						
SATY				S	Sb	07 15 46.7	-1.2
	26nm,0.1s						
SATY	Saty	1.18	331	eP	Pn	07 15 32.0	-0.5
	0.5nm,0.1s						
SATY				eS	Sb	07 15 46.7	-1.2
	26nm,0.1s						
PDGK	Podgornoye	1.32	10	P	Pb	07 15 34.9	+0.2
	1.1nm,0.1s						
PDGK				S	Sn	07 15 51.8	-0.9
	1.9nm,0.2s						
PDGK	Podgornoye	1.32	10	⇓P	Pn	07 15 34.1	-0.5
	0.2nm,0.2s						
PDGK				⇓S	Sn	07 15 51.6	-1.1
	0.8nm,0.3s						
PDGK	Podgornoye	1.32	10	⇓iP	Pn	07 15 34.3	-0.2
	baz=11						
PDGK				⇓iS	Sg	07 15 52.6	+0.8
	baz=11						
KDJ	Kajisay	1.49	275	⇑iP	Pb	07 15 37.6	+0.1
	baz=74						
KDJ				⇑iS	Sg	07 15 57.1	0.0
	baz=74						
KURS	Kuram	1.64	334	P	Pg	07 15 40.8	+0.1
	1.8nm,0.6s						
KURS				S	Sg	07 16 01.9	0.0
	3.2nm,0.5s						
KURS	Kuram	1.64	334	eP	Pg	07 15 40.8	+0.1
	baz=34						
KURS				eS	Sg	07 16 01.7	-0.2
	baz=34						
KURS	Kuram	1.64	334	eP	Pg	07 15 40.8	+0.1
	0.5nm,0.3s						
KURS				eS	Sg	07 16 01.7	-0.2
	3.2nm,0.5s						
MDOK	Medeo	1.94	307	⇑Pn	Pb	07 15 44.5	-0.6
	1.2nm,0.4s						
MDOK				Sn	Sb	07 16 10.0	+0.3
	6.1nm,0.6s						
MDOK	Medeo	1.94	307	Pg	Pb	07 15 45.7	+0.6
	3.5nm,0.2s						
MDOK				Lg	Lg	07 16 10.3	
	8.6nm,0.4s						
MDOK	Medeo	1.94	307	eP	Pb	07 15 45.7	+0.6
	baz=7.0						
MDOK				eS	Sb	07 16 10.3	+0.6
	baz=7.0						
MDOK	Medeo	1.94	307	eP	Pb	07 15 45.7	+0.6
	3.5nm,0.2s						
MDOK				eS	Sb	07 16 10.3	+0.6
	8.6nm,0.4s						
ULHL	Ulahol	2.19	277	⇓iP	Pb	07 15 48.5	-1.0
	baz=76						
ULHL				⇓iS	Sb	07 16 16.8	-0.3
	baz=76						
DJR	Jarkent	2.35	11	Pg	Pb	07 15 53.5	+1.4
	0.8nm,0.3s						
DJR				Lg	Lg	07 16 23.6	
	2.4nm,0.2s						
DJR	Jarkent	2.35	11	eP	Pb	07 15 53.5	+1.4
	0.2nm,0.1s						
DJR				eS	Sg	07 16 23.6	-1.1
	2.2nm,0.2s						
ARXS	Arharly	2.40	336	Pg	Pb	07 15 54.0	+1.0
	1.0nm,0.2s						
ARXS				Lg	Lg	07 16 24.4	
	12nm,0.4s						
ARXS	Arharly	2.40	336	eP	Pb	07 15 54.0	+1.0
	1.0nm,0.2s						
ARXS				eS	Sg	07 16 24.4	-1.9
	12nm,0.4s						
CHKK	Chushkaly	2.43	319	Pg	Pb	07 15 54.7	+1.2
	3.4nm,0.2s						
CHKK				Lg	Lg	07 16 25.9	
	30nm,0.3s						
CHKK	Chushkaly	2.43	319	eP	Pb	07 15 54.7	+1.2
	3.4nm,0.2s						

CHKK				*e*S	**Sg**	**07 16 25.9**	**-1.5**
	30nm,0.3s						
BOOM	**Boomskoye usch**	**2.45**	**282**	⇓*i*P	**Pb**	**07 15 52.2**	**-1.6**
	baz=82						
BOOM				⇓*i*S	**Sb**	**07 16 22.7**	**-1.6**
	baz=82						
NRN	**Naryn**	**2.45**	**257**	⇑*i*P	**Pb**	**07 15 52.4**	**-1.5**
	baz=56						
NRN				⇑*i*S	**Sb**	**07 16 23.4**	**-1.1**
	baz=56						
KTBS	**Karatobe**	**2.49**	**313**	Pg	**Pb**	**07 15 55.5**	**+1.0**
	4.4nm,0.3s						
KTBS				Lg	Lg	07 16 27.7	
	15nm,0.2s						
KTBS	**Karatobe**	**2.49**	**313**	*e*P	**Pb**	**07 15 54.5**	**0.0**
	baz=12						
KTBS				*e*S	**Sb**	**07 16 26.1**	**+0.6**
	baz=12						
KTBS	**Karatobe**	**2.49**	**313**	*e*P	**Pb**	**07 15 55.5**	**+1.0**
	4.4nm,0.3s						
KTBS				*e*S	**Sg**	**07 16 27.1**	**-2.1**
	15nm,0.2s						
KST	**Kastek**	**2.58**	**294**	Pg	**Pb**	**07 15 57.7**	**+1.6**
	2.0nm,0.2s						
KST				Lg	Lg	07 16 30.5	
	4.4nm,0.4s						
KST	**Kastek**	**2.58**	**294**	*e*P	**Pb**	**07 15 57.7**	**+1.6**
	2.0nm,0.2s						
KST				*e*S	**Sg**	**07 16 30.5**	**-1.6**
	4.4nm,0.4s						
DGS	**Degeres**	**2.79**	**297**	Pg	**Pb**	**07 16 01.3**	**+1.7**
	1.4nm,0.4s						
DGS				Lg	Lg	07 16 36.3	
	4.2nm,0.2s						
DGS	**Degeres**	**2.79**	**297**	*e*P	**Pb**	**07 16 01.4**	**+1.7**
	1.4nm,0.4s						
DGS				*e*S	**Sg**	**07 16 37.3**	**-1.6**
	4.2nm,0.2s						
TKM2	**Tokmak 2**	**2.79**	**290**	⇓Pg	**Pb**	**07 16 01.3**	**+1.5**
	0.9nm,0.6s						
TKM2				⇓Lg	Lg	07 16 36.4	
	1.3nm,0.5s						
TKM2	**Tokmak 2**	**2.79**	**290**	⇓*i*P	**Pn**	**07 15 57.0**	**+2.2**
	baz=90						
TKM2				⇓*i*S	**Sb**	**07 16 31.1**	**-3.3**
	baz=90						
KUU	**Kurty**	**2.80**	**313**	Pg	**Pb**	**07 16 01.0**	**+1.4**
	0.7nm,0.3s						
KUU				Lg	Lg	07 16 36.5	
	8.8nm,0.2s						
KUU	**Kurty**	**2.80**	**313**	*e*P	**Pb**	**07 16 01.0**	**+1.4**
	0.6nm,0.2s						
KUU				*e*S	**Sg**	**07 16 36.5**	**-2.5**
	9.5nm,0.3s						
ARLS	**Aral**	**3.62**	**269**	⇑*i*P	**Pn**	**07 16 08.7**	**+2.6**
	baz=69						
ARLS				⇑*i*S	**Sn**	**07 16 50.9**	**+1.5**
	baz=69						

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*ISCJB **19** 07:17:03.2±0.4, 33°.94S±0°.09×56°.16E±0°.09, h10^{km}, mb4.0/24, MS3.6/8, Error ellipse: s-maj=13.6km s-min=9.5km az=33.6*

*IDC **19** 07:17:03.4±0.6, 33°.84S×56°.15E, h0^{km}, mb3.9/16, mb1 4.0/17, mb1mx3.9/55, mbtmp4.0/17, ML4.2/1, MS3.6/9, Ms1 3.6/9, ms1mx3.2/42, Error ellipse: s-maj=19.7km s-min=16.7km az=21.0*

*NEIC **19** 07:17:05.0±0.2, 33°.90S×56°.15E, h10^{km}, mb4.5/11, Error ellipse: s-maj=7.7km s-min=5.4km az=33.0*

ISC 19 07:17:05.1±0.6, 33°.8S±0°.1×56°.1E±0°.1, h10^{km}, n55, σ0.^{s}47/40, mb4.1/24, MS3.7/8, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABPO	**Ambohimpanom**	**16.76**	**330**	*e*Pn	**P**	**07 21 01.4**	**-1.0**
	15nm,1.1s						
OPO	**Ambohidratompo**	**17.17**	**330**	P	**P**	**07 21 06.9**	**-0.1**
	0.8nm,0.3s,baz=137,slow=16,SNR=3.5						
OPO				LR	LR	07 26 09.3	
	comp=Z,213nm,20.8s,baz=170,slow=32						
BOSA	**Boshof**	**26.84**	**273**	P	**P**	**07 22 45.1**	**-0.8**
	2.7nm,0.9s,baz=90,slow=3.0,SNR=3.2						
BOSA				LR	LR	07 31 01.1	
	comp=Z,62nm,19.9s,baz=160,slow=31						
MATP	**Matopo**	**27.87**	**292**	P	**P**	**07 22 54.6**	**-0.6**
	0.7nm,0.4s,baz=153,slow=6.8,SNR=2.8						
MATP				LR	LR	07 32 07.8	
	comp=Z,82nm,19.4s,baz=146,slow=32						
LBTB	**Lobatse**	**27.91**	**280**	LR	LR	07 31 30.3	
	comp=Z,80nm,18.1s,baz=139,slow=31						
H08S1	**Diego Carcia H**	**30.13**	**34**	T	T	07 54 22.9	
	baz=207,slow=75,SNR=47						
H08S2	**Diego Garcia H**	**30.14**	**34**	T	T	07 54 27.2	
	baz=207,slow=75,SNR=31						
H08S3	**Diego Garcia H**	**30.15**	**34**	T	T	07 54 26.1	
	baz=207,slow=75,SNR=50						
H08N3	**Diego Garcia H**	**30.64**	**30**	T	T	07 55 02.1	
	baz=204,slow=76,SNR=25						
H08N1	**Diego Carcia H**	**30.65**	**30**	T	T	07 55 02.4	
	baz=204,slow=76,SNR=25						
H08N2	**Diego Garcia H**	**30.66**	**30**	T	T	07 55 02.9	
	baz=204,slow=76,SNR=25						
MAW	**Mawson**	**34.03**	**175**	LR	LR	07 35 37.7	
	comp=Z,132nm,18.2s,baz=336,slow=33						
TSUM	**Tsumeb**	**37.20**	**283**	P	**P**	**07 24 17.4**	**+0.6**
	0.8nm,0.7s,baz=135,slow=10.0,SNR=3.9						
H01W2	**Cape Leeuwin H**	**47.31**	**108**	T	T	08 16 23.2	
	baz=254						
H01W3	**Cape Leeuwin H**	**47.32**	**108**	T	T	08 16 23.3	
	baz=254						
H01W1	**Cape Leeuwin H**	**47.33**	**108**	T	T	08 16 22.1	
	baz=254						
SNAA	**Sanae**	**48.57**	**201**	*e*P	**P**	**07 25 48.6**	**+0.3**
	7.2nm,1.3s						
SNAA	**Sanae**	**48.57**	**201**	P	**P**	**07 25 48.1**	**-0.2**
	2.8nm,1.1s,baz=273,slow=0.7,SNR=3.7						
QSPA	**South Pole Qui**	**56.34**	**180**	*e*P	**P**	**07 26 46.3**	**+0.2**
	12nm,1.4s						
QSPA	**South Pole Qui**	**56.34**	**180**	P	**P**	**07 26 46.5**	**+0.5**
	3.1nm,0.7s,baz=266,slow=1.7,SNR=18						
VNDA	**Vanda**	**60.53**	**166**	LR	LR	07 50 54.0	
	comp=Z,74nm,18.5s,baz=229,slow=34						
CM01	**Chiang Mai Arr**	**66.09**	**45**	*e*P	**P**	**07 27 52.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**66.11**	**45**	P	**P**	**07 27 52.3**	**-0.3**
	1.6nm,0.4s,baz=230,slow=6.9,SNR=7.6						
ASAR	**Alice Springs**	**67.50**	**104**	P	**P**	**07 28 00.9**	**-0.8**
	0.9nm,0.7s,baz=236,slow=5.9,SNR=10						
AS31	**Alice Springs**	**67.50**	**104**	*e*P	**P**	**07 28 01.3**	**-0.4**
	0.8nm,1.0s						
AS01	**Alice Springs**	**67.54**	**104**	*e*P	**P**	**07 28 01.1**	**-0.8**
SHL	**Shillong**	**68.16**	**35**	*e*P	**P**	**07 28 06.3**	**+0.5**
	7.0nm,1.1s						
WRA	**Warramunga Arr**	**69.65**	**101**	P	**P**	**07 28 14.9**	**-0.2**
	1.6nm,0.7s,baz=239,slow=5.4,SNR=18						
WR1	**Warramunga Arr**	**69.65**	**101**	*e*P	**P**	**07 28 14.9**	**-0.2**
	8.2nm,1.4s						
WB2	**Warramunga Arr**	**69.66**	**101**	*e*P	**P**	**07 28 14.6**	**-0.6**
	11nm,1.3s						
WRAB	**Tennant Creek**	**69.67**	**101**	*e*P	**P**	**07 28 14.5**	**-0.7**
	3.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**69.73**	**302**	P	**P**	**07 28 15.7**	**+0.2**
	0.5nm,0.9s,baz=142,slow=5.4,SNR=3.2						
TOA1	**Torodi Ar. Sit**	**69.73**	**302**	*e*P	**P**	**07 28 15.7**	**+0.1**
DBIC	**Dimbokro**	**70.29**	**293**	LR	LR	07 57 40.6	
	comp=Z,37nm,19.0s,baz=118,slow=35						
BRTR	**Keskin Array B**	**76.10**	**342**	P	**P**	**07 28 53.1**	**+0.1**
	0.5nm,0.6s,baz=152,slow=6.5,SNR=4.0						
BR101	**Keskin Array S**	**76.10**	**342**	*e*P	**P**	**07 28 53.1**	**+0.2**
KK31	**Karatay Array**	**77.70**	**11**	*e*P	**P**	**07 29 01.9**	**+0.2**
	5.2nm,1.5s						
AAK	**Ala-Archa**	**77.95**	**14**	P	**P**	**07 29 03.0**	**-0.3**
	0.7nm,0.4s,baz=180,slow=8.2,SNR=2.3						
KEST	**Kesra**	**81.86**	**323**	LR	LR	08 08 50.1	
	comp=Z,36nm,18.6s,baz=307,slow=38						
ABKAR	**Akbulak array**	**82.80**	**3**	*e*P	**P**	**07 29 29.2**	**+0.2**
	2.7nm,1.1s						
MK31	**Makanchi Array**	**83.66**	**18**	*e*P	**P**	**07 29 34.8**	**+1.2**
	3.2nm,1.6s						
MK32	**Makanchi Array**	**83.66**	**18**	*e*P	**P**	**07 29 33.7**	**+0.1**
MKAR	**Makanchi Array**	**83.66**	**18**	P	**P**	**07 29 33.7**	**+0.1**
	0.6nm,1.0s,baz=200,slow=7.7,SNR=4.1						
KURBB	**Kurchatov Arra**	**86.40**	**14**	P	**P**	**07 29 47.2**	**+0.1**
	0.2nm,0.4s,baz=206,slow=5.6,SNR=4.3						
KURK	**Kurchatov**	**86.51**	**14**	*e*P	**P**	**07 29 47.2**	**-0.5**
BVAR	**Borovoye Array**	**87.39**	**9**	P	**P**	**07 29 51.6**	**-0.4**
	1.0nm,0.8s,baz=141,slow=5.7,SNR=5.2						
AKASG	**Malin Array Be**	**87.46**	**343**	P	**P**	**07 29 52.7**	**+0.3**
	0.1nm,0.3s,baz=166,slow=4.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**90.89**	**16**	P	**P**	**07 30 08.5**	**+0.1**
	0.6nm,0.5s,baz=194,slow=5.2,SNR=2.1						
ZAA1	**Zalesovo Array**	**90.90**	**16**	*e*P	**P**	**07 30 08.5**	**+0.1**
ESDC	**Sonseca Array**	**91.84**	**318**	LR	LR	08 11 59.4	
	comp=Z,57nm,18.4s,baz=295,slow=36						
INK	**Inuvik**	**145.05**	**6**	*e*PKPbc	**PKPab**	**07 36 40.9**	**-0.2**
INK	**Inuvik**	**145.05**	**6**	PKPbc	**PKPdf**	**07 36 41.0**	**-0.6**
	11nm,1.1s,baz=358,slow=3.8,SNR=18						
ILAR	**Eielson Array**	**146.01**	**17**	PKPbc	**PKPdf**	**07 36 43.3**	**-0.2**
	1.1nm,0.8s,baz=325,slow=4.1,SNR=8.0						
YKA	**Yellowknife Ar**	**150.73**	**351**	PKPbc	**PKPbc**	**07 36 56.4**	**-0.3**
	1.5nm,0.7s,baz=13,slow=2.1,SNR=25						
YKB5	**Yellowknife Ar**	**150.73**	**351**	*e*PKPbc	**PKPbc**	**07 36 56.7**	**0.0**

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*ISCJB **19** 07:23:35.3±0.8, 10°.94S±0°.07×166°.0E±0°.1, h10^{km}, mb4.0/14, MS3.2/1, Error ellipse: s-maj=15.9km s-min=8.7km az=158.3*

*IDC **19** 07:23:35.8±1.3, 10°.75S×165°.98E, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.9/42, mbtmp4.0/9, ML4.6/2, MS3.3/2, Ms1 3.2/2, ms1mx2.7/33, Error ellipse: s-maj=39.2km s-min=23.4km az=124.0*

*NEIC **19** 07:23:36.6±0.9, 10°.82S×166°.08E, h10^{km}, mb4.4/8, Error ellipse: s-maj=17.2km s-min=7.4km az=55.0*

ISC 19 07:23:36.9±0.9, 10°.90S±0°.08×166°.0E±0°.1, h10^{km}, n31, σ1.^{s}06/28, mb4.0/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.17**	**283**	*e*Pn	**Pn**	**07 25 08.3**	**+0.1**
HNR	**Honiara**	**6.17**	**283**	Pn	**Pn**	**07 25 06.0**	**-2.2**
	16nm,0.3s,baz=207,slow=8.0,SNR=1.8						
MARNC	**Mare, Loyalty**	**10.69**	**170**	*e*Pn	**Pn**	**07 26 11.0**	**+0.8**
DZM	**Mont Dzumac**	**11.11**	**178**	*e*Pn	**Pn**	**07 26 16.9**	**+0.7**
DZM				Sn	**Sn**	**07 28 18.7**	**-1.9**
DZM	**Mont Dzumac**	**11.11**	**178**	Pn	**Pn**	**07 26 17.6**	**+1.5**
	4.3nm,0.3s,baz=289,slow=9.9,SNR=53						
DZM				Sn	**Sn**	**07 28 18.7**	**-1.9**
	0.1nm,0.3s,baz=104,slow=22,SNR=2.0						
DZM				LR	LR	07 30 10.0	
	comp=Z,122nm,20.5s,baz=28,slow=35						
ONTNC	**Ouen Toro**	**11.35**	**178**	*e*Pn	**Pn**	**07 26 20.4**	**+1.1**
PINNC	**Pines Island,**	**11.72**	**174**	*e*Pn	**Pn**	**07 26 25.9**	**+1.5**
CTA	**Charters Tower**	**21.12**	**242**	P	**P**	**07 28 23.7**	**+1.6**
	1.8nm,0.6s,baz=54,slow=12,SNR=4.5						
ARMA	**Armidale**	**23.59**	**212**	*e*P	**P**	**07 28 48.4**	**+0.2**
	29nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**29.21**	**1**	T	T	08 00 01.7	
	baz=181,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy**	**29.22**	**1**	T	T	08 00 02.0	
	baz=181,slow=76,SNR=35						
H11S1	**WAKE ISLAND Hy**	**29.23**	**1**	T	T	08 00 03.0	
	baz=181,slow=76,SNR=39						
BKZ	**Black Stump Fm**	**29.65**	**163**	*e*P	**P**	**07 29 42.1**	**-0.7**
	8.1nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**30.43**	**2**	T	T	08 01 33.6	
	baz=182,slow=76,SNR=26						
H11N3	**WAKE ISLAND Hy**	**30.44**	**2**	T	T	08 01 30.4	
	baz=182,slow=76,SNR=16						
H11N2	**WAKE ISLAND Hy**	**30.45**	**2**	T	T	08 01 34.7	
	baz=182,slow=76,SNR=17						
STKA	**Stephens Creek**	**30.74**	**224**	*e*P	**P**	**07 29 52.5**	**-0.1**
	1.2nm,1.1s						
STKA	**Stephens Creek**	**30.74**	**224**	P	**P**	**07 29 53.5**	**+1.0**
	1.9nm,0.7s,baz=47,slow=7.7,SNR=5.2						
STKA				LR	LR	07 41 04.6	
	comp=Z,57nm,18.7s,baz=26,slow=34						
WB2	**Warramunga Arr**	**31.79**	**250**	*e*P	**P**	**07 30 01.5**	**-0.4**
	9.4nm,1.4s						
WR1	**Warramunga Arr**	**31.80**	**250**	*e*P	**P**	**07 30 02.3**	**+0.3**
	3.9nm,0.8s						
WRA	**Warramunga Arr**	**31.80**	**250**	P	**P**	**07 30 02.3**	**+0.3**
	3.5nm,0.8s,baz=82,slow=9.0,SNR=32						
TOO	**Toolangi**	**32.34**	**211**	*e*P	**P**	**07 30 07.6**	**+1.1**
	14nm,1.0s						
AS31	**Alice Springs**	**33.11**	**243**	*e*P	**P**	**07 30 13.2**	**-0.4**
	0.7nm,1.0s						
ASAR	**Alice Springs**	**33.11**	**243**	P	**P**	**07 30 13.2**	**-0.4**
	0.9nm,0.7s,baz=63,slow=10.0,SNR=15						
ASAR				PcP	**PcP**	**07 32 58.1**	**+1.3**
	0.8nm,1.1s,baz=103,slow=2.9,SNR=2.7						
FITZ	**Fitzroy Crossi**	**39.69**	**255**	*e*P	**P**	**07 31 09.6**	**-0.1**
	3.1nm,0.6s						
SONA0	**Songino Array**	**78.72**	**324**	*e*P	**P**	**07 35 40.0**	**+0.3**
SONM	**Songino Array**	**78.72**	**324**	P	**P**	**07 35 40.0**	**+0.3**
	0.1nm,0.4s,baz=129,slow=3.9,SNR=2.5						
ILAR	**Eielson Array**	**83.29**	**18**	P	**P**	**07 36 03.3**	**-0.3**
	0.3nm,0.5s,baz=236,slow=5.4,SNR=5.1						
MK32	**Makanchi Array**	**93.61**	**317**	*e*P	**P**	**07 36 53.1**	**-0.5**
MKAR	**Makanchi Array**	**93.61**	**317**	P	**P**	**07 36 53.1**	**-0.5**
	0.4nm,0.8s,baz=109,slow=6.6,SNR=4.1						
ARCES	**ARCESS Array B**	**116.27**	**346**	PKP	**PKiKP**	**07 42 19.5**	**-0.7**
	4.8nm,1.1s,baz=70,slow=1.1,SNR=2.4						

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*DDA **19** 07:28:52.8, 37°.85N×29°.36E, h7^{km}±2^{km}, ML2.6*

*ISK **19** 07:28:53.5, 37°.94N×29°.29E, h5^{km}, ML2.4/6*

*ISCJB **19** 07:28:54.2±0.5, 37°.90N±0°.03×29°.33E±0°.04, h11^{km}, Error ellipse: s-maj=5.1km s-min=4.5km az=38.9*

ISC 19 07:28:54.0±0.9, 37°.93N±0°.03×29°.32E±0°.03, h11^{km}, n18, σ0.^{s}72/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHL	**Karahalli**	**0.43**	**22**	PG	**Pg**	**07 29 02.5**	**0.0**
KHAL	**Karahalli**	**0.47**	**17**	*i* P	**Pg**	**07 29 02.6**	**-0.5**
KHAL				IAML_P			
	comp=Z,2μm,0.1s						
TAVA	**DENIZLI_Tavas**	**0.56**	**215**	*i* P	**Pg**	**07 29 03.9**	**-1.0**
TAVA				*i* S	**Sg**	**07 29 11.2**	**-1.1**
BRDR	**BURDUR-Merkez**	**0.63**	**111**	*i* P	**Pg**	**07 29 05.4**	**-0.8**
BRDR				IAML_P			
	comp=Z,712nm,0.1s						
KZIL	**AFYON_Kizioren**	**0.73**	**63**	*i* P	**Pg**	**07 29 07.3**	**-0.8**
KULA	**Kula-Manisa**	**0.78**	**319**	PG	**Pb**	**07 29 09.5**	**-0.2**
KULA				SG	**Sb**	**07 29 20.9**	**+0.5**
MANT	**Manisa**	**0.82**	**314**	*i* P	**Pn**	**07 29 11.2**	**-0.5**
SHAP	**Saphane-Kutahy**	**1.10**	**356**	PN	**Pn**	**07 29 15.5**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.13**	**272**	PN	**Pb**	**07 29 15.5**	**-0.1**
AYDB				SN	**Sn**	**07 29 32.2**	**+0.8**
YER	**Yerkesik**	**1.14**	**227**	PN	**Pn**	**07 29 16.3**	**+0.4**
SHUT	**Suhut-Afyon**	**1.16**	**57**	PN	**Pg**	**07 29 17.2**	**+1.0**
BAGO	**Egridir - ISPA**	**1.16**	**86**	*i* P	**Pb**	**07 29 15.7**	**-0.5**
GDZ	**Gediz**	**1.17**	**6**	*i* P	**Pb**	**07 29 16.2**	**-0.1**
GDZ				IAML_P			
	comp=Z,2μm,0.1s						
AYDN	**Tasoluk**	**1.17**	**257**	*i* P	**Pg**	**07 29 16.6**	**+0.1**
AYDN				IAML_P			
	comp=Z,721nm,0.2s						
DEMI	**Demirci**	**1.21**	**337**	*i* P	**Pg**	**07 29 17.8**	**+0.5**
KORT	**Korkueli**	**1.23**	**138**	PN	**Pg**	**07 29 19.2**	**+1.5**
FETY	**Fethiye**	**1.30**	**188**	PN	**Pg**	**07 29 19.6**	**+0.6**
TVSB	**Tavsanli**	**1.53**	**4**	PN	**Pg**	**07 29 23.5**	**+0.2**

IDC 19 07:31:47.6±28.0, 19°.08S×173°.95W, h0^{km}, mb4.1/4, mb1 4.2/4, mb1mx3.7/39, mbtmp4.1/4, Error ellipse: s-maj=526.0km s-min=154.0km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.45**	**262**	P	P	07 39 03.9	+0.8
	1.6nm,0.4s,baz=87,slow=9.2,SNR=3.0						
STKA	**Stephens Creek**	**41.84**	**243**	P	P	07 39 39.6	+0.1
	1.6nm,0.4s,baz=90,slow=12,SNR=6.7						
ASAR	**Alice Springs**	**48.56**	**255**	P	P	07 40 32.8	-0.4
	1.3nm,0.5s,baz=98,slow=7.7,SNR=23						
WRA	**Warramunga Arr**	**48.59**	**260**	P	P	07 40 32.8	-0.6
	0.4nm,0.3s,baz=97,slow=7.6,SNR=13						

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*ISCJB **19** 07:32:17.4±1.0, 22°.3S±0°.1×179°.5W±0°.2, h579^{km}, mb3.5/6, Error ellipse: s-maj=23.2km s-min=13.7km az=5.5*

*IDC **19** 07:32:19.3±5.5, 22°.34S×179°.49W, h594^{km}±68^{km}, mb2.9/6, mb1 3.2/7, mb1mx3.0/37, mbtmp4.0/7, Error ellipse: s-maj=55.0km s-min=29.4km az=177.0*

ISC 19 07:32:17.7±0.9, 22°.4S±0°.1×179°.4W±0°.2, h579^{km}, n11, σ0.^{s}91/11, mb3.6/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**16.13**	**190**	P	**P**	**07 35 37.7**	**+0.7**
	1.5nm,0.3s,baz=346,slow=4.2,SNR=11						
URZ				S	**S**	**07 38 18.5**	**-0.9**
	0.2nm,0.3s,baz=287,slow=17,SNR=3.9						
CTA	**Charters Tower**	**32.04**	**268**	P	**P**	**07 37 58.4**	**+0.2**
	0.9nm,0.4s,baz=100,slow=11,SNR=2.1						
ASAR	**Alice Springs**	**42.84**	**259**	P	**P**	**07 39 26.3**	**+0.2**
	1.3nm,0.8s,baz=101,slow=8.2,SNR=12						
WRA	**Warramunga Arr**	**43.07**	**264**	P	**P**	**07 39 27.3**	**-0.6**
	0.6nm,0.3s,baz=94,slow=8.2,SNR=40						
NVAR	**Mina Array Bea**	**83.27**	**44**	P	**P**	**07 43 45.8**	**+1.2**
	0.3nm,0.5s,baz=249,slow=6.6,SNR=3.0						
CMAR	**Chiang Mai Arr**	**89.50**	**290**	P	**P**	**07 44 15.3**	**+1.0**
	0.8nm,0.2s,baz=93,slow=4.7,SNR=4.7						
ILAR	**Eielson Array**	**90.41**	**13**	P	**P**	**07 44 16.3**	**-1.2**
	0.3nm,0.8s,baz=211,slow=5.1,SNR=2.9						
BVAR	**Borovoye Array**	**119.63**	**319**	PKP	**PKPdf**	**07 50 01.4**	**-0.7**
	0.4nm,0.3s,baz=94,slow=3.5,SNR=3.1						
ARCES	**ARCESS Array B**	**130.49**	**349**	PKP	**PKPdf**	**07 50 21.9**	**-0.6**
	4.9nm,1.0s,baz=46,slow=2.6,SNR=3.3						
AKASG	**Malin Array Be**	**143.95**	**329**	PKP	PKPbc	07 50 46.0	-1.1
	0.3nm,0.3s,baz=43,slow=4.1,SNR=4.7						
BRTR	**Keskin Array B**	**147.05**	**309**	PKPbc	**PKPbc**	**07 50 56.3**	**-0.3**
	0.4nm,0.6s,baz=85,slow=5.0,SNR=2.9						

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*ISCJB **19** 07:44:28.3±0.6, 24°.05S±0°.07×66°.62W±0°.07, h195^{km}, mb3.6/11, Error ellipse: s-maj=12.3km s-min=5.9km az=36.5*

*IDC **19** 07:44:29.6±1.1, 23°.96S×66°.52W, h197^{km}±9^{km}, mb3.5/11, mb1 3.7/16, mb1mx3.5/38, mbtmp4.0/16, Error ellipse: s-maj=18.6km s-min=12.0km az=25.0*

*VAO **19** 07:44:29.4±0.4, 24°.38S×67°.00W, h232^{km}±5^{km}, mb4.0*

ISC 19 07:44:29.2±0.6, 23°.98S±0°.09×66°.57W±0°.08, h195^{km}, n41, σ1.^{s}41/39, mb3.9/11, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.55**	**302**	P	**Pn**	**07 45 14.9**	**+1.2**
	117nm,0.3s,baz=133,slow=6.6,SNR=680						
LVC				S	**Sn**	**07 45 49.7**	**+1.3**
	46nm,0.3s,baz=260,slow=20,SNR=12						
LVC	**Limon Verde**	**2.55**	**302**	*e*P	**Pn**	**07 45 14.9**	**+1.2**
LCO	**Las Campanas**	**6.23**	**216**	*e*P	Pn	07 45 52.9	-6.6
LPAZ	**La Paz**	**7.80**	**349**	P	**Pn**	**07 46 21.7**	**+1.2**
	0.8nm,0.3s,baz=167,slow=4.0,SNR=16						
LPAZ				S	**Sn**	**07 47 48.0**	**-0.8**
	0.3nm,0.3s,baz=209,slow=17,SNR=1.6						
LPAZ	**La Paz**	**7.80**	**349**	*e*P	Pn	07 46 25.3	+4.8
CPUP	**Villa Florida**	**8.69**	**108**	P	**Pn**	**07 46 30.7**	**-0.7**
	0.1nm,0.3s,baz=292,slow=12,SNR=6.6						
SIV	**San Ignacio**	**9.48**	**34**	P	**Pn**	**07 46 42.3**	**+0.4**
	0.3nm,0.3s,baz=234,slow=11,SNR=13						
TRCB	**Terra Rica**	**12.85**	**88**	*e*P	**P**	**07 47 29.0**	**+0.3**
CPSB	**Cacapava Do Su**	**13.31**	**122**	*e*P	**Pn**	**07 47 31.9**	**+1.1**
C2SB	**Chapadao do Su**	**13.80**	**71**	*e*P	**P**	**07 47 42.6**	**+3.4**
CNLB	**Canela**	**15.02**	**114**	*e*P	**P**	**07 47 53.1**	**+0.4**
FRTB	**Fartura**	**15.60**	**91**	*e*P	**P**	**07 48 01.2**	**+2.1**
ITRB	**Iturama**	**15.64**	**77**	*e*P	**P**	**07 48 02.6**	**+3.0**
TIJ01	**Guaruva-PR**	**16.03**	**98**	*e*P	**Pn**	**07 48 05.4**	**+1.2**
TER01	**Tubaro-SC**	**16.28**	**110**	*e*P	**Pn**	**07 48 07.3**	**+0.1**
BB19B	**Bebedouro**	**16.92**	**84**	*e*P	**Pn**	**07 48 15.5**	**+0.7**
PLCA	**Paso Flores**	**17.03**	**190**	*e*P	P	07 48 07.5	-7.3
RCLB	**Rio Claro- Sao**	**17.57**	**89**	*e*P	**P**	**07 48 21.6**	**+0.8**
IPMB	**Ipameri, GO**	**18.14**	**74**	*e*P	**Pn**	**07 48 28.7**	**-0.6**
BDFB	**Brasilia**	**19.31**	**68**	P	**P**	**07 48 40.8**	**+1.0**
	1.3nm,0.3s,baz=235,slow=13,SNR=12						
BSCB	**Bom Sucesso**	**20.35**	**86**	*e*P	Pn	07 48 53.8	-2.0
VAS01	**Vassouras-RJ**	**21.33**	**90**	*e*P	**P**	**07 49 02.8**	**+1.6**
ALF01	**Guarapari-ES**	**24.13**	**87**	*e*P	**P**	**07 49 27.8**	**+0.4**
SJMB	**Sao Joao De Ma**	**24.20**	**82**	*e*P	**P**	**07 49 29.1**	**+1.0**
APG	**El Apazote**	**45.24**	**327**	P	**P**	**07 52 27.9**	**+0.3**
	4.2nm,0.9s,baz=146,slow=11,SNR=8.9						
DWPF	**Disney Wildern**	**53.74**	**344**	*e*P	**P**	**07 53 29.7**	**-1.6**
SNAA	**Sanae**	**59.23**	**161**	P	**P**	**07 54 10.7**	**+1.0**
	1.1nm,0.9s,baz=287,slow=14,SNR=3.9						
TXAR	**Lajitas Array**	**63.90**	**324**	P	**P**	**07 54 41.8**	**+0.4**
	0.5nm,0.7s,baz=146,slow=8.6,SNR=4.2						
DBIC	**Dimbokro**	**67.42**	**71**	P	**P**	**07 55 03.4**	**-0.8**
	1.4nm,0.6s,baz=217,slow=5.1,SNR=2.4						
TORD	**Torodi Ar. Bea**	**76.19**	**69**	P	**P**	**07 55 55.6**	**-0.8**
	1.4nm,0.5s,baz=272,slow=5.7,SNR=21						
TSUM	**Tsumeb**	**77.28**	**105**	P	**P**	**07 56 02.4**	**-0.2**
	1.1nm,0.5s,baz=115,slow=2.5,SNR=3.9						
PDAR	**Pinedale Array**	**77.34**	**329**	P	**P**	**07 56 03.1**	**+0.6**
	0.3nm,0.6s,baz=137,slow=7.4,SNR=4.2						
ULM	**Lac du Bonnet**	**78.34**	**341**	P	**P**	**07 56 07.8**	**+0.3**
	1.2nm,0.5s,baz=138,slow=8.5,SNR=4.2						
NVAR	**Mina Array Bea**	**78.77**	**321**	P	**P**	**07 56 10.6**	**+0.1**
	0.3nm,0.6s,baz=150,slow=9.4,SNR=3.4						
MATP	**Matopo**	**86.30**	**111**	P	**P**	**07 56 49.9**	**+0.1**
	3.5nm,1.0s,baz=253,slow=5.9,SNR=3.7						
YKA	**Yellowknife Ar**	**94.25**	**340**	P	**P**	**07 57 25.7**	**+0.2**
	0.5nm,0.6s,baz=135,slow=4.3,SNR=13						
ASAR	**Alice Springs**	**128.63**	**204**	PKP	**PKPdf**	**08 03 13.2**	**-0.5**
	0.5nm,0.7s,baz=126,slow=1.6,SNR=4.7						
WRA	**Warramunga Arr**	**131.82**	**207**	PKP	**PKPdf**	**08 03 19.6**	**-0.3**
	0.4nm,0.7s,baz=154,slow=1.7,SNR=8.1						
MKAR	**Makanchi Array**	**146.26**	**40**	PKPbc	**PKPbc**	**08 03 46.9**	**+0.3**
	0.8nm,0.8s,baz=296,slow=4.6,SNR=2.4						
MAJO	**Matsushiro**	**155.29**	**306**	*e*P	**PKPdf**	**08 03 55.1**	**-4.3**
CHTO	**Chiang Mai**	**165.56**	**108**	*e*P	**PKPdf**	**08 04 08.7**	**-2.4**

MEX 19 07:47:05.5±0.5, 15°.45N×93°.43W, h96^{km}±4^{km}, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.33**	**40**	*e*P	Pn	07 47 18.1	-1.6
PCIG				*i* S	Sn	07 47 28.5	-1.8
THIG		**1.25**	**115**	*e*P	Pn	07 47 27.4	-1.0
THIG				*e*S	Sn	07 47 44.5	-1.4
CCIG	**Comitan**	**1.50**	**56**	*e*P	Pn	07 47 30.4	-1.3
CCIG				*e*S	Sn	07 47 49.5	-2.0
CMIG	**Matias Romero**	**2.14**	**320**	*e*P	Pn	07 47 39.1	-0.7
CMIG				*e*S	Sn	07 48 04.2	-1.8
HUIG	**Huatulco**	**2.60**	**277**	*i* P	Pn	07 47 44.2	-1.5
HUIG				*e*S	Sn	07 48 13.9	-2.8

IDC 19 07:48:43.5±3.1, 5°.65S×131°.07E, h135^{km}±42^{km}, mb2.9/1, mb1 3.3/4, mb1mx3.0/47, mbtmp3.6/4, Error ellipse: s-maj=98.9km s-min=18.7km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.75**	**2**	P	Pn	07 49 54.8	+1.4
	4.4nm,0.3s,baz=180,slow=20,SNR=23						
SIJI				S	Sn	07 50 47.5	-0.4
	5.8nm,0.3s,baz=263,slow=22,SNR=23						
FITZ	**Fitzroy Crossi**	**13.46**	**203**	S	Sn	07 54 00.7	-17
	0.3nm,0.3s,baz=205,slow=16,SNR=7.0						
WRA	**Warramunga Arr**	**14.56**	**168**	P	Pn	07 52 03.6	+0.4
	0.2nm,0.3s,baz=347,slow=12,SNR=9.4						
WRA				S	Sn	07 54 29.9	-15
	0.4nm,0.3s,baz=334,slow=22,SNR=10						
ASAR	**Alice Springs**	**18.12**	**172**	P	P	07 52 44.4	-0.9
	0.4nm,0.3s,baz=351,slow=10,SNR=23						
ASAR				S	S	07 55 52.0	-14
	0.0nm,0.3s,baz=354,slow=28,SNR=1.9						
MKAR	**Makanchi Array**	**67.70**	**326**	P	P	07 59 26.6	+0.3
	0.2nm,0.7s,baz=124,slow=7.7,SNR=2.4						

SJA 19 07:54:11.0±0.6, 31°.64S×69°.84W, h109^{km}±5^{km}, ML2.2, MW3.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	**0.49**	**110**	*i* P	Pn	07 54 29.0	+1.0
RTLS				*i* S	Sn	07 54 42.6	+1.7
RTLS				IAML		07 54 43.0	
	comp=Z,60nm,0.3s						
AUSP	**Uspallata**	**0.70**	**147**	*i* P	Pn	07 54 30.9	+1.3
AUSP				*i* S	Sn	07 54 45.1	+1.5
RTCV	**Cerro Valdivia**	**1.13**	**102**	*i* P	Pn	07 54 34.1	+0.6
RTCV				*i* S	Sn	07 54 52.0	+1.4
ACCO	**Cerro Coronel**	**1.24**	**33**	*i* P	Pn	07 54 36.2	+1.1
ACCO				*i* S	Sn	07 54 55.2	+2.0
AMOG	**MOGNA**	**1.34**	**59**	*i* P	Pn	07 54 36.8	+0.8
AROD	**Rodeo**	**1.50**	**12**	*i* P	Pn	07 54 39.8	+1.7

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*IDC **19** 07:55:29.1±0.4, 28°.31N×104°.96E, h0^{km}, mb4.3/31, mb1 4.4/33, mb1mx4.3/49, mbtmp4.3/33, ML4.4/2, MS3.8/25,*

Ms1 3.8/25, ms1mx3.6/50, Error ellipse: s-maj=13.0km s-min=10.5km az=62.0

*ISCJB **19** 07:55:30.5±0.2, 28°.33N±0°.02×104°.93E±0°.03, h19^{km}, mb4.5/92, MS3.8/28, Error ellipse: s-maj=3.5km s-min=3.3km az=167.1*

*MOS **19** 07:55:30.6±0.9, 28°.34N×104°.97E, h21^{km}, mb4.7/41, Error ellipse: s-maj=7.2km s-min=5.2km az=105.8*

*NEIC **19** 07:55:31.3±0.2, 28°.37N×104°.96E, h10^{km}, mb4.7/53, ML4.5(BJI), Error ellipse: s-maj=4.0km s-min=3.5km az=77.0*

*BJI **19** 07:55:31.3, 28°.35N×104°.84E, h10^{km}, mB4.8/28, mb4.5/38, ML4.5/24, Ms4.5/52, Ms7 4.3/45*

ISC 19 07:55:32.6±0.3**, 28°.35N**±0°.03×**104°.97E**±0°.03**, h19^{km}, n273, σ1^{s}.93**/296**, mb4.6**/92**, MS3.8**/29**, 19C-4D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**2.42**	**141**	⇑*i*Pn	**Pn**	**07 56 12.9**	**+1.7**
GYA				Pg	**Pg**	**07 56 19.0**	**0.0**
GYA				Sn	**Sb**	**07 56 43.6**	**-1.5**
GYA				Sg	**Sg**	**07 56 52.3**	**+1.9**
GYA				smax	smax		
	comp=N,3μm,0.8s						
GYA				smax	smax		
	comp=E,3μm,0.8s						
GYA	**Guiyang**	**2.42**	**141**	⇑*i*Pn	**Pn**	**07 56 12.9**	**+1.7**
GYA				Pg	**Pg**	**07 56 19.0**	**0.0**
GYA				Sg	**Sn**	**07 56 42.3**	**+1.9**
GYA				Sn	**Sb**	**07 56 43.6**	**-1.5**
CD2	**Chengdu**	**2.76**	**338**	⇓Pn	**Pn**	**07 56 17.1**	**+1.3**
CD2				Sn	**Sn**	**07 56 48.0**	**-0.6**
CD2				Sg	**Sg**	**07 56 59.4**	**-1.8**
CD2				smax	smax		
	comp=N,7μm,0.5s						
CD2				smax	smax		
	comp=E,7μm,0.5s						
CD2	**Chengdu**	**2.76**	**338**	⇓Pn	**Pn**	**07 56 17.1**	**+1.3**
CD2				Sn	**Sn**	**07 56 48.0**	**-0.6**
CD2				Sg	**Sg**	**07 56 59.4**	**-1.8**
KMI	**Kunming**	**3.78**	**212**	Pn	**Pn**	**07 56 31.5**	**+1.4**
KMI				Sn	**Sn**	**07 57 15.8**	**+1.6**
KMI				Sg	**Sg**	**07 57 31.5**	**-2.7**
KMI				smax	smax		
	comp=N,330nm,1.4s						
KMI				smax	smax		
	comp=E,290nm,1.3s						
KMI				LR	LR		
	comp=N,6μm,5.5s						
KMI				LR	LR		
	comp=E,8μm,5.7s						
KMI				LR	LR		
	comp=Z,3μm,6.6s						
KMI	**Kunming**	**3.78**	**212**	*e*Pn	**Pn**	**07 56 32.0**	**+1.9**
KMI	**Kunming**	**3.78**	**212**	*e*P	**Pn**	**07 56 32.0**	**+1.9**
ENH	**Enshi**	**4.39**	**63**	*e*Pn	**Pn**	**07 56 41.0**	**+2.7**
XAN	**Xi'an**	**6.60**	**30**	Pn	**Pn**	**07 57 09.9**	**+1.2**
XAN				Pg	Pb	07 57 32.3	+5.4
XAN				Sg	**Sg**	**07 59 02.3**	**-2.2**
XAN				smax	smax		
	comp=N,630nm,1.1s						
XAN				smax	smax		
	comp=E,430nm,1.2s						
XAN				LR	LR		
	comp=N,3μm,8.8s						
XAN				LR	LR		
	comp=E,3μm,5.3s						
XAN				LR	LR		
	comp=Z,1μm,4.4s						
XAN	**Xi'an**	**6.60**	**30**	*e*Pn	**Pn**	**07 57 09.6**	**+0.9**
XAN	**Xi'an**	**6.60**	**30**	*e*P	**Pn**	**07 57 09.6**	**+0.9**
SLVN	**Son La**	**7.06**	**188**	Pn	**Pn**	**07 57 16.7**	**+1.8**
LZH	**Lanzhou**	**7.77**	**353**	*e*Pn	**Pn**	**07 57 27.9**	**+3.1**
LZH				Sn	**Sn**	**07 58 55.6**	**+3.3**
LZH				smax	smax		
	comp=N,450nm,1.0s						
LZH				smax	smax		
	comp=E,540nm,0.8s						
LZH				LR	LR		
	comp=N,5μm,8.8s						
LZH				LR	LR		
	comp=E,6μm,9.2s						
LZH				LR	LR		
	comp=Z,4μm,9.2s						
WHN	**Wuhan**	**8.47**	**73**	⇓*i*P	**Pn**	**07 57 36.3**	**+2.0**
WHN				S	**Sn**	**07 59 08.3**	**-1.0**
WHN				LR	LR		
	comp=N,6μm,10.7s						
WHN				LR	LR		
	comp=E,5μm,5.9s						
WHN				LR	LR		
	comp=Z,6μm,7.7s						
GZH	**Guangzhou**	**9.20**	**123**	P	**Pn**	**07 57 42.6**	**-1.6**
GZH				S	**Sn**	**07 59 25.8**	**-1.4**
GZH				LR	LR		
	comp=N,3μm,4.9s						
GZH				LR	LR		
	comp=E,4μm,6.6s						
PAYA	**Payao**	**10.09**	**209**	P	Pn	07 58 01.5	+4.9
	comp=E,6.3nm,0.8s						
QIZ	**Qiongzhong**	**10.30**	**153**	P	**Pn**	**07 58 01.1**	**+1.7**
QIZ				S	**Sn**	**07 59 56.0**	**+1.6**
QIZ				pmax	pmax		
	comp=E,14nm,1.5s						
QIZ				LR	LR		
	comp=E,1μm,7.5s						
QIZ				LR	LR		
	comp=E,2μm,3.6s						
QIZ				LR	LR		
	comp=E,1μm,8.2s						
QIZ	**Qiongzhong**	**10.30**	**153**	*e*Pn	**Pn**	**07 57 59.5**	**0.0**
CMMT	**Chiang Mai**	**10.98**	**211**	P	**Pn**	**07 58 12.4**	**+3.6**
	comp=E,11nm,1.6s						
CHTO	**Chiang Mai**	**10.98**	**211**	*e*Pn	**Pn**	**07 58 10.6**	**+1.8**
CHTO	**Chiang Mai**	**10.98**	**211**	*e*P	**Pn**	**07 58 10.6**	**+1.8**
CHTO	**Chiang Mai**	**10.98**	**211**	P	**Pn**	**07 58 12.5**	**+3.7**
	comp=E,26nm,0.9s						
CM31	**Chiang Mai Arr**	**11.29**	**211**	*e*Pn	**Pn**	**07 58 15.3**	**+2.3**
CMAR	**Chiang Mai Arr**	**11.29**	**211**	Pn	**Pn**	**07 58 13.3**	**+0.3**
	comp=E,0.5nm,0.3s,baz=18,slow=11,SNR=43						
CMAR				Lg	Lg	08 01 29.2	
	comp=E,0.5nm,0.3s,baz=18,slow=24,SNR=5.2						
CM01	**Chiang Mai Arr**	**11.32**	**210**	*e*Pn	**Pn**	**07 58 15.3**	**+1.9**
SKNT	**Sakolnakorn**	**11.36**	**185**	P	**Pn**	**07 58 18.1**	**+4.1**
	comp=E,5.9nm,2.1s						
GTA	**Gaotai**	**11.83**	**340**	*e*P	**Pn**	**07 58 24.6**	**+4.2**
GTA				pP		07 58 28.9	
GTA				sP		07 58 31.6	
GTA				S	**Sn**	**08 00 40.5**	**+8.6**
GTA				SS	**SnSn**	**08 00 54.1**	**+10**
GTA				pmax	pmax		
	comp=E,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=E,98nm,7.0s						
GTA				LR	LR		
	comp=E,2μm,14.3s						
GTA				LR	LR		
	comp=E,1μm,17.1s						
SUKH	**Sukhothai**	**11.88**	**206**	P	**Pn**	**07 58 25.7**	**+4.6**
	comp=E,3.3nm,0.9s						
SHL	**Shillong**	**11.99**	**260**	*e*Pn	**Pn**	**07 58 24.1**	**+1.3**
SHL	**Shillong**	**11.99**	**260**	*e*P	**Pn**	**07 58 24.1**	**+1.3**
LSA	**Lhasa**	**12.17**	**280**	*e*Pn	**Pn**	**07 58 25.6**	**+0.2**
LSA	**Lhasa**	**12.17**	**280**	*e*P	**Pn**	**07 58 25.6**	**+0.2**
NJ2	**Nanjing**	**12.56**	**70**	*e*P	**Pn**	**07 58 32.5**	**+2.1**
NJ2				pmax	pmax		
	comp=E,13nm,0.5s						
NJ2				LR	LR		
	comp=E,2μm,8.4s						
NJ2				LR	LR		
	comp=E,3μm,8.9s						
NJ2				LR	LR		
	comp=E,3μm,8.0s						
QZH	**Quanzhou**	**12.65**	**102**	*e*P	**Pn**	**07 58 34.1**	**+2.5**
QZH				S	**Sn**	**08 01 00.3**	**+8.3**
QZH				LR	LR		
	comp=E,4μm,8.0s						
QZH				LR	LR		
	comp=E,2μm,5.3s						
QZH				LR	LR		
	comp=E,2μm,14.1s						
BTO	**Baotou**	**12.91**	**17**	*e*P	**Pn**	**07 58 35.3**	**+0.2**
BTO				S	Sn	08 01 09.3	+11
BRDH	**Bariadhala**	**13.29**	**248**	LR	LR	08 04 16.1	
	comp=E,372nm,19.3s,baz=124,slow=40						
HHC	**Hu-ho-hao-te**	**13.59**	**22**	*e*P	**Pn**	**07 58 45.1**	**+0.7**
HHC				S	**Sn**	**08 01 12.0**	**-3.0**
HHC				SS	**S**	**08 01 33.0**	**-5.0**
HHC				pmax	pmax		
	comp=E,19nm,0.8s						
HHC				pmax	pmax		
	comp=E,210nm,4.1s						
HHC				LR	LR		
	comp=E,940nm,6.7s						
HHC				LR	LR		
	comp=E,440nm,7.8s						
SRAK	**Srakaew**	**14.53**	**191**	P	**P**	**07 59 05.6**	**+1.9**
	comp=E,23nm,0.7s,comp=E,1μm						
BJT	**Baijiatuau**	**14.86**	**36**	*e*Pn	**Pn**	**07 59 02.7**	**+1.0**
BJT	**Baijiatuau**	**14.86**	**36**	*e*P	**Pn**	**07 59 02.7**	**+1.0**
BJI	**Beijing**	**14.88**	**36**	P	**Pn**	**07 59 02.6**	**+0.7**
BJI				S	**Sn**	**08 01 43.8**	**-2.4**
BJI				pmax	pmax		
	comp=E,4.0nm,0.9s						
BJI				LR	LR		
	comp=E,490nm,11.1s						
BJI				LR	LR		
	comp=E,630nm,10.3s						
PHET	**Kaeng Krachan**	**16.15**	**199**	P	**P**	**07 59 23.0**	**+1.2**
	comp=E,6.7nm,0.8s						
RAMN	**Ramite**	**16.34**	**269**	*e*P	**Pn**	**07 59 18.6**	**-2.6**
	comp=E,56nm,0.6s						
JIRN	**Jiri**	**16.60**	**272**	*e*P	**Pn**	**07 59 21.2**	**-3.5**
	comp=E,60nm,0.6s						
GUN	**Gumba**	**16.84**	**273**	*e*P	**Pn**	**07 59 24.1**	**-3.7**
	comp=E,26nm,0.4s						
PKIN	**Phulchoki**	**17.31**	**272**	*e*P	**Pn**	**07 59 29.7**	**-3.8**
	comp=E,25nm,0.5s						
KKN	**Kakani**	**17.39**	**273**	*e*P	**Pn**	**07 59 30.7**	**-3.7**
	comp=E,71nm,0.8s						
DMN	**Daman**	**17.56**	**272**	*e*P	**Pn**	**07 59 32.5**	**-4.1**
	comp=E,113nm,1.3s						
DANN	**Dangsing**	**18.67**	**275**	*e*P	**P**	**07 59 45.7**	**-4.2**
	comp=E,39nm,0.5s						
KOLN	**Koldanda**	**18.87**	**273**	*e*P	**P**	**07 59 47.3**	**-4.7**
	comp=E,18nm,0.6s						
PYUN	**Piuthan**	**19.37**	**274**	*e*P	**P**	**07 59 54.1**	**-3.4**
	comp=E,82nm,0.9s						
SONA0	**Songino Array**	**19.48**	**3**	*e*P	**Pn**	**07 59 59.4**	**-0.3**
SONM	**Songino Array**	**19.48**	**3**	P	**Pn**	**07 59 59.4**	**-0.3**
	comp=E,2.4nm,0.3s,baz=186,slow=13,SNR=44						
SONM				PcP	**PcP**	**08 04 17.9**	**-1.0**
	comp=E,0.1nm,0.3s,baz=163,slow=1.5,SNR=2.8						
SONA1	**Songino Array**	**19.49**	**3**	*e*P	**Pn**	**07 59 59.3**	**-0.6**
ULN	**Ulaanbaatar**	**19.55**	**4**	*e*P	**P**	**07 59 59.7**	**+0.5**
	comp=E,7.8nm,0.9s						
ULN	**Ulaanbaatar**	**19.55**	**4**	*e*P	**P**	**07 59 59.7**	**+0.5**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TJN	**Taejon**	**20.51**	**61**	*i* P	**P**	**08 00 09.4**	**-0.2**
JOW	**Kunigami**	**20.71**	**89**	*e*P	**P**	**08 00 12.8**	**+0.9**
	comp=Z,63nm,1.3s						
JOW	**Kunigami**	**20.71**	**89**	P	**P**	**08 00 12.2**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=167,slow=12,SNR=3.4						
WMQ	**Urumqi**	**20.75**	**323**	P	**P**	**08 00 10.8**	**-1.4**
WMQ				pP	Pn	08 00 15.8	+1.2
WMQ				PP	sP	08 00 31.8	+11
WMQ				S	**S**	**08 04 03.0**	**0.0**
WMQ				PcS	**PcS**	**08 07 57.8**	**-1.3**
WMQ				pmax	pmax		
	comp=Z,34nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,270nm,4.9s						
WMQ				LR	LR		
	comp=Z,1μm,11.1s						
WMQ				LR	LR		
	comp=Z,1μm,19.1s						
WMQ				LR	LR		
	comp=Z,910nm,19.9s						
WMQ	**Urumqi**	**20.75**	**323**	*e*P	**P**	**08 00 10.7**	**-1.4**
	comp=Z,12nm,0.6s						
WMQ	**Urumqi**	**20.75**	**323**	*e*P	**P**	**08 00 10.7**	**-1.4**
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
TRTT	**Trang**	**21.01**	**195**	P	P	08 00 26.3	+11
KS15	**Wonju Array Si**	**21.23**	**59**	*e*P	**P**	**08 00 18.3**	**+0.9**
KS01	**Wonju Array Si**	**21.25**	**59**	*e*P	**P**	**08 00 18.0**	**+0.4**
KSRS	**Korea Array**	**21.26**	**59**	P	**P**	**08 00 17.9**	**+0.2**
	comp=Z,6.8nm,0.6s,baz=241,slow=10,SNR=22						
ZAK	**Zakamensk**	**22.04**	**357**	*e*P	**P**	**08 00 27.0**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,17nm,0.9s						
CN2	**Changchun**	**22.53**	**41**	*e*P	**P**	**08 00 33.8**	**+2.5**
CN2				*e*sP	sP	08 00 47.1	+7.7
CN2				*e*S	**S**	**08 04 34.5**	**-3.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,8.0s						
CN2				LR	LR		
	comp=Z,440nm,8.0s						
CN2				LR	LR		
	comp=Z,510nm,8.0s						
JNU	**Nakatsue**	**22.75**	**71**	*e*P	**P**	**08 00 34.1**	**+0.3**
	comp=Z,46nm,1.4s						
TLY	**Talaya**	**23.32**	**358**	*e*P	**P**	**08 00 43.5**	**+4.1**
TLY				*e*S	**S**	**08 04 53.3**	**+2.3**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TLY				MLR	MLR		
	comp=Z,604nm,12.0s						
MOY	**Mondy**	**23.48**	**354**	*e*P	**P**	**08 00 43.3**	**+2.2**
HIA	**Hailar**	**23.76**	**24**	*e*P	**P**	**08 00 44.4**	**+0.6**
	comp=Z,11nm,0.5s						
HIA	**Hailar**	**23.76**	**24**	*e*P	**P**	**08 00 44.4**	**+0.6**
HIA				pmax	pmax		
	comp=Z,11nm,0.5s						
KKM	**Kota Kinabalu**	**24.62**	**152**	*e*P	**P**	**08 00 52.7**	**+0.6**
	comp=Z,39nm,1.2s						
DGZ	**Jazzator, Alta**	**25.18**	**333**	*e*P	**P**	**08 00 57.6**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK01	**Makanchi Array**	**25.55**	**322**	*e*P	**P**	**08 01 00.4**	**+0.2**
MK31	**Makanchi Array**	**25.57**	**322**	*e*P	**P**	**08 01 00.6**	**+0.2**
	comp=Z,9.5nm,0.8s						
MK31	**Makanchi Array**	**25.57**	**322**	*e*P	**P**	**08 01 00.6**	**+0.2**
MK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK32	**Makanchi Array**	**25.57**	**322**	*e*P	**P**	**08 01 00.9**	**+0.5**
MKAR	**Makanchi Array**	**25.57**	**322**	*e*P	**P**	**08 01 01.0**	**+0.6**
	comp=Z,71nm,0.8s						
MKAR	**Makanchi Array**	**25.57**	**322**	P	**P**	**08 01 00.9**	**+0.5**
	comp=Z,12nm,0.8s,baz=126,slow=9.8,SNR=57						
MKAR				PcP	**PcP**	**08 04 31.1**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=131,slow=4.0,SNR=4.0						
MKAR				ScP	**ScP**	**08 08 09.2**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=134,slow=4.2,SNR=4.1						
MKAR				LR	LR	08 11 57.9	
	comp=Z,478nm,18.4s,baz=134,slow=39						
PRZ	**Przheval'sk**	**25.70**	**310**	*e*P	**P**	**08 01 02.4**	**+0.6**
	comp=Z,12nm,0.7s						
PRZ	**Przheval'sk**	**25.70**	**310**	P	**P**	**08 01 02.4**	**+0.6**
PRZ				pmax	pmax		
	comp=Z,12nm,0.7s						
MAKZ	**Makanchi**	**25.75**	**322**	*e*P	**P**	**08 01 02.1**	**+0.1**
	comp=Z,10nm,0.8s						
MAKZ	**Makanchi**	**25.75**	**322**	*e*P	**P**	**08 01 02.1**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TARG	**Taragay, Kyrgy**	**25.81**	**308**	*e*P	**P**	**08 01 03.3**	**+0.3**
	comp=Z,23nm,1.6s						
PSI	**Prapat**	**26.06**	**194**	*e*P	**P**	**08 01 05.1**	**0.0**
	comp=Z,6.3nm,0.8s						
PSI	**Prapat**	**26.06**	**194**	*e*P	**P**	**08 01 05.1**	**0.0**
PSI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PSI	**Prapat**	**26.06**	**194**	P	**P**	**08 01 05.6**	**+0.5**
	comp=Z,6.2nm,0.8s,baz=360,slow=15,SNR=3.1						
PSI				LR	LR	08 10 44.0	
	comp=Z,197nm,21.2s,baz=282,slow=35						
KSH	**Kashi**	**26.40**	**303**	P	P	08 01 15.8	+7.8
KSH				S	**S**	**08 05 49.8**	**+9.2**
KSH				SS	**SnSn**	**08 06 54.3**	**+13**
KSH				pmax	pmax		
	comp=Z,160nm,4.0s						
KSH				LR	LR		
	comp=Z,220nm,5.8s						
KSH				LR	LR		
	comp=Z,410nm,6.5s						
KSH				LR	LR		
	comp=Z,440nm,8.0s						
HYB	**Hyderabad**	**26.60**	**252**	*i* P	**P**	**08 01 10.0**	**+0.1**
HYB				*e*S	**S**	**08 05 42.0**	**-1.9**
USA0B	**Ussuriysk Arra**	**26.75**	**47**	*e*P	**P**	**08 01 11.1**	**+0.1**
	comp=Z,12nm,0.9s						
USRK	**Ussuriysk Ar.**	**26.75**	**47**	P	**P**	**08 01 11.5**	**+0.5**
	comp=Z,11nm,0.8s,baz=244,slow=9.1,SNR=22						
NRN	**Naryn**	**26.96**	**307**	*e*P	**P**	**08 01 13.1**	**-0.3**
	comp=Z,20nm,1.6s						
NRN	**Naryn**	**26.96**	**307**	*e*P	**P**	**08 01 13.1**	**-0.3**
NRN				pmax	pmax		
	comp=Z,20nm,1.6s						
AAK	**Ala-Archa**	**28.43**	**308**	P	**P**	**08 01 26.5**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=98,slow=7.1,SNR=2.7						
DAV	**Davao City (W)**	**28.78**	**133**	LR	LR	08 14 30.8	
	comp=Z,206nm,19.1s,baz=336,slow=40						
MJAR	**Matsushiro Arr**	**29.11**	**65**	LR	LR	08 14 43.7	
	comp=Z,208nm,18.0s,baz=245,slow=40						
KLR	**Kul'dur**	**29.24**	**37**	P	**P**	**08 01 32.6**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=258,slow=8.0,SNR=7.6						
ZAA0	**Zalesovo Array**	**29.52**	**336**	*e*P	**P**	**08 01 35.6**	**0.0**
	comp=Z,5.8nm,0.7s						
ZALV	**Zalesovo Beam**	**29.52**	**336**	*e*P	**P**	**08 01 35.4**	**-0.2**
ZALV	**Zalesovo Beam**	**29.52**	**336**	*e*P	**P**	**08 01 35.4**	**-0.2**
ZALV	**Zalesovo Beam**	**29.52**	**336**	P	**P**	**08 01 35.5**	**-0.1**
	comp=Z,6.5nm,0.6s,baz=138,slow=8.1,SNR=17						
ZAA1	**Zalesovo Array**	**29.52**	**336**	*e*P	**P**	**08 01 35.5**	**-0.1**
KURK	**Kurchatov**	**29.91**	**326**	*e*P	**P**	**08 01 39.5**	**+0.4**
	comp=Z,6.9nm,0.7s						
KURK	**Kurchatov**	**29.91**	**326**	*e*P	**P**	**08 01 39.5**	**+0.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BTK	**Batken**	**30.38**	**302**	*e*P	**P**	**08 01 44.2**	**+0.7**
	comp=Z,3.7nm,0.4s						
BTK	**Batken**	**30.38**	**302**	*e*P	**P**	**08 01 44.2**	**+0.7**
BTK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GAR	**Garm**	**30.56**	**299**	*e*P	**P**	**08 01 45.2**	**0.0**
	comp=Z,15nm,1.4s						
GAR	**Garm**	**30.56**	**299**	*e*P	**P**	**08 01 45.2**	**0.0**
GAR				pmax	pmax		
	comp=Z,15nm,1.4s						
PALK	**Pallekele**	**31.07**	**232**	*e*P	**P**	**08 01 49.1**	**-0.7**
	comp=Z,7.6nm,0.9s						
PALK	**Pallekele**	**31.07**	**232**	P	**P**	**08 01 49.2**	**-0.5**
	comp=Z,5.8nm,0.7s,baz=292,slow=0.4,SNR=5.3						
KBL	**Kabul**	**31.15**	**291**	*e*P	**P**	**08 01 50.2**	**-0.3**
	comp=Z,16nm,1.6s						
KBL	**Kabul**	**31.15**	**291**	*e*P	**P**	**08 01 50.2**	**-0.3**
KBL				pmax	pmax		
	comp=Z,16nm,1.6s						
KK31	**Karatay Array**	**31.36**	**307**	*e*P	**P**	**08 01 52.0**	**0.0**
KK31	**Karatay Array**	**31.36**	**307**	*e*P	**P**	**08 01 52.0**	**0.0**
KKAR	**Karatay Array**	**31.36**	**307**	*e*P	**P**	**08 01 51.7**	**-0.3**
KKAR	**Karatay Array**	**31.36**	**307**	*e*P	**P**	**08 01 51.7**	**-0.3**
YSS	**Yuzh-Sakhalins**	**34.78**	**47**	*e*P	P	08 02 10.6	-11
YSS				*e*		08 02 24.5	
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,16.0s						
BVAR	**Borovoye Array**	**35.43**	**324**	P	**P**	**08 02 27.3**	**0.0**
	comp=N,1.2nm,0.6s,baz=127,slow=9.8,SNR=7.0						
BVAR				LR	LR	08 18 10.2	
	comp=N,322nm,21.5s,baz=113,slow=38						
BRVK	**Borovoye**	**35.50**	**324**	*e*P	**P**	**08 02 27.8**	**-0.1**
	comp=N,3.8nm,0.8s						
BRVK	**Borovoye**	**35.50**	**324**	*e*P	**P**	**08 02 27.8**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GUMO	**Guam**	**39.85**	**103**	LR	LR	08 19 56.7	
	comp=Z,117nm,19.4s,baz=157,slow=37						
GEYT	**Alibeck**	**40.02**	**296**	P	**P**	**08 03 07.1**	**+0.7**
	comp=Z,10nm,0.6s,baz=86,slow=7.6,SNR=15						
GEYT				LR	LR	08 22 49.8	
	comp=Z,150nm,21.4s,baz=65,slow=41						
GYA0B	**ALIBECK ARRAY**	**40.02**	**296**	*e*P	**P**	**08 03 07.0**	**+0.6**
	comp=Z,14nm,0.8s						
ABKAR	**Akbulak array**	**40.09**	**314**	*e*P	**P**	**08 03 06.9**	**+0.2**
AKTO	**Aktyubinsk**	**41.59**	**315**	P	**P**	**08 03 19.0**	**-0.1**
	comp=Z,3.7nm,0.6s,baz=100,slow=10.0,SNR=3.6						
AKTO				LR	LR	08 22 38.5	
	comp=Z,158nm,20.7s,baz=102,slow=39						
NRIK	**Noril'sk**	**42.26**	**351**	P	**P**	**08 03 24.8**	**+0.5**
	comp=Z,7.9nm,0.6s,baz=144,slow=8.2,SNR=18						
NRIK				LR	LR	08 22 36.2	
	comp=Z,150nm,19.1s,baz=211,slow=38						
BATI	**Baumata**	**42.38**	**152**	LR	LR	08 21 19.5	
	comp=Z,97nm,20.2s,baz=294,slow=37						
ARU	**Arti**	**43.07**	**324**	*e*P	**P**	**08 03 31.2**	**+0.1**
	comp=Z,9.3nm,1.0s						
ARU	**Arti**	**43.07**	**324**	*d* *i*P	**P**	**08 03 31.9**	**+0.8**
ARU						08 05 16.2	
ARU				S	**S**	**08 09 58.1**	**+2.1**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARU				MLR	MLR		
	comp=Z,227nm,18.0s						
JAY	**Jayapura**	**46.04**	**126**	LR	LR	08 24 03.1	
	comp=Z,44nm,19.3s,baz=342,slow=37						
SEY	**Seymchan**	**46.14**	**28**	P	**P**	**08 03 55.7**	**+0.3**
	baz=244,slow=9.7						
KIRV	**Kirov**	**48.42**	**325**	P	**P**	**08 04 12.8**	**-0.6**
	comp=Z,17nm,0.4s,baz=8.3,slow=1.6,SNR=4.0						
KIRV				LR	LR	08 26 40.8	
	comp=Z,219nm,20.4s,baz=161,slow=39						
FITZ	**Fitzroy Crossi**	**50.33**	**154**	*e*P	**P**	**08 04 27.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**50.33**	**154**	P	**P**	**08 04 26.7**	**-1.5**
	comp=Z,1.8nm,0.9s,baz=32,slow=16,SNR=2.6						
FITZ				LR	LR	08 29 15.4	
	comp=Z,44nm,18.1s,baz=294,slow=40						
ZEI	**Tsey**	**50.68**	**304**	*e*P	**P**	**08 04 30.7**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,11nm,1.4s						
MBWA	**Marble Bar**	**51.25**	**162**	*e*P	**P**	**08 04 34.8**	**-0.4**
	comp=Z,9.0nm,1.0s						
KBZ	**Khabaz**	**51.34**	**305**	P	**P**	**08 04 35.3**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=100,slow=11,SNR=2.8						
KBZ				LR	LR	08 30 43.5	
	comp=Z,71nm,18.2s,baz=85,slow=41						
KIV	**Kislovodsk**	**51.47**	**305**	*e*P	**P**	**08 04 37.1**	**+0.2**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,79nm,16.0s						
RAYN	**Ar Rayn**	**53.23**	**279**	*e*P	**P**	**08 04 49.5**	**-0.7**
	comp=Z,5.5nm,0.9s						
RAYN	**Ar Rayn**	**53.23**	**279**	*e*P	**P**	**08 04 49.5**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BILL	**Bilibino**	**53.35**	**24**	*e*P	**P**	**08 04 49.1**	**-1.2**
BILL				*e*		08 05 54.8	
BILL				*e*		08 06 54.7	
BILL				pmax	pmax		
	comp=Z,38nm,3.8s						
VSR	**Storozhevoye**	**53.52**	**314**	*e*P	**P**	**08 04 50.5**	**-1.3**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LPSR	**Galich'ya Gora**	**53.65**	**316**	*e*P	**P**	**08 04 51.2**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLMR	**Klimovskoe**	**53.75**	**326**	*e*P	**P**	**08 04 50.4**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLMR	**Klimovskoe**	**53.75**	**326**	*e*P	**P**	**08 04 50.5**	**-2.9**
KLMR				AMP		08 04 58.4	
	comp=Z,8.0nm,0.9s						
OBN	**Obninsk**	**55.03**	**319**	LR	LR	08 30 12.4	
	comp=Z,43nm,19.7s,baz=143,slow=38						
WRAB	**Tennant Creek**	**55.78**	**146**	*e*P	**P**	**08 05 08.2**	**-0.3**
	comp=Z,32nm,1.6s						
WRAB	**Tennant Creek**	**55.78**	**146**	*e*P	**P**	**08 05 08.2**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,32nm,1.6s						
WRA	**Warramunga Arr**	**55.78**	**146**	P	**P**	**08 05 07.8**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=318,slow=12,SNR=64						
WRA				LR	LR	08 32 46.4	
	comp=Z,28nm,18.1s,baz=255,slow=40						
WR1	**Warramunga Arr**	**55.78**	**146**	*e*P	**P**	**08 05 07.8**	**-0.8**
	comp=Z,8.7nm,0.5s						
WB2	**Warramunga Arr**	**55.79**	**146**	*e*P	**P**	**08 05 07.6**	**-1.0**
COEN	**Coen**	**56.01**	**134**	*e*P	**P**	**08 05 09.8**	**-0.4**
	comp=Z,5.8nm,0.9s						
AS31	**Alice Springs**	**58.76**	**149**	*e*P	**P**	**08 05 29.0**	**-0.6**
	comp=Z,1.4nm,0.5s						

ASAR	Alice Springs	58.76	149	P	P	08 05 29.1	-0.4
	comp=Z,2.7nm,0.6s,baz=331,slow=6.9,SNR=7.6						
ASAR				LR	LR	08 33 00.8	
	comp=Z,42nm,18.9s,baz=54,slow=38						
BR101	Keskin Array S	58.78	301	eP	P	08 05 29.1	-0.6
BRTR	Keskin Array B	58.78	301	P	P	08 05 29.1	-0.6
	comp=Z,1.1nm,0.7s,baz=104,slow=4.9,SNR=6.0						
BRTR				LR	LR	08 35 53.0	
	comp=Z,39nm,18.6s,baz=70,slow=41						
AS01	Alice Springs	58.78	149	eP	P	08 05 29.3	-0.4
KEV	Kevo	59.54	337	eP	P	08 05 34.2	-0.1
	comp=Z,54nm,1.3s						
KEV	Kevo	59.54	337	eP	P	08 05 34.3	-0.1
KEV				pmax	pmax		
	comp=Z,54nm,1.3s						
AKASG	Malin Array Be	59.82	315	P	P	08 05 35.9	-0.7
	comp=Z,1.3nm,0.5s,baz=68,slow=7.1,SNR=9.1						
AKASG				LR	LR	08 33 28.9	
	comp=Z,86nm,18.4s,baz=75,slow=38						
AKBB	Malin Array Si	59.82	315	eP	P	08 05 35.9	-0.7
	comp=Z,10nm,1.5s						
AKBB	Malin Array Si	59.82	315	eP	P	08 05 35.9	-0.7
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KIEV	Kiev	59.84	315	⇑iP	P	08 05 36.3	-0.4
ARA0	ARCESS Array S	60.07	336	eP	P	08 05 37.3	-0.7
ARCES	ARCESS Array B	60.07	336	P	P	08 05 37.3	-0.7
	comp=Z,3.7nm,0.9s,baz=91,slow=7.4,SNR=7.5						
FIA0	FINESS Array S	60.27	327	eP	P	08 05 38.7	-0.7
FIA0	FINESS Array S	60.27	327	eP	P	08 05 38.7	-0.7
FINES	FINESS Array B	60.27	327	P	P	08 05 38.7	-0.7
	comp=Z,1.6nm,0.5s,baz=100,slow=7.9,SNR=5.8						
FINES				LR	LR	08 33 34.7	
	comp=Z,159nm,18.5s,baz=32,slow=38						
CFR	Carcaliu	61.57	308	⇑iP	P	08 05 50.9	+2.3
TLB	Topalu	61.77	308	⇑iP	P	08 05 50.0	0.0
VRI	Vrincioaia	62.38	309	⇑iP	P	08 05 55.0	+0.9
PLOR	Plostina	62.44	309	⇑iP	P	08 05 56.3	+1.8
CTA	Charters Tower	62.54	136	P	P	08 05 55.2	-0.2
	comp=Z,1.9nm,0.5s,baz=314,slow=8.1,SNR=5.3						
CTAO	Charters Tower	62.54	136	eP	P	08 05 55.2	-0.2
	comp=Z,6.8nm,1.1s						
CTAO	Charters Tower	62.54	136	eP	P	08 05 55.2	-0.2
CTAO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BIZ	Bicaz	62.56	311	⇑iP	P	08 05 55.5	+0.2
LEHL	Lehliu	62.65	308	⇑iP	P	08 06 13.1	+17
OZUR		62.97	310	⇑iP	P	08 05 59.3	+1.2
BURAR	Bucovina Array	63.00	312	⇑iP	P	08 05 58.3	0.0
BUR04	Bucovina Ar. S	63.00	312	eP	P	08 05 56.9	-1.4
MLR	Muntele Rosu	63.01	309	eP	P	08 05 58.1	-0.3
	comp=Z,4.1nm,0.8s						
MLR	Muntele Rosu	63.01	309	⇑iP	P	08 05 59.9	+1.5
MLR	Muntele Rosu	63.01	309	eP	P	08 05 58.1	-0.3
MLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DOPR	Dopca	63.27	310	⇑iP	P	08 06 01.3	+1.3
VOIR		63.63	309	⇑iP	P	08 06 02.8	+0.3
ARR	Arges	63.93	309	⇑iP	P	08 06 04.3	-0.2
ANM	Nome	64.64	29	eP	P	08 06 08.7	+0.1
	comp=Z,4.4nm,1.7s						
ANM	Nome	64.64	29	eP	P	08 06 08.7	+0.1
ANM				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KARP	Karpathos	64.83	298	eP	P	08 06 09.9	-0.6
	comp=Z,20nm,1.0s						
DRGR		64.86	311	⇑iP	P	08 06 11.2	+0.7
DRGR		64.86	311	P	P	08 06 11.2	+0.7
HNR	Honiara	65.03	117	LR	LR	08 31 31.3	
	comp=Z,56nm,21.5s,baz=321,slow=33						
HERR	Herculane	65.58	309	⇑iP	P	08 06 15.0	-0.1
SIRR	Siria	65.70	311	⇑iP	P	08 06 15.9	0.0
MDVR	Moldovita	66.08	309	⇑iP	P	08 06 18.8	+0.4
NC405	NORSAR Array S	67.12	328	eP	P	08 06 24.2	-0.5
NB2	NORSAR Subarra	67.38	328	P	P	08 06 25.3	-1.1
	comp=Z,1.3nm,0.7s,baz=72,slow=6.9						
NB200	NORSAR Array S	67.38	328	eP	P	08 06 25.2	-1.1
NOA	NORSAR Array B	67.38	328	P	P	08 06 25.2	-1.1
	comp=Z,1.4nm,0.6s,baz=74,slow=6.3,SNR=7.8						
NOA				LR	LR	08 35 31.7	
	comp=Z,49nm,19.9s,baz=75,slow=36						
NC204	NORSAR Array S	67.51	329	eP	P	08 06 26.6	-0.7
	comp=Z,36nm,1.5s						
IM3	Indian Mountai	68.87	25	eP	P	08 06 35.6	0.0
CONA	Conrad Observa	68.97	314	eP	P	08 06 34.5	-2.1
	comp=Z,2.1nm,0.7s						
TOLK	Toolik Lake Re	69.30	22	eP	P	08 06 38.5	+0.2
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	69.30	147	eP	P	08 06 37.8	-0.8
	comp=Z,1.6nm,1.1s						
STKA	Stephens Creek	69.30	147	eP	P	08 06 37.8	-0.8
STKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
STKA	Stephens Creek	69.30	147	P	P	08 06 37.9	-0.8
	comp=Z,2.5nm,0.7s,baz=10,slow=3.7,SNR=5.4						
STKA				LR	LR	08 38 48.4	
	comp=Z,28nm,20.4s,baz=25,slow=38						
COLD	Coldfoot	69.67	24	eP	P	08 06 40.6	0.0
	comp=Z,3.6nm,1.3s						
SOKA	Soboth	69.92	313	eP	P	08 06 41.0	-1.6
	comp=Z,1.6nm,0.5s						
SVW2	Sparrevohn	69.96	31	eP	P	08 06 43.1	+0.6
	comp=Z,5.4nm,1.0s						
GERES	GERESS Array B	70.01	315	P	P	08 06 42.9	-0.2
	comp=Z,1.8nm,0.6s,baz=64,slow=6.1,SNR=9.5						
GERES				LR	LR	08 39 19.5	
	comp=Z,125nm,19.4s,baz=78,slow=38						
GEA0	GERESS Array S	70.01	315	eP	P	08 06 42.7	-0.4
MLY	Manley	70.40	26	eP	P	08 06 45.1	-0.1
	comp=Z,4.9nm,0.8s						
PPLA	Purkeypile	70.72	28	eP	P	08 06 47.7	+0.5
	comp=Z,11nm,1.0s						
KBA	Koelnbreinsper	70.86	314	eP	P	08 06 46.3	-2.1
	comp=Z,2.3nm,0.5s						
KMBO	Kilima Mbogo	71.04	258	P	P	08 06 49.3	-0.8
	comp=Z,1.6nm,0.3s,baz=55,slow=11,SNR=6.7						
MDM	Murphy Dome	71.39	25	eP	P	08 06 51.1	0.0
	comp=Z,6.3nm,0.8s						
ABTA	Abfaltersbach	71.51	314	eP	P	08 06 51.3	-1.0
	comp=Z,2.2nm,0.6s						
MCK	McKinley	71.68	27	eP	P	08 06 53.1	+0.2
	comp=Z,10.0nm,1.3s						
MCK	McKinley	71.68	27	eP	P	08 06 53.1	+0.2
MCK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SUA	Susitna One	71.94	29	eP	P	08 06 54.6	0.0
	comp=Z,14nm,1.0s						
ILAR	Eielson Array	71.99	25	P	P	08 06 53.6	-1.1
	comp=Z,0.8nm,0.6s,baz=290,slow=3.1,SNR=18						
ILB	Eielson Array	71.99	25	eP	P	08 06 54.1	-0.6
	comp=Z,8.9nm,1.4s						
PRP	Porcupine Dome	72.13	24	eP	P	08 06 56.1	+0.4
	comp=Z,6.9nm,0.8s						
SQTA	Sankt Quirin	72.16	314	eP	P	08 06 55.1	-1.1
	comp=Z,4.8nm,0.6s						
MOTA	Moosalm	72.18	315	eP	P	08 06 55.3	-1.1
	comp=Z,2.2nm,0.6s						
RETA	Reutte	72.34	315	eP	P	08 06 54.2	-3.0
	comp=Z,8.2nm,1.5s						
FETA	Feichten	72.54	314	P	P	08 06 55.4	-3.2
	comp=Z,3.4nm,1.1s						
PMR	Palmer	72.58	29	eP	P	08 06 58.0	-0.2
	comp=Z,9.5nm,0.8s						
PMR	Palmer	72.58	29	eP	P	08 06 58.0	-0.2
PMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KDAK	Kodiak Island	72.71	33	eP	P	08 06 59.2	+0.1
	comp=Z,57nm,1.4s						
KDAK	Kodiak Island	72.71	33	eP	P	08 06 59.2	+0.1
KDAK				pmax	pmax		
	comp=Z,57nm,1.4s						
RIDG	Independ'e Rid	73.27	26	eP	P	08 07 01.9	-0.5
	comp=Z,14nm,1.4s						
KLU	Klutina	73.97	28	eP	P	08 07 06.8	+0.2
	comp=Z,34nm,1.7s						
INK	Inuvik	74.50	19	eP	P	08 07 08.9	-0.5
	comp=Z,3.0nm,0.9s						
INK	Inuvik	74.50	19	eP	P	08 07 08.9	-0.5
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EYAK	Cordova Ski Ar	74.52	29	eP	P	08 07 10.0	+0.4
	comp=Z,102nm,1.6s						
EPYK	Eagle Plains	74.70	22	eP	P	08 07 10.3	-0.5
	comp=Z,15nm,1.6s						
YKA	Yellowknife Ar	84.09	17	P	P	08 08 01.7	-0.1
	comp=Z,0.8nm,0.4s,baz=325,slow=4.9,SNR=21						
YKB5	Yellowknife Ar	84.09	17	eP	P	08 08 01.4	-0.4
ESDC	Sonseca Array	85.42	313	P	P	08 08 09.5	+0.4
	comp=Z,0.3nm,0.4s,baz=36,slow=6.3,SNR=3.4						
TOA1	Torodi Ar. Sit	95.18	288	eP	P	08 08 54.7	-0.7
TORD	Torodi Ar. Bea	95.18	288	P	P	08 08 54.7	-0.7
	comp=Z,0.5nm,0.9s,baz=44,slow=4.4,SNR=4.0						
TXAR	Lajitas Array	116.44	28	PKP	PKPdf	08 14 14.9	-0.8
	comp=Z,0.3nm,0.5s,baz=81,slow=0.5,SNR=3.5						
QSPA	South Pole Qui	118.14	180	PKP	PKPdf	08 14 16.4	-1.2
	comp=Z,14nm,0.5s,baz=199,slow=1.0,SNR=105						
SDV	Santo Domingo	142.74	353	eP	PKPdf	08 15 02.1	-3.6
SDV	Santo Domingo	142.74	353	eP	PKPdf	08 15 02.1	-3.6
TAMC	Tame, Arauca	145.27	354	eP	PKPbc	08 15 09.6	0.0
TAMC	Tame, Arauca	145.27	354	eP	PKPbc	08 15 09.6	0.0
PTBC	PUERTO BERRIO,	145.31	359	eP	PKPbc	08 15 09.2	-0.5
PTBC	PUERTO BERRIO,	145.31	359	eP	PKPbc	08 15 09.2	-0.5
SOLC	Bahia Solano	145.54	4	eP	PKPdf	08 15 10.2	-0.1
SOLC	Bahia Solano	145.54	4	eP	PKPdf	08 15 10.2	-0.1
RUSC	La Rusia	145.90	357	eP	PKPbc	08 15 12.0	-0.2
RUSC	La Rusia	145.90	357	eP	PKPbc	08 15 12.0	-0.2
PLMC	San Jos del P	146.91	2	eP	PKPbc	08 15 13.9	-0.7
PLMC	San Jos del P	146.91	2	eP	PKPbc	08 15 13.9	-0.7
ROSC	El Rosal	146.99	359	PKPbc	PKPbc	08 15 14.9	-0.3
	comp=Z,16nm,0.7s,baz=72,slow=18,SNR=8.1						
VILC	Villavicencio,	147.70	357	eP	PKPbc	08 15 16.8	-0.1
VILC	Villavicencio,	147.70	357	eP	PKPbc	08 15 16.8	-0.1
YOTC	Yotoco, Valle	147.82	2	eP	PKPdf	08 15 14.4	0.0
YOTC	Yotoco, Valle	147.82	2	eP	PKPdf	08 15 14.4	0.0
MARP	Paez Belalcaza	148.97	2	eP	PKPbc	08 15 21.1	+0.6
MARP	Paez Belalcaza	148.97	2	eP	PKPbc	08 15 21.1	+0.6
POPC	Popayan, Colom	149.24	3	eP	PKPbc	08 15 20.6	-0.4
POPC	Popayan, Colom	149.24	3	eP	PKPbc	08 15 20.6	-0.4
SOTA	Rioblanco	149.65	3	eP	PKiKP	08 15 24.1	+0.7
SOTA				eP	pPKPdf	08 15 24.8	+0.2
SOTA	Rioblanco	149.65	3	eP	PKiKP	08 15 24.1	+0.7
SOTA				eP	pPKPdf	08 15 24.8	+0.2
BDFB	Brasilia	152.01	291	PKPbc	PKPbc	08 15 26.2	-1.2
	comp=Z,1.5nm,0.5s,baz=317,slow=0.3,SNR=3.5						
LPAZ	La Paz	166.40	331	eP	PKPdf	08 15 37.1	-1.0
LPAZ	La Paz	166.40	331	ePKIKP	PKPdf	08 15 37.1	-1.0
LPAZ	La Paz	166.40	331	PKP	PKPdf	08 15 37.8	-0.3
	comp=Z,2.4nm,0.9s,baz=8.4,slow=4.6,SNR=5.1						

ISCJB ***19*** *08:01:22.7±0.5, 1°.77N±0°.05×127°.43E±0°.07, h128^{km}, mb4.0/9, Error ellipse: s-maj=10.0km s-min=7.1km az=12.2*

IDC ***19*** *08:01:24.9±3.3, 1°.67N×127°.53E, h133^{km}±31^{km}, mb3.6/8, mb1 3.7/9, mb1mx3.5/34, mbtmp3.9/9, Error ellipse: s-maj=44.5km s-min=10.8km az=78.0*

DJA ***19*** *08:01:24.0±0.4, 2°N±3°×12°7E±°, h130^{km}±4^{km}, M4.7/13, mb4.9/11, mB5.0/7, MLv4.8/13, Mw(mB)4.3/7*

ISC 19 08:01:24.3±0.6, 1°.73N±0°.07×127°.4E±0°.1, h128^{km}, n24, σ1^{s}21/28, mb4.0/9, Halmahera

<table>
<tr><th rowspan="2">Code</th><th rowspan="2">Station Name</th><th rowspan="2">Δ°</th><th rowspan="2">AZ°</th><th colspan="2">Phase ID</th><th>Time</th><th>Res</th></tr>
<tr><th>Op</th><th>ISC</th><th>h m s</th><th>ISC</th></tr>
<tr><td>TNTI</td><td>Ternate</td><td>0.95</td><td>184</td><td>P</td><td>Pn</td><td>08 01 47.8</td><td>+1.3</td></tr>
<tr><td>TNTI</td><td></td><td></td><td></td><td>S</td><td>Sn</td><td>08 02 04.6</td><td>+1.2</td></tr>
<tr><td>SGSI</td><td>Sangihe</td><td>2.72</td><td>316</td><td>P</td><td>Pn</td><td>08 02 05.7</td><td>-1.5</td></tr>
<tr><td>KMSI</td><td>Cibinong</td><td>3.63</td><td>252</td><td>P</td><td>Pn</td><td>08 02 19.1</td><td>0.0</td></tr>
<tr><td>SANI</td><td>Sanana</td><td>4.02</td><td>201</td><td>P</td><td>Pn</td><td>08 02 21.6</td><td>-2.6</td></tr>
<tr><td>NLAI</td><td>Namlea</td><td>4.94</td><td>184</td><td>P</td><td>Pn</td><td>08 02 36.7</td><td>+0.1</td></tr>
<tr><td>LUWI</td><td>Luwuk</td><td>5.41</td><td>239</td><td>P</td><td>Pn</td><td>08 02 43.4</td><td>+0.6</td></tr>
<tr><td>MRSI</td><td>Marisa</td><td>5.63</td><td>257</td><td>P</td><td>Pn</td><td>08 02 45.9</td><td>+0.1</td></tr>
<tr><td>APSI</td><td>Ampana</td><td>6.35</td><td>246</td><td>P</td><td>Pn</td><td>08 02 53.8</td><td>-1.6</td></tr>
<tr><td>KDI</td><td>Kendari</td><td>7.41</td><td>220</td><td>P</td><td>Pn</td><td>08 03 10.6</td><td>+0.7</td></tr>
<tr><td></td><td>98nm,0.4s,4µm0.7nm</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>TTSI</td><td>Tana Toraja</td><td>8.96</td><td>238</td><td>P</td><td>Pn</td><td>08 03 30.1</td><td>-0.6</td></tr>
<tr><td></td><td>122nm,0.7s,1µm0.4nm</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>SPSI</td><td>Sidrap Palu</td><td>9.52</td><td>234</td><td>P</td><td>Pn</td><td>08 03 37.5</td><td>-0.7</td></tr>
<tr><td>BNSI</td><td>Bone</td><td>9.52</td><td>230</td><td>P</td><td>Pn</td><td>08 03 37.7</td><td>-0.5</td></tr>
<tr><td>BKSI</td><td>Bulukumba</td><td>10.11</td><td>226</td><td>P</td><td>Pn</td><td>08 03 47.5</td><td>+1.3</td></tr>
<tr><td>EDFI</td><td>Ende, Flores</td><td>11.87</td><td>209</td><td>P</td><td>Pn</td><td>08 04 13.2</td><td>+3.5</td></tr>
<tr><td>FITZ</td><td>Fitzroy Crossi</td><td>19.78</td><td>185</td><td>P</td><td>P</td><td>08 05 43.6</td><td>-1.0</td></tr>
<tr><td></td><td>0.4nm,0.3s,baz=0.3,slow=10,SNR=8.8</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>WRA</td><td>Warramunga Arr</td><td>22.57</td><td>163</td><td>P</td><td>P</td><td>08 06 13.4</td><td>-0.7</td></tr>
<tr><td></td><td>16nm,0.6s,baz=343,slow=10,SNR=45</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>WRA</td><td></td><td></td><td></td><td>PcP</td><td>PcP</td><td>08 10 02.9</td><td>-0.3</td></tr>
<tr><td></td><td>0.3nm,0.5s,baz=336,slow=2.4,SNR=3.9</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>WRA</td><td></td><td></td><td></td><td>S</td><td>S</td><td>08 10 11.5</td><td>-0.7</td></tr>
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<tr><td>ASAR</td><td>Alice Springs</td><td>26.01</td><td>166</td><td>P</td><td>P</td><td>08 06 45.0</td><td>-0.5</td></tr>
<tr><td></td><td>3.4nm,0.7s,baz=347,slow=13,SNR=17</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>ASAR</td><td></td><td></td><td></td><td>PcP</td><td>PcP</td><td>08 10 10.4</td><td>-0.2</td></tr>
<tr><td></td><td>0.5nm,0.6s,baz=345,slow=2.2,SNR=3.3</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>KSRS</td><td>Korea Array</td><td>35.56</td><td>1</td><td>P</td><td>P</td><td>08 08 09.9</td><td>+0.8</td></tr>
<tr><td></td><td>0.8nm,0.4s,baz=178,slow=9.4,SNR=4.1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>STKA</td><td>Stephens Creek</td><td>36.02</td><td>159</td><td>P</td><td>P</td><td>08 08 13.2</td><td>0.0</td></tr>
<tr><td></td><td>14nm,0.4s,baz=334,slow=8.8,SNR=37</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>KLR</td><td>Kul'dur</td><td>47.47</td><td>4</td><td>P</td><td>P</td><td>08 09 46.4</td><td>+0.3</td></tr>
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<tr><td>SONM</td><td>Songino Array</td><td>49.41</td><td>341</td><td>P</td><td>P</td><td>08 10 00.9</td><td>-0.3</td></tr>
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<tr><td>PETK</td><td>Petropavlovsk-</td><td>57.02</td><td>21</td><td>P</td><td>P</td><td>08 10 57.1</td><td>+0.5</td></tr>
<tr><td></td><td>1.2nm,0.6s,baz=196,slow=8.3,SNR=2.7</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>MKAR</td><td>Makanchi Array</td><td>59.59</td><td>326</td><td>P</td><td>P</td><td>08 11 15.7</td><td>+1.1</td></tr>
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<tr><td>ILAR</td><td>Eielson Array</td><td>86.60</td><td>25</td><td>P</td><td>P</td><td>08 13 51.8</td><td>-1.2</td></tr>
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ISCJB ***19*** *08:07:42.7±0.3, 56°.14S±0°.06×26°.9W±0°.1, h100^{km}, mb4.7/34, Error ellipse: s-maj=9.2km s-min=6.5km az=138.1*

NEIC ***19*** *08:07:43.0±1.0, 56°.19S×26°.91W, h90^{km}±8^{km}, mb4.9/33, Error ellipse: s-maj=6.4km s-min=4.9km az=224.0*

IDC ***19*** *08:07:44.2±0.6, 56°.16S×26°.90W, h101^{km}±5^{km}, mb4.3/11, mb1 4.4/13, mb1mx4.2/21, mbtmp4.7/13, MS3.6/5, Ms1 3.6/5, ms1mx3.2/24, Error ellipse: s-maj=16.9km s-min=13.2km az=79.0*

ISC 19 08:07:43.9±0.3, 56°.19S±0°.07×27°.01W±0°.07, h100^{km}, n94, σ0^{s}88/99, mb4.8/32, 1C, South Sandwich Islands region

<table>
<tr><th rowspan="2">Code</th><th rowspan="2">Station Name</th><th rowspan="2">Δ°</th><th rowspan="2">AZ°</th><th colspan="2">Phase ID</th><th>Time</th><th>Res</th></tr>
<tr><th>Op</th><th>ISC</th><th>h m s</th><th>ISC</th></tr>
<tr><td>HOPE</td><td>Hope Point</td><td>5.75</td><td>285</td><td>ePn</td><td>Pn</td><td>08 09 06.7</td><td>+0.1</td></tr>
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<tr><td>VNA1</td><td>Neumayer--Stat</td><td>16.62</td><td>158</td><td>P</td><td>P</td><td>08 11 33.1</td><td>+2.0</td></tr>
<tr><td>VNA3</td><td>Neumayer Olymp</td><td>16.82</td><td>161</td><td>P</td><td>Pn</td><td>08 11 33.1</td><td>+0.2</td></tr>
<tr><td>VNA2</td><td>Neumayer--Watz</td><td>17.02</td><td>158</td><td>P</td><td>Pn</td><td>08 11 35.2</td><td>-0.1</td></tr>
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<tr><td>SNAA</td><td>Sanae</td><td>18.57</td><td>156</td><td>P</td><td>P</td><td>08 11 51.9</td><td>-0.8</td></tr>
<tr><td>SNAA</td><td>Sanae</td><td>18.57</td><td>156</td><td>eP</td><td>P</td><td>08 11 51.6</td><td>-1.0</td></tr>
<tr><td></td><td>17nm,0.7s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>SNAA</td><td></td><td></td><td></td><td>PcP</td><td>PcP</td><td>08 16 17.1</td><td>-0.1</td></tr>
<tr><td></td><td>0.2nm,0.3s,baz=307,slow=6.1,SNR=4.5</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td></td><td>0.1nm,0.3s,baz=290,slow=5.1,SNR=5.7</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PMSA</td><td>Palmer Station</td><td>19.88</td><td>229</td><td>eP</td><td>P</td><td>08 12 07.7</td><td>+0.9</td></tr>
<tr><td></td><td>84nm,0.9s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td></td><td>3.1nm,0.3s,baz=58,slow=7.2,SNR=9.6</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PMSA</td><td></td><td></td><td></td><td>LR</td><td>LR</td><td>08 17 47.7</td><td></td></tr>
<tr><td></td><td>comp=Z,258nm,18.7s,baz=136,slow=30</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>SYO</td><td>Syowa Base</td><td>31.41</td><td>141</td><td>⇑eP</td><td>P</td><td>08 13 52.4</td><td>-2.4</td></tr>
<tr><td>QSPA</td><td>South Pole Qui</td><td>34.06</td><td>180</td><td>eP</td><td>P</td><td>08 14 17.2</td><td>-1.0</td></tr>
<tr><td></td><td>30nm,1.1s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>QSPA</td><td>South Pole Qui</td><td>34.06</td><td>180</td><td>P</td><td>P</td><td>08 14 18.5</td><td>+0.3</td></tr>
<tr><td></td><td>14nm,0.5s,baz=180,slow=20,SNR=106</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td></td><td>2.3nm,0.7s,baz=31,slow=4.6,SNR=2.3</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>QSPA</td><td></td><td></td><td></td><td>ScP</td><td>ScP</td><td>08 20 27.7</td><td>-1.0</td></tr>
<tr><td></td><td>5.6nm,1.0s,baz=171,slow=2.5,SNR=9.1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>QSPA</td><td></td><td></td><td></td><td>LR</td><td>LR</td><td>08 27 29.3</td><td></td></tr>
<tr><td></td><td>comp=Z,100nm,18.1s,baz=186,slow=35</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CPUP</td><td>Villa Florida</td><td>36.98</td><td>311</td><td>eP</td><td>P</td><td>08 14 43.3</td><td>-0.1</td></tr>
<tr><td></td><td>5.4nm,1.3s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CPUP</td><td>Villa Florida</td><td>36.98</td><td>311</td><td>P</td><td>P</td><td>08 14 43.5</td><td>+0.1</td></tr>
<tr><td></td><td>2.2nm,0.6s,baz=155,slow=9.4,SNR=6.6</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>ROC1</td><td>El Roble</td><td>38.08</td><td>289</td><td>eP</td><td>P</td><td>08 14 53.2</td><td>+0.3</td></tr>
<tr><td></td><td>10nm,0.8s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>MAW</td><td>Mawson</td><td>39.97</td><td>143</td><td>eP</td><td>P</td><td>08 15 07.9</td><td>0.0</td></tr>
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<tr><td>GO04</td><td>Tololo Observa</td><td>40.17</td><td>292</td><td>eP</td><td>P</td><td>08 15 10.4</td><td>0.0</td></tr>
<tr><td></td><td>40nm,1.3s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>SUR</td><td>Sutherland</td><td>40.58</td><td>75</td><td>eP</td><td>P</td><td>08 15 13.8</td><td>+0.2</td></tr>
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<tr><td></td><td>4.8nm,0.8s,baz=192,slow=9.0,SNR=3.7</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>LCO</td><td>Las Campanas</td><td>41.05</td><td>293</td><td>eP</td><td>P</td><td>08 15 17.7</td><td>0.0</td></tr>
<tr><td></td><td>23nm,1.3s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>GO02</td><td>Mina Guanaco</td><td>43.65</td><td>297</td><td>eP</td><td>P</td><td>08 15 39.1</td><td>+0.3</td></tr>
<tr><td></td><td>16nm,0.7s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>LVC</td><td>Limon Verde</td><td>45.46</td><td>300</td><td>eP</td><td>P</td><td>08 15 54.0</td><td>+0.8</td></tr>
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<tr><td>BOSA</td><td>Boshof</td><td>45.91</td><td>75</td><td>P</td><td>P</td><td>08 15 55.9</td><td>-0.5</td></tr>
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<tr><td>PB04</td><td>IPOC Station P</td><td>46.30</td><td>299</td><td>eP</td><td>P</td><td>08 16 00.1</td><td>+0.5</td></tr>
<tr><td></td><td>46nm,1.2s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>VNDA</td><td>Vanda</td><td>46.44</td><td>183</td><td>eP</td><td>P</td><td>08 16 00.0</td><td>+0.2</td></tr>
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<tr><td>VNDA</td><td></td><td></td><td></td><td>LR</td><td>LR</td><td>08 33 21.5</td><td></td></tr>
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<tr><td>PB01</td><td>IPOC Station P</td><td>47.07</td><td>301</td><td>eP</td><td>P</td><td>08 16 06.1</td><td>+0.5</td></tr>
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<tr><td>H10S2</td><td>ASCENSION HYDR</td><td>48.11</td><td>17</td><td>T</td><td>T</td><td>09 09 07.4</td><td></td></tr>
<tr><td></td><td>baz=189,slow=75</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>H10S3</td><td>ASCENSION HYDR</td><td>48.11</td><td>16</td><td>T</td><td>T</td><td>09 09 13.2</td><td></td></tr>
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<tr><td>H10S1</td><td>ASCENSION HYDR</td><td>48.12</td><td>16</td><td>T</td><td>T</td><td>09 09 14.3</td><td></td></tr>
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<tr><td>MNMC</td><td>Minye Minye</td><td>48.76</td><td>302</td><td>eP</td><td>P</td><td>08 16 19.0</td><td>+0.3</td></tr>
<tr><td></td><td>28nm,0.6s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>LBTB</td><td>Lobatse</td><td>48.95</td><td>73</td><td>eP</td><td>P</td><td>08 16 19.9</td><td>-0.1</td></tr>
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<tr><td></td><td>9.5nm,0.9s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>LPAZ</td><td>La Paz</td><td>50.54</td><td>305</td><td>eP</td><td>P</td><td>08 16 33.3</td><td>+0.6</td></tr>
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<tr><td></td><td>12nm,0.9s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>DBIC</td><td>Dimbokro</td><td>65.25</td><td>24</td><td>eP</td><td>P</td><td>08 18 15.3</td><td>+0.6</td></tr>
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<tr><td>OTAV</td><td>Otavalo</td><td>69.82</td><td>304</td><td>eP</td><td>P</td><td>08 18 45.2</td><td>+1.2</td></tr>
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<tr><td>TORD</td><td>Torodi Ar. Bea</td><td>73.13</td><td>29</td><td>P</td><td>P</td><td>08 19 02.8</td><td>-0.4</td></tr>
<tr><td></td><td>2.8nm,0.6s,baz=208,slow=5.8,SNR=17</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>TORD</td><td></td><td></td><td></td><td>pP</td><td>pP</td><td>08 19 29.0</td><td>+1.6</td></tr>
<tr><td></td><td>4.5nm,0.9s,baz=228,slow=4.0,SNR=6.1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>TOA1</td><td>Torodi Ar. Sit</td><td>73.13</td><td>29</td><td>eP</td><td>P</td><td>08 19 02.8</td><td>-0.5</td></tr>
<tr><td>SDV</td><td>Santo Domingo</td><td>74.18</td><td>315</td><td>eP</td><td>P</td><td>08 19 10.3</td><td>+0.6</td></tr>
<tr><td></td><td>10nm,1.4s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>WHZ</td><td>Wether Hill Ro</td><td>77.51</td><td>191</td><td>eP</td><td>P</td><td>08 19 28.9</td><td>+0.8</td></tr>
<tr><td></td><td>14nm,1.0s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>MLZ</td><td>Mavora Lakes</td><td>78.01</td><td>191</td><td>eP</td><td>P</td><td>08 19 31.6</td><td>+0.7</td></tr>
<tr><td></td><td>13nm,1.1s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>RPZ</td><td>Rata Peaks</td><td>79.30</td><td>193</td><td>LR</td><td>LR</td><td>08 53 10.8</td><td></td></tr>
<tr><td></td><td>comp=Z,55nm,18.2s,baz=255,slow=34</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>FOZ</td><td>Fox Glacier</td><td>79.63</td><td>192</td><td>eP</td><td>P</td><td>08 19 40.2</td><td>+0.5</td></tr>
<tr><td></td><td>9.2nm,1.1s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>THZ</td><td>Tophouse</td><td>80.97</td><td>195</td><td>eP</td><td>P</td><td>08 19 47.9</td><td>+0.8</td></tr>
<tr><td></td><td>24nm,1.3s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>SNZO</td><td>South Karori</td><td>81.14</td><td>196</td><td>eP</td><td>P</td><td>08 19 47.9</td><td>+0.1</td></tr>
<tr><td></td><td>16nm,0.9s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>TAU</td><td>Tasmania Unive</td><td>81.15</td><td>176</td><td>eP</td><td>P</td><td>08 19 47.9</td><td>0.0</td></tr>
<tr><td></td><td>54nm,1.3s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>BKZ</td><td>Black Stump Fm</td><td>82.93</td><td>198</td><td>eP</td><td>P</td><td>08 19 57.5</td><td>+0.1</td></tr>
<tr><td></td><td>19nm,1.5s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>TOO</td><td>Toolangi</td><td>86.38</td><td>174</td><td>eP</td><td>P</td><td>08 20 15.3</td><td>+0.6</td></tr>
<tr><td></td><td>12nm,1.1s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>STKA</td><td>Stephens Creek</td><td>91.74</td><td>170</td><td>eP</td><td>P</td><td>08 20 40.8</td><td>+0.7</td></tr>
<tr><td></td><td>3.4nm,1.5s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>STKA</td><td>Stephens Creek</td><td>91.74</td><td>170</td><td>P</td><td>P</td><td>08 20 41.7</td><td>+1.7</td></tr>
<tr><td></td><td>2.0nm,0.6s,baz=164,slow=6.1,SNR=9.1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>ASAR</td><td>Alice Springs</td><td>98.82</td><td>162</td><td>P</td><td>Pdif</td><td>08 21 13.9</td><td>+1.4</td></tr>
<tr><td></td><td>2.5nm,0.7s,baz=184,slow=4.0,SNR=25</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>AS31</td><td>Alice Springs</td><td>98.82</td><td>162</td><td>eP</td><td>Pdif</td><td>08 21 13.3</td><td>+0.8</td></tr>
<tr><td></td><td>1.1nm,0.8s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>WRA</td><td>Warramunga Arr</td><td>102.54</td><td>162</td><td>P</td><td>Pdif</td><td>08 21 27.9</td><td>-1.1</td></tr>
<tr><td></td><td>0.4nm,0.9s,baz=191,slow=4.2,SNR=6.4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>WR1</td><td>Warramunga Arr</td><td>102.54</td><td>162</td><td>ePdif</td><td>Pdif</td><td>08 21 27.9</td><td>-1.1</td></tr>
<tr><td>PDAR</td><td>Pinedale Array</td><td>120.50</td><td>302</td><td>PKP</td><td>PKPdf</td><td>08 26 21.2</td><td>-1.9</td></tr>
<tr><td></td><td>0.2nm,0.4s,baz=123,slow=3.3,SNR=4.8</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>FIA0</td><td>FINESS Array S</td><td>124.46</td><td>28</td><td>ePKPdf</td><td>PKPdf</td><td>08 26 29.7</td><td>0.0</td></tr>
<tr><td>FINES</td><td>FINESS Array B</td><td>124.46</td><td>28</td><td>PKP</td><td>PKPdf</td><td>08 26 29.7</td><td>0.0</td></tr>
<tr><td></td><td>2.8nm,0.9s,baz=211,slow=2.2,SNR=7.0</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CMAR</td><td>Chiang Mai Arr</td><td>124.92</td><td>110</td><td>PKP</td><td>PKPdf</td><td>08 26 31.6</td><td>-0.4</td></tr>
<tr><td></td><td>0.9nm,0.3s,baz=243,slow=4.0,SNR=3.4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>ARA0</td><td>ARCESS Array S</td><td>131.04</td><td>22</td><td>ePKPdf</td><td>PKPdf</td><td>08 26 41.8</td><td>-0.2</td></tr>
<tr><td>ARCES</td><td>ARCESS Array B</td><td>131.04</td><td>22</td><td>PKP</td><td>PKPdf</td><td>08 26 41.8</td><td>-0.2</td></tr>
<tr><td></td><td>1.3nm,0.6s,baz=191,slow=1.8,SNR=4.0</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>BVAR</td><td>Borovoye Array</td><td>134.77</td><td>58</td><td>PKP</td><td>PKiKP</td><td>08 26 51.3</td><td>+0.2</td></tr>
<tr><td></td><td>0.6nm,0.7s,baz=210,slow=2.7,SNR=2.4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>YKA</td><td>Yellowknife Ar</td><td>136.34</td><td>318</td><td>PKP</td><td>PKPdf</td><td>08 26 52.3</td><td>+0.1</td></tr>
<tr><td></td><td>0.7nm,0.5s,baz=126,slow=2.3,SNR=17</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>YKA</td><td></td><td></td><td></td><td>SKPbc</td><td>SKPbc</td><td>08 30 13.2</td><td>-1.8</td></tr>
<tr><td></td><td>1.1nm,0.6s,baz=128,slow=2.8,SNR=18</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>YKB5</td><td>Yellowknife Ar</td><td>136.34</td><td>318</td><td>ePKPdf</td><td>PKPdf</td><td>08 26 51.9</td><td>-0.3</td></tr>
<tr><td>MK32</td><td>Makanchi Array</td><td>136.84</td><td>71</td><td>ePKPdf</td><td>PKPdf</td><td>08 26 53.2</td><td>-0.4</td></tr>
<tr><td>MKAR</td><td>Makanchi Array</td><td>136.84</td><td>71</td><td>PKP</td><td>PKPdf</td><td>08 26 53.2</td><td>-0.4</td></tr>
<tr><td></td><td>0.2nm,0.7s,baz=263,slow=1.2,SNR=2.6</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CD2</td><td>Chengdu</td><td>137.52</td><td>105</td><td>PKP</td><td>PKPdf</td><td>08 26 56.0</td><td>+0.5</td></tr>
<tr><td>LZH</td><td>Lanzhou</td><td>141.48</td><td>100</td><td>ePKP</td><td>PKPdf</td><td>08 26 59.3</td><td>-3.4</td></tr>
<tr><td>LZH</td><td></td><td></td><td></td><td>pPKP</td><td>pPKPdf</td><td>08 27 26.6</td><td>-2.7</td></tr>
<tr><td>LZH</td><td></td><td></td><td></td><td>sPKP</td><td></td><td>08 27 37.9</td><td></td></tr>
<tr><td>LZH</td><td></td><td></td><td></td><td>LR</td><td>LR</td><td></td><td></td></tr>
<tr><td></td><td>comp=N,230nm,18.0s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>LZH</td><td></td><td></td><td></td><td>LR</td><td>LR</td><td></td><td></td></tr>
<tr><td></td><td>comp=E,290nm,18.1s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>LZH</td><td></td><td></td><td></td><td>LR</td><td>LR</td><td></td><td></td></tr>
<tr><td></td><td>comp=Z,300nm,20.3s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>HYT</td><td>Haines Junctio</td><td>144.96</td><td>307</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 06.5</td><td>-0.9</td></tr>
<tr><td>INK</td><td>Inuvik</td><td>145.98</td><td>320</td><td>ePKPdf</td><td>PKPdf</td><td>08 27 09.9</td><td>+0.7</td></tr>
<tr><td>INK</td><td>Inuvik</td><td>145.98</td><td>320</td><td>PKPbc</td><td>PKPbc</td><td>08 27 10.4</td><td>+0.2</td></tr>
<tr><td></td><td>comp=Z,4.8nm,0.6s,baz=69,slow=3.2,SNR=27</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>INK</td><td></td><td></td><td></td><td>pPKPbc</td><td>pPKPab</td><td>08 27 37.9</td><td>+0.5</td></tr>
<tr><td></td><td>comp=Z,3.6nm,0.8s,baz=110,slow=2.2,SNR=3.2</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>INK</td><td></td><td></td><td></td><td>SKPbc</td><td>SKPbc</td><td>08 30 38.2</td><td>-1.5</td></tr>
<tr><td></td><td>comp=Z,2.6nm,1.0s,baz=108,slow=4.4,SNR=4.5</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>EPYK</td><td>Eagle Plains</td><td>146.60</td><td>316</td><td>ePKPdf</td><td>PKPdf</td><td>08 27 10.5</td><td>+0.1</td></tr>
<tr><td>DAWY</td><td>Dawson</td><td>146.96</td><td>312</td><td>ePKPdf</td><td>PKPdf</td><td>08 27 11.6</td><td>+0.4</td></tr>
<tr><td>SCRK</td><td>Sand Creek</td><td>148.87</td><td>310</td><td>ePKPdf</td><td>PKPdf</td><td>08 27 16.4</td><td>+2.0</td></tr>
<tr><td>RIDG</td><td>Independ'e Rid</td><td>149.17</td><td>310</td><td>ePKPdf</td><td>PKPbc</td><td>08 27 18.2</td><td>-0.9</td></tr>
<tr><td>DHY</td><td>Denali Highway</td><td>150.10</td><td>308</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 21.5</td><td>-0.1</td></tr>
<tr><td>IL1</td><td>Eielson Array</td><td>150.29</td><td>311</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 21.9</td><td>+0.2</td></tr>
<tr><td>ILAR</td><td>Eielson Array</td><td>150.29</td><td>311</td><td>PKPbc</td><td>PKPbc</td><td>08 27 22.1</td><td>+0.4</td></tr>
<tr><td></td><td>comp=Z,2.7nm,0.7s,baz=145,slow=3.9,SNR=61</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>ILAR</td><td></td><td></td><td></td><td>pPKPbc</td><td>pPKPbc</td><td>08 27 47.5</td><td>-1.1</td></tr>
<tr><td></td><td>comp=Z,5.0nm,1.0s,baz=129,slow=1.5,SNR=6.4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>ILB</td><td>Eielson Array</td><td>150.29</td><td>311</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 22.2</td><td>+0.5</td></tr>
<tr><td>SONA0</td><td>Songino Array</td><td>150.63</td><td>87</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 22.8</td><td>-0.5</td></tr>
<tr><td>SONM</td><td>Songino Array</td><td>150.63</td><td>87</td><td>PKPbc</td><td>PKPbc</td><td>08 27 22.8</td><td>-0.5</td></tr>
<tr><td></td><td>comp=Z,1.7nm,0.6s,baz=228,slow=3.1,SNR=15</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>WRH</td><td>Wood River Hil</td><td>150.73</td><td>311</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 22.9</td><td>+0.2</td></tr>
<tr><td>RND</td><td>Reindeer</td><td>150.83</td><td>308</td><td>ePKPbc</td><td>PKiKP</td><td>08 27 24.1</td><td>+0.3</td></tr>
<tr><td>MCK</td><td>McKinley</td><td>150.94</td><td>309</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 23.9</td><td>+0.6</td></tr>
<tr><td>BWN</td><td>Browne</td><td>151.26</td><td>310</td><td>ePKPbc</td><td>PKiKP</td><td>08 27 24.7</td><td>+0.2</td></tr>
<tr><td>TRF</td><td>Thorofare Moun</td><td>151.47</td><td>308</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 25.2</td><td>+0.4</td></tr>
<tr><td>TOLK</td><td>Toolik Lake Re</td><td>151.85</td><td>319</td><td>ePKPbc</td><td>PKPbc</td><td>08 27 25.6</td><td>+0.2</td></tr>
<tr><td>JNU</td><td>Nakatsue</td><td>152.32</td><td>137</td><td>PKPbc</td><td>PKPbc</td><td>08 27 27.1</td><td>-0.4</td></tr>
<tr><td></td><td>comp=Z,9.5nm,1.0s,baz=284,slow=4.2,SNR=2.1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>IM3</td><td>Indian Mountai</td><td>153.31</td><td>313</td><td>ePKPbc</td><td>PKiKP</td><td>08 27 29.2</td><td>+0.6</td></tr>
</table>

IDC 19 08:13:03.6±2.0, 0°.34N×125°.06E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.1/45, mbtmp3.2/3, Error ellipse: s-maj=181.7km s-min=28.4km az=64.0, Northern Molucca Sea

<table>
<tr><th rowspan="2">Code</th><th rowspan="2">Station Name</th><th rowspan="2">Δ°</th><th rowspan="2">AZ°</th><th colspan="2">Phase ID</th><th>Time</th><th>Res</th></tr>
<tr><th>Op</th><th>ISC</th><th>h m s</th><th>ISC</th></tr>
<tr><td>WRA</td><td>Warramunga Arr</td><td>22.11</td><td>156</td><td>P</td><td>P</td><td>08 18 01.3</td><td>+0.5</td></tr>
<tr><td></td><td>0.3nm,0.3s,baz=335,slow=10,SNR=11</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>ASAR</td><td>Alice Springs</td><td>25.36</td><td>161</td><td>P</td><td>P</td><td>08 18 32.1</td><td>-0.5</td></tr>
<tr><td></td><td>0.2nm,0.6s,baz=340,slow=7.4,SNR=4.5</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>MKAR</td><td>Makanchi Array</td><td>59.43</td><td>327</td><td>P</td><td>P</td><td>08 23 08.2</td><td>0.0</td></tr>
<tr><td></td><td>0.3nm,0.9s,baz=120,slow=8.5,SNR=2.5</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

*IDC **19** 08:25:39.0±0.6, 28°.32N×104°.91E, h0^{km}, mb4.0/19, mb1 4.1/21, mb1mx4.0/51, mbtmp4.0/21, ML4.2/2, MS3.3/5, Ms1 3.3/5, ms1mx2.8/55, Error ellipse: s-maj=18.3km s-min=13.9km az=61.0*
*ISCJB **19** 08:25:39.7±0.3, 28°.25N±0°.03×104°.88E±0°.04, h19^{km}, mb4.1/31, MS3.2/4, Error ellipse: s-maj=5.5km s-min=4.7km az=20.3*
*NEIC **19** 08:25:40.5±0.2, 28°.27N×104°.82E, h10^{km}, mb4.2/13, ML3.9(BJI), Error ellipse: s-maj=5.2km s-min=4.2km az=78.0*
*BJI **19** 08:25:40.8, 28°.30N×104°.82E, h8^{km}, mb4.3/8, ML3.9/21, Ms3.8/7, Ms7 3.5/5*
ISC 19 08:25:41.8±0.4**, 28°.32N**±0°.03×**104°.83E**±0°.05**, h19**^{km}**, n70, σ1^{s}.19**/78**, mb4.2**/31**, MS3.3**/4**, 1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	2.75	340	Pn	Pn	08 26 26.8	+1.9
CD2				Pg	Pg	08 26 33.8	-0.7
CD2				Sn	Sb	08 27 01.0	-2.6
CD2				Sg	Sg	08 27 08.3	-1.8
CD2				smax	smax		
	comp=N,2μm,1.0s						
CD2				smax	smax		
	comp=E,5μm,0.7s						
CD2	Chengdu	2.75	340	Pn	Pn	08 26 26.8	+1.9
CD2				Pg	Pg	08 26 33.8	-0.7
CD2				Sn	Sb	08 27 01.0	-2.6
CD2				Sn	Sb	08 27 01.0	-2.6
CD2				Sg	Sg	08 27 08.3	-1.8
KMI	Kunming	3.69	211	Pg	Pg	08 26 51.0	-1.6
KMI				Sn	Sn	08 27 21.3	+0.1
KMI				Sg	Sg	08 27 40.3	-0.2
KMI				smax	smax		
	comp=N,85nm,0.9s						
KMI				smax	smax		
	comp=E,41nm,1.3s						
KMI	Kunming	3.69	211	ePn	Pn	08 26 37.9	-0.2
ENH	Enshi	4.50	63	ePn	Pn	08 26 51.3	+2.2
XAN	Xi'an	6.69	31	Pn	Pn	08 27 20.3	+1.2
XAN				Sg	Sg	08 29 11.9	-4.5
XAN				smax	smax		
	comp=E,130nm,1.0s						
XAN				smax	smax		
	comp=E,150nm,1.0s						
XAN				LR	LR		
	comp=E,430nm,6.4s						
XAN				LR	LR		
	comp=E,430nm,7.8s						
XAN	Xi'an	6.69	31	ePn	Pn	08 27 20.2	+1.2
LZH	Lanzhou	7.79	354	ePn	Pn	08 27 34.3	0.0
LZH				Sn	Sn	08 29 06.8	+4.8
LZH				sS	Sb	08 29 10.0	-19
LZH				smax	smax		
	comp=E,96nm,1.1s						
LZH				smax	smax		
	comp=E,160nm,0.9s						
LZH				LR	LR		
	comp=E,570nm,8.3s						
LZH				LR	LR		
	comp=E,430nm,9.2s						
WHN	Wuhan	8.59	73	⇓P	Pn	08 27 46.3	+1.2
QIZ	Qiongzhong	10.32	153	ePn	Pn	08 28 08.9	0.0
CMAR	Chiang Mai Arr	11.21	210	Pn	Pn	08 28 20.6	-0.4
	comp=E,0.6nm,0.3s,baz=21,slow=11,SNR=3.1						
CMAR				Lg	Lg	08 31 40.3	
	comp=E,0.2nm,0.3s,baz=18,slow=20,SNR=2.4						
BRDH	Bariadhala	13.17	248	LR	LR	08 34 25.2	
	comp=E,124nm,18.4s,baz=133,slow=40						
JIRN	Jiri	16.48	272	eP	Pn	08 29 32.0	-0.4
	comp=E,16nm,0.5s						
GUN	Gumba	16.73	273	eP	Pn	08 29 34.8	-0.7
	comp=E,24nm,0.9s						
PKI	Pulchoki	17.18	272	eP	Pn	08 29 41.0	-0.2
	comp=E,28nm,0.8s						
PKIN	Phulchoki	17.19	272	eP	Pn	08 29 41.6	+0.3
	comp=E,7.7nm,0.5s						
KKN	Kakani	17.27	273	eP	Pn	08 29 41.7	-0.5
	comp=E,33nm,0.8s						
DMN	Daman	17.45	272	eP	P	08 29 44.7	-0.8
	comp=E,10nm,0.6s						
DANN	Dangsing	18.55	275	eP	P	08 29 57.5	-0.3
	comp=E,32nm,0.8s						
SONA0	Songino Array	19.52	3	eP	Pn	08 30 09.0	-0.4
SONM	Songino Array	19.52	3	P	Pn	08 30 09.0	-0.4
	comp=E,0.6nm,0.3s,baz=187,slow=11,SNR=14						
SONM				PcP	PcP	08 34 28.1	-0.1
	comp=E,0.0nm,0.3s,baz=160,slow=2.6,SNR=2.6						
SONA1	Songino Array	19.53	3	eP	Pn	08 30 09.1	-0.4
ULN	Ulaanbaatar	19.59	4	eP	Pn	08 30 09.8	-0.4
	comp=E,3.2nm,1.0s						
WMQ	Urumqi	20.70	323	eP	Pn	08 30 23.8	+0.5
WMQ				pP	sP	08 30 27.8	-1.4
WMQ				pmax	pmax		
	comp=E,14nm,0.7s						
KSAR	Wonju Array Be	21.35	59	P	P	08 30 28.0	+0.2
KSRS	Korea Array	21.38	59	P	P	08 30 28.0	-0.1
	comp=E,1.1nm,0.5s,baz=187,slow=30,SNR=6.4						
JNU	Nakatsue	22.87	71	LR	LR	08 41 26.1	
	comp=E,33nm,18.8s,baz=203,slow=42						
MK01	Makanchi Array	25.51	322	eP	P	08 31 08.9	-0.1
MK31	Makanchi Array	25.53	322	eP	P	08 31 09.4	+0.3
	comp=E,5.1nm,0.9s						
MK32	Makanchi Array	25.53	322	eP	P	08 31 09.8	+0.6
MKAR	Makanchi Array	25.53	322	eP	P	08 31 08.8	-0.4
	comp=E,28nm,0.8s						
MKAR	Makanchi Array	25.53	322	P	P	08 31 09.8	+0.6
	comp=E,3.5nm,0.7s,baz=119,slow=10.0,SNR=22						
MKAR				PcP	PcP	08 34 40.2	-0.1
	comp=E,0.7nm,0.9s,baz=108,slow=4.7,SNR=2.5						
MAKZ	Makanchi	25.71	322	eP	P	08 31 11.0	+0.2
	comp=E,6.3nm,0.9s						
USA0B	Ussuriysk Arra	26.86	47	eP	P	08 31 21.4	+0.2
	comp=E,19nm,1.5s						
USRK	Ussuriysk Ar.	26.86	47	P	P	08 31 21.0	-0.2
	comp=E,3.1nm,0.6s,baz=245,slow=9.3,SNR=7.5						
ZALV	Zalesovo Beam	29.50	336	P	P	08 31 45.0	+0.4
	comp=E,1.2nm,0.4s,baz=144,slow=9.6,SNR=2.0						
ZALV				LR	LR	08 44 12.0	
	comp=E,47nm,20.7s,baz=47,slow=38						
ZAA1	Zalesovo Array	29.51	336	eP	P	08 31 45.0	+0.4
KURK	Kurchatov	29.87	326	eP	P	08 31 48.1	+0.1
	comp=E,3.0nm,0.8s						
BVAR	Borovoye Array	35.38	324	LR	LR	08 49 10.9	
	comp=E,67nm,18.9s,baz=93,slow=40						
GEYT	Alibeck	39.93	296	P	P	08 33 16.4	+1.6
	comp=E,2.6nm,0.5s,baz=134,slow=4.3,SNR=3.9						
ABKAR	Akbulak array	40.02	314	eP	P	08 33 15.9	+0.5
	comp=E,1.9nm,0.9s						
AKTO	Aktyubinsk	41.53	315	P	P	08 33 29.2	+1.4
	comp=E,0.7nm,0.5s,baz=103,slow=13,SNR=2.8						
NRIK	Noril'sk	42.27	351	P	P	08 33 34.0	+0.4
	comp=E,2.6nm,0.3s,baz=136,slow=7.6,SNR=5.0						
GNI	Garni	50.20	300	LR	LR	09 00 04.4	
	comp=E,55nm,19.1s,baz=167,slow=41						
WR1	Warramunga Arr	55.82	146	eP	P	08 35 17.4	-0.5
	comp=E,7.6nm,1.4s						
WRA	Warramunga Arr	55.82	146	P	P	08 35 17.4	-0.5
	comp=E,1.1nm,0.6s,baz=337,slow=8.3,SNR=28						
WB2	Warramunga Arr	55.82	146	eP	P	08 35 16.9	-1.2
BR101	Keskin Array S	58.70	301	eP	P	08 35 39.0	+0.7
BRTR	Keskin Array B	58.70	301	P	P	08 35 39.0	+0.7
	comp=E,0.7nm,0.7s,baz=81,slow=7.6,SNR=4.0						
AS31	Alice Springs	58.79	149	eP	P	08 35 38.7	-0.3
	comp=E,1.2nm,1.2s						
ASAR	Alice Springs	58.79	149	P	P	08 35 39.1	+0.1
	comp=E,0.8nm,0.5s,baz=332,slow=7.0,SNR=18						
AKASG	Malin Array Be	59.76	315	P	P	08 35 45.4	0.0
	comp=E,0.2nm,0.3s,baz=71,slow=6.0,SNR=2.8						
ARA0	ARCESS Array S	60.05	336	eP	P	08 35 47.3	+0.2
ARCES	ARCESS Array B	60.05	336	P	P	08 35 47.3	+0.2
	comp=E,4.4nm,1.0s,baz=48,slow=10.0,SNR=3.5						
FIA0	FINESS Array S	60.23	327	eP	P	08 35 48.4	-0.1
FINES	FINESS Array B	60.23	327	P	P	08 35 48.4	-0.1
	comp=E,3.0nm,0.9s,baz=104,slow=8.0,SNR=4.4						
CTA	Charters Tower	62.60	136	P	P	08 36 05.2	+0.3
	comp=E,0.8nm,0.2s,baz=313,slow=7.1,SNR=2.5						
NB200	NORSAR Array S	67.34	328	eP	P	08 36 34.5	-0.9
NOA	NORSAR Array B	67.34	328	P	P	08 36 34.5	-0.9
	comp=E,0.3nm,0.4s,baz=73,slow=6.3,SNR=2.7						
IM3	Indian Mountai	68.95	25	eP	P	08 36 45.2	-0.1
GERES	GERESS Array B	69.95	315	P	P	08 36 52.6	+0.7
	comp=E,0.5nm,0.5s,baz=98,slow=8.2,SNR=3.7						
MLY	Manley	70.48	26	eP	P	08 36 55.3	+0.5
	comp=E,1.8nm,1.1s						
KMBO	Kilima Mbogo	70.92	258	P	P	08 36 58.6	+0.1
	comp=E,1.0nm,0.3s,baz=61,slow=9.2,SNR=4.0						
MDM	Murphy Dome	71.47	25	eP	P	08 37 01.6	+0.7
	comp=E,5.5nm,1.0s						
IL1	Eielson Array	72.07	25	eP	P	08 37 03.8	-0.5
ILAR	Eielson Array	72.07	25	P	P	08 37 04.0	-0.3
	comp=E,0.2nm,0.4s,baz=289,slow=4.5,SNR=6.2						
KDAK	Kodiak Island	72.81	33	eP	P	08 37 08.8	0.0
	comp=E,33nm,1.6s						
INK	Inuvik	74.57	19	eP	P	08 37 19.0	+0.1
	comp=E,1.0nm,0.8s						
DAWY	Dawson	75.21	24	eP	P	08 37 23.0	+0.1
	comp=E,4.2nm,1.4s						
YKA	Yellowknife Ar	84.15	17	P	P	08 38 11.7	+0.4
	comp=E,0.3nm,0.5s,baz=326,slow=5.0,SNR=10						

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*ISCJB **19** 08:34:03.9±1.4, 4°.4S±0°.1×144°.7E±0°.2, h100^{km}, mb3.8/4, Error ellipse: s-maj=29.1km s-min=19.3km az=4.4*
*IDC **19** 08:34:10.7±4.8, 4°.29S×144°.27E, h145^{km}±39^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.4/33, mbtmp4.0/6, Error ellipse: s-maj=54.4km s-min=20.9km az=100.0*
ISC 19 08:34:05.0±1.5**, 4°.4S**±0°.1×**144°.7E**±0°.2**, h100**^{km}**, n6, σ1^{s}.30**/6**, mb3.7**/4**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	4.43	295	P	Pn	08 35 10.7	+0.7
	3.2nm,0.3s,baz=124,slow=10.0,SNR=7.7						
WRA	Warramunga Arr	18.44	212	P	Pn	08 38 13.6	-0.4
	1.0nm,0.3s,baz=32,slow=11,SNR=55						
ASAR	Alice Springs	21.78	208	P	P	08 38 49.8	+0.8
	2.6nm,0.6s,baz=33,slow=7.3,SNR=22						
FITZ	Fitzroy Crossi	23.08	232	P	P	08 39 01.8	-0.4
	12nm,0.6s,baz=51,slow=8.5,SNR=52						
MKAR	Makanchi Array	74.85	321	P	P	08 45 33.0	-1.6
	0.4nm,0.6s,baz=101,slow=7.4,SNR=4.6						
ILAR	Eielson Array	84.95	24	P	P	08 46 29.6	+0.9
	0.9nm,1.0s,baz=258,slow=3.9,SNR=5.8						

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*ISCJB **19** 08:47:29.3±0.8, 31°.93S±0°.06×179°.9E±0°.2, h450^{km}, mb3.1/2, Error ellipse: s-maj=19.7km s-min=7.9km az=7.6*
*WEL **19** 08:47:32.7±0.8, 32°S±8°×18°0E±1°9, h383^{km}±13^{km}*
*IDC **19** 08:47:32.9±7.6, 32°.18S×179°.46E, h465^{km}±98^{km}, mb2.7/2, mb1 3.1/3, mb1mx2.9/36, mbtmp3.8/3, Error ellipse: s-maj=114.4km s-min=42.0km az=8.0*
ISC 19 08:47:27.7±1.0**, 31°.88S**±0°.09×**180°.0W**±0°.1**, h450**^{km}**, n41, σ2^{s}.46**/51**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.15	35	P	P	08 48 36.2	+0.2
GLKZ				S	S	08 49 28.8	-2.5
MXZ	Matakaoa Point	5.84	194	P	P	08 49 02.5	+2.2
MXZ				S	S	08 50 13.5	-2.4
KUZ	Kuaotunu	6.02	215	P	P	08 49 05.2	+3.1
WMGZ	Waiomatatini S	6.07	192	P	P	08 49 06.1	+3.5
WMGZ				S	S	08 50 19.8	-0.4
HAZ	Te Kaha	6.15	197	P	P	08 49 05.1	+1.7
HAZ				S	S	08 50 19.0	-2.6
PKGZ	Pakihiroa	6.21	194	P	P	08 49 07.0	+3.0
PKGZ				S	S	08 50 20.1	-2.8
OUZ	Omahuta	6.32	236	P	P	08 49 06.9	+1.7
RUGZ	Raukumara Rang	6.37	197	P	P	08 49 07.8	+2.0
RUGZ				S	S	08 50 23.3	-2.8
TWGZ	Tauwhareparae	6.50	194	P	P	08 49 10.1	+3.0
TWGZ				S	S	08 50 26.8	-1.7
OPRZ	Ohinepanea	6.60	205	P	P	08 49 12.3	+4.2
CNGZ	Carnagh Statio	6.76	192	P	P	08 49 13.1	+3.4
MWZ	Matawai	6.76	197	P	P	08 49 11.6	+1.8
MWZ				S	S	08 50 30.8	-2.6
TKGZ	Te Karaka	6.79	195	P	P	08 49 11.1	+1.1
URZ	Urewera	6.80	200	P	P	08 49 12.3	+2.2
	8.3nm,0.3s,baz=269,slow=3.9,SNR=92						
URZ				S	S	08 50 31.1	-3.0
	6.1nm,0.3s,baz=222,slow=22,SNR=20						
URZ	Urewera	6.80	200	P	P	08 49 10.6	+0.4
URZ				S	S	08 50 31.2	-3.0
RAGZ	Rawiri	6.94	197	P	P	08 49 14.2	+2.5
RIGZ	Rimuhau	7.06	195	P	P	08 49 14.2	+1.3
RRRZ	Republican Roa	7.06	203	P	P	08 49 16.2	+3.3
MUGZ	Murupara	7.10	201	P	P	08 49 14.3	+0.9
RTZ	Ruatahuna	7.17	200	P	P	08 49 16.7	+2.6
SNGZ	Shannon Statio	7.23	197	P	P	08 49 18.0	+3.3
PRGZ	Paritu Road	7.24	193	P	P	08 49 19.3	+4.4
KNZ	Kokohu	7.38	194	P	P	08 49 19.9	+3.6
RAHZ	Arahi	7.42	198	P	P	08 49 18.9	+2.1
MTHZ	Maungataniwha	7.43	200	P	P	08 49 19.0	+2.1
MHGZ	Mahia Peninsul	7.46	193	P	P	08 49 20.7	+3.5
NMHZ	Naumai	7.67	199	P	P	08 49 21.8	+2.4
ARHZ	Aropaoanui	7.77	198	P	P	08 49 23.2	+2.8
BKZ	Black Stump Fm	7.82	201	P	P	08 49 22.0	+0.9
MCHZ	McNeill Hill	8.02	199	P	P	08 49 25.3	+2.2
NGZ	Ngauruhoe	8.12	205	P	P	08 49 26.8	+2.3
KAHZ	Kahuranaki	8.30	197	P	P	08 49 28.1	+1.9
PXZ	Pawanui	8.53	197	P	P	08 49 30.5	+1.9
TSZ	Takapari Road	8.80	201	P	P	08 49 32.5	+0.9
PRHZ	Porangahau	8.81	197	P	P	08 49 34.2	+2.5
WAZ	Wanganui	8.86	206	P	P	08 49 34.2	+1.9
BFZ	Birch Farm	9.30	198	P	P	08 49 38.8	+1.8
MRZ	Mangatainoka R	9.47	201	P	P	08 49 39.7	+0.8
ASAR	Alice Springs	41.37	270	P	P	08 54 33.7	+0.4
	0.3nm,0.6s,baz=104,slow=7.7,SNR=4.1						
WRA	Warramunga Arr	42.50	275	P	P	08 54 42.4	+0.2
	0.4nm,0.3s,baz=111,slow=8.1,SNR=19						
FINES	FINESS Array B	145.91	338	PKPbc	PKiKP	09 06 18.1	+0.2
	0.8nm,0.5s,baz=50,slow=2.2,SNR=6.0						

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*WEL **19** 08:51:28.9±1.0, 32°S±8°×17°8W±2°2, h0^{km}, ML4.7/7*
*IDC **19** 08:51:37.0±8.7, 32°.40S×178°.44W, h85^{km}±76^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.5/37, mbtmp3.9/4, ML3.6/1, Error ellipse: s-maj=62.7km s-min=49.0km az=17.0*
ISC 19 08:51:28.4±1.3**, 32°.08S**±0°.07×**177°.9W**±0°.2**, h33**^{km}**, n28, σ2^{s}.71**/43**, mb3.9**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.81	0	P	Pb	08 52 17.1	-0.8
GLKZ				S	Sb	08 52 50.4	-1.5
MXZ	Matakaoa Point	6.28	208	P	Pn	08 53 01.7	+3.0
MXZ				S	Sn	08 54 06.6	-2.7
WMGZ	Waiomatatini S	6.46	207	P	Pn	08 53 04.1	+2.9
WMGZ				S	Sn	08 54 14.7	+0.9
PKGZ	Pakihiroa	6.65	208	P	Pn	08 53 05.1	+1.2
PKGZ				S	Sn	08 54 16.8	-1.7
HAZ	Te Kaha	6.66	211	P	Pn	08 53 07.5	+3.5
HAZ				S	Sn	08 54 19.9	+1.2
PUZ	Puketiti	6.74	206	P	Pn	08 53 06.8	+1.7
PUZ				S	Sn	08 54 19.3	-1.4
RUGZ	Raukumara Rang	6.88	210	P	Pn	08 53 08.1	+1.0
RUGZ				S	Sn	08 54 23.3	-1.0
TWGZ	Tauwhareparae	6.94	208	P	Pn	08 53 09.2	+1.3
TWGZ				S	Sn	08 54 24.7	-0.9
CNGZ	Carnagh Statio	7.12	205	P	Pn	08 53 11.9	+1.6
TKGZ	Te Karaka	7.22	207	P	Pn	08 53 16.3	+4.7
TKGZ				S	Sn	08 54 30.5	-1.9
MWZ	Matawai	7.26	209	P	Pn	08 53 14.9	+2.7
MWZ				S	Sn	08 54 29.7	-3.7
URZ	Urewera	7.38	212	P	Pn	08 53 15.1	+1.4
	1.1nm,0.3s,baz=270,slow=4.4,SNR=7.9						
URZ				S	Sn	08 54 32.5	-3.8
	1.5nm,0.3s,baz=72,slow=21,SNR=8.9						
URZ	Urewera	7.38	212	P	Pn	08 53 16.3	+2.5
URZ				S	Sn	08 54 32.4	-3.8
RAGZ	Rawiri	7.44	209	S	Sn	08 54 34.4	-3.7
RIGZ	Rimuhau	7.48	207	P	Pn	08 53 18.5	+3.2
RIGZ				S	Sn	08 54 34.7	-4.3
PRGZ	Paritu Road	7.63	205	P	Pn	08 53 21.4	+4.1
MUGZ	Murupara	7.71	213	S	Sn	08 54 40.6	-3.8
SNGZ	Shannon Statio	7.71	209	P	Pn	08 53 21.0	+2.6
SNGZ				S	Sn	08 54 41.4	-3.2
OUZ	Omahuta	7.72	244	P	Pn	08 53 22.3	+3.8
RAHZ	Arahi	7.93	209	P	Pn	08 53 24.0	+2.5
MTHZ	Maungataniwha	7.98	211	P	Pn	08 53 25.5	+3.3
NMHZ	Naumai	8.20	210	P	Pn	08 53 26.9	+1.7
BKZ	Black Stump Fm	8.39	211	P	Pn	08 53 30.2	+2.3
BKZ				S	Sn	08 54 57.0	-4.5
CTA	Charters Tower	34.15	282	P	P	08 58 11.2	+0.5
	0.5nm,0.3s,baz=131,slow=9.3,SNR=3.2						
ASAR	Alice Springs	43.09	269	P	P	08 59 25.6	0.0
	0.8nm,0.7s,baz=106,slow=7.7,SNR=10						
WRA	Warramunga Arr	44.23	274	P	P	08 59 34.7	-0.1
	1.1nm,0.4s,baz=112,slow=8.1,SNR=26						
FINES	FINESS Array B	146.73	339	PKPbc	PKiKP	09 11 08.7	-0.2
	2.5nm,1.0s,baz=48,slow=2.1,SNR=6.1						
BRTR	Keskin Array B	153.40	296	PKPbc	PKiKP	09 11 24.0	+0.4
	0.4nm,0.6s,baz=98,slow=4.4,SNR=2.8						

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*NNC **19** 09:07:23.1±2.4, 53°.42N×87°.73E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=19.4km s-min=9.4km az=66.0, Suspected Mining explosion.*
KRAR 19 09:07:25.1±0.1**, 53°.63N**×**87°.80E, M2.4, 6C-8D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	1.80	281	⇓Pn	Pn	09 07 54.2	-3.1
	6.9nm,0.5s						
ZAA0				⇓Sn	Sn	09 08 20.7	-0.1
	19nm,0.3s						
KURK	Kurchatov	6.36	246	⇓Pn	Pn	09 08 56.9	-3.0
	1.5nm,0.8s						
KURK				⇓Sn	Sn	09 10 07.8	-5.3
	2.7nm,1.0s						
KURK				⇑Lg	Lg	09 10 39.2	
	5.5nm,0.9s						
KURBB	Kurchatov Arra	6.45	246	⇑Pn	Pn	09 08 58.3	-3.0
	3.3nm,0.6s						
KURBB				⇑Sn	Sn	09 10 09.9	-5.7
	9.7nm,0.7s						
KURBB				⇑Lg	Lg	09 10 41.7	
	14nm,1.1s						
MK31	Makanchi Array	7.70	209	⇑Pn	Pn	09 09 15.1	-3.4
	0.4nm,0.6s,baz=26,slow=12,SNR=22						
MK31				⇑Sn	Sn	09 10 42.1	-4.2
	0.4nm,0.5s,baz=31,slow=28,SNR=2.6						
MK31				⇓Lg	Lg	09 11 24.1	
	3.9nm,0.8s,baz=35,slow=31,SNR=4.8						
MAKZ	Makanchi	7.78	211	⇓Pn	Pn	09 09 16.7	-2.8
	0.9nm,0.8s						
MAKZ				⇓Sn	Sn	09 10 42.4	-5.9
	0.9nm,0.8s						
MAKZ				⇓Lg	Lg	09 11 20.7	
	1.8nm,0.9s						

KRSC 19 09:16:25.1±1.5**, 55°.10N**×**164°.17E, h38**^{km}±25^{km}**, ML3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	1.35	326	eP	Pn	09 16 47.9	+0.6
KBTR				eS	Sn	09 17 06.2	+2.2
KBG	Krutoberegovo	1.43	325	eS	Sn	09 17 08.9	+3.1
TUMD	Tumrok D	2.16	274	eP	Pn	09 17 01.1	+2.6
BDR	Baidarnaya	2.23	313	eP	Pn	09 17 02.1	+2.7
TUMR	Tumrok	2.31	276	eP	Pn	09 17 03.6	+2.9
KLY	Klyuchi	2.33	303	eP	Pn	09 17 02.3	+1.5
SPN	Mys Shipunski	3.16	232	eS	Sn	09 17 51.7	+3.2
NLC	Nalytchevo	3.43	238	eS	Sn	09 18 00.2	+5.0
SMAR	Somma	3.65	242	eP	Pn	09 17 23.4	+4.3
UGLR	Uglovaya	3.67	241	eP	Pn	09 17 23.8	+4.6
KRX	Arik	3.68	244	eP	Pn	09 17 24.2	+4.8
AVH	Avacha	3.68	242	eP	Pn	09 17 24.3	+4.9
KOK	Koryaka	3.72	243	eP	Pn	09 17 24.4	+4.5
DALK	Dalny	3.80	239	eP	Pn	09 17 24.5	+3.5
GNL	Ganaly	3.90	251	eP	Pn	09 17 27.5	+5.0
KRMR	Karymshinskiy	4.23	240	eP	Pn	09 17 30.8	+4.0
KRMR				eS	Sn	09 18 20.8	+6.0
MTVR	Mutnovka	4.41	236	eP	Pn	09 17 33.0	+3.5
MTVR				eS	Sn	09 18 23.6	+4.0

MEX 19 09:19:26.5±0.9**, 16°.39N**×**94°.59W, h90**^{km}±12^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.75	338	i P	Pn	09 19 42.6	-0.9
CMIG				i S	Sn	09 19 54.3	-1.9
HUIG	Huatulco	1.59	247	i P	Pn	09 19 51.7	-1.7
HUIG				i S	Sn	09 20 12.3	-1.4
VHO	Vista Hermosa	2.17	289	eP	Pn	09 20 00.5	-0.6
VHO				i S	Sn	09 20 26.1	-1.3
PNIG	Pinotepa	3.40	271	eP	Pn	09 20 15.1	-2.3
PNIG				eS	Sn	09 20 54.8	-1.9

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*IDC **19** 09:19:33.8±0.8, 3°.44S×131°.40E, h0^{km}, mb4.0/10, mb1 4.2/12, mb1mx4.0/42, mbtmp4.1/12, ML4.1/2, MS3.2/5, Ms1 3.2/5, ms1mx2.9/38, Error ellipse: s-maj=35.3km s-min=15.6km az=69.0*
*ISCJB **19** 09:19:35.0±0.3, 3°.66S±0°.03×131°.26E±0°.04, h24^{km}, mb4.0/15, MS3.2/2, Error ellipse: s-maj=6.2km s-min=4.8km az=8.2*
*DJA **19** 09:19:36.7±1.6, 4°S±5°×13°1E±°, h20^{km}±16^{km}, M4.4/6, mb4.5/1, mB5.4/1, MLv4.3/6, Mw(mB)4.9/1*
*NEIC **19** 09:19:38.5±0.5, 3°.59S×131°.29E, h35^{km}, mb4.1/16, Error ellipse: s-maj=11.8km s-min=8.4km az=73.0*
ISC 19 09:19:36.4±0.5**, 3°.68S**±0°.05×**131°.28E**±0°.05**, h24**^{km}**, n52, σ2^{s}.78**/56**, mb4.1**/15**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.23	52	ePn	Pn	09 19 57.5	-0.5
FAKI				eSn	Sb	09 20 15.2	+0.8
FAKI	Fak Fak	1.23	52	P	Pn	09 19 57.3	-0.8
FAKI				S	Sb	09 20 15.5	+1.1
BNDI	Bandanaira	1.60	239	P	Pn	09 20 04.0	+0.8
SIJI	Sorong	2.79	360	Pn	Pn	09 20 17.5	-2.1
	7.3nm,0.3s,baz=225,slow=23,SNR=47						
SIJI				Sn	Sn	09 20 46.9	-5.7
	23nm,0.3s,baz=233,slow=20,SNR=11						
SIJI				LR	LR	09 21 33.3	
	comp=Z,368nm,18.2s,baz=306,slow=47						
RKPI	Ransiki, Papua	3.61	53	P	Pn	09 20 30.2	-0.7
NLAI	Namlea	4.20	276	P	Pn	09 20 41.3	+2.4
BAKI	Biak	5.42	63	P	Pn	09 20 56.2	+0.4
SANI	Sanana	5.53	287	P	Pn	09 20 57.2	0.0
MTN	Manton Dam	9.10	181	ePn	Pn	09 21 48.3	+2.0
MTN				eSn	Sn	09 23 28.5	+0.3
SOEI	Soe	9.21	229	ePn	Pn	09 21 50.8	+2.8
SOEI				eSn	Sn	09 23 27.9	-3.1
JAY	Jayapura	9.48	83	LR	LR	09 25 54.3	
	comp=Z,148nm,19.3s,baz=324,slow=41						
BATI	Baumata	9.96	229	Pn	Pn	09 22 02.4	+4.4
	6.8nm,0.3s,baz=66,slow=9.3,SNR=3.7						
BATI				LR	LR	09 26 32.3	
	comp=Z,171nm,18.1s,baz=86,slow=41						
FITZ	Fitzroy Crossi	15.36	201	ePn	Pn	09 23 09.6	-2.0
	5.3nm,0.6s						
FITZ	Fitzroy Crossi	15.36	201	Pn	Pn	09 23 09.2	-2.4
	1.9nm,0.3s,baz=33,slow=11,SNR=26						
FITZ				Sn	Sn	09 25 54.8	-6.3
	0.9nm,0.3s,baz=194,slow=18,SNR=5.4						
COEN	Coen	15.56	132	ePn	Pn	09 23 14.9	+0.6
	4.9nm,0.6s						
WRAB	Tennant Creek	16.43	170	ePn	Pn	09 23 26.9	+1.4
	9.0nm,0.4s						
WRA	Warramunga Arr	16.43	170	Pn	Pn	09 23 22.9	-2.7
	0.7nm,0.3s,baz=353,slow=13,SNR=35						
WRA				Sn	Sn	09 26 19.5	-7.9
	0.5nm,0.3s,baz=360,slow=24,SNR=6.7						
WR1	Warramunga Arr	16.44	170	ePn	Pn	09 23 22.9	-2.7
	11nm,1.0s						
WR1				eSn	Sn	09 26 19.5	-7.9
WB2	Warramunga Arr	16.44	170	ePn	Pn	09 23 24.1	-1.5
WB2				eSn	Sn	09 26 23.3	-4.2
KKM	Kota Kinabalu	17.88	303	ePn	Pn	09 23 42.5	-1.3
	32nm,1.1s						
AS31	Alice Springs	20.03	173	eP	Pn	09 24 11.3	+1.7
	7.7nm,0.4s						
ASAR	Alice Springs	20.03	173	P	Pn	09 24 10.7	+1.1
	5.4nm,0.4s,baz=349,slow=11,SNR=148						
ASAR				S	S	09 27 44.2	-7.8
	1.2nm,0.8s,baz=356,slow=28,SNR=4.2						
AS01	Alice Springs	20.03	173	eP	Pn	09 24 11.3	+1.7
MBWA	Marble Bar	20.69	212	eP	P	09 24 15.8	+0.9
	6.1nm,0.9s						
SMRI	Semarang	21.01	260	eP	P	09 24 20.0	+1.5

CTA	Charters Tower	21.89	139	P	P	09 24 30.5	+2.7
	3.6nm,0.6s,baz=310,slow=11,SNR=11						
CTAO	Charters Tower	21.89	139	eP	P	09 24 30.7	+2.8
	6.4nm,0.8s						
MORW	Morawa	29.10	208	eP	P	09 25 37.0	+1.7
	5.4nm,1.0s						
BBOO	Buckleboo	29.32	172	eP	P	09 25 37.9	+0.6
	5.5nm,1.0s						
STKA	Stephens Creek	29.68	162	eP	P	09 25 43.3	+2.9
	1.4nm,1.0s						
STKA	Stephens Creek	29.68	162	P	P	09 25 42.9	+2.5
	2.0nm,0.4s,baz=347,slow=7.6,SNR=9.7						
NWAO	Narrogin (SRO)	31.93	203	eP	P	09 26 02.2	+2.0
	3.7nm,0.9s						
JNU	Nakatsue	36.60	359	LR	LR	09 40 05.6	
	comp=Z,41nm,21.8s,baz=176,slow=34						
CMAR	Chiang Mai Arr	38.71	306	P	P	09 27 00.3	+1.4
	0.7nm,0.4s,baz=123,slow=6.9,SNR=3.6						
KSRS	Korea Array	41.05	356	LR	LR	09 43 13.5	
	comp=Z,30nm,19.1s,baz=126,slow=35						
BKZ	Black Stump Fm	54.08	137	eP	P	09 29 01.6	+2.2
	2.4nm,0.9s						
SONA0	Songino Array	55.75	340	eP	P	09 29 10.8	-0.6
SONM	Songino Array	55.75	340	P	P	09 29 10.8	-0.6
	0.2nm,0.4s,baz=172,slow=4.4,SNR=3.8						
MK01	Makanchi Array	66.18	325	eP	P	09 30 22.0	-0.1
MK31	Makanchi Array	66.20	325	eP	P	09 30 22.4	+0.2
	1.4nm,0.9s						
MK32	Makanchi Array	66.20	325	eP	P	09 30 22.6	+0.4
MKAR	Makanchi Array	66.20	325	eP	P	09 30 22.4	+0.1
	13nm,1.0s						
MKAR	Makanchi Array	66.20	325	P	P	09 30 22.6	+0.4
	0.7nm,0.4s,baz=111,slow=8.1,SNR=14						
MAKZ	Makanchi	66.38	325	eP	P	09 30 23.9	+0.5
	1.6nm,1.0s						
ZALV	Zalesovo Beam	69.21	333	P	P	09 30 41.0	-0.1
	0.9nm,0.4s,baz=132,slow=5.5,SNR=4.3						
ZAA1	Zalesovo Array	69.22	333	eP	P	09 30 41.0	-0.1
KURBB	Kurchatov Arra	70.39	327	P	P	09 30 48.9	+0.5
	2.3nm,0.6s,baz=128,slow=5.8,SNR=17						
KURK	Kurchatov	70.39	328	eP	P	09 30 48.9	+0.5
BVAR	Borovoye Array	75.97	327	P	P	09 31 21.6	+0.2
	1.0nm,0.5s,baz=126,slow=7.5,SNR=5.1						
ILAR	Eielson Array	89.82	25	P	P	09 32 33.1	+0.3
	0.4nm,0.7s,baz=258,slow=6.4,SNR=4.1						
TORD	Torodi Ar. Bea	129.34	284	PKP	PKPdf	09 38 44.6	+0.6
	0.3nm,0.6s,baz=96,slow=1.9,SNR=2.6						
TOA1	Torodi Ar. Sit	129.34	284	ePKPdf	PKPdf	09 38 44.6	+0.6

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*NIED **19** 09:19:00, 37°.70N×141°.90E, h8^{km}, Mw3.8 Best double couple: $M_0$6.55000×10^{14} NP1:ϕ_s270.00000°, δ21.00000°, λ-130.00000°. NP2:ϕ_s132.00000°, δ74.00000°, λ-76.00000°.*

*ISCJB **19** 09:19:47.2±0.3, 37°.71N±0°.02×142°.00E±0°.03, h10^{km}, mb4.0/24, Error ellipse: s-maj=3.8km s-min=2.9km az=29.2*

*IDC **19** 09:19:47.1±0.6, 37°.62N×142°.11E, h0^{km}, mb3.8/18, mb1 4.0/24, mb1mx3.9/51, mbtmp3.9/24, ML3.3/3, MS2.6/3, Ms1 2.6/3, ms1mx2.4/50, Error ellipse: s-maj=15.7km s-min=13.0km az=134.0*

*JMA **19** 09:19:49.3±0.1, 37°.72N×141°.89E, h23^{km}±1^{km}, M4.2*

JMA Felt I J1.

*NEIC **19** 09:19:52.0±0.3, 37°.62N×142°.09E, h35^{km}, mb4.4/8, Error ellipse: s-maj=8.1km s-min=5.8km az=123.0*

NEIC Recorded [1 JMA] in Fukushima.

ISC 19 09:19:47.6±0.5**, 37°.63N**±0°.03×**141°.89E**±0°.04**, h10^{km}, n69, σ1^{s}91**/80**, mb4.0**/24**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.76	334	P	Pb	09 20 02.3	-0.6
JIKH				S	Sg	09 20 11.2	-1.0
JFK	Kawauchi	0.85	252	P	Pn	09 20 05.5	-0.2
JFK				S	Sn	09 20 17.1	-1.1
JMM	Marumori	0.90	286	P	Pn	09 20 05.3	-1.1
JMM				S	Sb	09 20 16.6	-0.8
JIO	Ouri	0.93	333	P	Pb	09 20 05.0	-0.8
JIO				S	Sg	09 20 16.0	-1.6
ONAJ	Iwakimizuishiy	1.02	239	P	Pn	09 20 08.2	+0.2
ONAJ				S	Sn	09 20 22.2	-0.2
JOU	Okura	1.22	308	P	Pg	09 20 10.6	-0.4
JOU				S	Sb	09 20 25.7	-0.8
JKMT	Kesennumamotoy	1.22	345	P	Pn	09 20 09.5	-1.3
JKMT				S	Sb	09 20 23.7	-3.0
JFT	Otama	1.24	265	P	Pg	09 20 11.8	+0.4
JFT				eS	Sn	09 20 28.0	+0.2
JMK	Ichinoseki	1.42	338	P	Pn	09 20 12.7	-0.8
JMK				S	Sn	09 20 30.2	-2.1
OFUJ	Ofunato	1.46	353	P	Pn	09 20 12.6	-1.4
OFUJ				eS	Sn	09 20 29.9	-3.3
JYS	Shirataka	1.56	293	P	Pg	09 20 16.1	-1.4
JYS				eS	Sb	09 20 36.1	-0.3
JFY	Yanaizu	1.75	263	P	Pg	09 20 19.6	-1.6
JFY				S	Sg	09 20 41.9	-2.1
JYK	Kaneyama	1.76	317	P	Pb	09 20 18.4	-1.6
JYK				eS	Sn	09 20 40.4	-0.3
MJAR	Matsushiro Arr	3.14	251	Pn	Pb	09 20 39.8	-3.7
	3.0nm,0.3s,baz=83,slow=16,SNR=97						
MJAR				Sn	Sb	09 21 21.3	-0.5
	2.2nm,0.3s,baz=139,slow=23,SNR=5.9						
MJAR				LR	LR	09 21 52.3	
	comp=Z,54nm,21.7s,baz=60,slow=38						
MAJO	Matsushiro	3.14	251	ePn	Pb	09 20 40.1	-3.4
MAJO				eSn	Sb	09 21 21.3	-0.6
MAT	Matsushiro	3.14	251	P	Pb	09 20 40.1	-3.4
MAT				eS	Sb	09 21 18.8	-3.1
MJB9	Matsu-Tunnel	3.14	251	ePn	Pb	09 20 40.1	-3.5
ERM	Erimo	4.49	12	ePn	Pn	09 20 56.0	+0.4
ERM				eSn	Sn	09 21 46.1	-1.8
INU	Inuyama	4.54	241	ePn	Pn	09 21 00.0	+3.7
INU				eSn	Sn	09 21 50.2	+1.0
JHJ2	Mitsune	4.82	201	ePn	Pn	09 21 02.6	+2.4
JHJ2				eSn	Sn	09 21 56.2	+0.2
JHJ	Hachijo jima 2	4.82	202	Pn	Pn	09 21 02.1	+1.9
	66nm,0.3s,baz=350,slow=24,SNR=13						
JHJ				Sn	Sn	09 21 56.1	0.0
	40nm,0.3s,baz=252,slow=20,SNR=3.1						
JHJ				LR	LR	09 23 21.0	
	comp=Z,108nm,18.7s,baz=70,slow=44						
ASAJ	Asahikawa	6.50	4	Pn	Pn	09 21 23.9	+0.6
	0.8nm,0.3s,baz=224,slow=9.9,SNR=6.2						
ASAJ				Sn	Sn	09 22 37.7	+0.2
	baz=155,slow=19,SNR=2.9						
USRK	Ussuriysk Ar.	9.96	314	Pn	Pn	09 22 14.6	+3.9
	0.1nm,0.3s,baz=113,slow=13,SNR=3.8						
CBIJ	Chichi jima	10.51	179	ePn	Pn	09 22 17.1	-1.1
CBIJ				eSn	Sn	09 24 09.9	-6.1
JCJ	Chichijima	10.51	179	Pn	Pn	09 22 17.1	-1.2
	8.5nm,0.3s,baz=289,slow=24,SNR=6.4						
JCJ				Sn	Sn	09 24 09.9	-6.2
	5.5nm,0.3s,baz=287,slow=19,SNR=4.2						
KSRS	Korea Array	11.09	273	Pn	Pn	09 22 30.7	+4.4
	0.2nm,0.3s,baz=84,slow=12,SNR=3.0						
KSRS				LR	LR	09 26 04.3	
	comp=Z,34nm,21.8s,baz=38,slow=33						
KSAR	Wonju Array Be	11.12	273	Pn	Pn	09 22 30.7	+3.9
PETK	Petropavlovsk-	18.98	30	eP	P	09 24 06.3	-2.8
MA2	Magadan	22.69	12	P	P	09 24 50.7	+1.6
	2.9nm,0.7s,baz=191,slow=12,SNR=2.4						
SEY	Seymchan	26.13	11	P	P	09 25 22.9	+1.4
	0.6nm,0.2s,baz=237,slow=16,SNR=2.9						
SONA0	Songino Array	27.77	303	eP	P	09 25 38.6	+1.9
SONM	Songino Array	27.77	303	P	P	09 25 38.6	+1.9
	0.8nm,0.6s,baz=103,slow=8.3,SNR=5.0						
H11N2	WAKE ISLAND Hy	28.14	122	T	T	09 55 05.1	
	baz=315,slow=75						
H11N1	WAKE ISLAND Hy	28.14	122	T	T	09 55 07.0	
	baz=315,slow=75						
H11N3	WAKE ISLAND Hy	28.15	122	T	T	09 55 06.5	
	baz=315,slow=75						
H11S1	WAKE ISLAND Hy	28.87	124	T	T	09 56 01.3	
	baz=317,slow=76						
H11S3	WAKE ISLAND Hy	28.87	124	T	T	09 56 03.2	
	baz=317,slow=76						
H11S2	WAKE ISLAND Hy	28.89	124	T	T	09 56 08.0	
	baz=317,slow=76						
ZAA1	Zalesovo Array	41.80	312	eP	P	09 27 38.8	+1.6
ZALV	Zalesovo Beam	41.80	312	eP	P	09 27 38.5	+1.4
ZALV	Zalesovo Beam	41.80	312	P	P	09 27 38.8	+1.6
	1.8nm,0.6s,baz=78,slow=6.8,SNR=4.0						
LUWI	Luwuk	42.35	209	eP	P	09 27 43.2	+1.2
	38nm,1.1s						
MK01	Makanchi Array	44.12	302	eP	P	09 27 56.9	+0.8
MK31	Makanchi Array	44.13	302	eP	P	09 27 59.8	+3.6
	1.6nm,0.8s						
MK32	Makanchi Array	44.13	302	eP	P	09 27 57.4	+1.3
MKAR	Makanchi Array	44.13	302	eP	P	09 27 59.9	+3.7
	12nm,0.8s						
MKAR	Makanchi Array	44.13	302	P	P	09 27 57.4	+1.3
	1.4nm,0.9s,baz=90,slow=9.5,SNR=6.1						
KURK	Kurchatov	45.87	308	eP	P	09 28 12.0	+2.2
	4.8nm,0.8s						
KURBB	Kurchatov Arra	45.94	308	P	P	09 28 12.7	+2.2
	3.7nm,0.7s,baz=82,slow=8.3,SNR=18						
KDAK	Kodiak Island	46.40	42	P	P	09 28 13.0	-1.0
	5.0nm,0.7s,baz=196,slow=7.4,SNR=3.7						
ILAR	Eielson Array	48.79	33	P	P	09 28 33.0	+0.6
	0.7nm,0.8s,baz=266,slow=5.8,SNR=6.5						
IL1	Eielson Array	48.79	33	eP	P	09 28 33.5	+1.1
KLU	Klutina	49.46	37	eP	P	09 28 35.9	-1.9
BVAR	Borovoye Array	50.45	312	P	P	09 28 47.4	+2.1
	0.3nm,0.4s,baz=73,slow=11,SNR=2.7						
AAK	Ala-Archa	50.54	298	P	P	09 28 47.7	+1.4
	0.4nm,0.4s,baz=49,slow=19,SNR=2.4						
INK	Inuvik	53.68	27	eP	P	09 29 10.2	+1.1
	4.3nm,1.4s						
INK	Inuvik	53.68	27	P	P	09 29 08.4	-0.6
	0.5nm,0.6s,baz=323,slow=2.9,SNR=3.2						
WB2	Warramunga Arr	57.70	188	eP	P	09 29 40.3	+1.9
	6.7nm,1.3s						
WR1	Warramunga Arr	57.70	188	eP	P	09 29 39.8	+1.3
	4.6nm,1.1s						
WRA	Warramunga Arr	57.70	188	P	P	09 29 39.8	+1.3
	1.3nm,0.6s,baz=5.9,slow=7.3,SNR=8.1						
ABKAR	Akbulak array	57.85	310	eP	P	09 29 41.4	+2.2
	1.0nm,0.6s						
AS01	Alice Springs	61.42	188	eP	P	09 30 06.0	+1.9
ASAR	Alice Springs	61.43	188	P	P	09 30 05.6	+1.4
	0.8nm,0.7s,baz=9.1,slow=4.9,SNR=4.4						
YKA	Yellowknife Ar	63.10	30	P	P	09 30 15.3	+0.4
	0.3nm,0.7s,baz=303,slow=6.8,SNR=6.7						
AKASG	Malin Array Be	74.06	322	P	P	09 31 25.7	+2.1
	0.5nm,0.3s,baz=46,slow=6.5,SNR=4.2						
NVAR	Mina Array Bea	74.33	53	P	P	09 31 25.7	+0.1
	0.5nm,0.7s,baz=277,slow=8.1,SNR=3.2						
PDAR	Pinedale Array	76.98	46	P	P	09 31 42.0	+1.2
	0.5nm,0.7s,baz=238,slow=1.7,SNR=6.5						
TXAR	Lajitas Array	89.46	53	P	P	09 32 46.6	+1.4
	0.5nm,0.8s,baz=308,slow=4.4,SNR=3.6						
LPAZ	La Paz	146.06	59	PKPbc	PKPab	09 39 29.1	-0.4
	0.7nm,0.5s,baz=283,slow=3.9,SNR=4.0						

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*SOME **19** 09:31:16.1, 39°.57N×77°.02E, h10^{km}*

*BJI **19** 09:31:17.4, 39°.59N×77°.12E, h5^{km}, mb4.0/4, ML3.9/9*

*KRNET **19** 09:31:18.8±0.1, 39°.66N×76°.82E, mb3.9*

*NNC **19** 09:31:18.7±1.0, 39°.68N×77°.00E, h0^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=7.5km s-min=4.0km az=146.0*

ISC 19 09:31:20.8±1.1**, 39°.76N**±0°.04×**77°.01E**±0°.04**, h10^{km}, n79, σ1^{s}97**/109**, 42C-19D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.84	253	Pg	Pn	09 31 41.1	+2.3
KSH				Sg	Sn	09 31 58.3	+7.1
KSH				smax	smax		
	comp=N,5μm,0.6s						
KSH				smax	smax		
	comp=E,2μm,0.8s						
NRN	Naryn	1.84	336	⇑iP	Pb	09 31 53.9	-0.8
	baz=40						
NRN				⇑iS	Sg	09 32 19.5	-0.5
	baz=40						
KDJ	Kajisay	2.37	3	⇑iP	Pb	09 32 02.8	-0.9
	baz=6.0						
KDJ				⇑iS	Sg	09 32 34.9	-2.1
	baz=6.0						
ULHL	Ulahol	2.55	347	P	Pb	09 32 05.6	-1.2
	SNR=59						
ULHL	Ulahol	2.55	347	⇑iP	Pb	09 32 04.8	-2.0
	baz=51						
ULHL				⇑iS	Sb	09 32 38.4	+0.1
	baz=51						
KZA	Kyzart	2.67	331	P	Pb	09 32 07.0	-2.0
	SNR=113						
KZA	Kyzart	2.67	331	⇑iP	Pn	09 32 05.9	+1.6
	baz=34						
KZA				⇑iS	Sb	09 32 40.2	-1.8
	baz=34						
SFK	Sufi-Kurgan	2.71	276	⇓Pg	Pb	09 32 09.2	-0.4
	27nm,0.2s						
SFK				⇓Lg	Lg	09 32 43.3	
	84nm,0.3s						
SFK	Sufi-Kurgan	2.71	276	Pg	Pn	09 32 07.1	+2.4
	74nm,0.2s						
SFK				Lg	Lg	09 32 43.6	
	105nm,0.3s						
SFK	Sufi-Kurgan	2.71	276	⇑iP	Pn	09 32 03.8	-0.8
	baz=79						
SFK				⇑iS	Sn	09 32 37.3	-0.3
	baz=79						
BOOM	Boomskoye usch	2.84	344	⇑iP	Pn	09 32 08.7	+2.3
	baz=47						
BOOM				⇑iS	Sb	09 32 45.2	-1.5
	baz=47						
ARLS	Aral	2.93	317	⇓iP	Pn	09 32 08.7	+1.1
	baz=20						
ARLS				⇓iS	Sn	09 32 45.2	+2.3
	baz=20						
UCH	Uchtor	3.11	323	P	Pn	09 32 12.5	+2.2
	SNR=19						
UCH	Uchtor	3.11	323	⇑iP	Pn	09 32 11.5	+1.2
	baz=26						
UCH				⇑iS	Sn	09 32 50.0	+2.3
	baz=26						
KBK	Karagaybulak	3.29	332	P	Pb	09 32 20.6	+1.3
	SNR=31						
KBK	Karagaybulak	3.29	332	⇑iP	Pn	09 32 14.7	+2.2
	baz=35						
KBK				⇑iS	Sn	09 32 54.8	+3.1
	baz=35						
IZV	Izvestkoviy	3.29	355	Pg	Pb	09 32 19.5	+0.2
	20nm,0.4s						
IZV				Lg	Lg	09 33 06.1	
	153nm,0.5s						
IZV	Izvestkoviy	3.29	355	eP	Pb	09 32 20.0	+0.7
	6.3nm,0.2s						
IZV				eS	Sg	09 33 06.1	-0.3
	153nm,0.5s						
TKM2	Tokmak 2	3.33	342	P	Pn	09 32 16.5	+3.3
	SNR=24						
TKM2	Tokmak 2	3.33	342	⇓Pg	Pb	09 32 19.9	-0.3
	6.5nm,0.3s						
TKM2				⇑Lg	Lg	09 33 08.2	
	39nm,0.5s						
TKM2	Tokmak 2	3.33	342	⇑iP	Pn	09 32 15.6	+2.4
	baz=45						
TKM2				⇑iS	Sb	09 32 56.8	-4.0
	baz=45						
KST	Kastek	3.37	347	Pg	Pb	09 32 21.5	+0.7
	19nm,0.5s						
KST				Lg	Lg	09 33 08.7	
	78nm,0.6s						
KST	Kastek	3.37	347	eP	Pb	09 32 21.5	+0.7
	19nm,0.5s						
KST				⇑iS	Sg	09 33 08.7	-0.5
	78nm,0.6s						
MDOK	Medeo	3.40	0	⇑Pg	Pg	09 32 24.4	-1.5
	31nm,0.4s						
MDOK				⇓Lg	Lg	09 33 09.8	
	84nm,0.6s						
MDOK	Medeo	3.40	0	Pg	Pb	09 32 22.1	+0.9
	54nm,0.4s						
MDOK				Lg	Lg	09 33 09.2	
	210nm,0.6s						
MDOK	Medeo	3.40	0	eP	Pb	09 32 22.1	+0.9
	54nm,0.4s						
MDOK				eS	Sg	09 33 09.2	-0.8
	210nm,0.6s						
AAK	Ala-Archa	3.44	327	P	Pb	09 32 19.3	-2.7
	SNR=6.4						
AAK	Ala-Archa	3.44	327	⇑Pg	Pb	09 32 22.9	+0.9
	19nm,0.4s						
AAK				⇓Lg	Lg	09 33 09.7	
	172nm,1.0s						
AAK	Ala-Archa	3.44	327	⇓iP	Pn	09 32 16.0	+1.3
	baz=30						
AAK				⇓iS	Sn	09 32 58.3	+2.7
	baz=30						
ARSB	Arslanbob	3.44	298	⇑iP	Pn	09 32 15.5	+0.8
	baz=1.0						
ARSB				⇑iS	Sn	09 32 56.7	+1.1
	baz=1.0						
AAA	Alma-Ata	3.45	359	Pg	Pb	09 32 23.4	+1.4
	46nm,0.2s						
AAA				Lg	Lg	09 33 11.9	
	211nm,0.3s						
AAA	Alma-Ata	3.45	359	eP	Pb	09 32 23.4	+1.4
	46nm,0.2s						
AAA				eS	Sg	09 33 11.9	+0.4
	211nm,0.3s						
AML	Almayashu	3.45	314	P	Pn	09 32 16.2	+1.2
	SNR=19						
AML	Almayashu	3.45	314	⇑eP	Pn	09 32 15.6	+0.6
	baz=17						
AML				⇑iS	Sn	09 32 57.7	+1.6
	baz=17						
KNDC	Almaty	3.45	359	⇑Pn	Pn	09 32 15.1	+0.4
	22nm,0.3s						
KNDC				⇓Lg	Lg	09 33 11.5	
	454nm,0.8s						
SATY	Saty	3.46	17	Pg	Pb	09 32 22.2	0.0
	134nm,0.4s						
SATY				Lg	Lg	09 33 10.0	
	164nm,0.5s						
SATY	Saty	3.46	17	eP	Pb	09 32 22.2	0.0
	134nm,0.4s						
SATY				⇑iS	Sg	09 33 10.0	-1.9
	164nm,0.5s						
KOTS	Kotyrbulak	3.47	1	Pg	Pb	09 32 23.2	+0.7
	43nm,0.5s						
KOTS				Lg	Lg	09 33 12.0	
	659nm,0.4s						
KOTS	Kotyrbulak	3.47	1	eP	Pb	09 32 23.6	+1.2
	26nm,0.4s						
KOTS				eS	Sg	09 33 12.0	-0.3
	659nm,0.4s						
FRU1	Bishkek	3.54	330	⇑iP	Pn	09 32 17.6	+1.8
	baz=33						
FRU1				⇑iS	Sn	09 33 00.3	+2.6
	baz=33						
DGS	Degeres	3.60	345	Pg	Pb	09 32 25.4	+0.8
	27nm,0.5s						
DGS				Lg	Lg	09 33 15.8	
	146nm,0.5s						
DGS	Degeres	3.60	345	eP	Pb	09 32 25.4	+0.8
	27nm,0.5s						
DGS				eS	Sg	09 33 15.8	-0.7
	146nm,0.5s						
CHMS	Chumysh	3.66	333	P	Pb	09 32 25.3	-0.2
	SNR=8.2						
UZB	Uzynbulak	3.71	23	Pg	Pb	09 32 27.9	+1.5
	40nm,0.5s						
UZB				Lg	Lg	09 33 19.4	
	45nm,0.4s						
UZB	Uzynbulak	3.71	23	eP	Pb	09 32 27.9	+1.5
	40nm,0.5s						
UZB				eS	Sg	09 33 19.4	-0.4
	45nm,0.4s						
EKS2	Erkin-Say	3.79	321	P	Pn	09 32 21.1	+1.8
	SNR=10						
EKS2	Erkin-Say	3.79	321	⇑iP	Pn	09 32 21.1	+1.8
	baz=24						
EKS2				⇑iS	Sn	09 33 06.2	+2.2
	baz=24						
KURS	Kuram	3.83	13	Pg	Pb	09 32 29.4	+1.0
	44nm,0.5s						
KURS				Lg	Lg	09 33 22.2	
	39nm,0.6s						
KURS	Kuram	3.83	13	eP	Pb	09 32 29.4	+1.0
	44nm,0.5s						
KURS				⇓iS	Sg	09 33 22.2	-1.4
	39nm,0.6s						
KTBS	Karatobe	3.96	357	Pg	Pb	09 32 31.5	+0.9
	17nm,0.4s						
KTBS				Lg	Lg	09 33 26.3	
	102nm,0.4s						
KTBS	Karatobe	3.96	357	eP	Pb	09 32 32.0	+1.4
	17nm,0.4s						
KTBS				eS	Sg	09 33 26.3	-1.5
	102nm,0.4s						
USP	Ospenovka	3.98	333	P	Pn	09 32 25.5	+3.6
	SNR=7.0						
PDGK	Podgornoye	4.02	27	Pg	Pb	09 32 33.5	+1.7
	18nm,0.4s						
PDGK				Lg	Lg	09 33 29.0	
	38nm,0.7s						
PDGK	Podgornoye	4.02	27	⇓Pg	Pb	09 32 32.2	+0.4
	22nm,0.5s						
PDGK				⇑Lg	Lg	09 33 29.5	
	55nm,0.6s						
CHKK	Chushkaly	4.09	360	Pg	Pb	09 32 34.2	+1.3
	22nm,0.4s						
CHKK				Lg	Lg	09 33 30.8	
	91nm,0.4s						
CHKK	Chushkaly	4.09	360	eP	Pb	09 32 34.2	+1.3
	22nm,0.4s						
CHKK				eS	Sg	09 33 30.8	-1.3
	91nm,0.4s						
MRKS	Merke	4.13	317	Pg	Pb	09 32 34.6	+1.0
	34nm,0.4s						
MRKS				Lg	Lg	09 33 31.1	
	37nm,0.4s						
MRKS	Merke	4.13	317	eP	Pb	09 32 34.6	+1.0
	34nm,0.4s						
MRKS				⇓iS	Sg	09 33 31.1	-2.2
	37nm,0.4s						
KUU	Kurty	4.16	353	Pg	Pb	09 32 35.4	+1.3
	20nm,0.6s						
KUU				Lg	Lg	09 33 32.5	
	136nm,0.6s						
KUU	Kurty	4.16	353	eP	Pb	09 32 35.4	+1.3
	20nm,0.6s						
KUU				⇑iS	Sg	09 33 32.5	-1.9
	136nm,0.6s						
MNAS	Manas	4.36	310	⇑Pg	Pb	09 32 40.6	+3.0
	16nm,0.5s						
MNAS				⇑Lg	Lg	09 33 37.1	
	23nm,0.6s						
MNAS	Manas	4.36	310	Pg	Pb	09 32 38.3	+0.7
	13nm,0.4s						
MNAS				Lg	Lg	09 33 37.1	
	22nm,0.6s						
MNAS	Manas	4.36	310	⇓iP	Pn	09 32 28.0	+0.8
	baz=12						
MNAS				⇓iS	Sn	09 33 19.0	+0.8
	baz=12						
ARXS	Arharly	4.49	8	Pg	Pb	09 32 42.0	+2.2
	25nm,0.5s						
ARXS				Lg	Lg	09 33 43.9	
	62nm,0.6s						
ARXS	Arharly	4.49	8	eP	Pb	09 32 42.0	+2.2
	25nm,0.5s						
ARXS				eS	Sg	09 33 43.9	-1.1
	62nm,0.6s						
DJR	Jarkent	5.01	23	Pg	Pb	09 32 51.1	+2.4
	6.7nm,0.5s						
DJR				Lg	Lg	09 33 59.2	
	12nm,0.4s						
DJR	Jarkent	5.01	23	eP	Pb	09 32 51.1	+2.4
	6.7nm,0.5s						
DJR				eS	Sg	09 33 59.2	-2.6
	12nm,0.4s						
KAPS	Kapalarasan	5.79	17	Pg	Pb	09 33 06.2	+4.3
	7.6nm,0.5s						
KAPS				Lg	Lg	09 34 25.6	
	14nm,0.7s						
KAPS	Kapalarasan	5.79	17	eP	Pb	09 33 06.2	+4.3
	7.6nm,0.5s						
KAPS				eS	Sg	09 34 25.6	-1.0
	14nm,0.7s						
KK31	Karatay Array	5.92	306	⇑Pn	Pn	09 32 52.4	+3.9
	0.9nm,0.5s,baz=126,slow=13,SNR=4.7						
KK31				⇑Pg	Pb	09 33 07.3	+3.3
	5.1nm,0.6s,baz=123,slow=17,SNR=27						
KK31				⇓Lg	Lg	09 34 25.2	
	0.3nm,0.1s,baz=7.4,slow=83,SNR=11						
CHCP	Chirah Chowk	6.79	207	P	Pn	09 32 58.7	-1.9
CEP	Cherat	7.20	216	P	Pn	09 33 04.1	-2.1
CEP				S	Sn	09 34 23.0	-5.2
MAKZ	Makanchi	7.92	26	⇑Pg	Pb	09 33 43.7	+5.6
	1.5nm,0.8s						
MAKZ				⇓Lg	Lg	09 35 34.8	
MK31	Makanchi Array	8.01	27	⇓Pn	Pn	09 33 16.8	-0.5
	0.3nm,0.4s,baz=204,slow=13,SNR=13						
MK31				⇑Lg	Lg	09 35 33.4	
	4.9nm,0.8s,baz=207,slow=24						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	Thamme Wali	8.15	213	P	Pn	09 33 15.0	-4.2
WMQ	Urumqi	8.95	60	*e*P	Pn	09 33 28.6	-1.6
WMQ				smax	smax		
	comp=N,31nm,0.9s						
WMQ				smax	smax		
	comp=E,39nm,1.1s						
OTUK	Ortayu	9.12	340	⇑Lg	Lg	09 36 11.2	
	10nm,0.9s						
KURBB	Kurchatov Arra	10.91	5	⇓Lg	Lg	09 37 09.3	
	7.3nm,0.6s						
KURK	Kurchatov	11.01	5	⇑Lg	Lg	09 37 08.1	
	9.1nm,0.9s						

IDC 19 09:50:56.3±2.1**,7°.14S**×**144°.09E,h0^{km},mb3.6**/2**, mb1 3.7**/4**,mb1mx3.4**/31**,mbtmp3.4**/4**,ML2.9**/2**,Error ellipse: s-maj=120.3km s-min=30.7km az=126.0,Near south coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.86	216	Pn	Pn	09 54 40.4	-0.8
	0.0nm,0.3s,baz=43,slow=14,SNR=4.4						
ASAR	Alice Springs	19.12	210	P	Pn	09 55 22.0	+0.1
	0.1nm,0.3s,baz=37,slow=11,SNR=6.9						
FITZ	Fitzroy Crossi	21.02	237	P	P	09 55 41.3	-0.5
	2.1nm,1.1s,baz=84,slow=19,SNR=3.2						
ILAR	Eielson Array	87.67	24	P	P	10 03 46.6	0.0
	0.7nm,0.9s,baz=236,slow=3.6,SNR=4.6						

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*IDC **19** 09:54:40.9±0.8, 55°.45N×166°.30E, h0^{km}, mb3.7/12, mb1 3.9/13, mb1mx3.7/59, mbtmp3.7/13, ML3.0/1, MS3.2/6, Ms1 3.2/6, ms1mx2.8/55, Error ellipse: s-maj=26.6km s-min=16.3km az=147.0*

*ISCJB **19** 09:54:42.8±0.5, 55°.28N±0°.05×166°.42E±0°.06, h26^{km}, mb3.7/12, MS3.4/4, Error ellipse: s-maj=7.0km s-min=5.0km az=174.8*

*MOS **19** 09:54:43.0±2.3, 55°.16N×166°.16E, h24^{km}, mb4.5/1, Error ellipse: s-maj=11.6km s-min=10.0km az=172.0*

*KRSC **19** 09:54:43.0±2.1, 55°.16N×166°.16E, h24^{km}±24^{km}, ML4.4*

ISC 19 09:54:44.5±0.8**,55°.34N**±0°.05×**166°.38E**±0°.07**,h26^{km},n55, σ1^{s}.46**/64**,mb3.8**/12**,MS3.6**/4**,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	2.19	295	*e*P	Pn	09 55 17.6	-1.5
KBTR				*e*S	Sn	09 55 44.4	-1.0
KBTR	Krutoberegovo	2.19	295	PN	Pn	09 55 17.6	-1.5
KBTR				S	Sn	09 55 44.4	-1.0
KBG	Krutoberegovo	2.27	295	*e*S	Sn	09 55 47.1	-0.1
SMKR	Semkarok	3.03	296	*e*P	Pn	09 55 31.3	+0.6
SMKR				*e*S	Sn	09 56 08.7	+2.6
SMKR	Semkarok	3.03	296	PN	Pn	09 55 31.3	+0.6
SMKR				S	Sn	09 56 08.7	+2.6
SRKR	Sorokina	3.21	296	*e*P	Pn	09 55 34.2	+1.0
SRKR				*e*S	Sn	09 56 13.3	+2.7
SRKR	Sorokina	3.21	296	PN	Pn	09 55 34.2	+1.0
SRKR				S	Sn	09 56 13.3	+2.7
ZLN	Zelenaya	3.23	284	*e*P	Pn	09 55 35.0	+1.5
ZLN				*e*S	Sn	09 56 13.7	+2.6
ZLN	Zelenaya	3.23	284	PN	Pn	09 55 35.0	+1.5
ZLN				S	Sn	09 56 13.7	+2.6
LGNR	Loginova	3.30	285	*e*P	Pn	09 55 36.3	+1.6
LGNR	Loginova	3.30	285	PN	Pn	09 55 36.3	+1.6
KLY	Klyuchi	3.37	289	*e*P	Pn	09 55 34.7	-0.7
KLY				*e*S	Sn	09 56 14.3	-0.2
KLY	Klyuchi	3.37	289	PN	Pn	09 55 34.7	-0.7
KLY				S	Sn	09 56 14.3	-0.2
TUMD	Tumrok D	3.42	270	*e*P	Pn	09 55 36.7	+0.6
TUMD				*e*S	Sn	09 56 17.4	+1.6
KZV	Kizimen	3.49	269	*e*P	Pn	09 55 37.3	+0.1
KZV	Kizimen	3.49	269	PN	Pn	09 55 37.3	+0.1
TUMR	Tumrok	3.56	272	*e*P	Pn	09 55 39.4	+1.3
TUMR	Tumrok	3.56	272	PN	Pn	09 55 39.4	+1.3
OSSR	Ossora	4.31	337	*e*S	Sb	09 56 46.5	-4.4
NLC	Nalytchevo	4.66	245	*e*S	Sn	09 56 45.3	-1.0
SMAR	Somma	4.90	248	*e*P	Pn	09 55 57.4	+0.8
SMAR	Somma	4.90	248	PN	Pn	09 55 57.4	+0.8
UGLR	Uglovaya	4.92	247	*e*P	Pn	09 55 57.3	+0.6
UGLR	Uglovaya	4.92	247	PN	Pn	09 55 57.3	+0.6
KRX	Arik	4.94	249	*e*P	Pn	09 55 57.4	+0.4
KRX	Arik	4.94	249	PN	Pn	09 55 57.4	+0.4
KOK	Koryaka	4.98	249	*e*P	Pn	09 55 58.5	+1.0
KOK	Koryaka	4.98	249	PN	Pn	09 55 58.5	+1.0
KRMR	Karymshinskiy	5.47	246	*e*P	Pn	09 56 05.3	+1.1
KRMR				*e*S	Sn	09 57 05.2	-0.9
KRMR	Karymshinskiy	5.47	246	PN	Pn	09 56 05.3	+1.1
KRMR				S	Sn	09 57 05.2	-0.9
PETK	Petropavlovsk-	5.56	250	Pn	Pn	09 56 06.0	+0.6
	2.5nm,0.3s,baz=80,slow=18,SNR=21						
PETK				Sn	Sn	09 57 09.6	+1.1
	2.0nm,0.3s,baz=47,slow=44,SNR=5.2						
PETK				LR	LR	09 58 05.9	
	comp=Z,91nm,20.4s,baz=45,slow=37						
MTVR	Mutnovka	5.63	243	*e*P	Pn	09 56 08.0	+1.5
MTVR				*e*S	Sn	09 57 08.4	-1.9
MTVR	Mutnovka	5.63	243	PN	Pn	09 56 08.0	+1.5
MTVR				S	Sn	09 57 08.4	-1.9
KDTR	Khodutka, Kamc	6.08	238	*e*S	Sn	09 57 17.6	-3.6
MA2	Magadan	9.41	303	LR	LR	10 00 47.3	
	comp=Z,73nm,18.2s,baz=92,slow=39						
KLR	Kul'dur	21.88	268	LR	LR	10 09 53.1	
	comp=Z,31nm,18.4s,baz=51,slow=42						
ILAR	Eielson Array	24.58	49	P	P	10 00 01.5	-0.5
	1.8nm,1.0s,baz=257,slow=9.2,SNR=8.6						
MJAR	Matsushiro Arr	26.86	237	P	P	10 00 23.1	+0.3
	2.0nm,0.8s,baz=29,slow=6.8,SNR=3.2						
H11N2	WAKE ISLAND Hy	35.56	179	T	T	10 38 59.2	
	baz=360,slow=76,SNR=75						
H11N3	WAKE ISLAND Hy	35.57	179	T	T	10 39 00.3	
	baz=360,slow=76,SNR=73						
H11N1	WAKE ISLAND Hy	35.57	179	T	T	10 39 01.4	
	baz=360,slow=76,SNR=85						
SONM	Songino Array	36.96	284	P	P	10 01 52.7	+1.3
	0.5nm,0.6s,baz=56,slow=7.7,SNR=4.4						
SONM				LR	LR	10 18 39.0	
	comp=Z,78nm,18.4s,baz=352,slow=39						
YKA	Yellowknife Ar	38.97	46	P	P	10 02 08.2	+0.3
	0.2nm,0.5s,baz=299,slow=8.2,SNR=3.2						
MKAR	Makanchi Array	50.45	298	P	P	10 03 38.5	-1.0
	0.7nm,0.7s,baz=48,slow=7.8,SNR=6.6						
FINES	FINESS Array B	59.43	339	P	P	10 04 43.1	-1.1
	0.8nm,0.5s,baz=359,slow=10.0,SNR=3.9						
ANMO	Albuquerque	60.58	70	LR	LR	10 32 05.2	
	comp=Z,44nm,19.1s,baz=284,slow=37						
NB2	NORSAR Subarra	62.31	347	P	P	10 05 03.8	-0.1
	comp=Z,0.5nm,0.5s,baz=17,slow=6.9						
NOA	NORSAR Array B	62.31	347	P	P	10 05 03.3	-0.6
	comp=Z,0.5nm,0.4s,baz=18,slow=6.9,SNR=3.8						
HFS	Hagfors	62.84	345	P	P	10 05 07.0	-0.3
HFS	Hagfors	62.84	345	P	P	10 05 07.0	-0.3
	comp=Z,1.1nm,0.6s,baz=34,slow=5.4,SNR=5.0						
TXAR	Lajitas Array	66.39	72	P	P	10 05 32.4	+1.2
	comp=Z,0.9nm,0.5s,baz=298,slow=4.9,SNR=8.4						
AKASG	Malin Array Be	68.46	332	P	P	10 05 43.2	-0.5
	comp=Z,0.2nm,0.3s,baz=24,slow=6.0,SNR=2.7						
GEYT	Alibeck	68.85	306	LR	LR	10 36 47.4	
	comp=Z,37nm,18.8s,baz=20,slow=37						
WRA	Warramunga Arr	79.79	210	P	P	10 06 50.1	0.0
	comp=Z,0.2nm,0.5s,baz=22,slow=6.1,SNR=4.7						
ASAR	Alice Springs	83.44	210	P	P	10 07 10.3	+1.0
	comp=Z,0.5nm,0.9s,baz=11,slow=4.3,SNR=4.0						

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*IDC **19** 10:03:17.8±1.1, 15°.27S×173°.59W, h0^{km}, mb3.9/6, mb1 4.2/6, mb1mx3.8/37, mbtmp3.9/6, MS3.4/2, Ms1 3.4/2, ms1mx2.8/31, Error ellipse: s-maj=52.5km s-min=21.8km az=135.0*

*NEIC **19** 10:03:19.6±0.6, 15°.28S×173°.75W, h10^{km}, mb4.0/3, Error ellipse: s-maj=17.5km s-min=13.0km az=163.0*

*ISCJB **19** 10:03:22.0±0.6, 15°.50S±0°.10×173°.59W±0°.08, h42^{km}, mb3.9/8, MS3.4/1, Error ellipse: s-maj=15.2km s-min=9.7km az=31.9*

ISC 19 10:03:23.5±0.8**,15°.5S**±0°.1×**173°.7W**±0°.1**,h42^{km},n18, σ1^{s}.54**/14**,mb4.0**/8**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.05	136	*e*Pn	Pn	10 04 38.0	+1.1
NIUE				*e*Sn	Sn	10 05 31.9	-2.1
DZM	Mont Dzumac	19.94	248	*e*P	P	10 07 50.0	-2.3
	9.2nm,1.0s						
DZM	Mont Dzumac	19.94	248	LR	LR	10 14 16.0	
	comp=Z,105nm,21.1s,baz=31,slow=33						
URZ	Urewera	24.12	198	P	P	10 08 37.2	+1.8
	4.9nm,0.8s,baz=68,slow=17,SNR=6.8						
H11S2	WAKE ISLAND Hy	38.90	329	T	T	10 51 28.4	
	baz=146,slow=76						
H11S3	WAKE ISLAND Hy	38.91	329	T	T	10 51 47.9	
	baz=146,slow=76						
H11S1	WAKE ISLAND Hy	38.91	329	T	T	10 51 33.8	
	baz=146,slow=76						
STKA	Stephens Creek	43.79	240	LR	LR	10 28 24.3	
	comp=Z,47nm,19.0s,baz=27,slow=34						
WB2	Warramunga Arr	49.58	257	*e*P	P	10 12 12.1	+1.2
WRAB	Tennant Creek	49.58	257	*e*P	P	10 12 09.2	-1.7
	2.6nm,1.0s						
WR1	Warramunga Arr	49.59	257	*e*P	P	10 12 12.1	+1.1
	1.2nm,0.9s						
WRA	Warramunga Arr	49.59	257	P	P	10 12 12.1	+1.1
	0.3nm,0.5s,baz=96,slow=6.2,SNR=10						
AS01	Alice Springs	49.81	252	*e*P	P	10 12 12.7	0.0
ASAR	Alice Springs	49.86	252	P	P	10 12 14.1	+1.1
	1.9nm,0.6s,baz=85,slow=8.0,SNR=30						
NV01	Mina Array Sit	74.54	42	*e*P	P	10 14 59.6	+1.2
NVAR	Mina Array Bea	74.54	42	P	P	10 14 58.3	-0.1
	1.7nm,0.8s,baz=225,slow=8.9,SNR=9.7						
ILAR	Eielson Array	82.56	11	P	P	10 15 40.2	-1.4
	0.5nm,0.7s,baz=225,slow=7.0,SNR=8.4						
YKA	Yellowknife Ar	90.26	23	P	P	10 16 19.7	+0.3
	0.4nm,0.9s,baz=236,slow=5.1,SNR=5.8						

IDC 19 10:13:21.2±1.6**,31°.46N**×**100°.55E,h0^{km},mb3.4**/4**, mb1 3.5**/4**,mb1mx3.3**/50**,mbtmp3.4**/4**,MS3.8**/2**,Ms1 3.8**/2**, ms1mx2.7**/32**,Error ellipse: s-maj=221.0km s-min=23.8km az=56.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	20.78	323	P	P	10 18 03.3	-0.5
	0.9nm,0.6s,baz=124,slow=12,SNR=7.8						
ZALV	Zalesovo Beam	25.16	338	P	P	10 18 47.8	-0.1
	0.6nm,0.5s,baz=149,slow=8.7,SNR=3.8						
KURBB	Kurchatov Arra	25.18	326	P	P	10 18 48.6	+0.5
	0.4nm,0.6s,baz=142,slow=8.6,SNR=4.5						
GUMO	Guam	44.29	103	LR	LR	10 41 22.1	
	comp=Z,27nm,18.6s,baz=86,slow=38						
WRA	Warramunga Arr	60.52	143	P	P	10 23 33.3	-0.1
	0.3nm,0.9s,baz=321,slow=8.8,SNR=2.5						
DAVOX	Davos/Dischmat	68.26	312	LR	LR	10 56 20.1	
	comp=Z,216nm,19.2s,slow=38						

ROM 19 10:16:28.2±0.1**,43°.497N**±0°.003×**12°.270E**±0°.004**, h6^{km},ML0.7**/2**,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BADI	Badiali	0.02	306	P	Pg	10 16 29.5	+0.1
BADI				S	Sg	10 16 30.3	0.0
ATMC	Monte Cedrone	0.07	228	P	Pg	10 16 30.3	+0.3
ATMC				S	Sg	10 16 31.9	+0.5
ATPI	Pietralunga -	0.11	115	P	Pg	10 16 30.9	+0.3
ATPI				S	Sg	10 16 32.8	+0.7
ATPC	Poggio Castell	0.14	97	P	Pg	10 16 31.5	+0.5
ATPC				S	Sg	10 16 34.1	+1.1
ATVO	AVT- Monte Val	0.15	139	P	Pg	10 16 31.8	+0.4
ATVO				S	Sg	10 16 34.4	+1.0
ATVO				AML	AML		
	comp=E,38µm,1.4s						
ATVO				AML	AML		
	comp=N,36µm,1.6s						
ATVO				AML	AML		
	comp=N,36µm,1.6s						
ATVO				AML	AML		
	comp=E,38µm,1.4s						
PARC	Parchiule	0.15	352	P	Pg	10 16 31.9	+0.5
PARC				S	Sg	10 16 34.6	+1.1
PARC				AML	AML		
	comp=E,49µm,0.2s						
PARC				AML	AML		
	comp=N,48µm,0.1s						
PARC				AML	AML		
	comp=N,48µm,0.1s						
PARC				AML	AML		
	comp=E,49µm,0.2s						
PIEI	Pieia	0.20	78	P	Pg	10 16 32.3	+0.1
PIEI				S	Sg	10 16 36.1	+1.3

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*NIED **19** 10:17:00, 29°.60N×129°.80E, h5^{km}, Mw3.8 Best double couple: M$_0$5.08000×10^{14} NP1:φ$_s$80.00000°, δ57.00000°, λ-141.00000°. NP2:φ$_s$325.00000°, δ58.00000°, λ-40.00000°.*

JMA 19 10:17:37.5,29°.60N×**129°.72E,h12^{km}**±1^{km}**,M3.5,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.28	29	P	Pg	10 17 43.3	+0.1
JNN				S	Sg	10 17 47.1	+0.1
JYAK	Yakushimahirau	0.94	47	P	Pg	10 17 54.9	-0.7
JYAK				*e*S	Sg	10 18 06.9	-0.9
JKC	Kuchinoerabu	0.95	26	P	Pg	10 17 55.6	-0.3
JKC				S	Sg	10 18 07.9	-0.4
JAM	Amami Oshima	1.19	185	P	Pn	10 17 59.6	-0.3
JAM				S	Sg	10 18 15.8	0.0
JMTN	Minamitane	1.30	52	P	Pn	10 18 00.9	-0.5
JMTN				*e*S	Sb	10 18 17.9	-0.5
JZK	Kikaishima	1.30	170	P	Pg	10 18 03.5	+1.0
JZK				*e*S	Sg	10 18 22.0	+2.6
JAMN	Amaminishikomi	1.43	200	P	Pn	10 18 03.2	-0.1
JTN	Tanegashima 3	1.52	46	P	Pn	10 18 04.1	-0.4
JTN				*e*S	Sn	10 18 23.9	-0.2
JTK	Tokunoshima	1.93	201	P	Pn	10 18 10.3	+0.1
JTK				*e*S	Sn	10 18 33.9	-0.5
JOKE	Okinoerabujima	2.45	205	P	Pn	10 18 18.0	+0.7
JYRO	Yoronjima	2.80	204	P	Pn	10 18 23.1	+1.0

SJA 19 10:24:58.4±0.7**,31°.39S**×**65°.05W,h20^{km}**±24^{km}**,ML2.0, MW3.5,Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCA	Tanti	0.39	82	*i* P	Pb	10 25 07.1	+0.4
TCA				*i* S	Sb	10 25 13.2	+0.8
TCA				IAML		10 25 14.4	
	comp=Z,142nm,0.3s						
ACAN	Cantantal	2.03	244	*i* P	Pb	10 25 33.4	-1.2
ACAN				*i* S	Sb	10 26 00.2	+0.8
CFA	Coronel Fontan	2.73	265	*i* P	Pb	10 25 44.2	-2.5
CFA				*i* S	Sb	10 26 17.5	-2.3

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*IDC **19** 10:27:37.7±1.2, 37°.74N×143°.88E, h0^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.4/54, mbtmp3.5/8, ML3.2/2, Error ellipse: s-maj=28.4km s-min=25.4km az=60.0*

*ISCJB **19** 10:27:40.3±0.7, 37°.85N±0°.04×143°.51E±0°.06, h19^{km}, mb3.4/6, Error ellipse: s-maj=6.7km s-min=5.2km az=27.2*

*JMA **19** 10:27:42.3±0.1, 37°.81N×143°.47E, h52^{km}, M3.3*

ISC 19 10:27:41.2±1.1**,37°.81N**±0°.05×**143°.55E**±0°.08**,h19^{km},n29, σ1^{s}.56**/36**,mb3.5**/6**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.72	288	P	Pn	10 28 09.7	-0.4
JIKH				S	Sn	10 28 29.7	-1.9
JIO	Ouri	1.85	291	P	Pn	10 28 11.6	-0.3
JIO				*e*S	Sn	10 28 33.5	-1.3
JKMT	Kesennumamotoy	1.92	302	P	Pn	10 28 12.5	-0.3
JKMT				S	Sn	10 28 34.4	-2.0
OFUJ	Ofunato	1.95	311	P	Pn	10 28 12.9	-0.3
OFUJ				*e*S	Sn	10 28 35.3	-1.9
JMK	Ichinoseki	2.16	303	P	Pn	10 28 16.0	-0.1
JMK				*e*S	Sn	10 28 40.9	-1.5
JOM	Ohasama	2.43	314	P	Pn	10 28 20.2	+0.4
JOM				*e*S	Sn	10 28 48.3	-0.7
JFT	Otama	2.57	264	P	Pn	10 28 22.0	+0.2
JFT				S	Sn	10 28 51.6	-0.9
JYK	Kaneyama	2.74	295	P	Pn	10 28 25.0	+0.8
JANG	Nango	3.01	329	*e*S	Sn	10 29 01.9	-1.5
JAG	Ashikaga	3.56	248	P	Pn	10 28 35.2	-0.2
JAG				*e*S	Sn	10 29 15.2	-1.7
JRY	Ryogami san	4.13	246	P	Pn	10 28 43.4	+0.1
JRY				*e*S	Sn	10 29 26.9	-4.3
JOD2	Odawara 2	4.40	236	P	Pn	10 28 47.5	+0.5
JOD2				*e*S	Sn	10 29 34.3	-3.5
MJAR	Matsushiro Arr	4.45	255	Pn	Pn	10 28 49.2	+1.5
	0.5nm,0.3s,baz=90,slow=15,SNR=21						
MJAR				Sn	Sn	10 29 38.8	-0.2
	0.3nm,0.3s,baz=192,slow=27,SNR=5.9						
MAT	Matsushiro	4.45	255	P	Pn	10 28 49.7	+2.0
MAT				S	Sn	10 29 40.3	+1.3
JCH	Churui	4.80	358	P	Pn	10 28 52.6	+0.2
JCH				*e*S	Sn	10 29 44.9	-2.6
ASAJ	Asahikawa	6.34	354	Pn	Pn	10 29 15.1	+1.5
	0.8nm,0.3s,baz=238,slow=11,SNR=5.3						
ASAJ				Sn	Sn	10 30 24.7	-0.7
	0.6nm,0.3s,baz=27,slow=24,SNR=4.1						
USRK	Ussuriysk Ar.	10.82	310	Pn	Pn	10 30 20.6	+5.7
	0.1nm,0.3s,baz=101,slow=15,SNR=3.5						
H11N2	WAKE ISLAND Hy	27.14	125	T	T	11 01 42.0	
	baz=315,slow=76						
H11N1	WAKE ISLAND Hy	27.15	125	T	T	11 01 45.1	
	baz=315						
H11N3	WAKE ISLAND Hy	27.16	125	T	T	11 01 45.6	
	baz=315,slow=76						
H11S1	WAKE ISLAND Hy	27.91	127	T	T	11 02 41.1	
	baz=320						
H11S3	WAKE ISLAND Hy	27.91	127	T	T	11 02 44.7	
	baz=320						
H11S2	WAKE ISLAND Hy	27.92	127	T	T	11 02 47.8	
	baz=320						
SONM	Songino Array	28.79	302	P	P	10 33 39.8	+1.9
	0.3nm,0.6s,baz=101,slow=7.5,SNR=3.1						
ZALV	Zalesovo Beam	42.66	312	P	P	10 35 37.4	+1.1
	0.2nm,0.3s,baz=78,slow=7.5,SNR=2.6						
MKAR	Makanchi Array	45.15	302	P	P	10 35 57.5	+1.0
	0.4nm,0.7s,baz=90,slow=8.7,SNR=2.8						
KURBB	Kurchatov Arra	46.87	308	P	P	10 36 11.1	+1.2
	1.0nm,0.6s,baz=81,slow=8.1,SNR=6.5						
WRA	Warramunga Arr	58.09	190	P	P	10 37 32.9	-0.4
	0.3nm,0.7s,baz=11,slow=7.3,SNR=3.5						
PDAR	Pinedale Array	75.90	47	P	P	10 39 25.4	-1.3
	0.4nm,0.9s,baz=46,slow=3.9,SNR=3.0						

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*DDA **19** 10:30:35.7, 39°.95N×35°.32E, h7^{km}±2^{km}, ML2.7*

*ISCJB **19** 10:30:36.6±0.6, 39°.96N±0°.04×35°.36E±0°.05, h11^{km}, Error ellipse: s-maj=6.4km s-min=5.4km az=160.5*

*ISK **19** 10:30:36.6, 39°.92N×35°.40E, h9^{km}, ML2.1/6*

ISC 19 10:30:36.0±1.0**,39°.95N**±0°.04×**35°.34E**±0°.04**,h11^{km},n13, σ0^{s}.43**/15**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	Yozgat	0.31	182	PG	Pg	10 30 42.4	0.0
YOZ				SG	Sb	10 30 47.9	-0.9
COAL	Corum-Alaca	0.40	319	*i* P	Pg	10 30 43.9	-0.1
SIRC	Yozgat	0.63	193	*i* P	Pg	10 30 48.8	+0.5
CDAG	Cicekdag	0.81	246	*i* P	Pg	10 30 51.8	+0.1
CUSAR	Sarkisla-SIVAS	0.88	127	*i* P	Pg	10 30 52.6	-0.5
TOKT	Tokat	1.00	68	PG	Pn	10 30 55.8	-0.2
DELI	KIRIKKALE	1.09	273	*i* P	Pb	10 30 56.9	0.0
DELI				IAML_P			
	comp=Z,614nm,0.2s						
HAVZ	Havza	1.16	14	*i* P	Pg	10 30 58.4	+0.1
SVSK	Karacayir	1.28	91	PN	Pn	10 31 00.0	+0.2
SVSK				SN	Sg	10 31 17.8	+0.6
CUALT	Altinyayla-SIV	1.29	121	*i* P	Pg	10 31 00.8	0.0
YAYX	Yaylak	1.56	230	PN	Pg	10 31 05.7	-0.1
SERE	Sereflikochisa	1.70	234	PN	Pb	10 31 07.9	+0.6
AFSR	Afar-Bala (An	1.82	255	PN	Pb	10 31 09.2	-0.2

IDC 19 10:53:29.7±14.0**,26°.69N**×**45°.39W,h0^{km},mb3.7**/4**, mb1 4.0**/4**,mb1mx3.5**/45**,mbtmp3.7**/4**,MS3.1**/1**,Ms1 3.1**/1**, ms1mx2.5**/33**,Error ellipse: s-maj=347.6km s-min=50.8km az=167.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	20.98	250	LR	LR	11 04 27.2	
	comp=Z,50nm,21.4s,baz=116,slow=31						
H10N2	ASCENSION HYDR	45.56	135	T	T	11 49 21.1	
	baz=319,slow=75						
H10N3	ASCENSION HYDR	45.57	135	T	T	11 49 32.2	
	baz=319,slow=75						
H10N1	ASCENSION HYDR	45.58	135	T	T	11 49 26.3	
	baz=319,slow=75						
H10S1	ASCENSION HYDR	46.32	136	T	T	11 50 21.1	
	baz=320,slow=74						
H10S3	ASCENSION HYDR	46.32	136	T	T	11 50 18.2	
	baz=320,slow=74						
H10S2	ASCENSION HYDR	46.33	136	T	T	11 50 27.3	
	baz=320,slow=74						
PDAR	Pinedale Array	53.89	305	P	P	11 02 54.8	-0.4
	1.1nm,0.9s,baz=80,slow=10,SNR=6.1						
YKA	Yellowknife Ar	57.10	329	P	P	11 03 17.9	+0.3
	0.2nm,0.7s,baz=86,slow=7.5,SNR=3.9						
ARCES	ARCESS Array B	58.59	23	P	P	11 03 27.8	-0.1
	2.4nm,0.8s,baz=262,slow=6.2,SNR=5.9						
ILAR	Eielson Array	70.89	334	P	P	11 04 48.3	0.0
	0.5nm,0.8s,baz=81,slow=5.6,SNR=5.4						

IDC 19 10:56:14.3±39.0**,22°.03S**×**174°.94W,h0^{km},mb3.6**/3**, mb1 3.8**/3**,mb1mx3.5**/32**,mbtmp3.6**/3**,MS4.3**/1**,Ms1 4.3**/1**, ms1mx3.1**/27**,Error ellipse: s-maj=738.9km s-min=167.1km az=85.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.74	246	P	P	11 03 48.6	-0.3
	1.0nm,0.7s,baz=90,slow=10,SNR=2.0						
ASAR	Alice Springs	46.97	258	P	P	11 04 46.5	-1.0
	0.2nm,0.4s,baz=94,slow=7.5,SNR=14						
WRA	Warramunga Arr	47.23	263	P	P	11 04 50.3	+0.8
	0.3nm,0.4s,baz=101,slow=7.7,SNR=14						
SIJI	Sorong	56.39	284	LR	LR	11 27 49.7	
	comp=Z,307nm,21.6s,baz=296,slow=34						

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*IDC **19** 11:08:23.3±0.6, 6°.43S×104°.47E, h0^{km}, mb4.8/23, mb1 4.9/25, mb1mx4.7/43, mbtmp4.8/25, ML4.9/2, MS4.2/24, Ms1 4.2/24, ms1mx4.0/42, Error ellipse: s-maj=21.9km s-min=11.3km az=47.0*

*BJI **19** 11:08:25.2, 6°.70S×104°.40E, h35^{km}, mB5.3/40, mb5.1/56, Ms4.8/35, Ms7 4.6/34*

*MOS **19** 11:08:26.2±1.0, 6°.34S×104°.57E, h29^{km}, mb5.2/58, MS4.2/10, Error ellipse: s-maj=10.1km s-min=5.1km az=111.7*

*NEIC **19** 11:08:27.0±1.2, 6°.55S×104°.38E, h28^{km}±8^{km}, mb4.9/64, Error ellipse: s-maj=6.7km s-min=3.2km az=48.0*

NEIC Felt [II] at Kalianda and Liwa.

*DJA **19** 11:08:28.8±0.3, 7°S±3°×10°4E±°, h59^{km}±3^{km}, M5.0/37, mB5.5/16, mb5.1/37, MLv5.2/20, Mw(mB)5.0/16*

*ISCJB **19** 11:08:29.2±0.5, 6°.60S±0°.03×104°.43E±0°.03, h66^{km}±4^{km}, mb4.8/125, Error ellipse: s-maj=7.1km s-min=3.1km az=43.5*

*GCMT **19** 11:08:32.0±0.3, 6°.97S±0°.02×104°.36E±0°.02, h39^{km}±1^{km}, MW5.0/69, Moment Tensor Solution. s49,c65; s69,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.73±.17; M$_{\theta\theta}$-2.86±.11; M$_{\phi\phi}$0.13±.14; M$_{r\theta}$1.95±.11; M$_{\theta\phi}$1.27±.07; M$_{\phi r}$-0.87±.12; Best double couple: M$_0$3.70700×10^{16} NP1:φ$_s$113.00000°, δ63.00000°, λ93.00000°. NP2: φ$_s$287.00000°, δ28.00000°, λ85.00000°. Principal axes: T 3.4120, Plg72.0000°, Azm29.0000°; N 0.5910, Plg3.0000°, Azm292.0000°; P -4.0020, Plg18.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 11:08:28.5±0.9**,6°.65S**±0°.05×**104°.32E**±0°.05**,h45^{km}**±7^{km}**, n597,**σ**1^{s}.25**/596**,mb4.9**/125**,MS4.4**/37**,21C-7D,Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.14	9	P	Pn	11 08 48.0	0.0
KASI				S	Sn	11 09 04.4	+1.9
BLSI	Bandar Lampung	1.58	36	P	Pn	11 08 54.5	+0.4
BLSI				S	Sn	11 09 15.7	+2.4
LWLI	Liwa	1.65	351	P	Pn	11 08 56.6	+1.5

LWLI				S	Sn	11 09 22.0	+6.9
KLI	Kotabumi	1.86	17	P	Pn	11 08 59.1	+1.2
MDSI	Maura Dua	2.16	356	P	Pn	11 09 03.6	+1.6
SKJI	Sukabumi	2.25	99	P	Pn	11 09 05.1	+1.8
TNG	Tangerang	2.37	78	P	Pn	11 09 06.1	+1.2
DBJI	Dramaga	2.42	88	P	Pn	11 09 06.8	+1.2
DBJI				S	Sn	11 09 35.8	+1.7
CBJI	Citeko	2.53	85	P	Pn	11 09 09.1	+2.0
MNAI	Manna	2.65	329	ePn	Pn	11 09 10.4	+1.6
MNAI				eSn	Sn	11 09 39.8	0.0
MNAI	Manna	2.65	329	P	Pn	11 09 09.5	+0.7
LHSI	Lahat	2.92	344	P	Pn	11 09 15.0	+2.5
CISI	Cisompet, Garu	3.59	105	ePn	Pn	11 09 21.2	-0.5
CISI				eSn	Sn	11 09 57.9	-5.0
CISI	Cisompet, Garu	3.59	105	P	Pn	11 09 20.6	-1.1
PMBI	Palembang	3.73	7	P	Pn	11 09 26.1	+2.5
JCJI	Jatiwangi	3.93	88	P	Pn	11 09 24.7	-1.7
XMIS	Christmas Isla	4.03	161	ePn	Pn	11 09 22.6	-5.1
XMIS				eSn	Sn	11 10 03.7	-10
MASI	Maura Aman, Be	4.06	329	P	Pn	11 09 29.6	+1.4
CMJI	Cimerak	4.25	106	P	Pn	11 09 31.6	+0.8
KPJI	Karang Pucung	4.63	99	P	Pn	11 09 38.8	+2.8
PPBI	Pangkal Pinang	4.82	22	P	Pn	11 09 40.3	+1.7
KRJI	Kerinci	5.35	328	P	Pn	11 09 49.2	+3.2
	673nm,0.9s,7µm3.2nm						
UGM	Wanagama	6.28	102	ePn	Pn	11 10 00.1	+1.4
UGM				eSn	Sn	11 10 58.1	-11
RGRI	Rengat	6.57	342	P	Pn	11 10 12.6	+10
PDSI	Padang	6.88	326	P	Pn	11 10 10.1	+3.2
	82nm,0.6s,3µm0.8nm						
PCJI	Pacitan	6.97	103	P	Pn	11 10 08.9	+0.7
	161nm,1.0s,0.8nm						
NGJI	Ngawi	7.13	96	P	Pn	11 10 23.7	+13
TPRI	Tanjung Pinang	7.53	2	P	Pn	11 10 18.4	+2.6
PWJI	Pagerwojo	7.55	101	P	Pn	11 10 17.2	+1.1
	132nm,0.6s,0.8nm						
BKNI	Bangkinang	7.67	335	ePn	Pn	11 10 16.2	-1.5
BKNI				eSn	Sn	11 11 39.2	-4.1
MYKOM	Kota Tinggi	8.40	357	ePn	Pn	11 10 24.6	-3.2
MYKOM				eSn	Sn	11 11 59.8	-1.6
MNSI	Mandailing Nat	8.78	327	P	Pn	11 10 31.0	-2.0
COCO	West Island	9.20	233	ePn	Pn	11 10 39.0	+0.3
COCO				eSn	Sn	11 12 15.7	-5.3
JAGI	Jajag, Banyuwa	9.92	101	ePn	Pn	11 10 48.0	-0.5
JAGI				eSn	Sn	11 12 34.6	-3.9
JAGI	Jajag, Banyuwa	9.92	101	P	Pn	11 10 48.1	-0.5
GSI	Gunungsitoli	10.38	319	ePn	Pn	11 10 52.5	-2.3
GSI	Gunungsitoli	10.38	319	P	Pn	11 10 52.6	-2.3
PSI	Prapat	10.82	330	ePn	Pn	11 10 58.4	-2.7
PSI	Prapat	10.82	330	eP	Pn	11 10 58.4	-2.7
PSI	Prapat	10.82	330	Pn	Pn	11 10 58.0	-3.1
	1.3nm,0.3s,baz=180,slow=10,SNR=3.9						
SRBI	Singaraja	10.90	98	P	Pn	11 11 02.3	+0.3
DNP	Denpasar	10.98	101	P	Pn	11 11 01.1	-2.0
DNP	Denpasar	10.98	101	P	Pn	11 11 02.8	-0.3
IPM	Ipoh	11.54	343	ePn	Pn	11 11 12.7	+2.0
SBUM	Sibu	12.00	41	ePn	Pn	11 11 20.5	+3.4
KCSI	Kotacane, Aceh	12.04	327	P	P	11 11 29.2	-0.2
PLAI	Plampang	13.51	100	P	Pn	11 11 34.5	-3.2
LHMI	Lhok Sumawe	13.91	328	ePn	Pn	11 11 40.3	-2.8
BKSI	Bulukumba	15.78	86	P	Pn	11 12 07.0	-0.7
TTSI	Tana Toraja	15.86	78	P	Pn	11 12 09.4	+0.6
BNSI	Bone	15.88	83	P	Pn	11 12 07.9	-1.1
PCI	Palu	16.50	70	P	P	11 12 18.3	-0.7
PCI				pmax	pmax		
	comp=Z,74nm,0.8s						
PCI	Palu	16.50	70	P	P	11 12 18.4	-0.6
MPSI	Mapaga	17.03	67	P	P	11 12 24.9	0.0
KKM	Kota Kinabalu	17.32	44	ePn	Pn	11 12 25.4	-1.9
	comp=Z,25nm,1.0s						
EDFI	Ende, Flores	17.34	98	P	Pn	11 12 21.3	-6.3
MMRI	Maumere	17.87	97	ePn	P	11 12 32.3	-1.9
	comp=Z,75nm,0.7s						
APSI	Ampana	18.20	72	P	Pn	11 12 43.1	+5.0
GIRL	Giralia	18.55	150	P	P	11 12 40.7	-0.9
	baz=19,SNR=11						
GIRL	Giralia	18.55	150	eP	P	11 12 39.1	-2.5
	comp=Z,50nm,1.1s						
MRSI	Marisa	18.96	69	P	P	11 12 45.9	-0.3
LUWI	Luwuk	19.23	74	P	P	11 12 49.4	+0.2
BATI	Baumata	19.46	102	P	P	11 12 50.4	-1.3
BATI	Baumata	19.46	102	P	P	11 12 51.3	-0.4
	comp=Z,22nm,0.3s,baz=298,slow=2.8,SNR=7.6						
BATI				S	Sn	11 16 30.7	-0.1
	comp=Z,6.6nm,0.3s,baz=147,slow=20,SNR=4.2						
SOEI	Soe	19.98	100	eP	P	11 12 57.0	-0.4
	comp=Z,141nm,0.8s						
SOEI	Soe	19.98	100	P	P	11 12 57.1	-0.4
	comp=Z,257nm,0.8s,comp=Z,2µm						
PHET	Kaeng Krachan	19.99	347	P	Pn	11 12 59.7	+0.4
	comp=Z,3.8nm,0.8s						
SRAK	Srakaew	20.66	354	P	P	11 13 04.0	-0.6
	comp=Z,61nm,0.8s,comp=Z,479nm						
MBWA	Marble Bar	20.75	136	eP	P	11 13 07.1	+1.5
	comp=Z,12nm,0.7s						
SANI	Sanana	22.08	79	P	P	11 13 18.4	-1.6
CHAI	Chaiyaphum	22.53	354	P	P	11 13 24.9	+0.2
	comp=Z,8.0nm,0.7s						
NLAI	Namlea	22.95	83	P	P	11 13 28.6	-0.6
PBKT	Sadao Pong	23.31	352	eP	P	11 13 32.5	-0.2
	comp=Z,12nm,0.7s						
PBKT	Sadao Pong	23.31	352	P	P	11 13 31.5	-1.2
	comp=Z,17nm,0.7s						
UMPA	Umpang Tak	23.35	347	P	P	11 13 32.1	-1.0
	comp=Z,5.2nm,0.7s,comp=Z,242nm						
SKNT	Sakolnakorn	23.48	359	P	P	11 13 35.2	+0.9
	comp=Z,4.4nm,0.8s,comp=Z,406nm						
FITZ	Fitzroy Crossi	23.70	121	P	P	11 13 37.2	+0.7
	baz=24,SNR=29						
FITZ	Fitzroy Crossi	23.70	121	eP	P	11 13 37.1	+0.7
	comp=Z,17nm,0.6s						
FITZ	Fitzroy Crossi	23.70	121	P	P	11 13 37.1	+0.7
	comp=Z,18nm,0.6s,baz=304,slow=6.4,SNR=82						
FITZ				LR	LR	11 23 59.2	
	comp=Z,487nm,21.2s,baz=312,slow=40						
MEEK	Meekatharra	24.09	147	P	P	11 13 40.8	+0.8
	baz=24,SNR=6.7						
TNTI	Ternate	24.16	73	eP	P	11 13 39.1	-1.6
	comp=Z,61nm,1.1s						
TNTI	Ternate	24.16	73	P	P	11 13 39.0	-1.7
UTTA	Uttaradit	24.53	351	P	P	11 13 44.9	+0.9
	comp=Z,5.6nm,0.7s,comp=Z,102nm						
MORW	Morawa	24.89	155	P	P	11 13 47.2	0.0
	baz=25,SNR=5.5						
DAV	Davao City (W)	25.22	58	LR	LR	11 26 04.2	
	comp=Z,248nm,18.7s,baz=245,slow=42						
LAMP	Lampang	25.44	350	P	P	11 13 53.3	+1.0
	comp=Z,6.0nm,0.8s						
CM01	Chiang Mai Arr	25.47	348	eP	P	11 13 52.9	+0.3
CM31	Chiang Mai Arr	25.51	348	eP	P	11 13 52.0	-0.9
CMAR	Chiang Mai Arr	25.51	348	P	P	11 13 51.5	-1.5
	comp=Z,11nm,0.8s,baz=181,slow=8.8,SNR=61						
CMAR				LR	LR	11 25 13.2	
	comp=Z,649nm,18.6s,baz=178,slow=40						
KNRA	Kununurra	25.58	113	P	P	11 13 53.3	-0.3
	baz=26,SNR=14						
CMMT	Chiang Mai	25.85	348	P	P	11 13 55.5	-0.5
	comp=Z,15nm,0.8s						
CHTO	Chiang Mai	25.86	348	eP	P	11 13 56.6	+0.6
	comp=Z,13nm,0.9s						
CHTO	Chiang Mai	25.86	348	eP	P	11 13 56.6	+0.6
CHTO				pmax	pmax		
	comp=Z,13nm,0.9s						
CHTO	Chiang Mai	25.86	348	P	P	11 13 55.6	-0.4
	comp=Z,65nm,0.8s						
QIZ	Qiongzhong	26.10	12	P	P	11 14 00.6	+2.4
QIZ				S	S	11 18 32.5	+5.9
QIZ				LR	LR		
	comp=Z,1µm,18.0s						
QIZ				LR	LR		
	comp=Z,650nm,16.7s						
QIZ				LR	LR		
	comp=Z,1µm,16.2s						
PAYA	Payao	26.22	350	P	P	11 14 03.4	+4.0
	comp=Z,3.6nm,0.7s						
TGY	Tagaytay City	26.41	39	LR	LR	11 25 14.8	
	comp=Z,345nm,21.5s,baz=130,slow=39						
MTN	Manton Dam	27.12	105	P	P	11 14 08.2	+0.6
	baz=27,SNR=44						
MTN	Manton Dam	27.12	105	eP	P	11 14 07.3	-0.2
	comp=Z,45nm,0.4s						
PALK	Pallekele	27.32	300	LR	LR	11 24 42.8	
	comp=Z,368nm,19.5s,baz=115,slow=36						
SIJI	Sorong	27.49	79	P	P	11 14 09.1	-1.9
	comp=Z,14nm,0.7s,baz=269,slow=9.9,SNR=6.0						
FAKI	Fak Fak	28.08	84	eP	P	11 14 13.9	-2.2
	comp=Z,11nm,0.8s						
KDU	Kakadu	28.38	104	P	P	11 14 18.0	-0.8
	baz=28,SNR=6.6						
NWAO	Narrogin (SRO)	28.77	157	LR	LR	11 24 40.2	
	comp=Z,1µm,21.4s,baz=201,slow=34						
WRKA	Warakurna	29.34	131	P	P	11 14 27.6	+0.4
	baz=30,SNR=8.3						
H01W3	Cape Leeuwin H	29.52	163	T	T	11 46 13.7	
	SNR=41						
H01W1	Cape Leeuwin H	29.53	163	T	T	11 45 35.1	
	baz=341,slow=74,SNR=35						
H01W2	Cape Leeuwin H	29.53	163	T	T	11 45 53.3	
	baz=162,slow=74,SNR=67						
H08S2	Diego Garcia H	31.59	266	T	T	11 48 35.1	
	baz=89,slow=76,SNR=26						
H08S3	Diego Garcia H	31.60	266	T	T	11 48 35.8	
	baz=89,slow=76,SNR=24						
H08S1	Diego Carcia H	31.61	266	T	T	11 48 32.7	
	baz=89,slow=76,SNR=19						
KMI	Kunming	31.62	357	P	P	11 14 49.3	+1.7
KMI				S	S	11 19 58.3	+4.4
KMI				pmax	pmax		
	comp=Z,29nm,0.7s						
KMI				LR	LR		
	comp=Z,2µm,17.4s						
KMI				LR	LR		
	comp=Z,830nm,19.9s						
KMI				LR	LR		
	comp=Z,2µm,18.3s						
KMI	Kunming	31.62	357	eP	P	11 14 46.0	-1.6
	comp=Z,21nm,0.7s						
KMI	Kunming	31.62	357	eP	P	11 14 46.0	-1.6
KMI				pmax	pmax		
	comp=Z,21nm,0.7s						
WR1	Warramunga Arr	31.99	117	eP	P	11 14 50.7	0.0
	comp=Z,9.5nm,0.6s						
WR1				ePcP	PcP	11 17 41.0	+0.9
WRA	Warramunga Arr	31.99	117	P	P	11 14 50.7	0.0
	comp=Z,6.3nm,0.7s,baz=287,slow=12,SNR=99						
WRA				PcP	PcP	11 17 41.0	+0.9
	comp=Z,0.7nm,0.6s,baz=304,slow=2.3,SNR=2.9						
WRAB	Tennant Creek	32.00	117	eP	P	11 14 51.1	+0.4
	comp=Z,10nm,0.6s						
WRAB	Tennant Creek	32.00	117	eP	P	11 14 51.2	+0.4
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WB2	Warramunga Arr	32.00	117	eP	P	11 14 51.2	+0.3
GYA	Guiyang	32.99	4⇑	iP	P	11 15 15.0	+15
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ASAR	Alice Springs	33.07	124	P	P	11 15 00.6	+0.3
	comp=Z,2.1nm,0.5s,baz=300,slow=8.2,SNR=28						
ASAR				PcP	PcP	11 17 44.6	+1.6
	comp=Z,0.6nm,0.8s,baz=270,slow=0.9,SNR=2.2						
ASAR				S	S	11 20 18.4	+2.1
	comp=Z,0.4nm,0.9s,baz=294,slow=14,SNR=3.7						
ASAR				LR	LR	11 29 53.2	
	comp=Z,572nm,19.9s,baz=302,slow=39						
AS31	Alice Springs	33.08	124	eP	P	11 15 01.5	+1.2
	comp=Z,1.3nm,0.5s						
AS31				ePcP	PcP	11 17 44.6	+1.6
AS31				eS	S	11 20 18.4	+2.1
AS01	Alice Springs	33.11	124	eP	P	11 15 02.8	+2.2
TPUB	Ta-pu	33.77	28	eP	P	11 15 05.9	-0.4
	comp=Z,19nm,1.1s						
YULB	Yu-li	34.16	29	eP	P	11 15 09.7	+0.1
	comp=Z,3.7nm,0.6s						
SHL	Shillong	34.23	340	eP	P	11 15 09.0	-1.4
	comp=Z,22nm,0.4s						
SHL	Shillong	34.23	340	eP	P	11 15 09.0	-1.4
SHL				pmax	pmax		
	comp=Z,22nm,0.4s						
NACB	Ninganchiao	34.97	28	eP	P	11 15 16.0	-0.5
	comp=Z,23nm,1.0s						
YHNB	Yeheng	35.29	28	eP	P	11 15 18.6	-0.8
YOJ	Yonaguni jima	35.90	30	eP	P	11 15 23.4	-1.1
	comp=Z,110nm,0.8s						
YOJ	Yonaguni jima	35.90	30	eP	P	11 15 23.4	-1.1
YOJ				pmax	pmax		
	comp=Z,110nm,0.8s						
JAY	Jayapura	36.49	85	P	P	11 15 27.4	-2.5
JAY				pmax	pmax		
	comp=Z,12nm,1.2s						
JAY	Jayapura	36.49	85	LR	LR	11 32 48.7	
	comp=Z,168nm,20.4s,baz=212,slow=40						
QIS	Mount Isa	36.87	116	P	P	11 15 33.6	+0.6
	baz=37,SNR=7.3						
ENH	Enshi	37.05	7	eP	P	11 15 32.3	-2.0
	comp=Z,10nm,0.6s						
CD2	Chengdu	37.35	359	P	P	11 15 37.3	+0.4
CD2				pP	pP	11 15 47.3	-1.2
CD2				sP	sP	11 15 51.8	-1.8
CD2				PP	PP	11 17 03.5	+0.6
CD2				S	S	11 21 25.0	+3.2
CD2				pmax	pmax		
	comp=Z,60nm,0.5s						
CD2				pmax	pmax		
	comp=Z,660nm,5.3s						
CD2				LR	LR		
	comp=Z,1µm,13.2s						
CD2				LR	LR		
	comp=Z,2µm,16.2s						
CD2				LR	LR		
	comp=Z,1µm,11.8s						
RAMN	Ramite	37.56	334	eP	P	11 15 39.7	+0.8
	comp=Z,16nm,0.3s						
LSA	Lhasa	38.30	341	eP	P	11 15 45.5	+0.1
	comp=Z,12nm,0.4s						
LSA	Lhasa	38.30	341	eP	P	11 15 45.5	+0.1
LSA				pmax	pmax		
	comp=Z,12nm,0.4s						
JIRN	Jiri	38.35	334	eP	P	11 15 46.2	+0.4
	comp=Z,111nm,0.6s						
PKI	Pulchoki	38.63	333	eP	P	11 15 48.0	0.0
	comp=Z,15nm,0.5s						
PKIN	Phulchoki	38.64	333	eP	P	11 15 48.0	0.0
	comp=Z,11nm,0.4s						
GUN	Gumba	38.70	333	eP	P	11 15 49.1	+0.4
	comp=Z,110nm,0.7s						
DMN	Daman	38.80	332	eP	P	11 15 50.1	+0.7
	comp=Z,36nm,0.9s						
COEN	Coen	38.87	104	P	P	11 15 49.3	-0.6
	baz=39,SNR=42						
COEN	Coen	38.87	104	eP	P	11 15 49.6	-0.4
	comp=Z,17nm,0.6s						
KKN	Kakani	38.87	333	eP	P	11 15 50.3	+0.4
	comp=Z,41nm,0.7s						
POO	Poona	39.10	310⇓	iP	P	11 15 52.0	+0.2
	comp=Z,3.0nm,1.0s						
BBOO	Buckleboo	39.33	136	eP	P	11 15 52.3	-1.3
	comp=Z,12nm,0.9s						
KOLN	Koldanda	39.65	331	eP	P	11 15 57.0	+0.6
	comp=Z,79nm,0.6s						
DANN	Dangsing	40.06	331	eP	P	11 16 00.3	+0.4
	comp=Z,117nm,0.7s						
PYUN	Piuthan	40.22	330	eP	P	11 16 02.0	+0.8
	comp=Z,59nm,0.5s						
MTSU	Mount Surprise	40.60	110	P	P	11 16 04.9	+0.6
	baz=41,SNR=21						
XAN	Xi'an	40.71	6	P	P	11 16 03.0	-1.9
XAN				pP	pP	11 16 16.3	-0.3
XAN				S	S	11 22 13.3	+1.2
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN				pmax	pmax		
	comp=Z,210nm,4.5s						
XAN				LR	LR		
	comp=Z,620nm,19.1s						
XAN				LR	LR		
	comp=Z,440nm,16.7s						
XAN				LR	LR		
	comp=Z,740nm,18.4s						
XAN	Xi'an	40.71	6	eP	P	11 16 03.7	-1.2
	comp=Z,14nm,0.6s						
XAN	Xi'an	40.71	6	eP	P	11 16 03.7	-1.2
XAN				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2	Nanjing	40.91	19	eP	P	11 16 06.9	+0.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
LZH	Lanzhou	42.52	359	eP	P	11 16 19.9	+0.1
LZH				pP	pP	11 16 32.8	+1.3
LZH				sP	sP	11 16 38.8	+2.2
LZH				eS	S	11 22 35.1	-4.0
LZH				sS	sS	11 22 58.4	-0.3
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.0s						
LZH				LR	LR		
	comp=Z,1µm,17.7s						
LZH				LR	LR		
	comp=Z,870nm,17.7s						
LZH				LR	LR		
	comp=Z,980nm,16.6s						
CTA	Charters Tower	42.79	112	P	P	11 16 22.9	+0.7
	comp=Z,1.9nm,0.6s,baz=281,slow=16,SNR=2.3						
CTAO	Charters Tower	42.79	112	eP	P	11 16 21.9	-0.3
	comp=Z,6.5nm,0.7s						
CTAO	Charters Tower	42.79	112	eP	P	11 16 21.9	-0.3
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
STKA	Stephens Creek	42.87	131	P	P	11 16 23.1	+0.4
	baz=43,SNR=27						
STKA	Stephens Creek	42.87	131	eP	P	11 16 23.7	+1.1
	comp=Z,1.9nm,0.8s						
STKA	Stephens Creek	42.87	131	P	P	11 16 23.8	+1.2
	comp=Z,7.3nm,0.5s,baz=306,slow=7.8,SNR=36						
STKA				LR	LR	11 35 50.6	
	comp=Z,486nm,19.4s,baz=306,slow=38						
NDI	New Delhi	43.78	325	eP	P	11 16 31.5	+1.5
TIA	Tai'an	44.30	15	P	P	11 16 33.3	-0.7
TIA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GUMO	Guam	45.01	63	LR	LR	11 36 42.3	
	comp=Z,76nm,21.4s,baz=230,slow=38						
CMSA	Cobar Meteorol	45.86	128	P	P	11 16 47.1	+0.5
	baz=46,SNR=8.9						
GTA	Gaotai	46.02	355	eP	P	11 16 48.0	+0.2
GTA				pP	pP	11 16 58.6	-1.0
GTA				sP	sP	11 17 02.5	-2.1
GTA				PcP	PcP	11 18 25.0	+1.2
GTA				pmax	pmax		
	comp=Z,15nm,1.3s						
GTA				pmax	pmax		
	comp=Z,170nm,6.7s						
GTA				LR	LR		
	comp=Z,640nm,18.7s						
GTA				LR	LR		
	comp=Z,350nm,17.8s						
GTA				LR	LR		
	comp=Z,620nm,18.1s						
JNU	Nakatsue	46.92	31	eP	P	11 16 54.4	-0.4
	comp=Z,28nm,1.0s						
JNU	Nakatsue	46.92	31	P	P	11 16 53.6	-1.2
	comp=Z,20nm,0.9s,baz=291,slow=2.5,SNR=10						
BJT	Baijiatuau	47.71	12	eP	P	11 17 01.0	+0.2
	comp=Z,28nm,0.6s						
BJT	Baijiatuau	47.71	12	eP	P	11 17 01.0	+0.2
BJT				pmax	pmax		
	comp=Z,28nm,0.6s						
BJI	Beijing	47.73	12	P	P	11 17 01.0	+0.1
BJI				S	S	11 23 54.8	+0.7
BJI				pmax	pmax		
	comp=Z,20nm,0.5s						
BJI				LR	LR		
	comp=Z,380nm,18.3s						
BJI				LR	LR		
	comp=Z,290nm,16.6s						
BJI				LR	LR		
	comp=Z,390nm,22.3s						
HHC	Hu-ho-hao-te	47.74	7	eP	P	11 17 01.6	+0.5
HHC				S	S	11 23 58.4	+4.0
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,6.0s						
HHC				LR	LR		
	comp=Z,570nm,14.7s						
HHC				LR	LR		
	comp=Z,450nm,14.5s						
HHC				LR	LR		
	comp=Z,980nm,15.6s						
EIDS	Eidsvold	48.35	118	P	P	11 17 06.1	0.0
	baz=48,SNR=3.5						
EIDS	Eidsvold	48.35	118	eP	P	11 17 03.3	-2.7
	comp=Z,0.6nm,0.6s						
TOO	Toolangi	48.40	136	eP	P	11 17 04.4	-1.9
	comp=Z,3.2nm,0.8s						
TOO	Toolangi	48.40	136	eP	P	11 17 04.4	-1.9
TOO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KS15	Wonju Array Si	49.08	25	eP	P	11 17 10.7	-0.7
	comp=Z,15nm,0.8s						
KSRS	Korea Array	49.11	25	P	P	11 17 11.3	-0.2
	comp=Z,13nm,0.7s,baz=221,slow=7.5,SNR=44						
KS01	Wonju Array Si	49.11	25	eP	P	11 17 12.6	+1.0
NIL	Nilore	49.74	326	eP	P	11 17 15.9	-0.6
	comp=Z,43nm,0.6s						
NIL	Nilore	49.74	326	eP	P	11 17 15.9	-0.6
NIL				pmax	pmax		
	comp=Z,43nm,0.6s						
INU	Inuyama	51.90	34	eP	P	11 17 30.7	-2.0
	comp=Z,11nm,0.8s						
WMQ	Urumqi	52.44	345	P	P	11 17 37.9	+1.2
WMQ				pP	pP	11 17 48.8	+0.1
WMQ				sP	sP	11 17 53.1	-0.6
WMQ				S	S	11 25 05.6	+5.8
WMQ				pmax	pmax		
	comp=Z,85nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,610nm,5.7s						
WMQ				LR	LR		
	comp=Z,370nm,24.5s						
WMQ				LR	LR		
	comp=Z,360nm,18.9s						
WMQ				LR	LR		
	comp=Z,420nm,23.7s						
WMQ	Urumqi	52.44	345	eP	P	11 17 35.7	-1.0
	comp=Z,34nm,0.8s						
WMQ	Urumqi	52.44	345	eP	P	11 17 35.7	-1.0
WMQ				pmax	pmax		
	comp=Z,34nm,0.8s						
KBL	Kabul	52.81	323	eP	P	11 17 38.5	-1.2
	comp=Z,8.4nm,0.8s						
KBL	Kabul	52.81	323	eP	P	11 17 38.5	-1.2
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH	Kashi	52.89	333	P	P	11 17 39.8	-0.4
KSH				pP	pP	11 17 50.0	-2.2
KSH				PP	PP	11 19 38.6	-1.6
KSH				S	S	11 25 00.6	-5.6
KSH				sS	sS	11 25 26.3	-0.1
KSH				SS	SS	11 28 42.3	-3.5
KSH				pmax	pmax		
	comp=Z,24nm,0.5s						
KSH				pmax	pmax		
	comp=Z,300nm,3.6s						
KSH				LR	LR		
	comp=Z,160nm,4.8s						
KSH				LR	LR		
	comp=Z,160nm,4.6s						
KSH				LR	LR		
	comp=Z,320nm,6.6s						
MAJO	Matsushiro	53.43	34	eP	P	11 17 42.2	-1.9
MAJO	Matsushiro	53.43	34	eP	P	11 17 42.2	-1.9
MAT	Matsushiro	53.43	34	P	P	11 17 41.7	-2.4
MJAR	Matsushiro Arr	53.43	34	P	P	11 17 42.2	-1.9
	comp=Z,7.1nm,0.7s,baz=215,slow=7.7,SNR=20						
MJAR				LR	LR	11 40 43.8	
	comp=Z,94nm,21.4s,baz=215,slow=36						
MJB9	Matsu-Tunnel	53.43	34	eP	P	11 17 42.4	-1.7
	comp=Z,9.1nm,0.8s						
CN2	Changchun	53.74	19	eP	P	11 17 45.1	-1.0
CN2				esP	pP	11 17 59.1	+0.9
CN2				eS	S	11 25 17.1	-0.1
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,270nm,18.0s						
CN2				LR	LR		
	comp=Z,330nm,18.0s						
CN2				LR	LR		
	comp=Z,450nm,21.0s						
TARG	Taragay, Kyrgy	53.91	336	eP	P	11 17 48.1	+0.1
	comp=Z,6.9nm,0.7s						
SONA0	Songino Array	54.28	2	eP	P	11 17 50.7	+0.5
SONA0				ePcP	PcP	11 18 54.8	+0.8
SONM	Songino Array	54.28	2	P	P	11 17 50.7	+0.5

	comp=Z,12nm,0.7s,baz=176,slow=8.6,SNR=77						
SONM				PcP	PcP	11 18 54.8	+0.8
	comp=Z,4.2nm,0.8s,baz=180,slow=4.4,SNR=4.4						
SONM				LR	LR	11 43 18.4	
	comp=Z,304nm,18.1s,baz=166,slow=39						
SONA1	Songino Array	54.30	2	eP	P	11 17 50.9	+0.6
PRZ	Przheval'sk	54.31	337	P	P	11 17 52.6	+2.0
ULN	Ulaanbaatar	54.34	2	eP	P	11 17 51.0	+0.4
	comp=Z,8.7nm,0.9s						
ULN	Ulaanbaatar	54.34	2	eP	P	11 17 51.0	+0.4
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NRN	Naryn	54.43	334	eP	P	11 17 52.6	+0.9
	comp=Z,11nm,0.8s						
NRN	Naryn	54.43	334	eP	P	11 17 52.6	+0.9
NRN				pmax	pmax		
	comp=Z,11nm,0.8s						
KDJ	Kajisay	54.50	335	eP	P	11 17 54.1	+2.1
	comp=Z,27nm,0.8s						
KDJ	Kajisay	54.50	335	eP	P	11 17 54.1	+2.1
KDJ				pmax	pmax		
	comp=Z,27nm,0.8s						
GAR	Garm	55.28	328	eP	P	11 17 57.7	+0.1
	comp=Z,20nm,0.7s						
GAR	Garm	55.28	328	eP	P	11 17 57.7	+0.1
GAR				pmax	pmax		
	comp=Z,20nm,0.7s						
KZA	Kyzart	55.28	334	P	P	11 17 59.2	+1.3
	SNR=12						
CHGR	Chuyangaron	55.65	327	eP	P	11 17 59.7	-0.6
	comp=Z,31nm,0.7s						
ARSB	Arslanbob	55.71	332	eP	P	11 18 00.9	+0.2
	comp=Z,17nm,0.9s						
UCH	Uchtor	55.73	333	P	P	11 18 01.9	+0.8
	SNR=8.7						
BTK	Batken	55.81	329	eP	P	11 18 02.0	+0.7
	comp=Z,13nm,0.8s						
BTK	Batken	55.81	329	eP	P	11 18 02.1	+0.7
BTK				pmax	pmax		
	comp=Z,13nm,0.8s						
TKM2	Tokmak 2	55.82	335	P	P	11 18 02.3	+0.8
	SNR=8.4						
KBK	Karagaybulak	55.88	334	P	P	11 18 03.1	+1.1
	SNR=9.7						
AML	Almayashu	56.02	333	P	P	11 18 03.9	+0.7
	SNR=14						
AAK	Ala-Archa	56.06	334	P	P	11 18 04.0	+0.8
	SNR=6.4						
AAK	Ala-Archa	56.06	334	eP	P	11 18 02.4	-0.8
	comp=Z,4.6nm,0.9s						
AAK	Ala-Archa	56.06	334	P	P	11 18 02.5	-0.7
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
UOSS	Minazif	56.37	306	eP	P	11 18 04.5	-1.1
	comp=Z,4.7nm,0.8s						
EKS2	Erkin-Say	56.40	333	P	P	11 18 06.6	+1.0
	SNR=25						
USA0B	Ussuriysk Arra	56.44	24	eP	P	11 18 05.6	-0.1
	comp=Z,36nm,0.7s						
USRK	Ussuriysk Ar.	56.44	24	P	P	11 18 05.4	-0.3
	comp=Z,38nm,0.7s,baz=213,slow=6.1,SNR=72						
USP	Ospenovka	56.57	334	P	P	11 18 06.7	0.0
	SNR=7.4						
LHI	Lord Howe Isla	56.66	123	eP	P	11 18 06.7	-0.8
	comp=Z,81nm,1.0s						
MK01	Makanchi Array	56.67	342	eP	P	11 18 07.2	-0.2
MK31	Makanchi Array	56.70	342	eP	P	11 18 07.6	+0.1
MK31	Makanchi Array	56.70	342	i P	P	11 18 07.2	-0.3
MK31				pmax	pmax		
	comp=Z,14nm,0.8s						
MK32	Makanchi Array	56.70	342	eP	P	11 18 07.6	+0.1
MKAR	Makanchi Array	56.70	342	eP	P	11 18 07.7	+0.2
	comp=Z,91nm,0.6s						
MKAR	Makanchi Array	56.70	342	eP	P	11 18 07.7	+0.2
MKAR				pmax	pmax		
	comp=Z,91nm,0.6s						
MKAR	Makanchi Array	56.70	342	P	P	11 18 07.6	+0.2
	comp=Z,18nm,0.7s,baz=144,slow=8.4,SNR=97						
MKAR				LR	LR	11 44 56.3	
	comp=Z,200nm,21.2s,baz=156,slow=39						
MAKZ	Makanchi	56.81	342	eP	P	11 18 08.5	+0.3
	comp=Z,7.9nm,1.0s						
MAKZ	Makanchi	56.81	342	eP	P	11 18 08.5	+0.3
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ZAK	Zakamensk	56.81	359	eP	P	11 18 08.4	+0.1
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DGZ	Jazzator, Alta	58.02	347	i P	P	11 18 17.5	+0.6
DGZ				pmax	pmax		
	comp=Z,73nm,0.7s						
TLY	Talaya	58.11	360	eP	P	11 18 16.1	-1.2
	comp=Z,13nm,0.7s						
TLY	Talaya	58.11	360	eP	P	11 18 17.8	+0.5
TLY				pmax	pmax		
	comp=Z,29nm,0.7s						
TLY				MLR	MLR		
	comp=Z,616nm,13.0s						
MOY	Mondy	58.16	358	eP	P	11 18 18.2	+0.4
MOY				pmax	pmax		
	comp=Z,24nm,2.7s						
KK31	Karatay Array	58.25	331	eP	P	11 18 18.3	-0.2
	comp=Z,3.3nm,0.6s						
KK31	Karatay Array	58.25	331	eP	P	11 18 18.3	-0.2
KK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKAR	Karatay Array	58.25	331	eP	P	11 18 18.4	-0.1
	comp=Z,3.3nm,0.6s						
KKAR	Karatay Array	58.25	331	eP	P	11 18 18.4	-0.1
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KLR	Kul'dur	60.59	20	P	P	11 18 33.9	-0.6
	comp=Z,23nm,0.7s,baz=224,slow=5.5,SNR=86						
KLR				LR	LR	11 46 00.7	
	comp=Z,189nm,18.7s,baz=208,slow=37						
KURK	Kurchatov	61.30	342	eP	P	11 18 38.9	-0.4
	comp=Z,21nm,0.8s						
KURK	Kurchatov	61.30	342	eP	P	11 18 38.9	-0.4
KURK				pmax	pmax		
	comp=Z,21nm,0.8s						
DZM	Mont Dzumac	61.72	111	eLR	LR	11 37 04.6	
	comp=Z,406nm,23.3s						
GEYT	Alibeck	61.76	320	P	P	11 18 43.8	+1.2
	comp=Z,8.2nm,0.7s,baz=142,slow=7.5,SNR=9.3						
GEYT				LR	LR	11 48 16.7	
	comp=Z,160nm,21.5s,baz=115,slow=39						
ZAA0	Zalesovo Array	62.57	347	eP	P	11 18 47.7	0.0
	comp=Z,37nm,0.8s						
ZALV	Zalesovo Beam	62.57	347	eP	P	11 18 47.6	-0.1
ZALV	Zalesovo Beam	62.57	347	eP	P	11 18 47.6	-0.1
ZALV	Zalesovo Beam	62.57	347	P	P	11 18 47.4	-0.3
	comp=Z,40nm,0.3s,baz=152,slow=5.7,SNR=214						
ZALV				LR	LR	11 48 47.3	
	comp=Z,393nm,19.4s,baz=72,slow=39						
ZAA1	Zalesovo Array	62.57	347	eP	P	11 18 47.4	-0.3
ZEA	Zeya	63.20	15	eP	P	11 18 51.7	-0.2
ZEA				pmax	pmax		
	comp=N,31nm,0.8s						
ZEA				pmax	pmax		
	comp=E,16nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,33nm,0.8s						
ZEA				MLR	MLR		
	comp=E,300nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	Yuzh-Sakhalins	63.31	28⇑	iP	P	11 18 52.1	-0.7
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
GRNR	Gornyy	63.55	22	eP	P	11 18 53.1	-1.2
GRNR				pmax	pmax		
	comp=Z,18nm,1.0s						
NVS	Novosibirsk	63.75	347⇓	iP	P	11 18 55.2	-0.3
NVS				pmax	pmax		
	comp=N,14nm,1.5s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.5s						
NVS				pmax	pmax		
	comp=Z,19nm,1.5s						
BOD	Bodaibo	64.74	6	eP	P	11 19 00.4	-1.5
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BVA0	Borovoye Array	66.04	338	i P	P	11 19 10.2	-0.3
BVA0				pmax	pmax		
	comp=Z,8.0nm,0.6s						

BRVK	Borovoye	66.10	338	eP	P	11 19 11.2	+0.4
	comp=Z,9.5nm,0.6s						
BRVK	Borovoye	66.10	338	eP	P	11 19 11.3	+0.4
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAW	Mawson	66.94	196	LR	LR	11 43 05.6	
	comp=Z,384nm,19.8s,baz=17,slow=31						
NKL	Nikolayevsk	67.05	23	eP	P	11 19 16.5	-0.4
NKL				pmax	pmax		
	comp=N,8.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,19nm,0.9s						
AB31	Akbulak array	67.77	330	i P	P	11 19 22.0	+0.4
AB31				pmax	pmax		
	comp=Z,22nm,0.6s						
ABKAR	Akbulak array	67.77	330	eP	P	11 19 22.5	+0.9
RPZ	Rata Peaks	68.67	134	eP	P	11 19 29.4	+1.9
	comp=Z,22nm,1.2s						
OUZ	Omahuta	69.28	125	eP	P	11 19 33.0	+1.7
	comp=Z,7.8nm,1.0s						
OXZ	Oxford	69.30	134	eP	P	11 19 31.7	+0.4
	comp=Z,3.8nm,0.7s						
AKTO	Aktyubinsk	69.49	330	P	P	11 19 32.5	+0.3
AKTO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
THZ	Tophouse	69.66	132	eP	P	11 19 34.8	+1.2
	comp=Z,5.7nm,0.7s						
MQZ	McQueen's Vall	69.81	134	eP	P	11 19 36.3	+1.9
	comp=Z,16nm,0.9s						
YAK	Yakutsk	71.24	12	eP	P	11 19 42.1	-0.5
YAK				pmax	pmax		
	comp=Z,116nm,0.8s						
YAK				pmax	pmax		
	comp=N,27nm,0.9s						
YAK				pmax	pmax		
	comp=E,12nm,0.9s						
BKZ	Black Stump Fm	72.02	129	eP	P	11 19 49.1	+1.1
	comp=E,17nm,0.6s						
SVE	Sverdlovsk	72.61	337	eP	P	11 19 52.2	+1.2
SVE				pmax	pmax		
	comp=Z,20nm,0.7s						
ARU	Arti	73.18	335	eP	P	11 19 55.5	+1.1
	comp=Z,15nm,0.6s						
ARU	Arti	73.18	335c	iP	P	11 19 55.2	+0.8
ARU						11 20 08.5	
ARU						11 22 34.4	
ARU				S	SKiKP	11 29 21.5	-1.2
ARU				SS	SS	11 33 58.4	-2.9
ARU				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEI	Tsey	73.55	318	eP	P	11 19 57.9	+0.7
ZEI				pmax	pmax		
	comp=Z,13nm,0.6s						
PETK	Petropavlovsk-	74.61	30	P	P	11 20 02.4	-0.5
	comp=Z,10nm,0.7s,baz=233,slow=3.4,SNR=12						
PETK				LR	LR	11 54 05.8	
	comp=Z,72nm,19.7s,baz=236,slow=37						
PEA1	Petropavlovsk-	74.61	30	eP	P	11 20 02.4	-0.5
KBZ	Khabaz	74.62	319	P	P	11 20 04.2	+1.1
	comp=Z,8.5nm,0.8s,baz=111,slow=5.5,SNR=20						
KIV	Kislovodsk	74.85	319	eP	P	11 20 05.0	+0.4
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
SYO	Syowa Base	74.92	200⇑	epP	pP	11 20 16.2	-0.8
SYO	Syowa Base	74.92	200⇑	iPcP	PcP	11 20 19.0	+1.0
SYO	Syowa Base	74.92	200⇓	esP	sP	11 20 22.2	+0.3
MA2	Magadan	75.57	22	eP	P	11 20 07.5	-0.7
	comp=Z,10nm,0.7s						
MA2	Magadan	75.57	22⇑	eP	P	11 20 08.9	+0.7
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SOC	Sochi	76.67	318	eP	P	11 20 13.2	-1.6
SOC				e		11 23 08.3	
SOC				ePPP	PPP	11 24 58.2	
SOC				eS	S	11 29 59.2	+0.9
SOC				eSS	SS	11 34 55.0	+0.2
SOC				pmax	pmax		
	comp=Z,9.0nm,0.4s						
NRIK	Noril'sk	76.71	354	P	P	11 20 13.8	-0.7
	comp=Z,3.6nm,0.4s,baz=162,slow=13,SNR=4.4						
NRIK				LR	LR	11 57 28.1	
	comp=Z,165nm,18.5s,baz=190,slow=38						
VNDA	Vanda	76.80	169	LR	LR	11 49 40.9	
	comp=Z,225nm,19.0s,baz=305,slow=32						
BOSA	Boshof	77.26	242	LR	LR	11 48 34.8	
	comp=Z,158nm,18.5s,baz=41,slow=31						
SEY	Seymchan	78.39	20⇑	eP	P	11 20 24.4	+0.4
VRH	Novokhopyorsk	78.57	325	eP	P	11 20 25.6	+0.4
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
BR101	Keskin Array S	79.62	312	eP	P	11 20 32.5	+1.0
BRTR	Keskin Array B	79.62	312	P	P	11 20 32.5	+1.0
	comp=Z,2.9nm,0.8s,baz=126,slow=6.3,SNR=12						
BRTR				LR	LR	11 59 17.1	
	comp=Z,68nm,18.5s,baz=98,slow=38						
VSR	Storozhevoye	80.03	325	eP	P	11 20 32.5	-0.7
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
LPSR	Galich'ya Gora	80.73	326	eP	P	11 20 37.7	+0.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SIM	Simferopol'	80.92	317	P	P	11 20 39.9	+1.8
SIM						11 20 50.0	
SIM				pmax	pmax		
	comp=Z,12nm,0.6s						
PRGR	Permogore	81.64	336	eP	P	11 20 41.5	-0.1
PRGR				e*PP	PcP	11 20 51.7	+4.4
PRGR				pmax	pmax		
	comp=Z,16nm,0.8s						
OBN	Obninsk	83.00	328	eP	P	11 20 49.6	+0.8
OBN				e		11 20 55.0	
OBN				pmax	pmax		
	comp=Z,67nm,2.5s						
KLMR	Klimovskoe	83.88	334	eP	P	11 20 53.8	+0.6
KLMR				pmax	pmax		
	comp=Z,25nm,1.3s						
KLMR	Klimovskoe	83.88	334	eP	P	11 20 53.8	+0.6
KLMR				AMP		11 21 11.7	
	comp=Z,25nm,1.2s						
CFR	Carcaliu	85.04	316⇑	iP	P	11 21 02.2	+2.8
CFR	Carcaliu	85.04	316	⇑P	P	11 21 02.2	+2.8
AKASG	Malin Array Be	85.78	322	P	P	11 21 03.4	+0.4
	comp=Z,1.4nm,0.5s,baz=86,slow=4.9,SNR=7.3						
AKASG				PP	PP	11 24 20.6	-2.2
	comp=Z,0.3nm,0.3s,baz=84,slow=6.8,SNR=4.6						
KIEV	Kiev	85.78	322⇓	iP	P	11 21 04.0	+1.0
KIEV	Kiev	85.78	322	i P	P	11 21 02.1	-0.9
KIEV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TMCR	Tamitsa	85.89	336	eP	P	11 21 01.6	-1.6
BILL	Bilibino	86.04	19	eP	P	11 21 03.8	-0.2
	comp=Z,4.1nm,0.7s						
BILL	Bilibino	86.04	19	eP	P	11 21 04.1	+0.1
BILL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VRI	Vrincioaia	86.17	317⇑	iP	P	11 21 07.4	+2.3
VRI	Vrincioaia	86.17	317	⇑P	P	11 21 07.4	+2.3
PLOR	Plostina	86.22	317⇑	iP	P	11 21 11.2	+5.8
PLOR	Plostina	86.22	317	⇑P	P	11 21 11.2	+5.8
TESR	Tescani	86.37	317⇑	iP	P	11 21 08.4	+2.3
MLR	Muntele Rosu	86.62	316⇑	iP	P	11 21 08.9	+1.4
MLR	Muntele Rosu	86.62	316	⇑P	P	11 21 08.9	+1.4
BIZ	Bicaz	86.83	318⇑	iP	P	11 21 08.4	+0.1
BURAR	Bucovina Array	87.57	318⇑	iP	P	11 21 14.5	+2.5
BURAR	Bucovina Array	87.57	318	⇑P	P	11 21 14.5	+2.5
BUR04	Bucovina Ar. S	87.58	318	eP	P	11 21 13.1	+1.1
BUR08	Bucovina Ar. S	87.59	318	eP	P	11 21 13.4	+1.3
	comp=Z,6.9nm,1.1s						
GZR	Gura Zlata	88.78	316⇑	iP	P	11 21 24.7	+7.0
GZR	Gura Zlata	88.78	316	⇑P	P	11 21 24.7	+7.0
MDVR	Moldovita	89.41	315⇓	iP	P	11 21 22.5	+1.8
BZS	Buzias	89.62	316⇓	iP	P	11 21 22.7	+1.1
BZS	Buzias	89.62	316	⇓P	P	11 21 22.7	+1.1
FIA0	FINESS Array S	90.21	332	eP	P	11 21 25.1	+1.1
FIA0	FINESS Array S	90.21	332	eP	P	11 21 25.1	+1.1
FINES	FINESS Array B	90.21	332	P	P	11 21 25.1	+1.1
	comp=Z,2.5nm,0.5s,baz=102,slow=4.5,SNR=12						
FINES				LR	LR	12 06 54.1	
	comp=Z,101nm,18.1s,baz=79,slow=39						
ARA0	ARCESS Array S	92.29	340	eP	P	11 21 34.4	+1.0
ARCES	ARCESS Array B	92.29	340	P	P	11 21 34.4	+0.9
	comp=Z,2.5nm,0.7s,baz=82,slow=2.6,SNR=5.6						
RAR	Rarotonga	93.10	112	LR	LR	12 00 35.0	
	comp=Z,90nm,21.5s,baz=241,slow=34						
TBI	Tubuai	102.11	116	eLR	LR	11 55 35.9	

	comp=Z,186nm,27.0s						
PPT2	Papeete2	103.20	110	eLR	LR	11 56 05.2	
	comp=Z,261nm,23.8s						
POKR	Poker Plat Res	103.65	24	P	Pdif	11 22 24.1	-0.7
	baz=284						
EPYK	Eagle Plains	107.41	22	P	PKiKP	11 26 49.0	-0.8
	baz=294						
RKT	Rikitea	114.97	119	eLR	LR	12 01 39.7	
	comp=Z,253nm,27.2s						
YKA	Yellowknife Ar	117.44	19	PKIKP	PKiKP	11 27 09.0	0.0
YKA	Yellowknife Ar	117.44	19	PKP	PKiKP	11 27 09.0	0.0
	comp=Z,0.4nm,0.7s,baz=348,slow=2.5,SNR=12						
YKA				PKKPbc	PKKPab	11 37 46.8	+11
	comp=Z,0.3nm,0.7s,baz=132,slow=4.0,SNR=5.2						
YKB5	Yellowknife Ar	117.44	19	ePKPdf	PKiKP	11 27 09.3	+0.3
B05A	Bryant	122.91	35	P	PKiKP	11 27 19.8	-0.3
	baz=301						
D04E	Lakebay	123.06	37	P	PKiKP	11 27 21.5	+1.0
	baz=300						
F04D	Rainier, OR	123.46	38	P	PKiKP	11 27 21.6	+0.4
	baz=299						
E04D	Cinebar	123.49	37	P	PKiKP	11 27 22.2	+0.9
	baz=300						
I03D	Drain, OR	124.37	41	P	PKiKP	11 27 23.8	+0.7
	baz=297						
H04D	Lebanon	124.37	39	P	PKiKP	11 27 23.9	+0.8
	baz=298						
I04A	Tendick Farm,	124.92	40	P	PKiKP	11 27 25.1	+0.8
	baz=298						
I05D	Terrebonne, OR	125.34	39	P	PKiKP	11 27 25.8	+0.6
	baz=300						
J04D	Umpqua Nationa	125.38	40	P	PKiKP	11 27 26.3	+0.9
	baz=298						
L04D	Klamath Falls	125.72	42	P	PKiKP	11 27 26.7	+0.7
	baz=297						
M02C	Callahan	125.73	43	P	PKiKP	11 27 27.1	+1.1
	baz=296						
J05D	Fort Rock, OR	125.92	40	P	PKiKP	11 27 27.7	+1.2
	baz=299						
N02D	Trinity Center	126.01	43	P	PKiKP	11 27 27.8	+1.1
	baz=296						
O02D	Mt. Diablo Mer	126.30	44	P	PKiKP	11 27 28.4	+1.2
	baz=296						
MSO	Missoula	128.26	33	P	PKiKP	11 27 31.2	+0.2
	baz=308						
NV01	Mina Array Sit	130.19	44	ePKPdf	PKiKP	11 27 35.2	0.0
NVAR	Mina Array Bea	130.19	44	PKP	PKiKP	11 27 37.1	+1.8
	comp=Z,1.1nm,0.6s,baz=305,slow=2.0,SNR=7.0						
BOZ	Bozeman (W)	130.28	33	P	PKiKP	11 27 36.0	+0.8
	baz=310						
PKM	Mcpherson Peak	130.67	49	P	PKiKP	11 27 36.8	+0.5
	baz=294						
SNCC	San Nicolas Is	131.55	51	P	PKiKP	11 27 37.1	-0.8
	baz=293						
BLG	Laguna Peak, P	131.55	50	P	PKiKP	11 27 37.1	-0.8
	baz=294						
MPMC	Manual Prospec	131.87	46	P	PKPdf	11 27 36.8	-0.9
	baz=297						
EDW2	Edwards Air Fo	132.03	48	P	PKiKP	11 27 38.6	-0.2
	baz=296						
GSC	Goldstone, Bar	132.71	47	P	PKiKP	11 27 40.6	+0.3
	baz=297						
SHOC	Shoshone, Teco	132.82	46	P	PKiKP	11 27 40.1	-0.2
	baz=298						
DUG	Dugway, Tooele	132.89	39	P	PKiKP	11 27 40.2	-0.3
	baz=305						
BW06	Boulder Array	133.25	34	P	PKiKP	11 27 40.7	-0.7
	baz=311						
PDAR	Pinedale Array	133.25	34	PKP	PKiKP	11 27 42.0	+0.6
	comp=Z,0.6nm,0.6s,baz=124,slow=0.8,SNR=7.9						
PDAR				SKP		11 31 16.1	
	comp=Z,0.5nm,0.8s,baz=259,slow=1.5,SNR=3.7						
ULM	Lac du Bonnet	133.38	18	PKP	PKiKP	11 27 40.4	-0.6
	comp=Z,1.7nm,0.6s,baz=271,slow=4.4,SNR=3.4						
GMRC	Granite Mounta	133.78	47	P	PKiKP	11 27 42.9	+0.4
	baz=298,SNR=5.1						
BELC	Belle Mtn. Jos	133.89	48	P	PKiKP	11 27 43.0	+0.3
	baz=297						
SRU	San Rafael Swe	134.96	39	ePKPdf	PKPdf	11 27 43.3	-0.1
SRU	San Rafael Swe	134.96	39	ePKIKP	PKPdf	11 27 43.3	-0.1
Y12C	Blythe	135.10	48	P	PKiKP	11 27 45.2	+0.1
	baz=298						
RSSD	Black Hills	135.19	29	P	PKiKP	11 27 45.0	-0.2
	baz=318						
O20A	White River Ci	135.71	36	ePKPdf	PKiKP	11 27 46.2	-0.1
O20A	White River Ci	135.71	36	P	PKiKP	11 27 46.4	0.0
	baz=310						
WUAZ	Wupatki	136.45	44	P	PKiKP	11 27 47.6	-0.3
	baz=303						
EYMN	Ely	136.70	15	P	PKiKP	11 27 48.3	+0.4
	baz=337						
CHGQ	Chibougamau	136.88	359	P	PKiKP	11 27 47.4	-0.7
	baz=1.8						
O41A	Passleys Farm,	144.00	20	P	PKPab	11 27 55.9	-1.0
	baz=334						
P41A	Barry, Barry	144.33	21	P	PKPab	11 27 57.1	-1.0
	baz=333						
M48A	Edgerton	144.40	12	P	PKPab	11 27 57.2	-1.0
	baz=344						
ERPA	Erie	144.48	6	P	PKPab	11 27 57.7	-0.8
	baz=353						
L55A	Hinsdale	144.53	4	P	PKPab	11 27 57.8	-1.0
	baz=355						
M49A	Liberty Center	144.55	11	P	PKPab	11 27 57.5	-1.3
	baz=346						
L53A	Girard	144.61	6	P	PKPdf	11 27 59.4	-1.1
	baz=352						
P42A	Winchester	144.66	20	P	PKPab	11 27 58.2	-1.1
	baz=334						
O44A	Mansfield	144.73	17	P	PKPab	11 27 58.1	-1.5
	baz=338						
BDFB	Brasilia	144.76	231	ePKIKP	PKPdf	11 28 03.0	+1.3
BDFB	Brasilia	144.76	231	PKPbc	PKPdf	11 28 03.0	+1.3
	comp=Z,2.0nm,0.4s,baz=65,slow=6.4,SNR=3.3						
N47A	Urbana	144.76	13	P	PKPab	11 27 58.2	-1.5
	baz=343						
M50A	Fremont	144.78	10	P	PKPab	11 27 57.9	-1.8
	baz=347						
O45A	Potomac	144.85	16	P	PKPab	11 27 58.5	-1.5
	baz=339						
WMOK	Wichita Mounta	144.87	34	ePKPdf	PKPdf	11 28 00.6	-0.6
WMOK	Wichita Mounta	144.87	34	ePKIKP	PKPdf	11 28 00.6	-0.6
WMOK	Wichita Mounta	144.87	34	P	PKPdf	11 28 00.7	-0.6
	baz=318,SNR=9.3						
P43A	Skaggs, Pawnee	144.88	19	P	PKPbc	11 27 59.7	-0.5
	baz=336						
M52A	Chesterland	144.90	7	P	PKPbc	11 27 59.7	-0.5
	baz=350						
SFIN	Lafayette	144.90	15	P	PKPdf	11 28 00.7	-0.4
	baz=340						
Q41A	Truxton	144.91	21	P	PKPab	11 27 58.7	-1.6
	baz=332						
N48A	Decatur	144.93	12	P	PKPab	11 27 59.1	-1.2
	baz=344						
M51A	Elyria	144.99	9	P	PKPdf	11 28 00.6	-0.5
	baz=349						
N49A	Columbus Grove	145.04	11	P	PKPdf	11 28 00.8	-0.5
	baz=345						
M53A	WI Miller and	145.08	7	P	PKPab	11 27 59.6	-1.2
	baz=351						
HPIG		145.09	51	ePKPdf	PKPdf	11 28 02.5	+0.4
M54A	Oil Creek Stat	145.11	5	ePKPbc	PKPdf	11 28 00.8	-0.6
M54A	Oil Creek Stat	145.11	5	P	PKPab	11 28 00.4	-0.5
	baz=353						
Q42A	Golden Eagle	145.20	21	P	PKPbc	11 27 60.0	-1.2
	baz=334						
M55A	Ridgway	145.22	4	P	PKPab	11 28 00.8	-0.6
	baz=355						
O47A	Sheridan	145.26	14	P	PKPdf	11 28 01.8	+0.1
	baz=342						
TXAR	Lajitas Array	145.29	46	PKPbc	PKPdf	11 28 03.4	+1.2
	comp=Z,14nm,0.6s,baz=280,slow=1.3,SNR=124						
P44A	Sand Creek, Wi	145.31	18	P	PKPbc	11 28 00.0	-1.6
	baz=337						
N50A	Nevada	145.38	10	P	PKPdf	11 28 01.8	-0.1
	baz=347,SNR=5.6						
R41A	Rosebud	145.44	22	P	PKPab	11 28 01.9	-0.3
	baz=332,SNR=9.7						
O48A	Farmland	145.48	13	P	PKPab	11 28 01.8	-0.5
	baz=343,SNR=5.3						
P45A	Graceland, Par	145.52	17	ePKPbc	PKPab	11 28 02.8	+0.3
P45A	Graceland, Par	145.52	17	P	PKPab	11 28 02.5	0.0
	baz=338						
N52A	McGinn's Farm,	145.57	8	P	PKPdf	11 28 01.5	-0.7
	baz=349						
P46A	Rosedale	145.58	16	P	PKPab	11 28 03.3	+0.5
	baz=340						
N54A	Moraine State	145.62	6	P	PKPab	11 28 03.3	+0.4

	baz=352						
R42A	Luebbering baz=333,SNR=7.7	145.67	21	P	PKPab	11 28 02.9	-0.2
N53A	Lisbon baz=351	145.68	7	P	PKPab	11 28 03.1	0.0
CCM	Cathedral Cave	145.70	22	*e*PKPdf	PKPab	11 28 03.3	+0.1
CCM	Cathedral Cave	145.70	22	*e*PKIKP	PKPab	11 28 03.3	+0.1
CCM	Cathedral Cave baz=332	145.70	22	P	PKPab	11 28 03.3	+0.1
Q44A	Meyer Farm, Va baz=336	145.71	19	P	PKPab	11 28 03.1	-0.1
O49A	Covington baz=345	145.72	12	P	PKPab	11 28 03.1	-0.1
PAL	Palisades baz=3.0	145.76	358	P	PKPab	11 28 03.2	-0.1
ABTX	Abilene, Hawle	145.87	38	*e*PKPdf	PKPab	11 28 04.6	+0.5
ABTX	Abilene, Hawle baz=314	145.87	38	P	PKPab	11 28 03.9	-0.2
N59A	State Game Lan	145.88	0	*e*PKPdf	PKPab	11 28 03.4	-0.5
N55A	Marion Center baz=354	145.89	4	P	PKPab	11 28 03.6	-0.3
O50A	Cable baz=346	145.90	11	P	PKPab	11 28 04.4	+0.5
S41A	Jillco Farms, baz=331,SNR=14	145.92	23	P	PKPab	11 28 03.6	-0.5
ACSO	Alum Creek Sta baz=347	145.93	10	P	PKPab	11 28 04.1	+0.1
P47A	Martinsville baz=341	145.95	15	P	PKPab	11 28 03.4	-0.7
R43A	Red Bud baz=334	145.97	20	P	PKPab	11 28 04.2	0.0
Q45A	Warren Harvey, baz=338	145.98	18	P	PKPab	11 28 04.5	+0.2
FVM	French Village	146.06	21	*e*PKPdf	PKPbc	11 28 03.4	-0.6
FVM	French Village	146.06	21	*e*PKP2	PKPbc	11 28 03.4	-0.6
O51A	Pataskala baz=348,SNR=5.7	146.08	10	P	PKPab	11 28 03.8	-0.8
HHAR	Hobbs	146.10	27	*e*PKPdf	PKPab	11 28 04.1	-0.8
S42A	Caledonia baz=332,SNR=7.4	146.12	22	P	PKPbc	11 28 03.8	-0.4
P48A	Milroy baz=342	146.18	14	P	PKPab	11 28 05.0	0.0
O53A	New Philadelph baz=350	146.18	8	P	PKPab	11 28 05.3	+0.3
O52A	Adamsville baz=349	146.23	9	P	PKPab	11 28 05.4	+0.3
P49A	Miami Univ. Ec baz=344	146.27	13	P	PKPab	11 28 04.5	-0.8
R44A	Waltonville baz=336,SNR=6.2	146.28	19	P	PKPab	11 28 04.5	-0.9
O54A	Avella baz=352	146.35	6	P	PKPab	11 28 05.0	-0.7
T41A	Mountain View baz=330,SNR=9.5	146.38	24	P	PKPbc	11 28 04.6	-0.4
P50A	Jamestown baz=345	146.39	11	P	PKPbc	11 28 04.1	-0.8
Q47A	Bedord North L baz=340	146.43	15	P	PKPbc	11 28 04.8	-0.3
O56A	Blue Knob Stat	146.43	4	*e*PKPdf	PKPab	11 28 05.5	-0.5
O56A	Blue Knob Stat baz=355	146.43	4	P	PKPab	11 28 05.4	-0.5
O55A	Ligonier baz=353	146.43	5	P	PKPbc	11 28 04.6	-0.4
R45A	Skylar, Fairfi baz=337	146.50	18	P	PKPab	11 28 05.8	-0.4
U40A	Yellville baz=328,SNR=11	146.52	26	P	PKPbc	11 28 04.9	-0.5
S43A	Fulton Ridge, baz=333	146.55	21	P	PKPbc	11 28 04.6	-0.9
Q48A	North Vernon baz=342	146.61	14	P	PKPab	11 28 05.7	-0.9
P51A	Williamsport	146.65	10	*e*PKPdf	PKPab	11 28 05.9	-0.9
P51A	Williamsport baz=347	146.65	10	P	PKPab	11 28 05.8	-1.0
P52A	Corning baz=348	146.66	9	P	PKPbc	11 28 05.2	-0.5
T42A	Van Buren	146.66	23	*e*PKPdf	PKPab	11 28 06.1	-0.8
T42A	Van Buren baz=331,SNR=11	146.66	23	P	PKPab	11 28 05.7	-1.2
S44A	Carbondale baz=335	146.73	20	P	PKPab	11 28 06.2	-1.0
Q49A	Aurora baz=343	146.74	13	P	PKPab	11 28 06.2	-1.0
R46A	Gibon Southern baz=338	146.80	17	P	PKPab	11 28 06.2	-1.2
P53A	Whipple	146.91	8	*e*PKPbc	PKPab	11 28 06.9	-0.8
P53A	Whipple baz=350	146.91	8	P	PKPab	11 28 07.1	-0.6
T43A	Greenville baz=333,SNR=5.3	146.91	22	P	PKPbc	11 28 06.5	0.0
P54A	Burton baz=351	146.91	7	P	PKPab	11 28 06.8	-1.0
U41A	Viola baz=330,SNR=8.9	146.92	24	P	PKPbc	11 28 06.5	-0.1
MCWV	Mont Chateau baz=352	146.93	6	P	PKPab	11 28 06.8	-1.0
S45A	Carrier Mills baz=336	146.97	19	P	PKPab	11 28 06.9	-1.1
R47A	Wooly Knot Far baz=340	147.00	16	P	PKPbc	11 28 06.6	-0.1
Q51A	Peebles	147.04	11	*e*PKPdf	PKPbc	11 28 06.3	-0.5
Q51A	Peebles baz=346	147.04	11	P	PKPbc	11 28 06.9	+0.1
R48A	Northridge Ran baz=341	147.08	15	P	PKPab	11 28 07.2	-1.3
P55A	Reedsville baz=352	147.08	6	P	PKPab	11 28 07.3	-1.2
Q50A	Georgetown baz=345	147.09	12	P	PKPbc	11 28 07.0	0.0
WCI	Wyandotte Cave baz=340	147.13	15	P	PKPab	11 28 07.3	-1.4
T44A	Benton baz=334	147.16	21	P	PKPab	11 28 07.3	-1.5
U42A	Revenden baz=331,SNR=9.5	147.19	24	P	PKPab	11 28 07.5	-1.5
JCT	Junction City	147.22	41	*e*PKPbc	PKPbc	11 28 07.7	+0.1
JCT	Junction City	147.22	41	*e*PKP2	PKPbc	11 28 07.7	+0.1
JCT	Junction City baz=312	147.22	41	P	PKPab	11 28 07.9	-1.5
S46A	Don Dixon Farm baz=338	147.23	18	P	PKPab	11 28 07.7	-1.4
Q52A	Bidwell baz=348	147.29	10	P	PKPab	11 28 07.9	-1.4
R49A	Shelbyville baz=342	147.35	14	P	PKPab	11 28 08.2	-1.3
Q54A	Coxs Mills baz=350	147.48	7	P	PKPbc	11 28 08.3	+0.3
U43A	Rector baz=332	147.50	22	P	PKPbc	11 28 08.4	+0.2
R50A	Paris baz=344	147.55	13	P	PKPbc	11 28 08.3	+0.1
Q55A	Buckhannon baz=352	147.56	6	P	PKPbc	11 28 08.2	-0.1
WHTX	Lake Whitney,	147.62	36	*e*PKPbc	PKiKP	11 28 10.4	-0.4
WHTX	Lake Whitney, baz=317	147.62	36	P	PKPab	11 28 09.3	-1.6
R51A	Hillsboro baz=345	147.69	12	P	PKiKP	11 28 09.5	-1.2
MIAR	Mount Ida	147.70	28	*e*PKPbc	PKiKP	11 28 09.6	-1.2
MIAR				*e*PKPab	PKPab	11 28 12.3	+1.2
MIAR	Mount Ida	147.70	28	*e*PKP2	PKiKP	11 28 09.6	-1.2
MIAR	Mount Ida baz=325	147.70	28	P	PKPbc	11 28 09.0	+0.3
S48A	Wiedeman Farm, baz=340,SNR=6.3	147.73	16	P	PKPbc	11 28 08.6	-0.1
T46A	Princeton baz=337,SNR=5.2	147.77	18	P	PKiKP	11 28 09.4	-1.5
W41B	Gary Mavity, V baz=328	147.78	26	P	PKiKP	11 28 09.6	-1.3
S49A	Springfield baz=342	147.81	14	P	PKPbc	11 28 09.1	+0.1
R52A	Catlettsburg baz=347	147.84	10	P	PKiKP	11 28 09.6	-1.4
R53A	Hurricane baz=348	147.96	9	P	PKiKP	11 28 10.0	-1.2
T47A	Sharon Grove	148.06	17	*e*PKPbc	PKiKP	11 28 10.3	-1.1
T47A	Sharon Grove baz=338	148.06	17	P	PKiKP	11 28 10.1	-1.4
X40A	Basin Creek Fa baz=326	148.09	27	P	PKiKP	11 28 10.1	-1.5
U45A	Rockin P Farm, baz=335	148.11	20	P	PKiKP	11 28 10.7	-0.9
S50A	Richmond baz=343	148.12	13	P	PKPbc	11 28 10.0	+0.2
T48A	Bowling Green baz=340	148.15	16	P	PKiKP	11 28 10.6	-1.1
V44A	Blytheville baz=332	148.17	22	P	PKiKP	11 28 10.9	-0.8
R54A	Victor baz=350	148.25	8	P	PKPbc	11 28 10.4	+0.2
U46A	Springville baz=336	148.30	19	P	PKiKP	11 28 10.9	-1.1
S51A	Beattyville	148.33	12	*e*PKPbc	PKiKP	11 28 10.8	-1.2
S51A	Beattyville baz=345	148.33	12	P	PKPbc	11 28 10.3	-0.1
T49A	Edmonton baz=341	148.39	15	P	PKPbc	11 28 10.4	-0.2
U47A	Clarksville baz=338	148.51	18	P	PKPbc	11 28 10.8	-0.1
WVT	Waverly	148.62	19	*e*PKPbc	PKiKP	11 28 12.0	-0.6
WVT	Waverly	148.62	19	*e*PKP2	PKiKP	11 28 12.0	-0.6
WVT	Waverly baz=336	148.62	19	P	PKiKP	11 28 11.9	-0.8
T50A	Nancy baz=342	148.64	14	P	PKPbc	11 28 10.6	-0.6
U48A	Cassie Pea, Po baz=339	148.67	17	P	PKiKP	11 28 11.7	-1.0
S55A	Lewisburg baz=351	148.72	7	P	PKPbc	11 28 11.1	-0.3
V46A	Holladay baz=336	148.83	20	P	PKiKP	11 28 11.8	-1.3
U49A	Red Boiling Sp baz=340	148.88	16	P	PKiKP	11 28 12.0	-1.2
T51A	Gray baz=344	148.90	13	P	PKiKP	11 28 12.1	-1.1
V47A	Nunnelly baz=337	149.00	19	P	PKiKP	11 28 12.6	-0.8
U50A	Jamestown baz=342	149.22	15	P	PKiKP	11 28 13.1	-0.8
T54A	Tazewell baz=348	149.26	9	P	PKiKP	11 28 13.2	-0.8
V48A	Smith Brothers baz=338	149.30	18	P	PKiKP	11 28 13.1	-1.0
TZTN	Tazewell	149.39	12	*e*PKPbc	PKiKP	11 28 13.7	-0.5
TZTN				*e*PKPab	PKPab	11 28 18.0	+0.2
TZTN	Tazewell baz=344	149.39	12	P	PKiKP	11 28 13.8	-0.5
U51A	La Follette baz=344	149.45	13	P	PKiKP	11 28 13.8	-0.6
W47A	Westpoint baz=336	149.50	19	P	PKiKP	11 28 13.9	-0.6
V49A	McMinnville baz=340	149.54	17	P	PKiKP	11 28 13.8	-0.8
U52A	Thorn Hill baz=345	149.58	12	P	PKiKP	11 28 14.1	-0.6
U53A	Fall Branch baz=346	149.76	11	P	PKiKP	11 28 14.2	-0.9
X46A	Booneville baz=334	149.79	21	P	PKiKP	11 28 14.4	-0.7
W48A	Pulaski baz=337	149.82	19	P	PKiKP	11 28 14.5	-0.7
V50A	Pikevile baz=341	149.85	15	P	PKiKP	11 28 14.3	-0.9
V51A	Loudon baz=343	149.92	14	P	PKiKP	11 28 14.7	-0.6
W49A	Belvidere baz=339	150.04	18	P	PKiKP	11 28 14.9	-0.7
V52A	Sevierville	150.06	13	*e*PKPbc	PKiKP	11 28 15.6	-0.1
V52A				*e*PKPab	PKPab	11 28 19.7	-0.8
V52A	Sevierville baz=344	150.06	13	P	PKiKP	11 28 15.5	-0.1
X47A	Russelville baz=335	150.08	20	P	PKiKP	11 28 15.3	-0.4
TKL	Tuckaleechee C	150.19	13	*e*PKPbc	PKiKP	11 28 15.2	-0.7
TKL	Tuckaleechee C	150.19	13	*e*PKP2	PKiKP	11 28 15.3	-0.7
CPCT	Cooper Cave	150.21	15	*e*PKPbc	PKiKP	11 28 16.1	+0.1
CPCT				*e*PKPab	PKPab	11 28 19.8	-1.3
W50A	Signal Mountai baz=340	150.24	16	P	PKiKP	11 28 15.7	-0.4
V53A	Saluda	150.39	12	*e*PKPbc	PKPbc	11 28 14.8	-0.9
V53A				*e*PKPab	PKPab	11 28 21.7	-0.3
V53A	Saluda baz=346	150.39	12	P	PKiKP	11 28 16.1	-0.3
X48A	Hartselle	150.41	19	*e*PKPbc	PKiKP	11 28 16.0	-0.4
X48A				*e*PKPab	PKPab	11 28 20.5	-1.5
X48A	Hartselle baz=337	150.41	19	P	PKiKP	11 28 15.8	-0.6
W51A	Cleveland baz=342	150.43	15	P	PKiKP	11 28 16.0	-0.4
X49A	Woodville baz=338	150.59	18	P	PKiKP	11 28 16.2	-0.5
W52A	Murphy baz=343	150.70	14	P	PKiKP	11 28 16.8	-0.3
W53A	Cullowhee baz=345	150.80	13	P	PKiKP	11 28 17.3	-0.1
X50B	Fort Payne baz=339	150.84	17	P	PKPbc	11 28 16.1	-0.6
Y48A	Jasper baz=336	150.86	20	P	PKiKP	11 28 16.5	-0.9
LNIG	Linares	150.89	49	*e*PKPbc	PKiKP	11 28 17.9	+0.2
145A	Houston Renfro baz=330	150.97	25	P	PKPbc	11 28 16.1	-0.9
Y49A	Blount Mountai	151.16	19	*e*PKPbc	PKiKP	11 28 17.6	-0.4
Y49A				*e*PKPab	PKPab	11 28 22.4	-2.8
Y49A	Blount Mountai baz=338	151.16	19	P	PKiKP	11 28 18.1	+0.1
X52A	Dahlonega baz=343	151.17	14	P	PKiKP	11 28 18.3	+0.3
KMSC	Kings Mountain baz=348	151.18	10	P	PKiKP	11 28 18.1	+0.1
Y50A	Piedmont baz=339	151.34	18	P	PKiKP	11 28 18.6	+0.2
PAULI	Pauline	151.41	11	*e*PKPbc	PKiKP	11 28 18.8	+0.3
X53A	Estanollee baz=344	151.41	13	P	PKiKP	11 28 18.3	-0.2
Y51A	Rockmart baz=340	151.53	17	P	PKiKP	11 28 18.9	+0.2
LRAL	Lakeview Retre baz=336	151.72	20	P	PKiKP	11 28 19.4	+0.2
Z49A	Columbiana baz=337	151.74	19	P	PKiKP	11 28 19.4	+0.2
X55A	Gracelyn & Ava baz=347	151.78	10	P	PKiKP	11 28 19.6	+0.3
Y52A	Lilburn	151.83	15	*e*PKPbc	PKiKP	11 28 19.4	+0.1
Y52A	Lilburn baz=342	151.83	15	P	PKiKP	11 28 20.1	+0.7
X56A	White Oak baz=349	151.86	9	P	PKiKP	11 28 19.3	0.0
Z50A	Ashland baz=338	151.88	18	P	PKiKP	11 28 19.8	+0.3
HODGE	Hodges	151.89	12	*e*PKPbc	PKiKP	11 28 20.3	+0.8
Y53A	Monroe baz=343	151.96	14	P	PKiKP	11 28 19.9	+0.3
X59A	McDuffie Farm, baz=354	152.09	5	P	PKiKP	11 28 20.2	+0.4
Y54A	Tignall baz=345	152.16	13	P	PKiKP	11 28 20.7	+0.7
149A	Jones baz=336	152.19	20	P	PKiKP	11 28 20.7	+0.6
Z52A	Williamson baz=341	152.38	16	P	PKiKP	11 28 21.5	+1.0
GOGA	Godfrey baz=343	152.41	14	P	PKiKP	11 28 21.2	+0.6
150A	Eclectic baz=337	152.44	19	P	PKiKP	11 28 21.3	+0.7
Z53A	Monticello baz=343	152.51	14	P	PKiKP	11 28 21.6	+0.8
249A	Camden baz=335	152.64	22	P	PKiKP	11 28 21.7	+0.7
Z54A	Sparta baz=344	152.73	13	P	PKiKP	11 28 22.2	+1.0
151A	Opelika baz=339	152.74	18	P	PKiKP	11 28 22.2	+1.0
152A	Waverly Hall baz=340	152.78	17	P	PKiKP	11 28 22.5	+1.2
250A	Grady baz=336	152.94	20	P	PKiKP	11 28 23.1	+1.4
153A	Fort Valley baz=342	153.04	15	P	PKiKP	11 28 23.3	+1.4
251A	Midway baz=338	153.11	18	P	PKiKP	11 28 23.2	+1.2

ISCJB ***19*** *11:28:45.6±0.4, 23°.70N±0°.02×122°.03E±0°.02, h17*^{km}*±3*^{km}*,*
Error ellipse: s-maj=3.3km s-min=1.8km az=39.4
JMA ***19*** *11:28:45.6±0.2, 23°.72N×121°.99E, h17*^{km}*±4*^{km}*, M2.8*
TAP ***19*** *11:28:46.9, 23°.73N×121°.97E, h27*^{km}*, ML3.4, D*
ISC 19 11:28:43.9±1.0**, 23°.70N**±0°.02×**122°.06E**±0°.02**, h14**^{km}±8^{km}**,**
n87, σ0^{s}**.66**/150**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng baz=304	0.47	296	*e*P	Pn	11 28 55.2	-0.9
ENLB	baz=304			*e*S	Sb	11 29 01.1	+0.4
HWA	Hwalien baz=300	0.50	304	*e*S	Sb	11 29 01.8	+0.3
TWD	Chiawan baz=316	0.57	312	P	Pb	11 28 56.3	+0.7
TWD	baz=316			*e*S	Sg	11 29 02.9	+0.3
EGFH	Guangfu baz=263	0.58	267	P	Pb	11 28 56.7	+0.9
EGFH	baz=263			*e*S	Sb	11 29 04.3	+0.5
ESL	Shilin baz=272	0.58	281	P	Pb	11 28 56.1	+0.3
ESL	baz=272			*e*S	Sg	11 29 03.1	0.0
HGSD	Ruisui baz=244	0.62	251	*e*P	Pb	11 28 57.3	+0.9
HGSD	baz=244			*e*S	Sb	11 29 05.5	+0.5
NACB	Ninganchiao baz=317	0.64	318	*e*P	Pb	11 28 57.1	+0.3
NACB	baz=317			*e*S	Sg	11 29 04.9	+0.1
EHY	Hungye baz=256	0.70	254	⇑P	Pb	11 28 58.8	+0.9
EHY	baz=256			S	Sb	11 29 07.9	+0.5
ETLH	Xiulin Townshi baz=317	0.73	314	*e*P	Pb	11 28 58.9	+0.4
ETLH	baz=317			*e*S	Sg	11 29 07.5	-0.2
YULB	Yu-li baz=257	0.76	247	P	Pn	11 28 60.0	-0.3
YULB	baz=257			S	Sb	11 29 10.0	+0.8
TWF1	Yuli baz=228	0.78	244	P	Pn	11 29 00.3	-0.2
TWF1	baz=228			S	Sb	11 29 10.7	+1.0
ENA	Nanau baz=332	0.78	338	P	Pn	11 29 00.1	-0.4
ENA	baz=332			S	Sb	11 29 10.4	+0.6
VWDT	VWDT baz=272	0.84	274	*e*P	Pn	11 29 00.9	-0.4
VWDT	baz=272			*e*S	Sg	11 29 11.3	0.0
OWD	Renai baz=295	0.85	288	*e*P	Pb	11 29 01.1	+0.6
OWD	baz=295			*e*S	Sg	11 29 11.0	-0.5
EOS1	EOS1 baz=19	0.85	4	P	Pn	11 29 02.3	+0.9
EOS1	baz=19			S	Sn	11 29 13.9	+0.2
WHF	Hehuan Shan baz=303	0.85	302	P	Pb	11 29 00.9	+0.2
WHF	baz=303			*e*S	Sg	11 29 11.1	-0.6
CHKT	Chengkung baz=209	0.87	227	P	Pb	11 29 01.2	+0.4
CHKT	baz=209			S	Sg	11 29 11.8	-0.4
CHGB	Renai baz=302	0.89	294	*e*P	Pb	11 29 01.5	+0.3
CHGB	baz=302			*e*S	Sg	11 29 12.3	-0.4
TWC	Suao baz=353	0.93	348	P	Pn	11 29 03.2	+0.7
TWC	baz=353			S	Sn	11 29 15.2	-0.4
NNSB	Datong baz=322	0.95	320	*e*P	Pn	11 29 02.7	-0.2
NNSB	baz=322			*e*S	Sb	11 29 14.3	-0.5
NNS	Nan Shan baz=323	0.97	320	P	Pn	11 29 03.1	-0.1
NNS	baz=323			*e*S	Sb	11 29 13.8	-1.4
TWT	Tachien baz=305	0.98	305	P	Pn	11 29 03.4	0.0
TWT	baz=305			S	Sb	11 29 15.6	+0.1
TDCB	Techi baz=305	0.99	304	*e*P	Pn	11 29 03.4	-0.1
TDCB	baz=305			*e*S	Sb	11 29 15.0	-0.9
SSLB	Suanglung baz=273	1.02	275	*e*P	Pb	11 29 03.3	+0.1
SSLB	baz=273			*e*S	Sb	11 29 15.0	-1.5
NDT	Datong Townshi baz=342	1.03	331	*e*P	Pn	11 29 04.5	+0.6
NDT	baz=342			*e*S	Sb	11 29 16.8	0.0
YUS	Yu-Shan baz=255	1.04	259	P	Pn	11 29 04.5	0.0
YUS	baz=255			S	Sb	11 29 16.8	-0.7
ENTT	Nioudou baz=338	1.04	334	*e*P	Pn	11 29 04.3	+0.3
SMLT	Sun Moon Lake baz=288	1.08	280	P	Pb	11 29 04.6	+0.2
SMLT	baz=288			S	Sb	11 29 17.5	-0.9
TWE	Neicheng baz=345	1.08	341	P	Pg	11 29 05.2	+0.5
TWE	baz=345			S	Sn	11 29 19.0	-0.3
ELDTW	Lidau baz=238	1.08	242	P	Pb	11 29 04.5	0.0
ILA	Ilan baz=349	1.10	345	*e*S	Sn	11 29 20.5	+0.6
WHYT	Xinyi Township baz=261	1.10	270	*e*P	Pg	11 29 05.3	+0.2
WHYT	baz=261			*e*S	Sb	11 29 18.2	-0.9
SLBB	Yuanshan baz=335	1.12	340	*e*P	Pg	11 29 05.9	+0.5
SLBB	baz=335			*e*S	Sn	11 29 20.8	+0.3
TYC	Yuchr baz=288	1.12	281	P	Pn	11 29 05.2	+0.1
TYC	baz=288			*e*S	Sb	11 29 18.9	-0.5
YHNB	Yeheng baz=330	1.15	327	*e*P	Pg	11 29 05.9	-0.1
YHNB	baz=330			*e*S	Sb	11 29 19.8	-0.6
YOJ	Yonaguni jima	1.16	49	*e*S	Sn	11 29 22.7	+1.5
NSK	Sanguang baz=329	1.16	327	*e*P	Pg	11 29 06.2	-0.1
NSK	baz=329			*e*S	Sb	11 29 20.0	-0.8
NTC	Toucheng baz=353	1.17	350	*e*P	Pg	11 29 07.1	+0.7
NTC	baz=353			*e*S	Sg	11 29 21.8	+0.1
WHP	Taichung City baz=311	1.17	300	*e*S	Sb	11 29 20.7	-0.3
NWLT	Wulai baz=324	1.19	335	*e*P	Pg	11 29 06.9	+0.1
NWLT	baz=324			*e*S	Sb	11 29 21.0	-0.4
WJS	Zhushan baz=275	1.23	276	*e*P	Pg	11 29 07.7	+0.2
WJS	baz=275			*e*S	Sg	11 29 24.5	+1.0
TWGBT	Beinan baz=234	1.26	226	*e*P	Pn	11 29 06.8	-0.2
TWGBT	baz=234			*e*S	Sb	11 29 23.0	-0.4
TWG	Pinlang baz=234	1.26	226	P	Pn	11 29 06.8	-0.2
TWG	baz=234			*e*S	Sb	11 29 23.1	-0.4
CHN5	Tsauling baz=264	1.27	266	P	Pg	11 29 08.6	+0.3
CHN5	baz=264			*e*S	Sn	11 29 24.8	+0.6
WNT	Mingjian baz=277	1.27	278	*e*S	Sg	11 29 24.9	-0.1
TIPB	Shuangxi baz=354	1.28	351	P	Pg	11 29 09.0	+0.4
TIPB	baz=354			S	Sg	11 29 25.3	-0.1
TWB1	Santiao Chiao	1.30	357	*e*P	Pg	11 29 09.2	+0.1

	baz=1.0						
TWB1				eS	Sb	11 29 24.7	-0.1
	baz=1.0						
STYT	Tauyuan	1.31	246	eP	Pb	11 29 08.6	+0.3
	baz=233						
STYT				eS	Sb	11 29 24.8	-0.2
	baz=233						
NSTT	Nanjuang	1.34	314	eP	Pb	11 29 09.1	+0.3
	baz=315						
LIOB	Emei	1.34	315	eP	Pb	11 29 09.1	+0.3
	baz=326						
TWA	Mucha	1.35	341	eP	Pg	11 29 09.9	+0.1
	baz=344						
TWA				eS	Sg	11 29 26.8	-0.6
	baz=344						
NHDH	Xindian Distri	1.35	339	eP	Pg	11 29 09.7	-0.2
	baz=329						
NHDH				eS	Sb	11 29 26.4	+0.4
	baz=329						
WLTB	Daxi	1.36	328	eS	Sg	11 29 27.8	-0.1
	baz=330						
TPUB	Ta-pu	1.37	253	eP	Pg	11 29 10.1	-0.1
	baz=240						
TPUB				eS	Sb	11 29 27.4	+0.7
	baz=240						
TATO	Taipei	1.37	338	eP	Pg	11 29 10.6	+0.3
	baz=328						
TATO				eS	Sn	11 29 26.4	-0.2
	baz=328						
CHN4	Tsaushan	1.39	256	P	Pg	11 29 10.6	0.0
	baz=242						
CHN4				S	Sg	11 29 28.7	+0.1
	baz=242						
NWF	Wu-fen Shan	1.39	350	eP	Pg	11 29 11.0	+0.4
	baz=352						
NWF				eS	Sb	11 29 27.5	+0.2
	baz=352						
WFSB	Wu-fen Shan	1.39	350	eP	Pg	11 29 11.1	+0.5
	baz=5.0						
WFSB				eS	Sb	11 29 27.6	+0.3
	baz=5.0						
WDLH	Douliu	1.39	270	eP	Pg	11 29 10.8	+0.1
	baz=268						
WDLH				eS	Sb	11 29 27.5	+0.2
	baz=268						
WTP	Ta-pu	1.40	252	P	Pb	11 29 10.4	+0.6
	baz=238						
WTP				S	Sb	11 29 28.5	+0.9
	baz=238						
CHN2	Minshiung	1.46	264	eP	Pg	11 29 12.4	+0.4
	baz=262						
SLGT	Liugui	1.48	242	eP	Pb	11 29 11.5	+0.4
	baz=230						
SGST	Jiashian	1.49	246	eP	Pb	11 29 11.8	+0.5
	baz=231						
SGST				eS	Sg	11 29 31.5	-0.4
	baz=231						
CHN1	Nanshi	1.50	250	P	Pg	11 29 12.3	-0.3
	baz=248						
CHN1				S	Sg	11 29 32.2	+0.1
	baz=248						
ECL	Taimali	1.50	223	eP	Pn	11 29 09.8	-0.4
	baz=229						
TWK	Hsinying	1.50	254	eP	Pb	11 29 12.2	+0.6
	baz=251						
TWK				eS	Sb	11 29 31.2	+0.6
	baz=251						
YM01	YM01	1.51	343	eP	Pg	11 29 13.2	+0.3
	baz=328						
YM01				eS	Sb	11 29 30.9	+0.2
	baz=328						
SNST	Tainan City	1.51	252	eP	Pg	11 29 12.6	-0.3
	baz=249						
SNST				eS	Sg	11 29 32.0	-0.5
	baz=249						
CHY	Chiayi	1.51	263	eP	Pg	11 29 13.3	+0.3
	baz=261						
CHY				eS	Sb	11 29 31.6	+0.8
	baz=261						
YM05	YM05	1.53	343	eP	Pb	11 29 11.9	-0.1
	baz=328						
YM11	YM11	1.53	343	eP	Pb	11 29 12.3	+0.3
	baz=328						
SSD	Sandimen	1.62	234	eP	Pn	11 29 12.9	+0.9
	baz=223						
HATJ	Hateruma jima	1.64	77	eS	Sb	11 29 35.0	+0.6
IRIF	Iriomote-Funau	1.66	67	P	Pg	11 29 15.3	-0.4
IRIF				eS	Sg	11 29 35.9	-1.3
MASBT	Mashibuluo	1.70	231	eP	Pn	11 29 14.0	+0.9
	baz=220						
EAST	Anshuo	1.72	221	eP	Pn	11 29 13.6	+0.1
	baz=217						
EAST				eS	Sn	11 29 35.4	+0.1
	baz=217						
SSPT	Xinbi	1.83	229	eP	Pn	11 29 15.5	+0.6
	baz=220						
JKRS	Kuro-shima	1.86	73	P	Pb	11 29 18.2	+0.5
JKRS				eS	Sb	11 29 41.4	+0.5
SCZT	Fangliau	1.87	225	eP	Pb	11 29 17.4	-0.4
	baz=217						
JIJ	Ishigaki jima	2.02	70	P	Pb	11 29 19.9	-0.4
JIJ				eS	Sn	11 29 43.6	+1.1
TWKBT	Hengchun	2.09	214	eP	Pb	11 29 21.2	-0.4
	baz=211						
JISG	Ishigakijimahi	2.24	66	P	Pb	11 29 23.0	-1.1
JISG				S	Sn	11 29 48.4	+0.4
PHUB	P'eng-hu	2.29	266	eS	Sn	11 29 48.5	-0.7
	baz=251						
JTJ	Tarama	2.59	68	P	Pb	11 29 28.1	-2.0
JTJ				S	Sn	11 29 58.7	+2.0
VWUC	VWUC	2.71	299	eS	Sn	11 29 56.9	-2.5
	baz=299						
JIRB	Irabujima	3.06	68	eS	Sn	11 30 07.6	-0.6
KNMB	Chin-men Tao	3.44	284	eP	Pn	11 29 37.6	+0.5
	baz=282						
KNMB				eS	Sn	11 30 15.0	-2.6
	baz=282						

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*ISCJB **19** 11:38:18.5±1.5, 43°85N±0°09×147°36E±0°09, h19^{km}±8^{km}, Error ellipse: s-maj=15.7km s-min=9.7km az=155.5*

*JMA **19** 11:38:18.8±0.2, 43°80N×147°32E, h17^{km}, M3.4*

*SKHL **19** 11:38:19.4±0.5, 44°02N×147°45E, h34^{km}±4^{km}, mb4.1/2*

ISC 19 11:38:15.1±3.7**, 43°95N**±0°09×**147°53E**±0°10**, h14**^{km}±24^{km}**, n16, σ1^{s}71**/27**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	Yuzh-Kuril'sk	1.21	275	i P	Pn	11 38 38.0	+0.5
YUK				AMB	AMB	11 38 39.0	
	90nm,0.1s						
YUK				AMB	AMB	11 38 39.0	
	20nm,0.1s						
YUK				i S	Sb	11 38 52.0	-1.1
YUK				A	A	11 38 54.0	
	260nm,0.2s						
YUK				A	A	11 38 54.0	
	550nm,0.2s						
GRPR	Tuman	1.27	273	eP	Pn	11 38 39.0	+0.6
GRPR				eS	Sb	11 38 54.0	-0.9
GRPR				A	A	11 38 55.0	
	260nm,0.2s						
GRPR				A	A	11 38 55.0	
	430nm,0.2s						
KUR	Kuril'sk	1.31	11	eP	Pn	11 38 40.0	+1.1
KUR				AMB	AMB	11 38 44.3	
	8.0nm,0.2s						
KUR				AMB	AMB	11 38 44.3	
	40nm,0.2s						
KUR				eS	Sn	11 38 55.0	-1.2
KUR				A	A	11 38 56.0	
	220nm,0.1s						
KUR				A	A	11 38 56.0	
	110nm,0.1s						
NEM2	Nemuro 2	1.42	246	P	Pn	11 38 41.1	+0.6
NEM2				eS	Sn	11 38 57.2	-1.7
GLVR	Golovnino	1.47	263	eS	Sn	11 39 00.2	+0.1
JRA	Rausu	1.74	271	P	Pb	11 38 46.6	-0.1
JRA				eS	Sn	11 39 06.9	+0.1
JKHN	Kushirohamanak	1.93	244	P	Pn	11 38 48.6	+1.2
JKHN				eS	Sn	11 39 10.0	-1.4
JNK	Nakash	2.07	261	P	Pn	11 38 50.8	+1.4
JNK				eS	Sn	11 39 15.0	+0.1
JAK	Akkeshi	2.27	246	P	Pn	11 38 53.2	+1.1
JAK				eS	Sn	11 39 18.7	-1.2
JTKR	Abashiri--Toko	2.61	272	P	Pn	11 38 59.1	+2.2
JAR	Ashorobuto	2.81	258	P	Pn	11 39 01.8	+2.3
JAR				eS	Sn	11 39 33.4	+0.3
JOB	Onbets	2.88	250	P	Pn	11 39 02.5	+1.9
JOB				eS	Sn	11 39 34.6	-0.5
JMP	Maruseppu	3.01	273	P	Pb	11 39 06.2	-2.2
JCH	Churui	3.32	248	P	Pn	11 39 08.9	+2.3
JCH				eS	Sn	11 39 45.4	-0.4
JSE	Soyaes	3.68	288	P	Pn	11 39 15.4	+3.9
JNBK	Urakawa-nobuka	3.87	246	P	Pn	11 39 17.5	+3.3

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*BJI **19** 11:52:02.9, 10°40S×167°52E, h11^{km}, mB5.3/19, mb4.8/34, Ms5.0/5, Ms7 4.7/3*

*NEIC **19** 11:52:04.6±0.2, 10°38S×167°48E, h10^{km}, mb4.8/45, Error ellipse: s-maj=5.7km s-min=4.5km az=121.0*

*GCMT **19** 11:52:04.6±0.2, 10°44S±0°02×167°59E±0°02, h12^{km}, MW5.0/99, Moment Tensor Solution. s47,c61; s99,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.16±.10; M$_{\theta\theta}$1.75±.10; M$_{\phi\phi}$2.41±.10; M$_{r\theta}$-0.01±.32; M$_{\theta\phi}$-1.91±.08; M$_{\phi r}$-0.48±.28; Best double couple: M$_0$4.11700×10^{16} NP1:ϕ_s324.00000°, δ48.00000°, λ-84.00000°. NP2: ϕ_s136.00000°, δ43.00000°, λ-96.00000°. Principal axes: T 4.0340, Plg3.0000°, Azm50.0000°; N 0.1650, Plg4.0000°, Azm140.0000°; P -4.1990, Plg85.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **19** 11:52:06.4±0.2, 10°49S±0°04×167°44E±0°04, h33^{km}, mb4.8/65, MS4.3/16 Error ellipse: s-maj=6.5km s-min=5.4km az=27.7*

*IDC **19** 11:52:09.3±4.5, 10°45S×167°54E, h47^{km}±42^{km}, mb4.3/16, mb1 4.5/17, mb1mx4.3/37, mbtmp4.5/17, ML4.1/1, MS4.3/16, Ms1 4.3/16, ms1mx4.2/31, Error ellipse: s-maj=21.2km s-min=19.5km az=148.0*

ISC 19 11:52:06.1±1.4**, 10°37S**±0°08×**167°46E**±0°07**, h20**^{km}±16^{km}**, n119, σ1^{s}07**/113**, mb4.8**/65**, MS4.4**/16**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	7.46	276	ePn	Pn	11 53 53.0	-0.9
HNR	Honiara	7.46	276	LR	LR	11 56 49.9	
	comp=Z,3µm,18.9s,baz=115,slow=37						
DZM	Mont Dzumac	11.68	185	ePn	Pn	11 54 53.7	+1.9
	13nm,0.6s						
DZM				eLR	LR	11 57 39.4	
	comp=Z,3µm,28.7s						
DZM	Mont Dzumac	11.68	185	ePn	Pn	11 54 53.3	+1.6
DZM	Mont Dzumac	11.68	185	P	Pn	11 54 53.6	+1.9
	1.3nm,0.3s,baz=14,slow=11,SNR=4.9						
DZM				LR	LR	11 58 50.2	
	comp=Z,1µm,21.4s,baz=22,slow=34						
ONTNC	Ouen Toro	11.91	185	ePn	Pn	11 54 54.4	-0.5
OUENC	Ouen Island, N	12.00	183	ePn	Pn	11 54 53.6	-2.4
PINNC	Pines Island,	12.18	180	ePn	Pn	11 54 58.2	-0.3
MSVF	Nonsavu	12.61	127	ePn	Pn	11 55 05.0	+0.5
RABL	Rabaul	16.36	291	ePn	Pn	11 55 53.4	-1.4
	22nm,0.9s						
EIDS	Eidsvold	21.54	224	eP	P	11 56 52.5	-1.7
	26nm,0.8s						
MANU	Manus Island	21.61	291	eP	P	11 56 54.4	-0.6
	58nm,1.1s						
CTA	Charters Tower	22.61	242	P	P	11 57 06.5	+0.8
	18nm,0.9s,baz=66,slow=12,SNR=25						
CTA				LR	LR	12 05 12.8	
	comp=Z,1µm,19.5s,baz=70,slow=35						
CTAO	Charters Tower	22.61	242	eP	P	11 57 07.2	+1.5
	21nm,0.9s						
COEN	Coen	24.00	259	eP	P	11 57 21.4	+1.7
	14nm,0.9s						
ARMA	Armidale	24.81	214	eP	P	11 57 27.5	+0.4
	22nm,0.8s						
JAY	Jayapura	27.69	285	LR	LR	12 09 11.1	
	comp=Z,735nm,20.1s,baz=129,slow=37						
URZ	Urewera	29.09	164	eP	P	11 58 05.0	-0.4
	15nm,1.0s						
URZ	Urewera	29.09	164	LR	LR	12 07 59.8	
	comp=Z,275nm,18.1s,baz=346,slow=33						
BKZ	Black Stump Fm	29.79	166	eP	P	11 58 10.0	-1.6
	11nm,1.0s						
STKA	Stephens Creek	32.10	224	eP	P	11 58 32.9	+0.9
	1.8nm,1.0s						
STKA	Stephens Creek	32.10	224	P	P	11 58 31.7	-0.3
	5.5nm,0.8s,baz=41,slow=9.9,SNR=8.9						
STKA				LR	LR	12 10 57.0	
	comp=Z,1µm,19.2s,baz=35,slow=35						
GUMO	Guam	32.70	316	LR	LR	12 11 43.1	
	comp=Z,166nm,20.1s,baz=164,slow=36						
FOZ	Fox Glacier	33.10	177	eP	P	11 58 41.4	+0.8
	18nm,0.8s						
WB2	Warramunga Arr	33.29	249	eP	P	11 58 43.2	+0.6
WB2				ePcP	PcP	12 01 25.4	+0.6
WRAB	Tennant Creek	33.29	249	eP	P	11 58 43.1	+0.5
	29nm,0.9s						
WR1	Warramunga Arr	33.30	249	eP	P	11 58 42.6	-0.1
	39nm,0.9s						
WR1				ePcP	PcP	12 01 25.4	+0.6
WRA	Warramunga Arr	33.30	249	P	P	11 58 42.6	-0.1
	26nm,0.9s,baz=82,slow=8.9,SNR=122						
WRA				PcP	PcP	12 01 25.4	+0.6
	2.0nm,0.9s,baz=82,slow=3.1,SNR=5.4						
WRA				LR	LR	12 12 14.4	
	comp=Z,1µm,18.3s,baz=70,slow=36						
RPZ	Rata Peaks	33.37	175	P	P	11 58 42.1	-0.9
	9.5nm,0.6s,baz=267,slow=4.0,SNR=6.6						
RPZ				LR	LR	12 10 13.2	
	comp=Z,258nm,21.9s,baz=355,slow=33						
TOO	Toolangi	33.54	213	eP	P	11 58 44.9	+0.3
	14nm,1.1s						
LBZ	Lake Benmore	33.98	177	eP	P	11 58 47.5	-0.7
	11nm,0.9s						
AS01	Alice Springs	34.56	243	eP	P	11 58 53.7	0.0
AS01				ePcP	PcP	12 01 28.0	-0.3
AS31	Alice Springs	34.60	243	eP	P	11 58 54.0	-0.1
	3.6nm,0.8s						
ASAR	Alice Springs	34.60	243	P	P	11 58 53.5	-0.5
	13nm,0.8s,baz=73,slow=9.1,SNR=59						
ASAR				PcP	PcP	12 01 28.8	+0.3
	1.6nm,0.9s,baz=70,slow=2.3,SNR=6.2						
ASAR				LR	LR	12 12 20.2	
	comp=Z,647nm,19.4s,baz=75,slow=35						
BBOO	Buckleboo	36.52	228	eP	P	11 59 10.7	+0.3
	15nm,0.9s						
XMAS	Kiritimati	37.04	73	eP	P	11 59 14.3	-0.6
	58nm,0.8s						
FITZ	Fitzroy Crossi	41.19	254	P	P	11 59 50.3	+0.6
	16nm,0.8s,baz=89,slow=5.9,SNR=35						
FORT	Forrest	41.81	235	eP	P	11 59 55.4	+0.7
	24nm,0.8s						
PPT	Papeete	42.23	105	LR	LR	12 13 12.9	
	comp=Z,367nm,21.4s,baz=256,slow=30						
PPT2	Papeete2	42.23	105	eLQ	LQ	12 09 37.8	
	1µm,27.2s						
PPT2				eLR	LR	12 11 58.3	
	comp=Z,674nm,22.5s,baz=282						
PAE	Paea	42.23	105	eT	T	12 44 41.3	
	1.9nm,0.2s						
TVO	Taravao	42.55	105	eT	T	12 45 05.2	
	2.4nm,0.3s						
TBI	Tubuai	43.03	113	eLQ	LQ	12 10 27.6	
	927nm,28.2s						
TBI				eLR	LR	12 12 17.6	
	comp=Z,788nm,29.5s						
DAV	Davao City (W)	45.16	291	LR	LR	12 17 12.3	
	comp=Z,151nm,21.2s,baz=119,slow=33						
MBWA	Marble Bar	47.01	251	eP	P	12 00 37.5	+1.1
	14nm,0.9s						
SDHHI	Sand Hill	47.13	51	eP	P	12 00 37.8	+0.5
	127nm,0.5s						
BNSI	Bone	47.30	274	P	P	12 00 37.4	-1.3
PCI	Palu	48.25	278	P	P	12 00 44.2	-1.9
	57nm,1.1s						
TAOE	Nuku Hiva Isla	51.63	93	eLR	LR	12 15 56.3	
	comp=Z,520nm,26.2s						
TAOE	Nuku Hiva Isla	51.63	93	eT	T	12 56 25.7	
	32nm,0.3s						
RKT	Rikitea	56.24	111	eLR	LR	12 18 19.7	
	comp=Z,415nm,31.0s						
KSRS	Korea Array	60.29	324	P	P	12 02 14.4	+1.0
	2.7nm,1.0s,baz=136,slow=7.9,SNR=6.3						
KS01	Wonju Array Si	60.33	324	eP	P	12 02 14.0	+0.4
NJ2	Nanjing	62.74	314	eP	P	12 02 30.0	0.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
CN2	Changchun	66.05	328	eP	P	12 02 53.5	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VNDA	Vanda	67.20	181	eP	P	12 02 58.4	0.0
VNDA	Vanda	67.20	181	P	P	12 02 57.4	-1.0
	14nm,1.1s,baz=20,slow=3.1,SNR=3.6						
VNDA				LR	LR	12 29 21.5	
	comp=Z,105nm,19.6s,baz=22,slow=33						
XAN	Xi'an	70.93	311	eP	P	12 03 22.7	+0.4
	9.3nm,1.1s						
HHC	Hu-ho-hao-te	72.42	319	eP	P	12 03 32.6	+1.4
HHC				S	S	12 12 52.3	-1.9
HHC				pmax	pmax		
	comp=Z,15nm,1.2s						
HHC				pmax	pmax		
	comp=Z,230nm,6.9s						
CM01	Chiang Mai Arr	73.37	293	eP	P	12 03 37.2	0.0
CM31	Chiang Mai Arr	73.40	293	eP	P	12 03 39.1	+1.7
	7.2nm,1.0s						
CMAR	Chiang Mai Arr	73.40	293	P	P	12 03 38.5	+1.2
	3.7nm,0.9s,baz=117,slow=4.1,SNR=18						
CHTO	Chiang Mai	73.50	293	eP	P	12 03 39.2	+1.3
	5.7nm,1.0s						
CHTO	Chiang Mai	73.50	293	P	P	12 03 40.7	+2.8
	26nm,1.2s						
CD2	Chengdu	73.55	307	eP	P	12 03 39.0	+1.0
LZH	Lanzhou	75.57	311	eP	P	12 03 51.6	+1.8
LZH				pP	sP	12 03 57.5	-0.6
LZH				sP	PcP	12 04 01.0	-1.7
LZH				PP	PP	12 06 40.0	+0.5
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.9s						
LZH				LR	LR		
	comp=N,390nm,16.8s						
LZH				LR	LR		
	comp=E,360nm,16.6s						
LZH				LR	LR		
	comp=Z,420nm,17.0s						
ANM	Nome	77.48	12	eP	P	12 04 00.9	+1.1
	4.1nm,1.0s						
ULN	Ulaanbaatar	78.76	323	eP	P	12 04 08.7	+1.2
	6.4nm,1.0s						
SONA0	Songino Array	79.13	323	eP	P	12 04 09.2	-0.3
SONM	Songino Array	79.13	323	P	P	12 04 09.2	-0.3
	2.3nm,1.0s,baz=142,slow=4.4,SNR=10						
SONA1	Songino Array	79.13	323	eP	P	12 04 09.5	0.0
GTA	Gaotai	79.82	313	eP	P	12 04 15.0	+1.6
GTA				pP	pP	12 04 19.6	-0.1
GTA				sP	sP	12 04 22.0	+0.3
GTA				S	S	12 14 15.8	+0.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,5.7s						
GTA				LR	LR		
	comp=N,140nm,17.8s						
GTA				LR	LR		
	comp=E,140nm,17.8s						
IM3	Indian Mountai	81.33	15	eP	P	12 04 21.0	+0.3
HDA	Harding Lake	82.07	18	eP	P	12 04 25.0	+0.4
	11nm,1.0s						
MDM	Murphy Dome	82.08	17	eP	P	12 04 24.3	-0.4
	12nm,1.2s						
RIDG	Independ'e Rid	82.27	19	eP	P	12 04 26.4	+0.6
	9.7nm,1.1s						
IL1	Eielson Array	82.34	18	eP	P	12 04 26.6	+0.5
ILAR	Eielson Array	82.34	18	P	P	12 04 25.6	-0.5
	3.1nm,0.8s,baz=221,slow=6.2,SNR=18						
ILB	Eielson Array	82.34	18	eP	P	12 04 26.3	+0.2
SCRK	Sand Creek	82.71	19	eP	P	12 04 28.9	+0.7
	4.9nm,0.8s						
EGAK	Eagle	84.17	20	eP	P	12 04 36.5	+1.0
	13nm,0.8s						
NV01	Mina Array Sit	84.30	49	eP	P	12 04 38.4	+1.3
NVAR	Mina Array Bea	84.30	49	P	P	12 04 37.0	-0.1
	2.2nm,1.0s,baz=231,slow=7.8,SNR=7.9						
NVAR				LR	LR	12 33 47.6	
	comp=Z,501nm,21.6s,baz=292,slow=30						
DAWY	Dawson	84.32	21	eP	P	12 04 37.2	+0.9
	8.0nm,1.1s						
NV11	Mina Array Sit	84.41	49	eP	P	12 04 37.6	0.0
	0.2nm,1.0s						
MAW	Mawson	85.98	202	LR	LR	12 37 12.5	
	comp=Z,241nm,19.1s,baz=110,slow=32						
MSU	Marysvale	88.95	51	eP	P	12 04 59.6	-0.2
MPU	Maple Canyon	89.72	49	eP	P	12 05 04.4	+1.1
	5.0nm,1.0s						
CTU	Camp Tracy	89.79	49	eP	P	12 05 04.5	+0.8
	5.8nm,0.8s						
Q16A	Castle Valley	89.81	50	eP	P	12 05 05.1	+1.3
	9.1nm,1.1s						
WMQ	Urumqi	89.82	315	eP	P	12 05 04.0	+0.4
WMQ				sP	sP	12 05 11.0	-0.9
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
TMUT	Trail Mountain	89.87	50	eP	P	12 05 05.8	+1.6
	8.8nm,1.1s						
JLU	Jordanelle	89.99	49	eP	P	12 05 06.3	+1.6
	5.9nm,1.0s						
TCUT	Toone Canyon	90.14	48	eP	P	12 05 07.5	+2.1
	11nm,0.9s						
DLMT	Dillon	90.32	44	eP	P	12 05 05.4	-0.6
	8.7nm,1.1s						
SRU	San Rafael Swe	90.34	50	eP	P	12 05 06.0	-0.2
	2.4nm,0.9s						
WALA	Waterton Lakes	90.40	40	eP	P	12 05 06.7	+0.5
	3.8nm,1.0s						
REDW	Red Top Meadow	91.06	46	eP	P	12 05 09.0	-0.6
	7.7nm,1.1s						
YHB	Horse Butte	91.14	45	eP	P	12 05 09.2	-0.7
	6.0nm,1.1s						
PD31	Pinedale Array	91.86	47	eP	P	12 05 12.7	-0.6
PDAR	Pinedale Array	91.86	47	P	P	12 05 13.1	-0.2
	2.7nm,1.1s,baz=216,slow=1.3,SNR=8.5						
SYO	Syowa Base	92.92	197⥣	eP	P	12 05 18.2	+0.8
SYO	Syowa Base	92.92	197⥣	eX	P	12 05 29.4	+12
YKA	Yellowknife Ar	93.60	27	P	P	12 05 19.2	-1.3
	0.7nm,0.7s,baz=257,slow=4.4,SNR=12						
YKB5	Yellowknife Ar	93.60	27	eP	P	12 05 18.1	-2.5
ZAA1	Zalesovo Array	94.00	324	eP	P	12 05 23.3	+0.7
ZALV	Zalesovo Beam	94.00	324	P	P	12 05 23.3	+0.7
	0.6nm,0.6s,baz=232,slow=1.7,SNR=4.3						
TXAR	Lajitas Array	94.03	61	LR	LR	12 42 31.7	
	comp=Z,261nm,18.6s,baz=0.0,slow=32						
MK01	Makanchi Array	94.18	317	eP	P	12 05 23.1	-0.5
MK31	Makanchi Array	94.19	317	eP	P	12 05 23.2	-0.5
	3.3nm,1.1s						
MK32	Makanchi Array	94.19	317	eP	P	12 05 22.9	-0.8
MKAR	Makanchi Array	94.19	317	eP	P	12 05 23.3	-0.4
	16nm,0.9s						
MKAR	Makanchi Array	94.19	317	P	P	12 05 22.9	-0.8
	2.8nm,0.9s,baz=103,slow=5.7,SNR=16						
MAKZ	Makanchi	94.40	317	eP	P	12 05 24.7	+0.1
	3.5nm,1.1s						
WHAR	Wooly Hollow	104.24	56	ePdif	Pdif	12 06 07.8	-1.2
CLL	Collm	134.14	338	ePKPdf	PKiKP	12 11 23.0	-0.6
KEST	Kesra	147.86	325	PKPbc	PKPbc	12 11 50.1	-0.2
	4.2nm,0.8s,baz=32,slow=7.1,SNR=3.6						
TORD	Torodi Ar. Bea	165.79	283	PKP	PKPdf	12 12 09.1	-1.5
	0.8nm,1.1s,baz=204,slow=3.2,SNR=2.6						
TORD				PKPab	PKPab	12 13 08.2	-1.8
	1.7nm,1.1s,baz=105,slow=4.0,SNR=4.0						
TOA1	Torodi Ar. Sit	165.80	283	ePKPdf	PKPdf	12 12 09.1	-1.5
TOA1				ePKPab	PKPab	12 13 08.2	-1.9

IDC 19 11:53:35.2±21.0**, 17°44S**×**177°01W, h0**^{km}**, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.8**/35**, mbtmp4.1**/4**, Error ellipse: s-maj=412.5km s-min=49.7km az=59.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	21.38	193	P	P	11 58 24.3	+0.1
	5.1nm,0.6s,baz=63,slow=9.0,SNR=7.0						
STKA	Stephens Creek	40.03	241	P	P	12 01 12.5	+0.4
	3.3nm,0.8s,baz=71,slow=8.9,SNR=5.3						
WRA	Warramunga Arr	46.03	259	P	P	12 02 00.8	-0.2
	0.4nm,0.4s,baz=97,slow=7.4,SNR=20						
ASAR	Alice Springs	46.21	254	P	P	12 02 01.8	-0.5
	2.0nm,0.4s,baz=89,slow=7.8,SNR=58						

UCR 19 11:53:49.7±2.0,9°.45N×84°.63W,h3^{km}±5^{km},MD3.9,ML3.3, 2C-6D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.68**	**65**	⇓*i*P	Pg	11 54 03.0	+0.2
HDC	**Heredia**	**0.75**	**43**	⇓*i*P	Pg	11 54 04.7	+0.6
SJS	**Escuela Geolog**	**0.75**	**50**	⇓*i*P	Pb	11 54 05.0	-0.5
EDDO	**Dominical**	**0.78**	**105**	*e*P	Pg	11 54 04.3	-0.5
EDDO				*e*S	Sg	11 54 15.3	+0.3
JTS	**JuntasAbangare**	**0.89**	**339**	⇓*e*P	Pg	11 54 06.5	-0.4
JTS				*e*S	Sg	11 54 19.1	+0.7
CASO	**Castillo**	**0.98**	**354**	*i* P	Pg	11 54 08.7	+0.2
ARE1	**Arenal 1**	**1.00**	**355**	⇓*i*P	Pg	11 54 09.2	+0.2
FORC	**Fortuna**	**1.01**	**358**	*i* P	Pg	11 54 09.3	+0.3
FORC				*i* S	Sn	11 54 24.7	-0.8
CEDE	**Laguna Cedeo**	**1.03**	**356**	*i* P	Pg	11 54 09.6	+0.1
CEDE				*i* S	Sn	11 54 26.0	-0.1
EDLM	**Las Mercedes**	**1.04**	**99**	*e*P	Pg	11 54 08.9	-0.8
PLVR	**Palo Verde**	**1.14**	**322**	⇑*e*P	Pg	11 54 10.6	-0.9
AMAS	**Alto Masis**	**1.21**	**343**	*i* P	Pg	11 54 12.1	-0.8
ACAL	**Aguas Claras**	**1.24**	**341**	*i* P	Pg	11 54 12.9	-0.6
CUI	**Cuipilapa**	**1.31**	**336**	*i* P	Pg	11 54 13.7	-1.1
CUI				*e*S	Sg	11 54 31.7	-0.1
COLC	**Colonia**	**1.33**	**335**	*i* P	Pn	11 54 13.7	-1.6
GUAB	**Guayabo de Bag**	**1.38**	**335**	*i* P	Pn	11 54 14.8	-1.2
LIM1	**Limonal**	**1.38**	**334**	*i* P	Pn	11 54 15.2	-0.8
MESS	**Mesas**	**1.39**	**337**	*i* P	Pn	11 54 15.1	-1.0
MESS				⇓*e*P	Pb	11 54 15.2	-1.3
MESS				*i* S	Sg	11 54 34.4	-0.2
MESS				*e*S	Sb	11 54 34.7	0.0
GPS3	**Bodega del ICE**	**1.48**	**331**	*i* P	Pn	11 54 16.8	-0.5
NY14	**Universidad de**	**1.48**	**323**	*i* P	Pn	11 54 16.5	-0.8
LAPC	**Finca la Perla**	**1.53**	**329**	*i* P	Pn	11 54 16.7	-1.2
BUEV	**Buena Vista**	**1.54**	**330**	*e*P	Pn	11 54 17.0	-1.1
GBS3	**Finca Las Img**	**1.55**	**329**	*i* P	Pn	11 54 17.4	-0.9
GB1A	**Borinquen Arri**	**1.55**	**331**	*e*P	Pn	11 54 17.4	-1.0
BUAI	**Buenos Aires**	**1.57**	**334**	*i* P	Pn	11 54 17.7	-0.9
BUAI				*i* S	Sn	11 54 38.4	-1.1
PTJ1	**Puerto Jimnez**	**1.60**	**125**	*e*P	Pb	11 54 19.8	-0.1
BRU2	**Volcan**	**2.03**	**109**	*e*P	Pb	11 54 26.2	-1.1
BRU2				*e*S	Sb	11 54 53.8	+0.8
CONN	**Concepcion**	**2.31**	**335**	*e*P	Pn	11 54 30.0	+1.2
DVD	**David**	**2.38**	**115**	*e*S	Sb	11 55 01.6	-1.4
ACON	**Acoyapa**	**2.56**	**348**	⇑*e*P	Pn	11 54 31.5	-0.5
ACON				*e*P	Pn	11 54 31.5	-0.5
ESPN	**Las Esperanzas**	**2.74**	**7**	*e*P	Pn	11 54 34.4	-0.3
ESPN				*e*S	Sn	11 55 10.6	+2.3
ESPN				IAML		11 55 13.8	
	comp=N,200nm,0.8s						
COPN	**Copaltepe**	**3.32**	**325**	*e*P	Pn	11 54 43.4	+0.8
BCIP	**Isla Barro Col**	**4.74**	**93**	*i* P	Pn	11 55 01.5	-0.6
BCIP				*e*S	Sn	11 55 57.5	-0.1

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*ISCJB **19** 12:00:25.7±0.6,37°.12N±0°.04×27°.94E±0°.03,h0^{km},Error ellipse: s-maj=5.5km s-min=3.5km az=11.3*

*ISK **19** 12:00:25.9,37°.16N×27°.88E,h10^{km}±4^{km},ML2.1/5, Suspected Mining explosion.*

*DDA **19** 12:00:26.4,37°.17N×27°.90E,h7^{km}±2^{km},ML2.6*

ISC 19 12:00:24.5±1.1**,37°.07N**±0°.04×**27°.89E**±0°.03**,h0^{km},n11, σ0^s.39**/18**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.25**	**338**	PG	**Pg**	**12 00 29.5**	**+0.3**
MLSB				SG	**Sg**	**12 00 32.9**	**+0.5**
YER	**Yerkesik**	**0.32**	**78**	PG	**Pb**	**12 00 32.9**	**-0.3**
BDRM	**Kayabasi**	**0.36**	**270**	*i* P	**Pb**	**12 00 33.6**	**-0.2**
BDRM				*i* S	**Sb**	**12 00 40.5**	**+0.5**
BDRM				IAML_P			
	comp=Z,3µm,0.1s						
BODT	**Bodrum**	**0.46**	**270**	PG	**Pb**	**12 00 35.2**	**-0.4**
BODT				SG	**Sb**	**12 00 42.7**	**-0.3**
AYDN	**Tasoluk**	**0.59**	**359**	*i* P	**Pg**	**12 00 36.3**	**+0.4**
AYDN				*i* S	**Sg**	**12 00 43.3**	**-0.3**
AYDN				IAML_P			
	comp=Z,10µm,0.3s						
TURN	**Turunc**	**0.60**	**108**	PG	**Pg**	**12 00 35.9**	**-0.2**
TURN	**Turunc**	**0.60**	**108**	*i* P	**Pg**	**12 00 36.4**	**+0.3**
TURN				*i* S	**Sg**	**12 00 44.2**	**+0.4**
TURN				IAML_P			
	comp=Z,862nm,0.2s						
GCAM	**G?zelcaml?**	**0.82**	**321**	PG	**Pb**	**12 00 41.2**	**-0.5**
GCAM	**G?zelcaml?**	**0.82**	**321**	*i* P	**Pb**	**12 00 41.6**	**-0.1**
GCAM				*i* S	**Sb**	**12 00 52.8**	**-0.5**
GCAM				IAML_P			
	comp=Z,2µm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**0.88**	**0**	PG	**Pg**	**12 00 41.5**	**+0.1**
TAVA	**DENIZLI_Tavas**	**0.91**	**64**	*i* P	**Pb**	**12 00 42.7**	**-0.5**
TAVA				*i* S	**Sb**	**12 00 56.3**	**+0.4**
TAVA				IAML_P			
	comp=Z,253nm,0.2s						

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*NNC **19** 12:08:08.3±14.0,44°.62N×78°.96E,h0^{km},mb1.9,mpv1.6, Error ellipse: s-maj=134.1km s-min=58.0km az=80.0*

SOME 19 12:07:56.0,44°.95N×81°.00E,h0^{km},2C-2D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.06**	**235**	P	Pg	12 08 16.3	-0.1
	0.3nm,0.3s						
DJR				S	Sb	12 08 31.4	-0.3
	0.8nm,0.3s						
DJR	**Jarkent**	**1.06**	**235**	*e*P	Pg	12 08 16.3	-0.1
	0.2nm,0.1s						
DJR				*e*S	Sb	12 08 31.4	-0.3
	0.5nm,0.1s						
KAPS	**Kapalarasan**	**1.21**	**287**	P	Pg	12 08 19.2	0.0
	0.2nm,0.3s						
KAPS				S	Sb	12 08 36.6	+0.5
	1.7nm,0.1s						
KAPS	**Kapalarasan**	**1.21**	**287**	*e*P	Pg	12 08 19.2	0.0
	0.1nm,0.2s						
KAPS				*e*S	Sb	12 08 36.6	+0.5
	0.6nm,0.1s						
PDGK	**Podgornoye**	**1.95**	**214**	Pg	Pg	12 08 33.3	-0.1
	0.6nm,0.3s						
PDGK				Lg	Lg	12 09 00.6	
	1.2nm,0.5s						
MAKZ	**Makanchi**	**1.98**	**20**	⇑Pn	Pg	12 08 33.9	0.0
	0.3nm,0.5s						
MAKZ				⇓Sn	Sg	12 08 59.7	+0.1
	0.2nm,0.3s						
MK31	**Makanchi Array**	**2.05**	**26**	⇓Pn	Pg	12 08 35.3	-0.1
	0.1nm,0.3s,baz=207,slow=17,SNR=6.7						
MK31				⇑Sn	Sg	12 09 03.2	+1.3
	0.4nm,0.5s,baz=214,slow=25,SNR=8.3						

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*NIED **19** 12:27:00,35°.30N×141°.20E,h29^{km},Mw5.4 Best double couple: M$_0$1.31000×10^{17} NP1:φ$_s$306.00000°,δ39.00000°, λ159.00000°. NP2:φ$_s$53.00000°,δ77.00000°,λ53.00000°.*

*BJI **19** 12:27:34.0,35°.37N×141°.12E,h39^{km},mB5.4/54,mb5.3/83, Ms5.4/93,Ms7 5.4/86*

*MOS **19** 12:27:34.9±1.0,35°.28N×140°.92E,h24^{km},mb5.9/169, MS5.3/80,Error ellipse: s-maj=6.0km s-min=3.5km az=119.0*

*JMA **19** 12:27:35.2±0.1,35°.35N×141°.20E,h37^{km}±1^{km},M5.6*

JMA Felt III J1.

*IDC **19** 12:27:36.0±3.0,35°.22N×140°.99E,h22^{km}±18^{km},mb5.1/41, mb1 5.2/46,mb1mx5.2/51,mbtmp5.3/46,ML4.0/4,MS5.1/35, Ms1 5.1/35,ms1mx4.9/46,Error ellipse: s-maj=11.9km s-min=10.7km az=101.0*

*ISCJB **19** 12:27:35.7±0.4,35°.24N±0°.02×140°.96E±0°.01,h30^{km}±2^{km}, mb5.5/501,MS5.2/251,Error ellipse: s-maj=2.7km s-min=2.0km az=163.4*

*NEIC **19** 12:27:36.1±0.1,35°.25N×140°.96E,h20^{km},mb5.5/293, MS5.2/179,MW5.3,MW5.4,Error ellipse: s-maj=3.0km s-min=2.2km az=152.0 Best double couple: NP1: φ$_s$274.00000°,δ22.00000°,λ125.00000°. NP2: φ$_s$58.00000°,δ72.00000°,λ77.00000°. Principal axes: T 1.0700, Plg61.0000°, Azm309.0000°; N 0.2400, Plg12.0000°, Azm62.0000°; P -1.3000, Plg26.0000°, Azm158.0000°;*

NEIC Felt [III] at Chiba, Narita, Tokyo and Yokohama. Felt in much of east-central Honshu. Recorded [3 JMA] in Chiba, Ibaraki and Saitama.

*GCMT **19** 12:27:37.1±0.1,35°.22N±0°.01×141°.00E±0°.01,h25^{km}, MW5.5/118,Moment Tensor Solution. s88,c167; s118,c207; Duration: 1^s.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.60±.02; M$_{\theta\theta}$-1.06±.01; M$_{\phi\phi}$0.46±.02; M$_{r\theta}$1.45±.03; M$_{\theta\phi}$0.05±.01; M$_{\phi r}$0.88±.04; Best double couple: M$_0$1.93000×10^{17} NP1:φ$_s$61.00000°,δ80.00000°, λ70.00000°. NP2:φ$_s$306.00000°,δ23.00000°,λ153.00000°. Principal axes: T 1.8870, Plg51.0000°, Azm308.0000°; N 0.0870, Plg20.0000°, Azm65.0000°; P -1.9740, Plg32.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **19** 12:27:38.0±0.0,35°.35N×141°.45E,h30^{km},Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.60; M$_{\theta\theta}$-0.71; M$_{\phi\phi}$0.10; M$_{r\theta}$1.53; M$_{\theta\phi}$-0.11; M$_{\phi r}$0.40; Best double couple: M$_0$1.70000×10^{17} NP1:φ$_s$75.00000°, δ79.00000°,λ87.00000°. NP2:φ$_s$271.00000°,δ12.00000°, λ106.00000°. Principal axes: T 1.6600, Plg56.0000°, Azm341.0000°; N 0.1100, Plg3.0000°, Azm76.0000°; P -1.7700, Plg33.0000°, Azm168.0000°;*

ISC 19 12:27:36.7±0.4**,35°.27N**±0°.03×**141°.01E**±0°.03**,h28^{km}**±2^{km}**, h28^{km}:pP-P,n1628,σ1^s.35**/1705**,mb5.6**/539**,MS5.3**/252**, 136C-39D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.45**	**344**	⇑P	**Pb**	**12 27 45.1**	**-1.1**
CHOJ				*e*S	**Sb**	**12 27 51.8**	**-0.9**
I30JP	**ISUMI INFRASON**	**0.57**	**274**	Pn	**Pn**	**12 27 49.6**	**+0.6**
	baz=97,slow=29,SNR=3.5						
I30JP				Sn	**Sn**	**12 27 58.5**	**+1.0**
	baz=97,slow=65						
KTR	**Katsuura**	**0.58**	**258**	⇑P	**Pn**	**12 27 49.5**	**+0.4**
JSMT	**Sammumatsuo**	**0.59**	**309**	P	**Pn**	**12 27 48.8**	**-0.4**
BSO1	**Boso 1**	**0.61**	**183**	⇓P	**Pn**	**12 27 48.5**	**-0.5**
BSO4	**Boso 4**	**0.62**	**243**	⇑P	**Pn**	**12 27 50.2**	**+0.7**
BSO3	**Boso 3**	**0.62**	**222**	⇓P	**Pn**	**12 27 49.9**	**+0.5**
JKUC	**kamogawauchiur**	**0.67**	**261**	P	**Pn**	**12 27 50.7**	**+0.4**
JCN	**Nagara**	**0.68**	**283**	⇑P	**Pn**	**12 27 51.1**	**+0.7**
JCN				*e*S	**Sn**	**12 28 03.6**	**+3.5**
JIHU	**Itakohorinouch**	**0.80**	**331**	P	**Pb**	**12 27 51.2**	**-0.8**
JHYU	**Hitachinakayam**	**1.12**	**342**	P	**Pn**	**12 27 54.7**	**-1.9**
JYT	**Yasato**	**1.17**	**325**	⇑P	**Pn**	**12 27 56.1**	**-1.0**
JHO	**Hitachi**	**1.39**	**345**	⇑P	**Pn**	**12 27 58.2**	**-2.0**
JIM2	**Oshima 3**	**1.41**	**247**	⇑P	**Pn**	**12 28 00.1**	**-0.4**
JIM2				S	**Sb**	**12 28 18.7**	**-1.2**
JOD2	**Odawara 2**	**1.57**	**270**	⇑P	**Pn**	**12 28 02.9**	**+0.1**
JHTM	**Izuhatsuma**	**1.67**	**260**	P	**Pn**	**12 28 04.0**	**-0.1**
JAG	**Ashikaga**	**1.71**	**313**	⇑P	**Pn**	**12 28 04.3**	**-0.4**
JIZS	**Izushimoda**	**1.83**	**253**	⇑P	**Pn**	**12 28 06.2**	**-0.1**
JRY	**Ryogami san**	**1.87**	**294**	⇑P	**Pn**	**12 28 07.8**	**+0.9**
JFT	**Otama**	**2.31**	**347**	⇑P	**Pn**	**12 28 12.6**	**-0.3**
JHJ2	**Mitsune**	**2.37**	**205**	*e*Pn	**Pn**	**12 28 14.4**	**+0.8**
JHJ	**Hachijo jima 2**	**2.37**	**206**	Pn	**Pn**	**12 28 13.9**	**+0.2**
	168nm,0.3s,baz=299,slow=20,SNR=17						
JHJ				Sn	**Sn**	**12 28 39.9**	**-2.0**
	647nm,0.3s,baz=266,slow=22,SNR=7.2						
JMM	**Marumori**	**2.60**	**356**	⇑P	**Pn**	**12 28 15.6**	**-1.2**
MJAR	**Matsushiro Arr**	**2.60**	**300**	Pn	**Pn**	**12 28 17.4**	**+0.5**
	25nm,0.3s,baz=96,slow=14,SNR=863						
MJAR				LR	LR	12 29 22.4	
	comp=Z,26µm,18.3s,baz=125,slow=41						
MAJO	**Matsushiro**	**2.61**	**300**	*e*Pn	**Pn**	**12 28 18.8**	**+1.8**
MAJO	**Matsushiro**	**2.61**	**300**	*e*P	**Pn**	**12 28 18.8**	**+1.8**
MAJO	**Matsushiro**	**2.61**	**300**	*e*P	**Pn**	**12 28 19.1**	**+2.2**
MAT	**Matsushiro**	**2.61**	**300**	P	**Pn**	**12 28 18.4**	**+1.4**
MAT				*e*S	**Sn**	**12 28 47.8**	**+0.1**
MJB9	**Matsu-Tunnel**	**2.61**	**300**	*e*Pn	**Pn**	**12 28 18.7**	**+1.6**
JYS	**Shirataka**	**3.04**	**346**	⇑P	**Pn**	**12 28 23.0**	**0.0**
JIO	**Ouri**	**3.19**	**5**	⇑P	**Pn**	**12 28 23.2**	**-1.8**
INU	**Inuyama**	**3.27**	**273**	*e*Pn	**Pn**	**12 28 28.2**	**+2.2**
JMK	**Ichinoseki**	**3.68**	**3**	⇓P	**Pn**	**12 28 31.0**	**-0.7**
MIYJ	**Miyakonagasawa**	**4.35**	**8**	P	**Pn**	**12 28 38.7**	**-2.2**
JHE	**Heguri**	**4.42**	**264**	P	**Pn**	**12 28 43.2**	**+1.4**
JWT	**Wachi**	**4.59**	**272**	P	**Pn**	**12 28 45.9**	**+1.7**
JKS	**Kasai**	**5.06**	**269**	P	**Pn**	**12 28 52.1**	**+1.4**
ERM	**Erimo**	**6.94**	**13**	*e*Pn	**Pn**	**12 29 13.7**	**-2.8**
ERM				*e*Sn	**Sn**	**12 30 33.8**	**-0.7**
ERM	**Erimo**	**6.94**	**13**	*e*P	**Pn**	**12 29 13.7**	**-2.8**
ERM				*e*		12 30 33.8	
CBIJ	**Chichi jima**	**8.21**	**173**	*e*Pn	**Pn**	**12 29 32.1**	**-1.8**
CBIJ				*e*Sn	**Sn**	**12 31 00.5**	**-5.3**
JCJ	**Chichijima**	**8.21**	**173**	Pn	**Pn**	**12 29 32.1**	**-1.8**
	106nm,0.3s,baz=346,slow=7.2,SNR=64						
JCJ				Sn	**Sn**	**12 31 00.5**	**-5.3**
	43nm,0.3s,baz=287,slow=19,SNR=3.9						
JNU	**Nakatsue**	**8.66**	**259**	*e*Pn	**Pn**	**12 29 43.9**	**+3.7**
JNU	**Nakatsue**	**8.66**	**259**	Pn	**Pn**	**12 29 40.6**	**+0.5**
	2.8nm,0.3s,baz=78,slow=9.3,SNR=18						
ASAJ	**Asahikawa**	**8.92**	**7**	Pn	**Pn**	**12 29 40.3**	**-3.4**
	50nm,0.3s,baz=224,slow=9.6,SNR=114						
ASAJ				LR	LR	12 33 49.0	
	comp=Z,11µm,20.5s,baz=168,slow=42						
YUK	**Yuzh-Kuril'sk**	**9.52**	**22**	⇑*i*P	Pn	12 29 44.1	-7.7
SHO	**Shikotan**	**9.69**	**26**	*e*P	**Pn**	**12 29 49.9**	**-4.3**
TEY	**Ternei**	**10.32**	**342**	⇑*e*P	**Pn**	**12 30 01.7**	**-1.1**
TEY				pmax	pmax		
	comp=E,40nm,0.8s						
TEY				pmax	pmax		
	comp=N,80nm,0.9s						
TEY				pmax	pmax		
	comp=Z,80nm,0.9s						
VLA	**Vladivostok**	**10.56**	**321**	*i* P	**Pn**	**12 30 06.0**	**-0.1**
MSHR	**Mys Shultsa**	**10.59**	**317**	*i* P	**Pn**	**12 30 07.4**	**+0.9**
KSRS	**Korea Array**	**10.78**	**285**	Pn	**Pn**	**12 30 11.9**	**+2.8**
	comp=Z,2.1nm,0.3s,baz=101,slow=13,SNR=100						
KSRS				LR	LR	12 34 35.0	
	comp=Z,17µm,18.3s,baz=99,slow=39						
KS01	**Wonju Array Si**	**10.80**	**286**	*e*Pn	**Pn**	**12 30 12.7**	**+3.2**
KS01				*e*Sn	**Sn**	**12 32 03.0**	**-6.4**
KS15	**Wonju Array Si**	**10.81**	**285**	*e*Pn	**Pn**	**12 30 13.4**	**+4.0**
TJN	**Taejon**	**11.14**	**280**	*i* P	**Pn**	**12 30 16.8**	**+2.8**
KUR	**Kuril'sk**	**11.24**	**26**	*d i*P	**Pn**	**12 30 16.9**	**+1.5**
KUR				pmax	pmax		
	comp=Z,158nm,0.7s						
KUR				pmax	pmax		
	comp=E,52nm,0.6s						
KUR				pmax	pmax		
	comp=N,28nm,0.3s						
USA0B	**Ussuriysk Arra**	**11.30**	**325**	*e*Pn	**Pn**	**12 30 17.2**	**+1.1**
USRK	**Ussuriysk Ar.**	**11.30**	**325**	Pn	**Pn**	**12 30 17.3**	**+1.1**
	comp=N,2.4nm,0.3s,baz=136,slow=12,SNR=60						
USRK				LR	LR	12 34 29.9	
	comp=N,17µm,18.6s,baz=129,slow=36						
YSS	**Yuzh-Sakhalins**	**11.75**	**6**	*e*Pn	**Pn**	**12 30 19.9**	**-2.4**
YSS	**Yuzh-Sakhalins**	**11.75**	**6**	⇑*e*P	**Pn**	**12 30 18.2**	**-4.1**
YSS				*e*		12 32 42.7	
YSS				pmax	pmax		
	comp=Z,180nm,0.6s						
YSS				MLR	MLR		
	comp=Z,14µm,16.0s						
YSS				MLR	MLR		
	comp=N,9µm,16.0s						
YSS				MLR	MLR		
	comp=E,8µm,16.0s						
MDJ	**Mudanjiang**	**12.79**	**320**	P	**Pn**	**12 30 37.0**	**+0.4**
MDJ				pP	P	12 30 44.8	-2.5
MDJ				sP		12 30 49.8	
MDJ				S	**Sn**	**12 32 58.8**	**+0.8**
MDJ				SS	**SnSn**	**12 33 11.6**	**+1.4**
MDJ				pmax	pmax		
	comp=E,330nm,2.1s						
MDJ				LR	LR		
	comp=E,9µm,17.5s						
MDJ				LR	LR		
	comp=E,9µm,14.7s						
MDJ				LR	LR		
	comp=E,17µm,18.3s						
MDJ	**Mudanjiang**	**12.79**	**320**	*e*Pn	**Pn**	**12 30 37.0**	**+0.4**
UGL	**Uglegorsk**	**13.82**	**3**	*e*P	**Pn**	**12 30 46.4**	**-4.2**
UGL				pmax	pmax		
	comp=Z,41nm,0.9s						
UGL				MLR	MLR		
	comp=Z,2µm,16.0s						
UGL				MLR	MLR		
	comp=N,15µm,16.0s						
UGL				MLR	MLR		
	comp=E,16µm,16.0s						
CN2	**Changchun**	**14.71**	**310**	*e*P	**Pn**	**12 31 02.0**	**-0.7**
CN2				*e*sP	P	12 31 14.3	+5.7
CN2				*e*S	**Sn**	**12 33 45.5**	**+0.8**
CN2				pmax	pmax		
	comp=E,20nm,1.5s						
CN2				pmax	pmax		
	comp=E,200nm,6.0s						
CN2				LR	LR		
	comp=E,8µm,16.0s						
CN2				LR	LR		
	comp=E,6µm,16.0s						
CN2				LR	LR		
	comp=E,7µm,19.0s						
SNY	**Shenyang**	**15.12**	**301**	⇑P	**Pn**	**12 31 08.6**	**+0.4**
SNY				pmax	pmax		
	comp=E,83nm,1.7s						
SNY				pmax	pmax		
	comp=E,2µm,9.6s						
SNY				LR	LR		
	comp=E,7µm,15.3s						
SNY				LR	LR		
	comp=E,9µm,19.9s						
SNY				LR	LR		
	comp=E,16µm,18.9s						
KLR	**Kul'dur**	**15.53**	**337**	Pn	**Pn**	**12 31 10.2**	**-3.3**
	comp=E,1.6nm,0.3s,baz=137,slow=12,SNR=23						
KLR				LR	LR	12 37 12.4	
	comp=E,11µm,19.4s,baz=140,slow=37						
TYV	**Tymovskoe**	**15.63**	**4**	*e*P	**Pn**	**12 31 10.4**	**-4.5**
TYV				*e*S	**Sn**	**12 33 59.0**	**-8.1**
TYV				pmax	pmax		
	comp=Z,300nm,1.7s						
TYV				pmax	pmax		
	comp=Z,65nm,1.5s						
TYV				smax	smax		
	comp=N,600nm,5.0s						
GRNR	**Gornyy**	**15.85**	**349**	*e*P	**Pn**	**12 31 11.2**	**-6.5**
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
DL2	**Dalian**	**15.89**	**289**	⇑*i*P	**P**	**12 31 19.8**	**-1.9**
DL2				pP	**pP**	**12 31 28.3**	**-0.8**
DL2				sP	**sP**	**12 31 36.3**	**+3.7**
DL2				S	**Sn**	**12 34 15.8**	**+2.4**
DL2				SS	**SnSn**	**12 34 26.3**	**0.0**
DL2				pmax	pmax		
	comp=Z,300nm,1.0s						
DL2				pmax	pmax		
	comp=Z,2µm,4.2s						
DL2				LR	LR		
	comp=Z,5µm,16.2s						
DL2				LR	LR		
	comp=Z,9µm,19.7s						
DL2				LR	LR		
	comp=Z,14µm,16.9s						
SSE	**Sheshan**	**17.11**	**262**	P	**Pn**	**12 31 34.0**	**+0.3**
SSE				S	**Sn**	**12 34 43.8**	**+0.7**
SSE				pmax	pmax		
	comp=Z,380nm,5.1s						
SSE				LR	LR		
	comp=Z,4µm,25.1s						
SSE				LR	LR		
	comp=Z,6µm,13.7s						
SSE	**Sheshan**	**17.11**	**262**	*e*Pn	**P**	**12 31 34.2**	**-1.0**
	comp=Z,275nm,1.3s						
NKL	**Nikolayevsk**	**17.88**	**359**	*e*P	**Pn**	**12 31 37.0**	**-6.1**
NKL				*e*		12 34 52.0	
NKL				pmax	pmax		
	comp=N,74nm,1.2s						
NKL				pmax	pmax		
	comp=Z,120nm,1.2s						
NKL				pmax	pmax		
	comp=N,800nm,13.0s						
NKL				pmax	pmax		
	comp=Z,1µm,13.0s						
NKL				MLR	MLR		
	comp=N,7µm,16.0s						
NKL				MLR	MLR		
	comp=Z,16µm,16.0s						
NJ2	**Nanjing**	**18.72**	**266**	*e*P	**P**	**12 31 52.6**	**-0.4**
NJ2				pP	**pP**	**12 32 00.6**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,37nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,1µm,4.6s						
NJ2				LR	LR		
	comp=Z,4µm,13.3s						
NJ2				LR	LR		
	comp=Z,6µm,13.9s						
NJ2				LR	LR		
	comp=Z,7µm,14.1s						
SKR	**Severo-Kuril's**	**18.90**	**31**	*e*P	**P**	**12 31 52.2**	**-2.7**
SKR				*e*S	**S**	**12 35 31.2**	**+3.3**
SKR				pmax	pmax		
	comp=Z,2µm,4.3s						
SKR				pmax	pmax		
	comp=Z,600nm,5.5s						
SKR				pmax	pmax		
	comp=Z,259nm,1.1s						
SKR				MLR	MLR		
	comp=Z,3µm,16.0s						
SKR				MLR	MLR		
	comp=Z,4µm,16.0s						
TIA	**Tai'an**	**19.41**	**280**	P	**P**	**12 31 58.9**	**-1.7**
TIA				pmax	pmax		
	comp=Z,39nm,1.2s						
TIA				LR	LR		
	comp=Z,2µm,12.6s						
TIA				LR	LR		
	comp=Z,5µm,15.5s						
TIA				LR	LR		
	comp=Z,5µm,15.3s						
YHNB	**Yeheng**	**19.99**	**243**	*e*P	**P**	**12 32 06.7**	**-0.4**
	comp=Z,78nm,1.0s						
YHNB				*e*S	**S**	**12 35 47.2**	**-3.3**
NACB	**Ninganchiao**	**20.13**	**242**	*e*P	**P**	**12 32 07.0**	**-1.5**
	comp=Z,112nm,1.3s						
NACB				LR	LR		
	comp=Z,2µm,18.0s						
BJI	**Beijing**	**20.21**	**291**	P	**P**	**12 32 06.8**	**-2.4**
BJI				S	**S**	**12 35 49.5**	**-5.1**
BJI				pmax	pmax		
	comp=Z,73nm,1.2s						
BJI				LR	LR		
	comp=Z,3µm,18.1s						
BJI				LR	LR		
	comp=Z,4µm,20.3s						
BJI				LR	LR		
	comp=Z,4µm,23.5s						
BJT	**Baijiatuau**	**20.21**	**291**	*e*P	**P**	**12 32 07.9**	**-1.4**
	comp=Z,446nm,1.2s						
BJT				LR	LR		
	comp=Z,7µm,20.0s						
BJT	**Baijiatuau**	**20.21**	**291**	*e*P	**P**	**12 32 07.9**	**-1.4**
BJT				pmax	pmax		
	comp=Z,446nm,1.2s						
BJT				MLR	MLR		
	comp=Z,7µm,20.0s						
YULB	**Yu-li**	**20.82**	**241**	*e*P	**P**	**12 32 13.9**	**-2.2**
	comp=Z,36nm,0.8s						
SSLB	**Suanglung**	**20.82**	**242**	*e*P	**P**	**12 32 17.0**	**+0.9**
	comp=Z,55nm,0.9s						
SSLB				LR	LR		
	comp=Z,2µm,21.0s						
ZEA	**Zeya**	**20.84**	**337**	*e*P	**P**	**12 32 11.9**	**-4.1**
ZEA				*e*		12 32 46.0	
ZEA				*e*S	**S**	**12 36 08.0**	**+1.0**
ZEA				*e*		12 36 34.0	
ZEA				pmax	pmax		
	comp=N,290nm,1.2s						
ZEA				pmax	pmax		
	comp=E,130nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,600nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,2µm,6.0s						
ZEA				pmax	pmax		
	comp=N,800nm,5.0s						
ZEA				smax	smax		
	comp=N,2µm,10.0s						
ZEA				MLR	MLR		
	comp=Z,9µm,16.0s						
ZEA				MLR	MLR		
	comp=E,2µm,15.0s						
ZEA				MLR	MLR		
	comp=N,7µm,16.0s						
HIA	**Hailar**	**20.96**	**318**	*e*P	**P**	**12 32 16.3**	**-1.1**
	comp=N,242nm,1.8s						
HIA				LR	LR		
	comp=Z,7µm,18.0s						

HIA	**Hailar**	**20.96**	**318**	*e*P	**P**	**12 32 16.3**	**-1.1**
HIA				pmax	pmax		
	comp=Z,242nm,1.8s						
HIA				MLR	MLR		
	comp=Z,7µm,18.0s						
TWG	**Pinlang**	**21.34**	**240**	*e*P	**P**	**12 32 19.8**	**-1.9**
	comp=Z,218nm,1.0s						
TPUB	**Ta-pu**	**21.36**	**242**	*e*P	**P**	**12 32 21.8**	**-0.1**
	comp=Z,102nm,1.2s						
TPUB				LR	LR		
	comp=Z,3µm,21.0s						
PEA0B	**Petropavlovsk-**	**21.38**	**28**	*e*P	**P**	**12 32 23.2**	**+1.3**
	comp=Z,276nm,1.1s						
PEA0B				LR	LR		
	comp=Z,3µm,20.0s						
PETK	**Petropavlovsk-**	**21.38**	**28**	P	**P**	**12 32 22.2**	**+0.3**
PETK				pmax	pmax		
	comp=Z,11nm,0.6s						
PETK				MLR	MLR		
	comp=Z,3µm,20.1s						
PETK	**Petropavlovsk-**	**21.38**	**28**	P	**P**	**12 32 22.2**	**+0.3**
	comp=Z,11nm,0.6s,baz=214,slow=9.0,SNR=35						
PETK				LR	LR	12 40 58.8	
	comp=Z,3µm,20.1s,baz=214,slow=38						
PEA1	**Petropavlovsk-**	**21.39**	**28**	*e*P	**P**	**12 32 22.2**	**+0.3**
PET	**Petropavlovsk**	**21.70**	**30**	*e*P	**P**	**12 32 26.2**	**+1.1**
	comp=Z,502nm,1.5s						
PET				LR	LR		
	comp=Z,4µm,19.0s						
PET	**Petropavlovsk**	**21.70**	**30**	⇑*e*P	**P**	**12 32 26.3**	**+1.1**
PET				pmax	pmax		
	comp=Z,277nm,1.7s						
GUMO	**Guam**	**21.86**	**170**	*e*P	**P**	**12 32 28.0**	**+0.8**
	comp=Z,2µm,1.2s						
GUMO	**Guam**	**21.86**	**170**	*e*P	**P**	**12 32 28.0**	**+0.8**
GUMO				pmax	pmax		
	comp=Z,2µm,1.2s						
QZH	**Quanzhou**	**21.91**	**248**	*e*P	**P**	**12 32 31.0**	**+3.3**
QZH				S	**S**	**12 36 29.6**	**+1.3**
QZH				LR	LR		
	comp=Z,2µm,16.0s						
QZH				LR	LR		
	comp=Z,4µm,15.1s						
QZH				LR	LR		
	comp=Z,3µm,13.3s						
WHN	**Wuhan**	**22.84**	**266**	⇓P	**P**	**12 32 36.3**	**-1.4**
WHN				S	**S**	**12 36 40.5**	**-4.9**
WHN				LR	LR		
	comp=Z,7µm,14.6s						
WHN				LR	LR		
	comp=Z,18µm,13.2s						
WHN				LR	LR		
	comp=Z,24µm,13.4s						
TIY	**Taiyuan**	**23.07**	**284**	*e*P	**P**	**12 32 37.1**	**-2.9**
TIY				S	**S**	**12 36 43.9**	**-5.4**
TIY				pmax	pmax		
	comp=Z,40nm,1.0s						
TIY				pmax	pmax		
	comp=Z,270nm,6.9s						
TIY				LR	LR		
	comp=Z,2µm,11.8s						
TIY				LR	LR		
	comp=Z,8µm,15.7s						
TIY				LR	LR		
	comp=Z,10µm,15.6s						
HHC	**Hu-ho-hao-te**	**23.78**	**292**	*e*P	**P**	**12 32 42.8**	**-4.2**
HHC				pP	pP	12 32 52.3	-2.5
HHC				sP	sP	12 32 58.1	-0.3
HHC				PP	**PnPn**	**12 33 13.8**	**-1.4**
HHC				S	**S**	**12 36 52.5**	**-8.4**
HHC				SS	Sn	12 37 39.6	+16
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,810nm,3.9s						
HHC				LR	LR		
	comp=Z,4µm,12.9s						
HHC				LR	LR		
	comp=Z,4µm,11.8s						
HHC				LR	LR		
	comp=Z,4µm,12.0s						
BTO	**Baotou**	**24.94**	**292**	*e*P	**P**	**12 32 54.4**	**-3.2**
BTO				S	**S**	**12 37 20.4**	**+0.9**
MA2	**Magadan**	**25.14**	**12**	*e*P	**P**	**12 32 59.8**	**+0.6**
	comp=Z,233nm,0.9s						
MA2				LR	LR		
	comp=Z,3µm,20.0s						
MA2	**Magadan**	**25.14**	**12**	⇑*e*P	**P**	**12 32 59.1**	**-0.1**
MA2				pmax	pmax		
	comp=Z,274nm,1.0s						
MA2	**Magadan**	**25.14**	**12**	P	**P**	**12 32 59.4**	**+0.2**
	comp=Z,204nm,0.9s,baz=195,slow=8.5,SNR=138						
MA2				LR	LR	12 43 20.2	
	comp=Z,3µm,20.4s,baz=195,slow=38						
CIT	**Chita**	**25.76**	**319**	*e*P	**P**	**12 33 03.2**	**-1.7**
CIT				*e*		12 33 12.5	
CIT				*e*		12 33 59.5	
CIT				pmax	pmax		
	comp=Z,215nm,1.5s						
XAN	**Xi'an**	**26.37**	**277**	P	**P**	**12 33 08.9**	**-1.7**
XAN				pP	sP	12 33 21.9	-0.1
XAN				S	**S**	**12 37 38.4**	**-3.7**
XAN				pmax	pmax		
	comp=Z,130nm,1.4s						
XAN				pmax	pmax		
	comp=Z,580nm,3.7s						
XAN				LR	LR		
	comp=Z,8µm,20.6s						
XAN				LR	LR		
	comp=Z,7µm,17.4s						
XAN	**Xi'an**	**26.37**	**277**	*e*P	**P**	**12 33 10.0**	**-0.6**
	comp=Z,186nm,1.2s						
XAN				LR	LR		
	comp=Z,7µm,18.0s						
XAN	**Xi'an**	**26.37**	**277**	*e*P	**P**	**12 33 10.0**	**-0.6**
XAN				pmax	pmax		
	comp=Z,186nm,1.2s						
XAN				MLR	MLR		
	comp=Z,7µm,18.0s						
ENH	**Enshi**	**26.91**	**268**	*e*P	**P**	**12 33 14.7**	**-0.7**
	comp=Z,219nm,1.1s						
ENH				LR	LR		
	comp=Z,3µm,19.0s						
H11N2	**WAKE ISLAND Hy**	**27.58**	**117**	T	T	13 02 24.6	
	baz=310,slow=75,SNR=1592						
H11N1	**WAKE ISLAND Hy**	**27.58**	**117**	T	T	13 02 23.5	
	baz=310,slow=75,SNR=683						
H11N3	**WAKE ISLAND Hy**	**27.59**	**117**	T	T	13 02 21.8	
	baz=310,slow=75,SNR=571						
YAK	**Yakutsk**	**27.73**	**349**	*c i*P	**P**	**12 33 21.9**	**-0.5**
YAK				*e**PP	**pP**	**12 33 30.5**	**+0.1**
YAK				*e*S	**S**	**12 38 01.9**	**-0.9**
YAK				*e*SS	SS	12 39 24.3	-36
YAK				pmax	pmax		
	comp=N,2µm,1.0s						
YAK				pmax	pmax		
	comp=E,873nm,1.1s						
YAK				smax	smax		
	comp=N,3µm,3.5s						
YAK				smax	smax		
	comp=E,3µm,3.6s						
YAK				MLR	MLR		
	comp=Z,32µm,18.0s						
YAK				MLR	MLR		
	comp=N,18µm,15.0s						
YAK				MLR	MLR		
	comp=E,14µm,17.0s						
TGY	**Tagaytay City**	**27.76**	**226**	LR	LR	12 44 40.0	
	comp=E,1µm,19.2s,baz=24,slow=37						
ULN	**Ulaanbaatar**	**28.12**	**307**	*e*P	**P**	**12 33 27.0**	**+0.7**
	comp=E,126nm,1.4s						
ULN				LR	LR		
	comp=Z,4µm,20.0s						
ULN	**Ulaanbaatar**	**28.12**	**307**	*e*P	**P**	**12 33 27.0**	**+0.7**
ULN				pmax	pmax		
	comp=Z,126nm,1.4s						
ULN				MLR	MLR		
	comp=Z,4µm,20.0s						
ULN	**Ulaanbaatar**	**28.12**	**307**	P	**P**	**12 33 25.5**	**-0.7**
	SNR=60						
H11S1	**WAKE ISLAND Hy**	**28.22**	**120**	T	T	13 02 58.0	
	baz=312,slow=76,SNR=2755						
H11S3	**WAKE ISLAND Hy**	**28.22**	**120**	T	T	13 02 59.9	
	baz=312,slow=76,SNR=584						
H11S2	**WAKE ISLAND Hy**	**28.24**	**120**	T	T	13 03 07.7	
	baz=312,slow=76,SNR=1665						
SONA1	**Songino Array**	**28.54**	**307**	*e*P	**P**	**12 33 30.4**	**+0.4**
SONA0	**Songino Array**	**28.54**	**307**	*e*P	**P**	**12 33 29.7**	**-0.3**
SONA0				*e*PcP	**PcP**	**12 36 40.2**	**-0.7**
SONA0				*e*ScP	**ScP**	**12 40 20.5**	**+0.3**
SONM	**Songino Array**	**28.54**	**307**	P	**P**	**12 33 29.7**	**-0.3**
	comp=Z,25nm,0.8s,baz=108,slow=7.5,SNR=80						
SONM				PcP	**PcP**	**12 36 40.2**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=118,slow=2.6,SNR=5.5						
SONM				ScP	**ScP**	**12 40 20.5**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=119,slow=4.0,SNR=3.8						
SONM				LR	LR	12 45 23.4	
	comp=Z,5µm,18.7s,baz=107,slow=37						
SEY	**Seymchan**	**28.58**	**11**	⇑*e*P	**P**	**12 33 30.7**	**+0.7**
SEY	**Seymchan**	**28.58**	**11**	P	**P**	**12 33 30.9**	**+0.9**
	comp=Z,106nm,1.0s,baz=200,slow=6.7,SNR=151						
SEY				LR	LR	12 46 32.8	
	comp=Z,5µm,19.5s,baz=162,slow=40						
BOD	**Bodaibo**	**28.87**	**330**	⇓*i*P	**P**	**12 33 32.0**	**-0.6**
BOD				pmax	pmax		
	comp=Z,157nm,1.5s						
LZH	**Lanzhou**	**30.09**	**283**	⇑P	**P**	**12 33 43.1**	**-0.8**
LZH				pP	sP	12 33 55.5	+0.1
LZH				sP	pP	12 34 02.5	+11
LZH				PP	**PnPn**	**12 34 37.8**	**-3.5**
LZH				S	**S**	**12 38 37.6**	**-3.3**
LZH				sS	sS	12 38 53.5	-0.8
LZH				SS	**SnSn**	**12 40 18.1**	**+3.8**
LZH				pmax	pmax		
	comp=Z,240nm,1.6s						
LZH				pmax	pmax		
	comp=Z,820nm,4.2s						
LZH				LR	LR		
	comp=Z,7µm,16.8s						
LZH				LR	LR		
	comp=Z,10µm,14.6s						
LZH				LR	LR		
	comp=Z,11µm,16.8s						
GYA	**Guiyang**	**30.64**	**263**	⇑*i*P	**P**	**12 33 46.8**	**-2.0**
GYA				pP	sP	12 34 00.6	+0.3
GYA				PP	**PnPn**	**12 34 51.3**	**+2.6**
GYA				S	**S**	**12 38 47.5**	**-2.1**
GYA				sS	sS	12 39 05.0	+2.0
GYA				SS	**SnSn**	**12 40 30.4**	**+2.4**
GYA				pmax	pmax		
	comp=Z,80nm,1.0s						
GYA				pmax	pmax		
	comp=Z,240nm,5.3s						
GYA				LR	LR		
	comp=Z,2µm,13.9s						
GYA				LR	LR		
	comp=Z,5µm,16.5s						
GYA				LR	LR		
	comp=Z,6µm,17.1s						
IRK	**Irkutsk**	**31.07**	**315**	*e*P	**P**	**12 33 50.9**	**-1.3**
IRK				pmax	pmax		
	comp=Z,89nm,1.9s						
ZAK	**Zakamensk**	**31.14**	**311**	*e*P	**P**	**12 33 52.2**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,31nm,1.3s						
TLY	**Talaya**	**31.27**	**313**	*e*P	**P**	**12 33 54.3**	**+0.3**
	comp=Z,38nm,1.0s						
TLY				LR	LR		
	comp=Z,12µm,18.0s						
TLY	**Talaya**	**31.27**	**313**	*c i*P	**P**	**12 33 53.7**	**-0.3**
TLY				*e*		12 34 56.1	
TLY				*e*PPP	PPP	12 35 08.5	
TLY				*e*S	**S**	**12 39 02.8**	**+4.0**
TLY				pmax	pmax		
	comp=Z,189nm,1.8s						
TLY				MLR	MLR		
	comp=Z,9µm,14.0s						
TLY	**Talaya**	**31.27**	**313**	P	**P**	**12 33 53.7**	**-0.3**
	SNR=29						
TLY				P	**P**	**12 33 53.7**	**-0.3**
	SNR=29						
CD2	**Chengdu**	**31.39**	**273**	P	**P**	**12 33 54.3**	**-1.0**
CD2				pP	sP	12 34 04.3	-2.5
CD2				sP	pP	12 34 08.8	+5.4
CD2				S	**S**	**12 38 59.5**	**-1.7**
CD2				sS	sS	12 39 16.5	+1.9
CD2				pmax	pmax		
	comp=Z,210nm,0.6s						
CD2				pmax	pmax		
	comp=Z,540nm,4.3s						
CD2				LR	LR		
	comp=Z,24µm,13.2s						
CD2				LR	LR		
	comp=Z,30µm,17.6s						
CD2				LR	LR		
	comp=Z,35µm,16.2s						
DAV	**Davao City (W)**	**31.45**	**210**	PFAKE		12 34 10.0	+14
DAV				LR	LR		
	comp=Z,2µm,21.0s						
QIZ	**Qiongzhong**	**31.93**	**248**	P	**P**	**12 34 00.4**	**+0.3**
QIZ				S	**S**	**12 39 04.8**	**-4.9**
QIZ				pmax	pmax		
	comp=Z,14nm,1.8s						
QIZ				LR	LR		
	comp=Z,3µm,13.7s						
QIZ				LR	LR		
	comp=Z,2µm,17.6s						
QIZ				LR	LR		
	comp=Z,2µm,16.1s						
QIZ	**Qiongzhong**	**31.93**	**248**	*e*P	**P**	**12 34 00.1**	**0.0**
	comp=Z,80nm,1.8s						
QIZ				LR	LR		
	comp=Z,2µm,20.0s						
GTA	**Gaotai**	**32.81**	**290**	⇑P	**P**	**12 34 07.3**	**-0.5**
GTA				pP	sP	12 34 18.0	-0.9
GTA				sP	pP	12 34 21.8	+6.0
GTA				PcP	**PcP**	**12 36 54.6**	**+2.2**
GTA				S	**S**	**12 39 21.0**	**-2.3**
GTA				sS	sS	12 39 37.8	+1.0
GTA				PcS	**PcS**	**12 40 38.8**	**+1.1**
GTA				SS	**SnSn**	**12 41 19.6**	**-0.8**
GTA				ScS	**ScS**	**12 44 33.0**	**-1.5**
GTA				pmax	pmax		
	comp=Z,28nm,1.5s						
GTA				pmax	pmax		
	comp=Z,410nm,7.0s						
GTA				LR	LR		
	comp=Z,3µm,18.4s						
GTA				LR	LR		
	comp=Z,4µm,18.1s						
GTA				LR	LR		
	comp=Z,5µm,18.7s						
MOY	**Mondy**	**32.86**	**312**	*e*P	**P**	**12 34 07.7**	**-0.3**
MOY				pmax	pmax		
	comp=Z,63nm,2.0s						
KMI	**Kunming**	**34.41**	**264**	P	**P**	**12 34 20.3**	**-1.6**
KMI				PP	**PP**	**12 35 40.1**	**+0.1**
KMI				S	**S**	**12 39 44.0**	**-4.4**
KMI				pmax	pmax		
	comp=Z,45nm,1.5s						
KMI				LR	LR		
	comp=Z,4µm,13.9s						
KMI				LR	LR		
	comp=Z,7µm,15.1s						
KMI				LR	LR		
	comp=Z,8µm,15.1s						
KMI	**Kunming**	**34.41**	**264**	*e*P	**P**	**12 34 21.2**	**-0.7**
	comp=Z,66nm,1.2s						
KMI				LR	LR		
	comp=Z,6µm,18.0s						
KMI	**Kunming**	**34.41**	**264**	*e*P	**P**	**12 34 21.2**	**-0.7**
KMI				pmax	pmax		
	comp=Z,66nm,1.2s						
KMI				MLR	MLR		
	comp=Z,6µm,18.0s						
KNGR	**Kungurtug, Tuv**	**34.79**	**310**	*i* P	**P**	**12 34 25.4**	**+0.6**
BILL	**Bilibino**	**35.81**	**16**	*e*P	**P**	**12 34 33.2**	**0.0**
	comp=Z,96nm,1.2s						
BILL				LR	LR		
	comp=Z,2µm,18.0s						
BILL	**Bilibino**	**35.81**	**16**	*ce*P	**P**	**12 34 31.7**	**-1.5**
BILL				*e*PPP	PPP	12 36 01.0	
BILL				pmax	pmax		
	comp=Z,79nm,1.0s						
BILL				MLR	MLR		
	comp=Z,3µm,16.0s						
BAKI	**Biak**	**36.56**	**188**	P	**P**	**12 34 40.3**	**+0.1**
TNTI	**Ternate**	**36.60**	**203**	PFAKE		12 34 50.0	+9.5
TNTI				LR	LR		
	comp=Z,1µm,20.0s						
KKM	**Kota Kinabalu**	**36.98**	**224**	PFAKE		12 35 00.0	+16
KKM				LR	LR		
	comp=Z,2µm,19.0s						
SWI	**Sorong**	**37.08**	**196**	P	**P**	**12 34 43.8**	**-0.8**
	comp=Z,27nm,0.8s						
RKPI	**Ransiki, Papua**	**37.14**	**191**	P	**P**	**12 34 44.9**	**-0.2**
	comp=Z,187nm,1.3s,comp=Z,2µm						
SRPI	**Serui, Papua**	**37.21**	**188**	P	**P**	**12 34 46.1**	**+0.4**
	comp=Z,341nm,1.2s,comp=Z,5µm						
JAY	**Jayapura**	**37.59**	**181**	P	**P**	**12 34 50.3**	**+1.4**
JAY				pmax	pmax		
	comp=Z,32nm,1.2s						
MANU	**Manus Island**	**37.59**	**170**	PFAKE		12 35 00.0	+11
MANU				LR	LR		
	comp=Z,2µm,21.0s						
SKNT	**Sakolnakorn**	**37.63**	**251**	P	**P**	**12 34 48.8**	**-0.5**
	comp=Z,9.2nm,0.8s						
GENI	**Genyem**	**37.67**	**181**	P	**P**	**12 34 50.0**	**+0.4**
	comp=Z,422nm,1.1s,comp=Z,4µm						
FAKI	**Fak Fak**	**38.87**	**194**	*e*P	**P**	**12 35 00.1**	**+0.4**
	comp=Z,375nm,1.4s						
FAKI				LR	LR		
	comp=Z,3µm,22.0s						
FAKI	**Fak Fak**	**38.87**	**194**	P	**P**	**12 34 59.4**	**-0.3**
	comp=Z,204nm,1.5s,comp=Z,2µm						
MRSI	**Marisa**	**38.91**	**211**	P	**P**	**12 35 00.3**	**+0.2**
SANI	**Sanana**	**39.70**	**204**	P	**P**	**12 35 05.3**	**-1.3**
	comp=Z,65nm,0.6s,comp=Z,955nm						
CHAI	**Chaiyaphum**	**39.81**	**251**	P	**P**	**12 35 06.4**	**-1.2**
	comp=Z,16nm,0.8s,comp=Z,167nm						
UTTA	**Uttaradit**	**39.87**	**255**	P	**P**	**12 35 07.7**	**-0.4**
	comp=Z,16nm,0.9s,comp=Z,132nm						
LAMP	**Lampang**	**40.17**	**256**	P	**P**	**12 35 10.8**	**+0.2**
	comp=Z,12nm,0.9s,comp=Z,102nm						
PBKT	**Sadao Pong**	**40.21**	**253**	*e*P	**P**	**12 35 10.7**	**-0.2**
PBKT	**Sadao Pong**	**40.21**	**253**	P	**P**	**12 35 09.9**	**-1.0**
	comp=Z,62nm,1.2s						
APSI	**Ampana**	**40.29**	**211**	P	**P**	**12 35 11.7**	**+0.2**
CMMT	**Chiang Mai**	**40.56**	**257**	P	**P**	**12 35 13.1**	**-0.8**
	comp=Z,31nm,1.0s,comp=Z,419nm						
CHTO	**Chiang Mai**	**40.56**	**257**	*e*P	**P**	**12 35 13.3**	**-0.6**
	comp=Z,30nm,1.0s						
CHTO				LR	LR		
	comp=Z,900nm,20.0s						
CHTO	**Chiang Mai**	**40.56**	**257**	*e*P	**P**	**12 35 13.3**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,30nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,900nm,20.0s						
CHTO	**Chiang Mai**	**40.56**	**257**	P	**P**	**12 35 12.5**	**-1.4**
	SNR=16						
CHTO				P	**P**	**12 35 12.5**	**-1.4**
	SNR=16						
CHTO	**Chiang Mai**	**40.56**	**257**	P	**P**	**12 35 13.2**	**-0.6**
	comp=Z,140nm,1.1s,comp=Z,2µm						
CHTO	**Chiang Mai**	**40.56**	**257**	*e*P	**P**	**12 35 12.5**	**-1.4**
SUKH	**Sukhothai**	**40.75**	**255**	P	**P**	**12 35 15.5**	**+0.2**
	comp=Z,17nm,1.0s						
CM31	**Chiang Mai Arr**	**40.76**	**257**	P	**P**	**12 35 14.3**	**-1.1**
	SNR=11						
CMAR	**Chiang Mai Arr**	**40.76**	**257**	P	**P**	**12 35 14.8**	**-0.6**
	comp=Z,4.3nm,0.6s,baz=45,slow=7.1,SNR=32						
CMAR				PcP	**PcP**	**12 37 16.4**	**-0.1**
	comp=Z,15nm,1.2s,baz=19,slow=2.4,SNR=7.7						
CMAR				LR	LR	12 55 07.6	
	comp=Z,3µm,18.1s,baz=42,slow=41						
SRAK	**Srakaew**	**40.90**	**249**	P	**P**	**12 35 12.5**	**-4.1**
PCI	**Palu**	**41.07**	**213**	P	**P**	**12 35 17.2**	**-0.8**
PCI				pmax	pmax		
	comp=Z,72nm,1.4s						
PCI	**Palu**	**41.07**	**213**	P	**P**	**12 35 18.2**	**+0.2**
DGZ	**Jazzator, Alta**	**41.18**	**307**	*i* P	**P**	**12 35 20.0**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,366nm,1.3s						
WMQ	**Urumqi**	**41.37**	**299**	P	**P**	**12 35 21.8**	**+1.5**
WMQ				pP	pP	12 35 27.9	-0.6
WMQ				PP	**PP**	**12 37 00.8**	**+4.8**
WMQ				S	**S**	**12 41 33.3**	**0.0**
WMQ				sS	sS	12 41 50.3	+3.4
WMQ				pmax	pmax		
	comp=Z,470nm,1.3s						
WMQ				LR	LR		
	comp=Z,6µm,17.1s						
WMQ				LR	LR		
	comp=Z,5µm,17.3s						
WMQ				LR	LR		
	comp=Z,5µm,21.3s						
WMQ	**Urumqi**	**41.37**	**299**	*e*P	**P**	**12 35 21.4**	**+1.2**
	comp=Z,555nm,1.6s						
WMQ				LR	LR		
	comp=Z,3µm,19.0s						
WMQ	**Urumqi**	**41.37**	**299**	*e*P	**P**	**12 35 21.5**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,555nm,1.6s						
WMQ				MLR	MLR		
	comp=Z,3µm,19.0s						
UTHA	**Uthaitani**	**41.99**	**253**	P	**P**	**12 35 25.9**	**+0.4**
	comp=Z,6.9nm,1.0s,comp=Z,76nm						
LSA	**Lhasa**	**42.07**	**277**	P	**P**	**12 35 26.9**	**+0.2**
LSA				pmax	pmax		
	comp=Z,26nm,2.0s						
LSA	**Lhasa**	**42.07**	**277**	*e*P	**P**	**12 35 27.5**	**+0.8**
	comp=Z,62nm,1.0s						
LSA				LR	LR		
	comp=Z,3µm,19.0s						
LSA	**Lhasa**	**42.07**	**277**	*e*P	**P**	**12 35 27.5**	**+0.8**
LSA				pmax	pmax		
	comp=Z,61nm,1.0s						
LSA				MLR	MLR		
	comp=Z,3µm,19.0s						
UMPA	**Umpang Tak**	**42.07**	**254**	P	**P**	**12 35 27.1**	**+0.8**
	comp=Z,18nm,0.9s						
SBUM	**Sibu**	**42.19**	**226**	*e*P	**P**	**12 35 26.5**	**-0.7**
	comp=Z,8.4nm,1.0s						
SBUM				LR	LR		
	comp=Z,500nm,21.0s						
PATY	**Pattaya**	**42.47**	**249**	P	**P**	**12 35 30.6**	**+1.1**
	comp=Z,11nm,0.8s						
ZAA0	**Zalesovo Array**	**42.88**	**314**	*e*P	**P**	**12 35 32.4**	**0.0**
	comp=Z,214nm,1.5s						
ZAA0				LR	LR		
	comp=Z,2µm,18.0s						
ZAA1	**Zalesovo Array**	**42.88**	**314**	*e*P	**P**	**12 35 32.2**	**-0.2**
ZAA1				*e*PcP	**PcP**	**12 37 22.9**	**0.0**
ZALV	**Zalesovo Beam**	**42.88**	**314**	*e*P	**P**	**12 35 32.9**	**+0.5**
ZALV	**Zalesovo Beam**	**42.88**	**314**	*e*P	**P**	**12 35 32.9**	**+0.5**
ZALV	**Zalesovo Beam**	**42.88**	**314**	P	**P**	**12 35 32.2**	**-0.2**
	comp=Z,34nm,0.5s,baz=99,slow=7.4,SNR=162						
ZALV				PcP	**PcP**	**12 37 22.9**	**+0.1**
	comp=Z,8.6nm,0.5s,baz=102,slow=3.2,SNR=5.6						
ZALV				ScP	**ScP**	**12 41 12.2**	**+0.2**
	comp=Z,5.5nm,0.9s,baz=79,slow=3.2,SNR=5.3						
ZALV				LR	LR	12 54 14.8	
	comp=Z,2µm,18.2s,baz=87,slow=37						
SHL	**Shillong**	**43.08**	**271**	*e*P	**P**	**12 35 33.9**	**-0.7**
SHL				IAmb	IAmb	12 35 34.6	
	comp=Z,20nm,0.5s						
ANM	**Nome**	**43.27**	**30**	*e*P	**P**	**12 35 36.8**	**+1.4**
	comp=Z,102nm,1.4s						
ANM	**Nome**	**43.27**	**30**	*e*P	**P**	**12 35 36.8**	**+1.4**
ANM				pmax	pmax		
	comp=Z,102nm,1.4s						
PHET	**Kaeng Krachan**	**43.42**	**250**	P	**P**	**12 35 37.1**	**-0.1**
	comp=Z,21nm,0.7s,comp=Z,188nm						
SPSI	**Sidrap Palu**	**43.83**	**211**	P	**P**	**12 35 38.3**	**-2.1**
	comp=Z,19nm,1.3s						
NVS	**Novosibirsk**	**43.84**	**315**	⇓*i*P	**P**	**12 35 40.7**	**+0.6**
NVS				*e*		12 37 16.9	
NVS				*i* S	**S**	**12 42 13.2**	**+4.1**
NVS				pmax	pmax		
	comp=Z,28nm,1.4s						
NVS				smax	smax		
	comp=N,15nm,1.9s						
NVS				smax	smax		
	comp=E,38nm,1.9s						
SAUI	**Saumlaki**	**43.98**	**194**	*e*P	**P**	**12 35 40.3**	**-1.3**
	comp=E,940nm,1.2s						
SAUI	**Saumlaki**	**43.98**	**194**	P	**P**	**12 35 40.4**	**-1.2**
	comp=E,686nm,1.3s,comp=E,7µm						
BNSI	**Bone**	**44.08**	**211**	P	**P**	**12 35 42.0**	**-0.4**
	comp=E,62nm,1.0s						
KSM	**Kuching**	**44.11**	**227**	*e*P	**P**	**12 35 42.7**	**0.0**
	comp=E,28nm,1.0s						
NRIK	**Noril'sk**	**44.74**	**336**	P	**P**	**12 35 47.1**	**0.0**
	comp=E,115nm,1.1s,baz=110,slow=8.9,SNR=111						
NRIK				LR	LR	12 55 37.6	
	comp=E,5µm,18.3s,baz=107,slow=38						
MK01	**Makanchi Array**	**44.80**	**304**	*e*P	**P**	**12 35 48.8**	**+0.8**
MK31	**Makanchi Array**	**44.80**	**304**	*e*P	**P**	**12 35 48.5**	**+0.5**

	comp=E,144nm,1.3s						
MK31	Makanchi Array	44.80	304	eP	P	12 35 48.5	+0.5
MK31				pmax	pmax		
	comp=Z,144nm,1.3s						
MK32	Makanchi Array	44.80	304	eP	P	12 35 48.2	+0.2
MKAR	Makanchi Array	44.80	304	eP	P	12 35 48.5	+0.5
	comp=Z,653nm,1.1s						
MKAR				LR	LR		
	comp=Z,1µm,19.0s						
MKAR	Makanchi Array	44.80	304	eP	P	12 35 48.5	+0.5
MKAR				pmax	pmax		
	comp=Z,653nm,1.1s						
MKAR				MLR	MLR		
	comp=Z,1µm,19.0s						
MKAR	Makanchi Array	44.80	304	P	P	12 35 48.2	+0.2
	comp=Z,67nm,0.9s,baz=87,slow=8.7,SNR=303						
MKAR				LR	LR	12 55 17.7	
	comp=Z,4µm,18.8s,baz=84,slow=37						
BKSI	Bulukumba	44.90	210	P	P	12 35 49.2	+0.2
MAKZ	Makanchi	45.01	304	eP	P	12 35 50.2	+0.6
	comp=Z,174nm,1.3s						
MAKZ				LR	LR		
	comp=Z,4µm,20.0s						
MAKZ	Makanchi	45.01	304	eP	P	12 35 50.2	+0.6
MAKZ				pmax	pmax		
	comp=Z,174nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,4µm,20.0s						
RDOG	Red Dog Mine	45.23	26	PFAKE		12 36 00.0	+9.0
RDOG				LR	LR		
	comp=Z,2µm,19.0s						
SEM	Semipalatinsk	45.77	309	d iP	P	12 35 52.2	-3.6
SEM				eS	S	12 42 35.0	-2.8
SEM				pmax	pmax		
	comp=Z,1µm,1.6s						
SEM				smax	smax		
	comp=N,1µm,3.3s						
SEM				MLR	MLR		
	comp=Z,3µm,15.0s						
SEM	Semipalatinsk	45.77	309	⇓iP	P	12 35 52.3	-3.6
	comp=Z,1µm,1.6s						
SEM				eS	S	12 42 35.0	-2.8
	comp=Z,1µm,3.3s						
SEM				eLR	LR	12 55 24.4	
	comp=Z,3µm,15.3s						
TRTT	Trang	46.63	244	P	P	12 36 02.6	-0.1
	comp=Z,11nm,1.2s						
KURK	Kurchatov	46.78	309	eP	P	12 36 03.9	+0.4
	comp=Z,298nm,1.1s						
KURK				LR	LR		
	comp=Z,3µm,21.0s						
KURK	Kurchatov	46.78	309	eP	P	12 36 03.9	+0.4
KURK				pmax	pmax		
	comp=Z,298nm,1.1s						
KURK				MLR	MLR		
	comp=Z,3µm,21.0s						
KURK	Kurchatov	46.78	309	P	P	12 36 03.3	-0.1
	SNR=153						
RAMN	Ramite	46.83	276	eP	P	12 36 04.4	-0.1
	comp=Z,207nm,0.7s						
JIRN	Jiri	46.87	277	eP	P	12 36 05.2	+0.2
	comp=Z,1µm,1.4s						
GUN	Gumba	47.03	277	eP	P	12 36 06.2	0.0
	comp=Z,236nm,0.9s						
SVW2	Sparrevohn	47.13	36	eP	P	12 36 06.8	+0.8
	comp=Z,56nm,1.2s						
PDGK	Podgornoye	47.33	299	P	P	12 36 07.9	-0.2
PDGK				pmax	pmax		
	comp=Z,239nm,1.3s						
EDFI	Ende, Flores	47.43	206	P	P	12 36 08.6	-0.4
	comp=Z,45nm,1.0s						
SOEI	Soe	47.50	203	eP	P	12 36 09.3	-0.3
	comp=Z,360nm,1.1s						
SOEI	Soe	47.50	203	P	P	12 36 09.6	+0.1
	comp=Z,318nm,0.9s,comp=Z,2µm						
PKI	Pulchoki	47.54	277	eP	P	12 36 09.9	-0.3
	comp=Z,270nm,1.3s						
PKIN	Phulchoki	47.55	277	eP	P	12 36 09.8	-0.4
	comp=Z,161nm,1.2s						
KKN	Kakani	47.56	277	eP	P	12 36 10.1	-0.1
	comp=Z,225nm,1.1s						
PKDT	Phuket	47.59	245	P	P	12 36 11.1	+0.9
	comp=Z,19nm,1.4s						
KULM	Kulim	47.66	241	eP	P	12 36 10.8	+0.1
	comp=Z,42nm,1.3s						
KULM				LR	LR		
	comp=Z,1µm,18.0s						
DMN	Daman	47.77	277	eP	P	12 36 11.8	-0.1
	comp=Z,367nm,1.7s						
KPKS	Kokpek	47.88	300	d iP	P	12 36 10.3	-2.0
KPKS				i S	S	12 43 07.5	-0.2
KPKS				pmax	pmax		
	comp=Z,978nm,1.6s						
KPKS				smax	smax		
	comp=N,457nm,5.6s						
KPKS				MLR	MLR		
	comp=Z,3µm,17.0s						
KPKS	Kokpek	47.88	300	⇓iP	P	12 36 10.3	-2.0
	comp=Z,978nm,1.6s						
KPKS				⇑iS	S	12 43 07.6	-0.2
	comp=Z,457nm,5.5s						
KPKS				eLR	LR	12 56 46.5	
	comp=Z,3µm,17.3s						
IPM	Ipoh	47.96	240	eP	P	12 36 12.1	-1.0
	comp=Z,29nm,0.8s						
IPM				LR	LR		
	comp=Z,800nm,19.0s						
MYKOM	Kota Tinggi	47.96	234	PFAKE		12 36 30.0	+17
MYKOM				LR	LR		
	comp=Z,800nm,18.0s						
BATI	Baumata	48.11	203	P	P	12 36 14.1	-0.1
	comp=Z,119nm,1.1s,comp=Z,1µm						
SATY	Saty	48.16	299	d iP	P	12 36 12.5	-2.0
SATY				i S	S	12 43 12.1	+0.2
SATY				pmax	pmax		
	comp=Z,1µm,1.4s						
SATY				smax	smax		
	comp=E,369nm,4.0s						
SATY				MLR	MLR		
	comp=Z,872nm,15.0s						
SATY	Saty	48.16	299	⇓iP	P	12 36 12.5	-2.0
	comp=Z,1µm,1.4s						
SATY				⇑iS	S	12 43 12.1	+0.2
	comp=Z,369nm,4.0s						
SATY				eLR	LR	12 56 54.5	
	comp=Z,872nm,15.3s						
OHAK	Old Harbor	48.28	42	eP	P	12 36 15.1	+0.1
	comp=Z,161nm,1.7s						
PRZ	Przheval'sk	48.30	298	PFAKE		12 36 30.0	+14
PRZ				LR	LR		
	comp=Z,2µm,18.0s						
PRZ	Przheval'sk	48.30	298	P	P	12 36 17.2	+1.5
IM3	Indian Mountai	48.34	30	eP	P	12 36 16.0	+0.7
RSO	Redoubt South	48.49	37	eP	P	12 36 18.8	+1.9
DANN	Dangsing	48.57	279	eP	P	12 36 18.5	+0.4
	comp=Z,294nm,0.5s						
KDAK	Kodiak Island	48.64	41	eP	P	12 36 17.7	0.0
	comp=Z,64nm,0.8s						
KDAK	Kodiak Island	48.64	41	eP	P	12 36 17.7	0.0
KDAK				pmax	pmax		
	comp=Z,64nm,0.8s						
MTN	Manton Dam	48.76	193	eP	P	12 36 18.7	-0.3
	comp=Z,644nm,1.6s						
MTN				LR	LR		
	comp=Z,1µm,22.0s						
BOK	Bokaro	48.76	272	eP	P	12 36 18.5	-0.7
BOK				IAmb	IAmb	12 36 21.1	
	comp=Z,68nm,1.0s						
WSI	Waingapu	48.80	208	P	P	12 36 19.6	+0.2
PPLA	Purkeypile	48.80	34	eP	P	12 36 20.9	+1.7
	comp=Z,96nm,1.2s						
CAST	Castle Rocks	48.87	33	eP	P	12 36 21.1	+1.6
	comp=Z,66nm,1.4s						
TARG	Taragay, Kyrgy	48.91	298	eP	P	12 36 21.8	+1.2
	comp=Z,112nm,0.8s						
KOLN	Koldanda	48.93	278	eP	P	12 36 20.8	+0.1
	comp=Z,767nm,1.6s						
CHKK	Chushkaly	48.99	300	⇓eP	P	12 36 18.4	-2.3
CHKK				eS	S	12 43 24.8	+1.4
CHKK				pmax	pmax		
	comp=Z,891nm,1.3s						
CHKK	Chushkaly	48.99	300	⇓eP	P	12 36 18.5	-2.3
	comp=Z,891nm,1.3s						
CHKK				eS	S	12 43 24.8	+1.4
COEN	Coen	49.00	177	eP	P	12 36 21.4	+0.4
	comp=Z,213nm,1.2s						
PLAI	Plampang	49.04	211	P	P	12 36 21.5	+0.2
MDOK	Medeo	49.11	300	deP	P	12 36 19.4	-2.4
MDOK				eS	S	12 43 25.6	+0.3
MDOK				pmax	pmax		
	comp=Z,1µm,1.3s						
MDOK				MLR	MLR		
	comp=Z,2µm,18.0s						
MDOK	Medeo	49.11	300	⇓eP	P	12 36 19.5	-2.4
	comp=Z,1µm,1.3s						
MDOK				eS	S	12 43 25.6	+0.3
	comp=Z,351nm,14.0s						
MDOK				eLR	LR	12 57 30.3	
	comp=Z,2µm,18.1s						
AAA	Alma-Ata	49.19	300	eP	P	12 36 23.2	+0.8
AAA				eS	S	12 43 29.1	+2.8
AAA				pmax	pmax		
	comp=Z,300nm,1.7s						
AAA				smax	smax		
	comp=N,300nm,7.7s						
AAA				MLR	MLR		
	comp=Z,3µm,16.0s						
AAA	Alma-Ata	49.19	300	⇓eP	P	12 36 21.5	-0.9
	comp=Z,628nm,1.4s						
AAA				eS	S	12 43 33.9	+7.6
	comp=Z,481nm,11.1s						
AAA				eLR	LR	12 57 38.1	
	comp=Z,1µm,17.9s						
KDJ	Kajisay	49.26	298	eP	P	12 36 24.2	+1.2
	comp=Z,53nm,0.8s						
KDJ				LR	LR		
	comp=Z,2µm,21.0s						
KDJ	Kajisay	49.26	298	eP	P	12 36 24.2	+1.2
KDJ				pmax	pmax		
	comp=Z,53nm,0.8s						
KDJ				MLR	MLR		
	comp=Z,2µm,21.0s						
PYUN	Piuthan	49.29	279	eP	P	12 36 23.8	+0.3
	comp=Z,663nm,1.0s						
BRLK	Bradley Lake	49.44	38	eP	P	12 36 21.9	-2.0
	comp=Z,26nm,0.9s						
KUU	Kurty	49.44	301	d iP	P	12 36 21.9	-2.3
KUU				i S	S	12 43 29.8	+0.2
KUU				pmax	pmax		
	comp=Z,549nm,1.4s						
KUU				smax	smax		
	comp=E,199nm,2.3s						
KUU				MLR	MLR		
	comp=Z,831nm,18.0s						
KUU	Kurty	49.44	301	⇓iP	P	12 36 21.9	-2.3
	comp=Z,549nm,1.4s						
KUU				⇑iS	S	12 43 29.9	+0.2
	comp=Z,199nm,2.3s						
KUU				eLR	LR	12 57 39.7	
	comp=Z,831nm,17.9s						
MLY	Manley	49.52	31	eP	P	12 36 25.5	+1.0
	comp=Z,52nm,1.0s						
PBA	Port Blair	49.53	254	PFAKE		12 36 40.0	+15
PBA				LR	LR		
	comp=Z,2µm,18.0s						
MTBS	Maitube	49.56	300	eP	P	12 36 24.8	-0.3
MTBS				pmax	pmax		
	comp=Z,535nm,1.2s						
MTBS	Maitube	49.56	300	eP	P	12 36 24.9	-0.3
	comp=Z,535nm,1.2s						
TRF	Thorofare Moun	49.68	33	eP	P	12 36 26.9	+1.0
	comp=Z,26nm,1.1s						
COLD	Coldfoot	49.85	28	eP	P	12 36 29.2	+2.3
	comp=Z,13nm,1.0s						
ULHL	Ulahol	49.91	299	P	P	12 36 28.6	+0.6
	SNR=24						
RC01	Rabbit Creek A	49.97	36	eP	P	12 36 28.4	+0.5
	comp=Z,95nm,1.3s						
BWN	Browne	50.05	32	eP	P	12 36 30.8	+2.3
	comp=Z,198nm,1.2s						
SEW	Seward	50.15	38	eP	P	12 36 29.0	-0.3
	comp=Z,220nm,1.8s						
TOLK	Toolik Lake Re	50.19	27	eP	P	12 36 30.6	+1.1
	comp=Z,70nm,1.4s						
TOLK				LR	LR		
	comp=Z,2µm,18.0s						
TOLK	Toolik Lake Re	50.19	27	P	P	12 36 30.0	+0.5
	baz=266,SNR=23						
TKM2	Tokmak 2	50.20	300	P	P	12 36 31.1	+0.9
	SNR=162						
PMR	Palmer	50.24	36	eP	P	12 36 30.1	+0.2
	comp=Z,51nm,1.1s						
PMR	Palmer	50.24	36	eP	P	12 36 30.1	+0.2
PMR				pmax	pmax		
	comp=Z,51nm,1.1s						
MCK	McKinley	50.28	33	eP	P	12 36 30.9	+0.6
	comp=Z,66nm,1.4s						
NRN	Naryn	50.29	298	eP	P	12 36 31.6	+0.5
	comp=Z,66nm,0.8s						
NRN				LR	LR		
	comp=Z,2µm,18.0s						
NRN	Naryn	50.29	298	P	P	12 36 31.6	+0.5
RND	Reindeer	50.32	33	eP	P	12 36 30.5	-0.2
	comp=Z,56nm,1.2s						
RND	Reindeer	50.32	33	eP	P	12 36 30.5	-0.2
RND				pmax	pmax		
	comp=Z,56nm,1.2s						
GHO	Glory Hole Cre	50.33	35	eP	P	12 36 31.4	+0.7
	comp=Z,113nm,1.2s						
BWNR	Bhubaneshwar	50.47	268	ex	P	12 36 28.5	-3.8
BWNR				IAmb	IAmb	12 36 30.2	
	comp=Z,136nm,1.6s						
KNK	Knik Glacier	50.57	36	eP	P	12 36 33.3	+0.8
	comp=Z,47nm,0.9s						
KNK				LR	LR		
	comp=Z,700nm,21.0s						
MDM	Murphy Dome	50.59	31	eP	P	12 36 33.6	+1.0
	comp=Z,91nm,1.0s						
SML	Sawmill	50.61	35	eP	P	12 36 33.7	+0.9
	comp=Z,51nm,0.8s						
SML	Sawmill	50.61	35	eP	P	12 36 33.7	+0.9
SML				pmax	pmax		
	comp=Z,51nm,0.8s						
PSI	Prapat	50.62	240	eP	P	12 36 32.9	-0.7
	comp=Z,17nm,0.8s						
PSI				LR	LR		
	comp=Z,900nm,20.0s						
PSI	Prapat	50.62	240	eP	P	12 36 32.9	-0.7
PSI				pmax	pmax		
	comp=Z,17nm,0.8s						
PSI				MLR	MLR		
	comp=Z,900nm,20.0s						
WRH	Wood River Hil	50.65	32	eP	P	12 36 33.7	+0.7
	comp=Z,33nm,1.1s						
KZA	Kyzart	50.66	299	P	P	12 36 35.5	+1.5
	SNR=147						
KBK	Karagaybulak	50.73	299	P	P	12 36 35.0	+0.8
	SNR=136						
TCOL	CIGO, UAF Yank	50.74	31	P	P	12 36 34.2	+0.5
	baz=270,SNR=8.1						
COLA	College	50.75	31	eP	P	12 36 34.4	+0.7
	comp=Z,44nm,0.8s						
COLA	College	50.75	31	eP	P	12 36 34.4	+0.7
COLA				pmax	pmax		
	comp=Z,44nm,0.8s						
COLA	College	50.75	31	eP	P	12 36 34.6	+0.9
BTLS	Baital	50.77	303	d iP	P	12 36 31.9	-2.3
BTLS				eS	S	12 43 47.6	-0.5
BTLS				pmax	pmax		
	comp=Z,779nm,1.5s						
BTLS				smax	smax		
	comp=E,139nm,2.0s						
BTLS				MLR	MLR		
	comp=Z,1µm,17.0s						
BTLS	Baital	50.77	303	⇓iP	P	12 36 32.0	-2.3
	comp=Z,780nm,1.4s						
BTLS				eS	S	12 43 47.6	-0.5
	comp=Z,139nm,2.0s						
BTLS				eLR	LR	12 58 25.1	
	comp=Z,1µm,16.5s						
CHMS	Chumysh	50.78	300	P	P	12 36 34.9	+0.5
	SNR=29						
KSH	Kashi	50.84	295	⇑iP	P	12 36 39.1	+4.1
KSH				sP	sP	12 36 51.9	+5.5
KSH				PP	PP	12 38 32.1	+0.9
KSH				S	S	12 43 53.1	+3.6
KSH				sS	sS	12 44 06.4	+3.2
KSH				SS	SS	12 47 29.8	+5.7
KSH				pmax	pmax		
	comp=Z,230nm,1.2s						
KSH				LR	LR		
	comp=Z,1µm,12.6s						
KSH				LR	LR		
	comp=Z,4µm,16.3s						
KSH				LR	LR		
	comp=Z,2µm,17.4s						
USP	Ospenovka	50.89	300	P	P	12 36 35.7	+0.5
	SNR=84						
FRU1	Bishkek	50.91	300	eP	P	12 36 36.6	+1.2
	comp=Z,205nm,1.1s						
FRU1				LR	LR		
	comp=Z,5µm,20.0s						
FRU1	Bishkek	50.91	300	eP	P	12 36 36.6	+1.2
FRU1				pmax	pmax		
	comp=Z,205nm,1.1s						
FRU1				MLR	MLR		
	comp=Z,5µm,20.0s						
FRU	Bishkek	50.92	300	⇑iP	P	12 36 35.5	+0.1
FRU				i		12 36 48.0	
FRU				eS	S	12 43 52.0	+1.7
FRU				e		12 43 59.0	
FRU				pmax	pmax		
	comp=Z,348nm,1.9s						
FRU				pmax	pmax		
	comp=E,460nm,4.0s						
POKR	Poker Plat Res	50.92	31	P	P	12 36 36.0	+0.9
	baz=271,SNR=46						
BKNI	Bangkinang	50.92	236	eP	P	12 36 35.5	-0.2
	comp=E,86nm,0.8s						
BKNI				LR	LR		
	comp=Z,600nm,20.0s						
BKNI	Bangkinang	50.92	236	P	P	12 36 35.5	-0.2
KCSI	Kotacane, Aceh	50.94	242	P	P	12 36 35.6	-0.3
DHY	Denali Highway	51.00	34	eP	P	12 36 36.3	+0.4
	comp=Z,145nm,2.0s						
AAK	Ala-Archa	51.06	300	P	P	12 36 37.0	+0.4
	SNR=75						
AAK	Ala-Archa	51.06	300	eP	P	12 36 36.9	+0.4
	comp=Z,73nm,0.9s						
AAK				LR	LR		
	comp=Z,5µm,20.0s						
AAK	Ala-Archa	51.06	300	P	P	12 36 36.7	+0.1
AAK				pmax	pmax		
	comp=Z,84nm,0.9s						
AAK	Ala-Archa	51.06	300	P	P	12 36 37.0	+0.4
	SNR=46						
AAK				P	P	12 36 37.0	+0.4
	SNR=46						
SCM	Sheep Creek Mo	51.09	35	eP	P	12 36 37.0	+0.5
	comp=Z,66nm,1.0s						
SCM	Sheep Creek Mo	51.09	35	eP	P	12 36 37.0	+0.5
SCM				pmax	pmax		
	comp=Z,66nm,1.0s						
PWJI	Pagerwojo	51.12	218	P	P	12 36 38.1	+1.0
	comp=Z,147nm,0.8s						
HDA	Harding Lake	51.15	32	eP	P	12 36 36.5	-0.3
	comp=Z,60nm,1.2s						
HDA	Harding Lake	51.15	32	P	P	12 36 36.5	-0.3
	baz=272,SNR=24						
UCH	Uchtor	51.15	299	P	P	12 36 38.7	+1.0
	SNR=71						
IL1	Eielson Array	51.16	32	eP	P	12 36 36.7	-0.2
ILAR	Eielson Array	51.16	32	P	P	12 36 36.6	-0.3
	comp=Z,13nm,0.8s,baz=264,slow=5.8,SNR=157						
ILAR				LR	LR	12 57 52.2	
	comp=Z,569nm,21.5s,baz=269,slow=36						
ILB	Eielson Array	51.16	32	eP	P	12 36 36.9	0.0
OTUK	Ortayu	51.21	307	P	P	12 36 37.7	+0.2
OTUK				pmax	pmax		
	comp=Z,159nm,0.9s						
CMBY	CAMPBELL BAY	51.48	248	eP	P	12 36 39.9	0.0
BVA0	Borovoye Array	51.53	313	i P	P	12 36 39.6	-0.2
BVA0				pmax	pmax		
	comp=Z,139nm,1.5s						
EKS2	Erkin-Say	51.56	300	P	P	12 36 40.6	+0.3
	SNR=48						
MNSI	Mandailing Nat	51.58	238	P	P	12 36 40.5	-0.1
BRVK	Borovoye	51.59	313	eP	P	12 36 40.4	+0.2
	comp=Z,93nm,1.0s						
BRVK				LR	LR		
	comp=Z,2µm,20.0s						
BRVK	Borovoye	51.59	313	eP	P	12 36 40.4	+0.2
BRVK				pmax	pmax		
	comp=Z,93nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,2µm,20.0s						
BRVK	Borovoye	51.59	313	P	P	12 36 40.4	+0.2
	SNR=59						
UGM	Wanagama	51.69	220	P	P	12 36 41.4	0.0
PRP	Porcupine Dome	51.72	31	eP	P	12 36 41.8	+0.7
	comp=Z,25nm,1.1s						
AML	Almayashu	51.76	299	P	P	12 36 43.1	+0.9
	SNR=171						
KLU	Klutina	51.78	36	eP	P	12 36 42.9	+1.2
	comp=Z,220nm,1.9s						
FYU	Fort Yukon	51.80	29	eP	P	12 36 43.5	+1.9
	comp=Z,304nm,1.8s						
DIV	Divide	51.88	36	eP	P	12 36 42.8	+0.4
	comp=Z,75nm,1.0s						
EYAK	Cordova Ski Ar	51.95	37	eP	P	12 36 44.0	+1.2
	comp=Z,72nm,1.0s						
KPJI	Karang Pucung	52.06	222	P	P	12 36 43.3	-0.8
	comp=Z,89nm,0.9s						
HARP	HAARP	52.06	35	eP	P	12 36 45.2	+1.6
	comp=Z,69nm,0.9s						
RIDG	Independ'e Rid	52.10	33	eP	P	12 36 44.0	0.0
	comp=Z,39nm,1.1s						
DDI	Dehra Dun	52.38	284	eP	P	12 36 47.0	+0.4
KLI	Kotabumi	52.41	228	P	P	12 36 46.3	-0.5
KLI				pmax	pmax		
	comp=Z,215nm,1.1s						
KLI	Kotabumi	52.41	228	P	P	12 36 46.5	-0.3
LHSI	Lahat	52.43	230	P	P	12 36 46.8	-0.1
DOT	Dot Lake	52.46	33	eP	P	12 36 46.6	0.0
	comp=Z,22nm,0.8s						
SCRK	Sand Creek	52.46	33	eP	P	12 36 46.8	+0.1
	comp=Z,86nm,1.4s						
SFK	Sufi-Kurgan	52.52	297	P	P	12 36 47.8	+0.2
SFK				pmax	pmax		
	comp=Z,83nm,1.1s						
MDSI	Maura Dua	52.53	229	P	P	12 36 47.1	-0.6
	comp=Z,97nm,1.0s,comp=Z,863nm						
GSI	Gunungsitoli	52.62	240	eP	P	12 36 47.5	-0.9
	comp=Z,342nm,1.6s						
GSI				LR	LR		
	comp=Z,2µm,19.0s						
MASI	Maura Aman, Be	52.72	232	P	P	12 36 49.0	-0.1
SMLA	Simla	52.77	285	eP	P	12 36 49.1	-0.2
CISI	Cisompet, Garu	52.86	223	PFAKE		12 37 00.0	+10
CISI				LR	LR		
	comp=Z,1µm,21.0s						
LWLI	Liwa	53.02	229	P	P	12 36 50.3	-1.1
	comp=Z,35nm,0.5s						
DHRM	DHARAMSHALA	53.03	286	eP	P	12 36 51.1	-0.4
DZA	Taraz	53.23	301	ceP	P	12 36 51.7	-0.9
DZA				pmax	pmax		
	comp=Z,1µm,1.5s						
DZA	Taraz	53.23	301	⇑eP	P	12 36 51.7	-0.9
	comp=Z,1µm,1.5s						
BALM	Baldy	53.55	36	eP	P	12 36 55.9	+1.1
	comp=Z,39nm,1.1s						
BALM	Baldy	53.55	36	eP	P	12 36 55.9	+1.1
BALM				pmax	pmax		
	comp=Z,39nm,1.1s						
EGAK	Eagle	53.61	31	eP	P	12 36 55.3	+0.3
	comp=Z,82nm,1.5s						
NDI	New Delhi	53.70	282	eP	P	12 36 57.0	+0.8
KK31	Karatay Array	53.74	301	eP	P	12 36 56.7	+0.4
KK31	Karatay Array	53.74	301	i P	P	12 36 56.4	+0.1
KK31				pmax	pmax		
	comp=Z,246nm,1.3s						
KKAR	Karatay Array	53.74	301	eP	P	12 36 56.7	+0.4
KKAR	Karatay Array	53.74	301	eP	P	12 36 56.7	+0.4
IUG	Iuzhnay	54.37	300	c iP	P	12 36 58.8	-2.2
IUG				eS	S	12 44 37.6	+0.1
IUG				MLR	MLR		
	comp=Z,1µm,18.0s						
IUG	Iuzhnay	54.37	300	⇑iP	P	12 36 58.9	-2.2
	comp=Z,3µm,1.2s						
IUG				eS	S	12 44 37.7	+0.1
IUG				eLR	LR	13 00 47.8	
	comp=Z,1µm,18.3s						
BTK	Batken	54.46	297	eP	P	12 37 03.8	+2.1
	comp=Z,218nm,1.8s						
BTK				LR	LR		
	comp=Z,4µm,18.0s						
BTK	Batken	54.46	297	eP	P	12 37 03.8	+2.1
BTK				pmax	pmax		
	comp=Z,218nm,1.8s						
BTK				MLR	MLR		

	comp=Z,4µm,18.0s						
DAWY	**Dawson**	54.46	32	eP	P	12 37 02.4	+1.1
	comp=Z,31nm,1.4s						
CHM	**Chimkent**	54.62	300c	iP	P	12 37 02.0	-0.7
CHM				eS	S	12 44 44.0	+3.4
CHM				pmax	pmax		
	comp=Z,2µm,1.2s						
CHM				smax	smax		
	comp=N,665nm,4.9s						
CHM				MLR	MLR		
	comp=Z,325nm,16.0s						
CHM	**Chimkent**	54.62	300⇑	iP	P	12 37 02.0	-0.7
	comp=Z,2µm,1.2s						
CHM				eS	S	12 44 44.1	+3.4
	comp=Z,665nm,4.9s						
CHM				eLR	LR	13 00 58.0	
	comp=Z,325nm,15.8s						
NIL	**Nilore**	54.87	289	eP	P	12 37 05.5	+0.8
	comp=Z,146nm,0.8s						
NIL				LR	LR		
	comp=Z,1µm,19.0s						
NIL	**Nilore**	54.87	289	eP	P	12 37 05.5	+0.8
NIL				pmax	pmax		
	comp=Z,146nm,0.8s						
NIL				MLR	MLR		
	comp=Z,1µm,19.0s						
FITZ	**Fitzroy Crossi**	55.04	198	eP	P	12 37 06.5	+0.6
	comp=Z,158nm,1.4s						
WB0	**Warramunga Arr**	55.09	188	PFAKE		12 37 20.0	+14
WB0				LR	LR		
	comp=Z,900nm,21.0s						
WB9	**Warramunga Arr**	55.12	188	PFAKE		12 37 20.0	+14
WB9				LR	LR		
	comp=Z,2µm,20.0s						
WB8	**Warramunga Arr**	55.14	188	PFAKE		12 37 20.0	+13
WB8				LR	LR		
	comp=Z,1µm,20.0s						
GAR	**Garm**	55.17	296	eP	P	12 37 07.1	+0.1
	comp=Z,284nm,1.3s						
GAR	**Garm**	55.17	296	eP	P	12 37 07.1	+0.1
GAR				pmax	pmax		
	comp=Z,284nm,1.3s						
WB6	**Warramunga Arr**	55.18	188	PFAKE		12 37 20.0	+13
WB6				LR	LR		
	comp=Z,1µm,22.0s						
WB5	**Warramunga Arr**	55.20	188	PFAKE		12 37 20.0	+13
WB5				LR	LR		
	comp=Z,1µm,22.0s						
EPYK	**Eagle Plains**	55.22	29	eP	P	12 37 07.8	+1.1
	comp=Z,360nm,1.6s						
EPYK	**Eagle Plains**	55.22	29	P	P	12 37 07.4	+0.7
	baz=279,SNR=38						
WB3	**Warramunga Arr**	55.25	188	PFAKE		12 37 20.0	+13
WB3				LR	LR		
	comp=Z,1µm,22.0s						
WC2	**Warramunga Arr**	55.25	188	PFAKE		12 37 20.0	+13
WC2				LR	LR		
	comp=Z,1µm,22.0s						
WC1	**Warramunga Arr**	55.25	188	PFAKE		12 37 20.0	+13
WC1				LR	LR		
	comp=Z,1µm,22.0s						
WRAB	**Tennant Creek**	55.26	188	eP	P	12 37 07.3	-0.2
	comp=Z,227nm,1.0s						
WRAB				LR	LR		
	comp=Z,1µm,22.0s						
WRAB	**Tennant Creek**	55.26	188	eP	P	12 37 07.3	-0.2
WRAB				pmax	pmax		
	comp=Z,227nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,1µm,22.0s						
WR8	**Warramunga Arr**	55.27	187	PFAKE		12 37 20.0	+12
WR8				LR	LR		
	comp=Z,1µm,21.0s						
WR9	**Warramunga Arr**	55.27	187	PFAKE		12 37 20.0	+12
WR9				LR	LR		
	comp=Z,2µm,22.0s						
WR7	**Warramunga Arr**	55.27	187	PFAKE		12 37 20.0	+12
WR7				LR	LR		
	comp=Z,1µm,22.0s						
WB2	**Warramunga Arr**	55.27	188	eP	P	12 37 07.2	-0.3
	comp=Z,234nm,1.0s						
WR5	**Warramunga Arr**	55.27	188	PFAKE		12 37 20.0	+12
WR5				LR	LR		
	comp=Z,1µm,22.0s						
WR6	**Warramunga Arr**	55.27	188	PFAKE		12 37 20.0	+12
WR6				LR	LR		
	comp=Z,1µm,22.0s						
WR1	**Warramunga Arr**	55.27	188	eP	P	12 37 05.6	-1.9
	comp=Z,250nm,1.0s						
WR1				LR	LR		
	comp=Z,1µm,21.0s						
WR3	**Warramunga Arr**	55.27	188	PFAKE		12 37 20.0	+12
WR3				LR	LR		
	comp=Z,1µm,22.0s						
WR4	**Warramunga Arr**	55.27	188	PFAKE		12 37 20.0	+12
WR4				LR	LR		
	comp=Z,1µm,22.0s						
WRA	**Warramunga Arr**	55.27	188	P	P	12 37 05.6	-1.9
	comp=Z,171nm,0.8s,baz=5.6,slow=7.4,SNR=250						
WRA				LR	LR	13 01 10.0	
	comp=Z,494nm,18.9s,baz=330,slow=36						
WRA				P4KPbc		13 14 27.4	
	comp=Z,0.6nm,1.0s,baz=9.6,slow=4.9,SNR=4.0						
WR2	**Warramunga Arr**	55.27	188	PFAKE		12 37 20.0	+12
WR2				LR	LR		
	comp=Z,1µm,21.0s						
CTAO	**Charters Tower**	55.28	174	eP	P	12 37 07.8	+0.2
	comp=Z,38nm,1.4s						
CTAO				LR	LR		
	comp=Z,1µm,22.0s						
CTAO	**Charters Tower**	55.28	174	eP	P	12 37 07.8	+0.2
CTAO				pmax	pmax		
	comp=Z,38nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,1µm,22.0s						
WC3	**Warramunga Arr**	55.28	188	PFAKE		12 37 20.0	+12
WC3				LR	LR		
	comp=Z,1µm,20.0s						
NGP	**Nagpur**	55.58	273	eP	P	12 37 09.3	-0.6
NGP				ex	x	12 37 10.2	
NGP				ex	x	12 37 19.5	
	comp=N,58nm,0.9s						
HYT	**Haines Junctio**	55.91	36	eP	P	12 37 14.1	+2.2
	comp=N,108nm,1.6s						
BHPL	**Bhopal**	55.92	276	eP	P	12 37 11.9	-0.5
INK	**Inuvik**	56.11	27	eP	P	12 37 13.7	+0.7
	comp=N,35nm,1.0s						
INK	**Inuvik**	56.11	27	eP	P	12 37 13.7	+0.7
INK				pmax	pmax		
	comp=Z,35nm,1.0s						
CHGR	**Chuyangaron**	56.14	296	eP	P	12 37 14.3	+0.4
	comp=Z,758nm,1.3s						
SVE	**Sverdlovsk**	56.26	319d	iP	P	12 37 14.8	+0.5
SVE				eS	S	12 44 59.0	-3.2
SVE				pmax	pmax		
	comp=Z,183nm,1.1s						
SVE				MLR	MLR		
	comp=Z,3µm,16.0s						
WHY	**Whitehorse**	57.20	36	eP	P	12 37 22.9	+1.8
	comp=Z,130nm,1.8s						
SKAG	**Skagway**	57.29	37	eP	P	12 37 23.4	+1.9
	comp=Z,34nm,1.1s						
ARU	**Arti**	57.47	319	eP	P	12 37 22.7	-0.1
	comp=Z,314nm,1.2s						
ARU				LR	LR		
	comp=Z,2µm,18.0s						
ARU	**Arti**	57.47	319c	iP	P	12 37 22.8	-0.1
ARU				*PP	pP	12 37 30.8	-0.6
ARU						12 38 14.2	
ARU						12 39 31.3	
ARU				S	S	12 45 20.4	+2.2
ARU						12 47 09.3	
ARU				SS	SS	12 49 13.6	+6.0
ARU				pmax	pmax		
	comp=Z,298nm,1.2s						
ARU				MLR	MLR		
	comp=Z,3µm,16.0s						
KBL	**Kabul**	57.76	292	eP	P	12 37 25.3	-0.2
	comp=Z,129nm,1.3s						
KBL				LR	LR		
	comp=Z,1µm,19.0s						
KBL	**Kabul**	57.76	292	eP	P	12 37 25.3	-0.2
KBL				pmax	pmax		
	comp=Z,129nm,1.3s						
KBL				MLR	MLR		
	comp=Z,1µm,19.0s						
HYB	**Hyderabad**	57.84	269	i P	P	12 37 25.0	-1.1
HYB				eS	S	12 45 24.0	-0.1
HYB	**Hyderabad**	57.84	269	eP	P	12 37 25.1	-1.1
WRMHI	**West Rim**	57.85	88	PFAKE		12 37 40.0	+14
WRMHI				LR	LR		
	comp=Z,3µm,18.0s						
UWB	**Uwekahuna B**	57.85	88	PFAKE		12 37 40.0	+14
UWB				LR	LR		
	comp=Z,4µm,20.0s						
SBLHI	**Steaming Bluff**	57.86	88	PFAKE		12 37 40.0	+14
SBLHI				LR	LR		
	comp=Z,3µm,19.0s						
NPOC	**North of Pu‘u**	58.01	88	PFAKE		12 37 40.0	+13
NPOC				LR	LR		
	comp=Z,3µm,18.0s						
MDRS	**Chennai**	58.76	264	eP	P	12 37 31.3	-1.2
AB31	**Akbulak array**	58.84	311	i P	P	12 37 32.5	0.0
AB31				pmax	pmax		
	comp=Z,31nm,0.6s						
ABKAR	**Akbulak array**	58.84	311	eP	P	12 37 32.5	0.0
AS01	**Alice Springs**	58.99	188	eP	P	12 37 33.1	-0.7
AS31	**Alice Springs**	59.00	188	eP	P	12 37 33.6	-0.3
	comp=Z,13nm,0.6s						
ASAR	**Alice Springs**	59.00	188	P	P	12 37 33.6	-0.3
	comp=Z,32nm,0.9s,baz=3.1,slow=7.9,SNR=179						
ASAR				LR	LR	13 03 06.3	
	comp=Z,390nm,19.3s,baz=9.0,slow=36						
ASAR				PKPPKP	P'P'df	13 07 05.0	+4.0
	comp=Z,0.6nm,0.9s,baz=187,slow=4.1,SNR=4.2						
ASAR				P4KPbc		13 14 42.0	
	comp=Z,0.5nm,0.8s,baz=10,slow=5.7,SNR=5.0						
AKTO	**Aktyubinsk**	59.62	313	P	P	12 37 37.6	-0.3
	comp=Z,34nm,0.8s,baz=81,slow=7.0,SNR=46						
AKTO				LR	LR	13 04 43.1	
	comp=Z,2µm,18.8s,baz=64,slow=37						
MBWA	**Marble Bar**	59.64	203	eP	P	12 37 38.5	+0.2
	comp=Z,69nm,0.8s						
MBWA	**Marble Bar**	59.64	203	eP	P	12 37 37.7	-0.6
DLBC	**Dease Lake**	60.22	37	eP	P	12 37 44.9	+2.8
	comp=Z,34nm,1.2s						
EIDS	**Eidsvold**	61.06	170	eP	P	12 37 49.1	+1.2
	comp=Z,59nm,1.2s						
EIDS				LR	LR		
	comp=Z,900nm,22.0s						
POO	**Poona**	61.12	273	eP	P	12 37 48.8	0.0
KIRV	**Kirov**	61.46	323	P	P	12 37 50.7	+0.3
	comp=Z,97nm,0.5s,baz=69,slow=3.1,SNR=63						
HOPEN	**Hopen**	61.67	346	eP	P	12 37 52.0	+0.5
PALK	**Pallekele**	61.68	258	eP	P	12 37 52.7	+0.2
	comp=Z,24nm,0.8s						
PALK				LR	LR		
	comp=Z,1µm,18.0s						
PALK	**Pallekele**	61.68	258	eP	P	12 37 52.7	+0.2
PALK				pmax	pmax		
	comp=Z,24nm,0.8s						
PALK				MLR	MLR		
	comp=Z,1µm,18.0s						
DZM	**Mont Dzumac**	61.92	153	eP	P	12 37 54.2	+0.3
	comp=Z,197nm,1.2s						
DZM				eS	S	12 46 18.2	+2.0
	comp=Z,2µm,29.1s						
DZM				eLQ	LQ	12 53 26.2	
	comp=Z,2µm,42.8s						
DZM				eLR	LR	12 56 19.8	
	comp=Z,2µm,24.6s						
DZM	**Mont Dzumac**	61.92	153	eP	P	12 37 55.9	+1.9
	comp=Z,101nm,1.2s						
DZM				LR	LR		
	comp=Z,1µm,20.0s						
PRGR	**Permogore**	62.07	327⇑	iP	P	12 37 54.5	+0.1
PRGR				e*PP	pP	12 38 02.8	-0.2
PRGR				pmax	pmax		
	comp=Z,113nm,1.3s						
SPA0	**Spitsbergen Ar**	62.19	349	eP	P	12 37 56.2	+1.2
SPA0	**Spitsbergen Ar**	62.19	349	eP	P	12 37 53.2	-1.8
SPITS	**Spitsbergen Ar**	62.19	349	P	P	12 37 55.6	+0.6
SPITS	**Spitsbergen Ar**	62.19	349	LR	LR	13 08 52.7	
	comp=Z,2µm,18.2s,baz=170,slow=40						
BHJ	**Bhuj**	62.21	280	eP	P	12 37 56.2	+0.3
KBS	**Kingsbay**	62.34	350	eP	P	12 37 57.0	+1.0
	comp=Z,100nm,0.9s						
KBS				LR	LR		
	comp=Z,1µm,21.0s						
KBS	**Kingsbay**	62.34	350	eP	P	12 37 57.0	+1.0
KBS				pmax	pmax		
	comp=Z,100nm,0.9s						
KBS				MLR	MLR		
	comp=Z,1µm,21.0s						
KBS	**Kingsbay**	62.34	350	eP	P	12 37 57.1	+1.1
OUENC	**Ouen Island, N**	62.38	153	eP	P	12 37 55.1	-1.8
GOA	**Goa**	62.71	270	eP	P	12 37 59.8	+0.4
HSPB	**Hornsund (broa**	63.10	348	eP	P	12 38 01.7	+0.6
HSPB				MLR	MLR		
	comp=Z,3µm,18.2s						
HSPB	**Hornsund (broa**	63.10	348	eP	P	12 38 02.2	+1.2
MSVF	**Nonsavu**	63.35	140	eP	P	12 38 06.4	+2.8
	comp=Z,87nm,1.4s						
MSVF	**Nonsavu**	63.35	140	eP	P	12 38 06.4	+2.8
MSVF				pmax	pmax		
	comp=Z,87nm,1.4s						
LVZ	**Lovozero**	63.59	336	PFAKE		12 38 20.0	+16
LVZ				LR	LR		
	comp=Z,4µm,19.0s						
TRD	**Trivandrum**	63.98	262	eP	P	12 38 07.9	+0.1
TMCR	**Tamitsa**	64.14	332	eP	P	12 38 06.0	-2.1
TMCR				pmax	pmax		
	comp=Z,218nm,1.5s						
APA	**Apatity**	64.16	336⇓	iP	P	12 38 07.9	-0.3
APA				i		12 40 39.0	
APA				i PPP	PPP	12 42 09.0	
APA				i S	S	12 46 40.0	-3.2
APA				i SS	SS	12 50 57.0	+5.2
APA				pmax	pmax		
	comp=Z,52nm,0.9s						
APA				MLR	MLR		
	comp=Z,5µm,16.0s						
RES	**Resolute Bay**	64.39	14	eP	P	12 38 09.7	+0.1
	comp=Z,106nm,1.0s						
RES	**Resolute Bay**	64.39	14	eP	P	12 38 09.7	+0.1
RES				pmax	pmax		
	comp=Z,106nm,1.0s						
GEYT	**Alibeck**	64.41	300	P	P	12 38 09.9	-0.5
	comp=Z,54nm,1.0s,baz=56,slow=3.7,SNR=65						
GEYT				LR	LR	13 08 18.1	
	comp=Z,2µm,19.0s,baz=50,slow=38						
GYA0B	**ALIBECK ARRAY**	64.41	300	eP	P	12 38 11.1	+0.7
	comp=Z,87nm,1.0s						
GYA0B				LR	LR		
	comp=Z,2µm,19.0s						
KEV	**Kevo**	64.98	339	eP	P	12 38 14.2	+0.8
	comp=Z,74nm,1.1s						
KEV				LR	LR		
	comp=Z,3µm,18.0s						
KEV	**Kevo**	64.98	339	eP	P	12 38 14.3	+0.8
KEV				pmax	pmax		
	comp=Z,74nm,1.1s						
KEV				MLR	MLR		
	comp=Z,3µm,18.0s						
KEV	**Kevo**	64.98	339	eP	P	12 38 14.1	+0.7
KLMR	**Klimovskoe**	65.08	328	eP	P	12 38 10.8	-3.4
KLMR				pmax	pmax		
	comp=Z,98nm,1.2s						
KLMR	**Klimovskoe**	65.08	328	eP	P	12 38 10.9	-3.3
KLMR				AMP		12 38 15.9	
	comp=Z,98nm,1.2s						
KLMR				ePP	PP	12 40 31.9	-5.2
YKW3	**Yellowknife Ar**	65.46	30	eP	P	12 38 16.7	0.0
	comp=Z,39nm,1.5s						
YKA	**Yellowknife Ar**	65.50	30	P	P	12 38 16.9	-0.1
	comp=Z,5.2nm,0.7s,baz=300,slow=6.3,SNR=74						
YKA				PKPPKP		13 06 53.2	
	comp=Z,0.4nm,0.9s,baz=118,slow=3.6,SNR=3.9						
YKB5	**Yellowknife Ar**	65.50	30	eP	P	12 38 15.5	-1.4
ARA0	**ARCESS Array S**	65.53	340	eP	P	12 38 17.6	+0.4
ARA0				ePP	PP	12 40 40.0	-0.9
ARCES	**ARCESS Array B**	65.53	340	P	P	12 38 17.6	+0.5
ARCES						12 40 40.1	
ARCES				pmax	pmax		
	comp=Z,36nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,2µm,19.1s						
ARCES	**ARCESS Array B**	65.53	340	P	P	12 38 17.6	+0.5
	comp=Z,36nm,0.9s,baz=51,slow=8.0,SNR=40						
ARCES				PP	PP	12 40 40.0	-0.9
	comp=Z,13nm,1.0s,baz=48,slow=9.9,SNR=5.0						
ARCES				LR	LR	13 10 22.2	
	comp=Z,2µm,19.1s,baz=45,slow=39						
ARE0	**ARCESS Array S**	65.53	340	eP	P	12 38 17.8	+0.7
	comp=Z,2.4nm,0.9s						
ARE0				LR	LR		
	comp=Z,100nm,18.0s						
ARE0	**ARCESS Array S**	65.53	340	eP	P	12 38 17.7	+0.6
ARMA	**Armidale**	66.10	170	eP	P	12 38 22.7	+1.5
	comp=Z,39nm,1.0s						
SGF	**Sodankyl**	66.45	337	P	P	12 38 23.4	+0.4
SGF				pmax	pmax		
	comp=Z,130nm,1.2s						
KTK1	**Kautokeino**	66.49	340	eP	P	12 38 23.7	+0.4
MSF	**Maaselka**	66.51	335	P	P	12 38 23.9	+0.4
MSF				pmax	pmax		
	comp=Z,120nm,1.5s						
STKA	**Stephens Creek**	66.79	179	eP	P	12 38 25.6	+0.1
	comp=Z,4.9nm,1.0s						
STKA	**Stephens Creek**	66.79	179	eP	P	12 38 25.6	+0.1
STKA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
STKA	**Stephens Creek**	66.79	179	P	P	12 38 25.6	+0.1
	comp=Z,17nm,0.9s,baz=352,slow=8.5,SNR=16						
STKA				LR	LR	13 06 41.3	
	comp=Z,1µm,21.4s,baz=0.7,slow=35						
FORT	**Forrest**	66.82	192	eP	P	12 38 26.0	+0.3
	comp=Z,134nm,0.8s						
TULEG	**Thule**	66.89	7	eP	P	12 38 25.2	-0.5
	comp=Z,50nm,1.0s						
TULEG				LR	LR		
	comp=Z,2µm,19.0s						
MNCI	**Minicoy**	67.28	264	eP	P	12 38 30.0	+0.9
	comp=Z,250nm,1.3s						
TRO	**Tromso**	67.28	341	P	P	12 38 28.8	+0.6
TRO				pmax	pmax		
	comp=Z,3.0nm,1.4s						
TRO	**Tromso**	67.28	341	eP	P	12 38 28.6	+0.4
MNCY	**Minicoy**	67.31	264	eP	P	12 38 29.0	-0.2
JOF	**Joensuu**	67.37	332	P	P	12 38 28.8	-0.1
JOF				pmax	pmax		
	comp=Z,102nm,1.4s						
DAG	**Danmarks Havn**	67.50	355⇑	iP	P	12 38 29.7	+0.1
	comp=Z,100nm,1.2s						
DAG	**Danmarks Havn**	67.50	355⇑	iP	P	12 38 29.7	+0.1
DAG				pmax	pmax		
	comp=Z,160nm,1.2s						
LLLB	**Lillooet**	67.76	43	eP	P	12 38 32.1	+0.4
	comp=Z,8.9nm,0.8s						
BBOO	**Buckleboo**	67.88	185	eP	P	12 38 32.9	+0.5
	comp=Z,32nm,0.9s						
OUL	**Oulu**	68.06	336	P	P	12 38 33.4	+0.2
OUL				pmax	pmax		
	comp=Z,132nm,1.1s						
NLWA	**Neilton Lookou**	68.15	47	eP	P	12 38 36.1	+1.9
	comp=Z,66nm,1.3s						
MORW	**Morawa**	68.19	203	eP	P	12 38 34.7	+0.3
	comp=Z,132nm,1.8s						
MOS	**Moscow**	68.47	324	eP	P	12 38 35.0	-1.0
MOS				e		12 39 00.5	
MOS				e		12 41 04.4	
MOS				eS	S	12 47 32.5	-3.3
MOS				pmax	pmax		
	comp=Z,500nm,1.7s						
MOS				pmax	pmax		
	comp=Z,211nm,1.4s						
MOS				pmax	pmax		
	comp=N,100nm,1.2s						
MOS				pmax	pmax		
	comp=N,89nm,1.1s						
MOS				MLR	MLR		
	comp=E,5µm,16.0s						
MOS				MLR	MLR		
	comp=Z,2µm,16.0s						
D03D	**Eldon**	68.55	46	P	P	12 38 37.6	+1.0
	baz=299,SNR=8.1						
VRH	**Novokhopyorsk**	68.67	318	eP	P	12 38 36.3	-1.0
VRH				pmax	pmax		
	comp=Z,180nm,1.5s						
VRH				MLR	MLR		
	comp=Z,3µm,14.0s						
B05A	**Bryant**	68.77	45	P	P	12 38 38.9	+0.9
	baz=300,SNR=8.2						
D04E	**Lakebay**	68.91	47	P	P	12 38 38.7	-0.2
	baz=299						
B06A	**Marblemount**	69.00	45	eP	P	12 38 40.7	+1.3
	comp=Z,30nm,0.9s						
MAK	**Makhachkala**	69.29	308	eP	P	12 38 42.2	+0.9
MAK				eS	S	12 47 47.9	+2.0
MAK				pmax	pmax		
	comp=Z,188nm,1.1s						
F04D	**Rainier, OR**	69.30	48	P	P	12 38 41.2	-0.1
	baz=300						
OBN	**Obninsk**	69.31	324	eP	P	12 38 41.7	+0.5
	comp=Z,185nm,1.3s						
OBN				LR	LR		
	comp=Z,2µm,19.0s						
OBN	**Obninsk**	69.31	324c	eP	P	12 38 40.9	-0.3
OBN				e		12 39 03.3	
OBN				e		12 41 13.2	
OBN				ePPP	PPP	12 42 54.8	
OBN				pmax	pmax		
	comp=Z,194nm,1.7s						
OBN				MLR	MLR		
	comp=Z,2µm,15.0s						
OBN	**Obninsk**	69.31	324	P	P	12 38 41.7	+0.5
	comp=Z,7.9nm,0.3s,baz=40,slow=3.7,SNR=21						
E04D	**Cinebar**	69.34	47	P	P	12 38 42.6	+1.0
	baz=300						
D05A	**Enumclaw**	69.37	46	eP	P	12 38 43.5	+1.8
	comp=Z,119nm,1.6s						
SUF	**Sumiainen**	69.41	333	P	P	12 38 41.7	0.0
SUF				pmax	pmax		
	comp=Z,106nm,1.2s						
STEI	**Steigen**	69.42	341	eP	P	12 38 42.0	+0.3
LPSR	**Galich'ya Gora**	69.45	320	eP	P	12 38 41.5	-0.6
LPSR				pmax	pmax		
	comp=Z,150nm,1.2s						
LPSR				MLR	MLR		
	comp=Z,5µm,16.0s						
PUL	**Pulkovo**	69.55	330⇑	eP	P	12 38 43.6	+1.0
PUL				pmax	pmax		
	comp=Z,177nm,0.4s						
G03D	**McMinnville, O**	69.58	49	P	P	12 38 43.8	+0.7
	baz=300						
C06D	**Leavenworth**	69.64	45	P	P	12 38 44.2	+0.8
	baz=300						
LOF	**Lofoten**	69.73	342	eP	P	12 38 44.1	+0.6
KULLO	**Kullorsuaq**	69.76	5⇑	iP	P	12 38 43.7	0.0
	comp=Z,113nm,1.1s						
	comp=Z,2µm,19.0s						
KULLO	**Kullorsuaq**	69.76	5⇑	iP	P	12 38 43.7	0.0
KULLO				pmax	pmax		
	comp=Z,110nm,1.1s						
KULLO				MLR	MLR		
	comp=Z,2µm,19.0s						
I02D	**Swisshome**	69.77	50	P	P	12 38 45.3	+1.1
	baz=300						
VSR	**Storozhevoye**	70.05	319	eP	P	12 38 44.7	-1.1
VSR				pmax	pmax		
	comp=Z,140nm,1.2s						
VSR				MLR	MLR		
	comp=Z,3µm,15.0s						
LTY	**Liberty**	70.11	46	eP	P	12 38 47.4	+1.0
	comp=Z,72nm,1.7s						
J01E	**Myrtle Point**	70.18	51	P	P	12 38 48.0	+1.2
	baz=300						
FIA1	**FINESS Array S**	70.22	332	eP	P	12 38 46.8	+0.1
FIA0	**FINESS Array S**	70.22	332	eP	P	12 38 46.9	+0.2
FIA0	**FINESS Array S**	70.22	332	eP	P	12 38 46.9	+0.2
FINES	**FINESS Array B**	70.22	332	P	P	12 38 46.9	+0.2
	comp=Z,92nm,1.0s,baz=58,slow=7.2,SNR=84						
FINES				LR	LR	13 14 07.8	
	comp=Z,2µm,18.5s,baz=27,slow=40						
H04D	**Lebanon**	70.25	49	P	P	12 38 48.7	+1.5
	baz=300						
GROC	**Groznyy**	70.26	309	eP	P	12 38 46.2	-1.1
GROC				e		12 39 07.4	
GROC				pmax	pmax		
	comp=Z,113nm,1.2s						
I03D	**Drain, OR**	70.28	50	P	P	12 38 48.6	+1.2
	baz=300						
B08A	**Colville Reser**	70.32	44	eP	P	12 38 48.4	+0.7
	comp=Z,46nm,1.4s						
F05D	**White Salmon**	70.34	47	P	P	12 38 48.6	+0.9
	baz=301						
SEKA	**Sheki**	70.36	307	P	P	12 38 47.9	-0.1
VAF	**Ylistaro**	70.45	335	P	P	12 38 48.4	+0.4

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VAF                              pmax    pmax
      comp=Z,104nm,1.1s
H04A  Detroit Lake     70.51  49 eP      P        12 38 50.2 +1.4
      comp=Z,33nm,0.9s
ZKTA  Zakatala         70.52 308  P      P        12 38 49.1 +0.2
LKRN  Lenkeran, Azer   70.54 304  P      P        12 38 49.1  0.0
K02D  Willamette Mer   70.59  51  P      P        12 38 50.3 +0.9
      baz=300
CAN   Canberra         70.62 173  PFAKE           12 39 00.0  +11
CAN                               LR     LR
      comp=Z,1µm,22.0s
G05D  Wamic, OR        70.75  48  P      P        12 38 51.2 +0.8
      baz=301
I04A  Tendick Farm,    70.82  50  P      P        12 38 51.3 +0.5
      baz=301,SNR=5.0
L02E  Cave Junction    70.90  52  P      P        12 38 51.8 +0.5
      baz=301
MOR8  Moi Rana         70.90 340 eP      P        12 38 50.0 -0.8
E07A  Sunnyside        70.95  46 eP      P        12 38 52.8 +1.3
      comp=Z,19nm,0.9s
JLN   Jalan Bani Buh   70.95 284  P      P        12 38 52.4 +0.5
      SNR=12
JLN                               P      P        12 38 52.4 +0.5
      SNR=12
WSAR  Wadi Sarin       71.02 285  P      P        12 38 53.0 +0.8
      SNR=12
WSAR  Wadi Sarin       71.02 285  P      P        12 38 53.0 +0.8
      comp=Z,37nm,1.1s,baz=87,slow=5.3,SNR=21
GOF   Gofitskoye       71.03 312 eP      P        12 38 52.1 +0.2
GOF                               pmax   pmax
      comp=Z,130nm,1.0s
KONS  Konsvik          71.03 340 eP      P        12 38 51.9 +0.4
I05D  Terrebonne, OR   71.20  49  P      P        12 38 53.0 -0.1
      baz=301
GANJ  Ganja            71.21 307  P      P        12 38 53.6 +0.4
C09A  Chrisman Ranch   71.22  44 eP      P        12 38 54.2 +1.1
      comp=Z,24nm,0.8s
HAWA  Hanford          71.23  46 eP      P        12 38 54.4 +1.3
      comp=Z,24nm,1.2s
D08A  Wollman Farm,    71.24  45 eP      P        12 38 54.2 +1.0
      comp=Z,17nm,0.8s
F07A  Phinny Hill Vi   71.25  47 eP      P        12 38 54.9 +1.6
      comp=Z,39nm,1.1s
BIDO  Bidbid           71.27 286  P      P        12 38 55.2 +1.4
      SNR=17
NWAO  Narrogin (SRO)   71.41 201 eP      P        12 38 54.6 +0.4
      comp=Z,35nm,0.8s
NWAO  Narrogin (SRO)   71.41 201 eP      P        12 38 54.6 +0.4
NWAO                              pmax   pmax
      comp=Z,35nm,0.8s
E08A  Dider Farm, El   71.45  46 eP      P        12 38 55.8 +1.3
      comp=Z,14nm,0.8s
BANOM Banah            71.47 289  P      P        12 38 55.5 +0.6
      SNR=9.8
NEW   Newport          71.62  44 eP      P        12 38 56.9 +1.3
      comp=Z,64nm,1.7s
NEW   Newport          71.62  44 eP      P        12 38 56.9 +1.3
NEW                               pmax   pmax
      comp=Z,64nm,1.7s
NEW   Newport          71.62  44  P      P        12 38 55.8 +0.2
      baz=303,SNR=11
ZEI   Tsey             71.67 310 eP      P        12 38 52.4 -3.7
ZEI                               pmax   pmax
      comp=Z,54nm,1.0s
TBLG  Delisi           71.68 308 eP      P        12 38 56.8 +0.7
TBLG  Delisi           71.68 308 eP      P        12 38 56.7 +0.7
      comp=Z,102nm,1.1s
TBLG  Delisi           71.68 308 eP      P        12 38 56.7 +0.7
TBLG                              pmax   pmax
      comp=Z,103nm,1.1s
YBH   Yreka Blue Hor   71.69  52 eP      P        12 38 58.0 +1.9
      comp=Z,25nm,1.0s
L04D  Klamath Falls    71.69  51  P      P        12 38 56.6 +0.4
      baz=301
PINE  Pine Mountain    71.73  49 eP      P        12 38 57.6 +1.2
      comp=Z,57nm,0.9s
M02C  Callahan         71.77  52  P      P        12 38 57.5 +0.9
      baz=301
KBZ   Khabaz           71.81 311  P      P        12 38 57.2 +0.6
      comp=Z,72nm,0.9s,baz=58,slow=3.9,SNR=81
KBZ                               LR     LR       13 14 15.6
      comp=Z,1µm,19.0s,baz=45,slow=39
VSU   Vasula           71.81 330⇑eP      P        12 38 56.7 +0.3
VSU                               pmax   pmax
      comp=Z,423nm,1.1s
VSU   Vasula           71.81 330 eP      P        12 38 56.2 -0.2
VSU                               IAmb   IAmb     12 38 58.4
      comp=Z,411nm,1.1s
KVAR  Kislovodsk Arr   71.81 311  P      P        12 38 57.4 +0.6
      comp=Z,72nm,1.0s,baz=233,slow=10,SNR=39
J05D  Fort Rock, OR    71.81  50  P      P        12 38 58.0 +1.0
      baz=302,SNR=6.4
KIV   Kislovodsk       71.82 311 eP      P        12 38 57.7 +0.8
KIV   Kislovodsk       71.82 311 eP      P        12 38 57.4 +0.6
      comp=Z,183nm,1.0s
KIV                               LR     LR
      comp=Z,1µm,18.0s
KIV   Kislovodsk       71.82 311⇑iP      P        12 38 58.0 +1.1
KIV   Kislovodsk       71.82 311 eP      P        12 38 57.5 +0.6
KIV                              eS      S        12 48 15.6  0.0
KIV                               pmax   pmax
      comp=Z,199nm,1.1s
KIV                               pmax   pmax
      comp=Z,51nm,3.0s
KIV   Kislovodsk       71.82 311  P      P        12 38 57.6 +0.7
      SNR=32
KIV                               P      P        12 38 57.6 +0.7
      SNR=32
K04D  Chiloquin, OR    71.83  50  P      P        12 38 57.9 +0.8
      baz=301
E09A  Wood Farm, Sta   71.98  46 eP      P        12 38 58.5 +0.9
      comp=Z,28nm,0.9s
UOSS  Minazif          72.04 288 eP      P        12 38 59.0 +0.6
      comp=Z,53nm,1.1s
UOSS                              LR     LR
      comp=Z,1µm,22.0s
UOSS  Minazif          72.04 288  P      P        12 38 57.9 -0.5
      SNR=10.0
UOSS                              P      P        12 38 57.9 -0.5
      SNR=10.0
N02D  Trinity Center   72.08  52  P      P        12 38 59.7 +1.2
      baz=301
G08A  Pilot Rock       72.15  47 eP      P        12 38 59.0 +0.2
      comp=Z,14nm,1.0s
HATD  Hatta, Dubai     72.16 288  P      P        12 38 59.5 +0.4
      SNR=18
HATD                              P      P        12 38 59.5 +0.4
      SNR=18
M04C  Macdoel          72.22  51  P      P        12 38 59.6 +0.3
      baz=302,SNR=6.9
ASHO  Ashiyiah         72.29 288  P      P        12 38 59.4 -0.5
      SNR=20
WDC   Whiskeytown Da   72.39  53 eP      P        12 39 01.8 +1.5
      comp=Z,42nm,1.3s
NAZ   Nazwa, Dubai     72.44 288  P      P        12 39 01.0 +0.2
      SNR=8.6
NAZ                               P      P        12 39 01.0 +0.2
      SNR=8.6
O02D  Mt. Diablo Mer   72.44  53  P      P        12 39 00.2 -0.5
      baz=302
SUMG  Summit           72.45 360 eP      P        12 39 01.5 +1.0
      comp=Z,184nm,1.2s
SUMG                              LR     LR
      comp=Z,3µm,20.0s
SUMG  Summit           72.45 360⇑iP      P        12 39 01.7 +1.2
      comp=Z,366nm,1.1s
      comp=Z,8µm,21.0s
SUMG  Summit           72.45 360 eP      P        12 39 01.5 +1.0
SUMG                              pmax   pmax
      comp=Z,184nm,1.2s
SUMG                              MLR    MLR
      comp=Z,3µm,20.0s
I07A  Izee             72.46  48 eP      P        12 39 01.5 +0.7
      comp=Z,14nm,1.0s
GNI   Garni            72.50 307 eP      P        12 39 02.4 +1.3
GNI   Garni            72.50 307 eP      P        12 39 01.7 +0.6
GNI                               LR     LR
      comp=Z,2µm,19.0s
GNI   Garni            72.50 307 eP      P        12 39 01.7 +0.6
GNI                               MLR    MLR
      comp=Z,2µm,19.0s
GNI   Garni            72.50 307  P      P        12 39 02.3 +1.2
      SNR=12
GNI                               P      P        12 39 02.3 +1.2
      SNR=12
GNI   Garni            72.50 307  P      P        12 39 01.7 +0.6
      comp=Z,61nm,1.0s,baz=216,slow=2.5,SNR=21
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NAX   Nakhchivan       72.51 306  P      P        12 39 01.5 +0.4
TOO   Toolangi         72.59 176 eP      P        12 39 02.5 +1.3
      comp=Z,57nm,1.4s
TOO   Toolangi         72.59 176 eP      P        12 39 02.5 +1.3
TOO                               pmax   pmax
      comp=Z,57nm,1.4s
FAQ   Al Faqa, Dubai   72.62 288  P      P        12 39 01.9  0.0
      SNR=6.9
FAQ                               P      P        12 39 01.9  0.0
      SNR=6.9
BGD   Bogdanovka       72.66 308 eP      P        12 39 03.8 +1.7
MHTO  MHTO             72.70 284  P      P        12 39 02.6 +0.2
      SNR=29
MHTO                              P      P        12 39 02.6 +0.2
      SNR=29
F10A  Beach Ranch, E   72.80  46 eP      P        12 39 03.7 +1.0
      comp=Z,19nm,1.1s
NSS   Namsos           72.82 339 eP      P        12 39 02.5 +0.2
ASUD  Al Ashush, Dub   72.89 288  P      P        12 39 03.8 +0.4
      SNR=6.9
ASUD                              P      P        12 39 03.8 +0.4
      SNR=6.9
WALA  Waterton Lakes   72.97  42 eP      P        12 39 04.7 +1.0
      comp=Z,24nm,1.1s
O03E  Paynes Creek     73.02  53  P      P        12 39 04.0 -0.1
      baz=302,SNR=7.1
MOD   Modoc Plateau    73.13  50 eP      P        12 39 06.2 +1.4
      comp=Z,17nm,0.8s
BMO   Blue Mountains   73.37  47 eP      P        12 39 06.7 +0.6
      comp=Z,14nm,0.9s
BMO   Blue Mountains   73.37  47 eP      P        12 39 06.7 +0.6
BMO                               pmax   pmax
      comp=Z,14nm,0.9s
J08A  Circle Bar Ran   73.48  48 eP      P        12 39 08.1 +1.3
      comp=Z,37nm,1.0s
CLDR  Caldiran         73.57 306 eP      P        12 39 09.1 +1.6
ORV   Oroville         73.61  53 eP      P        12 39 07.9 +0.4
      comp=Z,19nm,0.8s
ORV   Oroville         73.61  53 eP      P        12 39 07.9 +0.4
ORV                               pmax   pmax
      comp=Z,19nm,0.8s
BATM  Batumi           73.69 310 eP      P        12 39 08.0 +0.1
IZAR  Zarasai          73.72 328 eP      P        12 39 08.2 +0.5
IZAR                              IAmb   IAmb     12 39 09.9
      comp=Z,25nm,0.6s
MICGM Minsk            73.77 326⇓eP      P        12 39 08.0 -0.1
MICGM                             PM              12 39 09.0
      comp=Z,0.6nm,1.0s
MICGM                            ePcP    PcP      12 39 22.0 -1.7
MICGM                            ePP     PP       12 41 50.0 -2.2
MICGM                            eS      SKiKP    12 48 36.0 +0.7
MICGM                            ePS              12 49 50.0
MICGM                            eLR     LR       13 11 54.0
MICGM                             LRM    MLR      13 17 12.0
      comp=Z,2.8nm,18.0s
MNK   Minsk            73.77 326⇓eP      P        12 39 08.0 -0.1
MNK                              e                12 39 22.0
MNK                              e                12 41 50.0
MNK                              eS      SKiKP    12 48 36.0 +0.7
MNK                               pmax   pmax
      comp=Z,570nm,1.0s
IDID  Didziasalis      73.78 327 eP      P        12 39 08.6 +0.5
IDID                              IAmb   IAmb     12 39 10.4
      comp=Z,24nm,0.8s
BCA   Borcka           73.82 309 eP      P        12 39 09.4 +0.7
BCA   Borcka           73.82 309⇑iP      P        12 39 09.2 +0.5
SCO   Scoresbysund     73.83 354 eP      P        12 39 09.4 +1.3
      comp=Z,216nm,1.7s
SCO   Scoresbysund     73.83 354 i P     P        12 39 09.6 +1.4
      comp=Z,191nm,1.6s
SCO   Scoresbysund     73.83 354 eP      P        12 39 09.4 +1.3
SCO                               pmax   pmax
      comp=Z,216nm,1.7s
SOC   Sochi            73.83 312c iP     P        12 39 08.5 -0.2
SOC                              ePPP    PPP      12 43 34.7
SOC                              eS      SKiKP    12 48 34.4 -1.3
SOC                              eSS     SS       12 53 21.6 -0.2
SOC                               pmax   pmax
      comp=Z,52nm,0.8s
SOC                               MLR    MLR
      comp=Z,1µm,18.0s
WVOR  Wild Horse Val   73.88  49 eP      P        12 39 10.6 +1.4
      comp=Z,30nm,1.2s
WVOR  Wild Horse Val   73.88  49 eP      P        12 39 10.6 +1.4
WVOR                              pmax   pmax
      comp=Z,30nm,1.2s
ISAL  Salakas          73.89 328 eP      P        12 39 09.2 +0.5
ISAL                              IAmb   IAmb     12 39 11.0
      comp=Z,49nm,0.8s
AGRB  Hanur-Agry       73.95 307 eP      P        12 39 11.1 +1.4
IIGN  Ignalina         73.98 327 eP      P        12 39 09.8 +0.5
IIGN                              IAmb   IAmb     12 39 11.5
      comp=Z,34nm,0.8s
SLIT  Slitere, Latvi   74.16 331 eP      P        12 39 09.6 -0.6
SLIT                              IAmb   IAmb     12 39 11.7
      comp=Z,443nm,0.7s
BEKR  Beckworth        74.19  52 eP      P        12 39 12.3 +1.3
      comp=Z,32nm,0.9s
MSO   Missoula         74.22  44 eP      P        12 39 11.8 +0.8
      comp=Z,10nm,0.9s
MSO   Missoula         74.22  44  P      P        12 39 11.1 +0.1
      baz=305
TBLU  Trondheim        74.28 339 eP      P        12 39 10.7 -0.3
AFDM  Forest Hills D   74.28  53 eP      P        12 39 12.6 +1.2
      comp=Z,17nm,1.2s
KOPR  Koprukoy-ERZUR   74.46 308 eP      P        12 39 13.9 +1.3
ANN   Anapa            74.52 314c iP     P        12 39 12.4 -0.2
ANN                              e*PP    sP       12 39 22.1 -2.2
ANN                              e                12 41 56.1
ANN                              eS      S        12 48 42.3 -3.7
ANN                               pmax   pmax
      comp=Z,118nm,1.3s
CHOM  Cayeli-Rize      74.55 310 eP      P        12 39 14.0 +1.0
AKDM  Akdamar-Van      74.63 306 eP      P        12 39 14.9 +1.3
PAHR  Pah Rah Range    74.90  52 eP      P        12 39 16.5 +1.3
      comp=Z,22nm,0.9s
VCNR  Virginia City    74.96  52 eP      P        12 39 17.3 +1.7
      comp=Z,16nm,0.9s
PNTR  Pine Nut         75.10  53 eP      P        12 39 18.0 +1.6
      comp=Z,29nm,1.0s
GURO  Guroymak-BITLI   75.13 307 eP      P        12 39 17.9 +1.4
CMB   Columbia Colle   75.17  54 eP      P        12 39 18.0 +1.4
      comp=Z,41nm,1.1s
CMB   Columbia Colle   75.17  54  P      P        12 39 18.0 +1.4
VRTB  Varto-Mus        75.17 308 eP      P        12 39 18.6 +1.9
MZR   Muzera           75.18 288  P      P        12 39 18.1 +1.3
      SNR=8.0
FFC   Flin Flon        75.37  32 eP      P        12 39 18.0 +0.7
      comp=Z,51nm,1.3s
PBUR  Paburg           75.38 330 eP      P        12 39 16.5 -0.9
PBUR                              IAmb   IAmb     12 39 18.2
      comp=Z,112nm,0.8s
YERR  Yerington        75.39  53 eP      P        12 39 19.6 +1.5
      comp=Z,34nm,0.9s
ILULI Ilulissat        75.44   4 eP      P        12 39 18.4 +0.9
      comp=Z,108nm,1.3s
ILULI                             LR     LR
      comp=Z,2µm,19.0s
ILULI Ilulissat        75.44   4 i P     P        12 39 17.7 +0.2
      comp=Z,107nm,1.3s
      comp=Z,2µm,24.0s
ILULI Ilulissat        75.44   4 i P     P        12 39 17.7 +0.2
ILULI                             pmax   pmax
      comp=Z,110nm,1.3s
ILULI                             MLR    MLR
      comp=Z,2µm,24.0s
HRY   Holter Researc   75.46  43 eP      P        12 39 19.5 +1.3
NC405 NORSAR Array S   75.47 337 eP      P        12 39 18.3 +0.4
AKASG Malin Array Be   75.49 322  P      P        12 39 17.9 -0.3
      comp=Z,39nm,0.7s,baz=48,slow=6.0,SNR=172
AKASG                             LR     LR       13 15 29.2
      comp=Z,4µm,18.9s,baz=45,slow=38
AKBB  Malin Array Si   75.49 322 eP      P        12 39 17.9 -0.2
      comp=Z,182nm,1.3s
AKBB                              LR     LR
      comp=Z,4µm,18.0s
NC303 NORSAR Array S   75.50 337 eP      P        12 39 18.1 +0.1
KIEV  Kiev             75.50 322 eP      P        12 39 17.9 -0.3
      comp=Z,146nm,1.2s
KIEV                              LR     LR
      comp=Z,4µm,18.0s
KIEV  Kiev             75.50 322⇑iP      P        12 39 18.5 +0.3
KIEV  Kiev             75.50 322 i P     P        12 39 17.7 -0.5
KIEV                              pmax   pmax
      comp=Z,148nm,1.3s
WAKR  Walker           75.53  53 eP      P        12 39 20.6 +1.7
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      comp=Z,19nm,0.8s
AK11  Malin Array Si   75.54 322 eP      P        12 39 17.8 -0.6
HFS   Hagfors          75.56 336  P      P        12 39 18.7 +0.3
      comp=Z,76nm,1.0s,baz=98,slow=2.2,SNR=50
HFS                               LR     LR       13 15 07.8
      comp=Z,3µm,19.6s,baz=28,slow=38
DOMB  Dombas           75.57 339 eP      P        12 39 19.1 +0.6
MOL   Molde            75.59 340 eP      P        12 39 19.4 +0.9
YEDI  Yedisu-Bingol    75.61 308 eP      P        12 39 20.5 +1.2
LRM   Limekiln Ridge   75.64  44 eP      P        12 39 20.3 +0.9
NC204 NORSAR Array S   75.65 338 eP      P        12 39 19.5 +0.5
NB201 NORSAR Array S   75.65 337 eP      P        12 39 19.1 +0.1
NB2   NORSAR Subarra   75.69 337  P      P        12 39 19.1  0.0
      comp=Z,225nm,1.2s,baz=41,slow=5.9
NB2   NORSAR Subarra   75.69 337  P      P        12 39 19.1  0.0
      baz=41,slow=5.9
NB200 NORSAR Array S   75.69 337 eP      P        12 39 19.2 +0.1
NB200                            ePP     PP       12 42 08.7 +0.4
NOA   NORSAR Array B   75.69 337  P      P        12 39 19.2 +0.1
      comp=Z,53nm,0.9s,baz=39,slow=5.7,SNR=92
NOA                               PP     PP       12 42 08.7 +0.4
      comp=Z,13nm,1.0s,baz=40,slow=8.7,SNR=4.6
NOA                               LR     LR       13 15 35.2
      comp=Z,3µm,19.9s,baz=45,slow=38
FCC   Fort Churchill   75.72  26 eP      P        12 39 19.3  0.0
      comp=Z,84nm,1.4s
FCC   Fort Churchill   75.72  26 eP      P        12 39 19.3  0.0
FCC                               pmax   pmax
      comp=Z,84nm,1.4s
BNGB  Bingl            75.77 308 eP      P        12 39 20.2 +0.1
EGMT  Eagleton         75.81  41 eP      P        12 39 20.8 +0.6
      comp=Z,86nm,1.4s
EGMT  Eagleton         75.81  41  P      P        12 39 20.4 +0.2
      baz=307,SNR=11
NC602 NORSAR Array S   75.81 337 eP      P        12 39 20.0 +0.2
NC602 NORSAR Array S   75.81 337 eP      P        12 39 19.7 -0.1
NORES NORESS Array B   75.81 337  P      P        12 39 21.3 +1.5
HLID  Hailey           75.82  47 eP      P        12 39 21.5 +1.1
      comp=Z,18nm,1.1s
HLID  Hailey           75.82  47  P      P        12 39 20.7 +0.3
      baz=305,SNR=11
DLMT  Dillon           75.83  44 eP      P        12 39 20.9 +0.5
      comp=Z,28nm,0.9s
NBO00 NORSAR Array S   75.83 337 eP      P        12 39 20.6 +0.6
BMN   Battle Mountai   75.88  50 eP      P        12 39 22.2 +1.4
BMN   Battle Mountai   75.88  50 eP      P        12 39 22.2 +1.4
SVAN  Silvan-Diyarba   75.90 307 eP      P        12 39 22.2 +1.4
NAO01 NORSAR Array S   75.94 337 eP      P        12 39 20.5  0.0
MCMT  McKenzie Canyo   76.00  45 eP      P        12 39 21.5  0.0
RYN   Ryan             76.06  53 eP      P        12 39 23.4 +1.6
      comp=Z,16nm,0.9s
AKN   Aaknes           76.06 340 eP      P        12 39 22.4 +1.1
KVN   Kaiserville      76.09  52 eP      P        12 39 23.7 +1.6
      comp=Z,33nm,0.9s
KVN   Kaiserville      76.09  52  P      P        12 39 23.7 +1.6
SUW   Suwalki          76.20 327 eP      P        12 39 22.2 +0.1
SUW                              ePcP    PcP      12 39 33.8 -0.3
SUW   Suwalki          76.20 327  PFAKE           12 39 30.0 +7.9
SUW                               LR     LR
      comp=Z,2µm,21.0s
SUW   Suwalki          76.20 327 eP      P        12 39 22.2 +0.1
SUW                              e                12 39 33.8
BOZ   Bozeman (W)      76.24  44 eP      P        12 39 23.7 +1.0
      comp=Z,14nm,0.8s
BOZ   Bozeman (W)      76.24  44 eP      P        12 39 23.7 +1.0
BOZ                               pmax   pmax
      comp=Z,14nm,0.8s
BOZ   Bozeman (W)      76.24  44  P      P        12 39 22.8 +0.1
      baz=307,SNR=17
NV01  Mina Array Sit   76.31  53 eP      P        12 39 24.2 +0.9
NVAR  Mina Array Bea   76.31  53  P      P        12 39 24.6 +1.3
      comp=Z,8.5nm,0.7s,baz=288,slow=5.4,SNR=50
SIM   Simferopol'      76.36 316ceP      P        12 39 23.5 +0.3
SIM                              e                12 39 40.0
SIM                               pmax   pmax
      comp=Z,49nm,0.8s
SIM                               MLR    MLR
      comp=Z,1µm,16.0s
NV11  Mina Array Sit   76.41  53 eP      P        12 39 25.1 +1.3
      comp=Z,1.2nm,0.9s
MLAC  Mammoth, Mammo76.41  54  P      P        12 39 23.2 -0.8
      baz=304,SNR=5.7
PAGB  Antelope Grade   76.52  56 eP      P        12 39 25.8 +1.5
      comp=Z,67nm,0.9s
OSL   Oslo             76.69 337 eP      P        12 39 25.5 +0.7
MAZI  Mazidag          76.78 307 eP      P        12 39 26.9 +1.0
QLMT  Earthquake Lak   76.81  44 eP      P        12 39 27.5 +1.5
SMMC  Simmler          76.93  56  P      P        12 39 27.4 +0.7
      baz=304,SNR=6.2
ELK   Elko             76.94  49 eP      P        12 39 28.4 +1.5
      comp=Z,25nm,1.0s
ELK   Elko             76.94  49 eP      P        12 39 28.4 +1.5
ELK                               pmax   pmax
      comp=Z,25nm,1.0s
YHB   Horse Butte      76.99  44 eP      P        12 39 28.7 +1.6
      comp=Z,13nm,0.8s
RSDY  Resadiye-TOKAT   77.10 310 eP      P        12 39 26.7 -0.8
HYA   Hoyanger         77.11 339 eP      P        12 39 26.9 -0.1
TIN   Tinemaha, Big    77.13  54  P      P        12 39 28.6 +0.7
      baz=305
YHH   Holmes Hill      77.16  44 eP      P        12 39 29.6 +1.4
      comp=Z,13nm,1.1s
YMR   Madison River    77.17  44 eP      P        12 39 30.0 +1.9
      comp=Z,56nm,1.7s
GCMT  Greycliff        77.22  43 eP      P        12 39 29.8 +1.5
STRU  Stroemstad       77.23 336 eP      P        12 39 28.2 +0.4
VES   Vestal, Richgr   77.25  55  P      P        12 39 28.2 -0.2
      baz=304,SNR=7.7
KONO  Kongsberg        77.27 337 eP      P        12 39 28.8 +0.7
      comp=Z,54nm,1.0s
KONO                              LR     LR
      comp=Z,3µm,19.0s
KONO  Kongsberg        77.27 337 eP      P        12 39 28.8 +0.7
KONO                              pmax   pmax
      comp=Z,54nm,1.0s
KONO                              MLR    MLR
      comp=Z,3µm,19.0s
KONO  Kongsberg        77.27 337 eP      P        12 39 28.2 +0.1
PKM   Mcpherson Peak   77.29  56  P      P        12 39 29.4 +0.5
      baz=304,SNR=6.6
YNR   Norris Junctio   77.30  44 eP      P        12 39 30.8 +1.9
      comp=Z,24nm,1.2s
YFT   Old Faithful     77.37  44 eP      P        12 39 32.0 +2.7
      comp=Z,16nm,0.9s
SNOP  Sinop            77.45 313 eP      P        12 39 30.1 +0.7
SNOP  Sinop            77.45 313 eP      P        12 39 30.4 +1.0
      comp=Z,74nm,1.1s
SNOP                              LR     LR
      comp=Z,900nm,20.0s
KVT   Kavak            77.49 312 eP      P        12 39 31.1 +1.4
YPP   Pitchstone Pla   77.50  44 eP      P        12 39 32.6 +2.6
      comp=Z,13nm,0.9s
LKWY  Lake             77.55  44 eP      P        12 39 33.0 +2.7
      comp=Z,27nm,1.1s
H17A  Grant Village    77.56  44 eP      P        12 39 32.9 +2.5
      comp=Z,29nm,0.9s
H17A  Grant Village    77.56  44  P      P        12 39 32.4 +2.1
      baz=308,SNR=18
CWC   Cottonwood Cre   77.58  54  P      P        12 39 31.3 +0.8
      baz=305
SVSK  Karacayir        77.58 310 eP      P        12 39 31.7 +1.5
SBC   Santa Barbara    77.61  57  P      P        12 39 30.0 -0.4
      baz=304
TOKT  Tokat            77.63 311 eP      P        12 39 31.7 +1.2
DIKM  Dikmen           77.64 312 eP      P        12 39 31.5 +1.0
DIKM  Dikmen           77.64 312⇑iP      P        12 39 31.5 +1.0
IMW   Indian Meadow    77.65  45 eP      P        12 39 32.3 +1.4
      comp=Z,26nm,1.1s
SFJD  Kangerlussuaq    77.67   5 eP      P        12 39 31.1 +1.0
      comp=Z,49nm,1.1s
SFJD  Kangerlussuaq    77.67   5 i P     P        12 39 31.1 +1.0
      comp=Z,48nm,1.2s
      comp=Z,940nm,16.0s
SFJD  Kangerlussuaq    77.67   5 i P     P        12 39 31.1 +1.0
SFJD                              pmax   pmax
      comp=Z,48nm,1.2s
SFJD                              MLR    MLR
      comp=Z,950nm,16.0s
SFJD  Kangerlussuaq    77.67   5 eP      P        12 39 31.0 +0.8
FLWY  Flagg Ranch      77.68  44 eP      P        12 39 32.8 +1.8
      comp=Z,40nm,1.3s
GRAC  Grapevine Rang   77.73  53  P      P        12 39 31.9 +0.7
      baz=305
FXWY  Fox Creek        77.76  45 eP      P        12 39 32.9 +1.5
      comp=Z,34nm,1.5s
ISA   Isabella, Lake   77.76  55 eP      P        12 39 31.8 +0.4
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	comp=Z,12nm,0.9s						
ISA	Isabella, Lake	77.76	55	*e*P	P	12 39 31.8	+0.4
ISA				pmax	pmax		
	comp=Z,12nm,0.9s						
ISA	Isabella, Lake	77.76	55	P	P	12 39 31.5	+0.1
	baz=305						
ARVC	Arvin	77.82	56	P	P	12 39 32.2	+0.6
	baz=305						
HVU	Hansel Valley	77.84	47	*e*P	P	12 39 32.8	+1.0
	comp=Z,24nm,0.9s						
HVU	Hansel Valley	77.84	47	*e*P	P	12 39 32.8	+1.0
HVU				pmax	pmax		
	comp=Z,25nm,0.9s						
RLMT	Red Lodge	77.85	43	*e*P	P	12 39 33.1	+1.2
	comp=Z,91nm,1.8s						
RLMT	Red Lodge	77.85	43	P	P	12 39 32.7	+0.9
	baz=308,SNR=10.0						
URFA	Urfa	77.85	307	*e*P	P	12 39 33.4	+1.5
MOOW	Moose Ponds	77.85	45	*e*P	P	12 39 33.3	+1.4
	comp=Z,57nm,1.9s						
SCZ2	Santa Cruz Isl	77.91	57	P	P	12 39 32.5	+0.3
	baz=304						
ODD1	Odda	77.99	338	*e*P	P	12 39 32.9	+0.8
BER	Bergen	77.99	339	*e*P	P	12 39 33.1	+1.1
LOHW	Long Hollow	78.02	45	*e*P	P	12 39 34.1	+1.3
	comp=Z,32nm,1.8s						
SNOW	Snow King Moun	78.02	45	*e*P	P	12 39 34.8	+1.9
	comp=Z,21nm,1.2s						
KIS	Kishinev	78.02	320	PM		12 39 22.0	
	comp=Z,200nm,2.0s						
KIS	Kishinev	78.02	320	*e*P	P	12 39 31.0	-1.5
KIS	Kishinev	78.02	320	*e*PP	PP	12 42 24.0	-4.3
KIS				*e*S	S	12 49 19.0	-5.4
KIS	Kishinev	78.02	320	*e*P	P	12 39 31.0	-1.5
KIS				*e*		12 39 43.0	
KIS				*e*		12 42 24.0	
KIS				*e*S	S	12 49 19.0	-5.4
KIS				*e*PS	PnS	12 50 02.0	-4.9
KIS				*e*SS	SS	12 54 30.0	+5.1
KIS				pmax	pmax		
	comp=Z,210nm,2.0s						
KIS				MLR	MLR		
	comp=Z,5µm,17.0s						
REDW	Red Top Meadow	78.02	45	*e*P	P	12 39 34.2	+1.2
	comp=Z,26nm,1.3s						
DARE	Darende-Malaty	78.06	309	*e*P	P	12 39 33.9	+0.9
R11A	Troy Canyon, C	78.11	51	*e*P	P	12 39 34.9	+1.4
	comp=Z,17nm,0.9s						
R11A	Troy Canyon, C	78.11	51	P	P	12 39 34.5	+1.1
	baz=306,SNR=17						
OSI	Osito Audit: C	78.18	56	P	P	12 39 34.1	+0.4
	baz=305						
MPMC	Manual Prospec	78.19	54	P	P	12 39 34.9	+1.0
	baz=305,SNR=9.6						
BGU	Big Grassy Mou	78.19	48	*e*P	P	12 39 34.6	+0.8
	comp=Z,11nm,0.9s						
BZK	Bozkurt	78.21	313	*e*P	P	12 39 34.5	+0.9
BZK	Bozkurt	78.21	313	⇑*i*P	P	12 39 34.2	+0.6
BLG	Laguna Peak, P	78.24	57	P	P	12 39 34.2	+0.2
	baz=305						
AHID	Auburn Hatcher	78.24	46	*e*P	P	12 39 35.5	+1.4
	comp=Z,14nm,0.9s						
SPUT	South Promonto	78.32	48	*e*P	P	12 39 35.4	+0.9
	comp=Z,19nm,1.2s						
FURC	Furnace Creek,	78.37	54	P	P	12 39 35.2	+0.6
	baz=305						
LRMC	Laurel Mtn Rad	78.39	55	P	P	12 39 35.4	+0.5
	baz=305						
SNCC	San Nicolas Is	78.41	58	P	P	12 39 35.9	+1.0
	baz=305						
DGMT	Dagmar	78.42	38	*e*P	P	12 39 35.6	+0.8
	comp=Z,49nm,1.2s						
DGMT	Dagmar	78.42	38	P	P	12 39 35.1	+0.4
	baz=311						
BLS5	Blasjo	78.43	338	*e*P	P	12 39 35.5	+0.9
TPNV	Topopah Spring	78.49	53	*e*P	P	12 39 36.6	+1.1
	comp=Z,26nm,0.9s						
TPNV	Topopah Spring	78.49	53	*e*P	P	12 39 36.7	+1.1
TPNV				pmax	pmax		
	comp=Z,26nm,0.9s						
TPNV	Topopah Spring	78.49	53	P	P	12 39 36.2	+0.6
	baz=306,SNR=12						
LAO	LASA Array	78.52	40	*e*P	P	12 39 36.6	+1.2
	comp=Z,74nm,1.5s						
LAO	LASA Array	78.52	40	P	P	12 39 36.2	+0.8
	baz=310,SNR=6.4						
EDW2	Edwards Air Fo	78.53	55	P	P	12 39 36.3	+0.7
	baz=305,SNR=8.4						
LVV	L'vov	78.61	324	*e*P	P	12 39 35.0	-0.7
LVV				*e*S	S	12 49 25.0	-5.6
LVV				MLR	MLR		
	comp=Z,1µm,15.0s						
DECC	Green Verdugo	78.65	56	P	P	12 39 37.0	+0.7
	baz=305						
BEL	Belsk	78.74	327	*e*P	P	12 39 37.2	+0.8
BEL	Belsk	78.74	327	*e*P	P	12 39 37.2	+0.8
DUG	Dugway, Tooele	78.76	49	*e*P	P	12 39 38.0	+1.1
	comp=Z,28nm,0.9s						
DUG	Dugway, Tooele	78.76	49	*e*P	P	12 39 38.0	+1.1
DUG				pmax	pmax		
	comp=Z,28nm,0.9s						
DUG	Dugway, Tooele	78.76	49	P	P	12 39 38.0	+1.1
	baz=307,SNR=34						
PASC	Pasadena Art C	78.80	56	*e*P	P	12 39 38.1	+1.0
	comp=Z,54nm,1.6s						
BSD	Bornholm Skovb	78.84	332	⇑*i*P	P	12 39 36.7	-0.1
	comp=Z,113nm,1.1s						
	comp=Z,2µm,16.0s						
BSD	Bornholm Skovb	78.84	332	⇑*i*P	P	12 39 36.7	-0.1
BSD				pmax	pmax		
	comp=Z,110nm,1.1s						
BSD				MLR	MLR		
	comp=Z,2µm,16.0s						
MWC	Mount Wilson	78.86	56	*e*P	P	12 39 39.7	+2.0
	comp=Z,44nm,1.2s						
ILGA	Ilgaz	78.92	313	*e*P	P	12 39 37.9	0.0
	comp=Z,72nm,1.0s						
ILGA				LR	LR		
	comp=Z,700nm,18.0s						
FMP	Fort Macarthur	78.99	57	P	P	12 39 38.8	+0.7
	baz=305						
GAZ	Gaziantep	79.05	308	*e*P	P	12 39 40.1	+1.6
TCUT	Toone Canyon	79.06	47	*e*P	P	12 39 39.7	+1.0
	comp=Z,72nm,1.3s						
SNART	Snartemo	79.07	337	*e*P	P	12 39 38.9	+0.8
GSC	Goldstone, Bar	79.08	55	*e*P	P	12 39 39.1	+0.4
	comp=Z,22nm,1.0s						
GSC	Goldstone, Bar	79.08	55	*e*P	P	12 39 39.1	+0.4
GSC				pmax	pmax		
	comp=Z,22nm,1.0s						
GSC	Goldstone, Bar	79.08	55	P	P	12 39 39.6	+0.9
	baz=306,SNR=7.8						
CIS	Catalina Islan	79.08	57	P	P	12 39 39.1	+0.4
	baz=305						
SHOC	Shoshone, Teco	79.08	54	P	P	12 39 39.5	+0.8
	baz=306,SNR=5.6						
PSUT	Pine Spring	79.10	50	*e*P	P	12 39 39.8	+0.9
	comp=Z,16nm,0.9s						
CTU	Camp Tracy	79.11	48	*e*P	P	12 39 39.8	+0.9
	comp=Z,18nm,0.9s						
BFSC	Mount Baldy Ra	79.12	56	P	P	12 39 39.2	+0.3
	baz=305,SNR=5.8						
BW06	Boulder Array	79.14	45	*e*P	P	12 39 39.6	+0.5
	comp=Z,8.9nm,0.9s						
BW06	Boulder Array	79.14	45	P	P	12 39 39.3	+0.3
	baz=308,SNR=10						
PD31	Pinedale Array	79.14	45	*e*P	P	12 39 39.6	+0.5
PDAR	Pinedale Array	79.14	45	*e*P	P	12 39 39.3	+0.2
PDAR	Pinedale Array	79.14	45	P	P	12 39 39.5	+0.5
	comp=Z,3.5nm,0.6s,baz=260,slow=1.5,SNR=47						
PRAR	RASCA	79.14	321	⇓*i*P	P	12 39 39.3	+0.6
TLCR		79.17	318	⇑*i*P	P	12 39 39.2	+0.3
RRX	Edison Barstow	79.20	55	P	P	12 39 40.0	+0.7
	baz=306						
SCI2	San Clemente I	79.24	57	P	P	12 39 40.1	+0.7
	baz=305						
GKP	Gorka Klasztor	79.26	329	*e*P	P	12 39 39.7	+0.5
GKP	Gorka Klasztor	79.26	329	*e*P	P	12 39 39.7	+0.5
JLU	Jordanelle	79.35	48	*e*P	P	12 39 41.5	+1.2
	comp=Z,12nm,0.9s						
BORG	Borgarnes	79.35	352	*e*P	P	12 39 41.6	+2.2
	comp=Z,94nm,1.1s						
BORG	Borgarnes	79.35	352	*e*P	P	12 39 41.7	+2.2
BORG				pmax	pmax		
	comp=Z,94nm,1.1s						
COP	Copenhagen	79.35	333	*i* P	P	12 39 40.7	+1.1
	comp=Z,1µm,15.0s						
COP	Copenhagen	79.35	333	*i* P	P	12 39 40.7	+1.1
COP				MLR	MLR		
	comp=Z,1µm,15.0s						
NLU	North Lily Min	79.36	48	*e*P	P	12 39 41.6	+1.3
	comp=Z,18nm,0.9s						
KWP	Kalwaria Pacla	79.37	324	*e*P	P	12 39 40.6	+0.7
KWP	Kalwaria Pacla	79.37	324	*e*P	P	12 39 40.4	+0.5
	comp=Z,2µm,1.2s						
KWP				LR	LR		
	comp=Z,23µm,18.0s						
KWP	Kalwaria Pacla	79.37	324	*e*P	P	12 39 40.4	+0.5
ANGG	Ammassalik, Gr	79.44	359	*e*P	P	12 39 40.1	+0.3
	comp=Z,56nm,1.2s						
ANGG				LR	LR		
	comp=Z,3µm,21.0s						
SHPR	Sheep Range	79.46	53	*e*P	P	12 39 42.5	+1.7
	comp=Z,22nm,0.9s						
TESR	Tescani	79.48	320	⇑*i*P	P	12 39 41.0	+0.5
BUR08	Bucovina Ar. S	79.48	322	*e*P	P	12 39 41.1	+0.4
BIZ	Bicaz	79.48	321	⇑*i*P	P	12 39 41.5	+0.9
BUR04	Bucovina Ar. S	79.49	322	*e*P	P	12 39 41.2	+0.4
BURAR	Bucovina Array	79.49	322	⇓*i*P	P	12 39 41.2	+0.5
BURAR	Bucovina Array	79.49	322	P	P	12 39 41.2	+0.5
CFR	Carcaliu	79.55	318	⇑*i*P	P	12 39 41.2	+0.3
CFR	Carcaliu	79.55	318	P	P	12 39 41.1	+0.2
TUQ	Turquoise Moun	79.59	54	P	P	12 39 42.2	+0.7
	baz=306						
MPU	Maple Canyon	79.59	48	*e*P	P	12 39 43.0	+1.4
	comp=Z,17nm,0.8s						
BBRC	Big Bear Solar	79.61	55	P	P	12 39 42.0	+0.2
	baz=306						
HEC	Hector,Ludlow	79.67	55	P	P	12 39 42.8	+0.9
	baz=306						
KOZT	Kozan	79.76	309	*e*P	P	12 39 44.3	+2.0
BR101	Keskin Array S	79.78	312	*e*P	P	12 39 42.9	+0.4
BR131	Keskin Array S	79.78	312	*e*P	P	12 39 43.0	+0.5
BR131	Keskin Array S	79.78	312	P	P	12 39 42.7	+0.3
	SNR=26						
BRTR	Keskin Array B	79.78	312	P	P	12 39 42.9	+0.5
	comp=Z,29nm,1.0s,baz=101,slow=3.9,SNR=49						
BRTR				LR	LR	13 19 35.4	
	comp=Z,589nm,19.2s,baz=48,slow=39						
HIZ	Hauiti	79.82	154	*e*P	P	12 39 44.6	+2.4
	comp=Z,65nm,1.0s						
HIZ				LR	LR		
	comp=Z,1µm,20.0s						
VRI	Vrincioaia	79.86	320	*e*P	P	12 39 43.2	+0.6
VRI	Vrincioaia	79.86	320	⇑*i*P	P	12 39 43.5	+0.9
VRI	Vrincioaia	79.86	320	P	P	12 39 43.5	+0.9
TIRR	Tirgusor	79.86	318	PFAKE		12 39 50.0	+7.4
TIRR				LR	LR		
	comp=Z,2µm,19.0s						
TIRR	Tirgusor	79.86	318	⇓*i*P	P	12 39 43.3	+0.6
TIRR	Tirgusor	79.86	318	P	P	12 39 43.2	+0.6
RGN	Rugen	79.88	332	PFAKE		12 39 50.0	+7.5
RGN				LR	LR		
	comp=Z,2µm,18.0s						
PLOR	Plostina	79.91	320	⇑*i*P	P	12 39 43.6	+0.6
PLOR	Plostina	79.91	320	P	P	12 39 43.5	+0.6
MUD	Monsted U'grnd	79.92	335	*i* P	P	12 39 43.7	+1.0
	comp=Z,146nm,1.3s						
MUD	Monsted U'grnd	79.92	335	*i* P	P	12 39 43.7	+1.0
MUD				pmax	pmax		
	comp=Z,150nm,1.3s						
TCRU	Three Creeks R	79.94	50	*e*P	P	12 39 45.4	+1.8
	comp=Z,76nm,1.8s						
HARR	Harsova	79.97	318	⇑*i*P	P	12 39 42.0	-1.2
TLB	Topalu	79.98	318	⇑*i*P	P	12 39 43.9	+0.6
TLB	Topalu	79.98	318	P	P	12 39 43.8	+0.5
CCUT	Cedar City	80.00	51	*e*P	P	12 39 45.2	+1.3
	comp=Z,58nm,1.6s						
CEYT	Ceyhan	80.09	308	*e*P	P	12 39 45.6	+1.6
GMRC	Granite Mounta	80.14	54	P	P	12 39 45.1	+0.6
	baz=306,SNR=37						
MSU	Marysvale	80.17	50	*e*P	P	12 39 43.0	-1.7
MSU	Marysvale	80.17	50	*e*P	P	12 39 43.0	-1.7
TAHT	Tahtakopru-Hat	80.19	308	*e*P	P	12 39 45.9	+1.3
OZUR		80.20	320	⇑*i*P	P	12 39 45.9	+1.4
ANTO	Ankara	80.20	312	*e*P	P	12 39 45.7	+1.0
ANTO	Ankara	80.20	312	*e*P	P	12 39 45.5	+0.8
	comp=Z,82nm,1.3s						
ANTO				LR	LR		
	comp=Z,800nm,20.0s						
ANTO	Ankara	80.20	312	⇑*i*P	P	12 39 45.2	+0.5
ANTO	Ankara	80.20	312	P	P	12 39 45.2	+0.5
ANTO	Ankara	80.20	312	P	P	12 39 45.2	+0.5
	SNR=10						
ANTO				P	P	12 39 45.2	+0.5
	SNR=10						
ANTO	Ankara	80.20	312	*e*P	P	12 39 45.7	+1.0
BR231	Keskin MP Arra	80.23	312	*e*P	P	12 39 45.5	+0.6
	comp=Z,33nm,0.9s						
UZH	Uzhgorod	80.25	324	⇓*i*P	P	12 39 43.0	-1.7
UZH				*e*		12 39 55.0	
UZH				*e*		12 42 44.0	
UZH				*e*S	S	12 49 41.2	-6.8
UZH				MLR	MLR		
	comp=N,330nm,16.0s						
UZH				MLR	MLR		
	comp=E,450nm,16.0s						
UZH				MLR	MLR		
	comp=Z,190nm,16.0s						
109C	Camp Elliot, M	80.28	57	P	P	12 39 45.5	+0.4
	baz=306						
CPE	Camp Elliot	80.28	57	*e*P	P	12 39 45.6	+0.5
	comp=Z,62nm,0.9s						
ARCR	ARCALIA	80.28	322	⇓*i*P	P	12 39 46.2	+1.3
TMUT	Trail Mountain	80.29	49	*e*P	P	12 39 46.9	+1.4
	comp=Z,12nm,0.8s						
AFSR	Afar-Bala (An	80.29	312	*e*P	P	12 39 46.0	+0.8
PFO	Pinyon Flats O	80.30	56	*e*P	P	12 39 46.3	+0.9
	comp=Z,84nm,1.0s						
PFO	Pinyon Flats O	80.30	56	*e*P	P	12 39 46.3	+0.9
PFO				pmax	pmax		
	comp=Z,84nm,1.0s						
PFO	Pinyon Flats O	80.30	56	P	P	12 39 45.6	+0.2
	baz=306						
XPFO	Pion Flat	80.30	56	*e*P	P	12 39 46.6	+1.2
	comp=Z,90nm,1.0s						
OJC	Ojcow	80.32	326	*e*P	P	12 39 45.6	+0.6
OJC	Ojcow	80.32	326	*e*P	P	12 39 43.5	-1.5
	comp=Z,150nm,1.2s						
OJC	Ojcow	80.32	326	*e*P	P	12 39 45.6	+0.6
LDFC	Landfair	80.34	54	*e*P	P	12 39 46.4	+0.9
	comp=Z,52nm,1.0s						
BELC	Belle Mtn. Jos	80.38	55	P	P	12 39 46.3	+0.4
	baz=306,SNR=14						
LCMT	Little Creek M	80.40	51	*e*P	P	12 39 47.2	+1.3
	comp=Z,32nm,1.0s						
ICOR	Ion Corvin	80.42	318	⇑*i*P	P	12 39 46.4	+0.8
ISR	Istrita	80.45	319	⇑*i*P	P	12 39 47.0	+1.1
ISR	Istrita	80.45	319	P	P	12 39 47.3	+1.4
MTPU	Mount Pierson	80.45	50	*e*P	P	12 39 48.1	+1.7
	comp=Z,19nm,0.9s						
P17A	Butcher Ranch,	80.47	48	*e*P	P	12 39 47.4	+1.2
	comp=Z,26nm,0.9s						
TRPA	Tarpa	80.48	323	⇓*i*P	P	12 39 47.0	+1.1
TRPA	Tarpa	80.48	323	⇑*e*P	P	12 39 46.1	+0.2
TRPA				*e*PP	PP	12 42 52.0	+3.4
TRPA				*e*S	S	12 49 56.1	+5.7
DOPR	Dopca	80.50	320	⇑*i*P	P	12 39 47.3	+1.2
MLR	Muntele Rosu	80.52	320	*e*P	P	12 39 46.7	+0.3
MLR				LR	LR		
	comp=Z,4µm,18.0s						
MLR	Muntele Rosu	80.52	320	⇑*i*P	P	12 39 46.9	+0.5
MLR	Muntele Rosu	80.52	320	P	P	12 39 46.6	+0.2
	comp=Z,13nm,1.1s,baz=25,slow=3.1,SNR=17						
Q16A	Castle Valley	80.54	49	*e*P	P	12 39 48.4	+1.7
	comp=Z,62nm,1.4s						
NIE	Niedzica	80.65	325	*e*P	P	12 39 47.9	+1.0
NIE	Niedzica	80.65	325	*e*P	P	12 39 47.9	+1.0
KNB	Kanab	80.66	51	*e*P	P	12 39 49.4	+2.0
	comp=Z,69nm,1.0s						
KNB	Kanab	80.66	51	*e*P	P	12 39 49.4	+2.0
KNB				pmax	pmax		
	comp=Z,69nm,1.0s						
BAR	Barrett	80.69	57	*e*P	P	12 39 48.6	+1.2
	comp=Z,52nm,0.9s						
PKCU	Pink Cliffs	80.73	51	*e*P	P	12 39 50.2	+2.3
	comp=Z,64nm,1.5s						
MONP2	Monument Peak	80.74	56	P	P	12 39 48.2	+0.4
	baz=306,SNR=14						
SULT	Sultanhani-AKS	80.78	310	*e*P	P	12 39 49.0	+1.1
MDUB	Mudurnu	80.79	313	*e*P	P	12 39 48.6	+0.7
NEE2	Needles Airpor	80.84	54	P	P	12 39 48.7	+0.6
	baz=307						
IRM	Iron Mountain	80.86	55	P	P	12 39 48.9	+0.7
	baz=307,SNR=16						
CJR	Cluj-Napoca	80.92	322	⇑*i*P	P	12 39 49.7	+1.3
CJR	Cluj-Napoca	80.92	322	P	P	12 39 49.7	+1.3
K22A	Casper	80.95	44	*e*P	P	12 39 49.5	+0.7
	comp=Z,101nm,2.0s						
K22A	Casper	80.95	44	P	P	12 39 49.1	+0.3
	baz=310,SNR=7.1						
BC3	Big Chuckawall	80.95	55	P	P	12 39 49.3	+0.5
	baz=306,SNR=20						
MERS	Mersin	80.96	309	*e*P	P	12 39 49.7	+0.9
BKZ	Black Stump Fm	81.00	153	*e*P	P	12 39 49.0	+0.4
	comp=Z,24nm,1.2s						
RAYN	Ar Rayn	81.02	292	*e*P	P	12 39 49.8	+0.5
	comp=Z,125nm,1.3s						
RAYN				LR	LR		
	comp=Z,1µm,22.0s						
VOIR		81.03	320	⇑*i*P	P	12 39 49.6	+0.6
IKP	In-Ko-Pah, Jac	81.10	56	P	P	12 39 50.4	+0.8
	baz=306,SNR=8.6						
MDND	Maddock	81.12	36	*e*P	P	12 39 50.2	+0.9
	comp=Z,33nm,0.9s						
MDND	Maddock	81.12	36	P	P	12 39 49.6	+0.2
	baz=314						
W13A	Hualapai Mount	81.13	53	*e*P	P	12 39 51.1	+1.2
	comp=Z,38nm,1.2s						
SWSC	Sam W. Stewart	81.13	56	P	P	12 39 50.2	+0.5
	baz=306						
ULM	Lac du Bonnet	81.16	33	*e*P	P	12 39 49.7	+0.2
	comp=Z,64nm,1.6s						
ULM	Lac du Bonnet	81.16	33	*e*P	P	12 39 49.7	+0.2
ULM				pmax	pmax		
	comp=Z,64nm,1.6s						
ULM	Lac du Bonnet	81.16	33	P	P	12 39 49.2	-0.3
	comp=Z,16nm,1.1s,baz=300,slow=5.6,SNR=10.0						
RWWY	Rawlins	81.17	45	*e*P	P	12 39 49.9	-0.2
	comp=Z,21nm,0.9s						
GULT	Gulveren	81.22	314	*e*P	P	12 39 50.8	+0.7
LANS	Liptovska Anna	81.23	326	*e*P	P	12 39 51.4	+1.4
LANS				*e*		12 42 53.8	
LANS	Liptovska Anna	81.23	326	*e*P	P	12 39 51.4	+1.4
LANS				*e*PP	PP	12 42 53.8	-1.1
PRD	Provadia	81.23	317	*e*P	P	12 39 51.1	+1.1
RUE	Ruedersdorf	81.26	330	*e*P	P	12 39 49.6	-0.4
RUE				IAmb	IAmb	12 39 52.0	
	comp=Z,142nm,1.2s						
ARR	Arges	81.29	320	⇑*i*P	P	12 39 52.0	+1.6
DRGR		81.31	322	⇑*i*P	P	12 39 51.3	+0.8
OKC	Ostrava-Krasne	81.34	327	AMS	AMS	13 19 40.0	
	comp=Z,3µm,15.4s						
RSSD	Black Hills	81.36	41	*e*P	P	12 39 51.4	+0.4
	comp=Z,43nm,1.8s						
RSSD	Black Hills	81.36	41	*e*P	P	12 39 51.4	+0.4
RSSD				pmax	pmax		
	comp=Z,43nm,1.8s						
RSSD	Black Hills	81.36	41	P	P	12 39 51.0	0.0
	baz=312						
KSP	Ksiaz	81.43	328	*e*P	P	12 39 51.5	+0.6
KSP	Ksiaz	81.43	328	*e*P	P	12 39 51.5	+0.6
KIZK	Mersin	81.44	309	*e*P	P	12 39 50.9	-0.3
PDMCI	Parker Dam,Lak	81.44	54	P	P	12 39 51.8	+0.5
	baz=307,SNR=12						
LADK	Ladik-KONYA	81.50	311	*e*P	P	12 39 52.1	+0.4
Y12C	Blythe	81.51	55	*e*P	P	12 39 52.5	+0.8
	comp=Z,69nm,1.0s						
Y12C	Blythe	81.51	55	P	P	12 39 52.3	+0.6
	baz=307,SNR=44						
O20A	White River Ci	81.56	46	*e*P	P	12 39 52.5	+0.5
	comp=Z,14nm,0.8s						
O20A	White River Ci	81.56	46	P	P	12 39 52.4	+0.3
	baz=309,SNR=7.4						
MORC	Moravsky Berou	81.66	327	*e*P	P	12 39 52.6	+0.4
	comp=Z,56nm,1.1s						
MORC				LR	LR		
	comp=Z,2µm,18.0s						
MORC	Moravsky Berou	81.66	327	⇑*i*P	P	12 39 52.9	+0.7
MORC	Moravsky Berou	81.66	327	*e*P	P	12 39 52.6	+0.4
MORC				pmax	pmax		
	comp=Z,56nm,1.1s						
MORC				MLR	MLR		
	comp=Z,2µm,18.0s						
MORC	Moravsky Berou	81.66	327	*e*P	P	12 39 52.5	+0.3
MORC				*e*		12 43 00.4	
KONT	Konya--Tatoy	81.66	311	*e*P	P	12 39 52.9	+0.5
GLA	Glamis	81.73	55	*e*P	P	12 39 54.5	+1.6
	comp=Z,114nm,0.9s						
GLA	Glamis	81.73	55	P	P	12 39 54.5	+1.6
GLA	Glamis	81.73	55	P	P	12 39 54.0	+1.1
	baz=307,SNR=14						
KEBE	Keben-Mersin	81.73	309	*e*P	P	12 39 53.5	+0.6
CAVI	Cavuskoy	81.76	314	*e*P	P	12 39 53.6	+0.7
BUY	Buyukada	81.77	315	*e*P	P	12 39 53.6	+0.7
DPC	Dobruska-Polom	81.78	328	*e*P	P	12 39 54.1	+1.3
DPC				*e*pP	pP	12 39 59.5	-1.9
DPC				*e*x	x	12 40 05.0	
DPC	Dobruska-Polom	81.78	328	*e*P	P	12 39 54.1	+1.3
DPC				*e*		12 39 59.5	
DPC				*e*		12 40 05.0	
KRLC	Kraliky	81.78	327	*e*P	P	12 39 53.9	+1.1
KRLC	Kraliky	81.78	327	*e*P	P	12 39 53.9	+1.1
UPC	Upice	81.80	328	*e*P	P	12 39 54.0	+1.1
UPC				*e*pP	PcP	12 39 59.3	+0.7
UPC				AMS	AMS	13 20 20.0	
	comp=Z,3µm,14.6s						
UPC	Upice	81.80	328	*e*P	P	12 39 54.0	+1.1
UPC				*e*		12 39 59.3	
UPC				MLR	MLR		
	comp=Z,3µm,14.6s						
YLV	Yalova	81.81	314	*e*P	P	12 39 53.7	+0.5
CTYL	Yalikoy Yolu	81.85	316	*e*P	P	12 39 52.9	-0.4
CTYL	Yalikoy Yolu	81.85	316	⇓*i*P	P	12 39 54.1	+0.8
IKL	Isikli	81.88	309	*e*P	P	12 39 53.9	+0.4
CTKS	Kestanelik-??a	81.88	315	*e*P	P	12 39 52.9	-0.6
PSZ	Piszkesteto	81.90	324	*e*P	P	12 39 54.3	+0.7
	comp=Z,89nm,1.1s						
PSZ				LR	LR		
	comp=Z,2µm,18.0s						
PSZ	Piszkesteto	81.90	324	⇑*i*P	P	12 39 54.4	+0.8
PSZ	Piszkesteto	81.90	324	*e*P	P	12 39 54.3	+0.7
PSZ				pmax	pmax		
	comp=Z,89nm,1.1s						
PSZ				MLR	MLR		
	comp=Z,2µm,18.0s						
PSZ	Piszkesteto	81.90	324	⇑*e*P	P	12 39 54.0	+0.4
PSZ				*e*PP	PP	12 43 00.1	-0.4
PSZ				*e*S	S	12 50 09.1	+3.7
TEVE	Tevekalti-Mers	81.91	309	*e*P	P	12 39 53.6	-0.2
VYHS	Vyhne	81.99	325	*e*P	P	12 39 54.8	+0.8
VYHS				pmax	pmax		
	comp=Z,27nm,1.1s						
VYHS	Vyhne	81.99	325	*e*P	P	12 39 54.8	+0.8
VYHS				*e*PP	PP	12 43 01.1	0.0
AKKU	Akkuyu-Mersin	82.01	309	*e*P	P	12 39 52.9	-1.4
THZ	Tophouse	82.05	156	*e*P	P	12 39 54.1	0.0
	comp=Z,48nm,1.0s						
ARMT	Armutlu	82.11	315	*e*P	P	12 39 55.2	+0.5
KOLL	Kolacno	82.13	326	*e*P	P	12 39 55.7	+1.0
PHSR	Pinarhisar	82.19	316	⇑*i*P	P	12 39 56.0	+0.9
SIRR	Siria	82.20	322	⇑*i*P	P	12 39 55.6	+0.5
ASF	Jabal al Asfar	82.22	304	P	P	12 39 56.6	+1.0
	comp=Z,25nm,0.9s,baz=337,slow=1.2,SNR=16						
GZR	Gura Zlata	82.23	321	⇓*i*P	P	12 39 55.8	+0.4
BFZ	Birch Farm	82.24	154	*e*P	P	12 39 55.6	+0.6
	comp=Z,53nm,1.1s						
SNZO	South Karori	82.25	155	*e*P	P	12 39 54.4	-0.6
SHUT	Suhut-Afyon	82.39	312	*e*P	P	12 39 57.1	+0.7
PVCC	Panska Ves	82.40	329	*e*P	P	12 39 57.3	+1.3
PVCC				AMS	AMS	13 19 10.0	
	comp=Z,2µm,18.3s						
PVCC	Panska Ves	82.40	329	*e*P	P	12 39 57.3	+1.3
PVCC				MLR	MLR		
	comp=Z,2µm,18.3s						
BRG	Berggiesshubel	82.40	329	⇑*i*P	P	12 39 56.4	+0.3
	comp=Z,45nm,1.0s						
BRG				*i*		12 40 09.5	
	comp=Z,35nm,1.2s						
BRG				PP	PP	12 43 02.0	-2.4
BRG				S	S	12 50 12.0	+1.7
BRG				SS	SS	12 55 27.0	-3.0
	comp=N,1µm,16.4s						
	comp=E,2µm,17.0s						
	comp=Z,2µm,15.6s						
BRG	Berggiesshubel	82.40	329	⇑*i*P	P	12 39 56.4	+0.3
BRG				*i*		12 40 09.5	

BRG						12 43 02.0	
BRG				S	S	12 50 12.0	+1.7
BRG				SS	SS	12 55 27.0	-3.0
BRG				pmax	pmax		
	comp=Z,45nm,1.0s						
BRG				MLR	MLR		
	comp=N,1µm,16.4s						
BRG				MLR	MLR		
	comp=E,2µm,17.0s						
BRG				MLR	MLR		
	comp=Z,2µm,15.6s						
Y14A	Wickenburg	82.41	54	*e*P	P	12 39 57.6	+1.1
	comp=Z,47nm,1.1s						
N23A	Red Feather La	82.41	45	*e*P	P	12 39 57.6	+0.9
	comp=Z,34nm,1.0s						
N23A	Red Feather La	82.41	45	P	P	12 39 57.3	+0.6
	baz=311,SNR=9.5						
VRAC	Vranov	82.42	327	⇑*i*P	P	12 39 57.0	+0.8
VRAC	Vranov	82.42	327	*e*P	P	12 39 56.8	+0.6
VRAC				*e*		12 43 05.3	
VRAC	Vranov	82.42	327	P	P	12 39 57.2	+1.0
	comp=Z,18nm,0.8s,baz=43,slow=5.3,SNR=29						
VRAC				PP	PP	12 43 06.3	+1.7
	comp=Z,3.6nm,0.8s,baz=60,slow=7.8,SNR=5.6						
PHWY	Pilot Hill	82.43	44	*e*P	P	12 39 57.5	+0.8
	comp=Z,35nm,1.4s						
CLL	Collm	82.46	330	*e*P	P	12 39 56.5	+0.1
	comp=Z,97nm,1.0s						
CLL				LR	LR		
	comp=Z,1µm,19.0s						
CLL	Collm	82.46	330	⇑*i*P	P	12 39 56.4	+0.1
	comp=Z,109nm,1.1s						
CLL				*i*		12 40 00.0	
CLL				*e*pPcP		12 40 09.0	
CLL				*e*		12 42 52.0	
CLL				*e*PP	PP	12 43 05.0	+0.1
	comp=Z,69nm,1.5s						
CLL				*e*SS	SS	12 55 30.0	-0.9
CLL				*e*		12 56 18.0	
CLL				*e*SSS	SSS	12 59 00.0	
CLL				LmH		13 19 00.0	
	comp=N,1µm,18.6s						
CLL				LmH		13 19 00.0	
	comp=E,1µm,20.1s						
CLL	Collm	82.46	330	*e*P	P	12 39 56.5	+0.1
CLL				pmax	pmax		
	comp=Z,97nm,1.0s						
CLL				MLR	MLR		
	comp=Z,1µm,19.0s						
TVSB	Tavsanli	82.47	313	*e*P	P	12 39 57.4	+0.6
EDRB	Edirne	82.48	317	*e*P	P	12 39 57.8	+1.2
WUAZ	Wupatki	82.50	52	*e*P	P	12 39 58.6	+1.5
	comp=Z,37nm,1.1s						
WUAZ	Wupatki	82.50	52	P	P	12 39 58.3	+1.2
	baz=308,SNR=19						
SRE	Strehaia	82.51	320	⇑*i*P	P	12 39 58.2	+1.4
SRE	Strehaia	82.51	320	P	P	12 39 58.1	+1.3
KCTX	Karacabey (Bur	82.59	315	*e*P	P	12 39 57.9	+0.6
BUD	Budapest	82.62	325	⇑*e*P	P	12 39 57.1	-0.2
BUD				*e*PP	PP	12 43 16.1	+10
SMOL	Smolenice	82.62	326	*e*P	P	12 39 58.5	+1.2
SMOL	Smolenice	82.62	326	*e*P	P	12 39 58.5	+1.2
PV01	Paradox Valley	82.63	48	PFAKE		12 40 10.0	+12
PV01				LR	LR		
	comp=Z,1µm,20.0s						
BZS	Buzias	82.67	322	⇑*i*P	P	12 39 57.5	0.0
KRUC	Moravsky	82.69	327	P	P	12 39 58.2	+0.6
KRUC				pmax	pmax		
	comp=Z,53nm,1.5s						
KRUC	Moravsky	82.69	327	*e*P	P	12 39 57.9	+0.3
MMAI	Mount Meron Ar	82.72	305	P	P	12 39 59.2	+1.1
	comp=Z,39nm,1.1s,baz=38,slow=7.4,SNR=21						
SRO	Srobarova	82.72	325	*e*P	P	12 39 58.7	+1.0
SRO	Srobarova	82.72	325	*e*P	P	12 39 58.7	+1.0
GOPC	GO Pecny, Ondr	82.76	328	*e*P	P	12 39 59.0	+1.0
GOPC				AMS	AMS	13 21 10.0	
	comp=Z,2µm,15.0s						
GOPC	GO Pecny, Ondr	82.76	328	*e*P	P	12 39 59.0	+1.0
GOPC				MLR	MLR		
	comp=Z,2µm,15.0s						
HERR	Herculane	82.77	321	⇑*i*P	P	12 39 58.2	+0.1
MODS	Modra-Piesok	82.80	326	*e*P	P	12 39 59.2	+1.0
MODS				pmax	pmax		
	comp=Z,234nm,2.1s						
MODS	Modra-Piesok	82.80	326	*e*P	P	12 39 59.2	+1.0
PRU	Pruhonice	82.81	328	*e*P	P	12 39 58.9	+0.7
PRU				*e*pP	pP	12 40 06.9	+0.1
PRU				*e*S	S	12 50 13.8	-0.7
PRU				AMS	AMS	13 21 20.0	
	comp=Z,2µm,14.3s						
PRU	Pruhonice	82.81	328	*e*P	P	12 39 58.9	+0.7
PRU				*e*		12 40 06.9	
PRU				*e*S	S	12 50 13.8	-0.7
PRU				MLR	MLR		
	comp=Z,2µm,14.3s						
EDC	Edincik	82.83	315	*e*P	P	12 39 58.1	-0.4
ISP	Isparta	82.87	312	PFAKE		12 40 10.0	+11
ISP				LR	LR		
	comp=Z,900nm,20.0s						
CSS	Mathiatis	82.89	308	*e*P	P	12 39 57.4	-1.5
CSS	Mathiatis	82.89	308	*e*P	P	12 39 59.4	+0.5
	comp=Z,100nm,1.5s						
CSS				LR	LR		
	comp=Z,1µm,22.0s						
SMCO	Snowmass	82.92	47	*e*P	P	12 40 00.8	+1.3
	comp=Z,19nm,0.9s						
TREC	Trest	82.92	328	AMS	AMS	13 22 30.0	
	comp=Z,2µm,15.7s						
TREC	Trest	82.92	328	P	P	12 39 59.9	+1.1
ZST	Bratislava	83.00	326	*e*P	P	12 39 59.2	0.0
ZST	Bratislava	83.00	326	*e*P	P	12 39 59.2	0.0
MMLI	Mount Malkishu	83.06	305	*e*P	P	12 40 01.0	+1.2
MMLI	Mount Malkishu	83.06	305	P	P	12 40 00.7	+0.9
LEF	Lefka	83.08	308	*e*P	P	12 39 58.3	-1.5
KRBG	Karabiga-Canak	83.12	315	*e*P	P	12 40 00.8	+0.8
X16A	Lo Mia Camp, P	83.14	53	*e*P	P	12 40 02.0	+1.6
	comp=Z,63nm,1.3s						
OXZ	Oxford	83.18	158	PFAKE		12 40 10.0	+10
OXZ				LR	LR		
	comp=Z,700nm,20.0s						
MDVR	Moldovita	83.20	321	⇑*i*P	P	12 40 00.6	+0.2
MVCO	Mesa Verde	83.25	49	*e*P	P	12 40 02.5	+1.4
	comp=Z,119nm,1.8s						
MVCO	Mesa Verde	83.25	49	P	P	12 40 01.5	+0.5
	baz=310,SNR=13						
ISCO	Idaho Springs	83.32	45	*e*P	P	12 40 02.9	+1.5
	comp=Z,64nm,1.9s						
ISCO	Idaho Springs	83.32	45	P	P	12 40 02.9	+1.5
ISCO	Idaho Springs	83.32	45	P	P	12 40 01.3	-0.1
	baz=311,SNR=9.0						
KDZ	Kurdzhali	83.36	317	*e*P	P	12 40 05.3	+4.1
ERIK	Erikli-Kesan	83.39	316	*e*P	P	12 40 02.3	+1.0
PGB	Panagyurishte	83.44	318	*e*P	P	12 40 02.6	+0.9
PLD	Plovdiv	83.45	318	*e*P	P	12 40 02.7	+1.1
PLD	Plovdiv	83.45	318	P	P	12 40 03.2	+1.6
KORT	Korkueli	83.49	311	*e*P	P	12 40 02.1	0.0
ALN	Alexandroupoli	83.51	316	*e*P	P	12 40 00.6	-1.3
ALN	Alexandroupoli	83.51	316	*e*P	P	12 40 02.8	+0.8
	comp=Z,31nm,1.3s						
ALN				LR	LR		
	comp=Z,600nm,19.0s						
ALN	Alexandroupoli	83.51	316	*e*P	P	12 40 02.8	+0.8
ALN				pmax	pmax		
	comp=Z,31nm,1.3s						
ALN				MLR	MLR		
	comp=Z,600nm,19.0s						
NKC	Novy Kostel	83.51	330	*e*P	P	12 40 02.1	+0.3
NKC				AMS	AMS	13 21 00.0	
	comp=Z,2µm,17.5s						
NKC	Novy Kostel	83.51	330	*e*P	P	12 40 02.1	+0.3
NKC				MLR	MLR		
	comp=Z,2µm,17.5s						
KULA	Kula-Manisa	83.55	313	*e*P	P	12 40 02.7	+0.4
TIH	Tihany	83.58	325	*e*PP	PP	12 43 14.0	-0.1
TIH				⇑*e*P	P	12 40 01.1	-1.1
TIH				*e*S	S	12 50 25.0	+2.7
GELI	Tayfur-Gelibol	83.59	316	*e*P	P	12 40 03.0	+0.6
LBZ	Lake Benmore	83.59	159	*e*P	P	12 40 02.7	+0.7
	comp=Z,61nm,1.2s						
MANT	Manisa	83.62	313	*e*P	P	12 40 03.5	+0.6
	comp=Z,242nm,1.2s						
MANT				LR	LR		
	comp=Z,4µm,22.0s						
RDO	Rodhopi	83.63	317	*e*P	P	12 40 03.5	+1.0
SOP	Sopron	83.63	326	*e*S	S	12 50 19.1	-3.8
SOP				⇑*e*P	P	12 40 03.0	+0.6
SOP				*e*PP	PP	12 43 17.0	+2.5
GHAJ	Ghor Haditha	83.65	304	P	P	12 40 03.8	+1.0
MORH	Mrgy, Hungar	83.72	324	⇑*i*P	P	12 40 02.7	-0.2
MORH	Mrgy, Hungar	83.72	324	⇑*e*P	P	12 40 02.1	-0.8
MORH				*e*PP	PP	12 43 12.0	-3.2
MORH				⇑*e*S	S	12 50 29.0	+5.3
RZN	Rozhen	83.72	318	*e*P	P	12 40 04.4	+1.1
LISJ	El Lisan	83.74	304	P	P	12 40 05.0	+1.7
214A	Organ Pipe Nat	83.74	55	P	P	12 40 04.4	+1.0
	baz=308,SNR=13						
CONA	Conrad Observa	83.77	326	*i* P	P	12 40 04.2	+1.0
	comp=Z,98nm,1.3s,SNR=42						
CONA				*e*PP	PP	12 43 18.5	+2.7
	comp=Z,34nm,1.7s						
PMOR	Pomariorio Ree	83.78	113	*e*T	T	14 12 11.6	
	comp=Z,26nm,0.2s						
W18A	Petrified Fore	83.80	51	P	P	12 40 04.8	+1.0
	baz=309						
SUSD	Miller	83.81	39	P	P	12 40 03.6	+0.1
	baz=315						
KHC	Kasperske Hory	83.87	328	*e*P	P	12 40 04.0	+0.3
	comp=Z,24nm,1.0s						
KHC				LR	LR		
	comp=Z,800nm,19.0s						
KHC	Kasperske Hory	83.87	328	*e*P	P	12 40 04.6	+0.9
KHC				*e*pP	pP	12 40 10.7	-1.6
KHC				*e*S	S	12 50 22.2	-3.2
KHC	Kasperske Hory	83.87	328	*e*P	P	12 40 04.0	+0.3
KHC				pmax	pmax		
	comp=Z,24nm,1.0s						
KHC				MLR	MLR		
	comp=Z,800nm,19.0s						
VTS	Vitosha	83.90	319	*e*P	P	12 40 05.1	+1.0
	comp=Z,128nm,1.2s						
VTS				LR	LR		
	comp=Z,2µm,18.0s						
VTS	Vitosha	83.90	319	⇑*i*P	P	12 40 05.3	+1.2
VTS	Vitosha	83.90	319	*e*P	P	12 40 05.5	+1.4
FRGS	Fruska Gora	83.90	323	⇑*i*P	P	12 40 04.4	+0.5
ELL	Elmali	83.93	311	*e*P	P	12 40 04.7	+0.3
JDRJ	Daraweish	83.93	303	P	P	12 40 13.0	+8.5
S22A	4UR Ranch, Cre	83.93	48	*e*P	P	12 40 06.3	+1.8
	comp=Z,26nm,1.0s						
S22A	4UR Ranch, Cre	83.93	48	P	P	12 40 05.7	+1.2
	baz=310,SNR=20						
AMAZ	Amatzia	83.95	304	P	P	12 40 01.0	-3.4
INVG	Invergeldie, C	83.96	341	*e*P	P	12 40 04.0	0.0
ESY	Stoneypath	84.02	340	⇑*e*P	P	12 40 04.5	+0.3
GEC2	GERESS Array S	84.04	328	*e*P	P	12 40 04.6	-0.1
	comp=Z,58nm,1.3s						
GEC2				LR	LR		
	comp=Z,2µm,19.0s						
GEC2	GERESS Array S	84.04	328	*e*P	P	12 40 04.6	-0.1
GEC2				pmax	pmax		
	comp=Z,58nm,1.3s						
GEC2				MLR	MLR		
	comp=Z,2µm,19.0s						
GERES	GERESS Array B	84.04	328	P	P	12 40 04.7	+0.1
	comp=Z,16nm,0.8s,baz=38,slow=5.0,SNR=59						
GERES				PP	PP	12 43 17.4	-0.5
	comp=Z,4.5nm,1.0s,baz=23,slow=7.2,SNR=4.7						
GERES				LR	LR	13 21 40.2	
	comp=Z,1µm,19.5s,baz=25,slow=39						
GEA0	GERESS Array S	84.04	328	*e*P	P	12 40 04.1	-0.6
EZN	Ezine	84.06	315	*e*P	P	12 40 05.3	+0.5
EZN	Ezine	84.06	315	⇑*i*P	P	12 40 05.0	+0.2
Q24A	Divide	84.14	46	*e*P	P	12 40 07.1	+1.5
	comp=Z,23nm,1.3s						
Q24A	Divide	84.14	46	P	P	12 40 06.0	+0.3
	baz=311						
PPT	Papeete	84.14	116	LR	LR	13 10 00.4	
	comp=Z,877nm,21.7s,baz=276,slow=30						
PPT2	Papeete2	84.16	116	*e*S	S	12 50 27.0	-2.0
	comp=Z,206nm,25.5s						
PPT2	Papeete2	84.16	116	*e*LR	LR	13 06 32.2	
	comp=Z,2µm,22.2s,baz=309						
PPT2	Papeete2	84.16	116	*e*T	T	14 12 41.3	
	comp=Z,7.7nm,0.3s						
WET	Wettzell	84.16	329	P	P	12 40 05.8	+0.6
HSNJ	Maan	84.20	303	P	P	12 40 07.4	+1.5
EAB	Aberfoyle	84.25	341	*e*P	P	12 40 06.0	+0.6
EBL	Broad Law	84.27	341	*e*P	P	12 40 06.1	+0.6
MMB	Musomiste	84.33	318	*e*P	P	12 40 06.8	+0.6
WTSB	Winterswijk	84.34	334	*e*P	P	12 40 05.9	-0.1
	comp=Z,128nm,1.5s						
AYDB	Zeytinkoy-Aydi	84.38	313	*e*P	P	12 40 07.3	+0.7
ARSA	Arzberg	84.42	326	*i* P	P	12 40 07.0	+0.4
	comp=Z,33nm,1.1s,SNR=16						
ARSA				*e*PP	PP	12 43 22.4	+1.3
	comp=Z,11nm,1.1s						
GRA1	Grafenberg Arr	84.43	330	*e*P	P	12 40 07.4	+0.9
	comp=Z,191nm,1.2s						
GRA1				LR	LR		
	comp=Z,2µm,20.0s						
GRF	Grafenberg Arr	84.43	330	*e*P	P	12 40 07.4	+0.9
GRF				pmax	pmax		
	comp=Z,191nm,1.2s						
GRF				MLR	MLR		
	comp=Z,2µm,20.0s						
GRFO	Grafenberg	84.43	330	*e*P	P	12 40 07.6	+1.1
	comp=Z,174nm,1.2s						
GRFO				LR	LR		
	comp=Z,2µm,20.0s						
GRFO	Grafenberg	84.43	330	*e*P	P	12 40 07.6	+1.1
GRFO				pmax	pmax		
	comp=Z,174nm,1.2s						
GRFO				MLR	MLR		
	comp=Z,2µm,20.0s						
LAWE	Loch Awe, Argy	84.45	342	*e*P	P	12 40 07.0	+0.6
LAWE				IAmb	IAmb	12 40 08.2	
	comp=Z,124nm,1.5s						
KKB	Krupnik	84.49	318	*e*P	P	12 40 08.4	+1.4
MOA	Molln	84.54	327	*i* P	P	12 40 07.6	+0.4
	comp=Z,63nm,1.2s,SNR=19						
MOA				*e*PP	PP	12 43 22.8	+0.8
	comp=Z,28nm,1.2s						
DIVS	Divibare	84.56	322	*e*P	P	12 40 07.4	0.0
	comp=Z,91nm,1.2s						
DIVS				LR	LR		
	comp=Z,3µm,18.0s						
DIVS	Divibare	84.56	322	⇑*i*P	P	12 40 07.5	+0.1
OGNE	Ogallala	84.59	43	*e*P	P	12 40 08.2	+0.6
	comp=Z,134nm,1.8s						
OGNE	Ogallala	84.59	43	P	P	12 40 07.8	+0.2
	baz=313,SNR=11						
BLCB	Balcova	84.59	314	*e*P	P	12 40 07.8	+0.3
PGBU	Glenifferbraes	84.62	341	*e*P	P	12 40 08.4	+1.1
PGBU				IAmb	IAmb	12 40 09.2	
	comp=Z,240nm,1.4s						
TURN	Turunc	84.65	312	*e*P	P	12 40 09.9	+2.1
YER	Yerkesik	84.67	312	*e*P	P	12 40 05.9	-2.1
KZIT	Kziot	84.68	304	*e*P	P	12 40 09.1	+1.0
KZIT	Kziot	84.68	304	P	P	12 40 08.6	+0.5
KOGS	Kog	84.68	325	*i* P	P	12 40 07.5	-0.3
EKA	Eskdalemuir Ar	84.68	340	P	P	12 40 08.2	+0.6
	comp=Z,2.8nm,0.5s,baz=39,slow=5.3,SNR=25						
EKA				PP	PP	12 43 21.7	-1.1
	comp=Z,6.8nm,1.0s,baz=29,slow=7.1,SNR=4.1						
ESK	Eskdalemuir	84.71	340	*e*P	P	12 40 09.0	+1.2
	comp=Z,159nm,1.9s						
ESK				LR	LR		
	comp=Z,2µm,21.0s						
ESK	Eskdalemuir	84.71	340	*e*P	P	12 40 09.0	+1.2
ESK				pmax	pmax		
	comp=Z,159nm,1.9s						
ESK				MLR	MLR		
	comp=Z,2µm,21.0s						
SDCO	Great Sand Dun	84.73	47	*e*P	P	12 40 09.4	+0.8
	comp=Z,25nm,1.0s						
SDCO	Great Sand Dun	84.73	47	P	P	12 40 09.7	+1.0
	baz=311,SNR=34						
HRFI	Mount Harif	84.78	303	*e*P	P	12 40 09.3	+0.6
HRFI	Mount Harif	84.78	303	P	P	12 40 09.1	+0.4
EYMN	Ely	84.80	32	P	P	12 40 08.1	-0.3
	baz=319						
GRC1	Grafenberg Arr	84.85	329	P	P	12 40 09.2	+0.6
MLSB	Milas	84.87	313	*e*P	P	12 40 08.4	-0.6
TUC	Tucson	84.88	54	*e*P	P	12 40 09.9	+0.7
	comp=Z,35nm,0.9s						
TUC	Tucson	84.88	54	*e*P	P	12 40 09.9	+0.7
TUC				pmax	pmax		
	comp=Z,35nm,0.9s						
TUC	Tucson	84.88	54	P	P	12 40 09.9	+0.7
	baz=309						
GCAM	G?zelcaml?	84.93	313	*e*P	P	12 40 10.0	+0.8
BBLS	Lazići	85.02	322	⇑*i*P	P	12 40 10.4	+0.7
EIL	Elat	85.06	303	*e*P	P	12 40 10.0	-0.1
EIL	Elat	85.06	303	P	P	12 40 10.3	+0.2
EIL	Elat	85.06	303	P	P	12 40 10.5	+0.5
	comp=Z,65nm,1.1s,baz=51,slow=3.2,SNR=14						
SOKA	Soboth	85.07	326	*e*P	P	12 40 10.1	+0.1
	comp=Z,80nm,1.0s,SNR=39						
SOKA				*e*PP	PP	12 43 26.8	+0.3
	comp=Z,18nm,1.5s						
KNT	Kendrikon	85.08	318	*e*P	P	12 40 10.6	+0.6
HAPS	Han Pijesak,Bl	85.09	322	*e*P	P	12 40 10.1	0.0
TNS	Taunus Mts	85.12	332	P	P	12 40 10.5	+0.4
BBO1	Bothel	85.23	340	⇑*e*P	P	12 40 11.3	+0.9
GOLS	Golise	85.30	325	*i* P	P	12 40 10.7	-0.3
GOLS				*e*PP	PP	12 43 30.9	+2.7
KESW	Keswick, Cumbr	85.32	340	*e*P	P	12 40 11.4	+0.5
KESW				IAmb	IAmb	12 40 12.6	
	comp=Z,199nm,1.4s						
PLE	Pljevlja	85.41	321	⇑*i*P	P	12 40 12.5	+0.8
OBKA	Obir	85.42	326	*i* P	P	12 40 11.4	-0.3
	comp=Z,19nm,0.8s,SNR=7.3						
OBKA				*e*PP	PP	12 43 29.4	+0.1
	comp=Z,27nm,1.2s						
HPK	Haverah Park	85.45	339	*e*P	P	12 40 12.0	+0.5
HPK				IAmb	IAmb	12 40 17.8	
	comp=Z,127nm,1.4s						
IVA	Berane	85.48	321	⇓*i*P	P	12 40 12.7	+0.7
BLY	Banja Luka	85.49	324	*e*P	P	12 40 12.7	+0.8
	comp=Z,89nm,1.4s						
BLY				LR	LR		
	comp=Z,2µm,19.0s						
BLY	Banja Luka	85.49	324	⇑*i*P	P	12 40 12.2	+0.3
BLY	Banja Luka	85.49	324	⇑*i*P	P	12 40 12.2	+0.3
ECSD	EROS Data Cent	85.50	38	*e*P	P	12 40 12.3	+0.3
	comp=Z,19nm,1.0s						
ECSD	EROS Data Cent	85.50	38	P	P	12 40 11.8	-0.3
	baz=316,SNR=9.4						
CRES	Cresnjev	85.51	325	⇑*i*P	P	12 40 11.8	-0.2
GAL1	Galloway	85.52	341	⇑*e*P	P	12 40 12.4	+0.6
GAL1				IAmb	IAmb	12 40 13.2	
	comp=Z,72nm,1.3s						
KBA	Koelnbreinsper	85.53	327	*e*P	P	12 40 12.2	-0.1
	comp=Z,31nm,1.0s,SNR=12						
KBA				*i* PP	PP	12 43 33.2	+3.0
	comp=Z,42nm,1.9s						
KBA	Koelnbreinsper	85.53	327	P	P	12 40 13.5	+1.2
KSCO	Kaye Shedlock’	85.57	44	*e*P	P	12 40 13.5	+0.9
	comp=Z,98nm,1.3s						
KSCO	Kaye Shedlock’	85.57	44	P	P	12 40 12.9	+0.3
	baz=313,SNR=11						
FUR	Furstenfeldbru	85.59	329	P	P	12 40 13.4	+1.0
HGN	Heimansgroeve	85.64	333	*e*P	P	12 40 12.6	+0.1
	comp=Z,231nm,1.6s						
CLGH	Cloghs, Cushen	85.69	342	*e*P	P	12 40 12.6	-0.1
CLGH				IAmb	IAmb	12 40 14.3	
	comp=Z,185nm,1.3s						
KOME	Kolasin	85.69	321	⇑*i*P	P	12 40 13.4	+0.3
BEBN	Eben Emael	85.70	333	⇑P	P	12 40 12.9	+0.1
MEM	Membach	85.74	333	P	P	12 40 13.6	+0.6
MEM	Membach	85.74	333	⇑P	P	12 40 12.8	-0.2
	comp=Z,48nm,1.2s						
MYKA	Terra Mystica	85.74	327	*i* P	P	12 40 12.9	-0.4
	comp=Z,19nm,0.7s,SNR=9.6						
MYKA				*e*PP	PP	12 43 34.4	+2.6
	comp=Z,55nm,1.8s						
T25A	Trinidad	85.78	47	*e*P	P	12 40 15.1	+1.3
	comp=Z,62nm,1.0s						
T25A	Trinidad	85.78	47	P	P	12 40 13.2	-0.6
	baz=312,SNR=12						
LJU	Ljubljana	85.78	326	*e*P	P	12 40 13.0	-0.3
LJU				*e*PP	PP	12 43 32.9	+0.9
LJU				*e*		12 50 52.5	
LJU	Ljubljana	85.78	326	⇑*i*P	P	12 40 13.2	-0.2
E38A	The Farm, Brul	85.79	33	P	P	12 40 14.0	+0.6
	baz=320						
WACR	West Acre	85.82	337	*e*P	P	12 40 13.8	+0.5
WACR				IAmb	IAmb	12 40 14.4	
	comp=Z,182nm,1.2s						
C40A	Isle Royale Na	85.83	31	P	P	12 40 12.8	-0.7
	baz=321						
LAZ	Ladron	85.90	50	*e*P	P	12 40 15.9	+1.5
LBWR	Ladybower, Pea	85.96	339	*e*P	P	12 40 14.8	+0.7
LBWR				IAmb	IAmb	12 40 15.6	
	comp=Z,187nm,1.1s						
F37A	Hinrichs Farm,	85.97	34	P	P	12 40 14.1	-0.2
	baz=319						
ANMO	Albuquerque	85.98	50	*e*P	P	12 40 15.7	+0.9
	comp=Z,29nm,1.0s						
ANMO	Albuquerque	85.98	50	P	P	12 40 15.6	+0.9
	baz=311						
STU	Stuttgart	85.98	330	*e*P	P	12 40 15.0	+0.7
	comp=Z,93nm,0.9s						
STU				LR	LR		
	comp=Z,1µm,18.0s						
STU	Stuttgart	85.98	330	*e*P	P	12 40 15.0	+0.7
STU				pmax	pmax		
	comp=Z,93nm,0.9s						
STU				MLR	MLR		
	comp=Z,1µm,18.0s						
LIT	Litokhoron	86.04	318	PFAKE		12 40 30.0	+15
LIT				LR	LR		
	comp=Z,1µm,18.0s						
IDGL	Inch Island, C	86.05	342	*e*P	P	12 40 11.8	-2.6
CEY	Cerknica	86.06	326	⇑*i*P	P	12 40 14.3	-0.5
TAOE	Nuku Hiva Isla	86.07	104	*e*LR	LR	13 07 26.4	
	comp=Z,1µm,23.9s,baz=325						
WATA	Walderalm	86.11	328	*e*PcP	P	12 40 16.1	+1.0
	comp=Z,6.2nm,0.5s						
PDG	Podgorica	86.13	321	⇑*i*P	P	12 40 15.4	+0.3
PDG	Podgorica	86.13	321	⇑*i*P	P	12 40 15.1	0.0
TTG	Podgorica	86.13	321	⇑*i*P	P	12 40 15.2	+0.1
TTG	Podgorica	86.13	321	*e*P	P	12 40 15.6	+0.5
	comp=Z,232nm,1.6s						
TTG				LR	LR		
	comp=Z,2µm,19.0s						
TTG	Podgorica	86.13	321	*e*P	P	12 40 15.6	+0.5
TTG				pmax	pmax		
	comp=Z,232nm,1.6s						
TTG				MLR	MLR		
	comp=Z,2µm,19.0s						
F38A	Pierce - Schro	86.13	34	P	P	12 40 14.9	-0.2
	baz=319,SNR=7.6						
WTTA	Wattenberg	86.14	328	*i* P	P	12 40 15.4	+0.1
	comp=Z,12nm,1.2s						
WIM	Isle of Man	86.14	341	⇑*e*P	P	12 40 15.1	+0.1
BCLA	Clavier	86.15	333	⇑P	P	12 40 14.8	-0.3
	comp=Z,46nm,1.4s						
BCLA				⇓PcP	PcP	12 40 19.1	+1.5
ABTA	Abfaltersbach	86.15	327	*i* P	P	12 40 14.5	-0.8
	comp=Z,38nm,1.1s,SNR=9.7						
BRY	Bratogost	86.15	322	⇑*i*P	P	12 40 15.8	+0.4
BRY	Bratogost	86.15	322	*e*P	P	12 40 15.5	+0.1
LENM	Lemitar	86.16	50	*e*P	P	12 40 17.0	+1.3
FNA	Florina	86.17	319	PFAKE		12 40 30.0	+15
FNA				LR	LR		
	comp=Z,2µm,20.0s						
UCC	Uccle	86.18	334	PFAKE		12 40 30.0	+15
UCC				LR	LR		
	comp=Z,3µm,18.0s						
UCC	Uccle	86.18	334	⇓P	P	12 40 15.6	+0.4
CEME	Cevo	86.22	321	⇓*i*P	P	12 40 15.5	-0.1
SPMN	Marine on St.	86.26	35	P	P	12 40 15.9	+0.2
	baz=319						
MOTA	Moosalm	86.31	328	*i* PcP	P	12 40 16.4	+0.3
	comp=Z,30nm,1.2s,SNR=6.9						
DRME	Dracevica, Mon	86.34	321	⇑*i*P	P	12 40 16.2	0.0
DRME	Dracevica, Mon	86.34	321	⇑*i*P	P	12 40 16.1	-0.1
RETA	Reutte	86.34	329	*i* P	P	12 40 16.4	+0.2
	comp=Z,38nm,0.9s,SNR=21						
SQTA	Sankt Quirin	86.36	328	*i* P	P	12 40 16.2	-0.1
	comp=Z,16nm,0.8s,SNR=8.8						
LANF	Langenberg	86.37	331	P	P	12 40 16.7	+0.5
BGNE	Belgrade	86.38	40	*e*P	P	12 40 17.2	+0.8
	comp=Z,95nm,1.0s						
BGNE	Belgrade	86.38	40	P	P	12 40 16.4	-0.1
	baz=315						
TRI	Trieste	86.38	326	*e*P	P	12 40 15.8	-0.5
	comp=Z,52nm,1.1s						
TRI				LR	LR		
	comp=Z,2µm,19.0s						
TRI	Trieste	86.38	326	*e*P	P	12 40 15.8	-0.5
TRI				pmax	pmax		
	comp=Z,52nm,1.1s						
TRI				MLR	MLR		

	comp=Z,2µm,19.0s						
BNM	Barren Site	86.39	50	*e*P	P	12 40 18.1	+1.2
KARP	Karpathos	86.39	312	*e*P	P	12 40 17.5	+0.9
KARP	Karpathos	86.39	312	PFAKE		12 40 30.0	+13
KARP				LR	LR		
	comp=Z,900nm,22.0s						
E39A	Mellen	86.41	33	P	P	12 40 16.0	-0.4
	baz=320						
WLF	Walferdange	86.45	333	*e*P	P	12 40 17.2	+0.7
	comp=Z,747nm,1.5s						
WLF				LR	LR		
	comp=Z,10µm,20.0s						
WLF	Walferdange	86.45	333	*e*P	P	12 40 17.3	+0.7
WLF				pmax	pmax		
	comp=Z,747nm,1.5s						
WLF				MLR	MLR		
	comp=Z,10µm,20.0s						
WLF	Walferdange	86.45	333	⇑P	P	12 40 17.4	+0.8
	comp=Z,69nm,1.6s						
WLF				⇑pP	sP	12 40 29.6	+1.2
319A	Douglas	86.46	54	*e*P	P	12 40 18.2	+1.1
	comp=Z,28nm,0.9s						
ULC	Ulcinj	86.47	321	⇓*i*P	P	12 40 17.8	+1.0
TIR	Tirane	86.58	320	PFAKE		12 40 30.0	+13
TIR				LR	LR		
	comp=Z,4µm,19.0s						
GIVF	Givet	86.59	333	*e*P	P	12 40 16.5	-0.7
GIVF				pmax	pmax		
	comp=Z,118nm,1.5s						
F39A	Loretta	86.60	33	P	P	12 40 17.3	-0.1
	baz=320						
DOU	Dourbes	86.67	334	⇑P	P	12 40 17.4	-0.2
	comp=Z,28nm,1.8s						
DOU				⇑sP	sP	12 40 31.8	+2.3
BFO	Black Forest	86.68	331	*e*P	P	12 40 17.7	0.0
	comp=Z,90nm,1.1s						
BFO				LR	LR		
	comp=Z,2µm,20.0s						
BFO	Black Forest	86.68	331	*e*P	P	12 40 17.7	0.0
BFO				pmax	pmax		
	comp=Z,90nm,1.1s						
BFO				MLR	MLR		
	comp=Z,2µm,20.0s						
121A	Cookes Peak, D	86.69	52	P	P	12 40 18.4	+0.1
	baz=310,SNR=5.8						
WME	Myndd Eilian	86.71	340	⇑*e*P	P	12 40 17.6	-0.1
FETA	Feichten	86.72	328	*i* P	P	12 40 18.1	-0.1
	comp=Z,29nm,1.1s,SNR=9.1						
G38A	Ridgeland	86.74	34	P	P	12 40 17.7	-0.4
	baz=319						
WLF1	Llynfaes	86.83	340	*e*P	P	12 40 18.5	+0.2
WLF1				IAmb	IAmb	12 40 23.4	
	comp=Z,166nm,1.4s						
FOEL	Foel Wylfa	86.84	339	⇑*e*P	P	12 40 19.2	+0.8
FOEL				IAmb	IAmb	12 40 19.9	
	comp=Z,201nm,1.3s						
BAIF	Baives	86.85	334	*e*P	P	12 40 17.8	-0.7
BAIF				pmax	pmax		
	comp=Z,47nm,1.3s						
DAVA	Damuels	86.87	329	*i* PcP	P	12 40 18.9	0.0
	comp=Z,76nm,1.3s,SNR=20						
AGG	Agios Georgios	86.87	317	PFAKE		12 40 30.0	+11
AGG				LR	LR		
	comp=Z,1µm,19.0s						
SANT	Santorini	86.87	313	PFAKE		12 40 30.0	+11
SANT				LR	LR		
	comp=Z,900nm,20.0s						
YLL	Llanberis	86.90	340	*e*P	P	12 40 19.3	+0.6
YRC	Rhoscolyn	86.91	340	⇑*e*P	P	12 40 18.8	+0.1
H38A	Maiden Rock	86.92	35	P	P	12 40 19.1	+0.2
	baz=319,SNR=5.4						
F40A	Park Falls	86.95	33	P	P	12 40 18.9	-0.2
	baz=320						
G39A	Holcombe	86.97	34	P	P	12 40 18.8	-0.4
	baz=320						
DAMY	Dhamar	87.00	286	PFAKE		12 40 30.0	+10
DAMY				LR	LR		
	comp=Z,1µm,19.0s						
ELSH	Elham, Standar	87.00	336	*e*P	P	12 40 19.6	+0.4
ELSH				IAmb	IAmb	12 40 20.3	
	comp=Z,100nm,1.0s						
LLW	Llanuwychllyn	87.01	339	*e*P	P	12 40 19.9	+0.6
CDF	Champ du Feu	87.03	331	*e*P	P	12 40 18.9	-0.7
CDF				pmax	pmax		
	comp=Z,80nm,1.1s						
E41A	Kenton	87.04	32	P	P	12 40 18.9	-0.7
	baz=321						
SCHQ	Schefferville	87.12	16	*e*P	P	12 40 20.5	+0.7
	comp=Z,26nm,0.9s						
SCHQ	Schefferville	87.12	16	P	P	12 40 20.7	+0.9
	comp=Z,20nm,0.9s,baz=340,slow=4.3,SNR=13						
SCHQ				LR	LR	13 21 00.8	
	comp=Z,440nm,21.8s,baz=334,slow=37						
FUORN	Ofenpass-Fuorn	87.23	328	*e*P	P	12 40 21.0	+0.2
	comp=Z,56nm,0.9s						
FUORN				LR	LR		
	comp=Z,2µm,19.0s						
ECH	Echery	87.24	331	*e*P	P	12 40 20.8	+0.3
	comp=Z,44nm,1.0s						
ECH				LR	LR		
	comp=Z,1µm,18.0s						
ECH	Echery	87.24	331	*e*P	P	12 40 20.8	+0.3
ECH				pmax	pmax		
	comp=Z,44nm,1.0s						
ECH				MLR	MLR		
	comp=Z,1µm,18.0s						
DAVOX	Davos/Dischmat	87.27	329	P	P	12 40 21.1	+0.2
	comp=Z,6.7nm,0.5s,baz=30,slow=2.0,SNR=18						
DAVOX				PP	PP	12 43 43.0	-1.3
	comp=Z,5.6nm,1.0s,baz=22,slow=5.1,SNR=4.4						
CBKS	Cedar Bluff	87.34	43	*e*P	P	12 40 21.5	+0.3
	comp=Z,60nm,1.1s						
CBKS	Cedar Bluff	87.34	43	*e*P	P	12 40 21.5	+0.3
CBKS				pmax	pmax		
	comp=Z,60nm,1.1s						
CBKS	Cedar Bluff	87.34	43	P	P	12 40 20.9	-0.3
	baz=314,SNR=10.0						
DSB	Dublin	87.41	341	*e*P	P	12 40 17.8	-3.3
G40A	Rib Lake	87.42	33	*e*P	P	12 40 22.4	+1.0
	comp=Z,40nm,1.1s						
G40A	Rib Lake	87.42	33	P	P	12 40 20.9	-0.5
	baz=320						
STRD	Stroud	87.51	338	⇑*e*P	P	12 40 21.7	+0.1
STRD				IAmb	IAmb	12 40 23.0	
	comp=Z,388nm,1.4s						
E42A	Champion	87.52	31	P	P	12 40 21.4	-0.4
	baz=322						
MOF	Molkenrain	87.54	331	P	P	12 40 22.4	+0.4
F41A	Three Lakes	87.55	33	*e*P	P	12 40 22.8	+0.8
	comp=Z,108nm,1.5s						
F41A	Three Lakes	87.55	33	P	P	12 40 22.1	+0.1
	baz=321,SNR=5.4						
MCH1	Michaelchurch	87.57	339	⇑*e*P	P	12 40 22.4	+0.5
MCH1				IAmb	IAmb	12 40 23.1	
	comp=Z,167nm,1.5s						
SWN1	Swindon	87.63	338	*e*P	P	12 40 22.9	+0.7
SWN1				IAmb	IAmb	12 40 23.7	
	comp=Z,425nm,1.4s						
MONM	Monmouth	87.65	338	⇑*e*P	P	12 40 22.2	-0.1
MONM				IAmb	IAmb	12 40 23.5	
	comp=Z,137nm,1.3s						
HINF	Hinteralfeld	87.68	331	*e*P	P	12 40 21.5	-1.2
HINF				pmax	pmax		
	comp=Z,47nm,1.4s						
HAU	Haudompre	87.73	331	*e*P	P	12 40 21.8	-1.0
HAU				pmax	pmax		
	comp=Z,39nm,1.2s						
TUE	Stuetta	87.74	329	*e*P	P	12 40 22.9	-0.3
	comp=Z,71nm,1.4s						
TUE				LR	LR		
	comp=Z,2µm,20.0s						
LPW	Lampeter	87.78	339	*e*P	P	12 40 23.4	+0.5
H40A	Chili	87.83	34	P	P	12 40 23.2	-0.2
	baz=320						
I39A	Houston	87.89	35	*e*P	P	12 40 23.5	-0.2
	comp=Z,25nm,0.8s						
I39A	Houston	87.89	35	P	P	12 40 23.2	-0.5
	baz=320						
TBI	Tubuai	87.91	121	*e*S	S	12 51 01.8	-3.5
	comp=Z,171nm,26.8s						
TBI	Tubuai	87.91	121	*e*LR	LR	13 08 18.0	
	comp=Z,2µm,21.5s,baz=311						
TBI	Tubuai	87.91	121	*e*T	T	14 17 22.5	
	comp=Z,21nm,0.3s						
G41A	Antigo	87.92	33	P	P	12 40 23.7	-0.1
	baz=321						
IDI	Anoyia	87.94	313	PFAKE		12 40 40.0	+16
IDI				LR	LR		
	comp=Z,600nm,20.0s						
RSBS	Rosebush, Pemb	88.11	340	*e*P	P	12 40 24.5	0.0
H41A	Junction City	88.17	34	P	P	12 40 24.9	-0.1
	baz=321						
J39A	Decorah	88.20	36	P	P	12 40 24.8	-0.3
	baz=320,SNR=5.4						
G42A	Mountain	88.23	32	P	P	12 40 24.4	-0.9
	baz=322						
I40A	Norwalk	88.29	35	P	P	12 40 24.9	-0.7
	baz=320						
IWEX	Carrickbyrne,	88.30	341	*e*P	P	12 40 23.6	-1.8
F43A	Flat Rock, Esc	88.31	31	P	P	12 40 25.6	0.0
	baz=322						
I41A	Arkdale	88.50	34	P	P	12 40 26.7	+0.1
	baz=321						
G43A	Wallace	88.54	32	P	P	12 40 26.9	+0.1
	baz=322						
SCIA	State Center	88.54	37	P	P	12 40 27.2	+0.4
	baz=318						
K39A	Oelwein	88.59	36	P	P	12 40 26.7	-0.3
	baz=319						
J40A	Soldiers Grove	88.61	35	P	P	12 40 26.8	-0.3
	baz=320						
SENIN	Lac Senin/Sane	88.68	330	*e*P	P	12 40 28.5	+0.8
	comp=Z,27nm,1.4s						
SENIN				LR	LR		
	comp=Z,2µm,18.0s						
MATQ	Matagami	88.68	24	P	P	12 40 27.4	+0.1
	baz=329						
E45A	Wooded Hills,	88.72	30	P	P	12 40 27.8	+0.2
	baz=324						
D46A	Sault St. Mari	88.75	29	P	P	12 40 27.8	+0.1
	baz=325						
H42A	Shiocton	88.76	33	P	P	12 40 27.9	+0.1
	baz=322						
MNTX	Cornudas Mount	88.78	51	*e*P	P	12 40 28.3	+0.1
	comp=Z,12nm,1.0s						
MNTX	Cornudas Mount	88.78	51	P	P	12 40 28.4	+0.2
	baz=312,SNR=5.7						
KSU1	Kansas State U	88.85	41	*e*P	P	12 40 27.9	-0.4
	comp=Z,42nm,1.0s						
KSU1	Kansas State U	88.85	41	P	P	12 40 28.4	+0.1
	baz=316,SNR=6.0						
MSTX	Muleshoe	88.89	48	*e*P	P	12 40 29.2	+0.4
	comp=Z,21nm,1.4s						
MSTX	Muleshoe	88.89	48	P	P	12 40 28.8	+0.1
	baz=313						
AMTX	Amarillo	88.93	47	*e*P	P	12 40 29.9	+1.0
	comp=Z,49nm,1.0s						
AMTX	Amarillo	88.93	47	P	P	12 40 28.3	-0.6
	baz=314						
K40A	Colesburg	88.95	36	P	P	12 40 28.6	-0.1
	baz=320						
CABF	La Chapelle	88.97	331	*e*P	P	12 40 28.4	-0.4
CABF				pmax	pmax		
	comp=Z,58nm,1.7s						
J41A	Loganville	88.97	35	P	P	12 40 28.5	-0.3
	baz=321						
L39A	Vinton	88.98	36	P	P	12 40 27.5	-1.3
	baz=319						
D47A	Chapleau	88.98	28	P	P	12 40 28.6	-0.2
	baz=325						
E46A	Sault Ste Mari	89.07	29	P	P	12 40 27.6	-1.6
	baz=324						
AQU	L'Aquila	89.10	324	*e*P	P	12 40 29.9	+0.4
	comp=Z,51nm,0.9s						
AQU				LR	LR		
	comp=Z,3µm,18.0s						
AQU	L'Aquila	89.10	324	*e*P	P	12 40 29.9	+0.4
AQU				pmax	pmax		
	comp=Z,51nm,0.9s						
AQU				MLR	MLR		
	comp=Z,3µm,18.0s						
AQU	L'Aquila	89.10	324	⇑*i*P	P	12 40 29.3	-0.2
VLC	Villacollemand	89.11	327	PFAKE		12 40 40.0	+11
VLC				LR	LR		
	comp=Z,2µm,21.0s						
JFWS	Jewell Farm	89.21	35	P	P	12 40 29.8	-0.1
	baz=320						
CLF	Chambon-Foret	89.25	334	*e*P	P	12 40 30.8	+0.8
	comp=Z,64nm,1.2s						
CLF				LR	LR		
	comp=Z,2µm,20.0s						
LOR	Lormes	89.29	332	*e*P	P	12 40 29.5	-0.7
LOR				pmax	pmax		
	comp=Z,88nm,1.6s						
F46A	Macinaw City C	89.37	30	P	P	12 40 30.6	0.0
	baz=324						
M39A	Webster	89.38	37	P	P	12 40 30.8	0.0
	baz=319						
D48A	Paudash Townsh	89.38	28	P	P	12 40 30.5	-0.2
	baz=326						
L40A	Anamosa	89.40	36	P	P	12 40 30.7	-0.1
	baz=320						
E47A	Iron Bridge	89.41	29	P	P	12 40 30.5	-0.2
	baz=325						
K41A	Shullsburg	89.42	35	P	P	12 40 30.3	-0.6
	baz=320						
U32A	Winter Ranch,	89.46	44	*e*P	P	12 40 32.5	+1.2
	comp=Z,31nm,1.0s						
D49A	Beulah Townshi	89.47	27	P	P	12 40 31.0	0.0
	baz=327						
LSQQ	Lebel-sur-Quev	89.50	24	P	P	12 40 31.1	0.0
	baz=330						
FLN	La Foliniere	89.58	336	*e*P	P	12 40 30.8	-0.7
FLN				pmax	pmax		
	comp=Z,84nm,1.6s						
CHGQ	Chibougamau	89.59	22	P	P	12 40 31.5	-0.1
	baz=332,SNR=14						
LPL	La Plagne	89.59	330	*e*P	P	12 40 31.2	-0.8
LPL				pmax	pmax		
	comp=Z,31nm,1.1s						
SSF	Saint Saulge	89.60	332	*e*P	P	12 40 31.1	-0.5
SSF				pmax	pmax		
	comp=Z,50nm,1.3s						
LPG	La Plagne	89.60	330	*e*P	P	12 40 31.4	-0.7
LPG				pmax	pmax		
	comp=Z,40nm,1.2s						
LDF	La Druitiere	89.61	335	*e*P	P	12 40 30.9	-0.7
LDF				pmax	pmax		
	comp=Z,216nm,2.2s						
CUC	Castrocucco	89.68	321	PFAKE		12 40 40.0	+7.8
CUC				LR	LR		
	comp=Z,2µm,18.0s						
M40A	Post Highland	89.76	37	P	P	12 40 33.2	+0.7
	baz=320						
TIP	Timpagrande	89.79	320	PFAKE		12 40 40.0	+7.2
TIP				LR	LR		
	comp=Z,2µm,20.0s						
SMF	Signal de Mont	89.82	332	*e*P	P	12 40 32.6	-0.1
SMF				pmax	pmax		
	comp=Z,117nm,1.6s						
AVF	Avril sur Loir	89.88	332	*e*P	P	12 40 32.5	-0.5
AVF				pmax	pmax		
	comp=Z,130nm,1.4s						
ATD	Arta Tunnel	89.98	284	PFAKE		12 40 50.0	+16
ATD				LR	LR		
	comp=Z,700nm,18.0s						
BNI	Bardonecchia	89.99	330	*e*P	P	12 40 34.1	+0.4
	comp=Z,30nm,1.3s						
BNI				LR	LR		
	comp=Z,2µm,19.0s						
BNI	Bardonecchia	89.99	330	*e*P	P	12 40 34.1	+0.4
BNI				pmax	pmax		
	comp=Z,30nm,1.3s						
BNI				MLR	MLR		
	comp=Z,2µm,19.0s						
N40A	Mertquake, Sal	90.12	37	P	P	12 40 34.7	+0.5
	baz=320						
VLDQ	Val d'Or	90.16	25	*e*P	P	12 40 34.1	-0.1
	comp=Z,55nm,1.4s						
H46A	Fife Lake	90.18	31	P	P	12 40 35.2	+0.8
	baz=324						
L42A	Oliver, Polo	90.19	35	P	P	12 40 35.4	+0.9
	baz=321						
GLMI	Grayling	90.19	31	*e*P	P	12 40 35.9	+1.4
	comp=Z,112nm,0.8s						
GLMI	Grayling	90.19	31	P	P	12 40 35.0	+0.5
	baz=324						
MBDF	Montbardon	90.22	329	*e*P	P	12 40 33.4	-1.4
MBDF				pmax	pmax		
	comp=Z,18nm,0.9s						
G47A	Hillman	90.22	30	P	P	12 40 35.1	+0.6
	baz=325						
M41A	Milan	90.25	36	P	P	12 40 34.7	-0.1
	baz=320						
K43A	Burlington	90.26	34	P	P	12 40 34.7	-0.1
	baz=322						
BGF	Bois d'Agland	90.27	333	*e*P	P	12 40 34.3	-0.5
BGF				pmax	pmax		
	comp=Z,25nm,1.1s						
D51A	Lot 18 Range I	90.36	26	P	P	12 40 34.8	-0.4
	baz=328						
E50A	Wahnapitae	90.41	27	P	P	12 40 35.4	0.0
	baz=327						
ORIF	Oris-en-Rattie	90.43	330	*e*P	P	12 40 34.9	-0.8
ORIF				pmax	pmax		
	comp=Z,24nm,1.1s						
H47A	Mio	90.55	30	P	P	12 40 36.1	0.0
	baz=325						
I46A	Reed City	90.56	32	P	P	12 40 36.7	+0.5
	baz=324						
N41A	Harden Midland	90.61	37	P	P	12 40 36.7	+0.2
	baz=320						
SBF	Sospel	90.63	328	*e*P	P	12 40 35.2	-1.4
SBF				pmax	pmax		
	comp=Z,88nm,1.2s						
SSB	Saint Sauveur	90.67	331	*e*P	P	12 40 37.2	+0.4
	comp=Z,19nm,1.0s						
SSB				LR	LR		
	comp=Z,2µm,20.0s						
SSB	Saint Sauveur	90.67	331	*e*P	P	12 40 37.2	+0.4
SSB				pmax	pmax		
	comp=Z,19nm,1.0s						
SSB				MLR	MLR		
	comp=Z,2µm,20.0s						
TCF	Toulx Ste Croi	90.73	333	*e*P	P	12 40 36.6	-0.4
TCF				pmax	pmax		
	comp=Z,66nm,1.4s						
WMOK	Wichita Mounta	90.75	45	*e*P	P	12 40 38.1	+0.8
	comp=Z,28nm,1.1s						
WMOK	Wichita Mounta	90.75	45	*e*P	P	12 40 38.1	+0.8
WMOK				pmax	pmax		
	comp=Z,28nm,1.1s						
WMOK	Wichita Mounta	90.75	45	P	P	12 40 37.5	+0.3
	baz=315,SNR=12						
E51A	G1948 Merrick	90.78	27	P	P	12 40 37.1	-0.1
	baz=328						
D52A	ZEK Kipawa Sen	90.80	26	P	P	12 40 37.4	+0.2
	baz=329						
SLBS	Sierra La Lagu	90.87	60	*e*P	P	12 40 39.5	+1.4
	comp=Z,30nm,1.2s						
N42A	Yates City	90.92	36	P	P	12 40 38.1	+0.2
	baz=321						
CEL	Celeste	90.92	320	PFAKE		12 40 50.0	+12
CEL				LR	LR		
	comp=Z,3µm,19.0s						
VIVF	Saint-Julien-l	90.97	331	*e*P	P	12 40 37.5	-0.6
VIVF				pmax	pmax		
	comp=Z,35nm,1.2s						
PGF	Pioggiola	91.00	327	*e*P	P	12 40 37.2	-1.2
PGF				pmax	pmax		
	comp=Z,49nm,1.4s						
O41A	Passleys Farm,	91.05	37	P	P	12 40 38.3	-0.2
	baz=320						
F51A	Arnstein	91.14	27	P	P	12 40 38.4	-0.4
	baz=328						
FRF	La Foret Royal	91.22	329	*e*P	P	12 40 38.5	-0.7
FRF				pmax	pmax		
	comp=Z,21nm,0.8s						
N43A	Stutzman Famil	91.25	36	P	P	12 40 39.9	+0.5
	baz=321						
D54A	Lac Fusel, La	91.26	25	P	P	12 40 39.3	-0.1
	baz=330						
P41A	Barry, Barry	91.30	38	P	P	12 40 39.8	+0.1
	baz=320						
E52A	Mattawa	91.30	26	P	P	12 40 40.4	+0.8
	baz=329						
MFF	Saint Martin d	91.32	334	*e*P	P	12 40 39.5	-0.2
MFF				pmax	pmax		
	comp=Z,86nm,1.2s						
J47A	Sunmer	91.39	32	P	P	12 40 40.3	+0.2
	baz=324						
K46A	Dorr	91.42	33	P	P	12 40 39.9	-0.3
	baz=324						
TXAR	Lajitas Array	91.46	52	P	P	12 40 41.8	+1.1
	comp=Z,4.4nm,0.7s,baz=309,slow=2.8,SNR=28						
TXAR				PKKPbc	PKKPbc	12 58 03.4	+3.1
	comp=Z,0.3nm,0.5s,baz=144,slow=4.7,SNR=4.0						
F52A	Sundridge	91.47	27	P	P	12 40 40.7	+0.3
	baz=328						
HDIL	Hopedale	91.48	36	P	P	12 40 40.5	0.0
	baz=321						
KLBO	Killbear Provi	91.51	28	P	P	12 40 40.7	+0.2
	baz=328						
TUL1	Leonard	91.61	43	*e*P	P	12 40 42.1	+0.9
	comp=Z,27nm,1.0s						
TUL1	Leonard	91.61	43	P	P	12 40 41.2	0.0
	baz=317						
E54A	Lac Daplat, Po	91.70	25	P	P	12 40 41.3	-0.1
	baz=330						
ABTX	Abilene, Hawle	91.72	47	*e*P	P	12 40 42.9	+1.1
	comp=Z,48nm,1.1s						
ABTX	Abilene, Hawle	91.72	47	P	P	12 40 42.0	+0.1
	baz=315,SNR=6.8						
P42A	Winchester	91.72	37	*e*P	P	12 40 42.7	+1.1
	comp=Z,61nm,1.4s						
P42A	Winchester	91.72	37	P	P	12 40 41.3	-0.3
	baz=320						
HPIG		91.73	55	*e*P	P	12 40 43.6	+1.4
	comp=Z,31nm,1.1s						
Q41A	Truxton	91.76	38	P	P	12 40 41.3	-0.6
	baz=320						
J48A	Bridge Port	91.78	31	P	P	12 40 43.1	+1.2
	baz=325						
ALGO	Algonquin Park	91.80	26	P	P	12 40 41.6	-0.3
	baz=329						
RJF	Les Rejaudoux	91.82	333	*e*P	P	12 40 41.8	-0.2
RJF				pmax	pmax		
	comp=Z,68nm,1.1s						
CAF	Calviac	91.94	332	*e*P	P	12 40 42.7	+0.1
CAF				pmax	pmax		
	comp=Z,60nm,1.2s						
Q42A	Golden Eagle	92.15	38	P	P	12 40 43.2	-0.5
	baz=320						
R41A	Rosebud	92.19	39	P	P	12 40 43.6	-0.2
	baz=320,SNR=7.4						
L47A	Sherwood	92.25	33	P	P	12 40 43.5	-0.5
	baz=324						
LATQ	La Tuque	92.32	22	P	P	12 40 44.7	+0.5
	baz=333						
PEMO	Pembroke	92.33	26	P	P	12 40 44.7	+0.4
	baz=330						
HHAR	Hobbs	92.35	41	*e*P	P	12 40 45.0	+0.3
	comp=Z,15nm,0.9s						
SADO	Sadowa	92.41	27	LR	LR	13 24 22.0	
	comp=Z,228nm,21.6s,baz=357,slow=37						
CCM	Cathedral Cave	92.44	39	*e*P	P	12 40 45.2	+0.2
	comp=Z,21nm,1.0s						
CCM	Cathedral Cave	92.44	39	*e*P	P	12 40 45.2	+0.2
CCM				pmax	pmax		
	comp=Z,21nm,1.0s						
CCM	Cathedral Cave	92.44	39	P	P	12 40 45.5	+0.4
	baz=320						
O45A	Potomac	92.47	35	P	P	12 40 45.5	+0.4
	baz=322						
R42A	Luebbering	92.50	38	P	P	12 40 45.6	+0.3
	baz=320						
SLM	Saint Louis	92.51	38	PFAKE		12 41 00.0	+15
SLM				LR	LR		
	comp=Z,600nm,21.0s						
S41A	Jillco Farms,	92.54	39	P	P	12 40 45.3	-0.2
	baz=319						
L48A	N Adams	92.61	32	P	P	12 40 45.2	-0.5
	baz=324						
P44A	Sand Creek, Wi	92.66	36	P	P	12 40 45.7	-0.3
	baz=322						
SFIN	Lafayette	92.66	35	P	P	12 40 46.1	+0.1
	baz=323						
CLTB	Caltabellotta	92.83	321	PFAKE		12 41 00.0	+13
CLTB				LR	LR		
	comp=Z,2µm,20.0s						
G55A	Calabogie	92.88	26	P	P	12 40 46.6	-0.3
	baz=330						
U40A	Yellville	92.88	41	P	P	12 40 46.8	-0.3
	baz=319,SNR=20						
S42A	Caledonia	92.89	39	P	P	12 40 46.8	-0.3
	baz=320,SNR=6.3						
Q44A	Meyer Farm, Va	92.90	37	P	P	12 40 47.2	+0.1
	baz=321						
R43A	Red Bud	92.94	38	P	P	12 40 47.2	-0.1
	baz=321						
T41A	Mountain View	92.94	40	P	P	12 40 46.9	-0.5
	baz=319,SNR=6.6						

JCT	Junction City	93.12	49	eP	P	12 40 49.1	+0.7
	comp=Z,80nm,1.8s						
JCT	Junction City	93.12	49	eP	P	12 40 49.1	+0.7
JCT				pmax	pmax		
	comp=Z,80nm,1.8s						
JCT	Junction City	93.12	49	P	P	12 40 48.0	-0.3
	baz=314						
ORIO	Orleans, Innes	93.13	25	P	P	12 40 47.5	-0.5
	baz=331						
H06N1	SOCORRO T-PHAS	93.14	64	T	T	14 24 20.2	
	SNR=14						
ALFO	Alfred	93.19	24	P	P	12 40 48.8	+0.5
	baz=331						
O47A	Sheridan	93.20	34	P	P	12 40 48.3	-0.2
	baz=323						
MTLF	Montolieu	93.21	331	eP	P	12 40 48.3	-0.2
MTLF				pmax	pmax		
	comp=Z,53nm,1.2s						
P46A	Rosedale	93.21	35	P	P	12 40 48.6	+0.1
	baz=322						
N48A	Decatur	93.22	33	P	P	12 40 48.2	-0.4
	baz=324						
W39A	Magazine	93.24	42	eP	P	12 40 49.4	+0.6
	comp=Z,68nm,1.8s						
W39A	Magazine	93.24	42	P	P	12 40 49.0	+0.2
	baz=318						
T42A	Van Buren	93.30	39	eP	P	12 40 49.1	+0.1
	comp=Z,27nm,1.3s						
T42A	Van Buren	93.30	39	P	P	12 40 48.9	-0.1
	baz=320,SNR=5.8						
Q45A	Warren Harvey,	93.33	36	P	P	12 40 49.5	+0.4
	baz=322						
R44A	Waltonville	93.38	37	P	P	12 40 49.2	-0.1
	baz=321						
U41A	Viola	93.39	40	P	P	12 40 49.2	-0.3
	baz=319						
WDD	Wied Dalam	93.46	319	PFAKE		12 41 00.0	+10
WDD				LR	LR		
	comp=Z,1μm,19.0s						
WHTX	Lake Whitney,	93.47	47	eP	P	12 40 51.0	+1.2
	comp=Z,57nm,1.1s						
WHTX	Lake Whitney,	93.47	47	P	P	12 40 50.3	+0.4
	baz=316						
N49A	Columbus Grove	93.55	33	P	P	12 40 50.4	+0.4
	baz=325						
O48A	Farmland	93.65	34	P	P	12 40 51.0	+0.5
	baz=324						
T43A	Greenville	93.67	39	P	P	12 40 50.7	0.0
	baz=320						
S44A	Carbondale	93.72	38	P	P	12 40 50.7	-0.3
	baz=321						
U42A	Revenden	93.74	40	P	P	12 40 51.5	+0.4
	baz=320						
PBMO	Poplar Bluff	93.83	39	eP	P	12 40 51.7	+0.2
	comp=Z,18nm,1.0s						
MIAR	Mount Ida	93.84	42	eP	P	12 40 52.4	+0.9
	comp=Z,27nm,1.0s						
MIAR	Mount Ida	93.84	42	eP	P	12 40 52.4	+0.9
MIAR				pmax	pmax		
	comp=Z,27nm,1.0s						
MIAR	Mount Ida	93.84	42	P	P	12 40 51.5	0.0
	baz=318,SNR=11						
WHAR	Wooly Hollow	93.98	41	eP	P	12 40 52.2	+0.1
	comp=Z,65nm,1.5s						
S45A	Carrier Mills	94.07	37	P	P	12 40 51.9	-0.6
	baz=322						
O49A	Covington	94.08	33	P	P	12 40 52.4	-0.1
	baz=324						
W41B	Gary Mavity, V	94.09	41	eP	P	12 40 53.5	+0.8
	comp=Z,44nm,1.6s						
W41B	Gary Mavity, V	94.09	41	P	P	12 40 53.2	+0.6
	baz=319						
Q47A	Bedord North L	94.12	35	P	P	12 40 53.0	+0.3
	baz=323						
N50A	Nevada	94.12	32	P	P	12 40 52.8	+0.1
	baz=325						
U43A	Rector	94.16	39	P	P	12 40 52.7	-0.3
	baz=320						
LONY	Lake Ozonia	94.17	25	P	P	12 40 53.6	+0.7
	baz=332						
J55A	Hilton	94.19	27	P	P	12 40 53.2	+0.2
	baz=329						
EPF	Esparros	94.20	332	eP	P	12 40 52.3	-0.8
EPF				pmax	pmax		
	comp=Z,25nm,1.4s						
X40A	Basin Creek Fa	94.29	42	eP	P	12 40 53.9	+0.3
	comp=Z,12nm,0.9s						
X40A	Basin Creek Fa	94.29	42	P	P	12 40 53.7	+0.1
	baz=319						
ERPA	Erie	94.32	29	P	P	12 40 53.0	-0.6
	baz=328						
O50A	Cable	94.43	33	P	P	12 40 53.8	-0.4
	baz=325						
P49A	Miami Univ. Ec	94.43	34	P	P	12 40 53.9	-0.2
	baz=324						
M53A	WI Miller and	94.61	30	P	P	12 40 54.8	-0.2
	baz=327						
ACSO	Alum Creek Sta	94.64	32	P	P	12 40 55.1	0.0
	baz=325						
ETSF	Etsaut	94.66	333	eP	P	12 40 55.2	0.0
ETSF				pmax	pmax		
	comp=Z,32nm,1.4s						
Q49A	Aurora	94.78	34	P	P	12 40 55.4	-0.3
	baz=324						
FURI	Furi	94.84	284	PFAKE		12 41 10.0	+13
FURI				LR	LR		
	comp=Z,800nm,20.0s						
833A	Chaparral WMA,	94.87	50	eP	P	12 40 54.3	-2.1
	comp=Z,29nm,1.1s						
L55A	Hinsdale	94.88	28	P	P	12 40 55.9	-0.3
	baz=329						
T46A	Princeton	94.91	37	P	P	12 40 56.1	-0.3
	baz=322						
M54A	Oil Creek Stat	94.97	29	P	P	12 40 55.5	-1.1
	baz=328						
P51A	Williamsport	95.22	33	P	P	12 40 57.1	-0.7
	baz=325						
R49A	Shelbyville	95.23	35	P	P	12 40 57.3	-0.5
	baz=324						
O52A	Adamsville	95.23	32	P	P	12 40 57.4	-0.4
	baz=326						
S48A	Wiedeman Farm,	95.32	36	P	P	12 40 58.0	-0.2
	baz=323						
Q50A	Georgetown	95.33	34	P	P	12 40 58.0	-0.3
	baz=325						
T47A	Sharon Grove	95.34	37	P	P	12 40 58.1	-0.2
	baz=322						
O53A	New Philadelph	95.39	31	P	P	12 40 58.5	-0.1
	baz=327						
Q51A	Peebles	95.47	33	eP	P	12 40 59.0	+0.1
	comp=Z,25nm,1.2s						
Q51A	Peebles	95.47	33	P	P	12 40 58.4	-0.5
	baz=325						
P52A	Corning	95.50	32	P	P	12 40 58.3	-0.7
	baz=326						
S49A	Springfield	95.58	35	P	P	12 40 59.0	-0.5
	baz=324						
R50A	Paris	95.62	34	P	P	12 40 59.3	-0.4
	baz=324						
W45A	Hickory Valley	95.72	39	P	P	12 40 59.6	-0.6
	baz=321						
V46A	Holladay	95.77	38	P	P	12 41 00.6	+0.2
	baz=322						
N55A	Marion Center	95.86	29	P	P	12 41 00.6	-0.1
	baz=328						
R51A	Hillsboro	95.95	34	P	P	12 41 00.5	-0.6
	baz=325						
U48A	Cassie Pea, Po	95.99	37	P	P	12 41 00.8	-0.6
	baz=323						
T49A	Edmonton	96.01	36	P	P	12 41 00.8	-0.6
	baz=324						
V47A	Nunnelly	96.05	38	P	P	12 41 01.1	-0.5
	baz=322						
S50A	Richmond	96.08	35	P	P	12 41 01.6	-0.2
	baz=324						
OXF	Oxford	96.11	40	P	P	12 41 01.4	-0.4
	baz=321						
O55A	Ligonier	96.21	30	P	P	12 41 02.0	-0.4
	baz=328						
KEST	Kesra	96.22	322	eP	P	12 41 02.8	+0.2
	comp=Z,22nm,1.4s						
KEST				LR	LR		
	comp=Z,2μm,19.0s						
KEST	Kesra	96.22	322	P	P	12 41 01.7	-0.8
	comp=Z,5.7nm,0.9s,baz=243,slow=6.0,SNR=5.4						
KEST				LR	LR	13 30 23.4	
	comp=Z,1μm,18.1s,baz=352,slow=39						
P54A	Burton	96.23	31	P	P	12 41 02.3	-0.1
	baz=327						
U49A	Red Boiling Sp	96.36	36	P	P	12 41 02.6	-0.4
	baz=323						
T50A	Nancy	96.41	35	P	P	12 41 02.5	-0.7
	baz=324						
O56A	Blue Knob Stat	96.46	29	P	P	12 41 02.4	-1.1
	baz=328						
V48A	Smith Brothers	96.47	37	P	P	12 41 02.6	-1.0
	baz=322						
P55A	Reedsville	96.59	31	P	P	12 41 03.4	-0.6
	baz=328						
R53A	Hurricane	96.66	33	P	P	12 41 03.9	-0.4
	baz=326						
T51A	Gray	96.87	35	P	P	12 41 04.9	-0.4
	baz=324						
W48A	Pulaski	96.89	38	P	P	12 41 05.0	-0.4
	baz=322						
U50A	Jamestown	96.89	36	P	P	12 41 05.0	-0.5
	baz=324						
Q55A	Buckhannon	96.91	31	P	P	12 41 04.9	-0.6
	baz=327						
N59A	State Game Lan	96.99	27	P	P	12 41 05.2	-0.6
	baz=331						
HRV	Adam Dziewonsk	97.06	24	P	P	12 41 05.1	-1.0
	baz=334						
W49A	Belvidere	97.23	37	P	P	12 41 06.1	-0.9
	baz=323						
Y48A	Jasper	97.73	39	P	P	12 41 08.3	-1.0
	baz=322						
CPNY	Central Park	97.76	26	PFAKE		12 41 20.0	+11
CPNY				LR	LR		
	comp=Z,2μm,20.0s						
T54A	Tazewell	97.87	33	P	P	12 41 09.1	-0.8
	baz=326						
W51A	Cleveland	97.94	36	P	P	12 41 09.5	-0.7
	baz=324						
TKL	Tuckaleechee C	98.01	35	LR	LR	13 26 01.1	
	comp=Z,184nm,21.1s,baz=332,slow=36						
RKT	Rikitea	98.39	112	eSKSac	SKSac	12 51 47.9	-0.4
	comp=Z,263nm,26.4s						
RKT	Rikitea	98.39	112	eLR	LR	13 13 04.3	
	comp=Z,2μm,22.8s						
Z49A	Columbiana	98.62	39	P	P	12 41 12.6	-0.7
	baz=322						
ES19	SONSECA Array	98.68	333	eP	P	12 41 13.2	-0.3
ESDC	Sonseca Array	98.72	333	P	P	12 41 12.9	-0.8
	comp=Z,1.5nm,0.8s,baz=31,slow=3.0,SNR=5.7						
ESDC				PP	PP	12 45 13.3	-0.6
	comp=Z,1.4nm,0.6s,baz=25,slow=8.0,SNR=4.3						
ESDC				LR	LR	13 29 47.8	
	comp=Z,998nm,20.4s,baz=35,slow=38						
ESLA	Sonseca Array	98.72	333	PFAKE		12 41 30.0	+16
ESLA				LR	LR		
	comp=Z,2μm,22.0s						
PAB	San Pablo	98.98	334	PFAKE		12 41 30.0	+15
PAB				LR	LR		
	comp=Z,2μm,19.0s						
MTE	Manteigas	99.33	336	PFAKE		12 41 30.0	+14
MTE				LR	LR		
	comp=Z,2μm,20.0s						
CART	Cartagena	99.39	330	PFAKE		12 41 30.0	+13
CART				LR	LR		
	comp=Z,2μm,20.0s						
KMBO	Kilima Mbogo	101.88	277	PP	PP	12 45 38.2	-1.3
	comp=Z,1.3nm,0.3s,baz=44,slow=9.3,SNR=7.7						
SFS	San Fernando	102.38	333	PFAKE		12 41 40.0	+10
SFS				LR	LR		
	comp=Z,2μm,20.0s						
MBAR	Mbarara	106.83	281	PFAKE		12 46 10.0	+10
MBAR				LR	LR		
	comp=Z,600nm,21.0s						
MBAR	Mbarara	106.83	281	PP	PP	12 46 16.0	-0.2
	comp=Z,7.0nm,0.2s,baz=48,slow=5.6,SNR=6.8						
TAM	Tamanrasset	108.49	317	PFAKE		12 46 20.0	+17
TAM				LR	LR		
	comp=Z,600nm,19.0s						
SDDR	Presa de Saban	117.95	35	PFAKE		12 46 30.0	+8.7
SDDR				LR	LR		
	comp=Z,1μm,19.0s						
TOC1	Torodi Ar. Sit	118.31	314	PFAKE		12 46 30.0	+8.0
TOC1				LR	LR		
	comp=Z,800nm,20.0s						
TOC2	Torodi Ar. Sit	118.31	314	PFAKE		12 46 30.0	+8.0
TOC2				LR	LR		
	comp=Z,800nm,22.0s						
TOB2	Torodi Ar. Sit	118.32	314	PFAKE		12 46 30.0	+8.0
TOB2				LR	LR		
	comp=Z,700nm,21.0s						
TOC3	Torodi Ar. Sit	118.32	314	PFAKE		12 46 30.0	+8.0
TOC3				LR	LR		
	comp=Z,700nm,21.0s						
TOC7	Torodi Ar. Sit	118.33	314	PFAKE		12 46 30.0	+8.0
TOC7				LR	LR		
	comp=Z,700nm,20.0s						
TOA1	Torodi Ar. Sit	118.33	314	ePKPdf	PKPdf	12 46 19.9	-2.1
TOA1				ePP	PP	12 47 28.3	-9.1
TOA1				ePKKPbc	PKKPbc	12 56 39.8	+1.0
TOA1				LR	LR		
	comp=Z,800nm,22.0s						
TOA0	Torodi Ar. Sit	118.33	314	ePKPdf	PKPdf	12 46 19.2	-2.8
TOA0				ePKPdf	PKiKP	12 46 22.0	-0.1
TOA0				LR	LR		
	comp=Z,700nm,21.0s						
TORD	Torodi Ar. Bea	118.33	314	PKP	PKPdf	12 46 19.9	-2.1
	comp=Z,2.5nm,0.5s,baz=7.7,slow=2.3,SNR=17						
TORD				PP	PP	12 47 28.3	-9.1
	comp=Z,3.7nm,1.1s,baz=46,slow=8.5,SNR=5.3						
TORD				PKKPbc	PKKPbc	12 56 39.8	+1.0
	comp=Z,0.9nm,0.8s,baz=219,slow=2.2,SNR=5.0						
TOB3	Torodi Ar. Sit	118.33	314	PFAKE		12 46 30.0	+7.9
TOB3				LR	LR		
	comp=Z,700nm,21.0s						
TOB5	Torodi Ar. Sit	118.33	314	PFAKE		12 46 30.0	+7.9
TOB5				LR	LR		
	comp=Z,800nm,21.0s						
TOA3	Torodi Ar. Sit	118.33	314	PFAKE		12 46 30.0	+7.9
TOA3				LR	LR		
	comp=Z,700nm,21.0s						
TOB4	Torodi Ar. Sit	118.34	314	PFAKE		12 46 30.0	+7.9
TOB4				LR	LR		
	comp=Z,700nm,21.0s						
TOC4	Torodi Ar. Sit	118.35	314	PFAKE		12 46 30.0	+7.9
TOC4				LR	LR		
	comp=Z,700nm,20.0s						
TOC5	Torodi Ar. Sit	118.36	314	PFAKE		12 46 30.0	+7.9
TOC5				LR	LR		
	comp=Z,900nm,21.0s						
MTP	Monte Pirata	121.24	30	PFAKE		12 46 40.0	+12
MTP				LR	LR		
	comp=Z,700nm,21.0s						
SMRT	St. Maarten	122.26	27	PFAKE		12 46 40.0	+10
SMRT				LR	LR		
	comp=Z,1μm,18.0s						
QSPA	South Pole Qui	125.02	180	ePKPdf	PKiKP	12 46 34.1	+0.5
QSPA				LR	LR		
	comp=Z,1μm,22.0s						
BOSA	Boshof	125.91	258	PKP	PKPdf	12 46 35.8	-0.5
	comp=Z,2.1nm,0.8s,baz=106,slow=7.4,SNR=2.6						
BOSA	Boshof	125.91	258	eP	PKPdf	12 46 36.2	-0.1
SYO	Syowa Base	126.48	206	⇑eP	PKPdf	12 46 29.6	-6.3
SYO	Syowa Base	126.48	206	⇑iP	PKPdf	12 46 36.0	+0.1
SDV	Santo Domingo	126.88	40	ePKPdf	PKPdf	12 46 38.6	-0.1
SDV				LR	LR		
	comp=Z,900nm,20.0s						
SDV	Santo Domingo	126.88	40	eP	PKiKP	12 46 39.3	+0.1
SVB	Belmont	127.31	28	PFAKE		12 46 50.0	+10
SVB				LR	LR		
	comp=Z,1μm,20.0s						
DBIC	Dimbokro	127.33	315	PKP	PKiKP	12 46 39.7	-0.1
	comp=Z,2.8nm,0.5s,baz=21,slow=3.5,SNR=9.0						
DBIC	Dimbokro	127.33	315	eP	PKiKP	12 46 40.3	+0.5
TIC	Toumodi	127.45	316	ePKP1	PKPdf	12 46 39.7	+0.1
KIC	Kosan Boka	127.52	315	ePKP1	PKPdf	12 46 39.2	-0.5
	comp=Z,36nm,1.2s						
LIC	Lamto	127.80	315	ePKP1	PKPdf	12 46 39.9	-0.3
	comp=Z,49nm,1.1s						
OTAV	Otavalo	129.00	55	eP	PKiKP	12 46 43.6	-0.2
PTGA	Pitinga	140.47	34	eP	PKPdf	12 47 04.8	+0.9
LPAZ	La Paz	147.84	61	ePKPbc	PKPbc	12 47 20.9	+0.6
LPAZ	La Paz	147.84	61	ePKP2	PKPbc	12 47 20.9	+0.6
LPAZ	La Paz	147.84	61	PKPbc	PKPbc	12 47 21.1	+0.8
	comp=Z,29nm,1.0s,baz=346,slow=3.6,SNR=24						
LPAZ	La Paz	147.84	61	eP	PKPdf	12 47 17.9	+0.5
MNMC	Minye Minye	148.55	67	ePKPdf	PKPdf	12 47 19.1	+1.1
MNMC				ePKPbc	pPKPdf	12 47 25.9	-1.1
PB11	IPOC Station P	148.88	68	ePKPdf	PKPdf	12 47 20.2	+1.8
PB11				ePKPbc	PKPab	12 47 27.2	+0.9
RCBR	Riachuelo	150.56	354	eP	PKPdf	12 47 22.8	+1.7
LVC	Limon Verde	151.06	72	ePKPbc	PKPbc	12 47 27.4	-0.5
LVC				ePKPab	sPKPbc	12 47 39.6	-0.2
LVC	Limon Verde	151.06	72	ePKIKP	PKPbc	12 47 27.4	-0.5
LVC				e		12 47 39.6	
LVC	Limon Verde	151.06	72	eP	PKPdf	12 47 23.1	+1.1
NBLI	Livramento-PB	152.17	356	eP	PKPdf	12 47 25.9	+2.3
LCO	Las Campanas	152.51	86	ePKPbc	PKPbc	12 47 30.2	-0.6
LCO				ePKPab	sPKPbc	12 47 43.0	+0.1
LCO	Las Campanas	152.51	86	ePKIKP	PKPbc	12 47 30.3	-0.6
LCO				e		12 47 43.0	
LCO	Las Campanas	152.51	86	eP	PKPdf	12 47 24.9	+0.9
SALV	Santo Antonio	155.59	42	eP	PKPdf	12 47 30.1	+1.8
BDFB	Brasilia	158.85	25	epPKPdf	pPKPdf	12 47 42.2	+0.7
BDFB				ePKPab	PKPab	12 48 06.4	-1.9
BDFB				ePKPab	PKPab	12 48 08.1	-0.2
BDFB	Brasilia	158.85	25	eP	pPKPdf	12 47 42.2	+0.7
BDFB	Brasilia	158.85	25	PKPab	PKPab	12 48 08.1	-0.2
	comp=Z,4.9nm,0.8s,baz=306,slow=3.6,SNR=4.3						
AQDB	Aquidauana	159.18	49	eP	PKPdf	12 47 34.6	+1.9
JANB	Januaria	159.31	15	eP	PKPdf	12 47 34.9	+1.9
IPMB	Ipameri, GO	160.93	28	eP	PKPdf	12 47 37.2	+2.4
CPUP	Villa Florida	161.92	66	PKPab	PKPab	12 48 22.8	+1.2
	comp=Z,2.1nm,0.7s,baz=223,slow=2.9,SNR=2.0						
RCLB	Rio Claro- Sao	165.18	33	eP	PKPdf	12 47 40.9	+2.1
VAS01	Vassouras-RJ	166.49	18	eP	PKPdf	12 47 42.2	+2.4
CPSB	Cacapava Do Su	166.92	72	eP	PKPdf	12 47 41.6	+1.8
CNLB	Canela	168.34	63	eP	PKPdf	12 47 43.8	+2.9

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*MOS **19** 12:34:44.3±1.3, 34°.19N×28°.21E, h15^{km}, mb4.4/12, Error ellipse: s-maj=9.5km s-min=4.3km az=104.1*
*GII **19** 12:34:46.5±0.0, 34°.34N×28°.25E, h10^{km}, MD3.0/4*
*NEIC **19** 12:34:46.7±0.8, 34°.27N×28°.23E, h10^{km}, mb4.3/12, ML4.0(ISK), Error ellipse: s-maj=13.0km s-min=6.9km az=185.0*
*ISK **19** 12:34:49.2, 34°.43N×28°.34E, h20^{km}, ML4.1/24*
*IDC **19** 12:34:50.8±2.4, 34°.58N×28°.26E, h38^{km}±21^{km}, mb3.9/11, mb1 4.1/18, mb1mx3.8/42, mbtmp4.1/18, ML4.1/7, Error ellipse: s-maj=25.5km s-min=14.5km az=4.0*
*ATH **19** 12:34:51.3, 34°.58N×28°.20E, h36^{km}±11^{km}, ML3.7/13, Error ellipse: s-maj=12.0km s-min=1.8km az=161.0*
*THE **19** 12:34:52.7, 34°.54N×28°.22E, h14^{km}±7^{km}, ML3.5/4, Error ellipse: s-maj=10.6km s-min=1.3km az=141.0*
*DDA **19** 12:34:52.9, 34°.93N×28°.33E, h6^{km}±1^{km}, ML4.3*
*HLW **19** 12:34:56.9, 33°.98N×28°.63E, h25^{km}±33^{km}, Md3.7, Ml4.3*
*NIC **19** 12:34:56.7±0.4, 34°.86N×28°.72E, h25^{km}, mb4.3, ML3.9*
ISC 19 12:34:48.2±1.4, **34°.35N**±0°.04×**28°.33E**±0°.03, **h23**^{km}±11^{km}, **n262,** σ1^s**79**/306, **mb4.2**/23, **8C-4D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KARP	Karpathos	1.53	321	PN	Pb	12 35 16.4	+0.4
KARP				SN	Sb	12 35 35.5	+0.5
KARP	Karpathos	1.53	321	ePn	Pb	12 35 16.0	0.0
KARP				eSn	Sn	12 35 32.9	-0.5
KARP	Karpathos	1.53	321	P	Pb	12 35 15.5	-0.5
KARP				AML	AML	12 35 36.6	
	comp=N,3863μm,0.5s						
KARP				AML	AML	12 35 40.2	
	comp=E,2640μm,0.4s						
KARP	Karpathos	1.53	321	P	Pb	12 35 16.1	+0.1
KARP				S	Sn	12 35 33.1	-0.3
ARG	Arkhangelos	1.87	355	PN	Pn	12 35 20.2	+1.5
ARG				SN	Sn	12 35 41.7	+0.1
ARG	Arkhangelos	1.87	355	eP	Pn	12 35 20.2	+1.5
ARG				eS	Sn	12 35 40.9	-0.7
ARG	Arkhangelos	1.87	355	P	Pn	12 35 20.2	+1.5
ARG				S	Sn	12 35 40.3	-1.3
ARG				AML	AML	12 35 42.9	
	comp=N,1328μm,0.4s						
ARG				AML	AML	12 35 43.2	
	comp=E,1606μm,0.3s						
ARG	Arkhangelos	1.87	355	P	Pn	12 35 20.2	+1.5
ARG				S	Sn	12 35 40.9	-0.7
ARG	Arkhangelos	1.87	355	eP	Pn	12 35 20.2	+1.5
ARG				eS	Sn	12 35 40.9	-0.7
ZKR	Zakros	1.90	294	PN	Pn	12 35 20.5	+1.3
ZKR				SN	Sb	12 35 44.7	-0.8
ZKR	Zakros	1.90	294	eP	Pn	12 35 20.9	+1.7
ZKR				eS	Sn	12 35 42.7	+0.2
ZKR	Zakros	1.90	294	P	Pn	12 35 21.0	+1.7
ZKR				S	Sn	12 35 42.2	-0.2
ZKR				AML	AML	12 35 44.7	
	comp=N,1805μm,0.4s						
ZKR				AML	AML	12 35 45.5	
	comp=E,2920μm,0.4s						
ZKR	Zakros	1.90	294	P	Pn	12 35 20.9	+1.7
ZKR				S	Sn	12 35 42.7	+0.2
STIA	Sitia Lasithi	2.03	295	P	Pn	12 35 23.1	+2.1
STIA				S	Sn	12 35 46.2	+0.6
KSL	Kastellorizon	2.07	29	P	Pn	12 35 23.3	+1.9
KSL				S	Sn	12 35 47.0	+0.5
KSL				AML	AML	12 35 53.9	
	comp=N,489μm,0.4s						
KSL				AML	AML	12 35 55.8	
	comp=E,989μm,0.4s						
AKAS	Kas	2.15	29	PN	Pn	12 35 24.6	+1.9
AKAS	Kas	2.15	29	⇓iP	Pb	12 35 25.0	-1.5
AKAS				i S	Sn	12 35 48.1	-0.5
AKAS				IAML_P			
	comp=Z,12μm,0.1s						
BBRN	Bozburun-Marma	2.33	355	PN	Pn	12 35 27.0	+1.8
BBRN				SN	Sn	12 35 53.3	+0.2
FETY	Fethiye	2.36	15	PN	Pn	12 35 27.6	+2.1
FETY	Fethiye	2.36	15	ePn	Pb	12 35 29.2	-0.8
FETY	Fethiye	2.36	15	⇓iP	Pn	12 35 27.3	+1.8
FETY				i S	Sn	12 35 52.7	-1.1
MRSB	Marmaris-Mugla	2.36	357	PN	Pn	12 35 27.2	+1.6
NPS	Neapolis	2.42	293	P	Pn	12 35 28.6	+2.3
NPS				AML	AML	12 35 57.2	
	comp=N,2554μm,0.6s						
NPS				AML	AML	12 35 59.7	
	comp=E,3906μm,0.3s						
NPS	Neapolis	2.42	293	P	Pn	12 35 28.6	+2.3
NPS				S	Sn	12 35 55.2	0.0
NISR	Nisiros	2.46	337	P	Pn	12 35 28.4	+1.6
NISR				S	Sn	12 35 53.7	-2.5
LAST	Lasithi	2.48	290	P	Pn	12 35 29.4	+2.1
LAST				AML	AML	12 35 58.9	
	comp=N,1668μm,0.4s						
LAST				AML	AML	12 35 58.9	
	comp=E,2067μm,0.5s						
LAST	Lasithi	2.48	290	P	Pn	12 35 29.4	+2.1
TURN	Turunc	2.53	5	PN	Pn	12 35 28.0	+0.2
TURN	Turunc	2.53	5	⇑iP	Pn	12 35 28.4	+0.7
TURN				i S	Sn	12 35 55.1	-2.7
TURN				IAML_P			
	comp=Z,5μm,0.1s						
ELL	Elmali	2.71	28	PN	Pn	12 35 32.3	+1.8
ELL	Elmali	2.71	28	P	Pn	12 35 33.5	+3.0
YER	Yerkesik	2.78	359	PN	Pn	12 35 33.4	+2.1
BDRM	Kayabasi	2.80	345	i P	Pn	12 35 32.1	+0.5
BDRM				i S	Sn	12 36 02.2	-2.5
BDRM				IAML_P			
	comp=Z,3μm,0.2s						
BODT	Bodrum	2.83	343	PN	Pn	12 35 33.1	+1.1
BODT	Bodrum	2.83	343	P	Pn	12 35 32.8	+0.8
IACM	Heraklion	2.85	290	P	Pn	12 35 34.5	+2.3
ANAF	Anafi Island	2.90	314	P	Pn	12 35 33.7	+0.8
ANAF	Anafi Island	2.90	314	P	Pn	12 35 33.7	+0.8
YKAV	Yalikavak-Bodr	2.90	343	PN	Pn	12 35 34.2	+1.3
MLSB	Milas	2.97	351	PN	Pn	12 35 35.5	+1.5
IDI	Anoyia	2.98	289	ePn	Pn	12 35 36.3	+2.2
IDI				eSn	Sn	12 36 09.7	+0.5
IDI	Anoyia	2.98	289	Pn	Pn	12 35 35.5	+1.3
	comp=Z,20nm,0.3s,baz=115,slow=15,SNR=75						
IDI				Sn	Sn	12 36 08.7	-0.5
	comp=Z,57nm,0.3s,baz=20,slow=22,SNR=9.7						
SANT	Santorini	3.10	311	PN	Pn	12 35 36.2	+0.6
SANT	Santorini	3.10	311	ePn	Pn	12 35 36.2	+0.6
SANT				eSn	Sn	12 36 10.7	-1.3
SANT	Santorini	3.10	311	P	Pn	12 35 36.4	+0.7
THR8	Santorini-Mono	3.11	312	P	Pn	12 35 36.6	+0.8
THR8	Santorini-Mono	3.11	312	P	Pn	12 35 36.5	+0.8
KORT	Korkueli	3.11	31	PN	Pn	12 35 38.7	+2.7
KORT	Korkueli	3.11	31	⇓iP	Pn	12 35 39.2	+3.2
KORT				i S	Sn	12 36 14.8	+2.2

KORT				IAML_P			
	comp=Z,3µm,0.3s						
THT1	Athinios (Pele	3.12	311	P	Pn	12 35 36.6	+0.6
THT1				AML	AML	12 36 10.0	
	comp=N,1209µm,0.2s						
THT1				AML	AML	12 36 11.3	
	comp=E,551µm,0.3s						
THT1	Athinios (Pele	3.12	311	P	Pn	12 35 36.6	+0.6
THR6	Thira Island,	3.12	311	P	Pn	12 35 37.1	+1.0
THR6	Thira Island,	3.12	311	P	Pn	12 35 37.0	+1.0
SAP2K	Karterados	3.13	312	P	Pn	12 35 37.0	+0.9
TAVA	DENIZLI_Tavas	3.14	8	⇑*i*P	Pn	12 35 38.5	+2.1
TAVA				*i*S	Sn	12 36 12.7	-0.5
TAVA				IAML_P			
	comp=Z,2µm,0.1s						
THR7	Fira-Santorini	3.15	312	P	Pn	12 35 37.4	+1.0
THR9	Santorini-Faro	3.15	310	P	Pn	12 35 37.4	+1.0
THR9	Santorini-Faro	3.15	310	P	Pn	12 35 37.3	+1.0
THR3	Thira Island,	3.15	311	P	Pn	12 35 37.3	+0.9
THR3	Thira Island,	3.15	311	P	Pn	12 35 37.4	+1.0
THR2	Thira island,	3.16	312	P	Pn	12 35 37.4	+0.9
THR2	Thira island,	3.16	312	P	Pn	12 35 37.4	+0.9
THT2	Imerovigli	3.16	312	P	Pn	12 35 37.5	+1.0
THT2				AML	AML	12 36 16.1	
	comp=N,1878µm,0.3s						
THT2				AML	AML	12 36 16.6	
	comp=E,2832µm,0.5s						
THT2	Imerovigli	3.16	312	P	Pn	12 35 37.4	+0.9
ANTB	Antalya	3.17	36	PN	Pn	12 35 39.2	+2.6
AMGA	Amorgos Island	3.17	322	P	Pn	12 35 37.5	+0.7
AMGA	Amorgos Island	3.17	322	P	Pn	12 35 37.3	+0.6
THR5	Thira Island,	3.19	311	P	Pn	12 35 37.8	+0.9
THR5	Thira Island,	3.19	311	P	Pn	12 35 37.9	+0.9
SAP3	Santorini-Thir	3.21	311	P	Pn	12 35 37.9	+0.8
AYDN	Tasoluk	3.32	354	⇑*i*P	Pn	12 35 40.9	+2.1
AYDN				*i*S	Sn	12 36 15.7	-1.9
AYDN				IAML_P			
	comp=Z,12µm,0.2s						
PPCY	Paphos	3.35	80	P	Pn	12 35 41.5	+2.4
	baz=270						
GCAM	G?zelcaml?	3.46	345	PN	Pn	12 35 42.8	+2.2
GCAM	G?zelcaml?	3.46	345	*i*P	Pn	12 35 42.2	+1.6
GCAM				*i*S	Sn	12 36 18.5	-2.3
GCAM				IAML_P			
	comp=Z,5µm,0.2s						
GVD	Gavdhos	3.54	279	P	Pn	12 35 43.8	+2.2
GVD				AML	AML	12 36 24.5	
	comp=E,3272µm,0.3s						
GVD				AML	AML	12 36 26.1	
	comp=N,2503µm,0.6s						
GVD	Gavdhos	3.54	279	P	Pn	12 35 43.5	+1.8
APE	Apeiranthos	3.54	321	PN	Pn	12 35 43.2	+1.4
APE	Apeiranthos	3.54	321	P	Pn	12 35 42.5	+0.7
APE				AML	AML	12 36 21.3	
	comp=N,1047µm,0.2s						
APE				AML	AML	12 36 21.6	
	comp=E,786µm,0.2s						
APE	Apeiranthos	3.54	321	P	Pn	12 35 42.5	+0.7
APE	Apeiranthos	3.54	321	*i*P	Pn	12 35 42.3	+0.5
VAM	Vamos	3.56	288	P	Pn	12 35 44.4	+2.4
VAM				AML	AML	12 36 25.5	
	comp=E,1745µm,0.5s						
VAM				AML	AML	12 36 28.7	
	comp=N,1584µm,0.4s						
VAM	Vamos	3.56	288	P	Pn	12 35 44.4	+2.4
SMG	Samos	3.56	341	P	Pn	12 35 42.8	+0.7
SMG				AML	AML	12 36 26.3	
	comp=N,204µm,0.2s						
SMG				AML	AML	12 36 29.5	
	comp=E,236µm,0.3s						
SMG	Samos	3.56	341	P	Pn	12 35 42.8	+0.7
ALFC	Alefka	3.60	76	P	Pn	12 35 43.7	+1.1
	baz=265						
ALFC				S	Sn	12 36 21.7	-2.8
BCK	Bucak	3.60	30	PN	Pn	12 35 45.5	+2.8
BCK	Bucak	3.60	30	P	Pn	12 35 47.1	+4.4
AYDB	Zeytinkoy-Aydi	3.61	354	PN	Pn	12 35 45.2	+2.4
BRDR	BURDUR-Merkez	3.62	22	*i*P	Pn	12 35 46.5	+3.6
BRDR				*i*S	Sn	12 36 25.7	+0.8
BRDR				IAML_P			
	comp=Z,2µm,0.2s						
ALAN	Alanya-ANTALYA	3.74	53	PN	Pn	12 35 46.1	+1.7
IMMV	Iera Moni Meta	3.74	288	P	Pn	12 35 46.7	+2.2
IMMV				AML	AML	12 36 30.2	
	comp=N,2026µm,0.4s						
IMMV				AML	AML	12 36 34.4	
	comp=E,1368µm,0.3s						
IMMV	Iera Moni Meta	3.74	288	P	Pn	12 35 46.1	+1.6
LEF	Lefka	3.83	77	PN	Pn	12 35 47.9	+2.2
LEF	Lefka	3.83	77	*i*P	Pn	12 35 46.9	+1.2
LEF				*i*S	Sn	12 36 25.9	-4.1
ISP	Isparta	3.89	26	PN	Pn	12 35 49.4	+2.7
ISP	Isparta	3.89	26	*e*Pn	Pn	12 35 48.9	+2.2
ISP				*e*Sn	Sn	12 36 32.7	+1.0
ISP	Isparta	3.89	26	*e*P	Pn	12 35 48.9	+2.2
ISP				*e*		12 36 32.7	
ISP	Isparta	3.89	26	Pn	Pn	12 35 47.3	+0.6
AKDN	Akdeniz- Kıbrı	3.93	75	PN	Pn	12 35 49.6	+2.6
MHLO	Agia Marina, M	3.97	307	P	Pn	12 35 48.8	+1.2
HBRG	Burj al `Arab	3.98	161	AMP		12 36 00.0	
	baz=162						
MAMC	Mammari	4.10	77	P	Pn	12 35 51.5	+2.0
	baz=266						
MANT	Manisa	4.13	2	*e*Pn	Pn	12 35 50.8	+0.7
MANT				*e*Sn	Sn	12 36 35.2	-2.7
BLCB	Balcova	4.16	346	PN	Pn	12 35 51.2	+1.0
KULA	Kula-Manisa	4.16	4	PN	Pn	12 35 52.7	+2.3
CSS	Mathiatis	4.16	80	*e*Pn	Pn	12 35 52.0	+1.7
CSS				*e*Sn	Sn	12 36 36.6	-1.7
CSS	Mathiatis	4.16	80	P	Pn	12 35 52.3	+2.0
	baz=269						
CSS				S	Sn	12 36 35.9	-2.4
CSS	Mathiatis	4.16	80	Pn	Pn	12 35 52.0	+1.7
URLA	Izmir	4.24	341	PN	Pn	12 35 53.4	+2.0
ERMK	Ermenek	4.38	57	*i*P	Pn	12 35 56.8	+3.4
ERMK				*i*S	Sn	12 36 46.1	+2.2
USAK	Uak-Merkez	4.39	7	*i*P	Pn	12 35 56.2	+2.7
USAK				*i*S	Sn	12 36 40.6	-3.3
USAK				IAML_P			
	comp=Z,731nm,0.1s						
ANKY	Antikythira Is	4.39	292	P	Pn	12 35 55.7	+2.3
CHOS	Chios island	4.43	336	PN	Pn	12 35 56.0	+2.0
YORU	Yoruktepe-Mers	4.52	65	PN	Pn	12 35 58.7	+3.4
SHUT	Suhut-Afyon	4.56	22	PN	Pn	12 35 58.7	+2.9
OREN	Orenkoy-Mersin	4.58	65	PN	Pn	12 35 59.1	+3.0
DOGA	KONYA_Doganhis	4.62	35	⇓*i*P	Pn	12 36 00.9	+4.3
DOGA				*i*S	Sn	12 36 50.1	+0.5
DOGA				IAML_P			
	comp=Z,2µm,0.2s						
TEVE	Tevekalti-Mers	4.66	62	PN	Pn	12 36 00.1	+2.9
KYTH	Kithira	4.73	295	P	Pn	12 35 58.1	0.0
KONT	Konya--Tatoy	4.85	41	PN	Pn	12 36 02.8	+3.1
VLI	Veliai	4.99	300	P	Pn	12 36 01.5	-0.2
LADK	Ladik-KONYA	5.04	39	PN	Pn	12 36 05.4	+3.0
PRK	Paraskevi	5.16	342	P	Pn	12 36 07.2	+3.3
TVSB	Tavsanli	5.17	10	PN	Pn	12 36 07.2	+3.0
ATH	Athens Observa	5.20	315	P	Pn	12 36 06.1	+1.6
DID	Didima	5.20	309	P	Pn	12 36 05.4	+0.8
KOT	Kottamia	5.31	145	AMP		12 37 00.0	
	baz=145						
HHAG	Hagoal	5.42	143	AMP		12 37 00.0	
	baz=142						
CHBY	Cihanbeyli	5.59	40	PN	Pn	12 36 12.9	+2.8
GONE	Gonen-Balikesi	5.71	355	PN	Pn	12 36 14.7	+3.2
TRIP	Tripoli	5.85	305	P	Pn	12 36 14.4	+0.8
ITM	Ithomi	5.92	300	*e*Pn	Pn	12 36 15.2	+0.7
ITM				*e*Sn	Sn	12 37 19.5	-2.1
ITM	Ithomi	5.92	300	P	Pn	12 36 15.1	+0.6
SLTI	Sal'it	6.00	109	Pn	Pn	12 36 16.3	+0.8
MMA0B	Mount Meron ar	6.04	101	Pn	Pn	12 36 17.3	+1.1
MMAI	Mount Meron Ar	6.04	101	Pn	Pn	12 36 18.4	+2.3
	comp=Z,5.8nm,0.3s,baz=324,slow=14,SNR=11						
MMAI				Sn	Sn	12 37 21.9	-2.8
	comp=Z,33nm,0.3s,baz=268,slow=19,SNR=16						
KZIT	Kziot	6.16	122	Pn	Pn	12 36 18.6	+0.8
AMAZ	Amatzia	6.21	115	Pn	Pn	12 36 19.5	+1.1
KSDI	Kefar Szold	6.21	99	P	Sn	12 37 26.4	-2.3
KSDI	Kefar Szold	6.21	99	Pn	Pn	12 36 19.6	+1.2
KSDI				Sn	Sn	12 37 27.5	-1.2
MMLI	Mount Malkishu	6.23	106	P	Sn	12 37 27.9	-1.3
MMLI	Mount Malkishu	6.23	106	Pn	Pn	12 36 19.9	+1.2
NATI	Neve Ativ	6.26	98	Pn	Pn	12 36 20.0	+0.9
NATI				Sn	Sn	12 37 30.1	+0.3
RCY	Rachaya	6.29	96	*e*P	Pn	12 36 20.7	+0.9
HWQ	Hawqa	6.30	89	*e*P	Pn	12 36 21.1	+1.3
HMDT	Nahal Hemdat	6.38	107	Pn	Pn	12 36 22.3	+1.6
SHMJ	Saham	6.41	103	P	Sn	12 37 33.8	+0.1
DRO	Drossia	6.45	306	P	Pn	12 36 23.5	+1.7
RMNI	Mount Ramon	6.60	123	Pn	Pn	12 36 24.6	+0.8
MZDA	Masada	6.65	115	Pn	Pn	12 36 25.7	+1.3
PAIG	Paliouri	6.69	328	P	Pn	12 36 26.5	+1.5
PAIG				pmax	pmax		
	comp=Z,60nm,1.7s						
AGG	Agios Georgios	6.71	316	*e*Pn	Pn	12 36 26.9	+1.7
AGG	Agios Georgios	6.71	316	*e*P	Pn	12 36 26.9	+1.7
LISJ	El Lisan	6.77	115	P	Sn	12 37 39.3	-3.1
ALN	Alexandroupoli	6.78	345	*e*Pn	Pn	12 36 27.6	+1.3
ALN				*e*Sn	Sn	12 37 42.5	-0.2
ALN	Alexandroupoli	6.78	345	*e*P	Pn	12 36 27.6	+1.3
ALN				*e*		12 37 42.5	
GHAJ	Ghor Haditha	6.80	115	Pn	Pn	12 36 27.6	+1.0
BR101	Keskin Array S	6.84	37	*e*Pn	Pn	12 36 27.6	+0.4
BR101				*e*Sn	Sn	12 37 41.1	-3.2
BR131	Keskin Array S	6.84	37	*e*Pn	Pn	12 36 28.9	+1.8
BR131				*e*Sn	Sn	12 37 41.8	-2.5
BRTR	Keskin Array B	6.84	37	Pn	Pn	12 36 27.6	+0.4
	comp=Z,1.2nm,0.3s,baz=214,slow=14,SNR=40						
BRTR				Sn	Sn	12 37 41.1	-3.2
	comp=Z,3.1nm,0.3s,baz=208,slow=25,SNR=17						
WALJ	Wala	6.87	112	P	Sn	12 37 45.1	+0.1
PRNI	Paran	6.91	123	Pn	Pn	12 36 29.1	+1.0
ZFRI	Zfri	6.91	121	Pn	Pn	12 36 28.7	+0.6
HRFI	Mount Harif	7.12	125	P	Sn	12 37 47.9	-3.4
	comp=Z,0.7nmcomp=Z,154nm,0.5s						
HRFI	Mount Harif	7.12	125	Pn	Pn	12 36 32.1	+1.1
JDRJ	Daraweish	7.17	118	P	Sn	12 37 56.3	+3.8
MBRI	Mt Berech	7.20	127	Pn	Pn	12 36 33.2	+1.1
SWQJ	Swaqa	7.21	113	P	Sn	12 37 52.0	-1.3
EIL	Elat	7.30	128	P	Sn	12 37 51.3	-4.4
	comp=Z,0.3nmcomp=Z,89nm,0.7s						
EIL	Elat	7.30	128	Pn	Pn	12 36 34.6	+1.1
EIL	Elat	7.30	128	Pn	Pn	12 36 35.8	+2.3
	comp=Z,3.7nm,0.3s,baz=299,slow=2.7,SNR=62						
EIL				Sn	Sn	12 37 51.5	-4.1
	comp=Z,20nm,0.3s,baz=26,slow=11,SNR=14						
AQBJ	Aqaba	7.33	127	P	Sn	12 37 52.4	-3.9
	comp=Z,0.7nmcomp=Z,164nm,0.8s						
LIT	Litokhoron	7.39	323	P	Pn	12 36 34.0	-0.7
LIT				pmax	pmax		
	comp=Z,61nm,1.6s						
HSNJ	Maan	7.44	121	P	Sn	12 37 56.9	-2.4
	comp=Z,2.2nmcomp=Z,369nm,0.6s						
ASF	Jabal al Asfar	7.49	104	P	Sn	12 38 00.8	+0.3
ASF	Jabal al Asfar	7.49	104	Sn	Sn	12 37 59.3	-1.2
	comp=Z,2.1nm,0.3s,baz=19,slow=18,SNR=5.5						
SOH	Sokhos	7.57	330	P	Pn	12 36 39.4	+2.3
SOH				pmax	pmax		
	comp=Z,20nm,1.9s						
KNT	Kendrikon	8.04	329	P	Pn	12 36 46.5	+2.9
KNT				pmax	pmax		
	comp=Z,18nm,1.5s						
GRG	Griva	8.10	326	P	Pn	12 36 46.9	+2.5
GRG				pmax	pmax		
	comp=Z,78nm,0.8s						
FNA	Florina	8.47	321	*e*Pn	Pn	12 36 51.2	+1.8
FNA				*e*Sn	Sn	12 38 21.3	-3.0
FNA	Florina	8.47	321	*e*P	Pn	12 36 51.2	+1.8
FNA				*e*		12 38 21.3	
STIP	Stip	8.79	328	*i*P	Pn	12 36 56.2	+2.5
KRUS	Krusevo	8.97	323	*i*P	Pn	12 36 59.3	+3.0
TIR	Tirane	9.67	319	*e*Pn	Pn	12 37 04.5	-1.4
TIR	Tirane	9.67	319	*e*P	Pn	12 37 04.5	-1.4
TIP	Timpagrande	10.46	301	*e*Pn	Pn	12 37 14.1	-2.6
VOIR		11.35	348	P	Pn	12 37 28.0	-1.0
VOIR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CUC	Castrocucco	11.46	303	*e*Pn	Pn	12 37 27.9	-2.5
VAE	Valguarnera	11.71	289	Sn	Sn	12 39 31.1	-13
	comp=Z,3.6nm,0.3s,baz=124,slow=6.4,SNR=3.7						
BZS	Buzias	12.37	337	P	Pn	12 37 42.9	+0.1
BZS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NVLJ	Novalja	14.55	318	*i*Pn	Pn	12 38 06.9	-5.6
KBZ	Khabaz	14.67	46	Pn	P	12 38 19.5	-0.7
	comp=Z,0.2nm,0.3s,baz=217,slow=7.6,SNR=13						
KIV	Kislovodsk	14.68	45	*e*P	Pn	12 38 15.6	+1.2
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
PSZ	Piszkesteto	14.96	338	*e*Pn	Pn	12 38 19.4	+1.3
PSZ	Piszkesteto	14.96	338	*e*P	Pn	12 38 19.4	+1.3
KEST	Kesra	15.62	280	*e*Pn	Pn	12 38 27.3	+0.4
	comp=Z,6.6nm,0.8s						
KEST	Kesra	15.62	280	Pn	P	12 38 30.2	-0.7
	comp=Z,0.6nm,0.3s,baz=110,slow=1.3,SNR=8.8						
AK11	Malin Array Si	16.33	2	*e*Pn	Pn	12 38 36.2	+0.4
KIEV	Kiev	16.35	2	*i*P	Pn	12 38 37.0	+1.0
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	16.35	2	Pn	Pn	12 38 35.2	-0.9
	comp=Z,3.1nm,0.3s,baz=193,slow=12,SNR=11						
KBA	Koelnbreinsper	17.01	323	*e*P	P	12 38 46.9	+0.5
	comp=Z,0.4nm,0.3s						
WATA	Walderalm	18.09	321	*e*P	P	12 39 02.6	+4.4
	comp=Z,3.6nm,0.5s						
GERES	GERESS Array B	18.10	328	P	Pn	12 38 56.8	-1.3
	comp=Z,0.4nm,0.3s,baz=138,slow=9.2,SNR=6.6						
SQTA	Sankt Quirin	18.21	320	*e*P	P	12 39 01.0	+1.5
	comp=Z,3.8nm,0.5s						
MOTA	Moosalm	18.34	320	*e*P	Pn	12 39 01.4	+0.3
	comp=Z,5.3nm,0.9s						
FETA	Feichten	18.34	319	pP	Pn	12 39 03.9	+2.8
	comp=Z,4.0nm,1.0s						
RETA	Reutte	18.61	320	*e*Pn	Pn	12 39 04.7	+0.4
	comp=Z,2.8nm,0.5s						
DAVA	Damuels	18.97	318	*e*Pn	Pn	12 39 09.1	+0.4
	comp=Z,4.8nm,0.6s						
BNI	Bardonecchia	19.73	309	*e*P	P	12 39 16.1	-0.2
	comp=Z,4.4nm,0.5s						
BNI	Bardonecchia	19.73	309	*e*P	P	12 39 16.1	-0.2
BNI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SENIN	Lac Senin/Sane	19.95	313	*e*P	P	12 39 17.6	-1.1
	comp=Z,11nm,0.8s						
SUW	Suwalki	19.99	351	*e*P	Pn	12 39 20.4	-0.2
	comp=Z,127nm,1.0s						
SUW	Suwalki	19.99	351	*e*P	Pn	12 39 20.4	-0.2
SUW				pmax	pmax		
	comp=Z,127nm,1.0s						
STU	Stuttgart	20.23	321	*e*P	P	12 39 22.0	+0.5
	comp=Z,30nm,0.7s						
STU	Stuttgart	20.23	321	*e*P	P	12 39 22.0	+0.5
STU				pmax	pmax		
	comp=Z,30nm,0.7s						
BFO	Black Forest	20.43	319	*e*P	P	12 39 24.0	+0.3
	comp=Z,8.4nm,1.0s						
BFO	Black Forest	20.43	319	*e*P	P	12 39 24.0	+0.3
BFO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GKP	Gorka Klasztor	20.49	341	P	P	12 39 23.4	-0.9
GKP				pmax	pmax		
	comp=Z,141nm,0.7s						
NACGM	Naroch	20.58	357	*e*	P	12 39 20.0	-5.2
NACGM				*e*LQ	LQ	13 08 06.0	
NACGM				*e*LR	LR	13 10 08.0	
ECH	Echery	21.00	318	*e*P	P	12 39 29.8	-0.1
	comp=Z,6.3nm,0.9s						
ECH	Echery	21.00	318	*e*P	P	12 39 29.8	-0.1
ECH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TNS	Taunus Mts	21.53	323	P	P	12 39 35.3	-0.3
TNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OBN	Obninsk	21.54	13	*e*P	P	12 39 37.1	+1.6
OBN				pmax	pmax		
	comp=Z,11nm,0.9s						
WLF	Walferdange	22.37	320	⇑P	P	12 39 45.4	+0.8
MEM	Membach	23.00	322	⇑P	P	12 39 50.4	-0.7
BCLA	Clavier	23.25	321	⇑P	P	12 39 53.0	-0.7
	comp=Z,15nm,1.0s						
DOU	Dourbes	23.44	319	⇑P	P	12 39 54.3	-1.4
UCC	Uccle	23.96	321	⇑P	P	12 40 02.0	+1.5
ES19	SONSECA Array	26.20	291	*e*P	P	12 40 21.2	0.0
ESDC	Sonseca Array	26.24	291	P	P	12 40 21.3	-0.3
	comp=Z,2.8nm,0.5s,baz=79,slow=9.4,SNR=20						
ESLA	Sonseca Array	26.24	291	*e*P	P	12 40 21.5	-0.1
	comp=Z,4.0nm,0.7s						
FIA0	FINESS Array S	27.15	358	*e*P	P	12 40 28.2	-1.2
FIA0	FINESS Array S	27.15	358	*e*P	P	12 40 28.2	-1.2
FINES	FINESS Array B	27.15	358	P	P	12 40 28.2	-1.2
	comp=Z,3.8nm,0.5s,baz=168,slow=10,SNR=11						
FIA1	FINESS Array S	27.15	358	*e*P	P	12 40 28.1	-1.2
	comp=Z,8.2nm,0.8s						
HFS	Hagfors	27.51	344	P	P	12 40 30.8	-1.8
	comp=Z,9.3nm,1.0s,baz=146,slow=11,SNR=5.8						
NORES	NORESS Array B	28.55	343	P	P	12 40 40.8	-1.1
EKA	Eskdalemuir Ar	30.22	324	P	P	12 40 55.4	-1.4
	comp=Z,1.4nm,0.4s,baz=125,slow=11,SNR=13						
ARA0	ARCESS Array S	35.27	358	*e*P	P	12 41 38.1	-2.7
ARCES	ARCESS Array B	35.27	358	P	P	12 41 38.1	-2.7
	comp=Z,0.9nm,0.4s,baz=174,slow=7.5,SNR=13						
KMBO	Kilima Mbogo	36.27	165	*i*P	P	12 41 57.5	+7.4
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSH	Kashi	38.08	68	P	P	12 42 04.8	-0.4
KSH				sP	pP	12 42 13.6	+2.1
KSH				PcP	PcP	12 44 22.8	+2.7
KSH				pmax	pmax		
	comp=Z,17nm,0.8s						
KSH				pmax	pmax		
	comp=Z,360nm,4.8s						
MAKZ	Makanchi	41.83	56	*e*P	P	12 42 37.0	+0.8
	comp=Z,4.0nm,1.1s						
MAKZ	Makanchi	41.83	56	*e*P	P	12 42 37.0	+0.8
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MK31	Makanchi Array	42.05	56	*e*P	P	12 42 38.7	+0.8
MK31	Makanchi Array	42.05	56	*e*P	P	12 42 38.7	+0.8
MK32	Makanchi Array	42.05	56	*e*P	P	12 42 38.9	+1.0
MKAR	Makanchi Array	42.05	56	*e*P	P	12 42 38.8	+0.9
	comp=Z,29nm,0.6s						
MKAR	Makanchi Array	42.05	56	P	P	12 42 38.9	+0.9
	comp=Z,3.0nm,0.6s,baz=266,slow=7.5,SNR=21						
MK01	Makanchi Array	42.06	56	*e*P	P	12 42 39.1	+1.1
ZAA1	Zalesovo Array	43.69	46	*e*P	P	12 42 51.2	+0.1
ZALV	Zalesovo Beam	43.69	46	P	P	12 42 51.2	+0.1
	comp=Z,1.4nm,0.5s,baz=265,slow=8.7,SNR=3.6						
SPA0	Spitsbergen Ar	44.23	356	*e*P	P	12 42 54.7	-0.5
	comp=Z,11nm,1.2s						
WMQ	Urumqi	46.15	60	*e*P	P	12 43 15.1	+4.2
SONA0	Songino Array	57.97	51	*e*P	P	12 44 39.8	+0.9
SONM	Songino Array	57.97	51	P	P	12 44 39.8	+0.9
	comp=Z,0.5nm,0.5s,baz=289,slow=7.7,SNR=3.9						
ULN	Ulaanbaatar	58.38	51	*i*P	P	12 44 44.0	+2.2
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
LZH	Lanzhou	60.20	65	*e*P	P	12 44 55.0	+0.5
LZH				pP	pP	12 45 00.8	-0.3
LZH				sP	pwP	12 45 03.6	-0.8
LZH				PP	PP	12 47 07.8	+0.6
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,99nm,4.9s						
HHC	Hu-ho-hao-te	63.90	57	*e*P	P	12 45 19.8	+0.5
HHC				pmax	pmax		
	comp=Z,19nm,1.2s						
HHC				pmax	pmax		
	comp=Z,1µm,7.0s						
SCHQ	Schefferville	65.48	321	P	P	12 45 27.9	-1.3
	comp=Z,3.9nm,0.7s,baz=34,slow=4.7,SNR=5.8						
YKA	Yellowknife Ar	78.99	343	P	P	12 46 48.6	-1.1
	comp=Z,0.4nm,0.6s,baz=28,slow=5.4,SNR=7.9						
ILAR	Eielson Array	81.13	358	P	P	12 47 01.1	-0.2
	comp=Z,0.4nm,0.8s,baz=346,slow=2.5,SNR=4.4						

NNC ***19*** *12:42:47.4±0.4, 42°.84N×77°.75E, h0^{km}, mpv2.3, Error ellipse: s-maj=3.2km s-min=1.5km az=176.0*

KRNET ***19*** *12:42:48.5±0.1, 42°.83N×77°.78E, h28^{km}, mb2.2*

SOME 19 12:42:47.9, 42°.85N×77°.73E, h5^{km}, 8C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.54	67	P	Pg	12 42 57.8	-0.4
	3.3nm,0.1s						
SATY				S	Sg	12 43 05.0	-0.2
	6.3nm,0.1s						
SATY	Saty	0.54	67	*e*P	Pg	12 42 57.8	-0.4
	3.3nm,0.1s						
SATY				*e*S	Sg	12 43 05.0	-0.2
	6.1nm,0.1s						
KDJ	Kajisay	0.83	210	⇑*e*P	Pg	12 43 03.9	+0.1
	baz=12						
KDJ				⇑*i*S	Sb	12 43 15.9	-0.5
	baz=12						
IZV	Izvestkoviy	0.84	283	P	Pg	12 43 04.1	0.0
	0.7nm,0.1s						
IZV				S	Sb	12 43 16.1	-0.8
	4.4nm,0.2s						
IZV	Izvestkoviy	0.84	283	*e*P	Pg	12 43 04.1	+0.1
	0.6nm,0.1s						
IZV				*e*S	Sb	12 43 16.1	-0.8
	2.4nm,0.2s						
TARG	Taragay, Kyrgy	1.12	177	⇑*i*P	Pg	12 43 08.9	-0.5
	baz=79						
TARG				⇑*i*S	Sg	12 43 23.6	-0.4
	baz=79						
ULHL	Ulahol	1.26	242	⇓*i*P	Pg	12 43 11.5	-0.5
	baz=43						
ULHL				⇓*i*S	Sb	12 43 28.6	-0.2
	baz=43						
BOOM	Boomskoye usch	1.37	255	⇑*e*P	Pb	12 43 14.1	0.0
	baz=57						
BOOM				⇑*i*S	Sn	12 43 32.5	0.0
	baz=57						
TKM2	Tokmak 2	1.57	273	⇓*i*P	Pb	12 43 17.6	0.0
	baz=74						
TKM2				⇓*i*S	Sg	12 43 38.7	+0.3
	baz=74						
NRN	Naryn	1.91	223	⇑*i*P	Pn	12 43 22.3	+0.8
	baz=24						
NRN				⇑*i*S	Sn	12 43 46.8	+0.7
	baz=24						

IDC ***19*** *13:07:20.7±1.5, 35°.67N×141°.81E, h0^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.2/43, mbtmp3.3/3, ML2.2/1, Error ellipse: s-maj=41.1km s-min=32.6km az=109.0*

ISCJB ***19*** *13:07:25.5±1.2, 35°.30N±0°.05×141°.22E±0°.10, h25^{km}, mb3.1/2, Error ellipse: s-maj=11.5km s-min=7.2km az=171.3*

JMA ***19*** *13:07:25.9±0.1, 35°.32N×141°.16E, h34^{km}±2^{km}, M2.6*

ISC 19 13:07:22.9±1.4**, 35°.33N**±0°.07×**141°.30E**±0°.09**, h25^{km}, n11,** σ**1^{s}.73**/13**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.52	316	P	Pn	13 07 35.6	+0.9
CHOJ				S	Sn	13 07 42.4	-0.3
BSO1	Boso 1	0.73	202	P	Pn	13 07 38.7	+1.6
JSMT	Sammumatsuo	0.76	294	P	Pn	13 07 38.8	+0.8
KTR	Katsuura	0.83	257	P	Pn	13 07 39.7	+0.7
KTR				S	Sb	13 07 49.6	+0.2
BSO3	Boso 3	0.84	231	P	Pn	13 07 40.1	+1.2
JYT	Yasato	1.27	315	P	Pb	13 07 46.5	+0.4
JHO	Hitachi	1.41	335	P	Pb	13 07 50.1	+1.6
MJAR	Matsushiro Arr	2.79	297	Pn	Pb	13 08 09.7	-2.2
	0.3nm,0.3s,baz=102,slow=9.6,SNR=11						
MAT	Matsushiro	2.79	297	P	Pb	13 08 10.1	-1.9
MAT				*e*S	Sn	13 08 41.5	+2.7
ILAR	Eielson Array	50.98	32	P	P	13 16 19.9	-2.2
	0.1nm,0.5s,baz=256,slow=7.3,SNR=4.9						
WRA	Warramunga Arr	55.37	188	P	P	13 16 59.2	+4.3
	0.1nm,0.4s,baz=2.6,slow=7.5,SNR=8.9						

IDC 19 13:19:47.3±999.0**, 50°.89N×53°.01E, h0^{km}, Error ellipse: s-maj=890.3km s-min=83.9km az=95.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	3.24	97	*i*		13 38 50.0	
	baz=281,slow=273,SNR=0.3						
I46RU	ZALESOVO INFRA	19.55	69	*i*		15 23 30.0	
	baz=275,slow=305,SNR=1.2						
I34MN	SONGINO INFRAS	34.30	74	*i*		16 50 40.0	
	baz=296,slow=331,SNR=0.6						

MAN 19 13:19:56.5, 10°.52N×122°.45E, h4^{km}, mb4.0, ML2.7, MS2.3, 2C-1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.17	53	eP	Pg	13 20 00.4	+0.6
GUIM				eS	Sg	13 20 05.4	+3.3
JAP	San Jose, Anti	0.55	294	⇓eP	Pg	13 20 07.3	+0.4
RCP	Roxas	1.07	16	⇑eP	Pg	13 20 17.0	-0.1
RCP				eS	Sn	13 20 33.6	0.0
DCPH	Dipolog City	2.12	155	⇑iP	Pg	13 20 47.1	+10
BUSP	Coron	2.66	304	eP	Pn	13 20 36.1	-4.0

IDC 19 13:20:16.1±2.0, 6°.35N×127°.04E, h92^{km}±18^{km}, mb3.5/9, mb1 3.6/10, mb1mx3.4/37, mbtmp3.8/10, MS3.3/1, Ms1 3.3/1, ms1mx2.8/28, Error ellipse: s-maj=31.9km s-min=11.2km az=64.0

ISC 19 13:20:13.5±1.1, **6°.23N**±0°.06×**127°.06E**±0°.09, **h67**^{km}±12^{km}, **n20**, σ**1^{s}73**/29, **mb3.8**/9, **1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.07	312	eP	Pn	13 20 31.0	-1.8
MATI				eS	Sn	13 20 44.3	-2.9
DDMP	Don Marcelino,	1.35	265	eP	Pn	13 20 37.0	+0.6
DAV	Davao City (W)	1.70	300	P	Pn	13 20 42.6	+1.6
	142nm,0.3s,baz=224,slow=21,SNR=8.6						
DAV				S	Sn	13 21 04.4	+2.6
	144nm,0.3s,baz=278,slow=21,SNR=14						
DMPH	Davao City--Mi	1.76	299	⇓eP	Pn	13 20 43.4	+1.4
DMPH				eS	Sn	13 21 05.1	+1.6
GSPH	General Santos	2.11	266	⇑iP	Pn	13 20 45.9	-0.8
GSPH				i S	Sn	13 21 09.2	-2.7
SKMP	Bagumbayan, Su	2.52	277	eP	Pn	13 20 52.0	-0.2
SKMP				eS	Sn	13 21 24.8	+3.0
BUKP	Musuan	2.58	310	eP	Pn	13 20 53.3	+0.3
BUKP				eS	Sn	13 21 22.2	-1.1
BUTP	Butuan	3.08	332	eP	Pn	13 21 01.4	+1.6
BUTP				eS	Sn	13 21 37.0	+1.5
DCPH	Dipolog City	4.36	303	i S	Pn	13 21 18.8	+1.4
SIJI	Sorong	8.20	149	P	Pn	13 22 12.3	+2.4
	3.7nm,0.3s,baz=256,slow=24,SNR=10						
SIJI				S	Sn	13 23 39.0	-2.1
	1.3nm,0.3s,baz=172,slow=23,SNR=5.8						
FITZ	Fitzroy Crossi	24.21	183	P	P	13 25 25.4	+1.4
	0.9nm,0.5s,baz=1.4,slow=7.7,SNR=5.1						
WRA	Warramunga Arr	26.97	165	P	P	13 25 50.5	+1.4
	0.4nm,0.7s,baz=332,slow=12,SNR=12						
WRA				PcP	PcP	13 29 10.0	+0.4
	0.4nm,0.5s,baz=340,slow=2.5,SNR=9.1						
ASAR	Alice Springs	30.45	168	P	P	13 26 20.9	+0.8
	0.3nm,0.6s,baz=345,slow=7.2,SNR=13						
ASAR				PcP	PcP	13 29 18.9	+0.7
	1.0nm,0.4s,baz=347,slow=2.4,SNR=24						
ASAJ	Asahikawa	40.13	17	LR	LR	13 44 30.9	
	comp=Z,46nm,20.4s,baz=344,slow=36						
KLR	Kul'dur	43.04	5	P	P	13 28 05.3	-1.2
	0.7nm,0.4s,baz=180,slow=10,SNR=3.9						
MKAR	Makanchi Array	55.72	324	P	P	13 29 42.3	-1.0
	0.7nm,0.4s,baz=125,slow=8.4,SNR=17						
ZALV	Zalesovo Beam	58.54	332	P	P	13 30 01.2	-1.8
	0.5nm,0.3s,baz=124,slow=6.0,SNR=2.8						
KURBB	Kurchatov Arra	59.84	326	P	P	13 30 10.6	-1.5
	1.3nm,0.2s,baz=116,slow=6.3,SNR=4.5						
BVAR	Borovoye Array	65.43	326	P	P	13 30 48.2	-1.1
	0.6nm,0.5s,baz=117,slow=8.5,SNR=6.1						
ILAR	Eielson Array	82.72	26	P	P	13 32 29.1	-0.6
	0.3nm,0.5s,baz=253,slow=5.0,SNR=9.9						

MEX 19 13:21:09.8±0.6, **16°.51N×98°.44W, h17**^{km}±130^{km}, **MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.32	112	i P	Pg	13 21 15.4	-1.2
PNIG				i S	Sg	13 21 20.5	-0.8
VHO	Vista Hermosa	1.72	71	eP	Pn	13 21 39.6	+0.4
VHO				eS	Sn	13 22 00.1	-0.8
CAIG	El Cayaco	1.83	287	eP	Pn	13 21 37.4	-3.1
CAIG				eS	Sb	13 22 05.5	-0.2
HUIG	Huatulco	2.35	108	eP	Pn	13 21 46.4	-1.3
HUIG				eS	Sn	13 22 10.4	-5.9

DDA 19 13:22:59.2, 39°.63N×28°.86E, h7^{km}±2^{km}, ML2.5

ISK 19 13:22:59.7, 39°.61N×28°.95E, h8^{km}±5^{km}, ML1.9/3

ISC 19 13:22:59.4±1.2, **39°.61N**±0°.04×**28°.91E**±0°.03, **h7**^{km}±10^{km}, **n11**, σ**1^{s}00**/19, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	Dursunbey	0.34	270	i P	Pg	13 23 05.5	-0.4
DURS				i S	Sg	13 23 10.4	+0.1
DURS				IAML_P			
	comp=Z,1μm,0.1s						
TVSB	Tavsanli	0.46	110	PG	Pg	13 23 08.6	+0.4
TVSB				SG	Sg	13 23 15.0	+0.8
KCTX	Karacabey (Bur	0.78	327	PG	Pb	13 23 15.7	+0.3
KCTX				SG	Sn	13 23 27.3	-1.6
USAK	Uak-Merkez	0.89	174	i P	Pg	13 23 13.9	-2.6
USAK				i S	Sb	13 23 30.4	+1.1
USAK				IAML_P			
	comp=Z,110nm,0.1s						
CAVI	Cavuskoy	0.94	50	PG	Pb	13 23 18.3	+0.4
CAVI				SG	Sb	13 23 30.5	0.0
STEP	BALIKESIR_Sava	0.95	256	i P	Pg	13 23 17.7	+0.1
STEP				i S	Sn	13 23 34.3	+1.3
STEP				IAML_P			
	comp=Z,423nm,0.1s						
ARMT	Armutlu	0.96	358	PG	Pb	13 23 18.6	+0.2
ARMT				SG	Sn	13 23 32.3	-1.0
SBT5	Esenkoy-Cinarc	1.02	359	PG	Pb	13 23 19.5	+0.1
YLV	Yalova	1.02	20	PG	Pb	13 23 19.5	0.0
KULA	Kula-Manisa	1.11	190	PN	Pn	13 23 21.5	+0.2
MANT	Manisa	1.15	194	i P	Pn	13 23 22.2	+0.2
MANT				i S	Sn	13 23 37.9	-0.2
MANT				IAML_P			
	comp=Z,1μm,0.1s						

NNC 19 13:30:12.1±0.6, 42°.78N×76°.86E, h3^{km}±2^{km}, mb2.3, mpv2.2, Error ellipse: s-maj=5.3km s-min=1.7km az=160.0

SOME 19 13:30:13.1, 42°.78N×76°.83E, h10^{km}

KRNET 19 13:30:12.6±0.1, **42°.77N×76°.84E, h17**^{km}, **mb2.1, 14C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.28	17	P	Pg	13 30 18.1	-0.8
	7.1nm,0.2s						
TNSS				S	Sg	13 30 22.1	-1.2
	16nm,0.2s						
TNSS	Tian-Shan	0.28	17	eP	Pg	13 30 18.1	-0.8
	baz=17						
TNSS				eS	Sg	13 30 22.1	-1.1
	baz=17						
TNSS	Tian-Shan	0.28	17	eP	Pg	13 30 18.1	-0.8
	7.1nm,0.2s						
TNSS				eS	Sg	13 30 22.1	-1.2
	16nm,0.2s						
IZV	Izvestkoviy	0.31	328	P	Pg	13 30 19.1	-0.2
	2.9nm,0.1s						
IZV				S	Sg	13 30 23.8	-0.1
	36nm,0.2s						
IZV	Izvestkoviy	0.31	328	eP	Pg	13 30 19.1	-0.2
	baz=28						
IZV				eS	Sg	13 30 23.8	-0.1
	baz=28						
IZV	Izvestkoviy	0.31	328	eP	Pg	13 30 19.1	-0.2
	2.9nm,0.1s						
IZV				eS	Sg	13 30 23.8	-0.1
	36nm,0.2s						
MDOK	Medeo	0.42	22	Pg	Pg	13 30 20.5	-0.7
	2.3nm,0.3s						
MDOK				Lg	Lg	13 30 26.2	
	7.7nm,0.2s						
MDOK	Medeo	0.42	22	⇓iP	Pg	13 30 20.5	-0.7
	baz=22						
MDOK				⇓iS	Sg	13 30 26.2	-0.9
	baz=22						
MDOK	Medeo	0.42	22	⇓iP	Pg	13 30 20.5	-0.7
	2.3nm,0.3s						
MDOK				⇓iS	Sg	13 30 26.2	-0.9
	7.7nm,0.2s						
KOTS	Kotyrbulak	0.50	24	P	Pg	13 30 22.1	-0.6
	2.9nm,0.1s						
KOTS				S	Sg	13 30 29.0	-0.6
	11nm,0.2s						
KOTS	Kotyrbulak	0.50	24	eP	Pg	13 30 22.1	-0.6
	baz=24						
KOTS				eS	Sg	13 30 29.0	-0.5
	baz=24						
KOTS	Kotyrbulak	0.50	24	eP	Pg	13 30 22.1	-0.6
	2.1nm,0.1s						
KOTS				eS	Sg	13 30 29.0	-0.6
	23nm,0.3s						
ULHL	Ulahol	0.69	220	⇑eP	Pg	13 30 26.1	0.0
	baz=20						
ULHL				⇑iS	Sg	13 30 34.9	-0.4
	baz=20						
KDJ	Kajisay	0.69	158	⇑iP	Pb	13 30 26.5	+0.2
	baz=58						
KDJ				⇑iS	Sb	13 30 35.8	+0.2
	baz=58						
KST	Kastek	0.70	293	P	Pb	13 30 26.4	0.0
	1.3nm,0.1s						
KST				S	Sb	13 30 36.2	+0.4
	2.9nm,0.3s						
KST	Kastek	0.70	293	eP	Pb	13 30 26.5	+0.1
	baz=93						
KST				eS	Sb	13 30 36.4	+0.7
	baz=93						
KST	Kastek	0.70	293	eP	Pb	13 30 26.5	+0.1
	0.7nm,0.2s						
KST				eS	Sb	13 30 36.4	+0.7
	5.0nm,0.4s						
DGS	Degeres	0.91	301	P	Pb	13 30 29.7	-0.3
	1.4nm,0.2s						
DGS				S	Sb	13 30 42.1	+0.2
	4.0nm,0.2s						
TKM2	Tokmak 2	0.93	280	⇑P	Pn	13 30 30.9	-0.1
	0.5nm,0.6s						
TKM2				⇑S	Sg	13 30 43.1	+0.3
	0.5nm,0.3s						
TKM2	Tokmak 2	0.93	280	⇑eP	Pn	13 30 30.9	-0.1
	baz=80						
TKM2				⇑iS	Sg	13 30 43.3	+0.5
	baz=80						
CHKK	Chushkaly	1.09	6	P	Pb	13 30 32.7	-0.2
	1.1nm,0.1s						
CHKK				S	Sb	13 30 47.2	+0.3
	3.2nm,0.2s						
CHKK	Chushkaly	1.09	6	eP	Pn	13 30 33.0	-0.1
	baz=6.0						
CHKK				eS	Sn	13 30 47.6	-0.1
	baz=6.0						
CHKK	Chushkaly	1.09	6	eP	Pb	13 30 33.0	0.0
	1.1nm,0.1s						
CHKK				eS	Sn	13 30 47.5	-0.2
	3.2nm,0.2s						
PRZ	Przheval'sk	1.19	104	⇓iP	Pg	13 30 35.7	+0.1
	baz=3.0						
PRZ				⇓iS	Sg	13 30 52.0	+0.9
	baz=3.0						
TARG	Taragay, Kyrgy	1.27	145	⇑iP	Pb	13 30 36.3	+0.1
	baz=45						
TARG				⇑iS	Sb	13 30 52.2	-0.2
	baz=45						
KZA	Kyzart	1.37	240	⇑iP	Pn	13 30 37.5	+0.2
	baz=40						
KZA				⇑iS	Sn	13 30 54.8	-0.4
	baz=40						
KBK	Karagaybulak	1.40	266	⇓eP	Pb	13 30 38.0	-0.3
	baz=66						
KBK				⇓iS	Sb	13 30 56.0	0.0
	baz=66						
ARXS	Arharly	1.61	26	P	Pb	13 30 41.6	-0.3
ARXS				S	Sb	13 31 02.4	+0.4
AAK	Ala-Archa	1.73	266	⇑Pn	Pb	13 30 43.7	-0.3
	0.5nm,0.6s						
AAK				⇑Sn	Sg	13 31 07.1	-1.4
	0.9nm,0.8s						
PDGK	Podgornoye	2.02	73	⇓Pg	Pb	13 30 48.1	-0.8
	0.4nm,0.3s						
PDGK				⇓Lg	Lg	13 31 16.0	
	0.7nm,0.3s						
PDGK	Podgornoye	2.02	73	⇓iP	Pb	13 30 48.3	-0.6
	baz=73						
PDGK				⇓iS	Sb	13 31 13.7	-0.2
	baz=73						

IDC 19 13:38:46.6±11.0, 45°.94N×147°.23E, h439^{km}±145^{km}, mb3.1/3, mb1 2.9/5, mb1mx2.6/41, mbtmp3.7/5, Error ellipse: s-maj=480.9km s-min=29.9km az=149.0

ISCJB 19 13:38:47.4±0.7, 46°.54N±0°.07×146°.6E±0°.2, h400^{km}, mb3.4/3, Error ellipse: s-maj=18.2km s-min=7.1km az=24.8

JMA 19 13:38:49.3±0.5, 46°.52N×146°.62E, h389^{km}, M3.2

ISC 19 13:38:48.0±1.0, **46°.45N**±0°.10×**146°.6E**±0°.1, **h400**^{km}, **n14**, σ**1^{s}49**/20, **mb3.6**/3, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	3.15	192	P	Pn	13 39 53.1	+0.6
NEM2				eS	S	13 40 43.6	-1.0
JSE	Soyaes	3.20	244	P	Pn	13 39 53.6	+0.8
JWK2	Keihoku	3.49	253	P	Pn	13 39 56.2	+0.9
ASAJ	Asahikawa	3.67	232	P	Pn	13 39 58.9	+1.8
	0.4nm,0.3s,baz=96,slow=14,SNR=6.2						
JAK	Akkeshi	3.72	202	P	Pn	13 39 58.6	+1.1
JAK				eS	S	13 40 52.9	-0.8
JAR	Ashorobuto	3.75	214	P	Pn	13 40 00.1	+2.3
JAR				eS	S	13 40 55.7	+1.4
JCH	Churui	4.49	212	P	Pn	13 40 06.0	+1.2
JCH				eS	S	13 41 05.7	-1.5
JKB	Kayabe	6.08	223	P	Pn	13 40 23.2	+1.8
JKB				eS	S	13 41 36.1	-1.5
JOT	Ohata	6.47	220	P	Pn	13 40 27.5	+1.8
JOT				eS	S	13 41 43.3	-2.2
JANG	Nango	7.12	213	eS	S	13 41 56.7	-2.2
PETK	Petropavlovsk-	9.78	43	P	P	13 41 02.6	-0.3
	0.1nm,0.3s,baz=222,slow=9.8,SNR=4.2						
MKAR	Makanchi Array	43.05	295	P	P	13 46 10.4	+0.2
	0.4nm,0.6s,baz=64,slow=9.3,SNR=5.5						
ARCES	ARCESS Array B	56.59	339	P	P	13 47 49.5	-0.7
	2.2nm,0.8s,baz=35,slow=8.0,SNR=2.2						
FINES	FINESS Array B	62.30	332	P	P	13 48 28.4	-0.4
	1.2nm,0.5s,baz=43,slow=6.3,SNR=7.3						

IDC 19 13:40:59.8±0.6, 29°.18N×142°.50E, h0^{km}, mb3.7/14, mb1 3.9/16, mb1mx3.8/35, mbtmp3.7/16, ML3.3/3, Error ellipse: s-maj=20.2km s-min=14.8km az=97.0

ISCJB 19 13:41:02.0±0.5, 29°.19N±0°.05×142°.5E±0°.1, h27^{km}, mb3.7/14, Error ellipse: s-maj=15.7km s-min=7.4km az=0.3

ISC 19 13:41:03.8±0.7, **29°.17N**±0°.07×**142°.5E**±0°.1, **h27**^{km}, **n17**, σ**0^{s}73**/19, **mb3.7**/14, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.09	188	Pn	Pn	13 41 36.7	-0.3
	9.4nm,0.3s,baz=53,slow=20,SNR=3.9						
JCJ				Sn	Sn	13 42 01.6	-0.5
	52nm,0.3s,baz=275,slow=22,SNR=11						
MJAR	Matsushiro Arr	8.20	335	Pn	Pn	13 42 59.7	-1.2
	0.2nm,0.3s,baz=164,slow=12,SNR=10						
KSRS	Korea Array	14.73	308	Pn	Pn	13 44 31.5	+1.3
	0.2nm,0.3s,baz=116,slow=15,SNR=3.0						
SONM	Songino Array	33.46	314	P	P	13 47 39.8	-0.8
	1.1nm,0.7s,baz=118,slow=8.8,SNR=8.9						
SEY	Seymchan	34.38	8	P	P	13 47 48.0	-0.2
	0.3nm,0.3s,baz=125,slow=13,SNR=4.5						
CMAR	Chiang Mai Arr	41.06	265	P	P	13 48 45.0	-0.2
	0.5nm,0.6s,baz=86,slow=3.9,SNR=3.9						
ZALV	Zalesovo Beam	48.14	318	P	P	13 49 41.4	+0.1
	1.1nm,0.4s,baz=103,slow=7.8,SNR=5.3						
MKAR	Makanchi Array	49.41	308	P	P	13 49 51.0	-0.2
	1.3nm,0.7s,baz=82,slow=10,SNR=13						
WRA	Warramunga Arr	49.46	190	P	P	13 49 51.5	-0.3
	0.9nm,0.4s,baz=8.0,slow=7.9,SNR=41						
WRA				PcP	PcP	13 51 14.8	+1.1
	0.6nm,0.7s,baz=3.1,slow=3.8,SNR=6.7						
ASAR	Alice Springs	53.18	190	P	P	13 50 19.3	-0.3
	0.3nm,0.4s,baz=16,slow=7.8,SNR=15						
ILAR	Eielson Array	55.76	29	P	P	13 50 37.9	0.0
	0.3nm,0.7s,baz=259,slow=6.7,SNR=5.4						
INK	Inuvik	61.03	25	P	P	13 51 14.0	-0.6
	0.4nm,0.6s,baz=271,slow=7.1,SNR=3.6						
YKA	Yellowknife Ar	70.19	29	P	P	13 52 13.9	+0.2
	0.2nm,0.6s,baz=291,slow=6.4,SNR=4.0						
KBZ	Khabaz	76.82	313	P	P	13 52 53.2	+0.1
	0.6nm,0.4s,baz=90,slow=3.0,SNR=2.6						
NVAR	Mina Array Bea	79.01	52	P	P	13 53 06.2	+0.4
	0.4nm,0.6s,baz=294,slow=7.6,SNR=3.6						
PDAR	Pinedale Array	82.54	45	P	P	13 53 25.9	+1.4
	0.1nm,0.3s,baz=277,slow=4.3,SNR=2.9						
BRTR	Keskin Array B	84.81	313	P	P	13 53 36.8	+0.6
	0.8nm,0.7s,baz=56,slow=3.1,SNR=4.9						

SOME 19 13:59:01.5, 42°.33N×75°.88E, h10^{km}

NNC 19 13:59:01.6±0.4, 42°.34N×75°.88E, h0^{km}, mb3.5, mpv3.5, Error ellipse: s-maj=3.2km s-min=1.8km az=168.0

KNET 19 13:59:01.1±0.3, 42°.33N×75°.86E, h0^{km}, ml2.5, Error ellipse: s-maj=3.0km s-min=1.7km az=16.0

KRNET 19 13:59:01.4±0.1, **42°.31N×75°.87E, h18**^{km}, **mb3.4, 47C-41D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM	Boomskoye usch	0.19	17	⇑iP	Pb	13 59 05.9	-0.3
	baz=17						
BOOM				⇑iS	Sb	13 59 09.1	-0.3
	baz=17						
ULHL	Ulahol	0.29	102	⇑P	Pg	13 59 07.0	-0.9
	458nm,0.1s,SNR=2436						
ULHL				⇑S	Sg	13 59 11.0	-1.2
	701nm,0.2s						
ULHL	Ulahol	0.29	102	⇓iP	Pg	13 59 07.0	-0.9
	baz=2.0						
ULHL				⇓iS	Sg	13 59 11.0	-1.3
	baz=2.0						
KZA	Kyzart	0.51	244	⇑P	Pg	13 59 12.0	+0.1
	96nm,0.1s,SNR=138						
KZA				⇑S	Sb	13 59 19.5	+0.1
	195nm,0.2s						
KZA	Kyzart	0.51	244	⇑iP	Pg	13 59 11.9	+0.1
	baz=44						
KZA				⇑iS	Sg	13 59 18.6	-0.2
	baz=44						
TKM2	Tokmak 2	0.65	342	⇓P	Pg	13 59 13.9	-0.4
	67nm,0.1s,SNR=997						
TKM2				⇓S	Sb	13 59 23.1	0.0
	1μm,0.1s						
TKM2	Tokmak 2	0.65	342	⇓P	Pg	13 59 13.8	-0.4
	28nm,0.2s						
TKM2				⇑S	Sg	13 59 22.9	-0.1
	170nm,0.2s						
TKM2	Tokmak 2	0.65	342	⇓iP	Pg	13 59 13.9	-0.4
	baz=42						
TKM2				⇓iS	Sg	13 59 22.9	0.0
	baz=42						
KST	Kastek	0.74	6	P	Pb	13 59 15.6	-0.3
	152nm,0.3s						
KST				S	Sg	13 59 25.9	+0.1
	276nm,0.4s						
KST	Kastek	0.74	6	⇓iP	Pb	13 59 15.6	-0.3
	baz=6.0						
KST				⇑iS	Sg	13 59 26.0	+0.1
	baz=6.0						
KST	Kastek	0.74	6	⇓iP	Pb	13 59 15.6	-0.3
	117nm,0.1s						
KST				⇑iS	Sg	13 59 25.9	+0.1
	244nm,0.3s						
KBK	Karagaybulak	0.76	298	P	Pb	13 59 16.3	+0.1
	45nm,0.1s,SNR=42						
KBK				⇓S	Sg	13 59 27.3	+0.7
	582nm,0.2s						
KBK	Karagaybulak	0.76	298	⇑iP	Pb	13 59 16.3	0.0
	baz=98						
KBK				⇑iS	Sb	13 59 26.3	-0.1
	baz=98						
NRN	Naryn	0.88	173	⇓iP	Pb	13 59 18.3	0.0
	baz=75						
NRN				⇓iS	Sg	13 59 30.3	+0.1
	baz=75						
IZV	Izvestkoviy	0.92	37	P	Pb	13 59 18.6	-0.2
	9.5nm,0.1s						
IZV				S	Sg	13 59 31.2	-0.2
	150nm,0.2s						
IZV	Izvestkoviy	0.92	37	eP	Pb	13 59 18.7	-0.2
	baz=37						
IZV				eS	Sg	13 59 31.3	-0.1
	baz=37						
IZV	Izvestkoviy	0.92	37	eP	Pb	13 59 18.6	-0.2
	9.5nm,0.1s						
IZV				eS	Sg	13 59 31.2	-0.2
	150nm,0.2s						
DGS	Degeres	0.94	356	P	Pb	13 59 18.6	-0.6
	52nm,0.1s						
DGS				S	Sb	13 59 31.2	-0.2
	147nm,0.2s						
DGS	Degeres	0.94	356	eP	Pb	13 59 18.6	-0.6
	baz=56						
DGS				eS	Sb	13 59 31.2	-0.2
	baz=56						
DGS	Degeres	0.94	356	eP	Pb	13 59 18.6	-0.6
	52nm,0.1s						
DGS				eS	Sb	13 59 31.2	-0.2
	147nm,0.2s						
KDJ	Kajisay	0.99	100	⇑iP	Pb	13 59 20.2	0.0
	baz=0.0						
KDJ				⇑iS	Sg	13 59 33.6	-0.2
	baz=0.0						
UCH	Uchtor	1.01	266	⇑P	Pb	13 59 20.3	-0.2
	45nm,0.3s,SNR=55						
UCH	Uchtor	1.01	266	⇑iP	Pb	13 59 20.4	-0.2
	baz=66						
UCH				⇑iS	Sb	13 59 33.9	+0.2
	baz=66						
FRU1	Bishkek	1.04	299	⇑eP	Pb	13 59 20.9	-0.1
	baz=99						
FRU1				⇑iS	Sg	13 59 35.1	-0.2
	baz=99						
AAK	Ala-Archa	1.07	289	⇑P	Pb	13 59 21.4	0.0
	22nm,0.2s,SNR=60						
AAK				⇑S	Sb	13 59 35.6	+0.5
	105nm,0.2s						
AAK	Ala-Archa	1.07	289	⇓P	Pb	13 59 21.3	-0.2
	6.7nm,0.4s						
AAK				⇓S	Sb	13 59 35.4	+0.3
	52nm,0.5s						
AAK	Ala-Archa	1.07	289	⇑iP	Pb	13 59 21.3	-0.1
	baz=89						
AAK				⇑iS	Sb	13 59 35.5	+0.4
	baz=89						
CHMS	Chumysh	1.07	311	⇓P	Pb	13 59 21.5	0.0
	14nm,0.1s,SNR=52						
CHMS				⇓S	Sn	13 59 36.0	-0.1
	49nm,0.1s						
CHMS	Chumysh	1.07	311	⇑iP	Pb	13 59 21.5	0.0
	baz=10.0						
CHMS				⇑iS	Sn	13 59 35.8	-0.3
	baz=10.0						
TNSS	Tian-Shan	1.08	47	P	Pb	13 59 21.7	-0.2
	24nm,0.3s						
TNSS				S	Sb	13 59 35.9	+0.1
	61nm,0.3s						
TNSS	Tian-Shan	1.08	47	eP	Pb	13 59 21.7	-0.1
	baz=47						
TNSS				eS	Sb	13 59 36.0	+0.2
	baz=47						
TNSS	Tian-Shan	1.08	47	eP	Pb	13 59 21.7	-0.2
	24nm,0.3s						
TNSS				eS	Sb	13 59 35.9	+0.1
	61nm,0.3s						
KNDC	Almaty	1.22	41	⇑P	Pg	13 59 25.5	+0.5
	6.4nm,0.1s						
KNDC				⇑S	Sg	13 59 40.8	-0.2
	40nm,0.3s						
MDOK	Medeo	1.22	45	⇑P	Pb	13 59 23.9	-0.2
	4.1nm,0.2s						
MDOK				⇓S	Sn	13 59 39.8	-0.1
	24nm,0.5s						
MDOK	Medeo	1.22	45	Pg	Pb	13 59 24.4	+0.4
	17nm,0.2s						
MDOK				Lg	Lg	13 59 40.8	
	16nm,0.4s						
MDOK	Medeo	1.22	45	⇓iP	Pb	13 59 24.5	+0.4
	baz=45						
MDOK				⇓iS	Sg	13 59 40.8	-0.3
	baz=45						
MDOK	Medeo	1.22	45	⇓iP	Pb	13 59 24.4	+0.4
	17nm,0.2s						
MDOK				⇓iS	Sg	13 59 40.8	-0.3

	16nm,0.4s						
ARLS	**Aral**	**1.23**	**249**	⇓*i*P	Pb	13 59 24.3	+0.1
	baz=50						
ARLS				⇓*e*S	Sn	13 59 40.5	+0.4
	baz=50						
KOTS	**Kotyrbulak**	**1.30**	**44**	P	Pb	13 59 25.8	+0.3
	22nm,0.3s						
KOTS				S	Sg	13 59 43.1	-0.7
	210nm,0.5s						
KOTS	**Kotyrbulak**	**1.30**	**44**	*e*P	Pb	13 59 25.9	+0.4
	baz=44						
KOTS				*e*S	Sg	13 59 43.1	-0.6
	baz=44						
KOTS	**Kotyrbulak**	**1.30**	**44**	*e*P	Pb	13 59 25.9	+0.3
	22nm,0.3s						
KOTS				*e*S	Sg	13 59 43.1	-0.7
	210nm,0.5s						
USP	**Ospenovka**	**1.39**	**314**	P	Pb	13 59 27.1	+0.2
	31nm,0.1s,SNR=28						
USP	**Ospenovka**	**1.39**	**314**	⇑*i*P	Pb	13 59 27.2	+0.3
	baz=14						
USP				⇑*i*S	Sg	13 59 45.6	-0.8
	baz=14						
SGDS	**Sogindy**	**1.46**	**322**	P	Pb	13 59 28.4	+0.3
	39nm,0.1s						
SGDS				S	Sg	13 59 47.5	-1.1
	78nm,0.3s						
KTBS	**Karatobe**	**1.53**	**23**	P	Pb	13 59 29.6	+0.4
	16nm,0.1s						
KTBS				S	Sg	13 59 50.0	-0.8
	53nm,0.3s						
KTBS	**Karatobe**	**1.53**	**23**	*e*P	Pb	13 59 29.6	+0.4
	baz=18						
KTBS				*e*S	Sg	13 59 50.0	-0.8
	baz=18						
KTBS	**Karatobe**	**1.53**	**23**	*e*P	Pb	13 59 29.6	+0.4
	16nm,0.1s						
KTBS				*e*S	Sg	13 59 50.0	-0.8
	53nm,0.3s						
TARG	**Taragay, Kyrgy**	**1.56**	**111**	⇓*i*P	Pb	13 59 29.6	-0.3
	baz=11						
TARG				⇓*i*S	Sg	13 59 50.7	-1.0
	baz=11						
EKS2	**Erkin-Say**	**1.58**	**284**	⇑P	Pg	13 59 31.3	-0.7
	12nm,0.1s,SNR=51						
EKS2	**Erkin-Say**	**1.58**	**284**	⇓*i*P	Pb	13 59 30.5	+0.3
	baz=84						
EKS2				⇓*i*S	Sg	13 59 51.3	-1.3
	baz=84						
AML	**Almayashu**	**1.62**	**265**	⇓P	Pb	13 59 31.8	+0.7
	10nm,0.1s,SNR=41						
AML	**Almayashu**	**1.62**	**265**	⇓*i*P	Pb	13 59 31.2	+0.2
	baz=65						
AML				⇓*i*S	Sg	13 59 52.7	-1.1
	baz=65						
KUU	**Kurty**	**1.62**	**12**	P	Pb	13 59 31.2	+0.4
	21nm,0.2s						
KUU				S	Sb	13 59 52.4	+1.4
	97nm,0.3s						
KUU	**Kurty**	**1.62**	**12**	⇓*i*P	Pb	13 59 31.2	+0.3
	baz=12						
KUU				⇑*i*S	Sb	13 59 52.4	+1.4
	baz=12						
KUU	**Kurty**	**1.62**	**12**	⇓*i*P	Pb	13 59 31.2	+0.4
	21nm,0.2s						
KUU				⇑*i*S	Sb	13 59 52.4	+1.4
	97nm,0.3s						
CHKK	**Chushkaly**	**1.75**	**28**	P	Pb	13 59 33.4	+0.4
	8.1nm,0.3s						
CHKK				S	Sg	13 59 56.6	-1.3
	181nm,0.3s						
CHKK	**Chushkaly**	**1.75**	**28**	*e*P	Pb	13 59 33.4	+0.4
	baz=28						
CHKK				*e*S	Sg	13 59 56.6	-1.3
	baz=28						
CHKK	**Chushkaly**	**1.75**	**28**	*e*P	Pb	13 59 33.4	+0.4
	8.1nm,0.3s						
CHKK				*e*S	Sg	13 59 56.6	-1.3
	181nm,0.3s						
MRKS	**Merke**	**2.00**	**284**	Pg	Pb	13 59 38.4	+1.2
	41nm,0.3s						
MRKS				Lg	Lg	14 00 05.4	
	64nm,0.3s						
MRKS	**Merke**	**2.00**	**284**	*e*P	Pb	13 59 38.4	+1.1
	baz=84						
MRKS				*e*S	Sg	14 00 05.4	-0.4
	baz=84						
MRKS	**Merke**	**2.00**	**284**	*e*P	Pb	13 59 38.4	+1.1
	41nm,0.3s						
MRKS				*e*S	Sg	14 00 05.4	-0.4
	64nm,0.3s						
SATY	**Saty**	**2.02**	**67**	Pg	Pb	13 59 37.5	-0.1
	28nm,0.1s						
SATY				Lg	Lg	14 00 04.4	
	104nm,0.1s						
SATY	**Saty**	**2.02**	**67**	*e*P	Pb	13 59 37.1	-0.5
	28nm,0.1s						
SATY				*e*S	Sb	14 00 03.2	+0.7
	98nm,0.2s						
KURS	**Kuram**	**2.06**	**54**	Pg	Pb	13 59 38.9	+0.5
	24nm,0.4s						
KURS				Lg	Lg	14 00 06.3	
	52nm,0.6s						
KURS	**Kuram**	**2.06**	**54**	*e*P	Pb	13 59 38.9	+0.5
	baz=54						
KURS				*e*S	Sg	14 00 06.3	-1.6
	baz=54						
KURS	**Kuram**	**2.06**	**54**	*e*P	Pb	13 59 38.9	+0.5
	24nm,0.4s						
KURS				*e*S	Sg	14 00 06.3	-1.6
	52nm,0.6s						
ARXS	**Arharly**	**2.38**	**36**	Pg	Pb	13 59 42.9	-0.9
	7.0nm,0.2s						
ARXS				Lg	Lg	14 00 14.6	
	57nm,0.3s						
ARXS	**Arharly**	**2.38**	**36**	*e*P	Pb	13 59 42.9	-0.9
	5.7nm,0.6s						
ARXS				*e*S	Sb	14 00 12.7	-0.3
	57nm,0.3s						
UZB	**Uzynbulak**	**2.47**	**69**	Pg	Pb	13 59 44.6	-0.8
	23nm,0.3s						
UZB				Lg	Lg	14 00 17.1	
	51nm,0.4s						
UZB	**Uzynbulak**	**2.47**	**69**	*e*P	Pb	13 59 44.2	-1.2
	baz=69						
UZB				*e*S	Sb	14 00 15.2	-0.4
	baz=69						
UZB	**Uzynbulak**	**2.47**	**69**	*e*P	Pb	13 59 44.2	-1.2
	23nm,0.3s						
UZB				*e*S	Sb	14 00 15.2	-0.3
	51nm,0.4s						
MNAS	**Manas**	**2.50**	**275**	⇓Pg	Pg	13 59 49.0	-0.3
	7.7nm,0.5s						
MNAS				⇑Lg	Lg	14 00 21.2	
	11nm,0.7s						
MNAS	**Manas**	**2.50**	**275**	⇑*i*P	Pb	13 59 44.1	-1.7
	baz=75						
MNAS				⇑*i*S	Sb	14 00 15.0	-1.2
	baz=75						
MNBS	**Baschi**	**2.56**	**45**	Pg	Pb	13 59 47.6	+0.7
	4.1nm,0.3s						
MNBS				Lg	Lg	14 00 20.6	
	53nm,0.2s						
MNBS	**Baschi**	**2.56**	**45**	*e*P	Pb	13 59 47.6	+0.7
	baz=48						
MNBS				*e*S	Sb	14 00 20.6	+2.4
	baz=48						
MNBS	**Baschi**	**2.56**	**45**	*e*P	Pb	13 59 47.6	+0.7
	4.1nm,0.3s						
MNBS				*e*S	Sb	14 00 20.6	+2.4
	53nm,0.2s						
PDGK	**Podgornoye**	**2.86**	**68**	⇑Pg	Pb	13 59 52.5	+0.6
	2.5nm,0.4s						
PDGK				⇓Lg	Lg	14 00 29.1	
	18nm,0.6s						
PDGK	**Podgornoye**	**2.86**	**68**	⇑*i*P	Pn	13 59 49.0	+2.8
	baz=68						
PDGK				⇑*e*S	Sb	14 00 23.7	-2.9
	baz=68						
SFK	**Sufi-Kurgan**	**2.90**	**219**	⇑Pg	Pg	13 59 56.5	-0.6
	1.2nm,0.3s						
SFK				⇑Lg	Lg	14 00 34.8	
	5.9nm,0.3s						
BTLS	**Baital**	**3.04**	**335**	Pg	Pb	13 59 56.3	+1.4
	2.5nm,0.3s						
BTLS				Lg	Lg	14 00 35.2	
	35nm,0.3s						
KK31	**Karatay Array**	**4.03**	**283**	⇑Pg	Pg	14 00 18.6	+0.1
	0.7nm,0.3s,baz=93,slow=16,SNR=6.3						
KK31				⇓Lg	Lg	14 01 12.3	
	6.9nm,0.6s,baz=96,slow=26,SNR=6.3						
IUG	**Iuzhnay**	**4.33**	**270**	Pg	Pg	14 00 21.3	-3.1
	6.4nm,0.5s						
IUG				Lg	Lg	14 01 19.1	
	11nm,0.5s						
IUG	**Iuzhnay**	**4.33**	**270**	*e*P	Pg	14 00 21.3	-3.1
	baz=70						
IUG				*e*S	Sg	14 01 19.1	-1.5
	baz=70						
IUG	**Iuzhnay**	**4.33**	**270**	*e*P	Pg	14 00 21.3	-3.1
	4.1nm,0.4s						
IUG				*e*S	Sg	14 01 19.1	-1.5
	11nm,0.5s						
MAKZ	**Makanchi**	**6.27**	**42**	⇑Pn	Pn	14 00 37.2	+4.3
	0.4nm,0.3s						
MAKZ				⇓Sn	Sn	14 01 46.5	+2.3
	2.0nm,1.1s						
MAKZ				⇓Lg	Lg	14 02 19.7	
	1.2nm,0.9s						
MK31	**Makanchi Array**	**6.42**	**43**	⇓Pn	Pn	14 00 39.3	+4.3
	0.1nm,0.3s,baz=222,slow=15,SNR=11						
MK31				⇑Sn	Sn	14 01 51.0	+3.2
	0.7nm,0.5s,baz=235,slow=14,SNR=10						
MK31				⇓Lg	Lg	14 02 26.2	
	0.8nm,0.5s						
OTUK	**Ortayu**	**6.44**	**338**	⇑Pn	Pn	14 00 37.0	+1.7
	0.5nm,0.4s						
OTUK				⇓Lg	Lg	14 02 25.2	
	1.5nm,0.4s						
KURBB	**Kurchatov Arra**	**8.52**	**12**	⇓Lg	Lg	14 03 31.1	
	7.1nm,0.7s						
KURK	**Kurchatov**	**8.62**	**12**	⇑Lg	Lg	14 03 32.9	
	4.2nm,1.0s						

ISCJB ***19*** *14:04:19.8±0.4, 33°.90N±0°.03×12°.57W±0°.03, h10^{km}, Error ellipse: s-maj=4.5km s-min=2.8km az=41.6*

CNRM ***19*** *14:04:25.1, 33°.65N×12°.54W, h30^{km}, ml4.2*

MDD ***19*** *14:04:27.7±1.7, 33°.79N×12°.69W, h24^{km}±16^{km}, mb4.4/15, Error ellipse: s-maj=13.8km s-min=5.0km az=143.0, PRXIMO*

IGIL ***19*** *14:04:28.4, 33°.81N×12°.72W, h22^{km}, ML3.2*

INMG ***19*** *14:04:31.4±2.1, 33°.69N×12°.63W, h38^{km}±11^{km}, ML3.2, Error ellipse: s-maj=4.4km s-min=2.5km az=125.0*

ISC 19 14:04:22.5±1.0**, 33°.75N**±0°.05×**12°.55W**±0°.05**, h10^{km}, n90,** σ**3^{s}.26**/140**, 1D, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPS	**Porto Santo**	**3.24**	**259**	*e*P	**Pn**	**14 05 15.3**	**+1.9**
PMPS				*e*S	**Sn**	**14 05 48.5**	**-3.6**
PMPS				A	A	14 05 57.7	
	81nm,0.2s						
PMPS	**Porto Santo**	**3.24**	**259**	P	**Pn**	**14 05 15.3**	**+1.9**
PMPS				S	**Sn**	**14 05 48.5**	**-3.6**
	40nm,0.2s						
EAH	**EAH**	**3.26**	**129**	P	**Pn**	**14 05 17.4**	**+3.7**
EAH				S	**Sn**	**14 05 50.4**	**-2.1**
PMAR	**Madeira**	**3.80**	**256**	*e*P	**Pn**	**14 05 22.9**	**+1.6**
PMAR				*e*S	**Sn**	**14 06 02.5**	**-3.6**
PMAR	**Madeira**	**3.80**	**256**	P	**Pn**	**14 05 22.9**	**+1.6**
PMAR				S	**Sn**	**14 06 02.5**	**-3.6**
PMAR	**Madeira**	**3.80**	**256**	P	**Pn**	**14 05 23.0**	**+1.6**
PMOZ	**Porto Moniz, M**	**4.00**	**258**	*e*P	**Pn**	**14 05 25.8**	**+1.8**
PMOZ				*e*S	**Sn**	**14 06 07.2**	**-3.8**
PMOZ				A	A	14 06 12.9	
	145nm,0.3s						
PMOZ	**Porto Moniz, M**	**4.00**	**258**	P	**Pn**	**14 05 24.9**	**+0.9**
	54nm,0.3s,SNR=7.9						
PMOZ				S	**Sn**	**14 06 06.8**	**-4.3**
	85nm,0.3s,SNR=7.9						
SRHM	**Skhour des Reh**	**4.10**	**107**	P	**Pn**	**14 05 27.4**	**+2.1**
SRHM				S	**Sn**	**14 06 14.4**	**+1.0**
AVE	**Averroes**	**4.31**	**95**	⇓*i*P	Pn	14 05 33.1	+5.0
AVE				*e*S	**Sn**	**14 06 19.2**	**+0.8**
AVE	**Averroes**	**4.31**	**95**	P	**Pn**	**14 05 30.2**	**+2.0**
AVE				S	**Sn**	**14 06 16.6**	**-1.8**
PFVI	**Vila Bisbo**	**4.54**	**41**	*e*P	**Pn**	**14 05 35.1**	**+3.8**
PFVI				*e*S	**Sn**	**14 06 23.0**	**-1.1**
PFVI				A	A	14 06 27.4	
	19nm,0.3s						
PFVI	**Vila Bisbo**	**4.54**	**41**	P	**Pn**	**14 05 34.8**	**+3.6**
	4.9nm,0.1s,SNR=6.6						
PFVI				S	**Sn**	**14 06 22.4**	**-1.7**
	12nm,0.1s,SNR=5.9						
EFAM	**Famara**	**4.69**	**191**	P	**Pn**	**14 05 37.7**	**+4.5**
	5.7nm,0.1s,SNR=7.9						
EFAM				S	**Sn**	**14 06 23.5**	**-4.2**
	21nm,0.2s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**4.72**	**131**	P	**Pn**	**14 05 34.0**	**0.0**
TTIG				S	Sn	14 06 22.4	-6.5
MORF	**Marmelete**	**4.76**	**41**	*e*P	**Pn**	**14 05 37.7**	**+3.4**
MORF				*e*S	**Sn**	**14 06 28.6**	**-1.1**
MORF				AML	AML	14 06 31.9	
	comp=N,74nm,0.3s						
MORF	**Marmelete**	**4.76**	**41**	*e*P	**Pn**	**14 05 37.8**	**+3.4**
MORF				*e*S	**Sn**	**14 06 28.7**	**-1.0**
MORF				A	A	14 06 33.3	
	comp=N,34nm,0.2s						
MORF	**Marmelete**	**4.76**	**41**	P	**Pn**	**14 05 37.7**	**+3.4**
MORF				S	**Sn**	**14 06 28.6**	**-1.1**
	comp=N,74nm,0.3s						
PTEO	**Sao Teotonio**	**4.90**	**38**	*e*P	**Pn**	**14 05 39.9**	**+3.7**
PTEO				*e*S	**Sn**	**14 06 31.0**	**-2.0**
PTEO				A	A	14 06 38.5	
	comp=N,20nm,0.6s						
PTEO	**Sao Teotonio**	**4.90**	**38**	P	**Pn**	**14 05 39.9**	**+3.7**
PTEO				S	**Sn**	**14 06 31.0**	**-2.0**
	comp=N,10.0nm,0.6s						
ZHG	**ZHG**	**4.94**	**92**	P	**Pn**	**14 05 37.7**	**+0.9**
ZHG				S	**Sn**	**14 06 29.8**	**-4.2**
PBDV	**Barranco-do-Ve**	**5.13**	**46**	*e*P	**Pn**	**14 05 43.7**	**+4.3**
PBDV				*e*S	**Sn**	**14 06 37.8**	**-0.9**
PBDV				A	A	14 06 42.0	
	comp=N,16nm,0.2s						
PBDV	**Barranco-do-Ve**	**5.13**	**46**	P	**Pn**	**14 05 43.7**	**+4.3**
PBDV				S	**Sn**	**14 06 37.8**	**-0.9**
	comp=N,16nm,0.2s						
CFUE	**Fuerteventura**	**5.22**	**194**	P	**Pn**	**14 05 42.5**	**+1.8**
	comp=N,8.1nm,0.2s,SNR=7.9						
CFUE				S	Sn	14 06 34.6	-6.5
	comp=N,17nm,0.1s,SNR=7.9						
PVAQ	**Vaqueiros**	**5.36**	**46**	*e*P	**Pn**	**14 05 47.0**	**+4.4**
PVAQ				*e*S	**Sn**	**14 06 42.9**	**-1.5**
PVAQ				A	A	14 06 47.8	
	comp=N,30nm,0.3s						
PVAQ	**Vaqueiros**	**5.36**	**46**	P	**Pn**	**14 05 47.0**	**+4.4**
PVAQ				S	**Sn**	**14 06 42.9**	**-1.5**
	comp=N,30nm,0.3s						
MESJ	**Messejana**	**5.39**	**40**	*e*S	**Sn**	**14 06 43.0**	**-1.9**
MESJ				AML	AML	14 06 47.0	
	comp=N,18nm,0.3s						
MESJ	**Messejana**	**5.39**	**40**	*e*P	**Pn**	**14 05 47.1**	**+4.2**
MESJ				*e*S	**Sn**	**14 06 44.0**	**-0.9**
MESJ				A	A	14 06 49.0	
	comp=N,12nm,0.2s						
MESJ	**Messejana**	**5.39**	**40**	P	**Pn**	**14 05 47.1**	**+4.2**
MESJ				S	**Sn**	**14 06 43.0**	**-1.9**
	comp=N,18nm,0.3s						
PNCL	**Nicolau / Gran**	**5.44**	**36**	*e*P	**Pn**	**14 05 48.1**	**+4.5**
PNCL				*e*S	**Sn**	**14 06 45.1**	**-1.1**
PNCL				A	A	14 06 49.3	
	comp=N,15nm,0.2s						
PNCL	**Nicolau / Gran**	**5.44**	**36**	P	**Pn**	**14 05 48.1**	**+4.5**
PNCL				S	**Sn**	**14 06 45.1**	**-1.1**
	comp=N,15nm,0.2s						
CFTV	**Fuerteventura**	**5.48**	**194**	P	**Pn**	**14 05 45.7**	**+1.5**
	comp=N,2.6nm,0.2s,SNR=7.9						
CFTV				S	Sn	14 06 39.2	-8.2
	comp=N,2.1nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**5.59**	**46**	P	**Pn**	**14 05 49.3**	**+3.6**
	comp=N,1.4nm,0.1s,SNR=12						
EGRO				S	**Sn**	**14 06 47.8**	**-2.2**
	comp=N,5.3nm,0.1s						
OUZM	**OUZ**	**5.66**	**118**	P	**Pn**	**14 05 46.3**	**-0.4**
OUZM				S	**Sn**	**14 06 48.1**	**-3.8**
RSA	**Sarsar**	**5.68**	**77**	P	**Pn**	**14 05 47.2**	**+0.3**
RSA				S	**Sn**	**14 06 51.6**	**-0.7**
PBEJ	**Beja**	**5.71**	**40**	*e*S	**Sn**	**14 06 52.5**	**-0.5**
PBEJ	**Beja**	**5.71**	**40**	S	**Sn**	**14 06 52.5**	**-0.5**
PMAFR	**Mafra**	**5.82**	**26**	*e*S	**Sn**	**14 06 54.2**	**-1.5**
PMAFR				A	A	14 06 58.8	
	comp=N,36nm,0.4s						
PMAFR	**Mafra**	**5.82**	**26**	S	**Sn**	**14 06 54.8**	**-0.9**
	comp=N,25nm,0.2s,SNR=11						
EBAJ	**Bajamar**	**6.13**	**213**	P	**Pn**	**14 05 55.8**	**+2.6**
	comp=N,3.8nm,0.1s,SNR=7.9						
EBAJ				S	Sn	14 06 54.3	-9.0
	comp=N,4.4nm,0.2s,SNR=7.9						
IFR	**Ifrane**	**6.19**	**90**	*e*P	**Pn**	**14 05 57.5**	**+3.4**
IFR				*e*S	**Sn**	**14 07 02.3**	**-2.8**
EOSO	**Osorio**	**6.22**	**205**	P	**Pn**	**14 05 57.3**	**+2.8**
	comp=N,1.0nm,0.2s,SNR=7.9						
EOSO				S	Sn	14 06 56.4	-9.3
	comp=N,7.4nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**6.23**	**48**	P	**Pn**	**14 05 58.3**	**+3.8**
	comp=N,2.3nm,0.1s,SNR=14						
EMIN				S	**Sn**	**14 07 02.3**	**-3.6**
	comp=N,1.3nm,0.1s,SNR=7.3						
ESPR	**Espera**	**6.29**	**58**	P	**Pn**	**14 05 59.0**	**+3.7**
	comp=N,5.3nm,0.2s,SNR=11						
ESPR				S	**Sn**	**14 07 06.8**	**-0.5**
	comp=N,16nm,0.3s						
PMTG	**Montargil**	**6.35**	**32**	*e*P	**Pn**	**14 05 59.7**	**+3.6**
PMTG				*e*S	**Sn**	**14 07 06.2**	**-2.4**
PMTG				A	A	14 07 11.3	
	comp=N,14nm,0.3s						
PMTG	**Montargil**	**6.35**	**32**	P	**Pn**	**14 05 59.7**	**+3.6**
PMTG				S	**Sn**	**14 07 06.2**	**-2.4**
	comp=N,14nm,0.3s						
EJIF	**Jimena Fronter**	**6.40**	**63**	P	**Pn**	**14 06 01.3**	**+4.6**
	comp=N,2.8nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**14 07 09.1**	**-0.8**
	comp=N,1.6nm,0.1s,SNR=7.9						
LCRM	**LCR**	**6.41**	**88**	P	**Pn**	**14 05 56.6**	**-0.5**
PESTR	**Estremoz**	**6.49**	**37**	*e*P	**Pn**	**14 06 02.3**	**+4.3**
PESTR				*e*S	**Sn**	**14 07 10.4**	**-1.7**
PESTR				A	A	14 07 13.8	
	comp=N,4.7nm,0.1s						
MD31	**MD31**	**6.58**	**96**	P	**Pn**	**14 05 59.9**	**+0.5**
EBAD	**Badajoz**	**6.70**	**40**	P	**Pn**	**14 06 04.9**	**+3.9**
	comp=N,1.2nm,0.1s,SNR=7.5						
EBAD				S	**Sn**	**14 07 14.2**	**-3.2**
	comp=N,2.5nm,0.1s,SNR=4.9						
MDT	**Midelt**	**6.71**	**96**	P	**Pn**	**14 06 02.1**	**+0.8**
GOLM	**Goulmima**	**6.72**	**106**	P	**Pn**	**14 06 02.4**	**+1.1**
GOLM				S	**Sn**	**14 07 17.4**	**-0.5**
TBT	**Taburiente**	**6.83**	**224**	S	Sn	14 07 07.9	-13
	comp=N,12nm,0.1s,SNR=7.9						
EGOM	**La Gomera**	**6.86**	**217**	S	Sn	14 07 10.0	-11
	comp=N,17nm,0.2s,SNR=7.9						
EHIG	**Higuera**	**6.86**	**222**	S	Sn	14 07 12.7	-8.9
	comp=N,27nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**6.96**	**64**	P	**Pn**	**14 06 07.8**	**+3.2**
	comp=N,1.8nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**14 07 21.4**	**-2.3**
	comp=N,1.6nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**7.02**	**35**	*e*P	**Pn**	**14 06 09.4**	**+4.0**
PMRV				*e*S	**Sn**	**14 07 22.0**	**-3.2**
PMRV				A	A	14 07 27.1	
	comp=N,7.8nm,0.4s						
PMRV	**Marv??o**	**7.02**	**35**	P	**Pn**	**14 06 09.4**	**+4.0**
PMRV				S	**Sn**	**14 07 22.0**	**-3.2**
	comp=N,7.8nm,0.4s						
PCAS	**Casmilo, Conde**	**7.08**	**26**	*e*S	**Sn**	**14 07 24.9**	**-1.7**
PCAS				A	A	14 07 27.8	
	comp=N,6.1nm,0.3s						
PCAS	**Casmilo, Conde**	**7.08**	**26**	S	**Sn**	**14 07 24.9**	**-1.7**
	comp=N,6.1nm,0.3s						
HORN	**Hornachuelos**	**7.19**	**53**	P	**Pn**	**14 06 08.5**	**+0.7**
HORN				S	**Sn**	**14 07 29.9**	**+0.4**
ECAB	**El Cabril**	**7.21**	**51**	P	**Pn**	**14 06 11.3**	**+3.2**
	comp=N,0.8nm,0.1s,SNR=20						
ECAB				S	**Sn**	**14 07 26.7**	**-3.3**
	comp=N,2.1nm,0.1s						
AKLM	**AKL**	**7.24**	**82**	P	**Pn**	**14 06 09.2**	**+0.8**
EGOR	**Sierra Gorda,**	**7.66**	**62**	S	**Sn**	**14 07 39.3**	**-1.9**
	comp=N,1.0nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**7.82**	**53**	P	**Pn**	**14 06 19.6**	**+3.3**
	comp=N,1.2nm,0.1s,SNR=15						
EADA				S	**Sn**	**14 07 42.8**	**-2.2**
	comp=N,2.2nm,0.1s						
ELGU	**Los Guajares,**	**7.93**	**64**	P	**Pn**	**14 06 22.0**	**+4.1**
	comp=N,2.3nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**14 07 46.5**	**-1.2**
	comp=N,4.7nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**8.15**	**38**	S	**Sn**	**14 07 48.3**	**-4.9**
	comp=N,3.6nm,0.3s,SNR=5.6						
EQUE	**Quentar**	**8.19**	**63**	P	**Pn**	**14 06 25.4**	**+3.9**
	comp=N,0.6nm,0.1s,SNR=4.7						
EQUE				S	**Sn**	**14 07 52.4**	**-1.7**
	comp=N,0.7nm,0.2s,SNR=7.9						
JBK	**JBK**	**8.30**	**83**	P	**Pn**	**14 06 23.5**	**+0.3**
JBK				S	**Sn**	**14 07 53.3**	**-3.8**
POLO	**Lamas de Olo**	**8.49**	**25**	*e*S	**Sn**	**14 07 57.9**	**-3.6**
POLO				A	A	14 08 01.5	
	comp=N,1.5nm,0.2s						
POLO	**Lamas de Olo**	**8.49**	**25**	S	**Sn**	**14 07 57.9**	**-3.6**
	comp=N,1.5nm,0.2s						
MVO	**Moncorvo**	**8.60**	**29**	*e*S	**Sn**	**14 07 59.4**	**-4.8**
MVO				A	A	14 08 04.6	
	comp=N,6.9nm,0.5s						
MVO	**Moncorvo**	**8.60**	**29**	S	**Sn**	**14 07 59.8**	**-4.4**
	comp=N,1.0nm,0.2s,SNR=7.9						
EQES	**Quesada**	**8.70**	**60**	P	**Pn**	**14 06 32.2**	**+3.7**
	comp=N,0.6nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**14 08 03.8**	**-2.8**
	comp=N,1.4nm,0.2s,SNR=7.9						
PCAB	**Cabril**	**8.71**	**23**	*e*S	**Sn**	**14 08 02.3**	**-4.6**
PCAB	**Cabril**	**8.71**	**23**	S	**Sn**	**14 08 02.3**	**-4.6**
PAB	**San Pablo**	**8.76**	**46**	P	**Pn**	**14 06 33.1**	**+3.8**
	comp=N,0.5nm,0.4s,SNR=7.9						
PAB				S	**Sn**	**14 08 02.3**	**-5.9**
	comp=N,1.1nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**8.84**	**22**	S	**Sn**	**14 08 05.3**	**-4.8**
	comp=N,0.6nm,0.2s,SNR=8.4						
PGAV	**Gavieira, Arco**	**8.87**	**21**	*e*S	**Sn**	**14 08 05.2**	**-5.6**
PGAV				A	A	14 08 10.7	
	comp=N,4.1nm,0.1s						
PGAV	**Gavieira, Arco**	**8.87**	**21**	S	**Sn**	**14 08 05.2**	**-5.6**
	comp=N,4.1nm,0.1s						
EZAM	**Zamans**	**8.92**	**19**	P	**Pn**	**14 06 33.4**	**+2.0**
	comp=N,1.9nm,0.2s,SNR=7.9						
EZAM				S	**Sn**	**14 08 06.4**	**-5.5**
	comp=N,5.3nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**9.08**	**47**	P	**Pn**	**14 06 36.9**	**+3.3**
	comp=N,1.0nm,0.2s,baz=236,slow=13,SNR=11						
SESP	**Santiago Espad**	**9.21**	**59**	P	**Pn**	**14 06 38.3**	**+2.8**
	comp=N,0.5nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**14 08 15.2**	**-4.0**
	comp=N,1.0nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**9.38**	**28**	S	**Sn**	**14 08 17.8**	**-5.4**
	comp=N,0.5nm,0.2s,SNR=5.3						
GUD	**Guadarrama**	**9.60**	**42**	P	**Pn**	**14 06 43.0**	**+2.2**
	comp=N,0.1nm,0.1s,SNR=7.9						
GUD				S	**Sn**	**14 08 24.3**	**-4.4**
	comp=N,0.5nm,0.3s,SNR=5.7						
EMAZ	**Mazaricos**	**9.60**	**16**	S	**Sn**	**14 08 20.6**	**-8.0**
	comp=N,2.0nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**9.69**	**20**	S	**Sn**	**14 08 24.6**	**-6.3**
	comp=N,1.5nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**10.14**	**58**	P	**Pn**	**14 06 51.2**	**+3.1**
	comp=N,2.8nm,0.3s,SNR=7.0						
ETOB				S	**Sn**	**14 08 36.0**	**-6.0**
	comp=N,1.9nm,0.3s,SNR=5.7						
EPON	**Pontenova**	**10.45**	**22**	S	**Sn**	**14 08 43.8**	**-5.7**
	comp=N,0.7nm,0.2s,SNR=7.9						

IDC ***19*** *14:17:41.5±0.5, 31°.27N×105°.33E, h0^{km}, mb4.2/27, mb1 4.3/30, mb1mx4.2/53, mbtmp4.1/30, ML4.0/3, MS4.5/31, Ms1 4.5/31, ms1mx4.3/49, Error ellipse: s-maj=15.2km s-min=12.0km az=48.0*

NEIC ***19*** *14:17:41.9±1.3, 31°.29N×105°.22E, h2^{km}±8^{km}, mb4.9/25, ML5.2(BJI), Error ellipse: s-maj=4.4km s-min=4.1km az=212.0*

NEIC Felt [IV] at Mianyang and [II] at Chengdu.

ISCJB ***19*** *14:17:41.2±0.2, 31°.25N±0°.02×105°.28E±0°.02, h10^{km}, mb4.5/79, MS4.6/63, Error ellipse: s-maj=3.0km s-min=2.8km az=171.3*

MOS ***19*** *14:17:42.7±0.8, 31°.25N×105°.33E, h23^{km}, mb4.8/37, MS4.4/26, Error ellipse: s-maj=7.0km s-min=4.4km az=115.9*

BJI ***19*** *14:17:43.4, 31°.21N×105°.20E, h20^{km}, mB4.9/27, mb4.5/37, ML5.2/20, Ms4.9/59, Ms7 4.9/51*

GCMT ***19*** *14:17:44.0±0.2, 31°.18N±0°.01×105°.26E±0°.01, h20^{km}±1^{km},* *MW5.1/109, Moment Tensor Solution. s44,c58; s109,c169; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.13±.11; $M_{\theta\theta}$-4.84±.10; $M_{\phi\phi}$4.71±.10; $M_{r\theta}$0.64±.19; $M_{\theta\phi}$0.13±.08; $M_{\phi r}$0.27±.20; Best double couple: $M_0$4.82500×10^{16} NP1:ϕ_s226.00000°,δ87.00000°, λ-8.00000°. NP2:ϕ_s316.00000°,δ82.00000°, λ-177.00000°. Principal axes: T 4.7290, Plg3.0000°, Azm271.0000°; N 0.1900, Plg82.0000°, Azm27.0000°; P -4.9220, Plg7.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 14:17:43.1±0.3**,31.°23N**±0.°03×**105.°27E**±0.°03**,h10**^{km}**,n221,** σ**2.^{s}26**/244**,mb4.6**/80**,MS4.6**/63**,13C-8D,Sichuan**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
CD2   Chengdu            1.33 257⇑iPg      Pn       14 18 06.6  -1.3
CD2                                Sg      Sn       14 18 24.5  -1.2
CD2                                smax    smax
      comp=N,65µm,0.9s
CD2                                smax    smax
      comp=E,44µm,0.7s
CD2   Chengdu            1.33 257⇑iPg      Pn       14 18 06.6  -1.3
CD2                                Sg      Sn       14 18 24.5  -1.2
ENH   Enshi              3.75 104 ePn      Pn       14 18 42.6  +1.5
XAN   Xi'an              4.17  47  Pn      Pn       14 18 46.6  -0.3
XAN                                Sn      Sn       14 19 35.4  -0.2
XAN                                Sg      Sg       14 19 58.1  +1.1
XAN                                smax    smax
      comp=N,5µm,1.0s
XAN                                smax    smax
      comp=E,3µm,0.8s
XAN                                LR      LR
      comp=Z,6µm,4.6s
XAN   Xi'an              4.17  47 ePn      Pn       14 18 46.5  -0.3
XAN   Xi'an              4.17  47 eP       Pn       14 18 46.5  -0.3
GYA   Guiyang            4.91 165  Pn      Pn       14 19 00.5  +3.4
GYA                                Sn      Sb       14 20 01.5  -6.8
GYA                                Sg      Sg       14 20 22.8  +2.1
GYA                                smax    smax
      comp=N,1µm,1.0s
GYA                                smax    smax
      comp=E,970nm,1.0s
GYA                                LR      LR
      comp=N,3µm,13.3s
GYA                                LR      LR
      comp=E,13µm,12.2s
GYA   Guiyang            4.91 165  Pn      Pn       14 19 00.5  +3.4
GYA                                Sn      Sb       14 20 01.5  -6.8
GYA                                Sg      Sg       14 20 22.8  +2.1
LZH   Lanzhou            4.99 347 ⇑Pn      Pn       14 19 00.0  +1.7
LZH                                Pg      Pb       14 19 12.8  +2.1
LZH                                Sn      Sn       14 19 54.1  -2.0
LZH                                Sg      Sb       14 20 15.5  +4.7
LZH                                smax    smax
      comp=N,11µm,0.8s
LZH                                smax    smax
      comp=E,18µm,1.1s
LZH                                LR      LR
      comp=N,25µm,7.7s
LZH                                LR      LR
      comp=Z,21µm,8.6s
KMI   Kunming            6.48 201  Pn      Pn       14 19 19.8  +1.0
KMI                                Sn      Sn       14 20 32.8  -0.1
KMI                                LR      LR
      comp=E,14µm,11.9s
KMI                                LR      LR
      comp=Z,4µm,10.7s
KMI   Kunming            6.48 201 ePn      Pn       14 19 19.7  +1.0
KMI   Kunming            6.48 201 eP       Pn       14 19 19.7  +1.0
WHN   Wuhan              7.83  93  P       Pn       14 19 39.0  +1.8
WHN                                S       Sn       14 21 05.6  -0.3
WHN                                LR      LR
      comp=N,13µm,5.1s
WHN                                LR      LR
      comp=E,13µm,6.1s
WHN                                LR      LR
      comp=Z,9µm,5.7s
GTA   Gaotai             9.30 333 eP       Pn       14 19 58.0  +0.6
GTA                                pP               14 20 02.3
GTA                                sP               14 20 05.1
GTA                                S       Sn       14 21 43.6  +1.5
GTA                                sS               14 21 51.0
GTA                                pmax    pmax
      comp=Z,3.0nm,0.9s
GTA                                pmax    pmax
      comp=Z,55nm,6.4s
GTA                                LR      LR
      comp=N,9µm,14.6s
GTA                                LR      LR
      comp=E,8µm,12.7s
GTA                                LR      LR
      comp=Z,6µm,10.2s
BTO   Baotou            10.12  21 eP       Pn       14 20 09.3  +0.7
BTO                                S       Sn       14 22 13.3   +11
GZH   Guangzhou         10.83 137 eP       Pn       14 20 21.1  +2.8
HHC   Hu-ho-hao-te      10.87  26 eP       Pn       14 20 19.1  +0.3
HHC                                S       Sn       14 22 16.8  -3.7
HHC                                pmax    pmax
      comp=Z,9.0nm,0.8s
HHC                                pmax    pmax
      comp=Z,99nm,3.9s
HHC                                LR      LR
      comp=E,5µm,7.7s
HHC                                LR      LR
      comp=Z,5µm,8.3s
NJ2   Nanjing           11.61  82 eP       Pn       14 20 31.1  +2.2
NJ2                                pmax    pmax
      comp=Z,7.0nm,0.5s
NJ2                                LR      LR
      comp=N,5µm,8.9s
NJ2                                LR      LR
      comp=E,6µm,11.6s
NJ2                                LR      LR
      comp=Z,6µm,12.3s
LSA   Lhasa             12.28 267 ePn      Pn       14 20 36.7  -1.8
LSA   Lhasa             12.28 267 eP       Pn       14 20 36.7  -1.8
BJT   Baijiatuau        12.46  42  P       Pn       14 20 40.0  -0.5
BJT                                pmax    pmax
      comp=Z,11nm,0.7s
BJI   Beijing           12.48  42  P       Pn       14 20 40.9  +0.1
BJI                                pmax    pmax
      comp=Z,2.0nm,0.4s
BJI                                LR      LR
      comp=Z,520nm,14.7s
BJI                                LR      LR
      comp=Z,1µm,13.7s
QIZ   Qiongzhong        12.83 160  P       Pn       14 20 48.1  +2.5
QIZ                                S       Sn       14 23 13.9  +5.3
QIZ                                LR      LR
      comp=Z,2µm,18.6s
QIZ                                LR      LR
      comp=Z,10µm,14.7s
SHL   Shillong          13.06 248 ePn      Pn       14 20 46.2  -2.7
SHL   Shillong          13.06 248 eP       Pn       14 20 46.2  -2.7
SHL   Shillong          13.06 248 eP       Pn       14 20 48.0  -0.9
CHTO  Chiang Mai        13.62 206 ePn      Pn       14 20 57.5  +1.1
CHTO  Chiang Mai        13.62 206 eP       Pn       14 20 57.6  +1.1
CHTO  Chiang Mai        13.62 206  P       Pn       14 20 59.6  +3.2
      comp=Z,33nm,1.0s
CMMT  Chiang Mai        13.62 206  P       Pn       14 20 59.6  +3.2
      comp=Z,7.5nm,0.9s,comp=Z,352nm
SSE   Sheshan           13.63  86  P       Pn       14 20 54.0  -2.6
SSE                                S       Sn       14 23 27.3  -0.8
SSE                                pmax    pmax
      comp=Z,5.0nm,2.7s
SSE                                pmax    pmax
      comp=Z,350nm,6.9s
SSE                                LR      LR
      comp=N,2µm,11.6s
SSE                                LR      LR
      comp=E,1µm,14.3s
CMAR  Chiang Mai Arr    13.94 206  Pn      Pn       14 21 00.6  -0.3
      comp=E,0.1nm,0.3s,baz=18,slow=12,SNR=14
CMAR                               Lg      Lg       14 25 10.6
      comp=E,0.1nm,0.3s,baz=33,slow=31,SNR=3.0
CMAR                               LR      LR       14 26 33.2
      comp=E,2µm,19.2s,baz=16,slow=38
CM01  Chiang Mai Arr    13.97 206 ePn      Pn       14 21 01.2   0.0
PBKT  Sadao Pong        15.11 196 ePn      Pn       14 21 17.8  +1.1
PBKT  Sadao Pong        15.11 196  P       P        14 21 22.2  +0.3
      comp=E,7.1nm,0.8s
DL2   Dalian            15.42  56  P       Pn       14 21 21.4  +0.7
DL2                                S       Sn       14 24 14.9  +3.4
DL2                                pmax    pmax
      comp=E,30nm,0.9s
DL2                                pmax    pmax
      comp=E,240nm,4.6s
DL2                                LR      LR
      comp=E,5µm,18.7s
DL2                                LR      LR
      comp=E,4µm,13.7s
CHAI  Chaiyaphum        15.55 192  P       P        14 21 26.5  -0.3
      comp=E,4.3nm,0.9s
NACB  Ninganchiao       16.07 112 ePn      Pn       14 21 28.9  -0.2
      comp=E,28nm,0.9s
UTHA  Uthaitani         16.48 200  P       P        14 21 39.0  +1.8
      comp=E,5.0nm,0.9s,comp=E,116nm
SONM  Songino Array     16.61   3  Pn      Pn       14 21 35.1  -1.0
      comp=E,0.4nm,0.3s,baz=185,slow=6.7,SNR=25
SONM                               Lg      Lg       14 26 35.3
      comp=E,0.2nm,0.3s,baz=192,slow=31,SNR=6.6
SONM                               LR      LR       14 28 35.1
      comp=E,3µm,20.6s,baz=185,slow=39
SONA1 Songino Array     16.62   3 ePn      Pn       14 21 34.7  -1.6
ULN   Ulaanbaatar       16.67   4 ePn      Pn       14 21 35.6  -1.4
      comp=E,23nm,1.0s
ULN   Ulaanbaatar       16.67   4 eP       Pn       14 21 35.6  -1.4
ULN                                pmax    pmax
      comp=Z,23nm,1.0s
RAMN  Ramite            16.86 260 eP       Pn       14 21 35.7  -3.9
      comp=Z,12nm,0.3s
JIRN  Jiri              16.99 263 eP       Pn       14 21 37.3  -4.1
      comp=Z,35nm,0.4s
YOJ   Yonaguni jima     17.07 109 ePn      Pn       14 21 41.9   0.0
      comp=Z,641nm,1.6s
YOJ   Yonaguni jima     17.07 109 eP       Pn       14 21 41.9   0.0
YOJ                                pmax    pmax
      comp=Z,641nm,1.6s
GUN   Gumba             17.19 264 eP       Pn       14 21 39.7  -4.1
      comp=Z,27nm,0.3s
SRAK  Srakaew           17.39 191  P       P        14 21 52.8  +5.5
      comp=Z,30nm,0.9s,comp=Z,454nm
PKI   Pulchoki          17.68 263 eP       Pn       14 21 45.6  -4.3
      comp=Z,36nm,0.5s
PKIN  Phulchoki         17.69 263 eP       Pn       14 21 45.5  -4.5
      comp=Z,34nm,0.4s
KKN   Kakani            17.73 264 eP       Pn       14 21 46.2  -4.2
      comp=Z,62nm,0.7s
DMN   Daman             17.93 264 eP       Pn       14 21 48.6  -4.3
      comp=Z,24nm,0.4s
WMQ   Urumqi            18.72 317 eP       P        14 22 01.5  -0.4
WMQ                                pP      sP       14 22 07.1  +0.8
WMQ                                sP      pP       14 22 11.1  +6.2
WMQ                                S       Sn       14 25 28.5  -3.3
WMQ                                pmax    pmax
      comp=Z,51nm,1.1s
WMQ                                pmax    pmax
      comp=Z,500nm,4.1s
WMQ                                LR      LR
      comp=Z,6µm,19.3s
DANN  Dangsing          18.89 267 eP       P        14 21 59.8  -4.3
      comp=Z,29nm,0.4s
KOLN  Koldanda          19.17 265 eP       P        14 22 02.5  -4.6
      comp=Z,50nm,0.7s
ZAK   Zakamensk         19.20 356 eP       P        14 22 05.9  -1.2
ZAK                                pmax    pmax
      comp=Z,11nm,1.3s
PYUN  Piuthan           19.61 267 eP       P        14 22 07.9  -4.0
      comp=Z,48nm,0.8s
KS15  Wonju Array Si    19.66  65 eP       P        14 22 13.5  +1.3
KSAR  Wonju Array Be    19.66  65  P       P        14 22 11.7  -0.4
KSAR  Wonju Array Be    19.66  65  P       P        14 22 11.7  -0.4
KS01  Wonju Array Si    19.67  65 eP       P        14 22 13.1  +0.8
KSRS  Korea Array       19.69  65  P       P        14 22 11.7  -0.8
      comp=Z,1.4nm,0.3s,baz=246,slow=10,SNR=22
KSRS                               LR      LR       14 30 25.2
      comp=Z,2µm,19.1s,baz=262,slow=39
CN2   Changchun         20.28  46 eP       P        14 22 20.0  +1.2
CN2                               eS       S        14 26 07.4  +1.2
CN2                                pmax    pmax
      comp=Z,10.0nm,0.6s
CN2                                pmax    pmax
      comp=Z,200nm,5.0s
CN2                                LR      LR
      comp=Z,2µm,10.0s
CN2                                LR      LR
      comp=Z,1µm,10.0s
CN2                                LR      LR
      comp=Z,2µm,10.0s
TLY   Talaya            20.47 357 eP       Pn       14 22 25.9  +2.8
TLY                               e                 14 22 40.7
TLY                               ePPP     PPP      14 22 48.5
TLY                               eS       S        14 26 08.4  -1.6
TLY                               eSS      SnSn     14 26 27.1  -1.4
TLY                               eSSS     SSS      14 26 38.5
TLY                                pmax    pmax
      comp=Z,24nm,1.4s
TLY                                MLR     MLR
      comp=Z,4µm,19.0s
MOY   Mondy             20.67 352 eP       P        14 22 24.1  +1.0
MOY                                pmax    pmax
      comp=Z,49nm,2.6s
IRK   Irkutsk           21.01 358 eP       P        14 22 26.7   0.0
IRK                               e                 14 22 55.5
IRK                                pmax    pmax
      comp=Z,70nm,1.6s
HIA   Hailar            21.07  27 eP       P        14 22 27.7  +0.3
      comp=Z,23nm,0.9s
HIA   Hailar            21.07  27 eP       P        14 22 27.7  +0.3
HIA                                pmax    pmax
      comp=Z,23nm,0.9s
JNU   Nakatsue          21.75  78  LR      LR       14 31 28.9
      comp=Z,2µm,18.5s,baz=275,slow=38
ZSN   Zaisan            22.51 322ceP       P        14 22 43.9  +1.0
ZSN                               eS       S        14 26 55.5  +5.8
ZSN                                pmax    pmax
      comp=Z,23nm,0.5s
ZSN                                smax    smax
      comp=N,486nm,2.6s
ZSN                                MLR     MLR
      comp=Z,670nm,15.0s
ZSN   Zaisan            22.51 322⇑eP       P        14 22 43.9  +1.0
      comp=Z,22nm,0.5s
ZSN                               eS       S        14 26 55.6  +5.8
      comp=Z,486nm,2.6s
ZSN                               eLR      LR       14 30 25.9
      comp=Z,670nm,14.8s
DGZ   Jazzator, Alta    22.80 329 i P      P        14 22 46.0  -0.1
DGZ                                pmax    pmax
      comp=Z,7.0nm,1.0s
MDJ   Mudanjiang        23.28  48  P       P        14 22 52.3  +1.4
MDJ                                pP      pP       14 22 54.3  +0.4
MDJ                                PcP     PcP      14 26 39.0  +0.8
MDJ                                S       S        14 27 06.1  +2.9
MDJ                                pmax    pmax
      comp=Z,13nm,1.2s
MDJ                                pmax    pmax
      comp=Z,290nm,3.0s
MDJ                                LR      LR
      comp=Z,3µm,16.7s
MDJ                                LR      LR
      comp=Z,1µm,15.9s
MDJ   Mudanjiang        23.28  48 eP       P        14 22 52.0  +1.1
      comp=Z,40nm,1.3s
MK01  Makanchi Array    23.53 318 eP       P        14 22 52.2  -1.2
MK31  Makanchi Array    23.55 318 eP       P        14 22 52.5  -1.1
MK31  Makanchi Array    23.55 318 eP       P        14 22 52.5  -1.1
MKAR  Makanchi Array    23.55 318 eP       P        14 22 52.3  -1.3
      comp=Z,191nm,1.2s
MKAR                               ScP     ScP      14 30 15.5  -1.6
MKAR  Makanchi Array    23.55 318  P       P        14 22 53.8  +0.2
MKAR                               pmax    pmax
      comp=Z,3.0nm,0.5s
MKAR                               MLR     MLR
      comp=Z,2µm,18.6s
MKAR  Makanchi Array    23.55 318  P       P        14 22 53.8  +0.2
      comp=Z,2.6nm,0.5s,baz=112,slow=11,SNR=31
MKAR                               ScP     ScP      14 30 15.5  -1.6
      comp=Z,1.4nm,1.0s,baz=131,slow=3.4,SNR=3.8
MKAR                               LR      LR       14 31 49.0
      comp=Z,2µm,18.6s,baz=119,slow=36
PDGK  Podgornoye        23.70 308  P       P        14 22 55.3   0.0
PDGK                               pmax    pmax
      comp=Z,17nm,1.2s
MAKZ  Makanchi          23.74 318 eP       P        14 22 54.3  -1.1
      comp=Z,36nm,1.2s
MAKZ  Makanchi          23.74 318 eP       P        14 22 54.3  -1.1
MAKZ                               pmax    pmax
      comp=Z,36nm,1.2s
UZB   Uzynbulak         23.95 307d iP      P        14 22 56.6  -1.1
UZB                               i S      S        14 27 18.6  +4.2
UZB                                pmax    pmax
      comp=Z,75nm,0.9s
UZB                                smax    smax
      comp=E,213nm,3.1s
UZB                                MLR     MLR
      comp=Z,615nm,11.0s
UZB   Uzynbulak         23.95 307⇓iP       P        14 22 56.6  -1.1
      comp=Z,75nm,0.9s
UZB                              ⇑iS       S        14 27 18.6  +4.2
      comp=Z,213nm,3.1s
UZB                               eLR      LR       14 32 26.3
      comp=Z,615nm,10.8s
PRZ   Przheval'sk       24.16 305 eP       P        14 22 59.3  -0.4
      comp=Z,77nm,1.2s
PRZ   Przheval'sk       24.16 305 eP       P        14 22 59.3  -0.4
PRZ                                pmax    pmax
      comp=Z,77nm,1.2s
KPKS  Kokpek            24.30 308 eP       P        14 23 00.1  -0.7
KPKS                              eS       S        14 27 23.2  +3.4
KPKS                               pmax    pmax
      comp=Z,108nm,0.9s
KPKS                               smax    smax
      comp=E,246nm,3.3s
KPKS                               MLR     MLR
      comp=Z,760nm,12.0s
KPKS  Kokpek            24.30 308 eP       P        14 23 00.1  -0.7
      comp=Z,108nm,0.9s
KPKS                              eS       S        14 27 23.2  +3.4
      comp=Z,246nm,3.3s
KPKS                              eLR      LR       14 32 32.3
      comp=Z,760nm,12.1s
SATY  Saty              24.35 307c iP      P        14 23 01.1  -0.2
SATY                               MLR     MLR
      comp=Z,907nm,12.0s
SATY  Saty              24.35 307⇑iP       P        14 23 01.2  -0.2
      comp=Z,280nm,0.8s
SATY                             ⇓iS       S        14 27 26.2  +5.5
      comp=Z,392nm,4.8s
SATY                              eLR      LR       14 32 24.2
      comp=Z,907nm,12.1s
ZHN   Zhinishke         24.36 307ceP       P        14 23 00.9  -0.6
ZHN                                pmax    pmax
      comp=Z,79nm,0.5s
ZHN                                MLR     MLR
      comp=Z,620nm,13.0s
ZHN   Zhinishke         24.36 307⇑eP       P        14 23 00.9  -0.6
      comp=Z,79nm,0.5s
ZHN                               eLR      LR       14 32 39.7
      comp=Z,620nm,12.8s
USRK  Ussuriysk Ar.     24.66  51  P       P        14 23 03.5  -0.5
      comp=Z,1.4nm,0.5s,baz=254,slow=7.8,SNR=5.0
USRK                               LR      LR       14 32 34.4
      comp=Z,873nm,18.6s,baz=242,slow=36
KDJ   Kajisay           24.91 304 eP       P        14 23 06.5   0.0
      comp=Z,27nm,1.1s
KDJ   Kajisay           24.91 304 eP       P        14 23 06.5   0.0
KDJ                                pmax    pmax
      comp=Z,27nm,1.1s
KSH   Kashi             25.20 297  P       P        14 23 15.1  +6.0
KSH                                PP      PnPn     14 23 52.1  +9.1
KSH                                S       S        14 27 40.3  +5.9
KSH                                SS      SnSn     14 28 40.4   +16
KSH                                pmax    pmax
      comp=Z,370nm,4.8s
KSH                                LR      LR
      comp=Z,780nm,8.0s
KSH                                LR      LR
      comp=Z,670nm,7.4s
KSH                                LR      LR
      comp=Z,880nm,12.7s
MDOK  Medeo             25.32 306 eP       P        14 23 09.6  -0.5
MDOK                               pmax    pmax
      comp=Z,82nm,1.3s
MDOK                               MLR     MLR
      comp=Z,815nm,22.0s
MDOK  Medeo             25.32 306 eP       P        14 23 09.7  -0.5
      comp=Z,82nm,1.3s
MDOK                              eS       S        14 27 42.8  +6.5
MDOK                              eLR      LR       14 32 51.1
      comp=Z,815nm,21.5s
AAA   Alma-Ata          25.43 306 eS       S        14 27 43.8  +6.0
      comp=Z,198nm,5.5s
AAA                               eLR      LR       14 33 00.5
      comp=Z,412nm,16.1s
NRN   Naryn             25.58 302 eP       P        14 23 12.9  +0.2
      comp=Z,19nm,0.9s
NRN   Naryn             25.58 302 eP       P        14 23 12.9  +0.2
NRN                                pmax    pmax
      comp=Z,19nm,0.9s
CHKK  Chushkaly         25.59 307 eP       P        14 23 11.8  -0.6
CHKK                               pmax    pmax
      comp=Z,58nm,1.0s
CHKK  Chushkaly         25.59 307 eP       P        14 23 11.8  -0.6
      comp=Z,58nm,1.0s
KUU   Kurty             26.04 307 eP       P        14 23 15.8  -0.7
KUU                               eS       S        14 27 48.7  +1.2
KUU                                pmax    pmax
      comp=Z,13nm,1.5s
KUU                                smax    smax
      comp=E,129nm,6.4s
KUU                                MLR     MLR
      comp=Z,425nm,13.0s
KUU   Kurty             26.04 307 eP       P        14 23 15.8  -0.7
      comp=Z,13nm,1.5s
KUU                              ⇓eS       S        14 27 48.8  +1.2
      comp=Z,130nm,6.4s
KUU                               eLR      LR       14 33 25.4
      comp=Z,425nm,12.8s
SEM   Semipalatinsk     26.73 323c iP      P        14 23 22.5  -0.4
SEM                                pmax    pmax
      comp=Z,52nm,0.6s
SEM                                MLR     MLR
      comp=Z,1µm,15.0s
SEM   Semipalatinsk     26.73 323⇑iP       P        14 23 22.6  -0.4
      comp=Z,52nm,0.6s
SEM                               eLR      LR       14 32 47.0
      comp=Z,1µm,14.9s
KLR   Kul'dur           26.85  40 i P      P        14 23 21.5  -2.2
KLR   Kul'dur           26.85  40  P       P        14 23 23.3  -0.4
      comp=Z,4.8nm,0.8s,baz=254,slow=9.0,SNR=11
KLR                                LR      LR       14 34 15.5
      comp=Z,1µm,19.9s,baz=238,slow=37
AAK   Ala-Archa         26.96 304 eP       P        14 23 25.0   0.0
      comp=Z,18nm,1.1s
AAK   Ala-Archa         26.96 304  P       P        14 23 25.4  +0.3
AAK                                pmax    pmax
      comp=Z,2.0nm,0.7s
AAK                                MLR     MLR
      comp=Z,2µm,20.2s
AAK   Ala-Archa         26.96 304  P       P        14 23 25.4  +0.3
      comp=Z,1.6nm,0.7s,baz=85,slow=8.1,SNR=7.1
AAK                                LR      LR       14 34 58.0
      comp=Z,2µm,20.2s,baz=87,slow=38
ZAA0  Zalesovo Array    27.06 333 eP       P        14 23 24.9  -0.6
      comp=Z,32nm,1.1s
ZALV  Zalesovo Beam     27.06 333 eP       P        14 23 24.8  -0.8
ZALV  Zalesovo Beam     27.06 333  P       P        14 23 25.2  -0.4
      comp=Z,1.9nm,0.5s,baz=126,slow=9.8,SNR=9.1
ZALV                               LR      LR       14 33 57.6
      comp=Z,1µm,20.5s,baz=111,slow=36
NIL   Nilore            27.07 284 eP       P        14 23 25.5  -0.5
      comp=Z,50nm,0.9s
NIL   Nilore            27.07 284 eP       P        14 23 25.5  -0.5
NIL                                pmax    pmax
      comp=Z,50nm,0.9s
SFK   Sufi-Kurgan       27.16 298  P       P        14 23 26.6  -0.3
SFK                                pmax    pmax
      comp=Z,10.0nm,0.9s
BOD   Bodaibo           27.26  10 eP       P        14 23 23.0  -4.3
BOD                                pmax    pmax
      comp=Z,6.0nm,1.9s
ZEA   Zeya              27.51  29 eP       P        14 23 30.0  +0.3
ZEA                                pmax    pmax
      comp=Z,18nm,1.4s
ZEA                                MLR     MLR
      comp=N,2µm,13.0s
ZEA                                MLR     MLR
      comp=Z,2µm,13.0s
ZEA                                MLR     MLR
      comp=E,1µm,14.0s
KURBB Kurchatov Arra    27.75 322  P       P        14 23 32.5  +0.7
      comp=E,2.5nm,0.7s,baz=126,slow=8.3,SNR=20
KURK  Kurchatov         27.75 322 eP       P        14 23 31.7  -0.1
      comp=E,14nm,0.9s
KURK  Kurchatov         27.75 322 eP       P        14 23 31.7  -0.1
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KURK				pmax	pmax		
	comp=Z,14nm,0.9s						
MJAR	**Matsushiro Arr**	**27.77**	**70**	LR	LR	14 33 56.0	
	comp=Z,1µm,19.9s,baz=275,slow=35						
HYB	**Hyderabad**	**27.87**	**247**	*i* P	**P**	**14 23 38.0**	**+4.8**
BTLS	**Baital**	**27.97**	**308**	*e*P	**P**	**14 23 33.5**	**-0.3**
BTLS				pmax	pmax		
	comp=Z,22nm,1.7s						
BTLS				MLR	MLR		
	comp=Z,457nm,12.0s						
BTLS	**Baital**	**27.97**	**308**	*e*P	**P**	**14 23 33.5**	**-0.3**
	comp=Z,22nm,1.7s						
BTLS				*e*LR	LR	14 34 21.2	
	comp=Z,457nm,12.1s						
TEY	**Ternei**	**28.04**	**52**⇑	*e*P	P	14 23 29.8	-4.7
TEY				pmax	pmax		
	comp=Z,10.0nm,1.9s						
TEY				MLR	MLR		
	comp=Z,300nm,12.0s						
MNAS	**Manas**	**28.36**	**303**	P	**P**	**14 23 38.1**	**+0.6**
MNAS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PSI	**Prapat**	**28.90**	**193**	P	**P**	**14 23 44.6**	**+2.2**
	comp=Z,2.7nm,0.2s,baz=359,slow=15,SNR=5.6						
PSI				LR	LR	14 37 02.4	
	comp=Z,720nm,19.2s,baz=282,slow=40						
KK31	**Karatay Array**	**29.92**	**303**	*e*P	**P**	**14 23 50.9**	**-0.4**
KK31	**Karatay Array**	**29.92**	**303**	*e*P	**P**	**14 23 50.9**	**-0.4**
KKAR	**Karatay Array**	**29.92**	**303**	*e*P	**P**	**14 23 50.9**	**-0.3**
KKAR	**Karatay Array**	**29.92**	**303**	*e*P	**P**	**14 23 50.9**	**-0.3**
IUG	**Iuzhnay**	**30.09**	**301**	*de*P	**P**	**14 23 51.9**	**-0.9**
IUG				pmax	pmax		
	comp=Z,61nm,1.0s						
IUG				MLR	MLR		
	comp=Z,957nm,16.0s						
IUG	**Iuzhnay**	**30.09**	**301**⇓	*e*P	**P**	**14 23 52.0**	**-0.9**
	comp=Z,61nm,1.0s						
IUG				*e*LR	LR	14 36 19.4	
	comp=Z,957nm,16.1s						
OTUK	**Ortayu**	**30.20**	**314**	P	**P**	**14 23 53.3**	**-0.3**
OTUK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KBL	**Kabul**	**30.50**	**286**	*e*P	**P**	**14 23 56.4**	**-0.3**
	comp=Z,21nm,1.3s						
KBL	**Kabul**	**30.50**	**286**	*e*P	**P**	**14 23 56.4**	**-0.3**
KBL				pmax	pmax		
	comp=Z,21nm,1.3s						
BRZS	**Berezniki**	**30.69**	**317**	*e*P	**P**	**14 23 56.5**	**-1.4**
BRZS				pmax	pmax		
	comp=Z,55nm,1.0s						
BRZS				MLR	MLR		
	comp=Z,666nm,13.0s						
BRZS	**Berezniki**	**30.69**	**317**	*e*P	**P**	**14 23 56.6**	**-1.4**
	comp=Z,55nm,1.0s						
BRZS				*e*LR	LR	14 36 27.5	
	comp=Z,666nm,13.4s						
BVA0	**Borovoye Array**	**33.32**	**321**	*i* P	**P**	**14 24 20.6**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BVAR	**Borovoye Array**	**33.32**	**321**	P	**P**	**14 24 21.6**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=110,slow=9.1,SNR=11						
BRVK	**Borovoye**	**33.39**	**321**	*e*P	**P**	**14 24 21.9**	**+0.4**
	comp=Z,18nm,1.6s						
BRVK	**Borovoye**	**33.39**	**321**	*e*P	**P**	**14 24 22.0**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,18nm,1.6s						
NKL	**Nikolayevsk**	**33.66**	**39**	*e*P	**P**	**14 24 23.3**	**-0.6**
NKL				MLR	MLR		
	comp=E,2µm,13.0s						
NKL				MLR	MLR		
	comp=Z,2µm,13.0s						
YUK	**Yuzh-Kuril'sk**	**34.26**	**56**	*e*P	P	14 24 25.0	-4.2
YUK				*e*		14 25 38.3	
YUK				*e*S	**S**	**14 29 51.4**	**-4.7**
YUK				*e*SS	**SnSn**	**14 32 00.1**	**-4.6**
YUK				*e*SSS	SSS	14 32 21.2	
YUK				MLR	MLR		
	comp=E,904nm,17.0s						
YUK				MLR	MLR		
	comp=Z,492nm,17.0s						
YUK				MLR	MLR		
	comp=N,498nm,13.0s						
YAK	**Yakutsk**	**34.64**	**20**	*e*P	**P**	**14 24 32.0**	**-0.3**
YAK				*e*S	**S**	**14 30 00.3**	**-1.3**
YAK				*e*		14 34 49.3	
YAK				pmax	pmax		
	comp=Z,33nm,0.8s						
YAK				pmax	pmax		
	comp=N,16nm,1.0s						
YAK				pmax	pmax		
	comp=E,16nm,1.0s						
YAK				pmax	pmax		
	comp=Z,158nm,2.5s						
YAK				smax	smax		
	comp=N,618nm,4.8s						
YAK				smax	smax		
	comp=E,601nm,4.0s						
YAK				MLR	MLR		
	comp=Z,4µm,16.0s						
YAK				MLR	MLR		
	comp=E,2µm,11.0s						
YAK				MLR	MLR		
	comp=N,3µm,12.0s						
AB31	**Akbulak array**	**38.34**	**311**	*e*P	**P**	**14 25 03.9**	**-0.2**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ABKAR	**Akbulak array**	**38.34**	**311**	*e*P	**P**	**14 25 04.2**	**+0.1**
GEYT	**Alibeck**	**39.06**	**293**	P	**P**	**14 25 10.9**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=79,slow=7.7,SNR=7.2						
GEYT				LR	LR	14 42 59.2	
	comp=Z,760nm,18.7s,baz=25,slow=39						
GYA0B	**ALIBECK ARRAY**	**39.06**	**293**	*e*P	**P**	**14 25 10.4**	**0.0**
	comp=Z,8.8nm,0.8s						
NRIK	**Noril'sk**	**39.48**	**350**	P	**P**	**14 25 12.7**	**-0.6**
	comp=Z,2.2nm,0.4s,baz=122,slow=5.7,SNR=2.5						
NRIK				LR	LR	14 43 45.9	
	comp=Z,191nm,18.4s,baz=158,slow=40						
AKTO	**Aktyubinsk**	**39.79**	**313**	P	**P**	**14 25 15.3**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKTO	**Aktyubinsk**	**39.79**	**313**	P	**P**	**14 25 16.4**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=124,slow=14,SNR=10						
SVE	**Sverdlovsk**	**40.00**	**323**	*e*P	**P**	**14 25 20.2**	**+2.4**
SVE				pmax	pmax		
	comp=Z,24nm,1.3s						
SVE				MLR	MLR		
	comp=Z,758nm,13.0s						
GUMO	**Guam**	**40.33**	**107**	LR	LR	14 40 27.6	
	comp=Z,321nm,20.9s,baz=280,slow=34						
ARU	**Arti**	**40.95**	**322**	*e*P	**P**	**14 25 25.3**	**-0.4**
	comp=Z,22nm,1.0s						
ARU	**Arti**	**40.95**	**322**	*e*P	**P**	**14 25 26.0**	**+0.3**
ARU						14 26 56.0	
ARU				S	**S**	**14 31 40.8**	**+3.4**
ARU				MLR	MLR		
	comp=Z,734nm,16.0s						
WSAR	**Wadi Sarin**	**41.98**	**271**	LR	LR	14 45 02.8	
	comp=Z,460nm,21.8s,baz=100,slow=39						
PETK	**Petropavlovsk-**	**43.41**	**44**	P	**P**	**14 25 46.6**	**+0.8**
	comp=Z,4.9nm,0.9s,baz=251,slow=2.2,SNR=3.6						
PETK				LR	LR	14 43 51.8	
	comp=Z,957nm,18.3s,baz=252,slow=36						
SEY	**Seymchan**	**43.49**	**29**	P	**P**	**14 25 47.1**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=216,slow=7.6,SNR=5.8						
MAK	**Makhachkala**	**46.71**	**301**	*d i*P	**P**	**14 26 08.2**	**-3.9**
MAK				*e*S	**S**	**14 32 57.0**	**-4.7**
PRGR	**Permogore**	**48.70**	**327**	*e*P	**P**	**14 26 28.3**	**+1.0**
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GNI	**Garni**	**49.13**	**298**	*i* P	**P**	**14 26 31.6**	**+0.4**
GNI				pmax	pmax		
	comp=Z,66nm,1.1s						
ZEI	**Tsey**	**49.36**	**302**	*e*P	**P**	**14 26 33.6**	**+0.6**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**49.96**	**303**	P	**P**	**14 26 38.8**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=190,slow=5.8,SNR=4.3						
KBZ				LR	LR	14 49 38.1	
	comp=Z,822nm,18.1s,baz=44,slow=38						
KIV	**Kislovodsk**	**50.08**	**303**	*e*P	**P**	**14 26 37.9**	**-0.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,449nm,16.0s						
VRH	**Novokhopyorsk**	**50.13**	**313**	*e*P	**P**	**14 26 39.0**	**+0.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VRH				MLR	MLR		
	comp=Z,390nm,12.0s						
BILL	**Bilibino**	**50.64**	**25**	*e*P	**P**	**14 26 41.4**	**-0.7**
	comp=Z,16nm,1.5s						
BILL	**Bilibino**	**50.64**	**25**	*e*P	**P**	**14 26 41.5**	**-0.6**
BILL				*e*		14 27 57.1	
BILL				*e*		14 28 38.5	
BILL				*e*PPP	PPP	14 29 33.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLMR	**Klimovskoe**	**51.53**	**325**	*e*P	**P**	**14 26 47.9**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,17nm,1.5s						
KLMR	**Klimovskoe**	**51.53**	**325**	*e*P	**P**	**14 26 47.9**	**-0.9**
KLMR				AMP		14 26 55.8	
	comp=Z,17nm,1.5s						
VSR	**Storozhevoye**	**51.73**	**313**	*e*P	**P**	**14 26 47.4**	**-3.1**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
VSR				MLR	MLR		
	comp=Z,560nm,16.0s						
LPSR	**Galich'ya Gora**	**51.80**	**315**	*e*P	**P**	**14 26 51.1**	**+0.2**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OBN	**Obninsk**	**53.06**	**318**	*e*P	**P**	**14 27 00.6**	**+0.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	**Keskin Array B**	**57.55**	**300**	P	**P**	**14 27 32.2**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=101,slow=6.3,SNR=8.1						
BRTR				LR	LR	14 55 38.1	
	comp=Z,354nm,18.2s,baz=52,slow=40						
ARCES	**ARCESS Array B**	**57.56**	**336**	P	**P**	**14 27 31.8**	**-0.7**
	comp=Z,4.9nm,0.9s,baz=75,slow=7.6,SNR=12						
FINES	**FINESS Array B**	**58.02**	**326**	P	**P**	**14 27 35.0**	**-0.9**
	comp=Z,3.6nm,0.8s,baz=90,slow=6.5,SNR=12						
FINES				LR	LR	14 52 25.0	
	comp=Z,413nm,18.4s,baz=92,slow=36						
WRAB	**Tennant Creek**	**58.03**	**147**	*e*P	**P**	**14 27 35.7**	**-0.7**
	comp=Z,26nm,1.3s						
WRAB	**Tennant Creek**	**58.03**	**147**	*e*P	**P**	**14 27 35.7**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,26nm,1.3s						
AKASG	**Malin Array Be**	**58.03**	**313**	P	**P**	**14 27 35.0**	**-1.1**
AKASG	**Malin Array Be**	**58.03**	**313**	P	**P**	**14 27 35.0**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=68,slow=6.8,SNR=4.4						
AKASG				LR	LR	14 52 29.8	
	comp=Z,664nm,19.9s,baz=70,slow=36						
WRA	**Warramunga Arr**	**58.03**	**147**	P	**P**	**14 27 35.6**	**-0.8**
	comp=Z,7.7nm,0.6s,baz=340,slow=8.0,SNR=89						
WB2	**Warramunga Arr**	**58.03**	**147**	*e*P	**P**	**14 27 35.5**	**-0.9**
	comp=Z,27nm,1.3s						
AS31	**Alice Springs**	**61.09**	**150**	*e*P	**P**	**14 27 57.8**	**+0.3**
	comp=Z,1.9nm,1.0s						
ASAR	**Alice Springs**	**61.09**	**150**	P	**P**	**14 27 57.7**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=331,slow=6.9,SNR=21						
AS01	**Alice Springs**	**61.10**	**150**	*e*P	**P**	**14 27 58.4**	**+0.8**
NB2	**NORSAR Subarra**	**65.09**	**328**	P	**P**	**14 28 22.2**	**-1.5**
	comp=Z,1.4nm,0.7s,baz=87,slow=7.4						
NOA	**NORSAR Array B**	**65.09**	**328**	P	**P**	**14 28 22.9**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=62,slow=6.5,SNR=4.3						
NOA				LR	LR	14 56 45.4	
	comp=Z,494nm,18.0s,baz=55,slow=36						
OKC	**Ostrava-Krasne**	**65.10**	**315**	AMS	AMS	14 53 20.0	
	comp=Z,600nm,16.4s						
VYHS	**Vyhne**	**65.12**	**313**	*e*P	**P**	**14 28 25.7**	**+1.6**
VYHS				*e*		14 28 51.9	
VYHS	**Vyhne**	**65.12**	**313**	*e*P	**P**	**14 28 25.7**	**+1.6**
VYHS				*e*PCP	**PcP**	**14 28 51.9**	**-4.9**
DPC	**Dobruska-Polom**	**66.03**	**315**	AMS	AMS	14 58 20.0	
	comp=Z,800nm,11.0s						
UPC	**Upice**	**66.17**	**316**	AMS	AMS	14 58 30.0	
	comp=Z,700nm,16.3s						
TREC	**Trest**	**66.92**	**315**	AMS	AMS	14 58 00.0	
	comp=Z,700nm,16.7s						
PVCC	**Panska Ves**	**67.02**	**316**	AMS	AMS	14 59 10.0	
	comp=Z,600nm,16.0s						
GOPC	**GO Pecny, Ondr**	**67.11**	**315**	AMS	AMS	14 59 10.0	
	comp=Z,700nm,14.2s						
PRU	**Pruhonice**	**67.23**	**316**	AMS	AMS	14 59 00.0	
	comp=Z,700nm,16.5s						
CLL	**Collm**	**67.65**	**317**⇓	*i*P	**P**	**14 28 36.5**	**-3.7**
CLL				MLR	MLR		
	comp=Z,500nm,18.5s						
MLY	**Manley**	**67.72**	**26**	*e*P	**P**	**14 28 40.4**	**0.0**
	comp=Z,23nm,1.7s						
KHC	**Kasperske Hory**	**68.14**	**315**	AMS	AMS	14 58 50.0	
	comp=Z,900nm,15.8s						
GERES	**GERESS Array B**	**68.17**	**315**	P	**P**	**14 28 43.3**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=102,slow=4.4,SNR=4.2						
GERES				LR	LR	14 59 54.4	
	comp=Z,647nm,18.4s,baz=70,slow=37						
NKC	**Novy Kostel**	**68.39**	**316**	AMS	AMS	15 00 00.0	
	comp=Z,1µm,13.6s						
WET	**Wettzell**	**68.56**	**315**	P	**P**	**14 28 46.6**	**+0.6**
ILAR	**Eielson Array**	**69.29**	**26**	P	**P**	**14 28 48.9**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=286,slow=4.3,SNR=14						
ILAR				LR	LR	15 01 16.8	
	comp=Z,431nm,18.5s,baz=296,slow=38						
PRP	**Porcupine Dome**	**69.42**	**25**	*e*P	**P**	**14 28 49.4**	**-1.8**
	comp=Z,22nm,1.6s						
SCRK	**Sand Creek**	**70.78**	**26**	*e*P	**P**	**14 28 58.6**	**-0.9**
	comp=Z,12nm,1.4s						
STKA	**Stephens Creek**	**71.57**	**148**	P	**P**	**14 29 05.1**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=48,slow=4.5,SNR=3.7						
STKA				LR	LR	15 01 34.7	
	comp=Z,68nm,21.9s,baz=252,slow=37						
BFO	**Black Forest**	**71.63**	**316**	P	**P**	**14 29 02.6**	**-2.3**
INK	**Inuvik**	**71.71**	**20**	P	**P**	**14 29 03.8**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=331,slow=3.6,SNR=8.9						
YKA	**Yellowknife Ar**	**81.28**	**18**	P	**P**	**14 29 58.9**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=330,slow=5.2,SNR=20						
YKA				LR	LR	15 11 59.4	
	comp=Z,30nm,18.0s,baz=297,slow=40						
YKB5	**Yellowknife Ar**	**81.28**	**18**	*e*P	**P**	**14 29 58.1**	**-1.1**
ESDC	**Sonseca Array**	**83.67**	**313**	P	**P**	**14 30 14.3**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=35,slow=5.3,SNR=3.7						
ESDC				LR	LR	15 08 56.8	
	comp=Z,277nm,18.8s,baz=80,slow=37						
TORD	**Torodi Ar. Bea**	**94.55**	**288**	LR	LR	15 19 22.9	
	comp=Z,99nm,20.1s,baz=350,slow=39						
BOSA	**Boshof**	**96.61**	**241**	LR	LR	15 15 38.2	
	comp=Z,145nm,18.2s,baz=37,slow=36						
ULM	**Lac du Bonnet**	**96.74**	**13**	LR	LR	15 17 55.0	
	comp=Z,277nm,20.1s,baz=326,slow=37						
NVAR	**Mina Array Bea**	**99.68**	**33**	LR	LR	15 17 48.4	
	comp=Z,107nm,19.5s,baz=360,slow=36						
PDAR	**Pinedale Array**	**99.72**	**25**	LR	LR	15 20 26.6	
	comp=Z,194nm,18.1s,baz=338,slow=38						

IDC 19 14:41:56.9±3.3**, 17°.33N×147°.69E, h0^{km}, mb3.4**/6**, mb1 3.6**/6**, mb1mx3.4**/37**, mbtmp3.4**/6**, Error ellipse: s-maj=105.1km s-min=22.9km az=81.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.30**	**200**	P	P	14 49 27.4	-0.3
	0.6nm,0.7s,baz=22,slow=9.3,SNR=5.4						
ASAR	**Alice Springs**	**42.92**	**199**	P	P	14 49 57.8	+0.2
	0.2nm,0.6s,baz=21,slow=8.0,SNR=2.9						
SONM	**Songino Array**	**45.39**	**321**	P	P	14 50 19.0	+1.7
	0.3nm,0.6s,baz=127,slow=7.8,SNR=2.8						
CMAR	**Chiang Mai Arr**	**46.29**	**279**	P	P	14 50 24.2	-0.5
	0.6nm,0.8s,baz=78,slow=6.1,SNR=4.6						
ZALV	**Zalesovo Beam**	**60.25**	**323**	P	P	14 52 05.3	-1.5
	0.3nm,0.4s,baz=109,slow=3.5,SNR=2.3						
MKAR	**Makanchi Array**	**60.77**	**314**	P	P	14 52 10.7	+0.1
	0.4nm,0.6s,baz=104,slow=6.4,SNR=7.1						

UCR 19 15:00:57.8±2.5**, 9°.42N×84°.62W, h19^{km}**±9^{km}**, MD3.8, 2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.69**	**62**⇓	*e*P	Pb	15 01 10.2	-1.1
EDDO	**Dominical**	**0.77**	**102**	*e*P	Pb	15 01 11.5	-1.0
EDDO				*e*S	Sg	15 01 23.1	0.0
HDC	**Heredia**	**0.77**	**41**	*i* P	Pb	15 01 11.9	-0.7
HDC				*i* S	Sb	15 01 21.7	-1.0
JTS	**JuntasAbangare**	**0.93**	**340**	*i* P	Pb	15 01 13.9	-1.4
JTS				*i* S	Sb	15 01 27.4	+0.2
ARE1	**Arenal 1**	**1.04**	**355**⇓	*e*P	Pb	15 01 16.5	-0.7
ARE1				*e*S	Sg	15 01 32.5	+0.7
FORC	**Fortuna**	**1.04**	**357**	*i* P	Pb	15 01 16.4	-0.9
CEDE	**Laguna Cedeo**	**1.06**	**356**	*e*P	Pb	15 01 17.1	-0.6
PLVR	**Palo Verde**	**1.17**	**322**	*e*P	Pn	15 01 17.9	-1.4
PLVR				*e*S	Sn	15 01 35.0	+0.2
AMAS	**Alto Masis**	**1.24**	**343**	*i* P	Pn	15 01 19.3	-1.0
AMAS				*i* S	Sb	15 01 35.9	-0.4
ACAL	**Aguas Claras**	**1.27**	**341**	*i* P	Pn	15 01 20.1	-0.6
CUI	**Cuipilapa**	**1.34**	**337**	*e*P	Pn	15 01 21.1	-0.5
COLC	**Colonia**	**1.36**	**335**	*i* P	Pn	15 01 21.3	-0.5
MESS	**Mesas**	**1.43**	**337**	*i* P	Pn	15 01 22.3	-0.5
MESS				*e*P	Pb	15 01 22.5	-1.4
MESS				*i* S	Sb	15 01 41.8	+0.1
LAPC	**Finca la Perla**	**1.56**	**329**	*i* P	Pn	15 01 23.7	-0.8
GB1A	**Borinquen Arri**	**1.59**	**331**	*e*P	Pn	15 01 25.4	+0.4

ISCJB ***19*** *15:02:02.8±0.3, 44°.88N±0°.05×141°.97E±0°.07, h264^{km}±3^{km}, mb3.3/10, Error ellipse: s-maj=8.0km s-min=7.9km az=38.1*

JMA ***19*** *15:02:02.9±0.2, 44°.94N×141°.96E, h266^{km}±2^{km}, M3.1*

IDC ***19*** *15:02:03.8±0.5, 44°.94N×141°.92E, h254^{km}±7^{km}, mb3.2/10, mb1 3.3/16, mb1mx3.1/37, mbtmp3.8/16, Error ellipse: s-maj=19.5km s-min=10.5km az=158.0*

ISC 19 15:02:03.7±0.6**, 44°.85N**±0°.06×**141°.99E**±0°.06**, h261^{km}**±6^{km}**, n34, σ0^{s}96**/49**, mb3.4**/10**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.44**	**75**	P	**Pn**	**15 02 37.5**	**-0.1**
JSE				*e*S	**S**	**15 03 03.4**	**-1.0**
JSS	**Shosan**	**0.46**	**192**	P	**Pn**	**15 02 38.0**	**+0.2**
JSS				*e*S	**S**	**15 03 05.0**	**+0.4**
JWK2	**Keihoku**	**0.47**	**352**	P	**Pn**	**15 02 37.3**	**-0.4**
JWK2				*e*S	**S**	**15 03 03.7**	**-0.9**
ASAJ	**Asahikawa**	**0.85**	**149**	P	**Pn**	**15 02 39.4**	**+0.2**
ASAJ				*e*S	**S**	**15 03 07.5**	**+0.3**
ASAJ	**Asahikawa**	**0.85**	**149**	P	**Pn**	**15 02 39.4**	**+0.2**
	7.3nm,0.3s,baz=309,slow=5.6,SNR=110						
ASAJ				S	**S**	**15 03 07.1**	**-0.1**
	1.9nm,0.3s,baz=347,slow=32,SNR=7.9						
JKK2	**Kamakawa 2**	**1.12**	**150**	P	**Pn**	**15 02 41.0**	**+0.4**
JKK2				*e*S	**S**	**15 03 10.4**	**+0.7**
JHR	**Hokuryu**	**1.12**	**190**	P	**Pn**	**15 02 41.1**	**+0.5**
JMP	**Maruseppu**	**1.30**	**130**	P	**Pn**	**15 02 42.2**	**+0.5**
JMP				*e*S	**S**	**15 03 12.5**	**+0.8**
JAB	**Ashibetsu**	**1.36**	**173**	P	**Pn**	**15 02 42.4**	**+0.3**
JTKR	**Abashiri--Toko**	**1.64**	**122**	P	**Pn**	**15 02 44.8**	**+0.8**
JTKR				*e*S	**S**	**15 03 16.9**	**+1.0**
JAR	**Ashorobuto**	**2.02**	**140**	P	**Pn**	**15 02 48.0**	**+0.8**
JAR				*e*S	**S**	**15 03 23.1**	**+1.4**
JEW	**Eniwo**	**2.05**	**191**	P	**Pn**	**15 02 48.3**	**+0.8**
JEW				*e*S	**S**	**15 03 23.2**	**+1.0**
JRA	**Rausu**	**2.43**	**111**	P	**Pn**	**15 02 52.1**	**+1.1**
JCH	**Churui**	**2.45**	**155**	P	**Pn**	**15 02 50.0**	**-1.2**
JCH				*e*S	**S**	**15 03 26.0**	**-2.9**
JNBK	**Urakawa-nobuka**	**2.63**	**167**	P	**Pn**	**15 02 53.4**	**+0.3**
JNBK				*e*S	**S**	**15 03 32.7**	**+0.5**
JAK	**Akkeshi**	**2.70**	**132**	P	**Pn**	**15 02 53.2**	**-0.5**
JAK				*e*S	**S**	**15 03 31.9**	**-1.4**
JKB	**Kayabe**	**3.04**	**194**	P	**Pn**	**15 02 56.4**	**-0.9**
JKB				*e*S	**S**	**15 03 38.2**	**-1.7**
NEM2	**Nemuro 2**	**3.09**	**117**	P	**Pn**	**15 02 56.5**	**-1.2**
NEM2				*e*S	**S**	**15 03 38.7**	**-1.9**
USRK	**Ussuriysk Ar.**	**7.17**	**268**	P	**Pn**	**15 03 46.0**	**-0.6**
	0.3nm,0.3s,baz=82,slow=12,SNR=4.6						
KLR	**Kul'dur**	**8.25**	**306**	P	**Pn**	**15 03 59.2**	**-0.7**
	0.2nm,0.3s,baz=117,slow=14,SNR=12						
MJAR	**Matsushiro Arr**	**8.78**	**200**	P	**Pn**	**15 04 06.1**	**-0.7**
	0.2nm,0.3s,baz=8.7,slow=14,SNR=8.9						
PETK	**Petropavlovsk-**	**13.20**	**46**	P	**P**	**15 05 01.8**	**-0.9**
	0.6nm,0.3s,baz=218,slow=9.7,SNR=17						
MA2	**Magadan**	**15.68**	**17**	P	**Pn**	**15 05 30.3**	**-0.9**
	0.2nm,0.3s,baz=195,slow=16,SNR=3.3						
SEY	**Seymchan**	**19.08**	**15**	P	**P**	**15 06 06.2**	**-0.6**
	0.3nm,0.3s,baz=206,slow=7.4,SNR=14						
SONM	**Songino Array**	**24.62**	**290**	P	**P**	**15 07 00.3**	**-0.2**
	2.7nm,0.5s,baz=86,slow=9.1,SNR=33						
ZALV	**Zalesovo Beam**	**37.35**	**305**	P	**P**	**15 08 51.6**	**+0.5**
	0.5nm,0.3s,baz=90,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**40.77**	**295**	P	**P**	**15 09 19.4**	**-0.1**
	1.6nm,0.7s,baz=80,slow=9.0,SNR=17						
ILAR	**Eielson Array**	**42.81**	**37**	P	**P**	**15 09 35.6**	**+0.1**
	0.5nm,0.7s,baz=275,slow=7.7,SNR=9.1						
CMAR	**Chiang Mai Arr**	**44.39**	**248**	P	**P**	**15 09 49.8**	**+1.1**
	0.1nm,0.3s,baz=27,slow=8.3,SNR=2.8						
INK	**Inuvik**	**47.32**	**30**	P	**P**	**15 10 10.3**	**-0.5**
	0.8nm,0.4s,baz=294,slow=5.5,SNR=9.8						
YKA	**Yellowknife Ar**	**56.91**	**33**	P	**P**	**15 11 21.6**	**+0.4**
	0.4nm,0.5s,baz=305,slow=6.7,SNR=8.3						
GEYT	**Alibeck**	**60.64**	**296**	P	**P**	**15 11 46.6**	**-0.6**
	2.1nm,0.8s,baz=52,slow=10,SNR=3.0						
PDAR	**Pinedale Array**	**71.96**	**47**	P	**P**	**15 12 59.9**	**+0.9**
	0.6nm,0.6s,baz=247,slow=1.5,SNR=7.5						
TXAR	**Lajitas Array**	**85.04**	**53**	P	**P**	**15 14 11.8**	**+1.6**
	0.2nm,0.5s,baz=297,slow=4.0,SNR=2.5						

DJA ***19*** *15:13:00.5±2.3, 7°N±19°×12°7E±1°0, h172^{km}±16^{km}, M4.7/8, mB4.9/6, mb4.7/8, MLv5.0/6, Mw(mB)4.2/6*

MOS ***19*** *15:13:15.5±0.9, 5°.70N×125°.88E, h106^{km}, mb4.6/23, Error ellipse: s-maj=18.4km s-min=7.2km az=115.5*

NEIC ***19*** *15:13:16.9±0.2, 5°.81N×126°.16E, mb4.6/25, Error ellipse: s-maj=9.1km s-min=4.0km az=76.0*

MAN ***19*** *15:13:16.8, 5°.64N×126°.17E, h56^{km}, mb4.9, ML3.9, MS3.9*

ISCJB ***19*** *15:13:16.5±0.3, 5°.76N±0°.02×126°.14E±0°.04, h116^{km}±2^{km}, mb4.3/52, Error ellipse: s-maj=7.3km s-min=3.8km az=164.5*

IDC ***19*** *15:13:18.1±0.8, 5°.75N×126°.08E, h110^{km}±6^{km}, mb3.9/23, mb1 4.0/24, mb1mx4.0/34, mbtmp4.2/24, Error ellipse: s-maj=20.5km s-min=7.7km az=69.0*

ISC 19 15:13:17.2±0.5**, 5°.74N**±0°.04×**126°.12E**±0°.05**, h104^{km}**±4^{km}**, h104^{km}:pP-P, n151, σ1^{s}46**/188**, mb4.4**/61**, 6C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.55**	**312**	*e*P	**Pn**	**15 13 32.9**	**-0.9**
DDMP				*e*S	**Sn**	**15 13 42.4**	**-3.8**
MATI	**Mati**	**1.21**	**6**	*e*P	**Pn**	**15 13 39.5**	**-0.8**
MATI				*e*S	**Sn**	**15 13 55.6**	**-2.1**
GSPH	**General Santos**	**1.22**	**287**⇓	*i*P	**Pn**	**15 13 40.5**	**0.0**
GSPH				*i* S	**Sn**	**15 13 57.1**	**-1.0**
DAV	**Davao City (W)**	**1.43**	**338**	*e*Pn	**Pn**	**15 13 42.4**	**-0.4**
DAV				S	**Sn**	**15 14 03.6**	**+1.3**
DAV	**Davao City (W)**	**1.43**	**338**	P	**Pn**	**15 13 44.2**	**+1.3**
	184nm,0.3s,baz=290,slow=2.9,SNR=17						
DAV				S	**Sn**	**15 14 03.6**	**+1.3**
	279nm,0.3s,baz=277,slow=23,SNR=6.6						
DMPH	**Davao City--Mi**	**1.47**	**336**	*e*P	**Pn**	**15 13 43.4**	**0.0**
DMPH				*e*S	**Sn**	**15 14 03.6**	**+0.4**
SKMP	**Bagumbayan, Su**	**1.75**	**296**	*e*P	**Pn**	**15 13 47.2**	**+0.4**
SKMP				*e*S	**Sn**	**15 14 09.4**	**+0.1**
SGSI	**Sangihe**	**2.12**	**196**	P	**Pn**	**15 13 54.4**	**+2.8**
BUKP	**Musuan**	**2.37**	**334**	*e*P	**Pn**	**15 13 55.7**	**+0.9**
BUKP				*e*S	**Sn**	**15 14 22.8**	**-0.9**
BIPH	**Bislig**	**2.44**	**6**⇓	*e*P	**Pn**	**15 13 58.0**	**+2.2**
BIPH				*e*S	**Sn**	**15 14 28.6**	**+3.3**
CGP	**Cagayan de Oro**	**3.05**	**332**⇓	*e*P	Pn	15 13 55.3	-8.4
CGP				*i* S	Sn	15 14 25.5	-14
BUTP	**Butuan**	**3.25**	**351**	*e*P	**Pn**	**15 14 08.9**	**+2.5**
BUTP				*e*S	**Sn**	**15 14 51.7**	**+7.4**
PAGZ	**Pagadian**	**3.43**	**308**	*e*P	**Pn**	**15 14 10.5**	**+1.6**
SCPH	**Surigao**	**4.07**	**351**⇑	*e*P	**Pn**	**15 14 19.4**	**+2.0**
MSLP	**Maasin**	**4.54**	**344**	*e*P	**Pn**	**15 14 24.6**	**+0.7**
LLP	**Lapu-Lapu**	**5.02**	**335**	*e*P	**Pn**	**15 14 32.1**	**+1.8**
LLP				*e*S	**Sn**	**15 15 31.9**	**+4.6**
TNTI	**Ternate**	**5.09**	**166**	*e*Pn	**Pn**	**15 14 31.0**	**-0.2**
TNTI	**Ternate**	**5.09**	**166**	P	**Pn**	**15 14 31.2**	**0.0**
KMSI	**Cibinong**	**5.56**	**203**	P	**Pn**	**15 14 40.9**	**+3.3**
RCP	**Roxas**	**6.68**	**330**⇓	*e*P	**Pn**	**15 14 56.3**	**+3.5**
MRSI	**Marisa**	**6.69**	**219**	P	**Pn**	**15 14 53.7**	**+0.8**
	72nm,0.8s,727nm						
LUWI	**Luwuk**	**7.52**	**207**	*e*Pn	**Pn**	**15 15 05.5**	**+1.3**
LUWI	**Luwuk**	**7.52**	**207**	P	**Pn**	**15 15 06.0**	**+1.8**
SANI	**Sanana**	**7.74**	**181**	P	**Pn**	**15 15 05.5**	**-1.7**
APSI	**Ampana**	**7.97**	**214**	P	**Pn**	**15 15 11.7**	**+1.3**
SIJI	**Sorong**	**8.34**	**142**	P	**Pn**	**15 15 17.0**	**+1.6**
	4.0nm,0.3s,baz=163,slow=24,SNR=7.1						
SIJI				S	**Sn**	**15 16 47.7**	**-0.2**
	1.1nm,0.3s,baz=162,slow=23,SNR=2.6						
FAKI	**Fak Fak**	**10.56**	**144**	*e*Pn	**Pn**	**15 15 45.4**	**-0.2**

SBUM	**Sibu**	**14.24**	**257**	*e*Pn	**Pn**	**15 16 35.8**	**+1.6**
SOEI	**Soe**	**15.50**	**187**	*e*Pn	**P**	**15 16 52.0**	**-0.5**
	19nm,0.9s						
BATI	**Baumata**	**16.03**	**189**	P	**P**	**15 16 59.8**	**+1.6**
	6.0nm,0.3s,baz=120,slow=3.8,SNR=8.8						
KSM	**Kuching**	**16.34**	**256**	*e*Pn	**P**	**15 17 04.5**	**+2.9**
	22nm,1.1s						
YULB	**Yu-li**	**18.16**	**346**	*e*P	**P**	**15 17 20.2**	**-1.4**
	38nm,1.3s						
TPUB	**Ta-pu**	**18.25**	**344**	*e*P	**P**	**15 17 21.6**	**-1.0**
	76nm,1.5s						
JAGI	**Jajag, Banyuwa**	**18.48**	**220**	*e*P	**Pn**	**15 17 26.6**	**0.0**
	26nm,0.9s						
SSLB	**Suanglung**	**18.62**	**345**	*e*P	**P**	**15 17 26.6**	**-0.2**
	73nm,1.6s						
MTN	**Manton Dam**	**19.12**	**165**	*e*P	**P**	**15 17 32.6**	**+0.4**
	18nm,1.1s						
YHNB	**Yeheng**	**19.37**	**347**	*e*P	**P**	**15 17 35.2**	**+0.3**
	92nm,1.2s						
FITZ	**Fitzroy Crossi**	**23.69**	**181**	*e*P	**P**	**15 18 19.8**	**+0.2**
	13nm,1.4s						
FITZ	**Fitzroy Crossi**	**23.69**	**181**	P	**P**	**15 18 19.9**	**+0.3**
	3.0nm,0.5s,baz=353,slow=7.5,SNR=17						
WRAB	**Tennant Creek**	**26.76**	**163**	*e*P	**P**	**15 18 47.4**	**-0.1**
	8.2nm,1.0s						
WRAB	**Tennant Creek**	**26.76**	**163**	*e*P	**P**	**15 18 47.4**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WR1	**Warramunga Arr**	**26.77**	**163**	*e*P	**P**	**15 18 47.3**	**-0.2**
WR1				*e*pP	**pwP**	**15 19 13.1**	**-1.1**
WR1				*e*PcP	**PcP**	**15 22 08.9**	**+0.7**
WR1				*e*ScP	**ScP**	**15 25 39.9**	**+0.8**
WRA	**Warramunga Arr**	**26.77**	**163**	P	**P**	**15 18 47.3**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=334,slow=11,SNR=35						
WRA				pP	**pwP**	**15 19 13.1**	**-1.1**
	comp=Z,2.3nm,0.5s,baz=343,slow=10,SNR=3.4						
WRA				PcP	**PcP**	**15 22 08.9**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=45,slow=2.4,SNR=3.7						
WRA				ScP	**ScP**	**15 25 39.9**	**+0.8**
	comp=Z,0.6nm,1.1s,baz=340,slow=3.2,SNR=3.3						
WB2	**Warramunga Arr**	**26.77**	**163**	*e*P	**P**	**15 18 46.9**	**-0.7**
PBKT	**Sadao Pong**	**26.88**	**296**	P	**P**	**15 18 52.2**	**+3.6**
	comp=Z,3.0nm,0.8s,comp=Z,771nm						
JNU	**Nakatsue**	**27.60**	**9**	P	**P**	**15 18 56.0**	**+1.1**
JNU	**Nakatsue**	**27.60**	**9**	P	**P**	**15 18 56.0**	**+1.1**
	comp=Z,6.1nm,1.0s,baz=359,slow=3.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**29.37**	**298**	P	**P**	**15 19 12.3**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=109,slow=7.3,SNR=10						
CMAR				PcP	**PcP**	**15 22 15.8**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=121,slow=1.3,SNR=4.5						
CMAR				ScP	**ScP**	**15 25 48.8**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=116,slow=2.1,SNR=3.2						
AS31	**Alice Springs**	**30.20**	**166**	*e*P	**P**	**15 19 17.5**	**-0.5**
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**30.20**	**166**	P	**P**	**15 19 18.2**	**+0.2**
	comp=Z,2.1nm,0.4s,baz=345,slow=7.2,SNR=82						
ASAR				pP	**pP**	**15 19 40.7**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=347,slow=10,SNR=4.4						
ASAR				PcP	**PcP**	**15 22 17.4**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=356,slow=2.4,SNR=5.0						
ASAR				ScP	**ScP**	**15 25 51.1**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=348,slow=4.1,SNR=3.2						
KSAR	**Wonju Array Be**	**31.60**	**3**	P	**P**	**15 19 31.6**	**+1.5**
KSAR	**Wonju Array Be**	**31.60**	**3**	P	**P**	**15 19 31.6**	**+1.5**
KSRS	**Korea Array**	**31.61**	**3**	P	**P**	**15 19 31.6**	**+1.4**
	comp=Z,1.6nm,0.5s,baz=186,slow=9.8,SNR=8.6						
CTA	**Charters Tower**	**32.41**	**143**	P	**P**	**15 19 38.4**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=310,slow=8.9,SNR=5.7						
COCO	**West Island**	**34.13**	**238**	⇑*e*P	**P**	**15 19 49.8**	**-2.7**
BJT	**Baijiatuau**	**35.29**	**347**	P	**P**	**15 20 03.9**	**+1.8**
BJT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**37.31**	**342**	*e*P	**P**	**15 20 22.3**	**+2.8**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,4.1s						
USRK	**Ussuriysk Ar.**	**38.65**	**7**	P	**P**	**15 20 31.1**	**+0.6**
	comp=Z,2.7nm,0.7s,baz=157,slow=5.4,SNR=6.8						
STKA	**Stephens Creek**	**40.21**	**159**	*e*P	**P**	**15 20 43.8**	**+0.1**
	comp=Z,1.3nm,0.7s						
STKA				PcP	**PcP**	**15 22 46.7**	**+0.9**
STKA	**Stephens Creek**	**40.21**	**159**	*e*P	**P**	**15 20 43.8**	**+0.1**
STKA						15 22 46.7	
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**40.21**	**159**	P	**P**	**15 20 44.5**	**+0.8**
	comp=Z,7.0nm,0.6s,baz=338,slow=8.4,SNR=21						
STKA				PcP	**PcP**	**15 22 46.7**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=333,slow=4.4,SNR=4.0						
GTA	**Gaotai**	**41.08**	**328**	*e*P	**P**	**15 20 49.8**	**-1.1**
GTA				pP	pP	15 20 56.0	-18
GTA				sP	pwP	15 20 59.1	-18
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RAMN	**Ramite**	**43.12**	**304**	*e*P	**P**	**15 21 08.6**	**+0.8**
	comp=Z,14nm,0.7s						
KLR	**Kul'dur**	**43.60**	**5**	*i* P	**P**	**15 21 14.3**	**+3.3**
JIRN	**Jiri**	**43.72**	**305**	*e*P	**P**	**15 21 13.3**	**+0.5**
	comp=Z,24nm,0.5s						
GUN	**Gumba**	**44.07**	**305**	*e*P	**P**	**15 21 16.0**	**+0.4**
	comp=Z,21nm,0.6s						
PKI	**Pulchoki**	**44.33**	**304**	*e*P	**P**	**15 21 17.5**	**-0.1**
	comp=Z,5.7nm,0.6s						
PKIN	**Phulchoki**	**44.34**	**304**	*e*P	**P**	**15 21 17.5**	**-0.2**
	comp=Z,5.0nm,0.5s						
DMN	**Daman**	**44.60**	**304**	*e*P	**P**	**15 21 19.8**	**+0.1**
	comp=Z,10nm,0.7s						
ULN	**Ulaanbaatar**	**45.03**	**342**	⇑*e*P	**P**	**15 21 21.9**	**-0.8**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SONA0	**Songino Array**	**45.21**	**341**	*e*P	**P**	**15 21 23.6**	**-0.4**
SONA0				*e*PcP	**PcP**	**15 23 02.7**	**+0.2**
SONM	**Songino Array**	**45.21**	**341**	P	**P**	**15 21 23.6**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=165,slow=8.5,SNR=6.6						
SONM				PcP	**PcP**	**15 23 02.7**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=162,slow=4.1,SNR=6.8						
KOLN	**Koldanda**	**45.90**	**303**	*e*P	**P**	**15 21 30.2**	**+0.3**
	comp=Z,20nm,0.5s						
DANN	**Dangsing**	**45.97**	**304**	*e*P	**P**	**15 21 30.6**	**0.0**
	comp=Z,31nm,0.5s						
PYUN	**Piuthan**	**46.52**	**304**	*e*P	**P**	**15 21 35.3**	**+0.5**
	comp=Z,15nm,0.4s						
TLY	**Talaya**	**49.44**	**342**	*e*P	P	15 22 06.3	+10
TLY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BOD	**Bodaibo**	**52.80**	**352**	*e*P	**P**	**15 22 20.9**	**-0.7**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PETK	**Petropavlovsk-**	**53.82**	**23**	P	**P**	**15 22 29.6**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=208,slow=4.9,SNR=2.2						
PEA1	**Petropavlovsk-**	**53.83**	**23**	*e*P	**P**	**15 22 29.6**	**+0.4**
DGZ	**Jazzator, Alta**	**54.56**	**330**	*i* P	**P**	**15 22 34.6**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
PDGK	**Podgornoye**	**55.49**	**320**	P	**P**	**15 22 41.2**	**-0.4**
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MK01	**Makanchi Array**	**55.55**	**325**	*e*P	**P**	**15 22 41.0**	**-0.8**
MK31	**Makanchi Array**	**55.57**	**325**	*e*P	**P**	**15 22 41.2**	**-0.8**
MK31	**Makanchi Array**	**55.57**	**325**	*e*P	**P**	**15 22 41.2**	**-0.8**
MK32	**Makanchi Array**	**55.57**	**325**	*e*P	**P**	**15 22 41.5**	**-0.5**
MK32				*e*PcP	**PcP**	**15 23 40.2**	**-0.3**
MK32				*e*ScP	**ScP**	**15 27 28.8**	**-1.3**
MKAR	**Makanchi Array**	**55.57**	**325**	*e*P	**P**	**15 22 41.5**	**-0.5**
	comp=Z,33nm,0.4s						
MKAR				PcP	**PcP**	**15 23 40.2**	**-0.3**
MKAR				ScP	**ScP**	**15 27 28.8**	**-1.3**
MKAR	**Makanchi Array**	**55.57**	**325**	P	**P**	**15 22 41.5**	**-0.5**
	comp=Z,3.5nm,0.5s,baz=120,slow=7.7,SNR=46						
MKAR				PcP	**PcP**	**15 23 40.2**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=121,slow=3.9,SNR=7.4						
MKAR				ScP	**ScP**	**15 27 28.8**	**-1.3**
	comp=Z,0.1nm,0.6s,baz=116,slow=3.4,SNR=2.1						
MAKZ	**Makanchi**	**55.76**	**325**	*e*P	**P**	**15 22 42.6**	**-0.7**
	comp=Z,5.7nm,1.0s						
MAKZ	**Makanchi**	**55.76**	**325**	*e*P	**P**	**15 22 42.7**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NIL	**Nilore**	**56.23**	**307**	*e*P	**P**	**15 22 46.4**	**-0.5**
	comp=Z,15nm,0.8s						
NIL	**Nilore**	**56.23**	**307**	*e*P	**P**	**15 22 46.4**	**-0.5**
NIL				pmax	pmax		
	comp=Z,15nm,0.8s						
YAK	**Yakutsk**	**56.23**	**2**	*e*P	**P**	**15 22 47.4**	**+1.1**
YAK				pmax	pmax		
	comp=Z,74nm,0.8s						
YAK				pmax	pmax		
	comp=N,27nm,0.9s						
KDJ	**Kajisay**	**56.46**	**318**	*e*P	**P**	**15 22 48.4**	**-0.2**
	comp=N,6.5nm,0.6s						
KDJ	**Kajisay**	**56.46**	**318**	*e*P	**P**	**15 22 48.4**	**-0.2**
KDJ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NRN	**Naryn**	**56.96**	**317**	*e*P	**P**	**15 22 51.7**	**-0.6**
	comp=Z,4.1nm,0.6s						
NRN	**Naryn**	**56.96**	**317**	*e*P	**P**	**15 22 51.7**	**-0.6**
NRN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KZA	**Kyzart**	**57.74**	**317**	P	**P**	**15 22 58.3**	**+0.4**
	SNR=6.0						
TKM2	**Tokmak 2**	**57.85**	**318**	P	**P**	**15 22 58.3**	**-0.1**
	SNR=5.9						
SFK	**Sufi-Kurgan**	**58.16**	**314**	P	**P**	**15 23 00.8**	**+0.2**
SFK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
UCH	**Uchtor**	**58.30**	**317**	P	**P**	**15 23 02.5**	**+0.7**
	SNR=9.8						
AAK	**Ala-Archa**	**58.48**	**317**	*e*P	**P**	**15 23 02.1**	**-0.6**
	comp=Z,2.6nm,1.1s						
AAK	**Ala-Archa**	**58.48**	**317**	⇑*e*P	**P**	**15 23 00.6**	**-2.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,2.5s						
ZALV	**Zalesovo Beam**	**58.53**	**333**	P	**P**	**15 23 01.5**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=136,slow=5.4,SNR=5.9						
ZAA1	**Zalesovo Array**	**58.54**	**333**	*e*P	**P**	**15 23 01.5**	**-1.2**
USP	**Ospenovka**	**58.73**	**318**	P	**P**	**15 23 04.0**	**-0.3**
	SNR=10						
AML	**Almayashu**	**58.82**	**316**	P	**P**	**15 23 05.6**	**+0.2**
	SNR=9.2						
EKS2	**Erkin-Say**	**58.97**	**317**	P	**P**	**15 23 06.3**	**+0.2**
	SNR=6.5						
KURK	**Kurchatov**	**59.73**	**327**	*e*P	**P**	**15 23 10.1**	**-0.9**
	comp=Z,12nm,0.6s						
KURK	**Kurchatov**	**59.73**	**327**	*e*P	**P**	**15 23 10.1**	**-0.9**
KURK				pmax	pmax		
	comp=Z,12nm,0.6s						
MNAS	**Manas**	**59.77**	**316**	P	**P**	**15 23 11.6**	**-0.1**
MNAS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBL	**Kabul**	**59.83**	**307**	*e*P	**P**	**15 23 11.5**	**-0.8**
	comp=Z,7.0nm,0.8s						
KBL	**Kabul**	**59.83**	**307**	*e*P	**P**	**15 23 11.5**	**-0.8**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BTK	**Batken**	**60.10**	**313**	*e*P	**P**	**15 23 15.8**	**+1.9**
	comp=Z,25nm,1.8s						
BTK	**Batken**	**60.10**	**313**	*e*P	**P**	**15 23 15.8**	**+1.9**
BTK				pmax	pmax		
	comp=Z,25nm,1.8s						
KK31	**Karatay Array**	**61.36**	**316**	*e*P	**P**	**15 23 21.3**	**-1.0**
	comp=Z,4.4nm,0.8s						
KK31	**Karatay Array**	**61.36**	**316**	*e*P	**P**	**15 23 21.3**	**-1.0**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	**Karatay Array**	**61.36**	**316**	*e*P	**P**	**15 23 21.4**	**-0.9**
	comp=Z,4.4nm,0.8s						
KKAR	**Karatay Array**	**61.36**	**316**	*e*P	**P**	**15 23 21.4**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OTUK	**Ortayu**	**62.17**	**322**	P	**P**	**15 23 27.5**	**-0.1**
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**65.39**	**327**	*e*P	**P**	**15 23 47.6**	**-1.0**
	comp=Z,5.8nm,0.6s						
BRVK	**Borovoye**	**65.39**	**327**	*e*P	**P**	**15 23 47.6**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BILL	**Bilibino**	**67.78**	**15**	*e*P	**P**	**15 24 03.7**	**+0.1**
BILL				pmax	pmax		
	comp=Z,19nm,3.5s						
NRIK	**Noril'sk**	**68.35**	**346**	P	**P**	**15 24 07.3**	**+0.2**
	comp=Z,7.2nm,0.7s,baz=129,slow=6.2,SNR=18						
GEYT	**Alibeck**	**69.17**	**308**	P	**P**	**15 24 12.6**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=97,slow=7.5,SNR=3.2						
ABKAR	**Akbulak array**	**70.22**	**320**	*e*P	**P**	**15 24 18.0**	**-1.0**
ARU	**Arti**	**72.93**	**328**	*e*P	**P**	**15 24 33.6**	**-1.5**
	comp=Z,5.7nm,0.6s						
ARU	**Arti**	**72.93**	**328**	*d i*P	**P**	**15 24 34.7**	**-0.4**
ARU						15 27 14.2	
ARU				S	**S**	**15 33 48.9**	**-4.3**
ARU				SS	**SS**	**15 38 31.7**	**-3.9**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBZ	**Khabaz**	**81.17**	**313**	P	**P**	**15 25 21.5**	**0.0**
	comp=Z,2.2nm,0.8s,baz=110,slow=7.9,SNR=5.8						
KLMR	**Klimovskoe**	**83.37**	**331**	*e*P	**P**	**15 25 31.5**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KLMR	**Klimovskoe**	**83.37**	**331**	*e*P	**P**	**15 25 31.5**	**-1.1**
KLMR				AMP		15 25 33.6	
	comp=Z,8.0nm,1.0s						
ILAR	**Eielson Array**	**83.56**	**26**	P	**P**	**15 25 32.9**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=253,slow=5.5,SNR=15						
ILB	**Eielson Array**	**83.56**	**26**	*e*P	**P**	**15 25 32.9**	**-0.6**
	comp=Z,12nm,1.5s						
OBN	**Obninsk**	**85.08**	**325**	*e*P	**P**	**15 25 39.4**	**-2.0**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VNDA	**Vanda**	**85.48**	**173**	*e*P	**P**	**15 25 43.8**	**+0.9**
VNDA	**Vanda**	**85.48**	**173**	*e*P	**P**	**15 25 43.8**	**+0.9**
VNDA	**Vanda**	**85.48**	**173**	P	**P**	**15 25 43.7**	**+0.8**
	comp=Z,9.2nm,1.0s,baz=342,slow=6.2,SNR=3.4						
BR101	**Keskin Array S**	**88.28**	**310**	*e*P	**P**	**15 25 55.6**	**-1.9**
BRTR	**Keskin Array B**	**88.28**	**310**	⇑*e*P	**P**	**15 25 57.1**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**88.28**	**310**	P	**P**	**15 25 55.6**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=127,slow=5.0,SNR=5.1						
ARA0	**ARCESS Array S**	**88.37**	**340**	*e*P	**P**	**15 25 55.6**	**-1.5**
ARA0				*e*pP	**pP**	**15 26 23.1**	**-0.4**
ARCES	**ARCESS Array B**	**88.37**	**340**	P	**P**	**15 25 55.6**	**-1.5**
	comp=Z,3.6nm,1.0s,baz=85,slow=6.5,SNR=9.5						
ARCES				pP	**pP**	**15 26 23.1**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=64,slow=8.1,SNR=1.9						
FIA0	**FINESS Array S**	**89.79**	**332**	*e*P	**P**	**15 26 02.0**	**-1.9**
FIA0				*e*pP	**pP**	**15 26 29.9**	**-0.3**
FINES	**FINESS Array B**	**89.79**	**332**	⇑*e*P	**P**	**15 26 03.8**	**-0.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**89.79**	**332**	P	**P**	**15 26 02.0**	**-1.9**
	comp=Z,1.6nm,0.7s,baz=67,slow=2.6,SNR=8.3						
FINES				pP	**pP**	**15 26 29.9**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=186,slow=33,SNR=1.5						
AKASG	**Malin Array Be**	**89.96**	**321**	P	**P**	**15 26 01.2**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=76,slow=6.0,SNR=4.2						
NB200	**NORSAR Array S**	**96.73**	**334**	*e*P	**P**	**15 26 34.8**	**-1.2**
NOA	**NORSAR Array B**	**96.73**	**334**	P	**P**	**15 26 34.7**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=67,slow=4.5,SNR=2.5						
YKA	**Yellowknife Ar**	**97.93**	**24**	P	**P**	**15 26 40.7**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=300,slow=4.3,SNR=3.3						
TXAR	**Lajitas Array**	**120.83**	**51**	PKP	**PKiKP**	**15 31 58.5**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=228,slow=2.7,SNR=3.8						
TOA0	**Torodi Ar. Sit**	**121.70**	**289**	*e*PKPdf	**PKPdf**	**15 31 58.6**	**-1.4**
TORD	**Torodi Ar. Bea**	**121.70**	**289**	PKP	**PKPdf**	**15 31 59.0**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=72,slow=1.6,SNR=12						

SKHL ***19*** *15:17:54.7±0.9, 43°.17N×146°.44E, h34^{km}, mb4.0/3*
JMA ***19*** *15:17:55.3±0.1, 43°.30N×145°.90E, h90^{km}±1^{km}, M3.2*
ISC 19 15:17:54.2±3.3**, 43°.31N**±0°.08×**146°.0E**±0°.1**, h94**^{km}±17^{km},
n13, σ0^{s}55/25**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.18**	**288**	P	**Pn**	**15 18 08.1**	**+0.5**
NEM2				*e*S	**Sn**	**15 18 17.7**	**+0.1**
GLVR	**Golovnino**	**0.54**	**323**	*i* P	**Pn**	**15 18 10.0**	**+0.3**
GLVR				AMB	AMB	15 18 10.0	
	30nm,0.2s						
GLVR				AMB	AMB	15 18 10.0	
	20nm,0.2s						
GLVR				AMB	AMB	15 18 10.0	
	40nm,0.2s						
GLVR				*i* S	**Sn**	**15 18 21.0**	**-0.2**
GLVR				A	A	15 18 24.0	
	190nm,0.4s						
GLVR				A	A	15 18 24.0	
	1µm,0.4s						
JKHN	**Kushirohamanak**	**0.64**	**249**	P	**Pn**	**15 18 10.9**	**+0.4**
JKHN				*e*S	**Sn**	**15 18 22.4**	**-0.2**
GRPR	**Tuman**	**0.70**	**348**	*i* P	**Pn**	**15 18 11.0**	**-0.1**
GRPR				AMB	AMB	15 18 12.0	
	70nm,0.3s						
GRPR				AMB	AMB	15 18 12.0	
	190nm,0.3s						
GRPR				*i* S	**Sn**	**15 18 23.0**	**-0.6**
GRPR				A	A	15 18 24.0	
	260nm,0.2s						
GRPR				A	A	15 18 24.0	
	850nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.73**	**354**	*i* P	**Pn**	**15 18 11.0**	**-0.3**
YUK				AMB	AMB	15 18 12.0	
	30nm,0.2s						
YUK				AMB	AMB	15 18 12.0	
	40nm,0.2s						
YUK				*i* S	**Sn**	**15 18 24.0**	**-0.1**
YUK				A	A	15 18 25.0	
	370nm,0.3s						
YUK				A	A	15 18 25.0	
	620nm,0.3s						
JRA	**Rausu**	**0.88**	**316**	P	**Pn**	**15 18 13.5**	**+0.6**
JRA				*e*S	**Sn**	**15 18 27.2**	**+0.4**
JNK	**Nakash**	**0.95**	**287**	P	**Pn**	**15 18 13.6**	**-0.1**
JNK				*e*S	**Sn**	**15 18 27.0**	**-1.3**
JAK	**Akkeshi**	**0.98**	**252**	P	**Pn**	**15 18 14.2**	**+0.2**
JAK				*e*S	**Sn**	**15 18 28.5**	**-0.4**
JAR	**Ashorobuto**	**1.61**	**270**	P	**Pn**	**15 18 22.1**	**+0.6**
JAR				*e*S	**Sn**	**15 18 42.1**	**-0.1**
JOB	**Onbets**	**1.62**	**256**	P	**Pn**	**15 18 22.2**	**+0.6**
JTKR	**Abashiri--Toko**	**1.64**	**294**	P	**Pn**	**15 18 22.4**	**+0.5**
JTKR				*e*S	**Sn**	**15 18 42.6**	**-0.2**
JMP	**Maruseppu**	**2.02**	**291**	P	**Pn**	**15 18 27.4**	**+0.6**
JMP				*e*S	**Sn**	**15 18 51.5**	**-0.2**
JCH	**Churui**	**2.04**	**251**	P	**Pn**	**15 18 27.1**	**+0.1**
JCH				*e*S	**Sn**	**15 18 50.9**	**-1.2**

ISK ***19*** *15:19:19.4, 37°.37N×38°.67E, h5^{km}, ML2.2/1*
ISCJB ***19*** *15:19:20.7±0.7, 37°.44N±0°.04×38°.67E±0°.04, h7^{km}±6^{km},*
Error ellipse: s-maj=6.5km s-min=5.4km az=144.4
DDA ***19*** *15:19:20.0, 37°.45N×38°.68E, h7^{km}±3^{km}, ML2.5*
ISC 19 15:19:20.0±1.0**, 37°.41N**±0°.04×**38°.67E**±0°.04**, h10**^{km}±9^{km},
n9, σ0^{s}45/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.13**	**77**	PG	**Pg**	**15 19 22.9**	**-0.1**
URFA				SG	**Sg**	**15 19 25.4**	**+0.2**
SANL	**SANLIURFA_Merk**	**0.35**	**133**	*i* P	**Pb**	**15 19 28.4**	**0.0**
SANL				*i* S	**Sb**	**15 19 33.4**	**-0.6**
SANL				IAML_P			
	comp=Z,1µm,0.2s						
SURC	**SANLIURFA_SURC**	**0.53**	**185**	*i* P	**Pb**	**15 19 31.3**	**-0.2**
SURC				*i* S	**Sb**	**15 19 40.2**	**+0.9**
SURC				IAML_P			
	comp=Z,177nm,0.1s						
GZT	**Gaziantep**	**0.88**	**267**	*i* P	**Pb**	**15 19 37.5**	**0.0**
GZT				*i* S	**Sn**	**15 19 51.4**	**-0.1**
GZT				IAML_P			
	comp=Z,575nm,0.1s						
AKCD	**Akcadag**	**1.06**	**327**	*i* P	**Pg**	**15 19 40.0**	**-0.5**
AKCD				*i* S	**Sb**	**15 19 55.1**	**+0.5**
AKCD				IAML_P			
	comp=Z,464nm,0.1s						
ELZG	**Elazig**	**1.11**	**13**	*i* P	**Pg**	**15 19 41.1**	**-0.3**
ELZG				*i* S	**Sg**	**15 19 56.0**	**+0.1**
ELZG				IAML_P			
	comp=Z,271nm,0.1s						
GAZ	**Gaziantep**	**1.19**	**259**	PN	**Pg**	**15 19 42.4**	**-0.4**
GAZ				SN	**Sn**	**15 19 59.1**	**+0.1**
MAZI	**Mazidag**	**1.42**	**88**	PN	**Pb**	**15 19 46.5**	**-0.2**
MAZI				SN	**Sg**	**15 20 06.3**	**+0.7**
DARE	**Darende-Malaty**	**1.49**	**321**	PN	**Pb**	**15 19 48.0**	**+0.2**

ISCJB ***19*** *15:34:46.6±0.3, 23°.21N±0°.01×121°.64E±0°.02, h26^{km}±2^{km},*
Error ellipse: s-maj=3.1km s-min=2.2km az=30.0
JMA ***19*** *15:34:47.0±0.1, 23°.25N×121°.50E, h43^{km}±3^{km}*
TAP ***19*** *15:34:47.8, 23°.24N×121°.53E, h34^{km}, ML3.2, B*
ISC 19 15:34:46.7±1.0**, 23°.22N**±0°.02×**121°.61E**±0°.02**, h30**^{km}±9^{km},
n74, σ1^{s}02/136**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.25**	**242**	P	**Pn**	**15 34 54.5**	**+0.2**
	baz=218						
CHKT				S	**Sb**	**15 34 59.5**	**+1.3**
	baz=218						
TWF1	**Yuli**	**0.31**	**295**	P	**Pn**	**15 34 55.3**	**0.0**
	baz=298						
TWF1				*e*S	**Sn**	**15 35 00.7**	**-0.1**
	baz=298						
HGSD	**Ruisui**	**0.32**	**328**	*e*P	**Pn**	**15 34 55.0**	**-0.2**
	baz=341						
HGSD				*e*S	**Sn**	**15 35 02.1**	**+1.2**
	baz=341						
YULB	**Yu-li**	**0.33**	**301**	P	**Pn**	**15 34 55.3**	**-0.2**
	baz=306						
YULB				*e*S	**Sn**	**15 35 00.7**	**-0.6**
	baz=306						
EHY	**Hungye**	**0.39**	**317**	P	**Pn**	**15 34 55.9**	**-0.3**
	baz=313						
EHY				S	**Sn**	**15 35 01.8**	**-0.8**
	baz=313						
EGFH	**Guangfu**	**0.47**	**340**	*e*P	**Pn**	**15 34 57.3**	**-0.2**
	baz=338						
EGFH				*e*S	**Sn**	**15 35 05.2**	**+0.4**
	baz=338						
ELDTW	**Lidau**	**0.54**	**267**	P	**Pn**	**15 34 57.7**	**-0.7**
	baz=262						
ELDTW				*e*S	**Sb**	**15 35 04.7**	**-0.9**
	baz=262						
ESL	**Shilin**	**0.61**	**345**	*e*P	**Pb**	**15 34 58.8**	**-0.2**
	baz=344						
ESL				*e*S	**Sn**	**15 35 07.5**	**-0.7**
	baz=344						
TWGBT	**Beinan**	**0.63**	**231**	*e*P	**Pn**	**15 34 59.0**	**-0.6**
	baz=233						
TWGBT				*e*S	**Sn**	**15 35 07.3**	**-1.3**
	baz=233						
TWG	**Pinlang**	**0.63**	**231**	P	**Pn**	**15 34 59.0**	**-0.6**
	baz=233						
TWG				*e*S	**Sn**	**15 35 07.5**	**-1.2**
	baz=233						
YUS	**Yu-Shan**	**0.66**	**294**	P	**Pn**	**15 35 00.1**	**-0.3**
	baz=295						
YUS				*e*S	**Sn**	**15 35 08.8**	**-1.2**
	baz=295						
VWDT	**VWDT**	**0.68**	**321**	P	**Pn**	**15 35 00.3**	**+0.1**
	baz=326						
VWDT				*e*S	**Sn**	**15 35 09.1**	**-0.8**
	baz=326						
STYT	**Tauyuan**	**0.79**	**266**	P	**Pn**	**15 35 01.7**	**0.0**
	baz=260						
STYT				S	**Sn**	**15 35 11.7**	**-0.8**
	baz=260						
SSLB	**Suanglung**	**0.82**	**313**	*e*P	**Pn**	**15 35 02.4**	**+0.1**
	baz=317						
SSLB				*e*S	**Sb**	**15 35 12.0**	**-1.3**
	baz=317						
OWD	**Renai**	**0.83**	**332**	*e*P	**Pn**	**15 35 02.2**	**-0.2**
	baz=345						
OWD				*e*S	**Sb**	**15 35 12.0**	**-1.6**
	baz=345						
WHYT	**Xinyi Township**	**0.84**	**304**	P	**Pn**	**15 35 03.0**	**+0.6**
	baz=311						
WHYT				*e*S	**Sn**	**15 35 13.3**	**-0.5**
	baz=311						
ECL	**Taimali**	**0.86**	**224**	*e*P	**Pb**	**15 35 01.9**	**-1.3**
	baz=216						
ECL				*e*S	**Sb**	**15 35 12.7**	**-1.7**
	baz=216						
TPUB	**Ta-pu**	**0.90**	**275**	P	**Pn**	**15 35 04.2**	**+0.9**
	baz=274						
TPUB				*e*S	**Sn**	**15 35 15.6**	**+0.2**
	baz=274						
SLGT	**Liugui**	**0.91**	**256**	*e*P	**Pn**	**15 35 04.1**	**+0.6**
	baz=251						
SLGT				*e*S	**Sn**	**15 35 15.8**	**+0.2**
	baz=251						
WTP	**Ta-pu**	**0.91**	**272**	P	**Pn**	**15 35 04.4**	**+0.9**
	baz=270						
WTP				*e*S	**Sn**	**15 35 16.6**	**+0.9**
	baz=270						
CHGB	**Renai**	**0.93**	**335**	*e*P	**Pn**	**15 35 04.0**	**+0.1**
	baz=347						

CHGB				*e*S	**Sb**	**15 35 14.8**	**-1.6**
	baz=347						
SMLT	**Sun Moon Lake**	**0.93**	**316**	P	**Pn**	**15 35 04.3**	**+0.6**
	baz=323						
SMLT				*e*S	**Sn**	**15 35 15.5**	**-0.6**
	baz=323						
CHN5	**Tsauling**	**0.93**	**294**	*e*P	**Pn**	**15 35 05.1**	**+1.3**
	baz=295						
CHN5				*e*S	**Sn**	**15 35 16.8**	**+0.6**
	baz=295						
CHN4	**Tsaushan**	**0.94**	**278**	P	**Pn**	**15 35 05.0**	**+1.2**
	baz=277						
CHN4				*e*S	**Sn**	**15 35 16.9**	**+0.6**
	baz=277						
NACB	**Ninganchiao**	**0.95**	**359**	*e*P	**Pb**	**15 35 04.1**	**-0.5**
	baz=355						
NACB				*e*S	**Sb**	**15 35 15.5**	**-1.3**
	baz=355						
SGST	**Jiashian**	**0.95**	**262**	*e*P	**Pn**	**15 35 05.2**	**+1.2**
	baz=258						
SGST				*e*S	**Sn**	**15 35 17.1**	**+0.5**
	baz=258						
TYC	**Yuchr**	**0.97**	**315**	*e*P	**Pn**	**15 35 05.0**	**+0.8**
	baz=327						
TYC				*e*S	**Sn**	**15 35 17.6**	**+0.6**
	baz=327						
WHF	**Hehuan Shan**	**0.97**	**341**	*e*P	**Pb**	**15 35 04.7**	**-0.6**
	baz=348						
WHF				*e*S	**Sb**	**15 35 17.0**	**-1.0**
	baz=348						
ETLH	**Xiulin Townshi**	**0.99**	**353**	*e*P	**Pn**	**15 35 04.1**	**-0.5**
ETLH				*e*S	**Sb**	**15 35 17.0**	**-1.1**
CHN1	**Nanshi**	**0.99**	**268**	*e*P	**Pn**	**15 35 05.8**	**+1.2**
	baz=265						
CHN1				*e*S	**Sn**	**15 35 19.0**	**+1.4**
	baz=265						
WJS	**Zhushan**	**1.00**	**307**	*e*P	**Pb**	**15 35 05.9**	**+0.3**
	baz=310						
WJS				*e*S	**Sn**	**15 35 18.9**	**+1.0**
	baz=310						
SSD	**Sandimen**	**1.02**	**242**	*e*P	**Pb**	**15 35 05.1**	**-0.6**
	baz=236						
SSD				*e*S	**Sn**	**15 35 18.3**	**+0.2**
	baz=236						
SNST	**Tainan City**	**1.02**	**270**	*e*P	**Pb**	**15 35 06.3**	**+0.5**
	baz=268						
SNST				*e*S	**Sn**	**15 35 19.3**	**+1.0**
	baz=268						
TWK	**Hsinying**	**1.03**	**273**	*e*P	**Pb**	**15 35 06.2**	**+0.2**
	baz=271						
TWK				*e*S	**Sn**	**15 35 18.9**	**+0.3**
	baz=271						
WGK	**Gukeng**	**1.07**	**296**	*e*P	**Pb**	**15 35 07.0**	**+0.4**
	baz=298						
WGK				*e*S	**Sn**	**15 35 21.1**	**+1.7**
	baz=298						
WNT	**Mingjian**	**1.07**	**308**	*e*P	**Pb**	**15 35 06.9**	**+0.3**
	baz=311						
WNT				*e*S	**Sn**	**15 35 21.1**	**+1.7**
	baz=311						
MASBT	**Mashibuluo**	**1.08**	**236**	*e*P	**Pb**	**15 35 06.0**	**-0.8**
	baz=230						
MASBT				*e*S	**Sn**	**15 35 19.4**	**-0.4**
	baz=230						
CHN2	**Minshiung**	**1.09**	**287**	*e*S	**Sn**	**15 35 22.1**	**+2.3**
	baz=272						
WDLH	**Douliu**	**1.09**	**296**	*e*P	**Pb**	**15 35 07.5**	**+0.6**
	baz=308						
WDLH				*e*S	**Sn**	**15 35 21.6**	**+1.7**
	baz=308						
EAST	**Anshuo**	**1.09**	**220**	*e*P	**Pn**	**15 35 05.2**	**-0.7**
	baz=204						
EAST				*e*S	**Sb**	**15 35 19.4**	**-1.4**
	baz=204						
TWT	**Tachien**	**1.10**	**339**	*e*S	**Sb**	**15 35 19.8**	**-1.5**
	baz=344						
TDCB	**Techi**	**1.11**	**338**	*e*P	**Pb**	**15 35 07.2**	**-0.2**
	baz=344						
TDCB				*e*S	**Sb**	**15 35 19.5**	**-2.0**
	baz=344						
CHY	**Chiayi**	**1.12**	**284**	*e*S	**Sn**	**15 35 22.2**	**+1.5**
	baz=285						
CHN3	**Shinhua**	**1.15**	**263**	*e*S	**Sb**	**15 35 25.6**	**+3.0**
	baz=260						
TWM1	**Shoushan**	**1.16**	**250**	*e*S	**Sb**	**15 35 26.5**	**+3.6**
	baz=244						
LAY	**Lan-yu**	**1.18**	**183**	*e*P	**Pn**	**15 35 07.0**	**-0.2**
	baz=169						
LAY				*e*S	**Sn**	**15 35 22.0**	**-0.2**
	baz=169						
SSPT	**Xinbi**	**1.21**	**233**	*e*P	**Pb**	**15 35 09.6**	**+0.6**
	baz=217						
SSPT				*e*S	**Sb**	**15 35 24.0**	**-0.2**
	baz=217						
WHP	**Taichung City**	**1.21**	**330**	*e*P	**Pb**	**15 35 09.6**	**+0.5**
	baz=335						
WHP				*e*S	**Sb**	**15 35 24.5**	**0.0**
	baz=335						
NNSB	**Datong**	**1.22**	**350**	*e*P	**Pb**	**15 35 08.4**	**-0.8**
	baz=8.0						
NNSB				*e*S	**Sn**	**15 35 23.0**	**-0.4**
	baz=8.0						
NNS	**Nan Shan**	**1.23**	**350**	*e*P	**Pb**	**15 35 08.8**	**-0.7**
	baz=8.0						
NNS				*e*S	**Sb**	**15 35 24.4**	**-0.6**
	baz=8.0						
SCZT	**Fangliau**	**1.24**	**227**	*e*P	**Pb**	**15 35 09.2**	**-0.3**
	baz=210						
SCZT				*e*S	**Sb**	**15 35 25.1**	**-0.1**
	baz=210						
TCU	**Taichung**	**1.26**	**317**	*e*P	**Pb**	**15 35 10.5**	**+0.7**
	baz=308						
TCU				*e*S	**Sb**	**15 35 26.2**	**+0.6**
	baz=308						
WCHH	**Zhanghua**	**1.29**	**312**	*e*P	**Pb**	**15 35 10.4**	**+0.1**
	baz=314						
CHN8	**Yiju**	**1.29**	**276**	*e*P	**Pb**	**15 35 10.1**	**-0.3**
	baz=276						
CHN8				*e*S	**Sb**	**15 35 26.4**	**-0.2**
	baz=276						
RLNB	**Erlin**	**1.32**	**300**	*e*S	**Sb**	**15 35 27.0**	**-0.5**
	baz=302						
TWQ1	**Liyutan**	**1.36**	**326**	*e*P	**Pb**	**15 35 11.6**	**+0.1**
	baz=331						
TWQ1				*e*S	**Sb**	**15 35 28.7**	**+0.2**
	baz=331						
NDT	**Datong Townshi**	**1.38**	**356**	*e*P	**Pn**	**15 35 10.5**	**+0.6**
	baz=13						
EOS1	**EOS1**	**1.41**	**20**	*e*S	**Sn**	**15 35 28.9**	**+1.2**
	baz=39						
ENTT	**Nioudou**	**1.41**	**358**	*e*P	**Pn**	**15 35 11.2**	**+0.9**
	baz=6.0						
ENTT				*e*S	**Sn**	**15 35 28.9**	**+0.9**
	baz=6.0						
NSY	**Sanyi**	**1.42**	**327**	*e*P	**Pb**	**15 35 12.7**	**+0.1**
	baz=332						
NSY				*e*S	**Sb**	**15 35 31.2**	**+1.0**
	baz=332						
WDJ	**Dajia District**	**1.43**	**322**	*e*S	**Sb**	**15 35 31.1**	**+0.6**
	baz=326						
YHNB	**Yeheng**	**1.46**	**352**	*e*P	**Pb**	**15 35 12.3**	**-1.0**
	baz=358						
YHNB				*e*S	**Sn**	**15 35 28.8**	**-0.4**
	baz=358						
NSK	**Sanguang**	**1.47**	**351**	*e*P	**Pb**	**15 35 12.6**	**-0.8**
	baz=358						
NSK				*e*S	**Sn**	**15 35 29.4**	**0.0**
	baz=358						
NSTT	**Nanjuang**	**1.51**	**339**	*e*P	**Pb**	**15 35 14.0**	**-0.1**
	baz=345						
NSTT				*e*S	**Sb**	**15 35 32.9**	**0.0**
	baz=345						
LIOB	**Emei**	**1.52**	**339**	*e*P	**Pb**	**15 35 13.0**	**-1.2**
	baz=346						
LIOB				*e*S	**Sb**	**15 35 32.1**	**-1.0**
	baz=346						
NWLT	**Wulai**	**1.55**	**356**	*e*P	**Pn**	**15 35 13.4**	**+1.1**
	baz=3.0						
NWLT				*e*S	**Sn**	**15 35 31.8**	**+0.3**
	baz=3.0						
TIPB	**Shuangxi**	**1.75**	**6**	*e*P	**Pb**	**15 35 16.9**	**-1.3**
	baz=5.0						
PHUB	**P'eng-hu**	**1.89**	**279**	*e*P	**Pn**	**15 35 17.1**	**+0.2**
	baz=280						
PHUB				*e*S	**Sn**	**15 35 38.3**	**-1.5**
	baz=280						
HATJ	**Hateruma jima**	**2.18**	**67**	P	**Pn**	**15 35 22.3**	**+1.4**
HATJ				S	**Sn**	**15 35 47.5**	**+0.6**
IRIF	**Iriomote-Funau**	**2.24**	**60**	P	**Pn**	**15 35 23.5**	**+1.8**
IRIF				*e*S	**Sn**	**15 35 50.0**	**+1.7**
JKRS	**Kuro-shima**	**2.42**	**65**	*e*S	**Sn**	**15 35 54.5**	**+1.7**
JIJ	**Ishigaki jima**	**2.59**	**63**	P	**Pn**	**15 35 27.7**	**+1.2**
JIJ				S	**Sn**	**15 35 57.2**	**+0.3**
JISG	**Ishigakijimahi**	**2.82**	**61**	P	**Pn**	**15 35 30.4**	**+0.7**
JISG				S	**Sn**	**15 36 01.7**	**-1.0**
KNMB	**Chin-men Tao**	**3.20**	**293**	*e*P	**Pn**	**15 35 34.4**	**-0.5**
	baz=294						
KNMB				*e*S	**Sn**	**15 36 08.8**	**-3.1**
	baz=294						

MEX 19 15:38:00.1±0.3, 28°.06N×112°.17W, h5km±10km, MD3.8, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	**Santa Rosalia**	**0.74**	**185**	*e*P	Pg	15 38 13.2	-1.1
SRIG				*e*S	Sg	15 38 23.1	-0.8
GUYB	**Guaymas**	**1.16**	**98**	*e*P	Pg	15 38 19.0	-3.3
GUYB				*e*S	Sg	15 38 34.1	-3.1

IDC ***19*** *15:40:36.4±6.3, 36°.40N×71°.25E, h176km±50km, mb2.9/3, mb1 3.0/9, mb1mx2.8/45, mbtmp3.4/9, MS2.9/1, Ms1 2.9/1, ms1mx2.2/18, Error ellipse: s-maj=60.5km s-min=28.9km az=58.0*

ISCJB ***19*** *15:40:37.1±1.0, 36°.58N±0°.08×70°.9E±0°.1, h188km, mb2.9/3, Error ellipse: s-maj=17.6km s-min=9.9km az=23.2*

NNC ***19*** *15:40:41.3±3.6, 36°.87N×70°.76E, h172km±64km, mb2.6, mpv3.6, Error ellipse: s-maj=36.7km s-min=29.8km az=56.0*

ISC 19 15:40:37.6±1.4, **36°.6N**±0°.1×**70°.9E**±0°.1, **h188km, n21,** σ**1.s37**/27, **mb2.9**/3, **6C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.98**	**30**	⇑P	**Pn**	**15 41 39.9**	**+1.0**
	2.7nm,0.3s						
SFK				⇓S	**Sn**	**15 42 26.0**	**-1.0**
	22nm,0.7s						
AML	**Almayashu**	**5.94**	**21**	P	**Pn**	**15 42 04.8**	**+0.6**
	SNR=45						
MNAS	**Manas**	**6.01**	**11**	⇑P	**Pn**	**15 42 05.6**	**+0.7**
	2.6nm,0.4s						
MNAS				⇓S	**Sn**	**15 43 11.8**	**-2.0**
	23nm,0.8s						
UCH	**Uchtor**	**6.28**	**25**	P	**Pn**	**15 42 09.3**	**+0.6**
	SNR=11						
EKS2	**Erkin-Say**	**6.45**	**19**	P	**Pn**	**15 42 11.4**	**+0.7**
	SNR=12						
KK31	**Karatay Array**	**6.50**	**358**	⇑P	**Pn**	**15 42 11.8**	**+0.5**
	0.8nm,0.3s,baz=170,slow=13,SNR=13						
KK31				⇓S	**Sn**	**15 43 21.8**	**-3.5**
	4.8nm,0.4s,baz=181,slow=20,SNR=19						
AAK	**Ala-Archa**	**6.64**	**24**	P	**Pn**	**15 42 14.2**	**+1.0**
	SNR=7.2						
AAK	**Ala-Archa**	**6.64**	**24**	⇓P	**Pn**	**15 42 13.7**	**+0.6**
	1.5nm,0.3s						
AAK				⇑S	**Sn**	**15 43 26.8**	**-1.9**
	2.4nm,0.5s						
AAK	**Ala-Archa**	**6.64**	**24**	P	**Pn**	**15 42 13.9**	**+0.8**
	1.7nm,0.3s,baz=160,slow=6.1,SNR=31						
AAK				S	**Sn**	**15 43 27.3**	**-1.4**
	0.5nm,0.3s,baz=58,slow=4.2,SNR=10						
KBK	**Karagaybulak**	**6.81**	**26**	P	**Pn**	**15 42 17.0**	**+1.6**
	SNR=5.2						
USP	**Ospenovka**	**7.21**	**21**	P	**Pn**	**15 42 21.0**	**+0.5**
	SNR=12						
TKM2	**Tokmak 2**	**7.28**	**28**	P	**Pn**	**15 42 22.2**	**+0.6**
	SNR=17						
TKM2	**Tokmak 2**	**7.28**	**28**	⇑P	**Pn**	**15 42 21.7**	**+0.1**
	6.4nm,0.5s						
TKM2				⇑S	**Sn**	**15 43 44.5**	**+0.6**
	2.2nm,0.8s						
MKAR	**Makanchi Array**	**13.26**	**36**	P	**Pn**	**15 43 38.7**	**0.0**
	0.1nm,0.3s,baz=225,slow=12,SNR=4.2						
KURBB	**Kurchatov Arra**	**15.06**	**19**	P	**P**	**15 44 02.6**	**+0.9**
	0.0nm,0.3s,baz=205,slow=12,SNR=3.4						
BVAR	**Borovoye Array**	**16.43**	**359**	P	**Pn**	**15 44 18.4**	**+1.0**
	0.2nm,0.3s,baz=158,slow=11,SNR=5.5						
AKTO	**Aktyubinsk**	**16.65**	**330**	P	**Pn**	**15 44 21.5**	**+1.3**
	0.1nm,0.3s,baz=142,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**19.86**	**25**	P	**P**	**15 44 55.1**	**+1.0**
	0.2nm,0.3s,baz=215,slow=13,SNR=3.5						
ZALV				LR	LR	15 53 57.0	
	comp=Z,30nm,18.4s,baz=58,slow=40						
YKA	**Yellowknife Ar**	**81.15**	**3**	P	**P**	**15 52 32.9**	**+1.2**
	0.1nm,0.4s,baz=353,slow=5.9,SNR=2.2						
WRA	**Warramunga Arr**	**82.11**	**122**	P	**P**	**15 52 35.1**	**-2.3**
	0.2nm,0.5s,baz=324,slow=5.1,SNR=4.7						
ASAR	**Alice Springs**	**84.38**	**125**	P	**P**	**15 52 47.4**	**-1.5**
	0.1nm,0.5s,baz=319,slow=3.9,SNR=6.4						

IDC ***19*** *15:53:09.6±1.7, 6°.25S×149°.73E, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.5/33, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=53.9km s-min=27.7km az=127.0*

ISCJB ***19*** *15:53:15.5±1.6, 6°.2S±0°.2×149°.5E±0°.2, h58km, mb3.4/3, Error ellipse: s-maj=29.8km s-min=23.8km az=19.0*

ISC 19 15:53:16.7±1.6, **6°.3S**±0°.2×**149°.5E**±0°.2, **h58km, n6,** σ**0.s78**/6, **mb3.5**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**9.57**	**293**	Pn	**Pn**	**15 55 31.7**	**-0.2**
	0.7nm,0.3s,baz=101,slow=16,SNR=2.4						
WRA	**Warramunga Arr**	**20.06**	**226**	P	**Pn**	**15 57 47.0**	**-0.6**
	0.8nm,0.7s,baz=49,slow=10,SNR=14						
ASAR	**Alice Springs**	**22.91**	**219**	P	**P**	**15 58 15.7**	**-0.2**
	0.5nm,0.9s,baz=56,slow=10,SNR=8.2						
FITZ	**Fitzroy Crossi**	**26.11**	**241**	P	**P**	**15 58 46.2**	**+0.8**
	1.8nm,0.9s,baz=61,slow=8.1,SNR=3.7						
ILAR	**Eielson Array**	**84.76**	**23**	P	**P**	**16 05 44.0**	**-0.3**
	0.4nm,0.9s,baz=241,slow=5.7,SNR=4.5						
TORD	**Torodi Ar. Bea**	**147.61**	**285**	PKPbc	**PKPab**	**16 12 58.7**	**+0.8**
	0.3nm,0.5s,baz=93,slow=2.6,SNR=2.8						

IDC ***19*** *15:57:55.4±1.5, 10°.68S×167°.79E, h0km, mb3.8/10, mb1 4.1/10, mb1mx3.9/44, mbtmp3.8/10, MS3.1/2, Ms1 3.1/2, ms1mx2.6/33, Error ellipse: s-maj=61.2km s-min=20.5km az=144.0*

NEIC ***19*** *15:57:57.0±0.8, 10°.66S×167°.83E, h10km, mb4.4/2, Error ellipse: s-maj=26.0km s-min=11.0km az=147.0*

ISCJB ***19*** *15:57:59.3±0.9, 10°.6S±0°.2×167°.7E±0°.1, h33km, mb3.9/12, MS3.1/1, Error ellipse: s-maj=32.3km s-min=14.4km az=151.2*

ISC 19 15:58:00.9±1.2, **10°.7S**±0°.3×**167°.8E**±0°.2, **h35km, n22,** σ**0.s74**/14, **mb3.9**/12, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.79**	**278**	*e*Pn	**Pn**	**15 59 52.0**	**0.0**
HNR	**Honiara**	**7.79**	**278**	LR	LR	16 02 32.0	
	comp=Z,129nm,21.0s,baz=7.0,slow=35						
CTA	**Charters Tower**	**22.74**	**243**	P	**P**	**16 03 01.1**	**+0.9**
	1.8nm,0.9s,baz=109,slow=11,SNR=3.9						
CTAO	**Charters Tower**	**22.74**	**243**	*e*P	**P**	**16 03 01.1**	**+0.9**
H11S2	**WAKE ISLAND Hy**	**28.98**	**358**	T	T	16 33 50.6	
	baz=178						
H11S3	**WAKE ISLAND Hy**	**28.98**	**358**	T	T	16 33 54.1	
	baz=178						
H11S1	**WAKE ISLAND Hy**	**29.00**	**358**	T	T	16 33 53.5	
	baz=178						
H11N1	**WAKE ISLAND Hy**	**30.19**	**358**	T	T	16 35 25.3	
	baz=187						
H11N3	**WAKE ISLAND Hy**	**30.19**	**358**	T	T	16 35 24.4	
	baz=187						
H11N2	**WAKE ISLAND Hy**	**30.21**	**358**	T	T	16 35 28.2	
	baz=187						
STKA	**Stephens Creek**	**32.10**	**225**	LR	LR	16 16 48.9	
	comp=Z,39nm,18.7s,baz=31,slow=35						
WRAB	**Tennant Creek**	**33.47**	**250**	*e*P	**P**	**16 04 36.3**	**-0.8**
	23nm,1.8s						
WRA	**Warramunga Arr**	**33.48**	**250**	P	**P**	**16 04 36.3**	**-0.8**
	3.3nm,0.9s,baz=80,slow=9.0,SNR=20						
ASAR	**Alice Springs**	**34.74**	**244**	P	**P**	**16 04 47.2**	**-1.0**
	1.7nm,0.8s,baz=73,slow=9.3,SNR=16						
FITZ	**Fitzroy Crossi**	**41.39**	**255**	P	**P**	**16 05 43.9**	**-0.4**
	2.4nm,0.8s,baz=100,slow=5.8,SNR=4.9						
CMAR	**Chiang Mai Arr**	**73.78**	**293**	P	**P**	**16 09 33.1**	**+0.8**
	0.6nm,0.8s,baz=112,slow=4.8,SNR=6.2						
ULN	**Ulaanbaatar**	**79.16**	**323**	*e*P	**P**	**16 10 01.3**	**-1.1**
	0.9nm,0.5s						
SONM	**Songino Array**	**79.54**	**323**	P	**P**	**16 10 04.3**	**-0.1**
	0.2nm,0.5s,baz=120,slow=4.1,SNR=2.3						
ILAR	**Eielson Array**	**82.53**	**18**	P	**P**	**16 10 19.7**	**0.0**
	0.8nm,0.9s,baz=233,slow=6.2,SNR=6.0						
YKA	**Yellowknife Ar**	**93.72**	**27**	P	**P**	**16 11 14.2**	**+0.5**
	0.2nm,0.7s,baz=256,slow=5.0,SNR=3.4						
TXAR	**Lajitas Array**	**93.91**	**61**	P	**P**	**16 11 15.4**	**-0.1**
	0.2nm,0.4s,baz=270,slow=2.7,SNR=2.1						
MKAR	**Makanchi Array**	**94.60**	**317**	P	**P**	**16 11 18.3**	**0.0**
	0.4nm,0.9s,baz=103,slow=6.1,SNR=2.9						

IDC ***19*** *16:08:51.6±1.1, 43°.19N×104°.98W, h0km, mb2.6/1, mb1 3.5/5, mb1mx3.3/43, mbtmp3.2/5, ML3.4/4, Error ellipse: s-maj=19.5km s-min=11.0km az=151.0*

ISCJB ***19*** *16:08:53.2±0.3, 43°.76N±0°.03×105°.22W±0°.04, h0km, Error ellipse: s-maj=4.6km s-min=3.8km az=168.1*

NEIC ***19*** *16:08:55.1±0.3, 43°.76N×105°.25W, h0km, ML3.2, MN2.6, Error ellipse: s-maj=3.6km s-min=3.1km az=79.0, Suspected Mining explosion.*

NEIC 63 km [39 miles] SSE of Gillette.

ISC 19 16:08:53.8±1.0, **43°.75N**±0°.06×**105°.08W**±0°.06, **h0km, n76,** σ**1.s22**/75, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.84**	**64**	*e*Pg	**Pn**	**16 09 13.5**	**+0.4**
K22A	**Casper**	**1.52**	**224**	*e*Pn	**Pn**	**16 09 19.9**	**-2.5**
PHWY	**Pilot Hill**	**2.47**	**187**	*e*Pn	**Pn**	**16 09 36.2**	**+0.7**
RWWY	**Rawlins**	**2.59**	**218**	*e*Pn	**Pn**	**16 09 36.8**	**-0.4**
N23A	**Red Feather La**	**2.93**	**193**	*e*Pn	**Pn**	**16 09 43.0**	**+1.2**
LAO	**LASA Array**	**3.04**	**345**	*e*Pn	**Pn**	**16 09 44.0**	**+0.8**
RLMT	**Red Lodge**	**3.29**	**296**	*e*Pn	**Pn**	**16 09 46.3**	**-0.5**
PD31	**Pinedale Array**	**3.41**	**255**	*e*Pn	**Pn**	**16 09 46.8**	**-1.6**
PDAR	**Pinedale Array**	**3.41**	**255**	*e*Pn	**Pn**	**16 09 47.2**	**-1.3**
PDAR				Sn	**Sn**	**16 10 31.7**	**+2.0**
PDAR	**Pinedale Array**	**3.41**	**255**	Pn	**Pn**	**16 09 47.8**	**-0.7**
	3.3nm,0.3s,baz=78,slow=15,SNR=63						
PDAR				Sn	**Sn**	**16 10 31.7**	**+2.0**
	7.7nm,0.3s,baz=80,slow=32,SNR=11						
BW06	**Boulder Array**	**3.41**	**255**	*e*Pn	**Pn**	**16 09 47.1**	**-1.4**
OGNE	**Ogallala**	**3.60**	**140**	*e*Pn	**Pb**	**16 09 54.8**	**-3.7**
GCMT	**Greycliff**	**3.85**	**304**	*e*Pn	**Pn**	**16 09 53.6**	**-0.7**
LKWY	**Lake**	**3.91**	**284**	*e*Pn	**Pn**	**16 09 56.5**	**+1.2**
ISCO	**Idaho Springs**	**3.97**	**186**	*e*Pn	**Pn**	**16 09 57.7**	**+1.5**
LOHW	**Long Hollow**	**4.01**	**270**	*e*Pn	**Pn**	**16 09 56.3**	**-0.3**
H17A	**Grant Village**	**4.01**	**281**	*e*Pn	**Pn**	**16 09 56.1**	**-0.5**
FLWY	**Flagg Ranch**	**4.07**	**277**	*e*Pn	**Pn**	**16 09 56.8**	**-0.7**
MOOW	**Moose Ponds**	**4.10**	**272**	*e*Pn	**Pn**	**16 09 57.6**	**-0.3**
SNOW	**Snow King Moun**	**4.13**	**268**	*e*Pn	**Pn**	**16 09 59.8**	**+1.5**
YNR	**Norris Junctio**	**4.13**	**285**	*e*Pn	**Pn**	**16 10 01.4**	**+3.0**
YPP	**Pitchstone Pla**	**4.16**	**279**	*e*Pn	**Pn**	**16 09 59.3**	**+0.5**
YFT	**Old Faithful**	**4.20**	**282**	*e*Pn	**Pn**	**16 10 00.5**	**+1.2**
REDW	**Red Top Meadow**	**4.21**	**267**	*e*Pn	**Pn**	**16 09 59.1**	**-0.3**
IMW	**Indian Meadow**	**4.24**	**274**	*e*Pn	**Pn**	**16 10 00.8**	**+1.0**
YHH	**Holmes Hill**	**4.27**	**286**	*e*Pn	**Pn**	**16 09 59.8**	**-0.5**
O20A	**White River Ci**	**4.32**	**214**	*e*Pn	**Pn**	**16 10 00.9**	**+0.1**
QLMT	**Earthquake Lak**	**4.68**	**285**	*e*Pn	**Pn**	**16 10 06.0**	**+0.2**
DGMT	**Dagmar**	**4.76**	**7**	*e*Pn	**Pn**	**16 10 08.6**	**+1.8**
BOZ	**Bozeman (W)**	**5.02**	**294**	*e*Pn	**Pn**	**16 10 09.7**	**-0.7**
KSCO	**Kaye Shedlock'**	**5.09**	**158**	*e*Pn	**Pn**	**16 10 12.2**	**+0.8**
TCUT	**Toone Canyon**	**5.37**	**243**	*e*Pn	**Pn**	**16 10 15.2**	**-0.1**
EGMT	**Eagleton**	**5.37**	**324**	*e*Pn	**Pn**	**16 10 14.3**	**-0.9**
DLMT	**Dillon**	**5.60**	**289**	*e*Pn	**Pn**	**16 10 16.9**	**-1.5**
HRY	**Holter Researc**	**5.61**	**304**	*e*Pn	**Pn**	**16 10 17.9**	**-0.5**
MDND	**Maddock**	**5.61**	**41**	*e*Pn	**Pn**	**16 10 19.6**	**+1.2**
LRM	**Limekiln Ridge**	**5.64**	**294**	*e*Pn	Pn	16 10 24.3	+5.3
MCMT	**McKenzie Canyo**	**5.68**	**284**	*e*Pn	**Pn**	**16 10 18.3**	**-1.2**
CTU	**Camp Tracy**	**5.82**	**241**	*e*Pn	**Pn**	**16 10 22.6**	**+1.1**
PV07	**Paradox Valley**	**5.95**	**208**	*e*Pn	**Pn**	**16 10 24.4**	**+1.1**
PV21	**Cone Mtn., Par**	**5.96**	**211**	*e*Pn	**Pn**	**16 10 24.1**	**+0.6**
SPUT	**South Promonto**	**5.96**	**248**	*e*Pn	**Pn**	**16 10 23.1**	**-0.3**
PV15	**Paradox Valley**	**5.99**	**207**	*e*Pn	**Pn**	**16 10 25.1**	**+1.3**
HVU	**Hansel Valley**	**6.00**	**253**	*e*Pn	**Pn**	**16 10 23.3**	**-0.6**
SDCO	**Great Sand Dun**	**6.01**	**183**	*e*Pn	**Pn**	**16 10 26.3**	**+2.1**
P17A	**Butcher Ranch,**	**6.02**	**227**	*e*Pn	**Pn**	**16 10 23.0**	**-1.2**
PV23	**Carpenter Ridg**	**6.07**	**211**	*e*Pn	**Pn**	**16 10 25.6**	**+0.6**
PV09	**Paradox Valley**	**6.08**	**212**	*e*Pn	**Pn**	**16 10 25.6**	**+0.6**
PV04	**Paradox Valley**	**6.08**	**210**	*e*Pn	**Pn**	**16 10 26.0**	**+0.9**
PV12	**Saucer Basin,**	**6.12**	**209**	*e*Pn	**Pn**	**16 10 27.1**	**+1.5**
ECSD	**EROS Data Cent**	**6.14**	**87**	*e*Pn	Pn	16 10 29.0	+3.3
PV14	**Lion Creek, Pa**	**6.14**	**210**	*e*Pn	**Pn**	**16 10 26.2**	**+0.2**
S22A	**4UR Ranch, Cre**	**6.15**	**193**	*e*Pn	**Pn**	**16 10 26.8**	**+0.7**
PV10	**Paradox Valley**	**6.15**	**210**	*e*Pn	**Pn**	**16 10 27.2**	**+1.2**
MPU	**Maple Canyon**	**6.15**	**235**	*e*Pn	**Pn**	**16 10 27.3**	**+1.3**
PV20	**West Nyswonger**	**6.15**	**210**	*e*Pn	**Pn**	**16 10 27.7**	**+1.7**
PV11	**David Mesa, Pa**	**6.16**	**209**	*e*Pn	**Pn**	**16 10 26.9**	**+0.8**
PV16	**Nyswonger Mesa**	**6.16**	**209**	*e*Pn	**Pn**	**16 10 27.4**	**+1.2**
SRU	**San Rafael Swe**	**6.18**	**223**	*e*Pn	**Pn**	**16 10 26.4**	**-0.1**
PV19	**Morning Glory**	**6.19**	**210**	*e*Pn	**Pn**	**16 10 26.8**	**+0.2**
PV03	**Paradox Valley**	**6.19**	**209**	*e*Pn	**Pn**	**16 10 26.9**	**+0.3**
PV02	**Paradox Valley**	**6.19**	**208**	*e*Pn	**Pn**	**16 10 27.0**	**+0.4**
PV17	**East Wray Mesa**	**6.20**	**209**	*e*Pn	**Pn**	**16 10 27.6**	**+0.8**
PV13	**Radium Mtn., P**	**6.26**	**208**	*e*Pn	**Pn**	**16 10 28.4**	**+0.8**
CBKS	**Cedar Bluff**	**6.37**	**139**	*e*Pn	**Pn**	**16 10 30.8**	**+1.9**
PV05	**Paradox Valley**	**6.43**	**210**	*e*Pn	**Pn**	**16 10 28.6**	**-1.4**
BGU	**Big Grassy Mou**	**6.53**	**247**	*e*Pn	**Pn**	**16 10 31.2**	**0.0**
T25A	**Trinidad**	**6.63**	**175**	*e*Pn	**Pn**	**16 10 34.2**	**+1.6**
Q16A	**Castle Valley**	**6.66**	**226**	*e*Pn	**Pn**	**16 10 33.4**	**+0.4**
DUG	**Dugway, Tooele**	**6.77**	**241**	*e*Pn	**Pn**	**16 10 33.4**	**-1.1**
MSO	**Missoula**	**6.96**	**299**	*e*Pn	**Pn**	**16 10 36.5**	**-0.6**
MSU	**Marysvale**	**7.49**	**228**	*e*Pn	**Pn**	**16 10 43.1**	**-1.3**
ELK	**Elko**	**8.11**	**252**	Pn	**Pn**	**16 10 53.8**	**+0.9**
	0.3nm,0.3s,baz=62,slow=15,SNR=5.7						
ULM	**Lac du Bonnet**	**9.04**	**41**	Pn	**Pn**	**16 11 06.5**	**+1.1**
	0.9nm,0.3s,baz=223,slow=12,SNR=9.6						
TXAR	**Lajitas Array**	**14.44**	**175**	Pn	Pn	16 12 09.8	-10
	0.1nm,0.3s,baz=348,slow=12,SNR=3.3						
YKA	**Yellowknife Ar**	**19.58**	**347**	P	**Pn**	**16 13 25.1**	**+0.8**
	0.2nm,0.6s,baz=155,slow=12,SNR=2.4						

SOME ***19*** *16:12:09.5, 42°.57N×79°.63E, h20km*

NNC ***19*** *16:12:09.0±0.7, 42°.60N×79°.61E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=4.6km s-min=2.4km az=135.0*

KRNET 19 16:12:08.9±0.1, **42°.57N×79°.62E, h16km, mb2.3, 11C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**0.77**	**353**	P	Pg	16 12 23.6	-0.3
	2.8nm,0.1s						
PDGK				S	Sb	16 12 34.4	+0.2
	2.1nm,0.3s						
PDGK	**Podgornoye**	**0.77**	**353**	⇓P	Pg	16 12 23.2	-0.6
	0.3nm,0.4s						
PDGK				⇑S	Sg	16 12 33.5	-0.5
	1.8nm,0.4s						
PDGK	**Podgornoye**	**0.77**	**353**	⇑*i*P	Pg	16 12 23.6	-0.3
	baz=53						
PDGK				⇑*i*S	Sb	16 12 34.5	+0.3
	baz=53						
PRZ	**Przheval'sk**	**0.90**	**265**	⇑*i*P	Pb	16 12 25.7	-0.6
	baz=65						
PRZ				⇑*i*S	Sb	16 12 38.2	0.0
	baz=65						
SATY	**Saty**	**1.02**	**299**	P	Pn	16 12 28.7	0.0
	2.1nm,0.4s						
SATY				S	Sg	16 12 42.3	+0.3
	8.3nm,0.1s						
SATY	**Saty**	**1.02**	**299**	*e*P	Pn	16 12 28.7	0.0
	2.1nm,0.4s						
SATY				*e*S	Sg	16 12 42.3	+0.3
	8.3nm,0.1s						
KTMS	**Ketmen**	**1.03**	**31**	P	Pn	16 12 28.6	-0.2
	3.0nm,0.1s						
KTMS				S	Sg	16 12 42.4	+0.1
	4.3nm,0.2s						
KTMS	**Ketmen**	**1.03**	**31**	*e*P	Pn	16 12 28.7	-0.1
	baz=30						
KTMS				*e*S	Sg	16 12 42.5	+0.1
	baz=30						
KTMS	**Ketmen**	**1.03**	**31**	*e*P	Pn	16 12 28.6	-0.2
	3.0nm,0.1s						
KTMS				*e*S	Sg	16 12 42.4	+0.1
	4.3nm,0.2s						
KDJ	**Kajisay**	**1.86**	**257**	⇑*i*P	Pb	16 12 43.0	+0.4
	baz=57						
KDJ				⇑*i*S	Sg	16 13 07.9	-0.9
	baz=57						

KOTS	**Kotyrbulak**	**1.96**	**291**	Pg	Pg	16 12 45.4	-1.1
	2.1nm,0.3s						
KOTS				Lg	Lg	16 13 11.2	
	8.7nm,0.3s						
KOTS	**Kotyrbulak**	**1.96**	**291**	*e*P	Pg	16 12 45.4	-1.1
	baz=91						
KOTS				*e*S	Sg	16 13 11.2	-0.7
	baz=91						
KOTS	**Kotyrbulak**	**1.96**	**291**	*e*P	Pg	16 12 45.4	-1.1
	2.1nm,0.3s						
KOTS				*e*S	Sg	16 13 11.2	-0.7
	8.7nm,0.3s						
MDOK	**Medeo**	**1.98**	**288**	Pg	Pb	16 12 44.8	+0.1
	1.1nm,0.3s						
MDOK				Lg	Lg	16 13 10.2	
	2.0nm,0.3s						
MDOK	**Medeo**	**1.98**	**288**	*e*P	Pb	16 12 44.8	+0.1
	1.1nm,0.3s						
MDOK				*e*S	Sb	16 13 10.2	+1.0
	2.0nm,0.3s						
TNSS	**Tian-Shan**	**2.02**	**284**	Pg	Pb	16 12 46.1	+0.6
	1.3nm,0.4s						
TNSS				Lg	Lg	16 13 12.7	
	2.4nm,0.3s						
TNSS	**Tian-Shan**	**2.02**	**284**	*e*P	Pb	16 12 46.1	+0.6
	baz=84						
TNSS				*e*S	Sg	16 13 12.7	-1.3
	baz=84						
TNSS	**Tian-Shan**	**2.02**	**284**	*e*P	Pb	16 12 46.1	+0.6
	1.3nm,0.4s						
TNSS				*e*S	Sg	16 13 12.7	-1.3
	2.4nm,0.3s						
ARXS	**Arharly**	**2.10**	**322**	Pg	Pb	16 12 46.8	+0.2
	1.1nm,0.5s						
ARXS				Lg	Lg	16 13 14.9	
	5.7nm,0.4s						
ARXS	**Arharly**	**2.10**	**322**	*e*P	Pb	16 12 46.8	+0.1
	1.1nm,0.5s						
ARXS				*e*S	Sb	16 13 13.7	+1.2
	5.7nm,0.4s						
IZV	**Izvestkoviy**	**2.26**	**283**	Pg	Pb	16 12 49.4	0.0
	2.2nm,0.1s						
IZV				Lg	Lg	16 13 19.2	
	5.7nm,0.3s						
IZV	**Izvestkoviy**	**2.26**	**283**	*e*P	Pb	16 12 49.4	0.0
	baz=83						
IZV				*e*S	Sb	16 13 17.8	+0.6
	baz=83						
IZV	**Izvestkoviy**	**2.26**	**283**	*e*P	Pb	16 12 49.4	0.0
	2.2nm,0.1s						
IZV				*e*S	Sb	16 13 17.9	+0.7
	5.7nm,0.3s						
CHKK	**Chushkaly**	**2.31**	**305**	Pg	Pb	16 12 51.4	+1.2
	0.5nm,0.1s						
CHKK				Lg	Lg	16 13 21.4	
	6.3nm,0.3s						
CHKK	**Chushkaly**	**2.31**	**305**	*e*P	Pb	16 12 51.4	+1.2
	0.5nm,0.1s						
CHKK				*e*S	Sg	16 13 21.4	-1.8
	6.3nm,0.3s						
KTBS	**Karatobe**	**2.43**	**299**	Pg	Pb	16 12 53.3	+1.0
	0.6nm,0.3s						
KTBS				Lg	Lg	16 13 24.9	
	6.8nm,0.4s						
KTBS	**Karatobe**	**2.43**	**299**	*e*P	Pb	16 12 53.3	+1.0
	baz=98						
KTBS				*e*S	Sg	16 13 25.6	-1.5
	baz=98						
KTBS	**Karatobe**	**2.43**	**299**	*e*P	Pb	16 12 53.3	+1.0
	0.6nm,0.3s						
KTBS				*e*S	Sg	16 13 24.9	-2.2
	6.8nm,0.4s						
ULHL	**Ulahol**	**2.52**	**264**	⇑*i*P	Pb	16 12 52.7	-1.2
	baz=64						
ULHL				⇑*i*S	Sb	16 13 25.0	+0.2
	baz=64						
BOOM	**Boomskoye usch**	**2.72**	**270**	⇓*i*P	Pb	16 12 55.6	-1.7
	baz=70						
BOOM				⇓*i*S	Sb	16 13 29.9	-0.5
	baz=70						
KST	**Kastek**	**2.73**	**281**	Pg	Pg	16 12 59.5	-1.7
	1.2nm,0.1s						
KST				Lg	Lg	16 13 34.9	
	2.1nm,0.5s						
KST	**Kastek**	**2.73**	**281**	*e*P	Pb	16 12 58.6	+1.2
	0.8nm,0.2s						
KST				*e*S	Sg	16 13 34.1	-2.6
	2.1nm,0.5s						
NRN	**Naryn**	**2.92**	**248**	⇑*i*P	Pb	16 12 58.6	-2.3
	baz=48						
NRN				⇑*i*S	Sb	16 13 35.4	-1.1
	baz=48						
TKM2	**Tokmak 2**	**2.98**	**278**	⇓Pg	Pb	16 13 01.0	-0.8
	0.7nm,0.8s						
TKM2				⇓Lg	Lg	16 13 40.9	
	0.5nm,0.3s						
TKM2	**Tokmak 2**	**2.98**	**278**	⇓*i*P	Pb	16 12 59.1	-2.7
	baz=78						
TKM2				⇓*i*S	Sb	16 13 36.2	-1.9
	baz=78						
KZA	**Kyzart**	**3.28**	**263**	⇓*i*P	Pb	16 13 03.7	-3.2
	baz=63						
KZA				⇓*i*S	Sb	16 13 43.2	-3.5
	baz=63						
ARLS	**Aral**	**4.00**	**262**	⇓*i*P	Pn	16 13 12.6	+3.0
	baz=62						
ARLS				⇓*i*S	Sn	16 14 00.3	+4.1
	baz=62						

MAN 19 16:20:05.3, 6°.91N×123°.87E, h6km, mb5.2, ML4.1, MS4.2, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.77**	**120**	*e*P	Pg	16 20 19.5	-0.6
SKMP				*e*S	Sg	16 20 29.5	-0.7
PAGZ	**Pagadian**	**1.05**	**332**	*e*P	Pg	16 20 25.1	-0.4
PAGZ				*e*S	Sb	16 20 40.3	+0.4
GSPH	**General Santos**	**1.35**	**127**	⇑*i*P	Pg	16 20 33.5	+2.3
GSPH				*i*S	Sn	16 20 54.6	+5.5
BUKP	**Musuan**	**1.52**	**51**	*e*P	Pn	16 20 32.2	-0.9
BUKP				*e*S	Sb	16 20 53.4	-0.1
DCPH	**Dipolog City**	**1.74**	**343**	⇑*i*P	Pn	16 20 27.1	-9.0
DCPH				*i*S	Sg	16 21 03.6	+2.4
DCPH	**Dipolog City**	**1.74**	**343**	⇑*e*P	Sn	16 20 57.5	-1.1
DCPH				*e*S	Sg	16 21 04.5	+3.2

NIED ***19*** *16:26:00, 43°.40N×146°.90E, h38km, Mw3.9 Best double couple: $M_0$8.34000×10^{14} NP1:ϕ_s179.00000°, δ46.00000°, λ35.00000°. NP2:ϕ_s63.00000°, δ65.00000°, λ131.00000°.*

JMA ***19*** *16:26:11.6±0.3, 43°.34N×146°.91E, h42km±3km, M4.3*

JMA Felt I J1.

ISCJB ***19*** *16:26:12.2±0.8, 43°.46N±0°.05×146°.87E±0°.07, h50km±6km, mb3.9/19, MS3.3/1, Error ellipse: s-maj=10.7km s-min=5.7km az=138.1*

MOS ***19*** *16:26:12.3±1.2, 43°.41N×146°.85E, h53km, mb4.4/8, Error ellipse: s-maj=11.8km s-min=8.1km az=90.0*

SKHL ***19*** *16:26:12.5±0.7, 43°.40N×146°.87E, h57km±6km, mb4.4/4*

IDC ***19*** *16:26:14.3±2.1, 43°.56N×146°.87E, h48km±20km, mb3.6/17, mb1 3.8/22, mb1mx3.6/59, mbtmp3.8/22, ML3.1/5, MS2.9/3, Ms1 3.0/3, ms1mx2.6/45, Error ellipse: s-maj=18.4km s-min=13.8km az=123.0*

ISC 19 16:26:13.7±1.2, **43°.51N**±0°.07×**146°.84E**±0°.06, **h41**km±11km, **n69, σ1.s43**/76, **mb3.9**/19, **1C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.81**	**260**	P	**Pn**	**16 26 27.3**	**-1.3**
NEM2				*e*S	**Sn**	**16 26 38.8**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**0.88**	**307**	*i*P	**Pn**	**16 26 29.7**	**+0.1**
YUK				AMB	AMB	16 26 30.0	
	10.0nm,0.1s						
YUK				AMB	AMB	16 26 30.0	
	50nm,0.1s						
YUK				*i*S	**Sn**	**16 26 42.0**	**+0.9**
YUK				A	A	16 26 42.9	
	380nm,0.2s						
YUK				A	A	16 26 42.9	
	780nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.88**	**307**	*d* *i*PN	**Pn**	**16 26 29.6**	**0.0**
YUK				*i*S	**Sn**	**16 26 42.4**	**+1.3**
YUK				pmax	pmax		
	comp=E,276nm,0.2s						
YUK				pmax	pmax		
	comp=Z,6µm,0.2s						
YUK				pmax	pmax		
	comp=N,334nm,0.1s						
YUK				smax	smax		
	comp=N,4µm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.2s						
GRPR	**Tuman**	**0.91**	**302**	*i*P	**Pn**	**16 26 29.0**	**-1.0**
GRPR				AMB	AMB	16 26 31.0	
	comp=E,150nm,0.3s						
GRPR				AMB	AMB	16 26 31.0	
	comp=E,130nm,0.3s						
GRPR				AMB	AMB	16 26 31.0	
	comp=E,240nm,0.3s						
GRPR				*i*S	**Sn**	**16 26 42.0**	**+0.1**
GRPR				A	A	16 26 43.0	
	comp=E,730nm,0.2s						
GRPR				A	A	16 26 43.0	
	comp=E,610nm,0.2s						
GRPR	**Tuman**	**0.91**	**302**	*d* *i*PN	**Pn**	**16 26 29.8**	**-0.2**
GRPR				*i*S	**Sn**	**16 26 42.7**	**+0.8**
GRPR				pmax	pmax		
	comp=N,2µm,0.2s						
GRPR				pmax	pmax		
	comp=E,1µm,0.2s						
GRPR				pmax	pmax		
	comp=Z,2µm,0.2s						
GRPR				smax	smax		
	comp=E,6µm,0.4s						
GRPR				smax	smax		
	comp=N,7µm,0.2s						
GLVR	**Golovnino**	**0.98**	**284**	*i*P	**Pn**	**16 26 30.0**	**-1.0**
GLVR				AMB	AMB	16 26 31.0	
	comp=N,90nm,0.2s						
GLVR				*i*S	**Sn**	**16 26 43.0**	**-0.7**
GLVR				A	A	16 26 43.0	
	comp=N,400nm,0.4s						
GLVR				A	A	16 26 43.0	
	comp=N,2µm,0.4s						
GLVR	**Golovnino**	**0.98**	**284**	*d* *i*PN	**Pn**	**16 26 30.7**	**-0.3**
GLVR				*i*S	**Sn**	**16 26 43.3**	**-0.4**
GLVR				pmax	pmax		
	comp=Z,943nm,0.1s						
GLVR				smax	smax		
	comp=N,4µm,0.4s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
JKHN	**Kushirohamanak**	**1.29**	**251**	P	**Pn**	**16 26 34.2**	**-1.1**
JRA	**Rausu**	**1.31**	**290**	P	**Pn**	**16 26 35.6**	**+0.1**
JNK	**Nakash**	**1.54**	**274**	P	**Pn**	**16 26 38.0**	**-0.7**
JNK				*e*S	**Sn**	**16 26 57.4**	**0.0**
JAK	**Akkeshi**	**1.65**	**253**	P	**Pn**	**16 26 38.5**	**-1.6**
KUR	**Kuril'sk**	**1.87**	**23**	*i*P	**Pn**	**16 26 43.0**	**-0.2**
KUR				AMB	AMB	16 26 45.0	
	comp=E,50nm,0.3s						
KUR				AMB	AMB	16 26 45.0	
	comp=E,30nm,0.3s						
KUR				AMB	AMB	16 26 45.0	
	comp=E,130nm,0.3s						
KUR				*i*S	**Sn**	**16 27 06.0**	**+0.4**
KUR				A	A	16 27 09.0	
	comp=E,680nm,0.4s						
KUR				A	A	16 27 09.0	
	comp=E,350nm,0.4s						
KUR	**Kuril'sk**	**1.87**	**23**	*d* *i*PN	**Pn**	**16 26 43.6**	**+0.4**
KUR				*i*S	**Sn**	**16 27 06.8**	**+1.2**
KUR				pmax	pmax		
	comp=Z,131nm,0.3s						
KUR				pmax	pmax		
	comp=N,43nm,0.2s						
KUR				pmax	pmax		
	comp=E,53nm,0.2s						
KUR				smax	smax		
	comp=E,727nm,0.4s						
KUR				smax	smax		
	comp=N,668nm,0.2s						
JTKR	**Abashiri--Toko**	**2.17**	**283**	P	**Pn**	**16 26 48.3**	**+1.0**
JAR	**Ashorobuto**	**2.25**	**266**	P	**Pn**	**16 26 48.1**	**-0.2**
JAR				*e*S	**Sn**	**16 27 14.4**	**-0.4**
JOB	**Onbets**	**2.28**	**256**	P	**Pn**	**16 26 48.0**	**-0.7**
JOB				*e*S	**Sn**	**16 27 15.1**	**-0.4**
HRK	**Horoka**	**2.70**	**270**	*e*P	**Pn**	**16 26 55.7**	**+1.1**
JCH	**Churui**	**2.70**	**252**	P	**Pn**	**16 26 53.6**	**-0.9**
ERM	**Erimo**	**3.09**	**242**	*e*P	**Pn**	**16 27 01.5**	**+1.5**
ERM	**Erimo**	**3.09**	**242**	*i*PN	**Pn**	**16 27 01.5**	**+1.5**
ASAJ	**Asahikawa**	**3.13**	**283**	P	**Pn**	**16 27 02.5**	**+2.1**
	comp=N,3.8nm,0.3s,baz=129,slow=11,SNR=41						
ASAJ				S	Sn	16 27 46.0	+10
	comp=N,7.4nm,0.3s,baz=25,slow=21,SNR=4.0						
ASAJ				LR	LR	16 28 28.2	
	comp=N,108nm,19.1s,baz=285,slow=43						
YSS	**Yuzh-Sakhalins**	**4.49**	**321**	*e*P	**Pn**	**16 27 20.8**	**+1.7**
YSS	**Yuzh-Sakhalins**	**4.49**	**321**	⇑*e*PN	**Pn**	**16 27 21.2**	**+2.1**
SKR	**Severo-Kuril’s**	**9.56**	**38**	*e*P	**Pn**	**16 28 28.8**	**+0.2**
SKR	**Severo-Kuril’s**	**9.56**	**38**	*i*PN	**Pn**	**16 28 28.8**	**+0.2**
MJAR	**Matsushiro Arr**	**9.60**	**226**	P	**Pn**	**16 28 28.7**	**-0.6**
	comp=N,0.1nm,0.3s,baz=29,slow=13,SNR=3.8						
MJAR				S	**Sn**	**16 30 22.0**	**+6.2**
	comp=N,0.1nm,0.3s,baz=206,slow=19,SNR=3.7						
MJAR				LR	LR	16 32 48.2	
	comp=N,55nm,19.5s,baz=55,slow=41						
USRK	**Ussuriysk Ar.**	**10.75**	**279**	P	**Pn**	**16 28 48.2**	**+3.3**
	comp=N,0.2nm,0.3s,baz=92,slow=10,SNR=4.0						
KLR	**Kul'dur**	**11.88**	**304**	*i*PN	**Pn**	**16 28 59.1**	**-1.3**
KLR	**Kul'dur**	**11.88**	**304**	P	**Pn**	**16 29 00.3**	**-0.1**
	comp=N,0.0nm,0.3s,baz=19,slow=22,SNR=2.1						
PETK	**Petropavlovsk-**	**12.01**	**33**	*e*PN	**Pn**	**16 29 01.8**	**-0.3**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**12.01**	**33**	P	**Pn**	**16 29 01.0**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=201,slow=14,SNR=14						
SEY	**Seymchan**	**19.72**	**8**	*i*P	**P**	**16 30 39.4**	**-0.1**
SEY	**Seymchan**	**19.72**	**8**	P	**P**	**16 30 37.5**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=184,slow=8.2,SNR=9.5						
BILL	**Bilibino**	**26.65**	**16**	*e*P	**P**	**16 31 48.8**	**+0.6**
BILL	**Bilibino**	**26.65**	**16**	*e*P	**P**	**16 31 48.8**	**+0.6**
BILL				pmax	pmax		
	comp=Z,20nm,3.8s						
SONM	**Songino Array**	**28.35**	**293**	*e*P	**P**	**16 32 07.4**	**+3.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**28.35**	**293**	P	**P**	**16 32 04.0**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=85,slow=8.2,SNR=7.4						
H11N2	**WAKE ISLAND Hy**	**29.07**	**138**	T	T	17 02 53.6	
	baz=329,slow=76,SNR=458						
H11N1	**WAKE ISLAND Hy**	**29.08**	**138**	T	T	17 02 53.5	
	baz=329,slow=76,SNR=532						
H11N3	**WAKE ISLAND Hy**	**29.09**	**138**	T	T	17 02 54.0	
	baz=329,slow=76,SNR=440						
H11S1	**WAKE ISLAND Hy**	**30.03**	**140**	T	T	17 04 04.4	
	baz=330,slow=76,SNR=1211						
H11S3	**WAKE ISLAND Hy**	**30.03**	**140**	T	T	17 04 04.9	
	baz=330,slow=76,SNR=1037						
H11S2	**WAKE ISLAND Hy**	**30.05**	**140**	T	T	17 04 05.6	
	baz=330,slow=76,SNR=768						
ILAR	**Eielson Array**	**41.82**	**36**	*e*P	**P**	**16 34 01.8**	**+2.8**
ILAR	**Eielson Array**	**41.82**	**36**	*e*P	**P**	**16 34 01.8**	**+2.8**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**41.82**	**36**	P	**P**	**16 33 58.3**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=277,slow=8.6,SNR=19						
ILAR				LR	LR	16 51 28.6	
	comp=Z,40nm,18.5s,baz=161,slow=36						
MKAR	**Makanchi Array**	**44.49**	**298**	P	**P**	**16 34 20.4**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=80,slow=8.9,SNR=8.4						
YKA	**Yellowknife Ar**	**56.13**	**34**	P	**P**	**16 35 48.3**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=300,slow=6.7,SNR=12						
ARCES	**ARCESS Array B**	**59.39**	**340**	*e*P	**P**	**16 36 10.8**	**-0.6**
ARCES	**ARCESS Array B**	**59.39**	**340**	*e*P	**P**	**16 36 10.8**	**-0.6**
ARCES	**ARCESS Array B**	**59.39**	**340**	P	**P**	**16 36 11.0**	**-0.4**
	comp=Z,3.7nm,0.9s,baz=40,slow=5.3,SNR=8.8						
WRA	**Warramunga Arr**	**64.17**	**193**	P	**P**	**16 36 42.6**	**-1.5**
	comp=Z,0.4nm,1.1s,baz=8.8,slow=6.9,SNR=2.7						
FINES	**FINESS Array B**	**64.98**	**333**	P	**P**	**16 36 48.0**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=52,slow=9.9,SNR=9.7						
OBN	**Obninsk**	**65.37**	**324**	*e*P	**P**	**16 36 49.4**	**-2.1**
OBN	**Obninsk**	**65.37**	**324**	*e*P	**P**	**16 36 49.4**	**-2.1**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAR	**Alice Springs**	**67.89**	**193**	P	**P**	**16 37 08.5**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=17,slow=7.2,SNR=3.0						
NVAR	**Mina Array Bea**	**67.90**	**58**	P	**P**	**16 37 08.7**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=291,slow=7.5,SNR=3.1						
NB2	**NORSAR Subarra**	**69.74**	**339**	P	**P**	**16 37 18.2**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=33,slow=6.5						
NB2	**NORSAR Subarra**	**69.74**	**339**	P	**P**	**16 37 18.1**	**-1.0**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**69.74**	**339**	P	**P**	**16 37 18.3**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=32,slow=6.2,SNR=7.6						
HFS	**Hagfors**	**69.82**	**337**	P	**P**	**16 37 18.7**	**-0.8**
	comp=Z,2.0nm,0.4s,baz=53,slow=7.6,SNR=13						
PDAR	**Pinedale Array**	**70.24**	**50**	P	**P**	**16 37 23.1**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=318,slow=1.2,SNR=3.4						
AKASG	**Malin Array Be**	**71.64**	**324**	P	**P**	**16 37 30.2**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=41,slow=6.2,SNR=6.2						
CLL	**Collm**	**77.42**	**332**	*e*P	**P**	**16 38 02.0**	**-2.2**
	comp=Z,3.0nm,0.8s						
CLL	**Collm**	**77.42**	**332**	*e*P	**P**	**16 38 02.0**	**-2.2**
EKA	**Eskdalemuir Ar**	**78.29**	**343**	P	**P**	**16 38 08.4**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=29,slow=5.4,SNR=5.6						
GERES	**GERESS Array B**	**79.25**	**331**	P	**P**	**16 38 14.6**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=51,slow=7.7,SNR=2.9						
MMAI	**Mount Meron Ar**	**81.45**	**308**	P	**P**	**16 38 27.8**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=46,slow=12,SNR=2.7						
TXAR	**Lajitas Array**	**82.97**	**56**	P	**P**	**16 38 34.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=287,slow=3.4,SNR=6.6						

ISCJB ***19*** *16:37:43.3±1.1, 8°.8S±0°.2×121°.87E±0°.07, h12km±13km, Error ellipse: s-maj=32.0km s-min=11.9km az=3.1*

DJA ***19*** *16:37:43.0±0.5, 9°S±10°×12°2E±°, h10km, M2.8/5, MLv2.8/5*

IDC ***19*** *16:38:10.7±2.3, 10°.77S×122°.89E, h0km, mb3.4/1, mb1 3.4/3, mb1mx3.2/40, mbtmp3.2/3, ML2.5/2, Error ellipse: s-maj=35.3km s-min=17.8km az=143.0*

ISC 19 16:37:43.8±1.5, **8°.7S**±0°.1×**121°.84E**±0°.05, **h13**km±13km, **n8, σ0.s54**/8, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.16**	**252**	P	**Pg**	**16 37 47.6**	**0.0**
MMRI	**Maumere**	**0.40**	**81**	P	**Pg**	**16 37 51.5**	**-0.2**
WSI	**Waingapu**	**1.80**	**238**	P	**Pn**	**16 38 14.2**	**-0.4**
BATI	**Baumata**	**2.34**	**130**	P	**Pg**	**16 38 28.2**	**-0.4**
BATI	**Baumata**	**2.34**	**130**	Pg	**Pg**	**16 38 28.6**	**0.0**
	1.0nm,0.3s,baz=237,slow=3.5,SNR=4.1						
BATI				Lg	Lg	16 38 42.3	
	1.2nm,0.3s,baz=284,slow=19,SNR=4.8						
SOEI	**Soe**	**2.61**	**114**	P	**Pb**	**16 38 30.9**	**+0.3**
WRA	**Warramunga Arr**	**16.46**	**134**	Pn	**Pn**	**16 41 34.5**	**-0.2**
	0.0nm,0.3s,baz=306,slow=14,SNR=2.8						
ASAR	**Alice Springs**	**18.84**	**144**	Pn	**Pn**	**16 42 05.0**	**+0.8**
	0.0nm,0.3s,baz=326,slow=12,SNR=7.9						

IDC 19 16:41:38.6±14.0, **16°.80S**×**178°.63W, h490**km±173km, **mb3.0**/5, **mb1 3.3**/5, **mb1mx2.9**/41, **mbtmp3.9**/5, **Error ellipse: s-maj=124.2km s-min=50.5km az=160.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.64**	**258**	P	P	16 49 06.6	-0.4
	0.8nm,0.4s,baz=92,slow=7.5,SNR=7.0						
ASAR	**Alice Springs**	**44.90**	**253**	P	P	16 49 08.4	-0.5
	4.0nm,0.5s,baz=86,slow=8.6,SNR=28						
FITZ	**Fitzroy Crossi**	**53.01**	**260**	P	P	16 50 10.6	+1.4
	1.2nm,0.7s,baz=129,slow=6.5,SNR=2.3						
ILAR	**Eielson Array**	**84.86**	**13**	P	P	16 53 20.8	+0.3
	0.1nm,0.4s,baz=220,slow=5.4,SNR=5.1						
TXAR	**Lajitas Array**	**85.58**	**58**	P	P	16 53 25.0	0.0
	0.5nm,1.0s,baz=213,slow=6.5,SNR=3.2						
GERES	**GERESS Array B**	**146.49**	**345**	PKPbc	PKPdf	17 00 23.2	+1.1
	0.6nm,0.5s,baz=20,slow=4.3,SNR=5.8						

DJA ***19*** *16:42:21.5±0.6, 2°N±4°×12°1E±°, h10km, M4.6/10, mb5.1/3, mB5.3/3, MLv4.4/10, Mw(mB)4.7/3*

ISCJB ***19*** *16:42:22.6±0.5, 2°.23N±0°.04×121°.19E±0°.07, h33km, mb3.9/10, MS3.0/4, Error ellipse: s-maj=10.8km s-min=6.1km az=170.5*

IDC ***19*** *16:42:30.3±6.3, 2°.22N×121°.37E, h87km±64km, mb3.7/9, mb1 3.9/10, mb1mx3.6/48, mbtmp4.1/10, ML4.3/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/35, Error ellipse: s-maj=44.5km s-min=15.5km az=74.0*

ISC 19 16:42:25.1±0.7, **2°.20N**±0°.07×**121°.24E**±0°.08, **h35**km, **n23, σ1.s21**/21, **mb4.0**/10, **MS3.0**/4, **1C-1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.85**	**158**	P	**Pn**	**16 42 54.3**	**0.0**
MRSI				S	**Sn**	**16 43 16.0**	**-0.5**
MPSI	**Mapaga**	**2.29**	**216**	P	**Pn**	**16 42 58.4**	**-1.9**
APSI	**Ampana**	**3.12**	**172**	P	**Pn**	**16 43 10.8**	**-1.0**
KMSI	**Cibinong**	**3.18**	**120**	P	**Pn**	**16 43 11.8**	**-0.8**
PCI	**Palu**	**3.39**	**204**	P	**Pn**	**16 43 15.2**	**-0.3**
LUWI	**Luwuk**	**3.57**	**155**	P	**Pn**	**16 43 18.2**	**+0.2**
TTSI	**Tana Toraja**	**5.40**	**195**	P	**Pn**	**16 43 43.2**	**0.0**
DCPH	**Dipolog City**	**6.68**	**18**	⇓*i*P	**Pn**	**16 43 59.9**	**-0.9**
MTKI	**Muara Teweh, K**	**7.07**	**244**	P	**Pn**	**16 44 05.0**	**-1.1**
BATI	**Baumata**	**12.56**	**169**	P	P	16 45 27.3	-5.2
	1.5nm,0.3s,baz=306,slow=14,SNR=3.0						
BATI				LR	LR	16 49 56.3	
	comp=Z,258nm,21.5s,baz=18,slow=36						
FITZ	**Fitzroy Crossi**	**20.63**	**168**	P	**P**	**16 47 01.3**	**-0.4**
	11nm,0.6s,baz=8.2,slow=7.9,SNR=51						
FITZ				LR	LR	16 56 20.7	
	comp=Z,74nm,18.5s,baz=338,slow=40						
TRTT	**Trang**	**22.18**	**285**	P	**P**	**16 47 22.4**	**+4.0**
	4.0nm,1.2s						
WRA	**Warramunga Arr**	**25.49**	**150**	P	**P**	**16 47 49.7**	**-0.6**
	4.8nm,0.8s,baz=326,slow=11,SNR=98						
GUMO	**Guam**	**25.96**	**63**	LR	LR	16 58 28.4	
	comp=Z,34nm,19.2s,baz=38,slow=37						
ASAR	**Alice Springs**	**28.51**	**155**	P	**P**	**16 48 17.5**	**0.0**
	2.2nm,0.5s,baz=342,slow=12,SNR=77						
ASAR				LR	LR	17 03 05.7	
	comp=Z,49nm,18.3s,baz=301,slow=43						
KSRS	**Korea Array**	**35.62**	**9**	LR	LR	17 04 47.2	
	comp=Z,19nm,19.1s,baz=192,slow=38						
MJAR	**Matsushiro Arr**	**37.60**	**23**	P	**P**	**16 49 35.6**	**-0.9**
	2.0nm,1.0s,baz=205,slow=10,SNR=3.5						
STKA	**Stephens Creek**	**39.01**	**152**	P	**P**	**16 49 49.2**	**+0.8**
	4.3nm,0.9s,baz=336,slow=9.5,SNR=6.8						
GTA	**Gaotai**	**41.86**	**335**	⇑P	**P**	**16 50 12.1**	**0.0**
GTA				pP	pP	16 50 16.5	-4.2
GTA				sP	sP	16 50 19.4	-4.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**42.89**	**11**	P	**P**	**16 50 19.8**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=155,slow=42,SNR=4.0						
SONM	**Songino Array**	**47.24**	**346**	P	**P**	**16 50 54.9**	**0.0**
	comp=Z,0.5nm,0.4s,baz=164,slow=8.9,SNR=4.4						
MKAR	**Makanchi Array**	**55.83**	**329**	P	**P**	**16 51 58.9**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=126,slow=8.6,SNR=9.5						
ZALV	**Zalesovo Beam**	**59.60**	**336**	P	**P**	**16 52 25.2**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=115,slow=6.8,SNR=4.2						

OTT ***19*** *16:57:01.6±0.5, 61°.16N×41°.83W, h18km, MN4.2/4, Southern Greenland. 1209km northeast from Nutak, Nl*

ISCJB ***19*** *16:57:03.3±0.2, 61°.21N±0°.03×42°.38W±0°.04, h10km, mb4.7/184, MS3.7/26, Error ellipse: s-maj=4.7km s-min=2.6km az=158.0*

IDC ***19*** *16:57:03.9±0.5, 61°.30N×42°.49W, h0km, mb4.3/36, mb1 4.5/40, mb1mx4.4/55, mbtmp4.3/40, ML3.6/4, MS3.7/31, Ms1 3.7/31, ms1mx3.6/41, Error ellipse: s-maj=15.1km s-min=8.4km az=3.0*

MOS ***19*** *16:57:03.4±1.0, 61°.37N×42°.54W, h10km, mb4.8/46, Error ellipse: s-maj=10.6km s-min=7.3km az=87.9*

NEIC ***19*** *16:57:05.0±0.1, 61°.27N×42°.44W, h10km, mb4.8/143, Error ellipse: s-maj=4.1km s-min=2.4km az=169.0*

ISC 19 16:57:05.2±0.3, **61°.36N**±0°.05×**42°.67W**±0°.03, **h10**km, **n485, σ1.s56**/502, **mb4.7**/184, **MS3.7**/27, **5C, Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**1.34**	**263**	*e*Pn	**Pn**	**16 57 29.9**	**-0.1**
NRS				*e*Sn	**Sg**	**16 57 49.9**	**+1.6**
NRS	**Narsarsuaq**	**1.34**	**263**	⇑*i*P	**Pn**	**16 57 30.0**	**+0.1**
NRS				*i*S	**Sg**	**16 57 50.7**	**+2.4**
NRS	**Narsarsuaq**	**1.34**	**263**	⇑*i*P	**Pn**	**16 57 30.0**	**+0.1**
NRS				*i*S	**Sg**	**16 57 50.7**	**+2.4**
IVI	**Ivigtut**	**2.66**	**269**	*e*Pn	**Pn**	**16 57 49.1**	**+1.1**
ANGG	**Ammassalik, Gr**	**4.83**	**26**	*e*Pn	**Pn**	**16 58 15.9**	**-1.9**

SFJD	**Kangerlussuaq**	**6.63**	**332**	PN	**Pn**	**16 58 41.8**	**-0.7**
SFJD				SN	**Sn**	**16 59 56.7**	**-1.4**
SFJD				Trac		17 00 02.2	
	comp=Z,77nm,0.3s						
SFJD				LG	Lg	17 00 34.5	
SFJD	**Kangerlussuaq**	**6.63**	**332**	*i* P	**Pn**	**16 58 41.3**	**-1.2**
SFJD				*i* S	**Sn**	**16 59 55.9**	**-2.2**
SFJD	**Kangerlussuaq**	**6.63**	**332**	Pn	**Pn**	**16 58 41.8**	**-0.7**
	4.3nm,0.3s,baz=142,slow=13,SNR=28						
SFJD				Sn	**Sn**	**16 59 55.8**	**-2.2**
	20nm,0.3s,baz=217,slow=18,SNR=6.8						
SFJD				LR	LR	17 01 24.3	
	comp=Z,774nm,20.0s,baz=146,slow=39						
ILULI	**Ilulissat**	**8.63**	**340**	*e*Pn	**Pn**	**16 59 09.2**	**-0.7**
ILULI	**Ilulissat**	**8.63**	**340**	PN	**Pn**	**16 59 07.9**	**-1.9**
ILULI				SN	**Sn**	**17 00 44.0**	**-3.0**
ILULI				Trac		17 01 35.4	
	comp=Z,698nm,0.9s						
ILULI				LG	Lg	17 01 37.4	
ILULI	**Ilulissat**	**8.63**	**340**	*e*P	**Pn**	**16 59 09.2**	**-0.7**
BORG	**Borgarnes**	**10.24**	**61**	*e*Pn	**Pn**	**16 59 29.1**	**-2.9**
BORG				Sn	Sn	17 01 17.8	-8.9
BORG	**Borgarnes**	**10.24**	**61**	*e*P	**Pn**	**16 59 29.1**	**-2.9**
BORG	**Borgarnes**	**10.24**	**61**	Pn	**Pn**	**16 59 31.5**	**-0.4**
	2.1nm,0.3s,baz=282,slow=3.5,SNR=9.4						
BORG				Sn	Sn	17 01 17.8	-8.9
	baz=304,slow=22,SNR=3.2						
BORG				LR	LR	17 02 32.5	
	comp=Z,527nm,20.8s,baz=252,slow=32						
MKVL	**Makkovik**	**10.71**	**241**	PN	**Pn**	**16 59 35.7**	**-2.8**
MKVL				SN	**Sn**	**17 01 30.6**	**-7.6**
NANL	**Nain**	**10.93**	**252**	PN	**Pn**	**16 59 40.3**	**-1.1**
NANL				SN	**Sn**	**17 01 38.0**	**-5.5**
NANL				Trac		17 01 53.1	
	comp=Z,0.5nm,0.0s						
SUMG	**Summit**	**11.38**	**6**	*e*Pn	**Pn**	**16 59 45.4**	**-2.5**
SUMG	**Summit**	**11.38**	**6**	*i* P	**Pn**	**16 59 45.2**	**-2.7**
SUMG	**Summit**	**11.38**	**6**	*e*P	**Pn**	**16 59 45.4**	**-2.5**
KAJQ	**Kangiqsualujju**	**11.91**	**267**	PN	**Pn**	**16 59 56.5**	**+1.6**
KAJQ				SN	**Sn**	**17 02 02.9**	**-4.7**
KAJQ				Trac		17 02 23.9	
	comp=Z,20nm,0.4s						
FRB	**Frobisher Bay**	**12.14**	**293**	PN	**Pn**	**16 59 58.0**	**+0.2**
FRB				SN	**Sn**	**17 02 09.5**	**-3.6**
FRB				Trac		17 02 35.7	
	comp=Z,74nm,1.6s						
FRB	**Frobisher Bay**	**12.14**	**293**	Pn	**Pn**	**16 59 59.0**	**+1.2**
	0.5nm,0.3s,baz=95,slow=11,SNR=17						
FRB				Sn	**Sn**	**17 02 05.1**	**-7.9**
	0.4nm,0.3s,baz=254,slow=9.8,SNR=2.3						
FRB				LR	LR	17 04 42.6	
	comp=Z,690nm,18.0s,baz=83,slow=38						
KNGQ	**Kangiqsujuaq**	**13.94**	**284**	PN	**Pn**	**17 00 22.8**	**+0.4**
KNGQ				SN	**Sn**	**17 02 51.5**	**-5.5**
KNGQ				Trac		17 03 39.8	
	comp=Z,724nm,3.5s						
KULLO	**Kullorsuaq**	**14.28**	**344**	PN	**Pn**	**17 00 25.6**	**-1.4**
KULLO				SN	Sn	17 02 49.6	-16
KULLO				Trac		17 03 34.9	
	comp=Z,83nm,1.1s						
SCHQ	**Schefferville**	**14.29**	**254**	Pn	**Pn**	**17 00 27.2**	**-0.1**
	1.0nm,0.3s,baz=59,slow=10,SNR=18						
SCHQ				Sn	**Sn**	**17 02 59.2**	**-6.5**
	1.0nm,0.3s,baz=190,slow=18,SNR=3.3						
SCHQ				LR	LR	17 05 34.6	
	comp=Z,346nm,18.7s,baz=12,slow=36						
DRLN	**Deer Lake**	**14.73**	**221**	*e*Pn	**Pn**	**17 00 33.2**	**-0.1**
JMIC	**Jan Mayen**	**16.56**	**40**	LR	LR	17 05 54.0	
	comp=Z,221nm,21.4s,baz=254,slow=32						
DAG	**Danmarks Havn**	**17.43**	**18**	*i* P	**Pn**	**17 01 05.9**	**-2.1**
	18nm,1.2s						
DAG	**Danmarks Havn**	**17.43**	**18**	*i* P	**Pn**	**17 01 05.9**	**-2.1**
DAG				pmax	pmax		
	comp=Z,28nm,1.2s						
TULEG	**Thule**	**17.59**	**340**	*e*Pn	**Pn**	**17 01 08.9**	**-1.1**
	comp=Z,15nm,0.9s						
ILON	**Igloolik, Nuna**	**17.86**	**313**	PN	**Pn**	**17 01 13.1**	**-0.2**
ILON				SN	**Sn**	**17 04 25.6**	**-6.4**
BATG	**Bathurst New B**	**19.46**	**234**	*e*P	**P**	**17 01 32.4**	**+0.7**
	comp=Z,40nm,1.4s						
CHGQ	**Chibougamau**	**21.01**	**251**	P	**P**	**17 01 48.6**	**+0.1**
	baz=45						
ESK	**Eskdalemuir**	**21.31**	**89**	*e*P	**P**	**17 01 50.2**	**-1.5**
	comp=Z,30nm,0.8s						
ESK	**Eskdalemuir**	**21.31**	**89**	*e*P	**P**	**17 01 50.2**	**-1.5**
ESK				pmax	pmax		
	comp=Z,30nm,0.8s						
EKA	**Eskdalemuir Ar**	**21.32**	**89**	P	**P**	**17 01 50.7**	**-1.2**
	comp=Z,24nm,0.9s,baz=298,slow=8.2,SNR=45						
LATQ	**La Tuque**	**22.17**	**245**	P	**P**	**17 02 01.2**	**+0.3**
	baz=40						
PKME	**Peaks-Kenny Pk**	**22.39**	**236**	P	**P**	**17 02 03.3**	**-0.1**
	baz=35						
RES	**Resolute Bay**	**22.60**	**327**	*e*P	**P**	**17 02 05.2**	**-0.2**
	comp=Z,9.5nm,0.8s						
RES	**Resolute Bay**	**22.60**	**327**	*e*P	**P**	**17 02 05.2**	**-0.2**
RES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RES	**Resolute Bay**	**22.60**	**327**	P	**P**	**17 02 06.7**	**+1.3**
	comp=Z,9.3nm,0.8s,baz=96,slow=8.0,SNR=27						
RES				LR	LR	17 10 11.8	
	comp=Z,245nm,19.2s,baz=138,slow=35						
MATQ	**Matagami**	**22.62**	**255**	P	**P**	**17 02 06.4**	**+0.6**
	baz=46						
LSQQ	**Lebel-sur-Quev**	**22.81**	**253**	P	**P**	**17 02 08.3**	**+0.5**
	baz=45						
D54A	**Lac Fusel, La**	**24.06**	**249**	P	**P**	**17 02 20.4**	**+0.1**
	baz=42						
FRNY	**Flat Rock**	**24.52**	**242**	*e*P	**P**	**17 02 23.2**	**-1.3**
	comp=Z,32nm,0.9s						
D53A	**Lac Vacive, Po**	**24.59**	**251**	P	**P**	**17 02 25.6**	**+0.5**
	baz=42						
SPA0	**Spitsbergen Ar**	**24.69**	**25**	*e*P	**P**	**17 02 25.1**	**-0.7**
	comp=Z,57nm,1.5s						
SPITS	**Spitsbergen Ar**	**24.69**	**25**	P	**P**	**17 02 27.9**	**+2.1**
	comp=Z,6.5nm,1.1s,baz=219,slow=5.2,SNR=3.3						
SPITS				LR	LR	17 10 47.4	
	comp=Z,124nm,19.5s,baz=305,slow=33						
E54A	**Lac Daplat, Po**	**24.84**	**249**	P	**P**	**17 02 28.1**	**+0.8**
	baz=41						
D52A	**ZEK Kipawa Sen**	**24.99**	**251**	P	**P**	**17 02 29.2**	**+0.5**
	baz=42						
E53A	**Dumoine, Ponti**	**25.10**	**249**	P	**P**	**17 02 30.6**	**+0.9**
	baz=41						
LONY	**Lake Ozonia**	**25.11**	**243**	*e*P	**P**	**17 02 29.7**	**-0.1**
	comp=Z,45nm,1.0s						
KONO	**Kongsberg**	**25.23**	**70⇑**	*e*P	**P**	**17 02 33.1**	**+2.4**
KONO				pmax	pmax		
	comp=Z,64nm,2.5s						
FCC	**Fort Churchill**	**25.25**	**287**	*e*P	**P**	**17 02 31.3**	**+0.4**
	comp=Z,20nm,1.3s						
FCC	**Fort Churchill**	**25.25**	**287**	*e*P	**P**	**17 02 31.3**	**+0.4**
FCC				pmax	pmax		
	comp=Z,20nm,1.3s						
NB2	**NORSAR Subarra**	**25.35**	**67**	P	**P**	**17 02 34.6**	**+2.7**
	comp=Z,16nm,1.2s,baz=290,slow=10						
NB200	**NORSAR Array S**	**25.35**	**67**	*e*P	**P**	**17 02 31.2**	**-0.7**
NOA	**NORSAR Array B**	**25.35**	**67**	P	**P**	**17 02 31.2**	**-0.7**
	comp=Z,6.8nm,1.0s,baz=292,slow=9.7,SNR=4.3						
NOA				LR	LR	17 10 44.4	
	comp=Z,138nm,20.8s,baz=295,slow=32						
HRV	**Adam Dziewonsk**	**25.60**	**236**	P	**P**	**17 02 33.9**	**-0.3**
	baz=33						
E52A	**Mattawa**	**25.62**	**250**	P	**P**	**17 02 35.4**	**+1.0**
	baz=41						
D49A	**Beulah Townshi**	**26.13**	**255**	P	**P**	**17 02 39.9**	**+0.9**
	baz=43						
H55A	**Tweed**	**26.30**	**246**	P	**P**	**17 02 40.6**	**0.0**
	baz=38						
HFS	**Hagfors**	**26.85**	**67**	LR	LR	17 12 41.1	
	comp=Z,68nm,18.1s,baz=287,slow=35						
SADO	**Sadowa**	**27.00**	**249**	LR	LR	17 13 13.6	
	comp=Z,232nm,19.6s,baz=32,slow=36						
ARA0	**ARCESS Array S**	**27.96**	**44**	*e*P	**P**	**17 02 54.3**	**-1.0**
ARCES	**ARCESS Array B**	**27.96**	**44**	P	**P**	**17 02 54.3**	**-1.0**
	comp=Z,5.1nm,1.0s,baz=282,slow=7.3,SNR=6.8						
E46A	**Sault Ste Mari**	**28.17**	**257**	P	**P**	**17 02 57.7**	**+0.3**
	baz=43						
F44A	**Big Bay de Noc**	**29.46**	**259**	P	**P**	**17 03 10.2**	**+1.4**
	baz=43						
SSPA	**Standing Stone**	**29.77**	**242**	P	**P**	**17 03 12.2**	**+0.6**
	baz=34						
G43A	**Wallace**	**30.58**	**259**	P	**P**	**17 03 19.8**	**+1.1**
	baz=42						
ECH	**Echery**	**30.76**	**92**	*e*P	**P**	**17 03 18.0**	**-2.3**
	comp=Z,7.1nm,1.0s						
ECH	**Echery**	**30.76**	**92**	*e*P	**P**	**17 03 18.0**	**-2.3**
ECH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULM	**Lac du Bonnet**	**31.00**	**274**	*e*P	**P**	**17 03 21.9**	**-0.5**
	comp=Z,14nm,0.8s						
ULM	**Lac du Bonnet**	**31.00**	**274**	*e*P	**P**	**17 03 21.9**	**-0.5**
ULM				pmax	pmax		
	comp=Z,14nm,0.8s						
ULM	**Lac du Bonnet**	**31.00**	**274**	P	**P**	**17 03 21.8**	**-0.5**
	comp=Z,11nm,0.7s,baz=62,slow=8.3,SNR=16						
ULM				LR	LR	17 15 32.4	
	comp=Z,400nm,19.5s,baz=66,slow=36						
CLL	**Collm**	**31.50**	**83**	*e*P	**P**	**17 03 26.0**	**-0.7**
CLL				Lm	MLR	17 15 00.0	
	comp=Z,200nm,19.6s						
CLL	**Collm**	**31.50**	**83**	*e*P	**P**	**17 03 26.0**	**-0.7**
FIA0	**FINESS Array S**	**31.53**	**59**	*e*P	**P**	**17 03 27.5**	**+0.6**
FIA0	**FINESS Array S**	**31.53**	**59**	*e*P	**P**	**17 03 27.5**	**+0.6**
FINES	**FINESS Array B**	**31.53**	**59**	P	**P**	**17 03 27.5**	**+0.6**
	comp=Z,4.0nm,0.7s,baz=294,slow=10,SNR=8.9						
FINES				LR	LR	17 14 47.7	
	comp=Z,185nm,19.8s,baz=307,slow=34						
F39A	**Loretta**	**31.64**	**263**	P	**P**	**17 03 29.7**	**+1.6**
	baz=43						
F38A	**Pierce - Schro**	**32.06**	**264**	P	**P**	**17 03 32.2**	**+0.4**
	baz=44						
Q55A	**Buckhannon**	**32.07**	**243**	P	**P**	**17 03 31.2**	**-0.8**
	baz=34						
ESDC	**Sonseca Array**	**32.07**	**115**	P	**P**	**17 03 31.8**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=322,slow=9.9,SNR=8.2						
ESDC				LR	LR	17 14 10.6	
	comp=Z,118nm,18.1s,baz=265,slow=32						
ES19	**SONSECA Array**	**32.08**	**115**	*e*P	**P**	**17 03 30.8**	**-1.3**
YKA	**Yellowknife Ar**	**32.28**	**304**	P	**P**	**17 03 33.7**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=57,slow=9.5,SNR=46						
YKA				PcP	**PcP**	**17 06 20.8**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=34,slow=2.5,SNR=4.9						
YKA				ScP	**ScP**	**17 10 06.6**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=57,slow=4.5,SNR=3.5						
YKA				LR	LR	17 16 38.5	
	comp=Z,54nm,20.2s,baz=56,slow=36						
YKB5	**Yellowknife Ar**	**32.28**	**304**	*e*P	**P**	**17 03 33.8**	**+0.3**
YKB5				*e*PcP	**PcP**	**17 06 21.5**	**+0.3**
N49A	**Columbus Grove**	**32.31**	**250**	P	**P**	**17 03 34.7**	**+0.7**
	baz=37						
AGMN	**Agassiz Nation**	**32.32**	**271**	*e*P	**P**	**17 03 34.1**	**+0.1**
	comp=Z,24nm,0.9s						
ACSO	**Alum Creek Sta**	**32.33**	**248**	P	**P**	**17 03 36.7**	**+2.5**
	baz=36						
H40A	**Chili**	**32.34**	**261**	P	**P**	**17 03 35.7**	**+1.5**
	baz=42						
G38A	**Ridgeland**	**32.63**	**263**	P	**P**	**17 03 38.7**	**+1.9**
	baz=43						
H39A	**Augusta**	**32.72**	**262**	P	**P**	**17 03 39.8**	**+2.2**
	baz=42						
SPMN	**Marine on St.**	**33.05**	**264**	P	**P**	**17 03 42.4**	**+2.0**
	baz=43						
J41A	**Loganville**	**33.11**	**259**	P	**P**	**17 03 42.6**	**+1.6**
	baz=40						
K42A	**Prairie Point,**	**33.24**	**258**	P	**P**	**17 03 44.0**	**+1.9**
	baz=40						
L43A	**Garden Prairie**	**33.42**	**256**	P	**P**	**17 03 44.4**	**+0.8**
	baz=39						
J40A	**Soldiers Grove**	**33.43**	**260**	P	**P**	**17 03 44.1**	**+0.4**
	baz=41						
I39A	**Houston**	**33.45**	**261**	P	**P**	**17 03 45.1**	**+1.1**
	baz=41						
GEC2	**GERESS Array S**	**33.48**	**86**	*e*P	**P**	**17 03 42.8**	**-1.4**
	comp=Z,19nm,1.9s						
GEC2	**GERESS Array S**	**33.48**	**86**	*e*P	**P**	**17 03 42.8**	**-1.4**
GEC2				pmax	pmax		
	comp=Z,19nm,1.9s						
GERES	**GERESS Array B**	**33.48**	**86**	P	**P**	**17 03 44.5**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=329,slow=13,SNR=4.0						
M44A	**Midewin, Midew**	**33.71**	**255**	P	**P**	**17 03 44.6**	**-1.6**
	baz=38						
K41A	**Shullsburg**	**33.82**	**258**	P	**P**	**17 03 47.5**	**+0.3**
	baz=40						
L42A	**Oliver, Polo**	**33.99**	**257**	P	**P**	**17 03 49.5**	**+0.8**
	baz=39						
K40A	**Colesburg**	**34.15**	**259**	P	**P**	**17 03 51.0**	**+1.0**
	baz=40						
MDND	**Maddock**	**34.44**	**273**	P	**P**	**17 03 53.5**	**+1.0**
	baz=46						
K39A	**Oelwein**	**34.50**	**260**	P	**P**	**17 03 54.1**	**+1.0**
	baz=40						
R50A	**Paris**	**34.52**	**247**	P	**P**	**17 03 54.4**	**+1.1**
	baz=34						
TMCR	**Tamitsa**	**34.74**	**49**	*e*P	**P**	**17 03 54.9**	**+0.1**
TMCR				pmax	pmax		
	comp=Z,25nm,1.5s						
HDIL	**Hopedale**	**34.95**	**255**	P	**P**	**17 03 57.0**	**0.0**
	baz=38						
L39A	**Vinton**	**35.00**	**260**	P	**P**	**17 03 56.7**	**-0.7**
	baz=40						
S50A	**Richmond**	**35.05**	**247**	P	**P**	**17 03 57.7**	**-0.2**
	baz=34						
N42A	**Yates City**	**35.08**	**256**	P	**P**	**17 03 59.1**	**+1.1**
	baz=38						
U53A	**Fall Branch**	**35.35**	**244**	P	**P**	**17 04 00.4**	**-0.1**
	baz=32						
T51A	**Gray**	**35.44**	**246**	P	**P**	**17 04 01.3**	**0.0**
	baz=33						
TZTN	**Tazewell**	**35.62**	**245**	P	**P**	**17 04 03.1**	**+0.3**
	baz=33						
INK	**Inuvik**	**35.82**	**321**	*e*P	**P**	**17 04 04.6**	**+0.4**
	comp=Z,9.1nm,0.8s						
INK				PcP	**PcP**	**17 06 31.6**	**+0.3**
INK	**Inuvik**	**35.82**	**321**	*e*P	**P**	**17 04 04.6**	**+0.4**
INK						17 06 31.6	
INK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
INK	**Inuvik**	**35.82**	**321**	P	**P**	**17 04 04.9**	**+0.8**
	comp=Z,7.9nm,0.7s,baz=35,slow=12,SNR=28						
INK				PcP	**PcP**	**17 06 31.6**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=30,slow=1.9,SNR=3.6						
KMSC	**Kings Mountain**	**35.86**	**241**	P	**P**	**17 04 04.6**	**-0.2**
	baz=31						
ECSD	**EROS Data Cent**	**35.98**	**266**	*e*P	**P**	**17 04 06.7**	**+0.8**
	comp=Z,6.6nm,0.9s						
ECSD	**EROS Data Cent**	**35.98**	**266**	P	**P**	**17 04 07.8**	**+2.0**
	baz=42						
O41A	**Passleys Farm,**	**36.04**	**256**	P	**P**	**17 04 06.7**	**+0.4**
	baz=38						
V53A	**Saluda**	**36.04**	**243**	P	**P**	**17 04 05.6**	**-0.8**
	baz=32						
Q44A	**Meyer Farm, Va**	**36.14**	**253**	P	**P**	**17 04 08.0**	**+0.9**
	baz=36						
DGMT	**Dagmar**	**36.20**	**278**	P	**P**	**17 04 10.2**	**+2.5**
	baz=46						
V52A	**Sevierville**	**36.23**	**244**	P	**P**	**17 04 08.6**	**+0.6**
	baz=32						
X56A	**White Oak**	**36.29**	**240**	P	**P**	**17 04 08.6**	**+0.1**
	baz=30						
R45A	**Skylar, Fairfi**	**36.30**	**252**	P	**P**	**17 04 09.9**	**+1.4**
	baz=36						
U50A	**Jamestown**	**36.30**	**246**	P	**P**	**17 04 09.6**	**+1.0**
	baz=33						
T48A	**Bowling Green**	**36.41**	**249**	P	**P**	**17 04 09.7**	**+0.2**
	baz=34						
P41A	**Barry, Barry**	**36.47**	**256**	P	**P**	**17 04 11.4**	**+1.4**
	baz=37						
X55A	**Gracelyn & Ava**	**36.56**	**241**	P	**P**	**17 04 10.9**	**+0.1**
	baz=31						
W53A	**Cullowhee**	**36.62**	**243**	P	**P**	**17 04 11.5**	**+0.1**
	baz=32						
U49A	**Red Boiling Sp**	**36.63**	**247**	P	**P**	**17 04 12.5**	**+1.1**
	baz=34						
T47A	**Sharon Grove**	**36.83**	**249**	P	**P**	**17 04 14.3**	**+1.2**
	baz=34						
U48A	**Cassie Pea, Po**	**36.97**	**248**	P	**P**	**17 04 15.5**	**+1.2**
	baz=34						
R43A	**Red Bud**	**37.07**	**254**	P	**P**	**17 04 15.6**	**+0.5**
	baz=36						
Q41A	**Truxton**	**37.13**	**256**	P	**P**	**17 04 16.3**	**+0.7**
	baz=37						
NHSC	**New Hope**	**37.14**	**238**	P	**P**	**17 04 16.7**	**+1.0**
	baz=29						
T46A	**Princeton**	**37.14**	**250**	P	**P**	**17 04 16.1**	**+0.3**
	baz=35						
S44A	**Carbondale**	**37.23**	**252**	P	**P**	**17 04 16.3**	**-0.2**
	baz=35						
KLMR	**Klimovskoe**	**37.24**	**53**	*e*P	**P**	**17 04 14.3**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
KLMR	**Klimovskoe**	**37.24**	**53**	*e*P	**P**	**17 04 14.4**	**-1.9**
KLMR				AMP		17 04 21.5	
	comp=Z,16nm,1.6s						
X53A	**Estanollee**	**37.24**	**243**	P	**P**	**17 04 16.2**	**-0.4**
	baz=31						
V49A	**McMinnville**	**37.31**	**247**	P	**P**	**17 04 17.3**	**+0.1**
	baz=33						
X52A	**Dahlonega**	**37.41**	**243**	P	**P**	**17 04 18.6**	**+0.5**
	baz=32						
R42A	**Luebbering**	**37.46**	**254**	P	**P**	**17 04 19.7**	**+1.2**
	baz=36						
W50A	**Signal Mountai**	**37.52**	**246**	P	**P**	**17 04 19.4**	**+0.3**
	baz=32						
Y54A	**Tignall**	**37.53**	**241**	P	**P**	**17 04 19.5**	**+0.5**
	baz=31						
R41A	**Rosebud**	**37.72**	**255**	P	**P**	**17 04 21.3**	**+0.6**
	baz=36						
V48A	**Smith Brothers**	**37.74**	**248**	P	**P**	**17 04 20.7**	**-0.2**
	baz=33						
CCM	**Cathedral Cave**	**37.85**	**255**	*e*P	**P**	**17 04 22.0**	**+0.2**
	comp=Z,17nm,0.7s						
CCM	**Cathedral Cave**	**37.85**	**255**	*e*P	**P**	**17 04 22.0**	**+0.2**
CCM				pmax	pmax		
	comp=Z,17nm,0.7s						
CCM	**Cathedral Cave**	**37.85**	**255**	P	**P**	**17 04 22.0**	**+0.2**
	baz=36						
WVT	**Waverly**	**37.87**	**249**	P	**P**	**17 04 21.5**	**-0.4**
	baz=34						
S42A	**Caledonia**	**37.88**	**254**	P	**P**	**17 04 22.2**	**+0.2**
	baz=36						
V47A	**Nunnelly**	**37.98**	**249**	P	**P**	**17 04 22.4**	**-0.4**
	baz=34						
EPYK	**Eagle Plains**	**37.98**	**319**	*e*P	**P**	**17 04 22.9**	**+0.3**
	comp=Z,24nm,0.7s						
W49A	**Belvidere**	**38.01**	**247**	P	**P**	**17 04 23.2**	**+0.1**
	baz=33						
Z54A	**Sparta**	**38.13**	**241**	P	**P**	**17 04 24.9**	**+0.8**
	baz=30						
V46A	**Holladay**	**38.27**	**249**	P	**P**	**17 04 25.2**	**-0.1**
	baz=34						
W48A	**Pulaski**	**38.29**	**247**	P	**P**	**17 04 25.0**	**-0.5**
	baz=33						
Z53A	**Monticello**	**38.40**	**242**	P	**P**	**17 04 25.6**	**-0.8**
	baz=31						
LAO	**LASA Array**	**38.43**	**277**	*e*P	**P**	**17 04 28.0**	**+1.3**
	comp=Z,46nm,0.8s						
LAO	**LASA Array**	**38.43**	**277**	P	**P**	**17 04 28.7**	**+2.1**
	baz=44,SNR=6.9						
S41A	**Jillco Farms,**	**38.47**	**255**	P	**P**	**17 04 27.1**	**+0.1**
	baz=36,SNR=8.2						
X49A	**Woodville**	**38.55**	**246**	P	**P**	**17 04 27.7**	**+0.1**
	baz=32						
T42A	**Van Buren**	**38.62**	**254**	*e*P	**P**	**17 04 28.1**	**-0.1**
	comp=Z,12nm,1.1s						
T42A	**Van Buren**	**38.62**	**254**	P	**P**	**17 04 28.4**	**+0.2**
	baz=35						
U43A	**Rector**	**38.84**	**252**	P	**P**	**17 04 30.8**	**+0.8**
	baz=35						
T41A	**Mountain View**	**38.92**	**254**	P	**P**	**17 04 31.9**	**+1.2**
	baz=36						
X48A	**Hartselle**	**38.92**	**247**	P	**P**	**17 04 31.2**	**+0.4**
	baz=32						
357A	**Townsend**	**39.14**	**238**	P	**P**	**17 04 32.3**	**-0.3**
	baz=29						
EGMT	**Eagleton**	**39.16**	**282**	*e*P	**P**	**17 04 34.7**	**+2.0**
	comp=Z,14nm,0.9s						
EGMT	**Eagleton**	**39.16**	**282**	P	**P**	**17 04 35.3**	**+2.6**
	baz=45						
X47A	**Russelville**	**39.22**	**248**	P	**P**	**17 04 34.1**	**+0.8**
	baz=33						
U42A	**Revenden**	**39.24**	**253**	P	**P**	**17 04 34.9**	**+1.5**
	baz=35						
RSSD	**Black Hills**	**39.27**	**273**	*e*P	**P**	**17 04 35.8**	**+1.9**
	comp=Z,3.7nm,0.6s						
RSSD	**Black Hills**	**39.27**	**273**	P	**P**	**17 04 36.6**	**+2.8**
	baz=42						
152A	**Waverly Hall**	**39.42**	**243**	P	**P**	**17 04 34.9**	**-0.1**
	baz=31						
254A	**Abbeville**	**39.44**	**241**	P	**P**	**17 04 35.9**	**+0.8**
	baz=30						
Z50A	**Ashland**	**39.44**	**245**	P	**P**	**17 04 35.4**	**+0.3**
	baz=31						
KIEV	**Kiev**	**39.51**	**72**	*i* P	**P**	**17 04 35.9**	**+0.4**
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AKASG	**Malin Array Be**	**39.51**	**72**	P	**P**	**17 04 35.7**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=319,slow=8.2,SNR=8.7						
AKASG				LR	LR	17 19 38.7	
	comp=Z,142nm,19.0s,baz=280,slow=34						
AKBB	**Malin Array Si**	**39.51**	**72**	*e*P	**P**	**17 04 35.4**	**-0.1**
	comp=Z,13nm,1.7s						
AKBB	**Malin Array Si**	**39.51**	**72**	*e*P	**P**	**17 04 35.4**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,13nm,1.7s						
U41A	**Viola**	**39.56**	**254**	P	**P**	**17 04 36.6**	**+0.5**
	baz=35						
OBN	**Obninsk**	**39.74**	**62**	*e*P	**P**	**17 04 38.4**	**+1.0**
OBN				*e*		17 06 09.1	
OBN				*e*PPP	PPP	17 06 34.9	
OBN				pmax	pmax		
	comp=Z,31nm,2.5s						
Z49A	**Columbiana**	**39.76**	**245**	P	**P**	**17 04 38.4**	**+0.7**
	baz=32						
BUR04	**Bucovina Ar. S**	**39.82**	**78**	*e*P	**P**	**17 04 37.8**	**-0.5**
U40A	**Yellville**	**39.98**	**255**	P	**P**	**17 04 40.8**	**+1.2**
	baz=35						
150A	**Eclectic**	**40.03**	**244**	P	**P**	**17 04 40.7**	**+0.6**
	baz=31						
LRAL	**Lakeview Retre**	**40.10**	**246**	P	**P**	**17 04 41.3**	**+0.7**
	baz=32						
TOLK	**Toolik Lake Re**	**40.18**	**327**	*e*P	**P**	**17 04 41.8**	**+0.9**
	comp=Z,14nm,0.6s						
DAWY	**Dawson**	**40.34**	**318**	*e*P	**P**	**17 04 43.9**	**+1.5**
	comp=Z,19nm,0.9s						
WALA	**Waterton Lakes**	**40.37**	**286**	*e*P	**P**	**17 04 43.5**	**+0.7**
	comp=Z,22nm,1.0s						
EGAK	**Eagle**	**40.42**	**319**	*e*P	**P**	**17 04 44.0**	**+1.0**
	comp=Z,12nm,0.8s						
FYU	**Fort Yukon**	**40.43**	**323**	*e*P	**P**	**17 04 44.5**	**+1.6**
	comp=Z,19nm,1.2s						
HHAR	**Hobbs**	**40.55**	**256**	*e*P	**P**	**17 04 43.3**	**-1.0**
	comp=Z,16nm,0.9s						
WHAR	**Wooly Hollow**	**40.59**	**253**	*e*P	**P**	**17 04 45.4**	**+0.7**
	comp=Z,33nm,1.4s						
DLBC	**Dease Lake**	**40.80**	**306**	P	**P**	**17 04 47.8**	**+1.5**
	comp=Z,3.6nm,1.0s,baz=199,slow=24,SNR=3.2						
657A	**Interlachen**	**40.91**	**237**	P	**P**	**17 04 48.7**	**+1.3**
	baz=28						
351A	**Pinckard**	**41.00**	**243**	P	**P**	**17 04 50.6**	**+2.5**
	baz=30						
RLMT	**Red Lodge**	**41.03**	**278**	*e*P	**P**	**17 04 49.7**	**+1.2**
	comp=Z,11nm,0.9s						
RLMT	**Red Lodge**	**41.03**	**278**	P	**P**	**17 04 49.3**	**+0.9**
	baz=42,SNR=7.6						
249A	**Camden**	**41.05**	**245**	P	**P**	**17 04 49.8**	**+1.3**
	baz=31						
HRY	**Holter Researc**	**41.08**	**282**	*e*P	**P**	**17 04 49.3**	**+0.5**
PRP	**Porcupine Dome**	**41.24**	**322**	*e*P	**P**	**17 04 52.5**	**+2.6**
	comp=Z,5.3nm,0.8s						
KEST	**Kesra**	**41.35**	**104**	P	**P**	**17 04 52.3**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=40,slow=9.7,SNR=2.8						
KEST				LR	LR	17 19 58.2	
	comp=Z,140nm,20.5s,baz=300,slow=33						
COLD	**Coldfoot**	**41.35**	**326**	*e*P	**P**	**17 04 51.7**	**+1.2**
	comp=Z,6.2nm,1.4s						
W39A	**Magazine**	**41.36**	**255**	*e*P	**P**	**17 04 51.5**	**+0.4**
	comp=Z,31nm,1.8s						
W39A	**Magazine**	**41.36**	**255**	P	**P**	**17 04 51.9**	**+0.9**
	baz=35						
X40A	**Basin Creek Fa**	**41.51**	**253**	P	**P**	**17 04 52.7**	**+0.5**
	baz=34						
K22A	**Casper**	**41.57**	**273**	*e*P	**P**	**17 04 53.1**	**+0.2**
	comp=Z,29nm,1.3s						
K22A	**Casper**	**41.57**	**273**	P	**P**	**17 04 53.2**	**+0.4**
	baz=41,SNR=8.2						
BOZ	**Bozeman (W)**	**41.80**	**281**	*e*P	**P**	**17 04 55.1**	**+0.4**
	comp=Z,18nm,1.1s						
BOZ	**Bozeman (W)**	**41.80**	**281**	*e*P	**P**	**17 04 55.1**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,18nm,1.1s						
BOZ	**Bozeman (W)**	**41.80**	**281**	P	**P**	**17 04 56.4**	**+1.7**
	baz=42,SNR=13						
MIAR	**Mount Ida**	**41.80**	**254**	*e*P	**P**	**17 04 54.5**	**-0.1**
	comp=Z,26nm,1.5s						
MIAR	**Mount Ida**	**41.80**	**254**	*e*P	**P**	**17 04 54.5**	**-0.1**
MIAR				pmax	pmax		
	comp=Z,27nm,1.5s						
MIAR	**Mount Ida**	**41.80**	**254**	P	**P**	**17 04 54.8**	**+0.2**
	baz=34						
552A	**Lynn Haven**	**41.86**	**242**	P	**P**	**17 04 55.3**	**+0.2**
	baz=29						

SCRK	Sand Creek	41.86	320	*e*P	P	17 04 56.6	+1.7
	comp=Z,17nm,0.8s						
HYT	Haines Junctio	41.93	313	*e*P	P	17 04 57.8	+2.2
	comp=Z,16nm,0.7s						
LKWY	Lake	41.98	279	*e*P	P	17 04 56.5	+0.1
	comp=Z,11nm,0.8s						
LKWY	Lake	41.98	279	*e*P	P	17 04 56.5	+0.1
LKWY				pmax	pmax		
	comp=Z,11nm,0.8s						
MSO	Missoula	41.99	284	*e*P	P	17 04 56.9	+0.8
	comp=Z,5.0nm,0.7s						
MSO	Missoula	41.99	284	P	P	17 04 59.1	+2.9
	baz=43						
PHWY	Pilot Hill	42.08	271	*e*P	P	17 04 57.6	+0.4
	comp=Z,11nm,0.9s						
POKR	Poker Plat Res	42.09	322	P	P	17 04 59.6	+2.9
	baz=44						
IL1	Eielson Array	42.18	322	*e*P	P	17 04 58.2	+0.8
ILAR	Eielson Array	42.18	322	P	P	17 04 59.0	+1.7
	comp=Z,7.1nm,0.8s,baz=40,slow=7.2,SNR=61						
ILAR				PcP	PcP	17 06 51.4	+0.1
	comp=Z,2.1nm,0.7s,baz=12,slow=2.3,SNR=13						
ILAR				LR	LR	17 22 19.1	
	comp=Z,138nm,18.5s,baz=82,slow=36						
ILB	Eielson Array	42.18	322	*e*P	P	17 04 58.4	+1.0
H17A	Grant Village	42.20	279	*e*P	P	17 04 58.5	+0.4
	comp=Z,16nm,0.8s						
H17A	Grant Village	42.20	279	P	P	17 05 00.6	+2.5
	baz=42,SNR=17						
YHB	Horse Butte	42.22	279	*e*P	P	17 04 59.1	+0.8
	comp=Z,13nm,0.9s						
857A	Zephyrhills	42.23	237	P	P	17 04 57.5	-0.7
	baz=27						
QLMT	Earthquake Lak	42.28	280	*e*P	P	17 05 00.6	+1.9
YFT	Old Faithful	42.28	279	*e*P	P	17 05 01.2	+2.5
	comp=Z,18nm,0.8s						
RIDG	Independ'e Rid	42.30	320	*e*P	P	17 05 00.7	+2.3
	comp=Z,16nm,0.8s						
COLA	College	42.39	322	*e*P	P	17 05 00.4	+1.4
	comp=Z,15nm,1.0s						
YPP	Pitchstone Pla	42.40	279	*e*P	P	17 05 01.6	+1.8
	comp=Z,24nm,1.2s						
NEW	Newport	42.42	287	P	P	17 05 00.6	+1.0
	baz=44						
NEW	Newport	42.42	287	P	P	17 04 59.5	0.0
	comp=Z,1.6nm,0.6s,baz=39,slow=9.7,SNR=3.4						
DLMT	Dillon	42.43	281	*e*P	P	17 05 01.2	+1.3
	comp=Z,21nm,1.4s						
MDM	Murphy Dome	42.44	323	*e*P	P	17 05 00.8	+1.2
	comp=Z,15nm,0.9s						
HDA	Harding Lake	42.46	321	*e*P	P	17 05 01.4	+1.7
	comp=Z,36nm,1.8s						
HDA	Harding Lake	42.46	321	P	P	17 05 02.6	+2.9
	baz=44						
FLWY	Flagg Ranch	42.49	278	*e*P	P	17 05 02.0	+1.6
	comp=Z,35nm,1.7s						
N23A	Red Feather La	42.63	271	*e*P	P	17 05 02.7	+1.1
	comp=Z,31nm,1.5s						
N23A	Red Feather La	42.63	271	P	P	17 05 03.6	+1.9
	baz=40						
IMW	Indian Meadow	42.74	278	*e*P	P	17 05 05.2	+2.6
	comp=Z,9.8nm,0.7s						
WRH	Wood River Hil	42.76	322	*e*P	P	17 05 03.3	+1.3
	comp=Z,8.1nm,0.9s						
MOOW	Moose Ponds	42.76	278	*e*P	P	17 05 04.0	+1.3
	comp=Z,6.0nm,0.9s						
LOHW	Long Hollow	42.80	278	*e*P	P	17 05 04.5	+1.6
	comp=Z,8.8nm,1.0s						
LLLB	Lillooet	42.87	293	*e*P	P	17 05 04.6	+1.4
	comp=Z,12nm,0.9s						
BW06	Boulder Array	42.94	276	*e*P	P	17 05 04.4	+0.4
	comp=Z,11nm,0.8s						
BW06	Boulder Array	42.94	276	P	P	17 05 04.4	+0.4
	baz=41,SNR=18						
PD31	Pinedale Array	42.94	276	*e*P	P	17 05 04.4	+0.3
PDAR	Pinedale Array	42.94	276	*e*P	P	17 05 04.2	+0.1
PDAR				PP	PP	17 06 49.6	+6.2
PDAR	Pinedale Array	42.94	276	P	P	17 05 04.7	+0.6
	comp=Z,10.0nm,0.7s,baz=54,slow=7.3,SNR=56						
PDAR				PP	PP	17 06 49.6	+6.2
	comp=Z,2.4nm,0.9s,baz=46,slow=8.5,SNR=4.2						
PDAR				LR	LR	17 23 07.1	
	comp=Z,172nm,18.1s,baz=38,slow=36						
MCMT	McKenzie Canyo	42.95	281	*e*P	P	17 05 05.6	+1.4
FXWY	Fox Creek	42.98	278	*e*P	P	17 05 05.6	+1.2
	comp=Z,5.8nm,0.9s						
REDW	Red Top Meadow	43.10	278	*e*P	P	17 05 06.1	+0.7
	comp=Z,15nm,1.4s						
MLY	Manley	43.11	324	*e*P	P	17 05 06.2	+1.2
	comp=Z,4.6nm,0.8s						
IM3	Indian Mountai	43.23	326	*e*P	P	17 05 07.2	+1.3
C09A	Chrisman Ranch	43.28	288	*e*P	P	17 05 07.9	+1.3
	comp=Z,11nm,0.9s						
ISCO	Idaho Springs	43.32	270	*e*P	P	17 05 08.3	+1.0
	comp=Z,4.5nm,1.0s						
ISCO	Idaho Springs	43.32	270	*e*P	P	17 05 08.3	+1.0
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
B08A	Colville Reser	43.36	289	*e*P	P	17 05 08.1	+0.9
	comp=Z,8.9nm,0.8s						
MCK	McKinley	43.55	322	*e*P	P	17 05 09.2	+0.7
	comp=Z,14nm,0.9s						
MCK	McKinley	43.55	322	*e*P	P	17 05 09.3	+0.7
MCK				pmax	pmax		
	comp=Z,14nm,0.9s						
DHY	Denali Highway	43.57	320	*e*P	P	17 05 10.1	+1.2
	comp=Z,6.6nm,0.8s						
RND	Reindeer	43.77	321	*e*P	P	17 05 12.4	+2.0
	comp=Z,8.2nm,0.7s						
RND	Reindeer	43.77	321	*e*P	P	17 05 12.4	+2.0
RND				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RDOG	Red Dog Mine	43.88	332	*e*P	P	17 05 13.3	+2.2
	comp=Z,8.6nm,0.7s						
WMOK	Wichita Mounta	44.09	259	*e*P	P	17 05 13.2	+0.1
	comp=Z,14nm,1.3s						
WMOK	Wichita Mounta	44.09	259	*e*P	P	17 05 13.2	+0.1
WMOK				pmax	pmax		
	comp=Z,14nm,1.3s						
WMOK	Wichita Mounta	44.09	259	P	P	17 05 13.0	-0.2
	baz=35						
F10A	Beach Ranch, E	44.15	285	*e*P	P	17 05 14.0	+0.3
	comp=Z,41nm,1.6s						
TRF	Thorofare Moun	44.17	322	*e*P	P	17 05 15.8	+2.1
	comp=Z,28nm,1.6s						
KLU	Klutina	44.28	318	*e*P	P	17 05 16.6	+2.0
	comp=Z,8.9nm,0.7s						
O20A	White River Ci	44.33	273	*e*P	P	17 05 16.3	+1.1
	comp=Z,23nm,0.8s						
O20A	White River Ci	44.33	273	P	P	17 05 16.6	+1.3
	baz=39,SNR=10						
BBB	Bella Bella	44.43	299	P	P	17 05 17.6	+1.9
	comp=Z,14nm,1.0s,baz=31,slow=9.3,SNR=3.1						
SMCO	Snowmass	44.46	271	*e*P	P	17 05 17.6	+1.1
	comp=Z,12nm,1.1s						
DIV	Divide	44.51	318	*e*P	P	17 05 18.0	+1.7
	comp=Z,11nm,1.0s						
HLID	Hailey	44.64	281	*e*P	P	17 05 19.1	+1.4
	comp=Z,6.9nm,1.0s						
HLID	Hailey	44.64	281	P	P	17 05 19.4	+1.7
	baz=41,SNR=6.8						
SML	Sawmill	44.81	320	*e*P	P	17 05 21.1	+2.4
	comp=Z,27nm,0.8s						
T25A	Trinidad	44.84	267	*e*P	P	17 05 20.6	+1.2
	comp=Z,20nm,0.9s						
T25A	Trinidad	44.84	267	P	P	17 05 20.7	+1.3
	baz=37,SNR=11						
NRIK	Noril'sk	44.86	23	P	P	17 05 20.2	+1.3
	comp=Z,1.1nm,0.3s,baz=357,slow=8.1,SNR=4.2						
SDCO	Great Sand Dun	44.88	268	*e*P	P	17 05 20.9	+1.1
	comp=Z,17nm,1.4s						
SDCO	Great Sand Dun	44.88	268	P	P	17 05 21.8	+2.0
	baz=37,SNR=8.0						
BMO	Blue Mountains	45.03	284	*e*P	P	17 05 21.0	+0.3
	comp=Z,11nm,0.9s						
BMO	Blue Mountains	45.03	284	*e*P	P	17 05 21.0	+0.3
BMO				pmax	pmax		
	comp=Z,11nm,0.9s						
HVU	Hansel Valley	45.23	278	*e*P	P	17 05 22.9	+0.5
	comp=Z,8.7nm,1.1s						
HVU	Hansel Valley	45.23	278	*e*P	P	17 05 22.9	+0.5
HVU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SPUT	South Promonto	45.44	277	*e*P	P	17 05 24.6	+0.5
	comp=Z,29nm,1.2s						
G08A	Pilot Rock	45.47	286	*e*P	P	17 05 25.9	+1.7
	comp=Z,29nm,1.9s						
JLU	Jordanelle	45.50	276	*e*P	P	17 05 25.2	+0.5
	comp=Z,19nm,1.2s						
S22A	4UR Ranch, Cre	45.52	269	*e*P	P	17 05 26.0	+1.1
	comp=Z,26nm,1.2s						
S22A	4UR Ranch, Cre	45.52	269	P	P	17 05 26.6	+1.7
	baz=37,SNR=20						
CTU	Camp Tracy	45.58	276	*e*P	P	17 05 25.7	+0.5
	comp=Z,8.0nm,0.8s						
SUA	Susitna One	45.82	320	*e*P	P	17 05 28.5	+1.7
	comp=Z,12nm,0.8s						
PV21	Cone Mtn., Par	45.91	272	*e*P	P	17 05 28.5	+0.6
	comp=Z,7.4nm,0.8s						
PV04	Paradox Valley	46.01	272	*e*P	P	17 05 29.4	+0.8
	comp=Z,12nm,0.6s						
BGU	Big Grassy Mou	46.01	277	*e*P	P	17 05 29.2	+0.7
	comp=Z,14nm,1.4s						
PV23	Carpenter Ridg	46.01	272	*e*P	P	17 05 29.6	+0.8
	comp=Z,16nm,0.8s						
PV12	Saucer Basin,	46.02	271	*e*P	P	17 05 29.4	+0.7
	comp=Z,12nm,0.7s						
PV09	Paradox Valley	46.03	272	*e*P	P	17 05 29.4	+0.5
P17A	Butcher Ranch,	46.04	274	*e*P	P	17 05 29.3	+0.5
	comp=Z,30nm,1.2s						
MPU	Maple Canyon	46.05	275	*e*P	P	17 05 29.0	+0.1
	comp=Z,26nm,1.2s						
PV01	Paradox Valley	46.05	271	*e*P	P	17 05 29.4	+0.3
	comp=Z,8.5nm,0.9s						
PV11	David Mesa, Pa	46.07	272	*e*P	P	17 05 30.3	+1.2
	comp=Z,45nm,0.4s						
PV14	Lion Creek, Pa	46.08	272	*e*P	P	17 05 30.1	+0.9
	comp=Z,43nm,0.7s						
PV03	Paradox Valley	46.09	271	*e*P	P	17 05 30.4	+1.1
	comp=Z,58nm,1.3s						
PV17	East Wray Mesa	46.12	272	*e*P	P	17 05 30.5	+0.9
	comp=Z,69nm,0.7s						
PV13	Radium Mtn., P	46.15	271	*e*P	P	17 05 30.8	+1.0
	comp=Z,25nm,0.8s						
SRU	San Rafael Swe	46.22	274	*e*P	P	17 05 30.9	+0.6
	comp=Z,8.8nm,0.8s						
SRU	San Rafael Swe	46.22	274	*e*P	P	17 05 30.9	+0.6
SRU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ABTX	Abilene, Hawle	46.23	258	*e*P	P	17 05 30.4	+0.2
	comp=Z,30nm,1.1s						
ABTX	Abilene, Hawle	46.23	258	P	P	17 05 32.3	+2.0
	baz=34						
NLU	North Lily Min	46.31	276	*e*P	P	17 05 31.8	+0.8
	comp=Z,23nm,1.0s						
PV05	Paradox Valley	46.35	272	*e*P	P	17 05 30.8	-0.6
	comp=Z,158nm,0.4s						
TMUT	Trail Mountain	46.41	274	*e*P	P	17 05 32.7	+0.8
	comp=Z,31nm,1.4s						
DUG	Dugway, Tooele	46.47	276	*e*P	P	17 05 33.0	+0.8
	comp=Z,7.2nm,1.0s						
DUG	Dugway, Tooele	46.47	276	*e*P	P	17 05 33.0	+0.8
DUG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DUG	Dugway, Tooele	46.47	276	P	P	17 05 34.8	+2.6
	baz=39						
MSTX	Muleshoe	46.61	262	*e*P	P	17 05 34.5	+1.1
	comp=Z,15nm,1.1s						
MSTX	Muleshoe	46.61	262	P	P	17 05 35.5	+2.2
	baz=35						
I07A	Izee	46.64	285	*e*P	P	17 05 34.7	+1.3
	comp=Z,12nm,1.1s						
Q16A	Castle Valley	46.69	274	*e*P	P	17 05 35.0	+1.1
	comp=Z,14nm,0.9s						
J08A	Circle Bar Ran	46.71	284	*e*P	P	17 05 34.7	+0.7
	comp=Z,20nm,0.9s						
MVCO	Mesa Verde	46.75	270	P	P	17 05 36.3	+1.8
	baz=37						
ELK	Elko	47.20	279	*e*P	P	17 05 39.7	+1.7
	comp=Z,13nm,0.8s						
ELK	Elko	47.20	279	P	P	17 05 40.3	+2.2
	comp=Z,11nm,0.8s,baz=33,slow=6.4,SNR=33						
ARU	Arti	47.43	48	*e*P	P	17 05 39.0	-0.3
	comp=Z,6.9nm,0.8s						
ARU	Arti	47.43	48	*c* *i*P	P	17 05 40.1	+0.8
ARU						17 07 29.5	
ARU				S	S	17 12 36.3	+3.2
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WVOR	Wild Horse Val	47.50	283	*e*P	P	17 05 41.1	+0.9
	comp=Z,11nm,1.1s						
WVOR	Wild Horse Val	47.50	283	*e*P	P	17 05 41.1	+0.9
WVOR				pmax	pmax		
	comp=Z,11nm,1.1s						
TCRU	Three Creeks R	47.54	275	*e*P	P	17 05 42.0	+1.3
	comp=Z,17nm,0.4s						
ANMO	Albuquerque	47.58	267	*e*P	P	17 05 42.4	+1.4
	comp=Z,8.4nm,1.1s						
ANMO	Albuquerque	47.58	267	*e*P	P	17 05 42.4	+1.4
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANMO	Albuquerque	47.58	267	P	P	17 05 42.6	+1.6
	baz=36						
MTPU	Mount Pierson	47.86	274	*e*P	P	17 05 44.4	+1.0
	comp=Z,8.7nm,1.0s						
J05D	Fort Rock, OR	48.05	286	P	P	17 05 46.8	+2.3
	baz=39,SNR=5.1						
JCT	Junction City	48.09	257	P	P	17 05 46.1	+1.3
	baz=33						
PSUT	Pine Spring	48.28	276	*e*P	P	17 05 47.1	+0.8
	comp=Z,9.7nm,0.8s						
BNM	Barren Site	48.31	266	*e*P	P	17 05 47.6	+1.0
LAZ	Ladron	48.35	267	*e*P	P	17 05 47.1	+0.1
BMN	Battle Mountai	48.39	280	*e*P	P	17 05 47.6	+0.5
	comp=Z,9.5nm,0.9s						
BMN	Battle Mountai	48.39	280	*e*P	P	17 05 47.6	+0.5
BMN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PKCU	Pink Cliffs	48.40	274	*e*P	P	17 05 48.1	+0.7
	comp=Z,16nm,0.9s						
LENM	Lemitar	48.47	266	*e*P	P	17 05 48.1	+0.3
J04D	Umpqua Nationa	48.49	286	P	P	17 05 49.8	+1.8
	baz=39						
MOD	Modoc Plateau	48.69	284	*e*P	P	17 05 49.7	+0.2
	comp=Z,22nm,1.3s						
I03D	Drain, OR	48.71	288	P	P	17 05 52.2	+2.8
	baz=39						
CCUT	Cedar City	48.82	275	*e*P	P	17 05 51.5	+0.9
	comp=Z,7.8nm,0.9s						
KNB	Kanab	48.99	274	*e*P	P	17 05 52.4	+0.6
	comp=Z,27nm,1.2s						
KNB	Kanab	48.99	274	*e*P	P	17 05 52.4	+0.6
KNB				pmax	pmax		
	comp=Z,27nm,1.2s						
W18A	Petrified Fore	49.02	270	P	P	17 05 53.3	+1.2
	baz=36						
LCMT	Little Creek M	49.19	274	*e*P	P	17 05 54.1	+0.8
	comp=Z,9.1nm,0.8s						
BILL	Bilibino	49.21	346	*e*P	P	17 05 52.9	0.0
	comp=Z,15nm,1.6s						
BILL	Bilibino	49.21	346	*e*P	P	17 05 52.7	-0.1
BILL				*e*		17 07 49.4	
BILL				*e*PPP	PPP	17 08 37.0	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.7s						
R11A	Troy Canyon, C	49.25	277	*e*P	P	17 05 54.8	+1.0
	comp=Z,9.4nm,1.1s						
R11A	Troy Canyon, C	49.25	277	P	P	17 05 55.2	+1.4
	baz=37,SNR=10						
KDAK	Kodiak Island	49.30	318⇑	*e*P	P	17 05 55.9	+2.2
J01E	Myrtle Point	49.39	288	P	P	17 05 55.8	+1.2
	baz=39						
WUAZ	Wupatki	49.49	271	*e*P	P	17 05 56.5	+0.9
	comp=Z,23nm,1.2s						
WUAZ	Wupatki	49.49	271	P	P	17 05 56.6	+0.9
	baz=36,SNR=5.2						
M04C	Macdoel	49.50	285	P	P	17 05 56.8	+1.1
	baz=38						
MNTX	Cornudas Mount	49.72	263	*e*P	P	17 05 57.7	+0.5
	comp=Z,20nm,1.4s						
MNTX	Cornudas Mount	49.72	263	P	P	17 05 57.4	+0.1
	baz=34,SNR=9.6						
BR101	Keskin Array S	49.78	79	*e*P	P	17 05 57.7	0.0
BRTR	Keskin Array B	49.78	79	P	P	17 05 57.7	0.0
	comp=Z,1.1nm,0.9s,baz=328,slow=4.4,SNR=6.2						
BRTR				LR	LR	17 29 31.5	
	comp=Z,45nm,18.4s,baz=279,slow=39						
KVN	Kaiserville	49.89	280	*e*P	P	17 05 59.7	+1.0
	comp=Z,23nm,0.9s						
KVN	Kaiserville	49.89	280	*e*P	P	17 05 59.7	+1.0
KVN				pmax	pmax		
	comp=Z,23nm,0.9s						
PAHR	Pah Rah Range	49.98	281	*e*P	P	17 06 00.7	+1.3
	comp=Z,26nm,1.3s						
121A	Cookes Peak, D	50.19	266	P	P	17 06 02.9	+2.0
	baz=35						
BEKR	Beckworth	50.32	282	*e*P	P	17 06 02.4	+0.6
	comp=Z,8.9nm,1.2s						
NV11	Mina Array Sit	50.41	279	*e*P	P	17 06 03.8	+1.2
	comp=Z,2.1nm,1.4s						
X16A	Lo Mia Camp, P	50.41	271	*e*P	P	17 06 03.9	+1.2
	comp=Z,12nm,1.3s						
RYN	Ryan	50.43	280	*e*P	P	17 06 03.5	+0.7
	comp=Z,16nm,0.9s						
NV01	Mina Array Sit	50.48	280	*e*P	P	17 06 03.2	0.0
NVAR	Mina Array Bea	50.48	280	P	P	17 06 05.2	+2.0
	comp=Z,4.4nm,0.7s,baz=44,slow=5.9,SNR=21						
NVAR				LR	LR	17 26 47.6	
	comp=Z,167nm,19.9s,baz=357,slow=35						
SHPR	Sheep Range	50.52	275	*e*P	P	17 06 04.2	+0.8
	comp=Z,9.2nm,1.1s						
PNTR	Pine Nut	50.57	281	*e*P	P	17 06 05.4	+1.6
	comp=Z,27nm,0.8s						
KIV	Kislovodsk	50.63	69	*e*P	P	17 06 03.6	-0.5
	comp=Z,8.4nm,0.9s						
KIV	Kislovodsk	50.63	69	*e*P	P	17 06 06.5	+2.4
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
O03E	Paynes Creek	50.66	284	P	P	17 06 06.1	+1.8
	baz=38						
TAM	Tamanrasset	50.66	117	P	P	17 06 08.1	+3.5
TAM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TPNV	Topopah Spring	50.68	277	*e*P	P	17 06 05.7	+1.0
	comp=Z,7.5nm,0.9s						
TPNV	Topopah Spring	50.68	277	*e*P	P	17 06 05.7	+1.0
TPNV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TPNV	Topopah Spring	50.68	277	P	P	17 06 04.6	-0.1
	baz=37						
TXAR	Lajitas Array	50.87	260	P	P	17 06 06.9	+0.8
	comp=Z,2.9nm,0.8s,baz=62,slow=5.6,SNR=19						
TXAR				LR	LR	17 27 36.4	
	comp=Z,71nm,20.1s,baz=0.0,slow=36						
KBZ	Khabaz	50.91	69	P	P	17 06 06.2	+0.2
	comp=Z,4.4nm,0.8s,baz=326,slow=11,SNR=12						
KBZ				LR	LR	17 27 08.9	
	comp=Z,71nm,21.2s,baz=336,slow=36						
WAKR	Walker	50.96	280	*e*P	P	17 06 08.1	+1.3
	comp=Z,25nm,1.4s						
GRAC	Grapevine Rang	51.18	278	P	P	17 06 10.0	+1.8
	baz=37						
PDMCI	Parker Dam,Lak	51.80	273	P	P	17 06 15.1	+2.2
	baz=36						
TUC	Tucson	51.81	269	*e*P	P	17 06 14.3	+1.2
	comp=Z,20nm,1.3s						
TUC	Tucson	51.81	269	*e*P	P	17 06 14.3	+1.2
TUC				pmax	pmax		
	comp=Z,20nm,1.3s						
TUC	Tucson	51.81	269	P	P	17 06 15.3	+2.2
	baz=35						
CWC	Cottonwood Cre	51.97	278	P	P	17 06 15.3	+1.0
	baz=36						
MPMC	Manual Prospec	51.99	277	P	P	17 06 16.3	+1.7
	baz=36,SNR=12						
GMRC	Granite Mounta	52.14	275	P	P	17 06 16.2	+0.7
	baz=36,SNR=7.3						
GSC	Goldstone, Bar	52.28	276	P	P	17 06 19.1	+2.6
	baz=36						
IRM	Iron Mountain	52.41	274	P	P	17 06 19.0	+1.6
	baz=35						
HEC	Hector,Ludlow	52.43	275	P	P	17 06 20.2	+2.6
	baz=36						
Y12C	Blythe	52.44	273	P	P	17 06 19.8	+2.2
	baz=35						
ISA	Isabella, Lake	52.78	278	*e*P	P	17 06 20.9	+0.7
	comp=Z,8.2nm,0.9s						
ISA	Isabella, Lake	52.78	278	*e*P	P	17 06 20.9	+0.7
ISA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ISA	Isabella, Lake	52.78	278	P	P	17 06 22.9	+2.7
	baz=36						
VES	Vestal, Richgr	52.93	278	P	P	17 06 23.7	+2.5
	baz=36						
BELC	Belle Mtn. Jos	52.94	274	P	P	17 06 23.6	+2.1
	baz=35						
BC3	Big Chuckawall	52.96	274	P	P	17 06 23.8	+2.1
	baz=35						
214A	Organ Pipe Nat	53.08	270	P	P	17 06 24.5	+2.0
	baz=34						
EDW2	Edwards Air Fo	53.19	277	P	P	17 06 24.6	+1.4
	baz=36						
PFO	Pinyon Flats O	53.48	274	*e*P	P	17 06 26.2	+0.7
	comp=Z,6.9nm,0.6s						
PFO	Pinyon Flats O	53.48	274	*e*P	P	17 06 26.2	+0.7
PFO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PFO	Pinyon Flats O	53.48	274	P	P	17 06 27.2	+1.8
	comp=Z,2.4nm,0.3s,baz=57,slow=13,SNR=3.9						
BFSC	Mount Baldy Ra	53.55	276	P	P	17 06 28.5	+2.5
	baz=35						
ABKAR	Akbulak array	53.63	53	*e*P	P	17 06 25.8	-0.4
	comp=Z,5.7nm,0.6s						
PKM	Mcpherson Peak	54.05	278	P	P	17 06 31.3	+1.6
	baz=35						
MONP2	Monument Peak	54.05	274	P	P	17 06 31.1	+1.4
	baz=35						
BLG	Laguna Peak, P	54.33	277	P	P	17 06 34.2	+2.7
	baz=35						
SCI2	San Clemente I	55.00	276	P	P	17 06 38.4	+2.0
	baz=35						
YAK	Yakutsk	56.79	4	*e*P	P	17 06 48.8	0.0
YAK				pmax	pmax		
	comp=Z,28nm,0.7s						
YAK				pmax	pmax		
	comp=N,16nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
CMIG	Matias Romero	57.43	244	P	P	17 06 51.8	-2.1
	comp=E,1.4nm,0.5s,baz=43,slow=9.2,SNR=4.0						
TOA1	Torodi Ar. Sit	57.75	126	*e*P	P	17 06 54.0	-2.1
TOA0	Torodi Ar. Sit	57.75	126	*e*P	P	17 06 52.5	-3.6
TORD	Torodi Ar. Bea	57.75	126	P	P	17 06 54.0	-2.1
	comp=E,2.1nm,0.8s,baz=332,slow=8.1,SNR=7.3						
TORD				LR	LR	17 29 33.7	
	comp=E,41nm,18.7s,baz=305,slow=34						
ZAA1	Zalesovo Array	57.76	34	*e*P	P	17 06 54.4	-1.3
ZALV	Zalesovo Beam	57.76	34	P	P	17 06 54.4	-1.3
	comp=E,1.0nm,0.7s,baz=351,slow=6.3,SNR=3.2						
ZALV				LR	LR	17 33 05.7	
	comp=E,34nm,19.7s,baz=28,slow=37						
OTUK	Ortayu	58.96	45	P	P	17 07 06.7	+2.4
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOD	Bodaibo	59.77	14	*e*P	P	17 07 09.7	0.0
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ROSC	El Rosal	61.17	217	LR	LR	17 32 05.3	
	comp=Z,20nm,18.1s,baz=62,slow=34						
DBIC	Dimbokro	61.37	136	P	P	17 07 21.1	0.0
	comp=Z,4.5nm,0.7s,baz=308,slow=9.1,SNR=6.1						
DBIC				LR	LR	17 30 52.2	
	comp=Z,58nm,18.2s,baz=334,slow=33						
GEYT	Alibeck	62.28	61	P	P	17 07 26.4	-0.7
	comp=Z,1.7nm,0.6s,baz=296,slow=9.0,SNR=2.4						
GEYT				LR	LR	17 35 37.5	
	comp=Z,87nm,19.1s,baz=275,slow=37						
DGZ	Jazzator, Alta	62.30	34	*i*P	P	17 07 28.6	+1.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK31	Makanchi Array	63.45	39	*e*P	P	17 07 34.0	-0.7
	comp=Z,2.8nm,1.2s						
MK31	Makanchi Array	63.45	39	*e*P	P	17 07 34.0	-0.7
MK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MK32	Makanchi Array	63.45	39	*e*P	P	17 07 34.3	-0.4
MKAR	Makanchi Array	63.45	39	*e*P	P	17 07 33.9	-0.8
	comp=Z,11nm,0.7s						
MKAR	Makanchi Array	63.45	39	*e*P	P	17 07 33.9	-0.8
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
MKAR	Makanchi Array	63.45	39	P	P	17 07 34.3	-0.4
	comp=Z,1.5nm,0.6s,baz=338,slow=5.6,SNR=25						
MKAR				LR	LR	17 36 05.2	
	comp=Z,35nm,20.4s,baz=347,slow=37						
MK01	Makanchi Array	63.47	39	*e*P	P	17 07 33.8	-1.1
MNAS	Manas	64.02	48	P	P	17 07 43.1	+4.4
MNAS				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AAK	Ala-Archa	64.59	47	*e*P	P	17 07 41.7	-0.7
	comp=Z,5.8nm,1.4s						
AAK	Ala-Archa	64.59	47	*e*P	P	17 07 41.7	-0.7

AAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
PETK	**Petropavlovsk-**	**64.73**	**347**	LR	LR	17 37 51.0	
	comp=Z,119nm,18.3s,baz=23,slow=38						
SONA0	**Songino Array**	**68.34**	**22**	*e*P	**P**	**17 08 07.5**	**+1.2**
SONM	**Songino Array**	**68.34**	**22**	P	**P**	**17 08 07.5**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=328,slow=6.6,SNR=4.9						
ULN	**Ulaanbaatar**	**68.43**	**21**	*e*P	**P**	**17 08 06.9**	**0.0**
	comp=Z,9.9nm,1.3s						
ULN	**Ulaanbaatar**	**68.43**	**21**	*e*P	**P**	**17 08 06.9**	**0.0**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HIA	**Hailar**	**68.82**	**12**	*i* P	**P**	**17 08 09.7**	**+0.5**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLR	**Kul'dur**	**69.67**	**4**	*i* P	**P**	**17 08 15.1**	**+0.7**
USRK	**Ussuriysk Ar.**	**74.71**	**4**	P	**P**	**17 08 45.9**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=329,slow=2.5,SNR=3.6						
GTA	**Gaotai**	**75.05**	**29**	*e*P	**P**	**17 08 48.4**	**+1.6**
GTA				pP	sP	17 08 52.8	+1.4
GTA				sP	pP	17 08 55.4	+5.3
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
LPAZ	**La Paz**	**80.01**	**205**	*e*P	**P**	**17 09 13.5**	**-1.6**
LPAZ	**La Paz**	**80.01**	**205**	*e*P	**P**	**17 09 13.5**	**-1.6**
LPAZ	**La Paz**	**80.01**	**205**	LR	LR	17 44 08.3	
	comp=Z,16nm,20.3s,baz=329,slow=35						
KSRS	**Korea Array**	**81.23**	**8**	P	**P**	**17 09 21.9**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=1.1,slow=5.4,SNR=4.8						
KSAR	**Wonju Array Be**	**81.25**	**8**	P	**P**	**17 09 21.9**	**+0.9**
KSAR	**Wonju Array Be**	**81.25**	**8**	P	**P**	**17 09 21.9**	**+0.9**
MAJO	**Matsushiro**	**82.44**	**359**	*e*P	**P**	**17 09 27.4**	**+0.1**
MAJO	**Matsushiro**	**82.44**	**359**	*e*P	**P**	**17 09 27.5**	**+0.1**
MJAR	**Matsushiro Arr**	**82.44**	**359**	P	**P**	**17 09 27.5**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=355,slow=4.8,SNR=5.9						
CPUP	**Villa Florida**	**88.18**	**193**	*e*P	**P**	**17 09 54.0**	**-1.8**
	comp=Z,45nm,2.0s						
CPUP	**Villa Florida**	**88.18**	**193**	*e*P	**P**	**17 09 54.0**	**-1.8**
CPUP				pmax	pmax		
	comp=Z,45nm,2.0s						
CPUP	**Villa Florida**	**88.18**	**193**	P	**P**	**17 09 55.0**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=49,slow=3.9,SNR=4.1						
CMAR	**Chiang Mai Arr**	**94.74**	**36**	*i* P	**P**	**17 10 27.7**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**94.74**	**36**	P	**P**	**17 10 26.0**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=325,slow=5.0,SNR=5.8						
CMAR				LR	LR	17 57 57.3	
	comp=Z,12nm,18.0s,baz=160,slow=39						
WR1	**Warramunga Arr**	**138.57**	**4**	*e*PKPpre	PKPpre	17 16 22.9	
WR1				*e*PKPdf	**PKPdf**	**17 16 30.6**	**-0.2**
WRA	**Warramunga Arr**	**138.57**	**4**	PKhKP	PKPpre	17 16 22.9	
	comp=Z,0.3nm,0.6s,baz=355,slow=2.2,SNR=12						
WRA				PKP	**PKPdf**	**17 16 30.6**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=346,slow=2.4,SNR=8.9						
AS31	**Alice Springs**	**142.25**	**5**	*e*PKPdf	**PKPdf**	**17 16 37.0**	**-0.5**
AS01	**Alice Springs**	**142.25**	**5**	*e*PKPpre	PKPpre	17 16 31.2	
ASAR	**Alice Springs**	**142.25**	**5**	PKhKP	PKPpre	17 16 32.2	
	comp=Z,1.2nm,0.7s,baz=352,slow=2.2,SNR=22						
ASAR				PKP	**PKPdf**	**17 16 37.3**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=359,slow=2.5,SNR=10.0						
STKA	**Stephens Creek**	**150.38**	**353**	*e*PKPbc	**PKPbc**	**17 16 55.9**	**-0.2**
STKA	**Stephens Creek**	**150.38**	**353**	*e*PKIKP	**PKPbc**	**17 16 55.9**	**-0.2**
STKA	**Stephens Creek**	**150.38**	**353**	PKPbc	**PKPbc**	**17 16 56.1**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=343,slow=1.6,SNR=4.1						
QSPA	**South Pole Qui**	**151.27**	**180**	*e*PKPbc	**PKPbc**	**17 16 56.2**	**-0.9**

*SOME **19** 16:57:25.7, 42°.58N×79°.62E, h10^{km}*
*KRNET **19** 16:57:25.5±0.1, 42°.57N×79°.67E, h19^{km}, mb2.5*
NNC 19 16:57:26.1±1.1, **42°.60N×79°.65E, h0^{km}, mb2.9, mpv2.6, 27C-6D, Error ellipse: s-maj=7.1km s-min=4.0km az=139.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.71**	**320**	P	Pg	16 57 39.8	-0.1
	1.7nm,0.2s						
UZB				S	Sg	16 57 50.0	+1.0
	13nm,0.2s						
UZB	**Uzynbulak**	**0.71**	**320**	*e*P	Pg	16 57 39.8	0.0
	baz=21						
UZB				*e*S	Sg	16 57 50.1	+1.0
	baz=21						
UZB	**Uzynbulak**	**0.71**	**320**	*e*P	Pg	16 57 39.8	-0.1
	1.7nm,0.2s						
UZB				*e*S	Sg	16 57 50.0	+0.9
	13nm,0.2s						
PDGK	**Podgornoye**	**0.74**	**351**	P	Pg	16 57 40.4	+0.2
	1.1nm,0.1s						
PDGK				S	Sg	16 57 51.2	+1.3
	13nm,0.3s						
PDGK	**Podgornoye**	**0.74**	**351**	⇑P	Pg	16 57 40.6	+0.3
	0.9nm,0.4s						
PDGK				⇓S	Sg	16 57 50.5	+0.7
	11nm,0.4s						
PDGK	**Podgornoye**	**0.74**	**351**	⇑*i*P	Pg	16 57 39.9	-0.4
	baz=50						
PDGK				⇑*i*S	Sg	16 57 51.1	+1.3
	baz=50						
PRZ	**Przheval'sk**	**0.93**	**263**	⇑*i*P	Pg	16 57 43.2	-0.7
	baz=65						
PRZ				⇑*e*S	Sg	16 57 56.2	+0.2
	baz=65						
KTMS	**Ketmen**	**0.99**	**31**	P	Pg	16 57 45.1	0.0
	2.8nm,0.1s						
KTMS				S	Sg	16 57 58.8	+0.8
	18nm,0.3s						
KTMS	**Ketmen**	**0.99**	**31**	*e*P	Pg	16 57 45.1	0.0
	baz=29						
KTMS				*e*S	Sg	16 57 58.8	+0.9
	baz=29						
KTMS	**Ketmen**	**0.99**	**31**	*e*P	Pg	16 57 45.1	0.0
	2.8nm,0.1s						
KTMS				*e*S	Sg	16 57 58.8	+0.8
	18nm,0.3s						
SATY	**Saty**	**1.02**	**297**	P	Pg	16 57 45.9	+0.2
	3.9nm,0.3s						
SATY				S	Sb	16 58 00.5	-0.3
	8.3nm,0.2s						
SATY	**Saty**	**1.02**	**297**	*e*P	Pg	16 57 45.9	+0.2
	3.9nm,0.3s						
SATY				*e*S	Sb	16 58 00.5	-0.3
	8.3nm,0.2s						
DJR	**Jarkent**	**1.73**	**3**	P	Pn	16 57 58.2	+0.6
	0.9nm,0.3s						
DJR				S	Sb	16 58 21.3	0.0
	5.6nm,0.3s						
DJR	**Jarkent**	**1.73**	**3**	*e*P	Pn	16 57 58.2	+0.6
	0.9nm,0.3s						
DJR				*e*S	Sb	16 58 21.3	0.0
	5.6nm,0.3s						
MNBS	**Baschi**	**1.74**	**329**	P	Pb	16 57 58.8	-0.1
	3.2nm,0.3s						
MNBS				S	Sg	16 58 22.7	+0.8
	12nm,0.3s						
KDJ	**Kajisay**	**1.89**	**256**	⇑*i*P	Pn	16 57 59.8	0.0
	baz=57						
KDJ				⇑*i*S	Sn	16 58 25.0	+0.6
	baz=57						
KOTS	**Kotyrbulak**	**1.97**	**290**	Pg	Pb	16 58 03.3	+0.4
	4.4nm,0.3s						
KOTS				Lg	Lg	16 58 30.7	
	26nm,0.3s						
KOTS	**Kotyrbulak**	**1.97**	**290**	*e*P	Pb	16 58 03.3	+0.4
	baz=90						
KOTS				*e*S	Sg	16 58 30.7	+1.4
	baz=90						
KOTS	**Kotyrbulak**	**1.97**	**290**	*e*P	Pb	16 58 03.3	+0.4
	4.4nm,0.3s						
KOTS				*e*S	Sg	16 58 30.7	+1.4
	26nm,0.3s						
MDOK	**Medeo**	**1.99**	**287**	Pn	Pn	16 58 02.1	+0.9
	1.2nm,0.4s						
MDOK				Sn	Sb	16 58 27.9	-0.9
	3.2nm,0.5s						
MDOK	**Medeo**	**1.99**	**287**	Pg	Pn	16 58 01.9	+0.7
	1.7nm,0.3s						
MDOK				Lg	Lg	16 58 27.6	
	5.3nm,0.4s						
MDOK	**Medeo**	**1.99**	**287**	*e*P	Pn	16 58 01.9	+0.7
	baz=88						
MDOK				*e*S	Sb	16 58 28.0	-0.8
	baz=88						
MDOK	**Medeo**	**1.99**	**287**	*e*P	Pn	16 58 01.9	+0.7
	1.0nm,0.4s						
MDOK				*e*S	Sb	16 58 28.1	-0.7
	5.1nm,0.4s						
TNSS	**Tian-Shan**	**2.04**	**283**	Pg	Pn	16 58 02.8	+0.8
	1.7nm,0.2s						
TNSS				Lg	Lg	16 58 29.6	
	4.2nm,0.4s						
TNSS	**Tian-Shan**	**2.04**	**283**	*e*P	Pn	16 58 02.8	+0.8
	baz=84						
TNSS				*e*S	Sb	16 58 29.6	-0.6
	baz=84						
TNSS	**Tian-Shan**	**2.04**	**283**	*e*P	Pn	16 58 02.8	+0.8
	1.7nm,0.2s						
TNSS				*e*S	Sb	16 58 29.6	-0.6
	4.2nm,0.4s						
ARXS	**Arharly**	**2.09**	**321**	Pg	Pb	16 58 04.0	-0.9
	1.6nm,0.5s						
ARXS				Lg	Lg	16 58 31.9	
	5.8nm,0.5s						
ARXS	**Arharly**	**2.09**	**321**	*e*P	Pb	16 58 04.0	-0.9
	1.6nm,0.5s						
ARXS				*e*S	Sb	16 58 31.9	+0.4
	5.8nm,0.5s						
IZV	**Izvestkoviy**	**2.28**	**282**	Pg	Pb	16 58 06.8	-1.3
	1.7nm,0.1s						
IZV				Lg	Lg	16 58 37.0	
	14nm,0.5s						
IZV	**Izvestkoviy**	**2.28**	**282**	*e*P	Pb	16 58 06.8	-1.4
	baz=83						
IZV				*e*S	Sb	16 58 36.6	-0.3
	baz=83						
IZV	**Izvestkoviy**	**2.28**	**282**	*e*P	Pb	16 58 06.8	-1.3
	1.7nm,0.1s						
IZV				*e*S	Sb	16 58 36.6	-0.3
	14nm,0.5s						
CHKK	**Chushkaly**	**2.31**	**304**	Pg	Pb	16 58 08.2	-0.5
	0.8nm,0.1s						
CHKK				Lg	Lg	16 58 38.6	
	8.8nm,0.3s						
CHKK	**Chushkaly**	**2.31**	**304**	*e*P	Pb	16 58 08.2	-0.5
	baz=4.0						
CHKK				*e*S	Sb	16 58 38.6	+0.7
	baz=4.0						
CHKK	**Chushkaly**	**2.31**	**304**	*e*P	Pb	16 58 08.2	-0.5
	0.8nm,0.1s						
CHKK				*e*S	Sb	16 58 38.6	+0.7
	8.8nm,0.3s						
KTBS	**Karatobe**	**2.44**	**298**	Pg	Pb	16 58 09.4	-1.5
	1.3nm,0.2s						
KTBS				Lg	Lg	16 58 41.6	
	7.6nm,0.3s						
KTBS	**Karatobe**	**2.44**	**298**	*e*P	Pb	16 58 09.3	-1.6
	baz=98						
KTBS				*e*S	Sb	16 58 41.0	-0.5
	baz=98						
KTBS	**Karatobe**	**2.44**	**298**	*e*P	Pb	16 58 09.3	-1.5
	0.1nm,0.2s						
KTBS				*e*S	Sb	16 58 41.0	-0.5
	7.6nm,0.3s						
ULHL	**Ulahol**	**2.55**	**263**	⇑*e*P	Pn	16 58 08.9	0.0
	baz=64						
ULHL				⇑*i*S	Sn	16 58 41.0	+0.3
	baz=64						
KAPS	**Kapalarasan**	**2.69**	**356**	Pg	Pb	16 58 15.7	+0.5
	0.8nm,0.3s						
KAPS				Lg	Lg	16 58 51.3	
	6.5nm,0.6s						
KAPS	**Kapalarasan**	**2.69**	**356**	*e*P	Pb	16 58 15.6	+0.4
	0.4nm,0.2s						
KAPS				⇓*i*S	Sg	16 58 51.3	-1.3
	6.5nm,0.6s						
BOOM	**Boomskoye usch**	**2.74**	**269**	⇑*i*P	Pn	16 58 12.1	+0.6
	baz=70						
BOOM				⇑*i*S	Sn	16 58 45.6	+0.1
	baz=70						
KST	**Kastek**	**2.75**	**281**	Pg	Pb	16 58 15.4	-0.8
	2.1nm,0.5s						
KST				Lg	Lg	16 58 51.7	
	6.1nm,0.8s						
KST	**Kastek**	**2.75**	**281**	*e*P	Pb	16 58 15.7	-0.5
	baz=81						
KST				⇑*i*S	Sb	16 58 51.7	+1.2
	baz=81						
KST	**Kastek**	**2.75**	**281**	*e*P	Pb	16 58 15.7	-0.5
	1.2nm,0.2s						
KST				⇑*i*S	Sb	16 58 51.7	+1.2
	5.8nm,0.6s						
DGS	**Degeres**	**2.92**	**284**	Pg	Pb	16 58 18.1	-1.0
	2.4nm,0.5s						
DGS				Lg	Lg	16 58 55.9	
	9.2nm,0.4s						
DGS	**Degeres**	**2.92**	**284**	*e*P	Pb	16 58 18.1	-1.0
	baz=85						
DGS				*e*S	Sb	16 58 55.9	+0.5
	baz=85						
DGS	**Degeres**	**2.92**	**284**	*e*P	Pb	16 58 18.1	-1.0
	2.4nm,0.5s						
DGS				*e*S	Sb	16 58 55.9	+0.5
	9.2nm,0.4s						
NRN	**Naryn**	**2.96**	**248**	⇓*i*P	Pn	16 58 14.9	+0.3
	baz=49						
NRN				⇓*i*S	Sn	16 58 50.9	-0.1
	baz=49						
TKM2	**Tokmak 2**	**3.00**	**278**	⇑Pg	Pb	16 58 20.7	+0.1
	0.7nm,0.4s						
TKM2				⇑Lg	Lg	16 58 57.9	
	1.3nm,0.3s						
TKM2	**Tokmak 2**	**3.00**	**278**	⇑*i*P	Pn	16 58 15.7	+0.6
	baz=78						
TKM2				⇑*i*S	Sn	16 58 52.1	+0.2
	baz=78						
KZA	**Kyzart**	**3.30**	**262**	⇑*e*P	Pn	16 58 19.6	+0.2
	baz=63						
KZA				⇑*i*S	Sn	16 58 59.2	-0.4
	baz=63						
AAK	**Ala-Archa**	**3.80**	**272**	⇑Pg	Pb	16 58 34.0	-0.2
	0.8nm,0.7s						
AAK				⇓Lg	Lg	16 59 24.1	
	1.8nm,0.7s						
ARLS	**Aral**	**4.02**	**261**	⇑*i*P	Pn	16 58 29.4	+0.3
	baz=62						
ARLS				⇑*i*S	Sn	16 59 16.2	-0.8
	baz=62						
MAKZ	**Makanchi**	**4.52**	**21**	⇓Pn	Pn	16 58 36.9	+1.0
	0.3nm,0.6s						
MAKZ				⇑Sn	Sn	16 59 30.5	+1.4
	0.4nm,0.6s						
MAKZ				⇑Lg	Lg	16 59 46.7	
	0.7nm,0.9s						
MK31	**Makanchi Array**	**4.60**	**23**	⇑Pn	Pn	16 58 37.9	+1.1
	0.2nm,0.3s,baz=210,slow=15						
MK31				⇑Sn	Sn	16 59 31.0	0.0
	0.3nm,0.4s,baz=204,slow=26						
MK31				⇑Lg	Lg	16 59 49.0	
	0.5nm,0.5s,baz=198,slow=29						

*IDC **19** 17:09:23.2±1.6, 0°.69S×98°.30E, h0^{km}, mb3.7/6, mb1 3.7/8, mb1mx3.5/38, mbtmp3.6/8, ML3.4/2, Error ellipse: s-maj=55.4km s-min=19.2km az=63.0*
*ISCJB **19** 17:09:26.3±1.0, 0°.67S±0°.08×98°.3E±0°.2, h35^{km}, mb3.7/6, Error ellipse: s-maj=29.5km s-min=11.3km az=173.6*
ISC 19 17:09:28.4±1.3, **0°.6S**±0°.1×**98°.4E**±0°.3, **h35^{km}, n11,** σ**1^{s}27**/9, **mb3.8**/6, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.46**	**9**	Pn	**Pn**	**17 10 18.6**	**-1.3**
	0.8nm,0.3s,baz=180,slow=12,SNR=4.2						
PSI				Sn	**Sn**	**17 11 01.9**	**+2.1**
	1.0nm,0.3s,baz=359,slow=12,SNR=2.3						
CMAR	**Chiang Mai Arr**	**18.99**	**2**	P	**Pn**	**17 13 46.5**	**-1.5**
	0.1nm,0.3s,baz=187,slow=12,SNR=4.3						
H08S2	**Diego Garcia H**	**26.72**	**254**	T	T	17 42 54.2	
	baz=75,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**26.72**	**254**	T	T	17 42 53.2	
	baz=75,slow=76,SNR=12						
H08S1	**Diego Carcia H**	**26.74**	**254**	T	T	17 42 52.1	
	baz=75,slow=76,SNR=12						
WRA	**Warramunga Arr**	**40.08**	**121**	P	**P**	**17 17 00.8**	**-0.1**
	0.4nm,0.6s,baz=302,slow=8.9,SNR=7.9						
ASAR	**Alice Springs**	**41.36**	**126**	P	**P**	**17 17 11.9**	**+0.5**
	0.3nm,0.6s,baz=299,slow=7.3,SNR=5.5						
SONM	**Songino Array**	**48.78**	**7**	P	**P**	**17 18 09.8**	**-0.2**
	0.3nm,0.3s,baz=204,slow=6.3,SNR=3.7						
MKAR	**Makanchi Array**	**49.30**	**345**	P	**P**	**17 18 14.3**	**+0.4**
	0.5nm,0.5s,baz=153,slow=9.1,SNR=12						
ZALV	**Zalesovo Beam**	**55.55**	**350**	P	**P**	**17 19 00.4**	**+0.3**
	0.3nm,0.3s,baz=142,slow=7.3,SNR=2.5						
FINES	**FINESS Array B**	**82.16**	**332**	P	**P**	**17 21 46.2**	**+0.8**
	3.3nm,1.0s,baz=101,slow=9.9,SNR=4.0						

*ISCJB **19** 17:16:44.2±2.5, 7°.88N±0°.06×91°.91E±0°.07, h26^{km}±19^{km}, mb4.2/22, Error ellipse: s-maj=12.6km s-min=8.1km az=144.7*
*NEIC **19** 17:16:47.7±0.6, 7°.92N×91°.91E, h38^{km}±6^{km}, mb4.4/12, Error ellipse: s-maj=7.1km s-min=4.7km az=55.0*
*IDC **19** 17:16:48.4±4.3, 7°.96N×91°.88E, h38^{km}±38^{km}, mb3.5/9, mb1 3.7/11, mb1mx3.5/32, mbtmp3.8/11, ML3.9/2, MS2.8/1, Ms1 3.0/1, ms1mx2.5/33, Error ellipse: s-maj=25.8km s-min=18.4km az=53.0*
ISC 19 17:16:48.2±0.9, **7°.95N**±0°.08×**91°.86E**±0°.08, **h37^{km}**±2^{km}, **n50,** σ**1^{s}05**/47, **mb4.1**/24, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**3.78**	**13**	*e*Pn	Pn	17 17 42.8	-1.2
PBA				*e*Sn	Sn	17 18 23.6	-3.7
LHMI	**Lhok Sumawe**	**5.73**	**118**	*e*Pn	**Pn**	**17 18 10.3**	**-0.5**
PSI	**Prapat**	**8.69**	**126**	*e*Pn	**Pn**	**17 18 51.4**	**-0.2**
PSI	**Prapat**	**8.69**	**126**	Pn	Pn	17 18 58.1	+6.6
	1.3nm,0.3s,baz=0.3,slow=8.0,SNR=3.6						
GSI	**Gunungsitoli**	**8.71**	**139**	*e*Pn	**Pn**	**17 18 49.7**	**-2.1**
GSI				*e*Sn	Sn	17 20 17.2	-12
KULM	**Kulim**	**9.12**	**106**	*e*Pn	**Pn**	**17 18 56.3**	**-1.1**
IPM	**Ipoh**	**9.74**	**110**	*e*Pn	**Pn**	**17 19 04.1**	**-1.8**
PALK	**Pallekele**	**11.08**	**267**	*e*Pn	**Pn**	**17 19 25.3**	**+1.0**
PALK				*e*Sn	Sn	17 21 15.4	-12
PALK	**Pallekele**	**11.08**	**267**	Pn	**Pn**	**17 19 25.8**	**+1.4**
	0.8nm,0.3s,baz=117,slow=12,SNR=9.8						
PALK				Sn	Sn	17 21 15.9	-11
	3.7nm,0.3s,baz=115,slow=9.7,SNR=7.7						
CMAR	**Chiang Mai Arr**	**12.51**	**33**	Pn	**Pn**	**17 19 44.1**	**+0.4**
	0.2nm,0.3s,baz=231,slow=14,SNR=4.9						
CMAR				LR	LR	17 24 08.1	
	comp=Z,48nm,20.5s,baz=216,slow=35						
JIRN	**Jiri**	**20.33**	**345**	*e*P	Pn	17 21 31.9	+8.0
	6.7nm,0.3s						
PKI	**Pulchoki**	**20.45**	**343**	*e*P	Pn	17 21 32.0	+6.7
	4.7nm,0.3s						
PKIN	**Phulchoki**	**20.46**	**343**	*e*P	Pn	17 21 32.4	+7.1
	6.4nm,0.4s						
DMN	**Daman**	**20.57**	**343**	*e*P	Pn	17 21 33.4	+6.8
LSA	**Lhasa**	**21.65**	**358**	*e*P	**P**	**17 21 34.5**	**-1.5**
	15nm,1.8s						
DANN	**Dangsing**	**21.69**	**340**	*e*P	**P**	**17 21 36.6**	**+0.4**
	18nm,1.0s						
PYUN	**Piuthan**	**21.73**	**338**	*e*P	**P**	**17 21 36.4**	**-0.2**
	14nm,0.8s						
H08S3	**Diego Garcia H**	**24.75**	**232**	T	T	17 48 27.2	
	baz=52,slow=76,SNR=62						
H08S2	**Diego Garcia H**	**24.76**	**232**	T	T	17 48 25.4	
	baz=52,slow=76,SNR=55						
H08S1	**Diego Carcia H**	**24.77**	**232**	T	T	17 48 28.6	
	baz=52,slow=76,SNR=61						
BATI	**Baumata**	**36.44**	**119**	P	**P**	**17 23 53.6**	**+3.8**
	9.1nm,0.7s,baz=270,slow=5.1,SNR=3.0						
ARSB	**Arslanbob**	**37.23**	**336**	*e*P	**P**	**17 23 56.7**	**+0.4**
	7.2nm,1.3s						
AAK	**Ala-Archa**	**37.79**	**339**	*e*P	**P**	**17 24 01.3**	**+0.2**
	12nm,1.9s						
MK01	**Makanchi Array**	**39.54**	**350**	*e*P	**P**	**17 24 14.7**	**-0.8**
MK31	**Makanchi Array**	**39.57**	**350**	*e*P	**P**	**17 24 14.9**	**-0.8**
	1.9nm,1.4s						
MK32	**Makanchi Array**	**39.57**	**350**	*e*P	**P**	**17 24 15.7**	**-0.1**
MK32				*e*PcP	**PcP**	**17 26 23.1**	**+0.5**
MKAR	**Makanchi Array**	**39.57**	**350**	*e*P	**P**	**17 24 14.7**	**-1.1**
	12nm,1.4s						
MKAR				PcP	**PcP**	**17 26 23.1**	**+0.5**
MKAR	**Makanchi Array**	**39.57**	**350**	P	**P**	**17 24 15.7**	**-0.1**
	0.5nm,0.6s,baz=162,slow=8.1,SNR=7.4						
MKAR				PcP	**PcP**	**17 26 23.1**	**+0.5**
	0.1nm,0.5s,baz=182,slow=3.1,SNR=2.4						
KK31	**Karatay Array**	**39.72**	**335**	*e*P	**P**	**17 24 17.1**	**+0.1**
	5.4nm,1.5s						
KKAR	**Karatay Array**	**39.72**	**335**	*e*P	**P**	**17 24 17.1**	**+0.1**
	5.4nm,1.5s						
SONA0	**Songino Array**	**41.62**	**15**	*e*P	**P**	**17 24 32.7**	**-0.2**
SONM	**Songino Array**	**41.62**	**15**	P	**P**	**17 24 32.7**	**-0.2**
	0.9nm,0.7s,baz=193,slow=9.7,SNR=5.9						
SONA1	**Songino Array**	**41.64**	**15**	*e*P	**P**	**17 24 32.4**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**42.66**	**320**	*e*P	**P**	**17 24 41.8**	**+0.4**
	6.6nm,1.1s						
ZALV	**Zalesovo Beam**	**46.22**	**354**	P	**P**	**17 25 09.5**	**0.0**
	0.4nm,0.4s,baz=190,slow=5.9,SNR=3.8						
ZAA1	**Zalesovo Array**	**46.23**	**354**	*e*P	**P**	**17 25 09.5**	**0.0**
ABKAR	**Akbulak array**	**49.11**	**333**	*e*P	**P**	**17 25 31.9**	**0.0**
	11nm,2.0s						
WR1	**Warramunga Arr**	**50.16**	**124**	*e*P	**P**	**17 25 39.4**	**-1.0**
	23nm,1.9s						
WR1				*e*PcP	**PcP**	**17 27 00.4**	**+0.8**
WRA	**Warramunga Arr**	**50.16**	**124**	P	**P**	**17 25 39.4**	**-1.0**
	0.9nm,0.7s,baz=304,slow=8.7,SNR=12						
WRA				PcP	**PcP**	**17 27 00.4**	**+0.8**
	0.2nm,0.5s,baz=305,slow=3.4,SNR=2.9						
WB2	**Warramunga Arr**	**50.16**	**124**	*e*P	**P**	**17 25 39.3**	**-1.2**
ABPO	**Ambohimpanom**	**51.51**	**238**	*e*P	**P**	**17 25 48.6**	**-2.2**
	14nm,1.1s						
ASAR	**Alice Springs**	**51.71**	**129**	P	**P**	**17 25 51.8**	**-0.3**
	0.5nm,0.7s,baz=303,slow=8.0,SNR=5.6						
ASAR				PcP	**PcP**	**17 27 06.4**	**+1.1**
	0.2nm,0.7s,baz=314,slow=4.1,SNR=5.2						
BR101	**Keskin Array S**	**60.68**	**311**	*e*P	**P**	**17 26 55.1**	**-1.0**
BRTR	**Keskin Array B**	**60.68**	**311**	P	**P**	**17 26 55.1**	**-1.0**
	0.7nm,0.6s,baz=119,slow=7.6,SNR=5.0						
BUR04	**Bucovina Ar. S**	**68.48**	**318**	*e*P	**P**	**17 27 46.9**	**0.0**
BUR08	**Bucovina Ar. S**	**68.50**	**318**	*e*P	**P**	**17 27 47.7**	**+0.7**
	15nm,1.8s						
ITM	**Ithomi**	**69.26**	**307**	*e*P	**P**	**17 27 51.7**	**-0.1**
	148nm,1.7s						
BOSA	**Boshof**	**73.72**	**237**	P	**P**	**17 28 19.1**	**+0.1**
	1.7nm,0.8s,baz=77,slow=18,SNR=2.0						
GERES	**GERESS Array B**	**76.27**	**318**	P	**P**	**17 28 33.2**	**-0.1**
	0.6nm,0.6s,baz=95,slow=3.2,SNR=5.1						
ILAR	**Eielson Array**	**95.52**	**22**	P	**P**	**17 30 08.4**	**-0.7**
	0.2nm,0.6s,baz=330,slow=5.2,SNR=3.8						

IDC 19 17:24:13.7±6.9, **8°.27S×120°.20E, h144^{km}**±62^{km}, **mb2.9**/4, **mb1 3.0**/6, **mb1mx2.8**/33, **mbtmp3.4**/6, **Error ellipse: s-maj=123.5km s-min=21.9km az=60.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.92**	**120**	P	Pn	17 25 14.0	+1.2
	3.1nm,0.3s,baz=258,slow=1.7,SNR=19						
BATI				S	Sn	17 25 58.3	-0.4
	5.6nm,0.3s,baz=88,slow=18,SNR=7.1						
WRA	**Warramunga Arr**	**17.94**	**132**	P	Pn	17 28 14.3	0.0
	0.0nm,0.3s,baz=305,slow=14,SNR=7.2						
WRA				S	S	17 31 21.7	-10
	0.1nm,0.3s,baz=306,slow=20,SNR=4.2						
ASAR	**Alice Springs**	**20.17**	**141**	P	P	17 28 38.4	+1.3
	0.2nm,0.3s,baz=320,slow=8.3,SNR=6.6						
STKA	**Stephens Creek**	**30.78**	**143**	P	P	17 30 14.3	-1.4
	0.6nm,0.3s,baz=311,slow=9.3,SNR=4.5						
MKAR	**Makanchi Array**	**64.36**	**332**	P	P	17 34 32.3	-1.8
	0.2nm,0.6s,baz=123,slow=5.3,SNR=2.8						
ZALV	**Zalesovo Beam**	**68.80**	**338**	P	P	17 35 03.8	+1.7
	0.4nm,0.5s,baz=161,slow=6.1,SNR=2.4						

IDC 19 17:30:59.9±2.1, **8°.19S×121°.86E, h0^{km}, mb3.4**/1, **mb1 3.4**/3, **mb1mx3.2**/42, **mbtmp3.2**/3, **ML2.7**/2, **Error ellipse: s-maj=268.6km s-min=28.4km az=55.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.81**	**135**	Pn	Pn	17 34 56.2	-0.7
	0.0nm,0.3s,baz=308,slow=15,SNR=3.3						
ASAR	**Alice Springs**	**19.24**	**144**	P	Pn	17 35 26.4	-0.4
	0.0nm,0.3s,baz=327,slow=13,SNR=10.0						
MKAR	**Makanchi Array**	**65.07**	**331**	P	P	17 41 42.3	0.0
	0.3nm,0.8s,baz=139,slow=6.5,SNR=3.3						

*IDC **19** 17:34:26.8±1.5, 11°.51S×165°.04E, h0^{km}, mb3.7/6, mb1 3.8/9, mb1mx3.7/43, mbtmp3.7/9, ML3.7/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/25, Error ellipse: s-maj=37.6km s-min=25.1km az=124.0*
*ISCJB **19** 17:34:30.5±0.9, 11°.6S±0°.1×164°.9E±0°.1, h34^{km}, mb3.6/6, Error ellipse: s-maj=18.7km s-min=10.9km az=41.0*

ISC 19 17:34:32.2±1.1, 11°.6S±0°.1×164°.9E±0°.1, h34km, n15, σ0s.75/10, mb3.6/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	5.33	293	Pn	Pn	17 35 49.0	-0.4
	10.0nm,0.3s,baz=150,slow=6.3,SNR=6.8						
HNR				Sn	Sn	17 36 49.7	+0.1
	15nm,0.3s,baz=186,slow=12,SNR=6.7						
HNR				LR	LR	17 37 42.2	
	comp=Z,154nm,19.1s,baz=174,slow=36						
DZM	**Mont Dzumac**	10.56	172	Pn	Pn	17 37 01.4	+0.2
	0.4nm,0.3s,baz=336,slow=20,SNR=7.5						
CTA	**Charters Tower**	19.85	242	P	Pn	17 39 01.6	-0.5
	0.1nm,0.3s,baz=72,slow=12,SNR=2.8						
H11S2	**WAKE ISLAND Hy**	29.91	3	T	T	18 11 54.2	
	baz=184,slow=76,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	29.91	3	T	T	18 11 58.5	
	baz=184,slow=76,SNR=4.0						
H11S1	**WAKE ISLAND Hy**	29.92	3	T	T	18 11 55.8	
	baz=184,slow=76,SNR=3.9						
WRA	**Warramunga Arr**	30.55	250	P	P	17 40 42.6	-0.2
	1.1nm,0.8s,baz=82,slow=9.0,SNR=8.5						
H11N1	**WAKE ISLAND Hy**	31.13	4	T	T	18 13 22.7	
	baz=182,slow=76,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	31.14	4	T	T	18 13 27.9	
	baz=182,slow=76,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	31.15	4	T	T	18 13 25.9	
	baz=182,slow=76,SNR=3.9						
ASAR	**Alice Springs**	31.84	244	P	P	17 40 54.1	-0.1
	0.8nm,0.7s,baz=67,slow=9.9,SNR=15						
CMAR	**Chiang Mai Arr**	71.58	294	P	P	17 45 51.6	+1.1
	0.2nm,0.4s,baz=111,slow=4.9,SNR=3.2						
SONM	**Songino Array**	78.60	324	P	P	17 46 31.5	+0.9
	0.2nm,0.6s,baz=120,slow=5.2,SNR=2.4						
ILAR	**Eielson Array**	84.25	19	P	P	17 46 58.8	-1.1
	0.3nm,0.8s,baz=244,slow=4.9,SNR=2.9						
MKAR	**Makanchi Array**	93.34	317	P	P	17 47 43.7	-0.1
	0.5nm,0.8s,baz=98,slow=5.0,SNR=4.4						

ISC 19 17:35:15.0±2.2, 51°.6N±0°.1×16°.07E±0°.06, h0km, n10, σ0s.61/16, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.74	169	*e*Pg	Pg	17 35 29.5	+0.3
KSP				*e*Sg	Sg	17 35 39.7	+0.8
UPC	**Upice**	1.07	182	*e*PG	Pg	17 35 35.8	+0.4
UPC				*e*SG	Sg	17 35 49.5	+0.3
	comp=Z,7.0nm,0.2s						
DPC	**Dobruska-Polom**	1.23	173	*e*PG	Pg	17 35 38.4	-0.2
DPC				*e*SG	Sg	17 35 54.8	+0.2
	comp=Z,3.8nm,0.4s						
PVCC	**Panska Ves**	1.41	223	*e*PG	Pg	17 35 41.5	-0.5
PVCC				*e*SG	Sg	17 36 00.2	-0.1
	comp=Z,11nm,0.3s						
KRLC	**Kraliky**	1.56	163	*e*SG	Sg	17 36 06.0	+0.8
PRU	**Pruhonice**	1.86	212	*e*SG	Sb	17 36 13.7	+0.1
CLL	**Collm**	1.94	263	*e*Pg	Pn	17 35 50.0	+0.8
CLL				*e*Sg	Sb	17 36 15.0	-0.9
MORC	**Moravsky Berou**	2.03	152	*e*PN	Pn	17 35 49.8	-0.7
MORC				*e*SG	Sg	17 36 19.8	-0.3
NKC	**Novy Kostel**	2.66	241	*e*SG	Sg	17 36 41.1	+0.8
	comp=Z,3.5nm,0.3s						
KHC	**Kasperske Hory**	2.92	214	*e*SG	Sg	17 36 48.2	-0.5

MEX 19 17:50:31.3±0.6, 14°.29N×92°.45W, h80km±17km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.64	16	*i* P	Pn	17 50 44.6	-1.7
THIG				*i* S	Sn	17 50 56.1	-1.4
PCIG		1.59	332	*e*P	Pn	17 50 56.7	-1.1
PCIG				*e*P		17 50 56.7	
PCIG				*i* S	Sn	17 51 15.7	-2.2
CCIG	**Comitan**	2.00	9	*i* P	Pn	17 51 07.0	+3.6
CCIG				*i* S	Sn	17 51 33.7	+5.9

RSNC 19 18:14:42.6±1.3, 6°.85N×73°.15W, h142km±6km, ML3.4, Mw3.5, 1C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	0.26	187	⇓*i*P	Pn	18 15 01.8	-0.6
BARC				*e*S	Sn	18 15 16.8	-0.6
BARC				*i*		18 15 17.5	
	comp=Z,560nm,0.3s						
BRRC	**Barranca, Sant**	0.61	295	⇑*i*P	Pn	18 15 03.5	-0.1
PAMC	**Pamplona, Colo**	0.66	43	⇓*i*P	Pn	18 15 04.8	+0.2
PAMC				*e*S	Sn	18 15 21.4	+0.2
PAMC				*i*		18 15 22.5	
	comp=N,871nm,0.5s						
RUSC	**La Rusia**	0.95	176	*e*P	Pn	18 15 05.8	-1.1
RUSC				*e*S	Sn	18 15 24.8	-0.4
RUSC				*i*		18 15 25.9	
	comp=N,167nm,0.4s						
PTBC	**PUERTO BERRIO,**	1.33	257	*e*P	Pn	18 15 08.4	-1.5
PTBC				*e*S	Sn	18 15 29.8	-0.8
PTBC				*i*		18 15 31.8	
	comp=N,302nm,0.4s						
OCAC	**Ocana**	1.39	353	*e*P	Pn	18 15 10.1	-0.5
OCAC				*e*S	Sn	18 15 31.6	-0.4
OCAC				*i*		18 15 35.7	
	comp=N,599nm,0.3s						
TAMC	**Tame, Arauca**	1.41	107	⇓*i*P	Pn	18 15 10.3	-0.3
TAMC				*e*S	Sn	18 15 31.9	-0.2
TAMC				*i*		18 15 32.6	
	comp=N,110nm,0.3s						
ZARC	**Zaragoza, Cauc**	1.81	291	*e*P	Pn	18 15 14.6	-0.5
ZARC				*e*S	Sn	18 15 40.0	+0.1
ZARC				*i*		18 15 46.6	
	comp=N,299nm,0.2s						
SMLC	**San Martn de**	2.14	335	*e*P	Pn	18 15 18.5	-0.5
SMLC				*e*S	Sn	18 15 46.0	-0.9
SMLC				*i*		18 15 53.0	
	comp=N,258nm,0.1s						
CHIC	**Chingaza**	2.28	195	*e*P	Pn	18 15 20.5	-0.6
CHIC				*e*S	Sn	18 15 50.7	+0.1
CHIC				*i*		18 15 51.7	
	comp=N,123nm,0.5s						
ROSC	**El Rosal**	2.31	210	*e*P	Pn	18 15 22.5	+1.1
ROSC				*e*S	Sn	18 15 52.7	+1.4
ROSC				*i*		18 15 57.6	
	comp=Z,68nm,0.5s						
HELC	**Santa Helena**	2.45	255	*e*P	Pn	18 15 23.3	+0.2
HELC				*e*S	Sn	18 15 52.8	-1.4
HELC				*i*		18 15 59.1	
	comp=N,73nm,0.4s						
UREC	**San Jos de Ur**	2.53	291	*e*S	Sn	18 15 54.2	-1.2
UREC				*i*		18 16 02.2	
	comp=N,155nm,0.3s						
DBBC	**Dabeiba**	3.04	273	*e*P	Pn	18 15 29.9	-0.4
DBBC				*i*		18 16 09.6	
	comp=Z,97nm,0.4s						
CODC	**Agustn Codazz**	3.08	355	*e*P	Pn	18 15 30.0	-0.7
CODC				*e*S	Sn	18 16 08.5	+0.6
SDV	**Santo Domingo**	3.21	51	*e*P	Pn	18 15 31.6	-1.0
SDV				*e*S	Sn	18 16 09.2	-2.0
ANIL	**Santa Ana**	3.24	224	*e*P	Pn	18 15 33.8	+0.7
ANIL				*e*S	Sn	18 16 13.2	+1.1
ANIL				*i*		18 16 19.8	
	comp=E,120nm,0.4s						

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*ISK **19** 18:16:20.9, 40°.72N×41°.25E, h22km, ML1.8/3*
*DDA **19** 18:16:21.7, 40°.73N×41°.24E, h7km±1km, ML2.6*
*TIF **19** 18:16:21.8, 40°.76N×41°.25E, h16km±2km*

ISC 19 18:16:21.8±1.3, 40°.73N±0°.06×41°.23E±0°.04, h16km±12km, n10, σ0s.50/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDEM	**Demirkent**	0.43	67	*i* P	Pg	18 16 30.1	-0.4
DDEM				IAML_P			
	comp=Z,1µm,0.1s						
DBAD	**Bademkaya**	0.46	50	*i* P	Pb	18 16 31.6	0.0
DBAD				*i* S	Sb	18 16 38.3	+0.1
DBAD				IAML_P			
	comp=Z,3µm,0.1s						
CHOM	**Cayeli-Rize**	0.51	317	PG	Pb	18 16 32.3	-0.1
CHOM				SG	Sb	18 16 40.4	+0.8
DAGI	**Agillar**	0.63	56	*i* P	Pb	18 16 34.8	+0.3
DAGI				*i* S	Sb	18 16 43.6	+0.6
DAGI				IAML_P			
	comp=Z,494nm,0.1s						
ARTV	**Artvin**	0.70	49	*i* P	Pb	18 16 35.9	+0.1
ARTV				IAML_P			
	comp=Z,2µm,0.1s						
DBOC	**Borcka**	0.70	28	*i* P	Pg	18 16 35.2	-0.3
DBOC				*i* S	Sb	18 16 45.8	+0.6
DBOC				IAML_P			
	comp=Z,724nm,0.1s						
BCA	**Borcka**	0.78	23	PG	Pb	18 16 36.7	-0.3
BCA				SG	Sb	18 16 47.5	+0.2
BAYT	**Aydıntepe-Bayb**	0.89	248	PG	Pb	18 16 38.4	-0.6
BAYT				SG	Sg	18 16 51.8	+0.9
BATM	**Batumi**	0.94	22	PG	Pg	18 16 39.8	-0.3
BATM				SG	Sg	18 16 52.7	+0.2
BATM	**Batumi**	0.94	22	P	Pb	18 16 39.4	-0.4
BATM				S	Sn	18 16 53.1	-0.5

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*IDC **19** 18:55:16.8±0.8, 10°.43S×167°.55E, h0km, mb4.5/13, mb1 4.7/13, mb1mx4.4/39, mbtmp4.4/13, MS3.9/24, Ms1 3.9/24, ms1mx3.7/43, Error ellipse: s-maj=30.1km s-min=16.6km az=137.0*
*NEIC **19** 18:55:19.2±0.2, 10°.35S×167°.34E, h10km, mb5.0/93, Error ellipse: s-maj=6.4km s-min=4.0km az=140.0*
*ISCJB **19** 18:55:21.2±0.2, 10°.46S±0°.04×167°.33E±0°.04, h33km, mb5.0/107, MS3.9/23, Error ellipse: s-maj=6.7km s-min=4.6km az=143.8*
*BJI **19** 18:55:25.7, 10°.50S×167°.30E, h79km, mB4.9/8, mb4.4/11*

ISC 19 18:55:23.2±0.4, 10°.41S±0°.06×167°.32E±0°.06, h35km, n155, σ1s.19/140, mb5.0/107, MS3.9/23, 1C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	7.33	277	*e*Pn	Pn	18 57 09.9	+2.2
HNR				*e*Sn	Sn	18 58 40.1	+10
HNR	**Honiara**	7.33	277	Pn	Pn	18 57 11.0	+3.2
	2.5nm,0.3s,baz=90,slow=17,SNR=4.9						
HNR				Sn	Sn	18 58 40.1	+10
	0.8nm,0.3s,baz=161,slow=18,SNR=3.1						
MARNC	**Mare, Loyalty**	11.03	177	*e*Pn	Pn	18 57 58.8	+0.2
DZM	**Mont Dzumac**	11.63	184	*e*Pn	Pn	18 57 57.4	-9.4
	10nm,0.8s						
DZM				*e*LR	LR	19 00 23.3	
	comp=Z,876nm,28.6s						
DZM	**Mont Dzumac**	11.63	184	*e*Pn	Pn	18 58 07.5	+0.7
DZM	**Mont Dzumac**	11.63	184	Pn	Pn	18 58 08.0	+1.2
	0.4nm,0.3s,baz=9.9,slow=18,SNR=3.7						
DZM				LR	LR	19 02 04.3	
	comp=Z,442nm,21.0s,baz=2.0,slow=35						
MSVF	**Nonsavu**	12.70	126	*e*Pn	Pn	18 58 24.9	+3.3
RABL	**Rabaul**	16.24	291	*e*Pn	P	18 59 12.6	+1.0
	51nm,1.4s						
KWAJ	**Kwajalein Atol**	19.09	1	*e*P	Pn	18 59 45.4	+1.4
	1µm,1.8s						
PATS	**Pohnpei**	19.34	332	*e*P	Pn	18 59 48.2	+1.2
	870nm,1.8s						
EIDS	**Eidsvold**	21.41	224	*e*P	P	19 00 09.5	+1.3
	66nm,1.4s						
MANU	**Manus Island**	21.49	291	*e*P	P	19 00 10.3	+1.2
	164nm,1.6s						
KNTN	**Kanton**	22.15	71	*e*P	P	19 00 17.4	+1.2
	553nm,2.0s						
CTA	**Charters Tower**	22.46	242	P	P	19 00 20.2	+0.7
	6.4nm,0.9s,baz=66,slow=13,SNR=10						
CTA				LR	LR	19 07 45.6	
	comp=Z,413nm,21.7s,baz=82,slow=33						
CTAO	**Charters Tower**	22.46	242	*e*P	P	19 00 20.5	+1.0
	38nm,1.4s						
RAO	**Raoul Island**	23.29	146	*e*P	P	19 00 28.6	+0.6
	386nm,1.0s						
RAO	**Raoul Island**	23.29	146	LR	LR	19 07 53.9	
	comp=Z,2µm,21.7s,baz=290,slow=33						
COEN	**Coen**	23.86	259	*e*P	P	19 00 35.1	+1.6
	8.6nm,0.9s						
ARMA	**Armidale**	24.69	214	*e*P	P	19 00 41.9	+0.7
	49nm,1.4s						
OUZ	**Omahuta**	25.35	168	*e*P	P	19 00 47.6	+0.7
	108nm,1.7s						
URZ	**Urewera**	29.09	164	LR	LR	19 11 03.9	
	comp=Z,106nm,19.5s,baz=350,slow=33						
STKA	**Stephens Creek**	31.97	224	*e*P	P	19 01 42.2	-3.8
STKA	**Stephens Creek**	31.97	224	P	P	19 01 46.0	0.0
	5.8nm,0.8s,baz=40,slow=7.9,SNR=8.5						
STKA				LR	LR	19 14 19.9	
	comp=Z,394nm,18.5s,baz=34,slow=36						
LTZ	**Lake Taylor**	32.54	173	*e*P	P	19 01 50.5	-0.4
	67nm,1.6s						
FOZ	**Fox Glacier**	33.07	177	*e*P	P	19 01 54.9	-0.6
	15nm,0.9s						
WB2	**Warramunga Arr**	33.14	249	*e*P	P	19 01 56.5	0.0
	35nm,1.1s						
WRAB	**Tennant Creek**	33.14	249	*e*P	P	19 01 56.5	+0.1
	28nm,1.0s						
WR1	**Warramunga Arr**	33.15	249	*e*P	P	19 01 56.6	+0.1
	34nm,1.0s						
WR1				*e*PcP	PcP	19 04 39.1	-0.1
WRA	**Warramunga Arr**	33.15	249	P	P	19 01 56.6	0.0
	19nm,0.9s,baz=80,slow=8.9,SNR=90						
WRA				PcP	PcP	19 04 39.1	-0.1
	1.5nm,0.9s,baz=80,slow=3.1,SNR=7.3						
WRA				LR	LR	19 15 28.3	
	comp=Z,373nm,18.7s,baz=80,slow=36						
RPZ	**Rata Peaks**	33.34	175	P	P	19 01 56.2	-1.7
	15nm,0.8s,baz=43,slow=9.6,SNR=5.4						
RPZ				LR	LR	19 13 49.6	
	comp=Z,117nm,20.7s,baz=346,slow=33						
RAR	**Rarotonga**	33.37	113	LR	LR	19 12 48.6	
	comp=Z,34nm,20.5s,baz=217,slow=32						
LBZ	**Lake Benmore**	33.94	176	*e*P	P	19 02 01.8	-1.3
	90nm,1.7s						
AS31	**Alice Springs**	34.45	243	*e*P	P	19 02 07.3	-0.6
	2.7nm,0.9s						
ASAR	**Alice Springs**	34.46	243	P	P	19 02 07.3	-0.6
	9.2nm,0.9s,baz=75,slow=9.4,SNR=69						
ASAR				PcP	PcP	19 04 42.8	-0.1
	1.4nm,0.8s,baz=51,slow=3.3,SNR=7.8						
ASAR				LR	LR	19 15 33.6	
	comp=Z,257nm,19.5s,baz=78,slow=35						
BBOO	**Buckleboo**	36.39	227	*e*P	P	19 02 24.7	+0.3
	104nm,1.8s						
SIJI	**Sorong**	37.06	282	LR	LR	19 18 09.4	
	comp=Z,147nm,19.7s,baz=20,slow=37						
FITZ	**Fitzroy Crossi**	41.04	254	P	P	19 03 03.7	+0.2
	11nm,0.9s,baz=86,slow=8.2,SNR=17						
FITZ				LR	LR	19 19 07.8	
	comp=Z,211nm,20.6s,baz=83,slow=35						
MIDW	**Midway**	41.16	21	*e*P	P	19 03 05.9	+1.7
	656nm,1.9s						
FORT	**Forrest**	41.67	235	*e*P	P	19 03 08.7	+0.1
	35nm,1.0s						
PPT	**Papeete**	42.35	105	LR	LR	19 16 56.0	
	comp=Z,141nm,18.9s,baz=248,slow=31						
PPT2	**Papeete2**	42.36	105	*e*S	S	19 09 22.8	-11
	82nm,23.2s						
PPT2				*e*LR	LR	19 14 35.0	
	comp=Z,255nm,22.5s						
BATI	**Baumata**	42.92	266	LR	LR	19 21 06.0	
	comp=Z,131nm,22.0s,baz=118,slow=36						
TBI	**Tubuai**	43.15	113	*e*LR	LR	19 14 54.6	
	comp=Z,287nm,29.2s						
MMRI	**Maumere**	44.47	268	*e*P	P	19 03 30.4	-1.0
	64nm,1.3s						
DAV	**Davao City (W)**	45.04	291	LR	LR	19 21 04.9	
	comp=Z,67nm,18.4s,baz=110,slow=34						
MBWA	**Marble Bar**	46.86	251	*e*P	P	19 03 50.7	+0.4
	73nm,2.0s						
KHU	**Kahuku**	46.94	51	*e*P	P	19 03 52.0	+0.9
	403nm,1.4s						
HLP	**Hilina Pali**	47.20	51	*e*P	P	19 03 53.5	+0.6
	1µm,1.9s						
SDHHI	**Sand Hill**	47.27	51	*e*P	P	19 03 54.2	+0.6
	251nm,1.2s						
UWE	**Uwekahuna**	47.28	51	*e*P	P	19 03 52.6	-1.1
	286nm,1.2s						
LPH	**Laupahoehoe**	47.54	51	*e*P	P	19 03 56.5	+1.1
NWAO	**Narrogin (SRO)**	51.10	236	*e*P	P	19 04 22.2	-0.4
	57nm,1.4s						
MORW	**Morawa**	51.28	241	*e*P	P	19 04 23.4	-0.7
	77nm,1.9s						
TAOE	**Nuku Hiva Isla**	51.77	93	*e*LR	LR	19 18 57.3	
	comp=Z,270nm,26.8s						
JAGI	**Jajag, Banyuwa**	52.43	267	*e*P	P	19 04 31.7	-1.1
	31nm,1.2s						
NACB	**Ninganchiao**	56.34	308	*e*P	P	19 05 00.3	-0.8
	91nm,1.5s						
ASAJ	**Asahikawa**	58.73	339	LR	LR	19 26 24.7	
	comp=Z,91nm,19.4s,baz=170,slow=32						
PETK	**Petropavlovsk-**	63.80	354	LR	LR	19 28 50.4	
	comp=Z,62nm,21.7s,baz=144,slow=32						
VNDA	**Vanda**	67.16	181	LR	LR	19 32 04.3	
	comp=Z,75nm,18.9s,baz=356,slow=33						
SKNT	**Sakolnakorn**	68.26	293	P	P	19 06 22.1	+1.0
ENH	**Enshi**	68.71	308	*e*P	P	19 06 23.2	-0.5
	59nm,1.8s						
PSI	**Prapat**	69.32	277	LR	LR	19 38 47.4	
	comp=Z,44nm,21.0s,baz=267,slow=38						
GSI	**Gunungsitoli**	70.34	275	*e*P	P	19 06 33.9	-0.2
	31nm,1.0s						
XAN	**Xi'an**	70.85	312	P	P	19 06 36.0	-0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
XAN	**Xi'an**	70.85	312	*e*P	P	19 06 36.1	-0.7
	5.4nm,0.9s						
MA2	**Magadan**	71.01	351	LR	LR	19 32 14.8	
	comp=Z,53nm,21.6s,baz=126,slow=31						
CM31	**Chiang Mai Arr**	73.28	293	*e*P	P	19 06 52.6	+1.0
CMAR	**Chiang Mai Arr**	73.28	293	P	P	19 06 52.7	+1.0
	3.0nm,0.9s,baz=116,slow=4.7,SNR=23						
CMMT	**Chiang Mai**	73.38	293	P	P	19 06 53.4	+1.2
	5.7nm,1.3s						
CHTO	**Chiang Mai**	73.39	293	*e*P	P	19 06 52.3	+0.1
	6.8nm,1.1s						
CHTO	**Chiang Mai**	73.39	293	P	P	19 06 53.5	+1.3
	26nm,1.4s						
CHTO	**Chiang Mai**	73.39	293	P	P	19 06 53.5	+1.3
	26nm,1.4s						
ANM	**Nome**	77.55	12	*e*P	P	19 07 17.0	+1.9
	30nm,1.8s						
BILL	**Bilibino**	78.25	360	*e*P	P	19 07 18.5	-0.5
	30nm,1.5s						
ULN	**Ulaanbaatar**	78.70	323	*e*P	P	19 07 22.3	+0.2
	7.5nm,1.0s						
SONA0	**Songino Array**	79.08	323	*e*P	P	19 07 24.4	+0.3
SONM	**Songino Array**	79.08	323	P	P	19 07 24.4	+0.3
	1.3nm,0.9s,baz=137,slow=4.8,SNR=9.3						
GTA	**Gaotai**	79.74	313	⇑P	P	19 07 29.1	+1.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RDOG	**Red Dog Mine**	81.11	11	*e*P	P	19 07 34.4	0.0
	13nm,1.2s						
HDA	**Harding Lake**	82.15	18	*e*P	P	19 07 38.7	-1.4
	13nm,1.1s						
RIDG	**Independ'e Rid**	82.36	19	*e*P	P	19 07 40.5	-0.8
	29nm,1.4s						
ILAR	**Eielson Array**	82.43	18	P	P	19 07 40.0	-1.5
	3.3nm,0.9s,baz=238,slow=4.3,SNR=18						
ILAR				LR	LR	19 35 54.5	
	comp=Z,105nm,21.4s,baz=188,slow=30						
ILB	**Eielson Array**	82.43	18	*e*P	P	19 07 40.0	-1.5
SCRK	**Sand Creek**	82.80	20	*e*P	P	19 07 42.9	-0.7
	10nm,1.1s						
LSA	**Lhasa**	83.33	302	*e*P	P	19 07 45.5	-2.1
	3.7nm,1.1s						
ISA	**Isabella, Lake**	83.47	52	*e*P	P	19 07 46.5	-1.2
	3.6nm,0.8s						
PNTR	**Pine Nut**	83.68	49	*e*P	P	19 07 49.4	+0.5
	60nm,2.0s						
PAHR	**Pah Rah Range**	84.04	48	*e*P	P	19 07 50.3	-0.3
	6.1nm,1.1s						
EGAK	**Eagle**	84.26	20	*e*P	P	19 07 50.5	-0.4
	21nm,1.0s						
PINE	**Pine Mountain**	84.30	44	*e*P	P	19 07 51.7	-0.1
	7.0nm,0.7s						
RYN	**Ryan**	84.33	49	*e*P	P	19 07 53.1	+1.0
	4.4nm,0.8s						
DAWY	**Dawson**	84.41	21	*e*P	P	19 07 51.1	-0.7
	8.1nm,1.1s						
NV01	**Mina Array Sit**	84.44	49	*e*P	P	19 07 52.2	-0.5
NVAR	**Mina Array Bea**	84.44	49	P	P	19 07 52.2	-0.5
	1.3nm,0.8s,baz=237,slow=8.0,SNR=6.5						
NVAR				LR	LR	19 39 39.8	
	comp=Z,131nm,18.4s,baz=270,slow=32						
KVN	**Kaiserville**	84.78	49	*e*P	P	19 07 52.9	-1.5
	14nm,1.9s						
DLBC	**Dease Lake**	85.12	28	*e*P	P	19 07 54.9	-0.6
	51nm,1.9s						
I07A	**Izee**	85.37	44	*e*P	P	19 07 55.2	-1.9
	15nm,1.4s						
WVOR	**Wild Horse Val**	85.44	46	*e*P	P	19 07 57.5	0.0
TPNV	**Topopah Spring**	85.56	51	*e*P	P	19 07 56.7	-1.7
	4.4nm,0.6s						
GLA	**Glamis**	85.62	55	*e*P	P	19 07 57.9	-0.7
	5.7nm,0.8s						
LTY	**Liberty**	85.67	41	*e*P	P	19 07 57.3	-1.2
	26nm,1.8s						
BMN	**Battle Mountai**	85.84	48	*e*P	P	19 07 58.8	-0.9
J08A	**Circle Bar Ran**	85.84	45	*e*P	P	19 07 59.1	-0.4
	9.9nm,0.4s						
MAW	**Mawson**	85.89	202	LR	LR	19 42 21.3	
	comp=Z,127nm,19.2s,baz=97,slow=33						
E07A	**Sunnyside**	85.96	41	*e*P	P	19 08 00.1	+0.2
	9.4nm,1.2s						
Y12C	**Blythe**	86.05	55	*e*P	P	19 08 00.0	-0.6
	17nm,1.5s						
HAWA	**Hanford**	86.11	42	*e*P	P	19 08 00.1	-0.5
	13nm,1.4s						
LLLB	**Lillooet**	86.11	37	*e*P	P	19 08 00.5	-0.1
	21nm,1.5s						
G08A	**Pilot Rock**	86.13	43	*e*P	P	19 08 00.3	-0.6
	6.3nm,1.1s						
SHPR	**Sheep Range**	86.28	52	*e*P	P	19 08 00.5	-1.4
	8.5nm,1.5s						
E08A	**Dider Farm, El**	86.45	42	*e*P	P	19 08 02.2	-0.1
	59nm,2.0s						
R11A	**Troy Canyon, C**	86.46	50	*e*P	P	19 08 01.4	-1.4
	9.9nm,1.9s						
EPYK	**Eagle Plains**	86.69	20	*e*P	P	19 08 03.0	-0.1
	32nm,1.6s						
B08A	**Colville Reser**	86.89	40	*e*P	P	19 08 03.1	-1.3
	13nm,1.7s						
Y14A	**Wickenburg**	87.32	55	*e*P	P	19 08 03.5	-3.4
	6.2nm,0.6s						
C09A	**Chrisman Ranch**	87.38	41	*e*P	P	19 08 07.8	+1.0
	11nm,1.4s						
PSUT	**Pine Spring**	87.81	50	*e*P	P	19 08 09.0	-0.4
	4.4nm,1.0s						
LCMT	**Little Creek M**	87.89	52	*e*P	P	19 08 09.5	-0.2
	22nm,2.0s						
CCUT	**Cedar City**	87.94	51	*e*P	P	19 08 09.7	-0.3
	15nm,1.9s						
PALK	**Pallekele**	87.99	278	*e*P	P	19 08 08.9	-1.6
	19nm,1.2s						
KNB	**Kanab**	88.22	52	*e*P	P	19 08 11.0	-0.3
	19nm,1.7s						
NEW	**Newport**	88.26	40	*e*P	P	19 08 10.2	-0.8
	9.3nm,1.4s						
PKCU	**Pink Cliffs**	88.72	52	*e*P	P	19 08 14.5	+0.7
	68nm,2.0s						
HLID	**Hailey**	88.73	45	*e*P	P	19 08 13.5	0.0
TUC	**Tucson**	88.74	57	*e*P	P	19 08 09.1	-4.6
	20nm,0.9s						
TCRU	**Three Creeks R**	88.90	51	*e*P	P	19 08 14.8	+0.3
	13nm,0.4s						
MTPU	**Mount Pierson**	88.97	51	*e*P	P	19 08 14.7	-0.3
	4.6nm,1.1s						
WUAZ	**Wupatki**	89.00	54	*e*P	P	19 08 14.4	-0.5
	5.6nm,0.9s						
DUG	**Dugway, Tooele**	89.02	49	*e*P	P	19 08 15.0	0.0
	19nm,1.8s						
BGU	**Big Grassy Mou**	89.04	48	*e*P	P	19 08 14.4	-0.6
	14nm,1.6s						
HVU	**Hansel Valley**	89.44	47	*e*P	P	19 08 16.7	-0.2
	20nm,1.4s						
NLU	**North Lily Min**	89.51	49	*e*P	P	19 08 16.6	-0.7
	21nm,1.7s						
SPUT	**South Promonto**	89.56	48	*e*P	P	19 08 17.2	-0.2
	7.4nm,1.3s						
WMQ	**Urumqi**	89.75	315	*e*P	P	19 08 17.9	-0.2
	8.8nm,1.2s						
319A	**Douglas**	89.79	58	*e*P	P	19 08 17.8	-0.9
	23nm,1.0s						
MPU	**Maple Canyon**	89.85	49	*e*P	P	19 08 19.0	+0.1
	20nm,1.5s						
MSO	**Missoula**	89.92	42	*e*P	P	19 08 18.6	-0.4
	17nm,1.8s						
CTU	**Camp Tracy**	89.92	49	*e*P	P	19 08 18.0	-1.2
	9.1nm,1.2s						
TMUT	**Trail Mountain**	90.00	50	*e*P	P	19 08 19.7	0.0
DLMT	**Dillon**	90.45	44	*e*P	P	19 08 21.5	-0.1
	8.8nm,1.1s						
FXWY	**Fox Creek**	91.13	46	*e*P	P	19 08 24.1	-0.8

	5.0nm,1.2s						
MOOW	Moose Ponds	91.36	46	eP	P	19 08 25.1	-0.8
	5.5nm,1.3s						
PV07	Paradox Valley	91.77	51	eP	P	19 08 28.2	+0.3
	60nm,0.8s						
PD31	Pinedale Array	91.99	47	eP	P	19 08 26.6	-2.3
PDAR	Pinedale Array	91.99	47	P	P	19 08 26.6	-2.3
	1.7nm,1.1s,baz=270,slow=2.8,SNR=6.5						
PDAR				LR	LR	19 46 07.3	
	comp=Z,45nm,18.8s,baz=276,slow=33						
LENM	Lemitar	92.25	56	eP	P	19 08 31.2	+1.0
SYO	Syowa Base	92.83	197	⇓eP	P	19 08 30.0	-1.9
S22A	4UR Ranch, Cre	93.04	52	eP	P	19 08 33.9	0.0
	2.6nm,0.7s						
YKA	Yellowknife Ar	93.70	27	P	P	19 08 33.3	-2.6
	0.7nm,0.8s,baz=254,slow=4.6,SNR=10						
YKB5	Yellowknife Ar	93.70	27	eP	P	19 08 33.4	-2.6
MK32	Makanchi Array	94.12	317	eP	P	19 08 38.0	-0.3
MKAR	Makanchi Array	94.12	317	eP	P	19 08 37.5	-0.8
	12nm,0.9s						
MKAR	Makanchi Array	94.12	317	P	P	19 08 38.0	-0.3
	2.0nm,0.9s,baz=104,slow=5.1,SNR=14						
TXAR	Lajitas Array	94.17	61	LR	LR	19 45 35.4	
	comp=Z,97nm,18.6s,baz=0.0,slow=32						
MAKZ	Makanchi	94.33	317	eP	P	19 08 38.5	-0.8
	3.8nm,1.2s						

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*IDC **19** 19:01:42.9±1.4, 17°.50S×178°.79W, h504km±13km, mb3.7/17, mb1 3.9/18, mb1mx3.6/49, mbtmp4.5/18, Error ellipse: s-maj=15.6km s-min=12.2km az=130.0*

*ISCJB **19** 19:01:44.9±0.2, 17°.60S±0°.04×178°.91W±0°.05, h539km, mb4.8/90, Error ellipse: s-maj=5.9km s-min=4.8km az=21.3*

*NEIC **19** 19:01:46.0±0.5, 17°.59S×178°.93W, h536km±5km, mb5.0/79, Error ellipse: s-maj=6.8km s-min=5.2km az=114.0*

ISC 19 19:01:46.0±0.3**, 17°.54S**±0°.06×**178°.90W**±0°.06**, h539**km**, n198, σ1s.06**/205**, mb4.9**/90**, 6D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.92	266	eP	P	19 03 00.6	+0.9
NIUE	Niue	8.66	102	eP	P	19 03 48.6	-1.5
FUNA	Funafuti	9.15	348	eP	P	19 03 52.8	-2.4
MARNC	Mare, Loyalty	12.93	250	eP	P	19 04 32.9	-1.4
PINNC	Pines Island,	13.78	246	eP	P	19 04 43.0	-0.1
DZM	Mont Dzumac	14.51	250	P	P	19 04 50.9	+0.1
	2.2nm,0.3s,baz=133,slow=16,SNR=18						
RAR	Rarotonga	18.41	105	eP	P	19 05 28.3	+0.1
	202nm,1.8s						
OUZ	Omahuta	18.84	199	eP	P	19 05 33.6	+1.7
	50nm,1.0s						
MXZ	Matakaoa Point	20.10	186	eP	P	19 05 42.7	-0.7
	67nm,1.1s						
TARA	Tarawa	20.43	336	eP	P	19 05 45.1	-1.6
	327nm,1.4s						
URZ	Urewera	20.94	189	eP	P	19 05 48.9	-2.1
	16nm,1.0s						
URZ	Urewera	20.94	189	P	P	19 05 48.7	-2.2
	9.9nm,0.5s,baz=354,slow=2.0,SNR=6.1						
BKZ	Black Stump Fm	21.92	190	eP	P	19 05 58.7	-1.2
	26nm,1.6s						
BFZ	Birch Farm	23.44	189	eP	P	19 06 13.2	-0.2
	42nm,1.3s						
THZ	Tophouse	25.14	195	eP	P	19 06 28.0	-0.6
	16nm,1.1s						
KHZ	Kahutara	25.62	193	eP	P	19 06 31.0	-1.7
	82nm,1.6s						
LTZ	Lake Taylor	26.26	195	eP	P	19 06 37.2	-1.2
	21nm,0.7s						
OXZ	Oxford	26.83	195	eP	P	19 06 41.9	-1.4
	44nm,0.8s						
MQZ	McQueen's Vall	27.05	194	eP	P	19 06 45.0	-0.1
	112nm,1.4s						
RPZ	Rata Peaks	27.44	196	eP	P	19 06 48.4	-0.3
	167nm,1.9s						
RPZ	Rata Peaks	27.44	196	P	P	19 06 48.4	-0.3
	9.0nm,0.6s,baz=327,slow=1.7,SNR=8.5						
FOZ	Fox Glacier	27.62	198	eP	P	19 06 49.4	-0.8
	36nm,1.0s						
LBZ	Lake Benmore	28.30	197	eP	P	19 06 54.2	-2.0
	83nm,1.7s						
ODZ	Otahua Downs	28.79	195	eP	P	19 06 58.5	-1.9
	123nm,1.8s						
EIDS	Eidsvold	28.96	249	eP	P	19 07 02.0	-0.2
	18nm,0.9s						
WKZ	Wanaka	29.04	198	eP	P	19 07 01.4	-1.2
	73nm,1.5s						
KWAJ	Kwajalein Atol	29.37	332	eP	P	19 07 07.7	+1.8
	447nm,1.2s						
ARMA	Armidale	29.73	239	eP	P	19 07 09.7	+0.8
	20nm,0.6s						
MLZ	Mavora Lakes	29.79	199	eP	P	19 07 09.5	+0.3
	49nm,0.8s						
DCZ	Deep Cove	30.18	200	eP	P	19 07 12.9	+0.4
	46nm,1.4s						
WHZ	Wether Hill Ro	30.32	198	eP	P	19 07 14.3	+0.7
	41nm,0.9s						
RABL	Rabaul	31.30	292	eP	P	19 07 22.5	0.0
	21nm,0.9s						
CTA	Charters Tower	33.05	260	P	P	19 07 37.1	-0.2
	9.4nm,0.8s,baz=85,slow=12,SNR=24						
CTA				PcP	PcP	19 10 05.7	+0.6
	2.7nm,0.7s,baz=101,slow=4.3,SNR=5.0						
CTAO	Charters Tower	33.05	260	eP	P	19 07 37.2	-0.2
	13nm,0.9s						
PATS	Pohnpei	33.07	315	eP	P	19 07 37.8	+0.3
	235nm,1.3s						
MANU	Manus Island	36.53	291	eP	P	19 08 07.3	+0.9
	37nm,0.8s						
COEN	Coen	36.64	270	eP	P	19 08 07.3	-0.1
	12nm,0.8s						
TOO	Toolangi	37.04	230	eP	P	19 08 11.1	+0.7
	56nm,0.9s						
TAU	Tasmania Unive	38.20	221	eP	P	19 08 20.8	+1.0
	176nm,1.8s						
STKA	Stephens Creek	38.40	241	eP	P	19 08 22.4	+0.9
	10.0nm,1.1s						
STKA	Stephens Creek	38.40	241	P	P	19 08 22.2	+0.7
	20nm,0.6s,baz=86,slow=10,SNR=45						
BBOO	Buckleboo	43.18	241	eP	P	19 08 59.7	+0.2
	58nm,0.9s						
KKH	Kailua Kona	43.26	32	eP	P	19 09 00.9	+0.7
AIN	Ainahou	43.31	33	eP	P	19 09 02.2	+1.3
	812nm,1.9s						
WRMHI	West Rim	43.42	33	eP	P	19 09 01.4	-0.2
	202nm,1.1s						
RIM	Rim	43.43	33	eP	P	19 09 02.4	+0.7
	134nm,0.9s						
KKO	Keanakako`i	43.43	33	eP	P	19 09 02.0	+0.3
	174nm,1.0s						
UWE	Uwekahuna	43.44	33	eP	P	19 09 00.6	-1.2
	224nm,1.0s						
BYL	Byron's Ledge	43.45	33	eP	P	19 09 01.2	-0.6
	113nm,0.8s						
UWB	Uwekahuna B	43.45	33	eP	P	19 09 05.0	+3.2
	498nm,1.6s						
SBLHI	Steaming Bluff	43.45	33	eP	P	19 09 06.3	+4.4
	514nm,1.7s						
WC3	Warramunga Arr	44.21	259	eP	P	19 09 06.4	-1.3
	13nm,0.9s						
WB2	Warramunga Arr	44.23	259	eP	P	19 09 07.1	-0.8
	22nm,1.1s						
WRAB	Tennant Creek	44.23	259	eP	P	19 09 06.6	-1.3
	18nm,1.1s						
WRA	Warramunga Arr	44.24	259	P	P	19 09 06.8	-1.1
	3.7nm,0.4s,baz=92,slow=7.7,SNR=132						
WRA				PcP	PcP	19 10 41.2	+0.4
	5.4nm,0.8s,baz=92,slow=3.4,SNR=13						
WRA				ScP	ScP	19 13 44.7	+3.1
	0.6nm,0.6s,baz=90,slow=3.9,SNR=4.9						
WRA				S	S	19 14 58.5	-4.2
	0.4nm,0.7s,baz=90,slow=14,SNR=3.7						
AS31	Alice Springs	44.44	254	eP	P	19 09 09.2	-0.4
	18nm,0.9s						
ASAR	Alice Springs	44.44	254	P	P	19 09 09.2	-0.4
	32nm,0.4s,baz=89,slow=8.0,SNR=889						
ASAR				PcP	PcP	19 10 41.8	+0.2
	5.7nm,0.7s,baz=100,slow=3.8,SNR=14						
ASAR				ScP	ScP	19 13 46.0	+3.6
	1.4nm,0.9s,baz=103,slow=4.9,SNR=5.0						
ASAR				S	S	19 15 04.2	-1.4
	3.3nm,1.0s,baz=88,slow=16,SNR=17						
PTCN	Pitcairn Islan	45.88	108	eP	P	19 09 20.1	-0.4
	198nm,0.6s						
GUMO	Guam	47.28	309	P	P	19 09 31.6	+0.5
	104nm,0.6s,baz=135,slow=1.6,SNR=3.8						
MTN	Manton Dam	48.34	268	eP	P	19 09 38.6	-0.5
	27nm,0.8s						
FORT	Forrest	49.74	244	eP	P	19 09 48.6	-0.7
	49nm,0.6s						
FAKI	Fak Fak	50.05	281	eP	P	19 09 51.3	-0.4
	102nm,1.3s						
SIJI	Sorong	51.70	283	P	P	19 10 03.9	+0.1
	48nm,0.7s,baz=69,slow=7.1,SNR=15						
FITZ	Fitzroy Crossi	52.63	260	eP	P	19 10 10.8	+0.4
	66nm,1.7s						
SOEI	Soe	55.60	270	eP	P	19 10 32.1	+0.6
	113nm,1.1s						
TNTI	Ternate	55.92	283	eP	P	19 10 34.1	+0.5
	28nm,0.9s						
MBWA	Marble Bar	57.71	256	eP	P	19 10 45.4	-0.3
	16nm,0.8s						
MMRI	Maumere	57.83	271	eP	P	19 10 46.9	+0.3
	32nm,0.8s						
NWAO	Narrogin (SRO)	58.97	242	eP	P	19 10 53.9	-0.2
	39nm,1.3s						
MORW	Morawa	60.20	246	eP	P	19 11 02.0	-0.4
	11nm,0.8s						
SBA	Scott Base	60.76	183	eP	P	19 11 06.8	+1.7
	538nm,1.8s						
VNDA	Vanda	60.77	185	eP	P	19 11 07.1	+1.8
	200nm,1.9s						
GIRL	Giralia	62.55	253	eP	P	19 11 18.2	+0.4
	531nm,2.0s						
JAGI	Jajag, Banyuwa	65.58	269	eP	P	19 11 35.8	-1.4
	49nm,0.7s						
CASY	Casey	66.28	205	eP	P	19 11 40.4	-0.1
	126nm,1.4s						
MJAR	Matsushiro Arr	67.33	324	P	P	19 11 47.2	-0.4
	3.3nm,0.6s,baz=163,slow=6.1,SNR=10						
MAJO	Matsushiro	67.34	324	eP	P	19 11 47.4	-0.2
	74nm,1.9s						
KKM	Kota Kinabalu	68.20	284	eP	P	19 11 53.6	+0.2
	30nm,1.2s						
ERM	Erimo	68.84	331	eP	P	19 11 57.8	+1.2
	111nm,1.2s						
UGM	Wanagama	69.19	268	eP	P	19 11 59.0	-0.4
	294nm,1.3s						
SBUM	Sibu	70.69	279	eP	P	19 12 09.4	+1.1
	5.0nm,1.0s						
YULB	Yu-li	71.18	303	eP	P	19 12 10.3	-0.6
	200nm,2.0s						
NACB	Ninganchiao	71.33	304	eP	P	19 12 11.2	-0.5
	173nm,1.8s						
SSLB	Suanglung	71.64	303	eP	P	19 12 13.1	-0.6
	171nm,2.0s						
TPUB	Ta-pu	71.67	303	eP	P	19 12 12.8	-1.0
	141nm,1.7s						
CISI	Cisompet, Garu	71.87	268	eP	P	19 12 13.3	-1.9
	62nm,1.2s						
KSM	Kuching	72.17	277	eP	P	19 12 18.1	+1.2
	33nm,1.0s						
QSPA	South Pole Qui	72.51	180	eP	P	19 12 18.9	+0.8
	15nm,0.8s						
PETK	Petropavlovsk-	73.21	346	P	P	19 12 21.3	-0.7
	2.5nm,0.7s,baz=131,slow=9.0,SNR=6.0						
SDPT	Sand Point	74.27	11	eP	P	19 12 30.6	+2.8
	261nm,1.3s						
NVAR	Mina Array Bea	79.48	44	P	P	19 12 57.2	+0.1
	0.9nm,0.6s,baz=220,slow=9.8,SNR=4.7						
IPM	Ipoh	81.91	277	eP	P	19 13 11.2	+1.2
	28nm,0.9s						
PSI	Prapat	83.39	275	eP	P	19 13 16.9	-0.7
	15nm,0.9s						
PSI	Prapat	83.39	275	P	P	19 13 17.5	0.0
	10nm,0.8s,baz=181,slow=6.5,SNR=7.7						
TCRU	Three Creeks R	83.54	46	epP	pP	19 15 17.2	+3.5
ENH	Enshi	83.68	304	eP	P	19 13 19.2	+0.7
	16nm,0.9s						
GSI	Gunungsitoli	84.22	273	eP	P	19 13 22.6	+1.1
	27nm,0.8s						
ILAR	Eielson Array	85.64	13	P	P	19 13 26.4	-0.9
	1.0nm,1.1s,baz=220,slow=5.2,SNR=5.8						
XAN	Xi'an	85.67	308	P	P	19 13 29.4	+1.2
XAN				pmax	pmax		
	comp=Z,17nm,1.5s						
XAN	Xi'an	85.67	308	eP	P	19 13 29.4	+1.2
	18nm,1.0s						
TXAR	Lajitas Array	86.19	58	P	P	19 13 32.0	+1.2
	1.0nm,0.8s,baz=208,slow=5.9,SNR=11						
PDAR	Pinedale Array	87.41	44	P	P	19 13 36.4	-0.1
	0.5nm,0.6s,baz=221,slow=3.4,SNR=6.4						
CMAR	Chiang Mai Arr	88.32	290	P	P	19 13 42.6	+1.7
	3.5nm,0.9s,baz=107,slow=3.1,SNR=24						
CMMT	Chiang Mai	88.43	290	P	P	19 13 42.8	+1.3
	9.3nm,1.2s						
CHTO	Chiang Mai	88.44	290	eP	P	19 13 42.5	+1.0
	10nm,1.2s						
CHTO	Chiang Mai	88.44	290	P	P	19 13 42.8	+1.3
	41nm,1.2s						
SNAA	Sanae	90.97	179	P	P	19 13 51.8	-0.5
VNA3	Neumayer Olymp	91.14	177	P	P	19 13 53.3	+0.3
VNA2	Neumayer--Watz	91.57	177	P	P	19 13 55.3	+0.3
ULN	Ulaanbaatar	92.57	320	eP	P	19 13 60.0	-0.2
	3.0nm,1.0s						
SONM	Songino Array	92.97	319	P	P	19 14 02.0	+0.1
	0.7nm,1.0s,baz=137,slow=6.5,SNR=3.6						
YKA	Yellowknife Ar	94.19	25	P	P	19 14 05.6	-1.3
	0.2nm,0.6s,baz=245,slow=4.3,SNR=5.3						
GTA	Gaotai	94.44	310	eP	P	19 14 09.6	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ACSO	Alum Creek Sta	105.54	52	ePdif	Pdif	19 14 58.2	0.0
ZALV	Zalesovo Beam	107.66	322	PKiKP	PKiKP	19 19 10.5	-1.2
	0.8nm,0.6s,baz=105,slow=0.9,SNR=4.5						
MKAR	Makanchi Array	108.55	314	PKiKP	PKiKP	19 19 12.6	-1.0
	0.9nm,0.6s,baz=223,slow=1.0,SNR=14						
KURBB	Kurchatov Arra	111.30	318	PKiKP	PKiKP	19 19 17.6	-1.0
	0.6nm,0.3s,baz=94,slow=1.3,SNR=7.0						
BVAR	Borovoye Array	116.27	321	PKP	PKPdf	19 19 27.3	-0.8
	1.9nm,0.6s,baz=90,slow=1.4,SNR=16						
BRVK	Borovoye	116.33	321	ePKPdf	PKPdf	19 19 27.5	-0.7
SPITS	Spitsbergen Ar	118.87	356	PKP	PKPdf	19 19 31.9	-0.6
	7.5nm,0.9s,baz=7.6,slow=4.4,SNR=3.7						
ABKAR	Akbulak array	123.35	318	ePKPdf	PKPdf	19 19 40.9	-1.0
ARCES	ARCESS Array B	125.87	350	PKP	PKPdf	19 19 45.3	-0.8
	4.5nm,1.0s,baz=17,slow=0.5,SNR=6.2						
GEYT	Alibeck	126.45	304	PKP	PKPdf	19 19 47.7	-0.5
	3.6nm,0.7s,baz=225,slow=3.7,SNR=5.6						
FINES	FINESS Array B	132.71	344	PKP	PKPdf	19 19 58.4	-0.8
	1.9nm,0.9s,baz=46,slow=4.0,SNR=5.0						
FINES				SKPbc	SKPab	19 22 38.4	-0.1
	2.5nm,0.7s,baz=56,slow=3.5,SNR=8.0						
NOA	NORSAR Array B	135.95	353	PKP	PKPdf	19 20 04.8	-0.6
	0.5nm,0.6s,baz=15,slow=4.6,SNR=3.6						
RAYN	Ar Rayn	138.12	286	ePKPdf	PKiKP	19 20 11.9	-0.8
AKASG	Malin Array Be	140.02	332	PKP	PKiKP	19 20 14.7	-1.1
	1.3nm,0.5s,baz=45,slow=2.3,SNR=6.0						
AKASG				SKP		19 22 59.5	
	1.9nm,0.8s,baz=42,slow=4.0,SNR=6.1						
EKA	Eskdalemuir Ar	142.13	4	PKhKP	PKPpre	19 20 12.4	
	1.7nm,0.8s,baz=346,slow=4.4,SNR=4.6						
ILGA	Ilgaz	143.49	317	ePKPdf	PKPdf	19 20 19.3	-0.6
KWP	Kalwaria Pacla	143.55	336	ePKP	PKPbc	19 20 18.3	+0.1
KWP	Kalwaria Pacla	143.55	336	ePKPbc	PKPbc	19 20 18.4	+0.2
BRTR	Keskin Array B	144.19	315	PKP	PKPbc	19 20 20.7	0.0
	4.5nm,0.7s,baz=129,slow=3.8,SNR=27						
NIE	Niedzica	144.61	338	ePKP	PKPab	19 20 22.1	0.0
KSP	Ksiaz	144.62	343	ePKP	PKPab	19 20 21.9	-0.1
ANTO	Ankara	144.69	316	ePKPdf	PKPbc	19 20 22.2	0.0
TRPA	Tarpa	144.82	335	ePKiKP	PKPbc	19 20 22.0	-0.1
OKC	Ostrava-Krasne	144.97	341	ePKP	PKPbc	19 20 22.8	+0.3
CLL	Collm	145.00	347	ePKPdf	PKPbc	19 20 22.3	-0.2
CLL	Collm	145.00	347	⇓iPKPbc	PKPdf	19 20 22.1	+0.2
	comp=Z,17nm,0.9s						
CLL				⇓iPKiKP	PKiKP	19 20 26.1	+0.2
	comp=Z,6.0nm,0.9s						
UPC	Upice	145.00	343	ePKP	PKPab	19 20 23.1	-0.4
DPC	Dobruska-Polom	145.06	343	ePKP	PKPab	19 20 23.5	-0.3
LANS	Liptovska Anna	145.13	339	ePKP	PKPab	19 20 24.2	+0.1
KRLC	Kraliky	145.18	342	ePKP	PKPab	19 20 23.8	-0.5
BRG	Berggiesshubel	145.20	346	ePKP	PKPdf	19 20 22.3	+0.1
	comp=Z,8.7nm,0.8s						
MORC	Moravsky Berou	145.21	341	ePKPdf	PKPdf	19 20 22.3	-0.1
MORC	Moravsky Berou	145.21	341	ePKP	PKPbc	19 20 23.4	+0.1
MLR	Muntele Rosu	145.28	329	ePKPdf	PKPbc	19 20 23.5	-0.3
MLR	Muntele Rosu	145.28	329	PKPbc	PKPbc	19 20 23.2	-0.5
	comp=Z,2.6nm,0.5s,baz=339,slow=11,SNR=10						
PVCC	Panska Ves	145.36	345	ePKP	PKPab	19 20 24.5	-0.4
MMAI	Mount Meron Ar	145.55	303	PKPbc	PKPbc	19 20 25.5	+0.6
	comp=Z,10nm,0.6s,baz=62,slow=4.1,SNR=36						
LTVH	Ltavrtes, Hu	145.67	335	ePKiKP	PKPdf	19 20 23.1	0.0
MBAR	Mbarara	145.70	241	ePKPdf	PKPdf	19 20 23.3	-1.2
MBAR				ePKPbc	PKPab	19 20 26.9	-0.6
MBAR	Mbarara	145.70	241	PKPbc	PKPab	19 20 27.2	-0.4
	comp=Z,4.5nm,0.3s,baz=144,slow=3.1,SNR=15						
PRU	Pruhonice	145.87	344	ePKP	PKPbc	19 20 25.4	+0.3
GOPC	GO Pecny, Ondr	145.87	344	ePKP	PKPbc	19 20 25.6	+0.4
VYHS	Vyhne	145.91	339	ePKP	PKPbc	19 20 25.9	+0.6
VRAC	Vranov	145.92	342	ePKP	PKPbc	19 20 25.6	+0.3
VRAC	Vranov	145.92	342	PKPbc	PKPbc	19 20 24.7	-0.6
	comp=Z,2.3nm,0.6s,baz=0.0,slow=4.0,SNR=4.8						
PSZ	Piszkesteto	146.02	337	ePKPdf	PKPdf	19 20 24.1	+0.2
PSZ	Piszkesteto	146.02	337	ePKiKP	PKPbc	19 20 25.0	-0.7
NKC	Novy Kostel	146.13	347	ePKP	PKPbc	19 20 26.3	+0.4
KRUC	Moravsky	146.19	342	ePKP	PKPbc	19 20 26.3	+0.2
SMOL	Smolenice	146.36	340	ePKP	PKPbc	19 20 27.6	+1.0
CSS	Mathiatis	146.49	308	ePKPbc	PKPbc	19 20 27.4	0.0
MODS	Modra-Piesok	146.53	340	ePKP	PKPbc	19 20 28.0	+0.9
KHC	Kasperske Hory	146.90	345	ePKPdf	PKPdf	19 20 25.0	-0.2
KHC				ePKPbc	PKPbc	19 20 28.4	+0.3
KHC	Kasperske Hory	146.90	345	ePKP	PKPbc	19 20 28.7	+0.6
BCLA	Clavier	147.03	355	⇓PKP	PKPbc	19 20 28.7	+0.4
GERES	GERESS Array B	147.13	345	PKPbc	PKPbc	19 20 28.9	+0.1
	comp=Z,3.5nm,0.5s,baz=23,slow=3.0,SNR=38						
CONA	Conrad Observa	147.37	341	ePKiKP	PKiKP	19 20 30.2	-0.8
	comp=Z,10nm,0.7s,SNR=6.4						
SOP	Sopron	147.37	340	⇓ePKiKP	PKPbc	19 20 29.0	-0.2
DOU	Dourbes	147.40	356	⇓PKP	PKPbc	19 20 28.8	-0.5
WLF	Walferdange	147.69	354	ePKPdf	PKPdf	19 20 28.1	+1.7
WLF				ePKPbc	PKPbc	19 20 30.7	+0.6
WLF	Walferdange	147.69	354	⇓PKiKP	PKiKP	19 20 30.9	-0.6
MOA	Molln	147.90	343	ePKPbc	PKPbc	19 20 30.6	-0.1
	comp=Z,5.6nm,1.0s						
MORH	Mrgy, Hungar	147.91	337	ePKiKP	PKPbc	19 20 29.1	-1.6
VTS	Vitosha	148.70	328	ePKPdf	PKPdf	19 20 30.2	+1.7
VTS				ePKPbc	PKPbc	19 20 33.2	+0.2
BFO	Black Forest	148.73	351	ePKPdf	PKPbc	19 20 31.0	-1.8
BFO				ePKPbc	PKiKP	19 20 32.9	-0.9
SOKA	Soboth	148.74	341	ePKPbc	PKPbc	19 20 32.7	-0.2
	comp=Z,6.0nm,0.8s						
PERS	Pernice	148.75	341	i PKPbc	PKPbc	19 20 32.3	-0.6
KBA	Koelnbreinsper	148.86	344	ePKPbc	PKPbc	19 20 32.9	-0.4
	comp=Z,5.8nm,0.5s						
WATA	Walderalm	149.06	346	ePKPbc	PKPbc	19 20 33.7	0.0
	comp=Z,8.0nm,0.5s						
RETA	Reutte	149.09	347	i PKPbc	PKPbc	19 20 33.9	+0.2
	comp=Z,4.6nm,0.5s						
DIVS	Divibare	149.10	333	ePKPbc	PKPbc	19 20 33.9	0.0
WTTA	Wattenberg	149.11	346	ePKPbc	PKPbc	19 20 34.0	0.0
	comp=Z,10nm,0.5s						
MOTA	Moosalm	149.16	347	ePKPbc	PKPbc	19 20 34.0	0.0
	comp=Z,2.5nm,0.5s						
MYKA	Terra Mystica	149.19	343	i PKPbc	PKPbc	19 20 33.5	-0.5
	comp=Z,7.6nm,0.5s						
SQTA	Sankt Quirin	149.25	346	i PKPbc	PKPbc	19 20 34.2	0.0
	comp=Z,12nm,0.6s,SNR=6.0						
ABTA	Abfaltersbach	149.38	345	ePKPbc	PKPbc	19 20 34.1	-0.4
	comp=Z,25nm,1.2s,SNR=7.8						
LJU	Ljubljana	149.46	341	i PKPbc	PKPbc	19 20 34.5	-0.1
DAVA	Damuels	149.47	348	ePKiKP	PKPbc	19 20 35.0	+0.2
	comp=Z,9.4nm,0.8s						
FETA	Feichten	149.54	347	i PKiKP	PKiKP	19 20 35.3	-0.4
	comp=Z,8.2nm,0.8s						
CEY	Cerknica	149.77	341	i PKPbc	PKPbc	19 20 35.2	-0.1
FUORN	Ofenpass-Fuorn	150.02	347	ePKPdf	PKPdf	19 20 32.6	+2.0
FUORN				ePKPbc	PKiKP	19 20 36.7	-0.1
FNA	Florina	150.99	327	ePKPbc	PKPbc	19 20 37.6	-0.8
IDI	Anoyia	152.43	315	PKPbc	PKiKP	19 20 42.4	+0.5
	comp=Z,13nm,1.1s,baz=59,slow=5.9,SNR=4.1						
DBIC	Dimbokro	167.73	151	PKP	PKPdf	19 20 50.5	-1.1
	comp=Z,2.8nm,0.8s,baz=190,slow=1.8,SNR=3.8						
TORD	Torodi Ar. Bea	175.60	188	PKP	PKPdf	19 20 53.1	-2.0
	comp=Z,1.9nm,0.8s,baz=186,slow=1.4,SNR=9.3						
TORD				PKPab	PKPab	19 22 37.3	+0.9
	comp=Z,0.5nm,0.6s,baz=189,slow=3.7,SNR=3.0						

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*IDC **19** 19:07:35.1±1.1, 31°.73S×68°.18W, h0km, mb3.7/2, mb1 4.2/4, mb1mx3.8/39, mbtmp4.0/4, ML4.1/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/24, Error ellipse: s-maj=53.4km s-min=34.2km az=83.0*

*ISCJB **19** 19:07:49.3±0.5, 31°.15S±0°.03×68°.33W±0°.04, h109km±4km, mb3.5/2, Error ellipse: s-maj=5.9km s-min=5.3km az=37.1*

*GUC **19** 19:07:49.3±0.8, 31°.15S×68°.57W, h149km±39km, ML4.0*

*SJA **19** 19:07:49.9±0.5, 31°.19S×68°.38W, h100km±2km, ML3.7, MW3.7*

*NEIC **19** 19:07:50.0±0.0, 31°.19S×68°.38W, h101km, MD3.7(SJA), After SJA.*

NEIC Felt [III] at San Juan.

ISC 19 19:07:50.0±0.8**, 31°.16S**±0°.04×**68°.35W**±0°.04**, h105**km±6km**, n27, σ0s.81**/42**, 1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.20	213	eP	Pn	19 08 04.7	-0.2
RTLL				IAML		19 08 05.1	
	comp=Z,5μm,0.4s						
RTLL				eS	Sn	19 08 15.8	-0.3
AMOG	MOGNA	0.25	330	eP	Pn	19 08 05.4	+0.3
AMOG				eS	Sn	19 08 16.3	-0.1
CFA	Coronel Fontan	0.45	168	eP	Pn	19 08 06.1	0.0
CFA				eS	Sn	19 08 17.7	-0.5
ZON	Zonda	0.48	216	eP	Pn	19 08 06.1	-0.2
ZON				IAML		19 08 06.2	
	comp=Z,2μm,0.2s						
ZON				eS	Sn	19 08 18.1	-0.4
RTCV	Cerro Valdivia	0.72	193	eP	Pn	19 08 08.0	-0.1
RTCV				eS	Sn	19 08 21.5	-0.2
RTLS	Leoncito	1.03	232	eP	Pn	19 08 11.8	+0.4
RTLS				eS	Sn	19 08 28.2	+0.6
RTLS				IAML		19 08 30.0	
	comp=Z,1μm,0.5s						
ACDV	Cuesta del Vie	1.19	326	eP	Pn	19 08 13.7	+0.6
ACDV				eS	Sn	19 08 31.7	+1.2
ACDV				IAML		19 08 32.1	
	comp=Z,1μm,0.5s						
AUSP	Uspallata	1.38	220	eP	Pn	19 08 15.9	+0.5
AUSP				eS	Sn	19 08 35.4	+0.8
AROD	Rodeo	1.39	315	eP	Pn	19 08 16.1	+0.6
ACAN	Cantantal	1.49	139	eP	Pn	19 08 17.4	+1.0
ACAN				eS	Sn	19 08 37.1	+0.7
AGUA	GUANDACOL	1.67	356	eP	Pn	19 08 20.1	+1.4
CMCH	Combarbala	2.27	269	eP	Pn	19 08 26.1	-0.3
CMCH				i S	Sn	19 08 54.2	-0.1
CMCH				IAML		19 08 55.9	
	comp=E,1μm,0.3s						
GO04	Tololo Observa	2.33	294	eP	Pn	19 08 27.3	0.0
GO04				i S	Sn	19 08 55.6	-0.2
FCH	Farellones	2.72	217	eP	Pn	19 08 33.1	+0.7
FCH				i S	Sn	19 09 06.3	+1.3
ROCH	El Roble	2.89	231	⇓eP	Pn	19 08 34.3	-0.4
ROCH				i S	Sn	19 09 09.0	0.0
ROCH				IAML		19 09 10.7	
	comp=E,414nm,0.5s						
CLCH	Cerro Calan	2.90	219	eP	Pn	19 08 35.8	+1.2
LCO	Las Campanas	2.96	316	ePn	Pn	19 08 35.7	+0.2
LCO				eSn	Sn	19 09 09.7	-1.0
LCO	Las Campanas	2.96	316	eP	Pn	19 08 35.8	+0.2
LCO				i S	Sn	19 09 10.6	0.0
LCO				IAML		19 09 14.5	
	comp=N,314nm,0.3s						
TCA	Tanti	3.22	94	i P	Pn	19 08 39.4	+0.5
TCA				i S	Sn	19 09 15.7	-0.9
TCA				IAML		19 09 17.5	
	comp=Z,153nm,0.6s						
LVC	Limon Verde	8.53	356	Pn	Pn	19 09 49.1	-1.9
	comp=Z,3.6nm,0.3s,baz=203,slow=6.9,SNR=13						
LVC				LR	LR	19 13 20.5	
	comp=Z,40nm,21.3s,baz=212,slow=38						
LPAZ	La Paz	14.81	1	Pn	Pn	19 11 15.9	+1.3
	comp=Z,0.2nm,0.3s,baz=185,slow=6.0,SNR=11						
TXAR	Lajitas Array	68.91	327	P	P	19 18 44.4	+0.7
	comp=Z,0.4nm,0.6s,baz=166,slow=8.4,SNR=4.4						
TORD	Torodi Ar. Bea	80.29	68	P	P	19 19 48.2	-1.5
	comp=Z,0.6nm,0.6s,baz=216,slow=4.6,SNR=5.1						
SCHQ	Schefferville	85.65	1	LR	LR	19 59 10.6	
	comp=Z,76nm,21.1s,baz=324,slow=36						
ASAR	Alice Springs	121.46	204	PKP	PKPdf	19 26 29.9	-1.7
	comp=Z,0.4nm,1.0s,baz=147,slow=2.0,SNR=3.5						
WRA	Warramunga Arr	124.72	206	PKP	PKPdf	19 26 37.1	-0.8
	comp=Z,0.5nm,0.5s,baz=159,slow=1.7,SNR=15						
ZALV	Zalesovo Beam	150.17	32	PKPbc	PKPbc	19 27 28.4	+0.4
	comp=Z,1.2nm,0.4s,baz=309,slow=3.7,SNR=7.0						

IDC ***19*** *19:16:07.4±1.0, 12°.37N×144°.87E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.7/57, mbtmp3.8/8, MS3.3/1, Ms1 3.3/1, ms1mx2.6/36, Error ellipse: s-maj=41.7km s-min=15.9km az=97.0*

ISCJB ***19*** *19:16:11.4±0.6, 12°.30N±0°.06×144°.8E±0°.2, h38^{km}, mb4.2/14, MS3.1/1, Error ellipse: s-maj=23.0km s-min=7.7km az=6.0*

NEIC ***19*** *19:16:13.4±1.5, 12°.37N×144°.95E, h44^{km}±13^{km}, mb4.6/4, Error ellipse: s-maj=19.1km s-min=8.8km az=96.0*

ISC 19 19:16:12.7±1.0**, 12°.33N**±0°.09×**145°.0E**±0°.2**, h38^{km}, n22, σ0^{s}.83**/23**, mb4.2**/14**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.25**	**357**	*e*Pn	**Pn**	**19 16 33.8**	**+0.1**
GUMO				*e*Sn	**Sn**	**19 16 49.8**	**+0.5**
GUMO	**Guam**	**1.25**	**357**	Pn	**Pn**	**19 16 33.5**	**-0.1**
	36nm,0.3s,baz=184,slow=12,SNR=36						
GUMO				Sn	**Sn**	**19 16 50.0**	**+0.8**
	90nm,0.3s,baz=15,slow=20,SNR=24						
MJAR	**Matsushiro Arr**	**24.86**	**347**	LR	LR	19 30 14.3	
	comp=Z,62nm,18.2s,baz=170,slow=34						
SSLB	**Suanglung**	**25.45**	**300**	*e*P	**P**	**19 21 38.1**	**+0.9**
	209nm,2.0s						
WRAB	**Tennant Creek**	**33.72**	**198**	*e*P	**P**	**19 22 50.9**	**+0.3**
	5.0nm,0.9s						
WB2	**Warramunga Arr**	**33.73**	**198**	*e*P	**P**	**19 22 51.1**	**+0.5**
	11nm,1.1s						
WR1	**Warramunga Arr**	**33.73**	**198**	*e*P	**P**	**19 22 51.1**	**+0.4**
	13nm,1.6s						
WRA	**Warramunga Arr**	**33.73**	**198**	P	**P**	**19 22 51.1**	**+0.4**
	1.7nm,0.6s,baz=22,slow=9.9,SNR=33						
ASAR	**Alice Springs**	**37.37**	**197**	P	**P**	**19 23 22.7**	**+0.7**
	0.3nm,0.6s,baz=18,slow=9.2,SNR=6.8						
GTA	**Gaotai**	**48.06**	**312**	*e*P	**P**	**19 24 48.5**	**-0.2**
GTA				pP	pP	19 24 53.3	-4.3
GTA				sP	sP	19 24 55.5	-8.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	**Makanchi Array**	**62.44**	**316**	*e*P	**P**	**19 26 32.7**	**+0.6**
MKAR	**Makanchi Array**	**62.44**	**316**	P	**P**	**19 26 32.7**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=100,slow=8.0,SNR=3.9						
KURBB	**Kurchatov Arra**	**65.63**	**320**	P	**P**	**19 26 52.0**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=105,slow=6.8,SNR=4.3						
ILAR	**Eielson Array**	**69.67**	**25**	P	**P**	**19 27 17.2**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=257,slow=5.8,SNR=4.1						
ILB	**Eielson Array**	**69.67**	**25**	*e*P	**P**	**19 27 17.2**	**-0.8**
GAR	**Garm**	**70.44**	**307**	*e*P	**P**	**19 27 23.2**	**-0.3**
CHGR	**Chuyangaron**	**71.34**	**307**	*e*P	**P**	**19 27 28.3**	**-0.7**
	comp=Z,28nm,1.5s						
GEYT	**Alibeck**	**80.06**	**307**	P	**P**	**19 28 18.8**	**0.0**
	comp=Z,1.7nm,0.7s,baz=54,slow=8.2,SNR=3.1						
YKA	**Yellowknife Ar**	**83.93**	**27**	P	**P**	**19 28 39.8**	**+1.3**
	comp=Z,1.3nm,0.9s,baz=288,slow=5.3,SNR=12						
YKB5	**Yellowknife Ar**	**83.93**	**27**	*e*P	**P**	**19 28 39.9**	**+1.3**
FIA0	**FINESS Array S**	**92.33**	**335**	*e*P	**P**	**19 29 17.4**	**-1.4**
FINES	**FINESS Array B**	**92.33**	**335**	P	**P**	**19 29 17.4**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=44,slow=6.2,SNR=3.1						

BJI ***19*** *19:21:13.1, 23°.85N×107°.45E, h10^{km}, mB4.8/24, mb4.5/33, ML4.8/17, Ms4.5/32, Ms7 4.3/24*

IDC ***19*** *19:21:14.2±0.5, 23°.81N×107°.41E, h0^{km}, mb4.4/25, mb1 4.4/26, mb1mx4.2/54, mbtmp4.3/26, ML4.0/1, MS3.4/10, Ms1 3.4/10, ms1mx3.1/36, Error ellipse: s-maj=17.0km s-min=10.2km az=64.0*

ISCJB ***19*** *19:21:14.2±0.2, 23°.78N±0°.02×107°.37E±0°.02, h10^{km}, mb4.6/93, MS3.4/8, Error ellipse: s-maj=3.3km s-min=2.8km az=35.4*

NEIC ***19*** *19:21:16.1±0.2, 23°.82N×107°.37E, h10^{km}, mb4.7/56, ML4.8(BJI), Error ellipse: s-maj=4.4km s-min=3.7km az=46.0*

NEIC Felt at Baicheng.

MOS ***19*** *19:21:16.0±1.2, 23°.73N×107°.33E, h21^{km}, mb4.8/41, Error ellipse: s-maj=10.0km s-min=4.9km az=125.9*

PLV ***19*** *19:21:20.7±1.2, 23°.61N×107°.17E, h15^{km}±10^{km}, ML4.6*

ISC 19 19:21:15.8±0.3**, 23°.85N**±0°.02×**107°.36E**±0°.03**, h10^{km}, n275, σ1^{s}.53**/277**, mb4.6**/102**, MS3.5**/8**, 10C-21D, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**2.67**	**346**	⇓*i*Pn	**Pn**	**19 21 58.1**	**-1.0**
GYA				Pg	**Pg**	**19 22 04.5**	**-2.6**
GYA				Sn	**Sb**	**19 22 32.6**	**-4.2**
GYA				Sg	**Sg**	**19 22 39.1**	**-2.6**
GYA				smax	smax		
	comp=N,5µm,0.6s						
GYA				smax	smax		
	comp=E,7µm,0.7s						
GYA	**Guiyang**	**2.67**	**346**	⇓*i*Pn	**Pn**	**19 21 58.1**	**-1.0**
GYA				Pg	**Pg**	**19 22 04.5**	**-2.6**
GYA				Sn	**Sb**	**19 22 32.6**	**-4.2**
GYA				Sg	**Sg**	**19 22 39.1**	**-2.6**
TTVN	**Tram Tau**	**3.65**	**230**	*e*Pn	**Pn**	**19 22 11.8**	**-0.6**
TTVN				*e*Pg	**Pg**	**19 22 23.9**	**-1.9**
TTVN				IAML		19 23 17.6	
	comp=N,1µm,0.5s						
TTVN				IAML		19 23 20.6	
	comp=E,920nm,0.6s						
SLVN	**Son La**	**4.06**	**233**	Pn	**Pn**	**19 22 16.1**	**-2.0**
SLVN				Pg	**Pg**	**19 22 31.4**	**-2.2**
SLVN				Sg	**Sg**	**19 23 23.6**	**-2.7**
MLAV	**Muong La stati**	**4.28**	**246**	*e*Pn	**Pn**	**19 22 22.1**	**+1.0**
MLAV				*e*Pg	**Pg**	**19 22 36.3**	**-1.5**
MLAV				*e*Sg	**Sg**	**19 23 29.1**	**-4.1**
MLAV				IAML		19 23 34.4	
	comp=N,867nm,0.6s						
MLAV				IAML		19 23 40.1	
	comp=E,819nm,0.6s						
TGV	**Tuan Giao**	**4.28**	**239**	*e*Pn	**Pn**	**19 22 22.2**	**+1.1**
TGV				*e*Pg	**Pg**	**19 22 36.9**	**-1.0**
TGV				*e*Sg	**Sg**	**19 23 29.5**	**-3.9**
TGV				IAML		19 23 38.7	
	comp=N,744nm,0.5s						
TGV				IAML		19 23 40.1	
	comp=E,813nm,0.6s						
KMI	**Kunming**	**4.39**	**288**	⇓Pn	**Pn**	**19 22 23.3**	**+0.4**
KMI	**Kunming**	**4.39**	**288**	*e*Pn	**Pn**	**19 22 23.2**	**+0.4**
KMI				*e*Pg	**Pg**	**19 22 41.2**	**+1.1**
KMI				*e*Lg	Lg	19 23 41.7	
KMI	**Kunming**	**4.39**	**288**	*e*P	**Pn**	**19 22 23.2**	**+0.4**
QIZ	**Qiongzhong**	**5.33**	**154**	Pn	**Pn**	**19 22 33.5**	**-2.0**
QIZ				Sg	**Sg**	**19 24 07.8**	**+0.8**
QIZ				smax	smax		
	comp=E,440nm,0.8s						
QIZ				smax	smax		
	comp=E,440nm,0.7s						
QIZ	**Qiongzhong**	**5.33**	**154**	*e*Pn	**Pn**	**19 22 33.5**	**-2.0**
QIZ				*e*Pg	**Pg**	**19 22 56.0**	**-2.0**
QIZ				*e*Sg	**Sg**	**19 24 01.4**	**-5.5**
GZH	**Guangzhou**	**5.55**	**97**	Pn	**Pn**	**19 22 39.3**	**+0.8**
GZH				Sn	**Sn**	**19 23 40.8**	**-1.6**
GZH				smax	smax		
	comp=E,1µm,1.2s						
GZH				smax	smax		
	comp=E,680nm,0.8s						
MCO	**Taipa Grande**	**5.97**	**106**	P	**Pn**	**19 22 43.0**	**-1.3**
HKPS	**Hong Kong Po S**	**6.44**	**103**	Pn	**Pn**	**19 22 49.3**	**-1.5**
ENH	**Enshi**	**6.67**	**16**	*e*Pn	**Pn**	**19 22 52.4**	**-1.6**
SKNT	**Sakolnakorn**	**7.54**	**205**	P	Pb	19 23 19.4	-7.4
	comp=E,12nm,0.9s						
SKNT				P	**Pg**	**19 23 40.2**	**-0.1**
	comp=E,12nm,0.9s						
CD2	**Chengdu**	**7.72**	**336**	Pn	**Pn**	**19 23 07.8**	**-0.6**
CD2				Sn	**Sn**	**19 24 36.9**	**+0.9**
CD2				smax	smax		
	comp=E,980nm,0.9s						
CD2				smax	smax		
	comp=E,1µm,1.1s						
CD2				LR	LR		
	comp=E,6µm,5.6s						
CD2				LR	LR		
	comp=E,4µm,5.9s						
CD2				LR	LR		
	comp=E,6µm,9.1s						
UTTA	**Uttaradit**	**8.80**	**228**	P	Pn	19 23 31.0	+7.8
WHN	**Wuhan**	**9.12**	**42**	P	**Pn**	**19 23 26.9**	**-0.6**
WHN				S	**Sn**	**19 25 04.0**	**-6.2**
WHN				LR	LR		
	comp=E,2µm,3.8s						
WHN				LR	LR		
	comp=E,2µm,3.0s						
WHN				LR	LR		
	comp=E,2µm,7.2s						
CMMT	**Chiang Mai**	**9.30**	**239**	P	Pn	19 23 40.4	+10
	comp=E,3.1nm,1.0s						
CHTO	**Chiang Mai**	**9.31**	**239**	*e*Pn	**Pn**	**19 23 29.9**	**-0.3**
CHTO	**Chiang Mai**	**9.31**	**239**	*e*P	**Pn**	**19 23 29.9**	**-0.3**
CHTO	**Chiang Mai**	**9.31**	**239**	P	Pn	19 23 42.0	+12
	comp=E,20nm,1.9s						
PBKT	**Sadao Pong**	**9.40**	**221**	*e*Pn	**Pn**	**19 23 31.4**	**-0.1**
PBKT	**Sadao Pong**	**9.40**	**221**	P	**Pn**	**19 23 32.4**	**+0.9**
CM31	**Chiang Mai Arr**	**9.51**	**237**	*e*Pn	**Pn**	**19 23 32.6**	**-0.3**
CM31				*e*Lg	Lg	19 26 17.6	
CM31				*e*		19 27 47.6	
CMAR	**Chiang Mai Arr**	**9.51**	**237**	Pn	**Pn**	**19 23 32.6**	**-0.3**
	comp=E,0.4nm,0.3s,baz=57,slow=12,SNR=12						
CMAR				Lg	Lg	19 26 17.6	
	baz=67,slow=26,SNR=5.4						
CMAR				LR	LR	19 27 47.6	
	comp=E,60nm,19.3s,baz=65,slow=41						
XAN	**Xi'an**	**10.24**	**7**	P	**Pn**	**19 23 40.9**	**-2.1**
XAN				S	**Sn**	**19 25 32.8**	**-5.1**
XAN				LR	LR		
	comp=E,2µm,6.3s						
XAN				LR	LR		
	comp=E,1µm,6.1s						
XAN				LR	LR		
	comp=E,2µm,8.8s						
XAN	**Xi'an**	**10.24**	**7**	*e*Pn	**Pn**	**19 23 40.4**	**-2.6**
XAN				*e*Sn	Sn	19 25 24.4	-13
XAN	**Xi'an**	**10.24**	**7**	*e*P	**Pn**	**19 23 40.4**	**-2.6**
QZH	**Quanzhou**	**10.30**	**82**	P	**Pn**	**19 23 44.3**	**+0.6**
QZH				*e*S	**Sn**	**19 25 42.3**	**+3.1**
QZH				LR	LR		
	comp=E,1µm,3.8s						
QZH				LR	LR		
	comp=E,900nm,3.4s						
QZH				LR	LR		
	comp=E,2µm,5.1s						
TPUB	**Ta-pu**	**12.18**	**90**	*e*Pn	**Pn**	**19 24 10.0**	**+0.5**
SSLB	**Suanglung**	**12.45**	**88**	*e*Pn	**Pn**	**19 24 12.4**	**-0.8**
LZH	**Lanzhou**	**12.57**	**347**	*e*P	**Pn**	**19 24 13.6**	**-1.3**
LZH				pP		19 24 19.3	
LZH				sP		19 24 23.8	
LZH				PP	**PnPn**	**19 24 25.3**	**+2.4**
LZH				S	**Sn**	**19 26 38.3**	**+3.3**
LZH				sS		19 26 41.8	
LZH				SS	**SnSn**	**19 26 51.6**	**+4.1**
LZH				pmax	pmax		
	comp=E,35nm,1.0s						
LZH				pmax	pmax		
	comp=E,220nm,4.3s						
LZH				LR	LR		
	comp=E,1µm,8.1s						
LZH				LR	LR		
	comp=E,2µm,7.1s						
LZH				LR	LR		
	comp=E,1µm,9.9s						
TWG	**Pinlang**	**12.64**	**92**	*e*Pn	**Pn**	**19 24 15.6**	**-0.2**
YULB	**Yu-li**	**12.79**	**89**	*e*Pn	Pn	19 24 19.9	+2.1
YHNB	**Yeheng**	**12.81**	**84**	*e*Pn	**Pn**	**19 24 16.7**	**-1.5**
NJ2	**Nanjing**	**13.03**	**49**	*e*P	Pn	19 24 22.4	+1.4
NJ2				pmax	pmax		
	comp=E,7.0nm,0.5s						
SHL	**Shillong**	**14.17**	**280**	*e*P	**P**	**19 24 43.1**	**-1.4**
SHL	**Shillong**	**14.17**	**280**	*e*P	**P**	**19 24 43.1**	**-1.4**
BRDH	**Bariadhala**	**14.49**	**269**	LR	LR	19 31 43.5	
	comp=E,128nm,18.3s,baz=166,slow=43						
LSA	**Lhasa**	**15.60**	**295**	*e*Pn	**Pn**	**19 24 56.0**	**-0.3**
	comp=E,6.4nm,0.7s						
LSA	**Lhasa**	**15.60**	**295**	*e*P	**Pn**	**19 24 56.0**	**-0.3**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA	**Gaotai**	**16.78**	**339**	⇑P	**Pn**	**19 25 09.6**	**-1.5**
GTA				pP	pP	19 25 13.9	-2.3
GTA				sP	sP	19 25 16.6	-1.0
GTA				S	**Sn**	**19 28 15.4**	**-2.1**
GTA				sS	S	19 28 21.1	-7.4
GTA				SS	**SnSn**	**19 28 35.1**	**+4.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,82nm,7.0s						
GTA				LR	LR		
	comp=Z,680nm,11.1s						
GTA				LR	LR		
	comp=Z,570nm,12.4s						
GTA				LR	LR		
	comp=Z,820nm,12.1s						
KRAB	**Krabi**	**17.40**	**208**	P	**P**	**19 25 24.1**	**+4.0**
BJT	**Baijiatuau**	**17.75**	**23**	*e*Pn	**P**	**19 25 25.5**	**+1.6**
	comp=Z,16nm,1.3s						
BJT	**Baijiatuau**	**17.75**	**23**	*e*P	**P**	**19 25 25.5**	**+1.6**
BJT				pmax	pmax		
	comp=Z,16nm,1.3s						
RAMN	**Ramite**	**19.00**	**284**	*e*P	**Pn**	**19 25 39.5**	**+0.7**
	comp=Z,20nm,0.5s						
JOW	**Kunigami**	**19.13**	**77**	*e*P	**Pn**	**19 25 41.2**	**+1.1**
	comp=Z,68nm,1.3s						
JIRN	**Jiri**	**19.44**	**286**	*e*P	**Pn**	**19 25 42.8**	**-1.3**
	comp=Z,34nm,0.5s						
KULM	**Kulim**	**19.55**	**200**	*e*P	**Pn**	**19 25 46.7**	**+1.5**
	comp=Z,23nm,1.3s						
KKM	**Kota Kinabalu**	**19.65**	**153**	*e*P	**Pn**	**19 25 47.7**	**+1.3**
	comp=Z,43nm,1.2s						
GUN	**Gumba**	**19.74**	**286**	*e*P	**Pn**	**19 25 46.6**	**-1.1**
	comp=Z,35nm,0.6s						
PKI	**Pulchoki**	**20.12**	**285**	*e*P	Pn	19 25 50.2	-2.0
	comp=Z,31nm,0.9s						
PKIN	**Phulchoki**	**20.13**	**285**	*e*P	Pn	19 25 50.1	-2.1
	comp=Z,17nm,0.6s						
IPM	**Ipoh**	**20.21**	**199**	*e*P	Pn	19 25 51.7	-1.2
	comp=Z,14nm,0.8s						
KKN	**Kakani**	**20.25**	**286**	*e*P	Pn	19 25 52.3	-1.4
	comp=Z,14nm,0.6s						
DMN	**Daman**	**20.39**	**285**	*e*P	Pn	19 25 53.8	-1.5
	comp=Z,30nm,0.8s						
DANN	**Dangsing**	**21.65**	**287**	*e*P	**P**	**19 26 05.4**	**-1.5**
	comp=Z,20nm,0.5s						
KOLN	**Koldanda**	**21.73**	**285**	*e*P	**P**	**19 26 06.4**	**-1.3**
	comp=Z,17nm,0.9s						
SBUM	**Sibu**	**21.79**	**167**	*e*P	**P**	**19 26 09.5**	**+1.5**
	comp=Z,23nm,1.1s						
KSRS	**Korea Array**	**22.23**	**48**	LR	LR	19 34 00.0	
	comp=Z,34nm,21.3s,baz=160,slow=34						
PYUN	**Piuthan**	**22.30**	**286**	*e*P	**P**	**19 26 12.2**	**-1.6**
	comp=Z,22nm,0.7s						
PSI	**Prapat**	**22.46**	**203**	*e*P	**P**	**19 26 16.7**	**+1.2**
	comp=Z,14nm,1.1s						
PSI	**Prapat**	**22.46**	**203**	*e*P	**P**	**19 26 16.7**	**+1.2**
PSI				pmax	pmax		
	comp=Z,14nm,1.1s						
PSI	**Prapat**	**22.46**	**203**	P	**P**	**19 26 16.4**	**+1.0**
	comp=Z,6.6nm,0.7s,baz=360,slow=16,SNR=7.4						
JNU	**Nakatsue**	**22.60**	**61**	*e*P	**P**	**19 26 17.2**	**+0.5**
	comp=Z,38nm,1.3s						
JNU	**Nakatsue**	**22.60**	**61**	P	**P**	**19 26 17.1**	**+0.3**
	comp=Z,10nm,0.9s,baz=163,slow=5.0,SNR=4.5						
SONA0	**Songino Array**	**23.95**	**358**	*e*P	**P**	**19 26 31.4**	**+1.1**
SONM	**Songino Array**	**23.95**	**358**	P	**P**	**19 26 31.4**	**+1.1**
	comp=Z,3.3nm,0.7s,baz=180,slow=9.7,SNR=19						
SONM				LR	LR	19 37 25.7	
	comp=Z,88nm,21.4s,baz=202,slow=40						
ULN	**Ulaanbaatar**	**23.96**	**359**	*e*P	**P**	**19 26 30.8**	**+0.3**
	comp=Z,6.6nm,0.9s						
ULN	**Ulaanbaatar**	**23.96**	**359**	*e*P	**P**	**19 26 30.8**	**+0.3**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GSI	**Gunungsitoli**	**24.34**	**204**	*e*P	**P**	**19 26 33.1**	**-0.9**
	comp=Z,36nm,1.5s						
WMQ	**Urumqi**	**25.64**	**326**	*e*P	**P**	**19 26 47.4**	**+1.7**
WMQ				sP	sP	19 26 57.0	+6.8
WMQ				pmax	pmax		
	comp=Z,27nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.1s						
WMQ				LR	LR		
	comp=Z,650nm,7.7s						
WMQ	**Urumqi**	**25.64**	**326**	*e*P	**P**	**19 26 46.5**	**+0.9**
	comp=Z,31nm,1.6s						
WMQ	**Urumqi**	**25.64**	**326**	*e*P	**P**	**19 26 46.6**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,31nm,1.6s						
MPSI	**Mapaga**	**26.35**	**151**	P	**P**	**19 26 53.3**	**+1.0**
ZAK	**Zakamensk**	**26.67**	**354**	*e*P	**P**	**19 26 55.6**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
PDGK	**Podgornoye**	**30.05**	**317**	P	**P**	**19 27 26.5**	**+1.2**
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DGZ	**Jazzator, Alta**	**30.15**	**334**	*i* P	**P**	**19 27 26.1**	**0.0**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PRZ	**Przheval'sk**	**30.32**	**315**	*e*P	**P**	**19 27 29.1**	**+1.3**
	comp=Z,5.9nm,0.9s						
TARG	**Taragay, Kyrgy**	**30.37**	**313**	*e*P	**P**	**19 27 28.9**	**+0.5**
	comp=Z,9.8nm,1.4s						
MK32	**Makanchi Array**	**30.46**	**325**	*e*P	**P**	**19 27 29.1**	**+0.4**
MK32				*e*PcP	**PcP**	**19 30 29.0**	**+1.0**
MKAR	**Makanchi Array**	**30.46**	**325**	*e*P	**P**	**19 27 28.5**	**-0.2**
	comp=Z,8.7nm,0.6s						
MKAR				PcP	**PcP**	**19 30 29.0**	**+1.0**
MKAR	**Makanchi Array**	**30.46**	**325**	*e*P	**P**	**19 27 28.5**	**-0.2**
MKAR						19 30 29.0	
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MKAR	**Makanchi Array**	**30.46**	**325**	P	**P**	**19 27 29.1**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=127,slow=7.9,SNR=14						
MKAR				PcP	**PcP**	**19 30 29.0**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=104,slow=4.5,SNR=6.1						
MKAR				LR	LR	19 40 56.3	
	comp=Z,162nm,18.5s,baz=120,slow=39						
MAKZ	**Makanchi**	**30.63**	**325**	*e*P	**P**	**19 27 30.1**	**-0.2**
	comp=Z,10nm,1.9s						
MAKZ	**Makanchi**	**30.63**	**325**	*e*P	**P**	**19 27 30.1**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.9s						
KDJ	**Kajisay**	**30.96**	**313**	*e*P	P	19 27 36.4	+2.9
	comp=Z,7.1nm,1.1s						
KDJ	**Kajisay**	**30.96**	**313**	*e*P	P	19 27 36.4	+3.0
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KPJI	**Karang Pucung**	**31.03**	**177**	P	**P**	**19 27 35.0**	**+1.0**
NIL	**Nilore**	**31.34**	**296**	*e*P	**P**	**19 27 37.1**	**+0.5**
	comp=Z,19nm,0.8s						
NIL	**Nilore**	**31.34**	**296**	*e*P	**P**	**19 27 37.1**	**+0.5**
NIL				pmax	pmax		
	comp=Z,19nm,0.8s						
NRN	**Naryn**	**31.46**	**311**	*e*P	**P**	**19 27 38.7**	**+0.7**
	comp=Z,6.0nm,0.9s						
NRN	**Naryn**	**31.46**	**311**	*e*P	**P**	**19 27 38.7**	**+0.7**
NRN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLR	**Kul'dur**	**31.76**	**31**	P	**P**	**19 27 41.4**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=212,slow=8.2,SNR=4.6						
KZA	**Kyzart**	**32.24**	**312**	P	**P**	**19 27 46.5**	**+1.5**
	SNR=5.9						
KBK	**Karagaybulak**	**32.68**	**313**	P	**P**	**19 27 50.5**	**+2.0**
	SNR=10						
FRU1	**Bishkek**	**32.96**	**313**	*e*P	**P**	**19 27 52.6**	**+1.8**
	comp=Z,5.5nm,0.5s						
FRU	**Bishkek**	**32.98**	**313**	*e*P	**P**	**19 27 53.0**	**+2.1**
AAK	**Ala-Archa**	**32.98**	**313**	P	**P**	**19 27 52.8**	**+1.7**
	SNR=7.8						
AAK	**Ala-Archa**	**32.98**	**313**	*e*P	**P**	**19 27 52.6**	**+1.5**
	comp=Z,5.2nm,0.7s						
AAK	**Ala-Archa**	**32.98**	**313**	*e*P	**P**	**19 27 52.6**	**+1.5**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	**Ala-Archa**	**32.98**	**313**	P	**P**	**19 27 52.9**	**+1.7**
	comp=Z,3.9nm,0.6s,baz=116,slow=6.7,SNR=19						
USP	**Ospenovka**	**33.24**	**314**	P	**P**	**19 27 54.5**	**+1.3**
	SNR=12						
AML	**Almayashu**	**33.32**	**311**	P	**P**	**19 27 56.2**	**+1.9**
	SNR=7.4						
EKS2	**Erkin-Say**	**33.47**	**312**	P	**P**	**19 27 56.9**	**+1.5**
	SNR=12						
ARSB	**Arslanbob**	**33.52**	**310**	*e*P	**P**	**19 27 56.9**	**+1.1**
	comp=Z,5.5nm,0.7s						
BOD	**Bodaibo**	**34.27**	**6**	*e*P	P	19 27 53.5	-8.4
BOD				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ZALV	**Zalesovo Beam**	**34.49**	**336**	P	**P**	**19 28 04.1**	**+0.2**
	comp=Z,11nm,0.6s,baz=135,slow=7.9,SNR=35						
ZALV				LR	LR	19 43 23.6	
	comp=Z,45nm,21.9s,baz=68,slow=38						
ZAA1	**Zalesovo Array**	**34.49**	**336**	*e*P	**P**	**19 28 04.1**	**+0.2**
BTK	**Batken**	**34.68**	**307**	*e*P	P	19 28 08.8	+2.9
	comp=Z,31nm,2.0s						
ERM	**Erimo**	**34.76**	**50**	*e*P	P	19 28 08.2	+1.8
	comp=Z,83nm,1.2s						
GAR	**Garm**	**34.77**	**305**	*e*P	**P**	**19 28 07.2**	**+0.6**
GAR	**Garm**	**34.77**	**305**	*e*P	**P**	**19 28 07.2**	**+0.6**
KURBB	**Kurchatov Arra**	**34.82**	**327**	P	**P**	**19 28 07.3**	**+0.5**
	comp=Z,8.8nm,0.7s,baz=132,slow=9.6,SNR=78						
KURBB				PcP	**PcP**	**19 30 40.2**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=121,slow=2.2,SNR=4.1						
KURK	**Kurchatov**	**34.84**	**328**	*e*P	**P**	**19 28 07.4**	**+0.5**
KURK				*e*PcP	**PcP**	**19 30 40.2**	**+0.3**
KURK	**Kurchatov**	**34.84**	**328**	*e*P	**P**	**19 28 07.4**	**+0.5**
KURK				*e*		19 30 40.2	
KBL	**Kabul**	**34.92**	**297**	*e*P	**P**	**19 28 08.1**	**0.0**
	comp=Z,8.7nm,1.0s						
KBL	**Kabul**	**34.92**	**297**	*e*P	**P**	**19 28 08.1**	**0.0**
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MMRI	**Maumere**	**35.41**	**154**	*e*P	P	19 28 13.9	+1.8
	comp=Z,32nm,1.0s						
CHGR	**Chuyangaron**	**35.56**	**304**	*e*P	**P**	**19 28 14.1**	**+0.6**
	comp=Z,28nm,1.5s						
KKAR	**Karatay Array**	**35.86**	**311**	*e*P	**P**	**19 28 16.1**	**+0.2**
	comp=Z,11nm,1.4s						
KKAR	**Karatay Array**	**35.86**	**311**	*e*P	**P**	**19 28 16.1**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,11nm,1.4s						
OTUK	**Ortayu**	**36.84**	**320**	P	**P**	**19 28 25.7**	**+1.5**
OTUK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BATI	**Baumata**	**37.41**	**153**	P	**P**	**19 28 27.4**	**-1.9**
	comp=Z,3.4nm,0.4s,baz=45,slow=1.4,SNR=3.9						
BRVK	**Borovoye**	**40.40**	**326**	*e*P	**P**	**19 28 54.3**	**+0.3**
	comp=Z,24nm,1.8s						
BRVK	**Borovoye**	**40.40**	**326**	*e*P	**P**	**19 28 54.3**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,24nm,1.8s						
GEYT	**Alibeck**	**44.04**	**301**	P	**P**	**19 29 23.7**	**-0.3**
	comp=Z,9.0nm,0.9s,baz=91,slow=8.0,SNR=11						
GEYT				LR	LR	19 50 10.6	
	comp=Z,56nm,18.7s,baz=95,slow=39						
ABKAR	**Akbulak array**	**44.79**	**317**	*e*P	**P**	**19 29 30.3**	**+0.6**
	comp=Z,12nm,1.5s						
FITZ	**Fitzroy Crossi**	**45.35**	**155**	*e*P	**P**	**19 29 33.8**	**-0.7**
	comp=Z,12nm,1.4s						
FITZ	**Fitzroy Crossi**	**45.35**	**155**	P	**P**	**19 29 33.7**	**-0.7**
	comp=Z,2.9nm,0.6s,baz=346,slow=6.9,SNR=14						
NRIK	**Noril'sk**	**47.03**	**351**	P	**P**	**19 29 47.9**	**+0.9**
	comp=Z,3.0nm,0.4s,baz=146,slow=5.9,SNR=10						
SVE	**Sverdlovsk**	**47.08**	**327**	⇑*e*P	**P**	**19 29 49.1**	**+1.4**
SVE				pmax	pmax		
	comp=Z,22nm,1.5s						
ARU	**Arti**	**47.98**	**326**	*e*P	**P**	**19 29 54.5**	**-0.1**
	comp=Z,17nm,1.2s						
ARU	**Arti**	**47.98**	**326**	*c i*P	**P**	**19 29 54.6**	**-0.1**
ARU						19 31 46.5	
ARU				S	**S**	**19 36 56.2**	**+3.9**
ARU				pmax	pmax		
	comp=Z,19nm,1.3s						
WRAB	**Tennant Creek**	**50.85**	**147**	*e*P	**P**	**19 30 16.2**	**-0.8**
	comp=Z,9.1nm,0.9s						
WRAB	**Tennant Creek**	**50.85**	**147**	*e*P	**P**	**19 30 16.2**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WR1	**Warramunga Arr**	**50.86**	**147**	*e*P	**P**	**19 30 16.0**	**-1.0**
	comp=Z,9.1nm,0.6s						
WRA	**Warramunga Arr**	**50.86**	**147**	P	**P**	**19 30 16.0**	**-1.0**
	comp=Z,4.0nm,0.5s,baz=334,slow=8.7,SNR=51						
WB2	**Warramunga Arr**	**50.86**	**147**	*e*P	**P**	**19 30 16.4**	**-0.7**
	comp=Z,29nm,1.4s						
COEN	**Coen**	**51.36**	**133**	*e*P	**P**	**19 30 21.1**	**+0.1**
	comp=Z,8.4nm,1.0s						
MORW	**Morawa**	**53.27**	**171**	*e*P	**P**	**19 30 34.5**	**-0.3**
	comp=Z,48nm,1.7s						
AS31	**Alice Springs**	**53.81**	**149**	*e*P	**P**	**19 30 38.4**	**-0.5**
	comp=Z,1.2nm,0.9s						
ASAR	**Alice Springs**	**53.81**	**149**	P	**P**	**19 30 38.5**	**-0.5**
	comp=Z,3.9nm,0.8s,baz=326,slow=7.2,SNR=37						
GNI	**Garni**	**54.48**	**303**	*e*P	**P**	**19 30 43.8**	**-0.1**
	comp=Z,7.5nm,0.9s						
GNI	**Garni**	**54.48**	**303**	*e*P	**P**	**19 30 43.8**	**-0.1**
GNI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZEI	**Tsey**	**55.02**	**307**	*e*P	**P**	**19 30 47.0**	**-0.9**

ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	55.73	308	LR	LR	19 58 33.2	
	comp=Z,40nm,18.9s,baz=46,slow=40						
KIV	Kislovodsk	55.88	308	*e*P	P	19 30 54.7	+0.8
	comp=Z,13nm,0.9s						
KIV	Kislovodsk	55.88	308	*e*P	P	19 30 54.6	+0.7
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
PRGR	Permogore	55.92	329	*e*P	P	19 30 53.9	+0.2
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RAYN	Ar Rayn	56.22	283	*e*P	P	19 30 56.7	+0.1
	comp=Z,9.7nm,1.4s						
RAYN	Ar Rayn	56.22	283	*e*P	P	19 30 56.7	+0.1
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BILL	Bilibino	56.60	23	*e*P	P	19 30 59.3	+0.7
BILL				*e*		19 31 55.9	
BILL				*e*PPP	PPP	19 34 22.1	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
VRH	Novokhopyorsk	56.62	317	*e*P	P	19 30 59.6	+0.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NWAO	Narrogin (SRO)	57.24	170	*e*P	P	19 31 04.2	+0.7
	comp=Z,116nm,1.9s						
NWAO	Narrogin (SRO)	57.24	170	*e*P	P	19 31 04.2	+0.7
NWAO				pmax	pmax		
	comp=Z,116nm,1.9s						
CTA	Charters Tower	57.83	136	P	P	19 31 08.2	+0.4
	comp=Z,4.7nm,0.6s,baz=320,slow=10,SNR=9.3						
CTAO	Charters Tower	57.83	136	*e*P	P	19 31 08.1	+0.3
	comp=Z,9.1nm,1.0s						
CTAO	Charters Tower	57.83	136	*e*P	P	19 31 08.1	+0.3
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VSR	Storozhevoye	58.23	317	*e*P	P	19 31 09.8	-0.5
VSR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LPSR	Galich'ya Gora	58.40	318	*e*P	P	19 31 11.2	-0.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	Klimovskoe	58.69	328	*e*P	P	19 31 12.1	-1.2
KLMR				pmax	pmax		
	comp=Z,25nm,1.3s						
KLMR	Klimovskoe	58.69	328	*e*P	P	19 31 12.1	-1.2
KLMR				AMP		19 31 16.4	
	comp=Z,25nm,1.3s						
OBN	Obninsk	59.85	321	*e*P	P	19 31 22.0	+0.5
OBN				*e*		19 32 07.6	
OBN				pmax	pmax		
	comp=Z,12nm,1.0s						
BRTR	Keskin Array B	63.01	304	*i* P	P	19 31 49.1	+5.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	64.36	148	*e*P	P	19 31 51.4	-0.6
	comp=Z,9.4nm,2.0s						
STKA	Stephens Creek	64.36	148	*e*P	P	19 31 51.4	-0.6
STKA				pmax	pmax		
	comp=Z,9.0nm,2.0s						
STKA	Stephens Creek	64.36	148	P	P	19 31 51.8	-0.2
	comp=Z,2.5nm,0.6s,baz=308,slow=8.9,SNR=6.4						
AKASG	Malin Array Be	64.53	316	P	P	19 31 52.6	-0.3
	comp=Z,2.4nm,0.7s,baz=73,slow=5.9,SNR=12						
AKASG				LR	LR	20 04 38.4	
	comp=Z,36nm,18.7s,baz=10.0,slow=40						
AKBB	Malin Array Si	64.53	316	*e*P	P	19 31 52.4	-0.5
	comp=Z,10nm,1.4s						
AKBB	Malin Array Si	64.53	316	*e*P	P	19 31 52.4	-0.5
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KIEV	Kiev	64.54	316	*i* P	P	19 31 54.2	+1.2
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ARA0	ARCESS Array S	65.04	337	*e*P	P	19 31 55.9	-0.1
ARCES	ARCESS Array B	65.04	337	P	P	19 31 55.8	-0.1
	comp=Z,2.3nm,0.6s,baz=81,slow=7.6,SNR=12						
OUL	Oulu	65.05	332	P	P	19 31 58.4	+2.4
OUL				pmax	pmax		
	comp=Z,16nm,1.4s						
FIA0	FINESS Array S	65.21	328	*e*P	P	19 31 57.0	-0.1
FIA0	FINESS Array S	65.21	328	*e*P	P	19 31 57.0	-0.1
FINES	FINESS Array B	65.21	328	P	P	19 31 57.0	-0.1
	comp=Z,4.7nm,1.0s,baz=104,slow=5.9,SNR=6.5						
FINES				LR	LR	20 02 58.2	
	comp=Z,72nm,19.2s,baz=19,slow=38						
CFR	Carcaliu	66.09	311	⇓*i*P	P	19 32 05.0	+1.9
CFR	Carcaliu	66.09	311	⇓P	P	19 32 05.0	+1.9
VRI	Vrincioaia	66.93	311	⇑*i*P	P	19 32 10.4	+1.8
VRI	Vrincioaia	66.93	311	⇑P	P	19 32 10.4	+1.8
PLOR	Plostina	66.99	311	⇓*i*P	P	19 32 12.4	+3.4
PLOR	Plostina	66.99	311	⇓P	P	19 32 12.4	+3.4
BIZ	Bicaz	67.15	313	⇑*i*P	P	19 32 10.3	+0.3
MLR	Muntele Rosu	67.55	311	*e*P	P	19 32 14.1	+1.5
	comp=Z,21nm,1.4s						
MLR	Muntele Rosu	67.55	311	⇓*i*P	P	19 32 14.3	+1.7
MLR	Muntele Rosu	67.55	311	⇓P	P	19 32 14.3	+1.7
SUW	Suwalki	67.70	321	*e*P	P	19 32 15.3	+2.0
SUW	Suwalki	67.70	321	*e*P	P	19 32 15.3	+2.0
VOIR		68.17	311	⇓*i*P	P	19 32 19.4	+2.9
VOIR		68.17	311	⇓P	P	19 32 19.4	+2.9
ARR	Arges	68.47	311	⇓*i*P	P	19 32 19.2	+0.8
KWP	Kalwaria Pacla	68.84	316	*e*P	P	19 32 21.9	+1.4
	comp=Z,145nm,0.9s						
KWP	Kalwaria Pacla	68.84	316	*e*P	P	19 32 21.9	+1.4
TRPA	Tarpa	69.27	314	⇓*i*P	P	19 32 23.1	-0.1
DRGR		69.46	313	⇑*i*P	P	19 32 26.0	+1.5
DRGR		69.46	313	⇑P	P	19 32 26.0	+1.5
GZR	Gura Zlata	69.74	312	⇓*i*P	P	19 32 27.1	+0.8
GZR	Gura Zlata	69.74	312	⇓P	P	19 32 27.1	+0.8
VTS	Vitosha	70.09	309	*e*P	P	19 32 28.9	+0.3
	comp=Z,16nm,1.3s						
VTS	Vitosha	70.09	309	⇓*i*P	P	19 32 29.3	+0.7
VTS	Vitosha	70.09	309	⇓P	P	19 32 29.3	+0.7
HERR	Herculane	70.11	311	⇓*i*P	P	19 32 30.6	+2.1
SIRR	Siria	70.29	313	⇑*i*P	P	19 32 31.4	+1.9
NIE	Niedzica	70.42	316	*e*P	P	19 32 32.6	+2.3
NIE	Niedzica	70.42	316	*e*P	P	19 32 32.6	+2.3
OJC	Ojcow	70.54	317	*e*P	P	19 32 33.0	+2.0
OJC	Ojcow	70.54	317	*e*P	P	19 32 33.0	+2.0
MDVR	Moldovita	70.62	311	⇓*i*P	P	19 32 32.0	+0.4
HFS	Hagfors	71.41	328	P	P	19 32 36.7	+0.7
	comp=Z,3.5nm,0.6s,baz=87,slow=5.2,SNR=21						
VYHS	Vyhne	71.58	316	*e*P	P	19 32 39.0	+1.6
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.3s						
VYHS	Vyhne	71.58	316	*e*P	P	19 32 39.0	+1.6
MORC	Moravsky Berou	72.06	317	*e*P	P	19 32 42.5	+2.3
NB2	NORSAR Subarra	72.33	329	P	P	19 32 41.8	+0.2
	comp=Z,3.5nm,0.7s,baz=73,slow=6.2						
NB200	NORSAR Array S	72.33	329	*e*P	P	19 32 42.2	+0.6
NOA	NORSAR Array B	72.33	329	P	P	19 32 42.2	+0.6
	comp=Z,2.1nm,0.6s,baz=74,slow=5.9,SNR=12						
KSP	Ksiaz	72.53	318	*e*P	P	19 32 45.0	+2.0
KSP	Ksiaz	72.53	318	*e*P	P	19 32 45.0	+2.0
TOLK	Toolik Lake Re	72.64	22	*e*P	P	19 32 44.2	+0.8
	comp=Z,5.5nm,0.6s						
DPC	Dobruska-Polom	72.65	318	*e*P	P	19 32 45.6	+1.8
DPC	Dobruska-Polom	72.65	318	*e*P	P	19 32 45.6	+1.8
VRAC	Vranov	72.78	317	⇓*i*P	P	19 32 46.1	+1.6
VRAC	Vranov	72.78	317	⇓P	P	19 32 46.1	+1.6
VRAC	Vranov	72.78	317	*e*P	P	19 32 46.3	+1.8
UPC	Upice	72.80	318	*e*P	P	19 32 47.7	+3.1
UPC	Upice	72.80	318	*e*P	P	19 32 47.7	+3.1
KRUC	Moravsky	72.98	317	*e*P	P	19 32 47.5	+1.8
MLY	Manley	73.50	26	*e*P	P	19 32 49.5	+0.9
	comp=Z,4.1nm,0.8s						
CONA	Conrad Observa	73.65	316	*e*pP	P	19 32 51.7	+2.0
	comp=Z,8.0nm,1.6s						
GOPC	GO Pecny, Ondr	73.73	318	*e*P	P	19 32 51.3	+1.2
GOPC	GO Pecny, Ondr	73.73	318	*e*P	P	19 32 51.3	+1.2
BRG	Berggiesshubel	73.95	319	*e*P	P	19 32 51.5	+0.2
	comp=Z,4.7nm,0.8s						
BRG	Berggiesshubel	73.95	319	*e*P	P	19 32 51.5	+0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARSA	Arzberg	74.08	315	*e*pP	P	19 32 55.3	+3.1
	comp=Z,6.7nm,1.3s						
CLL	Collm	74.37	319	*i* P	P	19 32 55.3	+1.5
	comp=Z,11nm,1.3s						
CLL				LmV		20 07 00.0	
	comp=Z,100nm,18.5s						
CLL	Collm	74.37	319	*i* P	P	19 32 55.3	+1.5
CLL				pmax	pmax		
	comp=Z,11nm,1.3s						
DAG	Danmarks Havn	74.50	349	P	P	19 32 55.7	+1.6
DAG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDM	Murphy Dome	74.52	25	*e*P	P	19 32 55.1	+0.7
	comp=Z,8.7nm,0.8s						
SOKA	Soboth	74.57	314	*e*P	P	19 32 56.0	+0.9
	comp=Z,3.5nm,0.7s						
MOA	Molln	74.70	316	*e*pP	P	19 32 57.5	+1.7
	comp=Z,2.4nm,0.7s						
KHC	Kasperske Hory	74.72	317	*e*P	P	19 32 57.9	+2.0
KHC	Kasperske Hory	74.72	317	*e*P	P	19 32 57.9	+2.0
GEC2	GERESS Array S	74.73	317	*e*P	P	19 32 56.5	+0.4
GEC2	GERESS Array S	74.73	317	*e*P	P	19 32 56.5	+0.4
GERES	GERESS Array B	74.73	317	P	P	19 32 56.5	+0.4
	comp=Z,2.4nm,0.7s,baz=61,slow=6.1,SNR=18						
SUA	Susitna One	74.81	29	*e*P	P	19 32 56.4	+0.1
	comp=Z,11nm,0.8s						
OBKA	Obir	74.94	314	*e*pP	P	19 32 58.9	+1.6
	comp=Z,2.7nm,0.6s						
ILAR	Eielson Array	75.12	25	P	P	19 32 57.0	-0.9
ILAR	Eielson Array	75.12	25	P	P	19 32 57.0	-0.9
	comp=Z,0.5nm,0.5s,baz=284,slow=5.2,SNR=11						
ILB	Eielson Array	75.12	25	*e*P	P	19 32 57.0	-0.9
WET	Wettzell	75.15	317	P	P	19 33 02.0	+3.6
WET				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PRP	Porcupine Dome	75.33	24	*e*P	P	19 32 60.0	+0.7
	comp=Z,11nm,1.3s						
KBA	Koelnbreinsper	75.54	315	*e*pP	P	19 33 02.4	+1.6
	comp=Z,3.1nm,0.6s						
KBA	Koelnbreinsper	75.54	315	P	P	19 33 03.9	+3.0
KBA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ABTA	Abfaltersbach	76.19	315	*e*P	P	19 33 04.0	-0.4
	comp=Z,4.8nm,1.3s						
SQTA	Sankt Quirin	76.86	316	*e*pP	P	19 33 09.4	+1.1
	comp=Z,3.7nm,0.5s						
MOTA	Moosalm	76.88	316	*e*pP	P	19 33 09.6	+1.1
	comp=Z,2.4nm,0.6s						
FETA	Feichten	77.24	316	*e*P	P	19 33 10.0	-0.5
	comp=Z,4.2nm,0.9s						
INK	Inuvik	78.02	19	*e*P	P	19 33 14.7	+0.5
	comp=Z,21nm,1.8s						
INK	Inuvik	78.02	19	*e*P	P	19 33 14.7	+0.5
INK				pmax	pmax		
	comp=Z,21nm,1.8s						
INK	Inuvik	78.02	19	P	P	19 33 13.2	-1.0
	comp=Z,2.9nm,0.8s,baz=285,slow=4.9,SNR=8.0						
BFO	Black Forest	78.25	318	⇑*e*P	P	19 33 18.8	+2.8
DAWY	Dawson	78.33	24	*e*P	P	19 33 16.2	+0.1
	comp=Z,4.9nm,0.8s						
BALM	Baldy	78.66	28	*e*P	P	19 33 18.7	+0.6
	comp=Z,12nm,0.8s						
BALM	Baldy	78.66	28	*e*P	P	19 33 18.7	+0.6
BALM				pmax	pmax		
	comp=Z,12nm,0.8s						
SUMG	Summit	81.07	350	*e*P	P	19 33 33.0	+1.7
	comp=Z,27nm,1.6s						
SUMG	Summit	81.07	350	*e*P	P	19 33 33.0	+1.7
SUMG				pmax	pmax		
	comp=Z,27nm,1.6s						
YKA	Yellowknife Ar	87.70	18	P	P	19 34 04.4	-0.2
	comp=Z,0.4nm,0.5s,baz=322,slow=4.2,SNR=9.4						
YKB5	Yellowknife Ar	87.70	18	*e*P	P	19 34 04.4	-0.2
TXAR	Lajitas Array	119.28	31	PKP	PKiKP	19 40 06.4	+0.3
	comp=Z,0.2nm,0.6s,baz=335,slow=1.3,SNR=2.9						
SDV	Santo Domingo	147.40	356	*e*PKPdf	PKPab	19 41 00.3	-2.5
SDV	Santo Domingo	147.40	356	PKPbc	PKiKP	19 41 00.5	-2.8
	comp=Z,19nm,0.7s,baz=310,slow=2.1,SNR=18						

MAN 19 19:45:23.7, 19°.35N×121°.14E, h8^{km}, mb4.7, ML3.6, MS3.5, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.40	142	*e*P	Pn	19 45 48.5	-1.0
SGCP				*e*S	Sb	19 46 03.6	-4.5
APYP	Conner	1.48	176	*e*P	Pn	19 45 49.7	-1.0
APYP				*e*S	Sn	19 46 07.8	-2.5
CAUP	Cauayan	2.48	165	*e*P	Pn	19 46 06.5	+2.0
CAUP				*e*S	Sb	19 46 37.1	-2.1
PALP	Palanan	2.58	152	*e*P	Pn	19 46 06.4	+0.5
PALP				*e*S	Sn	19 46 39.1	+1.7

ISCJB ***19*** *19:55:31.7±1.1, 13°.7S±0°.2×111°.1W±0°.1, h10^{km}, mb4.6/43, MS3.9/11, Error ellipse: s-maj=24.1km s-min=18.8km az=26.8*

IDC ***19*** *19:55:31.9±1.4, 13°.49S×111°.09W, h0^{km}, mb3.7/6, mb1 4.1/6, mb1mx4.0/22, mbtmp3.7/6, MS3.9/12, Ms1 3.9/12, ms1mx3.8/16, Error ellipse: s-maj=48.0km s-min=30.0km az=49.0*

NEIC ***19*** *19:55:32.8±0.9, 13°.76S×111°.12W, h10^{km}, mb4.7/36, Error ellipse: s-maj=20.5km s-min=19.0km az=65.0*

GCMT ***19*** *19:55:34.8±0.5, 13°.50S±0°.03×111°.23W±0°.02, h19^{km}±1^{km}, MW4.9/77, Moment Tensor Solution. s17,c18; s77,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.29±.13; $M_{\theta\theta}$0.22±.12; $M_{\phi\phi}$0.06±.13; $M_{r\theta}$-0.05±.21; $M_{\theta\phi}$2.42±.10; $M_{\phi r}$-1.31±.32; Best double couple: $M_0$2.75900×10^{16} NP1:ϕ_s2.00000°, δ87.00000°, λ-151.00000°. NP2: ϕ_s270.00000°, δ61.00000°, λ-4.00000°. Principal axes: T 2.8640, Plg18.0000°, Azm133.0000°; N -0.2100, Plg61.0000°, Azm8.0000°; P -2.6530, Plg22.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 19:55:33.7±1.2, 13°.6S±0°.2×111°.1W±0°.2, h10^{km}, n73, σ1^{s}.33/56, mb4.7/43, MS4.0/11, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	13.60	173	LR	LR	20 02 43.0	
	comp=Z,535nm,18.6s,baz=348,slow=32						
TAOE	Nuku Hiva Isla	28.90	276	*e*LR	LR	20 08 41.2	
	comp=Z,666nm,26.4s						
PPT2	Papeete2	37.27	259	*e*LR	LR	20 12 38.4	
	comp=Z,172nm,27.2s						
TBI	Tubuai	37.60	249	*e*LR	LR	20 12 50.8	
	comp=Z,322nm,26.5s						
ROSC	El Rosal	40.80	66	LR	LR	20 16 39.7	
	comp=Z,56nm,18.3s,baz=70,slow=31						
LPAZ	La Paz	41.52	99	*e*P	P	20 03 22.0	-0.3
LPAZ	La Paz	41.52	99	P	P	20 03 22.4	+0.1
	3.5nm,0.8s,baz=271,slow=6.8,SNR=12						
LPAZ				LR	LR	20 16 43.0	
	comp=Z,267nm,20.7s,baz=264,slow=31						
TXAR	Lajitas Array	43.23	9	P	P	20 03 35.7	+0.3
	0.6nm,0.8s,baz=207,slow=11,SNR=7.0						
TXAR				LR	LR	20 18 27.0	
	comp=Z,75nm,18.1s,baz=0.0,slow=32						
MNTX	Cornudas Mount	45.32	7	*e*P	P	20 03 51.6	-0.4
	12nm,1.1s						
SDV	Santo Domingo	45.91	63	*e*P	P	20 03 57.9	+0.7
	11nm,1.0s						
LENM	Lemitar	47.61	5	*e*P	P	20 04 12.0	+1.9
BNM	Barren Site	47.63	5	*e*P	P	20 04 11.8	+1.5
LAZ	Ladron	47.84	4	*e*P	P	20 04 14.6	+2.7
MSTX	Muleshoe	47.91	9	*e*P	P	20 04 12.1	-0.3
	17nm,1.3s						
W18A	Petrified Fore	48.42	1	*e*P	P	20 04 16.8	+0.4
	12nm,1.0s						
ANMO	Albuquerque	48.43	5	*e*P	P	20 04 16.7	+0.2
	3.3nm,1.0s						
W13A	Hualapai Mount	48.46	357	*e*P	P	20 04 17.1	+0.3
	3.2nm,0.8s						
XMAS	Kiritimati	48.53	285	*e*P	P	20 04 18.2	+0.8
	311nm,1.5s						
WUAZ	Wupatki	48.80	360	*e*P	P	20 04 18.1	-1.3
	5.0nm,0.9s						
SHPR	Sheep Range	49.94	356	*e*P	P	20 04 29.4	+1.5
	5.5nm,1.1s						
MVCO	Mesa Verde	50.55	3	*e*P	P	20 04 33.2	+0.5
	17nm,1.5s						
PKCU	Pink Cliffs	50.74	359	*e*P	P	20 04 35.3	+1.1
	9.9nm,0.8s						
T25A	Trinidad	50.81	7	*e*P	P	20 04 36.5	+1.9
	26nm,1.8s						
SDCO	Great Sand Dun	51.29	6	*e*P	P	20 04 37.8	-0.5
	7.9nm,1.1s						
MTPU	Mount Pierson	51.33	359	*e*P	P	20 04 39.6	+0.9
	19nm,1.7s						
PV01	Paradox Valley	51.47	3	*e*P	P	20 04 41.3	+1.7
	16nm,1.5s						
PV13	Radium Mtn., P	51.48	2	*e*P	P	20 04 40.7	+1.1
	13nm,1.3s						
PV03	Paradox Valley	51.58	2	*e*P	P	20 04 43.5	+3.1
	14nm,1.4s						
PV17	East Wray Mesa	51.60	2	*e*P	P	20 04 40.9	+0.4
	5.0nm,1.0s						
PV04	Paradox Valley	51.71	2	*e*P	P	20 04 44.5	+3.1
	6.4nm,1.0s						
CPUP	Villa Florida	51.76	113	LR	LR	20 22 22.1	
	comp=Z,239nm,21.2s,baz=258,slow=31						
PV09	Paradox Valley	51.81	2	*e*P	P	20 04 43.0	+0.8
NV01	Mina Array Sit	52.15	353	*e*P	P	20 04 45.5	+0.8
NVAR	Mina Array Bea	52.15	353	P	P	20 04 45.5	+0.8
	0.9nm,0.7s,baz=178,slow=8.9,SNR=3.1						
NVAR				LR	LR	20 21 50.6	
	comp=Z,143nm,19.3s,baz=198,slow=30						
SRU	San Rafael Swe	52.39	1	*e*P	P	20 04 47.0	+0.6
	9.3nm,1.2s						
P17A	Butcher Ranch,	52.75	0	*e*P	P	20 04 49.9	+0.9
	11nm,1.1s						
NLU	North Lily Min	53.24	359	*e*P	P	20 04 52.9	+0.3
	9.4nm,1.1s						
DUG	Dugway, Tooele	53.50	358	*e*P	P	20 04 56.0	+1.6
	5.7nm,1.0s						
ELK	Elko	54.16	356	*e*P	P	20 04 59.8	+0.4
	7.6nm,1.4s						
PD31	Pinedale Array	56.06	1	*e*P	P	20 05 11.6	-1.6
PDAR	Pinedale Array	56.06	1	P	P	20 05 11.6	-1.6
	0.6nm,0.6s,baz=182,slow=7.5,SNR=7.3						
PDAR				LR	LR	20 24 56.3	
	comp=Z,92nm,19.8s,baz=196,slow=32						
TPAW	Teton Pass	56.77	0	*e*P	P	20 05 17.8	-0.4
	8.5nm,1.4s						
FXWY	Fox Creek	56.91	0	*e*P	P	20 05 20.9	+1.7
	3.3nm,1.1s						
MOOW	Moose Ponds	57.02	0	*e*P	P	20 05 23.4	+3.5
	18nm,1.9s						
IMW	Indian Meadow	57.17	0	*e*P	P	20 05 21.6	+0.5
	12nm,1.2s						
FLWY	Flagg Ranch	57.36	0	*e*P	P	20 05 23.1	+0.7
	11nm,1.0s						
YHH	Holmes Hill	58.06	0	*e*P	P	20 05 28.5	+1.2
	4.4nm,1.1s						
BDFB	Brasilia	60.85	100	LR	LR	20 30 13.9	
	comp=Z,76nm,18.1s,baz=241,slow=34						
FCC	Fort Churchill	73.38	9	*e*P	P	20 07 05.9	+0.4
	30nm,2.0s						
YKA	Yellowknife Ar	75.85	358	P	P	20 07 18.7	-1.1
	0.6nm,0.9s,baz=173,slow=5.4,SNR=9.2						
YKA				LR	LR	20 37 49.5	
	comp=Z,14nm,18.2s,baz=182,slow=34						
YKB5	Yellowknife Ar	75.85	358	*e*P	P	20 07 18.7	-1.1
SCHQ	Schefferville	77.69	24	LR	LR	20 40 30.7	
	comp=Z,104nm,19.5s,baz=306,slow=35						
RIDG	Independ'e Rid	81.32	346	*e*P	P	20 07 48.8	-1.2
	18nm,1.3s						
EPYK	Eagle Plains	81.94	350	*e*P	P	20 07 53.0	-0.3
	16nm,1.3s						
RND	Reindeer	82.07	344	*e*P	P	20 07 54.3	+0.3
	22nm,1.5s						
ILAR	Eielson Array	82.67	345	P	P	20 07 55.5	-1.6
	0.7nm,1.0s,baz=188,slow=5.5,SNR=3.6						
ILAR				LR	LR	20 35 58.4	
	comp=Z,64nm,20.6s,baz=154,slow=29						
ILB	Eielson Array	82.67	345	*e*P	P	20 07 55.5	-1.6
WRH	Wood River Hil	82.73	345	*e*P	P	20 07 57.0	-0.3
	42nm,1.9s						
MDM	Murphy Dome	83.16	345	*e*P	P	20 07 60.0	+0.3
	20nm,1.6s						
INK	Inuvik	83.23	352	*e*P	P	20 07 59.1	-0.7
	6.1nm,1.1s						
H11S2	WAKE ISLAND Hy	87.06	290	T	T	21 44 20.8	
	baz=105,slow=74,SNR=66						
H11S1	WAKE ISLAND Hy	87.07	290	T	T	21 44 19.4	
	baz=105,slow=74,SNR=34						
H11S3	WAKE ISLAND Hy	87.08	290	T	T	21 44 19.6	
	baz=105,slow=74,SNR=34						
H11N3	WAKE ISLAND Hy	87.19	291	T	T	21 44 30.1	
	baz=106,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	87.21	291	T	T	21 44 32.9	
	baz=106,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	87.21	291	T	T	21 44 35.5	
	baz=106,slow=74,SNR=4.8						
STKA	Stephens Creek	97.14	235	LR	LR	20 44 32.1	
	comp=Z,83nm,21.5s,baz=42,slow=30						
BR101	Keskin Array S	139.50	43	*e*PKPpre	PKPpre	20 14 56.5	
BRTR	Keskin Array B	139.50	43	PKhKP	PKPpre	20 14 56.5	
	0.5nm,0.8s,baz=352,slow=2.9,SNR=2.6						
KBZ	Khabaz	142.55	32	PKP	PKPdf	20 15 07.8	+0.6
	1.8nm,0.8s,baz=327,slow=2.9,SNR=3.1						
MK32	Makanchi Array	145.02	344	*e*PKPbc	PKPab	20 15 08.9	-1.8
MKAR	Makanchi Array	145.02	344	PKP	PKPab	20 15 08.9	-1.8
	1.3nm,1.0s,baz=358,slow=2.1,SNR=9.2						
CMAR	Chiang Mai Arr	150.77	284	PKPbc	PKPbc	20 15 27.9	+0.7
	2.8nm,0.9s,baz=63,slow=0.8,SNR=14						

ISCJB ***19*** *19:57:47.5±0.3, 24°.35N±0°.02×122°.75E±0°.02, h57^{km}±5^{km}, Error ellipse: s-maj=3.4km s-min=2.3km az=3.4*

TAP ***19*** *19:57:47.5, 24°.34N×122°.73E, h52^{km}±1^{km}, ML3.4, C*

JMA ***19*** *19:57:47.7±0.1, 24°.34N×122°.74E, h56^{km}±2^{km}, M2.9*

ISC 19 19:57:47.9±1.2, 24°.35N±0°.03×122°.76E±0°.02, h55^{km}±7^{km}, n89, σ0^{s}.85/165, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.20	60	P	Pn	19 57 56.8	0.0
JYNG				S	Sn	19 58 03.2	0.0
YOJ	Yonaguni jima	0.26	65	P	Pn	19 57 57.2	0.0
	baz=61						
YOJ				S	Sn	19 58 03.8	0.0
	baz=61						
YOJ	Yonaguni jima	0.26	65	P	Pn	19 57 57.2	0.0
YOJ				S	Sn	19 58 03.6	-0.2
EOS1	EOS1	0.61	289	P	Pn	19 58 00.8	+0.1
	baz=291						
EOS1				S	Sn	19 58 10.6	+0.6
	baz=291						
TWC	Suao	0.87	287	P	Pn	19 58 03.4	-0.6
	baz=288						
TWC				*e*S	Sn	19 58 15.3	-0.5
	baz=288						
IRIF	Iriomote-Funau	0.89	91	P	Pn	19 58 04.2	-0.1
IRIF				S	Sn	19 58 16.2	-0.1
ENA	Nanau	0.93	275	P	Pn	19 58 05.5	+0.7
	baz=275						
ENA				*e*S	Sn	19 58 17.2	-0.1
	baz=275						
NTC	Toucheng	0.98	301	P	Pn	19 58 05.5	0.0
	baz=302						
NTC				*e*S	Sn	19 58 17.7	-0.9
	baz=302						
HATJ	Hateruma jima	1.00	107	P	Pn	19 58 06.6	+0.8
HATJ				*e*S	Sn	19 58 20.1	+1.1
TIPB	Shuangxi	1.05	306	P	Pn	19 58 06.4	0.0
	baz=307						
TIPB				S	Sn	19 58 19.5	-0.7
	baz=307						
TWE	Neicheng	1.06	291	P	Pn	19 58 06.7	+0.1
	baz=291						
TWE				S	Sn	19 58 20.6	+0.2
	baz=291						
NACB	Ninganchiao	1.08	261	P	Pn	19 58 06.4	-0.4
	baz=261						
NACB				S	Sn	19 58 20.2	-0.6
	baz=261						
TWD	Chiawan	1.09	256	P	Pn	19 58 06.6	-0.4
	baz=256						
TWD				S	Sn	19 58 20.8	-0.4
	baz=256						
ENTT	Nioudou	1.12	285	P	Pn	19 58 08.2	+0.7
	baz=285						
ENTT				*e*S	Sn	19 58 23.5	+1.5
	baz=285						
NWF	Wu-fen Shan	1.14	309	P	Pn	19 58 07.8	+0.1
	baz=310						
NWF				S	Sn	19 58 22.5	0.0
	baz=310						
WFSB	Wu-fen Shan	1.14	309	P	Pn	19 58 07.8	+0.2
	baz=310						
WFSB				S	Sn	19 58 22.4	+0.1
	baz=310						
ENLB	Shoufeng	1.15	247	P	Pn	19 58 07.5	-0.2
	baz=247						
ENLB				S	Sn	19 58 22.7	+0.2

	baz=247						
JKRS	**Kuro-shima**	1.15	95	P	Pn	19 58 08.2	+0.5
JKRS				S	Sn	19 58 23.1	+0.6
NDT	**Datong Townshi** baz=283	1.16	283	P	Pn	19 58 08.7	+0.7
NDT	baz=283			S	Sn	19 58 23.9	+1.1
ETLH	**Xiulin Townshi** baz=263	1.17	263	P	Pn	19 58 08.0	-0.1
ETLH	baz=263			*e*S	Sn	19 58 23.2	-0.1
NWLT	**Wulai** baz=291	1.22	291	P	Pn	19 58 09.2	+0.4
NWLT	baz=291			S	Sn	19 58 24.8	+0.5
TWA	**Mucha** baz=301	1.24	301	P	Pn	19 58 09.4	+0.4
TWA	baz=301			S	Sn	19 58 24.8	+0.1
NNSB	**Datong** baz=274	1.26	274	P	Pn	19 58 09.4	+0.1
NNSB	baz=274			*e*S	Sn	19 58 24.8	-0.5
JIJ	**Ishigaki jima**	1.26	89	P	Pn	19 58 09.0	-0.3
JIJ				S	Sn	19 58 24.6	-0.7
NNS	**Nan Shan** baz=274	1.27	274	P	Pn	19 58 09.6	+0.2
YHNB	**Yeheng** baz=285	1.30	284	P	Pn	19 58 10.5	+0.7
YHNB	baz=285			*e*S	Sn	19 58 26.3	+0.1
TATO	**Taipei** baz=299	1.31	299	P	Pn	19 58 10.2	+0.2
TATO	baz=299			*e*S	Sn	19 58 26.6	+0.2
NSK	**Sanguang** baz=285	1.31	285	P	Pn	19 58 10.8	+0.7
NSK	baz=285			*e*S	Sn	19 58 26.5	-0.1
ESL	**Shilin** baz=246	1.32	246	P	Pn	19 58 09.3	-0.8
TAP	**Taipei** baz=302	1.33	301	P	Pn	19 58 10.6	+0.4
TAP	baz=302			S	Sn	19 58 27.4	+0.6
YM01	**YM01** baz=307	1.34	306	*e*P	Pn	19 58 10.1	-0.2
YM01	baz=307			*e*S	Sn	19 58 27.3	+0.1
YM11	**YM11** baz=308	1.35	307	*e*P	Pn	19 58 10.7	+0.1
YM11	baz=308			*e*S	Sn	19 58 27.8	+0.3
YM08	**YM08** baz=309	1.35	308	*e*P	Pn	19 58 10.3	-0.2
YM05	**YM05** baz=307	1.35	307	*e*P	Pn	19 58 10.5	-0.1
YM05	baz=307			*e*S	Sn	19 58 27.6	+0.1
YM04	**YM04** baz=306	1.37	306	P	Pn	19 58 10.8	+0.1
YM04	baz=306			*e*S	Sn	19 58 27.7	-0.2
WHF	**Hehuan Shan** baz=261	1.38	262	P	Pn	19 58 11.0	-0.3
WHF	baz=261			S	Sn	19 58 27.0	-1.6
EGFH	**Guangfu** baz=240	1.39	241	*e*P	Pn	19 58 10.6	-0.5
EGFH	baz=240			*e*S	Sn	19 58 27.1	-1.3
TWY	**Chenhua** baz=312	1.40	311	*e*S	Sn	19 58 29.6	+1.1
TWS1	**Kuangyinshan** baz=302	1.43	302	*e*P	Pn	19 58 12.0	+0.5
TWS1	baz=302			*e*S	Sn	19 58 29.7	+0.4
JISG	**Ishigakijimahi**	1.44	80	P	Pn	19 58 11.4	-0.2
JISG				S	Sn	19 58 28.8	-0.6
NTST	**Danshui** baz=305	1.44	305	*e*P	Pn	19 58 12.1	+0.4
NTST	baz=305			*e*S	Sn	19 58 29.9	+0.4
TWT	**Tachien** baz=266	1.45	266	P	Pn	19 58 12.9	+1.0
TWT	baz=266			*e*S	Sn	19 58 29.9	0.0
TDCB	**Techi** baz=266	1.46	266	P	Pn	19 58 13.0	+0.8
CHGB	**Renai** baz=259	1.48	259	P	Pn	19 58 12.4	0.0
CHGB	baz=259			*e*S	Sn	19 58 31.1	+0.4
HGSD	**Ruisui** baz=234	1.49	235	*e*P	Pn	19 58 11.5	-0.9
HGSD	baz=234			*e*S	Sn	19 58 29.6	-1.1
OWD	**Renai** baz=255	1.50	255	P	Pn	19 58 12.4	-0.2
OWD	baz=255			*e*S	Sn	19 58 30.2	-0.9
NCU	**National Centr** baz=294	1.56	294	*e*S	Sn	19 58 32.5	+0.1
NCUH	**Zhongli** baz=294	1.56	294	*e*P	Pn	19 58 14.0	+0.7
NCUH	baz=294			*e*S	Sn	19 58 32.8	+0.4
EHY	**Hungye** baz=237	1.56	238	*e*P	Pn	19 58 12.7	-0.7
VWDT	**VWDT** baz=248	1.59	248	P	Pn	19 58 14.0	+0.2
VWDT	baz=248			S	Sn	19 58 32.9	-0.3
LIOB	**Emei** baz=281	1.61	281	P	Pn	19 58 14.2	+0.2
LIOB	baz=281			S	Sn	19 58 34.1	+0.3
NSTT	**Nanjuang** baz=280	1.62	280	P	Pn	19 58 14.9	+0.8
NSTT	baz=280			S	Sn	19 58 35.0	+1.0
YULB	**Yu-li** baz=234	1.64	235	P	Pn	19 58 13.8	-0.6
YULB	baz=234			*e*S	Sn	19 58 32.6	-1.9
TWF1	**Yuli** baz=233	1.67	234	P	Pn	19 58 14.3	-0.4
TWF1	baz=233			S	Sn	19 58 33.9	-1.2
SSLB	**Suanglung** baz=251	1.74	252	*e*P	Pn	19 58 15.9	0.0
SSLB	baz=251			*e*S	Sn	19 58 34.9	-2.1
SMLT	**Sun Moon Lake** baz=254	1.76	255	*e*P	Pn	19 58 16.7	+0.6
SMLT	baz=254			*e*S	Sn	19 58 37.1	-0.4
TYC	**Yuchr** baz=255	1.79	256	*e*P	Pn	19 58 17.2	+0.8
TYC	baz=255			*e*S	Sn	19 58 37.4	-0.7
JTJ	**Tarama**	1.79	80	P	Pn	19 58 16.9	+0.4
JTJ				S	Sn	19 58 37.7	-0.5
NMLH	**Miaoli** baz=276	1.80	276	*e*P	Pn	19 58 16.9	+0.3
NMLH	baz=276			*e*S	Sn	19 58 38.6	+0.2
TWQ1	**Liyutan** baz=270	1.81	270	*e*P	Pn	19 58 17.6	+0.9
TWQ1	baz=270			*e*S	Sn	19 58 40.1	+1.5
WHYT	**Xinyi Township** baz=249	1.86	250	*e*P	Pn	19 58 18.4	+1.0
WHYT	baz=249			S	Sn	19 58 40.0	+0.1
YUS	**Yu-Shan** baz=242	1.86	243	P	Pn	19 58 18.1	+0.2
YUS	baz=242			S	Sn	19 58 39.2	-1.3
TCU	**Taichung** baz=264	1.91	264	P	Pn	19 58 19.3	+1.3
TCU	baz=264			*e*S	Sn	19 58 41.1	0.0
WJS	**Zhushan** baz=254	1.93	255	*e*P	Pn	19 58 19.8	+1.4
WJS	baz=254			*e*S	Sn	19 58 41.8	+0.3
WDJ	**Dajia District** baz=270	1.93	270	*e*P	Pn	19 58 18.6	+0.2
WDJ	baz=270			*e*S	Sn	19 58 41.7	+0.2
WNT	**Mingjian** baz=256	1.95	256	*e*P	Pn	19 58 20.4	+1.8
WNT	baz=256			*e*S	Sn	19 58 43.1	+1.1
ELDTW	**Lidau** baz=233	1.97	234	P	Pn	19 58 18.4	-0.6
CHN5	**Tsauling** baz=248	2.04	249	P	Pn	19 58 21.3	+1.3
CHN5	baz=248			*e*S	Sn	19 58 45.7	+1.3
TWGBT	**Beinan** baz=225	2.17	226	*e*P	Pn	19 58 21.4	-0.3
TWG	**Pinlang** baz=225	2.17	226	*e*P	Pn	19 58 21.2	-0.4
TWG	baz=225			*e*S	Sn	19 58 45.1	-2.3
TPUB	**Ta-pu** baz=241	2.21	242	*e*P	Pn	19 58 23.6	+1.3
TPUB	baz=241			*e*S	Sn	19 58 48.9	+0.5
RLNB	**Erlin** baz=258	2.24	259	*e*P	Pn	19 58 23.6	+1.1
RLNB	baz=258			*e*S	Sn	19 58 49.7	+0.7
CHN2	**Minshiung** baz=248	2.24	249	*e*P	Pn	19 58 24.8	+2.2
CHN2	baz=248			*e*S	Sn	19 58 49.9	+0.8
WTP	**Ta-pu** baz=240	2.25	241	*e*P	Pn	19 58 24.4	+1.6
WTP	baz=240			*e*S	Sn	19 58 49.1	-0.4
CHY	**Chiayi** baz=248	2.30	249	*e*P	Pn	19 58 24.1	+0.7
CHY	baz=248			*e*S	Sn	19 58 50.9	+0.4
SNST	**Tainan City** baz=241	2.36	242	*e*P	Pn	19 58 26.3	+2.1
SNST	baz=241			*e*S	Sn	19 58 53.1	+1.1
SLGT	**Liugui** baz=235	2.36	235	*e*P	Pn	19 58 25.5	+1.2
SLGT	baz=235			*e*S	Sn	19 58 53.1	+1.0
WSF	**Szhu** baz=253	2.42	253	*e*S	Sn	19 58 54.7	+1.1
SSD	**Sandimen** baz=230	2.52	231	P	Pn	19 58 27.6	+1.1
SSD	baz=230			*e*S	Sn	19 58 56.7	+0.7
MASBT	**Mashibuluo** baz=228	2.61	229	*e*P	Pn	19 58 28.3	+0.7
MASBT	baz=228			*e*S	Sn	19 58 58.4	+0.2
SSPT	**Xinbi** baz=227	2.74	228	*e*P	Pn	19 58 30.1	+0.7
SSPT	baz=227			*e*S	Sn	19 59 01.9	+0.6
PTTC	**Pingtan** baz=293	2.94	293	*e*P	Pn	19 58 32.5	+0.3
PTTC	baz=293			*e*S	Sn	19 59 04.0	-2.4
PHUB	**P'eng-hu** baz=254	3.03	255	*e*P	Pn	19 58 33.6	+0.2
PHUB	baz=254			*e*S	Sn	19 59 06.2	-2.3
MATB	**Ma-tsu** baz=305	3.11	306	*e*P	Pn	19 58 34.0	-0.6
MATB	baz=305			*e*S	Sn	19 59 09.6	-1.0
XPSS	**Dashiqiu** baz=318	3.46	318	*e*P	Pn	19 58 39.1	-0.1
XPSS	baz=318			*e*S	Sn	19 59 17.0	-2.0
LYJJ	**Jianjiangzhen** baz=309	3.48	310	*e*P	Pn	19 58 40.2	+0.6
LYJJ	baz=309			*e*S	Sn	19 59 17.6	-2.0
MHZQ	**Yeshan** baz=297	3.80	298	*e*P	Pn	19 58 45.7	+1.8
KNMB	**Chin-men Tao** baz=271	3.98	273	*e*P	Pn	19 58 45.5	-1.0
AXDP	**Jialang** baz=277	4.39	278	P	Pn	19 58 51.5	-0.5

ISCJB ***19*** *20:22:48.0±1.3, 8°.3S±0°.1×121°.53E±0°.08, h10^{km}, mb3.4/1, MS4.0/1, Error ellipse: s-maj=19.0km s-min=10.1km az=17.7*

IDC ***19*** *20:22:49.9±1.9, 6°.97S×123°.54E, h0^{km}, mb3.3/1, mb1 3.5/3, mb1mx3.3/24, mbtmp3.3/3, ML2.7/2, MS4.0/1, Ms1 4.0/1, ms1mx2.8/14, Error ellipse: s-maj=207.8km s-min=30.3km az=58.0*

DJA ***19*** *20:22:49.8±1.1, 8°S±13°×12°2E±°, h14^{km}±10^{km}, M3.1/5, MLv3.1/5*

ISC 19 20:22:49.3±1.4**, 8°.4S**±0°.1×**121°.57E**±0°.08**, h10**^{km}**, n8, σ1**^{s}.**36**/8**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	0.39	162	P	Pb	20 22 58.8	+0.4
MMRI	**Maumere**	0.71	111	P	Pg	20 23 03.2	+0.1
MMRI				S	Sb	20 23 13.6	-0.1
WSI	**Waingapu**	1.79	224	P	Pn	20 23 19.4	-1.0
SOEI	**Soe**	3.00	117	P	Pb	20 23 42.5	-0.4
WRA	**Warramunga Arr** 0.0nm,0.3s,baz=315,slow=13,SNR=2.8	16.88	134	Pn	Pn	20 26 44.3	-1.6
ASAR	**Alice Springs** 0.1nm,0.3s,baz=324,slow=12,SNR=9.7	19.25	144	P	Pn	20 27 17.4	+2.3
KLR	**Kul'dur** comp=Z,130nm,20.9s,baz=18,slow=36	58.05	8	LR	LR	20 56 24.6	
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=137,slow=5.6,SNR=3.6	65.10	331	P	P	20 33 30.8	+0.5

SOME ***19*** *20:24:31.2, 43°.10N×78°.40E, h5^{km}*

KRNET ***19*** *20:24:31.2±0.1, 42°.58N×79°.68E, h35^{km}, mb1.6*

NNC 19 20:24:29.9±0.7**, 43°.12N×78°.37E, h5**^{km}±6^{km}**, mpv1.9, 4C-4D, Error ellipse: s-maj=6.7km s-min=2.8km az=177.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty** 28nm,0.1s	0.07	160	P	Pg	20 24 32.5	+0.9
SATY	354nm,0.1s			S	Sg	20 24 33.6	+0.9
SATY	**Saty** 28nm,0.1s	0.07	160	*e*P	Pg	20 24 32.4	+0.8
SATY	354nm,0.1s			*e*S	Sg	20 24 33.8	+1.0
UZB	**Uzynbulak** 0.4nm,0.1s	0.47	87	P	Pb	20 24 40.0	-0.8
UZB	7.2nm,0.1s			S	Sg	20 24 46.4	+1.1
UZB	**Uzynbulak** 0.4nm,0.1s	0.47	87	*e*P	Pb	20 24 40.0	-0.8
UZB	7.2nm,0.1s			*e*S	Sg	20 24 46.4	+1.1
PRZ	**Przheval'sk** baz=65	0.64	178	⇑*i*P	Pn	20 24 49.4	+3.5
PRZ	baz=65			⇑*i*S	Sn	20 25 02.3	+5.8
PDGK	**Podgornoye** 0.1nm,0.1s	0.84	76	P	Pb	20 24 47.0	-0.1
PDGK	0.5nm,0.2s			S	Sg	20 24 57.8	+0.8
PDGK	**Podgornoye** baz=49	0.84	76	⇓*e*P	Pb	20 24 46.6	-0.5
PDGK	baz=49			⇓*e*S	Sg	20 24 57.7	+0.7
TNSS	**Tian-Shan** 0.3nm,0.1s	1.05	266	P	Pb	20 24 50.5	-0.3
TNSS	1.1nm,0.2s			S	Sg	20 25 04.1	+0.5
KDJ	**Kajisay** baz=57	1.33	222	⇑*i*P	Pb	20 25 02.5	+7.1
KDJ	baz=57			⇑*i*S	Sn	20 25 25.4	+12
TARG	**Taragay, Kyrgy** baz=39	1.46	197	⇓*i*P	Pg	20 24 58.7	+0.9
TARG	baz=39			⇓*i*S	Sn	20 25 19.3	+2.3

KRNET ***19*** *20:26:33.0±0.1, 40°.60N×78°.26E, h21^{km}, mb2.1*

SOME ***19*** *20:26:33.9, 40°.68N×78°.65E, h20^{km}*

NNC 19 20:26:34.6±1.0**, 40°.78N×78°.61E, h0**^{km}**, mb3.2, mpv2.9, 14C-10D, Error ellipse: s-maj=6.7km s-min=4.9km az=172.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy** baz=43	1.12	328	⇑*i*P	Pg	20 26 54.8	-1.3
TARG	baz=43			⇑*i*S	Sg	20 27 10.8	+0.1
PRZ	**Przheval'sk** baz=3.0	1.71	355	⇑*i*P	Pg	20 27 07.3	0.0
PRZ	baz=3.0			⇑*i*S	Sg	20 27 32.1	+2.6
KDJ	**Kajisay** baz=32	1.72	322	⇓*i*P	Pn	20 27 05.1	-0.9
KDJ	baz=32			⇓*i*S	Sn	20 27 27.7	-1.1
NRN	**Naryn** baz=96	2.08	289	⇑*i*P	Pn	20 27 07.4	-3.6
NRN	baz=96			⇑*i*S	Sn	20 27 32.6	-5.1
SATY	**Saty** 5.9nm,0.3s	2.28	356	Pg	Pg	20 27 17.5	-0.8
SATY	13nm,0.5s			Lg	Lg	20 27 48.4	
SATY	**Saty** 5.9nm,0.3s	2.28	356	⇑*i*P	Pg	20 27 17.5	-0.8
SATY	16nm,0.8s			*e*S	Sg	20 27 48.9	+1.0
ULHL	**Ulahol** baz=18	2.30	310	⇓*i*P	Pn	20 27 12.4	-1.6
ULHL	baz=18			⇓*i*S	Sn	20 27 40.7	-2.4
UZB	**Uzynbulak** 1.5nm,0.2s	2.38	7	Pg	Pb	20 27 18.1	-0.4
UZB	5.9nm,0.4s			Lg	Lg	20 27 50.1	
UZB	**Uzynbulak** 0.2nm,0.2s	2.38	7	*e*P	Pb	20 27 18.2	-0.3
UZB	5.9nm,0.4s			*e*S	Sg	20 27 50.1	-1.1
TNSS	**Tian-Shan** 2.2nm,0.3s	2.57	332	Pg	Pb	20 27 22.7	+0.8
TNSS	3.4nm,0.3s			Lg	Lg	20 27 57.7	
TNSS	**Tian-Shan** 2.2nm,0.3s	2.57	332	*e*P	Pb	20 27 22.4	+0.5
TNSS	3.4nm,0.3s			*e*S	Sg	20 27 57.0	-0.3
BOOM	**Boomskoye usch** baz=18	2.63	311	⇑*i*P	Pn	20 27 17.0	-1.4
BOOM	baz=18			⇑*i*S	Sn	20 27 49.1	-2.1
PDGK	**Podgornoye** 0.9nm,0.2s	2.63	14	Pg	Pb	20 27 22.3	-0.4
PDGK	3.7nm,0.5s			Lg	Lg	20 27 58.1	
PDGK	**Podgornoye** 0.7nm,0.4s	2.63	14	⇑Pg	Pb	20 27 21.7	-1.0
PDGK	8.0nm,0.6s			⇓Lg	Lg	20 27 58.1	
PDGK	**Podgornoye** baz=18	2.63	14	⇑*i*P	Pb	20 27 21.1	-1.6
PDGK	baz=18			⇑*i*S	Sb	20 27 56.3	+0.7
MDOK	**Medeo** 2.3nm,0.6s	2.65	334	⇑Pg	Pb	20 27 22.8	-0.2
MDOK	7.8nm,0.6s			⇓Lg	Lg	20 27 59.0	
MDOK	**Medeo** 2.2nm,0.7s	2.65	334	Pg	Pb	20 27 22.9	-0.1
MDOK	9.3nm,0.6s			Lg	Lg	20 27 57.8	
MDOK	**Medeo** 2.6nm,0.6s	2.65	334	⇑*i*P	Pb	20 27 22.9	-0.1
MDOK	9.7nm,0.6s			*e*S	Sg	20 27 58.3	-1.4
IZV	**Izvestkoviy** 1.7nm,0.3s	2.70	327	Pg	Pb	20 27 24.4	+0.6
IZV	4.3nm,0.6s			Lg	Lg	20 28 00.2	
IZV	**Izvestkoviy** 0.6nm,0.2s	2.70	327	*e*P	Pb	20 27 24.1	+0.2
IZV	4.3nm,0.6s			*e*S	Sg	20 28 00.2	-1.2
KURS	**Kuram** 3.0nm,0.4s	2.73	353	Pg	Pb	20 27 24.7	+0.4
KURS	4.2nm,0.6s			Lg	Lg	20 28 01.8	
KURS	**Kuram** 3.0nm,0.4s	2.73	353	*e*P	Pb	20 27 24.7	+0.4
KURS	4.2nm,0.6s			*e*S	Sg	20 28 01.2	-0.9
KZA	**Kyzart** baz=4.0	2.84	298	⇓*i*P	Pn	20 27 18.8	-2.7
KZA	baz=4.0			⇓*i*S	Sn	20 27 53.0	-3.6
KTMS	**Ketmen** 1.0nm,0.1s	2.96	25	Pg	Pb	20 27 28.6	+0.2
KTMS	8.9nm,0.6s			Lg	Lg	20 28 08.1	
KTMS	**Ketmen** 1.0nm,0.1s	2.96	25	*e*P	Pb	20 27 28.6	+0.2
KTMS	8.9nm,0.6s			*e*S	Sg	20 28 08.1	-1.7
KST	**Kastek** 1.6nm,0.1s	3.00	320	Pg	Pb	20 27 29.6	+0.6
KST	3.6nm,0.7s			Lg	Lg	20 28 09.9	
KST	**Kastek** 1.6nm,0.1s	3.00	320	*e*P	Pb	20 27 29.6	+0.6
KST	3.6nm,0.7s			*e*S	Sg	20 28 09.8	-1.1
TKM2	**Tokmak 2** 1.2nm,0.6s	3.10	315	⇓Pg	Pb	20 27 29.9	-0.8
TKM2	2.3nm,0.6s			⇓Lg	Lg	20 28 12.6	
DGS	**Degeres** 1.2nm,0.4s	3.24	320	Pg	Pb	20 27 33.1	0.0
DGS	3.1nm,0.5s			Lg	Lg	20 28 15.9	
DGS	**Degeres** 1.2nm,0.4s	3.24	320	*e*P	Pb	20 27 33.1	+0.1
DGS	3.1nm,0.5s			*e*S	Sb	20 28 15.9	+2.7
KTBS	**Karatobe**	3.26	335	Pg	Pb	20 27 34.5	+1.2
KTBS				Lg	Lg	20 28 17.9	
KTBS	**Karatobe** 0.8nm,0.5s	3.26	335	*e*P	Pb	20 27 34.6	+1.3
KTBS	3.8nm,0.3s			*e*S	Sg	20 28 17.9	-1.4
CHKK	**Chushkaly** 1.2nm,0.2s	3.30	339	Pg	Pb	20 27 34.9	+0.9
CHKK	26nm,0.4s			Lg	Lg	20 28 18.9	
CHKK	**Chushkaly** 1.2nm,0.2s	3.30	339	*e*P	Pb	20 27 34.9	+0.9
CHKK	26nm,0.4s			*e*S	Sg	20 28 18.9	-1.6
ARXS	**Arharly**	3.48	351	Pg	Pb	20 27 38.0	+1.0
ARXS				Lg	Lg	20 28 23.9	
ARXS	**Arharly** 2.1nm,0.6s	3.48	351	*e*P	Pb	20 27 37.8	+0.7
ARXS	5.1nm,0.4s			*e*S	Sg	20 28 23.9	-2.5

ISCJB ***19*** *20:37:45.4±0.4, 40°.45N±0°.02×25°.86E±0°.03, h4^{km}±5^{km}, Error ellipse: s-maj=4.1km s-min=3.5km az=19.6*

DDA ***19*** *20:37:45.0, 40°.45N×25°.87E, h7^{km}±1^{km}, ML2.6*

ATH ***19*** *20:37:45.5, 40°.46N×25°.87E, h14^{km}±5^{km}, ML1.6/2, Error ellipse: s-maj=5.2km s-min=1.0km az=289.0*

ISK ***19*** *20:37:45.1, 40°.46N×25°.87E, h9^{km}, ML2.1/9*

ISC 19 20:37:45.7±0.9**, 40°.46N**±0°.02×**25°.86E**±0°.02**, h13**^{km}±8^{km}**, n21, σ0**^{s}.**46**/33**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	0.25	272	P	Pg	20 37 50.8	-0.2
SMTH				S	Sg	20 37 55.0	+0.4
SMTH	comp=E,348µm,0.1s			AML	AML	20 38 00.2	
SMTH				AML	AML	20 38 01.4	

	comp=N,380μm,0.1s						
ENEZ	**Enez**	**0.35**	**39**	PG	**Pg**	**20 37 52.1**	**-0.7**
ENEZ				SG	**Sg**	**20 37 57.9**	**+0.3**
ALN	**Alexandroupoli**	**0.46**	**18**	PG	**Pg**	**20 37 54.6**	**-0.1**
ALN				SG	**Sb**	**20 38 01.8**	**-0.4**
ALN	**Alexandroupoli**	**0.46**	**18**	P	**Pg**	**20 37 54.4**	**-0.3**
ALN				S	**Sb**	**20 38 01.9**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.47**	**98**	PG	**Pg**	**20 37 55.1**	**+0.1**
GELI				SG	**Sb**	**20 38 01.8**	**-0.9**
ERIK	**Erikli-Kesan**	**0.54**	**67**	PG	**Pg**	**20 37 55.6**	**-0.6**
BOZC	**Bozcaada**	**0.64**	**167**	PG	**Pg**	**20 37 57.6**	**-0.5**
RDO	**Rodhopi**	**0.73**	**340**	PG	**Pb**	**20 38 00.0**	**-0.1**
RDO	**Rodhopi**	**0.73**	**340**	P	**Pg**	**20 37 59.3**	**-0.4**
RDO				S	**Sb**	**20 38 09.9**	**-0.1**
RDO				AML	AML	20 38 14.7	
	comp=E,108μm,0.2s						
RDO				AML	AML	20 38 15.4	
	comp=N,111μm,0.1s						
EZN	**Ezine**	**0.73**	**151**	PG	**Pg**	**20 37 59.4**	**-0.4**
LIA	**Limnos Island**	**0.77**	**223**	P	**Pg**	**20 38 00.0**	**-0.5**
LIA				S	**Sb**	**20 38 11.0**	**-0.1**
THAS	**Thassos island**	**0.88**	**280**	P	**Pg**	**20 38 02.2**	**-0.5**
THAS				S	**Sb**	**20 38 14.9**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.89**	**144**	*i* P	**Pg**	**20 38 02.6**	**-0.3**
BAYC				*i* S	**Sb**	**20 38 14.7**	**-0.1**
BAYC				IAML_P			
	comp=Z,416nm,0.1s						
KAVA	**Kavala**	**1.16**	**298**	P	**Pb**	**20 38 07.5**	**0.0**
KAVA				S	**Sn**	**20 38 23.6**	**+0.4**
SIGR	**SIGRI**	**1.25**	**180**	PN	**Pn**	**20 38 08.8**	**0.0**
SIGR	**SIGRI**	**1.25**	**180**	P	**Pn**	**20 38 08.5**	**-0.2**
PRK	**Paraskevi**	**1.25**	**165**	P	**Pg**	**20 38 09.3**	**-0.4**
KNL	**Balıkesir**	**1.29**	**98**	*i* P	**Pn**	**20 38 09.3**	**0.0**
KNL				*i* S	**Sg**	**20 38 28.5**	**+1.4**
AYVA	**Ayvalik**	**1.32**	**151**	*i* P	**Pg**	**20 38 10.9**	**-0.1**
AYVA				*i* S	**Sg**	**20 38 28.3**	**+0.2**
AYVA				IAML_P			
	comp=Z,78nm,0.2s						
SBT4	**Kumbag-Tekirda**	**1.32**	**73**	PN	**Pb**	**20 38 10.2**	**0.0**
EDRB	**Edirne**	**1.54**	**25**	PN	**Pn**	**20 38 13.1**	**+0.4**

ISC 19 20:40:22.9±1.3**, 50°.09N**±0°.06×**19°.16E**±0°.04**, h0**^{km}**, n4, σ1**^{s}**.01**/8**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.43**	**72**	*e*Pg	**Pg**	**20 40 31.8**	**+0.7**
OJC				*e*Sg	**Sg**	**20 40 36.6**	**-0.1**
LANS	**Liptovska Anna**	**0.96**	**168**	*e*PG	**Pg**	**20 40 41.5**	**+0.2**
LANS				*e*SG	**Sg**	**20 40 55.3**	**+1.5**
MORC	**Moravsky Berou**	**1.09**	**254**	*e*PG	**Pg**	**20 40 44.2**	**+0.5**
MORC				*e*SG	**Sg**	**20 40 58.5**	**+0.6**
VYHS	**Vyhne**	**1.61**	**188**	*e*PN	**Pn**	**20 40 51.7**	**-0.9**
VYHS				*e*SN	**Sn**	**20 41 13.2**	**-0.9**
VYHS				*e*LG	Lg	20 41 16.3	

IDC ***19*** *20:41:08.7±1.4, 10°.13N×123°.88E, h0*^{km}*, mb3.7/6, mb1 3.9/6, mb1mx3.6/33, mbtmp3.8/6, Error ellipse: s-maj=67.1km s-min=19.7km az=62.0*

ISCJB ***19*** *20:41:26.4±0.5, 9°.56N±0°.05×122°.89E±0°.06, h157*^{km}*±5*^{km}*, mb3.4/5, Error ellipse: s-maj=11.1km s-min=6.1km az=148.4*

MAN ***19*** *20:41:28.9, 9°.61N×122°.91E, h128*^{km}*, mb4.4, ML3.3, MS3.0*

ISC 19 20:41:27.6±0.8**, 9°.59N**±0°.05×**122°.93E**±0°.06**, h151**^{km}±6^{km}**, n21, σ1**^{s}**.48**/30**, mb3.4**/5**, 2C-3D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.39**	**129**	⇓*i*P	**Pn**	**20 41 49.1**	**+0.5**
SNPH				*i* S	**Sn**	**20 42 03.5**	**-1.0**
TBP	**Tagbilaran**	**0.92**	**84**	*e*P	**Pn**	**20 41 51.7**	**-0.1**
GUIM	**Jordan**	**1.08**	**342**	*e*P	**Pn**	**20 41 52.8**	**-0.4**
GUIM				*e*S	**Sn**	**20 42 11.7**	**-1.0**
DCPH	**Dipolog City**	**1.08**	**157**	⇑*e*P	**Sn**	**20 42 11.5**	**-1.2**
DCPH				*e*S	**Sn**	**20 42 17.0**	**+4.3**
LLP	**Lapu-Lapu**	**1.25**	**55**	⇓*i*P	**Pn**	**20 41 55.2**	**+0.5**
LLP				*e*S	**Sn**	**20 42 16.5**	**+1.1**
JAP	**San Jose, Anti**	**1.50**	**320**	⇓*e*P	**Pn**	**20 41 57.8**	**+0.6**
PAGZ	**Pagadian**	**1.79**	**166**	*e*P	**Pn**	**20 42 01.0**	**+0.6**
PAGZ				*e*S	**Sn**	**20 42 24.9**	**-0.6**
RCP	**Roxas**	**1.96**	**355**	⇑*e*P	**Pn**	**20 42 03.2**	**+0.8**
RCP				*e*S	**Sn**	**20 42 28.8**	**-0.3**
MSLP	**Maasin**	**1.97**	**74**	*e*P	**Pn**	**20 42 03.5**	**+1.0**
CGP	**Cagayan de Oro**	**2.08**	**123**	*e*P	**Pn**	**20 42 03.5**	**-0.1**
OCLP	**Ormoc**	**2.20**	**49**	*e*P	**Pn**	**20 42 06.2**	**+1.1**
CUYO	**Cuyo Island**	**2.26**	**304**	*e*P	**Pn**	**20 42 06.0**	**+0.1**
CUYO				*e*S	**Sn**	**20 42 34.6**	**-0.7**
OTRP	**Odiongan**	**2.90**	**342**	*e*P	**Pn**	**20 42 14.5**	**+0.8**
OTRP				*e*S	**Sn**	**20 42 47.6**	**-1.8**
SJMP	**San Jose**	**3.36**	**328**	*e*P	**Pn**	**20 42 21.2**	**+1.6**
BUSP	**Coron**	**3.60**	**312**	*e*P	**Pn**	**20 42 24.7**	**+2.0**
BATI	**Baumata**	**19.68**	**178**	P	**P**	**20 45 44.2**	**-1.1**
	9.7nm,0.6s,baz=310,slow=7.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**24.86**	**293**	P	**P**	**20 46 39.9**	**+3.5**
	0.7nm,0.8s,baz=128,slow=8.0,SNR=8.2						
WRA	**Warramunga Arr**	**31.42**	**159**	P	**P**	**20 47 33.9**	**-1.0**
	0.2nm,0.3s,baz=339,slow=9.3,SNR=12						
ASAR	**Alice Springs**	**34.75**	**162**	P	**P**	**20 48 03.3**	**-0.4**
	0.4nm,0.3s,baz=337,slow=7.4,SNR=7.4						
MKAR	**Makanchi Array**	**50.62**	**325**	P	**P**	**20 50 10.0**	**-1.2**
	0.4nm,0.8s,baz=136,slow=7.8,SNR=2.9						
MKAR				PcP	**PcP**	**20 51 27.6**	**+1.0**
	0.2nm,0.5s,baz=127,slow=3.8,SNR=4.4						
FINES	**FINESS Array B**	**84.92**	**331**	P	**P**	**20 53 44.4**	**-1.1**
	1.3nm,0.8s,baz=64,slow=3.2,SNR=4.3						

DDA ***19*** *20:41:50.0, 35°.82N×28°.19E, h6*^{km}*±4*^{km}*, ML3.0*

ISK ***19*** *20:41:50.8, 35°.85N×28°.19E, h7*^{km}*, ML2.5/9*

ATH ***19*** *20:41:51.0, 35°.88N×28°.20E, h26*^{km}*±3*^{km}*, ML2.1/1, Error ellipse: s-maj=4.5km s-min=1.9km az=346.0*

ISC 19 20:41:51.2±1.4**, 35°.86N**±0°.05×**28°.23E**±0°.04**, h10**^{km}±11^{km}**, n19, σ1**^{s}**.10**/26**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.36**	**347**	PG	**Pg**	**20 41 58.8**	**+0.3**
ARG				SG	**Sb**	**20 42 04.4**	**-1.1**
ARG	**Arkhangelos**	**0.36**	**347**	P	**Pg**	**20 41 58.2**	**-0.2**
ARG				S	**Sb**	**20 42 04.8**	**-0.7**
ARG				AML	AML	20 42 07.4	
	comp=N,617μm,0.1s						
ARG				AML	AML	20 42 07.9	
	comp=E,728μm,0.2s						
KARP	**Karpathos**	**0.92**	**250**	PG	**Pb**	**20 42 08.3**	**-1.0**
KARP	**Karpathos**	**0.92**	**250**	P	**Pb**	**20 42 08.7**	**-0.6**
FETY	**Fethiye**	**1.04**	**42**	PG	**Pg**	**20 42 11.0**	**-0.2**
FETY				SG	**Sn**	**20 42 27.4**	**+1.0**
FETY	**Fethiye**	**1.04**	**42**	*i* P	**Pg**	**20 42 10.8**	**-0.4**
FETY				*i* S	**Sn**	**20 42 27.2**	**+0.8**
TURN	**Turunc**	**1.05**	**17**	PG	**Pg**	**20 42 08.5**	**-3.0**
TURN	**Turunc**	**1.05**	**17**	*i* P	**Pg**	**20 42 09.2**	**-2.3**
TURN				*i* S	**Sg**	**20 42 25.7**	**+0.5**
TURN				IAML_P			
	comp=Z,2μm,0.2s						
KSL	**Kastellorizon**	**1.14**	**75**	P	**Pg**	**20 42 13.3**	**+0.1**
AKAS	**Kas**	**1.18**	**71**	PN	**Pn**	**20 42 14.3**	**+0.4**
YER	**Yerkesik**	**1.27**	**2**	PN	**Pg**	**20 42 15.5**	**-0.2**
BDRM	**Kayabasi**	**1.36**	**333**	*i* P	**Pg**	**20 42 17.1**	**-0.2**
BDRM				*i* S	**Sg**	**20 42 36.0**	**+1.1**
BDRM				IAML_P			
	comp=Z,949nm,0.3s						
BODT	**Bodrum**	**1.41**	**329**	PN	**Pb**	**20 42 17.2**	**-0.4**
MLSB	**Milas**	**1.48**	**346**	PN	**Pb**	**20 42 18.6**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.69**	**19**	*i* P	**Pb**	**20 42 22.1**	**-0.4**
TAVA				*i* S	**Sg**	**20 42 47.6**	**+1.9**
TAVA				IAML_P			
	comp=Z,443nm,0.2s						
AYDN	**Tasoluk**	**1.82**	**351**	*i* P	**Pb**	**20 42 24.9**	**+0.3**
AYDN				IAML_P			
	comp=Z,917nm,0.2s						
KORT	**Korkueli**	**2.06**	**56**	PN	**Pb**	**20 42 27.8**	**-0.9**
SMG	**Samos**	**2.15**	**329**	P	**Pn**	**20 42 27.2**	**0.0**
NPS	**Neapolis**	**2.21**	**255**	P	**Pn**	**20 42 28.8**	**+0.8**

IDC 19 20:44:45.3±6.9**, 50°.15N**×**114°.30W, h0**^{km}**, mb1 3.8**/1**, mb1mx3.0**/36**, mbtmp3.4**/1**, ML3.2**/1**, Error ellipse: s-maj=100.6km s-min=49.8km az=60.0, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I56US	**NEWPORT INFRAS**	**2.64**	**226**	*i*		21 04 00.0	
	baz=43,slow=330,SNR=1.8						
I10CA	**LAC DU BONNET**	**11.72**	**83**	*i*		22 00 50.0	
	baz=273,slow=390,SNR=1.0						
YKA	**Yellowknife Ar**	**12.38**	**359**	Pn	Pn	20 47 38.6	-4.0
	0.2nm,0.3s,baz=182,slow=13,SNR=9.9						
YKA				Lg	Lg	20 51 07.9	
	0.0nm,0.3s,baz=169,slow=26,SNR=3.0						

IDC 19 20:45:25.5±5.6**, 7°.92S**×**129°.46E, h87**^{km}±60^{km}**, mb2.7**/1**, mb1 3.2**/5**, mb1mx3.0**/36**, mbtmp3.3**/5**, ML3.4**/3**, Error ellipse: s-maj=46.7km s-min=20.7km az=34.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.16**	**248**	P	Pn	20 46 54.3	+0.4
	1.5nm,0.3s,baz=70,slow=3.2,SNR=3.1						
BATI				S	Sn	20 48 04.0	+1.0
	0.7nm,0.3s,baz=104,slow=19,SNR=2.0						
FITZ	**Fitzroy Crossi**	**10.78**	**200**	P	Pn	20 47 58.7	+1.8
	baz=32,slow=12						
FITZ				S	Sn	20 49 54.0	-1.7
	0.5nm,0.3s,baz=73,slow=20,SNR=8.1						
WRA	**Warramunga Arr**	**12.85**	**159**	P	Pn	20 48 25.5	+0.5
	0.2nm,0.3s,baz=338,slow=14,SNR=16						
WRA				S	Sn	20 50 45.0	-1.2
	0.5nm,0.3s,baz=330,slow=21,SNR=11						
ASAR	**Alice Springs**	**16.23**	**165**	P	P	20 49 09.9	0.0
	0.1nm,0.3s,baz=350,slow=9.7,SNR=3.8						
ASAR				S	Sn	20 52 05.5	-2.5
	0.1nm,0.3s,baz=329,slow=16,SNR=3.5						
MKAR	**Makanchi Array**	**68.70**	**327**	P	P	20 56 19.5	-0.3
	0.1nm,0.5s,baz=115,slow=7.5,SNR=2.6						

IDC ***19*** *20:48:56.1±1.4, 1°.96N×127°.16E, h0*^{km}*, mb3.7/4, mb1 3.8/5, mb1mx3.5/39, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=96.1km s-min=19.5km az=72.0*

ISCJB ***19*** *20:49:02.6±0.9, 1°.97N±0°.08×126°.9E±0°.1, h63*^{km}*, mb3.6/4, Error ellipse: s-maj=21.5km s-min=6.5km az=152.9*

DJA ***19*** *20:49:02.2±1.8, 2°N±3°×12°7E±°, h25*^{km}*±16*^{km}*, M3.9/6, MLv3.9/6*

ISC 19 20:49:03.8±1.0**, 1°.98N**±0°.08×**127°.0E**±0°.1**, h63**^{km}**, n9, σ1**^{s}**.58**/11**, mb3.6**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.27**	**161**	P	**Pn**	**20 49 25.3**	**-0.2**
TNTI				S	**Sn**	**20 49 42.4**	**+0.6**
SGSI	**Sangihe**	**2.21**	**320**	P	**Pn**	**20 49 36.7**	**-1.6**
SGSI				S	**Sn**	**20 50 04.4**	**-0.2**
KMSI	**Cibinong**	**3.29**	**245**	P	**Pn**	**20 49 53.1**	**+0.2**
SANI	**Sanana**	**4.12**	**194**	P	**Pn**	**20 50 04.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**20.00**	**184**	P	**P**	**20 53 29.7**	**-1.7**
	0.2nm,0.3s,baz=14,slow=11,SNR=5.1						
FITZ				S	Sn	20 57 32.1	+14
	0.1nm,0.3s,baz=24,slow=20,SNR=6.2						
WRA	**Warramunga Arr**	**22.96**	**162**	P	**P**	**20 54 00.3**	**-2.8**
	2.6nm,0.5s,baz=344,slow=11,SNR=21						
ASAR	**Alice Springs**	**26.38**	**166**	P	**P**	**20 54 34.8**	**+0.3**
	0.6nm,0.6s,baz=347,slow=7.6,SNR=7.2						
SONM	**Songino Array**	**49.02**	**342**	P	**P**	**20 57 46.8**	**+2.4**
	0.5nm,0.8s,baz=153,slow=7.8,SNR=5.0						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**20 58 58.5**	**+0.6**
	0.3nm,0.5s,baz=120,slow=8.2,SNR=8.3						

ISCJB ***19*** *20:55:37.6±1.7, 43°.47N±0°.07×146°.88E±0°.09, h26*^{km}*±9*^{km}*, Error ellipse: s-maj=14.7km s-min=7.3km az=137.6*

JMA ***19*** *20:55:38.5±0.3, 43°.39N×146°.83E, h34*^{km}*±3*^{km}*, M3.3*

SKHL ***19*** *20:55:38.6±0.7, 43°.39N×146°.86E, h49*^{km}*±3*^{km}*, mb4.1/4*

ISC 19 20:55:36.3±2.8**, 43°.51N**±0°.08×**146°.95E**±0°.07**, h17**^{km}±16^{km}**, n13, σ0**^{s}**.76**/19**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.89**	**261**	P	**Pb**	**20 55 53.3**	**+0.2**
NEM2				*e*S	**Sb**	**20 56 03.8**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**0.95**	**304**	*i* P	**Pn**	**20 55 55.5**	**+0.8**
YUK				AMB	AMB	20 55 56.0	
	120nm,0.3s						
YUK				*i* S	**Sn**	**20 56 07.7**	**-0.1**
YUK				A	A	20 56 09.0	
	840nm,0.3s						
YUK				A	A	20 56 09.0	
	570nm,0.3s						
GRPR	**Tuman**	**0.98**	**300**	*i* P	**Pb**	**20 55 55.0**	**+0.3**
GRPR				AMB	AMB	20 55 57.0	
	130nm,0.3s						
GRPR				*i* S	**Sg**	**20 56 08.0**	**-0.2**
GRPR				A	A	20 56 09.0	
	1μm,0.3s						
GRPR				A	A	20 56 09.0	
	620nm,0.3s						
GLVR	**Golovnino**	**1.06**	**283**	*i* P	**Pb**	**20 55 56.0**	**-0.1**
GLVR				AMB	AMB	20 55 59.0	
	101nm,0.3s						
GLVR				*i* S	**Sb**	**20 56 09.0**	**-0.7**
GLVR				A	A	20 56 10.0	
	1μm,0.4s						
GLVR				A	A	20 56 10.0	
	470nm,0.4s						
JKHN	**Kushirohamanak**	**1.37**	**253**	P	**Pn**	**20 56 00.8**	**+0.3**
JRA	**Rausu**	**1.39**	**289**	P	**Pb**	**20 56 01.5**	**-0.2**
JNK	**Nakash**	**1.62**	**274**	P	**Pn**	**20 56 04.1**	**+0.1**
JNK				*e*S	**Sn**	**20 56 23.3**	**-1.1**
JAK	**Akkeshi**	**1.72**	**254**	P	**Pn**	**20 56 05.0**	**-0.3**
KUR	**Kuril'sk**	**1.85**	**21**	*i* P	**Pb**	**20 56 09.2**	**-0.4**
KUR				AMB	AMB	20 56 12.0	
	30nm,0.4s						
KUR				AMB	AMB	20 56 12.0	
	50nm,0.4s						
KUR				*i* S	**Sb**	**20 56 32.0**	**-0.4**
KUR				A	A	20 56 34.0	
	130nm,0.4s						
KUR				A	A	20 56 34.0	
	250nm,0.4s						
JTKR	**Abashiri--Toko**	**2.25**	**283**	P	**Pn**	**20 56 14.3**	**+1.7**
JAR	**Ashorobuto**	**2.32**	**266**	P	**Pn**	**20 56 14.5**	**+0.8**
JOB	**Onbets**	**2.35**	**256**	*e*S	**Sn**	**20 56 43.0**	**+0.5**
JCH	**Churui**	**2.77**	**252**	P	**Pn**	**20 56 20.9**	**+1.1**

NEIC ***19*** *20:59:04.8±0.0, 15°.87N×95°.20W, h33*^{km}*, MD4.2(MEX), After MEX.*

MEX 19 20:59:04.9±0.7**, 15°.87N**×**95°.20W, h33**^{km}±13^{km}**, MD4.2, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.88**	**263**	*e*Sn	Sn	20 59 29.8	-2.9
HUIG	**Huatulco**	**0.88**	**263**	*e*P	Pn	20 59 18.9	-2.1
HUIG				*e*S	Sn	20 59 29.8	-2.9
CMIG	**Matias Romero**	**1.25**	**14**	*e*Sn	Sn	20 59 38.8	-2.9
CMIG	**Matias Romero**	**1.25**	**14**	*e*P	Pn	20 59 24.1	-2.0
CMIG				*e*S	Sn	20 59 38.8	-2.9
VHO	**Vista Hermosa**	**1.90**	**309**	*e*Sn	Sn	20 59 54.8	-3.2
VHO	**Vista Hermosa**	**1.90**	**309**	*e*P	Pn	20 59 33.7	-1.5
VHO				*e*S	Sn	20 59 54.8	-3.2
PCIG		**1.91**	**95**	*e*P	Pn	20 59 33.2	-1.9
PCIG				*e*S	Sn	20 59 56.0	-2.0
PNIG	**Pinotepa**	**2.86**	**281**	*e*Pn	Pn	20 59 46.9	-1.4
PNIG				*e*Sn	Sn	21 00 17.6	-4.0
PNIG	**Pinotepa**	**2.86**	**281**	*e*P	Pn	20 59 46.9	-1.4
PNIG				*i* S	Sn	21 00 17.6	-4.0
CCIG	**Comitan**	**2.97**	**82**	*e*Pn	Pn	20 59 48.5	-1.4
LVIG	**Laguna Verde**	**4.00**	**343**	*e*Pn	Pn	21 00 02.3	-1.6
TEIG	**Tepich**	**7.88**	**56**	*e*Pn	Pn	21 00 53.6	-3.6
TEIG				*e*Sn	Sn	21 02 18.6	-6.6
WHTX	**Lake Whitney,**	**16.18**	**353**	*e*Pn	Pn	21 02 50.8	+1.0

DMN ***19*** *21:04:53.9±0.0, 24°.16N×90°.35E, h60*^{km}*, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISCJB ***19*** *21:05:09.9±0.2, 25°.30N±0°.03×89°.06E±0°.02, h10*^{km}*, mb4.0/23, MS3.6/1, Error ellipse: s-maj=4.1km s-min=2.9km az=27.3*

BJI ***19*** *21:05:11.3, 25°.46N×89°.21E, h10*^{km}*, mB4.6/5, mb4.1/18, ML4.3/2, Ms3.8/4, Ms7 3.5/3*

NEIC ***19*** *21:05:12.1±3.3, 25°.35N×89°.03E, h12*^{km}*±22*^{km}*, mb4.1/15, Error ellipse: s-maj=11.1km s-min=5.8km az=52.0*

IDC ***19*** *21:05:12.3±0.7, 25°.29N×88°.91E, h13*^{km}*±3*^{km}*, mb3.8/16, mb1 4.0/18, mb1mx3.8/50, mbtmp3.9/18, ML4.0/2, MS3.2/2, Ms1 3.3/2, ms1mx2.7/43, Error ellipse: s-maj=27.3km s-min=10.5km az=52.0*

NDI ***19*** *21:05:12.0±2.2, 25°.37N×89°.05E, h12*^{km}*, ML4.2, mb4.1(NEIC)*

ISC 19 21:05:11.7±0.4**, 25°.37N**±0°.04×**89°.12E**±0°.03**, h10**^{km}**, n86, σ1**^{s}**.81**/102**, mb4.0**/23**, 1D, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTK	**Tadong**	**2.00**	**347**	*e*P	**Pn**	**21 05 47.4**	**+1.7**
GTK				*e*S	**Sn**	**21 06 11.8**	**+0.9**
GTK				IAML		21 06 15.2	
	comp=N,3μm,0.2s						
GTK				IAML		21 06 15.2	
	comp=E,3μm,0.2s						
ODAN	**Odare**	**2.15**	**314**	*e*Pg	**Pn**	**21 05 49.6**	**+1.7**
SHL	**Shillong**	**2.51**	**85**	*e*Pn	**Pn**	**21 05 52.1**	**-0.6**
SHL				*e*Sn	**Sn**	**21 06 24.7**	**+1.2**
SHL	**Shillong**	**2.51**	**85**	*e*P	**Pn**	**21 05 52.2**	**-0.5**
SHL				*e*S	**Sn**	**21 06 24.5**	**+1.0**
SHL				IAML		21 06 28.4	
	comp=E,3μm,0.3s						
SHL				IAML		21 06 29.1	
	comp=N,3μm,0.5s						
RAMN	**Ramite**	**2.76**	**305**	*e*Pg	**Pn**	**21 05 58.0**	**+1.8**
BELO	**BELONIA**	**2.99**	**134**	*e*P	**Pn**	**21 06 01.0**	**+1.8**
BELO				*e*S	**Sn**	**21 06 35.6**	**+0.5**
BELO				IAML		21 06 49.9	
	comp=N,2μm,0.2s						
BELO				IAML		21 06 49.9	
	comp=E,1μm,0.4s						
TAWA	**Tawang**	**3.32**	**47**	*e*P	**Pn**	**21 06 05.2**	**+1.2**
TAWA				*e*S	**Sn**	**21 06 43.7**	**0.0**
BOK	**Bokaro**	**3.33**	**243**	*e*P	**Pn**	**21 06 03.4**	**-0.5**
JIRN	**Jiri**	**3.48**	**312**	*e*Pg	**Pn**	**21 06 07.8**	**+1.5**
BRDH	**Bariadhala**	**3.53**	**139**	Pn	**Pn**	**21 06 09.7**	**+3.1**
	comp=E,30nm,0.3s,baz=246,slow=18,SNR=5.7						
BRDH				Sn	**Sn**	**21 06 48.5**	**-0.1**
	comp=E,80nm,0.3s,baz=30,slow=15,SNR=7.5						
BRDH				Lg	Lg	21 07 05.3	
	comp=E,97nm,0.3s,baz=70,slow=23,SNR=4.1						
TEZP	**TEZPUR**	**3.54**	**69**	*e*P	**Pn**	**21 06 06.6**	**-0.1**
GUN	**Gumba**	**3.85**	**312**	*e*Pn	**Pn**	**21 06 12.8**	**+1.4**
PKI	**Pulchoki**	**3.98**	**304**	*e*Pn	**Pn**	**21 06 14.4**	**+1.2**
PKIN	**Phulchoki**	**4.00**	**304**	*e*Pn	**Pn**	**21 06 14.4**	**+1.1**
KKN	**Kakani**	**4.20**	**306**	*e*Pn	**Pn**	**21 06 17.0**	**+1.0**
KKN				*e*Sn	**Sb**	**21 07 19.2**	**+2.5**
	comp=E,1μm,0.6s						
DMN	**Daman**	**4.23**	**303**	*e*Pn	**Pn**	**21 06 17.5**	**+1.0**
DMN				*e*Sn	**Sb**	**21 07 19.9**	**+2.2**
	comp=E,2μm,0.9s						
KOHI	**KOHIMA**	**4.52**	**84**	*e*P	**Pn**	**21 06 21.0**	**+0.6**
KOHI				*e*S	**Sn**	**21 07 14.0**	**+0.9**
KOHI				IAML		21 07 35.1	
	comp=E,723nm,0.4s						
KOHI				IAML		21 07 35.5	
	comp=N,739nm,0.7s						
SAIH	**SAIHA**	**4.55**	**128**	*e*P	**Pn**	**21 06 23.1**	**+2.3**
LSA	**Lhasa**	**4.68**	**22**	Pg	Pn	21 06 27.8	+4.9
LSA				Sn	Sn	21 07 10.3	-7.2
LSA				smax	smax		
	comp=N,110nm,0.7s						
LSA				smax	smax		
	comp=N,240nm,0.7s						
LSA	**Lhasa**	**4.68**	**22**	*e*Pn	**Pn**	**21 06 24.8**	**+2.0**
LSA				*e*S	Sn	21 07 10.4	-7.1
ZIRO	**ZIRO**	**4.76**	**62**	*e*P	**Pn**	**21 06 24.3**	**+0.7**
ZIRO				*e*S	**Sn**	**21 07 17.0**	**-2.0**
GKN	**Gorkha**	**4.79**	**304**	*e*Pn	**Pn**	**21 06 24.7**	**+0.6**
JORH	**JORHAT**	**4.82**	**72**	*e*S	**Sn**	**21 07 16.6**	**-3.6**
MOKO	**MOKOCHONG**	**4.96**	**78**	*e*P	**Pn**	**21 06 26.3**	**-0.1**
MOKO				*e*S	**Sn**	**21 07 20.9**	**-2.9**
MOKO				IAML		21 07 25.9	
	comp=E,435nm,0.4s						
MOKO				IAML		21 07 26.3	
	comp=N,363nm,0.3s						
KOLN	**Koldanda**	**5.49**	**297**	*e*Pn	**Pn**	**21 06 33.7**	**-0.1**
KOLN				*e*Sn	**Sb**	**21 07 49.0**	**-4.9**
	comp=N,527nm,0.5s						
DANN	**Dangsing**	**5.63**	**303**	*e*Pn	**Pn**	**21 06 35.9**	**+0.1**
DANN				*e*Sn	**Sb**	**21 07 52.4**	**-5.7**
	comp=N,747nm,0.6s						
SIMRM	**Sittwe**	**6.26**	**146**	Pn	**Pn**	**21 06 44.6**	**+0.4**
SIMRM				Sn	**Sn**	**21 07 56.0**	**+0.2**
LKP	**Lekhapani**	**6.35**	**71**	*e*P	**Pn**	**21 06 45.4**	**+0.1**
LKP				*e*S	**Sn**	**21 07 55.0**	**-2.9**
LKP				IAML		21 07 58.6	
	comp=E,182nm,0.2s						
LKP				IAML		21 07 58.6	
	comp=N,326nm,0.5s						
NGP	**Nagpur**	**10.16**	**248**	⇓*i*P	**Pn**	**21 07 36.2**	**-1.5**
NGP				*e*S	Sn	21 09 21.6	-10
BHPL	**Bhopal**	**10.87**	**261**	*e*P	**Pn**	**21 07 45.2**	**-2.3**
DDI	**Dehra Dun**	**10.96**	**299**	*e*P	**Pn**	**21 07 47.6**	**-1.1**
DDI				*e*S	Sn	21 09 39.8	-12
CHTO	**Chiang Mai**	**11.20**	**124**	*e*Pn	**Pn**	**21 07 53.5**	**+1.6**
CHTO				*e*S	Sn	21 09 51.3	-6.0
CHTO	**Chiang Mai**	**11.20**	**124**	P	Pn	21 08 03.7	+12
CMMT	**Chiang Mai**	**11.20**	**124**	P	Pn	21 08 03.6	+12
	comp=N,5.5nm,0.9s						
CM31	**Chiang Mai Arr**	**11.42**	**125**	*e*Pn	**Pn**	**21 07 57.2**	**+2.3**
CMAR	**Chiang Mai Arr**	**11.42**	**125**	Pn	**Pn**	**21 07 54.8**	**-0.1**
	comp=N,0.2nm,0.3s,baz=303,slow=13,SNR=11						
CMAR				LR	LR	21 12 58.8	
	comp=N,58nm,18.8s,baz=30,slow=40						
CM01	**Chiang Mai Arr**	**11.45**	**125**	*e*Pn	**Pn**	**21 07 54.2**	**-1.2**
SMLA	**Simla**	**11.99**	**301**	*e*P	**Pn**	**21 08 00.0**	**-2.7**
SMLA				*e*S	Sn	21 10 03.9	-13
SUKH	**Sukhothai**	**12.54**	**127**	P	Pn	21 08 22.7	+12
HYB	**Hyderabad**	**12.62**	**233**	*i* P	**Pn**	**21 08 10.0**	**-1.4**
HYB				*e*S	**Sn**	**21 10 32.0**	**-0.1**
DHRM	**DHARAMSHALA**	**13.16**	**304**	*e*P	Pn	21 08 15.5	-3.4
DHRM				*e*S	Sn	21 10 33.2	-12
PBA	**Port Blair**	**14.06**	**165**	*e*Pn	Pn	21 08 31.0	-0.1
CHCP	**Chirah Chowk**	**16.07**	**305**	P	**Pn**	**21 08 53.4**	**-4.5**
NIL	**Nilore**	**16.08**	**305**	*e*Pn	**Pn**	**21 08 53.5**	**-4.4**
	comp=N,32nm,1.1s						
NIL				*e*S	Sn	21 11 46.9	-9.4
GTA	**Gaotai**	**16.65**	**30**	*e*P	**Pn**	**21 09 06.9**	**+1.6**
GTA				pP	P	21 09 11.1	+3.4
GTA				sP	sP	21 09 14.3	+2.5
GTA				pmax	pmax		
	comp=N,2.0nm,1.5s						
THW	**Thamme Wali**	**16.88**	**300**	P	Pn	21 09 01.9	-6.3
CEP	**Cherat**	**17.16**	**303**	P	Pn	21 09 04.7	-7.1
WMQ	**Urumqi**	**18.45**	**357**	*e*P	**P**	**21 09 28.9**	**+1.4**
WMQ				LR	LR		
	comp=N,120nm,19.9s						
WMQ				LR	LR		
	comp=N,150nm,18.3s						
WMQ				LR	LR		
	comp=N,210nm,18.3s						
ENH	**Enshi**	**18.66**	**70**	*e*P	**P**	**21 09 29.8**	**-0.1**
	comp=N,6.6nm,0.8s						
PRZ	**Przheval'sk**	**19.22**	**335**	*e*P	**P**	**21 09 34.3**	**-1.8**
	comp=N,8.2nm,0.8s						
XAN	**Xi'an**	**19.23**	**59**	*e*P	**P**	**21 09 37.8**	**+1.7**
	comp=N,5.6nm,0.5s						
NRN	**Naryn**	**19.37**	**329**	*e*P	**Pn**	**21 09 41.7**	**+2.6**
	comp=N,2.3nm,0.6s						
KBL	**Kabul**	**19.62**	**302**	*e*P	**P**	**21 09 39.8**	**-0.8**
	comp=N,10nm,0.9s						
ARSB	**Arslanbob**	**20.80**	**324**	*e*P	**P**	**21 09 55.2**	**+1.9**
	comp=N,8.3nm,1.1s						
GAR	**Garm**	**20.88**	**315**	*e*P	**P**	**21 09 54.7**	**+0.6**
	comp=N,7.7nm,0.8s						
AAK	**Ala-Archa**	**21.01**	**329**	*e*P	**P**	**21 09 56.5**	**+0.9**
	comp=N,5.7nm,0.9s						
AAK	**Ala-Archa**	**21.01**	**329**	P	**P**	**21 09 57.4**	**+1.8**
	comp=N,4.4nm,0.8s,baz=178,slow=6.3,SNR=10						
BTK	**Batken**	**21.19**	**318**	*e*P	**P**	**21 10 01.1**	**+3.6**
	comp=N,17nm,0.6s						
CHGR	**Chuyangaron**	**21.44**	**313**	*e*P	**P**	**21 10 00.9**	**+0.8**
	comp=N,20nm,0.7s						
MK01	**Makanchi Array**	**22.04**	**347**	*e*P	**P**	**21 10 06.0**	**-0.5**
MK31	**Makanchi Array**	**22.07**	**347**	*e*P	**P**	**21 10 06.6**	**-0.1**

MKAR	Makanchi Array	22.07	347	P	P	21 10 06.4	-0.3
	comp=N,3.3nm,0.6s,baz=171,slow=11,SNR=40						
MAKZ	Makanchi	22.14	347	eP	P	21 10 07.6	+0.1
	comp=N,5.3nm,0.9s						
KK31	Karatay Array	23.36	324	eP	P	21 10 18.9	-1.4
KKAR	Karatay Array	23.36	324	eP	P	21 10 18.7	-1.6
HHC	Hu-ho-hao-te	24.23	45	eP	P	21 10 27.8	-1.1
HHC				S	S	21 14 42.6	-4.8
HHC				pmax	pmax		
	comp=N,12nm,0.8s						
HHC				pmax	pmax		
	comp=N,83nm,4.1s						
HHC				LR	LR		
	comp=N,290nm,7.8s						
HHC				LR	LR		
	comp=N,240nm,10.8s						
HHC				LR	LR		
	comp=N,320nm,7.1s						
SONM	Songino Array	26.25	27	P	P	21 10 49.8	+2.7
	comp=N,3.2nm,0.8s,baz=210,slow=10,SNR=16						
KURBB	Kurchatov Arra	26.51	345	P	P	21 10 49.6	+0.5
	comp=N,2.0nm,0.7s,baz=163,slow=8.9,SNR=8.4						
KURK	Kurchatov	26.57	345	eP	P	21 10 49.9	+0.1
	comp=N,20nm,0.8s						
ZAA0	Zalesovo Array	28.73	355	eP	P	21 11 12.5	+3.4
	comp=N,2.7nm,0.8s						
ZALV	Zalesovo Beam	28.73	355	eP	P	21 11 09.6	+0.6
ZALV	Zalesovo Beam	28.73	355	P	P	21 11 09.2	+0.2
	comp=N,1.6nm,0.4s,baz=182,slow=9.3,SNR=14						
ZALV				pP	pP	21 11 13.1	+1.0
	comp=N,1.6nm,0.4s,baz=177,slow=9.7,SNR=14						
ABKAR	Akbulak array	32.92	324	eP	P	21 11 46.8	+0.7
ARU	Arti	38.09	333	eP	P	21 12 30.5	+0.1
	comp=N,4.0nm,0.5s						
BRTR	Keskin Array B	48.19	302	P	P	21 13 51.7	-0.9
	comp=N,0.4nm,0.6s,baz=124,slow=9.2,SNR=2.5						
AKASG	Malin Array Be	51.88	316	P	P	21 14 19.3	-0.9
	comp=N,0.8nm,0.4s,baz=81,slow=7.0,SNR=9.1						
AKASG				pP	pP	21 14 23.8	+0.4
	comp=N,0.7nm,0.4s,baz=86,slow=6.3,SNR=4.1						
FINES	FINESS Array B	55.20	329	P	P	21 14 44.0	-0.4
	comp=N,1.0nm,0.6s,baz=132,slow=3.9,SNR=3.6						
FINES				pP	pP	21 14 48.3	+0.7
	comp=N,1.4nm,0.6s,baz=104,slow=8.0,SNR=2.5						
ARCES	ARCESS Array B	57.30	338	P	P	21 14 59.5	+0.2
	comp=N,6.1nm,0.9s,baz=96,slow=7.3,SNR=3.8						
ARCES				pP	pP	21 15 04.3	+1.8
	comp=N,6.4nm,1.0s,baz=105,slow=10,SNR=3.1						
GERES	GERESS Array B	61.95	314	P	P	21 15 31.3	-0.5
	comp=N,0.6nm,0.7s,baz=72,slow=6.3,SNR=5.7						
GERES				LR	LR	21 46 55.8	
	comp=N,40nm,18.9s,baz=314,slow=40						
NOA	NORSAR Array B	62.33	327	P	P	21 15 33.5	-0.6
	comp=N,0.4nm,0.6s,baz=86,slow=6.6,SNR=2.6						
WRA	Warramunga Arr	62.93	131	P	P	21 15 39.6	+1.0
	comp=N,0.8nm,0.6s,baz=324,slow=6.8,SNR=9.1						
WRA				pP	pP	21 15 43.6	+1.8
	comp=N,0.9nm,0.6s,baz=323,slow=6.9,SNR=7.2						
ASAR	Alice Springs	65.25	135	P	P	21 15 55.0	+1.2
	comp=N,0.5nm,0.6s,baz=311,slow=6.5,SNR=7.6						
ASAR				pP	pP	21 15 58.6	+1.6
	comp=N,0.5nm,0.6s,baz=320,slow=7.2,SNR=4.2						
ILAR	Eielson Array	80.32	21	P	P	21 17 23.3	+0.5
	comp=N,0.5nm,0.8s,baz=286,slow=4.5,SNR=4.9						
TORD	Torodi Ar. Bea	82.19	281	P	P	21 17 32.5	-1.1
	comp=N,0.3nm,0.6s,baz=67,slow=4.0,SNR=4.8						
YKA	Yellowknife Ar	90.41	11	P	P	21 18 12.2	-0.9
	comp=N,0.4nm,0.7s,baz=331,slow=4.7,SNR=7.0						
TXAR	Lajitas Array	124.25	14	PKP	PKPdf	21 24 12.1	+0.7
	comp=N,0.1nm,0.4s,baz=280,slow=13,SNR=2.9						
TXAR				pPKP	pPKPdf	21 24 16.1	+1.2
	comp=N,0.2nm,0.5s,baz=36,slow=1.7,SNR=2.7						

*KRNET **19** 21:13:58.9±0.1, 42°.58N×79°.67E, h17^{km}, mb2.4*
*SOME **19** 21:13:59.1, 42°.58N×79°.68E, h20^{km}*
NNC 19 21:13:58.3±1.4**, 42°.57N×79°.69E, h0^{km}, mb2.8, mpv2.6, 16C-8D, Error ellipse: s-maj=8.8km s-min=5.3km az=137.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.76	320	P	Pg	21 14 13.1	+0.3
	9.9nm,0.1s						
UZB				S	Sg	21 14 23.5	+0.9
	2.7nm,0.3s						
UZB	Uzynbulak	0.76	320	eP	Pg	21 14 13.1	+0.3
	baz=20						
UZB				eS	Sg	21 14 23.5	+0.9
	baz=20						
UZB	Uzynbulak	0.76	320	eP	Pg	21 14 13.1	+0.3
	9.9nm,0.1s						
UZB				eS	Sg	21 14 23.5	+0.9
	2.7nm,0.3s						
PDGK	Podgornoye	0.77	349	P	Pg	21 14 13.6	+0.5
	1.9nm,0.1s						
PDGK				S	Sg	21 14 24.0	+0.9
	6.1nm,0.2s						
PDGK	Podgornoye	0.77	349	⇓P	Pg	21 14 13.3	+0.2
	1.0nm,0.3s						
PDGK				⇑S	Sg	21 14 24.0	+0.9
	7.1nm,0.6s						
PDGK	Podgornoye	0.77	349	⇑iP	Pg	21 14 13.6	+0.5
	baz=50						
PDGK				⇑iS	Sg	21 14 24.2	+1.1
	baz=50						
PRZ	Przheval'sk	0.96	265	⇑eP	Pg	21 14 16.6	0.0
	baz=64						
PRZ				⇑iS	Sg	21 14 29.5	+0.5
	baz=64						
KTMS	Ketmen	1.00	29	P	Pb	21 14 18.1	-0.5
	4.6nm,0.1s						
KTMS				S	Sg	21 14 31.2	+0.7
	6.2nm,0.2s						
KTMS	Ketmen	1.00	29	eP	Pb	21 14 18.1	-0.5
	baz=29						
KTMS				eS	Sb	21 14 31.6	-0.8
	baz=29						
KTMS	Ketmen	1.00	29	eP	Pb	21 14 18.1	-0.5
	4.6nm,0.1s						
KTMS				eS	Sb	21 14 31.7	-0.8
	3.1nm,0.1s						
SATY	Saty	1.06	298	P	Pg	21 14 18.7	0.0
	4.3nm,0.5s						
SATY				S	Sg	21 14 32.2	-0.3
	8.8nm,0.2s						
SATY	Saty	1.06	298	eP	Pg	21 14 18.5	-0.1
	0.6nm,0.1s						
SATY				eS	Sg	21 14 32.6	+0.2
	14nm,0.1s						
KURS	Kuram	1.44	310	P	Pn	21 14 25.6	-0.2
	0.8nm,0.2s						
KURS				S	Sg	21 14 44.6	-0.1
	1.1nm,0.2s						
KURS	Kuram	1.44	310	eP	Pn	21 14 25.6	-0.1
	baz=10.0						
KURS				eS	Sg	21 14 44.6	0.0
	baz=10.0						
KURS	Kuram	1.44	310	eP	Pn	21 14 25.6	-0.1
	0.8nm,0.2s						
KURS				eS	Sg	21 14 44.6	-0.1
	1.1nm,0.2s						
DJR	Jarkent	1.76	2	P	Pb	21 14 31.2	-0.3
	0.4nm,0.3s						
DJR				S	Sb	21 14 54.1	-0.1
	5.6nm,0.3s						
DJR	Jarkent	1.76	2	eP	Pb	21 14 31.1	-0.5
	0.2nm,0.3s						
DJR				eS	Sb	21 14 54.2	-0.1
	5.6nm,0.3s						
MNBS	Baschi	1.78	329	P	Pb	21 14 31.3	-0.5
MNBS				S	Sb	21 14 55.0	+0.3
KDJ	Kajisay	1.91	258	⇓iP	Pb	21 14 33.8	-0.3
	baz=57						
KDJ				⇓iS	Sb	21 14 59.1	+0.5
	baz=57						
KOTS	Kotyrbulak	2.01	290	Pg	Pb	21 14 36.1	+0.4
	3.1nm,0.2s						
KOTS				Lg	Lg	21 15 04.1	
	9.8nm,0.5s						
KOTS	Kotyrbulak	2.01	290	eP	Pb	21 14 36.0	+0.3
	baz=90						
KOTS				eS	Sg	21 15 02.4	-0.3
	baz=90						
KOTS	Kotyrbulak	2.01	290	eP	Pb	21 14 36.0	+0.3
	2.2nm,0.2s						
KOTS				eS	Sg	21 15 02.4	-0.3
	22nm,0.5s						
MDOK	Medeo	2.03	288	Pn	Pb	21 14 35.1	-1.0
	1.8nm,0.5s						
MDOK				Sn	Sn	21 15 00.9	+0.8
	2.4nm,0.6s						
MDOK	Medeo	2.03	288	Pg	Pb	21 14 35.6	-0.5
	1.9nm,0.2s						
MDOK				Lg	Lg	21 15 01.4	
	3.8nm,0.4s						
MDOK	Medeo	2.03	288	eP	Pb	21 14 35.3	-0.8
	baz=88						
MDOK				eS	Sb	21 15 01.4	-0.6
	baz=88						
MDOK	Medeo	2.03	288	eP	Pb	21 14 35.3	-0.8
	1.4nm,0.4s						
MDOK				eS	Sb	21 15 01.4	-0.6
	3.8nm,0.4s						
TNSS	Tian-Shan	2.07	284	Pg	Pb	21 14 36.0	-1.0
	2.0nm,0.2s						
TNSS				Lg	Lg	21 15 03.2	
	3.4nm,0.3s						
TNSS	Tian-Shan	2.07	284	eP	Pn	21 14 35.8	+1.1
	baz=84						
TNSS				eS	Sn	21 15 02.4	+1.0
	baz=84						
TNSS	Tian-Shan	2.07	284	eP	Pb	21 14 35.8	-1.1
	1.6nm,0.4s						
TNSS				eS	Sb	21 15 02.4	-1.0
	3.4nm,0.3s						
IZV	Izvestkoviy	2.31	283	Pg	Pb	21 14 40.4	-0.6
IZV				Lg	Lg	21 15 10.2	
IZV	Izvestkoviy	2.31	283	eP	Pb	21 14 40.4	-0.5
	baz=82						
IZV				eS	Sb	21 15 10.3	+0.2
	baz=82						
IZV	Izvestkoviy	2.31	283	eP	Pb	21 14 40.4	-0.6
	1.0nm,0.2s						
IZV				eS	Sb	21 15 10.2	+0.2
	3.6nm,0.3s						
ULHL	Ulahol	2.57	264	⇑iP	Pn	21 14 42.7	+1.3
	baz=64						
ULHL				⇑eS	Sn	21 15 15.5	+2.0
	baz=64						
KAPS	Kapalarasan	2.73	355	Pg	Pb	21 14 48.0	+0.1
	0.3nm,0.2s						
KAPS				Lg	Lg	21 15 23.6	
	4.4nm,0.6s						
KAPS	Kapalarasan	2.73	355	eP	Pb	21 14 47.9	0.0
	0.2nm,0.3s						
KAPS				eS	Sb	21 15 23.1	+1.2
	4.5nm,0.5s						
BOOM	Boomskoye usch	2.77	270	⇑iP	Pn	21 14 45.7	+1.6
	baz=69						
BOOM				⇑iS	Sn	21 15 20.2	+1.8
	baz=69						
DGS	Degeres	2.95	284	Pg	Pb	21 14 50.3	-1.6
	1.2nm,0.6s						
DGS				Lg	Lg	21 15 28.1	
	3.3nm,0.5s						
NRN	Naryn	2.97	249	⇑iP	Pn	21 14 49.0	+2.0
	baz=48						
NRN				⇑eS	Sn	21 15 25.7	+2.1
	baz=48						
TKM2	Tokmak 2	3.03	278	⇑Pg	Pb	21 14 50.9	-2.4
	0.8nm,0.8s						
TKM2				⇓Lg	Lg	21 15 31.2	
	0.7nm,0.4s						
TKM2	Tokmak 2	3.03	278	⇓eP	Pn	21 14 49.6	+1.9
	baz=78						
TKM2				⇓iS	Sn	21 15 26.4	+1.5
	baz=78						
KZA	Kyzart	3.33	263	⇑iP	Pn	21 14 53.9	+1.9
	baz=63						
KZA				⇑iS	Sn	21 15 34.0	+1.6
	baz=63						
MAKZ	Makanchi	4.54	20	⇓Pn	Pn	21 15 05.8	-2.5
	0.7nm,1.1s						
MAKZ				⇑Lg	Lg	21 16 20.6	
	0.2nm,0.6s						
MK31	Makanchi Array	4.61	23	⇓Pn	Pn	21 15 10.0	+0.8
	0.5nm,0.8s,baz=191,slow=12,SNR=4.0						
MK31				⇑Lg	Lg	21 16 24.5	
	0.4nm,0.6s,baz=195,slow=29						

IDC 19 21:17:02.7±2.3**, 13°.94N×92°.27W, h0^{km}, mb3.4**/1**, mb1 3.6**/4**, mb1mx3.4**/45**, mbtmp3.3**/4**, ML3.5**/3**, Error ellipse: s-maj=33.3km s-min=16.8km az=0.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	El Apazote	2.04	59	Pn	Pn	21 17 39.0	+0.5
	15nm,0.3s,baz=233,slow=11,SNR=64						
APG				Lg	Lg	21 18 07.7	
	9.5nm,0.3s,baz=300,slow=14,SNR=4.1						
CMIG	Matias Romero	4.02	321	Pn	Pn	21 18 05.7	+0.2
	2.6nm,0.3s,baz=142,slow=11,SNR=17						
CMIG				Sn	Sn	21 18 55.8	+2.5
	4.3nm,0.3s,baz=113,slow=13,SNR=3.2						
CMIG				Lg	Lg	21 19 10.3	
	9.3nm,0.3s,baz=229,slow=20,SNR=7.1						
TXAR	Lajitas Array	18.60	327	P	P	21 21 21.0	-0.7
	0.0nm,0.3s,baz=134,slow=12,SNR=3.7						
YKA	Yellowknife Ar	51.02	347	P	P	21 26 05.6	-0.6
	0.4nm,0.7s,baz=148,slow=7.5,SNR=7.1						
CMAR	Chiang Mai Arr	145.96	341	PKPbc	PKPdf	21 36 44.7	+0.1
	0.8nm,0.6s,baz=341,slow=2.6,SNR=7.5						

*ISCJB **19** 21:18:01.2±1.0, 8°.22S±0°.09×121°.7E±0°.1, h10^{km}, mb3.4/2, Error ellipse: s-maj=17.1km s-min=12.1km az=151.7*
*IDC **19** 21:18:01.7±2.1, 8°.28S×121°.57E, h0^{km}, mb3.4/2, mb1 3.4/5, mb1mx3.3/42, mbtmp3.3/5, ML2.7/3, Error ellipse: s-maj=152.4km s-min=21.5km az=55.0*
*DJA **19** 21:18:03.7±0.6, 8°S±7°×12°2E±°, h10^{km}, M3.0/5, MLv3.0/5*
ISC 19 21:18:02.8±1.1**, 8°.3S**±0°.1×**121°.75E**±0°.08**, h10^{km}, n9,** σ**1^{s}38**/9**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.41	189	P	Pb	21 18 11.7	-0.4
MMRI	Maumere	0.56	121	P	Pg	21 18 13.5	-0.2
BASI	Baing, Sumba	2.19	212	P	Pn	21 18 39.5	+0.2
BATI	Baumata	2.64	135	Pn	Pb	21 18 48.1	-2.1
	0.9nm,0.3s,baz=326,slow=11,SNR=2.5						
SOEI	Soe	2.85	120	P	Pb	21 18 54.3	+0.4
WRA	Warramunga Arr	16.77	135	Pn	Pn	21 21 58.7	+0.7
	0.0nm,0.3s,baz=309,slow=14,SNR=3.3						
ASAR	Alice Springs	19.17	144	P	Pn	21 22 29.9	+2.3
	0.1nm,0.3s,baz=328,slow=12,SNR=7.1						
SONM	Songino Array	57.56	348	P	P	21 27 52.9	+0.1
	0.4nm,0.7s,baz=145,slow=5.3,SNR=4.2						
MKAR	Makanchi Array	65.16	331	P	P	21 28 43.3	-0.7
	0.2nm,0.6s,baz=140,slow=6.0,SNR=3.3						

*ISCJB **19** 21:20:14.3±0.7, 10°.77S±0°.06×166°.17E±0°.08, h10^{km}, mb4.1/14, MS3.3/3, Error ellipse: s-maj=12.1km s-min=6.6km az=147.0*
*NEIC **19** 21:20:15.6±0.7, 10°.61S×166°.19E, h10^{km}, mb4.4/7, Error ellipse: s-maj=15.3km s-min=8.6km az=65.0*
*IDC **19** 21:20:21.8±3.9, 10°.81S×166°.11E, h54^{km}±32^{km}, mb3.6/9, mb1 3.8/9, mb1mx3.6/46, mbtmp3.9/9, ML5.1/2, MS3.4/4, Ms1 3.4/4, ms1mx3.1/26, Error ellipse: s-maj=29.0km s-min=18.0km az=56.0*
ISC 19 21:20:15.4±0.9**, 10°.64S**±0°.08×**166°.3E**±0°.1**, h10^{km}, n32,** σ**1^{s}32**/27**, mb4.0**/14**, MS3.3**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.33	280	P	Pn	21 21 51.2	+2.3
	74nm,0.3s,baz=140,slow=2.6,SNR=21						
HNR				S	Sn	21 23 02.2	+0.9
	8.4nm,0.3s,baz=66,slow=20,SNR=1.7						
HNR				LR	LR	21 24 32.6	
	comp=Z,467nm,18.3s,baz=148,slow=40						
MARNC	Mare, Loyalty	10.92	171	ePn	Pn	21 22 53.0	+1.2
DZM	Mont Dzumac	11.37	179	P	Pn	21 22 58.6	+0.4
	7.5nm,0.3s,baz=311,slow=22,SNR=13						
DZM				S	Sn	21 25 03.9	-1.4
	1.0nm,0.3s,baz=262,slow=8.3,SNR=1.7						
OUENC	Ouen Island, N	11.73	177	ePn	Pn	21 23 04.1	+1.2
PINNC	Pines Island,	11.96	175	ePn	Pn	21 23 07.5	+1.4
EIDS	Eidsvold	20.54	222	eP	P	21 24 54.8	+0.6
	14nm,0.9s						
MANU	Manus Island	20.61	293	eP	P	21 24 52.8	-2.3
	30nm,1.0s						
CTA	Charters Tower	21.43	242	P	P	21 25 03.4	-0.5
	2.8nm,0.6s,baz=69,slow=15,SNR=4.0						
CTAO	Charters Tower	21.43	242	eP	P	21 25 05.0	+1.1
	6.0nm,0.9s						
H11S2	WAKE ISLAND Hy	28.95	1	T	T	21 56 45.9	
	baz=181,slow=76,SNR=94						
H11S3	WAKE ISLAND Hy	28.95	1	T	T	21 56 46.1	
	baz=181,slow=76,SNR=56						
H11S1	WAKE ISLAND Hy	28.96	1	T	T	21 56 42.4	
	baz=181,slow=76,SNR=50						
URZ	Urewera	29.18	162	LR	LR	21 37 03.0	
	comp=Z,48nm,18.5s,baz=354,slow=34						
BKZ	Black Stump Fm	29.84	164	eP	P	21 26 22.3	-0.6
	7.1nm,0.5s						
H11N1	WAKE ISLAND Hy	30.16	1	T	T	21 58 17.4	
	baz=182,slow=76,SNR=47						
H11N3	WAKE ISLAND Hy	30.17	1	T	T	21 58 15.6	
	baz=182,slow=76,SNR=60						
H11N2	WAKE ISLAND Hy	30.18	1	T	T	21 58 16.5	
	baz=182,slow=76,SNR=44						
STKA	Stephens Creek	31.08	223	P	P	21 26 34.1	+0.1
	2.4nm,0.7s,baz=4.4,slow=16,SNR=2.6						
STKA				LR	LR	21 38 54.4	
	comp=Z,99nm,18.4s,baz=32,slow=36						
THZ	Tophouse	31.55	170	eP	P	21 26 37.8	-0.2
	12nm,0.7s						
WR1	Warramunga Arr	32.10	249	eP	P	21 26 41.8	-1.2
	2.4nm,0.6s						
WRA	Warramunga Arr	32.10	249	P	P	21 26 41.8	-1.2
	1.3nm,0.8s,baz=82,slow=8.8,SNR=8.6						
RPZ	Rata Peaks	33.22	174	P	P	21 26 52.5	0.0
	19nm,0.8s,baz=315,slow=4.3,SNR=6.1						
AS31	Alice Springs	33.42	243	eP	P	21 26 52.4	-2.3
	0.7nm,0.5s						
ASAR	Alice Springs	33.42	243	P	P	21 26 53.1	-1.5
	1.3nm,0.8s,baz=72,slow=9.7,SNR=12						
ASAR				LR	LR	21 39 58.1	
	comp=Z,55nm,19.5s,baz=74,slow=35						
ANA2	Anatahan	33.64	323	eP	P	21 26 54.0	-2.6
FITZ	Fitzroy Crossi	39.97	255	P	P	21 27 49.9	-0.7
	3.7nm,0.6s,baz=75,slow=7.2,SNR=6.4						
CMAR	Chiang Mai Arr	72.41	293	P	P	21 31 42.4	-0.1
	0.3nm,0.6s,baz=109,slow=4.8,SNR=2.0						
SONA0	Songino Array	78.64	324	eP	P	21 32 18.5	+0.7
SONM	Songino Array	78.64	324	P	P	21 32 18.5	+0.7
	0.2nm,0.4s,baz=151,slow=3.3,SNR=2.1						
ILAR	Eielson Array	82.97	18	P	P	21 32 41.8	+1.4
	0.3nm,0.8s,baz=215,slow=7.7,SNR=2.0						
MK32	Makanchi Array	93.57	317	eP	P	21 33 32.2	+0.3
MKAR	Makanchi Array	93.57	317	P	P	21 33 32.2	+0.3
	0.5nm,0.7s,baz=88,slow=5.7,SNR=4.9						

*STR **19** 21:27:07.0±0.7, 49°N±2°×°±°, h3^{km}±9^{km}, M1.9/7, MLv1.9/7, MLv1.9/6*
LDG 19 21:27:06.7±0.1**, 48°.55N×6°.18E, h4^{km}, Md2.1**/3**, Ml2.1**/9**, Error ellipse: s-maj=1.0km s-min=0.9km az=42.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGF	Fort de Pagny	0.30	272	ePg	Pg	21 27 13.1	+0.5
	baz=89						
PAGF				eSg	Sg	21 27 16.8	+0.3
	24nm,0.2s,baz=89						
THEF	They Montfort	0.34	202	Pg	Pg	21 27 13.4	0.0
THEF				Sg	Sg	21 27 17.3	-0.5
HAU	Haudompre	0.55	168	ePg	Pg	21 27 17.1	-0.2
HAU				eSg	Sg	21 27 24.5	0.0
	10nm,0.2s						
ECH	Echery	0.73	117	Pg	Pg	21 27 20.5	-0.2
ECH				Sg	Sg	21 27 29.8	-0.4
CDF	Champ du Feu	0.74	100	ePg	Pg	21 27 20.5	-0.4
CDF				eSg	Sg	21 27 29.9	-0.6
CDF				eSn	Sb	21 27 32.9	+0.2
	12nm,0.2s						
MEZF	Maizieres J'vi	0.75	267	ePg	Pg	21 27 20.7	-0.4
	baz=87						
MEZF				eSg	Sg	21 27 30.7	-0.1
	3.8nm,0.2s,baz=86						
WLS	Welschbruch	0.79	99	Pg	Pg	21 27 21.4	-0.5
WLS				Sg	Sg	21 27 31.6	-0.5
SFTF	Sexfontaines	0.83	246	ePg	Pg	21 27 22.1	-0.6
	baz=66						
SFTF				eSg	Sg	21 27 33.5	0.0
	5.0nm,0.2s,baz=62						
SFTF				eSn	Sb	21 27 36.3	+1.0
HINF	Hinteralfeld	0.86	148	ePg	Pg	21 27 22.8	-0.3
HINF	Hinteralfeld	0.86	148	ePn	Pg	21 27 23.4	+0.3
HINF	Hinteralfeld	0.86	148	eP	Pb	21 27 23.8	-0.4
HINF				eSg	Sg	21 27 33.9	-0.3
	14nm,0.3s						
MOF	Molkenrain	0.94	137	Pg	Pg	21 27 24.9	+0.1
MOF				Sg	Sg	21 27 37.6	+0.6
LANF	Langenberg	1.16	67	Pg	Pg	21 27 28.9	0.0
LANF				Sg	Sg	21 27 44.0	+0.1
LOMF	Lomont	1.27	160	Pg	Pg	21 27 30.6	-0.5
LOMF				Sg	Sg	21 27 47.6	+0.1
ABH	Alteburg	1.61	33	Pn	Pn	21 27 36.0	+0.1
GIVF	Givet	1.79	331	ePn	Pn	21 27 36.7	-1.7
GIVF	Givet	1.79	331	ePg	Pb	21 27 39.9	-0.2
GIVF				eSn	Sn	21 27 58.6	-3.0
GIVF				eSg	Sb	21 28 02.9	0.0
	1.8nm,0.2s						
CABF	La Chapelle	1.94	182	ePn	Pn	21 27 39.4	-1.1
CABF	La Chapelle	1.94	182	ePg	Pb	21 27 42.8	+0.2
CABF				eSn	Sn	21 28 02.2	-3.1
CABF				eSg	Sb	21 28 07.9	+0.8
	0.7nm,0.2s						
BAIF	Baives	1.99	320	ePn	Pn	21 27 39.7	-1.4
BAIF	Baives	1.99	320	ePg	Pb	21 27 43.4	0.0
BAIF				eSn	Sn	21 28 03.5	-3.0
BAIF				eSg	Sb	21 28 09.2	+0.6
	1.5nm,0.2s						
LOR	Lormes	2.02	232	ePn	Pn	21 27 39.8	-1.7
	baz=52						
LOR	Lormes	2.02	232	ePg	Pb	21 27 44.2	+0.2
	baz=52						
LOR				eSn	Sn	21 28 03.9	-3.3
	baz=52						
LOR				eSg	Sb	21 28 09.7	+0.3
	1.8nm,0.2s,baz=53						
LOR	Lormes	2.02	232	Pn	Pn	21 27 39.8	-1.7
SSF	Saint Saulge	2.34	232	ePn	Pn	21 27 44.1	-1.8
SSF	Saint Saulge	2.34	232	ePg	Pb	21 27 50.0	+0.7
SSF				eSn	Sn	21 28 11.8	-3.2
SSF				eSg	Sb	21 28 19.9	+1.4
	1.0nm,0.2s						
SMF	Signal de Mont	2.48	221	ePn	Pn	21 27 45.6	-2.2
SMF	Signal de Mont	2.48	221	ePg	Pb	21 27 52.8	+1.1
SMF				eSn	Sn	21 28 15.5	-3.0
SMF				eSg	Sg	21 28 24.4	-1.8
	3.4nm,0.2s						
AVF	Avril sur Loir	2.60	228	ePn	Pn	21 27 47.3	-2.1
AVF	Avril sur Loir	2.60	228	ePg	Pb	21 27 54.9	+1.1
AVF				eSn	Sn	21 28 18.1	-3.3
AVF				eSg	Sg	21 28 28.3	-1.7
	0.6nm,0.2s						

*SOME **19** 21:52:32.4, 39°.70N×74°.00E, h15^{km}*
*KRNET **19** 21:52:33.4±0.1, 39°.77N×74°.06E, h10^{km}, mb2.9*
NNC 19 21:52:37.9±2.3**, 39°.85N×73°.96E, h0^{km}, mb3.5, mpv3.1, 19C-25D, Error ellipse: s-maj=19.6km s-min=7.3km az=171.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.38	295	Pg	Pg	21 52 42.7	-2.6
	56nm,0.1s						
SFK				Lg	Lg	21 52 50.4	
	500nm,0.1s						
SFK	Sufi-Kurgan	0.38	295	⇓iP	Pg	21 52 42.7	-2.6
	baz=0.0						
SFK				⇓iS	Sg	21 52 50.4	+0.2
	baz=0.0						
ARSB	Arslanbob	1.65	334	⇓iP	Pn	21 53 06.2	-2.1
	baz=32						
ARSB				⇓iS	Sn	21 53 30.0	-0.2
	baz=32						
DRK	Karamyk	1.71	258	⇑iP	Pn	21 53 06.7	-2.5
	baz=61						
DRK				⇑iS	Sn	21 53 30.5	-1.4

	baz=61						
ARLS	**Aral**	**2.02**	**8**	⇑*i*P	Pn	21 53 11.9	-1.6
	baz=6.0						
ARLS				⇑*i*S	Sn	21 53 39.7	+0.1
	baz=6.0						
NRN	**Naryn**	**2.21**	**44**	⇓*i*P	Pn	21 53 13.3	-2.9
	baz=41						
NRN				⇓*i*S	Sn	21 53 42.4	-2.1
	baz=41						
AML	**Almayashu**	**2.28**	**355**	P	Pn	21 53 18.5	+1.2
	SNR=10.0						
AML	**Almayashu**	**2.28**	**355**	⇑*i*P	Pn	21 53 15.8	-1.5
	baz=53						
AML				⇑*i*S	Sn	21 53 47.0	+0.7
	baz=53						
UCH	**Uchtor**	**2.41**	**10**	P	Pn	21 53 19.1	+0.1
	SNR=18						
UCH	**Uchtor**	**2.41**	**10**	⇑*e*P	Pn	21 53 17.0	-2.0
	baz=8.0						
UCH				⇑*i*S	Sn	21 53 49.5	0.0
	baz=8.0						
BTK	**Batken**	**2.42**	**276**	⇓*i*P	Pn	21 53 17.5	-1.3
	baz=78						
BTK				⇓*i*S	Sn	21 53 49.4	+0.2
	baz=78						
KZA	**Kyzart**	**2.43**	**23**	P	Pn	21 53 19.6	+0.4
	SNR=7.3						
KZA	**Kyzart**	**2.43**	**23**	⇓*e*P	Pn	21 53 17.0	-2.2
	baz=21						
KZA				⇓*i*S	Sn	21 53 49.1	-0.8
	baz=21						
ARK	**Arkit**	**2.46**	**323**	⇑*i*P	Pn	21 53 18.1	-1.3
	baz=22						
ARK				⇑*i*S	Sn	21 53 50.6	+0.3
	baz=22						
EKS2	**Erkin-Say**	**2.81**	**357**	P	Pb	21 53 27.4	-1.7
	SNR=8.5						
EKS2	**Erkin-Say**	**2.81**	**357**	⇓*i*P	Pn	21 53 23.0	-1.2
	baz=56						
EKS2				⇓*i*S	Sn	21 53 59.2	+0.3
	baz=56						
AAK	**Ala-Archa**	**2.81**	**8**	P	Pb	21 53 28.1	-1.0
	SNR=12						
AAK	**Ala-Archa**	**2.81**	**8**	⇑Pn	Pn	21 53 24.7	+0.4
	3.2nm,0.5s						
AAK				⇑Lg	Lg	21 54 09.8	
	16nm,0.8s						
AAK	**Ala-Archa**	**2.81**	**8**	⇓*e*P	Pn	21 53 22.6	-1.7
	baz=6.0						
AAK				⇓*i*S	Sn	21 53 58.2	-0.8
	baz=6.0						
MNAS	**Manas**	**2.85**	**338**	⇓Pn	Pn	21 53 25.0	+0.2
	2.0nm,0.5s						
MNAS				⇑Lg	Lg	21 54 05.6	
	11nm,0.7s						
MNAS	**Manas**	**2.85**	**338**	Pg	Pn	21 53 26.4	+1.6
	1.2nm,0.3s						
MNAS				Lg	Lg	21 54 04.7	
	5.7nm,0.4s						
MNAS	**Manas**	**2.85**	**338**	⇓*e*P	Pn	21 53 24.0	-0.8
	baz=37						
MNAS				⇓*i*S	Sn	21 54 00.9	+1.0
	baz=37						
KBK	**Karagaybulak**	**2.90**	**15**	P	Pn	21 53 26.7	+1.2
	SNR=9.7						
KBK	**Karagaybulak**	**2.90**	**15**	⇓*i*P	Pn	21 53 24.1	-1.4
	baz=13						
KBK				⇓*i*S	Sn	21 54 00.8	-0.3
	baz=13						
MRKS	**Merke**	**2.94**	**349**	Pg	Pb	21 53 29.8	-1.5
	9.9nm,0.4s						
MRKS				Lg	Lg	21 54 10.6	
	8.6nm,0.3s						
MRKS	**Merke**	**2.94**	**349**	*e*P	Pb	21 53 29.8	-1.5
	9.9nm,0.4s						
MRKS				⇓*i*S	Sg	21 54 10.6	-1.8
	8.6nm,0.3s						
BOOM	**Boomskoye usch**	**3.03**	**29**	⇓*i*P	Pn	21 53 25.3	-2.0
	baz=27						
BOOM				⇓*i*S	Sn	21 54 02.8	-1.6
	baz=27						
TKM2	**Tokmak 2**	**3.30**	**21**	⇑Pn	Pn	21 53 32.9	+1.8
	2.1nm,0.6s						
TKM2				⇑Lg	Lg	21 54 22.9	
	4.9nm,0.7s						
USP	**Ospenovka**	**3.43**	**7**	P	Pb	21 53 39.4	-0.3
	SNR=5.9						
KST	**Kastek**	**3.52**	**25**	Pg	Pn	21 53 37.5	+3.5
	3.6nm,0.8s						
KST				Lg	Lg	21 54 24.0	
	13nm,0.8s						
KST	**Kastek**	**3.52**	**25**	*e*P	Pn	21 53 37.5	+3.5
	3.6nm,0.8s						
KST				*e*S	Sb	21 54 24.0	-0.6
	13nm,0.8s						
IUG	**Iuzhnay**	**3.75**	**309**	Pg	Pn	21 53 38.2	+1.1
	3.5nm,0.3s						
IUG				Lg	Lg	21 54 26.1	
	17nm,0.5s						
IZV	**Izvestkoviy**	**3.75**	**31**	Pg	Pb	21 53 45.7	+0.5
	3.8nm,0.5s						
IZV				Lg	Lg	21 54 37.0	
	11nm,0.8s						
IZV	**Izvestkoviy**	**3.75**	**31**	*e*P	Pb	21 53 44.8	-0.4
	3.8nm,0.5s						
IZV				*e*S	Sg	21 54 37.0	-1.5
	11nm,0.8s						
TNSS	**Tian-Shan**	**3.89**	**34**	Pg	Pb	21 53 46.5	-1.2
	4.3nm,0.6s						
TNSS				Lg	Lg	21 54 40.8	
	7.6nm,0.6s						
TNSS	**Tian-Shan**	**3.89**	**34**	*e*P	Pb	21 53 47.2	-0.5
	4.3nm,0.6s						
TNSS				*e*S	Sg	21 54 40.8	-2.2
	7.6nm,0.6s						
MDOK	**Medeo**	**4.04**	**34**	Pn	Pn	21 53 45.4	+4.3
	2.8nm,0.5s						
MDOK				Lg	Lg	21 54 44.0	
	11nm,1.0s						
MDOK	**Medeo**	**4.04**	**34**	Pg	Pb	21 53 49.2	-0.9
	3.6nm,0.7s						
MDOK				Lg	Lg	21 54 44.9	
	5.1nm,0.8s						
MDOK	**Medeo**	**4.04**	**34**	*e*P	Pb	21 53 49.2	-0.9
	3.6nm,0.7s						
MDOK				*e*S	Sg	21 54 44.9	-2.8
	5.1nm,0.8s						
KOTS	**Kotyrbulak**	**4.12**	**34**	Pg	Pb	21 53 50.9	-0.5
	4.0nm,0.3s						
KOTS				Lg	Lg	21 54 48.2	
	22nm,1.0s						
KOTS	**Kotyrbulak**	**4.12**	**34**	*e*P	Pb	21 53 50.9	-0.5
	4.0nm,0.3s						
KOTS				*e*S	Sg	21 54 48.2	-2.2
	22nm,1.0s						
KK31	**Karatay Array**	**4.15**	**323**	⇑Pn	Pn	21 53 43.3	+0.7
	0.3nm,0.3s						
KK31				⇑Pg	Pg	21 53 55.7	-1.8
	0.4nm,0.3s,baz=138,slow=14						
KK31				⇓Sn	Sn	21 54 37.0	+5.2
	0.7nm,0.3s,baz=137,slow=26						
KK31				⇓Lg	Lg	21 54 48.7	
	1.4nm,0.4s,baz=139,slow=31						
KTBS	**Karatobe**	**4.36**	**27**	Pg	Pb	21 53 55.3	-0.1
	1.8nm,0.5s						
KTBS				Lg	Lg	21 54 55.4	
	6.6nm,0.4s						
KTBS	**Karatobe**	**4.36**	**27**	*e*P	Pb	21 53 55.3	-0.1
	1.8nm,0.5s						
KTBS				*e*S	Sg	21 54 55.4	-2.6
	6.6nm,0.4s						
CHKK	**Chushkaly**	**4.59**	**29**	Pg	Pb	21 54 00.2	+0.8
	1.4nm,0.5s						
CHKK				Lg	Lg	21 55 03.1	
	3.6nm,0.7s						
CHKK	**Chushkaly**	**4.59**	**29**	*e*P	Pb	21 54 00.2	+0.8
	1.4nm,0.5s						
CHKK				*e*S	Sg	21 55 03.1	-2.4
	3.6nm,0.7s						
SATY	**Saty**	**4.63**	**45**	Pg	Pb	21 53 58.8	-1.2
	2.6nm,0.6s						
SATY				Lg	Lg	21 55 00.7	
	3.5nm,0.8s						
SATY	**Saty**	**4.63**	**45**	*e*P	Pb	21 53 58.8	-1.2
	2.6nm,0.6s						
SATY				*e*S	Sb	21 55 00.7	+4.3
	3.5nm,0.8s						
KURS	**Kuram**	**4.81**	**40**	Pg	Pb	21 54 04.3	+1.2
	1.8nm,0.5s						
KURS				Lg	Lg	21 55 08.9	
	2.1nm,1.1s						
KURS	**Kuram**	**4.81**	**40**	*e*P	Pb	21 54 03.5	+0.4
	0.8nm,0.4s						
KURS				*e*S	Sg	21 55 08.9	-3.5
	2.1nm,1.1s						
PDGK	**Podgornoye**	**5.41**	**48**	⇓Pg	Pb	21 54 15.0	+1.6
	1.6nm,0.6s						
PDGK				⇑Sn	Sn	21 55 06.9	+4.0
	1.7nm,0.4s						
PDGK				⇑Lg	Lg	21 55 30.7	
	4.7nm,0.9s						

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*MAN **19** 22:03:30.9,5°.92N×125°.82E,h157^{km},mb4.6,ML3.5,MS3.4*

*ISCJB **19** 22:03:32.0±0.5,5°.92N±0°.05×125°.99E±0°.08,h142^{km}±6^{km},mb4.1/5,Error ellipse: s-maj=13.8km s-min=8.0km az=1.6*

*IDC **19** 22:03:33.3±0.8,6°.05N×126°.11E,h149^{km}±8^{km},mb3.8/5,mb1 4.1/7,mb1mx3.4/43,mbtmp4.4/7,MS3.4/3,Ms1 3.4/3,ms1mx2.7/47,Error ellipse: s-maj=62.6km s-min=14.1km az=66.0*

ISC 19 22:03:33.0±0.8,**5°.92N**±0°.06×**125°.95E**±0°.09,**h139**^{km}±7^{km},**n20**,σ**1**^{s}**22**/26,**mb4.1**/5,**1C-3D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.30**	**308**	*e*P	**Pn**	**22 03 52.1**	**-0.2**
DDMP				*e*S	**Sn**	**22 04 06.1**	**-0.8**
GSPH	**General Santos**	**1.01**	**280**	⇓*i*P	**Pn**	**22 03 57.5**	**+0.5**
GSPH				*i* S	**Sn**	**22 04 15.8**	**+0.6**
DAV	**Davao City (W)**	**1.20**	**342**	P	**Pn**	**22 03 59.1**	**+0.4**
	164nm,0.3s,baz=100,slow=2.1,SNR=22						
DAV				S	**Sn**	**22 04 19.3**	**+1.0**
	384nm,0.3s,baz=353,slow=22,SNR=15						
DMPH	**Davao City--Mi**	**1.24**	**339**	⇑*e*P	**Pn**	**22 03 59.2**	**+0.1**
DMPH				*e*S	**Sn**	**22 04 19.8**	**+0.9**
SKMP	**Bagumbayan, Su**	**1.52**	**293**	*e*P	**Pn**	**22 04 00.0**	**-2.0**
SKMP				*e*S	**Sn**	**22 04 24.0**	**-0.1**
BUKP	**Musuan**	**2.14**	**336**	*e*P	**Pn**	**22 04 07.9**	**-1.3**
BUKP				*e*S	**Sn**	**22 04 36.1**	**-0.9**
BIPH	**Bislig**	**2.29**	**10**	⇓*e*P	**Pn**	**22 04 11.2**	**+0.2**
BIPH				*e*S	**Sn**	**22 04 38.0**	**-2.2**
CGP	**Cagayan de Oro**	**2.81**	**334**	⇓*i*P	**Pn**	**22 04 19.1**	**+1.5**
CGP				*i* S	**Sn**	**22 04 53.6**	**+1.6**
BUTP	**Butuan**	**3.05**	**354**	*e*P	**Pn**	**22 04 19.6**	**-0.9**
BUTP				*e*S	**Sn**	**22 04 59.9**	**+2.5**
SIJI	**Sorong**	**8.58**	**142**	P	**Pn**	**22 05 33.9**	**-0.4**
	2.0nm,0.3s,baz=336,slow=17,SNR=2.5						
SIJI				S	Sn	22 07 02.1	-7.5
	0.7nm,0.3s,baz=176,slow=19,SNR=1.8						
BATI	**Baumata**	**16.18**	**188**	P	**P**	**22 07 14.8**	**+1.7**
	8.0nm,0.3s,baz=304,slow=1.4,SNR=7.9						
GUMO	**Guam**	**20.13**	**66**	LR	LR	22 15 22.6	
	comp=Z,17nm,18.3s,baz=108,slow=36						
FITZ	**Fitzroy Crossi**	**23.87**	**181**	P	**P**	**22 08 34.5**	**+0.7**
	2.8nm,0.4s,baz=4.4,slow=6.9,SNR=23						
WRA	**Warramunga Arr**	**26.99**	**162**	P	**P**	**22 09 01.6**	**-0.5**
	1.8nm,0.4s,baz=343,slow=10,SNR=24						
ASAR	**Alice Springs**	**30.41**	**165**	P	**P**	**22 09 32.5**	**+0.1**
	6.9nm,0.6s,baz=341,slow=6.9,SNR=88						
STKA	**Stephens Creek**	**40.44**	**159**	P	**P**	**22 10 58.4**	**+0.6**
	5.9nm,0.6s,baz=336,slow=9.0,SNR=13						
MKAR	**Makanchi Array**	**55.33**	**325**	P	**P**	**22 12 51.2**	**-1.1**
	0.3nm,0.5s,baz=120,slow=8.3,SNR=9.0						
KIRV	**Kirov**	**77.96**	**329**	LR	LR	22 51 06.0	
	comp=Z,70nm,20.9s,baz=257,slow=37						
GNI	**Garni**	**79.50**	**310**	LR	LR	22 54 36.5	
	comp=Z,48nm,21.8s,baz=310,slow=38						
TORD	**Torodi Ar. Bea**	**121.48**	**289**	PKP	**PKPdf**	**22 22 10.1**	**-0.9**
	0.3nm,0.6s,baz=86,slow=2.4,SNR=3.7						

GUC 19 22:05:29.9±0.6,**37°.45S**×**73°.67W**,**h13**^{km}±8^{km},**ML3.9**,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGCH	**Angol**	**0.85**	**115**	*e*P	Pg	22 05 45.0	-1.4
AGCH				*i* S	Sg	22 05 55.9	-1.6
CCHI	**Chillan**	**1.53**	**57**	*e*P	Pn	22 05 55.1	-1.8
CCHI				*i* S	Sn	22 06 15.0	-1.5
CCHI				IAML		22 06 28.1	
	comp=N,3μm,0.3s						
GO06	**Curarrehue**	**2.74**	**142**	*e*P	Pn	22 06 12.3	-1.4
GO06				*i* S	Sb	22 06 52.0	-0.4
CHPI	**Pichilemu**	**3.34**	**24**	*e*P	Pn	22 06 22.2	+0.5

MEX 19 22:07:16.3±0.7,**16°.50N**×**94°.98W**,**h86**^{km}±8^{km},**MD3.9**,**Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.60**	**9**	*e*P	Pn	22 07 30.3	-1.3
CMIG				*i* S	Sn	22 07 41.0	-1.8
HUIG	**Huatulco**	**1.30**	**236**	*i* P	Pn	22 07 37.4	-2.0
HUIG				*i* S	Sn	22 07 55.5	-1.3
VHO	**Vista Hermosa**	**1.77**	**289**	*i* P	Pn	22 07 44.6	-1.1
VHO				*i* S	Sn	22 08 05.9	-1.9
PCIG		**1.87**	**115**	*e*P	Pn	22 07 46.1	-0.5
PCIG				*i* S	Sn	22 08 07.9	-1.8

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*IDC **19** 22:12:15.0±28.0,26°.89N×96°.98E,h0^{km},mb3.3/3,mb1 3.4/3,mb1mx3.2/52,mbtmp3.4/3,MS3.8/1,Ms1 3.8/1,ms1mx2.6/19,Error ellipse: s-maj=437.6km s-min=73.9km az=171.0*

ISC 19 22:12:02.4±12.0,**27°N**±1°×**100°.8E**±0°.9,**h10**^{km},**n13**,σ**2**^{s}**39**/10,**mb3.2**/3,**Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAMN	**Ramite**	**12.69**	**275**	*e*P	Pn	22 15 16.9	+14
	7.5nm,0.6s						
JIRN	**Jiri**	**13.06**	**278**	*e*P	**P**	**22 15 17.0**	**-1.9**
	6.5nm,0.3s						
GUN	**Gumba**	**13.34**	**279**	*e*P	**P**	**22 15 19.8**	**-2.2**
	6.5nm,0.4s						
PKI	**Pulchoki**	**13.75**	**278**	*e*P	**P**	**22 15 26.0**	**-0.5**
	7.0nm,0.6s						
PKIN	**Phulchoki**	**13.76**	**278**	*e*P	**P**	**22 15 26.0**	**-0.6**
DMN	**Daman**	**14.02**	**278**	*e*P	**P**	**22 15 29.8**	**+0.4**
	3.1nm,0.4s						
DANN	**Dangsing**	**15.23**	**281**	*e*P	**Pn**	**22 15 40.4**	**+2.5**
	3.9nm,0.4s						
KOLN	**Koldanda**	**15.36**	**279**	*e*P	**P**	**22 15 44.8**	**+0.6**
	3.7nm,0.5s						
PYUN	**Piuthan**	**15.90**	**280**	*e*P	**P**	**22 15 50.0**	**-0.3**
	4.2nm,0.5s						
SONM	**Songino Array**	**21.74**	**10**	P	P	22 17 12.9	+19
	0.3nm,0.6s,baz=202,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**24.98**	**329**	P	**P**	**22 17 21.7**	**-4.6**
	0.4nm,0.7s,baz=140,slow=11,SNR=3.6						
ZALV	**Zalesovo Beam**	**29.85**	**341**	P	**P**	**22 18 11.7**	**+1.9**
	1.3nm,0.6s,baz=146,slow=7.7,SNR=6.0						
AKASG	**Malin Array Be**	**58.48**	**315**	LR	LR	22 49 40.4	
	comp=Z,91nm,21.2s,baz=255,slow=40						

IDC 19 22:14:19.9±2.7,**6°.71S**×**129°.93E**,**h137**^{km}±35^{km},**mb3.2**/1,**mb1 3.2**/4,**mb1mx3.0**/39,**mbtmp3.5**/4,**Error ellipse: s-maj=54.6km s-min=18.0km az=85.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.95**	**13**	P	Pn	22 15 46.0	0.0
	1.0nm,0.3s,baz=165,slow=22,SNR=26						
SIJI				S	Sn	22 16 46.5	-6.6
	3.4nm,0.3s,baz=127,slow=22,SNR=11						
FITZ	**Fitzroy Crossi**	**12.07**	**200**	P	Pn	22 17 07.6	0.0
	0.2nm,0.3s,baz=28,slow=12,SNR=7.4						
FITZ				S	Sn	22 19 13.2	-7.5
	0.1nm,0.3s,baz=274,slow=12,SNR=1.4						
WRA	**Warramunga Arr**	**13.83**	**162**	P	Pn	22 17 31.8	+1.4
	0.2nm,0.3s,baz=343,slow=11,SNR=3.2						
WRA				S	Sn	22 19 56.6	-6.7
	0.3nm,0.3s,baz=337,slow=23,SNR=9.5						
ASAR	**Alice Springs**	**17.29**	**168**	P	Pn	22 18 13.9	+0.9
	0.1nm,0.3s,baz=349,slow=9.5,SNR=6.4						
ASAR				S	S	22 21 23.5	-2.1
	0.1nm,0.3s,baz=346,slow=23,SNR=4.0						
MKAR	**Makanchi Array**	**67.95**	**327**	P	P	22 25 03.7	-0.3
	0.2nm,0.3s,baz=131,slow=5.9,SNR=3.0						

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*ISCJB **19** 22:15:06.0±0.3,10°.99S±0°.04×165°.86E±0°.05,h10^{km},mb4.8/43,Error ellipse: s-maj=7.6km s-min=5.5km az=163.5*

*IDC **19** 22:15:06.0±0.6,10°.95S×165°.94E,h0^{km},mb4.3/15,mb1 4.5/16,mb1mx4.3/45,mbtmp4.4/16,ML5.2/1,MS4.1/1,Ms1 4.1/1,ms1mx3.2/33,Error ellipse: s-maj=19.1km s-min=15.3km az=123.0*

*NEIC **19** 22:15:07.5±0.3,10°.89S×165°.89E,h10^{km},mb5.0/30,Error ellipse: s-maj=7.7km s-min=5.9km az=94.0*

*BJI **19** 22:15:08.6,11°.51S×165°.42E,h22^{km},mB5.3/15,mb4.8/23,Ms5.1/9,Ms7 4.8/7*

ISC 19 22:15:07.5±0.4,**10°.94S**±0°.06×**165°.93E**±0°.07,**h10**^{km},**n87**,σ**1**^{s}**43**/92,**mb4.9**/44,**1C,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.08**	**284**	*e*P	**Pn**	**22 16 38.0**	**+0.5**
HNR				*e*S	**Sn**	**22 17 41.0**	**-6.1**
HNR	**Honiara**	**6.08**	**284**	*e*Pn	**Pn**	**22 16 38.7**	**+1.3**
HNR				*e*Sn	**Sn**	**22 17 48.7**	**+1.6**
HNR	**Honiara**	**6.08**	**284**	Pn	**Pn**	**22 16 39.2**	**+1.8**
	63nm,0.3s,baz=169,slow=3.0,SNR=13						
HNR				Sn	**Sn**	**22 17 46.2**	**-1.0**
	baz=204,slow=20,SNR=4.0						
HNR				LR	LR	22 18 57.5	
	comp=Z,2μm,18.9s,baz=123,slow=38						
DZM	**Mont Dzumac**	**11.08**	**178**	*e*Pn	**Pn**	**22 17 48.3**	**+2.2**
DZM				Sn	**Sn**	**22 19 49.3**	**-1.0**
DZM	**Mont Dzumac**	**11.08**	**178**	Pn	**Pn**	**22 17 48.7**	**+2.6**
	8.2nm,0.3s,baz=12,slow=18,SNR=54						
DZM				Sn	**Sn**	**22 19 49.3**	**-1.0**
	1.5nm,0.3s,baz=73,slow=20,SNR=5.0						
PINNC	**Pines Island,**	**11.70**	**173**	*e*Pn	**Pn**	**22 17 58.1**	**+3.5**
MSVF	**Nonsavu**	**13.54**	**121**	*e*Pn	**P**	**22 18 27.7**	**-1.4**
EIDS	**Eidsvold**	**20.09**	**222**	*e*P	**P**	**22 19 40.7**	**-0.7**
	47nm,0.9s						
MANU	**Manus Island**	**20.44**	**294**	*e*P	Pn	22 19 47.7	+0.4
	29nm,0.8s						
CTA	**Charters Tower**	**21.01**	**242**	P	**P**	**22 19 52.4**	**+1.0**
	23nm,0.9s,baz=69,slow=12,SNR=26						
CTAO	**Charters Tower**	**21.01**	**242**	*e*P	**P**	**22 19 52.4**	**+1.0**
	29nm,1.0s						
ARMA	**Armidale**	**23.50**	**212**	*e*P	**P**	**22 20 19.2**	**+1.4**
	29nm,0.9s						
HIZ	**Hauiti**	**28.59**	**165**	*e*P	**P**	**22 21 05.4**	**+1.5**
	83nm,1.2s						
URZ	**Urewera**	**28.99**	**162**	*e*P	**P**	**22 21 07.6**	**+0.2**
	12nm,0.7s						
URZ	**Urewera**	**28.99**	**162**	P	**P**	**22 21 08.3**	**+0.9**
	6.5nm,0.5s,baz=255,slow=3.2,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**29.25**	**2**	T	T	22 51 30.8	
	baz=181,slow=76,SNR=101						
H11S3	**WAKE ISLAND Hy**	**29.26**	**1**	T	T	22 51 31.0	
	baz=181,slow=76,SNR=75						
H11S1	**WAKE ISLAND Hy**	**29.27**	**1**	T	T	22 51 31.5	
	baz=181,slow=76,SNR=76						
BKZ	**Black Stump Fm**	**29.64**	**163**	*e*P	**P**	**22 21 14.0**	**+0.7**
	31nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	22 53 02.4	
	baz=182,slow=76,SNR=68						
H11N3	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	22 53 02.7	
	baz=182,slow=76,SNR=45						
H11N2	**WAKE ISLAND Hy**	**30.49**	**2**	T	T	22 53 03.6	
	baz=182,slow=76,SNR=44						
STKA	**Stephens Creek**	**30.64**	**223**	*e*P	**P**	**22 21 22.3**	**+0.1**
	2.5nm,0.7s						
STKA	**Stephens Creek**	**30.64**	**223**	P	**P**	**22 21 22.6**	**+0.4**
	8.4nm,0.6s,baz=40,slow=10,SNR=22						
BFZ	**Birch Farm**	**30.99**	**165**	*e*P	**P**	**22 21 24.7**	**-0.4**
	30nm,0.6s						
SNZO	**South Karori**	**31.22**	**167**	*e*P	**P**	**22 21 27.8**	**+0.7**
THZ	**Tophouse**	**31.31**	**170**	*e*P	**P**	**22 21 28.7**	**+0.8**
	39nm,0.8s						
WRAB	**Tennant Creek**	**31.68**	**250**	*e*P	**P**	**22 21 30.7**	**-0.7**
	24nm,1.3s						
WB2	**Warramunga Arr**	**31.68**	**250**	*e*P	**P**	**22 21 31.1**	**-0.4**
WRA	**Warramunga Arr**	**31.69**	**250**	P	**P**	**22 21 30.9**	**-0.7**
	15nm,0.9s,baz=81,slow=9.1,SNR=44						
LTZ	**Lake Taylor**	**32.20**	**171**	*e*P	**P**	**22 21 36.2**	**+0.4**
	42nm,0.7s						
FOZ	**Fox Glacier**	**32.65**	**175**	*e*P	**P**	**22 21 40.5**	**+1.0**
	28nm,0.7s						
OXZ	**Oxford**	**32.70**	**172**	*e*P	**P**	**22 21 40.9**	**+0.8**
	102nm,1.4s						
RPZ	**Rata Peaks**	**32.95**	**173**	*e*P	**P**	**22 21 43.4**	**+1.1**
	52nm,0.7s						
RPZ	**Rata Peaks**	**32.95**	**173**	P	**P**	**22 21 42.8**	**+0.5**
	49nm,0.6s,baz=319,slow=1.4,SNR=39						
AS01	**Alice Springs**	**32.96**	**243**	*e*P	**P**	**22 21 40.6**	**-2.1**
AS01				*e*PcP	**PcP**	**22 24 26.6**	**-0.3**
AS31	**Alice Springs**	**33.00**	**243**	*e*P	**P**	**22 21 42.0**	**-1.0**
	2.4nm,0.8s						
ASAR	**Alice Springs**	**33.00**	**243**	P	**P**	**22 21 41.7**	**-1.4**
	8.6nm,0.9s,baz=75,slow=9.3,SNR=54						
ASAR				PcP	**PcP**	**22 24 26.9**	**-0.1**
	1.4nm,0.9s,baz=75,slow=4.0,SNR=6.2						
ASAR				ScP	**ScP**	**22 28 11.1**	**-0.4**
	0.7nm,0.9s,baz=90,slow=4.6,SNR=4.6						
BBOO	**Buckleboo**	**35.03**	**227**	*e*P	**P**	**22 21 58.7**	**-1.9**
	36nm,1.0s						
FITZ	**Fitzroy Crossi**	**39.58**	**255**	*e*P	**P**	**22 22 37.4**	**-1.9**
	9.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.58**	**255**	P	**P**	**22 22 39.0**	**-0.3**
	10nm,0.7s,baz=98,slow=7.4,SNR=23						
FORT	**Forrest**	**40.25**	**235**	*e*P	**P**	**22 22 42.4**	**-2.3**
	35nm,0.9s						
MBWA	**Marble Bar**	**45.40**	**251**	*e*P	**P**	**22 23 26.7**	**0.0**
	20nm,0.7s						
NWAO	**Narrogin (SRO)**	**49.67**	**236**	*e*P	**P**	**22 23 59.7**	**-0.1**
	866nm,1.1s						
MORW	**Morawa**	**49.83**	**241**	*e*P	**P**	**22 24 00.8**	**-0.3**
	23nm,0.8s						
MJAR	**Matsushiro Arr**	**53.96**	**332**	P	**P**	**22 24 32.1**	**+0.5**
	1.4nm,0.7s,baz=177,slow=9.2,SNR=5.0						
NJ2	**Nanjing**	**62.07**	**315**	*e*P	**P**	**22 25 28.8**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**62.94**	**333**	P	**P**	**22 25 35.0**	**+0.9**
	2.0nm,0.9s,baz=129,slow=8.0,SNR=2.9						
GYA	**Guiyang**	**68.51**	**304**	P	**P**	**22 26 13.0**	**+2.3**
GYA				pP	pwP	22 26 24.3	+8.6
GYA				PP	**PP**	**22 28 46.9**	**+4.8**
GYA				SKS	**SKiKP**	**22 36 05.5**	**+0.6**
GYA				SS	**SS**	**22 39 37.9**	**+0.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=N,520nm,18.0s						
GYA				LR	LR		
	comp=E,510nm,18.4s						
GYA				LR	LR		
	comp=Z,490nm,18.8s						
KMI	**Kunming**	**71.22**	**301**	P	**P**	**22 26 26.3**	**-1.2**
KMI				pmax	pmax		
	comp=Z,310nm,5.0s						
HHC	**Hu-ho-hao-te**	**71.87**	**320**	*e*P	**P**	**22 26 32.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,15nm,1.2s						
HHC				pmax	pmax		
	comp=Z,260nm,6.8s						
CM01	**Chiang Mai Arr**	**72.21**	**293**	*e*P	**P**	**22 26 33.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**72.24**	**293**	P	**P**	**22 26 33.7**	**+0.2**
	0.4nm,0.6s,baz=126,slow=4.5,SNR=4.0						
CD2	**Chengdu**	**72.68**	**307**	*e*P	**P**	**22 26 35.4**	**-0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH	**Lanzhou**	**74.82**	**312**	*e*P	**P**	**22 26 49.0**	**+0.4**
LZH				pP	PcP	22 27 00.3	-2.3
LZH				sP	pwP	22 27 04.3	+11
LZH				PP	PP	22 29 44.1	+8.0
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,99nm,4.4s						
LZH				LR	LR		
	comp=N,510nm,16.3s						
LZH				LR	LR		
	comp=Z,770nm,18.8s						
ULN	**Ulaanbaatar**	**78.32**	**324**	*e*P	**P**	**22 27 09.4**	**+1.3**
	3.0nm,0.8s						

SONM	**Songino Array**	**78.69**	**324**	P	**P**	**22 27 10.8**	**+0.7**
	0.4nm,0.6s,baz=138,slow=6.6,SNR=4.4						
BILL	**Bilibino**	**78.77**	**0**	eP	**P**	**22 27 09.8**	**-0.1**
	5.7nm,1.0s						
QSPA	**South Pole Qui**	**79.06**	**180**	eP	**P**	**22 27 11.8**	**-0.1**
	13nm,1.1s						
GTA	**Gaotai**	**79.12**	**314**	eP	**P**	**22 27 13.3**	**+0.7**
GTA				pP	PcP	22 27 21.8	+0.7
GTA				sP	pwP	22 27 25.3	+7.6
GTA				S	**S**	**22 37 10.0**	**-2.5**
GTA				pmax	pmax		
	comp=Z,100nm,6.4s						
GTA				LR	LR		
	comp=N,160nm,20.0s						
GTA				LR	LR		
	comp=E,220nm,21.6s						
MDM	**Murphy Dome**	**83.08**	**18**	eP	**P**	**22 27 32.4**	**-0.6**
	4.4nm,1.1s						
HDA	**Harding Lake**	**83.09**	**19**	eP	**P**	**22 27 32.5**	**-0.6**
	7.8nm,0.9s						
ILAR	**Eielson Array**	**83.36**	**18**	P	**P**	**22 27 34.0**	**-0.4**
	1.4nm,0.8s,baz=233,slow=5.4,SNR=20						
ILB	**Eielson Array**	**83.36**	**18**	eP	**P**	**22 27 34.0**	**-0.4**
IL1	**Eielson Array**	**83.36**	**18**	eP	**P**	**22 27 34.1**	**-0.3**
YBH	**Yreka Blue Hor**	**83.69**	**46**	P	**P**	**22 27 37.4**	**+0.6**
	2.2nm,0.8s,baz=260,slow=6.1,SNR=2.4						
EGAK	**Eagle**	**85.22**	**20**	eP	**P**	**22 27 43.6**	**-0.2**
	6.6nm,1.0s						
NV01	**Mina Array Sit**	**85.82**	**50**	eP	**P**	**22 27 46.0**	**-1.8**
NVAR	**Mina Array Bea**	**85.82**	**50**	P	**P**	**22 27 47.9**	**+0.1**
	1.2nm,0.8s,baz=220,slow=6.0,SNR=5.6						
WMQ	**Urumqi**	**89.15**	**315**	eP	**P**	**22 28 04.8**	**+1.3**
WMQ				LR	LR		
	comp=N,180nm,28.1s						
WMQ				LR	LR		
	comp=E,280nm,25.7s						
WMQ				LR	LR		
	comp=Z,200nm,25.7s						
SYO	**Syowa Base**	**91.94**	**197**	⇑iP	**P**	**22 28 14.4**	**-1.5**
PDAR	**Pinedale Array**	**93.35**	**47**	P	**P**	**22 28 26.5**	**+3.2**
	0.1nm,0.4s,baz=260,slow=5.4,SNR=2.5						
MK01	**Makanchi Array**	**93.56**	**317**	eP	**P**	**22 28 24.0**	**+0.1**
MK31	**Makanchi Array**	**93.57**	**317**	eP	**P**	**22 28 23.6**	**-0.3**
MKAR	**Makanchi Array**	**93.57**	**317**	eP	**P**	**22 28 24.0**	**+0.1**
	12nm,0.9s						
MKAR				PKKPbc	**PKKPdf**	**22 45 28.6**	**-1.7**
MKAR	**Makanchi Array**	**93.57**	**317**	P	**P**	**22 28 24.0**	**+0.1**
	1.0nm,0.7s,baz=94,slow=6.2,SNR=14						
MKAR				PKKPbc	**PKKPdf**	**22 45 28.6**	**-1.7**
	0.7nm,0.8s,baz=357,slow=1.3,SNR=5.2						
ZALV	**Zalesovo Beam**	**93.58**	**324**	eP	**P**	**22 28 22.4**	**-1.4**
MAKZ	**Makanchi**	**93.78**	**317**	eP	**P**	**22 28 25.5**	**+0.6**
	3.8nm,1.1s						
YKA	**Yellowknife Ar**	**94.80**	**27**	P	**P**	**22 28 27.7**	**-1.4**
	0.4nm,0.7s,baz=251,slow=4.7,SNR=4.4						
KURK	**Kurchatov**	**96.68**	**320**	PKKPbc	PKKPbc	22 45 20.9	-2.1
KURBB	**Kurchatov Arra**	**96.72**	**320**	PKKPbc	PKKPbc	22 45 20.9	-1.9
	0.6nm,0.6s,baz=284,slow=3.4,SNR=4.7						
ARCES	**ARCESS Array B**	**116.28**	**346**	PKP	**PKPdf**	**22 33 50.9**	**+0.2**
	2.2nm,0.8s,baz=74,slow=4.1,SNR=7.0						
CPUP	**Villa Florida**	**123.96**	**132**	PKP	**PKPdf**	**22 34 05.9**	**-0.9**
	1.9nm,0.9s,baz=300,slow=4.2,SNR=3.5						
GERES	**GERESS Array B**	**135.69**	**334**	PKP	**PKiKP**	**22 34 29.8**	**-0.2**
	0.3nm,0.7s,baz=96,slow=7.1,SNR=3.0						
ES19	**SONSECA Array**	**149.97**	**344**	ePKPbc	**PKPbc**	**22 34 58.9**	**+0.2**
ESDC	**Sonseca Array**	**150.01**	**344**	PKPbc	**PKPbc**	**22 34 58.9**	**+0.2**
	1.1nm,0.8s,baz=31,slow=1.7,SNR=7.3						
TORD	**Torodi Ar. Bea**	**164.43**	**280**	PKP	**PKPdf**	**22 35 11.4**	**-1.1**
	0.6nm,0.9s,baz=28,slow=2.0,SNR=3.2						

IDC ***19*** *22:28:55.3±0.3, 17°.44S×173°.33W, h0^{km}, mb5.3/22, mb1 5.5/24, mb1mx5.5/24, mbtmp5.3/24, ML4.4/1, MS5.1/32, Ms1 5.1/32, ms1mx5.0/37, Error ellipse: s-maj=15.8km s-min=12.1km az=129.0*

ISCJB ***19*** *22:28:56.6±1.5, 17°.50S±0°.03×173°.40W±0°.02, h18^{km}±10^{km}, mb5.6/327, MS5.3/191, Error ellipse: s-maj=5.1km s-min=3.0km az=150.2*

BJI ***19*** *22:28:59.5, 17°.06S×173°.09W, h33^{km}, mB5.8/51, mb5.5/61, Ms5.4/59, Ms7 5.2/59*

NEIC ***19*** *22:29:00.0±0.0, 17°.32S×173°.74W, h45^{km}, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M_{rr}2.46; $M_{\theta\theta}$-1.98; $M_{\phi\phi}$-0.49; $M_{r\theta}$-0.81; $M_{\theta\phi}$1.30; $M_{\phi r}$2.80; Best double couple: $M_0$3.90000×10^{17} NP1:ϕ_s329.00000°, δ70.00000°, λ112.00000°. NP2:ϕ_s99.00000°, δ29.00000°, λ44.00000°. Principal axes: T 4.1500, Plg58.0000°, Azm269.0000°; N -0.5400, Plg20.0000°, Azm141.0000°; P -3.6100, Plg22.0000°, Azm42.0000°;*

MOS ***19*** *22:29:00.2±1.3, 17°.36S×173°.42W, h37^{km}, mb5.8/81, MS5.3/48 Error ellipse: s-maj=9.3km s-min=6.7km az=66.7*

NEIC ***19*** *22:29:02.0±0.1, 17°.46S×173°.45W, h47^{km}, mb5.7/275, MS5.3/130, MW5.8, MW5.7, Error ellipse: s-maj=4.1km s-min=2.2km az=136.0, Moment Tensor Solution. s44 Moment tensor: Scale 10^{17}Nm; M_{rr}6.38; $M_{\theta\theta}$-6.38; $M_{\phi\phi}$0.00; $M_{r\theta}$-0.41; $M_{\theta\phi}$0.50; $M_{\phi r}$1.06; Principal axes: T 6.5600, Plg81.0000°, Azm261.0000°; N -0.1200, Plg9.0000°, Azm95.0000°; P -6.4400, Plg2.0000°, Azm5.0000°;*

NEIC Felt at Neiafu.

GCMT ***19*** *22:29:05.0±0.1, 17°.50S±0°.01×173°.03W±0°.01, h46^{km}, MW5.7/137, Moment Tensor Solution. s135,c267; s137,c320; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}3.86±.04; $M_{\theta\theta}$-2.43±.03; $M_{\phi\phi}$-1.43±.03; $M_{r\theta}$0.53±.03; $M_{\theta\phi}$1.12±.02; $M_{\phi r}$1.68±.03; Best double couple: $M_0$3.82100×10^{17} NP1:ϕ_s322.00000°, δ52.00000°, λ113.00000°. NP2:ϕ_s108.00000°, δ43.00000°, λ63.00000°. Principal axes: T 4.4490, Plg71.0000°, Azm292.0000°; N -1.2550, Plg18.0000°, Azm128.0000°; P -3.1940, Plg5.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 19 22:29:01.2±0.3**, 17°.62S**±0°.04×**173°.38W**±0°.04**, h42**^{km}±2^{km}**, h42**^{km}**:pP-P, n1629,** σ1^{s}**22**/1609**, mb5.6**/325**, MS5.3**/193**, 90C-47D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.59**	**114**	P	Pn	22 29 49.7	-4.7
	baz=3.5,SNR=1000						
NIUE				S	Sn	22 30 25.1	-10
	baz=3.5						
NIUE	**Niue**	**3.59**	**114**	ePn	Pn	22 29 49.5	-4.8
MSVF	**Nonsavu**	**8.17**	**268**	ePn	Pn	22 31 05.6	+8.2
	2μm,1.1s						
MSVF	**Nonsavu**	**8.17**	**268**	eP	Pn	22 31 05.6	+8.3
MSVF				pmax	pmax		
	comp=Z,2μm,1.1s						
RAO	**Raoul Island**	**12.30**	**199**	ePn	**Pn**	**22 31 53.6**	**-0.2**
RAO				eS	**Sn**	**22 34 06.7**	**-2.9**
RAO	**Raoul Island**	**12.30**	**199**	eP	**Pn**	**22 31 53.6**	**-0.2**
RAO	**Raoul Island**	**12.30**	**199**	Pn	**Pn**	**22 31 53.8**	**-0.1**
	baz=86,slow=18						
RAO				Sn	**Sn**	**22 34 03.9**	**-5.8**
	comp=Z,72nm,0.3s,baz=127,slow=20,SNR=4.0						
RAR	**Rarotonga**	**13.33**	**108**	ePn	Pn	22 32 02.8	-5.0
RAR				eS	Sn	22 34 12.1	-23
RAR	**Rarotonga**	**13.33**	**108**	eP	Pn	22 32 02.8	-5.1
RAR	**Rarotonga**	**13.33**	**108**	Pn	Pn	22 32 02.6	-5.3
	comp=Z,39nm,0.3s,baz=260,slow=6.6,SNR=55						
RAR				Sn	Sn	22 34 18.0	-17
	comp=Z,8.9nm,0.3s,baz=127,slow=19,SNR=4.3						
RAR				LR	LR	22 36 13.7	
	comp=Z,4μm,20.1s,baz=284,slow=33						
KNTN	**Kanton**	**14.84**	**6**	ePn	**Pn**	**22 32 24.7**	**-3.7**
MARNC	**Mare, Loyalty**	**17.93**	**255**	ePn	**P**	**22 33 08.6**	**+0.9**
	comp=Z,1μm,1.6s						
PINNC	**Pines Island,**	**18.67**	**251**	eP	**Pn**	**22 33 17.3**	**+0.8**
	comp=Z,992nm,1.5s						
OUENC	**Ouen Island, N**	**19.18**	**252**	eP	**Pn**	**22 33 22.7**	**0.0**
	comp=Z,224nm,1.1s						
DZM	**Mont Dzumac**	**19.48**	**254**	eP	**Pn**	**22 33 25.8**	**-0.5**
	comp=Z,521nm,1.3s						
DZM				eS	**S**	**22 36 58.2**	**-4.8**
	comp=Z,4μm,27.0s						
DZM				eLR	LR	22 38 04.3	
	comp=Z,25μm,25.4s						
DZM	**Mont Dzumac**	**19.48**	**254**	eP	**P**	**22 33 25.0**	**+0.1**
	comp=Z,294nm,1.2s						
DZM	**Mont Dzumac**	**19.48**	**254**	P	**Pn**	**22 33 26.6**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=73,slow=19,SNR=9.1						
DZM				LR	LR	22 39 53.7	
	comp=Z,14μm,21.8s,baz=91,slow=34						
OUZ	**Omahuta**	**21.02**	**211**	eP	**P**	**22 33 42.9**	**+1.6**
	comp=Z,126nm,0.8s						
OUZ				eS	Sn	22 37 48.7	+7.9
OUZ				LR	LR		
	comp=Z,9μm,20.0s						
MXZ	**Matakaoa Point**	**21.17**	**199**	eP	**P**	**22 33 46.9**	**+4.0**
	comp=Z,170nm,0.6s						
MXZ				LR	LR		
	comp=Z,2μm,21.0s						
URZ	**Urewera**	**22.19**	**200**	P	**P**	**22 33 56.9**	**+3.1**
	comp=Z,682nm,0.6s						
URZ				S	**S**	**22 37 52.3**	**-3.4**
URZ				LR	LR		
	comp=Z,5μm,20.0s						
URZ	**Urewera**	**22.19**	**200**	P	**P**	**22 33 56.9**	**+3.1**
	comp=Z,582nm,0.6s,baz=18,slow=4.2,SNR=164						
URZ				S	**S**	**22 37 52.3**	**-3.4**
	comp=Z,26nm,0.4s,baz=233,slow=20,SNR=7.2						
PAE	**Paea**	**22.68**	**94**	eP	**P**	**22 33 58.0**	**-1.3**
	comp=Z,28nm,1.1s						
PAE	**Paea**	**22.68**	**94**	eT	T	22 57 13.8	
	comp=Z,40nm,0.3s						
PPT2	**Papeete2**	**22.69**	**94**	eP	**P**	**22 33 58.3**	**-1.2**
	comp=Z,256nm,1.2s						
PPT2				eS	**S**	**22 38 00.2**	**-4.9**
	comp=Z,4μm,25.6s						
PPT2				eLQ	LQ	22 38 19.3	
	comp=Z,8μm,28.5s						
PPT2				eLR	LR	22 39 12.9	
	comp=Z,15μm,27.0s,baz=260						
PPT2	**Papeete2**	**22.69**	**94**	eT	T	22 57 15.2	
	comp=Z,50nm,0.3s						
PPT	**Papeete**	**22.69**	**94**	P	**P**	**22 33 57.7**	**-1.7**
	comp=Z,40nm,0.8s,baz=135,slow=16,SNR=4.4						
PPT				LR	LR	22 40 18.4	
	comp=Z,3μm,20.6s,baz=268,slow=30						
PPTF	**Pamatai, Papee**	**22.70**	**94**	eP	**P**	**22 33 59.4**	**-0.2**
	comp=Z,271nm,1.1s						
TIAR	**Tiarei**	**22.91**	**94**	eP	**P**	**22 34 00.5**	**-1.2**
	comp=Z,65nm,1.2s						
TVO	**Taravao**	**22.99**	**94**	eP	**P**	**22 34 01.0**	**-1.5**
	comp=Z,116nm,1.2s						
TVO	**Taravao**	**22.99**	**94**	eT	T	22 57 36.7	
	comp=Z,13nm,0.3s						
TBI	**Tubuai**	**23.11**	**108**	eP	**P**	**22 34 02.2**	**-1.4**
	comp=Z,708nm,1.4s						
TBI				eS	**S**	**22 38 07.5**	**-4.5**
	comp=Z,4μm,27.1s						
TBI				eLQ	LQ	22 38 33.7	
	comp=Z,5μm,29.2s						
TBI				eLR	LR	22 39 32.2	
	comp=Z,17μm,28.2s,baz=285						
TBI	**Tubuai**	**23.11**	**108**	eT	T	22 57 47.4	
	comp=Z,48nm,0.3s						
TARA	**Tarawa**	**23.18**	**323**	PFAKE		22 34 10.0	+5.6
TARA				LR	LR		
	comp=Z,12μm,22.0s						
BKZ	**Black Stump Fm**	**23.21**	**200**	eP	**P**	**22 34 04.7**	**+0.1**
	comp=Z,193nm,0.8s						
BKZ				LR	LR		
	comp=Z,5μm,21.0s						
HIZ	**Hauiti**	**23.22**	**204**	eP	**P**	**22 34 07.5**	**+2.9**
	comp=Z,580nm,0.6s						
PMOR	**Pomariorio Ree**	**24.59**	**88**	eP	**P**	**22 34 16.4**	**-1.2**
	comp=Z,309nm,1.2s						
PMOR	**Pomariorio Ree**	**24.59**	**88**	eT	T	22 59 36.5	
	comp=Z,26nm,0.3s						
BFZ	**Birch Farm**	**24.67**	**199**	eP	**P**	**22 34 19.4**	**+1.3**
	comp=Z,176nm,0.6s						
BFZ				eS	**S**	**22 38 40.6**	**+3.8**
VAH	**Vaihoa**	**24.81**	**88**	eP	**P**	**22 34 18.2**	**-1.4**
	comp=Z,125nm,1.0s						
VAH	**Vaihoa**	**24.81**	**88**	eT	T	22 59 52.6	
	comp=Z,58nm,0.3s						
SNZO	**South Karori**	**25.74**	**201**	eP	**P**	**22 34 28.2**	**+0.5**
	comp=Z,127nm,0.6s						
SNZO				eS	**S**	**22 39 02.3**	**+8.6**
SNZO				LR	LR		
	comp=Z,6μm,21.0s						
SNZO	**South Karori**	**25.74**	**201**	eP	**P**	**22 34 29.6**	**+1.9**
THZ	**Tophouse**	**26.78**	**203**	eP	**P**	**22 34 37.5**	**+0.3**
	comp=Z,146nm,0.5s						
THZ				eS	**S**	**22 39 15.8**	**+5.4**
THZ				LR	LR		
	comp=Z,6μm,22.0s						
KHZ	**Kahutara**	**27.12**	**202**	eP	**P**	**22 34 42.4**	**+2.2**
	comp=Z,125nm,0.9s						
KHZ				LR	LR		
	comp=Z,6μm,21.0s						
HNR	**Honiara**	**27.15**	**284**	eP	**P**	**22 34 39.7**	**-1.1**
	comp=Z,91nm,0.8s						
HNR	**Honiara**	**27.15**	**284**	eP	**P**	**22 34 39.7**	**-1.1**
HNR				pmax	pmax		
	comp=Z,91nm,0.8s						
HNR	**Honiara**	**27.15**	**284**	P	**P**	**22 34 43.0**	**+2.2**
	comp=Z,50nm,0.3s,baz=177,slow=4.5,SNR=5.1						
HNR				LR	LR	22 43 57.1	
	comp=Z,7μm,21.0s,baz=125,slow=33						
LTZ	**Lake Taylor**	**27.90**	**203**	eP	**P**	**22 34 47.3**	**+0.1**
	comp=Z,436nm,0.6s						
LTZ				LR	LR		
	comp=Z,5μm,21.0s						
OXZ	**Oxford**	**28.45**	**203**	eP	**P**	**22 34 52.6**	**+0.5**
	comp=Z,260nm,0.7s						
LHI	**Lord Howe Isla**	**28.53**	**236**	PFAKE		22 35 10.0	+17
LHI				LR	LR		
	comp=Z,6μm,22.0s						
MQZ	**McQueen's Vall**	**28.56**	**201**	PFAKE		22 35 10.0	+17
MQZ				LR	LR		
	comp=Z,5μm,22.0s						
RPZ	**Rata Peaks**	**29.15**	**204**	P	**P**	**22 35 00.1**	**+1.7**
	comp=Z,43nm,0.6s,baz=351,slow=5.9,SNR=20						
RPZ				S	S	22 40 00.9	+13
	comp=Z,5.6nm,0.6s,baz=36,slow=18,SNR=3.0						
RPZ				LR	LR	22 45 01.9	
	comp=Z,2μm,20.4s,baz=47,slow=33						
FOZ	**Fox Glacier**	**29.49**	**205**	eP	**P**	**22 35 02.0**	**+0.8**
	comp=Z,359nm,0.6s						
LBZ	**Lake Benmore**	**30.06**	**204**	eP	**P**	**22 35 07.9**	**+1.5**
	comp=Z,51nm,0.8s						
ODZ	**Otahua Downs**	**30.44**	**203**	eP	**P**	**22 35 12.8**	**+3.1**
	comp=Z,78nm,0.8s						
WKZ	**Wanaka**	**30.88**	**205**	eP	**P**	**22 35 15.9**	**+2.2**
	comp=Z,111nm,0.7s						
MLZ	**Mavora Lakes**	**31.69**	**205**	eP	**P**	**22 35 22.8**	**+2.0**
	comp=Z,68nm,0.9s						
DCZ	**Deep Cove**	**32.17**	**206**	eP	**P**	**22 35 27.9**	**+3.0**
	comp=Z,104nm,1.3s						
WHZ	**Wether Hill Ro**	**32.19**	**205**	eP	**P**	**22 35 27.1**	**+2.0**
	comp=Z,83nm,0.8s						
TAOE	**Nuku Hiva Isla**	**33.45**	**79**	eS	**S**	**22 40 55.2**	**-0.4**
	comp=Z,1μm,28.1s						
TAOE				eLR	LR	22 44 19.0	
	comp=Z,7μm,25.3s,baz=255						
TAOE	**Nuku Hiva Isla**	**33.45**	**79**	eT	T	23 10 39.4	
	comp=Z,324nm,0.2s						
EIDS	**Eidsvold**	**33.88**	**251**	P	**P**	**22 35 39.4**	**-0.7**
	baz=34,SNR=7.5						
EIDS	**Eidsvold**	**33.88**	**251**	eP	**P**	**22 35 38.9**	**-1.2**
	comp=Z,20nm,0.9s						
ARMA	**Armidale**	**34.26**	**242**	P	**P**	**22 35 43.8**	**+0.2**
	baz=34,SNR=12						
ARMA	**Armidale**	**34.26**	**242**	eP	**P**	**22 35 44.3**	**+0.8**
	comp=Z,96nm,1.6s						
MGCD	**Mangrove Creek**	**35.43**	**237**	P	**P**	**22 35 54.6**	**+1.1**
	baz=36,SNR=4.4						
RMQ	**Roma**	**36.07**	**249**	P	**P**	**22 35 59.0**	**-0.1**
	baz=36,SNR=12						
RKT	**Rikitea**	**36.35**	**105**	eP	**P**	**22 36 01.4**	**0.0**
	comp=Z,118nm,1.2s						
RKT				eS	**S**	**22 41 40.4**	**+0.6**
	comp=Z,829nm,29.0s						
RKT				eLQ	LQ	22 44 15.9	
	comp=Z,1μm,26.5s						
RKT				eLR	LR	22 45 48.5	
	comp=Z,16μm,47.0s						
RKT	**Rikitea**	**36.35**	**105**	eT	T	23 14 18.4	
	comp=Z,16nm,0.3s						
CNB	**Canberra Magne**	**37.45**	**235**	P	**P**	**22 36 10.9**	**+0.1**
	baz=38,SNR=33						
MILA	**Mila**	**38.18**	**232**	P	**P**	**22 36 18.8**	**+1.9**
	baz=38,SNR=3.7						
CTA	**Charters Tower**	**38.22**	**260**	S	**S**	**22 42 01.6**	**-6.8**
	comp=Z,0.5nm,0.3s,baz=16,slow=18,SNR=2.2						
CTAO	**Charters Tower**	**38.22**	**260**	eP	**P**	**22 36 15.6**	**-1.7**
	comp=Z,33nm,0.8s						
CTAO				ePcP	**PcP**	**22 38 30.8**	**-0.4**
CTAO				LR	LR		
	comp=Z,7μm,22.0s						
CTAO	**Charters Tower**	**38.22**	**260**	eP	**P**	**22 36 15.6**	**-1.7**
CTAO				e		22 38 30.8	
CTAO				pmax	pmax		
	comp=Z,33nm,0.8s						
CTAO				MLR	MLR		
	comp=Z,7μm,22.0s						
CMSA	**Cobar Meteorol**	**39.48**	**242**	P	**P**	**22 36 27.5**	**-0.3**
	baz=40,SNR=24						
MTSU	**Mount Surprise**	**40.20**	**263**	P	**P**	**22 36 32.2**	**-1.7**
	baz=40,SNR=26						
H11S2	**WAKE ISLAND Hy**	**40.88**	**330**	T	T	23 20 05.4	
	baz=142,slow=74						
H11S3	**WAKE ISLAND Hy**	**40.89**	**330**	T	T	23 19 52.9	
	baz=142						
H11S1	**WAKE ISLAND Hy**	**40.89**	**330**	T	T	23 19 55.4	
	baz=142,slow=74						
POHA	**Pohakuloa**	**41.07**	**26**	PFAKE		22 36 50.0	+8.8
POHA				LR	LR		
	comp=Z,4μm,22.0s						
TOO	**Toolangi**	**41.11**	**233**	P	**P**	**22 36 42.5**	**+1.3**
	baz=41,SNR=27						
TOO	**Toolangi**	**41.11**	**233**	eP	**P**	**22 36 42.4**	**+1.2**
	comp=Z,30nm,0.6s						
TOO	**Toolangi**	**41.11**	**233**	eP	**P**	**22 36 42.4**	**+1.2**
TOO				pmax	pmax		
	comp=Z,30nm,0.6s						
MANU	**Manus Island**	**41.52**	**287**	eP	**P**	**22 36 44.5**	**-0.3**
	comp=Z,374nm,0.1s						
WAKE	**Wake Island**	**41.59**	**331**	PFAKE		22 37 00.0	+15
WAKE				LR	LR		
	comp=Z,3μm,20.0s						
KIP	**Kipapa**	**41.62**	**22**	eP	**P**	**22 36 45.7**	**+0.3**
	comp=Z,171nm,1.0s						
KIP	**Kipapa**	**41.62**	**22**	eP	**P**	**22 36 45.7**	**+0.3**
KIP				pmax	pmax		
	comp=Z,171nm,1.0s						
TAU	**Tasmania Unive**	**41.73**	**224**	eP	**P**	**22 36 46.1**	**0.0**
	comp=Z,38nm,0.8s						
TAU				LR	LR		
	comp=Z,5μm,22.0s						
TAU	**Tasmania Unive**	**41.73**	**224**	eP	**P**	**22 36 46.1**	**0.0**
TAU				pmax	pmax		
	comp=Z,38nm,0.8s						
TAU				MLR	MLR		
	comp=Z,5μm,22.0s						
H11N3	**WAKE ISLAND Hy**	**41.85**	**332**	T	T	23 22 08.0	
	baz=151,slow=77,SNR=10.0						
H11N1	**WAKE ISLAND Hy**	**41.85**	**332**	T	T	23 22 08.1	
	baz=151,slow=77,SNR=17						
H11N2	**WAKE ISLAND Hy**	**41.86**	**332**	T	T	23 22 09.3	
	baz=151,slow=77,SNR=14						
COEN	**Coen**	**41.90**	**269**	P	**P**	**22 36 46.8**	**-1.1**
	baz=42,SNR=63						
COEN	**Coen**	**41.90**	**269**	eP	**P**	**22 36 47.0**	**-0.9**
	comp=Z,27nm,0.8s						
STKA	**Stephens Creek**	**42.98**	**242**	P	**P**	**22 36 56.4**	**-0.1**
	baz=43,SNR=21						
STKA	**Stephens Creek**	**42.98**	**242**	P	**P**	**22 36 56.5**	**0.0**
	comp=Z,12nm,0.5s,baz=90,slow=11,SNR=39						
STKA				LR	LR	22 52 55.6	
	comp=Z,2μm,19.1s,baz=76,slow=33						
ARPS	**Mount Arapiles**	**43.71**	**235**	P	**P**	**22 37 03.8**	**+1.5**
	baz=44,SNR=10						
QIS	**Mount Isa**	**44.41**	**258**	P	**P**	**22 37 07.0**	**-1.2**
	baz=45,SNR=7.0						
HTT	**Hallett**	**45.43**	**240**	P	**P**	**22 37 16.0**	**-0.2**
	baz=46,SNR=26						
JAY	**Jayapura**	**47.47**	**283**	LR	LR	22 55 47.8	
	comp=Z,1μm,20.7s,baz=87,slow=34						
BBOO	**Buckleboo**	**47.74**	**241**	P	**P**	**22 37 33.4**	**-0.9**
	baz=48,SNR=46						
BBOO	**Buckleboo**	**47.74**	**241**	eP	**P**	**22 37 33.4**	**-0.9**
	comp=Z,38nm,0.8s						
WRAB	**Tennant Creek**	**49.38**	**259**	eP	**P**	**22 37 45.3**	**-1.8**
	comp=Z,82nm,1.2s						
WRAB				LR	LR		
	comp=Z,5μm,20.0s						
WRAB	**Tennant Creek**	**49.38**	**259**	eP	**P**	**22 37 45.3**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,82nm,1.2s						
WRAB				MLR	MLR		
	comp=Z,5μm,20.0s						
WRA	**Warramunga Arr**	**49.39**	**259**	P	**P**	**22 37 45.9**	**-1.2**
	comp=Z,15nm,0.5s,baz=97,slow=7.5,SNR=282						
WRA				PcP	**PcP**	**22 39 09.6**	**+0.4**
	comp=Z,21nm,0.8s,baz=88,slow=3.8,SNR=5.1						
WRA				S	**S**	**22 44 44.2**	**-7.2**
	comp=Z,1.7nm,0.8s,baz=103,slow=12,SNR=4.5						
WRA				LR	LR	22 57 14.2	
	comp=Z,5μm,21.0s,baz=100,slow=34						
AS01	**Alice Springs**	**49.43**	**254**	eP	**P**	**22 37 45.1**	**-2.3**
AS31	**Alice Springs**	**49.47**	**254**	eP	**P**	**22 37 46.5**	**-1.3**
	comp=Z,31nm,0.6s						
AS31				eS	**S**	**22 44 48.2**	**-4.3**
ASAR	**Alice Springs**	**49.47**	**254**	P	**P**	**22 37 46.9**	**-0.9**
	comp=Z,64nm,0.6s,baz=89,slow=8.5,SNR=704						
ASAR				PcP	**PcP**	**22 39 09.8**	**+0.4**
	comp=Z,41nm,0.7s,baz=105,slow=4.1,SNR=8.8						
ASAR				ScP	**ScP**	**22 43 05.2**	**+3.6**
	comp=Z,1.9nm,0.9s,baz=96,slow=5.8,SNR=3.6						
ASAR				S	**S**	**22 44 47.9**	**-4.7**
	comp=Z,7.2nm,0.8s,baz=91,slow=16,SNR=17						
ASAR				LR	LR	22 57 35.3	
	comp=Z,2μm,20.4s,baz=92,slow=35						
ASAR				P4KPbc		23 15 26.6	
	comp=Z,0.6nm,0.6s,baz=95,slow=4.8,SNR=9.9						
GUMO	**Guam**	**51.56**	**304**	PFAKE		22 38 10.0	+6.5
GUMO				LR	LR		
	comp=Z,3μm,21.0s						
KDU	**Kakadu**	**52.35**	**267**	P	**P**	**22 38 08.1**	**-1.3**
	baz=52,SNR=6.8						
MTN	**Manton Dam**	**53.60**	**267**	P	**P**	**22 38 16.7**	**-1.9**
	baz=54,SNR=6.0						
MTN	**Manton Dam**	**53.60**	**267**	eP	**P**	**22 38 16.8**	**-1.8**
	comp=Z,35nm,0.7s						
FORT	**Forrest**	**54.46**	**244**	P	**P**	**22 38 23.8**	**-0.9**
	baz=55,SNR=17						
FORT	**Forrest**	**54.46**	**244**	eP	**P**	**22 38 24.9**	**+0.2**
	comp=Z,57nm,0.8s						
WRKA	**Warakurna**	**54.48**	**252**	P	**P**	**22 38 24.0**	**-1.1**
	baz=55,SNR=110						
KNRA	**Kununurra**	**55.28**	**263**	P	**P**	**22 38 29.5**	**-1.3**
	baz=56,SNR=12						
SWI	**Sorong**	**56.87**	**281**	P	**P**	**22 38 41.3**	**-0.9**
	comp=Z,38nm,1.2s						
FITZ	**Fitzroy Crossi**	**57.80**	**259**	P	**P**	**22 38 47.4**	**-1.2**
	baz=58,SNR=11						
FITZ	**Fitzroy Crossi**	**57.80**	**259**	eP	**P**	**22 38 47.5**	**-1.2**
	comp=Z,15nm,0.8s						
FITZ				S	**S**	**22 46 44.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**57.80**	**259**	S	**S**	**22 46 44.1**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=302,slow=19,SNR=3.9						
SOEI	**Soe**	**60.86**	**268**	eP	**P**	**22 39 09.9**	**-0.2**
	comp=Z,106nm,0.8s						
SOEI	**Soe**	**60.86**	**268**	P	**P**	**22 39 09.8**	**-0.3**
SBA	**Scott Base**	**61.05**	**185**	eP	**P**	**22 39 12.9**	**+2.7**
	comp=Z,427nm,1.8s						
SBA	**Scott Base**	**61.05**	**185**	eP	**P**	**22 39 12.9**	**+2.7**
SBA				pmax	pmax		
	comp=Z,427nm,1.8s						
VNDA	**Vanda**	**61.19**	**186**	P	**P**	**22 39 13.7**	**+2.5**
	comp=Z,22nm,0.9s,baz=4.5,slow=6.7,SNR=18						
VNDA				LR	LR	22 58 43.4	
	comp=Z,566nm,21.6s,baz=34,slow=29						
SANI	**Sanana**	**61.44**	**277**	P	**P**	**22 39 12.8**	**-1.1**
	comp=Z,62nm,0.7s,comp=Z,1μm						
MBWA	**Marble Bar**	**62.78**	**255**	eP	**P**	**22 39 22.3**	**-0.5**
	comp=Z,134nm,1.0s						
MBWA				LR	LR		
	comp=Z,4μm,19.0s						
MBWA	**Marble Bar**	**62.78**	**255**	eP	**P**	**22 39 25.2**	**+2.4**
MEEK	**Meekatharra**	**63.01**	**249**	P	**P**	**22 39 23.1**	**-1.1**
	baz=63,SNR=26						
KLBR	**Kellerberrin**	**63.24**	**243**	P	**P**	**22 39 25.9**	**+0.3**
	baz=64,SNR=12						
NWAO	**Narrogin (SRO)**	**63.57**	**242**	P	**P**	**22 39 28.6**	**+0.8**
	baz=64,SNR=8.1						
NWAO	**Narrogin (SRO)**	**63.57**	**242**	eP	**P**	**22 39 28.1**	**+0.2**
	comp=Z,65nm,1.1s						
NWAO				LR	LR		
	comp=Z,2μm,19.0s						
NWAO	**Narrogin (SRO)**	**63.57**	**242**	eP	**P**	**22 39 28.1**	**+0.2**
NWAO				pmax	pmax		
	comp=Z,65nm,1.1s						

NWAO				MLR	MLR		
	comp=Z,2µm,19.0s						
EDFI	Ende, Flores	63.58	269	P	P	22 39 28.1	-0.2
RKGY	Rocky Gully	63.66	240	P	P	22 39 29.7	+1.3
	baz=64,SNR=8.9						
KMSI	Cibinong	64.19	279	P	P	22 39 31.8	-0.4
	comp=Z,166nm,0.8s						
BLDU	Ballidu	64.22	244	P	P	22 39 32.3	+0.1
	baz=64,SNR=59						
MUN	Mundaring	64.51	242	P	P	22 39 35.0	+0.9
	baz=65,SNR=20						
MORW	Morawa	64.97	246	P	P	22 39 37.2	+0.1
	baz=65,SNR=7.2						
MORW	Morawa	64.97	246	*e*P	P	22 39 37.7	+0.5
	comp=Z,68nm,1.4s						
DAV	Davao City (W)	65.07	287	PFAKE		22 39 50.0	+12
DAV				LR	LR		
	comp=Z,746nm,19.0s						
DAV	Davao City (W)	65.07	287	*e*P	P	22 39 39.4	+1.5
KAPI	Kappang	66.46	272	PFAKE		22 40 00.0	+13
KAPI				LR	LR		
	comp=Z,487nm,20.0s						
PLAI	Plampang	67.29	268	P	P	22 39 52.1	-0.1
GIRL	Giralia	67.56	252	P	P	22 39 55.5	+1.8
	baz=68,SNR=7.5						
CASY	Casey	68.41	205	*e*P	P	22 39 59.4	+1.0
	comp=Z,46nm,0.9s						
CASY				LR	LR		
	comp=Z,173nm,19.0s						
KIWB	Kanaga Island	69.25	358	*e*P	P	22 40 03.6	0.0
ADK	Adak	69.26	358	PFAKE		22 40 20.0	+16
ADK				LR	LR		
	comp=Z,2µm,19.0s						
MJAR	Matsushiro Arr	70.64	320	P	P	22 40 11.5	-1.0
	comp=Z,12nm,0.9s,baz=163,slow=5.9,SNR=16						
MJAR				LR	LR	23 05 45.1	
	comp=Z,1µm,21.9s,baz=130,slow=31						
MAJO	Matsushiro	70.64	320	*e*P	P	22 40 11.8	-0.7
	comp=Z,25nm,0.8s						
MAJO				LR	LR		
	comp=Z,2µm,22.0s						
MAJO	Matsushiro	70.64	320	*e*P	P	22 40 11.8	-0.7
MAJO				pmax	pmax		
	comp=Z,25nm,0.8s						
MAJO				MLR	MLR		
	comp=Z,2µm,22.0s						
MAJO	Matsushiro	70.64	320	*e*P	P	22 40 12.2	-0.3
MAT	Matsushiro	70.64	320	P	P	22 40 11.5	-1.0
MAT				S	S	22 49 31.0	+7.4
MJB9	Matsu-Tunnel	70.64	320	*e*P	P	22 40 11.7	-0.8
MJB9				*e*PcP	PcP	22 40 34.0	+0.6
JAGI	Jajag, Banyuwa	70.84	267	*e*P	P	22 40 12.6	-1.6
	comp=Z,116nm,1.1s						
JAGI	Jajag, Banyuwa	70.84	267	P	P	22 40 14.2	0.0
H06S1	SOCORRO T	71.20	63	T	T	23 58 34.4	
	SNR=84						
H06E1	SOCORRO T-PHAS	71.24	63	T	T	23 58 29.7	
	SNR=64						
ERM	Erimo	71.62	327	PFAKE		22 40 30.0	+12
ERM				LR	LR		
	comp=Z,790nm,22.0s						
KUR	Kuril'sk	71.78	332⇑	*e*P	P	22 40 20.2	+1.1
YUK	Yuzh-Kuril'sk	71.78	330	*i* P	P	22 40 12.0	-7.2
YUK				*e*		22 40 33.1	
YUK				*e*		22 42 58.5	
YUK				*e*PPP	PPP	22 44 40.6	
YUK				*e*SS	SS	22 54 12.7	-0.8
SNCC	San Nicolas Is	72.11	45	P	P	22 40 21.0	-0.4
	baz=234						
QSPA	South Pole Qui	72.44	180	*e*P	P	22 40 24.6	+1.5
	comp=Z,323nm,1.6s						
QSPA				LR	LR		
	comp=Z,2µm,22.0s						
SCZ2	Santa Cruz Isl	72.47	45	P	P	22 40 23.8	+0.1
	baz=234						
SCI2	San Clemente I	72.62	46	P	P	22 40 23.6	-0.9
	baz=235						
SBC	Santa Barbara	72.69	44	P	P	22 40 23.8	-1.1
	baz=234						
PKM	Mcpherson Peak	72.88	44	P	P	22 40 25.7	-0.6
	baz=233						
BLG	Laguna Peak, P	72.92	45	P	P	22 40 25.9	-0.4
	baz=234						
CIS	Catalina Islan	72.95	46	P	P	22 40 26.4	-0.1
	baz=235						
SAO	San Andreas Ge	72.97	41	*e*P	P	22 40 26.8	+0.3
	comp=Z,42nm,0.9s						
SAO	San Andreas Ge	72.97	41	*e*P	P	22 40 26.8	+0.3
SAO				pmax	pmax		
	comp=Z,42nm,0.9s						
SMMC	Simmler	73.02	43	P	P	22 40 27.4	+0.5
	baz=233,SNR=6.7						
PAGB	Antelope Grade	73.10	43	*e*P	P	22 40 28.2	+0.8
	comp=Z,94nm,1.4s						
PWJI	Pagerwojo	73.19	267	P	P	22 40 28.0	-0.3
FMP	Fort Macarthur	73.22	46	P	P	22 40 27.5	-0.5
	baz=235						
JNU	Nakatsue	73.32	314	LR	LR	23 06 39.7	
	comp=Z,1µm,21.0s,baz=116,slow=31						
OSI	Osito Audit: C	73.45	45	*e*P	P	22 40 29.3	-0.2
	comp=Z,221nm,1.9s						
OSI	Osito Audit: C	73.45	45	P	P	22 40 29.2	-0.2
	baz=234						
DECC	Green Verdugo	73.50	45	P	P	22 40 29.2	-0.6
	baz=235						
109C	Camp Elliot, M	73.57	47	P	P	22 40 29.5	-0.6
	baz=236						
MWC	Mount Wilson	73.67	45	*e*P	P	22 40 30.7	-0.2
	comp=Z,36nm,0.8s						
MWC	Mount Wilson	73.67	45	*e*P	P	22 40 30.7	-0.2
MWC				pmax	pmax		
	comp=Z,36nm,0.8s						
ARVC	Arvin	73.68	44	P	P	22 40 30.2	-0.5
	baz=234						
NGJI	Ngawi	73.70	267	P	P	22 40 31.4	+0.1
PCJI	Pacitan	73.74	266	P	P	22 40 31.6	0.0
BAR	Barrett	73.75	47	*e*P	P	22 40 32.0	+0.8
	comp=Z,33nm,1.3s						
KMRM	Mail Ridge	73.80	37	*e*P	P	22 40 32.2	+0.9
	comp=Z,117nm,1.0s						
MURC	Murrieta	73.90	46	P	P	22 40 31.9	-0.2
	baz=236,SNR=5.5						
VES	Vestal, Richgr	73.93	43	P	P	22 40 31.9	-0.3
	baz=234,SNR=9.0						
BFSC	Mount Baldy Ra	73.95	45	P	P	22 40 32.0	-0.5
	baz=235,SNR=7.2						
VOG	Valley Oaks Go	74.02	43	P	P	22 40 32.2	-0.5
	baz=233						
MONP2	Monument Peak	74.04	47	P	P	22 40 33.0	-0.2
	baz=236,SNR=9.7						
EDW2	Edwards Air Fo	74.09	45	P	P	22 40 33.2	-0.1
	baz=235,SNR=18						
IKP	In-Ko-Pah, Jac	74.13	48	P	P	22 40 33.5	0.0
	baz=237,SNR=8.0						
LPIG	La Paz	74.19	58	LR	LR	23 04 06.4	
	comp=Z,1µm,21.9s,baz=297,slow=28						
SRIG	Santa Rosalia	74.20	54	*e*P	P	22 40 33.2	-0.7
	comp=Z,109nm,1.3s						
ISA	Isabella, Lake	74.22	44	*e*P	P	22 40 34.2	+0.2
	comp=Z,72nm,1.3s						
ISA	Isabella, Lake	74.22	44	P	P	22 40 34.1	+0.2
	baz=234,SNR=16						
O02D	Mt. Diablo Mer	74.30	38	P	P	22 40 35.0	+0.6
	baz=230,SNR=10						
PET	Petropavlovsk	74.39	343	*e*P	P	22 40 33.7	-0.7
	comp=Z,339nm,2.0s						
PET				LR	LR		
	comp=Z,1µm,19.0s						
PET	Petropavlovsk	74.39	343	*e*P	P	22 40 34.1	-0.3
PET				*e*S	S	22 50 03.0	-2.6
PET				pmax	pmax		
	comp=Z,46nm,1.1s						
PET				MLR	MLR		
	comp=Z,800nm,20.0s						
CMB	Columbia Colle	74.41	41	*e*P	P	22 40 34.6	-0.4
	comp=Z,32nm,0.9s						
CMB	Columbia Colle	74.41	41	*e*P	P	22 40 34.6	-0.4
CMB				pmax	pmax		
	comp=Z,32nm,0.9s						
PFO	Pinyon Flats O	74.42	47	*e*P	P	22 40 34.9	-0.3
	comp=Z,56nm,1.4s						
PFO				LR	LR		
	comp=Z,2µm,21.0s						
PFO	Pinyon Flats O	74.42	47	*e*P	P	22 40 34.9	-0.3
PFO				pmax	pmax		
	comp=Z,56nm,1.4s						
PFO				MLR	MLR		
	comp=Z,2µm,21.0s						
PFO	Pinyon Flats O	74.42	47	P	P	22 40 35.1	-0.1
	baz=236						
XPFO	Pion Flat	74.42	47	*e*P	P	22 40 35.0	-0.2
	comp=Z,54nm,1.4s						
UGM	Wanagama	74.44	266	*e*P	P	22 40 35.9	+0.2
	comp=Z,465nm,1.5s						
UGM	Wanagama	74.44	266	P	P	22 40 35.7	0.0
BBRC	Big Bear Solar	74.47	46	P	P	22 40 35.3	-0.3
	baz=236						
SWSC	Sam W. Stewart	74.51	47	P	P	22 40 35.2	-0.4
	baz=237						
AFDM	Forest Hills D	74.61	40	*e*P	P	22 40 35.7	-0.4
	comp=Z,31nm,1.1s						
LRMC	Laurel Mtn Rad	74.64	44	P	P	22 40 36.4	-0.1
	baz=235,SNR=12						
ORV	Oroville	74.67	39	*e*P	P	22 40 36.2	-0.2
	comp=Z,114nm,1.8s						
ORV				*e*pP	pP	22 40 49.1	+0.7
ORV	Oroville	74.67	39	*e*P	P	22 40 36.2	-0.2
ORV				*e**PP	pP	22 40 49.1	+0.7
ORV				pmax	pmax		
	comp=Z,114nm,1.8s						
WDC	Whiskeytown Da	74.71	38	*e*P	P	22 40 36.8	+0.2
	comp=Z,166nm,1.8s						
WDC	Whiskeytown Da	74.71	38	*e*P	P	22 40 36.8	+0.2
WDC				pmax	pmax		
	comp=Z,166nm,1.8s						
PEA0B	Petropavlovsk-	74.73	342	*e*P	P	22 40 36.4	-0.1
	comp=Z,580nm,1.8s						
PETK	Petropavlovsk-	74.73	342	*e*P	P	22 40 35.2	-1.2
PETK	Petropavlovsk-	74.73	342	*e*P	P	22 40 35.2	-1.2
PETK	Petropavlovsk-	74.73	342	P	P	22 40 35.9	-0.6
	comp=Z,55nm,0.7s,baz=144,slow=9.1,SNR=54						
PETK				LR	LR	23 09 22.8	
	comp=Z,505nm,21.5s,baz=159,slow=32						
RRX	Edison Barstow	74.76	45	P	P	22 40 36.9	-0.1
	baz=235						
N02D	Trinity Center	74.86	37	P	P	22 40 38.1	+0.5
	baz=230,SNR=6.6						
CWC	Cottonwood Cre	74.94	43	P	P	22 40 38.1	-0.1
	baz=234						
BELC	Belle Mtn. Jos	74.95	46	P	P	22 40 38.2	-0.1
	baz=236,SNR=9.1						
MDPB	Devils Postpil	75.00	42	*e*P	P	22 40 38.9	+0.3
	comp=Z,111nm,1.5s						
OMMB	Old Mammoth Mi	75.03	42	*e*P	P	22 40 39.0	+0.1
	comp=Z,62nm,1.4s						
M02C	Callahan	75.05	37	P	P	22 40 39.2	+0.6
	baz=230,SNR=11						
MPMC	Manual Prospec	75.11	44	P	P	22 40 39.5	+0.2
	baz=235,SNR=49						
L02E	Cave Junction	75.12	36	P	P	22 40 39.6	+0.6
	baz=229						
GSC	Goldstone, Bar	75.13	45	*e*P	P	22 40 38.5	-0.8
	comp=Z,84nm,1.5s						
GSC	Goldstone, Bar	75.13	45	*e*P	P	22 40 38.5	-0.8
GSC				pmax	pmax		
	comp=Z,84nm,1.5s						
GSC	Goldstone, Bar	75.13	45	P	P	22 40 39.1	-0.2
	baz=236,SNR=12						
BC3	Big Chuckawall	75.14	47	P	P	22 40 39.4	0.0
	baz=237,SNR=8.8						
MLAC	Mammoth, Mammo	75.15	42	P	P	22 40 39.9	+0.4
	baz=234,SNR=6.9						
DAC	Darwin (Calif)	75.16	44	*e*P	P	22 40 39.1	-0.4
	comp=Z,95nm,1.7s						
DAC	Darwin (Calif)	75.16	44	*e*P	P	22 40 39.1	-0.4
DAC				pmax	pmax		
	comp=Z,95nm,1.7s						
HEC	Hector,Ludlow	75.18	46	P	P	22 40 39.3	-0.2
	baz=236,SNR=15						
TIN	Tinemaha, Big	75.20	43	P	P	22 40 39.9	+0.2
	baz=234,SNR=9.8						
GLA	Glamis	75.25	48	*e*P	P	22 40 40.7	+0.8
	comp=Z,93nm,1.3s						
GLA	Glamis	75.25	48	P	P	22 40 40.7	+0.8
GLA				pmax	pmax		
	comp=Z,93nm,1.3s						
GLA	Glamis	75.25	48	P	P	22 40 40.1	+0.1
	baz=237,SNR=6.8						
WAKR	Walker	75.29	41	*e*P	P	22 40 40.6	+0.3
	comp=Z,248nm,1.9s						
YBH	Yreka Blue Hor	75.35	37	*e*P	P	22 40 41.0	+0.6
	comp=Z,108nm,1.4s						
YBH	Yreka Blue Hor	75.35	37	*e*P	P	22 40 41.0	+0.6
YBH				pmax	pmax		
	comp=Z,108nm,1.4s						
YBH	Yreka Blue Hor	75.35	37	LR	LR	23 06 09.7	
	comp=Z,3µm,21.5s,baz=270,slow=30						
YSS	Yuzh-Sakhalins	75.41	331	*e*P	P	22 40 39.6	-0.8
	comp=Z,116nm,1.0s						
YSS				LR	LR		
	comp=Z,619nm,21.0s						
YSS	Yuzh-Sakhalins	75.41	331	*c* *i*P	P	22 40 40.6	+0.2
YSS				*e*		22 40 53.9	
YSS				*e**SP	sP	22 40 59.5	+2.3
YSS				*e*		22 43 28.5	
YSS				*e*S	S	22 50 15.0	-2.3
YSS				pmax	pmax		
	comp=Z,90nm,0.9s						
K02D	Willamette Mer	75.44	36	P	P	22 40 40.9	0.0
	baz=229						
PNTR	Pine Nut	75.55	40	*e*P	P	22 40 42.0	+0.3
	comp=Z,274nm,1.8s						
J01E	Myrtle Point	75.60	35	P	P	22 40 42.3	+0.6
	baz=228						
GMRC	Granite Mounta	75.62	46	P	P	22 40 41.8	-0.3
	baz=236,SNR=12						
IRM	Iron Mountain	75.63	47	P	P	22 40 42.2	+0.1
	baz=237,SNR=20						
VCNR	Virginia City	75.64	40	*e*P	P	22 40 42.9	+0.6
	comp=Z,195nm,1.9s						
VCNR				*e*pP	pP	22 40 55.5	+1.2
YERR	Yerington	75.70	41	*e*P	P	22 40 43.2	+0.6
	comp=Z,37nm,0.7s						
GRAC	Grapevine Rang	75.73	43	P	P	22 40 42.9	+0.3
	baz=235,SNR=8.2						
FURC	Furnace Creek,	75.75	44	P	P	22 40 42.6	-0.1
	baz=235						
HUMO	Hull Mountain	75.78	36	*e*P	P	22 40 42.4	-0.3
	comp=Z,154nm,1.8s						
TUQ	Turquoise Moun	75.80	45	P	P	22 40 43.0	-0.2
	baz=236						
SHOC	Shoshone, Teco	75.82	45	P	P	22 40 42.9	-0.3
	baz=236						
Y12C	Blythe	75.84	47	*e*P	P	22 40 43.4	+0.1
	comp=Z,108nm,1.5s						
Y12C	Blythe	75.84	47	P	P	22 40 43.4	+0.1
	baz=237,SNR=7.1						
M04C	Macdoel	75.88	37	P	P	22 40 43.8	+0.3
	baz=230,SNR=12						
L04D	Klamath Falls	75.89	37	P	P	22 40 43.7	+0.2
	baz=230,SNR=9.4						
RYN	Ryan	75.94	41	*e*P	P	22 40 44.1	+0.2
	comp=Z,243nm,2.0s						
NV01	Mina Array Sit	75.96	42	*e*P	P	22 40 43.2	-0.9
NVAR	Mina Array Bea	75.96	42	P	P	22 40 44.0	-0.2
	comp=Z,29nm,0.7s,baz=226,slow=9.4,SNR=117						
NVAR				LR	LR	23 06 31.4	
	comp=Z,2µm,21.4s,baz=214,slow=30						
PAHR	Pah Rah Range	76.05	40	*e*P	P	22 40 44.7	+0.1
	comp=Z,77nm,1.3s						
NV11	Mina Array Sit	76.06	42	*e*P	P	22 40 44.4	-0.2
	comp=Z,8.8nm,1.3s						
214A	Organ Pipe Nat	76.12	50	P	P	22 40 44.7	-0.3
	baz=239						
KPJI	Karang Pucung	76.12	267	P	P	22 40 45.4	+0.1
I03D	Drain, OR	76.28	35	P	P	22 40 45.8	+0.4
	baz=229						
I02D	Swisshome	76.28	34	P	P	22 40 45.6	+0.2
	baz=228						
NEE2	Needles Airpor	76.33	46	P	P	22 40 45.8	-0.2
	baz=237						
PDMCI	Parker Dam,Lak	76.41	47	P	P	22 40 46.4	0.0
	baz=238						
TPNV	Topopah Spring	76.43	44	*e*P	P	22 40 47.0	+0.2
	comp=Z,40nm,0.9s						
TPNV	Topopah Spring	76.43	44	P	P	22 40 46.8	0.0
	baz=236,SNR=10						
KVN	Kaiserville	76.46	41	*e*P	P	22 40 46.5	-0.3
	comp=Z,97nm,1.4s						
KVN	Kaiserville	76.46	41	*e*P	P	22 40 46.6	-0.3
KVN				pmax	pmax		
	comp=Z,97nm,1.4s						
K04D	Chiloquin, OR	76.47	37	P	P	22 40 47.0	+0.2
	baz=230						
J04D	Umpqua Nationa	76.66	36	P	P	22 40 48.2	+0.2
	baz=230,SNR=10						
MOD	Modoc Plateau	76.85	38	*e*P	P	22 40 48.2	-0.8
	comp=Z,83nm,1.3s						
I04A	Tendick Farm,	76.85	35	P	P	22 40 48.6	-0.2
	baz=230,SNR=7.9						
Y14A	Wickenburg	77.01	48	*e*P	P	22 40 49.2	-0.7
	comp=Z,31nm,1.0s						
KDAK	Kodiak Island	77.08	11	*e*P	P	22 40 49.0	-0.7
	comp=Z,305nm,1.8s						
KDAK				LR	LR		
	comp=Z,2µm,22.0s						
KDAK	Kodiak Island	77.08	11	*e*P	P	22 40 49.0	-0.7
KDAK				pmax	pmax		
	comp=Z,305nm,1.8s						
KDAK				MLR	MLR		
	comp=Z,2µm,22.0s						
CISI	Cisompet, Garu	77.12	266	*e*P	P	22 40 50.5	-0.6
	comp=Z,364nm,1.6s						
CISI	Cisompet, Garu	77.12	266	P	P	22 40 51.0	0.0
H04D	Lebanon	77.15	35	P	P	22 40 50.7	+0.3
	baz=229,SNR=6.7						
J05D	Fort Rock, OR	77.18	36	P	P	22 40 51.3	+0.4
	baz=231,SNR=26						
G03D	McMinnville, O	77.32	34	P	P	22 40 51.3	-0.1
	baz=229						
H04A	Detroit Lake	77.55	35	*e*P	P	22 40 52.5	-0.2
	comp=Z,158nm,1.6s						
R11A	Troy Canyon, C	77.66	43	*e*P	P	22 40 53.6	-0.1
	comp=Z,49nm,1.3s						
R11A	Troy Canyon, C	77.66	43	P	P	22 40 53.5	-0.1
	baz=236,SNR=44						
PINE	Pine Mountain	77.67	36	*e*P	P	22 40 53.8	+0.2
	comp=Z,123nm,1.2s						
KSRS	Korea Array	77.75	316	P	P	22 40 54.8	+1.0
	comp=Z,8.1nm,1.0s,baz=132,slow=6.9,SNR=16						
KSRS				LR	LR	23 12 15.0	
	comp=Z,710nm,19.3s,baz=116,slow=34						
KSAR	Wonju Array Be	77.77	316	P	P	22 40 54.8	+0.8
KS01	Wonju Array Si	77.78	316	*e*P	P	22 40 53.4	-0.7
TUC	Tucson	77.78	50	*e*P	P	22 40 54.0	-0.4
	comp=Z,230nm,1.8s						
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	Tucson	77.78	50	*e*P	P	22 40 54.0	-0.4
TUC				pmax	pmax		
	comp=Z,230nm,1.8s						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s						
TUC	Tucson	77.78	50	P	P	22 40 54.9	+0.5
	baz=240						
I05D	Terrebonne, OR	77.80	35	P	P	22 40 54.3	+0.2
	baz=230,SNR=11						
F04D	Rainier, OR	78.03	33	P	P	22 40 55.9	+0.6
	baz=229						
WVOR	Wild Horse Val	78.15	38	*e*P	P	22 40 55.5	-0.7
	comp=Z,72nm,1.1s						
WVOR				LR	LR		
	comp=Z,3µm,20.0s						
WVOR	Wild Horse Val	78.15	38	*e*P	P	22 40 55.5	-0.7
WVOR				pmax	pmax		
	comp=Z,72nm,1.1s						
WVOR				MLR	MLR		
	comp=Z,3µm,20.0s						
TYV	Tymovskoe	78.33	333	*e*P	P	22 40 56.3	-0.5
TYV				*e*S	S	22 50 53.5	+4.6
TYV				pmax	pmax		
	comp=Z,52nm,1.6s						
TYV				pmax	pmax		
	comp=Z,700nm,3.3s						
TYV				smax	smax		
	comp=N,500nm,6.4s						
X16A	Lo Mia Camp, P	78.37	48	*e*P	P	22 40 58.0	+0.4
	comp=N,39nm,1.0s						
G05D	Wamic, OR	78.39	35	P	P	22 40 57.2	-0.1
	baz=230						
DBJI	Dramaga	78.42	267	P	P	22 40 58.3	+0.1
319A	Douglas	78.44	52	*e*P	P	22 40 58.3	+0.3
	comp=N,99nm,0.9s						
NLWA	Neilton Lookou	78.46	32	*e*P	P	22 40 57.6	-0.1
	comp=N,75nm,1.4s						
NLWA				LR	LR		
	comp=Z,2µm,19.0s						
E04D	Cinebar	78.57	33	P	P	22 40 58.9	+0.6
	baz=229						
QZH	Quanzhou	78.59	301⇑	*i*P	P	22 41 01.5	+2.7
QZH				S	S	22 50 56.4	+3.6
QZH				LR	LR		
	comp=Z,1µm,21.0s						
CCUT	Cedar City	78.69	45	*e*P	P	22 40 59.8	+0.4
	comp=Z,91nm,1.4s						
F05D	White Salmon	78.72	34	P	P	22 40 58.9	-0.2
	baz=230						
KNB	Kanab	78.76	45	*e*P	P	22 41 00.5	+0.7
	comp=Z,203nm,1.7s						
KNB	Kanab	78.76	45	*e*P	P	22 41 00.5	+0.7
KNB				pmax	pmax		
	comp=Z,203nm,1.7s						
J08A	Circle Bar Ran	78.81	37	*e*P	P	22 40 59.3	-0.5
	comp=Z,94nm,1.2s						
D04E	Lakebay	78.88	33	P	P	22 41 00.5	+0.6
	baz=229						
PSUT	Pine Spring	78.89	44	*e*P	P	22 41 00.4	-0.1
	comp=Z,42nm,0.8s						
SZCU	Shurtz Canyon	78.89	45	*e*P	P	22 41 01.3	+0.7
	comp=Z,95nm,1.4s						
D03D	Eldon	78.95	32	P	P	22 41 00.5	+0.2
	baz=228						
WUAZ	Wupatki	78.98	47	*e*P	P	22 41 01.0	0.0
	comp=Z,146nm,1.8s						
WUAZ				LR	LR		
	comp=Z,1µm,21.0s						
WUAZ	Wupatki	78.98	47	P	P	22 41 01.4	+0.4
	baz=239						
LON	Longmire	79.09	33	*e*P	P	22 41 00.9	-0.3
	comp=Z,114nm,2.0s						
LON	Longmire	79.09	33	*e*P	P	22 41 00.9	-0.3
LON				pmax	pmax		
	comp=Z,114nm,2.0s						
USA0B	Ussuriysk Arra	79.16	323	*e*P	P	22 41 03.7	+2.2
	comp=Z,51nm,1.3s						
USRK	Ussuriysk Ar.	79.16	323	P	P	22 41 03.2	+1.6
	comp=Z,18nm,1.1s,baz=113,slow=4.4,SNR=14						
USRK				LR	LR	23 10 19.5	
	comp=Z,1µm,21.1s,baz=127,slow=31						
HPIG		79.20	57	*e*P	P	22 41 02.5	0.0
	comp=Z,66nm,1.2s						
ELK	Elko	79.23	41	*e*P	P	22 41 01.7	-0.6
	comp=Z,53nm,1.1s						
ELK	Elko	79.23	41	*e*P	P	22 41 01.7	-0.6
ELK				pmax	pmax		
	comp=Z,53nm,1.1s						
ELK	Elko	79.23	41	LR	LR	23 08 33.4	
	comp=Z,2µm,21.8s,baz=238,slow=30						
BRLK	Bradley Lake	79.25	11	*e*P	P	22 41 01.5	-0.3
	comp=Z,60nm,0.9s						
D05A	Enumclaw	79.29	33	*e*P	P	22 41 02.8	+0.6
	comp=Z,244nm,1.5s						
SSE	Sheshan	79.31	307	PFAKE		22 41 10.0	+7.4
SSE				LR	LR		
	comp=Z,1µm,20.0s						
PKCU	Pink Cliffs	79.33	45	*e*P	P	22 41 04.3	+1.2
	comp=Z,339nm,1.6s						
PGC	Sidney	79.52	31	*e*P	P	22 41 02.7	-0.6
	comp=Z,52nm,0.8s						
G08A	Pilot Rock	79.71	36	*e*P	P	22 41 04.0	-0.6
	comp=Z,87nm,1.2s						
SVW2	Sparrevohn	79.73	9	*e*P	P	22 41 03.4	-0.9
	comp=Z,23nm,0.9s						
MTPU	Mount Pierson	79.74	45	*e*P	P	22 41 06.0	+0.7
	comp=Z,188nm,1.6s						
SEW	Seward	79.84	12	*e*P	P	22 41 04.4	-0.5
	comp=Z,61nm,0.9s						
BBB	Bella Bella	79.85	26	LR	LR	23 08 25.0	
	comp=Z,863nm,21.0s,baz=216,slow=30						
A04D	Lummi Island	79.93	31	P	P	22 41 05.6	0.0
	baz=229						
W18A	Petrified Fore	79.93	48	*e*P	P	22 41 06.7	+0.4
	comp=Z,66nm,1.4s						
W18A	Petrified Fore	79.93	48	P	P	22 41 06.5	+0.3
	baz=240						
B05A	Bryant	79.94	32	P	P	22 41 05.8	+0.2
	baz=229						
MSU	Marysvale	79.99	44	*e*P	P	22 41 07.2	+0.7
LTY	Liberty	80.02	33	*e*P	P	22 41 05.9	-0.3
	comp=Z,124nm,1.8s						
HAWA	Hanford	80.08	35	*e*P	P	22 41 06.2	-0.3
	comp=Z,206nm,1.8s						

HAWA				LR	LR		
	comp=Z,4µm,21.0s						
121A	Cookes Peak, D	80.11	51	P	P	22 41 07.9	+0.7
	baz=242						
C06D	Leavenworth	80.33	33	P	P	22 41 07.4	-0.4
	baz=230						
BMO	Blue Mountains	80.38	37	*e*P	P	22 41 07.0	-1.3
	comp=Z,117nm,1.6s						
BMO				*e*PP	PP	22 44 09.9	-2.1
BMO				LR	LR		
	comp=Z,3µm,22.0s						
BMO	Blue Mountains	80.38	37	*e*P	P	22 41 07.0	-1.3
BMO				*e*		22 44 09.9	
BMO				pmax	pmax		
	comp=Z,117nm,1.6s						
BMO				MLR	MLR		
	comp=Z,3µm,22.0s						
E08A	Dider Farm, El	80.40	35	*e*P	P	22 41 08.3	+0.1
	comp=Z,242nm,1.9s						
DUG	Dugway, Tooele	80.47	43	*e*P	P	22 41 08.6	-0.3
	comp=Z,64nm,1.4s						
DUG				LR	LR		
	comp=Z,1µm,21.0s						
DUG	Dugway, Tooele	80.47	43	*e*P	P	22 41 08.6	-0.3
DUG				pmax	pmax		
	comp=Z,64nm,1.4s						
DUG				MLR	MLR		
	comp=Z,1µm,21.0s						
DUG	Dugway, Tooele	80.47	43	P	P	22 41 08.8	-0.1
	baz=237						
RC01	Rabbit Creek A	80.70	11	*e*P	P	22 41 08.7	-0.8
	comp=Z,318nm,1.8s						
BGU	Big Grassy Mou	80.72	42	*e*P	P	22 41 10.2	-0.2
	comp=Z,45nm,1.6s						
MDJ	Mudanjiang	80.78	323	P	P	22 41 11.6	+1.3
MDJ				pP	pP	22 41 22.6	+0.1
MDJ				sP	sP	22 41 27.0	-0.1
MDJ				PP	PP	22 44 15.3	+0.1
MDJ				S	S	22 51 18.0	+2.8
MDJ				sS	sS	22 51 36.3	+0.6
MDJ				SS	SS	22 56 33.3	+3.4
MDJ				pmax	pmax		
	comp=Z,52nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,900nm,3.2s						
MDJ				LR	LR		
	comp=Z,890nm,22.3s						
MDJ				LR	LR		
	comp=Z,1µm,22.3s						
MDJ				LR	LR		
	comp=Z,2µm,22.3s						
MDJ	Mudanjiang	80.78	323	*e*P	P	22 41 10.8	+0.4
	comp=Z,137nm,1.7s						
MDJ				LR	LR		
	comp=Z,2µm,22.0s						
NLU	North Lily Min	80.82	43	*e*P	P	22 41 11.1	+0.2
	comp=Z,20nm,1.2s						
D08A	Wollman Farm,	80.82	34	*e*P	P	22 41 10.2	-0.3
	comp=Z,237nm,1.8s						
NKL	Nikolayevsk	80.83	334	*e*P	P	22 41 09.0	-1.3
NKL				pmax	pmax		
	comp=Z,47nm,1.0s						
KASI	Kota Agung	80.86	267	P	P	22 41 11.5	+0.1
SUA	Susitna One	80.86	11	*e*P	P	22 41 09.4	-1.1
	comp=Z,75nm,0.7s						
Q16A	Castle Valley	80.87	44	*e*P	P	22 41 12.1	+0.9
	comp=Z,32nm,0.9s						
E09A	Wood Farm, Sta	80.91	35	*e*P	P	22 41 10.2	-0.7
	comp=Z,106nm,1.5s						
EYAK	Cordova Ski Ar	81.02	13	*e*P	P	22 41 11.1	-0.1
	comp=Z,131nm,1.3s						
TMUT	Trail Mountain	81.04	44	*e*P	P	22 41 12.8	+0.5
	comp=Z,82nm,0.9s						
GRNR	Gornyy	81.07	330	*e*P	P	22 41 10.8	-0.9
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
F10A	Beach Ranch, E	81.09	36	*e*P	P	22 41 10.9	-1.1
	comp=Z,63nm,1.0s						
MPU	Maple Canyon	81.14	43	*e*P	P	22 41 13.0	+0.4
	comp=Z,28nm,1.0s						
KNK	Knik Glacier	81.24	12	*e*P	P	22 41 11.8	-0.6
	comp=Z,70nm,0.8s						
PMR	Palmer	81.28	11	*e*P	P	22 41 11.6	-0.9
	comp=Z,55nm,1.0s						
PMR	Palmer	81.28	11	*e*P	P	22 41 11.6	-0.9
PMR				pmax	pmax		
	comp=Z,55nm,1.0s						
SPUT	South Promonto	81.30	42	*e*P	P	22 41 13.4	+0.1
	comp=Z,91nm,1.5s						
HLID	Hailey	81.33	39	*e*P	P	22 41 13.2	-0.3
	comp=Z,47nm,0.9s						
HLID				LR	LR		
	comp=Z,2µm,20.0s						
HLID	Hailey	81.33	39	P	P	22 41 13.8	+0.3
	baz=236						
HVU	Hansel Valley	81.35	41	*e*P	P	22 41 13.3	-0.3
	comp=Z,36nm,1.0s						
HVU	Hansel Valley	81.35	41	*e*P	P	22 41 13.3	-0.3
HVU				pmax	pmax		
	comp=Z,36nm,1.0s						
WRAK	Wrangell Islan	81.39	22	*e*P	P	22 41 13.0	-0.2
	comp=Z,98nm,1.5s						
WRAK				LR	LR		
	comp=Z,2µm,19.0s						
SRU	San Rafael Swe	81.40	44	*e*P	P	22 41 14.0	0.0
	comp=Z,177nm,1.7s						
SRU	San Rafael Swe	81.40	44	*e*P	P	22 41 14.0	0.0
SRU				pmax	pmax		
	comp=Z,177nm,1.7s						
B08A	Colville Reser	81.41	33	*e*P	P	22 41 12.2	-1.4
	comp=Z,79nm,1.4s						
CTU	Camp Tracy	81.42	43	*e*P	P	22 41 14.4	+0.4
	comp=Z,34nm,1.1s						
LWLI	Liwa	81.42	267	P	P	22 41 14.5	-0.1
P17A	Butcher Ranch,	81.44	44	*e*P	P	22 41 14.8	+0.6
	comp=Z,66nm,1.1s						
LAZ	Ladron	81.46	50	*e*P	P	22 41 15.2	+0.8
MDSI	Maura Dua	81.46	268	P	P	22 41 14.3	-0.3
	comp=Z,42nm,0.8s,comp=Z,933nm						
LENM	Lemitar	81.47	50	*e*P	P	22 41 15.1	+0.7
NJ2	Nanjing	81.51	307	*e*P	P	22 41 15.1	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,680nm,15.0s						
NJ2				LR	LR		
	comp=Z,810nm,18.1s						
NJ2				LR	LR		
	comp=Z,2µm,17.9s						
MNTX	Cornudas Mount	81.53	53	*e*P	P	22 41 14.4	-0.2
	comp=Z,77nm,1.3s						
MNTX				LR	LR		
	comp=Z,1µm,21.0s						
MNTX	Cornudas Mount	81.53	53	P	P	22 41 15.1	+0.4
	baz=243						
DIV	Divide	81.54	13	*e*P	P	22 41 12.1	-1.9
	comp=Z,98nm,1.0s						
JLU	Jordanelle	81.57	43	*e*P	P	22 41 15.1	+0.1
	comp=Z,30nm,1.0s						
LLLB	Lillooet	81.58	30	*e*P	P	22 41 14.1	-0.4
	comp=Z,42nm,0.9s						
C09A	Chrisman Ranch	81.63	34	*e*P	P	22 41 13.8	-0.9
	comp=Z,209nm,1.8s						
SML	Sawmill	81.63	12	*e*P	P	22 41 14.3	-0.2
	comp=Z,103nm,1.6s						
SML	Sawmill	81.63	12	*e*P	P	22 41 14.3	-0.2
SML				pmax	pmax		
	comp=Z,103nm,1.6s						
BNM	Barren Site	81.72	50	*e*P	P	22 41 16.4	+0.5
LPM	Los Pinos Moun	81.79	50	*e*P	P	22 41 16.9	+0.7
TX31	Lajitas Ar. Si	81.83	56	*e*P	P	22 41 16.0	-0.4
TXAR	Lajitas Array	81.83	56	P	P	22 41 16.7	+0.4
	comp=Z,49nm,1.2s,baz=219,slow=5.8,SNR=101						
TXAR				PKKPbc	PKKPbc	22 59 49.3	+1.2
	comp=Z,0.4nm,0.6s,baz=107,slow=3.0,SNR=3.7						
TXAR				LR	LR	23 09 44.0	
	comp=Z,877nm,21.6s,baz=0.0,slow=30						
KLU	Klutina	81.83	13	*e*P	P	22 41 15.6	0.0
	comp=Z,49nm,1.0s						
MVCO	Mesa Verde	81.83	47	*e*P	P	22 41 16.3	-0.1
	comp=Z,73nm,1.4s						
MVCO				LR	LR		
	comp=Z,1µm,20.0s						
MVCO	Mesa Verde	81.83	47	P	P	22 41 16.2	-0.1
	baz=241						
PV05	Paradox Valley	81.85	46	*e*P	P	22 41 17.1	+0.6
	comp=Z,185nm,1.4s						
SCM	Sheep Creek Mo	81.85	12	*e*P	P	22 41 15.0	-0.7
	comp=Z,86nm,0.8s						
SCM	Sheep Creek Mo	81.85	12	*e*P	P	22 41 15.0	-0.7
SCM				pmax	pmax		
	comp=Z,86nm,0.8s						
TCUT	Toone Canyon	81.86	42	*e*P	P	22 41 16.5	0.0
	comp=Z,665nm,1.8s						
HWUT	Hardware Ranch	82.02	42	*e*P	P	22 41 16.6	-0.6
	comp=Z,90nm,2.0s						
HWUT				LR	LR		
	comp=Z,2µm,21.0s						
PV09	Paradox Valley	82.03	46	*e*P	P	22 41 17.6	+0.1
PV10	Paradox Valley	82.03	46	*e*P	P	22 41 17.5	+0.1
	comp=Z,59nm,0.9s						
PV19	Morning Glory	82.04	46	*e*P	P	22 41 17.9	+0.4
	comp=Z,98nm,1.1s						
PV17	East Wray Mesa	82.04	46	*e*P	P	22 41 17.8	+0.3
	comp=Z,166nm,1.4s						
PV14	Lion Creek, Pa	82.04	46	*e*P	P	22 41 17.8	+0.3
	comp=Z,107nm,1.1s						
PV20	West Nyswonger	82.07	46	*e*P	P	22 41 18.1	+0.6
	comp=Z,114nm,1.2s						
PV13	Radium Mtn., P	82.08	46	*e*P	P	22 41 17.6	-0.1
	comp=Z,198nm,1.6s						
PV16	Nyswonger Mesa	82.09	46	*e*P	P	22 41 17.6	-0.1
	comp=Z,90nm,1.2s						
PV23	Carpenter Ridg	82.09	46	*e*P	P	22 41 18.2	+0.5
	comp=Z,87nm,0.9s						
PV03	Paradox Valley	82.11	46	*e*P	P	22 41 17.5	-0.3
	comp=Z,144nm,1.4s						
PV11	David Mesa, Pa	82.11	46	*e*P	P	22 41 18.0	+0.2
	comp=Z,147nm,1.3s						
PV04	Paradox Valley	82.14	46	*e*P	P	22 41 18.1	+0.2
	comp=Z,67nm,0.9s						
PMSA	Palmer Station	82.16	156	PFAKE		22 41 30.0	+13
PMSA				LR	LR		
	comp=Z,2µm,20.0s						
PV02	Paradox Valley	82.16	46	*e*P	P	22 41 18.4	+0.3
	comp=Z,134nm,1.3s						
PV12	Saucer Basin,	82.17	46	*e*P	P	22 41 18.6	+0.4
	comp=Z,246nm,1.4s						
JIS	Juneau Island	82.17	20	*e*P	P	22 41 17.3	0.0
	comp=Z,118nm,1.8s						
PV21	Cone Mtn., Par	82.17	46	*e*P	P	22 41 18.6	+0.5
	comp=Z,149nm,1.4s						
ANMO	Albuquerque	82.21	50	*e*P	P	22 41 18.0	-0.3
	comp=Z,112nm,1.5s						
ANMO				LR	LR		
	comp=Z,1µm,20.0s						
ANMO	Albuquerque	82.21	50	*e*P	P	22 41 18.0	-0.3
ANMO				pmax	pmax		
	comp=Z,112nm,1.5s						
ANMO				MLR	MLR		
	comp=Z,1µm,20.0s						
ANMO	Albuquerque	82.21	50	P	P	22 41 18.7	+0.3
	baz=242						
PV01	Paradox Valley	82.24	46	*e*P	P	22 41 18.4	-0.1
	comp=Z,62nm,0.9s						
BALM	Baldy	82.24	15	*e*P	P	22 41 17.2	-0.6
	comp=Z,42nm,0.9s						
BALM	Baldy	82.24	15	*e*P	P	22 41 17.2	-0.6
BALM				pmax	pmax		
	comp=Z,42nm,0.9s						
BESE	Bessie Mountai	82.26	19	*e*P	P	22 41 18.0	+0.1
	comp=Z,67nm,1.4s						
MA2	Magadan	82.27	342	*e*P	P	22 41 16.9	-1.0
	comp=Z,76nm,1.0s						
MA2				LR	LR		
	comp=Z,692nm,20.0s						
MA2	Magadan	82.27	342⇑	*e*P	P	22 41 17.2	-0.6
MA2				pmax	pmax		
	comp=Z,81nm,1.0s						
PV07	Paradox Valley	82.33	46	*e*P	P	22 41 18.9	-0.1
	comp=Z,131nm,1.5s						
KLR	Kul'dur	82.38	327	*i* P	P	22 41 19.2	+0.6
PV15	Paradox Valley	82.40	46	*e*P	P	22 41 19.2	-0.1
	comp=Z,58nm,0.9s						
NEW	Newport	82.52	34	*e*P	P	22 41 18.8	-0.7
	comp=Z,63nm,1.6s						
NEW	Newport	82.52	34	*e*P	P	22 41 18.8	-0.7
NEW				pmax	pmax		
	comp=Z,63nm,1.6s						
NEW	Newport	82.52	34	P	P	22 41 18.6	-0.9
	baz=233						
NEW	Newport	82.52	34	LR	LR	23 10 21.1	
	comp=Z,2µm,21.8s,baz=224,slow=30						
DL2	Dalian	82.74	315⇑	*i*P	P	22 41 20.8	+0.1
DL2				S	S	22 51 37.6	+2.0
DL2				pmax	pmax		
	comp=Z,59nm,0.9s						
DL2				pmax	pmax		
	comp=Z,1µm,4.8s						
DL2				LR	LR		
	comp=Z,340nm,20.5s						
DL2				LR	LR		
	comp=Z,590nm,18.6s						
DL2				LR	LR		
	comp=Z,720nm,18.7s						
CN2	Changchun	82.79	320	*e*P	P	22 41 21.8	+0.9
CN2				*e*S	S	22 51 37.6	+1.6
CN2				pmax	pmax		
	comp=Z,50nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,600nm,22.0s						
CN2				LR	LR		
	comp=Z,700nm,22.0s						
CN2				LR	LR		
	comp=Z,800nm,24.0s						
TRF	Thorofare Moun	82.79	10	*e*P	P	22 41 19.5	-1.2
	comp=Z,61nm,0.8s						
HARP	HAARP	82.82	13	*e*P	P	22 41 20.5	-0.1
	comp=Z,62nm,1.0s						
SKAG	Skagway	82.83	18	*e*P	P	22 41 21.4	+0.7
	comp=Z,176nm,1.6s						
SNY	Shenyang	82.92	318	⇑P	P	22 41 21.1	-0.5
SNY				pmax	pmax		
	comp=Z,59nm,1.5s						
SNY				pmax	pmax		
	comp=Z,860nm,5.4s						
AHID	Auburn Hatcher	82.93	41	*e*P	P	22 41 21.6	-0.3
	comp=Z,89nm,1.2s						
AHID				LR	LR		
	comp=Z,2µm,21.0s						
MCMT	McKenzie Canyo	82.96	39	*e*P	P	22 41 22.1	0.0
DHY	Denali Highway	82.97	12	*e*P	P	22 41 20.7	-0.9
	comp=Z,24nm,0.8s						
RND	Reindeer	83.00	11	*e*P	P	22 41 20.8	-0.8
	comp=Z,96nm,0.9s						
RND	Reindeer	83.00	11	*e*P	P	22 41 20.8	-0.8
RND				pmax	pmax		
	comp=Z,96nm,0.9s						
S22A	4UR Ranch, Cre	83.25	47	*e*P	P	22 41 24.0	+0.1
	comp=Z,120nm,1.0s						
S22A	4UR Ranch, Cre	83.25	47	P	P	22 41 24.6	+0.7
	baz=242						
MCK	McKinley	83.29	11	*e*P	P	22 41 21.7	-1.3
	comp=Z,125nm,0.8s						
MCK	McKinley	83.29	11	*e*P	P	22 41 21.7	-1.3
MCK				pmax	pmax		
	comp=Z,125nm,0.8s						
HYT	Haines Junctio	83.31	17	*e*P	P	22 41 23.4	0.0
	comp=Z,69nm,1.1s						
REDW	Red Top Meadow	83.39	41	*e*P	P	22 41 24.1	-0.3
	comp=Z,110nm,1.2s						
TPAW	Teton Pass	83.40	41	*e*P	P	22 41 23.0	-1.4
	comp=Z,100nm,1.3s						
DLMT	Dillon	83.41	38	*e*P	P	22 41 24.2	-0.1
	comp=Z,95nm,1.3s						
FXWY	Fox Creek	83.43	40	*e*P	P	22 41 23.8	-0.7
	comp=Z,95nm,1.4s						
O20A	White River Ci	83.44	44	*e*P	P	22 41 24.9	+0.2
	comp=Z,46nm,0.8s						
O20A	White River Ci	83.44	44	P	P	22 41 24.7	0.0
	baz=241						
MSO	Missoula	83.44	37	*e*P	P	22 41 23.6	-0.8
	comp=Z,94nm,1.4s						
MSO	Missoula	83.44	37	P	P	22 41 23.6	-0.8
	baz=236						
LNIG	Linares	83.45	61	*e*P	P	22 41 23.7	-1.1
	comp=Z,78nm,0.8s						
SNOW	Snow King Moun	83.51	41	*e*P	P	22 41 25.0	0.0
	comp=Z,98nm,1.0s						
MENT	Mentasta	83.60	13	*e*P	P	22 41 24.1	-0.6
	comp=Z,45nm,1.0s						
IMW	Indian Meadow	83.62	40	*e*P	P	22 41 25.1	-0.5
	comp=Z,135nm,1.4s						
MOOW	Moose Ponds	83.66	40	*e*P	P	22 41 25.4	-0.3
	comp=Z,134nm,1.8s						
LOHW	Long Hollow	83.68	41	*e*P	P	22 41 25.4	-0.4
	comp=Z,108nm,1.5s						
QIZ	Qiongzhong	83.75	292	P	P	22 41 27.4	+1.0
QIZ				S	S	22 51 52.3	+5.6
QIZ				pmax	pmax		
	comp=Z,320nm,8.0s						
QIZ				LR	LR		
	comp=Z,360nm,14.7s						
QIZ				LR	LR		
	comp=Z,600nm,27.0s						
QIZ				LR	LR		
	comp=Z,1µm,27.5s						
QIZ	Qiongzhong	83.75	292	PFAKE		22 41 40.0	+14
QIZ				LR	LR		
	comp=Z,123nm,22.0s						
DLBC	Dease Lake	83.75	21	*e*P	P	22 41 24.9	-0.7
	comp=Z,190nm,2.0s						
DLBC	Dease Lake	83.75	21	LR	LR	23 11 54.6	
	comp=Z,1µm,20.5s,baz=156,slow=31						
QLMT	Earthquake Lak	83.82	39	*e*P	P	22 41 26.8	+0.4
SMCO	Snowmass	83.83	46	*e*P	P	22 41 26.9	-0.1
	comp=Z,135nm,1.4s						
FLWY	Flagg Ranch	83.86	40	*e*P	P	22 41 26.9	+0.2
	comp=Z,174nm,1.3s						
BW06	Boulder Array	83.90	42	*e*P	P	22 41 25.8	-1.2
	comp=Z,66nm,1.1s						
BW06				LR	LR		
	comp=Z,2µm,20.0s						
BW06	Boulder Array	83.90	42	P	P	22 41 26.4	-0.6
	baz=240						
PD31	Pinedale Array	83.90	42	*e*P	P	22 41 26.1	-0.8
PDAR	Pinedale Array	83.90	42	P	P	22 41 26.2	-0.8
	comp=Z,36nm,0.9s,baz=214,slow=3.2,SNR=202						
PDAR				PKKP	PKKPdf	22 59 35.0	-1.3
	comp=Z,0.4nm,0.5s,baz=159,slow=8.9,SNR=6.3						
PDAR				PKKPbc	PKKPbc	22 59 43.7	-0.5
	comp=Z,1.8nm,1.0s,baz=54,slow=2.6,SNR=5.7						
PDAR				LR	LR	23 11 33.9	
	comp=Z,1µm,21.1s,baz=254,slow=31						
YPP	Pitchstone Pla	83.90	40	*e*P	P	22 41 27.6	+0.6
	comp=Z,88nm,1.6s						
YHB	Horse Butte	83.92	39	*e*P	P	22 41 27.4	+0.4
	comp=Z,102nm,1.1s						
WHY	Whitehorse	83.93	18	*e*P	P	22 41 26.4	-0.1
	comp=Z,37nm,1.0s						
YFT	Old Faithful	83.97	40	*e*P	P	22 41 28.9	+1.6
	comp=Z,69nm,1.2s						
YMR	Madison River	84.01	39	*e*P	P	22 41 28.1	+0.6
	comp=Z,346nm,1.8s						
RIDG	Independ'e Rid	84.07	12	*e*P	P	22 41 26.5	-0.7
	comp=Z,104nm,1.2s						
H17A	Grant Village	84.10	40	*e*P	P	22 41 29.1	+1.1
	comp=Z,59nm,1.1s						
H17A	Grant Village	84.10	40	P	P	22 41 29.1	+1.1
	baz=239						
BOZ	Bozeman (W)	84.11	38	*e*P	P	22 41 27.7	-0.2
	comp=Z,192nm,1.6s						
BOZ				LR	LR		
	comp=Z,2µm,22.0s						
BOZ	Bozeman (W)	84.11	38	*e*P	P	22 41 27.7	-0.2
BOZ				pmax	pmax		
	comp=Z,192nm,1.6s						
BOZ				MLR	MLR		
	comp=Z,2µm,22.0s						
BOZ	Bozeman (W)	84.11	38	P	P	22 41 28.0	+0.1
	baz=238						
WRH	Wood River Hil	84.11	11	*e*P	P	22 41 26.2	-1.0
	comp=Z,192nm,1.0s						
YHH	Holmes Hill	84.14	39	*e*P	P	22 41 28.5	+0.2
	comp=Z,109nm,1.3s						
SDCO	Great Sand Dun	84.19	48	*e*P	P	22 41 27.9	-0.7
	comp=Z,54nm,1.3s						
SDCO				LR	LR		
	comp=Z,1µm,22.0s						
SDCO	Great Sand Dun	84.19	48	P	P	22 41 28.8	+0.1
	baz=243						
MLY	Manley	84.19	9	*e*P	P	22 41 26.4	-1.2
	comp=Z,52nm,1.0s						
YNR	Norris Junctio	84.21	40	*e*P	P	22 41 29.5	+0.9
	comp=Z,66nm,1.2s						
HDA	Harding Lake	84.27	11	*e*P	P	22 41 26.8	-1.2
	comp=Z,83nm,0.9s						
HDA	Harding Lake	84.27	11	P	P	22 41 27.3	-0.7
	baz=205						
LKWY	Lake	84.30	40	*e*P	P	22 41 29.9	+0.9
	comp=Z,82nm,1.1s						
LKWY				LR	LR		
	comp=Z,2µm,21.0s						
WHN	Wuhan	84.35	304	⇑P	P	22 41 31.5	+2.3
WHN				S	S	22 51 57.5	+5.3
WHN				LR	LR		
	comp=Z,2µm,26.6s						
SCRK	Sand Creek	84.46	13	*e*P	P	22 41 28.3	-0.9
	comp=Z,55nm,1.0s						
MSTX	Muleshoe	84.50	52	*e*P	P	22 41 30.2	+0.1
	comp=Z,283nm,1.5s						
MSTX	Muleshoe	84.50	52	P	P	22 41 29.9	-0.1
	baz=245						
TCOL	CIGO, UAF Yank	84.52	11	P	P	22 41 28.6	-0.7
	baz=204						
COLA	College	84.53	11	*e*P	P	22 41 28.1	-1.1
	comp=Z,237nm,0.8s						
COLA				LR	LR		
	comp=Z,3µm,21.0s						
COLA	College	84.53	11	*e*P	P	22 41 28.2	-1.1
COLA				pmax	pmax		
	comp=Z,237nm,0.8s						
COLA				MLR	MLR		
	comp=Z,3µm,21.0s						
COLA	College	84.53	11	*e*P	P	22 41 28.3	-1.0
MDM	Murphy Dome	84.54	10	*e*P	P	22 41 27.9	-1.5
	comp=Z,122nm,1.0s						
HRY	Holter Researc	84.59	37	*e*P	P	22 41 29.7	-0.5
IL1	Eielson Array	84.61	11	*e*P	P	22 41 26.8	-2.9
ILAR	Eielson Array	84.61	11	P	P	22 41 28.3	-1.4
	comp=Z,19nm,0.8s,baz=230,slow=6.6,SNR=133						
ILAR				PKiKP	PKiKP	22 46 43.8	+0.9
	comp=Z,0.6nm,0.7s,baz=213,slow=4.3,SNR=4.6						
ILAR				PKKP	PKKPdf	22 59 38.4	+2.8
	comp=Z,0.4nm,0.6s,baz=323,slow=2.5,SNR=5.2						
ILAR				LR	LR	23 15 07.3	
	comp=Z,372nm,18.8s,baz=212,slow=33						
ILB	Eielson Array	84.61	11	*e*P	P	22 41 28.1	-1.6
CMIG	Matias Romero	84.61	70	P	P	22 41 30.8	0.0
	comp=Z,15nm,0.8s,baz=266,slow=5.6,SNR=18						
TIA	Tai'an	84.65	310	P	P	22 41 30.8	+0.2
TIA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SEY	Seymchan	84.65	345	*e*P	P	22 41 29.4	-0.6
IM3	Indian Mountai	84.65	8	*e*P	P	22 41 28.8	-1.1
T25A	Trinidad	84.69	49	*e*P	P	22 41 31.1	+0.1
	comp=Z,40nm,1.1s						
T25A	Trinidad	84.69	49	P	P	22 41 31.0	-0.1
	baz=243						
WALA	Waterton Lakes	84.72	35	*e*P	P	22 41 30.0	-0.8
	comp=Z,124nm,1.6s						
POKR	Poker Plat Res	84.82	11	P	P	22 41 30.4	-0.4
	baz=205						
833A	Chaparral WMA,	84.84	58	*e*P	P	22 41 32.4	+0.6
	comp=Z,36nm,0.9s						
833A	Chaparral WMA,	84.84	58	P	P	22 41 31.8	0.0
	baz=247						
RWWY	Rawlins	84.88	43	*e*P	P	22 41 30.7	-1.3
	comp=Z,86nm,1.0s						
Q24A	Divide	84.99	47	P	P	22 41 32.8	+0.1
	baz=243						
ISCO	Idaho Springs	85.06	46	*e*P	P	22 41 32.2	-0.7
	comp=Z,74nm,1.8s						
ISCO				LR	LR		
	comp=Z,1µm,20.0s						
ISCO	Idaho Springs	85.06	46	*e*P	P	22 41 32.3	-0.7
ISCO				pmax	pmax		
	comp=Z,74nm,1.8s						
ISCO				MLR	MLR		
	comp=Z,1µm,20.0s						
ISCO	Idaho Springs	85.06	46	P	P	22 41 33.0	0.0
	baz=242						
RLMT	Red Lodge	85.28	40	*e*P	P	22 41 33.8	-0.1
	comp=Z,60nm,1.3s						
RLMT				LR	LR		
	comp=Z,2µm,22.0s						
RLMT	Red Lodge	85.28	40	P	P	22 41 33.9	+0.1
	baz=240						
N23A	Red Feather La	85.34	45	*e*P	P	22 41 34.4	0.0
	comp=Z,60nm,1.4s						

N23A	**Red Feather La**	**85.34**	**45**	P	**P**	**22 41 34.1**	**-0.2**
	baz=242						
JCT	**Junction City**	**85.36**	**56**	*e*P	**P**	**22 41 33.6**	**-0.8**
	comp=Z,58nm,1.4s						
JCT				LR	LR		
	comp=Z,885nm,20.0s						
JCT	**Junction City**	**85.36**	**56**	*e*P	**P**	**22 41 33.6**	**-0.8**
JCT				pmax	pmax		
	comp=Z,58nm,1.4s						
JCT				MLR	MLR		
	comp=Z,885nm,20.0s						
JCT	**Junction City**	**85.36**	**56**	P	**P**	**22 41 34.0**	**-0.4**
	baz=247						
GCMT	**Greycliff**	**85.38**	**39**	*e*P	**P**	**22 41 34.4**	**+0.1**
PRP	**Porcupine Dome**	**85.53**	**11**	*e*P	**P**	**22 41 33.8**	**-0.8**
	comp=Z,120nm,1.0s						
DAWY	**Dawson**	**85.55**	**14**	*e*P	**P**	**22 41 34.1**	**-0.5**
	comp=Z,152nm,1.4s						
AMTX	**Amarillo**	**85.70**	**52**	*e*P	**P**	**22 41 35.8**	**-0.2**
	comp=Z,119nm,1.1s						
AMTX	**Amarillo**	**85.70**	**52**	P	**P**	**22 41 35.7**	**-0.4**
	baz=245						
MAW	**Mawson**	**85.71**	**199**	P	**P**	**22 41 37.1**	**+1.7**
	comp=Z,79nm,0.7s,baz=130,slow=7.1,SNR=25						
MAW				LR	LR	23 16 39.1	
	comp=Z,2µm,21.6s,baz=117,slow=33						
EGAK	**Eagle**	**85.76**	**13**	*e*P	**P**	**22 41 34.8**	**-0.7**
	comp=Z,90nm,1.1s						
EGAK				LR	LR		
	comp=Z,2µm,21.0s						
RDOG	**Red Dog Mine**	**85.77**	**4**	*e*P	**P**	**22 41 35.7**	**+0.2**
	comp=Z,43nm,0.9s						
K22A	**Casper**	**85.79**	**43**	*e*P	**P**	**22 41 36.0**	**-0.4**
	comp=Z,69nm,1.5s						
K22A	**Casper**	**85.79**	**43**	P	**P**	**22 41 35.9**	**-0.5**
	baz=242						
PHWY	**Pilot Hill**	**85.86**	**44**	*e*P	**P**	**22 41 36.3**	**-0.7**
	comp=Z,28nm,1.4s						
PDSI	**Padang**	**86.06**	**270**	P	**P**	**22 41 38.3**	**+0.1**
COCO	**West Island**	**86.18**	**258**	PFAKE		22 41 50.0	+11
COCO				LR	LR		
	comp=Z,2µm,20.0s						
COLD	**Coldfoot**	**86.32**	**9**	*e*P	**P**	**22 41 38.4**	**+0.2**
	comp=Z,59nm,1.4s						
ABTX	**Abilene, Hawle**	**86.33**	**54**	*e*P	**P**	**22 41 39.0**	**-0.1**
	comp=Z,550nm,1.8s						
ABTX	**Abilene, Hawle**	**86.33**	**54**	P	**P**	**22 41 39.1**	**0.0**
	baz=247						
EGMT	**Eagleton**	**86.48**	**37**	*e*P	**P**	**22 41 38.9**	**-0.7**
	comp=Z,90nm,1.4s						
EGMT				LR	LR		
	comp=Z,3µm,20.0s						
EGMT	**Eagleton**	**86.48**	**37**	P	**P**	**22 41 39.1**	**-0.5**
	baz=239						
BILL	**Bilibino**	**86.70**	**352**	*e*P	**P**	**22 41 39.3**	**-0.7**
	comp=Z,137nm,1.1s						
BILL				LR	LR		
	comp=Z,2µm,22.0s						
BILL	**Bilibino**	**86.70**	**352**	*e*P	**P**	**22 41 39.3**	**-0.7**
BILL				pmax	pmax		
	comp=Z,137nm,1.1s						
BILL				MLR	MLR		
	comp=Z,2µm,22.0s						
KSCO	**Kaye Shedlock’**	**86.77**	**47**	P	**P**	**22 41 41.2**	**0.0**
	baz=244						
CCIG	**Comitan**	**86.81**	**72**	*e*P	**P**	**22 41 42.4**	**+0.4**
	comp=Z,68nm,1.3s						
BJT	**Baijiatuau**	**87.00**	**314**	*e*P	**P**	**22 41 42.5**	**+0.4**
	comp=Z,91nm,1.3s						
BJT				LR	LR		
	comp=Z,787nm,20.0s						
BJT	**Baijiatuau**	**87.00**	**314**	*e*P	**P**	**22 41 42.6**	**+0.4**
BJT				pmax	pmax		
	comp=Z,91nm,1.3s						
BJT				MLR	MLR		
	comp=Z,787nm,20.0s						
BJI	**Beijing**	**87.00**	**314**	P	**P**	**22 41 42.6**	**+0.5**
BJI				S	**S**	**22 52 19.8**	**+1.9**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJI				LR	LR		
	comp=Z,340nm,13.9s						
BJI				LR	LR		
	comp=Z,390nm,19.4s						
BJI				LR	LR		
	comp=Z,490nm,25.8s						
435B	**Jarrell**	**87.24**	**57**	*e*P	**P**	**22 41 44.1**	**+0.6**
	comp=Z,79nm,1.0s						
435B	**Jarrell**	**87.24**	**57**	P	**P**	**22 41 43.9**	**+0.4**
	baz=248						
ZEA	**Zeya**	**87.32**	**329**	*e*P	**P**	**22 41 43.0**	**-0.4**
ZEA				pmax	pmax		
	comp=Z,400nm,7.0s						
MNSI	**Mandailing Nat**	**87.41**	**272**	P	**P**	**22 41 44.7**	**-0.1**
	comp=Z,64nm,0.8s,comp=Z,1µm						
TOLK	**Toolik Lake Re**	**87.72**	**9**	*e*P	**P**	**22 41 44.8**	**-0.3**
	comp=Z,29nm,0.9s						
TOLK	**Toolik Lake Re**	**87.72**	**9**	P	**P**	**22 41 45.2**	**+0.1**
	baz=203						
GO06	**Curarrehue**	**87.78**	**131**	*e*P	**P**	**22 41 47.4**	**+1.1**
	comp=Z,79nm,1.3s						
WHTX	**Lake Whitney,**	**87.80**	**56**	*e*P	**P**	**22 41 46.5**	**+0.3**
	comp=Z,343nm,1.9s						
WHTX	**Lake Whitney,**	**87.80**	**56**	P	**P**	**22 41 46.4**	**+0.2**
	baz=248						
WMOK	**Wichita Mounta**	**87.83**	**53**	*e*P	**P**	**22 41 46.1**	**-0.2**
	comp=Z,37nm,1.4s						
WMOK				LR	LR		
	comp=Z,1µm,20.0s						
WMOK	**Wichita Mounta**	**87.83**	**53**	*e*P	**P**	**22 41 46.1**	**-0.2**
WMOK				pmax	pmax		
	comp=Z,37nm,1.4s						
WMOK				MLR	MLR		
	comp=Z,1µm,20.0s						
WMOK	**Wichita Mounta**	**87.83**	**53**	P	**P**	**22 41 45.8**	**-0.5**
	baz=247						
LAO	**LASA Array**	**87.90**	**39**	PFAKE		22 42 00.0	+14
LAO				LR	LR		
	comp=Z,2µm,22.0s						
LAO	**LASA Array**	**87.90**	**39**	P	**P**	**22 41 46.8**	**+0.3**
	baz=242						
APG	**El Apazote**	**87.92**	**74**	LR	LR	23 13 26.5	
	comp=Z,634nm,19.8s,baz=272,slow=30						
OGNE	**Ogallala**	**88.01**	**46**	PFAKE		22 42 00.0	+13
OGNE				LR	LR		
	comp=Z,1µm,19.0s						
OGNE	**Ogallala**	**88.01**	**46**	P	**P**	**22 41 46.4**	**-0.8**
	baz=245						
PLCA	**Paso Flores**	**88.02**	**132**	*e*P	**P**	**22 41 49.0**	**+1.6**
	comp=Z,23nm,0.9s						
PLCA	**Paso Flores**	**88.02**	**132**	*e*P	**P**	**22 41 49.2**	**+1.9**
RSSD	**Black Hills**	**88.08**	**42**	*e*P	**P**	**22 41 46.2**	**-1.3**
	comp=Z,28nm,1.0s						
RSSD	**Black Hills**	**88.08**	**42**	*e*P	**P**	**22 41 46.2**	**-1.3**
RSSD				pmax	pmax		
	comp=Z,28nm,1.0s						
RSSD	**Black Hills**	**88.08**	**42**	P	**P**	**22 41 46.3**	**-1.3**
	baz=243						
EPYK	**Eagle Plains**	**88.10**	**14**	*e*P	**P**	**22 41 46.5**	**-0.4**
	comp=Z,40nm,1.0s						
EPYK	**Eagle Plains**	**88.10**	**14**	P	**P**	**22 41 46.5**	**-0.4**
	baz=215						
ENH	**Enshi**	**88.11**	**302**	*e*P	**P**	**22 41 48.4**	**+0.6**
	comp=Z,149nm,1.6s						
ENH				LR	LR		
	comp=Z,629nm,22.0s						
HKT	**Hockley**	**88.34**	**58**	*e*P	**P**	**22 41 48.8**	**+0.1**
	comp=Z,123nm,1.8s						
HKT	**Hockley**	**88.34**	**58**	*e*P	**P**	**22 41 48.8**	**+0.1**
HKT				pmax	pmax		
	comp=Z,123nm,1.8s						
PSI	**Prapat**	**88.64**	**273**	*e*P	**P**	**22 41 50.6**	**-0.2**
	comp=Z,68nm,1.0s						
PSI	**Prapat**	**88.64**	**273**	*e*P	**P**	**22 41 50.6**	**-0.2**
PSI				pmax	pmax		
	comp=Z,68nm,1.0s						
TIY	**Taiyuan**	**88.69**	**310**	*e*P	**P**	**22 41 52.0**	**+1.6**
TIY				SKS	**SKSac**	**22 52 18.4**	**+1.9**
TIY				S	**S**	**22 52 35.8**	**+1.5**
TIY				pmax	pmax		
	comp=Z,43nm,0.8s						
TIY				LR	LR		
	comp=Z,490nm,15.4s						
TIY				LR	LR		
	comp=Z,370nm,13.7s						
TIY				LR	LR		
	comp=Z,850nm,21.3s						
CBKS	**Cedar Bluff**	**88.74**	**49**	*e*P	**P**	**22 41 51.1**	**+0.5**
	comp=Z,30nm,0.9s						
CBKS				LR	LR		
	comp=Z,2µm,21.0s						
CBKS	**Cedar Bluff**	**88.74**	**49**	P	**P**	**22 41 49.8**	**-0.7**
	baz=246						
HIA	**Hailar**	**88.97**	**323**	*e*P	**P**	**22 41 51.0**	**-0.4**
	comp=Z,59nm,0.9s						
HIA				LR	LR		
	comp=Z,1µm,21.0s						
HIA	**Hailar**	**88.97**	**323**	*e*P	**P**	**22 41 51.0**	**-0.4**
HIA				pmax	pmax		
	comp=Z,59nm,0.9s						
HIA				MLR	MLR		
	comp=Z,1µm,21.0s						
GYA	**Guiyang**	**89.09**	**298**	⇑*i*P	**P**	**22 41 53.8**	**+1.2**
GYA				pP	pP	22 42 04.6	-0.4
GYA				PP	**PP**	**22 45 26.0**	**+2.7**
GYA				SKS	**SKSac**	**22 52 18.9**	**-0.6**
GYA				S	**S**	**22 52 37.4**	**-1.3**
GYA				sS	pS	22 52 55.5	+1.1
GYA				SS	**SS**	**22 58 34.3**	**+1.0**
GYA				pmax	pmax		
	comp=Z,40nm,0.9s						
GYA				pmax	pmax		
	comp=Z,160nm,6.3s						
GYA				LR	LR		
	comp=Z,820nm,18.9s						
GYA				LR	LR		
	comp=Z,810nm,18.6s						
GYA				LR	LR		
	comp=Z,890nm,18.8s						
GSI	**Gunungsitoli**	**89.48**	**272**	*e*P	**P**	**22 41 56.2**	**+1.6**
	comp=Z,124nm,0.8s						
CHAI	**Chaiyaphum**	**89.77**	**287**	P	**P**	**22 41 57.4**	**+1.6**
PATY	**Pattaya**	**89.88**	**284**	P	**P**	**22 41 59.4**	**+3.0**
NATX	**Nacogdoches**	**89.92**	**57**	*e*P	**P**	**22 41 57.3**	**+1.1**
	comp=Z,459nm,1.9s						
NATX				LR	LR		
	comp=Z,1µm,21.0s						
NATX	**Nacogdoches**	**89.92**	**57**	P	**P**	**22 41 56.9**	**+0.7**
	baz=249						
XAN	**Xi'an**	**89.93**	**306**	P	**P**	**22 41 57.4**	**+1.1**
XAN				pP	pP	22 42 05.9	-2.7
XAN				SKS	**SKSac**	**22 52 25.3**	**+1.3**
XAN				S	**S**	**22 52 44.9**	**-1.1**
XAN				SS	**SS**	**22 58 45.0**	**-0.1**
XAN				pmax	pmax		
	comp=Z,40nm,1.7s						
XAN				pmax	pmax		
	comp=Z,500nm,2.8s						
XAN				LR	LR		
	comp=Z,430nm,18.6s						
XAN				LR	LR		
	comp=Z,720nm,23.0s						
XAN				LR	LR		
	comp=Z,800nm,23.5s						
XAN	**Xi'an**	**89.93**	**306**	*e*P	**P**	**22 41 57.0**	**+0.7**
	comp=Z,359nm,1.3s						
DGMT	**Dagmar**	**89.94**	**38**	*e*P	**P**	**22 41 53.9**	**-2.0**
DGMT				LR	LR		
	comp=Z,3µm,21.0s						
DGMT	**Dagmar**	**89.94**	**38**	P	**P**	**22 41 56.0**	**+0.1**
	baz=243						
INK	**Inuvik**	**90.41**	**14**	*e*P	**P**	**22 41 56.5**	**-1.1**
	comp=Z,33nm,0.9s						
INK	**Inuvik**	**90.41**	**14**	*e*P	**P**	**22 41 56.5**	**-1.1**
INK				pmax	pmax		
	comp=Z,33nm,0.9s						
INK	**Inuvik**	**90.41**	**14**	P	**P**	**22 41 56.5**	**-1.1**
	baz=189,slow=10						
SYO	**Syowa Base**	**90.44**	**191**	⇓*i*P	**P**	**22 41 57.0**	**-1.0**
SYO	**Syowa Base**	**90.44**	**191**	⇑*e*sP	sP	22 42 09.2	-5.5
ROC1	**El Roble**	**90.50**	**125**	*e*P	**P**	**22 42 01.0**	**+1.6**
	comp=Z,30nm,0.6s						
TUL1	**Leonard**	**90.53**	**52**	P	**P**	**22 41 58.8**	**-0.2**
	baz=249						
HHC	**Hu-ho-hao-te**	**90.54**	**313**	*e*P	**P**	**22 41 59.8**	**+0.8**
HHC				pP	pP	22 42 10.1	-1.3
HHC				sP	sP	22 42 13.4	-2.5
HHC				S	**S**	**22 52 52.5**	**+1.0**
HHC				pmax	pmax		
	comp=Z,91nm,1.3s						
HHC				pmax	pmax		
	comp=Z,650nm,6.4s						
HHC				LR	LR		
	comp=Z,440nm,17.4s						
HHC				LR	LR		
	comp=Z,400nm,17.5s						
HHC				LR	LR		
	comp=Z,500nm,17.0s						
VNA3	**Neumayer Olymp**	**90.66**	**175**	P	**P**	**22 41 59.8**	**+0.8**
PEL	**Peldehue**	**90.70**	**125**	*e*P	**P**	**22 42 01.3**	**+1.3**
	comp=Z,158nm,1.3s						
PEL	**Peldehue**	**90.70**	**125**	P	**P**	**22 42 01.3**	**+1.3**
PEL				pmax	pmax		
	comp=Z,158nm,1.3s						
SNAA	**Sanae**	**90.70**	**177**	P	**P**	**22 41 59.9**	**+0.6**
SNAA	**Sanae**	**90.70**	**177**	*e*P	**P**	**22 41 59.4**	**+0.1**
	comp=Z,55nm,1.1s						
SNAA	**Sanae**	**90.70**	**177**	*e*P	**P**	**22 41 59.4**	**+0.1**
SNAA				pmax	pmax		
	comp=Z,55nm,1.1s						
PKDT	**Phuket**	**90.73**	**278**	P	**P**	**22 42 02.8**	**+2.4**
BGNE	**Belgrade**	**90.88**	**47**	P	**P**	**22 42 00.2**	**-0.3**
	baz=247						
PBKT	**Sadao Pong**	**90.91**	**287**	P	**P**	**22 42 03.0**	**+1.9**
PHET	**Kaeng Krachan**	**91.03**	**283**	P	**P**	**22 42 04.1**	**+2.4**
EFI	**East Falkland**	**91.06**	**146**	PFAKE		22 42 10.0	+8.8
EFI				LR	LR		
	comp=Z,2µm,19.0s						
KSU1	**Kansas State U**	**91.10**	**49**	PFAKE		22 42 10.0	+8.5
KSU1				LR	LR		
	comp=Z,2µm,21.0s						
KSU1	**Kansas State U**	**91.10**	**49**	P	**P**	**22 42 00.8**	**-0.7**
	baz=248						
YAK	**Yakutsk**	**91.14**	**337**	*e*P	**P**	**22 41 59.5**	**-1.6**
YAK				*e*		22 45 35.0	
YAK				*e*PPP	PPP	22 47 35.9	
YAK				*e*S	**SKSac**	**22 52 31.0**	**+1.5**
YAK				*e*		22 52 53.4	
YAK				pmax	pmax		
	comp=Z,224nm,0.9s						
YAK				pmax	pmax		
	comp=E,47nm,1.3s						
YAK				pmax	pmax		
	comp=N,37nm,0.9s						
YAK				pmax	pmax		
	comp=Z,99nm,0.9s						
YAK				smax	smax		
	comp=E,1µm,5.4s						
YAK				smax	smax		
	comp=N,650nm,4.3s						
VNA2	**Neumayer--Watz**	**91.15**	**175**	P	**P**	**22 42 02.3**	**+1.0**
	baz=191,slow=3.2						
VNA1	**Neumayer--Stat**	**91.35**	**175**	P	**P**	**22 42 03.5**	**+1.4**
BTO	**Baotou**	**91.53**	**312**	*e*P	**P**	**22 42 04.8**	**+1.2**
JTS	**JuntasAbangare**	**91.59**	**80**	*e*P	**P**	**22 42 05.5**	**+1.1**
	comp=N,88nm,1.0s						
JTS				LR	LR		
	comp=Z,860nm,19.0s						
UTTA	**Uttaradit**	**91.65**	**288**	P	**P**	**22 42 06.2**	**+1.7**
MIAR	**Mount Ida**	**91.75**	**54**	*e*P	**P**	**22 42 04.8**	**+0.2**
	comp=Z,34nm,1.2s						
MIAR				LR	LR		
	comp=Z,904nm,19.0s						
MIAR	**Mount Ida**	**91.75**	**54**	*e*P	**P**	**22 42 04.9**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,34nm,1.2s						
MIAR				MLR	MLR		
	comp=Z,904nm,19.0s						
MIAR	**Mount Ida**	**91.75**	**54**	P	**P**	**22 42 04.9**	**+0.2**
	baz=250						
NVL	**N'lazarevskaya**	**91.77**	**182**	*e*P	**P**	**22 42 04.1**	**0.0**
NVL				*e*S	**SKSac**	**22 52 34.6**	**+1.3**
NVL				pmax	pmax		
	comp=Z,21nm,1.2s						
W39A	**Magazine**	**91.81**	**54**	*e*P	**P**	**22 42 05.5**	**+0.6**
	comp=Z,57nm,1.3s						
W39A				*e*pP	**pP**	**22 42 17.7**	**+0.6**
W39A	**Magazine**	**91.81**	**54**	P	**P**	**22 42 04.9**	**0.0**
	baz=250						
NANT	**Nan**	**91.84**	**289**	P	**P**	**22 42 06.6**	**+1.2**
Z41A	**Richland Creek**	**91.91**	**56**	P	**P**	**22 42 06.1**	**+0.6**
	baz=250						
KMI	**Kunming**	**92.00**	**296**	P	**P**	**22 42 07.8**	**+1.5**
KMI				PP	**PP**	**22 45 46.3**	**-0.2**
KMI				S	**S**	**22 53 00.6**	**-5.0**
KMI				pmax	pmax		
	comp=Z,46nm,0.9s						
KMI				pmax	pmax		
	comp=Z,380nm,7.7s						
KMI				LR	LR		
	comp=Z,300nm,14.3s						
KMI				LR	LR		
	comp=Z,690nm,24.2s						
KMI				LR	LR		
	comp=Z,920nm,23.5s						
UTHA	**Uthaitani**	**92.00**	**286**	P	**P**	**22 42 07.8**	**+1.6**
HHAR	**Hobbs**	**92.06**	**53**	*e*P	**P**	**22 42 06.1**	**0.0**
YKA	**Yellowknife Ar**	**92.11**	**23**	P	**P**	**22 42 04.9**	**-0.7**
	comp=Z,7.8nm,0.9s,baz=234,slow=4.2,SNR=64						
YKA				PKKPbc	**PKKPdf**	**22 59 19.9**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=42,slow=2.3,SNR=9.4						
YKA				PKPPKP	**P'P'df**	**23 07 32.0**	**+2.7**
	comp=Z,0.4nm,0.9s,baz=55,slow=2.5,SNR=3.9						
YKA				LR	LR	23 16 06.9	
	comp=Z,138nm,21.6s,baz=250,slow=31						
YKB5	**Yellowknife Ar**	**92.11**	**23**	*e*P	**P**	**22 42 04.4**	**-1.2**
YKW3	**Yellowknife Ar**	**92.15**	**23**	*e*P	**P**	**22 42 04.0**	**-1.8**
LCO	**Las Campanas**	**92.19**	**121**	*e*P	**P**	**22 42 08.8**	**+1.5**
	comp=Z,338nm,2.0s						
LCO				LR	LR		
	comp=Z,923nm,21.0s						
LCO	**Las Campanas**	**92.19**	**121**	*e*P	**P**	**22 42 08.8**	**+1.5**
LCO				pmax	pmax		
	comp=Z,338nm,2.0s						
LCO				MLR	MLR		
	comp=Z,923nm,21.0s						
LCO	**Las Campanas**	**92.19**	**121**	*e*P	**P**	**22 42 09.3**	**+2.0**
X40A	**Basin Creek Fa**	**92.30**	**55**	*e*P	**P**	**22 42 07.9**	**+0.7**
	comp=Z,58nm,1.9s						
X40A	**Basin Creek Fa**	**92.30**	**55**	P	**P**	**22 42 06.9**	**-0.3**
	baz=250						
MDND	**Maddock**	**92.46**	**40**	P	**P**	**22 42 06.7**	**-0.9**
	baz=246						
NNA	**Nana**	**92.53**	**103**	PFAKE		22 42 20.0	+11
NNA				LR	LR		
	comp=Z,318nm,20.0s						
LAMP	**Lampang**	**92.72**	**288**	P	**P**	**22 42 11.1**	**+1.6**
UMPA	**Umpang Tak**	**92.73**	**286**	P	**P**	**22 42 11.1**	**+1.5**
UALR	**University of**	**92.78**	**54**	*e*P	**P**	**22 42 10.1**	**+0.7**
	comp=Z,52nm,1.1s						
ECSD	**EROS Data Cent**	**92.81**	**45**	*e*P	**P**	**22 42 08.1**	**-1.3**
	comp=Z,5.2nm,0.8s						
ECSD				LR	LR		
	comp=Z,877nm,22.0s						
ECSD	**EROS Data Cent**	**92.81**	**45**	P	**P**	**22 42 08.4**	**-1.0**
	baz=248						
U40A	**Yellville**	**92.92**	**53**	P	**P**	**22 42 09.7**	**-0.3**
	baz=250						
CD2	**Chengdu**	**92.97**	**301**	P	**P**	**22 42 11.0**	**+0.5**
CD2				pP	pP	22 42 22.0	-0.8
CD2				sP	sP	22 42 26.3	-1.1
CD2				SKS	**SKSac**	**22 52 41.6**	**+0.2**
CD2				S	**ScS**	**22 53 14.3**	**-1.2**
CD2				SS	**SS**	**22 59 30.1**	**+1.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,640nm,6.7s						
CD2				LR	LR		
	comp=Z,1µm,15.2s						
CD2				LR	LR		
	comp=Z,1µm,19.6s						
CD2				LR	LR		
	comp=Z,2µm,15.1s						
W41B	**Gary Mavity, V**	**92.99**	**54**	*e*P	**P**	**22 42 10.9**	**+0.6**
W41B				*e*pP	**pP**	**22 42 23.2**	**+0.6**
W41B	**Gary Mavity, V**	**92.99**	**54**	P	**P**	**22 42 10.3**	**0.0**
	baz=251						
WHAR	**Wooly Hollow**	**92.99**	**54**	*e*P	**P**	**22 42 10.8**	**+0.4**
CM31	**Chiang Mai Arr**	**93.32**	**288**	*e*P	**P**	**22 42 14.1**	**+1.8**
CMAR	**Chiang Mai Arr**	**93.32**	**288**	P	**P**	**22 42 13.7**	**+1.4**
	comp=Z,13nm,0.8s,baz=102,slow=2.7,SNR=84						
CMAR				PKKPbc	**PKKPdf**	**22 59 18.4**	**0.0**
	comp=Z,0.5nm,0.3s,baz=292,slow=4.6,SNR=5.8						
CMAR				LR	LR	23 20 55.5	
	comp=Z,614nm,20.6s,baz=96,slow=33						
VBMS	**Vicksburg**	**93.39**	**57**	P	**P**	**22 42 13.4**	**+1.1**
	baz=252						
CMMT	**Chiang Mai**	**93.42**	**289**	P	**P**	**22 42 13.7**	**+1.0**
CHTO	**Chiang Mai**	**93.43**	**289**	*e*P	**P**	**22 42 13.9**	**+1.2**
	comp=Z,28nm,0.7s						
CHTO				LR	LR		
	comp=Z,723nm,20.0s						
CHTO	**Chiang Mai**	**93.43**	**289**	P	**P**	**22 42 13.9**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,28nm,0.7s						
CHTO	**Chiang Mai**	**93.43**	**289**	P	**P**	**22 42 13.8**	**+1.0**
	comp=Z,213nm,0.8s,comp=Z,3µm						
CHTO	**Chiang Mai**	**93.43**	**289**	*e*P	**P**	**22 42 14.0**	**+1.2**
W42A	**Bald Knob**	**93.58**	**54**	P	**P**	**22 42 13.2**	**+0.1**
	baz=251						
Y43A	**Makayla and Ka**	**93.61**	**56**	P	**P**	**22 42 14.1**	**+0.8**
	baz=251						
U41A	**Viola**	**93.62**	**53**	P	**P**	**22 42 12.9**	**-0.4**
	baz=251						
X43A	**Marvell**	**93.84**	**55**	P	**P**	**22 42 14.5**	**+0.2**
	baz=252						
FFC	**Flin Flon**	**93.93**	**33**	*e*P	**P**	**22 42 13.7**	**-0.6**
	comp=Z,60nm,1.9s						
FFC				LR	LR		
	comp=Z,2µm,20.0s						
FFC	**Flin Flon**	**93.93**	**33**	*e*P	**P**	**22 42 13.7**	**-0.6**
FFC				pmax	pmax		
	comp=Z,60nm,1.9s						
FFC				MLR	MLR		
	comp=Z,2µm,20.0s						
T41A	**Mountain View**	**93.97**	**53**	P	**P**	**22 42 14.6**	**-0.2**
	baz=251						
145A	**Houston Renfro**	**93.99**	**57**	P	**P**	**22 42 13.7**	**-1.3**
	baz=252						
U42A	**Revenden**	**94.14**	**53**	P	**P**	**22 42 15.1**	**-0.5**
	baz=251						
S41A	**Jillco Farms,**	**94.16**	**52**	P	**P**	**22 42 15.3**	**-0.5**
	baz=251						
T42A	**Van Buren**	**94.47**	**53**	*e*P	**P**	**22 42 16.6**	**-0.6**
	comp=Z,25nm,1.0s						
T42A	**Van Buren**	**94.47**	**53**	P	**P**	**22 42 16.8**	**-0.3**
	baz=252						
V43A	**Jonesboro**	**94.50**	**54**	P	**P**	**22 42 17.4**	**+0.1**
	baz=252						
SCIA	**State Center**	**94.51**	**48**	PFAKE		22 42 30.0	+13
SCIA				LR	LR		
	comp=Z,2µm,20.0s						
SCIA	**State Center**	**94.51**	**48**	P	**P**	**22 42 16.9**	**-0.3**
	baz=251						
LZH	**Lanzhou**	**94.54**	**306**	⇑P	**P**	**22 42 18.6**	**+0.9**
LZH				pP	pP	22 42 30.0	-0.1
LZH				sP	sP	22 42 33.3	-1.4
LZH				PP	**PP**	**22 46 03.1**	**-3.1**
LZH				SKS	**SKSac**	**22 52 49.8**	**-0.2**
LZH				S	**S**	**22 53 25.3**	**-2.2**
LZH				sS	pS	22 53 45.8	+2.3
LZH				SS	**SS**	**22 59 53.3**	**+1.8**
LZH				pmax	pmax		
	comp=Z,51nm,1.5s						
LZH				pmax	pmax		
	comp=Z,360nm,4.9s						
LZH				LR	LR		
	comp=Z,440nm,18.8s						
LZH				LR	LR		
	comp=Z,740nm,16.6s						
LZH				LR	LR		
	comp=Z,1µm,19.7s						
R41A	**Rosebud**	**94.66**	**51**	P	**P**	**22 42 16.9**	**-1.0**
	baz=251						
CCM	**Cathedral Cave**	**94.68**	**52**	*e*P	**P**	**22 42 17.5**	**-0.6**
CCM				*e*pP	**pwP**	**22 42 32.8**	**0.0**
CCM	**Cathedral Cave**	**94.68**	**52**	*e*P	**P**	**22 42 17.5**	**-0.6**
CCM				_e_*PP	**pwP**	**22 42 32.8**	**0.0**
CCM	**Cathedral Cave**	**94.68**	**52**	P	**P**	**22 42 17.1**	**-1.0**
	baz=252						
OTAV	**Otavalo**	**94.77**	**91**	PFAKE		22 42 30.0	+10
OTAV				LR	LR		
	comp=Z,585nm,22.0s						
OTAV	**Otavalo**	**94.77**	**91**	*e*P	**P**	**22 42 19.4**	**-0.2**
U43A	**Rector**	**94.79**	**54**	P	**P**	**22 42 18.0**	**-0.6**
	baz=252						
PBMO	**Poplar Bluff**	**94.90**	**53**	*e*P	**P**	**22 42 19.2**	**+0.1**
	comp=Z,29nm,1.1s						

S42A	Caledonia	94.93	52	P	P	22 42 18.3	-0.9
	baz=252						
Q41A	Truxton	94.98	51	P	P	22 42 18.7	-0.7
	baz=252						
OXF	Oxford	94.99	56	P	P	22 42 19.2	-0.3
	baz=252						
V44A	Blytheville	95.01	54	P	P	22 42 18.9	-0.7
	baz=252						
R42A	Luebbering	95.09	52	P	P	22 42 19.4	-0.6
	baz=252						
T43A	Greenville	95.10	53	P	P	22 42 19.2	-0.8
	baz=252						
M39A	Webster	95.11	48	P	P	22 42 18.8	-1.1
	baz=251						
FVM	French Village	95.28	52	*e*P	P	22 42 20.9	+0.1
	comp=Z,51nm,1.3s						
P41A	Barry, Barry	95.33	50	P	P	22 42 20.7	-0.3
	baz=252						
N40A	Mertquake, Sal	95.33	49	P	P	22 42 20.1	-0.9
	baz=252						
147A	Livingston	95.34	58	P	P	22 42 21.5	+0.3
	baz=253						
W45A	Hickory Valley	95.36	55	P	P	22 42 20.6	-0.6
	baz=252						
S43A	Fulton Ridge,	95.41	52	P	P	22 42 21.0	-0.5
	baz=252						
L39A	Vinton	95.43	48	P	P	22 42 20.7	-0.8
	baz=251						
M40A	Post Highland	95.55	48	P	P	22 42 21.3	-0.6
	baz=252						
O41A	Passleys Farm,	95.60	50	P	P	22 42 21.6	-0.6
	baz=252						
T44A	Benton	95.63	53	P	P	22 42 21.7	-0.7
	baz=252						
ULM	Lac du Bonnet	95.64	39	*e*P	P	22 42 20.6	-1.5
ULM				*e*pP	pP	22 42 36.0	+1.6
ULM				PKKPbc	PKKPbc	22 59 13.5	-1.1
ULM	Lac du Bonnet	95.64	39	*e*P	P	22 42 20.6	-1.5
ULM				*e**PP	pP	22 42 36.0	+1.6
ULM	Lac du Bonnet	95.64	39	P	P	22 42 20.6	-1.5
	comp=Z,8.3nm,0.8s,baz=275,slow=4.4,SNR=14						
ULM				PKKPbc	PKKPbc	22 59 13.5	-1.1
	comp=Z,1.3nm,0.6s,baz=101,slow=10,SNR=2.3						
ULM				LR	LR	23 18 46.7	
	comp=Z,3µm,21.7s,baz=253,slow=31						
K39A	Oelwein	95.70	47	P	P	22 42 21.5	-1.1
	baz=252						
R43A	Red Bud	95.74	52	P	P	22 42 22.1	-0.8
	baz=252						
N41A	Harden Midland	95.81	49	P	P	22 42 22.5	-0.6
	baz=252						
349A	Repton	95.83	59	P	P	22 42 23.0	-0.4
	baz=253						
P42A	Winchester	95.83	50	*e*P	P	22 42 22.9	-0.4
	comp=Z,52nm,1.3s						
P42A	Winchester	95.83	50	P	P	22 42 22.8	-0.5
	baz=252						
BOD	Bodaibo	95.83	329	*e*P	P	22 42 20.5	-2.3
BOD				pmax	pmax		
	comp=Z,12nm,1.1s						
SPMN	Marine on St.	95.88	44	*e*P	P	22 42 23.2	-0.2
SPMN				*e*pP	pwP	22 42 38.1	0.0
SPMN	Marine on St.	95.88	44	P	P	22 42 22.6	-0.8
	baz=251						
BRAL	Brewton	95.89	59	PFAKE		22 42 30.0	+6.3
BRAL				LR	LR		
	comp=Z,880nm,20.0s						
L40A	Anamosa	95.96	48	P	P	22 42 22.4	-1.5
	baz=252						
J39A	Decorah	96.03	47	P	P	22 42 22.7	-1.4
	baz=252						
LVC	Limon Verde	96.04	116	PFAKE		22 42 40.0	+15
LVC				LR	LR		
	comp=Z,2µm,22.0s						
LVC	Limon Verde	96.04	116	*e*P	P	22 42 27.2	+2.0
H38A	Maiden Rock	96.06	45	P	P	22 42 23.4	-0.8
	baz=251						
BCIP	Isla Barro Col	96.08	82	PFAKE		22 42 40.0	+15
BCIP				LR	LR		
	comp=Z,643nm,19.0s						
ULN	Ulaanbaatar	96.09	318	*e*P	P	22 42 23.9	-0.5
	comp=Z,16nm,0.8s						
ULN				LR	LR		
	comp=Z,655nm,22.0s						
ULN	Ulaanbaatar	96.09	318	*e*P	P	22 42 24.0	-0.5
ULN				pmax	pmax		
	comp=Z,16nm,0.8s						
ULN				MLR	MLR		
	comp=Z,655nm,22.0s						
Q43A	New Douglas	96.11	51	P	P	22 42 24.1	-0.5
	baz=252						
F37A	Hinrichs Farm,	96.16	44	P	P	22 42 24.0	-0.7
	baz=251						
X47A	Russelville	96.21	56	P	P	22 42 24.2	-0.9
	baz=253						
K40A	Colesburg	96.22	47	P	P	22 42 24.7	-0.3
	baz=252						
M41A	Milan	96.24	49	P	P	22 42 24.8	-0.3
	baz=252						
I39A	Houston	96.31	46	P	P	22 42 24.4	-1.0
	baz=252						
R44A	Waltonville	96.37	52	P	P	22 42 25.1	-0.6
	baz=253						
V46A	Holladay	96.38	55	P	P	22 42 25.6	-0.3
	baz=253						
N42A	Yates City	96.44	49	P	P	22 42 25.3	-0.7
	baz=252						
P43A	Skaggs, Pawnee	96.45	51	P	P	22 42 25.6	-0.5
	baz=253						
LRAL	Lakeview Retre	96.47	58	P	P	22 42 25.9	-0.5
	baz=253						
L41A	Preston	96.48	48	P	P	22 42 25.1	-1.1
	baz=252						
SONA1	Songino Array	96.50	318	*e*P	P	22 42 25.7	-0.6
SONM	Songino Array	96.50	318	P	P	22 42 26.0	-0.3
	comp=Z,5.8nm,0.8s,baz=125,slow=3.7,SNR=37						
SONM				PP	PP	22 46 18.0	-3.0
	comp=Z,1.2nm,1.1s,baz=90,slow=7.6,SNR=3.6						
SONM				LR	LR	23 23 38.6	
	comp=Z,223nm,19.5s,baz=132,slow=34						
U46A	Springville	96.50	54	P	P	22 42 26.0	-0.4
	baz=253						
G38A	Ridgeland	96.50	45	P	P	22 42 25.4	-0.8
	baz=252						
350A	Dozier	96.55	59	P	P	22 42 26.5	-0.3
	baz=254						
Q44A	Meyer Farm, Va	96.61	51	P	P	22 42 25.9	-0.9
	baz=253						
W47A	Westpoint	96.63	55	P	P	22 42 26.3	-0.8
	baz=253						
WVT	Waverly	96.70	54	P	P	22 42 26.3	-1.0
	baz=253						
MNMC	Minye Minye	96.71	112	*e*P	P	22 42 29.7	+1.6
	comp=Z,92nm,1.6s						
J40A	Soldiers Grove	96.71	47	P	P	22 42 26.4	-0.8
	baz=252						
F38A	Pierce - Schro	96.73	44	P	P	22 42 26.2	-1.0
	baz=252						
H39A	Augusta	96.73	45	P	P	22 42 26.5	-0.8
	baz=252						
250A	Grady	96.76	59	P	P	22 42 26.4	-1.3
	baz=254						
K41A	Shullsburg	96.78	48	P	P	22 42 26.7	-0.8
	baz=252						
X48A	Hartselle	96.84	56	P	P	22 42 27.0	-1.0
	baz=254						
V47A	Nunnelly	96.86	55	P	P	22 42 27.1	-0.9
	baz=253						
HDIL	Hopedale	96.89	50	PFAKE		22 42 40.0	+12
HDIL				LR	LR		
	comp=Z,2µm,21.0s						
Z49A	Columbiana	96.89	57	P	P	22 42 28.0	-0.2
	baz=254						
JFWS	Jewell Farm	96.91	47	PFAKE		22 42 40.0	+12
JFWS				LR	LR		
	comp=Z,2µm,21.0s						
JFWS	Jewell Farm	96.91	47	P	P	22 42 27.2	-0.9
	baz=253						
T46A	Princeton	96.92	53	P	P	22 42 28.0	-0.2
	baz=253						
I40A	Norwalk	96.95	46	P	P	22 42 27.2	-1.1
	baz=252						
R45A	Skylar, Fairfi	96.98	52	P	P	22 42 27.6	-1.0
	baz=253						
G39A	Holcombe	97.00	45	P	P	22 42 27.4	-1.1
	baz=252						
L42A	Oliver, Polo	97.05	48	P	P	22 42 27.5	-1.2
	baz=253						
P44A	Sand Creek, Wi	97.07	51	P	P	22 42 28.2	-0.7
	baz=253						
W48A	Pulaski	97.12	56	P	P	22 42 28.5	-0.8
	baz=254						
150A	Eclectic	97.14	58	P	P	22 42 28.5	-0.9
	baz=254						
Y49A	Blount Mountai	97.17	57	P	P	22 42 28.5	-1.1
	baz=254						
J41A	Loganville	97.21	47	P	P	22 42 28.2	-1.3
	baz=253						
U47A	Clarksville	97.21	54	P	P	22 42 28.8	-0.8
	baz=254						
S46A	Don Dixon Farm	97.24	53	P	P	22 42 28.7	-1.0
	baz=254						
Q45A	Warren Harvey,	97.25	52	P	P	22 42 28.4	-1.3
	baz=253						
H40A	Chili	97.32	46	P	P	22 42 28.9	-1.1
	baz=253						
F39A	Loretta	97.36	44	P	P	22 42 29.1	-1.0
	baz=252						
V48A	Smith Brothers	97.38	55	P	P	22 42 29.6	-0.8
	baz=254						
M43A	Waltham Townsh	97.39	49	P	P	22 42 29.4	-0.9
	baz=253						
Z50A	Ashland	97.40	58	P	P	22 42 30.3	-0.3
	baz=254						
X49A	Woodville	97.42	56	P	Pdif	22 42 30.8	+0.1
	baz=254						
251A	Midway	97.49	59	P	P	22 42 29.9	-1.1
	baz=254						
K42A	Prairie Point,	97.50	48	P	P	22 42 30.1	-0.7
	baz=253						
T47A	Sharon Grove	97.50	54	*e*P	Pdif	22 42 30.9	-0.1
	comp=Z,17nm,1.0s						
T47A	Sharon Grove	97.50	54	P	P	22 42 30.5	-0.5
	baz=254						
R46A	Gibon Southern	97.54	52	P	P	22 42 30.3	-0.8
	baz=254						
EYMN	Ely	97.60	42	PFAKE		22 42 40.0	+8.8
EYMN				LR	LR		
	comp=Z,1µm,20.0s						
EYMN	Ely	97.60	42	P	P	22 42 30.3	-0.8
	baz=252						
W49A	Belvidere	97.64	56	P	P	22 42 31.2	-0.4
	baz=254						
E39A	Mellen	97.74	44	P	P	22 42 30.7	-1.1
	baz=253						
U48A	Cassie Pea, Po	97.81	54	P	P	22 42 31.6	-0.7
	baz=254						
J42A	Columbus	97.82	47	P	P	22 42 31.8	-0.4
	baz=253						
H41A	Junction City	97.83	46	P	P	22 42 31.7	-0.5
	baz=253						
S47A	Hartford	97.85	53	P	P	22 42 31.8	-0.6
	baz=254						
F40A	Park Falls	97.89	44	P	P	22 42 31.4	-1.1
	baz=253						
O45A	Potomac	97.95	50	P	P	22 42 32.6	-0.3
	baz=254						
T48A	Bowling Green	98.09	54	P	P	22 42 32.9	-0.7
	baz=254						
V49A	McMinnville	98.10	55	P	P	22 42 32.7	-1.0
	baz=254						
E40A	Wakefield	98.19	44	P	P	22 42 32.8	-1.0
	baz=253						
152A	Waverly Hall	98.21	58	P	P	22 42 33.8	-0.5
	baz=254						
U49A	Red Boiling Sp	98.40	54	P	P	22 42 34.4	-0.6
	baz=254						
GTA	Gaotai	98.57	309	*e*P	Pdif	22 42 36.5	+0.6
GTA				pP	pP	22 42 46.8	-1.5
GTA				sP	sP	22 42 51.0	-1.8
GTA				S	S	22 53 59.6	-2.3
GTA				sS	pS	22 54 16.0	-2.0
GTA				SS	SS	23 00 49.9	+1.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,150nm,7.8s						
GTA				LR	LR		
	comp=Z,450nm,21.3s						
GTA				LR	LR		
	comp=Z,830nm,22.9s						
GTA				LR	LR		
	comp=Z,1µm,22.2s						
Z52A	Williamson	98.59	58	P	P	22 42 35.4	-0.5
	baz=255						
COWI	Conover	98.60	44	PFAKE		22 42 50.0	+14
COWI				LR	LR		
	comp=Z,3µm,22.0s						
X51A	Calhoun	98.61	57	P	P	22 42 35.7	-0.2
	baz=255						
V50A	Pikevile	98.71	55	P	P	22 42 35.8	-0.6
	baz=255						
T49A	Edmonton	98.75	54	P	P	22 42 36.0	-0.5
	baz=255						
P47A	Martinsville	98.82	51	P	P	22 42 36.3	-0.5
	baz=255						
LPAZ	La Paz	99.04	110	P	Pdif	22 42 40.5	+1.3
	comp=Z,2.2nm,0.9s,baz=284,slow=2.7,SNR=5.8						
LPAZ				PP	PP	22 46 39.8	-1.6
	comp=Z,0.5nm,0.7s,baz=277,slow=5.2,SNR=4.0						
LPAZ				PKKPbc	PKKPbc	22 59 04.7	+0.1
	comp=Z,2.2nm,0.7s,baz=208,slow=0.4,SNR=8.1						
LPAZ				LR	LR	23 16 55.2	
	comp=Z,1µm,21.5s,baz=264,slow=29						
LPAZ	La Paz	99.04	110	*e*P	Pdif	22 42 39.0	-0.2
254A	Abbeville	99.19	59	P	Pdif	22 42 38.2	-0.4
	baz=255						
ZAK	Zakamensk	99.22	320	*e*P	Pdif	22 42 37.4	-1.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
M46A	Old House Fiel	99.27	50	P	Pdif	22 42 37.7	-1.0
	baz=255						
R49A	Shelbyville	99.33	53	P	Pdif	22 42 38.7	-0.4
	baz=255						
TLY	Talaya	99.37	321	PFAKE		22 42 50.0	+11
TLY				LR	LR		
	comp=Z,431nm,22.0s						
TLY	Talaya	99.37	321	*i* P	Pdif	22 42 38.7	-0.3
GOGA	Godfrey	99.42	58	PFAKE		22 42 50.0	+10
GOGA				LR	LR		
	comp=Z,927nm,22.0s						
FCC	Fort Churchill	99.46	31	*e*P	Pdif	22 42 38.2	-0.9
	comp=Z,12nm,1.2s						
FCC	Fort Churchill	99.46	31	*e*P	Pdif	22 42 38.2	-0.9
FCC				pmax	pmax		
	comp=Z,12nm,1.2s						
DWPF	Disney Wildern	99.77	64	*e*P	Pdif	22 42 42.6	+1.3
MTDJ	Mount Denham	100.71	74	PFAKE		22 43 00.0	+14
MTDJ				LR	LR		
	comp=Z,811nm,19.0s						
GLMI	Grayling	101.34	47	PFAKE		22 43 00.0	+12
GLMI				LR	LR		
	comp=Z,3µm,22.0s						
AAM	Ann Arbor	101.44	49	PFAKE		22 43 00.0	+12
AAM				LR	LR		
	comp=Z,1µm,20.0s						
ACSO	Alum Creek Sta	101.46	51	PFAKE		22 43 00.0	+11
ACSO				LR	LR		
	comp=Z,2µm,22.0s						
NHSC	New Hope	102.02	59	PFAKE		22 43 00.0	+8.8
NHSC				LR	LR		
	comp=Z,509nm,19.0s						
BLA	Blacksburg	102.74	55	PFAKE		22 43 10.0	+16
BLA				LR	LR		
	comp=Z,1µm,21.0s						
LSA	Lhasa	103.14	297	PFAKE		22 43 10.0	+13
LSA				LR	LR		
	comp=Z,533nm,22.0s						
CNNC	Cliffs of the	104.33	57	PFAKE		22 43 10.0	+8.6
CNNC				LR	LR		
	comp=Z,1µm,19.0s						
SDV	Santo Domingo	104.72	85	PFAKE		22 43 20.0	+16
SDV				LR	LR		
	comp=Z,385nm,20.0s						
CBN	Corbin Frederi	105.30	54	PFAKE		22 47 30.0	+10
CBN				LR	LR		
	comp=Z,1µm,21.0s						
RAMN	Ramite	106.48	294	*e*P	PKiKP	22 47 22.8	+0.4
SDDR	Presa de Saban	106.64	75	PFAKE		22 47 30.0	+7.3
SDDR				LR	LR		
	comp=Z,1µm,21.0s						
JIRN	Jiri	106.98	294	*e*P	PKiKP	22 47 22.9	-0.6
BINY	Binghamton	107.01	50	PFAKE		22 47 30.0	+7.3
BINY				LR	LR		
	comp=Z,2µm,21.0s						
GUN	Gumba	107.30	294	*e*P	PKiKP	22 47 23.9	-0.2
PKI	Pulchoki	107.64	294	*e*P	PKiKP	22 47 24.4	-0.3
PKIN	Phulchoki	107.65	294	*e*P	PKiKP	22 47 24.4	-0.2
KKN	Kakani	107.80	294	*e*P	PKiKP	22 47 24.4	-0.4
DMN	Daman	107.91	294	*e*P	PKiKP	22 47 24.5	-0.6
WMQ	Urumqi	108.34	311	*e*Pdif	Pdif	22 43 20.3	+1.2
WMQ				S	Sdif	22 55 20.9	-2.3
WMQ				AMB	AMB		
	comp=Z,480nm,4.9s						
WMQ				LR	LR		
	comp=Z,810nm,17.3s						
WMQ				LR	LR		
	comp=Z,660nm,16.9s						
WMQ				LR	LR		
	comp=Z,680nm,20.5s						
LONY	Lake Ozonia	108.35	48	PFAKE		22 47 40.0	+15
LONY				LR	LR		
	comp=Z,2µm,21.0s						
DANN	Dangsing	109.22	294	*e*P	PKiKP	22 47 27.1	-0.5
KOLN	Koldanda	109.25	294	*e*P	PKiKP	22 47 27.1	-0.5
NRIK	Noril'sk	109.54	338	Pdiff	Pdif	22 43 21.9	-1.9
	comp=Z,1.9nm,0.5s,baz=110,slow=5.1,SNR=3.4						
NRIK				PKiKP	PKiKP	22 47 27.1	+0.5
	comp=Z,2.2nm,0.6s,baz=135,slow=3.9,SNR=3.2						
PYUN	Piuthan	109.84	294	*e*P	PKiKP	22 47 27.6	-1.1
DGAR	Diego Garcia	110.40	255	PFAKE		22 47 40.0	+10
DGAR				LR	LR		
	comp=Z,851nm,22.0s						
ZALV	Zalesovo Beam	110.97	322	Pdiff	Pdif	22 43 30.1	-0.4
	comp=Z,1.0nm,0.8s,baz=10,slow=1.7,SNR=4.2						
ZALV				PKiKP	PKiKP	22 47 29.1	-0.6
	comp=Z,6.3nm,0.6s,baz=98,slow=0.6,SNR=30						
ZALV				PKKPbc	PKKPbc	22 58 27.4	-1.4
	comp=Z,0.6nm,0.6s,baz=240,slow=4.8,SNR=2.8						
ZALV				PKKPab	PKKPab	22 58 37.0	+0.8
	comp=Z,1.4nm,0.7s,baz=266,slow=3.7,SNR=6.5						
NVS	Novosibirsk	111.90	323	*e*PKIKP	PKiKP	22 47 31.0	-0.4
NVS				pmax	pmax		
	comp=N,2.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PTGA	Pitinga	112.03	98	PFAKE		22 47 50.0	+17
PTGA				LR	LR		
	comp=Z,14µm,21.0s						
PKME	Peaks-Kenny Pk	112.14	48	PFAKE		22 47 40.0	+7.8
PKME				LR	LR		
	comp=Z,2µm,21.0s						
MK01	Makanchi Array	112.37	314	*e*Pdif	Pdif	22 43 38.6	+1.6
MK31	Makanchi Array	112.38	314	*e*Pdif	Pdif	22 43 39.2	+2.2
MK31	Makanchi Array	112.38	314	*e*P	Pdif	22 43 39.2	+2.2
MKAR	Makanchi Array	112.38	314	Pdiff	Pdif	22 43 37.5	+0.5
	comp=Z,1.4nm,0.8s,baz=84,slow=5.0,SNR=11						
MKAR				PKiKP	PKiKP	22 47 31.9	-0.8
	comp=Z,12nm,0.7s,baz=69,slow=1.7,SNR=91						
MKAR				PKKPbc	PKKPbc	22 58 23.4	-0.6
	comp=Z,0.6nm,0.6s,baz=256,slow=3.2,SNR=6.6						
MKAR				PKKPab	PKKPab	22 58 30.6	+0.3
	comp=Z,0.9nm,0.7s,baz=274,slow=3.1,SNR=5.7						
MKAR				PKKP	PKKPdf	22 58 43.1	-1.0
	comp=Z,1.5nm,1.1s,baz=270,slow=4.6,SNR=3.6						
KURK	Kurchatov	114.80	318	*e*PKPdf	PKPdf	22 47 36.3	-0.8
KURK				LR	LR		
	comp=Z,1µm,21.0s						
KURK	Kurchatov	114.80	318	*e*PKIKP	PKPdf	22 47 36.3	-0.8
KURK				MLR	MLR		
	comp=Z,1µm,21.0s						
KURK	Kurchatov	114.80	318	PKPdf	PKPdf	22 47 36.4	-0.7
	SNR=5.7						
KURBB	Kurchatov Arra	114.86	318	PKP	PKiKP	22 47 36.8	-0.4
	comp=Z,16nm,0.7s,baz=92,slow=1.8,SNR=125						
POO	Poona	116.44	282	*e*P	PKPdf	22 47 39.0	-2.3
KSH	Kashi	116.79	306	PKP	PKiKP	22 47 42.6	+1.1
KSH				PP	PP	22 48 51.3	+0.9
KSH				SKS	SKSdf	22 54 49.3	-1.1
KSH				SKKS	SKKSac	22 55 44.4	-3.5
KSH				SS	SS	23 04 57.9	+3.1
KSH				AMB	AMB		
	comp=Z,290nm,5.5s						
KSH				LR	LR		
	comp=Z,180nm,4.5s						
KSH				LR	LR		
	comp=Z,180nm,4.3s						
KSH				LR	LR		
	comp=Z,630nm,7.1s						
BDFB	Brasilia	116.82	118	PKKPbc	PKKPbc	22 58 08.4	+0.3
	comp=Z,5.6nm,0.7s,baz=83,slow=1.2,SNR=10						
TKM2	Tokmak 2	117.09	310	P	PKPdf	22 47 41.7	-0.4
	SNR=16						
KZA	Kyzart	117.36	309	P	PKiKP	22 47 43.4	+0.6
	SNR=12						
KZA	Kyzart	117.36	309	P	SKPdf	22 51 18.9	+3.9
	SNR=6.9						
KBK	Karagaybulak	117.57	309	P	PKPdf	22 47 42.8	-0.1
	SNR=18						
CHMS	Chumysh	117.71	310	P	PKPdf	22 47 42.4	-0.6
	SNR=13						
FRU1	Bishkek	117.80	310	*e*PKPdf	PKiKP	22 47 43.5	+0.2
FRU1	Bishkek	117.80	310	PKIKP	PKiKP	22 47 43.5	+0.2
FRU	Bishkek	117.81	310	*e*PKIKP	PKPdf	22 47 43.0	-0.2
USP	Ospenovka	117.89	310	P	PKPdf	22 47 42.8	-0.6
	SNR=18						
UCH	Uchtor	117.90	309	P	PKiKP	22 47 44.5	+0.5
	SNR=24						
AAK	Ala-Archa	117.91	309	P	PKiKP	22 47 43.6	0.0
	SNR=12						
AAK	Ala-Archa	117.91	309	P	SKPdf	22 51 21.8	+6.0
	SNR=12						
AAK	Ala-Archa	117.91	309	*e*PKPdf	PKPdf	22 47 43.1	-0.5
AAK				PKP	PKiKP	22 47 43.9	+0.2
AAK				SKP		22 51 21.6	
AAK				LR	LR		
	comp=Z,614nm,21.0s						
AAK	Ala-Archa	117.91	309	*i* PKPdf	PKPdf	22 47 43.4	-0.2
	SNR=16						
AAK	Ala-Archa	117.91	309	*e*PKIKP	PKPdf	22 47 43.1	-0.5
AAK				MLR	MLR		
	comp=Z,614nm,21.0s						
AAK	Ala-Archa	117.91	309	PKP	PKiKP	22 47 43.8	+0.2
	comp=Z,7.7nm,0.8s,baz=156,slow=3.0,SNR=40						
AAK				SKP		22 51 21.6	
	comp=Z,6.2nm,0.3s,baz=156,slow=2.8,SNR=50						
AAK	Ala-Archa	117.91	309	P	SKPdf	22 51 21.1	+5.3
	comp=Z,6.1nm,0.6s						
EKS2	Erkin-Say	118.44	309	P	PKiKP	22 47 44.7	+0.1
	SNR=15						
EKS2	Erkin-Say	118.44	309	P	SKPdf	22 51 18.7	+1.9
	SNR=7.8						
AML	Almayashu	118.51	309	P	PKiKP	22 47 45.4	+0.3
	SNR=21						
KBS	Kingsbay	118.60	359	PFAKE		22 48 00.0	+16
KBS				LR	LR		
	comp=Z,517nm,19.0s						
SFJD	Kangerlussuaq	118.65	22	PFAKE		22 48 00.0	+16
SFJD				LR	LR		
	comp=Z,1µm,21.0s						
SFJD	Kangerlussuaq	118.65	22	*i* P	PKPdf	22 47 42.7	-1.3
	comp=Z,8.8nm,0.7s						
SFJD	Kangerlussuaq	118.65	22	*i* PKIKP	PKPdf	22 47 42.7	-1.3
SFJD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NIL	Nilore	118.78	299	*e*PKPdf	PKPdf	22 47 45.1	-0.3
NIL				LR	LR		
	comp=Z,242nm,22.0s						
NIL	Nilore	118.78	299	*e*PKIKP	PKPdf	22 47 45.1	-0.3
NIL				MLR	MLR		
	comp=Z,242nm,22.0s						
SPITS	Spitsbergen Ar	119.22	358	PKP	PKiKP	22 47 45.1	+0.1
	comp=Z,14nm,0.8s,baz=42,slow=9.7,SNR=5.6						
SUMG	Summit	119.32	14	*i* P	PKPdf	22 47 45.4	-0.3
	comp=Z,34nm,1.2s						
SUMG	Summit	119.32	14	*i* PKIKP	PKPdf	22 47 45.4	-0.3
SUMG				pmax	pmax		
	comp=Z,34nm,1.2s						
BVAR	Borovoye Array	119.62	321	PKP	PKPdf	22 47 45.9	-0.4
	comp=Z,42nm,0.7s,baz=92,slow=1.5,SNR=185						
BRVK	Borovoye	119.68	321	*e*PKPdf	PKPdf	22 47 45.9	-0.6
BRVK				LR	LR		
	comp=Z,330nm,21.0s						
BRVK	Borovoye	119.68	321	*e*PKIKP	PKPdf	22 47 45.9	-0.6
BRVK				MLR	MLR		
	comp=Z,330nm,21.0s						
BRVK	Borovoye	119.68	321	PKPdf	PKPdf	22 47 46.0	-0.4
	SNR=12						
SJMB	Sao Joao De Ma	120.75	125	*e*P	PKPdf	22 47 49.5	-0.1

KK31	**Karatay Array**	**120.81**	**310**	*e*PKPdf	**PKPdf**	**22 47 48.8**	**-0.2**
KK31	**Karatay Array**	**120.81**	**310**	*e*PKIKP	**PKPdf**	**22 47 48.8**	**-0.2**
KKAR	**Karatay Array**	**120.81**	**310**	*e*PKPdf	**PKPdf**	**22 47 48.8**	**-0.2**
KKAR	**Karatay Array**	**120.81**	**310**	*e*PKIKP	**PKPdf**	**22 47 48.8**	**-0.2**
BSFB	**Barra de Sao F**	**120.94**	**126**	*e*P	**PKiKP**	**22 47 52.5**	**+2.4**
RIB01	**Linhares ES**	**121.01**	**126**	*e*P	**PKiKP**	**22 47 52.2**	**+2.0**
GAR	**Garm**	**121.19**	**305**	*e*PKPdf	**PKiKP**	**22 47 50.5**	**+0.4**
GAR	**Garm**	**121.19**	**305**	*e*PKIKP	**PKiKP**	**22 47 50.5**	**+0.4**
CHGR	**Chuyangaron**	**122.10**	**305**	*e*PKPdf	**PKiKP**	**22 47 52.0**	**+0.2**
KBL	**Kabul**	**122.29**	**300**	*e*PKPdf	**PKiKP**	**22 47 52.7**	**+0.2**
KBL	**Kabul**	**122.29**	**300**	*e*PKIKP	**PKiKP**	**22 47 52.7**	**+0.2**
SVE	**Sverdlovsk**	**124.01**	**328**	⇑*i*PKIKP	**PKiKP**	**22 47 54.7**	**-0.2**
SVE				pmax	pmax		
	comp=Z,36nm,0.9s						
SVE				MLR	MLR		
	comp=Z,610nm,23.0s						
SCO	**Scoresbysund**	**124.39**	**11**	*e*PKPdf	**PKiKP**	**22 47 55.4**	**+0.1**
SCO	**Scoresbysund**	**124.39**	**11**	*i* P	**PKiKP**	**22 47 55.1**	**-0.2**
	comp=Z,24nm,1.1s						
SCO	**Scoresbysund**	**124.39**	**11**	*i* PKIKP	**PKiKP**	**22 47 55.1**	**-0.2**
SCO				pmax	pmax		
	comp=Z,24nm,1.1s						
ARU	**Arti**	**125.22**	**328**	*e*PKPdf	**PKPdf**	**22 47 56.8**	**-0.2**
ARU				LR	LR		
	comp=Z,330nm,19.0s						
ARU	**Arti**	**125.22**	**328**	*i* PKIKP	**PKPdf**	**22 47 56.5**	**-0.4**
ARU						22 49 48.3	
ARU				PPP	PPP	22 52 30.7	
ARU						22 55 05.1	
ARU				SP	SP	22 59 38.5	-3.6
ARU				SS	**SS**	**23 06 37.7**	**-3.3**
ARU				SSS	SSS	23 11 25.2	
ABPO	**Ambohimpanom**	**125.98**	**230**	PFAKE		22 48 10.0	+10
ABPO				LR	LR		
	comp=Z,437nm,20.0s						
KEV	**Kevo**	**126.38**	**351**	PFAKE		22 48 10.0	+11
KEV				LR	LR		
	comp=Z,1µm,20.0s						
LVZ	**Lovozero**	**126.66**	**347**	PFAKE		22 48 10.0	+10
LVZ				LR	LR		
	comp=Z,391nm,19.0s						
ARCES	**ARCESS Array B**	**126.79**	**352**	PKP	**PKPdf**	**22 47 59.3**	**-0.3**
	comp=Z,10nm,0.7s,baz=13,slow=0.9,SNR=22						
ABKAR	**Akbulak array**	**126.90**	**319**	*e*PKPdf	**PKiKP**	**22 48 00.7**	**-0.2**
APA	**Apatity**	**127.19**	**347**	⇓*i*PKIKP	PKiKP	22 48 12.0	+11
APA				pmax	pmax		
	comp=Z,10.0nm,1.8s						
AKTO	**Aktyubinsk**	**127.72**	**321**	PKP	**PKiKP**	**22 48 02.8**	**+0.3**
	comp=Z,14nm,0.8s,baz=81,slow=3.0,SNR=41						
PRGR	**Permogore**	**128.18**	**338**	*e*PKIKP	**PKPdf**	**22 48 01.5**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,20nm,0.9s						
SUR	**Sutherland**	**128.46**	**195**	PFAKE		22 48 20.0	+15
SUR				LR	LR		
	comp=Z,2µm,20.0s						
KIRV	**Kirov**	**128.52**	**333**	PKP	**PKiKP**	**22 48 04.1**	**+0.3**
	comp=Z,23nm,0.6s,baz=154,slow=1.9,SNR=13						
TMCR	**Tamitsa**	**128.83**	**343**	*e*PKIKP	**PKPdf**	**22 48 02.8**	**-0.8**
TMCR				pmax	pmax		
	comp=Z,15nm,0.9s						
NBLI	**Livramento-PB**	**130.32**	**116**	*e*P	**PKiKP**	**22 48 08.8**	**-0.1**
BOSA	**Boshof**	**130.63**	**202**	PKP	**PKiKP**	**22 48 09.6**	**+0.3**
BOSA				*e*PKPdf	**PKiKP**	**22 48 10.6**	**+1.3**
BOSA	**Boshof**	**130.63**	**202**	PKIKP	**PKiKP**	**22 48 10.6**	**+1.3**
BOSA	**Boshof**	**130.63**	**202**	PKP	**PKiKP**	**22 48 09.6**	**+0.3**
	comp=Z,7.5nm,0.9s,baz=46,slow=7.5,SNR=3.6						
BOSA	**Boshof**	**130.63**	**202**	*e*P	**PKiKP**	**22 48 09.5**	**+0.3**
GEYT	**Alibeck**	**130.81**	**305**	PKhKP	PKPpre	22 48 00.6	
	comp=Z,2.6nm,0.7s,baz=337,slow=3.3,SNR=4.5						
GEYT				PKP	**PKiKP**	**22 48 08.8**	**-0.4**
	comp=Z,15nm,0.7s,baz=215,slow=1.8,SNR=19						
KLMR	**Klimovskoe**	**130.87**	**339**	*e*PKIKP	**PKPdf**	**22 48 06.6**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,25nm,1.1s						
KLMR	**Klimovskoe**	**130.87**	**339**	*e*PKPdf	**PKPdf**	**22 48 06.7**	**-0.9**
KLMR				AMP		22 48 10.2	
	comp=Z,25nm,1.1s						
KLMR				*e*PKS	PKSdf	22 51 30.3	-13
KLMR				*e*PKS	PKSdf	22 51 30.3	-13
MHTO	**MHTO**	**131.58**	**283**	PKPdf	**PKPdf**	**22 48 09.8**	**-0.3**
	SNR=6.3						
RCBR	**Riachuelo**	**131.99**	**115**	*e*P	**PKiKP**	**22 48 11.9**	**-0.3**
SOHO	**SOHO**	**133.10**	**287**	PKPdf	**PKPdf**	**22 48 12.3**	**-0.7**
	SNR=10						
MDH	**Madha**	**133.35**	**288**	*i* PKPdf	**PKPdf**	**22 48 13.3**	**-0.1**
	SNR=5.8						
UOSS	**Minazif**	**133.43**	**288**	*e*PKPdf	**PKPdf**	**22 48 13.5**	**-0.1**
UOSS	**Minazif**	**133.43**	**288**	PKPdf	**PKPdf**	**22 48 13.3**	**-0.2**
MSFE	**Esma-Masafi**	**133.47**	**288**	*i* PKiKP	**PKPdf**	**22 48 14.1**	**+0.4**
	SNR=6.4						
HATD	**Hatta, Dubai**	**133.49**	**288**	*i* PKiKP	**PKPdf**	**22 48 14.1**	**+0.5**
	SNR=11						
HATD	**Hatta, Dubai**	**133.49**	**288**	PKPdf	**PKPdf**	**22 48 13.2**	**-0.5**
	SNR=5.0						
SHME	**Shamm**	**133.49**	**289**	PKiKP	**PKiKP**	**22 48 15.0**	**0.0**
ASHO	**Ashiyiah**	**133.55**	**288**	*i* PKPdf	**PKPdf**	**22 48 13.8**	**0.0**
	SNR=12						
ALNE	**Al Ain**	**133.82**	**287**	*i* PKiKP	**PKPdf**	**22 48 14.5**	**+0.2**
	SNR=14						
NAZ	**Nazwa, Dubai**	**133.92**	**288**	*i* PKiKP	**PKPdf**	**22 48 14.7**	**+0.3**
	SNR=7.8						
FAQ	**Al Faqa, Dubai**	**133.98**	**288**	PKPdf	**PKPdf**	**22 48 14.3**	**-0.3**
FINES	**FINESS Array B**	**134.10**	**347**	PKhKP	PKPpre	22 48 02.9	
	comp=Z,2.8nm,0.7s,baz=23,slow=7.5,SNR=5.9						
MOS	**Moscow**	**135.26**	**336**	*i* PKIKP	**PKiKP**	**22 48 17.3**	**-0.2**
MOS				*e*		22 50 48.6	
MOS				pmax	pmax		
	comp=Z,25nm,0.7s						
OBN	**Obninsk**	**136.13**	**336**	PKPpre	PKPpre	22 48 06.5	
OBN				*e*PKPdf	**PKPdf**	**22 48 17.1**	**-0.5**
OBN				PKP	**PKPdf**	**22 48 18.0**	**+0.4**
OBN				LR	LR		
	comp=Z,285nm,21.0s						
OBN	**Obninsk**	**136.13**	**336**	*i* PKIKP	**PKPdf**	**22 48 17.6**	**0.0**
OBN				*e*		22 48 30.2	
OBN				*e*		22 51 00.9	
OBN				*e*PPP	PPP	22 53 54.8	
OBN				pmax	pmax		
	comp=Z,42nm,1.3s						
OBN				MLR	MLR		
	comp=Z,380nm,21.0s						
OBN	**Obninsk**	**136.13**	**336**	PKhKP	PKPpre	22 48 06.5	
	comp=Z,2.7nm,0.5s,baz=100,slow=9.7,SNR=3.3						
OBN				PKP	**PKPdf**	**22 48 18.0**	**+0.4**
	comp=Z,4.9nm,0.8s,baz=72,slow=11,SNR=5.8						
VRH	**Novokhopyorsk**	**136.44**	**328**	*e*PKIKP	**PKPdf**	**22 48 18.9**	**+0.6**
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
NB2	**NORSAR Subarra**	**136.50**	**357**	PKP	PKPpre	22 48 06.7	
	comp=Z,4.0nm,0.9s,baz=20,slow=4.1						
NOA	**NORSAR Array B**	**136.50**	**357**	PKhKP	PKPpre	22 48 06.9	
	comp=Z,1.5nm,0.8s,baz=16,slow=4.3,SNR=6.3						
NOA				PKP	**PKPdf**	**22 48 18.3**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=13,slow=4.1,SNR=5.8						
VSU	**Vasula**	**136.60**	**345**	⇑*e*PKIKP	**PKiKP**	**22 48 21.5**	**+1.4**
VSU				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LPSR	**Galich'ya Gora**	**136.88**	**332**	*e*PKIKP	**PKPdf**	**22 48 19.6**	**+0.5**
LPSR				pmax	pmax		
	comp=Z,30nm,1.8s						
LPSR				MLR	MLR		
	comp=Z,770nm,21.0s						
VSR	**Storozhevoye**	**137.69**	**330**	*e*PKIKP	**PKPdf**	**22 48 19.8**	**-0.8**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GROC	**Groznyy**	**138.22**	**316**	*e*PKIKP	PKPpre	22 48 16.0	
GROC				pmax	pmax		
	comp=Z,60nm,1.7s						
GOF	**Gofitskoye**	**139.12**	**320**	*e*PKIKP	**PKiKP**	**22 48 26.7**	**+0.9**
GOF				pmax	pmax		
	comp=Z,40nm,1.0s						
KPL	**Plockton**	**139.29**	**10**	*e*P	**PKiKP**	**22 48 25.3**	**-0.3**
TBLG	**Delisi**	**139.56**	**315**	*e*P	**PKiKP**	**22 48 25.8**	**-1.0**
TBLG	**Delisi**	**139.56**	**315**	*e*P	**PKiKP**	**22 48 25.8**	**-1.0**
TBLG	**Delisi**	**139.56**	**315**	*e*P	**PKiKP**	**22 48 25.8**	**-1.0**
ZEI	**Tsey**	**139.66**	**316**	*i* PKHKP	PKPpre	22 48 15.4	
ZEI				pmax	pmax		
	comp=Z,16nm,1.0s						
NACGM	**Naroch**	**139.69**	**342**	*e*	PKPpre	22 48 18.0	
NACGM				*e*LQ	LQ	23 42 27.0	
NACGM				*e*LR	LR	23 48 50.0	
KBZ	**Khabaz**	**139.87**	**318**	PKhKP	PKPpre	22 48 17.3	
	comp=Z,4.4nm,0.9s,baz=92,slow=2.3,SNR=12						
KBZ				PKP	**PKPdf**	**22 48 24.8**	**0.0**
	comp=Z,6.6nm,0.9s,baz=197,slow=3.2,SNR=7.2						
KVAR	**Kislovodsk Arr**	**139.88**	**319**	PKP	**PKPdf**	**22 48 24.3**	**-0.8**
	comp=Z,3.7nm,0.9s,baz=99,slow=19,SNR=5.4						
KIV	**Kislovodsk**	**139.89**	**319**	*e*P	**PKPdf**	**22 48 24.1**	**-1.0**
KIV	**Kislovodsk**	**139.89**	**319**	*e*P	**PKPdf**	**22 48 24.1**	**-1.0**
KIV	**Kislovodsk**	**139.89**	**319**	*e*P	**PKPdf**	**22 48 24.1**	**-1.0**
KIV	**Kislovodsk**	**139.89**	**319**	*e*PKPdf	PKPpre	22 48 17.3	
KIV				LR	LR		
	comp=Z,571nm,21.0s						
KIV	**Kislovodsk**	**139.89**	**319**	*i* PKIKP	**PKPdf**	**22 48 25.4**	**+0.3**
KIV				*e*		22 51 18.8	
KIV				*e*SS	SS	23 09 36.7	-3.1
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,636nm,24.0s						
GNI	**Garni**	**140.20**	**312**	PKPpre	PKPpre	22 48 18.3	
GNI				*e*PKPdf	**PKPdf**	**22 48 25.3**	**-0.5**
GNI				PKP	**PKPdf**	**22 48 26.9**	**+1.1**
GNI				LR	LR		
	comp=Z,770nm,22.0s						
GNI	**Garni**	**140.20**	**312**	PKHKP	PKPpre	22 48 18.3	
GNI				*e*		22 48 25.3	
GNI				MLR	MLR		
	comp=Z,770nm,22.0s						
GNI	**Garni**	**140.20**	**312**	PKiKP	**PKiKP**	**22 48 27.2**	**-1.2**
	SNR=7.3						
GNI	**Garni**	**140.20**	**312**	PKhKP	PKPpre	22 48 18.3	
	comp=Z,4.3nm,0.8s,baz=128,slow=19,SNR=4.3						
GNI				PKP	**PKPdf**	**22 48 26.9**	**+1.1**
	comp=Z,14nm,0.8s,baz=33,slow=4.7,SNR=9.7						
LSZ	**Lusaka**	**141.00**	**214**	*e*PKPpre	PKPpre	22 48 22.3	
LSZ				LR	LR		
	comp=Z,961nm,21.0s						
ESY	**Stoneypath**	**141.13**	**8**	*e*P	**PKPdf**	**22 48 25.6**	**-1.2**
MUD	**Monsted U'grnd**	**141.18**	**358**	*i* P	PKPpre	22 48 19.4	
MUD	**Monsted U'grnd**	**141.18**	**358**	*e*PKHKP	PKPpre	22 48 19.4	
SUW	**Suwalki**	**141.47**	**344**	*e*PKP	PKPpre	22 48 22.6	
SUW	**Suwalki**	**141.47**	**344**	*e*PKPpre	PKPpre	22 48 22.3	
SUW	**Suwalki**	**141.47**	**344**	*e*PKHKP	PKPpre	22 48 22.3	
ESK	**Eskdalemuir**	**141.63**	**9**	PFAKE		22 48 40.0	+9.5
ESK				LR	LR		
	comp=Z,1µm,20.0s						
SENK	**Senkaya-Erzuru**	**141.69**	**314**	*e*P	**PKiKP**	**22 48 30.3**	**-1.1**
SENK	**Senkaya-Erzuru**	**141.69**	**314**	*e*P	**PKiKP**	**22 48 30.3**	**-1.1**
SENK	**Senkaya-Erzuru**	**141.69**	**314**	*e*P	**PKiKP**	**22 48 30.3**	**-1.1**
BCA	**Borcka**	**141.78**	**316**	⇑*i*P	PKPpre	22 48 22.6	
TSUM	**Tsumeb**	**141.86**	**197**	*e*PKPpre	PKPpre	22 48 23.9	
TSUM				*e*PKPdf	**PKPdf**	**22 48 30.4**	**+1.0**
TSUM				LR	LR		
	comp=Z,1µm,21.0s						
SOC	**Sochi**	**141.93**	**320**	*e*PKIKP	**PKPdf**	**22 48 27.8**	**-0.8**
SOC				*e*		22 51 33.8	
SOC				*e*PPP	PPP	22 54 39.5	
SOC				*e*SS	SS	23 10 02.3	-1.0
SOC				*e*SSS	SSS	23 15 20.4	
SOC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,762nm,22.0s						
CUKT	**Cukurca**	**142.11**	**309**	*i* P	PKPpre	22 48 25.3	
CUKT	**Cukurca**	**142.11**	**309**	*e*P	PKPpre	22 48 25.3	
CUKT	**Cukurca**	**142.11**	**309**	*e*P	PKPpre	22 48 25.3	
AKASG	**Malin Array Be**	**142.37**	**336**	PKhKP	PKPpre	22 48 24.1	
	comp=Z,11nm,0.7s,baz=36,slow=3.9,SNR=26						
KIEV	**Kiev**	**142.38**	**336**	*e*PKPpre	PKPpre	22 48 24.4	
KIEV				LR	LR		
	comp=Z,523nm,21.0s						
KIEV	**Kiev**	**142.38**	**336**	⇑*i*P	PKPpre	22 48 24.5	
KIEV	**Kiev**	**142.38**	**336**	*i* PKPdf	PKPpre	22 48 24.5	
	SNR=8.3						
KIEV	**Kiev**	**142.38**	**336**	⇑PKHKP	PKPpre	22 48 24.5	
CHOM	**Cayeli-Rize**	**142.51**	**316**	*e*P	**PKPdf**	**22 48 27.3**	**-2.5**
CHOM	**Cayeli-Rize**	**142.51**	**316**	*e*P	**PKPdf**	**22 48 27.3**	**-2.5**
CHOM	**Cayeli-Rize**	**142.51**	**316**	*e*P	**PKPdf**	**22 48 27.3**	**-2.5**
ANN	**Anapa**	**142.59**	**323**	*i* PKIKP	**PKPdf**	**22 48 27.2**	**-2.5**
ANN				*e*		22 51 32.7	
ANN				pmax	pmax		
	comp=Z,43nm,1.0s						
VRTB	**Varto-Mus**	**142.91**	**313**	*e*P	**PKPdf**	**22 48 29.2**	**-1.5**
VRTB	**Varto-Mus**	**142.91**	**313**	*e*P	**PKPdf**	**22 48 29.2**	**-1.5**
VRTB	**Varto-Mus**	**142.91**	**313**	*i* P	**PKPdf**	**22 48 29.2**	**-1.5**
DSB	**Dublin**	**143.02**	**13**	*e*P	PKPbc	22 48 27.0	-0.1
RAYN	**Ar Rayn**	**143.20**	**286**	*e*PKPpre	PKPpre	22 48 28.5	
RAYN				*e*PKPdf	**PKPdf**	**22 48 31.3**	**-0.3**
RAYN				LR	LR		
	comp=Z,355nm,20.0s						
RAYN	**Ar Rayn**	**143.20**	**286**	PKPdf	PKPbc	22 48 28.4	-0.2
RAYN	**Ar Rayn**	**143.20**	**286**	*e*PKIKP	PKPbc	22 48 28.5	-0.1
RAYN				MLR	MLR		
	comp=Z,355nm,20.0s						
KTUT	**Trabzon**	**143.23**	**316**	*e*P	PKPbc	22 48 28.9	+0.8
KTUT	**Trabzon**	**143.23**	**316**	*e*P	PKPbc	22 48 28.9	+0.8
KTUT	**Trabzon**	**143.23**	**316**	*e*P	PKPbc	22 48 28.9	+0.8
VAL	**Valentia**	**143.25**	**17**	*e*P	PKPbc	22 48 28.0	+0.3
YEDI	**Yedisu-Bingol**	**143.43**	**313**	*e*P	**PKPdf**	**22 48 30.7**	**-0.9**
YEDI	**Yedisu-Bingol**	**143.43**	**313**	*e*P	**PKPdf**	**22 48 30.7**	**-0.9**
YEDI	**Yedisu-Bingol**	**143.43**	**313**	*e*P	**PKPdf**	**22 48 30.7**	**-0.9**
SVAN	**Silvan-Diyarba**	**143.52**	**311**	*e*P	PKPbc	22 48 30.2	+1.1
SVAN	**Silvan-Diyarba**	**143.52**	**311**	*e*P	PKPbc	22 48 30.2	+1.1
SVAN	**Silvan-Diyarba**	**143.52**	**311**	*e*P	PKPbc	22 48 30.2	+1.1
BNGB	**Bingl**	**143.53**	**313**	*e*P	PKPbc	22 48 29.7	+0.5
BNGB	**Bingl**	**143.53**	**313**	*e*P	PKPbc	22 48 29.7	+0.5
BNGB	**Bingl**	**143.53**	**313**	*i* P	PKPbc	22 48 29.7	+0.5
DAMY	**Dhamar**	**143.62**	**271**	*e*PKPdf	**PKPdf**	**22 48 32.0**	**-0.8**
IWEX	**Carrickbyrne,**	**143.75**	**14**	*e*P	PKPbc	22 48 30.0	+0.8
FOEL	**Foel Wylfa**	**143.97**	**10**	*e*P	PKPbc	22 48 30.1	+0.2
BEL	**Belsk**	**144.06**	**345**	*e*PKP	**PKPdf**	**22 48 31.1**	**-0.9**
BEL	**Belsk**	**144.06**	**345**	*e*PKIKP	**PKPdf**	**22 48 31.2**	**-0.9**
SIM	**Simferopol'**	**144.34**	**326c**	*i*PKIKP	**PKPdf**	**22 48 32.1**	**-0.7**
SIM				pmax	pmax		
	comp=Z,33nm,0.8s						
MAZI	**Mazidag**	**144.35**	**311**	*e*P	PKPbc	22 48 32.1	+0.4
MAZI	**Mazidag**	**144.35**	**311**	*e*P	PKPbc	22 48 32.1	+0.4
MAZI	**Mazidag**	**144.35**	**311**	*i* P	PKPbc	22 48 32.1	+0.4
CWF	**Charnwood Fore**	**144.40**	**8**	*e*P	**PKPab**	**22 48 30.9**	**0.0**
SHEL	**Horse Pasture**	**144.48**	**159**	*e*PKPdf	**PKPdf**	**22 48 34.5**	**+0.5**
SHEL				LR	LR		
	comp=Z,357nm,20.0s						
SHEL	**Horse Pasture**	**144.48**	**159**	*e*PKIKP	**PKPdf**	**22 48 34.5**	**+0.5**
SHEL				MLR	MLR		
	comp=Z,357nm,20.0s						
KMBO	**Kilima Mbogo**	**144.54**	**241**	*e*PKPdf	**PKPdf**	**22 48 34.5**	**+0.1**
KMBO				LR	LR		
	comp=Z,736nm,20.0s						
KMBO	**Kilima Mbogo**	**144.54**	**241**	*i* PKPdf	**PKPdf**	**22 48 34.9**	**+0.4**
	SNR=24						
KMBO	**Kilima Mbogo**	**144.54**	**241**	PKPdf	**PKPdf**	**22 48 34.6**	**+0.1**
	SNR=57						
KMBO	**Kilima Mbogo**	**144.54**	**241**	PKP	**PKPdf**	**22 48 34.6**	**+0.1**
	comp=Z,100nm,0.9s,baz=87,slow=4.2,SNR=222						
LPW	**Lampeter**	**144.56**	**11**	*e*P	PKPbc	22 48 31.7	+0.1
RSBS	**Rosebush, Pemb**	**144.58**	**12**	*e*P	PKPbc	22 48 32.3	+0.5
MCH1	**Michaelchurch**	**144.86**	**10**	*e*P	**PKPab**	**22 48 31.9**	**-0.6**
LVV	**L'vov**	**144.94**	**340**	*e*PKIKP	**PKPab**	**22 48 32.2**	**-0.8**
MONM	**Monmouth**	**145.05**	**10**	*e*P	**PKPbc**	**22 48 32.7**	**-0.5**
RSDY	**Resadiye-TOKAT**	**145.12**	**317**	*i* P	**PKPdf**	**22 48 35.2**	**+0.8**
RSDY	**Resadiye-TOKAT**	**145.12**	**317**	*e*P	**PKPdf**	**22 48 35.2**	**+0.8**
RSDY	**Resadiye-TOKAT**	**145.12**	**317**	*i* P	**PKPdf**	**22 48 35.2**	**+0.8**
STRD	**Stroud**	**145.21**	**10**	*e*P	**PKPbc**	**22 48 33.4**	**-0.3**
CMLA	**Cha da Macela**	**145.43**	**48**	PFAKE		22 48 50.0	+11
CMLA				LR	LR		
	comp=Z,2µm,22.0s						
CMLA	**Cha da Macela**	**145.43**	**48**	*i* PKIKP	**PKiKP**	**22 48 37.2**	**-1.7**
KIS	**Kishinev**	**145.45**	**333**	*e*PKP	**PKPdf**	**22 48 33.0**	**-1.7**
	comp=Z,400nm,1.6s						
KIS				*e*L	L	23 41 10.0	
KIS				LRM	MLR	23 52 52.0	
	comp=Z,200nm,22.0s						
KIS	**Kishinev**	**145.45**	**333**	*e*PKP2	**PKPdf**	**22 48 33.0**	**-1.7**
KIS				*i*		22 48 37.0	
KIS				*i*		22 48 47.0	
KIS				pmax	pmax		
	comp=Z,430nm,1.6s						
KIS				MLR	MLR		
	comp=Z,400nm,20.0s						
KWP	**Kalwaria Pacla**	**145.52**	**341**	*e*PKP	**PKPab**	**22 48 34.9**	**-0.2**
KWP	**Kalwaria Pacla**	**145.52**	**341**	*e*PKIKP	**PKPab**	**22 48 34.9**	**-0.2**
SWN1	**Swindon**	**145.53**	**9**	*e*P	**PKPab**	**22 48 35.1**	**+0.1**
URFA	**Urfa**	**145.53**	**311**	*i* P	**PKPab**	**22 48 36.3**	**+0.6**
URFA	**Urfa**	**145.53**	**311**	*e*P	**PKPab**	**22 48 36.3**	**+0.6**
URFA	**Urfa**	**145.53**	**311**	*i* P	**PKPab**	**22 48 36.3**	**+0.6**
HTL	**Hartland**	**145.54**	**12**	*e*P	**PKPbc**	**22 48 34.7**	**-0.1**
SNOP	**Sinop**	**145.55**	**321**	*e*P	**PKPdf**	**22 48 34.7**	**-0.3**
SNOP	**Sinop**	**145.55**	**321**	*e*P	**PKPdf**	**22 48 34.7**	**-0.3**
SNOP	**Sinop**	**145.55**	**321**	*e*P	**PKPdf**	**22 48 34.7**	**-0.3**
KVT	**Kavak**	**145.57**	**319**	*e*P	**PKPab**	**22 48 36.4**	**+0.7**
KVT	**Kavak**	**145.57**	**319**	*e*P	**PKPab**	**22 48 36.4**	**+0.7**
KVT	**Kavak**	**145.57**	**319**	*i* P	**PKPab**	**22 48 36.4**	**+0.7**
SVSK	**Karacayir**	**145.59**	**317**	P	**PKPab**	**22 48 36.8**	**+1.1**
SVSK	**Karacayir**	**145.59**	**317**	*e*P	**PKPab**	**22 48 36.8**	**+1.1**
SVSK	**Karacayir**	**145.59**	**317**	*i* P	**PKPab**	**22 48 36.8**	**+1.1**
TOKT	**Tokat**	**145.67**	**317**	*e*P	**PKPab**	**22 48 36.6**	**+0.5**
TOKT	**Tokat**	**145.67**	**317**	*e*P	**PKPab**	**22 48 36.6**	**+0.5**
TOKT	**Tokat**	**145.67**	**317**	*i* P	**PKPab**	**22 48 36.6**	**+0.5**
WTSB	**Winterswijk**	**145.73**	**360**	*e*PKPdf	**PKPdf**	**22 48 34.7**	**-0.3**
WTSB				*e*pPKPbc	**PKPab**	**22 48 35.7**	**0.0**
	comp=Z,487nm,1.3s						
DIKM	**Dikmen**	**145.73**	**320**	*e*P	**PKPab**	**22 48 37.5**	**+1.3**
DIKM	**Dikmen**	**145.73**	**320**	*e*P	**PKPab**	**22 48 37.5**	**+1.3**
DIKM	**Dikmen**	**145.73**	**320**	*e*P	**PKPab**	**22 48 37.5**	**+1.3**
DIKM	**Dikmen**	**145.73**	**320**	⇓*i*P	**PKPab**	**22 48 36.8**	**+0.6**
OJC	**Ojcow**	**145.79**	**345**	*e*PKP	**PKPbc**	**22 48 35.7**	**0.0**
OJC	**Ojcow**	**145.79**	**345**	*e*PKPdf	**PKPbc**	**22 48 35.7**	**0.0**
OJC	**Ojcow**	**145.79**	**345**	*e*PKP2	**PKPbc**	**22 48 35.7**	**0.0**
WOL	**Wolverton**	**145.81**	**9**	*e*P	**PKPdf**	**22 48 35.1**	**-0.1**
IAS	**Iasi**	**145.84**	**334**	⇑*i*P	**PKPbc**	**22 48 35.7**	**-0.2**
IAS	**Iasi**	**145.84**	**334**	⇑PKP2	**PKPbc**	**22 48 35.7**	**-0.2**
DARE	**Darende-Malaty**	**145.94**	**314**	*e*P	**PKPab**	**22 48 38.4**	**+1.2**
DARE	**Darende-Malaty**	**145.94**	**314**	*e*P	**PKPab**	**22 48 38.4**	**+1.2**
DARE	**Darende-Malaty**	**145.94**	**314**	*i* P	**PKPab**	**22 48 38.4**	**+1.2**
KSP	**Ksiaz**	**145.96**	**349**	*e*PKP	**PKPab**	**22 48 36.5**	**-0.2**
KSP	**Ksiaz**	**145.96**	**349**	*e*PKP2	**PKPab**	**22 48 36.5**	**-0.2**
CLL	**Collm**	**146.00**	**353**	⇑*i*PKPbc	**PKPbc**	**22 48 36.0**	**-0.3**
	comp=Z,348nm,1.1s						
CLL				*e*PKPlp		22 48 41.0	
	comp=Z,400nm,27.3s						
CLL				*e*pPKPdf	**pPKPdf**	**22 48 47.0**	**-1.2**
CLL				*e*		22 49 05.0	
CLL				*e*		22 51 32.0	
CLL				*e*PP	**PP**	**22 51 57.0**	**-0.2**
CLL				*e*PPP	PPP	22 55 06.0	
CLL				*e*PSKS		23 02 12.0	
CLL				*e*PPS	PPS	23 04 36.0	
CLL				*e*		23 06 06.0	
CLL				*e*SS	SS	23 10 46.0	-2.5
CLL				*e*PSPS		23 11 54.0	
CLL				*e*SSS	SSS	23 16 00.0	
CLL				*e*		23 17 36.0	
CLL				*e*SSSS		23 20 24.0	
CLL				LmV		23 56 00.0	
	comp=Z,500nm,21.7s						
CLL	**Collm**	**146.00**	**353**	⇑*i*PKP2	**PKPbc**	**22 48 36.0**	**-0.3**
CLL				pmax	pmax		
	comp=Z,348nm,1.1s						
LEOM	**Leova**	**146.11**	**333**	⇓*i*P	**PKPbc**	**22 48 36.8**	**+0.1**
LEOM	**Leova**	**146.11**	**333**	⇓PKP2	**PKPbc**	**22 48 36.8**	**+0.1**
CCA1	**Carnmenellis**	**146.14**	**14**	*e*P	**PKPbc**	**22 48 36.3**	**-0.4**
PRAR	**RASCA**	**146.24**	**336**	⇓*i*P	**PKPbc**	**22 48 37.2**	**0.0**
ELSH	**Elham, Standar**	**146.26**	**6**	*e*P	**PKPbc**	**22 48 37.1**	**+0.1**
BZK	**Bozkurt**	**146.30**	**322**	*e*P	**PKPab**	**22 48 39.1**	**+0.8**
BZK	**Bozkurt**	**146.30**	**322**	*e*P	**PKPab**	**22 48 39.1**	**+0.8**
BZK	**Bozkurt**	**146.30**	**322**	P	**PKPab**	**22 48 39.1**	**+0.8**
BZK	**Bozkurt**	**146.30**	**322**	⇓*i*P	**PKPab**	**22 48 38.4**	**+0.1**
BRG	**Berggiesshubel**	**146.31**	**352**	⇑*i*PKP	**PKPbc**	**22 48 37.2**	**0.0**
	comp=Z,150nm,1.0s						
BRG				*e*		22 55 57.1	
	comp=Z,3.4nm,0.9s						
BRG				SS	SS	23 10 59.0	+7.0
	comp=N,478nm,23.6s						
	comp=E,390nm,19.4s						
	comp=Z,763nm,21.2s						
BRG	**Berggiesshubel**	**146.31**	**352**	⇑*i*PKP2	**PKPbc**	**22 48 37.2**	**0.0**
BRG				pmax	pmax		
	comp=Z,150nm,1.0s						
BRG				MLR	MLR		
	comp=N,478nm,23.6s						
BRG				MLR	MLR		
	comp=E,390nm,19.4s						
BRG				MLR	MLR		
	comp=Z,763nm,21.2s						
UPC	**Upice**	**146.33**	**349**	*e*PKP	**PKPab**	**22 48 37.7**	**-0.5**
UPC				*e*x	x	22 48 43.2	
UPC				AMS	AMS	23 51 20.0	
	comp=Z,800nm,21.3s						
UPC	**Upice**	**146.33**	**349**	*e*PKP2	**PKPab**	**22 48 37.7**	**-0.5**
UPC				MLR	MLR		
	comp=Z,800nm,21.3s						
BUR08	**Bucovina Ar. S**	**146.40**	**337**	*e*PKPdf	**PKPbc**	**22 48 37.8**	**0.0**
NIE	**Niedzica**	**146.40**	**344**	*e*PKP	**PKPbc**	**22 48 37.6**	**+0.1**
NIE	**Niedzica**	**146.40**	**344**	*e*PKP2	**PKPbc**	**22 48 37.7**	**+0.1**
BURAR	**Bucovina Array**	**146.41**	**337**	⇑*i*P	**PKPbc**	**22 48 37.6**	**-0.2**
BURAR	**Bucovina Array**	**146.41**	**337**	⇑PKP2	**PKPbc**	**22 48 37.6**	**-0.2**
DPC	**Dobruska-Polom**	**146.43**	**349**	*e*PKP	**PKPbc**	**22 48 37.7**	**0.0**
DPC				AMS	AMS	23 50 00.0	
	comp=Z,700nm,22.8s						
DPC	**Dobruska-Polom**	**146.43**	**349**	*e*PKP2	**PKPbc**	**22 48 37.7**	**0.0**
DPC				MLR	MLR		
	comp=Z,700nm,22.8s						
HMNX	**Herstmonceux**	**146.45**	**7**	*e*P	**PKPbc**	**22 48 37.5**	**-0.1**
UZH	**Uzhgorod**	**146.53**	**341**	*e*PKIKP	**PKPdf**	**22 48 36.4**	**-0.1**
UZH				*i*		22 48 39.0	
UZH				*e*		22 48 53.0	
UZH				*e*		22 52 02.0	
UZH				*e*		22 55 25.0	
BIR	**Birlad**	**146.54**	**333**	⇓*i*P	**PKPab**	**22 48 39.3**	**+0.2**
BIR	**Birlad**	**146.54**	**333**	⇓PKP2	**PKPab**	**22 48 39.3**	**+0.2**
OKC	**Ostrava-Krasne**	**146.54**	**346**	*e*PKP	**PKPbc**	**22 48 38.0**	**+0.1**
OKC				AMS	AMS	23 52 00.0	
	comp=Z,600nm,21.4s						
OKC	**Ostrava-Krasne**	**146.54**	**346**	*e*PKP2	**PKPbc**	**22 48 38.0**	**+0.1**
OKC				MLR	MLR		
	comp=Z,600nm,21.4s						
PVCC	**Panska Ves**	**146.55**	**351**	*e*PKP	**PKPbc**	**22 48 38.0**	**0.0**
PVCC				*e*pPKP	**pPKPdf**	**22 48 47.7**	**-1.4**
PVCC				AMS	AMS	23 52 30.0	
	comp=Z,1µm,22.3s						
PVCC	**Panska Ves**	**146.55**	**351**	*e*PKP2	**PKPbc**	**22 48 38.0**	**0.0**
PVCC				MLR	MLR		
	comp=Z,1µm,22.3s						
KRLC	**Kraliky**	**146.60**	**348**	*e*PKP	**PKPab**	**22 48 38.8**	**-0.5**
KRLC	**Kraliky**	**146.60**	**348**	*e*PKP2	**PKPab**	**22 48 38.8**	**-0.5**
BIZ	**Bicaz**	**146.63**	**335**	⇑*i*P	**PKPbc**	**22 48 37.9**	**-0.4**
MORC	**Moravsky Berou**	**146.73**	**347**	*e*PKPdf	**PKPbc**	**22 48 38.1**	**-0.4**
MORC	**Moravsky Berou**	**146.73**	**347**	⇓*i*P	**PKPbc**	**22 48 38.4**	**-0.2**
MORC	**Moravsky Berou**	**146.73**	**347**	*e*PKP2	**PKPbc**	**22 48 38.1**	**-0.4**
MORC	**Moravsky Berou**	**146.73**	**347**	*e*PKP	**PKPbc**	**22 48 37.9**	**-0.7**
TESR	**Tescani**	**146.76**	**334**	⇑*i*P	**PKPbc**	**22 48 38.2**	**-0.5**
GAZ	**Gaziantep**	**146.79**	**312**	*i* P	**PKPbc**	**22 48 38.7**	**-0.5**
GAZ	**Gaziantep**	**146.79**	**312**	*e*P	**PKPbc**	**22 48 38.7**	**-0.5**
GAZ	**Gaziantep**	**146.79**	**312**	*i* P	**PKPbc**	**22 48 38.7**	**-0.5**
MOX	**Moxa**	**146.81**	**354**	PKP2	**PKPbc**	**22 48 37.9**	**-0.8**
TLCR		**146.84**	**331**	⇓*i*P	**PKPab**	**22 48 39.7**	**-0.5**
TLCR		**146.84**	**331**	⇓PKP2	**PKPab**	**22 48 39.7**	**-0.5**
UCC	**Uccle**	**146.85**	**3**	⇑PKP	**PKPbc**	**22 48 38.6**	**-0.2**
KMRS	**Kahramanmaras**	**146.86**	**313**	*e*P	**PKPbc**	**22 48 38.5**	**-0.8**
KMRS	**Kahramanmaras**	**146.86**	**313**	*e*P	**PKPbc**	**22 48 38.5**	**-0.8**
KMRS	**Kahramanmaras**	**146.86**	**313**	*i* P	**PKPbc**	**22 48 38.5**	**-0.8**
LANS	**Liptovska Anna**	**146.86**	**345**	*e*PKP2	**PKPab**	**22 48 39.8**	**-0.5**
LANS	**Liptovska Anna**	**146.86**	**345**	*e*PKP	**PKPab**	**22 48 39.8**	**-0.5**
ANKE	**Ethiopia-Afar**	**146.88**	**260**	*i* P	**PKPab**	**22 48 41.5**	**-0.4**
ANKE	**Ethiopia-Afar**	**146.88**	**260**	*i* P	**PKPab**	**22 48 41.5**	**-0.4**
BEBN	**Eben Emael**	**146.89**	**1**	⇑PKP	**PKPbc**	**22 48 38.6**	**-0.2**
TRPA	**Tarpa**	**146.90**	**340**	⇑*i*P	**PKPdf**	**22 48 37.6**	**+0.5**
TRPA	**Tarpa**	**146.90**	**340**	⇑*e*PKiKP	**PKPbc**	**22 48 38.1**	**-0.9**
HGN	**Heimansgroeve**	**146.93**	**1**	*e*PKPdf	**PKPbc**	**22 48 38.8**	**-0.2**
HGN				*e*pPKPbc	**PKPab**	**22 48 39.6**	**-0.8**
	comp=Z,1µm,2.5s						
ILGA	**Ilgaz**	**147.02**	**321**	*e*PKPdf	**PKPbc**	**22 48 39.6**	**-0.3**
MEM	**Membach**	**147.08**	**1**	PKP2	**PKPbc**	**22 48 39.5**	**0.0**
MEM	**Membach**	**147.08**	**1**	⇑PKP	**PKPbc**	**22 48 39.2**	**-0.2**
PRU	**Pruhonice**	**147.08**	**351**	*e*PKP	**PKPbc**	**22 48 40.1**	**+0.6**
PRU				*e*x	x	22 48 52.1	
PRU				*e*pPKP	**sPKPbc**	**22 48 58.0**	**+1.4**
PRU				AMS	AMS	23 53 10.0	
	comp=Z,1µm,21.8s						
PRU	**Pruhonice**	**147.08**	**351**	*e*PKP2	**PKPbc**	**22 48 40.1**	**+0.6**
PRU				MLR	MLR		
	comp=Z,1µm,21.8s						
KURC	**Kurucasile-Bar**	**147.11**	**323**	*e*P	**PKPbc**	**22 48 39.8**	**0.0**
KURC	**Kurucasile-Bar**	**147.11**	**323**	*e*P	**PKPbc**	**22 48 39.8**	**0.0**
KURC	**Kurucasile-Bar**	**147.11**	**323**	*e*P	**PKPbc**	**22 48 39.8**	**0.0**
GOPC	**GO Pecny, Ondr**	**147.12**	**350**	*e*PKP	**PKPbc**	**22 48 39.5**	**-0.1**
GOPC				*e*x	x	22 48 45.8	
GOPC				AMS	AMS	23 53 30.0	
	comp=Z,900nm,18.9s						

GOPC	GO Pecny, Ondr	147.12 350	ePKP2	PKPbc	22 48 39.5	-0.1
GOPC			MLR	MLR		
	comp=Z,900nm,18.9s					
NKC	Novy Kostel	147.13 353	ePKP	PKPdf	22 48 38.4	+0.9
NKC			ex	x	22 48 40.4	
NKC			epPKP	pPKPab	22 48 53.7	0.0
NKC	Novy Kostel	147.13 353	ePKP2	PKPdf	22 48 38.4	+0.9
PETR	Petresti	147.14 333	⇑iP	PKPab	22 48 40.8	-0.6
CFR	Carcaliu	147.16 331	⇓iP	PKPdf	22 48 38.5	+0.9
CFR	Carcaliu	147.16 331	⇓PKP2	PKPdf	22 48 38.5	+0.9
ARCR	ARCALIA	147.18 337	⇓iP	PKPab	22 48 40.8	-0.8
ODBI	Odobesti	147.18 333	⇑iP	PKPab	22 48 41.7	+0.1
VRI	Vrincioaia	147.24 334	eP	PKPab	22 48 41.0	-0.9
VRI	Vrincioaia	147.24 334	eP	PKPab	22 48 41.0	-0.9
VRI	Vrincioaia	147.24 334	eP	PKPab	22 48 41.0	-0.9
VRI	Vrincioaia	147.24 334	⇑iP	PKPbc	22 48 40.5	+0.4
VRI	Vrincioaia	147.24 334	⇑PKP2	PKPbc	22 48 40.5	+0.4
BCLA	Clavier	147.26 2	⇑PKP	PKPbc	22 48 39.4	-0.6
PLOR	Plostina	147.28 334	⇓iP	PKPbc	22 48 40.6	+0.3
PLOR	Plostina	147.28 334	⇓PKP2	PKPbc	22 48 40.6	+0.3
CEI	Carei	147.32 340	⇑iP	PKPbc	22 48 40.5	+0.3
CEI	Carei	147.32 340	⇑PKP2	PKPbc	22 48 40.5	+0.3
VRAC	Vranov	147.37 348	⇓iP	PKPbc	22 48 39.4	-0.9
VRAC	Vranov	147.37 348	⇓PKP2	PKPbc	22 48 39.4	-0.9
VRAC	Vranov	147.37 348	ePKP	PKPbc	22 48 40.3	0.0
TNS	Taunus Mts	147.44 358	PKP2	PKPbc	22 48 40.7	+0.1
OZUR		147.44 335	⇑iP	PKPbc	22 48 41.5	+0.8
DOU	Dourbes	147.56 2	⇑PKP	PKPbc	22 48 40.5	-0.3
DOU			⇑pPKP	pPKPdf	22 48 51.5	+0.6
TIRR	Tirgusor	147.57 330	⇑iP	PKPbc	22 48 40.9	-0.1
TIRR	Tirgusor	147.57 330	⇑PKP2	PKPbc	22 48 40.9	-0.1
TREC	Trest	147.59 349	ePKP	PKPbc	22 48 41.5	+0.5
TREC			AMS	AMS	23 54 20.0	
	comp=Z,1µm,21.0s					
TREC	Trest	147.59 349	ePKP2	PKPbc	22 48 41.5	+0.5
TREC			MLR	MLR		
	comp=Z,1µm,21.0s					
KOZT	Kozan	147.62 314	eP	PKPdf	22 48 39.5	+0.8
KOZT	Kozan	147.62 314	eP	PKPdf	22 48 39.5	+0.8
KOZT	Kozan	147.62 314	P	PKPdf	22 48 39.5	+0.8
HARR	Harsova	147.62 331	⇑iP	PKPbc	22 48 41.9	+0.8
HARR	Harsova	147.62 331	⇑PKP2	PKPbc	22 48 41.9	+0.8
VYHS	Vyhne	147.63 345	ePKIKP	PKPdf	22 48 39.1	+0.7
VYHS			e		22 48 41.9	
VYHS	Vyhne	147.63 345	ePKP	PKPdf	22 48 39.1	+0.7
VYHS			e		22 48 41.9	
KRUC	Moravsky	147.65 348	PKIKP	PKPdf	22 48 39.5	+1.2
KRUC	Moravsky	147.65 348	ePKP	PKPbc	22 48 39.8	-1.3
TLB	Topalu	147.65 331	⇑iP	PKPbc	22 48 42.0	+0.8
TLB	Topalu	147.65 331	⇑PKP2	PKPbc	22 48 42.0	+0.8
KOLL	Kolacno	147.66 345	ePKP	PKPdf	22 48 39.4	+1.0
KOLL			e		22 48 41.8	
DOPR	Dopca	147.71 335	⇑iP	PKPbc	22 48 40.4	-1.0
JSA	Saint Aubin	147.71 11	eP	PKPbc	22 48 39.9	-1.3
LTVH	Ltavrtes, Hu	147.76 340	⇑ePKiKP	PKPbc	22 48 40.1	-1.3
CJR	Cluj-Napoca	147.77 338	⇑iP	PKPbc	22 48 42.1	+0.5
CJR	Cluj-Napoca	147.77 338	⇑PKP2	PKPbc	22 48 42.1	+0.5
MFTR	Murfatlar	147.78 330	⇓iP	PKPbc	22 48 42.3	+0.7
GRFO	Grafenberg	147.79 354	ePKPbc	PKPbc	22 48 41.7	+0.2
CVDA	Cernavoda	147.84 330	⇑iP	PKiKP	22 48 42.8	-0.9
BR131	Keskin Array S	147.85 319	PKPdf	PKPdf	22 48 39.5	+0.3
	SNR=76					
BRTR	Keskin Array B	147.85 319	PKP	PKPdf	22 48 39.9	+0.7
	comp=Z,107nm,0.8s,baz=132,slow=2.4,SNR=108					
BRTR			PKPbc	PKPbc	22 48 43.0	+0.8
	comp=Z,107nm,0.8s,baz=134,slow=2.8,SNR=189					
MLR	Muntele Rosu	147.87 334	⇓iP	PKPdf	22 48 39.7	+0.7
MLR	Muntele Rosu	147.87 334	⇓PKIKP	PKPdf	22 48 39.7	+0.7
PSZ	Piszkesteto	147.88 343	⇓iP	PKPbc	22 48 42.7	+0.8
PSZ	Piszkesteto	147.88 343	⇓PKP2	PKPbc	22 48 42.7	+0.8
PSZ	Piszkesteto	147.88 343	ePKiKP	PKPbc	22 48 41.1	-0.8
PGOR	Pogoanele	147.88 332	⇑iP	PKiKP	22 48 43.1	-0.6
TAHT	Tahtakopru-Hat	147.89 311	eP	PKPbc	22 48 41.3	-0.9
TAHT	Tahtakopru-Hat	147.89 311	eP	PKPbc	22 48 41.3	-0.9
TAHT	Tahtakopru-Hat	147.89 311	eP	PKPbc	22 48 41.3	-0.9
CEYT	Ceyhan	147.90 313	eP	PKPdf	22 48 40.5	+1.4
CEYT	Ceyhan	147.90 313	eP	PKPdf	22 48 40.5	+1.4
CEYT	Ceyhan	147.90 313	eP	PKPdf	22 48 40.5	+1.4
ISR	Istrita	147.91 333	⇑iP	PKPbc	22 48 42.5	+0.5
ISR	Istrita	147.91 333	⇑PKP2	PKPbc	22 48 42.5	+0.5
SMOL	Smolenice	147.95 346	ePKP2	PKiKP	22 48 42.9	-0.9
SMOL	Smolenice	147.95 346	ePKP	PKiKP	22 48 42.9	-0.9
AMRR	Amara	147.96 332	⇓iP	PKiKP	22 48 43.1	-0.8
AMRR	Amara	147.96 332	⇓PKP2	PKiKP	22 48 43.1	-0.8
DRGR		148.01 339	⇓iP	PKPdf	22 48 40.0	+0.9
DRGR		148.01 339	⇓PKIKP	PKPdf	22 48 40.0	+0.9
WLF	Walferdange	148.03 1	ePKPbc	PKPbc	22 48 42.7	+0.6
WLF	Walferdange	148.03 1	⇓PKP	PKPbc	22 48 42.5	+0.4
WLF			⇓pPKP	sPKPdf	22 48 56.8	+0.7
KHC	Kasperske Hory	148.06 351	ePKPdf	PKPdf	22 48 39.9	+0.8
KHC	Kasperske Hory	148.06 351	ePKP	PKPdf	22 48 39.4	+0.3
KHC			ex	x	22 48 42.5	
KHC			epPKP	sPKPdf	22 48 56.7	+0.5
KHC			AMS	AMS	23 53 40.0	
	comp=Z,1µm,21.1s					
KHC	Kasperske Hory	148.06 351	ePKIKP	PKPdf	22 48 39.4	+0.3
KHC			e		22 48 42.5	
KHC			e		22 48 56.7	
KHC			MLR	MLR		
	comp=Z,1µm,21.1s					
YURE	YUREGIR	148.07 313	eP	PKiKP	22 48 43.9	-0.5
YURE	YUREGIR	148.07 313	eP	PKiKP	22 48 43.9	-0.5
YURE	YUREGIR	148.07 313	eP	PKiKP	22 48 43.9	-0.5
MODS	Modra-Piesok	148.11 346	ePKP2	PKPbc	22 48 43.1	+0.7
MODS	Modra-Piesok	148.11 346	ePKP	PKPbc	22 48 43.1	+0.7
ICOR	Ion Corvin	148.12 330	⇑iP	PKiKP	22 48 43.4	-0.8
NIG	Nigde	148.12 315	eP	PKPbc	22 48 42.5	-0.6
NIG	Nigde	148.12 315	eP	PKPbc	22 48 42.5	-0.6
WET	Wettzell	148.14 352	PKIKP	PKPdf	22 48 40.1	+0.9
SECR		148.18 333	⇓iP	PKPdf	22 48 40.4	+1.0
YAYX	Yaylak	148.19 317	eP	PKPdf	22 48 40.3	+0.6
YAYX	Yaylak	148.19 317	eP	PKPdf	22 48 40.3	+0.6
YAYX	Yaylak	148.19 317	eP	PKPdf	22 48 40.3	+0.6
KARA	Karaisali	148.26 314	eP	PKPdf	22 48 40.8	+1.1
KARA	Karaisali	148.26 314	eP	PKPdf	22 48 40.8	+1.1
KARA	Karaisali	148.26 314	eP	PKPdf	22 48 40.8	+1.1
PSN	Preselentsi	148.26 330	P	PKPbc	22 48 43.4	+0.5
PSN	Preselentsi	148.26 330	eP	PKPbc	22 48 43.4	+0.5
PSN	Preselentsi	148.26 330	eP	PKPbc	22 48 43.4	+0.5
VOIR		148.28 335	⇑iP	PKPbc	22 48 41.3	-1.7
VOIR		148.28 335	⇑PKIKP	PKPbc	22 48 41.3	-1.7
ANTO	Ankara	148.29 320	eP	PKPbc	22 48 41.6	-1.6
ANTO	Ankara	148.29 320	eP	PKPbc	22 48 41.6	-1.6
ANTO	Ankara	148.29 320	eP	PKPbc	22 48 41.6	-1.6
ANTO	Ankara	148.29 320	ePKPdf	PKPdf	22 48 40.6	+0.8
ANTO			ePKPbc	PKiKP	22 48 44.2	-0.7
ANTO			LR	LR		
	comp=Z,319nm,20.0s					
ANTO	Ankara	148.29 320	PKPbc	PKPbc	22 48 41.5	-1.7
	SNR=31					
ANTO	Ankara	148.29 320	eP	PKPbc	22 48 41.5	-1.7
LEHL	Lehliu	148.30 332	⇑iP	PKPbc	22 48 43.6	+0.7
PLAR	PLOIESTI	148.30 333	⇑iP	PKiKP	22 48 43.7	-0.9
ZST	Bratislava	148.32 347	ePKP2	PKPbc	22 48 43.1	+0.2
ZST	Bratislava	148.32 347	ePKP	PKPbc	22 48 43.0	+0.2
GERES	GERESS Array B	148.32 351	PKP	PKPdf	22 48 39.9	+0.3
	comp=Z,35nm,0.8s,baz=48,slow=1.5,SNR=137					
GERES			PKPbc	PKPbc	22 48 42.9	-0.1
	comp=Z,35nm,0.8s,baz=26,slow=2.5,SNR=143					
RASA	Rasa	148.35 331	⇓iP	PKiKP	22 48 43.9	-0.8
AFSR	Afar-Bala (An	148.37 319	eP	PKPdf	22 48 41.6	+1.6
AFSR	Afar-Bala (An	148.37 319	eP	PKPdf	22 48 41.6	+1.6
AFSR	Afar-Bala (An	148.37 319	eP	PKPdf	22 48 41.6	+1.6
KRTS	Karatas	148.37 312	eP	PKPdf	22 48 41.2	+1.3
KRTS	Karatas	148.37 312	eP	PKPdf	22 48 41.2	+1.3
KRTS	Karatas	148.37 312	eP	PKPdf	22 48 41.2	+1.3
SULR		148.38 333	⇓iP	PKPbc	22 48 41.8	-1.3
SRO	Srobarova	148.39 345	ePKIKP	PKPdf	22 48 40.7	+1.1
SRO			e		22 48 43.8	
SRO	Srobarova	148.39 345	ePKP	PKPdf	22 48 40.7	+1.1
SRO			e		22 48 43.8	
MTUR	Matau	148.45 335	⇓iP	PKPbc	22 48 43.4	-0.1
MTUR	Matau	148.45 335	⇓PKP2	PKPbc	22 48 43.4	-0.1
ARR	Arges	148.50 335	⇑iP	PKPbc	22 48 41.8	-1.8
BUD	Budapest	148.51 344	⇓ePKiKP	PKPbc	22 48 42.0	-1.4
KULU	Kulu	148.65 318	eP	PKPbc	22 48 43.7	-0.5
KULU	Kulu	148.65 318	eP	PKPbc	22 48 43.7	-0.5
KULU	Kulu	148.65 318	eP	PKPbc	22 48 43.7	-0.5
DEV	Deva	148.73 338	⇑iP	PKiKP	22 48 45.0	-0.5
DEV	Deva	148.73 338	⇑PKP2	PKiKP	22 48 45.0	-0.5
LOT	Lotru	148.77 336	⇑iP	PKPbc	22 48 43.9	-0.4
SULT	Sultanhani-AKS	148.80 317	eP	PKPbc	22 48 43.2	-1.4
SULT	Sultanhani-AKS	148.80 317	eP	PKPbc	22 48 43.2	-1.4
SULT	Sultanhani-AKS	148.80 317	eP	PKPbc	22 48 43.2	-1.4
SIRR	Siria	148.82 340	⇓iP	PKPdf	22 48 41.7	+1.3
MERS	Mersin	148.82 314	eP	PKPdf	22 48 41.4	+0.6
MERS	Mersin	148.82 314	eP	PKPdf	22 48 41.4	+0.6
MERS	Mersin	148.82 314	eP	PKPdf	22 48 41.4	+0.6
CONA	Conrad Observa	148.83 348	ePKPdf	PKPdf	22 48 40.7	+0.3
	comp=Z,153nm,1.2s,SNR=69					
SGRR	Singureni	148.87 333	⇑iP	PKPbc	22 48 44.2	-0.2
MDUB	Mudurnu	148.88 322	eP	PKPbc	22 48 43.9	-0.8
MDUB	Mudurnu	148.88 322	eP	PKPbc	22 48 43.9	-0.8
MDUB	Mudurnu	148.88 322	eP	PKPbc	22 48 43.9	-0.8
SOP	Sopron	148.92 347	ePKiKP	PKPdf	22 48 40.0	-0.4
CHBY	Cihanbeyli	148.99 318	i P	PKPdf	22 48 42.6	+1.6
CHBY	Cihanbeyli	148.99 318	eP	PKPdf	22 48 42.6	+1.6
CHBY	Cihanbeyli	148.99 318	eP	PKPdf	22 48 42.6	+1.6
HWQ	Hawqa	149.00 308	eP	PKPdf	22 48 41.5	+0.3
PRD	Provadia	149.00 330	i P	PKPdf	22 48 42.2	+1.5
HUMR	Humele	149.05 334	⇓iP	PKPbc	22 48 44.8	-0.1
GZR	Gura Zlata	149.19 337	⇓iP	PKPdf	22 48 42.8	+1.7
MOA	Molln	149.20 350	ePKPdf	PKPdf	22 48 41.0	+0.1
	comp=Z,75nm,1.3s,SNR=21					
SAUV	Serdivan-Sakar	149.21 323	eP	PKPbc	22 48 43.4	-2.0
SAUV	Serdivan-Sakar	149.21 323	eP	PKPbc	22 48 43.4	-2.0
SAUV	Serdivan-Sakar	149.21 323	eP	PKPbc	22 48 43.4	-2.0
SPNC	Sapanca-Adapaz	149.25 323	eP	PKPbc	22 48 45.5	0.0
SPNC	Sapanca-Adapaz	149.25 323	eP	PKPbc	22 48 45.5	0.0
SPNC	Sapanca-Adapaz	149.25 323	eP	PKPbc	22 48 45.5	0.0
KIZK	Mersin	149.28 313	P	PKPbc	22 48 46.2	+0.5
KIZK	Mersin	149.28 313	eP	PKPbc	22 48 46.2	+0.5
KIZK	Mersin	149.28 313	eP	PKPbc	22 48 46.2	+0.5
GULT	Gulveren	149.30 323	eP	PKPdf	22 48 43.4	+2.0
GULT	Gulveren	149.30 323	eP	PKPdf	22 48 43.4	+2.0
GULT	Gulveren	149.30 323	eP	PKPdf	22 48 43.4	+2.0
SILT	Sile	149.31 325	eP	PKiKP	22 48 47.1	+0.3
SILT	Sile	149.31 325	eP	PKiKP	22 48 47.1	+0.3
SILT	Sile	149.31 325	eP	PKiKP	22 48 47.1	+0.3
SILT	Sile	149.31 325	⇑iP	PKiKP	22 48 46.2	-0.6
SVRH	Sivrihisar-ESK	149.33 320	eP	PKPbc	22 48 43.9	-2.0
SVRH	Sivrihisar-ESK	149.33 320	eP	PKPbc	22 48 43.9	-2.0
SVRH	Sivrihisar-ESK	149.33 320	eP	PKPbc	22 48 43.9	-2.0
BFO	Black Forest	149.34 358	ePKPdf	PKPdf	22 48 41.6	+0.4
BFO	Black Forest	149.34 358	ePKIKP	PKPdf	22 48 41.6	+0.4
TIH	Tihany	149.35 345	⇑ePKiKP	PKPdf	22 48 41.1	-0.1
BHL	Bhannes	149.37 308	eP	PKPdf	22 48 43.4	+1.6
BZS	Buzias	149.41 339	⇑iP	PKPdf	22 48 41.9	+0.6
BZS	Buzias	149.41 339	⇑PKIKP	PKPdf	22 48 41.9	+0.6
LADK	Ladik-KONYA	149.54 318	eP	PKPdf	22 48 42.0	+0.1
LADK	Ladik-KONYA	149.54 318	eP	PKPdf	22 48 42.0	+0.1
LADK	Ladik-KONYA	149.54 318	eP	PKPdf	22 48 42.0	+0.1
ARSA	Arzberg	149.55 348	ePKPdf	PKPdf	22 48 41.4	-0.1
	comp=Z,56nm,1.1s,SNR=21					
KEBE	Keben-Mersin	149.60 313	eP	PKPdf	22 48 42.7	+0.7
KEBE	Keben-Mersin	149.60 313	eP	PKPdf	22 48 42.7	+0.7
KEBE	Keben-Mersin	149.60 313	eP	PKPdf	22 48 42.7	+0.7
SZH	Strazhica	149.64 331	i P	PKPdf	22 48 42.1	+0.3
SRE	Strehaia	149.65 336	⇑iP	PKPbc	22 48 45.3	-1.1
HSUJ	Al Zarqa	149.66 304	P	PKiKP	22 48 48.1	+0.2
KSDI	Kefar Szold	149.66 306	P	PKPdf	22 48 42.8	+0.7
	comp=Z,318nm,1.6s					
KONT	Konya--Tatoy	149.69 317	eP	PKPbc	22 48 44.4	-2.4
KONT	Konya--Tatoy	149.69 317	eP	PKPbc	22 48 44.4	-2.4
KONT	Konya--Tatoy	149.69 317	eP	PKPbc	22 48 44.4	-2.4
ISK	Istanbul-Kandi	149.70 325	eP	PKPab	22 48 51.7	-0.2
ISK	Istanbul-Kandi	149.70 325	eP	PKPab	22 48 51.7	-0.2
CRAR	CRAIOVA	149.70 335	⇑iP	PKiKP	22 48 47.5	0.0
CRAR	CRAIOVA	149.70 335	⇑PKP2	PKiKP	22 48 47.5	0.0
VLAD	Vladila	149.72 334	⇑iP	PKPdf	22 48 43.5	+1.7
IKL	Isikli	149.72 313	i P	PKPdf	22 48 42.5	+0.4
IKL	Isikli	149.72 313	eP	PKPdf	22 48 42.5	+0.4
IKL	Isikli	149.72 313	eP	PKPdf	22 48 42.5	+0.4
EREN	Erenkoy	149.73 312	eP	PKPdf	22 48 43.2	+1.1
EREN	Erenkoy	149.73 312	eP	PKPdf	22 48 43.2	+1.1
EREN	Erenkoy	149.73 312	eP	PKPdf	22 48 43.2	+1.1
HERR	Herculane	149.76 337	⇑iP	PKPbc	22 48 46.8	+0.2
BGKT	Bogazkoy	149.77 326	P	PKPdf	22 48 43.7	+1.7
BGKT	Bogazkoy	149.77 326	eP	PKPdf	22 48 43.7	+1.7
BGKT	Bogazkoy	149.77 326	eP	PKPdf	22 48 43.7	+1.7
BANR	Banloc	149.78 339	⇑iP	PKiKP	22 48 47.8	+0.2
MORH	Mrgy, Hungar	149.78 343	eP	PKPdf	22 48 42.1	+0.2
MORH	Mrgy, Hungar	149.78 343	ePKiKP	PKPbc	22 48 46.0	-0.6
TEVE	Tevekalti-Mers	149.79 314	eP	PKPbc	22 48 45.5	-1.6
TEVE	Tevekalti-Mers	149.79 314	eP	PKPbc	22 48 45.5	-1.6
TEVE	Tevekalti-Mers	149.79 314	eP	PKPbc	22 48 45.5	-1.6
BUY	Buyukada	149.81 325	eP	PKPbc	22 48 47.0	+0.1
BUY	Buyukada	149.81 325	eP	PKPbc	22 48 47.0	+0.1
CAVI	Cavuskoy	149.84 323	eP	PKPbc	22 48 45.2	-1.8
CAVI	Cavuskoy	149.84 323	eP	PKPbc	22 48 45.2	-1.8
CAVI	Cavuskoy	149.84 323	eP	PKPbc	22 48 45.2	-1.8
AKKU	Akkuyu-Mersin	149.86 313	eP	PKPdf	22 48 44.2	+1.9
AKKU	Akkuyu-Mersin	149.86 313	eP	PKPdf	22 48 44.2	+1.9
AKKU	Akkuyu-Mersin	149.86 313	eP	PKPdf	22 48 44.2	+1.9
YLV	Yalova	149.86 324	eP	PKPdf	22 48 41.9	-0.4
YLV	Yalova	149.86 324	eP	PKPdf	22 48 41.9	-0.4
YLV	Yalova	149.86 324	eP	PKPdf	22 48 41.9	-0.4
CTKS	Kestanelik-??a	149.88 326	eP	PKPdf	22 48 43.7	+1.5
CTKS	Kestanelik-??a	149.88 326	eP	PKPdf	22 48 43.7	+1.5
CTKS	Kestanelik-??a	149.88 326	eP	PKPdf	22 48 43.7	+1.5
SLE	Schleitheim	149.89 357	PKHKP	PKPdf	22 48 42.9	+0.8
PVL	Pavlikeni	149.95 332	i P	PKPdf	22 48 41.8	-0.4
RETA	Reutte	150.02 354	ePKPdf	PKPdf	22 48 42.6	+0.2
	comp=Z,67nm,1.4s,SNR=20					
BEHE	Becsehely	150.02 346	⇑ePKiKP	PKPbc	22 48 47.0	-0.2
BEHE	Becsehely	150.02 346	⇑iP	PKPbc	22 48 46.9	-0.3
SLVT	Silivri	150.04 326	eP	PKPbc	22 48 47.3	-0.1
SLVT	Silivri	150.04 326	eP	PKPbc	22 48 47.3	-0.1
SLVT	Silivri	150.04 326	eP	PKPbc	22 48 47.3	-0.1
GEMT	Gemlik	150.06 324	eP	PKPbc	22 48 45.2	-2.3
GEMT	Gemlik	150.06 324	eP	PKPbc	22 48 45.2	-2.3
GEMT	Gemlik	150.06 324	eP	PKPbc	22 48 45.2	-2.3
PUNG	Punghina	150.08 336	⇓iP	PKPbc	22 48 47.7	+0.3
WATA	Walderalm	150.08 353	ePKPdf	PKPdf	22 48 42.9	+0.4
	comp=Z,56nm,1.0s,SNR=20					
PHNC	Paralimni	150.08 311	P	PKiKP	22 48 48.5	-0.1
KBA	Koelnbreinsper	150.10 351	ePKPdf	PKPdf	22 48 42.2	-0.4
	comp=Z,47nm,0.9s,SNR=30					
KBA	Koelnbreinsper	150.10 351	PKHKP	PKPpre	22 48 42.7	
MDVR	Moldovita	150.10 338	⇑iP	PKPbc	22 48 47.8	+0.3
PHSR	Pinarhisar	150.11 328	⇑iP	PKPbc	22 48 47.7	+0.1
MOTA	Moosalm	150.12 354	ePKPdf	PKPdf	22 48 42.6	0.0
	comp=Z,73nm,1.1s,SNR=24					
MBAR	Mbarara	150.14 235	PFAKE		22 49 00.0	+5.3
MBAR			LR	LR		
	comp=Z,873nm,19.0s					
MMLI	Mount Malkishu	150.14 305	eP	PKPdf	22 48 44.4	+1.5
MMLI	Mount Malkishu	150.14 305	eP	PKPdf	22 48 44.4	+1.5
MMLI	Mount Malkishu	150.14 305	eP	PKPdf	22 48 44.4	+1.5
MMLI	Mount Malkishu	150.14 305	P	PKPdf	22 48 43.7	+0.8
	comp=Z,234nm,1.0s					
WTTA	Wattenberg	150.15 353	ePKPdf	PKPdf	22 48 42.9	+0.2
	comp=Z,43nm,0.7s,SNR=17					
ARMT	Armutlu	150.15 325	eP	PKPdf	22 48 43.9	+1.2
ARMT	Armutlu	150.15 325	eP	PKPdf	22 48 43.9	+1.2
ARMT	Armutlu	150.15 325	eP	PKPdf	22 48 43.9	+1.2
KOGS	Kog	150.16 347	i PKPdf	PKPdf	22 48 42.5	+0.1
KOGS			ePKPbc	PKPbc	22 48 47.2	-0.4
KOGS			ePKPab	PKPab	22 48 53.6	0.0
TEKE	Tekeli-Mersin	150.17 313	eP	PKPdf	22 48 42.9	+0.1
TEKE	Tekeli-Mersin	150.17 313	eP	PKPdf	22 48 42.9	+0.1
TEKE	Tekeli-Mersin	150.17 313	eP	PKPdf	22 48 42.9	+0.1
SOKA	Soboth	150.19 348	ePKPdf	PKPdf	22 48 42.3	-0.4
	comp=Z,92nm,1.0s,SNR=45					
SQTA	Sankt Quirin	150.24 354	ePKPdf	PKPdf	22 48 43.0	+0.2
	comp=Z,90nm,1.4s,SNR=53					
DAVA	Damuels	150.29 356	ePKPdf	PKPdf	22 48 42.9	0.0
	comp=Z,74nm,0.9s,SNR=19					
LFK	Lefkose	150.31 312	eP	PKPbc	22 48 45.7	-2.7
LFK	Lefkose	150.31 312	eP	PKPbc	22 48 45.7	-2.7
LFK	Lefkose	150.31 312	eP	PKPbc	22 48 45.7	-2.7
EDRB	Edirne	150.34 329	eP	PKPdf	22 48 42.2	-0.7
EDRB	Edirne	150.34 329	eP	PKPdf	22 48 42.2	-0.7
EDRB	Edirne	150.34 329	eP	PKPdf	22 48 42.2	-0.7
EDRB	Edirne	150.34 329	P	PKPbc	22 48 47.5	-0.6
EDRB	Edirne	150.34 329	P	PKPbc	22 48 47.5	-0.6
FRGS	Fruska Gora	150.40 341	eP	PKPbc	22 48 47.9	-0.3
GHAJ	Ghor Haditha	150.44 303	P	PKPdf	22 48 43.7	+0.3
	comp=Z,171nm,1.0s					
OBKA	Obir	150.45 349	ePKPdf	PKPdf	22 48 42.0	-1.0
	comp=Z,34nm,1.0s,SNR=10					
SHUT	Suhut-Afyon	150.48 320	eP	PKPdf	22 48 45.1	+1.7
SHUT	Suhut-Afyon	150.48 320	eP	PKPdf	22 48 45.1	+1.7
SHUT	Suhut-Afyon	150.48 320	eP	PKPdf	22 48 45.1	+1.7
FETA	Feichten	150.48 354	ePKPdf	PKPdf	22 48 43.5	+0.3
	comp=Z,65nm,0.9s,SNR=35					
MYKA	Terra Mystica	150.49 350	ePKPdf	PKPdf	22 48 42.5	-0.6
	comp=Z,60nm,0.8s,SNR=34					
ABTA	Abfaltersbach	150.54 352	ePKPdf	PKPdf	22 48 42.8	-0.4
	comp=Z,123nm,1.0s,SNR=45					
TVSB	Tavsanli	150.56 322	P	PKPdf	22 48 44.9	+1.4
TVSB	Tavsanli	150.56 322	eP	PKPdf	22 48 44.9	+1.4
TVSB	Tavsanli	150.56 322	eP	PKPdf	22 48 44.9	+1.4
MAMC	Mammari	150.59 312	P	PKiKP	22 48 49.2	-0.4
CSS	Mathiatis	150.61 311	eP	PKPdf	22 48 44.1	+0.5
CSS	Mathiatis	150.61 311	eP	PKPdf	22 48 44.1	+0.5
CSS	Mathiatis	150.61 311	eP	PKPdf	22 48 44.1	+0.5
CSS	Mathiatis	150.61 311	P	PKPbc	22 48 48.6	-0.4
CSS	Mathiatis	150.61 311	P	PKiKP	22 48 49.8	+0.1
CSS	Mathiatis	150.61 311	P	PKPbc	22 48 48.6	-0.4
KCTX	Karacabey (Bur	150.63 325	eP	PKPdf	22 48 44.7	+1.2
KCTX	Karacabey (Bur	150.63 325	eP	PKPdf	22 48 44.7	+1.2
KCTX	Karacabey (Bur	150.63 325	eP	PKPdf	22 48 44.7	+1.2
ZAG	Zagreb	150.81 347	⇑iP	PKPbc	22 48 49.3	+0.2
LEF	Lefka	150.84 312	eP	PKPdf	22 48 45.7	+1.8
LEF	Lefka	150.84 312	eP	PKPdf	22 48 45.7	+1.8
LEF	Lefka	150.84 312	eP	PKPdf	22 48 45.7	+1.8
LEF	Lefka	150.84 312	⇓iP	PKiKP	22 48 50.0	-0.2
EDC	Edincik	150.85 325	eP	PKiKP	22 48 50.2	+0.2
EDC	Edincik	150.85 325	eP	PKiKP	22 48 50.2	+0.2
EDC	Edincik	150.85 325	eP	PKiKP	22 48 50.2	+0.2
SACV	Santiago Islan	150.88 91	PFAKE		22 49 00.0	+2.4
SACV			LR	LR		
	comp=Z,359nm,20.0s					
LJU	Ljubljana	150.90 349	ePKPdf	PKPdf	22 48 43.6	0.0
LJU			i PKPbc	PKPbc	22 48 49.2	-0.2
LJU			i pPKPbc	pPKPbc	22 49 03.2	+1.3
LJU	Ljubljana	150.90 349	⇑iP	PKPbc	22 48 48.9	-0.4
CRES	Cresnjev	150.92 347	eP	PKPdf	22 48 44.0	+0.3
DST	Dursunbey	150.94 323	eP	PKPbc	22 48 46.9	-2.8
DST	Dursunbey	150.94 323	eP	PKPbc	22 48 46.9	-2.8
DST	Dursunbey	150.94 323	eP	PKPbc	22 48 46.9	-2.8
ISP	Isparta	150.94 319	eP	PKPdf	22 48 45.9	+1.8
ISP	Isparta	150.94 319	eP	PKPdf	22 48 45.9	+1.8
ISP	Isparta	150.94 319	eP	PKPdf	22 48 45.9	+1.8
ISP	Isparta	150.94 319	⇑iP	PKPbc	22 48 50.0	+0.2
ISP	Isparta	150.94 319	⇑PKIKP	PKPbc	22 48 50.0	+0.2
PGB	Panagyurishte	151.00 333	i P	PKPdf	22 48 43.9	-0.1
SZAC	Souni	151.03 311	P	PKPbc	22 48 50.1	0.0
ALFC	Alefka	151.03 312	P	PKPbc	22 48 49.9	-0.1
PLD	Plovdiv	151.11 331	eP	PKPdf	22 48 46.4	+2.3
PLD	Plovdiv	151.11 331	eP	PKPdf	22 48 46.4	+2.3
PLD	Plovdiv	151.11 331	eP	PKPdf	22 48 46.4	+2.3
KRBG	Karabiga-Canak	151.12 326	eP	PKPdf	22 48 44.9	+0.8
KRBG	Karabiga-Canak	151.12 326	eP	PKPdf	22 48 44.9	+0.8
KRBG	Karabiga-Canak	151.12 326	eP	PKPdf	22 48 44.9	+0.8
OZLJ	Ozalj	151.12 347	P	PKPdf	22 48 43.4	-0.6
KDZ	Kurdzhali	151.13 330	eP	PKPdf	22 48 45.9	+1.7
KDZ	Kurdzhali	151.13 330	eP	PKPdf	22 48 45.9	+1.7
KDZ	Kurdzhali	151.13 330	eP	PKPdf	22 48 45.9	+1.7
CEY	Cerknica	151.21 349	ePKPdf	PKPdf	22 48 43.6	-0.6
CEY			ePKPbc	PKPbc	22 48 49.8	-0.3
CEY			ePKPab	pPKPdf	22 48 57.6	+0.8
CEY			epPKPbc	pPKPbc	22 49 04.0	+1.2
CEY	Cerknica	151.21 349	⇑iP	PKPdf	22 48 44.1	-0.1
DIVS	Divibare	151.29 340	eP	PKPdf	22 48 44.9	+0.5
DOB	Doboj	151.30 343	eP	PKiKP	22 48 50.9	+0.1
HRFI	Mount Harif	151.30 301	eP	PKPdf	22 48 44.9	+0.1
HRFI	Mount Harif	151.30 301	eP	PKPdf	22 48 44.9	+0.1
HRFI	Mount Harif	151.30 301	eP	PKPdf	22 48 44.9	+0.1
ERIK	Erikli-Kesan	151.33 327	eP	PKPdf	22 48 45.4	+1.0
ERIK	Erikli-Kesan	151.33 327	eP	PKPdf	22 48 45.4	+1.0
ERIK	Erikli-Kesan	151.33 327	eP	PKPdf	22 48 45.4	+1.0
VTS	Vitosha	151.34 334	ePKPdf	PKPdf	22 48 45.4	+0.8
VTS	Vitosha	151.34 334	⇓iP	PKPdf	22 48 45.6	+1.0
VTS	Vitosha	151.34 334	P	PKiKP	22 48 50.9	-0.3
VTS	Vitosha	151.34 334	⇓PKIKP	PKPdf	22 48 45.6	+1.0
VTS	Vitosha	151.34 334	i P	PKPdf	22 48 43.9	-0.7
ALN	Alexandroupoli	151.40 328	eP	PKPdf	22 48 45.5	+1.0
ALN	Alexandroupoli	151.40 328	eP	PKPdf	22 48 45.5	+1.0
ALN	Alexandroupoli	151.40 328	eP	PKPdf	22 48 45.5	+1.0
LPK	Lapseki	151.42 327	eP	PKiKP	22 48 51.1	-0.1
LPK	Lapseki	151.42 327	eP	PKiKP	22 48 51.1	-0.1
LPK	Lapseki	151.42 327	eP	PKiKP	22 48 51.1	-0.1
RZN	Rozhen	151.43 331	i P	PKPdf	22 48 44.3	-0.6
RDO	Rodhopi	151.46 329	eP	PKPdf	22 48 44.9	+0.3
RDO	Rodhopi	151.46 329	eP	PKPdf	22 48 44.9	+0.3
RDO	Rodhopi	151.46 329	eP	PKPdf	22 48 44.9	+0.3
RDO	Rodhopi	151.46 329	P	PKPbc	22 48 49.1	-1.7
RDO	Rodhopi	151.46 329	P	PKPbc	22 48 49.1	-1.7
ENEZ	Enez	151.46 328	eP	PKiKP	22 48 51.3	+0.1
ENEZ	Enez	151.46 328	eP	PKiKP	22 48 51.3	+0.1
ENEZ	Enez	151.46 328	eP	PKiKP	22 48 51.3	+0.1
EIL	Elat	151.49 300	eP	PKPdf	22 48 45.9	+0.8
EIL	Elat	151.49 300	eP	PKPdf	22 48 45.9	+0.8
EIL	Elat	151.49 300	P	PKPdf	22 48 45.5	+0.4
	comp=Z,164nm,1.1s					
BLY	Banja Luka	151.53 344	⇓iP	PKiKP	22 48 51.5	+0.2
BLY	Banja Luka	151.53 344	eP	PKPdf	22 48 47.4	+2.8
KORT	Korkueli	151.54 317	eP	PKPdf	22 48 46.7	+1.6
KORT	Korkueli	151.54 317	eP	PKPdf	22 48 46.7	+1.6
KORT	Korkueli	151.54 317	eP	PKPdf	22 48 46.7	+1.6
GELI	Tayfur-Gelibol	151.55 327	eP	PKPdf	22 48 43.7	-1.1
GELI	Tayfur-Gelibol	151.55 327	eP	PKPdf	22 48 43.7	-1.1
GELI	Tayfur-Gelibol	151.55 327	eP	PKPdf	22 48 43.7	-1.1
HAPS	Han Pijesak,BI	151.64 341	eP	PKPbc	22 48 48.8	-2.5
KULA	Kula-Manisa	151.64 322	P	PKiKP	22 48 52.9	+1.1
KULA	Kula-Manisa	151.64 322	P	PKiKP	22 48 52.9	+1.1
BBLS	Lazići	151.69 340	⇑iP	PKPdf	22 48 45.6	+0.6
MANT	Manisa	151.72 322	ePKPdf	PKPdf	22 48 46.8	+1.4
MMB	Musomiste	151.96 332	i P	PKPdf	22 48 44.3	-1.2
ELL	Elmali	151.98 317	eP	PKPbc	22 48 49.0	-3.3
ELL	Elmali	151.98 317	eP	PKPbc	22 48 49.0	-3.3
ELL	Elmali	151.98 317	eP	PKPbc	22 48 49.0	-3.3
KKB	Krupnik	152.02 333	i P	PKPdf	22 48 44.3	-1.2
EZN	Ezine	152.04 326	eP	PKPbc	22 48 50.3	-1.8
EZN	Ezine	152.04 326	eP	PKPbc	22 48 50.3	-1.8
EZN	Ezine	152.04 326	eP	PKPbc	22 48 50.3	-1.8
EZN	Ezine	152.04 326	⇑iP	PKPbc	22 48 51.3	-0.8
EZN	Ezine	152.04 326	⇑PKIKP	PKPbc	22 48 51.3	-0.8
KAVA	Kavala	152.07 330	P	PKPbc	22 48 52.0	-0.2
KAVA	Kavala	152.07 330	P	PKPbc	22 48 52.0	-0.2
UDBI	Udbina	152.09 346	P	PKPdf	22 48 45.0	-0.6
NVR	Nevrokopi	152.09 332	P	PKPbc	22 48 51.2	-1.1
NVR	Nevrokopi	152.09 332	P	PKPbc	22 48 51.2	-1.1
NVLJ	Novalja	152.25 347	P	PKPdf	22 48 45.4	-0.3
AYDB	Zeytinkoy-Aydi	152.47 322	eP	PKPdf	22 48 48.8	+2.4
AYDB	Zeytinkoy-Aydi	152.47 322	eP	PKPdf	22 48 48.8	+2.4
AYDB	Zeytinkoy-Aydi	152.47 322	eP	PKPdf	22 48 48.8	+2.4
STIP	Stip	152.54 334	i P	PKPdf	22 48 46.2	-0.1
PGAV	Gavieira, Arco	152.59 25	ePKPdf	PKiKP	22 48 53.5	-0.2
KNT	Kendrikon	152.68 333	eP	PKPdf	22 48 45.7	-0.8
KNT	Kendrikon	152.68 333	eP	PKPdf	22 48 45.7	-0.8
KNT	Kendrikon	152.68 333	eP	PKPdf	22 48 45.7	-0.8
KNT	Kendrikon	152.68 333	P	PKPbc	22 48 52.8	-0.8
KNT	Kendrikon	152.68 333	P	PKPbc	22 48 52.8	-0.8
KNT	Kendrikon	152.68 333	PKIKP	PKPbc	22 48 52.8	-0.8
VAY	Valandovo	152.69 333	i P	PKPdf	22 48 46.7	+0.3
TURN	Turunc	152.73 319	eP	PKPdf	22 48 49.3	+2.6
TURN	Turunc	152.73 319	eP	PKPdf	22 48 49.3	+2.6
TURN	Turunc	152.73 319	eP	PKPdf	22 48 49.3	+2.6
YER	Yerkesik	152.76 320	eP	PKPdf	22 48 47.8	+1.0
YER	Yerkesik	152.76 320	eP	PKPdf	22 48 47.8	+1.0
YER	Yerkesik	152.76 320	eP	PKPdf	22 48 47.8	+1.0
BRY	Bratogost	152.83 341	eP	PKPbc	22 48 53.4	-0.6
PCAB	Cabril	152.91 25	ePKPdf	PKPbc	22 48 54.0	-0.1
URLA	Izmir	152.94 324	eP	PKPdf	22 48 50.3	+3.3
URLA	Izmir	152.94 324	eP	PKPdf	22 48 50.3	+3.3
URLA	Izmir	152.94 324	eP	PKPdf	22 48 50.3	+3.3
MLSB	Milas	152.97 321	eP	PKPbc	22 48 50.8	-3.6
MLSB	Milas	152.97 321	eP	PKPbc	22 48 50.8	-3.6
MLSB	Milas	152.97 321	eP	PKPbc	22 48 50.8	-3.6
PDG	Podgorica	153.02 339	⇓iP	PKPab	22 49 05.4	-0.2
PDG	Podgorica	153.02 339	eP	PKPbc	22 48 53.9	-0.3
GCAM	G?zelcaml?	153.02 322	eP	PKPdf	22 48 50.0	+2.9
GCAM	G?zelcaml?	153.02 322	eP	PKPdf	22 48 50.0	+2.9
GCAM	G?zelcaml?	153.02 322	eP	PKPdf	22 48 50.0	+2.9
GRG	Griva	153.06 333	eP	PKPdf	22 48 46.8	-0.3
GRG	Griva	153.06 333	eP	PKPdf	22 48 46.8	-0.3
GRG	Griva	153.06 333	eP	PKPdf	22 48 46.8	-0.3
KRUS	Krusevo	153.20 335	i P	PKPdf	22 48 47.5	+0.1

DRME	Dracevica, Mon	153.26	339	⇑iP	PKPbc	22 48 54.2	-0.6
POLO	Lamas de Olo	153.28	25	ePKPdf	PKPbc	22 48 54.9	-0.1
PBRG	Braganca	153.31	23	ePKPdf	PKPbc	22 48 54.5	-0.5
PVRL	Vila Real	153.40	25	i LQ	LQ	22 48 55.4	
BODT	Bodrum	153.40	321	eP	PKPdf	22 48 50.8	+3.1
BODT	Bodrum	153.40	321	eP	PKPdf	22 48 50.8	+3.1
BODT	Bodrum	153.40	321	eP	PKPdf	22 48 50.8	+3.1
OHR	Ohrid	153.60	335	i P	PKPdf	22 48 48.7	+0.8
FNA	Florina	153.64	334	eP	PKPdf	22 48 47.2	-0.8
FNA	Florina	153.64	334	eP	PKPdf	22 48 47.2	-0.8
FNA	Florina	153.64	334	eP	PKPdf	22 48 47.2	-0.8
FNA	Florina	153.64	334	P	PKPbc	22 48 54.8	-1.0
FNA	Florina	153.64	334	P	PKPbc	22 48 54.8	-1.0
FNA	Florina	153.64	334	PKIKP	PKPbc	22 48 54.8	-1.0
MVO	Moncorvo	153.76	24	ePKPdf	PKiKP	22 48 56.3	+0.2
PVIS	Viseu	153.80	26	ePKPdf	PKPdf	22 48 49.5	+1.3
PVIS				i LQ	LQ	22 48 55.6	
PMAR	Madeira	154.01	50	ePKPdf	PKPdf	22 48 48.3	-0.6
PMAR				i LQ	LQ	22 48 57.8	
PCAS	Casmilo, Conde	154.09	27	ePKPdf	PKPdf	22 48 49.6	+1.0
PCAS				i LQ	LQ	22 48 56.6	
MTE	Manteigas	154.21	25	ePKPdf	PKPbc	22 48 56.8	-0.2
KARP	Karpathos	154.47	318	eP	PKiKP	22 49 01.4	+3.7
KARP	Karpathos	154.47	318	eP	PKiKP	22 49 01.4	+3.7
PTOM	Tomar	154.49	28	ePKPdf	PKPdf	22 48 50.5	+1.4
PTOM				i LQ	LQ	22 48 58.1	
AQU	L'Aquila	154.67	348	eP	PKiKP	22 48 59.6	+1.7
PCBR	Castelo Branco	154.71	26	ePKPdf	PKPdf	22 48 50.6	+1.2
PCBR				i LQ	LQ	22 48 57.8	
PMST	Lisbon--Monsan	154.84	30	ePKPab	PKPab	22 49 13.8	+0.3
SANT	Santorini	154.97	322	⇓iP	PKPdf	22 48 40.6	-9.3
PMTG	Montargil	155.02	28	ePKPdf	PKPdf	22 48 50.8	+0.9
PMTG	Montargil	155.02	28	ePKPab	PKPab	22 49 13.3	-0.9
PMRV	Marv??o	155.09	26	ePKPdf	PKPdf	22 48 51.3	+1.3
PMRV				i LQ	LQ	22 48 58.9	
MATE	Matera	155.45	341	⇑iP	PKPab	22 49 15.8	-0.1
PESTR	Estremoz	155.47	27	ePKPab	PKPab	22 49 15.4	-0.8
PNCL	Nicolau / Gran	155.65	30	ePKPdf	PKPdf	22 48 52.5	+1.8
PNCL	Nicolau / Gran	155.65	30	ePKPab	PKPab	22 49 16.7	-0.2
MESJ	Messejana	156.01	30	ePKPdf	PKPdf	22 48 51.1	-0.2
MESJ				AMS	AMS	23 52 55.6	
	comp=Z,560nm,22.7s						
MESJ	Messejana	156.01	30	ePKPdf	PKPdf	22 48 52.7	+1.5
MESJ	Messejana	156.01	30	ePKPab	PKPab	22 49 18.4	-0.1
MESJ	Messejana	156.01	30	ePKIKP	PKPdf	22 48 51.0	-0.2
PBEJ	Beja	156.03	29	ePKPdf	PKPdf	22 48 53.9	+2.6
IDI	Anoyia	156.04	321	⇓iP	PKPab	22 49 18.4	-0.4
PAB	San Pablo	156.16	21	PFAKE		22 49 00.0	+8.5
PAB				LR	LR		
	comp=Z,889nm,19.0s						
ESDC	Sonseca Array	156.18	21	PKP	PKPdf	22 48 51.0	-0.5
	comp=Z,1.1nm,0.7s,baz=321,slow=2.9,SNR=9.5						
ESDC				PKPbc	pPKPdf	22 49 01.4	-2.7
	comp=Z,3.9nm,0.8s,baz=329,slow=2.8,SNR=19						
MORF	Marmelete	156.22	31	ePKPdf	PKPdf	22 48 51.4	-0.3
MORF				AMS	AMS	23 53 23.0	
	comp=Z,759nm,23.3s						
MORF	Marmelete	156.22	31	ePKPdf	PKPdf	22 48 53.0	+1.4
MORF	Marmelete	156.22	31	ePKPab	PKPab	22 49 19.5	0.0
MORF	Marmelete	156.22	31	ePKIKP	PKPdf	22 48 51.3	-0.3
PFVI	Vila Bisbo	156.27	32	ePKPdf	PKPdf	22 48 53.7	+2.1
PBDV	Barranco-do-Ve	156.63	30	ePKPdf	PKPdf	22 48 54.1	+2.0
TIP	Timpagrande	156.77	340	⇑iP	PKPab	22 49 22.0	+0.2
KEST	Kesra	161.79	353	PKP	PKPdf	22 48 57.4	-0.9
	comp=Z,3.5nm,0.9s,baz=9.5,slow=16,SNR=4.4						
KEST				PKPab	PKPab	22 49 43.3	-0.4
	comp=Z,13nm,0.8s,baz=280,slow=2.9,SNR=10						
LIC	Lamto	163.95	133	ePKIKP	PKPdf	22 49 00.5	-0.4
	comp=Z,47nm,1.0s						
KIC	Kosan Boka	164.25	134	ePKIKP	PKPdf	22 49 00.7	-0.4
	comp=Z,31nm,1.0s						
TIC	Toumodi	164.25	132	ePKIKP	PKPdf	22 49 00.7	-0.5
DBIC	Dimbokro	164.38	133	PKP	PKPdf	22 49 01.0	-0.2
	comp=Z,15nm,1.0s,baz=78,slow=1.7,SNR=9.1						
DBIC				PKPab	PKPab	22 49 55.0	-0.6
	comp=Z,7.4nm,0.7s,baz=168,slow=4.6,SNR=7.7						
TORD	Torodi Ar. Bea	173.50	132	PKP	PKPdf	22 49 05.4	-1.6
	comp=Z,3.3nm,0.9s,baz=343,slow=4.5,SNR=27						
TORD				PKPab	PKPab	22 50 35.2	-0.6
	comp=Z,11nm,0.7s,baz=277,slow=3.2,SNR=30						
TORD				PP	PP	22 54 28.2	+1.0
	comp=Z,5.2nm,1.3s,baz=178,slow=4.5,SNR=4.0						

*DDA **19** 22:48:06.1, 38°.84N×43°.65E, h7^{km}±5^{km}, ML2.5*

ISC 19 22:48:06.6±1.1**, 38°.91N**±0°.04×**43°.54E**±0°.05**, h16**^{km}±7^{km}**,**
n20, σ2^{s}.63/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.09	17	i P	Pg	22 48 09.6	-0.6
VMUR				i S	Sg	22 48 13.5	+1.1
VMUR				IAML_P			
	comp=Z,3µm,0.2s						
CLDR	Caldiran	0.38	51	i P	Pn	22 48 19.9	+2.2
CLDR	Caldiran	0.38	51	eP	Pn	22 48 19.9	+2.2
CLDR	Caldiran	0.38	51	i P	Pg	22 48 13.5	-1.0
CLDR				i S	Sb	22 48 20.3	-0.6
TVAN	Van	0.39	195	i P	Pg	22 48 13.2	-1.5
TVAN				i S	Sb	22 48 20.0	-1.2
TVAN				IAML_P			
	comp=Z,2µm,0.2s						
DYDN	Diyadin	0.65	10	i P	Pg	22 48 19.6	+0.2
DYDN				i S	Sb	22 48 30.2	+1.6
DYDN				IAML_P			
	comp=Z,627nm,0.1s						
AKDM	Akdamar-Van	0.72	217	eP	Pn	22 48 25.9	+3.5
AKDM	Akdamar-Van	0.72	217	eP	Pn	22 48 25.9	+3.5
AKDM	Akdamar-Van	0.72	217	eP	Pn	22 48 25.9	+3.5
MLAZ	Malazgirt-MUS	0.81	287	i P	Pn	22 48 26.2	+2.7
MLAZ	Malazgirt-MUS	0.81	287	eP	Pn	22 48 26.2	+2.7
MLAZ	Malazgirt-MUS	0.81	287	eP	Pn	22 48 26.2	+2.7
TASB	TASBURUN-IGDIR	1.21	27	eP	Pn	22 48 26.9	-2.0
TASB	TASBURUN-IGDIR	1.21	27	eP	Pn	22 48 26.9	-2.0
TASB	TASBURUN-IGDIR	1.21	27	eP	Pn	22 48 26.9	-2.0
GURO	Guroymak-BITLI	1.23	254	eP	Pn	22 48 25.9	-3.5
GURO	Guroymak-BITLI	1.23	254	eP	Pn	22 48 25.9	-3.5
GURO	Guroymak-BITLI	1.23	254	eP	Pn	22 48 25.9	-3.5
CHAY	Cayeli-Rize	3.07	316	i P	Pn	22 48 48.8	-5.7
CHAY	Cayeli-Rize	3.07	316	eP	Pn	22 48 48.8	-5.7

*NNC **19** 22:49:46.8±2.4, 36°.85N×70°.54E, h214^{km}±37^{km}, mb2.7, mpv3.8, Error ellipse: s-maj=25.0km s-min=20.2km az=61.0*

ISC 19 22:49:40.5±1.9**, 36°.46N**±0°.09×**70°.4E**±0°.2**, h200**^{km}**, n22,**
σ1^{s}.88/26**, 6C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.30	34	⇓P	Pn	22 50 47.9	+1.7
	6.4nm,0.4s						
SFK				⇑S	Sn	22 51 37.6	-0.4
	12nm,0.3s						
AML	Almayashu	6.21	23	P	Pn	22 51 12.2	+1.5
	SNR=49						
MNAS	Manas	6.23	14	⇓P	Pn	22 51 13.1	+2.3
	4.7nm,0.5s						
MNAS				⇑S	Sn	22 52 20.8	-1.5
	10nm,0.5s						
UCH	Uchtor	6.58	28	P	Pn	22 51 17.2	+1.6
	SNR=22						
KK31	Karatay Array	6.63	1	⇑P	Pn	22 51 17.6	+1.8
	1.4nm,0.3s,baz=182,slow=12,SNR=27						
KK31				⇑S	Sn	22 52 28.6	-3.0
	4.2nm,0.4s,baz=177,slow=19,SNR=12						
AAK	Ala-Archa	6.93	26	⇑S	Sn	22 52 37.5	-1.2
	9.9nm,0.6s						
KBK	Karagaybulak	7.11	28	P	Pn	22 51 24.7	+2.5
	SNR=10.0						
ULHL	Ulahol	7.33	36	P	Pn	22 51 26.5	+1.3
	SNR=8.9						
CHMS	Chumysh	7.33	26	P	Pn	22 51 27.0	+2.0
	SNR=5.7						
USP	Ospenovka	7.49	24	P	Pn	22 51 28.7	+1.7
	SNR=9.6						
TKM2	Tokmak 2	7.59	30	P	Pn	22 51 30.1	+1.6
	SNR=5.8						
TKM2	Tokmak 2	7.59	30	⇑P	Pn	22 51 29.5	+1.0
	9.3nm,0.5s						
TKM2				⇓S	Sn	22 52 52.2	-2.1
	3.0nm,0.8s						
PYUN	Piuthan	13.51	125	eP	P	22 52 43.7	-3.4
	10nm,0.4s						
DANN	Dangsing	13.87	122	eP	P	22 52 50.1	-1.1
	6.8nm,0.2s						
KOLN	Koldanda	14.13	124	eP	P	22 52 51.7	-2.4
	5.1nm,0.3s						
DMN	Daman	15.26	121	eP	P	22 53 07.3	+0.7
	9.1nm,0.3s						
KKN	Kakani	15.27	120	eP	P	22 53 07.8	+1.2
	20nm,0.4s						
PKIN	Phulchoki	15.48	121	eP	P	22 53 09.6	+0.6
	13nm,0.3s						
PKI	Pulchoki	15.49	121	eP	P	22 53 09.8	+0.6
	12nm,0.3s						
GUN	Gumba	15.62	119	eP	P	22 53 13.2	+2.6
	9.8nm,0.3s						
JIRN	Jiri	15.98	119	eP	Pn	22 53 16.2	+1.1
RAMN	Ramite	16.71	120	eP	Pn	22 53 23.1	-0.5
	18nm,0.6s						

*IDC **19** 23:19:11.5±0.8, 3°.62N×126°.37E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.7/31, mbtmp3.8/9, ML4.0/1, Error ellipse: s-maj=68.0km s-min=14.7km az=69.0*
*MAN **19** 23:19:13.9, 4°.73N×121°.52E, h3^{km}, mb5.1, ML4.1, MS4.2*
*ISCJB **19** 23:19:15.1±0.7, 3°.6N±0°.1×126°.7E±0°.2, h33^{km}, mb3.8/8, Error ellipse: s-maj=35.9km s-min=7.6km az=149.5*

ISC 19 23:19:17.1±0.7**, 3°.6N**±0°.2×**126°.7E**±0°.3**, h35**^{km}**, n11,**
σ1^{s}.36/12**, mb3.8**/8**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	3.56	324	eP	Pn	23 20 11.0	+1.0
SKMP				eS	Sn	23 20 53.0	+2.1
BUKP	Musuan	4.52	340	eP	Pn	23 20 27.6	+4.5
SIJI	Sorong	6.42	134	Pn	Pn	23 20 50.7	+1.5
	2.9nm,0.3s,baz=339,slow=18,SNR=5.3						
FITZ	Fitzroy Crossi	21.61	183	P	P	23 24 04.3	+0.2
	2.4nm,1.0s,baz=350,slow=8.9,SNR=3.9						
WRA	Warramunga Arr	24.60	162	P	P	23 24 33.7	-0.6
	1.5nm,0.6s,baz=341,slow=10,SNR=17						
ASAR	Alice Springs	28.03	166	P	P	23 25 05.2	+0.1
	0.3nm,0.3s,baz=350,slow=7.3,SNR=5.7						
STKA	Stephens Creek	38.06	159	P	P	23 26 32.3	-0.1
	2.2nm,0.7s,baz=324,slow=16,SNR=3.4						
SONM	Songino Array	47.38	342	P	P	23 27 47.1	-0.9
	0.6nm,0.7s,baz=157,slow=8.1,SNR=4.8						
SONM				PcP	PcP	23 29 17.0	-1.3
	0.2nm,0.6s,baz=188,slow=3.7,SNR=2.2						
MKAR	Makanchi Array	57.60	325	P	P	23 29 02.1	-1.5
	1.1nm,0.6s,baz=120,slow=8.5,SNR=18						
ZALV	Zalesovo Beam	60.65	333	P	P	23 29 22.7	-1.9
	0.3nm,0.4s,baz=145,slow=3.7,SNR=3.4						
NRIK	Noril'sk	70.52	346	P	P	23 30 28.5	+0.5
	1.1nm,0.5s,baz=85,slow=2.8,SNR=3.4						

*ISCJB **19** 23:21:36.9±0.6, 43°.16N±0°.03×78°.27E±0°.03, h12^{km}±4^{km}, Error ellipse: s-maj=5.7km s-min=4.3km az=173.8*
*KRNET **19** 23:21:36.3±0.1, 43°.30N×78°.27E, h35^{km}, mb1.7*
*NNC **19** 23:21:36.5±0.5, 43°.20N×78°.30E, h1^{km}±4^{km}, mpv2.5, Error ellipse: s-maj=6.6km s-min=2.0km az=9.0*
*SOME **19** 23:21:37.2, 43°.15N×78°.32E, h10^{km}*

ISC 19 23:21:36.2±0.9**, 43°.19N**±0°.04×**78°.26E**±0°.03**, h11**^{km}±7^{km}**,**
n18, σ0^{s}.52/36**, 10C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.16	141	P	Pg	23 21 40.0	0.0
	48nm,0.1s						
SATY				S	Sg	23 21 42.5	-0.2
	204nm,0.1s						
SATY	Saty	0.16	141	eP	Pg	23 21 40.0	0.0
	48nm,0.1s						
SATY				eS	Sg	23 21 42.3	-0.3
	192nm,0.1s						
KURS	Kuram	0.31	347	eP	Pb	23 21 44.5	+0.6
	baz=39						
KURS				eS	Sb	23 21 49.7	+0.7
	baz=39						
KURS	Kuram	0.31	347	eP	Pb	23 21 44.5	+0.6
	0.2nm,0.0s						
KURS				eS	Sb	23 21 49.6	+0.7
	0.8nm,0.2s						
UZB	Uzynbulak	0.56	94	P	Pg	23 21 47.2	+0.2
	1.1nm,0.0s						
UZB				S	Sg	23 21 54.5	0.0
	16nm,0.1s						
UZB	Uzynbulak	0.56	94	eP	Pg	23 21 47.2	+0.2
	1.1nm,0.0s						
UZB				eS	Sg	23 21 54.5	0.0
	16nm,0.1s						
PRZ	Przheval'sk	0.71	172	⇑iP	Pn	23 21 52.5	+0.2
	baz=72						
PRZ				⇑iS	Sn	23 22 04.3	+1.0
	baz=72						
KOTS	Kotyrbulak	0.84	274	P	Pb	23 21 53.2	+0.3
	0.8nm,0.2s						
KOTS				S	Sb	23 22 04.7	+0.3
	7.0nm,0.3s						
KOTS	Kotyrbulak	0.84	274	eP	Pb	23 21 53.2	+0.3
	baz=66						
KOTS				eS	Sb	23 22 04.7	+0.3
	baz=66						
KOTS	Kotyrbulak	0.84	274	eP	Pb	23 21 53.2	+0.3
	0.8nm,0.2s						
KOTS				eS	Sb	23 22 04.7	+0.3
	7.0nm,0.3s						
PDGK	Podgornoye	0.91	80	P	Pg	23 21 53.5	-0.2
	0.3nm,0.1s						
PDGK				S	Sg	23 22 05.3	-0.3
	0.7nm,0.1s						
PDGK	Podgornoye	0.91	80	⇑iP	Pg	23 21 53.4	-0.3
	baz=88						
PDGK				⇑iS	Sb	23 22 05.9	-0.3
	baz=88						
KDJ	Kajisay	1.32	218	⇑iP	Pn	23 22 00.9	+0.1
	baz=15						
KDJ				⇑iS	Sb	23 22 18.5	+0.3
	baz=15						
TARG	Taragay, Kyrgy	1.49	193	⇑iP	Pn	23 22 03.2	-0.2
	baz=93						
TARG				⇑iS	Sb	23 22 23.5	+0.2
	baz=93						
KTMS	Ketmen	1.55	80	P	Pb	23 22 05.1	+0.2
	0.7nm,0.1s						
KTMS				S	Sg	23 22 25.1	-0.8
	1.1nm,0.1s						
KTMS	Ketmen	1.55	80	eP	Pb	23 22 05.1	+0.2
	0.7nm,0.1s						
KTMS				eS	Sg	23 22 25.1	-0.8
	1.1nm,0.1s						
BOOM	Boomskoye usch	1.84	249	⇓iP	Pn	23 22 08.0	0.0
	baz=46						
BOOM				⇓iS	Sn	23 22 31.0	-0.4
	baz=46						
TKM2	Tokmak 2	1.97	263	⇑iP	Pn	23 22 09.1	-0.7
	baz=60						
TKM2				⇑iS	Sn	23 22 33.0	-1.6
	baz=60						

*IDC **19** 23:34:10.8±1.4, 10°.99S×164°.91E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.8/41, mbtmp3.9/7, ML4.3/1, Error ellipse: s-maj=45.5km s-min=25.2km az=125.0*
*ISCJB **19** 23:34:13.5±1.1, 11°.2S±0°.1×165°.0E±0°.1, h31^{km}, mb3.8/5, Error ellipse: s-maj=19.8km s-min=11.6km az=37.2*

ISC 19 23:34:15.2±1.2**, 11°.1S**±0°.1×**165°.1E**±0°.1**, h31**^{km}**, n14,**
σ0^{s}.84/9**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.32	288	Sn	Sn	23 36 33.1	+0.4
	baz=15,slow=20,SNR=2.7						
DZM	Mont Dzumac	10.96	173	Pn	Pn	23 36 50.2	+0.1
	2.0nm,0.3s,baz=176,slow=17,SNR=17						
CTA	Charters Tower	20.18	242	P	P	23 38 48.4	+1.0
	3.3nm,0.7s,baz=59,slow=13,SNR=3.2						
H11S2	WAKE ISLAND Hy	29.47	3	T	T	00 10 56.4	
	baz=182,slow=74						
H11S3	WAKE ISLAND Hy	29.48	3	T	T	00 11 11.0	
	baz=182,slow=74						
H11S1	WAKE ISLAND Hy	29.49	3	T	T	00 11 02.9	
	baz=182						
STKA	Stephens Creek	29.93	223	P	P	23 40 20.9	+0.3
	0.6nm,0.3s,baz=11,slow=16,SNR=3.6						
H11N1	WAKE ISLAND Hy	30.70	3	T	T	00 12 26.9	
	baz=187						
H11N3	WAKE ISLAND Hy	30.70	3	T	T	00 12 28.0	
	baz=187						
H11N2	WAKE ISLAND Hy	30.72	3	T	T	00 12 32.2	
	baz=187						
WRA	Warramunga Arr	30.83	250	P	P	23 40 27.8	-0.9
	1.1nm,0.4s,baz=79,slow=9.4,SNR=15						
ASAR	Alice Springs	32.16	243	P	P	23 40 39.4	-1.1
	0.8nm,0.5s,baz=63,slow=10,SNR=11						
ASAR				PcP	PcP	23 43 29.1	0.0
	0.6nm,0.7s,baz=67,slow=2.2,SNR=5.8						
ILAR	Eielson Array	83.80	19	P	P	23 46 41.8	+0.6
	0.4nm,0.7s,baz=243,slow=4.0,SNR=3.4						
MKAR	Makanchi Array	93.13	317	P	P	23 47 25.6	-0.7
	0.3nm,0.7s,baz=84,slow=4.5,SNR=4.1						

IDC 19 23:47:04.1±1.0**, 16°.84S**×**178°.61W, h0**^{km}**, mb3.9**/7**,**
mb1 4.2/7**, mb1mx3.9**/34**, mbtmp3.9**/7**, Error ellipse:**
s-maj=51.8km s-min=23.3km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	28.19	196	P	P	23 52 57.0	-1.4
	5.7nm,0.6s,baz=37,slow=10,SNR=2.9						
WRA	Warramunga Arr	44.64	258	P	P	23 55 18.4	-0.5
	0.4nm,0.9s,baz=92,slow=8.3,SNR=2.9						
ASAR	Alice Springs	44.90	253	P	P	23 55 22.2	+1.3
	1.6nm,0.9s,baz=84,slow=9.1,SNR=7.5						
NVAR	Mina Array Bea	78.79	44	P	P	23 59 09.5	+0.3
	0.8nm,0.8s,baz=230,slow=12,SNR=4.3						
ILAR	Eielson Array	84.90	13	P	P	23 59 38.5	-2.0
	0.7nm,0.9s,baz=224,slow=6.3,SNR=3.7						
TXAR	Lajitas Array	85.59	58	P	P	23 59 46.7	+1.8
	0.7nm,0.9s,baz=238,slow=5.2,SNR=3.9						
PDAR	Pinedale Array	86.72	44	P	P	23 59 50.8	+0.4
	0.4nm,0.8s,baz=217,slow=4.3,SNR=2.1						
GERES	GERESS Array B	146.54	345	PKPbc	PKPdf	00 06 46.5	+0.4
	0.8nm,0.7s,baz=28,slow=3.2,SNR=5.1						

*IDC **19** 23:49:06.1±1.0, 15°.08S×179°.54W, h0^{km}, mb4.2/13, mb1 4.5/13, mb1mx4.3/33, mbtmp4.2/13, MS3.9/3, Ms1 3.9/3, ms1mx3.4/32, Error ellipse: s-maj=65.9km s-min=16.5km az=150.0*
*ISCJB **19** 23:49:09.5±0.3, 15°.36S±0°.10×179°.53W±0°.08, h33^{km}, mb4.5/42, MS3.9/3, Error ellipse: s-maj=17.1km s-min=6.6km az=142.3*
*NEIC **19** 23:49:09.3±3.4, 15°.33S×179°.49W, h22^{km}±24^{km}, mb4.6/27, Error ellipse: s-maj=12.9km s-min=6.8km az=152.0*

ISC 19 23:49:11.1±0.6**, 15°.4S**±0°.1×**179°.5W**±0°.1**, h35**^{km}**, n86,**
σ0^{s}.73/79**, mb4.6**/42**, MS3.9**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.36	225	ePn	Pn	23 50 01.7	+0.5
PINNC	Pines Island,	14.32	238	ePn	Pn	23 52 29.3	-2.2
DZM	Mont Dzumac	14.92	241	eLR	LR	23 55 46.2	
	comp=Z,685nm,25.9s						
PPT2	Papeete2	28.74	99	eLR	LR	00 02 27.0	
	comp=Z,793nm,26.2s,baz=278						
PPT	Papeete	28.74	99	LR	LR	00 03 32.4	
	comp=Z,215nm,20.8s,baz=236,slow=30						
FOZ	Fox Glacier	29.54	196	eP	P	23 55 12.5	+0.2
	20nm,1.0s						
WHZ	Wether Hill Ro	32.23	197	eP	P	23 55 35.8	-0.3
	42nm,1.1s						
TAOE	Nuku Hiva Isla	38.94	85	eLR	LR	00 07 02.7	
	comp=Z,455nm,28.4s						
STKA	Stephens Creek	39.04	238	eP	P	23 56 35.4	+0.7
	4.3nm,1.1s						
STKA	Stephens Creek	39.04	238	P	P	23 56 35.6	+0.9
	12nm,0.9s,baz=63,slow=8.1,SNR=14						
RKT	Rikitea	42.59	108	eLR	LR	00 08 45.0	
	comp=Z,640nm,29.0s						
WB2	Warramunga Arr	44.14	257	eP	P	23 57 15.1	-1.6
WR1	Warramunga Arr	44.15	257	eP	P	23 57 15.7	-1.1
	7.7nm,1.1s						
WRA	Warramunga Arr	44.15	257	P	P	23 57 15.7	-1.1
	1.9nm,0.9s,baz=90,slow=7.4,SNR=9.9						
AS01	Alice Springs	44.52	252	eP	P	23 57 19.5	-0.2
AS31	Alice Springs	44.56	252	eP	P	23 57 20.4	+0.4
	2.5nm,0.8s						
ASAR	Alice Springs	44.56	252	P	P	23 57 20.4	+0.4
	10.0nm,0.9s,baz=84,slow=8.6,SNR=29						
SIJI	Sorong	50.69	282	LR	LR	00 19 11.7	
	comp=Z,113nm,18.1s,baz=327,slow=36						
BATI	Baumata	55.57	268	P	P	23 58 46.5	+2.8
	44nm,1.0s,baz=162,slow=3.2,SNR=4.0						
KS01	Wonju Array Si	72.16	318	eP	P	00 00 31.9	-0.5
QSPA	South Pole Qui	74.69	180	eP	P	00 00 47.0	0.0
AFDM	Forest Hills D	76.80	43	eP	P	00 00 59.1	-0.3
	6.1nm,1.2s						
YBH	Yreka Blue Hor	77.21	40	P	P	00 01 00.3	-1.4
	3.3nm,0.8s,baz=201,slow=11,SNR=6.1						
PFO	Pinyon Flats O	77.27	50	LR	LR	00 27 22.2	
	comp=Z,95nm,19.6s,baz=112,slow=30						
MDPB	Devils Postpil	77.38	45	eP	P	00 01 02.5	-0.5
	6.9nm,1.1s						
PAHR	Pah Rah Range	78.24	43	eP	P	00 01 08.1	+0.5
	14nm,1.6s						
NV01	Mina Array Sit	78.31	45	eP	P	00 01 08.1	0.0
NVAR	Mina Array Bea	78.31	45	P	P	00 01 07.8	-0.3
	2.2nm,0.8s,baz=225,slow=9.6,SNR=12						
NV11	Mina Array Sit	78.41	45	eP	P	00 01 08.7	+0.1
	1.0nm,1.4s						
TPNV	Topopah Spring	79.00	47	eP	P	00 01 12.2	+0.3
	6.6nm,0.9s						
W13A	Hualapai Mount	79.84	49	eP	P	00 01 16.6	+0.1
	4.5nm,1.1s						
TUC	Tucson	80.97	53	eP	P	00 01 22.8	+0.3
	1.3nm,0.5s						
CCUT	Cedar City	81.32	47	eP	P	00 01 24.8	+0.3
	23nm,1.9s						
G08A	Pilot Rock	81.44	38	eP	P	00 01 25.0	+0.3
	13nm,1.3s						
ELK	Elko	81.51	44	eP	P	00 01 25.6	+0.2
	3.8nm,1.1s						
ELK	Elko	81.51	44	P	P	00 01 25.6	+0.2
	0.9nm,0.7s,baz=155,slow=6.0,SNR=4.2						
PKCU	Pink Cliffs	82.02	48	eP	P	00 01 28.4	+0.1
	38nm,1.7s						
F10A	Beach Ranch, E	82.83	38	eP	P	00 01 31.7	-0.3
	30nm,1.9s						
HLID	Hailey	83.39	42	eP	P	00 01 35.6	+0.5
	6.7nm,1.1s						
COLA	College	83.52	13	eP	P	00 01 34.0	-0.9
	2.3nm,0.5s						
TMUT	Trail Mountain	83.61	46	eP	P	00 01 36.7	+0.3
	5.6nm,0.8s						
HVU	Hansel Valley	83.64	44	eP	P	00 01 36.5	+0.1
	5.5nm,1.3s						
IL1	Eielson Array	83.64	13	eP	P	00 01 34.6	-1.1
ILAR	Eielson Array	83.64	13	P	P	00 01 33.5	-2.1
	2.3nm,1.1s,baz=228,slow=5.4,SNR=7.9						
SRU	San Rafael Swe	84.01	47	eP	P	00 01 38.5	+0.1
	4.5nm,0.9s						
MCMT	McKenzie Canyo	84.98	41	eP	P	00 01 43.2	0.0
ANMO	Albuquerque	85.32	52	eP	P	00 01 45.5	+0.5
	16nm,2.0s						
ANMO	Albuquerque	85.32	52	P	P	00 01 45.5	+0.5
	0.4nm,0.4s,baz=198,slow=6.4,SNR=2.6						
TX31	Lajitas Ar. Si	85.50	58	eP	P	00 01 46.3	+0.3
	23nm,1.9s						
TXAR	Lajitas Array	85.50	58	P	P	00 01 46.9	+0.9
	1.4nm,0.8s,baz=217,slow=6.9,SNR=7.6						
REDW	Red Top Meadow	85.61	43	eP	P	00 01 46.8	+0.5
	10nm,1.2s						
FXWY	Fox Creek	85.62	43	eP	P	00 01 46.4	0.0
	5.8nm,1.3s						
IMW	Indian Meadow	85.79	42	eP	P	00 01 47.3	0.0
	8.9nm,1.4s						
MOOW	Moose Ponds	85.85	43	eP	P	00 01 47.8	+0.3
	19nm,2.0s						
BOZ	Bozeman (W)	86.09	41	eP	P	00 01 48.9	+0.3
	17nm,1.7s						
PD31	Pinedale Array	86.22	44	eP	P	00 01 49.0	-0.3
	10nm,1.6s						
PDAR	Pinedale Array	86.22	44	eP	P	00 01 48.7	-0.6
PDAR	Pinedale Array	86.22	44	P	P	00 01 49.0	-0.3
	1.0nm,0.7s,baz=230,slow=2.8,SNR=8.8						
H17A	Grant Village	86.24	42	eP	P	00 01 50.2	+0.7
	3.3nm,0.9s						
CMAR	Chiang Mai Arr	87.07	290	P	P	00 01 54.9	+1.1
	0.7nm,0.3s,baz=119,slow=3.5,SNR=7.4						
ULN	Ulaanbaatar	90.56	320	eP	P	00 02 10.4	+0.6

	1.1nm,0.4s						
SONA0	Songino Array	90.96	320	eP	P	00 02 11.6	0.0
SONM	Songino Array	90.96	320	P	P	00 02 11.6	0.0
	1.2nm,1.1s,baz=134,slow=4.2,SNR=3.6						
YKA	Yellowknife Ar	92.45	25	P	P	00 02 18.7	+0.7
	0.2nm,0.7s,baz=260,slow=3.5,SNR=5.3						
YKB5	Yellowknife Ar	92.45	25	eP	P	00 02 18.2	+0.2
GRFO	Grafenberg	144.66	348	ePKPdf	PKPdf	00 08 43.6	-0.5
GEC2	GERESS Array S	144.89	345	ePKPdf	PKPdf	00 08 44.3	-0.4
GERES	GERESS Array B	144.89	345	PKP	PKPdf	00 08 44.0	-0.7
	2.7nm,0.9s,baz=29,slow=3.0,SNR=15						
CONA	Conrad Observa	145.13	342	ePKPdf	PKPdf	00 08 45.8	+0.7
	11nm,0.9s						
WLF	Walferdange	145.47	354	ePKPdf	PKPab	00 08 46.0	+0.2
MOA	Molln	145.66	344	i PKPab	PKPab	00 08 47.0	+0.5
	12nm,1.5s						
ARSA	Arzberg	145.84	342	ePKPab	PKPab	00 08 47.4	+0.2
	5.7nm,1.2s						
SOKA	Soboth	146.50	342	ePKPab	PKPab	00 08 49.2	-0.7
	3.6nm,1.0s						
OBKA	Obir	146.80	342	ePKPab	PKPbc	00 08 49.6	-0.2
	3.1nm,1.0s						
WATA	Walderalm	146.81	346	ePKiKP	PKPab	00 08 51.0	-0.1
	3.8nm,0.9s						
RETA	Reutte	146.85	347	ePKPab	PKPab	00 08 50.3	-0.9
	6.9nm,1.0s						
WTTA	Wattenberg	146.87	346	ePKPab	PKPab	00 08 50.9	-0.5
	2.9nm,0.7s						
MOTA	Moosalm	146.91	347	ePKiKP	PKPab	00 08 51.2	-0.3
	6.1nm,1.0s						
MYKA	Terra Mystica	146.95	343	ePKPab	PKPbc	00 08 50.2	0.0
	6.0nm,1.2s						
SQTA	Sankt Quirin	147.01	347	ePKPab	PKPab	00 08 50.8	-1.1
	6.7nm,1.1s						
ABTA	Abfaltersbach	147.14	345	ePKPab	PKPbc	00 08 50.7	0.0
	5.7nm,1.1s						
DAVA	Damuels	147.22	348	PKPbc	PKPbc	00 08 50.5	-0.6
	7.9nm,1.3s						
FETA	Feichten	147.30	347	ePKiKP	PKPab	00 08 52.9	-0.2
	9.2nm,1.9s						
FUORN	Ofenpass-Fuorn	147.78	347	ePKPbc	PKPbc	00 08 52.8	+0.1
TORD	Torodi Ar. Bea	177.53	207	PKP	PKPdf	00 09 18.0	-0.8
	1.5nm,1.2s,baz=174,slow=1.4,SNR=4.1						
TOA1	Torodi Ar. Sit	177.54	207	ePKPdf	PKPdf	00 09 18.0	-0.8

MAN 19 23:49:53.8, 11°.09N×125°.56E, h24km, mb4.0, ML2.8, MS2.3, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.52	347	eP	Pb	23 50 05.0	+0.6
BESP				eS	Sn	23 50 15.2	+1.3
PLP	Palo	0.57	277⇓	eP	Pn	23 50 06.2	-0.3
PLP				eS	Sn	23 50 16.1	+0.9
MSLP	Maasin	1.17	216	eP	Pn	23 50 14.1	-0.7
MSLP				eS	Sb	23 50 31.5	+1.3
SJMP	San Jose	4.55	288	eP	Pb	23 51 08.1	-5.0
SJMP				eS	Pb	23 51 13.9	+0.8

IDC 20 00:00:09.0±1.3, 0°.19N×130°.62E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/39, mbtmp3.7/4, MS3.2/1, Ms1 3.2/1, ms1mx2.8/26, Error ellipse: s-maj=71.5km s-min=16.1km az=63.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	1.23	148	Pn	Pn	00 00 33.9	+0.3
	23nm,0.3s,baz=331,slow=18,SNR=28						
SIJI				Sn	Sn	00 00 50.6	-0.3
	31nm,0.3s,baz=249,slow=15,SNR=11						
GUMO	Guam	19.40	46	LR	LR	00 10 25.3	
	comp=Z,79nm,20.0s,baz=109,slow=32						
WRA	Warramunga Arr	20.33	170	P	P	00 04 46.9	-0.1
	1.6nm,0.5s,baz=348,slow=10,SNR=14						
ASAR	Alice Springs	23.92	173	P	P	00 05 25.1	+0.1
	2.6nm,0.5s,baz=355,slow=8.0,SNR=33						
MKAR	Makanchi Array	62.67	325	P	P	00 10 35.7	0.0
	0.3nm,0.8s,baz=133,slow=8.4,SNR=4.2						
KURBB	Kurchatov Arra	66.81	327	P	P	00 11 02.5	0.0
	0.3nm,0.5s,baz=120,slow=6.6,SNR=3.1						

DJA ***20*** *00:04:57.5±0.8, 8°S±7°×12°2E±°, h10km, M3.4/5, MLv3.4/5*

IDC ***20*** *00:05:01.0±1.8, 7°.85S×122°.31E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.3/43, mbtmp3.3/4, ML2.9/3, MS2.6/1, Ms1 2.6/1, ms1mx2.5/21, Error ellipse: s-maj=152.2km s-min=26.8km az=60.0*

ISC 20 00:04:59.0±7.5, 8°.1S±0°.4×121°.7E±0°.3, h10km, n8, σ1^{s}93/7, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	0.66	176	P	Pg	00 05 11.1	-0.7
EDFI				Pg	Pb	00 05 11.3	-1.4
MMRI	Maumere	0.80	133	P	Pb	00 05 14.9	-0.1
BATI	Baumata	2.90	137	LR	LR	00 07 15.3	
	comp=Z,113nm,18.9s,baz=209,slow=50						
SOEI	Soe	3.07	123	P	Pn	00 05 47.3	-0.4
FITZ	Fitzroy Crossi	10.68	159	Pn	Pn	00 07 35.1	+3.0
	0.1nm,0.3s,baz=343,slow=11,SNR=2.8						
WRA	Warramunga Arr	17.03	135	Pn	Pn	00 08 55.9	-1.5
	0.0nm,0.3s,baz=311,slow=14,SNR=2.8						
ASAR	Alice Springs	19.44	144	P	Pn	00 09 28.1	+1.1
	0.1nm,0.3s,baz=327,slow=13,SNR=6.6						
MKAR	Makanchi Array	64.88	331	P	P	00 15 42.8	+4.4
	0.4nm,0.8s,baz=126,slow=6.3,SNR=4.1						

ISCJB ***20*** *00:09:16.6±1.2, 10°.80S±0°.03×166°.87E±0°.02, h5km±7km, mb5.5/301, MS5.3/368, Error ellipse: s-maj=4.4km s-min=3.2km az=174.4*

BJI ***20*** *00:09:17.1, 10°.59S×166°.94E, h7km, mB5.8/59, mb5.6/74, Ms5.4/73, Ms7 5.1/54*

IDC ***20*** *00:09:17.3±0.3, 10°.77S×166°.96E, h0km, mb5.1/31, mb1 5.2/33, mb1mx5.1/38, mbtmp5.1/33, ML4.7/2, MS5.0/20, Ms1 5.0/20, ms1mx4.9/27, Error ellipse: s-maj=12.3km s-min=11.3km az=123.0*

NEIC ***20*** *00:09:18.1±0.1, 10°.78S×166°.90E, h6km, mb5.5/237, ME5.4, MS5.4/298, MW5.6, MW5.6, Error ellipse: s-maj=2.3km s-min=1.8km az=141.0, Moment Tensor Solution. s49 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.77; $M_{\theta\theta}$0.99; $M_{\phi\phi}$1.78; $M_{r\theta}$-0.60; $M_{\theta\phi}$-1.26; $M_{\phi r}$0.32; Best double couple: $M_0$2.80000×10^{17} NP1:ϕ_s329.00000°, δ39.00000°, λ-81.00000°. NP2:ϕ_s138.00000°, δ52.00000°, λ-97.00000°. Principal axes: T 2.7700, Plg6.0000°, Azm233.0000°; N 0.0900, Plg6.0000°, Azm142.0000°; P -2.8600, Plg82.0000°, Azm11.0000°; Apparent Stress 0.30 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from MT mechanism.*

NEIC ***20*** *00:09:19.0±0.0, 10°.97S×166°.87E, h11km, Moment Tensor Solution. s17 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.56; $M_{\theta\theta}$0.32; $M_{\phi\phi}$1.24; $M_{r\theta}$2.17; $M_{\theta\phi}$-1.41; $M_{\phi r}$-1.53; Best double couple: $M_0$3.30000×10^{17} NP1:ϕ_s307.00000°, δ73.00000°, λ-104.00000°. NP2:ϕ_s169.00000°, δ22.00000°, λ-50.00000°. Principal axes: T 3.5400, Plg26.0000°, Azm48.0000°; N -0.4800, Plg13.0000°, Azm310.0000°; P -3.0600, Plg59.0000°, Azm196.0000°;*

MOS ***20*** *00:09:20.3±1.0, 10°.67S×166°.82E, h24km, mb5.6/74, MS5.2/49 Error ellipse: s-maj=7.2km s-min=5.9km az=113.2*

GCMT ***20*** *00:09:22.1±0.1, 10°.82S±0°.01×166°.97E±0°.01, h12km, MW5.6/123, Moment Tensor Solution. s94,c162; s123,c292; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.31±.04; $M_{\theta\theta}$0.70±.04; $M_{\phi\phi}$1.62±.04; $M_{r\theta}$-0.75±.11; $M_{\theta\phi}$-2.12±.03; $M_{\phi r}$-1.04±.11; Best double couple: $M_0$3.20900×10^{17} NP1:ϕ_s348.00000°, δ56.00000°, λ-52.00000°. NP2:ϕ_s114.00000°, δ49.00000°, λ-132.00000°. Principal axes: T 3.3500, Plg4.0000°, Azm52.0000°; N -0.2750, Plg31.0000°, Azm144.0000°; P -3.0690, Plg59.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 20 00:09:18.7±0.6, 10°.80S±0°.04×167°.03E±0°.04, h13km±3km, n1012, σ1^{s}31/915, mb5.5/305, MS5.4/369, 23C-20D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	7.10	280	eP	Pn	00 11 03.0	+0.6
HNR				eS	Sn	00 12 13.0	-10
HNR	Honiara	7.10	280	ePn	Pn	00 11 03.1	+0.8
HNR				Sn	Sn	00 12 23.8	+0.7
HNR	Honiara	7.10	280	Pn	Pn	00 11 03.6	+1.2
	20nm,0.3s,baz=160,slow=4.3,SNR=24						
HNR				Sn	Sn	00 12 23.7	+0.7
	baz=198,slow=20,SNR=2.1						
HNR				LR	LR	00 13 50.4	
	comp=Z,31µm,18.5s,baz=120,slow=39						
MARNC	Mare, Loyalty	10.66	175	ePn	Pn	00 11 53.1	+1.9
DZM	Mont Dzumac	11.22	183	ePn	Pn	00 12 01.7	+2.8
	267nm,1.4s						
DZM				eLQ	LQ	00 14 11.5	
	7µm,23.6s						
DZM				eLR	LR	00 14 42.4	
	comp=Z,27µm,26.9s						
DZM	Mont Dzumac	11.22	183	ePn	Pn	00 12 00.7	+1.8
DZM				Sn	Sn	00 14 01.0	-3.3
DZM	Mont Dzumac	11.22	183	Pn	Pn	00 12 01.3	+2.4
	3.0nm,0.3s,baz=4.4,slow=20,SNR=13						
DZM				Sn	Sn	00 14 01.0	-3.3
	baz=36,slow=19,SNR=1.2						
DZM				LR	LR	00 15 50.1	
	comp=Z,10µm,21.9s,baz=8.5,slow=35						
PINNC	Pines Island,	11.75	178	ePn	Pn	00 12 07.1	+1.0
FUNA	Funafuti	12.21	80	ePn	Pn	00 12 08.5	-3.9
MSVF	Nonsavu	12.71	124	ePn	P	00 12 30.6	+0.1
MSVF	Nonsavu	12.71	124	i P	P	00 12 26.2	-4.3
TARA	Tarawa	13.43	26	ePn	Pn	00 12 27.9	-1.1
RABL	Rabaul	16.13	293	ePn	Pn	00 13 04.8	-0.5
	381nm,1.3s						
KWAJ	Kwajalein Atol	19.49	2	eP	P	00 13 45.9	+0.3
KWAJ	Kwajalein Atol	19.49	2	eP	P	00 13 45.9	+0.3
PATS	Pohnpei	19.55	333	eP	Pn	00 13 47.1	-0.6
	925nm,1.7s						
EIDS	Eidsvold	20.93	224	P	Pn	00 14 03.2	-0.6
	baz=21,SNR=14						
EIDS	Eidsvold	20.93	224	eP	P	00 14 01.9	+0.7
	162nm,0.9s						
EIDS				LR	LR		
	comp=Z,8µm,21.0s						
MANU	Manus Island	21.37	293	eP	P	00 14 06.3	+0.2
	comp=Z,2µm,1.8s						
MANU				LR	LR		
	comp=Z,7µm,19.0s						
LHI	Lord Howe Isla	21.89	199	PFAKE		00 14 20.0	+8.5
LHI				LR	LR		
	comp=Z,6µm,20.0s						
CTA	Charters Tower	22.03	243	P	P	00 14 14.0	+0.9
	comp=Z,28nm,0.7s,baz=75,slow=12,SNR=30						
CTA				PcP	PcP	00 18 12.4	+1.1
	comp=Z,4.3nm,0.8s,baz=79,slow=5.2,SNR=3.1						
CTA				LR	LR	00 21 47.6	
	comp=Z,10µm,18.1s,baz=64,slow=34						
CTAO	Charters Tower	22.03	243	eP	P	00 14 13.4	+0.3
CTAO				LR	LR		
	comp=Z,11µm,19.0s						
CTAO	Charters Tower	22.03	243	eP	P	00 14 13.4	+0.3
CTAO				MLR	MLR		
	comp=Z,11µm,19.0s						
KNTN	Kanton	22.55	71	eP	P	00 14 20.2	+1.5
	comp=Z,363nm,1.3s						
KNTN				LR	LR		
	comp=Z,7µm,20.0s						
RAO	Raoul Island	23.12	145	P	P	00 14 27.1	+2.5
	comp=Z,142nm,0.3s,baz=72,slow=20,SNR=2.0						
MTSU	Mount Surprise	23.15	249	P	P	00 14 25.7	+0.6
	baz=23,SNR=54						
RMQ	Roma	23.25	225	P	P	00 14 27.3	+1.3
	baz=23,SNR=8.6						
COEN	Coen	23.50	260	P	P	00 14 28.7	+0.1
	baz=24,SNR=30						
COEN	Coen	23.50	260	eP	P	00 14 28.3	-0.3
	comp=Z,91nm,1.0s						
COEN				LR	LR		
	comp=Z,10µm,21.0s						
ARMA	Armidale	24.21	214	P	P	00 14 36.1	+0.9
	baz=24,SNR=20						
ARMA	Armidale	24.21	214	eP	P	00 14 35.7	+0.5
	comp=Z,235nm,1.3s						
ARMA				LR	LR		
	comp=Z,7µm,20.0s						
OUZ	Omahuta	25.03	167	eP	P	00 14 42.8	+0.2
	comp=Z,86nm,1.1s						
OUZ				LR	LR		
	comp=Z,4µm,20.0s						
JAY	Jayapura	27.39	286	P	P	00 15 03.1	-1.1
JAY	Jayapura	27.39	286	P	P	00 15 03.5	-0.6
	comp=Z,31nm,0.9s,baz=66,slow=3.3,SNR=8.4						
JAY				LR	LR	00 26 41.8	
	comp=Z,5µm,19.0s,baz=90,slow=38						
GENI	Genyem	27.87	285	P	P	00 15 06.9	-1.5
QIS	Mount Isa	28.09	246	P	P	00 15 10.3	0.0
	baz=28,SNR=5.1						
HIZ	Hauiti	28.47	167	PFAKE		00 15 30.0	+17
HIZ				LR	LR		
	comp=Z,4µm,20.0s						
MXZ	Matakaoa Point	28.51	161	PFAKE		00 15 30.0	+16
MXZ				LR	LR		
	comp=Z,3µm,20.0s						
CMSA	Cobar Meteorol	28.55	221	P	P	00 15 15.0	+0.6
	baz=29,SNR=10						
URZ	Urewera	28.79	163	eP	P	00 15 17.5	+1.1
	comp=Z,33nm,1.0s						
URZ	Urewera	28.79	163	P	P	00 15 18.0	+1.7
	comp=Z,11nm,0.9s,baz=358,slow=5.7,SNR=5.4						
URZ				LR	LR	00 24 26.5	
	comp=Z,3µm,21.6s,baz=346,slow=32						
H11S2	WAKE ISLAND Hy	29.11	359	T	T	00 45 24.6	
	baz=181,slow=76,SNR=834						
H11S3	WAKE ISLAND Hy	29.11	359	T	T	00 45 24.9	
	baz=181,slow=76,SNR=752						
H11S1	WAKE ISLAND Hy	29.13	359	T	T	00 45 23.7	
	baz=181,slow=76,SNR=516						
CNB	Canberra Magne	29.21	211	P	P	00 15 21.3	+1.1
	baz=29,SNR=5.0						
CAN	Canberra	29.40	211	PFAKE		00 15 30.0	+8.1
CAN				LR	LR		
	comp=Z,3µm,21.0s						
BKZ	Black Stump Fm	29.48	165	eP	P	00 15 24.0	+1.5
	comp=Z,55nm,1.3s						
BKZ				LR	LR		
	comp=Z,3µm,20.0s						
H11N1	WAKE ISLAND Hy	30.33	360	T	T	00 46 54.1	
	baz=182,slow=76,SNR=229						
H11N3	WAKE ISLAND Hy	30.33	360	T	T	00 46 54.4	
	baz=182,slow=76,SNR=145						
H11N2	WAKE ISLAND Hy	30.34	360	T	T	00 46 57.6	
	baz=182,slow=76,SNR=157						
BFZ	Birch Farm	30.85	166	eP	P	00 15 35.2	+0.6
	comp=Z,36nm,0.8s						
BFZ				LR	LR		
	comp=Z,5µm,20.0s						
SNZO	South Karori	31.13	169	PFAKE		00 15 50.0	+13
SNZO				LR	LR		
	comp=Z,3µm,20.0s						
THZ	Tophouse	31.27	172	eP	P	00 15 39.5	+1.2
	comp=Z,41nm,0.9s						
THZ				LR	LR		
	comp=Z,2µm,18.0s						
STKA	Stephens Creek	31.49	224	P	P	00 15 41.1	+0.8
	baz=32,SNR=19						
STKA	Stephens Creek	31.49	224	eP	P	00 15 40.3	0.0
	comp=Z,14nm,1.3s						
STKA				PcP	PcP	00 18 33.9	+0.5
STKA	Stephens Creek	31.49	224	eP	P	00 15 40.3	0.0
STKA						00 18 33.9	
STKA				pmax	pmax		
	comp=Z,14nm,1.3s						
STKA	Stephens Creek	31.49	224	P	P	00 15 40.9	+0.6
	comp=Z,14nm,0.8s,baz=41,slow=8.7,SNR=18						
STKA				PcP	PcP	00 18 33.9	+0.5
	comp=Z,11nm,0.9s,baz=42,slow=6.7,SNR=3.2						
STKA				LR	LR	00 27 29.8	
	comp=Z,8µm,20.1s,baz=54,slow=35						
KHZ	Kahutara	32.00	171	PFAKE		00 16 00.0	+15
KHZ				LR	LR		
	comp=Z,3µm,21.0s						
LTZ	Lake Taylor	32.18	173	eP	P	00 15 47.5	+1.2
	comp=Z,91nm,1.1s						
LTZ				LR	LR		
	comp=Z,4µm,22.0s						
OXZ	Oxford	32.69	173	eP	P	00 15 51.9	+1.1
	comp=Z,70nm,1.1s						
OXZ				LR	LR		
	comp=Z,4µm,18.0s						
FOZ	Fox Glacier	32.70	176	eP	P	00 15 51.9	+1.1
	comp=Z,61nm,0.9s						
FOZ				LR	LR		
	comp=Z,3µm,18.0s						
WRAB	Tennant Creek	32.74	250	eP	P	00 15 51.0	-0.5
WRAB				LR	LR		
	comp=Z,8µm,19.0s						
WRAB	Tennant Creek	32.74	250	ceP	P	00 15 50.8	-0.7
WRAB				pmax	pmax		
	comp=Z,43nm,1.0s						
WB2	Warramunga Arr	32.74	250	eP	P	00 15 50.9	-0.6
WRA	Warramunga Arr	32.75	250	ceP	P	00 15 49.5	-2.1
WRA				pmax	pmax		
	comp=Z,27nm,0.9s						
WRA	Warramunga Arr	32.75	250	P	P	00 15 50.9	-0.6
	comp=Z,30nm,0.9s,baz=81,slow=9.1,SNR=51						
WRA				PcP	PcP	00 18 37.4	+0.4
	comp=Z,7.5nm,0.8s,baz=81,slow=3.7,SNR=6.2						
WRA				LR	LR	00 29 11.1	
	comp=Z,8µm,18.4s,baz=50,slow=36						
TOO	Toolangi	32.94	212	P	P	00 15 53.9	+0.9
	baz=33,SNR=4.8						
TOO	Toolangi	32.94	212	eP	P	00 15 53.2	+0.2
	comp=Z,176nm,1.9s						
TOO				LR	LR		
	comp=Z,5µm,22.0s						
TOO	Toolangi	32.94	212	eP	P	00 15 53.2	+0.2
TOO				pmax	pmax		
	comp=Z,176nm,1.9s						
TOO				MLR	MLR		
	comp=Z,5µm,22.0s						
RPZ	Rata Peaks	32.97	175	eP	P	00 15 54.5	+1.3
	comp=Z,75nm,0.9s						
RPZ				LR	LR		
	comp=Z,4µm,18.0s						
RPZ	Rata Peaks	32.97	175	P	P	00 15 54.3	+1.1
	comp=Z,42nm,0.8s,baz=284,slow=3.2,SNR=14						
CRLZ	Canterbury Las	33.01	173	PFAKE		00 16 10.0	+17
CRLZ				LR	LR		
	comp=Z,2µm,21.0s						
MQZ	McQueen's Vall	33.14	173	PFAKE		00 16 10.0	+15
MQZ				LR	LR		
	comp=Z,2µm,18.0s						
LBZ	Lake Benmore	33.57	176	eP	P	00 15 59.7	+1.3
	comp=Z,38nm,1.0s						
LBZ				LR	LR		
	comp=Z,2µm,18.0s						
KDU	Kakadu	33.87	263	P	P	00 16 00.8	-0.5
	baz=34,SNR=13						
WKZ	Wanaka	33.94	177	eP	P	00 16 02.7	+1.0
	comp=Z,416nm,1.8s						
WKZ				LR	LR		
	comp=Z,4µm,22.0s						
AS01	Alice Springs	33.98	244	eP	P	00 16 01.1	-1.3
AS31	Alice Springs	34.02	244	eP	P	00 16 01.8	-0.9
	comp=Z,8.2nm,0.9s						
AS31				LR	LR		
	comp=Z,100nm,20.0s						
ASAR	Alice Springs	34.03	244	P	P	00 16 01.8	-1.0
	comp=Z,9.7nm,0.7s,baz=74,slow=9.4,SNR=83						
ASAR				PcP	PcP	00 18 40.9	+0.2
	comp=Z,9.4nm,0.9s,baz=74,slow=3.0,SNR=8.7						
ASAR				LR	LR	00 28 54.7	
	comp=Z,9µm,19.5s,baz=74,slow=35						
HTT	Hallett	34.22	224	P	P	00 16 05.6	+1.3
	baz=34,SNR=8.1						
MLZ	Mavora Lakes	34.45	179	eP	P	00 16 06.3	+0.2
	comp=Z,204nm,1.9s						
DCZ	Deep Cove	34.54	180	eP	P	00 16 07.3	+0.5
	comp=Z,410nm,1.8s						
WHZ	Wether Hill Ro	34.98	179	eP	P	00 16 12.9	+2.4
	comp=Z,96nm,1.5s						
MTN	Manton Dam	35.17	263	P	P	00 16 12.4	-0.2
	baz=35,SNR=4.5						
MTN	Manton Dam	35.17	263	eP	P	00 16 11.8	-0.9
	comp=Z,428nm,2.0s						
MTN				LR	LR		
	comp=Z,4µm,20.0s						
SAUI	Saumlaki	35.35	271	PFAKE		00 16 30.0	+16
SAUI				LR	LR		
	comp=Z,4µm,18.0s						
FAKI	Fak Fak	35.38	280	PFAKE		00 16 30.0	+16
FAKI				LR	LR		
	comp=Z,4µm,22.0s						
BBOO	Buckleboo	35.92	228	P	P	00 16 19.1	+0.3
	baz=36,SNR=13						
BBOO	Buckleboo	35.92	228	eP	P	00 16 18.4	-0.5
	comp=Z,56nm,1.0s						
BBOO				LR	LR		
	comp=Z,5µm,20.0s						
TAU	Tasmania Unive	36.30	205	PFAKE		00 16 30.0	+8.0
TAU				LR	LR		
	comp=Z,3µm,21.0s						
SIJI	Sorong	36.87	283	P	P	00 16 26.3	-1.0
	comp=Z,37nm,0.7s,baz=84,slow=7.5,SNR=13						
KNRA	Kununurra	37.52	258	P	P	00 16 32.7	0.0
	baz=38,SNR=26						
WRKA	Warakurna	39.32	244	P	P	00 16 47.5	-0.3
	baz=39,SNR=10.0						
NLAI	Namlea	40.30	278	P	P	00 16 56.0	0.0
FITZ	Fitzroy Crossi	40.66	255	P	P	00 16 58.6	-0.4
	baz=41,SNR=88						
FITZ	Fitzroy Crossi	40.66	255	eP	P	00 16 58.7	-0.3
	comp=Z,112nm,0.8s						
FITZ				LR	LR		
	comp=Z,6µm,20.0s						
FITZ	Fitzroy Crossi	40.66	255	P	P	00 16 58.9	-0.1
	comp=Z,105nm,0.8s,baz=88,slow=6.4,SNR=194						
TNTI	Ternate	41.08	284	PFAKE		00 17 10.0	+7.5
TNTI				LR	LR		
	comp=Z,1µm,20.0s						
FORT	Forrest	41.21	235	P	P	00 17 03.9	+0.5
	baz=41,SNR=12						
FORT	Forrest	41.21	235	eP	P	00 17 03.2	-0.2
	comp=Z,113nm,0.9s						
FORT				LR	LR		
	comp=Z,4µm,19.0s						
SANI	Sanana	41.65	279	P	P	00 17 06.2	-1.0
SOEI	Soe	42.06	267	eP	P	00 17 10.6	-0.1
	comp=Z,109nm,1.1s						
SOEI				LR	LR		
	comp=Z,3µm,18.0s						
SOEI	Soe	42.06	267	P	P	00 17 10.8	+0.1
PPT	Papeete	42.53	104	eP	P	00 17 14.3	-0.1
PPT	Papeete	42.53	104	eP	P	00 17 14.3	-0.1
PPT	Papeete	42.53	104	LR	LR	00 31 42.0	
	comp=Z,3µm,18.4s,baz=267,slow=32						
PAE	Paea	42.53	104	eP	P	00 17 15.8	+1.5
	comp=Z,19nm,1.2s						
PPT2	Papeete2	42.53	104	eP	P	00 17 16.3	+1.9
	comp=Z,107nm,1.2s						
PPT2				eS	S	00 23 38.5	+1.6
	comp=Z,898nm,24.0s						
PPT2				eLQ	LQ	00 27 16.1	
	comp=Z,9µm,29.8s						
PPT2				eLR	LR	00 28 59.2	
	comp=Z,5µm,24.0s,baz=279						
BATI	Baumata	42.62	267	P	P	00 17 15.3	+0.2
BATI	Baumata	42.62	267	P	P	00 17 16.2	+1.1
	comp=Z,109nm,0.9s,baz=87,slow=0.6,SNR=17						
TIAR	Tiarei	42.75	104	eP	P	00 17 17.8	+1.6
	comp=Z,34nm,1.1s						
TVO	Taravao	42.85	104	eP	P	00 17 18.7	+1.7
	comp=Z,42nm,1.2s						
TBI	Tubuai	43.26	113	eP	P	00 17 22.7	+2.5
	comp=Z,380nm,1.0s						
TBI				eS	S	00 23 49.3	+2.1
	comp=Z,588nm,26.2s						
TBI				eLQ	LQ	00 27 35.5	
	comp=Z,7µm,30.5s						
TBI				eLR	LR	00 29 21.7	
	comp=Z,5µm,29.2s,baz=286						
PMOR	Pomariorio Ree	44.08	100	eP	P	00 17 28.7	+1.8
	comp=Z,192nm,1.1s						
MMRI	Maumere	44.17	269	eP	P	00 17 27.4	-0.3
	comp=Z,261nm,1.1s						
MMRI				LR	LR		
	comp=Z,1µm,18.0s						
MMRI	Maumere	44.17	269	P	P	00 17 27.8	+0.1
KMSI	Cibinong	44.27	282	P	P	00 17 34.5	+6.1
VAH	Vaihoa	44.34	101	eP	P	00 17 30.6	+1.7
	comp=Z,199nm,1.3s						
LUWI	Luwuk	45.01	279	eP	P	00 17 34.2	-0.2
	comp=Z,180nm,1.0s						
LUWI	Luwuk	45.01	279	P	P	00 17 31.5	-2.9

WSI	**Waingapu**	**45.97**	**267**	P	P	00 17 50.1	+8.2
APSI	**Ampana**	**46.13**	**279**	P	**P**	**00 17 42.5**	**-0.8**
MRSI	**Marisa**	**46.20**	**281**	P	**P**	**00 17 43.2**	**-0.6**
MBWA	**Marble Bar**	**46.47**	**251**	*e*P	**P**	**00 17 45.9**	**+0.1**
MBWA				LR	LR		
	comp=Z,6µm,18.0s						
BNSI	**Bone**	**46.90**	**274**	P	**P**	**00 17 48.9**	**-0.4**
SPSI	**Sidrap Palu**	**47.31**	**275**	P	**P**	**00 17 51.9**	**-0.6**
TTSI	**Tana Toraja**	**47.44**	**276**	P	**P**	**00 17 54.0**	**+0.5**
WRMHI	**West Rim**	**47.74**	**51**	PFAKE		00 18 10.0	+14
WRMHI				LR	LR		
	comp=Z,4µm,20.0s						
KKO	**Keanakako`i**	**47.76**	**51**	PFAKE		00 18 10.0	+14
KKO				LR	LR		
	comp=Z,4µm,21.0s						
SBLHI	**Steaming Bluff**	**47.77**	**51**	PFAKE		00 18 10.0	+14
SBLHI				LR	LR		
	comp=Z,5µm,22.0s						
STCH	**Steam Cracks**	**47.86**	**51**	PFAKE		00 18 10.0	+13
STCH				LR	LR		
	comp=Z,3µm,20.0s						
PCI	**Palu**	**47.89**	**279**	P	**P**	**00 17 57.8**	**+0.7**
	comp=Z,287nm,1.2s,comp=Z,4µm						
MPSI	**Mapaga**	**48.14**	**280**	P	**P**	**00 17 58.3**	**-0.6**
MEEK	**Meekatharra**	**48.18**	**244**	P	**P**	**00 17 59.6**	**+0.4**
	baz=48,SNR=35						
PLAI	**Plampang**	**48.53**	**268**	P	**P**	**00 18 01.9**	**-0.1**
KLBR	**Kellerberrin**	**49.90**	**238**	P	**P**	**00 18 11.7**	**-0.5**
	baz=50,SNR=17						
BLDU	**Ballidu**	**50.56**	**239**	P	**P**	**00 18 17.4**	**+0.1**
	baz=51,SNR=5.3						
NWAO	**Narrogin (SRO)**	**50.64**	**236**	P	**P**	**00 18 17.9**	**+0.1**
	baz=51,SNR=9.8						
NWAO	**Narrogin (SRO)**	**50.64**	**236**	*e*P	**P**	**00 18 17.3**	**-0.5**
NWAO				LR	LR		
	comp=Z,12µm,19.0s						
NWAO	**Narrogin (SRO)**	**50.64**	**236**	*e*P	**P**	**00 18 17.3**	**-0.5**
NWAO				MLR	MLR		
	comp=Z,12µm,19.0s						
MORW	**Morawa**	**50.84**	**241**	P	**P**	**00 18 19.5**	**+0.1**
	baz=51,SNR=11						
MORW	**Morawa**	**50.84**	**241**	*e*P	**P**	**00 18 18.9**	**-0.5**
	comp=Z,71nm,1.1s						
MORW				LR	LR		
	comp=Z,5µm,20.0s						
KBKI	**Kotabaru**	**50.97**	**275**	P	**P**	**00 18 20.3**	**-0.2**
SRBI	**Singaraja**	**51.14**	**268**	P	**P**	**00 18 22.4**	**+0.6**
MUN	**Mundaring**	**51.27**	**238**	P	**P**	**00 18 23.1**	**+0.6**
	baz=51,SNR=11						
GIRL	**Giralia**	**51.67**	**250**	P	**P**	**00 18 25.3**	**-0.4**
	baz=52,SNR=4.5						
GIRL	**Giralia**	**51.67**	**250**	*e*P	**P**	**00 18 24.9**	**-0.8**
	comp=Z,585nm,1.8s						
GIRL				LR	LR		
	comp=Z,5µm,18.0s						
TAOE	**Nuku Hiva Isla**	**52.03**	**93**	*e*S	**S**	**00 25 50.6**	**-1.8**
	comp=Z,1µm,25.0s						
TAOE				*e*LR	LR	00 33 15.4	
	comp=Z,3µm,27.7s,baz=262						
JAGI	**Jajag, Banyuwa**	**52.13**	**268**	*e*P	**P**	**00 18 27.8**	**-1.4**
	comp=Z,163nm,1.1s						
JAGI	**Jajag, Banyuwa**	**52.13**	**268**	P	**P**	**00 18 28.0**	**-1.3**
JOW	**Kunigami**	**53.06**	**316**	*e*P	**P**	**00 18 36.2**	**+0.4**
	comp=Z,156nm,1.4s						
KKM	**Kota Kinabalu**	**53.28**	**286**	*e*P	**P**	**00 18 37.4**	**-0.5**
	comp=Z,256nm,1.2s						
KKM				LR	LR		
	comp=Z,400nm,21.0s						
INU	**Inuyama**	**53.97**	**330**	*e*P	**P**	**00 18 42.6**	**+0.3**
	comp=Z,72nm,1.3s						
MJAR	**Matsushiro Arr**	**54.35**	**331**	P	**P**	**00 18 44.8**	**-0.4**
	comp=Z,13nm,0.9s,baz=168,slow=8.9,SNR=30						
MJAR				PcP	**PcP**	**00 19 50.1**	**+1.1**
	comp=Z,13nm,0.8s,baz=173,slow=3.8,SNR=7.1						
MAJO	**Matsushiro**	**54.35**	**331**	*e*P	**P**	**00 18 44.4**	**-0.8**
	comp=Z,36nm,1.0s						
MAJO	**Matsushiro**	**54.35**	**331**	*e*P	**P**	**00 18 44.4**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,35nm,1.0s						
MAT	**Matsushiro**	**54.35**	**331**	P	**P**	**00 18 44.9**	**-0.3**
MAT				S	**S**	**00 26 24.0**	**+0.9**
MJB9	**Matsu-Tunnel**	**54.36**	**331**	*e*P	**P**	**00 18 44.2**	**-1.0**
	comp=Z,35nm,1.0s						
JNU	**Nakatsue**	**55.63**	**323**	*e*P	**P**	**00 18 55.0**	**+0.4**
	comp=Z,160nm,1.0s						
UGM	**Wanagama**	**55.77**	**268**	*e*P	**P**	**00 18 55.6**	**-0.3**
	comp=Z,247nm,1.2s						
SMRI	**Semarang**	**55.97**	**269**	*e*P	**P**	**00 18 57.0**	**-0.3**
	comp=Z,247nm,1.1s						
SBUM	**Sibu**	**56.09**	**280**	*e*P	**P**	**00 18 58.0**	**-0.2**
	comp=Z,30nm,1.1s						
SBUM				LR	LR		
	comp=Z,300nm,18.0s						
NACB	**Ninganchiao**	**56.37**	**309**	*e*P	**P**	**00 19 00.1**	**+0.2**
	comp=Z,266nm,1.6s						
RKT	**Rikitea**	**56.49**	**111**	*e*S	**S**	**00 26 52.9**	**+0.7**
	comp=Z,557nm,32.5s						
RKT				*e*LQ	LQ	00 33 05.5	
	comp=Z,2µm,29.8s						
RKT				*e*LR	LR	00 35 32.7	
	comp=Z,2µm,25.5s						
TPUB	**Ta-pu**	**56.65**	**307**	*e*P	**P**	**00 19 02.2**	**+0.2**
	comp=Z,248nm,1.4s						
YHNB	**Yeheng**	**56.80**	**309**	*e*P	**P**	**00 19 01.3**	**-1.9**
	comp=Z,197nm,1.2s						
KSM	**Kuching**	**57.71**	**279**	*e*P	**P**	**00 19 09.0**	**-0.7**
	comp=Z,75nm,1.4s						
KSM				LR	LR		
	comp=Z,500nm,21.0s						
YUK	**Yuzh-Kuril'sk**	**57.87**	**342**	*e*P	**P**	**00 19 09.0**	**-1.1**
YUK				*e*		00 20 02.8	
YUK				*e*		00 21 13.9	
YUK				*e*S	**S**	**00 27 10.6**	**+1.1**
YUK				*e*SS	**SS**	**00 30 58.1**	**-2.6**
YUK				MLR	MLR		
	comp=Z,576nm,17.0s						
KUR	**Kuril'sk**	**58.40**	**344**	*ce*P	**P**	**00 19 14.9**	**+1.1**
CISI	**Cisompet, Garu**	**58.47**	**268**	*e*P	**P**	**00 19 14.3**	**-0.8**
	comp=Z,152nm,1.1s						
CISI				LR	LR		
	comp=Z,700nm,20.0s						
QZH	**Quanzhou**	**59.09**	**308**	⇑*i*P	**P**	**00 19 20.3**	**+1.2**
QZH				*e*S	**S**	**00 27 20.9**	**-5.2**
QZH				pmax	pmax		
	comp=Z,68nm,1.6s						
QZH				LR	LR		
	comp=Z,1µm,21.8s						
QZH				LR	LR		
	comp=Z,1µm,18.0s						
QZH				LR	LR		
	comp=Z,1µm,17.1s						
TJN	**Taejon**	**59.97**	**323**	*ce*P	**P**	**00 19 25.1**	**+0.2**
KSRS	**Korea Array**	**60.40**	**325**	P	**P**	**00 19 28.8**	**+1.0**
	comp=Z,12nm,0.8s,baz=144,slow=6.9,SNR=33						
KSRS				PcP	**PcP**	**00 20 14.3**	**+1.6**
	comp=Z,6.8nm,0.8s,baz=149,slow=5.1,SNR=4.9						
KS15	**Wonju Array Si**	**60.41**	**325**	*e*P	**P**	**00 19 28.4**	**+0.5**
KSAR	**Wonju Array Be**	**60.41**	**325**	P	**P**	**00 19 28.8**	**+0.9**
KSAR				PcP	**PcP**	**00 20 14.3**	**+1.5**
KSAR	**Wonju Array Be**	**60.41**	**325**	P	**P**	**00 19 28.8**	**+0.9**
KSAR						00 20 14.3	
KS01	**Wonju Array Si**	**60.43**	**325**	*e*P	**P**	**00 19 27.7**	**-0.3**
SSE	**Sheshan**	**60.56**	**315**	*e*P	**P**	**00 19 28.9**	**-0.2**
	comp=Z,195nm,1.1s						
YSS	**Yuzh-Sakhalins**	**61.45**	**341**	*e*P	**P**	**00 19 35.9**	**+1.1**
	comp=Z,94nm,1.1s						
YSS	**Yuzh-Sakhalins**	**61.45**	**341**	κ*e*P	**P**	**00 19 36.0**	**+1.2**
YSS				*e*		00 19 51.1	
YSS				*e*PPP	PPP	00 23 24.0	
YSS				*e*S	**S**	**00 27 54.2**	**-1.4**
YSS				*e*PS	**PnS**	**00 28 06.0**	**-4.2**
YSS				pmax	pmax		
	comp=Z,70nm,1.1s						
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,300nm,6.3s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
NJ2	**Nanjing**	**62.74**	**315**	⇓P	**P**	**00 19 44.9**	**+1.1**
NJ2				pP	**pwP**	**00 19 48.9**	**-2.0**
NJ2				sP	**sP**	**00 19 51.4**	**+2.9**
NJ2				S	**S**	**00 28 11.6**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,100nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,660nm,5.4s						
NJ2				LR	LR		
	comp=Z,950nm,14.6s						
NJ2				LR	LR		
	comp=Z,990nm,14.6s						
NJ2				LR	LR		
	comp=Z,840nm,16.3s						
USA0B	**Ussuriysk Arra**	**63.31**	**332**	*e*P	**P**	**00 19 47.8**	**+0.5**
	comp=Z,306nm,1.6s						
USRK	**Ussuriysk Ar.**	**63.31**	**332**	P	**P**	**00 19 48.1**	**+0.9**
	comp=Z,85nm,1.2s,baz=134,slow=5.5,SNR=44						
USRK				PcP	**PcP**	**00 20 26.0**	**+1.7**
	comp=Z,16nm,1.1s,baz=126,slow=3.4,SNR=4.2						
QIZ	**Qiongzhong**	**63.68**	**298**	P	**P**	**00 19 50.5**	**+0.2**
QIZ				S	**S**	**00 28 31.6**	**+6.9**
QIZ				pmax	pmax		
	comp=Z,33nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,580nm,5.2s						
QIZ				LR	LR		
	comp=Z,540nm,18.6s						
QIZ				LR	LR		
	comp=Z,680nm,29.4s						
QIZ				LR	LR		
	comp=Z,950nm,22.6s						
QIZ	**Qiongzhong**	**63.68**	**298**	*e*P	**P**	**00 19 50.3**	**0.0**
	comp=Z,12nm,0.8s						
QIZ				LR	LR		
	comp=Z,900nm,21.0s						
PET	**Petropavlovsk**	**63.98**	**354**	*e*P	**P**	**00 19 52.6**	**+1.1**
	comp=Z,49nm,1.2s						
PET	**Petropavlovsk**	**63.98**	**354**	*e*P	**P**	**00 19 52.5**	**+1.1**
PET				*e*S	**S**	**00 28 26.1**	**-1.0**
PET				pmax	pmax		
	comp=Z,37nm,1.2s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s						
MYKOM	**Kota Tinggi**	**64.07**	**277**	*e*P	**P**	**00 19 52.7**	**-0.2**
	comp=Z,70nm,1.1s						
MYKOM				LR	LR		
	comp=Z,600nm,21.0s						
PEA0B	**Petropavlovsk-**	**64.16**	**354**	*e*P	**P**	**00 19 53.5**	**+0.8**
	comp=Z,201nm,1.8s						
PETK	**Petropavlovsk-**	**64.16**	**354**	*e*P	**P**	**00 19 53.8**	**+1.1**
PETK	**Petropavlovsk-**	**64.16**	**354**	P	**P**	**00 19 53.6**	**+0.9**
	comp=Z,17nm,0.8s,baz=160,slow=9.6,SNR=11						
PETK				LR	LR	00 42 32.2	
	comp=Z,744nm,21.0s,baz=162,slow=31						
MDJ	**Mudanjiang**	**64.74**	**331**	P	**P**	**00 19 57.8**	**+1.1**
MDJ				pP	pwP	00 20 07.4	+3.6
MDJ				S	**S**	**00 28 40.5**	**+3.7**
MDJ				pmax	pmax		
	comp=Z,97nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,1µm,5.7s						
MDJ				LR	LR		
	comp=Z,940nm,13.6s						
MDJ				LR	LR		
	comp=Z,690nm,15.6s						
MDJ				LR	LR		
	comp=Z,800nm,15.4s						
MDJ	**Mudanjiang**	**64.74**	**331**	*e*P	**P**	**00 19 57.0**	**+0.3**
	comp=Z,165nm,1.4s						
TYV	**Tymovskoe**	**64.97**	**343**	*e*P	**P**	**00 19 58.5**	**+0.5**
TYV				*e*		00 28 37.7	
TYV				pmax	pmax		
	comp=Z,19nm,1.2s						
TYV				pmax	pmax		
	comp=Z,500nm,5.0s						
DL2	**Dalian**	**65.05**	**322**	⇓*i*P	**P**	**00 19 59.8**	**+1.0**
DL2				pmax	pmax		
	comp=Z,97nm,1.1s						
DL2				pmax	pmax		
	comp=Z,800nm,6.0s						
DL2				LR	LR		
	comp=Z,370nm,17.9s						
DL2				LR	LR		
	comp=Z,820nm,17.2s						
DL2				LR	LR		
	comp=Z,1µm,17.2s						
WHN	**Wuhan**	**65.18**	**311**	⇑P	**P**	**00 20 00.6**	**+0.7**
WHN				LR	LR		
	comp=Z,880nm,11.2s						
WHN				LR	LR		
	comp=Z,2µm,12.7s						
WHN				LR	LR		
	comp=Z,3µm,23.1s						
SNY	**Shenyang**	**65.84**	**326**	⇓P	**P**	**00 20 04.4**	**+0.6**
SNY				S	**S**	**00 28 43.8**	**-6.6**
SNY				pmax	pmax		
	comp=Z,48nm,1.7s						
SNY				pmax	pmax		
	comp=Z,1µm,4.1s						
SNY				LR	LR		
	comp=Z,1µm,17.6s						
SNY				LR	LR		
	comp=Z,980nm,15.5s						
SNY				LR	LR		
	comp=Z,1µm,21.6s						
CN2	**Changchun**	**66.19**	**328**	*e*P	**P**	**00 20 07.1**	**+1.0**
CN2				*e*sP	pwP	00 20 14.1	+0.9
CN2				*e*S	**S**	**00 28 54.1**	**-0.6**
CN2				pmax	pmax		
	comp=Z,70nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,650nm,18.0s						
CN2				LR	LR		
	comp=Z,460nm,18.0s						
TIA	**Tai'an**	**66.28**	**317**	P	**P**	**00 20 07.0**	**+0.1**
TIA				pmax	pmax		
	comp=Z,27nm,1.3s						
VNDA	**Vanda**	**66.76**	**181**	*e*P	**P**	**00 20 10.4**	**+1.2**
	comp=Z,97nm,1.5s						
VNDA	**Vanda**	**66.76**	**181**	P	**P**	**00 20 10.1**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,20nm,1.1s						
VNDA	**Vanda**	**66.76**	**181**	P	**P**	**00 20 10.1**	**+0.9**
	comp=Z,13nm,0.9s,baz=352,slow=5.5,SNR=9.4						
VNDA				LR	LR	00 45 19.9	
	comp=Z,504nm,20.0s,baz=12,slow=32						
GRNR	**Gornyy**	**66.85**	**339**	*e*P	**P**	**00 20 11.6**	**+1.4**
GRNR				pmax	pmax		
	comp=Z,55nm,1.1s						
CASY	**Casey**	**67.06**	**201**	PFAKE		00 20 20.0	+8.7
CASY				LR	LR		
	comp=Z,2µm,21.0s						
KLR	**Kul'dur**	**67.35**	**336**	*d i*P	**P**	**00 20 14.5**	**+1.1**
KLR	**Kul'dur**	**67.35**	**336**	LR	LR	00 45 53.1	
	comp=Z,331nm,21.0s,baz=156,slow=33						
IPM	**Ipoh**	**67.42**	**279**	*e*P	**P**	**00 20 14.8**	**+0.1**
	comp=Z,96nm,1.0s						
IPM				LR	LR		
	comp=Z,600nm,20.0s						
NKL	**Nikolayevsk**	**67.57**	**343**	*e*P	**P**	**00 20 15.0**	**+0.4**
NKL				pmax	pmax		
	comp=Z,49nm,1.0s						
KULM	**Kulim**	**67.98**	**280**	*e*P	**P**	**00 20 18.4**	**+0.3**
	comp=Z,148nm,1.8s						
KULM				LR	LR		
	comp=Z,600nm,22.0s						
SKNT	**Sakolnakorn**	**68.15**	**293**	P	**P**	**00 20 19.6**	**+0.5**
	comp=Z,57nm,1.2s,comp=Z,698nm						
COCO	**West Island**	**68.62**	**261**	PFAKE		00 20 30.0	+7.9
COCO				LR	LR		
	comp=Z,2µm,20.0s						
ENH	**Enshi**	**68.73**	**308**	*e*P	**P**	**00 20 22.6**	**+0.1**
SRAK	**Srakaew**	**69.00**	**290**	P	**P**	**00 20 23.3**	**-1.1**
	comp=Z,18nm,0.7s,comp=Z,545nm						
BJT	**Baijiatuau**	**69.08**	**320**	*e*P	**P**	**00 20 24.8**	**+0.3**
BJT				LR	LR		
	comp=Z,1µm,22.0s						
BJT	**Baijiatuau**	**69.08**	**320**	*e*P	**P**	**00 20 24.8**	**+0.3**
BJT				MLR	MLR		
	comp=Z,1µm,22.0s						
PSI	**Prapat**	**69.09**	**277**	*e*P	**P**	**00 20 24.3**	**-0.9**
	comp=Z,46nm,0.9s						
PSI				LR	LR		
	comp=Z,900nm,18.0s						
PSI	**Prapat**	**69.09**	**277**	*e*P	**P**	**00 20 24.3**	**-0.9**
PSI				pmax	pmax		
	comp=Z,46nm,0.9s						
PSI				MLR	MLR		
	comp=Z,900nm,18.0s						
BJI	**Beijing**	**69.09**	**320**	P	**P**	**00 20 25.5**	**+1.0**
BJI				S	**S**	**00 29 31.6**	**+2.0**
BJI				pmax	pmax		
	comp=Z,900nm,4.1s						
BJI				LR	LR		
	comp=Z,520nm,15.2s						
BJI				LR	LR		
	comp=Z,810nm,17.7s						
BJI	**Beijing**	**69.09**	**320**	P	**P**	**00 20 24.8**	**+0.3**
GYA	**Guiyang**	**69.33**	**304**	⇓*i*P	**P**	**00 20 27.1**	**+0.6**
GYA				PP	**PP**	**00 23 03.4**	**+3.5**
GYA				SKS	**SKiKP**	**00 30 24.0**	**+7.7**
GYA				SS	**SS**	**00 34 02.6**	**+2.0**
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				pmax	pmax		
	comp=Z,190nm,5.8s						
GYA				LR	LR		
	comp=Z,720nm,18.8s						
GYA				LR	LR		
	comp=Z,610nm,18.6s						
GYA				LR	LR		
	comp=Z,690nm,19.0s						
TRTT	**Trang**	**69.52**	**283**	P	**P**	**00 20 28.6**	**+0.9**
	comp=Z,17nm,1.7s,comp=Z,596nm						
CHAI	**Chaiyaphum**	**69.62**	**291**	P	**P**	**00 20 28.5**	**+0.2**
	comp=Z,13nm,0.9s,comp=Z,162nm						
PATY	**Pattaya**	**69.77**	**288**	P	**P**	**00 20 31.1**	**+1.9**
	comp=Z,17nm,1.2s						
GSI	**Gunungsitoli**	**70.09**	**275**	*e*P	**P**	**00 20 31.0**	**-0.3**
	comp=Z,124nm,0.8s						
TIY	**Taiyuan**	**70.25**	**317**	*e*P	**P**	**00 20 33.3**	**+1.5**
PKDT	**Phuket**	**70.84**	**282**	P	**P**	**00 20 36.7**	**+0.9**
XAN	**Xi'an**	**70.90**	**312**	P	**P**	**00 20 36.8**	**+1.0**
XAN				pP	sP	00 20 40.8	+0.2
XAN				S	**S**	**00 29 50.5**	**-0.7**
XAN				pmax	pmax		
	comp=Z,130nm,1.1s						
XAN				pmax	pmax		
	comp=Z,1µm,2.6s						
XAN				LR	LR		
	comp=Z,710nm,16.2s						
XAN				LR	LR		
	comp=Z,800nm,19.6s						
XAN				LR	LR		
	comp=Z,1µm,21.7s						
XAN	**Xi'an**	**70.90**	**312**	*e*P	**P**	**00 20 36.0**	**+0.2**
	comp=Z,134nm,1.0s						
XAN				LR	LR		
	comp=Z,1µm,20.0s						
XAN	**Xi'an**	**70.90**	**312**	*e*P	**P**	**00 20 36.0**	**+0.2**
XAN				pmax	pmax		
	comp=Z,134nm,1.0s						
XAN				MLR	MLR		
	comp=Z,1µm,20.0s						
PHET	**Kaeng Krachan**	**70.92**	**288**	P	**P**	**00 20 38.2**	**+1.9**
	comp=Z,9.1nm,1.2s,comp=Z,215nm						
MA2	**Magadan**	**71.36**	**351**	*e*P	**P**	**00 20 37.9**	**-0.1**
	comp=Z,28nm,1.0s						
MA2	**Magadan**	**71.36**	**351**	*ce*P	**P**	**00 20 38.2**	**+0.2**
MA2				pmax	pmax		
	comp=Z,39nm,1.3s						
UTTA	**Uttaradit**	**71.50**	**293**	P	**P**	**00 20 40.7**	**+1.0**
	comp=Z,8.4nm,1.3s,comp=Z,96nm						
NANT	**Nan**	**71.70**	**294**	P	**P**	**00 20 41.4**	**+0.5**
	comp=Z,15nm,1.2s						
UTHA	**Uthaitani**	**71.85**	**290**	P	**P**	**00 20 43.0**	**+1.1**
	comp=Z,13nm,1.0s,comp=Z,152nm						
KMI	**Kunming**	**72.08**	**301**	P	**P**	**00 20 44.8**	**+1.5**
KMI				pP	sP	00 20 48.3	+0.2
KMI				PcP	**PcP**	**00 21 02.3**	**+0.5**
KMI				S	**S**	**00 30 06.4**	**+0.9**
KMI				SKS	**SKSac**	**00 30 46.3**	**-1.6**
KMI				pmax	pmax		
	comp=Z,94nm,1.4s						
KMI				pmax	pmax		
	comp=Z,760nm,7.3s						
KMI				LR	LR		
	comp=Z,410nm,14.1s						
KMI				LR	LR		
	comp=Z,580nm,20.0s						
KMI				LR	LR		
	comp=Z,900nm,21.8s						
KMI	**Kunming**	**72.08**	**301**	*e*P	**P**	**00 20 44.1**	**+0.7**
	comp=Z,317nm,1.7s						
KMI				LR	LR		
	comp=Z,900nm,21.0s						
KMI	**Kunming**	**72.08**	**301**	*e*P	**P**	**00 20 44.1**	**+0.7**
KMI				pmax	pmax		
	comp=Z,317nm,1.7s						
KMI				MLR	MLR		
	comp=Z,900nm,21.0s						
SUKH	**Sukhothai**	**72.25**	**292**	P	**P**	**00 20 45.5**	**+1.3**
	comp=Z,8.1nm,0.9s						
HHC	**Hu-ho-hao-te**	**72.47**	**319**	*e*P	**P**	**00 20 46.9**	**+1.7**
HHC				sP	pwP	00 20 54.8	+2.5
HHC				PcP	**PcP**	**00 21 07.6**	**+4.6**
HHC				PP	**PP**	**00 23 28.9**	**+2.3**
HHC				S	**S**	**00 30 11.5**	**+2.3**
HHC				ScS	**ScS**	**00 30 52.1**	**0.0**
HHC				SS	**SS**	**00 34 48.8**	**+0.5**
HHC				pmax	pmax		
	comp=Z,85nm,1.3s						
HHC				pmax	pmax		
	comp=Z,690nm,4.5s						
HHC				LR	LR		
	comp=Z,580nm,16.1s						
HHC				LR	LR		
	comp=Z,410nm,14.5s						
LAMP	**Lampang**	**72.57**	**293**	P	**P**	**00 20 47.4**	**+1.2**
	comp=Z,24nm,0.9s,comp=Z,234nm						
UMPA	**Umpang Tak**	**72.58**	**291**	P	**P**	**00 20 47.5**	**+1.2**
	comp=Z,7.4nm,1.5s						
ZEA	**Zeya**	**72.62**	**337**	*de*P	**P**	**00 20 46.8**	**+1.1**
ZEA				*e*S	**S**	**00 30 14.0**	**+3.9**
ZEA				pmax	pmax		
	comp=N,72nm,1.2s						
ZEA				pmax	pmax		
	comp=E,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,190nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,800nm,6.0s						
ZEA				pmax	pmax		
	comp=N,400nm,5.0s						
ZEA				smax	smax		
	comp=N,500nm,9.0s						
ZEA				MLR	MLR		
	comp=E,300nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
PAYA	**Payao**	**72.62**	**294**	P	P	00 20 52.8	+6.4
HIA	**Hailar**	**72.79**	**330**	*e*P	**P**	**00 20 47.6**	**+0.7**
	comp=Z,260nm,1.9s						
HIA				LR	LR		
	comp=Z,700nm,20.0s						
HIA	**Hailar**	**72.79**	**330**	*e*P	**P**	**00 20 47.6**	**+0.7**
HIA				pmax	pmax		
	comp=Z,260nm,1.9s						
HIA				MLR	MLR		
	comp=Z,700nm,20.0s						
CM01	**Chiang Mai Arr**	**73.15**	**293**	*e*P	**P**	**00 20 49.3**	**-0.3**
CM31	**Chiang Mai Arr**	**73.17**	**293**	*e*P	**P**	**00 20 49.7**	**0.0**
CM31	**Chiang Mai Arr**	**73.17**	**293**	P	**P**	**00 20 51.0**	**+1.2**
	SNR=22						
CMAR	**Chiang Mai Arr**	**73.17**	**293**	*ce*P	**P**	**00 20 50.9**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,26nm,0.9s						
CMAR	**Chiang Mai Arr**	**73.17**	**293**	P	**P**	**00 20 50.9**	**+1.2**
	comp=Z,24nm,0.9s,baz=115,slow=4.4,SNR=115						
CMAR				LR	LR	00 53 39.5	
	comp=Z,269nm,19.4s,baz=125,slow=36						
CMMT	**Chiang Mai**	**73.28**	**293**	P	**P**	**00 20 51.0**	**+0.6**
	comp=Z,55nm,1.5s,comp=Z,988nm						
CHTO	**Chiang Mai**	**73.28**	**293**	*e*P	**P**	**00 20 50.9**	**+0.5**
	comp=Z,126nm,1.5s						
CHTO	**Chiang Mai**	**73.28**	**293**	*e*P	**P**	**00 20 50.9**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,126nm,1.5s						
CHTO	**Chiang Mai**	**73.28**	**293**	P	**P**	**00 20 51.0**	**+0.6**
	SNR=21						
CHTO				P	**P**	**00 20 51.0**	**+0.6**
	SNR=21						
CHTO	**Chiang Mai**	**73.28**	**293**	P	**P**	**00 20 51.1**	**+0.7**

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      comp=Z,248nm,1.5s,comp=Z,4µm
CD2   Chengdu          73.46 307 ⇓P      P        00 20 52.1 +0.8
CD2                              pP      sP       00 20 55.4 -0.7
CD2                              PP      PP       00 23 35.5 +0.3
CD2                              S       SKiKP    00 30 22.1 -0.2
CD2                              SS      SS       00 35 05.4 +1.7
CD2                              pmax    pmax
      comp=Z,280nm,0.9s
CD2                              pmax    pmax
      comp=Z,1µm,5.9s
CD2                              LR      LR
      comp=Z,2µm,14.2s
CD2                              LR      LR
      comp=Z,2µm,20.1s
CD2                              LR      LR
      comp=Z,2µm,18.6s
SEY   Seymchan         74.38 353ceP      P        00 20 56.5 +0.7
SEY   Seymchan         74.38 353  P      P        00 20 56.4 +0.5
      comp=Z,19nm,0.8s,baz=154,slow=5.7,SNR=7.1
CMBY  CAMPBELL BAY     74.88 280 eP      P        00 20 59.4 -0.4
CMBY                             IAmb    IAmb     00 21 04.3
      comp=Z,64nm,0.8s
LZH   Lanzhou          75.53 312 ⇓P      P        00 21 04.9 +1.6
LZH                              pP      pwP      00 21 09.1 -1.3
LZH                              sP      PcP      00 21 12.6 -3.7
LZH                              PP      PP       00 23 48.5 -4.4
LZH                              S       S        00 30 44.1 +0.1
LZH                              sS      sS       00 30 50.8 +1.1
LZH                              SS      SS       00 35 35.6 +0.3
LZH                              pmax    pmax
      comp=Z,320nm,1.2s
LZH                              pmax    pmax
      comp=Z,540nm,5.0s
LZH                              LR      LR
      comp=Z,1µm,17.2s
LZH                              LR      LR
      comp=Z,2µm,17.4s
LZH                              LR      LR
      comp=Z,2µm,18.3s
GAMB  Gambell          76.12  10 eP      P        00 21 06.7 +0.9
      comp=Z,29nm,0.9s
PBA   Port Blair       77.10 285 eP      P        00 21 10.9 -1.5
SVW2  Sparrevohn       77.50  18 eP      P        00 21 15.2 +1.4
      comp=Z,88nm,1.8s
CIT   Chita            77.59 329 eP      P        00 21 15.8 +1.3
CIT                              e                00 21 31.2
CIT                              pmax    pmax
      comp=Z,413nm,1.7s
BRLK  Bradley Lake     77.97  20  PFAKE           00 21 30.0  +14
BRLK                              LR     LR
      comp=Z,3µm,21.0s
ANM   Nome             77.99  12 eP      P        00 21 17.3 +0.9
      comp=Z,40nm,1.4s
ANM                              LR      LR
      comp=Z,1µm,20.0s
ANM   Nome             77.99  12 eP      P        00 21 17.3 +0.9
ANM                              pmax    pmax
      comp=Z,40nm,1.4s
ANM                              MLR     MLR
      comp=Z,1µm,20.0s
YAK   Yakutsk          78.23 343d iP     P        00 21 18.0 +0.3
YAK                             eS       S        00 31 12.8 +0.8
YAK                             eSS      SS       00 36 11.8 -2.8
YAK                              pmax    pmax
      comp=Z,352nm,1.3s
YAK                              pmax    pmax
      comp=N,104nm,1.1s
YAK                              pmax    pmax
      comp=E,73nm,1.3s
YAK                              pmax    pmax
      comp=Z,1µm,4.4s
YAK                              pmax    pmax
      comp=N,963nm,5.1s
YAK                              pmax    pmax
      comp=E,96nm,1.5s
YAK                              smax    smax
      comp=N,470nm,5.4s
YAK                              smax    smax
      comp=E,2µm,5.4s
YAK                              MLR     MLR
      comp=Z,2µm,17.0s
YAK                              MLR     MLR
      comp=N,1µm,13.0s
YAK                              MLR     MLR
      comp=E,2µm,19.0s
BILL  Bilibino         78.64 360 eP      P        00 21 20.7 +0.8
      comp=E,69nm,1.1s
BILL  Bilibino         78.64 360ceP      P        00 21 20.9 +1.0
BILL                             pmax    pmax
      comp=Z,81nm,1.3s
ULN   Ulaanbaatar      78.85 324 eP      P        00 21 21.9 +0.2
      comp=Z,124nm,1.0s
ULN                              LR      LR
      comp=Z,600nm,20.0s
ULN   Ulaanbaatar      78.85 324ceP      P        00 21 22.8 +1.1
ULN                              pmax    pmax
      comp=Z,237nm,1.7s
ULN   Ulaanbaatar      78.85 324  P      P        00 21 23.1 +1.4
      SNR=76
ULN                               P      P        00 21 23.1 +1.4
      SNR=76
QSPA  South Pole Qui   79.20 180 eP      P        00 21 23.3 -0.1
QSPA                              LR     LR
      comp=Z,1µm,18.0s
SONM  Songino Array    79.22 323  P      P        00 21 24.8 +1.1
      comp=Z,41nm,1.1s,baz=127,slow=1.7,SNR=147
SONA1 Songino Array    79.22 323 eP      P        00 21 23.7  0.0
SUA   Susitna One      79.28  19 eP      P        00 21 24.9 +1.2
      comp=Z,68nm,1.5s
SUA                              LR      LR
      comp=Z,2µm,22.0s
RC01  Rabbit Creek A   79.34  20  PFAKE           00 21 40.0  +16
RC01                              LR     LR
      comp=Z,3µm,22.0s
GTA   Gaotai           79.80 313 ⇓P      P        00 21 28.3 +1.2
GTA                              pP      pwP      00 21 32.9 -1.3
GTA                              sP      PcP      00 21 35.8 +1.1
GTA                              S       S        00 31 27.8 -2.3
GTA                              sS      sS       00 31 34.8 -1.0
GTA                              SKS     SKSac    00 31 37.6 -6.5
GTA                              SS      SS       00 36 36.3 -3.2
GTA                              pmax    pmax
      comp=Z,120nm,1.3s
GTA                              pmax    pmax
      comp=Z,850nm,7.9s
GTA                              LR      LR
      comp=Z,620nm,17.8s
GTA                              LR      LR
      comp=Z,560nm,18.1s
GTA                              LR      LR
      comp=Z,630nm,20.0s
PMR   Palmer           79.90  20 eP      P        00 21 27.8 +0.9
      comp=Z,88nm,1.7s
PMR                              LR      LR
      comp=Z,3µm,22.0s
PMR   Palmer           79.90  20 eP      P        00 21 27.8 +0.9
PMR                              pmax    pmax
      comp=Z,88nm,1.7s
PMR                              MLR     MLR
      comp=Z,3µm,22.0s
KNK   Knik Glacier     80.00  20 eP      P        00 21 28.7 +1.3
      comp=Z,54nm,1.4s
KNK                              LR      LR
      comp=Z,2µm,20.0s
GHO   Glory Hole Cre   80.10  20  PFAKE           00 21 40.0  +12
GHO                               LR     LR
      comp=Z,3µm,21.0s
SML   Sawmill          80.32  20 eP      P        00 21 30.4 +1.1
      comp=Z,55nm,1.2s
SML                              LR      LR
      comp=Z,2µm,19.0s
SML   Sawmill          80.32  20 eP      P        00 21 30.4 +1.1
SML                              pmax    pmax
      comp=Z,55nm,1.2s
SML                              MLR     MLR
      comp=Z,2µm,19.0s
EYAK  Cordova Ski Ar   80.34  22  PFAKE           00 21 40.0  +11
EYAK                              LR     LR
      comp=Z,4µm,22.0s
SCM   Sheep Creek Mo   80.68  20 eP      P        00 21 32.4 +1.2
      comp=Z,120nm,1.6s
SCM   Sheep Creek Mo   80.68  20 eP      P        00 21 32.4 +1.2
SCM                              pmax    pmax
      comp=Z,120nm,1.6s
DIV   Divide           80.73  21  PFAKE           00 21 40.0 +8.5
DIV                               LR     LR
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      comp=Z,3µm,20.0s
HMT   Hamilton         80.74  22  PFAKE           00 21 40.0 +8.5
HMT                               LR     LR
      comp=Z,2µm,19.0s
BOD   Bodaibo          80.86 334 eP      P        00 21 31.8 -0.3
BOD                              pmax    pmax
      comp=Z,75nm,1.5s
TRF   Thorofare Moun   80.90  18 eP      P        00 21 33.4 +0.9
      comp=Z,84nm,1.8s
TRF                              LR      LR
      comp=Z,2µm,21.0s
KLU   Klutina          80.92  21 eP      P        00 21 34.0 +1.5
      comp=Z,20nm,0.9s
KLU                              LR      LR
      comp=Z,2µm,20.0s
BRDH  Bariadhala       80.93 295  P      P        00 21 34.7 +1.4
      comp=Z,71nm,0.3s,baz=74,slow=11,SNR=8.4
RND   Reindeer         81.31  18 eP      P        00 21 35.1 +0.6
      comp=Z,32nm,1.2s
RND                              LR      LR
      comp=Z,1µm,20.0s
RND   Reindeer         81.31  18 eP      P        00 21 35.1 +0.6
RND                              pmax    pmax
      comp=Z,32nm,1.2s
RND                              MLR     MLR
      comp=Z,1µm,20.0s
MCCM  Marconi Confer   81.42  49  PFAKE           00 21 50.0  +14
MCCM                              LR     LR
      comp=Z,2µm,20.0s
SHL   Shillong         81.51 298 eP      P        00 21 36.4 -0.2
      comp=Z,74nm,1.0s
SHL   Shillong         81.51 298 eP      P        00 21 35.7 -0.9
SHL                              IAmb    IAmb     00 21 38.0
      comp=Z,42nm,0.8s
MCK   McKinley         81.52  18 eP      P        00 21 36.1 +0.5
      comp=Z,56nm,1.5s
MCK   McKinley         81.52  18 eP      P        00 21 36.1 +0.5
MCK                              pmax    pmax
      comp=Z,56nm,1.5s
DHY   Denali Highway   81.54  19 eP      P        00 21 36.9 +1.0
      comp=Z,20nm,1.2s
DHY                              LR      LR
      comp=Z,3µm,21.0s
RDOG  Red Dog Mine     81.54  11 eP      P        00 21 36.4 +0.8
      comp=Z,29nm,1.0s
RDOG                             LR      LR
      comp=Z,1µm,20.0s
GDXM  Geysers          81.72  48  PFAKE           00 21 50.0  +13
GDXM                              LR     LR
      comp=Z,2µm,19.0s
HARP  HAARP            81.81  20 eP      P        00 21 38.2 +1.1
      comp=Z,42nm,1.0s
IM3   Indian Mountai   81.86  15 eP      P        00 21 37.5 +0.2
BALM  Baldy            81.91  22 eP      P        00 21 39.1 +1.3
      comp=Z,54nm,1.5s
BALM                             LR      LR
      comp=Z,2µm,19.0s
BALM  Baldy            81.91  22 eP      P        00 21 39.1 +1.3
BALM                             pmax    pmax
      comp=Z,54nm,1.5s
BALM                             MLR     MLR
      comp=Z,2µm,19.0s
MLY   Manley           81.94  17 eP      P        00 21 38.5 +0.7
      comp=Z,22nm,1.2s
SAO   San Andreas Ge   82.01  50 eP      P        00 21 39.8 +1.0
      comp=Z,13nm,0.9s
SAO                              LR      LR
      comp=Z,3µm,20.0s
SAO   San Andreas Ge   82.01  50 eP      P        00 21 39.8 +1.0
SAO                              pmax    pmax
      comp=Z,13nm,0.9s
SAO                              MLR     MLR
      comp=Z,3µm,20.0s
PAX   Paxson           82.09  20  PFAKE           00 21 50.0  +11
PAX                               LR     LR
      comp=Z,1µm,21.0s
PCA   Pinnacle         82.12  24  PFAKE           00 21 50.0  +11
PCA                               LR     LR
      comp=Z,2µm,20.0s
O02D  Mt. Diablo Mer   82.21  47  P      P        00 21 39.8  0.0
      baz=249
ZAK   Zakamensk        82.23 325 eP      P        00 21 39.9 +0.2
ZAK                              pmax    pmax
      comp=Z,65nm,1.3s
WRH   Wood River Hil   82.31  18 eP      P        00 21 40.0 +0.4
      comp=Z,19nm,1.0s
J01E  Myrtle Point     82.52  44  P      P        00 21 41.3 +0.1
      baz=248
K02D  Willamette Mer   82.52  44  P      P        00 21 41.6 +0.1
      baz=248
WDC   Whiskeytown Da   82.53  46 eP      P        00 21 42.8 +1.4
      comp=Z,86nm,1.8s
IRK   Irkutsk          82.55 327 eP      P        00 21 41.0 -0.2
IRK                              pmax    pmax
      comp=Z,161nm,3.4s
PAGB  Antelope Grade   82.58  52  PFAKE           00 21 50.0 +8.2
PAGB                              LR     LR
      comp=Z,2µm,19.0s
HDA   Harding Lake     82.62  18 eP      P        00 21 42.1 +0.8
      comp=Z,50nm,0.9s
HDA                              LR      LR
      comp=Z,2µm,21.0s
HDA   Harding Lake     82.62  18  P      P        00 21 41.6 +0.3
      baz=226
MDM   Murphy Dome      82.62  18 eP      P        00 21 41.3  0.0
      comp=Z,39nm,1.0s
MDM                              LR      LR
      comp=Z,2µm,21.0s
TLY   Talaya           82.63 326 eP      P        00 21 41.6 -0.1
      comp=Z,60nm,0.9s
TLY                              LR      LR
      comp=Z,500nm,20.0s
TLY   Talaya           82.63 326ceP      P        00 21 42.4 +0.7
TLY                              pmax    pmax
      comp=Z,362nm,1.7s
TLY   Talaya           82.63 326  P      P        00 21 42.4 +0.7
      SNR=36
TLY                               P      P        00 21 42.4 +0.7
      SNR=36
PKM   Mcpherson Peak   82.65  52  P      P        00 21 42.6 +0.3
      baz=252
MENT  Mentasta         82.66  20 eP      P        00 21 42.9 +1.3
      comp=Z,57nm,1.4s
MENT                             LR      LR
      comp=Z,2µm,20.0s
TCOL  CIGO, UAF Yank   82.67  18  P      P        00 21 41.5  0.0
      baz=225
COLA  College          82.67  18 eP      P        00 21 42.0 +0.5
      comp=Z,31nm,0.8s
COLA                             LR      LR
      comp=Z,1µm,21.0s
COLA  College          82.67  18 i P     P        00 21 41.3 -0.2
COLA                             pmax    pmax
      comp=Z,30nm,0.9s
RIDG  Independ'e Rid   82.83  20 eP      P        00 21 43.7 +1.2
      comp=Z,97nm,1.4s
RIDG                             LR      LR
      comp=Z,2µm,22.0s
YBH   Yreka Blue Hor   82.83  45 eP      P        00 21 44.5 +1.5
      comp=Z,64nm,1.6s
YBH   Yreka Blue Hor   82.83  45  P      P        00 21 45.2 +2.2
      comp=Z,7.0nm,0.9s,baz=260,slow=3.1,SNR=10
IL1   Eielson Array    82.89  18 eP      P        00 21 41.7 -1.0
ILAR  Eielson Array    82.89  18  P      P        00 21 42.5 -0.1
      comp=Z,20nm,0.9s,baz=225,slow=6.1,SNR=83
ILAR                              PKKPbc PKKPbc   00 40 05.3 -3.8
      comp=Z,0.6nm,1.0s,baz=20,slow=1.7,SNR=4.4
ILAR                              LR     LR       00 53 41.1
      comp=Z,609nm,20.4s,baz=228,slow=32
ILB   Eielson Array    82.89  18 eP      P        00 21 42.6 -0.1
ORV   Oroville         82.92  48 eP      P        00 21 43.5 +0.1
      comp=Z,33nm,1.4s
ORV                              LR      LR
      comp=Z,2µm,22.0s
ORV   Oroville         82.92  48 eP      P        00 21 43.5 +0.1
ORV                              pmax    pmax
      comp=Z,33nm,1.4s
ORV                              MLR     MLR
      comp=Z,2µm,22.0s
O03E  Paynes Creek     82.96  47  P      P        00 21 44.1 +0.4
      baz=250
POKR  Poker Plat Res   82.97  18  P      P        00 21 43.1 -0.1
      baz=225
HUMO  Hull Mountain    82.98  44 eP      P        00 21 45.2 +1.5
      comp=Z,70nm,0.9s
SCI2  San Clemente I   83.06  55  P      P        00 21 44.6 +0.3
      baz=252
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AFDM  Forest Hills D   83.10  48 eP      P        00 21 46.0 +1.6
      comp=Z,48nm,1.4s
AFDM                             LR      LR
      comp=Z,2µm,21.0s
I03D  Drain, OR        83.11  43  P      P        00 21 45.5 +1.2
      baz=248
CMB   Columbia Colle   83.23  49 eP      P        00 21 46.7 +1.5
      comp=Z,18nm,1.1s
CMB                              LR      LR
      comp=Z,2µm,21.0s
CMB   Columbia Colle   83.23  49 eP      P        00 21 46.7 +1.5
CMB                              pmax    pmax
      comp=Z,18nm,1.1s
CMB                              MLR     MLR
      comp=Z,2µm,21.0s
SCRK  Sand Creek       83.27  20 eP      P        00 21 46.2 +1.4
      comp=Z,110nm,1.6s
SCRK                             LR      LR
      comp=Z,2µm,22.0s
L04D  Klamath Falls    83.28  45  P      P        00 21 46.6 +1.2
      baz=249
LSA   Lhasa            83.30 302 eP      P        00 21 46.3 +0.1
      comp=Z,12nm,0.6s
LSA   Lhasa            83.30 302 eP      P        00 21 46.3 +0.1
LSA                              pmax    pmax
      comp=Z,12nm,0.6s
OSI   Osito Audit: C   83.42  53  PFAKE           00 22 00.0  +14
OSI                               LR     LR
      comp=Z,2µm,20.0s
OSI   Osito Audit: C   83.42  53  P      P        00 21 46.8 +0.6
      baz=252
M04C  Macdoel          83.45  45  P      P        00 21 46.9 +0.6
      baz=249
FMP   Fort Macarthur   83.48  54  P      P        00 21 47.4 +0.9
      baz=252
ARVC  Arvin            83.49  53  P      P        00 21 46.8 +0.4
      baz=252
VES   Vestal, Richgr   83.51  52  P      P        00 21 47.7 +1.1
      baz=252
JIS   Juneau Island    83.54  27 eP      P        00 21 46.7 +0.5
      comp=Z,117nm,1.7s
HYT   Haines Junctio   83.65  24 eP      P        00 21 48.2 +1.3
      comp=Z,20nm,1.1s
HYT                              LR      LR
      comp=Z,2µm,21.0s
PASC  Pasadena Art C   83.71  54  PFAKE           00 22 00.0  +12
PASC                              LR     LR
      comp=Z,2µm,19.0s
COLD  Coldfoot         83.73  15 eP      P        00 21 48.1 +1.2
      comp=Z,9.3nm,1.0s
COLD                             LR      LR
      comp=Z,1µm,22.0s
RUBR  Rubicon Trail    83.73  48  PFAKE           00 22 00.0  +12
RUBR                              LR     LR
      comp=Z,2µm,19.0s
G03D  McMinnville, O   83.73  42  P      P        00 21 47.7 +0.2
      baz=248
SKAG  Skagway          83.78  26  PFAKE           00 22 00.0  +13
SKAG                              LR     LR
      comp=Z,1µm,20.0s
J04D  Umpqua Nationa   83.79  44  P      P        00 21 48.5 +0.4
      baz=249
K04D  Chiloquin, OR    83.81  45  P      P        00 21 49.0 +0.8
      baz=249
MWC   Mount Wilson     83.82  54 eP      P        00 21 53.5 +5.0
      comp=Z,122nm,1.9s
MWC                              LR      LR
      comp=Z,2µm,20.0s
PRP   Porcupine Dome   83.83  18  PFAKE           00 22 00.0  +12
PRP                               LR     LR
      comp=Z,1µm,20.0s
H04D  Lebanon          83.83  43  P      P        00 21 49.0 +1.0
      baz=248
BEKR  Beckworth        83.85  48 eP      P        00 21 49.8 +1.3
      comp=Z,39nm,1.2s
BEKR                             LR      LR
      comp=Z,2µm,22.0s
ISA   Isabella, Lake   83.93  52 eP      P        00 21 50.5 +1.7
      comp=Z,114nm,2.0s
ISA                              LR      LR
      comp=Z,2µm,20.0s
ISA   Isabella, Lake   83.93  52 eP      P        00 21 50.5 +1.7
ISA                              pmax    pmax
      comp=Z,114nm,2.0s
ISA                              MLR     MLR
      comp=Z,2µm,20.0s
ISA   Isabella, Lake   83.93  52  P      P        00 21 49.3 +0.5
      baz=252
EDW2  Edwards Air Fo   84.07  53  P      P        00 21 50.6 +1.1
      baz=253,SNR=12
MDPB  Devils Postpil   84.08  50 eP      P        00 21 50.6 +0.8
      comp=Z,38nm,1.1s
MDPB                             LR      LR
      comp=Z,3µm,22.0s
WAKR  Walker           84.09  49 eP      P        00 21 51.1 +1.4
      comp=Z,63nm,1.3s
WAKR                             LR      LR
      comp=Z,3µm,22.0s
MOY   Mondy            84.10 325 eP      P        00 21 49.7 +0.3
MOY                              pmax    pmax
      comp=Z,176nm,3.6s
OMMB  Old Mammoth Mi   84.13  50 eP      P        00 21 51.4 +1.3
      comp=Z,42nm,1.4s
OMMB                             LR      LR
      comp=Z,3µm,22.0s
BFSC  Mount Baldy Ra   84.14  54  P      P        00 21 50.7 +0.7
      baz=253
PNTR  Pine Nut         84.16  49 eP      P        00 21 51.3 +1.2
      comp=Z,44nm,1.1s
PNTR                             LR      LR
      comp=Z,2µm,20.0s
VCNR  Virginia City    84.18  48  PFAKE           00 22 00.0  +10
VCNR                              LR     LR
      comp=Z,1µm,20.0s
109C  Camp Elliot, M   84.19  55  P      P        00 21 51.0 +0.9
      baz=253
CPE   Camp Elliot      84.19  55  PFAKE           00 22 00.0  +10
CPE                               LR     LR
      comp=Z,2µm,19.0s
F04D  Rainier, OR      84.23  41  P      P        00 21 50.6 +0.6
      baz=248
MLAC  Mammoth, Mammo84.26  50  P      P        00 21 51.3 +0.7
      baz=252
MURC  Murrieta         84.32  54  P      P        00 21 51.8 +0.9
      baz=253
YERR  Yerington        84.39  49 eP      P        00 21 52.4 +1.1
      comp=Z,65nm,1.6s
YERR                             LR      LR
      comp=Z,2µm,21.0s
J05D  Fort Rock, OR    84.40  44  P      P        00 21 52.0 +0.9
      baz=250
CWC   Cottonwood Cre   84.47  51  P      P        00 21 51.8 +0.1
      baz=252
BAR   Barrett          84.48  55  PFAKE           00 22 00.0 +8.4
BAR                               LR     LR
      comp=Z,2µm,19.0s
LRMC  Laurel Mtn Rad   84.49  52  P      P        00 21 52.3 +0.5
      baz=253
PAHR  Pah Rah Range    84.51  48 eP      P        00 21 53.0 +1.2
      comp=Z,118nm,1.9s
TIN   Tinemaha, Big    84.54  51  P      P        00 21 52.6 +0.7
      baz=252
MOD   Modoc Plateau    84.57  46 eP      P        00 21 53.3 +1.2
      comp=Z,20nm,1.0s
WHY   Whitehorse       84.62  25 eP      P        00 21 53.0 +1.2
      comp=Z,60nm,2.0s
E04D  Cinebar          84.69  41  P      P        00 21 53.4 +1.1
      baz=248
I05D  Terrebonne, OR   84.70  43  P      P        00 21 53.3 +0.8
      baz=250
D03D  Eldon            84.72  40  P      P        00 21 52.7 +0.3
      baz=248
EGAK  Eagle            84.72  20 eP      P        00 21 53.2 +1.1
      comp=Z,71nm,1.2s
EGAK                             LR      LR
      comp=Z,1µm,20.0s
BBRC  Big Bear Solar   84.73  54  P      P        00 21 53.7 +0.6
      baz=253
MONP2 Monument Peak    84.74  55  P      P        00 21 53.2  0.0
      baz=254
PINE  Pine Mountain    84.78  44 eP      P        00 21 54.1 +1.0
      comp=Z,60nm,1.5s
PINE                             LR      LR
      comp=Z,2µm,21.0s
DAC   Darwin (Calif)   84.80  52 eP      P        00 21 54.7 +1.3
      comp=Z,51nm,1.7s
DAC                              LR      LR
      comp=Z,2µm,20.0s
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DAC	Darwin (Calif)	84.80	52	P	P	00 21 54.7	+1.3
RYN	Ryan	84.81	49	PFAKE		00 22 10.0	+17
RYN				LR	LR		
	comp=Z,2µm,20.0s						
MPMC	Manual Prospec	84.81	52	P	P	00 21 54.4	+1.0
	baz=253,SNR=7.0						
DAWY	Dawson	84.88	21	*e*P	P	00 21 54.4	+1.4
	comp=Z,46nm,1.4s						
DAWY				LR	LR		
	comp=Z,2µm,19.0s						
NV01	Mina Array Sit	84.91	50	*e*P	P	00 21 55.0	+1.1
NVAR	Mina Array Bea	84.91	50	P	P	00 21 55.1	+1.2
	comp=Z,11nm,0.8s,baz=232,slow=8.2,SNR=38						
NVAR				LR	LR	00 51 33.3	
	comp=Z,2µm,21.6s,baz=256,slow=30						
PFO	Pinyon Flats O	84.92	55	*e*P	P	00 21 54.0	0.0
	comp=Z,24nm,1.4s						
PFO				LR	LR		
	comp=Z,2µm,20.0s						
PFO	Pinyon Flats O	84.92	55	*e*P	P	00 21 54.0	0.0
PFO				pmax	pmax		
	comp=Z,24nm,1.4s						
PFO				MLR	MLR		
	comp=Z,2µm,20.0s						
PFO	Pinyon Flats O	84.92	55	P	P	00 21 55.3	+1.4
	baz=254						
PFO	Pinyon Flats O	84.92	55	P	P	00 21 55.8	+1.8
	comp=Z,2.9nm,0.5s,baz=255,slow=4.4,SNR=3.7						
PGC	Sidney	84.92	39	*e*P	P	00 21 54.1	+0.8
	comp=Z,20nm,1.0s						
XPFO	Pion Flat	84.92	55	*e*P	P	00 21 55.4	+1.5
	comp=Z,28nm,1.4s						
XPFO				LR	LR		
	comp=Z,2µm,20.0s						
IKP	In-Ko-Pah, Jac	84.93	56	P	P	00 21 55.5	+1.5
	baz=254						
TOLK	Toolik Lake Re	84.94	15	*e*P	P	00 21 54.0	+0.8
	comp=Z,25nm,1.3s						
TOLK	Toolik Lake Re	84.94	15	P	P	00 21 54.2	+1.1
	baz=223						
NV11	Mina Array Sit	85.02	50	*e*P	P	00 21 55.6	+1.2
	comp=Z,3.3nm,1.3s						
NV11				LR	LR		
	comp=Z,200nm,20.0s						
GSC	Goldstone, Bar	85.12	53	PFAKE		00 22 10.0	+15
GSC				LR	LR		
	comp=Z,2µm,20.0s						
GSC	Goldstone, Bar	85.12	53	P	P	00 21 55.5	+0.6
	baz=253						
GRAC	Grapevine Rang	85.18	51	P	P	00 21 56.3	+1.2
	baz=253						
LON	Longmire	85.24	41	*e*P	P	00 21 56.7	+1.5
	comp=Z,55nm,1.8s						
LON	Longmire	85.24	41	*e*P	P	00 21 56.7	+1.5
LON				pmax	pmax		
	comp=Z,55nm,1.8s						
KVN	Kaiserville	85.25	49	*e*P	P	00 21 56.9	+1.3
	comp=Z,26nm,1.1s						
KVN				LR	LR		
	comp=Z,2µm,20.0s						
KVN	Kaiserville	85.25	49	*e*P	P	00 21 56.9	+1.3
KVN				pmax	pmax		
	comp=Z,26nm,1.1s						
KVN				MLR	MLR		
	comp=Z,2µm,20.0s						
SWSC	Sam W. Stewart	85.26	55	P	P	00 21 56.2	+0.7
	baz=254						
D05A	Enumclaw	85.29	40	*e*P	P	00 22 01.0	+5.7
	comp=Z,179nm,1.9s						
HEC	Hector,Ludlow	85.36	53	P	P	00 21 57.5	+1.4
	baz=254						
BELC	Belle Mtn. Jos	85.39	54	P	P	00 21 57.4	+1.1
	baz=254						
A04D	Lummi Island	85.40	39	P	P	00 21 56.7	+0.9
	baz=248						
FURC	Furnace Creek,	85.42	52	P	P	00 21 57.2	+1.1
	baz=253						
MAW	Mawson	85.42	202	LR	LR	00 54 39.8	
	comp=Z,764nm,19.1s,baz=96,slow=32						
DLBC	Dease Lake	85.60	28	*e*P	P	00 21 57.6	+0.9
	comp=Z,24nm,1.3s						
DLBC				LR	LR		
	comp=Z,2µm,18.0s						
B05A	Bryant	85.61	39	P	P	00 21 58.2	+1.3
	baz=249						
BC3	Big Chuckawall	85.73	55	P	P	00 21 59.4	+1.4
	baz=254						
I07A	Izee	85.85	44	*e*P	P	00 21 59.5	+1.1
	comp=Z,29nm,1.3s						
TUQ	Turquoise Moun	85.85	53	P	P	00 21 59.8	+1.2
	baz=254						
GMRC	Granite Mounta	85.88	54	P	P	00 21 59.4	+0.7
	baz=254						
WVOR	Wild Horse Val	85.92	46	*e*P	P	00 21 60.0	+1.2
	comp=Z,66nm,1.6s						
WVOR	Wild Horse Val	85.92	46	*e*P	P	00 22 00.0	+1.2
WVOR				pmax	pmax		
	comp=Z,66nm,1.6s						
H06S1	SOCORRO T	85.99	70	T	T	01 56 53.3	
	SNR=27						
TPNV	Topopah Spring	86.03	51	*e*P	P	00 22 00.4	+0.9
	comp=Z,38nm,1.4s						
TPNV				LR	LR		
	comp=Z,2µm,22.0s						
TPNV	Topopah Spring	86.03	51	*e*P	P	00 22 00.4	+0.9
TPNV				pmax	pmax		
	comp=Z,38nm,1.4s						
TPNV				MLR	MLR		
	comp=Z,2µm,22.0s						
TPNV	Topopah Spring	86.03	51	P	P	00 21 59.8	+0.3
	baz=254						
GLA	Glamis	86.08	55	PFAKE		00 22 10.0	+10
GLA				LR	LR		
	comp=Z,2µm,20.0s						
GLA	Glamis	86.08	55	P	P	00 22 00.2	+0.6
	baz=255						
IRM	Iron Mountain	86.12	54	P	P	00 22 00.6	+0.8
	baz=254						
LTY	Liberty	86.15	41	*e*P	P	00 22 00.9	+1.2
	comp=Z,34nm,1.5s						
BMN	Battle Mountai	86.31	48	PFAKE		00 22 10.0	+9.2
BMN				LR	LR		
	comp=Z,1µm,18.0s						
J08A	Circle Bar Ran	86.32	45	*e*P	P	00 22 02.2	+1.5
	comp=Z,32nm,1.3s						
BOK	Bokaro	86.34	295	*e*P	P	00 21 59.9	-1.2
BOK				IAmb	IAmb	00 22 02.3	
	comp=Z,35nm,1.2s						
LDFC	Landfair	86.39	53	*e*P	P	00 22 02.3	+1.1
	comp=Z,85nm,1.1s						
LDFC				LR	LR		
	comp=Z,2µm,20.0s						
E07A	Sunnyside	86.44	41	*e*P	P	00 22 02.2	+1.1
	comp=Z,21nm,1.1s						
Y12C	Blythe	86.51	55	*e*P	P	00 22 03.4	+1.8
	comp=Z,41nm,1.3s						
Y12C				LR	LR		
	comp=Z,2µm,20.0s						
Y12C	Blythe	86.51	55	P	P	00 22 02.5	+0.8
	baz=255						
HAWA	Hanford	86.59	42	*e*P	P	00 22 03.4	+1.5
	comp=Z,28nm,1.3s						
G08A	Pilot Rock	86.61	43	*e*P	P	00 22 03.5	+1.4
	comp=Z,32nm,1.4s						
NEE2	Needles Airpor	86.70	54	P	P	00 22 03.3	+0.7
	baz=255						
SHPR	Sheep Range	86.74	52	*e*P	P	00 22 04.1	+1.1
	comp=Z,33nm,1.3s						
SHPR				LR	LR		
	comp=Z,2µm,20.0s						
SRIG	Santa Rosalia	86.80	62	PFAKE		00 22 20.0	+17
SRIG				LR	LR		
	comp=Z,2µm,20.0s						
R11A	Troy Canyon, C	86.93	50	*e*P	P	00 22 04.9	+1.0
	comp=Z,23nm,1.5s						
R11A				LR	LR		
	comp=Z,2µm,21.0s						
R11A	Troy Canyon, C	86.93	50	P	P	00 22 04.4	+0.5
	baz=254						
E08A	Dider Farm, El	86.94	42	*e*P	P	00 22 04.5	+1.0
	comp=Z,83nm,1.7s						
PDMCI	Parker Dam,Lak	86.96	54	P	P	00 22 05.4	+1.5
	baz=255						
JIRN	Jiri	86.98	299	*e*P	P	00 22 05.0	+0.4
	comp=Z,534nm,1.8s						
EPYK	Eagle Plains	87.16	20	*e*P	P	00 22 04.5	+0.3
	comp=Z,64nm,1.5s						
EPYK				LR	LR		
	comp=Z,2µm,18.0s						
EPYK	Eagle Plains	87.16	20	P	P	00 22 04.9	+0.8
	baz=235						
D08A	Wollman Farm,	87.21	41	*e*P	P	00 22 06.0	+1.2
	comp=Z,72nm,1.8s						
GUN	Gumba	87.30	299	*e*P	P	00 22 06.3	+0.2
	comp=Z,153nm,1.3s						
W13A	Hualapai Mount	87.37	54	*e*P	P	00 22 07.3	+1.2
	comp=Z,34nm,1.4s						
W13A				LR	LR		
	comp=Z,2µm,19.0s						
B08A	Colville Reser	87.37	40	*e*P	P	00 22 06.7	+1.1
	comp=Z,34nm,1.5s						
B08A				LR	LR		
	comp=Z,1µm,22.0s						
214A	Organ Pipe Nat	87.44	57	P	P	00 22 06.2	-0.1
	baz=256						
E09A	Wood Farm, Sta	87.54	42	*e*P	P	00 22 07.8	+1.4
	comp=Z,31nm,1.4s						
BMO	Blue Mountains	87.59	44	*e*P	P	00 22 08.0	+1.2
	comp=Z,62nm,1.9s						
BMO				LR	LR		
	comp=Z,2µm,21.0s						
BMO	Blue Mountains	87.59	44	*e*P	P	00 22 08.0	+1.2
BMO				pmax	pmax		
	comp=Z,62nm,1.9s						
BMO				MLR	MLR		
	comp=Z,2µm,21.0s						
PKI	Pulchoki	87.63	298	*e*P	P	00 22 07.7	0.0
	comp=Z,136nm,1.2s						
PKIN	Phulchoki	87.64	298	*e*P	P	00 22 07.5	-0.2
	comp=Z,162nm,1.5s						
PALK	Pallekele	87.76	278	*e*P	P	00 22 08.3	0.0
	comp=Z,32nm,1.1s						
PALK				LR	LR		
	comp=Z,500nm,20.0s						
PALK	Pallekele	87.76	278	*ce*P	P	00 22 09.6	+1.3
Y14A	Wickenburg	87.78	55	*e*P	P	00 22 09.2	+1.3
	comp=Z,23nm,1.4s						
Y14A				LR	LR		
	comp=Z,2µm,20.0s						
KKN	Kakani	87.79	299	*e*P	P	00 22 08.2	-0.1
	comp=Z,181nm,1.4s						
ELK	Elko	87.85	48	*e*P	P	00 22 09.9	+1.5
	comp=Z,35nm,1.7s						
ELK				LR	LR		
	comp=Z,2µm,21.0s						
ELK	Elko	87.85	48	*e*P	P	00 22 09.9	+1.5
ELK				pmax	pmax		
	comp=Z,35nm,1.7s						
ELK				MLR	MLR		
	comp=Z,2µm,21.0s						
DMN	Daman	87.90	298	*e*P	P	00 22 09.2	+0.3
	comp=Z,204nm,1.2s						
F10A	Beach Ranch, E	87.98	43	*e*P	P	00 22 09.4	+0.8
	comp=Z,80nm,1.6s						
PSUT	Pine Spring	88.28	50	*e*P	P	00 22 12.2	+1.8
	comp=Z,51nm,1.7s						
PSUT				LR	LR		
	comp=Z,2µm,22.0s						
LCMT	Little Creek M	88.36	52	*e*P	P	00 22 12.0	+1.3
	comp=Z,30nm,1.3s						
LCMT				LR	LR		
	comp=Z,1µm,21.0s						
CCUT	Cedar City	88.41	51	*e*P	P	00 22 11.9	+0.8
	comp=Z,70nm,1.7s						
CCUT				LR	LR		
	comp=Z,2µm,20.0s						
SZCU	Shurtz Canyon	88.63	51	*e*P	P	00 22 13.4	+1.3
	comp=Z,77nm,1.6s						
SZCU				LR	LR		
	comp=Z,2µm,22.0s						
KNB	Kanab	88.69	52	*e*P	P	00 22 13.2	+0.9
	comp=Z,207nm,1.9s						
KNB				LR	LR		
	comp=Z,1µm,19.0s						
KNB	Kanab	88.69	52	*e*P	P	00 22 13.2	+0.9
KNB				pmax	pmax		
	comp=Z,207nm,1.9s						
KNB				MLR	MLR		
	comp=Z,1µm,19.0s						
NEW	Newport	88.74	40	*e*P	P	00 22 13.3	+1.2
	comp=Z,53nm,2.0s						
NEW	Newport	88.74	40	*e*P	P	00 22 13.3	+1.2
NEW				pmax	pmax		
	comp=Z,53nm,2.0s						
NEW	Newport	88.74	40	P	P	00 22 12.8	+0.6
	baz=252						
NEW	Newport	88.74	40	P	P	00 22 13.3	+1.2
	comp=Z,2.0nm,0.8s,baz=206,slow=5.8,SNR=5.9						
X16A	Lo Mia Camp, P	89.15	55	*e*P	P	00 22 15.9	+1.3
	comp=Z,26nm,1.0s						
X16A				LR	LR		
	comp=Z,2µm,21.0s						
PKCU	Pink Cliffs	89.19	52	*e*P	P	00 22 16.1	+1.2
	comp=Z,90nm,1.3s						
PKCU				LR	LR		
	comp=Z,1µm,19.0s						
TUC	Tucson	89.20	57	*e*P	P	00 22 16.1	+1.4
	comp=Z,30nm,1.4s						
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	Tucson	89.20	57	*e*P	P	00 22 16.1	+1.4
TUC				pmax	pmax		
	comp=Z,30nm,1.4s						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s						
TUC	Tucson	89.20	57	P	P	00 22 14.9	+0.2
	baz=257						
HLID	Hailey	89.21	45	*e*P	P	00 22 16.0	+1.4
	comp=Z,79nm,2.0s						
HLID	Hailey	89.21	45	P	P	00 22 16.0	+1.4
	baz=254						
DANN	Dangsing	89.22	299	*e*P	P	00 22 14.6	-0.6
	comp=Z,74nm,0.9s						
KOLN	Koldanda	89.24	298	*e*P	P	00 22 14.6	-0.5
	comp=Z,71nm,1.1s						
INK	Inuvik	89.27	19	*e*P	P	00 22 15.4	+1.4
	comp=Z,8.5nm,1.2s						
INK	Inuvik	89.27	19	*e*P	P	00 22 15.4	+1.4
INK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
INK	Inuvik	89.27	19	P	P	00 22 14.3	+0.3
	comp=Z,2.8nm,0.9s,baz=256,slow=5.4,SNR=5.9						
INK				LR	LR	01 00 01.7	
	comp=Z,688nm,18.5s,baz=218,slow=34						
MDRS	Chennai	89.32	283	*e*P	P	00 22 15.8	+0.3
MDRS				IAmb	IAmb	00 22 16.7	
	comp=Z,13nm,0.8s						
TCRU	Three Creeks R	89.37	51	PFAKE		00 22 30.0	+14
TCRU				LR	LR		
	comp=Z,2µm,22.0s						
MTPU	Mount Pierson	89.43	51	*e*P	P	00 22 17.5	+1.5
	comp=Z,50nm,1.3s						
MTPU				LR	LR		
	comp=Z,2µm,21.0s						
WUAZ	Wupatki	89.46	54	*e*P	P	00 22 16.3	+0.3
	comp=Z,42nm,1.2s						
WUAZ				LR	LR		
	comp=Z,1µm,20.0s						
WUAZ	Wupatki	89.46	54	P	P	00 22 16.8	+0.8
	baz=256						
DUG	Dugway, Tooele	89.49	49	*e*P	P	00 22 17.1	+1.2
	comp=Z,86nm,1.9s						
DUG				LR	LR		
	comp=Z,2µm,21.0s						
DUG	Dugway, Tooele	89.49	49	*e*P	P	00 22 17.1	+1.2
DUG				pmax	pmax		
	comp=Z,86nm,1.9s						
DUG				MLR	MLR		
	comp=Z,2µm,21.0s						
DUG	Dugway, Tooele	89.49	49	P	P	00 22 17.2	+1.2
	baz=256,SNR=16						
BGU	Big Grassy Mou	89.51	48	*e*P	P	00 22 16.9	+0.8
	comp=Z,44nm,1.5s						
BGU				LR	LR		
	comp=Z,1µm,19.0s						
MSU	Marysvale	89.55	51	*e*P	P	00 22 18.1	+1.7
WMQ	Urumqi	89.82	315	P	P	00 22 17.9	+0.6
WMQ				sP	pwP	00 22 26.3	+1.8
WMQ				PP	PP	00 25 46.9	-3.1
WMQ				SKS	SKSac	00 32 48.8	+0.9
WMQ				S	S	00 33 08.9	-0.4
WMQ				SS	SS	00 39 07.1	+0.2
WMQ				pmax	pmax		
	comp=Z,98nm,1.5s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
WMQ				LR	LR		
	comp=Z,590nm,23.7s						
WMQ				LR	LR		
	comp=Z,630nm,23.7s						
WMQ	Urumqi	89.82	315	*e*P	P	00 22 17.8	+0.5
	comp=Z,142nm,1.4s						
WMQ				LR	LR		
	comp=Z,500nm,20.0s						
WMQ	Urumqi	89.82	315	*e*P	P	00 22 17.8	+0.5
WMQ				pmax	pmax		
	comp=Z,142nm,1.4s						
WMQ				MLR	MLR		
	comp=Z,500nm,20.0s						
PYUN	Piuthan	89.83	299	*e*P	P	00 22 17.2	-0.7
	comp=Z,92nm,1.0s						
HVU	Hansel Valley	89.91	47	*e*P	P	00 22 19.6	+1.7
	comp=Z,78nm,1.3s						
HVU	Hansel Valley	89.91	47	*e*P	P	00 22 19.6	+1.7
HVU				pmax	pmax		
	comp=Z,78nm,1.3s						
NLU	North Lily Min	89.98	49	*e*P	P	00 22 19.8	+1.4
	comp=Z,44nm,1.2s						
NLU				LR	LR		
	comp=Z,2µm,20.0s						
SPUT	South Promonto	90.03	48	*e*P	P	00 22 19.7	+1.1
	comp=Z,68nm,1.6s						
319A	Douglas	90.24	58	*e*P	P	00 22 20.2	+0.5
	comp=Z,34nm,1.0s						
319A				LR	LR		
	comp=Z,2µm,21.0s						
MPU	Maple Canyon	90.32	49	*e*P	P	00 22 21.0	+1.1
	comp=Z,42nm,1.3s						
MPU				LR	LR		
	comp=Z,2µm,20.0s						
CTU	Camp Tracy	90.40	49	*e*P	P	00 22 21.4	+1.1
	comp=Z,28nm,0.9s						
CTU				LR	LR		
	comp=Z,1µm,22.0s						
MSO	Missoula	90.40	42	*e*P	P	00 22 21.5	+1.5
	comp=Z,32nm,1.7s						
MSO	Missoula	90.40	42	P	P	00 22 20.5	+0.4
	baz=255						
Q16A	Castle Valley	90.41	51	*e*P	P	00 22 21.8	+1.4
	comp=Z,49nm,1.2s						
Q16A				LR	LR		
	comp=Z,2µm,22.0s						
TMUT	Trail Mountain	90.47	50	*e*P	P	00 22 21.9	+1.1
	comp=Z,32nm,1.1s						
TMUT				LR	LR		
	comp=Z,2µm,21.0s						
JLU	Jordanelle	90.60	49	*e*P	P	00 22 22.5	+1.2
	comp=Z,33nm,1.1s						
JLU				LR	LR		
	comp=Z,2µm,19.0s						
MCMT	McKenzie Canyo	90.63	45	*e*P	P	00 22 22.6	+1.2
W18A	Petrified Fore	90.68	55	*e*P	P	00 22 23.0	+1.3
	comp=Z,33nm,0.9s						
W18A				LR	LR		
	comp=Z,1µm,20.0s						
W18A	Petrified Fore	90.68	55	P	P	00 22 22.1	+0.4
	baz=257						
TCUT	Toone Canyon	90.75	48	*e*P	P	00 22 22.8	+0.9
	comp=Z,45nm,0.9s						
HWUT	Hardware Ranch	90.75	48	*e*P	P	00 22 23.4	+1.5
	comp=Z,20nm,1.1s						
P17A	Butcher Ranch,	90.87	50	*e*P	P	00 22 23.9	+1.4
	comp=Z,72nm,1.9s						
P17A				LR	LR		
	comp=Z,2µm,21.0s						
DLMT	Dillon	90.93	44	*e*P	P	00 22 23.8	+1.2
	comp=Z,34nm,1.1s						
DLMT				LR	LR		
	comp=Z,1µm,22.0s						
SRU	San Rafael Swe	90.95	50	*e*P	P	00 22 24.6	+1.7
	comp=Z,13nm,1.1s						
SRU				LR	LR		
	comp=Z,2µm,20.0s						
SRU	San Rafael Swe	90.95	50	*e*P	P	00 22 24.6	+1.7
SRU				pmax	pmax		
	comp=Z,13nm,1.1s						
SRU				MLR	MLR		
	comp=Z,2µm,20.0s						
WALA	Waterton Lakes	91.01	40	*e*P	P	00 22 24.2	+1.4
	comp=Z,34nm,1.3s						
LRM	Limekiln Ridge	91.14	44	*e*P	P	00 22 25.2	+1.5
AHID	Auburn Hatcher	91.36	47	*e*P	P	00 22 26.3	+1.6
	comp=Z,31nm,1.4s						
DGZ	Jazzator, Alta	91.52	320	*d i*P	P	00 22 25.4	+0.2
DGZ				pmax	pmax		
	comp=Z,39nm,1.0s						
QLMT	Earthquake Lak	91.61	45	*e*P	P	00 22 26.9	+1.1
FXWY	Fox Creek	91.61	46	*e*P	P	00 22 27.0	+1.1
	comp=Z,20nm,1.3s						
TPAW	Teton Pass	91.63	46	*e*P	P	00 22 27.0	+0.9
	comp=Z,72nm,1.8s						
TRD	Trivandrum	91.64	278	*e*P	P	00 22 24.7	-1.7
BOZ	Bozeman (W)	91.65	44	*e*P	P	00 22 27.3	+1.4
	comp=Z,58nm,1.7s						
BOZ	Bozeman (W)	91.65	44	*e*P	P	00 22 27.3	+1.4
BOZ				pmax	pmax		
	comp=Z,58nm,1.7s						
BOZ	Bozeman (W)	91.65	44	P	P	00 22 27.2	+1.3
	baz=256,SNR=16						
REDW	Red Top Meadow	91.67	46	*e*P	P	00 22 26.9	+0.7
	comp=Z,59nm,1.4s						
121A	Cookes Peak, D	91.72	57	P	P	00 22 26.9	+0.4
	baz=258						
IMW	Indian Meadow	91.73	46	*e*P	P	00 22 27.7	+1.2
	comp=Z,21nm,1.2s						
HYB	Hyderabad	91.75	287	*i* P	P	00 22 26.0	-0.8
HYB	Hyderabad	91.75	287	*e*P	P	00 22 25.4	-1.4
YHB	Horse Butte	91.75	45	*e*P	P	00 22 27.8	+1.3
	comp=Z,27nm,1.3s						
YHB				LR	LR		
	comp=Z,2µm,21.0s						
SNOW	Snow King Moun	91.76	46	*e*P	P	00 22 28.0	+1.4
	comp=Z,30nm,1.4s						
HRY	Holter Researc	91.78	43	*e*P	P	00 22 28.1	+1.7
PV05	Paradox Valley	91.81	52	*e*P	P	00 22 29.0	+2.0
	comp=Z,46nm,1.6s						
PV05				LR	LR		
	comp=Z,1µm,20.0s						
MOOW	Moose Ponds	91.84	46	*e*P	P	00 22 28.1	+1.2
	comp=Z,28nm,1.5s						
PV09	Paradox Valley	91.88	51	*e*P	P	00 22 28.7	+1.4
YMR	Madison River	91.89	45	*e*P	P	00 22 28.6	+1.4
	comp=Z,48nm,1.5s						
LOHW	Long Hollow	91.91	46	*e*P	P	00 22 27.8	+0.6
	comp=Z,20nm,1.4s						
YPP	Pitchstone Pla	91.91	45	*e*P	P	00 22 28.7	+1.3
	comp=Z,42nm,1.8s						
YFT	Old Faithful	91.93	45	*e*P	P	00 22 28.8	+1.4
	comp=Z,24nm,1.2s						
PV14	Lion Creek, Pa	91.93	51	*e*P	P	00 22 28.0	+0.4
	comp=Z,58nm,1.7s						
FLWY	Flagg Ranch	91.94	46	*e*P	P	00 22 28.5	+1.1
	comp=Z,22nm,1.3s						
PV19	Morning Glory	91.95	52	*e*P	P	00 22 28.7	+1.1
	comp=Z,34nm,1.4s						
PV23	Carpenter Ridg	91.96	51	*e*P	P	00 22 28.7	+1.1
	comp=Z,64nm,1.6s						
PV17	East Wray Mesa	91.96	52	*e*P	P	00 22 29.4	+1.8
	comp=Z,44nm,1.6s						
PV20	West Nyswonger	91.97	51	*e*P	P	00 22 28.9	+1.3
	comp=Z,35nm,1.4s						
YHH	Holmes Hill	92.00	45	*e*P	P	00 22 28.7	+1.0
	comp=Z,18nm,1.3s						
YHH				LR	LR		
	comp=Z,1µm,20.0s						
PV16	Nyswonger Mesa	92.00	52	*e*P	P	00 22 29.3	+1.5
	comp=Z,77nm,1.9s						
PV16				LR	LR		
	comp=Z,1µm,20.0s						
PV21	Cone Mtn., Par	92.01	51	*e*P	P	00 22 28.5	+0.6
	comp=Z,100nm,1.9s						
PV21				LR	LR		
	comp=Z,2µm,22.0s						
PV04	Paradox Valley	92.03	51	*e*P	P	00 22 29.1	+1.2
	comp=Z,54nm,1.5s						
PV11	David Mesa, Pa	92.03	52	*e*P	P	00 22 29.6	+1.6
	comp=Z,39nm,1.4s						
PV03	Paradox Valley	92.04	52	*e*P	P	00 22 28.8	+0.8
	comp=Z,55nm,1.8s						
PV03				LR	LR		
	comp=Z,1µm,20.0s						
PV13	Radium Mtn., P	92.04	52	*e*P	P	00 22 29.1	+1.1
	comp=Z,41nm,1.7s						
PV12	Saucer Basin,	92.09	52	*e*P	P	00 22 29.2	+1.0

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      comp=Z,101nm,1.9s
MVCO  Mesa Verde         92.10  53 PFAKE              00 22 40.0 +12
MVCO                               LR       LR
      comp=Z,1µm,20.0s
MVCO  Mesa Verde         92.10  53 P        P         00 22 29.0 +0.7
      baz=258
H17A  Grant Village      92.10  45 eP       P         00 22 29.3 +1.2
      comp=Z,14nm,1.0s
H17A  Grant Village      92.10  45 P        P         00 22 30.7 +2.5
      baz=257
YNR   Norris Junctio     92.10  45 PFAKE              00 22 40.0 +12
YNR                                LR       LR
      comp=Z,1µm,20.0s
PV02  Paradox Valley     92.12  52 eP       P         00 22 29.5 +1.1
      comp=Z,50nm,1.9s
PV02                               LR       LR
      comp=Z,2µm,22.0s
PV01  Paradox Valley     92.23  52 eP       P         00 22 29.9 +0.9
      comp=Z,16nm,1.2s
PV07  Paradox Valley     92.23  51 eP       P         00 22 29.9 +1.0
      comp=Z,29nm,1.4s
LKWY  Lake               92.26  45 PFAKE              00 22 40.0 +11
LKWY                               LR       LR
      comp=Z,2µm,21.0s
PV15  Paradox Valley     92.34  52 eP       P         00 22 30.9 +1.4
      comp=Z,20nm,1.2s
SYO   Syowa Base         92.38 197⇑eX       P         00 22 24.4 -4.2
HPIG                     92.45  63 PFAKE              00 22 40.0 +10
HPIG                               LR       LR
      comp=Z,2µm,22.0s
BW06  Boulder Array      92.47  47 eP       P         00 22 30.9 +1.0
      comp=Z,31nm,1.5s
BW06  Boulder Array      92.47  47 P        P         00 22 30.3 +0.5
      baz=258,SNR=7.8
PD31  Pinedale Array     92.47  47 eP       P         00 22 30.9 +1.0
PDAR  Pinedale Array     92.47  47 eP       P         00 22 29.6 -0.3
PDAR                               PKKPbc   PKKPdf    00 39 42.9 -0.2
PDAR  Pinedale Array     92.47  47 P        P         00 22 30.2 +0.4
      comp=Z,3.5nm,0.9s,baz=241,slow=1.5,SNR=20
PDAR                               PKKPbc   PKKPdf    00 39 42.9 -0.2
      comp=Z,0.9nm,0.8s,baz=86,slow=4.6,SNR=7.1
Y22D  IRIS PASSCAL I     92.73  56 PFAKE              00 22 40.0 +8.8
Y22D                               LR       LR
      comp=Z,2µm,19.0s
O20A  White River Ci     92.89  50 eP       P         00 22 32.7 +0.8
      comp=Z,37nm,1.4s
O20A                               LR       LR
      comp=Z,2µm,22.0s
O20A  White River Ci     92.89  50 P        P         00 22 32.3 +0.4
      baz=258
RLMT  Red Lodge          93.17  45 eP       P         00 22 34.3 +1.2
      comp=Z,19nm,1.4s
RLMT                               LR       LR
      comp=Z,2µm,19.0s
RLMT  Red Lodge          93.17  45 P        P         00 22 33.9 +0.9
      baz=258
ANMO  Albuquerque        93.28  55 eP       P         00 22 35.2 +1.4
      comp=Z,11nm,1.6s
ANMO                               LR       LR
      comp=Z,1µm,20.0s
ANMO  Albuquerque        93.28  55ceP       P         00 22 35.7 +2.0
ANMO                               pmax     pmax
      comp=Z,7.0nm,1.6s
ANMO  Albuquerque        93.28  55 P        P         00 22 34.4 +0.7
      baz=259
EGMT  Eagleton           93.45  42 eP       P         00 22 34.9 +0.8
      comp=Z,25nm,1.1s
EGMT  Eagleton           93.45  42 P        P         00 22 35.0 +1.0
      baz=258
S22A  4UR Ranch, Cre     93.50  52 eP       P         00 22 35.6 +0.7
      comp=Z,9.7nm,1.0s
S22A                               LR       LR
      comp=Z,1µm,20.0s
S22A  4UR Ranch, Cre     93.50  52 P        P         00 22 35.6 +0.7
      baz=259
MNTX  Cornudas Mount     93.56  59 eP       P         00 22 36.2 +1.3
      comp=Z,5.5nm,1.1s
MNTX                               LR       LR
      comp=Z,2µm,21.0s
MNTX  Cornudas Mount     93.56  59 P        P         00 22 35.9 +0.9
      baz=260
SMCO  Snowmass           93.66  51 eP       P         00 22 36.8 +1.1
      comp=Z,15nm,1.4s
SMCO                               LR       LR
      comp=Z,2µm,22.0s
BHPL  Bhopal             93.83 293 eP       P         00 22 35.9 -0.4
BHPL                               IAmb     IAmb      00 22 36.5
      comp=Z,5.3nm,0.4s
RWWY  Rawlins            93.96  48 eP       P         00 22 37.0 +0.2
      comp=Z,25nm,1.4s
RWWY                               epP      sP        00 22 40.6 -1.0
ZAA0  Zalesovo Array     94.10 324 eP       P         00 22 36.4 -0.4
      comp=Z,65nm,1.2s
ZAA0                               LR       LR
      comp=Z,600nm,22.0s
ZALV  Zalesovo Beam      94.10 324 P        P         00 22 36.2 -0.5
      comp=Z,29nm,1.0s,baz=112,slow=4.0,SNR=88
YKA   Yellowknife Ar     94.18  27 P        P         00 22 36.2 -0.7
      comp=Z,1.8nm,0.7s,baz=256,slow=4.6,SNR=26
YKA                                PKKPbc   PKKPdf    00 39 36.5 -3.7
      comp=Z,0.7nm,1.0s,baz=71,slow=2.7,SNR=4.9
YKA                                LR       LR        01 01 14.2
      comp=Z,46nm,18.9s,baz=266,slow=33
YKB5  Yellowknife Ar     94.18  27 eP       P         00 22 36.2 -0.7
MK01  Makanchi Array     94.20 317 eP       P         00 22 37.0 -0.5
MK31  Makanchi Array     94.21 317 eP       P         00 22 37.9 +0.3
MKAR  Makanchi Array     94.21 317 eP       P         00 22 37.9 +0.3
      comp=Z,364nm,0.9s
MKAR                               PKKPbc   PKKPdf    00 39 38.0 -1.8
MKAR  Makanchi Array     94.21 317 P        P         00 22 37.9 +0.3
      comp=Z,53nm,0.9s,baz=102,slow=6.2,SNR=304
MKAR                               PKKPbc   PKKPdf    00 39 38.0 -1.8
      comp=Z,2.5nm,0.9s,baz=286,slow=2.7,SNR=21
MKAR                               LR       LR        01 06 15.4
      comp=Z,152nm,20.0s,baz=94,slow=36
MAKZ  Makanchi           94.42 317 eP       P         00 22 38.9 +0.4
      comp=Z,136nm,1.2s
MAKZ                               LR       LR
      comp=Z,400nm,20.0s
MAKZ  Makanchi           94.42 317 eP       P         00 22 38.9 +0.4
MAKZ                               pmax     pmax
      comp=Z,136nm,1.2s
MAKZ                               MLR      MLR
      comp=Z,400nm,20.0s
DDI   Dehra Dun          94.49 300 eP       P         00 22 39.2  0.0
SDCO  Great Sand Dun     94.54  53 PFAKE              00 22 50.0 +10
SDCO                               LR       LR
      comp=Z,2µm,21.0s
SDCO  Great Sand Dun     94.54  53 P        P         00 22 40.9 +1.3
      baz=260
TX31  Lajitas Ar. Si     94.61  61 eP       P         00 22 40.7 +0.8
TXAR  Lajitas Array      94.61  61 P        P         00 22 41.3 +1.4
      comp=Z,0.9nm,0.9s,baz=273,slow=4.9,SNR=4.7
TXAR                               LR       LR        00 59 56.4
      comp=Z,1µm,18.7s,baz=0.0,slow=32
K22A  Casper             94.64  48 eP       P         00 22 40.7 +0.9
      comp=Z,13nm,1.1s
K22A  Casper             94.64  48 P        P         00 22 40.8 +1.0
      baz=260
N23A  Red Feather La     94.75  49 eP       P         00 22 46.1 +5.6
      comp=Z,15nm,1.3s
N23A                               LR       LR
      comp=Z,2µm,22.0s
N23A  Red Feather La     94.75  49 P        P         00 22 41.0 +0.5
      baz=260
ISCO  Idaho Springs      94.81  51 PFAKE              00 22 50.0 +9.2
ISCO                               LR       LR
      comp=Z,2µm,21.0s
NVS   Novosibirsk        95.19 325⇑iP       P         00 22 41.4 -0.4
NVS                                pmax     pmax
      comp=N,11nm,1.7s
NVS                                pmax     pmax
      comp=E,25nm,1.7s
NVS                                pmax     pmax
      comp=Z,48nm,1.7s
SMLA  Simla              95.38 301 eP       P         00 22 43.0 -0.2
MNCY  Minicoy            95.41 277 eP       P         00 22 43.8  0.0
GOA   Goa                95.88 285 eP       P         00 22 44.4 -1.4
MSTX  Muleshoe           96.11  57 PFAKE              00 23 00.0 +13
MSTX                               LR       LR
      comp=Z,2µm,18.0s
PRZ   Przheval'sk        96.20 312 eP       P         00 22 46.3 -0.6
      comp=Z,25nm,1.0s
PRZ                                LR       LR
      comp=Z,600nm,21.0s
PRZ   Przheval'sk        96.20 312 eP       P         00 22 46.3 -0.6
PRZ                                pmax     pmax
      comp=Z,25nm,1.0s
PRZ                                MLR      MLR
      comp=Z,600nm,21.0s
DHRM  DHARAMSHALA        96.29 302 eP       P         00 22 46.7 -0.9
DHRM                               IAmb     IAmb      00 22 47.9
      comp=Z,27nm,0.7s
NRIK  Noril'sk           96.34 339 P        P         00 22 46.7  0.0
NRIK                                                  00 26 37.3
NRIK                               pmax     pmax
      comp=Z,4.0nm,0.7s
NRIK                               MLR      MLR
      comp=Z,175nm,19.2s
NRIK  Noril'sk           96.34 339 P        P         00 22 46.7  0.0
      comp=Z,2.0nm,0.5s,baz=101,slow=4.5,SNR=11
NRIK                               PP       PP        00 26 37.3 -3.0
      comp=Z,0.8nm,0.3s,baz=140,slow=9.7,SNR=4.0
NRIK                               LR       LR        01 06 15.9
      comp=Z,175nm,19.2s,baz=98,slow=36
POO   Poona              96.35 288 eP       P         00 22 47.1 -0.8
TARG  Taragay, Kyrgy     96.52 311 eP       P         00 22 48.6 -0.1
      comp=Z,40nm,1.7s
RSSD  Black Hills        96.67  46 P        P         00 22 50.0 +0.9
      baz=262
KSCO  Kaye Shedlock'     96.97  52 PFAKE              00 23 00.0 +10
KSCO                               LR       LR
      comp=Z,2µm,21.0s
KDJ   Kajisay            97.04 311 eP       P         00 22 50.6 -0.1
      comp=Z,15nm,1.0s
KDJ                                LR       LR
      comp=Z,400nm,22.0s
KDJ   Kajisay            97.04 311 eP       P         00 22 50.7 -0.1
KDJ                                pmax     pmax
      comp=Z,15nm,1.0s
KDJ                                MLR      MLR
      comp=Z,400nm,22.0s
UNM   Universidad Na     97.05  72 PFAKE              00 23 00.0 +8.5
UNM                                LR       LR
      comp=Z,900nm,20.0s
AMTX  Amarillo           97.14  56 PFAKE              00 23 00.0 +8.6
AMTX                               LR       LR
      comp=Z,2µm,20.0s
DGMT  Dagmar             97.18  42 P        Pdif      00 22 52.1 +1.0
      baz=262
KURK  Kurchatov          97.26 320 eP       P         00 22 51.3  0.0
      comp=Z,36nm,1.2s
KURK                               PP       PP        00 26 48.3 +0.3
KURK                               PKKPbc   PKKPbc    00 39 30.4 -1.7
KURK  Kurchatov          97.26 320ceP       P         00 22 51.1 -0.3
KURK                               pmax     pmax
      comp=Z,21nm,1.2s
KURK  Kurchatov          97.26 320 P        P         00 22 51.0 -0.3
      SNR=14
KURK                               P        P         00 22 51.0 -0.3
      SNR=14
KURBB Kurchatov Arra     97.31 320 PP       PP        00 26 48.3  0.0
      comp=Z,4.0nm,1.0s,baz=100,slow=7.4,SNR=4.1
KURBB                              PKKPbc   PKKPbc    00 39 30.4 -1.6
      comp=Z,1.0nm,0.8s,baz=274,slow=3.1,SNR=8.2
KSH   Kashi              97.59 309 P        Pdif      00 22 55.3 +2.0
KSH                                sP       pwP       00 23 03.5 +3.1
KSH                                PP       PP        00 26 53.1 +2.1
KSH                                SKS      SKSac     00 33 30.6 -0.2
KSH                                S        S         00 34 15.6 -2.8
KSH                                sS       sS        00 34 26.8 +2.5
KSH                                SS       SS        00 41 02.8 +4.5
KSH                                LR       LR
      comp=Z,310nm,5.0s
KSH                                LR       LR
      comp=Z,240nm,6.8s
KSH                                LR       LR
      comp=Z,1µm,17.2s
LNIG  Linares            97.62  66 PFAKE              00 23 10.0 +16
LNIG                               LR       LR
      comp=Z,1µm,20.0s
OGNE  Ogallala           97.69  50 PFAKE              00 23 10.0 +16
OGNE                               LR       LR
      comp=Z,2µm,20.0s
OGNE  Ogallala           97.69  50 P        Pdif      00 22 54.1 +0.4
      baz=262
NRN   Naryn              97.82 311 eP       Pdif      00 22 54.6 +0.1
      comp=Z,15nm,1.5s
NRN                                LR       LR
      comp=Z,300nm,20.0s
NRN   Naryn              97.82 311 eP       Pdif      00 22 54.6 +0.1
NRN                                pmax     pmax
      comp=Z,15nm,1.5s
NRN                                MLR      MLR
      comp=Z,300nm,20.0s
JCT   Junction City      98.10  61 PFAKE              00 23 10.0 +14
JCT                                LR       LR
      comp=Z,2µm,19.0s
833A  Chaparral WMA,     98.16  63 PFAKE              00 23 10.0 +14
833A                               LR       LR
      comp=Z,1µm,19.0s
TKM2  Tokmak 2           98.30 312 P        P         00 22 56.4 -0.1
      SNR=6.9
ABTX  Abilene, Hawle     98.52  58 PFAKE              00 23 10.0 +13
ABTX                               LR       LR
      comp=Z,2µm,21.0s
KBK   Karagaybulak       98.75 312 P        Pdif      00 22 58.8 +0.4
      SNR=6.0
CHMS  Chumysh            98.93 312 P        Pdif      00 22 59.4 +0.4
      SNR=5.9
FRU1  Bishkek            99.00 312 PFAKE              00 23 10.0 +11
FRU1                               LR       LR
      comp=Z,400nm,21.0s
FRU   Bishkek            99.01 312 eP       Pdif      00 22 59.0 -0.4
NIL   Nilore             99.02 303 eP       Pdif      00 22 59.4 -0.3
NIL   Nilore             99.02 303 eP       Pdif      00 22 59.4 -0.3
UCH   Uchtor             99.02 311 P        Pdif      00 23 01.0 +1.0
      SNR=7.3
AAK   Ala-Archa          99.08 312 P        Pdif      00 22 60.0  0.0
      SNR=6.8
AAK   Ala-Archa          99.08 312 eP       Pdif      00 22 59.9  0.0
      comp=Z,5.9nm,0.9s
AAK                                LR       LR
      comp=Z,500nm,20.0s
AAK   Ala-Archa          99.08 312 eP       Pdif      00 22 59.9  0.0
AAK                                pmax     pmax
      comp=Z,6.0nm,0.9s
AAK                                MLR      MLR
      comp=Z,500nm,20.0s
USP   Ospenovka          99.14 312 P        Pdif      00 22 59.7 -0.3
      SNR=8.6
CBKS  Cedar Bluff        99.18  52 PFAKE              00 23 10.0 +10
CBKS                               LR       LR
      comp=Z,1µm,20.0s
FFC   Flin Flon          99.30  36 eP       Pdif      00 23 00.3  0.0
FFC   Flin Flon          99.30  36 i P      Pdif      00 23 01.3 +0.9
WMOK  Wichita Mounta     99.48  56 PFAKE              00 23 10.0 +8.3
WMOK                               LR       LR
      comp=Z,2µm,19.0s
U32A  Winter Ranch,      99.49  55 PFAKE              00 23 10.0 +8.3
U32A                               LR       LR
      comp=Z,2µm,21.0s
EKS2  Erkin-Say          99.61 312 P        Pdif      00 23 02.0 -0.2
      SNR=5.8
AML   Almayashu          99.61 311 P        Pdif      00 23 03.2 +0.6
      SNR=9.8
LVIG  Laguna Verde       99.68  72 PFAKE              00 23 20.0 +17
LVIG                               LR       LR
      comp=Z,800nm,20.0s
435B  Jarrell           100.03  60 PFAKE              00 23 20.0 +16
435B                               LR       LR
      comp=Z,2µm,20.0s
ARSB  Arslanbob         100.06 310 ePdif    Pdif      00 23 04.2 -0.1
      comp=Z,18nm,1.4s
WHTX  Lake Whitney,     100.28  59 PFAKE              00 23 20.0 +15
WHTX                               LR       LR
      comp=Z,1µm,21.0s
BGNE  Belgrade          100.65  50 PFAKE              00 23 20.0 +13
BGNE                               LR       LR
      comp=Z,2µm,20.0s
BHJ   Bhuj              100.90 292 eP       Pdif      00 23 07.6 -0.6
BHJ                                IAmb     IAmb      00 23 09.0
      comp=Z,25nm,1.0s
HKT   Hockley           101.45  61 PFAKE              00 23 20.0 +10
HKT                                LR       LR
      comp=Z,1µm,20.0s
TUL1  Leonard           102.03  55 PFAKE              00 23 30.0 +17
TUL1                               LR       LR
      comp=Z,2µm,19.0s
KK31  Karatay Array     102.03 312 ePdif    Pdif      00 23 13.0 +0.1
KK31  Karatay Array     102.03 312 eP       Pdif      00 23 13.0 +0.1
KKAR  Karatay Array     102.03 312 ePdif    Pdif      00 23 13.0 +0.1
KKAR  Karatay Array     102.03 312 eP       Pdif      00 23 13.0 +0.1
BVAR  Borovoye Array    102.54 322 PP       PP        00 27 21.3 -6.7
      comp=Z,2.1nm,1.1s,baz=100,slow=6.5,SNR=4.1
BRVK  Borovoye          102.60 322 ePdif    Pdif      00 23 15.1  0.0
BRVK                               LR       LR
      comp=Z,600nm,20.0s
BRVK  Borovoye          102.60 322 i P      Pdif      00 23 14.6 -0.5
BRVK                               pmax     pmax
      comp=Z,24nm,2.3s
NATX  Nacogdoches       102.62  60 PFAKE              00 23 30.0 +14
NATX                               LR       LR
      comp=Z,2µm,19.0s
CHGR  Chuyangaron       102.78 307 ePdif    Pdif      00 23 16.6 +0.2
CCIG  Comitan           103.25  76 PFAKE              00 23 30.0 +11
CCIG                               LR       LR
      comp=Z,500nm,19.0s
HHAR  Hobbs             103.55  55 PFAKE              00 23 30.0 +10
HHAR                               LR       LR
      comp=Z,2µm,20.0s
W39A  Magazine          103.61  56 PFAKE              00 23 30.0 +10
W39A                               LR       LR
      comp=Z,2µm,22.0s
MIAR  Mount Ida         103.74  57 PFAKE              00 23 30.0 +9.4
MIAR                               LR       LR
      comp=Z,2µm,22.0s
FCC   Fort Churchill    103.77  32 PFAKE              00 23 30.0 +10
FCC                                LR       LR
      comp=Z,2µm,20.0s
WLAR  White Oak Lake    104.07  58 PFAKE              00 23 30.0 +7.9
WLAR                               LR       LR
      comp=Z,1µm,20.0s
Z41A  Richland Creek    104.30  58 PFAKE              00 23 40.0 +17
Z41A                               LR       LR
      comp=Z,2µm,20.0s
X40A  Basin Creek Fa    104.35  57 PFAKE              00 23 40.0 +17
X40A                               LR       LR
      comp=Z,1µm,20.0s
SCIA  State Center      104.37  49 PFAKE              00 23 40.0 +17
SCIA                               LR       LR
      comp=Z,2µm,19.0s
WHAR  Wooly Hollow      104.84  56 PFAKE              00 23 40.0 +15
WHAR                               LR       LR
      comp=Z,2µm,19.0s
W41B  Gary Mavity, V    104.87  56 PFAKE              00 23 40.0 +14
W41B                               LR       LR
      comp=Z,2µm,20.0s
L40A  Anamosa           105.86  49 PFAKE              00 27 50.0 +7.5
L40A                               LR       LR
      comp=Z,2µm,19.0s
T42A  Van Buren         105.88  55 PFAKE              00 28 00.0 +17
T42A                               LR       LR
      comp=Z,2µm,19.0s
MYIG  Mrida             106.05  71 PFAKE              00 28 00.0 +17
MYIG                               LR       LR
      comp=Z,600nm,19.0s
N41A  Harden Midland    106.13  51 PFAKE              00 28 00.0 +17
N41A                               LR       LR
      comp=Z,2µm,20.0s
VBMS  Vicksburg         106.17  60 PFAKE              00 28 00.0 +17
VBMS                               LR       LR
      comp=Z,2µm,22.0s
HBAR  Harrisburg        106.18  56 PFAKE              00 28 00.0 +17
HBAR                               LR       LR
      comp=Z,2µm,20.0s
PBMO  Poplar Bluff      106.40  55 PFAKE              00 28 00.0 +16
PBMO                               LR       LR
      comp=Z,2µm,21.0s
FVM   French Village    106.43  54 PFAKE              00 28 00.0 +16
FVM                                LR       LR
      comp=Z,2µm,21.0s
GNAR  Gosnell           106.71  56 PFAKE              00 28 00.0 +16
GNAR                               LR       LR
      comp=Z,2µm,20.0s
MET   Memphis--Engin    106.76  57 PFAKE              00 28 00.0 +16
MET                                LR       LR
      comp=Z,2µm,20.0s
PARMO Parma             106.94  55 PFAKE              00 28 00.0 +15
PARMO                              LR       LR
      comp=Z,1µm,20.0s
PVMO  Portageville      106.98  55 PFAKE              00 28 00.0 +15
PVMO                               LR       LR
      comp=Z,2µm,22.0s
OXF   Oxford            107.18  57 PFAKE              00 28 00.0 +15
OXF                                LR       LR
      comp=Z,1µm,19.0s
HALT  Halls             107.26  56 PFAKE              00 28 00.0 +15
HALT                               LR       LR
      comp=Z,2µm,21.0s
GLAT  Glass             107.31  55 PFAKE              00 28 00.0 +15
GLAT                               LR       LR
      comp=Z,2µm,22.0s
TEIG  Tepich            107.34  72 PFAKE              00 28 00.0 +14
TEIG                               LR       LR
      comp=Z,600nm,18.0s
Q44A  Meyer Farm, Va    107.54  53 PFAKE              00 28 00.0 +14
Q44A                               LR       LR
      comp=Z,2µm,21.0s
TGUH  Tegucigalpa,Un    107.63  79 PFAKE              00 28 00.0 +14
TGUH                               LR       LR
      comp=Z,900nm,19.0s
T45A  Paducah           107.83  55 PFAKE              00 28 00.0 +14
T45A                               LR       LR
      comp=Z,2µm,19.0s
K43A  Burlington        107.99  49 PFAKE              00 28 00.0 +14
K43A                               LR       LR
      comp=Z,2µm,18.0s
TULEG Thule             108.08  12 PFAKE              00 28 00.0 +14
TULEG                              LR       LR
      comp=Z,400nm,18.0s
147A  Livingston        108.08  59 PFAKE              00 28 00.0 +13
147A                               LR       LR
      comp=Z,2µm,21.0s
WVT   Waverly           108.49  55 PFAKE              00 28 00.0 +12
WVT                                LR       LR
      comp=Z,2µm,22.0s
USIN  University of     108.61  54 PFAKE              00 28 00.0 +12
USIN                               LR       LR
      comp=Z,2µm,20.0s
SFIN  Lafayette         109.00  51 PFAKE              00 28 00.0 +12
SFIN                               LR       LR
      comp=Z,2µm,21.0s
T47A  Sharon Grove      109.06  55 PFAKE              00 28 00.0 +11
T47A                               LR       LR
      comp=Z,2µm,19.0s
X48A  Hartselle         109.13  57 PFAKE              00 28 00.0 +11
X48A                               LR       LR
      comp=Z,1µm,22.0s
ARU   Arti              109.13 326 ePKP     PKiKP     00 27 47.9 -0.2
ABKAR Akbulak array     109.26 318 ePdif    Pdif      00 23 46.5 +1.7
V48A  Smith Brothers    109.31  56 PFAKE              00 28 00.0 +11
V48A                               LR       LR
      comp=Z,2µm,21.0s
JTS   JuntasAbangare    109.40  83 PFAKE              00 28 00.0 +10
JTS                                LR       LR
      comp=Z,700nm,18.0s
BLO   Bloomington       109.48  52 PFAKE              00 28 00.0 +11
BLO                                LR       LR
      comp=Z,2µm,20.0s
WCI   Wyandotte Cave    109.68  53 PFAKE              00 28 00.0 +10
WCI                                LR       LR
      comp=Z,2µm,20.0s
250A  Grady             109.76  60 PFAKE              00 28 00.0 +10
250A                               LR       LR
      comp=Z,1µm,22.0s
Z50A  Ashland           110.06  59 PFAKE              00 28 00.0 +9.4
Z50A                               LR       LR
      comp=Z,2µm,18.0s
ESPN  Las Esperanzas    110.28  81 PFAKE              00 28 00.0 +8.5
ESPN                               LR       LR
      comp=Z,500nm,21.0s
W50A  Signal Mountai    110.55  56 PFAKE              00 28 00.0 +8.5
W50A                               LR       LR
      comp=Z,2µm,21.0s
X51A  Calhoun           110.93  57 PFAKE              00 28 00.0 +7.8
X51A                               LR       LR
      comp=Z,2µm,21.0s
152A  Waverly Hall      111.08  59 PFAKE              00 28 10.0 +17
152A                               LR       LR
      comp=Z,2µm,19.0s
N49A  Columbus Grove    111.18  50 PFAKE              00 28 00.0 +7.5
N49A                               LR       LR
      comp=Z,2µm,21.0s
CPCT  Cooper Cave       111.19  56 PFAKE              00 28 10.0 +17
CPCT                               LR       LR
      comp=Z,2µm,22.0s
Y52A  Lilburn           111.61  58 PFAKE              00 28 10.0 +17
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Y52A                                  LR        LR
      comp=Z,2µm,20.0s
W52A  Murphy            111.68  57    PFAKE               00 28 10.0  +16
W52A                                  LR        LR
      comp=Z,1µm,19.0s
TKL   Tuckaleechee C    111.79  56    PFAKE               00 28 10.0  +16
TKL                                   LR        LR
      comp=Z,2µm,21.0s
V52A  Sevierville       111.93  56    PFAKE               00 28 10.0  +16
V52A                                  LR        LR
      comp=Z,2µm,20.0s
TZTN  Tazewell          111.93  55    PFAKE               00 28 10.0  +16
TZTN                                  LR        LR
      comp=Z,4µm,20.0s
Q51A  Peebles           111.95  52    PFAKE               00 28 10.0  +16
Q51A                                  LR        LR
      comp=Z,3µm,20.0s
M50A  Fremont           112.00  50    PFAKE               00 28 10.0  +16
M50A                                  LR        LR
      comp=Z,3µm,22.0s
GOGA  Godfrey           112.11  58    PFAKE               00 28 10.0  +16
GOGA                                  LR        LR
      comp=Z,2µm,20.0s
154A  Montrose          112.44  59    PFAKE               00 28 10.0  +15
154A                                  LR        LR
      comp=Z,2µm,22.0s
V53A  Saluda            112.57  56    PFAKE               00 28 10.0  +15
V53A                                  LR        LR
      comp=Z,2µm,21.0s
656A  Willston          112.97  63    PFAKE               00 28 10.0  +14
656A                                  LR        LR
      comp=Z,1µm,20.0s
O52A  Adamsville        113.03  51    PFAKE               00 28 10.0  +14
O52A                                  LR        LR
      comp=Z,2µm,20.0s
HODGE Hodges            113.09  57    PFAKE               00 28 10.0  +14
HODGE                                 LR        LR
      comp=Z,2µm,20.0s
UOSS  Minazif           113.28 293    PFAKE               00 28 10.0  +13
UOSS                                  LR        LR
      comp=Z,300nm,20.0s
PAULI Pauline           113.43  57    PFAKE               00 28 10.0  +13
PAULI                                 LR        LR
      comp=Z,2µm,19.0s
KMSC  Kings Mountain    113.81  56    PFAKE               00 28 10.0  +12
KMSC                                  LR        LR
      comp=Z,2µm,21.0s
JSC   Jenkinsville      113.92  57    PFAKE               00 28 10.0  +12
JSC                                   LR        LR
      comp=Z,2µm,18.0s
DWPF  Disney Wildern    113.95  64    PFAKE               00 28 10.0  +12
DWPF                                  LR        LR
      comp=Z,800nm,18.0s
OTAV  Otavalo           114.11  95    PFAKE               00 28 10.0  +11
OTAV                                  LR        LR
      comp=Z,600nm,20.0s
ERPA  Erie              114.20  49    PFAKE               00 28 10.0  +12
ERPA                                  LR        LR
      comp=Z,2µm,19.0s
BLA   Blacksburg        114.39  54    PFAKE               00 28 10.0  +11
BLA                                   LR        LR
      comp=Z,2µm,22.0s
061Z  Ochoppi           114.42  66    PFAKE               00 28 10.0  +11
061Z                                  LR        LR
      comp=Z,1µm,20.0s
NHSC  New Hope          114.88  59    PFAKE               00 28 10.0  +10
NHSC                                  LR        LR
      comp=Z,2µm,22.0s
O56A  Blue Knob Stat    115.50  51    PFAKE               00 28 10.0 +9.2
O56A                                  LR        LR
      comp=Z,2µm,22.0s
APA   Apatity           115.60 342⇓iPKIKP   PKiKP     00 27 54.0 -6.1
APA                                   pmax      pmax
      comp=Z,6.0nm,0.9s
APA                                   MLR       MLR
      comp=Z,800nm,16.0s
SSPA  Standing Stone    115.96  50    PFAKE               00 28 10.0 +8.4
SSPA                                  LR        LR
      comp=Z,2µm,19.0s
R58B  Mineral           116.32  53    PFAKE               00 28 10.0 +7.6
R58B                                  LR        LR
      comp=Z,3µm,21.0s
ARCES ARCESS Array B    116.41 346    PKIKP     PKiKP     00 28 02.0 +0.3
ARCES ARCESS Array B    116.41 346    PKP       PKiKP     00 28 01.9 +0.3
      comp=Z,5.8nm,0.7s,baz=318,slow=1.6,SNR=11
CNNC  Cliffs of the     116.61  56    PFAKE               00 28 20.0  +17
CNNC                                  LR        LR
      comp=Z,2µm,19.0s
ILULI Ilulissat         116.73  14    PFAKE               00 28 10.0 +7.8
ILULI                                 LR        LR
      comp=Z,800nm,21.0s
KLMR  Klimovskoe        117.08 334   ePKIKP     PKPdf     00 28 02.2 -0.9
KLMR                                  pmax      pmax
      comp=Z,14nm,1.4s
KLMR  Klimovskoe        117.08 334   ePKPdf     PKPdf     00 28 02.3 -0.9
KLMR                                  AMP                 00 28 04.6
      comp=Z,14nm,1.4s
LUPA  Lehigh Univers    117.86  50    PFAKE               00 28 20.0  +15
LUPA                                  LR        LR
      comp=Z,200nm,21.0s
BRNJ  Basking Ridge     118.45  50    PFAKE               00 28 20.0  +14
BRNJ                                  LR        LR
      comp=Z,3µm,22.0s
MAK   Makhachkala       118.81 313d iP          Pdif      00 24 20.3 -7.1
MAK                                  e                    00 34 58.3
MAK                                  eSSS       SSS       00 50 00.5
MAK                                   pmax      pmax
      comp=Z,153nm,1.1s
LPAZ  La Paz            119.15 116   ePKPdf     PKiKP     00 28 09.8 +0.5
LPAZ  La Paz            119.15 116    PKP       PKPdf     00 28 09.2  0.0
      comp=Z,3.2nm,1.0s,baz=288,slow=1.1,SNR=7.8
SCHQ  Schefferville     119.15  32    PKP       PKPdf     00 28 06.2 -1.2
      comp=Z,5.0nm,0.9s,baz=0.1,slow=6.2,SNR=3.6
GROC  Groznyy           119.97 314   i PKIKP    PKiKP     00 28 09.7 +0.4
GROC                                 e                    00 29 34.3
GROC                                  pmax      pmax
      comp=Z,8.0nm,0.7s
VRH   Novokhopyorsk     120.13 324   ePKIKP     PKPdf     00 28 07.3 -2.0
VRH                                   pmax      pmax
      comp=Z,9.0nm,0.9s
MOS   Moscow            120.42 330   i PKIKP    PKPdf     00 28 08.6 -1.1
MOS                                   pmax      pmax
      comp=Z,24nm,1.0s
TBLG  Delisi            121.09 312   ePKPdf     PKiKP     00 28 12.1 +0.5
LPSR  Galich'ya Gora    121.16 326   ePKIKP     PKPdf     00 28 11.2  0.0
LPSR                                  pmax      pmax
      comp=Z,30nm,1.5s
OBN   Obninsk           121.25 329    PFAKE               00 28 20.0 +8.6
OBN                                   LR        LR
      comp=Z,600nm,21.0s
OBN   Obninsk           121.25 329d iPKIKP      PKPdf     00 28 11.0 -0.3
OBN                                  e                    00 35 05.8
OBN                                   pmax      pmax
      comp=Z,25nm,1.3s
ZEI   Tsey              121.42 314   i PKIKP    PKPdf     00 28 10.3 -2.0
ZEI                                   pmax      pmax
      comp=Z,2.0nm,0.7s
GNI   Garni             121.46 311   ePKPdf     PKiKP     00 28 13.4 +0.8
GNI   Garni             121.46 311    PKP       PKiKP     00 28 12.8 +0.3
      comp=Z,5.2nm,0.9s,baz=282,slow=6.2,SNR=3.8
VSR   Storozhevoye      121.61 324   ePKIKP     PKPdf     00 28 10.6 -1.5
VSR                                   pmax      pmax
      comp=Z,30nm,1.8s
KBZ   Khabaz            121.86 315    PKP       PKiKP     00 28 13.9 +0.9
      comp=Z,1.1nm,0.6s,baz=285,slow=8.4,SNR=3.9
KBZ                                   PP        PP        00 29 42.2 -4.1
      comp=Z,1.9nm,1.0s,baz=43,slow=8.3,SNR=3.5
KVAR  Kislovodsk Arr    121.94 315    PP        PP        00 29 43.8 -3.2
      comp=Z,2.7nm,0.8s,baz=180,slow=2.0,SNR=4.4
KIV   Kislovodsk        121.95 315   ePKPdf     PKiKP     00 28 13.3  0.0
KIV   Kislovodsk        121.95 315   i PKIKP    PKPdf     00 28 13.0 -0.2
KIV                                  e                    00 29 45.4
KIV                                  eSS        SS        00 46 23.1 -1.6
KIV                                   pmax      pmax
      comp=Z,6.0nm,1.0s
FINES FINESS Array B    122.00 339    PKP       PKPdf     00 28 12.1 -0.5
      comp=Z,13nm,0.9s,baz=106,slow=2.8,SNR=19
RAYN  Ar Rayn           123.06 291   ePKPdf     PKiKP     00 28 15.9 -0.1
RAYN                                  LR        LR
      comp=Z,400nm,20.0s
SDV   Santo Domingo     123.22  86   ePKPdf     PKPdf     00 28 16.4 -0.2
CPUP  Villa Florida     123.25 131    PKP       PKPdf     00 28 15.9 -0.2
      comp=Z,2.1nm,0.9s,baz=197,slow=6.9,SNR=3.7
VSU   Vasula            123.76 336c iPKIKP      PKiKP     00 28 17.6 +1.3
VSU                                   pmax      pmax
      comp=Z,52nm,1.3s
VSU   Vasula            123.76 336   eP         PKPpre    00 28 09.6
VSU                                   IAmb      IAmb      00 28 15.7
      comp=Z,31nm,0.5s
DAMY  Dhamar            124.03 280    PFAKE               00 28 30.0  +12
DAMY                                  LR        LR
      comp=Z,400nm,19.0s
SOC   Sochi             124.11 316   i PKIKP    PKPpre    00 28 10.2
SOC                                  ePPP       PPP       00 32 40.1
SOC                                   MLR       MLR
      comp=Z,290nm,22.0s
ANN   Anapa             125.21 318   eP         Pdif      00 24 53.3 -2.5
ANN                                  i                    00 28 18.4
ANN                                  e                    00 28 21.5
ANN                                  e                    00 30 10.8
ANN                                   pmax      pmax
      comp=Z,68nm,1.5s
ANN                                   MLR       MLR
      comp=Z,405nm,21.0s
ATD   Arta Tunnel       125.31 277    PFAKE               00 28 30.0 +9.3
ATD                                   LR        LR
      comp=Z,700nm,20.0s
IZAR  Zarasai           125.73 334   eP         PKiKP     00 28 20.7 +0.5
IZAR                                  IAmb      IAmb      00 28 22.6
      comp=Z,9.8nm,0.8s
IDID  Didziasalis       125.79 333   eP         PKiKP     00 28 21.1 +0.7
IDID                                  IAmb      IAmb      00 28 22.7
      comp=Z,13nm,0.9s
ISAL  Salakas           125.90 334   eP         PKiKP     00 28 21.2 +0.6
ISAL                                  IAmb      IAmb      00 28 23.0
      comp=Z,11nm,1.0s
IIGN  Ignalina          126.00 334   eP         PKiKP     00 28 21.5 +0.7
IIGN                                  IAmb      IAmb      00 28 23.2
      comp=Z,19nm,1.0s
NACGM Naroch            126.03 333   e          PKiKP     00 28 21.0 +0.1
NACGM                                eLR        LR        01 20 18.0
BOSA  Boshof            126.15 222   ePKPdf     PKiKP     00 28 22.1 -0.1
BOSA  Boshof            126.15 222    PKP       PKPdf     00 28 21.4 -0.4
      comp=Z,11nm,0.8s,baz=179,slow=1.4,SNR=16
SUR   Sutherland        126.28 216   ePKPdf     PKiKP     00 28 22.4  0.0
NB2   NORSAR Subarra    126.79 346    PKPdf     PKPdf     00 28 21.6 -0.3
      comp=Z,25nm,1.2s,baz=32,slow=2.0
NB2   NORSAR Subarra    126.79 346    PKPdf     PKPdf     00 28 21.6 -0.3
      baz=32,slow=2.0
NOA   NORSAR Array B    126.79 346    PKP       PKPdf     00 28 21.8 -0.1
      comp=Z,6.1nm,0.9s,baz=31,slow=1.9,SNR=13
HFS   Hagfors           126.92 344    PKP       PKPdf     00 28 22.2 +0.2
      comp=Z,8.9nm,0.9s,baz=107,slow=2.0,SNR=6.9
AKASG Malin Array Be    127.34 328    PKP       PKPdf     00 28 23.1 -0.1
      comp=Z,2.7nm,0.8s,baz=51,slow=2.2,SNR=28
AKBB  Malin Array Si    127.34 328   ePKPdf     PKiKP     00 28 23.6  0.0
AKBB                                  LR        LR
      comp=Z,500nm,20.0s
KIEV  Kiev              127.36 328   ePKPdf     PKiKP     00 28 23.5 -0.1
KIEV                                  LR        LR
      comp=Z,500nm,20.0s
KIEV  Kiev              127.36 328   i PKIKP    PKiKP     00 28 23.6 -0.1
AK11  Malin Array Si    127.39 328   ePKPdf     PKiKP     00 28 23.6 -0.2
SJG   San Juan          128.14  75   ePKPdf     PKiKP     00 28 26.0 -0.2
SJG                                  ePKPdf     PKPdf     00 28 26.2 +0.7
SJG   San Juan          128.14  75   ePKIKP     PKiKP     00 28 26.0 -0.2
SUW   Suwalki           128.21 334   ePKP       PKiKP     00 28 25.6 +0.4
SUW   Suwalki           128.21 334   ePKPdf     PKiKP     00 28 25.7 +0.4
SUW                                   LR        LR
      comp=Z,600nm,21.0s
SUW   Suwalki           128.21 334   ePKIKP     PKiKP     00 28 25.7 +0.4
SUW                                   MLR       MLR
      comp=Z,600nm,21.0s
LBTB  Lobatse           128.22 226   ePKPdf     PKiKP     00 28 26.4 +0.1
HUMP  Col San Antoni    128.42  75   ePKPdf     PKPdf     00 28 26.2 +0.1
KMBO  Kilima Mbogo      128.67 260   ePKPdf     PKiKP     00 28 28.2 +0.5
KMBO                                  LR        LR
      comp=Z,500nm,20.0s
KMBO  Kilima Mbogo      128.67 260    PKP       PKiKP     00 28 28.3 +0.5
      comp=Z,4.7nm,0.9s,baz=41,slow=3.4,SNR=11
MTP   Monte Pirata      128.71  75    PFAKE               00 28 40.0  +13
MTP                                   LR        LR
      comp=Z,800nm,19.0s
FURI  Furi              129.12 273    PFAKE               00 28 40.0  +11
FURI                                  LR        LR
      comp=Z,800nm,20.0s
ILGA  Ilgaz             129.17 315    PFAKE               00 28 40.0  +12
ILGA                                  LR        LR
      comp=Z,300nm,20.0s
ASF   Jabal al Asfar    129.47 303    PKP       PKiKP     00 28 29.5 +0.8
      comp=Z,3.2nm,0.9s,baz=112,slow=4.1,SNR=5.2
ASF                                   PP        PP        00 30 38.6 +1.0
      comp=Z,2.2nm,0.9s,baz=85,slow=1.4,SNR=5.6
BRTR  Keskin Array B    129.72 313    PKP       PKPdf     00 28 28.5 +0.3
      comp=Z,1.9nm,1.0s,baz=145,slow=6.8,SNR=8.3
BRTR                                  PP        PP        00 30 35.0 -3.9
      comp=Z,3.1nm,1.1s,baz=90,slow=6.2,SNR=5.3
ANTO  Ankara            130.27 314    PFAKE               00 28 40.0  +10
ANTO                                  LR        LR
      comp=Z,200nm,19.0s
MMAI  Mount Meron Ar    130.49 304    PKP       PKiKP     00 28 31.2 +0.5
      comp=Z,2.6nm,0.8s,baz=115,slow=5.6,SNR=5.3
CFR   Carcaliu          130.94 322   ⇓PKIKP     PKiKP     00 28 39.9 +8.9
TIRR  Tirgusor          131.14 321    PFAKE               00 28 40.0 +8.5
TIRR                                  LR        LR
      comp=Z,200nm,20.0s
BUR08 Bucovina Ar. S    131.26 326   ePKPdf     PKiKP     00 28 32.1 +0.3
BUR04 Bucovina Ar. S    131.27 326   ePKPdf     PKiKP     00 28 31.9  0.0
BURAR Bucovina Array    131.27 326   ⇓PKIKP     PKiKP     00 28 33.2 +1.4
CSS   Mathiatis         131.59 307    PFAKE               00 28 40.0 +7.3
CSS                                   LR        LR
      comp=Z,300nm,20.0s
EIL   Elat              131.66 300    PKP       PKPdf     00 28 32.3 +0.3
      comp=Z,3.9nm,0.8s,baz=140,slow=7.9,SNR=3.6
LSZ   Lusaka            131.69 238   ePKPdf     PKiKP     00 28 33.2 -0.4
LSZ                                   LR        LR
      comp=Z,1µm,20.0s
SPB   Sao Paulo         131.99 136    PFAKE               00 28 50.0  +16
SPB                                   LR        LR
      comp=Z,700nm,22.0s
MLR   Muntele Rosu      132.07 323   ePKPdf     PKiKP     00 28 33.1 -0.4
MLR   Muntele Rosu      132.07 323    PKIKP     PKPdf     00 28 33.0 +0.5
MLR                                   pmax      pmax
      comp=Z,3.0nm,1.0s
MLR   Muntele Rosu      132.07 323    PKP       PKPdf     00 28 33.0 +0.5
      comp=Z,3.3nm,1.0s,baz=330,slow=4.2,SNR=6.8
UZH   Uzhgorod          132.19 329   ePKIKP     PKPdf     00 28 32.6 +0.2
UZH                                  e                    00 28 37.4
UZH                                  e                    00 30 50.8
OJC   Ojcow             132.33 332   ePKP       PKiKP     00 28 33.5 -0.2
OJC   Ojcow             132.33 332   ePKIKP     PKiKP     00 28 33.5 -0.2
NIE   Niedzica          132.65 331   ePKP       PKiKP     00 28 35.5 +1.1
NIE   Niedzica          132.65 331   ePKIKP     PKiKP     00 28 35.5 +1.1
DRGR                    133.13 327   ⇓PKIKP     PKiKP     00 28 35.5 -0.1
LANS  Liptovska Anna    133.23 331   ePKIKP     PKiKP     00 28 36.3 +0.7
LANS  Liptovska Anna    133.23 331   ePKP       PKiKP     00 28 36.3 +0.7
OKC   Ostrava-Krasne    133.36 333    AMS       AMS       01 21 30.0
      comp=Z,400nm,18.0s
KSP   Ksiaz             133.43 335   ePKP       PKiKP     00 28 36.9 +1.0
KSP   Ksiaz             133.43 335   ePKIKP     PKiKP     00 28 36.9 +1.0
MORC  Moravsky Berou    133.67 333   ePKPdf     PKPdf     00 28 35.7 +0.4
MORC  Moravsky Berou    133.67 333   ⇓PKIKP     PKiKP     00 28 37.0 +0.5
MORC  Moravsky Berou    133.67 333   ePKP       PKiKP     00 28 36.5  0.0
DPC   Dobruska-Polom    133.78 334   ePKPDF     PKiKP     00 28 36.7  0.0
DPC                                  ex         x         00 28 45.9
DPC                                   AMS       AMS       01 31 00.0
      comp=Z,500nm,15.4s
DPC   Dobruska-Polom    133.78 334   ePKIKP     PKiKP     00 28 36.7  0.0
DPC                                  e                    00 28 45.9
DPC                                   MLR       MLR
      comp=Z,500nm,15.4s
UPC   Upice             133.80 335   ePKPDF     PKiKP     00 28 37.2 +0.5
UPC                                   AMS       AMS       01 32 20.0
      comp=Z,900nm,20.7s
UPC   Upice             133.80 335   ePKIKP     PKiKP     00 28 37.2 +0.5
UPC                                   MLR       MLR
      comp=Z,900nm,20.7s
PSZ   Piszkesteto       133.86 330   ePKPdf     PKPdf     00 28 35.5 -0.2
PSZ   Piszkesteto       133.86 330   ⇑PKIKP     PKPdf     00 28 35.8 +0.1
GZR   Gura Zlata        133.95 325   ⇑PKIKP     PKPdf     00 28 36.5 +0.6
VYHS  Vyhne             133.99 331   ePKIKP     PKiKP     00 28 36.7 -0.5
VYHS  Vyhne             133.99 331   ePKP       PKiKP     00 28 36.7 -0.5
BRG   Berggiesshubel    134.36 336   ePKP       PKPpre    00 28 25.6
      comp=Z,4.4nm,1.0s
BRG                                  e                    00 28 37.8
      comp=Z,40nm,1.5s
BRG                                   PP        PP        00 31 00.0 -7.7
BRG                                   SKP                 00 31 57.5
      comp=Z,4.1nm,1.3s
BRG                                   SDIFF               00 39 16.0
      comp=N,393nm,21.7s
      comp=E,269nm,18.7s
      comp=Z,401nm,13.6s
BRG   Berggiesshubel    134.36 336   ePKHKP     PKPpre    00 28 25.6
BRG                                  e                    00 28 37.8
BRG                                   pmax      pmax
      comp=Z,4.0nm,1.0s
BRG                                   pmax      pmax
      comp=Z,40nm,1.5s
BRG                                   MLR       MLR
      comp=E,269nm,18.7s
BRG                                   MLR       MLR
      comp=Z,401nm,13.6s
PVCC  Panska Ves        134.38 336   ePKPDF     PKiKP     00 28 38.2 +0.3
PVCC                                  AMS       AMS       01 29 50.0
      comp=Z,500nm,18.4s
PVCC  Panska Ves        134.38 336   ePKIKP     PKiKP     00 28 38.2 +0.3
PVCC                                  MLR       MLR
      comp=Z,500nm,18.4s
CLL   Collm             134.38 337   ePKPdf     PKPdf     00 28 37.0 +0.5
CLL   Collm             134.38 337   i PKPdf    PKPdf     00 28 37.0 +0.5
      comp=Z,20nm,1.0s
CLL                                  ePP        PP        00 31 05.0 -2.8
CLL                                   LmV                 01 27 00.0
      comp=Z,500nm,21.7s
CLL   Collm             134.38 337   i PKIKP    PKPdf     00 28 37.0 +0.5
CLL                                   pmax      pmax
      comp=Z,20nm,1.0s
CLL                                   MLR       MLR
      comp=Z,500nm,21.7s
VRAC  Vranov            134.44 333   ePKP       PKiKP     00 28 37.7 -0.4
VRAC  Vranov            134.44 333    PKP       PKiKP     00 28 37.5 -0.6
      comp=Z,5.5nm,1.0s,baz=82,slow=3.5,SNR=5.3
BZS   Buzias            134.46 326   ⇑PKIKP     PKiKP     00 28 37.5 -0.7
KRUC  Moravsky          134.71 333   ePKP       PKiKP     00 28 38.2 -0.4
GOPC  GO Pecny, Ondr    134.76 335   ePKPDF     PKiKP     00 28 39.7 +1.0
GOPC                                  AMS       AMS       01 29 30.0
      comp=Z,600nm,21.1s
GOPC  GO Pecny, Ondr    134.76 335   ePKIKP     PKiKP     00 28 39.7 +1.0
GOPC                                  MLR       MLR
      comp=Z,600nm,21.1s
MODS  Modra-Piesok      134.81 332   ePKIKP     PKiKP     00 28 38.8  0.0
MODS  Modra-Piesok      134.81 332   ePKP       PKiKP     00 28 38.8  0.0
PRU   Pruhonice         134.81 335   ePKPDF     PKiKP     00 28 39.6 +0.9
PRU                                   AMS       AMS       01 33 00.0
      comp=Z,500nm,19.9s
PRU   Pruhonice         134.81 335   ePKIKP     PKiKP     00 28 39.6 +0.9
PRU                                   MLR       MLR
      comp=Z,500nm,19.9s
TREC  Trest             134.93 334    AMS       AMS       01 26 30.0
      comp=Z,400nm,16.6s
MBAR  Mbarara           135.09 258    PFAKE               00 28 50.0 +9.4
MBAR                                  LR        LR
      comp=Z,1µm,20.0s
VTS   Vitosha           135.30 322   ePKPdf     PKiKP     00 28 39.4 -0.8
VTS                                   LR        LR
      comp=Z,400nm,21.0s
VTS   Vitosha           135.30 322   ⇑PKIKP     PKPdf     00 28 39.3 +0.6
NKC   Novy Kostel       135.45 337   ePKPDF     PKiKP     00 28 41.2 +1.1
NKC   Novy Kostel       135.45 337   ePKIKP     PKiKP     00 28 41.2 +1.1
CONA  Conrad Observa    135.78 332   ePKiKP     PKiKP     00 28 40.4 -0.6
      comp=Z,13nm,0.9s
CONA                                  PP        PP        00 31 18.2 +1.3
      comp=Z,13nm,1.6s
KHC   Kasperske Hory    135.87 335   ePKPdf     PKPdf     00 28 40.0 +0.6
KHC   Kasperske Hory    135.87 335   ePKPpre    PKPpre    00 28 28.8
KHC                                  ePKPDF     PKiKP     00 28 40.5 -0.5
KHC                                  ex         x         00 28 45.9
KHC                                   AMS       AMS       01 36 10.0
      comp=Z,500nm,19.6s
KHC   Kasperske Hory    135.87 335   ePKHKP     PKPpre    00 28 28.8
KHC                                  e                    00 28 40.5
KHC                                  e                    00 28 45.9
KHC                                   MLR       MLR
      comp=Z,500nm,19.6s
GEC2  GERESS Array S    136.04 335   ePKPdf     PKiKP     00 28 40.7 -0.7
GEC2                                  LR        LR
      comp=Z,500nm,19.0s
GEC2  GERESS Array S    136.04 335   ePKIKP     PKiKP     00 28 40.7 -0.7
GEC2                                  MLR       MLR
      comp=Z,500nm,19.0s
GERES GERESS Array B    136.04 335    PKhKP     PKPpre    00 28 27.2
      comp=Z,1.5nm,0.7s,baz=40,slow=2.3,SNR=15
GERES                                 PKP       PKiKP     00 28 40.6 -0.8
      comp=Z,8.2nm,1.1s,baz=48,slow=2.0,SNR=20
GERES                                 PP        PP        00 31 17.7 -0.7
      comp=Z,1.0nm,0.9s,baz=63,slow=6.3,SNR=3.5
GEA0  GERESS Array S    136.04 335   ePKPdf     PKPdf     00 28 39.6 -0.2
DIVS  Divibare          136.31 325   ePKPdf     PKPdf     00 28 40.4  0.0
ARSA  Arzberg           136.44 332   ePKPdf     PKPdf     00 28 40.9 +0.4
      comp=Z,5.9nm,1.1s
ARSA                                  PP        PP        00 31 21.5 +0.6
      comp=Z,5.8nm,1.2s
BDFB  Brasilia          136.48 127    PKP       PKPdf     00 28 42.2 +0.6
      comp=Z,3.6nm,0.8s,baz=135,slow=5.7,SNR=4.9
MOA   Molln             136.56 333   ePKPdf     PKPdf     00 28 41.3 +0.6
      comp=Z,5.6nm,0.8s
MOA                                   PP        PP        00 31 23.7 +2.0
      comp=Z,0.6nm,0.4s
SOKA  Soboth            137.08 332   ePKiKP     PKiKP     00 28 43.6  0.0
      comp=Z,12nm,1.0s
BLY   Banja Luka        137.39 328   ePKPdf     PKPdf     00 28 41.3 -1.0
OBKA  Obir              137.43 332    PP        PP        00 31 28.0 +0.7
      comp=Z,3.3nm,0.9s
KBA   Koelnbreinsper    137.55 333   epPKPdf    PKPdf     00 28 43.9 +1.2
      comp=Z,12nm,1.1s
KBA                                   PP        PP        00 31 27.8 -0.3
      comp=Z,3.9nm,1.1s
TSUM  Tsumeb            137.62 225   ePKPdf     PKPdf     00 28 42.3 -1.3
TSUM                                  LR        LR
      comp=Z,2µm,19.0s
UCC   Uccle             137.66 344    PFAKE               00 28 50.0 +5.5
UCC                                   LR        LR
      comp=Z,800nm,22.0s
IDI   Anoyia            137.88 312    PFAKE               00 29 00.0  +14
IDI                                   LR        LR
      comp=Z,300nm,20.0s
WATA  Walderalm         138.11 335   epPKPdf    PKPdf     00 28 44.4 +0.7
      comp=Z,3.5nm,0.6s
WLF   Walferdange       138.14 341   ePKPdf     PKPdf     00 28 43.1 -0.4
WLF   Walferdange       138.14 341   ePKIKP     PKPdf     00 28 43.1 -0.4
WTTA  Wattenberg        138.14 335   epPKPdf    PKPdf     00 28 44.9 +1.0
      comp=Z,17nm,1.3s
WTTA                                 ePP        PP        00 31 32.4 +0.7
      comp=Z,4.1nm,0.8s
ABTA  Abfaltersbach     138.17 334   ePKPdf     PKPdf     00 28 44.2 +0.4
      comp=Z,13nm,1.0s
DOU   Dourbes           138.22 343   ⇑PKiKP     PKiKP     00 28 44.9 -0.8
MOTA  Moosalm           138.29 335   epPKPdf    PKPdf     00 28 45.1 +1.0
      comp=Z,4.0nm,0.6s
RETA  Reutte            138.32 336   epPKPdf    PKPdf     00 28 44.6 +0.6
      comp=Z,8.5nm,1.1s
RETA                                 ePP        PP        00 31 30.3 -2.4
      comp=Z,7.0nm,1.7s
SQTA  Sankt Quirin      138.35 335   epPKPdf    PKPdf     00 28 45.8 +1.7
      comp=Z,14nm,0.9s
SQTA                                  PP        PP        00 31 35.4 +2.5
      comp=Z,14nm,1.9s
BFO   Black Forest      138.55 339   i PKIKP    PKiKP     00 28 48.7 +2.2
FETA  Feichten          138.71 335   epPKPdf    PKPdf     00 28 46.1 +1.2
      comp=Z,12nm,1.0s
FETA                                  PP        PP        00 31 37.3 +2.1
      comp=Z,11nm,1.5s
DAVA  Damuels           138.83 336   ePKPdf     PKPdf     00 28 45.2 +0.2
      comp=Z,14nm,1.1s
ECH   Echery            139.06 339   ePKPdf     PKPdf     00 28 46.0 +0.7
ECH   Echery            139.06 339   ePKIKP     PKPdf     00 28 46.0 +0.7
FUORN Ofenpass-Fuorn    139.22 335   ePKPdf     PKPdf     00 28 46.1 +0.2
FUORN                                 LR        LR
      comp=Z,500nm,20.0s
DAVOX Davos/Dischmat    139.25 336    PKhKP     PKPpre    00 28 37.3
DAVOX                                 PKP       PKPdf     00 28 47.1 +1.2
      comp=Z,16nm,0.9s
SENIN Lac Senin/Sane    140.59 338   ePKPdf     PKPdf     00 28 48.5 +0.1
CLF   Chambon-Foret     140.75 344   ePKPdf     PKPdf     00 28 49.1 +0.8
AQU   L'Aquila          141.03 328    PFAKE               00 29 00.0 +8.2
AQU                                   LR        LR
      comp=Z,500nm,21.0s
VLC   Villacollemand    141.12 333    PFAKE               00 29 00.0 +8.1
VLC                                   LR        LR
      comp=Z,400nm,20.0s
BNI   Bardonecchia      141.93 337   ePKPdf     PKPdf     00 28 49.6 -1.2
SSB   Saint Sauveur     142.51 340   ePKPpre    PKPpre    00 28 48.5
CLTB  Caltabellotta     144.45 323   ePKPdf     PKPdf     00 28 54.7 -0.6
CLTB                                  LR        LR
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	comp=Z,400nm,20.0s						
KEST	Kesra	147.97	324	*e*PKPbc	PKPbc	00 29 04.5	+0.1
KEST	Kesra	147.97	324	PKPbc	PKiKP	00 29 05.4	-0.9
	comp=Z,53nm,1.0s,baz=338,slow=2.6,SNR=43						
CMAH	Djebel Manchou	148.37	328	P	PKPdf	00 29 02.8	+0.8
ABSA	Djebel Ababsia	148.61	327	P	PKiKP	00 29 07.1	-0.5
PBRG	Braganca	148.64	351	*e*PKPdf	PKiKP	00 29 06.7	-0.7
PGAV	Gavieira, Arco	148.69	353	*e*PKPdf	PKiKP	00 29 07.0	-0.6
PCAB	Cabril	148.91	353	*e*PKPdf	PKiKP	00 29 07.6	-0.4
CASM	Ain Smara	149.14	328	P	PKiKP	00 29 08.0	-0.6
POLO	Lamas de Olo	149.21	352	*e*PKPdf	PKPbc	00 29 07.6	+0.2
DFRA	Djebel Bou Aff	149.23	329	P	PKiKP	00 29 09.0	+0.1
PVRL	Vila Real	149.30	352	*e*PKPdf	PKiKP	00 29 08.7	-0.1
MVO	Moncorvo	149.31	351	*e*PKPdf	PKiKP	00 29 08.4	-0.5
CTEI	Djebel Teioual	149.33	328	P	PKiKP	00 29 09.1	0.0
PTO	Porto	149.54	353	*e*PKPdf	PKiKP	00 29 09.5	+0.3
SET	Setif	149.74	330	P	PKiKP	00 29 11.0	+1.1
CKHR	Kef el Ahmar	149.82	329	P	PKiKP	00 29 10.2	0.0
PVIS	Viseu	149.87	352	*e*PKPdf	PKiKP	00 29 10.0	0.0
ES19	SONSECA Array	150.11	346	*e*PKPdf	PKPdf	00 29 05.2	+0.6
ES19				*e*PKPbc	PKPbc	00 29 09.7	0.0
ES19				*e*PKPab	PKPab	00 29 16.7	+1.3
MTE	Manteigas	150.13	352	*e*PKPdf	PKiKP	00 29 10.9	+0.3
MTE	Manteigas	150.13	352	*e*PKPbc	PKiKP	00 29 10.6	0.0
ESDC	Sonseca Array	150.15	346	PKP	PKPdf	00 29 05.4	+0.7
	comp=Z,6.2nm,0.9s,baz=337,slow=2.7,SNR=9.9						
ESDC				PKPbc	PKiKP	00 29 10.7	+0.1
	comp=Z,15nm,0.9s,baz=16,slow=2.2,SNR=59						
ESLA	Sonseca Array	150.15	346	*e*PKPbc	PKPbc	00 29 09.9	+0.2
ESLA				*e*PKPab	PKPab	00 29 17.9	+2.3
PAB	San Pablo	150.37	346	*e*PKPdf	PKPdf	00 29 05.6	+0.5
PAB				*e*PKPbc	PKiKP	00 29 11.3	+0.2
PAB	San Pablo	150.37	346	*e*PKIKP	PKPdf	00 29 05.6	+0.5
PAB				*e*		00 29 11.3	
PCAS	Casmilo, Conde	150.60	353	*e*PKPdf	PKiKP	00 29 11.6	+0.1
PCBR	Castelo Branco	150.67	351	*e*PKPdf	PKiKP	00 29 11.9	+0.3
CMLA	Cha da Macela	150.88	21	*i* PKIKP	PKiKP	00 29 15.1	+3.0
PTOM	Tomar	151.02	353	*e*PKPdf	PKiKP	00 29 12.6	+0.3
PMRV	Marv??o	151.06	351	*e*PKPdf	PKiKP	00 29 12.5	0.0
CART	Cartagena	151.24	340	PFAKE		00 29 20.0	-0.1
CART				LR	LR		
	comp=Z,600nm,18.0s						
PMTG	Montargil	151.54	352	*e*PKPdf	PKiKP	00 29 13.4	0.0
PESTR	Estremoz	151.64	351	*e*PKPdf	PKiKP	00 29 14.1	+0.4
PESTR	Estremoz	151.64	351	*e*PKPbc	PKiKP	00 29 13.6	0.0
PMAFR	Mafra	151.77	354	*e*PKPdf	PKiKP	00 29 14.4	+0.5
RCBR	Riachuelo	151.82	125	*e*PKPab	PKPab	00 29 23.0	-0.3
SHEL	Horse Pasture	152.46	195	*e*PKPbc	PKiKP	00 29 16.3	+0.3
SHEL	Horse Pasture	152.46	195	*e*PKIKP	PKiKP	00 29 16.3	+0.3
PBEJ	Beja	152.51	351	*e*PKPdf	PKiKP	00 29 17.1	+1.6
PNCL	Nicolau / Gran	152.52	352	*e*PKPdf	PKPdf	00 29 10.3	+2.0
MESJ	Messejana	152.74	352	*e*PKPdf	PKiKP	00 29 16.9	+1.0
PBDV	Barranco-do-Ve	153.29	351	*e*PKPdf	PKiKP	00 29 19.0	+1.9
MORF	Marmelete	153.33	352	*e*PKPdf	PKiKP	00 29 17.6	+0.4
PFVI	Vila Bisbo	153.52	353	*e*PKPdf	PKiKP	00 29 19.0	+1.4
TAM	Tamanrasset	158.69	306	*e*PKPdf	PKPdf	00 29 17.4	+0.2
TAM				*e*PKPab	PKPab	00 29 55.0	+2.4
TAM	Tamanrasset	158.69	306	*e*PKIKP	PKPdf	00 29 17.4	+0.2
TOA0	Torodi Ar. Sit	165.46	281	*e*PKPdf	PKPdf	00 29 23.1	-0.9
TOA0				*e*PKPdf	PKPdf	00 29 23.8	-0.3
TOA0				*e*PKPab	PKPab	00 30 20.1	-2.2
TOA0				*e*PKPab	PKPab	00 30 21.3	-1.0
TOA0	Torodi Ar. Sit	165.46	281	P	PKPdf	00 29 24.2	+0.1
	SNR=7.0						
TORD	Torodi Ar. Bea	165.46	281	PKP	PKPdf	00 29 23.7	-0.4
	comp=Z,5.8nm,1.1s,baz=154,slow=3.3,SNR=22						
TORD				PKPab	PKPab	00 30 21.3	-1.0
	comp=Z,5.4nm,1.0s,baz=97,slow=4.2,SNR=9.1						
TORD				PP	PP	00 34 09.5	0.0
	comp=Z,5.2nm,1.2s,baz=128,slow=9.6,SNR=4.2						
KIC	Kosan Boka	170.74	242	*e*PKIKP	PKPdf	00 29 26.5	-1.2
	comp=Z,47nm,1.2s						
KIC	Kosan Boka	170.74	242	*e*PKP1	PKPab	00 30 45.7	+0.1
	comp=Z,87nm,1.3s						
LIC	Lamto	170.92	241	*e*PKIKP	PKPdf	00 29 26.7	-1.1
	comp=Z,47nm,1.5s						
LIC	Lamto	170.92	241	*e*PKP1	PKPab	00 30 46.5	+0.1
	comp=Z,74nm,1.1s						
DBIC	Dimbokro	170.99	244	*e*PKPdf	PKPdf	00 29 26.9	-0.9
DBIC				*e*PKPab	PKPab	00 30 46.8	+0.1
DBIC	Dimbokro	170.99	244	PKP	PKPdf	00 29 27.4	-0.5
	comp=Z,6.7nm,1.0s,baz=152,slow=3.3,SNR=5.5						
DBIC				PKPab	PKPab	00 30 46.3	-0.4
	comp=Z,14nm,1.2s,baz=127,slow=4.8,SNR=4.5						
TIC	Toumodi	171.12	243	*e*PKIKP	PKPdf	00 29 26.9	-1.1
TIC	Toumodi	171.12	243	*e*PKP1	PKPab	00 30 46.4	-0.9

IDC 20 00:19:08.5±5.1,**8°.16S**×**128°.00E**,**h239**^{km}±53^{km},**mb3.2**/4, **mb1 3.4**/7,**mb1mx3.1**/40,**mbtmp3.9**/7,**Error ellipse: s-maj=68.6km s-min=24.7km az=55.0,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.74	244	P	Pn	00 20 20.3	-0.5
	26nm,0.3s,baz=115,slow=4.5,SNR=17						
FITZ	Fitzroy Crossi	10.14	193	P	Pn	00 21 29.9	+0.9
	1.8nm,0.3s,baz=19,slow=11,SNR=27						
FITZ				S	S	00 23 23.5	+0.5
	0.9nm,0.3s,baz=97,slow=16,SNR=3.7						
WRA	Warramunga Arr	13.22	153	P	Pn	00 22 08.2	+0.6
	0.7nm,0.3s,baz=330,slow=13,SNR=16						
WRA				S	S	00 24 31.6	-2.6
	1.7nm,0.3s,baz=330,slow=22,SNR=11						
ASAR	Alice Springs	16.42	161	P	Pn	00 22 51.3	+5.1
	0.5nm,0.3s,baz=340,slow=11,SNR=31						
ASAR				S	S	00 25 49.8	+5.3
	0.3nm,0.3s,baz=316,slow=19,SNR=4.7						
MKAR	Makanchi Array	68.13	328	P	P	00 29 42.8	-0.1
	0.2nm,0.4s,baz=123,slow=7.8,SNR=9.5						
ZALV	Zalesovo Beam	71.76	335	P	P	00 30 04.2	-0.5
	0.8nm,0.6s,baz=136,slow=5.9,SNR=3.7						
KURBB	Kurchatov Arra	72.48	329	P	P	00 30 09.2	+0.2
	0.7nm,0.6s,baz=131,slow=4.9,SNR=5.9						
BVAR	Borovoye Array	78.00	329	P	P	00 30 40.9	+0.5
	0.3nm,0.5s,baz=137,slow=5.3,SNR=4.0						

IDC 20 00:34:27.9±8.0,26°.10N×127°.99E,h0^{km},mb3.5/5, mb1 3.7/5,mb1mx3.4/41,mbtmp3.5/5,MS4.5/1,Ms1 4.5/1, ms1mx3.2/34,Error ellipse: s-maj=201.8km s-min=36.3km az=5.0

ISCJB 20 00:34:48.7±0.5,27°.65N±0°.09×127°.9E±0°.1,h106^{km}±9^{km}, mb3.3/5,Error ellipse: s-maj=20.4km s-min=5.7km az=42.4

JMA 20 00:34:50.0±0.1,27°.67N×127°.87E,h93^{km}±3^{km},M3.2

ISC 20 00:34:49.3±0.9,**27°.68N**±0°.10×**127°.85E**±0°.10,**h97**^{km}±12^{km}, **n18**,σ**0^s.77**/28,**mb3.3**/5,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIH	Iheya	0.65	171	P	Pn	00 35 06.4	+0.4
JIH				S	Sn	00 35 18.5	0.0
JOKE	Okinoerabujima	0.71	116	P	Pn	00 35 06.9	+0.3
JOKE				S	Sn	00 35 19.1	-0.5
JYRO	Yoronjima	0.84	140	P	Pn	00 35 08.0	+0.1
JYRO				S	Sn	00 35 21.0	-0.7
JOW	Kunigami	0.92	156	P	Pn	00 35 09.0	+0.3
JOW				S	Sn	00 35 22.9	-0.4
JTK	Tokunoshima	0.98	83	P	Pn	00 35 09.7	+0.4
JTK				S	Sn	00 35 24.3	-0.1
JNTH	Nagotoyohara	1.16	172	P	Pn	00 35 12.0	+0.6
JNTH				*e*S	Sn	00 35 28.1	+0.1
JAGN	Aguni-jima	1.21	207	P	Pn	00 35 12.3	+0.3
JAGN				*e*S	Sn	00 35 29.0	0.0
JAMN	Amaminishikomi	1.30	64	P	Pn	00 35 13.5	+0.5
JAMN				S	Sn	00 35 30.5	-0.4
JJT3	Tamagusuku3	1.53	182	P	Pn	00 35 17.1	+1.3
JJT3				S	Sn	00 35 36.7	+0.8
JKE	Kume jima 2	1.65	215	P	Pn	00 35 17.8	+0.5
JAM	Amami Oshima	1.71	64	P	Pn	00 35 18.7	+0.6
JAM				*e*S	Sn	00 35 40.0	0.0
JZK	Kikaishima	1.98	71	P	Pn	00 35 22.8	+1.3
JZK				*e*S	Sn	00 35 47.2	+1.1
SONM	Songino Array	26.16	326	P	P	00 40 16.5	+1.8
	0.7nm,0.7s,baz=138,slow=9.5,SNR=5.6						
MKAR	Makanchi Array	40.33	311	P	P	00 42 16.0	-1.3
	0.1nm,0.3s,baz=92,slow=8.9,SNR=5.2						
KURBB	Kurchatov Arra	43.58	316	P	P	00 42 43.7	+0.1
	0.7nm,0.3s,baz=101,slow=8.9,SNR=5.4						
GEYT	Alibeck	58.28	299	LR	LR	01 15 04.1	
	comp=Z,362nm,20.2s,baz=110,slow=41						
ILAR	Eielson Array	63.33	29	P	P	00 45 06.8	-0.9
	0.2nm,0.8s,baz=259,slow=4.3,SNR=3.0						
YKA	Yellowknife Ar	77.36	25	P	P	00 46 32.6	-0.6
	0.3nm,0.5s,baz=299,slow=5.4,SNR=5.8						

IDC 20 00:43:01.7±4.7,**4°.70S**×**148°.10E**,**h0**^{km},**mb3.4**/4, **mb1 3.6**/4,**mb1mx3.5**/30,**mbtmp3.5**/4,**Error ellipse: s-maj=133.5km s-min=31.6km az=104.0,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.22	220	P	P	00 47 38.6	+0.1
	0.8nm,0.6s,baz=44,slow=12,SNR=13						
ASAR	Alice Springs	23.30	215	P	P	00 48 10.7	-0.8
	0.3nm,0.5s,baz=43,slow=8.9,SNR=4.6						
FITZ	Fitzroy Crossi	25.68	237	P	P	00 48 34.2	+0.6
	2.3nm,0.9s,baz=44,slow=11,SNR=6.4						
MKAR	Makanchi Array	77.20	320	P	P	00 54 57.6	0.0
	0.3nm,0.9s,baz=116,slow=6.8,SNR=2.7						

IDC 20 00:45:10.5±0.9,**32°.58N**×**39°.84W**,**h0**^{km},**mb3.7**/7, **mb1 3.9**/7,**mb1mx3.6**/33,**mbtmp3.7**/7,**Error ellipse: s-maj=25.3km s-min=22.0km az=154.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGA	Pitinga	38.20	214	P	P	00 52 31.9	-0.1
	baz=48,slow=14						
TORD	Torodi Ar. Bea	42.54	107	P	P	00 53 08.2	0.0
	2.0nm,1.1s,baz=306,slow=6.1,SNR=7.0						
H10N2	ASCENSION HYDR	46.88	144	T	T	01 43 45.3	
	baz=330						
H10N3	ASCENSION HYDR	46.89	144	T	T	01 43 43.6	
	baz=330						
H10N1	ASCENSION HYDR	46.90	144	T	T	01 43 46.8	
	baz=330						
H10S1	ASCENSION HYDR	47.77	145	T	T	01 44 50.8	
	baz=332						
H10S3	ASCENSION HYDR	47.77	145	T	T	01 44 51.0	
	baz=332						
H10S2	ASCENSION HYDR	47.79	145	T	T	01 44 52.1	
	baz=332						
AKASG	Malin Array Be	52.74	48	P	P	00 54 27.1	+0.1
	0.5nm,0.5s,baz=274,slow=6.8,SNR=5.0						
TXAR	Lajitas Array	54.10	285	P	P	00 54 38.4	+1.0
	0.4nm,0.6s,baz=70,slow=8.0,SNR=2.7						
PDAR	Pinedale Array	54.69	302	P	P	00 54 41.0	-0.7
	0.5nm,0.7s,baz=75,slow=7.7,SNR=4.6						
YKA	Yellowknife Ar	54.72	327	P	P	00 54 40.8	-0.5
	0.4nm,0.9s,baz=81,slow=7.2,SNR=4.3						
LPAZ	La Paz	55.62	213	P	P	00 54 48.6	-0.4
	1.5nm,1.1s,baz=0.0,slow=6.1,SNR=3.1						
MKAR	Makanchi Array	85.36	36	P	P	00 57 49.5	-0.2
	1.4nm,1.1s,baz=307,slow=4.4,SNR=6.0						

ISCJB 20 00:53:54.7±0.6,32°.6N±0°.1×40°.0W±0°.1,h13^{km},mb4.0/16, MS4.1/4,Error ellipse: s-maj=16.6km s-min=12.3km az=179.1

IDC 20 00:53:54.3±0.9,32°.61N×40°.06W,h0^{km},mb3.8/11, mb1 3.9/11,mb1mx3.7/44,mbtmp3.8/11,MS4.1/4, Ms1 4.1/4,ms1mx3.5/42,Error ellipse: s-maj=27.0km s-min=20.4km az=155.0

NEIC 20 00:53:56.6±0.5,32°.73N×39°.98W,h10^{km},mb4.5/7,Error ellipse: s-maj=14.8km s-min=9.3km az=178.0

GCMT 20 00:53:58.6±0.4,32°.67N±0°.04×39°.86W±0°.03,h28^{km}±1^{km}, MW5.1/73,Moment Tensor Solution. s27,c32; s73,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.61±.49; M$_{\theta\theta}$0.81±.30; M$_{\phi\phi}$4.80±.30; M$_{r\theta}$0.43±.45; M$_{\theta\phi}$1.99±.18; M$_{\phi r}$-2.52±.34; Best double couple: M$_0$6.16700×10^{16} NP1:φ$_s$10.00000°,δ57.00000°,λ-104.00000°. NP2: φ$_s$214.00000°,δ36.00000°,λ-70.00000°. Principal axes: T 6.0370, Plg11.0000°, Azm110.0000°; N 0.2630, Plg11.0000°, Azm18.0000°; P -6.2970, Plg74.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 20 00:53:56.8±0.7,**32°.7N**±0°.2×**40°.0W**±0°.1,**h13**^{km},**n40**, σ**0^s.91**/33,**mb4.1**/16,**MS4.1**/4,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDT	Midelt	29.67	80	LR	LR	01 09 06.2	
	comp=Z,588nm,21.4s,baz=314,slow=31						
SDV	Santo Domingo	36.94	237	*e*P	P	01 01 08.5	+2.5
	17nm,1.4s						
PTGA	Pitinga	38.23	214	P	P	01 01 15.1	-1.5
	1.0nm,0.3s,baz=70,slow=17,SNR=3.4						
ROSC	El Rosal	42.37	237	LR	LR	01 17 44.6	
	comp=Z,209nm,21.8s,baz=36,slow=34						
CLL	Collm	42.51	48	*e*P	P	01 01 51.0	-0.7
TOA1	Torodi Ar. Sit	42.69	107	*e*P	P	01 01 53.2	-0.4
TOA0	Torodi Ar. Sit	42.70	107	*e*P	P	01 01 52.9	-0.8
TORD	Torodi Ar. Bea	42.70	107	P	P	01 01 53.2	-0.5
	2.6nm,1.0s,baz=303,slow=6.7,SNR=8.0						
GEC2	GERESS Array S	42.82	52	*e*P	P	01 01 56.1	+1.7
	15nm,1.9s						
GERES	GERESS Array B	42.82	52	P	P	01 01 56.1	+1.7
	0.3nm,0.6s,baz=262,slow=6.6,SNR=3.1						
NB200	NORSAR Array S	43.38	34	*e*P	P	01 01 59.3	+0.6
NOA	NORSAR Array B	43.38	34	P	P	01 01 59.3	+0.6
	1.5nm,1.0s,baz=255,slow=8.6,SNR=2.7						
ULM	Lac du Bonnet	44.29	310	LR	LR	01 19 02.6	
	comp=Z,244nm,21.2s,baz=64,slow=34						
H10N2	ASCENSION HYDR	47.06	144	T	T	01 52 29.1	
	baz=330,slow=75,SNR=107						
H10N3	ASCENSION HYDR	47.06	144	T	T	01 52 29.4	
	baz=330,slow=75,SNR=85						
H10N1	ASCENSION HYDR	47.08	144	T	T	01 52 30.5	
	baz=330,slow=75,SNR=107						
HKT	Hockley	47.32	282	*e*P	P	01 02 29.8	-0.4
H10S1	ASCENSION HYDR	47.95	145	T	T	01 53 34.7	
	baz=331,slow=75,SNR=12						
H10S3	ASCENSION HYDR	47.95	145	T	T	01 53 35.0	
	baz=331,slow=75,SNR=14						
H10S2	ASCENSION HYDR	47.96	145	T	T	01 53 36.0	
	baz=331,slow=75,SNR=13						
FIA0	FINESS Array S	50.51	35	*e*P	P	01 02 53.5	-0.8
FINES	FINESS Array B	50.51	35	P	P	01 02 53.5	-0.8
	2.4nm,0.9s,baz=246,slow=9.4,SNR=7.3						
AKASG	Malin Array Be	52.75	48	P	P	01 03 10.3	-1.0
	0.3nm,0.4s,baz=273,slow=6.9,SNR=8.0						
AKBB	Malin Array Si	52.75	48	*e*P	P	01 03 10.3	-1.0
	14nm,1.6s						
PD31	Pinedale Array	54.51	302	*e*P	P	01 03 23.8	-0.8
	9.7nm,1.6s						
PDAR	Pinedale Array	54.51	302	P	P	01 03 23.8	-0.8
	0.5nm,0.8s,baz=54,slow=7.7,SNR=4.4						
PDAR				LR	LR	01 25 29.1	
	comp=Z,195nm,20.2s,baz=67,slow=35						
YKA	Yellowknife Ar	54.54	327	P	P	01 03 24.6	+0.4
	0.3nm,0.7s,baz=85,slow=7.8,SNR=3.3						
YKA				PcP	PcP	01 04 26.8	-0.5
	0.1nm,0.7s,baz=68,slow=4.0,SNR=3.0						
YKB5	Yellowknife Ar	54.54	327	*e*P	P	01 03 24.6	+0.4
YKB5				*e*PcP	PcP	01 04 26.8	-0.5
BR101	Keskin Array S	58.29	60	*e*P	P	01 03 52.3	+0.8
BRTR	Keskin Array B	58.29	60	P	P	01 03 52.3	+0.8
	0.9nm,0.9s,baz=316,slow=4.0,SNR=4.6						
ABKAR	Akbulak array	71.88	43	*e*P	P	01 05 19.7	+0.2
	1.8nm,0.9s						
ZAA1	Zalesovo Array	81.41	29	*e*P	P	01 06 12.7	-0.6
ZALV	Zalesovo Beam	81.42	29	P	P	01 06 12.7	-0.6
	0.7nm,0.7s,baz=308,slow=7.3,SNR=4.4						
MAKZ	Makanchi	85.17	36	*e*P	P	01 06 33.2	+0.3
	2.2nm,0.8s						
MK31	Makanchi Array	85.33	36	*e*P	P	01 06 34.2	+0.6
	3.2nm,1.3s						
MK32	Makanchi Array	85.33	36	*e*P	P	01 06 34.0	+0.3
MKAR	Makanchi Array	85.33	36	P	P	01 06 34.0	+0.3
	1.5nm,0.9s,baz=316,slow=3.3,SNR=12						
MK01	Makanchi Array	85.36	36	*e*P	P	01 06 33.8	+0.1
AS31	Alice Springs	169.51	32	*e*PKPab	PKPab	01 15 17.9	+0.4
ASAR	Alice Springs	169.51	32	PKPab	PKPab	01 15 17.9	+0.4
	1.1nm,1.1s,baz=339,slow=5.0,SNR=4.1						

IDC 20 00:55:45.6±1.1,**32°.66N**×**39°.92W**,**h0**^{km},**mb3.6**/5, **mb1 3.7**/5,**mb1mx3.4**/46,**mbtmp3.6**/5,**Error ellipse: s-maj=32.4km s-min=26.8km az=32.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGA	Pitinga	38.23	214	P	P	01 03 07.7	+0.2
	0.8nm,0.3s,baz=60,slow=6.1,SNR=2.7						
TORD	Torodi Ar. Bea	42.63	107	P	P	01 03 43.7	-0.3
	1.3nm,1.0s,baz=308,slow=7.6,SNR=3.1						
PDAR	Pinedale Array	54.59	302	P	P	01 05 15.0	-1.1
	0.1nm,0.4s,baz=61,slow=9.4,SNR=2.7						
YKA	Yellowknife Ar	54.61	327	P	P	01 05 16.3	+0.8
	0.1nm,0.7s,baz=87,slow=8.0,SNR=2.7						
MKAR	Makanchi Array	85.33	36	P	P	01 08 24.6	0.0
	0.9nm,0.9s,baz=307,slow=3.5,SNR=5.2						

ISCJB 20 00:58:21.4±0.2,32°.56N±0°.05×40°.06W±0°.04,h13^{km}, mb4.5/77,Error ellipse: s-maj=7.6km s-min=4.8km az=172.5

IDC 20 00:58:21.0±0.5,32°.59N×40°.08W,h0^{km},mb4.2/25, mb1 4.3/25,mb1mx4.2/48,mbtmp4.2/25,Error ellipse: s-maj=14.6km s-min=12.6km az=165.0

NEIC 20 00:58:22.6±0.1,32°.54N×40°.03W,h10^{km},mb4.6/53,Error ellipse: s-maj=5.1km s-min=3.1km az=171.0

ISC 20 00:58:23.1±0.4,**32°.59N**±0°.08×**40°.02W**±0°.07,**h13**^{km},**n124**, σ**0^s.74**/121,**mb4.5**/80,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRLN	Deer Lake	21.17	327	*e*P	P	01 03 07.4	-0.6
	40nm,0.8s						
ANWB	Willy Bob	24.60	238	*e*P	P	01 03 41.6	-1.5
	99nm,1.1s						
ESDC	Sonseca Array	29.82	66	P	P	01 04 29.5	-0.4
	2.4nm,1.2s,baz=266,slow=7.8,SNR=5.1						
ES19	SONSECA Array	29.87	66	*e*P	P	01 04 30.4	0.0
CLF	Chambon-Foret	35.26	51	*e*P	P	01 05 17.5	+0.2
	12nm,0.8s						
FRB	Frobisher Bay	35.91	339	P	P	01 05 21.6	-1.0
	3.4nm,1.0s,baz=145,slow=8.8,SNR=8.2						
SSB	Saint Sauveur	36.46	56	*e*P	P	01 05 28.9	+1.2
	5.9nm,1.0s						
SDV	Santo Domingo	36.85	237	*e*P	P	01 05 32.5	+1.0
	7.4nm,0.9s						
PTGA	Pitinga	38.12	214	P	P	01 05 42.7	+0.7
	10.0nm,0.8s,baz=23,slow=12,SNR=14						
SENIN	Lac Senin/Sane	38.46	55	*e*P	P	01 05 45.5	+0.6
	5.8nm,0.9s						
BFO	Black Forest	39.32	52	*e*P	P	01 05 51.7	-0.1
	6.0nm,1.0s						
DAVOX	Davos/Dischmat	40.26	54	P	P	01 06 01.2	+1.3
	3.8nm,0.7s						
DAVA	Damuels	40.29	54	*e*pP	P	01 06 01.3	+1.2
	4.8nm,0.9s						
RETA	Reutte	40.90	53	*e*P	P	01 06 05.5	+0.5
	4.9nm,1.1s						
MOTA	Moosalm	41.12	54	*e*P	P	01 06 07.6	+0.7
	3.3nm,0.8s						
SQTA	Sankt Quirin	41.19	54	*e*pP	P	01 06 08.4	+1.0
	6.4nm,0.9s						
TAM	Tamanrasset	41.23	92	*e*P	P	01 06 09.0	+0.9
	6.8nm,1.1s						
WATA	Walderalm	41.44	54	*e*P	P	01 06 10.2	+0.6
	2.9nm,0.6s						
TIC	Toumodi	41.54	121	*e*P	P	01 06 10.8	+0.3
DBIC	Dimbokro	41.64	121	*e*P	P	01 06 11.1	-0.2
	12nm,1.0s						
DBIC	Dimbokro	41.64	121	P	P	01 06 11.3	0.0
	6.5nm,0.9s,baz=298,slow=7.0,SNR=6.8						
LIC	Lamto	41.82	121	*e*P	P	01 06 12.4	-0.4
	31nm,0.8s						
KIC	Kosan Boka	41.93	121	*e*P	P	01 06 13.3	-0.4
	66nm,1.6s						
ABTA	Abfaltersbach	42.07	55	*e*P	P	01 06 15.2	+0.6
	6.1nm,0.9s						
CLL	Collm	42.61	48	*e*P	P	01 06 19.0	+0.2
KBA	Koelnbreinsper	42.65	54	*e*pP	P	01 06 21.0	+1.6
	4.4nm,1.4s						
TOA1	Torodi Ar. Sit	42.69	107	*e*P	P	01 06 18.9	-1.0
TOA0	Torodi Ar. Sit	42.69	107	*e*P	P	01 06 19.9	0.0
	14nm,0.9s						
TORD	Torodi Ar. Bea	42.69	107	P	P	01 06 18.9	-1.0
	12nm,0.9s,baz=308,slow=7.6,SNR=45						
GEA0	GERESS Array S	42.91	51	*e*P	P	01 06 21.3	-0.2
GEC2	GERESS Array S	42.91	51	*e*P	P	01 06 21.3	-0.2
	1.9nm,0.7s						
GERES	GERESS Array B	42.91	51	P	P	01 06 20.5	-1.0
	0.8nm,0.7s,baz=271,slow=8.7,SNR=9.1						
OBKA	Obir	43.48	55	*e*P	P	01 06 26.3	+0.3
	5.2nm,0.7s						
NB2	NORSAR Subarra	43.49	33	P	P	01 06 26.2	+0.3
	comp=Z,1.1nm,0.7s,baz=253,slow=7.9						
NB200	NORSAR Array S	43.49	33	*e*P	P	01 06 26.4	+0.6
NOA	NORSAR Array B	43.49	33	P	P	01 06 26.4	+0.6
	comp=Z,2.3nm,0.8s,baz=254,slow=8.0,SNR=6.5						
WLAR	White Oak Lake	44.05	287	*e*P	P	01 06 32.2	+1.4
	comp=Z,15nm,0.9s						
FCC	Fort Churchill	44.30	323	*e*P	P	01 06 33.2	+0.9
	comp=Z,2.9nm,0.8s						
ULM	Lac du Bonnet	44.34	311	P	P	01 06 31.9	-0.9
	comp=Z,1.0nm,0.4s,baz=70,slow=6.7,SNR=4.8						
TUL1	Leonard	45.69	290	*e*P	P	01 06 44.1	+0.4
	comp=Z,13nm,1.0s						
H10N2	ASCENSION HYDR	46.98	144	T	T	01 56 42.3	
	baz=330,slow=75,SNR=62						
H10N3	ASCENSION HYDR	46.99	144	T	T	01 56 42.7	
	baz=330,slow=75,SNR=65						
H10N1	ASCENSION HYDR	47.00	144	T	T	01 56 43.8	
	baz=330,slow=75,SNR=60						
HKT	Hockley	47.31	282	*e*P	P	01 06 56.6	+0.2
	comp=Z,11nm,0.9s						
H10S1	ASCENSION HYDR	47.87	145	T	T	01 57 47.1	
	baz=331,slow=75,SNR=41						
H10S3	ASCENSION HYDR	47.87	145	T	T	01 57 47.3	
	baz=331,slow=75,SNR=56						
H10S2	ASCENSION HYDR	47.88	145	T	T	01 57 48.3	
	baz=331,slow=75,SNR=48						
CBKS	Cedar Bluff	48.15	295	*e*P	P	01 07 03.0	0.0
	comp=Z,6.9nm,0.5s						
FFC	Flin Flon	48.17	317	*e*P	P	01 07 03.1	+0.2
	comp=Z,2.6nm,1.0s						
WMOK	Wichita Mounta	48.34	290	*e*P	P	01 07 05.1	+0.5
	comp=Z,6.6nm,1.0s						
OTAV	Otavalo	48.43	236	*e*P	P	01 07 06.1	+0.3
	comp=Z,1.5nm,0.5s						
BDFB	Brasilia	48.56	190	P	P	01 07 06.1	-0.3
	comp=Z,7.2nm,0.8s,baz=19,slow=7.9,SNR=9.6						
RES	Resolute Bay	49.77	343	*e*P	P	01 07 15.1	+0.3
	comp=Z,2.1nm,1.0s						
RES	Resolute Bay	49.77	343	P	P	01 07 15.3	+0.5
	comp=Z,1.4nm,0.9s,baz=81,slow=6.8,SNR=3.6						
JCT	Junction City	50.41	285	*e*P	P	01 07 20.6	+0.2
	comp=Z,4.4nm,0.8s						
FIA0	FINESS Array S	50.62	35	*e*P	P	01 07 21.9	+0.5
FINES	FINESS Array B	50.62	35	P	P	01 07 21.9	+0.5
	comp=Z,3.6nm,0.7s,baz=260,slow=6.3,SNR=20						
FIA1	FINESS Array S	50.62	35	*e*P	P	01 07 21.1	-0.3
BUR08	Bucovina Ar. S	50.64	53	*e*P	P	01 07 22.6	+0.6
	comp=Z,8.1nm,1.4s						
BUR04	Bucovina Ar. S	50.66	53	*e*P	P	01 07 22.8	+0.7
MLR	Muntele Rosu	51.48	55	*e*P	P	01 07 28.8	+0.5
	comp=Z,18nm,1.3s						
KIEV	Kiev	52.84	48	*e*P	P	01 07 37.8	-0.4
	comp=Z,4.7nm,0.9s						
AKASG	Malin Array Be	52.85	48	P	P	01 07 38.0	-0.3
	comp=Z,1.8nm,0.6s,baz=273,slow=6.9,SNR=11						
AKBB	Malin Array Si	52.85	48	*e*P	P	01 07 38.2	0.0
	comp=Z,12nm,1.3s						
TX31	Lajitas Ar. Si	53.95	285	*e*P	P	01 07 47.1	+0.3
TXAR	Lajitas Array	53.95	285	P	P	01 07 45.3	-1.5
	comp=Z,1.2nm,0.9s,baz=61,slow=9.4,SNR=4.5						
ANMO	Albuquerque	54.34	292	*e*P	P	01 07 50.1	+0.4
	comp=Z,2.2nm,1.0s						
MNTX	Cornudas Mount	54.53	288	*e*P	P	01 07 51.5	+0.6
	comp=Z,1.3nm,0.9s						
BW06	Boulder Array	54.55	302	*e*P	P	01 07 51.5	+0.3
	comp=Z,16nm,1.9s						
PD31	Pinedale Array	54.55	302	*e*P	P	01 07 51.4	+0.2
	comp=Z,15nm,1.9s						
PDAR	Pinedale Array	54.55	302	*e*P	P	01 07 51.0	-0.1
PDAR	Pinedale Array	54.55	302	P	P	01 07 50.8	-0.4
	comp=Z,1.9nm,0.9s,baz=74,slow=6.6,SNR=11						
YKA	Yellowknife Ar	54.62	327	P	P	01 07 50.7	-0.4
	comp=Z,1.2nm,0.8s,baz=85,slow=7.2,SNR=16						
YKA				PcP	PcP	01 08 53.9	0.0
	comp=Z,0.3nm,0.5s,baz=88,slow=4.4,SNR=11						
YKB5	Yellowknife Ar	54.62	327	*e*P	P	01 07 51.4	+0.3

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LPAZ  La Paz            55.55 213  eP      P       01 07 58.9 -0.1
      comp=Z,3.3nm,0.8s
LPAZ  La Paz            55.55 213  P       P       01 07 58.8 -0.2
      comp=Z,2.5nm,0.6s,baz=20,slow=5.7,SNR=12
WALA  Waterton Lakes    56.09 310  eP      P       01 08 02.0  0.0
      comp=Z,5.8nm,1.0s
SRU   San Rafael Swe    56.22 298  eP      P       01 08 02.5 -0.8
      comp=Z,2.7nm,0.9s
KLMR  Klimovskoe        57.15  35  eP      P       01 08 05.8 -3.4
KLMR                                AMP            01 08 16.8
      comp=Z,13nm,1.6s
DUG   Dugway, Tooele    57.59 300  eP      P       01 08 13.3 +0.4
      comp=Z,4.1nm,1.0s
NEW   Newport           58.35 310  eP      P       01 08 18.3 +0.4
      comp=Z,6.1nm,1.0s
NEW   Newport           58.35 310  P       P       01 08 17.1 -0.9
      comp=Z,4.2nm,0.9s,baz=66,slow=7.5,SNR=7.1
BR101 Keskin Array S    58.37  60  eP      P       01 08 18.9 +0.5
BR131 Keskin Array S    58.37  60  eP      P       01 08 18.5 +0.1
      comp=Z,5.7nm,1.0s
BRTR  Keskin Array B    58.37  60  P       P       01 08 18.9 +0.5
      comp=Z,3.0nm,0.8s,baz=271,slow=5.7,SNR=15
MNMC  Minye Minye       58.70 213  eP      P       01 08 20.0 -0.9
      comp=Z,15nm,0.8s
CCUT  Cedar City        58.82 297  eP      P       01 08 22.7 +1.0
      comp=Z,4.7nm,1.1s
PSUT  Pine Spring       58.87 298  eP      P       01 08 22.8 +0.8
      comp=Z,5.9nm,1.2s
PB11  IPOC Station P    59.27 213  eP      P       01 08 23.9 -0.8
      comp=Z,24nm,0.9s
J08A  Circle Bar Ran    60.66 305  eP      P       01 08 34.7 +0.6
      comp=Z,12nm,1.3s
INK   Inuvik            61.41 335  eP      P       01 08 38.5 -0.1
      comp=Z,7.9nm,1.4s
INK   Inuvik            61.41 335  P       P       01 08 38.6 +0.1
      comp=Z,0.9nm,0.7s,baz=90,slow=2.9,SNR=3.0
LVC   Limon Verde       61.44 211  eP      P       01 08 39.5 -0.2
      comp=Z,4.9nm,0.8s
KVN   Kaiserville       61.83 300  eP      P       01 08 42.1  0.0
      comp=Z,7.0nm,1.3s
NV01  Mina Array Sit    62.19 300  eP      P       01 08 44.3 -0.4
NVAR  Mina Array Bea    62.19 300  P       P       01 08 44.0 -0.7
      comp=Z,0.9nm,0.8s,baz=72,slow=6.0,SNR=4.1
GNI   Garni             66.21  57  eP      P       01 09 11.0 +0.1
ARU   Arti              67.93  36  eP      P       01 09 21.4  0.0
      comp=Z,4.8nm,0.4s
NRIK  Noril'sk          71.43  17  P       P       01 09 43.4 +0.7
      comp=Z,2.3nm,0.3s,baz=332,slow=2.7,SNR=4.8
ABKAR Akbulak array     71.99  43  eP      P       01 09 47.4 +1.1
      comp=Z,4.4nm,0.9s
H09W1 TRISTAN DA CUN    73.99 157  T       T       02 30 34.8
RAYN  Ar Rayn           74.15  72  eP      P       01 09 59.1 -0.6
      comp=Z,2.4nm,0.9s
BRVK  Borovoye          75.49  36  eP      P       01 10 06.4 -0.4
GEYT  Alibeck           76.49  54  P       P       01 10 14.1 +1.2
      comp=Z,2.8nm,0.9s,baz=289,slow=9.2,SNR=3.7
KURK  Kurchatov         81.00  34  eP      P       01 10 38.3 +0.9
ZAA1  Zalesovo Array    81.53  29  eP      P       01 10 40.1  0.0
ZAA0  Zalesovo Array    81.53  29  eP      P       01 10 40.6 +0.5
      comp=Z,5.2nm,1.1s
ZALV  Zalesovo Beam     81.53  29  eP      P       01 10 41.0 +0.8
ZALV  Zalesovo Beam     81.53  29  P       P       01 10 40.1 -0.1
      comp=Z,2.8nm,0.9s,baz=294,slow=8.0,SNR=10
CHGR  Chuyangaron       83.32  48  eP      P       01 10 50.5 +0.6
      comp=Z,17nm,1.1s
GAR   Garm              83.84  47  eP      P       01 10 53.3 +0.7
      comp=Z,12nm,0.9s
AAK   Ala-Archa         84.07  42  eP      P       01 10 54.9 +1.1
      comp=Z,1.8nm,0.9s
MAKZ  Makanchi          85.28  36  eP      P       01 10 59.5 -0.1
      comp=Z,5.5nm,0.8s
MK31  Makanchi Array    85.44  36  eP      P       01 11 00.8 +0.3
      comp=Z,4.5nm,1.0s
MK32  Makanchi Array    85.44  36  eP      P       01 11 01.0 +0.5
MKAR  Makanchi Array    85.44  36  P       P       01 11 01.0 +0.5
      comp=Z,4.3nm,0.8s,baz=316,slow=5.1,SNR=38
MK01  Makanchi Array    85.47  36  eP      P       01 11 00.5 -0.1
NRN   Naryn             85.70  43  eP      P       01 11 02.8 +0.6
      comp=Z,4.7nm,0.8s
QSPA  South Pole Qui   122.49 180  ePKPdf  PKPdf   01 17 17.1 -0.3
NWAO  Narrogin (SRO)   160.87  97  ePKPab  PKPab   01 19 04.2 -1.5
WR1   Warramunga Arr   166.43  23  ePKPdf  PKPdf   01 18 29.9 +1.2
WR1                                ePKPab  PKPab   01 19 29.8 -0.3
WRA   Warramunga Arr   166.43  23  PKP     PKPdf   01 18 29.9 +1.2
      comp=Z,0.3nm,0.7s,baz=343,slow=1.7,SNR=2.6
WRA                                PKPab   PKPab   01 19 29.8 -0.3
      comp=Z,1.0nm,1.1s,baz=341,slow=5.3,SNR=3.1
AS31  Alice Springs    169.62  33  ePKPab  PKPab   01 19 44.6 +0.4
ASAR  Alice Springs    169.62  33  PKP     PKPdf   01 18 29.4 -1.5
      comp=Z,1.1nm,0.9s,baz=129,slow=1.3,SNR=8.0
ASAR                               PKPab   PKPab   01 19 44.6 +0.4
      comp=Z,1.7nm,0.9s,baz=335,slow=4.6,SNR=8.0
```

IDC 20 01:02:54.0±1.0**, 32°.66N×40°.04W, h0^{km}, mb3.7**/9**, mb1 3.8**/9**, mb1mx3.6**/51**, mbtmp3.7**/9**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx3.4**/44**, Error ellipse: s-maj=28.2km s-min=22.2km az=162.0, Northern Mid-Atlantic Ridge**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
BORG  Borgarnes         34.12  14  LR      LR      01 19 05.1
      comp=Z,391nm,18.9s,baz=327,slow=28
PTGA  Pitinga           38.17 213  P       P       01 10 15.6 +0.3
      3.1nm,0.6s,baz=312,slow=21,SNR=5.6
TORD  Torodi Ar. Bea    42.73 107  P       P       01 10 52.6 -0.5
      1.9nm,1.1s,baz=316,slow=6.0,SNR=6.0
GERES GERESS Array B    42.88  52  P       P       01 10 55.1 +1.0
      0.4nm,0.7s,baz=291,slow=11,SNR=2.8
H10N2 ASCENSION HYDR47.05 144  T       T       02 01 30.1
      baz=330
H10N3 ASCENSION HYDR47.05 144  T       T       02 01 30.4
      baz=330
H10N1 ASCENSION HYDR47.07 144  T       T       02 01 31.5
      baz=330
H10S1 ASCENSION HYDR47.93 145  T       T       02 02 35.8
      baz=332
H10S3 ASCENSION HYDR47.93 145  T       T       02 02 36.4
      baz=332
H10S2 ASCENSION HYDR47.95 145  T       T       02 02 36.1
      baz=332
FINES FINESS Array B    50.58  35  P       P       01 11 53.2 -0.8
      0.8nm,0.7s,baz=250,slow=4.1,SNR=2.9
AKASG Malin Array Be    52.82  48  P       P       01 12 10.0 -0.9
      0.2nm,0.3s,baz=277,slow=6.6,SNR=4.8
PDAR  Pinedale Array    54.50 302  P       P       01 12 22.4 -1.4
      0.5nm,0.9s,baz=84,slow=8.3,SNR=2.7
YKA   Yellowknife Ar    54.56 327  P       P       01 12 24.6 +1.1
      0.4nm,0.9s,baz=80,slow=7.4,SNR=3.5
H09W1 TRISTAN DA CUN    74.06 157  T       T       02 35 13.5
KURBB Kurchatov Arra    80.97  35  P       P       01 15 10.6 +0.3
      0.9nm,0.7s,baz=317,slow=5.9,SNR=7.0
MKAR  Makanchi Array    85.40  36  P       P       01 15 33.4 +0.1
      0.4nm,0.7s,baz=20,slow=3.9,SNR=5.2
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*IDC **20** 01:08:10.4±0.8, 32°.65N×39°.93W, h0^{km}, mb3.9/13, mb1 4.0/13, mb1mx3.8/52, mbtmp3.9/13, MS4.3/12, Ms1 4.3/12, ms1mx3.9/45, Error ellipse: s-maj=25.4km s-min=18.0km az=148.0*

*ISCJB **20** 01:08:11.1±0.5, 32°.7N±0°.1×39°.88W±0°.10, h13^{km}, mb4.2/16, MS4.3/12, Error ellipse: s-maj=15.2km s-min=11.8km az=167.0*

*NEIC **20** 01:08:12.5±0.3, 32°.64N×39°.83W, h10^{km}, mb4.4/5, Error ellipse: s-maj=9.9km s-min=7.3km az=170.0*

*GCMT **20** 01:08:15.5±0.5, 32°.83N±0°.05×39°.86W±0°.04, h22^{km}±1^{km}, MW5.0/73, Moment Tensor Solution. s21,c23; s73,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.19±.36; $M_{\theta\theta}$1.62±.23; $M_{\phi\phi}$2.57±.21; $M_{r\theta}$0.95±.43; $M_{\theta\phi}$1.25±.14; $M_{\phi r}$-0.85±.32; Best double couple: $M_0$3.96700×10^{16} NP1:ϕ_s21.00000°, δ48.00000°, λ-108.00000°. NP2: ϕ_s227.00000°, δ45.00000°, λ-71.00000°. Principal axes: T 3.4360, Plg1.0000°, Azm124.0000°; N 1.0620, Plg14.0000°, Azm34.0000°; P -4.4980, Plg76.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 01:08:12.6±0.7**, 32°.7N**±0°.1×**39°.9W**±0°.1**, h13^{km}, n49, σ0^{s}.98**/34**, mb4.1**/16**, MS4.3**/13**, Northern Mid-Atlantic Ridge**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
SCHQ  Schefferville     29.15 327  LR      LR      01 24 46.2
      comp=Z,1µm,18.4s,baz=136,slow=34
PTGA  Pitinga           38.24 214  P       P       01 15 32.1 -0.3
      1.6nm,0.3s,baz=342,slow=23,SNR=4.7
DAVOX Davos/Dischmat    40.15  55  P       P       01 15 48.3 -0.1
      2.5nm,0.8s
CLL   Collm             42.49  48  eP      P       01 16 08.0 +0.7
CLL                                Lm      MLR     02 08 00.0
      comp=Z,300nm,21.6s
TOA1  Torodi Ar. Sit    42.64 107  eP      P       01 16 08.6 -0.4
TOA0  Torodi Ar. Sit    42.64 107  eP      P       01 16 08.8 -0.2
TORD  Torodi Ar. Bea    42.64 107  P       P       01 16 08.6 -0.4
      comp=Z,3.3nm,0.9s,baz=309,slow=9.1,SNR=14
GEC2  GERESS Array S    42.80  52  eP      P       01 16 10.5 +0.5
      comp=Z,9.4nm,1.8s
GERES GERESS Array B    42.80  52  P       P       01 16 10.5 +0.5
      comp=Z,0.5nm,0.7s,baz=258,slow=6.7,SNR=3.7
ULM   Lac du Bonnet     44.34 310  LR      LR      01 33 17.5
      comp=Z,292nm,21.3s,baz=71,slow=34
H10N2 ASCENSION HYDR47.01 144  T       T       02 06 46.5
      baz=330,slow=75,SNR=83
H10N3 ASCENSION HYDR47.01 144  T       T       02 06 49.6
      baz=330,slow=75,SNR=84
H10N1 ASCENSION HYDR47.03 144  T       T       02 06 50.7
      baz=330,slow=75,SNR=102
H10S1 ASCENSION HYDR47.89 145  T       T       02 07 54.9
      baz=331,slow=75,SNR=14
H10S3 ASCENSION HYDR47.90 145  T       T       02 07 54.3
      baz=331,slow=75,SNR=14
H10S2 ASCENSION HYDR47.91 145  T       T       02 07 56.1
      baz=331,slow=75,SNR=14
FIA0  FINESS Array S    50.51  35  eP      P       01 17 10.2 +0.2
FINES FINESS Array B    50.51  35  P       P       01 17 10.2 +0.2
      comp=Z,4.2nm,1.0s,baz=241,slow=3.9,SNR=4.2
AKASG Malin Array Be    52.73  48  P       P       01 17 26.2 -0.6
      comp=Z,1.1nm,0.6s,baz=275,slow=6.2,SNR=7.0
AKBB  Malin Array Si    52.73  48  eP      P       01 17 26.2 -0.6
      comp=Z,8.6nm,1.4s
ANMO  Albuquerque       54.38 292  LR      LR      01 39 46.5
      comp=Z,279nm,19.8s,baz=61,slow=35
PD31  Pinedale Array    54.57 302  eP      P       01 17 41.5 +0.7
      comp=Z,5.5nm,1.3s
PDAR  Pinedale Array    54.57 302  eP      P       01 17 42.8 +2.0
PDAR  Pinedale Array    54.57 302  P       P       01 17 41.5 +0.7
      comp=Z,0.6nm,0.7s,baz=70,slow=10,SNR=4.8
PDAR                               LR      LR      01 39 24.2
      comp=Z,178nm,20.3s,baz=80,slow=34
YKA   Yellowknife Ar    54.59 327  P       P       01 17 40.5 +0.2
      comp=Z,0.2nm,0.8s,baz=88,slow=7.4,SNR=3.4
YKA                                PcP     PcP     01 18 41.6 -1.7
      comp=Z,0.1nm,0.6s,baz=83,slow=4.1,SNR=3.2
YKA                                LR      LR      01 39 57.2
      comp=Z,36nm,19.4s,baz=72,slow=35
YKB5  Yellowknife Ar    54.59 327  eP      P       01 17 40.5 +0.2
YKB5                               ePcP    PcP     01 18 41.6 -1.7
LENM  Lemitar           55.03 291  eP      P       01 17 46.7 +2.5
LPAZ  La Paz            55.66 213  eP      P       01 17 50.1 +0.8
      comp=Z,14nm,1.5s
LPAZ  La Paz            55.66 213  P       P       01 17 49.1 -0.2
      comp=Z,1.2nm,0.7s,baz=20,slow=9.8,SNR=4.3
BR101 Keskin Array S    58.26  60  eP      P       01 18 07.9 +0.8
BRTR  Keskin Array B    58.26  60  P       P       01 18 07.9 +0.8
      comp=Z,1.1nm,0.9s,baz=232,slow=6.0,SNR=4.9
NEW   Newport           58.35 310  LR      LR      01 41 45.4
      comp=Z,288nm,20.9s,baz=81,slow=34
ELK   Elko              59.21 301  LR      LR      01 42 27.1
      comp=Z,244nm,19.3s,baz=77,slow=35
C09A  Chrisman Ranch    59.22 310  eP      P       01 18 10.8 -2.6
      comp=Z,38nm,0.2s
NVAR  Mina Array Bea    62.22 300  LR      LR      01 45 37.8
      comp=Z,355nm,18.1s,baz=42,slow=36
PFO   Pinyon Flats O    62.61 294  LR      LR      01 43 24.1
      comp=Z,235nm,19.4s,baz=116,slow=34
DLBC  Dease Lake        62.86 324  LR      LR      01 46 07.9
      comp=Z,509nm,18.1s,baz=92,slow=36
BBB   Bella Bella       63.91 317  LR      LR      01 46 58.0
      comp=Z,256nm,18.4s,baz=64,slow=36
ILAR  Eielson Array     67.66 334  LR      LR      01 48 20.9
      comp=Z,137nm,18.4s,baz=93,slow=36
AKTO  Aktyubinsk        70.21  42  P       P       01 19 24.8 -0.3
      comp=Z,1.7nm,0.7s,baz=320,slow=6.0,SNR=6.3
H09W1 TRISTAN DA CUN    74.04 157  T       T       02 40 35.3
KURK  Kurchatov         80.88  34  eP      P       01 20 25.9 -0.3
KURBB Kurchatov Arra    80.90  35  P       P       01 20 25.9 -0.4
      comp=Z,1.1nm,0.8s,baz=310,slow=5.8,SNR=7.5
MK31  Makanchi Array    85.33  36  eP      P       01 20 49.5 +0.1
      comp=Z,1.7nm,1.1s
MK32  Makanchi Array    85.33  36  eP      P       01 20 49.6 +0.3
MKAR  Makanchi Array    85.33  36  P       P       01 20 49.6 +0.3
      comp=Z,1.1nm,0.8s,baz=304,slow=6.6,SNR=9.0
MK01  Makanchi Array    85.35  36  eP      P       01 20 50.1 +0.6
AS31  Alice Springs    169.51  33  ePKPab  PKPab   01 29 34.0 +0.7
ASAR  Alice Springs    169.51  33  PKPab   PKPab   01 29 34.0 +0.7
      comp=Z,0.3nm,0.7s,baz=343,slow=2.9,SNR=3.3
```

MEX 20 01:10:34.2±0.4**, 16°.80N×100°.17W, h8^{km}**±7^{km}**, MD3.6, Near coast of Guerrero**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
CAIG  El Cayaco          0.26 339  i P     Pg      01 10 39.1 -0.4
CAIG                               i S     Sg      01 10 43.0  0.0
MEIG  Mezcala            1.24  25  eP      Pb      01 10 54.1 -3.7
MEIG                               eS      Sg      01 11 08.9 -5.1
ARIG  Puente Sto Nin     1.48 353  i P     Pn      01 10 57.5 -3.7
ARIG                               eS      Sn      01 11 15.2 -5.7
PLIG  Platanillo         1.71  22  eP      Pn      01 11 00.8 -3.6
```

---

*SOME **20** 01:15:46.8, 41°.75N×79°.93E, h10^{km}*

*NNC **20** 01:15:46.8±2.7, 41°.89N×79°.99E, h0^{km}, mb2.3, mpv2.3, Error ellipse: s-maj=18.9km s-min=14.3km az=105.0*

ISC 20 01:15:46.9±3.7**, 41°.9N**±0°.1×**80°.1E**±0°.1**, h14^{km}**±13^{km}**, n7, σ0^{s}.75**/13**, 1C-2D, Southern Xinjiang**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
UZB   Uzynbulak          1.52 329  P       Pn      01 16 13.2 -0.6
      0.9nm,0.3s
UZB                                S       Sn      01 16 32.3 -1.1
      0.5nm,0.2s
UZB   Uzynbulak          1.52 329  eP      Pg      01 16 15.8 -0.2
      0.2nm,0.1s
UZB                                eS      Sg      01 16 36.6 +0.9
      1.1nm,0.2s
PDGK  Podgornoye         1.54 343  P       Pb      01 16 15.7 +0.4
      0.4nm,0.3s
PDGK                               S       Sg      01 16 36.8 +0.3
      0.6nm,0.3s
PDGK  Podgornoye         1.54 343  ⇓P      Pn      01 16 13.4 -0.6
      2.0nm,1.0s
PDGK                               ⇑S      Sn      01 16 34.7 +0.8
      0.7nm,0.5s
SATY  Saty               1.74 315  P       Pn      01 16 17.1 +0.4
      1.4nm,0.3s
SATY                               S       Sn      01 16 39.0 +0.3
      1.0nm,0.1s
SATY  Saty               1.74 315  eP      Pb      01 16 18.8 +0.2
      1.0nm,0.1s
SATY                               eS      Sg      01 16 41.8 -1.0
      2.2nm,0.1s
MDOK  Medeo              2.60 301  ⇓Pg     Pb      01 16 34.0 +0.6
      2.1nm,1.0s
MDOK                               Lg      Lg      01 17 08.2
      1.3nm,0.6s
```

IDC 20 01:16:04.4±2.2**, 8°.45S×121°.65E, h0^{km}, mb3.3**/1**, mb1 3.5**/3**, mb1mx3.2**/39**, mbtmp3.3**/3**, ML2.8**/2**, Error ellipse: s-maj=272.7km s-min=28.7km az=54.0, Flores region**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
WRA   Warramunga Arr    16.77 134  Pn      Pn      01 19 58.9 -1.9
      0.0nm,0.3s,baz=306,slow=14,SNR=3.2
ASAR  Alice Springs     19.15 144  P       Pn      01 20 30.6 +0.3
      0.1nm,0.3s,baz=323,slow=12,SNR=7.0
MKAR  Makanchi Array    65.20 331  P       P       01 26 47.6 -0.1
      0.3nm,0.8s,baz=138,slow=7.5,SNR=2.8
```

IDC 20 01:18:44.2±4.6**, 14°.04S×173°.24E, h567^{km}**±68^{km}**, mb3.2**/4**, mb1 3.5**/5**, mb1mx3.1**/32**, mbtmp4.3**/5**, Error ellipse: s-maj=96.4km s-min=34.4km az=146.0, Fiji Islands region**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
DZM   Mont Dzumac       10.27 218  P       P       01 21 05.3 +0.1
      2.0nm,0.3s,baz=72,slow=19,SNR=13
STKA  Stephens Creek    33.94 233  P       P       01 24 41.0 -0.3
      0.7nm,0.3s,baz=58,slow=8.6,SNR=7.4
WRA   Warramunga Arr    37.60 256  P       P       01 25 11.5 -0.2
      2.2nm,0.5s,baz=89,slow=8.4,SNR=49
ASAR  Alice Springs     38.33 250  P       P       01 25 17.4 -0.2
      7.2nm,0.5s,baz=79,slow=9.2,SNR=97
ILAR  Eielson Array     84.18  16  P       P       01 30 15.8 -0.1
      0.3nm,0.6s,baz=223,slow=5.3,SNR=4.7
```

IDC 20 01:28:10.0±2.1**, 16°.28S×173°.41W, h0^{km}, mb3.7**/5**, mb1 4.0**/5**, mb1mx3.7**/32**, mbtmp3.7**/5**, Error ellipse: s-maj=125.2km s-min=24.7km az=146.0, Tonga Islands**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
WRA   Warramunga Arr    49.64 257  P       P       01 37 03.1 -0.8
      0.2nm,0.6s,baz=94,slow=7.1,SNR=3.2
ASAR  Alice Springs     49.84 253  P       P       01 37 05.2 -0.1
      1.1nm,0.5s,baz=87,slow=8.1,SNR=17
NVAR  Mina Array Bea    74.98  42  P       P       01 39 53.8 +0.1
      0.1nm,0.3s,baz=220,slow=6.7,SNR=3.7
PDAR  Pinedale Array    82.92  42  P       P       01 40 36.5 -0.6
      0.5nm,0.8s,baz=193,slow=4.6,SNR=3.7
ILAR  Eielson Array     83.30  11  P       P       01 40 37.5 -0.8
      0.4nm,0.8s,baz=224,slow=6.3,SNR=5.9
KMBO  Kilima Mbogo     145.14 243  PKPbc   PKPbc   01 47 49.5 -0.9
      0.5nm,0.4s,baz=180,slow=3.0,SNR=3.0
BRTR  Keskin Array B   146.83 320  PKPbc   PKPbc   01 47 55.2 +0.5
      0.9nm,0.8s,baz=31,slow=2.9,SNR=6.3
GERES GERESS Array B   147.00 351  PKPbc   PKPbc   01 47 55.0 +0.1
      0.7nm,0.7s,baz=47,slow=2.4,SNR=5.6
```

---

*ISCJB **20** 01:29:06.5±0.4, 32°.59N±0°.09×39°.95W±0°.07, h13^{km}, mb4.2/26, MS3.8/4, Error ellipse: s-maj=12.7km s-min=8.8km az=172.8*

*IDC **20** 01:29:06.2±0.6, 32°.64N×39°.92W, h0^{km}, mb3.9/16, mb1 4.0/16, mb1mx3.8/52, mbtmp3.9/16, MS3.9/4, Ms1 3.9/4, ms1mx3.4/39, Error ellipse: s-maj=20.7km s-min=14.5km az=154.0*

*NEIC **20** 01:29:07.7±0.3, 32°.58N×39°.94W, h10^{km}, mb4.5/11, Error ellipse: s-maj=10.4km s-min=6.9km az=169.0*

ISC 20 01:29:08.0±0.5**, 32°.6N**±0°.1×**39°.97W**±0°.09**, h13^{km}, n51, σ1^{s}.12**/39**, mb4.2**/26**, MS3.8**/4**, Northern Mid-Atlantic Ridge**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
HUMP  Col San Antoni    27.36 245  eP      P       01 34 49.3 -3.7
      48nm,1.3s
SJG   San Juan          27.60 245  LR      LR      01 42 14.1
      comp=Z,89nm,21.4s,baz=62,slow=28
MOQ   Mont Orford       27.94 306  eP      P       01 34 59.1 +1.1
AGP   Aguadilla         28.19 247  eP      P       01 34 58.5 -2.0
      344nm,1.5s
NCB   Newcomb           28.99 303  eP      P       01 35 07.6 +0.2
      24nm,1.6s
SCHQ  Schefferville     29.20 328  eP      P       01 35 03.0 -6.1
      65nm,2.0s
SCHQ  Schefferville     29.20 328  LR      LR      01 44 53.9
      comp=Z,305nm,21.2s,baz=348,slow=32
ESLA  Sonseca Array     29.79  66  eP      P       01 35 14.4 -0.1
      14nm,1.5s
ESDC  Sonseca Array     29.79  66  P       P       01 35 13.8 -0.7
      0.2nm,0.5s,baz=260,slow=7.7,SNR=3.1
SADO  Sadowa            32.60 303  LR      LR      01 47 30.0
      comp=Z,168nm,18.8s,baz=148,slow=34
TKL   Tuckaleechee C    36.17 287  LR      LR      01 48 16.3
      comp=Z,381nm,20.9s,baz=70,slow=32
PTGA  Pitinga           38.14 214  P       P       01 36 28.0 +0.9
      3.1nm,0.6s,baz=329,slow=22,SNR=5.8
DAVOX Davos/Dischmat    40.23  54  P       P       01 36 43.8 -0.7
      2.1nm,0.7s
TOA1  Torodi Ar. Sit    42.65 107  eP      P       01 37 04.5  0.0
TOA0  Torodi Ar. Sit    42.65 107  eP      P       01 37 04.3 -0.2
TORD  Torodi Ar. Bea    42.65 107  P       P       01 37 04.5  0.0
      2.7nm,0.9s,baz=311,slow=10,SNR=16
GEC2  GERESS Array S    42.88  51  eP      P       01 37 06.3 +0.2
      11nm,1.8s
GERES GERESS Array B    42.88  51  P       P       01 37 06.3 +0.2
      0.3nm,0.6s,baz=267,slow=6.7,SNR=5.2
H10N2 ASCENSION HYDR46.96 144  T       T       02 27 43.4
      baz=330,slow=75,SNR=79
H10N3 ASCENSION HYDR46.96 144  T       T       02 27 43.7
      baz=330,slow=75,SNR=79
H10N1 ASCENSION HYDR46.98 144  T       T       02 27 44.8
      baz=330,slow=75,SNR=82
H10S1 ASCENSION HYDR47.84 145  T       T       02 28 48.6
      baz=331,slow=75,SNR=43
H10S3 ASCENSION HYDR47.84 145  T       T       02 28 47.9
      baz=331,slow=75,SNR=48
H10S2 ASCENSION HYDR47.86 145  T       T       02 28 55.1
      baz=331,slow=75,SNR=40
BDFB  Brasilia          48.57 190  P       P       01 37 52.5 +1.2
      2.3nm,0.6s,baz=7.3,slow=13,SNR=5.1
FIA0  FINESS Array S    50.60  35  eP      P       01 38 05.8 -0.4
FINES FINESS Array B    50.60  35  P       P       01 38 05.8 -0.4
      2.4nm,0.8s,baz=246,slow=9.4,SNR=4.0
AKASG Malin Array Be    52.82  48  P       P       01 38 22.4 -0.6
      2.4nm,0.8s,baz=276,slow=6.3,SNR=9.8
AKBB  Malin Array Si    52.82  48  eP      P       01 38 22.4 -0.6
      11nm,1.6s
TXAR  Lajitas Array     53.99 285  P       P       01 38 31.3 -0.7
      0.4nm,0.7s,baz=59,slow=7.6,SNR=3.0
PD31  Pinedale Array    54.59 302  eP      P       01 38 36.4  0.0
      2.7nm,1.2s
PDAR  Pinedale Array    54.59 302  P       P       01 38 36.4  0.0
      1.0nm,0.9s,baz=72,slow=9.7,SNR=5.5
YKA   Yellowknife Ar    54.65 327  P       P       01 38 36.9 +0.8
      0.2nm,0.7s,baz=90,slow=7.4,SNR=4.3
YKB5  Yellowknife Ar    54.65 327  eP      P       01 38 36.9 +0.7
LPAZ  La Paz            55.57 213  P       P       01 38 44.1 +0.1
      1.5nm,0.7s,baz=335,slow=6.0,SNR=5.3
BR101 Keskin Array S    58.34  60  eP      P       01 39 01.6 -1.4
BRTR  Keskin Array B    58.34  60  P       P       01 39 01.6 -1.4
      0.9nm,0.9s,baz=330,slow=4.7,SNR=5.1
NV01  Mina Array Sit    62.23 300  eP      P       01 39 30.6 +0.8
NVAR  Mina Array Bea    62.23 300  P       P       01 39 30.6 +0.8
      0.8nm,0.9s,baz=82,slow=7.4,SNR=2.5
H09W1 TRISTAN DA CUN    73.97 157  T       T       03 01 31.4
GAR   Garm              83.81  47  eP      P       01 41 39.3 +1.9
      17nm,1.5s
MAKZ  Makanchi          85.26  36  eP      P       01 41 45.4 +1.0
      1.9nm,0.8s
MK31  Makanchi Array    85.42  36  eP      P       01 41 46.2 +0.9
      1.4nm,0.9s
MK32  Makanchi Array    85.42  36  eP      P       01 41 45.9 +0.7
MKAR  Makanchi Array    85.42  36  P       P       01 41 45.9 +0.7
      1.5nm,0.8s,baz=318,slow=5.2,SNR=13
MK01  Makanchi Array    85.44  36  eP      P       01 41 45.9 +0.5
NRN   Naryn             85.68  43  eP      P       01 41 49.9 +2.9
      2.1nm,0.7s
SONA0 Songino Array     94.45  22  eP      P       01 42 27.5 -0.4
SONM  Songino Array     94.45  22  P       P       01 42 27.5 -0.4
      0.2nm,0.6s,baz=287,slow=5.9,SNR=3.0
AS31  Alice Springs    169.60  33  ePKPab  PKPab   01 50 29.2 +0.1
ASAR  Alice Springs    169.60  33  PKPab   PKPab   01 50 29.2 +0.1
      0.1nm,0.3s,baz=333,slow=5.3,SNR=4.9
```

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*IDC **20** 01:32:16.7±1.6, 39°.73N×20°.70E, h0^{km}, mb3.5/3, mb1 3.5/4, mb1mx3.3/48, mbtmp3.5/4, ML3.5/1, MS3.5/2, Ms1 3.5/2, ms1mx3.0/37, Error ellipse: s-maj=31.2km s-min=25.5km az=86.0*

*ISCJB **20** 01:32:18.9±0.4, 39°.70N±0°.01×20°.52E±0°.02, h13^{km}±3^{km}, mb3.5/3, MS3.5/2, Error ellipse: s-maj=2.7km s-min=2.1km az=137.5*

*THE **20** 01:32:18.8, 39°.67N×20°.61E, h0^{km}±1^{km}, ML2.9/19, Error ellipse: s-maj=1.4km s-min=0.5km az=300.0*

*ATH **20** 01:32:18.6, 39°.67N×20°.61E, h12^{km}±1^{km}, ML3.0/11, Error ellipse: s-maj=1.3km s-min=0.6km az=292.0*

*BEO **20** 01:32:20.3±0.4, 39°.65N×20°.51E, h8^{km}±3^{km}, ML2.9/14*

ISC 20 01:32:18.8±0.8**, 39°.67N**±0°.02×**20°.59E**±0°.02**, h12^{km}**±5^{km}**, n125, σ1^{s}.31**/172**, mb3.5**/3**, 2C, Greece-Albania border region**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC        h  m  s   ISC
JAN   Janina             0.20  94  P       Pg      01 32 22.7 -0.6
```

```
JAN                              S      Sg     01 32 26.0 -0.3
JAN                              AML    AML    01 32 26.3
      comp=N,63526µm,0.3s
JAN                              AML    AML    01 32 26.4
      comp=E,53086µm,0.3s
JAN   Janina             0.20  94 P      Pg     01 32 22.6 -0.6
JAN                              S      Sg     01 32 26.0 -0.3
IGT   Igoumenitsa        0.24 236 ePg    Pg     01 32 23.6 -0.2
IGT                              eSg    Sg     01 32 28.5 +1.2
IGT   Igoumenitsa        0.24 236 P      Pg     01 32 23.7 -0.2
IGT                              S      Sg     01 32 27.7 +0.4
IGT                              AML    AML    01 32 30.7
      comp=E,4257µm,0.3s
IGT                              AML    AML    01 32 30.8
      comp=N,5995µm,0.4s
IGT   Igoumenitsa        0.24 236 P      Pg     01 32 23.6 -0.2
IGT                              S      Sg     01 32 28.5 +1.2
SRN   Sarande            0.50 295 P      Pg     01 32 28.2 -0.4
SRN                              S      Sg     01 32 36.6 +1.4
KASA  Kassiopi           0.51 279 P      Pg     01 32 29.1 +0.3
KASA                             S      Sg     01 32 36.4 +0.8
KASA                             AML    AML    01 32 40.4
      comp=E,4573µm,0.4s
KASA                             AML    AML    01 32 40.9
      comp=N,7206µm,0.4s
KEK   Kerkira            0.61 274 P      Pg     01 32 30.5 -0.2
KEK                              S      Sg     01 32 39.5 +0.7
KEK                              AML    AML    01 32 45.7
      comp=N,4131µm,0.4s
KEK                              AML    AML    01 32 45.8
      comp=E,3850µm,0.4s
KEK   Kerkira            0.61 274 P      Pg     01 32 30.5 -0.2
KEK                              S      Sb     01 32 40.2 +0.3
KPRO  Kipourio           0.66  64 P      Pg     01 32 30.8 -0.8
KPRO                             S      Sg     01 32 40.5 +0.1
KPRO                             AML    AML    01 32 43.3
      comp=N,4183µm,0.3s
KPRO                             AML    AML    01 32 45.3
      comp=E,3053µm,0.4s
KPRO  Kipourio           0.66  64 P      Pg     01 32 30.7 -0.9
KPRO                             S      Sb     01 32 41.1 -0.3
DSL   Palaion Diasel     0.66 144 P      Pg     01 32 30.9 -0.8
DSL                              S      Sg     01 32 40.7 +0.3
PENT  Pentalofos         0.67  39 P      Pg     01 32 31.1 -0.8
PENT                             S      Sg     01 32 40.5 -0.4
PENT                             AML    AML    01 32 42.2
      comp=E,1776µm,0.4s
PENT                             AML    AML    01 32 44.9
      comp=N,2280µm,0.7s
PENT  Pentalofos         0.67  39 P      Pg     01 32 31.2 -0.7
PENT                             S      Sg     01 32 40.4 -0.4
TPE   Tepelena           0.77 325 P      Pg     01 32 33.5 -0.1
NEST  Nestorio           0.82  25 P      Pg     01 32 34.4 -0.4
NEST                             S      Sg     01 32 45.6 +0.1
NEST                             AML    AML    01 32 48.1
      comp=E,2034µm,0.7s
NEST                             AML    AML    01 32 50.3
      comp=N,1288µm,0.3s
NEST  Nestorio           0.82  25 P      Pg     01 32 34.3 -0.4
NEST                             S      Sb     01 32 46.3 +0.2
TSLK  Tsoukalades, L     0.84 177 P      Pg     01 32 34.8 -0.3
LKD2  Lefkada island     0.88 177 P      Pg     01 32 35.1 -0.6
LKD2  Lefkada island     0.88 177 P      Pg     01 32 35.2 -0.6
LKD2                             S      Sb     01 32 49.2 +1.5
EVGI  Lefkada island     1.05 177 P      Pg     01 32 38.3 -0.7
EVGI  Lefkada island     1.05 177 P      Pg     01 32 37.9 -1.1
THL   Klokotos Trika     1.10  95 P      Pg     01 32 39.2 -0.9
THL                              S      Sb     01 32 54.3 +0.2
THL                              AML    AML    01 33 01.0
      comp=E,755µm,0.4s
THL                              AML    AML    01 33 01.9
      comp=N,621µm,0.5s
THL   Klokotos Trika     1.10  95 P      Pg     01 32 38.8 -1.2
THL                              S      Sb     01 32 54.5 +0.4
KZN   Kozani             1.11  55 P      Pg     01 32 38.9 -1.2
KZN   Kozani             1.11  55 P      Pg     01 32 38.7 -1.4
KZN                              S      Sn     01 32 55.6 +0.2
EVR   Evrytania          1.21 128 P      Pg     01 32 40.9 -1.1
EVR                              S      Sb     01 32 57.8 +0.6
EVR                              AML    AML    01 33 05.3
      comp=E,1529µm,0.4s
EVR                              AML    AML    01 33 06.2
      comp=N,1318µm,0.5s
EVR   Evrytania          1.21 128 P      Pg     01 32 40.9 -1.1
EVR                              S      Sn     01 32 58.4 +0.6
FNA   Florina            1.27  28 ePg    Pn     01 32 42.4 +0.1
FNA                              eSg    Sn     01 33 02.6 +3.4
FNA   Florina            1.27  28 P      Pn     01 32 42.1 -0.2
FNA                              S      Sn     01 32 59.8 +0.6
FNA                              AML    AML    01 33 05.4
      comp=N,990µm,0.4s
FNA                              AML    AML    01 33 06.0
      comp=E,1341µm,0.5s
FNA   Florina            1.27  28 P      Pn     01 32 42.1 -0.2
FNA                              S      Sn     01 33 00.5 +1.3
PVO   Paravola           1.28 145 P      Pn     01 32 42.3 -0.1
PVO   Paravola           1.28 145 P      Pg     01 32 43.1 -0.2
LRSO  Larissa Observ     1.39  89 P      Pg     01 32 45.0 -0.5
LRSO  Larissa Observ     1.39  89 P      Pb     01 32 44.9 +0.3
LRSO                             S      Sg     01 33 05.3 +1.8
OHR   Ohrid              1.45   6 iPn    Pg     01 32 46.9 +0.3
BIA   Bitola             1.46  22 iPn    Pb     01 32 46.0 +0.1
VLS   Valsamata          1.49 180 P      Pn     01 32 46.2 +0.9
VLS   Valsamata          1.49 180 P      Pn     01 32 45.9 +0.6
VLS                              S      Sg     01 33 06.8 +0.1
ANX   Ano Chora          1.49 136 P      Pb     01 32 46.4  0.0
ANX   Ano Chora          1.49 136 P      Pn     01 32 46.1 +0.7
ANX                              S      Sg     01 33 06.3 -0.5
AGG   Agios Georgios     1.50 115 P      Pb     01 32 46.3 -0.2
AGG                              S      Sg     01 33 06.4 -0.6
AGG                              AML    AML    01 33 12.0
      comp=E,1458µm,0.4s
AGG                              AML    AML    01 33 13.2
      comp=N,822µm,0.8s
AGG   Agios Georgios     1.50 115 P      Pn     01 32 45.7 +0.3
AGG                              S      Sg     01 33 07.9 +1.0
LIT   Litokhoron         1.52  73 P      Pb     01 32 47.0 +0.1
LIT   Litokhoron         1.52  73 P      Pn     01 32 45.9 +0.1
AXS   Araxos             1.59 157 P      Pb     01 32 48.5 +0.4
EFP   Efpalio            1.61 140 P      Pg     01 32 49.1 -0.5
SCTE  Santa Cesarea      1.68 285 P      Pn     01 32 48.7 +0.8
SERG  Sergoula           1.70 137 P      Pb     01 32 50.5 +0.6
RLS   Riolos of Patr     1.75 157 P      Pb     01 32 50.9 +0.2
TIR   Tirane             1.77 342 P      Pg     01 32 52.1 -0.5
KRUS  Krusevo            1.77  16 iPn    Pb     01 32 50.6 -0.5
LAKA  Lakka              1.79 142 P      Pb     01 32 51.9 +0.4
GRG   Griva              1.89  47 P      Pb     01 32 52.3 -0.9
GRG   Griva              1.89  47 P      Pn     01 32 51.6 +0.8
DRO   Drossia            1.93 153 P      Pb     01 32 53.3 -0.5
DSF   Desfina            1.96 129 P      Pb     01 32 54.2 -0.3
KLV   Kalavryta, Ach     2.03 143 P      Pb     01 32 55.3 -0.3
XOR   Xorichti           2.04  98 P      Pb     01 32 55.2 -0.5
XOR   Xorichti           2.04  98 P      Pn     01 32 54.1 +1.3
XOR                              S      Sn     01 33 19.7 +1.5
NEO   Neokhori           2.07  99 P      Pn     01 32 54.9 +1.6
NEO                              S      Sb     01 33 21.1 -0.8
ATAL  Atalanti           2.13 117 P      Pb     01 32 56.0 -1.2
HORT  Hortiatis          2.14  63 P      Pn     01 32 55.6 +1.4
VAY   Valandovo          2.24  42 iPn    Pn     01 32 56.5 +1.0
PLG   Polygyros          2.30  71 P      Pn     01 32 58.3 +1.8
KNT   Kendrikon          2.31  49 P      Pn     01 32 57.9 +1.3
KNT   Kendrikon          2.31  49 P      Pn     01 32 57.5 +0.9
STIP  Stip               2.36  30 iPn    Pb     01 33 00.5 -0.7
PAIG  Paliouri           2.39  83 P      Pn     01 32 58.3 +0.6
PAIG                             S      Sb     01 33 30.0 -1.2
SOH   Sokhos             2.41  61 P      Pn     01 32 59.5 +1.5
SOH   Sokhos             2.41  61 P      Pn     01 32 59.5 +1.5
CGL1  Ceglie Messapi     2.58 293 ePn    Pn     01 33 00.5 +0.2
FASA  Fasano             2.73 296 ePn    Pn     01 33 02.5 +0.2
DRME  Dracevica, Mon     2.73 338 ePn    Pn     01 33 03.1 +0.7
MASS  Massafra           2.81 291 ePn    Pn     01 33 03.6 +0.1
KKB   Krupnik            2.90  40 P      Pn     01 33 06.4 +1.7
NOCI  Noci               2.92 294 P      Pn     01 33 05.6 +0.6
PDG   Podgorica          2.94 340 ePn    Pn     01 33 05.7 +0.5
MMB   Musomiste          3.06  50 P      Pn     01 33 08.4 +1.4
BAI   Bari               3.18 298 ⇑iPn   Pn     01 33 08.4 -0.1
SG1   Sgolgore (BA)      3.21 293 ⇑iPn   Pn     01 33 09.2 +0.2
BARS  Barje              3.28  16 ePn    Pn     01 33 12.5 +2.6
BARS                             eSn    Sn     01 33 51.1 +2.3
TREB  Trebinje           3.48 332 ePn    Pn     01 33 13.3 +0.6
TREB                             eSn    Sn     01 33 54.8 +1.0
TREB  Trebinje           3.48 332 ePn    Pn     01 33 11.7 -1.0
VTS   Vitosha            3.53  33 ePn    Pn     01 33 15.8 +2.4
VTS                              eSn    Sn     01 33 57.0 +1.9
VTS   Vitosha            3.53  33 P      Pn     01 33 16.6 +3.2
SELS  Selova             3.57   6 ePn    Pn     01 33 17.1 +3.2
BRY   Bratogost          3.58 335 ePn    Pn     01 33 14.0 -0.2
SJES  Sjenica            3.62 353 ePn    Pn     01 33 15.7 +1.0
SJES                             eSn    Sn     01 33 59.6 +2.3
RZN   Rozhen             3.73  56 P      Pn     01 33 08.4 -7.9
STON  Ston               3.87 327 ePn    Pn     01 33 17.9 -0.1
STON                             Sn     Sn     01 34 01.5 -1.8
ZAPS  Zavoj              3.92  22 ePn    Pn     01 33 21.3 +2.6
ZAPS                             eSn    Sn     01 34 07.3 +2.8
IVAS  Ivanjica           3.92 355 ePn    Pn     01 33 21.6 +2.9
IVAS                             eSn    Sn     01 34 06.5 +1.9
PLD   Plovdiv            3.95  51 ePn    Pn     01 33 21.9 +2.7
PLD                              eSn    Sn     01 34 08.4 +3.0
BOVS  Bovan              4.05  12 ePn    Pn     01 33 22.8 +2.3
BOVS                             eSn    Sn     01 34 10.3 +2.5
GRUS  Gruza              4.22   1 ePn    Pn     01 33 24.4 +1.6
GRUS                             eSn    Sn     01 34 13.2 +1.3
BBLS  Lazi&#263;i        4.29 348 ePn    Pn     01 33 26.1 +2.3
BBLS                             eSn    Sn     01 34 15.5 +1.8
BBLS  Lazi&#263;i        4.29 348 ePn    Pn     01 33 28.2 +4.4
DIVS  Divibare           4.45 354 ePn    Pn     01 33 27.8 +1.8
DIVS                             eSn    Sn     01 34 18.1 +0.4
DIVS  Divibare           4.45 354 ePn    Pn     01 33 26.8 +0.8
TRUS  Trudelj            4.55 358 ePn    Pn     01 33 29.5 +2.1
HAPS  Han Pijesak,Bl     4.58 345 ePn    Pn     01 33 27.0 -0.9
KUBS  Kucevo             4.81   9 ePn    Pn     01 33 32.7 +1.8
FRGS  Fruska Gora        5.51 354 ePn    Pn     01 33 42.6 +2.0
FRGS                             eSn    Sn     01 34 43.6 -0.3
FRGS  Fruska Gora        5.51 354 ePn    Pn     01 33 36.3 -4.3
BLY   Banja Luka         5.67 335 ePn    Pn     01 33 43.2 +0.5
UDBI  Udbina             6.04 325 ePn    Pn     01 33 48.8 +1.0
UDBI                             Sn     Sn     01 34 56.4 -0.5
AQU   L'Aquila           6.06 299 ePn    Pn     01 33 48.2  0.0
NVLJ  Novalja            6.48 321 ePn    Pn     01 33 53.8  0.0
NVLJ                             Sn     Sn     01 35 04.2 -3.4
OZLJ  Ozalj              7.04 329 ePn    Pn     01 34 01.7 +0.2
CRES  Cresnjev           7.22 330 ePn    Pn     01 34 02.2 -1.8
CEY   Cerknica           7.57 325 ePn    Pn     01 34 05.1 -3.8
SOKA  Soboth             8.09 332 ePn    Pn     01 34 15.9 -0.2
      comp=N,0.7nm,0.3s
SOKA                             Sn     Sn     01 35 45.2 -2.3
      comp=N,0.3nm,0.3s
OBKA  Obir               8.14 329 ePn    Pn     01 34 17.4 +0.7
      comp=N,0.6nm,0.2s
OBKA                             eSn    Sn     01 35 47.1 -1.5
      comp=N,2.3nm,0.6s
ABTA  Abfaltersbach      9.21 323 Pn     Pn     01 34 31.7 +0.3
      comp=N,0.4nm,0.3s
ABTA                             Sn     Sn     01 36 13.0 -1.8
      comp=N,1.8nm,0.6s
MOA   Molln              9.37 333 ePn    Pn     01 34 34.5 +1.0
      comp=N,1.2nm,0.3s
WATA  Walderalm         10.07 322 ePn    Pn     01 34 44.4 +1.2
      comp=N,1.4nm,0.5s
SQTA  Sankt Quirin      10.17 321 ePn    Pn     01 34 45.9 +1.4
      comp=N,1.0nm,0.3s
MOTA  Moosalm           10.30 321 ePn    Pn     01 34 46.6 +0.1
      comp=N,0.6nm,0.4s
GERES GERESS Array B    10.41 334 Pn     Pn     01 34 48.5 +0.6
      comp=N,0.1nm,0.3s,baz=156,slow=13,SNR=4.9
FINES FINESS Array B    22.06   7 P      P      01 37 10.6 -2.5
      comp=N,1.4nm,0.8s,baz=163,slow=12,SNR=2.7
TORD  Torodi Ar. Bea    31.23 217 P      P      01 38 38.7 +0.5
      comp=N,0.5nm,0.8s,baz=28,slow=9.8,SNR=4.0
JMIC  Jan Mayen         34.74 344 LR     LR     01 54 56.4
      comp=N,63nm,19.6s,baz=90,slow=39
BORG  Borgarnes         34.84 330 LR     LR     01 54 22.5
      comp=N,97nm,19.5s,baz=101,slow=38
MKAR  Makanchi Array    44.49  60 P      P      01 40 29.1 -0.7
      comp=N,0.8nm,0.5s,baz=278,slow=7.3,SNR=26
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NSSP ***20*** *01:33:54.8, 38°.83N×43°.63E, h10^{km}, Ms3.4*
TEH ***20*** *01:33:55.3, 38°.90N×43°.55E, h8^{km}, ML3.1*
ISCJB ***20*** *01:33:56.7±0.4, 38°.89N±0°.02×43°.58E±0°.02, h0^{km}±4^{km}, Error ellipse: s-maj=3.2km s-min=2.9km az=41.9*
DDA ***20*** *01:33:56.3, 38°.91N×43°.56E, h16^{km}±2^{km}, ML3.6*
ISK ***20*** *01:33:56.1, 38°.91N×43°.56E, h5^{km}, ML3.4/18*
AZER ***20*** *01:33:58.1±0.6, 38°.99N×43°.57E, h3^{km}, ml3.2/25, Error ellipse: s-maj=3.7km s-min=2.0km az=62.0*
ISC 20 01:33:57.8±1.0**, 38°.91N**±0°.02×**43°.56E**±0°.02**, h5**^{km}±7^{km}**,**
n101, σ**1^s.18**/135**, 24C-17D, Turkey**

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Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s     ISC
VMUR  Van-Muradiye       0.08   8 iP     Pg     01 33 59.5 -0.3
VMUR                             iS     Sg     01 34 02.4 +1.4
ERCV  ERCIS-VAN          0.20 304 PG     Pg     01 34 01.0 -0.8
ERCV                             SG     Sg     01 34 05.1 +0.5
ERCV  ERCIS-VAN          0.20 304 ePg    Pg     01 34 01.0 -0.8
CLDR  Caldiran           0.37  50 PG     Pg     01 34 04.4 -0.5
CLDR                             SG     Sg     01 34 10.3 +0.5
CLDR  Caldiran           0.37  50 iP     Pg     01 34 04.7 -0.2
CLDR                             iS     Sg     01 34 10.8 +1.0
CLDR                             IAML_P
      comp=Z,54µm,0.2s
CLDR  Caldiran           0.37  50 ePg    Pg     01 34 04.3 -0.6
TVAN  Van                0.40 197 iP     Pg     01 34 05.6 +0.1
TVAN                             iS     Sb     01 34 13.1 -0.7
DYDN  Diyadin            0.64   9 iP     Pg     01 34 09.2 -0.9
DYDN                             iS     Sg     01 34 19.5 +0.9
DYDN                             IAML_P
      comp=Z,19µm,0.2s
ADCV  BITLIS_Adilcev     0.66 262 iP     Pg     01 34 09.4 -1.0
ADCV                             iS     Sg     01 34 20.1 +1.2
GEVA  Gevas              0.71 214 iP     Pg     01 34 10.2 -1.2
GEVA                             iS     Sb     01 34 22.7 -0.2
GEVA                             IAML_P
      comp=Z,12µm,0.2s
AKDM  Akdamar-Van        0.73 218 PG     Pg     01 34 10.7 -1.1
TUTA  Tutak              0.76 311 iP     Pg     01 34 10.7 -1.7
TUTA                             iS     Sg     01 34 21.8 -0.5
AGRB  Hanur-Agry         0.80 327 PG     Pg     01 34 12.2 -0.9
AGRB                             SG     Sg     01 34 24.0 +0.5
AGRB  Hanur-Agry         0.80 327 ePg    Pg     01 34 12.2 -0.9
MLAZ  Malazgirt-MUS      0.82 287 PG     Pg     01 34 13.4 -0.1
MLAZ                             SG     Sb     01 34 25.5 -0.5
BASK  Baskale_VAN        0.92 158 iP     Pg     01 34 14.0 -1.4
BASK                             IAML_P
      comp=Z,12µm,0.3s
IGDI  IGDIR              1.04  23 iP     Pg     01 34 16.3 -1.5
IGDI                             iS     Sn     01 34 35.5 +1.4
IGDI                             IAML_P
      comp=Z,3µm,0.2s
TASB  TASBURUN-IGDIR     1.20  26 PN     Pg     01 34 19.9 -0.8
TASB  TASBURUN-IGDIR     1.20  26 ePn    Pg     01 34 19.8 -0.9
GURO  Guroymak-BITLI     1.25 254 ePg    Pb     01 34 19.9 -1.9
HYR   Heyderabad         1.29  51 ePn    Pn     01 34 20.6 -1.9
HYR   Heyderabad         1.29  51 ⇓P     Pn     01 34 20.8 -1.8
HYR                              ⇑S     Sb     01 34 38.0 -1.5
YOVA  Hakkari_Yksek      1.44 156 iP     Pn     01 34 24.1 -0.6
YOVA                             IAML_P
      comp=Z,3µm,0.3s
DIGO  Kars               1.51 355 iP     Pn     01 34 25.2 -0.6
NAX   Nakhchivan         1.53  79 ePn    Pn     01 34 25.6 -0.2
NAX   Nakhchivan         1.53  79 P      Pn     01 34 25.7 -0.2
      SNR=20
NAX                              ⇑S     Sg     01 34 48.1 +1.1
GNI   Garni              1.54  36 PN     Pn     01 34 26.3 +0.2
GNI   Garni              1.54  36 ⇓iP    Pn     01 34 25.4 -0.7
GNI                              ⇑iS    Sb     01 34 46.5 -0.4
GNI   Garni              1.54  36 ePn    Pb     01 34 26.4 -0.5
SRTM  Siirt_Merkez       1.58 235 iP     Pn     01 34 26.3 -0.2
SRTM                             iS     Sg     01 34 51.1 +2.7
SRTM                             IAML_P
      comp=Z,6µm,0.2s
SBZ   Shahbuz            1.63  72 ePn    Pn     01 34 26.9 -0.3
SBZ   Shahbuz            1.63  72 ⇓P     Pn     01 34 27.0 -0.3
VRTB  Varto-Mus          1.66 279 PN     Pn     01 34 27.2 -0.4
VRTB  Varto-Mus          1.66 279 iP     Pn     01 34 27.0 -0.6
VRTB                             IAML_P
      comp=Z,7µm,0.3s
VRTB  Varto-Mus          1.66 279 ePn    Pn     01 34 27.2 -0.4
CUKT  Cukurca            1.66 179 PN     Pn     01 34 27.2 -0.4
CUKT  Cukurca            1.66 179 iP     Pn     01 34 27.4 -0.2
CUKT                             IAML_P
      comp=Z,4µm,0.5s
CUKT  Cukurca            1.66 179 ePg    Pn     01 34 27.1 -0.5
SIRN  Sırnak             1.67 213 iP     Pn     01 34 28.0 +0.2
SIRN                             IAML_P
      comp=Z,6µm,0.5s
KOPR  Koprukoy-ERZUR     1.71 310 PN     Pn     01 34 28.2 -0.2
HOMI  Horasan            1.71 312 iP     Pb     01 34 29.6 -0.3
EAK   Akyaka             1.78   1 iP     Pb     01 34 30.7 -0.2
EAK                              IAML_P
      comp=Z,3µm,0.4s
SENK  Senkaya-Erzuru     1.90 331 PN     Pn     01 34 30.9 -0.1
SENK  Senkaya-Erzuru     1.90 331 ePn    Pb     01 34 32.4 -0.6
ORD   Ordubad            1.90  89 ePn    Pn     01 34 31.0 +0.1
ORD   Ordubad            1.90  89 ⇑P     Pn     01 34 31.1 +0.1
ORD                              ⇑S     Sb     01 34 57.3 +0.3
SVAN  Silvan-Diyarba     2.00 249 PN     Pn     01 34 32.2  0.0
SVAN  Silvan-Diyarba     2.00 249 iP     Pn     01 34 32.0 -0.2
SVAN                             IAML_P
      comp=Z,3µm,0.4s
SVAN  Silvan-Diyarba     2.00 249 ePn    Pn     01 34 32.7 +0.5
ITBZ  Tabriz             2.14 108 ePn    Pn     01 34 34.6 +0.3
ITBZ                             IAMB   IAmb   01 34 42.5
      comp=Z,461nm,0.3s
STEZ  Stepenevan         2.19  17 eP     Pn     01 34 33.0 -2.0
STEZ                             eS     Sb     01 35 06.0 +0.6
BNGB  Bingl              2.25 273 PN     Pn     01 34 36.2 +0.5
IAZR  Azarshahr          2.27 122 ePn    Pn     01 34 36.9 +0.8
IAZR                             IAMB   IAmb   01 34 42.9
      comp=Z,3µm,0.4s
IAZR                             IAMB   IAmb   01 34 55.6
      comp=N,4µm,0.4s
BGD   Bogdanovka         2.35   1 P      Pb     01 34 41.6 +0.8
BGD                              S      Sg     01 35 21.6 +8.2
BGD   Bogdanovka         2.35   1 ePn    Pb     01 34 41.6 +0.8
BINT  Bingol             2.40 270 ePn    Pn     01 34 36.6 -1.2
YEDI  Yedisu-Bingol      2.40 284 PN     Pn     01 34 38.3 +0.4
YEDI  Yedisu-Bingol      2.40 284 ePn    Pn     01 34 38.2 +0.4
GDB   GEDABAY            2.48  42 ePn    Pn     01 34 39.2 +0.2
GDB   GEDABAY            2.48  42 ⇑P     Pn     01 34 38.5 -0.5
      SNR=6.6
GDB                              ⇓S     Sb     01 35 11.4 -2.4
KZRT  Kazreti            2.56  14 P      Pg     01 34 47.0 +0.2
KZRT                             S      Sg     01 35 20.3 +0.3
QZX   Qazax, Azerbai     2.56  32 ePn    Pn     01 34 40.6 +0.6
QZX   Qazax, Azerbai     2.56  32 ⇓P     Pn     01 34 39.2 -0.7
      SNR=7.7
QZX                              ⇓S     Sn     01 35 12.9 +1.3
TRLG  Trialeti           2.66   9 P      Pb     01 34 45.2 -0.9
TRLG  Trialeti           2.66   9 ePn    Pb     01 34 45.1 -0.9
GANJ  Ganja              2.75  50 ePn    Pn     01 34 43.4 +0.8
GANJ  Ganja              2.75  50 ⇑P     Pn     01 34 42.4 -0.2
      SNR=18
GANJ                             ⇑S     Sn     01 35 18.1 +1.9
IHRS  Heris              2.79 101 ePn    Pn     01 34 43.7 +0.4
IHRS                             IAMB   IAmb   01 34 51.9
      comp=Z,826nm,0.6s
MAZI  Mazidag            2.84 240 PN     Pn     01 34 44.4 +0.4
MAZI  Mazidag            2.84 240 ePn    Pn     01 34 44.3 +0.3
BTNK  Botanikuri         2.93  19 P      Pb     01 34 50.1 -0.4
BTNK                             S      Sg     01 35 31.8 -0.1
BCA   Borcka             2.94 330 PN     Pn     01 34 45.9 +0.8
BCA   Borcka             2.94 330 ePn    Pn     01 34 46.1 +1.0
TBLG  Delisi             2.96  17 PN     Pn     01 34 46.1 +0.6
TBLG  Delisi             2.96  17 P      Pb     01 34 48.7 -2.3
TBLG                             S      Sg     01 35 30.8 -2.1
TBLG  Delisi             2.96  17 ePn    Pb     01 34 48.7 -2.3
BAYT  Aydıntepe-Bayb     3.03 300 PN     Pn     01 34 46.9 +0.4
BAYT  Aydıntepe-Bayb     3.03 300 ePn    Pn     01 34 46.9 +0.4
ERZN  Erzincan           3.05 284 PN     Pn     01 34 47.4 +0.6
CHOM  Cayeli-Rize        3.06 316 PN     Pn     01 34 47.5 +0.6
CHOM  Cayeli-Rize        3.06 316 ePn    Pn     01 34 48.0 +1.1
BRDA  Brd                3.11  63 ⇑P     Pn     01 34 47.4 -0.1
MNGR  Mingechevir, A     3.29  54 ⇓P     Pn     01 34 49.8 -0.2
MNGR                             ⇓S     Sn     01 35 29.7 +0.1
ISRB  Sarab              3.41 107 ePn    Pn     01 34 52.9 +1.2
ISRB                             IAMB   IAmb   01 35 13.5
      comp=Z,350nm,0.6s
ZRD   Zardab             3.47  65 ⇓P     Pn     01 34 52.4  0.0
ZRD                              ⇑S     Sn     01 35 34.5 +0.6
ZKTA  Zakatala           3.60  40 ⇑P     Pn     01 34 53.9 -0.3
ZKTA                             ⇓S     Sn     01 35 37.1  0.0
SEKA  Sheki              3.62  49 ⇓P     Pn     01 34 55.1 +0.6
SEKA                             ⇓S     Sn     01 35 39.2 +1.5
GUDG  Gudauri            3.62  11 P      Pb     01 35 00.1 -2.3
LRK   Lerik              3.75  93 ⇑P     Pn     01 34 57.0 +0.6
LRK                              ⇑S     Sn     01 35 42.3 +1.3
GLBA  Clilabad           3.78  83 ⇑P     Pn     01 34 57.2 +0.6
GLBA                             ⇑S     Sn     01 35 42.7 +1.2
KDMR  Kurdemir           3.86  66 ⇓S     Sn     01 35 44.1 +0.5
QBL   Gabala             3.87  57 ⇑S     Sn     01 35 44.0 +0.1
IML   Ismayilli          4.03  61 ⇑P     Pn     01 35 00.1  0.0
IML                              ⇑S     Sn     01 35 48.1 +0.3
LKRN  Lenkeran, Azer     4.08  91 ⇑P     Pn     01 35 01.6 +0.7
LKRN                             ⇑S     Sn     01 35 50.6 +1.6
ASTR  Astara             4.11  93 ⇑P     Pn     01 35 02.0 +0.8
ASTR                             ⇑S     Sn     01 35 51.3 +1.7
XNQ   Khinaliq           4.18  56 ⇓P     Pn     01 35 02.3 -0.1
PQL   Pirkuli            4.31  63 ⇑P     Pn     01 35 04.0 -0.1
QSAR  Qusar              4.45  53 ⇑P     Pn     01 35 05.7 -0.1
GBS   Qobustan           4.46  67 ⇓P     Pn     01 35 06.4 +0.3
QUBA  Quba, Azerbaij     4.50  56 ⇓P     Pn     01 35 06.7  0.0
ATGJ  Altiaghaj          4.58  63 ⇓P     Pn     01 35 07.8  0.0
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ISK ***20*** *01:41:33.9, 38°.91N×43°.55E, h4^{km}, ML2.1/9*
DDA ***20*** *01:41:34.4, 38°.91N×43°.56E, h12^{km}±1^{km}, ML2.5*
ISCJB ***20*** *01:41:35.1±0.5, 38°.92N±0°.03×43°.52E±0°.04, h11^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=4.4km az=36.4*
ISC 20 01:41:34.6±0.9**, 38°.90N**±0°.03×**43°.55E**±0°.03**, h13**^{km}±7^{km}**,**
n14, σ**0^s.55**/22**, Turkey**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s     ISC
VMUR  Van-Muradiye       0.09  12 iP     Pg     01 41 37.6 -0.1
VMUR                             iS     Sg     01 41 40.2 +0.3
ERCV  ERCIS-VAN          0.20 306 PG     Pg     01 41 38.6 -0.6
ERCV                             SG     Sg     01 41 42.4  0.0
CLDR  Caldiran           0.38  50 PG     Pg     01 41 41.7 -0.6
CLDR                             SG     Sg     01 41 47.7 +0.3
CLDR  Caldiran           0.38  50 iP     Pg     01 41 41.9 -0.3
CLDR                             iS     Sb     01 41 48.3 -0.9
CLDR                             IAML_P
      comp=Z,3µm,0.1s
TVAN  Van                0.39 197 iP     Pb     01 41 43.0 -0.6
TVAN                             iS     Sb     01 41 50.1 +0.6
TVAN                             IAML_P
      comp=Z,3µm,0.2s
ADCV  BITLIS_Adilcev     0.65 262 iP     Pb     01 41 47.6 -0.4
ADCV                             iS     Sb     01 41 57.5 +0.5
ADCV                             IAML_P
      comp=Z,189nm,0.1s
DYDN  Diyadin            0.65  10 iP     Pb     01 41 47.8 -0.2
DYDN                             iS     Sb     01 41 57.8 +0.7
DYDN                             IAML_P
      comp=Z,737nm,0.1s
AKDM  Akdamar-Van        0.72 218 PG     Pg     01 41 48.1 -0.6
AGRB  Hanur-Agry         0.80 328 PG     Pg     01 41 49.8 -0.4
AGRB                             SG     Sb     01 42 01.1 -0.2
MLAZ  Malazgirt-MUS      0.81 287 PG     Pb     01 41 50.3 -0.4
TASB  TASBURUN-IGDIR     1.21  26 PN     Pn     01 41 58.1 +0.8
GURO  Guroymak-BITLI     1.24 254 PN     Pb     01 41 57.9  0.0
GNI   Garni              1.55  36 PN     Pg     01 42 03.6 -0.8
CUKT  Cukurca            1.65 178 PN     Pb     01 42 05.0  0.0
```

IDC 20 01:44:09.4±2.2**, 1°.04N**×**126°.71E, h0**^{km}**, mb3.3**/3**,**
mb1 3.6/3**, mb1mx3.3**/24**, mbtmp3.3**/3**, Error ellipse:**
s-maj=169.5km s-min=28.2km az=66.0, Northern
Molucca Sea

```
Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s     ISC
WRA   Warramunga Arr    22.15 161 P      P      01 49 06.8 -0.2
      0.9nm,0.5s,baz=339,slow=11,SNR=8.8
ASAR  Alice Springs     25.53 165 P      P      01 49 40.2 +0.2
      0.2nm,0.3s,baz=341,slow=8.3,SNR=3.7
MKAR  Makanchi Array    59.75 326 P      P      01 54 16.2 -0.1
      0.2nm,0.5s,baz=117,slow=8.4,SNR=3.4
```

MEX 20 01:46:34.5±0.8**, 16°.43N**×**98°.00W, h6**^{km}±16^{km}**, MD3.6,**
Oaxaca

```
Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s     ISC
```

PNIG	Pinotepa	0.13	255	iP	Pg	01 46 36.5	-0.7
PNIG				iS	Sg	01 46 39.2	+0.2

IDC **20** *01:46:39.0±0.6, 32.°70N×40.°04W, h0^{km}, mb4.0/18, mb1 4.1/18, mb1mx4.0/40, mbtmp4.0/18, MS4.0/14, Ms1 4.0/14, ms1mx3.7/44, Error ellipse: s-maj=19.3km s-min=14.5km az=0.0*

ISCJB **20** *01:46:39.6±0.3, 32.°60N±0.°08×39.°95W±0.°05, h13^{km}, mb4.4/48, MS4.0/14, Error ellipse: s-maj=11.3km s-min=6.2km az=2.6*

NEIC **20** *01:46:40.9±0.3, 32.°60N×39.°96W, h10^{km}, mb4.6/34, Error ellipse: s-maj=11.1km s-min=6.2km az=184.0*

GCMT **20** *01:46:43.9±0.4, 32.°83N±0.°04×40.°10W±0.°02, h16^{km}±1^{km}, MW5.0/77, Moment Tensor Solution. s14,c14; s77,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.71±.23; M$_{\theta\theta}$0.64±.13; M$_{\phi\phi}$2.07±.13; M$_{r\theta}$2.45±.48; M$_{\theta\phi}$0.54±.09; M$_{\phi r}$0.71±.29; Best double couple: M$_0$3.42600×10^{16} NP1:φ$_s$232.00000°, δ68.00000°, λ-71.00000°. NP2: φ$_s$10.00000°, δ29.00000°, λ-129.00000°. Principal axes: T 2.8250, Plg20.0000°, Azm308.0000°; N 1.2020, Plg18.0000°, Azm45.0000°; P -4.0260, Plg62.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 01:46:41.4±0.5**, 32.°6N**±0.°1×**39.°99W**±0.°07**, h13^{km}, n90, σ1^{s}15**/78**, mb4.3**/54**, MS4.0**/14**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACI	Morro de la Ar	20.70	96	eP	P	01 51 20.0	-1.5
	287nm,1.7s						
MTP	Monte Pirata	27.15	244	eP	P	01 52 22.8	-1.7
	179nm,2.0s						
MDT	Midelt	29.69	80	LR	LR	02 01 40.1	
	comp=Z,599nm,21.0s,baz=321,slow=30						
ESDC	Sonseca Array	29.79	66	P	P	01 52 47.1	-0.8
	0.5nm,0.7s,baz=270,slow=6.8,SNR=4.1						
ES19	SONSECA Array	29.84	66	eP	P	01 52 47.8	-0.6
PTGA	Pitinga	38.15	214	P	P	01 54 00.6	+0.1
	2.1nm,0.3s,baz=30,slow=12,SNR=4.3						
DAVA	Damuels	40.26	54	epP	P	01 54 18.8	+0.7
	2.8nm,0.9s						
KEST	Kesra	40.60	72	LR	LR	02 08 20.7	
	comp=Z,212nm,19.4s,baz=166,slow=32						
MOTA	Moosalm	41.09	54	epP	P	01 54 25.9	+0.9
	1.9nm,0.8s						
SQTA	Sankt Quirin	41.16	54	epP	P	01 54 26.2	+0.7
	3.7nm,0.9s						
TAM	Tamanrasset	41.20	92	eP	P	01 54 28.1	+2.0
	4.5nm,1.0s						
WATA	Walderalm	41.41	54	epP	P	01 54 28.6	+1.0
	2.9nm,0.9s						
WTTA	Wattenberg	41.45	54	eP	P	01 54 26.2	-1.8
	2.9nm,0.8s						
DBIC	Dimbokro	41.62	121	eP	P	01 54 30.1	+0.7
	10nm,1.2s						
DBIC	Dimbokro	41.62	121	P	P	01 54 30.1	+0.7
	3.3nm,0.9s,baz=294,slow=8.2,SNR=4.4						
DBIC				LR	LR	02 09 41.7	
	comp=Z,323nm,18.4s,baz=300,slow=33						
ABTA	Abfaltersbach	42.04	55	epP	P	01 54 33.6	+0.9
	5.0nm,1.0s						
ROSC	El Rosal	42.31	237	LR	LR	02 10 58.7	
	comp=Z,159nm,21.0s,baz=64,slow=34						
KBA	Koelnbreinsper	42.62	54	P	P	01 54 36.7	-0.8
	0.4nm,0.4s						
TOA1	Torodi Ar. Sit	42.66	107	eP	P	01 54 37.1	-0.9
TOA0	Torodi Ar. Sit	42.67	107	eP	P	01 54 37.6	-0.4
TORD	Torodi Ar. Bea	42.67	107	P	P	01 54 37.1	-0.9
	5.6nm,0.9s,baz=309,slow=10,SNR=28						
TORD				LR	LR	02 10 58.9	
	comp=Z,310nm,18.4s,baz=305,slow=34						
GEC2	GERESS Array S	42.88	51	eP	P	01 54 38.4	-1.2
	8.7nm,1.8s						
GERES	GERESS Array B	42.88	51	P	P	01 54 38.4	-1.2
	0.8nm,0.8s,baz=243,slow=8.7,SNR=5.2						
GERES				LR	LR	02 10 28.6	
	comp=Z,121nm,18.2s,baz=238,slow=33						
MOA	Molln	43.24	53	eP	P	01 54 41.8	-0.6
OBKA	Obir	43.45	55	epP	P	01 54 44.7	+0.6
	3.0nm,0.7s						
FCC	Fort Churchill	44.31	323	eP	P	01 54 51.1	+0.4
	16nm,1.4s						
ULM	Lac du Bonnet	44.35	311	P	P	01 54 50.1	-1.1
	3.8nm,1.0s,baz=177,slow=18,SNR=3.2						
TUL1	Leonard	45.72	290	eP	P	01 55 04.0	+1.7
	14nm,1.1s						
H10N2	ASCENSION HYDR	46.98	144	T	T	02 45 16.9	
	baz=330,slow=75,SNR=125						
H10N3	ASCENSION HYDR	46.98	144	T	T	02 45 16.6	
	baz=330,slow=75,SNR=105						
H10N1	ASCENSION HYDR	46.99	144	T	T	02 45 18.4	
	baz=330,slow=75,SNR=145						
H10S1	ASCENSION HYDR	47.86	145	T	T	02 46 21.4	
	baz=331,slow=75,SNR=95						
H10S3	ASCENSION HYDR	47.86	145	T	T	02 46 22.0	
	baz=331,slow=75,SNR=114						
H10S2	ASCENSION HYDR	47.88	145	T	T	02 46 24.0	
	baz=331,slow=75,SNR=107						
FFC	Flin Flon	48.19	317	eP	P	01 55 21.8	+0.5
	14nm,1.4s						
WMOK	Wichita Mounta	48.37	290	eP	P	01 55 23.0	0.0
	4.9nm,0.9s						
OTAV	Otavalo	48.46	236	eP	P	01 55 25.3	+0.9
	13nm,1.5s						
RES	Resolute Bay	49.77	343	eP	P	01 55 35.4	+2.2
	6.7nm,1.4s						
FIA0	FINESS Array S	50.60	35	eP	P	01 55 40.0	+0.4
FINES	FINESS Array B	50.60	35	P	P	01 55 40.0	+0.4
	1.9nm,0.8s,baz=251,slow=4.3,SNR=3.8						
MSTX	Muleshoe	51.75	290	eP	P	01 55 48.9	+0.1
	8.6nm,1.0s						
AKASG	Malin Array Be	52.82	48	P	P	01 55 55.6	-0.8
	1.3nm,0.6s,baz=273,slow=7.0,SNR=9.2						
AKASG				LR	LR	02 16 27.4	
	comp=Z,128nm,19.2s,baz=275,slow=34						
AKBB	Malin Array Si	52.82	48	eP	P	01 55 55.6	-0.8
	11nm,1.4s						
TXAR	Lajitas Array	53.97	285	P	P	01 56 05.3	0.0
	0.6nm,0.8s,baz=93,slow=5.5,SNR=3.8						
PD31	Pinedale Array	54.57	302	eP	P	01 56 09.2	-0.4
	12nm,1.5s						
PDAR	Pinedale Array	54.57	302	eP	P	01 56 08.6	-1.0
PDAR	Pinedale Array	54.57	302	P	P	01 56 07.8	-1.9
	1.9nm,0.9s,baz=72,slow=9.5,SNR=11						
BW06	Boulder Array	54.57	302	eP	P	01 56 09.1	-0.5
	11nm,1.5s						
YKA	Yellowknife Ar	54.63	327	P	P	01 56 07.3	-2.1
	1.0nm,0.9s,baz=86,slow=7.1,SNR=10						
YKA				PcP	PcP	01 57 11.7	-0.5
	0.3nm,0.7s,baz=86,slow=4.8,SNR=3.8						
YKB5	Yellowknife Ar	54.63	327	eP	P	01 56 07.3	-2.1
YKB5				ePcP	PcP	01 57 11.7	-0.5
YHB	Horse Butte	55.25	305	eP	P	01 56 17.4	+2.9
	4.9nm,1.0s						
IMW	Indian Meadow	55.27	304	eP	P	01 56 15.2	+0.4
	20nm,1.8s						
TPAW	Teton Pass	55.38	303	eP	P	01 56 15.5	0.0
	19nm,1.8s						
LPAZ	La Paz	55.57	213	P	P	01 56 17.7	+0.2
	0.7nm,0.7s,baz=34,slow=3.6,SNR=3.0						
LPAZ				LR	LR	02 18 06.0	
	comp=Z,108nm,21.3s,baz=36,slow=34						
DLMT	Dillon	56.07	306	eP	P	01 56 20.7	+0.4
	9.7nm,1.4s						
OBN	Obninsk	56.52	42	LR	LR	02 18 04.8	
	comp=Z,34nm,20.2s,baz=333,slow=33						
NLU	North Lily Min	57.14	299	eP	P	01 56 29.1	+1.1
	2.6nm,1.1s						
DUG	Dugway, Tooele	57.61	300	eP	P	01 56 32.2	+0.9
	4.9nm,1.1s						
BR101	Keskin Array S	58.34	60	eP	P	01 56 35.4	-1.1
BRTR	Keskin Array B	58.34	60	P	P	01 56 35.4	-1.1
	1.5nm,0.8s,baz=271,slow=5.2,SNR=8.5						
NEW	Newport	58.36	310	eP	P	01 56 36.2	-0.2
	7.4nm,1.3s						
CCUT	Cedar City	58.84	297	eP	P	01 56 41.6	+1.5
	5.3nm,1.3s						
PSUT	Pine Spring	58.89	298	eP	P	01 56 41.8	+1.4
	3.8nm,1.0s						
R11A	Troy Canyon, C	60.24	299	eP	P	01 56 49.4	-0.2
	8.8nm,1.6s						
INK	Inuvik	61.42	335	eP	P	01 56 57.8	+0.9
	15nm,1.4s						
INK	Inuvik	61.42	335	P	P	01 56 55.7	-1.2
	5.1nm,1.2s,baz=71,slow=8.2,SNR=4.7						
KVN	Kaiserville	61.85	300	eP	P	01 57 00.5	0.0
	6.1nm,1.2s						
NV01	Mina Array Sit	62.21	300	eP	P	01 57 02.2	-0.8
NVAR	Mina Array Bea	62.21	300	P	P	01 57 02.6	-0.5
	1.1nm,0.8s,baz=45,slow=3.3,SNR=7.0						
NVAR				LR	LR	02 23 10.3	
	comp=Z,240nm,20.0s,baz=40,slow=35						
KIRV	Kirov	62.52	36	LR	LR	02 22 53.8	
	comp=Z,176nm,18.3s,baz=221,slow=35						
YERR	Yerington	62.70	300	eP	P	01 57 07.1	+0.9
	54nm,1.7s						
GNI	Garni	66.18	57	LR	LR	02 26 59.2	
	comp=Z,41nm,18.0s,baz=272,slow=37						
ILAR	Eielson Array	67.71	334	P	P	01 57 36.1	-2.0
	1.0nm,1.1s,baz=72,slow=5.8,SNR=4.7						
ILB	Eielson Array	67.71	334	eP	P	01 57 36.1	-2.0
	9.5nm,1.7s						
AKTO	Aktyubinsk	70.30	42	LR	LR	02 28 04.8	
	comp=Z,149nm,18.1s,baz=293,slow=35						
ABKAR	Akbulak array	71.96	43	eP	P	01 58 05.2	+0.7
	2.6nm,1.0s						
H09W1	TRISTAN DA CUN	73.99	157	T	T	03 19 01.9	
BILL	Bilibino	77.75	350	eP	P	01 58 38.8	+1.1
	11nm,1.3s						
ZAA1	Zalesovo Array	81.50	29	eP	P	01 58 59.2	+0.9
ZALV	Zalesovo Beam	81.51	29	P	P	01 58 59.2	+0.9
	1.0nm,0.9s,baz=296,slow=4.6,SNR=2.8						
GAR	Garm	83.81	47	eP	P	01 59 13.1	+2.3
	36nm,1.8s						
MAKZ	Makanchi	85.25	36	eP	P	01 59 17.4	-0.4
	7.0nm,1.5s						
MK31	Makanchi Array	85.42	36	eP	P	01 59 19.7	+1.1
	2.3nm,1.1s						
MK32	Makanchi Array	85.42	36	eP	P	01 59 19.0	+0.4
MKAR	Makanchi Array	85.42	36	P	P	01 59 19.0	+0.4
	1.7nm,0.9s,baz=307,slow=4.2,SNR=13						
MKAR				LR	LR	02 36 44.4	
	comp=Z,76nm,19.6s,baz=302,slow=35						
MK01	Makanchi Array	85.44	36	eP	P	01 59 19.5	+0.7
CM31	Chiang Mai Arr	115.81	44	ePKPdf	PKiKP	02 05 23.9	-0.4
CMAR	Chiang Mai Arr	115.81	44	PKP	PKiKP	02 05 23.9	-0.4
	2.3nm,0.3s,baz=333,slow=1.4,SNR=4.2						
AS31	Alice Springs	169.60	33	ePKPab	PKPab	02 08 00.4	-2.1
ASAR	Alice Springs	169.60	33	PKPab	PKPab	02 08 00.4	-2.1
	0.8nm,1.0s,baz=312,slow=4.7,SNR=4.6						

NNC 20 01:48:33.3±9.0**, 36.°86N×70.°62E, h0^{km}, mb3.7, mpv3.3, 3C-5D, Error ellipse: s-maj=72.1km s-min=61.8km az=147.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.88	35	⇓Pn	Pn	01 49 33.8	-0.6
	1.2nm,0.3s						
SFK				⇑Sn	Sn	01 50 21.6	+0.8
	3.1nm,0.3s						
MNAS	Manas	5.81	14	⇑Pn	Pn	01 50 02.0	+1.2
	2.5nm,0.8s						
MNAS				⇓Sn	Sn	01 51 08.3	+0.1
	6.5nm,0.7s						
KK31	Karatay Array	6.24	359	⇑Pn	Pn	01 50 09.2	+2.5
	1.7nm,0.3s,baz=180,slow=13,SNR=54						
KK31				⇓Sn	Sn	01 51 22.2	+3.5
	1.5nm,0.5s,baz=190,slow=25,SNR=3.9						
AAK	Ala-Archa	6.50	26	⇓Pn	Pn	01 50 09.1	-1.2
	1.5nm,0.7s						
AAK				⇓Sn	Sn	01 51 25.3	+0.1
	2.7nm,0.6s						

GUC 20 02:02:41.1±0.6**, 38.°44S×75.°10W, h18^{km}**±5^{km}**, ML4.1, 2C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLCH	Valdivia	1.98	134	⇓iP	Pb	02 03 15.3	-1.3
VLCH				iS	Sn	02 03 38.2	+0.1
VLCH				IAML		02 03 40.6	
	comp=E,3μm,0.5s						
AGCH	Angol	1.99	72	iS	Sn	02 03 39.0	+0.7
CCHI	Chillan	3.02	54	⇑iP	Pn	02 03 28.6	+0.7
CCHI				iS	Sn	02 04 04.1	+0.4
CCHI				IAML		02 04 12.3	
	comp=N,578nm,0.5s						
GO06	Curarrehue	3.05	113	⇑iP	Pn	02 03 31.1	+2.7
GO06				iS	Sn	02 04 04.6	+0.1
GO06				IAML		02 04 10.4	
	comp=N,256nm,0.5s						
PLCA	Paso Flores	4.19	125	eP	Pn	02 03 46.0	+1.8
LMEL	Las Melosas	6.05	42	eP	Pn	02 04 09.7	-0.2
LMEL				iS	Sn	02 05 18.3	-0.5
CLCH	Cerro Calan	6.25	38	eP	Pn	02 04 11.4	-1.0
CLCH				iS	Sn	02 05 21.9	-1.4
FCH	Farellones	6.42	39	⇓iP	Pn	02 04 14.1	-0.9
FCH				iS	Sn	02 05 25.0	-3.0

ECX **20** *02:03:04.4±0.6, 31.°21N×115.°92W, h5^{km}, MD2.6, ML2.8*

MEX **20** *02:03:05.0±0.4, 31.°12N×115.°91W, h12^{km}±3^{km}, MD3.6*

ISC 20 02:03:02.9±1.6**, 31.°12N**±0.°09×**115.°94W**±0.°10**, h26^{km}**±20^{km}**, n10, σ0^{s}47**/19**, 1C, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIG	San Pedro Mart	0.42	100	iP	Pb	02 03 12.3	+0.3
SPIG				eS	Sb	02 03 18.2	-0.1
SPIG	San Pedro Mart	0.42	100	eP	Pb	02 03 11.9	-0.1
SPIG				eS	Sb	02 03 18.1	-0.1
SPX	San Pedro Mart	0.42	100	eP	Pb	02 03 12.2	+0.1
SPX				eS	Sb	02 03 18.0	-0.3
SPX	San Pedro Mart	0.42	100	⇑eP	Pb	02 03 12.3	+0.3
SPX				eS	Sb	02 03 18.2	-0.1
SPX				IAML		02 03 18.6	
	comp=E,560nm,0.1s						
SPX				IAML		02 03 18.9	
	comp=N,716nm,0.1s						
SPX				e		02 03 18.9	
ECBX	El Chinero	0.84	65	eP	Pb	02 03 18.8	-0.1
ECBX				eS	Sb	02 03 28.9	-0.9
CBX	Cerro Bola	1.34	333	eP	Pn	02 03 26.0	0.0
CBX				iS	Sn	02 03 42.9	-0.2
CBX	Cerro Bola	1.34	333	eP	Pn	02 03 26.1	0.0
CBX				eS	Sb	02 03 43.5	-0.7
CBX				IAML		02 03 48.0	
	comp=E,176nm,0.4s						
CPBX	Cerro Prieto	1.41	23	eP	Pb	02 03 28.9	+0.4
CPBX				eS	Sb	02 03 46.4	+0.4
TJIG	Tijuana	1.45	335	eP	Pn	02 03 27.8	+0.3
TJIG				iS	Sn	02 03 45.0	-0.7
BAR	Barrett	1.68	338	eP	Pn	02 03 31.4	+0.8

KRSC 20 02:05:42.0±0.6**, 55.°81N×162.°22E, h47^{km}**±17^{km}**, ML3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.53	39	eP	Pn	02 05 54.1	+0.7
ZLN	Zelenaya	0.83	285	eP	Pn	02 05 58.5	+1.1
ZLN				eS	Sn	02 06 10.0	+1.4
BZGR	Bezymyannyi-Gr	0.87	280	eP	Pn	02 05 59.0	+1.0
BZGR				eS	Sn	02 06 10.9	+1.2
SMKR	Semkarok	0.89	332	eP	Pn	02 05 58.9	+0.7
SMKR				eS	Sn	02 06 11.1	+1.1
LGNR	Loginova	0.91	289	eP	Pn	02 05 59.6	+1.0
LGNR				eS	Sn	02 06 12.1	+1.3
BDR	Baidarnaya	0.95	324	eP	Pn	02 06 00.1	+1.0
BDR				eS	Sn	02 06 14.1	+2.5
BZMR	Bezymyannaya	0.98	278	eS	Sn	02 06 13.6	+1.1
BZWR	Bezymyannyi-We	0.99	280	eP	Pn	02 06 00.9	+1.3
BZWR				eS	Sn	02 06 14.2	+1.7
KLY	Klyuchi	1.02	301	eP	Pn	02 05 59.1	-0.7
KLY				eS	Sn	02 06 11.5	-1.5
SRKR	Sorokina	1.03	326	eP	Pn	02 06 01.1	+0.9
KPT	Kopyto	1.14	279	eP	Pn	02 06 03.1	+1.5
KPT				eS	Sn	02 06 18.0	+1.9
TUMD	Tumrok D	1.20	241	eP	Pn	02 06 04.1	+1.7
TUMD				eS	Sn	02 06 19.1	+1.6
TUMR	Tumrok	1.29	247	eP	Pn	02 06 05.8	+2.1
KZV	Kizimen	1.30	239	eP	Pn	02 06 05.5	+1.7
KII	Karymskiy	2.39	223	eP	Pn	02 06 22.5	+3.8
SPN	Mys Shipunski	3.00	206	eP	Pn	02 06 28.9	+1.9
NLC	Nalytchevo	3.13	214	eS	Sn	02 07 07.9	+3.1
SMAR	Somma	3.23	219	eP	Pn	02 06 33.4	+3.0
AVH	Avacha	3.26	220	eP	Pn	02 06 33.9	+3.3
GNL	Ganaly	3.26	231	eP	Pn	02 06 33.4	+2.8
UGLR	Uglovaya	3.27	219	eP	Pn	02 06 34.0	+3.2
KOK	Koryaka	3.27	221	eP	Pn	02 06 34.2	+3.4
DALK	Dalny	3.44	218	eP	Pn	02 06 37.7	+4.7
DALK				eS	Sn	02 07 15.7	+3.3
KRMR	Karymshinskiy	3.83	220	eP	Pn	02 06 42.8	+4.5

KRSC **20** *02:16:55.2±1.6, 48.°88N×156.°74E, h7^{km}±27^{km}, ML4.1*

ISCJB **20** *02:16:57.7±0.5, 48.°84N±0.°05×156.°09E±0.°09, h34^{km}, mb4.2/25, Error ellipse: s-maj=10.4km s-min=3.7km az=38.4*

SKHL **20** *02:16:57.8±0.2, 48.°73N×156.°35E, h51^{km}±3^{km}, mb4.3/4*

MOS **20** *02:16:58.5±1.0, 48.°79N×156.°58E, h40^{km}, mb4.2/10, Error ellipse: s-maj=11.9km s-min=4.5km az=78.6*

NEIC **20** *02:17:01.2±1.2, 48.°94N×155.°91E, h46^{km}±9^{km}, mb4.2/12, Error ellipse: s-maj=13.4km s-min=6.6km az=147.0*

IDC **20** *02:17:03.1±3.2, 49.°09N×155.°77E, h55^{km}±24^{km}, mb3.5/13, mb1 3.7/16, mb1mx3.5/59, mbtmp3.8/16, ML4.1/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/38, Error ellipse: s-maj=43.9km s-min=16.5km az=151.0*

ISC 20 02:16:59.1±0.7**, 48.°82N**±0.°07×**156.°21E**±0.°09**, h34^{km}, n113, σ1^{s}30**/121**, mb4.1**/25**, 1C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.87	358	eP	Pn	02 17 28.4	-0.2
SKR				eS	Sn	02 17 51.6	+0.6
SKR	Severo-Kuril's	1.87	358	eP	Pn	02 17 28.3	-0.3
SKR				AMB	AMB	02 17 30.6	
	140nm,0.5s						
SKR				eS	Sn	02 17 51.0	+0.1
SKR				A	A	02 18 01.7	
	570nm,0.5s						
SKR				A	A	02 18 01.7	
	400nm,0.5s						
SKR	Severo-Kuril's	1.87	358	ePN	Pn	02 17 28.3	-0.3
SKR				eS	Sn	02 17 51.5	+0.6
SKR				pmax	pmax		
	comp=Z,139nm,0.5s						
SKR				smax	smax		
	comp=E,405nm,0.4s						
SKR				smax	smax		
	comp=N,563nm,0.5s						
PAU	Pauzhetka	2.68	8	eP	Pn	02 17 39.9	+0.2
PAU				eS	Sn	02 18 12.2	+1.2
PAU	Pauzhetka	2.68	8	eP	Pn	02 17 39.3	-0.4
PAU				AMB	AMB	02 17 47.5	
	comp=N,80nm,0.5s						
PAU				eS	Sn	02 18 10.6	-0.4
PAU				A	A	02 18 15.0	
	comp=N,130nm,0.4s						
PAU				A	A	02 18 15.0	
	comp=N,270nm,0.4s						
PAU	Pauzhetka	2.68	8	PN	Pn	02 17 39.9	+0.2
PAU				S	Sn	02 18 12.2	+1.2
KDTR	Khodutka, Kamc	3.23	21	eP	Pn	02 17 45.9	-1.3
KDTR				eS	Sn	02 18 23.6	-0.8
KDTR	Khodutka, Kamc	3.23	21	PN	Pn	02 17 45.9	-1.3
KDTR				S	Sn	02 18 23.6	-0.8
MTVR	Mutnovka	3.88	18	eP	Pn	02 17 56.3	-0.1
MTVR				eS	Sn	02 18 41.5	+0.7
MTVR	Mutnovka	3.88	18	PN	Pn	02 17 56.3	-0.1
MTVR				S	Sn	02 18 41.5	+0.7
RUS	Russkaya	3.91	21	eP	Pn	02 17 56.9	+0.3
RUS	Russkaya	3.91	21	eP	Pn	02 17 56.9	+0.3
RUS	Russkaya	3.91	21	PN	Pn	02 17 56.9	+0.3
APC	Apacha	4.16	8	eP	Pn	02 18 01.8	+1.8
APC	Apacha	4.16	8	PN	Pn	02 18 01.8	+1.8
KRMR	Karymshinskiy	4.20	16	eP	Pn	02 18 00.9	+0.3
KRMR	Karymshinskiy	4.20	16	PN	Pn	02 18 00.9	+0.3
PETK	Petropavlovsk-	4.40	12	ePn	Pn	02 18 05.3	+1.9
PETK	Petropavlovsk-	4.40	12	P	Pn	02 18 04.5	+1.1
	comp=N,1.6nm,0.3s,baz=274,slow=11,SNR=40						
PEA1	Petropavlovsk-	4.40	12	ePn	Pn	02 18 04.5	+1.1
PET	Petropavlovsk	4.49	19	ePn	Pn	02 18 04.9	+0.3
PET				eSn	Sb	02 19 11.9	+1.4
PET	Petropavlovsk	4.49	19	eP	Pn	02 18 05.7	+1.2
PET	Petropavlovsk	4.49	19	eP	Pn	02 18 04.0	-0.5
PET				AMB	AMB	02 18 05.7	
	comp=N,30nm,0.8s						
PET				eS	Sn	02 18 54.2	-1.3
PET				A	A	02 19 11.0	
	comp=N,90nm,0.5s						
PET				A	A	02 19 11.0	
	comp=N,80nm,0.5s						
PET	Petropavlovsk	4.49	19	ePN	Pn	02 18 05.6	+1.1
PET				pmax	pmax		
	comp=Z,31nm,0.8s						
DALK	Dalny	4.51	20	eP	Pn	02 18 04.5	-0.4
DALK	Dalny	4.51	20	PN	Pn	02 18 04.5	-0.4
UGLR	Uglovaya	4.70	20	eP	Pn	02 18 08.1	+0.5
UGLR	Uglovaya	4.70	20	PN	Pn	02 18 08.1	+0.5
AVH	Avacha	4.73	19	eP	Pn	02 18 08.6	+0.6
AVH	Avacha	4.73	19	PN	Pn	02 18 08.6	+0.6
KOK	Koryaka	4.73	18	eP	Pn	02 18 09.0	+0.9
KOK	Koryaka	4.73	18	PN	Pn	02 18 09.0	+0.9
SMAR	Somma	4.74	19	eP	Pn	02 18 08.6	+0.3
SMAR	Somma	4.74	19	PN	Pn	02 18 08.6	+0.3
KRX	Arik	4.80	18	eP	Pn	02 18 10.3	+1.3
KRX	Arik	4.80	18	PN	Pn	02 18 10.3	+1.3
SPN	Mys Shipunski	4.92	28	eP	Pn	02 18 11.5	+1.0
SPN	Mys Shipunski	4.92	28	PN	Pn	02 18 11.5	+1.0
GNL	Ganaly	5.00	12	eP	Pn	02 18 12.8	+1.0
GNL	Ganaly	5.00	12	PN	Pn	02 18 12.8	+1.0
KUR	Kuril'sk	6.73	241	eP	Pn	02 18 36.2	+0.8
KUR	Kuril'sk	6.73	241	ePN	Pn	02 18 36.2	+0.8
TUMD	Tumrok D	6.90	20	eP	Pn	02 18 40.4	+2.7
TUMR	Tumrok	6.91	19	PN	Pn	02 18 40.4	+2.4
YUK	Yuzh-Kuril'sk	8.60	240	eP	Pn	02 19 01.5	+0.5
YUK	Yuzh-Kuril'sk	8.60	240	ePN	Pn	02 19 01.5	+0.5
TYV	Tymovskoe	8.99	288	eP	Pn	02 19 07.8	+1.4
TYV	Tymovskoe	8.99	288	ePN	Pn	02 19 07.8	+1.4
YSS	Yuzh-Sakhalins	9.23	263	eP	Pn	02 19 11.5	+1.8
YSS				AMB	AMB	02 19 15.9	
	comp=Z,10.0nm,0.6s						
YSS	Yuzh-Sakhalins	9.23	263	ePN	Pn	02 19 13.5	+3.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
ASAJ	Asahikawa	10.50	248	P	Pn	02 19 28.7	+1.7
	comp=Z,0.7nm,0.3s,baz=51,slow=14,SNR=5.5						
MA2	Magadan	11.23	346	P	Pn	02 19 37.1	+0.1
	comp=Z,0.4nm,0.3s,baz=162,slow=20,SNR=3.1						
MA2				LR	LR	02 24 24.3	
	comp=Z,94nm,20.7s,baz=156,slow=40						
KLR	Kul'dur	16.03	281	eP	Pn	02 20 37.5	-4.3
KLR	Kul'dur	16.03	281	iP	Pn	02 20 37.5	-4.3
KLR	Kul'dur	16.03	281	P	Pn	02 20 44.4	+2.6
	comp=Z,0.2nm,0.3s,baz=84,slow=13,SNR=4.8						
KLR				LR	LR	02 27 20.6	
	comp=Z,131nm,18.0s,baz=9.5,slow=39						
BILL	Bilibino	19.93	11	eP	P	02 21 26.4	-1.2
	comp=Z,8.7nm,1.4s						
BILL	Bilibino	19.93	11	eP	Pn	02 21 28.8	-0.6
BILL	Bilibino	19.93	11	iP	P	02 21 27.5	-0.1
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KSRS	Korea Array	23.42	252	eP	P	02 22 14.2	+9.3
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSRS	Korea Array	23.42	252	P	P	02 22 06.4	+1.5
	comp=Z,1.3nm,0.7s,baz=48,slow=9.1,SNR=4.1						
KS01	Wonju Array Si	23.42	252	eP	P	02 22 05.5	+0.5
KS15	Wonju Array Si	23.45	252	eP	P	02 22 06.4	+1.2
	comp=Z,24nm,1.4s						
KSAR	Wonju Array Be	23.45	252	P	P	02 22 06.4	+1.2
KSAR	Wonju Array Be	23.45	252	P	P	02 22 06.4	+1.2
HIA	Hailar	23.76	285	eP	P	02 22 07.2	-1.0
HIA	Hailar	23.76	285	iP	P	02 22 07.2	-1.0
HIA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
H11S1	WAKE ISLAND Hy	31.41	161	T	T	02 56 41.2	
	baz=346,slow=76,SNR=9.1						
H11S3	WAKE ISLAND Hy	31.42	161	T	T	02 56 38.6	
	baz=346,slow=76,SNR=11						

H11S2	WAKE ISLAND Hy	31.43	161	T	T	02 56 36.1	
	baz=346,slow=76,SNR=8.9						
TRF	Thorofare Moun	32.11	43	eP	P	02 23 20.0	-2.9
	comp=Z,17nm,1.4s						
ULN	Ulaanbaatar	32.23	287	eP	P	02 23 22.9	-1.2
	comp=Z,3.2nm,1.5s						
ULN	Ulaanbaatar	32.23	287	i P	P	02 23 22.1	-2.0
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONA0	Songino Array	32.66	287	eP	P	02 23 25.1	-2.7
SONM	Songino Array	32.66	287	P	P	02 23 25.1	-2.7
	comp=Z,0.3nm,0.8s,baz=94,slow=8.4,SNR=2.5						
MCK	McKinley	32.72	42	eP	P	02 23 30.5	+2.5
	comp=Z,5.5nm,1.1s						
SML	Sawmill	33.03	46	eP	P	02 23 30.3	-0.5
	comp=Z,22nm,1.4s						
SML	Sawmill	33.03	46	eP	P	02 23 30.3	-0.5
SML				pmax	pmax		
	comp=Z,22nm,1.4s						
ANA2	Anatahan	33.51	198	eP	P	02 23 35.4	0.0
	comp=Z,379nm,0.3s						
IL1	Eielson Array	33.62	40	eP	P	02 23 37.6	+1.7
ILAR	Eielson Array	33.62	40	P	P	02 23 38.1	+2.3
	comp=Z,0.2nm,0.6s,baz=260,slow=6.6,SNR=4.1						
ILB	Eielson Array	33.62	40	eP	P	02 23 38.1	+2.3
	comp=Z,7.1nm,1.5s						
TPUB	Ta-pu	37.87	241	eP	P	02 24 12.6	-0.1
	comp=Z,124nm,1.5s						
INK	Inuvik	38.78	34	eP	P	02 24 20.6	+0.8
	comp=Z,3.6nm,1.4s						
INK	Inuvik	38.78	34	eP	P	02 24 20.6	+0.8
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
INK	Inuvik	38.78	34	P	P	02 24 20.6	+0.8
	comp=Z,0.9nm,0.6s,baz=301,slow=6.8,SNR=6.8						
MK31	Makanchi Array	47.85	297	eP	P	02 25 32.7	-0.6
	comp=Z,1.2nm,0.9s						
MK31	Makanchi Array	47.85	297	eP	P	02 25 32.7	-0.6
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK32	Makanchi Array	47.85	297	eP	P	02 25 32.1	-1.2
MKAR	Makanchi Array	47.85	297	P	P	02 25 32.2	-1.2
	comp=Z,0.9nm,0.8s,baz=62,slow=8.1,SNR=10.0						
KURK	Kurchatov	47.96	303	eP	P	02 25 33.5	-0.6
KURK	Kurchatov	47.96	303	eP	P	02 25 33.3	-0.8
KURK	Kurchatov	47.96	303	i P	P	02 25 33.3	-0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	48.01	39	P	P	02 25 35.1	+0.8
	comp=Z,0.3nm,0.8s,baz=294,slow=7.1,SNR=3.9						
YKB5	Yellowknife Ar	48.01	39	eP	P	02 25 35.1	+0.8
KURBB	Kurchatov Arra	48.06	303	P	P	02 25 33.5	-1.3
	comp=Z,0.8nm,0.4s,baz=57,slow=9.0,SNR=3.1						
ARU	Arti	54.89	318c	iP	P	02 26 24.7	-1.1
ARU						02 28 23.5	
ARU				S	S	02 33 54.0	-11
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ABKAR	Akbulak array	58.69	310	eP	P	02 26 52.5	-0.3
	comp=Z,1.2nm,0.6s						
FIA0	FINESS Array S	63.04	336	eP	P	02 27 21.2	-1.0
FIA0	FINESS Array S	63.04	336	eP	P	02 27 21.2	-1.0
FINES	FINESS Array B	63.04	336	P	P	02 27 21.2	-1.0
	comp=Z,2.6nm,1.0s,baz=31,slow=8.9,SNR=7.7						
AKASG	Malin Array Be	70.95	327	P	P	02 28 12.1	-0.6
	comp=Z,0.3nm,0.3s,baz=29,slow=6.1,SNR=3.3						
AKBB	Malin Array Si	70.95	327	eP	P	02 28 12.1	-0.6
	comp=Z,7.8nm,1.4s						
AKBB	Malin Array Si	70.95	327	eP	P	02 28 12.1	-0.6
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.4s						
EKA	Eskdalemuir Ar	74.78	348	P	P	02 28 35.6	+0.4
	comp=Z,0.4nm,0.3s,baz=23,slow=5.3,SNR=6.7						
MLR	Muntele Rosu	76.53	326	P	P	02 28 45.8	+0.2
	comp=Z,1.6nm,0.7s,baz=321,slow=4.7,SNR=4.9						
GEC2	GERESS Array S	77.47	336	eP	P	02 28 50.9	+0.1
	comp=Z,0.5nm,0.4s						
GEC2	GERESS Array S	77.47	336	eP	P	02 28 50.9	+0.1
GEC2				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	77.47	336	eP	P	02 28 51.2	+0.4
GERES	GERESS Array B	77.47	336	eP	P	02 28 51.2	+0.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	77.47	336	P	P	02 28 50.9	+0.1
	comp=Z,0.6nm,0.6s,baz=33,slow=8.0,SNR=4.1						
BR101	Keskin Array S	78.27	318	eP	P	02 28 55.2	-0.3
BRTR	Keskin Array B	78.27	318	eP	P	02 28 56.9	+1.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	Keskin Array B	78.27	318	P	P	02 28 55.2	-0.3
	comp=Z,0.9nm,0.9s,baz=357,slow=6.2,SNR=4.2						

WEL 20 02:22:03.9±0.7**,37°S**±6°×**17°8E**±°**,h37**^{km}±9^{km}**,ML3.6**/25**,**
Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	0.51	170	P	Pn	02 22 15.5	+0.8
HAZ				S	Sn	02 22 25.1	+3.0
MXZ	Matakaoa Point	0.59	121	P	Pn	02 22 16.1	+0.1
MXZ				S	Sn	02 22 27.8	+3.4
RUGZ	Raukumara Rang	0.71	179	P	Pn	02 22 17.3	-0.3
RUGZ				S	Sn	02 22 28.4	+1.2
WHRZ	Whale Island	0.81	222	P	Pn	02 22 19.8	+1.0
WMGZ	Waiomatatini S	0.82	134	P	Pn	02 22 19.1	+0.2
WMGZ				P	Pn	02 22 19.1	+0.2
WMGZ				S	Sn	02 22 32.9	+3.1
PUZ	Puketiti	0.94	150	P	Pn	02 22 20.0	-0.6
PUZ				S	Sn	02 22 34.6	+1.8
TWGZ	Tauwhareparae	0.95	165	P	Pn	02 22 21.3	+0.5
TWGZ				S	Sn	02 22 35.6	+2.4
OPRZ	Ohinepanea	1.06	236	P	Pn	02 22 22.4	+0.2
OPRZ				S	Sn	02 22 37.0	+1.3
MARZ	Manawahe	1.07	227	P	Pn	02 22 22.7	+0.3
MWZ	Matawai	1.08	186	P	Pn	02 22 22.3	-0.3
MWZ				P	Pn	02 22 22.3	-0.3
MWZ				S	Sn	02 22 36.8	+0.5
URZ	Urewera	1.09	204	P	Pn	02 22 22.6	-0.1
URZ				P	Pn	02 22 22.6	-0.1
URZ				S	Sn	02 22 37.8	+1.2
EDRZ	Edgecumbe	1.12	221	P	Pn	02 22 23.6	+0.4
MYRZ	Mayor Island	1.14	268	P	Pn	02 22 24.3	+1.0
TKGZ	Te Karaka	1.19	173	P	Pn	02 22 23.9	-0.1
RAGZ	Rawiri	1.25	189	P	Pn	02 22 25.1	+0.2
MKRZ	Makatiti	1.30	227	P	Pn	02 22 26.5	+1.0
CNGZ	Carnagh Statio	1.30	161	P	Pn	02 22 25.1	-0.4
OMRZ	Omania	1.33	230	P	Pn	02 22 26.3	+0.3
TARZ	Mount Tarawera	1.34	223	P	Pn	02 22 26.6	+0.4
KARZ	Kaharoa	1.36	236	P	Pn	02 22 26.7	+0.3
MUGZ	Murupara	1.41	210	P	Pn	02 22 26.8	-0.2
RRRZ	Republican Roa	1.42	220	P	Pn	02 22 27.3	+0.2
RIGZ	Rimuhau	1.45	177	P	Pn	02 22 27.2	-0.4
RTZ	Ruatahuna	1.46	202	P	Pn	02 22 27.3	-0.5
KMRZ	Kaimai	1.49	246	P	Pn	02 22 28.2	+0.1
SNGZ	Shannon Statio	1.54	189	P	Pn	02 22 28.6	-0.3
KUZ	Kuaotunu	1.64	288	P	Pn	02 22 30.6	+0.4
ALRZ	Allen Road	1.67	218	P	Pn	02 22 30.6	0.0
PRGZ	Paritu Road	1.67	174	P	Pn	02 22 29.3	-1.3
RAHZ	Arahi	1.72	195	P	Pn	02 22 32.3	+1.0
MTHZ	Maungataniwha	1.72	202	P	Pn	02 22 31.0	-0.3
TOZ	Tahuroa Road	1.79	254	P	Pn	02 22 32.4	+0.2
MHGZ	Mahia Peninsul	1.90	174	P	Pn	02 22 32.1	-1.7
NMHZ	Naumai	1.96	200	P	Pn	02 22 35.2	+0.5
MKAZ	Moumakai	2.01	274	P	Pn	02 22 35.8	+0.6
GRZ	Great Barrier	2.04	299	P	Pn	02 22 36.2	+0.6
ARHZ	Aropaoanui	2.07	195	P	Pn	02 22 35.8	-0.4
BKZ	Black Stump Fm	2.12	206	P	Pn	02 22 36.1	-0.7
RITZ	Rihia Road	2.23	219	P	Pn	02 22 38.7	+0.4
MBAZ	Motutapu North	2.27	282	P	Pn	02 22 39.7	+0.9
MCHZ	McNeill Hill	2.31	199	P	Pn	02 22 39.0	-0.4
KWHZ	Kaweka Forest	2.38	204	P	Pn	02 22 40.3	0.0
KRVZ	Karewarewa	2.43	220	P	Pn	02 22 41.9	+0.7
WTVZ	West Tongariro	2.47	221	P	Pn	02 22 42.3	+0.5
NGZ	Ngauruhoe	2.51	220	P	Pn	02 22 42.8	+0.5
TWVZ	Taurewa	2.52	223	P	Pn	02 22 42.7	+0.3
HIZ	Hauiti	2.55	240	P	Pn	02 22 43.5	+0.8
TUVZ	Tukino	2.56	218	P	Pn	02 22 42.7	-0.2
BHHZ	Black Hill Sta	2.56	209	P	Pn	02 22 42.7	-0.2
FWVZ	Far West T-bar	2.60	219	P	Pn	02 22 44.0	+0.5
KAHZ	Kahuranaki	2.61	193	P	Pn	02 22 41.4	-2.1
MOVZ	Moawhango	2.62	214	P	Pn	02 22 42.5	-1.2
TRVZ	Turoa	2.63	219	P	Pn	02 22 44.7	+0.7
MTVZ	Mangateitei	2.74	218	P	Pn	02 22 45.1	-0.2
VRZ	Vera Road	2.95	230	P	Pn	02 22 49.0	+0.7
TSZ	Takapari Road	3.10	205	P	Pn	02 22 50.3	+0.1
PRHZ	Porangahau	3.11	195	P	Pn	02 22 48.2	-2.2
KHEZ	Kahui Hut	3.52	234	P	Pn	02 22 58.9	+2.8
MRZ	Mangatainoka R	3.77	205	P	Pn	02 22 56.8	-2.6
TIWZ	Tintock	3.78	201	P	Pn	02 22 56.8	-2.8
CTZ	Chatham Island	7.80	148	P	Pn	02 23 51.0	-3.7

ISCJB ***20*** *02:22:21.1±0.7, 47°.29S±0°.10×11°.5W±0°.3, h10^{km}, mb4.1/7, MS4.5/18, Error ellipse: s-maj=25.4km s-min=13.1km az=11.2*

IDC ***20*** *02:22:21.3±0.8, 47°.26S×11°.48W, h0^{km}, mb4.1/7, mb1 4.2/7, mb1mx4.0/29, mbtmp4.1/7, MS4.5/18, Ms1 4.5/18, ms1mx4.4/21, Error ellipse: s-maj=30.1km s-min=20.7km az=107.0*

GCMT ***20*** *02:22:29.0±0.1, 47°.51S±0°.01×11°.89W±0°.01, h18^{km}, MW5.3/115, Moment Tensor Solution. s80,c115; s115,c206; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.08±.02; $M_{\theta\theta}$0.58±.02; $M_{\phi\phi}$-0.50±.02; $M_{r\theta}$0.15±.04; $M_{\theta\phi}$-0.90±.02; $M_{\phi r}$-0.24±.04; Best double couple: $M_0$1.08500×10^{17} NP1:ϕ_s165.00000°,δ88.00000°,λ14.00000°. NP2:ϕ_s74.00000°,δ76.00000°,λ178.00000°. Principal axes: T 1.1420, Plg12.0000°, Azm30.0000°; N -0.1130, Plg76.0000°, Azm174.0000°; P -1.0290, Plg8.0000°, Azm298.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 20 02:22:22.7±0.7**,47°.3S**±0°.1×**11°.5W**±0°.2**,h10**^{km}**,n36,** **σ0^{s}.97**/14**,mb4.1**/7**,MS4.5**/18**,Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA2	Neumayer--Watz	23.75	177	P	P	02 27 33.1	-1.6
VNA3	Neumayer Olymp	24.01	179	P	P	02 27 35.8	-1.4
SNAA	Sanae	24.76	173	P	P	02 27 45.5	+1.4
SNAA	Sanae	24.76	173	P	P	02 27 44.9	+0.8
	5.8nm,0.9s,baz=304,slow=8.7,SNR=6.9						
SNAA				LR	LR	02 34 55.0	
	comp=Z,882nm,20.8s,baz=342,slow=30						
SUR	Sutherland	28.68	70	LR	LR	02 37 16.1	
	comp=Z,696nm,20.0s,baz=228,slow=31						
BOSA	Boshof	34.04	70	LR	LR	02 40 11.1	
	comp=Z,766nm,21.6s,baz=226,slow=31						
TSUM	Tsumeb	36.71	50	P	P	02 29 30.4	+0.3
	5.8nm,1.1s,baz=186,slow=9.2,SNR=4.8						
H10S2	ASCENSION HYDR	38.33	355	T	T	03 10 56.1	
	baz=178,slow=75,SNR=31						
H10S3	ASCENSION HYDR	38.34	355	T	T	03 10 39.5	
	baz=178,slow=75,SNR=28						
H10S1	ASCENSION HYDR	38.35	355	T	T	03 10 57.4	
	baz=178,slow=75,SNR=32						
CPUP	Villa Florida	41.54	284	LR	LR	02 44 15.7	
	comp=Z,682nm,21.6s,baz=140,slow=32						
MAW	Mawson	41.63	146	LR	LR	02 44 08.9	
	comp=Z,385nm,19.3s,baz=262,slow=31						
QSPA	South Pole Qui	42.93	180	P	P	02 30 21.6	+0.3
	4.2nm,0.8s,baz=207,slow=5.4,SNR=11						
BDFB	Brasilia	43.71	304	LR	LR	02 45 31.2	
	comp=Z,972nm,18.2s,baz=118,slow=32						
LSZ	Lusaka	45.78	59	P	P	02 30 44.7	+0.1
	2.4nm,1.1s,baz=226,slow=6.0,SNR=3.7						
DBIC	Dimbokro	54.08	8	LR	LR	02 48 49.4	
	comp=Z,390nm,21.6s,baz=166,slow=29						
VNDA	Vanda	55.36	178	LR	LR	02 53 42.6	
	comp=Z,844nm,20.3s,baz=176,slow=34						
LPAZ	La Paz	55.72	284	P	P	02 32 00.4	+0.2
	0.7nm,0.5s,baz=155,slow=7.7,SNR=3.6						
LPAZ				LR	LR	02 53 58.9	
	comp=Z,630nm,21.9s,baz=134,slow=34						
TORD	Torodi Ar. Bea	61.34	15	P	P	02 32 37.5	-1.0
	0.5nm,0.5s,baz=192,slow=6.9,SNR=11						
TORD				LR	LR	02 53 29.4	
	comp=Z,357nm,21.5s,baz=265,slow=30						
KMBO	Kilima Mbogo	62.41	58	LR	LR	02 58 23.4	
	comp=Z,297nm,20.2s,baz=204,slow=35						
ROSC	El Rosal	75.65	294	LR	LR	03 05 49.8	
	comp=Z,397nm,19.0s,baz=178,slow=34						
KEST	Kesra	84.77	17	LR	LR	03 09 22.3	
	comp=Z,264nm,19.4s,baz=154,slow=33						
ESDC	Sonseca Array	86.88	6	P	P	02 35 07.3	+0.2
	0.7nm,0.7s,baz=179,slow=5.6,SNR=5.9						
ESDC				LR	LR	03 10 05.4	
	comp=Z,136nm,18.9s,baz=230,slow=33						
RPZ	Rata Peaks	89.32	182	LR	LR	03 11 40.6	
	comp=Z,195nm,19.8s,baz=181,slow=33						
RKT	Rikitea	93.42	230	eLR	LR	03 05 31.5	
	comp=Z,393nm,31.8s						
BRTR	Keskin Array B	95.52	33	LR	LR	03 17 41.5	
	comp=Z,86nm,21.9s,baz=240,slow=35						
STKA	Stephens Creek	97.51	157	LR	LR	03 16 58.1	
	comp=Z,180nm,20.0s,baz=199,slow=34						
GERES	GERESS Array B	98.25	16	LR	LR	03 17 22.4	
	comp=Z,244nm,20.8s,baz=224,slow=34						
TBI	Tubuai	100.12	219	eLR	LR	03 08 47.5	
	comp=Z,520nm,32.0s						
PPT2	Papeete2	105.24	221	eLR	LR	03 11 09.0	
	comp=Z,721nm,31.8s						
TAOE	Nuku Hiva Isla	107.95	234	eLR	LR	03 12 26.8	
	comp=Z,288nm,28.7s						
DZM	Mont Dzumac	110.90	178	eLR	LR	03 13 42.8	
	comp=Z,379nm,25.6s						
PDAR	Pinedale Array	124.50	298	PKP	PKPdf	02 41 22.1	+0.2
	0.2nm,0.5s,baz=115,slow=4.1,SNR=2.3						
YKA	Yellowknife Ar	136.13	319	PKP	PKPdf	02 41 42.3	-0.6
	0.2nm,0.8s,baz=110,slow=2.0,SNR=3.8						
INK	Inuvik	144.55	327	PKP	PKPab	02 41 57.6	+1.2
	1.3nm,0.7s,baz=135,slow=1.5,SNR=3.2						
ILAR	Eielson Array	150.45	322	PKPbc	PKPbc	02 42 12.8	-0.4
	0.7nm,0.6s,baz=116,slow=0.7,SNR=12						

IDC 20 02:22:22.3±1.9**,5°.84S**×**151°.71E,h0**^{km}**,mb4.1**/4**,** **mb1 4.4**/4**,mb1mx3.8**/34**,mbtmp4.2**/4**,MS3.6**/3**,Ms1 3.7**/3**,** **ms1mx3.0**/31**,Error ellipse: s-maj=78.3km s-min=25.6km az=124.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.95	229	P	P	02 27 18.0	+0.1
	3.1nm,0.4s,baz=55,slow=10,SNR=34						
WRA				LR	LR	02 35 47.6	
	comp=Z,109nm,21.9s,baz=120,slow=37						
ASAR	Alice Springs	24.66	222	P	P	02 27 45.2	+0.2
	5.8nm,0.8s,baz=54,slow=9.2,SNR=45						
FITZ	Fitzroy Crossi	28.22	242	P	P	02 28 17.1	0.0
	5.3nm,0.5s,baz=53,slow=8.3,SNR=30						
CMAR	Chiang Mai Arr	57.34	296	LR	LR	02 57 09.7	
	comp=Z,25nm,20.0s,baz=290,slow=36						
MKAR	Makanchi Array	80.39	319	P	P	02 34 35.7	-0.1
	0.1nm,0.4s,baz=91,slow=7.2,SNR=3.6						
ILAR	Eielson Array	83.52	22	P	P	02 34 52.1	+0.2
	0.2nm,0.5s,baz=246,slow=5.0,SNR=4.3						
GEYT	Alibeck	96.38	307	LR	LR	03 21 28.5	
	comp=Z,116nm,22.0s,baz=220,slow=37						
TORD	Torodi Ar. Bea	149.57	286	PKPbc	PKPbc	02 42 14.2	-0.7
	1.0nm,0.6s,baz=81,slow=2.4,SNR=11						

ISCJB ***20*** *02:23:41.4±0.2, 21°.61S±0°.03×68°.19W±0°.05, h135^{km}±4^{km}, mb4.7/15, Error ellipse: s-maj=7.0km s-min=4.4km az=178.4*

IDC ***20*** *02:23:43.0±0.7, 21°.57S×68°.04W, h121^{km}±9^{km}, mb4.2/9, mb1 4.1/12, mb1mx3.9/28, mbtmp4.4/12, Error ellipse: s-maj=21.4km s-min=10.4km az=102.0*

VAO ***20*** *02:23:43.5±0.5, 21°.71S×68°.11W, h139^{km}±5^{km}, mb4.4*

NEIC ***20*** *02:23:43.0±0.0, 21°.59S×68°.46W, h141^{km}, mb4.7/9, ML4.5(GUC), After GUC.*

GUC ***20*** *02:23:43.6±0.5, 21°.59S×68°.46W, h141^{km}±4^{km}, ML4.5*

ISC 20 02:23:42.6±0.6**,21°.67S**±0°.04×**68°.26W**±0°.06**,h133**^{km}±6^{km}**,** **n90,σ1^{s}.60**/115**,mb5.0**/15**,9C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.93	262	⇑iP	Pn	02 24 06.4	+1.0
PB09				i S	Sn	02 24 23.3	+0.7
PB09				IAML		02 24 25.6	
	comp=N,5µm,0.3s						
LVC	Limon Verde	1.12	213	ePn	Pn	02 24 09.0	+1.6
LVC				eSn	Sn	02 24 26.4	+0.3
LVC	Limon Verde	1.12	213	P	Pn	02 24 08.9	+1.6
	comp=N,177nm,0.3s,baz=26,slow=8.2,SNR=1733						
LVC				S	Sn	02 24 28.2	+2.1
	comp=N,271nm,0.3s,baz=32,slow=17,SNR=18						
LVC				LR	LR	02 24 30.1	
	comp=N,68nm,20.0s,baz=86,slow=36						
LVC	Limon Verde	1.12	213	eP	Pn	02 24 08.9	+1.6
PB01	IPOC Station P	1.30	298	ePn	Pn	02 24 09.3	+0.3
PB01				eSn	Sn	02 24 27.1	-1.8
PB01	IPOC Station P	1.30	298	⇑iP	Pn	02 24 09.2	+0.3
PB01				i S	Sn	02 24 28.4	-0.6
PB01				IAML		02 24 30.2	
	comp=E,8µm,0.3s						
PB03	IPOC Station P	1.44	254	⇑iP	Pn	02 24 11.1	+0.6
PB03				i S	Sn	02 24 31.9	+0.2
PB03				IAML		02 24 33.4	
	comp=N,9µm,0.5s						
PB07	IPOC Station P	1.52	267	⇑iP	Pn	02 24 11.9	+0.6
PB07				i S	Sn	02 24 33.2	0.0
PB07				IAML		02 24 34.9	
	comp=N,11µm,0.5s						
PB02	IPOC Station P	1.57	282	⇑iP	Pn	02 24 12.0	+0.2
PB02				i S	Sn	02 24 33.3	-0.7
PB06	IPOC Station P	1.60	229	⇑iP	Pn	02 24 13.5	+1.3
PB06				i S	Sn	02 24 36.2	+1.3
PB06				IAML		02 24 37.6	
	comp=E,5µm,0.5s						
PB08	IPOC Station P	1.73	331	⇑iP	Pn	02 24 14.8	+0.8
PB08				i S	Sn	02 24 38.2	+0.2
PB08				IAML		02 24 39.5	
	comp=E,4µm,0.6s						
PB04	IPOC Station P	1.88	249	ePn	Pn	02 24 16.1	+0.6
PB04				eSn	Sn	02 24 38.3	-2.3
PB04	IPOC Station P	1.88	249	⇑iP	Pn	02 24 15.9	+0.4
PB04				i S	Sn	02 24 40.6	0.0
PB04				IAML		02 24 42.5	
	comp=E,4µm,0.3s						
PB15	IPOC Station P	1.90	216	eP	Pn	02 24 17.7	+1.9
PB15				i S	Sn	02 24 44.0	+2.7
PB05	IPOC Station P	2.16	236	eP	Pn	02 24 19.8	+1.0
PB05				i S	Sn	02 24 46.9	+0.4
PB05				IAML		02 24 48.2	
	comp=N,2µm,0.5s						
PB11	IPOC Station P	2.30	325	ePn	Pn	02 24 20.0	-0.7
PB11				eSn	Sn	02 24 48.4	-1.5
PB11	IPOC Station P	2.30	325	⇑iP	Pn	02 24 20.1	-0.6
PB11				eS	Sn	02 24 48.6	-1.3
PB11				IAML		02 24 49.9	
	comp=N,4µm,0.4s						
PSGC	Pisagua	2.70	319	eP	Pn	02 24 24.2	-1.4
PSGC				i S	Sn	02 24 56.1	-2.6
PSGC				IAML		02 24 58.0	
	comp=E,2µm,0.5s						
PB10	IPOC Station P	2.81	229	ePn	Pn	02 24 27.8	+0.9
PB10				eSn	Sn	02 24 58.8	-2.2
MNMC	Minye Minye	2.82	333	ePn	Pn	02 24 27.1	-0.2
MNMC				eSn	Sn	02 24 58.9	-2.7
PB12	IPOC Station P	3.61	327	eP	Pn	02 24 35.7	-1.7
PB12				i S	Sn	02 25 16.5	-3.2
GO02	Mina Guanaco	3.69	199	ePn	Pn	02 24 39.4	+0.7
GO02				eSn	Sn	02 25 16.4	-5.7
LPAZ	La Paz	5.35	1	P	Pn	02 25 01.8	+0.7
	comp=E,5.6nm,0.3s,baz=159,slow=6.7,SNR=55						
LPAZ				S	Sn	02 26 00.8	-1.3
	comp=E,1.8nm,0.3s,baz=190,slow=10,SNR=4.1						
LPAZ	La Paz	5.35	1	eP	Pn	02 25 02.2	+1.2
GO03	Copiap	6.17	197	ePn	Pn	02 25 09.9	-1.5
GO03				eSn	Sn	02 26 18.3	-2.6
LCO	Las Campanas	7.64	196	ePn	Pn	02 25 28.8	-2.6
LCO				eSn	Sn	02 26 53.3	-3.4
GO04	Tololo Observa	8.78	195	ePn	Pn	02 25 43.3	-3.4
GO04				eSn	Sn	02 27 19.8	-4.2
CPUP	Villa Florida	11.01	117	P	Pn	02 26 15.1	-1.3
	comp=E,0.2nm,0.3s,baz=285,slow=12,SNR=7.0						
CPUP	Villa Florida	11.01	117	eP	Pn	02 26 14.3	-2.1
AQDB	Aquidauana	11.78	87	eP	Pn	02 26 25.1	-1.5
TRCB	Terra Rica	14.51	97	eP	Pn	02 27 01.0	-0.7
PTGB	Pitanga	15.19	105	eP	P	02 27 10.6	-1.7
CPSB	Cacapava Do Su	15.90	126	eP	Pn	02 27 17.4	-1.5
PLTB	Pedras Altas	16.49	131	eP	Pn	02 27 24.6	-1.5
ITRB	Iturama	16.86	87	eP	P	02 27 30.1	-0.6
CNLB	Canela	17.45	119	eP	P	02 27 36.2	-0.9
GO06	Curarrehue	18.07	188	eP	Pn	02 27 46.2	+1.0
	comp=E,34nm,1.5s						
BB19B	Bebedouro	18.39	92	eP	P	02 27 46.5	-0.8
TER01	Tubaro-SC	18.61	115	eP	P	02 27 49.7	-0.1
PLCA	Paso Flores	19.11	185	eP	P	02 27 55.9	+0.8
	comp=E,6.8nm,1.0s						
IPMB	Ipameri, GO	19.21	83	eP	P	02 27 56.1	-0.3
RCLB	Rio Claro- Sao	19.23	96	eP	P	02 27 55.3	-1.2
BDFB	Brasilia	20.08	76	eP	P	02 28 05.8	-0.2
BDFB	Brasilia	20.08	76	P	P	02 28 05.0	-1.0
	comp=E,1.3nm,0.3s,baz=217,slow=10,SNR=12						
PEXB	Peixe	21.31	67	eP	P	02 28 17.1	-1.9
BSCB	Bom Sucesso	21.88	93	eP	P	02 28 25.0	-0.1
PTGA	Pitinga	22.32	22	eP	P	02 28 28.0	-1.4
	comp=E,5.2nm,0.6s						
PTGA	Pitinga	22.32	22	P	P	02 28 28.1	-1.4
	comp=E,2.9nm,0.3s,baz=300,slow=23,SNR=6.7						
VAS01	Vassouras-RJ	23.02	96	eP	P	02 28 35.4	-0.8
MCI6	Montes Claros	23.49	82	eP	P	02 28 38.7	-1.9
MCI8	Montes Claros	23.51	82	eP	P	02 28 38.9	-1.8
MCI9	Montes Claros	23.52	82	eP	P	02 28 39.0	-1.9
JANB	Januaria	23.64	78	eP	P	02 28 40.0	-1.9
DUB01	Friburgo-RJ	24.02	96	eP	P	02 28 44.8	-0.4
SJMB	Sao Joao De Ma	25.57	88	eP	P	02 28 58.7	-0.6
BSFB	Barra de Sao F	25.86	89	eP	P	02 29 01.9	-0.1
RIB01	Linhares ES	26.19	90	eP	P	02 29 04.8	-0.2
RCBR	Riachuelo	35.03	68	eP	P	02 30 22.2	-0.6
	comp=E,41nm,1.5s						
OBIP	Obispado Ponce	39.50	2	eP	P	02 30 56.2	-4.0
	comp=E,33nm,1.1s						
SNAA	Sanae	61.93	161	eP	P	02 33 49.8	+2.0
	comp=E,5.0nm,1.1s						
SNAA	Sanae	61.93	161	P	P	02 33 49.8	+2.0
	comp=E,1.2nm,0.5s,baz=272,slow=11,SNR=5.9						
LIC	Lamto	67.85	73	eP	P	02 34 26.7	-0.2
	comp=E,17nm,0.4s						
TIC	Toumodi	68.04	73	eP	P	02 34 27.9	-0.3
KIC	Kosan Boka	68.17	73	eP	P	02 34 29.0	+0.1
	comp=E,41nm,0.6s						
DBIC	Dimbokro	68.20	73	eP	P	02 34 29.4	+0.3
	comp=E,18nm,0.8s						
DBIC	Dimbokro	68.20	73	P	P	02 34 29.2	+0.1
	comp=E,16nm,0.6s,baz=220,slow=4.1,SNR=51						
DBIC	Dimbokro	68.20	73	eP	P	02 34 29.4	+0.3
QSPA	South Pole Qui	68.53	180	P	P	02 34 33.1	+2.6
	comp=E,0.8nm,0.6s,baz=213,slow=2.4,SNR=6.5						
TOA0	Torodi Ar. Sit	76.84	70	eP	P	02 35 20.6	+0.3
	comp=E,21nm,0.7s						
TOA1	Torodi Ar. Sit	76.84	70	eP	P	02 35 20.6	+0.3
TORD	Torodi Ar. Bea	76.84	70	P	P	02 35 20.6	+0.3
	comp=E,18nm,0.6s,baz=259,slow=4.9,SNR=163						
SUR	Sutherland	77.97	120	eP	P	02 35 28.9	+2.3
	comp=E,32nm,1.3s						
SUR	Sutherland	77.97	120	P	P	02 35 28.9	+2.3
	comp=E,12nm,1.0s,baz=219,slow=5.1,SNR=6.9						
BOSA	Boshof	82.83	118	P	P	02 35 53.8	+1.2
	comp=E,2.9nm,0.4s,baz=252,slow=4.2,SNR=10						
BOSA	Boshof	82.83	118	eP	P	02 35 51.6	-1.0
ESDC	Sonseca Array	85.53	44	P	P	02 36 06.8	+1.0
	comp=E,1.2nm,0.9s,baz=241,slow=4.7,SNR=4.1						
YKA	Yellowknife Ar	91.55	340	P	P	02 36 34.7	+1.1
	comp=E,0.5nm,0.5s,baz=135,slow=4.5,SNR=21						
YKB5	Yellowknife Ar	91.55	340	eP	P	02 36 34.7	+1.1
RAO	Raoul Island	95.46	236	eP	P	02 36 51.0	-1.6
	comp=E,2µm,0.6s						
WRA	Warramunga Arr	133.12	210	PKP	PKiKP	02 42 45.5	+1.1
	comp=E,0.2nm,0.6s,baz=149,slow=1.5,SNR=3.3						
ZALV	Zalesovo Beam	141.84	26	PKP	PKPdf	02 42 58.9	+0.7
	comp=E,0.8nm,0.6s,baz=305,slow=2.0,SNR=3.8						
NRN	Naryn	144.06	48	ePKPdf	PKPdf	02 43 03.2	+0.3
TARG	Taragay, Kyrgy	145.19	47	ePKPdf	PKPdf	02 43 06.9	+1.9
MAKZ	Makanchi	145.22	37	ePKPdf	PKPdf	02 43 06.0	+1.6
MK31	Makanchi Array	145.41	37	ePKPdf	PKPab	02 43 06.3	+1.0
MK32	Makanchi Array	145.41	37	ePKPdf	PKPab	02 43 06.2	+1.0
MKAR	Makanchi Array	145.41	37	PKPbc	PKPab	02 43 06.2	+1.0
	comp=E,4.2nm,0.8s,baz=337,slow=2.7,SNR=39						
MK01	Makanchi Array	145.43	37	ePKPdf	PKPab	02 43 06.2	+0.9
SONA0	Songino Array	153.54	8	ePKPbc	PKiKP	02 43 26.9	+1.3
SONM	Songino Array	153.54	8	PKPbc	PKiKP	02 43 26.9	+1.3
	comp=E,0.3nm,0.4s,baz=318,slow=1.0,SNR=4.5						

JMA 20 02:34:12.9±0.2, 25°.35N×122°.63E, h241^{km}±4^{km}, M3.7, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	1.42	135	P	Pn	02 34 49.7	-0.1
IRIF				S	S	02 35 17.8	-0.9
HATJ	Hateruma jima	1.67	140	*e*S	S	02 35 22.8	+0.5
JKRS	Kuro-shima	1.67	131	P	Pn	02 34 52.3	+0.5
JKRS				S	S	02 35 22.8	+0.6
JIJ	Ishigaki jima	1.69	125	P	Pn	02 34 52.0	+0.1
JIJ				S	S	02 35 21.8	-0.7
JISG	Ishigakijimahi	1.70	116	P	Pn	02 34 52.1	+0.1
JISG				S	S	02 35 22.3	-0.4
JTJ	Tarama	2.01	110	P	Pn	02 34 55.1	+0.4
JTJ				S	S	02 35 27.3	-0.2
JIRB	Irabujima	2.36	102	P	Pn	02 34 58.1	0.0
JIRB				S	S	02 35 32.1	-1.5
JIKM	Ikemajima	2.41	100	P	Pn	02 34 58.9	+0.3
JIKM				S	S	02 35 34.1	-0.4

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*ISCJB **20** 02:35:35.3±0.7, 34°.38N±0°.08×26°.59E±0°.06, h33^{km}, Error ellipse: s-maj=12.9km s-min=3.6km az=31.1*

*ATH **20** 02:35:35.9, 34°.37N×26°.16E, h29^{km}±3^{km}, ML2.5/2, Error ellipse: s-maj=6.6km s-min=2.3km az=354.0*

*GII **20** 02:35:41.3±0.0, 34°.15N×26°.94E, h8^{km}, MD3.4/1*

ISC 20 02:35:35.7±1.6, 34°.3N±0°.1×26°.37E±0°.10, h33^{km}, n21, σ1^{s}.84/33, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.83	352	P	Pn	02 35 50.7	-0.4
ZKR				S	Sn	02 36 01.0	-1.2
ZKR				AML	AML	02 36 10.3	
	comp=E,1033µm,0.4s						
ZKR				AML	AML	02 36 11.2	
	comp=N,456µm,0.7s						
LAST	Lasithi	1.13	320	P	Pn	02 35 54.6	-0.7
LAST				S	Sn	02 36 08.7	-1.1
LAST				AML	AML	02 36 12.0	
	comp=E,538µm,0.7s						
LAST				AML	AML	02 36 13.5	
	comp=N,1029µm,0.7s						
NPS	Neapolis	1.15	328	P	Pn	02 35 55.2	-0.3
KARP	Karpathos	1.41	27	P	Pb	02 36 02.0	+0.5
VAM	Vamos	2.10	303	P	Pn	02 36 08.2	-0.3
CSS	Mathiatis	5.78	81	Pn	Pn	02 37 01.0	+1.9
CSS				Sn	Sn	02 38 03.6	-0.7
OFRI	`Ofer	7.39	101	Sn	Sn	02 38 41.9	-2.2
SLTI	Sal'it	7.55	103	Pn	Pn	02 37 25.0	+1.6
SLTI				Sn	Sn	02 38 45.4	-2.4
MMA0B	Mount Meron ar	7.64	97	Pn	Pn	02 37 26.6	+1.8
AMAZ	Amatzia	7.70	109	Pn	Pn	02 37 27.1	+1.6
AMAZ				Sn	Sn	02 38 49.7	-1.8
MMLI	Mount Malkishu	7.80	101	Pn	Pn	02 37 28.0	+1.1
MMLI				Sn	Sn	02 38 51.7	-2.3
KSDI	Kefar Szold	7.82	95	Pn	Pn	02 37 28.5	+1.4
KSDI				Sn	Sn	02 38 51.9	-2.5
NATI	Neve Ativ	7.87	95	Pn	Pn	02 37 29.8	+2.0
NATI				Sn	Sn	02 38 54.4	-1.3
YTIR	Yattir	7.92	109	Pn	Pn	02 37 29.8	+1.2
YTIR				Sn	Sn	02 38 55.2	-1.9
HMDT	Nahal Hemdat	7.94	102	Pn	Pn	02 37 31.0	+2.3
DSI	Dead Sea	8.05	107	Pn	Pn	02 37 32.3	+2.0
DSI				Sn	Sn	02 38 58.7	-1.4
GHAJ	Ghor Haditha	8.30	109	Pn	Pn	02 37 35.7	+2.0
PRNI	Paran	8.30	116	Pn	Pn	02 37 36.1	+2.4
PRNI				Sn	Sn	02 39 04.2	-2.1
HRFI	Mount Harif	8.49	118	Pn	Pn	02 37 38.3	+2.0
HRFI				Sn	Sn	02 39 08.9	-2.0
MBRI	Mt Berech	8.53	119	Pn	Pn	02 37 39.0	+2.1
EIL	Elat	8.62	120	Sn	Sn	02 39 11.6	-2.7

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*ISCJB **20** 02:44:13.8±0.5, 32°.59S±0°.04×179°.8W±0°.1, h350^{km}, mb3.6/5, Error ellipse: s-maj=14.5km s-min=4.6km az=15.8*

*IDC **20** 02:44:14.9±4.7, 32°.29S×179°.85E, h318^{km}±38^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.5/31, mbtmp4.4/7, Error ellipse: s-maj=48.5km s-min=20.4km az=44.0*

*WEL **20** 02:44:18.2±0.8, 33°S±6°×18°0W±1°5, h274^{km}±13^{km}*

ISC 20 02:44:13.7±0.9, 32°.63S±0°.07×179°.7W±0°.1, h350^{km}, n54, σ1^{s}.95/69, mb3.6/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.69	25	P	Pn	02 45 19.5	-0.2
GLKZ				S	S	02 46 08.7	-4.2
RIZ	Raoul Island	3.71	25	P	Pn	02 45 21.6	+1.8
RIZ				S	S	02 46 10.9	-2.1
MXZ	Matakaoa Point	5.18	198	P	Pn	02 45 37.3	+2.2
MXZ				S	S	02 46 39.9	-1.2
GRZ	Great Barrier	5.38	227	P	Pn	02 45 38.9	+1.5
WMGZ	Waiomatatini S	5.40	196	P	Pn	02 45 39.9	+2.4
WMGZ				S	S	02 46 46.4	+0.9
HAZ	Te Kaha	5.51	201	P	Pn	02 45 40.9	+2.1
HAZ				S	S	02 46 46.4	-1.3
KUZ	Kuaotunu	5.57	221	P	Pn	02 45 42.2	+2.7
PUZ	Puketiti	5.67	196	P	Pn	02 45 42.2	+1.5
PUZ				S	S	02 46 50.3	-0.9
RUGZ	Raukumara Rang	5.73	201	P	Pn	02 45 43.5	+2.1
RUGZ				S	S	02 46 49.3	-3.3
TWGZ	Tauwhareparae	5.84	198	P	Pn	02 45 45.4	+2.8
TWGZ				S	S	02 46 55.4	+0.6
WHRZ	Whale Island	5.88	207	P	Pn	02 45 47.6	+4.7
WHRZ				S	S	02 46 56.6	+1.2
WCZ	Waipu Caves	5.92	235	P	Pn	02 45 45.3	+1.8
OPRZ	Ohinepanea	6.03	209	P	Pn	02 45 47.4	+2.7
CNGZ	Carnagh Statio	6.08	196	P	Pn	02 45 47.6	+2.3
MWZ	Matawai	6.12	201	P	Pn	02 45 46.9	+1.1
MWZ				S	S	02 46 59.4	-1.1
TKGZ	Te Karaka	6.13	198	P	Pn	02 45 47.4	+1.6
TKGZ				S	S	02 46 59.3	-1.3
EDRZ	Edgecumbe	6.18	207	P	Pn	02 45 44.9	-1.6
URZ	Urewera	6.18	204	P	Pn	02 45 49.1	+2.7
	19nm,0.3s,baz=346,slow=4.6,SNR=59						
URZ				S	S	02 46 60.0	-1.8
	18nm,0.3s,baz=74,slow=23,SNR=14						
URZ	Urewera	6.18	204	P	Pn	02 45 46.6	+0.1
URZ				S	S	02 46 59.3	-2.5
RAGZ	Rawiri	6.30	201	P	Pn	02 45 48.8	+0.9
RAGZ				S	S	02 47 03.7	-0.7
MUGZ	Murupara	6.50	205	P	Pn	02 45 51.6	+1.5
MUGZ				S	S	02 47 05.4	-3.1
RTZ	Ruatahuna	6.55	203	P	Pn	02 45 52.2	+1.5
PRGZ	Paritu Road	6.57	197	P	Pn	02 45 54.3	+3.3
SNGZ	Shannon Statio	6.59	201	P	Pn	02 45 53.3	+2.1
RAHZ	Arahi	6.79	202	P	Pn	02 45 55.4	+1.9
BFZ	Birch Farm	8.66	201	P	Pn	02 46 15.6	+0.1
MRZ	Mangatainoka R	8.86	204	P	Pn	02 46 18.5	+0.6
TIWZ	Tintock	8.86	202	P	Pn	02 46 19.1	+1.2
HOWZ	Holdsworth Sta	9.09	204	P	Pn	02 46 21.4	+0.7
OGWZ	Otaki Gorge	9.14	205	P	Pn	02 46 20.5	-0.8
TMWZ	Te Maipa	9.16	201	P	P	02 46 22.9	-0.7
KIW	Kapiti Island	9.28	206	P	Pn	02 46 23.4	+0.5
MTW	Mount Morrison	9.33	203	P	Pn	02 46 24.2	+0.7
CAW	Cannon Point	9.44	205	P	Pn	02 46 25.0	+0.3
TRWZ	Traveller	9.49	201	P	P	02 46 27.3	0.0
PAWZ	Paruwai Farm	9.56	203	P	Pn	02 46 27.3	+1.1
DUWZ	D'Urville Isla	9.62	210	P	Pn	02 46 27.0	+0.1
MSWZ	Moikau Station	9.65	203	P	Pn	02 46 27.6	+0.4
BHW	Baring Head	9.77	205	P	Pn	02 46 28.9	+0.2
PLWZ	Palliser	9.78	203	P	Pn	02 46 29.2	+0.3
TCW	Tory Channel	9.82	208	P	Pn	02 46 29.6	+0.3
TUWZ	Tuamarina	10.14	208	P	Pn	02 46 32.5	-0.6
NNZ	Nelson	10.19	211	P	Pn	02 46 33.4	-0.4
QRZ	Quartz Range	10.27	215	P	Pn	02 46 34.6	-0.1
BSWZ	Blackbirch Sta	10.41	208	P	Pn	02 46 36.9	+0.6
THZ	Tophouse	10.85	211	P	Pn	02 46 41.7	+0.1
KHZ	Kahutara	11.13	207	P	Pn	02 46 45.1	+0.2
RPZ	Rata Peaks	13.22	211	P	Pn	02 47 11.1	+1.4
	2.3nm,0.3s,baz=39,slow=6.4,SNR=7.5						
RPZ				S	S	02 49 26.0	-7.6
	2.4nm,0.3s,baz=311,slow=22,SNR=7.5						
STKA	Stephens Creek	32.61	261	P	P	02 50 15.4	+1.5
	0.7nm,0.3s,baz=91,slow=11,SNR=3.6						
CTA	Charters Tower	32.81	284	P	P	02 50 16.6	+0.8
	3.3nm,0.5s,baz=105,slow=12,SNR=9.9						
ASAR	Alice Springs	41.59	270	P	P	02 51 29.4	+0.6
	2.9nm,0.7s,baz=109,slow=7.5,SNR=27						
WRA	Warramunga Arr	42.79	275	P	P	02 51 38.3	0.0
	2.6nm,0.5s,baz=113,slow=7.9,SNR=34						
QSPA	South Pole Qui	57.48	180	P	P	02 53 33.6	+6.7
	1.2nm,0.6s,baz=221,slow=1.1,SNR=8.4						
FINES	FINESS Array B	146.69	338	PKPbc	PKiKP	03 03 16.6	+0.4
	1.9nm,0.9s,baz=18,slow=2.2,SNR=8.2						

IDC 20 02:46:35.5±9.7, 16°.96N×145°.77E, h0^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.4/43, mbtmp3.4/4, Error ellipse: s-maj=364.6km s-min=24.3km az=79.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	38.35	197	P	P	02 53 58.4	-0.1
	0.4nm,0.6s,baz=20,slow=9.2,SNR=5.1						
ASAR	Alice Springs	42.01	196	P	P	02 54 28.6	-0.2
	0.3nm,0.6s,baz=14,slow=12,SNR=2.9						
SONM	Songino Array	44.55	322	P	P	02 54 49.2	0.0
	0.2nm,0.6s,baz=130,slow=7.5,SNR=2.7						
MKAR	Makanchi Array	59.72	315	P	P	02 56 42.0	-0.1
	0.5nm,0.5s,baz=90,slow=7.2,SNR=9.8						

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*ISCJB **20** 02:49:58.7±0.3, 18°.87S±0°.05×177°.59W±0°.06, h600^{km}, mb4.4/53, Error ellipse: s-maj=7.5km s-min=6.0km az=13.7*

*IDC **20** 02:49:58.2±3.0, 18°.79S×177°.47W, h581^{km}±36^{km}, mb3.6/16, mb1 3.8/18, mb1mx3.6/35, mbtmp4.6/18, Error ellipse: s-maj=18.3km s-min=13.9km az=66.0*

*NEIC **20** 02:50:00.8±0.5, 18°.82S×177°.50W, h622^{km}±8^{km}, mb4.7/38, Error ellipse: s-maj=8.3km s-min=6.9km az=78.0*

*BJI **20** 02:50:01.3, 18°.84S×177°.82W, h601^{km}, mb4.5/12, mB5.2/8*

ISC 20 02:49:59.9±0.4, 18°.90S±0°.07×177°.54W±0°.06, h600^{km}, n95, σ1^{s}.56/105, mb4.7/53, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.35	285	*e*P	P	02 51 31.5	+3.5
MSVF				*e*S	S	02 52 45.6	+5.7
NIUE	Niue	7.20	93	*e*P	P	02 51 52.9	+1.1
NIUE				*e*S	S	02 53 25.2	+1.8
FUNA	Funafuti	10.79	342	*e*P	P	02 52 27.2	+0.5
MARNC	Mare, Loyalty	13.79	257	*e*P	P	02 52 56.0	-0.8
PINNC	Pines Island,	14.52	253	*e*P	P	02 53 03.2	-0.6
DZM	Mont Dzumac	15.34	255	*e*P	P	02 53 13.2	+1.8
	15nm,0.8s						
DZM	Mont Dzumac	15.34	255	P	P	02 53 11.1	-0.2
	1.3nm,0.3s,baz=74,slow=17,SNR=12						
OUZ	Omahuta	18.05	204	*e*P	P	02 53 39.9	+4.0
	28nm,0.7s						
MXZ	Matakaoa Point	18.95	190	*e*P	P	02 53 43.7	-0.2
	38nm,0.9s						
URZ	Urewera	19.84	192	*e*P	P	02 53 51.8	-0.3
	15nm,0.7s						
URZ	Urewera	19.84	192	P	P	02 53 51.4	-0.7
	3.8nm,0.3s,baz=360,slow=4.8,SNR=20						
URZ				S	S	02 56 53.3	-6.4
	0.2nm,0.3s,baz=197,slow=20,SNR=3.5						
HIZ	Hauiti	20.63	197	*e*P	P	02 54 00.8	+1.6
	22nm,1.2s						
BKZ	Black Stump Fm	20.85	193	*e*P	P	02 54 00.9	-0.3
	6.6nm,0.9s						
BFZ	Birch Farm	22.35	193	*e*P	P	02 54 15.2	+0.6
	11nm,0.6s						
SNZO	South Karori	23.30	195	*e*P	P	02 54 23.3	+0.4
	32nm,0.8s						
THZ	Tophouse	24.20	198	*e*P	P	02 54 32.1	+1.1
	20nm,0.5s						
KHZ	Kahutara	24.63	196	*e*P	P	02 54 34.5	-0.2
	19nm,0.5s						
LTZ	Lake Taylor	25.32	198	*e*P	P	02 54 40.3	-0.6
	24nm,0.6s						
OXZ	Oxford	25.89	198	*e*P	P	02 54 45.9	+0.1
	21nm,0.9s						
MQZ	McQueen's Vall	26.07	196	*e*P	P	02 54 48.0	+0.7
RPZ	Rata Peaks	26.54	199	*e*P	P	02 54 51.7	+0.3
RPZ	Rata Peaks	26.54	199	P	P	02 54 51.4	-0.1
	9.2nm,0.4s,baz=338,slow=0.7,SNR=9.1						
PPT	Papeete	26.58	92	*e*P	P	02 54 52.8	+0.6
FOZ	Fox Glacier	26.77	201	*e*P	P	02 54 53.8	+0.4
	50nm,0.6s						
LBZ	Lake Benmore	27.41	199	*e*P	P	02 54 58.3	-0.8
WKZ	Wanaka	28.18	201	*e*P	P	02 55 05.5	-0.3
	32nm,0.8s						
MLZ	Mavora Lakes	28.96	201	*e*P	P	02 55 14.0	+1.5
	15nm,0.7s						
DCZ	Deep Cove	29.38	202	*e*P	P	02 55 16.6	+0.5
	26nm,1.2s						
WHZ	Wether Hill Ro	29.48	201	*e*P	P	02 55 18.6	+1.6
	26nm,0.6s						
EIDS	Eidsvold	29.73	252	*e*P	P	02 55 19.9	+0.5
	6.0nm,0.6s						
ARMA	Armidale	30.18	242	*e*P	P	02 55 24.9	+1.5
	15nm,0.6s						
CTA	Charters Tower	34.12	262	P	P	02 55 56.7	+0.1
	25nm,0.6s,baz=96,slow=11,SNR=61						
CTAO	Charters Tower	34.12	262	*e*P	P	02 55 57.0	+0.3
	27nm,0.7s						
TOO	Toolangi	37.20	232	*e*P	P	02 56 22.9	+1.0
	23nm,0.7s						
COEN	Coen	37.95	271	*e*P	P	02 56 28.9	+0.7
	25nm,0.6s						
STKA	Stephens Creek	38.89	242	*e*P	P	02 56 36.5	+0.9
	4.0nm,0.9s						
STKA	Stephens Creek	38.89	242	P	P	02 56 36.1	+0.5
	7.5nm,0.3s,baz=86,slow=9.6,SNR=26						
BBOO	Buckleboo	43.66	242	*e*P	P	02 57 13.5	+0.3
	26nm,0.6s						
HUH	Hualalai	43.86	30	*e*P	P	02 57 12.7	-2.4
	61nm,1.0s						
JAY	Jayapura	43.98	287	P	P	02 57 16.3	+0.4
	19nm,0.5s,baz=131,slow=8.1,SNR=7.6						
WB2	Warramunga Arr	45.27	260	*e*P	P	02 57 24.9	-0.7
	15nm,0.6s						
WRAB	Tennant Creek	45.27	260	*e*P	P	02 57 25.2	-0.4
	13nm,0.6s						
WRA	Warramunga Arr	45.28	260	P	P	02 57 25.1	-0.6
	9.4nm,0.3s,baz=97,slow=7.4,SNR=233						
WRA				PcP	PcP	02 58 52.4	-0.2
	1.2nm,0.5s,baz=92,slow=3.4,SNR=4.1						
WRA				S	S	03 03 19.7	-4.0
	1.1nm,0.8s,baz=93,slow=14,SNR=10						
AS01	Alice Springs	45.29	255	*e*P	P	02 57 25.4	-0.4
AS31	Alice Springs	45.33	255	*e*P	P	02 57 25.9	-0.3
	5.4nm,0.8s						
ASAR	Alice Springs	45.33	255	P	P	02 57 25.9	-0.2
	22nm,0.7s,baz=89,slow=7.8,SNR=259						
ASAR				PcP	PcP	02 58 52.3	-0.4
	2.0nm,0.5s,baz=93,slow=5.3,SNR=6.4						
ASAR				S	S	03 03 21.6	-2.8
	3.0nm,0.6s,baz=91,slow=16,SNR=22						
MTN	Manton Dam	49.61	269	*e*P	P	02 57 57.1	-0.9
	9.9nm,0.8s						
FORT	Forrest	50.34	245	*e*P	P	02 58 02.6	-0.6
	30nm,0.6s						
FITZ	Fitzroy Crossi	53.69	261	*e*P	P	02 58 27.3	0.0
	4.4nm,0.6s						
MBWA	Marble Bar	58.64	256	*e*P	P	02 59 00.5	-0.8
	1.5nm,1.0s						
NWAO	Narrogin (SRO)	59.48	242	*e*P	P	02 59 06.1	-0.6
	7.4nm,0.8s						
VNDA	Vanda	59.53	185	*e*P	P	02 59 07.7	+1.5
	1.8nm,0.8s						
VNDA	Vanda	59.53	185	P	P	02 59 08.0	+1.8
	3.0nm,0.6s,baz=352,slow=6.8,SNR=11						
MORW	Morawa	60.85	247	*e*P	P	02 59 15.1	-0.7
	8.2nm,1.1s						
GIRL	Giralia	63.41	254	*e*P	P	02 59 32.6	+0.2
MAJO	Matsushiro	69.20	323	*e*P	P	03 00 06.0	-1.7
	14nm,1.1s						
UGM	Wanagama	70.44	268	*e*P	P	03 00 14.1	-1.6
	32nm,0.8s						
ADK	Adak	70.48	1	*e*P	P	03 00 13.9	-1.1
	30nm,1.0s						
QSPA	South Pole Qui	71.16	180	*e*P	P	03 00 20.6	+1.5
	7.1nm,0.6s						
ASAJ	Asahikawa	72.54	331	P	P	03 00 26.9	-0.2
	3.5nm,0.5s,baz=232,slow=19,SNR=5.0						
PETK	Petropavlovsk-	74.85	345	P	P	03 00 39.3	-0.7
	3.5nm,0.6s,baz=129,slow=7.8,SNR=14						
USRK	Ussuriysk Ar.	77.90	325	P	P	03 00 56.6	-0.2
	1.0nm,0.5s,baz=183,slow=4.9,SNR=4.3						
NJ2	Nanjing	79.21	309	*e*P	P	03 01 03.8	-0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
NVAR	Mina Array Bea	79.57	43	P	P	03 01 05.6	-0.6
	0.3nm,0.5s,baz=220,slow=8.3,SNR=2.0						
KLR	Kul'dur	81.38	329	P	P	03 01 15.2	+0.2
	0.5nm,0.5s,baz=330,slow=7.6,SNR=4.1						
HPIG		83.23	59	*e*P	P	03 01 27.7	+2.6
	10nm,0.6s						
SEY	Seymchan	84.93	347	P	P	03 01 31.1	-1.1
	2.5nm,0.6s,baz=137,slow=4.0,SNR=8.6						
TXAR	Lajitas Array	85.83	57	P	P	03 01 36.8	-0.7
	0.8nm,0.6s,baz=217,slow=7.4,SNR=4.6						
GYA	Guiyang	86.25	299	*e*P	P	03 01 39.3	-0.3
GYA				pP	pwP	03 03 53.8	+3.3
GYA				PP	PP	03 05 15.0	+2.8
GYA				SKS	SKSac	03 11 05.6	-4.0
GYA				S	SKKSac	03 11 23.3	+3.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ILAR	Eielson Array	86.67	13	P	P	03 01 39.5	-1.0
	0.7nm,0.5s,baz=222,slow=5.0,SNR=17						
HHC	Hu-ho-hao-te	88.56	314	*e*P	P	03 01 51.5	+1.4
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,4.9s						
KMI	Kunming	89.02	297	P	P	03 01 52.0	-0.7
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SNAA	Sanae	89.59	178	P	P	03 01 54.2	0.0
VNA3	Neumayer Olymp	89.70	176	P	P	03 01 55.3	+0.5
VNA2	Neumayer--Watz	90.15	177	P	P	03 01 57.6	+0.8
	baz=188,slow=3.9						
CD2	Chengdu	90.30	303	*e*P	P	03 01 57.0	-1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VNA1	Neumayer--Stat	90.37	176	P	P	03 01 58.5	+0.7
LZH	Lanzhou	92.15	307	*e*P	P	03 02 09.0	+2.1
LZH				pP	pP	03 04 14.6	-1.8
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,5.0s						
YKA	Yellowknife Ar	94.89	25	P	P	03 02 17.7	-0.7
	0.2nm,0.8s,baz=243,slow=5.2,SNR=3.4						
MKAR	Makanchi Array	110.42	314	PKiKP	PKiKP	03 07 23.2	-1.8
	0.1nm,0.4s,baz=107,slow=1.1,SNR=7.2						
ARCES	ARCESS Array B	127.43	350	PKP	PKPdf	03 07 56.6	-0.3
	9.3nm,1.2s,baz=69,slow=1.2,SNR=8.4						
FINES	FINESS Array B	134.36	344	PKhKP	PKPpre	03 08 05.1	
	1.8nm,1.0s,baz=54,slow=2.4,SNR=3.3						
FINES				SKPbc	SKPbc	03 10 43.5	-1.0
	0.8nm,0.5s,baz=50,slow=3.0,SNR=8.5						
AKASG	Malin Array Be	141.82	332	PKhKP	PKPpre	03 08 18.6	
	1.0nm,0.5s,baz=40,slow=4.2,SNR=5.7						
BRTR	Keskin Array B	146.07	314	PKPbc	PKPdf	03 08 33.2	+1.2
	1.0nm,0.9s,baz=146,slow=4.4,SNR=4.6						
DPC	Dobruska-Polom	146.73	344	*e*PKPAB	PKPab	03 08 39.1	+0.5
VYHS	Vyhne	147.63	339	*e*PKP	PKPbc	03 08 38.5	+0.6
VYHS				*e*		03 08 43.2	
KHC	Kasperske Hory	148.54	346	*e*PKPAB	PKPab	03 08 46.3	+0.3
GERES	GERESS Array B	148.78	346	PKPbc	PKPbc	03 08 40.2	-0.6
	0.3nm,0.4s,baz=7.1,slow=3.2,SNR=5.1						
GERES				PKPab	PKPab	03 08 46.3	-0.8
	0.2nm,0.4s,baz=32,slow=6.3,SNR=3.9						
KBA	Koelnbreinsper	150.51	345	*e*PKiKP	PKPbc	03 08 44.3	-0.7
	1.5nm,0.5s						
WATA	Walderalm	150.68	347	*e*PKiKP	PKPbc	03 08 44.6	-0.8
	2.2nm,0.4s						
MOTA	Moosalm	150.76	348	*e*PKiKP	PKPbc	03 08 45.5	-0.1
	0.7nm,0.4s						
MYKA	Terra Mystica	150.86	344	*e*PKPbc	PKPbc	03 08 43.5	-2.2
	1.8nm,0.4s						
SQTA	Sankt Quirin	150.86	348	*e*PKiKP	PKPbc	03 08 45.2	-0.6
	1.3nm,0.5s						
ABTA	Abfaltersbach	151.03	346	*e*PKiKP	PKPbc	03 08 45.2	-0.9
	1.8nm,0.5s						
TORD	Torodi Ar. Bea	174.23	173	PKPab	PKPab	03 10 38.6	0.0
	0.3nm,0.9s,baz=173,slow=3.2,SNR=2.6						

MEX 20 02:52:56.0±0.8, 16°.45N×98°.01W, h4^{km}±6^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.13	245	*i* P	Pg	02 52 57.9	-0.7
PNIG				*i* S	Sg	02 53 00.6	+0.2
VHO	Vista Hermosa	1.37	63	*e*P	Pn	02 53 19.6	-2.5

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*JMA **20** 02:54:28.9±0.1, 24°.14N×122°.27E, h53^{km}±2^{km}, M3.0*

*TAP **20** 02:54:29.3, 24°.18N×122°.29E, h43^{km}, ML3.6, C*

ISC 20 02:54:27.4±1.1, 24°.16N±0°.02×122°.31E±0°.02, h15^{km}±9^{km}, n81, σ0^{s}.55/147, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.42	337	*e*P	Pn	02 54 39.7	+0.7
	baz=338						
EOS1				*e*S	Sn	02 54 47.4	+1.0
	baz=338						
NANB	Nanao	0.57	298	P	Pn	02 54 41.4	+0.3
	baz=296						
NANB				S	Sn	02 54 50.3	+0.1
	baz=296						
ENA	Nanau	0.58	298	P	Pn	02 54 41.4	+0.3
	baz=296						
ENA				S	Sn	02 54 50.5	+0.1
	baz=296						
TWC	Suao	0.61	317	P	Pn	02 54 41.6	0.0
	baz=317						
TWC				S	Sn	02 54 50.1	-1.1
	baz=317						
NACB	Ninganchiao	0.65	271	P	Pn	02 54 42.1	0.0
	baz=269						
NACB				*e*S	Sn	02 54 51.6	-0.5
	baz=269						
JYNG	Yonagunijimaku	0.65	63	P	Pn	02 54 42.7	+0.6
JYNG				S	Sn	02 54 52.7	+0.5
TWD	Chiawan	0.65	263	P	Pn	02 54 42.2	+0.1
	baz=260						
TWD				S	Sn	02 54 51.9	-0.3
	baz=260						
HWA	Hwalien	0.67	254	P	Pn	02 54 42.8	+0.4
	baz=251						
HWA				*e*S	Sn	02 54 53.4	+0.9
	baz=251						
ENLB	Shoufeng	0.69	249	P	Pn	02 54 43.2	+0.5
	baz=246						
ENLB				*e*S	Sn	02 54 53.6	+0.5
	baz=246						
YOJ	Yonaguni jima	0.71	65	*e*P	Pn	02 54 43.5	+0.6
	baz=66						
YOJ				*e*S	Sn	02 54 54.3	+0.7
	baz=66						
YOJ	Yonaguni jima	0.71	65	P	Pn	02 54 43.5	+0.6
YOJ				*e*S	Sn	02 54 53.8	+0.2
ETLH	Xiulin Townshi	0.75	274	*e*P	Pn	02 54 43.6	-0.1
	baz=271						
ETLH				*e*S	Sn	02 54 54.5	-0.3
	baz=271						
ILA	Ilan	0.79	320	*e*P	Pn	02 54 44.1	+0.1
	baz=320						
TWE	Neicheng	0.81	314	P	Pn	02 54 44.5	+0.2
	baz=314						
TWE				S	Sn	02 54 55.5	-0.5
	baz=314						
NTC	Toucheng	0.82	328	*e*P	Pn	02 54 44.9	+0.5
	baz=328						
ENTT	Nioudou	0.83	305	*e*P	Pn	02 54 45.0	+0.4
	baz=304						
ENTT				*e*S	Sn	02 54 56.0	-0.5
	baz=304						
NDT	Datong Townshi	0.85	302	*e*P	Pn	02 54 45.3	+0.5
	baz=300						
NDT				*e*S	Sn	02 54 57.1	+0.1
	baz=300						
SLBB	Yuanshan	0.85	314	*e*P	Pn	02 54 45.5	+0.6
	baz=313						
SLBB				*e*S	Sn	02 54 57.2	0.0
	baz=313						
ESL	Shilin	0.87	247	*e*P	Pn	02 54 45.1	0.0
	baz=244						
ESL				*e*S	Sn	02 54 57.2	-0.3
	baz=244						
NNSB	Datong	0.88	288	*e*P	Pn	02 54 45.6	+0.1

	baz=286						
NNSB	baz=286			S	Sn	02 54 57.6	-0.5
TWB1	**Santiao Chiao** baz=342	0.89	341	*e*P	Pb	02 54 45.0	+0.4
TWB1	baz=342			*e*S	Sg	02 54 55.9	-0.5
NNS	**Nan Shan** baz=287	0.90	288	P	Pn	02 54 45.7	+0.1
NNS	baz=287			S	Sn	02 54 57.7	-0.7
TIPB	**Shuangxi** baz=331	0.92	332	*e*P	Pn	02 54 45.8	-0.1
TIPB	baz=331			*e*S	Sb	02 54 57.4	+0.2
EGFH	**Guangfu** baz=236	0.94	239	*e*P	Pn	02 54 46.5	+0.4
EGFH	baz=236			*e*S	Sn	02 54 59.6	+0.3
WHF	**Hehuan Shan** baz=267	0.95	269	P	Pn	02 54 46.7	+0.1
WHF	baz=267			*e*S	Sb	02 54 59.1	+0.6
NWLT	**Wulai** baz=309	0.96	310	P	Pn	02 54 46.7	+0.3
NWLT	baz=309			*e*S	Sb	02 54 59.0	+0.8
YHNB	**Yeheng** baz=300	0.99	301	*e*P	Pn	02 54 47.1	+0.2
YHNB	baz=300			*e*S	Sg	02 54 59.6	+0.1
NSK	**Sanguang** baz=300	1.00	301	*e*P	Pn	02 54 47.2	+0.2
NSK	baz=300			*e*S	Sb	02 54 59.8	+0.1
NWF	**Wu-fen Shan** baz=332	1.02	332	*e*P	Pn	02 54 47.3	-0.1
NWF	baz=332			*e*S	Sb	02 55 00.1	-0.2
WFSB	**Wu-fen Shan** baz=332	1.02	332	*e*P	Pn	02 54 47.3	0.0
WFSB	baz=332			*e*S	Sb	02 55 00.1	-0.1
TWT	**Tachien** baz=273	1.04	275	P	Pn	02 54 48.4	+0.8
TWT	baz=273			*e*S	Sn	02 55 02.0	0.0
CHGB	**Renai** baz=263	1.04	265	P	Pn	02 54 48.1	+0.5
CHGB	baz=263			*e*S	Sg	02 55 01.5	+0.4
HGSD	**Ruisui** baz=228	1.05	231	*e*P	Pn	02 54 48.2	+0.6
HGSD	baz=228			*e*S	Sn	02 55 02.3	+0.4
TWA	**Mucha** baz=321	1.05	321	*e*S	Sn	02 55 02.3	+0.3
TDCB	**Techi** baz=273	1.05	275	P	Pn	02 54 48.4	+0.6
TDCB	baz=273			*e*S	Sg	02 55 01.8	+0.3
OWD	**Renai** baz=257	1.05	259	*e*P	Pn	02 54 48.2	+0.4
OWD	baz=257			*e*S	Sg	02 55 02.0	+0.4
NHDH	**Xindian Distri** baz=318	1.07	319	P	Pg	02 54 47.9	-0.2
NHDH	baz=318			*e*S	Sn	02 55 02.5	0.0
TATO	**Taipei** baz=317	1.10	318	*e*P	Pg	02 54 48.5	-0.2
TATO	baz=317			*e*S	Sg	02 55 03.1	0.0
EHY	**Hungye** baz=232	1.11	234	*e*P	Pg	02 54 49.0	+0.1
VWDT	**VWDT** baz=247	1.14	249	*e*P	Pg	02 54 49.6	+0.2
VWDT	baz=247			*e*S	Sg	02 55 04.2	-0.1
YM07	**YM07** baz=328	1.19	328	*e*P	Pn	02 54 49.6	0.0
YM01	**YM01** baz=325	1.19	326	*e*P	Pn	02 54 49.6	0.0
YM01	baz=325			*e*S	Sb	02 55 05.2	+0.2
YULB	**Yu-li** baz=229	1.20	231	*e*P	Pb	02 54 50.0	+0.2
YULB	baz=229			*e*S	Sb	02 55 04.6	-0.6
YM11	**YM11** baz=326	1.20	327	*e*P	Pn	02 54 49.6	-0.2
YM04	**YM04** baz=324	1.21	325	*e*P	Pn	02 54 49.7	-0.1
YM04	baz=324			*e*S	Sb	02 55 04.0	-1.6
TWF1	**Yuli** baz=227	1.23	229	*e*P	Pb	02 54 50.6	+0.3
TWF1	baz=227			*e*S	Sb	02 55 05.6	-0.4
TWS1	**Kuangyinshan** baz=319	1.24	319	*e*P	Pb	02 54 50.4	-0.1
TWS1	baz=319			*e*S	Sn	02 55 06.9	+0.3
WHP	**Taichung City** baz=274	1.25	276	*e*P	Pg	02 54 51.8	+0.3
WHP	baz=274			*e*S	Sb	02 55 06.8	+0.1
NTST	**Danshui** baz=322	1.27	322	*e*S	Sb	02 55 07.4	+0.2
LIOB	**Emei** baz=291	1.27	293	*e*P	Pb	02 54 51.0	-0.1
LIOB	baz=291			*e*S	Sb	02 55 07.1	-0.2
NSTT	**Nanjuang** baz=290	1.28	292	*e*P	Pg	02 54 51.8	-0.3
NSTT	baz=290			*e*S	Sb	02 55 07.5	+0.1
SSLB	**Suanglung** baz=252	1.29	254	*e*P	Pg	02 54 51.9	-0.4
SSLB	baz=252			*e*S	Sb	02 55 07.9	+0.1
NCU	**National Centr** baz=308	1.30	309	*e*P	Pn	02 54 51.3	+0.2
NCU	baz=308			*e*S	Sb	02 55 07.5	-0.6
IRIF	**Iriomote-Funau**	1.31	82	P	Pn	02 54 51.4	+0.2
IRIF				S	Sb	02 55 08.0	-0.4
SMLT	**Sun Moon Lake** baz=256	1.31	258	*e*P	Pb	02 54 52.2	+0.3
SMLT	baz=256			*e*S	Sb	02 55 08.3	-0.3
TYC	**Yuchr** baz=257	1.35	259	*e*P	Pb	02 54 52.7	+0.3
TYC	baz=257			*e*S	Sn	02 55 09.1	-0.3
CHKT	**Chengkung** baz=217	1.36	219	*e*P	Pb	02 54 52.7	+0.1
CHKT	baz=217			*e*S	Sn	02 55 07.9	-1.8
HATJ	**Hateruma jima**	1.37	94	P	Pb	02 54 53.1	+0.3
HATJ				*e*S	Sb	02 55 10.9	+0.7
WHYT	**Xinyi Township** baz=249	1.41	251	*e*P	Pg	02 54 54.5	0.0
WHYT	baz=249			*e*S	Sg	02 55 12.2	-0.7
YUS	**Yu-Shan** baz=240	1.41	242	P	Pn	02 54 53.5	+0.5
YUS	baz=240			*e*S	Sn	02 55 10.6	-0.9
TWQ1	**Liyutan** baz=276	1.41	278	*e*S	Sb	02 55 11.5	+0.2
NSY	**Sanyi** baz=279	1.43	281	*e*S	Sg	02 55 12.8	-0.8
JKRS	**Kuro-shima**	1.56	87	P	Pb	02 54 55.7	-0.3
JKRS				S	Sn	02 55 14.6	+0.1
CHN5	**Tsauling** baz=248	1.59	250	*e*P	Pb	02 54 56.9	+0.3
CHN5	baz=248			*e*S	Sb	02 55 16.6	+0.1
WDLH	**Douliu** baz=252	1.68	254	*e*P	Pb	02 54 58.3	+0.2
WDLH	baz=252			*e*S	Sb	02 55 19.2	+0.1
JIJ	**Ishigaki jima**	1.69	83	P	Pn	02 54 56.5	+0.1
JIJ				*e*S	Sn	02 55 16.1	-1.7
STYT	**Tauyuan** baz=233	1.73	235	*e*P	Pn	02 54 58.0	+1.0
TWGBT	**Beinan** baz=219	1.75	220	*e*P	Pn	02 54 57.8	+0.5
TWGBT	baz=219			*e*S	Sn	02 55 17.5	-1.8
TWG	**Pinlang** baz=219	1.75	221	*e*P	Pn	02 54 57.9	+0.7
TWG	baz=219			*e*S	Sn	02 55 17.5	-1.8
TPUB	**Ta-pu** baz=239	1.76	241	*e*P	Pb	02 54 59.3	-0.1
TPUB	baz=239			*e*S	Sn	02 55 20.0	+0.5
CHN4	**Tsaushan** baz=241	1.76	243	*e*P	Pb	02 54 59.6	+0.2
WTP	**Ta-pu** baz=238	1.80	240	*e*P	Pb	02 54 59.9	-0.2
JISG	**Ishigakijimahi**	1.88	76	P	Pn	02 54 59.1	+0.1
JISG				*e*S	Sn	02 55 21.3	-1.1
SGST	**Jiashian** baz=234	1.91	236	*e*P	Pb	02 55 01.6	-0.4
SGST	baz=234			*e*S	Sb	02 55 26.2	+0.5
SLGT	**Liugui** baz=231	1.92	233	*e*P	Pb	02 55 01.8	-0.3
SLGT	baz=231			*e*S	Sb	02 55 26.6	+0.8
CHN8	**Yiju** baz=246	2.08	248	*e*P	Pn	02 55 02.0	+0.2
CHN8	baz=246			*e*S	Sn	02 55 27.9	+0.4
SSD	**Sandimen** baz=226	2.08	228	*e*P	Pb	02 55 04.5	-0.5
SSD	baz=226			*e*S	Sb	02 55 30.1	-0.6
MASBT	**Mashibuluo** baz=224	2.18	225	*e*P	Pn	02 55 04.4	+1.2
JTJ	**Tarama**	2.24	77	P	Pn	02 55 04.7	+0.8
JTJ				S	Sn	02 55 30.7	-0.6
JIRB	**Irabujima**	2.70	75	S	Sn	02 55 41.7	-0.9
JIKM	**Ikemajima**	2.79	74	*e*S	Sn	02 55 45.4	+0.6

MEX 20 03:13:58.4±0.7, 18°.36N×99°.38W, h51^{km}±5^{km}, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIG	**Platanillo**	0.12	288	*i* P	Pn	03 14 04.8	-1.8
PLIG				*e*S	Sn	03 14 10.9	-1.5
MEIG	**Mezcala**	0.48	208	*i* P	Pn	03 14 07.6	-2.1
MEIG				*i* S	Sn	03 14 16.0	-1.7
YAIG	**Yautepec**	0.58	30	*e*P	Pn	03 14 09.1	-1.8
YAIG				*e*S	Sn	03 14 18.0	-1.9
ARIG	**Puente Sto Nin**	0.92	266	*e*P	Pn	03 14 13.6	-1.5
ARIG				*e*S	Sn	03 14 25.8	-1.7
PPM	**Popocatepetl**	1.00	45	*e*P	Pn	03 14 15.3	-1.4
PPM				*i* S	Sn	03 14 29.6	-0.5

IGQ 20 03:17:26.2±0.4, 1°S±2°×8°0W±°, h5^{km}, MLv3.7, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAG1	**Magdalena**	0.46	18	P	Pn	03 17 38.1	-1.3
AQUE	**Quevedo**	0.68	142	P	Pg	03 17 39.2	-0.1
AQUE				S	Sb	03 17 50.3	0.0
PAST	**Pastocalle**	1.28	98	P	Pg	03 17 46.9	-4.0
NINA	**Atacazo Ninahu**	1.30	85	P	Pg	03 17 47.1	-4.1
GGPC	**Guagua Pichinc**	1.36	76	P	Pg	03 17 47.9	-4.4
PAC1	**Pacto, Paraso**	1.36	55	P	Pn	03 17 47.0	-5.1
PAC1				S	Sg	03 18 02.9	-7.1
YANA	**Yana**	1.40	74	P	Pn	03 17 47.6	-5.3
BNAS	**Cotopaxi Volca**	1.44	96	P	Pn	03 17 49.6	-3.9
NAS2	**Nasa**	1.45	95	P	Pn	03 17 49.9	-3.7
BMOR	**Cotopaxi Volca**	1.47	99	P	Pn	03 17 49.9	-4.0
BMOR				S	Sg	03 18 08.0	-5.5
BREF	**Cotopaxi Volca**	1.48	96	P	Pn	03 17 51.7	-2.4
BREF				S	Sg	03 18 10.4	-3.5
PITA	**Cotopaxi Volc**	1.48	92	P	Pn	03 17 50.3	-3.7
BVC2	**Cotopaxi Volca**	1.51	96	P	Pn	03 17 51.0	-3.4
VC1	**Cotopaxi 1**	1.52	95	P	Pn	03 17 51.2	-3.3
BTAM	**Cotopaxi Volca**	1.52	96	P	Pn	03 17 51.1	-3.6
COV1	**Cotopaxi Volc**	1.58	96	P	Pn	03 17 50.9	-4.5
IGUA	**Igualata**	1.60	127	P	Pn	03 17 52.7	-3.1
PISA	**Pisayambo**	1.62	110	P	Pn	03 17 52.6	-3.3
ANTG	**Antisana-Guama**	1.66	90	P	Pn	03 17 52.7	-3.8
ANTG				S	Sn	03 18 12.2	-6.3
ANTM	**Antisana-La Mi**	1.69	91	P	Pn	03 17 53.2	-3.7
BIL2	**Estacion Bilba**	1.69	124	P	Pn	03 17 54.1	-2.6
BBIL	**Ulba Tungurahu**	1.70	123	P	Pn	03 17 53.7	-3.2
JUI6	**Juive**	1.71	122	P	Pn	03 17 53.6	-3.3
CUSE	**Cuicocha Este**	1.72	62	P	Pn	03 17 53.1	-4.1
CUSE				S	Sn	03 18 13.4	-6.4
POND	**Pondoa**	1.72	122	P	Pn	03 17 53.7	-3.4
POND				S	Sn	03 18 14.4	-5.2
RETU	**Refugio**	1.74	123	P	Pn	03 17 54.1	-3.5
RUN5	**Runtun**	1.74	121	P	Pn	03 17 53.9	-3.5
BMAS	**Trigal station**	1.74	125	P	Pn	03 17 54.1	-3.4
BMAS				S	Sn	03 18 14.7	-5.5
ANTS	**Antisana-Sarah**	1.74	90	P	Pn	03 17 54.0	-3.7
ANTS				S	Sn	03 18 14.6	-6.0
CUIC	**Cuicocha-Domo**	1.75	62	P	Pn	03 17 54.1	-3.5
CUSW	**Cuicocha Oeste**	1.75	63	P	Pn	03 17 54.1	-3.5
ANTI	**Antisana**	1.75	88	P	Pn	03 17 54.4	-3.4
BRUN	**Tungurahua Vol**	1.75	121	P	Pn	03 17 53.9	-3.7
ARRY	**Arrayan**	1.76	124	P	Pn	03 17 54.2	-3.5
BULB	**Ulba Tungurahu**	1.76	122	P	Pn	03 17 54.4	-3.4
BULB				S	Sn	03 18 15.7	-5.1
PAT1	**Patacocha**	1.78	124	P	Pn	03 17 54.5	-3.6
BPAT	**Tungurahua Vol**	1.78	124	P	Pn	03 17 54.7	-3.3
BPAT				S	Sn	03 18 15.9	-5.4
MILO	**Milagro-Astudi**	1.79	169	P	Pn	03 17 52.6	-5.3
MILO				S	Sn	03 18 13.1	-7.9
IMBA	**Imbabura, San**	1.88	65	P	Pn	03 17 56.5	-3.0
URCU	**Urcuqui**	1.91	60	P	Pn	03 17 56.1	-3.7
SALI	**Salinas**	1.98	213	P	Pn	03 17 56.9	-3.5
COHC	**Cochancay**	2.05	161	P	Pn	03 17 56.6	-4.8
MORR	**Playas El Morr**	2.16	191	P	Pn	03 18 00.3	-2.6
ARDO	**Archidona, Ten**	2.17	103	P	Pn	03 18 01.3	-1.7
MCRA	**Macar, Loja**	3.83	181	P	Pn	03 18 22.6	-3.4

SOME ***20*** *03:28:35.6, 42°.85N×76°.03E, h10^{km}*

NNC ***20*** *03:28:35.6±0.6, 42°.89N×76°.04E, h0^{km}, mb2.5, mpv2.9, Error ellipse: s-maj=6.8km s-min=2.2km az=167.0*

KNET ***20*** *03:28:36.2±0.7, 42°.86N×75°.96E, h20^{km}±5^{km}, ml1.4, Error ellipse: s-maj=6.2km s-min=2.4km az=33.0*

KRNET 20 03:28:35.4±0.1, 42°.90N×75°.99E, h25^{km}, mb2.4, 32C-18D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KST	**Kastek** 163nm,0.2s	0.14	353	P	Pb	03 28 40.1	-0.6
KST	164nm,0.2s			S	Sb	03 28 42.5	-1.6
KST	**Kastek** baz=54	0.14	353	*e*P	Pb	03 28 40.1	-0.5
KST	baz=54			*e*S	Sb	03 28 43.2	-0.9
KST	**Kastek** 174nm,0.2s	0.14	353	*e*P	Pb	03 28 40.0	-0.6
KST	439nm,0.2s			*e*S	Sb	03 28 43.2	-0.9
TKM2	**Tokmak 2** 9.4nm,0.1s,SNR=132	0.29	274	P	Pb	03 28 42.7	+0.3
TKM2	104nm,0.1s			⇑S	Sb	03 28 47.6	+0.4
TKM2	**Tokmak 2** 1.5nm,0.2s	0.29	274	⇑P	Pb	03 28 42.5	+0.1
TKM2	12nm,0.2s			⇑S	Sb	03 28 47.3	0.0
TKM2	**Tokmak 2** baz=74	0.29	274	⇑*i*P	Pb	03 28 42.7	+0.3
TKM2	baz=74			⇑*i*S	Sb	03 28 47.0	-0.2
DGS	**Degeres** 67nm,0.1s	0.38	335	P	Pb	03 28 43.1	-0.5
DGS	99nm,0.2s			S	Sb	03 28 47.8	-1.5
DGS	**Degeres** baz=35	0.38	335	*e*P	Pb	03 28 43.2	-0.5
DGS	baz=35			*e*S	Sb	03 28 48.8	-0.5
DGS	**Degeres** 67nm,0.1s	0.38	335	*e*P	Pb	03 28 43.2	-0.5
DGS	99nm,0.2s			*e*S	Sb	03 28 48.7	-0.6
MTBS	**Maitube** 13nm,0.2s	0.40	55	P	Pb	03 28 43.4	-0.6
MTBS	77nm,0.1s			S	Sb	03 28 48.3	-1.5
MTBS	**Maitube** baz=55	0.40	55	*e*P	Pb	03 28 43.5	-0.5
MTBS	baz=55			*e*S	Sb	03 28 49.1	-0.7
MTBS	**Maitube** 13nm,0.2s	0.40	55	*e*P	Pb	03 28 43.5	-0.5
MTBS	78nm,0.2s			*e*S	Sb	03 28 49.1	-0.7
BOOM	**Boomskoye usch** baz=85	0.41	185	⇑*i*P	Pb	03 28 44.1	-0.2
BOOM	baz=85			⇑*i*S	Sb	03 28 50.1	-0.2
IZV	**Izvestkoviy** 9.9nm,0.1s	0.48	73	P	Pb	03 28 45.1	-0.2
IZV	33nm,0.1s			S	Sb	03 28 51.4	-0.8
IZV	**Izvestkoviy** baz=73	0.48	73	*e*P	Pb	03 28 45.2	-0.2
IZV	baz=73			*e*S	Sb	03 28 51.7	-0.4
IZV	**Izvestkoviy** 9.9nm,0.1s	0.48	73	*e*P	Pb	03 28 45.1	-0.2
IZV	36nm,0.2s			*e*S	Sb	03 28 51.7	-0.5
ULHL	**Ulahol** 6.6nm,0.2s,SNR=45	0.68	164	⇓P	Pb	03 28 48.8	0.0
ULHL	20nm,0.2s			⇓S	Sb	03 28 58.1	+0.2
ULHL	**Ulahol** baz=64	0.68	164	⇑*i*P	Pb	03 28 48.7	-0.1
ULHL	baz=64			⇑*i*S	Sb	03 28 58.0	+0.1
TNSS	**Tian-Shan** 2.3nm,0.1s	0.72	79	P	Pb	03 28 48.9	-0.6
TNSS	7.1nm,0.2s			S	Sb	03 28 58.3	-0.9
TNSS	**Tian-Shan** baz=79	0.72	79	*e*P	Pb	03 28 48.8	-0.7
TNSS	baz=79			*e*S	Sb	03 28 58.9	-0.2
TNSS	**Tian-Shan** 2.5nm,0.2s	0.72	79	*e*P	Pb	03 28 48.8	-0.7
TNSS	10nm,0.2s			*e*S	Sb	03 28 58.9	-0.2
KBK	**Karagaybulak** 3.4nm,0.1s,SNR=15	0.80	253	⇑P	Pn	03 28 51.7	+0.4
KBK	20nm,0.2s			⇓S	Sn	03 29 03.1	+0.6
KBK	**Karagaybulak** baz=53	0.80	253	⇑*i*P	Pb	03 28 50.7	-0.1
KBK	baz=53			⇑*i*S	Sb	03 29 01.5	+0.2
MDOK	**Medeo** 2.3nm,0.3s	0.82	71	Pg	Pn	03 28 51.4	-0.1
MDOK	10nm,0.1s			Lg	Lg	03 29 01.9	
MDOK	**Medeo** baz=71	0.82	71	*e*P	Pb	03 28 50.8	-0.3
MDOK	baz=71			*e*S	Sb	03 29 02.0	+0.2
MDOK	**Medeo** 2.6nm,0.2s	0.82	71	*e*P	Pb	03 28 50.8	-0.3
MDOK	10nm,0.1s			*e*S	Sb	03 29 01.9	+0.1
KOTS	**Kotyrbulak** 2.2nm,0.1s	0.89	68	P	Pb	03 28 52.1	-0.1
KOTS	6.2nm,0.1s			S	Sb	03 29 03.2	-0.5
KOTS	**Kotyrbulak** baz=68	0.89	68	*e*P	Pn	03 28 52.5	+0.1
KOTS	baz=68			*e*S	Sb	03 29 04.2	+0.4
KOTS	**Kotyrbulak** 2.2nm,0.1s	0.89	68	*e*P	Pn	03 28 52.5	+0.1
KOTS	17nm,0.2s			*e*S	Sn	03 29 04.2	-0.4
CHMS	**Chumysh** 0.7nm,0.1s	0.91	277	⇑P	Pn	03 28 53.3	+0.7
CHMS	7.6nm,0.1s			⇑S	Sn	03 29 06.0	+1.0
CHMS	**Chumysh** baz=77	0.91	277	⇓*i*P	Pb	03 28 52.6	0.0
CHMS	baz=77			⇓*i*S	Sn	03 29 05.0	0.0
KTBS	**Karatobe** 4.4nm,0.1s	0.96	32	P	Pn	03 28 53.3	0.0
KTBS	15nm,0.2s			S	Sb	03 29 05.2	-0.4
KTBS	**Karatobe** baz=24	0.96	32	*e*P	Pb	03 28 53.4	+0.1
KTBS	baz=24			*e*S	Sb	03 29 05.8	+0.2
KTBS	**Karatobe** 4.8nm,0.1s	0.96	32	*e*P	Pb	03 28 53.4	0.0
KTBS	20nm,0.1s			*e*S	Sb	03 29 05.8	+0.2
KZA	**Kyzart** 1.7nm,0.1s,SNR=6.4	0.99	214	⇑P	Pb	03 28 55.0	+1.0
KZA	**Kyzart** baz=14	0.99	214	⇓*i*P	Pn	03 28 53.9	-0.1
KZA	baz=14			⇓*i*S	Sn	03 29 07.3	-0.1
KUU	**Kurty** 4.0nm,0.1s	1.02	14	P	Pb	03 28 54.6	+0.2
KUU	20nm,0.2s			S	Sb	03 29 07.6	+0.1
KUU	**Kurty** baz=14	1.02	14	*e*P	Pb	03 28 54.7	+0.2
KUU	baz=14			*e*S	Sn	03 29 08.1	+0.3
KUU	**Kurty** 4.0nm,0.1s	1.02	14	*e*P	Pb	03 28 54.6	+0.2
KUU	20nm,0.2s			*e*S	Sn	03 29 08.0	+0.3
AAK	**Ala-Archa** 2.6nm,0.9s	1.13	257	⇓P	Pn	03 28 55.4	-0.4
AAK	1.3nm,0.3s			⇑S	Sb	03 29 11.9	+1.3
AAK	**Ala-Archa** baz=57	1.13	257	⇑*i*P	Pb	03 28 56.6	+0.3
AAK	baz=57			⇑*i*S	Sb	03 29 11.2	+0.5
SGDS	**Sogindy** 1.7nm,0.1s	1.14	299	P	Pb	03 28 57.2	+0.8
SGDS	20nm,0.2s			S	Sb	03 29 12.0	+1.3
USP	**Ospenovka** baz=89	1.15	289	⇑*e*P	Pb	03 28 57.0	+0.4
USP	baz=89			⇑*i*S	Sb	03 29 11.8	+0.7
KDJ	**Kajisay** baz=30	1.17	131	⇑*i*P	Pb	03 28 57.8	+0.7
KDJ	baz=30			⇑*i*S	Sb	03 29 13.2	+1.3
CHKK	**Chushkaly** 0.9nm,0.1s	1.20	37	P	Pb	03 28 57.8	+0.3
CHKK	36nm,0.3s			S	Sb	03 29 13.0	+0.4
CHKK	**Chushkaly** baz=37	1.20	37	*e*P	Pb	03 28 57.8	+0.4
CHKK	baz=37			*e*S	Sb	03 29 13.4	+0.8
CHKK	**Chushkaly** 2.0nm,0.1s	1.20	37	*e*P	Pb	03 28 57.8	+0.4
CHKK	36nm,0.3s			*e*S	Sb	03 29 13.4	+0.9
UCH	**Uchtor** 0.7nm,0.2s,SNR=5.7	1.28	239	⇑P	Pb	03 29 00.0	+1.0
UCH	4.1nm,0.2s			⇑S	Sb	03 29 17.2	+1.9
UCH	**Uchtor** baz=39	1.28	239	⇑*i*P	Pb	03 28 59.2	+0.1
UCH	baz=39			⇑*i*S	Sb	03 29 15.8	+0.5
NRN	**Naryn** baz=80	1.47	180	⇑*i*P	Pb	03 29 02.4	+0.2
NRN	baz=80			⇑*i*S	Sb	03 29 21.7	+1.2
ARLS	**Aral** baz=31	1.61	230	⇓*i*P	Pb	03 29 04.2	-0.4
ARLS	baz=31			⇓*i*S	Sb	03 29 24.8	+0.3

EKS2	Erkin-Say	1.64	262	⇓*i*P	Pb	03 29 05.0	-0.1
	baz=62						
EKS2				⇓*i*S	Sb	03 29 26.3	+0.9
	baz=62						
KURS	Kuram	1.70	69	P	Pb	03 29 07.0	+1.0
	1.6nm,0.3s						
KURS				S	Sb	03 29 28.7	+1.7
	2.1nm,0.6s						
KURS	Kuram	1.70	69	*e*P	Pb	03 29 06.5	+0.5
	baz=69						
KURS				*e*S	Sb	03 29 28.7	+1.7
	baz=69						
KURS	Kuram	1.70	69	*e*P	Pb	03 29 06.5	+0.5
	1.9nm,0.4s						
KURS				*e*S	Sb	03 29 28.7	+1.7
	2.1nm,0.6s						
SATY	Saty	1.78	84	P	Pb	03 29 09.9	+2.5
	4.9nm,0.1s						
SATY				S	Sb	03 29 33.8	+4.4
	8.3nm,0.1s						
SATY	Saty	1.78	84	*e*P	Pb	03 29 08.8	+1.4
	4.0nm,0.2s						
SATY				*e*S	Sb	03 29 32.2	+2.8
	8.3nm,0.1s						
TARG	Taragay, Kyrgy	1.79	130	⇓*i*P	Pb	03 29 07.1	-0.6
	baz=30						
TARG				⇓*i*S	Sb	03 29 29.9	+0.1
	baz=30						
AML	Almayashu	1.86	246	⇑*e*P	Pb	03 29 08.0	-0.9
	baz=46						
AML				⇑*i*S	Sb	03 29 31.7	-0.2
	baz=46						
ARXS	Arharly	1.87	45	P	Pb	03 29 09.4	+0.5
	1.0nm,0.2s						
ARXS				S	Sb	03 29 32.9	+0.9
	17nm,0.2s						
ARXS	Arharly	1.87	45	*e*P	Pb	03 29 09.2	+0.3
	1.3nm,0.2s						
ARXS				*e*S	Sb	03 29 33.6	+1.6
	17nm,0.2s						
MRKS	Merke	2.04	267	*e*P	Pb	03 29 13.5	+1.8
	baz=67						
MRKS				*e*S	Sb	03 29 40.4	+3.7
	baz=67						
MRKS	Merke	2.04	267	*e*P	Pb	03 29 13.4	+1.7
	1.5nm,0.2s						
MRKS				*e*S	Sb	03 29 40.3	+3.6
	3.9nm,0.2s						
UZB	Uzynbulak	2.24	83	Pg	Pb	03 29 17.2	+2.0
	1.1nm,0.2s						
UZB				Lg	Lg	03 29 46.3	
	2.0nm,0.1s						
UZB	Uzynbulak	2.24	83	*e*P	Pb	03 29 17.2	+2.0
	baz=83						
UZB				*e*S	Sb	03 29 46.8	+4.3
	baz=83						
UZB	Uzynbulak	2.24	83	*e*P	Pb	03 29 17.2	+2.0
	1.2nm,0.3s						
UZB				*e*S	Sb	03 29 46.8	+4.2
	2.8nm,0.2s						
MNAS	Manas	2.60	262	⇓Pg	Pb	03 29 23.6	+2.3
	2.4nm,1.3s						
MNAS				⇓Lg	Lg	03 29 55.6	
	0.7nm,0.3s						
MNAS	Manas	2.60	262	⇑*e*P	Pn	03 29 17.9	+1.9
	baz=62						
MNAS				⇑*i*S	Sn	03 29 49.4	+2.6
	baz=62						
KK31	Karatay Array	4.02	275	⇓Pg	Pb	03 29 49.4	+3.9
	1.0nm,0.9s,baz=100,slow=14,SNR=4.0						
KK31				⇓Lg	Lg	03 30 43.3	
	0.2nm,0.3s,baz=91,slow=29,SNR=4.9						

ISCJB ***20*** *03:29:44.1±0.5, 32°.82N±0°.04×140°.42E±0°.06, h99^{km}±3^{km}, mb3.8/15, Error ellipse: s-maj=8.6km s-min=6.0km az=176.2*

JMA ***20*** *03:29:45.0±0.1, 32°.87N×140°.46E, h92^{km}±2^{km}, M3.6*

IDC ***20*** *03:29:45.2±0.7, 32°.77N×140°.16E, h91^{km}±4^{km}, mb3.6/15, mb1 3.8/17, mb1mx3.7/35, mbtmp4.0/17, MS2.4/1, Ms1 2.4/1, ms1mx2.2/32, Error ellipse: s-maj=19.2km s-min=13.4km az=80.0*

ISC 20 03:29:44.9±0.8**, 32°.81N**±0°.04×**140°.43E**±0°.06**, h91**^{km}±6^{km}**, n41, σ1^{s}26**/51**, mb3.9**/15**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	0.59	296	P	Pn	03 30 00.6	+0.1
JHCJ				S	Sn	03 30 13.0	+0.9
JHJ2	Mitsune	0.60	300	P	Pn	03 30 00.8	+0.3
JHJ2				*e*S	Sn	03 30 12.7	+0.5
JHJ	Hachijo jima 2	0.62	299	P	Pn	03 30 00.9	+0.1
	3µm,0.3s,baz=104,slow=23,SNR=508						
JHJ				S	Sn	03 30 12.4	-0.3
	2µm,0.3s,baz=40,slow=24,SNR=14						
JAOM	Aogashimamukai	0.66	238	P	Pn	03 30 02.1	+0.9
JAOM				S	Sn	03 30 14.6	+1.3
JMKN	Mikurajimanish	1.29	327	P	Pn	03 30 08.0	-0.1
JMKN				S	Sn	03 30 24.1	-1.4
JKO	Kozu shima	1.75	322	*e*S	Sn	03 30 35.7	-0.1
BSO1	Boso 1	1.89	14	P	Pn	03 30 15.5	+0.3
BSO1				*e*S	Sn	03 30 39.4	+1.0
BSO3	Boso 3	1.98	2	P	Pn	03 30 17.1	+0.4
BSO3				*e*S	Sn	03 30 41.6	+0.6
JIM2	Oshima 3	2.07	337	P	Pn	03 30 18.1	-0.1
JIM2				S	Sn	03 30 41.6	-1.9
JIZS	Izushimoda	2.30	326	P	Pn	03 30 21.3	+0.2
JIZS				*e*S	Sn	03 30 48.4	-0.4
TK02	Tokai 2	2.51	298	P	Pn	03 30 24.5	+0.9
TK02				*e*S	Sn	03 30 54.4	+1.0
TK04	Tokai 4	2.65	307	P	Pn	03 30 26.6	+1.0
TK04				S	Sn	03 30 58.2	+1.3
JOD2	Odawara 2	2.69	336	P	Pn	03 30 26.4	+0.1
JOD2				*e*S	Sn	03 30 56.9	-1.1
SHZ3	Shizuoka 3	2.91	321	P	Pn	03 30 30.4	+1.1
SHZ3				*e*S	Sn	03 31 05.2	+1.8
TTO2	TONANKAI O.B.S	3.00	289	P	Pn	03 30 30.7	+0.6
MJAR	Matsushiro Arr	4.15	334	P	Pn	03 30 46.5	+0.5
	0.7nm,0.3s,baz=158,slow=8.3,SNR=24						
MJAR				LR	LR	03 32 17.0	
	comp=Z,44nm,20.2s,baz=100,slow=37						
MAT	Matsushiro	4.15	334	P	Pn	03 30 47.2	+1.2
MAT				S	Sn	03 31 33.1	-0.2
JCJ	Chichijima	5.90	165	P	Pn	03 31 09.6	-0.2
	10nm,0.3s,baz=8.1,slow=14,SNR=3.9						
JCJ				S	Sn	03 32 11.2	-4.8
	23nm,0.3s,baz=278,slow=20,SNR=4.7						
JNU	Nakatsue	8.03	275	P	Pn	03 31 39.5	+0.6
	0.7nm,0.3s,baz=92,slow=4.2,SNR=5.9						
KLR	Kul'dur	17.64	341	P	P	03 33 41.0	-3.4
	0.2nm,0.3s,baz=161,slow=16,SNR=5.0						
H11N2	WAKE ISLAND Hy	26.98	112	T	T	04 04 22.5	
	baz=305,slow=75,SNR=34						
H11N1	WAKE ISLAND Hy	26.99	112	T	T	04 04 23.5	
	baz=305,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	27.00	112	T	T	04 04 07.3	
	baz=305,slow=75,SNR=38						
H11S3	WAKE ISLAND Hy	27.53	115	T	T	04 04 53.0	
	baz=307,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	27.54	115	T	T	04 04 49.7	
	baz=307,slow=75,SNR=9.2						
H11S2	WAKE ISLAND Hy	27.55	115	T	T	04 04 56.1	
	baz=307,slow=75,SNR=7.5						
SONM	Songino Array	29.69	310	P	P	03 35 41.6	-0.7
	1.1nm,0.3s,baz=108,slow=8.5,SNR=9.9						
ZALV	Zalesovo Beam	44.26	316	P	P	03 37 44.0	-1.2
	0.8nm,0.3s,baz=98,slow=6.2,SNR=5.3						
MKAR	Makanchi Array	45.79	306	P	P	03 37 56.5	-1.0
	3.6nm,0.4s,baz=90,slow=9.8,SNR=62						
KDAK	Kodiak Island	50.82	40	P	P	03 38 36.7	+0.8
	7.2nm,0.6s,baz=234,slow=5.5,SNR=5.8						
WRA	Warramunga Arr	52.78	187	P	P	03 38 50.2	-0.6
	2.1nm,0.3s,baz=4.9,slow=7.5,SNR=78						
WRA				PcP	PcP	03 39 59.6	+0.4
	0.3nm,0.5s,baz=0.3,slow=4.3,SNR=2.3						
ILAR	Eielson Array	53.51	31	P	P	03 38 56.4	+0.6
	0.2nm,0.5s,baz=261,slow=6.5,SNR=5.1						
ASAR	Alice Springs	56.51	187	P	P	03 39 17.3	-0.5
	0.9nm,0.5s,baz=4.5,slow=7.1,SNR=13						
INK	Inuvik	58.52	26	P	P	03 39 32.0	+0.7
	0.4nm,0.5s,baz=273,slow=4.4,SNR=3.9						
YKA	Yellowknife Ar	67.87	29	P	P	03 40 33.6	+0.4
	0.1nm,0.5s,baz=287,slow=5.4,SNR=3.6						
FINES	FINESS Array B	72.17	333	P	P	03 40 58.8	-0.7
	1.3nm,0.6s,baz=63,slow=6.7,SNR=6.8						
AKASG	Malin Array Be	77.14	323	P	P	03 41 28.0	-0.4
	0.4nm,0.4s,baz=64,slow=2.2,SNR=3.7						
NOA	NORSAR Array B	77.76	337	P	P	03 41 31.5	-0.3
	0.5nm,0.7s,baz=46,slow=5.3,SNR=2.8						
NVAR	Mina Array Bea	78.19	52	P	P	03 41 37.7	+2.9
	0.2nm,0.4s,baz=291,slow=5.6,SNR=2.3						
BRTR	Keskin Array B	81.04	312	P	P	03 41 49.7	-0.5
	0.5nm,0.6s,baz=126,slow=4.0,SNR=4.3						
TXAR	Lajitas Array	93.34	52	P	P	03 42 51.5	+1.3
	0.7nm,0.5s,baz=305,slow=2.6,SNR=6.3						

CRAAG ***20*** *03:31:51.9, 36°.89N×5°.21E, Ml2.8*

MDD ***20*** *03:31:56.9±1.2, 36°.77N×5°.29E, h13^{km}±17^{km}, mb4.0/4, Error ellipse: s-maj=10.7km s-min=8.1km az=164.0, PRXIMO*

LDG ***20*** *03:31:58.9±0.5, 37°.11N×4°.92E, h10^{km}, Ml2.8/6, Error ellipse: s-maj=8.9km s-min=5.7km az=145.0*

ISC 20 03:31:46.9±0.8**, 37°.43N**±0°.03×**5°.28E**±0°.03**, h10**^{km}**, n44, σ2^{s}93**/52**, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	1.00	151	P	Pb	03 32 06.4	0.0
DFRA	Djebel Bou Aff	1.00	151	P	Pb	03 32 06.4	0.0
SET	Setif	1.23	175	P	Pn	03 32 08.0	-2.2
SET	Setif	1.23	175	P	Pn	03 32 08.0	-2.2
CKHR	Kef el Ahmar	1.42	172	P	Pn	03 32 09.9	-3.0
CKHR	Kef el Ahmar	1.42	172	P	Pn	03 32 09.9	-3.0
CASM	Ain Smara	1.52	140	P	Pg	03 32 17.4	+1.4
CASM	Ain Smara	1.52	140	P	Pg	03 32 17.4	+1.4
CTEI	Djebel Teioual	1.64	146	P	Pg	03 32 18.4	+0.2
CTEI	Djebel Teioual	1.64	146	P	Pg	03 32 18.4	+0.2
AKET	Djebel Ketaf	1.77	220	P	Pg	03 32 21.1	+0.2
AKET	Djebel Ketaf	1.77	220	P	Pg	03 32 21.1	+0.2
CMAH	Djebel Manchou	1.89	114	P	Pg	03 32 24.5	+1.3
CMAH	Djebel Manchou	1.89	114	P	Pg	03 32 24.5	+1.3
ABSA	Djebel Ababsia	2.11	122	P	Pn	03 32 23.0	+0.7
CABS	Djebel Ababsia	2.11	122	P	Pn	03 32 23.0	+0.7
ETOS	Mallorca	3.03	321	P	Pg	03 32 50.0	+5.1
	3.0nm,0.2s,SNR=16						
ETOS				S	Sg	03 33 28.4	+4.1
	0.5nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.48	299	P	Pg	03 32 54.4	+0.8
	0.6nm,0.1s,SNR=7.9						
EIBI				S	Sg	03 33 35.6	-3.2
	0.9nm,0.2s,SNR=7.9						
CFON	Fontmartina	4.86	334	P	Pg	03 33 18.3	-1.6
	1.5nm,0.2s,SNR=7.9						
EPOB	Poblet	5.09	322	P	Pb	03 33 18.0	+1.9
	1.5nm,0.3s,SNR=7.9						
EPOB				S	Sb	03 34 17.4	-0.1
	0.8nm,0.2s,SNR=7.9						
EMIR	Miracle	5.33	328	P	Pb	03 33 22.9	+2.7
	1.6nm,0.2s,SNR=6.7						
EMIR				S	Sb	03 34 25.5	+1.2
	1.5nm,0.2s,SNR=5.8						
ECHE	Chera	5.35	296	P	Pb	03 33 19.2	-1.4
	0.2nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.52	285	P	Pb	03 33 22.3	-1.2
	0.4nm,0.2s,SNR=6.4						
CLLI	Llivia	5.65	334	P	Pb	03 33 27.8	+2.2
	0.1nm,0.2s,SNR=7.9						
CLLI				S	Sb	03 34 33.4	0.0
	0.2nm,0.3s,SNR=7.9						
PGF	Pioggiola	5.86	28	*e*Pn	Pb	03 33 29.7	+0.5
PGF				*e*Sn	Sb	03 34 36.9	-2.6
	2.6nm,0.3s						
PGF	Pioggiola	5.86	28	P	Pb	03 33 29.7	+0.5
PGF				S	Sb	03 34 36.9	-2.6
	1.3nm,0.3s						
CSOR	Sort	5.88	329	P	Pb	03 33 30.6	+1.1
	0.5nm,0.2s,SNR=7.5						
CSOR				S	Sb	03 34 39.0	-1.1
	1.8nm,0.4s,SNR=7.9						
LMR	La Mourre	5.98	9	*e*Sn	Sb	03 34 38.5	-4.2
	1.0nm,0.2s						
LMR	La Mourre	5.98	9	S	Sb	03 34 38.5	-4.2
	0.0nm,0.2s						
FRF	La Foret Royal	6.22	9	*e*Sn	Sb	03 34 43.8	-5.8
	1.2nm,0.3s						
FRF	La Foret Royal	6.22	9	S	Sb	03 34 43.8	-5.8
	0.6nm,0.3s						
MTLF	Montolieu	6.35	339	*e*P	Pb	03 33 37.8	+0.3
MTLF				*e*Sn	Sb	03 34 43.9	-10
	0.3nm,0.2s						
MTLF	Montolieu	6.35	339	P	Pb	03 33 37.8	+0.3
MTLF				S	Sb	03 34 43.9	-10
	0.2nm,0.2s						
EQES	Quesada	6.64	276	P	Pb	03 33 34.9	-7.5
	0.2nm,0.2s,SNR=7.9						
LASF	Ste Croix	6.73	351	*e*P	Pb	03 33 44.3	+0.3
LASF				*e*Sn	Sb	03 34 54.2	-10
	1.0nm,0.4s						
LASF	Ste Croix	6.73	351	P	Pb	03 33 44.3	+0.3
LASF				S	Sb	03 34 54.2	-10
	0.5nm,0.4s						
EPF	Esparros	6.75	328	*e*P	Pb	03 33 42.6	-1.8
EPF				*e*Sn	Sn	03 34 51.0	+7.9
	0.7nm,0.3s						
EPF	Esparros	6.75	328	P	Pb	03 33 42.6	-1.8
EPF				S	Sn	03 34 51.0	+7.9
	0.3nm,0.3s						
ETSF	Etsaut	7.06	323	*e*P	Pb	03 33 46.2	-3.4
ETSF	Etsaut	7.06	323	P	Pb	03 33 46.2	-3.4
CAF	Calviac	7.87	343	*e*P	Pb	03 33 59.8	-3.6
CAF	Calviac	7.87	343	P	Pb	03 33 59.8	-3.6
LPL	La Plagne	8.16	7	*e*P	Pb	03 34 04.3	-4.1
LPL	La Plagne	8.16	7	P	Pb	03 34 04.3	-4.1

ISCJB ***20*** *03:40:06.5±0.4, 40°.71N±0°.03×140°.80E±0°.09, h128^{km}±3^{km}, mb3.5/8, Error ellipse: s-maj=10.9km s-min=5.7km az=179.7*

JMA ***20*** *03:40:07.3±0.1, 40°.70N×140°.77E, h124^{km}±1^{km}, M3.0*

IDC ***20*** *03:40:07.3±1.7, 40°.69N×140°.74E, h120^{km}±14^{km}, mb3.4/8, mb1 3.4/11, mb1mx3.3/35, mbtmp3.6/11, MS3.5/1, Ms1 3.6/1, ms1mx2.6/21, Error ellipse: s-maj=21.7km s-min=12.7km az=125.0*

ISC 20 03:40:07.5±0.7**, 40°.70N**±0°.04×**140°.77E**±0°.08**, h124**^{km}±5^{km}**, n23, σ0^{s}54**/32**, mb3.6**/8**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTM	Tenmabayashi	0.24	70	P	Pn	03 40 24.5	-0.2
JTM				*e*S	Sn	03 40 37.5	-0.1
JHHS	Hirosakihyakuz	0.31	261	P	Pn	03 40 25.1	+0.2
JHHS				S	Sn	03 40 38.3	+0.2
JAH	Hinai	0.52	191	P	Pn	03 40 26.0	0.0
JAH				S	Sn	03 40 40.2	+0.3
JIW	Iwasaki	0.59	260	P	Pn	03 40 26.7	+0.3
JANG	Nango	0.66	120	P	Pn	03 40 26.6	-0.3
JANG				S	Sn	03 40 40.9	-0.6
JOT	Ohata	0.71	17	P	Pn	03 40 27.5	+0.2
JSR	Shiriuchi	0.87	342	P	Pn	03 40 28.4	-0.2
JSR				*e*S	Sn	03 40 43.8	-0.8
JKB	Kayabe	1.20	10	P	Pn	03 40 32.0	+0.2
JKB				*e*S	Sn	03 40 50.2	-0.1
JOM	Ohasama	1.29	162	P	Pn	03 40 32.6	-0.2
JOM				S	Sn	03 40 52.1	0.0
JOSM	Okushiri--Mats	1.69	325	P	Pn	03 40 36.8	-0.5
JMK	Ichinoseki	1.78	169	P	Pn	03 40 38.4	-0.1
JMK				*e*S	Sn	03 41 02.0	-0.1
JYK	Kaneyama	1.81	190	P	Pn	03 40 38.9	+0.1
ASAJ	Asahikawa	3.67	21	P	Pn	03 41 02.5	-0.2
	2.3nm,0.3s,baz=232,slow=9.7,SNR=11						
ASAJ				S	Sn	03 41 45.1	-0.3
	1.8nm,0.3s,baz=72,slow=20,SNR=5.3						
MJAR	Matsushiro Arr	4.61	207	P	Pn	03 41 16.2	+0.9
	0.2nm,0.3s,baz=23,slow=12,SNR=5.0						
USRK	Ussuriysk Ar.	7.37	301	P	Pn	03 41 53.9	+1.5
	0.4nm,0.3s,baz=108,slow=15,SNR=5.6						
SEY	Seymchan	23.32	13	P	P	03 45 04.9	+0.7
	0.5nm,0.2s,baz=171,slow=16,SNR=2.7						
SONM	Songino Array	25.47	298	P	P	03 45 23.4	-0.6
	0.4nm,0.3s,baz=93,slow=7.2,SNR=4.2						
MKAR	Makanchi Array	41.83	299	P	P	03 47 44.7	-0.3
	0.6nm,0.5s,baz=82,slow=9.9,SNR=9.1						
ILAR	Eielson Array	46.71	34	P	P	03 48 24.2	+0.7
	0.9nm,0.6s,baz=271,slow=5.8,SNR=17						
ILAR				LR	LR	04 09 12.8	
	comp=Z,51nm,19.0s,baz=275,slow=37						
INK	Inuvik	51.38	28	P	P	03 48 59.8	+0.8
	1.2nm,0.4s,baz=276,slow=6.3,SNR=13						
WRA	Warramunga Arr	60.63	187	P	P	03 50 04.4	-0.9
	0.2nm,0.3s,baz=5.2,slow=6.8,SNR=3.4						
YKA	Yellowknife Ar	60.91	31	P	P	03 50 07.0	+0.3
	0.2nm,0.5s,baz=301,slow=6.5,SNR=7.7						
FINES	FINESS Array B	65.35	331	P	P	03 50 35.8	-0.2
	1.8nm,0.9s,baz=35,slow=10,SNR=5.1						

ISCJB ***20*** *03:49:20.7±0.5, 21°.35S±0°.03×69°.51W±0°.07, h78^{km}±5^{km}, mb3.4/2, Error ellipse: s-maj=10.4km s-min=4.1km az=3.8*

GUC ***20*** *03:49:20.6±0.7, 21°.36S×69°.48W, h70^{km}±2^{km}, ML3.8*

IDC ***20*** *03:49:23.5±1.6, 21°.53S×69°.28W, h105^{km}±15^{km}, mb3.3/2, mb1 3.7/3, mb1mx3.3/24, mbtmp3.9/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/14, Error ellipse: s-maj=45.1km s-min=24.0km az=82.0*

ISC 20 03:49:20.5±0.9**, 21°.35S**±0°.03×**69°.51W**±0°.07**, h75**^{km}±6^{km}**, n25, σ0^{s}89**/31**, 5C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.30	4	⇓*i*P	Pn	03 49 32.4	0.0
PB01				*e*S	Sn	03 49 40.8	-0.3
PB01				IAML		03 49 41.7	
	comp=E,16µm,0.2s						
PB02	IPOC Station P	0.36	274	⇓*i*P	Pn	03 49 33.2	+0.4
PB02				*i* S	Sn	03 49 42.4	+0.6
PB02				IAML		03 49 43.0	
	comp=E,15µm,0.3s						
PB09	IPOC Station P	0.51	151	⇓*i*P	Pn	03 49 34.3	+0.1
PB09				*i* S	Sn	03 49 44.0	-0.2
PB07	IPOC Station P	0.52	223	⇓*i*P	Pn	03 49 34.3	+0.2
PB07				*i* S	Sn	03 49 44.3	+0.1
PB07				IAML		03 49 45.0	
	comp=N,7µm,0.5s						
PB03	IPOC Station P	0.73	198	*e*P	Pn	03 49 36.5	+0.1
PB03				*i* S	Sn	03 49 48.1	0.0
PB03				IAML		03 49 48.9	
	comp=N,5µm,0.3s						
PB04	IPOC Station P	1.15	211	*e*P	Pn	03 49 41.6	+0.3
PB04				*i* S	Sn	03 49 57.6	+0.8
PB04				IAML		03 50 02.5	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	1.24	16	⇑*i*P	Pn	03 49 43.4	+0.6
PB08				*i* S	Sn	03 50 00.8	+1.4
PB08				IAML		03 50 01.7	
	comp=N,3µm,0.2s						
PB06	IPOC Station P	1.35	182	⇑*i*P	Pn	03 49 44.4	+0.4
PB06				*i* S	Sn	03 50 02.0	+0.5
PB06				IAML		03 50 03.7	
	comp=E,3µm,0.3s						
LVC	Limon Verde	1.38	156	P	Pn	03 49 45.5	+1.1
	comp=E,109nm,0.3s,baz=350,slow=9.4,SNR=461						
LVC				S	Sn	03 50 03.2	+0.9
	comp=E,56nm,0.3s,baz=338,slow=9.8,SNR=8.6						
LVC				LR	LR	03 50 22.7	
	comp=E,74nm,21.7s,baz=216,slow=52						
PB11	IPOC Station P	1.58	355	⇑*i*P	Pn	03 49 47.6	+0.7
PB11				*i* S	Sn	03 50 08.7	+1.8
PB11				IAML		03 50 11.4	
	comp=N,3µm,0.5s						
PB05	IPOC Station P	1.63	203	⇑*i*P	Pn	03 49 47.7	+0.2
PB05				*i* S	Sn	03 50 08.9	+0.9
PB05				IAML		03 50 14.6	
	comp=E,1µm,0.5s						
PSGC	Pisagua	1.83	342	⇓*i*P	Pn	03 49 50.4	+0.3
PSGC				*i* S	Sn	03 50 13.0	+0.3
PSGC				IAML		03 50 19.3	
	comp=E,1µm,0.3s						
PB15	IPOC Station P	1.85	179	⇑*i*P	Pn	03 49 51.5	+1.0
PB15				*i* S	Sn	03 50 14.0	+0.6
PB10	IPOC Station P	2.36	204	*e*P	Pn	03 49 57.2	0.0
PB10				*i* S	Sn	03 50 27.4	+2.2
PB10				IAML		03 50 35.2	
	comp=E,586nm,0.5s						
LPAZ	La Paz	5.20	15	P	Pn	03 50 41.4	+5.0
	comp=E,8.3nm,0.3s,baz=207,slow=6.6,SNR=131						
CPUP	Villa Florida	12.20	116	LR	LR	03 57 22.9	
	comp=E,50nm,18.9s,baz=212,slow=40						
TORD	Torodi Ar. Bea	77.83	71	P	P	04 01 09.2	-1.2
	comp=E,0.2nm,0.5s,baz=258,slow=5.2,SNR=6.3						
YKA	Yellowknife Ar	90.86	341	P	P	04 02 15.5	+0.3
	comp=E,0.3nm,0.6s,baz=135,slow=4.5,SNR=8.6						
H11S2	WAKE ISLAND Hy	127.30	277	T	T	06 28 02.4	
	baz=102,slow=74,SNR=22						
H11S1	WAKE ISLAND Hy	127.31	277	T	T	06 28 04.8	
	baz=102,slow=74,SNR=17						
H11S3	WAKE ISLAND Hy	127.32	277	T	T	06 28 11.0	
	baz=102,slow=74,SNR=16						
H11N3	WAKE ISLAND Hy	127.38	279	T	T	06 28 24.0	
	baz=104,slow=75,SNR=9.0						
H11N2	WAKE ISLAND Hy	127.39	279	T	T	06 28 29.0	
	baz=104,slow=75,SNR=5.9						
H11N1	WAKE ISLAND Hy	127.40	279	T	T	06 28 25.2	
	baz=104,slow=75,SNR=5.4						
MKAR	Makanchi Array	145.84	35	PKPbc	PKPab	04 08 50.2	-1.6
	comp=E,0.4nm,0.7s,baz=10,slow=4.0,SNR=4.3						

KRNET ***20*** *04:14:58.5±0.1, 41°.52N×79°.17E, h13^{km}, mb2.0*

SOME ***20*** *04:15:00.1, 41°.52N×79°.23E, h15^{km}*

NNC ***20*** *04:15:01.0±1.3, 41°.53N×79°.08E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=9.0km s-min=5.3km az=157.0*

ISC 20 04:14:55.6±2.3**, 41°.32N**±0°.09×**79°.23E**±0°.05**, h6**^{km}±12^{km}**, n33, σ0^{s}98**/56**, 11C-5D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.14	291	⇑*i*P	Pn	04 15 18.5	-0.1
	baz=82						
TARG				⇑*i*S	Sb	04 15 33.3	0.0
	baz=82						
PRZ	Przheval'sk	1.32	332	⇓*i*P	Pn	04 15 19.5	-1.2
	baz=30						
PRZ				⇓*i*S	Sb	04 15 35.2	-2.9
	baz=30						
KDJ	Kajisay	1.73	299	⇑*i*P	Pg	04 15 28.8	-0.1
	baz=93						
KDJ				⇑*i*S	Sg	04 15 50.8	-0.5
	baz=93						
SATY	Saty	1.84	341	P	Pg	04 15 31.1	+0.2
	2.0nm,0.1s						
SATY				S	Sb	04 15 53.3	+0.1
	6.2nm,0.1s						
SATY	Saty	1.84	341	*e*P	Pb	04 15 30.1	+0.3
	2.0nm,0.1s						
SATY				*e*S	Sn	04 15 51.7	+0.1
	6.2nm,0.1s						
SHLS	Shalkode	1.84	5	P	Pg	04 15 32.4	+1.4
	5.7nm,0.2s						
SHLS				S	Sg	04 15 55.8	+0.9
	44nm,0.4s						
SHLS	Shalkode	1.84	5	*e*P	Pg	04 15 31.4	+0.4
	5.7nm,0.2s						
SHLS				*e*S	Sb	04 15 53.4	+0.2
	44nm,0.4s						
PDGK	Podgornoye	2.02	5	P	Pg	04 15 34.6	+0.3
	0.6nm,0.2s						
PDGK				S	Sb	04 15 59.3	+1.1
	7.0nm,0.4s						
PDGK	Podgornoye	2.02	5	⇓P	Pb	04 15 32.8	0.0
	1.0nm,0.4s						
PDGK				⇓S	Sb	04 15 57.3	-0.9
	14nm,0.5s						
PDGK	Podgornoye	2.02	5	⇑*e*P	Pb	04 15 32.6	-0.2
	baz=7.0						
PDGK				⇑*i*S	Sb	04 15 57.6	-0.6
	baz=7.0						
KTMS	Ketmen	2.28	21	*e*P	Pb	04 15 37.9	+0.6
	0.9nm,0.1s						
KTMS				*e*S	Sb	04 16 05.2	-0.7
	7.0nm,0.5s						
KURS	Kuram	2.30	340	Pg	Pg	04 15 38.9	-0.9
	2.3nm,0.5s						
KURS				Lg	Lg	04 16 06.7	
	5.4nm,0.4s						
KURS	Kuram	2.30	340	*e*P	Pg	04 15 38.9	-0.9
	2.3nm,0.5s						
KURS				*e*S	Sb	04 16 06.7	+0.3
	5.4nm,0.4s						
TNSS	Tian-Shan	2.41	316	Pg	Pg	04 15 41.7	-0.1
	1.8nm,0.3s						
TNSS				Lg	Lg	04 16 11.6	
	2.8nm,0.2s						
TNSS	Tian-Shan	2.41	316	*e*P	Pg	04 15 41.7	-0.1

	1.8nm,0.3s						
TNSS				*e*S	**Sb**	**04 16 11.6**	**+1.8**
	2.8nm,0.2s						
ULHL	**Ulahol**	**2.42**	**293**	⇑*i*P	**Pb**	**04 15 40.0**	**+0.4**
	baz=89						
ULHL				⇑*i*S	**Sb**	**04 16 09.8**	**0.0**
	baz=89						
KOTS	**Kotyrbulak**	**2.47**	**321**	Pg	**Pg**	**04 15 42.6**	**-0.5**
	3.6nm,0.3s						
KOTS				Lg	Lg	04 16 13.0	
	8.4nm,0.3s						
KOTS	**Kotyrbulak**	**2.47**	**321**	*e*P	**Pg**	**04 15 42.6**	**-0.5**
	3.6nm,0.3s						
KOTS				*e*S	**Sb**	**04 16 12.9**	**+1.6**
	8.4nm,0.3s						
IZV	**Izvestkoviy**	**2.59**	**312**	Pg	**Pg**	**04 15 44.9**	**-0.4**
	2.6nm,0.2s						
IZV				Lg	Lg	04 16 17.4	
	11nm,0.2s						
IZV	**Izvestkoviy**	**2.59**	**312**	*e*P	**Pg**	**04 15 44.9**	**-0.4**
	2.6nm,0.2s						
IZV				*e*S	**Sg**	**04 16 17.4**	**-1.5**
	11nm,0.2s						
BOOM	**Boomskoye usch**	**2.72**	**297**	⇑*e*P	**Pb**	**04 15 43.9**	**-0.9**
	baz=93						
BOOM				⇑*i*S	**Sb**	**04 16 17.3**	**-1.1**
	baz=93						
MNBS	**Baschi**	**2.82**	**348**	Pg	**Pb**	**04 15 47.3**	**+0.8**
	2.6nm,0.3s						
MNBS				Lg	Lg	04 16 21.3	
	8.0nm,0.3s						
MNBS	**Baschi**	**2.82**	**348**	*e*P	**Pb**	**04 15 47.3**	**+0.8**
	2.6nm,0.3s						
MNBS				*e*S	**Sb**	**04 16 21.3**	**-0.1**
	8.0nm,0.3s						
KST	**Kastek**	**2.98**	**306**	Pg	**Pb**	**04 15 50.4**	**+1.3**
	1.7nm,0.1s						
KST				Lg	Lg	04 16 26.4	
	4.7nm,0.5s						
KST	**Kastek**	**2.98**	**306**	*e*P	**Pb**	**04 15 50.4**	**+1.3**
	1.7nm,0.1s						
KST				*e*S	**Sb**	**04 16 26.4**	**+0.6**
	4.7nm,0.5s						
CHKK	**Chushkaly**	**3.02**	**328**	Pg	**Pb**	**04 15 51.4**	**+1.5**
	1.9nm,0.2s						
CHKK				Lg	Lg	04 16 27.7	
	13nm,0.2s						
CHKK	**Chushkaly**	**3.02**	**328**	*e*P	**Pb**	**04 15 51.4**	**+1.5**
	1.9nm,0.2s						
CHKK				*e*S	**Sb**	**04 16 27.8**	**+0.7**
	13nm,0.2s						
DJR	**Jarkent**	**3.04**	**8**	*e*P	**Pb**	**04 15 50.7**	**+0.6**
	0.6nm,0.1s						
DJR				*e*S	**Sb**	**04 16 26.7**	**-0.9**
	0.9nm,0.2s						
ARXS	**Arharly**	**3.07**	**341**	Pg	**Pb**	**04 15 51.6**	**+0.9**
	0.9nm,0.2s						
ARXS				Lg	Lg	04 16 28.3	
	3.9nm,0.3s						
ARXS	**Arharly**	**3.07**	**341**	*e*P	**Pb**	**04 15 51.6**	**+0.9**
	0.9nm,0.2s						
ARXS				*e*S	**Sb**	**04 16 28.3**	**-0.1**
	3.9nm,0.3s						
TKM2	**Tokmak 2**	**3.14**	**302**	⇓Pg	**Pb**	**04 15 53.5**	**+1.6**
	3.5nm,1.4s						
TKM2				⇑Lg	Lg	04 16 34.7	
	1.0nm,0.4s						
DGS	**Degeres**	**3.20**	**308**	Pg	**Pb**	**04 15 54.6**	**+1.6**
	1.0nm,0.3s						
DGS				Lg	Lg	04 16 33.5	
	2.8nm,0.4s						
DGS	**Degeres**	**3.20**	**308**	*e*P	**Pb**	**04 15 54.6**	**+1.6**
	1.0nm,0.3s						
DGS				*e*S	**Sb**	**04 16 33.5**	**+1.2**
	2.8nm,0.4s						

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*IDC **20** 04:31:58.8±5.2, 36°.03N×136°.61E, h138^{km}±88^{km}, mb3.2/2, mb1 3.5/2, mb1mx2.9/35, mbtmp3.6/2, Error ellipse: s-maj=136.8km s-min=27.1km az=57.0*

*ISCJB **20** 04:31:59.1±0.8, 36°.71N±0°.09×138°.1E±0°.1, h207^{km}±6^{km}, mb3.2/2, Error ellipse: s-maj=19.9km s-min=13.1km az=157.8*

*JMA **20** 04:32:00.3±0.3, 36°.76N×138°.20E, h203^{km}±2^{km}, M3.1*

ISC 20 04:31:59.9±1.1**, 36°.74N**±0°.09×**138°.1E**±0°.1**, h202**^{km}±7^{km}**, n13, σ0**^{s}.**45**/21**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.23**	**152**	P	**Pn**	**04 32 26.8**	**+0.2**
MAT				S	**S**	**04 32 47.1**	**-0.3**
MAT	**Matsushiro**	**0.23**	**152**	P	**Pn**	**04 32 26.8**	**+0.2**
MAT				S	**S**	**04 32 47.2**	**-0.2**
MJAR	**Matsushiro Arr**	**0.23**	**152**	P	**Pn**	**04 32 26.8**	**+0.1**
	2.7nm,0.3s,baz=316,slow=1.5,SNR=61						
MJAR				S	**S**	**04 32 47.6**	**+0.2**
	0.7nm,0.3s,baz=169,slow=20,SNR=14						
JNG	**Nsakai**	**0.34**	**177**	P	**Pn**	**04 32 27.3**	**+0.3**
JNG				S	**S**	**04 32 48.0**	**+0.1**
JSZ	**Suzu**	**0.91**	**321**	P	**Pn**	**04 32 29.6**	**+0.4**
JRY	**Ryogami san**	**0.98**	**137**	P	**Pn**	**04 32 29.7**	**-0.2**
JRY				*e*S	**S**	**04 32 51.8**	**-1.1**
JAG	**Ashikaga**	**1.15**	**105**	P	**Pn**	**04 32 30.9**	**-0.1**
JAG				S	**S**	**04 32 54.3**	**-0.5**
JYN	**Shimob**	**1.30**	**163**	P	**Pn**	**04 32 32.5**	**+0.2**
JYN				S	**S**	**04 32 57.6**	**+0.6**
JSD	**Sado**	**1.30**	**6**	P	**Pn**	**04 32 32.3**	**+0.2**
JOD2	**Odawara 2**	**1.69**	**151**	P	**Pn**	**04 32 36.2**	**+0.6**
JOD2				S	**S**	**04 33 03.1**	**+0.3**
JFT	**Otama**	**1.97**	**66**	P	**Pn**	**04 32 39.0**	**+0.8**
MKAR	**Makanchi Array**	**42.00**	**302**	P	**P**	**04 39 31.0**	**-0.2**
	0.5nm,0.6s,baz=93,slow=9.0,SNR=6.4						
WRA	**Warramunga Arr**	**56.49**	**184**	P	**P**	**04 41 20.8**	**-0.2**
	0.4nm,0.3s,baz=0.4,slow=7.6,SNR=16						

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*MOS **20** 04:41:41.8±1.4, 53°.30N×108°.75E, h10^{km}, mb4.4/1, Error ellipse: s-maj=21.6km s-min=11.9km az=57.1*

BYKL 20 04:41:42.0±0.2**, 53°.34N**×**108°.67E, h23**^{km}±3^{km}**, 5C-9D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.09**	**150**	⇓*i*Pg	Pb	04 41 46.1	-0.2
MXMB				*e*Sg	Sb	04 41 48.9	-0.3
KELR	**Kotokel**	**0.68**	**212**	*e*Pg	Pb	04 41 54.8	-0.4
KELR				*e*Sg	Sb	04 42 04.2	0.0
OGRR	**Ongureny**	**0.71**	**296**	⇑*i*Pg	Pn	04 41 56.7	0.0
	117nm,0.2s						
OGRR				⇓*i*Pg	Pn	04 41 56.7	0.0
	192nm,0.2s						
OGRR				⇑*i*Pg	Pn	04 41 56.7	0.0
	199nm,0.2s						
OGRR				*i* Sg	Sn	04 42 06.2	-0.7
OGRR				Pmax			
	133nm,0.2s						
OGRR				Smax			
	1μm,0.2s						
OGRR	**Ongureny**	**0.71**	**296**	⇑*i*PG	Pn	04 41 56.7	0.0
OGRR				*e*		04 42 06.1	
OGRR				pmax	pmax		
	comp=Z,133nm,0.3s						
OGRR				smax	smax		
	comp=N,1μm,0.2s						
SYVR	**Suvo**	**0.85**	**68**	⇓*i*Pg	Pb	04 41 57.8	-0.4
	comp=N,40nm,0.4s						
SYVR				⇓*i*Pg	Pb	04 41 57.8	-0.4
	comp=N,64nm,0.4s						
SYVR				⇓*i*Pg	Pb	04 41 57.8	-0.4
	comp=N,98nm,0.4s						
SYVR				*i* Sg	Sb	04 42 09.6	+0.4
SYVR				*e*Sb	Sn	04 42 12.6	+2.1
SYVR				Pmax			
	comp=N,110nm,0.3s						
SYVR				Smax			
	comp=N,657nm,0.3s						
SYVR	**Suvo**	**0.85**	**68**	⇓*i*PG	Pb	04 41 57.8	-0.4
SYVR				*e*		04 42 09.2	
SYVR				pmax	pmax		
	comp=Z,112nm,0.3s						
SYVR				smax	smax		
	comp=E,665nm,0.3s						
TRTB	**Turuntaevo**	**1.28**	**210**	⇓*i*Pg	Pb	04 42 05.5	+0.1
TRTB				*e*Sg	Sb	04 42 22.5	+1.1
TRG	**Tyrgan**	**1.52**	**248**	*e*Pg	Pb	04 42 08.8	-0.7
TRG				*e*		04 42 15.6	
TRG				*e*Sg	Sb	04 42 29.8	+1.5
TRG				max			
	comp=E,64nm,0.3s						
TRG				Smax			
	comp=E,450nm,0.1s						
TRG	**Tyrgan**	**1.52**	**248**	*e*PG	Pb	04 42 09.1	-0.4
TRG				*e*		04 42 30.1	
TRG				pmax	pmax		
	comp=Z,66nm,0.2s						
TRG				smax	smax		
	comp=N,451nm,0.2s						
KAB	**Kabansk**	**1.78**	**224**	*e*Sg	Sb	04 42 38.6	+2.8
KAB				max			
	comp=N,148nm,0.4s						
KAB				Smax			
	comp=N,1μm,0.7s						
HRMR	**Khuramsha**	**2.01**	**212**	*e*Pn	Pb	04 42 16.2	-1.6
HRMR				⇑*i*Pg	Pn	04 42 18.0	+3.5
HRMR				*e*		04 42 24.4	
HRMR				*e*Sg	Sb	04 42 45.2	+2.8
HRMR				Pmax			
	comp=N,234nm,0.3s						
HRMR				Smax			
	comp=N,1μm,0.4s						
YLYR	**Ulyunkhan**	**2.13**	**43**	⇓*i*Pn	Pn	04 42 17.2	+1.1
YLYR				*e*Pg	Pb	04 42 19.0	-0.8
YLYR				*e*		04 42 23.2	
YLYR				*e*Sg	Sb	04 42 47.8	+2.0
YLYR				max			
	comp=N,61nm,0.6s						
YLYR				Smax			
	comp=N,265nm,0.4s						
YLYR	**Ulyunkhan**	**2.13**	**43**	⇓*i*PN	Pn	04 42 17.1	+1.0
YLYR				*e*		04 42 47.5	
YLYR				pmax	pmax		
	comp=Z,46nm,0.3s						
YLYR				smax	smax		
	comp=E,260nm,0.5s						
BGT	**Bolshoye Golou**	**2.37**	**238**	*e*Pg	Pb	04 42 24.7	+0.7
BGT				*e*Sg	Sb	04 42 56.3	+3.5
NIZ	**Nizh Angarsk**	**2.49**	**11**	*e*Pn	Pn	04 42 22.5	+1.4
NIZ				*e*Pg	Pb	04 42 26.2	+0.1
NIZ				*e*Sg	Sb	04 42 58.3	+2.0
NIZ				Pmax			
	comp=E,48nm,0.4s						
NIZ				Smax			
	comp=E,282nm,0.5s						
NIZ	**Nizh Angarsk**	**2.49**	**11**	⇑*e*PN	Pn	04 42 22.7	+1.6
NIZ				*i*		04 42 26.8	
NIZ				*e*S	Sn	04 42 53.0	+2.2
NIZ				*e*		04 42 58.2	
NIZ				pmax	pmax		
	comp=Z,48nm,0.4s						
NIZ				smax	smax		
	comp=N,279nm,0.4s						
LSTR	**Listvyanka**	**2.77**	**239**	*e*Pn	Pn	04 42 25.6	+0.7
LSTR				*e*Pg	Pb	04 42 31.0	+0.3
LSTR				*e*Sn	Sn	04 42 58.5	+0.9
LSTR				*e*Sg	Sb	04 43 07.2	+3.1
LSTR				Pmax			
	comp=N,10.0nm,0.6s						
LSTR				Smax			
	comp=N,76nm,0.2s						
IRK	**Irkutsk**	**2.89**	**249**	*e*Sg	Sb	04 43 10.2	+2.5
IRK				Smax			
	comp=N,298nm,0.6s						
KMO	**Kumora**	**2.95**	**29**	*e*Pn	Pn	04 42 28.4	+1.0
KMO				*e*Pg	Pb	04 42 33.8	0.0
KMO				*e*Sg	Sb	04 43 12.6	+3.3
KMO				Smax			
	comp=N,258nm,1.2s						
KMO	**Kumora**	**2.95**	**29**	*e*PN	Pb	04 42 30.8	-3.0
KMO				*e*		04 42 36.0	
KMO				*e*S	Sn	04 43 04.8	+2.8
KMO				*e*		04 43 12.1	
KMO				pmax	pmax		
	comp=Z,57nm,0.3s						
KMO				smax	smax		
	comp=E,259nm,1.2s						
IVK	**Ivanovka**	**3.02**	**241**	*e*Pn	Pn	04 42 29.2	+0.8
IVK				*e*		04 42 33.6	
IVK				*e*Pg	Pb	04 42 35.6	+0.6
IVK				*e*Sg	Sb	04 43 15.4	+4.0
IVK	**Ivanovka**	**3.02**	**241**	*e*PN	Pn	04 42 29.3	+0.9
IVK				*e*		04 42 36.2	
IVK				*e*		04 43 14.5	
CIT	**Chita**	**3.25**	**112**	*e*Sg	Sb	04 43 21.9	+3.7
CIT				Smax			
	comp=E,379nm,0.7s						
CIT	**Chita**	**3.25**	**112**	*e*PN	Pn	04 42 31.7	+0.1
CIT				*e*		04 42 37.7	
CIT				*e*S	Sn	04 43 08.5	-1.1
CIT				*e*		04 43 20.2	
CIT				pmax	pmax		
	comp=Z,72nm,0.3s						
CIT				smax	smax		
	comp=E,379nm,0.7s						
TLY	**Talaya**	**3.49**	**244**	*e*Pn	Pn	04 42 36.0	+1.1
TLY				*e*Pg	Pb	04 42 44.4	+1.3
TLY				*e*Sg	Sb	04 43 30.0	+5.0
TLY				Pmax			
	comp=E,8.0nm,0.4s						
TLY				Smax			
	comp=E,48nm,0.4s						
TLY	**Talaya**	**3.49**	**244**	*e*PN	Pb	04 42 46.1	+3.0
TLY				*e*		04 43 30.4	
TLY				pmax	pmax		
	comp=Z,14nm,0.3s						
UKT	**Uakit**	**3.61**	**51**	*e*Pn	Pn	04 42 37.5	+1.0
UKT				*e*Pg	Pb	04 42 46.0	+0.9
UKT				*e*Sg	Sb	04 43 36.3	+7.9
UKT				Pmax			
	comp=Z,17nm,0.7s						
UKT				Smax			
	comp=Z,97nm,1.3s						
UKT	**Uakit**	**3.61**	**51**	*e*PN	Pn	04 42 37.7	+1.2
UKT				*e*		04 42 46.5	
UKT				*e*		04 43 33.6	
ARS	**Arshan**	**4.06**	**252**	*e*	Pn	04 42 46.1	+3.3
ARS				*e*Pg	Pb	04 42 53.5	+0.7
ARS				*e*Sg	Sb	04 43 46.0	+4.5
ARS				Pmax			
	comp=Z,20nm,0.5s						
ARS				Smax			
	comp=Z,195nm,0.5s						
KPC	**Khapcheranga**	**4.32**	**146**	*e*Pn	Pn	04 42 46.2	0.0
KPC				*e*Pg	Pb	04 42 59.1	+2.0
KPC				*e*Sg	Sb	04 43 54.7	+5.9
KPC				Pmax			
	comp=Z,25nm,1.0s						
KPC				Smax			
	comp=Z,90nm,1.0s						
ZAK	**Zakamensk**	**4.46**	**231**	*e*Pn	Pn	04 42 49.7	+1.4
ZAK				*e*Pg	Pb	04 43 01.7	+2.0
ZAK				*e*Sg	Sb	04 44 00.8	+7.7
ZAK				Pmax			
	comp=Z,6.0nm,0.4s						
ZAK				Smax			
	comp=Z,47nm,0.8s						
MOY	**Mondy**	**4.98**	**253**	*e*Pn	Pn	04 42 55.0	-0.4
MOY				*e*Pg	Pb	04 43 09.9	+1.4
MOY				*e*Sg	Sb	04 44 15.6	+7.7
MOY				Pmax			
	comp=Z,8.0nm,0.7s						
MOY				Smax			
	comp=Z,49nm,1.2s						
NLYR	**Nelyaty**	**5.14**	**49**	*e*	Pn	04 43 03.7	+6.2
NLYR				*e*Pg	Pb	04 43 14.4	+3.3
NLYR				*e*		04 43 24.1	
NLYR				*e*Sg	Sb	04 44 22.6	+10
NLYR				max			
	comp=Z,10.0nm,0.6s						
NLYR				Smax			
	comp=Z,134nm,1.4s						
BOD	**Bodaibo**	**5.41**	**32**	*e*Pg	Pb	04 43 17.4	+1.7
BOD				*e*Sg	Sb	04 44 28.6	+8.5
BOD				Pmax			
	comp=Z,6.0nm,1.0s						
BOD				Smax			
	comp=Z,45nm,1.7s						
ORL	**Orlik**	**5.42**	**265**	*e*Pn	Pn	04 43 04.0	+2.6
ORL				*e*		04 43 11.6	
ORL				*e*		04 44 05.9	
ORL				*e*Sg	Sb	04 44 31.4	+11
ORL				max			
	comp=Z,6.0nm,0.4s						
ORL				Smax			
	comp=Z,42nm,1.4s						
ULN	**Ulaanbaatar**	**5.58**	**191**	*e*Pn	Pn	04 43 05.2	+1.5
ULN				*e*Pg	Pb	04 43 23.1	+4.4
ULN				*e*Sg	Sb	04 44 36.1	+11
CRS	**Chara**	**6.56**	**53**	*e*	Pb	04 43 41.2	+5.9
CRS				*e*Sg	Sb	04 45 05.6	+12
CRS				max			
	comp=Z,10.0nm,0.9s						
CRS				Smax			
	comp=Z,48nm,1.0s						
CRS	**Chara**	**6.56**	**53**	*e*PG	Pb	04 43 42.0	+6.7
CRS				*e*		04 45 05.8	
CRS				pmax	pmax		
	comp=Z,21nm,0.9s						
CRS				smax	smax		
	comp=E,45nm,0.9s						
TUP	**Tupik**	**6.76**	**76**	*e*		04 44 58.8	
TUP				*e*Sg	Sb	04 45 12.9	+14
TUP				Smax			
	comp=E,75nm,1.7s						

IDC 20 04:58:58.8±3.1**, 54°.56N**×**83°.47E, h0**^{km}**, mb1 2.8**/1**, mb1mx2.7**/45**, mbtmp2.8**/1**, ML2.6**/1**, Error ellipse: s-maj=23.1km s-min=13.5km az=151.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.00**	**127**	*i*		05 05 15.0	
	baz=305,slow=318,SNR=9.7						
ZALV	**Zalesovo Beam**	**1.00**	**127**	Pg	Pg	04 59 17.3	-0.6
	1.4nm,0.3s,baz=311,slow=17,SNR=24						
ZALV				Lg	Lg	04 59 32.2	
	3.1nm,0.3s,baz=310,slow=28,SNR=33						
MKAR	**Makanchi Array**	**7.81**	**186**	Pn	Pn	05 00 54.2	+0.5
	0.1nm,0.3s,baz=12,slow=12,SNR=6.3						

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*ISCJB **20** 05:01:56.7±0.2, 23°.26N±0°.02×101°.66E±0°.02, h10^{km}, mb4.5/88, MS4.1/36, Error ellipse: s-maj=3.1km s-min=2.6km az=32.6*

*IDC **20** 05:01:56.6±0.6, 23°.25N×101°.69E, h0^{km}, mb4.2/23, mb1 4.3/24, mb1mx4.2/45, mbtmp4.2/24, ML3.9/1, MS3.9/28, Ms1 3.9/28, ms1mx3.8/49, Error ellipse: s-maj=15.3km s-min=12.5km az=99.0*

*GCMT **20** 05:01:57.3±0.3, 23°.19N±0°.02×101°.70E±0°.03, h15^{km}±1^{km}, MW4.7/71, Moment Tensor Solution. s10,c12; s71,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.67±.11; M$_{\theta\theta}$-1.49±.08; M$_{\phi\phi}$0.82±.06; M$_{r\theta}$0.49±.20; M$_{\theta\phi}$0.24±.05; M$_{\phi r}$-0.61±.28; Best double couple: M$_0$1.51000×10^{16} NP1:φ$_s$131.00000°, δ72.00000°, λ137.00000°. NP2: φ$_s$237.00000°, δ49.00000°, λ24.00000°. Principal axes: T 1.3670, Plg43.0000°, Azm86.0000°; N 0.2910, Plg44.0000°, Azm293.0000°; P -1.6530, Plg14.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*PLV **20** 05:01:57.9±0.8, 22°.95N×101°.36E, h10^{km}±9^{km}, ML4.1*

*BJI **20** 05:01:57.0, 23°.25N×101°.60E, h15^{km}, mb4.5/43, mB4.8/30, ML4.8/12, Ms4.8/53, Ms7 4.5/47*

*MOS **20** 05:01:58.0±0.9, 23°.20N×101°.64E, h22^{km}, mb4.9/44, MS4.4/6, Error ellipse: s-maj=8.1km s-min=4.7km az=117.2*

*NEIC **20** 05:01:58.3±0.2, 23°.24N×101°.71E, h10^{km}, mb4.6/28, ML4.8(BJI), Error ellipse: s-maj=4.1km s-min=3.7km az=81.0*

ISC 20 05:01:58.9±0.3**, 23°.32N**±0°.03×**101°.65E**±0°.03**, h10**^{km}**, n221, σ2**^{s}.**09**/235**, mb4.6**/88**, MS4.0**/36**, 13C, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLAV	**Muong La stati**	**1.88**	**132**	*e*Pn	**Pn**	**05 02 29.8**	**-1.4**
MLAV				*e*Sg	**Sg**	**05 02 58.4**	**-1.1**
MLAV				IAML		05 03 10.0	
	comp=E,2μm,0.5s						
MLAV				IAML		05 03 11.8	
	comp=N,2μm,0.5s						
KMI	**Kunming**	**2.05**	**29**	Pn	**Pn**	**05 02 34.5**	**+0.8**
KMI				Pg	**Pg**	**05 02 37.9**	**-0.4**
KMI				Sg	**Sg**	**05 03 05.1**	**+0.1**
KMI				smax	smax		
	comp=N,4μm,1.1s						
KMI				smax	smax		
	comp=N,3μm,1.2s						
KMI	**Kunming**	**2.05**	**29**	*e*Pn	**Pn**	**05 02 34.7**	**+1.0**
KMI	**Kunming**	**2.05**	**29**	*e*P	**Pn**	**05 02 34.7**	**+1.0**
TGV	**Tuan Giao**	**2.37**	**136**	*e*Pg	**Pb**	**05 02 42.4**	**+0.7**
TGV				*e*Sg	**Sg**	**05 03 13.2**	**-2.0**
TGV				IAML		05 03 18.1	
	comp=E,1μm,0.5s						
TGV				IAML		05 03 23.7	
	comp=N,670nm,0.5s						
SLVN	**Son La**	**2.87**	**133**	Pn	**Pn**	**05 02 43.1**	**-1.8**
TTVN	**Tram Tau**	**3.11**	**126**	*e*Pn	**Pn**	**05 02 47.6**	**-0.3**
TTVN				*e*Pg	**Pg**	**05 02 57.5**	**-0.9**
TTVN				*e*Sg	**Sg**	**05 03 40.2**	**+1.5**
TTVN				IAML		05 03 43.4	
	comp=N,670nm,0.6s						
TTVN				IAML		05 03 48.9	
	comp=E,549nm,0.7s						
LAMP	**Lampang**	**5.13**	**202**	P	**Sg**	**05 04 42.6**	**-1.1**
CMMT	**Chiang Mai**	**5.14**	**210**	P	**Pn**	**05 03 15.3**	**-0.7**
	comp=E,69nm,0.7s,comp=E,1μmcomp=E,2.7nm						
CHTO	**Chiang Mai**	**5.14**	**210**	*e*Pn	**Pn**	**05 03 14.7**	**-1.3**
CHTO	**Chiang Mai**	**5.14**	**210**	*e*P	**Pn**	**05 03 14.7**	**-1.3**
CHTO	**Chiang Mai**	**5.14**	**210**	P	**Pn**	**05 03 15.3**	**-0.7**
	comp=E,318nm,0.7s,comp=E,6μmcomp=E,12nm						
CHTO	**Chiang Mai**	**5.14**	**210**	P	**Sg**	**05 04 44.0**	**-0.2**
CM31	**Chiang Mai Arr**	**5.46**	**208**	*e*Pn	**Pn**	**05 03 19.0**	**-1.3**
CMAR	**Chiang Mai Arr**	**5.46**	**208**	Pn	**Pn**	**05 03 19.0**	**-1.3**
	comp=E,1.0nm,0.3s,baz=22,slow=13,SNR=23						
CMAR				Pg	**Pb**	**05 03 35.6**	**+1.2**
	comp=E,3.1nm,0.3s,baz=24,slow=12,SNR=12						
CMAR				Lg	Lg	05 04 48.6	
	comp=E,6.4nm,0.3s,baz=21,slow=29,SNR=6.6						
CM01	**Chiang Mai Arr**	**5.48**	**208**	*e*Pn	**Pn**	**05 03 20.6**	**-0.1**
GYA	**Guiyang**	**5.52**	**54**	⇑*i*Pn	**Pn**	**05 03 21.0**	**-0.3**
GYA				Sn	**Sn**	**05 04 24.3**	**-0.6**
GYA				Sg	**Sg**	**05 04 56.8**	**+0.5**
GYA				smax	smax		
	comp=E,330nm,1.0s						
GYA				smax	smax		
	comp=E,390nm,1.0s						
GYA				LR	LR		
	comp=E,6μm,7.2s						
GYA				LR	LR		
	comp=E,3μm,7.1s						
UTTA	**Uttaradit**	**5.64**	**191**	P	Pn	05 03 28.4	+5.6
	comp=E,49nm,0.5s,comp=E,528nmcomp=E,0.3nm						
UTTA	**Uttaradit**	**5.64**	**191**	P	**Sg**	**05 05 01.6**	**+1.6**
SUKH	**Sukhothai**	**6.11**	**198**	P	**Pn**	**05 03 30.1**	**+0.9**
	comp=E,42nm,1.0s,comp=E,380nmcomp=E,0.4nm						
SUKH	**Sukhothai**	**6.11**	**198**	P	**Sg**	**05 05 12.9**	**-2.1**
CHAI	**Chaiyaphum**	**7.38**	**177**	P	Pn	05 03 52.2	+5.4
	comp=E,15nm,1.1s,comp=E,172nmcomp=E,0.2nm						
CHAI	**Chaiyaphum**	**7.38**	**177**	P	**Sn**	**05 05 17.3**	**+6.6**
	comp=E,0.2nmcomp=E,811nmcomp=E,21nm,1.1s						
CD2	**Chengdu**	**7.79**	**13**	Pn	**Pn**	**05 03 52.0**	**-0.4**
CD2				Pg	**Pg**	**05 04 24.9**	**-3.2**
CD2				Sn	**Sn**	**05 05 18.8**	**-1.9**
CD2				Sg	**Sg**	**05 06 06.0**	**-3.0**
CD2				smax	smax		
	comp=N,1μm,2.0s						
CD2				smax	smax		
	comp=E,880nm,1.7s						
CD2				LR	LR		
	comp=N,12μm,10.8s						
CD2				LR	LR		
	comp=E,14μm,9.4s						
CD2				LR	LR		
	comp=Z,17μm,9.8s						
CD2	**Chengdu**	**7.79**	**13**	P	**Pn**	**05 03 52.3**	**-0.1**
CD2				S	**Sn**	**05 05 18.5**	**-2.2**
CD2				smax	smax		
	comp=Z,1μm,1.9s						
CD2				smax	smax		

	comp=Z,880nm,1.6s						
CD2				LR	LR		
	comp=Z,14µm,11.8s						
CD2				LR	LR		
	comp=Z,14µm,10.3s						
CD2				LR	LR		
	comp=Z,17µm,10.8s						
UTHA	Uthaitani	7.99	195	P	Pn	05 04 00.2	+5.0
	comp=Z,5.4nm,0.4s,comp=Z,106nmcomp=Z,0.1nm						
QIZ	Qiongzhong	8.75	118	P	Pn	05 04 05.6	0.0
QIZ				S	Sn	05 05 41.9	-2.5
QIZ				LR	LR		
	comp=Z,2µm,9.4s						
QIZ				LR	LR		
	comp=Z,1µm,9.6s						
QIZ	Qiongzhong	8.75	118	ePn	Pn	05 04 04.0	-1.6
SHL	Shillong	9.18	286	ePn	Pn	05 04 11.1	-0.4
SHL	Shillong	9.18	286	eP	Pn	05 04 11.1	-0.4
ENH	Enshi	9.84	44	ePn	Pn	05 04 20.2	-0.3
LSA	Lhasa	11.35	306	ePn	Pn	05 04 42.8	+1.3
LSA	Lhasa	11.35	306	eP	Pn	05 04 42.8	+1.3
XAN	Xi'an	12.44	29	P	Pn	05 04 53.0	-3.0
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN				LR	LR		
	comp=Z,2µm,5.7s						
XAN				LR	LR		
	comp=Z,3µm,8.4s						
XAN	Xi'an	12.44	29	ePn	Pn	05 04 53.7	-2.4
XAN	Xi'an	12.44	29	eP	Pn	05 04 53.7	-2.4
LZH	Lanzhou	12.87	8	eP	Pn	05 05 06.3	+4.3
LZH				pP		05 05 10.5	
LZH				sP		05 05 12.5	
LZH				PP	PnPn	05 05 17.4	+7.4
LZH				S	Sn	05 07 35.0	+10
LZH				sS		05 07 38.9	
LZH				SS	SnSn	05 07 48.3	+10
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,92nm,4.5s						
LZH				LR	LR		
	comp=Z,3µm,9.4s						
LZH				LR	LR		
	comp=Z,2µm,10.5s						
ODAN	Odare	13.39	288	eP	Pn	05 05 07.3	-2.0
WHN	Wuhan	13.41	55	P	Pn	05 05 10.0	+0.7
WHN				S	Sn	05 07 39.3	+0.8
WHN				LR	LR		
	comp=Z,11µm,8.1s						
WHN				LR	LR		
	comp=Z,7µm,6.3s						
WHN				LR	LR		
	comp=Z,9µm,6.7s						
RAMN	Ramite	14.10	288	eP	Pn	05 05 17.9	-1.1
	comp=Z,194nm,0.9s						
JIRN	Jiri	14.61	290	eP	Pn	05 05 24.2	-1.9
	comp=Z,209nm,1.3s						
GUN	Gumba	14.94	291	eP	Pn	05 05 28.6	-2.0
	comp=Z,362nm,1.3s						
PKI	Pulchoki	15.27	289	eP	Pn	05 05 33.4	-1.5
	comp=Z,269nm,1.2s						
PKIN	Phulchoki	15.28	289	eP	Pn	05 05 33.5	-1.5
	comp=Z,225nm,1.3s						
KKN	Kakani	15.43	290	eP	Pn	05 05 34.8	-2.1
	comp=Z,236nm,1.3s						
TRTT	Trang	15.51	187	P	P	05 05 44.3	+2.1
	comp=Z,7.1nm,1.4s						
DMN	Daman	15.54	289	eP	Pn	05 05 36.8	-1.6
	comp=Z,243nm,1.2s						
GTA	Gaotai	16.12	355	eP	P	05 05 49.5	+0.5
GTA				pP	sP	05 05 54.1	+0.3
GTA				sP	pP	05 05 56.8	+4.6
GTA				S	S	05 08 52.3	-5.8
GTA				sS	sS	05 08 58.4	-4.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,99nm,6.3s						
GTA				LR	LR		
	comp=Z,1µm,12.1s						
GTA				LR	LR		
	comp=Z,2µm,13.0s						
GTA				LR	LR		
	comp=Z,1µm,13.3s						
DANN	Dangsing	16.86	291	eP	Pn	05 05 53.1	-2.3
	comp=Z,252nm,1.5s						
KOLN	Koldanda	16.88	289	eP	Pn	05 05 52.5	-3.0
	comp=Z,176nm,1.4s						
PYUN	Piuthan	17.47	290	eP	Pn	05 06 00.7	-2.3
	comp=Z,72nm,1.2s						
NJ2	Nanjing	17.53	57	eP	Pn	05 06 03.4	0.0
NJ2				S	Sn	05 09 19.3	+0.7
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=Z,3µm,9.8s						
NJ2				LR	LR		
	comp=Z,2µm,10.3s						
TIA	Tai'an	18.56	43	P	Pn	05 06 20.3	+4.3
TIA				S	S	05 09 48.5	+1.0
TIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TIA				LR	LR		
	comp=Z,350nm,9.4s						
TIA				LR	LR		
	comp=Z,790nm,9.6s						
TIA				LR	LR		
	comp=Z,660nm,11.6s						
BTO	Baotou	18.62	20	eP	Pn	05 06 17.3	+0.4
HHC	Hu-ho-hao-te	19.37	23	eP	Pn	05 06 26.8	+0.9
HHC				sP	sP	05 06 33.5	+3.9
HHC				PP	PnPn	05 06 45.9	+6.8
HHC				eS	Sn	05 09 57.8	-5.4
HHC				SS	SnSn	05 10 30.0	+12
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.3s						
HHC				LR	LR		
	comp=Z,2µm,10.4s						
HHC				LR	LR		
	comp=Z,700nm,8.1s						
HHC				LR	LR		
	comp=Z,1µm,11.3s						
KCSI	Kotacane, Aceh	20.04	191	P	Pn	05 06 33.1	-0.8
BJT	Baijiatuau	20.69	33	eP	Pn	05 06 41.3	-0.1
BJT	Baijiatuau	20.69	33	eP	Pn	05 06 41.3	-0.1
BJI	Beijing	20.71	33	P	Pn	05 06 41.3	-0.3
HYB	Hyderabad	22.42	259	i P	P	05 06 58.0	0.0
WMQ	Urumqi	23.46	334	eP	P	05 07 09.9	+1.3
WMQ				sP	sP	05 07 18.0	+4.6
WMQ				PP	pP	05 07 45.8	+34
WMQ				S	S	05 11 20.5	-1.6
WMQ				sS	sS	05 11 29.9	+2.1
WMQ				PcS	PcS	05 14 36.9	+3.1
WMQ				pmax	pmax		
	comp=Z,29nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,370nm,4.7s						
WMQ				LR	LR		
	comp=N,2µm,16.7s						
WMQ				LR	LR		
	comp=E,3µm,13.1s						
WMQ				LR	LR		
	comp=Z,2µm,13.1s						
WMQ	Urumqi	23.46	334	eP	P	05 07 09.8	+1.2
WMQ				sP	sP	05 07 18.0	+4.6
WMQ				S	S	05 11 20.5	-1.6
WMQ				sS	sS	05 11 29.9	+2.1
WMQ				PcS	PcS	05 14 36.9	+3.1
WMQ				pmax	pmax		
	comp=Z,29nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,370nm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.7s						
WMQ				LR	LR		
	comp=Z,3µm,13.1s						
WMQ				LR	LR		
	comp=Z,2µm,13.1s						
SONA0	Songino Array	24.76	8	eP	P	05 07 21.0	+0.2
SONM	Songino Array	24.76	8	P	P	05 07 21.0	+0.2
SONM	Songino Array	24.76	8	P	P	05 07 21.0	+0.2
	comp=Z,3.3nm,0.8s,baz=191,slow=6.9,SNR=15						
SONM				LR	LR	05 18 32.5	
	comp=Z,528nm,21.2s,baz=184,slow=40						
SONA1	Songino Array	24.77	8	eP	P	05 07 20.8	-0.1
ULN	Ulaanbaatar	24.87	9	eP	P	05 07 22.2	+0.4
	comp=Z,7.7nm,1.1s						
ULN	Ulaanbaatar	24.87	9	ceP	P	05 07 22.4	+0.6
ULN				pmax	pmax		
	comp=Z,25nm,2.5s						
PALK	Pallekele	25.68	235	P	P	05 07 28.9	-0.5
	comp=Z,6.0nm,0.7s,baz=117,slow=3.5,SNR=3.9						
SNY	Shenyang	25.99	40	⇑P	P	05 07 33.9	+2.1
SNY				S	S	05 12 08.0	+5.6
SNY				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SNY				pmax	pmax		
	comp=Z,110nm,4.5s						
SNY				LR	LR		
	comp=Z,1µm,20.1s						
SNY				LR	LR		
	comp=Z,1µm,18.2s						
SNY				LR	LR		
	comp=Z,1µm,11.2s						
KSAR	Wonju Array Be	26.54	52	P	P	05 07 36.9	0.0
KSAR	Wonju Array Be	26.54	52	P	P	05 07 36.9	0.0
KSRS	Korea Array	26.58	52	P	P	05 07 36.9	-0.2
	comp=Z,1.5nm,0.8s,baz=236,slow=9.5,SNR=3.4						
KSRS				LR	LR	05 20 00.5	
	comp=Z,292nm,18.9s,baz=242,slow=41						
NIL	Nilore	26.92	299	eP	P	05 07 40.5	+0.1
	comp=Z,37nm,1.1s						
NIL	Nilore	26.92	299	eP	P	05 07 40.5	+0.1
NIL				pmax	pmax		
	comp=Z,37nm,1.1s						
ZAK	Zakamensk	27.04	2	eP	P	05 07 41.5	+0.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PDGK	Podgornoye	27.08	323	P	P	05 07 41.9	+0.1
PDGK				pmax	pmax		
	comp=Z,23nm,1.4s						
TARG	Taragay, Kyrgy	27.08	318	eP	P	05 07 42.7	+0.5
	comp=Z,12nm,1.1s						
KSH	Kashi	27.09	313	P	P	05 07 44.1	+2.2
KSH				pP	sP	05 07 49.0	+2.1
KSH				PP	PnPn	05 08 30.0	+5.4
KSH				S	S	05 12 20.8	+0.7
KSH				sS	sS	05 12 30.9	+5.1
KSH				SS	SnSn	05 13 36.0	+9.5
KSH				pmax	pmax		
	comp=Z,40nm,1.2s						
KSH				pmax	pmax		
	comp=Z,280nm,5.3s						
KSH				LR	LR		
	comp=Z,170nm,5.1s						
KSH				LR	LR		
	comp=Z,160nm,4.9s						
KSH				LR	LR		
	comp=Z,390nm,5.9s						
PRZ	Przheval'sk	27.17	320	eP	P	05 07 42.6	-0.1
	comp=Z,17nm,0.3s						
PRZ	Przheval'sk	27.17	320	eP	P	05 07 42.6	-0.1
PRZ				pmax	pmax		
	comp=Z,17nm,0.3s						
NRN	Naryn	28.04	316	eP	P	05 07 51.5	+0.8
	comp=Z,6.3nm,1.1s						
NRN	Naryn	28.04	316	eP	P	05 07 51.5	+0.8
NRN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MK01	Makanchi Array	28.11	331	eP	P	05 07 51.0	+0.1
MK31	Makanchi Array	28.13	331	eP	P	05 07 51.5	+0.5
	comp=Z,9.3nm,1.0s						
MK31	Makanchi Array	28.13	331	eP	P	05 07 51.1	0.0
MK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK32	Makanchi Array	28.13	331	eP	P	05 07 51.4	+0.3
MKAR	Makanchi Array	28.13	331	eP	P	05 07 51.5	+0.5
	comp=Z,55nm,1.0s						
MKAR	Makanchi Array	28.13	331	eP	P	05 07 51.6	+0.5
MKAR				pmax	pmax		
	comp=Z,55nm,1.0s						
MKAR	Makanchi Array	28.13	331	P	P	05 07 51.4	+0.3
	comp=Z,7.6nm,0.9s,baz=138,slow=9.3,SNR=26						
MKAR				LR	LR	05 20 39.8	
	comp=Z,286nm,19.4s,baz=148,slow=40						
MAKZ	Makanchi	28.28	331	eP	P	05 07 53.6	+1.2
	comp=Z,1.9nm,1.1s						
MAKZ	Makanchi	28.28	331	eP	P	05 07 53.6	+1.2
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
CN2	Changchun	28.30	38	eP	P	05 07 53.3	+0.8
CN2				esP	sP	05 08 00.3	+2.8
CN2				eS	S	05 12 36.8	-2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
CN2				LR	LR		
	comp=Z,710nm,18.0s						
ULHL	Ulahol	28.33	318	P	P	05 07 55.3	+2.1
	SNR=9.2						
DGZ	Jazzator, Alta	28.60	341	i P	P	05 07 55.2	-0.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BOOM	Boomskoye usch	28.66	318	P	P	05 07 57.9	+1.9
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SFK	Sufi-Kurgan	29.00	312	i P	P	05 07 58.2	-1.0
SFK				pmax	pmax		
	comp=Z,31nm,1.4s						
TKM2	Tokmak 2	29.11	318	i P	P	05 08 00.0	0.0
TKM2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBK	Karagaybulak	29.36	317	P	P	05 08 04.4	+2.2
	SNR=5.7						
AAK	Ala-Archa	29.63	317	P	P	05 08 07.0	+2.3
	SNR=7.0						
AAK	Ala-Archa	29.63	317	eP	P	05 08 05.7	+1.1
AAK				eP	P	05 08 07.0	+2.3
AAK	Ala-Archa	29.63	317	ceP	P	05 08 06.6	+1.9
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	Ala-Archa	29.63	317	P	P	05 08 05.7	+1.1
	comp=Z,5.3nm,1.0s,baz=104,slow=6.4,SNR=12						
AAK				LR	LR	05 20 49.9	
	comp=Z,251nm,19.0s,baz=113,slow=38						
AML	Almayashu	29.88	316	P	P	05 08 09.3	+2.2
	SNR=11						
USP	Ospenovka	29.97	318	P	P	05 08 09.1	+1.6
	SNR=5.3						
EKS2	Erkin-Say	30.10	317	P	P	05 08 11.0	+2.3
	SNR=8.2						
KBL	Kabul	30.53	299	eP	P	05 08 13.3	+0.6
	comp=Z,15nm,1.1s						
KBL	Kabul	30.53	299	eP	P	05 08 13.3	+0.6
KBL				pmax	pmax		
	comp=Z,15nm,1.1s						
MNAS	Manas	30.82	315	i P	P	05 08 14.5	-0.7
MNAS				pmax	pmax		
	comp=Z,13nm,1.0s						
GAR	Garm	30.85	308	eP	P	05 08 15.9	+0.5
	comp=Z,9.2nm,0.9s						
GAR	Garm	30.85	308	eP	P	05 08 15.9	+0.5
GAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BTK	Batken	30.89	310	eP	P	05 08 16.9	+1.2
	comp=Z,8.1nm,1.1s						
BTK	Batken	30.89	310	eP	P	05 08 16.9	+1.2
BTK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CHGR	Chuyangaron	31.58	307	eP	P	05 08 22.6	+0.8
	comp=Z,22nm,1.2s						
KK31	Karatay Array	32.41	315	eP	P	05 08 30.1	+1.2
	comp=Z,2.1nm,0.9s						
KK31	Karatay Array	32.41	315	eP	P	05 08 29.6	+0.7
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	32.41	315	eP	P	05 08 29.5	+0.6
KKAR	Karatay Array	32.41	315	eP	P	05 08 29.5	+0.6
USRK	Ussuriysk Ar.	32.42	43	P	P	05 08 28.9	-0.1
	comp=Z,1.7nm,0.8s,baz=239,slow=13,SNR=3.9						
KURBB	Kurchatov Arra	32.65	332	P	P	05 08 31.0	+0.1
	comp=Z,5.5nm,0.9s,baz=140,slow=8.7,SNR=23						
KURK	Kurchatov	32.69	333	eP	P	05 08 31.0	-0.2
KURK				eP	P	05 08 32.3	+1.1
KURK	Kurchatov	32.69	333	ceP	P	05 08 32.2	+1.0
KURK				pmax	pmax		
	comp=Z,17nm,1.7s						
ZAA0	Zalesovo Array	33.11	342	eP	P	05 08 35.9	+1.0
	comp=Z,9.3nm,1.0s						
ZALV	Zalesovo Beam	33.11	342	eP	P	05 08 34.2	-0.7
ZALV	Zalesovo Beam	33.11	342	i P	P	05 08 35.7	+0.8
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZALV	Zalesovo Beam	33.11	342	P	P	05 08 35.0	0.0
	comp=Z,6.3nm,0.9s,baz=148,slow=8.6,SNR=14						
ZALV				LR	LR	05 23 05.4	
	comp=Z,298nm,20.6s,baz=110,slow=38						
ZAA1	Zalesovo Array	33.12	342	eP	P	05 08 35.0	0.0
OTUK	Ortayu	34.05	324	P	P	05 08 43.4	+0.2
OTUK				pmax	pmax		
	comp=Z,35nm,1.4s						
MJAR	Matsushiro Arr	34.11	59	LR	LR	05 22 32.2	
	comp=Z,239nm,18.4s,baz=260,slow=36						
KLR	Kul'dur	35.05	35	i P	P	05 08 52.3	+0.4
KLR	Kul'dur	35.05	35	P	P	05 08 50.6	-1.3
	comp=Z,3.9nm,0.8s,baz=269,slow=8.3,SNR=8.2						
BOD	Bodaibo	35.60	11	eP	P	05 08 56.2	-0.2
BOD				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ZEA	Zeya	35.99	26	eP	P	05 09 00.5	+0.7
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,13.0s						
ZEA				MLR	MLR		
	comp=E,400nm,10.0s						
ZEA				MLR	MLR		
	comp=N,600nm,12.0s						
BVAR	Borovoye Array	37.97	329	P	P	05 09 16.2	-0.5
	comp=N,3.7nm,0.9s,baz=119,slow=12,SNR=11						
BVAR				PcP	PcP	05 11 31.4	-1.0
	comp=N,1.7nm,0.8s,baz=141,slow=4.8,SNR=4.7						
BVAR				LR	LR	05 26 33.7	
	comp=N,317nm,20.1s,baz=120,slow=39						
BRVK	Borovoye	38.04	329	eP	P	05 09 18.0	+0.8
	comp=N,5.4nm,0.8s						
BRVK	Borovoye	38.04	329	ceP	P	05 09 18.7	+1.4
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WSAR	Wadi Sarin	39.41	279	LR	LR	05 29 48.8	
	comp=Z,142nm,18.1s,baz=104,slow=42						
BATI	Baumata	39.68	145	LR	LR	05 27 18.5	
	comp=Z,222nm,18.3s,baz=288,slow=38						
GEYT	Alibeck	39.83	302	P	P	05 09 33.0	+0.4
	comp=Z,18nm,1.1s,baz=121,slow=5.7,SNR=14						
GEYT				LR	LR	05 29 13.0	
	comp=Z,169nm,18.3s,baz=85,slow=41						
GYA0B	ALIBECK ARRAY	39.83	302	eP	P	05 09 33.4	+0.8
	comp=Z,12nm,0.9s						
YSS	Yuzh-Sakhalins	40.42	44	eP	P	05 09 39.8	+2.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
AB31	Akbulak array	41.67	319	P	P	05 09 46.9	-0.6
AB31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ABKAR	Akbulak array	41.67	319	eP	P	05 09 47.3	-0.2
	comp=Z,14nm,0.9s						
NKL	Nikolayevsk	41.90	35	eP	P	05 09 46.0	-3.3
NKL				pmax	pmax		
	comp=Z,20nm,1.0s						
NKL				MLR	MLR		
	comp=E,1µm,15.0s						
NKL				MLR	MLR		
	comp=Z,1µm,15.0s						
AKTO	Aktyubinsk	43.27	320	P	P	05 10 00.5	-0.1
AKTO				pmax	pmax		
	comp=Z,13nm,1.1s						
AKTO	Aktyubinsk	43.27	320	LR	LR	05 29 45.0	
	comp=Z,111nm,19.0s,baz=115,slow=38						
ARU	Arti	45.55	328	ceP	P	05 10 19.2	+0.5
ARU				pmax	pmax		
	comp=Z,11nm,1.0s						
NRIK	Noril'sk	46.81	353	P	P	05 10 28.7	+0.3
	comp=Z,5.2nm,0.6s,baz=163,slow=6.2,SNR=7.4						
NRIK				LR	LR	05 32 06.7	
	comp=Z,218nm,21.6s,baz=187,slow=39						
FITZ	Fitzroy Crossi	47.37	148	LR	LR	05 33 11.8	
	comp=Z,60nm,19.0s,baz=318,slow=40						
GANJ	Ganja	49.21	304	P	P	05 10 48.2	+0.7
GROC	Groznyy	49.77	308	P	P	05 10 48.8	-2.9
GROC				e		05 12 06.7	
GROC				e		05 12 43.6	
GROC				pmax	pmax		
	comp=Z,45nm,1.2s						
MA2	Magadan	49.83	30	ceP	P	05 10 51.3	-0.6
MA2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GNI	Garni	50.40	304	ceP	P	05 10 57.5	+0.8
GNI				pmax	pmax		
	comp=Z,41nm,1.2s						
GNI	Garni	50.40	304	LR	LR	05 35 57.0	
	comp=Z,55nm,19.3s,baz=86,slow=40						
KIRV	Kirov	50.94	328	LR	LR	05 32 53.5	
	comp=Z,164nm,19.6s,baz=103,slow=36						
ZEI	Tsey	51.13	307	eP	P	05 11 00.5	-1.7
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RAYN	Ar Rayn	51.23	282	eP	P	05 11 01.8	-1.3
	comp=Z,11nm,1.1s						
RAYN	Ar Rayn	51.23	282	eP	P	05 11 01.8	-1.3
RAYN				pmax	pmax		
	comp=Z,11nm,1.1s						
PETK	Petropavlovsk-	51.42	40	LR	LR	05 34 20.0	
	comp=Z,154nm,18.2s,baz=256,slow=38						
GOF	Gofitskoye	51.90	310	⇑iP	P	05 11 04.9	-2.8
GOF				pmax	pmax		
	comp=Z,20nm,0.7s						
KBZ	Khabaz	51.92	308	LR	LR	05 37 27.6	
	comp=Z,132nm,18.0s,baz=90,slow=41						
KIV	Kislovodsk	52.08	308	eP	P	05 11 09.6	+0.4
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIV				MLR	MLR		
	comp=Z,109nm,17.0s						
VRH	Novokhopyorsk	53.44	317	eP	P	05 11 18.5	-0.4
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WRA	Warramunga Arr	53.53	141	P	P	05 11 18.6	-1.4
	comp=Z,1.4nm,0.9s,baz=331,slow=8.1,SNR=12						
WRA				LR	LR	05 36 07.7	
	comp=Z,86nm,18.6s,baz=270,slow=38						
WR1	Warramunga Arr	53.53	141	eP	P	05 11 18.6	-1.4
	comp=Z,6.1nm,1.1s						
PRGR	Permogore	53.76	331	eP	P	05 11 19.8	-1.3
PRGR				pmax	pmax		
	comp=Z,13nm,0.8s						
VSR	Storozhevoye	55.03	317	eP	P	05 11 29.2	-1.4
VSR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LPSR	Galich'ya Gora	55.33	319	eP	P	05 11 31.7	-1.0
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AS31	Alice Springs	56.24	144	eP	P	05 11 38.7	-0.9
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	56.24	144	P	P	05 11 38.7	-0.9
	comp=Z,2.0nm,1.0s,baz=333,slow=7.6,SNR=9.3						
ASAR				LR	LR	05 37 30.5	
	comp=Z,106nm,19.0s,baz=283,slow=38						
AS01	Alice Springs	56.26	144	eP	P	05 11 38.8	-0.9
KLMR	Klimovskoe	56.39	329	eP	P	05 11 39.5	-0.6
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s						
KLMR	Klimovskoe	56.39	329	eP	P	05 11 39.5	-0.6
KLMR				AMP		05 11 42.5	
	comp=Z,20nm,1.2s						
ATD	Arta Tunnel	56.99	269	LR	LR	05 34 39.2	
	comp=Z,72nm,21.7s,baz=50,slow=34						
OBN	Obninsk	57.00	322	⇑eP	P	05 11 44.8	+0.3
OBN				e		05 12 37.6	
OBN				e		05 13 50.7	
OBN				eS	S	05 19 36.4	-2.4
OBN				pmax	pmax		
	comp=Z,13nm,1.0s						
OBN				MLR	MLR		
	comp=Z,130nm,18.0s						

OBN	**Obninsk**	**57.00**	**322**	LR	LR	05 36 45.8	
	comp=Z,31nm,20.3s,baz=178,slow=37						
TMCR	**Tamitsa**	**57.80**	**332**	eP	**P**	**05 11 50.2**	**+0.1**
TMCR				pmax	pmax		
	comp=Z,25nm,1.3s						
BR101	**Keskin Array S**	**58.94**	**303**	eP	**P**	**05 11 59.0**	**+0.4**
BRTR	**Keskin Array B**	**58.94**	**303**	P	**P**	**05 11 59.0**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=28,slow=5.9,SNR=4.3						
BRTR				LR	LR	05 43 10.8	
	comp=Z,48nm,20.3s,baz=92,slow=42						
BILL	**Bilibino**	**59.14**	**23**	⇑eP	**P**	**05 11 58.6**	**-0.8**
BILL				e		05 12 48.3	
BILL				e		05 14 08.6	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,676nm,17.0s						
JOF	**Joensuu**	**60.56**	**330**	P	**P**	**05 12 10.5**	**+1.3**
JOF				pmax	pmax		
	comp=Z,15nm,0.8s						
AKASG	**Malin Array Be**	**61.30**	**316**	P	**P**	**05 12 13.5**	**-0.9**
	comp=Z,3.2nm,0.8s,baz=79,slow=7.0,SNR=7.8						
AKBB	**Malin Array Si**	**61.30**	**316**	eP	**P**	**05 12 15.8**	**+1.4**
	comp=Z,6.9nm,0.9s						
KIEV	**Kiev**	**61.31**	**316**	eP	**P**	**05 12 15.8**	**+1.3**
	comp=Z,7.8nm,1.0s						
KIEV	**Kiev**	**61.31**	**316**	i P	**P**	**05 12 14.1**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AK11	**Malin Array Si**	**61.33**	**316**	eP	**P**	**05 12 14.8**	**+0.1**
VSU	**Vasula**	**62.58**	**325**	ceP	**P**	**05 12 23.8**	**+0.9**
VSU				pmax	pmax		
	comp=Z,28nm,1.0s						
SUF	**Sumiainen**	**62.91**	**330**	P	**P**	**05 12 27.3**	**+2.2**
SUF				pmax	pmax		
	comp=Z,16nm,0.9s						
FIA0	**FINESS Array S**	**62.92**	**328**	eP	**P**	**05 12 24.9**	**-0.3**
FIA0	**FINESS Array S**	**62.92**	**328**	eP	**P**	**05 12 24.9**	**-0.3**
FINES	**FINESS Array B**	**62.92**	**328**	P	**P**	**05 12 24.9**	**-0.3**
	comp=Z,6.7nm,0.8s,baz=84,slow=7.9,SNR=12						
FINES				LR	LR	05 42 01.4	
	comp=Z,94nm,19.5s,baz=99,slow=38						
OUL	**Oulu**	**63.10**	**333**	P	**P**	**05 12 28.4**	**+2.1**
MLR	**Muntele Rosu**	**63.93**	**311**	eP	**P**	**05 12 31.5**	**-0.8**
	comp=Z,4.4nm,1.1s						
MLR	**Muntele Rosu**	**63.93**	**311**	eP	**P**	**05 12 31.5**	**-0.8**
MLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KWP	**Kalwaria Pacla**	**65.56**	**315**	eP	**P**	**05 12 43.3**	**+0.5**
	comp=Z,104nm,0.9s						
KWP	**Kalwaria Pacla**	**65.56**	**315**	eP	**P**	**05 12 43.3**	**+0.5**
DRGR		**65.97**	**312**	P	**P**	**05 12 46.4**	**+0.9**
DRGR				pmax	pmax		
	comp=Z,11nm,1.4s						
STKA	**Stephens Creek**	**66.87**	**144**	LR	LR	05 44 23.7	
	comp=Z,95nm,18.2s,baz=286,slow=38						
KMBO	**Kilima Mbogo**	**67.08**	**258**	eP	**P**	**05 12 52.8**	**-0.5**
	comp=Z,9.7nm,1.1s						
KMBO	**Kilima Mbogo**	**67.08**	**258**	eP	**P**	**05 12 52.8**	**-0.5**
KMBO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KMBO	**Kilima Mbogo**	**67.08**	**258**	P	**P**	**05 12 52.1**	**-1.2**
	comp=Z,1.1nm,0.2s,baz=44,slow=5.0,SNR=5.9						
VYHS	**Vyhne**	**68.26**	**315**	eP	P	05 13 04.5	+4.5
VYHS	**Vyhne**	**68.26**	**315**	eP	P	05 13 04.5	+4.5
NC405	**NORSAR Array S**	**69.84**	**329**	eP	**P**	**05 13 09.8**	**+0.3**
	comp=Z,7.6nm,1.1s						
NB2	**NORSAR Subarra**	**70.10**	**329**	P	**P**	**05 13 09.8**	**-1.3**
	comp=Z,1.6nm,0.7s,baz=78,slow=6.2						
NB2	**NORSAR Subarra**	**70.10**	**329**	P	**P**	**05 13 10.8**	**-0.3**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB200	**NORSAR Array S**	**70.10**	**329**	eP	**P**	**05 13 10.1**	**-1.1**
NOA	**NORSAR Array B**	**70.10**	**329**	P	**P**	**05 13 10.1**	**-1.1**
	comp=Z,5.0nm,0.9s,baz=79,slow=6.2,SNR=12						
NOA				LR	LR	05 46 03.6	
	comp=Z,126nm,19.4s,baz=40,slow=38						
CLL	**Collm**	**71.34**	**319**	eP	**P**	**05 13 17.0**	**-1.8**
CLL				LmH		05 42 00.0	
	comp=N,200nm,21.1s						
CLL				LmH		05 42 00.0	
	comp=E,100nm,19.1s						
CLL	**Collm**	**71.34**	**319**	eP	**P**	**05 13 17.0**	**-1.8**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GERES	**GERESS Array B**	**71.50**	**316**	P	**P**	**05 13 19.9**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=90,slow=8.0,SNR=5.6						
GERES				LR	LR	05 46 24.3	
	comp=Z,141nm,19.8s,baz=80,slow=37						
MLY	**Manley**	**76.21**	**25**	eP	**P**	**05 13 47.3**	**+0.1**
	comp=Z,4.9nm,0.9s						
MDM	**Murphy Dome**	**77.20**	**24**	eP	**P**	**05 13 52.5**	**-0.3**
	comp=Z,6.4nm,1.0s						
ILAR	**Eielson Array**	**77.79**	**24**	P	**P**	**05 13 56.1**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=293,slow=4.6,SNR=7.2						
ILAR				LR	LR	05 51 13.4	
	comp=Z,154nm,19.4s,baz=295,slow=38						
INK	**Inuvik**	**80.20**	**18**	eP	**P**	**05 14 08.2**	**-0.9**
	comp=Z,2.2nm,0.8s						
INK	**Inuvik**	**80.20**	**18**	eP	**P**	**05 14 08.2**	**-0.9**
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ESDC	**Sonseca Array**	**86.60**	**312**	P	**P**	**05 14 42.6**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=72,slow=4.8,SNR=4.5						
YKA	**Yellowknife Ar**	**89.75**	**16**	P	**P**	**05 14 55.4**	**-1.8**
	comp=Z,0.7nm,0.9s,baz=323,slow=4.4,SNR=10						
BOSA	**Boshof**	**89.85**	**239**	LR	LR	05 54 29.4	
	comp=Z,66nm,18.5s,baz=30,slow=35						
BDFB	**Brasilia**	**150.44**	**279**	PKPbc	**PKPbc**	**05 21 50.7**	**-0.9**
	comp=Z,4.2nm,1.1s,baz=29,slow=7.1,SNR=3.8						
ROSC	**El Rosal**	**151.74**	**351**	PKPbc	**PKPbc**	**05 21 54.7**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=153,slow=2.9,SNR=3.9						

KRNET ***20*** *05:03:13.9±0.1, 41°.81N×77°.93E, h17^{km}, mb2.3*
SOME ***20*** *05:03:14.6, 41°.82N×77°.88E, h5^{km}*
NNC ***20*** *05:03:14.8±1.0, 41°.79N×77°.96E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=6.8km s-min=4.1km az=170.0*
ISC 20 05:03:14.1±1.3**, 41°.79N**±0°.04×**77°.94E**±0°.04**, h2**^{km}±11^{km}**, n26, σ0ˢ.65**/47**, 12C-11D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.12**	**237**	⇑iP	**Pg**	**05 03 16.5**	**-0.1**
	baz=31						
TARG				⇑iS	**Sg**	**05 03 18.5**	**+0.3**
	baz=31						
SATY	**Saty**	**1.31**	**15**	P	**Pb**	**05 03 40.0**	**+0.5**
	1.8nm,0.1s						
SATY				S	**Sn**	**05 03 57.4**	**-0.4**
	3.5nm,0.1s						
SATY	**Saty**	**1.31**	**15**	eP	**Pb**	**05 03 40.0**	**+0.5**
	1.8nm,0.1s						
SATY				eS	**Sn**	**05 03 57.4**	**-0.4**
	3.5nm,0.1s						
ULHL	**Ulahol**	**1.34**	**290**	⇓eP	**Pn**	**05 03 39.1**	**-1.0**
	baz=90						
ULHL				⇓iS	**Sg**	**05 03 57.4**	**+0.1**
	baz=90						
TNSS	**Tian-Shan**	**1.44**	**330**	P	**Pg**	**05 03 42.3**	**+0.5**
	2.6nm,0.1s						
TNSS				S	**Sn**	**05 04 01.4**	**0.0**
	4.4nm,0.2s						
TNSS	**Tian-Shan**	**1.44**	**330**	eP	**Pg**	**05 03 42.1**	**+0.3**
	3.1nm,0.2s						
TNSS				eS	**Sn**	**05 04 01.7**	**+0.3**
	4.4nm,0.2s						
NRN	**Naryn**	**1.50**	**257**	⇑eP	**Pn**	**05 03 42.4**	**+0.1**
	baz=56						
NRN				⇑iS	**Sg**	**05 04 03.2**	**+1.0**
	baz=56						
MDOK	**Medeo**	**1.52**	**335**	⇓P	**Pb**	**05 03 42.9**	**-0.3**
	2.3nm,0.5s						
MDOK				S	**Sg**	**05 04 04.0**	**+1.1**
	3.9nm,0.9s						
UZB	**Uzynbulak**	**1.57**	**30**	P	**Pb**	**05 03 44.0**	**-0.1**
	0.9nm,0.1s						
UZB				S	**Sb**	**05 04 04.1**	**-0.3**
	2.9nm,0.2s						
UZB	**Uzynbulak**	**1.57**	**30**	eP	**Pb**	**05 03 44.0**	**-0.1**
	0.9nm,0.1s						
UZB				eS	**Sb**	**05 04 04.1**	**-0.3**
	2.9nm,0.2s						
BOOM	**Boomskoye usch**	**1.64**	**296**	⇓iP	**Pn**	**05 03 44.5**	**+0.3**
	baz=95						
BOOM				⇓iS	**Sb**	**05 04 06.4**	**0.0**
	baz=95						
KURS	**Kuram**	**1.70**	**6**	P	**Pg**	**05 03 46.7**	**0.0**
	0.9nm,0.1s						
KURS				S	**Sg**	**05 04 08.9**	**0.0**
	3.9nm,0.4s						
KURS	**Kuram**	**1.70**	**6**	eP	**Pg**	**05 03 46.7**	**0.0**
	0.9nm,0.1s						
KURS				eS	**Sg**	**05 04 08.9**	**0.0**
	3.9nm,0.4s						
PDGK	**Podgornoye**	**1.92**	**36**	⇓Pg	**Pn**	**05 03 48.2**	**+0.3**
	1.0nm,0.7s						
PDGK				⇑Lg	Lg	05 04 16.6	
	2.7nm,0.7s						
PDGK	**Podgornoye**	**1.92**	**36**	⇑iP	**Pn**	**05 03 48.9**	**+1.0**
	baz=37						
PDGK				⇑iS	**Sg**	**05 04 15.0**	**-0.7**
	baz=37						
KST	**Kastek**	**1.92**	**311**	P	**Pb**	**05 03 50.2**	**+0.2**
	3.4nm,0.2s						
KST				S	**Sb**	**05 04 14.5**	**0.0**
	1.3nm,0.3s						
KST	**Kastek**	**1.92**	**311**	eP	**Pb**	**05 03 50.1**	**+0.2**
	3.4nm,0.2s						
KST				eS	**Sb**	**05 04 14.5**	**0.0**
	1.3nm,0.3s						
KZA	**Kyzart**	**2.03**	**279**	⇑eP	**Pb**	**05 03 51.1**	**-0.8**
	baz=79						
KZA				⇑iS	**Sg**	**05 04 18.7**	**-0.5**
	baz=79						
TKM2	**Tokmak 2**	**2.07**	**304**	⇓Pg	**Pb**	**05 03 52.5**	**0.0**
	1.4nm,0.2s						
TKM2				⇓Lg	Lg	05 04 21.1	
	6.1nm,0.8s						
TKM2	**Tokmak 2**	**2.07**	**304**	⇓eP	**Pb**	**05 03 51.4**	**-1.1**
	baz=3.0						
TKM2				⇓iS	**Sb**	**05 04 19.1**	**+0.3**
	baz=3.0						
CHKK	**Chushkaly**	**2.17**	**342**	Pg	**Pb**	**05 03 55.0**	**+0.8**
	3.7nm,0.2s						
CHKK				Lg	Lg	05 04 23.4	
	8.8nm,0.3s						
CHKK	**Chushkaly**	**2.17**	**342**	eP	**Pb**	**05 03 55.0**	**+0.8**
	3.7nm,0.2s						
CHKK				eS	**Sg**	**05 04 23.4**	**-0.6**
	8.8nm,0.3s						
ARXS	**Arharly**	**2.42**	**358**	Pg	**Pg**	**05 03 59.7**	**-0.8**
	1.8nm,0.3s						
ARXS				Lg	Lg	05 04 31.0	
	9.2nm,0.3s						
ARXS	**Arharly**	**2.42**	**358**	eP	**Pg**	**05 03 59.7**	**-0.8**
	1.8nm,0.3s						
ARXS				eS	**Sg**	**05 04 31.0**	**-0.9**
	9.2nm,0.3s						
UCH	**Uchtor**	**2.59**	**281**	⇑iP	**Pn**	**05 03 59.1**	**+1.7**
	baz=80						
UCH				⇑iS	**Sb**	**05 04 32.2**	**-1.7**
	baz=80						
AAK	**Ala-Archa**	**2.69**	**289**	⇓Pg	**Pb**	**05 04 03.2**	**+0.1**
	2.4nm,0.8s						
AAK				⇑Lg	Lg	05 04 39.8	
	1.1nm,0.3s						

MEX 20 05:17:13.0±0.8**, 16°.41N**×**95°.10W, h16**^{km}±16^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.71**	**17**	eP	Pg	05 17 24.1	-2.9
CMIG				i S	Sg	05 17 33.7	-2.8
HUIG	**Huatulco**	**1.16**	**237**	eP	Pn	05 17 30.6	-3.9
HUIG				eS	Sb	05 17 44.6	-4.8
VHO	**Vista Hermosa**	**1.70**	**293**	eP	Pn	05 17 39.5	-2.6
VHO				i S	Sn	05 17 58.3	-5.4

IDC ***20*** *05:24:12.4±0.8, 38°.49N×72°.83E, h0^{km}, mb4.0/10, mb1 4.0/17, mb1mx3.8/63, mbtmp3.8/17, ML3.1/7, Error ellipse: s-maj=15.1km s-min=14.5km az=86.0*
NNC ***20*** *05:24:14.2±2.4, 38°.38N×73°.21E, h0^{km}, mb4.5, mpv4.1, Error ellipse: s-maj=21.9km s-min=18.5km az=80.0*
NEIC ***20*** *05:24:20.9±0.6, 38°.54N×72°.89E, h66^{km}±6^{km}, mb4.4/5, Error ellipse: s-maj=7.9km s-min=6.5km az=145.0*
ISC 20 05:24:13.2±0.5**, 38°.31N**±0°.05×**73°.05E**±0°.05**, h10**^{km}**, n69, σ2ˢ.40**/63**, mb4.0**/12**, 7C-8D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.74**	**12**	⇑Pn	**Pn**	**05 24 43.2**	**-0.5**
	89nm,0.6s						
SFK				⇓Lg	Lg	05 25 06.1	
	361nm,0.8s						
GAR	**Garm**	**2.25**	**289**	ePn	**Pn**	**05 24 53.3**	**+2.8**
BTK	**Batken**	**2.46**	**316**	ePn	**Pb**	**05 24 58.4**	**+0.9**
ARSB	**Arslanbob**	**3.01**	**359**	ePn	**Pn**	**05 25 03.4**	**+2.3**
CHGR	**Chuyangaron**	**3.07**	**278**	ePn	**Pn**	**05 25 05.4**	**+3.6**
NRN	**Naryn**	**3.86**	**35**	ePn	**Pn**	**05 25 14.9**	**+2.1**
MNAS	**Manas**	**4.19**	**355**	⇑Pn	**Pn**	**05 25 19.5**	**+2.2**
	15nm,0.4s						
MNAS				⇓Lg	Lg	05 26 24.0	
	68nm,0.6s						
MRKS	**Merke**	**4.43**	**2**	Pg	**Pg**	**05 25 36.7**	**-1.4**
	40nm,0.6s						
MRKS				Lg	Lg	05 26 30.0	
AAK	**Ala-Archa**	**4.46**	**14**	ePn	**Pn**	**05 25 24.1**	**+3.1**
AAK				ePn	Pb	05 25 24.3	-7.3
AAK				eSn	**Sn**	**05 26 16.1**	**+3.0**
AAK	**Ala-Archa**	**4.46**	**14**	⇓Pn	**Pn**	**05 25 23.9**	**+2.9**
	32nm,0.7s						
AAK				⇑Lg	Lg	05 26 30.1	
	108nm,1.0s						
AAK	**Ala-Archa**	**4.46**	**14**	Pn	**Pn**	**05 25 24.1**	**+3.1**
	1.3nm,0.3s,baz=190,slow=14,SNR=13						
AAK				Sn	**Sn**	**05 26 16.0**	**+3.0**
	2.1nm,0.3s,baz=199,slow=12,SNR=3.9						
NIL	**Nilore**	**4.65**	**178**	ePn	Pn	05 25 29.2	+5.7
KBL	**Kabul**	**4.96**	**222**	ePn	Pn	05 25 34.6	+6.7
TKM2	**Tokmak 2**	**5.00**	**22**	⇓Pn	**Pn**	**05 25 28.1**	**-0.3**
	16nm,0.8s						
TKM2				⇑Lg	Lg	05 26 51.7	
	59nm,1.2s						
TARG	**Taragay, Kyrgy**	**5.00**	**45**	ePn	Pn	05 25 32.9	+4.3
KK31	**Karatay Array**	**5.16**	**339**	ePn	**Pn**	**05 25 32.6**	**+2.1**
KK31	**Karatay Array**	**5.16**	**339**	⇓Pn	**Pn**	**05 25 32.2**	**+1.8**
	8.9nm,0.4s,baz=152,slow=12,SNR=103						
KK31				⇓Sn	**Sn**	**05 26 35.7**	**+5.6**
	24nm,0.6s,baz=158,slow=24,SNR=4.6						
KK31				⇑Lg	Lg	05 26 58.1	
	50nm,0.7s						
KKAR	**Karatay Array**	**5.16**	**339**	ePn	**Pn**	**05 25 32.6**	**+2.1**
IZV	**Izvestkoviy**	**5.44**	**29**	Pg	**Pg**	**05 25 55.7**	**-1.7**
	24nm,0.5s						
IZV				Lg	Lg	05 27 03.1	
	37nm,0.7s						
PRZ	**Przheval'sk**	**5.84**	**43**	ePn	Pn	05 25 45.8	+5.9
UZB	**Uzynbulak**	**6.63**	**41**	Pg	Pg	05 26 13.8	-6.3
	11nm,0.6s						
UZB				Lg	Lg	05 27 33.7	
	13nm,1.3s						
PDGK	**Podgornoye**	**7.00**	**42**	⇓Pn	**Pn**	**05 25 57.7**	**+1.9**
	9.8nm,0.7s						
PDGK				⇑Lg	Lg	05 27 52.9	
	36nm,1.3s						
OTUK	**Ortayu**	**9.94**	**357**	⇓Pn	**Pn**	**05 26 35.5**	**-0.6**
	3.3nm,1.1s						
OTUK				⇑Lg	Lg	05 29 29.0	
	22nm,1.3s						
MAKZ	**Makanchi**	**10.74**	**35**	ePn	Pn	05 26 51.3	+4.3
MK01	**Makanchi Array**	**10.86**	**36**	ePn	Pn	05 26 53.0	+4.3
MK31	**Makanchi Array**	**10.87**	**36**	ePn	**Pn**	**05 26 51.7**	**+2.9**
MK32	**Makanchi Array**	**10.87**	**36**	ePn	**Pn**	**05 26 50.4**	**+1.6**
MKAR	**Makanchi Array**	**10.87**	**36**	ePn	**Pn**	**05 26 51.7**	**+2.9**
MKAR	**Makanchi Array**	**10.87**	**36**	Pn	**Pn**	**05 26 50.4**	**+1.6**
	0.1nm,0.3s,baz=223,slow=14,SNR=9.5						
GEYT	**Alibeck**	**11.77**	**273**	Pn	**Pn**	**05 26 59.4**	**-1.7**
	0.5nm,0.3s,baz=102,slow=11,SNR=3.2						
GEYT				Sn	**Sn**	**05 29 11.0**	**-1.5**
	0.6nm,0.3s,baz=96,slow=13,SNR=2.5						
KURBB	**Kurchatov Arra**	**12.91**	**16**	Pn	**Pn**	**05 27 14.8**	**-1.9**
	0.0nm,0.3s,baz=210,slow=12,SNR=6.9						
KURBB				Lg	Lg	05 30 59.1	
	0.0nm,0.3s,baz=193,slow=28,SNR=3.7						
KURK	**Kurchatov**	**13.02**	**16**	ePn	**Pn**	**05 27 14.8**	**-3.3**
KURK				e		05 30 59.1	
PYUN	**Piuthan**	**13.14**	**138**	eP	**Pn**	**05 27 17.3**	**-2.8**
	19nm,0.4s						
DANN	**Dangsing**	**13.36**	**135**	eP	Pn	05 27 18.6	-4.6
	18nm,0.4s						
KOLN	**Koldanda**	**13.73**	**137**	eP	**Pn**	**05 27 25.3**	**-2.8**
	12nm,0.5s						
ABKAR	**Akbulak array**	**14.44**	**323**	ePn	**Pn**	**05 27 35.6**	**-1.9**
DMN	**Daman**	**14.69**	**133**	eP	**Pn**	**05 27 37.1**	**-4.2**
	12nm,0.5s						
BVAR	**Borovoye Array**	**14.83**	**354**	Pn	**Pn**	**05 27 39.0**	**-3.8**
	0.1nm,0.3s,baz=159,slow=10,SNR=3.1						
BRVK	**Borovoye**	**14.87**	**353**	ePn	**Pn**	**05 27 45.0**	**+1.6**
PKIN	**Phulchoki**	**14.89**	**132**	eP	Pn	05 27 39.5	-4.4
	8.9nm,0.5s						
PKI	**Pulchoki**	**14.90**	**132**	eP	Pn	05 27 39.5	-4.7
	25nm,0.9s						
GUN	**Gumba**	**14.92**	**130**	eP	Pn	05 27 39.7	-4.8
	9.4nm,0.4s						
JIRN	**Jiri**	**15.29**	**130**	eP	**Pn**	**05 27 45.3**	**-4.2**
	25nm,0.5s						
AKTO	**Aktyubinsk**	**16.16**	**323**	Pn	**Pn**	**05 27 56.4**	**-3.8**
	0.1nm,0.3s,baz=119,slow=12,SNR=1.7						
AKTO				Sn	Sn	05 30 46.2	-13
	0.1nm,0.3s,baz=75,slow=20,SNR=1.9						
ZAA0	**Zalesovo Array**	**17.60**	**24**	ePn	**Pn**	**05 28 17.8**	**-0.6**
	3.6nm,0.8s						
ZALV	**Zalesovo Beam**	**17.60**	**24**	ePn	**Pn**	**05 28 17.6**	**-0.7**
ZALV	**Zalesovo Beam**	**17.60**	**24**	P	**Pn**	**05 28 17.5**	**-0.8**
	0.4nm,0.3s,baz=214,slow=12,SNR=9.2						
ZAA1	**Zalesovo Array**	**17.61**	**23**	ePn	**Pn**	**05 28 17.5**	**-0.9**
SONA0	**Songino Array**	**25.98**	**58**	eP	**P**	**05 29 47.4**	**+1.4**
SONM	**Songino Array**	**25.98**	**58**	P	**P**	**05 29 47.4**	**+1.4**
	0.6nm,0.8s,baz=265,slow=9.4,SNR=3.6						
CM31	**Chiang Mai Arr**	**30.00**	**124**	eP	**P**	**05 30 26.5**	**+4.5**
	9.9nm,0.4s						
CM31				eS	**S**	**05 35 23.6**	**+3.5**
CMAR	**Chiang Mai Arr**	**30.00**	**124**	P	**P**	**05 30 26.5**	**+4.5**
	2.2nm,0.3s,baz=307,slow=9.7,SNR=4.2						
FIA0	**FINESS Array S**	**36.93**	**324**	eP	**P**	**05 31 21.2**	**-0.7**
FINES	**FINESS Array B**	**36.93**	**324**	P	**P**	**05 31 21.2**	**-0.7**
	1.9nm,0.8s,baz=104,slow=5.9,SNR=4.0						
ARA0	**ARCESS Array S**	**40.12**	**336**	eP	**P**	**05 31 47.3**	**-1.4**
ARCES	**ARCESS Array B**	**40.12**	**336**	P	**P**	**05 31 47.3**	**-1.4**
	2.1nm,0.8s,baz=112,slow=9.3,SNR=6.7						
NB2	**NORSAR Subarra**	**43.94**	**322**	P	**P**	**05 32 19.2**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=92,slow=7.9						
NB200	**NORSAR Array S**	**43.94**	**322**	eP	**P**	**05 32 18.5**	**-1.5**
NOA	**NORSAR Array B**	**43.94**	**322**	P	**P**	**05 32 18.5**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=91,slow=7.7,SNR=3.5						
KMBO	**Kilima Mbogo**	**51.25**	**229**	i P	**P**	**05 33 17.3**	**-0.2**
TOA1	**Torodi Ar. Sit**	**67.38**	**269**	eP	**P**	**05 35 08.0**	**-0.9**
TORD	**Torodi Ar. Bea**	**67.38**	**269**	P	**P**	**05 35 08.0**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=51,slow=6.6,SNR=7.6						
INK	**Inuvik**	**71.85**	**10**	P	**P**	**05 35 35.6**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=348,slow=6.8,SNR=30						
ILAR	**Eielson Array**	**72.59**	**17**	P	**P**	**05 35 39.3**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=318,slow=5.1,SNR=10						
ILB	**Eielson Array**	**72.59**	**17**	eP	**P**	**05 35 39.3**	**-0.9**
	comp=Z,1.9nm,1.0s						
YKA	**Yellowknife Ar**	**79.35**	**4**	P	**P**	**05 36 18.4**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=349,slow=5.5,SNR=43						
YKB5	**Yellowknife Ar**	**79.35**	**4**	eP	**P**	**05 36 18.4**	**-0.4**
WR1	**Warramunga Arr**	**81.59**	**123**	eP	**P**	**05 36 34.0**	**+2.6**
	comp=Z,9.6nm,0.8s						
WRA	**Warramunga Arr**	**81.59**	**123**	P	**P**	**05 36 34.0**	**+2.6**
	comp=Z,0.8nm,0.7s,baz=330,slow=4.8,SNR=2.9						

IDC ***20*** *05:27:22.1±2.0, 6°.53S×129°.85E, h148^{km}±21^{km}, mb3.6/6, mb1 3.7/10, mb1mx3.5/42, mbtmp4.1/10, Error ellipse: s-maj=20.3km s-min=14.8km az=72.0*
ISC 20 05:27:20.0±0.8**, 6°.67S**±0°.06×**130°.1E**±0°.1**, h146**^{km}**, n11, σ3ˢ.17**/15**, mb3.9**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.88**	**11**	P	**Pn**	**05 28 46.1**	**+0.9**
	3.1nm,0.3s,baz=232,slow=23,SNR=24						
SIJI				S	**Sn**	**05 29 47.0**	**-4.7**
	5.8nm,0.3s,baz=252,slow=24,SNR=8.9						
BATI	**Baumata**	**7.28**	**241**	P	**Pn**	**05 29 04.3**	**+0.5**
	4.6nm,0.3s,baz=81,slow=5.9,SNR=2.4						
BATI				S	**Sn**	**05 30 24.1**	**-1.2**
	8.9nm,0.3s,baz=162,slow=20,SNR=3.8						
FITZ	**Fitzroy Crossi**	**12.16**	**201**	P	**Pn**	**05 30 10.6**	**+2.0**
	0.7nm,0.3s,baz=25,slow=12,SNR=12						
FITZ				S	**Sn**	**05 32 18.0**	**-5.1**
	2.1nm,0.3s,baz=169,slow=22,SNR=9.1						
WRA	**Warramunga Arr**	**13.82**	**163**	P	**Pn**	**05 30 31.7**	**+1.8**
	0.9nm,0.3s,baz=334,slow=13,SNR=19						
WRA				S	**Sn**	**05 32 57.4**	**-5.5**
	1.6nm,0.3s,baz=343,slow=22,SNR=9.9						
ASAR	**Alice Springs**	**17.29**	**168**	P	**Pn**	**05 31 16.6**	**+3.9**
	0.9nm,0.3s,baz=341,slow=11,SNR=28						
ASAR				S	**S**	**05 34 22.9**	**-1.7**
	0.6nm,0.3s,baz=354,slow=27,SNR=6.8						
CTA	**Charters Tower**	**20.57**	**132**	P	Pn	05 31 52.6	+1.1
	1.6nm,0.3s,baz=316,slow=12,SNR=5.4						
STKA	**Stephens Creek**	**27.27**	**158**	P	**P**	**05 32 54.6**	**+3.8**
	1.2nm,0.4s,baz=344,slow=10,SNR=4.6						
CMAR	**Chiang Mai Arr**	**39.61**	**310**	P	**P**	**05 34 37.1**	**-0.4**
	0.8nm,0.3s,baz=133,slow=7.0,SNR=5.7						
SONM	**Songino Array**	**58.17**	**341**	P	**P**	**05 36 59.3**	**+0.6**
	0.3nm,0.6s,baz=176,slow=4.3,SNR=2.9						
MKAR	**Makanchi Array**	**68.01**	**327**	P	**P**	**05 38 04.3**	**+0.7**
	3.2nm,0.5s,baz=113,slow=8.6,SNR=47						
ZALV	**Zalesovo Beam**	**71.34**	**334**	P	**P**	**05 38 23.0**	**-0.7**
	0.9nm,0.5s,baz=151,slow=6.1,SNR=3.6						

ISCJB ***20*** *05:31:46.6±0.5, 26°.43S±0°.03×27°.55E±0°.03, h8^{km}±3^{km}, mb4.2/14, MS3.5/1, Error ellipse: s-maj=5.5km s-min=4.1km az=144.4*
PRE ***20*** *05:31:46.5±1.8, 26°.43S×27°.57E, h2^{km}, ML3.5*
IDC ***20*** *05:31:47.7±0.8, 26°.42S×27°.42E, h0^{km}, mb4.2/10, mb1 4.3/16, mb1mx4.1/35, mbtmp4.3/16, ML4.3/4, MS3.0/2, Ms1 3.0/2, ms1mx2.6/42, Error ellipse: s-maj=15.7km s-min=11.5km az=99.0*
NEIC ***20*** *05:31:48.2±0.4, 26°.37S×27°.47E, h5^{km}, mb4.4/5, Error ellipse: s-maj=10.7km s-min=6.7km az=109.0*
ISC 20 05:31:47.0±0.9**, 26°.42S**±0°.03×**27°.54E**±0°.03**, h1**^{km}±6^{km}**, n52, σ1ˢ.50**/71**, mb4.3**/14**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**0.11**	**266**	eP	**Pg**	**05 31 50.6**	**+1.5**
WDLM				eS	**Sg**	**05 31 51.4**	**+0.9**
WDLM				AML	AML	05 31 51.9	
	comp=Z,65µm,0.2s						
PRYS	**Parys**	**0.53**	**198**	eP	**Pg**	**05 31 56.9**	**-0.3**
PRYS				eS	**Sg**	**05 32 04.3**	**+0.1**
PRYS				AML	AML	05 32 10.9	
	comp=Z,2µm,0.7s						
ERPM	**east rand prop**	**0.63**	**84**	eP	**Pg**	**05 31 59.2**	**+0.2**
ERPM				eS	**Sg**	**05 32 07.0**	**-0.3**
ERPM				AML	AML	05 32 16.2	
	comp=Z,886nm,0.7s						
KSR	**Koster**	**0.81**	**314**	eP	**Pg**	**05 32 02.9**	**+0.4**
KSR				eS	**Sg**	**05 32 13.4**	**+0.4**
KSR				AML	AML	05 32 18.9	
	comp=Z,868nm,1.0s						
SLR	**Silverton**	**0.95**	**44**	eP	**Pg**	**05 32 05.6**	**+0.5**
SLR				eS	**Sg**	**05 32 18.7**	**+1.2**
SLR				AML	AML	05 32 26.4	
	comp=Z,850nm,0.5s						
SWZ	**Schweizer**	**2.12**	**248**	eP	**Pb**	**05 32 25.3**	**-1.0**
SWZ				eS	**Sn**	**05 32 50.2**	**-0.5**
SWZ				AML	AML	05 32 54.1	
	comp=Z,1µm,0.7s						
LBTB	**Lobatse**	**2.24**	**308**	ePn	**Pn**	**05 32 26.5**	**+1.2**
LBTB				eSn	**Sn**	**05 32 53.6**	**-0.1**
LBTB	**Lobatse**	**2.24**	**308**	eP	**Pn**	**05 32 25.5**	**+0.2**
LBTB				eS	**Sn**	**05 32 54.0**	**+0.2**
LBTB				AML	AML	05 32 57.1	
	comp=Z,898nm,0.8s						
LBTB	**Lobatse**	**2.24**	**308**	Pn	**Pn**	**05 32 26.3**	**+1.0**
	comp=Z,124nm,0.3s,baz=133,slow=14,SNR=248						
LBTB				Pg	**Pb**	**05 32 27.6**	**-0.8**
	comp=Z,124nm,0.3s,baz=123,slow=17,SNR=359						
LBTB				Lg	Lg	05 32 55.9	
	comp=Z,215nm,0.3s,baz=229,slow=14,SNR=60						
LBTB				LR	LR	05 33 28.0	
	comp=Z,105nm,21.7s,baz=140,slow=46						
BOSA	**Boshof**	**2.99**	**222**	i P	**Pn**	**05 32 36.3**	**+0.7**
BOSA				i S	**Sb**	**05 33 18.6**	**+0.5**

BOSA	**Boshof**	**2.99**	**222**	*e*P	**Pn**	**05 32 35.5**	**-0.1**
BOSA				*e*S	**Sn**	**05 33 11.8**	**-0.3**
BOSA				AML	AML	05 33 19.4	
	comp=Z,289nm,0.3s						
BOSA	**Boshof**	**2.99**	**222**	*i* P	**Pn**	**05 32 34.7**	**-0.9**
BOSA				*i* S	**Sb**	**05 33 18.6**	**+0.5**
BOSA	**Boshof**	**2.99**	**222**	Pn	**Pn**	**05 32 36.0**	**+0.4**
	comp=Z,22nm,0.3s,baz=39,slow=12,SNR=60						
BOSA				Pg	**Pb**	**05 32 41.3**	**+0.3**
	comp=Z,23nm,0.3s,baz=34,slow=15,SNR=22						
BOSA				Lg	Lg	05 33 18.8	
	comp=Z,120nm,0.3s,baz=321,slow=18,SNR=25						
HVD	**Gariep Dam**	**4.54**	**203**	*e*P	**Pn**	**05 32 56.3**	**-0.7**
HVD				*e*S	**Sn**	**05 33 48.0**	**-2.6**
HVD				AML	AML	05 34 19.4	
	comp=Z,106nm,0.6s						
MSNA	**Messina**	**4.64**	**30**	*e*P	**Pn**	**05 32 57.3**	**-0.9**
MSNA				*e*S	**Sn**	**05 33 47.3**	**-5.5**
MSNA				AML	AML	05 34 17.8	
	comp=Z,142nm,0.3s						
PKA	**Prieska**	**5.33**	**231**	*e*P	**Pn**	**05 33 07.8**	**+0.1**
PKA				*e*S	**Sn**	**05 34 06.4**	**-3.4**
PKA				AML	AML	05 34 38.3	
	comp=Z,78nm,0.5s						
MATP	**Matopo**	**6.03**	**9**	*i* P	**Pn**	**05 33 15.9**	**-1.5**
MATP				*i* S	**Sn**	**05 34 24.2**	**-2.9**
MATP	**Matopo**	**6.03**	**9**	*i* P	**Pn**	**05 33 15.9**	**-1.5**
MATP				*i* S	**Sn**	**05 34 24.2**	**-2.9**
MATP	**Matopo**	**6.03**	**9**	Pn	**Pn**	**05 33 18.0**	**+0.6**
	comp=Z,16nm,0.3s,baz=188,slow=13,SNR=65						
MATP				Lg	Lg	05 34 52.3	
	comp=Z,13nm,0.3s,baz=98,slow=12,SNR=5.7						
BLWY	**Bulawayo**	**6.32**	**9**	*i* P	**Pn**	**05 33 19.3**	**-2.2**
BLWY	**Bulawayo**	**6.32**	**9**	*i* P	**Pn**	**05 33 19.3**	**-2.2**
SUR	**Sutherland**	**8.35**	**223**	*e*Pn	**Pn**	**05 33 49.6**	**+0.3**
SUR				*e*Lg	Lg	05 36 06.6	
SUR	**Sutherland**	**8.35**	**223**	Pn	**Pn**	**05 33 49.6**	**+0.3**
	comp=Z,3.8nm,0.3s,baz=38,slow=9.6,SNR=15						
SUR				Lg	Lg	05 36 06.9	
	comp=Z,17nm,0.3s,baz=340,slow=17,SNR=8.4						
KOMG	**Komaggas**	**9.50**	**247**	*e*P	**Pn**	**05 34 04.7**	**-0.3**
KOMG				*e*S	**Sn**	**05 35 47.1**	**-5.3**
KOMG				AML	AML	05 36 49.2	
	comp=Z,56nm,0.5s						
LSZ	**Lusaka**	**11.10**	**3**	*e*Pn	**Pn**	**05 34 25.9**	**-1.2**
LSZ				*e*		05 34 26.0	
LSZ				Lg	Lg	05 37 32.2	
LSZ	**Lusaka**	**11.10**	**3**	Pn	**Pn**	**05 34 26.0**	**-1.0**
	comp=Z,2.9nm,0.3s,baz=180,slow=13,SNR=14						
LSZ				Lg	Lg	05 37 32.2	
	comp=Z,2.1nm,0.3s,baz=295,slow=20,SNR=4.0						
TSUM	**Tsumeb**	**11.65**	**306**	Pn	**Pn**	**05 34 33.7**	**-0.9**
	comp=Z,3.7nm,0.3s,baz=121,slow=10,SNR=35						
TSUM				Lg	Lg	05 37 48.3	
	comp=Z,0.9nm,0.3s,baz=237,slow=22,SNR=3.1						
DBIC	**Dimbokro**	**45.49**	**312**	*e*P	**P**	**05 40 07.4**	**-0.7**
	comp=Z,5.2nm,1.1s						
DBIC	**Dimbokro**	**45.49**	**312**	P	**P**	**05 40 08.0**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=136,slow=8.3,SNR=3.6						
TOA0	**Torodi Ar. Sit**	**46.67**	**324**	*e*P	**P**	**05 40 16.8**	**-0.6**
TOA0				*e*P	**pP**	**05 40 17.4**	**-0.9**
TORD	**Torodi Ar. Bea**	**46.67**	**324**	P	**P**	**05 40 17.3**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=129,slow=6.0,SNR=26						
TORD				LR	LR	06 00 14.8	
	comp=Z,50nm,19.5s,baz=350,slow=37						
TOA1	**Torodi Ar. Sit**	**46.68**	**324**	*e*P	**P**	**05 40 17.3**	**-0.1**
SNAA	**Sanae**	**48.35**	**192**	*e*P	**P**	**05 40 31.5**	**+1.5**
	comp=Z,7.4nm,0.9s						
QSPA	**South Pole Qui**	**63.77**	**180**	P	**P**	**05 42 21.2**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=137,slow=0.5,SNR=12						
BDFB	**Brasilia**	**70.49**	**262**	P	**P**	**05 43 04.5**	**+0.6**
	comp=Z,3.2nm,1.0s,baz=174,slow=19,SNR=3.4						
ES19	**SONSECA Array**	**72.02**	**335**	*e*P	**P**	**05 43 13.1**	**+0.6**
ESDC	**Sonseca Array**	**72.02**	**335**	P	**P**	**05 43 13.1**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=155,slow=6.0,SNR=16						
GERES	**GERESS Array B**	**75.94**	**351**	P	**P**	**05 43 36.2**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=18,slow=4.6,SNR=4.1						
AKASG	**Malin Array Be**	**76.79**	**1**	P	**P**	**05 43 40.4**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=179,slow=5.5,SNR=5.3						
AKBB	**Malin Array Si**	**76.79**	**1**	*e*P	**P**	**05 43 40.4**	**+0.6**
	comp=Z,3.0nm,0.7s						
KK31	**Karatay Array**	**79.67**	**30**	*e*P	**P**	**05 43 57.1**	**+1.0**
	comp=Z,4.3nm,1.1s						
KKAR	**Karatay Array**	**79.67**	**30**	*e*P	**P**	**05 43 56.9**	**+0.8**
	comp=Z,4.3nm,1.1s						
FIA0	**FINESS Array S**	**87.55**	**359**	*e*P	**P**	**05 44 36.9**	**+0.9**
FINES	**FINESS Array B**	**87.55**	**359**	P	**P**	**05 44 36.9**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=174,slow=5.4,SNR=7.0						
LPAZ	**La Paz**	**87.81**	**253**	*e*P	**P**	**05 44 38.2**	**-1.0**
LPAZ	**La Paz**	**87.81**	**253**	P	**P**	**05 44 40.0**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=124,slow=5.7,SNR=3.6						
MK32	**Makanchi Array**	**88.05**	**34**	*e*P	**P**	**05 44 39.9**	**+1.1**
MKAR	**Makanchi Array**	**88.05**	**34**	P	**P**	**05 44 39.9**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=223,slow=5.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**94.03**	**30**	*e*P	**P**	**05 45 04.8**	**-1.6**
RES	**Resolute Bay**	**123.67**	**344**	*e*Pdif	**Pdif**	**05 47 15.3**	**-3.0**
ILB	**Eielson Array**	**141.47**	**356**	*e*PKPpre	PKPpre	05 51 13.4	
NVAR	**Mina Array Bea**	**148.96**	**301**	PKPbc	**PKiKP**	**05 51 38.4**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=83,slow=3.7,SNR=2.7						

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*SOME **20** 05:33:23.7, 41°.37N×79°.05E, h5^{km}*

*NNC **20** 05:33:25.7±1.8, 41°.47N×79°.01E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=12.0km s-min=7.7km az=156.0*

ISC 20 05:33:25.3±3.0**, 41°.4N**±0°.1×**79°.03E**±0°.06**, h5**^{km}±13^{km}**, n18, σ1^{s}06**/30**, 3C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**1.70**	**344**	P	**Pn**	**05 33 55.9**	**+0.1**
	1.8nm,0.1s						
SATY				S	**Sb**	**05 34 19.0**	**0.0**
	5.3nm,0.1s						
SATY	**Saty**	**1.70**	**344**	*e*P	**Pn**	**05 33 55.8**	**+0.1**
	1.8nm,0.1s						
SATY				*e*S	**Sb**	**05 34 19.0**	**0.0**
	5.3nm,0.1s						
UZB	**Uzynbulak**	**1.73**	**360**	P	**Pb**	**05 33 56.7**	**-0.9**
	1.2nm,0.2s						
UZB				S	**Sg**	**05 34 20.3**	**-0.5**
	5.3nm,0.3s						
UZB	**Uzynbulak**	**1.73**	**360**	*e*P	**Pb**	**05 33 56.8**	**-0.9**
	1.0nm,0.1s						
UZB				*e*S	**Sg**	**05 34 20.6**	**-0.2**
	5.3nm,0.3s						
SHLS	**Shalkode**	**1.77**	**10**	P	**Pg**	**05 33 59.1**	**-0.1**
	6.1nm,0.2s						
SHLS				S	**Sg**	**05 34 24.4**	**+2.3**
	30nm,0.5s						
SHLS	**Shalkode**	**1.77**	**10**	*e*P	**Pg**	**05 33 59.1**	**-0.1**
	6.1nm,0.2s						
SHLS				*e*S	**Sg**	**05 34 24.4**	**+2.3**
	30nm,0.5s						
PDGK	**Podgornoye**	**1.94**	**10**	Pg	**Pb**	**05 33 59.9**	**-1.3**
	0.6nm,0.2s						
PDGK				Lg	Lg	05 34 25.7	
	5.0nm,0.5s						
PDGK	**Podgornoye**	**1.94**	**10**	⇑P	**Pn**	**05 33 59.6**	**+0.5**
	1.1nm,0.5s						
PDGK				⇑S	**Sn**	**05 34 23.4**	**-0.5**
	9.2nm,0.5s						
KURS	**Kuram**	**2.16**	**343**	Pg	**Pb**	**05 34 03.7**	**-1.3**
	2.4nm,0.4s						
KURS				Lg	Lg	05 34 32.2	
	4.8nm,0.5s						
KURS	**Kuram**	**2.16**	**343**	*e*P	**Pb**	**05 34 03.7**	**-1.3**
	2.4nm,0.4s						
KURS				*e*S	**Sb**	**05 34 32.2**	**+0.1**
	4.8nm,0.5s						
TNSS	**Tian-Shan**	**2.24**	**317**	Pg	**Pb**	**05 34 06.5**	**0.0**
	1.9nm,0.2s						
TNSS				Lg	Lg	05 34 37.2	
	3.8nm,0.2s						
TNSS	**Tian-Shan**	**2.24**	**317**	*e*P	**Pb**	**05 34 06.5**	**0.0**
	1.9nm,0.2s						
TNSS				*e*S	**Sg**	**05 34 37.2**	**-0.1**
	3.8nm,0.2s						
MDOK	**Medeo**	**2.28**	**320**	Pg	**Pb**	**05 34 05.5**	**-1.5**
	4.2nm,1.0s						
MDOK				⇑Lg	Lg	05 34 36.9	
	3.4nm,0.5s						
MDOK	**Medeo**	**2.28**	**320**	*e*P	**Pb**	**05 34 07.3**	**+0.2**
	1.0nm,0.1s						
MDOK				*e*S	**Sg**	**05 34 38.2**	**-0.4**
	5.1nm,0.4s						
TKM2	**Tokmak 2**	**2.96**	**302**	⇓Pg	**Pb**	**05 34 18.0**	**-0.6**
	1.4nm,0.8s						
TKM2				⇓Lg	Lg	05 34 59.9	
	1.3nm,0.5s						
DJR	**Jarkent**	**2.96**	**11**	*e*P	**Pb**	**05 34 19.3**	**+0.6**
	0.5nm,0.1s						
DJR				*e*S	**Sg**	**05 34 59.0**	**-1.5**
	0.5nm,0.2s						
KUU	**Kurty**	**3.17**	**322**	Pg	**Pb**	**05 34 21.9**	**-0.2**
	0.5nm,0.2s						
KUU				Lg	Lg	05 35 03.4	
	2.1nm,0.3s						
KUU	**Kurty**	**3.17**	**322**	*e*P	**Pb**	**05 34 21.9**	**-0.2**
	0.5nm,0.2s						
KUU				*e*S	**Sb**	**05 35 03.4**	**+2.3**
	2.1nm,0.3s						

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*ASRS **20** 05:40:08.4, 53°.80N×91°.07E, M3.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 20 05:40:23.1±3.1**, 53°.40N×90°.13E, h0**^{km}**, mb3.9, mpv3.6, 6C-5D, Error ellipse: s-maj=24.9km s-min=18.9km az=77.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.20**	**282**	⇓Pn	Pn	05 41 16.3	+1.6
	22nm,1.1s						
ZAA0				⇑Lg	Lg	05 42 02.9	
	80nm,1.2s						
KURK	**Kurchatov**	**7.58**	**254**	⇓Pn	Pn	05 42 12.3	-2.5
	7.7nm,1.1s						
KURK				⇓Sn	Sn	05 43 41.4	+0.1
	21nm,1.0s						
KURK				⇑Lg	Lg	05 44 23.7	
	41nm,1.0s						
KURBB	**Kurchatov Arra**	**7.68**	**253**	Pn	Pn	05 42 15.2	-0.8
KURBB				Sn	Sn	05 43 44.5	+0.9
KURBB				Lg	Lg	05 44 26.8	
MK31	**Makanchi Array**	**8.31**	**220**	⇑Pn	Pn	05 42 23.6	-1.2
	1.7nm,0.8s,baz=37,slow=12,SNR=33						
MK31				⇑Sn	Sn	05 44 03.2	+4.0
	4.4nm,0.8s,baz=48,slow=26,SNR=3.6						
MK31				⇓Lg	Lg	05 44 48.9	
	14nm,1.0s,baz=36,slow=26						
MAKZ	**Makanchi**	**8.42**	**222**	⇑Pn	Pn	05 42 24.3	-2.0
	3.7nm,1.2s						
MAKZ				⇓Sn	Sn	05 44 04.7	+2.8
	6.8nm,0.9s						
MAKZ				⇑Lg	Lg	05 44 52.2	
	13nm,1.1s						

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*NNC **20** 05:46:20.7±0.9, 42°.73N×76°.81E, h0^{km}, mb2.3, mpv2.5, Error ellipse: s-maj=6.7km s-min=2.5km az=147.0*

*SOME **20** 05:46:22.1, 42°.73N×76°.80E, h10^{km}*

KRNET 20 05:46:21.9±0.1**, 42°.79N×76°.81E, h24**^{km}**, mb2.0, 22C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.27**	**23**	P	Pb	05 46 28.5	-0.2
	9.4nm,0.1s						
TNSS				S	Sb	05 46 33.1	-0.2
	8.2nm,0.1s						
TNSS	**Tian-Shan**	**0.27**	**23**	⇑*e*P	Pb	05 46 28.5	-0.2
	baz=23						
TNSS				⇑*e*S	Sb	05 46 33.2	-0.2
	baz=23						
TNSS	**Tian-Shan**	**0.27**	**23**	⇑*e*P	Pb	05 46 28.5	-0.2
	9.4nm,0.1s						
TNSS				*e*S	Sb	05 46 33.2	-0.1
	13nm,0.1s						
MDOK	**Medeo**	**0.41**	**26**	Pg	Pb	05 46 30.4	-0.3
	1.5nm,0.1s						
MDOK				Lg	Lg	05 46 36.3	
	7.8nm,0.2s						
MDOK	**Medeo**	**0.41**	**26**	⇑*e*P	Pb	05 46 30.5	-0.2
	baz=26						
MDOK				⇑*e*S	Sb	05 46 36.4	-0.3
	baz=26						
MDOK	**Medeo**	**0.41**	**26**	⇑*e*P	Pb	05 46 30.5	-0.2
	1.8nm,0.1s						
MDOK				*e*S	Sb	05 46 36.4	-0.3
	7.8nm,0.1s						
MTBS	**Maitube**	**0.43**	**321**	⇑*e*P	Pb	05 46 30.8	-0.3
	baz=21						
MTBS				⇑*e*S	Sb	05 46 37.4	+0.1
	baz=21						
MTBS	**Maitube**	**0.43**	**321**	⇑*e*P	Pb	05 46 30.8	-0.3
	2.4nm,0.1s						
MTBS				*e*S	Sb	05 46 37.4	+0.1
	12nm,0.1s						
KNDC	**Almaty**	**0.44**	**16**	⇑P	Pb	05 46 30.5	-0.6
	17nm,0.5s						
KNDC				⇓S	Sb	05 46 37.8	+0.4
	21nm,0.3s						
KST	**Kastek**	**0.67**	**292**	*e*P	Pb	05 46 35.1	+0.1
	baz=92						
KST				*e*S	Sb	05 46 44.5	+0.6
	baz=92						
KST	**Kastek**	**0.67**	**292**	*e*P	Pb	05 46 35.1	+0.1
	0.9nm,0.1s						
KST				*e*S	Sb	05 46 44.5	+0.6
	1.2nm,0.1s						
ULHL	**Ulahol**	**0.69**	**217**	⇑*i*P	Pb	05 46 35.2	-0.2
	baz=17						
ULHL				⇑*i*S	Sb	05 46 44.2	-0.4
	baz=17						
BOOM	**Boomskoye usch**	**0.71**	**245**	⇑*i*P	Pb	05 46 35.6	-0.1
	baz=45						
BOOM				⇑*i*S	Sb	05 46 45.4	+0.3
	baz=45						
KDJ	**Kajisay**	**0.72**	**157**	⇑*i*P	Pn	05 46 36.5	-0.2
	baz=56						
KDJ				⇑*i*S	Sb	05 46 46.2	+0.8
	baz=56						
DGS	**Degeres**	**0.88**	**301**	P	Pb	05 46 38.3	-0.3
	0.3nm,0.1s						
DGS				S	Sb	05 46 49.8	-0.2
	3.2nm,0.5s						
DGS	**Degeres**	**0.88**	**301**	⇑*e*P	Pb	05 46 38.3	-0.3
	baz=1.0						
DGS				⇑*e*S	Sb	05 46 50.1	+0.1
	baz=1.0						
DGS	**Degeres**	**0.88**	**301**	⇑*e*P	Pb	05 46 38.3	-0.3
	0.4nm,0.1s						
DGS				*e*S	Sb	05 46 50.1	+0.1
	2.3nm,0.2s						
TKM2	**Tokmak 2**	**0.90**	**279**	⇑P	Pb	05 46 37.4	-1.6
	3.4nm,1.2s						
TKM2				⇑S	Sn	05 46 51.4	-0.2
	0.7nm,0.3s						
TKM2	**Tokmak 2**	**0.90**	**279**	⇓*i*P	Pn	05 46 39.2	0.0
	baz=79						
TKM2				⇓*i*S	Sn	05 46 51.8	+0.2
	baz=79						
SATY	**Saty**	**1.21**	**77**	P	Pb	05 46 44.5	+0.3
	1.4nm,0.1s						
SATY				S	Sb	05 47 00.4	+1.0
	4.6nm,0.1s						
SATY	**Saty**	**1.21**	**77**	*e*P	Pb	05 46 44.6	+0.5
	1.4nm,0.1s						
SATY				*e*S	Sb	05 47 00.6	+1.3
	4.6nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.30**	**145**	⇓*i*P	Pb	05 46 45.8	-0.1
	baz=45						
TARG				⇓*i*S	Sb	05 47 02.3	+0.1
	baz=45						
KZA	**Kyzart**	**1.35**	**239**	⇓*e*P	Pb	05 46 46.8	0.0
	baz=39						
KZA				⇓*i*S	Sb	05 47 04.3	+0.4
	baz=39						
KBK	**Karagaybulak**	**1.38**	**265**	⇓*e*P	Pb	05 46 47.1	+0.1
	baz=65						
KBK				⇓*i*S	Sb	05 47 05.0	+0.7
	baz=65						
AAK	**Ala-Archa**	**1.71**	**266**	⇓P	Pb	05 46 52.9	+0.1
	1.9nm,1.0s						
AAK				⇑S	Sb	05 47 15.5	+1.6
	1.2nm,0.6s						

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*ISK **20** 06:01:49.8, 38°.72N×43°.48E, h12^{km}, ML1.9/4*

*ISCJB **20** 06:01:51.5±0.6, 38°.83N±0°.04×43°.42E±0°.06, h13^{km}, Error ellipse: s-maj=7.8km s-min=4.4km az=38.9*

*DDA **20** 06:01:51.1, 38°.82N×43°.48E, h7^{km}±2^{km}, ML2.6*

ISC 20 06:01:51.0±1.1**, 38°.78N**±0°.04×**43°.47E**±0°.05**, h13**^{km}**, n9, σ0^{s}93**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	**Van-Muradiye**	**0.23**	**21**	*i* P	**Pg**	**06 01 55.7**	**-0.3**
VMUR				*i* S	**Sg**	**06 02 00.2**	**+0.8**
VMUR				IAML_P			
	comp=Z,789nm,0.1s						
TVAN	**Van**	**0.25**	**191**	*i* P	**Pb**	**06 01 57.8**	**+0.2**
TVAN				*i* S	**Sb**	**06 02 03.9**	**+2.0**
TVAN				IAML_P			
	comp=Z,3μm,0.1s						
CLDR	**Caldiran**	**0.51**	**44**	PG	**Pg**	**06 02 00.6**	**-0.4**
CLDR				SG	**Sb**	**06 02 09.1**	**-0.2**
CLDR	**Caldiran**	**0.51**	**44**	*i* P	**Pg**	**06 02 00.2**	**-0.9**
CLDR				*i* S	**Sb**	**06 02 08.8**	**-0.5**
ADCV	**BITLIS_Adilcev**	**0.58**	**273**	*i* P	**Pb**	**06 02 03.1**	**0.0**
ADCV				IAML_P			
	comp=Z,184nm,0.1s						
AKDM	**Akdamar-Van**	**0.59**	**221**	PG	**Pg**	**06 02 01.0**	**-1.5**
TUTA	**Tutak**	**0.81**	**321**	*i* P	**Pg**	**06 02 06.0**	**-0.6**
TUTA				IAML_P			
	comp=Z,2μm,0.2s						
AGRB	**Hanur-Agry**	**0.88**	**335**	PG	**Pg**	**06 02 08.1**	**+0.1**
GURO	**Guroymak-BITLI**	**1.15**	**259**	PN	**Pb**	**06 02 12.7**	**0.0**

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*NNC **20** 06:27:59.0±0.4, 43°.10N×78°.33E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=4.2km s-min=1.8km az=179.0*

*SOME **20** 06:27:59.5, 43°.07N×78°.32E, h10^{km}*

*KRNET **20** 06:28:00.6±0.1, 43°.04N×78°.46E, h35^{km}, mb2.1*

ISC 20 06:27:59.6±0.9**, 43°.09N**±0°.02×**78°.29E**±0°.02**, h6**^{km}±7^{km}**, n46, σ0^{s}79**/87**, 23C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.09**	**109**	P	**Pg**	**06 28 01.8**	**+0.1**
	753nm,0.1s						
SATY				S	**Sg**	**06 28 03.2**	**+0.1**
	4μm,0.1s						
SATY	**Saty**	**0.09**	**109**	⇑*e*P	**Pg**	**06 28 01.8**	**+0.1**
	753nm,0.1s						
SATY				*e*S	**Sg**	**06 28 03.3**	**+0.1**
	4μm,0.1s						
KURS	**Kuram**	**0.41**	**347**	P	**Pg**	**06 28 07.7**	**+0.1**
	6.1nm,0.1s						
KURS				S	**Sg**	**06 28 13.3**	**+0.3**
	11nm,0.1s						
KURS	**Kuram**	**0.41**	**347**	⇑*e*P	**Pg**	**06 28 07.7**	**+0.1**
	7.2nm,0.1s						
KURS				*e*S	**Sg**	**06 28 13.6**	**+0.6**
	16nm,0.2s						
UZB	**Uzynbulak**	**0.54**	**83**	P	**Pg**	**06 28 09.5**	**-0.4**
	11nm,0.1s						
UZB				S	**Sg**	**06 28 16.5**	**-0.5**
	93nm,0.1s						
UZB	**Uzynbulak**	**0.54**	**83**	⇓*e*P	**Pg**	**06 28 09.5**	**-0.4**
	11nm,0.1s						
UZB				*e*S	**Sg**	**06 28 16.5**	**-0.5**
	93nm,0.1s						
PRZ	**Przheval'sk**	**0.61**	**173**	⇑*i*P	**Pb**	**06 28 12.4**	**-0.3**
	baz=83						
PRZ				⇑*i*S	**Sb**	**06 28 21.1**	**-0.5**
	baz=83						
SHLS	**Shalkode**	**0.86**	**85**	*e*P	**Pn**	**06 28 20.4**	**+2.1**
	9.1nm,0.3s						
SHLS				*e*S	**Sn**	**06 28 35.2**	**+4.0**
	17nm,0.3s						
KOTS	**Kotyrbulak**	**0.88**	**280**	P	**Pg**	**06 28 16.4**	**0.0**
	3.5nm,0.2s						
KOTS				S	**Sb**	**06 28 28.8**	**-0.4**
	26nm,0.3s						
KOTS	**Kotyrbulak**	**0.88**	**280**	⇑*e*P	**Pg**	**06 28 16.4**	**0.0**
	3.5nm,0.2s						
KOTS				*e*S	**Sg**	**06 28 28.2**	**+0.4**
	26nm,0.3s						
PDGK	**Podgornoye**	**0.91**	**74**	P	**Pg**	**06 28 16.2**	**-0.9**
	1.7nm,0.1s						
PDGK				S	**Sg**	**06 28 27.9**	**-0.9**
	4.5nm,0.1s						
PDGK	**Podgornoye**	**0.91**	**74**	⇓P	**Pg**	**06 28 16.0**	**-1.0**
	0.6nm,0.2s						
PDGK				⇑S	**Sg**	**06 28 27.5**	**-1.3**
	4.3nm,0.5s						
PDGK	**Podgornoye**	**0.91**	**74**	⇑*i*P	**Pg**	**06 28 16.1**	**-0.9**
	baz=69						
PDGK				⇑*i*S	**Sg**	**06 28 27.5**	**-1.3**
	baz=69						
MDOK	**Medeo**	**0.92**	**275**	Pg	**Pg**	**06 28 16.9**	**-0.2**
	2.7nm,0.3s						
MDOK				Lg	Lg	06 28 29.2	
	5.9nm,0.2s						
MDOK	**Medeo**	**0.92**	**275**	⇑*e*P	**Pg**	**06 28 17.2**	**0.0**
	2.9nm,0.3s						
MDOK				*e*S	**Sg**	**06 28 29.4**	**+0.4**
	8.2nm,0.2s						
TNSS	**Tian-Shan**	**0.99**	**268**	P	**Pg**	**06 28 18.2**	**-0.3**
	3.1nm,0.2s						
TNSS				S	**Sg**	**06 28 31.4**	**0.0**
	11nm,0.2s						
TNSS	**Tian-Shan**	**0.99**	**268**	*e*P	**Pg**	**06 28 18.2**	**-0.3**
	3.1nm,0.2s						
TNSS				*e*S	**Sg**	**06 28 31.4**	**0.0**
	11nm,0.2s						
MNBS	**Baschi**	**0.99**	**4**	P	**Pg**	**06 28 18.0**	**-0.7**
	2.9nm,0.1s						
MNBS				S	**Sg**	**06 28 31.2**	**-0.4**
	47nm,0.1s						
MNBS	**Baschi**	**0.99**	**4**	*e*P	**Pg**	**06 28 17.1**	**-1.6**
	3.4nm,0.1s						
MNBS				*e*S	**Sg**	**06 28 30.0**	**-1.6**
	47nm,0.1s						
ARXS	**Arharly**	**1.18**	**343**	P	**Pg**	**06 28 21.4**	**-0.7**
	4.9nm,0.1s						
ARXS				S	**Sg**	**06 28 36.9**	**-0.5**
	8.5nm,0.1s						
ARXS	**Arharly**	**1.18**	**343**	*e*P	**Pg**	**06 28 21.4**	**-0.7**
	4.9nm,0.1s						
ARXS				*e*S	**Sg**	**06 28 36.9**	**-0.5**
	8.5nm,0.1s						
CHKK	**Chushkaly**	**1.22**	**309**	P	**Pg**	**06 28 22.6**	**-0.4**
	6.5nm,0.1s						
CHKK				S	**Sb**	**06 28 38.9**	**-0.1**
	10nm,0.2s						
CHKK	**Chushkaly**	**1.22**	**309**	*e*P	**Pg**	**06 28 22.6**	**-0.4**
	6.5nm,0.1s						
CHKK				*e*S	**Sb**	**06 28 38.9**	**-0.1**
	10nm,0.2s						
IZV	**Izvestkoviy**	**1.23**	**268**	P	**Pg**	**06 28 22.6**	**-0.6**
	1.7nm,0.1s						
IZV				S	**Sg**	**06 28 39.2**	**0.0**
	16nm,0.2s						
IZV	**Izvestkoviy**	**1.23**	**268**	*e*P	**Pg**	**06 28 22.6**	**-0.6**
	1.7nm,0.1s						
IZV				*e*S	**Sg**	**06 28 39.2**	**0.0**
	16nm,0.2s						
KDJ	**Kajisay**	**1.26**	**221**	⇑*i*P	**Pn**	**06 28 24.4**	**+0.5**
	baz=26						
KDJ				⇑*i*S	**Sn**	**06 28 41.4**	**+0.2**
	baz=26						
MTBS	**Maitube**	**1.37**	**272**	P	**Pn**	**06 28 25.0**	**-0.3**
	2.8nm,0.1s						
MTBS				S	**Sb**	**06 28 42.9**	**-0.3**
	9.8nm,0.2s						
MTBS	**Maitube**	**1.37**	**272**	*e*P	**Pn**	**06 28 24.9**	**-0.3**
	2.8nm,0.1s						
MTBS				*e*S	**Sb**	**06 28 43.0**	**-0.3**
	9.8nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.41**	**195**	⇑*i*P	**Pn**	**06 28 25.9**	**-0.1**
	baz=1.0						
TARG				⇑*i*S	**Sb**	**06 28 43.6**	**-1.1**
	baz=1.0						
KUU	**Kurty**	**1.63**	**300**	P	**Pn**	**06 28 29.4**	**+0.6**
	4.2nm,0.3s						
KUU				S	**Sb**	**06 28 50.6**	**-0.4**
	6.4nm,0.1s						
KUU	**Kurty**	**1.63**	**300**	*e*P	**Pn**	**06 28 29.4**	**+0.6**
	4.2nm,0.3s						
KUU				*e*S	**Sb**	**06 28 50.6**	**-0.4**
	6.4nm,0.1s						
DJR	**Jarkent**	**1.65**	**41**	P	**Pb**	**06 28 29.7**	**-0.7**
	0.8nm,0.2s						
DJR				S	**Sb**	**06 28 51.1**	**-0.4**
	5.5nm,0.2s						

DJR	Jarkent 0.8nm,0.2s	1.65	41	eP	Pb	06 28 29.7	-0.7
DJR	 5.5nm,0.2s			eS	Sb	06 28 51.1	-0.4
KST	Kastek 2.6nm,0.2s	1.71	269	P	Pb	06 28 31.4	0.0
KST	 3.7nm,0.1s			S	Sg	06 28 54.0	-0.5
KST	Kastek 2.8nm,0.2s	1.71	269	⇑eP	Pb	06 28 31.4	0.0
KST	 3.7nm,0.1s			eS	Sg	06 28 54.0	-0.5
ULHL	Ulahol baz=45	1.73	242	⇑iP	Pb	06 28 31.4	-0.5
ULHL	 baz=45			⇑iS	Sn	06 28 53.5	+0.7
BOOM	Boomskoye usch baz=54	1.83	252	⇑iP	Pb	06 28 33.1	-0.5
BOOM	 baz=54			⇑iS	Sb	06 28 56.3	-0.5
DGS	Degeres 1.9nm,0.2s	1.85	276	P	Pn	06 28 32.9	+1.0
DGS	 11nm,0.2s			S	Sb	06 28 56.5	-0.8
DGS	Degeres 1.9nm,0.2s	1.85	276	eP	Pn	06 28 32.9	+1.0
DGS	 11nm,0.2s			eS	Sb	06 28 56.5	-0.8
TKM2	Tokmak 2 0.5nm,0.3s	1.98	266	⇑Pg	Pb	06 28 36.7	+0.5
TKM2	 6.5nm,0.6s			⇓Lg	Lg	06 29 03.3	
TKM2	Tokmak 2 baz=68	1.98	266	⇑iP	Pb	06 28 35.4	-0.8
TKM2	 baz=68			⇑iS	Sb	06 29 00.4	-0.8
KAPS	Kapalarasan 0.7nm,0.3s	2.33	19	Pg	Pb	06 28 41.7	-0.2
KAPS	 7.4nm,0.2s			Lg	Lg	06 29 11.6	
KAPS	Kapalarasan 0.7nm,0.3s	2.33	19	eP	Pb	06 28 42.0	+0.1
KAPS	 7.6nm,0.3s			eS	Sb	06 29 12.0	+1.1
NRN	Naryn baz=30	2.37	227	⇓iP	Pn	06 28 40.0	+0.7
NRN	 baz=30			⇓iS	Sn	06 29 09.0	+0.2
AAK	Ala-Archa 2.9nm,1.1s	2.83	262	⇓Pg	Pb	06 28 50.8	+0.3
AAK	 3.3nm,0.7s			⇓Lg	Lg	06 29 29.1	
MK31	Makanchi Array 0.4nm,0.6s,baz=205,slow=16	4.67	36	⇑Pg	Pb	06 29 20.6	-1.2
MK31	 0.6nm,0.6s,baz=212,slow=29,SNR=5.2			⇑Lg	Lg	06 30 22.7	

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*SOME **20** 06:34:35.7, 40°.60N×69°.62E, h15^{km}*

*KRNET **20** 06:34:40.8±0.1, 41°.02N×69°.70E, h12^{km}, mb3.2*

*NNC **20** 06:34:41.2±2.8, 40°.99N×69°.62E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=22.1km s-min=10.9km az=60.0*

ISC 20 06:34:40.8±1.4, **40°.93N**±0°.04×**69°.55E**±0°.06, **h5**^{km}±12^{km}, **n29,** σ**1^{s}.44**/51, **21C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	Tashkent baz=15	0.45	333	⇑iP	Pg	06 34 49.4	0.0
TAS	 baz=15			⇑iS	Sg	06 34 55.9	+0.6
IUG	Iuzhnay 125nm,0.3s	1.27	16	P	Pb	06 35 04.3	-0.9
IUG	 226nm,0.5s			S	Sn	06 35 22.8	0.0
IUG	Iuzhnay 125nm,0.3s	1.27	16	eP	Pb	06 35 04.1	-1.1
IUG	 226nm,0.5s			eS	Sn	06 35 22.8	0.0
BTK	Batken baz=38	1.30	132	⇑iP	Pn	06 35 05.5	-0.2
BTK	 baz=38			⇑iS	Sg	06 35 23.4	+0.8
CHM	Chimkent 187nm,0.2s	1.39	1	eP	Pn	06 35 06.6	-0.2
CHM	 744nm,0.4s			eS	Sg	06 35 28.2	+2.8
ARK	Arkit baz=65	2.01	64	⇑iP	Pn	06 35 15.5	0.0
ARK	 baz=65			⇑iS	Sb	06 35 41.8	-1.5
DRK	Karamyk baz=33	2.25	129	⇓iP	Pb	06 35 21.1	-1.0
DRK	 baz=33			⇓iS	Sb	06 35 50.8	+0.5
KK31	Karatay Array 9.9nm,0.5s,baz=200,slow=14	2.28	18	⇑Pg	Pb	06 35 20.6	-1.9
KK31	 32nm,0.4s,baz=203,slow=27			⇑Lg	Lg	06 35 51.0	
DZA	Taraz 68nm,0.1s	2.37	34	eP	Pb	06 35 22.1	-1.8
DZA	 129nm,0.4s			eS	Sg	06 35 54.7	-2.1
ARSB	Arslanbob baz=82	2.62	80	⇑iP	Pn	06 35 24.8	+0.9
ARSB	 baz=82			⇑iS	Sn	06 35 56.4	+0.2
MNAS	Manas 7.6nm,0.8s	2.70	54	⇓Pn	Pn	06 35 25.6	+0.6
MNAS	 9.7nm,0.5s			⇑Lg	Lg	06 36 02.8	
MNAS	Manas 3.4nm,0.6s	2.70	54	Pg	Pn	06 35 26.4	+1.4
MNAS	 7.1nm,0.5s			Lg	Lg	06 36 01.0	
MNAS	Manas baz=54	2.70	54	⇓iP	Pn	06 35 25.5	+0.5
MNAS	 baz=54			⇓iS	Sn	06 35 58.4	+0.2
SFK	Sufi-Kurgan 5.0nm,0.7s	3.15	106	⇑Pn	Pn	06 35 32.5	+1.2
SFK	 6.9nm,0.5s			⇑Sn	Sb	06 36 11.8	-4.3
SFK	Sufi-Kurgan 1.3nm,0.1s	3.15	106	Pg	Pn	06 35 33.3	+2.0
SFK	 5.0nm,0.4s			Lg	Lg	06 36 12.6	
SFK	Sufi-Kurgan baz=8.0	3.15	106	⇑iP	Pn	06 35 32.9	+1.6
SFK	 baz=8.0			⇑iS	Sn	06 36 10.7	+1.3
MRKS	Merke 9.6nm,0.5s	3.29	55	Pg	Pb	06 35 37.7	-1.9
MRKS	 16nm,0.5s			Lg	Lg	06 36 20.0	
MRKS	Merke 9.6nm,0.5s	3.29	55	eP	Pb	06 35 37.7	-1.9
MRKS	 16nm,0.5s			eS	Sb	06 36 20.0	0.0
AML	Almayashu baz=68	3.33	68	⇓iP	Pn	06 35 34.8	+0.9
AML	 baz=68			⇓iS	Sn	06 36 14.1	0.0
EKS2	Erkin-Say baz=60	3.60	60	⇓iP	Pn	06 35 38.0	+0.6
EKS2	 baz=60			⇓iS	Sn	06 36 19.9	-0.4
ARLS	Aral baz=75	3.71	74	⇑iP	Pn	06 35 39.9	+1.0
ARLS	 baz=75			⇑iS	Sn	06 36 23.1	+0.1
UCH	Uchtor baz=70	3.94	69	⇓eP	Pn	06 35 43.3	+1.0
UCH	 baz=70			⇓iS	Sn	06 36 28.9	-0.2
AAK	Ala-Archa 3.9nm,0.6s	4.07	64	⇓Pg	Pb	06 35 52.3	-0.7
AAK	 6.6nm,0.7s			⇓Lg	Lg	06 36 48.0	
AAK	Ala-Archa baz=64	4.07	64	⇑eP	Pn	06 35 44.8	+1.0
AAK	 baz=64			⇑eS	Sn	06 36 31.5	-0.4
KZA	Kyzart baz=74	4.43	73	⇓eP	Pn	06 35 49.8	+0.8
KZA	 baz=74			⇓iS	Sn	06 36 40.8	-0.3
NRN	Naryn baz=83	4.89	82	⇑eP	Pn	06 35 56.0	+0.7
NRN	 baz=83			⇑iS	Sn	06 36 51.6	-0.8
DGS	Degeres 5.6nm,0.6s	5.17	61	eP	Pb	06 36 10.1	-1.7
DGS	 6.2nm,0.6s			eS	Sb	06 37 17.2	+3.0
KST	Kastek 6.5nm,0.7s	5.22	64	Pg	Pb	06 36 12.5	-0.2
KST	 13nm,0.5s			Lg	Lg	06 37 19.4	
KST	Kastek 6.8nm,0.8s	5.22	64	eP	Pb	06 36 12.3	-0.3
KST	 14nm,0.6s			eS	Sb	06 37 19.4	+3.7

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*NEIC **20** 06:51:37.9±0.0, 17°.05N×94°.25W, h156^{km}, mb4.3/1, MD4.1(MEX), After MEX.*

MEX 20 06:51:37.9±1.4, **17°.05N×94°.25W, h156**^{km}±15^{km}, **MD4.1, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.61	274	ePn	Pn	06 51 59.4	-1.1
CMIG				eSn	Sn	06 52 15.7	-2.0
CMIG	Matias Romero	0.61	274	i P	Pn	06 51 59.4	-1.1
CMIG				i S	Sn	06 52 15.7	-2.0
TUIG	Tuzandepetl	0.99	350	ePn	Pn	06 52 01.5	-1.7
TUIG				eSn	Sn	06 52 20.3	-2.4
TUIG	Tuzandepetl	0.99	350	i P	Pn	06 52 01.5	-1.7
TUIG				i S	Sn	06 52 20.3	-2.4
PCIG		1.66	143	ePn	Pn	06 52 08.8	-0.8
PCIG				eSn	Sn	06 52 31.8	-2.3
PCIG		1.66	143	eP	Pn	06 52 08.8	-0.8
PCIG				i S	Sn	06 52 31.8	-2.3
CCIG	Comitan	2.17	110	ePn	Pn	06 52 14.1	-1.4
CCIG				eSn	Sn	06 52 42.4	-2.0
HUIG	Huatulco	2.19	235	ePn	Pn	06 52 13.2	-2.5
HUIG				eSn	Sn	06 52 43.0	-1.7
HUIG	Huatulco	2.19	235	i P	Pn	06 52 13.2	-2.5
HUIG				eS	Sn	06 52 43.0	-1.7
VHO	Vista Hermosa	2.38	271	ePn	Pn	06 52 18.2	+0.2
VHO				eSn	Sn	06 52 49.6	+0.7
VHO	Vista Hermosa	2.38	271	eP	Pn	06 52 18.2	+0.2
VHO				eS	Sn	06 52 49.6	+0.7
LVIG	Laguna Verde	3.36	323	ePn	Pn	06 52 28.1	-2.0
LVIG				eSn	Sn	06 53 05.4	-5.2
PNIG	Pinotepa	3.77	261	ePn	Pn	06 52 33.5	-1.9
PNIG	Pinotepa	3.77	261	i P	Pn	06 52 33.5	-1.9
TEIG	Tepich	6.49	60	ePn	Pn	06 53 07.2	-3.9
ESPN	Las Esperanzas	10.77	115	ePn	Pn	06 54 06.7	-1.3
JTS	JuntasAbangare	11.26	125	ePn	Pn	06 54 12.6	-1.9
JCT	Junction City	14.30	340	ePn	Pn	06 54 51.2	-2.1
TX31	Lajitas Ar. Si	14.97	326	ePn	Pn	06 55 01.5	-0.3
MIAR	Mount Ida 25nm,1.8s	17.43	2	eP	P	06 55 28.9	-1.5

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*ISK **20** 06:59:00.9, 37°.88N×29°.38E, h10^{km}, ML3.5/14*

*DDA **20** 06:59:01.4, 37°.91N×29°.32E, h23^{km}±1^{km}, ML4.1*

*THE **20** 06:59:01.7, 37°.95N×29°.39E, h0^{km}±1^{km}, ML3.2/1, Error ellipse: s-maj=1.7km s-min=1.1km az=17.0*

ISC 20 06:59:02.2±1.1, **37°.90N**±0°.02×**29°.37E**±0°.02, **h6**^{km}±9^{km}, **n76,** σ**1^{s}.23**/107, **6C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.30	241	PG	Pg	06 59 07.6	-0.5
DENT				SG	Sg	06 59 12.2	+0.1
KHL	Karahalli	0.44	16	PG	Pg	06 59 10.2	-0.5
KHL				SG	Sb	06 59 17.9	-1.4
TAVA	DENIZLI_Tavas	0.56	220	⇓iP	Pg	06 59 12.3	-0.7
TAVA				i S	Sg	06 59 21.1	+0.7
BRDR	BURDUR-Merkez	0.59	110	⇑iP	Pg	06 59 13.4	-0.1
BRDR				i S	Sb	06 59 23.9	+0.4
BRDR	 comp=Z,23µm,0.2s			IAML_P			
KZIL	AFYON_Kizioren	0.71	60	⇓iP	Pg	06 59 15.5	-0.2
KZIL				i S	Sn	06 59 28.1	-2.0
KULA	Kula-Manisa	0.83	318	PG	Pg	06 59 17.9	-0.2
KULA				SG	Sb	06 59 29.9	-0.6
KULA	Kula-Manisa	0.83	318	P	Pg	06 59 17.5	-0.6
KULA				S	Sb	06 59 29.8	-0.7
USAK	Uak-Merkez	0.86	341	⇑iP	Pg	06 59 18.6	-0.1
USAK				i S	Sg	06 59 29.4	-0.4
USAK	 comp=Z,33µm,0.2s			IAML_P			
MANT	Manisa	0.87	313	⇑iP	Pg	06 59 18.6	-0.3
MANT				i S	Sb	06 59 31.1	-0.7
MANT	 comp=Z,26µm,0.2s			IAML_P			
ISP	Isparta	0.92	95	⇑iP	Pg	06 59 18.9	-0.9
ISP	Isparta	0.92	95	P	Pg	06 59 18.9	-0.9
ISP				S	Sb	06 59 33.4	+0.4
SHAP	Saphane-Kutahy	1.13	354	PN	Pg	06 59 23.4	-0.4
BAGO	Egridir - ISPA	1.13	85	i P	Pg	06 59 23.5	-0.3
BAGO				i S	Sn	06 59 41.0	+0.6
GEDZ	Gediz	1.14	2	PN	Pg	06 59 23.8	-0.3
AFYO	Afyonkarahisar	1.15	39	i P	Pn	06 59 25.6	+0.7
AFYO				i S	Sn	06 59 43.6	+2.6
AFYO	 comp=Z,28µm,0.3s			IAML_P			
YER	Yerkesik	1.15	229	PN	Pb	06 59 23.1	-1.4
YER	Yerkesik	1.15	229	P	Pb	06 59 22.9	-1.6
YER				S	Sn	06 59 41.0	0.0
AYDB	Zeytinkoy-Aydi	1.17	273	PN	Pb	06 59 23.6	-1.2
AYDB				SN	Sn	06 59 40.9	-0.6
KORT	Korkueli	1.19	139	i P	Pb	06 59 24.1	-1.2
KORT				i S	Sn	06 59 44.3	+2.2
TURN	Turunc	1.19	211	PN	Pg	06 59 28.2	+3.2
TURN	Turunc	1.19	211	i P	Pg	06 59 28.6	+3.6
TURN				i S	Sn	06 59 51.3	+9.5
AYDN	Tasoluk	1.20	259	⇓iP	Pb	06 59 24.8	-0.6
AYDN				i S	Sn	06 59 41.6	-0.6
AYDN	 comp=Z,14µm,0.2s			IAML_P			
SMAA	Simav-Kutahya	1.24	346	PN	Pn	06 59 24.9	-1.2
DEMI	Demirci	1.25	336	⇓iP	Pn	06 59 25.7	-0.5
DEMI				i S	Sb	06 59 41.3	-1.3
DEMI	 comp=Z,22µm,0.3s			IAML_P			
FETY	Fethiye	1.28	190	PN	Pn	06 59 25.9	-0.7
FETY	Fethiye	1.28	190	i P	Pb	06 59 26.6	-0.2
FETY				i S	Sn	06 59 45.6	+1.4
GOMA	Golmarmara-Man	1.40	306	PN	Pn	06 59 27.7	-0.5
MLSB	Milas	1.40	245	PN	Pn	06 59 27.0	-1.3
BOLV	Bolvadin	1.49	56	i P	Pb	06 59 29.8	-0.5
BOLV				i S	Sg	06 59 53.8	+3.7
AKHS	Akhisar	1.56	309	i P	Pn	06 59 29.6	-0.9
AKHS				i S	Sg	06 59 54.7	+2.3
AKS	Akhisar	1.56	309	PN	Pn	06 59 29.6	-0.9
AKAS	Kas	1.68	173	i P	Pb	06 59 33.1	-0.4
AKAS				i S	Sg	06 59 55.6	-0.4
GCAM	G?zelcaml?	1.70	264	PN	Pn	06 59 31.5	-0.9
GCAM	G?zelcaml?	1.70	264	i P	Pn	06 59 31.9	-0.5
GCAM				i S	Sb	06 59 55.2	-0.3
BDRM	Kayabasi	1.74	242	i P	Pn	06 59 32.8	-0.2
BDRM				i S	Sg	06 59 58.2	0.0
DATC	Datca-Mugla	1.77	231	PN	Pn	06 59 32.4	-1.0
DST	Dursunbey	1.80	341	PN	Pn	06 59 33.4	-0.4
DOGA	KONYA_Doganhis	1.83	83	i P	Pb	06 59 34.8	-1.3
DOGA				i S	Sg	06 59 59.9	-1.0
DURS	Dursunbey	1.84	338	i P	Pn	06 59 34.1	-0.2
DURS				i S	Sg	07 00 04.0	+2.8
BODT	Bodrum	1.84	244	PN	Pn	06 59 32.9	-1.4
BODT	Bodrum	1.84	244	P	Pn	06 59 33.1	-1.2
BLCB	Balcova	1.90	285	PN	Pn	06 59 34.6	-0.5
GMLD	Gumuldur	1.94	276	PN	Pn	06 59 35.1	-0.6
ARG	Arkhangelos	1.95	211	PN	Pn	06 59 34.7	-1.1
ARG	Arkhangelos	1.95	211	P	Pb	06 59 36.8	-1.3
ARG				S	Sb	07 00 02.6	-0.1
STEP	BALIKESIR_Sava	1.96	319	i P	Pn	06 59 35.7	-0.3
STEP				i S	Sg	07 00 08.1	+2.9
DGB	zmir	1.97	275	i P	Pn	06 59 35.5	-0.5
DGB				i S	Sg	07 00 06.2	+0.7
SMG	Samos	2.01	265	P	Pn	06 59 35.2	-1.5
ZEDA	zmir-Bergama	2.09	301	i P	Pn	06 59 37.5	-0.2
BORA	Eskisehir	2.15	23	i P	Pb	06 59 39.8	-1.8
FOCM	Foa	2.23	292	PN	Pn	06 59 39.0	-0.6
URLA	Izmir	2.23	283	PN	Pn	06 59 39.3	-0.5
URLA	Izmir	2.23	283	i P	Pn	06 59 39.2	-0.5
URLA				i S	Sb	07 00 11.7	+0.8
KDHN	Kadinhani	2.25	73	i P	Pn	06 59 39.2	-0.8
ZEY	zmir	2.29	279	i P	Pn	06 59 39.2	-1.1
ZEY				i S	Sg	07 00 15.8	+0.2
BALY	Balya	2.29	324	i P	Pn	06 59 40.6	+0.1
BALY				i S	Sg	07 00 17.5	+1.8
KONT	Konya--Tatoy	2.37	88	i P	Pn	06 59 41.2	-0.3
AYVA	Ayvalik	2.52	305	i P	Pn	06 59 43.4	-0.3
AUMIH	MIHALICIK	2.57	39	i P	Pg	06 59 50.6	-0.7
CHOS	Chios island	2.66	282	PN	Pn	06 59 45.2	-0.4
CHOS	Chios island	2.66	282	P	Pn	06 59 45.1	-0.5
YLV	Yalova	2.66	0	⇑iP	Pb	06 59 51.3	+1.0
GEYV	SAKARYA_Geyve	2.68	15	i P	Pg	06 59 52.4	-1.1
KNL	Balıkesir	2.77	329	i P	Pn	06 59 47.2	+0.2
BAYC	CANAKKALE_Bayr	2.87	311	i P	Pn	06 59 48.6	+0.2
SIGR	SIGRI	3.05	296	P	Pn	06 59 50.3	-0.6
EZN	Ezine	3.06	310	⇓iP	Pn	06 59 50.5	-0.4
EZN	Ezine	3.06	310	P	Pn	06 59 50.6	-0.4
ANTO	Ankara	3.32	53	⇑iP	Pn	06 59 54.6	-0.1
KESN	Edirne-Kesan	3.59	325	i P	Pn	06 59 58.7	0.0
LIA	Limnos Island	3.83	303	P	Pn	07 00 01.4	-0.2
ALN	Alexandroupoli	3.95	320	P	Pn	07 00 03.0	-0.2
STIP	Stip	6.70	307	i P	Pn	07 00 40.1	-1.0
MLR	Muntele Rosu	8.00	342	⇓iP	Pn	07 01 02.3	+3.2
VOIR		8.19	338	⇓iP	Pn	07 01 05.4	+3.8
BZS	Buzias	9.64	326	⇓iP	Pn	07 01 22.4	+1.1

NNC 20 07:05:07.3±1.6, **41°.85N×78°.04E, h0**^{km}**, mb2.9, mpv2.7, 4C-2D, Error ellipse: s-maj=11.5km s-min=6.9km az=2.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	Tian-Shan 1.7nm,0.1s	1.44	326	P	Pb	07 05 35.4	+0.1
TNSS	 4.8nm,0.3s			S	Sn	07 05 56.3	+1.5
MDOK	Medeo 2.2nm,0.6s	1.51	331	P	Pn	07 05 35.0	-0.8
MDOK	 3.9nm,0.6s			S	Sg	07 05 55.6	-0.2
PDGK	Podgornoye 0.7nm,0.2s	1.83	35	P	Pb	07 05 41.2	-0.6
PDGK	 2.3nm,0.5s			S	Sg	07 06 06.3	+0.1
PDGK	Podgornoye 2.6nm,0.7s	1.83	35	⇓Pg	Pn	07 05 39.4	-0.7
PDGK	 5.8nm,0.7s			⇑Lg	Lg	07 06 05.6	
TKM2	Tokmak 2 1.7nm,0.3s	2.10	302	⇑Pg	Pn	07 05 45.2	+1.2
TKM2	 6.3nm,0.8s			⇓Lg	Lg	07 06 15.9	
KTBS	Karatobe 4.3nm,0.5s	2.12	332	Pg	Pb	07 05 45.5	-1.1
KTBS	 9.2nm,0.3s			Lg	Lg	07 06 13.6	
CHKK	Chushkaly 7.7nm,0.3s	2.15	339	Pg	Pn	07 05 45.7	+1.3
CHKK	 11nm,0.3s			Lg	Lg	07 06 14.0	
AAK	Ala-Archa 1.8nm,0.8s	2.75	288	⇑Pg	Pb	07 05 57.4	-0.1
AAK	 5.7nm,0.8s			⇑Lg	Lg	07 06 35.4	

IDC 20 07:12:41.8±5.9, **29°.37S×76°.61E, h0**^{km}**, mb3.6**/5, **mb1 3.7**/5, **mb1mx3.5**/40, **mbtmp3.6**/5, **Error ellipse: s-maj=211.7km s-min=31.6km az=39.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H baz=174,slow=76,SNR=52	21.95	349	T	T	07 40 28.6	
H08S1	Diego Carcia H baz=174,slow=76,SNR=49	21.95	349	T	T	07 40 26.1	
H08S3	Diego Garcia H baz=174,slow=76,SNR=196	21.97	349	T	T	07 40 30.0	
ASAR	Alice Springs 0.4nm,0.8s,baz=253,slow=6.1,SNR=5.3	51.16	98	P	P	07 21 46.7	-0.3
WRA	Warramunga Arr 0.9nm,0.9s,baz=249,slow=7.3,SNR=6.0	52.85	94	P	P	07 21 59.7	+0.1
MKAR	Makanchi Array 0.4nm,0.8s,baz=178,slow=6.1,SNR=3.9	75.98	4	P	P	07 24 30.6	+0.2
KURBB	Kurchatov Arra 0.3nm,0.4s,baz=186,slow=6.2,SNR=3.0	79.65	1	P	P	07 24 50.4	-0.4
BVAR	Borovoye Array 0.3nm,0.4s,baz=176,slow=6.5,SNR=2.8	82.22	356	P	P	07 25 05.1	+0.7
YKA	Yellowknife Ar 0.4nm,0.6s,baz=330,slow=3.5,SNR=4.3	146.06	9	PKPbc	PKPdf	07 32 21.6	-0.6

KRSC 20 07:19:59.2±0.8, **48°.96N×157°.03E, h12**^{km}±12^{km}**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.83	342	eP	Pn	07 20 31.2	+0.8
SKR				eS	Sn	07 20 54.4	+0.9
PAU	Pauzhetka	2.52	357	eS	Sn	07 21 12.9	+2.3
KDTR	Khodutka, Kamc	2.93	13	eP	Pn	07 20 48.5	+2.8
KDTR				eS	Sb	07 21 24.3	-3.0
MTVR	Mutnovka	3.61	11	eP	Pn	07 20 58.0	+2.9
MTVR				eS	Sn	07 21 41.2	+3.5
KRMR	Karymshinskiy	3.94	10	eP	Pn	07 21 03.3	+3.8
DALK	Dalny	4.22	14	eP	Pn	07 21 06.8	+3.4
UGLR	Uglovaya	4.41	14	eP	Pn	07 21 09.9	+3.9
AVH	Avacha	4.45	13	eP	Pn	07 21 10.8	+4.2
SMAR	Somma	4.46	14	eP	Pn	07 21 11.1	+4.3
KOK	Koryaka	4.46	13	eP	Pn	07 21 10.5	+3.8
KRX	Arik	4.53	12	eP	Pn	07 21 11.8	+4.1
GNL	Ganaly	4.78	7	eP	Pn	07 21 15.5	+4.3

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*NNC **20** 07:20:12.8±1.9, 41°.82N×78°.10E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=13.2km s-min=7.4km az=171.0, Suspected Mining explosion.*

KRNET 20 07:20:11.8±0.1, **41°.71N×78°.21E, h14**^{km}**, mb2.2, 20C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy baz=73	0.31	273	⇑iP	Pg	07 20 17.8	-0.6
TARG	 baz=73			⇑iS	Sg	07 20 22.9	0.0
PRZ	Przheval'sk baz=11	0.78	10	⇑iP	Pg	07 20 27.1	0.0
PRZ	 baz=11			⇑iS	Sb	07 20 37.7	-0.2
KDJ	Kajisay baz=99	0.88	299	⇑eP	Pg	07 20 28.1	-0.7
KDJ	 baz=99			⇑iS	Sg	07 20 40.4	0.0
SATY	Saty 1.6nm,0.1s	1.35	6	P	Pg	07 20 37.9	0.0
SATY	 3.8nm,0.2s			S	Sg	07 20 56.7	+1.1
ULHL	Ulahol baz=91	1.56	291	⇓eP	Pb	07 20 41.2	+0.5
ULHL	 baz=91			⇓iS	Sg	07 21 02.5	+0.3
NRN	Naryn baz=61	1.68	261	⇑iP	Pg	07 20 43.6	-0.6
NRN	 baz=61			⇑iS	Sg	07 21 06.5	+0.4
MDOK	Medeo 7.6nm,1.1s	1.69	330	P	Pn	07 20 41.1	0.0
MDOK	 4.2nm,0.6s			S	Sn	07 21 01.3	-1.2
KURS	Kuram 1.4nm,0.5s	1.78	359	P	Pg	07 20 45.2	-0.7
KURS	 5.0nm,0.4s			S	Sg	07 21 09.2	+0.2
BOOM	Boomskoye usch baz=96	1.86	295	⇑iP	Pb	07 20 46.2	+0.5
BOOM	 baz=96			⇑iS	Sg	07 21 11.6	-0.1
PDGK	Podgornoye 3.7nm,0.9s	1.87	30	⇑P	Pb	07 20 45.1	-0.7

PDGK	5.8nm,0.7s			⇓S	Sb	07 21 08.8	-0.4
PDGK	Podgornoye baz=30	1.87	30	⇑*i*P	Pb	07 20 46.7	+0.8
PDGK	baz=30			⇑*i*S	Sg	07 21 12.2	+0.2
KST	Kastek 3.7nm,0.4s	2.13	309	Pg	Pb	07 20 50.1	-0.3
KST	4.2nm,0.5s			Lg	Lg	07 21 17.5	
KZA	Kyzart baz=80	2.24	280	⇓*i*P	Pb	07 20 52.0	-0.3
KZA	baz=80			⇓*i*S	Sb	07 21 21.3	+1.2
TKM2	Tokmak 2 1.9nm,0.4s	2.29	303	⇓Pg	Pb	07 20 52.7	-0.3
TKM2	4.7nm,0.6s			⇑Lg	Lg	07 21 23.0	
TKM2	Tokmak 2 baz=3.0	2.29	303	⇑*i*P	Pb	07 20 52.6	-0.4
TKM2	baz=3.0			⇑*i*S	Sb	07 21 22.6	+1.4
KTBS	Karatobe 6.6nm,0.5s	2.30	331	Pg	Pb	07 20 52.8	-0.3
KTBS	14nm,0.6s			Lg	Lg	07 21 22.1	
CHKK	Chushkaly 12nm,0.3s	2.32	338	Pg	Pb	07 20 53.0	-0.5
CHKK	9.5nm,0.4s			Lg	Lg	07 21 22.7	
DGS	Degeres 6.8nm,0.6s	2.37	311	Pg	Pb	07 20 53.4	-0.9
DGS	7.3nm,0.5s			Lg	Lg	07 21 23.3	
ARXS	Arharly 6.7nm,0.4s	2.52	354	Pg	Pb	07 20 56.1	-0.7
ARXS	10.0nm,0.4s			Lg	Lg	07 21 28.1	
ARLS	Aral baz=74	2.91	274	⇑*i*P	Pb	07 21 01.6	-2.0
ARLS	baz=74			⇑*i*S	Sb	07 21 36.9	-2.3
AAK	Ala-Archa 1.2nm,0.6s	2.92	290	⇑Pg	Pb	07 21 03.8	+0.1
AAK	3.6nm,0.7s			⇑Lg	Lg	07 21 42.5	

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*IDC **20** 07:23:50.7±2.9, 36°.30N×70°.89E, h178^{km}±26^{km}, mb3.4/7, mb1 3.4/13, mb1mx3.2/44, mbtmp3.9/13, Error ellipse: s-maj=22.3km s-min=17.9km az=20.0*

*ISCJB **20** 07:23:52.5±0.5, 36°.50N±0°.04×70°.85E±0°.05, h200^{km}, mb3.5/6, Error ellipse: s-maj=6.2km s-min=5.1km az=155.6*

*NNC **20** 07:23:56.2±3.1, 37°.09N×70°.45E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=25.9km s-min=19.1km az=160.0*

ISC 20 07:23:53.5±0.7**, 36°.56N**±0°.07×**70°.83E**±0°.06**, h200**^{km}**, n37, σ1§65**/45**, mb3.6**/6**, 8C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 15nm,0.2s	4.04	31	⇑P	Pn	07 24 56.9	+1.0
SFK	47nm,0.4s			⇓S	Sn	07 25 42.8	-2.2
AML	Almayashu SNR=128	5.99	21	P	Pn	07 25 21.5	+0.6
MNAS	Manas 9.0nm,0.6s	6.06	12	⇑P	Pn	07 25 22.4	+0.8
MNAS	66nm,0.6s			⇓S	Sn	07 26 28.0	-3.4
UCH	Uchtor SNR=58	6.34	26	P	Pn	07 25 25.9	+0.5
KZA	Kyzart SNR=11	6.49	31	P	Pn	07 25 27.3	-0.1
EKS2	Erkin-Say SNR=26	6.50	20	P	Pn	07 25 28.2	+0.9
KK31	Karatay Array 0.8nm,0.2s,baz=182,slow=11,SNR=50	6.54	358	⇑P	Pn	07 25 28.5	+0.9
KK31	11nm,0.4s,baz=186,slow=24,SNR=9.2			⇑S	Sn	07 26 38.5	-3.8
AAK	Ala-Archa SNR=23	6.70	24	P	Pn	07 25 30.7	+0.9
AAK	Ala-Archa 5.2nm,0.3s	6.70	24	⇑P	Pn	07 25 30.5	+0.7
AAK	16nm,0.7s			⇑S	Sn	07 26 44.2	-2.1
AAK	Ala-Archa 6.5nm,0.3s,baz=160,slow=5.5,SNR=63	6.70	24	P	Pn	07 25 30.6	+0.9
AAK	1.7nm,0.3s,baz=129,slow=23,SNR=12			S	Sn	07 26 43.3	-2.9
KBK	Karagaybulak SNR=16	6.87	26	P	Pn	07 25 33.2	+1.1
ULHL	Ulahol SNR=13	7.06	35	P	Pn	07 25 35.4	+0.9
CHMS	Chumysh SNR=5.7	7.10	24	P	Pn	07 25 36.1	+1.1
USP	Ospenovka SNR=9.7	7.27	22	P	Pn	07 25 37.5	+0.4
TKM2	Tokmak 2 SNR=11	7.34	29	P	Pn	07 25 38.8	+0.6
TKM2	Tokmak 2 32nm,0.7s	7.34	29	⇑P	Pn	07 25 38.6	+0.4
TKM2	12nm,1.2s			⇑S	Sn	07 27 00.8	-0.7
GEYT	Alibeck 0.4nm,0.3s,baz=90,slow=14,SNR=2.8	10.23	281	P	Pn	07 26 14.4	-1.2
GEYT	0.4nm,0.3s,baz=77,slow=20,SNR=2.1			S	Sn	07 28 07.2	-2.7
PYUN	Piuthan 4.1nm,0.3s	13.29	126	*e*P	Pn	07 26 54.2	-0.6
MKAR	Makanchi Array 0.3nm,0.3s,baz=206,slow=11,SNR=14	13.32	36	P	Pn	07 26 55.2	+0.3
DANN	Dangsing 5.1nm,0.2s	13.64	123	*e*P	Pn	07 26 58.7	-0.5
KOLN	Koldanda 3.3nm,0.3s	13.91	125	*e*P	Pn	07 27 00.7	-1.9
AB31	Akbulak array 3.3nm,1.0s,baz=137,slow=10,SNR=16	14.96	331	P	P	07 27 18.1	+2.4
AB31	1.1nm,0.8s			⇓S	S	07 29 59.5	-1.6
DMN	Daman	15.02	122	*e*P	Pn	07 27 14.8	-1.5
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=206,slow=12,SNR=2.5	15.11	19	P	Pn	07 27 16.0	-0.9
GUN	Gumba 6.7nm,0.3s	15.37	120	*e*P	P	07 27 21.2	+0.4
JIRN	Jiri 16nm,0.3s	15.74	120	*e*P	P	07 27 24.9	0.0
RAMN	Ramite 6.9nm,0.5s	16.47	121	*e*P	P	07 27 33.2	+0.4
BVAR	Borovoye Array 0.4nm,0.3s,baz=157,slow=8.6,SNR=6.6	16.47	359	P	Pn	07 27 34.1	+1.0
AKTO	Aktyubinsk 4.4nm,0.7s	16.66	330	⇓P	Pn	07 27 40.5	+5.0
AKTO	Aktyubinsk 0.3nm,0.3s,baz=139,slow=10.0,SNR=16	16.66	330	P	Pn	07 27 36.5	+1.1
ZALV	Zalesovo Beam 1.6nm,0.5s,baz=224,slow=12,SNR=6.4	19.92	25	P	P	07 28 10.5	+0.8
FINES	FINESS Array B 2.2nm,0.8s,baz=114,slow=9.2,SNR=3.8	37.36	326	P	P	07 30 47.4	+1.0
ARCES	ARCESS Array B 1.5nm,0.5s,baz=95,slow=7.4,SNR=8.4	41.04	338	P	P	07 31 18.3	+1.6
TORD	Torodi Ar. Bea 0.3nm,0.5s,baz=42,slow=6.3,SNR=5.8	65.58	268	P	P	07 34 15.9	-0.2
YKA	Yellowknife Ar 0.4nm,0.4s,baz=351,slow=5.3,SNR=25	81.19	3	P	P	07 35 47.6	+1.2
WRA	Warramunga Arr 0.5nm,0.5s,baz=324,slow=5.0,SNR=16	82.14	122	P	P	07 35 50.4	-1.7
ASAR	Alice Springs 0.7nm,0.6s,baz=310,slow=5.0,SNR=13	84.40	125	P	P	07 36 03.0	-0.5

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*ISCJB **20** 07:30:41.8±0.2, 17°.21N±0°.03×94°.10W±0°.02, h158^{km}±3^{km}, mb4.1/28, Error ellipse: s-maj=4.7km s-min=3.1km az=40.1*

*IDC **20** 07:30:41.2±0.5, 17°.24N×94°.00W, h138^{km}±7^{km}, mb3.7/14, mb1 3.9/17, mb1mx3.7/37, mbtmp4.2/17, MS3.2/2, Ms1 3.3/2, ms1mx2.7/30, Error ellipse: s-maj=23.3km s-min=8.3km az=38.0*

*GCMT **20** 07:30:44.4±0.5, 17°.21N±0°.03×94°.01W±0°.03, h146^{km}±4^{km}, MW4.9/72, Moment Tensor Solution. s19,c21; s72,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.84±.11; $M_{\theta\theta}$-1.99±.12; $M_{\phi\phi}$2.83±.12; $M_{r\theta}$1.27±.08; $M_{\theta\phi}$-0.03±.16; $M_{\phi r}$-0.44±.09; Best double couple: $M_0$2.85300×10^{16} NP1:ϕ_s320.00000°, δ73.00000°, λ-150.00000°. NP2: ϕ_s220.00000°, δ61.00000°, λ-20.00000°. Principal axes: T 2.8880, Plg7.0000°, Azm88.0000°; N -0.0740, Plg56.0000°, Azm347.0000°; P -2.8190, Plg33.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MEX **20** 07:30:44.4±1.1, 17°.07N×94°.22W, h147^{km}±7^{km}, MD4.2*

*NEIC **20** 07:30:44.4±0.0, 17°.07N×94°.22W, h147^{km}, mb4.3/49, MD4.2(MEX), After MEX.*

NEIC Felt at Cintalapa.

ISC 20 07:30:42.8±0.5**, 17°.14N**±0°.04×**94°.12W**±0°.04**, h156**^{km}±5^{km}**, n254, σ1§80**/277**, mb4.1**/28**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.73	266	*e*Pn	Pn	07 31 04.9	-1.3
CMIG				*e*Sn	Sn	07 31 21.1	-2.9
CMIG	Matias Romero	0.73	266	*e*P	Pn	07 31 04.9	-1.3
CMIG				*i* S	Sn	07 31 21.1	-2.9
CMIG	Matias Romero 311nm,0.3s,baz=78,slow=6.2,SNR=9925	0.73	266	P	Pn	07 31 04.4	-1.8
CMIG	838nm,0.3s,baz=308,slow=19,SNR=152			S	Sn	07 31 21.0	-3.0
TUIG	Tuzandepetl	0.93	342	*e*Pn	Pn	07 31 07.0	-0.6
TUIG				*e*Sn	Sn	07 31 25.1	-1.6
TUIG	Tuzandepetl	0.93	342	*i* P	Pn	07 31 07.0	-0.6
TUIG				*i* S	Sn	07 31 25.1	-1.6
PCIG		1.67	149	*e*Pn	Pn	07 31 14.7	0.0
PCIG				*e*Sn	Sn	07 31 37.9	-1.3
PCIG		1.67	149	*e*P	Pn	07 31 14.7	0.0
PCIG				*e*S	Sn	07 31 37.9	-1.3
CCIG	Comitan	2.08	114	*e*Pn	Pn	07 31 19.4	0.0
CCIG				*e*		07 31 44.6	
CCIG				*e*Sn	Sn	07 31 46.6	-1.2
CCIG				*e*Sn	Sn	07 31 46.7	-1.0
CCIG	Comitan	2.08	114	*e*P	Pn	07 31 19.5	0.0
CCIG				*e*S	Sn	07 31 44.6	-3.1
CCIG				*i* S		07 31 46.7	
HUIG	Huatulco	2.34	235	*e*Pn	Pn	07 31 18.7	-3.6
HUIG				*e*Sn	Sn	07 31 49.1	-3.8
HUIG	Huatulco	2.34	235	*e*P	Pn	07 31 18.7	-3.6
HUIG				*e*S	Sn	07 31 49.1	-3.8
VHO	Vista Hermosa	2.50	269	*e*Pn	Pn	07 31 23.6	-0.8
VHO				*e*Sn	Sn	07 31 56.4	-0.1
VHO	Vista Hermosa	2.50	269	*e*P	Pn	07 31 23.6	-0.8
VHO				*i* S	Sn	07 31 56.4	-0.1
THIG		2.85	141	*e*Pn	Pn	07 31 28.9	+0.4
THIG				*e*		07 31 58.2	
THIG				*e*Sn	Sn	07 32 04.2	+0.2
THIG		2.85	141	*e*P	Pn	07 31 28.9	+0.4
THIG				*e*S	Sn	07 31 58.2	-5.7
THIG				*e*S		07 32 04.2	
LVIG	Laguna Verde	3.37	320	*e*Pn	Pn	07 31 31.8	-3.3
LVIG				*e*Sn	Sn	07 32 09.2	-6.5
APG	El Apazote 3.7nm,0.3s,baz=324,slow=14,SNR=46	4.11	121	P	Pn	07 31 43.8	-1.1
APG	36nm,0.3s,baz=328,slow=13,SNR=7.7			S	Sn	07 32 30.0	-3.2
PPM	Popocatepetl	4.69	295	*e*Pn	Pn	07 31 53.9	+1.1
PPM	Popocatepetl	4.69	295	*i* P	Pn	07 31 53.9	+1.1
YAIG	Yautepec	5.01	291	*e*Pn	Pn	07 31 57.0	+0.4
YAIG	Yautepec	5.01	291	*e*P	Pn	07 31 57.0	+0.4
UNM	Universidad Na	5.27	295	*e*Pn	Pn	07 31 59.0	-1.2
UNM				*e*Pn	Pn	07 32 02.7	+2.5
UNM				*e*Sn	Sn	07 32 36.3	-24
UNM	Universidad Na	5.27	295	*i* P	Pn	07 32 02.7	+2.5
PLIG	Platanillo	5.28	284	*e*Pn	Pn	07 32 00.2	+0.1
PLIG	Platanillo	5.28	284	*e*P	Pn	07 32 00.2	+0.1
MEIG	Mezcala	5.30	279	*e*Pn	Pn	07 32 00.1	-0.4
MEIG				*e*Sn	Sn	07 33 01.4	+0.3
MEIG	Mezcala	5.30	279	*e*P	Pn	07 32 00.1	-0.4
MEIG				*i* S	Sn	07 33 01.4	+0.3
MYIG	Mrida	5.62	47	*e*Pn	Pn	07 32 06.9	+2.3
CAIG	El Cayaco	5.88	270	*e*Pn	Pn	07 32 06.0	-2.0
CAIG	El Cayaco	5.88	270	*e*P	Pn	07 32 06.0	-2.0
ARIG	Puente Sto Nin	6.04	282	*i* P	Pn	07 32 10.6	+0.4
ARIG	Puente Sto Nin	6.04	282	*i* P	Pn	07 32 10.6	+0.4
TEIG	Tepich	6.33	60	*e*Pn	Pn	07 32 12.3	-1.7
ZIIG	Zihuatanejo	7.03	275	*e*Pn	Pn	07 32 22.4	-0.8
ZIIG	Zihuatanejo	7.03	275	*i* P	Pn	07 32 22.4	-0.8
MOIG	Morelia	7.17	292	*e*Pn	Pn	07 32 23.9	-1.5
MOIG				*e*Pn	Pn	07 32 26.8	+1.4
MOIG	Morelia	7.17	292	*e*P	Pn	07 32 26.8	+1.4
TGUH	Tegucigalpa,Un	7.28	114	*e*Pn	Pn	07 32 28.7	+2.1
ESTN	Estel	8.49	117	*e*Pn	Pn	07 32 44.0	+1.1
LNIG	Linares	9.19	328	*e*Pn	Pn	07 32 53.3	+1.3
ZAIG	Zacatecas	9.71	307	*e*Pn	Pn	07 32 57.4	-1.8
ESPN	Las Esperanzas	10.70	116	*e*Pn	Pn	07 33 12.3	+0.3
JTS	JuntasAbangare	11.21	126	*e*Pn	Pn	07 33 18.4	-0.3
JTS				*e*Sn	Sn	07 35 22.8	-0.1
JTS	JuntasAbangare 8.9nm,0.3s,baz=13,slow=21,SNR=31	11.21	126	P	Pn	07 33 18.7	0.0
JTS	2.9nm,0.3s,baz=75,slow=20,SNR=3.4			S	Sn	07 35 20.1	-2.8
HDC	Heredia	12.04	125	*e*Pn	Pn	07 33 29.6	-0.1
HDC				*e*Sn	Sn	07 35 46.5	+3.5
833A	Chaparral WMA,	12.14	337	*e*Pn	P	07 33 34.3	-2.6
833A	Chaparral WMA, baz=156,SNR=13	12.14	337	P	Pn	07 33 31.1	+0.3
FSCY	Frank Sound, G	12.48	78	*e*Pn	Pn	07 33 35.5	+0.3
435B	Jarrell	13.94	348	*e*Pn	P	07 33 59.2	+2.4
435B	Jarrell baz=167,SNR=16	13.94	348	P	Pn	07 33 54.9	+1.1
JCT	Junction City	14.25	340	*e*Pn	P	07 34 01.5	+1.2
JCT	Junction City baz=158	14.25	340	P	Pn	07 33 58.6	+0.9
NATX	Nacogdoches	14.56	358	*e*Pn	P	07 34 04.7	+1.0
059Z	Ave Maria baz=234,SNR=5.9	14.91	50	P	Pn	07 34 05.8	0.0
TXAR	Lajitas Array 0.1nm,0.3s,baz=149,slow=13,SNR=50	14.96	326	P	Pn	07 34 07.1	+0.5
TX31	Lajitas Ar. Si	14.96	326	*e*Pn	P	07 34 08.0	-0.3
TX31				*e*Pn	Pn	07 34 08.3	+1.7
061Z	Ochoppi 115nm,1.0s	15.04	53	*e*Pn	P	07 34 08.2	-0.9
061Z	Ochoppi baz=237,SNR=6.3	15.04	53	P	Pn	07 34 07.0	-0.5
058A	Arcadia baz=232	15.08	47	P	Pn	07 34 06.7	-1.1
WHTX	Lake Whitney, 38nm,0.8s	15.09	349	*e*Pn	P	07 34 11.8	+2.3
WHTX	Lake Whitney, baz=168,SNR=10.0	15.09	349	P	Pn	07 34 07.2	-0.8
450A	Crestview baz=209	15.24	25	P	P	07 34 10.1	-1.1
VBMS	Vicksburg baz=193	15.36	12	P	Pn	07 34 11.3	-0.1
958A	Wauchula baz=230	15.44	46	P	P	07 34 12.8	-0.7
349A	Repton baz=206	15.49	23	P	P	07 34 13.6	-0.3
857A	Zephyrhills baz=227	15.58	43	P	P	07 34 14.5	-0.4
MTDJ	Mount Denham 77nm,1.1s	15.85	84	*e*Pn	P	07 34 18.9	+0.8
350A	Dozier baz=208	15.88	25	P	P	07 34 18.6	+0.3
DWPF	Disney Wildern baz=230	16.00	45	P	P	07 34 19.7	+0.1
351A	Pinckard baz=211	16.06	27	P	P	07 34 20.2	-0.1
249A	Camden baz=205	16.07	22	P	P	07 34 19.9	-0.5
Z41A	Richland Creek 81nm,1.1s	16.09	4	*e*Pn	P	07 34 24.3	+3.7
Z41A	Richland Creek baz=185,SNR=7.2	16.09	4	P	P	07 34 20.6	0.0
060A	Indiantown baz=235	16.10	50	P	P	07 34 21.2	+0.5
ABTX	Abilene, Hawle 32nm,0.6s	16.20	343	*e*Pn	P	07 34 24.4	+2.5
ABTX	Abilene, Hawle baz=161,SNR=12	16.20	343	P	P	07 34 21.9	0.0
147A	Livingston 35nm,0.6s	16.34	18	*e*Pn	P	07 34 29.5	+6.1
147A	Livingston baz=200,SNR=7.4	16.34	18	P	P	07 34 23.6	+0.2
250A	Grady 31nm,0.6s	16.40	24	*e*Pn	Pn	07 34 26.4	+2.4
250A	Grady baz=208	16.40	24	P	Pn	07 34 24.8	+0.8
WLAR	White Oak Lake 85nm,1.1s	16.50	3	*e*P	Pn	07 34 29.5	+4.2
352A	Blakely baz=212	16.54	29	P	Pn	07 34 25.9	+0.2
556A	Lake Butler baz=222	16.69	38	P	Pn	07 34 27.4	-0.3
149A	Jones baz=205	16.76	22	P	Pn	07 34 28.7	+0.3
353A	Camilla baz=215	16.77	31	P	Pn	07 34 28.7	+0.3
CCAR	Cane Creek 23nm,0.8s	16.84	7	*e*P	Pn	07 34 33.0	+3.7
251A	Midway baz=210	16.85	26	P	Pn	07 34 28.9	-0.7
150A	Eclectic baz=207	17.05	24	P	Pn	07 34 31.4	-0.5
252A	Lumpkin baz=212	17.06	28	P	Pn	07 34 32.0	0.0
LRAL	Lakeview Retre 7.6nm,0.5s	17.08	21	*e*P	Pn	07 34 32.6	+0.3
LRAL	Lakeview Retre baz=204	17.08	21	P	Pn	07 34 31.8	-0.5
TIGA	Tifton baz=216	17.15	32	P	Pn	07 34 33.1	-0.1
151A	Opelika baz=210	17.26	26	P	Pn	07 34 33.8	-0.6
X40A	Basin Creek Fa 12nm,0.9s	17.31	4	*e*P	Pn	07 34 38.7	+3.7
X40A	Basin Creek Fa baz=184	17.31	4	P	Pn	07 34 34.9	-0.1
MIAR	Mount Ida 9.3nm,0.8s	17.34	2	*e*P	Pn	07 34 34.8	-0.6
MIAR	Mount Ida baz=182	17.34	2	P	Pn	07 34 34.8	-0.6
Z49A	Columbiana baz=205	17.39	22	P	Pn	07 34 35.7	-0.3
456A	Hilliard 112nm,1.1s	17.45	37	*e*P	Pn	07 34 39.7	+3.1
GDL2	Guadalupe Moun	17.63	330	*e*P	P	07 34 38.2	+0.5
152A	Waverly Hall 11nm,0.7s	17.64	27	*e*P	Pn	07 34 41.0	+2.0
152A	Waverly Hall baz=211	17.64	27	P	Pn	07 34 39.5	+0.6
Z50A	Ashland 9.8nm,0.6s	17.66	23	*e*P	Pn	07 34 40.8	+1.6
Z50A	Ashland baz=207	17.66	23	P	Pn	07 34 39.8	+0.6
254A	Abbeville baz=216	17.71	32	P	Pn	07 34 39.8	0.0
MNTX	Cornudas Mount 3.0nm,0.9s	17.73	327	*e*P	Pn	07 34 40.9	+0.8
MNTX	Cornudas Mount baz=143	17.73	327	P	Pn	07 34 39.6	-0.5
OXF	Oxford 17nm,0.6s	17.81	13	*e*P	Pn	07 34 43.3	+2.4
OXF	Oxford baz=195	17.81	13	P	Pn	07 34 40.8	-0.1
W39A	Magazine 25nm,0.8s	17.98	1	*e*P	Pn	07 34 42.4	-0.7
W39A	Magazine baz=181,SNR=7.3	17.98	1	P	Pn	07 34 41.8	-1.2
WMOK	Wichita Mounta 6.8nm,0.8s	18.01	348	*e*P	Pn	07 34 43.3	-0.1
Y49A	Blount Mountai 8.8nm,0.9s	18.03	21	*e*P	Pn	07 34 42.2	-1.4
W41B	Gary Mavity, V 12nm,1.0s	18.04	5	*e*P	Pn	07 34 42.8	-0.8
W41B	Gary Mavity, V baz=186	18.04	5	P	Pn	07 34 43.1	-0.5
X46A	Booneville baz=198	18.04	15	P	P	07 34 42.3	+0.3
255A	Hazlehurst 37nm,1.1s	18.11	34	*e*P	Pn	07 34 43.4	-1.2
255A	Hazlehurst baz=218	18.11	34	P	Pn	07 34 43.1	-1.4
WHAR	Wooly Hollow 15nm,1.0s	18.15	5	*e*P	Pn	07 34 44.2	-0.8
X47A	Russelville baz=200	18.19	17	P	P	07 34 42.9	-0.7
Z52A	Williamson baz=211	18.22	27	P	Pn	07 34 44.5	-1.3
GTBY	Guantanamo Bay 170nm,1.0s	18.24	78	*e*P	Pn	07 34 45.2	-0.9
Y50A	Piedmont baz=206	18.30	23	P	P	07 34 44.9	0.0
154A	Montrose baz=216	18.34	31	P	P	07 34 43.4	-1.9
X48A	Hartselle 5.5nm,1.1s	18.37	19	*e*P	Pn	07 34 48.3	+0.7
X48A	Hartselle baz=202	18.37	19	P	P	07 34 43.9	-1.7
MSTX	Muleshoe 17nm,1.1s	18.47	337	*e*P	Pn	07 34 48.5	-0.4
MSTX	Muleshoe baz=154	18.47	337	P	P	07 34 45.1	-1.7
Y51A	Rockmart baz=208	18.57	24	P	P	07 34 47.8	+0.1
PLAL	Pickwick Lake 8.8nm,1.0s	18.57	16	*e*P	Pn	07 34 50.4	+0.4
Z53A	Monticello baz=213	18.67	29	P	P	07 34 47.9	-1.0
TUL1	Leonard 8.2nm,0.7s	18.75	356	*e*P	Pn	07 34 52.0	-0.1
TUL1	Leonard baz=175	18.75	356	P	P	07 34 49.6	-0.2
GOGA	Godfrey 20nm,0.8s	18.83	29	*e*P	Pn	07 34 54.2	+1.3
GOGA	Godfrey baz=213	18.83	29	P	P	07 34 49.9	-0.7
X50B	Fort Payne baz=206	18.84	22	P	P	07 34 50.3	-0.5
AMTX	Amarillo 15nm,0.5s	18.92	341	*e*P	Pn	07 34 53.2	-0.8
AMTX	Amarillo baz=158	18.92	341	P	P	07 34 50.2	-1.4
Y52A	Lilburn 16nm,0.9s	18.95	27	*e*P	Pn	07 34 56.2	+1.9
Y52A	Lilburn baz=211,SNR=5.1	18.95	27	P	P	07 34 51.1	-0.8
W47A	Westpoint baz=200	18.95	17	P	P	07 34 50.6	-1.3
Z54A	Sparta baz=215	18.98	30	P	P	07 34 50.8	-1.5
HHAR	Hobbs 17nm,1.1s	19.07	0	*e*P	P	07 34 53.8	+0.6
Y53A	Monroe baz=212	19.15	28	P	P	07 34 53.0	-1.1
U40A	Yellville baz=184	19.17	3	P	P	07 34 54.1	-0.3
U41A	Viola baz=187	19.23	5	P	P	07 34 54.5	-0.5
W49A	Belvidere baz=204	19.23	20	P	P	07 34 53.9	-1.1
U42A	Revenden baz=189	19.30	7	P	P	07 34 54.9	-0.9
V46A	Holladay baz=198	19.34	15	P	P	07 34 54.8	-1.3
V47A	Nunnelly baz=199	19.52	16	P	P	07 34 57.7	-0.4
Y54A	Tignall baz=214	19.56	30	P	P	07 34 57.7	-0.9
W50A	Signal Mountai baz=206	19.63	22	P	P	07 34 58.3	-1.0
V48A	Smith Brothers baz=201	19.63	18	P	P	07 34 58.2	-1.1
X52A	Dahlonega baz=210	19.65	26	P	P	07 34 59.4	-0.2
121A	Cookes Peak, D baz=138,SNR=10	19.68	324	P	P	07 34 57.2	-2.8
WVT	Waverly baz=198	19.72	15	P	P	07 34 59.1	-1.1
319A	Douglas 12nm,0.9s	19.76	319	*e*P	Pn	07 35 03.9	-0.2
X53A	Estanollee baz=212	19.82	27	P	P	07 34 59.5	-1.8
U46A	Springville baz=197,SNR=5.2	19.86	14	P	P	07 35 00.6	-1.1
T41A	Mountain View baz=187	19.93	6	P	P	07 35 01.4	-1.2
V49A	McMinnville baz=204	19.94	20	P	P	07 35 02.1	-0.5
T42A	Van Buren baz=189	19.99	7	P	P	07 35 02.6	-0.6
T43A	Greenville baz=191	20.15	9	P	P	07 35 04.2	-0.7
U47A	Clarksville baz=199	20.16	16	P	P	07 35 04.5	-0.4
T44A	Benton baz=193	20.27	11	P	P	07 35 05.9	-0.2
BNM	Barren Site	20.31	329	*e*P	Pn	07 35 09.5	-1.3

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Y22D  IRIS PASSCAL I    20.40 328  P      P        07 35 04.9 -2.8
      baz=143
S41A  Jillco Farms,     20.48   5  P      P        07 35 08.1 -0.3
      baz=187
LENM  Lemitar           20.50 328 eP      Pn       07 35 11.7 -1.2
TKL   Tuckaleechee C    20.61  25  P      P        07 35 07.5 -2.3
      2.6nm,0.6s,baz=135,slow=11,SNR=3.8
S43A  Fulton Ridge,     20.66   9  P      P        07 35 09.0 -1.3
      baz=191
U49A  Red Boiling Sp    20.66  19  P      P        07 35 08.0 -2.3
      baz=203
T47A  Sharon Grove      20.72  16  P      P        07 35 10.2 -0.7
      baz=199
LAZ   Ladron            20.77 328 eP      P        07 35 12.4 +0.7
ANMO  Albuquerque       20.88 330  P      P        07 35 10.1 -2.7
      baz=146
ANMO  Albuquerque       20.88 330  P      P        07 35 12.6 -0.2
      2.0nm,0.9s,baz=148,slow=12,SNR=6.9
CCM   Cathedral Cave    20.99   6  P      P        07 35 12.4 -1.4
      baz=188
SMLC  San Martn de      21.21 110 eP      P        07 35 14.4 -2.0
SMLC  San Martn de      21.21 110 eP      P        07 35 14.4 -2.0
R41A  Rosebud           21.21   6  P      P        07 35 14.9 -1.3
      baz=188
T49A  Edmonton          21.28  19  P      P        07 35 14.9 -2.0
      baz=203
U52A  Thorn Hill        21.41  24  P      P        07 35 16.5 -2.0
      baz=209
TZTN  Tazewell          21.48  24  P      P        07 35 17.6 -1.5
      baz=209
S48A  Wiedeman Farm,    21.64  18  P      P        07 35 19.0 -1.8
      baz=201
T25A  Trinidad          21.89 337 eP      P        07 35 26.1 +2.4
      3.5nm,0.7s
T25A  Trinidad          21.89 337  P      P        07 35 21.2 -2.4
      baz=153
PTBC  PUERTO BERRIO,    21.92 116 eP      P        07 35 22.1 -1.8
PTBC  PUERTO BERRIO,    21.92 116 eP      P        07 35 22.1 -1.8
Q42A  Golden Eagle      21.92   8  P      P        07 35 21.9 -1.7
      baz=189
S49A  Springfield       21.98  19  P      P        07 35 21.7 -2.6
      baz=203
KSU1  Kansas State U    21.99 355 eP      P        07 35 27.5 +3.2
      6.4nm,1.0s
Q43A  New Douglas       22.06   9  P      P        07 35 23.2 -1.8
      baz=192
WCI   Wyandotte Cave    22.10  17  P      P        07 35 23.4 -2.0
      baz=200
OCAC  Ocana             22.12 111 eP      P        07 35 24.9 -1.2
OCAC  Ocana             22.12 111 eP      P        07 35 24.9 -1.2
S50A  Richmond          22.18  21  P      P        07 35 23.1 -3.1
      baz=205
POPC  Popayan, Colom    22.46 128 eP      P        07 35 29.7 +0.3
POPC  Popayan, Colom    22.46 128 eP      P        07 35 29.7 +0.3
Q47A  Bedord North L    22.73  16  P      P        07 35 30.8 -0.7
      baz=200
SOTA  Rioblanco         22.78 129 eP      P        07 35 34.0 +1.3
SOTA  Rioblanco         22.78 129 eP      P        07 35 34.0 +1.3
PCON  Cinco Dias        22.81 128 eP      P        07 35 35.0 +2.0
PCON  Cinco Dias        22.81 128 eP      P        07 35 35.0 +2.0
MARP  Paez Belalcaza    22.81 127 eP      P        07 35 33.5 +0.8
MARP  Paez Belalcaza    22.81 127 eP      P        07 35 33.5 +0.8
OTAV  Otavalo           22.81 136 eP      P        07 35 34.8 +1.9
      2.8nm,0.8s
ROSC  El Rosal          22.93 120  P      P        07 35 34.0 +0.1
      3.9nm,0.4s,baz=45,slow=20,SNR=3.7
PAMC  Pamplona, Colo    23.07 112 eP      P        07 35 34.0 -1.4
PAMC  Pamplona, Colo    23.07 112 eP      P        07 35 34.0 -1.4
P46A  Rosedale          23.19  14  P      P        07 35 35.1 -0.6
      baz=197
RUSC  La Rusia          23.42 116 eP      P        07 35 37.7 -0.9
RUSC  La Rusia          23.42 116 eP      P        07 35 37.7 -0.9
CHIC  Chingaza          23.53 120 eP      P        07 35 38.9 -0.6
CHIC  Chingaza          23.53 120 eP      P        07 35 38.9 -0.6
FLOC  Florencia         23.85 128 eP      P        07 35 43.7 +1.7
FLOC  Florencia         23.85 128 eP      P        07 35 43.7 +1.7
TAMC  Tame, Arauca      24.28 113 eP      P        07 35 43.7 -2.2
TAMC  Tame, Arauca      24.28 113 eP      P        07 35 43.7 -2.2
M40A  Post Highland     24.29   5  P      P        07 35 43.6 -2.0
      baz=186
SDV   Santo Domingo     24.29 107 eP      P        07 35 45.1 -1.0
      12nm,0.8s
SDV   Santo Domingo     24.29 107 eP      P        07 35 45.3 -0.9
SDV   Santo Domingo     24.29 107 eP      P        07 35 45.3 -0.9
SDV   Santo Domingo     24.29 107  P      P        07 35 45.2 -0.9
      12nm,0.7s,baz=283,slow=4.6,SNR=18
PV01  Paradox Valley    24.46 332 eP      P        07 35 51.3 +3.8
      4.4nm,1.0s
PV01                              epP     pP       07 36 25.0 +5.8
PV13  Radium Mtn., P    24.59 331 eP      P        07 35 52.6 +3.9
      6.9nm,1.0s
PV03  Paradox Valley    24.68 331 eP      P        07 35 53.0 +3.5
      4.1nm,0.6s
PV12  Saucer Basin,     24.71 332 eP      P        07 35 53.7 +3.9
      8.4nm,1.2s
PV12                              epP     pP       07 36 27.3 +5.4
PV11  David Mesa, Pa    24.73 331 eP      P        07 35 53.6 +3.7
      4.3nm,0.7s
PV23  Carpenter Ridg    24.92 331 eP      P        07 35 54.3 +2.6
      8.8nm,1.0s
PV23                              epP     pP       07 36 25.8 +1.6
GUVC  San Jose del G    25.62 122 eP      P        07 36 00.2 +2.2
GUVC  San Jose del G    25.62 122 eP      P        07 36 00.2 +2.2
XPFO  Pion Flat         25.91 313 eP      P        07 36 07.6 +7.0
      56nm,0.3s
ATAH  Atahualpa         28.70 146  P      P        07 36 28.9 +3.1
      11nm,0.9s,baz=343,slow=6.8,SNR=5.6
SNOW  Snow King Moun    29.79 335 eP      P        07 36 36.9 +1.7
      3.6nm,0.9s
NVAR  Mina Array Bea    29.96 320  P      P        07 36 38.3 +1.6
      0.4nm,0.4s,baz=159,slow=8.9,SNR=4.4
BEKR  Beckworth         32.10 320 eP      P        07 36 54.1 -1.3
      12nm,0.7s
ULM   Lac du Bonnet     33.06 358  P      P        07 37 01.1 -2.2
      2.0nm,0.7s,baz=181,slow=12,SNR=3.0
F10A  Beach Ranch, E    34.59 331 eP      P        07 37 17.6 +0.9
      4.7nm,1.1s
LPAZ  La Paz            41.95 141 eP      P        07 38 18.6 -0.6
      4.0nm,0.8s
LPAZ  La Paz            41.95 141  P      P        07 38 19.6 +0.4
      4.5nm,0.9s,baz=332,slow=10,SNR=12
LPAZ                               LR     LR       07 53 57.3
      comp=Z,38nm,18.7s,baz=312,slow=33
YKA   Yellowknife Ar    47.52 347  P      P        07 39 01.4 -0.6
      2.0nm,0.6s,baz=153,slow=7.2,SNR=65
BDFB  Brasilia          55.93 123  P      P        07 40 05.0 -0.1
      1.0nm,0.3s,baz=191,slow=3.9,SNR=3.2
CPUP  Villa Florida     56.09 140  LR     LR       08 04 08.7
      comp=Z,17nm,18.5s,baz=221,slow=36
INK   Inuvik            56.87 344 eP      P        07 40 11.2 +0.5
      5.7nm,1.1s
ILAR  Eielson Array     59.16 337  P      P        07 40 27.6 +0.7
      0.4nm,0.5s,baz=134,slow=5.0,SNR=10
PLCA  Paso Flores       61.60 160 eP      P        07 40 45.0 +1.2
      14nm,1.0s
NOA   NORSAR Array B    82.37  28  P      P        07 42 47.6 +0.5
      0.2nm,0.3s,baz=289,slow=5.0,SNR=3.3
ARCES ARCESS Array B    83.80  18  P      P        07 42 53.9 -0.4
      2.2nm,0.6s,baz=318,slow=3.4,SNR=10
DBIC  Dimbokro          87.36  84  P      P        07 43 11.9 -1.0
      1.3nm,0.5s,baz=252,slow=3.2,SNR=3.4
GERES GERESS Array B    88.48  39  P      P        07 43 17.4 -0.2
      0.7nm,0.8s,baz=292,slow=4.2,SNR=6.0
MKAR  Makanchi Array   116.28   3  PKP    PKPdf    07 49 06.9 -1.0
      0.1nm,0.6s,baz=315,slow=0.2,SNR=2.8
LZH   Lanzhou          124.40 342 ePKP    PKPdf    07 49 22.9 -1.0
LZH                                pPKP   pPKPdf   07 50 04.3 -1.0
LZH                                sPKP            07 50 24.5
WRA   Warramunga Arr   134.09 259  PKP    PKPdf    07 49 42.2 -0.3
      0.3nm,0.4s,baz=17,slow=0.9,SNR=12
ASAR  Alice Springs    134.69 253  PKP    PKPdf    07 49 43.4 -0.2
      0.5nm,0.9s,baz=64,slow=2.2,SNR=4.0
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*KRAR **20** 07:38:17.4±0.1, 55°.54N×86°.02E, M2.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*NNC **20** 07:38:20.2±3.1, 55°.25N×86°.67E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=49.5km s-min=19.1km az=129.0, Suspected Mining explosion.*

IDC 20 07:38:20.3±2.6**, 55°.38N**×**86°.46E, h0**^{km}**, mb1 3.2**/3**, mb1mx3.1**/40**, mbtmp3.2**/3**, ML3.0**/3**, 7C-4D, Error ellipse: s-maj=22.5km s-min=14.4km az=57.0, Southwestern Siberia**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time      Res
                                   Op      ISC       h  m  s     ISC
I46RU ZALESOVO INFRA    1.72 214  i                  07 48 30.4
      baz=29,slow=334,SNR=9.6
ZAA0  Zalesovo Array    1.72 214  ⇑P      Pn         07 38 50.4 -1.2
      9.8nm,0.7s
ZAA0                              ⇓S      Sn         07 39 13.7 -0.5
      12nm,0.7s
ZALV  Zalesovo Beam     1.72 214   Pg     Pn         07 38 50.4 -1.1
      3.7nm,0.3s,baz=34,slow=16,SNR=35
ZALV                               Lg     Lg         07 39 15.6
      3.4nm,0.3s,baz=38,slow=27,SNR=8.8
KURK  Kurchatov         6.64 229  ⇓Pn     Pn         07 39 58.7 -0.4
      2.6nm,1.0s
KURK                              ⇑Lg     Lg         07 41 50.0
      6.2nm,0.8s
KURBB Kurchatov Arra    6.75 228  ⇑Pn     Pn         07 40 01.1 +0.5
      0.8nm,0.3s
KURBB                             ⇑Lg     Lg         07 41 53.3
      12nm,0.8s
KURBB Kurchatov Arra    6.75 228   Pn     Pn         07 40 00.8 +0.3
      0.1nm,0.3s,baz=46,slow=14,SNR=4.4
KURBB                              Lg     Lg         07 41 54.9
      0.1nm,0.3s,baz=42,slow=32,SNR=5.3
MK31  Makanchi Array    8.99 199  ⇓Pn     Pn         07 40 32.2 +0.8
      0.6nm,0.7s,baz=27,slow=13,SNR=8.4
MK31                              ⇑Sn     Sn         07 42 13.7 +0.5
      1.3nm,0.7s
MK31                              ⇓Lg     Lg         07 43 01.9
      1.7nm,0.8s,baz=27,slow=28,SNR=3.6
MKAR  Makanchi Array    8.99 199   Pn     Pn         07 40 31.7 +0.4
      0.1nm,0.3s,baz=15,slow=13,SNR=9.1
MKAR                               Sn     Sn         07 42 11.5 -1.7
      0.1nm,0.3s,baz=14,slow=22,SNR=5.9
MKAR                               Lg     Lg         07 43 05.2
      0.0nm,0.3s,baz=28,slow=28,SNR=5.9
MAKZ  Makanchi          9.03 200  ⇑Sn     Sn         07 42 13.1 -1.2
      1.4nm,0.8s
MAKZ                              ⇑Lg     Lg         07 43 06.4
      2.9nm,1.2s
BVAR  Borovoye Array    9.71 263   Pn     Pn         07 40 40.0 -1.1
      0.3nm,0.3s,baz=62,slow=16,SNR=8.5
BVAR                               Sn     Sn         07 42 27.1 -3.7
      0.1nm,0.3s,baz=59,slow=29,SNR=3.9
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*IDC **20** 07:50:00.9±1.9, 8°.02S×125°.37E, h0^{km}, mb3.3/1, mb1 3.6/3, mb1mx3.3/31, mbtmp3.4/3, ML3.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/16, Error ellipse: s-maj=268.3km s-min=32.0km az=60.0*

*ISCJB **20** 07:50:01.4±1.2, 8°.53S±0°.08×124°.5E±0°.1, h20^{km}, mb3.2/1, MS3.0/1, Error ellipse: s-maj=15.8km s-min=11.1km az=168.7*

*DJA **20** 07:50:11.8±0.9, 9°S±3°×12°4E±°, h72^{km}±13^{km}, M3.1/5, MLv3.1/5*

ISC 20 07:50:03.5±1.4**, 8°.58S**±0°.09×**124°.5E**±0°.1**, h20**^{km}**, n7, σ1ˢ.85**/7**, Timor region**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time      Res
                                   Op      ISC       h  m  s     ISC
SOEI  Soe               1.19 190   P      Pb         07 50 27.9 +2.5
SOEI                               S      Sb         07 50 40.1 -0.3
BATI  Baumata           1.81 207   P      Pn         07 50 31.2 -2.3
EDFI  Ende, Flores      2.77 266   P      Pn         07 50 45.8 -1.0
EDFI                               S      Sn         07 51 11.8 -8.0
WRA   Warramunga Arr   14.78 141   Pn     Pn         07 53 31.5 -0.1
      0.2nm,0.3s,baz=327,slow=14,SNR=11
WRA                                Sn     Sn         07 56 01.4  -13
      0.7nm,0.3s,baz=317,slow=24,SNR=12
ASAR  Alice Springs    17.50 150   P      P          07 54 06.8 -0.8
      0.2nm,0.3s,baz=323,slow=12,SNR=12
ASAR                               S      Sn         07 57 07.9  -13
      0.2nm,0.3s,baz=314,slow=20,SNR=6.5
GUMO  Guam             29.91  43   LR     LR         08 08 16.2
      comp=Z,39nm,19.5s,baz=82,slow=38
MKAR  Makanchi Array   66.69 330   P      P          08 00 53.5 +0.5
      0.1nm,0.4s,baz=127,slow=7.3,SNR=4.3
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*IDC **20** 07:58:05.7±1.1, 4°.01S×135°.52E, h0^{km}, mb3.9/5, mb1 4.1/10, mb1mx3.9/39, mbtmp4.0/10, ML3.8/5, MS3.1/2, Ms1 3.1/2, ms1mx2.5/31, Error ellipse: s-maj=30.8km s-min=22.8km az=55.0*

*ISCJB **20** 07:58:07.1±0.5, 4°.01S±0°.04×135°.44E±0°.06, h20^{km}, mb3.9/5, MS3.1/1, Error ellipse: s-maj=9.0km s-min=5.7km az=177.4*

*DJA **20** 07:58:08.0±1.1, 4°S±6°×13°5E±°, h13^{km}±4^{km}, M4.5/7, mb4.6/1, mB5.3/1, MLv4.5/7, Mw(mB)4.7/1*

ISC 20 07:58:08.3±0.7**, 4°.06S**±0°.06×**135°.43E**±0°.07**, h20**^{km}**, n17, σ1ˢ.74**/21**, mb4.0**/5**, Irian Jaya region**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time      Res
                                   Op      ISC       h  m  s     ISC
SRPI  Serui, Papua      2.32  20   P      Pn         07 58 43.6 -1.8
SRPI                               S      Sn         07 59 12.2 -1.2
RKPI  Ransiki, Papua    2.83 334   P      Pn         07 58 52.2 -0.2
RKPI                               S      Sn         07 59 25.4 -0.5
BAKI  Biak              2.93  13   P      Pn         07 58 53.4 -0.4
FAKI  Fak Fak           3.37 290   P      Pn         07 58 59.7 -0.2
SIJI  Sorong            5.23 307   Pn     Pn         07 59 25.5  0.0
      7.9nm,0.3s,baz=288,slow=23,SNR=45
SIJI                               Sn     Sn         08 00 21.9 -3.4
      7.3nm,0.3s,baz=321,slow=23,SNR=6.2
SWI   Sorong            5.24 307   P      Pn         07 59 25.8 +0.2
JAY   Jayapura          5.48  74   Pn     Pn         07 59 28.9  0.0
      0.6nm,0.3s,baz=145,slow=16,SNR=2.0
JAY                                LR     LR         08 02 07.4
      comp=Z,141nm,18.1s,baz=164,slow=45
WRA   Warramunga Arr   15.82 184   Pn     Pn         08 01 51.0 +1.0
      0.3nm,0.3s,baz=8.6,slow=13,SNR=15
WRA                                Sn     Sn         08 04 41.3 -3.7
      0.5nm,0.3s,baz=9.7,slow=24,SNR=5.3
FITZ  Fitzroy Crossi   16.93 214   Pn     Pn         08 02 03.2 -0.9
      0.7nm,0.3s,baz=38,slow=9.6,SNR=18
FITZ                               Sn     Sn         08 05 03.0 -8.8
      0.9nm,0.3s,baz=189,slow=12,SNR=8.2
CTA   Charters Tower   19.11 147   P      Pn         08 02 31.4 +0.5
      0.1nm,0.3s,baz=317,slow=12,SNR=2.0
ASAR  Alice Springs    19.55 184   P      Pn         08 02 40.0 +3.8
      0.7nm,0.3s,baz=8.2,slow=11,SNR=48
ASAR                               S      S          08 06 12.9 -2.1
      0.2nm,0.3s,baz=4.4,slow=28,SNR=4.2
STKA  Stephens Creek   28.27 169   LR     LR         08 16 00.0
      comp=Z,46nm,19.1s,baz=29,slow=38
SONM  Songino Array    57.61 337   P      P          08 07 57.9 +0.8
      0.5nm,0.7s,baz=144,slow=5.8,SNR=3.0
MKAR  Makanchi Array   68.90 324   P      P          08 09 13.2 +1.3
      0.5nm,0.5s,baz=114,slow=8.3,SNR=7.1
BVAR  Borovoye Array   78.57 326   P      P          08 10 09.0 +0.6
      2.1nm,1.0s,baz=120,slow=5.8,SNR=7.1
NRIK  Noril'sk         80.11 345   P      P          08 10 16.8 +0.3
      1.1nm,0.4s,baz=143,slow=3.4,SNR=3.9
ILAR  Eielson Array    88.42  25   P      P          08 10 58.1 -0.6
      0.7nm,0.8s,baz=263,slow=5.1,SNR=5.1
```

WEL 20 08:03:33.9, 39°.3S±0°.7×**17°7E**±°**, h22**^{km}±2^{km}**, ML3.8**/14**, Off east coast of North Island**

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Code  Station Name       Δ°   AZ°   Phase ID            Time      Res
                                   Op      ISC       h  m  s     ISC
WHHZ  Waihua            0.22 326   P      Pb         08 03 39.7 +0.1
WHHZ                               S      Sb         08 03 44.8 +1.3
ARHZ  Aropaoanui        0.31 269   P      Pb         08 03 41.2 +0.3
ARHZ                               S      Sn         08 03 47.3 -1.6
KNZ   Kokohu            0.32  43   P      Pb         08 03 41.8 +0.7
KNZ                                S      Sn         08 03 48.0 -1.2
MHGZ  Mahia Peninsul    0.41  75   P      Pn         08 03 43.8 -0.7
RAHZ  Arahi             0.42 325   P      Pb         08 03 42.8 +0.1
RAHZ                               S      Sb         08 03 50.0 +1.4
CKHZ  Cape Kidnapper    0.47 211   P      Pn         08 03 44.5 -0.8
SNGZ  Shannon Statio    0.48 355   P      Pb         08 03 44.1 +0.4
NMHZ  Naumai            0.48 289   P      Pb         08 03 44.0 +0.2
NMHZ                               S      Sn         08 03 52.1 -1.2
PRGZ  Paritu Road       0.51  49   P      Pb         08 03 45.0 +0.7
MCHZ  McNeill Hill      0.57 251   P      Pb         08 03 45.9 +0.7
MTHZ  Maungataniwha     0.59 313   P      Pb         08 03 45.3 -0.3
MTHZ                               S      Sb         08 03 54.5 +0.9
RIGZ  Rimuhau           0.62  28   P      Pb         08 03 46.6 +0.4
RIGZ                               P      Pn         08 03 46.6 -0.8
KAHZ  Kahuranaki        0.67 217   P      Pb         08 03 47.4 +0.5
BKZ   Black Stump Fm    0.70 277   P      Pb         08 03 47.4 -0.2
BKZ                                S      Sn         08 03 58.1 -0.8
RTZ   Ruatahuna         0.72 333   P      Pb         08 03 47.6 -0.3
RAGZ  Rawiri            0.76   1   P      Pb         08 03 48.6 +0.1
RAGZ                               P      Pb         08 03 48.6 +0.1
KWHZ  Kaweka Forest     0.77 257   P      Pb         08 03 48.6 -0.1
KWHZ                               S      Sn         08 03 59.9 -0.6
MRHZ  Matea Rd          0.87 299   P      Pb         08 03 50.1 -0.3
MRHZ                               S      Sn         08 04 02.4 -0.5
TKGZ  Te Karaka         0.89  24   P      Pb         08 03 50.3 -0.4
MWZ   Matawai           0.93   7   P      Pb         08 03 50.6 -0.8
CNGZ  Carnagh Statio    1.00  40   P      Pb         08 03 51.8 -0.8
URZ   Urewera           1.02 347   P      Pn         08 03 52.2 -0.7
URZ                                S      Sn         08 04 06.3 -0.3
BHHZ  Black Hill Sta    1.06 257   P      Pn         08 03 52.5 -0.9
ALRZ  Allen Road        1.07 310   P      Pn         08 03 53.3 -0.4
HATZ  Hinemaiaia        1.08 290   P      Pn         08 03 53.6 -0.1
PRRZ  Plateau Road      1.09 314   P      Pn         08 03 53.4 -0.4
WPHZ  Waipukurau        1.09 222   P      Pn         08 03 53.5 -0.3
RRRZ  Republican Roa    1.15 323   P      Pn         08 03 54.2 -0.5
PRHZ  Porangahau        1.16 210   P      Pn         08 03 53.5 -1.4
TWGZ  Tauwhareparae     1.17  23   P      Pn         08 03 54.3 -0.7
WPRZ  Whakapapatarin    1.21 307   P      Pn         08 03 55.7 +0.2
HRRZ  Handcock Road     1.23 315   P      Pn         08 03 55.3 -0.4
RITZ  Rihia Road        1.23 283   P      Pn         08 03 55.7 -0.1
TARZ  Mount Tarawera    1.23 326   P      Pn         08 03 55.7 -0.3
MOVZ  Moawhango         1.28 263   P      Pn         08 03 56.4 -0.2
HSRZ  Hossack Road      1.30 316   P      Pn         08 03 56.6 -0.2
RUGZ  Raukumara Rang    1.31  10   P      Pn         08 03 56.0 -1.0
RATZ  Rangitukua        1.32 287   P      Pn         08 03 56.7 -0.4
TUVZ  Tukino            1.35 269   P      Pn         08 03 57.3 -0.2
KATZ  Kakaramea         1.35 282   P      Pn         08 03 57.3 -0.3
TSZ   Takapari Road     1.36 234   P      Pn         08 03 56.7 -0.9
PUZ   Puketiti          1.36  30   P      Pn         08 03 56.2 -1.4
KRVZ  Karewarewa        1.37 276   P      Pn         08 03 57.7 -0.1
NGZ   Ngauruhoe         1.39 273   P      Pn         08 03 57.8 -0.4
WHVZ  Whangaehu Hut     1.40 268   P      Pn         08 03 58.0 -0.4
DVHZ  Dannevirke        1.40 222   P      Pn         08 03 56.9 -1.3
WTVZ  West Tongariro    1.41 275   P      Pn         08 03 58.4 +0.1
FWVZ  Far West T-bar    1.43 270   P      Pn         08 03 58.2 -0.5
TRVZ  Turoa             1.43 268   P      Pn         08 03 58.3 -0.5
COVZ  Chateau Observ    1.44 272   P      Pn         08 03 58.3 -0.4
KUTZ  Kaahu Road        1.45 302   P      Pn         08 03 58.2 -0.6
MTVZ  Mangateitei       1.50 265   P      Pn         08 03 59.1 -0.4
HAZ   Te Kaha           1.53  12   P      Pn         08 03 59.1 -0.8
TWVZ  Taurewa           1.53 276   P      Pn         08 03 59.7 -0.3
OPRZ  Ohinepanea        1.56 335   P      Pn         08 03 59.3 -1.0
PKVZ  Pokaka            1.59 268   P      Pn         08 04 00.7 -0.1
BFZ   Birch Farm        1.67 211   P      Pn         08 03 59.5 -2.3
PRWZ  Pori Road         1.69 220   P      Pn         08 04 00.9 -1.3
TLZ   Tolley Road       1.72 302   P      Pn         08 04 01.7 -0.8
TIWZ  Tintock           1.91 217   P      Pn         08 04 03.7 -1.5
WAZ   Wanganui          1.93 254   P      Pn         08 04 05.9 +0.5
MRZ   Mangatainoka R    1.98 224   P      Pn         08 04 04.6 -1.5
VRZ   Vera Road         2.05 273   P      Pn         08 04 07.5 +0.4
HIZ   Hauiti            2.12 290   P      Pn         08 04 08.1 +0.2
HOWZ  Holdsworth Sta    2.18 221   P      Pn         08 04 07.7 -1.1
MTW   Mount Morrison    2.39 217   P      Pn         08 04 09.1 -2.6
KIW   Kapiti Island     2.49 229   P      Pn         08 04 11.4 -1.7
CAW   Cannon Point      2.57 223   P      Pn         08 04 12.1 -2.1
PKE   Pukeiti           2.65 270   P      Pn         08 04 16.0 +0.7
PLWZ  Palliser          2.83 215   P      Pn         08 04 14.8 -3.0
DUWZ  D'Urville Isla    3.08 239   P      Pn         08 04 19.3 -1.9
QRZ   Quartz Range      4.05 246   P      Pn         08 04 31.6 -2.9
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*ISCJB **20** 08:03:41.1±0.8, 16°.46N±0°.05×99°.00W±0°.03, h20^{km}±6^{km}, mb4.2/37, MS3.5/6, Error ellipse: s-maj=8.5km s-min=3.8km az=21.0*

*IDC **20** 08:03:42.5±3.7, 16°.86N×98°.81W, h0^{km}, mb4.1/6, mb1 4.2/10, mb1mx3.9/42, mbtmp3.9/10, ML3.3/4, MS3.3/7, Ms1 3.3/7, ms1mx3.0/39, Error ellipse: s-maj=81.4km s-min=21.4km az=24.0*

*MEX **20** 08:03:42.5±0.8, 16°.42N×99°.06W, h1^{km}±9^{km}, MD4.2*

*NEIC **20** 08:03:42.5±0.0, 16°.42N×99°.06W, h1^{km}, mb4.3/40, MD4.2(MEX), After MEX.*

NEIC Felt at Azoyu.

ISC 20 08:03:40.5±1.2**, 16°.38N**±0°.05×**99°.07W**±0°.03**, h13**^{km}±8^{km}**, n109, σ1ˢ.81**/135**, mb4.3**/37**, MS3.3**/6**, Near coast of Guerrero**

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Code  Station Name       Δ°   AZ°   Phase ID            Time      Res
                                   Op      ISC       h  m  s     ISC
PNIG  Pinotepa          0.90  89  ePg     Pg         08 03 58.2 +0.2
PNIG                              eSn     Sg         08 04 09.6 -0.3
PNIG  Pinotepa          0.90  89  eP      Pg         08 03 58.2 +0.2
PNIG                              eS      Sg         08 04 09.6 -0.3
ACP2  Acapulco          0.93 302  eP      Pg         08 03 57.9 -0.6
ACP2                              i S     Sg         08 04 10.4 -0.2
CAIG  El Cayaco         1.33 300  ePn     Pn         08 04 03.5 -1.3
CAIG                              eSn     Sb         08 04 21.5 -0.8
CAIG  El Cayaco         1.33 300  eP      Pn         08 04 03.5 -1.3
CAIG                              eS      Sb         08 04 21.5 -0.8
MEIG  Mezcala           1.63 341  ePn     Pn         08 04 07.8 -1.2
MEIG                              eSn     Sn         08 04 28.2 -1.8
MEIG  Mezcala           1.63 341  eP      Pn         08 04 07.8 -1.2
MEIG                              eS      Sn         08 04 28.2 -1.8
PLIG  Platanillo        2.05 348  ePn     Pn         08 04 14.2 -0.6
PLIG                              eSn     Sn         08 04 37.8 -2.6
PLIG  Platanillo        2.05 348  eP      Pn         08 04 14.2 -0.6
PLIG                              eS      Sn         08 04 37.8 -2.6
ARIG  Puente Sto Nin    2.25 327  eP      Pn         08 04 17.4 -0.2
ARIG                              eS      Sn         08 04 43.5 -1.9
ARIG  Puente Sto Nin    2.25 327  eP      Pn         08 04 17.4 -0.2
ARIG                              eS      Sn         08 04 43.5 -1.9
VHO   Vista Hermosa     2.34  72  ePn     Pn         08 04 19.0  0.0
VHO                               eSn     Sn         08 04 46.4 -1.4
VHO   Vista Hermosa     2.34  72  eP      Pn         08 04 19.0  0.0
VHO                               eS      Sn         08 04 46.4 -1.4
OXBJ  Oaxaca            2.35  73  eP      Pn         08 04 19.6 +0.5
YAIG  Yautepec          2.47   0  ePn     Pn         08 04 20.9 +0.2
YAIG                              eSn     Sn         08 04 50.8 -0.1
YAIG  Yautepec          2.47   0  eP      Pn         08 04 20.9 +0.2
YAIG                              eS      Sn         08 04 50.8 -0.1
MAVM  Malinalco, Edo    2.60 351  eP      Pn         08 04 24.9 +2.3
MAVM  Malinalco, Edo    2.60 351  eP      Pn         08 04 24.9 +2.3
ZIIG  Zihuatanejo       2.60 298  ePn     Pn         08 04 26.0 +3.7
ZIIG                              eSn     Sb         08 05 01.4 +2.5
ZIIG  Zihuatanejo       2.60 298  i P     Pn         08 04 26.0 +3.7
ZIIG                              eS      Sb         08 05 01.4 +2.5
TPIG  Tehuac#an         2.60  38  ePn     Pn         08 04 21.2 -1.4
TPIG                              eSn     Sn         08 04 52.5 -1.7
TPIG  Tehuac#an         2.60  38  eP      Pn         08 04 21.2 -1.4
TPIG                              i S     Sn         08 04 52.5 -1.7
PPM   Popocatepetl      2.71   9  ePn     Pn         08 04 23.2 -1.1
PPM                               eSn     Sb         08 05 01.4 -1.2
PPM   Popocatepetl      2.71   9  eP      Pn         08 04 23.2 -1.1
PPM                               eS      Sb         08 05 01.4 -1.2
AMVM  AMECAMECA         2.75   6  eP      Pb         08 04 30.2 +0.3
PHPU  Puebla            2.79  18  eP      Pn         08 04 23.6 -1.6
HUIG  Huatulco          2.91 102  ePn     Pn         08 04 27.4 +0.8
HUIG                              eSn     Sn         08 04 56.8 -4.8
HUIG  Huatulco          2.91 102  eP      Pn         08 04 27.4 +0.8
HUIG                              eS      Sn         08 04 56.8 -4.8
UNM   Universidad Na    2.94 358  ePn     Pn         08 04 28.3 +1.0
UNM                               ePn     Pn         08 04 31.0 +3.7
UNM                               eSn     Sn         08 05 06.1 +3.4
UNM   Universidad Na    2.94 358  i P     Pn         08 04 31.0 +3.7
UNM                               eS      Sn         08 05 06.1 +3.4
TOVM  TOLUCA            2.95 349  eP      Pn         08 04 29.8 +2.3
PBVM  Pinon             3.05 360  ePn     Pn         08 04 27.0 -1.5
PBVM  Pinon             3.05 360  eP      Pn         08 04 27.0 -1.5
AZVM  Cuida Lopez Ma    3.20 356  eP      Pn         08 04 33.5 +2.6
PTVM  Pico Tres Padr    3.20 359  ePn     Pn         08 04 33.0 +2.2
PTVM  Pico Tres Padr    3.20 359  eP      Pn         08 04 33.0 +2.2
VTVM  Tizayuca          3.39   5  eP      Pb         08 04 40.5 -0.2
MOIG  Morelia           3.85 329  ePn     Pn         08 04 44.4 +4.6
MOIG                              ePn     Pn         08 04 45.3 +5.4
MOIG  Morelia           3.85 329  eP      Pn         08 04 45.3 +5.4
DEIG  Demacu            3.90   0  ePg     Pb         08 04 49.9 +0.4
DEIG  Demacu            3.90   0  eP      Pb         08 04 49.9 +0.4
CMIG  Matias Romero     4.07  79  ePn     Pn         08 04 42.2 -0.5
CMIG                              eSn     Sn         08 05 27.2 -3.0
CMIG                              eSg     Sn         08 05 34.6 +4.4
CMIG                              eLg     Lg         08 05 49.4
CMIG  Matias Romero     4.07  79  eP      Pn         08 04 42.2 -0.5
CMIG                              i S     Sn         08 05 34.6 +4.4
CMIG  Matias Romero     4.07  79   Pn     Pn         08 04 42.4 -0.2
      4.2nm,0.3s,baz=262,slow=11,SNR=19
CMIG                               Sn     Sn         08 05 27.2 -3.0
      8.9nm,0.3s,baz=241,slow=19,SNR=2.8
CMIG                               Lg     Lg         08 05 49.4
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	69nm,0.3s,baz=350,slow=19,SNR=28						
LVIG	**Laguna Verde**	**4.18**	**37**	*e*Pn	Pn	08 04 40.8	-3.2
LVIG				*e*Pn	**Pn**	**08 04 42.1**	**-1.9**
LVIG	**Laguna Verde**	**4.18**	**37**	*e*P	Pn	08 04 40.8	-3.2
PCIG		**5.66**	**96**	*e*Pn	**Pn**	**08 05 02.8**	**-1.7**
PCIG		**5.66**	**96**	*e*P	**Pn**	**08 05 02.8**	**-1.7**
PCIG				*e*		08 05 02.8	
CCIG	**Comitan**	**6.66**	**90**	*e*Pn	**Pn**	**08 05 22.3**	**+4.0**
APG	**El Apazote**	**8.40**	**98**	Pn	**Pn**	**08 05 44.3**	**+2.0**
	0.3nm,0.3s,baz=288,slow=15,SNR=5.7						
APG				Sn	**Sn**	**08 07 15.9**	**-1.2**
	1.1nm,0.3s,baz=314,slow=13,SNR=4.8						
APG				Lg	Lg	08 08 16.2	
	1.4nm,0.3s,baz=315,slow=20,SNR=4.3						
TX31	**Lajitas Ar. Si**	**13.57**	**343**	*e*Pn	**Pn**	**08 06 53.4**	**+0.4**
TX31				*e*Pn	**Pn**	**08 06 53.5**	**+0.5**
TXAR	**Lajitas Array**	**13.57**	**343**	Pn	**Pn**	**08 06 54.1**	**+1.2**
	0.0nm,0.3s,baz=158,slow=13,SNR=6.0						
TXAR				Lg	Lg	08 10 54.2	
	0.0nm,0.3s,baz=155,slow=30,SNR=6.8						
TXAR				LR	LR	08 12 49.9	
	comp=Z,103nm,20.6s,baz=0.0,slow=42						
JCT	**Junction City**	**14.05**	**357**	*e*Pn	**Pn**	**08 06 58.7**	**-0.9**
WHTX	**Lake Whitney,**	**15.62**	**5**	*e*Pn	**Pn**	**08 07 20.5**	**0.0**
	17nm,0.8s						
MNTX	**Cornudas Mount**	**16.30**	**340**	*e*Pn	**Pn**	**08 07 29.8**	**+0.5**
	4.1nm,1.1s						
GDL2	**Guadalupe Moun**	**16.47**	**344**	*e*Pn	**Pn**	**08 07 31.4**	**-0.2**
319A	**Douglas**	**17.59**	**330**	*e*Pn	**Pn**	**08 07 45.1**	**-0.6**
	6.1nm,0.9s						
MSTX	**Muleshoe**	**17.83**	**350**	*e*Pn	**Pn**	**08 07 48.3**	**-0.3**
	13nm,0.8s						
AMTX	**Amarillo**	**18.58**	**353**	*e*P	**P**	**08 07 57.6**	**+0.1**
	10nm,0.7s						
W39A	**Magazine**	**19.33**	**13**	*e*P	**P**	**08 08 04.9**	**-0.7**
	12nm,0.8s						
ANMO	**Albuquerque**	**19.64**	**342**	*e*P	**P**	**08 08 08.9**	**-0.4**
	3.7nm,1.1s						
ANMO	**Albuquerque**	**19.64**	**342**	P	**P**	**08 08 09.6**	**+0.3**
	0.2nm,0.3s,baz=146,slow=13,SNR=9.2						
ANMO				LR	LR	08 16 42.0	
	comp=Z,126nm,18.2s,baz=119,slow=40						
TUL1	**Leonard**	**19.67**	**8**	*e*P	**P**	**08 08 08.5**	**-0.9**
	15nm,0.8s						
X16A	**Lo Mia Camp, P**	**21.12**	**331**	*e*P	**P**	**08 08 24.7**	**-0.7**
	11nm,0.8s						
GOGA	**Godfrey**	**22.04**	**37**	*e*P	**P**	**08 08 33.8**	**-1.3**
	12nm,1.0s						
WVT	**Waverly**	**22.07**	**25**	*e*P	**P**	**08 08 33.4**	**-1.9**
	5.8nm,0.8s						
S22A	**4UR Ranch, Cre**	**22.36**	**344**	*e*P	**P**	**08 08 38.4**	**-0.4**
	5.2nm,1.0s						
MVCO	**Mesa Verde**	**22.37**	**340**	*e*P	**P**	**08 08 39.0**	**+0.2**
	9.9nm,0.8s						
FVM	**French Village**	**22.83**	**18**	*e*P	**P**	**08 08 42.2**	**-1.3**
	5.2nm,0.6s						
CPCT	**Cooper Cave**	**23.01**	**32**	*e*P	**P**	**08 08 45.3**	**0.0**
	6.7nm,0.7s						
PV03	**Paradox Valley**	**23.43**	**340**	*e*P	**P**	**08 08 49.9**	**+0.1**
	3.0nm,0.9s						
PV04	**Paradox Valley**	**23.58**	**340**	*e*P	**P**	**08 08 52.5**	**+1.3**
	5.8nm,1.0s						
ISCO	**Idaho Springs**	**24.03**	**348**	*e*P	**P**	**08 08 56.7**	**+1.1**
	3.0nm,0.8s						
P42A	**Winchester**	**24.35**	**17**	*e*P	**P**	**08 08 56.9**	**-1.4**
	16nm,0.9s						
MTPU	**Mount Pierson**	**24.48**	**334**	*e*P	**P**	**08 09 02.2**	**+2.3**
	7.4nm,1.0s						
SRU	**San Rafael Swe**	**24.77**	**338**	*e*P	**P**	**08 09 02.0**	**-0.3**
	11nm,0.9s						
Q16A	**Castle Valley**	**24.84**	**337**	*e*P	**P**	**08 09 02.6**	**-0.4**
	8.1nm,0.8s						
TMUT	**Trail Mountain**	**25.18**	**337**	*e*P	**P**	**08 09 07.9**	**+1.7**
	5.2nm,0.7s						
MPU	**Maple Canyon**	**25.97**	**338**	*e*P	**P**	**08 09 13.4**	**+0.2**
	3.5nm,0.9s						
NLU	**North Lily Min**	**26.08**	**337**	*e*P	**P**	**08 09 14.9**	**+0.7**
	3.4nm,0.9s						
RWWY	**Rawlins**	**26.18**	**346**	*e*P	**P**	**08 09 17.1**	**+1.9**
	6.9nm,1.1s						
TCUT	**Toone Canyon**	**26.86**	**339**	*e*P	**P**	**08 09 23.3**	**+1.9**
	7.6nm,0.9s						
P51A	**Williamsport**	**26.93**	**28**	*e*P	**P**	**08 09 20.7**	**-1.0**
	28nm,1.1s						
NV01	**Mina Array Sit**	**27.71**	**326**	*e*P	**P**	**08 09 29.9**	**+0.9**
NVAR	**Mina Array Bea**	**27.71**	**326**	P	**P**	**08 09 31.8**	**+2.8**
	1.3nm,0.7s,baz=155,slow=10,SNR=3.6						
NVAR				LR	LR	08 19 03.0	
	comp=Z,62nm,21.9s,baz=255,slow=34						
BW06	**Boulder Array**	**27.79**	**343**	*e*P	**P**	**08 09 30.8**	**+1.2**
	5.8nm,1.1s						
PD31	**Pinedale Array**	**27.79**	**343**	*e*P	**P**	**08 09 31.1**	**+1.5**
PDAR	**Pinedale Array**	**27.79**	**343**	P	**P**	**08 09 30.2**	**+0.6**
	3.2nm,1.0s,baz=134,slow=8.5,SNR=14						
PDAR				LR	LR	08 21 49.3	
	comp=Z,81nm,19.7s,baz=162,slow=40						
HVU	**Hansel Valley**	**27.93**	**338**	*e*P	**P**	**08 09 32.2**	**+1.4**
	3.4nm,0.8s						
SDV	**Santo Domingo**	**28.70**	**102**	LR	LR	08 23 02.3	
	comp=Z,32nm,20.3s,baz=66,slow=41						
LOHW	**Long Hollow**	**28.87**	**342**	*e*P	**P**	**08 09 41.0**	**+1.8**
	4.7nm,0.8s						
FXWY	**Fox Creek**	**29.01**	**342**	*e*P	**P**	**08 09 42.7**	**+2.2**
	5.8nm,1.1s						
MOOW	**Moose Ponds**	**29.03**	**342**	*e*P	**P**	**08 09 43.4**	**+2.7**
	2.9nm,1.1s						
BEKR	**Beckworth**	**29.85**	**326**	*e*P	**P**	**08 09 50.9**	**+2.9**
	14nm,0.9s						
RLMT	**Red Lodge**	**29.91**	**345**	*e*P	**P**	**08 09 50.1**	**+1.7**
	4.4nm,0.8s						
HLID	**Hailey**	**30.08**	**337**	*e*P	**P**	**08 09 51.5**	**+1.7**
	2.8nm,1.1s						
DLMT	**Dillon**	**31.05**	**341**	*e*P	**P**	**08 09 59.7**	**+1.3**
	6.2nm,0.9s						
LRM	**Limekiln Ridge**	**31.42**	**342**	*e*P	P	08 10 11.1	+9.3
F10A	**Beach Ranch, E**	**33.18**	**337**	*e*P	**P**	**08 10 18.7**	**+1.7**
	5.2nm,1.0s						
ULM	**Lac du Bonnet**	**33.89**	**4**	LR	LR	08 27 03.1	
	comp=Z,95nm,20.0s,baz=39,slow=42						
FFC	**Flin Flon**	**38.34**	**357**	*e*P	**P**	**08 11 01.1**	**+0.1**
	9.9nm,1.1s						
LPAZ	**La Paz**	**44.55**	**135**	LR	LR	08 29 15.4	
	comp=Z,33nm,19.3s,baz=311,slow=34						
SCHQ	**Schefferville**	**45.71**	**26**	*e*P	**P**	**08 12 00.8**	**-0.4**
	7.1nm,1.0s						
SCHQ	**Schefferville**	**45.71**	**26**	P	**P**	**08 12 00.8**	**-0.4**
	2.1nm,0.6s,baz=233,slow=6.7,SNR=8.1						
YKA	**Yellowknife Ar**	**47.34**	**350**	P	**P**	**08 12 13.7**	**-0.2**
	2.0nm,0.9s,baz=158,slow=7.3,SNR=18						
YKB5	**Yellowknife Ar**	**47.34**	**350**	*e*P	**P**	**08 12 13.7**	**-0.2**
INK	**Inuvik**	**56.33**	**345**	*e*P	**P**	**08 13 20.9**	**0.0**
INK	**Inuvik**	**56.33**	**345**	P	**P**	**08 13 21.1**	**+0.3**
	4.2nm,1.1s,baz=122,slow=6.2,SNR=7.5						
INK				LR	LR	08 38 16.5	
	comp=Z,761nm,19.0s,baz=106,slow=37						
ILAR	**Eielson Array**	**58.03**	**338**	P	**P**	**08 13 34.2**	**+1.2**
	1.3nm,1.0s,baz=147,slow=5.4,SNR=8.2						

JMA ***20*** *08:11:53.3±0.1, 22°.98N×121°.43E, h39^{km}±3^{km}, M3.4*
ISCJB ***20*** *08:11:54.2±0.3, 23°.00N±0°.01×121°.45E±0°.02, h39^{km}±5^{km},*
Error ellipse: s-maj=2.9km s-min=2.1km az=37.3
TAP ***20*** *08:11:55.0, 23°.05N×121°.36E, h32^{km}, ML3.2, C*
ISC 20 08:11:54.5±1.6**, 22°.99N**±0°.02×**121°.43E**±0°.02**, h35**^{km}±4^{km}**,**
n88, σ0^{s}.87/166**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.13**	**333**	P	Pn	08 12 01.0	-1.3
	baz=12						
CHKT				*e*S	Sn	08 12 05.2	-3.3
	baz=12						
TTN	**Taitung**	**0.35**	**228**	*e*P	**Pn**	**08 12 03.5**	**+0.5**
	baz=212						
TTN				*e*S	**Sn**	**08 12 10.6**	**+1.5**
	baz=212						
TWGBT	**Beinan**	**0.36**	**242**	*e*P	**Pn**	**08 12 02.6**	**-0.6**
	baz=228						
TWGBT				*e*S	**Sn**	**08 12 08.5**	**-0.9**
	baz=228						
TWG	**Pinlang**	**0.37**	**243**	*e*P	**Pn**	**08 12 02.7**	**-0.6**
	baz=228						
TWG				*e*S	**Sn**	**08 12 08.5**	**-1.0**
	baz=228						
TWF1	**Yuli**	**0.38**	**342**	P	**Pn**	**08 12 03.0**	**-0.5**
	baz=350						
TWF1				S	**Sn**	**08 12 09.4**	**-0.5**
	baz=350						
YULB	**Yu-li**	**0.42**	**343**	*e*P	**Pn**	**08 12 03.4**	**-0.7**
	baz=350						
YULB				*e*S	**Sn**	**08 12 10.0**	**-0.8**
	baz=350						
ELDTW	**Lidau**	**0.43**	**298**	P	**Pn**	**08 12 03.6**	**-0.6**
	baz=293						
ELDTW				*i* S	**Sn**	**08 12 09.7**	**-1.4**
	baz=293						
HGSD	**Ruisui**	**0.50**	**360**	P	**Pn**	**08 12 05.4**	**+0.2**
	baz=7.0						
HGSD				*e*S	**Sn**	**08 12 12.7**	**0.0**
	baz=7.0						
EHY	**Hungye**	**0.53**	**349**	*e*P	**Pn**	**08 12 04.8**	**-0.8**
	baz=356						
EHY				*e*S	**Sn**	**08 12 11.9**	**-1.4**
	baz=356						
ECL	**Taimali**	**0.58**	**229**	*e*P	**Pn**	**08 12 04.9**	**-1.5**
	baz=219						
ECL				*e*S	**Sn**	**08 12 12.8**	**-2.0**
	baz=219						
STYT	**Tauyuan**	**0.64**	**286**	*e*P	**Pn**	**08 12 07.1**	**-0.2**
	baz=281						
STYT				*e*S	**Sn**	**08 12 15.2**	**-1.0**
	baz=281						
YUS	**Yu-Shan**	**0.67**	**319**	*e*P	**Pn**	**08 12 07.5**	**-0.5**
	baz=318						
YUS				*e*S	**Sn**	**08 12 17.0**	**-0.4**
	baz=318						
EGFH	**Guangfu**	**0.68**	**360**	*e*P	**Pn**	**08 12 08.0**	**+0.3**
	baz=5.0						
EGFH				*e*S	**Sn**	**08 12 17.0**	**-0.1**
	baz=5.0						
SLGT	**Liugui**	**0.72**	**271**	*e*P	**Pn**	**08 12 08.3**	**+0.1**
	baz=265						
SLGT				*e*S	**Sn**	**08 12 17.7**	**-0.3**
	baz=265						
SSD	**Sandimen**	**0.77**	**252**	*e*P	**Pn**	**08 12 08.5**	**-0.4**
	baz=245						
SSD				*e*S	**Sn**	**08 12 17.6**	**-1.7**
	baz=245						
ALS	**Alishan**	**0.77**	**312**	*e*P	**Pn**	**08 12 09.6**	**+0.3**
	baz=312						
ALS				*e*S	**Sn**	**08 12 20.4**	**+0.5**
	baz=312						
SGST	**Jiashian**	**0.78**	**277**	*e*P	**Pn**	**08 12 09.1**	**0.0**
	baz=272						
SGST				*e*S	**Sn**	**08 12 20.1**	**+0.4**
	baz=272						
WTP	**Ta-pu**	**0.79**	**289**	*e*P	**Pn**	**08 12 10.0**	**+0.7**
	baz=285						
WTP				*e*S	**Sn**	**08 12 20.3**	**+0.4**
	baz=285						
TPUB	**Ta-pu**	**0.80**	**293**	*e*P	**Pn**	**08 12 09.9**	**+0.6**
	baz=290						
TPUB				*e*S	**Sn**	**08 12 20.8**	**+0.8**
	baz=290						
VWDT	**VWDT**	**0.81**	**341**	P	**Pn**	**08 12 09.5**	**+0.1**
	baz=343						
VWDT				*e*S	**Sn**	**08 12 19.6**	**-0.6**
	baz=343						
ESL	**Shilin**	**0.82**	**0**	P	**Pn**	**08 12 10.0**	**+0.3**
	baz=5.0						
ESL				*e*S	**Sn**	**08 12 20.3**	**-0.3**
	baz=5.0						
MASBT	**Mashibuluo**	**0.82**	**243**	P	**Pn**	**08 12 09.4**	**-0.3**
	baz=237						
MASBT				*e*S	**Sn**	**08 12 21.4**	**+0.8**
	baz=237						
CHN4	**Tsaushan**	**0.85**	**295**	*e*P	**Pn**	**08 12 10.9**	**+0.9**
	baz=293						
CHN4				*e*S	**Sn**	**08 12 22.0**	**+0.8**
	baz=293						
CHN1	**Nanshi**	**0.85**	**284**	*e*P	**Pn**	**08 12 11.4**	**+1.3**
	baz=279						
CHN1				*e*S	**Sn**	**08 12 23.4**	**+2.1**
	baz=279						
WHYT	**Xinyi Township**	**0.88**	**323**	*e*P	**Pn**	**08 12 10.5**	**0.0**
	baz=324						
WHYT				*e*S	**Sn**	**08 12 21.5**	**-0.6**
	baz=324						
SNST	**Tainan City**	**0.89**	**285**	*e*P	**Pn**	**08 12 11.5**	**+1.0**
	baz=282						
SNST				*e*S	**Sn**	**08 12 23.8**	**+1.6**
	baz=282						
SGLT	**Jiouru**	**0.90**	**253**	*e*P	**Pn**	**08 12 11.2**	**+0.5**
	baz=247						
SGLT				*e*S	**Sn**	**08 12 23.0**	**+0.4**
	baz=247						
SSLB	**Suanglung**	**0.91**	**331**	*e*P	**Pn**	**08 12 10.7**	**-0.1**
	baz=333						
SSLB				*e*S	**Sn**	**08 12 21.8**	**-1.0**
	baz=333						
TWK	**Hsinying**	**0.91**	**288**	*e*P	**Pn**	**08 12 12.0**	**+1.1**
	baz=285						
TWK				*e*S	**Sn**	**08 12 24.9**	**+2.1**
	baz=285						
CHN5	**Tsauling**	**0.92**	**312**	*e*P	**Pn**	**08 12 12.6**	**+1.6**
	baz=310						
CHN5				*e*S	**Sn**	**08 12 25.2**	**+2.1**
	baz=310						
ENLB	**Shoufeng**	**0.93**	**10**	*e*P	**Pn**	**08 12 10.3**	**-0.7**
	baz=14						
ENLB				*e*S	**Sn**	**08 12 23.3**	**+0.2**
	baz=14						
SSPT	**Xinbi**	**0.94**	**238**	*e*P	**Pn**	**08 12 11.9**	**+0.7**
	baz=232						
SSPT				*e*S	**Sn**	**08 12 24.7**	**+1.3**
	baz=232						
LAY	**Lan-yu**	**0.95**	**173**	*e*P	**Pn**	**08 12 11.7**	**+0.3**
	baz=169						
LAY				*e*S	**Sn**	**08 12 23.4**	**-0.4**
	baz=169						
SCZT	**Fangliau**	**0.96**	**231**	*e*P	**Pn**	**08 12 11.2**	**-0.4**
	baz=225						
SCZT				*e*S	**Sn**	**08 12 25.9**	**+1.8**
	baz=225						
OWD	**Renai**	**0.99**	**347**	*e*P	**Pn**	**08 12 11.7**	**-0.4**
	baz=349						
OWD				*e*S	**Sn**	**08 12 23.3**	**-1.6**
	baz=349						
WJS	**Zhushan**	**1.05**	**322**	*e*P	**Pn**	**08 12 14.2**	**+1.4**
	baz=322						
WJS				*e*S	**Sn**	**08 12 27.5**	**+1.3**
	baz=322						
TYC	**Yuchr**	**1.05**	**330**	*e*P	**Pn**	**08 12 13.7**	**+0.9**
	baz=332						
TYC				*e*S	**Sn**	**08 12 26.6**	**+0.3**
	baz=332						
CHY	**Chiayi**	**1.05**	**299**	*e*P	**Pn**	**08 12 13.0**	**+0.2**
	baz=297						
WGK	**Gukeng**	**1.06**	**311**	*e*P	**Pn**	**08 12 12.6**	**-0.3**
	baz=311						
WGK				*e*S	**Sn**	**08 12 27.7**	**+1.3**
	baz=311						
WDLH	**Douliu**	**1.08**	**311**	*e*P	**Pn**	**08 12 14.1**	**+1.0**
	baz=310						
CHGB	**Renai**	**1.09**	**348**	*e*P	**Pn**	**08 12 13.6**	**0.0**
	baz=350						
CHGB				*e*S	**Sn**	**08 12 26.9**	**-0.7**
	baz=350						
TWD	**Chiawan**	**1.10**	**8**	*e*P	**Pn**	**08 12 12.7**	**-0.7**
	baz=12						
TWD				*e*S	**Sn**	**08 12 27.1**	**-0.3**
	baz=12						
WNT	**Mingjian**	**1.12**	**323**	*e*S	**Sn**	**08 12 26.7**	**-1.2**
	baz=323						
WHF	**Hehuan Shan**	**1.16**	**353**	*e*P	**Pn**	**08 12 14.3**	**-0.4**
	baz=355						
WHF				*e*S	**Sn**	**08 12 28.8**	**-0.8**
	baz=355						
TWKBT	**Hengchun**	**1.19**	**209**	*e*P	**Pn**	**08 12 14.3**	**-0.3**
	baz=204						
TWKBT				*e*S	**Sn**	**08 12 29.1**	**-0.4**
	baz=204						
NACB	**Ninganchiao**	**1.19**	**7**	*e*P	**Pn**	**08 12 14.8**	**+0.1**
	baz=10.0						
NACB				*e*S	**Sn**	**08 12 27.6**	**-2.1**
	baz=10.0						
ETLH	**Xiulin Townshi**	**1.22**	**2**	*e*P	**Pn**	**08 12 14.4**	**-0.7**
	baz=5.0						
ETLH				*e*S	**Sn**	**08 12 28.9**	**-1.5**
	baz=5.0						
TWT	**Tachien**	**1.28**	**350**	*e*P	**Pn**	**08 12 15.8**	**-0.3**
	baz=351						
TWT				*e*S	**Sn**	**08 12 31.5**	**-0.6**
	baz=351						
TDCB	**Techi**	**1.28**	**349**	*e*P	**Pn**	**08 12 16.4**	**+0.2**
	baz=351						
TDCB				*e*S	**Sn**	**08 12 31.6**	**-0.6**
	baz=351						
RLNB	**Erlin**	**1.33**	**313**	*e*P	**Pn**	**08 12 16.5**	**-0.1**
	baz=312						
RLNB				*e*S	**Sn**	**08 12 32.0**	**-1.1**
	baz=312						
WCHH	**Zhanghua**	**1.35**	**324**	*e*P	**Pn**	**08 12 16.5**	**-0.4**
	baz=324						
WCHH				*e*S	**Sn**	**08 12 33.1**	**-0.5**
	baz=324						
WHP	**Taichung City**	**1.36**	**341**	*e*P	**Pn**	**08 12 18.8**	**+1.7**
	baz=342						
WHP				*e*S	**Sn**	**08 12 34.9**	**+0.9**
	baz=342						
WTCT	**Ta-ch'eng**	**1.37**	**310**	*e*P	**Pn**	**08 12 16.9**	**-0.2**
	baz=309						
WTCT				*e*S	**Sn**	**08 12 32.5**	**-1.5**
	baz=309						
NNSB	**Datong**	**1.44**	**358**	*e*P	**Pn**	**08 12 18.4**	**+0.2**
NNSB				*e*S	**Sn**	**08 12 35.9**	**0.0**
NNS	**Nan Shan**	**1.45**	**358**	*e*P	**Pn**	**08 12 19.4**	**+1.1**
NNS				*e*S	**Sn**	**08 12 35.8**	**-0.4**
ENA	**Nanau**	**1.46**	**11**	*e*P	**Pn**	**08 12 18.9**	**+0.4**
	baz=14						
ENA				*e*S	**Sn**	**08 12 36.6**	**+0.2**
	baz=14						
NANB	**Nanao**	**1.46**	**12**	*e*P	**Pn**	**08 12 18.5**	**+0.1**
	baz=14						
NANB				*e*S	**Sn**	**08 12 36.8**	**+0.4**
	baz=14						
TWQ1	**Liyutan**	**1.48**	**336**	*e*P	**Pn**	**08 12 20.5**	**+1.7**
	baz=337						
TWQ1				*e*S	**Sn**	**08 12 37.1**	**+0.2**
	baz=337						
NSY	**Sanyi**	**1.55**	**337**	*e*P	**Pn**	**08 12 20.1**	**+0.4**
	baz=338						
NSY				*e*S	**Sn**	**08 12 37.6**	**-0.9**
	baz=338						
NDT	**Datong Townshi**	**1.61**	**3**	*e*P	**Pn**	**08 12 21.2**	**+0.7**
	baz=5.0						
NDT				*e*S	**Sn**	**08 12 40.4**	**+0.4**
	baz=5.0						
ENTT	**Nioudou**	**1.65**	**4**	*e*P	**Pn**	**08 12 21.8**	**+0.8**
	baz=7.0						
ENTT				*e*S	**Sn**	**08 12 40.7**	**-0.3**
	baz=7.0						
NMLH	**Miaoli**	**1.65**	**339**	*e*P	**Pn**	**08 12 21.6**	**+0.6**
	baz=340						
NMLH				*e*S	**Sn**	**08 12 40.3**	**-0.7**
	baz=340						
WDGT	**Dungji**	**1.65**	**280**	*e*P	**Pn**	**08 12 21.3**	**+0.3**
	baz=277						
WDGT				*e*S	**Sn**	**08 12 40.5**	**-0.5**
	baz=277						
TWC	**Suao**	**1.66**	**13**	P	**Pn**	**08 12 22.3**	**+1.2**
	baz=16						
TWC				*e*S	**Sn**	**08 12 41.9**	**+0.6**
	baz=16						
YHNB	**Yeheng**	**1.68**	**358**	P	**Pn**	**08 12 22.0**	**+0.6**
YHNB				*e*S	**Sn**	**08 12 41.1**	**-0.6**
EOS1	**EOS1**	**1.68**	**22**	*e*P	**Pn**	**08 12 22.4**	**+1.0**
	baz=25						
EOS1				*e*S	**Sn**	**08 12 42.9**	**+1.2**
	baz=25						
NSK	**Sanguang**	**1.68**	**358**	P	**Pn**	**08 12 22.2**	**+0.7**
NSK				S	**Sn**	**08 12 41.5**	**-0.4**
NSTT	**Nanjuang**	**1.68**	**347**	*e*P	**Pn**	**08 12 21.4**	**0.0**
	baz=348						
NSTT				*e*S	**Sn**	**08 12 41.3**	**-0.5**
	baz=348						
LIOB	**Emei**	**1.69**	**347**	*e*P	**Pn**	**08 12 22.1**	**+0.4**
	baz=348						
LIOB				*e*S	**Sn**	**08 12 41.7**	**-0.4**
	baz=348						
NWLT	**Wulai**	**1.78**	**2**	*e*P	**Pn**	**08 12 23.5**	**+0.6**
	baz=4.0						
NWLT				*e*S	**Sn**	**08 12 43.9**	**-0.4**
	baz=4.0						
PHUB	**P'eng-hu**	**1.79**	**287**	*e*S	**Sn**	**08 12 43.0**	**-1.3**
	baz=285						
PNG	**Penghu**	**1.82**	**289**	*e*P	**Pn**	**08 12 23.1**	**-0.2**
	baz=287						
PNG				*e*S	**Sn**	**08 12 44.4**	**-0.7**
	baz=287						
NTC	**Toucheng**	**1.90**	**11**	*e*S	**Sn**	**08 12 47.6**	**+0.6**
	baz=13						
TIPB	**Shuangxi**	**2.01**	**10**	*e*P	**Pn**	**08 12 26.9**	**+0.9**
	baz=12						
TIPB				*e*S	**Sn**	**08 12 50.3**	**+0.4**
	baz=12						
NWF	**Wu-fen Shan**	**2.10**	**9**	*e*P	**Pn**	**08 12 27.7**	**+0.5**
	baz=10.0						
NWF				*e*S	**Sn**	**08 12 51.8**	**-0.4**
	baz=10.0						
WFSB	**Wu-fen Shan**	**2.10**	**9**	*e*P	**Pn**	**08 12 27.8**	**+0.6**
	baz=10.0						
WFSB				*e*S	**Sn**	**08 12 52.2**	**+0.1**
	baz=10.0						
TWS1	**Kuangyinshan**	**2.10**	**360**	*e*S	**Sn**	**08 12 51.7**	**-0.5**
	baz=1.0						
YM01	**YM01**	**2.15**	**3**	*e*P	**Pn**	**08 12 28.6**	**+0.6**
	baz=5.0						
YM01				*e*S	**Sn**	**08 12 53.3**	**-0.2**
	baz=5.0						
YM05	**YM05**	**2.17**	**3**	*e*P	**Pn**	**08 12 29.0**	**+0.7**
	baz=5.0						
YM05				*e*S	**Sn**	**08 12 53.8**	**-0.2**
	baz=5.0						
YM11	**YM11**	**2.17**	**3**	*e*P	**Pn**	**08 12 28.5**	**+0.2**
	baz=5.0						
YM11				*e*S	**Sn**	**08 12 53.8**	**-0.3**
	baz=5.0						
HATJ	**Hateruma jima**	**2.43**	**64**	P	**Pn**	**08 12 31.9**	**+0.2**
HATJ				S	**Sn**	**08 12 59.6**	**-0.6**
IRIF	**Iriomote-Funau**	**2.50**	**57**	P	**Pn**	**08 12 33.4**	**+0.7**
IRIF				*e*S	**Sn**	**08 13 02.6**	**+0.6**
JKRS	**Kuro-shima**	**2.67**	**62**	P	**Pn**	**08 12 35.7**	**+0.6**
JKRS				S	**Sn**	**08 13 06.2**	**-0.1**
VWUC	**VWUC**	**2.69**	**318**	*e*S	**Sn**	**08 13 04.5**	**-2.2**
	baz=317						
JIJ	**Ishigaki jima**	**2.84**	**61**	P	**Pn**	**08 12 37.4**	**0.0**
JIJ				S	**Sn**	**08 13 09.6**	**-0.8**
JISG	**Ishigakijimahi**	**3.08**	**58**	P	**Pn**	**08 12 40.4**	**-0.3**
JISG				S	**Sn**	**08 13 15.3**	**-1.1**
KNMB	**Chin-men Tao**	**3.15**	**298**	*e*P	**Pn**	**08 12 41.4**	**-0.2**
	baz=297						
KNMB				*e*S	**Sn**	**08 13 15.6**	**-2.4**
	baz=297						
JTJ	**Tarama**	**3.42**	**61**	S	**Sn**	**08 13 24.5**	**-0.2**

KRNET ***20*** *08:21:44.6±0.1, 40°.57N×77°.52E, h18^{km}, mb2.9*
SOME ***20*** *08:21:45.3, 40°.62N×77°.57E, h10^{km}*
NNC ***20*** *08:21:49.1±1.2, 40°.79N×77°.52E, h0^{km}, mb3.6, mpv3.3,*
Error ellipse: s-maj=8.3km s-min=6.6km az=164.0
ISC 20 08:21:46.3±1.7**, 40°.65N**±0°.08×**77°.38E**±0°.03**, h10**^{km}**, n52,**
σ1^{s}.40/80**, 12C-20D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.12**	**16**	⇓*i*P	**Pg**	**08 22 06.3**	**-1.6**
	baz=10.0						
TARG				⇓*i*S	**Sn**	**08 22 23.2**	**-0.9**
	baz=10.0						
NRN	**Naryn**	**1.30**	**307**	⇓*i*P	**Pg**	**08 22 11.6**	**+0.3**
	baz=7.0						
NRN				⇓*i*S	**Sn**	**08 22 30.8**	**+2.3**
	baz=7.0						
KDJ	**Kajisay**	**1.48**	**354**	⇓*i*P	**Pb**	**08 22 13.6**	**-0.4**
	baz=51						
KDJ				⇓*i*S	**Sg**	**08 22 35.2**	**+1.2**
	baz=51						
KSH	**Kashi**	**1.57**	**224**	Pg	Pg	08 22 22.4	+6.1
KSH				Sg	Sg	08 22 49.0	+12
KSH				smax	smax		
	comp=N,120nm,0.4s						
KSH				smax	smax		
	comp=E,130nm,0.5s						
ULHL	**Ulahol**	**1.81**	**332**	⇓*i*P	**Pb**	**08 22 19.8**	**+0.2**
	baz=31						
ULHL				⇓*i*S	**Sg**	**08 22 45.5**	**+1.1**
	baz=31						
BOOM	**Boomskoye usch**	**2.13**	**330**	⇓*i*P	**Pb**	**08 22 24.5**	**-0.5**
	baz=29						
BOOM				⇓*i*S	**Sb**	**08 22 52.9**	**+1.3**
	baz=29						
KZA	**Kyzart**	**2.14**	**312**	⇑*i*P	**Pb**	**08 22 24.6**	**-0.8**

	baz=12						
KZA				⇑*i*S	**Sg**	**08 22 54.1**	**-1.1**
	baz=12						
TNSS	**Tian-Shan**	**2.40**	**352**	Pg	**Pb**	**08 22 30.4**	**+0.5**
	comp=E,14nm,0.2s						
TNSS				Lg	Lg	08 23 02.8	
	comp=E,24nm,0.4s						
TNSS	**Tian-Shan**	**2.40**	**352**	*e*P	**Pb**	**08 22 30.4**	**+0.5**
	comp=E,14nm,0.2s						
TNSS				*e*S	**Sg**	**08 23 02.8**	**-0.7**
	comp=E,24nm,0.4s						
IZV	**Izvestkoviy**	**2.45**	**347**	Pg	**Pg**	**08 22 31.7**	**-1.5**
	comp=E,13nm,0.4s						
IZV				Lg	Lg	08 23 05.5	
	comp=E,33nm,0.4s						
IZV	**Izvestkoviy**	**2.45**	**347**	*e*P	**Pg**	**08 22 31.6**	**-1.5**
	comp=E,13nm,0.3s						
IZV				*e*S	**Sg**	**08 23 05.1**	**+0.1**
	comp=E,33nm,0.4s						
MDOK	**Medeo**	**2.52**	**354**	⇑Pg	**Pb**	**08 22 32.1**	**+0.4**
	comp=E,3.6nm,0.4s						
MDOK				Lg	Lg	08 23 06.7	
	comp=E,17nm,0.5s						
MDOK	**Medeo**	**2.52**	**354**	Pg	**Pg**	**08 22 32.8**	**-1.7**
	comp=E,10.0nm,0.2s						
MDOK				Lg	Lg	08 23 07.0	
	comp=E,20nm,0.5s						
MDOK	**Medeo**	**2.52**	**354**	*e*P	**Pg**	**08 22 32.8**	**-1.7**
	comp=E,10.0nm,0.2s						
MDOK				*e*S	**Sg**	**08 23 07.0**	**-0.3**
	comp=E,20nm,0.5s						
SATY	**Saty**	**2.52**	**17**	Pg	**Pb**	**08 22 31.1**	**-0.7**
	comp=E,17nm,0.4s						
SATY				Lg	Lg	08 23 04.0	
	comp=E,13nm,0.2s						
SATY	**Saty**	**2.52**	**17**	*e*P	**Pb**	**08 22 31.1**	**-0.7**
	comp=E,17nm,0.4s						
SATY				*e*S	**Sb**	**08 23 04.0**	**+1.1**
	comp=E,13nm,0.2s						
MTBS	**Maitube**	**2.57**	**344**	Pg	**Pb**	**08 22 33.1**	**+0.5**
	comp=E,11nm,0.2s						
MTBS				Lg	Lg	08 23 07.5	
	comp=E,19nm,0.5s						
MTBS	**Maitube**	**2.57**	**344**	*e*P	**Pb**	**08 22 33.1**	**+0.5**
	comp=E,11nm,0.2s						
MTBS				*e*S	**Sg**	**08 23 07.5**	**-1.5**
	comp=E,19nm,0.5s						
KOTS	**Kotyrbulak**	**2.59**	**356**	Pg	**Pb**	**08 22 33.8**	**+0.9**
	comp=E,14nm,0.2s						
KOTS				Lg	Lg	08 23 08.4	
	comp=E,33nm,0.3s						
KOTS	**Kotyrbulak**	**2.59**	**356**	*e*P	**Pb**	**08 22 33.8**	**+0.9**
	comp=E,14nm,0.2s						
KOTS				*e*S	**Sg**	**08 23 08.4**	**-1.0**
	comp=E,47nm,0.5s						
ARLS	**Aral**	**2.60**	**299**	⇑*i*P	**Pb**	**08 22 31.0**	**-2.1**
	baz=99						
ARLS				⇑*i*S	**Sb**	**08 23 04.8**	**-0.4**
	baz=99						
KST	**Kastek**	**2.61**	**337**	Pg	**Pg**	**08 22 34.8**	**-1.5**
	comp=E,3.6nm,0.1s						
KST				Lg	Lg	08 23 10.1	
	comp=E,12nm,0.3s						
KST	**Kastek**	**2.61**	**337**	*e*P	**Pg**	**08 22 34.8**	**-1.5**
	comp=E,3.6nm,0.1s						
KST				*e*S	**Sg**	**08 23 10.1**	**0.0**
	comp=E,12nm,0.3s						
TKM2	**Tokmak 2**	**2.63**	**330**	⇓Pn	**Pb**	**08 22 33.8**	**+0.2**
	comp=E,2.0nm,0.3s						
TKM2				⇑Lg	Lg	08 23 11.5	
	comp=E,7.8nm,0.7s						
TKM2	**Tokmak 2**	**2.63**	**330**	⇓*i*P	**Pn**	**08 22 31.0**	**+2.0**
	baz=29						
TKM2				⇓*i*S	**Sb**	**08 23 05.2**	**-0.8**
	baz=29						
UCH	**Uchtor**	**2.67**	**307**	⇑*e*P	**Pn**	**08 22 32.0**	**+2.3**
	baz=7.0						
UCH				⇑*i*S	**Sb**	**08 23 06.5**	**-0.9**
	baz=7.0						
KBK	**Karagaybulak**	**2.71**	**318**	⇓*e*P	**Pb**	**08 22 32.4**	**-2.5**
	baz=18						
KBK				⇓*i*S	**Sb**	**08 23 07.1**	**-1.1**
	baz=18						
UZB	**Uzynbulak**	**2.78**	**26**	Pg	**Pb**	**08 22 35.4**	**-0.7**
	comp=E,3.0nm,0.4s						
UZB				Lg	Lg	08 23 11.3	
	comp=E,6.6nm,0.4s						
UZB	**Uzynbulak**	**2.78**	**26**	*e*P	**Pb**	**08 22 35.4**	**-0.7**
	comp=E,3.0nm,0.3s						
UZB				*e*S	**Sb**	**08 23 11.3**	**+1.1**
	comp=E,7.1nm,0.3s						
DGS	**Degeres**	**2.85**	**336**	Pg	**Pb**	**08 22 38.7**	**+1.4**
	comp=E,4.6nm,0.4s						
DGS				Lg	Lg	08 23 16.9	
	comp=E,9.1nm,0.4s						
DGS	**Degeres**	**2.85**	**336**	*e*P	**Pb**	**08 22 38.7**	**+1.4**
	comp=E,4.6nm,0.4s						
DGS				*e*S	**Sg**	**08 23 16.9**	**-0.9**
	comp=E,9.1nm,0.4s						
KURS	**Kuram**	**2.89**	**11**	Pg	**Pb**	**08 22 38.0**	**0.0**
	comp=E,4.9nm,0.5s						
KURS				Lg	Lg	08 23 16.5	
	comp=E,7.7nm,0.5s						
KURS	**Kuram**	**2.89**	**11**	*e*P	**Pb**	**08 22 37.2**	**-0.8**
	comp=E,4.9nm,0.5s						
KURS				*e*S	**Sb**	**08 23 14.2**	**+0.7**
	comp=E,7.7nm,0.5s						
AAK	**Ala-Archa**	**2.93**	**313**	Pn	**Pb**	**08 22 38.1**	**-0.6**
	comp=E,2.3nm,0.4s						
AAK				⇓Lg	Lg	08 23 22.6	
	comp=E,26nm,1.0s						
AAK	**Ala-Archa**	**2.93**	**313**	⇓*i*P	**Pn**	**08 22 35.5**	**+2.4**
	baz=13						
AAK				⇓*i*S	**Sb**	**08 23 13.0**	**-1.7**
	baz=13						
SHLS	**Shalkode**	**2.94**	**31**	Pg	**Pg**	**08 22 41.6**	**-1.1**
	comp=E,8.3nm,0.1s						
SHLS				Lg	Lg	08 23 22.1	
	comp=E,24nm,0.6s						
SHLS	**Shalkode**	**2.94**	**31**	*e*P	**Pg**	**08 22 41.6**	**-1.1**
	comp=E,8.3nm,0.1s						
SHLS				*e*S	**Sg**	**08 23 22.1**	**+1.2**
	comp=E,24nm,0.6s						
KTBS	**Karatobe**	**3.10**	**351**	Pg	**Pg**	**08 22 43.5**	**-2.2**
	comp=E,4.4nm,0.5s						
KTBS				Lg	Lg	08 23 25.0	
	comp=E,15nm,0.3s						
KTBS	**Karatobe**	**3.10**	**351**	*e*P	**Pg**	**08 22 43.5**	**-2.2**
	comp=E,3.8nm,0.3s						
KTBS				*e*S	**Sg**	**08 23 25.0**	**-0.8**
	comp=E,15nm,0.3s						
PDGK	**Podgornoye**	**3.10**	**30**	Pg	**Pb**	**08 22 41.4**	**-0.2**
	comp=E,2.4nm,0.3s						
PDGK				Lg	Lg	08 23 21.7	
	comp=E,7.2nm,0.5s						
PDGK	**Podgornoye**	**3.10**	**30**	⇓Pn	**Pb**	**08 22 39.9**	**-1.7**
	comp=E,4.9nm,0.8s						
PDGK				⇓Lg	Lg	08 23 26.5	
	comp=E,15nm,1.0s						
PDGK	**Podgornoye**	**3.10**	**30**	⇑*e*P	**Pn**	**08 22 36.6**	**+1.2**
	baz=27						
PDGK				⇑*i*S	**Sn**	**08 23 13.9**	**+1.3**
	baz=27						
CHKK	**Chushkaly**	**3.21**	**355**	Pg	**Pb**	**08 22 44.7**	**+1.3**
	comp=E,4.0nm,0.3s						
CHKK				Lg	Lg	08 23 27.1	
	comp=E,19nm,0.3s						
CHKK	**Chushkaly**	**3.21**	**355**	*e*P	**Pb**	**08 22 44.7**	**+1.3**
	comp=E,4.0nm,0.3s						
CHKK				*e*S	**Sg**	**08 23 27.1**	**-2.3**
	comp=E,19nm,0.3s						
KUU	**Kurty**	**3.33**	**347**	Pg	**Pb**	**08 22 47.0**	**+1.7**
	comp=E,1.6nm,0.1s						
KUU				Lg	Lg	08 23 31.4	
	comp=E,12nm,0.4s						
KUU	**Kurty**	**3.33**	**347**	*e*P	**Pb**	**08 22 47.0**	**+1.7**
	comp=E,1.6nm,0.1s						
KUU				*e*S	**Sg**	**08 23 31.4**	**-1.8**
	comp=E,12nm,0.4s						
MNBS	**Baschi**	**3.51**	**12**	Pg	**Pb**	**08 22 49.4**	**+0.9**
	comp=E,2.4nm,0.3s						
MNBS				Lg	Lg	08 23 35.5	
	comp=E,6.7nm,0.1s						
MNBS	**Baschi**	**3.51**	**12**	*e*P	**Pb**	**08 22 49.4**	**+0.9**
	comp=E,2.4nm,0.3s						
MNBS				*e*S	**Sg**	**08 23 35.5**	**-3.3**
	comp=E,6.7nm,0.1s						
ARXS	**Arharly**	**3.57**	**5**	Pg	**Pb**	**08 22 50.7**	**+1.1**
	comp=E,3.5nm,0.3s						
ARXS				Lg	Lg	08 23 37.4	
	comp=E,10nm,0.4s						
ARXS	**Arharly**	**3.57**	**5**	*e*P	**Pb**	**08 22 50.7**	**+1.1**
	comp=E,3.4nm,0.4s						
ARXS				*e*S	**Sg**	**08 23 37.4**	**-3.5**
	comp=E,10nm,0.5s						
MRKS	**Merke**	**3.75**	**305**	*e*P	**Pg**	**08 22 56.0**	**-2.0**
	comp=E,2.6nm,0.3s						
MRKS				*e*S	**Sg**	**08 23 46.8**	**+0.3**
	comp=E,5.2nm,0.6s						
MNAS	**Manas**	**4.09**	**298**	⇑Pg	**Pg**	**08 23 03.5**	**-1.2**
	comp=E,3.3nm,1.3s						
MNAS				⇑Lg	Lg	08 23 57.4	
	comp=E,2.8nm,0.6s						

IDC 20 08:33:55.1±1.7, 4°.51S×152°.42E, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.6/46, mbtmp3.7/5, MS3.0/1, Ms1 3.0/1, ms1mx2.5/34, Error ellipse: s-maj=111.7km s-min=22.8km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**19.48**	**337**	LR	LR	08 45 57.7	
	comp=Z,49nm,20.3s,baz=82,slow=37						
WRA	**Warramunga Arr**	**23.35**	**227**	P	P	08 39 05.7	+0.3
	1.5nm,0.5s,baz=53,slow=9.8,SNR=22						
ASAR	**Alice Springs**	**26.11**	**221**	P	P	08 39 31.1	+0.1
	0.3nm,0.4s,baz=55,slow=9.2,SNR=13						
FITZ	**Fitzroy Crossi**	**29.46**	**241**	P	P	08 40 00.8	-0.2
	0.7nm,0.3s,baz=50,slow=8.2,SNR=9.6						
ILAR	**Eielson Array**	**82.04**	**22**	P	P	08 46 17.1	+0.1
	0.1nm,0.4s,baz=240,slow=5.1,SNR=4.6						
YKA	**Yellowknife Ar**	**95.35**	**28**	P	P	08 47 21.4	+0.3
	0.1nm,0.5s,baz=266,slow=5.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**149.85**	**288**	PKPbc	PKPbc	08 53 47.3	-1.1
	0.2nm,0.3s,baz=65,slow=2.4,SNR=5.6						

IDC ***20*** *08:43:37.3±3.6, 53°.85N×164°.44W, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.5/46, mbtmp3.7/7, ML3.1/2, Error ellipse: s-maj=84.7km s-min=21.7km az=163.0*

ISCJB ***20*** *08:43:41.3±0.7, 53°.71N±0°.05×164°.02W±0°.06, h26^{km}, mb3.5/4, Error ellipse: s-maj=7.6km s-min=4.7km az=157.2*

NEIC ***20*** *08:43:42.6±0.0, 53°.77N×164°.07W, h26^{km}, mb3.6/2, ML3.6(AEIC), After AEIC.*

ISC 20 08:43:39.9±1.1, 53°.67N±0°.08×163°.95W±0°.04, h26^{km}, n38, σ1^{s}42/37, mb3.5/4, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESP	**Westdahl Peak**	**0.95**	**332**	P	**Pb**	**08 43 58.2**	**+0.4**
WESP				S	**Sb**	**08 44 09.3**	**-0.6**
BRPK	**Brown Peak**	**0.99**	**7**	P	**Pb**	**08 43 59.0**	**+0.6**
WECS	**Westdahl Cape**	**0.99**	**331**	P	**Pb**	**08 43 59.2**	**+0.7**
WEBT	**Westdahl Beart**	**1.04**	**333**	P	**Pb**	**08 43 59.8**	**+0.5**
SSLS	**Shishaldin Sou**	**1.05**	**358**	P	**Pb**	**08 43 59.9**	**+0.5**
SSLS				S	**Sb**	**08 44 12.4**	**-0.4**
SSBA	**Shishaldin**	**1.11**	**355**	P	**Pn**	**08 44 00.4**	**+0.5**
SSBA				S	**Sn**	**08 44 14.1**	**-0.3**
AKSA	**Akutan Strait**	**1.14**	**295**	P	**Pn**	**08 44 00.8**	**+0.7**
AKUT	**Akutan**	**1.18**	**294**	P	**Pb**	**08 44 01.5**	**0.0**
AHB	**Akutan Harbor**	**1.19**	**293**	P	**Pb**	**08 44 01.8**	**0.0**
FALS	**False Pass**	**1.23**	**15**	P	**Pb**	**08 44 02.6**	**0.0**
ZRO	**Akutan Zero**	**1.27**	**290**	P	**Pb**	**08 44 03.1**	**-0.2**
AKMO	**Akutan Morgan**	**1.29**	**290**	P	**Pb**	**08 44 03.3**	**-0.3**
AKRB	**Akutan Reef Bi**	**1.34**	**291**	P	**Pb**	**08 44 04.0**	**-0.3**
AKRB				S	**Sn**	**08 44 19.9**	**+0.1**
UNV	**Unalaska Valle**	**1.53**	**278**	P	**Pn**	**08 44 06.0**	**+0.6**
DRIA	**Deer Island**	**1.64**	**36**	P	**Pn**	**08 44 08.5**	**+1.5**
MTBL	**Makushin Table**	**1.65**	**282**	P	**Pn**	**08 44 08.6**	**+1.4**
MREP	**Makushin Rep't**	**1.67**	**276**	P	**Pn**	**08 44 08.8**	**+1.4**
MSW	**Makushin Switc**	**1.70**	**280**	P	**Pn**	**08 44 09.0**	**+1.1**
DT1	**Dutton Round H**	**1.74**	**33**	P	**Pb**	**08 44 10.4**	**-0.8**
MCIR	**Makushin Cirqu**	**1.77**	**281**	P	**Pn**	**08 44 10.5**	**+1.6**
DOL	**Dolgoi Island**	**1.92**	**39**	P	**Pb**	**08 44 13.2**	**-1.0**
PS4A	**Pavlof South-4**	**2.08**	**35**	P	**Pb**	**08 44 16.1**	**-0.9**
SDPT	**Sand Point**	**2.64**	**49**	P	**Pn**	**08 44 23.9**	**+3.2**
KDAK	**Kodiak Island**	**7.63**	**53**	Pn	**Pn**	**08 45 31.9**	**+2.7**
	0.8nm,0.3s,baz=206,slow=7.0,SNR=9.4						
KDAK				Sn	**Sn**	**08 46 50.4**	**-4.3**
	baz=144,slow=19,SNR=2.4						
ILAR	**Eielson Array**	**14.09**	**31**	Pn	**Pn**	**08 46 56.0**	**-1.6**
	0.0nm,0.3s,baz=227,slow=10,SNR=3.3						
DAWY	**Dawson**	**16.30**	**41**	*e*Pn	**P**	**08 47 31.8**	**+2.2**
	1.9nm,0.5s						
INK	**Inuvik**	**20.48**	**33**	*e*P	**P**	**08 48 15.1**	**-0.1**
	2.2nm,0.5s						
INK	**Inuvik**	**20.48**	**33**	P	**P**	**08 48 15.2**	**-0.1**
	0.8nm,0.5s,baz=233,slow=8.3,SNR=14						
PETK	**Petropavlovsk-**	**22.70**	**284**	P	**P**	**08 48 37.6**	**-1.7**
	0.9nm,0.4s,baz=87,slow=10,SNR=5.7						
YKA	**Yellowknife Ar**	**26.90**	**51**	P	**P**	**08 49 20.8**	**+2.5**
	0.2nm,0.4s,baz=274,slow=9.0,SNR=11						
H11N2	**WAKE ISLAND Hy**	**40.60**	**225**	T	T	09 34 43.8	
	baz=26,slow=76,SNR=3.8						
H11N3	**WAKE ISLAND Hy**	**40.61**	**225**	T	T	09 34 51.3	
	baz=26,slow=76,SNR=1.7						
H11N1	**WAKE ISLAND Hy**	**40.62**	**225**	T	T	09 34 52.1	
	baz=26,slow=76,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**41.77**	**224**	T	T	09 36 17.7	
	baz=26,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**41.79**	**224**	T	T	09 36 16.6	
	baz=26,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**41.79**	**224**	T	T	09 36 17.2	
	baz=26,slow=76,SNR=8.1						
FINES	**FINESS Array B**	**64.96**	**355**	P	**P**	**08 54 16.6**	**-0.1**
	0.8nm,0.5s,baz=15,slow=7.2,SNR=4.4						
MKAR	**Makanchi Array**	**65.22**	**316**	P	**P**	**08 54 17.6**	**-1.1**
	0.2nm,0.5s,baz=41,slow=7.4,SNR=3.9						

IDC ***20*** *08:47:07.1±0.4, 50°.23N×173°.51W, h0^{km}, mb5.0/35, mb1 5.1/36, mb1mx5.0/42, mbtmp5.0/36, ML3.6/1, MS4.4/33, Ms1 4.4/33, ms1mx4.3/44, Error ellipse: s-maj=14.5km s-min=9.5km az=169.0*

ISCJB ***20*** *08:47:08.1±0.6, 50°.39N±0°.02×173°.38W±0°.02, h13^{km}±3^{km}, mb5.4/481, MS4.6/64, Error ellipse: s-maj=3.2km s-min=1.7km az=179.8*

BJI ***20*** *08:47:09.0, 50°.37N×173°.63W, h24^{km}, mB5.5/53, mb5.2/67, Ms5.0/55, Ms7 4.6/48*

GCMT ***20*** *08:47:10.6±0.1, 50°.31N±0°.01×173°.69W±0°.02, h12^{km}, MW5.4/135, Moment Tensor Solution. s82,c134; s135,c266; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.33±.02; M$_{\theta\theta}$1.47±.02; M$_{\phi\phi}$-0.13±.02; M$_{r\theta}$0.15±.04; M$_{\theta\phi}$0.03±.01; M$_{\phi r}$0.29±.05; Best double couple: M$_0$1.44300×10^{17} NP1:ϕ_s257.00000°, δ50.00000°, λ-107.00000°. NP2:ϕ_s102.00000°, δ43.00000°, λ-71.00000°. Principal axes: T 1.4800, Plg3.0000°, Azm358.0000°; N -0.0700, Plg13.0000°, Azm268.0000°; P -1.4060, Plg77.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***20*** *08:47:11.3±1.0, 50°.27N×173°.56W, h33^{km}, mb5.6/150, MS4.7/20 Error ellipse: s-maj=6.1km s-min=3.9km az=100.3*

NEIC ***20*** *08:47:12.6±0.0, 50°.46N×173°.58W, h25^{km}, mb5.4/300, ML5.0(AEIC), After AEIC.*

AEIC ***20*** *08:47:12.6, 50°.46N×173°.58W, h25^{km}, ML5.0, MB5.4(NEIC), MW5.4(GCMT)*

ISC 20 08:47:10.4±0.4, 50°.30N±0°.04×173°.48W±0°.03, h19^{km}±1^{km}, h19^{km}:pP-P, n1528, σ1^{s}46/1665, mb5.4/496, MS4.6/66, 45C-34D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	**Korovin Flat P**	**2.01**	**349**	*e*Pn	**Pn**	**08 47 41.8**	**-1.5**
KOKL	**Mount Kliuchef**	**2.07**	**348**	*e*Pn	**Pn**	**08 47 43.0**	**-1.2**
GSMY	**Great Sitkin M**	**2.38**	**318**	*e*Pn	**Pn**	**08 47 46.2**	**-2.1**
ETKA	**Kagalaska Isla**	**2.42**	**311**	*e*Pn	**Pn**	**08 47 46.6**	**-2.2**
GSTR	**Great Sitkin T**	**2.42**	**319**	*e*Pn	**Pn**	**08 47 47.5**	**-1.4**
GSTD	**Great Sitkin T**	**2.43**	**317**	*e*Pn	**Pn**	**08 47 47.0**	**-2.0**
GSTD				*e*Sn	**Sn**	**08 48 14.0**	**-4.2**
GSSP	**Great Sitkin S**	**2.47**	**318**	P	**Pn**	**08 47 48.3**	**-1.2**
ADK	**Adak**	**2.56**	**309**	*e*Pn	**Pn**	**08 47 48.7**	**-2.1**
ADK				*e*Sn	**Sn**	**08 48 16.6**	**-4.9**
ADK	**Adak**	**2.56**	**309**	*e*P	**Pn**	**08 47 48.7**	**-2.1**
ADK				*e*		08 48 16.6	
ADAG	**Mount Adagdak**	**2.58**	**312**	*e*Pn	**Pn**	**08 47 49.9**	**-1.3**
KIRH	**Kanaga Island**	**2.78**	**306**	*e*Pn	**Pn**	**08 47 52.9**	**-0.9**
KIMD	**Kanaga Island**	**2.78**	**303**	P	**Pn**	**08 47 52.5**	**-1.4**
KIWB	**Kanaga Island**	**2.79**	**305**	*e*Pn	**Pn**	**08 47 52.4**	**-1.5**
KIWB				*e*Sn	**Sn**	**08 48 19.7**	**-7.3**
KIKV	**Kanaga Island**	**2.81**	**306**	*e*Pn	**Pn**	**08 47 53.2**	**-1.0**
TAFP	**Tanaga Falls P**	**3.26**	**301**	*e*Pn	**Pn**	**08 47 59.4**	**-1.0**
TAFP				*e*Sn	**Sn**	**08 48 34.8**	**-3.8**
TASE	**Tanaga Southea**	**3.26**	**300**	*e*Pn	**Pn**	**08 47 59.7**	**-0.7**
GAEA	**Gareloi East**	**3.64**	**296**	*e*Pn	**Pn**	**08 48 05.3**	**-0.3**
GALAA	**Gareloi Lava P**	**3.64**	**296**	*e*Pn	**Pn**	**08 48 06.3**	**+0.6**
NIKH	**Nikolski High**	**3.93**	**45**	*e*Pn	**Pn**	**08 48 08.0**	**-1.6**
OKTU	**Okmok Mt. Tuli**	**4.57**	**45**	*e*Pn	**Pn**	**08 48 17.6**	**-0.8**
OKTU				*e*Sn	**Sn**	**08 49 09.5**	**-1.5**
MGOD	**Makushin Gods**	**5.37**	**47**	*e*Pn	**Pn**	**08 48 28.5**	**-0.9**
MREP	**Makushin Rep't**	**5.44**	**47**	P	**Pn**	**08 48 29.5**	**-0.9**
MCIR	**Makushin Cirqu**	**5.46**	**45**	*e*Pn	**Pn**	**08 48 29.5**	**-1.2**
MSW	**Makushin Switc**	**5.49**	**46**	*e*Pn	**Pn**	**08 48 30.2**	**-0.8**
MSW				*e*Sn	**Sn**	**08 49 29.7**	**-3.8**
MTBL	**Makushin Table**	**5.57**	**46**	*e*Pn	**Pn**	**08 48 31.3**	**-0.9**
UNV	**Unalaska Valle**	**5.58**	**48**	*e*Pn	**Pn**	**08 48 31.3**	**-0.9**
UNV				*e*Sn	**Sn**	**08 49 32.9**	**-2.8**
AKRB	**Akutan Reef Bi**	**5.95**	**47**	*e*Pn	**Pn**	**08 48 37.1**	**-0.3**
AKMO	**Akutan Morgan**	**5.96**	**48**	*e*Pn	**Pn**	**08 48 36.9**	**-0.6**
AKMO				*e*Sn	**Sn**	**08 49 42.7**	**-2.3**
ZRO	**Akutan Zero**	**5.97**	**48**	*e*Pn	**Pn**	**08 48 37.4**	**-0.3**
AHB	**Akutan Harbor**	**6.06**	**48**	P	**Pn**	**08 48 37.6**	**-1.3**
AKUT	**Akutan**	**6.10**	**48**	*e*Pn	**Pn**	**08 48 39.7**	**+0.3**
WECS	**Westdahl Cape**	**6.80**	**48**	P	**Pn**	**08 48 48.4**	**-0.6**
WESP	**Westdahl Peak**	**6.80**	**49**	*e*Pn	**Pn**	**08 48 48.8**	**-0.4**
SSBA	**Shishaldin**	**7.25**	**48**	P	**Pn**	**08 48 54.1**	**-1.1**
FALS	**False Pass**	**7.64**	**49**	*e*Pn	**Pn**	**08 49 00.3**	**-0.1**
FALS				*e*Sn	**Sn**	**08 50 24.1**	**-2.2**
DRIA	**Deer Island**	**8.27**	**51**	P	**Pn**	**08 49 07.7**	**-1.4**
DT1	**Dutton Round H**	**8.33**	**50**	*e*Pn	**Pn**	**08 49 08.6**	**-1.4**
DOL	**Dolgoi Island**	**8.55**	**51**	P	**Pn**	**08 49 12.1**	**-1.0**
PS4A	**Pavlof South-4**	**8.66**	**50**	P	**Pn**	**08 49 13.7**	**-0.8**
SDPT	**Sand Point**	**9.35**	**52**	*e*Pn	**Pn**	**08 49 23.0**	**-0.9**
VNFG	**Veniaminof 2**	**10.26**	**49**	P	**Pn**	**08 49 34.8**	**-1.7**
CHGN	**Chignik**	**10.82**	**51**	*e*Pn	**Pn**	**08 49 42.6**	**-1.4**
CHGN				*e*Sn	**Sn**	**08 51 39.4**	**-5.1**
SII	**Sitkinak Islan**	**13.07**	**54**	*e*Pn	**Pn**	**08 50 12.4**	**-2.5**
GAMB	**Gambell**	**13.54**	**3**	*e*Pn	**Pn**	**08 50 21.7**	**+0.6**
OHAK	**Old Harbor**	**13.77**	**52**	*e*Pn	**Pn**	**08 50 20.3**	**-4.1**
KDAK	**Kodiak Island**	**14.34**	**51**	*e*Pn	**Pn**	**08 50 27.9**	**-4.1**
KDAK				*e*		08 50 28.4	
KDAK	**Kodiak Island**	**14.34**	**51**	Pn	**Pn**	**08 50 28.2**	**-3.9**
	4.5nm,0.3s,baz=230,slow=9.1,SNR=44						
KDAK				LR	LR	08 56 46.2	
	comp=Z,3µm,20.7s,baz=246,slow=40						
SVW2	**Sparrevohn**	**14.73**	**36**	*e*Pn	**Pn**	**08 50 35.9**	**-1.5**
ANM	**Nome**	**14.93**	**14**	*e*Pn	**Pn**	**08 50 40.6**	**+0.5**
ANM	**Nome**	**14.93**	**14**	*e*P	**Pn**	**08 50 40.6**	**+0.5**
BRLK	**Bradley Lake**	**15.97**	**45**	*e*Pn	**Pn**	**08 50 52.0**	**-1.7**
	165nm,0.9s						
BRLK				*e*Sn	**Sn**	**08 53 56.8**	**+6.8**
SEW	**Seward**	**16.77**	**45**	*e*Pn	**Pn**	**08 51 01.6**	**-2.2**
	104nm,0.9s						
SEW				*e*Sn	**Sn**	**08 54 07.9**	**-1.4**
SUA	**Susitna One**	**16.85**	**40**	*e*Pn	**Pn**	**08 51 03.6**	**-1.4**
	146nm,1.7s						
SUA				*e*Sn	**Sn**	**08 54 10.6**	**-1.0**
RC01	**Rabbit Creek A**	**17.09**	**42**	*e*Pn	**Pn**	**08 51 05.6**	**-2.3**
	67nm,1.2s						
RC01				*e*Sn	**Sn**	**08 54 13.8**	**-3.3**
PPLA	**Purkeypile**	**17.10**	**34**	*e*Pn	**Pn**	**08 51 08.7**	**+0.5**
	316nm,1.4s						
PET	**Petropavlovsk**	**17.45**	**290**	*e*Pn	**Pn**	**08 51 12.8**	**+0.3**
	93nm,1.3s						
PET	**Petropavlovsk**	**17.45**	**290**	*e*P	**Pn**	**08 51 13.0**	**+0.5**
PET				*e*S	**Sn**	**08 54 23.6**	**-2.5**
PET				pmax	pmax		
	comp=Z,65nm,1.4s						
PET				MLR	MLR		
	comp=Z,1µm,21.0s						
CAST	**Castle Rocks**	**17.47**	**33**	*e*Pn	**Pn**	**08 51 12.9**	**+0.2**
	comp=Z,199nm,1.3s						
PMR	**Palmer**	**17.58**	**41**	*e*Pn	**Pn**	**08 51 11.7**	**-2.3**
	comp=Z,47nm,1.3s						
PMR	**Palmer**	**17.58**	**41**	*e*P	**Pn**	**08 51 11.7**	**-2.3**
PMR				pmax	pmax		
	comp=Z,47nm,1.3s						
GHO	**Glory Hole Cre**	**17.76**	**40**	*e*Pn	**Pn**	**08 51 14.9**	**-1.4**
	comp=Z,75nm,1.0s						
KNK	**Knik Glacier**	**17.78**	**42**	*e*Pn	**Pn**	**08 51 14.4**	**-2.2**
	comp=Z,58nm,0.8s						
KNK				*e*Sn	**Sn**	**08 54 29.1**	**-4.9**
SML	**Sawmill**	**18.02**	**41**	*e*Pn	**Pn**	**08 51 17.5**	**-2.0**
	comp=Z,159nm,1.1s						
SML	**Sawmill**	**18.02**	**41**	*e*P	**Pn**	**08 51 17.5**	**-2.0**
SML				pmax	pmax		
	comp=Z,159nm,1.1s						
PEA0B	**Petropavlovsk-**	**18.03**	**290**	*e*Pn	**P**	**08 51 19.9**	**0.0**
	comp=Z,62nm,0.8s						
PEA1	**Petropavlovsk-**	**18.03**	**290**	*e*Pn	**Pn**	**08 51 17.3**	**-2.3**
PETK	**Petropavlovsk-**	**18.03**	**290**	*e*Pn	**P**	**08 51 20.6**	**+0.7**
PETK	**Petropavlovsk-**	**18.03**	**290**	P	**Pn**	**08 51 17.3**	**-2.3**
	comp=Z,1.0nm,0.3s,baz=104,slow=15,SNR=20						
TRF	**Thorofare Moun**	**18.13**	**35**	*e*Pn	**Pn**	**08 51 20.7**	**-0.2**
	comp=Z,68nm,0.8s						
TRF				*e*Sn	S	08 55 05.0	+17
SCM	**Sheep Creek Mo**	**18.46**	**41**	*e*P	**P**	**08 51 22.9**	**-1.8**
	comp=Z,167nm,0.9s						
SCM				*e*Sn	**Sn**	**08 54 45.1**	**-5.2**
SCM	**Sheep Creek Mo**	**18.46**	**41**	*e*P	**P**	**08 51 22.9**	**-1.8**
SCM				*e*		08 54 45.1	
SCM				pmax	pmax		
	comp=Z,167nm,0.9s						
RDOG	**Red Dog Mine**	**18.56**	**13**	*e*P	**Pn**	**08 51 26.5**	**+0.5**
	comp=Z,59nm,1.1s						
EYAK	**Cordova Ski Ar**	**18.63**	**46**	*e*P	**P**	**08 51 24.5**	**-2.1**
	comp=Z,133nm,1.1s						
RND	**Reindeer**	**18.64**	**36**	*e*P	**P**	**08 51 25.3**	**-1.3**
	comp=Z,83nm,1.1s						
RND				*e*Sn	S	08 55 11.2	+13
RND	**Reindeer**	**18.64**	**36**	*e*P	**P**	**08 51 25.3**	**-1.3**
RND				pmax	pmax		
	comp=Z,83nm,1.1s						
MCK	**McKinley**	**18.79**	**35**	*e*P	**P**	**08 51 26.9**	**-1.3**
	comp=Z,128nm,1.1s						
MCK				*e*Sn	S	08 55 15.2	+14
MCK	**McKinley**	**18.79**	**35**	*e*P	**P**	**08 51 26.9**	**-1.3**
MCK				pmax	pmax		
	comp=Z,128nm,1.1s						
DIV	**Divide**	**18.84**	**44**	*e*P	**P**	**08 51 26.8**	**-2.1**
	comp=Z,73nm,1.1s						
DIV				*e*Sn	**Sn**	**08 54 54.8**	**-4.8**
KLU	**Klutina**	**18.92**	**43**	*e*P	**P**	**08 51 27.5**	**-2.3**
	comp=Z,142nm,1.4s						
KLU				*e*Sn	Sn	08 54 49.5	-12
MLY	**Manley**	**18.95**	**30**	*e*P	**Pn**	**08 51 30.6**	**-0.2**
	comp=Z,240nm,1.5s						
DHY	**Denali Highway**	**19.03**	**38**	*e*P	**P**	**08 51 31.0**	**-0.1**
	comp=Z,43nm,0.9s						
DHY				*e*Sn	S	08 55 21.2	+15
HMT	**Hamilton**	**19.26**	**47**	*e*P	**Pn**	**08 51 34.5**	**0.0**
	comp=Z,262nm,0.8s						
WRH	**Wood River Hil**	**19.51**	**34**	*e*P	**P**	**08 51 34.6**	**-1.6**
	comp=Z,40nm,0.7s						
HARP	**HAARP**	**19.63**	**41**	*e*P	**P**	**08 51 38.1**	**+0.6**
	comp=Z,187nm,1.2s						
PAX	**Paxson**	**19.74**	**39**	*e*P	**P**	**08 51 38.8**	**0.0**
	comp=Z,26nm,0.8s						
PAX	**Paxson**	**19.74**	**39**	*e*P	**P**	**08 51 38.8**	**0.0**
PAX				pmax	pmax		
	comp=Z,26nm,0.8s						
MDM	**Murphy Dome**	**19.75**	**33**	*e*P	**P**	**08 51 38.7**	**0.0**
	comp=Z,56nm,0.9s						
TCOL	**CIGO, UAF Yank**	**19.82**	**33**	P	**P**	**08 51 38.7**	**-0.8**
	baz=235,SNR=12						
COLA	**College**	**19.83**	**33**	*e*P	**P**	**08 51 39.4**	**-0.2**
	comp=Z,54nm,0.8s						
COLA	**College**	**19.83**	**33**	⇓*e*P	**P**	**08 51 38.2**	**-1.3**
COLA				pmax	pmax		
	comp=Z,40nm,0.9s						
COLA	**College**	**19.83**	**33**	*e*P	**P**	**08 51 39.3**	**-0.2**
HDA	**Harding Lake**	**19.89**	**35**	*e*P	**P**	**08 51 39.5**	**-0.7**
	comp=Z,109nm,1.1s						
HDA				*e*S	**S**	**08 55 18.1**	**-5.0**
HDA	**Harding Lake**	**19.89**	**35**	P	**P**	**08 51 39.3**	**-1.0**
	baz=238,SNR=36						
ILAR	**Eielson Array**	**20.11**	**34**	P	**P**	**08 51 41.4**	**-1.3**
	comp=Z,14nm,0.6s,baz=233,slow=8.3,SNR=84						
ILAR				S	**S**	**08 55 21.4**	**-6.1**
	comp=Z,1.6nm,0.7s,baz=233,slow=18,SNR=3.6						

ILAR				PcP	**PcP**	**08 55 55.7**	**-1.3**
	comp=Z,3.4nm,0.9s,baz=261,slow=3.2,SNR=5.1						
ILAR				LR	LR	09 00 09.9	
	comp=Z,886nm,18.4s,baz=250,slow=39						
ILB	**Eielson Array**	**20.11**	**34**	*e*P	**P**	**08 51 41.0**	**-1.7**
ILB				*e*S	**S**	**08 55 21.4**	**-6.1**
ILB				*e*PcP	**PcP**	**08 55 55.7**	**-1.3**
IL1	**Eielson Array**	**20.11**	**34**	*e*P	**P**	**08 51 39.9**	**-2.7**
POKR	**Poker Plat Res**	**20.11**	**33**	P	**P**	**08 51 42.4**	**-0.3**
	baz=235,SNR=16						
RIDG	**Independ'e Rid**	**20.35**	**38**	*e*P	**P**	**08 51 45.9**	**+0.6**
	comp=Z,117nm,1.2s						
BALM	**Baldy**	**20.37**	**46**	*e*P	Pn	08 51 46.8	-1.0
	comp=Z,204nm,1.0s						
BALM	**Baldy**	**20.37**	**46**	*e*P	Pn	08 51 46.8	-1.0
BALM				pmax	pmax		
	comp=Z,204nm,1.0s						
BILL	**Bilibino**	**20.40**	**338**	*e*P	**P**	**08 51 45.5**	**-0.3**
	comp=Z,107nm,1.1s						
BILL	**Bilibino**	**20.40**	**338⇑**	*e*P	**P**	**08 51 44.9**	**-0.9**
BILL				pmax	pmax		
	comp=Z,41nm,0.8s						
MENT	**Mentasta**	**20.45**	**41**	*e*P	**P**	**08 51 47.1**	**+0.7**
	comp=Z,50nm,1.0s						
COLD	**Coldfoot**	**20.59**	**26**	*e*P	Pn	08 51 50.0	-0.2
	comp=Z,135nm,1.3s						
DOT	**Dot Lake**	**20.62**	**38**	*e*P	**P**	**08 51 49.3**	**+1.1**
	comp=Z,100nm,1.2s						
SCRK	**Sand Creek**	**20.80**	**38**	*e*P	**P**	**08 51 49.7**	**-0.6**
	comp=Z,89nm,0.9s						
PRP	**Porcupine Dome**	**21.00**	**33**	*e*P	**P**	**08 51 51.9**	**-0.6**
	comp=Z,63nm,1.2s						
PCA	**Pinnacle**	**21.12**	**50**	*e*P	**P**	**08 51 56.3**	**+2.6**
	comp=Z,384nm,1.2s						
FYU	**Fort Yukon**	**21.69**	**31**	*e*P	**P**	**08 52 00.6**	**+1.0**
	comp=Z,163nm,1.0s						
TOLK	**Toolik Lake Re**	**21.76**	**24**	*e*P	**P**	**08 52 00.9**	**+0.4**
	comp=Z,149nm,0.8s						
TOLK	**Toolik Lake Re**	**21.76**	**24**	P	**P**	**08 52 00.8**	**+0.3**
	baz=225,SNR=103						
EGAK	**Eagle**	**22.25**	**37**	*e*P	**P**	**08 52 05.4**	**-0.4**
	comp=Z,413nm,1.5s						
MA2	**Magadan**	**22.27**	**308**	*e*P	**P**	**08 52 06.4**	**+0.4**
	comp=Z,35nm,0.9s						
MA2	**Magadan**	**22.27**	**308⇑**	*e*P	**P**	**08 52 05.8**	**-0.2**
MA2				pmax	pmax		
	comp=Z,49nm,1.7s						
MA2	**Magadan**	**22.27**	**308**	P	**P**	**08 52 05.4**	**-0.6**
	comp=Z,20nm,0.8s,baz=90,slow=9.3,SNR=18						
MA2				LR	LR	09 00 30.2	
	comp=Z,692nm,21.3s,baz=103,slow=36						
SEY	**Seymchan**	**22.31**	**317⇓**	*e*P	**P**	**08 52 06.1**	**-0.3**
SEY	**Seymchan**	**22.31**	**317**	P	**P**	**08 52 06.2**	**-0.2**
	comp=Z,33nm,0.8s,baz=109,slow=12,SNR=53						
HYT	**Haines Junctio**	**22.61**	**48**	*e*P	**P**	**08 52 11.4**	**+1.7**
	comp=Z,78nm,0.9s						
DAWY	**Dawson**	**22.68**	**40**	*e*P	**P**	**08 52 10.3**	**-0.1**
	comp=Z,132nm,1.1s						
SKAG	**Skagway**	**23.47**	**52**	*e*P	**P**	**08 52 18.3**	**-0.1**
	comp=Z,81nm,1.0s						
WHY	**Whitehorse**	**23.85**	**49**	*e*P	**P**	**08 52 23.8**	**+1.6**
	comp=Z,119nm,0.9s						
WHY				*e*Sn	Sn	08 56 54.2	-5.6
JIS	**Juneau Island**	**23.88**	**55**	*e*P	**P**	**08 52 23.6**	**+1.3**
	comp=Z,83nm,0.9s						
EPYK	**Eagle Plains**	**24.59**	**35**	*e*P	**P**	**08 52 29.2**	**+0.3**
	comp=Z,357nm,1.7s						
EPYK				*e*S	**S**	**08 56 51.5**	**+2.9**
EPYK	**Eagle Plains**	**24.59**	**35**	P	**P**	**08 52 29.4**	**+0.5**
	baz=248,SNR=45						
CRAG	**Craig**	**24.63**	**62**	*e*P	**P**	**08 52 31.3**	**+2.0**
	comp=Z,316nm,1.7s						
WRAK	**Wrangell Islan**	**25.00**	**60**	*e*P	**P**	**08 52 33.6**	**+1.1**
	comp=Z,318nm,1.5s						
DLBC	**Dease Lake**	**26.18**	**55**	*e*P	**P**	**08 52 45.6**	**+2.2**
	comp=Z,51nm,0.9s						
DLBC	**Dease Lake**	**26.18**	**55**	P	**P**	**08 52 45.2**	**+1.8**
	comp=Z,38nm,1.1s,baz=282,slow=9.1,SNR=26						
DLBC				LR	LR	09 03 49.6	
	comp=Z,600nm,18.9s,baz=284,slow=38						
KUR	**Kuril'sk**	**26.25**	**274⇓**	*e*P	**P**	**08 52 46.3**	**+2.2**
INK	**Inuvik**	**26.48**	**32**	*e*P	**P**	**08 52 46.5**	**+0.6**
	comp=Z,50nm,1.0s						
INK				*e*PcP	**PcP**	**08 56 10.1**	**-0.1**
INK	**Inuvik**	**26.48**	**32**	*e*P	**P**	**08 52 46.5**	**+0.6**
INK				*e*		08 56 10.1	
INK				pmax	pmax		
	comp=Z,50nm,1.0s						
INK	**Inuvik**	**26.48**	**32**	P	**P**	**08 52 46.3**	**+0.4**
	comp=Z,26nm,0.6s,baz=234,slow=10.0,SNR=95						
INK				PcP	**PcP**	**08 56 10.1**	**-0.1**
	comp=Z,16nm,1.0s,baz=287,slow=3.4,SNR=4.5						
INK				LR	LR	09 04 00.4	
	comp=Z,1µm,18.5s,baz=240,slow=38						
TYV	**Tymovskoe**	**27.55**	**288**	*e*P	**P**	**08 52 56.7**	**+1.0**
TYV				*e*S	**S**	**08 57 40.7**	**+4.9**
TYV				pmax	pmax		
	comp=Z,14nm,1.3s						
TYV				smax	smax		
	comp=E,600nm,6.9s						
TYV				MLR	MLR		
	comp=Z,700nm,16.0s						
YUK	**Yuzh-Kuril'sk**	**28.07**	**273**	*e*P	**P**	**08 52 57.8**	**-2.6**
YUK				*e*		08 53 48.9	
YUK				*e*PPP	PPP	08 53 56.9	
YUK				*e*S	**S**	**08 57 38.4**	**-5.6**
YUK				*e*SS	**SnSn**	**08 59 01.5**	**+2.2**
YUK				*e*SSS	SSS	08 59 17.0	
YUK				pmax	pmax		
	comp=Z,250nm,1.8s						
BBB	**Bella Bella**	**28.11**	**68**	LR	LR	09 01 53.4	
	comp=Z,367nm,20.2s,baz=312,slow=32						
NKL	**Nikolayevsk**	**28.16**	**294**	*e*P	**P**	**08 53 01.0**	**-0.1**
NKL				*e*S	**S**	**08 57 47.0**	**+1.7**
NKL				pmax	pmax		
	comp=Z,800nm,4.0s						
NKL				pmax	pmax		
	comp=Z,130nm,1.3s						
NKL				smax	smax		
	comp=E,2µm,6.0s						
NKL				MLR	MLR		
	comp=E,800nm,16.0s						
NKL				MLR	MLR		
	comp=Z,900nm,14.0s						
YSS	**Yuzh-Sakhalins**	**28.81**	**280**	*e*P	**P**	**08 53 07.4**	**+0.6**
	comp=Z,46nm,0.8s						
YSS	**Yuzh-Sakhalins**	**28.81**	**280⇑**	*e*P	**P**	**08 53 07.5**	**+0.6**
YSS				*e**SP	**pwP**	**08 53 17.5**	**-0.1**
YSS				*e*		08 53 57.0	
YSS				*e*PPP	PPP	08 54 13.0	
YSS				*e*S	**S**	**08 57 53.8**	**-1.7**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				pmax	pmax		
	comp=E,30nm,0.8s						
YSS				pmax	pmax		
	comp=Z,200nm,5.8s						
YSS				smax	smax		
	comp=E,200nm,6.6s						
YSS				smax	smax		
	comp=E,300nm,8.8s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
ASAJ	**Asahikawa**	**30.12**	**275**	P	**P**	**08 53 18.9**	**+0.3**
	comp=Z,20nm,0.7s,baz=82,slow=7.6,SNR=13						
ERM	**Erimo**	**30.78**	**271⇑**	*e*P	**P**	**08 53 25.5**	**+1.0**
ERM				pmax	pmax		
	comp=Z,74nm,1.4s						
GRNR	**Gornyy**	**31.35**	**291**	*e*P	**P**	**08 53 29.1**	**-0.3**
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
PGC	**Sidney**	**32.06**	**73**	*e*P	**P**	**08 53 37.6**	**+2.0**
	comp=Z,172nm,1.8s						
NLWA	**Neilton Lookou**	**32.29**	**76**	*e*P	**P**	**08 53 40.5**	**+2.7**
	comp=Z,120nm,1.0s						
LLLB	**Lillooet**	**32.31**	**69**	*e*P	**P**	**08 53 39.3**	**+1.5**
	comp=Z,28nm,1.2s						
A04D	**Lummi Island**	**32.49**	**73**	P	**P**	**08 53 39.1**	**-0.3**
	baz=293						
YAK	**Yakutsk**	**32.64**	**313**	*e*P	**P**	**08 53 38.2**	**-2.4**
YAK				*e*		08 54 48.0	
YAK				*e*PPP	PPP	08 55 06.5	
YAK				*e*		08 56 24.7	
YAK				*e*S	**S**	**08 58 51.0**	**-4.2**
YAK				*e*		09 04 05.4	
YAK				pmax	pmax		
	comp=Z,235nm,1.0s						
YAK				pmax	pmax		
	comp=N,22nm,0.9s						
YAK				pmax	pmax		
	comp=E,144nm,1.1s						
YAK				pmax	pmax		
	comp=Z,33nm,0.6s						
YAK				smax	smax		
	comp=N,3µm,3.3s						
YAK				smax	smax		
	comp=E,2µm,2.3s						
YAK				MLR	MLR		
	comp=Z,7µm,26.0s						
YAK				MLR	MLR		
	comp=E,5µm,23.0s						
D03D	**Eldon**	**32.72**	**75**	P	**P**	**08 53 43.1**	**+1.7**
	baz=294,SNR=51						
B05A	**Bryant**	**33.04**	**73**	P	**P**	**08 53 45.1**	**+0.8**
	baz=294,SNR=35						
D04E	**Lakebay**	**33.06**	**75**	P	**P**	**08 53 45.5**	**+1.1**
	baz=295,SNR=10						
B06A	**Marblemount**	**33.31**	**73**	*e*P	**P**	**08 53 48.2**	**+1.6**
	comp=E,152nm,1.8s						
F04D	**Rainier, OR**	**33.38**	**77**	P	**P**	**08 53 48.7**	**+1.5**
	baz=296						
E04D	**Cinebar**	**33.45**	**76**	P	**P**	**08 53 49.6**	**+1.8**
	baz=296,SNR=36						
LPH	**Laupahoehoe**	**33.47**	**148**	*e*P	**P**	**08 53 49.6**	**+1.4**
LPH				*e*S	**S**	**08 59 11.7**	**+2.9**
TEY	**Ternei**	**33.50**	**281⇓**	*e*P	**P**	**08 53 48.4**	**+0.1**
TEY				pmax	pmax		
	comp=Z,50nm,0.8s						
TEY				pmax	pmax		
	comp=E,40nm,0.9s						
YKW3	**Yellowknife Ar**	**33.53**	**46**	*e*P	**P**	**08 53 49.1**	**+0.8**
	comp=E,50nm,1.3s						
YKW3				*e*PcP	**PcP**	**08 56 28.6**	**+0.1**
YKA	**Yellowknife Ar**	**33.54**	**46**	P	**P**	**08 53 49.0**	**+0.6**
	comp=E,14nm,0.8s,baz=276,slow=9.3,SNR=118						
YKA				PcP	**PcP**	**08 56 28.3**	**-0.2**
	comp=E,9.5nm,0.9s,baz=282,slow=3.2,SNR=14						
YKA				LR	LR	09 08 37.8	
	comp=E,84nm,21.0s,baz=272,slow=38						
YKB5	**Yellowknife Ar**	**33.54**	**46**	*e*P	**P**	**08 53 48.3**	**-0.1**
YKB5				*e*PcP	**PcP**	**08 56 28.3**	**-0.2**
D05A	**Enumclaw**	**33.54**	**75**	*e*P	**P**	**08 53 51.4**	**+2.8**
	comp=E,344nm,1.1s						
LON	**Longmire**	**33.84**	**76**	*e*P	**P**	**08 53 53.2**	**+1.9**
	comp=E,38nm,0.9s						
LON	**Longmire**	**33.84**	**76**	*e*P	**P**	**08 53 53.2**	**+1.9**
LON				pmax	pmax		
	comp=Z,38nm,0.9s						
C06D	**Leavenworth**	**33.91**	**73**	P	**P**	**08 53 52.3**	**+0.4**
	baz=294,SNR=5.7						
RIM	**Rim**	**34.08**	**148**	*e*P	**P**	**08 53 55.2**	**+1.6**
	comp=Z,108nm,0.9s						
J01E	**Myrtle Point**	**34.16**	**83**	P	**P**	**08 53 55.1**	**+1.1**
	baz=300						
H11N2	**WAKE ISLAND Hy**	**34.26**	**214**	T	T	09 30 11.4	
	baz=18						
H04D	**Lebanon**	**34.26**	**80**	P	**P**	**08 53 55.0**	**+0.1**
	baz=298						
H11N3	**WAKE ISLAND Hy**	**34.27**	**214**	T	T	09 30 12.3	
	baz=18						
I03D	**Drain, OR**	**34.27**	**81**	P	**P**	**08 53 56.4**	**+1.4**
	baz=299						
H11N1	**WAKE ISLAND Hy**	**34.28**	**214**	T	T	09 30 19.2	
	baz=18						
LTY	**Liberty**	**34.33**	**74**	*e*P	**P**	**08 53 56.1**	**+0.5**
	comp=Z,111nm,1.4s						
F05D	**White Salmon**	**34.44**	**77**	P	**P**	**08 53 57.9**	**+1.5**
	baz=297,SNR=8.8						
H04A	**Detroit Lake**	**34.53**	**79**	*e*P	**P**	**08 53 59.4**	**+2.0**
	comp=Z,147nm,1.4s						
K02D	**Willamette Mer**	**34.57**	**83**	P	**P**	**08 53 58.7**	**+1.1**
	baz=301						
B08A	**Colville Reser**	**34.69**	**72**	*e*P	**P**	**08 53 59.8**	**+1.1**
	comp=Z,80nm,1.3s						
KLR	**Kul'dur**	**34.72**	**290**	*ce*P	**P**	**08 53 58.3**	**-0.5**
I04A	**Tendick Farm,**	**34.82**	**81**	P	**P**	**08 54 00.6**	**+0.8**
	baz=300,SNR=6.9						
G05D	**Wamic, OR**	**34.82**	**78**	P	**P**	**08 54 00.8**	**+1.0**
	baz=298,SNR=12						
L02E	**Cave Junction**	**34.88**	**84**	P	**P**	**08 54 01.0**	**+0.7**
	baz=301						
HUMO	**Hull Mountain**	**35.06**	**83**	*e*P	**P**	**08 54 04.2**	**+2.3**
	comp=Z,63nm,1.6s						
HUMO				*e*PcP	**PcP**	**08 56 34.7**	**+1.3**
E07A	**Sunnyside**	**35.14**	**75**	*e*P	**P**	**08 54 04.0**	**+1.5**
	comp=Z,186nm,1.5s						
I05D	**Terrebonne, OR**	**35.23**	**79**	P	**P**	**08 54 04.1**	**+0.8**
	baz=299,SNR=15						
J04D	**Umpqua Nationa**	**35.28**	**81**	P	**P**	**08 54 03.9**	**-0.1**
	baz=300,SNR=6.1						
F07A	**Phinny Hill Vi**	**35.39**	**76**	*e*P	**P**	**08 54 05.8**	**+1.2**
	comp=Z,107nm,1.1s						
HAWA	**Hanford**	**35.41**	**75**	*e*P	**P**	**08 54 05.8**	**+0.9**
	comp=Z,98nm,0.9s						
H11S1	**WAKE ISLAND Hy**	**35.45**	**214**	T	T	09 31 39.9	
	baz=22,slow=76,SNR=8.8						
H11S2	**WAKE ISLAND Hy**	**35.47**	**214**	T	T	09 31 48.3	
	baz=22,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**35.47**	**214**	T	T	09 31 46.6	
	baz=22,slow=76,SNR=12						
D08A	**Wollman Farm,**	**35.49**	**74**	*e*P	**P**	**08 54 06.8**	**+1.2**
	comp=Z,232nm,1.9s						
C09A	**Chrisman Ranch**	**35.57**	**72**	*e*P	**P**	**08 54 07.5**	**+1.4**
	comp=Z,48nm,1.1s						
C09A				*e*PcP	**PcP**	**08 56 35.8**	**+1.1**
E08A	**Dider Farm, El**	**35.66**	**75**	*e*P	**P**	**08 54 08.7**	**+1.8**
	comp=Z,183nm,1.5s						
YBH	**Yreka Blue Hor**	**35.67**	**84**	*e*P	**P**	**08 54 09.9**	**+2.7**
	comp=Z,57nm,1.6s						
YBH	**Yreka Blue Hor**	**35.67**	**84**	*e*P	**P**	**08 54 09.9**	**+2.7**
YBH				pmax	pmax		
	comp=Z,57nm,1.6s						
L04D	**Klamath Falls**	**35.67**	**83**	P	**P**	**08 54 07.1**	**-0.2**
	baz=301,SNR=8.4						
ZEA	**Zeya**	**35.72**	**299**	*e*P	**P**	**08 54 06.4**	**-0.9**
ZEA				*e*S	**S**	**08 59 42.0**	**-0.9**
ZEA				pmax	pmax		
	comp=E,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,81nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,500nm,5.0s						
ZEA				smax	smax		
	comp=E,500nm,6.0s						
ZEA				smax	smax		
	comp=N,500nm,5.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,16.0s						
ZEA				MLR	MLR		
	comp=E,600nm,15.0s						
ZEA				MLR	MLR		
	comp=N,400nm,13.0s						
PINE	**Pine Mountain**	**35.75**	**80**	*e*P	**P**	**08 54 10.4**	**+2.4**
	comp=N,127nm,1.4s						
PINE				*e*PcP	**PcP**	**08 56 37.0**	**+1.5**
M02C	**Callahan**	**35.76**	**84**	P	**P**	**08 54 09.0**	**+1.1**
	baz=302,SNR=9.7						
J05D	**Fort Rock, OR**	**35.81**	**81**	P	**P**	**08 54 09.4**	**+0.9**
	baz=300,SNR=12						
K04D	**Chiloquin, OR**	**35.82**	**82**	P	**P**	**08 54 09.6**	**+1.1**
	baz=301						
N02D	**Trinity Center**	**36.07**	**85**	P	**P**	**08 54 10.9**	**+0.3**
	baz=303						
NEW	**Newport**	**36.07**	**71**	*e*P	**P**	**08 54 11.1**	**+0.5**
	comp=N,36nm,1.0s						
NEW	**Newport**	**36.07**	**71**	*e*P	**P**	**08 54 11.1**	**+0.5**
NEW				pmax	pmax		
	comp=Z,36nm,1.0s						
NEW	**Newport**	**36.07**	**71**	P	**P**	**08 54 10.3**	**-0.2**
	baz=295,SNR=27						
M04C	**Macdoel**	**36.20**	**83**	P	**P**	**08 54 12.6**	**+0.8**
	baz=302,SNR=6.5						
E09A	**Wood Farm, Sta**	**36.21**	**74**	*e*P	**P**	**08 54 13.1**	**+1.4**
	comp=Z,71nm,1.0s						
G08A	**Pilot Rock**	**36.27**	**76**	*e*P	**P**	**08 54 13.7**	**+1.3**
	comp=Z,67nm,1.4s						
WDC	**Whiskeytown Da**	**36.39**	**85**	*e*P	**P**	**08 54 15.6**	**+2.3**
	comp=Z,47nm,1.4s						
WDC	**Whiskeytown Da**	**36.39**	**85**	*e*P	**P**	**08 54 15.6**	**+2.3**
WDC				pmax	pmax		
	comp=Z,47nm,1.4s						
O02D	**Mt. Diablo Mer**	**36.45**	**86**	P	**P**	**08 54 14.5**	**+0.6**
	baz=304,SNR=8.7						
I07A	**Izee**	**36.51**	**78**	*e*P	**P**	**08 54 16.1**	**+1.7**
	comp=Z,68nm,1.1s						
USA0B	**Ussuriysk Arra**	**36.80**	**282**	*e*P	**P**	**08 54 17.3**	**+0.6**
USRK	**Ussuriysk Ar.**	**36.80**	**282**	P	**P**	**08 54 16.1**	**-0.6**
	comp=Z,10nm,0.8s,baz=67,slow=7.6,SNR=16						
USRK				PcP	**PcP**	**08 56 39.0**	**+0.6**
	comp=Z,9.3nm,1.0s,baz=72,slow=4.7,SNR=6.2						
O03E	**Paynes Creek**	**37.02**	**85**	P	**P**	**08 54 19.3**	**+0.6**
	baz=304,SNR=18						
MJAR	**Matsushiro Arr**	**37.02**	**267**	P	**P**	**08 54 19.6**	**+0.9**
	comp=Z,7.2nm,1.0s,baz=46,slow=5.8,SNR=9.4						
MJAR				PcP	**PcP**	**08 56 39.7**	**+0.4**
	comp=Z,7.4nm,1.0s,baz=101,slow=2.1,SNR=6.8						
F10A	**Beach Ranch, E**	**37.03**	**74**	*e*P	**P**	**08 54 20.1**	**+1.3**
	comp=Z,37nm,1.0s						
MAJO	**Matsushiro**	**37.03**	**267**	*e*P	**P**	**08 54 20.2**	**+1.4**
	comp=Z,40nm,1.2s						
MAJO				*e*PcP	**PcP**	**08 56 39.7**	**+0.4**
MAJO	**Matsushiro**	**37.03**	**267**	*di*P	**P**	**08 54 19.6**	**+0.9**
MAJO				pmax	pmax		
	comp=Z,56nm,1.7s						
MAJO	**Matsushiro**	**37.03**	**267**	*e*P	**P**	**08 54 19.6**	**+0.9**
MAT	**Matsushiro**	**37.03**	**267**	P	**P**	**08 54 20.0**	**+1.3**
MJB9	**Matsu-Tunnel**	**37.03**	**267**	*e*P	**P**	**08 54 20.6**	**+1.9**
	comp=Z,42nm,1.2s						
MOD	**Modoc Plateau**	**37.11**	**82**	*e*P	**P**	**08 54 21.4**	**+1.8**
	comp=Z,82nm,1.4s						
MOD				*e*PcP	**PcP**	**08 56 40.7**	**+1.1**
GDXM	**Geysers**	**37.22**	**88**	*e*P	**P**	**08 54 23.1**	**+2.7**
	comp=Z,63nm,1.5s						
VLA	**Vladivostok**	**37.40**	**281⇑**	*e*P	**P**	**08 54 23.4**	**+1.6**
VLA				pmax	pmax		
	comp=Z,39nm,0.9s						
BMO	**Blue Mountains**	**37.51**	**76**	*e*P	**P**	**08 54 24.3**	**+1.5**
	comp=Z,139nm,1.8s						
BMO	**Blue Mountains**	**37.51**	**76**	*e*P	**P**	**08 54 24.3**	**+1.5**
BMO				pmax	pmax		
	comp=Z,139nm,1.8s						
J08A	**Circle Bar Ran**	**37.52**	**79**	*e*P	**P**	**08 54 24.4**	**+1.5**
	comp=Z,97nm,1.2s						
ORV	**Oroville**	**37.62**	**86**	*e*P	**P**	**08 54 24.9**	**+1.2**
	comp=Z,36nm,1.5s						
ORV				*e*PcP	**PcP**	**08 56 41.7**	**+0.6**
ORV	**Oroville**	**37.62**	**86**	*e*P	**P**	**08 54 24.9**	**+1.2**
ORV				*e*		08 56 41.7	
ORV				pmax	pmax		
	comp=Z,36nm,1.5s						
WALA	**Waterton Lakes**	**37.67**	**68**	*e*P	**P**	**08 54 25.1**	**+0.9**
	comp=Z,28nm,1.1s						
WALA				*e*PcP	**PcP**	**08 56 42.2**	**+1.1**
WVOR	**Wild Horse Val**	**37.89**	**80**	*e*P	**P**	**08 54 27.1**	**+1.0**
	comp=Z,70nm,1.1s						
WVOR	**Wild Horse Val**	**37.89**	**80**	*e*P	**P**	**08 54 27.1**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,70nm,1.1s						
MDJ	**Mudanjiang**	**38.09**	**284**	P	**P**	**08 54 27.3**	**-0.3**
MDJ				sP	pwP	08 54 36.8	-1.6
MDJ				S	**S**	**09 00 16.3**	**-3.0**
MDJ				sS	ScP	09 00 28.3	-0.5
MDJ				pmax	pmax		
	comp=Z,19nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,260nm,4.6s						
MDJ				LR	LR		
	comp=Z,680nm,11.2s						
MDJ				LR	LR		
	comp=Z,510nm,10.7s						
MDJ				LR	LR		
	comp=Z,660nm,17.3s						
MSHR	**Mys Shultsa**	**38.14**	**280⇓**	*i*P	**P**	**08 54 28.7**	**+0.7**
BEKR	**Beckworth**	**38.18**	**85**	*e*P	**P**	**08 54 30.2**	**+1.6**
	comp=Z,50nm,1.4s						
BEKR				*e*PcP	**PcP**	**08 56 43.5**	**+0.6**
AFDM	**Forest Hills D**	**38.30**	**87**	*e*P	**P**	**08 54 31.1**	**+1.6**
	comp=Z,38nm,1.6s						
MSO	**Missoula**	**38.64**	**71**	*e*P	**P**	**08 54 33.1**	**+0.7**
	comp=Z,52nm,1.3s						
MSO				*e*PcP	**PcP**	**08 56 44.7**	**+0.5**
MSO	**Missoula**	**38.64**	**71**	P	**P**	**08 54 32.3**	**-0.1**
	baz=298,SNR=22						
PAHR	**Pah Rah Range**	**38.89**	**84**	*e*P	**P**	**08 54 36.5**	**+1.9**
	comp=Z,81nm,1.2s						
PAHR				*e*PcP	**PcP**	**08 56 46.0**	**+0.8**
VCNR	**Virginia City**	**38.95**	**85**	*e*P	**P**	**08 54 36.3**	**+1.1**
	comp=Z,72nm,1.2s						
PNTR	**Pine Nut**	**39.10**	**85**	*e*P	**P**	**08 54 38.7**	**+2.2**
	comp=Z,50nm,0.9s						
CMB	**Columbia Colle**	**39.21**	**87**	*e*P	**P**	**08 54 39.1**	**+1.9**
	comp=Z,54nm,1.4s						
CMB	**Columbia Colle**	**39.21**	**87**	*e*P	**P**	**08 54 39.1**	**+1.9**
CMB				pmax	pmax		
	comp=Z,54nm,1.4s						
RES	**Resolute Bay**	**39.33**	**24**	*e*P	**P**	**08 54 38.5**	**+0.8**
	comp=Z,18nm,1.1s						
RES	**Resolute Bay**	**39.33**	**24**	*e*P	**P**	**08 54 38.5**	**+0.8**
RES				pmax	pmax		
	comp=Z,18nm,1.1s						
YERR	**Yerington**	**39.39**	**85**	*e*P	**P**	**08 54 40.9**	**+2.0**
	comp=Z,90nm,1.4s						
WAKR	**Walker**	**39.54**	**86**	*e*P	**P**	**08 54 42.4**	**+2.3**
	comp=Z,50nm,1.2s						
BMN	**Battle Mountai**	**39.86**	**82**	*e*P	**P**	**08 54 44.3**	**+1.6**
BMN	**Battle Mountai**	**39.86**	**82**	*e*P	**P**	**08 54 44.3**	**+1.6**
HLID	**Hailey**	**39.96**	**76**	*e*P	**P**	**08 54 44.6**	**+1.1**
	comp=Z,73nm,1.1s						
HLID				*e*PcP	**PcP**	**08 56 50.1**	**+1.6**
HLID	**Hailey**	**39.96**	**76**	P	**P**	**08 54 44.1**	**+0.7**
	baz=301,SNR=77						
HRY	**Holter Researc**	**39.98**	**70**	*e*P	**P**	**08 54 44.2**	**+0.7**
LRM	**Limekiln Ridge**	**40.03**	**72**	*e*P	**P**	**08 54 44.7**	**+0.6**
LRM				*e*PcP	**PcP**	**08 56 49.7**	**+0.9**
RYN	**Ryan**	**40.05**	**85**	*e*P	**P**	**08 54 46.2**	**+1.9**
	comp=Z,42nm,1.1s						
KVN	**Kaiserville**	**40.08**	**84**	*e*P	**P**	**08 54 46.1**	**+1.5**
	comp=Z,35nm,1.1s						
KVN	**Kaiserville**	**40.08**	**84**	*e*P	**P**	**08 54 46.1**	**+1.5**
KVN				pmax	pmax		
	comp=Z,35nm,1.1s						
DLMT	**Dillon**	**40.17**	**73**	*e*P	**P**	**08 54 45.8**	**+0.6**
	comp=Z,29nm,1.3s						
MCMT	**McKenzie Canyo**	**40.28**	**74**	*e*P	**P**	**08 54 46.8**	**+0.5**
MDPB	**Devils Postpil**	**40.28**	**87**	*e*P	**P**	**08 54 48.5**	**+2.2**
	comp=Z,56nm,1.1s						
NV01	**Mina Array Sit**	**40.31**	**85**	*e*P	**P**	**08 54 47.8**	**+1.2**
NV01				*e*PcP	**PcP**	**08 56 50.5**	**+0.7**
NVAR	**Mina Array Bea**	**40.31**	**85**	P	**P**	**08 54 47.8**	**+1.2**
	comp=Z,16nm,0.9s,baz=292,slow=8.5,SNR=45						
NVAR				PcP	**PcP**	**08 56 50.4**	**+0.6**
	comp=Z,19nm,1.1s,baz=275,slow=3.2,SNR=11						
NVAR				LR	LR	09 09 28.5	
	comp=Z,195nm,19.3s,baz=278,slow=33						
MLAC	**Mammoth, Mammo**	**40.44**	**87**	P	**P**	**08 54 49.5**	**+1.9**
	baz=307						
EGMT	**Eagleton**	**40.60**	**68**	*e*P	**P**	**08 54 49.2**	**+0.5**
	comp=Z,56nm,1.0s						
EGMT	**Eagleton**	**40.60**	**68**	P	**P**	**08 54 47.9**	**-0.8**
	baz=298,SNR=25						
BOZ	**Bozeman (W)**	**40.64**	**72**	*e*P	**P**	**08 54 49.3**	**+0.2**
	comp=Z,31nm,0.9s						
BOZ	**Bozeman (W)**	**40.64**	**72**	*e*P	**P**	**08 54 49.3**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,31nm,0.9s						
BOZ	**Bozeman (W)**	**40.64**	**72**	P	**P**	**08 54 49.0**	**-0.1**
	baz=300,SNR=35						
ELK	**Elko**	**40.95**	**80**	*e*P	**P**	**08 54 52.8**	**+1.0**
	comp=Z,47nm,1.3s						
ELK	**Elko**	**40.95**	**80**	*e*P	**P**	**08 54 52.8**	**+1.0**
ELK				pmax	pmax		
	comp=Z,47nm,1.3s						
CN2	**Changchun**	**41.07**	**285**	*e*P	**P**	**08 54 51.6**	**-0.9**
CN2				*e*sP	pwP	08 55 02.4	-0.9
CN2				*e*S	**S**	**09 01 00.9**	**-3.1**
CN2				pmax	pmax		
	comp=Z,30nm,1.4s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,380nm,17.0s						
CN2				LR	LR		
	comp=Z,430nm,17.0s						
CN2				LR	LR		
	comp=Z,430nm,18.0s						
SMMC	**Simmler**	**41.09**	**90**	P	**P**	**08 54 54.4**	**+1.6**
	baz=309						

QLMT	**Earthquake Lak**	**41.15**	**73**	*e*P	**P**	**08 54 54.2**	**+0.8**
QLMT				*e*PcP	**PcP**	**08 56 54.2**	**+1.8**
TIN	**Tinemaha, Big**	**41.17**	**87**	P	**P**	**08 54 53.8**	**+0.3**
	baz=307,SNR=6.5						
BOD	**Bodaibo**	**41.30**	**309**	*e*P	**P**	**08 54 52.6**	**-1.5**
BOD				*e*		09 01 05.1	
BOD				pmax	pmax		
	comp=Z,29nm,1.6s						
YHB	**Horse Butte**	**41.33**	**73**	*e*P	**P**	**08 54 55.1**	**+0.2**
	comp=Z,43nm,1.1s						
VES	**Vestal, Richgr**	**41.35**	**89**	P	**P**	**08 54 55.5**	**+0.6**
	baz=308,SNR=12						
PKM	**Mcpherson Peak**	**41.48**	**91**	P	**P**	**08 54 57.4**	**+1.2**
	baz=309						
YMR	**Madison River**	**41.52**	**73**	*e*P	**P**	**08 54 57.5**	**+1.1**
	comp=Z,50nm,1.1s						
YHH	**Holmes Hill**	**41.53**	**73**	*e*P	**P**	**08 54 57.0**	**+0.4**
CWC	**Cottonwood Cre**	**41.63**	**88**	P	**P**	**08 54 58.1**	**+0.7**
	baz=308						
YNR	**Norris Junctio**	**41.67**	**73**	*e*P	**P**	**08 54 59.4**	**+1.7**
	comp=Z,52nm,1.0s						
YNR				*e*PcP	**PcP**	**08 56 57.1**	**+3.0**
YFT	**Old Faithful**	**41.71**	**73**	*e*P	**P**	**08 54 59.8**	**+1.8**
	comp=Z,20nm,1.0s						
YFT				*e*PcP	**PcP**	**08 56 57.3**	**+3.1**
GCMT	**Greycliff**	**41.74**	**71**	*e*P	**P**	**08 54 59.0**	**+0.9**
GCMT				*e*PcP	**PcP**	**08 56 55.3**	**+1.1**
GRAC	**Grapevine Rang**	**41.76**	**86**	P	**P**	**08 54 59.3**	**+1.0**
	baz=307,SNR=11						
HIA	**Hailar**	**41.80**	**295**	*e*P	**P**	**08 54 58.4**	**-0.1**
	comp=Z,40nm,0.9s						
HIA	**Hailar**	**41.80**	**295**	*e*P	**P**	**08 54 58.4**	**-0.1**
HIA				pmax	pmax		
	comp=Z,40nm,0.9s						
SBC	**Santa Barbara**	**41.82**	**91**	P	**P**	**08 55 00.2**	**+1.5**
	baz=310						
YPP	**Pitchstone Pla**	**41.82**	**73**	*e*P	**P**	**08 55 00.7**	**+1.7**
	comp=Z,30nm,1.4s						
ISA	**Isabella, Lake**	**41.85**	**89**	P	**P**	**08 54 59.1**	**0.0**
	baz=308,SNR=10						
H17A	**Grant Village**	**41.90**	**73**	*e*P	**P**	**08 55 00.9**	**+1.4**
	comp=Z,63nm,1.2s						
H17A				*e*PcP	**PcP**	**08 56 57.7**	**+2.8**
H17A	**Grant Village**	**41.90**	**73**	P	**P**	**08 55 01.3**	**+1.7**
	baz=302,SNR=35						
LKWY	**Lake**	**41.92**	**73**	*e*P	**P**	**08 55 01.4**	**+1.7**
	comp=Z,32nm,0.8s						
HVU	**Hansel Valley**	**41.93**	**77**	*e*P	**P**	**08 55 00.9**	**+1.2**
	comp=Z,52nm,1.1s						
IMW	**Indian Meadow**	**41.93**	**74**	*e*P	**P**	**08 55 01.0**	**+1.1**
	comp=Z,32nm,1.0s						
IMW				*e*PcP	**PcP**	**08 56 55.8**	**+0.7**
ARVC	**Arvin**	**41.96**	**90**	P	**P**	**08 55 00.6**	**+0.7**
	baz=309						
FLWY	**Flagg Ranch**	**41.98**	**73**	*e*P	**P**	**08 55 01.8**	**+1.6**
	comp=Z,56nm,1.3s						
FFC	**Flin Flon**	**42.01**	**55**	*e*P	**P**	**08 54 59.8**	**-0.2**
	comp=Z,14nm,0.9s						
FFC	**Flin Flon**	**42.01**	**55**	*i* P	**P**	**08 55 00.5**	**+0.5**
FXWY	**Fox Creek**	**42.02**	**74**	*e*P	**P**	**08 55 02.0**	**+1.5**
	comp=Z,72nm,1.8s						
FXWY				*e*PcP	**PcP**	**08 56 56.5**	**+1.2**
DAC	**Darwin (Calif)**	**42.04**	**87**	*e*P	**P**	**08 55 02.4**	**+1.6**
	comp=Z,56nm,1.4s						
DAC	**Darwin (Calif)**	**42.04**	**87**	*e*P	**P**	**08 55 02.4**	**+1.6**
DAC				pmax	pmax		
	comp=Z,56nm,1.4s						
R11A	**Troy Canyon, C**	**42.09**	**84**	*e*P	**P**	**08 55 02.5**	**+1.3**
	comp=Z,56nm,1.2s						
R11A	**Troy Canyon, C**	**42.09**	**84**	P	**P**	**08 55 01.8**	**+0.7**
	baz=306,SNR=46						
MOOW	**Moose Ponds**	**42.13**	**74**	*e*P	**P**	**08 55 02.7**	**+1.3**
	comp=Z,36nm,1.5s						
TPAW	**Teton Pass**	**42.14**	**74**	*e*P	**P**	**08 55 02.3**	**+0.7**
	comp=Z,88nm,1.4s						
BGU	**Big Grassy Mou**	**42.24**	**79**	*e*P	**P**	**08 55 03.7**	**+1.4**
	comp=Z,134nm,1.7s						
MPMC	**Manual Prospec**	**42.24**	**88**	P	**P**	**08 55 03.2**	**+0.8**
	baz=308,SNR=14						
REDW	**Red Top Meadow**	**42.27**	**74**	*e*P	**P**	**08 55 04.3**	**+1.7**
	comp=Z,111nm,1.4s						
SNOW	**Snow King Moun**	**42.28**	**74**	*e*P	**P**	**08 55 04.1**	**+1.4**
	comp=Z,38nm,1.1s						
LOHW	**Long Hollow**	**42.29**	**74**	*e*P	**P**	**08 55 03.9**	**+1.2**
	comp=Z,74nm,1.8s						
RLMT	**Red Lodge**	**42.32**	**71**	*e*P	**P**	**08 55 03.5**	**+0.5**
	comp=Z,62nm,1.0s						
RLMT	**Red Lodge**	**42.32**	**71**	P	**P**	**08 55 03.3**	**+0.3**
	baz=301,SNR=37						
OSI	**Osito Audit: C**	**42.35**	**90**	*e*P	**P**	**08 55 05.0**	**+1.9**
	comp=Z,76nm,1.3s						
OSI	**Osito Audit: C**	**42.35**	**90**	P	**P**	**08 55 03.9**	**+0.8**
	baz=309						
SPUT	**South Promonto**	**42.39**	**78**	*e*P	**P**	**08 55 05.3**	**+1.8**
	comp=Z,177nm,1.6s						
FURC	**Furnace Creek,**	**42.40**	**87**	P	**P**	**08 55 04.3**	**+0.9**
	baz=308,SNR=15						
AHID	**Auburn Hatcher**	**42.44**	**75**	*e*P	**P**	**08 55 04.6**	**+0.7**
	comp=Z,114nm,1.4s						
BLG	**Laguna Peak, P**	**42.45**	**91**	P	**P**	**08 55 04.0**	**+0.2**
	baz=310						
LRMC	**Laurel Mtn Rad**	**42.48**	**88**	P	**P**	**08 55 04.2**	**0.0**
	baz=309						
TPNV	**Topopah Spring**	**42.50**	**86**	*e*P	**P**	**08 55 05.4**	**+1.0**
	comp=Z,61nm,1.0s						
TPNV	**Topopah Spring**	**42.50**	**86**	*e*P	**P**	**08 55 05.4**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,61nm,1.0s						
TPNV	**Topopah Spring**	**42.50**	**86**	P	**P**	**08 55 05.2**	**+0.7**
	baz=307,SNR=23						
EDW2	**Edwards Air Fo**	**42.65**	**89**	P	**P**	**08 55 06.2**	**+0.6**
	baz=309,SNR=7.5						
SNCC	**San Nicolas Is**	**42.70**	**92**	P	**P**	**08 55 06.5**	**+0.6**
	baz=310						
DUG	**Dugway, Tooele**	**42.79**	**79**	*e*P	**P**	**08 55 08.1**	**+1.4**
	comp=Z,123nm,1.4s						
DUG	**Dugway, Tooele**	**42.79**	**79**	*e*P	**P**	**08 55 08.1**	**+1.4**
DUG				pmax	pmax		
	comp=Z,123nm,1.4s						
DUG	**Dugway, Tooele**	**42.79**	**79**	P	**P**	**08 55 07.3**	**+0.6**
	baz=305,SNR=67						
DECC	**Green Verdugo**	**42.82**	**90**	P	**P**	**08 55 06.8**	**-0.1**
	baz=310						
MWC	**Mount Wilson**	**43.02**	**90**	*e*P	**P**	**08 55 10.1**	**+1.4**
	comp=Z,116nm,1.5s						
MWC	**Mount Wilson**	**43.02**	**90**	*e*P	**P**	**08 55 10.1**	**+1.4**
MWC				pmax	pmax		
	comp=Z,116nm,1.5s						
KSRS	**Korea Array**	**43.07**	**276**	P	**P**	**08 55 09.0**	**+0.2**
	comp=Z,10nm,0.8s,baz=58,slow=8.1,SNR=30						
KSRS				PcP	**PcP**	**08 56 59.6**	**+1.1**
	comp=Z,7.0nm,1.0s,baz=68,slow=2.5,SNR=7.6						
KS01	**Wonju Array Si**	**43.07**	**276**	*e*P	**P**	**08 55 08.5**	**-0.4**
KS01				*e*PcP	**PcP**	**08 56 58.5**	**-0.1**
PSUT	**Pine Spring**	**43.08**	**82**	*e*P	**P**	**08 55 09.6**	**+0.4**
	comp=Z,148nm,1.8s						
KS15	**Wonju Array Si**	**43.10**	**276**	*e*P	**P**	**08 55 09.0**	**-0.1**
	comp=Z,18nm,0.9s						
KS15				*e*PcP	**PcP**	**08 56 59.6**	**+1.0**
KSAR	**Wonju Array Be**	**43.10**	**276**	P	**P**	**08 55 09.0**	**-0.1**
KSAR				PcP	**PcP**	**08 56 59.6**	**+1.0**
KSAR	**Wonju Array Be**	**43.10**	**276**	P	**P**	**08 55 09.0**	**-0.1**
KSAR						08 56 59.7	
SHOC	**Shoshone, Teco**	**43.12**	**87**	P	**P**	**08 55 10.0**	**+0.7**
	baz=308,SNR=9.9						
GSC	**Goldstone, Bar**	**43.15**	**88**	*e*P	**P**	**08 55 11.2**	**+1.6**
	comp=Z,115nm,1.2s						
GSC	**Goldstone, Bar**	**43.15**	**88**	*e*P	**P**	**08 55 11.2**	**+1.6**
GSC				pmax	pmax		
	comp=Z,115nm,1.2s						
GSC	**Goldstone, Bar**	**43.15**	**88**	P	**P**	**08 55 10.5**	**+0.9**
	baz=309,SNR=31						
TCUT	**Toone Canyon**	**43.15**	**77**	*e*P	**P**	**08 55 11.4**	**+1.6**
	comp=Z,157nm,1.2s						
CTU	**Camp Tracy**	**43.17**	**78**	*e*P	**P**	**08 55 11.3**	**+1.4**
	comp=Z,96nm,1.2s						
BFSC	**Mount Baldy Ra**	**43.27**	**90**	P	**P**	**08 55 11.5**	**+0.9**
	baz=310,SNR=9.4						
RRX	**Edison Barstow**	**43.29**	**89**	P	**P**	**08 55 11.5**	**+0.8**
	baz=309						
SNY	**Shenyang**	**43.29**	**284**	⇓P	**P**	**08 55 11.5**	**+0.9**
SNY				pmax	pmax		
	comp=Z,29nm,1.4s						
LAO	**LASA Array**	**43.35**	**68**	*e*P	**P**	**08 55 10.7**	**-0.4**
	comp=Z,22nm,1.1s						
LAO	**LASA Array**	**43.35**	**68**	P	**P**	**08 55 11.4**	**+0.3**
	baz=301						
NLU	**North Lily Min**	**43.39**	**79**	*e*P	**P**	**08 55 13.1**	**+1.4**
	comp=Z,67nm,1.1s						
BW06	**Boulder Array**	**43.39**	**74**	*e*P	**P**	**08 55 12.2**	**+0.5**
	comp=Z,75nm,1.0s						
BW06	**Boulder Array**	**43.39**	**74**	P	**P**	**08 55 11.8**	**+0.1**
	baz=303,SNR=86						
PD31	**Pinedale Array**	**43.39**	**74**	*e*P	**P**	**08 55 12.2**	**+0.5**
PDAR	**Pinedale Array**	**43.39**	**74**	P	**P**	**08 55 12.1**	**+0.4**
	comp=Z,44nm,0.9s,baz=295,slow=4.2,SNR=237						
PDAR				LR	LR	09 10 37.7	
	comp=Z,310nm,20.4s,baz=334,slow=32						
JLU	**Jordanelle**	**43.41**	**78**	*e*P	**P**	**08 55 13.2**	**+1.3**
	comp=Z,140nm,1.3s						
SHPR	**Sheep Range**	**43.46**	**85**	*e*P	**P**	**08 55 13.6**	**+1.3**
	comp=Z,32nm,1.4s						
TUQ	**Turquoise Moun**	**43.63**	**87**	P	**P**	**08 55 12.3**	**-1.2**
	baz=309						
MPU	**Maple Canyon**	**43.63**	**79**	*e*P	**P**	**08 55 14.8**	**+1.2**
	comp=Z,56nm,1.2s						
DGMT	**Dagmar**	**43.64**	**64**	*e*P	**P**	**08 55 13.8**	**+0.4**
	comp=Z,99nm,1.6s						
DGMT	**Dagmar**	**43.64**	**64**	P	**P**	**08 55 13.3**	**0.0**
	baz=300						
BBRC	**Big Bear Solar**	**43.72**	**89**	P	**P**	**08 55 14.5**	**+0.1**
	baz=310						
HEC	**Hector,Ludlow**	**43.74**	**88**	P	**P**	**08 55 14.7**	**+0.2**
	baz=309,SNR=8.4						
JNU	**Nakatsue**	**43.86**	**269**	*e*P	**P**	**08 55 16.1**	**+0.8**
	comp=Z,26nm,0.9s						
JNU	**Nakatsue**	**43.86**	**269**	P	**P**	**08 55 16.1**	**+0.8**
	comp=Z,21nm,0.9s,baz=57,slow=5.4,SNR=7.4						
TCRU	**Three Creeks R**	**43.93**	**81**	*e*P	**P**	**08 55 15.9**	**-0.3**
	comp=Z,189nm,1.8s						
MURC	**Murrieta**	**43.97**	**90**	P	**P**	**08 55 16.3**	**+0.1**
	baz=310,SNR=6.6						
CCUT	**Cedar City**	**43.98**	**83**	*e*P	**P**	**08 55 17.4**	**+0.9**
	comp=Z,136nm,1.5s						
TJN	**Taejon**	**44.07**	**275**	⇓*e*P	**P**	**08 55 17.4**	**+0.5**
SZCU	**Shurtz Canyon**	**44.13**	**83**	*e*P	**P**	**08 55 19.0**	**+1.3**
	comp=Z,45nm,1.2s						
MSU	**Marysvale**	**44.16**	**81**	*e*P	**P**	**08 55 19.0**	**+1.1**
MSU	**Marysvale**	**44.16**	**81**	*e*P	**P**	**08 55 19.0**	**+1.1**
GMRC	**Granite Mounta**	**44.20**	**88**	P	**P**	**08 55 18.9**	**+0.7**
	baz=309,SNR=27						
FCC	**Fort Churchill**	**44.24**	**47**	*e*P	**P**	**08 55 18.5**	**+0.5**
	comp=Z,50nm,1.0s						
FCC	**Fort Churchill**	**44.24**	**47**	*e*P	**P**	**08 55 18.5**	**+0.5**
FCC				pmax	pmax		
	comp=Z,50nm,1.0s						
TMUT	**Trail Mountain**	**44.31**	**79**	*e*P	**P**	**08 55 20.4**	**+1.1**
	comp=Z,68nm,1.2s						
LDFC	**Landfair**	**44.37**	**87**	*e*P	**P**	**08 55 20.6**	**+1.1**
	comp=Z,168nm,1.3s						
LCMT	**Little Creek M**	**44.38**	**83**	*e*P	**P**	**08 55 20.9**	**+1.4**
	comp=Z,73nm,1.1s						
PFO	**Pinyon Flats O**	**44.43**	**90**	*e*P	**P**	**08 55 21.3**	**+1.3**
	comp=Z,64nm,1.4s						
PFO	**Pinyon Flats O**	**44.43**	**90**	*e*P	**P**	**08 55 21.3**	**+1.3**
PFO				pmax	pmax		
	comp=Z,64nm,1.4s						
PFO	**Pinyon Flats O**	**44.43**	**90**	P	**P**	**08 55 20.1**	**+0.1**
	baz=310,SNR=6.0						
MTPU	**Mount Pierson**	**44.44**	**82**	*e*P	**P**	**08 55 22.1**	**+1.8**
	comp=Z,89nm,1.4s						
XPFO	**Pion Flat**	**44.44**	**90**	*e*P	**P**	**08 55 21.3**	**+1.2**
	comp=Z,62nm,1.3s						
BELC	**Belle Mtn. Jos**	**44.48**	**89**	P	**P**	**08 55 20.6**	**+0.2**
	baz=310,SNR=9.3						
109C	**Camp Elliot, M**	**44.48**	**91**	P	**P**	**08 55 21.0**	**+0.8**
	baz=311						
CPE	**Camp Elliot**	**44.48**	**91**	*e*P	**P**	**08 55 21.8**	**+1.6**
	comp=Z,71nm,1.2s						
P17A	**Butcher Ranch,**	**44.51**	**79**	*e*P	**P**	**08 55 22.2**	**+1.6**
	comp=Z,108nm,1.3s						
Q16A	**Castle Valley**	**44.56**	**80**	*e*P	**P**	**08 55 22.4**	**+1.3**
	comp=Z,113nm,1.1s						
KNB	**Kanab**	**44.64**	**83**	*e*P	**P**	**08 55 23.5**	**+1.8**
	comp=Z,99nm,1.2s						
KNB	**Kanab**	**44.64**	**83**	*e*P	**P**	**08 55 23.5**	**+1.8**
KNB				pmax	pmax		
	comp=Z,99nm,1.2s						
PKCU	**Pink Cliffs**	**44.71**	**82**	*e*P	**P**	**08 55 24.2**	**+1.8**
	comp=Z,77nm,1.4s						
P18A	**Preston Nutter**	**44.73**	**78**	*e*P	**P**	**08 55 24.3**	**+1.8**
SRU	**San Rafael Swe**	**44.85**	**79**	*e*P	**P**	**08 55 24.7**	**+1.3**
	comp=Z,98nm,1.2s						
SRU	**San Rafael Swe**	**44.85**	**79**	*e*P	**P**	**08 55 24.7**	**+1.3**
SRU				pmax	pmax		
	comp=Z,98nm,1.2s						
NEE2	**Needles Airpor**	**44.88**	**87**	P	**P**	**08 55 23.5**	**+0.1**
	baz=309						
MONP2	**Monument Peak**	**44.92**	**90**	P	**P**	**08 55 24.0**	**0.0**
	baz=311,SNR=5.5						
IRM	**Iron Mountain**	**44.93**	**88**	P	**P**	**08 55 23.8**	**-0.1**
	baz=310,SNR=11						
TULEG	**Thule**	**44.93**	**19**	*e*P	**P**	**08 55 24.0**	**+0.8**
	comp=Z,36nm,1.0s						
BC3	**Big Chuckawall**	**45.05**	**89**	P	**P**	**08 55 24.8**	**-0.1**
	baz=310						
W13A	**Hualapai Mount**	**45.14**	**86**	*e*P	**P**	**08 55 27.0**	**+1.2**
	comp=Z,47nm,1.1s						
IKP	**In-Ko-Pah, Jac**	**45.28**	**90**	P	**P**	**08 55 26.5**	**-0.2**
	baz=311						
SWSC	**Sam W. Stewart**	**45.28**	**90**	P	**P**	**08 55 26.7**	**+0.1**
	baz=311						
K22A	**Casper**	**45.32**	**73**	*e*P	**P**	**08 55 27.3**	**+0.2**
	comp=Z,50nm,1.3s						
K22A	**Casper**	**45.32**	**73**	P	**P**	**08 55 26.6**	**-0.4**
	baz=304,SNR=12						
RWWY	**Rawlins**	**45.44**	**74**	*e*P	**P**	**08 55 27.2**	**-0.9**
	comp=Z,73nm,1.3s						
PDMCI	**Parker Dam,Lak**	**45.48**	**87**	P	**P**	**08 55 28.1**	**0.0**
	baz=310,SNR=14						
Y12C	**Blythe**	**45.59**	**88**	*e*P	**P**	**08 55 30.2**	**+1.2**
	comp=Z,53nm,0.9s						
Y12C	**Blythe**	**45.59**	**88**	P	**P**	**08 55 29.5**	**+0.4**
	baz=310,SNR=15						
O20A	**White River Ci**	**45.69**	**77**	*e*P	**P**	**08 55 30.3**	**+0.3**
	comp=Z,184nm,1.3s						
O20A	**White River Ci**	**45.69**	**77**	P	**P**	**08 55 29.9**	**-0.1**
	baz=306,SNR=54						
GLA	**Glamis**	**45.84**	**89**	*e*P	**P**	**08 55 32.5**	**+1.4**
	comp=Z,44nm,1.0s						
GLA	**Glamis**	**45.84**	**89**	*e*P	**P**	**08 55 32.5**	**+1.4**
GLA				pmax	pmax		
	comp=Z,44nm,1.0s						
GLA	**Glamis**	**45.84**	**89**	P	**P**	**08 55 31.4**	**+0.3**
	baz=311						
RSSD	**Black Hills**	**46.01**	**70**	*e*P	**P**	**08 55 32.5**	**-0.1**
	comp=Z,21nm,1.0s						
RSSD	**Black Hills**	**46.01**	**70**	*e*P	**P**	**08 55 32.5**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,21nm,1.0s						
RSSD	**Black Hills**	**46.01**	**70**	P	**P**	**08 55 31.3**	**-1.2**
	baz=304						
PV09	**Paradox Valley**	**46.09**	**79**	*e*P	**P**	**08 55 34.3**	**+0.9**
PV21	**Cone Mtn., Par**	**46.15**	**79**	*e*P	**P**	**08 55 34.4**	**+0.6**
	comp=Z,74nm,1.2s						
DL2	**Dalian**	**46.19**	**282**	P	P	08 55 39.1	+5.4
DL2				S	**S**	**09 02 22.1**	**+3.2**
DL2				SS	**SS**	**09 05 39.3**	**-4.5**
DL2				pmax	pmax		
	comp=Z,28nm,1.2s						
DL2				pmax	pmax		
	comp=Z,180nm,5.0s						
DL2				LR	LR		
	comp=N,300nm,13.0s						
DL2				LR	LR		
	comp=E,380nm,16.1s						
DL2				LR	LR		
	comp=Z,360nm,15.1s						
PV23	**Carpenter Ridg**	**46.20**	**79**	*e*P	**P**	**08 55 35.0**	**+0.9**
	comp=Z,125nm,1.3s						
PV10	**Paradox Valley**	**46.22**	**79**	*e*P	**P**	**08 55 35.7**	**+1.3**
	comp=Z,94nm,1.1s						
PV14	**Lion Creek, Pa**	**46.24**	**79**	*e*P	**P**	**08 55 34.7**	**+0.3**
	comp=Z,91nm,1.2s						
PV20	**West Nyswonger**	**46.29**	**79**	*e*P	**P**	**08 55 35.8**	**+1.0**
	comp=Z,68nm,1.0s						
PV20				*e*PcP	**PcP**	**08 57 11.4**	**+1.5**
PV04	**Paradox Valley**	**46.30**	**79**	*e*P	**P**	**08 55 35.6**	**+0.8**
	comp=Z,91nm,1.1s						
PV19	**Morning Glory**	**46.30**	**79**	*e*P	**P**	**08 55 35.5**	**+0.6**
	comp=Z,75nm,1.1s						
PV17	**East Wray Mesa**	**46.33**	**79**	*e*P	**P**	**08 55 36.0**	**+0.8**
	comp=Z,97nm,1.0s						
PV16	**Nyswonger Mesa**	**46.34**	**79**	*e*P	**P**	**08 55 36.1**	**+0.9**
	comp=Z,118nm,1.3s						
PV05	**Paradox Valley**	**46.37**	**79**	*e*P	**P**	**08 55 36.5**	**+1.0**
	comp=Z,98nm,1.3s						
PV11	**David Mesa, Pa**	**46.38**	**79**	*e*P	**P**	**08 55 36.0**	**+0.5**
	comp=Z,248nm,1.4s						
PV12	**Saucer Basin,**	**46.41**	**79**	*e*P	**P**	**08 55 36.7**	**+0.9**
	comp=Z,121nm,1.1s						
PV03	**Paradox Valley**	**46.42**	**79**	*e*P	**P**	**08 55 36.1**	**+0.3**
	comp=Z,131nm,1.2s						
PV07	**Paradox Valley**	**46.43**	**79**	*e*P	**P**	**08 55 36.5**	**+0.6**
	comp=Z,94nm,1.3s						
Y14A	**Wickenburg**	**46.44**	**87**	*e*P	**P**	**08 55 36.7**	**+0.8**
	comp=Z,40nm,1.0s						
WUAZ	**Wupatki**	**46.49**	**84**	*e*P	**P**	**08 55 37.9**	**+1.6**
	comp=Z,75nm,1.0s						
WUAZ	**Wupatki**	**46.49**	**84**	P	**P**	**08 55 36.8**	**+0.4**
	baz=309,SNR=26						
PV13	**Radium Mtn., P**	**46.49**	**79**	*e*P	**P**	**08 55 36.7**	**+0.3**
	comp=Z,130nm,1.0s						
PV02	**Paradox Valley**	**46.52**	**79**	*e*P	**P**	**08 55 37.1**	**+0.5**
	comp=Z,140nm,1.1s						
PV15	**Paradox Valley**	**46.60**	**79**	*e*P	**P**	**08 55 37.8**	**+0.5**
	comp=Z,89nm,1.1s						
MDND	**Maddock**	**46.60**	**63**	*e*P	**P**	**08 55 37.0**	**+0.1**
	comp=Z,67nm,1.0s						
MDND	**Maddock**	**46.60**	**63**	P	**P**	**08 55 36.5**	**-0.3**
	baz=302,SNR=5.6						
PV01	**Paradox Valley**	**46.66**	**79**	*e*P	**P**	**08 55 37.9**	**+0.1**
	comp=Z,93nm,1.0s						
N23A	**Red Feather La**	**46.67**	**74**	*e*P	**P**	**08 55 38.0**	**+0.1**
	comp=Z,75nm,1.1s						
N23A	**Red Feather La**	**46.67**	**74**	P	**P**	**08 55 37.9**	**+0.1**
	baz=306,SNR=30						
PHWY	**Pilot Hill**	**46.74**	**74**	*e*P	**P**	**08 55 38.7**	**+0.3**
	comp=Z,35nm,1.5s						
NRIK	**Noril'sk**	**47.01**	**331**	P	**P**	**08 55 39.5**	**-0.2**
	comp=Z,10nm,0.8s,baz=65,slow=6.4,SNR=8.0						
NRIK				LR	LR	09 16 13.9	
	comp=Z,575nm,21.2s,baz=42,slow=37						
SMCO	**Snowmass**	**47.04**	**77**	*e*P	**P**	**08 55 41.1**	**+0.2**
	comp=Z,42nm,1.4s						
SMCO				*e*PcP	**PcP**	**08 57 14.0**	**+1.1**
X16A	**Lo Mia Camp, P**	**47.13**	**85**	*e*P	**P**	**08 55 43.0**	**+1.6**
	comp=Z,36nm,1.0s						
X16A				*e*PcP	**PcP**	**08 57 14.2**	**+1.2**
MVCO	**Mesa Verde**	**47.27**	**80**	*e*P	**P**	**08 55 43.1**	**+0.6**
	comp=Z,148nm,1.4s						
MVCO	**Mesa Verde**	**47.27**	**80**	P	**P**	**08 55 42.2**	**-0.3**
	baz=308,SNR=36						
ULM	**Lac du Bonnet**	**47.41**	**58**	*e*P	**P**	**08 55 43.2**	**0.0**
	comp=Z,51nm,1.3s						
ULM	**Lac du Bonnet**	**47.41**	**58**	*e*P	**P**	**08 55 43.2**	**0.0**
ULM				pmax	pmax		
	comp=Z,51nm,1.3s						
ULM	**Lac du Bonnet**	**47.41**	**58**	P	**P**	**08 55 42.5**	**-0.7**
	comp=Z,17nm,1.0s,baz=300,slow=8.9,SNR=18						
ULM				LR	LR	09 17 09.8	
	comp=Z,478nm,18.3s,baz=318,slow=38						
ISCO	**Idaho Springs**	**47.52**	**75**	*e*P	**P**	**08 55 45.1**	**+0.6**
	comp=Z,51nm,1.4s						
ISCO	**Idaho Springs**	**47.52**	**75**	*e*P	**P**	**08 55 45.1**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,51nm,1.4s						
ISCO	**Idaho Springs**	**47.52**	**75**	P	**P**	**08 55 44.1**	**-0.4**
	baz=307,SNR=19						
W18A	**Petrified Fore**	**47.78**	**83**	*e*P	**P**	**08 55 47.9**	**+1.4**
	comp=Z,86nm,1.1s						
W18A	**Petrified Fore**	**47.78**	**83**	P	**P**	**08 55 46.8**	**+0.4**
	baz=309,SNR=8.9						
214A	**Organ Pipe Nat**	**47.84**	**89**	P	**P**	**08 55 47.2**	**+0.4**
	baz=311,SNR=5.7						
S22A	**4UR Ranch, Cre**	**47.99**	**78**	*e*P	**P**	**08 55 48.7**	**+0.5**
	comp=Z,144nm,1.4s						
S22A	**4UR Ranch, Cre**	**47.99**	**78**	P	**P**	**08 55 49.1**	**+0.9**
	baz=308,SNR=62						
Q24A	**Divide**	**48.31**	**76**	*e*P	**P**	**08 55 51.5**	**+0.8**
	comp=Z,57nm,1.4s						
Q24A	**Divide**	**48.31**	**76**	P	**P**	**08 55 50.9**	**+0.3**
	baz=307,SNR=11						
AGMN	**Agassiz Nation**	**48.47**	**61**	*e*P	**P**	**08 55 51.1**	**-0.3**
	comp=Z,50nm,1.1s						
AGMN	**Agassiz Nation**	**48.47**	**61**	P	**P**	**08 55 50.9**	**-0.5**
	baz=304,SNR=17						
SDCO	**Great Sand Dun**	**48.83**	**78**	*e*P	**P**	**08 55 55.3**	**+0.7**
	comp=Z,96nm,1.4s						
SDCO	**Great Sand Dun**	**48.83**	**78**	P	**P**	**08 55 55.1**	**+0.4**
	baz=308,SNR=44						
IRK	**Irkutsk**	**48.83**	**306**	*e*P	**P**	**08 55 53.6**	**-0.5**
IRK				pmax	pmax		
	comp=Z,70nm,3.8s						
SUSD	**Miller**	**48.85**	**66**	P	**P**	**08 55 53.4**	**-1.0**
	baz=305						
BJI	**Beijing**	**48.91**	**286**	P	**P**	**08 55 55.3**	**+0.5**
BJI				pmax	pmax		
	comp=Z,20nm,1.2s						
BJI				LR	LR		
	comp=Z,410nm,20.2s						
BJI				LR	LR		
	comp=Z,440nm,19.8s						
TUC	**Tucson**	**48.91**	**87**	*e*P	**P**	**08 55 56.2**	**+1.2**
	comp=Z,49nm,1.1s						
TUC	**Tucson**	**48.91**	**87**	*e*P	**P**	**08 55 56.2**	**+1.2**
TUC				pmax	pmax		
	comp=Z,49nm,1.1s						
TUC	**Tucson**	**48.91**	**87**	P	**P**	**08 55 55.7**	**+0.6**
	baz=311						
BJT	**Baijiatuau**	**48.92**	**286**	*e*P	**P**	**08 55 54.8**	**-0.2**
	comp=Z,25nm,0.9s						
BJT	**Baijiatuau**	**48.92**	**286**	*e*P	**P**	**08 55 54.8**	**-0.2**
BJT				pmax	pmax		
	comp=Z,25nm,0.9s						
OGNE	**Ogallala**	**49.05**	**72**	*e*P	**P**	**08 55 57.1**	**+1.1**
	comp=Z,129nm,1.5s						
OGNE	**Ogallala**	**49.05**	**72**	P	**P**	**08 55 56.0**	**0.0**
	baz=307						
TLY	**Talaya**	**49.46**	**306**	*e*P	**P**	**08 55 59.4**	**+0.5**
	comp=Z,55nm,1.4s						
TLY	**Talaya**	**49.46**	**306**	*d i*P	**P**	**08 55 59.3**	**+0.4**
TLY	**Talaya**	**49.46**	**306**	P	**P**	**08 56 00.1**	**+1.1**
	SNR=20						
TLY				P	**P**	**08 56 00.1**	**+1.1**
	SNR=20						
TLY				S	**S**	**09 03 08.5**	**+3.5**
TLY				S	**S**	**09 03 08.5**	**+3.5**
ULN	**Ulaanbaatar**	**49.74**	**300**	*e*P	**P**	**08 56 01.3**	**0.0**
	comp=Z,23nm,1.0s						
ULN	**Ulaanbaatar**	**49.74**	**300**	*d i*P	**P**	**08 56 01.0**	**-0.3**
ULN				pmax	pmax		
	comp=Z,41nm,1.7s						
ULN	**Ulaanbaatar**	**49.74**	**300**	P	**P**	**08 56 01.3**	**0.0**
	SNR=12						
ULN				P	**P**	**08 56 01.3**	**0.0**
	SNR=12						
KSCO	**Kaye Shedlock’**	**49.84**	**74**	*e*P	**P**	**08 56 03.4**	**+1.2**
	comp=Z,202nm,1.5s						
KSCO	**Kaye Shedlock’**	**49.84**	**74**	P	**P**	**08 56 02.7**	**+0.5**
	baz=308,SNR=5.2						
T25A	**Trinidad**	**49.88**	**77**	*e*P	**P**	**08 56 03.9**	**+1.2**
	comp=Z,205nm,1.3s						
T25A	**Trinidad**	**49.88**	**77**	P	**P**	**08 56 03.2**	**+0.6**
	baz=309,SNR=39						
LAZ	**Ladron**	**49.89**	**82**	*e*P	**P**	**08 56 04.2**	**+1.6**
ANMO	**Albuquerque**	**49.97**	**81**	*e*P	**P**	**08 56 04.1**	**+0.8**
	comp=Z,73nm,1.4s						
ANMO	**Albuquerque**	**49.97**	**81**	*e*P	**P**	**08 56 04.1**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,73nm,1.4s						
ANMO	**Albuquerque**	**49.97**	**81**	P	**P**	**08 56 03.6**	**+0.3**
	baz=310						
SONA1	**Songino Array**	**50.11**	**300**	*e*P	**P**	**08 56 04.2**	**+0.1**
SONA0	**Songino Array**	**50.12**	**300**	*e*P	**P**	**08 56 04.2**	**+0.1**
SONA0				*e*PcP	**PcP**	**08 57 23.3**	**-0.2**
SONM	**Songino Array**	**50.12**	**300**	P	**P**	**08 56 04.2**	**+0.1**
	comp=Z,22nm,1.0s,baz=52,slow=7.5,SNR=67						
SONM				PcP	**PcP**	**08 57 23.3**	**-0.2**
	comp=Z,6.9nm,0.9s,baz=58,slow=4.1,SNR=5.4						
LENM	**Lemitar**	**50.14**	**82**	*e*P	**P**	**08 56 06.0**	**+1.5**
Y22D	**IRIS PASSCAL I**	**50.23**	**82**	P	**P**	**08 56 05.1**	**-0.2**
	baz=310						
LPM	**Los Pinos Moun**	**50.27**	**82**	*e*P	**P**	**08 56 07.0**	**+1.5**
BNM	**Barren Site**	**50.37**	**82**	*e*P	**P**	**08 56 07.1**	**+0.7**
ZAK	**Zakamensk**	**50.37**	**304**	*e*P	**P**	**08 56 05.8**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,58nm,1.2s						
319A	**Douglas**	**50.49**	**87**	*e*P	**P**	**08 56 08.3**	**+1.2**
	comp=Z,110nm,1.6s						
ECSD	**EROS Data Cent**	**50.64**	**66**	*e*P	**P**	**08 56 07.0**	**-1.0**
ECSD				*e*PcP	**PcP**	**08 57 25.8**	**+0.5**

ECSD	EROS Data Cent baz=306,SNR=7.0	50.64	66	P	P	08 56 06.1	-1.9
TIA	Tai'an	50.67	282	P	P	08 56 08.6	+0.3
TIA	comp=Z,15nm,1.1s			pmax	pmax		
121A	Cookes Peak, D baz=311,SNR=18	50.68	84	P	P	08 56 09.1	+0.4
MOY	Mondy	50.84	307	eP	P	08 56 10.0	+0.5
MOY	comp=Z,52nm,1.6s			pmax	pmax		
KBS	Kingsbay	50.99	359	eP	P	08 56 11.3	+1.2
EYMN	Ely comp=Z,35nm,1.1s	51.09	59	eP	P	08 56 11.1	-0.2
EYMN	Ely baz=306,SNR=6.7	51.09	59	P	P	08 56 10.5	-0.8
BGNE	Belgrade baz=308	51.12	69	P	P	08 56 10.5	-1.2
HHC	Hu-ho-hao-te	51.23	290	eP	P	08 56 14.0	+1.4
HHC				pP	sP	08 56 20.1	+1.4
HHC				sP	pwP	08 56 24.1	+0.7
HHC				PcP	PcP	08 57 28.8	+1.2
HHC				S	S	09 03 28.8	-1.2
HHC	comp=Z,43nm,0.9s			pmax	pmax		
HHC	comp=Z,240nm,4.3s			pmax	pmax		
HHC	comp=Z,480nm,14.7s			LR	LR		
HHC	comp=Z,300nm,13.0s			LR	LR		
HHC	comp=Z,380nm,14.7s			LR	LR		
SPA0	Spitsbergen Ar	51.64	357	eP	P	08 56 16.9	+1.8
SPA0	Spitsbergen Ar	51.64	357	eP	P	08 56 15.7	+0.7
SPITS	Spitsbergen Ar	51.64	357	P	P	08 56 15.2	+0.1
SPITS	comp=Z,2.0nm,0.3s			pmax	pmax		
CBKS	Cedar Bluff comp=Z,111nm,1.4s	51.74	73	eP	P	08 56 17.1	+0.8
CBKS	Cedar Bluff	51.74	73	eP	P	08 56 17.1	+0.8
CBKS	comp=Z,111nm,1.4s			pmax	pmax		
CBKS	Cedar Bluff baz=309	51.74	73	P	P	08 56 16.2	-0.2
F37A	Hinrichs Farm, baz=307,SNR=6.1	51.76	62	P	P	08 56 14.7	-1.6
E38A	The Farm, Brul baz=306	51.84	60	P	P	08 56 15.6	-1.3
SPMN	Marine on St. baz=307	51.95	62	P	P	08 56 16.4	-1.4
F38A	Pierce - Schro baz=307,SNR=8.0	52.04	61	P	P	08 56 17.5	-1.0
FRB	Frobisher Bay	52.14	33	P	P	08 56 20.2	+1.4
DAG	Danmarks Havn comp=Z,26nm,0.9s	52.19	7	i P	P	08 56 19.6	+0.5
DAG	Danmarks Havn	52.19	7	i P	P	08 56 19.6	+0.5
DAG	comp=Z,22nm,0.9s			pmax	pmax		
NJ2	Nanjing	52.25	277	eP	P	08 56 20.6	+0.5
NJ2	comp=Z,15nm,0.7s			pmax	pmax		
BTO	Baotou	52.30	291	eP	P	08 56 20.5	-0.1
G38A	Ridgeland baz=307	52.52	62	P	P	08 56 21.0	-1.1
E39A	Mellen baz=307	52.53	60	P	P	08 56 20.6	-1.5
H38A	Maiden Rock baz=307	52.58	63	P	P	08 56 21.7	-0.7
F39A	Loretta baz=307	52.60	61	P	P	08 56 21.2	-1.4
TIY	Taiyuan	52.64	286	eP	P	08 56 24.4	+1.3
TIY				S	S	09 03 54.8	+5.4
TIY	comp=Z,53nm,1.1s			pmax	pmax		
TIY	comp=Z,330nm,3.5s			pmax	pmax		
MNTX	Cornudas Mount comp=Z,138nm,1.6s	52.76	83	eP	P	08 56 24.8	+0.8
MNTX	Cornudas Mount baz=312,SNR=40	52.76	83	P	P	08 56 23.5	-0.5
G39A	Holcombe baz=307	52.84	61	P	P	08 56 23.0	-1.4
CPRX	Cap Rock	52.85	81	eP	P	08 56 25.7	+0.9
MSTX	Muleshoe comp=Z,177nm,1.1s	52.93	79	eP	P	08 56 25.5	+0.2
MSTX	Muleshoe baz=311,SNR=60	52.93	79	P	P	08 56 25.1	-0.2
AMTX	Amarillo comp=Z,73nm,1.0s	53.02	78	eP	P	08 56 26.6	+0.6
AMTX	Amarillo baz=311	53.02	78	P	P	08 56 25.9	-0.1
F40A	Park Falls baz=307	53.05	60	P	P	08 56 24.4	-1.5
GDL2	Guadalupe Moun	53.08	82	eP	P	08 56 27.4	+1.0
H39A	Augusta baz=308	53.14	62	P	P	08 56 25.6	-1.1
KNGR	Kungurtug, Tuv	53.24	307⇓	eP	P	08 56 27.9	+0.5
KSU1	Kansas State U	53.47	71	eP	P	08 56 28.8	-0.2
KSU1				ePcP	PcP	08 57 36.3	+0.4
KSU1	Kansas State U baz=309	53.47	71	P	P	08 56 28.2	-0.9
SUMG	Summit comp=Z,68nm,1.0s	53.49	15	eP	P	08 56 29.6	+0.4
SUMG	Summit comp=Z,171nm,1.0s	53.49	15	i P	P	08 56 30.1	+0.9
SUMG	Summit	53.49	15	i P	P	08 56 30.1	+0.9
SUMG	comp=Z,170nm,1.0s			pmax	pmax		
I39A	Houston comp=Z,28nm,0.7s	53.51	63	eP	P	08 56 28.5	-0.8
I39A	Houston baz=308,SNR=6.9	53.51	63	P	P	08 56 27.9	-1.4
ILULI	Ilulissat comp=Z,19nm,0.8s	53.55	22	eP	P	08 56 30.5	+1.3
ILULI				epP	pwP	08 56 39.0	-1.6
ILULI	Ilulissat comp=Z,23nm,0.9s	53.55	22	i P	P	08 56 29.3	+0.1
ILULI	Ilulissat	53.55	22	eP	P	08 56 30.5	+1.3
ILULI				e*PP	pwP	08 56 39.0	-1.6
ILULI	comp=Z,19nm,0.8s			pmax	pmax		
H40A	Chili baz=308	53.68	62	P	P	08 56 29.9	-0.7
F41A	Three Lakes comp=Z,49nm,1.0s	53.72	60	eP	P	08 56 30.8	-0.1
F41A	Three Lakes baz=308	53.72	60	P	P	08 56 30.1	-0.8
J39A	Decorah baz=308,SNR=7.4	53.73	64	P	P	08 56 29.6	-1.3
U32A	Winter Ranch, comp=Z,74nm,1.1s	53.73	75	eP	P	08 56 31.5	+0.5
SCIA	State Center baz=309	53.73	66	P	P	08 56 29.9	-1.1
G41A	Antigo baz=308	54.00	60	P	P	08 56 31.0	-1.9
I40A	Norwalk baz=308	54.01	62	P	P	08 56 31.3	-1.6
K39A	Oelwein baz=309	54.01	64	P	P	08 56 31.3	-1.7
H41A	Junction City comp=Z,42nm,1.0s	54.10	61	eP	P	08 56 33.3	-0.4
H41A	Junction City baz=308	54.10	61	P	P	08 56 32.2	-1.4
J40A	Soldiers Grove baz=309	54.24	63	P	P	08 56 33.3	-1.4
F42A	Maple Grove Fa baz=308	54.24	59	P	P	08 56 33.3	-1.4
L39A	Vinton baz=309,SNR=6.3	54.31	65	P	P	08 56 34.1	-1.1
I41A	Arkdale comp=Z,39nm,1.0s	54.33	62	eP	P	08 56 33.4	-1.8
I41A	Arkdale baz=309	54.33	62	P	P	08 56 34.3	-1.0
G42A	Mountain baz=308	54.40	60	P	P	08 56 34.7	-1.1
K40A	Colesburg baz=309	54.45	64	P	P	08 56 34.6	-1.6
E43A	Lone Tree Farm baz=308	54.49	58	P	P	08 56 34.7	-1.7
M39A	Webster baz=309,SNR=8.4	54.61	66	P	P	08 56 35.8	-1.5
J41A	Loganville baz=309	54.67	63	P	P	08 56 36.4	-1.4
F43A	Flat Rock, Esc baz=309	54.73	59	P	P	08 56 36.4	-1.8
L40A	Anamosa comp=Z,51nm,1.3s	54.80	65	eP	P	08 56 37.6	-1.1
L40A	Anamosa baz=309	54.80	65	P	P	08 56 36.8	-1.9
JFWS	Jewell Farm baz=309	54.82	63	P	P	08 56 37.5	-1.4
WMOK	Wichita Mounta comp=Z,63nm,0.9s	54.93	76	eP	P	08 56 40.2	+0.4
WMOK	Wichita Mounta	54.93	76	eP	P	08 56 40.2	+0.4
WMOK	comp=Z,63nm,0.9s			pmax	pmax		
WMOK	Wichita Mounta baz=311,SNR=22	54.93	76	P	P	08 56 38.8	-1.0
I42A	Draeger Farm, baz=309	54.97	62	P	P	08 56 38.3	-1.6
K41A	Shullsburg baz=309	54.98	64	P	P	08 56 38.6	-1.5
M40A	Post Highland baz=310	55.04	65	P	P	08 56 38.7	-1.8
F44A	Big Bay de Noc baz=309	55.05	58	P	P	08 56 39.9	-0.6
L41A	Preston baz=310	55.21	64	P	P	08 56 40.3	-1.4
J42A	Columbus baz=309	55.21	62	P	P	08 56 40.2	-1.5
H43A	Windswept, Lux baz=309	55.25	60	P	P	08 56 40.8	-1.1
N40A	Mertquake, Sal baz=310	55.33	66	P	P	08 56 41.5	-1.1
SFJD	Kangerlussuaq comp=Z,59nm,1.1s	55.33	24	eP	P	08 56 44.0	+1.8
SFJD	Kangerlussuaq comp=Z,59nm,1.2s	55.33	24	i P	P	08 56 42.9	+0.7
SFJD	Kangerlussuaq	55.33	24	i P	P	08 56 42.9	+0.7
SFJD	comp=Z,59nm,1.2s			pmax	pmax		
SFJD	Kangerlussuaq	55.33	24	eP	P	08 56 43.1	+0.9
SLBS	Sierra La Lagu comp=Z,38nm,1.1s	55.36	94	eP	P	08 56 44.1	+1.0
I43A	Langenfeld Bro baz=309	55.41	61	P	P	08 56 42.0	-1.1
K42A	Prairie Point, baz=310	55.42	63	P	P	08 56 42.0	-1.3
TX31	Lajitas Ar. Si	55.44	84	eP	P	08 56 42.9	-0.8
TX31				eP	P	08 56 43.4	-0.3
TXAR	Lajitas Array comp=Z,26nm,0.9s,baz=295,slow=5.0,SNR=165	55.45	84	P	P	08 56 43.6	-0.1
TXAR	comp=Z,7.8nm,0.8s,baz=292,slow=2.8,SNR=6.4			PcP	PcP	08 57 44.2	+0.4
J43A	Natural Harves baz=310	55.57	62	P	P	08 56 42.6	-1.6
M41A	Milan baz=310	55.63	65	P	P	08 56 43.4	-1.3
L42A	Oliver, Polo baz=310	55.73	64	P	P	08 56 44.1	-1.4
D46A	Sault St. Mari baz=309	55.76	56	P	P	08 56 44.4	-1.2
ABTX	Abilene, Hawle comp=Z,135nm,1.1s	55.78	79	eP	P	08 56 46.4	+0.4
ABTX	Abilene, Hawle baz=312,SNR=24	55.78	79	P	P	08 56 45.3	-0.7
N41A	Harden Midland comp=Z,24nm,0.8s	55.87	66	eP	P	08 56 45.8	-0.7
N41A	Harden Midland baz=310	55.87	66	P	P	08 56 45.3	-1.2
E46A	Sault Ste Mari baz=310	55.95	57	P	P	08 56 45.5	-1.4
TUL1	Leonard comp=Z,46nm,1.2s	56.01	73	eP	P	08 56 47.5	0.0
TUL1	Leonard baz=311,SNR=7.5	56.01	73	P	P	08 56 46.7	-0.8
K43A	Burlington baz=310	56.05	62	P	P	08 56 46.3	-1.4
F46A	Macinaw City C baz=310	56.08	57	P	P	08 56 46.7	-1.1
WHN	Wuhan	56.12	278	⇑P	P	08 56 47.8	-0.6
WHN				S	S	09 04 33.3	-3.0
WHN	comp=Z,110nm,1.2s			pmax	pmax		
WHN	comp=Z,640nm,15.3s			LR	LR		
D47A	Chapleau baz=310	56.15	55	P	P	08 56 47.5	-0.9
O41A	Passleys Farm, baz=310,SNR=8.0	56.23	66	P	P	08 56 47.8	-1.3
G46A	Petoskey baz=310	56.31	58	P	P	08 56 48.8	-0.8
P41A	Barry, Barry baz=311,SNR=5.3	56.41	67	P	P	08 56 48.9	-1.4
E47A	Iron Bridge baz=310	56.44	56	P	P	08 56 49.5	-1.0
M43A	Waltham Townsh baz=310	56.50	64	P	P	08 56 49.5	-1.5
SSLB	Suanglung comp=Z,70nm,1.0s	56.58	268	eP	P	08 56 51.4	-0.4
D48A	Paudash Townsh baz=310	56.75	55	P	P	08 56 51.9	-0.8
GLMI	Grayling baz=310	56.76	58	P	P	08 56 51.7	-1.1
Q41A	Truxton baz=311	56.78	67	P	P	08 56 52.0	-0.9
I46A	Reed City baz=310	56.87	60	P	P	08 56 52.5	-1.1
HDIL	Hopedale comp=Z,39nm,0.9s	56.88	65	eP	P	08 56 52.5	-1.1
HDIL	Hopedale baz=311	56.88	65	P	P	08 56 52.5	-1.1
P42A	Winchester	56.89	66	ePcP	PcP	08 57 49.1	+0.1
P42A	Winchester baz=311	56.89	66	P	P	08 56 52.8	-0.9
HHAR	Hobbs comp=Z,34nm,1.3s	56.90	72	eP	P	08 56 52.9	-1.0
O43A	Sugar Creek Fa baz=311	57.04	65	P	P	08 56 53.5	-1.3
R41A	Rosebud baz=311,SNR=7.3	57.12	68	P	P	08 56 53.7	-1.7
JCT	Junction City comp=Z,105nm,1.3s	57.12	81	eP	P	08 56 55.3	-0.3
JCT	Junction City	57.12	81	eP	P	08 56 55.3	-0.3
JCT	comp=Z,105nm,1.3s			pmax	pmax		
JCT	Junction City baz=313,SNR=27	57.12	81	P	P	08 56 54.2	-1.4
H47A	Mio baz=310	57.13	58	P	P	08 56 54.5	-0.9
J46A	Howard City baz=311	57.15	60	P	P	08 56 53.8	-1.7
ZAA1	Zalesovo Array	57.17	316	eP	P	08 56 56.5	+0.9
ZALV	Zalesovo Beam	57.18	316	eP	P	08 56 55.8	+0.2
ZALV	Zalesovo Beam comp=Z,3.3nm,0.7s,baz=64,slow=10,SNR=11	57.18	316	P	P	08 56 56.5	+0.9
ZALV	comp=Z,514nm,21.2s,baz=65,slow=37			LR	LR	09 22 38.8	
XAN	Xi'an	57.19	285	P	P	08 56 55.5	-0.5
XAN				pP	pwP	08 57 04.8	-2.1
XAN				S	S	09 04 42.3	-8.2
XAN	comp=Z,38nm,1.2s			pmax	pmax		
XAN	comp=Z,410nm,4.5s			pmax	pmax		
XAN	comp=Z,400nm,19.6s			LR	LR		
XAN	comp=Z,460nm,13.1s			LR	LR		
XAN	comp=Z,450nm,16.7s			LR	LR		
XAN	Xi'an comp=Z,43nm,1.1s	57.19	285	eP	P	08 56 55.6	-0.4
F48A	Evansville baz=311	57.19	56	P	P	08 56 55.0	-0.8
MATQ	Matagami baz=311	57.20	50	P	P	08 56 54.0	-1.8
Q42A	Golden Eagle baz=311,SNR=11	57.22	67	P	P	08 56 54.9	-1.2
NVS	Novosibirsk	57.27	318	eP	P	08 56 57.0	+0.8
NVS				eS	S	09 04 53.7	+2.8
NVS	comp=N,11nm,1.3s			pmax	pmax		
NVS	comp=E,12nm,1.3s			pmax	pmax		
NVS	comp=Z,19nm,1.3s			pmax	pmax		
NVS	comp=N,16nm,1.9s			pmax	pmax		
NVS	comp=E,16nm,1.9s			pmax	pmax		
NVS	comp=Z,24nm,1.9s			pmax	pmax		
NVS	comp=N,15nm,2.0s			smax	smax		
NVS	comp=E,17nm,2.0s			smax	smax		
P43A	Skaggs, Pawnee baz=311,SNR=5.5	57.34	66	P	P	08 56 55.8	-1.1
CCM	Cathedral Cave	57.36	68	eP	P	08 56 55.6	-1.5
CCM				ePcP	PcP	08 57 50.4	-0.5
CCM	Cathedral Cave	57.36	68	eP	P	08 56 55.6	-1.5
CCM				e		08 57 50.4	
CCM	Cathedral Cave baz=311	57.36	68	P	P	08 56 55.4	-1.7
S41A	Jillco Farms, baz=311,SNR=8.2	57.36	69	P	P	08 56 55.2	-1.9
N44A	Piper City baz=311	57.39	64	P	P	08 56 56.2	-1.1
R42A	Luebbering baz=311	57.48	68	P	P	08 56 56.3	-1.6
U40A	Yellville baz=312,SNR=12	57.51	71	P	P	08 56 56.3	-1.9
WHTX	Lake Whitney, comp=E,420nm,1.6s	57.58	78	eP	P	08 56 58.5	-0.2
WHTX	Lake Whitney, baz=313,SNR=44	57.58	78	P	P	08 56 58.5	-0.2
O44A	Mansfield baz=311	57.62	65	P	P	08 56 57.7	-1.2
J47A	Sunmer baz=311	57.67	60	P	P	08 56 58.4	-0.9
Q43A	New Douglas baz=311,SNR=7.0	57.69	67	P	P	08 56 57.7	-1.7
W39A	Magazine comp=E,81nm,1.4s	57.71	72	eP	P	08 56 59.5	-0.1
W39A	Magazine baz=312,SNR=9.1	57.71	72	P	P	08 56 58.2	-1.4
T41A	Mountain View baz=312	57.71	69	P	P	08 56 57.5	-2.1
N45A	Kentland baz=311	57.72	64	P	P	08 56 58.1	-1.5
SCO	Scoresbysund comp=E,29nm,1.1s	57.77	11	eP	P	08 57 00.6	+1.1
SCO				epP	pwP	08 57 09.2	-1.8
SCO	Scoresbysund comp=E,14nm,0.8s	57.77	11	i P	P	08 57 00.1	+0.6
SCO	Scoresbysund	57.77	11	i P	P	08 57 00.1	+0.6
SCO	comp=Z,14nm,0.8s			pmax	pmax		
S42A	Caledonia baz=312,SNR=7.1	57.81	68	P	P	08 56 57.9	-2.4
FVM	French Village comp=Z,23nm,1.0s	57.89	68	eP	P	08 56 59.3	-1.5
FVM	French Village	57.89	68	eP	P	08 56 59.3	-1.5
FVM	comp=Z,23nm,1.0s			pmax	pmax		
K47A	Vermontville baz=311	57.95	60	P	P	08 57 00.2	-1.0
P44A	Sand Creek, Wi baz=311,SNR=9.4	57.98	65	P	P	08 57 00.3	-1.1
LSQQ	Lebel-sur-Quev baz=312	57.98	50	P	P	08 56 59.1	-2.2
O45A	Potomac baz=311,SNR=5.7	57.98	64	P	P	08 57 00.5	-1.0
R43A	Red Bud baz=312,SNR=7.0	57.99	67	P	P	08 56 59.9	-1.6
M46A	Old House Fiel baz=311	58.01	62	P	P	08 57 00.5	-1.2
D51A	Lot 18 Range I baz=311	58.07	53	P	P	08 57 00.6	-1.4
U41A	Viola baz=312,SNR=6.4	58.08	70	P	P	08 57 00.6	-1.5
Q44A	Meyer Farm, Va baz=312	58.12	66	P	P	08 57 00.8	-1.6
T42A	Van Buren	58.12	69	eP	P	08 57 00.6	-1.9
T42A				ePcP	PcP	08 57 54.1	+0.2
T42A	Van Buren baz=312	58.12	69	P	P	08 57 00.3	-2.1
TOBO	Tobermory, Bru baz=311	58.17	56	P	P	08 57 01.6	-1.1
SFIN	Lafayette baz=312	58.26	64	P	P	08 57 01.9	-1.5
MIAR	Mount Ida comp=Z,70nm,1.2s	58.27	73	eP	P	08 57 03.5	-0.1
MIAR	Mount Ida	58.27	73	eP	P	08 57 03.5	-0.1
MIAR	comp=Z,70nm,1.2s			pmax	pmax		
MIAR	Mount Ida baz=312,SNR=11	58.27	73	P	P	08 57 03.0	-0.5
L47A	Sherwood baz=311	58.29	61	P	P	08 57 02.5	-1.1
I49A	Point Hope baz=311	58.31	58	P	P	08 57 02.6	-1.1
435B	Jarrell comp=Z,99nm,1.1s	58.32	79	eP	P	08 57 04.6	+0.7
435B	Jarrell baz=313,SNR=9.3	58.32	79	P	P	08 57 03.6	-0.3
K48A	Perry baz=311	58.35	60	P	P	08 57 02.5	-1.5
S43A	Fulton Ridge, baz=312,SNR=12	58.37	68	P	P	08 57 02.0	-2.2
VLDQ	Val d'Or comp=Z,69nm,1.6s	58.37	52	eP	P	08 57 02.8	-1.2
E51A	G1948 Merrick baz=312	58.38	54	P	P	08 57 03.1	-1.0
P45A	Graceland, Par baz=312	58.45	65	P	P	08 57 03.4	-1.3
M47A	Cromwell baz=312	58.46	62	P	P	08 57 03.3	-1.4
U42A	Revenden baz=312,SNR=5.2	58.49	70	P	P	08 57 02.7	-2.3
R44A	Waltonville baz=312	58.51	67	P	P	08 57 03.8	-1.4
J49A	Marlette baz=312	58.52	59	P	P	08 57 03.0	-2.2
F51A	Arnstein baz=312	58.56	55	P	P	08 57 03.8	-1.6
WHAR	Wooly Hollow comp=Z,87nm,1.4s	58.56	71	eP	P	08 57 04.8	-0.7
T43A	Greenville baz=312	58.57	69	P	P	08 57 03.8	-1.8
Q45A	Warren Harvey, baz=312,SNR=6.3	58.63	66	P	P	08 57 04.2	-1.8
D52A	ZEK Kipawa Sen baz=312	58.64	53	P	P	08 57 04.8	-1.2
W41B	Gary Mavity, V comp=Z,68nm,1.4s	58.66	71	eP	P	08 57 05.0	-1.2
W41B	Gary Mavity, V baz=312,SNR=9.6	58.66	71	P	P	08 57 04.6	-1.6
CHGQ	Chibougamau baz=312	58.68	48	P	P	08 57 04.7	-1.5
PBMO	Poplar Bluff	58.69	69	eP	P	08 57 05.4	-1.0
PBMO				ePcP	PcP	08 57 56.2	0.0
SCHQ	Schefferville comp=Z,22nm,0.9s	58.70	40	eP	P	08 57 07.0	+0.8
SCHQ	Schefferville comp=Z,15nm,0.8s,baz=336,slow=6.7,SNR=15	58.70	40	P	P	08 57 06.3	+0.1
SCHQ	comp=Z,685nm,18.2s,baz=330,slow=38			LR	LR	09 23 59.5	
P46A	Rosedale baz=312	58.70	64	P	P	08 57 05.2	-1.2
K49A	Clarkson baz=312	58.73	59	P	P	08 57 05.2	-1.5
N47A	Urbana baz=312	58.73	62	P	P	08 57 05.2	-1.5
L48A	N Adams baz=312	58.74	61	P	P	08 57 05.4	-1.3
BMRO	Meriville Lake baz=312	58.75	57	P	P	08 57 05.0	-1.7
X40A	Basin Creek Fa comp=Z,39nm,1.2s	58.76	72	eP	P	08 57 06.1	-0.9
X40A	Basin Creek Fa baz=313,SNR=7.3	58.76	72	P	P	08 57 05.7	-1.2
OLIL	Olney comp=Z,34nm,0.8s	58.77	66	eP	P	08 57 06.5	-0.4
S44A	Carbondale baz=312	58.78	67	P	P	08 57 05.2	-1.8
KLBO	Killbear Provi baz=312	58.78	55	P	P	08 57 05.9	-1.0
SIUC	Southern Illin comp=Z,15nm,0.8s	58.78	67	eP	P	08 57 06.1	-0.9
DGZ	Jazzator, Alta	58.81	311	ceP	P	08 57 07.8	+0.5
DGZ	comp=Z,9.0nm,1.3s			pmax	pmax		
833A	Chaparral WMA, comp=Z,132nm,1.1s	58.86	82	eP	P	08 57 08.3	+0.6
833A	Chaparral WMA, baz=314,SNR=16	58.86	82	P	P	08 57 07.1	-0.6
UALR	University of comp=Z,64nm,1.4s	58.87	72	eP	P	08 57 07.0	-0.7
M48A	Edgerton baz=312	58.88	61	P	P	08 57 06.1	-1.6
O47A	Sheridan	58.88	63	P	P	08 57 05.6	-2.2

	baz=312						
LZH	Lanzhou	58.92	290	⇓P	P	08 57 08.4	+0.1
LZH				pP	pwP	08 57 19.8	+0.4
LZH				sP	sP	08 57 21.4	+6.9
LZH				S	S	09 05 12.8	-0.6
LZH				sS	sS	09 05 24.0	+3.2
LZH				pmax	pmax		
	comp=Z,62nm,1.6s						
LZH				pmax	pmax		
	comp=Z,260nm,4.9s						
LZH				LR	LR		
	comp=Z,830nm,16.6s						
LZH				LR	LR		
	comp=Z,600nm,16.6s						
LZH				LR	LR		
	comp=Z,980nm,18.8s						
D53A	Lac Vacive, Po	58.94	53	P	P	08 57 07.4	-0.6
	baz=312						
AAM	Ann Arbor	58.94	60	P	P	08 57 06.5	-1.5
	baz=312						
R45A	Skylar, Fairfi	58.95	66	P	P	08 57 06.5	-1.7
	baz=312						
F52A	Sundridge	58.95	55	P	P	08 57 08.1	-0.1
	baz=312						
E52A	Mattawa	58.97	54	P	P	08 57 06.9	-1.3
	baz=312						
U43A	Rector	58.97	69	P	P	08 57 06.7	-1.6
	baz=312						
T44A	Benton	58.98	68	P	P	08 57 06.9	-1.6
	baz=312						
L49A	Milan	59.00	60	P	P	08 57 06.5	-2.0
	baz=312						
W42A	Bald Knob	59.03	71	P	P	08 57 07.5	-1.4
	baz=313						
GTA	Gaotai	59.09	296	eP	P	08 57 09.0	-0.3
GTA				pP	pP	08 57 14.3	+0.5
GTA				sP	sP	08 57 17.3	+1.8
GTA				S	S	09 05 13.3	-2.0
GTA				sS	sS	09 05 23.3	+0.2
GTA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,310nm,7.3s						
GTA				LR	LR		
	comp=Z,430nm,19.0s						
GTA				LR	LR		
	comp=Z,450nm,17.8s						
GTA				LR	LR		
	comp=Z,680nm,19.4s						
N48A	Decatur	59.12	62	P	P	08 57 07.4	-2.0
	baz=312						
WLAR	White Oak Lake	59.13	73	eP	P	08 57 09.5	0.0
	comp=Z,90nm,1.1s						
V43A	Jonesboro	59.28	70	P	P	08 57 08.7	-1.9
	baz=313						
M49A	Liberty Center	59.31	61	P	P	08 57 09.1	-1.5
	baz=312,SNR=7.6						
KEV	Kevo	59.32	352	eP	P	08 57 10.8	+0.5
	comp=Z,156nm,1.7s						
KEV	Kevo	59.32	352	eP	P	08 57 11.1	+0.8
P47A	Martinsville	59.33	64	P	P	08 57 09.1	-1.7
	baz=312,SNR=6.2						
HBAR	Harrisburg	59.37	70	ePcP	PcP	08 58 00.3	+1.3
ENH	Enshi	59.38	282	eP	P	08 57 11.1	-0.2
	comp=Z,44nm,1.0s						
BLO	Bloomington	59.39	64	eP	P	08 57 10.2	-1.0
	comp=Z,40nm,0.9s						
BLO	Bloomington	59.39	64	eP	P	08 57 10.2	-1.0
BLO				pmax	pmax		
	comp=Z,40nm,0.9s						
D54A	Lac Fusel, La	59.41	52	P	P	08 57 09.7	-1.6
	baz=313						
E53A	Dumoine, Ponti	59.42	53	P	P	08 57 10.2	-1.1
	baz=312						
O48A	Farmland	59.45	63	P	P	08 57 09.5	-2.2
	baz=312,SNR=11						
R46A	Gibon Southern	59.46	66	P	P	08 57 10.3	-1.4
	baz=312						
NATX	Nacogdoches	59.48	76	eP	P	08 57 12.8	+0.8
	comp=Z,140nm,1.4s						
NATX	Nacogdoches	59.48	76	P	P	08 57 11.5	-0.4
	baz=313,SNR=5.7						
ALGO	Algonquin Park	59.51	54	P	P	08 57 11.2	-0.8
	baz=312,SNR=6.1						
ANGG	Ammassalik, Gr	59.53	20	eP	P	08 57 12.7	+1.0
	comp=Z,79nm,1.4s						
USIN	University of	59.53	66	eP	P	08 57 11.7	-0.5
	comp=Z,68nm,1.4s						
N49A	Columbus Grove	59.56	62	P	P	08 57 10.8	-1.6
	baz=312						
L50A	Kingsville	59.58	60	P	P	08 57 10.7	-1.8
	baz=312						
Q47A	Bedord North L	59.60	65	P	P	08 57 11.0	-1.8
	baz=312						
Z41A	Richland Creek	59.61	73	eP	P	08 57 13.2	+0.4
	comp=Z,81nm,1.5s						
Z41A	Richland Creek	59.61	73	P	P	08 57 11.9	-0.9
	baz=313						
ELFO	Elginfield	59.63	58	P	P	08 57 12.6	-0.2
	baz=312						
E54A	Lac Daplat, Po	59.63	53	P	P	08 57 11.4	-1.4
	baz=313						
ARA0	ARCESS Array S	59.67	352	eP	P	08 57 12.8	+0.1
ARCES	ARCESS Array B	59.67	352	eP	P	08 57 13.0	+0.3
ARCES	ARCESS Array B	59.67	352	eP	P	08 57 13.0	+0.3
ARCES	ARCESS Array B	59.67	352	P	P	08 57 12.8	+0.1
	comp=Z,12nm,0.6s,baz=19,slow=7.3,SNR=50						
ARCES				LR	LR	09 22 53.5	
	comp=Z,532nm,21.4s,baz=355,slow=36						
ARE0	ARCESS Array S	59.67	352	eP	P	08 57 11.9	-0.8
G53A	Haliburton	59.77	55	P	P	08 57 13.3	-0.5
	baz=313						
CCAR	Cane Creek	59.80	72	eP	P	08 57 14.6	+0.5
	comp=Z,204nm,1.7s						
P48A	Milroy	59.83	63	P	P	08 57 13.0	-1.3
	baz=312,SNR=5.0						
M50A	Fremont	59.88	60	P	P	08 57 13.5	-1.1
	baz=312						
X43A	Marvell	59.93	71	eP	P	08 57 14.9	-0.1
	comp=Z,95nm,1.4s						
X43A	Marvell	59.93	71	P	P	08 57 14.2	-0.8
	baz=313						
R47A	Wooly Knot Far	59.98	65	P	P	08 57 13.6	-1.6
	baz=313,SNR=5.2						
HKT	Hockley	59.99	78	eP	P	08 57 16.2	+0.8
	comp=Z,168nm,1.6s						
HKT	Hockley	59.99	78	eP	P	08 57 15.3	-0.1
HKT				pmax	pmax		
	comp=Z,47nm,1.3s						
Q48A	North Vernon	60.01	64	P	P	08 57 14.3	-1.2
	baz=313						
T46A	Princeton	60.02	67	P	P	08 57 15.0	-0.6
	baz=313,SNR=6.0						
ACTO	Acton	60.03	57	P	P	08 57 15.4	-0.2
	baz=313						
TRO	Tromso	60.03	355	eP	P	08 57 15.5	+0.3
J52A	Paris	60.05	57	P	P	08 57 13.4	-2.3
	baz=313						
PEMO	Pembroke	60.11	54	P	P	08 57 15.6	-0.5
	baz=313						
I53A	Kortright Cn E	60.13	56	P	P	08 57 15.0	-1.3
	baz=313						
WCI	Wyandotte Cave	60.16	65	eP	P	08 57 15.8	-0.7
	comp=Z,18nm,0.8s						
WCI	Wyandotte Cave	60.16	65	eP	P	08 57 15.8	-0.7
WCI				pmax	pmax		
	comp=Z,18nm,0.8s						
WCI	Wyandotte Cave	60.16	65	P	P	08 57 15.5	-1.1
	baz=313						
P49A	Miami Univ. Ec	60.19	63	P	P	08 57 14.8	-1.9
	baz=313						
BANO	Bancroft	60.20	54	P	P	08 57 17.1	+0.4
	baz=313,SNR=6.5						
K52A	Tillsonburg	60.23	58	P	P	08 57 16.6	-0.3
	baz=313						
N50A	Nevada	60.24	61	P	P	08 57 16.0	-1.1
	baz=313,SNR=8.0						
S47A	Hartford	60.24	66	P	P	08 57 16.0	-1.2
	baz=313						
LVZ	Lovozero	60.25	348	eP	P	08 57 16.8	0.0
	comp=Z,58nm,0.9s						
LVZ	Lovozero	60.25	348	⇓eP	P	08 57 17.3	+0.5
LVZ				pmax	pmax		
	comp=Z,69nm,1.0s						
V45A	Humboldt	60.26	69	P	P	08 57 16.0	-1.3
	baz=313						
R48A	Northridge Ran	60.29	65	P	P	08 57 16.0	-1.4
	baz=313						
U46A	Springville	60.31	68	P	P	08 57 16.2	-1.5
	baz=313,SNR=7.7						
Y43A	Makayla and Ka	60.31	72	P	P	08 57 16.2	-1.4
	baz=313						
PKRO	Pickering	60.32	56	P	P	08 57 15.9	-1.6
	baz=313						
KTK1	Kautokeino	60.36	353	eP	P	08 57 18.0	+0.5
O50A	Cable	60.40	62	P	P	08 57 16.9	-1.3
	baz=313,SNR=11						
M51A	Elyria	60.40	60	P	P	08 57 16.4	-1.8
	baz=313						
Q49A	Aurora	60.44	64	P	P	08 57 17.0	-1.5
	baz=313						
F55A	Otter Lake	60.46	53	P	P	08 57 17.8	-0.7
	baz=313						
TYNO	Tyneside	60.48	57	P	P	08 57 17.8	-0.8
	baz=313						
T47A	Sharon Grove	60.52	67	eP	P	08 57 18.2	-0.8
	comp=Z,140nm,1.9s						
T47A	Sharon Grove	60.52	67	P	P	08 57 18.2	-0.8
	baz=313,SNR=8.9						
W45A	Hickory Valley	60.52	69	P	P	08 57 18.3	-0.7
	baz=313						
IVI	Ivigtut	60.53	27	eP	P	08 57 20.2	+1.5
	comp=Z,99nm,1.2s						
DRWO	Darlington Wes	60.56	56	P	P	08 57 18.0	-1.2
	baz=313						
DRCO	St. Marys Ceme	60.57	56	P	P	08 57 18.3	-0.9
	baz=313						
PLVO	Plevna	60.63	54	eP	P	08 57 20.5	+0.8
	comp=Z,78nm,1.0s						
PLVO	Plevna	60.63	54	P	P	08 57 18.6	-1.1
	baz=313,SNR=7.4						
P50A	Jamestown	60.66	62	P	P	08 57 18.9	-1.0
	baz=313,SNR=9.1						
G55A	Calabogie	60.67	54	P	P	08 57 18.7	-1.2
	baz=313,SNR=7.3						
WVT	Waverly	60.67	68	eP	P	08 57 19.4	-0.7
	comp=Z,79nm,1.6s						
WVT	Waverly	60.67	68	eP	P	08 57 19.4	-0.7
WVT				pmax	pmax		
	comp=Z,79nm,1.6s						
WVT	Waverly	60.67	68	P	P	08 57 18.7	-1.3
	baz=313						
S48A	Wiedeman Farm,	60.68	65	P	P	08 57 19.2	-1.0
	baz=313						
ACSO	Alum Creek Sta	60.70	61	P	P	08 57 19.4	-0.8
	baz=313						
WLVO	Wesleyville	60.70	56	P	P	08 57 19.9	-0.3
	baz=313						
DELO	Deloro Mine	60.71	55	P	P	08 57 19.2	-1.0
	baz=313						
M52A	Chesterland	60.72	59	P	P	08 57 19.9	-0.4
	baz=313						
APA	Apatity	60.72	349	⇑iP	P	08 57 19.2	-0.7
APA				pmax	pmax		
	comp=Z,11nm,1.0s						
APA				MLR	MLR		
	comp=Z,400nm,16.0s						
V46A	Holladay	60.73	68	P	P	08 57 18.7	-1.8
	baz=313,SNR=9.2						
R49A	Shelbyville	60.77	64	P	P	08 57 19.6	-1.1
	baz=313						
STCO	Saint Catharin	60.77	57	P	P	08 57 19.6	-1.0
	baz=313						
U47A	Clarksville	60.78	67	P	P	08 57 20.1	-0.7
	baz=313						
OXF	Oxford	60.83	70	eP	P	08 57 20.5	-0.7
	comp=Z,78nm,1.0s						
OXF	Oxford	60.83	70	eP	P	08 57 20.5	-0.7
OXF				pmax	pmax		
	comp=Z,78nm,1.0s						
OXF	Oxford	60.83	70	P	P	08 57 19.7	-1.5
	baz=313,SNR=7.7						
T48A	Bowling Green	60.85	66	P	P	08 57 20.9	-0.4
	baz=313						
I55A	Frankford	60.88	55	P	P	08 57 21.0	-0.4
	baz=313						
H55A	Tweed	60.91	54	P	P	08 57 20.8	-0.7
	baz=313						
O51A	Pataskala	60.97	61	P	P	08 57 21.2	-0.9
	baz=313,SNR=5.1						
W46A	Michie	61.02	69	P	P	08 57 21.3	-1.2
	baz=313						
N52A	McGinn's Farm,	61.03	60	P	P	08 57 21.5	-1.0
	baz=313,SNR=7.2						
L53A	Girard	61.04	58	P	P	08 57 21.8	-0.7
	baz=313						
S49A	Springfield	61.04	65	P	P	08 57 21.2	-1.4
	baz=313						
V47A	Nunnelly	61.06	68	P	P	08 57 21.6	-1.1
	baz=313						
Q50A	Georgetown	61.08	63	P	P	08 57 21.7	-1.1
	baz=313						
ERPA	Erie	61.08	58	P	P	08 57 22.3	-0.5
	baz=313						
TRQ	Mont Tremblant	61.11	52	eP	P	08 57 22.9	-0.1
ORIO	Orleans, Innes	61.16	53	P	P	08 57 21.6	-1.6
	baz=314						
M53A	WI Miller and	61.16	59	P	P	08 57 22.5	-0.9
	baz=313						
P51A	Williamsport	61.16	62	P	P	08 57 21.7	-1.7
	baz=313						
U48A	Cassie Pea, Po	61.18	67	P	P	08 57 22.7	-0.8
	baz=313						
LATQ	La Tuque	61.18	50	P	P	08 57 22.5	-0.8
	baz=314						
MEDO	Medina	61.19	56	P	P	08 57 23.5	0.0
	baz=314						
LNIG	Linares	61.21	85	eP	P	08 57 22.1	-1.8
	comp=Z,30nm,1.1s						
R50A	Paris	61.26	64	P	P	08 57 22.5	-1.6
	baz=313						
X46A	Booneville	61.29	70	P	P	08 57 23.3	-1.1
	baz=314						
PLAL	Pickwick Lake	61.31	69	eP	P	08 57 23.9	-0.6
	comp=Z,82nm,1.6s						
Q51A	Peebles	61.31	63	eP	P	08 57 23.9	-0.6
	comp=Z,76nm,1.3s						
Q51A	Peebles	61.31	63	P	P	08 57 23.3	-1.2
	baz=313,SNR=8.1						
ALFO	Alfred	61.35	52	P	P	08 57 23.6	-0.9
	baz=314,SNR=7.3						
T49A	Edmonton	61.36	66	P	P	08 57 23.5	-1.3
	baz=313						
H56A	Elgin	61.36	54	P	P	08 57 24.1	-0.5
	baz=314,SNR=8.4						
W47A	Westpoint	61.41	68	P	P	08 57 23.6	-1.6
	baz=314,SNR=7.5						
O52A	Adamsville	61.42	61	eP	P	08 57 24.7	-0.5
	comp=Z,72nm,1.0s						
O52A	Adamsville	61.42	61	P	P	08 57 23.8	-1.3
	baz=313,SNR=8.1						
J55A	Hilton	61.46	56	P	P	08 57 25.0	-0.2
	baz=314						
N53A	Lisbon	61.51	60	P	P	08 57 24.5	-1.2
	baz=314						
V48A	Smith Brothers	61.54	67	eP	P	08 57 25.1	-0.8
	comp=Z,73nm,1.5s						
V48A	Smith Brothers	61.54	67	P	P	08 57 24.9	-1.0
	baz=314,SNR=6.9						
P52A	Corning	61.59	61	P	P	08 57 25.4	-0.8
	baz=314						
U49A	Red Boiling Sp	61.62	66	P	P	08 57 25.6	-0.9
	baz=314						
S50A	Richmond	61.63	64	P	P	08 57 25.7	-0.9
	baz=314						
M54A	Oil Creek Stat	61.67	58	eP	P	08 57 27.0	+0.2
	comp=Z,37nm,0.9s						
M54A	Oil Creek Stat	61.67	58	P	P	08 57 26.4	-0.4
	baz=314,SNR=5.0						
R51A	Hillsboro	61.67	63	P	P	08 57 26.1	-0.8
	baz=314,SNR=12						
O53A	New Philadelph	61.68	60	P	P	08 57 25.7	-1.2
	baz=314						
K55A	Perry	61.69	56	P	P	08 57 26.3	-0.6
	baz=314						
VBMS	Vicksburg	61.72	73	eP	P	08 57 27.6	+0.3
	comp=Z,68nm,1.0s						
VBMS	Vicksburg	61.72	73	P	P	08 57 26.9	-0.4
	baz=314,SNR=5.5						
X47A	Russelville	61.76	69	P	P	08 57 26.2	-1.3
	baz=314						
MMNY	Mt. Morris Dam	61.78	56	eP	P	08 57 28.0	+0.5
	comp=Z,68nm,1.1s						
145A	Houston Renfro	61.82	72	P	P	08 57 26.6	-1.3
	baz=314						
T50A	Nancy	61.82	65	P	P	08 57 26.7	-1.2
	baz=314,SNR=5.7						
N54A	Moraine State	61.87	59	eP	P	08 57 27.4	-0.7
	comp=Z,61nm,1.1s						
N54A	Moraine State	61.87	59	P	P	08 57 26.6	-1.6
	baz=314,SNR=6.8						
L55A	Hinsdale	61.87	57	P	P	08 57 27.1	-1.1
	baz=314						
W48A	Pulaski	61.88	68	P	P	08 57 27.3	-1.0
	baz=314,SNR=10						
STEI	Steigen	61.91	356	eP	P	08 57 28.3	+0.4
V49A	McMinnville	62.06	67	P	P	08 57 28.4	-1.2
	baz=314,SNR=5.4						
P53A	Whipple	62.10	61	eP	P	08 57 29.1	-0.6
	comp=Z,42nm,0.9s						
P53A	Whipple	62.10	61	P	P	08 57 29.2	-0.5
	baz=314,SNR=6.0						
S51A	Beattyville	62.12	64	P	P	08 57 28.9	-1.0
	baz=314						
KURK	Kurchatov	62.16	317	eP	P	08 57 30.0	+0.1
	comp=Z,20nm,0.8s						
KURK	Kurchatov	62.16	317	d iP	P	08 57 30.2	+0.3
KURK				pmax	pmax		
	comp=Z,56nm,1.7s						
KURK	Kurchatov	62.16	317	P	P	08 57 30.6	+0.7
	SNR=11						
KURK				P	P	08 57 30.6	+0.7
	SNR=11						
R52A	Catlettsburg	62.19	63	P	P	08 57 29.3	-1.0
	baz=314						
M55A	Ridgway	62.19	58	P	P	08 57 30.0	-0.3
	baz=314,SNR=12						
O54A	Avella	62.19	60	P	P	08 57 29.4	-0.9
	baz=314,SNR=11						
LONY	Lake Ozonia	62.21	53	P	P	08 57 29.7	-0.7
	baz=314						
U50A	Jamestown	62.24	66	P	P	08 57 29.8	-0.9
	baz=314						
X48A	Hartselle	62.29	69	eP	P	08 57 30.0	-1.1
	comp=Z,38nm,1.4s						
X48A	Hartselle	62.29	69	P	P	08 57 29.3	-1.8
	baz=314						
W49A	Belvidere	62.29	68	P	P	08 57 30.2	-0.9
	baz=314,SNR=7.0						
T51A	Gray	62.38	65	P	P	08 57 30.2	-1.4
	baz=314						
S52A	Salyersville	62.39	64	P	P	08 57 30.8	-0.9
	baz=314						
SWET	Sewanee	62.42	67	eP	P	08 57 31.0	-1.0
	comp=Z,107nm,1.8s						
CD2	Chengdu	62.50	286	P	P	08 57 32.6	0.0
CD2				pP	sP	08 57 40.3	+1.5
CD2				S	S	09 05 57.8	-1.2
CD2				SS	SS	09 10 02.5	-0.1
CD2				pmax	pmax		
	comp=Z,100nm,0.8s						
CD2				pmax	pmax		
	comp=Z,780nm,4.0s						
CD2				LR	LR		
	comp=Z,660nm,19.6s						
CD2				LR	LR		
	comp=Z,660nm,11.3s						
P54A	Burton	62.53	60	P	P	08 57 31.6	-1.0
	baz=314,SNR=8.8						
N55A	Marion Center	62.54	59	P	P	08 57 32.2	-0.5
	baz=314,SNR=6.4						
R53A	Hurricane	62.58	62	P	P	08 57 31.5	-1.5
	baz=314						
Y48A	Jasper	62.59	69	P	P	08 57 31.2	-1.9
	baz=314,SNR=5.6						
V50A	Pikevile	62.60	66	P	P	08 57 31.6	-1.5
	baz=314						
WMQ	Urumqi	62.73	306	P	P	08 57 35.0	+1.1
WMQ				PcP	PcP	08 58 14.8	+2.4
WMQ				S	S	09 06 00.9	-0.6
WMQ				sS	sS	09 06 13.1	+3.7
WMQ				SS	SS	09 10 06.3	+0.8
WMQ				pmax	pmax		
	comp=Z,46nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,950nm,4.7s						
WMQ				LR	LR		
	comp=Z,840nm,20.5s						
WMQ				LR	LR		
	comp=Z,2µm,30.1s						
WMQ	Urumqi	62.73	306	eP	P	08 57 35.1	+1.1
	comp=Z,48nm,1.3s						
WMQ	Urumqi	62.73	306	eP	P	08 57 35.1	+1.1
WMQ				pmax	pmax		
	comp=Z,47nm,1.3s						
U51A	La Follette	62.74	65	P	P	08 57 32.9	-1.2
	baz=314						
Q54A	Coxs Mills	62.76	61	P	P	08 57 33.2	-0.9
	baz=314,SNR=6.4						
O55A	Ligonier	62.77	59	P	P	08 57 32.8	-1.4
	baz=314						
147A	Livingston	62.78	71	eP	P	08 57 34.1	-0.2
	comp=Z,210nm,1.4s						
147A	Livingston	62.78	71	P	P	08 57 33.7	-0.6
	baz=314,SNR=7.4						
W50A	Signal Mountai	62.80	67	eP	P	08 57 34.0	-0.5
	comp=Z,64nm,1.4s						
W50A	Signal Mountai	62.80	67	P	P	08 57 32.9	-1.6
	baz=314						
T52A	Hallie	62.84	64	P	P	08 57 33.6	-1.1
	baz=314						
NCB	Newcomb	62.84	53	eP	P	08 57 34.4	-0.2
	comp=Z,141nm,1.8s						
MCWV	Mont Chateau	62.85	60	eP	P	08 57 34.7	0.0
	comp=Z,37nm,1.0s						
MCWV	Mont Chateau	62.85	60	P	P	08 57 34.5	-0.2
	baz=314,SNR=7.0						
MOQ	Mont Orford	62.90	51	eP	P	08 57 34.9	-0.1
TZTN	Tazewell	62.90	65	P	P	08 57 34.1	-1.0
	baz=314						
S53A	Williamson	62.93	63	P	P	08 57 34.4	-0.9
	baz=314						
V51A	Loudon	62.95	66	P	P	08 57 34.4	-1.0
	baz=314						
P55A	Reedsville	62.96	60	P	P	08 57 35.3	-0.2
	baz=314,SNR=5.3						
Y49A	Blount Mountai	63.08	69	eP	P	08 57 35.9	-0.4
	comp=Z,52nm,1.4s						
Y49A	Blount Mountai	63.08	69	P	P	08 57 34.8	-1.6
	baz=314						
CPCT	Cooper Cave	63.09	66	eP	P	08 57 35.6	-0.7
	comp=Z,49nm,1.6s						
X50B	Fort Payne	63.11	68	P	P	08 57 34.7	-1.8
	baz=314,SNR=6.3						
O56A	Blue Knob Stat	63.13	59	eP	P	08 57 36.6	-0.1
	comp=Z,33nm,0.8s						
O56A	Blue Knob Stat	63.13	59	P	P	08 57 36.1	-0.5
	baz=315,SNR=5.9						
W51A	Cleveland	63.15	67	P	P	08 57 35.2	-1.6
	baz=314						
BINY	Binghamton	63.17	56	eP	P	08 57 37.0	+0.2
	comp=Z,60nm,1.0s						
BINY	Binghamton	63.17	56	P	P	08 57 34.7	-2.1
	baz=315,SNR=7.4						
Q55A	Buckhannon	63.18	61	P	P	08 57 36.6	-0.3
	baz=314,SNR=7.9						
T53A	Wise	63.18	64	P	P	08 57 36.3	-0.7
	baz=314						
R54A	Victor	63.23	62	P	P	08 57 36.8	-0.5
	baz=314,SNR=6.0						
TMCR	Tamitsa	63.24	345	eP	P	08 57 36.8	-0.1
TMCR				pmax	pmax		
	comp=Z,64nm,1.3s						
SSPA	Standing Stone	63.24	58	P	P	08 57 36.7	-0.6
	baz=315						
BORG	Borgarnes	63.26	13	LR	LR	09 28 14.9	
	comp=Z,136nm,18.6s,baz=338,slow=39						
LRAL	Lakeview Retre	63.30	70	P	P	08 57 36.2	-1.6
	baz=315						
MK31	Makanchi Array	63.30	312	eP	P	08 57 37.3	-0.4
MK31	Makanchi Array	63.30	312	eP	P	08 57 37.3	-0.4
MK32	Makanchi Array	63.30	312	eP	P	08 57 36.9	-0.8
MKAR	Makanchi Array	63.30	312	eP	P	08 57 37.3	-0.4
	comp=Z,79nm,1.0s						
MKAR	Makanchi Array	63.30	312	eP	P	08 57 37.3	-0.4
MKAR				pmax	pmax		
	comp=Z,79nm,1.0s						
MKAR	Makanchi Array	63.30	312	P	P	08 57 36.9	-0.8
	comp=Z,10.0nm,0.9s,baz=53,slow=6.1,SNR=60						
MK01	Makanchi Array	63.32	312	eP	P	08 57 37.0	-0.8
VT1	Waterbury	63.34	52	eP	P	08 57 38.2	+0.3
	comp=Z,95nm,1.5s						

V52A	Sevierville	63.36	65	eP	P	08 57 37.5	-0.7
	comp=Z,81nm,1.5s						
V52A	Sevierville	63.36	65	P	P	08 57 37.2	-1.0
	baz=314						
TKL	Tuckaleechee C	63.38	66	ePcP	PcP	08 58 16.1	+0.9
KONS	Konsvik	63.42	357	eP	P	08 57 38.1	+0.1
MAKZ	Makanchi	63.44	312	eP	P	08 57 37.9	-0.7
	comp=Z,43nm,1.4s						
MAKZ	Makanchi	63.44	312	eP	P	08 57 37.9	-0.7
MAKZ				pmax	pmax		
	comp=Z,43nm,1.4s						
Y50A	Piedmont	63.46	68	P	P	08 57 36.9	-1.9
	baz=315						
Z49A	Columbiana	63.47	69	P	P	08 57 37.6	-1.3
	baz=315,SNR=8.8						
X51A	Calhoun	63.51	67	eP	P	08 57 38.5	-0.7
	comp=Z,104nm,1.7s						
X51A	Calhoun	63.51	67	P	P	08 57 38.3	-0.9
	baz=315						
ACCN	Adirondack Com	63.54	53	eP	P	08 57 39.2	-0.1
	comp=Z,65nm,1.1s						
U53A	Fall Branch	63.59	64	P	P	08 57 38.1	-1.6
	baz=315						
R55A	Marlinton	63.65	61	P	P	08 57 39.7	-0.5
	baz=315						
T54A	Tazewell	63.68	63	P	P	08 57 40.2	-0.2
	baz=315,SNR=6.8						
W52A	Murphy	63.69	66	P	P	08 57 39.2	-1.2
	baz=315						
MOR8	Moi Rana	63.70	356	eP	P	08 57 39.3	-0.6
149A	Jones	63.73	70	P	P	08 57 39.4	-1.2
	baz=315,SNR=8.5						
KSPA	Keystone Colle	63.74	56	eP	P	08 57 41.2	+0.7
	comp=Z,38nm,1.0s						
Z50A	Ashland	63.79	69	eP	P	08 57 39.9	-1.1
	comp=Z,51nm,1.2s						
Z50A	Ashland	63.79	69	P	P	08 57 39.7	-1.3
	baz=315,SNR=7.1						
S55A	Lewisburg	63.79	62	P	P	08 57 39.8	-1.2
	baz=315						
GYA	Guiyang	63.81	280	⇑iP	P	08 57 41.3	-0.1
GYA				pP	pwP	08 57 50.6	-2.0
GYA				PP	PP	09 00 05.4	+3.9
GYA				S	S	09 06 14.0	-1.6
GYA				sS	sS	09 06 26.8	+3.6
GYA				SKS	SKKSac	09 07 31.0	-3.1
GYA				SS	SS	09 10 23.5	+0.2
GYA				pmax	pmax		
	comp=Z,60nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,5.6s						
GYA				LR	LR		
	comp=Z,720nm,18.8s						
GYA				LR	LR		
	comp=Z,610nm,18.6s						
GYA				LR	LR		
	comp=Z,690nm,19.0s						
LBNH	Lisbon	63.82	52	P	P	08 57 39.6	-1.5
	baz=316						
BVA0	Borovoye Array	63.84	323	P	P	08 57 41.4	+0.4
BVA0				pmax	pmax		
	comp=Z,28nm,1.0s						
Y51A	Rockmart	63.85	68	P	P	08 57 40.1	-1.3
	baz=315						
BRVK	Borovoye	63.85	323	eP	P	08 57 41.9	+0.8
	comp=Z,47nm,1.3s						
BRVK	Borovoye	63.85	323	d iP	P	08 57 41.4	+0.3
BRVK				pmax	pmax		
	comp=Z,29nm,1.2s						
BRVK	Borovoye	63.85	323	P	P	08 57 41.7	+0.6
	SNR=14						
BRVK				P	P	08 57 41.7	+0.6
	SNR=14						
BRVK				S	S	09 06 16.2	+1.0
BRVK				S	S	09 06 16.2	+1.0
V53A	Saluda	63.94	65	P	P	08 57 40.9	-1.1
	baz=315						
249A	Camden	63.96	71	P	P	08 57 41.5	-0.6
	baz=315						
X52A	Dahlonega	64.05	67	P	P	08 57 41.5	-1.3
	baz=315						
W53A	Cullowhee	64.08	66	P	P	08 57 42.2	-0.8
	baz=315						
PRGR	Permogore	64.11	340	eP	P	08 57 42.9	+0.2
PRGR				pmax	pmax		
	comp=Z,91nm,1.0s						
150A	Eclectic	64.18	70	P	P	08 57 42.4	-1.3
	baz=315						
N59A	State Game Lan	64.19	57	eP	P	08 57 43.8	+0.3
	comp=Z,49nm,1.0s						
N59A	State Game Lan	64.19	57	P	P	08 57 42.6	-1.0
	baz=315,SNR=5.5						
Z51A	Franklin	64.19	68	P	P	08 57 41.7	-2.0
	baz=315,SNR=5.8						
BLA	Blacksburg	64.23	62	eP	P	08 57 44.0	+0.1
	comp=Z,67nm,0.9s						
BLA	Blacksburg	64.23	62	eP	P	08 57 44.0	+0.1
BLA				pmax	pmax		
	comp=Z,67nm,0.9s						
BLA	Blacksburg	64.23	62	P	P	08 57 42.5	-1.4
	baz=315,SNR=7.1						
SVE	Sverdlovsk	64.26	330	eP	P	08 57 45.0	+1.3
SVE				eS	S	09 06 17.9	-2.1
SVE				pmax	pmax		
	comp=Z,73nm,1.4s						
SVE				MLR	MLR		
	comp=Z,775nm,22.0s						
349A	Repton	64.36	71	P	P	08 57 44.4	-0.4
	baz=315						
PKME	Peaks-Kenny Pk	64.39	49	P	P	08 57 44.3	-0.5
	baz=317						
BATG	Bathurst New B	64.45	46	eP	P	08 57 46.1	+0.9
	comp=Z,141nm,1.7s						
X53A	Estanollee	64.47	66	P	P	08 57 44.0	-1.5
	baz=315,SNR=5.6						
Y52A	Lilburn	64.47	67	eP	P	08 57 44.8	-0.7
	comp=Z,90nm,1.6s						
Y52A	Lilburn	64.47	67	P	P	08 57 44.0	-1.5
	baz=315						
250A	Grady	64.48	70	eP	P	08 57 44.5	-1.1
	comp=Z,172nm,1.4s						
250A	Grady	64.48	70	P	P	08 57 44.1	-1.5
	baz=315,SNR=5.4						
MVL	Millersville	64.53	58	eP	P	08 57 46.1	+0.4
	comp=Z,30nm,1.0s						
BRAL	Brewton	64.57	71	P	P	08 57 45.0	-1.2
	baz=315						
LUPA	Lehigh Univers	64.63	57	eP	P	08 57 46.5	0.0
	comp=Z,4.7nm,0.9s						
151A	Opelika	64.66	69	P	P	08 57 45.2	-1.5
	baz=315						
SDMD	Soldier's Deli	64.68	58	eP	P	08 57 47.3	+0.6
	comp=Z,17nm,1.0s						
Z52A	Williamson	64.73	68	P	P	08 57 45.8	-1.4
	baz=315						
449A	Pace	64.76	72	P	P	08 57 47.0	-0.4
	baz=315						
Y53A	Monroe	64.76	67	P	P	08 57 46.1	-1.2
	baz=315						
350A	Dozier	64.83	71	P	P	08 57 47.1	-0.8
	baz=315						
251A	Midway	64.91	70	P	P	08 57 47.6	-0.8
	baz=315						
152A	Waverly Hall	64.92	69	eP	P	08 57 47.2	-1.3
	comp=Z,72nm,1.5s						
152A	Waverly Hall	64.92	69	P	P	08 57 47.0	-1.4
	baz=315						
PAL	Palisades	65.11	55	eP	P	08 57 50.2	+0.7
	comp=Z,57nm,1.0s						
PAL	Palisades	65.11	55	P	P	08 57 50.2	+0.7
PAL				pmax	pmax		
	comp=Z,57nm,1.0s						
PAL	Palisades	65.11	55	P	P	08 57 49.4	-0.1
	baz=316						
PAULI	Pauline	65.11	65	eP	P	08 57 49.5	-0.2
	comp=Z,77nm,1.6s						
R58B	Mineral	65.13	60	P	P	08 57 49.3	-0.4
	baz=316						
GOGA	Godfrey	65.14	67	eP	P	08 57 49.0	-0.8
	comp=Z,99nm,1.6s						
GOGA	Godfrey	65.14	67	eP	P	08 57 49.0	-0.8
GOGA				pmax	pmax		
	comp=Z,99nm,1.6s						
GOGA	Godfrey	65.14	67	P	P	08 57 48.1	-1.8
	baz=315,SNR=6.1						
KMSC	Kings Mountain	65.17	64	eP	P	08 57 49.4	-0.6
	comp=Z,33nm,0.8s						
KMSC	Kings Mountain	65.17	64	P	P	08 57 47.8	-2.2
	baz=315,SNR=7.3						
Z53A	Monticello	65.17	67	P	P	08 57 47.8	-2.2
	baz=315,SNR=6.2						
ARU	Arti	65.23	331	eP	P	08 57 50.1	+0.1
	comp=Z,79nm,1.2s						
ARU	Arti	65.23	331	P	P	08 57 51.2	+1.1
ARU						08 58 21.4	
ARU						09 00 12.7	
ARU				S	S	09 06 35.7	+3.6
ARU				SS	SS	09 10 44.5	+0.7
ARU				MLR	MLR		
	comp=Z,594nm,21.0s						
CBN	Corbin Frederi	65.24	60	P	P	08 57 49.6	-0.8
	baz=316						
HODGE	Hodges	65.27	66	eP	P	08 57 50.3	-0.3
	comp=Z,61nm,1.7s						
Y54A	Tignall	65.28	66	P	P	08 57 49.6	-1.1
	baz=315,SNR=7.7						
351A	Pinckard	65.37	70	P	P	08 57 50.5	-0.9
	baz=316						
252A	Lumpkin	65.38	69	P	P	08 57 50.5	-0.9
	baz=316						
NSS	Namsos	65.43	357	eP	P	08 57 52.1	+0.9
X55A	Gracelyn & Ava	65.47	65	P	P	08 57 51.5	-0.5
	baz=316,SNR=5.5						
Z54A	Sparta	65.63	67	P	P	08 57 51.7	-1.3
	baz=316,SNR=6.1						
352A	Blakely	65.64	70	P	P	08 57 52.2	-0.9
	baz=316						
TAOE	Nuku Hiva Isla	65.66	143	eS	S	09 06 33.1	-5.2
	comp=Z,263nm,24.8s						
TAOE	Nuku Hiva Isla	65.66	143	eLR	LR	09 17 24.2	
	comp=Z,1µm,30.4s,baz=348						
253A	Americus	65.70	69	P	P	08 57 52.8	-0.7
	baz=316						
X56A	White Oak	65.80	65	P	P	08 57 53.2	-0.9
	baz=316						
JSC	Jenkinsville	65.82	65	eP	P	08 57 54.2	0.0
	comp=Z,65nm,1.4s						
JSC	Jenkinsville	65.82	65	eP	P	08 57 54.2	0.0
JSC				pmax	pmax		
	comp=Z,65nm,1.4s						
154A	Montrose	65.92	68	P	P	08 57 53.5	-1.4
	baz=316						
KLMR	Klimovskoe	66.06	343	eP	P	08 57 53.9	-1.4
KLMR				pmax	pmax		
	comp=Z,47nm,1.1s						
KLMR	Klimovskoe	66.06	343	eP	P	08 57 54.0	-1.4
KLMR				AMP		08 57 57.5	
	comp=Z,47nm,1.1s						
LMN	Caledonia Moun	66.09	46	eP	P	08 57 55.7	-0.1
	comp=Z,66nm,1.0s						
155A	Kite	66.29	67	P	P	08 57 56.4	-0.8
	baz=316						
X57A	Johnson Farm,	66.36	64	P	P	08 57 57.2	-0.5
	baz=316						
453A	Whigham	66.44	70	P	P	08 57 58.0	-0.3
	baz=316						
DRLN	Deer Lake	66.69	40	eP	P	08 58 00.5	+0.9
	comp=Z,61nm,1.0s						
OTUK	Ortayu	66.73	318	P	P	08 57 59.2	-0.7
OTUK				pmax	pmax		
	comp=Z,23nm,1.1s						
X58A	Rowland	66.73	64	P	P	08 57 59.9	-0.1
	baz=316						
TBLU	Trondheim	66.75	358	eP	P	08 57 60.0	+0.3
255A	Hazlehurst	66.78	68	P	P	08 58 00.3	-0.1
	baz=316						
156A	Sylvania	66.84	66	P	P	08 58 00.3	-0.5
	baz=316						
553A	Crawfordville	66.85	70	P	P	08 58 00.5	-0.4
	baz=316						
355A	Pearson	66.97	68	P	P	08 58 00.5	-1.1
	baz=316						
256A	Glennville	67.09	67	P	P	08 58 01.9	-0.5
	baz=316						
PDGK	Podgornoye	67.19	311	P	P	08 58 03.1	0.0
PDGK				pmax	pmax		
	comp=Z,88nm,1.1s						
KMI	Kunming	67.23	282	P	P	08 58 04.3	+0.6
KMI				pP	sP	08 58 11.8	+1.9
KMI				sP	pwP	08 58 14.0	-0.9
KMI				S	S	09 06 55.3	-2.4
KMI				sS	sS	09 07 08.3	+3.0
KMI				pmax	pmax		
	comp=Z,55nm,1.1s						
KMI				pmax	pmax		
	comp=Z,410nm,3.6s						
KMI				LR	LR		
	comp=Z,250nm,5.0s						
KMI				LR	LR		
	comp=Z,170nm,8.0s						
KMI				LR	LR		
	comp=Z,210nm,6.6s						
356A	Blackshear	67.42	68	P	P	08 58 04.2	-0.2
	baz=316						
MOL	Molde	67.47	359	eP	P	08 58 05.2	+0.9
FIA1	FINESS Array S	67.50	350	eP	P	08 58 04.3	-0.2
FIA1				eP	P	08 58 04.8	+0.3
FIA0	FINESS Array S	67.51	350	eP	P	08 58 04.6	+0.1
FIA0	FINESS Array S	67.51	350	eP	P	08 58 04.6	+0.1
FINES	FINESS Array B	67.51	350	P	P	08 58 04.6	+0.1
	comp=Z,28nm,0.9s,baz=35,slow=7.0,SNR=34						
FINES				LR	LR	09 27 55.1	
	comp=Z,285nm,21.9s,baz=12,slow=36						
GBN	Guysborough	67.94	45	eP	P	08 58 08.8	+1.2
	comp=Z,162nm,1.6s						
MSVF	Nonsavu	68.15	189	⇑eP	P	08 58 10.1	+1.0
MSVF				pmax	pmax		
	comp=Z,12nm,1.0s						
556A	Lake Butler	68.20	69	P	P	08 58 09.7	+0.3
	baz=317						
PUL	Pulkovo	68.60	347	⇓eP	P	08 58 11.5	+0.1
PUL				pmax	pmax		
	comp=Z,68nm,1.1s						
NC303	NORSAR Array S	68.75	357	eP	P	08 58 13.6	+1.2
NC405	NORSAR Array S	68.86	357	eP	P	08 58 14.1	+1.1
NB201	NORSAR Array S	68.93	358	eP	P	08 58 14.3	+0.8
NB2	NORSAR Subarra	68.94	358	P	P	08 58 14.1	+0.5
	comp=Z,9.9nm,0.8s,baz=0.5,slow=6.5						
NB2	NORSAR Subarra	68.94	358	P	P	08 58 14.1	+0.5
	baz=0.5,slow=6.5						
NB200	NORSAR Array S	68.94	358	eP	P	08 58 14.2	+0.6
NOA	NORSAR Array B	68.94	358	P	P	08 58 14.2	+0.6
	comp=Z,24nm,0.3s,baz=1.8,slow=6.3,SNR=38						
NOA				LR	LR	09 29 04.3	
	comp=Z,213nm,20.1s,baz=355,slow=36						
TARG	Taragay, Kyrgy	69.22	311	eP	P	08 58 17.3	+1.2
	comp=Z,24nm,1.1s						
NC602	NORSAR Array S	69.24	357	eP	P	08 58 16.9	+1.5
TKM2	Tokmak 2	69.36	313	P	P	08 58 17.6	+0.9
	SNR=48						
ULHL	Ulahol	69.58	312	P	P	08 58 19.1	+1.0
	SNR=16						
USP	Ospenovka	69.61	314	P	P	08 58 19.1	+1.1
	SNR=70						
CHMS	Chumysh	69.70	313	P	P	08 58 19.0	+0.4
	SNR=18						
HFS	Hagfors	69.77	356	LR	LR	09 28 09.7	
	comp=Z,284nm,21.7s,baz=9.0,slow=35						
KBK	Karagaybulak	69.87	313	P	P	08 58 20.5	+0.7
	SNR=42						
FRU	Bishkek	69.89	313	eP	P	08 58 20.0	+0.2
FRU				e		08 58 34.0	
FRU				pmax	pmax		
	comp=Z,200nm,1.8s						
FRU1	Bishkek	69.90	313	eP	P	08 58 22.1	+2.3
	comp=Z,104nm,0.9s						
FRU1	Bishkek	69.90	313	P	P	08 58 22.2	+2.3
FRU1				pmax	pmax		
	comp=Z,104nm,0.9s						
957A	Wimauma	70.00	71	P	P	08 58 20.8	+0.2
	baz=317						
AAK	Ala-Archa	70.10	313	P	P	08 58 21.7	+0.5
	SNR=50						
AAK	Ala-Archa	70.10	313	eP	P	08 58 21.8	+0.5
	comp=Z,62nm,0.9s						
AAK				eP	P	08 58 22.1	+0.8
AAK	Ala-Archa	70.10	313	i P	P	08 58 21.6	+0.4
	SNR=63						
AAK	Ala-Archa	70.10	313	d iP	P	08 58 21.6	+0.4
AAK				pmax	pmax		
	comp=Z,54nm,0.9s						
AAK	Ala-Archa	70.10	313	P	P	08 58 21.9	+0.6
	SNR=24						
AAK				P	P	08 58 21.9	+0.6
	SNR=24						
AAK	Ala-Archa	70.10	313	P	P	08 58 22.0	+0.8
	comp=Z,46nm,0.9s,baz=75,slow=2.7,SNR=80						
DWPF	Disney Wildern	70.16	70	eP	P	08 58 22.3	+0.8
	comp=Z,637nm,2.0s						
DWPF	Disney Wildern	70.16	70	P	P	08 58 21.3	-0.2
	baz=317						
DWPF	Disney Wildern	70.16	70	eP	P	08 58 22.2	+0.6
KZA	Kyzart	70.17	312	P	P	08 58 23.1	+1.1
	SNR=19						
NRN	Naryn	70.31	312	eP	P	08 58 23.9	+1.1
	comp=Z,46nm,1.3s						
NRN	Naryn	70.31	312	eP	P	08 58 23.9	+1.1
NRN				pmax	pmax		
	comp=Z,46nm,1.3s						
VSU	Vasula	70.34	349	d iP	P	08 58 22.9	+0.7
VSU				pmax	pmax		
	comp=Z,183nm,1.0s						
VSU	Vasula	70.34	349	eP	P	08 58 22.6	+0.5
VSU				IAmb	IAmb	08 58 24.3	
	comp=Z,189nm,1.0s						
KONO	Kongsberg	70.38	358	eP	P	08 58 24.0	+1.6
	comp=Z,48nm,1.0s						
KONO	Kongsberg	70.38	358	⇑eP	P	08 58 22.9	+0.5
KONO				pmax	pmax		
	comp=Z,48nm,1.1s						
UCH	Uchtor	70.41	313	P	P	08 58 24.2	+0.7
	SNR=34						
EKS2	Erkin-Say	70.41	314	P	P	08 58 23.9	+0.8
	SNR=55						
AKTO	Aktyubinsk	70.45	328	LR	LR	09 32 26.2	
	comp=Z,417nm,21.7s,baz=29,slow=39						
058A	Arcadia	70.70	71	P	P	08 58 24.8	-0.1
	baz=318						
AB31	Akbulak array	70.77	326	i P	P	08 58 25.5	+0.5
AB31				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ABKAR	Akbulak array	70.77	326	eP	P	08 58 25.3	+0.3
PPT	Papeete	70.79	156	LR	LR	09 22 43.5	
	comp=Z,618nm,20.5s,baz=14,slow=30						
PPT2	Papeete2	70.81	156	eS	S	09 07 34.0	-5.5
	comp=Z,391nm,26.8s						
PPT2	Papeete2	70.81	156	eLR	LR	09 19 52.0	
	comp=Z,1µm,23.5s,baz=338						
AML	Almayashu	70.86	313	P	P	08 58 27.2	+1.0
	SNR=53						
959A	Okeechobee	70.92	70	P	P	08 58 26.1	-0.1
	baz=318						
LSA	Lhasa	70.97	294	eP	P	08 58 29.2	+2.1
	comp=Z,44nm,1.5s						
LSA	Lhasa	70.97	294	P	P	08 58 29.1	+2.0
LSA	Lhasa	70.97	294	eP	P	08 58 29.2	+2.1
LSA				pmax	pmax		
	comp=Z,44nm,1.5s						
MNAS	Manas	71.14	314	i P	P	08 58 26.9	-0.6
MNAS				pmax	pmax		
	comp=Z,44nm,1.2s						
059A	Moore Haven	71.17	70	P	P	08 58 27.6	-0.1
	baz=318						
MOS	Moscow	71.20	342	eP	P	08 58 28.5	+1.1
MOS				e		08 58 48.5	
MOS				pmax	pmax		
	comp=Z,44nm,1.0s						
KK31	Karatay Array	71.55	316	eP	P	08 58 30.1	+0.2
KK31	Karatay Array	71.55	316	eP	P	08 58 30.1	+0.2
KKAR	Karatay Array	71.55	316	eP	P	08 58 30.1	+0.2
KKAR	Karatay Array	71.55	316	eP	P	08 58 30.1	+0.2
SLIT	Slitere, Latvi	71.65	351	eP	P	08 58 28.9	-1.2
SLIT				IAmb	IAmb	08 58 32.1	
	comp=Z,365nm,0.9s						
KSH	Kashi	71.81	310	P	P	08 58 35.4	+3.8
KSH				pP	pwP	08 58 45.5	+2.2
KSH				PP	PP	09 01 17.1	+6.6
KSH				S	S	09 07 53.5	+2.5
KSH				SKS	SKSac	09 08 34.3	-0.1
KSH				SS	SS	09 12 36.1	+10
KSH				pmax	pmax		
	comp=Z,140nm,1.0s						
KSH				LR	LR		
	comp=Z,250nm,5.1s						
KSH				LR	LR		
	comp=Z,500nm,6.4s						
ARSB	Arslanbob	71.83	313	eP	P	08 58 32.3	+0.5
	comp=Z,78nm,1.0s						
OBN	Obninsk	71.99	342	d iP	P	08 58 32.0	-0.2
OBN				e		08 58 51.5	
OBN				e		09 01 09.6	
OBN				ePPP	PPP	09 02 56.1	
OBN				i S	S	09 07 48.7	-3.6
OBN				pmax	pmax		
	comp=Z,80nm,1.7s						
OBN				MLR	MLR		
	comp=Z,462nm,23.0s						
OBN	Obninsk	71.99	342	LR	LR	09 33 57.4	
	comp=Z,98nm,21.5s,baz=358,slow=39						
061Z	Ochoppi	72.12	71	eP	P	08 58 34.6	+1.1
	comp=Z,146nm,1.1s						
CCIG	Comitan	72.15	86	eP	P	08 58 34.0	0.0
	comp=Z,106nm,1.6s						
SKNT	Sakolnakorn	72.40	275	P	P	08 58 35.8	+0.5
SFK	Sufi-Kurgan	72.61	312	i P	P	08 58 36.6	+0.1
SFK				pmax	pmax		
	comp=Z,67nm,1.1s						
IZAR	Zarasai	73.05	348	eP	P	08 58 39.7	+1.2
IZAR				IAmb	IAmb	08 58 41.4	
	comp=Z,13nm,0.8s						
ISAL	Salakas	73.23	349	eP	P	08 58 40.9	+1.2
ISAL				IAmb	IAmb	08 58 41.7	
	comp=Z,11nm,1.1s						
PAYA	Payao	73.25	280	P	P	08 58 41.3	+1.0
IDID	Didziasalis	73.41	348	eP	P	08 58 41.9	+1.2
IDID				IAmb	IAmb	08 58 42.6	
	comp=Z,9.8nm,0.9s						
IIGN	Ignalina	73.44	348	eP	P	08 58 42.2	+1.3
IIGN				IAmb	IAmb	08 58 42.8	
	comp=Z,15nm,0.9s						
SHL	Shillong	73.59	290	eP	P	08 58 42.4	0.0
	comp=Z,82nm,1.2s						
SHL	Shillong	73.59	290	eP	P	08 58 42.4	0.0
SHL				pmax	pmax		
	comp=Z,82nm,1.2s						
SHL	Shillong	73.59	290	eP	P	08 58 42.0	-0.5
MRSI	Marisa	73.64	250	P	P	08 58 41.9	-0.7
NACGM	Naroch	73.80	348	e	P	08 58 52.0	+9.0
NACGM				eLR	LR	09 23 46.0	
LPSR	Galich'ya Gora	73.87	340	eP	P	08 58 43.6	+0.2
LPSR				pmax	pmax		
	comp=Z,70nm,1.3s						
UTTA	Uttaradit	74.01	279	P	P	08 58 45.0	+0.2
LAMP	Lampang	74.02	280	P	P	08 58 46.0	+1.2
DZM	Mont Dzumac	74.22	199	eP	P	08 58 46.7	+0.9
	comp=Z,103nm,1.2s						
DZM				eS	S	09 08 12.0	-6.3
	comp=Z,202nm,24.2s						
DZM	Mont Dzumac	74.22	199	eLR	LR	09 21 25.7	
	comp=Z,2µm,30.8s						
DZM	Mont Dzumac	74.22	199	eP	P	08 58 47.1	+1.4
	comp=Z,63nm,1.3s						
CMMT	Chiang Mai	74.23	280	P	P	08 58 46.3	+0.2
CHTO	Chiang Mai	74.24	280	eP	P	08 58 45.8	-0.3
	comp=Z,30nm,1.3s						
CHTO				epP	pwP	08 58 56.5	-0.9
CHTO	Chiang Mai	74.24	280	eP	P	08 58 45.8	-0.3
CHTO				e*PP	pwP	08 58 56.5	-0.9
CHTO				pmax	pmax		
	comp=Z,31nm,1.3s						
CHTO	Chiang Mai	74.24	280	P	P	08 58 45.7	-0.3
	SNR=12						
CHTO				P	P	08 58 45.7	-0.3
	SNR=12						
CHTO	Chiang Mai	74.24	280	P	P	08 58 46.4	+0.3
	comp=Z,94nm,1.5s,comp=Z,2µm						
CHTO	Chiang Mai	74.24	280	eP	P	08 58 45.5	-0.6
COEN	Coen	74.40	224	eP	P	08 58 45.4	-1.5
	comp=Z,21nm,1.3s						
CHAI	Chaiyaphum	74.47	276	P	P	08 58 48.3	+0.8
CM31	Chiang Mai Arr	74.50	280	eP	P	08 58 47.4	-0.3
	comp=Z,54nm,1.4s						
CM31	Chiang Mai Arr	74.50	280	P	P	08 58 48.5	+0.8
	SNR=12						
CMAR	Chiang Mai Arr	74.50	280	P	P	08 58 47.4	-0.3
	comp=Z,12nm,0.7s,baz=27,slow=6.4,SNR=50						
CM01	Chiang Mai Arr	74.52	280	eP	P	08 58 47.4	-0.3
VRH	Novokhopyorsk	74.53	338	eP	P	08 58 46.8	-0.5

VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
PBKT	Sadao Pong	74.62	277	eP	P	08 58 48.7	+0.4
PBKT	Sadao Pong	74.62	277	P	P	08 58 48.8	+0.4
VORR	Voronezh	74.67	340	P	P	08 58 46.0	-2.1
VORR				pmax	pmax		
	comp=Z,250nm,0.8s						
SUKH	Sukhothai	74.79	279	P	P	08 58 50.4	+1.1
KLNR	Kaliningrad	74.83	352	⇑eP	P	08 58 49.9	+0.9
KLNR				pmax	pmax		
	comp=Z,152nm,1.3s						
GAR	Garm	74.91	314	eP	P	08 58 50.5	+0.6
	comp=Z,177nm,1.0s						
GAR	Garm	74.91	314	eP	P	08 58 50.5	+0.6
GAR				pmax	pmax		
	comp=Z,177nm,1.0s						
MPSI	Mapaga	74.99	252	P	P	08 58 50.5	0.0
VSR	Storozhevoye	75.11	339	eP	P	08 58 50.4	-0.2
VSR				pmax	pmax		
	comp=Z,70nm,1.3s						
SUW	Suwalki	75.12	350	eP	P	08 58 51.4	+0.8
SUW	Suwalki	75.12	350	eP	P	08 58 51.5	+0.8
	comp=Z,90nm,1.2s						
SUW	Suwalki	75.12	350	eP	P	08 58 51.4	+0.8
GUN	Gumba	75.37	296	eP	P	08 58 52.9	-0.1
	comp=Z,150nm,1.1s						
JIRN	Jiri	75.38	296	eP	P	08 58 53.0	-0.1
	comp=Z,62nm,0.6s						
RAMN	Ramite	75.68	295	eP	P	08 58 54.3	-0.4
	comp=Z,60nm,0.8s						
CHGR	Chuyangaron	75.72	314	eP	P	08 58 54.8	+0.2
	comp=Z,214nm,0.9s						
KKN	Kakani	75.81	296	eP	P	08 58 55.3	-0.1
	comp=Z,22nm,0.7s						
PKI	Pulchoki	75.90	296	eP	P	08 58 56.3	+0.3
	comp=Z,82nm,1.3s						
PKIN	Phulchoki	75.90	296	eP	P	08 58 56.3	+0.3
	comp=Z,48nm,1.1s						
DMN	Daman	76.05	296	eP	P	08 58 56.7	-0.1
	comp=Z,61nm,1.1s						
UMPA	Umpang Tak	76.23	279	P	P	08 58 59.4	+1.8
DANN	Dangsing	76.25	298	eP	P	08 58 57.8	-0.2
	comp=Z,61nm,0.9s						
UTHA	Uthaitani	76.34	278	P	P	08 58 59.1	+0.9
TBI	Tubuai	76.35	157	eS	S	09 08 38.6	-3.2
	comp=Z,235nm,30.8s						
TBI	Tubuai	76.35	157	eLR	LR	09 22 20.9	
	comp=Z,1µm,24.8s,baz=345						
KOLN	Koldanda	76.78	297	eP	P	08 59 00.4	-0.5
	comp=Z,33nm,0.9s						
PYUN	Piuthan	76.88	298	eP	P	08 59 01.0	-0.4
	comp=Z,100nm,1.0s						
PATY	Pattaya	77.41	275	P	P	08 59 15.4	+11
AKASG	Malin Array Be	77.53	345	P	P	08 59 04.0	-0.4
AKASG	Malin Array Be	77.53	345	P	P	08 59 04.0	-0.4
	comp=Z,12nm,0.7s,baz=17,slow=6.0,SNR=38						
AKASG				LR	LR	09 37 33.7	
	comp=Z,303nm,19.8s,baz=5.0,slow=39						
AKBB	Malin Array Si	77.53	345	eP	P	08 59 04.0	-0.4
	comp=Z,25nm,1.0s						
KIEV	Kiev	77.53	345	eP	P	08 59 04.0	-0.4
	comp=Z,25nm,1.0s						
KIEV	Kiev	77.53	345	⇓iP	P	08 59 04.9	+0.5
KIEV	Kiev	77.53	345	i P	P	08 59 03.7	-0.6
	SNR=12						
KIEV	Kiev	77.53	345	d iP	P	08 59 03.8	-0.6
KIEV				pmax	pmax		
	comp=Z,41nm,1.4s						
AK11	Malin Array Si	77.56	345	eP	P	08 59 04.9	+0.3
TTSI	Tana Toraja	77.71	250	P	P	08 59 06.4	+0.5
NIL	Nilore	77.77	308	eP	P	08 59 06.7	+0.6
	comp=Z,52nm,1.0s						
NIL	Nilore	77.77	308	eP	P	08 59 06.7	+0.6
NIL				pmax	pmax		
	comp=Z,52nm,1.0s						
WTSB	Winterswijk	78.11	360	eP	P	08 59 09.3	+1.8
	comp=Z,104nm,1.4s						
SBUM	Sibu	78.11	259	eP	P	08 59 08.0	-0.1
	comp=Z,6.4nm,0.7s						
PHET	Kaeng Krachan	78.21	276	P	P	08 59 09.7	+1.0
CTA	Charters Tower	78.58	218	P	P	08 59 09.4	-1.1
	comp=Z,10nm,0.8s,baz=31,slow=8.4,SNR=18						
CTAO	Charters Tower	78.58	218	eP	P	08 59 10.4	-0.1
	comp=Z,19nm,1.0s						
CTAO	Charters Tower	78.58	218	eP	P	08 59 10.4	-0.1
CTAO				pmax	pmax		
	comp=Z,19nm,1.0s						
CLL	Collm	78.61	356	eP	P	08 59 11.2	+0.7
	comp=Z,56nm,1.5s						
CLL	Collm	78.61	356	i P	P	08 59 11.6	+1.2
	comp=Z,72nm,1.7s						
CLL				i sP	pwP	08 59 21.4	-0.7
CLL				i		08 59 30.1	
CLL				ePP	PP	09 02 06.0	-1.4
CLL				eS	S	09 09 06.0	+0.1
CLL				ePS		09 09 50.0	
CLL				ePPS	PPS	09 10 00.0	
CLL				e		09 12 54.0	
CLL				eSS	SS	09 14 25.0	+17
CLL				eSSS	SSS	09 17 30.0	
CLL				e		09 18 26.0	
CLL				e(SSSS)		09 20 42.0	
CLL	Collm	78.61	356	i P	P	08 59 11.6	+1.2
CLL				i		08 59 21.4	
CLL				eS	S	09 09 06.0	+0.1
CLL				pmax	pmax		
	comp=Z,72nm,1.7s						
KSP	Ksiaz	78.89	354	eP	P	08 59 12.9	+1.0
KSP	Ksiaz	78.89	354	eP	P	08 59 12.9	+1.0
BRG	Berggiesshubel	79.00	355	i P	P	08 59 13.4	+0.9
	comp=Z,42nm,1.3s						
BRG				S	S	09 09 13.0	+2.9
BRG				SS	SS	09 14 19.0	+4.9
	comp=N,10µm,34.5s						
	comp=E,392nm,23.3s						
	comp=Z,903nm,27.8s						
BRG	Berggiesshubel	79.00	355	i P	P	08 59 13.4	+0.9
BRG				S	S	09 09 13.0	+2.9
BRG				SS	SS	09 14 19.0	+4.9
BRG				pmax	pmax		
	comp=Z,42nm,1.3s						
BRG				MLR	MLR		
	comp=N,10µm,27.0s						
BRG				MLR	MLR		
	comp=E,392nm,23.3s						
BRG				MLR	MLR		
	comp=Z,903nm,27.0s						
MTKI	Muara Teweh, K	79.07	255	P	P	08 59 13.9	+0.5
KBL	Kabul	79.11	312	eP	P	08 59 13.4	-0.3
	comp=Z,42nm,1.0s						
KBL	Kabul	79.11	312	eP	P	08 59 13.4	-0.3
KBL				pmax	pmax		
	comp=Z,42nm,1.0s						
LVV	L'vov	79.14	349	eP	P	08 59 14.1	+0.8
LVV				eS	S	09 09 06.3	-5.2
LVV				ePS	PnS	09 10 02.9	+8.2
LVV				eSS	SS	09 14 13.7	-2.4
LVV				MLR	MLR		
	comp=Z,600nm,20.0s						
OJC	Ojcow	79.21	351	eP	P	08 59 14.8	+1.1
OJC	Ojcow	79.21	351	eP	P	08 59 14.8	+1.1
	comp=Z,26nm,1.3s						
OJC	Ojcow	79.21	351	eP	P	08 59 14.8	+1.1
UPC	Upice	79.24	354	eP	P	08 59 15.8	+1.9
UPC				eS	S	09 09 17.5	+4.8
UPC				AMS	AMS	09 31 10.0	
	comp=Z,500nm,23.9s						
UPC	Upice	79.24	354	eP	P	08 59 15.8	+1.9
UPC				eS	S	09 09 17.5	+4.8
UPC				MLR	MLR		
	comp=Z,500nm,23.9s						
UCC	Uccle	79.26	1	⇑P	P	08 59 15.2	+1.3
MTN	Manton Dam	79.29	235	eP	P	08 59 14.1	-0.4
	comp=Z,39nm,1.1s						
RAO	Raoul Island	79.30	184	eP	P	08 59 13.7	-0.5
	comp=Z,2µm,0.6s						
RAO	Raoul Island	79.30	184	eP	P	08 59 13.7	-0.5
HGN	Heimansgroeve	79.31	0	eP	P	08 59 15.6	+1.4
	comp=Z,67nm,1.0s						
PVCC	Panska Ves	79.31	355	AMS	AMS	09 29 40.0	
	comp=Z,600nm,21.8s						
DPC	Dobruska-Polom	79.38	354	eP	P	08 59 16.0	+1.3
DPC				epP	pwP	08 59 25.9	-0.4
DPC				ex	x	08 59 34.1	
DPC				eS	S	09 09 16.1	+1.9
DPC				AMS	AMS	09 30 20.0	
	comp=Z,600nm,26.6s						
DPC	Dobruska-Polom	79.38	354	eP	P	08 59 16.0	+1.3
DPC				e		08 59 25.9	
DPC				e		08 59 34.1	
DPC				eS	S	09 09 16.1	+1.9
DPC				MLR	MLR		
	comp=Z,600nm,26.6s						
MEM	Membach	79.46	0	⇑P	P	08 59 16.2	+1.1
	comp=Z,34nm,1.6s						
KWP	Kalwaria Pacla	79.48	349	eP	P	08 59 16.7	+1.5
KWP	Kalwaria Pacla	79.48	349	eP	P	08 59 16.1	+0.9
	comp=Z,595nm,1.2s						
KWP	Kalwaria Pacla	79.48	349	eP	P	08 59 16.7	+1.5
BCLA	Clavier	79.65	1	⇑P	P	08 59 17.0	+0.9
	comp=Z,35nm,1.6s						
NKC	Novy Kostel	79.71	356	eP	P	08 59 18.3	+1.8
NKC	Novy Kostel	79.71	356	eP	P	08 59 18.3	+1.8
OKC	Ostrava-Krasne	79.74	352	eS	S	09 09 20.3	+2.3
OKC				AMS	AMS	09 32 20.0	
	comp=Z,700nm,22.1s						
PRU	Pruhonice	79.85	355	eP	P	08 59 18.5	+1.3
PRU				eS	S	09 09 22.7	+3.6
PRU				AMS	AMS	09 29 30.0	
	comp=Z,700nm,26.5s						
PRU	Pruhonice	79.85	355	eP	P	08 59 18.5	+1.3
PRU				eS	S	09 09 22.7	+3.6
PRU				MLR	MLR		
	comp=Z,700nm,26.5s						
MORC	Moravsky Berou	79.85	353	eP	P	08 59 18.4	+1.1
	comp=Z,37nm,1.7s						
MORC	Moravsky Berou	79.85	353	⇑iP	P	08 59 18.1	+0.8
MORC	Moravsky Berou	79.85	353	eP	P	08 59 18.4	+1.1
MORC				pmax	pmax		
	comp=Z,37nm,1.7s						
MORC	Moravsky Berou	79.85	353	eP	P	08 59 18.3	+1.1
GOF	Gofitskoye	79.86	335	⇑iP	P	08 59 17.8	+0.5
GOF				pmax	pmax		
	comp=Z,110nm,0.9s						
GOPC	GO Pecny, Ondr	79.91	355	eP	P	08 59 18.9	+1.3
GOPC				eS	S	09 09 24.8	+5.0
GOPC				AMS	AMS	09 30 00.0	
	comp=Z,500nm,20.5s						
GOPC	GO Pecny, Ondr	79.91	355	eP	P	08 59 18.9	+1.3
GOPC				eS	S	09 09 24.8	+5.0
GOPC				MLR	MLR		
	comp=Z,500nm,20.5s						
NIE	Niedzica	79.96	351	eP	P	08 59 19.6	+1.8
NIE	Niedzica	79.96	351	eP	P	08 59 19.6	+1.8
GIVF	Givet	79.96	1	eP	P	08 59 18.5	+0.7
GIVF				pmax	pmax		
	comp=Z,65nm,1.3s						
DOU	Dourbes	79.97	1	⇑P	P	08 59 18.8	+1.0
	comp=Z,22nm,1.5s						
BAIF	Baives	80.00	2	eP	P	08 59 18.9	+0.9
BAIF				pmax	pmax		
	comp=Z,44nm,1.1s						
KSM	Kuching	80.07	260	eP	P	08 59 19.7	+0.8
	comp=Z,40nm,1.0s						
KSM				epP	pwP	08 59 29.5	-0.8
ESPN	Las Esperanzas	80.21	83	eP	P	08 59 20.1	+0.5
	comp=Z,122nm,1.1s						
GRA1	Grafenberg Arr	80.30	357	eP	P	08 59 21.6	+1.9
	comp=Z,77nm,1.4s						
GRF	Grafenberg Arr	80.30	357	eP	P	08 59 21.6	+1.9
GRF				pmax	pmax		
	comp=Z,77nm,1.4s						
GRFO	Grafenberg	80.30	357	eP	P	08 59 21.6	+2.0
	comp=Z,72nm,1.4s						
GRFO	Grafenberg	80.30	357	eP	P	08 59 21.7	+2.0
GRFO				pmax	pmax		
	comp=Z,72nm,1.4s						
LANS	Liptovska Anna	80.30	351	eP	P	08 59 21.1	+1.4
LANS	Liptovska Anna	80.30	351	eP	P	08 59 21.1	+1.4
VRAC	Vranov	80.39	353	⇑iP	P	08 59 20.9	+0.7
VRAC	Vranov	80.39	353	P	P	08 59 20.9	+0.7
VRAC	Vranov	80.39	353	eP	P	08 59 21.5	+1.3
VRAC	Vranov	80.39	353	LR	LR	09 36 56.7	
	comp=Z,142nm,20.8s,baz=14,slow=37						
WLF	Walferdange	80.41	0	eP	P	08 59 21.7	+1.5
	comp=Z,196nm,1.2s						
WLF	Walferdange	80.41	0	eP	P	08 59 21.7	+1.5
WLF				pmax	pmax		
	comp=Z,196nm,1.2s						
WLF	Walferdange	80.41	0	⇑P	P	08 59 22.3	+2.1
MAK	Makhachkala	80.46	331	eP	P	08 59 16.8	-3.8
MAK				eS	S	09 09 20.6	-5.1
MAK				pmax	pmax		
	comp=Z,133nm,1.1s						
TREC	Trest	80.48	354	AMS	AMS	09 31 00.0	
	comp=Z,700nm,21.5s						
UZH	Uzhgorod	80.52	349	⇓iP	P	08 59 21.2	+0.4
UZH				e		08 59 31.7	
UZH				e		09 02 20.8	
UZH				eS	S	09 09 24.0	-2.1
UZH				e		09 10 21.6	
UZH				pmax	pmax		
	comp=Z,4.0nm,1.8s						
KRUC	Moravsky	80.65	353	eP	P	08 59 22.8	+1.3
RKT	Rikitea	80.66	144	eS	S	09 09 27.0	-0.9
	comp=Z,612nm,37.8s						
RKT	Rikitea	80.66	144	eLR	LR	09 24 28.8	
	comp=Z,852nm,31.0s,baz=331						
KHC	Kasperske Hory	80.76	355	eP	P	08 59 22.8	+0.6
	comp=Z,19nm,1.4s						
KHC				epP	pwP	08 59 34.0	+0.2
KHC	Kasperske Hory	80.76	355	eP	P	08 59 23.3	+1.1
KHC				epP	pwP	08 59 34.7	+0.9
KHC				eS	S	09 09 32.3	+3.5
KHC				AMS	AMS	09 30 20.0	
	comp=Z,600nm,23.2s						
KHC	Kasperske Hory	80.76	355	eP	P	08 59 22.8	+0.6
KHC				e*PP	pwP	08 59 34.0	+0.2
KHC				pmax	pmax		
	comp=Z,19nm,1.4s						
GROC	Groznyy	80.77	332	eP	P	08 59 21.6	-0.6
GROC				e		08 59 28.8	
GROC				pmax	pmax		
	comp=Z,48nm,1.2s						
KVAR	Kislovodsk Arr	80.97	334	LR	LR	09 38 50.6	
	comp=Z,191nm,21.0s,baz=260,slow=38						
KIV	Kislovodsk	80.97	334	⇓iP	P	08 59 25.0	+1.5
KIV	Kislovodsk	80.97	334	i P	P	08 59 25.0	+1.5
	SNR=5.7						
KIV	Kislovodsk	80.97	334	eP	P	08 59 24.7	+1.2
KIV				eS	S	09 09 33.8	+2.5
KIV				eSS	SS	09 14 48.5	+4.4
KIV				pmax	pmax		
	comp=Z,28nm,1.0s						
KIV				pmax	pmax		
	comp=Z,102nm,3.6s						
KIV				MLR	MLR		
	comp=Z,287nm,19.0s						
VYHS	Vyhne	81.01	352	eP	P	08 59 25.2	+1.7
VYHS				pmax	pmax		
	comp=Z,16nm,1.4s						
VYHS	Vyhne	81.01	352	eP	P	08 59 25.2	+1.7
GEC2	GERESS Array S	81.04	355	eP	P	08 59 25.0	+1.3
	comp=Z,47nm,1.7s						
GEC2	GERESS Array S	81.04	355	eP	P	08 59 25.0	+1.3
GEC2				pmax	pmax		
	comp=Z,47nm,1.7s						
GERES	GERESS Array B	81.04	355	P	P	08 59 24.3	+0.5
	comp=Z,4.0nm,0.8s,baz=19,slow=4.5,SNR=19						
GERES				LR	LR	09 37 10.3	
	comp=Z,111nm,19.6s,baz=12,slow=37						
GEA0	GERESS Array S	81.05	355	eP	P	08 59 24.5	+0.7
GEA0				epP	pwP	08 59 34.8	-0.6
GEYT	Alibeck	81.10	321	P	P	08 59 24.7	+0.5
	comp=Z,46nm,0.9s,baz=344,slow=4.8,SNR=44						
GEYT				LR	LR	09 40 12.8	
	comp=Z,390nm,19.4s,baz=35,slow=39						
GYA0B	ALIBECK ARRAY	81.10	321	eP	P	08 59 24.9	+0.7
	comp=Z,59nm,1.0s						
BUR08	Bucovina Ar. S	81.11	347	eP	P	08 59 25.0	+0.9
KBZ	Khabaz	81.12	334	P	P	08 59 25.9	+1.8
	comp=Z,8.9nm,0.9s,baz=331,slow=2.0,SNR=12						
KBZ				LR	LR	09 40 22.0	
	comp=Z,264nm,20.6s,baz=10.0,slow=39						
FLN	La Foliniere	81.13	5	eP	P	08 59 24.4	+0.3
FLN				pmax	pmax		
	comp=Z,55nm,1.2s						
BUR04	Bucovina Ar. S	81.13	347	eP	P	08 59 24.8	+0.5
BURAR	Bucovina Array	81.14	347	⇑iP	P	08 59 24.9	+0.6
BURAR	Bucovina Array	81.14	347	P	P	08 59 24.9	+0.6
KIS	Kishinev	81.18	345	eP	P	08 59 24.0	-0.4
	comp=Z,300nm,2.0s						
KIS				eS	S	09 09 30.0	-3.1
KIS				LRM	MLR	09 39 00.0	
	comp=Z,700nm,22.0s						
KIS	Kishinev	81.18	345	eP	P	08 59 24.0	-0.4
KIS				e		08 59 35.0	
KIS				e		09 02 32.0	
KIS				eS	S	09 09 30.0	-3.1
KIS				e		09 09 40.0	
KIS				pmax	pmax		
	comp=Z,300nm,2.0s						
KIS				MLR	MLR		
	comp=Z,700nm,22.0s						
JTS	JuntasAbangare	81.23	85	deP	P	08 59 26.3	+1.1
MODS	Modra-Piesok	81.27	353	eP	P	08 59 27.0	+2.1
MODS				pmax	pmax		
	comp=Z,51nm,1.5s						
MODS	Modra-Piesok	81.27	353	eP	P	08 59 27.0	+2.1
LDF	La Druitiere	81.32	4	eP	P	08 59 25.3	+0.2
LDF				pmax	pmax		
	comp=Z,37nm,1.0s						
PSZ	Piszkesteto	81.48	351	eP	P	08 59 27.9	+1.8
	comp=Z,36nm,1.2s						
PSZ	Piszkesteto	81.48	351	⇓iP	P	08 59 26.5	+0.4
PSZ	Piszkesteto	81.48	351	⇓eP	P	08 59 27.0	+0.9
PSZ				eS	S	09 09 39.1	+2.7
PSZ	Piszkesteto	81.48	351	eP	P	08 59 27.9	+1.8
PSZ				pmax	pmax		
	comp=Z,36nm,1.2s						
GRR	Gorron	81.48	5	eP	P	08 59 26.4	+0.4
GRR				pmax	pmax		
	comp=Z,41nm,1.0s						
SGMF	Saint Gilles	81.51	6	eP	P	08 59 27.7	+1.6
SGMF				pmax	pmax		
	comp=Z,51nm,1.2s						
ANN	Anapa	81.54	338	eP	P	08 59 26.2	-0.1
ANN				eS	S	09 09 38.4	+1.6
ANN				pmax	pmax		
	comp=Z,85nm,1.3s						
ANN				MLR	MLR		
	comp=N,817nm,18.0s						
ANN				MLR	MLR		
	comp=Z,373nm,18.0s						
CDF	Champ du Feu	81.66	359	eP	P	08 59 27.6	+0.6
CDF				pmax	pmax		
	comp=Z,36nm,1.2s						
BIZ	Bicaz	81.67	347	⇑iP	P	08 59 28.3	+1.3
ZEI	Tsey	81.71	333	eP	P	08 59 26.3	-1.2
ZEI				pmax	pmax		
	comp=Z,38nm,1.5s						
BFO	Black Forest	81.73	359	eP	P	08 59 28.8	+1.4
	comp=Z,29nm,1.3s						
BFO	Black Forest	81.73	359	eP	P	08 59 28.8	+1.4
BFO				pmax	pmax		
	comp=Z,29nm,1.3s						
ARCR	ARCALIA	81.78	348	⇑iP	P	08 59 28.6	+1.1
CONA	Conrad Observa	81.82	354	i P	P	08 59 29.2	+1.3
	comp=Z,15nm,0.9s,SNR=11						
ECH	Echery	81.86	360	eP	P	08 59 29.0	+1.0
	comp=Z,36nm,1.1s						
ECH	Echery	81.86	360	eP	P	08 59 29.0	+1.0
ECH				pmax	pmax		
	comp=Z,36nm,1.1s						
SKLT	Songkhla	81.91	271	P	P	08 59 29.9	+1.2
ZKTA	Zakatala	81.94	331	P	P	08 59 30.2	+1.7
CLF	Chambon-Foret	81.98	3	eP	P	08 59 30.0	+1.5
	comp=Z,59nm,1.0s						
TESR	Tescani	82.00	346	⇑iP	P	08 59 29.5	+0.7
TRTT	Trang	82.00	273	P	P	08 59 30.0	+0.8
SOP	Sopron	82.01	353	P	P	08 59 32.4	+3.6
HAU	Haudompre	82.07	0	eP	P	08 59 29.7	+0.6
HAU				pmax	pmax		
	comp=Z,34nm,1.2s						
SOC	Sochi	82.11	336	eP	P	08 59 29.7	+0.3
SOC				e		09 02 34.8	
SOC				ePPP	PPP	09 04 25.7	
SOC				eS	S	09 09 40.6	-2.3
SOC				eSS	SS	09 15 00.8	-0.1
SOC				eSSS	SSS	09 18 34.2	
SOC				pmax	pmax		
	comp=Z,28nm,0.8s						
SOC				MLR	MLR		
	comp=Z,313nm,15.0s						
SIM	Simferopol'	82.14	341	ceP	P	08 59 31.2	+1.7
SIM				eS	S	09 09 50.0	+6.9
SIM				pmax	pmax		
	comp=Z,49nm,7.3s						
SEKA	Sheki	82.14	330	P	P	08 59 30.2	+0.5
HINF	Hinteralfeld	82.26	360	eP	P	08 59 30.4	+0.3
DRGR		82.28	349	⇑iP	P	08 59 30.8	+0.5
DRGR		82.28	349	P	P	08 59 30.8	+0.5
TBLG	Delisi	82.43	332	eP	P	08 59 32.6	+1.5
	comp=Z,116nm,1.4s						
TBLG				epP	pwP	08 59 42.5	-0.3
TBLG	Delisi	82.43	332	eP	P	08 59 32.6	+1.5
TBLG				e*PP	pwP	08 59 42.5	-0.3
TBLG				pmax	pmax		
	comp=Z,116nm,1.4s						
ARSA	Arzberg	82.52	354	eP	P	08 59 32.7	+1.3
	comp=Z,9.5nm,0.9s,SNR=6.7						
RETA	Reutte	82.52	357	ePcP	P	08 59 33.6	+2.0
	comp=Z,18nm,1.2s						
OZUR		82.54	347	⇑iP	P	08 59 31.8	+0.2
MNGR	Mingechevir, A	82.58	330	P	P	08 59 33.1	+1.3
VRI	Vrincioaia	82.62	346	⇑iP	P	08 59 32.8	+0.8
WATA	Walderalm	82.64	357	ePcP	P	08 59 34.1	+1.9
	comp=Z,5.9nm,0.7s						
PLOR	Plostina	82.65	346	⇑iP	P	08 59 32.3	+0.1
MOTA	Moosalm	82.65	357	i PcP	P	08 59 34.0	+1.7
	comp=Z,11nm,0.8s,SNR=6.3						
DOPR	Dopca	82.72	347	⇑iP	P	08 59 34.1	+1.5
DAVA	Damuels	82.75	358	ePcP	P	08 59 35.0	+2.2
	comp=Z,10nm,0.9s						
SQTA	Sankt Quirin	82.77	357	ePcP	P	08 59 34.9	+2.0
	comp=Z,23nm,1.4s,SNR=5.3						
LOR	Lormes	82.78	2	P	P	08 59 33.1	+0.3
KBA	Koelnbreinsper	82.82	355	ePcP	P	08 59 34.8	+1.5
	comp=Z,37nm,0.9s,SNR=17						
KBA	Koelnbreinsper	82.82	355	P	P	08 59 34.9	+1.7
SIRR	Siria	82.92	349	⇑iP	P	08 59 35.1	+1.5
GANJ	Ganja	82.93	331	P	P	08 59 34.5	+0.7
TLCR		82.94	344	⇑iP	P	08 59 35.2	+1.6
SSF	Saint Saulge	82.98	2	P	P	08 59 34.4	+0.6
SSF				pmax	pmax		
	comp=Z,75nm,1.6s						
FETA	Feichten	82.99	357	ePcP	P	08 59 35.4	+1.3
	comp=Z,18nm,1.0s,SNR=5.6						
CFR	Carcaliu	83.06	345	⇑iP	P	08 59 35.2	+0.9
CFR	Carcaliu	83.06	345	P	P	08 59 35.2	+0.9
MLR	Muntele Rosu	83.11	346	eP	P	08 59 36.2	+1.6
	comp=Z,54nm,1.0s						
MLR	Muntele Rosu	83.11	346	⇑iP	P	08 59 36.3	+1.6
MLR	Muntele Rosu	83.11	346	LR	LR	09 41 36.8	
	comp=Z,644nm,19.6s,baz=17,slow=39						
SOKA	Soboth	83.12	354	eP	P	08 59 35.4	+0.8
	comp=Z,24nm,1.0s,SNR=13						
ABTA	Abfaltersbach	83.19	356	ePcP	P	08 59 36.8	+1.7
	comp=Z,11nm,1.0s						
AVF	Avril sur Loir	83.25	2	eP	P	08 59 35.7	+0.5
AVF				pmax	pmax		
	comp=Z,55nm,1.3s						
MYKA	Terra Mystica	83.25	355	ePcP	P	08 59 37.0	+1.7
	comp=Z,7.4nm,0.9s						
DAVOX	Davos/Dischmat	83.25	358	LR	LR	09 35 25.9	
	comp=Z,172nm,22.0s,baz=26,slow=35						
MORH	Mrgy, Hungar	83.29	352	⇓eP	P	08 59 36.0	+0.6
MORH				eS	PnS	09 10 39.0	-7.3
VOIR		83.29	347	⇓iP	P	08 59 36.5	+0.9
VOIR		83.29	347	P	P	08 59 36.5	+0.9
GROS	Grobnik	83.30	354	i P	P	08 59 36.5	+0.9
MFF	Saint Martin d	83.30	5	eP	P	08 59 36.1	+0.6
MFF				pmax	pmax		
	comp=Z,55nm,1.2s						
OBKA	Obir	83.32	354	eP	P	08 59 36.7	+1.0
	comp=Z,13nm,1.2s,SNR=5.9						
ISR	Istrita	83.38	346	⇑iP	P	08 59 37.8	+1.7
ISR	Istrita	83.38	346	P	P	08 59 37.7	+1.7
FUORN	Ofenpass-Fuorn	83.40	357	eP	P	08 59 38.4	+2.0
	comp=Z,69nm,1.6s						
SMF	Signal de Mont	83.41	2	eP	P	08 59 36.6	+0.5
SMF				pmax	pmax		
	comp=Z,94nm,1.3s						
ARR	Arges	83.42	347	⇓iP	P	08 59 37.6	+1.4

LOT	Lotru	83.46	348	⇑iP	P	08 59 36.8	+0.3
CABF	La Chapelle	83.47	0	eP	P	08 59 38.5	+2.0
CABF				pmax	pmax		
	comp=Z,91nm,1.4s						
BGF	Bois d'Agland	83.47	3	eP	P	08 59 36.9	+0.5
BGF				pmax	pmax		
	comp=Z,55nm,1.3s						
MTUR	Matau	83.50	347	⇓iP	P	08 59 38.1	+1.4
SECR		83.53	346	⇑iP	P	08 59 37.3	+0.6
BZS	Buzias	83.57	349	⇓iP	P	08 59 37.3	+0.4
BZS	Buzias	83.57	349	P	P	08 59 37.3	+0.4
HARR	Harsova	83.57	345	⇑iP	P	08 59 37.1	+0.2
HARR	Harsova	83.57	345	P	P	08 59 37.1	+0.2
TUE	Stuetta	83.57	358	eP	P	08 59 39.5	+2.3
	comp=Z,90nm,1.6s						
GZR	Gura Zlata	83.64	349	⇑iP	P	08 59 38.0	+0.6
GZR	Gura Zlata	83.64	349	P	P	08 59 37.9	+0.6
CADS	Cadrg	83.65	355	i P	P	08 59 37.6	+0.3
TLB	Topalu	83.65	345	⇑iP	P	08 59 38.1	+0.8
TLB	Topalu	83.65	345	P	P	08 59 38.1	+0.8
WRAB	Tennant Creek	83.69	228	⇓iP	P	08 59 36.5	-1.2
WRAB				pmax	pmax		
	comp=Z,17nm,1.3s						
WB2	Warramunga Arr	83.69	228	eP	P	08 59 35.9	-1.8
WR1	Warramunga Arr	83.70	228	eP	P	08 59 36.2	-1.5
	comp=Z,15nm,1.2s						
WRA	Warramunga Arr	83.70	228	P	P	08 59 36.2	-1.6
	comp=Z,6.0nm,1.0s,baz=37,slow=5.9,SNR=26						
SENIN	Lac Senin/Sane	83.71	359	eP	P	08 59 40.0	+2.0
	comp=Z,12nm,1.1s						
TIRR	Tirgusor	83.71	344	eP	P	08 59 37.9	+0.3
	comp=Z,50nm,1.1s						
TIRR				epP	pwP	08 59 48.1	-1.2
TIRR	Tirgusor	83.71	344	⇑iP	P	08 59 38.2	+0.6
TIRR	Tirgusor	83.71	344	P	P	08 59 38.2	+0.6
TCF	Toulx Ste Croi	83.72	3	eP	P	08 59 38.1	+0.4
TCF				pmax	pmax		
	comp=Z,35nm,1.2s						
GNI	Garni	83.88	332	eP	P	08 59 41.7	+2.9
	comp=Z,95nm,1.5s						
GNI	Garni	83.88	332	i P	P	08 59 41.2	+2.4
	SNR=5.8						
GNI	Garni	83.88	332	d iP	P	08 59 40.0	+1.2
GNI				pmax	pmax		
	comp=Z,101nm,1.4s						
GNI	Garni	83.88	332	P	P	08 59 40.6	+1.8
	SNR=6.0						
GNI				P	P	08 59 40.6	+1.8
	SNR=6.0						
GNI	Garni	83.88	332	LR	LR	09 42 29.6	
	comp=Z,161nm,20.6s,baz=40,slow=40						
LKRN	Lenkeran, Azer	83.88	328	P	P	08 59 39.7	+1.1
HERR	Herculane	84.19	349	⇑iP	P	08 59 40.5	+0.4
BOJS	Bojanci	84.27	354	eP	P	08 59 40.7	+0.2
MDVR	Moldovita	84.38	349	⇑iP	P	08 59 41.7	+0.6
NAX	Nakhchivan	84.53	331	P	P	08 59 43.2	+1.2
LPL	La Plagne	84.56	360	eP	P	08 59 43.7	+1.5
LPL				pmax	pmax		
	comp=Z,35nm,1.2s						
LPG	La Plagne	84.58	360	eP	P	08 59 44.0	+1.6
LPG				pmax	pmax		
	comp=Z,84nm,1.4s						
RJF	Les Rejaudoux	84.67	4	eP	P	08 59 42.7	+0.2
RJF				pmax	pmax		
	comp=Z,49nm,1.4s						
SSB	Saint Sauveur	84.78	1	eP	P	08 59 44.0	+0.9
	comp=Z,37nm,1.1s						
SSB	Saint Sauveur	84.78	1	eP	P	08 59 44.0	+0.9
SSB				pmax	pmax		
	comp=Z,37nm,1.1s						
BLY	Banja Luka	84.88	352	eP	P	08 59 45.8	+2.2
	comp=Z,15nm,1.0s						
LFF	La Frestale	85.00	4	eP	P	08 59 44.6	+0.4
LFF				pmax	pmax		
	comp=Z,32nm,1.0s						
BNI	Bardonecchia	85.03	360	eP	P	08 59 46.1	+1.6
	comp=Z,99nm,1.0s						
BNI	Bardonecchia	85.03	360	eP	P	08 59 46.1	+1.6
BNI				pmax	pmax		
	comp=Z,99nm,1.0s						
CAF	Calviac	85.07	3	eP	P	08 59 45.2	+0.6
CAF				pmax	pmax		
	comp=Z,42nm,1.3s						
ORIF	Oris-en-Rattie	85.16	0	eP	P	08 59 47.1	+2.0
ORIF				pmax	pmax		
	comp=Z,40nm,1.2s						
VIVF	Saint-Julien-l	85.21	1	eP	P	08 59 46.0	+0.7
VIVF				pmax	pmax		
	comp=Z,26nm,1.2s						
DIVS	Divibare	85.25	350	eP	P	08 59 46.1	+0.6
	comp=Z,51nm,1.3s						
SZH	Strazhica	85.28	346	P	P	08 59 53.6	+8.0
BCIP	Isla Barro Col	85.34	81	eP	P	08 59 47.3	+1.0
	comp=Z,150nm,1.3s						
MBDF	Montbardon	85.35	360	eP	P	08 59 47.3	+1.2
MBDF				pmax	pmax		
	comp=Z,28nm,1.0s						
ILGA	Ilgaz	85.95	340	eP	P	08 59 51.6	+2.4
	comp=Z,53nm,1.2s						
SBF	Sospel	86.21	359	eP	P	08 59 52.2	+1.9
SBF				pmax	pmax		
	comp=Z,131nm,0.7s						
PGB	Panagyurishte	86.25	347	P	P	08 59 50.2	-0.3
VTS	Vitosha	86.31	348	eP	P	08 59 51.4	+0.5
	comp=Z,21nm,0.9s						
VTS	Vitosha	86.31	348	⇑iP	P	08 59 51.5	+0.5
VTS	Vitosha	86.31	348	P	P	08 59 51.5	+0.5
VTS	Vitosha	86.31	348	P	P	08 59 50.7	-0.2
PSI	Prapat	86.32	270	eP	P	08 59 51.0	-0.3
	comp=Z,35nm,1.2s						
PSI	Prapat	86.32	270	eP	P	08 59 51.0	-0.3
PSI				pmax	pmax		
	comp=Z,35nm,1.2s						
FITZ	Fitzroy Crossi	86.56	236	eP	P	08 59 51.7	-0.4
	comp=Z,29nm,0.9s						
PLD	Plovdiv	86.61	347	P	P	08 59 55.9	+3.7
MTLF	Montolieu	86.66	3	eP	P	08 59 53.3	+0.8
MTLF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SJPF	Ste Jean	86.72	6	eP	P	08 59 53.0	+0.2
SJPF				pmax	pmax		
	comp=Z,13nm,1.1s						
ETSF	Etsaut	86.97	5	eP	P	08 59 54.1	0.0
ETSF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PDG	Podgorica	86.98	351	⇓iP	P	08 59 54.2	+0.2
TTG	Podgorica	86.98	351	eP	P	08 59 54.0	0.0
	comp=Z,54nm,0.9s						
TTG				epP	pwP	09 00 04.4	-1.3
RZN	Rozhen	87.01	346	P	P	08 59 55.8	+1.4
AS01	Alice Springs	87.07	227	eP	P	08 59 53.0	-1.5
KKB	Krupnik	87.07	348	P	P	08 59 55.3	+0.8
AS31	Alice Springs	87.09	227	eP	P	08 59 54.5	-0.2
	comp=Z,2.6nm,1.0s						
ASAR	Alice Springs	87.09	227	P	P	08 59 53.6	-1.1
	comp=Z,8.5nm,1.0s,baz=36,slow=4.6,SNR=38						
BR101	Keskin Array S	87.23	339	eP	P	08 59 55.5	0.0
BR131	Keskin Array S	87.23	339	eP	P	08 59 55.6	+0.1
BRTR	Keskin Array B	87.23	339	i P	P	08 59 55.9	+0.4
BRTR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRTR	Keskin Array B	87.23	339	P	P	08 59 55.5	0.0
	comp=Z,8.6nm,1.0s,baz=29,slow=2.9,SNR=19						
BRTR				LR	LR	09 41 37.8	
	comp=Z,105nm,21.7s,baz=34,slow=38						
MMB	Musomiste	87.25	347	P	P	08 59 56.6	+1.2
STIP	Stip	87.36	348	i P	P	08 59 56.5	+0.6
PBRG	Braganca	87.54	10	eP	P	08 59 57.4	+0.6
VAY	Valandovo	87.68	348	i P	P	08 59 59.1	+1.8
HYB	Hyderabad	87.74	295	i P	P	08 59 57.0	-1.1
KRUS	Krusevo	87.80	349	i P	P	08 59 59.0	+0.9
POLO	Lamas de Olo	87.84	11	eP	P	08 59 58.9	+0.6
MVO	Moncorvo	88.14	10	eP	P	09 00 00.3	+0.6
	comp=Z,38nm,1.7s						
GSI	Gunungsitoli	88.33	270	eP	P	09 00 01.3	+0.5
	comp=Z,84nm,1.5s						
GSI	Gunungsitoli	88.33	270	P	P	09 00 01.1	+0.2
FNA	Florina	88.36	349	eP	P	09 00 01.1	+0.3
	comp=Z,15nm,0.9s						
FNA	Florina	88.36	349	eP	P	09 00 01.1	+0.3
FNA				pmax	pmax		
	comp=Z,15nm,0.9s						
LIT	Litokhoron	88.89	348	eP	P	09 00 03.8	+0.6
	comp=Z,16nm,1.0s						
LIT	Litokhoron	88.89	348	eP	P	09 00 03.8	+0.6
LIT				pmax	pmax		
	comp=Z,16nm,1.0s						
HIZ	Hauiti	89.03	189	eP	P	09 00 03.8	+0.3
	comp=Z,83nm,1.1s						
BKZ	Black Stump Fm	89.53	188	eP	P	09 00 04.6	-1.3
	comp=Z,40nm,0.3s						
POO	Poona	89.55	299	ex	P	09 00 02.0	-4.6
IGT	Igoumenitsa	89.72	349	P	P	09 00 07.7	+0.6
ES19	SONSECA Array	89.91	8	eP	P	09 00 07.9	-0.1
ESDC	Sonseca Array	89.93	8	P	P	09 00 08.3	+0.2
	comp=Z,6.2nm,0.8s,baz=351,slow=4.7,SNR=24						
ESDC				LR	LR	09 38 27.5	
	comp=Z,144nm,21.9s,baz=245,slow=34						
ESLA	Sonseca Array	89.93	8	eP	P	09 00 08.9	+0.8
	comp=Z,15nm,1.1s						
STKA	Stephens Creek	90.97	217	eP	P	09 00 13.1	+0.4
	comp=Z,3.3nm,1.0s						
STKA	Stephens Creek	90.97	217	eP	P	09 00 13.1	+0.4
STKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
STKA	Stephens Creek	90.97	217	P	P	09 00 12.3	-0.4
	comp=Z,8.7nm,0.9s,baz=354,slow=11,SNR=8.9						
STKA				LR	LR	09 35 45.4	
	comp=Z,520nm,21.6s,baz=24,slow=32						
SDV	Santo Domingo	91.33	75	eP	P	09 00 15.6	+0.4
	comp=Z,33nm,0.9s						
SDV	Santo Domingo	91.33	75	eP	P	09 00 15.6	+0.4
SNZO	South Karori	91.82	189	eP	P	09 00 17.7	+1.4
MBWA	Marble Bar	92.26	239	eP	P	09 00 19.2	+0.3
	comp=Z,41nm,1.1s						
MBWA	Marble Bar	92.26	239	eP	P	09 00 19.2	+0.3
OTAV	Otavalo	93.04	86	eP	P	09 00 24.0	+0.6
	comp=Z,8.2nm,1.3s						
OTAV	Otavalo	93.04	86	eP	P	09 00 24.0	+0.6
OTAV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
OTAV	Otavalo	93.04	86	eP	P	09 00 23.8	+0.4
PALK	Pallekele	94.41	287	P	P	09 00 29.6	+0.4
PALK	Pallekele	94.41	287	i P	P	09 00 30.7	+1.5
RAYN	Ar Rayn	98.80	324	eP	P	09 00 48.9	-0.1
	comp=Z,23nm,1.4s						
RAYN	Ar Rayn	98.80	324	i Pdiff	P	09 00 48.6	-0.4
	SNR=9.1						
RAYN	Ar Rayn	98.80	324	eP	P	09 00 48.9	-0.1
RAYN				pmax	pmax		
	comp=Z,23nm,1.4s						
TOA1	Torodi Ar. Sit	116.68	5	ePKPdf	PKPdf	09 05 52.0	-1.4
TOA0	Torodi Ar. Sit	116.68	5	ePKPdf	PKPdf	09 05 51.8	-1.6
TORD	Torodi Ar. Bea	116.68	5	PKP	PKPdf	09 05 52.0	-1.5
	comp=Z,2.4nm,0.9s,baz=346,slow=1.9,SNR=10						
DBIC	Dimbokro	122.41	13	ePKPdf	PKPdf	09 06 03.9	-0.6
DBIC	Dimbokro	122.41	13	ePKIKP	PKPdf	09 06 03.9	-0.6
DBIC	Dimbokro	122.41	13	PKP	PKPdf	09 06 03.0	-1.5
	comp=Z,5.8nm,0.8s,baz=307,slow=2.6,SNR=7.6						
DBIC	Dimbokro	122.41	13	eP	PKPdf	09 06 04.2	-0.3
TIC	Toumodi	122.41	14	ePKIKP	PKPdf	09 06 03.8	-0.7
KIC	Kosan Boka	122.73	13	ePKIKP	PKPdf	09 06 03.6	-1.5
	comp=Z,17nm,1.0s						
LIC	Lamto	122.82	14	ePKIKP	PKPdf	09 06 03.8	-1.5
	comp=Z,25nm,0.9s						
AQDB	Aquidauana	123.17	82	eP	PKPdf	09 06 04.9	-0.7
BDFB	Brasilia	124.34	72	PKP	PKPdf	09 06 07.1	-1.1
	comp=Z,4.4nm,0.9s,baz=207,slow=2.0,SNR=4.5						
ITRB	Iturama	125.97	77	eP	PKPdf	09 06 10.0	-1.1
IPMB	Ipameri, GO	126.01	74	eP	PKPdf	09 06 08.8	-2.4
JANB	Januaria	126.11	68	eP	PKPdf	09 06 10.0	-1.5
GO06	Curarrehue	126.17	111	ePKPdf	PKPdf	09 06 10.8	-0.2
CPUP	Villa Florida	126.31	89	PKP	PKPdf	09 06 10.1	-1.4
	comp=Z,3.4nm,0.9s,baz=7.3,slow=4.5,SNR=6.3						
CPUP	Villa Florida	126.31	89	eP	PKPdf	09 06 10.3	-1.2
TRCB	Terra Rica	126.80	82	eP	PKPdf	09 06 12.3	-0.3
NBCP	Cabaceiras do	127.12	61	eP	PKPdf	09 06 12.3	-1.1
PLCA	Paso Flores	127.43	111	ePKPdf	PKiKP	09 06 13.7	-0.1
PLCA	Paso Flores	127.43	111	ePKIKP	PKiKP	09 06 13.7	-0.1
PLCA	Paso Flores	127.43	111	eP	PKiKP	09 06 13.8	-0.1
MCI8	Montes Claros	127.60	69	eP	PKPdf	09 06 14.0	-0.3
MCI9	Montes Claros	127.64	69	eP	PKPdf	09 06 14.0	-0.3
MCI6	Montes Claros	127.73	69	eP	PKPdf	09 06 13.6	-0.9
MCI7	Montes Claros	127.75	69	eP	PKPdf	09 06 14.6	0.0
BB19B	Bebedouro	128.12	77	eP	PKiKP	09 06 16.1	+0.3
PTGB	Pitanga	128.54	83	eP	PKPdf	09 06 15.3	-0.6
FRTB	Fartura	129.14	80	eP	PKPdf	09 06 17.2	+0.2
RCLB	Rio Claro- Sao	129.74	77	eP	PKiKP	09 06 19.0	0.0
ITAB	Concordia	130.27	85	eP	PKiKP	09 06 20.3	+0.5
BSCB	Bom Sucesso	130.40	73	eP	PKPdf	09 06 19.4	-0.2
SJMB	Sao Joao De Ma	130.81	68	eP	PKPdf	09 06 20.0	-0.3
TIJ01	Guaruva-PR	130.91	81	eP	PKiKP	09 06 22.2	+0.9
BSFB	Barra de Sao F	131.12	68	eP	PKPdf	09 06 20.7	-0.2
CPSB	Cacapava Do Su	131.59	89	eP	PKiKP	09 06 22.1	-0.3
VAS01	Vassouras-RJ	132.17	73	eP	PKiKP	09 06 24.0	+0.1
PLTB	Pedras Altas	132.38	91	eP	PKPdf	09 06 23.4	+0.4
CNLB	Canela	132.51	86	eP	PKiKP	09 06 24.6	+0.3
QSPA	South Pole Qui	140.06	180	ePKPpre	PKPpre	09 06 28.3	
MAW	Mawson	147.66	217	PKPbc	PKPbc	09 06 52.3	+0.2
	comp=Z,53nm,1.0s,baz=40,slow=6.7,SNR=5.0						
TSUM	Tsumeb	147.74	340	ePKPbc	PKPbc	09 06 53.8	-0.1
LBTB	Lobatse	150.75	323	ePKPbc	PKPbc	09 07 01.1	-0.2
LBTB				ePKPab	PKPab	09 07 09.6	+1.2
LBTB	Lobatse	150.75	323	ePKIKP	PKPbc	09 07 01.1	-0.2
LBTB				e		09 07 09.6	
BOSA	Boshof	154.09	320	PKPbc	PKPbc	09 07 07.6	-1.1
	comp=Z,4.9nm,1.0s,baz=24,slow=2.8,SNR=3.0						
BOSA	Boshof	154.09	320	eP	PKPdf	09 07 02.6	+2.0
SNAA	Sanae	158.14	172	PKPab	PKPab	09 07 37.9	-0.5
SNAA	Sanae	158.14	172	ePKPab	PKPab	09 07 38.0	-0.5
SNAA	Sanae	158.14	172	ePKP2	PKPab	09 07 38.0	-0.5
VNA2	Neumayer--Watz	158.33	168	PKPab	PKPab	09 07 38.6	-0.6
	baz=214,slow=4.5						
VNA1	Neumayer--Stat	158.45	167	PKPab	PKPab	09 07 38.7	-1.0

IDC ***20*** *09:13:41.4±1.2, 3°.75S×99°.02E, h0^{km}, mb3.9/11, mb1 4.0/12, mb1mx3.8/59, mbtmp3.9/12, ML3.2/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/41, Error ellipse: s-maj=39.2km s-min=18.7km az=52.0*

NEIC ***20*** *09:13:42.9±0.5, 3°.75S×99°.06E, h10^{km}, mb4.6/3, Error ellipse: s-maj=12.3km s-min=6.1km az=45.0*

ISCJB ***20*** *09:13:45.7±0.5, 3°.42S±0°.04×99°.32E±0°.04, h33^{km}, mb4.1/16, MS3.2/2, Error ellipse: s-maj=6.5km s-min=4.7km az=151.8*

DJA ***20*** *09:13:47.8±0.5, 3°S±3°×9°9E±°, h47^{km}±13^{km}, M4.1/13, mb4.0/2, mB5.4/1, MLv4.2/13, Mw(mB)4.8/1*

ISC 20 09:13:47.5±0.8**, 3°.52S**±0°.07×**99°.27E**±0°.06**, h35**^{km}**, n47,** σ**2^{s}41**/56**, mb4.1**/16**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	1.05	44	P	Pn	09 14 03.4	-2.4
PPSI				S	Sn	09 14 15.5	-3.8
SISI	Saibi	2.19	355	P	Pn	09 14 19.3	-2.2
SISI				S	Sn	09 14 45.8	-1.5
KRJI	Kerinci	2.61	57	P	Pn	09 14 25.4	-1.9
KRJI				S	Sn	09 14 55.2	-2.7
PDSI	Padang	2.85	25	P	Pn	09 14 28.0	-2.6
PDSI				S	Sn	09 14 59.2	-4.6
MASI	Maura Aman, Be	2.99	83	P	Pn	09 14 35.9	+3.4
PPI	Padang Panjang	3.25	20	P	Pn	09 14 33.8	-2.2
PPI				S	Sn	09 15 09.4	-4.0
SDSI	Sungai Dareh	3.35	40	P	Pn	09 14 35.6	-1.9
PBSI	Pulau Batu	3.58	344	P	Pn	09 14 38.4	-2.3
PBSI				S	Sn	09 15 18.7	-3.1
MNAI	Manna	3.77	103	ePn	Pn	09 14 44.2	+0.9
MNAI	Manna	3.77	103	P	Pn	09 14 42.2	-1.0
MNAI				S	Sn	09 15 21.7	-4.7
BKNI	Bangkinang	4.21	25	ePn	Pn	09 14 50.7	+1.4
BKNI				eSn	Sn	09 15 43.7	+6.4
MNSI	Mandailing Nat	4.30	4	P	Pn	09 14 49.0	-1.5
MNSI				S	Sn	09 15 36.2	-3.3
MDSI	Maura Dua	4.99	101	P	Pn	09 14 57.9	-2.1
MDSI				S	Sn	09 15 52.3	-4.2
GSI	Gunungsitoli	5.08	340	ePn	Pn	09 14 57.3	-4.0
GSI				eSn	Sn	09 15 55.3	-3.6
GSI	Gunungsitoli	5.08	340	P	Pn	09 15 01.6	+0.3
PSI	Prapat	6.29	357	ePn	Pn	09 15 16.5	-1.5
PSI	Prapat	6.29	357	Pn	Pn	09 15 19.1	+1.1
	0.5nm,0.3s,baz=179,slow=7.6,SNR=2.9						
KCSI	Kotacane, Aceh	7.16	348	P	Pn	09 15 28.7	-1.1
CISI	Cisompet, Garu	9.40	116	ePn	Pn	09 15 58.8	-1.9
KSM	Kuching	12.10	66	ePn	Pn	09 16 40.8	+3.3
JAGI	Jajag, Banyuwa	15.59	109	ePn	Pn	09 17 25.2	+0.4
	59nm,0.8s						
PALK	Pallekele	21.41	300	LR	LR	09 25 54.9	
	comp=Z,50nm,20.0s,baz=118,slow=34						
CM01	Chiang Mai Arr	21.81	359	eP	P	09 18 37.6	+0.8
CM31	Chiang Mai Arr	21.84	359	eP	P	09 18 38.4	+1.2
	12nm,1.0s						
CMAR	Chiang Mai Arr	21.84	359	P	P	09 18 37.4	+0.2
	5.2nm,0.7s,baz=188,slow=9.9,SNR=23						
BRDH	Bariadhala	27.08	344	LR	LR	09 32 37.3	
	comp=Z,134nm,18.8s,baz=55,slow=42						
SSLB	Suanglung	34.39	37	eP	P	09 20 33.0	+1.3
	65nm,1.5s						
WR1	Warramunga Arr	37.88	118	eP	P	09 21 01.0	-0.6
	20nm,1.8s						
WRA	Warramunga Arr	37.88	118	P	P	09 21 01.0	-0.6
	0.5nm,0.6s,baz=298,slow=8.8,SNR=7.6						
ASAR	Alice Springs	38.98	124	P	P	09 21 10.6	-0.2
	0.6nm,0.8s,baz=297,slow=8.1,SNR=5.6						
AS31	Alice Springs	38.98	124	eP	P	09 21 09.9	-0.9
	1.0nm,1.0s						
KS15	Wonju Array Si	48.66	31	eP	P	09 22 31.5	+3.2
	75nm,1.9s						
KSAR	Wonju Array Be	48.66	31	P	P	09 22 31.5	+3.2
KSRS	Korea Array	48.69	31	P	P	09 22 31.5	+3.0
	1.3nm,0.8s,baz=210,slow=7.0,SNR=4.2						
SONA0	Songino Array	51.52	6	eP	P	09 22 51.0	+1.0
SONM	Songino Array	51.52	6	P	P	09 22 51.0	+1.0
	0.6nm,0.7s,baz=191,slow=12,SNR=4.0						
MK32	Makanchi Array	52.30	345	eP	P	09 22 56.2	+0.5
MKAR	Makanchi Array	52.30	345	P	P	09 22 56.2	+0.5
	1.2nm,0.5s,baz=148,slow=8.5,SNR=7.3						
USRK	Ussuriysk Ar.	55.83	28	P	P	09 23 21.2	-0.2
	0.8nm,0.6s,baz=210,slow=8.1,SNR=3.1						
ZALV	Zalesovo Beam	58.53	350	eP	P	09 23 40.4	+0.2
ZALV	Zalesovo Beam	58.53	350	P	P	09 23 40.0	-0.2
	4.2nm,0.7s,baz=177,slow=6.7,SNR=4.2						
ZAA1	Zalesovo Array	58.53	350	eP	P	09 23 40.0	-0.3
BVAR	Borovoye Array	61.36	341	P	P	09 23 59.7	-0.1
	0.9nm,0.5s,baz=124,slow=7.7,SNR=2.9						
KBZ	Khabaz	68.98	320	P	P	09 24 49.2	-0.2
	2.7nm,0.8s,baz=125,slow=4.9,SNR=5.0						
BR101	Keskin Array S	73.81	313	eP	P	09 25 17.9	-1.0
BRTR	Keskin Array B	73.81	313	P	P	09 25 17.9	-1.0
	0.8nm,0.6s,baz=112,slow=5.5,SNR=4.1						
TXAR	Lajitas Array	146.34	38	PKPbc	PKPab	09 33 26.0	-0.3
	0.9nm,0.8s,baz=329,slow=1.1,SNR=7.6						

NIED ***20*** *09:14:00, 44°.30N×146°.90E, h150^{km}, Mw4.3   Best double couple: M$_0$2.87000×10^{15} NP1:φ$_s$222.00000°, δ21.00000°, λ81.00000°.   NP2:φ$_s$51.00000°, δ70.00000°, λ93.00000°.*

MOS ***20*** *09:14:20.7±1.0, 44°.50N×146°.81E, h146^{km}, mb4.6/50, Error ellipse: s-maj=7.7km s-min=4.6km az=104.8*

ISCJB ***20*** *09:14:21.3±0.2, 44°.49N±0°.03×146°.78E±0°.03, h149^{km}±2^{km}, mb4.5/167, Error ellipse: s-maj=5.5km s-min=3.4km az=158.5*

IDC ***20*** *09:14:21.7±0.6, 44°.56N×146°.81E, h145^{km}±6^{km}, mb4.2/29, mb1 4.3/35, mb1mx4.2/56, mbtmp4.6/35, Error ellipse: s-maj=12.1km s-min=8.7km az=163.0*

JMA ***20*** *09:14:22.6±0.3, 44°.27N×146°.85E, h147^{km}±3^{km}, M4.1*

JMA Felt I J1.

SKHL ***20*** *09:14:22.3±0.6, 44°.38N×146°.82E, h144^{km}±5^{km}, mb4.7/8, msh5.5/5*

NEIC ***20*** *09:14:22.7±0.6, 44°.62N×146°.68E, h145^{km}±5^{km}, mb4.5/80, Error ellipse: s-maj=7.4km s-min=3.6km az=164.0*

NEIC Recorded [1 JMA] in eastern Hokkaido.

ISC 20 09:14:22.1±0.5**, 44°.48N**±0°.04×**146°.86E**±0°.04**, h148**^{km}±4^{km}**, h148**^{km}**:pP-P, n415,** σ**1^{s}23**/450**, mb4.5**/177**, 31C-22D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.61	182	i P	Pn	09 14 42.7	-1.1
SHO				AMB	AMB	09 14 43.0	
	180nm,0.2s						
SHO				AMB	AMB	09 14 43.0	
	160nm,0.2s						
SHO				AMB	AMB	09 14 43.0	
	300nm,0.2s						
SHO				i S	Sn	09 14 57.7	-2.5
SHO				A	A	09 14 58.8	
	720nm,0.3s						
SHO				A	A	09 14 58.8	
	890nm,0.3s						
SHO	Shikotan	0.61	182	c iPN	Pn	09 14 42.7	-1.1
SHO				i S	Sn	09 14 57.8	-2.5
SHO				pmax	pmax		
	comp=N,2μm,0.2s						
SHO				pmax	pmax		
	comp=E,2μm,0.2s						
SHO				pmax	pmax		
	comp=Z,3μm,0.2s						
SHO				smax	smax		
	comp=E,7μm,0.2s						
SHO				smax	smax		
	comp=N,10μm,0.4s						
YUK	Yuzh-Kuril'sk	0.84	238	i P	Pn	09 14 45.0	-0.4
YUK				AMB	AMB	09 14 46.0	
	comp=N,350nm,0.2s						
YUK				AMB	AMB	09 14 46.0	
	comp=N,280nm,0.2s						
YUK				AMB	AMB	09 14 46.0	
	comp=N,360nm,0.2s						
YUK				i S	Sn	09 15 02.2	-0.8
YUK				A	A	09 15 03.7	
	comp=N,710nm,0.4s						
YUK				A	A	09 15 03.7	
	comp=N,2μm,0.4s						
YUK	Yuzh-Kuril'sk	0.84	238	c iPN	Pn	09 14 45.0	-0.4
YUK				i S	Sn	09 15 02.3	-0.8
YUK				pmax	pmax		
	comp=Z,3μm,0.2s						
YUK				pmax	pmax		
	comp=N,348nm,0.1s						
YUK				pmax	pmax		
	comp=E,275nm,0.1s						
YUK				smax	smax		
	comp=N,4μm,0.4s						
YUK				smax	smax		
	comp=E,17μm,0.4s						
LAGR	Lagunnoye	0.88	241	i P	Pn	09 14 45.0	-0.6
LAGR				AMB	AMB	09 14 48.9	
	comp=E,70nm,0.3s						
LAGR				AMB	AMB	09 14 48.9	
	comp=E,130nm,0.3s						
LAGR				AMB	AMB	09 14 48.9	
	comp=E,220nm,0.3s						
LAGR				i S	Sn	09 15 04.2	+0.6
LAGR				A	A	09 15 07.0	
	comp=E,1μm,0.5s						
LAGR				A	A	09 15 07.0	
	comp=E,720nm,0.5s						
LAGR	Lagunnoye	0.88	241	c iPN	Pn	09 14 45.3	-0.3
LAGR				i S	Sn	09 15 04.2	+0.6
LAGR				pmax	pmax		
	comp=E,1μm,0.3s						
LAGR				pmax	pmax		
	comp=Z,1μm,0.3s						
LAGR				pmax	pmax		
	comp=N,732nm,0.4s						
LAGR				smax	smax		
	comp=E,7μm,0.3s						
LAGR				smax	smax		
	comp=N,12μm,0.5s						
GRPR	Tuman	0.92	238	i P	Pn	09 14 45.8	-0.2
GRPR				AMB	AMB	09 14 46.0	
	comp=N,100nm,0.3s						
GRPR				AMB	AMB	09 14 46.0	
	comp=N,260nm,0.3s						
GRPR				i S	Sn	09 15 03.0	-1.2
GRPR				A	A	09 15 04.0	
	comp=N,970nm,0.4s						
GRPR				A	A	09 15 04.0	
	comp=N,1μm,0.4s						
GRPR	Tuman	0.92	238	⇑iPN	Pn	09 14 45.6	-0.4
GRPR				i S	Sn	09 15 03.9	-0.3
GRPR				pmax	pmax		
	comp=Z,3μm,0.3s						
GRPR				pmax	pmax		
	comp=N,1μm,0.2s						
GRPR				pmax	pmax		
	comp=E,1μm,0.2s						
GRPR				smax	smax		
	comp=E,13μm,0.4s						
GRPR				smax	smax		

```
       comp=N,966nm,0.2s
KUR    Kuril'sk           1.04  43  i P    Pn     09 14 47.6 +0.6
KUR                                   AMB  AMB    09 14 48.0
       comp=N,60nm,0.5s
KUR                                   AMB  AMB    09 14 48.0
       comp=N,40nm,0.5s
KUR                                   AMB  AMB    09 14 48.0
       comp=N,380nm,0.5s
KUR                                 i S    Sn     09 15 06.4 +0.4
KUR                                   A    A      09 15 07.2
       comp=N,1µm,0.5s
KUR                                   A    A      09 15 07.2
       comp=N,660nm,0.5s
KUR    Kuril'sk           1.04  43c iPN    Pn     09 14 47.5 +0.6
KUR                                 i S    Sn     09 15 06.6 +0.6
KUR                                   pmax pmax
       comp=Z,388nm,0.5s
KUR                                   pmax pmax
       comp=N,87nm,0.1s
KUR                                   pmax pmax
       comp=E,143nm,0.4s
KUR                                   smax smax
       comp=N,1µm,0.4s
KUR                                   smax smax
       comp=E,661nm,0.4s
KUR                                   smax smax
       comp=N,3µm,1.5s
KUR                                   smax smax
       comp=E,2µm,1.5s
JRA    Rausu              1.36 247    P    Pn     09 14 49.8 -0.2
JRA                                 eS     Sn     09 15 10.5 -0.8
NEM2   Nemuro 2           1.38 216    P    Pn     09 14 48.9 -1.3
NEM2                                eS     Sn     09 15 08.3 -3.3
JNK    Nakash             1.78 241    P    Pn     09 14 54.2 -0.4
JKHN   Kushirohamanak     1.86 222    P    Pn     09 14 54.4 -1.0
JKHN                                eS     Sn     09 15 18.4 -2.6
JAK    Akkeshi            2.16 227    P    Pn     09 14 57.9 -1.0
JAK                                 eS     Sn     09 15 24.4 -2.8
JTKR   Abashiri--Toko     2.18 258    P    Pn     09 14 59.0 -0.2
JTKR                                eS     Sn     09 15 26.8 -0.9
JAR    Ashorobuto         2.53 243    P    Pn     09 15 03.6 +0.2
JMP    Maruseppu          2.56 261    P    Pn     09 15 03.7 -0.1
JOB    Onbets             2.70 235    P    Pn     09 15 05.3 -0.2
JOB                                 eS     Sn     09 15 36.9 -2.2
HRK    Horoka             2.88 251  eP     Pn     09 15 08.1 +0.3
JKK2   Kamakawa 2         3.02 260    P    Pn     09 15 10.0 +0.4
ASAJ   Asahikawa          3.08 265    P    Pn     09 15 11.0 +0.7
ASAJ   Asahikawa          3.08 265    P    Pn     09 15 10.9 +0.5
       comp=E,58nm,0.3s,baz=80,slow=18,SNR=354
ASAJ                                  S    Sn     09 15 49.1 +1.4
       comp=E,2.2nm,0.3s,baz=14,slow=31,SNR=3.7
JSE    Soyaes             3.08 280    P    Pn     09 15 10.8 +0.5
JCH    Churui             3.15 235    P    Pn     09 15 10.3 -1.0
JCH                                 eS     Sn     09 15 45.7 -3.6
JFR    Furan              3.36 248    P    Pn     09 15 14.4 +0.5
JWK2   Keihoku            3.62 285    P    Pn     09 15 19.0 +1.7
ERM    Erimo              3.66 229  ePn    Pn     09 15 17.4 -0.4
ERM    Erimo              3.66 229  ePN    Pn     09 15 17.4 -0.4
JNBK   Urakawa-nobuka     3.71 235    P    Pn     09 15 16.9 -1.6
JHR    Hokuryu            3.77 261    P    Pn     09 15 20.1 +0.9
YSS    Yuzh-Sakhalins     3.79 312  ePn    Pn     09 15 19.6 +0.2
YSS    Yuzh-Sakhalins     3.79 312  eP     Pn     09 15 19.8 +0.4
YSS                                   AMB  AMB    09 15 20.6
       comp=E,40nm,1.0s
YSS                                   AMB  AMB    09 15 20.6
       comp=E,60nm,1.0s
YSS                                   AMB  AMB    09 15 20.6
       comp=E,110nm,1.0s
YSS                                 eS     Sn     09 16 03.9 -0.1
YSS                                   A    A      09 16 07.7
       comp=E,90nm,0.9s
YSS    Yuzh-Sakhalins     3.79 312⇓ ePN    Pn     09 15 19.8 +0.4
YSS                                 eS     Sn     09 16 03.9 -0.1
YSS                                   pmax pmax
       comp=Z,110nm,1.0s
YSS                                   pmax pmax
       comp=N,40nm,0.8s
YSS                                   pmax pmax
       comp=E,60nm,0.7s
YSS                                   smax smax
       comp=E,90nm,0.9s
YSS                                   MLR  MLR
       comp=Z,200nm,14.0s
UGL    Uglegorsk          5.65 326  eP     Pn     09 15 46.0 +2.0
UGL                                   AMB  AMB    09 15 48.1
       comp=Z,30nm,0.8s
UGL                                 eS     Sn     09 16 46.7 -1.3
UGL                                   A    A      09 16 48.5
       comp=Z,50nm,0.4s
UGL                                   A    A      09 16 48.5
       comp=Z,20nm,0.4s
UGL    Uglegorsk          5.65 326  ePN    Pn     09 15 46.0 +2.0
UGL                                 eS     Sn     09 16 44.2 -3.8
UGL                                   pmax pmax
       comp=Z,25nm,0.8s
UGL                                   smax smax
       comp=E,49nm,1.2s
TYV    Tymovskoe          6.99 338  eP     Pn     09 16 02.2 +0.5
TYV                                   AMB  AMB    09 16 02.3
       comp=E,10.0nm,0.8s
TYV                                 eS     Sn     09 17 19.5 -0.4
TYV                                   A    A      09 17 20.7
       comp=E,50nm,0.9s
TYV    Tymovskoe          6.99 338  ePN    Pn     09 16 02.0 +0.3
TYV                                 eS     Sn     09 17 15.2 -4.7
TYV                                   pmax pmax
       comp=Z,11nm,0.8s
TYV                                   smax smax
       comp=E,5.0nm,0.9s
SKR    Severo-Kuril's     8.81  42  eP     Pn     09 16 28.4 +2.4
SKR    Severo-Kuril's     8.81  42⇑ ePN    Pn     09 16 28.4 +2.4
NKL    Nikolayevsk        9.58 337  eP     Pn     09 16 35.0 -1.3
NKL    Nikolayevsk        9.58 337  ePN    Pn     09 16 34.5 -1.8
MJAR   Matsushiro Arr    10.30 223    P    Pn     09 16 45.2 -0.9
       comp=E,0.1nm,0.3s,baz=27,slow=13,SNR=4.2
USA0B  Ussuriysk Arra    10.66 274  ePn    Pn     09 16 49.7 -1.0
USRK   Ussuriysk Ar.     10.66 274    P    Pn     09 16 49.9 -0.8
       comp=E,0.6nm,0.3s,baz=86,slow=13,SNR=24
PEA0B  Petropavlovsk-    11.20  36  ePn    Pn     09 16 49.3 -8.4
PETK   Petropavlovsk-    11.20  36    P    Pn     09 16 56.5 -1.2
       comp=E,0.6nm,0.3s,baz=211,slow=8.2,SNR=8.6
KLR    Kul'dur           11.38 300  eP     Pn     09 16 59.4 -0.7
KLR    Kul'dur           11.38 300⇑ ePN    Pn     09 16 59.4 -0.7
KLR    Kul'dur           11.38 300    P    Pn     09 17 03.9 +3.8
       comp=E,0.4nm,0.3s,baz=115,slow=13,SNR=13
EKMR   Ekimchan          12.55 318  eP     Pn     09 17 14.1 -1.2
EKMR                                  AMB  AMB    09 17 16.0
       comp=E,7.0nm,0.6s
MA2    Magadan           15.30   8  ePn    Pn     09 17 48.8 -1.3
MA2    Magadan           15.30   8  eP     Pn     09 17 49.4 -0.6
MA2    Magadan           15.30   8d iP     Pn     09 17 49.4 -0.6
MA2                                   pmax pmax
       comp=Z,28nm,1.3s
MA2    Magadan           15.30   8    P    Pn     09 17 49.0 -1.0
       comp=Z,1.5nm,0.3s,baz=193,slow=8.6,SNR=18
BMKR   Bomnak            15.48 318  eP     Pn     09 17 51.6 -0.7
BMKR                                  AMB  AMB    09 17 54.8
       comp=Z,20nm,0.6s
ZEA    Zeya              15.79 313  eP     P      09 18 08.8  +12
SEY    Seymchan          18.76   8⇓ iP     P      09 18 28.0 -1.3
SEY    Seymchan          18.76   8    P    P      09 18 27.2 -2.1
       comp=Z,1.5nm,0.3s,baz=196,slow=8.9,SNR=27
YAK    Yakutsk           20.24 336  eP     Pn     09 18 47.7 -1.2
YAK                                 e             09 19 15.3
YAK                                 eS     S      09 22 23.2 -0.8
YAK                                   pmax pmax
       comp=Z,107nm,1.1s
YAK                                   pmax pmax
       comp=N,44nm,1.0s
YAK                                   pmax pmax
       comp=E,44nm,0.9s
YAK                                   smax smax
       comp=E,715nm,3.5s
YAK                                   smax smax
       comp=N,237nm,1.9s
YAK                                   smax smax
       comp=N,44nm,0.6s
BOD    Bodaibo           24.26 315  eP     P      09 19 21.1 -4.0
BOD                                 e             09 19 54.5
BOD                                   pmax pmax
       comp=Z,9.0nm,1.2s
NJ2    Nanjing           25.11 250  eP     P      09 19 36.6 +3.5
NJ2                                   pmax pmax
       comp=Z,10.0nm,0.6s
BILL   Bilibino          25.72  17⇓ eP     P      09 19 35.9 -2.3
BILL                                e             09 20 24.5
BILL                                eS     S      09 23 56.5 +0.9
BILL                                  pmax pmax
       comp=Z,17nm,4.0s
HHC    Hu-ho-hao-te      26.08 274  eP     P      09 19 43.3 +1.4
HHC                                   pmax pmax
       comp=Z,10.0nm,0.9s
HHC                                   pmax pmax
       comp=Z,61nm,3.7s
ULN    Ulaanbaatar       27.56 291  eP     P      09 19 55.4 +0.4
       comp=Z,4.4nm,0.6s
ULN    Ulaanbaatar       27.56 291  eP     P      09 19 55.4 +0.4
ULN    Ulaanbaatar       27.56 291d iP     P      09 19 54.4 -0.7
ULN                                   pmax pmax
       comp=Z,3.0nm,0.6s
SONA1  Songino Array     28.00 291  eP     P      09 19 58.2 -0.7
SONM   Songino Array     28.00 291    P    P      09 19 58.1 -0.9
       comp=Z,3.1nm,0.5s,baz=80,slow=8.9,SNR=25
TLY    Talaya            29.40 300⇑ eP     P      09 20 13.0 +1.8
H11N2  WAKE ISLAND Hy    29.79 139    T    T      09 51 28.5
       baz=328,slow=75,SNR=97
H11N1  WAKE ISLAND Hy    29.80 140    T    T      09 51 31.4
       baz=328,slow=75,SNR=75
H11N3  WAKE ISLAND Hy    29.81 139    T    T      09 51 23.5
       baz=328,slow=75,SNR=62
ANM    Nome              33.11  36  eP     P      09 20 44.7 +1.2
       comp=Z,4.4nm,0.7s
ANM    Nome              33.11  36  eP     P      09 20 44.7 +1.2
ANM                                   pmax pmax
       comp=Z,4.0nm,0.7s
LZH    Lanzhou           33.55 271  eP     P      09 20 49.3 +1.5
LZH                                   pP   pP     09 21 27.3 +8.1
LZH                                   sP   sP     09 21 47.3  +11
LZH                                   PP   PP     09 22 07.4 +0.8
LZH                                   pmax pmax
       comp=Z,21nm,1.3s
LZH                                   pmax pmax
       comp=Z,290nm,4.5s
GTA    Gaotai            34.97 278  eP     P      09 21 00.8 +0.8
GTA                                   pP   pwP    09 21 37.1 +3.0
GTA                                   sP   sP     09 21 56.6 +8.8
GTA                                   PcP  PcP    09 23 30.0 +1.0
GTA                                   pmax pmax
       comp=Z,5.0nm,1.0s
CD2    Chengdu           36.28 263  eP     P      09 21 12.0 +0.8
CD2                                   pmax pmax
       comp=Z,10.0nm,0.5s
SVW2   Sparrevohn        37.17  43  eP     P      09 21 19.4 +1.1
       comp=Z,6.6nm,0.8s
IM3    Indian Mountai    38.16  35  eP     P      09 21 27.1 +0.5
OHAK   Old Harbor        38.60  49  eP     P      09 21 30.4 +0.1
       comp=Z,7.4nm,0.7s
PPLA   Purkeypile        38.75  40  eP     P      09 21 29.1 -2.5
       comp=Z,17nm,1.1s
KDAK   Kodiak Island     38.91  48  eP     P      09 21 32.9 +0.1
       comp=Z,15nm,0.8s
KDAK   Kodiak Island     38.91  48  i P    P      09 21 33.0 +0.1
MLY    Manley            39.38  36  eP     P      09 21 37.0 +0.3
       comp=Z,6.7nm,0.8s
SUA    Susitna One       39.49  42  eP     P      09 21 38.2 +0.4
TRF    Thorofare Moun    39.59  39  eP     P      09 21 39.5 +0.8
       comp=Z,6.0nm,1.2s
DGZ    Jazzator, Alta    39.87 299c iP     P      09 21 41.4 +0.2
DGZ                                   pmax pmax
       comp=Z,1.0nm,0.6s
TOLK   Toolik Lake Re    39.96  31  eP     P      09 21 41.4 -0.1
       comp=Z,6.0nm,0.8s
RC01   Rabbit Creek A    40.00  43  eP     P      09 21 42.7 +0.8
       comp=Z,14nm,0.9s
PMR    Palmer            40.25  42  eP     P      09 21 44.1 +0.3
       comp=Z,5.7nm,1.1s
PMR    Palmer            40.25  42  eP     P      09 21 44.1 +0.3
PMR                                   pmax pmax
       comp=Z,6.0nm,1.1s
SEW    Seward            40.25  44  eP     P      09 21 43.9  0.0
       comp=Z,29nm,1.1s
GHO    Glory Hole Cre    40.33  41  eP     P      09 21 43.6 -1.1
       comp=Z,13nm,0.8s
ZALV   Zalesovo Beam     40.39 306    PcP  PcP    09 23 45.4 +0.2
       comp=Z,3.9nm,0.4s,baz=78,slow=3.3,SNR=9.8
MDM    Murphy Dome       40.44  36  eP     P      09 21 45.3 -0.2
       comp=Z,12nm,0.7s
KMI    Kunming           40.48 256    P    P      09 21 48.9 +2.4
KMI                                   pmax pmax
       comp=Z,6.0nm,0.5s
WRH    Wood River Hil    40.52  37  eP     P      09 21 47.0 +0.9
       comp=Z,3.6nm,0.6s
COLA   College           40.61  37  eP     P      09 21 47.5 +0.8
COLA   College           40.61  37c iP     P      09 21 47.5 +0.8
COLA                                i *PP  pP     09 22 21.6 +2.7
COLA                                  pmax pmax
       comp=Z,24nm,0.8s
DHY    Denali Highway    40.93  39  eP     P      09 21 50.4 +0.7
       comp=Z,9.0nm,0.8s
HDA    Harding Lake      41.02  37  eP     P      09 21 50.2  0.0
       comp=Z,9.8nm,0.6s
IL1    Eielson Array     41.02  37  eP     P      09 21 50.9 +0.6
ILAR   Eielson Array     41.02  37    P    P      09 21 50.5 +0.3
       comp=Z,9.9nm,0.6s,baz=272,slow=6.7,SNR=94
ILAR                                  PcP  PcP    09 23 46.4 -0.7
       comp=Z,0.4nm,0.6s,baz=278,slow=3.9,SNR=3.2
ILB    Eielson Array     41.02  37  eP     P      09 21 50.8 +0.6
SCM    Sheep Creek Mo    41.08  41  eP     P      09 21 52.1 +1.3
       comp=Z,12nm,1.0s
SCM                                 eS     S      09 27 48.9 -3.2
SCM    Sheep Creek Mo    41.08  41  eP     P      09 21 52.1 +1.3
SCM                                 eS     S      09 27 48.9 -3.2
SCM                                   pmax pmax
       comp=Z,12nm,1.0s
NVS    Novosibirsk       41.10 308  eP     P      09 21 40.3  -11
FYU    Fort Yukon        41.61  34  eP     P      09 21 56.2 +1.2
       comp=Z,12nm,0.7s
WMQ    Urumqi            41.64 291  eP     P      09 21 57.1 +1.5
KLU    Klutina           41.78  42  eP     P      09 21 57.1 +0.5
       comp=Z,9.7nm,0.7s
PAX    Paxson            41.81  39  eP     P      09 21 57.9 +1.2
       comp=Z,7.9nm,1.2s
PAX    Paxson            41.81  39  eP     P      09 21 57.9 +1.2
PAX                                   pmax pmax
       comp=Z,8.0nm,1.2s
HARP   HAARP             42.02  40  eP     P      09 22 00.0 +1.6
       comp=Z,24nm,0.9s
SCRK   Sand Creek        42.35  38  eP     P      09 22 01.5 +0.3
       comp=Z,16nm,1.0s
EGAK   Eagle             43.47  36  eP     P      09 22 10.5 +0.6
BALM   Baldy             43.57  42  eP     P      09 22 12.1 +1.1
BALM   Baldy             43.57  42  eP     P      09 22 12.1 +1.1
MK31   Makanchi Array    44.06 297  eP     P      09 22 14.7 -0.3
MK31   Makanchi Array    44.06 297  eP     P      09 22 14.7 -0.3
MKAR   Makanchi Array    44.06 297  eP     P      09 22 14.8 -0.2
       comp=Z,58nm,0.4s
MKAR                                  PcP  PcP    09 23 57.6  0.0
MKAR   Makanchi Array    44.06 297  eP     P      09 22 14.8 -0.2
MKAR   Makanchi Array    44.06 297  eP     P      09 22 14.8 -0.2
MKAR                                              09 23 57.6
MKAR                                  pmax pmax
       comp=Z,58nm,0.4s
MKAR   Makanchi Array    44.06 297    P    P      09 22 14.6 -0.4
       comp=Z,4.7nm,0.6s,baz=79,slow=8.6,SNR=51
MKAR                                  PcP  PcP    09 23 57.6  0.0
       comp=Z,1.0nm,0.5s,baz=60,slow=4.1,SNR=3.9
MK01   Makanchi Array    44.07 297  eP     P      09 22 14.2 -0.8
MAKZ   Makanchi          44.26 297  eP     P      09 22 16.6 +0.1
       comp=Z,7.7nm,0.8s
MAKZ   Makanchi          44.26 297  eP     P      09 22 16.6 +0.1
MAKZ                                  pmax pmax
       comp=Z,8.0nm,0.8s
DAWY   Dawson            44.34  37  eP     P      09 22 17.7 +0.7
       comp=Z,7.1nm,1.1s
KURK   Kurchatov         44.95 303  eP     P      09 22 20.9 -1.0
       comp=Z,3.2nm,0.8s
KURK                                ePcP   PcP    09 23 59.1 -1.5
KURK   Kurchatov         44.95 303⇓ eP     P      09 22 23.9 +2.0
KURK                                i *PP  pP     09 22 52.5 -1.6
KURK                                  pmax pmax
       comp=Z,4.0nm,1.1s
EPYK   Eagle Plains      45.03  34  eP     P      09 22 23.3 +0.9
       comp=Z,13nm,0.6s
INK    Inuvik            45.88  31  eP     P      09 22 28.8 -0.2
       comp=Z,7.6nm,0.6s
INK    Inuvik            45.88  31  eP     P      09 22 28.7 -0.2
INK    Inuvik            45.88  31  eP     P      09 22 28.8 -0.2
INK                                   pmax pmax
       comp=Z,8.0nm,0.6s
HYT    Haines Junctio    45.92  41  eP     P      09 22 31.7 +2.1
       comp=Z,24nm,1.0s
PDGK   Podgornoye        47.28 294    P    P      09 22 40.0 -0.4
PDGK                                  pmax pmax
       comp=Z,7.0nm,1.1s
CMAR   Chiang Mai Arr    47.54 253  eP     P      09 22 44.9 +2.4
CMAR   Chiang Mai Arr    47.54 253  i P    P      09 22 44.9 +2.4
CMAR                                  pmax pmax
       comp=Z,1.0nm,0.3s
CMAR   Chiang Mai Arr    47.54 253    P    P      09 22 42.4 -0.2
       comp=Z,1.0nm,0.3s,baz=41,slow=5.7,SNR=5.4
BVAR   Borovoye Array    48.88 309    PcP  PcP    09 24 14.9 +0.4
       comp=Z,1.5nm,0.4s,baz=85,slow=3.9,SNR=6.4
BRVK   Borovoye          48.93 309  eP     P      09 22 52.7  0.0
BRVK   Borovoye          48.93 309⇓ eP     P      09 22 52.7  0.0
BRVK                                  pmax pmax
       comp=Z,2.0nm,0.9s
OTUK   Ortayu            49.68 302    P    P      09 22 58.9 +0.3
OTUK                                  pmax pmax
       comp=Z,5.0nm,1.2s
ULHL   Ulahol            49.90 294    P    P      09 23 01.1 +0.5
       SNR=8.1
BOOM   Boomskoye usch    49.98 294    P    P      09 23 02.1 +1.0
TKM2   Tokmak 2          50.01 295    P    P      09 23 02.2 +0.9
       SNR=7.0
KBK    Karagaybulak      50.55 295    P    P      09 23 06.1 +0.7
       SNR=7.5
USP    Ospenovka         50.55 296    P    P      09 23 05.7 +0.4
       SNR=8.3
KZA    Kyzart            50.63 294    P    P      09 23 07.5 +1.2
       SNR=12
JIRN   Jiri              50.69 272  eP     P      09 23 07.1 +0.2
       comp=Z,17nm,0.4s
GUN    Gumba             50.77 272  eP     P      09 23 07.8 +0.4
       comp=Z,14nm,0.4s
RAMN   Ramite            50.82 271  eP     P      09 23 07.7  0.0
       comp=Z,20nm,0.3s
AAK    Ala-Archa         50.85 295    P    P      09 23 08.0 +0.3
       SNR=6.8
AAK    Ala-Archa         50.85 295  eP     P      09 23 07.9 +0.3
       comp=Z,6.0nm,0.5s
AAK    Ala-Archa         50.85 295  eP     P      09 23 07.9 +0.3
AAK    Ala-Archa         50.85 295c iP     P      09 23 07.4 -0.3
AAK                                 i *PP  pP     09 23 41.9 +1.2
AAK                                   pmax pmax
       comp=Z,3.0nm,0.7s
KKN    Kakani            51.27 273  eP     P      09 23 11.3 +0.3
       comp=Z,10nm,0.4s
PKI    Pulchoki          51.30 272  eP     P      09 23 10.5 -0.9
       comp=Z,12nm,0.6s
PKIN   Phulchoki         51.31 272  eP     P      09 23 10.5 -0.9
       comp=Z,4.8nm,0.3s
KSH    Kashi             51.40 291    P    P      09 23 15.8 +4.1
KSH                                   pP   sP     09 23 56.1 -4.8
KSH                                   PP   PP     09 25 17.8 +7.7
KSH                                   S    S      09 30 20.3 +0.4
KSH                                   sS   sS     09 31 29.6  +11
KSH    Kashi             51.40 291    SS   SS     09 33 58.5 +1.3
KSH                                   pmax pmax
       comp=Z,270nm,4.2s
KSH                                   LR   LR
       comp=N,290nm,5.1s
KSH                                   LR   LR
       comp=E,190nm,4.6s
KSH                                   LR   LR
       comp=Z,310nm,8.4s
DMN    Daman             51.50 273  eP     P      09 23 13.2 +0.4
       comp=Z,22nm,0.8s
DANN   Dangsing          52.02 274  eP     P      09 23 17.2 +0.5
       comp=Z,40nm,0.7s
MNAS   Manas             52.22 296    P    P      09 23 18.0 +0.3
MNAS                                  pmax pmax
       comp=Z,19nm,0.7s
ARSB   Arslanbob         52.48 294  eP     P      09 23 20.5 +0.8
       comp=Z,24nm,0.6s
KOLN   Koldanda          52.48 274  eP     P      09 23 20.2 +0.2
       comp=Z,15nm,0.7s
PYUN   Piuthan           52.72 275  eP     P      09 23 22.0 +0.3
       comp=Z,12nm,0.5s
SFK    Sufi-Kurgan       52.80 293    P    P      09 23 22.0 -0.2
SFK                                   pmax pmax
       comp=Z,15nm,1.0s
KK31   Karatay Array     53.19 297  eP     P      09 23 24.5 -0.2
KK31   Karatay Array     53.19 297  eP     P      09 23 24.5 -0.2
KKAR   Karatay Array     53.19 297  eP     P      09 23 24.5 -0.2
KKAR   Karatay Array     53.19 297  eP     P      09 23 24.5 -0.2
ARU    Arti              53.67 316d iP     P      09 23 26.5 -1.5
ARU                                   S    S      09 30 47.7 -2.3
ARU                                   SS   SKiKP  09 34 28.7 +2.7
ARU                                   pmax pmax
       comp=Z,8.0nm,0.9s
SPITS  Spitsbergen Ar    54.02 349    P    P      09 23 27.7 -2.6
       comp=Z,8.4nm,0.9s,baz=57,slow=9.3,SNR=17
RES    Resolute Bay      54.33  17  eP     P      09 23 31.8 -0.7
       comp=Z,8.0nm,1.1s
RES    Resolute Bay      54.33  17  eP     P      09 23 31.8 -0.7
RES                                   pmax pmax
       comp=Z,8.0nm,1.1s
BTK    Batken            54.54 294  eP     P      09 23 36.8 +2.1
       comp=Z,10nm,0.5s
BTK    Batken            54.54 294  eP     P      09 23 36.8 +2.1
BTK                                   pmax pmax
       comp=Z,10.0nm,0.5s
YKW3   Yellowknife Ar    55.27  34  eP     P      09 23 39.9 +0.5
       comp=Z,8.0nm,0.8s
YKA    Yellowknife Ar    55.31  34    P    P      09 23 39.7  0.0
       comp=Z,4.9nm,0.6s,baz=301,slow=6.9,SNR=78
YKB5   Yellowknife Ar    55.31  34  eP     P      09 23 39.0 -0.7
GAR    Garm              55.43 293  eP     P      09 23 41.2 +0.1
       comp=Z,36nm,1.2s
CHGR   Chuyangaron       56.37 293  eP     P      09 23 47.7 -0.1
       comp=Z,41nm,0.6s
NIL    Nilore            56.38 286    P    P      09 23 49.0 +1.1
PRGR   Permogore         56.84 326  eP     P      09 23 48.7 -1.9
PRGR                                  pmax pmax
       comp=Z,9.0nm,0.4s
KIRV   Kirov             56.89 322    P    P      09 23 50.5 -0.5
       comp=Z,16nm,0.5s,baz=47,slow=3.3,SNR=3.5
ARCES  ARCESS Array B    58.49 339    P    P      09 23 59.7 -2.3
       comp=Z,1.2nm,0.3s,baz=47,slow=6.9,SNR=26
DAG    Danmarks Havn     58.67 356  i P    P      09 24 01.1 -2.1
       comp=Z,2.1nm,0.6s
DAG    Danmarks Havn     58.67 356  i P    P      09 24 01.1 -2.1
DAG                                   pmax pmax
       comp=Z,1.0nm,0.6s
KBL    Kabul             58.75 289    P    P      09 24 04.5 -0.1
KBL                                   pmax pmax
       comp=Z,9.0nm,0.9s
KLMR   Klimovskoe        59.71 327  eP     P      09 24 08.2 -2.3
KLMR                                  pmax pmax
       comp=Z,5.0nm,0.9s
KLMR   Klimovskoe        59.71 327  eP     P      09 24 08.2 -2.3
KLMR                                  AMP         09 24 10.6
       comp=Z,5.0nm,0.8s
F07A   Phinny Hill Vi    61.85  52  eP     P      09 24 27.2 +2.0
       comp=Z,7.6nm,0.7s
NEW    Newport           62.01  49  eP     P      09 24 27.5 +1.2
NEW    Newport           62.01  49  eP     P      09 24 27.5 +1.2
E09A   Wood Farm, Sta    62.49  51  eP     P      09 24 31.1 +1.7
       comp=Z,5.9nm,0.9s
SUMG   Summit            63.19   2  eP     P      09 24 32.9 -1.3
       comp=Z,9.9nm,0.4s
SUMG   Summit            63.19   2  i P    P      09 24 33.4 -0.7
       comp=Z,25nm,0.4s
SUMG   Summit            63.19   2  i P    P      09 24 33.4 -0.7
WALA   Waterton Lakes    63.23  47  eP     P      09 24 35.8 +1.3
       comp=Z,8.4nm,1.1s
GEYT   Alibeck           63.91 298    P    P      09 24 38.6 -0.3
       comp=Z,12nm,0.8s,baz=5.2,slow=3.3,SNR=12
FIA1   FINESS Array S    64.13 333  eP     P      09 24 38.2 -1.7
FINES  FINESS Array B    64.13 333  i P    P      09 24 38.2 -1.8
FINES                                 pmax pmax
       comp=Z,4.0nm,0.5s
FINES  FINESS Array B    64.13 333    P    P      09 24 38.1 -1.9
       comp=Z,4.2nm,0.5s,baz=41,slow=7.5,SNR=48
MSO    Missoula          64.59  49  eP     P      09 24 44.8 +1.4
       comp=Z,4.0nm,0.9s
VRH    Novokhopyorsk     64.84 318  eP     P      09 24 43.1 -1.6
VRH                                   pmax pmax
       comp=Z,10.0nm,0.8s
WRA    Warramunga Arr    65.12 193    P    P      09 24 46.1 -0.8
       comp=Z,2.4nm,0.8s,baz=9.8,slow=6.7,SNR=17
WRA                                   pP   PcP    09 25 20.3 +2.0
       comp=Z,0.7nm,0.6s,baz=8.7,slow=6.7,SNR=2.9
LPSR   Galich'ya Gora    65.23 320  eP     P      09 24 45.7 -1.6
LPSR                                  pmax pmax
       comp=Z,10.0nm,0.8s
FFC    Flin Flon         65.24  37  eP     P      09 24 47.8 +0.5
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	comp=Z,4.8nm,0.6s						
FFC	Flin Flon	65.24	37	*i* P	P	09 24 48.0	+0.7
FCC	Fort Churchill	65.49	30	*e*P	P	09 24 48.9	+0.1
	comp=Z,8.8nm,0.6s						
FCC	Fort Churchill	65.49	30	*e*P	P	09 24 48.9	+0.1
FCC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LRM	Limekiln Ridge	66.03	49	*e*P	P	09 24 54.3	+1.4
VSR	Storozhevoye	66.04	319	*e*P	P	09 24 50.7	-1.8
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
YERR	Yerington	66.45	58	*e*P	P	09 24 57.7	+2.1
	comp=Z,5.8nm,1.0s						
BOZ	Bozeman (W)	66.61	49	*e*P	P	09 24 57.8	+1.3
	comp=Z,6.4nm,0.6s						
BOZ	Bozeman (W)	66.61	49	*e*P	P	09 24 57.8	+1.3
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KVN	Kaiserville	67.10	57	*e*P	P	09 25 01.4	+1.7
	comp=Z,3.9nm,0.8s						
KVN	Kaiserville	67.10	57	*e*P	P	09 25 01.4	+1.7
KVN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NV01	Mina Array Sit	67.37	58	*e*P	P	09 25 02.8	+1.3
NVAR	Mina Array Bea	67.37	58	P	P	09 25 02.5	+1.1
	comp=Z,3.9nm,0.7s,baz=293,slow=6.5,SNR=12						
YHB	Horse Butte	67.40	49	*e*P	P	09 25 02.8	+1.3
	comp=Z,5.0nm,0.8s						
YFT	Old Faithful	67.79	49	*e*P	P	09 25 07.4	+3.4
	comp=Z,5.5nm,0.9s						
H17A	Grant Village	67.96	49	*e*P	P	09 25 08.3	+3.2
	comp=Z,7.1nm,1.0s						
IMW	Indian Meadow	68.09	50	*e*P	P	09 25 08.1	+2.2
	comp=Z,2.4nm,0.8s						
GOF	Gofitskoye	68.20	312	*e*P	P	09 25 06.6	+0.4
GOF				pmax	pmax		
	comp=Z,60nm,0.8s						
FXWY	Fox Creek	68.22	50	*e*P	P	09 25 08.7	+2.0
	comp=Z,1.4nm,1.0s						
MOOW	Moose Ponds	68.30	50	*e*P	P	09 25 09.2	+2.0
	comp=Z,2.6nm,0.8s						
TPAW	Teton Pass	68.35	50	*e*P	P	09 25 08.7	+1.1
	comp=Z,5.0nm,0.9s						
HVU	Hansel Valley	68.46	52	*e*P	P	09 25 09.8	+1.7
	comp=Z,2.5nm,0.8s						
LOHW	Long Hollow	68.46	50	*e*P	P	09 25 10.1	+1.9
	comp=Z,2.1nm,0.8s						
SNOW	Snow King Moun	68.48	50	*e*P	P	09 25 10.6	+2.2
	comp=Z,2.6nm,0.8s						
NC405	NORSAR Array S	68.65	338	*e*P	P	09 25 07.8	-1.0
LAO	LASA Array	68.71	45	*e*P	P	09 25 10.9	+1.5
	comp=Z,8.6nm,0.9s						
ASAR	Alice Springs	68.84	193	P	P	09 25 10.7	+0.3
	comp=Z,0.8nm,0.8s,baz=13,slow=8.2,SNR=6.7						
ASAR				pP	pP	09 25 45.9	-0.2
	comp=Z,1.2nm,0.6s,baz=8.9,slow=5.7,SNR=7.2						
NB2	NORSAR Subarra	68.84	339	P	P	09 25 08.5	-1.5
	comp=Z,3.9nm,0.5s,baz=31,slow=6.5						
NOA	NORSAR Array B	68.84	339	P	P	09 25 08.6	-1.4
	comp=Z,3.5nm,0.4s,baz=32,slow=6.3,SNR=25						
HFS	Hagfors	68.94	337	P	P	09 25 09.0	-1.5
HFS	Hagfors	68.94	337	P	P	09 25 09.0	-1.5
	comp=Z,7.5nm,0.4s,baz=35,slow=5.4,SNR=53						
NORES	NORESS Array B	69.02	338	P	P	09 25 09.9	-1.1
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KVAR	Kislovodsk Arr	69.12	311	P	P	09 25 12.6	+0.5
	comp=Z,12nm,0.7s,baz=255,slow=20,SNR=8.7						
KIV	Kislovodsk	69.12	311	*e*P	P	09 25 13.0	+0.9
	comp=Z,38nm,0.8s						
KIV	Kislovodsk	69.12	311	⇑*i*P	P	09 25 12.7	+0.6
KIV	Kislovodsk	69.12	311	*e*P	P	09 25 13.4	+1.3
KIV	Kislovodsk	69.12	311	*e*P	P	09 25 13.4	+1.3
KIV				pmax	pmax		
	comp=Z,47nm,1.0s						
KBZ	Khabaz	69.16	311	P	P	09 25 13.0	+0.8
KBZ	Khabaz	69.16	311	P	P	09 25 12.9	+0.8
	comp=Z,20nm,0.8s,baz=62,slow=4.2,SNR=38						
ZEI	Tsey	69.24	310	*e*P	P	09 25 11.5	-1.5
ZEI				pmax	pmax		
	comp=Z,14nm,0.6s						
DUG	Dugway, Tooele	69.48	54	*e*P	P	09 25 16.1	+1.7
	comp=Z,3.5nm,0.8s						
DUG	Dugway, Tooele	69.48	54	*e*P	P	09 25 16.1	+1.7
DUG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TBLG	Delisi	69.48	309	*e*P	P	09 25 15.5	+1.2
	comp=Z,38nm,0.7s						
TBLG	Delisi	69.48	309	*e*P	P	09 25 15.5	+1.2
TBLG				pmax	pmax		
	comp=Z,38nm,0.7s						
BW06	Boulder Array	69.60	50	*e*P	P	09 25 16.3	+1.1
	comp=Z,4.9nm,1.1s						
PD31	Pinedale Array	69.60	50	*e*P	P	09 25 15.7	+0.5
PDAR	Pinedale Array	69.60	50	*e*P	P	09 25 15.7	+0.5
PDAR	Pinedale Array	69.60	50	P	P	09 25 15.9	+0.7
	comp=Z,2.8nm,0.8s,baz=242,slow=2.0,SNR=22						
MPU	Maple Canyon	70.27	53	*e*P	P	09 25 20.9	+1.6
	comp=Z,3.2nm,0.6s						
AKASG	Malin Array Be	70.87	323	*i* P	P	09 25 22.0	-0.5
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.4s						
AKASG	Malin Array Be	70.87	323	P	P	09 25 21.8	-0.7
	comp=Z,8.1nm,0.4s,baz=40,slow=6.5,SNR=39						
AKBB	Malin Array Si	70.87	323	*e*P	P	09 25 22.2	-0.3
	comp=Z,18nm,0.8s						
KIEV	Kiev	70.88	323	*e*P	P	09 25 21.6	-0.9
	comp=Z,20nm,0.9s						
KIEV	Kiev	70.88	323	⇓*i*P	P	09 25 21.7	-0.8
KIEV	Kiev	70.88	323	*d i*P	P	09 25 21.9	-0.6
KIEV				pmax	pmax		
	comp=Z,20nm,1.0s						
AK11	Malin Array Si	70.91	323	*e*P	P	09 25 22.0	-0.7
ULM	Lac du Bonnet	71.04	37	P	P	09 25 23.1	-0.4
	comp=Z,2.0nm,0.4s,baz=317,slow=6.9,SNR=11						
P17A	Butcher Ranch,	71.15	53	*e*P	P	09 25 26.2	+1.6
	comp=Z,3.8nm,0.8s						
MTPU	Mount Pierson	71.27	55	*e*P	P	09 25 27.7	+2.1
	comp=Z,3.4nm,0.8s						
SRU	San Rafael Swe	71.52	53	*e*P	P	09 25 28.2	+1.4
	comp=Z,9.9nm,1.0s						
SRU	San Rafael Swe	71.52	53	*e*P	P	09 25 28.2	+1.4
SRU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PV21	Cone Mtn., Par	72.77	53	*e*P	P	09 25 36.1	+1.7
	comp=Z,3.7nm,0.6s						
PV14	Lion Creek, Pa	72.88	53	*e*P	P	09 25 36.4	+1.3
	comp=Z,5.2nm,0.9s						
PV17	East Wray Mesa	72.98	53	*e*P	P	09 25 37.0	+1.5
	comp=Z,9.0nm,0.6s						
PV13	Radium Mtn., P	73.14	53	*e*P	P	09 25 38.0	+1.5
	comp=Z,5.5nm,0.6s						
ISCO	Idaho Springs	73.79	50	*e*P	P	09 25 42.0	+1.5
	comp=Z,2.5nm,1.1s						
ISCO	Idaho Springs	73.79	50	*e*P	P	09 25 42.0	+1.5
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BIR	Birlad	74.91	321	⇑*i*P	P	09 25 47.0	+0.7
BUR08	Bucovina Ar. S	74.91	323	*e*P	P	09 25 46.8	+0.3
BUR04	Bucovina Ar. S	74.92	323	*e*P	P	09 25 46.4	-0.1
BURAR	Bucovina Array	74.92	323	⇑*i*P	P	09 25 46.6	0.0
BURAR	Bucovina Array	74.92	323	P	P	09 25 46.6	0.0
OJC	Ojcow	75.05	328	*e*P	P	09 25 47.0	-0.1
	comp=Z,19nm,1.0s						
OJC	Ojcow	75.05	328	*e*P	P	09 25 47.0	-0.1
OJC				pmax	pmax		
	comp=Z,19nm,1.0s						
BIZ	Bicaz	75.06	322	⇑*i*P	P	09 25 47.2	0.0
TESR	Tescani	75.15	322	⇓*i*P	P	09 25 47.8	0.0
TLCR		75.19	320	⇑*i*P	P	09 25 48.0	+0.1
TLCR		75.19	320	P	P	09 25 48.0	+0.1
CFR	Carcaliu	75.50	320	⇓*i*P	P	09 25 50.0	+0.3
CFR	Carcaliu	75.50	320	P	P	09 25 50.0	+0.3
ODBI	Odobesti	75.55	321	⇑*i*P	P	09 25 51.2	+1.2
VRI	Vrincioaia	75.61	321	⇑*i*P	P	09 25 51.4	+1.0
VRI	Vrincioaia	75.61	321	P	P	09 25 51.3	+0.9
PLOR	Plostina	75.66	321	⇑*i*P	P	09 25 51.1	+0.4
PLOR	Plostina	75.66	321	P	P	09 25 51.1	+0.4
KSP	Ksiaz	75.83	330	P	P	09 25 51.8	+0.3
OZUR		75.86	322	⇑*i*P	P	09 25 53.0	+1.2
TIRR	Tirgusor	75.92	320	⇓*i*P	P	09 25 52.7	+0.6
TIRR	Tirgusor	75.92	320	P	P	09 25 52.6	+0.5
HARR	Harsova	75.97	320	⇓*i*P	P	09 25 52.7	+0.3
HARR	Harsova	75.97	320	P	P	09 25 52.7	+0.3
OKC	Ostrava-Krasne	75.98	329	*e*P	P	09 25 57.5	+5.1
OKC	Ostrava-Krasne	75.98	329	*e*P	P	09 25 57.5	+5.1
TLB	Topalu	76.00	320	⇓*i*P	P	09 25 53.0	+0.4
TLB	Topalu	76.00	320	P	P	09 25 53.0	+0.4
LANS	Liptovska Anna	76.04	327	*e*P	P	09 25 53.9	+1.1
LANS	Liptovska Anna	76.04	327	*e*P	P	09 25 53.9	+1.1
DOPR	Dopca	76.13	322	⇑*i*P	P	09 25 54.8	+1.4
UPC	Upice	76.20	330	*e*P	P	09 25 54.0	+0.3
UPC	Upice	76.20	330	*e*P	P	09 25 54.0	+0.3
DPC	Dobruska-Polom	76.22	330	*e*P	P	09 25 54.5	+0.7
DPC	Dobruska-Polom	76.22	330	*e*P	P	09 25 54.5	+0.7
MLR	Muntele Rosu	76.25	322	*e*P	P	09 25 54.6	+0.4
	comp=Z,8.9nm,0.8s						
MLR	Muntele Rosu	76.25	322	⇑*i*P	P	09 25 54.9	+0.7
MLR	Muntele Rosu	76.25	322	*e*P	P	09 25 54.6	+0.4
MLR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MLR	Muntele Rosu	76.25	322	P	P	09 25 53.9	-0.3
	comp=Z,8.1nm,0.7s,baz=183,slow=5.6,SNR=10						
MORC	Moravsky Berou	76.25	329	⇓*i*P	P	09 25 54.3	+0.3
MORC	Moravsky Berou	76.25	329	*e*P	P	09 25 54.4	+0.4
ISR	Istrita	76.27	321	⇑*i*P	P	09 25 55.1	+0.9
ISR	Istrita	76.27	321	P	P	09 25 55.1	+0.9
KRLC	Kraliky	76.29	330	*e*P	P	09 25 54.2	0.0
KRLC	Kraliky	76.29	330	*e*P	P	09 25 54.2	0.0
ICOR	Ion Corvin	76.47	320	⇑*i*P	P	09 25 56.0	+0.8
CLL	Collm	76.57	332	*e*P	P	09 25 55.2	-0.5
	comp=Z,22nm,0.9s						
CLL	Collm	76.57	332	⇑*i*P	P	09 25 55.3	-0.5
	comp=Z,24nm,1.0s						
CLL	Collm	76.57	332	*e*P	P	09 25 55.2	-0.5
CLL	Collm	76.57	332	*e*P	P	09 25 55.2	-0.5
CLL				pmax	pmax		
	comp=Z,22nm,0.9s						
BRG	Berggiesshubel	76.62	332	*e*P	P	09 25 55.4	-0.6
	comp=Z,9.6nm,1.0s						
BRG	Berggiesshubel	76.62	332	*e*P	P	09 25 55.4	-0.6
BRG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DRGR		76.63	324	⇓*i*P	P	09 25 56.6	+0.4
DRGR		76.63	324	P	P	09 25 56.0	-0.2
VOIR		76.69	322	⇑*i*P	P	09 25 57.1	+0.5
VOIR		76.69	322	P	P	09 25 57.3	+0.7
ANMO	Albuquerque	76.74	54	⇓*e*P	P	09 25 58.7	+1.5
ANMO				pmax	pmax		
	comp=Z,13nm,3.0s						
VYHS	Vyhne	76.82	327	*e*P	P	09 25 57.6	+0.4
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.5s						
VYHS	Vyhne	76.82	327	*e*P	P	09 25 57.6	+0.4
PSZ	Piszkesteto	76.87	327	*e*P	P	09 25 57.9	+0.3
	comp=Z,9.8nm,0.7s						
PSZ	Piszkesteto	76.87	327	⇓*i*P	P	09 25 57.9	+0.3
PSZ	Piszkesteto	76.87	327	*e*P	P	09 25 57.9	+0.3
PSZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PSZ	Piszkesteto	76.87	327	⇓*e*P	P	09 25 58.0	+0.5
BR131	Keskin Array S	76.89	313	*e*P	P	09 25 58.4	+0.5
BRTR	Keskin Array B	76.89	313	P	P	09 25 57.9	0.0
	comp=Z,3.2nm,0.6s,baz=70,slow=3.8,SNR=14						
ARR	Arges	76.93	322	⇑*i*P	P	09 25 58.9	+1.0
VRAC	Vranov	76.99	329	⇓*i*P	P	09 25 58.5	+0.4
VRAC	Vranov	76.99	329	*e*P	P	09 25 58.5	+0.4
VRAC	Vranov	76.99	329	P	P	09 25 58.2	+0.1
	comp=Z,7.3nm,0.7s,baz=22,slow=6.7,SNR=8.1						
SCHQ	Schefferville	77.00	19	P	P	09 25 58.0	-0.1
	comp=Z,3.0nm,0.4s,baz=336,slow=4.5,SNR=30						
GOPC	GO Pecny, Ondr	77.13	331	*e*P	P	09 25 58.7	-0.2
GOPC	GO Pecny, Ondr	77.13	331	*e*P	P	09 25 58.7	-0.2
GOPC				MLR	MLR		
	comp=Z,2µm,16.6s						
PRU	Pruhonice	77.16	331	*e*P	P	09 25 59.3	+0.3
PRU	Pruhonice	77.16	331	*e*P	P	09 25 59.3	+0.3
KRUC	Moravsky	77.27	329	*e*P	P	09 26 00.0	+0.4
EKA	Eskdalemuir Ar	77.36	343	P	P	09 25 59.9	-0.2
	comp=Z,8.0nm,0.6s,baz=26,slow=5.5,SNR=22						
MODS	Modra-Piesok	77.51	328	*e*P	P	09 26 01.8	+0.8
MODS				pmax	pmax		
	comp=Z,16nm,1.2s						
MODS	Modra-Piesok	77.51	328	*e*P	P	09 26 01.8	+0.8
MOX	Moxa	77.59	333	P	P	09 26 01.4	-0.1
MOX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GZR	Gura Zlata	77.71	323	⇑*i*P	P	09 26 02.2	-0.1
GZR	Gura Zlata	77.71	323	P	P	09 26 02.2	-0.1
BZS	Buzias	78.03	324	P	P	09 26 04.6	+0.7
BZS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KHC	Kasperske Hory	78.22	331	*e*P	P	09 26 05.1	+0.1
	comp=Z,6.3nm,0.8s						
KHC	Kasperske Hory	78.22	331	*e*P	P	09 26 05.5	+0.5
KHC	Kasperske Hory	78.22	331	*e*P	P	09 26 05.1	+0.1
KHC	Kasperske Hory	78.22	331	*e*P	P	09 26 05.5	+0.5
CONA	Conrad Observa	78.41	329	*e*P	P	09 26 06.9	+0.8
	comp=Z,8.4nm,0.8s						
GEC2	GERESS Array S	78.42	331	*e*P	P	09 26 05.9	-0.2
	comp=Z,4.7nm,0.6s						
GEC2	GERESS Array S	78.42	331	*e*P	P	09 26 05.9	-0.2
GEC2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GERES	GERESS Array B	78.42	331	P	P	09 26 06.0	-0.2
GERES	GERESS Array B	78.42	331	P	P	09 26 06.0	-0.2
	comp=Z,3.8nm,0.6s,baz=30,slow=6.2,SNR=21						
GEA0	GERESS Array S	78.42	331	*e*P	P	09 26 05.8	-0.4
WET	Wettzell	78.45	331	P	P	09 26 06.7	+0.5
WET				pmax	pmax		
	comp=Z,12nm,0.9s						
GRA1	Grafenberg Arr	78.54	332	*e*P	P	09 26 07.4	+0.7
	comp=Z,19nm,0.7s						
GRF	Grafenberg Arr	78.54	332	*e*P	P	09 26 07.4	+0.7
GRF				pmax	pmax		
	comp=Z,19nm,0.7s						
GRFO	Grafenberg	78.54	332	*e*P	P	09 26 07.5	+0.8
	comp=Z,17nm,0.8s						
GRFO	Grafenberg	78.54	332	*e*P	P	09 26 07.5	+0.8
GRFO				pmax	pmax		
	comp=Z,17nm,0.8s						
MDVR	Moldovita	78.65	324	⇑*i*P	P	09 26 07.2	-0.2
MOA	Molln	79.06	330	*e*P	P	09 26 09.8	+0.2
	comp=Z,3.7nm,0.8s						
MEM	Membach	79.37	336	⇑P	P	09 26 11.4	+0.3
VTS	Vitosha	79.72	321	⇑*i*P	P	09 26 13.8	+0.4
VTS	Vitosha	79.72	321	P	P	09 26 14.2	+0.8
BCLA	Clavier	79.74	336	⇓P	P	09 26 13.0	-0.1
SOKA	Soboth	79.76	329	*i* P	P	09 26 13.7	+0.2
	comp=Z,7.5nm,0.8s						
GROS	Grobnik	79.77	328	*i* P	P	09 26 13.3	-0.2
KBA	Koelnbreinsper	80.04	330	*i* P	P	09 26 15.6	+0.5
	comp=Z,6.4nm,0.6s						
KBA	Koelnbreinsper	80.04	330	P	P	09 26 16.0	+0.9
KBA				pmax	pmax		
	comp=Z,15nm,0.8s						
OBKA	Obir	80.09	329	*i* P	P	09 26 15.7	+0.5
	comp=Z,5.6nm,0.7s						
GOLS	Golise	80.10	328	*i* P	P	09 26 15.0	-0.2
LEGS	Legarje	80.27	328	*i* P	P	09 26 15.7	-0.4
MYKA	Terra Mystica	80.32	329	*e*P	P	09 26 16.5	+0.1
	comp=Z,1.7nm,0.5s						
WATA	Walderalm	80.45	331	*e*P	P	09 26 17.5	+0.3
	comp=Z,4.9nm,0.5s						
WTTA	Wattenberg	80.49	331	*i* P	P	09 26 18.1	+0.6
	comp=Z,5.3nm,0.5s						
RETA	Reutte	80.60	332	*e*P	P	09 26 18.4	+0.4
	comp=Z,7.0nm,1.0s						
MOTA	Moosalm	80.61	331	*e*P	P	09 26 18.4	+0.3
	comp=Z,6.1nm,0.7s						
BFO	Black Forest	80.67	333	*i* P	P	09 26 19.1	+0.9
SQTA	Sankt Quirin	80.68	331	*e*P	P	09 26 18.8	+0.4
	comp=Z,2.8nm,0.5s						
CDF	Champ du Feu	80.93	334	*e*P	P	09 26 19.0	-0.7
CDF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DAVA	Damuels	81.07	332	*e*P	P	09 26 21.3	+0.8
	comp=Z,5.8nm,0.7s						
DAVOX	Davos/Dischmat	81.51	332	P	P	09 26 22.5	-0.4
	comp=Z,2.8nm,0.5s,baz=30,slow=1.0,SNR=4.4						
FUORN	Ofenpass-Fuorn	81.52	331	*e*P	P	09 26 23.6	+0.5
	comp=Z,8.0nm,0.7s						
TX31	Lajitas Ar. Si	82.42	56	*e*P	P	09 26 29.1	+1.2
TXAR	Lajitas Array	82.42	56	P	P	09 26 28.4	+0.6
	comp=Z,1.8nm,0.6s,baz=302,slow=3.9,SNR=22						
TXAR				pP	pP	09 27 04.3	-0.6
	comp=Z,0.5nm,0.5s,baz=296,slow=4.2,SNR=2.5						
LOR	Lormes	82.99	336	*e*P	P	09 26 29.6	-0.8
LOR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GRR	Gorron	83.27	339	*e*P	P	09 26 31.4	-0.4
GRR				pmax	pmax		
	comp=Z,18nm,1.1s						
SSF	Saint Saulge	83.28	336	*e*P	P	09 26 31.1	-0.8
SSF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SMF	Signal de Mont	83.56	335	*e*P	P	09 26 32.7	-0.6
SMF				pmax	pmax		
	comp=Z,11nm,0.9s						
AVF	Avril sur Loir	83.57	336	*e*P	P	09 26 32.9	-0.4
AVF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPL	La Plagne	83.67	333	*e*P	P	09 26 33.9	-0.2
LPL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LPG	La Plagne	83.68	333	*e*P	P	09 26 34.0	-0.3
LPG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SGMF	Saint Gilles	83.82	340	*e*P	P	09 26 34.5	-0.1
SGMF				pmax	pmax		
	comp=Z,46nm,1.5s						
ROSF	Rostrenen	83.92	340	*e*P	P	09 26 35.0	-0.1
ROSF				pmax	pmax		
	comp=Z,29nm,1.1s						
QUIF	Quistinic	84.29	340	*e*P	P	09 26 36.6	-0.3
QUIF				pmax	pmax		
	comp=Z,79nm,1.8s						
MBDF	Montbardon	84.36	333	*e*P	P	09 26 37.0	-0.5
MBDF				pmax	pmax		
	comp=Z,14nm,1.4s						
ORIF	Oris-en-Rattie	84.48	333	*e*P	P	09 26 37.8	-0.3
ORIF				pmax	pmax		
	comp=Z,50nm,2.0s						
MFF	Saint Martin d	84.73	338	*e*P	P	09 26 39.4	+0.2
MFF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CAF	Calviac	85.64	336	*e*P	P	09 26 44.2	+0.4
CAF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ETSF	Etsaut	88.26	337	*e*P	P	09 26 56.9	+0.4
ETSF				pmax	pmax		
	comp=Z,24nm,1.6s						
ESDC	Sonseca Array	92.20	338	P	P	09 27 14.3	-0.6
	comp=Z,0.3nm,0.4s,baz=33,slow=4.1,SNR=3.9						
TORD	Torodi Ar. Bea	114.49	322	PKP	PKiKP	09 32 43.9	-0.8
	comp=Z,0.2nm,0.3s,baz=32,slow=2.4,SNR=4.5						

DJA 20 09:18:55.7±1.7,8°S±16°×12°1E±°,h72^{km}±35^{km},M3.8/5, MLv3.8/5,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.87	142	P	Pn	09 19 13.4	+0.6
MMRI	Maumere	1.22	118	P	Pn	09 19 16.8	-0.3
WSI	Waingapu	1.81	208	P	Pn	09 19 24.9	+0.1

MEX 20 09:26:05.2±0.6,19°.64N×104°.27W,h3^{km}±6^{km},MD3.7, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		0.54	150	*e*P	Pg	09 26 15.0	-0.5
R15V				*e*P	Pb	09 26 15.2	-2.1
R15V				*e*S	Sg	09 26 23.6	+1.0
EZ5V		0.65	104	*e*P	Pg	09 26 17.3	-0.4
EZ5V				*i* S	Sg	09 26 27.1	+0.9
CJM	Chamela	0.74	259	*e*P	Pg	09 26 18.4	-1.0
CJM				*i* S	Sg	09 26 28.9	-0.1
ANIG	Ahuacatlan	1.43	351	*e*P	Pn	09 26 29.2	-3.0

MEX 20 09:33:08.3±0.5,16°.02N×98°.35W,h2^{km},MD3.6,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.42	30	*e*P	Pg	09 33 16.0	-0.5
PNIG				*e*S	Sg	09 33 22.4	+0.4

*IDC **20** 09:49:56.9±1.3, 10°.63S×164°.34E, h0^{km}, mb4.0/6, mb1 4.2/9, mb1mx3.9/49, mbtmp4.1/9, ML4.1/3, MS3.3/5, Ms1 3.3/5, ms1mx3.0/37, Error ellipse: s-maj=31.3km s-min=22.3km az=128.0*

*ISCJB **20** 09:49:58.4±0.5, 10°.72S±0°.06×164°.39E±0°.06, h24^{km}, mb4.4/14, MS3.4/4, Error ellipse: s-maj=9.6km s-min=7.7km az=30.5*

*NEIC **20** 09:49:58.3±0.3, 10°.66S×164°.39E, h10^{km}, mb4.3/9, Error ellipse: s-maj=6.7km s-min=6.1km az=112.0*

ISC 20 09:50:00.3±0.8,10°.67S±0°.09×164°.41E±0°.08,h24^{km},n38, σ0^{s}.84/33,mb4.4/15,MS3.4/4,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.57	285	*e*Pn	Pn	09 51 06.8	-1.1
HNR				*e*Sn	Sn	09 52 01.9	+1.7
HNR	Honiara	4.57	285	Pn	Pn	09 51 06.8	-1.1
	4.7nm,0.3s,baz=90,slow=20,SNR=3.1						
HNR				Sn	Sn	09 52 02.3	+2.1
	4.9nm,0.3s,baz=180,slow=20,SNR=2.2						
HNR				LR	LR	09 52 20.0	
	comp=Z,83nm,19.3s,baz=206,slow=32						
DZM	Mont Dzumac	11.50	171	*e*Pn	Pn	09 52 43.0	-0.2
DZM	Mont Dzumac	11.50	171	Pn	Pn	09 52 44.3	+1.2
	1.3nm,0.3s,baz=2.9,slow=14,SNR=18						
MANU	Manus Island	18.97	296	*e*P	Pn	09 54 20.6	-0.3
	24nm,0.9s						
EIDS	Eidsvold	19.32	219	*e*P	P	09 54 22.8	-1.1
	26nm,1.1s						
KWAJ	Kwajalein Atol	19.61	9	*e*P	P	09 54 26.6	-0.4
	440nm,1.3s						
CTA	Charters Tower	19.84	240	P	Pn	09 54 30.4	-0.8
	0.7nm,0.3s,baz=70,slow=12,SNR=19						
CTAO	Charters Tower	19.84	240	*e*P	P	09 54 30.0	+0.5
	12nm,0.9s						
COEN	Coen	21.00	259	*e*P	P	09 54 42.0	-0.3
	6.2nm,0.7s						
ARMA	Armidale	22.97	209	*e*P	P	09 55 03.9	+0.6
	52nm,1.6s						
NIUE	Niue	26.14	112	*e*P	P	09 55 33.3	+0.5
	256nm,1.3s						
H11S2	WAKE ISLAND Hy	29.07	4	T	T	10 26 26.0	
	baz=184,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.07	4	T	T	10 26 26.4	
	baz=184,slow=76,SNR=6.5						
H11S1	WAKE ISLAND Hy	29.08	4	T	T	10 26 20.1	
	baz=184,slow=76,SNR=7.3						
HIZ	Hauiti	29.26	163	*e*P	P	09 55 59.5	-1.0
	30nm,1.3s						
URZ	Urewera	29.73	160	LR	LR	10 07 05.6	
	comp=Z,71nm,19.9s,baz=352,slow=34						
STKA	Stephens Creek	29.83	222	*e*P	P	09 56 05.7	0.0
	2.3nm,1.1s						
STKA	Stephens Creek	29.83	222	P	P	09 56 06.0	+0.3
	3.1nm,0.8s,baz=76,slow=8.3,SNR=5.3						
H11N1	WAKE ISLAND Hy	30.29	5	T	T	10 27 55.0	
	baz=184,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.30	5	T	T	10 27 56.7	
	baz=184,slow=76,SNR=15						
H11N2	WAKE ISLAND Hy	30.31	5	T	T	10 27 59.8	
	baz=184,slow=76,SNR=14						
WB2	Warramunga Arr	30.38	249	*e*P	P	09 56 11.1	+0.4
WR1	Warramunga Arr	30.39	249	*e*P	P	09 56 09.8	-1.0
	7.4nm,1.3s						
WRA	Warramunga Arr	30.39	249	P	P	09 56 09.8	-1.0
	0.8nm,0.6s,baz=78,slow=9.3,SNR=6.5						
WRA				LR	LR	10 07 48.5	
	comp=Z,129nm,20.6s,baz=65,slow=35						
AS01	Alice Springs	31.76	242	*e*P	P	09 56 22.8	-0.1
AS31	Alice Springs	31.80	242	*e*P	P	09 56 23.7	+0.4
	2.2nm,1.5s						
ASAR	Alice Springs	31.80	242	P	P	09 56 22.2	-1.0
	0.5nm,0.7s,baz=64,slow=10,SNR=11						
ASAR				LR	LR	10 07 52.2	
	comp=Z,70nm,19.6s,baz=78,slow=34						
SNZO	South Karori	31.84	165	*e*P	P	09 56 23.8	+0.6
	60nm,1.3s						
THZ	Tophouse	31.86	168	*e*P	P	09 56 24.3	+0.8
	57nm,1.6s						
FITZ	Fitzroy Crossi	38.21	254	*e*P	P	09 57 17.9	-0.6
	4.1nm,0.8s						
FITZ	Fitzroy Crossi	38.21	254	P	P	09 57 18.1	-0.5
	3.8nm,0.7s,baz=114,slow=8.9,SNR=14						
FITZ				LR	LR	10 11 51.6	

	comp=Z,86nm,21.3s,baz=70,slow=34						
SONA0	**Songino Array**	**77.60**	**324**	*e*P	**P**	**10 01 55.1**	**+0.5**
SONM	**Songino Array**	**77.60**	**324**	P	**P**	**10 01 55.1**	**+0.5**
	0.3nm,0.4s,baz=101,slow=7.5,SNR=2.5						
HDA	**Harding Lake**	**83.32**	**19**	*e*P	**P**	**10 02 24.7**	**-0.1**
	8.3nm,1.1s						
IL1	**Eielson Array**	**83.58**	**19**	*e*P	**P**	**10 02 26.9**	**+0.7**
ILAR	**Eielson Array**	**83.58**	**19**	P	**P**	**10 02 26.5**	**+0.3**
	1.8nm,0.8s,baz=234,slow=5.4,SNR=18						
ILB	**Eielson Array**	**83.58**	**19**	*e*P	**P**	**10 02 25.7**	**-0.5**
	4.7nm,1.0s						

IDC 20 09:51:51.8±3.0**, 55°.85N×86°.25E, $h0^{km}$, mb1 2.9**/4**, mb1mx2.9**/69**, mbtmp2.9**/4**, ML2.5**/4**, Error ellipse: s-maj=27.6km s-min=21.0km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.08**	**204**	*i*		10 04 57.0	
	baz=23,slow=329,SNR=1.0						
ZALV	**Zalesovo Beam**	**2.08**	**204**	Pn	Pn	09 52 28.8	+0.9
	2.4nm,0.3s,baz=22,slow=15,SNR=24						
ZALV				Lg	Lg	09 52 59.1	
	3.2nm,0.3s,baz=25,slow=25,SNR=12						
KURBB	**Kurchatov Arra**	**6.99**	**225**	Pn	Pn	09 53 33.8	-1.5
	0.1nm,0.3s,baz=42,slow=14,SNR=7.1						
KURBB				Sn	Sn	09 54 53.3	-2.2
	0.1nm,0.3s,baz=42,slow=30,SNR=3.4						
MKAR	**Makanchi Array**	**9.40**	**197**	Pn	Pn	09 54 08.9	+0.4
	0.1nm,0.3s,baz=19,slow=14,SNR=3.2						
MKAR				Sn	Sn	09 55 38.6	-16
	0.0nm,0.3s,baz=0.7,slow=12,SNR=3.3						
BVAR	**Borovoye Array**	**9.66**	**260**	Pn	Pn	09 54 11.9	-0.2
	0.2nm,0.3s,baz=67,slow=11,SNR=4.2						

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*IDC **20** 09:53:47.0±2.4, 36°.25N×70°.98E, $h127^{km}$±21^{km}, mb4.0/20, mb1 4.1/27, mb1mx3.8/71, mbtmp4.5/27, MS2.9/1, Ms1 2.9/1, ms1mx2.4/54, Error ellipse: s-maj=15.4km s-min=11.8km az=21.0*

*ISCJB **20** 09:53:48.5±0.2, 36°.42N±0°.02×71°.03E±0°.03, $h150^{km}$, mb4.3/48, Error ellipse: s-maj=3.4km s-min=2.5km az=171.3*

*NNC **20** 09:53:48.6±2.4, 36°.91N×70°.47E, $h0^{km}$, mb5.2, mpv5.1, Error ellipse: s-maj=23.2km s-min=11.8km az=156.0*

*BJI **20** 09:53:48.7, 36°.39N×71°.12E, $h133^{km}$, mB4.8/14, mb4.5/18*

*NEIC **20** 09:53:49.1±0.5, 36°.42N×71°.03E, $h137^{km}$±4^{km}, mb4.6/15, Error ellipse: s-maj=5.6km s-min=5.3km az=113.0*

*MOS **20** 09:53:49.1±1.0, 36°.46N×71°.05E, $h148^{km}$, mb4.6/25, Error ellipse: s-maj=8.0km s-min=4.0km az=89.2*

ISC 20 09:53:49.7±0.4**, 36°.42N**±0°.04×**70°.90E**±0°.04**, $h150^{km}$, n183, σ2^{s}12**/212**, mb4.5**/47**, 27C-12D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.41**	**220**	*e*Pn	**Pn**	**09 54 30.1**	**+0.1**
KBL				*e*Sn	**Sn**	**09 55 00.2**	**-0.8**
KBL	**Kabul**	**2.41**	**220**	*e*PN	**Pn**	**09 54 30.1**	**+0.1**
GAR	**Garm**	**2.62**	**350**	*e*Pn	**Pn**	**09 54 32.0**	**-0.4**
GAR				*e*Sn	**Sn**	**09 55 03.0**	**-2.4**
GAR	**Garm**	**2.62**	**350**	*e*PN	**Pn**	**09 54 32.0**	**-0.4**
CHGR	**Chuyangaron**	**2.63**	**329**	*e*Pn	**Pn**	**09 54 31.8**	**-0.7**
CHGR				*e*Sn	**Sn**	**09 55 03.2**	**-2.4**
CEP	**Cherat**	**2.72**	**162**	P	**Pn**	**09 54 32.8**	**-0.9**
CEP				S	**Sn**	**09 55 06.0**	**-1.6**
CHCP	**Chirah Chowk**	**3.37**	**144**	P	**Pn**	**09 54 41.2**	**-0.6**
NIL	**Nilore**	**3.37**	**144**	*e*Pn	**Pn**	**09 54 41.5**	**-0.4**
NIL				*e*Sn	**Sn**	**09 55 19.6**	**-2.6**
NIL	**Nilore**	**3.37**	**144**	*e*PN	**Pn**	**09 54 41.5**	**-0.4**
BTK	**Batken**	**3.63**	**359**	*e*Pn	**Pn**	**09 54 47.6**	**+2.3**
BTK	**Batken**	**3.63**	**359**	*e*PN	**Pn**	**09 54 47.6**	**+2.3**
THW	**Thamme Wali**	**3.68**	**169**	P	**Pn**	**09 54 44.9**	**-1.0**
SFK	**Sufi-Kurgan**	**4.13**	**29**	⇑P	**Pn**	**09 54 51.9**	**0.0**
	220nm,0.6s						
SFK				⇑S	**Sn**	**09 55 38.4**	**-1.8**
	281nm,0.4s						
SFK	**Sufi-Kurgan**	**4.13**	**29**	PN	**Pn**	**09 54 51.9**	**0.0**
SFK				S	**Sn**	**09 55 38.3**	**-1.9**
SFK				pmax	pmax		
	comp=Z,219nm,0.6s						
SFK				smax	smax		
	comp=N,281nm,0.4s						
SARP	**Sargodha**	**4.72**	**161**	P	**Pn**	**09 54 57.8**	**-1.7**
KSH	**Kashi**	**5.06**	**51**	P	Pn	09 54 58.9	-5.1
KSH				S	Sn	09 55 50.6	-11
KSH				smax	smax		
	comp=N,4μm,0.5s						
KSH				smax	smax		
	comp=N,2μm,0.7s						
TAS	**Tashkent**	**5.06**	**346**	PN	**Pn**	**09 55 03.5**	**-0.4**
AML	**Almayashu**	**6.10**	**20**	P	**Pn**	**09 55 17.1**	**-1.0**
	SNR=285						
MNAS	**Manas**	**6.19**	**11**	⇑P	**Pn**	**09 55 17.9**	**-1.1**
	comp=N,117nm,0.6s						
MNAS				⇑S	**Sn**	**09 56 24.8**	**-4.0**
	comp=N,195nm,0.6s						
MNAS	**Manas**	**6.19**	**11**	PN	**Pn**	**09 55 17.9**	**-1.1**
MNAS				pmax	pmax		
	comp=Z,117nm,0.6s						
NRN	**Naryn**	**6.39**	**37**	*e*Pn	**Pn**	**09 55 19.6**	**-2.3**
NRN	**Naryn**	**6.39**	**37**	*e*PN	**Pn**	**09 55 19.6**	**-2.3**
UCH	**Uchtor**	**6.44**	**25**	P	**Pn**	**09 55 21.5**	**-1.2**
	SNR=183						
KZA	**Kyzart**	**6.58**	**30**	P	**Pn**	**09 55 22.9**	**-1.6**
	SNR=56						
EKS2	**Erkin-Say**	**6.62**	**19**	P	**Pn**	**09 55 23.9**	**-0.8**
	SNR=161						
KK31	**Karatay Array**	**6.68**	**358**	*e*Pn	**Pn**	**09 55 24.7**	**-0.8**
KK31				*e*Sn	**Sn**	**09 56 37.8**	**-2.8**
KK31	**Karatay Array**	**6.68**	**358**	⇓P	**Pn**	**09 55 23.7**	**-1.8**
	comp=Z,153nm,0.4s,baz=181,slow=13						
KK31				⇑S	**Sn**	**09 56 35.5**	**-5.0**
	comp=Z,161nm,0.5s,baz=185,slow=23						
KK31	**Karatay Array**	**6.68**	**358**	*e*PN	**Pn**	**09 55 24.7**	**-0.8**
KKAR	**Karatay Array**	**6.68**	**358**	*e*Pn	**Pn**	**09 55 24.8**	**-0.7**
KKAR				*e*Sn	**Sn**	**09 56 37.7**	**-2.9**
KKAR	**Karatay Array**	**6.68**	**358**	*e*PN	**Pn**	**09 55 24.8**	**-0.7**
AAK	**Ala-Archa**	**6.80**	**23**	P	**Pn**	**09 55 26.4**	**-0.8**
	SNR=123						
AAK	**Ala-Archa**	**6.80**	**23**	*e*Pn	**Pn**	**09 55 26.3**	**-1.0**
AAK				S	**Sn**	**09 56 40.4**	**-3.2**
AAK	**Ala-Archa**	**6.80**	**23**	⇑P	**Pn**	**09 55 26.0**	**-1.2**
	comp=Z,59nm,0.6s						
AAK				⇓S	**Sn**	**09 56 39.9**	**-3.7**
	comp=Z,200nm,1.1s						
AAK	**Ala-Archa**	**6.80**	**23**	*d i*PN	**Pn**	**09 55 26.2**	**-1.0**
AAK				pmax	pmax		
	comp=Z,84nm,0.8s						
AAK	**Ala-Archa**	**6.80**	**23**	P	**Pn**	**09 55 26.0**	**-1.2**
	comp=Z,26nm,0.3s,baz=177,slow=6.5,SNR=157						
AAK				S	**Sn**	**09 56 40.4**	**-3.2**
	comp=Z,17nm,0.3s,baz=325,slow=22,SNR=11						
AAK				LR	LR	09 58 07.4	
	comp=Z,92nm,20.5s,baz=272,slow=38						
KBK	**Karagaybulak**	**6.97**	**25**	P	**Pn**	**09 55 28.6**	**-0.8**
	SNR=68						
FRU1	**Bishkek**	**7.00**	**23**	*e*Pn	**Pn**	**09 55 29.4**	**-0.4**
FRU1	**Bishkek**	**7.00**	**23**	*e*PN	**Pn**	**09 55 29.4**	**-0.4**
ULHL	**Ulahol**	**7.14**	**34**	P	**Pn**	**09 55 30.8**	**-1.0**
	SNR=12						
BOOM	**Boomskoye usch**	**7.21**	**31**	PN	**Pn**	**09 55 31.3**	**-1.3**
CHMS	**Chumysh**	**7.21**	**23**	P	**Pn**	**09 55 31.3**	**-1.2**
	SNR=66						
USP	**Ospenovka**	**7.38**	**21**	P	**Pn**	**09 55 33.1**	**-1.6**
	SNR=44						
TKM2	**Tokmak 2**	**7.43**	**28**	P	**Pn**	**09 55 34.5**	**-1.2**
	SNR=123						
TKM2	**Tokmak 2**	**7.43**	**28**	⇑P	**Pn**	**09 55 34.3**	**-1.4**
	comp=Z,78nm,0.6s						
TKM2				⇓S	**Sn**	**09 56 56.0**	**-2.8**
	comp=Z,73nm,0.9s						
TKM2	**Tokmak 2**	**7.43**	**28**	PN	**Pn**	**09 55 34.3**	**-1.4**
TKM2				pmax	pmax		
	comp=Z,78nm,0.6s						
TARG	**Taragay, Kyrgy**	**7.54**	**43**	*e*Pn	**Pn**	**09 55 36.4**	**-1.0**
MDOK	**Medeo**	**8.23**	**33**	P	**Pn**	**09 55 45.5**	**-0.8**
	comp=Z,58nm,0.7s						
MDOK				S	**Sn**	**09 57 17.3**	**-0.6**
	comp=Z,23nm,0.8s						
PRZ	**Przheval'sk**	**8.38**	**41**	*e*Pn	**Pn**	**09 55 47.8**	**-0.5**
PRZ	**Przheval'sk**	**8.38**	**41**	*e*PN	**Pn**	**09 55 47.8**	**-0.5**
PDGK	**Podgornoye**	**9.55**	**41**	⇓P	**Pn**	**09 56 02.9**	**-0.8**
	comp=Z,11nm,0.7s						
PDGK				⇓S	**Sn**	**09 57 53.4**	**+3.9**
	comp=Z,39nm,1.1s						
PDGK	**Podgornoye**	**9.55**	**41**	P	**Pn**	**09 56 02.9**	**-0.8**
PDGK				S	**Sn**	**09 57 53.4**	**+3.9**
PDGK				pmax	pmax		
	comp=Z,11nm,0.6s						
PDGK				smax	smax		
	comp=N,34nm,1.1s						
GEYT	**Alibeck**	**10.31**	**282**	P	**Pn**	**09 56 11.6**	**-2.3**
	comp=N,5.3nm,0.3s,baz=101,slow=11,SNR=23						
GEYT				S	**Sn**	**09 58 03.5**	**-4.5**
	comp=N,21nm,0.3s,baz=118,slow=19,SNR=13						
GYA0B	**ALIBECK ARRAY**	**10.31**	**282**	*e*Pn	**Pn**	**09 56 12.3**	**-1.6**
GYA0B	**ALIBECK ARRAY**	**10.31**	**282**	⇑P	**Pn**	**09 56 12.0**	**-1.9**
	comp=N,8.0nm,0.3s						
GYA0B				⇑S	**Sn**	**09 58 03.8**	**-4.2**
	comp=N,151nm,0.7s						
OTUK	**Ortayu**	**11.87**	**5**	P	**Pn**	**09 56 32.3**	**-1.8**
OTUK				pmax	pmax		
	comp=Z,33nm,1.0s						
PYUN	**Piuthan**	**13.16**	**126**	*e*P	**Pn**	**09 56 47.5**	**-3.7**
	comp=Z,100nm,0.6s						
MAKZ	**Makanchi**	**13.27**	**35**	*e*Pn	**Pn**	**09 56 49.7**	**-2.5**
MAKZ	**Makanchi**	**13.27**	**35**	*e*P	**Pn**	**09 56 49.7**	**-2.5**
MK01	**Makanchi Array**	**13.39**	**36**	*e*Pn	**Pn**	**09 56 52.4**	**-1.4**
MK31	**Makanchi Array**	**13.40**	**36**	*e*Pn	**Pn**	**09 56 52.5**	**-1.5**
MK31	**Makanchi Array**	**13.40**	**36**	*e*P	**Pn**	**09 56 52.5**	**-1.5**
MKAR	**Makanchi Array**	**13.40**	**36**	*e*Pn	**Pn**	**09 56 52.5**	**-1.4**
MKAR	**Makanchi Array**	**13.40**	**36**	*e*P	**Pn**	**09 56 52.5**	**-1.4**
MKAR	**Makanchi Array**	**13.40**	**36**	P	**Pn**	**09 56 52.1**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=221,slow=13,SNR=31						
DANN	**Dangsing**	**13.51**	**123**	*e*P	**Pn**	**09 56 51.7**	**-4.0**
	comp=Z,107nm,0.7s						
KOLN	**Koldanda**	**13.78**	**125**	*e*P	**Pn**	**09 56 55.5**	**-3.6**
	comp=Z,81nm,0.9s						
WMQ	**Urumqi**	**14.81**	**55**	*e*P	**P**	**09 57 11.3**	**-2.5**
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.1s						
DMN	**Daman**	**14.90**	**122**	*e*P	**Pn**	**09 57 10.1**	**-3.0**
	comp=Z,52nm,0.6s						
KKN	**Kakani**	**14.90**	**121**	*e*P	**Pn**	**09 57 09.7**	**-3.5**
	comp=Z,84nm,0.7s						
AB31	**Akbulak array**	**15.12**	**331**	P	**Pn**	**09 57 13.9**	**-1.5**
	comp=Z,22nm,0.8s,baz=141,slow=11,SNR=178						
AB31				⇓S	**Sn**	**09 59 57.9**	**-5.4**
	comp=Z,25nm,0.6s,baz=154,slow=23,SNR=18						
AB31	**Akbulak array**	**15.12**	**331**	P	**Pn**	**09 57 13.9**	**-1.5**
AB31				S	**Sn**	**09 59 57.9**	**-5.4**
AB31				pmax	pmax		
	comp=Z,22nm,0.8s						
AB31				smax	smax		
	comp=Z,25nm,0.6s						
ABKAR	**Akbulak array**	**15.12**	**331**	*e*Pn	**Pn**	**09 57 14.2**	**-1.2**
PKIN	**Phulchoki**	**15.12**	**122**	*e*P	**Pn**	**09 57 12.9**	**-3.0**
	comp=Z,69nm,0.7s						
PKI	**Pulchoki**	**15.13**	**122**	*e*P	**Pn**	**09 57 12.9**	**-3.2**
	comp=Z,81nm,0.6s						
KURBB	**Kurchatov Arra**	**15.22**	**19**	P	**Pn**	**09 57 15.0**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=210,slow=11,SNR=20						
GUN	**Gumba**	**15.25**	**120**	*e*P	**Pn**	**09 57 15.0**	**-2.5**
	comp=Z,66nm,0.8s						
KURK	**Kurchatov**	**15.33**	**19**	*e*Pn	**Pn**	**09 57 15.2**	**-2.9**
	comp=Z,17nm,0.9s						
KURK	**Kurchatov**	**15.33**	**19**	*c i*P	**Pn**	**09 57 16.7**	**-1.3**
KURK				pmax	pmax		
	comp=Z,36nm,1.7s						
JBP	**Jabalpur**	**15.37**	**147**	⇑*e*P	**P**	**09 57 20.8**	**+0.8**
JBP				*e*S	Sn	09 59 51.1	-19
JIRN	**Jiri**	**15.62**	**120**	*e*P	**Pn**	**09 57 20.2**	**-1.9**
	comp=Z,141nm,0.5s						
RAMN	**Ramite**	**16.34**	**121**	*e*P	**Pn**	**09 57 28.2**	**-2.7**
	comp=Z,73nm,0.7s						
BVA0	**Borovoye Array**	**16.61**	**359**	⇑P	**Pn**	**09 57 33.9**	**+0.3**
	comp=Z,25nm,1.3s,baz=175,slow=10,SNR=67						
BVA0	**Borovoye Array**	**16.61**	**359**	P	**Pn**	**09 57 33.9**	**+0.3**
BVA0				pmax	pmax		
	comp=Z,25nm,1.3s						
BVAR	**Borovoye Array**	**16.61**	**359**	P	**Pn**	**09 57 33.2**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=181,slow=12,SNR=34						
BVAR				S	**S**	**10 00 32.2**	**-5.9**
	comp=Z,1.1nm,0.3s,baz=165,slow=23,SNR=5.3						
BRVK	**Borovoye**	**16.64**	**359**	*e*Pn	**P**	**09 57 33.1**	**-0.7**
	comp=Z,89nm,1.7s						
BRVK	**Borovoye**	**16.64**	**359**	⇓P	**Pn**	**09 57 35.1**	**+1.0**
	comp=Z,24nm,1.0s						
BRVK	**Borovoye**	**16.64**	**359**	⇑*e*P	**P**	**09 57 33.3**	**-0.6**
MDH	**Madha**	**16.71**	**233**	P	**P**	**09 57 35.0**	**+0.2**
AKTO	**Aktyubinsk**	**16.81**	**330**	⇑P	**Pn**	**09 57 36.4**	**+0.3**
	comp=Z,74nm,0.8s						
AKTO				⇓S	**S**	**10 00 38.5**	**-4.4**
	comp=Z,49nm,0.8s						
AKTO	**Aktyubinsk**	**16.81**	**330**	P	**Pn**	**09 57 36.6**	**+0.5**
	comp=Z,4.8nm,0.3s,baz=127,slow=11,SNR=142						
AKTO				S	**S**	**10 00 37.9**	**-5.0**
	comp=Z,2.6nm,0.3s,baz=108,slow=18,SNR=6.0						
WSAR	**Wadi Sarin**	**16.89**	**222**	P	**P**	**09 57 36.2**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=51,slow=5.5,SNR=9.5						
UOSS	**Minazif**	**17.02**	**232**	*e*P	**Pn**	**09 57 39.6**	**+0.7**
	comp=Z,15nm,0.6s						
UOSS	**Minazif**	**17.02**	**232**	P	**P**	**09 57 37.9**	**-0.4**
ASHO	**Ashiyiah**	**17.30**	**232**	P	**Pn**	**09 57 43.2**	**+0.9**
	SNR=19						
DGZ	**Jazzator, Alta**	**17.89**	**37**	*c i*P	**Pn**	**09 57 48.4**	**-0.8**
SEKA	**Sheki**	**19.06**	**292**	P	**Pn**	**09 58 03.8**	**+0.9**
ZAA0	**Zalesovo Array**	**20.02**	**25**	*e*P	**P**	**09 58 11.0**	**+0.4**
	comp=Z,24nm,0.6s						
ZALV	**Zalesovo Beam**	**20.02**	**25**	*i* P	**P**	**09 58 11.0**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,19nm,0.4s						
ZALV	**Zalesovo Beam**	**20.02**	**25**	P	**P**	**09 58 10.9**	**+0.3**
	comp=Z,19nm,0.4s,baz=224,slow=12,SNR=47						
HYB	**Hyderabad**	**20.10**	**158**	*i* P	Pn	09 58 13.0	-2.3
HYB				*e*S	**S**	**10 01 46.0**	**-3.6**
NVS	**Novosibirsk**	**20.29**	**21**	⇑*i*P	Pn	09 58 14.5	-2.6
NVS				*e*		09 58 59.0	
NVS				pmax	pmax		
	comp=N,14nm,0.9s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,14nm,0.9s						
GROC	**Groznyy**	**20.40**	**297**	*e*P	Pn	09 58 18.9	+0.3
GROC				pmax	pmax		
	comp=Z,17nm,0.4s						
GNI	**Garni**	**20.84**	**288**	⇑*e*P	**P**	**09 58 22.3**	**+2.5**
GNI				pmax	pmax		
	comp=Z,53nm,1.0s						
GNI	**Garni**	**20.84**	**288**	P	**P**	**09 58 19.9**	**+0.2**
	comp=Z,8.5nm,0.7s,baz=206,slow=18,SNR=2.7						
SHL	**Shillong**	**20.95**	**115**	*e*P	**P**	**09 58 21.2**	**+0.2**
	comp=Z,15nm,0.9s						
TBLG	**Delisi**	**20.96**	**293**	*e*P	**P**	**09 58 24.5**	**+3.7**
	comp=Z,9.9nm,0.6s						
TBLG	**Delisi**	**20.96**	**293**	*e*P	**P**	**09 58 24.5**	**+3.7**
TBLG				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SVE	**Sverdlovsk**	**21.55**	**345**	⇑*i*P	**P**	**09 58 28.5**	**+1.5**
SVE				*e*S	**S**	**10 02 25.6**	**+9.5**
SVE				pmax	pmax		
	comp=Z,43nm,1.3s						
ARU	**Arti**	**21.68**	**341**	*e*P	**P**	**09 58 29.5**	**+1.1**
	comp=Z,50nm,1.2s						
ARU	**Arti**	**21.68**	**341**	*c i*P	**P**	**09 58 29.7**	**+1.3**
ARU						09 59 03.7	
ARU				S	**S**	**10 02 21.2**	**+2.8**
ARU				pmax	pmax		
	comp=Z,47nm,1.1s						
ZEI	**Tsey**	**21.70**	**295**	*e*P	**P**	**09 58 31.3**	**+2.3**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KBZ	**Khabaz**	**22.57**	**298**	P	**P**	**09 58 37.9**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=127,slow=9.9,SNR=3.6						
GOF	**Gofitskoye**	**22.72**	**301**	*e*P	P	09 58 53.5	+15
KIV	**Kislovodsk**	**22.76**	**298**	*e*P	**P**	**09 58 43.0**	**+3.8**
KIV				*e*S	**S**	**10 02 42.2**	**+5.7**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA	**Gaotai**	**22.96**	**74**	*e*P	**P**	**09 58 43.3**	**+2.1**
GTA				S	**S**	**10 02 39.3**	**-0.7**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,7.1s						
GTA				LR	LR		
	comp=Z,130nm,17.8s						
GTA				LR	LR		
	comp=Z,140nm,19.0s						
GTA				LR	LR		
	comp=Z,110nm,16.5s						
KNGR	**Kungurtug, Tuv**	**23.79**	**45**	⇑*e*P	**P**	**09 58 49.2**	**+0.6**
ABTO	**Aybut**	**24.56**	**224**	P	**P**	**09 58 56.2**	**+0.3**
	SNR=5.7						
VRH	**Novokhopyorsk**	**25.51**	**315**	*e*P	**P**	**09 59 05.0**	**+1.0**
VRH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KIRV	**Kirov**	**26.28**	**334**	P	**P**	**09 59 12.6**	**+1.8**
	comp=Z,17nm,0.5s,baz=139,slow=12,SNR=4.8						
LZH	**Lanzhou**	**26.50**	**81**	*e*P	**P**	**09 59 14.9**	**+1.6**
LZH				pP	pP	09 59 42.3	-3.8
LZH				sP	sP	09 59 59.9	-4.2
LZH				PP	**PnPn**	**10 00 03.1**	**+0.2**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,270nm,4.4s						
VSR	**Storozhevoye**	**27.00**	**313**	*e*P	**P**	**09 59 17.4**	**0.0**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LPSR	**Galich'ya Gora**	**27.66**	**316**	*e*P	**P**	**09 59 24.5**	**+1.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	**Chengdu**	**27.81**	**92**	*e*P	**P**	**09 59 25.0**	**+0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SONM	**Songino Array**	**28.45**	**55**	P	**P**	**09 59 31.4**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=246,slow=9.7,SNR=4.7						
KMI	**Kunming**	**29.45**	**103**	P	**P**	**09 59 40.8**	**+1.1**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PRGR	**Permogore**	**29.81**	**336**	*e*P	**P**	**09 59 40.7**	**-1.5**
PRGR				pmax	pmax		
	comp=Z,11nm,0.6s						
OBN	**Obninsk**	**29.95**	**320**	⇓*e*P	**P**	**09 59 45.6**	**+2.2**
OBN				*i* *PP	**pP**	**10 00 15.8**	**+0.1**
OBN				*e*		10 00 44.4	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**30.49**	**118**	*ce*P	**P**	**09 59 51.9**	**+3.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**30.49**	**118**	P	**P**	**09 59 48.3**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=301,slow=8.3,SNR=7.3						
KLMR	**Klimovskoe**	**31.51**	**331**	*e*P	**P**	**09 59 57.7**	**+0.6**
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	**Klimovskoe**	**31.51**	**331**	*e*P	**P**	**09 59 57.7**	**+0.6**
KLMR				AMP		09 59 59.2	
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**31.87**	**69**	*e*P	**P**	**10 00 03.6**	**+2.9**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.3s						
AKASG	**Malin Array Be**	**32.94**	**309**	*ce*P	**P**	**10 00 11.3**	**+1.6**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	**Malin Array Be**	**32.94**	**309**	P	**P**	**10 00 10.6**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=80,slow=7.2,SNR=18						
AKBB	**Malin Array Si**	**32.94**	**309**	*e*P	**P**	**10 00 11.4**	**+1.7**
	comp=Z,5.2nm,0.7s						
AKBB	**Malin Array Si**	**32.94**	**309**	*e*P	**P**	**10 00 11.4**	**+1.7**
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KIEV	**Kiev**	**32.94**	**309**	*e*P	**P**	**10 00 11.5**	**+1.7**
	comp=Z,5.0nm,0.7s						
KIEV	**Kiev**	**32.94**	**309**	⇑*i*P	**P**	**10 00 11.8**	**+2.0**
KIEV	**Kiev**	**32.94**	**309**	⇑*e*P	**P**	**10 00 10.8**	**+1.0**
KIEV				pmax	pmax		
	comp=Z,19nm,2.2s						
AK11	**Malin Array Si**	**32.97**	**309**	*e*P	**P**	**10 00 11.3**	**+1.4**
NRIK	**Noril'sk**	**34.22**	**10**	P	**P**	**10 00 21.0**	**+0.4**
	comp=Z,5.9nm,0.5s,baz=201,slow=5.1,SNR=8.1						
JOF	**Joensuu**	**35.90**	**330**	P	**P**	**10 00 37.1**	**+2.1**
JOF				pmax	pmax		
	comp=Z,25nm,2.9s						
VSU	**Vasula**	**36.20**	**322**	⇓*e*P	**P**	**10 00 39.3**	**+1.7**
VSU				pmax	pmax		
	comp=Z,43nm,1.1s						
LVZ	**Lovozero**	**37.51**	**338**	*e*P	**P**	**10 00 50.0**	**+1.4**
	comp=Z,87nm,1.6s						
LVZ	**Lovozero**	**37.51**	**338**	*e*P	**P**	**10 00 50.0**	**+1.4**
LVZ				pmax	pmax		
	comp=Z,87nm,1.6s						
FIA1	**FINESS Array S**	**37.51**	**326**	*e*P	**P**	**10 00 50.4**	**+1.7**
FINES	**FINESS Array B**	**37.51**	**326**	P	**P**	**10 00 50.4**	**+1.7**
	comp=Z,5.5nm,0.4s,baz=117,slow=9.4,SNR=38						
NJ2	**Nanjing**	**39.56**	**82**	*e*P	**P**	**10 01 07.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KEV	**Kevo**	**40.85**	**338**	*e*P	**P**	**10 01 18.0**	**+1.8**
	comp=Z,91nm,1.5s						
KEV	**Kevo**	**40.85**	**338**	*e*P	**P**	**10 01 18.0**	**+1.8**
KEV				pmax	pmax		
	comp=Z,91nm,1.5s						
ARCES	**ARCESS Array B**	**41.19**	**338**	*e*P	**P**	**10 01 21.1**	**+2.0**
ARCES	**ARCESS Array B**	**41.19**	**338**	*e*P	**P**	**10 01 21.1**	**+2.0**
ARCES	**ARCESS Array B**	**41.19**	**338**	P	**P**	**10 01 20.8**	**+1.7**
	comp=Z,9.0nm,0.6s,baz=111,slow=8.5,SNR=62						
ARE0	**ARCESS Array S**	**41.19**	**338**	*e*P	**P**	**10 01 21.1**	**+2.0**
	comp=Z,3.6nm,1.4s						
HFS	**Hagfors**	**43.08**	**322**	P	**P**	**10 01 35.8**	**+1.3**
	comp=Z,17nm,0.7s,baz=98,slow=10,SNR=35						
NC405	**NORSAR Array S**	**44.16**	**323**	*e*P	**P**	**10 01 44.1**	**+1.0**
NC602	**NORSAR Array S**	**44.21**	**323**	*e*P	**P**	**10 01 44.9**	**+1.4**
NORES	**NORESS Array B**	**44.21**	**323**	P	**P**	**10 01 44.7**	**+1.2**
NORES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NC303	**NORSAR Array S**	**44.34**	**323**	*e*P	**P**	**10 01 46.4**	**+1.9**
NB201	**NORSAR Array S**	**44.36**	**323**	*e*P	**P**	**10 01 46.4**	**+1.6**
NB2	**NORSAR Subarra**	**44.40**	**323**	P	**P**	**10 01 45.7**	**+0.6**
	comp=Z,10nm,0.7s,baz=94,slow=7.9						
NB2	**NORSAR Subarra**	**44.40**	**323**	P	**P**	**10 01 43.5**	**-1.6**
NB2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**10 01 46.1**	**+1.0**
	comp=Z,9.6nm,0.3s,baz=96,slow=7.8,SNR=35						
MDJ	**Mudanjiang**	**44.51**	**60**	P	**P**	**10 01 46.8**	**+0.7**
MDJ				PcS	**PcS**	**10 07 19.1**	**-1.1**
MDJ				S	**S**	**10 08 12.9**	**+2.9**
MDJ				pmax	pmax		
	comp=Z,12nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,280nm,3.7s						
NC204	**NORSAR Array S**	**44.64**	**323**	*e*P	**P**	**10 01 48.5**	**+1.5**
SPITS	**Spitsbergen Ar**	**47.55**	**347**	P	**P**	**10 02 11.6**	**+2.1**
	comp=Z,4.4nm,0.7s,baz=126,slow=4.2,SNR=6.4						
MA2	**Magadan**	**54.48**	**38**	⇑*e*P	**P**	**10 03 02.4**	**+1.0**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SEY	**Seymchan**	**54.53**	**34**	⇓*e*P	**P**	**10 03 02.7**	**+1.0**
DAG	**Danmarks Havn**	**54.78**	**344**	⇑*i*P	**P**	**10 03 05.0**	**+1.7**
	comp=Z,7.2nm,0.7s						
DAG	**Danmarks Havn**	**54.78**	**344**	⇑*i*P	**P**	**10 03 05.0**	**+1.7**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUMG	**Summit**	**61.11**	**341**	*e*P	**P**	**10 03 50.5**	**+2.6**
	comp=Z,19nm,1.4s						
SUMG	**Summit**	**61.11**	**341**	*e*P	**P**	**10 03 50.5**	**+2.6**
SUMG				pmax	pmax		
	comp=Z,19nm,1.4s						
TORD	**Torodi Ar. Bea**	**65.64**	**269**	P	**P**	**10 04 16.9**	**-1.1**
	comp=Z,6.7nm,1.0s,baz=32,slow=5.1,SNR=7.8						
TOLK	**Toolik Lake Re**	**71.02**	**15**	*e*P	**P**	**10 04 52.4**	**+1.6**
	comp=Z,26nm,1.8s						
INK	**Inuvik**	**74.00**	**9**	*e*P	**P**	**10 05 10.0**	**+1.7**
	comp=Z,27nm,2.0s						
INK	**Inuvik**	**74.00**	**9**	*e*P	**P**	**10 05 10.0**	**+1.7**
INK				pmax	pmax		
	comp=Z,27nm,2.0s						
INK	**Inuvik**	**74.00**	**9**	P	**P**	**10 05 08.4**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=347,slow=5.8,SNR=14						
ILAR	**Eielson Array**	**74.88**	**16**	P	**P**	**10 05 13.1**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=324,slow=3.5,SNR=5.9						
YKA	**Yellowknife Ar**	**81.33**	**3**	P	**P**	**10 05 49.6**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=351,slow=5.3,SNR=31						
YKB5	**Yellowknife Ar**	**81.33**	**3**	*e*P	**P**	**10 05 49.5**	**+0.5**
WRA	**Warramunga Arr**	**82.02**	**122**	P	**P**	**10 05 52.3**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=327,slow=5.5,SNR=3.8						

ASAR	Alice Springs	84.27	125	P	P	10 06 04.1	-0.6
	comp=Z,0.7nm,0.8s,baz=306,slow=5.2,SNR=3.2						
CTA	Charters Tower	90.58	115	P	P	10 06 33.5	-1.6
	comp=Z,1.3nm,0.6s,baz=282,slow=9.3,SNR=2.9						

MAN 20 09:53:50.3, 7°.98N×127°.36E, h5^{km}, MS3.7, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	1.01	281⇓	eP	Pn	09 54 12.0	+0.9
BIPH				eS	Sg	09 54 22.5	-0.2
BUTP	Butuan	1.98	300	eP	Pn	09 54 25.5	+1.0
BUTP				eS	Sb	09 54 50.9	-0.9
BUKP	Musuan	2.28	268	eP	Pn	09 54 29.5	+0.8
BUKP				eS	Sb	09 54 59.6	-0.9
KCP	Kidapawan	2.45	247⇓	eP	Pn	09 54 32.0	+1.0
KCP				i S	Sn	09 55 03.0	+1.6

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*IDC **20** 09:55:22.2±1.2, 11°.34S×162°.86E, h0^{km}, mb4.0/8, mb1 4.2/11, mb1mx4.0/48, mbtmp4.1/11, ML3.8/3, Error ellipse: s-maj=27.2km s-min=21.0km az=102.0*

*NEIC **20** 09:55:23.6±0.4, 11°.33S×162°.87E, h10^{km}, mb4.3/10, Error ellipse: s-maj=8.9km s-min=8.0km az=78.0*

*ISCJB **20** 09:55:24.9±0.5, 11°.39S±0°.05×162°.91E±0°.06, h33^{km}, mb4.3/16, Error ellipse: s-maj=9.4km s-min=5.3km az=142.4*

ISC 20 09:55:27.2±0.7, **11°.34S**±0°.07×**162°.89E**±0°.08, **h35^{km}, n39, σ1ˢ07**/38, **mb4.3**/16, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	3.46	303	eP	Pn	09 56 20.0	+1.4
HNR				eS	Sn	09 57 00.0	+1.6
HNR	Honiara	3.46	303	ePn	Pn	09 56 17.1	-1.6
HNR				eSn	Sn	09 56 59.6	+1.2
HNR				eSn	Sn	09 57 00.7	+2.3
HNR	Honiara	3.46	303	Pn	Pn	09 56 18.3	-0.3
	42nm,0.3s,baz=1.5,slow=5.0,SNR=20						
HNR				Sn	Sn	09 56 59.6	+1.2
	114nm,0.3s,baz=126,slow=14,SNR=8.0						
DZM	Mont Dzumac	11.20	163	ePn	Pn	09 58 04.4	-0.6
DZM				eSn	Sn	10 00 11.3	+2.3
DZM	Mont Dzumac	11.20	163	Pn	Pn	09 58 05.4	+0.5
	0.2nm,0.3s,baz=30,slow=4.9,SNR=9.2						
DZM				Sn	Sn	10 00 11.3	+2.3
	0.1nm,0.3s,baz=308,slow=18,SNR=1.8						
PINNC	Pines Island,	12.02	159	ePn	Pn	09 58 17.4	+1.3
FUNA	Funafuti	16.31	82	ePn	Pn	09 59 13.3	-0.4
	51nm,1.2s						
EIDS	Eidsvold	17.87	217	ePn	P	09 59 33.7	+0.1
	21nm,1.3s						
CTA	Charters Tower	18.20	239	P	Pn	09 59 37.9	+0.6
	0.2nm,0.3s,baz=73,slow=14,SNR=13						
CTAO	Charters Tower	18.20	239	ePn	Pn	09 59 37.5	+0.2
	20nm,1.1s						
COEN	Coen	19.41	260	eP	Pn	09 59 52.7	+0.8
	15nm,1.0s						
STKA	Stephens Creek	28.34	221	eP	P	10 01 16.5	-1.5
	1.9nm,0.8s						
WR1	Warramunga Arr	28.75	249	eP	P	10 01 20.8	-1.0
	19nm,1.6s						
WRA	Warramunga Arr	28.75	249	P	P	10 01 20.8	-1.0
	1.2nm,0.7s,baz=75,slow=9.4,SNR=5.0						
H11S2	WAKE ISLAND Hy	29.88	7	T	T	10 32 21.9	
	baz=189						
H11S3	WAKE ISLAND Hy	29.89	7	T	T	10 32 22.6	
	baz=189						
H11S1	WAKE ISLAND Hy	29.90	7	T	T	10 32 29.5	
	baz=189						
AS01	Alice Springs	30.12	242	eP	P	10 01 33.2	-0.7
AS31	Alice Springs	30.16	242	eP	P	10 01 34.1	-0.1
	0.9nm,0.8s						
ASAR	Alice Springs	30.16	242	P	P	10 01 32.8	-1.5
	1.2nm,0.7s,baz=80,slow=10,SNR=7.4						
TOO	Toolangi	30.43	208	eP	P	10 01 35.0	-1.5
	16nm,0.9s						
H11N1	WAKE ISLAND Hy	31.11	7	T	T	10 33 53.1	
	baz=193						
H11N3	WAKE ISLAND Hy	31.12	7	T	T	10 33 54.4	
	baz=193						
H11N2	WAKE ISLAND Hy	31.13	7	T	T	10 33 57.3	
	baz=193						
BFZ	Birch Farm	31.51	160	eP	P	10 01 45.7	-0.2
	41nm,1.2s						
SNZO	South Karori	31.61	163	eP	P	10 01 44.7	-2.0
	150nm,1.6s						
FITZ	Fitzroy Crossi	36.59	255	eP	P	10 02 29.3	-1.0
	5.8nm,1.1s						
FITZ	Fitzroy Crossi	36.59	255	P	P	10 02 31.2	+1.0
	2.5nm,0.7s,baz=106,slow=11,SNR=5.4						
KSRS	Korea Array	58.58	328	P	P	10 05 20.9	+0.3
	0.7nm,0.6s,baz=134,slow=7.1,SNR=4.4						
KS15	Wonju Array Si	58.59	328	eP	P	10 05 20.1	-0.6
	49nm,1.6s						
KSAR	Wonju Array Be	58.59	328	P	P	10 05 20.9	+0.2
USRK	Ussuriysk Ar.	62.00	335	P	P	10 05 44.3	+0.5
	2.7nm,0.8s,baz=131,slow=4.0,SNR=4.7						
ULN	Ulaanbaatar	76.92	325	eP	P	10 07 16.1	-0.1
	5.6nm,1.1s						
SONA0	Songino Array	77.27	325	eP	P	10 07 18.4	+0.2
SONM	Songino Array	77.27	325	P	P	10 07 18.4	+0.2
	2.9nm,0.9s,baz=141,slow=5.4,SNR=12						
ILAR	Eielson Array	84.70	19	P	P	10 07 57.8	+0.6
	0.5nm,0.5s,baz=243,slow=4.3,SNR=9.3						
ILB	Eielson Array	84.70	19	eP	P	10 07 57.8	+0.6
MK32	Makanchi Array	91.83	317	eP	P	10 08 31.5	-0.2
MKAR	Makanchi Array	91.83	317	P	P	10 08 31.5	-0.2
	0.5nm,0.7s,baz=87,slow=8.4,SNR=3.6						

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*IDC **20** 09:56:03.5±0.4, 10°.71N×41°.04W, h0^{km}, mb4.5/40, mb1 4.7/41, mb1mx4.6/60, mbtmp4.6/41, ML5.4/2, MS4.2/26, Ms1 4.3/26, ms1mx4.2/32, Error ellipse: s-maj=12.5km s-min=9.6km az=150.0*

*MOS **20** 09:56:03.8±1.2, 10°.68N×41°.10W, h10^{km}, mb5.1/68, Error ellipse: s-maj=7.9km s-min=4.8km az=57.0*

*ISCJB **20** 09:56:04.9±0.2, 10°.63N±0°.04×41°.04W±0°.02, h17^{km}, mb4.8/209, MS4.3/33, Error ellipse: s-maj=5.3km s-min=2.7km az=176.6*

*NEIC **20** 09:56:05.6±0.2, 10°.60N×41°.04W, h10^{km}, mb5.0/121, Error ellipse: s-maj=6.1km s-min=4.2km az=178.0*

*BJI **20** 09:56:06.6, 10°.60N×41°.10W, h19^{km}, Ms5.4/5, Ms7 4.9/5*

*GCMT **20** 09:56:09.6±0.2, 10°.81N±0°.01×40°.88W±0°.01, h18^{km}±1^{km}, MW5.1/102, Moment Tensor Solution. s34,c39; s102,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.77±.16; $M_{\theta\theta}$-0.63±.14; $M_{\phi\phi}$1.40±.13; $M_{r\theta}$-0.96±.32; $M_{\theta\phi}$-4.84±.13; $M_{\phi r}$1.52±.32; Best double couple: $M_0$5.19300×10^{16} NP1:ϕ_s7.00000°, δ82.00000°, λ13.00000°. NP2:ϕ_s275.00000°, δ77.00000°, λ172.00000°. Principal axes: T 5.8130, Plg15.0000°, Azm231.0000°; N -1.2430, Plg74.0000°, Azm37.0000°; P -4.5730, Plg4.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 09:56:06.7±0.3, **10°.61N**±0°.06×**41°.07W**±0°.06, **h17^{km}, n611, σ1ˢ09**/603, **mb4.9**/214, **MS4.3**/33, **26C-14D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	12.70	245	Pn	Pn	09 59 05.8	-0.8
	30nm,0.3s,baz=56,slow=14,SNR=153						
MDP				Sn	Sn	10 01 17.3	-10
	0.5nm,0.3s,baz=180,slow=20,SNR=2.6						
MDP				LR	LR	10 03 08.6	
	comp=Z,2μm,21.3s,baz=63,slow=33						
RCBR	Riachuelo	17.12	162	P	Pn	10 00 04.9	-0.5
	7.2nm,0.3s,baz=33,slow=0.8,SNR=2.3						
PTGA	Pitinga	21.91	240	eP	P	10 01 00.2	+0.9
	143nm,1.5s						
PTGA	Pitinga	21.91	240	P	P	10 00 59.6	+0.2
	33nm,0.7s,baz=56,slow=12,SNR=59						
PTGA				LR	LR	10 08 54.7	
	comp=Z,1μm,21.5s,baz=54,slow=35						
CDVI	St. Croix	24.03	290	eP	P	10 01 20.9	-0.1
	97nm,0.8s						
MTP	Monte Pirata	24.84	290	eP	P	10 01 28.6	+0.2
	195nm,2.0s						
HUMP	Col San Antoni	25.12	290	eP	P	10 01 30.2	-0.7
	53nm,1.3s						
SJG	San Juan	25.39	290	P	P	10 01 32.5	-0.9
	13nm,0.7s,baz=86,slow=14,SNR=2.1						
SJG				LR	LR	10 09 51.0	
	comp=Z,451nm,19.8s,baz=100,slow=33						
OBIP	Obispado Ponce	25.80	290	eP	P	10 01 36.0	-1.1
	53nm,1.0s						
MPR	Mayaguez	26.33	290	eP	P	10 01 41.5	-0.4
	280nm,2.0s						
BDFB	Brasilia	26.97	195	eP	P	10 01 45.2	-2.6
	38nm,1.5s						
BDFB	Brasilia	26.97	195	P	P	10 01 48.0	+0.2
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BDFB				MLR	MLR		
	comp=Z,1μm,21.6s						
BDFB	Brasilia	26.97	195	P	P	10 01 48.0	+0.2
	comp=Z,4.0nm,0.7s,baz=4.4,slow=10,SNR=4.5						
BDFB				LR	LR	10 11 45.7	
	comp=Z,1μm,21.6s,baz=31,slow=35						
SDV	Santo Domingo	29.18	269	eP	P	10 02 07.9	+0.1
	comp=Z,9.4nm,1.0s						
SDV	Santo Domingo	29.18	269	eP	P	10 02 07.5	-0.2
SDV	Santo Domingo	29.18	269	eP	P	10 02 07.5	-0.2
SDV	Santo Domingo	29.18	269	P	P	10 02 07.3	-0.5
	comp=Z,3.4nm,0.8s,baz=31,slow=7.2,SNR=4.1						
SDV				LR	LR	10 14 32.5	
	comp=Z,210nm,18.5s,baz=72,slow=38						
BANI	BANI	29.36	289	eP	P	10 02 08.7	-0.5
BARC	Barichara	31.99	265	eP	P	10 02 34.4	+1.8
BARC	Barichara	31.99	265	eP	P	10 02 34.4	+1.8
RUSC	La Rusia	32.01	264	eP	P	10 02 35.1	+2.0
RUSC	La Rusia	32.01	264	eP	P	10 02 35.1	+2.0
H10N3	ASCENSION HYDR	32.18	124	T	T	10 36 25.8	
	baz=304,slow=75,SNR=89						
H10N2	ASCENSION HYDR	32.18	124	T	T	10 36 31.9	
	baz=304,slow=75,SNR=113						
H10N1	ASCENSION HYDR	32.20	124	T	T	10 36 32.4	
	baz=304,slow=75,SNR=100						
H10S3	ASCENSION HYDR	32.69	126	T	T	10 37 04.2	
	baz=306,slow=75,SNR=64						
H10S1	ASCENSION HYDR	32.69	126	T	T	10 37 04.5	
	baz=306,slow=75,SNR=65						
H10S2	ASCENSION HYDR	32.70	126	T	T	10 37 04.7	
	baz=306,slow=75,SNR=51						
CHIC	Chingaza	32.89	262	eP	P	10 02 41.7	+1.0
CHIC	Chingaza	32.89	262	eP	P	10 02 41.7	+1.0
SIV	San Ignacio	33.02	217	P	P	10 02 41.9	+0.5
	comp=Z,3.8nm,0.7s,baz=54,slow=10,SNR=19						
PTBC	PUERTO BERRIO,	33.24	266	eP	P	10 02 39.0	-4.4
PTBC	PUERTO BERRIO,	33.24	266	eP	P	10 02 39.0	-4.4
SJAC	San Juan de Ar	33.42	260	eP	P	10 02 47.0	+2.0
SJAC	San Juan de Ar	33.42	260	eP	P	10 02 47.0	+2.0
ROSC	El Rosal	33.42	263	eP	P	10 02 46.4	+1.0
ROSC	El Rosal	33.42	263	eP	P	10 02 46.4	+1.0
ROSC	El Rosal	33.42	263	P	P	10 02 45.0	-0.3
	comp=Z,5.9nm,0.6s,baz=62,slow=7.7,SNR=3.6						
ROSC				LR	LR	10 16 36.5	
	comp=Z,401nm,18.5s,baz=76,slow=37						
RREF	El Recreo	34.41	263	eP	P	10 02 54.4	+0.2
RREF	El Recreo	34.41	263	eP	P	10 02 54.4	+0.2
PTLC	Puerto Leguiza	35.09	255	eP	P	10 03 01.4	+2.0
PTLC	Puerto Leguiza	35.09	255	eP	P	10 03 01.4	+2.0
MARP	Paez Belalcaza	35.46	260	eP	P	10 03 05.6	+2.7
MARP	Paez Belalcaza	35.46	260	eP	P	10 03 05.6	+2.7
YOTC	Yotoco, Valle	35.58	262	eP	P	10 03 01.5	-2.2
YOTC	Yotoco, Valle	35.58	262	eP	P	10 03 01.5	-2.2
TIC	Toumodi	35.85	93	eP	P	10 03 04.5	-1.4
LIC	Lamto	35.91	94	eP	P	10 03 05.3	-1.1
	comp=Z,66nm,1.1s						
DBIC	Dimbokro	36.00	93	eP	P	10 03 06.1	-1.1
	comp=Z,44nm,1.3s						
DBIC	Dimbokro	36.00	93	eP	P	10 03 06.1	-1.1
DBIC				pmax	pmax		
	comp=Z,44nm,1.3s						
DBIC	Dimbokro	36.00	93	P	P	10 03 05.8	-1.4
	comp=Z,11nm,0.7s,baz=273,slow=10.0,SNR=11						
KIC	Kosan Boka	36.16	94	eP	P	10 03 07.6	-1.0
	comp=Z,31nm,1.0s						
POPC	Popayan, Colom	36.23	260	eP	P	10 03 07.0	-2.4
POPC	Popayan, Colom	36.23	260	eP	P	10 03 07.0	-2.4
SOTA	Rioblanco	36.27	259	eP	P	10 03 10.4	+0.3
SOTA	Rioblanco	36.27	259	eP	P	10 03 10.4	+0.3
LPAZ	La Paz	37.83	225	eP	P	10 03 24.6	+1.2
	comp=Z,12nm,0.8s						
LPAZ	La Paz	37.83	225	eP	P	10 03 24.6	+1.2
LPAZ				pmax	pmax		
	comp=Z,12nm,0.8s						
LPAZ	La Paz	37.83	225	P	P	10 03 23.8	+0.4
	comp=Z,11nm,0.8s,baz=28,slow=7.7,SNR=38						
LPAZ				LR	LR	10 19 12.8	
	comp=Z,823nm,21.0s,baz=46,slow=37						
OTAV	Otavalo	38.56	257	eP	P	10 03 31.3	+1.8
	comp=Z,27nm,1.7s						
OTAV	Otavalo	38.56	257	eP	P	10 03 31.3	+1.8
OTAV				pmax	pmax		
	comp=Z,27nm,1.7s						
MORF	Marmelete	39.45	42	eP	P	10 03 36.0	-0.3
MORF				AMb	AMB	10 03 41.8	
	comp=Z,52nm,1.5s						
MORF	Marmelete	39.45	42	eP	P	10 03 35.9	-0.3
MORF				pmax	pmax		
	comp=Z,52nm,1.5s						
CPUP	Villa Florida	39.98	203	eP	P	10 03 41.8	+1.2
	comp=Z,22nm,1.9s						
CPUP	Villa Florida	39.98	203	P	P	10 03 40.1	-0.5
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CPUP				MLR	MLR		
	comp=Z,918nm,18.1s						
CPUP	Villa Florida	39.98	203	P	P	10 03 40.0	-0.5
	comp=Z,1.2nm,0.4s,baz=15,slow=10.0,SNR=4.6						
CPUP				LR	LR	10 20 20.7	
	comp=Z,918nm,18.1s,baz=24,slow=36						
PNCL	Nicolau / Gran	39.99	41	eP	P	10 03 40.8	+0.2
	comp=Z,48nm,1.6s						
MESJ	Messejana	40.04	42	eP	P	10 03 40.7	-0.3
MESJ				AMb	AMB	10 03 44.1	
	comp=Z,52nm,1.5s						
MESJ	Messejana	40.04	42	eP	P	10 03 40.8	-0.2
	comp=Z,52nm,1.5s						
MESJ	Messejana	40.04	42	eP	P	10 03 40.6	-0.3
MESJ				pmax	pmax		
	comp=Z,52nm,1.5s						
PBEJ	Beja	40.37	42	eP	P	10 03 44.9	+1.1
	comp=Z,46nm,1.8s						
PMTG	Montargil	40.73	40	eP	P	10 03 46.6	-0.1
	comp=Z,33nm,1.5s						
PCAS	Casmilo, Conde	41.13	39	eP	P	10 03 49.9	-0.1
PMRV	Marv??o	41.47	40	eP	P	10 03 53.1	+0.3
	comp=Z,69nm,1.7s						
PCBR	Castelo Branco	41.65	40	eP	P	10 03 54.1	-0.1
	comp=Z,30nm,1.4s						
TOA0	Torodi Ar. Sit	41.89	82	eP	P	10 03 55.4	-1.2
TORD	Torodi Ar. Bea	41.89	82	P	P	10 03 54.8	-1.8
	comp=Z,2.4nm,0.7s,baz=112,slow=20,SNR=44						
TORD				LR	LR	10 19 29.9	
	comp=Z,363nm,20.4s,baz=305,slow=34						
PVIS	Viseu	41.90	39	eP	P	10 03 56.3	-0.1
	comp=Z,36nm,2.0s						
MTE	Manteigas	41.93	39	eP	P	10 03 56.8	+0.2
	comp=Z,57nm,2.0s						
PKME	Peaks-Kenny Pk	42.16	330	eP	P	10 03 58.9	+0.6
	comp=Z,82nm,1.4s						
BATG	Bathurst New B	42.20	335	eP	P	10 03 58.5	-0.2
	comp=Z,27nm,1.0s						
POLO	Lamas de Olo	42.35	38	eP	P	10 03 59.7	-0.4
	comp=Z,30nm,2.0s						
MVO	Moncorvo	42.69	39	eP	P	10 04 03.0	+0.2
	comp=Z,24nm,1.5s						
556A	Lake Butler	43.00	303	P	P	10 04 06.1	+0.7
	baz=108						
PBRG	Braganca	43.24	38	eP	P	10 04 08.5	+1.2
	comp=Z,51nm,1.7s						
X56A	White Oak	43.48	310	P	P	10 04 09.7	+0.4
	baz=114						
PAB	San Pablo	43.51	42	eP	P	10 04 09.0	-0.5
	comp=Z,15nm,1.1s						
PAB	San Pablo	43.51	42	eP	P	10 04 09.0	-0.5
PAB				pmax	pmax		
	comp=Z,15nm,1.1s						
ESDC	Sonseca Array	43.83	42	P	P	10 04 10.8	-1.3
	comp=Z,4.3nm,0.9s,baz=237,slow=8.4,SNR=14						
ESDC				LR	LR	10 18 48.5	
	comp=Z,627nm,20.7s,baz=235,slow=31						
ES19	SONSECA Array	43.88	42	eP	P	10 04 10.9	-1.6
155A	Kite	43.90	306	P	P	10 04 13.5	+0.9
	baz=110						
X55A	Gracelyn & Ava	43.93	309	P	P	10 04 13.1	+0.2
	baz=113						
KMSC	Kings Mountain	43.97	310	P	P	10 04 13.9	+0.7
	baz=114						
FRNY	Flat Rock	44.08	327	eP	P	10 04 15.3	+1.4
	comp=Z,49nm,1.5s						
HODGE	Hodges	44.32	309	eP	P	10 04 16.1	+0.1
	comp=Z,108nm,2.0s						
154A	Montrose	44.41	306	P	P	10 04 17.0	+0.3
	baz=110						
Z54A	Sparta	44.41	307	P	P	10 04 17.5	+0.8
	baz=111						
Y54A	Tignall	44.52	308	P	P	10 04 18.1	+0.6
	baz=111						
Q55A	Buckhannon	44.77	316	P	P	10 04 20.5	+0.9
	baz=119						
O55A	Ligonier	44.84	318	P	P	10 04 20.6	+0.5
	baz=120						
P55A	Reedsville	44.84	317	P	P	10 04 21.1	+0.9
	baz=119						
N55A	Marion Center	44.93	319	P	P	10 04 21.1	+0.3
	baz=121						
T54A	Tazewell	44.95	313	P	P	10 04 21.3	+0.3
	baz=115						
GOGA	Godfrey	44.96	307	P	P	10 04 21.5	+0.3
	baz=110						
Z53A	Monticello	45.00	307	P	P	10 04 22.0	+0.6
	baz=110						
Y53A	Monroe	45.21	308	P	P	10 04 23.9	+0.8
	baz=111						
X53A	Estanollee	45.22	309	P	P	10 04 24.0	+0.8
	baz=112						
V53A	Saluda	45.29	310	P	P	10 04 24.5	+0.7
	baz=113						
P54A	Burton	45.33	316	P	P	10 04 25.1	+1.1
	baz=119						
W53A	Cullowhee	45.36	309	P	P	10 04 25.1	+0.7
	baz=112						
U53A	Fall Branch	45.39	311	P	P	10 04 25.4	+0.9
	baz=114						
252A	Lumpkin	45.51	305	P	P	10 04 26.3	+0.8
	baz=108						
Y52A	Lilburn	45.59	307	P	P	10 04 26.7	+0.7
	baz=110						
S53A	Williamson	45.61	313	P	P	10 04 26.9	+0.7
	baz=115						
T53A	Wise	45.61	312	P	P	10 04 26.9	+0.6
	baz=114						
Z52A	Williamson	45.64	306	P	P	10 04 27.0	+0.5
	baz=109						
N54A	Moraine State	45.67	318	P	P	10 04 27.7	+1.0
	baz=120						
152A	Waverly Hall	45.71	306	P	P	10 04 27.8	+0.7
	baz=109						
X52A	Dahlonega	45.71	308	P	P	10 04 27.9	+0.8
	baz=111						
P53A	Whipple	45.90	316	P	P	10 04 29.3	+0.8
	baz=118						
H55A	Tweed	45.91	324	P	P	10 04 29.6	+1.1
	baz=126						
W52A	Murphy	45.92	309	P	P	10 04 29.2	+0.4
	baz=112						
451A	Vernon	45.94	302	P	P	10 04 29.3	+0.4
	baz=106						
V52A	Sevierville	45.94	310	P	P	10 04 29.6	+0.7
	baz=112						
U52A	Thorn Hill	45.99	311	P	P	10 04 30.0	+0.7
	baz=113						
T52A	Hallie	45.99	312	P	P	10 04 30.4	+1.1
	baz=114						
351A	Pinckard	46.01	303	P	P	10 04 29.5	+0.1
	baz=107						
TAM	Tamanrasset	46.06	69	eP	P	10 04 32.6	+2.4
	comp=Z,35nm,1.6s						
TAM	Tamanrasset	46.06	69	eP	P	10 04 32.6	+2.4
TAM				pmax	pmax		
	comp=Z,35nm,1.6s						
251A	Midway	46.09	305	P	P	10 04 30.9	+0.8
	baz=108						
151A	Opelika	46.15	305	P	P	10 04 31.4	+0.8
	baz=108						
TZTN	Tazewell	46.18	311	P	P	10 04 31.4	+0.6
	baz=113						
R52A	Catlettsburg	46.26	314	P	P	10 04 31.7	+0.4
	baz=116						
Q52A	Bidwell	46.27	315	P	P	10 04 31.6	+0.2
	baz=116						
Z51A	Franklin	46.28	306	P	P	10 04 32.2	+0.6
	baz=109						
Y51A	Rockmart	46.38	307	P	P	10 04 32.9	+0.5
	baz=110						
U51A	La Follette	46.46	311	P	P	10 04 33.6	+0.6
	baz=113						
P52A	Corning	46.47	316	P	P	10 04 33.8	+0.8
	baz=117						
V51A	Loudon	46.50	310	P	P	10 04 34.1	+0.8
	baz=112						
W51A	Cleveland	46.58	309	P	P	10 04 34.9	+1.0
	baz=111						
T51A	Gray	46.64	311	P	P	10 04 35.0	+0.7
	baz=113						
350A	Dozier	46.65	303	P	P	10 04 35.2	+0.8
	baz=106						
S51A	Beattyville	46.65	312	P	P	10 04 35.4	+1.0
	baz=114						
N52A	McGinn's Farm,	46.72	317	P	P	10 04 35.6	+0.7
	baz=118						
150A	Eclectic	46.73	305	P	P	10 04 35.9	+0.7
	baz=108						
Z50A	Ashland	46.85	306	P	P	10 04 36.4	+0.4
	baz=108						
R51A	Hillsboro	46.91	313	P	P	10 04 37.2	+0.7
	baz=115						
W50A	Signal Mountai	47.02	309	eP	P	10 04 38.5	+1.1
	comp=Z,34nm,1.1s						
W50A	Signal Mountai	47.02	309	P	P	10 04 37.8	+0.4
	baz=110						
V50A	Pikevile	47.02	309	P	P	10 04 37.7	+0.4
	baz=111						
X50B	Fort Payne	47.03	308	P	P	10 04 37.6	+0.2
	baz=110						
O51A	Pataskala	47.03	316	P	P	10 04 38.3	+0.9
	baz=117						
P51A	Williamsport	47.05	315	P	P	10 04 38.3	+0.8
	baz=116						
Q51A	Peebles	47.05	314	eP	P	10 04 38.5	+1.0
	comp=Z,123nm,1.9s						
Q51A	Peebles	47.05	314	P	P	10 04 38.3	+0.7
	baz=115						
U50A	Jamestown	47.09	310	P	P	10 04 38.9	+0.9
	baz=112						
449A	Pace	47.20	302	P	P	10 04 39.0	+0.2
	baz=105						
S50A	Richmond	47.25	312	P	P	10 04 39.0	-0.1
	baz=113						
T50A	Nancy	47.32	311	P	P	10 04 40.4	+0.8
	baz=112						
Z49A	Columbiana	47.32	306	P	P	10 04 40.5	+0.8
	baz=108						
ACSO	Alum Creek Sta	47.33	316	eP	P	10 04 40.7	+1.1
	comp=Z,13nm,0.9s						
ACSO	Alum Creek Sta	47.33	316	P	P	10 04 40.8	+1.1
	baz=117						
349A	Repton	47.33	303	P	P	10 04 40.7	+0.9
	baz=106						
149A	Jones	47.35	305	P	P	10 04 41.1	+1.2
	baz=107						
SJPF	Ste Jean	47.37	40	eP	P	10 04 39.7	-0.2
SJPF				pmax	pmax		
	comp=Z,53nm,1.4s						
Q50A	Georgetown	47.42	314	P	P	10 04 41.0	+0.6
	baz=115						
Y49A	Blount Mountai	47.43	307	eP	P	10 04 41.9	+1.3
	comp=Z,48nm,1.6s						
R50A	Paris	47.44	313	P	P	10 04 41.2	+0.6
	baz=114						
249A	Camden	47.45	304	P	P	10 04 41.3	+0.6
	baz=106						
SWET	Sewanee	47.50	308	eP	P	10 04 41.0	-0.1
	comp=Z,17nm,0.7s						
X49A	Woodville	47.57	307	P	P	10 04 42.6	+1.0
	baz=109						
P50A	Jamestown	47.62	315	P	P	10 04 43.0	+1.1
	baz=116						
LRAL	Lakeview Retre	47.65	305	eP	P	10 04 43.3	+1.0

	comp=Z,35nm,1.4s						
LRAL	Lakeview Retre	47.65	305	P	P	10 04 43.1	+0.8
	baz=107						
V49A	McMinnville	47.66	309	P	P	10 04 42.8	+0.5
	baz=110						
ETSF	Etsaut	47.68	40	eP	P	10 04 42.1	-0.3
ETSF				pmax	pmax		
	comp=Z,19nm,1.1s						
N50A	Nevada	47.68	317	P	P	10 04 43.2	+0.8
	baz=117						
W49A	Belvidere	47.72	308	P	P	10 04 43.7	+0.9
	baz=110						
U49A	Red Boiling Sp	47.83	310	P	P	10 04 44.2	+0.5
	baz=111						
T49A	Edmonton	47.87	311	eP	P	10 04 44.0	+0.1
	comp=Z,17nm,1.1s						
T49A	Edmonton	47.87	311	P	P	10 04 44.2	+0.3
	baz=112						
CHGQ	Chibougamau	47.87	331	P	P	10 04 44.5	+0.8
	baz=133						
S49A	Springfield	47.94	312	P	P	10 04 45.1	+0.7
	baz=113						
BWLO	Walkerton	48.02	321	P	P	10 04 46.5	+1.6
	baz=122						
Y48A	Jasper	48.05	306	P	P	10 04 46.0	+0.6
	baz=108						
R49A	Shelbyville	48.05	313	P	P	10 04 46.2	+0.9
	baz=113						
X48A	Hartselle	48.11	307	eP	P	10 04 47.0	+1.2
	comp=Z,12nm,0.8s						
X48A	Hartselle	48.11	307	P	P	10 04 46.5	+0.6
	baz=108						
Q49A	Aurora	48.14	314	P	P	10 04 46.7	+0.7
	baz=114						
VLDQ	Val d'Or	48.23	328	eP	P	10 04 48.1	+1.6
	comp=Z,20nm,1.1s						
P49A	Miami Univ. Ec	48.23	314	P	P	10 04 47.2	+0.5
	baz=115						
W48A	Pulaski	48.24	308	P	P	10 04 47.9	+1.0
	baz=109						
EPF	Esparros	48.31	41	eP	P	10 04 47.1	-0.2
EPF				pmax	pmax		
	comp=Z,45nm,1.5s						
V48A	Smith Brothers	48.36	309	eP	P	10 04 48.8	+1.1
	comp=Z,20nm,0.6s						
V48A	Smith Brothers	48.36	309	P	P	10 04 47.3	-0.5
	baz=110,SNR=9.7						
U48A	Cassie Pea, Po	48.41	310	P	P	10 04 48.3	+0.3
	baz=110						
S48A	Wiedeman Farm,	48.46	311	P	P	10 04 49.3	+0.9
	baz=112						
T48A	Bowling Green	48.51	311	P	P	10 04 49.3	+0.4
	baz=111						
147A	Livingston	48.57	304	P	P	10 04 49.1	-0.3
	baz=106						
LSQQ	Lebel-sur-Quev	48.58	329	P	P	10 04 49.5	+0.3
	baz=130						
SCHQ	Schefferville	48.59	340	eP	P	10 04 49.3	+0.2
	comp=Z,17nm,0.8s						
SCHQ	Schefferville	48.59	340	P	P	10 04 48.0	-1.1
	comp=Z,7.4nm,0.8s,baz=148,slow=6.2,SNR=18						
SCHQ				LR	LR	10 22 25.5	
	comp=Z,303nm,19.4s,baz=178,slow=33						
R48A	Northridge Ran	48.60	312	P	P	10 04 50.5	+0.9
	baz=113						
P48A	Milroy	48.70	314	P	P	10 04 50.3	0.0
	baz=114						
Q48A	North Vernon	48.71	313	P	P	10 04 50.8	+0.5
	baz=113						
X47A	Russelville	48.77	307	P	P	10 04 50.6	-0.3
	baz=108,SNR=5.1						
W47A	Westpoint	48.79	308	P	P	10 04 51.3	+0.2
	baz=109						
WCI	Wyandotte Cave	48.84	312	P	P	10 04 52.0	+0.6
	baz=112						
V47A	Nunnelly	48.92	309	P	P	10 04 52.1	0.0
	baz=109						
U47A	Clarksville	48.95	309	P	P	10 04 53.1	+0.8
	baz=110						
T47A	Sharon Grove	49.00	310	P	P	10 04 53.0	+0.4
	baz=110						
S47A	Hartford	49.04	311	P	P	10 04 52.4	-0.5
	baz=111,SNR=8.5						
L48A	N Adams	49.08	317	P	P	10 04 53.6	+0.5
	baz=117						
ROSF	Rostrenen	49.11	33	eP	P	10 04 52.7	-0.6
ROSF				pmax	pmax		
	comp=Z,60nm,1.4s						
Q47A	Bedord North L	49.21	313	P	P	10 04 54.9	+0.7
	baz=113						
WVT	Waverly	49.26	309	eP	P	10 04 55.1	+0.5
	comp=Z,14nm,0.9s						
WVT	Waverly	49.26	309	eP	P	10 04 55.1	+0.5
WVT				pmax	pmax		
	comp=Z,14nm,0.9s						
WVT	Waverly	49.26	309	P	P	10 04 55.1	+0.5
	baz=109						
K48A	Perry	49.26	318	P	P	10 04 55.5	+1.0
	baz=118						
P47A	Martinsville	49.31	314	P	P	10 04 55.6	+0.6
	baz=113						
X46A	Booneville	49.36	307	P	P	10 04 55.8	+0.4
	baz=107						
MATQ	Matagami	49.36	329	P	P	10 04 55.8	+0.7
	baz=130						
V46A	Holladay	49.37	308	P	P	10 04 56.0	+0.4
	baz=109						
LFF	La Frestale	49.52	39	eP	P	10 04 56.3	-0.2
LFF				pmax	pmax		
	comp=Z,4.0nm,0.4s						
O47A	Sheridan	49.54	315	P	P	10 04 56.4	-0.3
	baz=114						
T46A	Princeton	49.61	310	P	P	10 04 57.9	+0.6
	baz=110						
MTLF	Montolieu	49.67	41	eP	P	10 04 57.0	-0.7
MTLF				pmax	pmax		
	comp=Z,17nm,1.4s						
S46A	Don Dixon Farm	49.70	311	P	P	10 04 58.5	+0.5
	baz=110						
MFF	Saint Martin d	49.86	36	eP	P	10 04 57.8	-1.2
MFF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OXF	Oxford	49.99	306	eP	P	10 05 00.2	0.0
	comp=Z,33nm,0.9s						
OXF	Oxford	49.99	306	eP	P	10 05 00.3	0.0
OXF				pmax	pmax		
	comp=Z,33nm,0.9s						
OXF	Oxford	49.99	306	P	P	10 05 00.3	0.0
	baz=106						
V45A	Humboldt	50.00	308	P	P	10 05 00.3	0.0
	baz=108						
W45A	Hickory Valley	50.01	307	P	P	10 05 00.3	-0.1
	baz=107						
D48A	Paudash Townsh	50.06	325	P	P	10 05 01.3	+0.7
	baz=123						
I47A	Gladwin	50.08	320	P	P	10 05 01.8	+1.0
	baz=118						
N46A	Monticello	50.20	315	P	P	10 05 02.7	+1.0
	baz=114						
R45A	Skylar, Fairfi	50.33	311	P	P	10 05 03.4	+0.7
	baz=110						
CAF	Calviac	50.33	39	eP	P	10 05 01.6	-1.1
CAF				pmax	pmax		
	comp=Z,33nm,1.3s						
OLIL	Olney	50.35	312	eP	P	10 05 03.7	+0.9
	comp=Z,29nm,1.0s						
GRR	Gorron	50.45	34	eP	P	10 05 04.2	+0.8
GRR				pmax	pmax		
	comp=Z,221nm,2.4s						
Q45A	Warren Harvey,	50.45	312	P	P	10 05 04.2	+0.6
	baz=111						
SIUC	Southern Illin	50.83	310	eP	P	10 05 07.1	+0.6
	comp=Z,25nm,0.8s						
S44A	Carbondale	50.85	310	P	P	10 05 06.8	+0.2
	baz=109						
FLN	La Foliniere	50.87	34	eP	P	10 05 05.7	-0.9
FLN				pmax	pmax		
	comp=Z,33nm,1.5s						
R44A	Waltonville	50.90	311	P	P	10 05 06.6	-0.5
	baz=110,SNR=5.2						
T44A	Benton	50.91	309	P	P	10 05 06.8	-0.3
	baz=108						
LDF	La Druitiere	50.97	34	eP	P	10 05 08.9	+1.5
LDF				pmax	pmax		
	comp=Z,64nm,2.0s						
P44A	Sand Creek, Wi	50.99	313	P	P	10 05 08.2	+0.4
	baz=111						
Y43A	Makayla and Ka	51.05	305	P	P	10 05 08.4	+0.2
	baz=105						
Q44A	Meyer Farm, Va	51.08	312	P	P	10 05 08.6	+0.2
	baz=110						
TCF	Toulx Ste Croi	51.09	38	eP	P	10 05 08.3	-0.1
TCF				pmax	pmax		
	comp=Z,43nm,1.5s						
O44A	Mansfield	51.13	314	P	P	10 05 09.0	+0.2
	baz=112						
X43A	Marvell	51.17	306	P	P	10 05 09.4	+0.3
	baz=105						
S43A	Fulton Ridge,	51.42	310	P	P	10 05 10.7	-0.3
	baz=108						
T43A	Greenville	51.44	309	P	P	10 05 10.6	-0.5
	baz=108						
R43A	Red Bud	51.54	311	P	P	10 05 11.6	-0.3
	baz=109						
Q43A	New Douglas	51.59	312	P	P	10 05 12.6	+0.4
	baz=110						
BGF	Bois d'Agland	51.60	38	eP	P	10 05 11.6	-0.6
BGF				pmax	pmax		
	comp=Z,13nm,0.8s						
FVM	French Village	51.82	310	eP	P	10 05 13.9	-0.1
	comp=Z,47nm,1.6s						
FVM	French Village	51.82	310	eP	P	10 05 13.9	-0.1
FVM				pmax	pmax		
	comp=Z,47nm,1.6s						
HDIL	Hopedale	51.86	314	P	P	10 05 14.5	+0.2
	baz=111						
VIVF	Saint-Julien-l	51.93	40	eP	P	10 05 15.5	+0.7
VIVF				pmax	pmax		
	comp=Z,32nm,1.4s						
U42A	Revenden	51.95	308	P	P	10 05 14.0	-0.9
	baz=107,SNR=5.6						
M43A	Waltham Townsh	51.95	315	P	P	10 05 14.6	-0.3
	baz=112						
KEST	Kesra	51.97	53	eP	P	10 05 15.4	+0.2
	comp=Z,25nm,1.0s						
KEST	Kesra	51.97	53	P	P	10 05 14.5	-0.7
	comp=Z,14nm,0.8s,baz=134,slow=5.4,SNR=5.9						
KEST				LR	LR	10 26 10.4	
	comp=Z,480nm,20.3s,baz=192,slow=35						
AVF	Avril sur Loir	52.02	38	eP	P	10 05 13.9	-1.4
AVF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
S42A	Caledonia	52.03	310	P	P	10 05 15.1	-0.5
	baz=108						
T42A	Van Buren	52.03	309	eP	P	10 05 14.7	-0.9
	comp=Z,11nm,1.0s						
T42A	Van Buren	52.03	309	P	P	10 05 14.6	-0.9
	baz=107						
R42A	Luebbering	52.19	311	P	P	10 05 16.2	-0.5
	baz=108,SNR=5.4						
Q42A	Golden Eagle	52.20	311	P	P	10 05 16.7	-0.1
	baz=109						
SMF	Signal de Mont	52.25	38	eP	P	10 05 18.5	+1.5
SMF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
P42A	Winchester	52.28	312	eP	P	10 05 17.2	-0.2
	comp=Z,20nm,1.0s						
P42A	Winchester	52.28	312	P	P	10 05 17.4	+0.1
	baz=110						
UALR	University of	52.40	306	eP	P	10 05 18.9	+0.6
	comp=Z,18nm,0.8s						
W41B	Gary Mavity, V	52.42	306	eP	P	10 05 18.5	0.0
	comp=Z,14nm,0.7s						
W41B	Gary Mavity, V	52.42	306	P	P	10 05 18.2	-0.3
	baz=105,SNR=6.9						
CCM	Cathedral Cave	52.46	310	eP	P	10 05 18.9	+0.2
	comp=Z,48nm,1.6s						
CCM	Cathedral Cave	52.46	310	eP	P	10 05 18.9	+0.2
CCM				pmax	pmax		
	comp=Z,48nm,1.6s						
CCM	Cathedral Cave	52.46	310	P	P	10 05 18.8	+0.2
	baz=108						
U41A	Viola	52.48	308	P	P	10 05 18.1	-0.8
	baz=106,SNR=10						
WHAR	Wooly Hollow	52.48	306	eP	P	10 05 18.9	-0.1
	comp=Z,43nm,1.5s						
N42A	Yates City	52.49	314	P	P	10 05 18.5	-0.3
	baz=111						
M42A	Sheffield	52.52	315	P	P	10 05 18.6	-0.5
	baz=112						
T41A	Mountain View	52.55	309	P	P	10 05 18.5	-1.0
	baz=107,SNR=12						
LOR	Lormes	52.56	37	eP	P	10 05 21.8	+2.5
LOR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
R41A	Rosebud	52.63	310	P	P	10 05 19.7	-0.3
	baz=108						
L42A	Oliver, Polo	52.66	315	eP	P	10 05 24.1	+4.0
	comp=Z,32nm,1.1s						
S41A	Jillco Farms,	52.70	309	P	P	10 05 19.8	-0.7
	baz=107,SNR=9.5						
X40A	Basin Creek Fa	52.72	305	eP	P	10 05 21.0	+0.3
	comp=Z,7.4nm,0.8s						
X40A	Basin Creek Fa	52.72	305	P	P	10 05 20.6	-0.1
	baz=104						
Q41A	Truxton	52.73	311	P	P	10 05 20.6	-0.1
	baz=108						
K42A	Prairie Point,	52.73	316	P	P	10 05 20.7	+0.1
	baz=113						
P41A	Barry, Barry	52.83	312	P	P	10 05 21.3	-0.2
	baz=109						
O41A	Passleys Farm,	52.85	313	P	P	10 05 21.4	-0.1
	baz=110						
I42A	Draeger Farm,	52.88	318	P	P	10 05 22.2	+0.5
	baz=114						
N41A	Harden Midland	53.03	313	eP	P	10 05 22.4	-0.5
	comp=Z,140nm,2.0s						
N41A	Harden Midland	53.03	313	P	P	10 05 22.2	-0.7
	baz=110						
M41A	Milan	53.04	314	P	P	10 05 22.7	-0.2
	baz=111						
U40A	Yellville	53.20	308	P	P	10 05 23.4	-0.9
	baz=105,SNR=10						
MBDF	Montbardon	53.23	41	eP	P	10 05 26.0	+1.5
MBDF				pmax	pmax		
	comp=Z,20nm,1.2s						
L41A	Preston	53.26	315	P	P	10 05 24.3	-0.3
	baz=111						
BNI	Bardonecchia	53.30	41	eP	P	10 05 27.6	+2.7
	comp=Z,35nm,1.6s						
BNI	Bardonecchia	53.30	41	P	P	10 05 27.7	+2.7
BNI				pmax	pmax		
	comp=Z,35nm,1.6s						
K41A	Shullsburg	53.32	316	P	P	10 05 25.1	+0.1
	baz=112						
MIAR	Mount Ida	53.33	305	P	P	10 05 24.9	-0.3
	baz=104						
LPL	La Plagne	53.53	40	eP	P	10 05 30.5	+3.7
LPL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
I41A	Arkdale	53.58	318	P	P	10 05 26.2	-0.7
	baz=113						
EKA	Eskdalemuir Ar	53.61	26	P	P	10 05 25.4	-1.4
	comp=Z,5.0nm,0.7s,baz=220,slow=5.3,SNR=5.9						
N40A	Mertquake, Sal	53.61	313	P	P	10 05 26.7	-0.5
	baz=110						
W39A	Magazine	53.65	306	eP	P	10 05 28.1	+0.6
	comp=Z,16nm,0.8s						
W39A	Magazine	53.65	306	P	P	10 05 27.5	0.0
	baz=104,SNR=5.3						
M40A	Post Highland	53.73	314	P	P	10 05 27.7	-0.3
	baz=110						
L40A	Anamosa	53.76	315	P	P	10 05 28.1	-0.1
	baz=111						
F41A	Three Lakes	53.77	320	P	P	10 05 28.4	+0.1
	baz=115						
PGF	Pioggiola	53.88	45	eP	P	10 05 32.5	+3.3
PGF				pmax	pmax		
	comp=Z,91nm,1.8s						
J40A	Soldiers Grove	53.91	317	P	P	10 05 29.2	-0.2
	baz=112						
E41A	Kenton	53.99	321	P	P	10 05 29.6	-0.3
	baz=116						
BAIF	Baives	54.15	34	eP	P	10 05 31.3	+0.4
BAIF				pmax	pmax		
	comp=Z,47nm,1.6s						
M39A	Webster	54.23	314	P	P	10 05 31.4	-0.2
	baz=110						
DOU	Dourbes	54.38	35	⇑P	P	10 05 33.3	+0.7
HAU	Haudompre	54.39	37	eP	P	10 05 32.9	+0.1
HAU				pmax	pmax		
	comp=Z,17nm,1.3s						
K39A	Oelwein	54.44	315	P	P	10 05 32.9	-0.3
	baz=110						
GIVF	Givet	54.51	35	eP	P	10 05 31.9	-1.7
GIVF				pmax	pmax		
	comp=Z,23nm,1.1s						
I39A	Houston	54.61	317	P	P	10 05 34.7	+0.3
	baz=112						
HINF	Hinteralfeld	54.61	38	eP	P	10 05 34.6	+0.2
HINF				pmax	pmax		
	comp=Z,40nm,1.6s						
BCLA	Clavier	54.93	34	⇓P	P	10 05 37.9	+1.2
F39A	Loretta	55.00	319	P	P	10 05 37.4	+0.1
	baz=114						
CDF	Champ du Feu	55.13	37	eP	P	10 05 38.8	+0.6
CDF				pmax	pmax		
	comp=Z,40nm,1.9s						
TUL1	Leonard	55.40	306	eP	P	10 05 40.0	-0.3
	comp=Z,24nm,0.8s						
TUL1	Leonard	55.40	306	P	P	10 05 39.6	-0.7
	baz=103,SNR=7.8						
MEM	Membach	55.42	35	⇑P	P	10 05 39.3	-0.8
BFO	Black Forest	55.72	38	eP	P	10 05 42.9	+0.5
	comp=Z,19nm,1.3s						
BFO	Black Forest	55.72	38	eP	P	10 05 42.9	+0.5
BFO				pmax	pmax		
	comp=Z,19nm,1.3s						
435B	Jarrell	55.94	300	eP	P	10 05 44.0	-0.3
	comp=Z,15nm,0.7s						
435B	Jarrell	55.94	300	P	P	10 05 43.7	-0.6
	baz=98						
SPMN	Marine on St.	55.96	318	eP	P	10 05 43.9	-0.2
	comp=Z,38nm,1.4s						
SPMN	Marine on St.	55.96	318	P	P	10 05 44.0	-0.1
	baz=111						
WHTX	Lake Whitney,	56.02	301	eP	P	10 05 44.5	-0.2
	comp=Z,14nm,1.0s						
WHTX	Lake Whitney,	56.02	301	P	P	10 05 44.1	-0.6
	baz=99						
F37A	Hinrichs Farm,	56.03	319	P	P	10 05 44.5	-0.1
	baz=112						
DAVOX	Davos/Dischmat	56.05	40	P	P	10 05 44.0	-1.0
DAVOX				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DAVOX	Davos/Dischmat	56.05	40	P	P	10 05 44.0	-1.0
	comp=Z,5.0nm,0.5s,baz=226,slow=7.9,SNR=8.4						
DAVA	Damuels	56.25	39	epP	P	10 05 48.2	+1.8
	comp=Z,13nm,1.1s						
FETA	Feichten	56.68	40	eP	P	10 05 48.4	-1.0
	comp=Z,10nm,1.2s						
SFJD	Kangerlussuaq	56.68	356	P	P	10 05 48.1	-0.8
	comp=Z,7.8nm,0.8s,baz=150,slow=6.0,SNR=5.2						
KSU1	Kansas State U	56.78	310	eP	P	10 05 49.1	-1.1
	comp=Z,18nm,0.8s						
KSU1	Kansas State U	56.78	310	P	P	10 05 49.3	-0.9
	baz=104						
RETA	Reutte	56.88	40	eP	P	10 05 49.6	-1.1
	comp=Z,18nm,1.5s						
LNIG	Linares	57.01	293	eP	P	10 05 53.1	+1.1
	comp=Z,6.3nm,0.8s						
MOTA	Moosalm	57.04	40	epP	P	10 05 53.4	+1.5
	comp=Z,8.5nm,1.0s						
SQTA	Sankt Quirin	57.05	40	eP	P	10 05 51.1	-1.0
	comp=Z,14nm,1.1s						
833A	Chaparral WMA,	57.21	297	eP	P	10 05 53.8	+0.5
	comp=Z,18nm,0.6s						
833A	Chaparral WMA,	57.21	297	P	P	10 05 52.3	-1.1
	baz=96						
WATA	Walderalm	57.33	40	epP	P	10 05 55.3	+1.3
	comp=Z,5.3nm,0.6s						
WTTA	Wattenberg	57.34	40	eP	P	10 05 54.6	+0.4
	comp=Z,6.9nm,0.8s						
WMOK	Wichita Mounta	57.57	304	eP	P	10 05 55.2	-0.5
	comp=Z,9.1nm,0.8s						
WMOK	Wichita Mounta	57.57	304	eP	P	10 05 55.3	-0.5
WMOK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WMOK	Wichita Mounta	57.57	304	P	P	10 05 55.2	-0.5
	baz=100						
ABTA	Abfaltersbach	57.71	41	eP	P	10 05 55.8	-0.9
	comp=Z,18nm,1.4s						
JCT	Junction City	57.80	299	eP	P	10 05 56.7	-0.8
	comp=Z,12nm,0.8s						
JCT	Junction City	57.80	299	eP	P	10 05 56.7	-0.8
JCT				pmax	pmax		
	comp=Z,12nm,0.8s						
JCT	Junction City	57.80	299	P	P	10 05 56.8	-0.8
	baz=97						
PLCA	Paso Flores	57.90	206	eP	P	10 05 57.9	0.0
	comp=Z,12nm,1.0s						
PLCA	Paso Flores	57.90	206	eP	P	10 05 57.9	0.0
PLCA				pmax	pmax		
	comp=Z,12nm,1.0s						
ABTX	Abilene, Hawle	57.94	302	eP	P	10 05 58.0	-0.4
	comp=Z,13nm,0.8s						
ABTX	Abilene, Hawle	57.94	302	P	P	10 05 57.7	-0.8
	baz=98						
U32A	Winter Ranch,	58.04	306	eP	P	10 05 59.4	+0.3
ECSD	EROS Data Cent	58.05	315	P	P	10 05 58.4	-0.6
	baz=107						
KBA	Koelnbreinsper	58.36	41	eP	P	10 06 00.6	-0.7
	comp=Z,5.6nm,0.6s						
KBA	Koelnbreinsper	58.36	41	P	P	10 06 02.4	+1.1
KBA				pmax	pmax		
	comp=Z,18nm,1.0s						
MYKA	Terra Mystica	58.40	41	eP	P	10 06 01.1	-0.3
	comp=Z,5.5nm,0.5s						
BGNE	Belgrade	58.50	312	eP	P	10 06 01.8	-0.4
	comp=Z,56nm,0.8s						
BGNE	Belgrade	58.50	312	P	P	10 06 01.5	-0.7
	baz=105,SNR=5.1						
OBKA	Obir	58.95	42	epP	P	10 06 07.3	+1.9
	comp=Z,16nm,0.9s						
CBKS	Cedar Bluff	59.09	309	eP	P	10 06 06.7	+0.2
	comp=Z,35nm,0.8s						
CBKS	Cedar Bluff	59.09	309	P	P	10 06 06.2	-0.2
	baz=102						
GEA0	GERESS Array S	59.20	39	eP	P	10 06 07.4	+0.4
GERES	GERESS Array B	59.21	39	P	P	10 06 05.4	-1.7
	comp=Z,0.8nm,0.6s,baz=242,slow=5.6,SNR=5.8						
GERES				LR	LR	10 28 21.2	
	comp=Z,223nm,20.6s,baz=262,slow=33						
MOA	Molln	59.22	40	eP	P	10 06 07.9	+0.9
	comp=Z,6.6nm,1.1s						
KHC	Kasperske Hory	59.23	39	eP	P	10 06 07.7	+0.5
	comp=Z,1.9nm,0.9s						
KHC	Kasperske Hory	59.23	39	eP	P	10 06 09.5	+2.3
KHC				ex	x	10 06 15.4	
KHC				AMS	AMS	10 25 00.0	
	comp=Z,300nm,13.2s						
KHC	Kasperske Hory	59.23	39	eP	P	10 06 07.7	+0.5
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SOKA	Soboth	59.33	42	eP	P	10 06 08.4	+0.5
	comp=Z,8.9nm,1.2s						
CLL	Collm	59.70	36	eS	S	10 14 21.0	+0.7
ULM	Lac du Bonnet	59.73	323	eP	P	10 06 08.9	-1.6
	comp=Z,14nm,0.9s						
ULM	Lac du Bonnet	59.73	323	eP	P	10 06 08.9	-1.6
ULM				pmax	pmax		
	comp=Z,14nm,0.9s						
ULM	Lac du Bonnet	59.73	323	P	P	10 06 08.3	-2.2
	comp=Z,4.6nm,0.7s,baz=95,slow=6.0,SNR=10						
ULM				LR	LR	10 27 51.2	
	comp=Z,138nm,20.1s,baz=130,slow=32						
ARSA	Arzberg	59.83	41	eP	P	10 06 11.0	-0.3
	comp=Z,7.7nm,1.2s						
SUSD	Miller	59.86	315	P	P	10 06 11.5	-0.1
	baz=106						
AMTX	Amarillo	59.95	304	eP	P	10 06 12.0	-0.4
	comp=Z,12nm,0.6s						
AMTX	Amarillo	59.95	304	P	P	10 06 12.2	-0.2
	baz=98						
PRU	Pruhonice	60.12	38	AMS	AMS	10 27 00.0	
	comp=Z,200nm,16.2s						
GOPC	GO Pecny, Ondr	60.25	38	AMS	AMS	10 31 30.0	
	comp=Z,300nm,17.3s						
CONA	Conrad Observa	60.26	40	epP	P	10 06 15.7	+1.4
	comp=Z,8.1nm,1.1s						
TREC	Trest	60.46	39	AMS	AMS	10 28 00.0	
	comp=Z,300nm,18.8s						
MSTX	Muleshoe	60.72	303	P	P	10 06 17.4	-0.3
	baz=97						
KRUC	Moravsky	60.95	39	eP	P	10 06 19.7	+0.8
TX31	Lajitas Ar. Si	61.03	298	eP	P	10 06 20.3	+0.4
TXAR	Lajitas Array	61.03	298	P	P	10 06 19.4	-0.6
	comp=Z,1.9nm,0.6s,baz=96,slow=6.1,SNR=27						
TXAR				LR	LR	10 31 01.6	
	comp=Z,139nm,22.0s,baz=0.0,slow=34						
PDG	Podgorica	61.10	47	⇓iP	P	10 06 20.5	+0.5
VRAC	Vranov	61.15	39	⇑iP	P	10 06 22.3	+2.0
VRAC	Vranov	61.15	39	⇑P	P	10 06 22.3	+2.0

VRAC	Vranov	61.15	39	eP	P	10 06 21.0	+0.7
VRAC	Vranov	61.15	39	P	P	10 06 19.1	-1.2
	comp=Z,2.7nm,0.7s,baz=260,slow=9.6,SNR=7.3						
DPC	Dobruska-Polom	61.32	38	AMS	AMS	10 28 30.0	
	comp=Z,200nm,14.3s						
KSCO	Kaye Shedlock'	61.35	309	eP	P	10 06 22.8	+0.8
	comp=Z,17nm,0.9s						
KSCO	Kaye Shedlock'	61.35	309	P	P	10 06 21.8	-0.2
	baz=100						
MORH	Mrgy, Hungar	61.58	43	eP	P	10 06 23.1	-0.1
MORC	Moravsky Berou	61.89	39	⇑iP	P	10 06 26.7	+1.4
MORC	Moravsky Berou	61.89	39	⇑P	P	10 06 26.7	+1.4
MORC	Moravsky Berou	61.89	39	eP	P	10 06 26.5	+1.2
SUMG	Summit	61.95	1	eP	P	10 06 26.8	+1.1
	comp=Z,14nm,0.9s						
SUMG	Summit	61.95	1	i P	P	10 06 25.4	-0.3
	comp=Z,30nm,0.9s						
SUMG	Summit	61.95	1	eP	P	10 06 26.8	+1.1
SUMG				pmax	pmax		
	comp=Z,14nm,0.9s						
DIVS	Divibare	61.99	46	eP	P	10 06 26.3	+0.2
	comp=Z,9.0nm,0.8s						
VYHS	Vyhne	62.32	41	eP	P	10 06 28.6	+0.4
VYHS	Vyhne	62.32	41	eP	P	10 06 28.6	+0.4
FCC	Fort Churchill	62.33	332	eP	P	10 06 27.2	-0.7
	comp=Z,22nm,1.2s						
FCC	Fort Churchill	62.33	332	eP	P	10 06 27.3	-0.7
FCC				pmax	pmax		
	comp=Z,22nm,1.2s						
T25A	Trinidad	62.45	306	eP	P	10 06 30.1	+0.5
	comp=Z,12nm,0.9s						
T25A	Trinidad	62.45	306	P	P	10 06 28.9	-0.6
	baz=98						
MNTX	Cornudas Mount	62.68	300	eP	P	10 06 30.3	-0.5
	comp=Z,7.1nm,1.0s						
MNTX	Cornudas Mount	62.68	300	P	P	10 06 30.4	-0.5
	baz=94						
PSZ	Piszkesteto	62.85	41	eP	P	10 06 32.1	+0.3
NB2	NORSAR Subarra	63.10	26	P	P	10 06 33.7	+0.6
	comp=Z,1.4nm,0.8s,baz=247,slow=9.3						
NOA	NORSAR Array B	63.10	26	P	P	10 06 31.9	-1.3
	comp=Z,29nm,0.6s,baz=243,slow=7.1,SNR=2.7						
NOA				LR	LR	10 28 42.3	
	comp=Z,241nm,21.6s,baz=240,slow=31						
Q24A	Divide	63.28	308	P	P	10 06 34.5	-0.7
	baz=98						
MDVR	Moldovita	63.34	45	⇓iP	P	10 06 36.2	+1.1
SDCO	Great Sand Dun	63.39	307	eP	P	10 06 36.2	+0.4
	comp=Z,9.9nm,0.8s						
SDCO	Great Sand Dun	63.39	307	P	P	10 06 35.2	-0.7
	baz=97,SNR=13						
BZS	Buzias	63.45	44	⇑iP	P	10 06 36.3	+0.5
BZS	Buzias	63.45	44	⇑P	P	10 06 36.3	+0.5
NIE	Niedzica	63.50	40	P	P	10 06 39.4	+3.3
NIE				pmax	pmax		
	comp=Z,4.0nm,2.2s						
ISCO	Idaho Springs	63.76	309	eP	P	10 06 39.0	+0.8
	comp=Z,8.2nm,0.9s						
ISCO	Idaho Springs	63.76	309	eP	P	10 06 39.0	+0.8
ISCO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ISCO	Idaho Springs	63.76	309	P	P	10 06 38.4	+0.2
	baz=98,SNR=9.1						
ANMO	Albuquerque	63.85	304	⇑eP	P	10 06 36.6	-2.2
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ANMO	Albuquerque	63.85	304	P	P	10 06 38.3	-0.5
	baz=95						
N23A	Red Feather La	64.16	310	P	P	10 06 40.0	-0.9
	baz=98						
GZR	Gura Zlata	64.21	45	⇑iP	P	10 06 40.5	-0.3
GZR	Gura Zlata	64.21	45	⇑P	P	10 06 40.5	-0.3
IDI	Anoyia	64.35	56	eP	P	10 06 44.2	+2.3
	comp=Z,101nm,1.3s						
IDI	Anoyia	64.35	56	⇑iP	P	10 06 42.5	+0.5
IDI	Anoyia	64.35	56	P	P	10 06 41.2	-0.8
	comp=Z,33nm,1.1s,baz=313,slow=2.7,SNR=4.3						
LAZ	Ladron	64.36	303	eP	P	10 06 43.4	+1.2
DGMT	Dagmar	64.39	319	P	P	10 06 41.7	-0.1
	baz=104						
S22A	4UR Ranch, Cre	64.44	307	eP	P	10 06 43.2	+0.4
	comp=Z,19nm,1.4s						
S22A	4UR Ranch, Cre	64.44	307	P	P	10 06 42.3	-0.5
	baz=96						
DRGR		64.45	43	⇓iP	P	10 06 42.5	+0.2
DRGR		64.45	43	⇓P	P	10 06 42.6	+0.2
FFC	Flin Flon	64.77	326	eP	P	10 06 43.6	-0.6
	comp=Z,21nm,0.9s						
FFC	Flin Flon	64.77	326	i P	P	10 06 43.9	-0.3
K22A	Casper	64.86	312	P	P	10 06 44.8	-0.5
	baz=99						
TSUM	Tsumeb	64.95	117	eP	P	10 06 46.7	+0.6
	comp=Z,14nm,1.0s						
LAO	LASA Array	65.35	317	P	P	10 06 48.2	0.0
	baz=101						
ARR	Arges	65.49	45	⇑iP	P	10 06 49.7	+0.5
MVCO	Mesa Verde	65.70	306	eP	P	10 06 53.5	+2.6
	comp=Z,36nm,1.9s						
MVCO	Mesa Verde	65.70	306	P	P	10 06 50.4	-0.5
	baz=95						
O20A	White River Ci	65.80	309	eP	P	10 06 52.1	+0.6
	comp=Z,8.0nm,0.8s						
O20A	White River Ci	65.80	309	P	P	10 06 50.9	-0.5
	baz=97						
PV01	Paradox Valley	65.84	307	eP	P	10 06 52.7	+0.9
	comp=Z,6.3nm,1.0s						
PV13	Radium Mtn., P	66.04	307	eP	P	10 06 53.9	+0.8
	comp=Z,8.7nm,1.0s						
PV16	Nyswonger Mesa	66.13	307	eP	P	10 06 56.5	+2.8
	comp=Z,14nm,1.3s						
PV17	East Wray Mesa	66.16	307	eP	P	10 06 54.8	+0.9
	comp=Z,22nm,1.6s						
BUR08	Bucovina Ar. S	66.28	43	eP	P	10 06 54.4	+0.2
BUR04	Bucovina Ar. S	66.28	43	eP	P	10 06 54.4	+0.1
BURAR	Bucovina Array	66.28	43	⇑iP	P	10 06 54.3	0.0
BURAR	Bucovina Array	66.28	43	⇑P	P	10 06 54.3	0.0
OZUR		66.41	44	⇑iP	P	10 06 55.2	+0.2
MLR	Muntele Rosu	66.42	45	eP	P	10 06 56.7	+1.5
	comp=Z,30nm,1.2s						
MLR	Muntele Rosu	66.42	45	⇓iP	P	10 06 55.1	-0.1
MLR	Muntele Rosu	66.42	45	eP	P	10 06 56.7	+1.5
MLR				pmax	pmax		
	comp=Z,30nm,1.2s						
MLR	Muntele Rosu	66.42	45	P	P	10 06 54.4	-0.8
	comp=Z,12nm,1.1s,baz=301,slow=8.2,SNR=8.7						
PLOR	Plostina	66.96	45	⇓iP	P	10 06 57.8	-0.8
PLOR	Plostina	66.96	45	⇓P	P	10 06 57.8	-0.8
VRI	Vrincioaia	67.02	45	⇑iP	P	10 06 59.2	+0.3
VRI	Vrincioaia	67.02	45	⇑P	P	10 06 59.2	+0.3
BW06	Boulder Array	67.09	312	P	P	10 06 59.2	-0.5
	baz=97						
PDAR	Pinedale Array	67.09	312	P	P	10 06 59.3	-0.4
	comp=Z,0.6nm,0.5s,baz=100,slow=8.1,SNR=7.0						
PDAR				LR	LR	10 32 56.7	
	comp=Z,389nm,21.7s,baz=126,slow=33						
RLMT	Red Lodge	67.19	315	P	P	10 06 59.7	-0.5
	baz=98						
DAG	Danmarks Havn	67.21	5	i P	P	10 06 58.5	-1.0
	comp=Z,5.5nm,0.8s						
DAG	Danmarks Havn	67.21	5	i P	P	10 06 58.5	-1.0
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TUC	Tucson	67.30	301	P	P	10 07 00.4	-0.6
	baz=92						
SRU	San Rafael Swe	67.45	308	eP	P	10 07 02.3	+0.2
	comp=Z,6.2nm,0.8s						
SRU	San Rafael Swe	67.45	308	eP	P	10 07 02.3	+0.2
SRU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
P17A	Butcher Ranch,	67.65	308	eP	P	10 07 03.5	+0.3
	comp=Z,15nm,1.5s						
TLB	Topalu	67.76	46	⇓iP	P	10 07 03.1	-0.5
TLB	Topalu	67.76	46	⇓P	P	10 07 03.1	-0.5
WUAZ	Wupatki	67.91	304	eP	P	10 07 06.1	+1.1
	comp=Z,16nm,0.8s						
WUAZ	Wupatki	67.91	304	P	P	10 07 05.3	+0.4
	baz=93,SNR=8.8						
X16A	Lo Mia Camp, P	67.92	303	eP	P	10 07 06.2	+1.1
	comp=Z,22nm,1.7s						
EGMT	Eagleton	67.94	318	eP	P	10 07 04.3	-0.5
	comp=Z,8.3nm,0.8s						
EGMT	Eagleton	67.94	318	P	P	10 07 04.4	-0.5
	baz=99,SNR=5.4						
LOHW	Long Hollow	67.95	313	eP	P	10 07 04.7	-0.4
	comp=Z,14nm,1.7s						
TMUT	Trail Mountain	68.00	308	eP	P	10 07 05.9	+0.3
	comp=Z,15nm,1.7s						
TIRR	Tirgusor	68.01	46	⇑iP	P	10 07 02.9	-2.3
TIRR	Tirgusor	68.01	46	⇑P	P	10 07 02.9	-2.3
MOOW	Moose Ponds	68.06	313	eP	P	10 07 05.3	-0.6
	comp=Z,19nm,1.9s						
FLWY	Flagg Ranch	68.07	313	eP	P	10 07 05.9	+0.1
	comp=Z,28nm,1.5s						
TPAW	Teton Pass	68.19	313	eP	P	10 07 05.5	-1.2
	comp=Z,7.0nm,1.1s						
IMW	Indian Meadow	68.22	313	eP	P	10 07 06.8	-0.1
	comp=Z,14nm,1.4s						
FXWY	Fox Creek	68.26	313	eP	P	10 07 06.7	-0.4
	comp=Z,12nm,1.6s						
YHH	Holmes Hill	68.26	314	eP	P	10 07 09.0	+1.9
	comp=Z,24nm,1.9s						
JLU	Jordanelle	68.29	309	eP	P	10 07 07.8	+0.5
	comp=Z,13nm,1.4s						
TCUT	Toone Canyon	68.30	310	eP	P	10 07 08.0	+0.6
	comp=Z,14nm,1.1s						
YMR	Madison River	68.33	314	eP	P	10 07 08.6	+1.1
	comp=Z,57nm,2.0s						
YHB	Horse Butte	68.50	314	eP	P	10 07 09.3	+0.8
	comp=Z,8.2nm,0.8s						
KIS	Kishinev	68.61	44	eP	P	10 07 09.0	+0.1
KIS	Kishinev	68.61	44	eP	P	10 07 09.0	+0.1
MTPU	Mount Pierson	68.68	307	eP	P	10 07 10.8	+0.8
	comp=Z,8.6nm,1.2s						
MSU	Marysvale	68.70	307	eP	P	10 07 10.7	+0.8
MSU	Marysvale	68.70	307	eP	P	10 07 10.7	+0.8
NLU	North Lily Min	68.71	309	eP	P	10 07 10.3	+0.3
	comp=Z,3.9nm,1.0s						
SPUT	South Promonto	69.09	310	eP	P	10 07 12.4	+0.1
	comp=Z,13nm,1.1s						
HRY	Holter Researc	69.17	316	eP	P	10 07 12.5	0.0
DUG	Dugway, Tooele	69.30	309	eP	P	10 07 13.8	+0.3
	comp=Z,7.0nm,1.1s						
DUG	Dugway, Tooele	69.30	309	P	P	10 07 13.8	+0.3
DUG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
DUG	Dugway, Tooele	69.30	309	P	P	10 07 13.2	-0.3
	baz=94						
AK11	Malin Array Si	69.35	40	eP	P	10 07 13.9	+0.5
KIEV	Kiev	69.38	40	eP	P	10 07 14.5	+0.9
	comp=Z,7.0nm,0.9s						
KIEV	Kiev	69.38	40	⇑eP	P	10 07 12.4	-1.2
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKASG	Malin Array Be	69.39	40	P	P	10 07 12.7	-0.9
	comp=Z,3.1nm,0.7s,baz=260,slow=5.8,SNR=19						
AKASG				LR	LR	10 36 02.5	
	comp=Z,214nm,19.2s,baz=255,slow=35						
AKBB	Malin Array Si	69.39	40	eP	P	10 07 14.5	+0.9
	comp=Z,7.4nm,0.9s						
AKBB	Malin Array Si	69.39	40	eP	P	10 07 14.5	+0.9
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BGU	Big Grassy Mou	69.51	310	eP	P	10 07 15.1	+0.3
	comp=Z,11nm,1.0s						
DLMT	Dillon	69.55	314	eP	P	10 07 15.7	+0.7
	comp=Z,9.2nm,0.9s						
CCUT	Cedar City	69.59	306	eP	P	10 07 16.8	+1.3
	comp=Z,4.3nm,1.0s						
FINES	FINESS Array B	69.89	28	P	P	10 07 15.6	-0.9
	comp=Z,3.5nm,0.7s,baz=290,slow=5.5,SNR=6.3						
FINES				LR	LR	10 34 54.8	
	comp=Z,194nm,19.6s,baz=222,slow=33						
PSUT	Pine Spring	70.02	307	eP	P	10 07 19.0	+1.0
	comp=Z,4.6nm,0.8s						
PDMCI	Parker Dam,Lak	70.14	303	P	P	10 07 18.3	-0.3
	baz=90						
RES	Resolute Bay	70.70	347	eP	P	10 07 23.1	+1.9
	comp=Z,18nm,1.5s						
RES	Resolute Bay	70.70	347	eP	P	10 07 23.1	+1.9
RES				pmax	pmax		
	comp=Z,18nm,1.5s						
RES	Resolute Bay	70.70	347	P	P	10 07 21.3	+0.1
	comp=Z,2.3nm,0.8s,baz=138,slow=4.0,SNR=5.8						
HLID	Hailey	70.70	312	eP	P	10 07 22.2	+0.2
	comp=Z,4.4nm,0.6s						
HLID	Hailey	70.70	312	P	P	10 07 21.6	-0.5
	baz=94,SNR=7.8						
IRM	Iron Mountain	70.98	302	P	P	10 07 23.7	-0.1
	baz=90						
ELK	Elko	71.17	309	eP	P	10 07 25.2	+0.1
	comp=Z,9.3nm,1.1s						
ELK	Elko	71.17	309	eP	P	10 07 25.2	+0.1
ELK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ELK	Elko	71.17	309	P	P	10 07 24.6	-0.5
	comp=Z,2.5nm,0.6s,baz=110,slow=7.2,SNR=15						
R11A	Troy Canyon, C	71.37	307	eP	P	10 07 28.9	+2.6
	comp=Z,2.7nm,0.9s						
R11A	Troy Canyon, C	71.37	307	P	P	10 07 25.9	-0.4
	baz=91						
GMRC	Granite Mounta	71.40	303	P	P	10 07 26.2	-0.3
	baz=90						
PUL	Pulkovo	71.55	30	⇓eP	P	10 07 27.4	+0.8
PUL				pmax	pmax		
	comp=Z,43nm,0.7s						
BR131	Keskin Array S	71.56	52	eP	P	10 07 29.8	+2.4
BRTR	Keskin Array B	71.56	52	i P	P	10 07 29.1	+1.8
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	71.56	52	P	P	10 07 26.9	-0.5
	comp=Z,4.3nm,0.9s,baz=264,slow=5.8,SNR=12						
BRTR				LR	LR	10 38 32.8	
	comp=Z,69nm,20.5s,baz=264,slow=36						
ARCES	ARCESS Array B	72.02	20	P	P	10 07 27.0	-2.3
	comp=Z,3.9nm,0.8s,baz=291,slow=7.5,SNR=3.8						
MURC	Murrieta	72.69	302	P	P	10 07 33.5	-0.5
	baz=89						
GRAC	Grapevine Rang	72.78	305	P	P	10 07 34.1	-0.5
	baz=90						
NEW	Newport	72.87	317	eP	P	10 07 34.6	-0.3
	comp=Z,6.3nm,0.9s						
NEW	Newport	72.87	317	P	P	10 07 34.7	-0.2
	baz=93						
NEW	Newport	72.87	317	P	P	10 07 33.1	-1.8
	comp=Z,2.2nm,0.7s,baz=112,slow=6.7,SNR=6.8						
YKA	Yellowknife Ar	73.06	332	P	P	10 07 33.9	-1.7
	comp=Z,3.4nm,1.0s,baz=100,slow=6.0,SNR=16						
YKB5	Yellowknife Ar	73.06	332	eP	P	10 07 33.9	-1.7
YKW3	Yellowknife Ar	73.07	332	eP	P	10 07 38.4	+2.7
KVN	Kaiserville	73.34	308	eP	P	10 07 37.8	-0.3
	comp=Z,4.4nm,0.7s						
KVN	Kaiserville	73.34	308	eP	P	10 07 37.8	-0.3
KVN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NVAR	Mina Array Bea	73.51	307	P	P	10 07 38.3	-0.8
	comp=Z,0.7nm,0.5s,baz=96,slow=4.7,SNR=3.4						
NVAR				LR	LR	10 39 13.9	
	comp=Z,169nm,18.9s,baz=99,slow=35						
OBN	Obninsk	74.30	36	⇓eP	P	10 07 44.6	+1.6
OBN				i		10 07 56.9	
OBN				e		10 10 26.7	
OBN				i S	S	10 17 15.6	-0.6
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
I07A	Izee	74.40	313	eP	P	10 07 42.2	-1.8
	comp=Z,18nm,0.3s						
BOSA	Boshof	74.94	123	P	P	10 07 45.9	-1.5
	comp=Z,4.0nm,0.9s,baz=284,slow=10,SNR=3.3						
BOSA				LR	LR	10 33 26.9	
	comp=Z,406nm,21.2s,baz=232,slow=30						
MOD	Modoc Plateau	75.00	311	eP	P	10 07 48.4	+0.8
	comp=Z,46nm,1.9s						
LPSR	Galich'ya Gora	75.58	38	eP	P	10 07 51.5	+1.0
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	Storozhevoye	75.70	40	eP	P	10 07 50.7	-0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLMR	Klimovskoe	76.22	30	eP	P	10 07 54.0	+0.1
KLMR				pmax	pmax		
	comp=Z,23nm,1.4s						
KLMR	Klimovskoe	76.22	30	eP	P	10 07 54.1	+0.1
KLMR				AMP		10 07 57.0	
	comp=Z,23nm,1.4s						
KIV	Kislovodsk	78.25	47	eP	P	10 08 07.0	+1.1
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV				MLR	MLR		
	comp=Z,79nm,18.0s						
KBZ	Khabaz	78.41	47	P	P	10 08 06.1	-0.5
	comp=Z,3.8nm,0.9s,baz=315,slow=8.0,SNR=3.6						
KBZ				LR	LR	10 42 26.7	
	comp=Z,45nm,20.7s,baz=280,slow=36						
PRGR	Permogore	79.18	29	eP	P	10 08 09.0	-1.4
PRGR				e		10 08 19.4	
PRGR				pmax	pmax		
	comp=Z,12nm,0.6s						
ZEI	Tsey	79.21	48	eP	P	10 08 09.6	-1.7
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DLBC	Dease Lake	80.50	328	P	P	10 08 17.9	0.0
	comp=Z,6.1nm,1.1s,baz=102,slow=1.4,SNR=3.1						
INK	Inuvik	81.13	338	eP	P	10 08 20.8	0.0
	comp=Z,20nm,1.3s						
INK	Inuvik	81.13	338	eP	P	10 08 20.8	0.0
INK				pmax	pmax		
	comp=Z,20nm,1.3s						
INK	Inuvik	81.13	338	P	P	10 08 19.9	-1.0
	comp=Z,2.8nm,0.7s,baz=63,slow=6.2,SNR=7.4						
EPYK	Eagle Plains	82.62	336	P	P	10 08 29.0	+0.2
	baz=80						
VNA1	Neumayer--Stat	84.09	170	P	P	10 08 37.2	+1.1
DAWY	Dawson	84.16	334	eP	P	10 08 40.7	+3.9
	comp=Z,7.1nm,0.9s						
VNA3	Neumayer Olymp	84.36	170	P	P	10 08 38.2	+0.7
VNA2	Neumayer--Watz	84.48	169	P	P	10 08 38.8	+0.7
	baz=329,slow=5.8						
SNAA	Sanae	85.94	169	P	P	10 08 46.0	+0.5
MENT	Mentasta	86.32	333	eP	P	10 08 49.8	+2.2
	comp=Z,9.0nm,0.7s						
ARU	Arti	86.52	33	⇑iP	P	10 08 50.2	+1.5
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TOLK	Toolik Lake Re	86.79	340	eP	P	10 08 50.1	+0.2
	comp=Z,19nm,0.9s						
TOLK	Toolik Lake Re	86.79	340	P	P	10 08 49.8	0.0
	baz=69						
IL1	Eielson Array	87.11	336	eP	P	10 08 51.5	+0.1
ILAR	Eielson Array	87.11	336	P	P	10 08 51.5	0.0
	comp=Z,4.1nm,0.9s,baz=60,slow=4.3,SNR=14						
ILAR				LR	LR	10 44 49.8	
	comp=Z,130nm,21.0s,baz=110,slow=34						
ILB	Eielson Array	87.11	336	eP	P	10 08 52.0	+0.6
COLA	College	87.46	336	⇓eP	P	10 08 52.6	-0.5
COLA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AKTO	Aktyubinsk	87.63	39	P	P	10 08 53.9	-0.3
	comp=Z,2.4nm,0.7s,baz=290,slow=4.5,SNR=6.0						
ABKAR	Akbulak array	89.13	40	eP	P	10 09 01.8	+0.4
IM3	Indian Mountai	89.32	338	eP	P	10 09 06.2	+4.3
GEYT	Alibeck	90.70	51	P	P	10 09 09.6	+0.6
	comp=Z,1.8nm,0.6s,baz=256,slow=6.0,SNR=4.1						
GEYT				LR	LR	10 53 40.7	
	comp=Z,37nm,18.2s,baz=20,slow=38						
NRIK	Noril'sk	92.68	16	LR	LR	10 46 40.2	
	comp=Z,71nm,20.9s,baz=254,slow=33						
BRVK	Borovoye	94.03	34	⇑eP	P	10 09 25.0	+1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SYO	Syowa Base	96.50	159	⇑eP	P	10 09 35.0	+0.2
SYO	Syowa Base	96.50	159	⇑epP	pP	10 09 38.6	-1.0
BILL	Bilibino	99.15	350	⇑eP	Pdif	10 09 45.6	-1.3
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ULN	Ulaanbaatar	115.27	23	⇓iPKIKP	PKiKP	10 14 45.6	-2.1
GTA	Gaotai	118.38	34	ePKP	PKiKP	10 14 57.1	+3.1
HHC	Hu-ho-hao-te	122.90	25	ePKP	PKPdf	10 14 56.9	-5.6
HHC				LR	LR		
	comp=Z,200nm,13.0s						
HHC				LR	LR		
	comp=Z,160nm,12.1s						
HHC				LR	LR		
	comp=Z,230nm,10.4s						
LZH	Lanzhou	122.98	34	ePKP	PKPdf	10 14 58.3	-4.6
LZH				sPKP		10 15 12.8	
LZH				LR	LR		
	comp=Z,230nm,18.0s						
LZH				LR	LR		
	comp=Z,290nm,18.1s						
LZH				LR	LR		
	comp=Z,300nm,20.3s						
CD2	Chengdu	126.67	38	PKP	PKPdf	10 15 08.0	-2.0
CMAR	Chiang Mai Arr	131.10	54	PKP	PKPdf	10 15 18.4	-0.2
	comp=Z,0.4nm,0.3s,baz=287,slow=3.2,SNR=4.3						
GYA	Guiyang	131.62	40	ePdif	Pdif	10 12 11.0	-1.4
GYA				PKP	PKPdf	10 15 19.4	-0.2
GYA				PP	PP	10 17 42.8	+4.6
GYA				pmax	pmax		
	comp=Z,120nm,7.8s						
NJ2	Nanjing	133.43	24	ePKP	PKiKP	10 15 24.4	+0.5
DZM	Mont Dzumac	151.30	243	PKPbc	PKiKP	10 16 01.2	+0.3
	comp=Z,11nm,0.7s,baz=136,slow=6.1,SNR=9.9						
ASAR	Alice Springs	166.16	160	PKPab	PKPab	10 17 12.8	+0.6
	comp=Z,0.9nm,0.9s,baz=183,slow=4.5,SNR=4.7						
WRA	Warramunga Arr	169.72	155	PKP	PKPdf	10 16 14.6	+0.3
	comp=Z,1.2nm,1.2s,baz=304,slow=0.9,SNR=2.9						
WRA				PKPab	PKPab	10 17 28.5	+0.5
	comp=Z,0.4nm,0.7s,baz=296,slow=27,SNR=5.0						

ISCJB ***20*** *09:57:16.0±1.5, 35°.31S±0°.10×137°.3E±0°.1, h10^{km}, Error ellipse: s-maj=16.7km s-min=11.8km az=142.2*

IDC ***20*** *09:57:18.0±6.6, 35°.25S×137°.33E, h0^{km}, mb1 3.9/3, mb1mx3.6/35, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=61.2km s-min=33.3km az=178.0*

AUST ***20*** *09:57:18.7±0.7, 35°.48S×137°.41E, h0^{km}, Error ellipse: s-maj=10.8km s-min=4.3km az=51.0*

ISC 20 09:57:16.7±1.8**, 35°.40S**±0°.10×**137°.2E**±0°.1**, h10^{km}, n8, σ3^s.32**/12**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTT	Hallett	2.42	36	P	Pn	09 57 59.2	+2.9
	baz=2.4,SNR=50						
BBOO	Buckleboo	2.75	339	P	Pb	09 58 06.1	+0.1
	baz=2.9,SNR=44						
BBOO				S	Sg	09 58 47.7	+2.7
	baz=2.9,SNR=5.7						
ARPS	Mount Arapiles	3.99	111	P	Pn	09 58 18.2	+0.3
	baz=3.8,SNR=36						
STKA	Stephens Creek	5.07	47	P	Pn	09 58 35.2	+2.5
	baz=5.0,SNR=25						
STKA	Stephens Creek	5.07	47	Pn	Pn	09 58 33.4	+0.7
	1.5nm,0.3s,baz=219,slow=14,SNR=37						
STKA				Sn	Sn	09 59 30.1	-1.3
	2.8nm,0.3s,baz=322,slow=22,SNR=3.1						
STKA				Lg	Lg	09 59 54.0	
	6.8nm,0.3s,baz=308,slow=6.7,SNR=5.5						
TOO	Toolangi	7.02	110	P	Pn	09 59 00.4	+0.9
	baz=6.8,SNR=4.8						
ASAR	Alice Springs	12.04	345	Pn	Pn	10 00 10.4	+2.0
	0.9nm,0.3s,baz=167,slow=11,SNR=60						
ASAR				Sn	Sn	10 02 17.7	-5.0
	0.6nm,0.3s,baz=159,slow=22,SNR=6.2						
ASAR				Lg	Lg	10 03 37.2	
	baz=168,slow=24,SNR=2.9						
WRA	Warramunga Arr	15.60	350	Pn	Pn	10 00 55.6	-1.1
	0.4nm,0.3s,baz=169,slow=14,SNR=19						
WRA				Sn	Sn	10 03 43.1	-6.6
	0.4nm,0.3s,baz=169,slow=25,SNR=5.7						

THE ***20*** *09:57:44.3, 37°.28N×20°.56E, h0^{km}±1^{km}, ML3.5/15, Error ellipse: s-maj=2.5km s-min=0.9km az=221.0*

ATH ***20*** *09:57:46.0, 37°.38N×20°.74E, h21^{km}±1^{km}, ML3.5/5, Error ellipse: s-maj=3.9km s-min=1.2km az=57.0*

BEO ***20*** *09:57:51.6±0.8, 37°.85N×22°.23E, h10^{km}, ML3.4/3*

ISC 20 09:57:46.5±1.4**, 37°.31N**±0°.04×**20°.64E**±0°.04**, h26**^{km}±13^{km}**, n101, σ1^s.97**/124**, 8C, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTN	Vitineika	0.75	36	P	Pb	09 57 58.6	-2.2
VTN				S	Sb	09 58 08.6	-2.0
MES3	Kyparissia	0.83	94	P	Pb	09 58 01.3	-1.0
VLS	Valsamata	0.87	358	P	Pb	09 58 01.0	-1.9
VLS				S	Sb	09 58 13.9	-0.3
VLS				AML	AML	09 58 15.4	
	comp=E,9888μm,0.1s						
VLS				AML	AML	09 58 15.7	
	comp=N,10749μm,0.2s						
VLS	Valsamata	0.87	358	P	Pb	09 58 01.0	-1.9
VLS				S	Sn	09 58 14.7	-0.2
AMT	Artemida-Makis	0.88	75	P	Pb	09 58 01.6	-1.5
AMT				AML	AML	09 58 18.8	
	comp=E,5240μm,0.9s						
AMT				AML	AML	09 58 31.6	
	comp=N,5368μm,0.8s						

AMT	**Artemida-Makis**	**0.88**	**75**	P	**Pb**	**09 58 01.7**	**-1.5**
AMT				S	**Sn**	**09 58 17.2**	**+1.9**
PYL	**PYLOS**	**0.98**	**115**	P	**Pn**	**09 58 03.2**	**-1.3**
PYL	**PYLOS**	**0.98**	**115**	P	**Pn**	**09 58 03.8**	**-0.7**
PYL				S	**Sn**	**09 58 18.7**	**+1.2**
MES2	**Methoni**	**0.98**	**119**	P	**Pn**	**09 58 03.8**	**-0.8**
RLS	**Riolos of Patr**	**1.00**	**41**	P	**Pn**	**09 58 02.5**	**-2.3**
RLS				AML	AML	09 58 20.7	
	comp=E,1792µm,1.3s						
RLS				AML	AML	09 58 21.0	
	comp=N,5891µm,0.8s						
RLS	**Riolos of Patr**	**1.00**	**41**	P	**Pn**	**09 58 03.0**	**-1.8**
RLS				S	**Sn**	**09 58 19.5**	**+1.5**
ITM	**Ithomi**	**1.04**	**97**	P	**Pn**	**09 58 04.7**	**-0.7**
ITM	**Ithomi**	**1.04**	**97**	P	**Pn**	**09 58 05.0**	**-0.4**
AXS	**Araxos**	**1.06**	**33**	P	**Pn**	**09 58 04.2**	**-1.6**
DRO	**Drossia**	**1.07**	**53**	P	**Pn**	**09 58 04.0**	**-1.8**
DRO				AML	AML	09 58 26.0	
	comp=N,7184µm,0.7s						
DRO				AML	AML	09 58 27.2	
	comp=E,6979µm,0.6s						
DRO	**Drossia**	**1.07**	**53**	P	**Pn**	**09 58 04.8**	**-1.0**
DRO				S	**Sn**	**09 58 22.7**	**+2.9**
EVGI	**Lefkada island**	**1.31**	**1**	P	**Pn**	**09 58 08.6**	**-0.5**
EVGI	**Lefkada island**	**1.31**	**1**	P	**Pn**	**09 58 09.0**	**-0.1**
TRIP	**Tripoli**	**1.32**	**80**	P	**Pb**	**09 58 10.5**	**-0.1**
TRIP	**Tripoli**	**1.32**	**80**	P	**Pb**	**09 58 10.8**	**+0.2**
VLX	**Vlachokerasia**	**1.39**	**87**	P	**Pn**	**09 58 10.7**	**+0.4**
KLV	**Kalavryta, Ach**	**1.41**	**58**	P	**Pn**	**09 58 09.8**	**-0.7**
KLV	**Kalavryta, Ach**	**1.41**	**58**	P	**Pn**	**09 58 10.5**	**0.0**
KLV				S	**Sb**	**09 58 32.6**	**+2.9**
LAKA	**Lakka**	**1.41**	**48**	P	**Pn**	**09 58 10.7**	**+0.1**
LAKA	**Lakka**	**1.41**	**48**	P	**Pn**	**09 58 11.0**	**+0.4**
LAKA				S	**Sb**	**09 58 32.4**	**+2.6**
LKD2	**Lefkada island**	**1.48**	**1**	P	**Pn**	**09 58 12.1**	**+0.6**
LKD2	**Lefkada island**	**1.48**	**1**	P	**Pn**	**09 58 11.7**	**+0.2**
LKD2				S	**Sb**	**09 58 32.8**	**+1.1**
PVO	**Paravola**	**1.48**	**28**	P	**Pn**	**09 58 12.2**	**+0.7**
PVO				AML	AML	09 58 37.4	
	comp=E,3796µm,1.0s						
PVO				AML	AML	09 58 41.7	
	comp=N,3912µm,0.4s						
PVO	**Paravola**	**1.48**	**28**	P	**Pb**	**09 58 12.5**	**-0.9**
PVO				S	**Sb**	**09 58 33.4**	**+1.6**
GUR	**Goura**	**1.49**	**65**	P	**Pn**	**09 58 11.5**	**-0.3**
EFP	**Efpalio**	**1.50**	**42**	P	**Pb**	**09 58 13.0**	**-0.6**
EFP	**Efpalio**	**1.50**	**42**	P	**Pb**	**09 58 13.5**	**-0.2**
EFP				S	**Sb**	**09 58 34.4**	**+2.1**
TSLK	**Tsoukalades, L**	**1.51**	**1**	P	**Pb**	**09 58 13.5**	**-0.4**
TRIZ	**Trizonia**	**1.55**	**47**	P	**Pb**	**09 58 14.4**	**-0.1**
TRIZ	**Trizonia**	**1.55**	**47**	P	**Pb**	**09 58 14.4**	**-0.1**
TRIZ				S	**Sb**	**09 58 36.5**	**+2.8**
SERG	**Sergoula**	**1.57**	**45**	P	**Pn**	**09 58 12.2**	**-0.6**
KALE	**Kalithea**	**1.61**	**47**	P	**Pb**	**09 58 15.0**	**-0.5**
KALE	**Kalithea**	**1.61**	**47**	P	**Pb**	**09 58 15.4**	**-0.1**
ANX	**Ano Chora**	**1.64**	**38**	P	**Pn**	**09 58 13.7**	**0.0**
ANX	**Ano Chora**	**1.64**	**38**	P	**Pb**	**09 58 14.9**	**-1.1**
ANX				S	**Sb**	**09 58 37.7**	**+1.4**
EVR	**Evrytania**	**1.85**	**30**	P	**Pn**	**09 58 18.0**	**+1.3**
DSF	**Desfina**	**1.86**	**53**	P	**Pn**	**09 58 18.1**	**+1.4**
VLI	**Veliai**	**1.93**	**107**	P	**Pb**	**09 58 20.4**	**-0.6**
LTK	**Loutraki**	**1.98**	**68**	P	**Pn**	**09 58 18.9**	**+0.5**
LTK	**Loutraki**	**1.98**	**68**	P	**Pn**	**09 58 19.1**	**+0.7**
PROD	**Prodromos**	**2.03**	**61**	P	**Pn**	**09 58 19.7**	**+0.7**
DID	**Didima**	**2.08**	**84**	P	**Pn**	**09 58 19.5**	**-0.3**
DID	**Didima**	**2.08**	**84**	P	**Pn**	**09 58 20.4**	**+0.7**
AGG	**Agios Georgios**	**2.17**	**37**	P	**Pn**	**09 58 22.6**	**+1.6**
AGG	**Agios Georgios**	**2.17**	**37**	P	**Pn**	**09 58 22.7**	**+1.7**
AGG				S	**Sb**	**09 58 50.5**	**-1.1**
KYTH	**Kithira**	**2.20**	**118**	P	**Pn**	**09 58 23.3**	**+2.0**
IGT	**Igoumenitsa**	**2.23**	**354**	*e*Pn	**Pb**	**09 58 29.1**	**+3.0**
IGT				*e*Sn	**Sb**	**09 58 56.6**	**+3.2**
IGT	**Igoumenitsa**	**2.23**	**354**	P	**Pn**	**09 58 22.7**	**+0.9**
IGT	**Igoumenitsa**	**2.23**	**354**	P	**Pn**	**09 58 22.0**	**+0.2**
IGT				S	**Sb**	**09 58 52.3**	**-1.1**
VIL2	**Platees**	**2.27**	**66**	P	**Pn**	**09 58 22.7**	**+0.4**
VILL	**Villia**	**2.29**	**67**	P	**Pn**	**09 58 23.1**	**+0.5**
ATAL	**Atalanti**	**2.34**	**53**	P	**Pn**	**09 58 24.2**	**+0.9**
ATAL	**Atalanti**	**2.34**	**53**	P	**Pn**	**09 58 24.7**	**+1.5**
ATAL				S	**Sb**	**09 58 55.1**	**-1.2**
THL	**Klokotos Trika**	**2.50**	**25**	P	**Pn**	**09 58 26.1**	**+0.6**
THL	**Klokotos Trika**	**2.50**	**25**	P	**Pn**	**09 58 26.8**	**+1.3**
VLY	**Voula,Athens**	**2.57**	**77**	P	**Pn**	**09 58 26.5**	**+0.1**
KPRO	**Kipourio**	**2.70**	**12**	P	**Pn**	**09 58 30.4**	**+2.0**
KPRO	**Kipourio**	**2.70**	**12**	P	**Pn**	**09 58 30.6**	**+2.3**
FYTO	**Fytoko, Volos**	**2.77**	**40**	P	**Pn**	**09 58 29.0**	**-0.2**
EREA	**Eretria**	**2.83**	**66**	P	**Pn**	**09 58 30.2**	**+0.1**
EREA	**Eretria**	**2.83**	**66**	P	**Pn**	**09 58 30.4**	**+0.3**
NEO	**Neokhori**	**2.85**	**45**	P	**Pn**	**09 58 30.4**	**+0.1**
XOR	**Xorichti**	**2.87**	**44**	P	**Pn**	**09 58 30.9**	**+0.3**
XOR	**Xorichti**	**2.87**	**44**	P	**Pn**	**09 58 31.2**	**+0.6**
SKIA	**Skiathos**	**2.90**	**49**	P	**Pn**	**09 58 31.8**	**+0.8**
PENT	**Pentalofos**	**2.91**	**8**	P	**Pn**	**09 58 33.5**	**+2.3**
AOS	**Alonnisos**	**3.16**	**53**	P	**Pn**	**09 58 34.8**	**+0.2**
FNA	**Florina**	**3.52**	**9**	*e*Pn	**Pn**	**09 58 39.8**	**+0.3**
TIP	**Timpagrande**	**3.58**	**303**	⇑*i*P	**Pn**	**09 58 43.9**	**+3.5**
BIA	**Bitola**	**3.74**	**8**	*i* Pn	**Pn**	**09 58 44.4**	**+1.8**
OHR	**Ohrid**	**3.80**	**2**	*i* Pn	**Pb**	**09 58 57.5**	**+4.7**
TIR	**Tirane**	**4.08**	**352**	⇑*i*P	Pb	09 59 09.7	+12
KRUS	**Krusevo**	**4.08**	**6**	*i* Pn	**Pn**	**09 58 47.8**	**+0.5**
TAR1	**Taranto**	**4.14**	**322**	*e*Pn	**Pn**	**09 58 49.7**	**+1.7**
TAR1				Sn	**Sn**	**09 59 34.1**	**-1.5**
VAY	**Valandovo**	**4.28**	**20**	*i* Pn	**Pn**	**09 58 50.3**	**+0.4**
MASS	**Massafra**	**4.29**	**322**	*e*Pn	**Pn**	**09 58 51.2**	**+1.1**
MATE	**Matera**	**4.53**	**319**	⇑*i*P	Pb	09 59 12.2	+7.0
STIP	**Stip**	**4.54**	**15**	*i* Pn	**Pn**	**09 58 55.3**	**+1.8**
SG1	**Sgolgore (BA)**	**4.68**	**320**	*e*Pn	**Pn**	**09 58 56.7**	**+1.2**
SG1				Sn	**Sn**	**09 59 41.7**	**-7.3**
BAI	**Bari**	**4.79**	**324**	*e*Pn	**Pn**	**09 58 57.7**	**+0.8**
BAI				Sn	**Sn**	**09 59 44.2**	**-7.2**
PDG	**Podgorica**	**5.22**	**349**	⇑*i*P	**Pb**	**09 59 20.2**	**+3.1**
VTS	**Vitosha**	**5.67**	**20**	*e*Pn	Pn	09 59 03.3	-5.8
VTS				*e*Sn	Sn	09 59 58.3	-15
VTS	**Vitosha**	**5.67**	**20**	⇑*i*P	Pn	09 59 03.6	-5.5
SELS	**Selova**	**5.92**	**3**	*e*Pn	**Pn**	**09 59 12.2**	**-0.2**
SJES	**Sjenica**	**5.97**	**355**	*e*Pn	**Pn**	**09 59 14.8**	**+1.6**
SJES				*e*Sn	**Sn**	**10 00 18.2**	**-2.6**
STON	**Ston**	**5.99**	**339**	*i* Pn	**Pn**	**09 59 12.6**	**-0.8**
STON				Sn	**Sn**	**10 00 16.8**	**-4.5**
ZAPS	**Zavoj**	**6.15**	**14**	*e*Pn	**Pn**	**09 59 11.5**	**-4.2**
IVAS	**Ivanjica**	**6.27**	**357**	*e*Pn	**Pn**	**09 59 18.8**	**+1.4**
IVAS				*e*Sn	**Sn**	**10 00 24.2**	**-4.0**
BOVS	**Bovan**	**6.37**	**7**	*e*Pn	**Pn**	**09 59 18.0**	**-0.7**
BOVS				*e*Sn	Sn	10 00 21.3	-9.2
GRUS	**Gruza**	**6.57**	**0**	*e*Pn	**Pn**	**09 59 20.5**	**-0.9**
GRUS				*e*Sn	**Sn**	**10 00 29.7**	**-5.8**
BBLS	**Lazići**	**6.62**	**352**	*e*Pn	**Pn**	**09 59 25.9**	**+3.8**
BBLS				*e*Sn	**Sn**	**10 00 35.0**	**-1.7**
DIVS	**Divibare**	**6.80**	**356**	*e*Pn	**Pn**	**09 59 25.1**	**+0.5**
DIVS				*e*Sn	**Sn**	**10 00 37.7**	**-3.5**
TRUS	**Trudelj**	**6.91**	**359**	*e*Pn	**Pn**	**09 59 27.8**	**+1.7**
MDVR	**Moldovita**	**7.51**	**6**	⇑*i*P	**Pb**	**09 59 59.1**	**+3.1**
GZR	**Gura Zlata**	**8.24**	**11**	⇑*i*P	**Pn**	**09 59 44.1**	**-0.2**
VOIR		**8.77**	**21**	⇑*i*P	**Pn**	**09 59 52.9**	**+1.2**

DDA ***20*** *10:01:37.5, 40.°98N×38.°07E, h6^{km}±3^{km}, ML2.9*

ISCJB ***20*** *10:01:38.8±0.6, 40.°95N±0.°04×38.°03E±0.°03, h7^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=4.1km az=16.2*

ISK ***20*** *10:01:38.0, 40.°94N×38.°04E, h10^{km}, ML2.4/11*

ISC 20 10:01:38.3±1.0**, 40.°97N**±0.°04×**38.°06E**±0.°02**, h11**^{km}±8^{km}**, n22, σ0.^{s}97**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORDU	**Ordu-Boztepe**	**0.16**	**277**	*i* P	**Pg**	**10 01 42.2**	**+0.2**
ORDU				*i* S	**Sg**	**10 01 44.7**	**+0.2**
ORDU				IAML_P			
	comp=Z,17µm,0.2s						
PRSB	**Persembe-Ordu**	**0.25**	**301**	PG	**Pg**	**10 01 43.7**	**+0.1**
PRSB				SG	**Sb**	**10 01 48.1**	**-1.2**
SUSE	**Susehri**	**0.77**	**172**	*i* P	**Pb**	**10 01 53.3**	**-0.5**
SUSE				*i* S	**Sb**	**10 02 04.7**	**+0.4**
SUSE				IAML_P			
	comp=Z,1µm,0.2s						
RSDY	**Resadiye-TOKAT**	**0.80**	**224**	PG	**Pb**	**10 01 53.4**	**-0.9**
RSDY				SG	**Sb**	**10 02 04.2**	**-0.9**
ERBA	**Erbaa**	**1.03**	**254**	*i* P	**Pb**	**10 01 57.6**	**-0.6**
ERBA				IAML_P			
	comp=Z,2µm,0.1s						
CUZAR	**Zara_SIVAS**	**1.11**	**192**	*i* P	**Pg**	**10 01 58.7**	**-1.0**
KELT	**Kelkit**	**1.23**	**132**	*i* P	**Pg**	**10 02 01.0**	**-0.9**
KELT				*i* S	**Sn**	**10 02 19.0**	**+0.7**
KELT				IAML_P			
	comp=Z,364nm,0.1s						
KTUT	**Trabzon**	**1.29**	**89**	PN	**Pg**	**10 02 02.8**	**-0.3**
MACK	**Trabzon**	**1.29**	**91**	*i* P	**Pg**	**10 02 02.6**	**-0.6**
MACK				*i* S	**Sn**	**10 02 21.6**	**+1.9**
MACK				IAML_P			
	comp=Z,12µm,0.1s						
TOKT	**Tokat**	**1.32**	**241**	PN	**Pn**	**10 02 02.6**	**-0.2**
SVSK	**Karacayir**	**1.33**	**218**	PN	**Pg**	**10 02 02.9**	**-1.0**
KVT	**Kavak**	**1.53**	**275**	PN	**Pb**	**10 02 06.2**	**-0.5**
KVT				SN	**Sg**	**10 02 26.4**	**-1.1**
REFA	**Refahiye_ERZN**	**1.67**	**161**	*i* P	Pn	10 02 00.8	-6.8
REFA				*i* S	Sn	10 02 18.2	-11
REFA				IAML_P			
	comp=Z,405nm,0.2s						
BAYT	**Aydıntepe-Bayb**	**1.68**	**109**	PN	**Pb**	**10 02 08.9**	**-0.5**
CUKAN	**kangal_SIVAS**	**1.72**	**196**	*i* P	**Pb**	**10 02 09.8**	**-0.1**
CUKAN				*i* S	**Sg**	**10 02 35.7**	**+2.1**
KEMA	**Kemaliye**	**1.73**	**169**	*i* P	**Pb**	**10 02 09.9**	**-0.3**
KEMA				*i* S	**Sg**	**10 02 35.8**	**+1.7**
KEMA				IAML_P			
	comp=Z,514nm,0.3s						
HAVZ	**Havza**	**1.78**	**274**	*i* P	**Pb**	**10 02 10.1**	**-0.8**
HAVZ				*i* S	**Sb**	**10 02 33.7**	**+0.5**
HAVZ				IAML_P			
	comp=Z,973nm,0.1s						
BAYB	**BAYBURT**	**1.82**	**112**	*i* P	**Pg**	**10 02 12.2**	**-1.0**
BAYB				*i* S	**Sg**	**10 02 36.0**	**-0.8**
BAYB				IAML_P			
	comp=Z,1µm,0.3s						
ERZN	**Erzincan**	**1.88**	**137**	PN	**Pb**	**10 02 11.4**	**-1.3**
CHOM	**Cayeli-Rize**	**2.05**	**86**	PN	**Pn**	**10 02 13.3**	**+0.6**
DIKM	**Dikmen**	**2.22**	**289**	PN	**Pn**	**10 02 15.6**	**+0.6**
SNOP	**Sinop**	**2.38**	**297**	PN	**Pn**	**10 02 18.2**	**+0.9**

IDC ***20*** *10:03:23.3±1.6, 12.°14S×164.°00E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.7/42, mbtmp3.8/8, ML3.3/2, Error ellipse: s-maj=35.4km s-min=26.8km az=115.0*

ISCJB ***20*** *10:03:26.6±1.1, 12.°26S±0.°09×164.°0E±0.°1, h33^{km}, mb3.7/6, Error ellipse: s-maj=21.0km s-min=10.9km az=154.6*

ISC 20 10:03:28.5±1.3**, 12.°2S**±0.°1×**164.°0E**±0.°2**, h35**^{km}**, n14, σ0.^{s}99**/9**, mb3.7**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.11**	**167**	Pn	**Pn**	**10 05 50.3**	**-1.2**
	0.4nm,0.3s,baz=338,slow=18,SNR=10						
DZM				Sn	**Sn**	**10 07 45.0**	**+1.3**
	0.1nm,0.3s,baz=358,slow=19,SNR=1.3						
CTA	**Charters Tower**	**18.75**	**243**	P	**P**	**10 07 44.6**	**0.0**
	0.0nm,0.3s,baz=45,slow=11,SNR=2.3						
STKA	**Stephens Creek**	**28.44**	**223**	P	**P**	**10 09 20.6**	**+0.4**
	2.3nm,0.9s,baz=58,slow=13,SNR=2.6						
WRA	**Warramunga Arr**	**29.48**	**251**	P	**P**	**10 09 29.8**	**+0.2**
	0.9nm,0.8s,baz=81,slow=8.8,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**30.59**	**5**	T	T	10 40 38.3	
	baz=184,slow=76,SNR=5.3						
H11S3	**WAKE ISLAND Hy**	**30.59**	**5**	T	T	10 40 36.0	
	baz=184,slow=76,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**30.61**	**5**	T	T	10 40 33.8	
	baz=184,slow=76,SNR=6.7						
ASAR	**Alice Springs**	**30.75**	**244**	P	**P**	**10 09 41.0**	**+0.2**
	0.5nm,0.9s,baz=66,slow=9.6,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**31.82**	**5**	T	T	10 42 06.1	
	baz=183						
H11N3	**WAKE ISLAND Hy**	**31.82**	**5**	T	T	10 42 03.2	
	baz=183						
H11N2	**WAKE ISLAND Hy**	**31.84**	**5**	T	T	10 42 08.2	
	baz=183						
FITZ	**Fitzroy Crossi**	**37.43**	**256**	P	**P**	**10 10 37.7**	**-1.0**
	1.8nm,0.8s,baz=90,slow=8.1,SNR=3.4						
ILAR	**Eielson Array**	**85.13**	**19**	P	**P**	**10 16 00.3**	**-0.3**
	0.2nm,0.6s,baz=224,slow=5.0,SNR=4.2						
MKAR	**Makanchi Array**	**93.17**	**317**	P	**P**	**10 16 40.4**	**+1.2**
	0.3nm,0.6s,baz=89,slow=5.6,SNR=3.5						

JMA ***20*** *10:10:26.6±0.1, 37.°99N×143.°72E, h38^{km}, M3.6*

IDC ***20*** *10:11:10.0±1.7, 36.°46N×138.°02E, h185^{km}±44^{km}, mb2.7/3, mb1 2.9/3, mb1mx2.6/42, mbtmp3.2/3, Error ellipse: s-maj=200.3km s-min=4.7km az=69.0*

ISC 20 10:10:26.7±2.0**, 37.°94N**±0.°08×**143.°8E**±0.°1**, h35**^{km}**, n16, σ1.^{s}28**/23**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.91**	**282**	P	**Pn**	**10 10 56.2**	**-0.4**
JIKH				*e*S	**Sn**	**10 11 17.7**	**-1.7**
JIO	**Ouri**	**2.02**	**286**	P	**Pn**	**10 10 58.0**	**-0.3**
JIO				S	**Sn**	**10 11 21.3**	**-1.0**
OFUJ	**Ofunato**	**2.05**	**305**	P	**Pn**	**10 10 58.4**	**-0.2**
JKMT	**Kesennumamotoy**	**2.05**	**296**	P	**Pn**	**10 10 58.3**	**-0.3**
JKMT				S	**Sn**	**10 11 21.5**	**-1.5**
JMK	**Ichinoseki**	**2.29**	**297**	P	**Pn**	**10 11 01.9**	**0.0**
JOM	**Ohasama**	**2.51**	**308**	P	**Pn**	**10 11 05.4**	**+0.4**
JOM				*e*S	**Sn**	**10 11 34.0**	**-0.4**
JFT	**Otama**	**2.80**	**263**	P	**Pn**	**10 11 09.4**	**+0.4**
JFT				S	**Sn**	**10 11 40.9**	**-0.7**
JYK	**Kaneyama**	**2.90**	**291**	P	**Pn**	**10 11 10.8**	**+0.5**
JYK				*e*S	**Sn**	**10 11 44.0**	**+0.1**
JANG	**Nango**	**3.03**	**324**	P	**Pn**	**10 11 12.4**	**+0.3**
JANG				S	**Sn**	**10 11 46.5**	**-0.6**
JAG	**Ashikaga**	**3.81**	**248**	P	**Pn**	**10 11 22.6**	**-0.2**
JRY	**Ryogami san**	**4.39**	**246**	P	**Pn**	**10 11 30.7**	**-0.1**
JRY				*e*S	**Sn**	**10 12 17.7**	**-3.0**
JCH	**Churui**	**4.69**	**356**	P	**Pn**	**10 11 34.5**	**-0.3**
JCH				*e*S	**Sn**	**10 12 24.7**	**-3.3**
MJAR	**Matsushiro Arr**	**4.70**	**254**	P	**Pn**	**10 11 35.0**	**-0.1**
	0.1nm,0.3s,baz=250,slow=25,SNR=7.4						
MJAR				S	Sn	10 11 51.1	-37
	0.1nm,0.3s,baz=151,slow=4.6,SNR=1.7						
MKAR	**Makanchi Array**	**45.28**	**302**	P	**P**	**10 18 42.9**	**+2.2**
	0.3nm,0.9s,baz=70,slow=8.3,SNR=1.8						
KURBB	**Kurchatov Arra**	**46.97**	**308**	P	P	10 19 01.1	+7.2
	0.3nm,0.7s,baz=83,slow=7.9,SNR=4.4						
WRA	**Warramunga Arr**	**58.26**	**191**	P	P	10 20 30.6	+13
	0.2nm,0.6s,baz=10,slow=7.2,SNR=1.2						

ISCJB ***20*** *10:22:36.1±0.3, 7.°55S±0.°03×129.°06E±0.°04, h131^{km}, mb4.0/19, Error ellipse: s-maj=5.8km s-min=4.5km az=164.8*

NEIC ***20*** *10:22:36.7±0.9, 7.°52S×128.°98E, h116^{km}±10^{km}, mb4.2/7, Error ellipse: s-maj=12.0km s-min=9.2km az=90.0*

IDC ***20*** *10:22:37.5±2.1, 7.°51S×128.°90E, h124^{km}±20^{km}, mb3.7/14, mb1 3.8/18, mb1mx3.7/43, mbtmp4.2/18, Error ellipse: s-maj=19.6km s-min=12.7km az=79.0*

ISC 20 10:22:37.2±0.5**, 7.°66S**±0.°05×**129.°06E**±0.°05**, h131**^{km}**, n43, σ2.^{s}13**/52**, mb4.1**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.25**	**98**	*e*Pn	**Pn**	**10 23 12.7**	**-1.6**
SAUI				*e*Sn	**Sn**	**10 23 42.8**	**+0.1**
SOEI	**Soe**	**5.17**	**246**	*e*Pn	**Pn**	**10 23 52.7**	**-0.1**
SOEI				*e*Sn	Sn	10 24 40.0	-12
MTN	**Manton Dam**	**5.54**	**159**	*e*Pn	**Pn**	**10 24 00.9**	**+3.2**
FAKI	**Fak Fak**	**5.68**	**34**	*e*Pn	**Pn**	**10 23 58.9**	**-0.6**
FAKI				*e*Sn	**Sn**	**10 25 01.8**	**-1.8**
BATI	**Baumata**	**5.90**	**244**	P	**Pn**	**10 24 02.5**	**0.0**
	31nm,0.3s,baz=107,slow=4.9,SNR=13						
BATI				S	**Sn**	**10 25 05.4**	**-3.6**
	36nm,0.3s,baz=89,slow=20,SNR=8.9						
SIJI	**Sorong**	**7.09**	**18**	P	**Pn**	**10 24 17.2**	**-1.3**
	2.5nm,0.3s,baz=214,slow=22,SNR=21						
SIJI				S	**Sn**	**10 25 33.0**	**-4.8**
	4.3nm,0.3s,baz=283,slow=23,SNR=7.8						
FITZ	**Fitzroy Crossi**	**10.90**	**197**	*e*Pn	**Pn**	**10 25 09.7**	**+0.1**
FITZ				*e*Sn	**Sn**	**10 27 05.9**	**-4.0**
FITZ	**Fitzroy Crossi**	**10.90**	**197**	P	**Pn**	**10 25 09.4**	**-0.2**
	1.1nm,0.3s,baz=13,slow=8.6,SNR=15						
FITZ				S	Sn	10 27 00.7	-9.2
	2.7nm,0.3s,baz=66,slow=14,SNR=8.8						
WRAB	**Tennant Creek**	**13.24**	**158**	*e*Pn	**Pn**	**10 25 40.9**	**+0.6**
WRAB				*e*Sn	**Sn**	**10 28 02.7**	**-3.8**
WRA	**Warramunga Arr**	**13.24**	**158**	P	**Pn**	**10 25 40.2**	**-0.1**
	2.5nm,0.3s,baz=342,slow=12,SNR=135						
WRA				S	Sn	10 27 59.8	-6.8
	4.8nm,0.3s,baz=335,slow=22,SNR=13						
WB2	**Warramunga Arr**	**13.25**	**158**	*e*Pn	**Pn**	**10 25 41.4**	**+1.0**
COEN	**Coen**	**15.21**	**116**	*e*Pn	**P**	**10 26 08.7**	**+1.4**
	13nm,0.9s						
COEN				*e*Sn	**Sn**	**10 28 49.5**	**-4.5**
AS31	**Alice Springs**	**16.58**	**164**	*e*Pn	**P**	**10 26 23.9**	**+1.5**
	2.8nm,0.7s						
ASAR	**Alice Springs**	**16.59**	**164**	P	**P**	**10 26 24.4**	**+1.9**
	1.3nm,0.3s,baz=331,slow=9.6,SNR=65						
ASAR				S	**Sn**	**10 29 20.7**	**-6.3**
	0.9nm,0.3s,baz=344,slow=24,SNR=4.8						
ASAR				ScP	**ScP**	**10 34 30.1**	**+2.5**
	0.1nm,0.3s,baz=354,slow=2.2,SNR=4.7						
AS01	**Alice Springs**	**16.60**	**164**	*e*Pn	**P**	**10 26 24.7**	**+2.2**
CTA	**Charters Tower**	**20.74**	**128**	P	Pn	10 27 11.8	+0.3
	1.8nm,0.4s,baz=298,slow=13,SNR=5.5						
CTA				S	**S**	**10 30 50.9**	**-1.4**
	1.3nm,0.4s,baz=316,slow=4.0,SNR=2.3						
CTAO	**Charters Tower**	**20.74**	**128**	*e*P	Pn	10 27 13.5	+2.0
	6.0nm,1.0s						
MORW	**Morawa**	**24.58**	**208**	*e*P	**P**	**10 27 47.7**	**+2.5**
	13nm,0.7s						
STKA	**Stephens Creek**	**26.78**	**156**	*e*P	**P**	**10 28 08.4**	**+3.4**
	0.4nm,0.8s						
STKA	**Stephens Creek**	**26.78**	**156**	P	**P**	**10 28 07.8**	**+2.8**
	1.4nm,0.8s,baz=330,slow=10,SNR=5.8						
NWAO	**Narrogin (SRO)**	**27.43**	**202**	*e*P	**P**	**10 28 12.9**	**+2.1**
	14nm,1.0s						
NWAO	**Narrogin (SRO)**	**27.43**	**202**	P	**P**	**10 28 12.6**	**+1.7**
	5.3nm,0.3s,baz=282,slow=7.4,SNR=12						
PSI	**Prapat**	**31.81**	**288**	P	**P**	**10 28 49.6**	**-0.2**
	5.8nm,0.7s,baz=180,slow=6.4,SNR=3.8						
CMAR	**Chiang Mai Arr**	**39.45**	**311**	P	**P**	**10 29 54.1**	**-0.8**
	1.1nm,0.4s,baz=141,slow=6.5,SNR=7.0						
KMI	**Kunming**	**41.45**	**323**	P	**P**	**10 30 12.9**	**+1.4**
KMI				pmax	pmax		
	comp=Z,13nm,0.7s						
KSRS	**Korea Array**	**44.89**	**359**	P	**P**	**10 30 38.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=168,slow=9.6,SNR=3.5						
LZH	**Lanzhou**	**49.55**	**333**	*e*P	**P**	**10 31 16.8**	**+1.7**
LZH				pP	pP	10 31 41.3	-3.0
LZH				sP	pwP	10 31 51.6	+2.8
LZH				PP	PP	10 33 18.3	+7.6
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,280nm,4.9s						
HHC	**Hu-ho-hao-te**	**50.88**	**343**	*e*P	**P**	**10 31 28.1**	**+3.2**
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,96nm,4.0s						
USRK	**Ussuriysk Ar.**	**51.68**	**3**	P	**P**	**10 31 30.6**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=178,slow=5.3,SNR=3.0						
GTA	**Gaotai**	**54.10**	**332**	*e*P	**P**	**10 31 48.3**	**-0.4**
GTA				pP	pP	10 31 55.3	-24
GTA				sP	pwP	10 31 58.8	-20
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	**Songino Array**	**58.77**	**342**	P	**P**	**10 32 21.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=161,slow=9.2,SNR=2.8						
SONM				PcP	**PcP**	**10 33 10.5**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=158,slow=4.2,SNR=2.4						
WMQ	**Urumqi**	**63.44**	**328**	*e*P	**P**	**10 32 55.0**	**+1.9**
WMQ				LR	LR		
	comp=N,320nm,22.5s						
WMQ				LR	LR		
	comp=E,360nm,24.7s						
WMQ				LR	LR		
	comp=Z,270nm,23.5s						
PETK	**Petropavlovsk-**	**65.24**	**19**	P	**P**	**10 33 05.1**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=182,slow=3.9,SNR=2.7						
MK01	**Makanchi Array**	**68.24**	**327**	*e*P	**P**	**10 33 23.4**	**-0.4**
MK31	**Makanchi Array**	**68.27**	**327**	*e*P	**P**	**10 33 23.8**	**-0.2**
MKAR	**Makanchi Array**	**68.27**	**327**	*e*P	**P**	**10 33 23.8**	**-0.2**
	comp=Z,13nm,0.4s						
MKAR	**Makanchi Array**	**68.27**	**327**	P	**P**	**10 33 23.8**	**-0.2**
	comp=Z,1.8nm,0.4s,baz=117,slow=8.3,SNR=45						
MAKZ	**Makanchi**	**68.44**	**327**	*e*P	**P**	**10 33 24.5**	**-0.5**
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**71.76**	**334**	P	**P**	**10 33 43.9**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=144,slow=5.5,SNR=5.8						
KURBB	**Kurchatov Arra**	**72.58**	**329**	P	**P**	**10 33 49.8**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=132,slow=5.1,SNR=24						
SEY	**Seymchan**	**72.62**	**11**	P	**P**	**10 33 50.6**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=22,slow=20,SNR=4.6						
AKTO	**Aktyubinsk**	**84.02**	**323**	P	**P**	**10 34 52.9**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=117,slow=14,SNR=2.4						
LPAZ	**La Paz**	**150.75**	**144**	PKPbc	**PKiKP**	**10 42 17.0**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=135,slow=2.9,SNR=5.3						

IDC ***20*** *10:28:48.9±3.3, 8.°00N×126.°99E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/42, mbtmp3.4/3, Error ellipse: s-maj=263.9km s-min=28.5km az=66.0*

ISCJB ***20*** *10:28:50.4±1.9, 8.°02N±0.°10×127.°44E±0.°07, h20^{km}±12^{km}, mb3.4/3, Error ellipse: s-maj=17.5km s-min=10.5km az=27.0*

MAN ***20*** *10:28:50.2, 7.°99N×127.°32E, h1^{km}, MS4.1*

ISC 20 10:28:52.6±3.7**, 8.°1N**±0.°1×**127.°4E**±0.°1**, h26**^{km}±26^{km}**, n9, σ1.^{s}35**/14**, mb3.3**/3**, 4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.00**	**275**	⇓*e*P	**Pn**	**10 29 10.8**	**-0.1**
BIPH				*e*S	**Sn**	**10 29 22.8**	**-1.4**
BUTP	**Butuan**	**1.93**	**297**	*e*P	**Pn**	**10 29 24.9**	**+1.2**
BUTP				*e*S	**Sb**	**10 29 50.2**	**-0.5**
DMPH	**Davao City--Mi**	**2.10**	**241**	⇓*e*P	**Pn**	**10 29 26.7**	**+0.6**
BUKP	**Musuan**	**2.29**	**265**	*e*P	**Pn**	**10 29 29.0**	**+0.2**
BUKP				*e*S	**Sn**	**10 29 54.6**	**-1.6**
KCP	**Kidapawan**	**2.50**	**245**	⇓*i*P	**Pn**	**10 29 32.1**	**+0.4**
KCP				*i* S	**Sn**	**10 30 02.1**	**+0.8**
CGP	**Cagayan de Oro**	**2.67**	**278**	⇓*e*P	**Pn**	**10 29 34.3**	**+0.4**
CGP				*e*S	**Sn**	**10 30 08.3**	**+3.0**
WRA	**Warramunga Arr**	**28.70**	**166**	P	**P**	**10 34 48.6**	**+0.9**
	0.4nm,0.8s,baz=346,slow=8.8,SNR=1.8						
ASAR	**Alice Springs**	**32.21**	**169**	P	**P**	**10 35 18.0**	**-0.8**
	0.3nm,0.8s,baz=349,slow=7.5,SNR=1.8						
MKAR	**Makanchi Array**	**54.40**	**323**	P	**P**	**10 38 16.7**	**-0.8**
	0.4nm,0.4s,baz=121,slow=7.3,SNR=6.0						

NIED ***20*** *10:28:00, 35.°30N×141.°20E, h20^{km}, Mw4.0 Best double couple: M$_0$1.10000×10^{15} NP1:φ$_s$320.00000°, δ50.00000°, λ31.00000°. NP2:φ$_s$209.00000°, δ67.00000°, λ135.00000°.*

IDC ***20*** *10:28:55.5±0.7, 35.°23N×141.°09E, h0^{km}, mb3.7/15, mb1 3.9/19, mb1mx3.8/44, mbtmp3.8/19, ML3.7/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/43, Error ellipse: s-maj=19.7km s-min=14.1km az=96.0*

ISCJB ***20*** *10:28:58.3±0.5, 35.°25N±0.°03×141.°12E±0.°05, h33^{km}, mb3.7/15, Error ellipse: s-maj=5.6km s-min=5.0km az=12.6*

JMA ***20*** *10:28:58.0±0.1, 35.°34N×141.°17E, h37^{km}±2^{km}, M3.9*

ISC 20 10:28:59.7±0.6**, 35.°29N**±0.°04×**141.°12E**±0.°05**, h33**^{km}**, n37, σ2.^{s}00**/42**, mb3.7**/15**, 2C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.46**	**333**	⇑P	**Pb**	**10 29 07.8**	**-1.9**
CHOJ				S	**Sb**	**10 29 14.6**	**-2.0**
BSO1	**Boso 1**	**0.65**	**190**	⇑P	**Pb**	**10 29 11.1**	**-1.2**
BSO1				X		10 29 19.5	
JSMT	**Sammumatsuo**	**0.65**	**303**	P	**Pb**	**10 29 11.4**	**-1.3**
JSMT				*e*S	**Sb**	**10 29 20.2**	**-1.4**
KTR	**Katsuura**	**0.67**	**258**	⇓P	**Pb**	**10 29 12.0**	**-1.1**
KTR				S	**Sn**	**10 29 21.3**	**-1.0**
BSO3	**Boso 3**	**0.70**	**226**	P	**Pb**	**10 29 12.5**	**-0.9**
BSO3				X		10 29 23.9	
BSO4	**Boso 4**	**0.71**	**245**	⇓P	**Pb**	**10 29 12.8**	**-0.8**
BSO4				X		10 29 22.8	
JCN	**Nagara**	**0.76**	**280**	⇓P	**Pb**	**10 29 13.9**	**-0.6**
JCN				*e*S	**Sb**	**10 29 25.6**	**+1.0**
JYT	**Yasato**	**1.20**	**321**	P	**Pn**	**10 29 18.8**	**-1.4**
JYT				*e*S	**Sn**	**10 29 32.3**	**-3.0**
JIM2	**Oshima 3**	**1.50**	**248**	P	**Pn**	**10 29 22.6**	**-1.7**
JIM2				S	**Sn**	**10 29 40.2**	**-2.6**
JOD2	**Odawara 2**	**1.66**	**270**	⇓P	**Pn**	**10 29 25.4**	**-1.2**
JOD2				*e*S	**Sn**	**10 29 43.7**	**-3.0**
JHJ	**Hachijo jima 2**	**2.43**	**207**	Pn	**Pn**	**10 29 36.5**	**-0.7**
	64nm,0.3s,baz=176,slow=2.5,SNR=7.6						

JHJ				Sn	Sn	10 30 02.2	-3.5
	57nm,0.3s,baz=63,slow=21,SNR=2.1						
MJAR	Matsushiro Arr	2.67	299	Pn	Pn	10 29 41.0	+0.6
	1.6nm,0.3s,baz=292,slow=23,SNR=54						
MJAR				Sn	Sb	10 30 24.3	+5.1
	1.5nm,0.3s,baz=141,slow=14,SNR=5.8						
MJAR				LR	LR	10 30 44.8	
	comp=Z,106nm,18.6s,baz=140,slow=41						
MAT	Matsushiro	2.67	299	P	Pn	10 29 42.1	+1.6
MAT				S	Sb	10 30 16.2	-3.1
JCJ	Chichijima	8.22	173	Pn	Pn	10 30 54.7	-2.0
	6.3nm,0.3s,baz=0.0,slow=20,SNR=2.5						
JCJ				Sn	Sn	10 32 25.8	-2.7
	1.2nm,0.3s,baz=279,slow=20,SNR=1.2						
ASAJ	Asahikawa	8.89	7	Pn	Pn	10 31 04.5	-1.2
	0.8nm,0.3s,baz=162,slow=13,SNR=3.6						
ASAJ				Sn	Sn	10 32 39.7	-4.9
	0.3nm,0.3s,baz=278,slow=24,SNR=1.5						
KSRS	Korea Array	10.86	285	LR	LR	10 35 48.8	
	comp=Z,103nm,18.8s,baz=98,slow=38						
MA2	Magadan	25.10	12	P	P	10 34 22.3	+1.1
	2.7nm,0.6s,baz=198,slow=16,SNR=3.8						
H11N2	WAKE ISLAND Hy	27.51	118	T	T	11 03 48.4	
	baz=310,slow=75,SNR=171						
H11N1	WAKE ISLAND Hy	27.52	118	T	T	11 03 49.0	
	baz=310,slow=75,SNR=202						
H11N3	WAKE ISLAND Hy	27.53	118	T	T	11 03 49.7	
	baz=310,slow=75,SNR=141						
H11S3	WAKE ISLAND Hy	28.16	120	T	T	11 04 28.7	
	baz=312,slow=75,SNR=525						
H11S1	WAKE ISLAND Hy	28.16	120	T	T	11 04 27.6	
	baz=312,slow=75,SNR=686						
H11S2	WAKE ISLAND Hy	28.18	120	T	T	11 04 18.4	
	baz=312,slow=75,SNR=478						
SEY	Seymchan	28.54	11	P	P	10 34 53.0	+0.9
	0.3nm,0.4s,baz=198,slow=20,SNR=3.6						
SONM	Songino Array	28.59	307	P	P	10 34 54.6	+1.7
	0.4nm,0.5s,baz=99,slow=8.7,SNR=3.7						
ZALV	Zalesovo Beam	42.93	314	P	P	10 36 55.2	+0.1
	0.8nm,0.5s,baz=98,slow=6.2,SNR=3.8						
MKAR	Makanchi Array	44.86	304	P	P	10 37 10.8	0.0
	0.6nm,0.6s,baz=82,slow=11,SNR=5.9						
KURBB	Kurchatov Arra	46.90	309	P	P	10 37 27.5	+0.7
	1.1nm,0.5s,baz=79,slow=7.5,SNR=6.9						
ILAR	Eielson Array	51.09	32	P	P	10 37 59.8	+1.0
	0.4nm,0.8s,baz=257,slow=6.0,SNR=5.9						
WRA	Warramunga Arr	55.31	188	P	P	10 38 30.0	-0.1
	1.2nm,0.4s,baz=23,slow=7.2,SNR=31						
INK	Inuvik	56.05	27	P	P	10 38 36.0	+1.1
	0.4nm,0.6s,baz=217,slow=5.6,SNR=2.4						
ASAR	Alice Springs	59.03	188	P	P	10 38 56.4	-0.1
	0.5nm,0.7s,baz=9.7,slow=9.0,SNR=9.1						
AKTO	Aktyubinsk	59.67	313	P	P	10 39 01.7	+1.1
	0.6nm,0.5s,baz=49,slow=11,SNR=3.1						
YKA	Yellowknife Ar	65.43	30	P	P	10 39 40.4	+1.6
	0.2nm,0.8s,baz=294,slow=6.2,SNR=3.8						
ARCES	ARCESS Array B	65.54	340	P	P	10 39 40.6	+1.1
	4.2nm,1.0s,baz=42,slow=7.2,SNR=2.4						
AKASG	Malin Array Be	75.53	322	P	P	10 40 40.7	+0.1
	0.5nm,0.4s,baz=47,slow=6.0,SNR=4.1						
PDAR	Pinedale Array	79.06	45	P	P	10 41 03.5	+2.5
	0.2nm,0.6s,baz=324,slow=4.5,SNR=2.7						

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*THR **20** 10:36:52.9, 38.°45N×46.°87E, h14km, ML2.6*
*NSSP **20** 10:36:52.2, 38.°40N×46.°83E, h10km, Ms3.0*
*ISCJB **20** 10:36:53.9±1.3, 38.°5N±0.°1×46.°93E±0.°09, h10km, Error ellipse: s-maj=17.3km s-min=9.3km az=166.1*
ISC 20 10:36:53.2±1.3**, 38.°5N**±0.°1×**46.°87E**±0.°06**, h10**km**, n4, σ1.ˢ50**/7**, 1C-1D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRMI	Germi	0.87	67	*e*AML	AML	10 37 26.4	
	comp=E,194nm,0.3s						
GRMI				*e*Pg	Pg	10 37 09.4	-0.5
GRMI				*e*Sg	Sb	10 37 21.8	-0.3
MAKU	Maku	1.92	298	*e*Pn	Pb	10 37 27.6	-0.7
MAKU				*e*Sg	Sg	10 37 53.8	-1.0
ZNJK	Zanjan	2.31	141	*e*Pn	Pn	10 37 32.4	+0.9
GNI	Garni	2.35	316	⇑*i*P	Pg	10 37 37.8	-0.4
GNI				⇓*i*S	Sg	10 38 11.1	+2.5

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*IDC **20** 10:39:28.4±2.1, 56.°34S×26.°76W, h0km, mb3.8/1, mb1 3.8/1, mb1mx3.5/15, mbtmp3.8/1, Error ellipse: s-maj=119.0km s-min=73.0km az=138.0*
ISC 20 10:39:41.8±1.4**, 56.°1S**±0.°2×**27.°2W**±0.°5**, h100**km**, n8, σ0.ˢ95**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.80	158	P	Pn	10 43 30.1	-0.4
VNA3	Neumayer Olymp	17.00	160	P	Pn	10 43 32.4	-0.6
VNA2	Neumayer--Watz	17.20	158	P	Pn	10 43 35.0	-0.5
	baz=315,slow=13						
SNAA	Sanae	18.75	156	P	Pn	10 43 55.9	+1.8
TORD	Torodi Ar. Bea	73.07	30	P	P	10 51 00.9	0.0
	0.5nm,0.5s,baz=200,slow=5.5,SNR=6.9						
YKA	Yellowknife Ar	136.15	318	PKP	PKPdf	10 58 50.2	+0.4
	0.1nm,0.6s,baz=119,slow=2.2,SNR=2.2						
ILAR	Eielson Array	150.10	312	PKPbc	PKiKP	10 59 20.1	+0.1
	0.4nm,0.7s,baz=131,slow=2.5,SNR=4.9						
SONM	Songino Array	150.75	87	PKPbc	PKPbc	10 59 20.8	-0.7
	0.3nm,0.6s,baz=247,slow=3.0,SNR=2.5						

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*NNC **20** 10:44:40.0±6.6, 37.°89N×71.°32E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=51.4km s-min=35.3km az=172.0*
ISC 20 10:44:32.9±1.3**, 37.°15N**±0.°09×**71.°6E**±0.°1**, h106**km**, n16, σ2.ˢ38**/23**, 10C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.23	27	⇑P	Pn	10 45 25.7	+3.7
	4.6nm,0.3s						
SFK				⇑S	Sn	10 45 59.8	-0.2
	21nm,0.4s						
MNAS	Manas	5.38	7	⇑P	Pn	10 45 53.8	+3.0
	8.7nm,0.4s						
MNAS				⇑S	Sn	10 46 49.8	-1.7
	28nm,0.6s						
AAK	Ala-Archa	5.92	21	⇑P	Pn	10 46 00.6	+2.4
	4.0nm,0.5s						
AAK				⇑S	Sn	10 47 01.5	-3.2
	8.3nm,0.6s						
KK31	Karatay Array	6.00	353	⇓P	Pn	10 46 02.1	+2.9
	6.4nm,0.4s,baz=178,slow=13,SNR=92						
KK31				⇓S	Sn	10 47 03.0	-3.4
	14nm,0.5s,baz=188,slow=25,SNR=4.4						
TKM2	Tokmak 2	6.54	27	⇑P	Pn	10 46 08.5	+1.9
	2.7nm,0.6s						
TKM2				⇓S	Sn	10 47 18.5	-1.3
	3.0nm,0.7s						
PYUN	Piuthan	13.19	130	*e*P	Pn	10 47 34.3	-1.9
	20nm,0.4s						
DANN	Dangsing	13.49	127	*e*P	Pn	10 47 39.4	-0.9
	14nm,0.4s						
KOLN	Koldanda	13.80	129	*e*P	Pn	10 47 42.3	-1.9
	7.6nm,0.5s						
AB31	Akbulak array	14.75	329	⇑P	P	10 47 59.1	-0.1
	0.6nm,0.3s,baz=134,slow=15,SNR=34						
AB31				⇑S	Sn	10 50 35.6	-2.9
	1.5nm,0.6s,baz=158,slow=22,SNR=11						
DMN	Daman	14.87	126	*e*P	Pn	10 47 57.0	-0.9
	11nm,0.5s						
PKIN	Phulchoki	15.08	125	*e*P	Pn	10 47 59.1	-1.4
	7.0nm,0.4s						
PKI	Pulchoki	15.09	125	*e*P	Pn	10 48 00.1	-0.7
	7.7nm,0.4s						
GUN	Gumba	15.17	123	*e*P	Pn	10 48 01.6	-0.2
	9.2nm,0.6s						
JIRN	Jiri	15.54	123	*e*P	Pn	10 48 05.4	-1.1
	16nm,0.4s						
RAMN	Ramite	16.29	124	*e*P	Pn	10 48 13.2	-2.4
	6.1nm,0.4s						
AKTO	Aktyubinsk	16.45	328	⇓P	P	10 48 22.4	+4.3
	3.0nm,0.7s						
AKTO				⇑S	Sn	10 51 18.8	-0.9
	3.6nm,1.2s						

MEX 20 10:59:14.6±0.3**, 15.°93N**×**95.°57W, h52**km±8km**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.55	253	*i* P	Pn	10 59 25.0	-1.6
HUIG				*i* S	Sn	10 59 33.4	-1.8
CMIG	Matias Romero	1.32	30	*e*P	Pn	10 59 35.2	-1.6
CMIG				*e*S	Sn	10 59 51.3	-2.1
VHO	Vista Hermosa	1.59	316	*e*P	Pn	10 59 38.4	-2.2
VHO				*e*S	Sn	10 59 58.1	-2.1
PNIG	Pinotepa	2.50	281	*e*P	Pn	10 59 52.0	-0.8

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*ISK **20** 11:03:19.8, 38.°51N×28.°48E, h9km±6km, ML2.1/5*
*ISCJB **20** 11:03:20.9±0.5, 38.°49N±0.°04×28.°51E±0.°04, h7km±4km, Error ellipse: s-maj=6.0km s-min=5.0km az=169.6*
*DDA **20** 11:03:20.4, 38.°50N×28.°52E, h7km, ML2.5*
ISC 20 11:03:20.5±0.9**, 38.°50N**±0.°04×**28.°51E**±0.°03**, h10**km±6km**, n14, σ0.ˢ54**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANT	Manisa	0.04	109	*i* P	Pg	11 03 22.9	+0.2
MANT				*i* S	Sg	11 03 23.8	-0.5
MANT				IAML_P			
	comp=Z,69μm,0.1s						
KULA	Kula-Manisa	0.12	85	PG	Pg	11 03 23.4	-0.1
KULA				SG	Sg	11 03 25.9	+0.3
USAK	Uak-Merkez	0.45	62	*i* P	Pb	11 03 30.0	-0.5
USAK				IAML_P			
	comp=Z,7μm,0.1s						
DEMI	Demirci	0.56	17	*i* P	Pb	11 03 32.2	-0.3
DEMI				*i* S	Sb	11 03 40.5	0.0
DEMI				IAML_P			
	comp=Z,2μm,0.3s						
AKHS	Akhisar	0.66	305	*i* P	Pb	11 03 33.4	-0.7
AKHS				*i* S	Sb	11 03 44.5	+1.2
AKHS				IAML_P			
	comp=Z,1μm,0.2s						
AYDB	Zeytinkoy-Aydi	0.74	221	PG	Pg	11 03 34.2	-0.6
SHAP	Saphane-Kutahy	0.76	47	PG	Pg	11 03 34.8	-0.4
KHAL	Karahalli	0.79	100	*i* P	Pb	11 03 36.7	+0.4
KHAL				*i* S	Sb	11 03 47.4	+0.4
KHAL				IAML_P			
	comp=Z,2μm,0.1s						
GDZ	Gediz	0.96	52	*i* P	Pn	11 03 39.7	-0.4
GDZ				IAML_P			
	comp=Z,367nm,0.3s						
AYDN	Tasoluk	0.98	211	*i* P	Pn	11 03 40.1	-0.1
AYDN				*i* S	Sb	11 03 53.0	+0.6
AYDN				IAML_P			
	comp=Z,1μm,0.2s						
DURS	Dursunbey	1.09	359	*i* P	Pn	11 03 42.4	+0.5
DURS				IAML_P			
	comp=Z,349nm,0.3s						
BLCB	Balcova	1.16	265	PN	Pb	11 03 42.2	-0.3
TVSB	Tavsanli	1.20	38	PN	Pn	11 03 43.6	+0.2
ZEDA	zmir-Bergama	1.21	293	*i* P	Pn	11 03 44.1	+0.7
ZEDA				IAML_P			
	comp=Z,40nm,0.2s						

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*ISCJB **20** 11:08:10.7±0.5, 17.°5S±0.°1×178.°8W±0.°1, h539km, mb3.6/15, Error ellipse: s-maj=22.7km s-min=11.7km az=135.8*
*IDC **20** 11:08:13.5±3.4, 17.°46S×178.°86W, h562km±41km, mb3.2/14, mb1 3.5/15, mb1mx3.3/37, mbtmp4.1/15, Error ellipse: s-maj=22.0km s-min=15.7km az=150.0*
ISC 20 11:08:11.5±0.7**, 17.°4S**±0.°2×**178.°8W**±0.°2**, h539**km**, n18, σ0.ˢ71**/19**, mb3.5**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.64	249	P	P	11 11 18.3	+0.8
	0.8nm,0.3s,baz=86,slow=19,SNR=9.5						
URZ	Urewera	21.07	189	P	P	11 12 17.6	0.0
	4.9nm,0.8s,baz=352,slow=14,SNR=3.3						
STKA	Stephens Creek	38.54	241	P	P	11 14 48.0	-0.1
	5.2nm,0.5s,baz=95,slow=11,SNR=25						
WRA	Warramunga Arr	44.36	259	P	P	11 15 33.7	-0.6
	2.4nm,0.5s,baz=91,slow=7.0,SNR=92						
WRA				PcP	PcP	11 17 05.6	-1.0
	0.4nm,0.5s,baz=94,slow=3.3,SNR=3.3						
ASAR	Alice Springs	44.57	254	P	P	11 15 35.8	-0.2
	31nm,0.6s,baz=88,slow=8.2,SNR=623						
ASAR				PcP	PcP	11 17 06.2	-1.2
	0.6nm,0.4s,baz=100,slow=4.0,SNR=5.7						
VNDA	Vanda	60.90	185	P	P	11 17 31.7	+0.2
	1.7nm,0.8s,baz=18,slow=20,SNR=2.1						
YBH	Yreka Blue Hor	78.38	39	P	P	11 19 17.4	+0.9
	2.2nm,1.0s,baz=243,slow=14,SNR=2.5						
NVAR	Mina Array Bea	79.33	44	P	P	11 19 22.3	+0.5
	0.3nm,0.3s,baz=219,slow=8.1,SNR=2.6						
SEY	Seymchan	83.22	347	P	P	11 19 41.4	+0.6
	0.5nm,0.5s,baz=180,slow=20,SNR=4.1						
NEW	Newport	85.33	36	P	P	11 19 51.4	-0.2
	0.7nm,0.4s,baz=225,slow=20,SNR=2.6						
ILAR	Eielson Array	85.49	13	P	P	11 19 51.5	-0.5
	0.2nm,0.4s,baz=222,slow=5.3,SNR=7.1						
TXAR	Lajitas Array	86.05	58	P	P	11 19 56.1	+0.5
	0.3nm,0.6s,baz=223,slow=6.1,SNR=7.0						
PDAR	Pinedale Array	87.25	44	P	P	11 20 01.2	+0.1
	0.4nm,0.5s,baz=207,slow=5.5,SNR=7.3						
CMAR	Chiang Mai Arr	88.37	290	P	P	11 20 07.4	+0.8
	0.7nm,0.4s,baz=90,slow=5.4,SNR=3.6						
INK	Inuvik	91.51	15	P	P	11 20 19.9	0.0
	0.4nm,0.8s,baz=217,slow=5.1,SNR=2.4						
YKA	Yellowknife Ar	94.04	25	P	P	11 20 30.9	-0.7
	0.2nm,0.6s,baz=238,slow=4.7,SNR=3.5						
BVAR	Borovoye Array	116.23	321	PKP	PKPdf	11 25 52.2	-1.2
	0.4nm,0.5s,baz=108,slow=1.8,SNR=2.9						
BRTR	Keskin Array B	144.17	315	PKP	PKPbc	11 26 45.8	-0.3
	0.7nm,0.7s,baz=32,slow=2.1,SNR=3.7						

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*IDC **20** 11:17:45.6±2.6, 11.°05S×165.°21E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.6/39, mbtmp3.7/6, ML3.9/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/36, Error ellipse: s-maj=56.2km s-min=35.8km az=76.0*
*ISCJB **20** 11:17:49.6±1.5, 11.°2S±0.°2×165.°0E±0.°2, h31km, mb3.6/4, MS3.4/1, Error ellipse: s-maj=30.2km s-min=11.3km az=40.6*
ISC 20 11:17:51.0±1.8**, 11.°1S**±0.°2×**165.°1E**±0.°2**, h31**km**, n13, σ0.ˢ47**/7**, mb3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.34	288	Pn	Pn	11 19 09.2	+0.6
	7.5nm,0.3s,baz=195,slow=10,SNR=2.4						
HNR				Sn	Sn	11 20 08.6	-0.5
	11nm,0.3s,baz=313,slow=15,SNR=7.5						
HNR				LR	LR	11 21 15.7	
	comp=Z,105nm,20.0s,baz=144,slow=39						
DZM	Mont Dzumac	10.97	173	Pn	Pn	11 20 26.0	0.0
	0.5nm,0.3s,baz=330,slow=8.1,SNR=4.8						
DZM				LR	LR	11 23 58.7	
	comp=Z,95nm,20.0s,baz=66,slow=34						
H11S2	WAKE ISLAND Hy	29.46	3	T	T	11 55 07.2	
	baz=184,slow=76,SNR=5.3						
H11S3	WAKE ISLAND Hy	29.46	3	T	T	11 55 08.8	
	baz=184,slow=76,SNR=5.5						
H11S1	WAKE ISLAND Hy	29.48	3	T	T	11 55 10.5	
	baz=184,slow=76,SNR=4.5						
STKA	Stephens Creek	29.96	223	LR	LR	11 35 39.3	
	comp=Z,91nm,20.0s,baz=22,slow=36						
H11N1	WAKE ISLAND Hy	30.68	3	T	T	11 56 35.1	
	baz=183						
H11N3	WAKE ISLAND Hy	30.69	3	T	T	11 56 40.5	
	baz=183						
H11N2	WAKE ISLAND Hy	30.70	3	T	T	11 56 37.4	
	baz=183						
WRA	Warramunga Arr	30.86	250	P	P	11 24 04.5	-0.2
	0.3nm,0.6s,baz=81,slow=9.2,SNR=5.8						
ASAR	Alice Springs	32.20	243	P	P	11 24 16.7	+0.2
	0.5nm,0.9s,baz=75,slow=8.8,SNR=4.0						
CMAR	Chiang Mai Arr	71.56	294	P	P	11 29 09.3	-0.4
	0.3nm,0.3s,baz=111,slow=4.9,SNR=2.9						
MKAR	Makanchi Array	93.14	317	P	P	11 31 02.2	0.0
	0.5nm,0.8s,baz=101,slow=4.7,SNR=3.8						

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*BJI **20** 11:18:49.9, 28.°16S×66.°82W, h121km, mB5.2/8*
*NEIC **20** 11:18:53.3±0.3, 27.°77S×66.°43W, h155km±3km, mb5.1/235, MD5.1(SJA), ML5.3(GUC), Error ellipse: s-maj=4.4km s-min=2.9km az=80.0*
NEIC Felt [III] in central Catamarca. Felt [II] at Copiapo and Tierra Amarilla, Chile.
*ISCJB **20** 11:18:53.1±0.3, 27.°67S±0.°02×66.°49W±0.°02, h167km±2km, mb5.0/278, Error ellipse: s-maj=3.7km s-min=2.9km az=135.6*
*MOS **20** 11:18:53.7±1.0, 27.°75S×66.°53W, h168km, mb5.0/40, Error ellipse: s-maj=10.2km s-min=6.0km az=104.1*
*SJA **20** 11:18:53.7, 27.°82S×66.°59W, h182km, ML4.8, MW5.1*
*VAO **20** 11:18:54.6±0.4, 27.°80S×66.°49W, h169km±4km, mb5.2*
*GUC **20** 11:18:55.8±0.7, 27.°87S×66.°64W, h149km±9km, ML5.3, MW4.9*
*IDC **20** 11:18:55.4±0.4, 27.°74S×66.°41W, h176km±2km, mb4.7/29, mb1 4.8/34, mb1mx4.7/44, mbtmp5.2/34, MS3.6/2, Ms1 3.6/2, ms1mx3.0/22, Error ellipse: s-maj=10.2km s-min=7.3km az=72.0*
*GCMT **20** 11:18:55.3±0.3, 27.°86S±0.°02×66.°64W±0.°03, h192km±2km, MW5.1/61, Moment Tensor Solution. s28,c34; s61,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.74±.24; $M_{\theta\theta}$1.74±.28; $M_{\phi\phi}$2.00±.33; $M_{r\theta}$0.14±.20; $M_{\theta\phi}$-6.51±.24; $M_{\phi r}$-0.45±.26; Best double couple: $M_0$6.54300×10^{16} NP1:ϕ_s360.00000°, δ82.00000°, λ-11.00000°. NP2: ϕ_s91.00000°, δ80.00000°, λ-172.00000°. Principal axes: T 8.3960, Plg2.0000°, Azm46.0000°; N -3.7060, Plg77.0000°, Azm144.0000°; P -4.6890, Plg13.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 11:18:54.6±0.3**, 27.°78S**±0.°03×**66.°59W**±0.°04**, h170**km±2km**, h171**km**:pP-P, n1143, σ1.ˢ10**/1232**, mb5.1**/279**, 17C-13D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHML	Horco Molle	1.49	49	*i* P	Pn	11 19 26.9	+1.2
AHML				*i* S	Sn	11 19 50.6	+0.8
AHML				IAML		11 19 52.7	
	comp=Z,3μm,0.6s						
AHML	Horco Molle	1.49	49	⇑*i*P	Pn	11 19 27.2	+1.4
AHML				*e*S	Sn	11 19 50.0	+0.3
AGUA	GUANDACOL	2.39	224	*i* P	Pn	11 19 36.0	+0.5
SLA	San Lorenzo	3.20	18	*i* P	Pn	11 19 46.4	+1.0
SLA	San Lorenzo	3.20	18	⇑*e*P	Pn	11 19 47.7	+2.3
SLA				*e*S	Sn	11 20 26.9	+1.9
GO03	Copiap	3.24	272	*e*Pn	Pn	11 19 46.2	+0.4
GO03				*e*Sn	Sn	11 20 24.9	-0.8
GO03	Copiap	3.24	272	*i* P	Pn	11 19 46.2	+0.4
GO03	Copiap	3.24	272	⇑*i*P	Pn	11 19 46.1	+0.3
GO03				*i* S	Sn	11 20 24.1	-1.5
ACDV	Cuesta del Vie	3.26	222	*i* P	Pn	11 19 46.6	+0.5
AROD	Rodeo	3.47	226	*i* P	Pn	11 19 49.6	+0.7
AMOG	MOGNA	3.56	207	*i* P	Pn	11 19 49.4	-0.5
GO02	Mina Guanaco	3.75	313	*e*Pn	Pn	11 19 54.5	+2.0
GO02				*e*Sn	Sn	11 20 35.0	-2.5
GO02	Mina Guanaco	3.75	313	⇓*i*P	Pn	11 19 54.4	+2.0
GO02				*i* S	Sn	11 20 38.9	+1.3
GO02				IAML		11 20 40.6	
	comp=N,1μm,0.5s						
LCO	Las Campanas	3.83	250	*e*Pn	Pn	11 19 53.2	-0.2
LCO				*e*Sn	Sn	11 20 38.4	-0.8
LCO	Las Campanas	3.83	250	*i* P	Pn	11 19 53.1	-0.3
LCO	Las Campanas	3.83	250	*e*P	Pn	11 19 53.3	-0.2
LCO				*e*		11 20 38.4	
LCO	Las Campanas	3.83	250	⇑*e*P	Pn	11 19 53.2	-0.2
LCO				*e*S	Sn	11 20 37.1	-2.2
LCO	Las Campanas	3.83	250	*e*P	Pn	11 19 53.4	0.0
CRCH	Chaqaral	3.87	291	*e*P	Pn	11 19 54.4	+0.7
RTLL	Cerro Villicun	3.90	204	*i* P	Pn	11 19 53.6	-0.6
RTLL				IAML		11 20 41.9	
	comp=N,7μm,0.7s						
RTLL	Cerro Villicun	3.90	204	*e*P	Pn	11 19 53.5	-0.6
TCA	Tanti	3.95	154	*i* P	Pn	11 19 54.7	-0.1
TCA				IAML		11 19 55.5	
	comp=Z,1μm,0.2s						
TCA				*e*		11 20 39.9	
TCA	Tanti	3.95	154	⇓*i*P	Pn	11 19 54.6	-0.1
TCA				*i* S	Sn	11 20 38.4	-3.5
TCA				IAML		11 20 41.0	
	comp=E,2μm,0.4s						
GO04	Tololo Observa	4.39	236	*e*Pn	Pn	11 20 00.0	-0.7
GO04				*e*Sn	Sn	11 20 51.7	-0.6
GO04	Tololo Observa	4.39	236	⇑*i*P	Pn	11 19 59.9	-0.8
GO04				*e*S	Sn	11 20 49.9	-2.4
PB14	IPOC Station P	4.65	312	*e*P	Pn	11 20 04.7	+0.6
PB14				*e*S	Sn	11 20 57.7	-0.7
RTLS	Leoncito	4.65	210	*i* P	Pn	11 20 03.9	-0.1
RTLS				*e*		11 20 56.3	
RTLS				IAML		11 20 59.9	
	comp=Z,815nm,0.2s						
PB15	IPOC Station P	5.24	330	⇓*e*P	Pn	11 20 12.3	+0.5
PB15				*e*S	Sn	11 21 11.2	-1.1
PB10	IPOC Station P	5.55	319	*e*Pn	Pn	11 20 15.8	+0.2
PB10				*e*Sn	Sn	11 21 18.3	-1.0
PB10	IPOC Station P	5.55	319	⇓*e*P	Pn	11 20 15.4	-0.3
PB10				*e*S	Sn	11 21 16.4	-2.8
LVC	Limon Verde	5.56	337	*e*Pn	Pn	11 20 16.8	+0.8
LVC				*e*Sn	Sn	11 21 12.6	-7.3
LVC				S	Sn	11 21 18.6	-1.3
LVC	Limon Verde	5.56	337	*e*P	Pn	11 20 16.8	+0.8
LVC				S	Sn	11 21 18.7	-1.3
LVC	Limon Verde	5.56	337	P	Pn	11 20 17.2	+1.2
	comp=Z,48nm,0.3s,baz=147,slow=10,SNR=482						
LVC				S	Sn	11 21 18.6	-1.3
	comp=Z,58nm,0.3s,baz=3.6,slow=20,SNR=17						
LVC	Limon Verde	5.56	337	*e*P	Pn	11 20 16.9	+0.8
PB05	IPOC Station P	5.89	326	⇑*e*P	Pn	11 20 19.8	-0.5
PB04	IPOC Station P	6.31	328	*e*Pn	Pn	11 20 25.1	-0.7
PB04				*e*Sn	Sn	11 21 33.6	-3.8
PEL	Peldehue	6.41	212	*e*Pn	Pn	11 20 25.9	-1.0
PEL				*e*Sn	Sn	11 21 36.5	-3.1
PEL	Peldehue	6.41	212	*e*P	Pn	11 20 25.9	-1.0
PEL				*e*		11 21 36.5	
ROC1	El Roble	6.44	215	*e*Pn	Pn	11 20 24.8	-2.6
ROC1				*e*Sn	Sn	11 21 36.6	-3.9
PB01	IPOC Station P	7.21	338	*e*Pn	Pn	11 20 36.5	-1.1
CPUP	Villa Florida	8.38	82	P	Pn	11 20 51.6	-1.3
	comp=Z,6.4nm,0.3s,baz=262,slow=12,SNR=316						
CPUP				S	Sn	11 22 04.9	-22
	baz=264,slow=12,SNR=1.9						
CPUP	Villa Florida	8.38	82	*e*P	Pn	11 20 51.9	-1.1
PB11	IPOC Station P	8.46	340	*e*Pn	Pn	11 20 51.8	-2.4
PB11				*e*Sn	Sn	11 22 23.8	-5.0
MNMC	Minye Minye	9.04	342	*e*Pn	Pn	11 20 59.5	-2.4
MNMC				*e*Sn	Sn	11 22 37.7	-5.1
LPAZ	La Paz	11.52	353	P	Pn	11 21 34.8	-0.1
	comp=Z,4.0nm,0.3s,baz=125,slow=5.5,SNR=69						
LPAZ				S	Sn	11 23 35.7	-7.3
	comp=Z,0.8nm,0.3s,baz=256,slow=3.6,SNR=1.5						
LPAZ	La Paz	11.52	353	*e*P	Pn	11 21 34.1	-0.7
CPSB	Cacapava Do Su	11.79	106	*e*P	Pn	11 21 35.9	-1.7
PLTB	Pedras Altas	11.96	113	*e*P	Pn	11 21 38.3	-1.4
AQDB	Aquidauana	12.31	56	*e*P	Pn	11 21 44.1	-0.2
GO06	Curarrehue	12.45	198	*e*Pn	Pn	11 21 44.2	-1.9
SIV	San Ignacio	12.79	25	P	Pn	11 21 49.7	-0.9
	comp=Z,3.0nm,0.3s,baz=227,slow=14,SNR=187						
SIV				S	Sn	11 24 12.6	-0.1
	comp=Z,0.8nm,0.3s,baz=223,slow=21,SNR=1.5						
ITAB	Concordia	12.85	91	*e*P	Pn	11 21 50.6	-0.5
PLCA	Paso Flores	13.33	193	*e*Pn	Pn	11 21 57.2	0.0
PLCA	Paso Flores	13.33	193	*e*P	Pn	11 21 57.2	0.0
PLCA	Paso Flores	13.33	193	*e*P	Pn	11 21 57.8	+0.5
PTGB	Pitanga	13.38	80	*e*P	Pn	11 21 58.2	+0.1
TRCB	Terra Rica	13.56	72	*e*P	Pn	11 21 59.8	-0.5
CNLB	Canela	13.92	100	*e*P	Pn	11 22 02.6	-2.1
TER01	Tubaro-SC	15.42	97	*e*P	Pn	11 22 21.7	-1.6
C2SB	Chapadao do Su	15.48	58	*e*P	Pn	11 22 24.3	+0.2
SALV	Santo Antonio	15.54	43	*e*P	Pn	11 22 24.3	-0.6
TIJ01	Guaruva-PR	15.93	85	*e*P	Pn	11 22 26.1	-3.5
FRTB	Fartura	15.98	78	*e*P	Pn	11 22 30.0	-0.2
ITRB	Iturama	16.88	65	*e*P	Pn	11 22 40.7	-0.4
BB19B	Bebedouro	17.74	72	*e*P	P	11 22 49.0	-0.8
SPB	Sao Paulo	17.76	81	*e*P	P	11 22 49.9	+0.1
	comp=Z,112nm,1.0s						
NNA	Nana	18.41	327	*e*P	Pn	11 22 59.2	0.0
	comp=Z,157nm,1.1s						
NNA	Nana	18.41	327	*ce*P	Pn	11 22 59.8	+0.6
NNA	Nana	18.41	327	P	Pn	11 22 59.4	+0.1
	comp=Z,1.8nm,0.3s,baz=184,slow=12,SNR=16						
IPMB	Ipameri, GO	19.52	64	*e*P	P	11 23 08.4	-0.7
ESAR	Angra dos Reis	20.55	82	*e*P	P	11 23 19.8	-0.2
PMNB	Patos De Minas	20.66	68	*e*P	P	11 23 20.4	-0.9
BSCB	Bom Sucesso	20.97	76	*e*P	P	11 23 23.7	-0.9

BDFB	Brasilia	21.03	59	*e*P	P	11 23 23.9	-1.4
	comp=Z,128nm,0.8s						
BDFB	Brasilia	21.03	59	P	P	11 23 24.5	-0.8
	comp=Z,59nm,0.4s,baz=230,slow=11,SNR=105						
DUB01	Friburgo-RJ	22.66	81	*e*P	P	11 23 41.2	-0.4
CAM01	Campos-RJ	23.37	81	*e*P	P	11 23 49.4	+1.4
ATAH	Atahualpa	23.38	329	P	P	11 23 49.6	+1.0
	comp=Z,14nm,0.7s,baz=159,slow=8.7,SNR=9.7						
MCI6	Montes Claros	23.62	67	*e*P	P	11 23 48.8	-1.7
MCI8	Montes Claros	23.68	67	*e*P	P	11 23 49.5	-1.4
MCI9	Montes Claros	23.68	67	*e*P	P	11 23 49.4	-1.5
MCI7	Montes Claros	23.70	67	*e*P	P	11 23 49.7	-1.4
GO09	Cerro Castillo	23.86	189	*e*P	P	11 23 53.0	+0.8
	comp=Z,40nm,0.8s						
JANB	Januaria	24.24	63	*e*P	P	11 23 54.5	-1.5
ALF01	Guarapari-ES	24.61	79	*e*P	P	11 23 58.0	-1.2
EFI	East Falkland	24.72	167	*e*P	P	11 24 00.1	+0.2
	comp=Z,190nm,0.8s						
EFI	East Falkland	24.72	167	*ce*P	P	11 23 59.5	-0.4
EFI				pmax	pmax		
	comp=Z,228nm,0.9s						
SJMB	Sao Joao De Ma	24.99	74	*e*P	P	11 24 01.9	-0.8
BSFB	Barra de Sao F	25.22	75	*e*P	P	11 24 03.6	-1.3
RIB01	Linhares ES	25.41	76	*e*P	P	11 24 07.1	+0.6
GO10	Punta Arenas	25.57	186	*e*P	P	11 24 07.4	-0.2
	comp=Z,225nm,0.9s						
USHA	Ushuaia	27.07	182	P	P	11 24 20.7	-0.2
	comp=Z,20nm,0.8s,baz=1.2,slow=8.1,SNR=12						
PTGA	Pitinga	27.63	14	*e*P	P	11 24 25.5	-1.0
	comp=Z,47nm,0.8s						
PTGA				PcP	PcP	11 27 39.3	-0.3
PTGA				ScP	ScP	11 31 03.0	-1.2
PTGA	Pitinga	27.63	14	P	P	11 24 26.3	-0.1
	comp=Z,27nm,0.3s,baz=163,slow=23,SNR=57						
PTGA				PcP	PcP	11 27 39.3	-0.3
	comp=Z,4.9nm,0.5s,baz=140,slow=7.9,SNR=2.2						
PTGA				ScP	ScP	11 31 03.0	-1.2
	comp=Z,6.7nm,1.0s,baz=156,slow=5.0,SNR=3.1						
PTGA	Pitinga	27.63	14	*e*P	P	11 24 26.0	-0.4
NBCP	Cabaceiras do	29.73	65	*e*P	P	11 24 41.9	-3.1
OTAV	Otavalo	30.09	336	*e*P	P	11 24 50.3	+1.6
	comp=Z,12nm,0.9s						
OTAV				*e*PcP	PcP	11 27 47.7	+1.4
OTAV	Otavalo	30.09	336	*e*P	P	11 24 50.3	+1.6
OTAV				*e*		11 27 47.7	
OTAV				pmax	pmax		
	comp=Z,12nm,0.9s						
OTAV	Otavalo	30.09	336	*e*P	P	11 24 49.4	+0.6
FLOC	Florencia	30.47	342	*e*P	P	11 24 51.5	0.0
FLOC	Florencia	30.47	342	*e*P	P	11 24 51.5	0.0
GCUF	Volcan Galeras	30.64	339	*e*P	P	11 24 56.4	+2.8
GCUF	Volcan Galeras	30.64	339	*e*P	P	11 24 56.4	+2.8
SOTA	Rioblanco	31.27	340	*e*P	P	11 25 01.8	+2.7
SOTA	Rioblanco	31.27	340	*e*P	P	11 25 01.8	+2.7
PCON	Cinco Dias	31.39	341	*e*P	P	11 25 02.8	+2.6
PCON	Cinco Dias	31.39	341	*e*P	P	11 25 02.8	+2.6
POPC	Popayan, Colom	31.67	341	*e*P	P	11 25 04.3	+2.0
POPC	Popayan, Colom	31.67	341	*e*P	P	11 25 04.3	+2.0
VILC	Villavicencio,	32.44	347	*e*P	P	11 25 09.1	+0.3
VILC	Villavicencio,	32.44	347	*e*P	P	11 25 09.1	+0.3
CHIC	Chingaza	32.95	347	*e*P	P	11 25 13.4	-0.2
CHIC	Chingaza	32.95	347	*e*P	P	11 25 13.4	-0.2
YOTC	Yotoco, Valle	32.95	342	*e*P	P	11 25 13.2	-0.2
YOTC	Yotoco, Valle	32.95	342	*e*P	P	11 25 13.2	-0.2
MALC	Bahia Malaga	33.26	340	*e*P	P	11 25 19.0	+3.1
MALC	Bahia Malaga	33.26	340	*e*P	P	11 25 19.0	+3.1
ROSC	El Rosal	33.27	346	LR	LR	11 41 37.8	
	comp=Z,85nm,18.2s,baz=94,slow=41						
RREF	El Recreo	33.57	344	*e*P	P	11 25 22.4	+3.2
RREF	El Recreo	33.57	344	*e*P	P	11 25 22.4	+3.2
RUSC	La Rusia	34.06	348	*e*P	P	11 25 23.4	+0.1
RUSC	La Rusia	34.06	348	*e*P	P	11 25 23.4	+0.1
HOPE	Hope Point	34.41	149	*e*P	P	11 25 24.6	-0.8
	comp=Z,372nm,1.9s						
NBLI	Livramento-PB	34.63	60	*e*P	P	11 25 27.4	-0.5
BARC	Barichara	34.76	348	*e*P	P	11 25 28.0	-1.1
BARC	Barichara	34.76	348	*e*P	P	11 25 28.0	-1.1
HELC	Santa Helena	34.86	344	*e*P	P	11 25 29.1	-0.9
HELC	Santa Helena	34.86	344	*e*P	P	11 25 29.1	-0.9
PTBC	PUERTO BERRIO,	34.95	346	*e*P	P	11 25 28.1	-2.4
PTBC	PUERTO BERRIO,	34.95	346	*e*P	P	11 25 28.1	-2.4
MDP	Montagnes des	35.35	25	P	P	11 25 33.7	-0.2
	comp=Z,27nm,0.5s,baz=199,slow=10,SNR=27						
MDP				PcP	PcP	11 28 00.9	+0.5
	comp=Z,12nm,0.9s,baz=204,slow=10.0,SNR=3.1						
PAMC	Pamplona, Colo	35.41	349	*e*P	P	11 25 33.6	-1.3
PAMC	Pamplona, Colo	35.41	349	*e*P	P	11 25 33.6	-1.3
ZARC	Zaragoza, Cauc	35.96	346	*e*P	P	11 25 37.0	-2.1
ZARC	Zaragoza, Cauc	35.96	346	*e*P	P	11 25 37.0	-2.1
UREC	San Jos de Ur	36.37	345	*e*P	P	11 25 41.4	-1.1
UREC	San Jos de Ur	36.37	345	*e*P	P	11 25 41.4	-1.1
OCAC	Ocana	36.39	349	*e*P	P	11 25 40.0	-2.9
OCAC	Ocana	36.39	349	*e*P	P	11 25 40.0	-2.9
RCBR	Riachuelo	36.41	59	*e*P	P	11 25 43.6	+0.7
	comp=Z,46nm,0.9s						
RCBR	Riachuelo	36.41	59	*e*P	P	11 25 43.6	+0.7
RCBR				pmax	pmax		
	comp=Z,46nm,0.9s						
RCBR	Riachuelo	36.41	59	P	P	11 25 41.3	-1.7
	comp=Z,97nm,0.6s,baz=104,slow=0.4,SNR=4.5						
RCBR	Riachuelo	36.41	59	*e*P	P	11 25 43.7	+0.7
SDV	Santo Domingo	36.66	353	*e*P	P	11 25 44.2	-0.9
	comp=Z,34nm,1.0s						
SDV				ScP	ScP	11 31 33.8	-1.3
SDV	Santo Domingo	36.66	353	*e*P	P	11 25 43.9	-1.2
SDV	Santo Domingo	36.66	353	*e*P	P	11 25 43.9	-1.2
SDV	Santo Domingo	36.66	353	P	P	11 25 44.0	-1.2
	comp=Z,24nm,0.8s,baz=185,slow=3.7,SNR=17						
SDV				ScP	ScP	11 31 33.7	-1.3
	comp=Z,4.1nm,0.8s,baz=38,slow=1.4,SNR=4.3						
SDV	Santo Domingo	36.66	353	*e*P	P	11 25 44.0	-1.1
PMSA	Palmer Station	37.04	178	*e*P	P	11 25 46.8	-0.9
	comp=Z,110nm,1.4s						
PMSA	Palmer Station	37.04	178	P	P	11 25 46.6	-1.1
	comp=Z,22nm,0.7s,baz=320,slow=5.3,SNR=5.1						
PMSA	Palmer Station	37.04	178	*e*P	P	11 25 47.6	0.0
SMLC	San Martn de	37.08	348	*e*P	P	11 25 45.7	-2.8
SMLC	San Martn de	37.08	348	*e*P	P	11 25 45.7	-2.8
CODC	Agustn Codazz	38.07	349	*e*P	P	11 25 54.2	-2.7
CODC	Agustn Codazz	38.07	349	*e*P	P	11 25 54.2	-2.7
SJCC	San Jacinto, C	38.37	346	*e*P	P	11 25 58.9	-0.4
SJCC	San Jacinto, C	38.37	346	*e*P	P	11 25 58.9	-0.4
SMRC	Santa Marta, M	39.41	348	*e*P	P	11 26 06.0	-2.0
SMRC	Santa Marta, M	39.41	348	*e*P	P	11 26 06.0	-2.0
JTS	JuntasAbangare	41.82	332	*e*P	P	11 26 29.4	+1.6
	comp=Z,67nm,1.1s						
JTS				PcP	PcP	11 28 19.5	-1.1
JTS	JuntasAbangare	41.82	332	*d i*P	P	11 26 30.0	+2.2
JTS				pmax	pmax		
	comp=Z,72nm,1.3s						
JTS	JuntasAbangare	41.82	332	P	P	11 26 29.6	+1.8
	comp=Z,39nm,0.9s,baz=333,slow=2.2,SNR=18						
JTS				PcP	PcP	11 28 19.5	-1.1
	comp=Z,5.5nm,0.9s,baz=113,slow=7.7,SNR=2.7						
FDF	Fort de France	42.59	8	*e*P	P	11 26 33.2	-0.7
	comp=Z,115nm,1.0s						
FDF	Fort de France	42.59	8	*e*P	P	11 26 33.2	-0.7
FDF				pmax	pmax		
	comp=Z,115nm,1.0s						
ESPN	Las Esperanzas	43.29	334	*e*P	P	11 26 41.0	+1.5
	comp=Z,87nm,0.5s						
OBIP	Obispado Ponce	45.55	360	*e*P	P	11 26 55.5	-1.9
	comp=Z,49nm,0.5s						
MTP	Monte Pirata	45.61	1	*e*P	P	11 26 55.7	-2.2
	comp=Z,38nm,1.1s						
SJG	San Juan	45.62	1	*e*P	P	11 26 57.4	-0.6
	comp=Z,93nm,1.5s						
SJG				pP	pP	11 27 35.6	-1.0
SJG	San Juan	45.62	1	*e*P	P	11 26 57.4	-0.6
SJG				*PP	pP	11 27 35.7	-1.0
SJG				pmax	pmax		
	comp=Z,93nm,1.5s						
SJG	San Juan	45.62	1	P	P	11 26 56.0	-2.0
	comp=Z,11nm,0.4s,baz=257,slow=6.3,SNR=3.7						
SJG				pP	pP	11 27 35.6	-1.0
	comp=Z,6.6nm,0.5s,baz=320,slow=18,SNR=1.3						
HUMP	Col San Antoni	45.65	1	*e*P	P	11 26 58.6	+0.4
	comp=Z,100nm,1.7s						
STVI	Saint Thomas	45.88	2	*e*P	P	11 26 58.9	-1.1
	comp=Z,40nm,0.9s						
MTDJ	Mount Denham	46.95	346	*e*P	P	11 27 09.0	+0.6
	comp=Z,250nm,1.1s						
APG	El Apazote	48.42	328	P	P	11 27 20.8	+0.8
	comp=Z,43nm,0.7s,baz=164,slow=4.3,SNR=49						
CCIG	Comitan	50.31	327	*e*P	P	11 27 34.9	+0.6
	comp=Z,56nm,1.2s						
TEIG	Tepich	52.13	334	*e*P	P	11 27 48.2	+0.6
	comp=Z,62nm,0.6s						
CMIG	Matias Romero	52.36	325	P	P	11 27 49.7	+0.4
	comp=Z,13nm,1.0s,baz=121,slow=6.9,SNR=8.2						
CMIG				PcP	PcP	11 28 58.5	+0.5
	comp=Z,3.3nm,0.7s,baz=45,slow=2.9,SNR=2.4						
VNA3	Neumayer Olymp	53.48	160	P	P	11 27 57.3	+0.5
VNA3				x	x	11 28 57.1	
VNA1	Neumayer--Stat	53.69	159	P	P	11 27 59.5	+1.1
VNA2	Neumayer--Watz	54.05	160	P	P	11 28 01.6	+0.5
	baz=284,slow=8.2						
VNA2				x	x	11 29 01.2	
	baz=284,slow=7.5						
061Z	Ochoppi	55.09	344	P	P	11 28 09.5	+0.6
	baz=164						
060Z	West Palm Beac	55.52	345	P	P	11 28 12.8	+0.8
	baz=165						
059Z	Ave Maria	55.67	344	P	P	11 28 13.6	+0.5
	baz=164						
SNAA	Sanae	55.68	160	P	P	11 28 13.0	+0.2
SNAA				x	x	11 29 10.4	
SNAA	Sanae	55.68	160	*e*P	P	11 28 12.9	+0.1
	comp=Z,103nm,1.4s						
SNAA				pP	pP	11 28 51.8	-0.7
SNAA	Sanae	55.68	160	*d i*P	P	11 28 12.8	0.0
SNAA	Sanae	55.68	160	P	P	11 28 13.0	+0.2
	comp=Z,25nm,0.7s,baz=283,slow=8.5,SNR=112						
SNAA				pP	pP	11 28 51.8	-0.7
	comp=Z,11nm,0.8s,baz=276,slow=19,SNR=3.7						
060A	Indiantown	56.08	345	P	P	11 28 16.4	+0.4
	baz=165						
059A	Moore Haven	56.20	344	P	P	11 28 17.4	+0.5
	baz=164						
058A	Arcadia	56.45	344	P	P	11 28 19.0	+0.4
	baz=164						
959A	Okeechobee	56.67	345	P	P	11 28 20.8	+0.7
	baz=165						
958A	Wauchula	56.94	344	P	P	11 28 22.6	+0.5
	baz=164						
957A	Wimauma	57.14	343	P	P	11 28 24.1	+0.7
	baz=163						
859A	Kempfer Cattle	57.19	345	P	P	11 28 24.5	+0.7
	baz=165						
DWPF	Disney Wildern	57.37	344	P	P	11 28 25.3	+0.2
	baz=164						
DWPF	Disney Wildern	57.37	344	*e*P	P	11 28 25.5	+0.5
857A	Zephyrhills	57.71	344	P	P	11 28 27.7	+0.3
	baz=164						
758A	Lake Helen	58.13	345	P	P	11 28 31.0	+0.7
	baz=165						
757A	Oxford	58.31	344	P	P	11 28 32.0	+0.4
	baz=164						
656A	Willston	58.84	344	*e*P	P	11 28 35.4	+0.1
	comp=Z,83nm,0.9s						
656A	Willston	58.84	344	P	P	11 28 35.5	+0.2
	baz=163						
657A	Interlachen	58.88	344	P	P	11 28 35.9	+0.4
	baz=164,SNR=5.4						
557A	Orange Park	59.26	345	P	P	11 28 38.3	+0.2
	baz=164						
556A	Lake Butler	59.41	344	P	P	11 28 39.0	-0.1
	baz=164						
555A	McAlpin	59.66	344	*e*P	P	11 28 41.6	+0.8
	comp=Z,117nm,0.8s						
555A	McAlpin	59.66	344	P	P	11 28 40.9	0.0
	baz=163						
554A	Perry	59.81	343	P	P	11 28 42.4	+0.5
	baz=162						
456A	Hilliard	60.01	345	P	P	11 28 43.7	+0.4
	baz=164						
553A	Crawfordville	60.11	342	P	P	11 28 44.8	+0.9
	baz=162						
NVL	N'lazarevskaya	60.24	158	⇑*i*P	P	11 28 44.0	-0.4
NVL				*e*S	S	11 36 57.4	+13
NVL				pmax	pmax		
	comp=Z,27nm,0.8s						
455A	Stateville	60.27	344	P	P	11 28 45.0	0.0
	baz=163						
552A	Lynn Haven	60.30	341	P	P	11 28 45.4	+0.2
	baz=161						
454A	Quitman	60.40	343	P	P	11 28 45.6	-0.3
	baz=162						
357A	Townsend	60.56	345	P	P	11 28 46.7	-0.2
	baz=165						
453A	Whigham	60.71	343	*e*P	P	11 28 48.5	+0.5
	comp=Z,650nm,1.9s						
453A	Whigham	60.71	343	P	P	11 28 48.3	+0.3
	baz=162						
451A	Vernon	60.88	341	*e*P	P	11 28 50.0	+0.9
	comp=Z,1µm,1.7s						
452A	Marianna	60.94	342	P	P	11 28 49.4	-0.1
	baz=161						
TIGA	Tifton	61.08	343	P	P	11 28 49.9	-0.5
	baz=163						
353A	Camilla	61.15	343	P	P	11 28 50.5	-0.4
	baz=162						
256A	Glennville	61.19	345	P	P	11 28 51.4	+0.3
	baz=164						
LNIG	Linares	61.20	326	*e*P	P	11 28 52.2	+0.7
	comp=Z,32nm,1.0s						
LNIG				*e*PcP	PcP	11 29 33.3	+0.8
255A	Hazlehurst	61.27	345	*e*P	P	11 28 52.1	+0.4
	comp=Z,240nm,1.7s						
255A	Hazlehurst	61.27	345	P	P	11 28 51.4	-0.3
	baz=164						
450A	Crestview	61.30	340	P	P	11 28 51.9	0.0
	baz=160						
449A	Pace	61.45	340	P	P	11 28 52.9	-0.1
	baz=159						
351A	Pinckard	61.46	341	P	P	11 28 53.0	0.0
	baz=161						
352A	Blakely	61.47	342	*e*P	P	11 28 53.3	+0.2
	comp=Z,86nm,0.8s						
352A	Blakely	61.47	342	P	P	11 28 52.9	-0.1
	baz=161,SNR=7.8						
254A	Abbeville	61.49	344	P	P	11 28 52.9	-0.3
	baz=163						
BRAL	Brewton	61.78	340	*e*P	P	11 28 55.8	+0.6
	comp=Z,361nm,1.8s						
BRAL	Brewton	61.78	340	P	P	11 28 55.1	-0.1
	baz=159						
253A	Americus	61.81	343	*e*P	P	11 28 55.5	+0.2
	comp=Z,350nm,2.0s						
253A	Americus	61.81	343	P	P	11 28 54.9	-0.4
	baz=162						
350A	Dozier	61.81	341	P	P	11 28 55.2	-0.1
	baz=160						
448A	Bay Minette	61.81	339	P	P	11 28 55.2	-0.1
	baz=159						
252A	Lumpkin	61.90	343	P	P	11 28 55.7	-0.3
	baz=162						
NHSC	New Hope	61.91	347	P	P	11 28 55.1	-0.8
	baz=166						
155A	Kite	61.94	345	P	P	11 28 56.2	+0.1
	baz=164						
349A	Repton	61.99	340	P	P	11 28 56.9	+0.3
	baz=159						
154A	Montrose	62.08	344	*e*P	P	11 28 57.4	+0.2
	comp=Z,134nm,1.0s						
154A	Montrose	62.08	344	P	P	11 28 57.1	0.0
	baz=163,SNR=5.8						
251A	Midway	62.18	342	P	P	11 28 57.4	-0.4
	baz=161,SNR=8.6						
153A	Fort Valley	62.29	344	P	P	11 28 58.0	-0.6
	baz=163						
250A	Grady	62.31	341	*e*P	P	11 28 58.6	-0.1
	comp=Z,46nm,0.8s						
250A	Grady	62.31	341	P	P	11 28 58.3	-0.4
	baz=160						
Z55A	Blythe	62.44	345	P	P	11 28 59.3	-0.2
	baz=164						
QSPA	South Pole Qui	62.44	180	*e*P	P	11 29 00.4	+1.0
	comp=Z,67nm,0.8s						
152A	Waverly Hall	62.54	343	*e*P	P	11 29 00.1	0.0
	comp=Z,30nm,1.0s						
152A	Waverly Hall	62.54	343	P	P	11 28 59.7	-0.5
	baz=162,SNR=7.1						
249A	Camden	62.56	340	P	P	11 29 00.1	-0.2
	baz=159,SNR=7.7						
151A	Opelika	62.56	342	P	P	11 28 59.7	-0.6
	baz=161,SNR=6.3						
Z54A	Sparta	62.61	345	P	P	11 29 00.3	-0.3
	baz=164						
Z53A	Monticello	62.83	344	P	P	11 29 01.6	-0.5
	baz=163						
150A	Eclectic	62.83	342	P	P	11 29 01.8	-0.3
	baz=161,SNR=12						
GOGA	Godfrey	62.93	344	*e*P	P	11 29 02.6	-0.2
	comp=Z,17nm,0.8s						
GOGA	Godfrey	62.93	344	*e*P	P	11 29 02.6	-0.2
GOGA				pmax	pmax		
	comp=Z,17nm,0.8s						
GOGA	Godfrey	62.93	344	P	P	11 29 02.4	-0.4
	baz=163						
Z52A	Williamson	62.95	343	P	P	11 29 02.6	-0.3
	baz=162,SNR=7.4						
149A	Jones	63.04	341	P	P	11 29 03.0	-0.6
	baz=160,SNR=8.5						
X59A	McDuffie Farm,	63.05	349	P	P	11 29 03.5	0.0
	baz=168						
X58A	Rowland	63.16	348	P	P	11 29 04.5	+0.2
	baz=167,SNR=5.8						
Y54A	Tignall	63.18	345	P	P	11 29 04.2	-0.1
	baz=164,SNR=6.0						
X57A	Johnson Farm,	63.21	348	P	P	11 29 05.0	+0.4
	baz=166						
JSC	Jenkinsville	63.27	346	*e*P	P	11 29 05.6	+0.6
	comp=Z,21nm,0.8s						
JSC	Jenkinsville	63.27	346	*e*P	P	11 29 05.6	+0.6
JSC				pmax	pmax		
	comp=Z,21nm,0.8s						
Z51A	Franklin	63.27	343	P	P	11 29 04.6	-0.5
	baz=162						
Y53A	Monroe	63.38	344	P	P	11 29 05.5	-0.3
	baz=163,SNR=7.5						
Z50A	Ashland	63.41	342	*e*P	P	11 29 06.0	0.0
	comp=Z,57nm,0.8s						
Z50A	Ashland	63.41	342	P	P	11 29 05.7	-0.3
	baz=161,SNR=17						
X56A	White Oak	63.42	347	P	P	11 29 06.3	+0.4
	baz=166,SNR=6.0						
Y52A	Lilburn	63.51	344	*e*P	P	11 29 06.5	0.0
	comp=Z,38nm,0.9s						
Y52A	Lilburn	63.51	344	P	P	11 29 06.3	-0.2
	baz=163,SNR=8.2						
LRAL	Lakeview Retre	63.51	341	*e*P	P	11 29 06.4	-0.2
	comp=Z,33nm,1.0s						
LRAL	Lakeview Retre	63.51	341	P	P	11 29 06.1	-0.5
	baz=160,SNR=9.7						
Z49A	Columbiana	63.53	341	P	P	11 29 06.3	-0.4
	baz=160,SNR=7.9						
X55A	Gracelyn & Ava	63.53	346	P	P	11 29 06.5	-0.1
	baz=165						
147A	Livingston	63.55	340	P	P	11 29 06.4	-0.5
	baz=158						
Y51A	Rockmart	63.79	343	P	P	11 29 08.1	-0.4
	baz=162,SNR=12						
HKT	Hockley	63.85	332	*e*P	P	11 29 09.8	+1.0
	comp=Z,32nm,1.1s						
HKT	Hockley	63.85	332	*e*P	P	11 29 09.8	+1.0
HKT				pmax	pmax		
	comp=Z,32nm,1.1s						
PAULI	Pauline	63.91	346	*e*P	P	11 29 09.7	+0.6
	comp=Z,35nm,1.2s						
X53A	Estanollee	63.93	345	P	P	11 29 09.1	-0.2
	baz=163,SNR=5.9						
Y50A	Piedmont	63.96	342	P	P	11 29 09.1	-0.4
	baz=161,SNR=16						
145A	Houston Renfro	64.02	338	P	P	11 29 10.2	+0.3
	baz=157						
833A	Chaparral WMA,	64.04	328	*e*P	P	11 29 11.4	+1.2
	comp=Z,152nm,0.8s						
833A	Chaparral WMA,	64.04	328	P	P	11 29 11.4	+1.2
	baz=148,SNR=44						
KMSC	Kings Mountain	64.11	347	*e*P	P	11 29 11.1	+0.6
	comp=Z,26nm,0.9s						
KMSC	Kings Mountain	64.11	347	P	P	11 29 10.1	-0.4
	baz=165						
Y49A	Blount Mountai	64.12	342	*e*P	P	11 29 10.2	-0.4
	comp=Z,36nm,0.8s						
Y49A	Blount Mountai	64.12	342	P	P	11 29 10.2	-0.4
	baz=160,SNR=10						
X52A	Dahlonega	64.17	344	P	P	11 29 10.7	-0.2
	baz=163,SNR=8.7						
X51A	Calhoun	64.37	343	*e*P	P	11 29 12.2	+0.1
	comp=Z,102nm,0.8s						
X51A	Calhoun	64.37	343	P	P	11 29 12.2	+0.1
	baz=162,SNR=15						
Y48A	Jasper	64.38	341	P	P	11 29 11.6	-0.6
	baz=160,SNR=11						
X50B	Fort Payne	64.48	343	P	P	11 29 12.5	-0.4
	baz=161,SNR=8.5						
W53A	Cullowhee	64.54	345	P	P	11 29 13.4	0.0
	baz=164,SNR=7.4						
W52A	Murphy	64.64	344	*e*P	P	11 29 13.3	-0.7
	comp=Z,18nm,0.8s						
W52A	Murphy	64.64	344	P	P	11 29 13.8	-0.2
	baz=163,SNR=7.5						
X49A	Woodville	64.71	342	P	P	11 29 14.1	-0.3
	baz=161,SNR=7.3						
X48A	Hartselle	64.85	341	*e*P	P	11 29 15.2	0.0
	comp=Z,76nm,1.0s						
X48A	Hartselle	64.85	341	P	P	11 29 15.3	0.0
	baz=160,SNR=23						
W51A	Cleveland	64.91	344	P	P	11 29 15.6	0.0
	baz=162,SNR=6.7						
V53A	Saluda	64.94	345	*e*P	P	11 29 16.0	0.0
	comp=Z,24nm,0.8s						
V53A	Saluda	64.94	345	P	P	11 29 15.9	0.0
	baz=164,SNR=7.0						
NATX	Nacogdoches	64.97	334	*e*P	P	11 29 17.5	+1.4
	comp=Z,98nm,0.8s						
NATX	Nacogdoches	64.97	334	P	P	11 29 17.3	+1.2
	baz=153,SNR=13						
W50A	Signal Mountai	65.09	343	*e*P	P	11 29 16.6	-0.2
	comp=Z,55nm,0.9s						
W50A	Signal Mountai	65.09	343	P	P	11 29 16.7	-0.2
	baz=162,SNR=12						
CPCT	Cooper Cave	65.13	344	*e*P	P	11 29 17.2	+0.1
	comp=Z,28nm,0.8s						
TKL	Tuckaleechee C	65.15	345	*e*P	P	11 29 16.9	-0.4
	comp=Z,26nm,0.8s						
TKL				pP	pP	11 29 57.9	-0.5
TKL	Tuckaleechee C	65.15	345	*e*P	P	11 29 16.9	-0.4
TKL				*PP	pP	11 29 57.9	-0.5
TKL				pmax	pmax		
	comp=Z,26nm,0.8s						
TKL	Tuckaleechee C	65.15	345	P	P	11 29 16.8	-0.4
	comp=Z,24nm,0.8s,baz=166,slow=7.7,SNR=20						
TKL				pP	pP	11 29 57.9	-0.5
	comp=Z,17nm,1.1s,baz=164,slow=15,SNR=3.6						
X47A	Russelville	65.15	341	P	P	11 29 16.6	-0.6
	baz=159,SNR=11						
W49A	Belvidere	65.26	342	P	P	11 29 17.7	-0.3
	baz=161,SNR=9.7						
SWET	Sewanee	65.27	343	*e*P	P	11 29 17.8	-0.3
	comp=Z,54nm,0.8s						
V52A	Sevierville	65.28	345	*e*P	P	11 29 17.6	-0.5
	comp=Z,29nm,0.8s						
V52A	Sevierville	65.28	345	P	P	11 29 17.5	-0.5
	baz=163,SNR=6.8						
435B	Jarrell	65.32	331	*e*P	P	11 29 19.0	+0.6
	comp=Z,32nm,0.8s						
435B	Jarrell	65.32	331	P	P	11 29 18.7	+0.3
	baz=150						
X46A	Booneville	65.40	340	P	P	11 29 18.3	-0.5
	baz=158,SNR=6.4						
V51A	Loudon	65.42	344	*e*P	P	11 29 18.8	-0.2
	comp=Z,21nm,0.8s						
V51A	Loudon	65.42	344	P	P	11 29 18.5	-0.4
	baz=163						
W48A	Pulaski	65.47	342	P	P	11 29 19.1	-0.1
	baz=160,SNR=21						
V50A	Pikevile	65.48	343	P	P	11 29 19.1	-0.2
	baz=162,SNR=18						
Y43A	Makayla and Ka	65.55	338	P	P	11 29 20.3	+0.5
	baz=156,SNR=6.0						
U53A	Fall Branch	65.55	346	P	P	11 29 19.3	-0.5
	baz=164						
Z41A	Richland Creek	65.61	336	P	P	11 29 20.9	+0.7
	baz=154						
OXF	Oxford	65.61	339	*e*P	P	11 29 19.4	-0.7
	comp=Z,79nm,0.9s						
OXF	Oxford	65.61	339	*e*P	P	11 29 19.4	-0.7
OXF				pmax	pmax		
	comp=Z,79nm,0.9s						
OXF	Oxford	65.61	339	P	P	11 29 19.4	-0.7
	baz=158,SNR=9.6						
PLAL	Pickwick Lake	65.64	341	*e*P	P	11 29 20.0	-0.4
	comp=Z,31nm,1.0s						
U52A	Thorn Hill	65.76	345	P	P	11 29 20.5	-0.6
	baz=164						
W47A	Westpoint	65.76	341	P	P	11 29 20.6	-0.6
	baz=160,SNR=20						

V49A	McMinnville	65.78	343	P	P	11 29 20.7	-0.6
	baz=161,SNR=23						
U51A	La Follette	65.89	345	P	P	11 29 21.5	-0.5
	baz=163						
BLA	Blacksburg	65.94	348	*e*P	P	11 29 23.0	+0.7
	comp=Z,20nm,0.8s						
BLA	Blacksburg	65.94	348	*e*P	P	11 29 23.0	+0.7
BLA				pmax	pmax		
	comp=Z,20nm,0.8s						
BLA	Blacksburg	65.94	348	P	P	11 29 23.0	+0.7
	baz=166						
TZTN	Tazewell	65.94	345	P	P	11 29 21.8	-0.5
	baz=164						
V48A	Smith Brothers	66.00	342	*e*P	P	11 29 22.5	-0.2
	comp=Z,52nm,0.8s						
V48A	Smith Brothers	66.00	342	P	P	11 29 22.4	-0.2
	baz=160,SNR=19						
T54A	Tazewell	66.02	347	P	P	11 29 22.5	-0.4
	baz=165						
JCT	Junction City	66.05	329	*e*P	P	11 29 24.0	+0.9
	comp=Z,83nm,0.7s						
JCT	Junction City	66.05	329	*e*P	P	11 29 24.0	+0.9
JCT				pmax	pmax		
	comp=Z,83nm,0.7s						
JCT	Junction City	66.05	329	P	P	11 29 23.9	+0.7
	baz=148,SNR=46						
X43A	Marvell	66.09	338	P	P	11 29 23.8	+0.6
	baz=156,SNR=5.7						
WLAR	White Oak Lake	66.10	336	*e*P	P	11 29 24.9	+1.6
	comp=Z,177nm,0.9s						
U50A	Jamestown	66.13	344	P	P	11 29 23.0	-0.5
	baz=162,SNR=6.3						
W45A	Hickory Valley	66.14	340	P	P	11 29 23.2	-0.3
	baz=158,SNR=10						
T53A	Wise	66.14	346	P	P	11 29 23.1	-0.5
	baz=164						
R58B	Mineral	66.25	350	*e*P	P	11 29 25.3	+1.1
	comp=Z,26nm,0.8s						
R58B	Mineral	66.25	350	P	P	11 29 25.0	+0.9
	baz=169,SNR=6.9						
V47A	Nunnelly	66.28	342	P	P	11 29 23.8	-0.6
	baz=160,SNR=19						
WHTX	Lake Whitney,	66.31	332	*e*P	P	11 29 25.4	+0.6
	comp=Z,52nm,0.8s						
WHTX	Lake Whitney,	66.31	332	P	P	11 29 25.3	+0.6
	baz=150,SNR=15						
V46A	Holladay	66.42	341	P	P	11 29 24.4	-0.9
	baz=159,SNR=16						
T51A	Gray	66.44	345	P	P	11 29 25.1	-0.3
	baz=163,SNR=6.9						
U49A	Red Boiling Sp	66.45	343	P	P	11 29 24.9	-0.6
	baz=161,SNR=6.6						
S55A	Lewisburg	66.50	348	P	P	11 29 26.5	+0.7
	baz=166,SNR=11						
V45A	Humboldt	66.61	340	P	P	11 29 25.8	-0.7
	baz=158						
WVT	Waverly	66.64	341	*e*P	P	11 29 25.6	-1.2
	comp=Z,104nm,0.8s						
WVT	Waverly	66.64	341	*e*P	P	11 29 25.6	-1.2
WVT				pmax	pmax		
	comp=Z,105nm,0.8s						
WVT	Waverly	66.64	341	P	P	11 29 26.3	-0.4
	baz=160						
U48A	Cassie Pea, Po	66.65	343	P	P	11 29 26.5	-0.3
	baz=161,SNR=7.2						
T50A	Nancy	66.70	344	P	P	11 29 26.4	-0.7
	baz=162,SNR=6.1						
X40A	Basin Creek Fa	66.72	337	*e*P	P	11 29 27.7	+0.4
	comp=Z,7.4nm,0.8s						
X40A	Basin Creek Fa	66.72	337	P	P	11 29 27.0	-0.3
	baz=155						
S53A	Williamson	66.73	347	P	P	11 29 26.8	-0.5
	baz=165						
U47A	Clarksville	66.79	342	P	P	11 29 27.1	-0.5
	baz=160,SNR=22						
UALR	University of	66.81	337	*e*P	P	11 29 28.1	+0.2
	comp=Z,35nm,0.8s						
R55A	Marlinton	66.93	348	P	P	11 29 29.7	+1.1
	baz=167,SNR=6.3						
T49A	Edmonton	66.95	344	*e*P	P	11 29 28.2	-0.5
	comp=Z,30nm,0.6s						
T49A	Edmonton	66.95	344	P	P	11 29 28.1	-0.5
	baz=162,SNR=13						
U46A	Springville	66.96	341	P	P	11 29 28.3	-0.4
	baz=159,SNR=20						
TXAR	Lajitas Array	66.97	325	P	P	11 29 29.9	+0.8
	comp=Z,10nm,0.8s,baz=148,slow=8.4,SNR=75						
TXAR				PKPPKP	P'P'df	11 57 54.7	+0.5
	comp=Z,0.5nm,0.8s,baz=336,slow=2.7,SNR=4.8						
TX31	Lajitas Ar. Si	66.97	325	*e*P	P	11 29 30.0	+0.9
V44A	Blytheville	66.98	340	P	P	11 29 28.6	-0.3
	baz=158						
R54A	Victor	66.99	348	P	P	11 29 29.0	+0.1
	baz=166						
W42A	Bald Knob	66.99	338	P	P	11 29 28.8	-0.1
	baz=156						
S51A	Beattyville	67.00	345	P	P	11 29 28.6	-0.4
	baz=164						
MIAR	Mount Ida	67.04	336	*e*P	P	11 29 29.6	+0.3
	comp=Z,73nm,1.3s						
MIAR	Mount Ida	67.04	336	*e*P	P	11 29 29.6	+0.3
MIAR				pmax	pmax		
	comp=Z,73nm,1.3s						
MIAR	Mount Ida	67.04	336	P	P	11 29 29.7	+0.3
	baz=154,SNR=17						
U45A	Rockin P Farm,	67.12	341	P	P	11 29 29.6	-0.1
	baz=159,SNR=13						
W41B	Gary Mavity, V	67.14	337	*e*P	P	11 29 29.9	+0.1
	comp=Z,35nm,0.9s						
W41B	Gary Mavity, V	67.14	337	P	P	11 29 30.0	+0.1
	baz=155,SNR=14						
T48A	Bowling Green	67.17	343	P	P	11 29 29.2	-0.9
	baz=161						
S50A	Richmond	67.22	345	P	P	11 29 30.0	-0.3
	baz=163,SNR=7.6						
T47A	Sharon Grove	67.25	342	*e*P	P	11 29 30.2	-0.3
	comp=Z,35nm,1.0s						
T47A	Sharon Grove	67.25	342	P	P	11 29 29.8	-0.7
	baz=160,SNR=7.9						
WHAR	Wooly Hollow	67.26	337	*e*P	P	11 29 31.2	+0.5
	comp=Z,41nm,1.0s						
U44B	Burton Farm, H	67.28	340	P	P	11 29 30.3	-0.4
	baz=158						
R53A	Hurricane	67.32	347	P	P	11 29 30.3	-0.6
	baz=165						
R52A	Catlettsburg	67.47	346	P	P	11 29 32.0	+0.1
	baz=164						
T46A	Princeton	67.52	342	P	P	11 29 31.5	-0.7
	baz=160,SNR=5.1						
S49A	Springfield	67.54	344	P	P	11 29 31.3	-1.0
	baz=162						
U44A	Portageville	67.54	340	P	P	11 29 32.6	+0.3
	baz=158,SNR=6.8						
S48A	Wiedeman Farm,	67.61	343	P	P	11 29 31.6	-1.2
	baz=161,SNR=6.1						
Q55A	Buckhannon	67.61	349	P	P	11 29 33.9	+1.0
	baz=167,SNR=7.2						
R51A	Hillsboro	67.63	346	P	P	11 29 32.7	-0.2
	baz=164,SNR=5.2						
U43A	Rector	67.63	339	P	P	11 29 33.0	+0.1
	baz=157						
W39A	Magazine	67.70	336	*e*P	P	11 29 34.4	+1.0
	comp=Z,55nm,0.8s						
W39A	Magazine	67.70	336	P	P	11 29 34.4	+1.0
	baz=154,SNR=19						
Q54A	Coxs Mills	67.74	348	P	P	11 29 33.7	+0.2
	baz=166,SNR=6.5						
S47A	Hartford	67.76	343	P	P	11 29 32.7	-1.0
	baz=160,SNR=6.6						
R50A	Paris	67.78	345	P	P	11 29 33.2	-0.7
	baz=163						
ABTX	Abilene, Hawle	67.79	330	*e*P	P	11 29 34.6	+0.4
	comp=Z,37nm,0.8s						
ABTX	Abilene, Hawle	67.79	330	P	P	11 29 34.5	+0.4
	baz=148,SNR=16						
U42A	Revenden	67.88	339	P	P	11 29 34.4	-0.1
	baz=156,SNR=16						
R49A	Shelbyville	67.99	344	P	P	11 29 34.3	-0.8
	baz=162						
Q52A	Bidwell	67.99	347	P	P	11 29 34.9	-0.3
	baz=165,SNR=6.0						
PBMO	Poplar Bluff	68.02	340	*e*P	P	11 29 35.5	+0.1
	comp=Z,108nm,0.7s						
MVL	Millersville	68.04	352	*e*P	P	11 29 36.8	+1.4
	comp=Z,31nm,0.9s						
T44A	Benton	68.05	340	P	P	11 29 35.2	-0.4
	baz=158,SNR=5.2						
P55A	Reedsville	68.07	349	P	P	11 29 36.4	+0.7
	baz=167,SNR=8.3						
S46A	Don Dixon Farm	68.07	342	P	P	11 29 34.4	-1.3
	baz=160						
U41A	Viola	68.10	338	P	P	11 29 35.9	0.0
	baz=156,SNR=26						
WCI	Wyandotte Cave	68.21	343	*e*P	P	11 29 35.7	-0.8
	comp=Z,22nm,0.6s						
WCI	Wyandotte Cave	68.21	343	*e*P	P	11 29 35.7	-0.8
WCI				pmax	pmax		
	comp=Z,23nm,0.6s						
WCI	Wyandotte Cave	68.21	343	P	P	11 29 35.5	-1.0
	baz=161						
MCWV	Mont Chateau	68.22	349	P	P	11 29 37.3	+0.7
	baz=167,SNR=9.2						
Q50A	Georgetown	68.24	345	P	P	11 29 36.0	-0.7
	baz=163						
T43A	Greenville	68.25	340	P	P	11 29 36.6	-0.2
	baz=157,SNR=36						
R48A	Northridge Ran	68.26	344	P	P	11 29 36.4	-0.4
	baz=162,SNR=5.4						
P54A	Burton	68.27	348	P	P	11 29 37.4	+0.5
	baz=167,SNR=12						
Q51A	Peebles	68.28	346	*e*P	P	11 29 36.8	-0.2
	comp=Z,22nm,0.9s						
Q51A	Peebles	68.28	346	P	P	11 29 36.6	-0.3
	baz=164,SNR=5.7						
S45A	Carrier Mills	68.30	341	P	P	11 29 36.4	-0.7
	baz=159,SNR=5.9						
LIC	Lamto	68.31	70	*e*P	P	11 29 35.9	-1.8
	comp=Z,27nm,0.7s						
P53A	Whipple	68.33	348	*e*P	P	11 29 37.8	+0.5
	comp=Z,46nm,0.8s						
P53A	Whipple	68.33	348	P	P	11 29 37.5	+0.2
	baz=166,SNR=9.0						
R47A	Wooly Knot Far	68.33	343	P	P	11 29 36.1	-1.1
	baz=161						
U40A	Yellville	68.42	337	P	P	11 29 38.1	+0.2
	baz=155,SNR=25						
T42A	Van Buren	68.46	339	*e*P	P	11 29 37.6	-0.5
	comp=Z,31nm,1.1s						
T42A	Van Buren	68.46	339	P	P	11 29 37.5	-0.5
	baz=157,SNR=12						
S44A	Carbondale	68.51	341	P	P	11 29 37.9	-0.5
	baz=158,SNR=11						
SIUC	Southern Illin	68.52	341	*e*P	P	11 29 37.9	-0.6
	comp=Z,30nm,0.6s						
TIC	Toumodi	68.55	70	*e*P	P	11 29 38.3	-0.9
Q49A	Aurora	68.60	345	P	P	11 29 38.4	-0.5
	baz=162,SNR=7.4						
O56A	Blue Knob Stat	68.61	350	*e*P	P	11 29 40.1	+1.1
	comp=Z,27nm,0.7s						
O56A	Blue Knob Stat	68.61	350	P	P	11 29 39.8	+0.8
	baz=168,SNR=5.7						
P52A	Corning	68.61	347	P	P	11 29 38.8	-0.2
	baz=165,SNR=7.9						
KIC	Kosan Boka	68.62	70	*e*P	P	11 29 38.1	-1.6
	comp=Z,20nm,0.5s						
S43A	Fulton Ridge,	68.64	340	P	P	11 29 38.7	-0.5
	baz=158,SNR=12						
P51A	Williamsport	68.65	346	*e*P	P	11 29 39.2	0.0
	comp=Z,26nm,0.8s						
P51A	Williamsport	68.65	346	P	P	11 29 38.9	-0.3
	baz=164,SNR=5.7						
O55A	Ligonier	68.67	350	P	P	11 29 40.1	+0.8
	baz=168,SNR=7.4						
T41A	Mountain View	68.68	339	P	P	11 29 39.5	0.0
	baz=156,SNR=40						
DBIC	Dimbokro	68.69	70	*e*P	P	11 29 38.9	-1.2
	comp=Z,10nm,0.7s						
DBIC				pP	pP	11 30 21.7	+0.7
DBIC	Dimbokro	68.69	70	*e*P	P	11 29 38.9	-1.2
DBIC				*PP	pP	11 30 21.7	+0.7
DBIC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DBIC	Dimbokro	68.69	70	P	P	11 29 38.8	-1.2
	comp=Z,9.0nm,0.3s,baz=212,slow=6.0,SNR=38						
DBIC				pP	pP	11 30 21.7	+0.7
	comp=Z,5.6nm,0.8s,baz=229,slow=7.6,SNR=2.3						
DBIC				LR	LR	11 59 08.3	
	comp=Z,52nm,19.7s,baz=193,slow=35						
DBIC	Dimbokro	68.69	70	*e*P	P	11 29 39.0	-1.1
HHAR	Hobbs	68.73	337	*e*P	P	11 29 40.1	+0.3
	comp=Z,112nm,1.5s						
Q48A	North Vernon	68.73	344	P	P	11 29 39.1	-0.6
	baz=162,SNR=6.2						
R45A	Skylar, Fairfi	68.79	342	P	P	11 29 39.3	-0.8
	baz=159,SNR=6.5						
O54A	Avella	68.82	349	P	P	11 29 40.3	+0.1
	baz=167,SNR=5.1						
SSPA	Standing Stone	68.87	351	*e*P	P	11 29 41.4	+0.8
	comp=Z,18nm,0.7s						
SSPA	Standing Stone	68.87	351	P	P	11 29 41.3	+0.8
	baz=169						
N59A	State Game Lan	68.88	353	*e*P	P	11 29 41.9	+1.3
	comp=Z,74nm,1.4s						
N59A	State Game Lan	68.88	353	P	P	11 29 41.7	+1.1
	baz=171,SNR=5.9						
Q47A	Bedord North L	68.91	344	P	P	11 29 39.8	-1.1
	baz=161						
P50A	Jamestown	68.93	346	P	P	11 29 40.6	-0.4
	baz=164						
R44A	Waltonville	68.98	341	P	P	11 29 40.5	-0.7
	baz=159,SNR=5.0						
O52A	Adamsville	69.02	348	*e*P	P	11 29 41.5	0.0
	comp=Z,39nm,0.8s						
O52A	Adamsville	69.02	348	P	P	11 29 41.4	-0.1
	baz=165,SNR=6.6						
O53A	New Philadelph	69.03	348	P	P	11 29 41.6	0.0
	baz=166						
S42A	Caledonia	69.04	340	P	P	11 29 41.2	-0.5
	baz=157,SNR=33						
P49A	Miami Univ. Ec	69.07	345	P	P	11 29 41.2	-0.6
	baz=163,SNR=8.0						
TUL1	Leonard	69.07	335	*e*P	P	11 29 42.2	+0.3
	comp=Z,52nm,0.8s						
TUL1	Leonard	69.07	335	P	P	11 29 42.2	+0.3
	baz=152,SNR=19						
FVM	French Village	69.13	340	*e*P	P	11 29 42.0	-0.2
	comp=Z,59nm,0.7s						
BLO	Bloomington	69.16	344	*e*P	P	11 29 41.9	-0.4
	comp=Z,29nm,0.5s						
P48A	Milroy	69.16	344	P	P	11 29 41.5	-0.9
	baz=162						
N55A	Marion Center	69.17	350	P	P	11 29 43.3	+0.8
	baz=168,SNR=11						
S41A	Jillco Farms,	69.17	339	P	P	11 29 42.8	+0.2
	baz=156,SNR=73						
O51A	Pataskala	69.20	347	P	P	11 29 42.2	-0.4
	baz=165,SNR=8.6						
WMOK	Wichita Mounta	69.23	332	*e*P	P	11 29 41.5	-1.5
	comp=Z,19nm,0.9s						
WMOK	Wichita Mounta	69.23	332	*e*P	P	11 29 41.5	-1.5
WMOK				pmax	pmax		
	comp=Z,19nm,0.9s						
WMOK	Wichita Mounta	69.23	332	P	P	11 29 42.9	-0.1
	baz=150,SNR=11						
R43A	Red Bud	69.25	341	P	P	11 29 42.1	-0.9
	baz=158						
Q45A	Warren Harvey,	69.32	342	P	P	11 29 42.6	-0.8
	baz=160,SNR=7.9						
ACSO	Alum Creek Sta	69.36	347	*e*P	P	11 29 43.6	0.0
	comp=Z,36nm,0.8s						
ACSO	Alum Creek Sta	69.36	347	P	P	11 29 43.3	-0.3
	baz=164,SNR=9.5						
P47A	Martinsville	69.39	344	P	P	11 29 43.1	-0.7
	baz=161						
O50A	Cable	69.41	346	P	P	11 29 43.5	-0.5
	baz=164,SNR=5.5						
CCM	Cathedral Cave	69.44	339	*e*P	P	11 29 44.0	-0.2
	comp=Z,75nm,0.7s						
CCM	Cathedral Cave	69.44	339	*e*P	P	11 29 44.0	-0.2
CCM				pmax	pmax		
	comp=Z,75nm,0.7s						
CCM	Cathedral Cave	69.44	339	P	P	11 29 44.2	0.0
	baz=157						
KSPA	Keystone Colle	69.51	353	*e*P	P	11 29 45.7	+1.2
	comp=Z,37nm,1.1s						
N53A	Lisbon	69.51	348	P	P	11 29 45.2	+0.7
	baz=166						
N54A	Moraine State	69.51	349	*e*P	P	11 29 45.3	+0.7
	comp=Z,57nm,0.8s						
N54A	Moraine State	69.51	349	P	P	11 29 45.3	+0.7
	baz=167,SNR=8.4						
R42A	Luebbering	69.51	340	P	P	11 29 44.4	-0.1
	baz=157,SNR=28						
Q44A	Meyer Farm, Va	69.57	341	*e*P	P	11 29 44.2	-0.7
	comp=Z,33nm,1.0s						
Q44A	Meyer Farm, Va	69.57	341	P	P	11 29 43.7	-1.2
	baz=159						
O49A	Covington	69.61	346	*e*P	P	11 29 45.0	-0.1
	comp=Z,31nm,0.9s						
O49A	Covington	69.61	346	P	P	11 29 44.7	-0.5
	baz=163,SNR=6.1						
N52A	McGinn's Farm,	69.67	348	P	P	11 29 44.9	-0.6
	baz=166						
R41A	Rosebud	69.71	339	P	P	11 29 45.7	-0.1
	baz=157,SNR=28						
MNTX	Cornudas Mount	69.74	325	*e*P	P	11 29 46.1	-0.1
	comp=Z,21nm,1.0s						
MNTX	Cornudas Mount	69.74	325	P	P	11 29 46.1	-0.1
	baz=144,SNR=31						
P46A	Rosedale	69.75	343	P	P	11 29 45.1	-0.9
	baz=160,SNR=5.7						
Q43A	New Douglas	69.80	341	P	P	11 29 45.7	-0.6
	baz=158,SNR=9.4						
P45A	Graceland, Par	69.81	343	*e*P	P	11 29 45.2	-1.0
	comp=Z,30nm,0.6s						
P45A	Graceland, Par	69.81	343	P	P	11 29 45.3	-1.0
	baz=160,SNR=10						
M55A	Ridgway	69.81	350	P	P	11 29 47.0	+0.6
	baz=168,SNR=8.4						
O48A	Farmland	69.86	345	P	P	11 29 46.1	-0.6
	baz=162,SNR=10						
SYO	Syowa Base	69.91	158⇑	*e*P	P	11 29 45.6	-1.1
SYO	Syowa Base	69.91	158⇑	*e*PcP	PcP	11 30 06.2	-1.7
N50A	Nevada	69.91	347	P	P	11 29 46.5	-0.4
	baz=164						
P44A	Sand Creek, Wi	69.98	342	P	P	11 29 45.9	-1.5
	baz=159						
M54A	Oil Creek Stat	69.99	350	*e*P	P	11 29 46.9	-0.6
	comp=Z,55nm,0.8s						
M54A	Oil Creek Stat	69.99	350	P	P	11 29 47.8	+0.3
	baz=168,SNR=10						
Q42A	Golden Eagle	70.02	340	P	P	11 29 47.3	-0.3
	baz=157,SNR=17						
O47A	Sheridan	70.08	344	P	P	11 29 47.1	-0.9
	baz=162,SNR=7.4						
M53A	WI Miller and	70.09	349	P	P	11 29 48.2	+0.1
	baz=167						
BINY	Binghamton	70.17	353	P	P	11 29 49.3	+0.8
	baz=171						
M51A	Elyria	70.26	348	P	P	11 29 49.0	-0.1
	baz=165						
Q41A	Truxton	70.27	340	P	P	11 29 49.0	-0.1
	baz=157,SNR=12						
N49A	Columbus Grove	70.28	346	*e*P	P	11 29 49.0	-0.1
	comp=Z,61nm,0.8s						
N49A	Columbus Grove	70.28	346	P	P	11 29 48.9	-0.3
	baz=163,SNR=15						
M52A	Chesterland	70.31	348	P	P	11 29 49.0	-0.4
	baz=166						
MSTX	Muleshoe	70.34	329	*e*P	P	11 29 50.2	+0.3
	comp=Z,53nm,0.8s						
MSTX	Muleshoe	70.34	329	P	P	11 29 50.2	+0.3
	baz=146,SNR=30						
P43A	Skaggs, Pawnee	70.40	341	P	P	11 29 49.3	-0.6
	baz=158,SNR=12						
N48A	Decatur	70.40	345	P	P	11 29 49.5	-0.4
	baz=163,SNR=7.0						
SFIN	Lafayette	70.44	343	*e*P	P	11 29 49.0	-1.1
	comp=Z,33nm,0.8s						
SFIN	Lafayette	70.44	343	P	P	11 29 49.1	-1.1
	baz=161,SNR=5.7						
TRY	Troy	70.46	354	*e*P	P	11 29 51.6	+1.4
	comp=Z,36nm,0.8s						
L55A	Hinsdale	70.47	351	P	P	11 29 50.8	+0.5
	baz=169						
O45A	Potomac	70.48	343	P	P	11 29 49.3	-1.1
	baz=160,SNR=6.7						
M50A	Fremont	70.50	347	P	P	11 29 50.3	-0.2
	baz=164						
L53A	Girard	70.52	349	P	P	11 29 50.8	+0.2
	baz=167						
N47A	Urbana	70.57	345	P	P	11 29 50.1	-0.8
	baz=162,SNR=6.4						
P42A	Winchester	70.58	341	*e*P	P	11 29 50.5	-0.5
	comp=Z,37nm,0.8s						
P42A	Winchester	70.58	341	P	P	11 29 50.4	-0.6
	baz=158,SNR=9.0						
O44A	Mansfield	70.58	342	P	P	11 29 50.0	-1.0
	baz=159						
AMTX	Amarillo	70.61	330	*e*P	P	11 29 51.8	+0.3
	comp=Z,27nm,0.8s						
AMTX	Amarillo	70.61	330	P	P	11 29 51.8	+0.3
	baz=147						
ERPA	Erie	70.64	349	P	P	11 29 51.8	+0.5
	baz=167						
M49A	Liberty Center	70.76	346	P	P	11 29 51.6	-0.5
	baz=164,SNR=9.9						
N46A	Monticello	70.84	344	P	P	11 29 51.7	-0.8
	baz=161,SNR=6.4						
P41A	Barry, Barry	70.88	340	P	P	11 29 52.4	-0.4
	baz=157,SNR=14						
M48A	Edgerton	70.93	346	P	P	11 29 52.4	-0.7
	baz=163,SNR=7.4						
MMNY	Mt. Morris Dam	70.93	351	*e*P	P	11 29 53.9	+0.8
	comp=Z,30nm,0.7s						
O43A	Sugar Creek Fa	70.94	342	P	P	11 29 52.4	-0.8
	baz=159,SNR=5.3						
K55A	Perry	70.95	351	P	P	11 29 52.7	-0.6
	baz=169						
N45A	Kentland	70.99	343	P	P	11 29 52.3	-1.1
	baz=160						
M47A	Cromwell	71.01	345	P	P	11 29 53.0	-0.6
	baz=162,SNR=5.1						
VNDA	Vanda	71.06	190	*e*P	P	11 29 55.6	+2.1
	comp=Z,27nm,1.0s						
VNDA	Vanda	71.06	190	P	P	11 29 55.3	+1.8
	comp=Z,15nm,0.9s,baz=147,slow=6.0,SNR=12						
L50A	Kingsville	71.07	347	P	P	11 29 52.9	-1.0
	baz=165						
O42A	Bath	71.07	341	P	P	11 29 53.5	-0.5
	baz=158						
N44A	Piper City	71.10	343	P	P	11 29 53.3	-0.9
	baz=160,SNR=5.4						
HDIL	Hopedale	71.18	342	*e*P	P	11 29 54.2	-0.4
	comp=Z,71nm,0.8s						
HDIL	Hopedale	71.18	342	P	P	11 29 54.0	-0.7
	baz=159,SNR=9.7						
O41A	Passleys Farm,	71.23	341	P	P	11 29 54.2	-0.7
	baz=157,SNR=5.4						
M46A	Old House Fiel	71.23	344	P	P	11 29 53.0	-1.9
	baz=162						
L48A	N Adams	71.31	346	P	P	11 29 54.8	-0.6
	baz=163,SNR=6.9						
HNH	Hanover	71.33	356	*e*P	P	11 29 57.2	+1.8
	comp=Z,53nm,1.0s						
L49A	Milan	71.33	347	P	P	11 29 55.3	-0.2
	baz=164						
K52A	Tillsonburg	71.41	349	P	P	11 29 56.0	0.0
	baz=167						
MEDO	Medina	71.43	351	P	P	11 29 56.5	+0.5
	baz=169						
K51A	Iona Station	71.48	348	P	P	11 29 55.8	-0.6
	baz=166						
AAM	Ann Arbor	71.49	347	P	P	11 29 55.8	-0.6
	baz=164						
L47A	Sherwood	71.50	345	P	P	11 29 55.8	-0.8
	baz=163,SNR=6.2						
N43A	Stutzman Famil	71.51	342	P	P	11 29 56.4	-0.2
	baz=159,SNR=16						
TYNO	Tyneside	71.57	350	P	P	11 29 57.1	+0.2
	baz=168						
121A	Cookes Peak, D	71.64	324	P	P	11 29 59.5	+1.7
	baz=142,SNR=25						
N42A	Yates City	71.64	341	P	P	11 29 57.0	-0.4
	baz=158						
N41A	Harden Midland	71.77	341	*e*P	P	11 29 57.7	-0.5
	comp=Z,61nm,1.0s						
N41A	Harden Midland	71.77	341	P	P	11 29 57.6	-0.5
	baz=157,SNR=8.1						
L46A	Eue Claire	71.79	345	P	P	11 29 57.3	-1.0
	baz=162						
J52A	Paris	71.81	349	P	P	11 29 58.4	+0.1
	baz=167						
LBNH	Lisbon	71.83	356	P	P	11 29 59.5	+1.0
	baz=175						
K49A	Clarkson	71.91	347	P	P	11 29 57.6	-1.3
	baz=164						
M43A	Waltham Townsh	71.92	342	P	P	11 29 58.5	-0.5
	baz=159,SNR=5.6						
K48A	Perry	72.06	347	P	P	11 29 59.4	-0.4
	baz=164						
ACTO	Acton	72.11	350	P	P	11 30 00.0	-0.1
	baz=167						
K47A	Vermontville	72.12	346	P	P	11 29 59.4	-0.9

	baz=163						
N40A	Mertquake, Sal	72.14	340	P	P	11 29 60.0	-0.4
	baz=157,SNR=19						
DRWO	Darlington Wes	72.16	351	P	P	11 30 00.2	-0.2
	baz=169						
KSU1	Kansas State U	72.20	336	*e*P	P	11 30 01.0	+0.2
	comp=Z,42nm,0.9s						
KSU1	Kansas State U	72.20	336	P	P	11 30 00.8	+0.1
	baz=152,SNR=6.7						
I53A	Kortright Cn E	72.24	350	P	P	11 30 00.8	-0.1
	baz=168						
M41A	Milan	72.29	341	P	P	11 30 00.6	-0.6
	baz=158,SNR=5.8						
PKRO	Pickering	72.30	351	P	P	11 30 01.3	0.0
	baz=168						
K46A	Dorr	72.31	345	P	P	11 30 00.5	-0.8
	baz=162						
BNM	Barren Site	72.33	326	*e*P	P	11 30 03.4	+1.4
I55A	Frankford	72.36	352	P	P	11 30 01.8	+0.2
	baz=170						
LONY	Lake Ozonia	72.42	354	*e*P	P	11 30 03.0	+1.0
	comp=Z,26nm,0.9s						
LONY	Lake Ozonia	72.42	354	P	P	11 30 02.5	+0.5
	baz=172						
I51A	Listowel	72.45	349	P	P	11 30 02.1	-0.1
	baz=166						
LPM	Los Pinos Moun	72.46	326	*e*P	P	11 30 04.5	+1.9
J48A	Bridge Port	72.47	347	P	P	11 30 01.3	-1.0
	baz=164						
LENM	Lemitar	72.52	326	*e*P	P	11 30 04.4	+1.4
FRNY	Flat Rock	72.54	355	*e*P	P	11 30 03.4	+0.8
	comp=Z,18nm,0.7s						
L43A	Garden Prairie	72.56	343	P	P	11 30 02.6	-0.2
	baz=159,SNR=5.9						
H56A	Elgin	72.56	353	P	P	11 30 03.0	+0.3
	baz=171						
I52A	Shelburne	72.57	350	P	P	11 30 02.9	0.0
	baz=167						
M40A	Post Highland	72.60	341	P	P	11 30 02.7	-0.4
	baz=157,SNR=18						
H55A	Tweed	72.63	352	P	P	11 30 03.0	-0.1
	baz=170						
J47A	Sunmer	72.63	346	P	P	11 30 02.6	-0.6
	baz=163						
L42A	Oliver, Polo	72.64	342	*e*P	P	11 30 03.2	-0.1
	comp=Z,90nm,1.4s						
L42A	Oliver, Polo	72.64	342	P	P	11 30 02.9	-0.3
	baz=159						
PKME	Peaks-Kenny Pk	72.73	358	*e*P	P	11 30 05.1	+1.4
	comp=Z,70nm,1.1s						
PKME	Peaks-Kenny Pk	72.73	358	P	P	11 30 04.5	+0.8
	baz=177						
BWLO	Walkerton	72.78	349	P	P	11 30 04.2	+0.2
	baz=166						
LAZ	Ladron	72.79	326	*e*P	P	11 30 06.2	+1.6
M39A	Webster	72.87	340	P	P	11 30 03.9	-0.7
	baz=156,SNR=6.0						
ANMO	Albuquerque	72.88	327	*e*P	P	11 30 06.6	+1.4
	comp=Z,20nm,0.9s						
ANMO	Albuquerque	72.88	327	*d i*P	P	11 30 06.5	+1.4
ANMO				pmax	pmax		
	comp=Z,30nm,1.3s						
ANMO	Albuquerque	72.88	327	P	P	11 30 06.6	+1.4
	baz=144						
I49A	Point Hope	72.90	348	P	P	11 30 04.0	-0.8
	baz=165						
L41A	Preston	72.93	342	P	P	11 30 04.3	-0.7
	baz=158,SNR=9.7						
K43A	Burlington	72.94	343	*e*P	P	11 30 04.9	-0.2
	comp=Z,106nm,0.9s						
K43A	Burlington	72.94	343	P	P	11 30 04.8	-0.2
	baz=160,SNR=6.2						
TUC	Tucson	73.06	322	*e*P	P	11 30 07.7	+1.6
	comp=Z,14nm,1.1s						
TUC	Tucson	73.06	322	P	P	11 30 07.7	+1.6
TUC	Tucson	73.06	322	P	P	11 30 07.3	+1.2
	baz=140						
PLVO	Plevna	73.10	352	P	P	11 30 06.2	+0.3
	baz=170						
L40A	Anamosa	73.12	341	*e*P	P	11 30 06.0	-0.2
	comp=Z,101nm,0.8s						
L40A	Anamosa	73.12	341	P	P	11 30 05.9	-0.2
	baz=157,SNR=19						
CBKS	Cedar Bluff	73.13	333	*e*P	P	11 30 07.3	+0.9
	comp=Z,61nm,0.9s						
CBKS	Cedar Bluff	73.13	333	*e*P	P	11 30 07.3	+0.9
CBKS				pmax	pmax		
	comp=Z,61nm,0.9s						
CBKS	Cedar Bluff	73.13	333	P	P	11 30 07.3	+0.9
	baz=150,SNR=8.7						
BANO	Bancroft	73.18	352	P	P	11 30 06.5	0.0
	baz=169						
BMRO	Meriville Lake	73.25	349	P	P	11 30 06.8	0.0
	baz=166						
G55A	Calabogie	73.27	353	P	P	11 30 06.9	0.0
	baz=170						
K42A	Prairie Point,	73.27	343	P	P	11 30 06.8	-0.2
	baz=159,SNR=8.2						
I48A	Sherman Twp	73.31	347	P	P	11 30 06.9	-0.3
	baz=164,SNR=5.7						
I47A	Gladwin	73.31	347	P	P	11 30 06.8	-0.4
	baz=163						
ORIO	Orleans, Innes	73.33	353	P	P	11 30 07.2	-0.1
	baz=172						
K41A	Shullsburg	73.37	342	P	P	11 30 07.3	-0.3
	baz=158,SNR=7.5						
G53A	Haliburton	73.38	351	P	P	11 30 07.7	+0.2
	baz=169						
L39A	Vinton	73.41	341	P	P	11 30 07.5	-0.3
	baz=157,SNR=6.9						
I46A	Reed City	73.43	346	P	P	11 30 06.9	-1.0
	baz=162						
ALFO	Alfred	73.44	354	P	P	11 30 06.8	-1.1
	baz=172						
SCIA	State Center	73.58	340	*e*P	P	11 30 08.8	0.0
	comp=Z,47nm,0.8s						
SCIA	State Center	73.58	340	P	P	11 30 08.5	-0.3
	baz=156						
J43A	Natural Harves	73.60	344	P	P	11 30 08.7	-0.2
	baz=160,SNR=7.0						
JFWS	Jewell Farm	73.64	342	*e*P	P	11 30 09.2	0.0
	comp=Z,46nm,0.6s						
JFWS	Jewell Farm	73.64	342	*e*P	P	11 30 09.2	0.0
JFWS				pmax	pmax		
	comp=Z,46nm,0.6s						
JFWS	Jewell Farm	73.64	342	P	P	11 30 09.0	-0.1
	baz=158,SNR=10						
K40A	Colesburg	73.69	341	P	P	11 30 09.0	-0.4
	baz=157						
T25A	Trinidad	73.70	329	*e*P	P	11 30 11.4	+1.4
	comp=Z,27nm,0.8s						
T25A	Trinidad	73.70	329	P	P	11 30 11.4	+1.4
	baz=146,SNR=23						
J42A	Columbus	73.72	343	P	P	11 30 09.6	0.0
	baz=159,SNR=5.6						
PEMO	Pembroke	73.75	352	P	P	11 30 09.9	+0.2
	baz=170						
F55A	Otter Lake	73.80	353	P	P	11 30 10.3	+0.3
	baz=171						
KLBO	Killbear Provi	73.83	350	P	P	11 30 10.3	+0.1
	baz=167						
K39A	Oelwein	73.91	341	P	P	11 30 10.2	-0.5
	baz=157,SNR=10						
TOBO	Tobermory, Bru	73.92	349	P	P	11 30 10.4	-0.3
	baz=166						
214A	Organ Pipe Nat	73.92	320	P	P	11 30 12.8	+1.7
	baz=138,SNR=7.0						
H46A	Fife Lake	73.95	346	P	P	11 30 10.6	-0.4
	baz=163,SNR=5.3						
J41A	Loganville	74.00	342	P	P	11 30 11.1	-0.1
	baz=158,SNR=6.9						
I43A	Langenfeld Bro	74.00	344	P	P	11 30 10.9	-0.3
	baz=160						
TRQ	Mont Tremblant	74.00	354	*e*P	P	11 30 11.9	+0.6
GLMI	Grayling	74.11	347	P	P	11 30 11.9	+0.1
	baz=163						
ALGO	Algonquin Park	74.12	352	P	P	11 30 11.9	0.0
	baz=169,SNR=8.5						
F52A	Sundridge	74.13	351	P	P	11 30 12.0	+0.1
	baz=168						
I42A	Draeger Farm,	74.20	343	*e*P	P	11 30 12.5	+0.1
	comp=Z,60nm,0.5s						
I42A	Draeger Farm,	74.20	343	P	P	11 30 12.4	+0.1
	baz=159,SNR=5.1						
J40A	Soldiers Grove	74.22	342	P	P	11 30 12.1	-0.4
	baz=158,SNR=8.6						
F51A	Arnstein	74.35	350	P	P	11 30 12.7	-0.5
	baz=168						
J39A	Decorah	74.43	341	P	P	11 30 13.4	-0.3
	baz=157,SNR=12						
H43A	Windswept, Lux	74.46	344	P	P	11 30 13.6	-0.3
	baz=160						
KSCO	Kaye Shedlock’	74.48	332	*e*P	P	11 30 15.8	+1.4
	comp=Z,148nm,1.5s						
KSCO	Kaye Shedlock’	74.48	332	P	P	11 30 15.4	+1.1
	baz=147,SNR=7.8						
E54A	Lac Daplat, Po	74.48	352	P	P	11 30 14.0	+0.1
	baz=170,SNR=8.0						
E53A	Dumoine, Ponti	74.49	352	P	P	11 30 14.1	+0.1
	baz=170						
F49A	Sandfield	74.53	349	P	P	11 30 13.9	-0.3
	baz=166						
I41A	Arkdale	74.60	343	*e*P	P	11 30 14.5	-0.2
	comp=Z,29nm,0.6s						
I41A	Arkdale	74.60	343	P	P	11 30 14.4	-0.2
	baz=159,SNR=6.5						
I40A	Norwalk	74.65	342	P	P	11 30 14.7	-0.3
	baz=158						
W18A	Petrified Fore	74.67	324	P	P	11 30 16.7	+1.2
	baz=141						
H42A	Shiocton	74.68	344	P	P	11 30 15.1	-0.1
	baz=160						
F48A	Evansville	74.69	348	P	P	11 30 15.0	-0.1
	baz=165						
SDCO	Great Sand Dun	74.70	329	*e*P	P	11 30 17.0	+1.3
	comp=Z,12nm,0.8s						
SDCO	Great Sand Dun	74.70	329	P	P	11 30 17.1	+1.3
	baz=145,SNR=22						
BATG	Bathurst New B	74.71	0	*e*P	P	11 30 16.5	+1.3
	comp=Z,33nm,1.1s						
BGNE	Belgrade	74.78	336	*e*P	P	11 30 16.5	+0.6
	comp=Z,155nm,0.7s						
BGNE	Belgrade	74.78	336	P	P	11 30 16.4	+0.6
	baz=151,SNR=18						
I39A	Houston	74.86	342	*e*P	P	11 30 16.1	-0.2
	comp=Z,84nm,1.3s						
I39A	Houston	74.86	342	P	P	11 30 15.9	-0.3
	baz=157,SNR=8.8						
E51A	G1948 Merrick	74.88	351	P	P	11 30 16.4	+0.2
	baz=168						
E50A	Wahnapitae	74.96	350	P	P	11 30 16.4	-0.3
	baz=167						
LATQ	La Tuque	75.02	356	P	P	11 30 17.4	+0.4
	baz=174						
X16A	Lo Mia Camp, P	75.02	323	*e*P	P	11 30 19.4	+1.9
	comp=Z,42nm,1.2s						
F46A	Macinaw City C	75.04	347	P	P	11 30 16.9	-0.2
	baz=163						
H41A	Junction City	75.07	343	*e*P	P	11 30 17.2	-0.1
	comp=Z,31nm,0.8s						
H41A	Junction City	75.07	343	P	P	11 30 17.2	-0.1
	baz=159						
F45A	CMU Biological	75.11	346	P	P	11 30 17.4	-0.2
	baz=163						
D54A	Lac Fusel, La	75.13	353	P	P	11 30 17.2	-0.5
	baz=171						
D52A	ZEK Kipawa Sen	75.17	352	P	P	11 30 18.2	+0.3
	baz=169						
D53A	Lac Vacive, Po	75.18	352	P	P	11 30 18.1	+0.2
	baz=170,SNR=5.3						
G43A	Wallace	75.19	345	P	P	11 30 17.6	-0.4
	baz=161						
E48A	Lockeyer	75.25	349	P	P	11 30 18.4	+0.1
	baz=166						
H40A	Chili	75.26	343	P	P	11 30 18.2	-0.3
	baz=158,SNR=6.9						
S22A	4UR Ranch, Cre	75.31	328	*e*P	P	11 30 20.6	+1.3
	comp=Z,8.9nm,0.8s						
S22A	4UR Ranch, Cre	75.31	328	P	P	11 30 20.6	+1.3
	baz=144,SNR=12						
G42A	Mountain	75.35	344	P	P	11 30 18.9	-0.1
	baz=160						
D51A	Lot 18 Range I	75.41	351	P	P	11 30 19.2	-0.1
	baz=168						
E47A	Iron Bridge	75.42	348	P	P	11 30 19.2	0.0
	baz=165,SNR=5.0						
G41A	Antigo	75.50	344	P	P	11 30 19.8	-0.1
	baz=159,SNR=7.5						
Y14A	Wickenburg	75.51	322	*e*P	P	11 30 21.6	+1.4
	comp=Z,19nm,0.9s						
E46A	Sault Ste Mari	75.52	347	P	P	11 30 19.7	-0.2
	baz=164,SNR=6.2						
Q24A	Divide	75.53	330	P	P	11 30 21.8	+1.3
	baz=145,SNR=14						
H39A	Augusta	75.56	342	P	P	11 30 19.9	-0.2
	baz=157						
F44A	Big Bay de Noc	75.58	346	P	P	11 30 20.1	-0.1
	baz=162						
F43A	Flat Rock, Esc	75.61	345	P	P	11 30 20.3	-0.1
	baz=161						
MVCO	Mesa Verde	75.68	327	*e*P	P	11 30 21.2	-0.2
	comp=Z,27nm,0.9s						
MVCO	Mesa Verde	75.68	327	P	P	11 30 22.8	+1.4
	baz=142,SNR=22						
E45A	Wooded Hills,	75.69	347	P	P	11 30 21.0	+0.2
	baz=163						
G40A	Rib Lake	75.81	343	P	P	11 30 21.4	-0.2
	baz=158						
WUAZ	Wupatki	75.82	324	*e*P	P	11 30 24.0	+1.8
	comp=Z,34nm,0.9s						
WUAZ	Wupatki	75.82	324	P	P	11 30 23.9	+1.8
	baz=140,SNR=19						
H38A	Maiden Rock	75.83	341	P	P	11 30 21.4	-0.3
	baz=157						
D48A	Paudash Townsh	75.86	349	P	P	11 30 21.3	-0.5
	baz=166						
GLA	Glamis	75.88	320	P	P	11 30 23.8	+1.4
	baz=137						
D47A	Chapleau	75.96	348	P	P	11 30 22.1	-0.3
	baz=165						
D46A	Sault St. Mari	75.98	348	P	P	11 30 21.9	-0.6
	baz=164						
F41A	Three Lakes	75.98	344	*e*P	P	11 30 22.7	+0.2
	comp=Z,32nm,0.8s						
F41A	Three Lakes	75.98	344	P	P	11 30 22.7	+0.2
	baz=159						
PPT	Papeete	75.98	257	P	P	11 30 25.1	+1.8
	comp=Z,50nm,0.8s,baz=33,slow=3.2,SNR=4.8						
G39A	Holcombe	76.09	342	P	P	11 30 22.9	-0.3
	baz=158,SNR=6.5						
G38A	Ridgeland	76.16	342	P	P	11 30 23.2	-0.4
	baz=157,SNR=5.3						
VLDQ	Val d'Or	76.17	353	*e*P	P	11 30 24.3	+0.8
	comp=Z,30nm,1.1s						
Y12C	Blythe	76.22	320	*e*P	P	11 30 25.9	+1.8
	comp=Z,31nm,0.9s						
Y12C	Blythe	76.22	320	P	P	11 30 25.8	+1.6
	baz=137,SNR=10.0						
ECSD	EROS Data Cent	76.31	338	*e*P	P	11 30 24.7	+0.2
	comp=Z,42nm,0.8s						
ECSD	EROS Data Cent	76.31	338	P	P	11 30 24.6	+0.2
	baz=153,SNR=37						
TSUM	Tsumeb	76.31	105	*e*P	P	11 30 25.5	+0.2
	comp=Z,5.9nm,0.8s						
E42A	Champion	76.34	345	P	P	11 30 24.7	+0.1
	baz=161						
SWSC	Sam W. Stewart	76.36	319	P	P	11 30 25.3	+0.3
	baz=136						
F40A	Park Falls	76.40	343	P	P	11 30 25.1	+0.2
	baz=159,SNR=5.7						
PDMCI	Parker Dam,Lak	76.41	321	P	P	11 30 26.1	+0.9
	baz=138						
ISCO	Idaho Springs	76.42	330	*e*P	P	11 30 26.6	+1.0
	comp=Z,22nm,0.8s						
ISCO	Idaho Springs	76.42	330	*e*P	P	11 30 26.6	+1.0
ISCO				pmax	pmax		
	comp=Z,21nm,0.8s						
ISCO	Idaho Springs	76.42	330	P	P	11 30 26.9	+1.4
	baz=145,SNR=24						
PV01	Paradox Valley	76.45	327	*e*P	P	11 30 27.4	+1.7
	comp=Z,28nm,1.3s						
SPMN	Marine on St.	76.48	341	*e*P	P	11 30 25.2	-0.2
	comp=Z,32nm,0.6s						
SPMN	Marine on St.	76.48	341	P	P	11 30 25.1	-0.3
	baz=156,SNR=12						
SMCO	Snowmass	76.53	329	*e*P	P	11 30 27.8	+1.4
	comp=Z,21nm,0.8s						
PV15	Paradox Valley	76.57	327	*e*P	P	11 30 28.4	+2.1
	comp=Z,46nm,1.3s						
PV02	Paradox Valley	76.59	327	*e*P	P	11 30 28.2	+1.8
	comp=Z,47nm,1.5s						
PV13	Radium Mtn., P	76.59	327	*e*P	P	11 30 27.8	+1.3
	comp=Z,31nm,1.1s						
F39A	Loretta	76.60	343	P	P	11 30 26.1	+0.1
	baz=158,SNR=6.1						
E41A	Kenton	76.62	344	P	P	11 30 25.9	-0.2
	baz=160						
PV05	Paradox Valley	76.66	327	*e*P	P	11 30 28.4	+1.5
	comp=Z,37nm,1.2s						
BC3	Big Chuckawall	76.68	320	P	P	11 30 28.3	+1.4
	baz=137,SNR=9.3						
PV03	Paradox Valley	76.68	327	*e*P	P	11 30 28.5	+1.5
	comp=Z,33nm,1.4s						
MONP2	Monument Peak	76.69	319	P	P	11 30 28.3	+1.2
	baz=136						
PV12	Saucer Basin,	76.71	327	*e*P	P	11 30 28.9	+1.8
	comp=Z,14nm,0.8s						
PV11	David Mesa, Pa	76.72	327	*e*P	P	11 30 28.8	+1.6
	comp=Z,38nm,1.4s						
PV07	Paradox Valley	76.73	327	*e*P	P	11 30 29.0	+1.8
	comp=Z,14nm,1.0s						
PV17	East Wray Mesa	76.75	327	*e*P	P	11 30 28.9	+1.5
	comp=Z,26nm,1.2s						
PV16	Nyswonger Mesa	76.75	327	*e*P	P	11 30 28.9	+1.5
	comp=Z,25nm,1.4s						
PV19	Morning Glory	76.79	327	*e*P	P	11 30 29.1	+1.6
	comp=Z,24nm,1.3s						
PV20	West Nyswonger	76.80	327	*e*P	P	11 30 29.2	+1.6
	comp=Z,18nm,1.2s						
PV04	Paradox Valley	76.81	327	*e*P	P	11 30 29.3	+1.7
	comp=Z,29nm,1.4s						
PV14	Lion Creek, Pa	76.86	327	*e*P	P	11 30 29.6	+1.6
	comp=Z,40nm,1.3s						
W13A	Hualapai Mount	76.86	322	*e*P	P	11 30 28.8	+0.8
PV10	Paradox Valley	76.87	327	*e*P	P	11 30 29.3	+1.3
	comp=Z,28nm,1.0s						
IRM	Iron Mountain	76.87	320	P	P	11 30 29.3	+1.5
	baz=137,SNR=6.9						
F37A	Hinrichs Farm,	76.89	342	P	P	11 30 27.8	+0.2
	baz=156,SNR=25						
F38A	Pierce - Schro	76.90	342	P	P	11 30 27.9	+0.2
	baz=157,SNR=11						
PV23	Carpenter Ridg	76.91	327	*e*P	P	11 30 29.9	+1.6
	comp=Z,11nm,0.9s						
E39A	Mellen	76.94	343	P	P	11 30 28.0	+0.1
	baz=158,SNR=5.6						
PV21	Cone Mtn., Par	76.98	327	*e*P	P	11 30 30.4	+1.7
	comp=Z,20nm,1.1s						
PV09	Paradox Valley	77.01	327	*e*P	P	11 30 30.6	+1.8
LSQQ	Lebel-sur-Quev	77.05	353	P	P	11 30 28.7	+0.2
	baz=170						
D41A	Chassel	77.09	345	*e*P	P	11 30 29.3	+0.6
	comp=Z,85nm,0.8s						
D41A	Chassel	77.09	345	P	P	11 30 29.3	+0.6
	baz=160,SNR=5.1						
DRLN	Deer Lake	77.11	6	*e*P	P	11 30 29.9	+1.1
	comp=Z,50nm,0.8s						
PFO	Pinyon Flats O	77.22	319	P	P	11 30 31.5	+1.5
	baz=136						
BELC	Belle Mtn. Jos	77.24	320	P	P	11 30 31.1	+1.0
	baz=136						
E38A	The Farm, Brul	77.41	343	P	P	11 30 30.4	-0.2
	baz=157						
N23A	Red Feather La	77.47	330	*e*P	P	11 30 33.0	+1.7
	comp=Z,18nm,0.8s						
N23A	Red Feather La	77.47	330	P	P	11 30 32.6	+1.3
	baz=145,SNR=12						
LDFC	Landfair	77.52	321	*e*P	P	11 30 33.7	+2.1
	comp=Z,28nm,0.8s						
PHWY	Pilot Hill	77.59	331	*e*P	P	11 30 32.6	+0.6
	comp=Z,15nm,0.8s						
TORD	Torodi Ar. Bea	77.61	68	P	P	11 30 31.3	-1.0
	comp=Z,29nm,0.7s,baz=108,slow=14,SNR=70						
TORD				pP	pP	11 31 13.7	-0.6
	comp=Z,7.6nm,1.0s,baz=229,slow=6.0,SNR=2.4						
TORD				PP	PP	11 33 29.0	-1.0
	comp=Z,4.6nm,1.1s,baz=225,slow=7.5,SNR=4.1						
GMRC	Granite Mounta	77.61	320	P	P	11 30 33.8	+1.7
	baz=137,SNR=19						
MURC	Murrieta	77.64	319	P	P	11 30 33.7	+1.5
	baz=136						
CHGQ	Chibougamau	77.65	355	P	P	11 30 32.0	+0.3
	baz=173,SNR=8.7						
KNB	Kanab	77.72	324	*e*P	P	11 30 34.8	+2.1
	comp=Z,64nm,0.9s						
KNB	Kanab	77.72	324	*e*P	P	11 30 34.8	+2.1
KNB				pmax	pmax		
	comp=Z,64nm,0.9s						
SUSD	Miller	77.73	337	P	P	11 30 32.5	+0.1
	baz=151						
PKCU	Pink Cliffs	77.78	324	*e*P	P	11 30 35.1	+1.9
	comp=Z,21nm,0.8s						
MATQ	Matagami	77.81	353	P	P	11 30 32.5	-0.2
	baz=170,SNR=5.3						
O20A	White River Ci	77.88	329	*e*P	P	11 30 35.0	+1.4
	comp=Z,53nm,0.9s						
O20A	White River Ci	77.88	329	P	P	11 30 34.9	+1.4
	baz=143,SNR=26						
LCMT	Little Creek M	77.94	323	*e*P	P	11 30 35.4	+1.5
	comp=Z,15nm,0.9s						
HEC	Hector,Ludlow	78.03	320	P	P	11 30 36.0	+1.7
	baz=136,SNR=8.0						
SRU	San Rafael Swe	78.16	327	*e*P	P	11 30 36.2	+1.1
	comp=Z,35nm,0.9s						
SRU	San Rafael Swe	78.16	327	*e*P	P	11 30 36.2	+1.1
SRU				pmax	pmax		
	comp=Z,35nm,0.9s						
MTPU	Mount Pierson	78.17	325	*e*P	P	11 30 36.8	+1.4
	comp=Z,20nm,0.8s						
CIS	Catalina Islan	78.22	318	P	P	11 30 36.8	+1.4
	baz=135						
TUQ	Turquoise Moun	78.23	321	P	P	11 30 37.1	+1.6
	baz=137,SNR=6.1						
SZCU	Shurtz Canyon	78.30	324	*e*P	P	11 30 37.9	+2.0
Q16A	Castle Valley	78.33	326	*e*P	P	11 30 37.8	+1.8
	comp=Z,28nm,1.0s						
CCUT	Cedar City	78.41	324	*e*P	P	11 30 38.7	+2.1
	comp=Z,37nm,0.9s						
P18A	Preston Nutter	78.43	327	*e*P	P	11 30 38.7	+1.9
MSU	Marysvale	78.52	325	*e*P	P	11 30 38.8	+1.6
MSU	Marysvale	78.52	325	*e*P	P	11 30 38.8	+1.6
P17A	Butcher Ranch,	78.55	327	*e*P	P	11 30 38.5	+1.2
	comp=Z,44nm,1.1s						
SHPR	Sheep Range	78.59	322	*e*P	P	11 30 39.1	+1.6
	comp=Z,13nm,0.9s						
EYMN	Ely	78.63	343	*e*P	P	11 30 37.3	+0.1
	comp=Z,15nm,0.8s						
EYMN	Ely	78.63	343	P	P	11 30 37.1	-0.2
	baz=158						
GSC	Goldstone, Bar	78.64	320	*e*P	P	11 30 39.3	+1.6
	comp=Z,43nm,1.5s						
GSC	Goldstone, Bar	78.64	320	*e*P	P	11 30 39.3	+1.6
GSC				pmax	pmax		
	comp=Z,43nm,1.5s						
GSC	Goldstone, Bar	78.64	320	P	P	11 30 39.1	+1.4
	baz=136,SNR=5.1						
TMUT	Trail Mountain	78.64	326	*e*P	P	11 30 39.2	+1.3
	comp=Z,41nm,1.5s						
RWWY	Rawlins	78.67	330	*e*P	P	11 30 38.4	+0.5
	comp=Z,63nm,0.8s						
BOSA	Boshof	78.71	116	*e*P	P	11 30 38.4	-0.1
	comp=Z,35nm,0.9s						
BOSA				pP	pP	11 31 20.1	-0.8
BOSA	Boshof	78.71	116	*e*P	P	11 30 38.4	-0.1
BOSA				*PP	pP	11 31 20.1	-0.8
BOSA				pmax	pmax		
	comp=Z,35nm,0.9s						
BOSA	Boshof	78.71	116	P	P	11 30 37.9	-0.6
	comp=Z,26nm,0.8s,baz=246,slow=5.1,SNR=22						
BOSA				pP	pP	11 31 20.1	-0.8
	comp=Z,3.0nm,0.7s,baz=198,slow=12,SNR=1.5						
BOSA	Boshof	78.71	116	*e*P	P	11 30 38.4	-0.1
EDW2	Edwards Air Fo	79.02	319	P	P	11 30 40.6	+0.9
	baz=135						
K22A	Casper	79.15	331	*e*P	P	11 30 41.9	+1.5
	comp=Z,43nm,1.1s						
K22A	Casper	79.15	331	P	P	11 30 41.7	+1.3
	baz=145,SNR=16						
OSI	Osito Audit: C	79.26	318	P	P	11 30 42.0	+1.0
	baz=135						
LRMC	Laurel Mtn Rad	79.26	320	P	P	11 30 42.0	+0.8
	baz=135						
RSSD	Black Hills	79.34	334	*e*P	P	11 30 42.2	+0.8
	comp=Z,21nm,0.7s						
RSSD	Black Hills	79.34	334	*e*P	P	11 30 42.2	+0.8
RSSD				pmax	pmax		
	comp=Z,21nm,0.7s						
RSSD	Black Hills	79.34	334	P	P	11 30 42.3	+0.8
	baz=147						
PSUT	Pine Spring	79.40	324	*e*P	P	11 30 43.5	+1.5
	comp=Z,26nm,0.8s						
MPU	Maple Canyon	79.40	326	*e*P	P	11 30 43.1	+1.2
	comp=Z,24nm,0.9s						
FURC	Furnace Creek,	79.51	321	P	P	11 30 43.7	+1.5

	baz=136,SNR=5.8						
TPNV	Topopah Spring	79.51	322	*e*P	P	11 30 44.2	+1.8
	comp=Z,31nm,1.2s						
TPNV	Topopah Spring	79.51	322	*e*P	P	11 30 44.3	+1.8
TPNV				pmax	pmax		
	comp=Z,31nm,1.2s						
TPNV	Topopah Spring	79.51	322	P	P	11 30 44.0	+1.5
	baz=137,SNR=18						
MPMC	Manual Prospec	79.56	320	P	P	11 30 43.8	+0.9
	baz=136,SNR=7.1						
NLU	North Lily Min	79.58	326	*e*P	P	11 30 44.3	+1.5
	comp=Z,39nm,1.4s						
ARVC	Arvin	79.68	319	P	P	11 30 43.5	+0.3
	baz=135						
JLU	Jordanelle	79.77	327	*e*P	P	11 30 45.2	+1.3
	comp=Z,26nm,0.8s						
DAC	Darwin (Calif)	79.78	320	*e*P	P	11 30 45.4	+1.4
DAC	Darwin (Calif)	79.78	320	*e*P	P	11 30 45.4	+1.4
ISA	Isabella, Lake	79.85	319	*e*P	P	11 30 46.0	+1.8
	comp=Z,18nm,1.3s						
ISA	Isabella, Lake	79.85	319	*e*P	P	11 30 46.0	+1.8
ISA				pmax	pmax		
	comp=Z,18nm,1.3s						
ISA	Isabella, Lake	79.85	319	P	P	11 30 45.6	+1.4
	baz=135						
CTU	Camp Tracy	79.98	327	*e*P	P	11 30 46.2	+1.2
	comp=Z,12nm,0.8s						
PKM	Mcpherson Peak	80.09	318	P	P	11 30 47.0	+1.3
	baz=134						
DUG	Dugway, Tooele	80.12	326	*e*P	P	11 30 47.0	+1.3
	comp=Z,21nm,0.9s						
DUG	Dugway, Tooele	80.12	326	*e*P	P	11 30 47.0	+1.3
DUG				pmax	pmax		
	comp=Z,21nm,0.9s						
DUG	Dugway, Tooele	80.12	326	P	P	11 30 47.0	+1.3
	baz=140,SNR=19						
TCUT	Toone Canyon	80.14	327	*e*P	P	11 30 47.1	+1.2
	comp=Z,146nm,1.6s						
AGMN	Agassiz Nation	80.15	341	*e*P	P	11 30 45.5	0.0
	comp=Z,35nm,0.8s						
AGMN	Agassiz Nation	80.15	341	P	P	11 30 45.6	+0.2
	baz=154,SNR=22						
GRAC	Grapevine Rang	80.17	321	P	P	11 30 47.4	+1.6
	baz=136,SNR=5.1						
CWC	Cottonwood Cre	80.17	320	P	P	11 30 47.2	+1.1
	baz=135						
R11A	Troy Canyon, C	80.17	323	*e*P	P	11 30 47.6	+1.6
	comp=Z,22nm,1.1s						
R11A	Troy Canyon, C	80.17	323	P	P	11 30 47.6	+1.6
	baz=137,SNR=24						
VES	Vestal, Richgr	80.33	319	P	P	11 30 47.8	+1.1
	baz=134,SNR=5.8						
SMMC	Simmler	80.49	318	P	P	11 30 47.9	+0.3
	baz=134						
LBTB	Lobatse	80.54	113	*e*P	P	11 30 48.5	+0.1
	comp=Z,38nm,1.0s						
LBTB	Lobatse	80.54	113	*e*P	P	11 30 48.5	+0.1
LBTB				pmax	pmax		
	comp=Z,38nm,1.0s						
BW06	Boulder Array	80.57	329	*e*P	P	11 30 48.6	+0.5
	comp=Z,30nm,1.1s						
BW06	Boulder Array	80.57	329	P	P	11 30 48.7	+0.6
	baz=142,SNR=30						
PD31	Pinedale Array	80.57	329	*e*P	P	11 30 48.8	+0.6
PDAR	Pinedale Array	80.57	329	*e*P	P	11 30 47.7	-0.5
PDAR	Pinedale Array	80.57	329	P	P	11 30 48.6	+0.6
	comp=Z,12nm,0.6s,baz=121,slow=7.1,SNR=135						
PDAR				PKKPbc	PKKPbc	11 49 26.9	-2.5
	comp=Z,0.5nm,0.7s,baz=243,slow=1.0,SNR=5.2						
BGU	Big Grassy Mou	80.79	326	*e*P	P	11 30 50.2	+0.9
	comp=Z,22nm,1.1s						
SPUT	South Promonto	80.79	327	*e*P	P	11 30 50.4	+1.1
	comp=Z,40nm,0.9s						
MDND	Maddock	80.92	338	*e*P	P	11 30 50.5	+1.0
	comp=Z,171nm,0.7s						
MDND	Maddock	80.92	338	P	P	11 30 50.4	+0.8
	baz=151,SNR=26						
AHID	Auburn Hatcher	81.28	329	*e*P	P	11 30 52.8	+1.0
	comp=Z,39nm,0.8s						
HVU	Hansel Valley	81.31	327	*e*P	P	11 30 52.7	+0.7
	comp=Z,35nm,0.8s						
HVU	Hansel Valley	81.31	327	*e*P	P	11 30 52.7	+0.7
HVU				pmax	pmax		
	comp=Z,35nm,0.8s						
MLAC	Mammoth, Mammo	81.44	321	P	P	11 30 54.0	+1.2
	baz=135,SNR=6.8						
MDPB	Devils Postpil	81.58	320	*e*P	P	11 30 54.9	+1.3
	comp=Z,15nm,1.2s						
REDW	Red Top Meadow	81.63	329	*e*P	P	11 30 54.4	+0.7
	comp=Z,34nm,1.2s						
NV11	Mina Array Sit	81.63	322	*e*P	P	11 30 54.5	+0.8
	comp=Z,0.9nm,1.1s						
SNOW	Snow King Moun	81.66	329	*e*P	P	11 30 54.8	+0.9
	comp=Z,28nm,1.1s						
NV01	Mina Array Sit	81.71	321	*e*P	P	11 30 55.0	+0.8
NVAR	Mina Array Bea	81.71	321	P	P	11 30 54.9	+0.7
	comp=Z,5.4nm,0.8s,baz=148,slow=7.2,SNR=15						
NVAR				pP	pP	11 31 36.9	-0.1
	comp=Z,0.5nm,0.4s,baz=164,slow=4.7,SNR=1.1						
LOHW	Long Hollow	81.71	329	*e*P	P	11 30 55.1	+0.9
	comp=Z,16nm,0.8s						
ELK	Elko	81.76	325	*e*P	P	11 30 55.4	+0.9
	comp=Z,21nm,0.9s						
TPAW	Teton Pass	81.77	329	*e*P	P	11 30 54.5	0.0
	comp=Z,30nm,1.1s						
MOOW	Moose Ponds	81.88	329	*e*P	P	11 30 55.8	+0.8
	comp=Z,8.2nm,0.8s						
ULM	Lac du Bonnet	81.91	342	P	P	11 30 54.6	-0.1
	comp=Z,19nm,0.7s,baz=156,slow=5.7,SNR=36						
ULM				pP	pP	11 31 37.8	+0.4
	comp=Z,5.4nm,0.8s,baz=126,slow=14,SNR=2.3						
FXWY	Fox Creek	81.92	329	*e*P	P	11 30 56.1	+0.9
	comp=Z,8.8nm,0.8s						
KVN	Kaiserville	82.04	322	*e*P	P	11 30 56.6	+0.7
	comp=Z,16nm,0.9s						
KVN	Kaiserville	82.04	322	*e*P	P	11 30 56.6	+0.7
KVN				pmax	pmax		
	comp=Z,17nm,0.9s						
IMW	Indian Meadow	82.08	329	*e*P	P	11 30 57.2	+1.1
	comp=Z,37nm,0.9s						
FLWY	Flagg Ranch	82.12	330	*e*P	P	11 30 57.4	+1.2
	comp=Z,25nm,0.6s						
SCHQ	Schefferville	82.27	360	*e*P	P	11 30 56.9	+0.4
SCHQ				pP	pP	11 31 40.1	+0.8
SCHQ	Schefferville	82.27	360	P	P	11 30 56.4	-0.1
	comp=Z,11nm,0.8s,baz=216,slow=5.3,SNR=12						
SCHQ				pP	pP	11 31 40.1	+0.8
	comp=Z,8.2nm,1.0s,baz=198,slow=15,SNR=2.9						
H17A	Grant Village	82.31	330	*e*P	P	11 30 59.0	+1.8
H17A	Grant Village	82.31	330	P	P	11 30 59.1	+1.8
	baz=142,SNR=7.8						
RLMT	Red Lodge	82.31	331	*e*P	P	11 30 58.1	+0.9
	comp=Z,28nm,0.8s						
RLMT	Red Lodge	82.31	331	P	P	11 30 58.2	+0.9
	baz=143,SNR=33						
YPP	Pitchstone Pla	82.32	330	*e*P	P	11 30 58.9	+1.6
	comp=Z,15nm,1.5s						
LAO	LASA Array	82.33	334	*e*P	P	11 30 57.6	+0.6
	comp=Z,40nm,0.9s						
LAO	LASA Array	82.33	334	P	P	11 30 57.6	+0.6
	baz=145,SNR=22						
LKWY	Lake	82.37	330	*e*P	P	11 30 59.4	+1.8
	comp=Z,9.8nm,0.8s						
LKWY	Lake	82.37	330	*e*P	P	11 30 59.4	+1.8
LKWY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WAKR	Walker	82.39	321	*e*P	P	11 30 59.7	+1.9
	comp=Z,39nm,1.4s						
YFT	Old Faithful	82.47	330	*e*P	P	11 31 00.4	+2.3
	comp=Z,18nm,0.9s						
CMB	Columbia Colle	82.60	320	*e*P	P	11 30 59.5	+0.9
	comp=Z,14nm,1.5s						
CMB	Columbia Colle	82.60	320	*e*P	P	11 30 59.5	+0.9
CMB				pmax	pmax		
	comp=Z,14nm,1.5s						
YNR	Norris Junctio	82.61	330	*e*P	P	11 31 01.3	+2.6
	comp=Z,9.1nm,0.8s						
YERR	Yerington	82.62	321	*e*P	P	11 31 00.6	+1.7
	comp=Z,40nm,1.4s						
YMR	Madison River	82.70	330	*e*P	P	11 31 01.0	+1.7
YHH	Holmes Hill	82.74	330	*e*P	P	11 31 00.9	+1.4
	comp=Z,47nm,0.9s						
YHB	Horse Butte	82.87	330	*e*P	P	11 31 01.5	+1.4
	comp=Z,29nm,1.0s						
PNTR	Pine Nut	82.89	321	*e*P	P	11 31 02.1	+1.8
	comp=Z,31nm,0.8s						
GCMT	Greycliff	83.02	331	*e*P	P	11 31 01.3	+0.6
QLMT	Earthquake Lak	83.03	330	*e*P	P	11 31 02.5	+1.5
DGMT	Dagmar	83.04	336	*e*P	P	11 31 01.6	+0.9
	comp=Z,61nm,0.8s						
DGMT	Dagmar	83.04	336	P	P	11 31 01.5	+0.9
	baz=147,SNR=21						
VCNR	Virginia City	83.06	321	*e*P	P	11 31 02.9	+1.7
	comp=Z,23nm,1.3s						
PAHR	Pah Rah Range	83.21	322	*e*P	P	11 31 03.0	+1.2
	comp=Z,25nm,1.0s						
HLID	Hailey	83.45	327	*e*P	P	11 31 04.5	+1.4
	comp=Z,33nm,0.8s						
HLID	Hailey	83.45	327	P	P	11 31 04.4	+1.4
	baz=139,SNR=55						
AFDM	Forest Hills D	83.56	320	*e*P	P	11 31 04.4	+0.8
	comp=Z,10nm,1.0s						
MCMT	McKenzie Canyo	83.67	329	*e*P	P	11 31 05.3	+1.1
BOZ	Bozeman (W)	83.72	330	*e*P	P	11 31 04.9	+0.6
	comp=Z,8.5nm,0.8s						
BOZ	Bozeman (W)	83.72	330	*e*P	P	11 31 04.9	+0.6
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BOZ	Bozeman (W)	83.72	330	P	P	11 31 04.9	+0.6
	baz=141,SNR=12						
BEKR	Beckworth	83.86	321	*e*P	P	11 31 06.5	+1.3
	comp=Z,17nm,0.9s						
DLMT	Dillon	83.97	329	*e*P	P	11 31 06.7	+1.1
	comp=Z,22nm,0.9s						
ORV	Oroville	84.28	321	*e*P	P	11 31 08.1	+1.0
	comp=Z,24nm,1.1s						
ORV	Oroville	84.28	321	*e*P	P	11 31 08.1	+1.0
ORV				pmax	pmax		
	comp=Z,24nm,1.1s						
PTEO	Sao Teotonio	84.65	43	*e*P	P	11 31 16.1	+7.1
HRY	Holter Researc	84.67	331	*e*P	P	11 31 10.1	+1.1
WVOR	Wild Horse Val	84.74	324	*e*P	P	11 31 10.4	+0.9
	comp=Z,11nm,1.3s						
WVOR	Wild Horse Val	84.74	324	*e*P	P	11 31 10.4	+0.9
WVOR				pmax	pmax		
	comp=Z,11nm,1.3s						
EGMT	Eagleton	84.82	333	*e*P	P	11 31 09.9	+0.1
	comp=Z,18nm,0.9s						
EGMT	Eagleton	84.82	333	P	P	11 31 09.9	+0.1
	baz=142,SNR=9.0						
PBDV	Barranco-do-Ve	84.93	43	*e*P	P	11 31 12.4	+2.0
	comp=Z,55nm,1.4s						
O03E	Paynes Creek	84.95	321	P	P	11 31 10.4	-0.2
	baz=133,SNR=6.8						
PNCL	Nicolau / Gran	85.13	42	*e*P	P	11 31 12.8	+1.4
MESJ	Messejana	85.14	43	*e*P	P	11 31 11.3	-0.1
MESJ				AMb	AMB	11 31 14.2	
	comp=Z,30nm,1.1s						
MESJ	Messejana	85.14	43	*e*P	P	11 31 12.8	+1.4
	comp=Z,31nm,1.7s						
MESJ	Messejana	85.14	43	*e*P	P	11 31 11.3	-0.1
MESJ				pmax	pmax		
	comp=Z,30nm,1.1s						
PVAQ	Vaqueiros	85.16	43	*e*P	P	11 31 13.0	+1.4
MOD	Modoc Plateau	85.24	323	*e*P	P	11 31 12.9	+0.9
	comp=Z,15nm,0.9s						
J08A	Circle Bar Ran	85.31	325	*e*P	P	11 31 13.4	+1.0
	comp=Z,53nm,0.9s						
O02D	Mt. Diablo Mer	85.43	320	P	P	11 31 13.5	+0.6
	baz=132						
PBEJ	Beja	85.47	43	*e*P	P	11 31 15.5	+2.4
	comp=Z,25nm,1.7s						
WDC	Whiskeytown Da	85.56	321	*e*P	P	11 31 13.0	-0.5
	comp=Z,12nm,0.9s						
WDC	Whiskeytown Da	85.56	321	*e*P	P	11 31 13.0	-0.5
WDC				pmax	pmax		
	comp=Z,12nm,0.9s						
MSO	Missoula	85.69	330	*e*P	P	11 31 15.2	+1.1
	comp=Z,13nm,1.1s						
MSO	Missoula	85.69	330	P	P	11 31 15.1	+0.9
	baz=139,SNR=8.5						
EVO	Evora	85.72	42	*e*P	P	11 31 17.4	+3.1
	comp=Z,25nm,1.2s						
BMO	Blue Mountains	85.80	326	*e*P	P	11 31 15.3	+0.6
	comp=Z,11nm,0.8s						
BMO	Blue Mountains	85.80	326	*e*P	P	11 31 15.3	+0.6
BMO				pmax	pmax		
	comp=Z,11nm,0.8s						
TAM	Tamanrasset	85.84	62	*e*P	P	11 31 16.6	+1.2
TAM	Tamanrasset	85.84	62	P	P	11 31 16.6	+1.2
N02D	Trinity Center	85.92	321	P	P	11 31 15.2	-0.1
	baz=132						
PMTG	Montargil	85.94	42	*e*P	P	11 31 16.6	+1.2
	comp=Z,41nm,1.2s						
M04C	Macdoel	85.99	322	P	P	11 31 16.4	+0.6
	baz=133,SNR=9.4						
PESTR	Estremoz	86.19	42	*e*P	P	11 31 17.7	+1.1
	comp=Z,34nm,1.3s						
PESTR	Estremoz	86.19	42	*e*P	P	11 31 18.0	+1.4
PTOM	Tomar	86.19	41	*e*P	P	11 31 18.0	+1.4
	comp=Z,57nm,1.2s						
M02C	Callahan	86.28	321	P	P	11 31 17.4	+0.3
	baz=132						
I07A	Izee	86.35	325	*e*P	P	11 31 18.4	+1.0
	comp=Z,18nm,1.0s						
YBH	Yreka Blue Hor	86.43	321	*e*P	P	11 31 17.9	+0.1
	comp=Z,10nm,0.8s						
YBH	Yreka Blue Hor	86.43	321	*e*P	P	11 31 17.9	+0.1
YBH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YBH	Yreka Blue Hor	86.43	321	P	P	11 31 17.6	-0.3
	comp=Z,11nm,0.8s,baz=113,slow=2.8,SNR=27						
K04D	Chiloquin, OR	86.52	323	P	P	11 31 19.2	+0.9
	baz=133						
L04D	Klamath Falls	86.54	322	P	P	11 31 18.6	+0.2
	baz=133						
F10A	Beach Ranch, E	86.58	327	*e*P	P	11 31 18.8	+0.3
	comp=Z,18nm,0.7s						
PMRV	Marv??o	86.67	42	*e*P	P	11 31 19.5	+0.6
	comp=Z,21nm,1.5s						
J05D	Fort Rock, OR	86.69	323	P	P	11 31 20.2	+1.0
	baz=134,SNR=14						
PCBR	Castelo Branco	86.88	41	*e*P	P	11 31 21.4	+1.5
	comp=Z,27nm,1.5s						
PINE	Pine Mountain	86.89	324	*e*P	P	11 31 21.6	+1.4
	comp=Z,47nm,0.8s						
G08A	Pilot Rock	86.93	326	*e*P	P	11 31 20.7	+0.4
	comp=Z,6.9nm,0.6s						
LSZ	Lusaka	87.12	106	*e*P	P	11 31 24.0	+2.1
LSZ	Lusaka	87.12	106	P	P	11 31 24.0	+2.1
J04D	Umpqua Nationa	87.13	323	P	P	11 31 22.0	+0.7
	baz=133,SNR=6.4						
MTE	Manteigas	87.20	41	*e*P	P	11 31 23.7	+2.1
L02E	Cave Junction	87.21	321	P	P	11 31 22.5	+1.0
	baz=132						
E09A	Wood Farm, Sta	87.41	327	*e*P	P	11 31 22.6	+0.3
I05D	Terrebonne, OR	87.48	324	P	P	11 31 23.8	+1.1
	baz=134,SNR=8.5						
K02D	Willamette Mer	87.60	322	P	P	11 31 24.8	+1.3
	baz=132,SNR=6.6						
FFC	Flin Flon	87.63	340	*e*P	P	11 31 23.1	0.0
FFC	Flin Flon	87.63	340*c*	*e*P	P	11 31 23.5	+0.4
I04A	Tendick Farm,	87.67	323	P	P	11 31 23.8	+0.1
	baz=133						
POLO	Lamas de Olo	87.69	40	*e*P	P	11 31 25.8	+1.9
E08A	Dider Farm, El	87.84	327	*e*P	P	11 31 24.9	+0.6
F07A	Phinny Hill Vi	87.84	326	*e*P	P	11 31 25.9	+1.6
HAWA	Hanford	88.00	326	*e*P	P	11 31 26.2	+1.1
MVO	Moncorvo	88.00	41	*e*P	P	11 31 26.0	+0.7
	comp=Z,25nm,1.4s						
J01E	Myrtle Point	88.06	322	P	P	11 31 26.7	+1.3
	baz=132						
G05D	Wamic, OR	88.09	325	P	P	11 31 26.8	+1.2
	baz=134						
I03D	Drain, OR	88.10	323	P	P	11 31 26.5	+0.8
	baz=132						
H04A	Detroit Lake	88.15	324	*e*P	P	11 31 26.6	+0.7
D08A	Wollman Farm,	88.17	327	*e*P	P	11 31 26.6	+0.6
NEW	Newport	88.20	329	*e*P	P	11 31 26.1	0.0
NEW	Newport	88.20	329	*e*P	P	11 31 26.1	0.0
NEW	Newport	88.20	329	P	P	11 31 25.5	-0.5
	baz=137,SNR=5.8						
NEW	Newport	88.20	329	P	P	11 31 25.6	-0.5
	comp=Z,3.7nm,0.9s,baz=129,slow=6.0,SNR=7.4						
E07A	Sunnyside	88.27	326	*e*P	P	11 31 27.5	+1.1
H04D	Lebanon	88.33	324	P	P	11 31 26.9	+0.2
	baz=133						
C09A	Chrisman Ranch	88.40	328	*e*P	P	11 31 27.6	+0.6
F05D	White Salmon	88.60	325	P	P	11 31 28.7	+0.8
	baz=134						
I02D	Swisshome	88.64	323	P	P	11 31 29.2	+1.0
	baz=132						
ESDC	Sonseca Array	88.87	43	P	P	11 31 28.9	-0.6
	comp=Z,2.6nm,0.8s,baz=247,slow=4.3,SNR=9.4						
ES19	SONSECA Array	88.93	43	*e*P	P	11 31 30.4	+0.6
LTY	Liberty	89.16	327	*e*P	P	11 31 30.9	+0.3
FCC	Fort Churchill	89.20	346	*e*P	P	11 31 30.8	+0.4
FCC	Fort Churchill	89.20	346	*e*P	P	11 31 30.8	+0.4
B08A	Colville Reser	89.29	328	*e*P	P	11 31 31.5	+0.3
LON	Longmire	89.37	326	*e*P	P	11 31 31.9	+0.3
LON	Longmire	89.37	326	*e*P	P	11 31 31.9	+0.3
E04D	Cinebar	89.62	325	P	P	11 31 33.7	+1.0
	baz=133						
D05A	Enumclaw	89.76	326	*e*P	P	11 31 34.1	+0.7
D04E	Lakebay	90.15	325	P	P	11 31 35.8	+0.7
	baz=133						
B06A	Marblemount	90.43	327	*e*P	P	11 31 36.6	+0.2
D03D	Eldon	90.55	326	P	P	11 31 37.4	+0.4
	baz=132						
B05A	Bryant	90.55	327	P	P	11 31 36.8	-0.1
	baz=133						
A04D	Lummi Island	91.16	327	P	P	11 31 40.2	+0.4
	baz=133						
LTZ	Lake Taylor	91.35	219	*e*P	P	11 31 43.6	+2.4
RPZ	Rata Peaks	91.41	218	*e*P	P	11 31 43.5	+2.2
RPZ	Rata Peaks	91.41	218	P	P	11 31 42.8	+1.5
	comp=Z,15nm,1.0s,baz=111,slow=6.0,SNR=6.2						
PGC	Sidney	91.48	326	*e*P	P	11 31 42.2	+1.0
THZ	Tophouse	91.66	220	*e*P	P	11 31 44.9	+2.2
LLLB	Lillooet	92.06	328	*e*P	P	11 31 44.2	+0.3
YKA	Yellowknife Ar	97.78	340	P	P	11 32 09.6	-0.1
	comp=Z,3.6nm,0.7s,baz=133,slow=4.4,SNR=76						
YKA				pP	pP	11 32 55.2	+1.9
	comp=Z,0.4nm,0.7s,baz=130,slow=4.3,SNR=1.3						
YKA				PP	PP	11 36 13.6	+3.0
	comp=Z,0.3nm,0.7s,baz=136,slow=8.0,SNR=4.5						
YKA				PKiKP	PKiKP	11 36 42.6	0.0
	comp=Z,0.3nm,0.6s,baz=142,slow=2.1,SNR=3.7						
YKA				PKKPbc	PKKPbc	11 48 43.3	-3.2
	comp=Z,0.3nm,0.6s,baz=330,slow=3.1,SNR=5.9						
DAVOX	Davos/Dischmat	101.20	43	P	Pdif	11 32 26.3	+0.6
	comp=Z,1.5nm,0.6s,baz=300,slow=6.2,SNR=3.1						
KMBO	Kilima Mbogo	101.70	98	P	Pdif	11 32 29.6	+0.8
	comp=Z,1.4nm,0.3s,baz=205,slow=15,SNR=4.8						
GERES	GERESS Array B	104.44	42	PKiKP	PKiKP	11 36 55.6	+0.4
	comp=Z,0.3nm,0.3s,baz=224,slow=3.7,SNR=3.7						
INK	Inuvik	107.53	339	PKiKP	PKiKP	11 36 59.2	-0.9
	comp=Z,0.8nm,1.0s,baz=90,slow=2.0,SNR=2.2						
INK				PKKPbc	PKKPbc	11 48 15.9	-1.8
	comp=Z,2.1nm,0.8s,baz=340,slow=4.5,SNR=7.9						
INK				PKKP	PKKPdf	11 48 30.8	-0.2
	comp=Z,1.1nm,0.8s,baz=284,slow=6.3,SNR=4.1						
ILAR	Eielson Array	110.78	333	PKiKP	PKiKP	11 37 06.2	-0.2
	comp=Z,1.0nm,0.9s,baz=90,slow=0.4,SNR=6.2						
AKASG	Malin Array Be	114.51	44	PKP	PKPdf	11 37 13.2	-0.8
	comp=Z,2.4nm,0.7s,baz=263,slow=2.6,SNR=12						
BRTR	Keskin Array B	114.61	57	PKP	PKPdf	11 37 13.7	-1.0
	comp=Z,2.2nm,0.8s,baz=197,slow=1.5,SNR=7.0						
BRTR				PKKPab	PKKPab	11 47 57.8	-0.6
	comp=Z,1.2nm,0.8s,baz=123,slow=4.6,SNR=4.8						
STKA	Stephens Creek	114.89	206	PKKPbc	PKKPbc	11 47 51.1	-1.6
	comp=Z,1.9nm,0.9s,baz=332,slow=15,SNR=2.3						
FINES	FINESS Array B	115.24	32	PKP	PKiKP	11 37 14.7	-0.3
	comp=Z,1.0nm,0.6s,baz=285,slow=2.7,SNR=5.4						
SPITS	Spitsbergen Ar	115.55	13	PKKPab	PKKPab	11 47 52.4	-0.1
	comp=Z,17nm,1.2s,baz=88,slow=6.3,SNR=5.8						
ARCES	ARCESS Array B	116.45	23	PKP	PKPdf	11 37 17.0	-0.2
	comp=Z,1.9nm,0.7s,baz=250,slow=4.0,SNR=9.5						
ARCES				PKKPab	PKKPab	11 47 48.5	-0.3
	comp=Z,3.3nm,0.8s,baz=31,slow=2.8,SNR=5.7						
OBN	Obninsk	119.69	40⇑	*i*PKIKP	PKPdf	11 37 23.7	0.0
OBN				*e*		11 38 02.9	
OBN				*e*SSS	SSS	11 59 33.2	
OBN				pmax	pmax		
	comp=Z,13nm,0.4s						
VSR	Storozhevoye	120.78	45	*e*PKIKP	PKPdf	11 37 25.0	-1.0
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LPSR	Galich'ya Gora	120.79	43	*e*PKIKP	PKPdf	11 37 25.8	-0.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	Klimovskoe	121.64	34	*e*PKIKP	PKPdf	11 37 26.6	-0.7
KLMR				pmax	pmax		
	comp=Z,16nm,0.6s						
KLMR	Klimovskoe	121.64	34	*e*PKPdf	PKPdf	11 37 26.7	-0.6
KLMR				AMP		11 37 28.3	
	comp=Z,16nm,0.6s						
KIV	Kislovodsk	122.13	54	*e*PKIKP	PKiKP	11 37 29.5	+0.3
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KBZ	Khabaz	122.25	54	PKP	PKPdf	11 37 28.4	-0.6
	comp=Z,6.1nm,0.9s,baz=199,slow=5.9,SNR=8.9						
KBZ				PKKPbc	PKKPbc	11 47 25.5	-0.5
	comp=Z,1.4nm,0.8s,baz=119,slow=19,SNR=2.6						
CTA	Charters Tower	122.78	217	PKP	PKPdf	11 37 30.9	0.0
	comp=Z,3.0nm,0.8s,baz=208,slow=4.1,SNR=5.0						
CTAO	Charters Tower	122.78	217	*e*PKPdf	PKPdf	11 37 30.7	-0.2
CTAO	Charters Tower	122.78	217	*e*PKIKP	PKPdf	11 37 30.7	-0.2
ZEI	Tsey	122.83	55	*i* PKIKP	PKPdf	11 37 30.1	-0.4
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PRGR	Permogore	124.56	32	*e*PKIKP	PKPdf	11 37 32.0	-0.9
PRGR				pmax	pmax		
	comp=Z,42nm,1.0s						
ASAR	Alice Springs	125.17	203	PKP	PKPdf	11 37 35.0	-0.5
	comp=Z,13nm,0.8s,baz=135,slow=1.8,SNR=122						
ASAR				pPKP	pPKPdf	11 38 20.5	+0.1
	comp=Z,4.9nm,0.8s,baz=145,slow=2.1,SNR=6.9						
ASAR				PKKPab	PKKPbc	11 47 14.9	+0.1
	comp=Z,0.4nm,0.5s,baz=331,slow=3.3,SNR=9.6						
ASAR				PKKP	PKKPdf	11 47 55.0	-0.3
	comp=Z,0.2nm,0.3s,baz=353,slow=1.6,SNR=6.3						
KIRV	Kirov	126.75	36	PKP	PKiKP	11 37 37.8	+0.1
	comp=Z,14nm,0.6s,baz=184,slow=6.5,SNR=4.8						
WRA	Warramunga Arr	128.42	205	PKP	PKPdf	11 37 41.5	-0.3
	comp=Z,11nm,0.5s,baz=153,slow=2.0,SNR=135						
WRA				pPKP	pPKPdf	11 38 27.8	+1.1
	comp=Z,5.8nm,0.8s,baz=157,slow=1.6,SNR=7.5						
WRA				SKP		11 41 00.3	
	comp=Z,0.5nm,0.8s,baz=158,slow=3.6,SNR=3.6						
WRAB	Tennant Creek	128.42	205	*e*PKPdf	PKPdf	11 37 40.8	-0.9
WRAB	Tennant Creek	128.42	205*c*	*i*PKIKP	PKPdf	11 37 41.8	+0.1
WRAB				pmax	pmax		
	comp=Z,33nm,1.7s						
BILL	Bilibino	129.11	337	*e*PKPdf	PKiKP	11 37 42.4	+0.2
BILL	Bilibino	129.11	337*c*	*i*PKIKP	PKiKP	11 37 42.5	+0.3
BILL				pmax	pmax		
	comp=Z,14nm,1.7s						
MBWA	Marble Bar	130.97	188	*e*PKPdf	PKPdf	11 37 46.4	-0.1
ARU	Arti	131.98	38	*e*PKPdf	PKPdf	11 37 47.7	+0.5
ARU	Arti	131.98	38	*i* PKIKP	PKPdf	11 37 46.8	-0.4
ARU						11 40 08.4	
ARU				SS	SS	11 57 31.7	-1.8
AKTO	Aktyubinsk	132.70	46	PKP	PKiKP	11 37 49.5	-0.4
	comp=Z,3.3nm,0.6s,baz=251,slow=0.9,SNR=9.0						
AKTO				SKPab	SKPbc	11 41 00.7	+0.5
	comp=Z,1.6nm,0.8s,baz=264,slow=2.3,SNR=3.7						
FITZ	Fitzroy Crossi	132.88	196	SKPbc	SKPbc	11 41 00.7	-1.2
	comp=Z,1.9nm,0.9s,baz=219,slow=6.5,SNR=2.6						
GEYT	Alibeck	133.06	63	PKP	PKPdf	11 37 49.0	-1.0
	comp=Z,2.5nm,0.6s,baz=226,slow=3.8,SNR=3.0						
GEYT				pPKP	pPKPdf	11 38 37.1	+2.3
	comp=Z,1.3nm,0.4s,baz=307,slow=0.7,SNR=1.8						
SEY	Seymchan	136.67	335⇓	*e*PKIKP	PKPdf	11 37 55.8	0.0
SEY	Seymchan	136.67	335	PKhKP	PKPpre	11 37 42.3	
	comp=Z,1.1nm,0.7s,baz=351,slow=23,SNR=3.3						
SEY				PKP	PKiKP	11 37 57.0	-0.5
	comp=Z,15nm,0.9s,baz=131,slow=2.9,SNR=31						
SEY				SKP		11 41 13.1	
	comp=Z,1.7nm,0.6s,baz=116,slow=5.3,SNR=5.5						
MNCY	Minicoy	137.25	109	*e*P	PKPdf	11 37 57.8	-0.6
PETK	Petropavlovsk-	138.79	320	PKhKP	PKPpre	11 37 50.6	
	comp=Z,1.8nm,0.8s,baz=99,slow=3.4,SNR=2.5						
PETK				PKP	PKPdf	11 37 60.0	-0.1
	comp=Z,10nm,0.8s,baz=145,slow=1.8,SNR=14						
MA2	Magadan	139.25	332	*i* PKIKP	PKPdf	11 38 00.8	+0.1
MA2	Magadan	139.25	332	PKP	PKPdf	11 38 01.1	+0.5
	comp=Z,5.2nm,0.8s,baz=103,slow=3.7,SNR=6.5						
BRVK	Borovoye	139.46	39	*e*PKPdf	PKiKP	11 38 02.6	-1.0
BRVK	Borovoye	139.46	39	*e*PKIKP	PKPdf	11 37 57.7	-3.5
BVAR	Borovoye Array	139.53	39	PKhKP	PKPpre	11 37 53.9	
	comp=Z,0.4nm,0.4s,baz=354,slow=3.0,SNR=4.1						
BVAR				PKP	PKPdf	11 38 02.5	+1.1
	comp=Z,7.0nm,0.7s,baz=300,slow=2.9,SNR=30						
BVAR				pPKP	pPKPdf	11 38 48.0	+1.6
	comp=Z,1.7nm,0.8s,baz=274,slow=2.3,SNR=1.6						
BHJ	Bhuj	140.41	86	*e*P	PKPdf	11 38 03.1	-0.7
BHJ				IAMs_20	IAMs_20	12 33 28.4	
	comp=Z,528nm,2.0s						
TRD	Trivandrum	140.63	112	*e*P	PKPdf	11 38 04.3	-0.3

TRD				IAMs_20	IAMs_20	12 23 40.6	
	comp=Z,323nm,6.6s						
GOA	**Goa**	141.39	100	eP	PKPdf	11 38 04.1	-1.7
GOA				IAMs_20	IAMs_20	12 24 05.2	
	comp=Z,231nm,5.6s						
POO	**Poona**	142.61	96	eP	PKPdf	11 38 06.8	-1.2
YAK	**Yakutsk**	144.08	347	ePKIKP	PKPab	11 38 06.9	-0.3
YAK				pmax	pmax		
	comp=Z,652nm,1.0s						
YAK				pmax	pmax		
	comp=E,79nm,0.8s						
YAK				pmax	pmax		
	comp=N,44nm,1.1s						
EKS2	**Erkin-Say**	144.72	55	P	PKPdf	11 38 11.2	+0.1
	SNR=53						
AML	**Almayashu**	144.77	55	P	PKPdf	11 38 11.8	+0.2
	SNR=50						
KURBB	**Kurchatov Arra**	145.12	40	PKP	PKPab	11 38 11.6	+0.1
	comp=N,95nm,0.8s,baz=298,slow=3.6,SNR=507						
KURBB				SKPbc	SKPbc	11 41 34.6	-0.3
	comp=N,1.0nm,0.8s,baz=301,slow=2.3,SNR=3.4						
KURK	**Kurchatov**	145.13	39	ePKPdf	PKPab	11 38 12.3	+0.7
KURK				SKPbc	SKPbc	11 41 34.6	-0.3
KURK	**Kurchatov**	145.13	39	d iPKIKP	PKPab	11 38 12.2	+0.7
KURK				pmax	pmax		
	comp=Z,120nm,1.0s						
NIL	**Nilore**	145.14	70	ePKPdf	PKPab	11 38 12.3	+0.1
NVS	**Novosibirsk**	145.21	31	⇑iPKIKP	PKPab	11 38 12.7	+1.0
NVS				e		11 38 59.0	
NVS				pmax	pmax		
	comp=N,9.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,18nm,0.7s						
NVS				pmax	pmax		
	comp=Z,98nm,0.7s						
AAK	**Ala-Archa**	145.24	54	d iPKP2	PKPab	11 38 13.5	+1.1
AAK				pmax	pmax		
	comp=Z,231nm,1.0s						
AAK	**Ala-Archa**	145.24	54	PKPbc	PKPab	11 38 13.6	+1.1
	comp=Z,161nm,0.8s,baz=194,slow=1.7,SNR=452						
FRU	**Bishkek**	145.29	54	⇓iPKP2	PKPab	11 38 13.0	+0.5
FRU				pmax	pmax		
	comp=Z,320nm,1.4s						
MDRS	**Chennai**	145.78	109	eP	PKPdf	11 38 12.9	-0.6
HYB	**Hyderabad**	146.31	100	i PKP	PKPbc	11 38 16.0	+0.1
HYB	**Hyderabad**	146.31	100	eP	PKPdf	11 38 14.1	-0.4
HYB				IAMs_20	IAMs_20	12 32 31.8	
	comp=Z,116nm,8.5s						
ZALV	**Zalesovo Beam**	146.49	31	PKPbc	PKPbc	11 38 14.9	-0.3
	comp=Z,112nm,0.7s,baz=295,slow=4.1,SNR=152						
ZALV				pPKPbc	pPKPab	11 39 01.2	+0.1
	comp=Z,15nm,0.7s,baz=293,slow=3.4,SNR=2.3						
ZALV				SKPbc	SKiKP	11 41 38.3	+0.2
	comp=Z,2.4nm,0.6s,baz=298,slow=3.1,SNR=4.7						
SIJI	**Sorong**	146.75	214	PKPbc	PKPbc	11 38 16.6	-0.7
	comp=Z,58nm,0.7s,baz=38,slow=2.7,SNR=33						
SIJI				pPKPbc	pPKPbc	11 39 01.6	-0.1
	comp=Z,21nm,0.8s,baz=200,slow=13,SNR=3.9						
KSH	**Kashi**	146.93	60	PKPbc	PKPbc	11 38 16.6	-0.6
KSH				pPKP	pPKPdf	11 38 54.3	-5.7
KSH				AMB	AMB		
	comp=Z,320nm,5.4s						
BHPL	**Bhopal**	147.28	90	eP	PKPdf	11 38 15.7	-0.3
BHPL				IAmb	IAmb	11 38 19.4	
	comp=Z,68nm,1.4s						
BHPL				IAMs_20	IAMs_20	12 26 01.7	
KUR	**Kuril'sk**	147.60	312	⇑iPKP2	PKPbc	11 38 19.2	+0.6
NKL	**Nikolayevsk**	147.61	329	ePKIKP	PKPdf	11 38 16.0	+0.5
NKL				pmax	pmax		
	comp=Z,63nm,0.9s						
DHRM	**DHARAMSHALA**	147.66	73	eP	PKPdf	11 38 16.8	+0.3
DHRM				IAMs_20	IAMs_20	12 30 13.2	
	comp=Z,705nm,1.2s						
NGP	**Nagpur**	148.11	94	eP	PKPdf	11 38 16.3	-1.0
SMLA	**Simla**	148.35	75	eP	PKPdf	11 38 16.8	-0.6
SMLA				IAMs_20	IAMs_20	12 27 15.9	
	comp=Z,251nm,2.2s						
SHO	**Shikotan**	148.76	310	i PKIKP	PKPbc	11 38 20.6	-1.1
DDI	**Dehra Dun**	149.06	77	eP	PKPdf	11 38 18.7	0.0
DDI				IAMs_20	IAMs_20	12 31 19.1	
	comp=Z,198nm,6.3s						
MKAR	**Makanchi Array**	149.09	44	PKPbc	PKPbc	11 38 22.8	+0.3
	comp=Z,48nm,0.6s,baz=305,slow=2.2,SNR=201						
MKAR				pPKPbc	pPKPbc	11 39 08.4	+1.0
	comp=Z,8.0nm,0.8s,baz=298,slow=3.1,SNR=1.9						
JBP	**Jabalpur**	149.53	91	ex	PKPbc	11 38 23.3	-1.0
BOD	**Bodaibo**	149.97	359	ePKIKP	PKPdf	11 38 18.9	-0.3
BOD				pmax	pmax		
	comp=Z,42nm,1.1s						
YSS	**Yuzh-Sakhalins**	150.09	318	ePKPbc	PKiKP	11 38 25.4	-0.3
YSS	**Yuzh-Sakhalins**	150.09	318	⇓ePKIKP	PKPbc	11 38 25.1	+0.2
YSS				e		11 38 29.7	
YSS				e		11 39 13.5	
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
ASAJ	**Asahikawa**	151.49	313	PKPbc	PKPbc	11 38 28.1	-0.1
	comp=Z,39nm,0.9s,baz=276,slow=3.0,SNR=14						
ASAJ				PKPab	PKPab	11 38 37.6	+0.3
	comp=Z,29nm,0.8s,baz=51,slow=26,SNR=4.2						
ASAJ				pPKPbc	pPKPbc	11 39 14.5	+1.3
	comp=Z,17nm,0.9s,baz=34,slow=12,SNR=2.5						
CMBY	**CAMPBELL BAY**	152.29	135	eP	PKPdf	11 38 23.0	-1.1
PYUN	**Piuthan**	153.15	82	eP	PKPdf	11 38 25.5	+0.3
	comp=Z,26nm,1.0s						
KOLN	**Koldanda**	153.65	83	eP	PKPdf	11 38 26.1	+0.2
	comp=Z,14nm,0.9s						
BWNR	**Bhubaneshwar**	153.75	100	eP	PKPdf	11 38 22.5	-3.4
BWNR				IAMs_20	IAMs_20	12 28 09.3	
	comp=Z,2µm,54.0s						
DANN	**Dangsing**	153.85	82	eP	PKPdf	11 38 27.1	+0.8
	comp=Z,55nm,0.8s						
WMQ	**Urumqi**	153.86	45	ePKPbc	PKPdf	11 38 25.8	+0.3
WMQ				LR	LR		
	comp=Z,160nm,25.3s						
WMQ				LR	LR		
	comp=Z,45nm,28.5s						
WMQ				LR	LR		
	comp=Z,91nm,28.5s						
WMQ	**Urumqi**	153.86	45	ePKPdf	PKPdf	11 38 24.9	-0.6
WMQ				ePKPbc	PKiKP	11 38 33.9	+0.2
WMQ				ePKPab	PKPab	11 38 49.5	+2.1
WMQ	**Urumqi**	153.86	45	ePKIKP	PKPdf	11 38 24.9	-0.6
KLR	**Kul'dur**	154.35	332	PKPbc	PKPbc	11 38 33.9	-0.5
	comp=Z,8.3nm,0.6s,baz=76,slow=2.0,SNR=13						
KLR				PKPab	PKPab	11 38 49.4	+0.3
	comp=Z,4.8nm,0.8s,baz=348,slow=4.2,SNR=3.5						
PBA	**Port Blair**	154.85	126	eP	PKPdf	11 38 25.1	-2.6
BOK	**Bokaro**	154.92	93	eP	PKPdf	11 38 24.6	-2.9
BOK				IAMs_20	IAMs_20	12 26 29.2	
	comp=Z,138nm,5.6s						
DMN	**Daman**	154.96	84	eP	PKPdf	11 38 28.2	+0.4
	comp=Z,33nm,1.1s						
TLY	**Talaya**	155.02	14	ePKP2	PKPab	11 38 48.6	-3.4
TLY				pmax	pmax		
	comp=Z,73nm,1.6s						
KKN	**Kakani**	155.13	83	eP	PKPdf	11 38 28.1	+0.1
	comp=Z,21nm,0.9s						
PKIN	**Phulchoki**	155.21	84	eP	PKPdf	11 38 28.0	-0.2
PKI	**Pulchoki**	155.22	84	eP	PKPdf	11 38 28.1	-0.2
	comp=Z,11nm,0.7s						
GUN	**Gumba**	155.67	83	eP	PKPdf	11 38 29.4	+0.5
JIRN	**Jiri**	155.92	84	eP	PKPdf	11 38 29.5	+0.2
	comp=Z,15nm,0.7s						
RAMN	**Ramite**	156.19	86	eP	PKPdf	11 38 30.0	+0.5
	comp=Z,24nm,0.7s						
MJAR	**Matsushiro Arr**	157.31	299	PKPab	PKPab	11 39 02.5	+0.1
	comp=Z,7.5nm,0.8s,baz=82,slow=4.3,SNR=6.7						
SONM	**Songino Array**	159.24	13	PKP	PKPdf	11 38 32.8	+0.4
	comp=Z,8.9nm,1.0s,baz=295,slow=1.3,SNR=6.3						
SONM				PKPab	PKPab	11 39 10.9	+0.5
	comp=Z,6.8nm,0.7s,baz=328,slow=4.4,SNR=6.4						
LSA	**Lhasa**	160.39	79	ePKPdf	PKPdf	11 38 36.2	+1.5
LSA	**Lhasa**	160.39	79	ePKIKP	PKPdf	11 38 36.3	+1.5
SHL	**Shillong**	160.64	92	eP	PKPdf	11 38 33.7	-1.1
SHL				IAmb	IAmb	11 38 36.2	
	comp=Z,9.1nm,0.5s						
SHL				IAMs_20	IAMs_20	12 29 45.9	
	comp=Z,84nm,8.3s						
UTHA	**Uthaitani**	162.24	130	P	PKPdf	11 38 37.7	+1.3
	comp=Z,4.2nm,0.9s,comp=Z,152nmcomp=Z,0.0nm						
CMAR	**Chiang Mai Arr**	163.79	122	PKP	PKPdf	11 38 38.7	+0.8
	comp=Z,3.2nm,0.9s,baz=252,slow=2.2,SNR=23						
CMAR				PKPab	PKPab	11 39 30.2	-0.9
	comp=Z,2.9nm,0.9s,baz=254,slow=3.6,SNR=7.7						
CMAR				pPKPab	pPKPab	11 40 14.2	-0.3
	comp=Z,1.0nm,0.8s,baz=232,slow=4.4,SNR=2.1						
CMAR				PP	PP	11 43 19.1	+2.2
	comp=Z,0.6nm,0.6s,baz=254,slow=5.0,SNR=4.1						
GTA	**Gaotai**	163.81	41	⇓PKP	PKPdf	11 38 38.0	+0.6
GTA				pPKP	pPKPdf	11 39 13.0	-10
GTA				sPKP		11 39 25.1	
GTA				PKPab	PKPab	11 39 31.8	+1.0
GTA				PP	PP	11 43 19.9	+3.3
GTA				SS	SS	12 03 37.6	+6.7
GTA				AMB	AMB		
	comp=Z,51nm,6.8s						
GTA				LR	LR		
	comp=Z,120nm,19.7s						
GTA				LR	LR		
	comp=Z,160nm,20.0s						
GTA				LR	LR		
	comp=Z,98nm,17.8s						
CHTO	**Chiang Mai**	164.00	121	P	PKPdf	11 38 39.3	+1.2
	comp=Z,32nm,0.9s,comp=Z,0.2nm						
CHTO	**Chiang Mai**	164.00	121	eP	PKPdf	11 38 40.0	+1.9
CMMT	**Chiang Mai**	164.01	121	P	PKPdf	11 38 39.3	+1.2
	comp=Z,7.0nm,0.9s,comp=Z,0.0nm						
KSRS	**Korea Array**	164.44	312	PKP	PKPdf	11 38 38.5	+0.6
	comp=Z,4.3nm,0.9s,baz=98,slow=1.2,SNR=11						
KSRS				PKPab	PKPab	11 39 34.1	+0.7
	comp=Z,6.7nm,0.9s,baz=63,slow=4.6,SNR=10						
KSAR	**Wonju Array Be**	164.47	312	PKP	PKPdf	11 38 38.5	+0.6
KSAR				PKPab	PKPab	11 39 34.1	+0.5
KSAR	**Wonju Array Be**	164.47	312	PKIKP	PKPdf	11 38 38.5	+0.6
KSAR						11 39 34.1	
HHC	**Hu-ho-hao-te**	166.87	6	ePKP	PKPdf	11 38 40.6	+0.7
LZH	**Lanzhou**	168.40	42	ePKP	PKPdf	11 38 36.1	-5.1
LZH				LR	LR		
	comp=Z,230nm,18.0s						
LZH				LR	LR		
	comp=Z,290nm,18.1s						
LZH				LR	LR		
	comp=Z,300nm,20.3s						
CD2	**Chengdu**	171.02	67	PKP	PKPdf	11 38 42.0	-0.8
TIA	**Tai'an**	171.02	340	PKP	PKPdf	11 38 43.3	+0.8
XAN	**Xi'an**	172.66	31	PKP	PKPdf	11 38 44.3	+0.9
XAN				pPKP	pPKPdf	11 39 12.6	-16
NJ2	**Nanjing**	173.64	313	ePKP	PKPdf	11 38 44.6	+0.8
GYA	**Guiyang**	173.84	101	PKP	PKPdf	11 38 43.0	-1.2
GYA				pPKP	pPKPdf	11 39 18.6	-11
GYA				sPKP		11 39 32.5	
GYA				PKPab	PKPab	11 40 15.8	+0.1
GYA				PKS	PKSdf	11 42 14.4	-2.3
GYA				PP	PP	11 44 08.9	+0.5
GYA				AMB	AMB		
	comp=Z,130nm,8.4s						

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*ISCJB **20** 11:25:53.1±0.9, 64°.84N±0°.06×30°.1E±0°.2, h0^{km}, Error ellipse: s-maj=15.4km s-min=5.2km az=27.6*

*IDC **20** 11:25:53.2±2.1, 64°.66N×31°.38E, h0^{km}, mb1 3.2/3, mb1mx2.9/52, mbtmp3.3/3, ML2.5/4, Error ellipse: s-maj=28.1km s-min=9.2km az=102.0*

*KOLA **20** 11:25:54.5, 64°.68N×30°.79E, h0^{km}*

ISC 20 11:25:54.6±1.2**, 64°.82N**±0°.07×**30°.2E**±0°.1**, h0**^{km}**, n6, σ1^{s}.04**/12**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	**Apatity Array**	3.01	21	P	Pn	11 26 43.5	+0.1
APA0				S	Sn	11 27 20.4	+0.3
APA	**Apatity**	3.04	24	P	Pn	11 26 44.0	+0.1
APA				S	Sn	11 27 20.8	-0.1
FINES	**FINESS Array B**	3.88	211	Pn	Pn	11 26 54.3	-1.1
	0.3nm,0.3s,baz=34,slow=14,SNR=11						
FINES				Pg	Pb	11 27 04.2	+0.3
	0.9nm,0.3s,baz=36,slow=15,SNR=16						
FINES				Sn	Sn	11 27 42.9	+1.2
	0.6nm,0.3s,baz=39,slow=25,SNR=3.3						
FINES				Lg	Lg	11 27 53.5	
	2.1nm,0.3s,baz=41,slow=27,SNR=10						
ARCES	**ARCESS Array B**	5.08	341	Pn	Pn	11 27 12.6	+0.7
	0.5nm,0.3s,baz=155,slow=15,SNR=27						
ARCES				Sn	Sn	11 28 12.3	+1.2
	0.8nm,0.3s,baz=157,slow=24,SNR=10.0						
ARCES				Lg	Lg	11 28 29.9	
	0.5nm,0.3s,baz=151,slow=28,SNR=4.2						
HFS	**Hagfors**	8.97	246	Pn	Pn	11 28 05.5	+0.3
	0.4nm,0.3s,baz=58,slow=14,SNR=8.1						
HFS				Sn	Sn	11 29 44.8	-2.1
	0.2nm,0.3s,baz=61,slow=24,SNR=3.5						
NOA	**NORSAR Array B**	9.45	255	Pn	Pn	11 28 12.3	+0.5
	0.0nm,0.3s,baz=64,slow=14,SNR=3.1						

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*IDC **20** 11:26:00.7±1.2, 21°.55S×68°.19W, h109^{km}±13^{km}, mb3.5/6, mb1 3.8/7, mb1mx3.6/34, mbtmp3.9/7, Error ellipse: s-maj=22.1km s-min=19.8km az=145.0*

*SJA **20** 11:26:00.6±0.8, 21°.67S×68°.43W, h133^{km}±7^{km}, MD2.9*

*ISCJB **20** 11:26:01.6±0.6, 21°.65S±0°.03×68°.51W±0°.09, h133^{km}±5^{km}, Error ellipse: s-maj=14.0km s-min=5.7km az=179.7*

*GUC **20** 11:26:01.5±0.5, 21°.64S×68°.54W, h134^{km}±3^{km}, ML3.7*

ISC 20 11:26:01.7±0.8**, 21°.63S**±0°.04×**68°.39W**±0°.08**, h125**^{km}±7^{km}**, n33, σ1^{s}.11**/52**, 9C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.81	258	eP	Pn	11 26 22.7	0.0
PB09				eS	Sn	11 26 39.0	+0.5
PB09	**IPOC Station P**	0.81	258	⇑iP	Pn	11 26 22.7	0.0
PB09				i S	Sn	11 26 38.5	0.0
PB09				IAML		11 26 39.8	
	comp=N,998nm,0.5s						
LVC	**Limon Verde**	1.09	206	eP	Pn	11 26 25.6	+0.1
LVC				eS	Sn	11 26 43.0	-0.5
LVC	**Limon Verde**	1.09	206	P	Pn	11 26 25.1	-0.4
	comp=N,166nm,0.3s,baz=38,slow=9.1,SNR=320						
LVC				S	Sn	11 26 43.0	-0.5
	comp=N,139nm,0.3s,baz=238,slow=22,SNR=36						
PB01	**IPOC Station P**	1.18	299	⇑iP	Pn	11 26 25.8	-0.3
PB01				i S	Sn	11 26 43.8	-0.7
PB01				IAML		11 26 46.0	
	comp=E,2µm,0.3s						
PB03	**IPOC Station P**	1.33	251	⇑iP	Pn	11 26 27.3	-0.5
PB03				i S	Sn	11 26 46.6	-1.0
PB03				IAML		11 26 50.2	
	comp=E,1µm,0.2s						
PB07	**IPOC Station P**	1.40	266	⇑iP	Pn	11 26 28.0	-0.5
PB07				i S	Sn	11 26 48.0	-0.9
PB07				IAML		11 26 49.5	
	comp=E,1µm,0.2s						
PB02	**IPOC Station P**	1.44	282	eP	Pn	11 26 28.7	-0.2
PB02				eS	Sn	11 26 49.8	+0.2
PB02	**IPOC Station P**	1.44	282	⇑iP	Pn	11 26 28.4	-0.5
PB02				i S	Sn	11 26 48.4	-1.1
PB02				IAML		11 26 54.8	
	comp=E,2µm,0.3s						
PB06	**IPOC Station P**	1.53	225	eP	Pn	11 26 29.7	-0.3
PB06				eS	Sn	11 26 51.4	-0.2
PB06	**IPOC Station P**	1.53	225	⇑iP	Pn	11 26 29.7	-0.3
PB06				i S	Sn	11 26 50.1	-1.5
PB06				IAML		11 26 52.7	
	comp=E,1µm,0.1s						
PB08	**IPOC Station P**	1.64	334	eP	Pn	11 26 32.6	+1.0
PB08				eS	Sn	11 26 55.2	+1.1
PB08	**IPOC Station P**	1.64	334	eP	Pn	11 26 32.4	+0.8
PB08				i S	Sn	11 26 55.3	+1.1
PB08				IAML		11 26 57.6	
	comp=N,526nm,0.5s						
PB04	**IPOC Station P**	1.78	246	eP	Pn	11 26 32.2	-0.7
PB04	**IPOC Station P**	1.78	246	⇑iP	Pn	11 26 32.2	-0.7
PB04				i S	Sn	11 26 55.5	-1.2
PB04				IAML		11 27 01.8	
	comp=N,786nm,0.3s						
PB15	**IPOC Station P**	1.86	212	eP	Pn	11 26 33.6	-0.4
PB15	**IPOC Station P**	1.86	212	⇓iP	Pn	11 26 33.5	-0.4
PB15				i S	Sn	11 26 58.5	-0.2
PB05	**IPOC Station P**	2.08	234	⇑iP	Pn	11 26 35.6	-0.9
PB05				i S	Sn	11 27 01.1	-2.0
PB05				IAML		11 27 10.3	
	comp=E,423nm,0.3s						
PB11	**IPOC Station P**	2.20	327	eP	Pn	11 26 38.0	-0.1
PB11	**IPOC Station P**	2.20	327	eP	Pn	11 26 37.9	-0.3
PB11				i S	Sn	11 27 05.6	-0.5
PB11				IAML		11 27 09.1	
	comp=E,1µm,0.3s						
PSGC	**Pisagua**	2.59	321	⇑iP	Pn	11 26 41.9	-1.1
PSGC				i S	Sn	11 27 13.6	-1.2
PSGC				IAML		11 27 20.2	
	comp=E,510nm,0.6s						
LPAZ	**La Paz**	5.32	3	P	Pn	11 27 21.0	+1.4
	comp=E,0.2nm,0.3s,baz=180,slow=19,SNR=5.4						
LPAZ				S	Sn	11 28 16.3	-3.9
	comp=E,0.2nm,0.3s,baz=32,slow=18,SNR=2.7						
SIV	**San Ignacio**	8.91	52	P	Pn	11 28 04.3	-3.3
	comp=E,4.7nm,0.3s,baz=248,slow=11,SNR=22						
TXAR	**Lajitas Array**	61.01	325	P	P	11 36 02.1	-0.1
	comp=E,0.2nm,0.7s,baz=144,slow=6.3,SNR=2.5						
DBIC	**Dimbokro**	68.31	73	P	P	11 36 48.9	-1.0
	comp=E,3.2nm,0.7s,baz=225,slow=8.9,SNR=4.5						
PDAR	**Pinedale Array**	74.46	330	P	P	11 37 27.5	+0.9
	comp=E,0.1nm,0.5s,baz=122,slow=4.4,SNR=2.3						
NVAR	**Mina Array Bea**	75.89	322	P	P	11 37 37.0	+2.2
	comp=E,0.4nm,0.4s,baz=165,slow=3.7,SNR=1.9						
TORD	**Torodi Ar. Bea**	76.94	70	P	P	11 37 40.7	-0.2
	comp=E,0.9nm,0.6s,baz=250,slow=5.6,SNR=11						
MAW	**Mawson**	84.07	163	P	P	11 38 19.0	+0.9
	comp=E,28nm,1.1s,baz=204,slow=10.0,SNR=6.6						
YKA	**Yellowknife Ar**	91.47	340	P	P	11 38 54.3	+0.9
	comp=E,1.0nm,0.7s,baz=134,slow=4.5,SNR=14						
ASAR	**Alice Springs**	130.02	207	PKP	PKiKP	11 44 58.1	-0.2
	comp=E,0.5nm,0.9s,baz=128,slow=1.9,SNR=3.4						
WRA	**Warramunga Arr**	133.09	210	PKP	PKiKP	11 45 04.7	+0.1
	comp=E,0.3nm,0.9s,baz=123,slow=3.1,SNR=4.0						
MKAR	**Makanchi Array**	145.45	36	PKPbc	PKPdf	11 45 24.3	-0.7
	comp=E,0.3nm,0.5s,baz=321,slow=4.3,SNR=5.6						

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*IDC **20** 11:30:27.8±1.0, 50°.91N×124°.77E, h0^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.4/60, mbtmp3.5/9, ML3.1/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/32, Error ellipse: s-maj=28.9km s-min=20.3km az=20.0*

*SKHL **20** 11:30:29.4±0.7, 51°.04N×124°.92E, h15^{km}±3^{km}, mb4.4/7, Ms4.1/1*

*BJI **20** 11:30:29.3, 50°.95N×124°.94E, h7^{km}, mb3.9/6, ML4.2/9*

ISC 20 11:30:29.3±0.6**, 51°.11N**±0°.04×**124°.94E**±0°.04**, h10**^{km}**, n21, σ2^{s}.79**/32**, mb3.5**/7**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEA	**Zeya**	2.99	27	ePn	Pn	11 31 18.4	+1.7
ZEA				ePg	Pg	11 31 26.5	0.0
ZEA				AMB	AMB	11 31 29.6	
	62nm,0.8s						
ZEA				AMB	AMB	11 31 29.6	
	52nm,0.8s						
ZEA				AMB	AMB	11 31 29.6	
	120nm,0.8s						
ZEA				sPg	Pb	11 31 34.0	+11
ZEA				eSn	Sn	11 31 54.2	+1.6
ZEA				eSg	Sg	11 32 07.0	+1.8
ZEA				A	A	11 32 09.0	
	500nm,1.0s						
ZEA				A	A	11 32 09.4	
	170nm,0.8s						
ZEA				A	A	11 32 09.4	
	470nm,0.8s						
ZEA				AMS	AMS	11 32 37.0	
	1µm,4.0s						
ZEA				AMS	AMS	11 32 37.0	
	800nm,4.0s						
BMKR	**Bomnak**	4.31	32	ePn	Pn	11 31 36.0	+1.1
BMKR				sPn	Pb	11 31 44.0	-1.1
BMKR				ePg	Pg	11 31 50.0	-1.8
BMKR				AMB	AMB	11 31 51.9	
	55nm,0.9s						
BMKR				eSn	Sn	11 32 26.6	+1.4
BMKR				eSg	Sg	11 32 46.0	-1.7
BMKR				A	A	11 32 54.2	
	232nm,0.8s						
TUP	**Tupik**	4.49	320	ePn	Pn	11 31 40.4	+3.0
TUP				ePg	Pg	11 31 53.3	-2.0
TUP				AMB	AMB	11 31 57.9	
	16nm,0.3s						
TUP				eSg	Sg	11 32 52.1	-1.4
TUP				A	A	11 33 05.1	
	299nm,0.5s						
KLR	**Kul'dur**	4.76	111	Pn	Pn	11 31 40.9	-0.2
	2.9nm,0.3s,baz=300,slow=12,SNR=58						
KLR				Sn	Sn	11 32 33.4	-2.9
	5.7nm,0.3s,baz=244,slow=22,SNR=10.0						
KLR				Lg	Lg	11 32 54.2	
	11nm,0.3s,baz=201,slow=2.6,SNR=10						
EKMR	**Ekimchan**	5.32	65	ePn	Pn	11 31 48.9	+0.2
EKMR				sPn	sPn	11 31 56.1	+3.4
EKMR				eSn	Sn	11 32 50.5	+0.6
EKMR				eSg	Sg	11 33 16.0	-3.8
EKMR				A	A	11 33 29.0	
	81nm,0.7s						
EKMR				A	A	11 33 29.0	
	51nm,0.7s						
CRS	**Chara**	7.01	329	ePg	Pg	11 32 39.6	-3.7
CRS				AMB	AMB	11 32 42.9	
	21nm,0.6s						
CRS				eSg	Sg	11 34 11.9	-2.0
CRS				A	A	11 34 19.9	
	109nm,0.8s						
GRNR	**Gornyy**	7.27	88	ePg	Pb	11 32 42.0	+6.6
GRNR				AMB	AMB	11 32 48.0	
	10.0nm,0.9s						
GRNR				eSg	Sg	11 34 17.5	-4.8
GRNR				A	A	11 34 31.4	
	40nm,0.9s						
CN2	**Changchun**	7.32	177	ePg	Pg	11 32 43.3	-6.0
CN2				eSg	Sb	11 34 10.4	+6.8
CN2				smax	smax		
	comp=N,60nm,0.7s						
CN2				smax	smax		
	comp=E,40nm,0.7s						
USRK	**Ussuriysk Ar.**	8.39	143	Pn	Pn	11 32 29.6	-1.2
	comp=E,0.5nm,0.3s,baz=323,slow=12,SNR=6.6						
USRK				Lg	Lg	11 34 46.6	
	comp=E,1.3nm,0.3s,baz=321,slow=29,SNR=8.6						
NKL	**Nikolayevsk**	9.89	72	eSg	Sn	11 35 42.0	+60
SONM	**Songino Array**	12.49	262	Pn	Pn	11 33 27.2	+0.1
	comp=E,0.1nm,0.3s,baz=71,slow=13,SNR=8.0						
SONM				Sn	Sn	11 35 38.8	-7.6
	comp=E,0.2nm,0.3s,baz=70,slow=24,SNR=3.3						
SONM				Lg	Lg	11 36 58.0	
	comp=E,1.1nm,0.3s,baz=69,slow=29,SNR=7.9						
SONM				LR	LR	11 38 50.2	
	comp=E,94nm,18.4s,baz=165,slow=41						
KSRS	**Korea Array**	13.82	170	Lg	Lg	11 37 42.8	
	comp=E,0.1nm,0.3s,baz=346,slow=30,SNR=3.8						
GTA	**Gaotai**	21.09	246	eP	P	11 35 16.5	+2.7
GTA				pP	sP	11 35 21.3	+3.1
GTA				sP	pP	11 35 23.8	+7.0
GTA				pmax	pmax		
	comp=E,2.0nm,0.8s						
ZALV	**Zalesovo Beam**	24.34	292	P	P	11 35 48.2	+1.2
	comp=E,0.3nm,0.3s,baz=100,slow=7.5,SNR=2.7						
WMQ	**Urumqi**	25.99	268	eP	P	11 36 03.8	+1.7
KURBB	**Kurchatov Arra**	28.92	287	P	P	11 36 25.9	-2.3
	comp=E,0.1nm,0.2s,baz=76,slow=7.8,SNR=5.7						
AKTO	**Aktyubinsk**	40.99	296	LR	LR	11 57 19.2	
	comp=E,21nm,18.1s,baz=8.2,slow=39						
ILAR	**Eielson Array**	44.77	37	P	P	11 38 44.7	+2.2
	comp=E,0.7nm,1.0s,baz=304,slow=6.4,SNR=3.5						
YKA	**Yellowknife Ar**	57.37	28	P	P	11 40 18.6	+1.4
	comp=E,0.2nm,0.7s,baz=321,slow=6.6,SNR=4.2						
BRTR	**Keskin Array B**	61.11	298	P	P	11 40 44.0	+0.4
	comp=E,0.3nm,0.5s,baz=32,slow=6.8,SNR=2.3						
WRA	**Warramunga Arr**	71.22	171	P	P	11 41 47.4	-1.0
	comp=E,0.3nm,0.6s,baz=352,slow=6.9,SNR=4.7						

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*IDC **20** 11:30:30.7±1.6, 10°.45S×165°.25E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.7/44, mbtmp3.9/7, ML3.8/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/28, Error ellipse: s-maj=40.4km s-min=26.8km az=130.0*

*ISCJB **20** 11:30:33.8±1.3, 10°.6S±0°.1×165°.1E±0°.1, h31^{km}, mb3.7/4, MS3.9/1, Error ellipse: s-maj=21.8km s-min=11.5km az=31.1*

ISC 20 11:30:35.5±1.5**, 10°.5S**±0°.2×**165°.2E**±0°.1**, h31**^{km}**, n14, σ0^{s}.91**/8**, mb3.8**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	5.27	281	Pn	Pn	11 31 52.7	+0.5
	3.5nm,0.3s,baz=110,slow=15,SNR=2.6						
HNR				Sn	Sn	11 32 50.7	-1.1
	7.0nm,0.3s,baz=214,slow=21,SNR=1.9						
HNR				LR	LR	11 33 44.7	
	comp=Z,131nm,19.9s,baz=88,slow=36						

DZM	Mont Dzumac	11.58	174	Pn	Pn	11 33 18.1	-0.7
	0.5nm,0.3s,baz=349,slow=16,SNR=7.4						
CTA	Charters Tower	20.58	240	P	P	11 35 12.3	+0.2
	3.8nm,0.7s,baz=74,slow=11,SNR=7.6						
H11S2	WAKE ISLAND Hy	28.84	3	T	T	12 07 41.7	
	baz=184						
H11S3	WAKE ISLAND Hy	28.84	3	T	T	12 07 38.5	
	baz=184						
H11S1	WAKE ISLAND Hy	28.86	3	T	T	12 07 38.6	
	baz=184						
H11N1	WAKE ISLAND Hy	30.06	3	T	T	12 09 11.7	
	baz=191						
H11N3	WAKE ISLAND Hy	30.07	3	T	T	12 09 16.0	
	baz=191						
H11N2	WAKE ISLAND Hy	30.08	3	T	T	12 09 09.1	
	baz=191						
STKA	Stephens Creek	30.47	222	P	P	11 36 47.0	+1.3
	3.6nm,1.1s,baz=60,slow=20,SNR=1.7						
WRA	Warramunga Arr	31.16	249	P	P	11 36 51.8	-0.2
	0.5nm,0.5s,baz=82,slow=9.1,SNR=7.6						
ASAR	Alice Springs	32.55	242	P	P	11 37 03.8	-0.5
	1.2nm,0.5s,baz=64,slow=10,SNR=26						
PPT	Papeete	44.36	104	LR	LR	11 54 38.3	
	comp=Z,126nm,19.2s,baz=84,slow=33						
ILAR	Eielson Array	83.17	19	P	P	11 42 58.0	-0.2
	0.2nm,0.7s,baz=224,slow=3.8,SNR=2.9						

ISCJB ***20*** *11:41:50.2±0.3, 48°.25N±0°.02×1°.68W±0°.02, h2^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=2.2km az=17.9*
LDG ***20*** *11:41:53.9±0.1, 48°.27N×1°.89W, h2^{km}, Md3.2/3, Ml3.2/37, Error ellipse: s-maj=1.1km s-min=0.9km az=22.0*
BGS ***20*** *11:41:55.5±0.1, 48°.37N×1°.96W, h5^{km}, ML2.4*
ISC 20 11:41:51.4±1.2**, 48°.27N**±0°.02×**1°.88W**±0°.02**, h12**^{km}±10^{km}**, n60,** σ**1^{s}46**/116**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGMF	Saint Gilles	0.45	268	ePg	Pn	11 42 02.7	-1.1
	SNR=1.0						
SGMF				eSg	Sb	11 42 08.5	+0.4
	236nm,0.2s,SNR=1.0						
GRR	Gorron	0.69	80	ePg	Pn	11 42 07.3	+0.3
	SNR=1.0						
GRR				eSg	Sb	11 42 16.0	+1.1
	351nm,0.2s						
JDC	Jersey Dam (Cr	0.92	353	eP	Pn	11 42 10.8	+0.6
JDC	Jersey Dam (Cr	0.92	353	eP	Pn	11 42 10.8	+0.6
JDG	Jersey Dam (Ga	0.93	353	eP	Pn	11 42 10.8	+0.5
JDG				eS	Sb	11 42 22.0	+0.2
JDG	Jersey Dam (Ga	0.93	353	eP	Pn	11 42 10.8	+0.5
JDG				eS	Sb	11 42 22.0	+0.2
QUIF	Quistinic	0.93	248	ePg	Pn	11 42 11.7	+1.4
	SNR=1.0						
QUIF				eSg	Sn	11 42 23.7	+0.1
	78nm,0.2s,SNR=1.0						
QUIF				eSn	Sb	11 42 26.5	+4.7
	127nm,0.2s						
JRS	Jersey	0.93	351	eP	Pn	11 42 10.7	+0.3
JRS				eS	Sb	11 42 21.9	0.0
JRS	Jersey	0.93	351	eP	Pn	11 42 10.7	+0.3
JRS				eS	Sb	11 42 21.9	0.0
ROSF	Rostrenen	0.93	275	ePg	Pn	11 42 11.4	+1.0
	SNR=1.0						
ROSF				eSg	Sn	11 42 23.5	-0.2
	SNR=1.0						
ROSF				eSn	Sb	11 42 25.7	+3.8
	493nm,0.2s						
JSA	Saint Aubin	0.94	348	eP	Pn	11 42 10.9	+0.5
JSA				eS	Sb	11 42 22.0	0.0
JSA				IAML		11 42 25.5	
	comp=N,325nm,0.2s						
JSA				IAML		11 42 25.5	
	comp=E,228nm,0.4s						
JSA	Saint Aubin	0.94	348	eP	Pn	11 42 10.9	+0.5
JSA				eS	Sb	11 42 22.0	0.0
JSA				IAML		11 42 25.5	
	comp=N,325nm,0.2s						
JSA				IAML		11 42 25.5	
	comp=E,228nm,0.4s						
FLN	La Foliniere	1.05	62	ePg	Pn	11 42 13.7	+1.7
	baz=240,SNR=1.0						
FLN				eSg	Sn	11 42 27.4	+0.8
	comp=E,121nm,0.2s,baz=240,SNR=1.0						
LDF	La Druitiere	1.21	74	ePg	Pg	11 42 16.9	+2.1
	SNR=1.0						
LDF				eSg	Sn	11 42 32.1	+1.5
	comp=E,94nm,0.2s						
MFF	Saint Martin d	2.04	144	ePn	Pb	11 42 27.6	-0.8
	SNR=1.0						
MFF	Saint Martin d	2.04	144	ePg	Pg	11 42 31.6	+1.0
	SNR=1.0						
MFF				eSg	Sg	11 42 58.6	+1.6
	comp=E,30nm,0.2s,SNR=1.0						
DYA	Yadsworthy	2.55	329	IAML		11 43 12.8	
	comp=E,10nm,0.6s						
DYA				IAML		11 43 15.8	
	comp=N,13nm,0.2s						
DYA	Yadsworthy	2.55	329	IAML		11 43 12.8	
	comp=E,10nm,0.6s						
DYA				IAML		11 43 15.8	
	comp=N,13nm,0.2s						
HYF	Humbligny	3.21	107	ePn	Pn	11 42 43.7	+2.1
HYF	Humbligny	3.21	107	ePg	Pg	11 42 53.2	+0.3
HYF				eSn	Sn	11 43 20.4	+0.6
HYF				eSg	Sg	11 43 34.6	+0.2
	comp=N,98nm,0.3s						
TCF	Toulx Ste Croi	3.42	124	ePn	Pn	11 42 46.5	+2.0
	SNR=1.0						
TCF	Toulx Ste Croi	3.42	124	ePg	Pg	11 42 57.3	+0.4
TCF				eSn	Sn	11 43 25.0	0.0
	SNR=1.0						
TCF				eSg	Sg	11 43 41.1	0.0
	comp=N,7.9nm,0.2s,SNR=1.0						
BGF	Bois d'Agland	3.64	116	ePn	Pn	11 42 49.4	+1.9
	SNR=1.0						
BGF	Bois d'Agland	3.64	116	ePg	Pg	11 43 01.3	+0.2
BGF				eSn	Sn	11 43 30.0	-0.3
	SNR=1.0						
BGF				eSg	Sg	11 43 47.6	-0.6
	comp=N,28nm,0.4s,SNR=1.0						
RJF	Les Rejaudoux	3.77	141	ePg	Pg	11 43 03.6	-0.1
RJF				eSn	Sn	11 43 33.2	-0.5
	SNR=1.0						
RJF				eSg	Sg	11 43 52.7	+0.1
	comp=N,16nm,0.3s,SNR=1.0						
LFF	La Frestale	3.79	151	ePg	Pg	11 43 04.0	0.0
LFF				eSn	Sn	11 43 33.7	-0.4
	SNR=1.0						
LFF				eSg	Sg	11 43 52.7	-0.4
	comp=N,20nm,0.3s,SNR=1.0						
SSF	Saint Saulge	3.83	106	ePn	Pn	11 42 52.2	+2.0
	SNR=1.0						
SSF	Saint Saulge	3.83	106	ePg	Pg	11 43 05.0	+0.2
SSF				eSn	Sn	11 43 33.9	-1.3
	SNR=1.0						
SSF				eSg	Sg	11 43 52.2	-2.3
	comp=N,8.4nm,0.3s,SNR=1.0						
AVF	Avril sur Loir	3.84	111	ePn	Pn	11 42 52.6	+2.3
	SNR=1.0						
AVF	Avril sur Loir	3.84	111	ePg	Pg	11 43 05.0	0.0
AVF				eSn	Sn	11 43 33.9	-1.4
	SNR=1.0						
AVF				eSg	Sg	11 43 54.1	-0.6
	comp=N,4.4nm,0.2s,SNR=1.0						
LOR	Lormes	4.00	102	ePn	Pn	11 42 54.5	+2.0
	baz=282,SNR=1.0						
LOR	Lormes	4.00	102	ePg	Pg	11 43 07.7	-0.3
	baz=282						
LOR				eSn	Sn	11 43 38.8	-0.4
	SNR=1.0						
LOR				eSg	Sg	11 43 58.2	-1.5
	comp=N,17nm,0.4s,baz=284,SNR=1.0						
SMF	Signal de Mont	4.21	111	ePn	Pn	11 42 57.1	+1.7
	SNR=1.0						
SMF	Signal de Mont	4.21	111	ePg	Pg	11 43 11.9	-0.1
SMF				eSn	Sn	11 43 43.8	-0.6
	SNR=1.0						
SMF				eSg	Sg	11 44 04.5	-1.9
	comp=N,5.4nm,0.3s,SNR=1.0						
CAF	Calviac	4.31	139	ePn	Pn	11 42 59.7	+2.9
	SNR=1.0						
CAF	Calviac	4.31	139	ePg	Pg	11 43 13.8	-0.2
CAF				eSn	Sn	11 43 45.7	-1.3
	comp=N,2.5nm,0.2s,SNR=1.0						
CAF				eSg	Sg	11 44 09.5	-0.3
	comp=N,15nm,0.5s						
BAIF	Baives	4.38	64	ePn	Pn	11 42 59.5	+1.8
	SNR=1.0						
BAIF	Baives	4.38	64	ePg	Pg	11 43 15.2	0.0
BAIF				eSn	Sn	11 43 48.5	0.0
	comp=N,5.1nm,0.3s,SNR=1.0						
BAIF				eSg	Sg	11 44 11.2	-0.6
	comp=N,5.1nm,0.3s						
SFTF	Sexfontaines	4.62	88	ePn	Pn	11 43 02.8	+1.7
	baz=268						
SFTF	Sexfontaines	4.62	88	ePg	Pg	11 43 19.9	0.0
	baz=268						
SFTF				eSn	Sn	11 43 53.2	-1.4
SFTF				eSg	Sg	11 44 19.0	-0.8
	comp=N,14nm,0.3s						
MEZF	Maizieres J'vi	4.62	85	ePn	Pn	11 43 02.3	+1.2
MEZF	Maizieres J'vi	4.62	85	ePg	Pg	11 43 19.6	-0.3
MEZF				eSn	Sn	11 43 53.9	-0.7
	baz=263						
MEZF				eSg	Sg	11 44 19.3	-0.5
	comp=N,11nm,0.4s						
GIVF	Givet	4.76	65	ePn	Pn	11 43 05.0	+2.0
GIVF	Givet	4.76	65	ePg	Pg	11 43 22.3	-0.3
GIVF				eSn	Sn	11 43 57.3	-0.7
GIVF				eSg	Sg	11 44 23.8	-0.4
	comp=N,8.1nm,0.4s						
PAGF	Fort de Pagny	5.07	84	eSn	Sn	11 44 03.7	-2.0
PAGF				eSg	Sg	11 44 34.7	+0.6
SJPF	Ste Jean	5.18	175	ePn	Pn	11 43 10.4	+1.7
SJPF	Ste Jean	5.18	175	ePg	Pg	11 43 29.5	-1.1
SJPF				eSn	Sn	11 44 06.1	-2.3
	comp=N,1.5nm,0.2s,SNR=1.0						
SJPF				eSg	Sg	11 44 35.7	-1.9
	comp=N,2.6nm,0.3s						
EPF	Esparros	5.47	163	ePn	Pn	11 43 14.5	+1.8
EPF	Esparros	5.47	163	ePg	Pg	11 43 34.9	-1.2
EPF				eSn	Sn	11 44 12.4	-3.1
EPF				eSg	Sg	11 44 44.7	-2.1
	comp=N,3.1nm,0.3s						
HAU	Haudompre	5.51	90	ePn	Pn	11 43 15.1	+1.8
HAU	Haudompre	5.51	90	ePg	Pg	11 43 36.1	-0.9
HAU				eSn	Sn	11 44 13.3	-3.3
	SNR=1.0						
HAU				eSg	Sg	11 44 47.0	-1.3
	comp=N,9.3nm,0.2s,SNR=1.0						
CABF	La Chapelle	5.65	104	ePn	Pn	11 43 17.5	+2.2
	SNR=1.0						
CABF	La Chapelle	5.65	104	ePg	Pg	11 43 38.5	-1.1
CABF				eSn	Sn	11 44 18.7	-1.5
	comp=N,4.1nm,0.6s,SNR=1.0						
CABF				eSg	Sg	11 44 50.8	-2.0
	comp=N,2.1nm,0.3s						
MTLF	Montolieu	5.70	148	ePn	Pn	11 43 17.3	+1.4
MTLF				eSn	Sn	11 44 19.3	-1.9
	comp=N,2.5nm,0.5s,SNR=1.0						
MTLF				eSg	Sg	11 44 52.2	-2.1
	comp=N,2.0nm,0.4s						
LASF	Ste Croix	5.78	134	ePn	Pn	11 43 19.8	+2.8
	SNR=1.0						
LASF				eSn	Sn	11 44 21.3	-2.0
LASF				eSg	Sg	11 44 55.0	-2.0
	comp=N,2.6nm,0.4s						
HINF	Hinteralfeld	5.87	91	ePn	Pn	11 43 20.4	+2.1
HINF	Hinteralfeld	5.87	91	ePg	Pg	11 43 42.7	-1.1
HINF				eSn	Sn	11 44 23.6	-1.9
HINF				eSg	Sg	11 44 57.9	-2.0
	comp=N,2.2nm,0.2s,SNR=1.0						
CDF	Champ du Feu	6.11	85	eSg	Sg	11 45 07.1	-0.2
	comp=N,4.8nm,0.4s						
ORIF	Oris-en-Rattie	6.31	119	ePn	Pn	11 43 25.7	+1.4
ORIF	Oris-en-Rattie	6.31	119	ePg	Pg	11 43 50.6	-1.6

SOME ***20*** *11:42:48.2, 42°.63N×75°.67E*
NNC 20 11:42:48.7±0.4**, 42°.66N×75°.62E, h0**^{km}**, mb2.4, mpv2.4, 2C-4D, Error ellipse: s-maj=2.7km s-min=1.9km az=150.0, Suspected Mining explosion., Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	0.27	356	⇓P	Pg	11 42 54.1	+0.3
	1.3nm,0.2s						
TKM2				⇑S	Sg	11 42 57.8	+0.6
	5.3nm,0.3s						
KST	Kastek	0.46	33	P	Pg	11 42 57.3	-0.2
	6.9nm,0.1s						
KST				S	Sg	11 43 04.0	+0.5
	4.5nm,0.1s						
DGS	Degeres	0.59	11	P	Pg	11 42 59.3	-0.8
	2.0nm,0.1s						
DGS				S	Sg	11 43 08.1	+0.3
	4.3nm,0.1s						
AAK	Ala-Archa	0.83	269	⇓P	Pb	11 43 05.7	-0.4
	1.1nm,0.6s						
AAK				⇓S	Sg	11 43 16.2	+0.7
	0.8nm,0.4s						
TNSS	Tian-Shan	1.05	68	P	Pg	11 43 07.9	-0.8
	2.9nm,0.3s						
TNSS				S	Sb	11 43 23.4	-1.0
	2.4nm,0.4s						
SGDS	Sogindy	1.08	318	P	Pg	11 43 08.8	-0.5
	1.1nm,0.2s						
SGDS				S	Sb	11 43 25.0	0.0
	2.7nm,0.2s						
MDOK	Medeo	1.16	64	P	Pg	11 43 11.3	+0.3
	0.8nm,0.3s						
MDOK				S	Sg	11 43 26.5	+0.4
	2.0nm,0.6s						
KTBS	Karatobe	1.31	36	P	Pg	11 43 13.3	-0.5
	1.8nm,0.3s						
KTBS				S	Sn	11 43 32.2	-0.3
	23nm,0.1s						
CHKK	Chushkaly	1.56	39	P	Pn	11 43 17.7	0.0
	1.3nm,0.2s						
CHKK				S	Sg	11 43 39.5	+0.8
	2.7nm,0.2s						
PDGK	Podgornoye	2.92	75	⇓Pg	Pb	11 43 40.7	-0.9
	2.7nm,1.1s						
PDGK				⇑Lg	Lg	11 44 19.6	
	2.1nm,0.8s						

IDC 20 11:56:21.1±965.0**, 52°.89N×4°.63E, h0**^{km}**, Error ellipse: s-maj=422.2km s-min=142.3km az=112.0, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	7.03	121	i		12 33 55.8	
	baz=310,slow=334,SNR=1.4						
I43RU	DUBNA INFRASON	19.07	65	i		13 55 40.0	
	baz=277,slow=337,SNR=0.4						
I31KZ	AKTYUBINSK INF	32.60	72	i		15 21 20.0	
	baz=292,slow=317,SNR=0.4						

IDC 20 12:09:42.9±14.0**, 2°.39S×67°.64E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/43**, mbtmp3.6**/4**, MS3.4**/5**, Ms1 3.4**/5**, ms1mx2.9**/36**, Error ellipse: s-maj=440.5km s-min=34.5km az=70.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	5.15	139	Pn	Pn	12 11 00.0	-1.0
H08N2				T	T	12 16 03.7	
	baz=321,slow=75						
H08N3	Diego Garcia H	5.16	140	Pn	Pn	12 11 00.1	-1.0
H08N3				T	T	12 16 04.6	
	baz=321,slow=75						
H08N1	Diego Carcia H	5.17	139	Pn	Pn	12 11 00.3	-1.0
H08N1				T	T	12 16 03.0	
	baz=321,slow=75						
H08S3	Diego Garcia H	7.10	137	T	T	12 18 37.4	
	baz=298,slow=74						
H08S1	Diego Carcia H	7.10	137	T	T	12 18 41.3	
	baz=298,slow=74						
H08S2	Diego Garcia H	7.12	137	T	T	12 18 42.9	
	baz=298						
PALK	Pallekele	16.19	54	LR	LR	12 18 10.7	
	comp=Z,117nm,20.5s,baz=295,slow=31						
BRDH	Bariadhala	34.20	42	LR	LR	12 32 01.3	
	comp=Z,52nm,18.1s,baz=238,slow=39						
CMAR	Chiang Mai Arr	37.13	55	LR	LR	12 30 33.0	
	comp=Z,35nm,20.9s,baz=209,slow=34						
BOSA	Boshof	48.04	233	LR	LR	12 35 16.2	
	comp=Z,30nm,18.5s,baz=30,slow=32						
MKAR	Makanchi Array	50.65	13	P	P	12 18 43.5	-0.4
	0.4nm,0.8s,baz=178,slow=8.7,SNR=2.7						
SONM	Songino Array	60.38	29	P	P	12 19 54.3	+0.2
	0.9nm,0.9s,baz=224,slow=8.3,SNR=4.4						
SONM				LR	LR	12 45 25.4	
	comp=Z,57nm,21.0s,baz=48,slow=36						
WRA	Warramunga Arr	67.31	111	P	P	12 20 40.1	-0.1
	0.6nm,0.5s,baz=288,slow=5.8,SNR=9.5						
ASAR	Alice Springs	67.34	115	P	P	12 20 40.5	+0.1
	0.1nm,0.3s,baz=279,slow=6.3,SNR=6.8						

IDC ***20*** *12:21:60.0±1.5, 40°.66N×127°.10W, h0^{km}, mb3.4/5, mb1 3.7/9, mb1mx3.6/41, mbtmp3.5/9, ML3.6/4, MS3.1/10, Ms1 3.1/10, ms1mx3.0/26, Error ellipse: s-maj=27.1km s-min=16.0km az=18.0*
ISCJB ***20*** *12:22:00.5±0.5, 40°.45N±0°.03×127°.00W±0°.05, h16^{km}, mb3.4/1, MS3.1/4, Error ellipse: s-maj=5.6km s-min=3.5km az=147.9*
NEIC ***20*** *12:22:00.3±0.8, 40°.35N×127°.14W, h10^{km}, mb4.3/5, Error ellipse: s-maj=10.6km s-min=4.7km az=66.0*
NEIC Felt at Eureka and Fortuna. Also felt at Brookings, Oregon.
ANF ***20*** *12:22:01.3±1.0, 40°.43N×126°.82W, ML3.9/14, Error ellipse: s-maj=10.6km s-min=5.4km az=63.0*
ISC 20 12:22:02.7±0.9**, 40°.50N**±0°.07×**127°.05W**±0°.07**, h16**^{km}**, n115,** σ**1^{s}54**/113**, MS3.1**/4**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCC	Jacoby Creek,	2.32	81	ePn	Pn	12 22 37.9	-2.3
JCC				eSn	Sn	12 23 06.2	-2.2
KHMM	Horse Mountain	2.55	80	ePn	Pn	12 22 41.2	-2.3
KMRM	Mail Ridge	2.57	95	ePn	Pn	12 22 42.1	-1.5
KCPM	Cahto Peak	2.78	106	ePn	Pn	12 22 44.4	-2.2
L02E	Cave Junction	3.08	56	P	Pn	12 22 49.5	-1.2
	baz=237,SNR=616						
L02E				S	Sn	12 23 24.9	-2.3
	baz=237						
KEBM	Edson Butte	3.13	40	ePn	Pn	12 22 49.7	-1.6
O02D	Mt. Diablo Mer	3.27	94	P	Pn	12 22 51.3	-2.1
	baz=274,SNR=16						
O02D				S	Sn	12 23 30.5	-1.6
	baz=274						
M02C	Callahan	3.30	73	P	Pn	12 22 51.9	-1.9
	baz=254,SNR=126						
M02C				S	Sn	12 23 30.5	-2.2
	baz=254						
N02D	Trinity Center	3.34	80	P	Pn	12 22 52.1	-2.2
	baz=261,SNR=30						
N02D				S	Sn	12 23 31.4	-2.2
	baz=261						
K02D	Willamette Mer	3.36	48	P	Pn	12 22 53.2	-1.3
	baz=229,SNR=566						
HOPS	Hopland Field	3.41	115	ePn	Pn	12 22 52.7	-2.5
HOPS				eSn	Sn	12 23 35.0	-0.4
WDC	Whiskeytown Da	3.44	87	ePn	Pn	12 22 54.3	-1.2
YBH	Yreka Blue Hor	3.50	68	Pn	Pn	12 22 56.0	-0.5
	23nm,0.3s,baz=264,slow=12,SNR=447						
YBH				Sn	Sn	12 23 37.0	-0.8
	5.2nm,0.3s,baz=270,slow=15,SNR=3.5						
YBH				LR	LR	12 23 59.4	
	comp=Z,160nm,21.7s,baz=271,slow=34						
J01E	Myrtle Point	3.54	40	P	Pn	12 22 55.2	-1.7
	baz=222,SNR=117						
J01E				S	Sn	12 23 37.2	-1.3
	baz=222						
GDXM	Geysers	3.69	116	ePn	Pn	12 22 58.5	-0.7
HUMO	Hull Mountain	3.73	54	ePn	Pn	12 22 58.7	-0.9
L04D	Klamath Falls	3.96	63	P	Pn	12 23 03.0	0.0
	baz=244,SNR=105						
MCCM	Marconi Confer	4.00	125	ePn	Pn	12 23 00.1	-3.1
O03E	Paynes Creek	4.01	91	P	Pn	12 23 01.1	-2.4
	baz=272,SNR=50						
O03E				S	Sn	12 23 49.1	-1.1
	baz=272						
M04C	Macdoel	4.14	70	P	Pn	12 23 05.4	+0.1
	baz=252,SNR=41						
I03D	Drain, OR	4.22	40	P	Pn	12 23 04.8	-1.5
	baz=221,SNR=99						
I02D	Swisshome	4.32	32	P	Pn	12 23 07.1	-0.5
	baz=214,SNR=112						
ORV	Oroville	4.36	101	ePn	Pn	12 23 07.1	-1.2
K04D	Chiloquin, OR	4.51	60	P	Pn	12 23 10.3	-0.1
	baz=242,SNR=17						
J04D	Umpqua Nationa	4.60	52	P	Pn	12 23 11.9	+0.2
	baz=234,SNR=31						
I04A	Tendick Farm,	4.77	45	P	Pn	12 23 13.9	0.0
	baz=227,SNR=31						
AFDM	Forest Hills D	4.94	106	ePn	Pn	12 23 15.4	-0.7
COR	Corvallis	4.94	33	ePn	Pn	12 23 16.5	+0.4
H04D	Lebanon	5.13	37	P	Pn	12 23 18.5	-0.4
	baz=219,SNR=9.9						
J05D	Fort Rock, OR	5.16	55	P	Pn	12 23 19.5	+0.2
	baz=238,SNR=244						
BEKR	Beckworth	5.16	95	ePn	Pn	12 23 19.5	+0.1
MOD	Modoc Plateau	5.28	72	ePn	Pn	12 23 20.3	-0.7
G03D	McMinnville, O	5.47	29	P	Pn	12 23 23.6	+0.1
	baz=212,SNR=26						
H04A	Detroit Lake	5.51	39	ePn	Pn	12 23 24.1	0.0
PINE	Pine Mountain	5.61	52	ePn	Pn	12 23 25.1	-0.5
I05D	Terrebonne, OR	5.71	46	P	Pn	12 23 26.4	-0.4
	baz=229,SNR=16						
CMB	Columbia Colle	5.72	113	ePn	Pn	12 23 27.1	0.0
SAO	San Andreas Ge	5.75	129	ePn	Pn	12 23 24.1	-3.3
PNTR	Pine Nut	5.91	101	ePn	Pn	12 23 32.5	+2.7
YERR	Yerington	6.21	102	ePn	Pn	12 23 34.3	+0.6
WAKR	Walker	6.21	106	ePn	Pn	12 23 35.6	+1.7
F04D	Rainier, OR	6.32	26	P	Pn	12 23 35.9	+0.8
	baz=209,SNR=5.2						
G05D	Wamic, OR	6.34	40	P	Pn	12 23 35.8	+0.3
	baz=223,SNR=16						
WVOR	Wild Horse Val	6.61	70	ePn	Pn	12 23 38.0	-1.3
I07A	Izee	6.64	55	ePn	Pn	12 23 40.4	+0.7
MDPB	Devils Postpil	6.83	112	ePn	Pn	12 23 43.5	+1.1
RYN	Ryan	6.85	103	ePn	Pn	12 23 43.1	+0.5
E04D	Cinebar	6.88	27	P	Pn	12 23 44.3	+1.5
	baz=210,SNR=66						
J08A	Circle Bar Ran	7.01	63	ePn	Pn	12 23 44.2	-0.5
KVN	Kaiserville	7.04	99	ePn	Pn	12 23 44.9	-0.4
NV01	Mina Array Sit	7.08	104	ePn	Pn	12 23 45.3	-0.5
NVAR	Mina Array Bea	7.08	104	Pn	Pn	12 23 46.8	+1.0
	1.0nm,0.3s,baz=304,slow=11,SNR=4.4						
NVAR				Sn	Sn	12 25 15.3	+9.4
	baz=242,slow=35,SNR=2.9						
PAGB	Antelope Grade	7.17	129	ePn	Pn	12 23 43.8	-3.0
NLWA	Neilton Lookou	7.27	17	ePn	Pn	12 23 48.9	+0.7
LON	Longmire	7.32	30	ePn	Pn	12 23 49.9	+1.1
D04E	Lakebay	7.36	23	P	Pn	12 23 51.1	+1.7
	baz=206,SNR=7.8						
D03D	Eldon	7.59	21	P	Pn	12 23 53.2	+0.6
	baz=204,SNR=27						
D05A	Enumclaw	7.62	27	ePn	Pn	12 23 55.0	+2.0
G08A	Pilot Rock	7.63	48	ePn	Pn	12 23 54.4	+1.1
VES	Vestal, Richgr	7.81	124	P	Pn	12 23 53.1	-2.4
	baz=308						
E07A	Sunnyside	8.00	38	ePn	Pn	12 23 59.5	+1.2
PKM	Mcpherson Peak	8.01	132	P	Pn	12 23 55.6	-3.0
	baz=315						
HAWA	Hanford	8.04	40	ePn	Pn	12 23 59.9	+1.2
LTY	Liberty	8.18	32	ePn	Pn	12 24 02.0	+1.3
ISA	Isabella, Lake	8.30	123	ePn	Pn	12 24 01.5	-1.0
ISA				eSn	Sn	12 25 35.9	-0.1
ISA	Isabella, Lake	8.30	123	P	Pn	12 24 01.0	-1.5
	baz=307						
BMO	Blue Mountains	8.39	56	ePn	Pn	12 24 04.6	+0.9
B05A	Bryant	8.54	23	P	Pn	12 24 06.3	+0.8
	baz=206,SNR=14						
PGC	Sidney	8.55	16	ePn	Pn	12 24 06.6	+0.9
C06D	Leavenworth	8.64	29	P	Pn	12 24 07.1	+0.1
	baz=213,SNR=7.0						
D08A	Wollman Farm,	8.81	39	ePn	Pn	12 24 09.1	-0.1
E09A	Wood Farm, Sta	8.83	44	ePn	Pn	12 24 09.6	0.0
B06A	Marblemount	8.95	24	ePn	Pn	12 24 10.9	-0.2
ELK	Elko	8.99	85	LR	LR	12 27 16.9	
	comp=Z,57nm,21.0s,baz=266,slow=35						
F10A	Beach Ranch, E	9.02	49	ePn	Pn	12 24 14.0	+1.8
TPNV	Topopah Spring	9.15	109	ePn	Pn	12 24 12.9	-1.3
B08A	Colville Reser	9.60	32	ePn	Pn	12 24 20.8	+0.7
GSC	Goldstone, Bar	9.61	119	ePn	Pn	12 24 19.5	-0.9
HLID	Hailey	9.89	68	ePn	Pn	12 24 24.5	+0.2
NEW	Newport	10.52	39	Pn	Pn	12 24 32.2	-0.5

	0.1nm,0.3s,baz=209,slow=13,SNR=2.3						
NEW				LR	LR	12 28 47.2	
	comp=Z,148nm,21.7s,baz=216,slow=39						
DUG	**Dugway, Tooele**	**10.87**	**87**	*e*Pn	**Pn**	**12 24 40.7**	**+2.9**
LDFC	**Landfair**	**10.88**	**116**	*e*Pn	**Pn**	**12 24 36.3**	**-1.5**
PFO	**Pinyon Flats O**	**10.89**	**126**	LR	LR	12 28 30.8	
	comp=Z,118nm,20.3s,baz=298,slow=35						
MCMT	**McKenzie Canyo**	**11.32**	**63**	*e*Pn	**Pn**	**12 24 45.5**	**+1.6**
MSO	**Missoula**	**11.41**	**52**	*e*Pn	**Pn**	**12 24 47.1**	**+2.2**
DLMT	**Dillon**	**11.66**	**61**	*e*Pn	**Pn**	**12 24 51.2**	**+2.8**
HRY	**Holter Researc**	**12.65**	**56**	*e*Pn	**Pn**	**12 25 04.0**	**+2.0**
LKWY	**Lake**	**12.94**	**66**	*e*Pn	**Pn**	**12 25 08.1**	**+2.1**
PDAR	**Pinedale Array**	**13.28**	**74**	Pn	**Pn**	**12 25 14.7**	**+4.0**
	0.0nm,0.3s,baz=253,slow=12,SNR=3.0						
PDAR				LR	LR	12 30 45.5	
	comp=Z,93nm,21.7s,baz=263,slow=40						
SDCO	**Great Sand Dun**	**16.94**	**92**	*e*Pn	**P**	**12 26 02.9**	**+1.7**
	10nm,1.4s						
ANMO	**Albuquerque**	**17.20**	**102**	P	**P**	**12 26 05.5**	**+1.6**
	0.1nm,0.3s,baz=308,slow=12,SNR=4.6						
ANMO				LR	LR	12 33 12.3	
	comp=Z,85nm,19.2s,baz=251,slow=39						
KSCO	**Kaye Shedlock'**	**18.83**	**87**	*e*P	**Pn**	**12 26 24.3**	**+2.0**
	32nm,1.1s						
LPIG	**La Paz**	**21.56**	**134**	LR	LR	12 33 59.7	
	comp=Z,46nm,19.2s,baz=9.5,slow=33						
FFC	**Flin Flon**	**21.94**	**41**	*e*P	**P**	**12 26 55.9**	**+0.7**
	14nm,1.3s						
TXAR	**Lajitas Array**	**22.11**	**113**	P	**P**	**12 26 59.7**	**+2.3**
	1.0nm,0.9s,baz=297,slow=5.5,SNR=7.0						
ECSD	**EROS Data Cent**	**22.75**	**72**	*e*P	**P**	**12 27 05.5**	**+1.5**
	7.4nm,0.9s						
YKA	**Yellowknife Ar**	**23.27**	**15**	P	**P**	**12 27 08.8**	**-0.3**
	0.4nm,0.8s,baz=203,slow=11,SNR=4.9						
ULM	**Lac du Bonnet**	**23.82**	**55**	P	**P**	**12 27 13.5**	**-1.2**
	1.3nm,0.6s,baz=246,slow=9.2,SNR=3.5						
ULM				LR	LR	12 36 38.3	
	comp=Z,93nm,19.3s,baz=242,slow=37						
H06N1	**SOCORRO T-PHAS**	**25.60**	**143**	T	T	12 54 11.8	
	SNR=2.0						
H06E1	**SOCORRO T-PHAS**	**25.70**	**143**	T	T	12 54 17.8	
	SNR=18						
HDA	**Harding Lake**	**26.61**	**341**	*e*P	**P**	**12 27 40.8**	**+0.8**
	44nm,2.0s						
ILAR	**Eielson Array**	**26.89**	**341**	P	**P**	**12 27 41.9**	**-0.6**
	0.8nm,0.8s,baz=161,slow=8.4,SNR=8.0						
ILAR				PcP	**PcP**	**12 31 01.9**	**-2.3**
	0.5nm,1.0s,baz=166,slow=1.3,SNR=4.1						
INK	**Inuvik**	**28.09**	**355**	LR	LR	12 38 04.8	
	comp=Z,62nm,18.2s,baz=45,slow=35						
H11N3	**WAKE ISLAND Hy**	**59.42**	**271**	T	T	13 36 00.4	
	baz=53,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**59.42**	**271**	T	T	13 36 21.4	
	baz=53,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**59.44**	**271**	T	T	13 36 29.8	
	baz=53,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**60.29**	**270**	T	T	13 37 17.3	
	baz=54,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	**60.30**	**270**	T	T	13 37 18.9	
	baz=54,slow=75,SNR=20						
H11S3	**WAKE ISLAND Hy**	**60.31**	**270**	T	T	13 37 18.8	
	baz=54,slow=75,SNR=20						
NOA	**NORSAR Array B**	**73.26**	**20**	LR	LR	13 04 04.9	
	comp=Z,8.7nm,20.4s,baz=295,slow=34						
SONM	**Songino Array**	**80.10**	**327**	P	**P**	**12 34 10.0**	**-1.8**
	0.2nm,0.4s,baz=36,slow=5.4,SNR=2.9						
HHC	**Hu-ho-hao-te**	**83.10**	**319**	*e*P	**P**	**12 34 26.5**	**-1.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,4.0s						
WMQ	**Urumqi**	**90.42**	**336**	*e*P	**P**	**12 35 05.5**	**+2.2**
LZH	**Lanzhou**	**90.59**	**321**	*e*P	**P**	**12 35 03.8**	**-0.6**
LZH				pP	pP	12 35 09.4	+0.7
LZH				sP	sP	12 35 10.8	+0.6
LZH				PP	PP	12 38 49.8	+11
LZH				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,4.3s						
KMI	**Kunming**	**99.97**	**315**	P	**Pdif**	**12 35 46.3**	**-1.1**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						

IDC 20 12:33:17.5±21.0**,18°.03S**×**177°.93W,h170**^{km}±211^{km}**,**
mb3.7/7**,mb1 3.9**/7**,mb1mx3.6**/30**,mbtmp4.2**/7**,Error ellipse: s-maj=74.6km s-min=25.9km az=178.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.61**	**191**	P	P	12 37 43.4	-0.1
	3.5nm,0.4s,baz=18,slow=9.6,SNR=6.8						
STKA	**Stephens Creek**	**38.97**	**241**	P	P	12 40 28.0	+0.7
	4.2nm,0.8s,baz=88,slow=12,SNR=10						
WRA	**Warramunga Arr**	**45.06**	**260**	P	P	12 41 16.0	-0.8
	0.9nm,0.5s,baz=97,slow=6.6,SNR=45						
ASAR	**Alice Springs**	**45.20**	**254**	P	P	12 41 17.6	-0.3
	7.4nm,0.5s,baz=90,slow=8.5,SNR=175						
PETK	**Petropavlovsk-**	**73.92**	**345**	P	P	12 44 34.6	+0.9
	2.8nm,0.8s,baz=120,slow=8.5,SNR=4.4						
TXAR	**Lajitas Array**	**85.68**	**57**	P	P	12 45 37.6	0.0
	0.8nm,0.8s,baz=218,slow=6.4,SNR=9.8						
ILAR	**Eielson Array**	**85.91**	**13**	P	P	12 45 37.0	-0.7
	0.6nm,0.9s,baz=216,slow=4.5,SNR=4.8						

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*ISCJB **20** 12:36:16.4±0.4, 38°.19N±0°.02×26°.53E±0°.03, h9^{km}±3^{km}, Error ellipse: s-maj=3.5km s-min=2.5km az=164.6*
*ATH **20** 12:36:16.1, 38°.16N×26°.52E, h30^{km}±1^{km}, ML2.8/4, Error ellipse: s-maj=2.6km s-min=1.1km az=245.0*
*ISK **20** 12:36:16.0, 38°.21N×26°.56E, h10^{km}, ML2.8/26*
*DDA **20** 12:36:17.0, 38°.24N×26°.68E, h9^{km}±3^{km}, ML3.2*
*THE **20** 12:36:17.1, 38°.19N×26°.56E, h10^{km}±1^{km}, ML2.7/8, Error ellipse: s-maj=1.5km s-min=0.7km az=60.0*
ISC 20 12:36:16.7±0.9**,38°.20N**±0°.02×**26°.55E**±0°.02**,h11**^{km}±6^{km}**,**
n56,σ**0^{s}.66**/82**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.17**	**12**	PG	**Pg**	**12 36 20.0**	**-0.4**
URLA				SG	**Sg**	**12 36 23.2**	**+0.1**
URLA	**Izmir**	**0.17**	**12**	*i* P	**Pg**	**12 36 20.0**	**-0.4**
URLA				*i* S	**Sg**	**12 36 23.0**	**0.0**
URLA				IAML_P			
	comp=Z,74µm,0.1s						
DGB	**zmir**	**0.30**	**119**	*i* P	**Pg**	**12 36 22.9**	**+0.2**
DGB				*i* S	**Sg**	**12 36 27.6**	**+0.9**
GMLD	**Gumuldur**	**0.31**	**112**	PG	**Pg**	**12 36 22.8**	**-0.1**
GMLD				SG	**Sg**	**12 36 27.7**	**+0.6**
KRBN	**Karaburun**	**0.40**	**0**	PG	**Pg**	**12 36 23.9**	**-0.7**
BLCB	**Balcova**	**0.43**	**64**	PG	**Pg**	**12 36 24.7**	**-0.4**
BLCB				SG	**Sg**	**12 36 31.0**	**+0.2**
CHOS	**Chios island**	**0.44**	**296**	PG	**Pg**	**12 36 25.4**	**+0.1**
CHOS	**Chios island**	**0.44**	**296**	P	**Pg**	**12 36 25.6**	**+0.4**
CHOS				S	**Sb**	**12 36 32.8**	**-0.2**
CHOS				AML	AML	12 36 34.0	
	comp=N,1922µm,0.2s						
CHOS				AML	AML	12 36 34.2	
	comp=E,3867µm,0.2s						
CHOS	**Chios island**	**0.44**	**296**	P	**Pg**	**12 36 25.6**	**+0.4**
CHOS				S	**Sb**	**12 36 32.9**	**-0.2**
SMG	**Samos**	**0.54**	**155**	P	**Pg**	**12 36 27.2**	**+0.1**
SMG				S	**Sg**	**12 36 34.8**	**+0.7**
SMG				AML	AML	12 36 39.0	
	comp=N,3639µm,0.2s						
SMG				AML	AML	12 36 39.3	
	comp=E,5686µm,0.2s						
SMG	**Samos**	**0.54**	**155**	P	**Pg**	**12 36 27.1**	**0.0**
SMG				S	**Sg**	**12 36 35.5**	**+1.3**
FOCM	**Foa**	**0.54**	**15**	PG	**Pg**	**12 36 26.8**	**-0.3**
GCAM	**G?zelcaml?**	**0.73**	**132**	PG	**Pg**	**12 36 30.6**	**-0.2**
GCAM	**G?zelcaml?**	**0.73**	**132**	*i* P	**Pg**	**12 36 30.9**	**+0.1**
GCAM				*i* S	**Sb**	**12 36 41.8**	**+0.4**
PSRA	**Psara**	**0.85**	**294**	P	**Pn**	**12 36 35.4**	**+0.8**
ZEDA	**zmir-Bergama**	**0.87**	**28**	*i* P	**Pg**	**12 36 32.1**	**-1.4**
ZEDA				*i* S	**Sb**	**12 36 46.6**	**+1.0**
PRK	**Paraskevi**	**1.07**	**348**	P	**Pg**	**12 36 37.7**	**+0.3**
PRK				S	**Sn**	**12 36 53.0**	**+0.4**
PRK				AML	AML	12 36 56.8	
	comp=E,1414µm,0.6s						
PRK				AML	AML	12 36 56.9	
	comp=N,1120µm,0.5s						
PRK	**Paraskevi**	**1.07**	**348**	P	**Pg**	**12 36 37.6**	**+0.3**
PRK				S	**Sn**	**12 36 52.6**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.08**	**103**	PN	**Pg**	**12 36 36.9**	**-0.7**
SIGR	**SIGRI**	**1.15**	**332**	PN	**Pb**	**12 36 37.9**	**-0.7**
SIGR	**SIGRI**	**1.15**	**332**	P	**Pb**	**12 36 38.1**	**-0.5**
SIGR				S	**Sb**	**12 36 53.8**	**+0.3**
SIGR				AML	AML	12 36 56.5	
	comp=E,331µm,0.4s						
SIGR				AML	AML	12 36 57.0	
	comp=N,496µm,0.6s						
SIGR	**SIGRI**	**1.15**	**332**	P	**Pb**	**12 36 38.1**	**-0.5**
SIGR				S	**Sb**	**12 36 53.9**	**+0.3**
AYDN	**Tasoluk**	**1.18**	**117**	*i* P	**Pg**	**12 36 39.5**	**+0.2**
AYDN				*i* S	**Sb**	**12 36 54.5**	**+0.2**
AYDN				IAML_P			
	comp=Z,2µm,0.1s						
AKS	**Akhisar**	**1.20**	**55**	PN	**Pb**	**12 36 39.4**	**-0.1**
AKHS	**Akhisar**	**1.20**	**55**	*i* P	**Pb**	**12 36 39.3**	**-0.2**
YKAV	**Yalikavak-Bodr**	**1.22**	**151**	PN	**Pn**	**12 36 39.9**	**+0.3**
BODT	**Bodrum**	**1.28**	**152**	PN	**Pn**	**12 36 40.9**	**+0.4**
BODT	**Bodrum**	**1.28**	**152**	P	**Pn**	**12 36 39.6**	**-0.9**
BODT				S	**Sb**	**12 36 57.0**	**-0.3**
MLSB	**Milas**	**1.32**	**132**	PN	**Pn**	**12 36 40.9**	**-0.2**
BDRM	**Kayabasi**	**1.33**	**148**	*i* P	**Pn**	**12 36 40.6**	**-0.6**
BDRM				*i* S	**Sg**	**12 37 00.8**	**+1.3**
APE	**Apeiranthos**	**1.39**	**216**	PN	**Pn**	**12 36 42.1**	**+0.1**
APE	**Apeiranthos**	**1.39**	**216**	P	**Pn**	**12 36 40.8**	**-1.3**
APE	**Apeiranthos**	**1.39**	**216**	P	**Pn**	**12 36 40.7**	**-1.3**
APE				S	**Sn**	**12 37 00.7**	**+0.4**
AMGA	**Amorgos Island**	**1.46**	**201**	P	**Pn**	**12 36 41.7**	**-1.3**
AMGA	**Amorgos Island**	**1.46**	**201**	P	**Pn**	**12 36 41.6**	**-1.3**
AMGA				S	**Sn**	**12 37 01.9**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.49**	**37**	*i* P	**Pb**	**12 36 44.7**	**+0.3**
STEP				*i* S	**Sg**	**12 37 04.9**	**+0.2**
STEP				IAML_P			
	comp=Z,1µm,0.1s						
BAYC	**CANAKKALE_Bayr**	**1.54**	**360**	*i* P	**Pn**	**12 36 44.0**	**-0.2**
BAYC				*i* S	**Sn**	**12 37 03.5**	**-0.8**
BAYC				IAML_P			
	comp=Z,541nm,0.1s						
MANT	**Manisa**	**1.60**	**79**	*i* P	**Pn**	**12 36 44.3**	**-0.9**
MANT				*i* S	**Sb**	**12 37 07.4**	**+0.6**
EZN	**Ezine**	**1.64**	**354**	PN	**Pn**	**12 36 45.5**	**+0.1**
EZN	**Ezine**	**1.64**	**354**	P	**Pn**	**12 36 45.9**	**+0.5**
EZN				S	**Sn**	**12 37 06.0**	**-0.5**
KULA	**Kula-Manisa**	**1.69**	**78**	PN	**Pn**	**12 36 46.2**	**0.0**
BOZC	**Bozcaada**	**1.69**	**347**	PN	**Pn**	**12 36 46.5**	**+0.3**
BOZC	**Bozcaada**	**1.69**	**347**	*i* P	**Pn**	**12 36 45.3**	**-0.9**
YER	**Yerkesik**	**1.73**	**127**	PN	**Pn**	**12 36 47.5**	**+0.7**
IOSP	**Ios island**	**1.78**	**215**	P	**Pn**	**12 36 47.5**	**+0.1**
IOSP				S	**Sn**	**12 37 10.3**	**+0.3**
ANAF	**Anafi Island**	**1.94**	**199**	P	**Pn**	**12 36 48.3**	**-1.2**
ANAF				S	**Sn**	**12 37 12.6**	**-1.3**
SERI	**Serifos**	**1.94**	**238**	P	**Pn**	**12 36 49.1**	**-0.5**
TURN	**Turunc**	**2.10**	**128**	PN	**Pn**	**12 36 50.3**	**-1.4**
LPK	**Lapseki**	**2.18**	**4**	PN	**Pn**	**12 36 53.4**	**+0.5**
GELI	**Tayfur-Gelibol**	**2.20**	**358**	PN	**Pn**	**12 36 53.2**	**0.0**
KRBG	**Karabiga-Canak**	**2.27**	**15**	PN	**Pn**	**12 36 54.1**	**0.0**
SMTH	**Samothraki Isl**	**2.41**	**341**	P	**Pn**	**12 36 55.7**	**-0.3**
ERIK	**Erikli-Kesan**	**2.47**	**359**	PN	**Pn**	**12 36 56.9**	**0.0**
ENEZ	**Enez**	**2.56**	**353**	PN	**Pn**	**12 36 59.5**	**+1.4**
ALN	**Alexandroupoli**	**2.73**	**352**	PN	**Pn**	**12 37 01.1**	**+0.7**
SBT4	**Kumbag-Tekirda**	**2.74**	**16**	PN	**Pn**	**12 37 01.3**	**+0.9**

KRSC 20 12:45:49.2±1.6**,49°.70N**×**157°.08E,h15**^{km}±32^{km}**,ML3.8,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.17**	**328**	*e*P	Pn	12 46 09.6	-1.3
SKR				*e*S	Sb	12 46 24.5	-1.4
PAU	**Pauzhetka**	**1.78**	**355**	*e*P	Pb	12 46 21.0	-0.5
PAU				*e*S	Sb	12 46 43.9	+0.3
KDTR	**Khodutka, Kamc**	**2.21**	**16**	*e*P	Pb	12 46 27.7	-1.1
KDTR				*e*S	Sb	12 46 55.8	-0.1
MTVR	**Mutnovka**	**2.88**	**14**	*e*P	Pn	12 46 37.4	+2.8
MTVR				*e*S	Sb	12 47 12.5	-2.8
RUS	**Russkaya**	**2.89**	**18**	*e*P	Pn	12 46 36.8	+2.2
RUS				*e*S	Sn	12 47 11.5	+2.5
DALK	**Dalny**	**3.50**	**17**	*e*P	Pn	12 46 46.0	+3.0
DALK				*e*S	Sn	12 47 28.3	+4.2
UGLR	**Uglovaya**	**3.68**	**17**	*e*P	Pn	12 46 49.2	+3.6
AVH	**Avacha**	**3.72**	**16**	*e*P	Pn	12 46 50.1	+4.0
KOK	**Koryaka**	**3.73**	**15**	*e*P	Pn	12 46 50.1	+3.8
SPN	**Mys Shipunski**	**3.87**	**27**	S	Sn	12 47 36.3	+3.0
GNL	**Ganaly**	**4.04**	**7**	P	Pn	12 46 54.6	+4.0

IDC 20 12:51:59.0±884.0**,53°.00N**×**3°.11E,h0**^{km}**,Error ellipse: s-maj=418.5km s-min=154.1km az=107.0,North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**7.88**	**118**	*i*		13 37 20.0	
	baz=307,slow=334,SNR=1.5						
I43RU	**DUBNA INFRASON**	**19.85**	**66**	*i*		14 55 50.0	
	baz=277,slow=338,SNR=0.3						
I31KZ	**AKTYUBINSK INF**	**33.44**	**72**	*i*		16 21 10.0	
	baz=292,slow=322,SNR=0.4						

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*IDC **20** 13:06:25.4±1.7, 7°.76S×122°.49E, h0^{km}, mb3.3/1, mb1 3.4/5, mb1mx3.3/33, mbtmp3.3/5, ML2.7/4, Error ellipse: s-maj=141.1km s-min=24.5km az=62.0*
*ISCJB **20** 13:06:27.3±1.3, 8°.40S±0°.10×121°.74E±0°.08, h33^{km}, mb3.5/1, Error ellipse: s-maj=13.8km s-min=12.0km az=175.8*
*DJA **20** 13:06:27.1±0.9, 8°S±9°×12°2E±°, h16^{km}±7^{km}, M2.9/5, MLv2.9/5*
ISC 20 13:06:28.5±1.5**,8°.5S**±0°.1×**121°.74E**±0°.09**,h35**^{km}**,n8,**
σ**1^{s}.65**/8**,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.26**	**191**	P	**Pn**	**13 06 34.6**	**-1.5**
EDFI				S	**Sn**	**13 06 41.4**	**+0.1**
MMRI	**Maumere**	**0.51**	**106**	P	**Pn**	**13 06 38.2**	**-1.1**
MMRI				S	**Sn**	**13 06 45.9**	**-0.9**
BATI	**Baumata**	**2.55**	**132**	P	**Pn**	**13 07 07.9**	**+0.5**
BATI	**Baumata**	**2.55**	**132**	Pn	Pn	13 07 11.3	+3.9
	2.1nm,0.3s,baz=328,slow=7.3,SNR=3.7						
FITZ	**Fitzroy Crossi**	**10.27**	**159**	Pn	Pn	13 08 59.5	+6.0
	0.1nm,0.3s,baz=348,slow=9.3,SNR=2.7						
WRA	**Warramunga Arr**	**16.68**	**134**	Pn	**P**	**13 10 20.2**	**-1.5**
	0.0nm,0.3s,baz=304,slow=14,SNR=3.5						
ASAR	**Alice Springs**	**19.06**	**144**	P	**Pn**	**13 10 51.5**	**+2.6**
	0.0nm,0.3s,baz=327,slow=12,SNR=7.0						
MKAR	**Makanchi Array**	**65.28**	**331**	P	**P**	**13 17 07.3**	**+0.5**
	0.3nm,0.7s,baz=126,slow=7.3,SNR=3.7						

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*UCR **20** 13:08:33.1±1.6, 10°.27N×86°.33W, h15^{km}±10^{km}, MD4.1*
*IDC **20** 13:08:35.0±5.5, 11°.43N×85°.48W, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.6/35, mbtmp3.5/4, ML3.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/24, Error ellipse: s-maj=119.0km s-min=70.9km az=15.0*
ISC 20 13:08:32.8±1.9**,10°.37N**±0°.07×**86°.26W**±0°.06**,h6**^{km}±11^{km}**,**
n34,σ**1^{s}.06**/39**,mb3.3**/3**,9C,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.77**	**68**	*i* P	**Pn**	**13 08 49.6**	**-0.6**
PLVR	**Palo Verde**	**0.90**	**91**	⇑*e*P	**Pb**	**13 08 50.7**	**-0.2**
PLVR				*e*S	**Sb**	**13 09 03.4**	**+0.2**
LAPC	**Finca la Perla**	**0.91**	**64**	*i* P	**Pb**	**13 08 51.0**	**0.0**
BUEV	**Buena Vista**	**0.94**	**63**	⇑*i*P	**Pb**	**13 08 51.8**	**+0.1**
BUEV				*i* S	**Sn**	**13 09 07.8**	**+1.2**
GB1A	**Borinquen Arri**	**0.96**	**62**	*i* P	**Pb**	**13 08 52.2**	**+0.3**
GPS3	**Bodega del ICE**	**0.96**	**66**	*i* P	**Pb**	**13 08 52.1**	**+0.2**
GPS2	**Hotel Rincn d**	**0.97**	**67**	⇑*e*P	**Pb**	**13 08 52.3**	**+0.1**
GPS2				*e*S	**Sn**	**13 09 06.5**	**-0.8**
GPS1	**Guardaparques**	**0.99**	**65**	*i* P	**Pb**	**13 08 52.6**	**+0.2**
GUAB	**Guayabo de Bag**	**1.07**	**71**	*i* P	**Pg**	**13 08 53.7**	**+0.3**
COLC	**Colonia**	**1.08**	**74**	*i* P	**Pg**	**13 08 53.9**	**+0.2**
MESS	**Mesas**	**1.11**	**70**	⇑*i*P	**Pg**	**13 08 54.4**	**+0.2**
MESS				*i* P	**Pg**	**13 08 54.5**	**+0.2**
MESS				*e*S	**Sn**	**13 09 11.8**	**+1.0**
CUI	**Cuipilapa**	**1.12**	**75**	*i* P	**Pg**	**13 08 54.4**	**0.0**
CUI				⇑*i*P	**Pg**	**13 08 54.4**	**0.0**
CUI				*e*S	**Sn**	**13 09 14.4**	**+3.6**
JTS	**JuntasAbangare**	**1.29**	**93**	⇑*i*P	**Pn**	**13 08 56.5**	**-0.9**
ARE1	**Arenal 1**	**1.52**	**86**	⇑*i*P	**Pn**	**13 09 00.8**	**+0.3**
CEDE	**Laguna Cedeo**	**1.54**	**85**	⇑*e*P	**Pn**	**13 09 01.1**	**+0.3**
MGAN	**Managua**	**1.77**	**0**	*e*P	**Pn**	**13 09 03.9**	**-0.1**
COPN	**Copaltepe**	**1.83**	**350**	*e*P	**Pn**	**13 09 04.6**	**-0.3**
ACON	**Acoyapa**	**1.92**	**34**	⇑*i*P	**Pn**	**13 09 06.0**	**0.0**
MOMN	**Momotombo**	**2.05**	**352**	*e*P	**Pn**	**13 09 07.5**	**-0.4**
HDC	**Heredia**	**2.15**	**99**	*e*P	**Pg**	**13 09 14.1**	**0.0**
BOAB	**BOACO BROADBAN**	**2.15**	**16**	*e*P	**Pn**	**13 09 09.2**	**-0.1**
CNGN	**Cerro Negro**	**2.17**	**349**	*e*P	**Pn**	**13 09 10.9**	**+1.4**
LCR2	**La Lucha 2**	**2.31**	**105**	*e*P	**Pn**	**13 09 11.7**	**+0.1**
CRIN	**San Cristobal**	**2.45**	**342**	*e*P	**Pn**	**13 09 13.4**	**+0.1**
MATN	**Matagalpa**	**2.57**	**7**	*e*P	**Pn**	**13 09 15.4**	**+0.3**
ESPN	**Las Esperanzas**	**2.65**	**46**	*e*P	**Pn**	**13 09 15.0**	**-1.1**
ESPN				*e*S	**Sg**	**13 09 57.7**	**-0.3**
CMIG	**Matias Romero**	**10.71**	**310**	Pn	**Pn**	**13 11 08.9**	**+2.0**
	0.2nm,0.3s,baz=69,slow=14,SNR=2.3						
SDV	**Santo Domingo**	**15.48**	**94**	LR	LR	13 18 05.8	
	comp=Z,40nm,19.5s,baz=228,slow=38						
TXAR	**Lajitas Array**	**24.92**	**322**	P	**P**	**13 13 57.2**	**+0.3**
	0.8nm,0.6s,baz=136,slow=9.7,SNR=13						
H06E1	**SOCORRO T-PHAS**	**25.27**	**292**	T	T	13 40 15.0	
	SNR=3.7						
TKL	**Tuckaleechee C**	**25.28**	**5**	LR	LR	13 23 39.5	
	comp=Z,49nm,18.1s,baz=305,slow=37						
PDAR	**Pinedale Array**	**38.15**	**332**	P	**P**	**13 15 52.3**	**-0.9**
	0.3nm,0.6s,baz=136,slow=9.4,SNR=3.4						
YKA	**Yellowknife Ar**	**55.92**	**345**	P	**P**	**13 18 08.3**	**-3.0**
	0.2nm,0.7s,baz=137,slow=7.5,SNR=6.6						
WRA	**Warramunga Arr**	**139.76**	**251**	PKP	**PKiKP**	**13 28 07.0**	**+1.9**
	0.4nm,1.0s,baz=87,slow=2.2,SNR=3.3						

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*SOME **20** 13:09:10.0, 42°.52N×79°.60E, h10^{km}*
*NNC **20** 13:09:10.7±0.7, 42°.58N×79°.58E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=4.8km s-min=2.4km az=133.0*
KRNET 20 13:09:11.0±0.1**,42°.58N**×**79°.58E,h18**^{km}**,mb2.9,27C-19D,**
Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.58**	**351**	*e*P	Pb	13 09 23.1	+0.4
	baz=21						
SHLS				*e*S	Sn	13 09 32.6	-1.1
	baz=21						
SHLS	**Shalkode**	**0.58**	**351**	*e*P	Pb	13 09 23.1	+0.3
	25nm,0.1s						
SHLS				*e*S	Sn	13 09 32.6	-1.1
	265nm,0.2s						
UZB	**Uzynbulak**	**0.70**	**324**	*e*P	Pb	13 09 24.6	-0.2
	baz=24						
UZB				*e*S	Sg	13 09 34.9	+0.7
	baz=24						
UZB	**Uzynbulak**	**0.70**	**324**	*e*P	Pb	13 09 24.6	-0.2
	7.9nm,0.2s						
UZB				*e*S	Sg	13 09 34.9	+0.6
	66nm,0.2s						
PDGK	**Podgornoye**	**0.75**	**355**	⇑P	Pb	13 09 25.2	-0.5
	2.5nm,0.4s						
PDGK				⇑S	Sg	13 09 36.0	+0.1
	29nm,0.3s						
PDGK	**Podgornoye**	**0.75**	**355**	⇑*i*P	Pb	13 09 25.2	-0.5
	baz=55						
PDGK				⇑*i*S	Sg	13 09 36.0	+0.2
	baz=55						
PRZ	**Przheval'sk**	**0.88**	**264**	⇑*i*P	Pb	13 09 27.8	0.0
	baz=64						
PRZ				⇑*i*S	Sg	13 09 40.4	+0.6
	baz=64						
SATY	**Saty**	**0.99**	**299**	P	Pb	13 09 29.8	+0.1
	12nm,0.1s						
SATY				S	Sn	13 09 43.5	-0.2
	51nm,0.1s						
SATY	**Saty**	**0.99**	**299**	⇑*i*P	Pb	13 09 29.8	+0.1
	12nm,0.1s						
SATY				⇓*i*S	Sn	13 09 43.5	-0.2
	51nm,0.1s						
KURS	**Kuram**	**1.38**	**312**	P	Pg	13 09 37.4	-0.2
	3.5nm,0.3s						
KURS				S	Sg	13 09 56.4	+0.9
	11nm,0.3s						
KURS	**Kuram**	**1.38**	**312**	*e*P	Pg	13 09 37.4	-0.2
	baz=12						
KURS				⇓*e*S	Sg	13 09 56.5	+0.9
	baz=12						
KURS	**Kuram**	**1.38**	**312**	*e*P	Pg	13 09 37.4	-0.2
	3.5nm,0.3s						
KURS				⇓*e*S	Sg	13 09 56.4	+0.9
	11nm,0.3s						
DJR	**Jarkent**	**1.76**	**5**	P	Pb	13 09 43.1	+0.3
	2.6nm,0.2s						
DJR				S	Sg	13 10 07.1	-0.6
	10nm,0.4s						
DJR	**Jarkent**	**1.76**	**5**	*e*P	Pb	13 09 43.1	+0.3
	2.6nm,0.2s						
DJR				*e*S	Sg	13 10 07.1	-0.6
	10nm,0.4s						
KDJ	**Kajisay**	**1.84**	**257**	⇑*i*P	Pb	13 09 44.6	+0.5
	baz=57						
KDJ				⇑*i*S	Sg	13 10 10.1	-0.1
	baz=57						
MDOK	**Medeo**	**1.95**	**288**	⇑Pg	Pb	13 09 46.7	+0.5
	3.2nm,0.4s						
MDOK				Lg	Lg	13 10 12.9	
	12nm,0.6s						
MDOK	**Medeo**	**1.95**	**288**	Pg	Pb	13 09 46.7	+0.6
	4.8nm,0.4s						
MDOK				Lg	Lg	13 10 12.8	
	20nm,0.5s						
MDOK	**Medeo**	**1.95**	**288**	*e*P	Pb	13 09 46.7	+0.6
	baz=88						
MDOK				*e*S	Sg	13 10 12.8	-1.1
	baz=88						
MDOK	**Medeo**	**1.95**	**288**	*e*P	Pb	13 09 46.7	+0.6
	4.8nm,0.4s						
MDOK				*e*S	Sg	13 10 12.8	-1.1
	20nm,0.5s						
TNSS	**Tian-Shan**	**1.99**	**284**	Pg	Pb	13 09 47.3	+0.3
	13nm,0.5s						
TNSS				Lg	Lg	13 10 13.8	
	26nm,0.4s						
TNSS	**Tian-Shan**	**1.99**	**284**	⇓*i*P	Pb	13 09 47.3	+0.4
	baz=84						
TNSS				⇑*i*S	Sg	13 10 13.8	-1.5
	baz=84						
TNSS	**Tian-Shan**	**1.99**	**284**	⇓*i*P	Pb	13 09 47.3	+0.3
	13nm,0.5s						
TNSS				⇑*i*S	Sg	13 10 13.8	-1.5
	26nm,0.4s						
IZV	**Izvestkoviy**	**2.23**	**283**	Pg	Pb	13 09 51.4	+0.5
	11nm,0.2s						
IZV				Lg	Lg	13 10 21.5	
	44nm,0.3s						
IZV	**Izvestkoviy**	**2.23**	**283**	*e*P	Pb	13 09 51.4	+0.5
	baz=83						
IZV				*e*S	Sg	13 10 21.5	-1.4
	baz=83						
IZV	**Izvestkoviy**	**2.23**	**283**	*e*P	Pb	13 09 51.4	+0.5
	11nm,0.2s						
IZV				*e*S	Sg	13 10 21.5	-1.3
	44nm,0.3s						
CHKK	**Chushkaly**	**2.29**	**305**	Pg	Pb	13 09 52.3	+0.6
	3.5nm,0.2s						
CHKK				Lg	Lg	13 10 22.9	
	41nm,0.3s						
CHKK	**Chushkaly**	**2.29**	**305**	*e*P	Pb	13 09 52.3	+0.6
	baz=5.0						
CHKK				*e*S	Sg	13 10 22.9	-1.6
	baz=5.0						
CHKK	**Chushkaly**	**2.29**	**305**	*e*P	Pb	13 09 52.3	+0.6
	3.5nm,0.2s						
CHKK				*e*S	Sg	13 10 22.9	-1.6
	41nm,0.3s						
MTBS	**Maitube**	**2.38**	**284**	Pg	Pb	13 09 53.8	+0.3
	14nm,0.2s						
MTBS				Lg	Lg	13 10 25.9	
	40nm,0.4s						
MTBS	**Maitube**	**2.38**	**284**	⇓*i*P	Pb	13 09 53.8	+0.4
	baz=84						
MTBS				⇑*i*S	Sg	13 10 26.0	-1.7
	baz=84						
MTBS	**Maitube**	**2.38**	**284**	⇓*i*P	Pb	13 09 53.8	+0.3
	14nm,0.2s						
MTBS				⇑*i*S	Sg	13 10 25.9	-1.8
	40nm,0.4s						
ULHL	**Ulahol**	**2.50**	**263**	⇑*i*P	Pb	13 09 54.5	-0.9
	baz=63						
ULHL				⇑*i*S	Sb	13 10 26.9	+1.0

	baz=63						
KST	Kastek	2.70	281	Pg	Pb	13 09 58.9	0.0
	5.3nm,0.3s						
KST				Lg	Lg	13 10 34.6	
	23nm,0.7s						
KST	Kastek	2.70	281	*e*P	Pb	13 09 58.9	0.0
	baz=81						
KST				*e*S	Sb	13 10 34.6	+2.8
	baz=81						
KST	Kastek	2.70	281	*e*P	Pb	13 09 58.9	0.0
	5.3nm,0.3s						
KST				*e*S	Sb	13 10 34.6	+2.9
	23nm,0.7s						
KAPS	Kapalarasan	2.71	357	Pg	Pb	13 09 59.4	+0.4
	1.9nm,0.4s						
KAPS				Lg	Lg	13 10 35.1	
	13nm,0.4s						
KAPS	Kapalarasan	2.71	357	⇓*i*P	Pb	13 09 59.4	+0.4
	1.9nm,0.4s						
KAPS				*e*S	Sg	13 10 35.1	-3.0
	13nm,0.4s						
NRN	Naryn	2.91	248	⇓*i*P	Pb	13 10 00.3	-2.1
	baz=48						
NRN				⇓*i*S	Sb	13 10 36.6	-1.1
	baz=48						
TKM2	Tokmak 2	2.96	278	⇓Pg	Pb	13 10 02.7	-0.6
	1.8nm,0.5s						
TKM2				⇓Lg	Lg	13 10 43.2	
	7.3nm,0.6s						
TKM2	Tokmak 2	2.96	278	⇑*i*P	Pb	13 10 00.8	-2.4
	baz=78						
TKM2				⇑*i*S	Sb	13 10 37.8	-1.3
	baz=78						
KZA	Kyzart	3.25	263	⇓*e*P	Pn	13 10 04.8	+3.3
	baz=63						
KZA				⇓*i*S	Sb	13 10 45.3	-2.5
	baz=63						
KBK	Karagaybulak	3.42	273	⇑*e*P	Pb	13 10 07.5	-3.7
	baz=73						
KBK				⇑*i*S	Sb	13 10 49.2	-3.3
	baz=73						
AAK	Ala-Archa	3.76	273	⇓Pg	Pb	13 10 17.0	+0.1
	1.2nm,0.6s						
AAK				⇑Lg	Lg	13 11 08.3	
	2.8nm,0.5s						
UCH	Uchtor	3.77	266	⇓*e*P	Pn	13 10 12.4	+3.8
	baz=66						
UCH				⇓*i*S	Sb	13 10 57.8	-5.0
	baz=66						
ARLS	Aral	3.97	261	⇑*i*P	Pn	13 10 14.2	+3.1
	baz=62						
ARLS				⇑*i*S	Sn	13 11 01.3	+4.0
	baz=62						
MAKZ	Makanchi	4.56	21	⇓Pn	Pn	13 10 22.3	+3.2
	2.0nm,0.9s						
MAKZ				⇑Sn	Sn	13 11 16.9	+5.3
	1.3nm,1.3s						
MAKZ				⇓Lg	Lg	13 11 35.7	
	1.7nm,1.4s						
MK31	Makanchi Array	4.63	24	⇑Pn	Pn	13 10 23.1	+3.0
	0.2nm,0.3s,baz=203,slow=13,SNR=37						
MK31				⇑Sn	Sn	13 11 16.9	+3.5
	0.9nm,0.7s,baz=205,slow=26,SNR=4.1						
MK31				⇑Lg	Lg	13 11 38.8	
	0.3nm,0.3s						

IDC ***20*** *13:13:54.0±2.4, 17°.09S×70°.44W, h122km±22km, mb3.0/3, mb1 3.4/5, mb1mx3.2/35, mbtmp3.6/5, MS3.5/1, Ms1 3.5/1, ms1mx2.5/12, Error ellipse: s-maj=31.9km s-min=23.5km az=130.0*

ISC 20 13:13:54.2±0.9**, 17°.16S**±0°.07×**70°.4W**±0°.1**, h150**km**, n9, σ3ˢ.18**/10**, mb3.0**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.37	69	P	Pn	13 14 33.6	-0.8
	41nm,0.3s,baz=290,slow=6.1,SNR=854						
LPAZ				S	Sn	13 15 02.6	-2.6
	3.3nm,0.3s,baz=8.5,slow=19,SNR=3.0						
LVC	Limon Verde	5.61	165	P	Pn	13 15 16.0	0.0
	2.3nm,0.3s,baz=14,slow=7.4,SNR=48						
LVC				S	Sn	13 16 16.2	-3.8
	4.7nm,0.3s,baz=181,slow=20,SNR=17						
ATAH	Atahualpa	12.64	321	S	S	13 19 18.5	-5.5
	1.0nm,0.3s,baz=217,slow=3.2,SNR=5.8						
SDV	Santo Domingo	25.88	360	LR	LR	13 29 37.1	
	comp=Z,111nm,21.8s,baz=248,slow=36						
TXAR	Lajitas Array	56.27	325	P	P	13 23 20.7	+1.4
	0.1nm,0.6s,baz=150,slow=7.3,SNR=2.7						
TORD	Torodi Ar. Bea	77.32	72	P	P	13 25 35.1	+2.3
	0.4nm,0.5s,baz=242,slow=5.7,SNR=4.2						
YKA	Yellowknife Ar	86.64	341	P	P	13 26 23.4	+3.0
	0.1nm,0.4s,baz=134,slow=4.8,SNR=5.3						
USRK	Ussuriysk Ar.	147.07	330	PKPbc	PKiKP	13 33 22.4	+0.5
	1.1nm,0.6s,baz=44,slow=7.3,SNR=4.2						
SONM	Songino Array	149.30	4	PKPbc	PKPab	13 33 29.0	-1.4
	0.4nm,0.5s,baz=335,slow=0.8,SNR=3.0						

ISCJB ***20*** *13:16:09.1±0.4, 10°.87S±0°.05×165°.92E±0°.06, h10km, mb4.5/28, MS3.9/18, Error ellipse: s-maj=9.5km s-min=6.1km az=149.8*

BJI ***20*** *13:16:09.5, 10°.73S×165°.71E, h6km, mB5.2/13, mb4.7/21, Ms4.8/4, Ms7 4.6/2*

NEIC ***20*** *13:16:10.9±0.5, 10°.80S×165°.93E, h10km, mb4.7/6, Error ellipse: s-maj=12.4km s-min=8.0km az=66.0*

IDC ***20*** *13:16:16.9±3.4, 11°.00S×165°.91E, h54km±30km, mb4.0/13, mb1 4.1/15, mb1mx4.0/35, mbtmp4.3/15, ML4.8/2, MS3.9/17, Ms1 3.9/17, ms1mx3.7/33, Error ellipse: s-maj=22.3km s-min=15.4km az=60.0*

ISC 20 13:16:11.4±0.5**, 10°.83S**±0°.08×**165°.93E**±0°.07**, h10**km**, n67, σ1ˢ.68**/55**, mb4.7**/28**, MS3.9**/18**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.05	283	*e*P	Pn	13 17 44.0	+3.0
HNR				*e*S	Sn	13 18 52.0	+1.6
HNR	Honiara	6.05	283	*e*Pn	Pn	13 17 43.0	+2.0
HNR				S	Sn	13 18 52.0	+1.6
HNR	Honiara	6.05	283	P	Pn	13 17 44.6	+3.6
	65nm,0.3s,baz=161,slow=2.2,SNR=56						
HNR				S	Sn	13 18 52.0	+1.6
	8.8nm,0.3s,baz=173,slow=17,SNR=1.7						
HNR				LR	LR	13 20 12.5	
	comp=Z,3µm,20.6s,baz=119,slow=39						
MARNC	Mare, Loyalty	10.78	169	*e*Pn	Pn	13 18 47.1	+1.2
DZM	Mont Dzumac	11.19	178	*e*Pn	Pn	13 18 52.2	+0.7
	59nm,0.9s						
DZM				*e*LR	LR	13 21 29.8	
	comp=Z,548nm,24.8s						
DZM	Mont Dzumac	11.19	178	*e*Pn	Pn	13 18 51.8	+0.2
DZM				S	Sn	13 20 48.0	-8.9
DZM	Mont Dzumac	11.19	178	P	Pn	13 18 52.3	+0.7
	2.1nm,0.3s,baz=316,slow=14,SNR=40						
DZM				S	Sn	13 20 48.0	-8.9
	0.2nm,0.3s,baz=84,slow=18,SNR=2.6						
DZM				LR	LR	13 22 59.6	
	comp=Z,448nm,18.5s,baz=17,slow=37						
ONTNC	Ouen Toro	11.43	178	*e*Pn	Pn	13 18 56.6	+1.9
OUENC	Ouen Island, N	11.56	176	*e*Pn	Pn	13 18 58.1	+1.6
PINNC	Pines Island,	11.81	173	*e*Pn	Pn	13 19 02.0	+2.0
MSVF	Nonsavu	13.60	122	Pn	Pn	13 19 28.6	+4.1
EIDS	Eidsvold	20.18	222	*e*P	P	13 20 46.9	+0.7
	34nm,1.2s						
CTA	Charters Tower	21.06	242	P	P	13 20 56.6	+0.8
	9.0nm,0.8s,baz=73,slow=13,SNR=13						
CTA				LR	LR	13 28 41.8	
	comp=Z,412nm,19.7s,baz=28,slow=36						
CTAO	Charters Tower	21.06	242	*e*P	P	13 20 55.9	+0.1
	13nm,0.8s						
COEN	Coen	22.44	260	*e*P	P	13 21 10.4	-0.3
	34nm,1.4s						
JAY	Jayapura	26.36	286	LR	LR	13 33 42.5	
	comp=Z,191nm,18.1s,baz=76,slow=40						
URZ	Urewera	29.09	162	P	P	13 22 10.9	-1.3
	6.5nm,0.8s,baz=319,slow=9.3,SNR=5.0						
URZ				LR	LR	13 32 03.8	
	comp=Z,222nm,20.7s,baz=346,slow=33						
H11S2	WAKE ISLAND Hy	29.14	2	T	T	13 52 47.2	
	baz=181,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.15	1	T	T	13 52 46.0	
	baz=181,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.16	2	T	T	13 52 39.8	
	baz=181,slow=76,SNR=10						
BKZ	Black Stump Fm	29.75	163	*e*P	P	13 22 16.8	-1.4
	20nm,1.1s						
H11N1	WAKE ISLAND Hy	30.36	2	T	T	13 54 18.7	
	baz=182,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.37	2	T	T	13 54 10.3	
	baz=182,slow=76,SNR=8.2						
H11N2	WAKE ISLAND Hy	30.38	2	T	T	13 54 20.5	
	baz=182,slow=76,SNR=8.5						
STKA	Stephens Creek	30.72	223	P	P	13 22 25.1	-1.7
	3.5nm,0.7s,baz=18,slow=6.4,SNR=5.4						
STKA				LR	LR	13 33 52.3	
	comp=Z,210nm,20.7s,baz=29,slow=34						
WRAB	Tennant Creek	31.71	250	*e*P	P	13 22 34.2	-1.4
	22nm,0.9s						
WB2	Warramunga Arr	31.71	250	*e*P	P	13 22 34.4	-1.3
WRA	Warramunga Arr	31.73	250	P	P	13 22 35.0	-0.8
	17nm,0.8s,baz=81,slow=9.1,SNR=110						
WRA				LR	LR	13 35 29.5	
	comp=Z,346nm,18.7s,baz=115,slow=36						
LTZ	Lake Taylor	32.31	171	*e*P	P	13 22 39.6	-1.1
	31nm,0.8s						
FOZ	Fox Glacier	32.76	175	*e*P	P	13 22 43.8	-0.7
	18nm,1.0s						
OXZ	Oxford	32.81	172	*e*P	P	13 22 43.0	-2.0
	18nm,0.8s						
AS01	Alice Springs	33.01	243	*e*P	P	13 22 44.4	-2.6
ASAR	Alice Springs	33.05	243	P	P	13 22 45.9	-1.5
	2.9nm,0.7s,baz=65,slow=10.0,SNR=39						
ASAR				PcP	PcP	13 25 28.2	-2.8
	0.4nm,0.6s,baz=73,slow=3.2,SNR=3.0						
ASAR				LR	LR	13 34 52.9	
	comp=Z,264nm,20.9s,baz=82,slow=34						
RPZ	Rata Peaks	33.06	173	*e*P	P	13 22 46.2	-1.0
	19nm,0.7s						
RPZ	Rata Peaks	33.06	173	P	P	13 22 46.6	-0.6
	18nm,0.7s,baz=307,slow=2.1,SNR=9.0						
SIJI	Sorong	35.83	284	LR	LR	13 39 10.9	
	comp=Z,118nm,18.8s,baz=132,slow=38						
FITZ	Fitzroy Crossi	39.61	255	*e*P	P	13 23 42.5	-1.0
FITZ	Fitzroy Crossi	39.61	255	LR	LR	13 38 57.7	
	comp=Z,208nm,21.1s,baz=81,slow=34						
BATI	Baumata	41.54	267	LR	LR	13 43 15.5	
	comp=Z,148nm,18.1s,baz=103,slow=39						
PPT	Papeete	43.57	104	LR	LR	13 39 58.2	
	comp=Z,167nm,21.9s,baz=218,slow=33						
PPT2	Papeete2	43.57	104	*e*LR	LR	13 36 23.8	
	comp=Z,405nm,26.0s						
TBI	Tubuai	44.25	112	*e*LR	LR	13 36 44.8	
	comp=Z,520nm,28.8s						
MORW	Morawa	49.88	241	*e*P	P	13 25 03.7	-1.7
	16nm,1.1s						
TAOE	Nuku Hiva Isla	53.11	93	*e*LR	LR	13 40 49.3	
	comp=Z,150nm,27.0s						
MJAR	Matsushiro Arr	53.86	332	P	P	13 25 34.9	+0.1
	2.1nm,0.9s,baz=176,slow=8.5,SNR=4.3						
MJAR				LR	LR	13 46 09.8	
	comp=Z,27nm,21.7s,baz=110,slow=33						
JNU	Nakatsue	55.01	324	P	P	13 25 44.0	+0.8
	7.0nm,0.9s,baz=121,slow=5.9,SNR=3.4						
RKT	Rikitea	57.49	110	*e*LR	LR	13 42 47.8	
	comp=Z,428nm,25.5s						
NJ2	Nanjing	61.99	315	*e*P	P	13 26 29.5	-2.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XAN	Xi'an	70.11	312	P	P	13 27 26.6	+2.4
XAN				pP	sP	13 27 32.8	+4.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMI	Kunming	71.16	301	P	P	13 27 30.8	-0.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC	Hu-ho-hao-te	71.78	320	*e*P	P	13 27 33.5	-0.8
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.2s						
CM01	Chiang Mai Arr	72.17	293	*e*P	P	13 27 34.9	-2.1
CMAR	Chiang Mai Arr	72.19	293	P	P	13 27 38.4	+1.3
	1.9nm,0.9s,baz=121,slow=4.4,SNR=11						
CMAR				LR	LR	13 59 44.9	
	comp=Z,21nm,18.4s,baz=106,slow=36						
CD2	Chengdu	72.62	307	*e*P	P	13 27 38.0	-1.5
LZH	Lanzhou	74.75	312	*e*P	P	13 27 50.3	-1.7
LZH				pP	sP	13 27 55.5	-1.0
LZH				sP	pP	13 27 58.1	+2.8
LZH				PP	PP	13 30 41.3	+1.9
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.4s						
LZH				LR	LR		
	comp=N,280nm,16.1s						
LZH				LR	LR		
	comp=E,310nm,16.6s						
LZH				LR	LR		
	comp=Z,380nm,18.6s						
SONM	Songino Array	78.60	324	P	P	13 28 14.7	+1.2
	0.3nm,0.5s,baz=131,slow=5.9,SNR=2.4						
GTA	Gaotai	79.04	314	⇑P	P	13 28 17.6	+1.5
GTA				pP	sP	13 28 21.6	+0.9
GTA				sP	PcP	13 28 24.8	+0.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,93nm,7.0s						
GTA				LR	LR		
	comp=N,130nm,16.5s						
GTA				LR	LR		
	comp=E,130nm,16.8s						
ILAR	Eielson Array	83.25	18	P	P	13 28 37.9	0.0
	0.8nm,0.8s,baz=231,slow=5.2,SNR=9.6						
NVAR	Mina Array Bea	85.75	50	LR	LR	13 58 41.6	
	comp=Z,89nm,20.8s,baz=272,slow=30						
WMQ	Urumqi	89.07	315	*e*P	P	13 29 04.8	-2.3
WMQ				sP	sP	13 29 12.0	+0.4
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.9s						
WMQ				LR	LR		
	comp=N,73nm,16.5s						
WMQ				LR	LR		
	comp=E,60nm,21.1s						
PDAR	Pinedale Array	93.28	47	LR	LR	14 09 27.0	
	comp=Z,32nm,18.1s,baz=262,slow=34						
MK01	Makanchi Array	93.48	317	*e*P	P	13 29 26.7	-0.7
MK31	Makanchi Array	93.49	317	*e*P	P	13 29 25.7	-1.8
MKAR	Makanchi Array	93.49	317	*e*P	P	13 29 25.6	-1.8
	5.8nm,0.8s						
MKAR	Makanchi Array	93.49	317	P	P	13 29 27.3	-0.2
	0.7nm,0.7s,baz=100,slow=5.9,SNR=9.5						
YKA	Yellowknife Ar	94.70	27	P	P	13 29 31.9	-0.7
	0.2nm,0.7s,baz=254,slow=4.7,SNR=4.7						
TXAR	Lajitas Array	95.57	61	P	P	13 29 37.0	-0.5
	0.4nm,1.1s,baz=252,slow=8.4,SNR=2.7						
TXAR				LR	LR	14 05 06.1	
	comp=Z,79nm,20.3s,baz=0.0,slow=31						

GUC ***20*** *13:25:47.5±2.9, 14°.89S×73°.38W, h144km±283km*

ISCJB ***20*** *13:25:59.2±0.2, 15°.14S±0°.03×72°.17W±0°.04, h108km, mb4.7/101, Error ellipse: s-maj=6.0km s-min=2.5km az=143.3*

NEIC ***20*** *13:26:00.0±0.5, 15°.24S×72°.11W, h99km±5km, mb4.7/93, Error ellipse: s-maj=8.1km s-min=3.7km az=62.0*

IDC ***20*** *13:26:04.3±1.0, 15°.03S×71°.96W, h131km±6km, mb4.1/12, mb1 4.3/14, mb1mx4.1/34, mbtmp4.5/14, Error ellipse: s-maj=30.8km s-min=14.0km az=32.0*

VAO ***20*** *13:26:05.0±0.7, 15°.33S×72°.10W, h140km±6km, mb4.6*

ISC 20 13:26:00.8±0.3**, 15°.39S**±0°.05×**72°.33W**±0°.06**, h108**km**, n522, σ1ˢ.23**/527**, mb4.6**/101**, 5C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	3.73	149	⇑*e*P	Pn	13 26 57.4	+0.8
LPAZ	La Paz	4.13	103	⇑*e*P	Pn	13 27 05.5	+3.0
LPAZ	La Paz	4.13	103	P	Pn	13 27 05.8	+3.4
	23nm,0.3s,baz=319,slow=4.5,SNR=124						
LPAZ				S	Sn	13 27 48.8	-1.4
	baz=276,slow=14,SNR=3.6						
LPAZ	La Paz	4.13	103	*e*P	Pn	13 27 05.9	+3.4
MNMC	Minye Minye	4.54	145	*e*Pn	Pn	13 27 08.6	+0.9
MNMC	Minye Minye	4.54	145	⇑*e*P	Pn	13 27 08.5	+0.9
PSGC	Pisagua	4.68	154	⇑*e*P	Pn	13 27 08.9	-0.4
PB11	IPOC Station P	5.04	150	*e*Pn	Pn	13 27 14.5	+0.3
PB11	IPOC Station P	5.04	150	⇑*e*P	Pn	13 27 14.6	+0.3
NNA	Nana	5.54	307	*e*Pn	Pn	13 27 19.9	-1.1
PB08	IPOC Station P	5.61	148	⇓*e*P	Pn	13 27 23.1	+0.9
PB01	IPOC Station P	6.23	155	*e*Pn	Pn	13 27 30.0	-0.4
PB04	IPOC Station P	7.21	164	*e*Pn	Pn	13 27 42.6	-1.1
LVC	Limon Verde	7.87	156	P	Pn	13 27 53.3	+0.4
	10nm,0.3s,baz=1.0,slow=8.8,SNR=82						
LVC				S	Sn	13 29 18.6	-2.0
	20nm,0.3s,baz=225,slow=22,SNR=19						
LVC	Limon Verde	7.87	156	*e*P	Pn	13 27 54.2	+1.3
PB10	IPOC Station P	8.25	169	*e*Pn	Pn	13 27 56.7	-1.0
GO02	Mina Guanaco	10.05	166	*e*Pn	Pn	13 28 21.8	-0.6
ATAH	Atahualpa	10.13	323	P	Pn	13 28 25.4	+1.7
	1.1nm,0.3s,baz=242,slow=3.9,SNR=6.4						
ATAH				S	Sn	13 30 14.1	-1.6
	1.5nm,0.3s,baz=89,slow=19,SNR=6.6						
LCO	Las Campanas	13.64	174	*e*Pn	Pn	13 29 11.2	+1.2
LCO	Las Campanas	13.64	174	*e*P	P	13 29 13.0	-2.1
GO04	Tololo Observa	14.78	175	*e*Pn	Pn	13 29 26.0	+1.4
SALV	Santo Antonio	16.03	94	*e*P	Pn	13 29 39.2	-0.9
AQDB	Aquidauana	16.60	110	*e*P	P	13 29 46.8	-0.9
OTAV	Otavalo	16.67	338	*e*P	P	13 29 52.7	+3.7
FLOC	Florencia	17.18	349	*e*P	P	13 29 53.7	-0.5
FLOC	Florencia	17.18	349	*e*P	P	13 29 53.7	-0.5
GCUF	Volcan Galeras	17.24	343	*e*P	Pn	13 29 58.1	+2.6
GCUF	Volcan Galeras	17.24	343	*e*P	Pn	13 29 58.1	+2.6
CRUC	La Cruz	17.46	344	*e*P	Pn	13 30 00.6	+2.6
CRUC	La Cruz	17.46	344	*e*P	Pn	13 30 00.6	+2.6
ROC1	El Roble	17.55	176	*e*P	Pn	13 30 00.6	+1.8
	31nm,1.4s						
CPUP	Villa Florida	17.72	130	*e*P	Pn	13 30 01.4	+0.7
	19nm,1.1s						
CPUP	Villa Florida	17.72	130	P	Pn	13 30 01.5	+0.7
	1.1nm,0.3s,baz=309,slow=12,SNR=13						
CPUP	Villa Florida	17.72	130	*e*P	Pn	13 30 01.4	+0.7
SOTA	Rioblanco	17.92	346	*e*P	Pn	13 30 05.1	+1.4
SOTA	Rioblanco	17.92	346	*e*P	Pn	13 30 05.1	+1.4
PCON	Cinco Dias	18.06	347	*e*P	Pn	13 30 06.0	+0.6
PCON	Cinco Dias	18.06	347	*e*P	Pn	13 30 06.0	+0.6
POPC	Popayan, Colom	18.33	346	*e*P	P	13 30 07.1	0.0
POPC	Popayan, Colom	18.33	346	*e*P	P	13 30 07.1	0.0
PTGA	Pitinga	19.00	41	*e*P	P	13 30 12.3	-1.8
	10.0nm,0.8s						
PTGA	Pitinga	19.00	41	*e*P	P	13 30 12.6	-1.6
YOTC	Yotoco, Valle	19.66	348	*e*P	P	13 30 22.1	+0.7
YOTC	Yotoco, Valle	19.66	348	*e*P	P	13 30 22.1	+0.7
CHIC	Chingaza	19.94	356	*e*P	Pn	13 30 28.2	+0.8
CHIC	Chingaza	19.94	356	*e*P	Pn	13 30 28.2	+0.8
ANIL	Santa Ana	19.99	351	*e*P	P	13 30 25.8	+0.7
ANIL	Santa Ana	19.99	351	*e*P	P	13 30 25.8	+0.7
TRCB	Terra Rica	20.00	115	*e*P	P	13 30 25.5	+0.5
ROSC	El Rosal	20.20	354	P	P	13 30 28.8	+1.3
	2.1nm,0.3s,baz=104,slow=16,SNR=5.6						
RREF	El Recreo	20.38	351	*e*P	Pn	13 30 31.6	-1.2
RREF	El Recreo	20.38	351	*e*P	Pn	13 30 31.6	-1.2
PLMC	San Jos del P	20.54	349	*e*P	P	13 30 31.2	+0.4
PLMC	San Jos del P	20.54	349	*e*P	P	13 30 31.2	+0.4
PTGB	Pitanga	21.15	119	*e*P	P	13 30 37.0	-0.4
RUSC	La Rusia	21.16	358	*e*P	P	13 30 35.3	-2.6
RUSC	La Rusia	21.16	358	*e*P	P	13 30 35.3	-2.6
ITRB	Iturama	21.37	105	*e*P	P	13 30 39.3	-0.5
HELC	Santa Helena	21.68	351	*e*P	P	13 30 44.4	+1.1
HELC	Santa Helena	21.68	351	*e*P	P	13 30 44.4	+1.1
PTBC	PUERTO BERRIO,	21.89	354	*e*P	P	13 30 43.7	-1.5
PTBC	PUERTO BERRIO,	21.89	354	*e*P	P	13 30 43.7	-1.5
ITAB	Concordia	22.16	125	*e*P	P	13 30 48.0	0.0
FRTB	Fartura	22.86	114	*e*P	P	13 30 55.2	+0.1
ZARC	Zaragoza, Cauc	22.87	354	*e*P	P	13 30 54.2	-1.0
ZARC	Zaragoza, Cauc	22.87	354	*e*P	P	13 30 54.2	-1.0
CPSB	Cacapava Do Su	22.88	134	*e*P	P	13 30 55.1	-0.1
UREC	San Jos de Ur	23.21	352	*e*P	P	13 30 57.7	-0.8
UREC	San Jos de Ur	23.21	352	*e*P	P	13 30 57.7	-0.8
IPMB	Ipameri, GO	23.24	100	*e*P	P	13 30 56.9	-2.0
BB19B	Bebedouro	23.28	108	*e*P	P	13 30 58.8	-0.4
BDFB	Brasilia	23.42	94	*e*P	P	13 30 59.2	-1.4
	9.6nm,0.7s						
BDFB	Brasilia	23.42	94	P	P	13 30 59.5	-1.2
	5.9nm,0.5s,baz=263,slow=12,SNR=9.7						
PEXB	Peixe	23.56	85	*e*P	P	13 31 00.5	-1.2
PLTB	Pedras Altas	23.60	137	*e*P	P	13 31 02.5	+0.5
TIJ01	Guaruva-PR	23.96	118	*e*P	P	13 31 06.0	+0.7
SMLC	San Martn de	24.10	356	*e*P	P	13 31 04.9	-1.6
SMLC	San Martn de	24.10	356	*e*P	P	13 31 04.9	-1.6
GO06	Curarrehue	24.11	178	*e*P	P	13 31 09.0	+2.4
	24nm,0.9s						
CNLB	Canela	24.16	129	*e*P	P	13 31 07.4	+0.4
SDV	Santo Domingo	24.18	4	*e*P	P	13 31 05.7	-1.7
	21nm,1.0s						
SDV	Santo Domingo	24.18	4	P	P	13 31 06.1	-1.3
	38nm,1.2s,baz=215,slow=8.0,SNR=11						
SDV	Santo Domingo	24.18	4	*e*P	P	13 31 06.8	-0.6
SPB	Sao Paulo	24.81	113	*e*P	P	13 31 12.5	-0.5
	29nm,0.9s						
PMNB	Patos De Minas	24.95	101	*e*P	P	13 31 14.2	-0.2
TER01	Tubaro-SC	25.11	125	*e*P	P	13 31 15.7	0.0
SJCC	San Jacinto, C	25.28	353	*e*P	P	13 31 15.1	-2.2
SJCC	San Jacinto, C	25.28	353	*e*P	P	13 31 15.1	-2.2
PLCA	Paso Flores	25.30	177	*e*P	P	13 31 19.1	+1.9
	10nm,0.9s						
PLCA	Paso Flores	25.30	177	*e*P	P	13 31 18.8	+1.5
BSCB	Bom Sucesso	26.74	106	*e*P	P	13 31 30.6	+0.1
JANB	Januaria	27.03	93	*e*P	P	13 31 32.2	-0.9
MCI8	Montes Claros	27.32	97	*e*P	P	13 31 35.3	-0.4
MCI6	Montes Claros	27.34	97	*e*P	P	13 31 35.8	-0.1
MCI9	Montes Claros	27.35	97	*e*P	P	13 31 35.7	-0.2
ESAR	Angra dos Reis	27.37	110	*e*P	P	13 31 36.7	+0.7
MCI7	Montes Claros	27.41	97	*e*P	P	13 31 36.3	-0.2
CAM01	Campos-RJ	29.72	107	*e*P	P	13 31 57.3	+0.4
BSFB	Barra de Sao F	30.26	101	*e*P	P	13 32 01.2	-0.5
RIB01	Linhares ES	30.70	102	*e*P	P	13 32 05.3	-0.3
NBCP	Cabaceiras do	32.26	89	*e*P	P	13 32 18.1	-1.3
LNIG	Linares	48.00	326	*e*P	P	13 34 29.4	+0.4
	12nm,0.9s						
254A	Abbeville	48.23	347	P	P	13 34 30.3	-0.3
	baz=166						
349A	Repton	48.62	343	P	P	13 34 32.8	-0.8
	baz=160						
155A	Kite	48.72	349	P	P	13 34 33.8	-0.5
	baz=167						
251A	Midway	48.85	345	P	P	13 34 34.8	-0.6
	baz=163						
249A	Camden	49.19	343	P	P	13 34 37.3	-0.7
	baz=161						
152A	Waverly Hall	49.24	346	*e*P	P	13 34 37.5	-0.9
	24nm,0.9s						
152A	Waverly Hall	49.24	346	P	P	13 34 37.6	-0.7
	baz=164,SNR=6.0						
151A	Opelika	49.25	345	P	P	13 34 37.3	-1.2
	baz=163						
Z54A	Sparta	49.39	348	P	P	13 34 38.5	-0.9
	baz=166						
150A	Eclectic	49.49	345	P	P	13 34 39.4	-0.9
	baz=162						
Z53A	Monticello	49.58	348	P	P	13 34 39.9	-1.0
	baz=165						
PMSA	Palmer Station	49.66	175	*e*P	P	13 34 43.4	+2.3
Z52A	Williamson	49.67	347	P	P	13 34 40.7	-0.9
	baz=164,SNR=6.8						
GOGA	Godfrey	49.68	348	P	P	13 34 40.8	-0.9
	baz=166						
149A	Jones	49.69	344	P	P	13 34 41.1	-0.7
	baz=161						
Y54A	Tignall	49.97	349	P	P	13 34 43.1	-0.8
	baz=167						
X59A	McDuffie Farm,	50.04	353	P	P	13 34 43.6	-0.8
	baz=172						
Z50A	Ashland	50.09	345	*e*P	P	13 34 44.0	-0.9
	24nm,0.6s						
Z50A	Ashland	50.09	345	P	P	13 34 43.9	-0.9
	baz=163,SNR=8.5						
Y53A	Monroe	50.13	348	P	P	13 34 44.4	-0.8
	baz=166						
LRAL	Lakeview Retre	50.15	344	*e*P	P	13 34 44.4	-0.9
	22nm,1.0s						
LRAL	Lakeview Retre	50.15	344	P	P	13 34 44.4	-0.9
	baz=161						
Z49A	Columbiana	50.18	344	P	P	13 34 44.5	-1.0
	baz=162						
Y52A	Lilburn	50.24	347	P	P	13 34 44.9	-1.1
	baz=165						
X56A	White Oak	50.29	351	P	P	13 34 45.9	-0.4
	baz=169						
X55A	Gracelyn & Ava	50.37	350	P	P	13 34 46.2	-0.6
	baz=168						
Y51A	Rockmart	50.50	346	P	P	13 34 46.8	-1.1

	baz=164,SNR=7.0						
145A	**Houston Renfro** baz=158	**50.61**	**341**	P	**P**	**13 34 47.8**	**-0.9**
Y50A	**Piedmont** baz=163	**50.65**	**346**	P	**P**	**13 34 47.8**	**-1.2**
833A	**Chaparral WMA,** baz=145	**50.75**	**329**	P	**P**	**13 34 49.2**	**-0.6**
Y49A	**Blount Mountai** baz=162	**50.78**	**345**	P	**P**	**13 34 48.9**	**-1.1**
X52A	**Dahlonega** baz=165	**50.92**	**348**	P	**P**	**13 34 50.0**	**-1.0**
KMSC	**Kings Mountain** baz=169	**50.98**	**350**	P	**P**	**13 34 50.7**	**-0.8**
Y48A	**Jasper** baz=161	**51.03**	**344**	P	**P**	**13 34 50.5**	**-1.4**
X50B	**Fort Payne** baz=163	**51.17**	**346**	P	**P**	**13 34 51.7**	**-1.3**
W53A	**Cullowhee** baz=166	**51.32**	**349**	P	**P**	**13 34 53.0**	**-1.1**
X49A	**Woodville** baz=162	**51.38**	**345**	P	**P**	**13 34 53.2**	**-1.2**
X48A	**Hartselle** 17nm,0.8s	**51.51**	**344**	*e*P	**P**	**13 34 54.3**	**-1.1**
X48A	**Hartselle** baz=162,SNR=6.0	**51.51**	**344**	P	**P**	**13 34 54.1**	**-1.3**
W51A	**Cleveland** baz=164	**51.64**	**347**	P	**P**	**13 34 55.3**	**-1.1**
V53A	**Saluda** baz=167	**51.74**	**349**	P	**P**	**13 34 56.2**	**-1.1**
X47A	**Russelville** baz=161	**51.79**	**344**	P	**P**	**13 34 55.9**	**-1.5**
W50A	**Signal Mountai** baz=164	**51.80**	**346**	P	**P**	**13 34 56.5**	**-1.1**
SWET	**Sewanee** 10.0nm,0.8s	**51.96**	**346**	*e*P	**P**	**13 34 57.6**	**-1.2**
X46A	**Booneville** baz=160	**52.02**	**343**	P	**P**	**13 34 57.5**	**-1.7**
V52A	**Sevierville** 19nm,1.1s	**52.06**	**348**	*e*P	**P**	**13 34 58.6**	**-0.9**
V52A	**Sevierville** baz=166	**52.06**	**348**	P	**P**	**13 34 58.2**	**-1.3**
W48A	**Pulaski** baz=162,SNR=7.2	**52.13**	**345**	P	**P**	**13 34 58.8**	**-1.3**
Y43A	**Makayla and Ka** baz=157	**52.14**	**340**	P	**P**	**13 34 59.1**	**-1.0**
V51A	**Loudon** baz=165	**52.17**	**348**	P	**P**	**13 34 59.3**	**-1.0**
V50A	**Pikevile** baz=164	**52.21**	**347**	P	**P**	**13 34 59.4**	**-1.1**
U53A	**Fall Branch** baz=167	**52.38**	**350**	P	**P**	**13 35 00.8**	**-1.1**
W47A	**Westpoint** baz=161	**52.41**	**344**	P	**P**	**13 35 00.7**	**-1.3**
V49A	**McMinnville** baz=163	**52.48**	**346**	P	**P**	**13 35 01.1**	**-1.5**
U52A	**Thorn Hill** baz=166	**52.55**	**349**	P	**P**	**13 35 01.9**	**-1.2**
U51A	**La Follette** baz=166	**52.66**	**348**	P	**P**	**13 35 02.7**	**-1.3**
V48A	**Smith Brothers** 12nm,0.7s	**52.67**	**345**	*e*P	**P**	**13 35 02.9**	**-1.2**
V48A	**Smith Brothers** baz=162	**52.67**	**345**	P	**P**	**13 35 02.9**	**-1.2**
WLAR	**White Oak Lake** 45nm,0.7s	**52.68**	**338**	*e*P	**P**	**13 35 04.6**	**+0.5**
TZTN	**Tazewell** baz=166	**52.73**	**349**	P	**P**	**13 35 03.3**	**-1.2**
W45A	**Hickory Valley** baz=159	**52.76**	**343**	P	**P**	**13 35 03.0**	**-1.7**
U50A	**Jamestown** baz=165,SNR=5.5	**52.87**	**347**	P	**P**	**13 35 04.3**	**-1.2**
V47A	**Nunnelly** baz=161	**52.93**	**345**	P	**P**	**13 35 04.1**	**-1.8**
T53A	**Wise** baz=167	**52.97**	**350**	P	**P**	**13 35 05.2**	**-1.1**
U49A	**Red Boiling Sp** baz=164	**53.16**	**346**	P	**P**	**13 35 06.0**	**-1.6**
T52A	**Hallie** baz=167	**53.17**	**349**	P	**P**	**13 35 06.5**	**-1.2**
T51A	**Gray** baz=166,SNR=5.5	**53.22**	**348**	P	**P**	**13 35 06.9**	**-1.1**
WVT	**Waverly** baz=161	**53.30**	**344**	P	**P**	**13 35 06.5**	**-2.1**
R58B	**Mineral** 21nm,0.8s	**53.33**	**355**	*e*P	**P**	**13 35 08.9**	**+0.1**
R58B	**Mineral** baz=173	**53.33**	**355**	P	**P**	**13 35 09.1**	**+0.4**
U48A	**Cassie Pea, Po** baz=163	**53.34**	**346**	P	**P**	**13 35 07.4**	**-1.5**
S55A	**Lewisburg** baz=170	**53.44**	**352**	P	**P**	**13 35 09.6**	**0.0**
T50A	**Nancy** baz=165	**53.45**	**348**	P	**P**	**13 35 08.4**	**-1.3**
U47A	**Clarksville** baz=162	**53.46**	**345**	P	**P**	**13 35 08.4**	**-1.3**
MIAR	**Mount Ida** 18nm,0.8s	**53.62**	**338**	*e*P	**P**	**13 35 10.5**	**-0.5**
MIAR	**Mount Ida** baz=154,SNR=8.0	**53.62**	**338**	P	**P**	**13 35 10.3**	**-0.6**
T49A	**Edmonton** 29nm,0.7s	**53.68**	**347**	*e*P	**P**	**13 35 10.2**	**-1.2**
T49A	**Edmonton** baz=164,SNR=11	**53.68**	**347**	P	**P**	**13 35 10.1**	**-1.2**
W41B	**Gary Mavity, V** 8.2nm,0.6s	**53.73**	**340**	*e*P	**P**	**13 35 10.9**	**-0.9**
W41B	**Gary Mavity, V** baz=156	**53.73**	**340**	P	**P**	**13 35 11.0**	**-0.7**
U45A	**Rockin P Farm,** baz=160	**53.75**	**344**	P	**P**	**13 35 11.3**	**-0.6**
TXAR	**Lajitas Array** 3.0nm,0.6s,baz=154,slow=9.1,SNR=60	**53.79**	**326**	P	**P**	**13 35 12.5**	**+0.1**
TX31	**Lajitas Ar. Si**	**53.79**	**326**	*e*P	**P**	**13 35 12.4**	**-0.1**
S51A	**Beattyville** baz=166	**53.80**	**349**	P	**P**	**13 35 11.4**	**-0.8**
T48A	**Bowling Green** baz=163	**53.88**	**346**	P	**P**	**13 35 11.5**	**-1.3**
R55A	**Marlinton** baz=170	**53.89**	**352**	P	**P**	**13 35 13.1**	**+0.2**
R54A	**Victor** baz=169	**53.91**	**352**	P	**P**	**13 35 12.2**	**-0.8**
T47A	**Sharon Grove** baz=162	**53.93**	**345**	P	**P**	**13 35 11.6**	**-1.6**
S50A	**Richmond** baz=165	**53.99**	**348**	P	**P**	**13 35 12.6**	**-1.1**
LPIG	**La Paz** 39nm,0.3s,baz=173,slow=7.6,SNR=5.1	**54.01**	**316**	P	**P**	**13 35 13.5**	**-0.5**
T46A	**Princeton** baz=161	**54.18**	**345**	P	**P**	**13 35 14.2**	**-0.8**
R53A	**Hurricane** baz=168	**54.20**	**351**	P	**P**	**13 35 14.3**	**-0.8**
U43A	**Rector** baz=158	**54.24**	**342**	P	**P**	**13 35 14.2**	**-1.3**
W39A	**Magazine** 17nm,0.8s	**54.28**	**338**	*e*P	**P**	**13 35 15.5**	**-0.3**
W39A	**Magazine** baz=154,SNR=6.4	**54.28**	**338**	P	**P**	**13 35 15.5**	**-0.3**
S49A	**Springfield** baz=164	**54.28**	**347**	P	**P**	**13 35 14.3**	**-1.4**
S48A	**Wiedeman Farm,** baz=163,SNR=6.6	**54.32**	**347**	P	**P**	**13 35 14.3**	**-1.7**
T45A	**Paducah** baz=160	**54.35**	**344**	P	**P**	**13 35 15.6**	**-0.6**
ABTX	**Abilene, Hawle** 24nm,1.1s	**54.43**	**332**	*e*P	**P**	**13 35 16.8**	**-0.1**
ABTX	**Abilene, Hawle** baz=147,SNR=5.2	**54.43**	**332**	P	**P**	**13 35 16.9**	**-0.1**
R51A	**Hillsboro** baz=166	**54.44**	**349**	P	**P**	**13 35 15.6**	**-1.3**
S47A	**Hartford** baz=162	**54.45**	**346**	P	**P**	**13 35 15.5**	**-1.4**
U42A	**Revenden** baz=157,SNR=7.8	**54.48**	**341**	P	**P**	**13 35 15.8**	**-1.4**
R50A	**Paris** baz=166	**54.56**	**348**	P	**P**	**13 35 16.5**	**-1.2**
Q55A	**Buckhannon** baz=171	**54.59**	**353**	P	**P**	**13 35 17.9**	**-0.1**
PBMO	**Poplar Bluff** 20nm,0.5s	**54.63**	**342**	*e*P	**P**	**13 35 16.9**	**-1.3**
Q54A	**Coxs Mills** baz=170	**54.67**	**352**	P	**P**	**13 35 17.7**	**-0.8**
T44A	**Benton** baz=159	**54.67**	**343**	P	**P**	**13 35 17.4**	**-1.2**
U41A	**Viola** baz=156	**54.69**	**341**	P	**P**	**13 35 17.5**	**-1.3**
S46A	**Don Dixon Farm** baz=162,SNR=7.7	**54.74**	**345**	P	**P**	**13 35 17.6**	**-1.4**
R49A	**Shelbyville** baz=165	**54.74**	**348**	P	**P**	**13 35 17.6**	**-1.5**
Q52A	**Bidwell** baz=168	**54.86**	**351**	P	**P**	**13 35 18.6**	**-1.3**
T43A	**Greenville** baz=158,SNR=10	**54.87**	**342**	P	**P**	**13 35 18.6**	**-1.4**
WCI	**Wyandotte Cave** 27nm,1.1s	**54.92**	**347**	*e*P	**P**	**13 35 18.8**	**-1.6**
WCI	**Wyandotte Cave** baz=163	**54.92**	**347**	P	**P**	**13 35 18.9**	**-1.5**
S45A	**Carrier Mills** baz=160	**54.96**	**344**	P	**P**	**13 35 19.4**	**-1.2**
R48A	**Northridge Ran** baz=164	**54.99**	**347**	P	**P**	**13 35 19.7**	**-1.2**
U40A	**Yellville** baz=155,SNR=8.4	**55.00**	**340**	P	**P**	**13 35 19.8**	**-1.3**
R47A	**Wooly Knot Far** baz=163	**55.04**	**346**	P	**P**	**13 35 19.5**	**-1.7**
Q50A	**Georgetown** baz=166	**55.04**	**349**	P	**P**	**13 35 20.1**	**-1.1**
T42A	**Van Buren** 7.6nm,0.6s	**55.06**	**342**	*e*P	**P**	**13 35 19.6**	**-1.7**
T42A	**Van Buren** baz=158,SNR=5.6	**55.06**	**342**	P	**P**	**13 35 19.7**	**-1.7**
Q51A	**Peebles** baz=167	**55.10**	**350**	P	**P**	**13 35 20.6**	**-1.1**
S44A	**Carbondale** baz=160,SNR=10	**55.15**	**344**	P	**P**	**13 35 20.7**	**-1.3**
SIUC	**Southern Illin** 53nm,0.7s	**55.16**	**344**	*e*P	**P**	**13 35 21.0**	**-1.1**
MCWV	**Mont Chateau** baz=171	**55.21**	**353**	P	**P**	**13 35 21.9**	**-0.6**
P54A	**Burton** baz=170	**55.23**	**352**	P	**P**	**13 35 21.6**	**-1.1**
P53A	**Whipple** baz=169	**55.24**	**351**	P	**P**	**13 35 21.7**	**-0.9**
S43A	**Fulton Ridge,** baz=159	**55.27**	**343**	P	**P**	**13 35 21.4**	**-1.4**
T41A	**Mountain View** baz=157	**55.28**	**341**	P	**P**	**13 35 22.1**	**-0.8**
HHAR	**Hobbs** 11nm,0.6s	**55.31**	**339**	*e*P	**P**	**13 35 22.3**	**-0.9**
Q49A	**Aurora** baz=165	**55.38**	**348**	P	**P**	**13 35 22.2**	**-1.4**
R45A	**Skylar, Fairfi** baz=161,SNR=9.3	**55.46**	**345**	P	**P**	**13 35 22.7**	**-1.6**
Q48A	**North Vernon** baz=164	**55.47**	**347**	P	**P**	**13 35 22.8**	**-1.5**
P52A	**Corning** baz=168	**55.50**	**351**	P	**P**	**13 35 23.1**	**-1.4**
R44A	**Waltonville** baz=160	**55.62**	**344**	P	**P**	**13 35 24.0**	**-1.4**
Q47A	**Bedord North L** baz=163	**55.63**	**347**	P	**P**	**13 35 24.1**	**-1.4**
TUL1	**Leonard** baz=152	**55.65**	**337**	P	**P**	**13 35 24.9**	**-0.7**
S42A	**Caledonia** baz=158	**55.66**	**342**	P	**P**	**13 35 23.9**	**-1.7**
O55A	**Ligonier** baz=172	**55.69**	**354**	P	**P**	**13 35 23.8**	**-2.1**
FVM	**French Village** 15nm,0.7s	**55.75**	**343**	*e*P	**P**	**13 35 24.7**	**-1.6**
P50A	**Jamestown** baz=166	**55.75**	**349**	P	**P**	**13 35 24.8**	**-1.5**
S41A	**Jillco Farms,** baz=157,SNR=7.2	**55.77**	**341**	P	**P**	**13 35 25.2**	**-1.3**
O54A	**Avella** baz=170	**55.79**	**353**	P	**P**	**13 35 26.2**	**-0.4**
P49A	**Miami Univ. Ec** baz=165	**55.85**	**348**	P	**P**	**13 35 25.2**	**-1.8**
R43A	**Red Bud** baz=159	**55.88**	**343**	P	**P**	**13 35 26.1**	**-1.1**
P48A	**Milroy** baz=164	**55.92**	**348**	P	**P**	**13 35 25.4**	**-2.1**
O52A	**Adamsville** baz=169	**55.93**	**351**	P	**P**	**13 35 26.3**	**-1.2**
Q45A	**Warren Harvey,** baz=161	**56.00**	**345**	P	**P**	**13 35 26.3**	**-1.7**
CCM	**Cathedral Cave** baz=158	**56.05**	**342**	P	**P**	**13 35 27.3**	**-1.1**
O51A	**Pataskala** baz=168	**56.08**	**351**	P	**P**	**13 35 27.3**	**-1.4**
P47A	**Martinsville** baz=164	**56.12**	**347**	P	**P**	**13 35 27.3**	**-1.7**
R42A	**Luebbering** baz=158	**56.13**	**343**	P	**P**	**13 35 27.8**	**-1.2**
ACSO	**Alum Creek Sta** 28nm,1.1s	**56.22**	**350**	*e*P	**P**	**13 35 28.4**	**-1.2**
ACSO	**Alum Creek Sta** baz=167	**56.22**	**350**	P	**P**	**13 35 28.4**	**-1.2**
Q44A	**Meyer Farm, Va** 21nm,0.7s	**56.22**	**344**	*e*P	**P**	**13 35 28.2**	**-1.4**
Q44A	**Meyer Farm, Va** baz=160	**56.22**	**344**	P	**P**	**13 35 28.1**	**-1.6**
N55A	**Marion Center** baz=172	**56.23**	**354**	P	**P**	**13 35 30.0**	**+0.3**
O50A	**Cable** baz=167	**56.24**	**350**	P	**P**	**13 35 28.4**	**-1.4**
R41A	**Rosebud** baz=158,SNR=9.7	**56.32**	**342**	P	**P**	**13 35 29.1**	**-1.2**
O49A	**Covington** baz=166	**56.41**	**349**	P	**P**	**13 35 29.1**	**-1.9**
Q43A	**New Douglas** baz=160	**56.44**	**344**	P	**P**	**13 35 29.8**	**-1.4**
P45A	**Graceland, Par** 24nm,1.0s	**56.50**	**346**	*e*P	**P**	**13 35 29.6**	**-2.0**
P45A	**Graceland, Par** baz=162	**56.50**	**346**	P	**P**	**13 35 29.9**	**-1.7**
N54A	**Moraine State** baz=171	**56.51**	**353**	P	**P**	**13 35 31.6**	**-0.1**
MNTX	**Cornudas Mount** 4.4nm,0.8s	**56.55**	**326**	*e*P	**P**	**13 35 31.6**	**-0.6**
MNTX	**Cornudas Mount** baz=141,SNR=8.1	**56.55**	**326**	P	**P**	**13 35 31.6**	**-0.6**
N52A	**McGinn's Farm,** baz=169	**56.59**	**351**	P	**P**	**13 35 31.0**	**-1.2**
O48A	**Farmland** baz=165	**56.63**	**348**	P	**P**	**13 35 31.0**	**-1.5**
Q42A	**Golden Eagle** baz=159,SNR=8.1	**56.64**	**343**	P	**P**	**13 35 31.7**	**-1.0**
P44A	**Sand Creek, Wi** baz=161	**56.66**	**345**	P	**P**	**13 35 31.2**	**-1.6**
N50A	**Nevada** baz=167	**56.77**	**350**	P	**P**	**13 35 32.0**	**-1.5**
O47A	**Sheridan** baz=164	**56.82**	**347**	P	**P**	**13 35 32.1**	**-1.8**
Q41A	**Truxton** baz=158,SNR=5.3	**56.88**	**342**	P	**P**	**13 35 33.3**	**-1.0**
M55A	**Ridgway** baz=172,SNR=5.3	**56.88**	**354**	P	**P**	**13 35 33.7**	**-0.6**
M54A	**Oil Creek Stat** baz=171	**57.02**	**353**	P	**P**	**13 35 34.4**	**-0.9**
MSTX	**Muleshoe** 17nm,1.3s	**57.02**	**330**	*e*P	**P**	**13 35 34.8**	**-0.7**
MSTX	**Muleshoe** baz=144	**57.02**	**330**	P	**P**	**13 35 34.9**	**-0.7**
P43A	**Skaggs, Pawnee** baz=160	**57.05**	**344**	P	**P**	**13 35 34.1**	**-1.4**
M53A	**WI Miller and** baz=170	**57.07**	**353**	P	**P**	**13 35 34.9**	**-0.7**
N49A	**Columbus Grove** 34nm,1.0s	**57.10**	**349**	*e*P	**P**	**13 35 33.6**	**-2.2**
N49A	**Columbus Grove** baz=166	**57.10**	**349**	P	**P**	**13 35 34.1**	**-1.7**
SFIN	**Lafayette** baz=163	**57.16**	**347**	P	**P**	**13 35 34.2**	**-2.0**
M51A	**Elyria** baz=168	**57.17**	**351**	P	**P**	**13 35 34.3**	**-2.0**
O45A	**Potomac** baz=162,SNR=6.1	**57.18**	**346**	P	**P**	**13 35 34.2**	**-2.2**
N48A	**Decatur** baz=165	**57.19**	**349**	P	**P**	**13 35 34.5**	**-2.0**
P42A	**Winchester** baz=159	**57.22**	**343**	P	**P**	**13 35 35.1**	**-1.6**
M52A	**Chesterland** baz=169	**57.26**	**352**	P	**P**	**13 35 35.4**	**-1.6**
N47A	**Urbana** baz=164	**57.34**	**348**	P	**P**	**13 35 35.7**	**-1.9**
M50A	**Fremont** baz=168	**57.37**	**350**	P	**P**	**13 35 36.8**	**-0.9**
BINY	**Binghamton** baz=176	**57.40**	**357**	P	**P**	**13 35 37.9**	**0.0**
P41A	**Barry, Barry** baz=158	**57.50**	**343**	P	**P**	**13 35 37.2**	**-1.5**
L53A	**Girard** baz=171	**57.52**	**353**	P	**P**	**13 35 37.4**	**-1.4**
N46A	**Monticello** baz=163	**57.57**	**347**	P	**P**	**13 35 37.2**	**-1.9**
M49A	**Liberty Center** baz=166	**57.60**	**350**	P	**P**	**13 35 38.0**	**-1.3**
O43A	**Sugar Creek Fa** baz=160	**57.60**	**345**	P	**P**	**13 35 37.3**	**-2.0**
O42A	**Bath** baz=159	**57.72**	**344**	P	**P**	**13 35 38.5**	**-1.6**
M47A	**Cromwell** baz=165	**57.79**	**348**	P	**P**	**13 35 38.9**	**-1.8**
HDIL	**Hopedale** baz=160	**57.85**	**345**	P	**P**	**13 35 39.4**	**-1.7**
O41A	**Passleys Farm,** baz=158	**57.86**	**343**	P	**P**	**13 35 39.4**	**-1.8**
K55A	**Perry** baz=173	**58.07**	**355**	P	**P**	**13 35 42.2**	**-0.5**
L48A	**N Adams** baz=166	**58.13**	**349**	P	**P**	**13 35 41.5**	**-1.6**
M45A	**Boilermakers S** baz=163	**58.16**	**347**	P	**P**	**13 35 42.4**	**-0.8**
N43A	**Stutzman Famil** baz=161,SNR=5.9	**58.18**	**345**	P	**P**	**13 35 41.8**	**-1.6**
N42A	**Yates City** baz=160,SNR=6.8	**58.30**	**344**	P	**P**	**13 35 42.5**	**-1.7**
L47A	**Sherwood** baz=165	**58.30**	**349**	P	**P**	**13 35 42.3**	**-1.9**
N41A	**Harden Midland** baz=159	**58.41**	**344**	P	**P**	**13 35 43.9**	**-1.1**
319A	**Douglas** 10.0nm,0.7s	**58.49**	**323**	*e*P	**P**	**13 35 45.7**	**-0.2**
121A	**Cookes Peak, D** baz=139,SNR=5.1	**58.50**	**325**	P	**P**	**13 35 46.5**	**+0.5**
M43A	**Waltham Townsh** baz=161	**58.60**	**345**	P	**P**	**13 35 44.9**	**-1.4**
KSU1	**Kansas State U** baz=152	**58.77**	**338**	P	**P**	**13 35 46.8**	**-0.8**
J52A	**Paris** baz=171	**58.82**	**353**	P	**P**	**13 35 46.9**	**-0.9**
K48A	**Perry** baz=166	**58.91**	**350**	P	**P**	**13 35 46.9**	**-1.6**
K46A	**Dorr** baz=165	**59.10**	**348**	P	**P**	**13 35 47.5**	**-2.2**
M40A	**Post Highland** baz=158	**59.24**	**343**	P	**P**	**13 35 48.9**	**-1.8**
L43A	**Garden Prairie** baz=161	**59.26**	**346**	P	**P**	**13 35 49.0**	**-1.8**
WLVO	**Wesleyville** baz=173	**59.29**	**355**	P	**P**	**13 35 50.1**	**-0.9**
L42A	**Oliver, Polo** baz=160	**59.31**	**345**	P	**P**	**13 35 49.5**	**-1.7**
J48A	**Bridge Port** baz=167	**59.34**	**350**	P	**P**	**13 35 48.2**	**-3.1**
I51A	**Listowel** baz=170	**59.44**	**353**	P	**P**	**13 35 50.9**	**-1.1**
J47A	**Sunmer** baz=166	**59.46**	**349**	P	**P**	**13 35 50.7**	**-1.5**
M39A	**Webster** baz=157	**59.49**	**343**	P	**P**	**13 35 51.2**	**-1.3**
LAZ	**Ladron**	**59.57**	**327**	*e*P	**P**	**13 35 53.7**	**+0.3**
L41A	**Preston** baz=159	**59.59**	**344**	P	**P**	**13 35 51.0**	**-2.1**
ANMO	**Albuquerque** 3.8nm,1.0s	**59.63**	**328**	*e*P	**P**	**13 35 53.3**	**-0.6**
ANMO	**Albuquerque** baz=141	**59.63**	**328**	P	**P**	**13 35 53.8**	**-0.1**
K43A	**Burlington** baz=162	**59.65**	**346**	P	**P**	**13 35 51.8**	**-1.7**
CBKS	**Cedar Bluff** baz=149	**59.72**	**335**	P	**P**	**13 35 53.5**	**-0.6**
BWLO	**Walkerton** baz=170	**59.76**	**353**	P	**P**	**13 35 53.1**	**-1.2**
L40A	**Anamosa** baz=159	**59.77**	**344**	P	**P**	**13 35 53.1**	**-1.3**
H56A	**Elgin** baz=175	**59.80**	**357**	P	**P**	**13 35 53.5**	**-1.0**
K42A	**Prairie Point,** baz=161	**59.96**	**346**	P	**P**	**13 35 54.1**	**-1.6**
L39A	**Vinton** baz=158	**60.04**	**343**	P	**P**	**13 35 54.2**	**-2.0**
TUC	**Tucson** baz=136	**60.05**	**323**	P	**P**	**13 35 56.5**	**-0.1**
I48A	**Sherman Twp** baz=167	**60.19**	**351**	P	**P**	**13 35 55.7**	**-1.5**
I46A	**Reed City** baz=165	**60.25**	**349**	P	**P**	**13 35 55.6**	**-2.0**
PLVO	**Plevna** baz=174	**60.30**	**356**	P	**P**	**13 35 56.4**	**-1.5**
JFWS	**Jewell Farm** baz=160	**60.31**	**345**	P	**P**	**13 35 56.5**	**-1.6**
J43A	**Natural Harves** baz=162	**60.32**	**347**	P	**P**	**13 35 56.7**	**-1.4**
K40A	**Colesburg** baz=159	**60.34**	**344**	P	**P**	**13 35 56.5**	**-1.7**
T25A	**Trinidad** baz=144	**60.36**	**331**	P	**P**	**13 35 59.3**	**+0.5**
PKME	**Peaks-Kenny Pk** baz=183	**60.43**	**2**	P	**P**	**13 35 58.1**	**-0.7**
G53A	**Haliburton** baz=173	**60.49**	**355**	P	**P**	**13 35 58.7**	**-0.6**
K39A	**Oelwein** baz=158	**60.55**	**344**	P	**P**	**13 35 58.0**	**-1.7**
H47A	**Mio** baz=167	**60.67**	**350**	P	**P**	**13 35 58.8**	**-1.7**
J41A	**Loganville** baz=160	**60.68**	**345**	P	**P**	**13 35 59.1**	**-1.4**
I43A	**Langenfeld Bro** baz=162	**60.74**	**347**	P	**P**	**13 35 59.5**	**-1.4**
ALFO	**Alfred** baz=177	**60.77**	**358**	P	**P**	**13 35 59.5**	**-1.6**
H46A	**Fife Lake** baz=166	**60.79**	**349**	P	**P**	**13 35 59.7**	**-1.6**
J40A	**Soldiers Grove** baz=159	**60.89**	**345**	P	**P**	**13 36 00.3**	**-1.6**
J39A	**Decorah** baz=158	**61.08**	**344**	P	**P**	**13 36 01.8**	**-1.5**
KSCO	**Kaye Shedlock'** baz=146	**61.09**	**333**	P	**P**	**13 36 03.5**	**-0.1**
F52A	**Sundridge** baz=172	**61.23**	**354**	P	**P**	**13 36 03.0**	**-1.2**
ALGO	**Algonquin Park** baz=174	**61.27**	**355**	P	**P**	**13 36 03.7**	**-0.8**
I41A	**Arkdale** baz=160	**61.30**	**346**	P	**P**	**13 36 03.2**	**-1.5**
I40A	**Norwalk** baz=160	**61.32**	**345**	P	**P**	**13 36 03.6**	**-1.3**
G45A	**Suttons Bay** baz=165	**61.35**	**349**	P	**P**	**13 36 03.2**	**-1.8**
BGNE	**Belgrade** 50nm,0.9s	**61.36**	**338**	*e*P	**P**	**13 36 04.8**	**-0.5**
BGNE	**Belgrade** baz=151	**61.36**	**338**	P	**P**	**13 36 04.6**	**-0.7**
SDCO	**Great Sand Dun** 8.7nm,0.8s	**61.37**	**330**	*e*P	**P**	**13 36 05.9**	**+0.3**
SDCO	**Great Sand Dun** baz=143,SNR=15	**61.37**	**330**	P	**P**	**13 36 05.8**	**+0.1**
H42A	**Shiocton** baz=162	**61.42**	**347**	P	**P**	**13 36 03.6**	**-1.9**
W18A	**Petrified Fore** baz=138	**61.51**	**325**	P	**P**	**13 36 07.3**	**+0.7**
I39A	**Houston** baz=159	**61.52**	**344**	P	**P**	**13 36 04.9**	**-1.3**
X16A	**Lo Mia Camp, P** 5.2nm,0.8s	**61.95**	**324**	*e*P	**P**	**13 36 10.2**	**+0.7**
F45A	**CMU Biological** baz=165	**61.95**	**350**	P	**P**	**13 36 07.4**	**-1.6**
H40A	**Chili** baz=160	**61.95**	**345**	P	**P**	**13 36 07.9**	**-1.2**
S22A	**4UR Ranch, Cre** baz=142	**62.01**	**329**	P	**P**	**13 36 10.3**	**+0.3**
D52A	**ZEK Kipawa Sen** baz=173	**62.32**	**355**	P	**P**	**13 36 11.3**	**-0.2**
D54A	**Lac Fusel, La** baz=175	**62.38**	**357**	P	**P**	**13 36 10.9**	**-0.9**
F43A	**Flat Rock, Esc** baz=164	**62.40**	**348**	P	**P**	**13 36 10.5**	**-1.5**
E46A	**Sault Ste Mari** baz=167	**62.41**	**351**	P	**P**	**13 36 10.8**	**-1.3**
MVCO	**Mesa Verde** baz=140	**62.43**	**328**	P	**P**	**13 36 12.7**	**-0.1**
LATQ	**La Tuque** baz=179	**62.49**	**360**	P	**P**	**13 36 12.4**	**-0.2**
WUAZ	**Wupatki** 6.6nm,0.9s	**62.71**	**325**	*e*P	**P**	**13 36 15.6**	**+1.1**
WUAZ	**Wupatki** baz=137	**62.71**	**325**	P	**P**	**13 36 15.0**	**+0.4**
F41A	**Three Lakes** baz=162	**62.71**	**347**	P	**P**	**13 36 13.3**	**-0.8**
G39A	**Holcombe** baz=159	**62.77**	**345**	P	**P**	**13 36 13.4**	**-1.1**
G38A	**Ridgeland** baz=158	**62.83**	**345**	P	**P**	**13 36 13.8**	**-1.1**
D48A	**Paudash Townsh**	**62.86**	**353**	P	**P**	**13 36 13.8**	**-1.3**

	baz=170						
D46A	Sault St. Mari	62.88	351	P	P	13 36 13.6	-1.6
	baz=167						
E43A	Lone Tree Farm	62.89	349	P	P	13 36 14.1	-1.2
	baz=164						
ECSD	EROS Data Cent	62.90	340	*e*P	P	13 36 14.4	-1.0
	12nm,1.0s						
ECSD	EROS Data Cent	62.90	340	P	P	13 36 14.6	-0.9
	baz=153,SNR=7.1						
ISCO	Idaho Springs	63.06	332	*e*P	P	13 36 16.4	-0.6
	2.6nm,0.8s						
ISCO	Idaho Springs	63.06	332	P	P	13 36 16.2	-0.8
	baz=143						
F40A	Park Falls	63.11	346	P	P	13 36 15.4	-1.4
	baz=160						
SPMN	Marine on St.	63.13	344	*e*P	P	13 36 15.8	-1.0
	10nm,0.6s						
SPMN	Marine on St.	63.13	344	P	P	13 36 15.9	-1.0
	baz=158						
PV01	Paradox Valley	63.18	329	*e*P	P	13 36 17.7	0.0
	4.4nm,0.7s						
SMCO	Snowmass	63.20	330	*e*P	P	13 36 18.3	+0.2
	6.8nm,1.1s						
PV15	Paradox Valley	63.29	329	*e*P	P	13 36 19.2	+0.7
	80nm,0.6s						
F39A	Loretta	63.29	346	P	P	13 36 17.0	-1.0
	baz=160						
PV13	Radium Mtn., P	63.32	328	*e*P	P	13 36 19.0	+0.4
	6.1nm,0.9s						
F38A	Pierce - Schro	63.57	345	P	P	13 36 19.0	-0.8
	baz=159						
E39A	Mellen	63.64	346	P	P	13 36 19.3	-1.0
	baz=160						
E38A	The Farm, Brul	64.09	345	P	P	13 36 22.2	-1.0
	baz=159						
O20A	White River Ci	64.56	330	*e*P	P	13 36 27.1	+0.4
	6.8nm,0.8s						
O20A	White River Ci	64.56	330	P	P	13 36 26.7	0.0
	baz=141						
KNB	Kanab	64.60	325	*e*P	P	13 36 28.1	+1.2
	8.7nm,0.8s						
GMRC	Granite Mounta	64.68	321	P	P	13 36 27.4	-0.1
	baz=133						
LCMT	Little Creek M	64.83	325	*e*P	P	13 36 29.4	+1.0
	6.3nm,1.1s						
SRU	San Rafael Swe	64.91	328	*e*P	P	13 36 28.7	-0.3
	8.8nm,1.1s						
MTPU	Mount Pierson	64.99	326	*e*P	P	13 36 30.2	+0.5
	4.1nm,0.8s						
MATQ	Matagami	65.03	356	P	P	13 36 28.9	-0.3
	baz=174						
Q16A	Castle Valley	65.10	327	*e*P	P	13 36 30.6	+0.4
	7.1nm,1.2s						
SZCU	Shurtz Canyon	65.16	325	*e*P	P	13 36 31.4	+0.7
	3.2nm,0.8s						
CCUT	Cedar City	65.28	325	*e*P	P	13 36 32.2	+0.8
	6.8nm,0.9s						
TUQ	Turquoise Moun	65.28	322	P	P	13 36 32.1	+0.7
	baz=133						
P17A	Butcher Ranch,	65.29	328	*e*P	P	13 36 31.2	-0.2
	7.1nm,1.0s						
MSU	Marysvale	65.33	326	*e*P	P	13 36 32.5	+0.7
TMUT	Trail Mountain	65.40	328	*e*P	P	13 36 32.7	+0.4
	18nm,0.3s						
BFSC	Mount Baldy Ra	65.54	320	P	P	13 36 34.3	+1.3
	baz=131						
SHPR	Sheep Range	65.56	323	*e*P	P	13 36 33.8	+0.5
	7.0nm,1.1s						
K22A	Casper	65.76	333	P	P	13 36 34.8	+0.4
	baz=143						
RSSD	Black Hills	65.92	336	*e*P	P	13 36 35.8	+0.4
	4.1nm,0.6s						
RSSD	Black Hills	65.92	336	P	P	13 36 35.9	+0.5
	baz=146						
MPU	Maple Canyon	66.16	328	*e*P	P	13 36 37.6	+0.6
	5.2nm,1.1s						
PSUT	Pine Spring	66.25	325	*e*P	P	13 36 38.6	+1.0
	6.0nm,0.9s						
NLU	North Lily Min	66.34	328	*e*P	P	13 36 38.9	+0.7
	6.0nm,1.2s						
JLU	Jordanelle	66.50	328	*e*P	P	13 36 40.0	+0.8
	7.1nm,1.0s						
TPNV	Topopah Spring	66.50	323	*e*P	P	13 36 40.5	+1.3
	11nm,1.1s						
TPNV	Topopah Spring	66.50	323	P	P	13 36 40.5	+1.3
	baz=133						
FURC	Furnace Creek,	66.54	322	P	P	13 36 40.7	+1.5
	baz=132						
SCZ2	Santa Cruz Isl	66.64	318	P	P	13 36 40.2	+0.3
	baz=129						
MPMC	Manual Prospec	66.64	321	P	P	13 36 40.8	+0.6
	baz=132						
AGMN	Agassiz Nation	66.79	343	*e*P	P	13 36 39.6	-0.9
	50nm,0.9s						
AGMN	Agassiz Nation	66.79	343	P	P	13 36 39.9	-0.6
	baz=155,SNR=9.8						
ARVC	Arvin	66.85	320	P	P	13 36 41.8	+0.5
	baz=130						
TCUT	Toone Canyon	66.86	329	*e*P	P	13 36 42.2	+0.7
	11nm,1.1s						
DUG	Dugway, Tooele	66.90	327	*e*P	P	13 36 42.5	+0.8
	11nm,1.1s						
DUG	Dugway, Tooele	66.90	327	P	P	13 36 42.6	+1.0
	baz=137,SNR=8.8						
ISA	Isabella, Lake	66.98	320	P	P	13 36 43.2	+1.0
	baz=131						
R11A	Troy Canyon, C	67.09	324	*e*P	P	13 36 44.0	+1.1
	4.0nm,0.8s						
R11A	Troy Canyon, C	67.09	324	P	P	13 36 44.2	+1.3
	baz=134,SNR=9.7						
VNA1	Neumayer--Stat	67.09	161	P	P	13 36 43.7	+1.5
BW06	Boulder Array	67.23	331	P	P	13 36 44.0	+0.2
	baz=141						
PD31	Pinedale Array	67.23	331	*e*P	P	13 36 43.3	-0.5
PDAR	Pinedale Array	67.23	331	*e*P	P	13 36 43.2	-0.6
PDAR	Pinedale Array	67.23	331	P	P	13 36 43.4	-0.4
	1.2nm,0.7s,baz=105,slow=8.5,SNR=9.4						
CWC	Cottonwood Cre	67.25	321	P	P	13 36 44.5	+0.6
	baz=131						
VNA2	Neumayer--Watz	67.45	161	P	P	13 36 46.9	+2.4
	baz=283,slow=8.5						
VES	Vestal, Richgr	67.47	320	P	P	13 36 45.5	+0.3
	baz=130						
MDND	Maddock	67.51	340	*e*P	P	13 36 45.3	+0.2
	110nm,1.3s						
MDND	Maddock	67.51	340	P	P	13 36 45.5	+0.3
	baz=151						
HVU	Hansel Valley	68.04	328	*e*P	P	13 36 48.9	+0.1
	6.1nm,0.9s						
REDW	Red Top Meadow	68.29	331	*e*P	P	13 36 49.1	-1.3
	10nm,1.4s						
LOHW	Long Hollow	68.37	331	*e*P	P	13 36 50.3	-0.6
	3.6nm,0.8s						
ULM	Lac du Bonnet	68.57	344	*e*P	P	13 36 50.2	-1.4
	18nm,1.0s						
ULM	Lac du Bonnet	68.57	344	P	P	13 36 50.7	-1.0
	12nm,0.7s,baz=152,slow=6.2,SNR=22						
ELK	Elko	68.58	326	*e*P	P	13 36 51.5	-0.7
	2.6nm,0.9s						
FXWY	Fox Creek	68.58	331	*e*P	P	13 36 52.0	-0.3
	4.1nm,0.9s						
NVAR	Mina Array Bea	68.70	323	P	P	13 36 54.1	+1.1
	1.0nm,0.4s,baz=155,slow=6.9,SNR=3.9						
IMW	Indian Meadow	68.74	331	*e*P	P	13 36 52.8	-0.5
	11nm,1.4s						
FLWY	Flagg Ranch	68.77	331	*e*P	P	13 36 53.1	-0.3
	15nm,0.9s						
LAO	LASA Array	68.91	336	P	P	13 36 54.2	+0.2
	baz=145						
RLMT	Red Lodge	68.93	333	*e*P	P	13 36 52.9	-1.5
	5.0nm,0.7s						
RLMT	Red Lodge	68.93	333	P	P	13 36 54.7	+0.3
	baz=141,SNR=5.7						
SNAA	Sanae	69.07	162	P	P	13 36 56.6	+1.9
SNAA	Sanae	69.07	162	*e*P	P	13 36 55.8	+1.1
	30nm,1.6s						
YMR	Madison River	69.34	332	*e*P	P	13 36 58.1	+1.2
	6.9nm,0.9s						
YHH	Holmes Hill	69.38	332	*e*P	P	13 36 58.3	+1.1
	3.9nm,0.9s						
YHB	Horse Butte	69.51	331	*e*P	P	13 36 59.0	+1.1
	7.7nm,0.8s						
DGMT	Dagmar	69.62	338	*e*P	P	13 36 58.8	+0.6
	30nm,1.2s						
DGMT	Dagmar	69.62	338	P	P	13 36 58.9	+0.6
	baz=147						
YERR	Yerington	69.62	323	*e*P	P	13 36 59.8	+1.1
	28nm,1.5s						
SCHQ	Schefferville	70.10	3	P	P	13 37 00.4	-0.7
	1.7nm,0.5s,baz=240,slow=14,SNR=3.5						
HLID	Hailey	70.17	329	*e*P	P	13 37 02.7	+0.7
	5.3nm,1.2s						
HLID	Hailey	70.17	329	P	P	13 37 02.7	+0.7
	baz=136						
PAHR	Pah Rah Range	70.18	323	*e*P	P	13 37 03.0	+0.9
	10nm,0.9s						
DBIC	Dimbokro	70.32	77	P	P	13 37 01.5	-1.7
	4.8nm,0.6s,baz=231,slow=4.9,SNR=10						
DBIC	Dimbokro	70.32	77	*e*P	P	13 37 01.5	-1.7
BOZ	Bozeman (W)	70.35	332	*e*P	P	13 37 03.3	+0.3
	3.2nm,0.8s						
BOZ	Bozeman (W)	70.35	332	P	P	13 37 03.8	+0.8
	baz=139						
ORV	Oroville	71.32	322	*e*P	P	13 37 09.8	+1.0
	9.1nm,1.0s						
EGMT	Eagleton	71.42	335	*e*P	P	13 37 09.5	+0.2
	6.3nm,0.8s						
EGMT	Eagleton	71.42	335	P	P	13 37 09.6	+0.3
	baz=142						
MOD	Modoc Plateau	72.15	324	*e*P	P	13 37 15.0	+1.1
	7.1nm,0.9s						
MSO	Missoula	72.34	331	P	P	13 37 16.1	+1.2
	baz=138						
BMO	Blue Mountains	72.55	328	*e*P	P	13 37 15.9	-0.2
	3.6nm,0.8s						
M04C	Macdoel	72.94	323	P	P	13 37 19.2	+0.6
	baz=130						
M02C	Callahan	73.28	323	P	P	13 37 21.0	+0.5
	baz=129						
K04D	Chiloquin, OR	73.44	324	P	P	13 37 22.2	+0.8
	baz=130						
L04D	Klamath Falls	73.49	324	P	P	13 37 22.4	+0.6
	baz=129						
J05D	Fort Rock, OR	73.58	325	P	P	13 37 22.8	+0.5
	baz=131						
J04D	Umpqua Nationa	74.03	325	P	P	13 37 25.2	+0.2
	baz=130						
I05D	Terrebonne, OR	74.32	326	P	P	13 37 27.9	+1.5
	baz=131						
D04E	Lakebay	76.93	327	P	P	13 37 42.9	+1.7
	baz=130						
A04D	Lummi Island	77.89	329	P	P	13 37 47.0	+0.5
	baz=130						
TOA0	Torodi Ar. Sit	78.52	73	*e*P	P	13 37 48.6	-2.1
	8.1nm,0.8s						
TORD	Torodi Ar. Bea	78.52	73	P	P	13 37 48.1	-2.7
	6.8nm,0.8s,baz=264,slow=5.4,SNR=28						
TORD				pP	pP	13 38 21.2	+1.3
	1.5nm,0.8s,baz=267,slow=5.6,SNR=2.5						
YKA	Yellowknife Ar	84.39	342	P	P	13 38 20.3	-0.3
	8.5nm,0.7s,baz=135,slow=5.2,SNR=148						
YKB5	Yellowknife Ar	84.39	342	*e*P	P	13 38 20.2	-0.4
YKW3	Yellowknife Ar	84.45	342	*e*P	P	13 38 19.9	-1.0
	11nm,0.7s						
BOSA	Boshof	89.21	119	*e*P	P	13 38 44.8	-0.3
INK	Inuvik	94.13	341	P	P	13 39 06.3	-0.4
	1.3nm,0.8s,baz=82,slow=4.7,SNR=5.9						
ILAR	Eielson Array	97.37	335	P	P	13 39 21.4	-0.2
	0.4nm,0.7s,baz=150,slow=1.5,SNR=4.2						
ILAR				PP	PP	13 43 22.2	+2.4
	0.8nm,0.9s,baz=98,slow=5.6,SNR=6.4						
COLA	College	97.79	335	*e*P	P	13 39 22.7	-0.7
ASAR	Alice Springs	133.48	214	PKP	PKiKP	13 45 06.1	-0.4
	0.4nm,0.6s,baz=123,slow=2.2,SNR=7.0						
WB2	Warramunga Arr	136.17	218	*e*PKPdf	PKPdf	13 45 10.8	+0.5
WRA	Warramunga Arr	136.18	218	PKP	PKPdf	13 45 11.2	+0.9
	1.0nm,0.6s,baz=128,slow=2.0,SNR=20						
WRA				pPKP	pPKPdf	13 45 45.5	+4.2
	0.5nm,0.8s,baz=138,slow=1.9,SNR=1.9						
ZAA0	Zalesovo Array	137.57	20	*e*PKPdf	PKPdf	13 45 12.6	+0.8
ZALV	Zalesovo Beam	137.57	20	*e*PKPdf	PKPdf	13 45 12.5	+0.6
ZALV	Zalesovo Beam	137.57	20	PKP	PKPdf	13 45 12.8	+0.9
	2.7nm,0.7s,baz=292,slow=2.5,SNR=10.0						
MKAR	Makanchi Array	142.22	29	PKhKP	PKPpre	13 45 16.6	
	0.4nm,0.6s,baz=312,slow=4.1,SNR=5.5						
MKAR				PKP	PKPdf	13 45 19.6	-1.0
	0.4nm,0.6s,baz=324,slow=2.3,SNR=4.8						
USRK	Ussuriysk Ar.	144.64	329	PKP	PKPbc	13 45 24.2	+0.4
	2.4nm,0.7s,baz=64,slow=3.4,SNR=4.9						
MJAR	Matsushiro Arr	145.63	314	PKPbc	PKPdf	13 45 27.2	+0.3
	12nm,0.8s,baz=144,slow=1.0,SNR=18						
MAJO	Matsushiro	145.64	314	*e*PKPbc	PKPbc	13 45 27.2	-0.1
MAJO	Matsushiro	145.64	314	*e*P	PKPdf	13 45 26.8	0.0
MAT	Matsushiro	145.64	314	PKP	PKPdf	13 45 27.1	+0.3
MJB9	Matsu-Tunnel	145.64	314	*e*PKPdf	PKPbc	13 45 27.3	0.0
WMQ	Urumqi	146.95	27	*e*P	PKPdf	13 45 28.6	-0.3
ULN	Ulaanbaatar	147.62	1	*e*PKPbc	PKPbc	13 45 32.9	0.0
SONA1	Songino Array	147.62	2	*e*PKPbc	PKPbc	13 45 32.6	-0.2
SONM	Songino Array	147.63	2	PKP	PKPdf	13 45 30.9	+0.9
	2.2nm,0.7s,baz=338,slow=1.6,SNR=14						
SONM				PKPbc	PKPbc	13 45 33.6	+0.8
	2.2nm,0.7s,baz=347,slow=1.8,SNR=14						
SONM				pPKPbc	pPKPab	13 46 07.9	+2.5
	0.9nm,0.4s,baz=324,slow=1.8,SNR=4.7						
KS01	Wonju Array Si	151.63	325	*e*PKPbc	PKPbc	13 45 43.1	+0.3
KSRS	Korea Array	151.63	325	PKPbc	PKiKP	13 45 44.0	+0.8
	3.2nm,0.7s,baz=14,slow=1.8,SNR=12						
KSAR	Wonju Array Be	151.66	325	PKPbc	PKiKP	13 45 44.0	+0.7
HHC	Hu-ho-hao-te	154.41	353	*e*P	PKPdf	13 45 39.3	-1.3
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.4s						
LZH	Lanzhou	159.11	9	*e*PKP	PKPdf	13 45 44.0	-2.8
LZH				pPKP	pPKPdf	13 46 09.4	-8.6
LZH				sPKP		13 46 23.6	

JMA 20 13:29:06.4±0.1, 38°.33N×144°.44E, h28^{km}, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.29	290	P	Pn	13 29 43.7	+1.3
OFUJ				*e*S	Sn	13 30 11.6	+1.9
JIKH	Ishinomakikobu	2.34	270	P	Pn	13 29 44.2	+1.2
JIKH				S	Sn	13 30 11.9	+1.1
JKMT	Kesennumamotoy	2.37	283	P	Pn	13 29 44.7	+1.3
JKMT				*e*S	Sn	13 30 13.3	+1.7
MIYJ	Miyakonagasawa	2.39	302	P	Pn	13 29 44.9	+1.2
MIYJ				*e*S	Sn	13 30 13.0	+0.9
JIO	Ouri	2.43	274	P	Pn	13 29 45.8	+1.6
JIO				S	Sn	13 30 14.8	+1.8
JMK	Ichinoseki	2.60	285	P	Pn	13 29 48.3	+1.8
JMK				*e*S	Sn	13 30 19.3	+2.2
JOM	Ohasama	2.71	296	P	Pn	13 29 49.9	+1.8
JOM				*e*S	Sn	13 30 22.5	+2.6
JANG	Nango	3.05	313	P	Pn	13 29 54.7	+1.9
JANG				*e*S	Sn	13 30 29.2	+0.9
JYK	Kaneyama	3.25	282	P	Pn	13 29 57.9	+2.4
JYK				*e*S	Sn	13 30 36.9	+3.6
JFT	Otama	3.34	257	P	Pn	13 29 59.1	+2.3
JFT				S	Sn	13 30 37.8	+2.2
JOT	Ohata	4.01	320	*e*S	Sn	13 30 51.9	-0.1
JCH	Churui	4.36	349	P	Pn	13 30 10.4	-0.3
JCH				*e*S	Sn	13 30 58.2	-2.3
JRY	Ryogami san	4.99	244	P	Pn	13 30 20.6	+1.2
JRY				*e*S	Sn	13 31 15.0	-1.2
NEM2	Nemuro 2	5.13	11	P	Pn	13 30 18.1	-3.1
NEM2				*e*S	Sn	13 31 12.3	-7.1
JOD2	Odawara 2	5.27	236	*e*S	Sn	13 31 20.9	-2.3
JTKR	Abashiri--Toko	5.65	356	P	Pn	13 30 27.4	-1.0
JTKR				S	Sn	13 31 27.6	-4.7

DJA 20 13:32:22.1±2.2, 0°N±3°×12°5E±°, h26^{km}±24^{km}, M3.8/10, mb3.9/1, mB4.8/1, MLv3.7/10, Mw(mB)4.0/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.95	290	P	Pn	13 32 39.4	-0.3
KMSI				S	Sn	13 32 52.8	+0.4
SANI	Sanana	2.54	154	P	Pn	13 33 00.8	-0.9
MRSI	Marisa	2.94	274	P	Pn	13 33 05.1	-2.0
APSI	Ampana	3.42	250	P	Pn	13 33 15.6	+1.8
NLAI	Namlea	4.12	147	P	Pn	13 33 23.3	-0.1
MPSI	Mapaga	4.97	271	P	Pn	13 33 34.2	-0.9
TTSI	Tana Toraja	6.02	237	P	Pn	13 33 51.1	+1.6

IDC 20 13:33:44.2±20.0, 5°.26S×151°.13E, h221^{km}±178^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.0/31, mbtmp3.8/4, Error ellipse: s-maj=113.9km s-min=76.1km az=177.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	15.48	197	P	Pn	13 37 11.6	+0.2
	0.2nm,0.3s,baz=9.7,slow=8.1,SNR=2.1						
WRA	Warramunga Arr	21.91	227	P	P	13 38 19.5	-0.4
	0.4nm,0.3s,baz=53,slow=9.7,SNR=16						
ASAR	Alice Springs	24.70	221	P	P	13 38 45.9	+0.5
	0.9nm,0.3s,baz=53,slow=9.3,SNR=17						
FITZ	Fitzroy Crossi	27.98	241	P	P	13 39 14.6	-0.1
	2.2nm,1.0s,baz=62,slow=8.7,SNR=2.1						
TORD	Torodi Ar. Bea	148.86	287	PKPbc	PKPbc	13 53 06.1	-0.7
	0.3nm,0.7s,baz=68,slow=2.3,SNR=1.8						

JMA 20 13:40:00.6±0.1, 38°.22N×144°.41E, h36^{km}, M4.1, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.31	293	P	Pn	13 40 37.8	+1.7
OFUJ				*e*S	Sn	13 41 05.3	+2.0
JIKH	Ishinomakikobu	2.32	273	P	Pn	13 40 37.6	+1.4
JIKH				*e*S	Sn	13 41 05.3	+1.9
JKMT	Kesennumamotoy	2.38	285	P	Pn	13 40 38.5	+1.5
JKMT				*e*S	Sn	13 41 06.8	+1.9
JIO	Ouri	2.42	276	P	Pn	13 40 39.1	+1.5
JIO				*e*S	Sn	13 41 07.5	+1.6
MIYJ	Miyakonagasawa	2.43	305	P	Pn	13 40 39.1	+1.3
MIYJ				*e*S	Sn	13 41 07.7	+1.4
JMK	Ichinoseki	2.60	287	P	Pn	13 40 42.0	+1.9
JMK				*e*S	Sn	13 41 13.0	+2.5
JOM	Ohasama	2.74	298	P	Pn	13 40 44.0	+2.0
JOM				*e*S	Sn	13 41 16.4	+2.6
JANG	Nango	3.11	315	P	Pn	13 40 48.4	+1.3
JANG				*e*S	Sn	13 41 24.3	+1.3
JYK	Kaneyama	3.25	284	P	Pn	13 40 51.6	+2.6
JYK				*e*S	Sn	13 41 29.6	+3.1
JFT	Otama	3.30	259	P	Pn	13 40 52.0	+2.3
JFT				S	Sn	13 41 29.8	+2.1
JOT	Ohata	4.08	322	P	Pn	13 41 03.1	+2.7
JOT				*e*S	Sn	13 41 47.2	+0.3
JCH	Churui	4.46	350	P	Pn	13 41 06.0	+0.4
JCH				*e*S	Sn	13 41 54.8	-1.5
JKB	Kayabe	4.49	326	*e*S	Sn	13 41 56.3	-0.6
JRY	Ryogami san	4.92	245	P	Pn	13 41 13.1	+1.1
JRY				S	Sn	13 42 07.1	-0.6
JOD2	Odawara 2	5.19	237	P	Pn	13 41 16.1	+0.4
JOD2				S	Sn	13 42 12.3	-2.1
MAT	Matsushiro	5.22	253	P	Pn	13 41 18.8	+2.7
NEM2	Nemuro 2	5.24	11	P	Pn	13 41 14.0	-2.3
NEM2				*e*S	Sn	13 42 09.0	-6.4
JTKR	Abashiri--Toko	5.76	356	P	Pn	13 41 23.4	0.0
JTKR				S	Sn	13 42 24.8	-3.4

DJA 20 13:40:56.3±0.3, 2°S±3°×12°1E±°, h10^{km}, M3.5/6, MLv3.5/6, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.52	244	P	Pn	13 41 20.2	-3.4
APSI	Ampana	1.53	17	P	Pn	13 41 22.1	-1.6
APSI				S	Sb	13 41 44.8	+0.6
PCI	Palu	1.99	317	P	Pb	13 41 33.3	+0.6
LUWI	Luwuk	2.07	50	P	Pn	13 41 28.2	-2.9
LUWI				S	Sb	13 41 59.5	-0.2
KDI	Kendari	2.12	138	P	Pn	13 41 33.1	+1.3
SPSI	Sidrap Palu	2.12	222	P	Pn	13 41 31.6	-0.2
BNSI	Bone	2.28	208	P	Pn	13 41 35.5	+1.5
MRSI	Marisa	2.94	15	P	Pn	13 41 40.0	-3.1
MPSI	Mapaga	2.99	334	P	Pn	13 41 43.9	+0.1
BKSI	Bulukumba	3.11	200	P	Pn	13 41 45.9	+0.4
SANI	Sanana	4.81	86	P	Pn	13 42 02.7	-6.1

MEX 20 13:50:09.5±0.5, 16°.13N×98°.33W, h3^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.33	37	*i* P	Pg	13 50 15.2	-0.6
PNIG				*e*S	Sg	13 50 20.4	+0.3

NIED ***20*** *14:02:00, 24°.80N×143°.10E, h8^{km}, Mw4.2 Best double couple: M$_0$2.35000×10^{15} NP1:φ$_s$155.00000°, δ19.00000°, λ17.00000°. NP2:φ$_s$49.00000°, δ85.00000°, λ108.00000°.*
JMA ***20*** *14:02:32.1±0.1, 24°.84N×143°.10E, h98^{km}, M4.0*
ISCJB ***20*** *14:02:32.7±0.3, 24°.88N±0°.04×142°.52E±0°.06, h32^{km}, mb4.3/49, MS3.6/6, Error ellipse: s-maj=7.7km s-min=5.1km az=176.6*
MOS ***20*** *14:02:33.2±1.1, 24°.84N×142°.49E, h38^{km}, mb4.6/25, Error ellipse: s-maj=13.2km s-min=6.4km az=113.5*
NEIC ***20*** *14:02:35.7±0.6, 24°.88N×142°.52E, h45^{km}±5^{km}, mb4.7/22, Error ellipse: s-maj=6.4km s-min=4.6km az=84.0*
IDC ***20*** *14:02:35.9±2.4, 24°.87N×142°.57E, h44^{km}±22^{km}, mb3.8/25, mb1 4.0/29, mb1mx4.0/44, mbtmp4.1/29, ML3.4/4, MS3.5/7, Ms1 3.5/7, ms1mx3.1/36, Error ellipse: s-maj=18.0km s-min=11.6km az=92.0*

ISC 20 14:02:34.6±0.4, 24°.89N±0°.05×142°.53E±0°.09, h32^{km}, n128, σ1^{s}.04/139, mb4.4/58, MS3.6/6, 13C-2D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.76	350	P	Pn	14 03 04.5	+1.6
JHHJ				*e*S	Sb	14 03 29.3	+1.4
CBIJ	Chichi jima	2.21	352	*e*Pn	Pn	14 03 11.1	+2.0
CBIJ				*e*Sn	Sb	14 03 40.0	-1.1
CBIJ	Chichi jima	2.21	352	P	Pn	14 03 10.1	+1.0
CBIJ				*e*S	Sb	14 03 39.6	-1.4
JCJ	Chichijima	2.21	352	P	Pn	14 03 11.1	+2.0
	26nm,0.3s,baz=6.1,slow=12,SNR=11						
JCJ				S	Sb	14 03 40.0	-1.1
	92nm,0.3s,baz=123,slow=20,SNR=6.4						
JHJ2	Mitsune	8.53	344	*e*Pn	Pn	14 04 36.1	+0.3
ANA2	Anatahan	9.02	160	*e*Pn	Pn	14 04 44.1	+1.4
BSO3	Boso 3	10.03	350	P	Pn	14 04 55.7	-0.5
BSO4	Boso 4	10.24	350	P	Pn	14 04 59.6	+0.4
JHU	Hanno	11.27	346	P	Pn	14 05 12.9	-0.6
INU	Inuyama	11.46	337	*e*Pn	Pn	14 05 16.5	+0.5
JAG	Ashikaga	11.79	348	P	Pn	14 05 19.7	-0.9
JHO	Hitachi	11.80	352	P	Pn	14 05 19.5	-1.2
MJAR	Matsushiro Arr	12.19	343	P	Pn	14 05 25.9	-0.1
	0.3nm,0.3s,baz=161,slow=10.0,SNR=22						
MJAR				LR	LR	14 10 25.8	
	comp=Z,103nm,18.9s,baz=165,slow=38						
MAJO	Matsushiro	12.19	343	*e*Pn	Pn	14 05 25.7	-0.3
MAJO	Matsushiro	12.19	343*c*	*i*P	Pn	14 05 26.0	0.0
MJB9	Matsu-Tunnel	12.19	343	*e*Pn	Pn	14 05 26.2	+0.1
JNU	Nakatsue	13.07	311	LR	LR	14 10 21.5	
	comp=Z,109nm,18.9s,baz=148,slow=36						
KSRS	Korea Array	17.66	319	P	P	14 06 39.6	+0.8
	0.2nm,0.3s,baz=125,slow=12,SNR=18						
KSRS				LR	LR	14 13 13.7	
	comp=Z,156nm,18.6s,baz=124,slow=36						
KSAR	Wonju Array Be	17.68	319	P	P	14 06 39.6	+0.6
KSAR	Wonju Array Be	17.68	319	P	P	14 06 39.6	+0.6
YOJ	Yonaguni jima	17.74	273	*e*Pn	P	14 06 40.2	+0.4
	371nm,1.5s						
YOJ	Yonaguni jima	17.74	273	*e*P	P	14 06 40.2	+0.4
YOJ				pmax	pmax		
	comp=Z,371nm,1.5s						
ASAJ	Asahikawa	19.18	0	P	Pn	14 06 57.6	+1.1
	comp=Z,0.1nm,0.3s,baz=273,slow=17,SNR=2.2						
YHNB	Yeheng	19.21	274	*e*P	P	14 06 55.6	-0.5
	comp=Z,153nm,1.6s						
YULB	Yu-li	19.43	270	*e*P	P	14 06 58.8	+0.4
	comp=Z,62nm,1.6s						
SSLB	Suanglung	19.69	271	*e*P	P	14 07 01.8	+0.5
	comp=Z,67nm,1.5s						
USRK	Ussuriysk Ar.	21.09	339	P	P	14 07 16.7	+0.5
	comp=Z,3.7nm,0.6s,baz=169,slow=13,SNR=8.0						
YSS	Yuzh-Sakhalins	22.02	0	*e*P	P	14 07 27.2	+1.1
YSS				*e*		14 07 36.3	
YSS				*e*S	S	14 11 28.8	+1.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				smax	smax		
	comp=E,120nm,12.0s						

YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
KLR	Kul'dur	25.72	344	P	P	14 08 02.7	+0.8
	comp=Z,4.6nm,0.7s,baz=142,slow=9.2,SNR=19						
HIA	Hailar	30.14	330	⇑*e*P	P	14 08 42.6	+1.1
HIA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZEA	Zeya	31.00	342	*e*P	P	14 08 49.2	+0.2
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
ULN	Ulaanbaatar	36.15	319	⇑*e*P	P	14 09 34.2	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONA0	Songino Array	36.53	318	*e*P	P	14 09 36.9	-0.4
SONM	Songino Array	36.53	318	P	P	14 09 36.9	-0.4
	comp=Z,0.6nm,0.6s,baz=129,slow=8.4,SNR=3.8						
SONM				LR	LR	14 25 15.1	
	comp=Z,99nm,18.4s,baz=186,slow=37						
SEY	Seymchan	38.60	7	⇑*e*P	P	14 09 55.0	+0.6
SEY	Seymchan	38.60	7	P	P	14 09 54.5	+0.2
	comp=Z,1.7nm,1.0s,baz=194,slow=9.5,SNR=3.5						
BOD	Bodaibo	38.68	336	*e*P	P	14 09 53.2	-1.9
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CMAR	Chiang Mai Arr	40.87	270	P	P	14 10 15.6	+1.7
	comp=Z,1.0nm,0.8s,baz=58,slow=7.8,SNR=6.8						
CMAR				LR	LR	14 27 22.1	
	comp=Z,50nm,19.4s,baz=88,slow=36						
CTA	Charters Tower	44.86	175	P	P	14 10 44.7	-1.4
	comp=Z,1.6nm,0.7s,baz=12,slow=14,SNR=3.4						
WRAB	Tennant Creek	45.26	191	⇑*e*P	P	14 10 48.2	-1.1
WRAB				pmax	pmax		
	comp=Z,13nm,2.0s						
WB2	Warramunga Arr	45.27	191	*e*P	P	14 10 48.1	-1.2
WR1	Warramunga Arr	45.27	191	*e*P	P	14 10 48.5	-0.9
	comp=Z,7.8nm,0.8s						
WRA	Warramunga Arr	45.27	191	*i* P	P	14 10 46.5	-2.9
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	45.27	191	P	P	14 10 48.5	-0.9
	comp=Z,2.1nm,0.5s,baz=7.8,slow=8.6,SNR=28						
BILL	Bilibino	45.53	12	⇑*i*P	P	14 10 51.5	+0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
FITZ	Fitzroy Crossi	45.79	203	*e*P	P	14 10 52.5	-0.9
	comp=Z,20nm,1.6s						
FITZ	Fitzroy Crossi	45.79	203	P	P	14 10 53.9	+0.4
	comp=Z,3.8nm,0.9s,baz=28,slow=3.0,SNR=4.4						
ASAR	Alice Springs	48.99	190	P	P	14 11 17.4	-0.9
	comp=Z,0.5nm,0.6s,baz=13,slow=8.5,SNR=7.8						
DGZ	Jazzator, Alta	49.02	315	⇑*i*P	P	14 11 19.1	+0.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JIRN	Jiri	50.22	286	*e*P	P	14 11 29.3	+1.0
	comp=Z,29nm,0.8s						
GUN	Gumba	50.45	287	*e*P	P	14 11 30.9	+1.0
	comp=Z,18nm,0.9s						
PKI	Pulchoki	50.92	286	*e*P	P	14 11 33.9	+0.4
	comp=Z,8.9nm,1.0s						
PKIN	Phulchoki	50.93	286	*e*P	P	14 11 33.6	+0.1
	comp=Z,2.1nm,0.4s						
KKN	Kakani	50.99	286	*e*P	P	14 11 34.9	+1.0
	comp=Z,4.4nm,0.5s						
DMN	Daman	51.17	286	*e*P	P	14 11 36.4	+1.1
	comp=Z,6.2nm,0.8s						
ZALV	Zalesovo Beam	51.36	320	*e*P	P	14 11 34.3	-1.6
ZALV				PcP	PcP	14 12 49.6	-0.8
ZALV	Zalesovo Beam	51.36	320	*e*P	P	14 11 34.3	-1.6
ZALV						14 12 49.6	
ZALV	Zalesovo Beam	51.36	320	P	P	14 11 35.2	-0.7
	comp=Z,2.4nm,0.7s,baz=108,slow=6.9,SNR=7.5						
ZALV				PcP	PcP	14 12 49.6	-0.8
	comp=Z,0.8nm,0.5s,baz=88,slow=3.5,SNR=3.7						
ZALV				LR	LR	14 33 44.2	
	comp=Z,43nm,19.0s,baz=70,slow=36						
ZAA1	Zalesovo Array	51.36	320	*e*P	P	14 11 35.2	-0.7
ZAA1				*e*PcP	PcP	14 12 49.6	-0.8
MK01	Makanchi Array	52.12	311	*e*P	P	14 11 41.1	-0.7
MK31	Makanchi Array	52.13	311	*e*P	P	14 11 41.7	-0.2
	comp=Z,2.2nm,1.1s						
MK31	Makanchi Array	52.13	311	*e*P	P	14 11 41.7	-0.2
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK32	Makanchi Array	52.13	311	*e*P	P	14 11 41.8	-0.1
MK32				*e*PcP	PcP	14 12 53.7	+0.2
MKAR	Makanchi Array	52.13	311	*e*P	P	14 11 41.7	-0.2
	comp=Z,8.2nm,0.8s						
MKAR				PcP	PcP	14 12 53.7	+0.2
MKAR	Makanchi Array	52.13	311	*e*P	P	14 11 41.7	-0.2
MKAR						14 12 53.7	
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR	Makanchi Array	52.13	311	P	P	14 11 41.8	-0.1
	comp=Z,1.4nm,0.8s,baz=92,slow=8.5,SNR=14						
MKAR				PcP	PcP	14 12 53.7	+0.2
	comp=Z,1.2nm,0.7s,baz=74,slow=8.9,SNR=7.3						
DANN	Dangsing	52.21	288	*e*P	P	14 11 44.3	+1.2
	comp=Z,26nm,0.8s						
MAKZ	Makanchi	52.34	311	*e*P	P	14 11 43.3	-0.2
	comp=Z,2.6nm,0.9s						
MAKZ	Makanchi	52.34	311	*e*P	P	14 11 43.3	-0.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KOLN	Koldanda	52.45	287	*e*P	P	14 11 46.1	+1.3
	comp=Z,7.5nm,0.8s						
PYUN	Piuthan	52.92	287	*e*P	P	14 11 49.2	+0.9
	comp=Z,11nm,0.8s						
KURK	Kurchatov	54.76	316	*e*P	P	14 12 00.4	-0.6
	comp=Z,4.4nm,0.9s						
KURK	Kurchatov	54.76	316	⇑*e*P	P	14 12 01.6	+0.6
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
NRIK	Noril'sk	54.80	339	LR	LR	14 36 06.4	
	comp=Z,80nm,19.1s,baz=38,slow=37						
STKA	Stephens Creek	56.46	181	*e*P	P	14 12 13.4	0.0
	comp=Z,5.3nm,1.6s						
STKA	Stephens Creek	56.46	181	*e*P	P	14 12 13.4	0.0
STKA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
STKA	Stephens Creek	56.46	181	P	P	14 12 14.1	+0.8
	comp=Z,1.3nm,0.4s,baz=349,slow=5.2,SNR=3.4						
NRN	Naryn	56.77	304	*e*P	P	14 12 15.4	-0.7
	comp=Z,5.1nm,1.4s						
NRN	Naryn	56.77	304	*e*P	P	14 12 15.4	-0.7
NRN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
AAK	Ala-Archa	57.78	306	⇓*i*P	P	14 12 23.8	+0.8
AAK				pmax	pmax		
	comp=Z,5.0nm,2.5s						
ILAR	Eielson Array	59.50	28	P	P	14 12 33.4	-1.0
	comp=Z,0.8nm,0.8s,baz=253,slow=6.0,SNR=7.3						
ILB	Eielson Array	59.50	28	*e*P	P	14 12 33.2	-1.1
	comp=Z,26nm,1.9s						
BRVK	Borovoye	59.94	318	*e*P	P	14 12 36.3	-1.3
	comp=Z,5.1nm,0.8s						
BRVK	Borovoye	59.94	318	⇑*e*P	P	14 12 37.2	-0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KK31	Karatay Array	60.63	307	*e*P	P	14 12 41.9	-0.6
	comp=Z,4.1nm,0.8s						
KK31	Karatay Array	60.63	307	*e*P	P	14 12 41.9	-0.6
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	60.63	307	*e*P	P	14 12 41.8	-0.7
	comp=Z,4.1nm,0.8s						
KKAR	Karatay Array	60.63	307	*e*P	P	14 12 41.8	-0.7
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBL	Kabul	63.29	298	*e*P	P	14 13 00.4	-0.4
	comp=Z,6.9nm,0.8s						
KBL	Kabul	63.29	298	*e*P	P	14 13 00.4	-0.4
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
INK	Inuvik	64.90	24	*e*P	P	14 13 09.9	-0.6
	comp=Z,7.4nm,1.4s						
INK	Inuvik	64.90	24	*e*P	P	14 13 09.9	-0.6
INK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
INK	Inuvik	64.90	24	P	P	14 13 09.8	-0.6
	comp=Z,2.2nm,0.9s,baz=227,slow=4.9,SNR=5.9						
ARU	Arti	66.35	323	*d* *i*P	P	14 13 19.7	-0.3
ARU						14 15 42.2	
ARU				S	S	14 22 08.5	+1.0
ARU				SS	SS	14 26 17.3	-6.5
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ABKAR	Akbulak array	66.86	315	*e*P	P	14 13 22.5	-0.9
	comp=Z,4.3nm,0.8s						
GEYT	Alibeck	70.96	304	P	P	14 13 50.9	+1.7
	comp=Z,1.4nm,0.5s,baz=149,slow=3.0,SNR=2.6						
PRGR	Permogore	71.60	330	*e*P	P	14 13 52.7	+0.2
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YKA	Yellowknife Ar	73.93	28	P	P	14 14 05.8	-0.5
	comp=Z,1.6nm,0.8s,baz=293,slow=5.7,SNR=27						
YKB5	Yellowknife Ar	73.93	28	*e*P	P	14 14 05.2	-1.1
ARA0	ARCESS Array S	75.71	341	*e*P	P	14 14 17.1	+0.5
ARCES	ARCESS Array B	75.71	341	P	P	14 14 17.1	+0.5
	comp=Z,5.7nm,0.9s,baz=58,slow=11,SNR=3.3						
KBZ	Khabaz	79.73	313	P	P	14 14 39.5	0.0
	comp=Z,2.1nm,0.8s,baz=232,slow=13,SNR=4.1						
FIA1	FINESS Array S	80.05	334	*e*P	P	14 14 40.7	-0.1
FINES	FINESS Array B	80.05	334	P	P	14 14 40.9	+0.1
	comp=Z,6.3nm,0.9s,baz=64,slow=4.8,SNR=8.1						
VSU	Vasula	81.46	331	⇑*i*P	P	14 14 49.0	+0.6
VSU				pmax	pmax		
	comp=Z,37nm,1.0s						
NV01	Mina Array Sit	81.64	52	*e*P	P	14 14 49.8	-0.3
NVAR	Mina Array Bea	81.64	52	P	P	14 14 51.1	+1.0
	comp=Z,0.4nm,0.3s,baz=297,slow=10.0,SNR=2.8						
FFC	Flin Flon	83.44	32	*i* P	P	14 14 59.4	+0.6
AKASG	Malin Array Be	84.57	324	*ce*P	P	14 15 04.1	-0.5
AKASG	Malin Array Be	84.57	324	P	P	14 15 03.8	-0.8
	comp=Z,0.3nm,0.4s,baz=52,slow=5.6,SNR=5.6						
KIEV	Kiev	84.58	324	⇑*e*P	P	14 15 05.1	+0.4
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NC405	NORSAR Array S	85.54	338	*e*P	P	14 15 08.7	-0.6
	comp=Z,9.4nm,0.6s						
PD31	Pinedale Array	85.56	45	*e*P	P	14 15 09.2	-0.9
	comp=Z,14nm,1.9s						
PDAR	Pinedale Array	85.56	45	P	P	14 15 10.3	+0.2
	comp=Z,0.5nm,0.9s,baz=336,slow=2.0,SNR=3.0						
NB2	NORSAR Subarra	85.76	338	P	P	14 15 09.8	-0.7
	comp=Z,1.7nm,0.6s,baz=45,slow=4.6						
NB200	NORSAR Array S	85.76	338	*e*P	P	14 15 09.6	-0.9
NOA	NORSAR Array B	85.76	338	P	P	14 15 09.6	-0.9
	comp=Z,5.0nm,0.8s,baz=48,slow=4.7,SNR=12						
BR101	Keskin Array S	87.72	313	*e*P	P	14 15 20.1	-0.5
BRTR	Keskin Array B	87.72	313	P	P	14 15 20.1	-0.5
	comp=Z,0.9nm,0.8s,baz=64,slow=4.3,SNR=3.7						
ANMO	Albuquerque	91.66	50	⇑*e*P	P	14 15 40.8	+1.6
ANMO				pmax	pmax		
	comp=Z,8.0nm,2.5s						
GEC2	GERESS Array S	93.55	329	*e*P	P	14 15 46.5	-1.0
	comp=Z,17nm,1.8s						
GEC2	GERESS Array S	93.55	329	*e*P	P	14 15 46.5	-1.0
GEC2				pmax	pmax		
	comp=Z,17nm,1.8s						
GERES	GERESS Array B	93.55	329	P	P	14 15 46.9	-0.7
	comp=Z,0.3nm,0.3s,baz=42,slow=4.6,SNR=4.2						
TXAR	Lajitas Array	96.67	54	P	P	14 16 03.0	+0.8
TXAR	Lajitas Array	96.67	54	P	P	14 16 03.0	+0.8
	comp=Z,0.5nm,0.9s,baz=251,slow=5.6,SNR=3.1						
LPAZ	La Paz	150.11	79	*e*PKPbc	PKPbc	14 22 23.4	-0.3
LPAZ	La Paz	150.11	79	*e*PKIKP	PKPbc	14 22 23.4	-0.3
LPAZ	La Paz	150.11	79	PKPbc	PKPbc	14 22 23.9	+0.2
	comp=Z,1.6nm,0.7s,baz=340,slow=2.2,SNR=6.2						

HEL 20 14:14:05.5±0.3**,60°.59N×27°.18E,h0^{km},ML1.1,**
Explosion,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	Virojoki	0.19	106	PG	Pg	14 14 09.0	-0.2
VJF				SG	Sg	14 14 11.4	-0.2
PVF	Pernaja	0.65	267	PG	Pg	14 14 17.5	-0.5
PVF				SG	Sg	14 14 26.1	-0.4
FIA0	FINESS Array S	1.01	328	*e*P	Sb	14 14 40.9	+1.3
FIA0	FINESS Array S	1.01	328	*e*P	Sb	14 14 40.9	+1.2
FIA0	FINESS Array S	1.01	328	PG	Pg	14 14 23.4	-1.4
FIA0				SN	Sb	14 14 40.5	+0.8
KAF	Kangasniemi	1.58	345	PG	Pn	14 14 34.9	+0.1
KAF				MSG		14 14 52.9	
	comp=Z,0.7nm,0.2s						
KEF	Keuruu	1.93	326	PG	Pn	14 14 40.1	+0.5
KEF				SG	Sb	14 15 06.2	0.0
SUF	Sumiainen	2.19	347	MSG		14 15 10.6	
	comp=Z,0.5nm,0.2s						
SUF				SG	Sb	14 15 14.2	+0.6
RAF	Rauma	2.69	282	PB	Pn	14 14 50.8	+0.9
RAF				MSG		14 15 24.8	
	comp=Z,0.8nm,0.2s						
RAF				SB	Sn	14 15 25.4	+2.2

DJA 20 14:27:48.7±0.3**,2°S**±3°×**12°1E**±°**,h10^{km},M3.6**/9**,MLv3.6**/9**,**
Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	1.54	15	P	Pn	14 28 16.1	-0.2
APSI				S	Sb	14 28 37.2	+0.2
TTSI	Tana Toraja	1.56	246	P	Pn	14 28 15.7	-0.8
LUWI	Luwuk	2.04	48	P	Pn	14 28 21.8	-1.3
KDI	Kendari	2.06	138	P	Pb	14 28 24.9	-1.3
PCI	Palu	2.06	317	P	Pn	14 28 23.5	+0.1
SPSI	Sidrap Palu	2.14	224	P	Pn	14 28 22.9	-1.6
BNSI	Bone	2.28	210	P	Pn	14 28 26.6	+0.1
MRSI	Marisa	2.95	14	P	Pn	14 28 34.4	-1.2
MPSI	Mapaga	3.04	334	P	Pn	14 28 36.5	-0.5
BKSI	Bulukumba	3.10	201	P	Pn	14 28 36.8	-1.0

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*IDC **20** 14:48:58.2±1.6,38°.41N×142°.41E,h0^{km},mb3.4/4,
mb1 3.5/6,mb1mx3.3/48,mbtmp3.4/6,ML2.9/2,MS2.6/1,
Ms1 2.6/1,ms1mx2.1/31,Error ellipse: s-maj=45.9km
s-min=21.8km az=83.0*

*ISCJB **20** 14:49:00.8±1.2,38°.44N±0°.04×142°.26E±0°.08,h28^{km}±6^{km},
mb3.4/4,Error ellipse: s-maj=10.8km s-min=5.7km
az=19.7*

*NIED **20** 14:49:00,38°.50N×142°.20E,h20^{km},Mw3.5 Best double
couple: $M_0$1.76000×10^{14} NP1:ϕ_s212.00000°,δ26.00000°,
λ-11.00000°. NP2:ϕ_s312.00000°,δ85.00000°,
λ-115.00000°.*

*JMA **20** 14:49:01.6±0.1,38°.47N×142°.24E,h27^{km}±2^{km},M3.7*

ISC 20 14:49:00.7±2.2**,38°.41N**±0°.05×**142°.21E**±0°.08**,h13**^{km}±12^{km}**,**
n22,σ**1^{s}22**/28**,mb3.6**/4**,Near east coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.59	260	P	Pb	14 49 13.6	+0.7
JIKH				S	Sb	14 49 21.8	+0.7
JIO	Ouri	0.68	274	P	Pb	14 49 15.1	+0.8
JIO				S	Sb	14 49 24.2	+0.7
JKMT	Kesennumamotoy	0.70	305	P	Pb	14 49 14.9	+0.2
JKMT				S	Sg	14 49 23.9	+0.4
OFUJ	Ofunato	0.79	328	P	Pg	14 49 15.8	-0.2
OFUJ				*e*S	Sg	14 49 25.9	-0.4
JMK	Ichinoseki	0.94	305	P	Pg	14 49 18.6	-0.3
JMK				*e*S	Sg	14 49 30.5	-0.7
JOU	Okura	1.21	268	P	Pn	14 49 23.5	+0.2
JOU				*e*S	Sb	14 49 39.4	+0.3
JMM	Marumori	1.24	244	P	Pn	14 49 23.4	-0.3
JMM				S	Sb	14 49 39.5	-0.3
JOM	Ohasama	1.28	326	P	Pn	14 49 23.5	-0.7
JOM				*e*S	Sb	14 49 39.2	-1.6
JFK	Kawauchi	1.48	226	P	Pn	14 49 26.3	-0.8
JFK				S	Sn	14 49 44.5	-1.8
MJAR	Matsushiro Arr	3.69	241	Pn	Pn	14 49 59.6	+2.3
	0.2nm,0.3s,baz=58,slow=10,SNR=12						
MJAR				Sn	Sb	14 50 51.1	+0.8
	0.3nm,0.3s,baz=34,slow=18,SNR=4.5						
MJAR				LR	LR	14 51 38.1	
	comp=Z,72nm,19.0s,baz=35,slow=42						
MAT	Matsushiro	3.69	241	P	Pn	14 49 59.5	+2.1
MAT				S	Sb	14 50 46.7	-3.6
ASAJ	Asahikawa	5.71	3	Pn	Pn	14 50 25.8	+0.8
	0.5nm,0.3s,baz=204,slow=7.0,SNR=7.3						
ASAJ				Sn	Sn	14 51 31.2	+0.9
	0.1nm,0.3s,baz=242,slow=17,SNR=1.7						
H11N2	WAKE ISLAND Hy	28.36	124	T	T	15 24 45.5	
	baz=316,slow=75,SNR=80						
H11N1	WAKE ISLAND Hy	28.36	124	T	T	15 24 35.7	
	baz=316,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	28.37	124	T	T	15 24 39.5	
	baz=316,slow=75,SNR=61						
H11S1	WAKE ISLAND Hy	29.12	126	T	T	15 25 36.5	
	baz=318,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.12	126	T	T	15 25 36.5	
	baz=318,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	29.14	126	T	T	15 25 37.6	
	baz=318,slow=76,SNR=15						
MKAR	Makanchi Array	43.93	301	P	P	14 57 07.6	+0.5
	0.2nm,0.9s,baz=84,slow=7.2,SNR=1.4						
KURBB	Kurchatov Arra	45.66	307	P	P	14 57 20.5	-0.3
	0.3nm,0.4s,baz=84,slow=8.4,SNR=4.9						
WRA	Warramunga Arr	58.52	189	P	P	14 58 56.2	-0.4
	0.5nm,0.6s,baz=6.6,slow=7.3,SNR=8.8						
ASAR	Alice Springs	62.24	189	P	P	14 59 22.1	0.0
	0.4nm,0.8s,baz=15,slow=12,SNR=4.8						

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*IDC **20** 14:51:41.0±1.8,36°.62N×73°.09E,h0^{km},mb3.3/4,
mb1 3.5/9,mb1mx3.3/44,mbtmp3.3/9,ML2.9/5,MS2.8/3,
Ms1 2.8/3,ms1mx2.3/45,Error ellipse: s-maj=48.9km
s-min=23.3km az=82.0*

*NNC **20** 14:51:52.8±5.9,37°.17N×74°.37E,h0^{km},mb3.9,mpv3.6,
Error ellipse: s-maj=55.9km s-min=42.1km az=93.0*

ISC 20 14:51:46.5±1.1**,36°.58N**±0°.08×**73°.4E**±0°.1**,h35**^{km}**,n26,**
σ**1^{s}91**/28**,mb3.1**/4**,9C-4D,Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.43	2	⇑Pn	Pn	14 52 41.3	+3.6
	38nm,0.6s						
SFK				⇑Lg	Lg	14 53 26.4	
	50nm,0.7s						
MNAS	Manas	5.94	354	⇓Pn	Pn	14 53 13.8	+1.7
	4.0nm,0.8s						
MNAS				⇑Sn	Sn	14 54 18.8	-0.2
	6.9nm,0.8s						
AAK	Ala-Archa	6.12	8	⇓Pn	Pn	14 53 17.0	+2.4
	5.2nm,0.8s						
AAK				⇓Sn	Sn	14 54 20.1	-3.2
	9.8nm,1.1s						
AAK				⇑Lg	Lg	14 54 47.6	
	20nm,1.4s						
AAK	Ala-Archa	6.12	8	Pn	Pn	14 53 16.0	+1.5
	0.8nm,0.3s,baz=174,slow=5.0,SNR=12						
AAK				Sn	Sn	14 54 26.1	+2.8
	0.0nm,0.3s,baz=222,slow=18,SNR=1.5						
AAK				LR	LR	14 54 51.1	
	comp=Z,18nm,21.4s,baz=62,slow=31						
TKM2	Tokmak 2	6.57	15	⇑Pn	Pn	14 53 22.9	+2.2
	4.7nm,0.8s						
TKM2				⇑Sn	Sn	14 54 31.9	-2.6
	6.0nm,1.0s						
TKM2				⇑Lg	Lg	14 55 00.9	
	20nm,1.5s						
KK31	Karatay Array	6.88	342	⇑Pn	Pn	14 53 26.9	+2.1
	1.0nm,0.3s,baz=150,slow=12,SNR=18						
KK31				⇓Sn	Sn	14 54 40.6	-1.2
	3.0nm,0.5s						
KK31				⇑Lg	Lg	14 55 16.2	
	7.1nm,0.8s,baz=145,slow=29						
PYUN	Piuthan	11.73	133	*e*P	Pn	14 54 30.9	-0.7
	5.6nm,0.4s						
DANN	Dangsing	12.01	130	*e*P	Pn	14 54 36.6	+1.1
	4.1nm,0.2s						
MKAR	Makanchi Array	12.19	30	Pn	Pn	14 54 36.9	-0.6
	0.1nm,0.3s,baz=209,slow=12,SNR=3.5						
GEYT	Alibeck	12.22	281	LR	LR	15 00 41.6	
	comp=Z,51nm,18.4s,baz=0.0,slow=45						
KOLN	Koldanda	12.34	132	*e*P	Pn	14 54 38.5	-1.4
	3.5nm,0.4s						
KKN	Kakani	13.36	128	*e*P	Pn	14 54 53.9	+0.1
	6.5nm,0.5s						
DMN	Daman	13.37	129	*e*P	Pn	14 54 52.5	-1.6
	3.2nm,0.3s						
PKIN	Phulchoki	13.58	128	*e*P	Pn	14 54 55.7	-1.2
	5.9nm,0.6s						
PKI	Pulchoki	13.59	128	*e*P	Pn	14 54 55.3	-1.8
	14nm,1.0s						
GUN	Gumba	13.66	126	*e*P	Pn	14 54 58.4	+0.3
	7.6nm,0.6s						
JIRN	Jiri	14.03	126	*e*P	Pn	14 55 00.7	-2.5
	9.6nm,0.4s						
KURBB	Kurchatov Arra	14.53	13	Pn	Pn	14 55 08.1	-1.3
	0.0nm,0.3s,baz=206,slow=10,SNR=3.3						
RAMN	Ramite	14.78	127	*e*P	Pn	14 55 07.4	-5.9
	6.2nm,0.5s						
AKTO	Aktyubinsk	17.72	326	P	Pn	14 55 47.5	-2.8
	0.1nm,0.3s,baz=132,slow=14,SNR=2.3						
ZALV	Zalesovo Beam	19.11	21	P	P	14 56 05.4	-0.7
	0.2nm,0.3s,baz=222,slow=15,SNR=4.5						
SONM	Songino Array	26.73	55	P	P	14 57 24.3	+1.5
	0.4nm,0.7s,baz=251,slow=9.0,SNR=2.9						
VRAC	Vranov	42.49	306	LR	LR	15 20 14.3	
	comp=Z,36nm,18.7s,baz=322,slow=40						
WRA	Warramunga Arr	80.43	123	P	P	15 03 55.8	+1.1
	0.3nm,1.0s,baz=327,slow=4.8,SNR=4.8						
YKA	Yellowknife Ar	81.06	4	P	P	15 03 57.3	-0.2
	0.1nm,0.4s,baz=351,slow=5.3,SNR=5.1						
ASAR	Alice Springs	82.76	126	P	P	15 04 08.0	+1.0
	0.1nm,0.7s,baz=314,slow=5.4,SNR=1.2						

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*IDC **20** 15:07:35.5±1.4,14°.78S×179°.79W,h0^{km},mb3.9/7,
mb1 4.3/7,mb1mx3.9/39,mbtmp3.9/7,MS3.6/1,Ms1 3.6/1,
ms1mx2.8/25,Error ellipse: s-maj=106.6km s-min=20.5km
az=149.0*

*NEIC **20** 15:07:37.2±0.6,14°.67S×179°.99W,h10^{km},mb4.1/4,Error
ellipse: s-maj=24.7km s-min=12.3km az=150.0*

*ISCJB **20** 15:07:39.2±0.6,14°.8S±0°.2×179°.9W±0°.1,h33^{km},mb3.9/9,
MS3.4/1,Error ellipse: s-maj=24.7km s-min=11.7km
az=152.3*

ISC 20 15:07:40.6±0.8**,14°.9S**±0°.2×**179°.9W**±0°.1**,h35**^{km}**,n16,**
σ**1^{s}16**/15**,mb4.0**/9**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.47	214	*e*Pn	Pn	15 08 30.6	-1.6
RAR	Rarotonga	20.15	111	*e*P	Pn	15 12 15.5	+1.5
	66nm,1.3s						
HNR	Honiara	20.42	283	LR	LR	15 19 02.3	
	comp=Z,154nm,20.3s,baz=84,slow=34						
STKA	Stephens Creek	38.94	237	*e*P	P	15 15 04.4	+1.0
	2.2nm,1.2s						
STKA	Stephens Creek	38.94	237	P	P	15 15 04.9	+1.5
	3.4nm,0.9s,baz=57,slow=6.0,SNR=4.4						
WR1	Warramunga Arr	43.85	257	*e*P	P	15 15 44.8	+0.9
	8.2nm,1.4s						
WRA	Warramunga Arr	43.85	257	P	P	15 15 44.8	+0.9
	0.9nm,1.0s,baz=87,slow=7.6,SNR=3.4						
AS01	Alice Springs	44.27	251	*e*P	P	15 15 48.0	+0.7
AS31	Alice Springs	44.32	251	*e*P	P	15 15 47.5	-0.1
	1.6nm,1.1s						
ASAR	Alice Springs	44.32	251	P	P	15 15 48.4	+0.7
	2.2nm,0.9s,baz=88,slow=8.4,SNR=18						
NV01	Mina Array Sit	78.26	45	*e*P	P	15 19 35.3	-2.0
NVAR	Mina Array Bea	78.26	45	P	P	15 19 37.3	0.0
	1.6nm,0.8s,baz=220,slow=8.2,SNR=4.1						
ILAR	Eielson Array	83.27	14	P	P	15 20 03.5	+0.3
	0.9nm,1.0s,baz=224,slow=7.8,SNR=4.3						
TXAR	Lajitas Array	85.60	58	P	P	15 20 15.7	-0.3
	0.8nm,0.8s,baz=232,slow=6.1,SNR=8.1						
PDAR	Pinedale Array	86.15	44	P	P	15 20 18.0	-0.6
	0.5nm,0.8s,baz=225,slow=2.2,SNR=4.2						
GERES	GERESS Array B	144.31	345	PKP	PKPdf	15 27 12.1	-1.1
	0.8nm,0.8s,baz=18,slow=4.5,SNR=4.6						

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*IDC **20** 15:14:03.6±1.2,24°.79N×142°.58E,h0^{km},mb3.5/6,
mb1 3.7/8,mb1mx3.5/41,mbtmp3.6/8,ML3.2/2,Error
ellipse: s-maj=52.4km s-min=19.1km az=86.0*

ISC 20 15:14:08.4±1.2**,24°.74N**±0°.10×**142°.5E**±0°.3**,h32**^{km}**,n8,**
σ**0^{s}95**/9**,mb3.5**/6**,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.36	352	Pn	Pn	15 14 44.8	-0.1
	10nm,0.3s,baz=274,slow=19,SNR=3.0						
JCJ				Sn	Sn	15 15 14.5	+1.6
	38nm,0.3s,baz=277,slow=22,SNR=10.0						
MJAR	Matsushiro Arr	12.33	343	Pn	Pn	15 17 01.5	-0.3
	0.1nm,0.3s,baz=161,slow=10,SNR=7.7						
WRA	Warramunga Arr	45.13	191	P	P	15 22 22.9	+0.9
	0.3nm,0.3s,baz=8.1,slow=8.7,SNR=6.3						
ASAR	Alice Springs	48.84	191	P	P	15 22 51.6	+0.6
	0.3nm,0.8s,baz=16,slow=8.2,SNR=2.7						

MKAR	Makanchi Array	52.23	311	P	P	15 23 15.4	-1.0
	0.2nm,0.5s,baz=76,slow=12,SNR=2.6						
KURBB	Kurchatov Arra	54.92	316	P	P	15 23 35.7	-0.3
	0.6nm,0.6s,baz=90,slow=7.8,SNR=6.7						
YKA	Yellowknife Ar	74.06	28	P	P	15 25 40.2	-0.7
	0.3nm,0.8s,baz=295,slow=5.8,SNR=4.0						
FINES	FINESS Array B	80.19	334	P	P	15 26 15.4	+0.1
	1.5nm,0.8s,baz=65,slow=3.7,SNR=4.6						

MOS ***20*** *15:19:00.9±0.0, 42°.43N×41°.09E, h10^{km}, MPVA2.6*

DDA ***20*** *15:19:02.4, 42°.17N×41°.09E, h7^{km}±2^{km}, ML2.9*

ISC 20 15:18:59.1±1.6**, 42°.38N**±0°.03×**41°.11E**±0°.08**, h0**^{km}±13^{km}**,**
n10, σ0^s.68/20**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBOC	Borcka	1.11	158	iP	Pg	15 19 20.4	0.0
DBOC				iS	Sb	15 19 37.2	+1.0
DBOC				IAML_P			
	comp=Z,2μm,0.1s						
ARXR	Arkhyz	1.19	6	ePg	Pn	15 19 22.9	-0.1
ARXR				eSg	Sb	15 19 38.5	0.0
ARTV	Artvin	1.34	153	iP	Pg	15 19 25.3	+0.5
ARTV				iS	Sg	15 19 41.8	-0.4
ARTV				IAML_P			
	comp=Z,1μm,0.1s						
DBAD	Bademkaya	1.43	162	iP	Pn	15 19 26.4	+0.1
DBAD				iS	Sg	15 19 44.1	-0.9
DBAD				IAML_P			
	comp=Z,322nm,0.1s						
DAGI	Agillar	1.43	155	iP	Pn	15 19 26.7	+0.4
DAGI				iS	Sg	15 19 44.2	-0.9
RPOR	Krasnaya Polya	1.46	335	iPg	Pn	15 19 26.9	+0.2
RPOR				eSg	Sn	15 19 46.7	+0.3
NEY	Neytrino	1.47	53	iPg	Pg	15 19 28.1	+0.9
NEY				eSg	Sn	15 19 47.3	+0.3
DDEM	Demirkent	1.56	162	iP	Pg	15 19 30.2	+1.3
DDEM				iS	Sn	15 19 48.2	-0.9
DDEM				IAML_P			
	comp=Z,974nm,0.1s						
SHA1	Shidzhatmaz	1.77	39	ePg	Pg	15 19 33.0	+0.1
SHA1				eSg	Sg	15 19 56.0	+0.2
KIV0	Kislovodsk Arr	1.96	36	ePg	Pb	15 19 34.9	-0.7
KIV0				eSg	Sg	15 20 01.3	-0.6

NIED ***20*** *15:20:00, 23°.20N×121°.60E, h26^{km}, Mw4.1 Best double couple: M$_0$1.58000×10^{15} NP1:φ$_s$242.00000°, δ15.00000°, λ131.00000°. NP2:φ$_s$20.00000°, δ79.00000°, λ80.00000°.*

IDC ***20*** *15:20:24.8±0.7, 23°.12N×121°.44E, h0^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.8/39, mbtmp3.8/15, ML2.6/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/41, Error ellipse: s-maj=25.2km s-min=14.9km az=69.0*

BJI ***20*** *15:20:26.5, 23°.14N×121°.50E, h15^{km}, mB4.3/8, mb4.0/23, ML4.2/7, Ms4.1/18, Ms7 4.0/17*

JMA ***20*** *15:20:26.1±0.1, 23°.18N×121°.58E, h0^{km}, M4.1*

NEIC ***20*** *15:20:27.3±1.1, 23°.18N×121°.53E, h11^{km}±7^{km}, mb4.0/1, Error ellipse: s-maj=10.3km s-min=7.1km az=122.0*

TAP ***20*** *15:20:28.9, 23°.23N×121°.39E, h20^{km}, ML4.5, B*

ASIES ***20*** *15:20:28.3, 23°.20N×121°.39E, h20^{km}, MW3.9*

ISCJB ***20*** *15:20:28.0±0.3, 23°.17N±0°.01×121°.51E±0°.02, h21^{km}±2^{km}, mb3.8/18, MS3.4/7, Error ellipse: s-maj=2.8km s-min=2.1km az=138.5*

ISC 20 15:20:28.7±0.5**, 23°.21N**±0°.02×**121°.50E**±0°.02**, h20**^{km}±2^{km}**,**
n177, σ1^s.37/225**, mb3.8**/18**, MS3.4**/7**, 22C-21D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKT	Chengkung	0.17	228	⇓iP	Pb	15 20 33.7	-0.7
	baz=188						
CHKT				iS	Sb	15 20 37.0	-1.4
	baz=188						
TWF1	Yuli	0.23	307	⇑iP	Pb	15 20 33.8	-0.9
	baz=320						
TWF1				eS	Sb	15 20 37.4	-1.4
	baz=320						
YULB	Yu-li	0.26	314	ePg	Pb	15 20 34.2	-0.7
YULB	Yu-li	0.26	314	⇑P	Pb	15 20 34.2	-0.7
	baz=321						
YULB				S	Sb	15 20 38.4	-0.9
	baz=321						
HGSD	Ruisui	0.29	346	⇑P	Pb	15 20 35.2	-0.1
	baz=15						
HGSD				eS	Sn	15 20 42.5	-1.1
	baz=15						
ELDTW	Lidau	0.44	267	⇓iP	Pb	15 20 36.3	-1.6
	baz=263						
ELDTW				S	Sb	15 20 40.9	-3.3
	baz=263						
EGFH	Guangfu	0.46	352	eP	Pb	15 20 37.7	-0.4
	baz=349						
TWGBT	Beinan	0.55	225	⇑P	Pb	15 20 38.6	-1.1
	baz=227						
TWGBT				S	Sb	15 20 45.6	-1.6
	baz=227						
TWG	Pinlang	0.55	226	ePg	Pb	15 20 38.5	-1.3
TWG	Pinlang	0.55	226	⇑iP	Pb	15 20 38.7	-1.2
	baz=227						
TWG				S	Sb	15 20 45.9	-1.5
	baz=227						
TTN	Taitung	0.56	216	⇑P	Pb	15 20 40.1	+0.2
	baz=209						
YUS	Yu-Shan	0.57	299	⇓iP	Pb	15 20 39.0	-1.5
	baz=297						
YUS				S	Sb	15 20 46.2	-2.3
	baz=297						
ESL	Shilin	0.60	354	⇓P	Pb	15 20 39.6	-1.1
	baz=354						
VWDT	VWDT	0.63	329	⇓P	Pb	15 20 40.3	-0.9
	baz=336						
VWDT				S	Sb	15 20 47.8	-1.9
	baz=336						
STYT	Tauyuan	0.69	266	⇑iP	Pb	15 20 40.6	-1.5
	baz=264						
STYT				S	Sb	15 20 48.4	-2.8
	baz=264						
ENLB	Shoufeng	0.70	8	eP	Pn	15 20 42.9	-0.6
	baz=1.0						
ENLB				S	Sn	15 20 53.4	-0.2
	baz=1.0						
ALS	Alishan	0.70	295	⇓iP	Pb	15 20 41.5	-1.1
	baz=290						
ALS				S	Sb	15 20 49.9	-2.1
	baz=290						
SSLB	Suanglung	0.76	319	ePg	Pb	15 20 42.1	-1.3
SSLB	Suanglung	0.76	319	⇓P	Pb	15 20 42.1	-1.3
	baz=332						
SSLB				S	Sb	15 20 51.0	-2.3
	baz=332						
WHYT	Xinyi Township	0.77	309	⇓P	Pb	15 20 42.7	-0.7
	baz=321						
WHYT				S	Sb	15 20 52.0	-1.4
	baz=321						
HWA	Hwalien	0.77	7	eP	Pn	15 20 44.5	0.0
	baz=359						
ECL	Taimali	0.79	220	eP	Pb	15 20 41.6	-2.2
	baz=214						
OWD	Renai	0.80	338	eP	Pb	15 20 42.8	-1.3
	baz=334						
TPUB	Ta-pu	0.81	277	ePg	Pb	15 20 43.2	-0.8
TPUB	Ta-pu	0.81	277	⇓P	Pb	15 20 43.3	-0.8
	baz=276						
TPUB				S	Sb	15 20 53.1	-1.4
	baz=276						
SLGT	Liugui	0.81	255	eP	Pb	15 20 43.0	-1.3
	baz=249						
CHN4	Tsaushan	0.84	280	⇓iP	Pb	15 20 44.1	-0.7
	baz=279						
CHN4				S	Sb	15 20 55.4	-0.2
	baz=279						
CHN5	Tsauling	0.85	297	⇓iP	Pb	15 20 44.4	-0.5
	baz=299						
CHN5				S	Sb	15 20 54.8	-1.0
	baz=299						
SGST	Jiashian	0.85	262	⇑P	Pb	15 20 44.1	-0.8
	baz=259						
SMLT	Sun Moon Lake	0.87	321	⇓P	Pb	15 20 44.2	-1.0
	baz=331						
SMLT				eS	Sb	15 20 55.5	-0.8
	baz=331						
TWD	Chiawan	0.87	6	eP	Pb	15 20 44.2	-1.0
	baz=359						
TWD				eS	Sn	15 20 58.5	+0.6
	baz=359						
CHN1	Nanshi	0.89	269	⇑iP	Pb	15 20 45.0	-0.5
	baz=267						
CHN1				S	Sb	15 20 56.7	-0.4
	baz=267						
CHGB	Renai	0.90	341	⇓P	Pb	15 20 44.7	-1.1
	baz=345						
TYC	Yuchr	0.91	320	⇓P	Pb	15 20 44.8	-1.0
	baz=334						
TYC				eS	Sb	15 20 56.9	-0.6
	baz=334						
SNST	Tainan City	0.92	271	⇓eP	Pb	15 20 45.4	-0.6
	baz=270						
SNST				eS	Sb	15 20 57.4	-0.5
	baz=270						
SSD	Sandimen	0.92	240	⇑P	Pb	15 20 44.4	-1.7
	baz=232						
TWK	Hsinying	0.93	274	⇑iP	Pb	15 20 45.5	-0.8
	baz=273						
TWK				S	Sb	15 20 57.4	-0.8
	baz=273						
WJS	Zhushan	0.93	311	⇓eP	Pb	15 20 46.4	+0.1
	baz=322						
WJS				S	Sb	15 20 58.5	+0.3
	baz=322						
WHF	Hehuan Shan	0.95	347	eP	Pb	15 20 45.6	-1.3
	baz=1.0						
NACB	Ninganchiao	0.96	5	ePg	Pb	15 20 44.8	-2.0
NACB	Ninganchiao	0.96	5	⇓eP	Pb	15 20 45.2	-1.6
	baz=356						
WGK	Gukeng	0.98	299	P	Pb	15 20 46.9	-0.2
	baz=301						
WGK				S	Sb	15 20 59.9	+0.3
	baz=301						
ETLH	Xiulin Townshi	0.99	359	eP	Pb	15 20 45.6	-1.7
	baz=2.0						
CHN2	Minshiung	0.99	289	P	Pb	15 20 47.4	+0.1
	baz=290						
CHN2				S	Sn	15 21 00.8	-0.1
	baz=290						
MASBT	Mashibuluo	1.00	233	⇑P	Pb	15 20 45.7	-1.6
	baz=224						
WNT	Mingjian	1.00	312	⇓P	Pb	15 20 47.5	+0.1
	baz=314						
WNT				S	Sb	15 21 00.4	+0.3
	baz=314						
WDLH	Douliu	1.00	299	⇑P	Pn	15 20 47.8	+0.1
	baz=300						
WDLH				eS	Sn	15 21 01.7	+0.5
	baz=300						
TAW	Tawu	1.01	213	eP	Pb	15 20 45.4	-2.2
	baz=211						
EAST	Anshuo	1.02	216	⇑iP	Pb	15 20 45.6	-2.1
	baz=214						
CHY	Chiayi	1.03	286	⇑eP	Pb	15 20 47.5	-0.3
	baz=287						
SGLT	Jiouru	1.05	243	eP	Pn	15 20 48.3	+0.1
	baz=239						
CHN3	Shinhua	1.05	263	⇑iP	Pb	15 20 49.0	+0.8
	baz=269						
CHN3				S	Sn	15 21 03.6	+1.2
	baz=269						
TWM1	Shoushan	1.06	249	⇑P	Pb	15 20 48.9	+0.5
	baz=248						
TWT	Tachien	1.08	344	eP	Pn	15 20 48.0	-0.8
	baz=347						
TDCB	Techi	1.08	343	⇓eP	Pn	15 20 47.9	-1.1
	baz=346						
SCZT	Fangliau	1.16	224	eP	Pn	15 20 48.5	-1.4
	baz=217						
SNJT	Kaohsiung City	1.17	247	eP	Pb	15 20 51.5	+1.3
	baz=247						
SNJT				eS	Sn	15 21 08.9	+3.7
	baz=247						
LAY	Lan-yu	1.17	178	eP	Pn	15 20 48.4	-1.5
	baz=161						
WHP	Taichung City	1.18	335	eP	Pb	15 20 50.3	-0.1
	baz=347						
TAI1	Yung-k'ang	1.18	262	eP	Pb	15 20 50.4	-0.1
	baz=261						
TAI1				eS	Sn	15 21 07.8	+2.2
	baz=261						
CHN8	Yiju	1.19	277	eP	Pn	15 20 50.1	-0.1
	baz=277						
CHN8				S	Sn	15 21 06.0	+0.2
	baz=277						
TCU	Taichung	1.20	321	eP	Pb	15 20 51.0	+0.2
	baz=323						
SCLT	Jiali	1.20	269	eP	Pn	15 20 50.3	0.0
	baz=268						
SCLT				eS	Sn	15 21 07.3	+1.3
	baz=268						
NNSB	Datong	1.22	355	⇓eP	Pn	15 20 49.6	-1.1
	baz=7.0						
WCHH	Zhanghua	1.22	315	eP	Pb	15 20 51.0	-0.2
	baz=316						
NNS	Nan Shan	1.23	355	eP	Pn	15 20 50.1	-0.8
	baz=8.0						
ENA	Nanau	1.23	10	eP	Pn	15 20 49.9	-1.0
NANB	Nanao	1.23	11	eP	Pn	15 20 49.7	-1.1
RLNB	Erlin	1.25	303	eP	Pn	15 20 51.3	+0.3
	baz=304						
RLNB				eS	Sb	15 21 07.5	+0.3
	baz=304						
WSF	Szhu	1.25	290	⇑P	Pn	15 20 50.8	-0.2
	baz=291						
WSF				S	Sn	15 21 07.0	-0.2
	baz=291						
KAU	Kaohsiung	1.27	240	eP	Pb	15 20 54.7	+2.7
	baz=258						
WTCT	Ta-ch'eng	1.29	300	eP	Pn	15 20 51.3	-0.3
	baz=301						
WTCT				eS	Sn	15 21 08.2	-0.2
	baz=301						
TWQ1	Liyutan	1.31	330	P	Pb	15 20 53.1	+0.3
	baz=332						
TWQ1				eS	Sb	15 21 09.9	+0.8
	baz=332						
WLCH	Liuqiu	1.34	231	eP	Pb	15 20 54.9	+1.7
	baz=224						
TWP	Hsiaoliuchiu	1.36	231	eP	Pb	15 20 54.0	+0.6
	baz=224						
NSY	Sanyi	1.38	331	⇑P	Pb	15 20 54.4	+0.5
	baz=333						
NSY				eS	Sb	15 21 12.1	+1.0
	baz=333						
WDJ	Dajia District	1.38	325	eP	Pb	15 20 54.2	+0.3
	baz=326						
NDT	Datong Townshi	1.39	1	eP	Pb	15 20 54.3	+0.3
	baz=14						
HEN	Hengchun	1.39	211	eP	Pb	15 20 54.3	+0.3
	baz=202						
TWKBT	Hengchun	1.41	207	eP	Pn	15 20 52.3	-1.0
	baz=198						
TWK1	Hengchun	1.42	207	eP	Pn	15 20 52.9	-0.4
	baz=198						
TSEB	Hengchuen, Pin	1.42	203	eP	Pb	15 20 54.9	+0.4
	baz=193						
ENTT	Nioudou	1.43	2	eP	Pn	15 20 53.7	+0.3
	baz=3.0						
TWC	Suao	1.43	13	eP	Pn	15 20 53.8	+0.3
	baz=360						
PTSB	Yuanli	1.43	330	eP	Pn	15 20 54.0	+0.5
	baz=331						
PTSB				eS	Sb	15 21 13.1	+0.6
	baz=331						
EOS1	EOS1	1.45	23	eP	Pb	15 20 55.2	+0.1
	baz=38						
YHNB	Yeheng	1.46	356	ePn	Pn	15 20 53.7	-0.2
YHNB	Yeheng	1.46	356	eP	Pn	15 20 54.1	+0.1
	baz=9.0						
NSK	Sanguang	1.47	355	eP	Pn	15 20 54.2	+0.1
	baz=8.0						
NMLH	Miaoli	1.47	334	eP	Pb	15 20 55.7	+0.3
	baz=334						
NSTT	Nanjuang	1.49	342	eP	Pb	15 20 55.4	-0.3
	baz=343						
LIOB	Emei	1.50	343	eP	Pn	15 20 54.5	0.0
	baz=343						
TWE	Neicheng	1.51	6	eP	Pb	15 20 55.7	-0.4
	baz=7.0						
SLBB	Yuanshan	1.54	5	eP	Pb	15 20 56.0	-0.7
	baz=4.0						
NWLT	Wulai	1.56	0	eP	Pb	15 20 56.4	-0.5
	baz=14						
SBCB	Hsinchu	1.64	343	eP	Pb	15 20 58.9	+0.6
	baz=343						
EGS		1.68	14	eP	Pb	15 20 58.7	-0.2
	baz=1.0						
WDGT	Dungji	1.69	272	eP	Pn	15 20 56.0	-1.1
	baz=272						
NHDH	Xindian Distri	1.75	1	eP	Pb	15 21 00.2	+0.1
	baz=12						
TATO	Taipei	1.76	360	ePn	Pn	15 20 58.4	+0.4
TATO	Taipei	1.76	360	eP	Pn	15 20 58.8	+0.8
	baz=15						
TWA	Mucha	1.76	2	eP	Pb	15 20 59.6	-0.8
	baz=13						
NCUH	Zhongli	1.77	351	eP	Pb	15 21 00.6	0.0
	baz=333						
TIPB	Shuangxi	1.78	10	eP	Pn	15 20 58.5	+0.2
	baz=8.0						
PHUB	P'eng-hu	1.80	280	eP	Pn	15 20 57.5	-1.0
	baz=280						
JYNG	Yonagunijimaku	1.81	47	P	Pn	15 20 59.7	+0.9
JYNG				eS	Sn	15 21 21.8	+0.7
PNG	Penghu	1.82	282	eP	Pn	15 20 58.4	-0.5
	baz=282						
TWB1	Santiao Chiao	1.84	14	eP	Pb	15 21 01.1	-0.7
	baz=2.0						
YOJ	Yonaguni jima	1.86	48	ePn	Pn	15 21 00.3	+0.8
YOJ	Yonaguni jima	1.86	48	eP	Pn	15 21 00.0	+0.6
	baz=50						
YOJ	Yonaguni jima	1.86	48	P	Pn	15 21 00.3	+0.8
YOJ				S	Sn	15 21 23.1	+0.7
NWF	Wu-fen Shan	1.87	8	eP	Pn	15 21 00.9	+1.2
	baz=6.0						
WFSB	Wu-fen Shan	1.87	8	eP	Pn	15 21 00.5	+1.0
	baz=6.0						
TWS1	Kuangyinshan	1.88	358	eP	Pn	15 21 00.8	+1.1
	baz=14						
VCHM	Qimei	1.90	270	eP	Pn	15 20 59.3	-0.8
	baz=270						
YM01	YM01	1.93	2	eP	Pb	15 21 01.9	-1.3
YM04	YM04	1.94	1	eP	Pn	15 21 01.6	+1.1
	baz=16						
YM05	YM05	1.95	2	eP	Pn	15 21 00.7	0.0
YM11	YM11	1.95	2	eP	Pn	15 21 01.1	+0.3
TWY	Chenhua	2.06	3	eP	Pb	15 21 05.0	-0.5
	baz=1.0						
HATJ	Hateruma jima	2.28	68	P	Pn	15 21 06.1	+0.9
HATJ				S	Sn	15 21 33.2	+0.6
IRIF	Iriomote-Funau	2.33	61	P	Pn	15 21 06.8	+0.9
IRIF				eS	Sn	15 21 35.2	+1.3
JKRS	Kuro-shima	2.52	66	P	Pn	15 21 09.6	+1.1
JKRS				S	Sn	15 21 39.7	+1.2
VWUC	VWUC	2.58	314	eP	Pn	15 21 08.8	-0.6
	baz=301						
JIJ	Ishigaki jima	2.68	64	P	Pn	15 21 11.1	+0.4
JIJ				S	Sn	15 21 42.3	-0.3
JISG	Ishigakijimahi	2.92	61	P	Pn	15 21 14.2	+0.3
JISG				eS	Sn	15 21 48.3	-0.1
KNM	Kinmen	3.05	294	⇑eP	Pn	15 21 16.4	+0.6
	baz=293						
KNMB	Chin-men Tao	3.11	294	⇑eP	Pn	15 21 15.6	-1.0
	baz=294						
QZH	Quanzhou	3.17	304	⇑iPn	Pn	15 21 16.3	-1.1
QZH				Sn	Sn	15 21 51.5	-3.1
QZH				smax	smax		
	comp=N,260nm,0.6s						
QZH				smax	smax		
	comp=E,280nm,0.8s						
MATB	Ma-tsu	3.25	335	eP	Pn	15 21 17.9	-0.7
	baz=333						
JTJ	Tarama	3.26	63	P	Pn	15 21 19.5	+0.8
JTJ				eS	Sn	15 21 57.0	+0.2
JIRB	Irabujima	3.73	64	P	Pn	15 21 25.7	+0.6
JIRB				S	Sn	15 22 08.2	-0.2
JMJ	Miyako jima 2	3.82	65	eP	Pn	15 21 27.8	+1.4
	baz=70						
JIKM	Ikemajima	3.83	63	P	Pn	15 21 26.9	+0.4
JIKM				S	Sn	15 22 10.7	-0.2
JOGS	Gusukube	3.89	66	P	Pn	15 21 28.7	+1.3
JOW	Kunigami	7.12	58	Pn	Pn	15 22 11.3	-0.5
	0.2nm,0.3s,baz=198,slow=13,SNR=5.5						
JOW				Sn	Sn	15 23 30.5	-1.7
	0.3nm,0.3s,baz=104,slow=15,SNR=2.4						
GZH	Guangzhou	7.51	271	Pn	Pn	15 22 12.3	-4.8
GZH				smax	smax		
	comp=N,160nm,1.0s						
GZH				smax	smax		
	comp=E,150nm,1.2s						
SSE	Sheshan	7.86	358	ePn	Pn	15 22 21.6	-0.3
WHN	Wuhan	9.70	320	⇓P	Pn	15 22 46.0	-1.1
WHN				LR	LR		
	comp=N,2μm,10.1s						
WHN				LR	LR		
	comp=E,1μm,9.2s						
WHN				LR	LR		
	comp=Z,1μm,10.8s						
QIZ	Qiongzhong	11.64	251	P	Pn	15 23 13.3	-0.5
QIZ				S	Sn	15 25 28.6	+5.3
QIZ				LR	LR		
	comp=Z,300nm,18.1s						
QIZ	Qiongzhong	11.64	251	ePn	Pn	15 23 14.5	+0.7
JNU	Nakatsue	12.87	38	LR	LR	15 28 55.7	
	comp=Z,99nm,19.6s,baz=196,slow=39						
KSAR	Wonju Array Be	15.21	20	Pn	P	15 24 05.5	-1.7
KSRS	Korea Array	15.23	20	Pn	P	15 24 05.5	-1.9
	0.1nm,0.3s,baz=201,slow=11,SNR=4.5						
KSRS				LR	LR	15 30 55.0	
	comp=Z,78nm,19.2s,baz=204,slow=41						
XAN	Xi'an	15.42	317	ePn	Pn	15 24 07.0	+1.8
	13nm,1.6s						
KMI	Kunming	17.23	280	P	P	15 24 29.9	0.0
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC	Hu-ho-hao-te	19.48	337	eP	Pn	15 24 55.1	-0.6
HHC				S	S	15 28 25.4	-8.3
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				LR	LR		
	comp=N,190nm,9.4s						
HHC				LR	LR		
	comp=E,130nm,8.6s						
HHC				LR	LR		
	comp=Z,81nm,8.6s						
MJAR	Matsushiro Arr	19.62	44	P	Pn	15 24 57.8	+0.5
	0.0nm,0.3s,baz=211,slow=7.5,SNR=3.2						
LZH	Lanzhou	19.96	314	eP	Pn	15 25 03.5	+1.9
LZH				pP	pP	15 25 06.8	+1.1
LZH				sP	sP	15 25 09.8	+0.5
LZH				PP	PnPn	15 25 20.4	+4.5
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				LR	LR		
	comp=N,340nm,10.3s						
LZH				LR	LR		
	comp=E,570nm,10.8s						
LZH				LR	LR		
	comp=Z,680nm,11.4s						
CMAR	Chiang Mai Arr	21.60	262	P	P	15 25 19.2	+1.7
	0.9nm,0.9s,baz=58,slow=8.7,SNR=8.9						
CMAR				PcP	PcP	15 29 19.6	+0.4
	0.2nm,0.6s,baz=66,slow=2.3,SNR=4.4						
CMAR				LR	LR	15 34 10.3	
	comp=Z,75nm,18.9s,baz=88,slow=38						
GTA	Gaotai	24.48	316	eP	P	15 25 48.3	+1.6
GTA				pP	pP	15 25 53.0	+0.2
GTA				sP	sP	15 25 55.5	-0.4
GTA				S	S	15 30 11.6	+5.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,48nm,5.2s						
GTA				LR	LR		
	comp=N,150nm,16.8s						
GTA				LR	LR		
	comp=E,250nm,14.9s						
GTA				LR	LR		
	comp=Z,270nm,13.6s						
KLR	Kul'dur	27.20	15	P	P	15 26 11.6	+0.6
	0.4nm,0.5s,baz=190,slow=12,SNR=3.6						
SONM	Songino Array	27.37	338	P	P	15 26 12.4	-0.3
	0.6nm,0.6s,baz=164,slow=9.7,SNR=4.1						
SONM				LR	LR	15 38 35.1	
	comp=Z,123nm,18.3s,baz=288,slow=40						
BATI	Baumata	33.28	176	LR	LR	15 41 10.8	
	comp=Z,42nm,20.3s,baz=202,slow=38						
WMQ	Urumqi	34.54	315	eP	P	15 27 17.9	+2.1
WMQ				LR	LR		
	comp=N,48nm,16.7s						
WMQ				LR	LR		
	comp=E,75nm,17.7s						

WMQ				LR	LR		
	comp=Z,130nm,14.3s						
MKAR	Makanchi Array	39.24	317	P	P	15 27 56.0	+0.3
	0.6nm,0.5s,baz=102,slow=9.3,SNR=12						
MKAR				PcP	PcP	15 30 04.4	-0.1
	0.3nm,0.6s,baz=106,slow=5.1,SNR=3.3						
PETK	Petropavlovsk-	40.52	33	LR	LR	15 46 02.7	
	comp=Z,49nm,18.3s,baz=142,slow=38						
ZALV	Zalesovo Beam	41.22	328	P	P	15 28 09.7	-2.3
	0.7nm,0.5s,baz=116,slow=10.0,SNR=4.7						
H11N1	WAKE ISLAND Hy	42.26	86	T	T	16 13 32.4	
	baz=283,slow=75,SNR=122						
H11N2	WAKE ISLAND Hy	42.26	86	T	T	16 13 32.5	
	baz=283,slow=75,SNR=100						
H11N3	WAKE ISLAND Hy	42.28	86	T	T	16 13 33.7	
	baz=283,slow=75,SNR=100						
H11S3	WAKE ISLAND Hy	42.36	88	T	T	16 13 40.7	
	baz=284,slow=75,SNR=129						
H11S1	WAKE ISLAND Hy	42.37	88	T	T	16 13 44.4	
	baz=284,slow=75,SNR=77						
H11S2	WAKE ISLAND Hy	42.38	88	T	T	16 13 41.6	
	baz=284,slow=75,SNR=89						
KURK	Kurchatov	43.02	321	P	P	15 28 26.5	-0.2
KURBB	Kurchatov Arra	43.04	320	P	P	15 28 26.5	-0.3
	0.8nm,0.9s,baz=114,slow=7.9,SNR=5.4						
WRA	Warramunga Arr	44.68	163	P	P	15 28 38.4	-2.0
	1.3nm,0.8s,baz=342,slow=8.4,SNR=13						
ASAR	Alice Springs	48.13	165	P	P	15 29 06.5	-1.0
	0.3nm,0.3s,baz=340,slow=7.0,SNR=27						
ASAR				PcP	PcP	15 30 33.0	-1.9
	0.3nm,0.7s,baz=338,slow=3.5,SNR=4.4						
NRIK	Noril'sk	50.41	345	P	P	15 29 24.3	-0.1
	0.8nm,0.3s,baz=162,slow=20,SNR=3.5						
NRIK				LR	LR	15 52 56.6	
	comp=Z,29nm,19.3s,baz=60,slow=39						
STKA	Stephens Creek	58.05	160	P	P	15 30 19.9	-0.5
	2.0nm,0.7s,baz=330,slow=14,SNR=3.0						
KDAK	Kodiak Island	68.53	35	P	P	15 31 30.3	+0.7
	22nm,1.2s,baz=242,slow=17,SNR=2.9						
ILAR	Eielson Array	69.94	27	P	P	15 31 41.0	+2.7
	0.3nm,0.6s,baz=294,slow=6.8,SNR=4.5						
FINES	FINESS Array B	72.43	330	P	P	15 31 52.5	-0.8
	0.9nm,0.7s,baz=101,slow=2.8,SNR=3.6						
BRTR	Keskin Array B	73.98	307	P	P	15 32 03.7	+0.5
	0.8nm,0.9s,baz=56,slow=8.9,SNR=3.0						
YKA	Yellowknife Ar	83.75	23	P	P	15 32 54.4	-1.6
	0.2nm,0.7s,baz=306,slow=4.8,SNR=6.6						
GERES	GERESS Array B	83.78	321	P	P	15 32 56.0	-0.7
	0.5nm,0.7s,baz=72,slow=9.4,SNR=2.9						
NVAR	Mina Array Bea	96.94	43	P	P	15 33 59.0	-0.3
	0.4nm,0.3s,baz=304,slow=6.4,SNR=3.2						

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*ISCJB **20** 15:31:10.5±0.8, 55°.2S±0°.1×28°.5W±0°.2, h10km, mb4.0/4, Error ellipse: s-maj=19.2km s-min=14.1km az=31.9*

*IDC **20** 15:31:11.5±1.0, 55°.09S×28°.54W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.9/19, mbtmp3.9/4, Error ellipse: s-maj=42.6km s-min=26.5km az=67.0*

*NEIC **20** 15:31:12.7±0.4, 55°.13S×28°.59W, h10km, mb4.6/2, Error ellipse: s-maj=14.0km s-min=10.1km az=207.0*

ISC 20 15:31:12.6±0.9**, 55°.1S**±0°.2×**28°.6W**±0°.1**, h10km, n15, σ0ˢ.63**/15**, mb4.0**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	4.65	277	*e*Pn	Pn	15 32 22.1	-0.6
EFI	East Falkland	17.83	269	*e*Pn	P	15 35 22.0	+0.7
	288nm,1.8s						
SNAA	Sanae	19.91	156	*e*P	P	15 35 43.0	-1.0
	37nm,1.9s						
QSPA	South Pole Qui	35.12	180	P	P	15 38 06.4	+0.5
	1.0nm,0.6s,baz=186,slow=3.4,SNR=14						
CPUP	Villa Florida	35.60	312	*e*P	P	15 38 09.5	-0.7
	25nm,2.0s						
CPUP	Villa Florida	35.60	312	P	P	15 38 09.7	-0.5
	2.6nm,0.6s,baz=152,slow=8.1,SNR=6.4						
LPAZ	La Paz	49.19	306	*e*P	P	15 40 01.5	0.0
LPAZ	La Paz	49.19	306	P	P	15 40 02.8	+1.2
	1.1nm,0.6s,baz=102,slow=4.8,SNR=5.2						
TORD	Torodi Ar. Bea	72.67	31	P	P	15 42 40.3	-0.1
	0.5nm,0.7s,baz=197,slow=4.6,SNR=4.0						
TOA1	Torodi Ar. Sit	72.67	31	*e*P	P	15 42 40.3	-0.1
IL1	Eielson Array	148.90	313	*e*PKPbc	PKPbc	15 50 59.1	0.0
ILAR	Eielson Array	148.90	313	PKPbc	PKPbc	15 50 59.3	+0.3
	2.0nm,0.6s,baz=116,slow=1.2,SNR=31						
ILB	Eielson Array	148.90	313	*e*PKPbc	PKPbc	15 50 59.4	+0.4
SONA0	Songino Array	151.47	86	*e*PKPbc	PKiKP	15 51 06.5	+0.2
SONM	Songino Array	151.47	86	PKPbc	PKiKP	15 51 06.5	+0.2
	0.7nm,0.5s,baz=228,slow=3.4,SNR=5.2						

IDC 20 16:00:35.5±2.0**, 5°.02S×153°.02E, h0km, mb3.6**/7**, mb1 3.9**/7**, mb1mx3.6**/35**, mbtmp3.6**/7**, Error ellipse: s-maj=65.5km s-min=25.3km az=120.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.46	229	P	P	16 05 47.6	+0.7
	0.4nm,0.4s,baz=50,slow=9.8,SNR=9.0						
ASAR	Alice Springs	26.13	223	P	P	16 06 11.9	+0.4
	0.2nm,0.6s,baz=55,slow=9.0,SNR=4.3						
FITZ	Fitzroy Crossi	29.74	242	P	P	16 06 42.5	-1.3
	1.1nm,0.5s,baz=50,slow=8.8,SNR=6.5						
CMAR	Chiang Mai Arr	58.17	295	P	P	16 10 32.2	+0.5
	0.9nm,0.3s,baz=108,slow=6.1,SNR=6.6						
MKAR	Makanchi Array	80.64	319	P	P	16 12 50.8	+0.5
	0.3nm,0.7s,baz=99,slow=7.2,SNR=4.1						
ZALV	Zalesovo Beam	81.46	326	P	P	16 12 53.8	-0.7
	0.4nm,0.5s,baz=75,slow=7.6,SNR=3.0						
ILAR	Eielson Array	82.28	22	P	P	16 12 58.7	+0.1
	0.3nm,0.7s,baz=243,slow=6.0,SNR=3.9						
TORD	Torodi Ar. Bea	150.58	288	PKPbc	PKPbc	16 20 30.0	-0.5
	0.9nm,0.8s,baz=43,slow=3.6,SNR=5.6						

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*JMA **20** 16:02:41.0±0.1, 23°.19N×121°.58E, h0km, M3.3*

*ISCJB **20** 16:02:42.9±0.3, 23°.18N±0°.02×121°.51E±0°.02, h19km±3km, Error ellipse: s-maj=3.1km s-min=2.5km az=41.3*

*TAP **20** 16:02:43.9, 23°.23N×121°.38E, h19km, ML3.5, B*

ISC 20 16:02:43.5±0.9**, 23°.21N**±0°.02×**121°.48E**±0°.02**, h20km**±2km**, n104, σ0ˢ.99**/145**, 12C-11D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.15	224	⇓P	Pb	16 02 48.5	+0.2
	baz=183						
CHKT				S	Sb	16 02 51.8	+0.1
	baz=183						
TWF1	Yuli	0.22	311	⇑*i*P	Pb	16 02 48.7	-0.4
	baz=322						
TWF1				S	Sb	16 02 52.2	-0.8
	baz=322						
YULB	Yu-li	0.25	318	⇑P	Pb	16 02 49.1	-0.4
	baz=324						
YULB				S	Sb	16 02 53.0	-0.5
	baz=324						
HGSD	Ruisui	0.29	350	⇑P	Pb	16 02 50.1	+0.1
	baz=18						
HGSD				*e*S	Sn	16 02 57.0	-1.3
	baz=18						
EHY	Hungye	0.33	334	⇓*i*P	Pb	16 02 50.5	-0.2
	baz=337						
EHY				S	Sb	16 02 55.2	-0.4
	baz=337						
ELDTW	Lidau	0.43	268	⇓*i*P	Pb	16 02 51.1	-1.3
	baz=262						
ELDTW				S	Sb	16 02 55.6	-2.8
	baz=262						
EGFH	Guangfu	0.46	354	*e*P	Pb	16 02 53.1	+0.2
	baz=350						
TWGBT	Beinan	0.54	224	⇑P	Pb	16 02 53.5	-0.7
	baz=215						
TWGBT				S	Sb	16 03 00.2	-1.3
	baz=215						
TWG	Pinlang	0.54	224	⇑*i*P	Pb	16 02 53.5	-0.8
	baz=225						
TWG				S	Sb	16 03 00.8	-0.9
	baz=225						
TTN	Taitung	0.55	214	⇑P	Pb	16 02 55.0	+0.6
	baz=208						
YUS	Yu-Shan	0.56	300	⇓*i*P	Pb	16 02 54.0	-1.0
	baz=296						
YUS				S	Sb	16 03 00.4	-2.3
	baz=296						
ESL	Shilin	0.60	356	*e*P	Pb	16 02 54.7	-0.8
	baz=352						
VWDT	VWDT	0.63	330	P	Pb	16 02 55.2	-0.6
	baz=337						
VWDT				S	Sb	16 03 03.0	-1.1
	baz=337						
STYT	Tauyuan	0.67	266	⇑*i*P	Pb	16 02 55.4	-1.1
	baz=263						
STYT				S	Sb	16 03 03.3	-2.1
	baz=263						
ENLB	Shoufeng	0.70	9	*e*P	Pn	16 02 57.7	-0.6
	baz=2.0						
ENLB				*e*S	Sn	16 03 08.6	0.0
	baz=2.0						
SSLB	Suanglung	0.75	320	⇓P	Pb	16 02 57.1	-0.8
	baz=333						
SSLB				S	Sb	16 03 06.1	-1.7
	baz=333						
WHYT	Xinyi Township	0.75	310	⇓P	Pb	16 02 57.6	-0.4
	baz=320						
WHYT				*e*S	Sb	16 03 06.5	-1.3
	baz=320						
HWA	Hwalien	0.77	9	*e*P	Pb	16 02 58.3	0.0
	baz=359						
ECL	Taimali	0.78	219	P	Pb	16 02 56.4	-1.9
	baz=214						
TPUB	Ta-pu	0.79	277	⇓P	Pb	16 02 58.1	-0.5
	baz=275						
TPUB				S	Sb	16 03 07.9	-0.9
	baz=275						
OWD	Renai	0.79	340	*e*P	Pb	16 02 57.7	-1.1
	baz=344						
SLGT	Liugui	0.80	255	*e*P	Pb	16 02 57.9	-0.8
	baz=248						
WTP	Ta-pu	0.80	273	⇓*i*P	Pb	16 02 58.4	-0.3
	baz=271						
WTP				S	Sb	16 03 08.7	-0.4
	baz=271						
CHN4	Tsaushan	0.83	280	⇓*i*P	Pb	16 02 58.9	-0.3
	baz=279						
CHN4				S	Sb	16 03 09.6	-0.3
	baz=279						
CHN5	Tsauling	0.83	298	⇓*i*P	Pb	16 02 59.2	-0.1
	baz=299						
CHN5				S	Sb	16 03 09.8	-0.3
	baz=299						
SGST	Jiashian	0.83	262	⇓P	Pb	16 02 59.0	-0.3
	baz=256						
SGST				*e*S	Sb	16 03 09.2	-0.9
	baz=256						
SMLT	Sun Moon Lake	0.86	322	*e*P	Pb	16 02 59.2	-0.6
	baz=333						
TWD	Chiawan	0.88	7	*e*P	Pb	16 02 59.4	-0.6
	baz=358						
CHN1	Nanshi	0.88	269	⇑P	Pb	16 02 60.0	-0.1
	baz=266						
CHN1				S	Sb	16 03 11.6	+0.3
	baz=266						
CHGB	Renai	0.89	342	*e*P	Pb	16 02 59.6	-0.9
	baz=337						
TYC	Yuchr	0.90	321	*e*P	Pb	16 02 59.6	-0.8
	baz=330						
SNST	Tainan City	0.90	271	*e*P	Pb	16 03 00.3	-0.2
	baz=269						
SNST				S	Sb	16 03 12.7	+0.6
	baz=269						
SSD	Sandimen	0.91	240	⇑P	Pb	16 02 59.2	-1.4
	baz=231						
TWK	Hsinying	0.91	274	⇑*i*P	Pb	16 03 00.4	-0.3
	baz=272						
TWK				S	Sb	16 03 12.0	-0.4
	baz=272						
WJS	Zhushan	0.92	312	*e*P	Pn	16 03 01.2	-0.1
	baz=324						
WJS				*e*S	Sn	16 03 13.6	-0.4
	baz=324						
WHF	Hehuan Shan	0.95	348	*e*P	Pb	16 03 00.5	-1.1
	baz=2.0						
NACB	Ninganchiao	0.97	6	*e*P	Pb	16 03 00.3	-1.3
	baz=357						
WGK	Gukeng	0.97	300	P	Pn	16 03 01.9	0.0
	baz=300						
WGK				S	Sn	16 03 15.2	+0.1
	baz=300						
CHN2	Minshiung	0.98	289	*e*P	Pn	16 03 02.2	+0.1
	baz=289						
CHN2				*e*S	Sn	16 03 15.8	+0.4
	baz=289						
MASBT	Mashibuluo	0.98	233	⇑P	Pb	16 03 00.6	-1.2
	baz=222						
WDLH	Douliu	0.99	299	*e*P	Pn	16 03 02.5	+0.2
	baz=300						
WDLH				*e*S	Sn	16 03 15.9	+0.3
	baz=300						
WNT	Mingjian	0.99	313	*e*P	Pn	16 03 02.2	-0.1
	baz=314						
WNT				*e*S	Sn	16 03 15.7	0.0
	baz=314						
ETLH	Xiulin Townshi	0.99	0	*e*P	Pb	16 03 00.8	-1.3
	baz=2.0						
EAST	Anshuo	1.01	215	⇑P	Pn	16 03 00.6	-2.0
	baz=213						
CHY	Chiayi	1.01	287	*e*P	Pb	16 03 02.6	+0.3
	baz=286						
CHY				S	Sn	16 03 16.4	+0.2
	baz=286						
SGLT	Jiouru	1.03	242	*e*P	Pn	16 03 02.7	-0.1
	baz=239						
CHN3	Shinhua	1.03	263	*e*P	Pb	16 03 03.8	+1.1
	baz=270						
CHN3				*e*S	Sn	16 03 18.9	+2.1
	baz=270						
TWM1	Shoushan	1.05	249	P	Pb	16 03 04.3	+1.4
	baz=247						
TWT	Tachien	1.08	345	*e*P	Pn	16 03 03.1	-0.6
	baz=347						
TDCB	Techi	1.08	344	*e*P	Pn	16 03 02.7	-1.0
	baz=346						
SSPT	Xinbi	1.11	230	*e*P	Pn	16 03 03.2	-0.6
	baz=223						
SNJT	Kaohsiung City	1.15	247	*e*P	Pb	16 03 06.2	+1.6
	baz=246						
SNJT				*e*S	Sn	16 03 24.1	+4.5
	baz=246						
SCZT	Fangliau	1.15	224	*e*P	Pn	16 03 03.1	-1.4
	baz=217						
LAY	Lan-yu	1.17	177	*e*P	Pn	16 03 03.1	-1.6
	baz=162						
WHP	Taichung City	1.17	335	*e*P	Pb	16 03 05.5	+0.4
	baz=348						
CHN8	Yiju	1.18	277	*e*P	Pb	16 03 05.1	0.0
	baz=276						
CHN8				S	Sb	16 03 21.5	+1.6
	baz=276						
SCLT	Jiali	1.18	269	*e*P	Pn	16 03 05.0	+0.1
	baz=267						
SCLT				*e*S	Sb	16 03 22.5	+2.4
	baz=267						
TCU	Taichung	1.19	322	*e*P	Pb	16 03 05.3	-0.1
	baz=323						
WCHH	Zhanghua	1.21	316	*e*P	Pb	16 03 05.6	-0.2
	baz=316						
NNSB	Datong	1.22	356	*e*P	Pn	16 03 04.8	-0.7
	baz=8.0						
NNS	Nan Shan	1.23	355	*e*P	Pn	16 03 04.9	-0.8
	baz=9.0						
WSF	Szhu	1.23	291	*e*P	Pn	16 03 05.2	-0.4
	baz=290						
WSF				*e*S	Sn	16 03 21.4	-0.2
	baz=290						
RLNB	Erlin	1.23	304	*e*P	Pb	16 03 06.0	-0.1
	baz=304						
ENA	Nanau	1.24	11	*e*P	Pn	16 03 05.2	-0.5
	baz=1.0						
NANB	Nanao	1.24	11	*e*P	Pn	16 03 04.8	-1.0
	baz=2.0						
WTCT	Ta-ch'eng	1.28	301	*e*P	Pn	16 03 06.3	+0.1
	baz=301						
TWQ1	Liyutan	1.31	330	*e*P	Pb	16 03 08.2	+0.8
	baz=332						
TWQ1				*e*S	Sb	16 03 25.0	+1.2
	baz=332						
WLCH	Liuqiu	1.33	230	*e*P	Pb	16 03 09.8	+2.1
	baz=223						
TWP	Hsiaoliuchiu	1.34	230	*e*P	Pb	16 03 09.6	+1.6
	baz=214						
NSY	Sanyi	1.37	331	*e*P	Pb	16 03 09.4	+0.9
	baz=333						
NSY				*e*S	Sb	16 03 27.4	+1.8
	baz=333						
WDJ	Dajia District	1.37	326	*e*P	Pb	16 03 08.9	+0.5
	baz=326						
NDT	Datong Townshi	1.39	1	*e*P	Pb	16 03 08.9	+0.1
	baz=14						
TWK1	Hengchun	1.40	206	*e*P	Pn	16 03 07.2	-0.7
	baz=197						
TWKBT	Hengchun	1.40	206	*e*P	Pn	16 03 07.5	-0.4
	baz=197						
PTSB	Yuanli	1.42	330	*e*P	Pb	16 03 09.5	+0.1
	baz=331						
PTSB				*e*S	Sb	16 03 28.3	+1.2
	baz=331						
ENTT	Nioudou	1.43	3	*e*P	Pn	16 03 08.0	-0.3
	baz=3.0						
TWC	Suao	1.44	14	*e*P	Pn	16 03 08.3	-0.1
	baz=2.0						
YHNB	Yeheng	1.46	356	*e*P	Pn	16 03 09.0	+0.2
	baz=9.0						
EOS1	EOS1	1.46	24	*e*P	Pb	16 03 09.9	-0.1
	baz=36						
NMLH	Miaoli	1.47	335	*e*P	Pn	16 03 09.1	+0.3
	baz=334						
NSK	Sanguang	1.47	356	*e*P	Pn	16 03 09.1	+0.2
	baz=9.0						
NSTT	Nanjuang	1.48	343	*e*P	Pb	16 03 10.9	+0.5
	baz=343						
LIOB	Emei	1.49	344	*e*P	Pn	16 03 09.3	+0.1
	baz=343						
TWE	Neicheng	1.52	6	*e*P	Pn	16 03 09.8	+0.3
	baz=6.0						
NWLT	Wulai	1.56	1	*e*P	Pn	16 03 10.6	+0.4
	baz=14						
WLTB	Daxi	1.65	353	*e*P	Pn	16 03 11.7	+0.3
	baz=5.0						
WDGT	Dungji	1.67	272	*e*P	Pn	16 03 11.9	+0.2
	baz=272						
PHUB	P'eng-hu	1.78	280	*e*P	Pn	16 03 12.2	-0.9
	baz=280						
TIPB	Shuangxi	1.79	10	*e*P	Pn	16 03 13.3	+0.1
	baz=8.0						
PNG	Penghu	1.80	282	*e*P	Pn	16 03 12.6	-0.8
	baz=282						
TWS1	Kuangyinshan	1.89	358	*e*P	Pb	16 03 16.0	-1.3
	baz=13						
VCHM	Qimei	1.89	270	*e*P	Pn	16 03 14.3	-0.2
	baz=270						
YM01	YM01	1.93	2	*e*P	Pn	16 03 16.2	+0.9
	baz=360						
HATJ	Hateruma jima	2.29	68	*e*S	Sn	16 03 48.3	+0.4
IRIF	Iriomote-Funau	2.35	61	P	Pn	16 03 21.7	+0.8
IRIF				*e*S	Sn	16 03 49.3	+0.1
JKRS	Kuro-shima	2.54	66	P	Pn	16 03 24.6	+1.1
JKRS				S	Sn	16 03 55.0	+1.2
VWUC	VWUC	2.57	314	*e*P	Pn	16 03 23.5	-0.5
	baz=301						
JIJ	Ishigaki jima	2.70	64	P	Pn	16 03 26.5	+0.7
JIJ				S	Sn	16 03 57.4	-0.4
JISG	Ishigakijimahi	2.93	62	P	Pn	16 03 29.1	+0.1
JISG				*e*S	Sn	16 04 02.5	-1.1
KNM	Kinmen	3.04	294	*e*P	Pn	16 03 31.5	+1.1
	baz=293						
KNMB	Chin-men Tao	3.09	294	*e*P	Pn	16 03 30.4	-0.8
	baz=294						
MATB	Ma-tsu	3.25	335	*e*P	Pn	16 03 33.1	-0.2
	baz=334						
JTJ	Tarama	3.28	64	P	Pn	16 03 34.7	+1.0
JTJ				*e*S	Sn	16 04 12.9	+0.8
JIRB	Irabujima	3.74	64	P	Pn	16 03 40.7	+0.6

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*NIC **20** 16:07:57.4±0.2, 34°.65N×33°.19E, h10km, ML2.7*

*ISK **20** 16:07:57.2, 34°.68N×33°.13E, h8km, ML2.5/6*

*ISCJB **20** 16:07:58.1±1.0, 34°.69N±0°.06×33°.18E±0°.05, h14km, Error ellipse: s-maj=9.0km s-min=6.1km az=172.2*

ISC 20 16:07:55.1±1.3**, 34°.58N**±0°.05×**33°.23E**±0°.05**, h14km, n13, σ0ˢ.56**/17**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZAC	Souni	0.34	302	P	Pb	16 08 03.5	+0.5
	baz=112						
SZAC				S	Sg	16 08 07.3	+0.5
CSS	Mathiatis	0.39	12	PG	Pb	16 08 04.5	+0.6
CSS				SG	Sg	16 08 09.1	+0.6
CSS	Mathiatis	0.39	12	P	Pb	16 08 04.6	+0.6
	baz=200						
CSS				S	Sb	16 08 09.4	-0.4
AKIN	Akıncılar- Kıb	0.48	24	PG	Pb	16 08 06.2	+0.8
MAMC	Mammari	0.59	359	P	Pb	16 08 07.6	+0.3
	baz=182						
LEF	Lefka	0.61	333	PG	Pg	16 08 07.2	+0.1
LFK	Lefkose	0.74	19	PG	Pn	16 08 10.8	-0.5
AKDN	Akdeniz- Kıbrı	0.75	343	PG	Pg	16 08 09.5	-0.2
ALFC	Alefka	0.78	318	P	Pn	16 08 11.2	-0.5
	baz=136						
ALFC				S	Sb	16 08 20.8	-0.1
TEKE	Tekeli-Mersin	1.56	357	PN	Pg	16 08 24.7	-0.5
IKL	Isikli	1.70	13	PN	Pb	16 08 26.9	+0.7
TEVE	Tevekalti-Mers	1.86	5	PN	Pb	16 08 28.7	-0.3
MMLI	Mount Malkishu	2.81	139	PN	Pb	16 08 45.5	+0.4

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*IDC **20** 16:14:54.8±1.3, 37°.00N×69°.16E, h0km, mb3.5/5, mb1 3.7/9, mb1mx3.5/64, mbtmp3.6/9, ML2.9/3, MS2.9/2, Ms1 2.9/2, ms1mx2.3/38, Error ellipse: s-maj=22.9km s-min=19.8km az=137.0*

*ISCJB **20** 16:14:56.6±0.6, 37°.01N±0°.04×69°.01E±0°.07, h37km, mb3.4/4, MS3.2/1, Error ellipse: s-maj=8.4km s-min=5.5km az=155.8*

ISC 20 16:14:59.5±0.8**, 37°.01N**±0°.08×**69°.10E**±0°.07**, h37km, n30, σ1ˢ.53**/32**, mb3.4**/4**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.22	33	P	Pn	16 16 29.6	+0.5
	SNR=42						
UCH	Uchtor	6.68	37	P	Pn	16 16 35.7	+0.3
	SNR=34						
EKS2	Erkin-Say	6.69	31	P	Pn	16 16 36.5	+1.2
	SNR=9.3						
KZA	Kyzart	6.94	41	P	Pn	16 16 39.3	+0.4
	SNR=14						
AAK	Ala-Archa	6.98	35	P	Pn	16 16 40.2	+0.9
	SNR=63						
AAK	Ala-Archa	6.98	35	Pn	Pn	16 16 40.2	+0.9
	6.6nm,0.3s,baz=198,slow=7.0,SNR=169						
AAK				Sn	Sn	16 17 59.3	+1.8
	1.0nm,0.3s,baz=313,slow=22,SNR=3.1						
KBK	Karagaybulak	7.21	37	P	Pn	16 16 43.7	+1.3
	SNR=15						
CHMS	Chumysh	7.38	34	P	Pn	16 16 45.3	+0.6
	SNR=20						
USP	Ospenovka	7.49	32	P	Pn	16 16 46.4	+0.2
	SNR=12						
ULHL	Ulahol	7.59	44	P	Pn	16 16 48.5	+0.8
	SNR=6.2						
TKM2	Tokmak 2	7.72	38	P	Pn	16 16 50.0	+0.5
	SNR=21						
GEYT	Alibeck	8.78	279	Pn	Pn	16 17 02.2	-1.7
	0.2nm,0.3s,baz=92,slow=14,SNR=2.3						
GEYT				Sn	Sn	16 18 45.4	+3.7
	0.7nm,0.3s,baz=156,slow=19,SNR=3.1						
GEYT				LR	LR	16 21 08.2	
	comp=Z,34nm,18.9s,baz=130,slow=42						
MKAR	Makanchi Array	13.84	41	Pn	Pn	16 18 11.0	-1.9
	0.1nm,0.3s,baz=233,slow=13,SNR=13						
PYUN	Piuthan	14.69	123	*e*P	Pn	16 18 23.8	-1.0
	15nm,0.8s						
DANN	Dangsing	15.05	121	*e*P	Pn	16 18 29.1	-0.6
	5.7nm,0.3s						
KOLN	Koldanda	15.31	123	*e*P	Pn	16 18 31.6	-1.5
	7.3nm,0.6s						
AKTO	Aktyubinsk	15.60	333	Pn	Pn	16 18 34.2	-2.4
	0.0nm,0.3s,baz=148,slow=16,SNR=2.6						
AKTO				Sn	Sn	16 21 25.9	-2.2
	0.1nm,0.3s,baz=6.4,slow=13,SNR=2.3						
BVAR	Borovoye Array	16.04	3	Pn	Pn	16 18 40.2	-1.9
	0.0nm,0.3s,baz=167,slow=14,SNR=5.2						
KKN	Kakani	16.45	119	*e*P	Pn	16 18 46.6	-1.1
	14nm,0.7s						
PKIN	Phulchoki	16.66	120	*e*P	Pn	16 18 50.1	-0.3
	7.5nm,0.6s						
PKI	Pulchoki	16.67	120	*e*P	Pn	16 18 50.2	-0.4
	11nm,0.8s						
GUN	Gumba	16.80	118	*e*P	Pn	16 18 52.5	+0.3

	27nm,1.1s						
JIRN	Jiri	17.17	118	eP	Pn	16 18 55.7	-1.2
	11nm,0.4s						
RAMN	Ramite	17.89	119	eP	Pn	16 19 02.6	-3.1
	8.9nm,0.6s						
ZALV	Zalesovo Beam	20.13	28	P	P	16 19 28.8	-1.2
	1.5nm,0.5s,baz=215,slow=11,SNR=7.2						
SONM	Songino Array	29.31	56	P	P	16 21 00.3	+1.8
	0.3nm,0.8s,baz=253,slow=10,SNR=2.8						
CMAR	Chiang Mai Arr	32.04	117	P	P	16 21 23.2	+0.5
	0.3nm,0.3s,baz=301,slow=7.0,SNR=3.6						
FINES	FINESS Array B	36.21	326	LR	LR	16 38 06.7	
	comp=Z,41nm,18.0s,baz=187,slow=38						
YKA	Yellowknife Ar	80.79	2	P	P	16 27 10.5	+1.7
	0.2nm,0.5s,baz=350,slow=5.3,SNR=5.9						
ASAR	Alice Springs	85.80	124	P	P	16 27 35.4	+0.2
	0.3nm,0.9s,baz=311,slow=4.7,SNR=4.6						

MEX 20 16:36:33.5±0.3**, 16.°95N×98.°47W, h9^{km}**±5^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.64	149	eP	Pg	16 36 44.8	-1.2
PNIG				i S	Sg	16 36 53.5	-0.8

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*IDC **20** 16:43:30.3±1.1, 3.°79N×82.°48W, h0^{km}, mb3.6/8, mb1 4.0/11, mb1mx3.9/30, mbtmp3.7/11, ML3.0/2, MS3.5/13, Ms1 3.5/13, ms1mx3.4/21, Error ellipse: s-maj=42.7km s-min=16.2km az=44.0*

*ISCJB **20** 16:43:32.5±0.8, 3.°4N±0.°1×82.°93W±0.°06, h33^{km}, mb3.6/8, MS3.5/9, Error ellipse: s-maj=16.8km s-min=7.0km az=21.8*

ISC 20 16:43:33.5±0.8**, 3.°39N**±0.°09×**83.°0W**±0.°1**, h35^{km}, n50,** σ**1.^{s}80**/40**, mb3.6**/8**, MS3.4**/9**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALC	Bahia Malaga	5.68	84	eP	Pn	16 44 57.1	+1.6
MALC	Bahia Malaga	5.68	84	eP	Pn	16 44 57.1	+1.6
CMBC	Cumbal	5.71	115	eP	Pn	16 44 54.9	-1.4
CMBC	Cumbal	5.71	115	eP	Pn	16 44 54.9	-1.4
CRUC	La Cruz	6.30	107	eP	Pn	16 45 04.7	+0.3
CRUC	La Cruz	6.30	107	eP	Pn	16 45 04.7	+0.3
POPC	Popayan, Colom	6.37	97	eP	Pn	16 45 03.4	-1.7
POPC	Popayan, Colom	6.37	97	eP	Pn	16 45 03.4	-1.7
YOTC	Yotoco, Valle	6.66	85	eP	Pn	16 45 07.5	-1.6
YOTC	Yotoco, Valle	6.66	85	eP	Pn	16 45 07.5	-1.6
PLMC	San Jos del P	6.86	77	eP	Pn	16 45 11.1	-0.7
PLMC	San Jos del P	6.86	77	eP	Pn	16 45 11.1	-0.7
JTS	JuntasAbangare	7.13	344	Pn	Pn	16 45 12.1	-3.3
	9.6nm,0.3s,baz=228,slow=6.1,SNR=24						
JTS				Sn	Sn	16 46 30.7	-4.5
	baz=142,slow=9.2,SNR=1.9						
FLOC	Florencia	7.55	104	eP	Pn	16 45 22.0	+0.8
FLOC	Florencia	7.55	104	eP	Pn	16 45 22.0	+0.8
ANIL	Santa Ana	7.65	82	eP	Pn	16 45 24.8	+1.9
ANIL	Santa Ana	7.65	82	eP	Pn	16 45 24.8	+1.9
RREF	El Recreo	7.77	79	eP	Pn	16 45 25.8	+1.0
RREF	El Recreo	7.77	79	eP	Pn	16 45 25.8	+1.0
HELC	Santa Helena	7.94	69	eP	Pn	16 45 27.5	+0.6
HELC	Santa Helena	7.94	69	eP	Pn	16 45 27.5	+0.6
ROSC	El Rosal	8.77	80	LR	LR	16 48 42.0	
	comp=Z,128nm,20.3s,baz=257,slow=38						
PTBC	PUERTO BERRIO,	9.06	69	eP	Pn	16 45 43.9	+1.9
PTBC	PUERTO BERRIO,	9.06	69	eP	Pn	16 45 43.9	+1.9
VILC	Villavicencio,	9.31	85	eP	Pn	16 45 47.5	+2.0
VILC	Villavicencio,	9.31	85	eP	Pn	16 45 47.5	+2.0
CHIC	Chingaza	9.32	82	eP	Pn	16 45 47.9	+2.0
CHIC	Chingaza	9.32	82	eP	Pn	16 45 47.9	+2.0
RUSC	La Rusia	10.19	76	eP	Pn	16 46 06.1	+8.3
RUSC	La Rusia	10.19	76	eP	Pn	16 46 06.1	+8.3
SMLC	San Martn de	10.37	58	eP	Pn	16 46 01.6	+1.7
SMLC	San Martn de	10.37	58	eP	Pn	16 46 01.6	+1.7
ATAH	Atahualpa	11.42	156	LR	LR	16 50 33.6	
	comp=Z,616nm,19.2s,baz=332,slow=36						
SDV	Santo Domingo	13.44	65	Pn	Pn	16 46 34.3	-7.8
	0.3nm,0.3s,baz=240,slow=20,SNR=1.8						
SDV				LR	LR	16 51 40.4	
	comp=Z,231nm,20.3s,baz=257,slow=38						
CMIG	Matias Romero	17.93	320	P	P	16 47 41.8	+1.2
	0.1nm,0.3s,baz=192,slow=8.1,SNR=3.7						
CMIG				LR	LR	16 53 14.2	
	comp=Z,135nm,21.1s,baz=168,slow=32						
PTGA	Pitinga	23.38	100	P	P	16 48 37.4	-1.9
	0.9nm,0.4s,baz=315,slow=19,SNR=1.9						
PTGA				LR	LR	16 57 48.4	
	comp=Z,136nm,18.6s,baz=282,slow=37						
LPAZ	La Paz	24.46	143	P	P	16 48 51.8	+1.7
	9.7nm,1.2s,baz=276,slow=2.5,SNR=11						
LPAZ				LR	LR	16 59 08.7	
	comp=Z,84nm,20.2s,baz=314,slow=38						
MDP	Montagnes des	30.31	86	LR	LR	17 02 27.2	
	comp=Z,59nm,18.9s,baz=272,slow=38						
TXAR	Lajitas Array	32.42	325	P	P	16 50 02.0	+1.5
	0.1nm,0.4s,baz=144,slow=19,SNR=2.6						
CPUP	Villa Florida	38.59	141	LR	LR	17 09 15.4	
	comp=Z,68nm,18.9s,baz=359,slow=40						
BDFB	Brasilia	39.44	120	LR	LR	17 07 42.9	
	comp=Z,65nm,18.9s,baz=230,slow=37						
PDAR	Pinedale Array	45.79	333	P	P	16 51 53.0	+0.8
	0.2nm,0.3s,baz=144,slow=5.1,SNR=5.1						
PDAR				LR	LR	17 12 01.0	
	comp=Z,31nm,20.8s,baz=146,slow=37						
NVAR	Mina Array Bea	47.46	322	P	P	16 52 06.8	+1.5
	0.2nm,0.3s,baz=129,slow=7.6,SNR=2.7						
NVAR				LR	LR	17 11 32.6	
	comp=Z,72nm,19.2s,baz=116,slow=36						
YKA	Yellowknife Ar	63.47	344	P	P	16 54 00.6	+0.9
	0.7nm,0.8s,baz=137,slow=6.6,SNR=12						
PPT	Papeete	68.85	250	LR	LR	17 18 30.3	
	comp=Z,137nm,20.1s,baz=72,slow=30						
ILAR	Eielson Array	76.03	337	P	P	16 55 19.6	+2.5
	0.7nm,1.0s,baz=152,slow=4.1,SNR=4.1						
TORD	Torodi Ar. Bea	84.07	77	P	P	16 55 59.3	-2.2
	0.3nm,0.9s,baz=250,slow=4.3,SNR=2.7						
NOA	NORSAR Array B	89.10	29	LR	LR	17 32 08.2	
	comp=Z,10nm,21.1s,baz=250,slow=33						
ASAR	Alice Springs	139.06	237	PKhKP	PKPpre	17 02 57.5	
	0.3nm,0.9s,baz=112,slow=7.1,SNR=3.0						
WRA	Warramunga Arr	140.06	243	PKP	PKiKP	17 03 00.7	-1.1
	0.4nm,0.9s,baz=102,slow=1.8,SNR=4.1						

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*ISCJB **20** 16:44:46.8±0.8, 2.°9N±0.°1×128.°7E±0.°2, h200^{km}, mb3.5/6, Error ellipse: s-maj=29.0km s-min=9.2km az=154.2*

*IDC **20** 16:44:50.2±2.5, 2.°75N×128.°73E, h224^{km}±28^{km}, mb3.2/6, mb1 3.4/8, mb1mx3.2/39, mbtmp3.8/8, MS2.4/1, Ms1 2.4/1, ms1mx2.1/16, Error ellipse: s-maj=37.3km s-min=13.4km az=69.0*

ISC 20 16:44:48.4±1.0**, 2.°8N**±0.°1×**128.°7E**±0.°2**, h200^{km}, n17,** σ**0.^{s}79**/16**, mb3.8**/14**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.50	145	P	Pn	16 45 57.4	+0.8
	1.9nm,0.3s,baz=322,slow=19,SNR=3.7						
BATI	Baumata	13.89	201	P	Pn	16 47 57.6	+0.4
	2.9nm,0.3s,baz=64,slow=4.2,SNR=7.5						
FITZ	Fitzroy Crossi	21.02	188	P	P	16 49 15.9	-0.9
	1.3nm,0.6s,baz=5.7,slow=10,SNR=6.4						
WRA	Warramunga Arr	23.31	166	P	P	16 49 37.1	-1.7
	0.6nm,0.3s,baz=342,slow=10,SNR=40						
ASAR	Alice Springs	26.84	169	P	P	16 50 09.9	-0.6
	0.7nm,0.4s,baz=351,slow=7.2,SNR=47						
CMAR	Chiang Mai Arr	33.00	300	P	P	16 51 05.9	+1.0
	1.1nm,0.6s,baz=118,slow=7.3,SNR=14						
KSRS	Korea Array	34.45	359	LR	LR	17 04 46.9	
	comp=Z,6.0nm,20.5s,baz=35,slow=35						
RAMN	Ramite	46.85	305	eP	P	16 52 59.0	0.0
	12nm,0.5s						
JIRN	Jiri	47.47	306	eP	P	16 53 03.6	-0.3
	10nm,0.3s						
GUN	Gumba	47.82	306	eP	P	16 53 06.4	-0.2
	16nm,0.7s						
PKI	Pulchoki	48.07	305	eP	P	16 53 07.7	-0.8
	1.3nm,0.2s						
PKIN	Phulchoki	48.08	305	eP	P	16 53 07.6	-0.9
	2.7nm,0.4s						
SONM	Songino Array	48.77	340	P	P	16 53 13.5	+0.3
	0.3nm,0.5s,baz=159,slow=7.9,SNR=2.9						
KOLN	Koldanda	49.63	305	eP	P	16 53 19.8	-0.4
	4.0nm,0.3s						
DANN	Dangsing	49.71	305	eP	P	16 53 20.5	-0.4
	15nm,0.6s						
PYUN	Piuthan	50.25	305	eP	P	16 53 24.7	-0.2
	16nm,0.8s						
MKAR	Makanchi Array	59.40	325	P	P	16 54 29.4	-0.5
	0.8nm,0.4s,baz=116,slow=8.1,SNR=22						

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*ISCJB **20** 16:52:38.7±0.5, 24.°11N±0.°02×122.°29E±0.°01, h9^{km}±3^{km}, Error ellipse: s-maj=2.7km s-min=2.2km az=157.2*

*JMA **20** 16:52:39.4±0.1, 24.°05N×122.°27E, h28^{km}±3^{km}, M2.1*

*TAP **20** 16:52:39.4, 24.°17N×122.°25E, h12^{km}±1^{km}, ML2.9, C*

ISC 20 16:52:39.6±1.2**, 24.°11N**±0.°02×**122.°27E**±0.°02**, h21^{km}**±4^{km}**, n71,** σ**0.^{s}71**/126**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.45	344	P	Pb	16 52 48.4	-0.4
	baz=343						
EOS1				S	Sb	16 52 55.2	+0.2
	baz=343						
NANB	Nanao	0.56	304	P	Pb	16 52 50.2	-0.7
	baz=299						
NANB				S	Sb	16 52 58.2	-0.3
	baz=299						
ENA	Nanau	0.57	303	i P	Pb	16 52 50.8	-0.1
	baz=299						
ENA				i S	Sb	16 52 59.0	+0.3
	baz=299						
TWD	Chiawan	0.61	267	P	Pb	16 52 51.7	0.0
	baz=261						
TWD				S	Sn	16 53 01.3	-0.9
	baz=261						
NACB	Ninganchiao	0.61	276	eP	Pb	16 52 51.5	-0.2
	baz=270						
NACB				eS	Sn	16 53 01.1	-1.2
	baz=270						
TWC	Suao	0.62	323	i P	Pb	16 52 50.6	-1.2
	baz=321						
TWC				i S	Sb	16 52 58.6	-1.6
	baz=321						
JYNG	Yonagunijimaku	0.71	61	P	Pb	16 52 53.1	-0.1
JYNG				eS	Sn	16 53 03.7	-0.8
ETLH	Xiulin Townshi	0.72	278	eP	Pb	16 52 52.9	-0.6
	baz=273						
YOJ	Yonaguni jima	0.76	63	eP	Pb	16 52 53.9	-0.2
	baz=66						
YOJ	Yonaguni jima	0.76	63	P	Pb	16 52 54.2	+0.1
YOJ				S	Sb	16 53 04.3	+0.2
EGS		0.79	337	eP	Pb	16 52 54.2	-0.4
	baz=337						
EGS				eS	Sb	16 53 04.1	-0.7
	baz=337						
TWE	Neicheng	0.81	318	i P	Pb	16 52 54.4	-0.7
	baz=316						
TWE				S	Sb	16 53 05.5	-0.1
	baz=316						
ESL	Shilin	0.82	249	P	Pb	16 52 54.2	-0.9
	baz=244						
ESL				eS	Sn	16 53 06.6	-0.7
	baz=244						
ENTT	Nioudou	0.82	310	i P	Pb	16 52 54.9	-0.3
	baz=307						
ENTT				S	Sb	16 53 06.0	0.0
	baz=307						
NTC	Toucheng	0.84	332	P	Pb	16 52 55.6	+0.2
	baz=330						
NTC				S	Sb	16 53 06.1	-0.1
	baz=330						
NDT	Datong Townshi	0.84	305	i P	Pb	16 52 55.6	+0.1
	baz=302						
NDT				i S	Sb	16 53 06.2	-0.1
	baz=302						
NNSB	Datong	0.86	291	eP	Pb	16 52 56.1	+0.1
	baz=288						
NNS	Nan Shan	0.88	292	i P	Pb	16 52 56.1	-0.1
	baz=288						
NNS				S	Sn	16 53 08.6	-0.3
	baz=288						
EGFH	Guangfu	0.89	240	eP	Pb	16 52 55.1	-1.1
	baz=236						
EGFH				eS	Sb	16 53 07.6	0.0
	baz=236						
WHF	Hehuan Shan	0.91	272	eP	Pb	16 52 56.3	-0.7
	baz=268						
WHF				S	Sb	16 53 09.3	+0.4
	baz=268						
TIPB	Shuangxi	0.94	335	P	Pb	16 52 57.0	-0.3
	baz=334						
TIPB				S	Sb	16 53 08.8	-0.6
	baz=334						
NWLT	Wulai	0.96	314	P	Pb	16 52 57.5	0.0
	baz=311						
NWLT				S	Sn	16 53 10.4	-0.5
	baz=311						
NSK	Sanguang	1.00	304	P	Pb	16 52 58.1	-0.1
	baz=302						
NSK				S	Sn	16 53 11.4	-0.4
	baz=302						
TWT	Tachien	1.00	278	eP	Pb	16 52 57.6	-0.8
	baz=274						
TWT				eS	Sn	16 53 12.7	+0.6
	baz=274						
OWD	Renai	1.01	261	P	Pb	16 52 57.7	-0.7
	baz=257						
OWD				S	Sb	16 53 11.1	-0.2
	baz=257						
NWF	Wu-fen Shan	1.05	335	eP	Pb	16 52 58.4	-0.7
	baz=334						
NWF				S	Sb	16 53 12.4	0.0
	baz=334						
EHY	Hungye	1.05	235	eP	Pb	16 52 57.8	-1.3
	baz=231						
EHY				eS	Sn	16 53 13.0	-0.2
	baz=231						
TWA	Mucha	1.06	324	eP	Pn	16 52 60.0	+0.7
	baz=323						
TWA				S	Sn	16 53 13.8	+0.4
	baz=323						
NHDH	Xindian Distri	1.08	322	P	Pb	16 52 59.9	+0.3
	baz=320						
NHDH				S	Sn	16 53 13.6	-0.1
	baz=320						
TAP	Taipei	1.15	323	eS	Sn	16 53 15.9	+0.4
	baz=322						
WLTB	Daxi	1.18	309	eP	Pb	16 53 02.1	+0.9
	baz=306						
WLTB				eS	Sn	16 53 16.8	+0.6
	baz=306						
WHP	Taichung City	1.22	278	P	Pb	16 53 02.0	+0.1
	baz=275						
WHP				eS	Sn	16 53 18.8	+1.6
	baz=275						
YM04	YM04	1.23	328	eP	Pn	16 53 01.4	-0.2
	baz=326						
YM04				eS	Sb	16 53 16.9	-0.6
	baz=326						
TWS1	Kuangyinshan	1.25	322	eP	Pb	16 53 02.3	-0.1
	baz=321						
TWS1				eS	Sn	16 53 18.6	+0.7
	baz=321						
LIOB	Emei	1.26	295	P	Pn	16 53 01.8	-0.1
	baz=293						
LIOB				eS	Sn	16 53 19.4	+1.2
	baz=293						
NSTT	Nanjuang	1.26	294	P	Pb	16 53 02.5	-0.2
	baz=292						
NSTT				S	Sb	16 53 18.8	+0.4
	baz=292						
SMLT	Sun Moon Lake	1.27	260	P	Pn	16 53 02.2	+0.1
	baz=256						
SMLT				eS	Sn	16 53 19.3	+0.7
	baz=256						
NTST	Danshui	1.28	325	eP	Pn	16 53 02.3	+0.1
	baz=323						
NTST				eS	Sb	16 53 19.3	+0.3
	baz=323						
TYC	Yuchr	1.30	261	P	Pn	16 53 02.4	-0.1
	baz=258						
TYC				eS	Sb	16 53 19.8	+0.1
	baz=258						
YUS	Yu-Shan	1.35	243	eP	Pn	16 53 03.4	-0.3
	baz=240						
YUS				eS	Sn	16 53 20.4	-0.8
	baz=240						
IRIF	Iriomote-Funau	1.35	80	P	Pn	16 53 03.2	0.0
IRIF				eS	Sb	16 53 22.0	+0.9
WHYT	Xinyi Township	1.36	252	P	Pb	16 53 03.7	-0.6
	baz=249						
WHYT				eS	Sb	16 53 22.1	+0.9
	baz=249						
TWQ1	Liyutan	1.38	280	eP	Pb	16 53 04.8	+0.1
	baz=277						
TWQ1				eS	Sb	16 53 23.3	+1.3
	baz=277						
HATJ	Hateruma jima	1.41	92	eS	Sb	16 53 24.0	+1.3
WJS	Zhushan	1.44	259	eP	Pb	16 53 05.0	-0.6
	baz=256						
WJS				S	Sb	16 53 24.9	+1.4
	baz=256						
TCU	Taichung	1.45	272	eS	Sb	16 53 26.0	+2.0
	baz=269						
WNT	Mingjian	1.47	261	eS	Sb	16 53 25.5	+1.2
	baz=258						
ELDTW	Lidau	1.47	231	eP	Pn	16 53 03.7	-1.2
	baz=229						
CHN5	Tsauling	1.54	251	P	Pb	16 53 07.1	-0.4
	baz=248						
CHN5				S	Sb	16 53 26.9	+0.4
	baz=248						
WCHH	Zhanghua	1.56	269	eS	Sb	16 53 28.1	+1.1
	baz=266						
JKRS	Kuro-shima	1.60	85	P	Pb	16 53 08.0	-0.4
WGK	Gukeng	1.62	255	eP	Pb	16 53 08.4	-0.3
	baz=252						
WGK				eS	Sb	16 53 29.5	+0.9
	baz=252						
WDLH	Douliu	1.64	255	eP	Pb	16 53 09.0	-0.1
	baz=253						
WDLH				S	Sb	16 53 30.4	+1.1
	baz=253						
STYT	Tauyuan	1.68	236	eP	Pn	16 53 07.2	-0.4
	baz=233						
STYT				S	Sb	16 53 29.6	-0.8
	baz=233						
CHN4	Tsaushan	1.71	244	P	Pb	16 53 10.3	0.0
	baz=241						
CHN4				S	Sb	16 53 32.4	+1.1
	baz=241						
JIJ	Ishigaki jima	1.73	81	P	Pn	16 53 08.8	+0.4
JIJ				eS	Sn	16 53 30.3	+0.5
WTP	Ta-pu	1.74	241	P	Pn	16 53 09.5	+0.9
	baz=238						
WTP				S	Sb	16 53 33.0	+0.7
	baz=238						
CHY	Chiayi	1.79	250	eS	Sb	16 53 34.5	+0.7
	baz=248						
WTCT	Ta-ch'eng	1.83	263	eS	Sb	16 53 35.3	+0.5
	baz=260						
TWK	Hsinying	1.83	243	P	Pb	16 53 11.1	-1.3
	baz=240						
TWK				S	Sb	16 53 34.9	0.0
	baz=240						
CHN1	Nanshi	1.84	240	eP	Pb	16 53 11.6	-0.9
	baz=238						
CHN1				S	Sb	16 53 35.6	+0.4
	baz=238						
SNST	Tainan City	1.85	242	P	Pb	16 53 11.9	-0.7
	baz=239						
SNST				S	Sb	16 53 35.7	+0.3
	baz=239						
SGST	Jiashian	1.85	237	P	Pb	16 53 11.8	-0.9
	baz=234						
SGST				S	Sb	16 53 36.3	+0.8
	baz=234						
SLGT	Liugui	1.86	233	P	Pn	16 53 11.1	+0.9
	baz=231						
SLGT				S	Sb	16 53 35.2	-0.4
	baz=231						
JISG	Ishigakijimahi	1.92	75	P	Pn	16 53 11.1	+0.1
JISG				eS	Sn	16 53 33.4	-1.2
WSF	Szhu	1.93	256	eS	Sb	16 53 37.6	0.0
	baz=254						
ECL	Taimali	1.93	219	eP	Pn	16 53 10.5	-0.7
	baz=217						
SSD	Sandimen	2.03	228	P	Pn	16 53 13.6	+1.1
	baz=226						
SSD				S	Sn	16 53 38.3	+1.2
	baz=226						
CHN8	Yiju	2.03	248	eS	Sb	16 53 40.3	-0.3
	baz=246						
EAST	Anshuo	2.16	217	eP	Pn	16 53 14.3	-0.1
	baz=215						
SCZT	Fangliau	2.30	221	eP	Pn	16 53 17.0	+0.8
	baz=219						
SCZT				eS	Sn	16 53 45.2	+1.3
	baz=219						

IDC 20 17:09:00.1±5.2**, 18.°88N**×**146.°05E, h188^{km}**±34^{km}**, mb3.0**/4**, mb1 3.2**/5**, mb1mx2.9**/31**, mbtmp3.6**/5**, Error ellipse: s-maj=93.8km s-min=20.8km az=79.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.38	192	P	Pn	17 10 19.7	+0.5
	4.6nm,0.3s,baz=17,slow=19,SNR=1.8						
GUMO				S	Sn	17 11 21.4	-0.1
	6.2nm,0.3s,baz=46,slow=17,SNR=3.7						
WRA	Warramunga Arr	40.26	197	P	P	17 16 18.6	-0.3
	0.3nm,0.3s,baz=17,slow=8.5,SNR=12						
WRA				PcP	PcP	17 18 18.4	-0.6
	0.3nm,0.9s,baz=14,slow=3.2,SNR=3.2						
ASAR	Alice Springs	43.92	196	P	P	17 16 48.7	+0.3
	0.1nm,0.4s,baz=15,slow=6.7,SNR=6.5						
ASAR				PcP	PcP	17 18 30.8	-0.2
	0.6nm,1.1s,baz=32,slow=3.7,SNR=2.9						
MKAR	Makanchi Array	58.57	314	P	P	17 18 37.4	+0.3
	0.2nm,0.5s,baz=97,slow=7.3,SNR=3.6						
FINES	FINESS Array B	86.86	335	P	P	17 21 22.5	-0.7
	0.7nm,0.6s,baz=67,slow=6.4,SNR=4.2						

DJA 20 17:21:38.1±0.3**, 2°S**±3°×**12°1E**±°**, h10^{km}, M3.7**/6**, MLv3.7**/6**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.32	244	P	Pn	17 22 01.2	-1.5
TTSI				S	Sb	17 22 19.5	-0.6
APSI	Ampana	1.67	23	P	Pn	17 22 06.5	-0.9
APSI				S	Sn	17 22 28.7	-0.1
PCI	Palu	1.94	323	P	Pn	17 22 11.1	-0.1
SPSI	Sidrap Palu	1.94	220	P	Pn	17 22 08.7	-2.5
BNSI	Bone	2.13	205	P	Pn	17 22 13.4	-0.3
KDI	Kendari	2.19	133	P	Pg	17 22 19.0	-1.1
LUWI	Luwuk	2.25	51	P	Pn	17 22 14.0	-1.5
BKSI	Bulukumba	2.98	197	P	Pn	17 22 25.7	+0.3
MPSI	Mapaga	2.99	338	P	Pn	17 22 26.0	+0.4
MRSI	Marisa	3.06	18	P	Pn	17 22 25.7	-0.9
SANI	Sanana	4.99	85	P	Pn	17 22 50.1	-3.0

NEIC 20 17:39:10.7±0.0**, 51.°44N**×**176.°39W, h24^{km}, ML3.8**(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETKA	Kagalaska Isla	0.42	359	P	Pb	17 39 20.1	+0.5
ETKA				S	Sn	17 39 27.1	-1.3
ADK	Adak	0.48	338	ePg	Pb	17 39 21.0	+0.4
ADAG	Mount Adagdak	0.56	347	P	Pn	17 39 22.6	-0.6
GSCK	Great Sitkin C	0.59	14	P	Pb	17 39 22.5	+0.1
KIMD	Kanaga Island	0.62	302	P	Pb	17 39 22.6	-0.3
KIWB	Kanaga Island	0.63	312	ePg	Pb	17 39 23.1	0.0
KIRH	Kanaga Island	0.64	317	P	Pb	17 39 23.4	+0.2
GSTD	Great Sitkin T	0.64	14	P	Pb	17 39 23.4	+0.1
GSTD				S	Sb	17 39 32.6	+0.8
GSMY	Great Sitkin M	0.64	19	P	Pb	17 39 23.3	0.0
KIKV	Kanaga Island	0.66	313	P	Pb	17 39 23.5	0.0
KIKV				S	Sn	17 39 33.7	-0.4
GSSP	Great Sitkin S	0.67	11	P	Pb	17 39 23.9	+0.1
KINC	Kanaga Island	0.67	317	P	Pb	17 39 23.9	+0.1
KINC				S	Sn	17 39 34.5	0.0
GSTR	Great Sitkin T	0.69	17	ePn	Pn	17 39 25.8	+0.8
TAFP	Tanaga Falls P	1.09	296	P	Pn	17 39 29.6	-0.9
TAFP				S	Sb	17 39 44.3	-0.5
TASE	Tanaga Southea	1.10	292	P	Pn	17 39 30.1	-0.6
GAEA	Gareloi East	1.51	284	P	Pn	17 39 36.0	-0.2
GALAA	Gareloi Lava P	1.52	283	P	Pn	17 39 35.9	-0.5
KOWE	Korovin West	1.62	54	P	Pn	17 39 38.5	+0.7
KOFP	Korovin Flat P	1.65	59	P	Pn	17 39 38.8	+0.5
NIKH	Nikolski High	4.88	69	P	Pn	17 40 22.9	+0.3
NLU	North Lily Min	44.98	79	eP	P	17 47 26.9	+2.8

MPU	**Maple Canyon**	**45.21**	**78**	*e*P	P	17 47 29.9	+3.9

NIED ***20*** *17:44:00,25°.20N×128°.00E,h5^{km},Mw4.3 Best double couple: M$_0$3.63000×10^{15} NP1:ϕ$_s$232.00000°,δ41.00000°, λ-60.00000°. NP2:ϕ$_s$15.00000°,δ56.00000°, λ-113.00000°.*

IDC ***20*** *17:44:31.7±0.6,25°.12N×127°.98E,h0^{km},mb4.1/17, mb1 4.2/21,mb1mx4.1/39,mbtmp4.1/21,ML3.2/3,MS3.6/23, Ms1 3.6/23,ms1mx3.4/49,Error ellipse: s-maj=19.8km s-min=13.2km az=89.0*

ISCJB ***20*** *17:44:33.9±0.9,25°.16N±0°.03×127°.99E±0°.03,h24^{km}±6^{km}, mb4.4/67,MS3.8/26,Error ellipse: s-maj=5.2km s-min=3.3km az=41.0*

NEIC ***20*** *17:44:33.5±1.9,25°.12N×127°.90E,h11^{km}±11^{km},mb4.6/22, Error ellipse: s-maj=5.2km s-min=4.4km az=114.0*

NEIC Felt at Yomitan-son, Okinawa.

MOS ***20*** *17:44:34.0±1.1,25°.12N×127°.91E,h24^{km},mb4.8/30,Error ellipse: s-maj=9.9km s-min=5.7km az=115.2*

JMA ***20*** *17:44:35.5±0.2,25°.22N×127°.96E,h72^{km},M4.2*

BJI ***20*** *17:44:37.0,25°.19N×127°.80E,h35^{km},mB4.7/25,mb4.2/38, Ms4.2/26,Ms7 3.9/27*

ISC 20 17:44:35.7±1.9,**25°.19N**±0°.05×**127°.95E**±0°.04,**h24**^{km}±12^{km}, **n182,**σ**1**^{s}**.13**/194,**mb4.5**/75,**MS3.9**/27,**7C-4D,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**0.97**	**351**	P	**Pn**	**17 44 53.7**	**-0.2**
JJT3				S	**Sb**	**17 45 07.2**	**+1.0**
JNTH	**Nagotoyohara**	**1.33**	**3**	P	**Pn**	**17 44 57.9**	**-0.9**
JNTH				*e*S	**Sn**	**17 45 13.4**	**-2.4**
JAGN	**Aguni-jima**	**1.54**	**336**	P	**Pn**	**17 45 01.8**	**+0.1**
JAGN				S	**Sn**	**17 45 20.6**	**-0.3**
JKE	**Kume jima 2**	**1.55**	**317**	P	**Pn**	**17 45 01.6**	**-0.2**
JKE				*e*S	**Sn**	**17 45 20.9**	**-0.3**
JOW	**Kunigami**	**1.67**	**10**	P	**Pn**	**17 45 02.8**	**-0.7**
JOW				*e*S	**Sn**	**17 45 21.8**	**-2.3**
JOW	**Kunigami**	**1.67**	**10**	Pn	**Pn**	**17 45 02.9**	**-0.6**
	22nm,0.3s,baz=163,slow=13,SNR=552						
JOW				Sn	**Sn**	**17 45 22.1**	**-2.1**
	baz=102,slow=14						
JIH	**Iheya**	**1.84**	**0**	P	**Pn**	**17 45 05.7**	**-0.2**
JIH				S	**Sn**	**17 45 27.5**	**-0.9**
JYRO	**Yoronjima**	**1.89**	**14**	P	**Pn**	**17 45 05.6**	**-0.9**
JYRO				*e*S	**Sn**	**17 45 26.5**	**-3.0**
JOKE	**Okinoerabujima**	**2.24**	**14**	P	**Pn**	**17 45 10.6**	**-0.7**
JOKE				S	**Sn**	**17 45 36.1**	**-2.1**
JOGS	**Gusukube**	**2.35**	**260**	P	**Pn**	**17 45 12.6**	**-0.2**
JOGS				*e*S	**Sn**	**17 45 39.8**	**-1.1**
JMJ	**Miyako jima 2**	**2.44**	**262**	P	**Pn**	**17 45 13.7**	**-0.4**
JMJ				*e*S	**Sn**	**17 45 42.2**	**-1.0**
JIKM	**Ikemajima**	**2.46**	**265**	P	**Pn**	**17 45 14.3**	**-0.1**
JIKM				S	**Sn**	**17 45 43.2**	**-0.6**
JIRB	**Irabujima**	**2.54**	**263**	P	**Pn**	**17 45 14.9**	**-0.7**
JIRB				*e*S	**Sn**	**17 45 44.4**	**-1.4**
JTK	**Tokunoshima**	**2.74**	**19**	P	**Pn**	**17 45 17.4**	**-0.9**
JTK				*e*S	**Sn**	**17 45 48.5**	**-2.1**
JTJ	**Tarama**	**3.00**	**260**	P	**Pn**	**17 45 20.9**	**-0.9**
JTJ				*e*S	**Sn**	**17 45 54.1**	**-2.9**
JMZ	**Minamidaito 2**	**3.02**	**77**	P	Pn	17 45 18.4	-3.7
JMZ				S	Sn	17 45 50.4	-7.2
JAMN	**Amaminishikomi**	**3.24**	**20**	P	**Pn**	**17 45 25.1**	**0.0**
JISG	**Ishigakijimahi**	**3.36**	**261**	P	**Pn**	**17 45 25.5**	**-1.2**
NACB	**Ninganchiao**	**5.87**	**261**	*e*Pn	Pn	17 45 59.1	-2.2
YULB	**Yu-li**	**6.33**	**255**	*e*Pn	Pn	17 46 03.6	-4.0
SSLB	**Suanglung**	**6.52**	**259**	*e*Pn	Pn	17 46 07.7	-2.7
TWG	**Pinlang**	**6.71**	**251**	*e*Pn	Pn	17 46 09.3	-3.7
TPUB	**Ta-pu**	**6.94**	**256**	*e*Pn	**Pn**	**17 46 14.7**	**-1.3**
JNU	**Nakatsue**	**8.31**	**17**	Pn	**Pn**	**17 46 35.5**	**+0.7**
	0.9nm,0.3s,baz=215,slow=5.5,SNR=24						
JNU				Sn	**Sn**	**17 48 07.2**	**-0.8**
	0.7nm,0.3s,baz=182,slow=16,SNR=4.6						
NJ2	**Nanjing**	**10.52**	**313**	*e*P	**Pn**	**17 47 04.1**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,12nm,1.0s						
NJ2				LR	LR		
	comp=N,790nm,10.8s						
NJ2				LR	LR		
	comp=E,540nm,9.8s						
NJ2				LR	LR		
	comp=Z,610nm,16.3s						
KSAR	**Wonju Array Be**	**12.22**	**360**	Pn	**Pn**	**17 47 28.2**	**-0.1**
KSAR	**Wonju Array Be**	**12.22**	**360**	P	**Pn**	**17 47 28.2**	**-0.1**
KSRS	**Korea Array**	**12.23**	**360**	Pn	**Pn**	**17 47 28.2**	**-0.2**
	baz=176,slow=22,SNR=3.1						
KSRS				LR	LR	17 52 04.0	
	comp=Z,43nm,18.4s,baz=185,slow=37						
JCJ	**Chichijima**	**12.93**	**78**	LR	LR	17 51 48.7	
	comp=Z,113nm,19.9s,baz=44,slow=34						
MAJO	**Matsushiro**	**14.33**	**35**	*e*Pn	**Pn**	**17 47 57.8**	**+0.6**
MAJO	**Matsushiro**	**14.33**	**35**	*e*P	**Pn**	**17 47 57.8**	**+0.6**
MJAR	**Matsushiro Arr**	**14.33**	**35**	Pn	**Pn**	**17 47 57.8**	**+0.6**
	0.0nm,0.3s,baz=186,slow=3.7,SNR=2.8						
BJT	**Baijiatuau**	**17.79**	**329**	*e*Pn	**Pn**	**17 48 42.5**	**+0.8**
	13nm,0.9s						
BJT	**Baijiatuau**	**17.79**	**329**	*e*P	**Pn**	**17 48 42.5**	**+0.8**
BJT				pmax	pmax		
	comp=Z,13nm,0.9s						
BJI	**Beijing**	**17.80**	**329**	P	**P**	**17 48 43.8**	**+1.3**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJI				LR	LR		
	comp=Z,250nm,19.1s						
BJI				LR	LR		
	comp=Z,280nm,17.2s						
BJI				LR	LR		
	comp=Z,150nm,27.0s						
BJI	**Beijing**	**17.80**	**329**	P	**P**	**17 48 43.4**	**+0.9**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
QIZ	**Qiongzhong**	**17.85**	**254**	P	**Pn**	**17 48 42.4**	**-0.3**
QIZ				S	**Sn**	**17 51 59.0**	**-2.2**
QIZ				LR	LR		
	comp=Z,190nm,7.8s						
CN2	**Changchun**	**18.68**	**354**	*e*P	**Pn**	**17 48 53.8**	**+1.2**
CN2				*e*sP	pwP	17 49 06.3	+4.1
CN2				*e*S	**Sn**	**17 52 16.6**	**-4.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,220nm,9.0s						
CN2				LR	LR		
	comp=Z,260nm,9.0s						
CN2				LR	LR		
	comp=Z,280nm,10.0s						
XAN	**Xi'an**	**18.73**	**303**	P	**P**	**17 48 53.4**	**+0.6**
XAN				pP	pwP	17 49 03.8	+1.1
XAN				S	**Sn**	**17 52 21.8**	**-0.4**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				LR	LR		
	comp=Z,510nm,15.2s						
XAN				LR	LR		
	comp=Z,340nm,15.7s						
XAN				LR	LR		
	comp=Z,320nm,17.3s						
XAN	**Xi'an**	**18.73**	**303**	*e*P	**P**	**17 48 50.8**	**-2.0**
	comp=Z,5.7nm,0.8s						
XAN	**Xi'an**	**18.73**	**303**	*e*P	**P**	**17 48 50.8**	**-2.0**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**19.25**	**9**	P	**P**	**17 48 59.3**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=184,slow=8.6,SNR=3.5						
GUMO	**Guam**	**19.67**	**123**	LR	LR	17 56 29.1	
	comp=Z,89nm,18.2s,baz=86,slow=37						
HHC	**Hu-ho-hao-te**	**20.75**	**323**	*e*P	**P**	**17 49 16.8**	**+1.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
HHC				LR	LR		
	comp=Z,250nm,9.4s						
HHC				LR	LR		
	comp=Z,230nm,9.4s						
HHC				LR	LR		
	comp=Z,160nm,6.0s						
CD2	**Chengdu**	**22.08**	**290**	P	**P**	**17 49 29.8**	**+0.6**
CD2				pP	sP	17 49 38.8	+1.4
CD2				sP	pwP	17 49 43.3	+3.5
CD2				S	**S**	**17 53 31.3**	**-0.3**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,220nm,4.8s						
CD2				LR	LR		
	comp=Z,910nm,16.2s						
CD2				LR	LR		
	comp=Z,500nm,12.7s						
CD2				LR	LR		
	comp=Z,740nm,10.3s						
ASAJ	**Asahikawa**	**22.34**	**29**	P	**P**	**17 49 31.8**	**0.0**
	comp=Z,6.1nm,1.0s,baz=257,slow=14,SNR=2.8						
ASAJ				LR	LR	17 58 33.9	
	comp=Z,82nm,20.4s,baz=185,slow=38						
KMI	**Kunming**	**22.81**	**275**	P	**P**	**17 49 38.8**	**+1.5**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				LR	LR		
	comp=Z,250nm,9.2s						
KMI				LR	LR		
	comp=Z,210nm,18.7s						
KMI				LR	LR		
	comp=Z,250nm,12.8s						
LZH	**Lanzhou**	**23.36**	**303**	*e*P	**P**	**17 49 42.1**	**-0.5**
LZH				pP	pwP	17 49 54.0	+1.4
LZH				sP	sP	17 49 58.5	+8.0
LZH				PP	**PnPn**	**17 50 13.6**	**+4.6**
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
LZH				pmax	pmax		
	comp=Z,220nm,4.8s						
LZH				LR	LR		
	comp=Z,430nm,13.6s						
LZH				LR	LR		
	comp=Z,470nm,12.5s						
LZH				LR	LR		
	comp=Z,520nm,15.3s						
KLR	**Kul'dur**	**24.18**	**6**	P	**P**	**17 49 50.6**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=207,slow=6.8,SNR=7.2						
YSS	**Yuzh-Sakhalins**	**24.72**	**25**	*e*P	**P**	**17 49 54.3**	**-0.8**
	comp=Z,98nm,1.4s						
YSS	**Yuzh-Sakhalins**	**24.72**	**25**	⇑*i*P	**P**	**17 49 57.6**	**+2.5**
YSS				*e*		17 50 08.2	
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
CHAI	**Chaiyaphum**	**25.97**	**254**	P	**P**	**17 50 07.6**	**+0.9**
	comp=Z,4.5nm,0.8s						
GTA	**Gaotai**	**27.55**	**308**	*e*P	**P**	**17 50 21.3**	**+0.3**
GTA				pP	sP	17 50 32.0	+2.9
GTA				sP	pwP	17 50 35.8	+4.4
GTA				PcP	**PcP**	**17 53 39.6**	**+1.0**
GTA				S	**S**	**17 54 59.8**	**-1.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,93nm,5.6s						
GTA				LR	LR		
	comp=Z,160nm,17.8s						
GTA				LR	LR		
	comp=Z,180nm,17.8s						
GTA				LR	LR		
	comp=Z,220nm,19.7s						
CMMT	**Chiang Mai**	**27.59**	**263**	P	**P**	**17 50 22.9**	**+1.5**
	comp=Z,4.4nm,1.1s						
CHTO	**Chiang Mai**	**27.60**	**263**	P	**P**	**17 50 21.7**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.6s						
CHTO	**Chiang Mai**	**27.60**	**263**	P	**P**	**17 50 23.0**	**+1.6**
	comp=Z,20nm,1.6s						
CMAR	**Chiang Mai Arr**	**27.71**	**262**	P	**P**	**17 50 23.1**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=59,slow=7.6,SNR=9.2						
CMAR				LR	LR	18 00 46.4	
	comp=Z,22nm,19.9s,baz=52,slow=35						
ULN	**Ulaanbaatar**	**28.01**	**329**	*e*P	**P**	**17 50 24.3**	**-0.7**
	comp=Z,12nm,1.5s						
ULN	**Ulaanbaatar**	**28.01**	**329**	⇑*i*P	**P**	**17 50 24.5**	**-0.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.8s						
SONA0	**Songino Array**	**28.30**	**329**	*e*P	**P**	**17 50 26.6**	**-1.0**
SONM	**Songino Array**	**28.30**	**329**	P	**P**	**17 50 26.6**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=134,slow=8.3,SNR=4.8						
SONM				LR	LR	18 03 10.8	
	comp=Z,146nm,18.9s,baz=140,slow=40						
SONA1	**Songino Array**	**28.30**	**329**	*e*P	**P**	**17 50 26.6**	**-1.0**
JAY	**Jayapura**	**30.19**	**154**	LR	LR	17 59 33.2	
	comp=Z,95nm,21.5s,baz=350,slow=30						
TLY	**Talaya**	**32.30**	**331**	*e*P	P	17 51 13.3	+11
TLY				pmax	pmax		
	comp=Z,19nm,2.0s						
TLY				MLR	MLR		
	comp=Z,317nm,19.0s						
LSA	**Lhasa**	**32.88**	**286**	*e*P	**P**	**17 51 07.4**	**-1.2**
	comp=Z,2.9nm,0.7s						
LSA	**Lhasa**	**32.88**	**286**	*e*P	**P**	**17 51 07.4**	**-1.2**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRDH	**Bariadhala**	**33.22**	**273**	LR	LR	18 05 04.1	
	comp=Z,93nm,18.8s,baz=156,slow=37						
BATI	**Baumata**	**35.42**	**187**	LR	LR	18 05 13.9	
	comp=Z,79nm,19.6s,baz=160,slow=35						
PETK	**Petropavlovsk-**	**35.72**	**31**	LR	LR	18 08 15.5	
	comp=Z,42nm,18.6s,baz=241,slow=40						
PSI	**Prapat**	**35.72**	**236**	P	**P**	**17 51 33.0**	**+0.1**
RAMN	**Ramite**	**37.07**	**282**	*e*P	**P**	**17 51 44.9**	**+0.4**
JIRN	**Jiri**	**37.35**	**283**	*e*P	**P**	**17 51 47.6**	**+0.5**
WMQ	**Urumqi**	**37.58**	**310**	*e*P	**P**	**17 51 48.6**	**+0.2**
WMQ				pP	pwP	17 52 00.8	+1.8
WMQ				sP	sP	17 52 05.8	+9.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				LR	LR		
	comp=Z,230nm,16.7s						
WMQ				LR	LR		
	comp=Z,150nm,18.5s						
WMQ				LR	LR		
	comp=Z,210nm,19.3s						
GUN	**Gumba**	**37.60**	**284**	*e*P	**P**	**17 51 50.2**	**+1.1**
	comp=Z,32nm,1.2s						
MA2	**Magadan**	**37.88**	**19**	LR	LR	18 08 54.8	
	comp=Z,24nm,18.4s,baz=130,slow=39						
PKI	**Pulchoki**	**38.05**	**283**	*e*P	**P**	**17 51 52.8**	**-0.1**
	comp=Z,5.5nm,0.6s						
PKIN	**Phulchoki**	**38.06**	**283**	*e*P	**P**	**17 51 53.3**	**+0.3**
	comp=Z,4.7nm,0.5s						
KKN	**Kakani**	**38.14**	**284**	*e*P	**P**	**17 51 54.1**	**+0.5**
	comp=Z,9.5nm,0.7s						
DMN	**Daman**	**38.32**	**283**	*e*P	**P**	**17 51 55.7**	**+0.6**
	comp=Z,5.3nm,0.5s						
DANN	**Dangsing**	**39.42**	**285**	*e*P	**P**	**17 52 05.2**	**+0.8**
	comp=Z,15nm,0.6s						
KOLN	**Koldanda**	**39.62**	**284**	*e*P	**P**	**17 52 06.6**	**+0.6**
	comp=Z,10nm,0.8s						
PYUN	**Piuthan**	**40.12**	**284**	*e*P	**P**	**17 52 11.1**	**+1.0**
	comp=Z,35nm,1.0s						
SEY	**Seymchan**	**41.09**	**17**	⇓*i*P	**P**	**17 52 18.1**	**+0.8**
MK01	**Makanchi Array**	**42.04**	**313**	*e*P	**P**	**17 52 24.6**	**-0.7**
MK31	**Makanchi Array**	**42.05**	**313**	*e*P	**P**	**17 52 24.9**	**-0.6**
MK31	**Makanchi Array**	**42.05**	**313**	*e*P	**P**	**17 52 24.9**	**-0.6**
MK32	**Makanchi Array**	**42.05**	**313**	*e*P	**P**	**17 52 25.4**	**-0.1**
MK32				*e*PcP	**PcP**	**17 54 20.7**	**+0.6**
MKAR	**Makanchi Array**	**42.05**	**313**	*e*P	**P**	**17 52 24.8**	**-0.7**
	comp=Z,19nm,0.5s						
MKAR				PcP	**PcP**	**17 54 20.7**	**+0.6**
MKAR	**Makanchi Array**	**42.05**	**313**	*e*P	**P**	**17 52 24.8**	**-0.7**
MKAR						17 54 20.7	
MKAR				pmax	pmax		
	comp=Z,19nm,0.5s						
MKAR	**Makanchi Array**	**42.05**	**313**	P	**P**	**17 52 25.4**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=94,slow=9.9,SNR=26						
MKAR				PcP	**PcP**	**17 54 20.7**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=85,slow=4.1,SNR=3.8						
MKAR				LR	LR	18 11 32.6	
	comp=Z,79nm,18.7s,baz=86,slow=38						
MAKZ	**Makanchi**	**42.26**	**313**	*e*P	**P**	**17 52 27.0**	**-0.2**
	comp=Z,5.8nm,1.1s						
MAKZ	**Makanchi**	**42.26**	**313**	*e*P	**P**	**17 52 27.0**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZAA0	**Zalesovo Array**	**42.93**	**324**	*e*P	**P**	**17 52 32.1**	**-0.3**
	comp=Z,18nm,1.8s						
ZALV	**Zalesovo Beam**	**42.93**	**324**	*e*P	**P**	**17 52 32.0**	**-0.5**
ZALV	**Zalesovo Beam**	**42.93**	**324**	*e*P	**P**	**17 52 32.0**	**-0.5**
ZALV	**Zalesovo Beam**	**42.93**	**324**	P	**P**	**17 52 32.5**	**0.0**
	comp=Z,1.2nm,0.4s,baz=125,slow=6.1,SNR=9.2						
ZALV				LR	LR	18 12 08.3	
	comp=Z,76nm,18.2s,baz=68,slow=38						
ZAA1	**Zalesovo Array**	**42.93**	**324**	*e*P	**P**	**17 52 32.5**	**-0.1**
PDGK	**Podgornoye**	**43.30**	**307**	P	**P**	**17 52 35.7**	**-0.1**
PDGK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRAB	**Tennant Creek**	**45.28**	**172**	⇑*e*P	**P**	**17 52 50.9**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,3.0nm,1.2s						
WR1	**Warramunga Arr**	**45.28**	**172**	*e*P	**P**	**17 52 50.6**	**-1.1**
	comp=Z,20nm,1.7s						
WRA	**Warramunga Arr**	**45.28**	**172**	P	**P**	**17 52 50.6**	**-1.1**
	comp=Z,2.1nm,0.7s,baz=353,slow=8.6,SNR=14						
WB2	**Warramunga Arr**	**45.29**	**172**	*e*P	**P**	**17 52 50.6**	**-1.1**
KURK	**Kurchatov**	**45.41**	**317**	⇓*e*P	**P**	**17 52 51.7**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH	**Kashi**	**45.58**	**301**	P	**P**	**17 52 58.1**	**+4.0**
KSH				pP	pwP	17 53 06.4	+0.5
KSH				pmax	pmax		
	comp=Z,150nm,5.7s						
NRN	**Naryn**	**45.66**	**304**	*e*P	**P**	**17 52 55.2**	**+0.2**
	comp=Z,4.9nm,1.1s						
NRN	**Naryn**	**45.66**	**304**	*e*P	**P**	**17 52 55.2**	**+0.2**
NRN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AAK	**Ala-Archa**	**46.87**	**306**	⇑*e*P	**P**	**17 53 05.5**	**+1.3**
NIL	**Nilore**	**47.92**	**293**	P	**P**	**17 53 12.7**	**+0.3**
NIL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BILL	**Bilibino**	**48.74**	**18**	⇑*e*P	**P**	**17 53 18.7**	**+0.6**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s						
AS31	**Alice Springs**	**48.90**	**173**	*e*P	**P**	**17 53 19.2**	**-0.8**
	comp=Z,0.8nm,0.9s						
ASAR	**Alice Springs**	**48.90**	**173**	P	**P**	**17 53 19.4**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=5.3,slow=16,SNR=16						
ASAR				PcP	**PcP**	**17 54 42.8**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=354,slow=3.9,SNR=4.7						
AS01	**Alice Springs**	**48.91**	**173**	*e*P	**P**	**17 53 19.4**	**-0.5**
OTUK	**Ortayu**	**48.94**	**313**	P	**P**	**17 53 19.8**	**-0.3**
OTUK				pmax	pmax		
	comp=Z,3.0nm,1.9s						
KK31	**Karatay Array**	**49.81**	**306**	*e*P	**P**	**17 53 27.3**	**+0.5**
KK31	**Karatay Array**	**49.81**	**306**	*e*P	**P**	**17 53 27.3**	**+0.5**
KKAR	**Karatay Array**	**49.81**	**306**	*e*P	**P**	**17 53 27.6**	**+0.8**
	comp=Z,5.5nm,1.4s						
KKAR	**Karatay Array**	**49.81**	**306**	*e*P	**P**	**17 53 27.6**	**+0.8**
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NRIK	**Noril'sk**	**50.17**	**343**	LR	LR	18 16 12.0	
	comp=Z,119nm,18.1s,baz=112,slow=38						
BVAR	**Borovoye Array**	**50.89**	**319**	LR	LR	18 16 33.1	
	comp=Z,141nm,20.4s,baz=90,slow=38						
BRVK	**Borovoye**	**50.96**	**319**	*e*P	**P**	**17 53 35.8**	**+0.6**
	comp=Z,9.4nm,1.3s						
BRVK	**Borovoye**	**50.96**	**319**	*e*P	**P**	**17 53 35.8**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ABKAR	**Akbulak array**	**57.18**	**314**	*e*P	**P**	**17 54 19.6**	**-1.0**
	comp=Z,4.5nm,0.9s						
STKA	**Stephens Creek**	**58.22**	**166**	P	**P**	**17 54 27.1**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=360,slow=3.3,SNR=2.9						
GEYT	**Alibeck**	**59.60**	**301**	P	**P**	**17 54 36.8**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=123,slow=22,SNR=4.0						
GEYT				LR	LR	18 23 33.8	
	comp=Z,96nm,19.0s,baz=255,slow=39						
PRGR	**Permogore**	**64.56**	**328**	*e*P	**P**	**17 55 11.0**	**+0.4**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MDM	**Murphy Dome**	**64.88**	**28**	*e*P	**P**	**17 55 14.1**	**+1.3**
	comp=Z,18nm,1.4s						
ILAR	**Eielson Array**	**65.47**	**28**	P	**P**	**17 55 16.1**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=256,slow=7.2,SNR=7.3						
KLMR	**Klimovskoe**	**67.59**	**328**	*e*P	**P**	**17 55 29.7**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,16nm,1.4s						
KLMR	**Klimovskoe**	**67.59**	**328**	*e*P	**P**	**17 55 29.7**	**-0.5**
KLMR				AMP		17 55 44.8	
	comp=Z,16nm,1.4s						
TMCR	**Tamitsa**	**67.60**	**332**	*e*P	**P**	**17 55 31.2**	**+1.1**
TMCR				pmax	pmax		
	comp=Z,26nm,1.2s						
VRH	**Novokhopyorsk**	**68.50**	**318**	*e*P	**P**	**17 55 36.1**	**+0.1**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ZEI	**Tsey**	**69.17**	**308**	*e*P	**P**	**17 55 40.3**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	**69.63**	**310**	P	**P**	**17 55 44.2**	**+1.1**
	comp=Z,6.2nm,0.9s,baz=64,slow=5.4,SNR=11						
KBZ				LR	LR	18 30 41.7	
	comp=Z,52nm,18.0s,baz=70,slow=40						
KIV	**Kislovodsk**	**69.71**	**310**	*e*P	**P**	**17 55 42.8**	**-1.1**
	comp=Z,11nm,0.9s						
KIV	**Kislovodsk**	**69.71**	**310**	*e*P	**P**	**17 55 45.2**	**+1.4**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
LPSR	**Galich'ya Gora**	**69.83**	**319**	*e*P	**P**	**17 55 44.5**	**+0.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
INK	**Inuvik**	**69.95**	**23**	*e*P	**P**	**17 55 43.9**	**-0.8**
	comp=Z,10nm,1.4s						
INK	**Inuvik**	**69.95**	**23**	*e*P	**P**	**17 55 43.9**	**-0.8**
INK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VSR	**Storozhevoye**	**70.06**	**318**	*de*P	**P**	**17 55 45.0**	**-0.7**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN	**Obninsk**	**70.50**	**322**	*ce*P	**P**	**17 55 48.9**	**+0.6**
OBN				*e*		17 56 12.4	
OBN				*e*		17 58 33.8	
OBN				*e*S	**SKiKP**	**18 05 34.4**	**+3.5**
OBN				pmax	pmax		
	comp=Z,37nm,1.7s						
OBN				MLR	MLR		
	comp=Z,92nm,17.0s						
JOF	**Joensuu**	**70.83**	**331**	P	**P**	**17 55 50.5**	**+0.3**
JOF				pmax	pmax		
	comp=Z,12nm,1.0s						
FIA0	**FINESS Array S**	**73.65**	**331**	*e*P	**P**	**17 56 07.7**	**+0.7**
FIA0	**FINESS Array S**	**73.65**	**331**	*e*P	**P**	**17 56 07.7**	**+0.7**
FINES	**FINESS Array B**	**73.65**	**331**	P	**P**	**17 56 07.7**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=71,slow=6.6,SNR=10						
FINES				LR	LR	18 32 20.2	
	comp=Z,115nm,19.4s,baz=36,slow=39						
RAYN	**Ar Rayn**	**73.90**	**289**	*e*P	**P**	**17 56 07.9**	**-1.4**
	comp=Z,7.1nm,1.1s						
RAYN	**Ar Rayn**	**73.90**	**289**	*e*P	**P**	**17 56 07.9**	**-1.4**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AKASG	**Malin Array Be**	**76.16**	**320**	P	**P**	**17 56 22.2**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=58,slow=6.2,SNR=16						
AKASG				LR	LR	18 32 07.1	
	comp=Z,104nm,20.4s,baz=25,slow=38						
AKBB	**Malin Array Si**	**76.16**	**320**	*e*P	**P**	**17 56 21.8**	**0.0**
KIEV	**Kiev**	**76.17**	**320**	*e*P	**P**	**17 56 20.6**	**-1.2**
	comp=Z,6.0nm,0.9s						
KIEV	**Kiev**	**76.17**	**320**	*de*P	**P**	**17 56 22.0**	**+0.2**
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AK11	**Malin Array Si**	**76.20**	**320**	*e*P	**P**	**17 56 21.8**	**-0.3**
RES	**Resolute Bay**	**76.62**	**11**	P	**P**	**17 56 23.6**	**-0.3**
RES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BR101	**Keskin Array S**	**77.47**	**308**	*e*P	**P**	**17 56 29.5**	**-0.1**
BR131	**Keskin Array S**	**77.47**	**308**	*e*P	**P**	**17 56 29.4**	**-0.2**
BRTR	**Keskin Array B**	**77.47**	**308**	*ce*P	**P**	**17 56 30.6**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**77.47**	**308**	P	**P**	**17 56 29.5**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=89,slow=5.7,SNR=11						
BRTR				LR	LR	18 33 43.1	
	comp=Z,18nm,19.7s,baz=96,slow=38						
YKA	**Yellowknife Ar**	**79.58**	**25**	P	**P**	**17 56 40.4**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=302,slow=5.0,SNR=20						
YKB5	**Yellowknife Ar**	**79.58**	**25**	*e*P	**P**	**17 56 40.8**	**+0.3**
BUR04	**Bucovina Ar. S**	**79.83**	**318**	*e*P	**P**	**17 56 42.8**	**+0.4**
NB2	**NORSAR Subarra**	**80.14**	**334**	P	**P**	**17 56 43.2**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=51,slow=5.6						
NB200	**NORSAR Array S**	**80.14**	**334**	*e*P	**P**	**17 56 43.3**	**-0.4**
NOA	**NORSAR Array B**	**80.14**	**334**	P	**P**	**17 56 43.3**	**-0.4**
	comp=Z,29nm,0.6s,baz=52,slow=5.4,SNR=6.4						
NOA				LR	LR	18 35 45.5	
	comp=Z,75nm,19.1s,baz=50,slow=38						
MLR	**Muntele Rosu**	**80.31**	**316**	P	**P**	**17 56 46.0**	**+0.9**
MLR				pmax	pmax		

	comp=Z,7.0nm,1.3s						
OJC	Ojcow	81.78	322	P	P	17 56 53.1	+0.5
OJC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SUMG	Summit	82.05	356	eP	P	17 56 54.7	+0.5
	comp=Z,41nm,1.7s						
SUMG	Summit	82.05	356	eP	P	17 56 54.7	+0.5
SUMG				pmax	pmax		
	comp=Z,41nm,1.7s						
VYHS	Vyhne	83.19	321	eP	P	17 57 01.7	+1.7
VYHS				e		17 57 14.2	
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VYHS	Vyhne	83.19	321	eP	P	17 57 01.7	+1.7
VYHS				e		17 57 14.2	
VTS	Vitosha	83.36	314	eP	P	17 57 02.1	+0.9
	comp=Z,8.3nm,0.9s						
VTS	Vitosha	83.36	314	eP	P	17 57 02.1	+0.9
VTS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRG	Berggiesshubel	84.61	324	eP	P	17 57 08.8	+1.6
	comp=Z,6.1nm,1.1s						
TREC	Trest	84.65	323	P	P	17 57 07.9	+0.4
TREC				pmax	pmax		
	comp=Z,2.0nm,2.5s						
GRG	Griva	84.70	313	P	P	17 57 07.4	-0.5
CLL	Collm	84.86	325	eP	P	17 57 10.0	+1.6
	comp=Z,7.0nm,1.1s						
CLL				i		17 57 21.7	
	comp=Z,11nm,1.3s						
CLL				LmH		18 33 00.0	
	comp=N,100nm,20.2s						
CLL				LmH		18 33 00.0	
	comp=E,100nm,20.1s						
CLL				LmV		18 39 00.0	
	comp=Z,100nm,19.1s						
CLL	Collm	84.86	325	eP	P	17 57 10.0	+1.6
CLL				i		17 57 21.7	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GEC2	GERESS Array S	85.88	323	eP	P	17 57 13.4	-0.3
	comp=Z,4.7nm,1.1s						
GEC2	GERESS Array S	85.88	323	eP	P	17 57 13.4	-0.3
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GERES	GERESS Array B	85.88	323	P	P	17 57 13.7	0.0
	comp=Z,1.4nm,0.8s,baz=57,slow=4.9,SNR=8.5						
GERES				LR	LR	18 38 47.3	
	comp=Z,84nm,19.4s,baz=76,slow=38						
GEA0	GERESS Array S	85.88	323	eP	P	17 57 13.1	-0.6
SFJD	Kangerlussuaq	88.10	359	P	P	17 57 24.1	+0.1
SFJD				pmax	pmax		
	comp=Z,12nm,1.4s						
FFC	Flin Flon	89.63	26	i P	P	17 57 32.9	+1.4
PPT	Papeete	90.79	109	LR	LR	18 33 23.4	
	comp=Z,77nm,18.5s,baz=60,slow=32						

*IDC **20** 17:55:33.9±0.7, 12°.04S×165°.44E, h0^{km}, mb4.3/14, mb1 4.4/16, mb1mx4.2/41, mbtmp4.3/16, ML4.0/2, MS3.4/6, Ms1 3.4/6, ms1mx3.0/27, Error ellipse: s-maj=21.5km s-min=17.4km az=116.0*

*NEIC **20** 17:55:35.5±0.3, 12°.02S×165°.42E, h10^{km}, mb4.8/13, Error ellipse: s-maj=9.7km s-min=8.0km az=125.0*

*ISCJB **20** 17:55:37.6±0.4, 12°.10S±0°.07×165°.31E±0°.06, h33^{km}, mb4.4/26, MS3.4/4, Error ellipse: s-maj=9.6km s-min=8.9km az=8.4*

ISC 20 17:55:39.2±0.5**, 12°.13S**±0°.07×**165°.35E**±0°.09**, h35**^{km}**, n49, σ1^{s}10**/58**, mb4.4**/26**, MS3.4**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.95	296	ePn	Pn	17 57 04.8	0.0
HNR				eSn	Sn	17 58 10.3	-1.5
HNR	Honiara	5.95	296	Pn	Pn	17 57 05.2	+0.4
	5.5nm,0.3s,baz=145,slow=3.0,SNR=11						
HNR				Sn	Sn	17 58 10.3	-1.5
	8.1nm,0.3s,baz=127,slow=20,SNR=6.9						
HNR				LR	LR	17 59 07.2	
	comp=Z,215nm,21.5s,baz=133,slow=36						
DZM	Mont Dzumac	9.94	174	ePn	Pn	17 58 01.4	+1.6
DZM				Sn	Sn	17 59 47.5	-2.6
DZM	Mont Dzumac	9.94	174	Pn	Pn	17 58 00.5	+0.7
	1.0nm,0.3s,baz=310,slow=23,SNR=17						
DZM				Sn	Sn	17 59 47.5	-2.6
	0.1nm,0.3s,baz=93,slow=4.1,SNR=2.4						
DZM				LR	LR	18 01 37.7	
	comp=Z,212nm,18.0s,baz=91,slow=36						
CTA	Charters Tower	19.96	244	P	Pn	18 00 10.2	-0.3
	4.9nm,0.8s,baz=85,slow=15,SNR=6.3						
STKA	Stephens Creek	29.39	224	LR	LR	18 12 27.0	
	comp=Z,103nm,21.2s,baz=26,slow=34						
WR1	Warramunga Arr	30.76	251	eP	P	18 01 51.7	+0.1
	7.1nm,1.0s						
WR1				ePcP	PcP	18 04 47.6	-1.2
WRA	Warramunga Arr	30.76	251	P	P	18 01 51.7	+0.1
	2.9nm,0.8s,baz=76,slow=8.9,SNR=18						
WRA				PcP	PcP	18 04 47.6	-1.2
	0.6nm,0.9s,baz=86,slow=2.4,SNR=4.2						
WRA				LR	LR	18 13 19.0	
	comp=Z,57nm,19.5s,baz=135,slow=34						
RPZ	Rata Peaks	31.85	172	P	P	18 02 02.8	+1.9
	7.9nm,0.8s,baz=0.0,slow=7.1,SNR=6.3						
AS31	Alice Springs	31.97	245	eP	P	18 02 01.4	-0.8
	0.9nm,0.7s						
ASAR	Alice Springs	31.97	245	P	P	18 02 01.9	-0.3
	1.3nm,0.8s,baz=72,slow=10.0,SNR=15						
ASAR				PcP	PcP	18 04 51.3	-0.7
	0.6nm,0.8s,baz=76,slow=3.9,SNR=4.7						
ASAR				LR	LR	18 13 53.3	
	comp=Z,82nm,20.0s,baz=75,slow=34						
FITZ	Fitzroy Crossi	38.73	256	eP	P	18 02 59.8	-0.6
	7.6nm,1.0s						
FITZ	Fitzroy Crossi	38.73	256	P	P	18 02 59.9	-0.6
	7.3nm,1.0s,baz=91,slow=8.5,SNR=5.2						
KLR	Kul'dur	67.90	337	P	P	18 06 34.4	+0.2
	0.8nm,0.5s,baz=163,slow=7.4,SNR=3.8						
ENH	Enshi	68.28	310	eP	P	18 06 37.2	+0.2
	12nm,1.1s						
CM01	Chiang Mai Arr	72.17	294	eP	P	18 07 01.8	+0.8
CM31	Chiang Mai Arr	72.19	294	eP	P	18 07 02.8	+1.7
	5.1nm,0.9s						
CMAR	Chiang Mai Arr	72.19	294	P	P	18 07 02.9	+1.8
	2.5nm,0.8s,baz=123,slow=4.5,SNR=23						
CHTO	Chiang Mai	72.31	294	P	P	18 07 04.8	+3.0
	13nm,1.4s						
GAMB	Gambell	77.70	10	eP	P	18 07 32.1	+0.2
	5.2nm,0.8s						
QSPA	South Pole Qui	77.88	180	P	P	18 07 34.2	+0.9
	2.3nm,1.0s,baz=351,slow=3.0,SNR=3.8						
ULN	Ulaanbaatar	78.95	324	eP	P	18 07 39.3	-0.1
	3.0nm,0.8s						
SONA0	Songino Array	79.31	324	eP	P	18 07 42.0	+0.6
SONM	Songino Array	79.31	324	P	P	18 07 42.0	+0.6
	1.7nm,0.9s,baz=139,slow=6.8,SNR=10.0						
GTA	Gaotai	79.53	314	P	P	18 07 44.6	+1.8
GTA				pP	pP	18 07 52.0	-0.2
GTA				sP	sP	18 07 55.3	-0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	Bilibino	79.96	0	eP	P	18 07 43.4	-0.9
	comp=Z,12nm,1.1s						
RDOG	Red Dog Mine	83.16	11	eP	P	18 08 01.6	+0.4
	comp=Z,14nm,1.2s						
IM3	Indian Mountai	83.57	16	eP	P	18 08 03.4	0.0
HDA	Harding Lake	84.39	19	eP	P	18 08 07.3	-0.3
	comp=Z,8.7nm,0.8s						
IL1	Eielson Array	84.66	19	eP	P	18 08 07.9	-1.1
ILAR	Eielson Array	84.66	19	P	P	18 08 08.0	-0.9
	comp=Z,2.0nm,0.6s,baz=242,slow=5.3,SNR=36						
ILB	Eielson Array	84.66	19	eP	P	18 08 08.1	-0.9
	comp=Z,25nm,1.8s						
EGAK	Eagle	86.52	20	eP	P	18 08 18.0	-0.2
	comp=Z,44nm,2.0s						
NV01	Mina Array Sit	87.02	50	eP	P	18 08 20.8	-0.8
NVAR	Mina Array Bea	87.02	50	P	P	18 08 21.1	-0.5
	comp=Z,0.3nm,0.3s,baz=243,slow=1.8,SNR=2.8						
MK01	Makanchi Array	94.03	317	eP	P	18 08 54.3	+0.4
MK31	Makanchi Array	94.04	317	eP	P	18 08 54.0	+0.1
MK32	Makanchi Array	94.04	317	eP	P	18 08 54.5	+0.6
MKAR	Makanchi Array	94.04	317	P	P	18 08 54.5	+0.6
	comp=Z,2.5nm,0.8s,baz=100,slow=6.1,SNR=27						
ZALV	Zalesovo Beam	94.20	324	eP	P	18 08 53.6	-0.8
ZALV	Zalesovo Beam	94.20	324	P	P	18 08 54.0	-0.4
	comp=Z,1.2nm,0.8s,baz=117,slow=5.6,SNR=5.7						
ZALV				LR	LR	18 51 31.1	
	comp=Z,16nm,18.4s,baz=250,slow=36						
ZAA1	Zalesovo Array	94.21	324	eP	P	18 08 54.0	-0.4
MAKZ	Makanchi	94.26	317	eP	P	18 08 55.0	+0.1
	comp=Z,4.1nm,1.0s						
YKA	Yellowknife Ar	96.11	27	P	P	18 09 00.7	-2.2
	comp=Z,0.5nm,0.6s,baz=257,slow=4.6,SNR=9.9						
YKB5	Yellowknife Ar	96.11	27	eP	P	18 09 01.1	-1.9
ESDC	Sonseca Array	150.98	343	PKPbc	PKiKP	18 15 29.4	0.0
	comp=Z,0.1nm,0.3s,baz=343,slow=4.0,SNR=3.4						
ESDC				PKPab	sPKPdf	18 15 37.1	+0.9
	comp=Z,0.3nm,0.4s,baz=360,slow=4.6,SNR=3.8						
TOA0	Torodi Ar. Sit	164.02	275	ePKPdf	PKPdf	18 15 40.1	+0.3
TORD	Torodi Ar. Bea	164.02	275	PKP	PKPdf	18 15 39.7	-0.2
	comp=Z,0.9nm,0.8s,baz=127,slow=0.7,SNR=4.5						
TORD				PKPab	PKPab	18 16 32.7	-0.4
	comp=Z,1.4nm,1.1s,baz=108,slow=4.7,SNR=4.3						
TOA1	Torodi Ar. Sit	164.02	275	ePKPdf	PKPdf	18 15 39.7	-0.2
TOA1				ePKPab	PKPab	18 16 32.7	-0.4

IDC 20 18:10:49.9±1.9**, 7°.61S×122°.64E, h0**^{km}**, mb3.4**/1**, mb1 3.5**/3**, mb1mx3.3**/32**, mbtmp3.3**/3**, ML3.1**/2**, Error ellipse: s-maj=273.1km s-min=28.3km az=56.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.70	138	Pn	Pn	18 14 43.8	-1.6
	0.1nm,0.3s,baz=309,slow=15,SNR=4.5						
ASAR	Alice Springs	19.28	147	P	Pn	18 15 17.3	-0.1
	0.1nm,0.3s,baz=331,slow=14,SNR=10						
MKAR	Makanchi Array	64.94	331	P	P	18 21 31.4	0.0
	0.3nm,0.8s,baz=116,slow=6.6,SNR=3.1						

*NORS **20** 18:11:34.8±0.0, 42°.59N×45°.51E, h18^{km}, MPVA3.3*

*MOS **20** 18:11:34.7±0.0, 42°.58N×45°.55E, h28^{km}±1^{km}, MPVA3.3*

*TIF **20** 18:11:34.5, 42°.68N×45°.66E, h24^{km}±4^{km}*

*ISCJB **20** 18:11:37.7±0.4, 42°.62N±0°.03×45°.54E±0°.03, h28^{km}±10^{km}, Error ellipse: s-maj=4.9km s-min=3.2km az=8.5*

ISC 20 18:11:37.1±1.0**, 42°.64N**±0°.03×**45°.55E**±0°.02**, h27**^{km}±12^{km}**, n19, σ1^{s}44**/35**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.50	86	ePg	Pb	18 11 47.2	-0.3
BTLR				eSg	Sb	18 11 54.2	-0.2
DVE	Vedeno	0.53	53	i Pg	Pb	18 11 47.4	-0.6
DVE				eSg	Sb	18 11 55.7	+0.3
GROC	Groznyy	0.59	18	ePg	Pb	18 11 49.2	+0.2
GROC				eSg	Sn	18 11 58.6	0.0
KMGR	Komgaron	0.66	310	ePg	Pb	18 11 50.1	0.0
KMGR				eSg	Sn	18 12 01.1	+0.8
GUDG	Gudauri	0.81	258	P	Pb	18 11 51.9	-0.8
GUDG				S	Sb	18 12 01.6	-1.8
LACR	Lac	0.94	282	i Pg	Pn	18 11 53.4	-1.4
LACR				eSg	Sn	18 12 07.5	+0.1
LGD	Lagodekhi	0.95	147	P	Pb	18 11 55.1	+0.1
LGD				S	Sb	18 12 06.7	-0.5
DBC	Dubki	1.02	67	ePg	Pb	18 11 57.6	+1.4
DBC				eSg	Sn	18 12 11.3	+2.1
GNBR	Gunib	1.07	103	ePg	Pb	18 11 57.2	+0.1
GNBR				eSg	Sb	18 12 11.0	+0.2
ARNR	Ardon	1.08	301	ePg	Pn	18 11 54.6	-1.9
ARNR				eSg	Sn	18 12 10.6	+0.1
BTNK	Botanikuri	1.10	211	P	Pn	18 11 57.2	+0.3
KORR	Kora	1.18	293	i Pg	Pn	18 11 58.4	+0.5
KORR				eSg	Sb	18 12 15.7	+2.0
DDFL	Dedoflistskaro	1.26	160	P	Pb	18 12 01.7	+1.4
DDFL				S	Sb	18 12 19.1	+2.9
LSNR	Lesken	1.42	298	ePg	Pb	18 12 02.2	-0.7
LSNR				eSg	Sb	18 12 22.4	+1.8
DIGR	Digorskoe uzhe	1.47	281	ePg	Pn	18 12 02.2	+0.1
DIGR				eSg	Sb	18 12 23.1	+0.7
KZRT	Kazreti	1.51	215	P	Sb	18 12 24.2	+0.8
TRLG	Trialeti	1.54	225	P	Pb	18 12 04.9	-0.1
TRLG				S	Sb	18 12 25.4	+1.3
AKT	Akhty	1.99	125	ePg	Pn	18 12 03.6	-5.6
AKT				eSg	Sn	18 12 28.5	-4.8
NEY	Neytrino	2.16	287	ePg	Pn	18 12 10.4	-1.2
NEY				eSg	Sn	18 12 38.4	+0.8

*NORS **20** 18:31:26.5±0.0, 42°.58N×45°.52E, h10^{km}, MPVA4.2*

*DRS **20** 18:31:27.9±0.0, 42°.59N×45°.45E, h14^{km}*

*TIF **20** 18:31:27.4, 42°.66N×45°.49E, h14^{km}±1^{km}*

*MOS **20** 18:31:28.9±0.8, 42°.55N×45°.52E, h12^{km}, mb4.2/2, Error ellipse: s-maj=6.4km s-min=4.5km az=37.8*

*ISK **20** 18:31:29.5, 42°.65N×45°.15E, h5^{km}, ML3.0/6*

*DDA **20** 18:31:42.6, 41°.97N×44°.59E, h13^{km}±1^{km}, ML2.5*

ISC 20 18:31:29.6±1.1**, 42°.61N**±0°.02×**45°.52E**±0°.01**, h22**^{km}±10^{km}**, n106, σ1^{s}71**/178**, 11C-11D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.52	84	⇑iPG	Pb	18 31 38.6	-1.6
BTLR				eS	Sb	18 31 46.5	-0.9
BTLR				pmax	pmax		
	comp=Z,329nm,0.8s						
BTLR	Botlikh	0.52	84	i Pg	Pb	18 31 38.7	-1.6
BTLR				eSg	Sb	18 31 46.5	-0.9
DVE	Vedeno	0.56	52	i PG	Pb	18 31 39.4	-1.5
DVE				eS	Sb	18 31 47.7	-0.9
DVE				pmax	pmax		
	comp=Z,156nm,0.2s						
DVE	Vedeno	0.56	52	ePg	Pb	18 31 39.5	-1.5
DVE				eSg	Sb	18 31 47.9	-0.7
GROC	Groznyy	0.62	19	ePG	Pb	18 31 41.3	-0.5
GROC				e		18 31 50.1	
GROC				pmax	pmax		
	comp=Z,335nm,0.4s						
GROC				smax	smax		
	comp=E,2µm,0.5s						
GROC				smax	smax		
	comp=E,2µm,0.5s						
GROC	Groznyy	0.62	19	i Pg	Pb	18 31 41.4	-0.5
GROC				eSg	Sn	18 31 51.7	-0.7
KMGR	Komgaron	0.65	313	⇑iPG	Pb	18 31 41.7	-0.7
KMGR				eS	Sn	18 31 53.2	0.0
KMGR	Komgaron	0.65	313	i Pg	Pb	18 31 41.6	-0.7
KMGR				eSg	Sn	18 31 52.0	-1.3
VLKR	Vladikavkaz	0.75	305	ePG	Pb	18 31 43.8	-0.3
VLKR				eS	Sn	18 31 55.0	-0.7
VLKR	Vladikavkaz	0.75	305	ePg	Pb	18 31 43.8	-0.3
VLKR				i Pg	Pb	18 31 43.9	-0.3
VLKR				eSg	Sn	18 31 55.0	-0.7
VLKR				eSg	Sb	18 31 55.1	+1.1
GUDG	Gudauri	0.78	259	P	Pb	18 31 43.6	-1.1
GUDG				S	Sb	18 31 53.4	-1.6
XNZR	Khunzakh	0.88	94	⇑ePG	Pb	18 31 45.3	-1.1
XNZR				e		18 31 58.3	
XNZR	Khunzakh	0.88	94	ePg	Pb	18 31 45.8	-0.6
XNZR				eSg	Sn	18 31 58.3	-0.7
LACR	Lac	0.92	284	ePG	Pb	18 31 45.1	-2.0
LACR				eS	Sb	18 31 57.6	-1.4
LACR	Lac	0.92	284	ePg	Pb	18 31 44.8	-2.3
LACR				eSg	Sb	18 31 56.8	-2.2
DLMR	Dylym	0.94	61	⇓iPG	Pb	18 31 46.8	-0.4
DLMR				eS	Sn	18 32 00.0	-0.2
DLMR				pmax	pmax		
	comp=Z,118nm,0.2s						
DLMR	Dylym	0.94	61	i Pg	Pb	18 31 46.8	-0.4
DLMR				eSg	Sn	18 32 00.0	-0.2
LGD	Lagodekhi	0.95	145	P	Pb	18 31 46.6	-0.8
LGD				S	Sb	18 31 58.4	-1.1
LGD	Lagodekhi	0.95	145	ePG	Pb	18 31 46.6	-0.8
LGD				eS	Sb	18 31 58.4	-1.1
LGD	Lagodekhi	0.95	145	ePg	Pb	18 31 46.6	-0.8
LGD				eSg	Sb	18 31 58.4	-1.1
UNCR	Uncukul	0.95	84	⇓iPG	Pb	18 31 46.0	-1.4
UNCR				eS	Sn	18 32 01.5	+1.0
UNCR				pmax	pmax		
	comp=Z,513nm,0.3s						
UNCR	Uncukul	0.95	84	i Pg	Pb	18 31 46.0	-1.4
UNCR				eSg	Sn	18 32 01.5	+1.0
SEAG	Tbilisi Sea	1.00	212	P	Pn	18 31 48.2	-0.2
SEAG				S	Sn	18 32 02.5	+0.7
BTKR	Batakoyurt	1.04	317	ePG	Pn	18 31 49.6	+0.7
BTKR				eS	Sn	18 32 05.8	+3.0
BTKR	Batakoyurt	1.04	317	ePg	Pn	18 31 49.6	+0.7
BTKR				eSg	Sn	18 32 05.8	+3.0
KRNR	Karanay	1.05	78	⇑iPG	Pb	18 31 48.0	-1.1
KRNR				i S	Sn	18 32 03.0	0.0
KRNR				pmax	pmax		
	comp=Z,335nm,0.4s						
KRNR	Karanay	1.05	78	i Pg	Pb	18 31 48.0	-1.1
KRNR				i Sg	Sn	18 32 03.0	0.0
DBC	Dubki	1.05	67	⇓ePG	Pb	18 31 48.2	-0.9
DBC				e		18 32 03.3	
DBC	Dubki	1.05	67	ePg	Pb	18 31 48.3	-0.9
DBC				eSg	Sn	18 32 05.0	+2.0
TBLG	Delisi	1.05	214	PG	Pb	18 31 48.9	-0.3
TBLG				SG	Sn	18 32 03.7	+0.6
TBLG	Delisi	1.05	214	P	Pn	18 31 48.7	-0.4
TBLG				S	Sn	18 32 03.5	+0.4
TBLG	Delisi	1.05	214	ePG	Pn	18 31 48.7	-0.4
TBLG				eS	Sn	18 32 03.5	+0.4
TBLG	Delisi	1.05	214	i P	Pb	18 31 49.5	+0.3
TBLG				i S	Sn	18 32 03.0	-0.1
TBLG				IAML_P			
	comp=Z,7µm,0.2s						
TBLG	Delisi	1.05	214	ePg	Pn	18 31 48.7	-0.4
TBLG				eSg	Sn	18 32 03.5	+0.4
BTNK	Botanikuri	1.07	210	P	Pn	18 31 49.0	-0.3
BTNK				S	Sn	18 32 04.3	+0.7
BTNK	Botanikuri	1.07	210	i P	Pn	18 31 49.0	-0.3
BTNK				IAML_P			
	comp=Z,7µm,0.1s						
GNBR	Gunib	1.09	101	⇑ePG	Pn	18 31 49.1	-0.6
GNBR				e		18 32 06.9	
GNBR				pmax	pmax		
	comp=Z,539nm,0.4s						
GNBR				smax	smax		
	comp=N,424nm,0.9s						
GNBR	Gunib	1.09	101	i Pg	Pn	18 31 49.3	-0.4
GNBR				eSg	Sn	18 32 05.8	+1.7
KORR	Kora	1.17	294	ePG	Pb	18 31 50.8	-0.4
KORR				eS	Sn	18 32 08.1	+2.2
KORR	Kora	1.17	294	ePg	Pb	18 31 50.8	-0.4
KORR				eSg	Sn	18 32 08.1	+2.2
BUJR	Buynaksk	1.19	79	i PG	Pb	18 31 51.5	-0.1
BUJR				eS	Sn	18 32 09.0	+2.5
BUJR				pmax	pmax		
	comp=Z,206nm,0.3s						
BUJR	Buynaksk	1.19	79	i Pg	Pb	18 31 51.5	-0.1
BUJR				eSg	Sn	18 32 09.0	+2.5
TRKR	Terskaya	1.25	333	ePG	Pb	18 31 53.0	+0.5
TRKR				eS	Sb	18 32 11.1	+2.9
TRKR	Terskaya	1.25	333	ePg	Pb	18 31 53.0	+0.5
TRKR				eSg	Sb	18 32 11.1	+2.9
DDFL	Dedoflistskaro	1.25	159	P	Pb	18 31 54.8	+2.2
DDFL				S	Sb	18 32 15.5	+7.2
KMKR	Kumukh	1.27	112	⇓iPG	Pb	18 31 52.5	-0.5
KMKR				eS	Sb	18 32 11.0	+2.1
KMKR				pmax	pmax		
	comp=Z,138nm,0.3s						
KMKR	Kumukh	1.27	112	i Pg	Pb	18 31 52.5	-0.5
KMKR				eSg	Sb	18 32 11.0	+2.1
ZKTA	Zakatala	1.28	139	PG	Pb	18 31 53.2	+0.2
STDR	Stavd-Durt	1.31	306	⇑ePG	Pb	18 31 53.5	0.0
STDR				eS	Sb	18 32 11.4	+1.6
STDR	Stavd-Durt	1.31	306	ePg	Pb	18 31 53.5	0.0
STDR				eSg	Sb	18 32 11.4	+1.6
LSNR	Lesken	1.41	299	ePG	Pb	18 31 54.3	-1.0
LSNR				eS	Sb	18 32 14.8	+2.0
LSNR	Lesken	1.41	299	ePg	Pb	18 31 54.3	-1.0
LSNR				eSg	Sb	18 32 14.8	+2.0
PRTR	Priterechnaya	1.45	322	⇑iPG	Pb	18 31 55.3	-0.7
PRTR				eS	Sb	18 32 16.4	+2.4
PRTR	Priterechnaya	1.45	322	i Pg	Pb	18 31 55.3	-0.7
PRTR				eSg	Sb	18 32 16.4	+2.4
DIGR	Digorskoe uzhe	1.45	282	ePG	Pn	18 31 54.1	-0.7
DIGR				eS	Sb	18 32 13.4	-0.9
DIGR				pmax	pmax		
	comp=Z,341nm,0.3s						
DIGR				smax	smax		
	comp=N,202nm,0.2s						
DIGR	Digorskoe uzhe	1.45	282	ePg	Pn	18 31 54.3	-0.5
DIGR				eSg	Sb	18 32 14.7	+0.4
KZRT	Kazreti	1.48	215	P	Pb	18 31 55.6	-1.0
KZRT				S	Sb	18 32 15.6	+0.6
MAK	Makhachkala	1.50	76	ePG	Pb	18 31 55.8	-1.1
MAK				e		18 32 19.5	
MAK				pmax	pmax		
	comp=Z,198nm,0.6s						
MAK				smax	smax		
	comp=E,710nm,0.4s						
MAK				smax	smax		
	comp=N,848nm,0.5s						
MAK	Makhachkala	1.50	76	ePg	Pb	18 31 57.6	+0.7
MAK				eSg	Sb	18 32 17.6	+2.1
TRLG	Trialeti	1.50	225	P	Pb	18 31 56.2	-0.8
TRLG				S	Sb	18 32 17.0	+1.4
URKR	Urkarakh	1.63	105	⇓ePN	Pb	18 31 59.3	+0.2
URKR				e		18 32 22.4	
URKR	Urkarakh	1.63	105	ePg	Pb	18 31 59.1	0.0
URKR				eSg	Sb	18 32 21.7	+2.4
NCK	Nalchik	1.66	303	ePN	Pb	18 31 59.1	-0.4
NCK				eS	Sb	18 32 21.4	+1.4
NCK	Nalchik	1.66	303	ePg	Pb	18 31 59.1	-0.4
NCK				eSg	Sb	18 32 21.4	+1.4
SEKA	Sheki	1.88	138	PN	Pb	18 32 04.1	+0.7
KBTC	Kuba-Taba	1.95	309	ePN	Pb	18 32 03.2	-1.4
KBTC				eS	Sb	18 32 29.5	+1.0
KBTC	Kuba-Taba	1.95	309	ePg	Pb	18 32 03.2	-1.4
KBTC				eSg	Sb	18 32 29.5	+1.0
BGD	Bogdanovka	1.97	227	P	Pb	18 32 04.1	-0.8
BGD				S	Sb	18 32 29.4	+0.4
AKT	Akhty	2.00	124	⇓iPN	Pb	18 32 04.6	-0.8
AKT				eS	Sb	18 32 32.3	+2.4
AKT	Akhty	2.00	124	i Pg	Pb	18 32 04.6	-0.8
AKT				eSg	Sb	18 32 29.0	-0.9
GANJ	Ganja	2.06	163	PN	Pb	18 32 04.9	-1.4
NEY	Neytrino	2.15	288	d iPN	Pb	18 32 06.6	-1.4
NEY	Neytrino	2.15	288	ePg	Pb	18 32 05.8	-2.2
NEY				eSg	Sb	18 32 32.7	-1.6
KSMR	Kasumkent	2.19	117	ePN	Pb	18 32 10.0	+1.4
KSMR				eS	Sb	18 32 45.0	+10
KSMR				pmax	pmax		
	comp=Z,101nm,0.2s						
KSMR	Kasumkent	2.19	117	ePg	Pb	18 32 10.0	+1.4
KSMR				eSg	Sb	18 32 45.0	+10
PYA1	Pyatigorsk	2.28	310	i PN	Pn	18 32 06.0	0.0
PYA1	Pyatigorsk	2.28	310	ePn	Pn	18 32 06.3	+0.3
PYA1				eSn	Sn	18 32 32.5	-0.9
EPOS	Posof	2.35	243	i P	Pb	18 32 10.5	-0.9
SHA1	Shidzhatmaz	2.37	299	ePN	Pn	18 32 08.6	+1.2
SHA1				eS	Sb	18 32 41.2	+0.4
SHA1	Shidzhatmaz	2.37	299	ePn	Pn	18 32 08.1	+0.6
SHA1				eSn	Sn	18 32 37.4	+1.4
EAK	Akyaka	2.40	217	i P	Pb	18 32 11.3	-0.9
KIV0	Kislovodsk Arr	2.46	304	ePn	Pn	18 32 08.7	+0.2
KIV0				eSn	Sb	18 32 39.8	-3.3
KIV	Kislovodsk	2.46	304	PN	Pn	18 32 08.6	+0.1
KIV	Kislovodsk	2.46	304	ePN	Pn	18 32 08.7	+0.2
KIV				eS	Sn	18 32 39.8	+1.8
KIV	Kislovodsk	2.46	304	ePn	Pn	18 32 09.7	+1.2
KIV				eSn	Sb	18 32 40.0	-3.2
GNI	Garni	2.53	194	PN	Pb	18 32 13.4	-1.1
GNI	Garni	2.53	194	d ePN	Pb	18 32 12.9	-1.6
DIGO	Kars	2.72	217	i P	Pb	18 32 17.1	-0.7
DIGO				IAML_P			
	comp=Z,1µm,0.3s						
TASB	TASBURUN-IGDIR	2.80	201	PN	Pb	18 32 16.7	-2.3
IGDI	IGDIR	2.95	202	i P	Pb	18 32 20.9	-0.6
GOF	Gofitskoye	3.03	325	ePN	Pb	18 32 28.9	+6.1
GOF				eS	Sb	18 33 05.1	+5.7
GOF				pmax	pmax		
	comp=Z,40nm,0.8s						
GOF				smax	smax		
	comp=E,90nm,0.7s						
GOF	Gofitskoye	3.03	325	ePn	Pn	18 32 18.8	+2.6
GOF				eSn	Sn	18 32 53.9	+2.2
ARTV	Artvin	3.04	243	i P	Pb	18 32 22.9	-0.3
ARTV				IAML_P			
	comp=Z,562nm,0.3s						
DAGI	Agillar	3.10	242	i P	Pb	18 32 21.4	-2.7
BCA	Borcka	3.13	249	PN	Pn	18 32 18.8	+1.2
DBOC	Borcka	3.14	247	i P	Pn	18 32 20.1	+2.3
SENK	Senkaya-Erzuru	3.14	230	PN	Pn	18 32 19.9	+2.0
DBAD	Bademkaya	3.27	242	i P	Pb	18 32 26.6	-0.5

DBAD				IAML_P			
	comp=Z,320nm,0.4s						
AGRB	**Hanur-Agry**	3.58	213	PN	Pn	18 32 26.3	+2.3
AKTO	**Aktyubinsk**	11.62	43	⇑Pn	Pn	18 34 16.1	+2.1
	comp=Z,2.0nm,1.0s						
AKTO				⇑Sn	Sn	18 36 14.6	-8.3
	comp=Z,3.6nm,1.5s						
AKTO	**Aktyubinsk**	11.62	43	P	Pn	18 34 16.1	+2.1
AKTO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AB31	**Akbulak array**	12.03	52	⇑Pn	Pn	18 34 24.9	+5.2
	comp=Z,0.3nm,0.5s,baz=237,slow=14,SNR=5.6						
AB31				⇓Sn	Sn	18 36 28.2	-4.8
	comp=Z,0.7nm,0.5s,baz=241,slow=24,SNR=3.4						
AB31	**Akbulak array**	12.03	52	P	Pn	18 34 24.9	+5.3
AB31				S	Sn	18 36 28.2	-4.8
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AB31				smax	smax		
	comp=N,1.0nm,0.5s						
BRVK	**Borovoye**	19.54	49	⇓*e*P	Pn	18 35 55.9	-0.9
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	**Ala-Archa**	21.28	80	⇓*e*P	P	18 36 15.2	+0.6
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURK	**Kurchatov**	23.96	59	⇑*e*P	P	18 36 43.8	+1.7
KURK				pmax	pmax		
	comp=Z,4.0nm,2.6s						

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*ISCJB **20** 18:33:19.5±0.5, 6°.61S±0°.05×130°.16E±0°.08, h150^{km}, mb3.7/7, Error ellipse: s-maj=11.2km s-min=6.2km az=171.4*

*IDC **20** 18:33:22.2±2.1, 6°.51S×130°.11E, h149^{km}±21^{km}, mb3.5/7, mb1 3.7/12, mb1mx3.5/38, mbtmp4.1/12, Error ellipse: s-maj=34.3km s-min=18.5km az=93.0*

ISC 20 18:33:20.8±0.8**, 6°.58S**±0°.06×**130°.3E**±0°.1**, h150^{km}, n22, σ1^{s}.90**/25**, mb3.6**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	5.76	10	P	Pn	18 34 45.0	+0.7
	5.2nm,0.3s,baz=48,slow=17,SNR=54						
SIJI				S	Sn	18 35 44.7	-5.0
	7.2nm,0.3s,baz=298,slow=21,SNR=4.8						
BATI	**Baumata**	7.45	241	P	Pn	18 35 08.0	+1.1
	18nm,0.3s,baz=89,slow=1.3,SNR=40						
BATI				S	Sn	18 36 27.2	-3.2
	8.2nm,0.3s,baz=200,slow=0.8,SNR=6.2						
FITZ	**Fitzroy Crossi**	12.31	201	P	Pn	18 36 11.3	+0.1
	2.6nm,0.3s,baz=36,slow=12,SNR=67						
FITZ				S	Sn	18 38 16.7	-11
	3.1nm,0.3s,baz=220,slow=22,SNR=9.8						
WRA	**Warramunga Arr**	13.87	164	P	Pn	18 36 32.7	+1.6
	1.0nm,0.3s,baz=344,slow=13,SNR=44						
WRA				S	Sn	18 39 00.4	-4.4
	3.0nm,0.3s,baz=331,slow=23,SNR=14						
ASAR	**Alice Springs**	17.35	169	P	Pn	18 37 17.5	+3.5
	0.4nm,0.3s,baz=343,slow=9.4,SNR=30						
ASAR				S	S	18 40 17.6	-8.7
	0.2nm,0.3s,baz=347,slow=20,SNR=4.6						
CMAR	**Chiang Mai Arr**	39.66	309	P	P	18 40 38.2	-0.1
	0.7nm,0.4s,baz=132,slow=7.0,SNR=7.1						
RAMN	**Ramite**	53.82	310	*e*P	P	18 42 28.8	+0.1
	16nm,0.6s						
JIRN	**Jiri**	54.50	311	*e*P	P	18 42 33.1	-0.7
	2.6nm,0.2s						
GUN	**Gumba**	54.87	311	*e*P	P	18 42 36.1	-0.3
	12nm,0.6s						
PKI	**Pulchoki**	55.05	310	*e*P	P	18 42 37.0	-0.6
	3.3nm,0.6s						
PKIN	**Phulchoki**	55.06	310	*e*P	P	18 42 37.1	-0.5
	3.2nm,0.6s						
KKN	**Kakani**	55.26	310	*e*P	P	18 42 38.4	-0.6
	6.1nm,0.6s						
DMN	**Daman**	55.30	310	*e*P	P	18 42 39.0	-0.3
	3.6nm,0.6s						
KOLN	**Koldanda**	56.53	309	*e*P	P	18 42 47.7	-0.3
	4.9nm,0.6s						
DANN	**Dangsing**	56.70	310	*e*P	P	18 42 49.1	-0.2
	5.1nm,0.7s						
PYUN	**Piuthan**	57.16	309	*e*P	P	18 42 52.8	+0.3
	8.6nm,0.8s						
SONM	**Songino Array**	58.12	341	P	P	18 43 00.5	+1.7
	0.3nm,0.4s,baz=154,slow=6.4,SNR=3.5						
MKAR	**Makanchi Array**	68.01	327	P	P	18 44 05.0	+1.1
	2.6nm,0.5s,baz=114,slow=8.8,SNR=56						
AAK	**Ala-Archa**	70.38	320	P	P	18 44 19.8	+1.0
	0.9nm,0.4s,baz=128,slow=3.3,SNR=4.9						
ZALV	**Zalesovo Beam**	71.32	334	P	P	18 44 23.5	-0.5
	0.5nm,0.5s,baz=108,slow=4.7,SNR=3.2						
KURBB	**Kurchatov Arra**	72.28	328	P	P	18 44 30.5	+0.7
	0.8nm,0.6s,baz=128,slow=5.0,SNR=7.9						
BVAR	**Borovoye Array**	77.84	328	P	P	18 45 02.0	+0.4
	0.5nm,0.7s,baz=106,slow=11,SNR=3.5						

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*MOS **20** 18:35:05.2±0.0, 42°.64N×45°.50E, h19^{km}, MPVA3.3*

TIF 20 18:35:06.4, 42°.68N×45°.43E, h17^{km}±5^{km}, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMGR	**Komgaron**	0.57	313	*e*Pg	Pn	18 35 19.4	-0.3
KMGR				*e*Sg	Sn	18 35 27.6	-1.2
BTLR	**Botlikh**	0.58	91	*e*Pg	Pg	18 35 16.5	-1.4
BTLR				*e*Sg	Sg	18 35 25.7	0.0
DVE	**Vedeno**	0.58	61	*e*Pg	Pg	18 35 17.1	-0.8
DVE				*e*Sg	Sg	18 35 25.5	-0.2
GROC	**Groznyy**	0.59	27	*e*Pg	Pn	18 35 19.3	-0.7
GROC				*e*Sg	Sn	18 35 29.3	0.0
GUDG	**Gudauri**	0.74	254	P	Pb	18 35 21.4	+0.5
GUDG				S	Sn	18 35 32.0	-1.2
GUDG	**Gudauri**	0.74	254	P	Pn	18 35 24.3	+2.0
GUDG				S	Sn	18 35 33.2	0.0
LACR	**Lac**	0.85	281	*e*Pg	Pb	18 35 22.7	-0.1
LACR				*e*Sg	Sn	18 35 37.6	+1.7
XNZR	**Khunzakh**	0.95	98	*e*Pg	Pb	18 35 23.4	-1.0
XNZR				*e*Sg	Sn	18 35 38.6	+0.2
LGD	**Lagodekhi**	1.03	144	P	Pb	18 35 24.6	-1.3
LGD				S	Sn	18 35 41.4	+1.2
LGD	**Lagodekhi**	1.03	144	*e*Pg	Pb	18 35 24.6	-1.3
LGD				*e*Sg	Sn	18 35 41.4	+1.2
TBLG	**Delisi**	1.08	209	P	Pb	18 35 25.6	-1.0
TBLG				S	Sn	18 35 42.9	+1.6
TBLG	**Delisi**	1.08	209	*e*Pg	Pb	18 35 25.6	-1.0
TBLG				*e*Sg	Sn	18 35 42.9	+1.6
DBC	**Dubki**	1.08	71	*e*Pg	Pb	18 35 26.6	-0.1
DBC				*e*Sg	Sn	18 35 42.8	+1.3
KORR	**Kora**	1.08	293	*e*Pg	Pg	18 35 28.9	+1.6
KORR				*e*Sg	Sg	18 35 44.8	+3.3
BTNK	**Botanikuri**	1.10	206	P	Pb	18 35 26.9	-0.1
GNBR	**Gunib**	1.17	104	*e*Pg	Pn	18 35 27.0	-1.0
GNBR				*e*Sg	Sb	18 35 42.6	-0.4
LSNR	**Lesken**	1.32	298	*e*Pg	Pg	18 35 33.0	+1.1
LSNR				*e*Sg	Sg	18 35 50.5	+1.3
DDFL	**Dedoflistskaro**	1.33	157	P	Pg	18 35 32.8	+0.8
DDFL				S	Sg	18 35 50.0	+0.6
PRTR	**Priterechnaya**	1.37	322	*e*Pg	Pg	18 35 33.3	+0.7
PRTR				*e*Sg	Sg	18 35 54.2	+3.7
DIGR	**Digorskoe uzhe**	1.38	280	*e*Pg	Pg	18 35 32.5	-0.5
DIGR				*e*Sg	Sg	18 35 53.1	+2.0
KZRT	**Kazreti**	1.50	211	P	Pb	18 35 33.6	-0.2
KZRT				S	Sg	18 35 54.3	-0.5
TRLG	**Trialeti**	1.51	222	P	Pb	18 35 34.6	+0.6
NEY	**Neytrino**	2.07	287	*e*Pg	Pb	18 35 43.9	+0.3
NEY				*e*Sg	Sg	18 36 13.6	+0.6
AKT	**Akhty**	2.08	124	*i* Pg	Pb	18 35 44.4	+0.5
AKT				*e*Sg	Sb	18 36 11.2	+1.6
PYA1	**Pyatigorsk**	2.20	310	*e*Pn	Pn	18 35 43.8	+1.6
PYA1				*e*Sn	Sb	18 36 12.9	+0.2
SHA1	**Shidzhatmaz**	2.29	299	*e*Pn	Pb	18 35 48.8	+1.4
SHA1				*e*Sn	Sg	18 36 19.3	-0.8
KIV	**Kislovodsk**	2.38	303	*e*Pn	Pb	18 35 50.3	+1.4
KIV				*e*Sn	Sb	18 36 16.2	-1.7

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*TIF **20** 18:35:09.3, 42°.70N×45°.41E, h7^{km}±6^{km}*

*MOS **20** 18:35:10.2±0.0, 42°.60N×45°.52E, h20^{km}, MPVA4.1*

*NORS **20** 18:35:10.8±0.0, 42°.57N×45°.51E, h7^{km}, MPVA4.0*

*DRS **20** 18:35:10.2±0.0, 42°.53N×45°.36E, h15^{km}*

*MOS **20** 18:35:11.5±0.9, 42°.59N×45°.50E, h11^{km}, mb4.1/1, Error ellipse: s-maj=7.1km s-min=5.2km az=33.2*

ISC 20 18:35:10.8±1.1**, 42°.57N**±0°.02×**45°.46E**±0°.01**, h0^{km}**±10^{km}**, n73, σ0^{s}.95**/131**, 5C-5D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh**	0.57	80	⇑*e*PG	Pg	18 35 22.2	+0.5
BTLR				*e*		18 35 30.8	
BTLR				pmax	pmax		
	comp=Z,179nm,0.8s						
BTLR				smax	smax		
	comp=N,207nm,1.1s						
BTLR	**Botlikh**	0.57	80	*e*Pg	Pg	18 35 22.0	+0.3
BTLR				*e*Sg	Sg	18 35 29.6	+0.5
DVE	**Vedeno**	0.62	52	*e*PG	Pg	18 35 22.5	-0.3
DVE				*e*S	Sg	18 35 31.0	+0.1
DVE	**Vedeno**	0.62	52	*e*Pg	Pg	18 35 22.5	-0.3
DVE				*e*Sg	Sg	18 35 30.8	-0.1
KMGR	**Komgaron**	0.65	318	*e*PG	Pb	18 35 24.7	-0.5
KMGR				*e*S	Sn	18 35 36.2	-2.2
KMGR	**Komgaron**	0.65	318	*e*Pg	Pb	18 35 24.6	-0.5
KMGR				*e*Sg	Sb	18 35 35.1	+0.4
GROC	**Groznyy**	0.68	21	*e*PG	Pg	18 35 24.4	+0.6
GROC				*e*S	Sb	18 35 34.3	-1.2
GROC				pmax	pmax		
	comp=Z,32nm,0.6s						
GROC				smax	smax		
	comp=N,251nm,0.3s						
GROC	**Groznyy**	0.68	21	*e*Pg	Pg	18 35 24.4	+0.6
GROC				*e*Sg	Sb	18 35 34.4	-1.1
VLKR	**Vladikavkaz**	0.75	310	*e*PG	Pb	18 35 26.3	-0.4
VLKR				*e*S	Sb	18 35 37.8	+0.3
VLKR	**Vladikavkaz**	0.75	310	*e*Pg	Pb	18 35 26.3	-0.4
VLKR				*e*Pg	Pb	18 35 26.3	-0.4
VLKR				*e*Sg	Sb	18 35 37.6	+0.2
VLKR				*e*Sg	Sb	18 35 37.8	+0.3
LACR	**Lac**	0.89	287	*e*PG	Pg	18 35 28.2	+0.3
LACR				*e*S	Sg	18 35 40.2	+0.7
LACR				pmax	pmax		
	comp=Z,37nm,0.6s						
LACR				smax	smax		
	comp=E,357nm,0.4s						
LACR	**Lac**	0.89	287	*e*Pg	Pg	18 35 27.9	-0.1
LACR				*e*Sg	Sg	18 35 40.2	+0.7
XNZR	**Khunzakh**	0.92	91	*e*PG	Pg	18 35 28.6	+0.2
XNZR				*e*S	Sb	18 35 41.3	-1.3
XNZR	**Khunzakh**	0.92	91	*e*Pg	Pg	18 35 28.7	+0.2
XNZR				*e*Sg	Sb	18 35 41.3	-1.3
LGD	**Lagodekhi**	0.94	141	P	Pb	18 35 29.4	-0.5
LGD				S	Sb	18 35 42.9	0.0
LGD	**Lagodekhi**	0.94	141	*e*PG	Pb	18 35 29.4	-0.5
LGD				*e*S	Sb	18 35 42.9	0.0
LGD	**Lagodekhi**	0.94	141	*e*Pg	Pb	18 35 29.4	-0.5
LGD				*e*Sg	Sb	18 35 42.9	0.0
SEAG	**Tbilisi Sea**	0.94	211	P	Sn	18 35 44.3	-1.1
TBLG	**Delisi**	0.99	213	P	Pg	18 35 29.2	-0.6
TBLG				S	Sn	18 35 46.2	-0.5
TBLG	**Delisi**	0.99	213	*e*PG	Pg	18 35 29.2	-0.6
TBLG				*e*S	Sn	18 35 46.3	-0.5
TBLG	**Delisi**	0.99	213	*e*Pg	Pg	18 35 29.2	-0.6
TBLG				*e*Sg	Sn	18 35 46.2	-0.5
DLMR	**Dylym**	1.00	59	*e*PG	Pg	18 35 30.0	+0.1
DLMR				*e*S	Sg	18 35 43.0	+0.2
DLMR				pmax	pmax		
	comp=Z,121nm,0.1s						
DLMR	**Dylym**	1.00	59	*e*Pg	Pg	18 35 30.0	+0.1
DLMR				*e*Sg	Sg	18 35 43.0	+0.2
UNCR	**Uncukul**	1.00	81	*e*PG	Pg	18 35 29.0	-0.9
UNCR				*e*S	Sb	18 35 43.5	-1.1
UNCR				pmax	pmax		
	comp=Z,205nm,0.3s						
UNCR	**Uncukul**	1.00	81	*e*Pg	Pg	18 35 29.0	-0.9
UNCR				*e*Sg	Sb	18 35 43.5	-1.1
KRNR	**Karanay**	1.10	76	*i* PG	Pg	18 35 31.5	-0.3
KRNR				*e*S	Sg	18 35 46.0	-0.1
KRNR				pmax	pmax		
	comp=Z,31nm,0.2s						
KRNR	**Karanay**	1.10	76	*i* Pg	Pg	18 35 31.5	-0.3
KRNR				*e*Sg	Sg	18 35 46.0	-0.1
DBC	**Dubki**	1.10	66	⇓*e*PG	Pg	18 35 32.0	+0.1
DBC				*e*		18 35 46.4	
DBC	**Dubki**	1.10	66	*e*Pg	Pg	18 35 32.1	+0.1
DBC				*e*Sg	Sb	18 35 48.0	+0.2
GNBR	**Gunib**	1.13	99	⇓*e*PG	Pg	18 35 32.1	-0.2
GNBR				*e*		18 35 47.8	
GNBR				pmax	pmax		
	comp=Z,247nm,0.3s						
GNBR				smax	smax		
	comp=N,243nm,0.3s						
GNBR	**Gunib**	1.13	99	*e*Pg	Pg	18 35 32.2	-0.2
GNBR				*e*Sg	Sb	18 35 48.2	-0.2
KORR	**Kora**	1.15	297	*e*PG	Pn	18 35 33.9	-0.2
KORR				*e*S	Sn	18 35 49.4	-1.1
KORR				pmax	pmax		
	comp=Z,145nm,0.3s						
KORR				smax	smax		
	comp=E,174nm,0.3s						
KORR	**Kora**	1.15	297	*e*Pg	Pn	18 35 34.0	-0.2
KORR				*e*Sg	Sn	18 35 50.4	-0.1
DDFL	**Dedoflistskaro**	1.23	156	P	Pn	18 35 35.5	+0.3
DDFL				S	Sn	18 35 55.7	+3.2
BUJR	**Buynaksk**	1.24	78	*e*PG	Pg	18 35 34.0	-0.6
BUJR				*e*S	Sn	18 35 54.5	+1.6
BUJR				pmax	pmax		
	comp=Z,81nm,0.2s						
BUJR	**Buynaksk**	1.24	78	*e*Pg	Pg	18 35 34.0	-0.6
BUJR				*e*Sg	Sn	18 35 54.5	+1.6
TRKR	**Terskaya**	1.27	335	*e*PG	Pn	18 35 36.1	+0.4
TRKR				*e*S	Sn	18 35 54.2	+0.7
TRKR	**Terskaya**	1.27	335	*e*Pg	Pn	18 35 36.1	+0.4
TRKR				*e*Sg	Sn	18 35 54.2	+0.7
KMKR	**Kumukh**	1.29	109	*e*PG	Pg	18 35 35.5	0.0
KMKR				*e*S	Sn	18 35 53.5	-0.9
KMKR				pmax	pmax		
	comp=Z,38nm,0.2s						
KMKR	**Kumukh**	1.29	109	*e*Pg	Pg	18 35 35.5	0.0
KMKR				*e*Sg	Sn	18 35 53.5	-0.9
STDR	**Stavd-Durt**	1.30	308	*e*PG	Pb	18 35 37.0	+0.9
STDR				*e*S	Sn	18 35 56.7	+2.4
STDR	**Stavd-Durt**	1.30	308	*e*Pg	Pb	18 35 37.0	+0.9
STDR				*e*Sg	Sn	18 35 56.6	+2.4
LSNR	**Lesken**	1.39	301	*e*PG	Pg	18 35 37.9	+0.4
LSNR				*e*S	Sn	18 35 56.9	+0.3
LSNR				pmax	pmax		
	comp=Z,44nm,0.4s						
LSNR				smax	smax		
	comp=N,54nm,0.2s						
LSNR	**Lesken**	1.39	301	*e*Pg	Pg	18 35 38.0	+0.5
LSNR				*e*Sg	Sn	18 35 57.5	+0.9
KZRT	**Kazreti**	1.42	214	P	Pg	18 35 38.5	+0.4
KZRT				S	Sn	18 35 58.5	+1.1
DIGR	**Digorskoe uzhe**	1.42	284	*e*PG	Pn	18 35 37.6	-0.5
DIGR				*e*S	Sn	18 35 57.4	-0.2
DIGR				pmax	pmax		
	comp=Z,121nm,0.4s						
DIGR				smax	smax		
	comp=E,49nm,0.4s						
DIGR	**Digorskoe uzhe**	1.42	284	*e*Pg	Pn	18 35 37.5	-0.6
DIGR				*e*Sg	Sn	18 35 57.4	-0.2
TRLG	**Trialeti**	1.44	225	P	Pg	18 35 38.6	+0.2
TRLG				S	Sn	18 36 00.3	+2.3
PRTR	**Priterechnaya**	1.46	324	*e*PG	Pn	18 35 38.2	-0.2
PRTR				*e*S	Sg	18 35 59.3	+1.6
PRTR	**Priterechnaya**	1.46	324	*e*Pg	Pn	18 35 38.2	-0.2
PRTR				*e*Sg	Sg	18 35 59.3	+1.6
MAK	**Makhachkala**	1.56	75	*e*PG	Pg	18 35 40.6	0.0
MAK				*e*		18 36 02.7	
MAK				pmax	pmax		
	comp=Z,91nm,0.3s						
MAK				smax	smax		
	comp=N,322nm,0.3s						
MAK				smax	smax		
	comp=N,418nm,0.3s						
MAK	**Makhachkala**	1.56	75	*e*Pg	Pg	18 35 41.1	+0.5
MAK				*e*Sg	Sg	18 36 02.6	+1.9
NCK	**Nalchik**	1.65	305	⇑*e*PN	Pb	18 35 41.2	-0.9
NCK	**Nalchik**	1.65	305	*e*Pg	Pb	18 35 41.2	-0.9
NCK				*e*Sg	Sn	18 35 59.3	-3.6
NCK	**Nalchik**	1.65	305	*e*Pg	Pb	18 35 41.2	-0.9
NCK				*e*Sg	Sb	18 36 03.1	-0.3
BGD	**Bogdanovka**	1.91	227	P	Sb	18 36 11.2	+0.3
KBTC	**Kuba-Taba**	1.95	310	*e*PN	Pb	18 35 47.3	+0.1
KBTC	**Kuba-Taba**	1.95	310	*e*Pg	Pb	18 35 47.4	+0.1
KBTC				*e*Sg	Sb	18 36 12.1	0.0
AKT	**Akhty**	2.01	122	⇑*e*PN	Pg	18 35 49.7	+0.4
AKT				*e*		18 36 14.3	
AKT				pmax	pmax		
	comp=Z,27nm,0.3s						
AKT				smax	smax		
	comp=N,46nm,0.9s						
AKT	**Akhty**	2.01	122	*i* Pg	Pb	18 35 47.1	-1.2
AKT				*e*Sg	Sn	18 36 12.2	+0.2
NEY	**Neytrino**	2.12	290	⇑*e*PN	Pn	18 35 48.5	+0.8
NEY	**Neytrino**	2.12	290	*e*Pg	Pb	18 35 49.0	-1.2
NEY				*e*Sg	Sb	18 36 17.8	+0.6
KSMR	**Kasumkent**	2.21	115	*e*PN	Pg	18 35 59.0	+5.9
PYA1	**Pyatigorsk**	2.28	312	⇓*e*PN	Pn	18 35 48.6	-1.1
PYA1	**Pyatigorsk**	2.28	312	*e*Pn	Pn	18 35 50.3	+0.6
PYA1				*e*Sn	Sb	18 36 20.4	-1.1
SHA1	**Shidzhatmaz**	2.36	301	*e*PN	Pb	18 35 53.4	-0.9
SHA1				*e*S	Sb	18 36 23.6	-0.4
SHA1	**Shidzhatmaz**	2.36	301	*e*Pn	Pn	18 35 51.0	0.0
SHA1				*e*Pn	Pb	18 35 51.5	-2.8
SHA1				*e*Sn	Sb	18 36 22.0	-2.0
KIV	**Kislovodsk**	2.45	305	*e*PN	Pn	18 35 51.6	-0.5
KIV	**Kislovodsk**	2.45	305	*e*Pn	Pg	18 35 56.9	-0.9
KIV				*e*Sn	Sb	18 36 25.4	-1.2
GOF	**Gofitskoye**	3.04	326	*e*PN	Pg	18 36 14.1	+5.1
GOF				*e*S	Sg	18 36 47.6	-0.8
GOF				pmax	pmax		
	comp=Z,20nm,0.6s						
GOF				smax	smax		
	comp=E,20nm,0.5s						
ARU	**Arti**	16.23	27	⇑*e*P	Pn	18 39 00.9	+0.9
BRVK	**Borovoye**	19.60	49	⇓*e*P	Pn	18 39 40.8	-0.8
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
AAK	**Ala-Archa**	21.33	80	⇓*e*P	P	18 40 00.4	+1.0
AAK				pmax	pmax		
	comp=Z,2.0nm,1.9s						

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*ISCJB **20** 18:36:54.6±0.8, 41°.68N±0°.06×42°.15E±0°.04, h13^{km}±5^{km}, Error ellipse: s-maj=9.6km s-min=4.5km az=168.1*

*DDA **20** 18:36:54.5, 41°.64N×42°.18E, h7^{km}±1^{km}, ML3.0*

*ISK **20** 18:36:54.5, 41°.64N×42°.15E, h14^{km}, ML2.7/6*

*TIF **20** 18:36:54.2, 41°.64N×42°.17E, h10^{km}±1^{km}*

ISC 20 18:36:54.5±1.1**, 41°.67N**±0°.05×**42°.17E**±0°.03**, h17^{km}**±9^{km}**, n18, σ0^{s}.29**/29**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	**Batumi**	0.36	259	PG	Pg	18 37 01.9	-0.1
BATM				SG	Sg	18 37 07.4	+0.3
BATM	**Batumi**	0.36	259	P	Pg	18 37 01.9	-0.1
BATM				S	Sg	18 37 07.4	+0.3
EPOS	**Posof**	0.46	112	*i* P	Pg	18 37 03.8	0.0
EPOS				*i* S	Sb	18 37 10.5	-0.2
BCA	**Borcka**	0.47	241	PG	Pg	18 37 03.6	-0.3
BCA				SG	Sg	18 37 10.4	+0.1
DBOC	**Borcka**	0.50	229	*i* P	Pg	18 37 04.4	-0.1
DBOC				*i* S	Sg	18 37 11.2	0.0
DBOC				IAML_P			
	comp=Z,6μm,0.1s						
ARTV	**Artvin**	0.52	200	*i* P	Pg	18 37 05.1	+0.1
ARTV				*i* S	Sb	18 37 12.6	0.0
ARTV				IAML_P			
	comp=Z,16μm,0.1s						
DAGI	**Agillar**	0.62	198	*i* P	Pg	18 37 06.6	-0.3
DAGI				*i* S	Sb	18 37 15.7	+0.2
DAGI				IAML_P			
	comp=Z,755nm,0.1s						
DBAD	**Bademkaya**	0.74	209	*i* P	Pb	18 37 08.8	-0.3
DBAD				*i* S	Sg	18 37 18.3	-0.7
DDEM	**Demirkent**	0.84	202	*i* P	Pg	18 37 11.0	+0.1
DDEM				*i* S	Sb	18 37 21.4	-0.3
DDEM				IAML_P			
	comp=Z,2μm,0.2s						
SENK	**Senkaya-Erzuru**	1.12	173	PN	Pn	18 37 15.9	+0.3
SENK				SN	Sg	18 37 31.1	+0.2
BGD	**Bogdanovka**	1.15	110	P	Sn	18 37 31.5	0.0
CHOM	**Cayeli-Rize**	1.20	242	PN	Pb	18 37 16.9	+0.1
CHAY	**Cayeli-Rize**	1.23	242	PN	Pb	18 37 17.4	+0.1
TRLG	**Trialeti**	1.46	95	P	Pg	18 37 22.3	-0.3
TRLG				S	Sb	18 37 39.8	+0.2
KOPR	**Koprukoy-ERZUR**	1.70	188	PN	Pn	18 37 23.7	+0.2
MACK	**Trabzon**	1.95	249	*i* P	Pn	18 37 26.3	-0.5
BAYT	**Aydıntepe-Bayb**	2.00	231	PN	Pn	18 37 28.2	+0.6
BAYB	**BAYBURT**	2.02	226	*i* P	Pb	18 37 31.0	+0.1
BAYB				IAML_P			
	comp=Z,568nm,0.1s						

IDC 20 18:37:47.1±2.0**, 0°.62S×133°.26E, h0^{km}, mb3.6**/2**, mb1 3.7**/4**, mb1mx3.4**/33**, mbtmp3.5**/4**, ML3.6**/1**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.7**/26**, Error ellipse: s-maj=36.9km s-min=26.4km az=53.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	2.01	263	Pn	Pn	18 38 22.4	+0.1
	24nm,0.3s,baz=159,slow=22,SNR=71						
SIJI				Sn	Sn	18 38 48.9	+0.7
	34nm,0.3s,baz=304,slow=23,SNR=14						
WRA	**Warramunga Arr**	19.24	177	P	P	18 42 12.9	-0.2
	baz=356,slow=11,SNR=2.6						
ASAR	**Alice Springs**	22.92	178	P	P	18 42 53.1	+0.2
	1.9nm,0.7s,baz=6.3,slow=9.3,SNR=5.6						
MJAR	**Matsushiro Arr**	37.25	7	LR	LR	18 58 59.8	
	comp=Z,50nm,18.7s,baz=10.0,slow=34						
KSRS	**Korea Array**	38.20	353	LR	LR	18 58 47.8	
	comp=Z,32nm,20.9s,baz=194,slow=33						
MKAR	**Makanchi Array**	64.85	324	P	P	18 48 28.1	0.0
	0.4nm,0.6s,baz=126,slow=7.8,SNR=4.5						

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*DRS **20** 18:37:56.4±0.0, 42°.61N×45°.28E, h16^{km}*

*NORS **20** 18:37:56.5±0.0, 42°.60N×45°.53E, h12^{km}, MPVA4.1*

*TIF **20** 18:37:57.3, 42°.64N×45°.50E, h14^{km}±2^{km}*

*MOS **20** 18:37:57.2±0.0, 42°.60N×45°.52E, h18^{km}, MPVA4.1*

*AZER **20** 18:37:59.6±1.9, 42°.38N×45°.41E, h10^{km}, ml3.2/18, Error ellipse: s-maj=3.1km s-min=1.5km az=335.0*

*MOS **20** 18:37:59.1±0.8, 42°.65N×45°.52E, h14^{km}, mb4.0/1, Error ellipse: s-maj=6.6km s-min=4.5km az=38.1*

*ISK **20** 18:38:00.8, 42°.60N×45°.10E, h5^{km}, ML3.1/6*

ISC 20 18:37:58.2±1.0**, 42°.60N**±0°.01×**45°.50E**±0°.01**, h8^{km}**±8^{km}**, n106, σ1^{s}.18**/180**, 22C-16D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh**	0.54	83	⇑*e*PG	Pg	18 38 08.5	-0.1
BTLR				pmax	pmax		
	comp=Z,723nm,0.6s						
BTLR	**Botlikh**	0.54	83	*e*Pg	Pg	18 38 08.6	-0.1
BTLR				*e*Sg	Sb	18 38 16.6	-1.3
DVE	**Vedeno**	0.58	52	⇓*i*PG	Pg	18 38 09.4	-0.1
DVE				*e*S	Sg	18 38 17.8	+0.6
DVE	**Vedeno**	0.58	52	*i* Pg	Pg	18 38 09.2	-0.3
DVE				*e*Sg	Sg	18 38 17.8	+0.6
GROC	**Groznyy**	0.64	20	⇓*i*PG	Pb	18 38 11.2	-0.5
GROC				*e*		18 38 19.6	
GROC				pmax	pmax		
	comp=Z,317nm,0.3s						
GROC				smax	smax		
	comp=E,1μm,0.4s						
GROC				smax	smax		
	comp=E,933nm,0.4s						
GROC	**Groznyy**	0.64	20	*i* Pg	Pb	18 38 11.3	-0.4
GROC				*e*Sg	Sb	18 38 21.6	+0.8
KMGR	**Komgaron**	0.66	315	*e*PG	Pb	18 38 11.4	-0.5
KMGR				*e*S	Sn	18 38 23.1	-1.3
KMGR	**Komgaron**	0.66	315	*e*Pg	Pb	18 38 11.3	-0.7
KMGR				*e*Sg	Sn	18 38 23.1	-1.3
VLKR	**Vladikavkaz**	0.75	307	*e*PG	Pb	18 38 13.5	-0.1
VLKR				*e*S	Sn	18 38 24.9	-2.0
VLKR	**Vladikavkaz**	0.75	307	*e*Pg	Pb	18 38 13.5	-0.1
VLKR				*e*Pg	Pb	18 38 13.6	-0.1
VLKR				*e*Sg	Sn	18 38 24.8	-2.0
VLKR				*e*Sg	Sn	18 38 24.9	-2.0
GUDG	**Gudauri**	0.77	260	P	Pb	18 38 13.4	-0.5
GUDG				S	Sg	18 38 23.2	+0.2
XNZR	**Khunzakh**	0.89	93	⇑*e*PG	Pg	18 38 15.5	+0.1
XNZR	**Khunzakh**	0.89	93	*e*Pg	Pb	18 38 15.6	-0.4

LACR	**Lac**	0.92	285	*e*PG	Pg	18 38 14.9	-0.9
LACR	**Lac**	0.92	285	*e*Pg	Pg	18 38 14.6	-1.2
LGD	**Lagodekhi**	0.94	144	P	Pg	18 38 16.3	+0.1
LGD	**Lagodekhi**	0.94	144	*e*Pg	Pg	18 38 16.3	+0.1
DLMR	**Dylym**	0.96	60	*e*PG	Pg	18 38 16.3	-0.3
DLMR				*e*S	Sb	18 38 30.0	+0.1
DLMR				pmax	pmax		
	comp=Z,86nm,0.2s						
DLMR	**Dylym**	0.96	60	*e*Pg	Pg	18 38 16.3	-0.3
DLMR				*e*Sg	Sb	18 38 30.0	+0.1
UNCR	**Uncukul**	0.96	83	⇓*i*PG	Pg	18 38 16.5	-0.2
UNCR				*e*S	Sb	18 38 29.5	-0.6
UNCR				pmax	pmax		
	comp=Z,428nm,0.2s						
UNCR	**Uncukul**	0.96	83	*i* Pg	Pg	18 38 16.5	-0.2
UNCR				*e*Sg	Sb	18 38 29.5	-0.6
SEAG	**Tbilisi Sea**	0.98	212	P	Pn	18 38 17.6	-0.7
SEAG				S	Sb	18 38 31.0	+0.5
TBLG	**Delisi**	1.03	213	PG	Pn	18 38 18.6	-0.5
TBLG	**Delisi**	1.03	213	P	Pn	18 38 18.5	-0.5
TBLG				S	Sn	18 38 33.0	-0.7
TBLG	**Delisi**	1.03	213	*e*PG	Pn	18 38 18.5	-0.5
TBLG				*e*S	Sn	18 38 33.0	-0.7
TBLG	**Delisi**	1.03	213	*e*Pg	Pn	18 38 18.5	-0.5
TBLG				*e*Sg	Sn	18 38 33.0	-0.7
BTKR	**Batakoyurt**	1.05	318	*e*PG	Pn	18 38 19.3	+0.1
BTKR				*e*S	Sn	18 38 35.5	+1.5
BTKR	**Batakoyurt**	1.05	318	*e*Pg	Pn	18 38 19.3	+0.1
BTKR				*e*Sg	Sn	18 38 35.5	+1.5
BTNK	**Botanikuri**	1.05	210	P	Pn	18 38 18.7	-0.6
BTNK				S	Sg	18 38 32.0	0.0
KRNR	**Karanay**	1.06	77	⇑*i*PG	Pg	18 38 18.0	-0.6
KRNR				*i* S	Sn	18 38 33.5	-1.0
KRNR				pmax	pmax		
	comp=Z,335nm,0.4s						
KRNR	**Karanay**	1.06	77	*i* Pg	Pg	18 38 18.0	-0.6
KRNR				*i* Sg	Sn	18 38 33.5	-1.0
DBC	**Dubki**	1.07	66	⇑*e*PG	Pn	18 38 18.9	-0.6
DBC	**Dubki**	1.07	66	*e*Pg	Pg	18 38 18.3	-0.4
DBC				*e*Sg	Sn	18 38 33.4	-1.2
GNBR	**Gunib**	1.10	100	⇓*e*PG	Pb	18 38 19.2	-0.4
GNBR				pmax	pmax		
	comp=Z,852nm,0.4s						
GNBR	**Gunib**	1.10	100	*i* Pg	Pg	18 38 19.3	0.0
GNBR				*e*Sg	Sb	18 38 33.8	-0.3
KORR	**Kora**	1.16	295	*e*PG	Pn	18 38 20.7	-0.1
KORR				*e*S	Sn	18 38 37.7	+0.8
KORR	**Kora**	1.16	295	*e*Pg	Pn	18 38 20.7	-0.1
KORR				*e*Sg	Sn	18 38 37.6	+0.8
BUJR	**Buynaksk**	1.21	79	*i* PG	Pg	18 38 21.5	+0.1
BUJR				*e*S	Sn	18 38 40.0	+2.0
BUJR				pmax	pmax		
	comp=Z,274nm,0.3s						
BUJR	**Buynaksk**	1.21	79	*i* Pg	Pg	18 38 21.5	+0.1
BUJR				*e*Sg	Sn	18 38 40.0	+2.0
DDFL	**Dedoflistskaro**	1.24	158	P	Pg	18 38 24.7	+2.8
DDFL				S	Sn	18 38 46.5	+7.7
TRKR	**Terskaya**	1.26	334	*e*PG	Pg	18 38 22.9	+0.6
TRKR				*e*S	Sn	18 38 40.8	+1.6
TRKR	**Terskaya**	1.26	334	*e*Pg	Pg	18 38 22.9	+0.6
TRKR				*e*Sg	Sn	18 38 40.8	+1.6
ZKTA	**Zakatala**	1.27	139	PG	Pg	18 38 22.6	+0.1
ZKTA	**Zakatala**	1.27	139	P	Pg	18 38 22.7	+0.1
	SNR=33						
ZKTA				⇑S	Sn	18 38 40.0	+0.4
KMKR	**Kumukh**	1.27	111	PG	Pn	18 38 22.0	-0.5
KMKR				*e*S	Sn	18 38 40.5	+0.6
KMKR				pmax	pmax		
	comp=Z,117nm,0.2s						
KMKR	**Kumukh**	1.27	111	*e*Pg	Pn	18 38 22.0	-0.5
KMKR				*e*Sg	Sn	18 38 40.5	+0.6
STDR	**Stavd-Durt**	1.31	307	*e*PG	Pg	18 38 23.5	+0.2
STDR				*e*S	Sg	18 38 42.7	+2.5
STDR	**Stavd-Durt**	1.31	307	*e*Pg	Pg	18 38 23.5	+0.2
STDR				*e*Sg	Sg	18 38 42.7	+2.5
LSNR	**Lesken**	1.41	300	*e*PG	Pg	18 38 24.9	-0.2
LSNR				*e*S	Sg	18 38 45.3	+1.9
LSNR	**Lesken**	1.41	300	*e*Pg	Pg	18 38 24.9	-0.2
LSNR				*e*Sg	Sg	18 38 45.3	+1.9
DIGR	**Digorskoe uzhe**	1.45	283	*e*PG	Pn	18 38 24.5	-0.4
DIGR				*e*S	Sg	18 38 44.8	+0.1
DIGR	**Digorskoe uzhe**	1.45	283	*e*Pg	Pn	18 38 24.5	-0.4
DIGR				*e*Sg	Sg	18 38 44.8	+0.1
PRTR	**Priterechnaya**	1.46	323	*e*PG	Pb	18 38 25.0	-0.6
PRTR				*e*S	Sg	18 38 46.1	+1.0
PRTR	**Priterechnaya**	1.46	323	*e*Pg	Pb	18 38 25.0	-0.6
PRTR				*e*Sg	Sg	18 38 46.1	+1.0
KZRT	**Kazreti**	1.46	215	P	Pb	18 38 25.5	-0.2
KZRT				S	Sg	18 38 45.5	+0.3
TRLG	**Trialeti**	1.48	225	P	Pb	18 38 26.2	+0.1
TRLG				S	Sg	18 38 47.0	+1.1
MAK	**Makhachkala**	1.52	75*c*	*i*PG	Pg	18 38 27.7	+0.4
MAK				*e*		18 38 49.5	
MAK				pmax	pmax		
	comp=Z,123nm,0.5s						
MAK				smax	smax		
	comp=N,698nm,0.4s						
MAK				smax	smax		
	comp=N,748nm,0.4s						
MAK	**Makhachkala**	1.52	75	*e*Pg	Pg	18 38 27.7	+0.4
MAK				*e*Sg	Sg	18 38 47.7	+0.7
QZX	**Qazax, Azerbai**	1.54	184	P	Pb	18 38 26.7	-0.3
	SNR=7.2						
QZX				⇑S	Sg	18 38 49.2	+1.5
SGKR	**Sergokala**	1.60	94	*e*PG	Pb	18 38 28.0	0.0
SGKR				*i* S	Sg	18 38 50.0	+0.3
SGKR	**Sergokala**	1.60	94	*e*Pg	Pb	18 38 28.0	0.0
SGKR				*i* Sg	Sg	18 38 50.0	+0.3
NCK	**Nalchik**	1.66	303	*e*PN	Pg	18 38 29.7	-0.3
NCK				*e*S	Sg	18 38 51.9	+0.3
NCK	**Nalchik**	1.66	303	*e*Pg	Pg	18 38 29.7	-0.3
NCK				*e*Sg	Sg	18 38 51.9	+0.3
SEKA	**Sheki**	1.88	137	PN	Pg	18 38 34.1	-0.1
SEKA	**Sheki**	1.88	137	P	Pg	18 38 34.2	-0.1
	SNR=30						
SEKA				⇓S	Sg	18 38 59.9	+1.3
GDB	**GEDABAY**	1.88	174	P	Pb	18 38 32.4	-0.6
	SNR=14						
GDB				⇓S	Sb	18 38 56.9	+0.2
BGD	**Bogdanovka**	1.95	227	P	Pb	18 38 33.2	-0.9
BGD				S	Sb	18 38 57.5	-1.0
KBTC	**Kuba-Taba**	1.96	309	*e*PN	Pb	18 38 33.9	-0.2
KBTC				*e*S	Sg	18 38 59.4	-1.6
KBTC	**Kuba-Taba**	1.96	309	*e*Pg	Pb	18 38 33.9	-0.2
KBTC				*e*Sg	Sg	18 38 59.4	-1.6
AKT	**Akhty**	2.00	123	*e*PN	Pb	18 38 34.4	-0.5
AKT	**Akhty**	2.00	123	*e*Pg	Pb	18 38 34.5	-0.5
AKT				*e*Sg	Sb	18 38 59.2	-0.8
GANJ	**Ganja**	2.04	162	PN	Pb	18 38 34.7	-0.9
GANJ	**Ganja**	2.04	162	P	Pb	18 38 34.8	-0.9
	SNR=13						
GANJ				⇑S	Sb	18 39 02.4	+1.2
NEY	**Neytrino**	2.14	289	*e*PN	Pb	18 38 36.4	-0.9
NEY				*e*S	Sb	18 39 04.9	+0.7
NEY	**Neytrino**	2.14	289	*e*Pg	Pb	18 38 36.4	-0.9
NEY				*e*Sg	Sb	18 39 04.9	+0.7
DRN	**Derbent**	2.17	104	⇑*e*PN	Pg	18 38 39.3	-0.5
DRN				pmax	pmax		
	comp=Z,113nm,0.7s						
KSMR	**Kasumkent**	2.19	116	*e*PN	Pg	18 38 40.0	-0.2
KSMR						18 39 15.0	
KSMR				pmax	pmax		
	comp=Z,117nm,0.3s						
QSAR	**Qusar**	2.32	117	⇑P	Pb	18 38 39.8	-0.6
	SNR=4.5						
QSAR				⇑S	Sb	18 39 09.7	+0.5
SHA1	**Shidzhatmaz**	2.37	300	*e*PN	Pn	18 38 38.5	+0.9
SHA1				*e*S	Sb	18 39 10.8	-0.1
SHA1	**Shidzhatmaz**	2.37	300	*e*Pn	Pn	18 38 38.5	+0.9
SHA1				*e*Sn	Sb	18 39 10.8	-0.1
QBL	**Gabala**	2.40	133	P	Pb	18 38 41.9	+0.2
	SNR=7.7						
QBL				⇑S	Sb	18 39 10.3	-1.3
XNQ	**Khinaliq**	2.43	125	⇑P	Pb	18 38 41.7	-0.6
XNQ				⇑S	Sb	18 39 12.3	-0.2
KIV	**Kislovodsk**	2.46	304	PN	Pn	18 38 39.1	+0.3
KIV	**Kislovodsk**	2.46	304	*i* PN	Pn	18 38 39.3	+0.6
KIV	**Kislovodsk**	2.46	304	*e*Pn	Pn	18 38 39.4	+0.6
GNI	**Garni**	2.51	193	PN	Pb	18 38 42.6	-1.0
GNI	**Garni**	2.51	193	*i* PN	Pb	18 38 43.4	-0.2
GNI	**Garni**	2.51	193	*e*Pn	Pb	18 38 43.4	-0.2
QUBA	**Quba, Azerbaij**	2.55	118	⇓P	Pb	18 38 43.4	-0.8
QUBA				⇓S	Sb	18 39 16.5	+0.7
IML	**Ismayilli**	2.70	131	⇓P	Pb	18 38 45.9	-0.9
IML				⇑S	Sb	18 39 19.1	-0.9
TASB	**TASBURUN-IGDIR**	2.78	200	PN	Pb	18 38 46.3	-1.8
HYR	**Heyderabad**	2.92	190	⇑P	Pb	18 38 48.1	-2.4
HYR				⇑S	Sn	18 39 22.0	+1.8
PQL	**Pirkuli**	2.94	127	⇓P	Pb	18 38 49.5	-1.4
PQL				⇓S	Sb	18 39 26.7	-0.3
SIZA	**Siyzn**	2.96	120	⇓P	Pb	18 38 49.6	-1.6
KDMR	**Kurdemir**	3.00	137	⇑S	Sb	18 39 27.1	-1.4
GOF	**Gofitskoye**	3.04	325	*e*PN	Pg	18 38 57.6	+1.3
GOF				*e*S	Sg	18 39 34.4	-1.3
GOF				pmax	pmax		
	comp=Z,30nm,0.7s						
GOF				smax	smax		
	comp=E,40nm,0.4s						
ATGJ	**Altiaghaj**	3.10	123	⇑P	Pb	18 38 51.9	-1.8
ATGJ				⇓S	Sb	18 39 32.1	+0.4
BCA	**Borcka**	3.11	250	PN	Pn	18 38 48.4	+0.8
SENK	**Senkaya-Erzuru**	3.12	230	PN	Pn	18 38 48.8	+0.9
SBZ	**Shahbuz**	3.20	179	⇑P	Pb	18 38 52.7	-2.6
SBZ				⇓S	Sb	18 39 30.9	-3.6
GBS	**Qobustan**	3.30	127	⇑P	Pb	18 38 54.6	-2.5
GBS				⇓S	Sb	18 39 37.3	-0.1
AGRB	**Hanur-Agry**	3.56	213	PN	Pn	18 38 56.2	+2.2
ORD	**Ordubad**	3.68	174	⇓P	Pb	18 38 59.9	-3.7
ARU	**Arti**	16.19	27	*i* P	Pn	18 41 46.7	+0.8
ARU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BRVK	**Borovoye**	19.56	49	*e*P	Pn	18 42 27.5	0.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
AAK	**Ala-Archa**	21.30	80	⇑*i*P	P	18 42 44.6	-0.8

*NORS **20** 18:38:09.6±0.0, 42°.58N×45°.51E, h14^{km}, MPVA4.5*
*MOS **20** 18:38:10.5±0.0, 42°.60N×45°.53E, h20^{km}, MPVA4.5*
*TIF **20** 18:38:10.8, 42°.68N×45°.50E, h22^{km}*
*MOS **20** 18:38:11.6±1.1, 42°.66N×45°.58E, h10^{km}, mb4.0/3, Error ellipse: s-maj=7.4km s-min=5.2km az=40.0*
*ISCJB **20** 18:38:12.8±0.3, 42°.58N±0°.02×45°.56E±0°.02, h17^{km}±4^{km}, mb3.4/3, Error ellipse: s-maj=3.8km s-min=2.6km az=13.2*
ISC 20 18:38:11.6±1.0, **42°.58N**±0°.02×**45°.50E**±0°.01, **h5**^{km}±8^{km}, **n75, σ0^{s}.92**/123, **mb3.5**/3, **8C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	**Botlikh**	0.54	81	*e*PG	Pg	18 38 22.0	0.0
BTLR				*e*S	Sg	18 38 29.8	+0.8
BTLR	**Botlikh**	0.54	81	*e*Pg	Pg	18 38 22.0	0.0
BTLR				*e*Sg	Sg	18 38 29.8	+0.8
DVE	**Vedeno**	0.59	50	*e*PG	Pg	18 38 22.4	-0.6
DVE				*e*S	Sg	18 38 30.8	+0.1
DVE	**Vedeno**	0.59	50	*e*Pg	Pg	18 38 22.4	-0.6
DVE				*e*Sg	Sg	18 38 30.8	+0.1
GROC	**Groznyy**	0.66	19	*e*PG	Pg	18 38 24.3	+0.1
GROC				*e*		18 38 32.5	
GROC				pmax	pmax		
	comp=Z,682nm,0.3s						
GROC				smax	smax		
	comp=E,2μm,0.4s						
GROC				smax	smax		
	comp=E,2μm,0.4s						
GROC	**Groznyy**	0.66	19	*e*Pg	Pg	18 38 24.4	+0.1
GROC				*e*Sg	Sb	18 38 34.8	-0.2
KMGR	**Komgaron**	0.67	316	*e*PG	Pg	18 38 24.0	-0.4
KMGR				*e*S	Sb	18 38 35.7	+0.4
KMGR	**Komgaron**	0.67	316	*e*Pg	Pg	18 38 24.0	-0.4
KMGR				*e*Sg	Sb	18 38 35.6	+0.2
VLKR	**Vladikavkaz**	0.77	308	*e*PG	Pg	18 38 26.5	+0.2
VLKR				*e*S	Sb	18 38 37.5	-0.6
VLKR	**Vladikavkaz**	0.77	308	*e*Pg	Pg	18 38 26.2	-0.1
VLKR				*e*Pg	Pb	18 38 26.9	-0.5
VLKR				*e*Sg	Sb	18 38 37.5	-0.6
VLKR				*e*Sg	Sg	18 38 38.2	+1.9
GUDG	**Gudauri**	0.77	262	P	Pg	18 38 26.3	-0.1
GUDG				S	Sg	18 38 36.2	-0.1
XNZR	**Khunzakh**	0.89	92	*e*PG	Pg	18 38 28.6	-0.1
XNZR				*e*S	Sg	18 38 40.8	+0.6
XNZR	**Khunzakh**	0.89	92	*e*Pg	Pg	18 38 28.4	-0.3
XNZR				*e*Sg	Sg	18 38 40.6	+0.4
XNZR	**Khunzakh**	0.89	92	*e*Sg	Pg	18 38 28.1	-0.5
LACR	**Lac**	0.92	286	*i* PG	Pg	18 38 28.6	-0.7
LACR				*e*S	Sb	18 38 42.1	-0.6
LACR				pmax	pmax		
	comp=Z,1μm,0.3s						
LACR				smax	smax		
	comp=N,1μm,0.4s						
LACR	**Lac**	0.92	286	*e*Pg	Pg	18 38 28.4	-0.9
LACR				*e*Sg	Sg	18 38 40.3	-1.0
LACR	**Lac**	0.92	286	*e*S	Pg	18 38 28.4	-0.9
LACR	**Lac**	0.92	286	*e*Sg	Pg	18 38 28.4	-0.9
LGD	**Lagodekhi**	0.93	143	P	Pb	18 38 30.4	+0.2
LGD	**Lagodekhi**	0.93	143	*e*Pg	Pb	18 38 30.4	+0.2
LGD	**Lagodekhi**	0.93	143	S	Pb	18 38 30.3	+0.2
LGD	**Lagodekhi**	0.93	143	*e*Sg	Pb	18 38 30.3	+0.2
TBLG	**Delisi**	1.02	214	P	Pb	18 38 32.0	+0.2
TBLG				S	Sb	18 38 46.4	+0.9
TBLG	**Delisi**	1.02	214	*e*PG	Pb	18 38 32.0	+0.2
TBLG				*e*S	Sb	18 38 46.4	+0.9
TBLG	**Delisi**	1.02	214	*e*Pg	Pb	18 38 32.0	+0.2
TBLG				*e*Sg	Sb	18 38 46.4	+0.9
TBLG	**Delisi**	1.02	214	SG	Pb	18 38 31.6	-0.1
BTKR	**Batakoyurt**	1.06	319	*e*PG	Pb	18 38 32.7	+0.3
BTKR				*e*S	Sn	18 38 48.1	-0.1
BTKR	**Batakoyurt**	1.06	319	*e*Pg	Pb	18 38 32.7	+0.3
BTKR				*e*Sg	Sn	18 38 48.1	-0.1
DBC	**Dubki**	1.07	65	*e*PG	Pb	18 38 32.7	+0.1
DBC				*e*S	Sn	18 38 48.3	-0.3
DBC	**Dubki**	1.07	65	*e*Pg	Pb	18 38 32.7	+0.1
DBC				*e*Sg	Sn	18 38 48.5	-0.1
GNBR	**Gunib**	1.10	100	⇓*i*PG	Pg	18 38 32.5	-0.1
GNBR				*e*S	Sb	18 38 47.6	-0.1
GNBR	**Gunib**	1.10	100	*i* Pg	Pg	18 38 32.5	-0.1
GNBR				*e*Sg	Sb	18 38 47.6	-0.1
KORR	**Kora**	1.17	296	*e*PG	Pg	18 38 34.0	0.0
KORR				*e*S	Sn	18 38 50.8	-0.2
KORR	**Kora**	1.17	296	*e*Pg	Pg	18 38 34.0	0.0
KORR				*e*Sg	Sn	18 38 50.8	-0.2
TRKR	**Terskaya**	1.27	334	*e*PG	Pb	18 38 36.0	0.0
TRKR				*e*S	Sn	18 38 54.0	+0.5
TRKR	**Terskaya**	1.27	334	*e*Pg	Pb	18 38 36.0	0.0
TRKR				*e*Sg	Sn	18 38 54.0	+0.5
STDR	**Stavd-Durt**	1.32	307	*e*PG	Pn	18 38 36.6	0.0
STDR				*e*S	Sn	18 38 55.2	+0.6
STDR	**Stavd-Durt**	1.32	307	*e*Pg	Pn	18 38 36.6	0.0
STDR				*e*Sg	Sn	18 38 55.2	+0.6
LSNR	**Lesken**	1.42	300	*e*PG	Pb	18 38 38.3	-0.2
LSNR				*e*S	Sg	18 38 58.4	+1.3
LSNR	**Lesken**	1.42	300	*e*Pg	Pb	18 38 38.3	-0.2
LSNR				*e*Sg	Sg	18 38 58.4	+1.3
KZRT	**Kazreti**	1.45	215	P	Pn	18 38 38.8	+0.3
KZRT				S	Sg	18 38 58.4	+0.3
DIGR	**Digorskoe uzhe**	1.45	283	*e*PG	Pn	18 38 37.6	-1.0
DIGR				*e*S	Sb	18 38 57.4	-0.6
DIGR	**Digorskoe uzhe**	1.45	283	*e*Pg	Pn	18 38 37.6	-1.0
DIGR				*e*Sg	Sb	18 38 57.4	-0.6
PRTR	**Priterechnaya**	1.47	323	*e*PG	Pn	18 38 38.2	-0.5
PRTR				*e*S	Sg	18 38 59.0	+0.1
PRTR	**Priterechnaya**	1.47	323	*e*Pg	Pn	18 38 38.2	-0.5
PRTR				*e*Sg	Sg	18 38 59.0	+0.1
TRLG	**Trialeti**	1.47	226	P	Pn	18 38 39.1	+0.2
TRLG				S	Sg	18 38 59.6	+0.7
MAK	**Makhachkala**	1.52	75	*e*PG	Pb	18 38 40.1	-0.2
MAK				*e*		18 39 03.2	
MAK				pmax	pmax		
	comp=Z,252nm,0.3s						
MAK				smax	smax		
	comp=N,1μm,0.5s						
MAK				smax	smax		
	comp=N,2μm,0.5s						
MAK	**Makhachkala**	1.52	75	*e*Pg	Pg	18 38 40.6	-0.2
MAK				*e*Sg	Sg	18 39 03.2	+2.7
NCK	**Nalchik**	1.67	304	*de*PN	Pg	18 38 44.0	+0.4
NCK	**Nalchik**	1.67	304	*e*Pg	Pn	18 38 42.1	+0.6
NCK				*e*Sg	Sg	18 39 05.2	0.0
KBTC	**Kuba-Taba**	1.97	310	*e*PN	Pn	18 38 46.1	+0.5
KBTC	**Kuba-Taba**	1.97	310	*e*Pg	Pn	18 38 46.1	+0.5
KBTC				*e*Sg	Sb	18 39 12.5	-0.2
AKT	**Akhty**	1.99	123	*e*PN	Pb	18 38 48.0	-0.3
AKT	**Akhty**	1.99	123	*e*Pg	Pb	18 38 48.0	-0.3
AKT				*e*Sg	Sn	18 39 12.3	+1.0
NEY	**Neytrino**	2.15	289	*de*PN	Pb	18 38 50.1	-1.0
NEY	**Neytrino**	2.15	289	*e*Pg	Pn	18 38 49.5	+1.3
NEY				*e*Sg	Sb	18 39 17.4	-0.6
DRN	**Derbent**	2.17	104	⇑*e*PN	Pn	18 38 43.3	-5.0
DRN	**Derbent**	2.17	104	*e*Pg	Pg	18 38 52.4	-0.7
DRN				*e*Sg	Sg	18 39 21.6	+0.4
PYA1	**Pyatigorsk**	2.30	311	⇑*e*PN	Pn	18 38 50.8	+0.7
PYA1	**Pyatigorsk**	2.30	311	*e*Pn	Pn	18 38 50.8	+0.7
PYA1				*e*Sn	Sb	18 39 20.9	-1.3
SHA1	**Shidzhatmaz**	2.38	300	*e*PN	Pn	18 38 52.8	+1.3
SHA1				*e*S	Sb	18 39 23.9	-0.9
SHA1	**Shidzhatmaz**	2.38	300	*e*Pn	Pn	18 38 52.8	+1.3
SHA1				*e*Sn	Sn	18 39 21.6	+0.4
KIV	**Kislovodsk**	2.47	305	*i* PN	Pn	18 38 52.6	0.0
KIV	**Kislovodsk**	2.47	305	*e*Pn	Pn	18 38 52.7	+0.1
GOF	**Gofitskoye**	3.05	325	*e*PN	Pg	18 39 14.1	+4.1
GOF				*e*S	Sg	18 39 47.5	-2.0
GOF				pmax	pmax		
	comp=Z,60nm,0.8s						
GOF				smax	smax		
	comp=E,130nm,0.5s						
ANN	**Anapa**	6.26	294	*e*P	Pb	18 39 52.8	-8.1
ANN				pmax	pmax		
	comp=Z,94nm,1.0s						
AKTO	**Aktyubinsk**	11.65	43	⇓Pn	Pn	18 40 57.9	-0.5
	comp=Z,4.7nm,1.4s						
AKTO				⇓Sn	Sn	18 42 57.3	-11
	comp=Z,3.7nm,0.9s						
AKTO	**Aktyubinsk**	11.65	43	P	Pn	18 40 57.9	-0.5
AKTO				pmax	pmax		
	comp=Z,5.0nm,1.4s						
AB31	**Akbulak array**	12.06	51	⇑Pn	Pn	18 41 03.8	-0.1
	comp=Z,0.2nm,0.3s,baz=240,slow=15,SNR=5.4						
AB31				⇑Sn	Sn	18 43 07.6	-11
	comp=Z,1.3nm,0.6s,baz=242,slow=22,SNR=3.2						
AB31	**Akbulak array**	12.06	51	P	Pn	18 41 03.8	-0.1
OBN	**Obninsk**	13.84	338	⇓*e*P	Pn	18 41 28.7	+0.6
OBN				*e*S	Sn	18 44 06.7	+4.7
OBN				pmax	pmax		
	comp=Z,39nm,2.1s						
OBN				MLR	MLR		
	comp=Z,28nm,16.0s						
BRVK	**Borovoye**	19.57	49	⇑*e*P	P	18 42 39.9	-0.1
AAK	**Ala-Archa**	21.30	80	⇑*e*P	P	18 42 58.1	-1.0
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURK	**Kurchatov**	23.98	59	⇑*e*P	P	18 43 24.5	-2.3
KURK				pmax	pmax		
	comp=Z,3.0nm,1.9s						
DGZ	**Jazzator, Alta**	29.60	61	⇑*e*P	P	18 44 15.5	-2.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.7s						

IDC 20 18:48:52.0±1.6, **7°.25S**×**123°.53E, h0**^{km}, **mb3.2**/1, **mb1 3.2**/4, **mb1mx3.1**/54, **mbtmp3.1**/4, **ML2.5**/3, **Error ellipse: s-maj=100.5km s-min=24.7km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	2.94	177	Pn	Pn	18 49 40.8	+0.7
	2.1nm,0.3s,baz=14,slow=4.4,SNR=5.1						
WRA	**Warramunga Arr**	16.40	141	Pn	Pn	18 52 44.5	+0.7
	0.0nm,0.3s,baz=312,slow=13,SNR=2.7						
ASAR	**Alice Springs**	19.12	150	P	P	18 53 15.9	-0.9
	0.0nm,0.3s,baz=326,slow=11,SNR=3.8						
MKAR	**Makanchi Array**	65.08	330	P	P	18 59 34.5	0.0
	0.2nm,0.8s,baz=126,slow=7.4,SNR=2.7						

IDC 20 18:50:21.3±60.0, **20°.76S**×**177°.65W, h0**^{km}, **mb4.3**/3, **mb1 4.5**/3, **mb1mx3.8**/36, **mbtmp4.3**/3, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.6**/28, **Error ellipse: s-maj=1092.0km s-min=152.2km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	24.35	294	LR	LR	19 05 52.8	
	comp=Z,52nm,18.4s,baz=174,slow=38						
STKA	**Stephens Creek**	37.97	245	P	P	18 57 40.8	-0.3
	2.5nm,0.4s,baz=88,slow=12,SNR=9.6						
ASAR	**Alice Springs**	44.78	257	P	P	18 58 36.8	-0.3
	3.4nm,0.7s,baz=98,slow=7.3,SNR=50						
WRA	**Warramunga Arr**	44.89	262	P	P	18 58 38.2	+0.2
	1.3nm,0.3s,baz=96,slow=8.4,SNR=128						

*NIED **20** 18:54:00, 41°.60N×142°.20E, h44^{km}, Mw3.8 Best double couple: M$_0$6.27000×10^{14} NP1:ϕ_s139.00000°, δ31.00000°, λ101.00000°. NP2:ϕ_s306.00000°, δ59.00000°, λ83.00000°.*
*IDC **20** 18:54:37.6±1.1, 41°.43N×141°.87E, h0^{km}, mb3.5/6, mb1 3.9/8, mb1mx3.6/49, mbtmp3.6/8, ML3.3/2, MS3.0/3, Ms1 3.0/3, ms1mx2.6/43, Error ellipse: s-maj=46.8km s-min=20.6km az=104.0*
*ISCJB **20** 18:54:44.5±0.4, 41°.57N±0°.03×142°.16E±0°.04, h53^{km}±5^{km}, mb3.7/7, MS3.4/1, Error ellipse: s-maj=6.0km s-min=3.2km az=35.8*
*JMA **20** 18:54:44.2±0.1, 41°.56N×142°.18E, h52^{km}±3^{km}, M3.6*
JMA Felt I J1.
ISC 20 18:54:44.9±1.0, **41°.57N**±0°.03×**142°.16E**±0°.04, **h44**^{km}±11^{km}, **n36, σ0^{s}.96**/49, **mb3.4**/7, **2C-5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	**Aomorihigashid**	0.69	244	P	Pn	18 54 58.3	0.0
JAHD				S	Sn	18 55 08.7	+0.7
JARK	**Aomorirokkasho**	0.82	227	P	Pn	18 54 59.8	-0.3
JARK				*e*S	Sn	18 55 11.1	0.0
JNBK	**Urakawa-nobuka**	0.84	32	P	Pn	18 54 59.2	-1.1
JNBK				*e*S	Sn	18 55 12.1	+0.5
JOT	**Ohata**	0.86	258	⇓P	Pn	18 55 00.4	-0.2
JOT				S	Sn	18 55 12.3	+0.3
JEM	**Erimo**	0.87	59	P	Pn	18 55 00.3	-0.4
JEM				S	Sn	18 55 12.1	-0.2
JSHD	**Hidakashinhida**	0.87	15	P	Pn	18 55 00.7	-0.1
JSHD				*e*S	Sn	18 55 13.8	+1.4
JKB	**Kayabe**	0.90	291	P	Pn	18 55 00.5	-0.7
JKB				S	Sn	18 55 12.3	-0.8
JIAM	**Iburiatsuma**	1.07	350	P	Pn	18 55 03.9	+0.4
JIAM				*e*S	Sn	18 55 18.3	+1.1
JTM	**Tenmabayashi**	1.14	227	⇓P	Pn	18 55 04.7	+0.3
JTM				S	Sn	18 55 19.5	+0.7
JBT2	**Biratori 2**	1.22	7	⇓P	Pn	18 55 05.1	-0.4
JBT2				*e*S	Sn	18 55 21.7	+0.8
JNB	**Noboribetsu**	1.23	317	P	Pn	18 55 04.9	-0.8
JNB				*e*S	Sn	18 55 20.1	-1.0
JANG	**Nango**	1.29	203	⇓P	Pn	18 55 06.1	-0.4
JANG				S	Sn	18 55 22.4	-0.2
JSR	**Shiriuchi**	1.31	269	P	Pn	18 55 07.1	+0.4
JSR				S	Sn	18 55 24.1	+1.1
JCH	**Churui**	1.38	40	⇓P	Pn	18 55 07.8	+0.1
JCH				*e*S	Sn	18 55 25.3	+0.6
JEW	**Eniwo**	1.38	338	P	Pn	18 55 08.0	+0.3
JEW				S	Sn	18 55 25.4	+0.7
JYM2	**Yakumo 2**	1.45	293	⇑P	Pn	18 55 08.9	+0.3
JYM2				*e*S	Sn	18 55 27.7	+1.3
JFR	**Furan**	1.63	11	⇑P	Pn	18 55 10.7	-0.4
JFR				*e*S	Sn	18 55 30.5	-0.4
JISS	**Ishikarishitsu**	1.79	342	P	Pn	18 55 14.3	+0.9
JISS				*e*S	Sn	18 55 35.6	+0.7
JAH	**Hinai**	1.80	221	P	Pn	18 55 14.7	+1.2
JAH				S	Sn	18 55 37.5	+2.4
JOB	**Onbets**	1.82	42	P	Pn	18 55 15.2	+1.4
ASAJ	**Asahikawa**	2.57	7	Pn	Pn	18 55 24.0	0.0
	6.8nm,0.3s,baz=215,slow=10,SNR=34						
ASAJ				Sn	Sn	18 55 55.8	+1.8
	8.2nm,0.3s,baz=328,slow=28,SNR=8.6						
ASAJ				LR	LR	18 56 41.8	
	comp=Z,166nm,19.4s,baz=182,slow=45						
KLR	**Kul'dur**	10.59	320	LR	LR	19 01 02.7	
	comp=Z,70nm,20.8s,baz=175,slow=36						
PETK	**Petropavlovsk-**	15.59	37	Pn	Pn	18 58 21.9	+0.4
	0.2nm,0.3s,baz=227,slow=6.9,SNR=3.1						
SEY	**Seymchan**	22.24	12	P	P	18 59 35.7	-1.8
	0.5nm,0.6s,baz=143,slow=20,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	30.25	129	T	T	19 33 22.3	
	baz=321,slow=76,SNR=3.5						
H11N1	**WAKE ISLAND Hy**	30.26	129	T	T	19 33 22.4	

	baz=321,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	30.27	129	T	T	19 33 23.0	
	baz=321,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	31.09	130	T	T	19 34 23.5	
	baz=323,slow=76,SNR=6.1						
H11S3	WAKE ISLAND Hy	31.10	130	T	T	19 34 22.8	
	baz=323,slow=76,SNR=7.9						
H11S2	WAKE ISLAND Hy	31.11	130	T	T	19 34 22.7	
	baz=323,slow=76,SNR=6.0						
ILAR	Eielson Array	45.40	35	P	P	19 02 59.5	+0.8
	0.4nm,0.8s,baz=270,slow=6.9,SNR=7.4						
YKA	Yellowknife Ar	59.62	32	P	P	19 04 44.3	+0.4
	0.2nm,0.6s,baz=307,slow=6.1,SNR=5.1						
WRA	Warramunga Arr	61.62	188	P	P	19 04 55.5	-2.5
	0.8nm,0.6s,baz=6.7,slow=7.1,SNR=2.0						
FINES	FINESS Array B	65.09	332	P	P	19 05 20.1	-0.3
	5.8nm,0.6s,baz=54,slow=9.7,SNR=4.8						
FINES				LR	LR	19 39 46.3	
	comp=Z,24nm,18.2s,baz=7.0,slow=42						
NVAR	Mina Array Bea	71.85	55	P	P	19 06 04.7	+1.3
	0.4nm,0.3s,baz=298,slow=1.9,SNR=3.6						
PDAR	Pinedale Array	74.11	47	P	P	19 06 17.3	+0.7
	0.3nm,0.7s,baz=290,slow=3.7,SNR=2.6						

NIED ***20*** *18:55:00, 35°.90N×135°.30E, h380^{km}, Mw4.5 Best double couple: M$_0$7.22000×10^{15} NP1:ϕ_s235.00000°, δ45.00000°, λ-95.00000°. NP2:ϕ_s62.00000°, δ45.00000°, λ-85.00000°.*

ISCJB ***20*** *18:55:06.9±0.1, 35°.83N±0°.03×135°.20E±0°.02, h363^{km}±1^{km}, mb4.3/194, Error ellipse: s-maj=4.2km s-min=3.0km az=164.4*

MOS ***20*** *18:55:06.6±0.9, 35°.82N×135°.24E, h365^{km}, mb4.3/53, Error ellipse: s-maj=6.7km s-min=4.8km az=107.1*

IDC ***20*** *18:55:07.6±0.6, 35°.81N×135°.25E, h360^{km}±6^{km}, mb3.8/34, mb1 4.0/41, mb1mx3.9/56, mbtmp4.6/41, Error ellipse: s-maj=7.1km s-min=6.4km az=67.0*

NEIC ***20*** *18:55:07.4±0.2, 35°.80N×135°.20E, h359^{km}±2^{km}, mb4.5/122, Error ellipse: s-maj=3.6km s-min=2.8km az=165.0*

JMA ***20*** *18:55:07.4±0.1, 35°.85N×135°.28E, h359^{km}±1^{km}, M4.8*

ISC 20 18:55:07.2±0.4**, 35°.81N**±0°.04×**135°.29E**±0°.04**, h358**^{km}±4^{km}**, n390, σ1^s.14**/444**, mb4.4**/204**, 12C-24D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKY	Yasaka	0.23	220	⇓P	Pn	18 55 52.6	+0.6
JWT	Wachi	0.53	170	⇓P	Pn	18 55 53.0	+0.5
JWT				S	S	18 56 28.1	-0.7
JKG	Kaga	0.97	61	⇓P	Pn	18 55 54.1	+0.5
JKG				S	S	18 56 30.8	-0.1
JYTA	Yamagatataniai	1.20	100	P	Pn	18 55 55.0	+0.4
JYTA				S	S	18 56 32.0	-0.7
INU	Inuyama	1.48	107	ePn	Pn	18 55 56.4	+0.4
JWY	Kouya	1.60	171	⇓P	Pn	18 55 57.6	+0.7
JWY				S	S	18 56 36.4	-0.4
JOI	OKI	1.72	287	⇓P	Pn	18 55 57.9	+0.6
JIE	Ise	1.83	140	⇓P	Pn	18 55 58.9	+0.8
JIE				S	S	18 56 39.4	+0.3
JHS	Saijyo	1.95	246	⇓P	Pn	18 55 59.3	+0.4
JHS				S	S	18 56 40.3	-0.2
JTNC	Tanabenakahech	2.00	172	P	Pn	18 55 59.7	+0.4
JTNC				S	S	18 56 40.4	-0.8
JAI	Aioi	2.12	199	⇓P	Pn	18 56 00.9	+0.7
JAI				S	S	18 56 43.1	+0.4
JSZ	Suzu	2.34	45	P	Pn	18 56 02.2	+0.6
JMN	Monobe	2.38	210	⇓P	Pn	18 56 03.0	+0.9
JMN				S	S	18 56 47.2	+1.0
JGT2	ShimaneMisato	2.39	253	⇓P	Pn	18 56 02.1	+0.1
MJB9	Matsu-Tunnel	2.47	72	ePn	Pn	18 56 02.9	+0.2
MAJO	Matsushiro	2.48	72	ePn	Pn	18 56 02.9	+0.2
MAJO	Matsushiro	2.48	72	d iP	Pn	18 56 03.1	+0.4
MAT	Matsushiro	2.48	72	P	Pn	18 56 03.0	+0.3
MAT				S	S	18 56 47.5	+0.1
MAT	Matsushiro	2.48	72	P	Pn	18 56 03.0	+0.3
MJAR	Matsushiro Arr	2.48	72	P	Pn	18 56 03.3	+0.6
	1.8nm,0.3s,baz=264,slow=10,SNR=220						
TTO1	TONANKAI O.B.S	2.50	150	⇓P	Pn	18 56 04.0	+1.3
JHT	Toyohira	2.61	245	⇓P	Pn	18 56 04.3	+0.4
JHT				S	S	18 56 49.2	-0.3
JYN	Shimob	2.67	96	⇓P	Pn	18 56 04.5	+0.1
TK02	Tokai 2	2.75	132	P	Pn	18 56 06.0	+1.2
TK02				X		18 56 54.1	
JRY	Ryogami san	2.94	85	P	Pn	18 56 06.9	+0.3
JOD2	Odawara 2	3.15	99	P	Pn	18 56 09.7	+1.2
JOD2				S	S	18 56 59.9	+2.0
JNA	Nagahama	3.22	227	⇓P	Pn	18 56 10.3	+1.1
JSD	Sado	3.26	46	P	Pn	18 56 10.0	+0.6
JTO	Tosashimizu	3.59	216	⇓P	Pn	18 56 13.7	+1.1
JTO				S	S	18 57 05.4	0.0
JNU	Nakatsue	4.52	235	P	Pn	18 56 23.1	+1.0
	24nm,0.3s,baz=80,slow=1.0,SNR=222						
JNU				S	S	18 57 23.7	+1.0
	baz=208,slow=20,SNR=4.9						
JHJ	Hachijo jima 2	4.58	125	P	Pn	18 56 24.0	+1.3
	16nm,0.3s,baz=74,slow=19,SNR=4.3						
JHJ				S	S	18 57 26.6	+2.8
	9.6nm,0.3s,baz=45,slow=20,SNR=2.9						
KSRS	Korea Array	6.14	288	P	Pn	18 56 41.1	+1.3
	6.0nm,0.3s,baz=107,slow=12,SNR=164						
KS15	Wonju Array Si	6.17	288	ePn	Pn	18 56 41.1	+0.9
KSAR	Wonju Array Be	6.17	288	P	Pn	18 56 41.1	+1.0
KSAR	Wonju Array Be	6.17	288	P	Pn	18 56 41.1	+1.0
KS01	Wonju Array Si	6.17	288	ePn	Pn	18 56 40.1	0.0
TJN	Taejon	6.44	277	c iP	Pn	18 56 43.9	+0.7
MSHR	Mys Shultsa	7.48	336	ceP	P	18 56 56.1	-0.3
VLA	Vladivostok	7.76	341	c iP	P	18 56 59.4	-0.2
ERM	Erimo	8.72	42	⇑eP	Pn	18 57 10.2	+0.5
USA0B	Ussuriysk Arra	8.76	344	ePn	Pn	18 57 10.9	+0.8
USRK	Ussuriysk Ar.	8.76	344	P	P	18 57 11.2	-1.0
	5.5nm,0.3s,baz=166,slow=11,SNR=184						
TEY	Ternei	9.27	6	⇓eP	Pn	18 57 16.7	+0.4
TEY				pmax	pmax		
	comp=N,30nm,0.8s						
TEY				pmax	pmax		
	comp=Z,40nm,0.9s						
MDJ	Mudanjiang	9.81	335	P	P	18 57 23.6	-0.4
MDJ				sP		18 58 34.3	
MDJ				S	S	18 59 16.8	+2.9
MDJ	Mudanjiang	9.81	335	ScS	ScS	19 09 26.6	-4.3
MDJ				pmax	pmax		
	comp=Z,120nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,370nm,4.1s						
MDJ	Mudanjiang	9.81	335	ePn	Pn	18 57 23.3	+0.6
ASAJ	Asahikawa	10.01	32	P	Pn	18 57 23.6	-1.5
	comp=Z,6.8nm,0.3s,baz=220,slow=12,SNR=6.1						
ASAJ				S	S	18 59 09.2	-9.0
	comp=Z,1.4nm,0.3s,baz=26,slow=25,SNR=3.6						
CBIJ	Chichi jima	10.49	144	ePn	Pn	18 57 26.9	-4.1
CBIJ				eS	S	18 59 17.3	-12
JCJ	Chichijima	10.49	144	P	Pn	18 57 26.9	-4.1
	comp=Z,26nm,0.3s,baz=265,slow=9.5,SNR=8.3						
JCJ				S	S	18 59 17.3	-12
	comp=Z,32nm,0.3s,baz=286,slow=18,SNR=6.0						
CN2	Changchun	10.99	320	eP	Pn	18 57 35.4	-1.3
CN2				pmax	pmax		
	comp=Z,40nm,1.6s						
DL2	Dalian	11.30	290	⇓iP	P	18 57 42.0	+1.4
DL2				sP		18 58 56.8	
DL2				S	S	18 59 48.3	+1.8
DL2				pmax	pmax		
	comp=Z,55nm,0.8s						
DL2				pmax	pmax		
	comp=Z,140nm,6.8s						
YUK	Yuzh-Kuril'sk	11.54	41	eP	Pn	18 57 45.6	+2.4
YUK				i S	S	18 59 44.9	-6.8
YUK				pmax	pmax		
	comp=Z,49nm,0.6s						
YSS	Yuzh-Sakhalins	12.46	24	eP	P	18 57 53.4	+0.1
YSS	Yuzh-Sakhalins	12.46	24	eP	P	18 57 53.6	+0.3
YSS				eS	S	19 00 02.7	-8.3
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
YSS				smax	smax		
	comp=N,60nm,0.9s						
YSS				smax	smax		
	comp=E,50nm,1.0s						
KUR	Kuril'sk	13.41	42	eP	Pn	18 58 05.5	+0.3
KUR				eS	S	19 00 30.3	+0.2
KUR				pmax	pmax		
	comp=Z,22nm,0.9s						
KLR	Kul'dur	13.66	350	eP	P	18 58 05.0	-1.5
KLR	Kul'dur	13.66	350	P	P	18 58 05.0	-1.5
	comp=Z,1.4nm,0.3s,baz=161,slow=6.5,SNR=47						
NJ2	Nanjing	14.15	259	eP	P	18 58 04.0	-8.1
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIA	Tai'an	14.71	277	P	P	18 58 18.3	+0.1
TIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GRNR	Gornyy	14.98	3	eP	P	18 58 20.2	-0.7
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
BJI	Beijing	15.66	291	P	P	18 58 28.4	0.0
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TYV	Tymovskoe	15.96	17	eP	Pn	18 58 36.4	+1.8
TYV				pmax	pmax		
	comp=Z,15nm,1.0s						
TYV				pmax	pmax		
	comp=Z,300nm,5.7s						
HIA	Hailar	17.62	325	eP	P	18 58 48.0	-1.4
	comp=Z,48nm,0.7s						
HIA	Hailar	17.62	325	d iP	P	18 58 47.9	-1.5
NKL	Nikolayevsk	17.75	11	eP	P	18 58 51.0	+0.3
NKL				pmax	pmax		
	comp=Z,30nm,0.8s						
ZEA	Zeya	18.79	345	eP	P	18 58 58.6	-3.2
ZEA				e		19 02 07.8	
ZEA				pmax	pmax		
	comp=Z,77nm,0.8s						
HHC	Hu-ho-hao-te	19.26	292	eP	P	18 59 08.3	+1.3
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,62nm,4.5s						
XAN	Xi'an	21.67	273	P	P	18 59 29.3	-0.5
XAN				pP	pP	19 00 24.4	+0.1
XAN				pmax	pmax		
	comp=Z,13nm,0.6s						
XAN	Xi'an	21.67	273	eP	P	18 59 29.1	-0.7
	comp=Z,10.0nm,0.6s						
XAN	Xi'an	21.67	273	eP	P	18 59 29.1	-0.7
XAN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ENH	Enshi	22.29	263	eP	P	18 59 34.6	-0.9
	comp=Z,30nm,0.8s						
PETK	Petropavlovsk-	23.40	35	P	P	18 59 44.9	-0.3
	comp=Z,4.8nm,0.8s,baz=197,slow=7.6,SNR=4.9						
PEA1	Petropavlovsk-	23.40	35	eP	P	18 59 44.9	-0.3
GUMO	Guam	23.74	156	P	P	18 59 49.1	+0.4
	comp=Z,101nm,0.7s,baz=354,slow=9.2,SNR=3.5						
ULN	Ulaanbaatar	24.10	309	eP	P	18 59 52.2	+0.4
	comp=Z,27nm,0.7s						
ULN	Ulaanbaatar	24.10	309	eP	P	18 59 52.2	+0.4
ULN				pmax	pmax		
	comp=Z,27nm,0.7s						
SONA1	Songino Array	24.50	308	eP	P	18 59 55.1	-0.3
SONA0	Songino Array	24.51	308	eP	P	18 59 55.3	-0.1
SONA0				ePcP	PcP	19 03 23.1	+0.4
SONM	Songino Array	24.51	308	P	P	18 59 55.3	-0.1
	comp=Z,8.2nm,0.5s,baz=111,slow=8.0,SNR=57						
SONM				PcP	PcP	19 03 23.1	+0.4
	comp=Z,1.7nm,0.6s,baz=128,slow=2.0,SNR=7.1						
TGY	Tagaytay City	25.16	214	P	P	19 00 00.9	-0.6
	comp=Z,310nm,0.3s,baz=79,slow=10,SNR=2.6						
LZH	Lanzhou	25.40	280	eP	P	19 00 06.9	+3.3
LZH				pP	pP	19 01 04.5	-1.2
LZH				sP	sP	19 01 50.3	0.0
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,220nm,4.9s						
MA2	Magadan	25.83	18	P	P	19 00 07.2	+0.3
	comp=Z,3.8nm,0.7s,baz=203,slow=9.8,SNR=6.4						
GYA	Guiyang	26.14	257	P	P	19 00 09.3	-0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BOD	Bodaibo	26.18	334	eP	P	19 00 09.0	-1.0
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YAK	Yakutsk	26.48	354	eP	P	19 00 16.7	+4.1
YAK				e*PP	pwP	19 01 20.5	+0.3
YAK				e		19 03 25.3	
YAK				eS	S	19 04 27.5	+8.1
YAK				e		19 10 15.4	
YAK				pmax	pmax		
	comp=Z,69nm,0.9s						
YAK				pmax	pmax		
	comp=N,27nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				smax	smax		
	comp=N,1µm,4.8s						
YAK				smax	smax		
	comp=E,642nm,3.7s						
CD2	Chengdu	26.72	269	eP	P	19 00 15.5	+0.3
ZAK	Zakamensk	27.28	312	eP	P	19 00 18.7	-1.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY	Talaya	27.54	315	⇑eP	P	19 00 23.3	+1.1
GTA	Gaotai	28.22	288	eP	P	19 00 28.6	+0.2
GTA				pP	PP	19 01 42.8	+1.9
GTA				sP	sP	19 02 20.6	+4.9
GTA				PcP	PcP	19 03 32.4	+0.8
GTA				S	S	19 04 47.4	-0.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,77nm,5.7s						
SEY	Seymchan	29.15	16	⇓eP	P	19 00 36.0	-0.1
SEY	Seymchan	29.15	16	P	P	19 00 36.5	+0.4
	comp=Z,1.2nm,0.7s,baz=218,slow=5.0,SNR=8.1						
KMI	Kunming	29.88	258	P	P	19 00 42.8	-0.5
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
LAMP	Lampang	35.84	251	P	P	19 01 35.0	+0.7
	comp=Z,6.7nm,0.6s						
PBKT	Sadao Pong	36.01	247	eP	P	19 01 34.9	-0.8
CMMT	Chiang Mai	36.20	252	P	P	19 01 37.2	-0.1
	comp=Z,15nm,0.7s						
CHTO	Chiang Mai	36.20	252	eP	P	19 01 37.0	-0.3
	comp=Z,9.2nm,0.7s						
CHTO	Chiang Mai	36.20	252	eP	P	19 01 37.1	-0.3
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CHTO	Chiang Mai	36.20	252	P	P	19 01 37.3	-0.1
	comp=Z,64nm,0.7s						
CM31	Chiang Mai Arr	36.41	251	eP	P	19 01 39.2	+0.1
CMAR	Chiang Mai Arr	36.41	251	P	P	19 01 39.2	+0.1
	comp=Z,3.5nm,0.6s,baz=45,slow=8.1,SNR=50						
CMAR				PcP	PcP	19 03 55.3	+0.8
	comp=Z,1.5nm,0.9s,baz=3.6,slow=1.5,SNR=7.7						
CMAR				ScP	ScP	19 07 07.2	+0.9
	comp=Z,1.0nm,0.8s,baz=19,slow=3.5,SNR=8.3						
CM01	Chiang Mai Arr	36.42	251	eP	P	19 01 38.7	-0.4
SUKH	Sukhothai	36.46	249	P	P	19 01 40.1	+0.6
	comp=Z,4.7nm,0.6s						
BILL	Bilibino	36.70	19	eP	P	19 01 41.7	+0.9
	comp=Z,15nm,0.6s						
BILL	Bilibino	36.70	19	c iP	P	19 01 41.8	+0.9
BILL				e*PP	pP	19 02 49.5	+0.9
BILL				e		19 03 11.8	
BILL				eS	S	19 06 55.9	-0.9
BILL				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ	Urumqi	36.99	297	eP	P	19 01 44.8	+1.1
DGZ	Jazzator, Alta	37.14	307	d iP	P	19 01 45.9	+0.9
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LSA	Lhasa	37.37	273	eP	P	19 01 47.3	-0.2
	comp=Z,4.3nm,0.9s						
LSA	Lhasa	37.37	273	eP	P	19 01 47.3	-0.2
LSA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FAKI	Fak Fak	38.63	185	eP	P	19 01 57.5	+0.1
	comp=Z,68nm,0.6s						
ZAA0	Zalesovo Array	39.14	314	eP	P	19 02 01.0	-0.2
	comp=Z,5.2nm,0.7s						
ZALV	Zalesovo Beam	39.14	314	eP	P	19 02 01.1	-0.1
ZALV				PcP	PcP	19 04 01.9	-0.5
ZALV	Zalesovo Beam	39.14	314	P	P	19 02 01.8	+0.6
	comp=Z,6.6nm,0.7s,baz=101,slow=6.6,SNR=20						
ZALV				PcP	PcP	19 04 01.9	-0.5
	comp=Z,6.7nm,0.6s,baz=103,slow=2.6,SNR=22						
ZAA1	Zalesovo Array	39.14	314	eP	P	19 02 01.8	+0.6
ZAA1				ePcP	PcP	19 04 01.9	-0.5
NVS	Novosibirsk	40.16	315	eP	P	19 02 08.9	-0.6
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,11nm,0.8s						
NVS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK01	Makanchi Array	40.59	302	eP	P	19 02 13.2	0.0
MK31	Makanchi Array	40.59	303	eP	P	19 02 13.6	+0.4
MK31	Makanchi Array	40.59	303	eP	P	19 02 13.6	+0.4
MK32	Makanchi Array	40.59	303	eP	P	19 02 13.8	+0.6
MK32				ePcP	PcP	19 04 07.3	0.0
MK32				eScP	ScP	19 07 22.5	+0.6
MK32				eS	S	19 07 55.9	+0.6
MKAR	Makanchi Array	40.59	303	eP	P	19 02 13.6	+0.4
	comp=Z,56nm,0.6s						
MKAR				PcP	PcP	19 04 07.3	0.0
MKAR				ScP	ScP	19 07 22.5	+0.6
MKAR				S	S	19 07 55.9	+0.6
MKAR	Makanchi Array	40.59	303	P	P	19 02 13.8	+0.6
	comp=Z,7.3nm,0.5s,baz=87,slow=9.4,SNR=92						
MKAR				PcP	PcP	19 04 07.3	0.0
	comp=Z,2.8nm,0.8s,baz=72,slow=4.2,SNR=8.8						
MKAR				ScP	ScP	19 07 22.5	+0.6
	comp=Z,0.3nm,0.7s,baz=222,slow=19,SNR=4.1						
MKAR				S	S	19 07 55.9	+0.6
	comp=Z,0.4nm,0.7s,baz=86,slow=18,SNR=5.1						
MAKZ	Makanchi	40.81	303	eP	P	19 02 15.3	+0.4
	comp=Z,8.7nm,0.6s						
MAKZ	Makanchi	40.81	303	eP	P	19 02 15.3	+0.4
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
RAMN	Ramite	42.13	272	eP	P	19 02 26.0	-0.1
	comp=Z,21nm,0.7s						
JIRN	Jiri	42.18	273	eP	P	19 02 26.9	+0.3
	comp=Z,15nm,0.4s						
GUN	Gumba	42.33	274	eP	P	19 02 27.9	+0.1
	comp=Z,7.8nm,0.4s						
GAMB	Gambell	42.34	32	eP	P	19 02 27.8	+0.9
	comp=Z,6.7nm,0.8s						
NRIK	Noril'sk	42.39	337	P	P	19 02 27.6	+0.4
	comp=Z,3.8nm,0.5s,baz=112,slow=11,SNR=5.0						
NRIK				PcP	PcP	19 04 13.3	+0.6
	comp=Z,8.6nm,0.6s,baz=109,slow=3.7,SNR=5.4						
KURK	Kurchatov	42.81	309	eP	P	19 02 30.8	0.0
	comp=Z,13nm,0.7s						
KURK				ePcP	PcP	19 04 14.2	-0.3
KURK	Kurchatov	42.81	309	d iP	P	19 02 30.6	-0.3
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
RABL	Rabaul	42.82	155	eP	P	19 02 32.0	+0.7
	comp=Z,14nm,0.8s						
PKI	Pulchoki	42.85	273	eP	P	19 02 31.4	-0.5
	comp=Z,11nm,0.8s						
PKIN	Phulchoki	42.85	273	eP	P	19 02 31.3	-0.6
	comp=Z,5.0nm,0.4s						
KKN	Kakani	42.86	274	eP	P	19 02 31.6	-0.3
	comp=Z,6.6nm,0.5s						
KURBB	Kurchatov Arra	42.87	308	P	P	19 02 31.4	+0.1
	comp=Z,7.2nm,0.7s,baz=92,slow=8.4,SNR=54						
KURBB				PcP	PcP	19 04 14.2	-0.6
	comp=Z,1.7nm,0.6s,baz=93,slow=3.8,SNR=7.1						
PDGK	Podgornoye	42.97	298	P	P	19 02 32.3	-0.1
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DANN	Dangsing	43.87	275	eP	P	19 02 40.3	+0.4
	comp=Z,54nm,0.8s						
PRZ	Przheval'sk	43.91	297	eP	P	19 02 41.4	+1.5
	comp=Z,6.7nm,0.6s						
PRZ	Przheval'sk	43.91	297	eP	P	19 02 41.4	+1.5
PRZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KOLN	Koldanda	44.23	275	eP	P	19 02 42.6	-0.1
	comp=Z,32nm,1.1s						
TARG	Taragay, Kyrgy	44.49	296	eP	P	19 02 45.6	+0.8
TARG				ePcP	PcP	19 04 21.1	+0.1
PYUN	Piuthan	44.59	275	eP	P	19 02 45.8	+0.3
	comp=Z,79nm,1.0s						
ANM	Nome	45.22	32	eP	P	19 02 50.9	+1.3
	comp=Z,6.6nm,0.8s						
ANM	Nome	45.22	32	eP	P	19 02 50.9	+1.3
ANM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NRN	Naryn	45.88	296	eP	P	19 02 54.3	-1.2
	comp=Z,3.7nm,0.8s						
NRN	Naryn	45.88	296	eP	P	19 02 54.3	-1.2
NRN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AAK	Ala-Archa	46.70	298	eP	P	19 03 01.6	+0.1
	comp=Z,3.0nm,0.5s						
AAK	Ala-Archa	46.70	298	⇑iP	P	19 03 01.8	+0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	Ala-Archa	46.70	298	P	P	19 03 01.9	+0.3
	comp=Z,2.6nm,0.4s,baz=114,slow=4.7,SNR=14						
OTUK	Ortayu	47.13	306	P	P	19 03 04.3	-0.3
OTUK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BVA0	Borovoye Array	47.74	312	P	P	19 03 08.4	-0.7
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BVAR	Borovoye Array	47.74	312	P	P	19 03 09.1	0.0
	comp=Z,3.8nm,0.5s,baz=96,slow=8.2,SNR=29						
BVAR				PcP	PcP	19 04 31.6	-0.2
	comp=Z,3.1nm,0.6s,baz=106,slow=2.4,SNR=10.0						
BVAR				S	S	19 09 35.9	-1.5
	comp=Z,0.8nm,0.8s,baz=78,slow=13,SNR=4.6						
BRVK	Borovoye	47.80	312	eP	P	19 03 09.3	-0.2
	comp=Z,4.4nm,0.5s						
BRVK	Borovoye	47.80	312	eP	P	19 03 09.4	-0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SFK	Sufi-Kurgan	48.07	295	P	P	19 03 13.8	+1.7
MNAS	Manas	48.17	298	i P	P	19 03 12.8	+0.1
MNAS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MTN	Manton Dam	48.54	185	eP	P	19 03 15.3	-0.3
	comp=Z,53nm,0.6s						
GSI	Gunungsitoli	49.00	234	eP	P	19 03 18.7	-0.5
	comp=Z,24nm,1.2s						
KK31	Karatay Array	49.44	299	eP	P	19 03 20.9	-1.2
	comp=Z,12nm,1.3s						
KK31	Karatay Array	49.44	299	P	P	19 03 22.4	+0.3
KK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKAR	Karatay Array	49.44	299	eP	P	19 03 20.6	-1.5
	comp=Z,12nm,1.3s						
KKAR	Karatay Array	49.44	299	eP	P	19 03 20.6	-1.5
KKAR				pmax	pmax		
	comp=Z,12nm,1.3s						
IM3	Indian Mountai	50.21	30	eP	P	19 03 28.0	+0.6
NIL	Nilore	50.27	287	P	P	19 03 29.5	+1.1
NIL				pmax	pmax		
	comp=Z,22nm,0.8s						
GAR	Garm	50.72	294	eP	P	19 03 31.9	+0.1
GAR	Garm	50.72	294	eP	P	19 03 31.9	+0.1
KDAK	Kodiak Island	51.28	41	i P	P	19 03 36.0	+0.5
MLY	Manley	51.49	31	eP	P	19 03 37.9	+0.9
	comp=Z,9.7nm,0.9s						
CHGR	Chuyangaron	51.69	294	eP	P	19 03 38.9	0.0
	comp=Z,25nm,0.8s						
TOLK	Toolik Lake Re	51.80	27	eP	P	19 03 40.3	+1.1
	comp=Z,28nm,1.7s						
MCK	McKinley	52.38	33	eP	P	19 03 44.1	+0.8
	comp=Z,11nm,0.8s						
MCK	McKinley	52.38	33	eP	P	19 03 44.2	+0.8
MCK				pmax	pmax		
	comp=Z,11nm,0.8s						
RND	Reindeer	52.45	33	eP	P	19 03 44.6	+0.6
	comp=Z,14nm,0.8s						
RND	Reindeer	52.45	33	eP	P	19 03 44.6	+0.6
RND				pmax	pmax		
	comp=Z,14nm,0.8s						
MDM	Murphy Dome	52.56	31	eP	P	19 03 45.8	+1.1
	comp=Z,27nm,0.8s						
WRH	Wood River Hil	52.67	32	eP	P	19 03 46.1	+0.7
	comp=Z,12nm,1.1s						
COLA	College	52.73	31	⇓eP	P	19 03 46.1	+0.2
COLA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SVE	Sverdlovsk	52.78	318	eP	P	19 03 46.5	+0.1
SVE				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ILAR	Eielson Array	53.15	32	P	P	19 03 49.2	+0.2
	comp=Z,2.9nm,0.6s,baz=263,slow=6.4,SNR=44						

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ILB   Eielson Array      53.15  32 eP        P          19 03 48.7  -0.2
IL1   Eielson Array      53.15  32 eP        P          19 03 48.8  -0.1
HDA   Harding Lake       53.17  32 eP        P          19 03 49.2  +0.1
      comp=Z,17nm,0.9s
KBL   Kabul              53.20 289 eP        P          19 03 49.0  -1.0
      comp=Z,3.8nm,0.9s
KBL   Kabul              53.20 289 eP        P          19 03 49.0  -1.0
KBL                                 pmax     pmax
      comp=Z,4.0nm,0.9s
HYB   Hyderabad          53.20 265 i P       P          19 03 50.0  -0.1
ARU   Arti               53.98 318 eP        P          19 03 54.5  -0.5
      comp=Z,11nm,1.0s
ARU   Arti               53.98 318c iP       P          19 03 54.8  -0.3
ARU                                 pmax     pmax
      comp=Z,13nm,1.1s
AB31  Akbulak array      54.91 309 i P       P          19 04 01.5  -0.3
AB31                                pmax     pmax
      comp=Z,4.0nm,0.5s
ABKAR Akbulak array      54.91 309 eP        P          19 04 01.3  -0.5
WRAB  Tennant Creek      55.44 181 eP        P          19 04 05.2  -0.6
      comp=Z,7.8nm,0.4s
WRAB  Tennant Creek      55.44 181deP        P          19 04 05.4  -0.4
WRAB                                pmax     pmax
      comp=Z,4.0nm,0.5s
WB2   Warramunga Arr     55.45 181 eP        P          19 04 05.4  -0.5
WR1   Warramunga Arr     55.45 181 eP        P          19 04 05.5  -0.4
      comp=Z,9.1nm,0.5s
WR1                                ePcP      PcP        19 05 01.7  +0.5
WR1                                eS        S          19 11 19.2  -3.2
WRA   Warramunga Arr     55.45 181  P        P          19 04 05.5  -0.4
      comp=Z,5.9nm,0.4s,baz=358,slow=7.6,SNR=183
WRA                                 PcP      PcP        19 05 01.7  +0.5
      comp=Z,2.5nm,0.7s,baz=353,slow=4.3,SNR=7.2
WRA                                 S        S          19 11 19.2  -3.2
      comp=Z,2.3nm,1.1s,baz=355,slow=12,SNR=6.2
AKTO  Aktyubinsk         55.78 311  P        P          19 04 08.0  +0.1
      comp=Z,3.9nm,0.8s,baz=83,slow=11,SNR=13
EPYK  Eagle Plains       57.01  29 eP        P          19 04 17.4  +1.1
      comp=Z,20nm,0.6s
INK   Inuvik             57.70  26 eP        P          19 04 21.4  +0.5
      comp=Z,12nm,1.1s
INK   Inuvik             57.70  26  P        P          19 04 21.5  +0.5
      comp=Z,4.9nm,0.6s,baz=309,slow=6.1,SNR=22
PRGR  Permogore          59.06 326 eP        P          19 04 29.5  -0.9
PRGR                                pmax     pmax
      comp=Z,10.0nm,0.9s
AS01  Alice Springs      59.16 181 eP        P          19 04 31.4  -0.2
AS31  Alice Springs      59.16 181 eP        P          19 04 31.4  -0.2
      comp=Z,2.4nm,0.6s
ASAR  Alice Springs      59.16 181  P        P          19 04 31.3  -0.3
      comp=Z,3.3nm,0.6s,baz=14,slow=14,SNR=62
ASAR                                S        S          19 12 11.2  +0.8
      comp=Z,1.4nm,0.9s,baz=18,slow=21,SNR=7.2
ASAR                                PKP2bc              19 34 07.3
      comp=Z,0.5nm,0.7s,baz=153,slow=0.8,SNR=4.3
GEYT  Alibeck            60.05 297  P        P          19 04 37.6  +0.1
      comp=Z,4.2nm,0.7s,baz=38,slow=7.5,SNR=5.3
KLMR  Klimovskoe         62.10 327 eP        P          19 04 49.0  -1.7
KLMR                                pmax     pmax
      comp=Z,12nm,1.4s
KLMR  Klimovskoe         62.10 327 eP        P          19 04 49.0  -1.7
KLMR                                AMP                 19 04 51.2
      comp=Z,12nm,1.4s
ARA0  ARCESS Array S     63.35 338 eP        P          19 04 58.9  +0.2
ARCES ARCESS Array B     63.35 338  P        P          19 04 58.9  +0.2
      comp=Z,4.7nm,0.5s,baz=59,slow=8.9,SNR=26
DZM   Mont Dzumac        64.68 148 eP        P          19 05 08.6  +0.6
      comp=Z,34nm,1.4s
DZM   Mont Dzumac        64.68 148  P        P          19 05 09.8  +1.8
      baz=153,slow=16
RES   Resolute Bay       64.96  13 eP        P          19 05 09.2  +0.2
      comp=Z,9.3nm,0.8s
RES   Resolute Bay       64.96  13 eP        P          19 05 09.2  +0.2
RES                                 pmax     pmax
      comp=Z,9.0nm,0.8s
VRH   Novokhopyorsk      65.11 316 eP        P          19 05 09.0  -1.3
VRH                                 pmax     pmax
      comp=Z,10.0nm,0.9s
LPSR  Galich'ya Gora     66.00 318 eP        P          19 05 13.9  -2.1
LPSR                                pmax     pmax
      comp=Z,3.0nm,0.4s
OBN   Obninsk            66.05 322⇑eP        P          19 05 16.2   0.0
OBN                                e*PP      pP         19 06 34.5  +0.7
OBN                                e                    19 07 44.4
OBN                                 pmax     pmax
      comp=Z,11nm,0.6s
WSAR  Wadi Sarin         66.35 282  P        P          19 05 19.1  +0.4
      comp=Z,2.5nm,0.6s,baz=278,slow=14,SNR=3.6
DAG   Danmarks Havn      66.51 354 i P       P          19 05 18.6  -0.1
      comp=Z,6.9nm,0.8s
DAG   Danmarks Havn      66.51 354 i P       P          19 05 18.6  -0.1
DAG                                 pmax     pmax
      comp=Z,5.0nm,0.8s
VSR   Storozhevoye       66.53 317⇑iP        P          19 05 18.3  -1.0
VSR                                 pmax     pmax
      comp=Z,7.0nm,0.8s
TULEG Thule              66.89   6 eP        P          19 05 21.3  +0.1
      comp=Z,9.0nm,0.9s
YKW3  Yellowknife Ar     67.24  28 eP        P          19 05 24.0  +0.4
      comp=Z,12nm,1.3s
YKA   Yellowknife Ar     67.29  28  P        P          19 05 24.0  +0.2
      comp=Z,3.5nm,0.9s,baz=300,slow=6.3,SNR=30
YKA                                 PcP      PcP        19 05 49.8  +1.1
      comp=Z,1.1nm,0.8s,baz=303,slow=4.0,SNR=6.9
YKB5  Yellowknife Ar     67.29  28 eP        P          19 05 23.6  -0.3
FIA0  FINESS Array S     67.52 331 eP        P          19 05 25.1  -0.2
FIA0                               ePcP      PcP        19 05 48.8  -0.8
FIA0  FINESS Array S     67.52 331 eP        P          19 05 25.1  -0.2
FIA0                               e                    19 05 48.8
FINES FINESS Array B     67.52 331  P        P          19 05 25.1  -0.2
      comp=Z,5.5nm,0.5s,baz=63,slow=5.8,SNR=45
FINES                               PcP      PcP        19 05 48.8  -0.8
      comp=Z,1.8nm,0.5s,baz=78,slow=4.9,SNR=5.5
STKA  Stephens Creek     67.59 174 eP        P          19 05 26.6  +0.6
      comp=Z,7.8nm,1.9s
STKA  Stephens Creek     67.59 174 eP        P          19 05 26.6  +0.6
STKA                                pmax     pmax
      comp=Z,8.0nm,1.9s
STKA  Stephens Creek     67.59 174  P        P          19 05 25.9  -0.2
      comp=Z,3.7nm,0.7s,baz=345,slow=5.5,SNR=8.9
KBZ   Khabaz             67.87 309  P        P          19 05 27.6  -0.2
      comp=Z,6.5nm,0.8s,baz=133,slow=2.5,SNR=14
KIV   Kislovodsk         67.90 309 eP        P          19 05 28.0  -0.1
      comp=Z,14nm,0.8s
KIV   Kislovodsk         67.90 309 eP        P          19 05 28.5  +0.4
KIV                                 pmax     pmax
      comp=Z,19nm,1.1s
SUMG  Summit             71.82 358 eP        P          19 05 51.7   0.0
      comp=Z,10nm,0.8s
SUMG  Summit             71.82 358 i P       P          19 05 52.7  +1.1
      comp=Z,25nm,0.8s
SUMG  Summit             71.82 358 i P       P          19 05 52.7  +1.1
SUMG                                pmax     pmax
      comp=Z,25nm,0.8s
AKASG Malin Array Be     72.15 320  P        P          19 05 52.9  -0.5
      comp=Z,6.7nm,0.6s,baz=51,slow=6.3,SNR=30
AKBB  Malin Array Si     72.15 320 eP        P          19 05 52.7  -0.7
      comp=Z,9.7nm,0.6s
AKBB  Malin Array Si     72.15 320 eP        P          19 05 52.7  -0.7
AKBB                                pmax     pmax
      comp=Z,10.0nm,0.6s
KIEV  Kiev               72.16 320 eP        P          19 05 52.8  -0.7
      comp=Z,9.5nm,0.6s
KIEV  Kiev               72.16 320⇑iP        P          19 05 53.1  -0.4
KIEV                                pmax     pmax
      comp=Z,9.0nm,0.9s
AK11  Malin Array Si     72.19 320 eP        P          19 05 53.1  -0.6
NB201 NORSAR Array S     73.28 335 eP        P          19 05 59.7  -0.1
NB2   NORSAR Subarra     73.31 335  P        P          19 05 59.3  -0.8
      comp=Z,2.8nm,0.7s,baz=44,slow=5.6
NB200 NORSAR Array S     73.31 335 eP        P          19 05 59.6  -0.5
NOA   NORSAR Array B     73.31 335  P        P          19 05 59.6  -0.5
      comp=Z,4.1nm,0.7s,baz=45,slow=5.7,SNR=19
KIS   Kishinev           74.52 317 eP        P          19 06 22.0   +15
KIS   Kishinev           74.52 317 eP        P          19 06 22.0   +15
PINE  Pine Mountain      74.84  47 eP        P          19 06 09.7  +0.3
      comp=Z,15nm,0.8s
E09A  Wood Farm, Sta     74.86  43 eP        P          19 06 10.0  +0.8
      comp=Z,40nm,1.8s
YBH   Yreka Blue Hor     74.95  49  P        P          19 06 10.8  +0.9
      comp=Z,4.7nm,0.8s,baz=288,slow=3.6,SNR=8.7
BR101 Keskin Array S     75.86 309 eP        P          19 06 15.4  +0.2
BRTR  Keskin Array B     75.86 309ceP        P          19 06 15.0  -0.2
BRTR                                pmax     pmax
      comp=Z,3.0nm,0.8s
BRTR  Keskin Array B     75.86 309  P        P          19 06 15.4  +0.2
      comp=Z,2.9nm,0.8s,baz=116,slow=4.8,SNR=8.9
BUR08 Bucovina Ar. S     76.09 319 eP        P          19 06 15.4  -0.9
      comp=Z,5.4nm,0.8s
BUR04 Bucovina Ar. S     76.10 319 eP        P          19 06 15.7  -0.6
MOD   Modoc Plateau      76.32  48 eP        P          19 06 18.4  +0.7
      comp=Z,5.8nm,0.8s
BMO   Blue Mountains     76.32  44 eP        P          19 06 17.8  +0.2
      comp=Z,5.5nm,0.9s
RAYN  Ar Rayn            76.47 289 eP        P          19 06 17.2  -1.5
      comp=Z,6.8nm,0.9s
RAYN  Ar Rayn            76.47 289 eP        P          19 06 17.2  -1.5
RAYN                                pmax     pmax
      comp=Z,7.0nm,0.9s
J08A  Circle Bar Ran     76.55  46 eP        P          19 06 19.1  +0.3
      comp=Z,7.1nm,0.9s
MLR   Muntele Rosu       77.02 317  P        P          19 06 21.3  -0.2
      comp=Z,1.0nm,0.5s,baz=180,slow=13,SNR=2.8
OJC   Ojcow              77.19 324 eP        P          19 06 22.6  +0.4
      comp=Z,11nm,0.9s
FCC   Fort Churchill     77.22  24 eP        P          19 06 22.1  +0.1
      comp=Z,6.6nm,0.8s
FCC   Fort Churchill     77.22  24 eP        P          19 06 22.2  +0.1
FCC                                 pmax     pmax
      comp=Z,7.0nm,0.8s
FFC   Flin Flon          77.32  30 eP        P          19 06 22.4  -0.4
      comp=Z,8.3nm,0.9s
FFC   Flin Flon          77.32  30 i P       P          19 06 23.3  +0.5
BEKR  Beckworth          77.48  50 eP        P          19 06 24.8  +0.7
      comp=Z,8.3nm,0.9s
LANS  Liptovska Anna     78.06 323 eP        P          19 06 28.0  +1.0
LANS  Liptovska Anna     78.06 323 eP        P          19 06 28.0  +1.0
HRY   Holter Researc     78.16  40 eP        P          19 06 26.6  -1.1
EGMT  Eagleton           78.38  38 eP        P          19 06 29.3  +0.5
      comp=Z,21nm,1.4s
LRM   Limekiln Ridge     78.40  41 eP        P          19 06 27.2  -2.0
CMB   Columbia Colle     78.55  51 eP        P          19 06 30.4  +0.5
      comp=Z,6.1nm,0.8s
CMB   Columbia Colle     78.55  51 eP        P          19 06 30.4  +0.5
CMB                                 pmax     pmax
      comp=Z,6.0nm,0.8s
DLMT  Dillon             78.62  42 eP        P          19 06 31.1  +0.8
      comp=Z,11nm,0.8s
HLID  Hailey             78.76  44 eP        P          19 06 31.9  +0.9
      comp=Z,4.9nm,1.0s
VYHS  Vyhne              78.81 323 eP        P          19 06 31.8  +0.8
VYHS                                pmax     pmax
      comp=Z,5.0nm,1.4s
VYHS  Vyhne              78.81 323 eP        P          19 06 31.8  +0.8
BOZ   Bozeman (W)        78.99  41 eP        P          19 06 32.3  +0.1
      comp=Z,8.3nm,1.0s
BOZ   Bozeman (W)        78.99  41 eP        P          19 06 32.3  +0.1
BOZ                                 pmax     pmax
      comp=Z,8.0nm,1.0s
KVN   Kaiserville        79.37  49 eP        P          19 06 34.0  -0.4
      comp=Z,10.0nm,1.0s
KVN   Kaiserville        79.37  49 eP        P          19 06 34.0  -0.4
KVN                                 pmax     pmax
      comp=Z,10.0nm,1.0s
BRG   Berggiesshubel     79.47 327 eP        P          19 06 34.7  +0.2
      comp=Z,16nm,1.6s
CLL   Collm              79.58 327 i P       P          19 06 34.9  -0.1
      comp=Z,8.0nm,0.8s
CLL   Collm              79.58 327 i P       P          19 06 34.9  -0.1
CLL                                 pmax     pmax
      comp=Z,8.0nm,0.8s
NV01  Mina Array Sit     79.62  50 eP        P          19 06 36.1  +0.3
NVAR  Mina Array Bea     79.62  50  P        P          19 06 37.4  +1.6
      comp=Z,2.4nm,0.7s,baz=294,slow=5.3,SNR=9.0
YHB   Horse Butte        79.77  42 eP        P          19 06 37.1  +0.6
      comp=Z,9.4nm,0.8s
YHH   Holmes Hill        79.93  41 eP        P          19 06 38.2  +0.7
      comp=Z,5.8nm,1.1s
YMR   Madison River      79.95  42 eP        P          19 06 38.9  +1.5
      comp=Z,11nm,1.1s
ELK   Elko               80.05  47 eP        P          19 06 39.5  +1.4
      comp=Z,2.2nm,0.8s
ELK   Elko               80.05  47 eP        P          19 06 39.5  +1.4
ELK                                 pmax     pmax
      comp=Z,2.0nm,0.8s
YPP   Pitchstone Pla     80.30  42 eP        P          19 06 41.6  +2.2
      comp=Z,3.0nm,0.8s
LKWY  Lake               80.32  41 eP        P          19 06 42.3  +2.8
      comp=Z,12nm,0.9s
LKWY  Lake               80.32  41 eP        P          19 06 42.3  +2.8
LKWY                                pmax     pmax
      comp=Z,12nm,0.9s
H17A  Grant Village      80.34  42 eP        P          19 06 42.0  +2.4
      comp=Z,16nm,0.9s
VTS   Vitosha            80.35 316 eP        P          19 06 40.2  +0.7
      comp=Z,7.4nm,1.0s
VTS   Vitosha            80.35 316 eP        P          19 06 40.2  +0.7
VTS                                 pmax     pmax
      comp=Z,7.0nm,1.0s
IMW   Indian Meadow      80.47  42 eP        P          19 06 42.0  +1.6
      comp=Z,7.0nm,0.9s
FLWY  Flagg Ranch        80.48  42 eP        P          19 06 42.4  +2.2
      comp=Z,7.6nm,1.0s
RLMT  Red Lodge          80.56  40 eP        P          19 06 41.9  +1.2
      comp=Z,26nm,1.6s
FXWY  Fox Creek          80.59  42 eP        P          19 06 42.0  +1.1
      comp=Z,10nm,1.5s
CONA  Conrad Observa     80.65 324 i P       P          19 06 42.1  +1.2
      comp=Z,8.2nm,1.6s
MOOW  Moose Ponds        80.67  42 eP        P          19 06 42.6  +1.3
      comp=Z,8.3nm,1.6s
TPAW  Teton Pass         80.73  42 eP        P          19 06 41.4  -0.2
      comp=Z,6.2nm,0.8s
GEC2  GERESS Array S     81.02 325 eP        P          19 06 42.5  -0.4
      comp=Z,3.6nm,1.0s
GEC2  GERESS Array S     81.02 325 eP        P          19 06 42.5  -0.4
GEC2                                pmax     pmax
      comp=Z,4.0nm,1.0s
GERES GERESS Array B     81.02 325  P        P          19 06 42.8  -0.1
      comp=Z,1.6nm,0.7s,baz=40,slow=5.4,SNR=15
GEA0  GERESS Array S     81.03 325 eP        P          19 06 41.9  -0.9
DIVS  Divibare           81.16 319 eP        P          19 06 43.0  -0.6
      comp=Z,4.7nm,0.9s
ARSA  Arzberg            81.29 323 i P       P          19 06 44.7  +0.5
      comp=Z,5.4nm,0.9s
R11A  Troy Canyon, C     81.35  49 eP        P          19 06 45.9  +1.0
      comp=Z,17nm,1.7s
MOA   Molln              81.47 324 i P       P          19 06 46.0  +0.9
      comp=Z,3.6nm,0.9s
TPNV  Topopah Spring     81.81  50 eP        P          19 06 48.3  +1.0
      comp=Z,7.3nm,0.9s
TPNV  Topopah Spring     81.81  50 eP        P          19 06 48.3  +1.0
TPNV                                pmax     pmax
      comp=Z,7.0nm,0.9s
DUG   Dugway, Tooele     81.83  46 eP        P          19 06 47.5  +0.3
      comp=Z,8.2nm,0.9s
DUG   Dugway, Tooele     81.83  46 eP        P          19 06 47.5  +0.3
DUG                                 pmax     pmax
      comp=Z,8.0nm,0.9s
SOKA  Soboth             81.93 323 i P       P          19 06 48.1  +0.5
      comp=Z,11nm,0.8s
PD31  Pinedale Array     81.97  42 eP        P          19 06 47.6  -0.5
      comp=Z,4.0nm,0.9s
PDAR  Pinedale Array     81.97  42 eP        P          19 06 47.6  -0.5
PDAR  Pinedale Array     81.97  42  P        P          19 06 48.4  +0.2
      comp=Z,2.8nm,0.8s,baz=290,slow=1.4,SNR=20
TCUT  Toone Canyon       82.03  44 eP        P          19 06 48.7  +0.3
      comp=Z,12nm,0.9s
PSUT  Pine Spring        82.28  48 eP        P          19 06 49.8   0.0
      comp=Z,6.8nm,1.2s
OBKA  Obir               82.28 323 i P       P          19 06 49.7  +0.2
      comp=Z,3.8nm,0.8s
LIT   Litokhoron         82.41 314 eP        P          19 06 49.7  -0.4
      comp=Z,12nm,0.7s
LIT   Litokhoron         82.41 314 eP        P          19 06 49.7  -0.4
LIT                                 pmax     pmax
      comp=Z,12nm,0.7s
NLU   North Lily Min     82.41  46 eP        P          19 06 51.4  +1.0
      comp=Z,6.5nm,0.9s
KBA   Koelnbreinsper     82.46 324 i P       P          19 06 50.7  +0.3
      comp=Z,4.9nm,0.7s
MYKA  Terra Mystica      82.64 324 i P       P          19 06 50.9  -0.3
      comp=Z,7.1nm,0.9s
TTG   Podgorica          82.68 318 eP        P          19 06 50.8  -0.5
      comp=Z,28nm,1.0s
TTG   Podgorica          82.68 318 eP        P          19 06 50.8  -0.5
TTG                                 pmax     pmax
      comp=Z,28nm,1.0s
SHPR  Sheep Range        82.77  50 eP        P          19 06 53.3  +1.0
      comp=Z,5.8nm,0.9s
ABTA  Abfaltersbach      83.09 324 i P       P          19 06 53.0  -0.6
      comp=Z,5.1nm,0.6s
WATA  Walderalm          83.10 325 i P       P          19 06 53.5  -0.2
      comp=Z,6.1nm,1.0s
WTTA  Wattenberg         83.12 325 i P       P          19 06 53.8   0.0
      comp=Z,5.3nm,0.8s
ULM   Lac du Bonnet      83.15  30 eP        P          19 06 52.6  -1.0
      comp=Z,10nm,1.1s
ULM   Lac du Bonnet      83.15  30  P        P          19 06 53.8  +0.1
      comp=Z,7.4nm,0.9s,baz=321,slow=5.7,SNR=10
MSU   Marysvale          83.29  47 eP        P          19 06 56.3  +1.4
MSU   Marysvale          83.29  47 eP        P          19 06 56.3  +1.4
MOTA  Moosalm            83.31 325 i P       P          19 06 54.5  -0.2
      comp=Z,3.3nm,0.6s
SQTA  Sankt Quirin       83.35 325 i P       P          19 06 54.5  -0.4
      comp=Z,3.8nm,0.5s
RETA  Reutte             83.36 326 i P       P          19 06 54.9   0.0
      comp=Z,7.4nm,0.7s
P17A  Butcher Ranch,     83.50  45 eP        P          19 06 56.9  +1.0
      comp=Z,12nm,0.8s
MTPU  Mount Pierson      83.60  47 eP        P          19 06 58.2  +1.6
      comp=Z,8.8nm,0.8s
LCMT  Little Creek M     83.63  49 eP        P          19 06 57.1  +0.6
      comp=Z,6.7nm,1.1s
P18A  Preston Nutter     83.69  45 eP        P          19 06 58.2  +1.3
FETA  Feichten           83.72 325 i P       P          19 06 56.8   0.0
      comp=Z,11nm,0.9s
PFO   Pinyon Flats O     83.77  53  P        P          19 06 57.6  +0.3
      baz=55,slow=18
BFO   Black Forest       83.82 328 eP        P          19 06 56.5  -0.6
      comp=Z,7.6nm,0.8s
SRU   San Rafael Swe     83.87  46 eP        P          19 06 58.8  +1.0
      comp=Z,8.8nm,0.8s
SRU   San Rafael Swe     83.87  46 eP        P          19 06 58.8  +1.0
SRU                                 pmax     pmax
      comp=Z,9.0nm,0.8s
DAVA  Damuels            83.91 326 i PcP     P          19 06 57.8  +0.1
      comp=Z,14nm,0.8s
FUORN Ofenpass-Fuorn     84.23 325 eP        P          19 06 58.7  -0.8
      comp=Z,20nm,0.6s
U15A  North Rim          84.59  48 eP        P          19 07 02.8  +1.3
      comp=Z,9.9nm,1.3s
ITM   Ithomi             84.66 313 eP        P          19 07 00.7  -0.8
      comp=Z,30nm,0.6s
PV09  Paradox Valley     85.08  45 eP        P          19 07 05.0  +1.1
PV21  Cone Mtn., Par     85.13  45 eP        P          19 07 04.3  +0.2
      comp=Z,14nm,0.8s
PV23  Carpenter Ridg     85.19  45 eP        P          19 07 05.7  +1.3
      comp=Z,18nm,0.9s
PHWY  Pilot Hill         85.20  41 eP        P          19 07 04.7  +0.3
      comp=Z,3.7nm,0.8s
PV10  Paradox Valley     85.22  45 eP        P          19 07 06.1  +1.6
      comp=Z,33nm,0.8s
N23A  Red Feather La     85.22  42 eP        P          19 07 02.4  -2.1
      comp=Z,17nm,1.4s
PV14  Lion Creek, Pa     85.23  45 eP        P          19 07 05.2  +0.6
      comp=Z,22nm,0.8s
PV20  West Nyswonger     85.29  45 eP        P          19 07 05.4  +0.6
      comp=Z,16nm,0.8s
PV04  Paradox Valley     85.29  45 eP        P          19 07 05.4  +0.6
      comp=Z,28nm,1.5s
PV19  Morning Glory      85.30  45 eP        P          19 07 05.6  +0.7
      comp=Z,14nm,0.9s
PV17  East Wray Mesa     85.33  45 eP        P          19 07 05.7  +0.7
      comp=Z,24nm,1.2s
PV16  Nyswonger Mesa     85.34  45 eP        P          19 07 05.6  +0.5
      comp=Z,34nm,1.8s
PV11  David Mesa, Pa     85.37  45 eP        P          19 07 06.4  +1.2
      comp=Z,16nm,1.2s
PV05  Paradox Valley     85.39  46 eP        P          19 07 06.8  +1.4
      comp=Z,22nm,0.7s
PV12  Saucer Basin,      85.40  45 eP        P          19 07 06.3  +0.9
      comp=Z,6.8nm,0.8s
PV03  Paradox Valley     85.41  45 eP        P          19 07 06.6  +1.2
      comp=Z,9.2nm,1.0s
PV13  Radium Mtn., P     85.50  45 eP        P          19 07 07.0  +1.2
      comp=Z,14nm,1.1s
PV02  Paradox Valley     85.51  45 eP        P          19 07 07.2  +1.2
      comp=Z,6.9nm,0.9s
PV15  Paradox Valley     85.57  45 eP        P          19 07 06.4  +0.2
      comp=Z,10.0nm,0.9s
PV01  Paradox Valley     85.66  45 eP        P          19 07 07.5  +0.9
      comp=Z,12nm,0.9s
SMCO  Snowmass           85.85  44 eP        P          19 07 08.7  +1.0
      comp=Z,6.7nm,1.0s
MVCO  Mesa Verde         86.33  46 eP        P          19 07 10.2  +0.3
      comp=Z,7.0nm,0.9s
S22A  4UR Ranch, Cre     86.92  45 eP        P          19 07 14.3  +1.5
      comp=Z,4.3nm,0.9s
SCHQ  Schefferville      87.74  13  P        P          19 07 16.1  +0.1
      comp=Z,1.9nm,0.6s,baz=0.4,slow=5.1,SNR=4.0
ECSD  EROS Data Cent     87.84  35 eP        P          19 07 17.5  +0.8
      comp=Z,8.2nm,0.9s
TX31  Lajitas Ar. Si     94.71  49 eP        P          19 07 49.1  +0.3
TXAR  Lajitas Array      94.71  49  P        P          19 07 49.6  +0.8
      comp=Z,2.3nm,0.8s,baz=284,slow=3.0,SNR=13
TOA1  Torodi Ar. Sit    114.47 309 ePKiKP    PKiKP      19 13 03.8  -1.7
TORD  Torodi Ar. Bea    114.48 309  PKP      PKiKP      19 13 03.8  -1.7
      comp=Z,0.9nm,0.5s,baz=14,slow=1.8,SNR=13
DBIC  Dimbokro          123.55 310  PKP      PKPdf      19 13 22.3  -0.7
      comp=Z,4.5nm,0.6s,baz=43,slow=2.2,SNR=13
TIC   Toumodi           123.67 310 ePKIKP    PKPdf      19 13 22.5  -0.8
KIC   Kosan Boka        123.71 310 ePKIKP    PKPdf      19 13 22.8  -0.5
      comp=Z,7.1nm,0.6s
LIC   Lamto             124.00 310 ePKIKP    PKPdf      19 13 23.2  -0.7
      comp=Z,58nm,1.8s
SDV   Santo Domingo     129.28  34 ePKPdf    PKPdf      19 13 34.5  +0.2
LPAZ  La Paz            151.49  53 ePKPdf    PKPdf      19 14 14.6  +0.7
LPAZ                                PKPbc    PKiKP      19 14 20.6  -0.2
LPAZ  La Paz            151.49  53 ePKIKP    PKPdf      19 14 14.6  +0.7
LPAZ  La Paz            151.49  53  PKPbc    PKiKP      19 14 20.6  -0.2
      comp=Z,3.8nm,0.7s,baz=346,slow=2.1,SNR=14
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ISCJB 20 18:56:32.9±1.8,36°.22N±0°.07×70°.7E±0°.2,h50km,Error
      ellipse: s-maj=26.6km s-min=7.4km az=167.1
  NNC 20 18:56:42.3±7.0,37°.16N×70°.31E,h0km,mb3.5,mpv3.1,
      Error ellipse: s-maj=53.5km s-min=45.5km az=169.0
  ISC 20 18:56:33.2±2.3,36°.29N±0°.10×70°.5E±0°.2,h50km,n12,
      σ2.s70/16,8D,Hindu Kush region
Code  Station Name         Δ°  AZ°    Phase ID             Time      Res
                                    Op       ISC          h  m  s    ISC
SFK   Sufi-Kurgan         4.41  32 ⇓Pn      Pn         18 57 42.2  +4.5
      1.1nm,0.3s
SFK                                ⇓Sn      Sn         18 58 29.0  +1.2
      6.6nm,0.4s
MNAS  Manas               6.38  13 ⇓Pn      Pn         18 58 07.3  +2.6
      1.1nm,0.4s
MNAS                               ⇓Sn      Sn         18 59 12.2  -4.0
      6.8nm,0.7s
KK31  Karatay Array       6.80   0 ⇓Pn      Pn         18 58 13.3  +3.0
      0.6nm,0.3s,baz=180,slow=12
KK31                               ⇓Sn      Sn         18 59 23.3  -3.2
      4.6nm,0.6s,baz=190,slow=22
AAK   Ala-Archa           7.05  25 ⇓Pn      Pn         18 58 15.5  +1.6
      2.5nm,0.9s
AAK                                ⇓Sn      Sn         18 59 29.3  -3.4
      2.7nm,0.6s
PYUN  Piuthan            13.35 124 eP       Pn         18 59 39.2  -1.0
      5.1nm,0.4s
DANN  Dangsing           13.72 122 eP       Pn         18 59 43.7  -1.5
      13nm,1.0s
KOLN  Koldanda           13.98 124 eP       Pn         18 59 47.8  -0.9
      1.9nm,0.2s
DMN   Daman              15.11 121 eP       Pn         19 00 02.7  -1.0
      6.8nm,0.6s
KKN   Kakani             15.12 120 eP       Pn         19 00 03.0  -0.7
      6.4nm,0.5s
PKIN  Phulchoki          15.33 120 eP       Pn         19 00 06.1  -0.4
      5.1nm,0.3s
PKI   Pulchoki           15.34 120 eP       Pn         19 00 06.3  -0.5
      3.2nm,0.3s
JIRN  Jiri               15.84 118 eP       Pn         19 00 09.8  -3.4
      6.1nm,0.4s
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  IDC 20 18:59:38.2±1.0,28°.17N×55°.31E,h0km,mb3.8/13,
      mb1 3.8/15,mb1mx3.7/40,mbtmp3.8/15,ML3.8/2,Error
      ellipse: s-maj=21.7km s-min=16.9km az=154.0
ISCJB 20 18:59:40.2±0.3,28°.17N±0°.03×55°.31E±0°.05,h10km,
      mb3.7/14,Error ellipse: s-maj=6.6km s-min=4.1km
      az=170.8
  TEH 20 18:59:40.2,28°.18N×55°.34E,h8km,ML3.6
  THR 20 18:59:42.2,28°.27N×55°.36E,h14km,ML3.4
  ISC 20 18:59:40.1±0.6,28°.17N±0°.03×55°.35E±0°.04,h10km,n52,
      σ1.s75/53,mb3.8/14,Southern Iran
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	1.06	136	ePn	Pb	19 00 01.2	+0.5
GENO				IAMB	IAmb	19 00 23.6	
	comp=Z,0.0nm,0.4s						
NIAN	Nian	1.45	115	IAMB	IAmb	19 00 34.7	
	comp=Z,0.0nm,0.2s						
NIAN				ePg	Pb	19 00 07.5	+0.3
JHRM	Jahrom	1.60	282	ePn	Pg	19 00 11.8	+1.0
JHRM				IAMB	IAmb	19 00 41.0	
	comp=E,0.0nm,0.4s						
NGRK	Negar Kerman	1.90	39	ePn	Pb	19 00 14.3	-0.9
NGRK				IAMB	IAmb	19 00 47.7	
	comp=Z,0.0nm,0.4s						
GHIR	Ghir-Karzin	2.09	274	ePn	Pb	19 00 18.8	+0.6
GHIR	Ghir-Karzin	2.09	274	ePn	Pb	19 00 18.8	+0.6
KRBR	Kerman	2.19	34	ePn	Pb	19 00 19.5	-0.5
KRBR	Kerman	2.19	34	eAML	AML	19 00 57.1	
	comp=N,242nm,0.6s						
KRBR	Kerman	2.19	34	ePn	Pb	19 00 19.5	-0.5
KRBR				eSg	Sb	19 00 48.5	+1.3
TVBK	TV Kerman	2.19	34	ePn	Pb	19 00 19.4	-0.6
TVBK				IAMB	IAmb	19 00 26.4	
	comp=Z,0.0nm,0.4s						
SHME	Shamm	2.23	161	ePn	Pb	19 00 19.4	-1.2
KHGB	Koh Gabri	2.41	24	ePn	Pb	19 00 22.7	-1.0
KHGB				IAMB	IAmb	19 00 59.2	
	comp=Z,0.0nm,0.5s						
CHMN	Cheshme madani	2.55	48	ePn	Pb	19 00 24.6	-1.6
CHMN				IAMB	IAmb	19 01 05.0	
	comp=Z,0.0nm,0.5s						
MSFE	Esma-Masafi	2.89	165	ePn	Pn	19 00 28.1	+1.8
NAZ	Nazwa, Dubai	3.18	175	ePn	Pn	19 00 32.7	+2.4
IMEH	Mehriz	3.27	349	ePn	Pn	19 00 34.4	+2.7
IMEH				IAMB	IAmb	19 00 43.9	
	comp=Z,991nm,0.6s						
UOSS	Minazif	3.30	166	ePn	Pn	19 00 33.3	+1.3
HATD	Hatta, Dubai	3.41	168	ePn	Pn	19 00 35.7	+2.3
FAQ	Al Faqa, Dubai	3.42	176	ePn	Pn	19 00 35.9	+2.4
IKAZ	Kazeroun	3.47	298	ePn	Pn	19 00 35.4	+0.9
IKAZ				IAMB	IAmb	19 01 23.3	
	comp=Z,1μm,0.3s						
ASHO	Ashiyiah	3.53	169	ePn	Pn	19 00 36.7	+1.6
ISAD	Sadrabad	4.00	339	ePn	Pn	19 00 45.4	+3.7
ISAD				IAMB	IAmb	19 01 56.2	
	comp=N,617nm,0.6s						
ALNE	Al Ain	4.12	175	ePn	Pn	19 00 46.1	+3.0
YZKH	Yazd	4.25	351	ePn	Pn	19 00 47.8	+2.7
YZKH	Yazd	4.25	351	ePn	Pn	19 00 47.8	+2.7
IRAM	Ramesheh	4.45	325	ePn	Pn	19 00 49.7	+1.9
IRAM				IAMB	IAmb	19 01 51.2	
	comp=Z,246nm,0.6s						
ZHSF	Zahedan	4.97	72	ePn	Pn	19 00 58.0	+3.0
ZHSF	Zahedan	4.97	72	ePn	Pn	19 00 58.0	+3.0
TPRV	Parvadeh(Tabas	4.97	13	ePn	Pn	19 00 57.1	+2.1
TPRV				IAMB	IAmb	19 02 30.9	
	comp=Z,0.0nm,2.0s						
IKOO	Kooshah	5.29	36	ePn	Pn	19 01 02.0	+2.6
IKOO				IAMB	IAmb	19 01 29.0	
	comp=Z,204nm,0.4s						
ROKH	ROKH	5.59	319	ePn	Pn	19 01 05.7	+2.2
TKDS	Koohdasht(Taba	5.63	15	ePn	Pn	19 01 06.9	+2.8
TABS	Tabas	5.67	15	ePn	Pn	19 01 06.8	+2.3
TABS	Tabas	5.67	15	ePn	Pn	19 01 06.8	+2.3
WSAR	Wadi Sarin	5.74	148	Pn	Pn	19 01 06.0	+0.6
	comp=Z,2.2nm,0.3s,baz=347,slow=5.7,SNR=40						
WSAR				Sn	Sn	19 02 10.5	-0.8
	comp=Z,1.0nm,0.3s,baz=297,slow=16,SNR=3.9						
TNSJ	Nastanj	5.87	10	ePn	Pn	19 01 09.8	+2.5
TNSJ				IAMB	IAmb	19 03 05.5	
	comp=Z,0.0nm,1.4s						
MMAI	Mount Meron Ar	17.83	291	P	Pn	19 03 48.3	-0.2
	comp=Z,0.4nm,0.3s,baz=76,slow=12,SNR=2.3						
AAK	Ala-Archa	21.19	42	P	P	19 04 26.9	+1.0
	comp=Z,2.1nm,0.7s,baz=53,slow=4.7,SNR=5.2						
BRTR	Keskin Array B	21.32	308	P	P	19 04 27.7	+0.3
	comp=Z,1.3nm,0.6s,baz=128,slow=12,SNR=7.5						
AKTO	Aktyubinsk	22.32	4	P	P	19 04 37.9	0.0
	comp=Z,3.4nm,0.9s,baz=176,slow=14,SNR=2.3						
BVAR	Borovoye Array	27.21	20	P	P	19 05 23.4	-0.5
	comp=Z,0.6nm,0.7s,baz=205,slow=6.7,SNR=2.9						
MKAR	Makanchi Array	28.11	41	P	P	19 05 32.1	-0.1
	comp=Z,0.4nm,0.4s,baz=229,slow=10,SNR=4.9						
KURBB	Kurchatov Arra	28.48	32	P	P	19 05 35.7	+0.4
	comp=Z,0.3nm,0.7s,baz=236,slow=8.4,SNR=2.9						
AKASG	Malin Array Be	29.94	326	P	P	19 05 47.2	-1.1
	comp=Z,0.6nm,0.5s,baz=129,slow=8.6,SNR=6.0						
ZALV	Zalesovo Beam	33.57	32	P	P	19 06 19.3	-0.9
	comp=Z,1.2nm,0.5s,baz=227,slow=9.0,SNR=5.2						
FINES	FINESS Array B	38.56	338	P	P	19 07 02.1	-0.7
	comp=Z,2.6nm,0.9s,baz=148,slow=8.2,SNR=3.5						
NB2	NORSAR Subarra	44.05	331	P	P	19 07 46.4	-1.6
	comp=Z,0.7nm,0.5s,baz=117,slow=7.9						
NOA	NORSAR Array B	44.05	331	P	P	19 07 46.7	-1.3
	comp=Z,23nm,0.5s,baz=118,slow=8.0,SNR=4.3						
TORD	Torodi Ar. Bea	51.99	265	P	P	19 08 48.7	-1.2
	comp=Z,1.1nm,0.6s,baz=55,slow=7.8,SNR=9.7						
DBIC	Dimbokro	60.66	261	P	P	19 09 51.9	0.0
	comp=Z,1.0nm,0.5s,baz=104,slow=4.2,SNR=3.3						
SEY	Seymchan	68.39	29	P	P	19 10 41.4	-0.3
	comp=Z,0.9nm,0.5s,baz=256,slow=23,SNR=9.2						
YKA	Yellowknife Ar	89.29	355	P	P	19 12 35.5	-0.8
	comp=Z,0.3nm,0.8s,baz=6.0,slow=5.0,SNR=4.3						

STR ***20*** *19:11:22.9±0.8, 51°N±8°×°±°, h0^{km}, M2.6/2, MLv2.6/2*
ISC 20 19:11:22.1±1.3**, 51°.41N**±0°.05×**2°.75E**±0°.03**, h14**^{km}±11^{km}**,**
n29, σ0^{s}.49/39**, 2C, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZEV	Zevekote	0.29	161	P	Pg	19 11 28.2	+0.1
BZEV				S	Sb	19 11 33.8	+0.1
ELSH	Elham, Standar	1.05	256	Pg	Pb	19 11 41.2	-0.8
BSKQ	Steenkerk	1.14	132	P	Pb	19 11 43.2	-0.2
BSKQ				S	Sn	19 11 58.1	-0.7
UCC	Uccle	1.19	121	P	Pb	19 11 44.0	-0.3
BRQR	Ronquire	1.23	130	P	Pb	19 11 45.0	-0.1
BBOU	Bougnies	1.27	143	P	Pn	19 11 44.6	-0.8
BMOL	Mol	1.48	97	P	Pb	19 11 49.0	-0.3
BMOL				S	Sb	19 12 08.9	+1.0
HMNX	Herstmonceux	1.62	251	Pn	Pb	19 11 51.7	+0.1
HMNX				Sg	Sg	19 12 14.6	+0.5
BMRD	Maredsous	1.69	130	P	Pb	19 11 52.3	-0.7
PPB4	Philisteinsche	1.72	43	ePg	Pn	19 11 51.9	+0.4
DOU	Dourbes	1.76	138	Pg	Pn	19 11 52.8	+0.6
DOU				Pg	Pb	19 11 54.8	+0.7
DOU				Sg	Sg	19 12 19.0	+0.2
DOU	Dourbes	1.76	138	⇑P	Pn	19 11 52.6	+0.5
DOU				S	Sg	19 12 18.4	-0.4
	comp=N,8.1nm,0.3s						
OTL4	Oterleek	1.77	46	ePg	Pn	19 11 52.4	+0.2
WMH4	Warmenhuizen	1.79	43	ePg	Pn	19 11 52.9	+0.4
BGES	Gesves	1.80	124	⇑P	Pn	19 11 53.1	+0.4
BGES				S	Sb	19 12 17.4	+0.1
	comp=E,17nm,0.3s						
BCLA	Clavier	1.90	121	P	Pn	19 11 54.3	+0.4
BCLA				S	Sg	19 12 22.2	-0.8
	comp=N,14nm,0.4s						
HGN	Heimansgroeve	2.11	107	ePn	Pn	19 11 57.0	+0.1
HGN				ePg	Pb	19 11 59.8	-0.3
MEM	Membach	2.21	110	P	Pn	19 11 58.5	+0.2
BHOU	Houvegnez	2.32	116	P	Pn	19 12 00.3	+0.5
VBG4	Venebrugge (Br	2.67	63	ePg	Pn	19 12 05.2	+0.6
HWF4	Haulerwijk	2.77	52	ePg	Pn	19 12 05.8	-0.1
ENV4	Elp / Enerveen	2.81	57	ePg	Pn	19 12 06.8	+0.2
ZL24	Zuidlaardervee	2.98	54	ePg	Pn	19 12 09.3	+0.4
ZLV4	Zuidlaardervee	2.98	54	ePg	Pn	19 12 09.3	+0.5
SPY4	Spijk (Roodesc	3.18	49	ePg	Pn	19 12 11.0	-0.5
FSW4	Finsterwolde 4	3.23	54	eSg	Pn	19 12 12.0	-0.3
ABH	Alteburg	3.42	115	Pn	Pn	19 12 15.3	+0.4
ECH	Echery	4.29	137	Pn	Pn	19 12 27.2	+0.4
KIZ	Kirchzarten	4.82	134	Pn	Pn	19 12 34.6	+0.5

NNC 20 19:12:00.7±1.3**, 42°.73N×79°.78E, h0**^{km}**, mb2.2, mpv1.9,**
4C, Error ellipse: s-maj=8.3km s-min=4.7km az=111.0,
Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	0.63	341	P	Pg	19 12 13.4	+0.6
	0.3nm,0.4s						
PDGK				S	Sg	19 12 22.1	+1.1
	1.2nm,0.4s						
PDGK	Podgornoye	0.63	341	⇑P	Pg	19 12 13.1	+0.3
	2.5nm,1.3s						
PDGK				⇑S	Sg	19 12 21.9	+0.9
	2.2nm,1.0s						
UZB	Uzynbulak	0.69	307	P	Pb	19 12 15.0	-0.7
	1.9nm,0.6s						
UZB				S	Sb	19 12 25.0	-0.9
	1.1nm,0.4s						
SATY	Saty	1.06	289	P	Pg	19 12 21.0	+0.1
	1.8nm,0.4s						
SATY				S	Sb	19 12 35.7	-0.7
	2.5nm,0.3s						
MDOK	Medeo	2.05	283	⇑Pg	Pn	19 12 36.9	+0.4
	0.6nm,0.5s						
MDOK				⇑Lg	Lg	19 13 03.6	
	4.6nm,1.2s						

ISCJB ***20*** *19:43:41.9±0.6, 54°.7S±0°.1×130°.0W±0°.2, h10^{km}, mb4.3/11, MS4.4/14, Error ellipse: s-maj=15.3km s-min=13.4km az=36.6*
IDC ***20*** *19:43:44.0±0.7, 55°.10S×130°.16W, h0^{km}, mb4.1/6, mb1 4.3/6, mb1mx4.1/27, mbtmp4.1/6, MS4.4/14, Ms1 4.4/14, ms1mx4.3/15, Error ellipse: s-maj=27.7km s-min=23.5km az=168.0*
NEIC ***20*** *19:43:44.6±0.4, 54°.93S×129°.79W, h10^{km}, mb4.6/3, Error ellipse: s-maj=20.6km s-min=11.8km az=181.0*
GCMT ***20*** *19:43:48.6±0.1, 55°.19S±0°.01×129°.62W±0°.01, h19^{km}, MW5.2/107, Moment Tensor Solution. s74,c110; s107,c173; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.07±.02; $M_{\theta\theta}$0.57±.02; $M_{\phi\phi}$-0.49±.01; $M_{r\theta}$-0.06±.03; $M_{\theta\phi}$0.66±.01; $M_{\phi r}$0.09±.03; Best double couple: $M_0$0.85600×10^{17} NP1:ϕ_s109.00000°, δ85.00000°, λ-6.00000°. NP2:ϕ_s200.00000°, δ84.00000°, λ-175.00000°. Principal axes: T 0.8840, Plg1.0000°, Azm155.0000°; N -0.0550, Plg82.0000°, Azm251.0000°; P -0.8280, Plg8.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 19:43:43.9±0.6**, 54°.7S**±0°.1×**130°.0W**±0°.1**, h10**^{km}**, n58,**
σ1^{s}.42/35**, mb4.5**/11**, MS4.5**/14**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	32.72	202	LR	LR	20 00 38.1	
	comp=Z,384nm,18.0s,baz=84,slow=31						
TBI	Tubuai	34.49	327	eT	T	20 27 08.0	
	227nm,0.4s						
QSPA	South Pole Qui	35.52	180	eP	P	19 50 39.5	-1.1
	52nm,1.8s						
QSPA	South Pole Qui	35.52	180	P	P	19 50 38.6	-2.1
	12nm,1.2s,baz=112,slow=6.6,SNR=7.9						
PPT2	Papeete2	39.95	330	eS	S	19 57 20.3	-3.3
	277nm,26.5s						
PPT2				eLR	LR	20 02 17.6	
	comp=Z,3μm,27.8s						
PPT	Papeete	39.97	330	LR	LR	20 03 42.5	
	comp=Z,647nm,18.8s,baz=192,slow=30						
GO06	Curarrehue	41.31	93	eP	P	19 51 28.1	-1.4
	18nm,1.4s						
VAH	Vaihoa	41.66	334	eT	T	20 36 05.2	
	300nm,0.3s						
PMOR	Pomariorio Ree	41.96	334	eT	T	20 36 41.3	
	14nm,0.3s						
TAOE	Nuku Hiva Isla	46.39	346	eS	S	19 58 56.7	-1.4
	409nm,26.9s						
VNA3	Neumayer Olymp	47.53	158	P	P	19 52 19.0	+0.2
TRQA	Tornquist	47.82	99	eP	P	19 52 19.2	-2.1
	23nm,1.4s						
VNA2	Neumayer--Watz	48.26	158	P	P	19 52 23.7	-0.7
	baz=223,slow=9.8						
VNA1	Neumayer--Stat	48.28	158	P	P	19 52 24.7	+0.3
SNAA	Sanae	48.62	160	P	P	19 52 26.7	-0.5
	1.8nm,0.9s,baz=187,slow=16,SNR=3.8						
MAW	Mawson	57.69	186	LR	LR	20 15 35.9	
	comp=Z,322nm,21.0s,baz=163,slow=33						
CPUP	Villa Florida	59.03	93	LR	LR	20 15 53.1	
	comp=Z,326nm,18.3s,baz=224,slow=33						
LPAZ	La Paz	60.64	76	eP	P	19 53 56.4	+0.6
LPAZ				epP	P	19 53 56.8	+1.1
LPAZ	La Paz	60.64	76	P	P	19 53 56.9	+1.2
	3.5nm,0.9s,baz=205,slow=8.6,SNR=8.3						
LPAZ				LR	LR	20 14 03.8	
	comp=Z,103nm,21.4s,baz=215,slow=30						
STKA	Stephens Creek	63.82	251	LR	LR	20 16 31.5	
	comp=Z,417nm,21.5s,baz=184,slow=31						
HNR	Honiara	70.86	281	LR	LR	20 19 40.3	
	comp=Z,91nm,18.5s,baz=160,slow=30						
BDFB	Brasilia	72.76	93	LR	LR	20 23 16.4	
	comp=Z,324nm,20.9s,baz=255,slow=33						
AS01	Alice Springs	74.43	251	eP	P	19 55 22.3	+0.1
ASAR	Alice Springs	74.46	251	P	P	19 55 21.4	-0.9
	0.7nm,0.7s,baz=134,slow=6.6,SNR=11						
ASAR				LR	LR	20 24 17.2	
	comp=Z,315nm,19.2s,baz=136,slow=33						
AS31	Alice Springs	74.46	251	eP	P	19 55 21.4	-1.0
	0.9nm,0.8s						
ROSC	El Rosal	75.02	58	eP	P	19 55 26.6	+0.6
	25nm,1.6s						
ROSC	El Rosal	75.02	58	LR	LR	20 22 38.5	
	comp=Z,143nm,19.6s,baz=182,slow=31						
H01W1	Cape Leeuwin H	75.23	230	T	T	21 18 53.0	
	baz=146,slow=76,SNR=366						
H01W2	Cape Leeuwin H	75.23	230	T	T	21 18 50.8	
	baz=146,slow=76,SNR=442						
H01W3	Cape Leeuwin H	75.25	230	T	T	21 18 52.3	
	baz=146,slow=76,SNR=417						
WR1	Warramunga Arr	77.19	254	eP	P	19 55 38.2	+0.2
	22nm,1.7s						
WRA	Warramunga Arr	77.19	254	P	P	19 55 38.2	+0.2
	1.1nm,0.7s,baz=142,slow=5.3,SNR=30						
WRA				LR	LR	20 26 15.3	
	comp=Z,234nm,19.3s,baz=140,slow=33						
TXAR	Lajitas Array	86.66	23	P	P	19 56 33.0	+5.6
	0.5nm,0.9s,baz=168,slow=9.2,SNR=6.3						
H11S2	WAKE ISLAND Hy	90.52	302	T	T	21 37 37.3	
	baz=145,slow=76,SNR=81						
H11S3	WAKE ISLAND Hy	90.53	302	T	T	21 37 38.3	
	baz=145,slow=76,SNR=56						
H11S1	WAKE ISLAND Hy	90.53	302	T	T	21 37 38.0	
	baz=145,slow=76,SNR=47						
H11N3	WAKE ISLAND Hy	91.46	303	T	T	21 38 43.8	
	baz=144,slow=75						
H11N1	WAKE ISLAND Hy	91.46	303	T	T	21 38 44.4	
	baz=144						
H11N2	WAKE ISLAND Hy	91.48	303	T	T	21 38 48.6	
	baz=144,slow=75						
NVAR	Mina Array Bea	93.25	9	LR	LR	20 31 29.2	
	comp=Z,189nm,18.0s,baz=194,slow=31						
BOSA	Boshof	94.37	158	LR	LR	20 34 08.6	
	comp=Z,246nm,20.1s,baz=190,slow=32						
PDAR	Pinedale Array	98.60	15	LR	LR	20 33 39.2	
	comp=Z,171nm,20.2s,baz=210,slow=30						
ILAR	Eielson Array	119.80	352	PKP	PKiKP	20 02 34.6	+1.8
	1.1nm,0.7s,baz=192,slow=2.0,SNR=12						
TORD	Torodi Ar. Bea	124.07	119	PKP	PKiKP	20 02 43.0	+0.2
	0.5nm,0.7s,baz=206,slow=1.2,SNR=3.9						
TOA1	Torodi Ar. Sit	124.08	119	ePKPdf	PKiKP	20 02 43.0	+0.2
ULN	Ulaanbaatar	144.56	283	ePKPdf	PKPdf	20 03 19.6	-0.2
SONA0	Songino Array	144.91	283	ePKPbc	PKPdf	20 03 21.5	+1.2
SONM	Songino Array	144.91	283	PKP	PKPdf	20 03 21.5	+1.2
	1.3nm,0.5s,baz=133,slow=1.7,SNR=11						
SONA1	Songino Array	144.91	283	ePKPbc	PKPdf	20 03 20.8	+0.4
KEST	Kesra	146.27	107	PKPbc	PKiKP	20 03 27.3	0.0
	4.5nm,1.0s,baz=245,slow=19,SNR=2.9						
GERES	GERESS Array B	156.96	90	PKP	PKPdf	20 03 40.8	+2.1
	0.4nm,0.7s,baz=326,slow=2.8,SNR=2.4						
MK31	Makanchi Array	158.27	262	ePKPab	PKPab	20 04 15.6	+1.0
MK32	Makanchi Array	158.27	262	ePKPab	PKPab	20 04 14.9	+0.3
MKAR	Makanchi Array	158.27	262	PKPab	PKPab	20 04 15.0	+0.3
	1.3nm,0.7s,baz=120,slow=4.2,SNR=12						
ZALV	Zalesovo Beam	159.81	282	PKPab	PKPab	20 04 24.3	+3.3
	0.9nm,0.6s,baz=64,slow=3.4,SNR=5.0						
ZAA1	Zalesovo Array	159.81	282	ePKPab	PKPab	20 04 24.3	+3.3
BR101	Keskin Array S	161.44	137	ePKPab	PKPab	20 04 28.6	-0.2
BRTR	Keskin Array B	161.44	137	PKPab	PKPab	20 04 28.6	-0.1
	1.2nm,0.7s,baz=188,slow=6.8,SNR=7.0						

CRAAG ***20*** *19:49:00.9, 35°.67N×1°.52W, Ml2.6*
ISCJB ***20*** *19:49:01.4±1.1, 35°.81N±0°.03×1°.53W±0°.04, h30^{km}±11^{km}, Error ellipse: s-maj=5.4km s-min=4.6km az=141.8*
CNRM ***20*** *19:49:03.3, 35°.82N×1°.92W, h3^{km}, ml2.7*
MDD ***20*** *19:49:03.0±1.6, 35°.76N×1°.53W, h26^{km}±17^{km}, mbLg2.2/9, Error ellipse: s-maj=8.0km s-min=5.6km az=5.0, PRXIMO*
ISC 20 19:49:01.5±1.4**, 35°.79N**±0°.03×**1°.51W**±0°.03**, h25**^{km}±15^{km}**,**
n30, σ1^{s}.57/49**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OLHC	Oulhaca	0.55	172	P	Pb	19 49 11.5	-1.1
OTSS	Djebel Tessala	0.77	131	P	Pn	19 49 17.2	+0.2
OTSS	Djebel Tessala	0.77	131	P	Pn	19 49 17.2	+0.2
EMEL	Melilla	1.28	248	P	Pn	19 49 23.7	-0.1
	26nm,0.2s,SNR=7.9						
EMEL				S	Sn	19 49 39.7	-0.4
	104nm,0.2s,SNR=7.9						
EBER	Berja	1.57	315	P	Pn	19 49 27.2	-0.8
	0.8nm,0.2s,SNR=8.2						
EBER				S	Sn	19 49 47.2	-0.4
	8.3nm,0.2s,SNR=8.5						
JBK	JBK	1.69	211	P	Pb	19 49 33.7	+1.5
JBK				S	Sb	19 49 55.9	+2.7
OKGL	Djebel Kef Gue	1.76	81	P	Pn	19 49 30.7	+0.2
	16nm,0.1s,SNR=7.9						
OKGL				S	Sn	19 49 52.9	+0.7
	55nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	2.02	303	P	Pn	19 49 33.1	-1.0
	0.8nm,0.1s,SNR=7.9						
ELGU				S	Sn	19 49 56.5	-2.0
	6.6nm,0.2s,SNR=7.9						
EMUR	La Murta	2.06	6	P	Pn	19 49 34.6	+0.1
	0.3nm,0.2s,SNR=7.9						
EMUR				S	Sn	19 49 58.2	-1.3
	3.2nm,0.2s,SNR=7.9						
EQUE	Quentar	2.10	313	P	Pn	19 49 35.9	+0.7
	0.5nm,0.1s,SNR=7.3						
EQUE				S	Sn	19 50 00.6	0.0
	1.3nm,0.2s						
EQES	Quesada	2.37	328	P	Pn	19 49 41.1	+2.2
	0.7nm,0.2s,SNR=7.9						
EQES				S	Sn	19 50 08.9	+1.7
	5.1nm,0.2s,SNR=7.9						
SESP	Santiago Espad	2.47	341	P	Pn	19 49 42.4	+2.1
	2.9nm,0.2s,SNR=7.9						
SESP				S	Sn	19 50 11.5	+1.7
	9.3nm,0.2s,SNR=7.9						
SESP	Santiago Espad	2.47	341	P	Pn	19 49 42.7	+2.4
SESP				S	Sb	19 50 13.8	-1.5
EGOR	Sierra Gorda,	2.48	303	P	Pn	19 49 41.4	+1.0
	0.3nm,0.3s,SNR=7.9						
EGOR				S	Sn	19 50 11.3	+1.3
	2.3nm,0.4s,SNR=7.9						
EMIJ	Mijas	2.75	287	P	Pn	19 49 43.1	-1.0
	0.6nm,0.1s,SNR=8.6						
EMIJ				S	Sn	19 50 13.3	-3.3
	4.4nm,0.2s						
ETOB	Tobarra	2.85	359	P	Pn	19 49 47.1	+1.6
	0.4nm,0.1s,SNR=19						
ETOB				S	Sn	19 50 19.1	+0.2
	3.2nm,0.2s						
EADA	Adamuz	3.41	315	S	Sn	19 50 32.8	-0.1
	0.6nm,0.3s,SNR=7.9						
FIGM	Figuig	3.66	177	S	Sb	19 50 47.3	-2.2
ECAB	El Cabril	3.87	307	P	Pn	19 50 01.3	+1.8
	0.1nm,0.2s,SNR=4.0						
ECAB				S	Sn	19 50 42.6	-1.6
	0.8nm,0.3s,SNR=7.9						
MDT	Midelt	3.93	222	S	Sn	19 50 47.3	+1.7
EIBI	Ibiza	3.95	34	P	Pn	19 50 01.1	+0.7
	1.1nm,0.1s,SNR=7.9						
EIBI				S	Sn	19 50 44.1	-1.9
	3.6nm,0.3s,SNR=7.9						
MD31	MD31	3.97	224	P	Pn	19 50 02.2	+1.3
MD31				S	Sn	19 50 48.5	+1.7
PAB	San Pablo	4.37	330	P	Pn	19 50 07.9	+1.5
	0.1nm,0.1s,SNR=7.9						
PAB				S	Sn	19 50 54.4	-2.3
	0.3nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	4.59	297	S	Sn	19 50 59.4	-2.5
	0.7nm,0.3s,SNR=7.9						
ETOS	Mallorca	5.24	39	P	Pn	19 50 19.4	+1.1
	0.4nm,0.1s,SNR=12						
ETOS				S	Sn	19 51 16.4	-1.5
	0.9nm,0.2s						
PVAQ	Vaqueiros	5.25	290	ePn	Pn	19 50 18.9	+0.5
PVAQ				eSn	Sn	19 51 08.6	-9.5
PVAQ				A	A	19 51 29.1	
	1.5nm,0.8s						
PVAQ	Vaqueiros	5.25	290	P	Pn	19 50 18.9	+0.5
PVAQ				S	Sn	19 51 08.6	-9.5
	1.5nm,0.8s						
EBAD	Badajoz	5.29	306	P	Pn	19 50 18.8	-0.2
	0.1nm,0.1s,SNR=7.9						
EBAD				S	Sn	19 51 16.2	-3.0
	0.7nm,0.2s,SNR=7.9						
PBDV	Barranco-do-Ve	5.37	288	ePn	Pn	19 50 20.9	+0.8
PBDV	Barranco-do-Ve	5.37	288	P	Pn	19 50 20.9	+0.8

IDC 20 19:59:07.7±5.9**, 49°.04S×120°.15E, h0**^{km}**, mb3.6**/2**,**
mb1 3.8/2**, mb1mx3.6**/20**, mbtmp3.6**/2**, MS3.5**/2**, Ms1 3.6**/2**,**
ms1mx3.2/9**, Error ellipse: s-maj=536.6km**
s-min=72.3km az=109.0, Western Indian-Antarctic
Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.81	340	T	T	20 18 25.2	
	baz=162,slow=73,SNR=13						
H01W1	Cape Leeuwin H	14.81	340	T	T	20 18 29.6	
	baz=162,slow=73,SNR=11						
H01W3	Cape Leeuwin H	14.83	340	T	T	20 18 28.4	
	baz=162,slow=73,SNR=14						
ASAR	Alice Springs	27.55	28	P	P	20 04 56.3	+0.1
	1.4nm,1.0s,baz=199,slow=7.9,SNR=4.7						
WRA	Warramunga Arr	31.19	26	P	P	20 05 28.3	-0.1
	0.3nm,0.8s,baz=198,slow=8.0,SNR=4.1						
VNDA	Vanda	32.67	164	LR	LR	20 17 36.9	
	comp=Z,122nm,19.2s,baz=304,slow=34						
KSRS	Korea Array	86.39	6	LR	LR	20 49 25.6	
	comp=Z,21nm,21.6s,baz=134,slow=35						
YKA	Yellowknife Ar	147.48	45	PKPbc	PKPbc	20 18 51.6	-0.7
	0.2nm,0.6s,baz=273,slow=1.8,SNR=4.8						

IDC ***20*** *20:12:34.6±0.7, 24°.86N×142°.66E, h0^{km}, mb3.8/15, mb1 4.0/17, mb1mx3.9/35, mbtmp3.8/17, ML3.6/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/29, Error ellipse: s-maj=24.0km s-min=13.5km az=88.0*
JMA ***20*** *20:12:37.6±0.4, 24°.88N×142°.89E, h125^{km}, M4.1*
NEIC ***20*** *20:12:40.1±1.4, 24°.91N×142°.52E, h37^{km}±11^{km}, mb4.5/5, Error ellipse: s-maj=14.5km s-min=8.7km az=86.0*
ISC 20 20:12:39.4±0.7**, 24°.93N**±0°.06×**142°.7E**±0°.1**, h32**^{km}**, n43,**
σ1^{s}.28/45**, mb3.9**/20**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.75	346	P	Pb	20 13 09.9	-0.9
JHHJ				S	Sb	20 13 35.2	+2.8
CBIJ	Chichi jima	2.20	349	ePn	Pn	20 13 14.3	+0.6
CBIJ				eSn	Sb	20 13 44.9	-0.5
CBIJ	Chichi jima	2.20	349	P	Pb	20 13 15.6	-2.9
CBIJ				S	Sb	20 13 43.9	-1.4
JCJ	Chichijima	2.20	349	Pn	Pn	20 13 14.3	+0.6
	42nm,0.3s,baz=64,slow=22,SNR=10						
JCJ				Sn	Sb	20 13 44.8	-0.5
	86nm,0.3s,baz=72,slow=23,SNR=13						
MJAR	Matsushiro Arr	12.19	343	Pn	Pn	20 15 30.5	-0.3
	0.2nm,0.3s,baz=162,slow=10,SNR=9.6						
MAJO	Matsushiro	12.19	343	ePn	Pn	20 15 30.5	-0.3
JNU	Nakatsue	13.14	311	LR	LR	20 19 52.2	
	comp=Z,58nm,21.4s,baz=160,slow=33						
KSRS	Korea Array	17.72	318	P	P	20 16 47.1	+2.9
	0.2nm,0.3s,baz=123,slow=12,SNR=9.6						
KSRS				LR	LR	20 23 29.4	
	comp=Z,70nm,18.4s,baz=139,slow=37						
KSAR	Wonju Array Be	17.73	318	P	P	20 16 47.1	+2.7
USRK	Ussuriysk Ar.	21.10	338	P	P	20 17 21.9	+0.7
	1.9nm,0.6s,baz=147,slow=8.6,SNR=4.8						
H11S3	WAKE ISLAND Hy	23.20	101	T	T	20 41 38.6	
	baz=294						
H11S1	WAKE ISLAND Hy	23.21	101	T	T	20 41 39.8	
	baz=294						
H11S2	WAKE ISLAND Hy	23.22	101	T	T	20 41 38.9	
	baz=294						
KLR	Kul'dur	25.72	343	P	P	20 18 08.3	+1.6
	2.2nm,0.8s,baz=159,slow=7.7,SNR=9.3						

SONA0	Songino Array	36.59	318	eP	P	20 19 41.2	-1.4
SONM	Songino Array	36.59	318	P	P	20 19 41.2	-1.4
	0.3nm,0.5s,baz=110,slow=8.3,SNR=3.5						
SONM				LR	LR	20 35 40.6	
	comp=Z,55nm,18.3s,baz=174,slow=38						
SEY	Seymchan	38.54	7	P	P	20 20 00.4	+1.7
	0.5nm,0.3s,baz=143,slow=20,SNR=2.8						
CMAR	Chiang Mai Arr	41.00	270	P	P	20 20 21.4	+1.6
	0.5nm,0.7s,baz=64,slow=7.9,SNR=4.8						
WB2	Warramunga Arr	45.33	191	eP	P	20 20 54.0	-0.6
WR1	Warramunga Arr	45.33	191	eP	P	20 20 54.7	+0.1
	16nm,1.5s						
WRA	Warramunga Arr	45.33	191	P	P	20 20 54.7	+0.1
	0.7nm,0.4s,baz=7.9,slow=8.4,SNR=24						
ASAR	Alice Springs	49.05	191	P	P	20 21 23.0	-0.5
	0.5nm,1.0s,baz=7.8,slow=7.5,SNR=3.1						
ZALV	Zalesovo Beam	51.41	320	P	P	20 21 40.6	-0.5
	0.6nm,0.5s,baz=94,slow=7.2,SNR=3.8						
ZAA1	Zalesovo Array	51.41	320	eP	P	20 21 40.5	-0.6
MK01	Makanchi Array	52.19	311	eP	P	20 21 46.3	-0.8
MK31	Makanchi Array	52.20	311	eP	P	20 21 44.6	-2.5
	3.0nm,1.5s						
MK32	Makanchi Array	52.20	311	eP	P	20 21 46.9	-0.3
MK32				ePcP	PcP	20 22 57.8	-0.6
MKAR	Makanchi Array	52.20	311	eP	P	20 21 44.9	-2.2
	5.5nm,0.9s						
MKAR				PcP	PcP	20 22 57.8	-0.6
MKAR	Makanchi Array	52.20	311	P	P	20 21 46.8	-0.3
	1.0nm,0.9s,baz=92,slow=8.2,SNR=7.4						
MKAR				PcP	PcP	20 22 57.8	-0.6
	0.4nm,0.8s,baz=86,slow=3.5,SNR=2.8						
STKA	Stephens Creek	56.50	181	P	P	20 22 17.9	-0.5
	1.6nm,0.8s,baz=41,slow=20,SNR=2.1						
ILAR	Eielson Array	59.41	28	P	P	20 22 38.9	+0.5
	0.3nm,0.7s,baz=234,slow=7.5,SNR=3.0						
KBL	Kabul	63.39	298	eP	P	20 23 04.7	-1.5
	2.9nm,0.8s						
ABKAR	Akbulak array	66.92	315	eP	P	20 23 27.7	-0.9
	9.8nm,1.8s						
YKA	Yellowknife Ar	73.83	28	P	P	20 24 11.0	+0.5
	0.6nm,0.7s,baz=293,slow=5.9,SNR=9.0						
YKB5	Yellowknife Ar	73.83	28	eP	P	20 24 10.3	-0.3
KBZ	Khabaz	79.80	313	P	P	20 24 45.3	+0.8
	1.2nm,0.7s,baz=229,slow=19,SNR=2.7						
FIA0	FINESS Array S	80.07	334	eP	P	20 24 46.2	+0.5
FINES	FINESS Array B	80.07	334	P	P	20 24 46.2	+0.5
	1.8nm,0.5s,baz=68,slow=4.7,SNR=13						
NVAR	Mina Array Bea	81.51	52	P	P	20 24 54.5	+0.3
	0.2nm,0.3s,baz=266,slow=5.9,SNR=2.1						
NB2	NORSAR Subarra	85.77	339	P	P	20 25 14.9	-0.4
	comp=Z,0.8nm,0.6s,baz=45,slow=4.8						
NB200	NORSAR Array S	85.77	339	eP	P	20 25 15.2	-0.1
NOA	NORSAR Array B	85.77	339	P	P	20 25 15.2	-0.1
	comp=Z,2.2nm,0.9s,baz=48,slow=4.6,SNR=6.6						
GERES	GERESS Array B	93.58	329	LR	LR	21 08 16.9	
	comp=Z,49nm,20.2s,baz=318,slow=36						

*IDC **20** 20:15:04.8±2.2, 37°.85N×142°.04E, h0^{km}, mb3.5/2, mb1 3.5/3, mb1mx3.2/34, mbtmp3.3/3, ML2.3/1, MS4.0/1, Ms1 4.1/1, ms1mx2.5/25, Error ellipse: s-maj=43.5km s-min=34.3km az=69.0*

*JMA **20** 20:15:08.1±0.1, 37°.80N×141°.77E, h24^{km}±1^{km}, M3.5*

ISC 20 20:15:07.2±1.8**, 37°.82N**±0°.04×**141°.83E**±0°.08**, h13**^{km}±10^{km}**, n22, σ1^{s}57**/27**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.57	330	P	Pg	20 15 19.3	+0.9
JIKH				eS	Sg	20 15 26.5	+0.5
JIO	Ouri	0.74	329	P	Pg	20 15 22.0	+0.4
JIO				S	Sg	20 15 31.1	-0.2
JMM	Marumori	0.82	274	P	Pb	20 15 22.7	-0.7
JMM				S	Sb	20 15 32.5	-2.0
JFK	Kawauchi	0.89	240	P	Pb	20 15 23.3	-1.2
JFK				eS	Sb	20 15 34.0	-2.2
JKMT	Kesennumamotoy	1.03	344	P	Pb	20 15 26.7	-0.2
JKMT				eS	Sb	20 15 39.5	-0.9
JOU	Okura	1.07	301	P	Pn	20 15 27.5	-0.5
JOU				S	Sb	20 15 41.0	-0.6
ONAJ	Iwakimizuishiy	1.09	229	P	Pb	20 15 26.6	-1.4
ONAJ				eS	Sb	20 15 39.7	-2.5
JFT	Otama	1.23	256	P	Pn	20 15 29.4	-0.7
JFT				eS	Sb	20 15 44.3	-1.7
JMK	Ichinoseki	1.23	337	P	Pn	20 15 29.8	-0.4
JMK				eS	Sb	20 15 45.2	-0.9
OFUJ	Ofunato	1.27	354	P	Pn	20 15 30.0	-0.7
JYS	Shirataka	1.45	287	P	Pn	20 15 33.6	+0.4
JYS				S	Sn	20 15 52.0	-0.2
MJAR	Matsushiro Arr	3.16	247	Pn	Pn	20 15 58.5	+1.8
	0.3nm,0.3s,baz=81,slow=16,SNR=9.2						
MJAR				Sn	Sn	20 16 37.7	+3.3
	0.3nm,0.3s,baz=299,slow=31,SNR=3.6						
MAT	Matsushiro	3.16	247	P	Pn	20 16 00.2	+3.4
MAT				S	Sn	20 16 36.3	+1.9
H11N2	WAKE ISLAND Hy	28.27	123	T	T	20 50 27.0	
	baz=315,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	28.28	123	T	T	20 50 26.8	
	baz=315,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	28.29	123	T	T	20 50 31.3	
	baz=315,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	29.02	125	T	T	20 51 28.3	
	baz=317,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.02	125	T	T	20 51 25.4	
	baz=317,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	29.03	125	T	T	20 51 21.4	
	baz=317,slow=76,SNR=15						
ZALV	Zalesovo Beam	41.64	312	P	P	20 22 55.2	+0.2
	0.3nm,0.4s,baz=107,slow=9.2,SNR=2.4						
ILAR	Eielson Array	48.65	33	LR	LR	20 43 17.6	
	comp=Z,158nm,20.5s,baz=184,slow=35						
WRA	Warramunga Arr	57.88	188	P	P	20 24 58.7	-0.2
	0.3nm,0.5s,baz=5.8,slow=7.3,SNR=3.8						

*ISCJB **20** 21:01:26.9±0.5, 19°.92S±0°.03×69°.13W±0°.08, h108^{km}±6^{km}, mb3.8/2, Error ellipse: s-maj=11.7km s-min=4.7km az=180.0*

*GUC **20** 21:01:28.5±0.8, 19°.97S×69°.22W, h93^{km}±4^{km}, ML3.9*

*IDC **20** 21:01:29.7±1.8, 19°.96S×68°.79W, h126^{km}±15^{km}, mb3.7/2, mb1 3.8/6, mb1mx3.4/47, mbtmp4.0/6, Error ellipse: s-maj=31.4km s-min=21.6km az=101.0*

ISC 20 21:01:26.8±0.8**, 19°.93S**±0°.04×**69°.13W**±0°.07**, h102**^{km}±7^{km}**, n26, σ1^{s}44**/34**, 8D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.21	185	⇓eP	Pn	21 01 42.5	+0.7
PB08				eS	Sn	21 01 53.8	+0.8
PB08				IAML		21 01 56.1	
	comp=E,4μm,0.2s						
PB11	IPOC Station P	0.52	289	⇓eP	Pn	21 01 43.5	+0.3
PB11				eS	Sn	21 01 54.9	-0.5
PB11				IAML		21 01 56.2	
	comp=E,12μm,0.3s						
MNMC	Minye Minye	0.91	331	⇓eP	Pn	21 01 47.9	+1.2
MNMC				eS	Sn	21 02 02.8	+1.2
MNMC				IAML		21 02 03.6	
	comp=E,9μm,0.4s						
PSGC	Pisagua	0.99	289	⇓eP	Pn	21 01 47.7	+0.3
PSGC				eS	Sn	21 02 02.9	0.0
PSGC				IAML		21 02 06.8	
	comp=E,2μm,0.3s						
PB01	IPOC Station P	1.16	197	⇓eP	Pn	21 01 50.2	+0.9
PB01				eS	Sn	21 02 06.4	+0.2
PB02	IPOC Station P	1.56	207	eP	Pn	21 01 55.0	+1.0
PB02				eS	Sn	21 02 15.2	+0.5
PB02				IAML		21 02 23.6	
	comp=E,4μm,0.1s						
PB12	IPOC Station P	1.73	319	⇓eP	Pn	21 01 56.4	+0.3
PB12				eS	Sn	21 02 19.6	+1.2
PB12				IAML		21 02 23.7	
	comp=E,2μm,0.2s						
PB09	IPOC Station P	1.86	183	⇓eP	Pn	21 01 59.7	+1.8
PB09				⇓eS	Sn	21 02 22.7	+1.2
PB09				IAML		21 02 28.7	
	comp=E,837nm,0.4s						
PB07	IPOC Station P	1.92	201	eP	Pn	21 01 60.0	+1.3
PB07				eS	Sn	21 02 24.0	+1.0
PB03	IPOC Station P	2.19	195	eP	Pn	21 02 03.5	+1.4
PB03				eS	Sn	21 02 29.8	+0.7
PB03				IAML		21 02 38.1	
	comp=E,1μm,0.2s						
PB04	IPOC Station P	2.57	201	eP	Pn	21 02 09.0	+1.8
PB04				eS	Sn	21 02 39.7	+1.6
LVC	Limon Verde	2.67	176	P	Pn	21 02 11.6	+2.9
	comp=E,14nm,0.3s,baz=5.1,slow=9.0,SNR=40						
LVC				S	Sn	21 02 37.5	-3.3
	comp=E,31nm,0.3s,baz=347,slow=5.9,SNR=14						
LPAZ	La Paz	3.75	15	P	Pn	21 02 26.2	+3.0
	comp=E,1.9nm,0.3s,baz=188,slow=7.9,SNR=31						
LPAZ				S	Sn	21 03 08.0	+1.2
	comp=E,0.9nm,0.3s,baz=245,slow=8.7,SNR=2.0						
SIV	San Ignacio	8.61	64	P	Pn	21 03 27.6	-1.2
	comp=E,3.5nm,0.3s,baz=267,slow=10,SNR=59						
CPUP	Villa Florida	12.59	123	P	Pn	21 04 21.1	-1.2
	comp=E,0.1nm,0.3s,baz=302,slow=11,SNR=5.4						
TORD	Torodi Ar. Bea	77.03	71	P	P	21 13 07.7	-1.5
	comp=E,0.4nm,0.4s,baz=245,slow=5.7,SNR=13						
YKA	Yellowknife Ar	89.64	341	P	P	21 14 13.4	+0.6
	comp=E,1.1nm,0.6s,baz=133,slow=4.8,SNR=14						
H11S2	WAKE ISLAND Hy	127.46	278	T	T	23 40 20.1	
	baz=108,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	127.48	278	T	T	23 40 21.3	
	baz=100,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	127.50	280	T	T	23 40 17.7	
	baz=101,slow=75,SNR=5.2						
H11N2	WAKE ISLAND Hy	127.51	280	T	T	23 40 11.3	
	baz=101,slow=75,SNR=4.2						
H11N1	WAKE ISLAND Hy	127.52	280	T	T	23 40 07.0	
	baz=101,slow=75,SNR=4.3						
ASAR	Alice Springs	131.19	208	PKP	PKPdf	21 20 27.4	-0.4
	comp=E,0.3nm,0.7s,baz=106,slow=1.3,SNR=3.6						
WRA	Warramunga Arr	134.19	212	PKP	PKPdf	21 20 33.9	+0.5
	comp=E,0.6nm,1.0s,baz=147,slow=1.5,SNR=5.4						
MKAR	Makanchi Array	144.48	34	PKP	PKPab	21 20 48.1	-1.8
	comp=E,0.1nm,0.4s,baz=169,slow=0.7,SNR=3.5						
SONM	Songino Array	151.93	6	PKPbc	PKPbc	21 21 10.3	+0.2
	comp=E,0.5nm,0.4s,baz=319,slow=2.7,SNR=4.2						

IDC 20 21:08:13.0±2.7**, 49°.98N**×**114°.41W, h0**^{km}**, mb1 4.0**/2**, mb1mx3.3**/49**, mbtmp3.6**/2**, ML3.4**/1**, Error ellipse: s-maj=49.7km s-min=11.9km az=113.0, British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	Newport	2.48	227	Pn	Pn	21 08 55.7	+1.1
	baz=28,slow=8.6,SNR=1.0						
NEW				Sn	Sb	21 09 27.8	-1.6
	3.4nm,0.3s,baz=302,slow=24,SNR=2.8						
I56US	NEWPORT INFRAS	2.48	227	*i*		21 27 30.0	
	baz=46,slow=325,SNR=8.6						
I10CA	LAC DU BONNET	11.81	82	*i*		22 27 20.0	
	baz=273,slow=312,SNR=1.8						
YKA	Yellowknife Ar	12.55	360	Pn	Pn	21 11 09.4	-3.2
	0.3nm,0.3s,baz=182,slow=13,SNR=17						
YKA				Sn	Sn	21 13 20.9	-12
	0.1nm,0.3s,baz=179,slow=22,SNR=4.6						
YKA				Lg	Lg	21 14 40.2	
	0.0nm,0.3s,baz=213,slow=35,SNR=2.9						

IDC 20 21:10:04.4±2.9**, 28°.88S**×**62°.00E, h0**^{km}**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/39**, mbtmp3.6**/5**, Error ellipse: s-maj=90.2km s-min=43.1km az=48.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	59.06	42	P	P	21 20 06.5	0.0
	0.8nm,0.7s,baz=232,slow=8.0,SNR=7.1						
WRA	Warramunga Arr	65.59	100	P	P	21 20 50.5	0.0
	0.6nm,0.9s,baz=240,slow=6.3,SNR=3.0						
MKAR	Makanchi Array	77.52	14	P	P	21 22 01.9	+0.2
	0.2nm,0.6s,baz=206,slow=6.3,SNR=2.6						
ZALV	Zalesovo Beam	84.82	13	P	P	21 22 40.5	+0.2
	0.5nm,0.5s,baz=214,slow=4.9,SNR=3.1						
SONM	Songino Array	86.15	28	P	P	21 22 46.9	-0.4
	0.2nm,0.4s,baz=225,slow=3.7,SNR=2.7						
YKA	Yellowknife Ar	146.31	357	PKPbc	PKPdf	21 29 45.4	+0.3
	0.6nm,0.7s,baz=351,slow=3.2,SNR=12						

*BJI **20** 21:11:32.9, 39°.78N×74°.29E, h8^{km}, ML3.3/5*

*KRNET **20** 21:11:34.0±0.1, 39°.66N×74°.55E, mb3.4*

*SOME **20** 21:11:36.5, 39°.85N×74°.32E, h10^{km}*

*NNC **20** 21:11:36.6±1.2, 39°.84N×74°.46E, h0^{km}, mb4.1, mpv3.6, Error ellipse: s-maj=10.4km s-min=2.8km az=164.0*

ISC 20 21:11:34.3±1.4**, 39°.50N**±0°.06×**74°.43E**±0°.03**, h10**^{km}±12^{km}**, n65, σ1^{s}61**/97**, 33C-18D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.88	306	⇓P	Pg	21 11 50.8	-0.3
	33nm,0.3s						
SFK				⇑S	Sb	21 12 02.3	-1.3
	556nm,0.3s						
SFK	Sufi-Kurgan	0.88	306	⇓*i*P	Pg	21 11 50.9	-0.3
	baz=95						
SFK				⇓*i*S	Sb	21 12 02.2	-1.3
	baz=95						
KSH	Kashi	1.20	89	Pg	Pn	21 11 52.6	-4.5
KSH				Sg	Sb	21 12 05.0	-7.7
KSH				smax	smax		
	comp=N,940nm,0.2s						
KSH				smax	smax		
	comp=E,1μm,0.2s						
KSH	Kashi	1.20	89	⇑*i*P	Pn	21 11 52.7	-4.4
	baz=97						
KSH				⇑*i*S	Sb	21 12 07.3	-5.4
	baz=97						
DRK	Karamyk	2.03	270	⇓*i*P	Pg	21 12 13.5	+0.3
	baz=66						
DRK				⇓*i*S	Sg	21 12 41.5	+1.9
	baz=66						
ARSB	Arslanbob	2.13	329	⇑*i*P	Pb	21 12 11.6	-1.4
	baz=25						
ARSB				⇑*i*S	Sb	21 12 38.1	-1.4
	baz=25						
NRN	Naryn	2.27	31	⇑*i*P	Pn	21 12 12.3	+0.2
	baz=31						
NRN				⇑*i*S	Sn	21 12 39.4	-1.0
	baz=31						
ARLS	Aral	2.36	358	⇑*i*P	Pn	21 12 13.8	+0.6
	baz=56						
ARLS				⇑*i*S	Sb	21 12 42.1	-4.1
	baz=56						
KZA	Kyzart	2.65	13	P	Pb	21 12 20.4	-1.6
	SNR=42						
KZA	Kyzart	2.65	13	⇓eP	Pn	21 12 17.8	+0.4
	baz=12						
KZA				⇓*i*S	Sn	21 12 49.5	-0.3
	baz=12						
AML	Almayashu	2.69	348	P	Pn	21 12 19.0	+1.2
	SNR=81						
UCH	Uchtor	2.73	1	P	Pn	21 12 19.8	+1.3
	SNR=33						
UCH	Uchtor	2.73	1	⇑eP	Pn	21 12 19.3	+0.8
	baz=59						
UCH				⇑*i*S	Sn	21 12 51.4	-0.3
	baz=59						
BTK	Batken	2.83	282	⇓eP	Pb	21 12 23.9	-1.1
	baz=79						
BTK				⇓*i*S	Sb	21 12 59.5	-0.3
	baz=79						
ARK	Arkit	2.96	322	⇑*i*P	Pn	21 12 22.8	+1.4
	baz=18						
ARK				⇑*i*S	Sn	21 12 57.7	+0.6
	baz=18						
ULHL	Ulahol	3.07	26	P	Pb	21 12 27.3	-1.8
	SNR=17						
ULHL	Ulahol	3.07	26	⇑eP	Pn	21 12 23.4	+0.4
	baz=26						
ULHL				⇑*i*S	Sn	21 12 59.8	0.0
	baz=26						
AAK	Ala-Archa	3.13	1	P	Pn	21 12 25.9	+2.1
	SNR=25						
AAK	Ala-Archa	3.13	1	⇓Pn	Pn	21 12 25.4	+1.6
	28nm,0.6s						
AAK				⇑Lg	Lg	21 13 07.5	
	38nm,0.6s						
KBK	Karagaybulak	3.18	7	P	Pn	21 12 26.1	+1.6
	SNR=17						
KBK	Karagaybulak	3.18	7	⇑*i*P	Pn	21 12 25.5	+1.1
	baz=6.0						
KBK				⇑*i*S	Sn	21 13 01.9	-0.5
	baz=6.0						
EKS2	Erkin-Say	3.20	351	P	Pb	21 12 31.9	+0.7
	SNR=8.0						
BOOM	Boomskoye usch	3.20	21	⇑*i*P	Pn	21 12 25.5	+0.8
	baz=20						
BOOM				⇑*i*S	Sn	21 13 02.0	-1.0
	baz=20						
MNAS	Manas	3.32	335	⇑Pn	Pn	21 12 27.5	+1.2
	5.4nm,0.4s						
MNAS				⇑Lg	Lg	21 13 12.4	
	20nm,0.5s						
MNAS	Manas	3.32	335	Pg	Pn	21 12 27.9	+1.5
	1.7nm,0.4s						
MNAS				Lg	Lg	21 13 07.3	
	8.9nm,0.4s						
MNAS	Manas	3.32	335	⇑*i*P	Pn	21 12 27.7	+1.4
	baz=32						
MNAS				⇑*i*S	Sn	21 13 05.5	-0.4
	baz=32						
KDJ	Kajisay	3.36	38	⇑*i*P	Pn	21 12 28.0	+1.1
	baz=38						
KDJ				⇑*i*S	Sn	21 13 06.6	-0.3
	baz=38						
MRKS	Merke	3.37	345	Pg	Pn	21 12 28.6	+1.7
	4.3nm,0.4s						
MRKS				Lg	Lg	21 13 08.7	
	17nm,0.5s						
MRKS	Merke	3.37	345	eP	Pb	21 12 30.6	-3.5
	6.2nm,0.5s						
MRKS				eS	Sb	21 13 08.7	-6.3
	17nm,0.5s						
CHMS	Chumysh	3.50	4	P	Pn	21 12 31.0	+2.2
	SNR=7.8						
TKM2	Tokmak 2	3.53	14	P	Pn	21 12 31.1	+1.8
	SNR=11						
TKM2	Tokmak 2	3.53	14	⇓Pn	Pn	21 12 30.2	+0.9
	8.7nm,0.4s						
TKM2				⇑Lg	Lg	21 13 19.4	
	44nm,0.5s						
TKM2	Tokmak 2	3.53	14	⇓*i*P	Pn	21 12 30.3	+1.0
	baz=13						
TKM2				⇓*i*S	Sn	21 13 10.4	-0.8
	baz=13						
USP	Ospenovka	3.76	1	⇑*i*P	Pn	21 12 33.1	+0.7
	baz=59						
USP				⇑*i*S	Sn	21 13 15.9	-0.8
	baz=59						
DGS	Degeres	3.87	15	Pg	Pb	21 12 41.5	-1.2
	41nm,0.8s						
DGS				Lg	Lg	21 13 29.5	
	66nm,0.5s						
DGS	Degeres	3.87	15	eP	Pb	21 12 41.2	-1.5
	41nm,0.8s						
DGS				eS	Sb	21 13 28.9	-0.7
	66nm,0.5s						
IZV	Izvestkoviy	3.90	24	Pg	Pb	21 12 42.7	-0.5
IZV				Lg	Lg	21 13 31.9	
IZV	Izvestkoviy	3.90	24	eP	Pb	21 12 43.7	+0.6
	10nm,0.5s						
IZV				eS	Sb	21 13 31.4	+1.0
	26nm,0.4s						
SGDS	Sogindy	3.95	2	Pg	Pb	21 12 42.8	-1.2
	6.9nm,0.5s						
SGDS				Lg	Lg	21 13 32.0	
	22nm,0.6s						
TNSS	Tian-Shan	4.01	27	Pg	Pb	21 12 45.1	-0.1
	25nm,0.6s						
TNSS				Lg	Lg	21 13 36.1	
	37nm,0.7s						
TNSS	Tian-Shan	4.01	27	eP	Pb	21 12 45.9	+0.7
	13nm,0.4s						
TNSS				eS	Sb	21 13 35.5	+1.6
	37nm,0.7s						
MDOK	Medeo	4.16	28	Pg	Pb	21 12 46.4	-1.2
	15nm,0.7s						
MDOK				⇓Lg	Lg	21 13 38.2	
	18nm,0.5s						
MDOK	Medeo	4.16	28	eP	Pb	21 12 46.6	-1.0
	8.5nm,0.7s						
MDOK				eS	Sb	21 13 37.6	-0.3
	28nm,0.5s						
KNDC	Almaty	4.18	26	⇓Pg	Pb	21 12 47.8	-0.1
	32nm,0.5s						
KNDC				⇑Lg	Lg	21 13 40.0	
	117nm,1.0s						
KOTS	Kotyrbulak	4.24	28	eP	Pb	21 12 49.0	0.0
	10nm,0.4s						
KOTS				eS	Sb	21 13 41.8	+1.5
	40nm,0.6s						
IUG	Iuzhnay	4.25	310	Pg	Pn	21 12 42.1	+2.9
	31nm,0.3s						
IUG				Lg	Lg	21 13 31.5	
	56nm,0.5s						
IUG	Iuzhnay	4.25	310	eP	Pb	21 12 47.6	-1.6
	18nm,0.3s						
IUG				eS	Sb	21 13 39.9	-0.7
	21nm,0.4s						
KTBS	Karatobe	4.54	21	Pg	Pb	21 12 54.1	+0.2
	17nm,0.3s						
KTBS				Lg	Lg	21 13 50.9	
	42nm,0.7s						
KTBS	Karatobe	4.54	21	eP	Pb	21 12 54.2	+0.3
	11nm,0.4s						
KTBS				eS	Sb	21 13 49.8	+1.1
	42nm,0.7s						
KUU	Kurty	4.62	17	Pg	Pb	21 12 55.0	-0.3
	4.2nm,0.5s						
KUU				Lg	Lg	21 13 52.8	
	16nm,0.6s						
KUU	Kurty	4.62	17	eP	Pb	21 12 55.8	+0.5
	5.3nm,0.6s						
KUU				eS	Sb	21 13 52.3	+1.4
	16nm,0.6s						
SATY	Saty	4.65	39	Pg	Pb	21 12 55.7	-0.3
	17nm,0.5s						
SATY				Lg	Lg	21 13 54.0	
	36nm,0.9s						
SATY	Saty	4.65	39	eP	Pb	21 12 56.8	+0.8
	17nm,0.5s						
SATY				eS	Sb	21 13 54.0	+1.9
	36nm,0.9s						
KK31	Karatay Array	4.65	322	⇑Pn	Pn	21 12 45.9	+1.4
	0.6nm,0.3s,baz=122,slow=12,SNR=30						
KK31				⇑Pg	Pb	21 12 56.4	+0.5
	1.4nm,0.3s,baz=136,slow=15,SNR=7.0						
KK31				⇑Sn	Sn	21 13 38.5	-0.1
	3.1nm,0.4s,baz=137,slow=22,SNR=3.8						
KK31				⇓Lg	Lg	21 13 56.6	
	2.2nm,0.3s,baz=131,slow=28,SNR=4.1						
CHKK	Chushkaly	4.75	23	Pg	Pb	21 12 58.0	+0.4
	5.3nm,0.2s						
CHKK				Lg	Lg	21 13 57.8	
	17nm,0.7s						
CHKK	Chushkaly	4.75	23	eP	Pb	21 12 59.4	+1.7
	5.2nm,0.3s						
CHKK				eS	Sb	21 13 57.8	+2.9
	17nm,0.7s						
KURS	Kuram	4.88	34	Pg	Pb	21 12 60.0	+0.2
	9.1nm,0.9s						
KURS				Lg	Lg	21 14 01.3	
	14nm,0.9s						
KURS	Kuram	4.88	34	eP	Pb	21 13 01.0	+1.2
	9.1nm,0.9s						
KURS				eS	Sb	21 14 01.3	+2.8
	14nm,0.9s						
UZB	Uzynbulak	5.03	42	Pg	Pb	21 13 02.1	-0.2
	5.4nm,0.8s						
UZB				Lg	Lg	21 14 05.4	
	11nm,0.7s						
UZB	Uzynbulak	5.03	42	eP	Pb	21 13 03.5	+1.2
	5.4nm,0.8s						
UZB				eS	Sb	21 14 05.4	+2.6
	11nm,0.7s						
SHLS	Shalkode	5.26	44	Pg	Pg	21 13 12.5	-2.6
	7.8nm,0.6s						
SHLS				Lg	Lg	21 14 22.9	
	20nm,0.8s						
ARXS	Arharly	5.35	27	Pg	Pb	21 13 08.0	+0.2
	5.8nm,0.6s						
ARXS				Lg	Lg	21 14 14.9	
	19nm,0.9s						
ARXS	Arharly	5.35	27	eP	Pb	21 13 09.3	+1.5
	5.8nm,0.6s						
ARXS				eS	Sb	21 14 14.9	+2.8
	19nm,0.9s						
PDGK	Podgornoye	5.40	43	Pg	Pb	21 13 07.8	-0.8
	1.4nm,0.6s						
PDGK				Lg	Lg	21 14 15.3	
	8.1nm,1.0s						
PDGK	Podgornoye	5.40	43	⇓Pg	Pb	21 13 08.4	-0.2
	10nm,0.8s						

PDGK				⇓Lg	Lg	21 14 21.6	
	19nm,0.8s						

ROM ***20*** *21:15:35.8±0.1, 44°.036N±0°.005×11°.701E±0°.006, h6^{km}, ML2.3/22*
ISCJB ***20*** *21:15:36.3±0.3, 44°.02N±0°.02×11°.71E±0°.02, h8^{km}±2^{km}, Error ellipse: s-maj=3.4km s-min=2.2km az=28.8*
LDG ***20*** *21:15:37.2±0.2, 44°.00N×11°.66E, h10^{km}, Ml2.5/20, Error ellipse: s-maj=4.1km s-min=2.9km az=58.0*
ISC 20 21:15:36.6±0.8, **43°.99N**±0°.02×**11°.64E**±0°.02, **h16**^{km}±5^{km}, **n65**, σ**2^{s}.40**/103, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRIS	**BRISIGHELLA**	**0.18**	**329**	P	**Pg**	**21 15 40.2**	**-0.9**
BRIS				S	**Sg**	**21 15 44.1**	**-0.1**
SEI	**Scarperia**	**0.21**	**286**	P	**Pg**	**21 15 41.1**	**-0.6**
SEI				S	**Sg**	**21 15 45.5**	**+0.4**
SEI				AML	AML		
	comp=E,5360μm,1.1s						
SEI				AML	AML		
	comp=N,17650μm,0.2s						
SEI				AML	AML		
	comp=E,5360μm,1.1s						
SEI				AML	AML		
	comp=N,17650μm,0.2s						
SEI				AML	AML		
	comp=E,5360μm,1.1s						
SEI				AML	AML		
	comp=N,17650μm,0.2s						
SEI				AML	AML		
	comp=E,5360μm,1.1s						
SEI				AML	AML		
	comp=N,17650μm,0.2s						
ASQU	**Asqua**	**0.22**	**152**	P	**Pg**	**21 15 41.4**	**-0.5**
ASQU				S	**Sg**	**21 15 46.1**	**+0.7**
ASQU				AML	AML		
	comp=E,2845μm,0.2s						
ASQU				AML	AML		
	comp=N,4535μm,0.2s						
ASQU				AML	AML		
	comp=E,2845μm,0.2s						
ASQU				AML	AML		
	comp=N,4535μm,0.2s						
ASQU				AML	AML		
	comp=E,2845μm,0.2s						
ASQU				AML	AML		
	comp=N,4535μm,0.2s						
ASQU				AML	AML		
	comp=N,4535μm,0.2s						
ASQU				AML	AML		
	comp=E,2845μm,0.2s						
IMOL	**Imola, Italy**	**0.37**	**11**	P	**Pg**	**21 15 43.3**	**-1.0**
IMOL				AML	AML		
	comp=E,5275μm,0.3s						
IMOL				AML	AML		
	comp=N,3095μm,0.7s						
IMOL				AML	AML		
	comp=E,698μm,0.3s						
IMOL				AML	AML		
	comp=N,454μm,0.3s						
IMOL				AML	AML		
	comp=E,5275μm,0.3s						
IMOL				AML	AML		
	comp=N,3100μm,0.7s						
IMOL				AML	AML		
	comp=E,697μm,0.3s						
IMOL				AML	AML		
	comp=N,455μm,0.3s						
IMOL				AML	AML		
	comp=N,455μm,0.3s						
IMOL				AML	AML		
	comp=N,3100μm,0.7s						
IMOL				AML	AML		
	comp=E,697μm,0.3s						
IMOL				AML	AML		
	comp=E,5275μm,0.3s						
MTRZ	**Monterenzio**	**0.40**	**342**	P	**Pg**	**21 15 43.4**	**-1.5**
MTRZ				AML	AML		
	comp=E,2840μm,0.4s						
MTRZ				AML	AML		
	comp=N,3715μm,0.5s						
MTRZ				AML	AML		
	comp=E,2855μm,0.4s						
MTRZ				AML	AML		
	comp=N,3800μm,0.5s						
MTRZ				AML	AML		
	comp=E,2845μm,0.4s						
MTRZ				AML	AML		
	comp=N,3715μm,0.5s						
MTRZ				AML	AML		
	comp=E,2855μm,0.4s						
MTRZ				AML	AML		
	comp=N,3800μm,0.5s						
MTRZ				AML	AML		
	comp=E,2845μm,0.4s						
MTRZ				AML	AML		
	comp=N,3715μm,0.5s						
MTRZ				AML	AML		
	comp=E,2855μm,0.4s						
MTRZ				AML	AML		
	comp=N,3800μm,0.5s						
MTRZ				AML	AML		
	comp=N,3800μm,0.5s						
MTRZ				AML	AML		
	comp=N,3715μm,0.5s						
MTRZ				AML	AML		
	comp=E,2855μm,0.4s						
MTRZ				AML	AML		
	comp=E,2845μm,0.4s						
PTF	**Prato**	**0.41**	**265**	P	**Pg**	**21 15 45.2**	**+0.1**
MTCR	**Monte La Croce**	**0.47**	**274**	P	**Pg**	**21 15 45.9**	**-0.2**
CPGN	**Carpegna, Ital**	**0.53**	**111**	P	**Pg**	**21 15 46.6**	**-0.6**
CPGN				AML	AML		
	comp=E,522μm,0.7s						
CPGN				AML	AML		
	comp=N,474μm,0.9s						
CPGN				AML	AML		
	comp=E,522μm,0.7s						
CPGN				AML	AML		
	comp=N,474μm,0.9s						
CPGN				AML	AML		
	comp=N,474μm,0.9s						
CPGN				AML	AML		
	comp=E,522μm,0.7s						
CRMI	**Carmignano**	**0.53**	**247**	P	**Pg**	**21 15 47.4**	**+0.2**
CRMI				S	**Sb**	**21 15 56.3**	**+1.4**
CRMI				AML	AML		
	comp=E,473μm,0.8s						
CRMI				AML	AML		
	comp=N,657μm,0.4s						
CRMI				AML	AML		
	comp=E,198μm,0.8s						
CRMI				AML	AML		
	comp=N,259μm,0.4s						
CRMI				AML	AML		
	comp=E,473μm,0.8s						
CRMI				AML	AML		
	comp=N,657μm,0.4s						
CRMI				AML	AML		
	comp=E,198μm,0.8s						
CRMI				AML	AML		
	comp=N,259μm,0.4s						
CRMI				AML	AML		
	comp=E,472μm,0.8s						
CRMI				AML	AML		
	comp=N,657μm,0.4s						
CRMI				AML	AML		
	comp=E,198μm,0.8s						
CRMI				AML	AML		
	comp=N,259μm,0.4s						
CRMI				AML	AML		
	comp=E,198μm,0.8s						
CRMI				AML	AML		
	comp=E,472μm,0.8s						
CRMI				AML	AML		
	comp=N,259μm,0.4s						
CRMI				AML	AML		
	comp=N,657μm,0.4s						
SSP9	**Sansepolcro**	**0.55**	**140**	P	**Pg**	**21 15 47.0**	**-0.5**
SSP9				S	**Sb**	**21 15 56.4**	**+0.9**
PARC	**Parchiule**	**0.55**	**129**	P	**Pg**	**21 15 46.7**	**-0.9**
PARC				S	**Sb**	**21 15 55.8**	**+0.2**
PARC				AML	AML		
	comp=E,243μm,0.3s						
PARC				AML	AML		
	comp=N,303μm,0.8s						
PARC				AML	AML		
	comp=E,243μm,0.3s						
PARC				AML	AML		
	comp=N,303μm,0.8s						
PARC				AML	AML		
	comp=E,243μm,0.3s						
PARC				AML	AML		
	comp=N,303μm,0.8s						
PARC				AML	AML		
	comp=N,303μm,0.8s						
PARC				AML	AML		
	comp=E,243μm,0.3s						
CSNT	**Castellina Chi**	**0.58**	**206**	P	**Pg**	**21 15 48.8**	**+0.6**
CSNT				AML	AML		
	comp=E,534μm,0.4s						
CSNT				AML	AML		
	comp=N,460μm,0.4s						
CSNT				AML	AML		
	comp=E,534μm,0.4s						
CSNT				AML	AML		
	comp=N,460μm,0.4s						
CSNT				AML	AML		
	comp=N,460μm,0.4s						
CSNT				AML	AML		
	comp=E,534μm,0.4s						
POPM	**Popiglio**	**0.64**	**275**	P	**Pg**	**21 15 48.9**	**-0.3**
POPM				S	**Sb**	**21 15 59.3**	**+1.2**
POPM	**Popiglio**	**0.64**	**275**	P	**Pg**	**21 15 48.9**	**-0.3**
POPM				S	**Sb**	**21 16 00.4**	**+2.2**
POPM				AML	AML		
	comp=E,325μm,0.2s						
POPM				AML	AML		
	comp=N,464μm,1.2s						
POPM				AML	AML		
	comp=E,325μm,0.2s						
POPM				AML	AML		
	comp=N,464μm,1.2s						
POPM				AML	AML		
	comp=N,464μm,1.2s						
POPM				AML	AML		
	comp=E,325μm,0.2s						
BADI	**Badiali**	**0.65**	**138**	P	**Pg**	**21 15 48.6**	**-0.9**
BADI				AML	AML		
	comp=E,238μm,1.2s						
BADI				AML	AML		
	comp=N,300μm,0.8s						
BADI				AML	AML		
	comp=E,238μm,1.2s						
BADI				AML	AML		
	comp=N,300μm,0.8s						
BADI				AML	AML		
	comp=E,238μm,1.2s						
BADI				AML	AML		
	comp=N,300μm,0.8s						
ATMC	**Monte Cedrone**	**0.68**	**144**	P	**Pg**	**21 15 49.3**	**-0.6**
ATMC				S	**Sb**	**21 15 59.7**	**+0.5**
ATMC				AML	AML		
	comp=E,353μm,1.3s						
ATMC				AML	AML		
	comp=N,336μm,0.4s						
ATMC				AML	AML		
	comp=E,354μm,1.3s						
ATMC				AML	AML		
	comp=N,336μm,0.4s						
ATMC				AML	AML		
	comp=N,336μm,0.4s						
ATMC				AML	AML		
	comp=E,354μm,1.3s						
CAFI	**Castiglion Fio**	**0.70**	**160**	P	**Pg**	**21 15 50.4**	**-0.1**
CAFI				S	**Sb**	**21 16 01.1**	**+1.1**
CAFI				AML	AML		
	comp=E,244μm,1.4s						
CAFI				AML	AML		
	comp=N,149μm,1.5s						
CAFI				AML	AML		
	comp=E,244μm,1.4s						
CAFI				AML	AML		
	comp=N,150μm,1.5s						
CAFI				AML	AML		
	comp=E,244μm,1.4s						
CAFI				AML	AML		
	comp=N,150μm,1.5s						
BDI	**Bagni Di Lucca**	**0.76**	**276**	P	**Pg**	**21 15 51.0**	**-0.4**
BDI				AML	AML		
	comp=E,190μm,0.9s						
BDI				AML	AML		
	comp=N,194μm,1.1s						
BDI				AML	AML		
	comp=E,172μm,0.4s						
BDI				AML	AML		
	comp=N,202μm,1.1s						
BDI				AML	AML		
	comp=E,190μm,0.9s						
BDI				AML	AML		
	comp=N,194μm,1.1s						
BDI				AML	AML		
	comp=E,172μm,0.4s						
BDI				AML	AML		
	comp=N,202μm,1.1s						
BDI				AML	AML		
	comp=E,172μm,0.4s						
BDI				AML	AML		
	comp=N,194μm,1.1s						
BDI				AML	AML		
	comp=N,202μm,1.1s						
BDI				AML	AML		
	comp=E,190μm,0.9s						
ATPI	**Pietralunga -**	**0.77**	**134**	P	**Pg**	**21 15 50.7**	**-1.0**
ATPI				S	**Sb**	**21 16 03.1**	**+1.1**
ATPI				AML	AML		
	comp=E,136μm,0.4s						
ATPI				AML	AML		
	comp=N,176μm,0.5s						
ATPI				AML	AML		
	comp=E,136μm,0.4s						
ATPI				AML	AML		
	comp=N,176μm,0.5s						
ATPI				AML	AML		
	comp=N,176μm,0.5s						
ATPI				AML	AML		
	comp=E,136μm,0.4s						
ATPC	**Poggio Castell**	**0.78**	**131**	P	**Pg**	**21 15 50.8**	**-1.2**
ATPC				AML	AML		
	comp=E,244μm,0.4s						
ATPC				AML	AML		
	comp=N,250μm,0.7s						
ATPC				AML	AML		
	comp=E,244μm,0.4s						
ATPC				AML	AML		
	comp=N,250μm,0.7s						
ATPC				AML	AML		
	comp=N,250μm,0.7s						
ATPC				AML	AML		
	comp=E,244μm,0.4s						
ATVO	**AVT- Monte Val**	**0.82**	**138**	P	**Pg**	**21 15 51.7**	**-1.0**
ATVO				AML	AML		
	comp=E,247μm,0.6s						
ATVO				AML	AML		
	comp=N,230μm,0.7s						
ATVO				AML	AML		
	comp=E,246μm,0.6s						
ATVO				AML	AML		
	comp=N,230μm,0.7s						
ATVO				AML	AML		
	comp=N,230μm,0.7s						
ATVO				AML	AML		
	comp=E,246μm,0.6s						
MAIM	**Mastiano**	**0.83**	**265**	P	**Pg**	**21 15 52.8**	**-0.1**
MAIM				S	**Sg**	**21 16 04.5**	**+0.6**
MAIM	**Mastiano**	**0.83**	**265**	P	**Pb**	**21 15 53.4**	**+0.7**
MAIM				AML	AML		
	comp=E,128μm,1.1s						
MAIM				AML	AML		
	comp=N,107μm,0.7s						
MAIM				AML	AML		
	comp=E,128μm,1.1s						
MAIM				AML	AML		
	comp=N,107μm,0.7s						
MAIM				AML	AML		
	comp=N,107μm,0.7s						
MAIM				AML	AML		
	comp=E,128μm,1.1s						
ATBU	**Serra di Buran**	**0.84**	**128**	P	**Pg**	**21 15 52.0**	**-0.9**
ATBU				AML	AML		
	comp=E,294μm,0.4s						
ATBU				AML	AML		
	comp=N,408μm,1.2s						
ATBU				AML	AML		
	comp=E,294μm,0.4s						
ATBU				AML	AML		
	comp=N,408μm,1.2s						
ATBU				AML	AML		
	comp=E,294μm,0.4s						
ATBU				AML	AML		
	comp=N,408μm,1.2s						
CARD	**Cardoso**	**0.84**	**273**	P	**Pg**	**21 15 53.2**	**+0.2**
CARD				S	**Sb**	**21 16 05.4**	**+1.6**
SARO	**Sassorosso**	**0.92**	**282**	P	**Pg**	**21 15 54.5**	**+0.1**
SARO				S	**Sb**	**21 16 08.0**	**+1.9**
SARO	**Sassorosso**	**0.92**	**282**	P	**Pb**	**21 15 54.8**	**+0.6**
SARO				AML	AML		
	comp=E,126μm,0.5s						
SARO				AML	AML		
	comp=N,178μm,0.4s						
SARO				AML	AML		
	comp=E,126μm,0.5s						
SARO				AML	AML		
	comp=N,178μm,0.4s						
SARO				AML	AML		
	comp=E,126μm,0.5s						
SARO				AML	AML		
	comp=N,178μm,0.4s						
ARVD	**Arcevia**	**1.06**	**117**	P	**Pg**	**21 15 56.0**	**-1.2**
ARVD				AML	AML		
	comp=E,89μm,0.4s						
ARVD				AML	AML		
	comp=N,80μm,0.4s						
ARVD				AML	AML		
	comp=E,89μm,0.4s						
ARVD				AML	AML		
	comp=N,80μm,0.4s						
ARVD				AML	AML		
	comp=E,89μm,0.4s						
ARVD				AML	AML		
	comp=N,80μm,0.4s						
EQUI	**Equi**	**1.09**	**280**	P	**Pn**	**21 15 58.1**	**+0.9**
EQUI				S	**Sg**	**21 16 12.2**	**+0.3**
ARCI	**Arcidosso**	**1.15**	**186**	AML	AML		
	comp=E,46μm,1.1s						
ARCI				AML	AML		
	comp=E,46μm,1.1s						
ARCI				AML	AML		
	comp=N,72μm,0.8s						
ARCI				AML	AML		
	comp=N,72μm,0.8s						
ARCI				AML	AML		
	comp=E,46μm,1.1s						
ARCI				AML	AML		
	comp=N,72μm,0.8s						
GRAM	**Graiana**	**1.24**	**294**	P	**Pg**	**21 16 00.8**	**+0.3**
GRAM				S	**Sn**	**21 16 17.0**	**+1.3**
NVLJ	**Novalja**	**2.39**	**75**	*e*Pn	**Pn**	**21 16 14.9**	**-0.1**
NVLJ				Sn	**Sn**	**21 16 44.8**	**+0.9**
PGF	**Pioggiola**	**2.41**	**234**	*e*P	**Pn**	**21 16 16.9**	**+1.4**
PGF				*e*Sn	**Sn**	**21 16 42.0**	**-2.7**
	comp=N,3.7nm,0.3s						
ABTA	**Abfaltersbach**	**2.82**	**12**	*i* Pn	**Pn**	**21 16 21.3**	**+0.2**
	comp=N,1.5nm,0.4s						
ABTA				Sn	**Sn**	**21 16 55.7**	**+1.0**
	comp=N,16nm,0.6s						
UDBI	**Udbina**	**3.01**	**78**	*e*Pn	**Pn**	**21 16 25.6**	**+2.0**
UDBI				Sn	**Sn**	**21 16 59.8**	**+0.4**
SBF	**Sospel**	**3.04**	**269**	*e*P	**Pn**	**21 16 26.3**	**+2.2**
SBF				*e*Sn	**Sn**	**21 16 57.8**	**-2.4**
	comp=N,2.1nm,0.2s						
FETA	**Feichten**	**3.09**	**348**	*i* Pn	**Pb**	**21 16 28.6**	**-2.8**
	comp=N,2.9nm,0.5s						
FETA				*i* Sn	**Sn**	**21 17 05.7**	**+4.1**
	comp=N,3.0nm,0.5s						
OZLJ	**Ozalj**	**3.17**	**58**	*e*Pn	**Pn**	**21 16 25.7**	**0.0**
OZLJ				Sn	**Sn**	**21 17 02.7**	**-0.5**
SQTA	**Sankt Quirin**	**3.24**	**355**	*i* Pn	**Pn**	**21 16 28.9**	**+2.0**
	comp=N,1.8nm,0.2s						
SQTA				*i* Sn	**Sn**	**21 17 08.6**	**+3.4**
	comp=N,6.5nm,0.3s						
OBKA	**Obir**	**3.25**	**38**	*i* Pg	**Pg**	**21 16 38.8**	**0.0**
	comp=N,3.7nm,0.5s						
WTTA	**Wattenberg**	**3.27**	**360**	*i* Sn	**Sn**	**21 17 09.0**	**+3.0**
	comp=N,13nm,0.6s						
WATA	**Walderalm**	**3.34**	**359**	*i* Pn	**Pn**	**21 16 31.7**	**+3.4**
	comp=N,1.3nm,0.2s						
MOTA	**Moosalm**	**3.37**	**354**	*i* Pn	**Pn**	**21 16 30.9**	**+2.2**
	comp=N,0.4nm,0.2s						
DAVA	**Damuels**	**3.52**	**340**	*i* Sn	**Sn**	**21 17 15.4**	**+3.4**
	comp=N,2.6nm,0.3s						
RETA	**Reutte**	**3.55**	**350**	*i* Pn	**Pn**	**21 16 33.8**	**+2.7**
	comp=N,0.5nm,0.2s						
RETA				*e*Sn	**Sn**	**21 17 16.4**	**+3.8**
	comp=N,5.5nm,0.7s						
MBDF	**Montbardon**	**3.57**	**284**	*e*P	**Pn**	**21 16 34.2**	**+2.7**
MBDF				*e*Sn	**Sn**	**21 17 09.8**	**-3.5**
	comp=N,0.6nm,0.3s						
FRF	**La Foret Royal**	**3.64**	**265**	*e*P	**Pn**	**21 16 35.3**	**+3.0**
FRF				*e*Sn	**Sn**	**21 17 12.3**	**-2.7**
	comp=N,0.6nm,0.2s						
LMR	**La Mourre**	**3.78**	**262**	*e*P	**Pn**	**21 16 36.5**	**+2.3**
LMR				*e*Sn	**Sn**	**21 17 15.3**	**-3.1**
	comp=N,0.6nm,0.2s						
LPG	**La Plagne**	**3.79**	**295**	*e*Pn	**Pn**	**21 16 34.4**	**-0.3**
LPG	**La Plagne**	**3.79**	**295**	*e*P	**Pn**	**21 16 37.9**	**+3.2**
LPG				*e*Sn	**Sn**	**21 17 15.1**	**-4.0**
	comp=N,1.4nm,0.4s						
LPL	**La Plagne**	**3.81**	**295**	*e*Pn	**Pn**	**21 16 34.7**	**-0.2**
LPL	**La Plagne**	**3.81**	**295**	*e*P	**Pn**	**21 16 37.9**	**+3.0**
LPL				*e*Sn	**Sn**	**21 17 15.5**	**-4.0**
	comp=N,3.0nm,0.5s						
ORIF	**Oris-en-Rattie**	**4.23**	**285**	*e*P	**Pn**	**21 16 43.3**	**+2.9**
ORIF				*e*Sn	**Sn**	**21 17 29.2**	**-0.3**
	comp=N,2.1nm,0.4s						
MOA	**Molln**	**4.27**	**24**	*e*Pn	**Pn**	**21 16 40.7**	**-0.2**
	comp=N,1.2nm,0.3s						
CABF	**La Chapelle**	**4.71**	**306**	*e*P	**Pn**	**21 16 49.0**	**+1.9**
CABF				*e*Sn	**Sn**	**21 17 36.4**	**-5.0**
	comp=N,1.0nm,0.2s						
VIVF	**Saint-Julien-l**	**5.07**	**282**	*e*P	**Pn**	**21 16 55.0**	**+3.1**
VIVF				*e*Sn	**Sn**	**21 17 45.5**	**-4.6**
	comp=N,0.6nm,0.3s						
HINF	**Hinteralfeld**	**5.08**	**321**	*e*P	**Pn**	**21 16 53.2**	**+1.1**
HINF				*e*Sn	**Sn**	**21 17 44.6**	**-5.7**
	comp=N,5.9nm,0.5s						
CDF	**Champ du Feu**	**5.36**	**327**	*e*Pn	**Pn**	**21 16 56.0**	**+0.1**
CDF				*e*Sn	**Sn**	**21 17 51.7**	**-5.6**
	comp=N,1.7nm,0.3s						
HAU	**Haudompre**	**5.45**	**319**	*e*P	**Pn**	**21 16 58.0**	**+0.9**
HAU				*e*Sn	**Sn**	**21 17 53.9**	**-5.6**
	comp=N,1.1nm,0.2s						
SMF	**Signal de Mont**	**6.11**	**298**	*e*Pn	**Pn**	**21 17 05.7**	**-0.5**
SMF				*e*Sn	**Sn**	**21 18 13.4**	**-2.2**
	comp=N,2.4nm,0.3s						
LOR	**Lormes**	**6.36**	**304**	*e*P	**Pn**	**21 17 11.6**	**+1.9**
	baz=123						
LOR				*e*Sn	**Sn**	**21 18 16.1**	**-5.9**
	comp=N,1.0nm,0.2s,baz=123						
AVF	**Avril sur Loir**	**6.47**	**298**	*e*Sn	**Sn**	**21 18 18.5**	**-6.1**
	comp=N,0.4nm,0.2s						
SSF	**Saint Saulge**	**6.49**	**301**	*e*P	**Pn**	**21 17 12.6**	**+1.2**
SSF				*e*Sn	**Sn**	**21 18 18.6**	**-6.4**
	comp=N,1.2nm,0.4s						
BGF	**Bois d'Agland**	**6.71**	**296**	*e*Pn	**Pn**	**21 17 13.8**	**-0.7**
BGF	**Bois d'Agland**	**6.71**	**296**	*e*P	**Pn**	**21 17 18.7**	**+4.2**

ISCJB ***20*** *21:19:49.4±1.1, 55°.0S±0°.3×129°.9W±0°.3, h10^{km}, mb4.3/5, MS4.2/4, Error ellipse: s-maj=39.1km s-min=25.2km az=166.4*
IDC ***20*** *21:19:49.8±0.9, 55°.08S×129°.81W, h0^{km}, mb4.3/5, mb1 4.4/5, mb1mx4.1/35, mbtmp4.3/5, MS4.2/4, Ms1 4.2/4, ms1mx3.8/22, Error ellipse: s-maj=36.8km s-min=25.9km az=170.0*
GCMT ***20*** *21:19:57.0±0.3, 55°.23S±0°.02×129°.64W±0°.03, h18^{km}±1^{km}, MW5.0/86, Moment Tensor Solution. s19,c22; s86,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.03±.23; $M_{\theta\theta}$2.95±.22; $M_{\phi\phi}$-2.92±.20; $M_{r\theta}$0.52±.42; $M_{\theta\phi}$3.13±.14; $M_{\phi r}$0.84±.41; Best double couple: $M_0$4.40200×10^{16} NP1:ϕ_s21.00000°, δ88.00000°, λ167.00000°. NP2: ϕ_s112.00000°, δ77.00000°, λ2.00000°. Principal axes: T 4.4520, Plg10.0000°, Azm336.0000°; N -0.1010, Plg77.0000°, Azm193.0000°; P -4.3510, Plg8.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s.*

nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function

ISC 20 21:19:51.2±1.0**, 55°.1S**±0°.3×**129°.8W**±0°.2**, h10^{km}, n23, σ0^{s}.69**/10**, mb4.3**/5**, MS4.1**/4**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA	South Pole Qui	35.12	180	P	P	21 26 44.8	+0.3
	7.1nm,1.0s,baz=78,slow=2.4,SNR=10						
RPZ	Rata Peaks	39.00	262	LR	LR	21 39 16.9	
	comp=Z,325nm,21.0s,baz=124,slow=30						
URZ	Urewera	39.07	273	LR	LR	21 39 45.1	
	comp=Z,270nm,19.1s,baz=130,slow=31						
MAW	Mawson	57.30	186	LR	LR	21 50 16.0	
	comp=Z,108nm,19.8s,baz=168,slow=32						
LPAZ	La Paz	60.65	76	P	P	21 30 03.3	+0.3
	1.7nm,0.7s,baz=222,slow=5.4,SNR=6.0						
STKA	Stephens Creek	63.78	251	P	P	21 30 23.1	-0.1
	2.4nm,0.9s,baz=109,slow=10.0,SNR=2.9						
ASAR	Alice Springs	74.42	251	P	P	21 31 29.1	-0.2
	3.0nm,1.0s,baz=143,slow=6.9,SNR=16						
H01W1	Cape Leeuwin H	75.05	230	T	T	22 54 53.4	
	baz=146,slow=76,SNR=105						
H01W2	Cape Leeuwin H	75.05	230	T	T	22 54 60.0	
	baz=146,slow=76,SNR=127						
H01W3	Cape Leeuwin H	75.06	230	T	T	22 54 54.7	
	baz=146,slow=76,SNR=106						
WRA	Warramunga Arr	77.17	254	P	P	21 31 44.5	-0.6
	1.5nm,0.6s,baz=145,slow=5.1,SNR=27						
H11S2	WAKE ISLAND Hy	90.81	302	T	T	23 13 38.6	
	baz=148,slow=76						
H11S3	WAKE ISLAND Hy	90.82	302	T	T	23 13 35.8	
	baz=148,slow=76						
H11S1	WAKE ISLAND Hy	90.83	302	T	T	23 13 39.3	
	baz=148,slow=76						
H11N3	WAKE ISLAND Hy	91.76	303	T	T	23 14 45.6	
	baz=153,slow=76						
H11N1	WAKE ISLAND Hy	91.76	303	T	T	23 14 42.5	
	baz=153,slow=76						
H11N2	WAKE ISLAND Hy	91.78	303	T	T	23 14 43.1	
	baz=153,slow=76						
PDAR	Pinedale Array	98.96	15	LR	LR	22 09 54.2	
	comp=Z,200nm,18.4s,baz=93,slow=30						
ILAR	Eielson Array	120.21	352	PKP	PKPdf	21 38 40.3	-0.5
	0.7nm,1.0s,baz=217,slow=2.0,SNR=2.6						
SONM	Songino Array	145.09	282	PKPbc	PKPdf	21 39 28.7	+0.8
	2.3nm,0.6s,baz=145,slow=3.4,SNR=11						
MKAR	Makanchi Array	158.31	261	PKPab	PKPab	21 40 22.9	+0.9
	1.2nm,0.7s,baz=121,slow=5.5,SNR=12						
BRTR	Keskin Array B	161.08	137	PKPab	PKPab	21 40 33.3	-1.1
	0.9nm,0.7s,baz=186,slow=6.0,SNR=5.1						
GEYT	Alibeck	162.05	201	PKPab	PKPab	21 40 38.4	0.0
	1.7nm,0.8s,baz=113,slow=3.7,SNR=2.9						

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*NEIC **20** 21:23:08.0±0.0, 18°.54N×103°.77W, h13^{km}, Moment Tensor Solution. s41 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.45; M$_{\theta\theta}$-2.15; M$_{\phi\phi}$-0.30; M$_{r\theta}$1.74; M$_{\theta\phi}$0.38; M$_{\phi r}$-1.02; Best double couple: M$_0$3.10000×10^{17} NP1:φ$_s$113.00000°, δ65.00000°, λ99.00000°. NP2:φ$_s$273.00000°, δ26.00000°, λ72.00000°. Principal axes: T 3.2400, Plg68.0000°, Azm39.0000°; N -0.3200, Plg7.0000°, Azm289.0000°; P -2.9200, Plg20.0000°, Azm196.0000°;*

*NEIC **20** 21:23:08.6±0.2, 18°.55N×103°.71W, h18^{km}, mb5.2/299, ME5.3, MS5.1/297, MW5.5, MW5.6, MD5.6(MEX) Error ellipse: s-maj=3.9km s-min=2.4km az=33.0, Moment Tensor Solution. s35 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.69; M$_{\theta\theta}$-1.05; M$_{\phi\phi}$-0.64; M$_{r\theta}$1.18; M$_{\theta\phi}$0.93; M$_{\phi r}$-0.63; Best double couple: M$_0$2.20000×10^{17} NP1:φ$_s$122.00000°, δ64.00000°, λ84.00000°. NP2:φ$_s$316.00000°, δ27.00000°, λ103.00000°. Principal axes: T 2.1600, Plg70.0000°, Azm19.0000°; N 0.0800, Plg6.0000°, Azm125.0000°; P -2.2400, Plg19.0000°, Azm217.0000°; Apparent Stress 0.17 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from MT mechanism.*

NEIC Felt [V] at Coahuayana and Tecoman; [III] at Cihuatlan, Manzanillo, Puerto Vallarta and San Patricio; [II] at Guadalajara and Mexico. Felt in parts of Colima, Guanajuato, Guerrero, Jalisco, Michoacan de Ocampo, Morelos and Nayarit.

*MEX **20** 21:23:09.5±1.7, 18°.50N×103°.99W, h3^{km}±10^{km}, MD5.6*

*IDC **20** 21:23:10.9±3.7, 18°.57N×103°.77W, h33^{km}±26^{km}, mb4.9/32, mb1 4.9/39, mb1mx4.9/48, mbtmp5.0/39, ML4.2/6, MS5.1/28, Ms1 5.1/28, ms1mx5.0/35, Error ellipse: s-maj=20.2km s-min=10.2km az=44.0*

*BJI **20** 21:23:10.4, 18°.79N×104°.04W, h33^{km}, mB5.8/32, mb5.4/6, Ms5.8/31, Ms7 5.6/31*

*MOS **20** 21:23:12.9±1.0, 18°.84N×103°.71W, h51^{km}, mb5.5/101, MS5.3/53, Error ellipse: s-maj=6.1km s-min=3.7km az=85.0*

*GCMT **20** 21:23:12.6±0.1, 18°.50N±0°.01×103°.91W±0°.01, h18^{km}, MW5.6/125, Moment Tensor Solution. s115,c205; s125,c298; Duration: 1^{s}.5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.39±.03; M$_{\theta\theta}$-1.90±.03; M$_{\phi\phi}$-0.48±.03; M$_{r\theta}$1.35±.07; M$_{\theta\phi}$1.05±.02; M$_{\phi r}$-0.75±.07; Best double couple: M$_0$2.87400×10^{17} NP1:φ$_s$119.00000°, δ61.00000°, λ91.00000°. NP2:φ$_s$297.00000°, δ29.00000°, λ89.00000°. Principal axes: T 2.8390, Plg74.0000°, Azm30.0000°; N 0.0730, Plg0.0000°, Azm298.0000°; P -2.9080, Plg16.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **20** 21:23:13.4±0.4, 18°.86N±0°.02×103°.64W±0°.02, h55^{km}±2^{km}, mb5.3/387, MS5.2/474 Error ellipse: s-maj=4.0km s-min=1.9km az=25.7*

ISC 20 21:23:10.5±0.5**, 18°.57N**±0°.03×**103°.91W**±0°.03**, h34^{km}**±1^{km}**, h34^{km}:pP-P, n1623, σ1^{s}.81**/1488**, mb5.4**/410**, MS5.2**/488**, 64C-13D, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		0.60	353	*i* P	Pn	21 23 21.1	-1.6
R15V				*e*S	Sn	21 23 30.8	-0.6
R15V				*e*S	Sb	21 23 30.9	-0.4
EZ5V		0.95	18	*e*P	Pb	21 23 28.3	-0.5
EZ5V				*e*S	Sn	21 23 40.1	-0.1
CJM	Chamela	1.42	311	*e*P	Pn	21 23 31.8	-2.1
CJM				*e*S	Sn	21 23 49.8	-1.6
CJM	Chamela	1.42	311	*e*P	Pn	21 23 31.8	-2.1
CJM				*e*S	Sn	21 23 49.8	-1.6
URUA	Uruapan	1.93	64	*e*P	Pn	21 23 42.4	+1.2
PUVA	Puert Vallarta	2.39	329	*e*P	Pn	21 23 48.0	+0.7
ZIIG	Zihuatanejo	2.51	112	*e*P	Pn	21 23 47.2	-1.7
ZIIG				*e*S	Sn	21 24 14.7	-3.8
ZIIG	Zihuatanejo	2.51	112	*e*P	Pn	21 23 47.2	-1.7
ZIIG				*e*S	Sn	21 24 14.7	-3.8
ANIG	Ahuacatlan	2.54	347	*e*P	Pn	21 23 50.1	+0.6
ANIG				*e*S	Sn	21 24 20.3	+1.0
ANIG	Ahuacatlan	2.54	347	*e*P	Pn	21 23 50.1	+0.6
ANIG				*e*S	Sn	21 24 20.3	+1.0
MOIG	Morelia	2.80	66	*e*Pn	Pn	21 23 53.5	+0.4
MOIG				*e*S	Sn	21 24 28.5	+2.6
MOIG	Morelia	2.80	66	*e*P	Pn	21 23 54.7	+1.6
MOIG				*e*S	Sn	21 24 28.5	+2.6
IGIG	Irapuato, Guan	3.26	48	*e*P	Pn	21 24 01.6	+2.1
IGIG				*e*S	Sn	21 24 37.7	+0.4
IGIG	Irapuato, Guan	3.26	48	*e*P	Pn	21 24 01.6	+2.1
IGIG				*e*S	Sn	21 24 37.7	+0.4
ARIG	Puente Sto Nin	3.39	94	*e*P	Pn	21 24 01.4	+0.3
ARIG				*e*S	Sn	21 24 28.8	-11
ARIG	Puente Sto Nin	3.39	94	*e*P	Pn	21 24 01.4	+0.3
ARIG				*e*S	Sn	21 24 28.8	-11
CAIG	El Cayaco	3.78	113	*e*P	Pn	21 24 05.3	-1.1
CAIG	El Cayaco	3.78	113	*e*P	Pn	21 24 05.3	-1.1
ATVM	ATLACOMULCO	4.03	72	*e*P	Pn	21 24 15.1	+5.1
TOVM	TOLUCA	4.07	79	*e*P	Pn	21 24 16.1	+5.4
MEIG	Mezcala	4.13	98	*e*P	Pn	21 24 11.5	+0.3
MEIG				*e*S	Sn	21 25 02.1	+3.7
MEIG	Mezcala	4.13	98	*e*P	Pn	21 24 11.5	+0.3
MEIG				*e*S	Sn	21 25 02.1	+3.7
PLIG	Platanillo	4.19	92	*e*P	Pn	21 24 12.9	+0.9
PLIG				*e*S	Sn	21 25 01.8	+1.9
PLIG	Platanillo	4.19	92	*e*P	Pn	21 24 12.9	+0.9
PLIG				*e*S	Sn	21 25 01.8	+1.9
ACP2	Acapulco	4.19	113	*e*P	Pn	21 24 15.0	+3.0
MAVM	Malinalco, Edo	4.20	84	*e*P	Pn	21 24 15.5	+3.1
MAVM	Malinalco, Edo	4.20	84	*e*P	Pn	21 24 15.5	+3.1
ZAIG	Zacatecas	4.37	17	*e*Pn	Pn	21 24 16.2	+1.5
ZAIG				*e*S	Sb	21 25 13.4	-5.7
ZAIG	Zacatecas	4.37	17	*e*P	Pn	21 24 16.6	+1.9
ZAIG				*e*S	Sb	21 25 13.4	-5.7
AZVM	Cuida Lopez Ma	4.49	76	*e*P	Pn	21 24 18.8	+2.4
UNM	Universidad Na	4.54	80	*e*Pn	Pn	21 24 19.1	+2.0
UNM				*e*S	Sb	21 25 16.5	-7.6
UNM	Universidad Na	4.54	80	*e*P	Pn	21 24 19.1	+2.0
UNM				*e*S	Sb	21 25 16.5	-7.6
UNM	Universidad Na	4.54	80	*e*P	Pn	21 24 19.1	+2.0
UNM				*e*S	Sb	21 25 16.5	-7.6
YAIG	Yautepec	4.60	86	*e*P	Pn	21 24 19.2	+1.4
YAIG				*e*S	Sb	21 25 25.6	0.0
YAIG	Yautepec	4.60	86	*e*P	Pn	21 24 19.2	+1.4
YAIG				*e*S	Sb	21 25 25.6	0.0
PBVM	Pinon	4.65	78	*e*P	Pn	21 24 20.8	+2.5
PBVM	Pinon	4.65	78	*e*P	Pn	21 24 20.8	+2.5
PTVM	Pico Tres Padr	4.65	77	*e*P	Pn	21 24 20.8	+2.2
PTVM	Pico Tres Padr	4.65	77	*e*P	Pn	21 24 20.8	+2.2
ZUVM	ZUMPANGO	4.74	74	*e*P	Pn	21 24 24.7	+4.9
AMVM	AMECAMECA	4.88	83	*e*P	Pn	21 24 23.9	+2.1
VTVM	Tizayuca	5.00	75	*e*P	Pn	21 24 25.9	+2.5
PPM	Popocatepetl	5.03	83	*e*P	Pn	21 24 25.9	+1.9
PPM				*e*S	Sn	21 25 27.2	+6.0
PPM	Popocatepetl	5.03	83	*e*P	Pn	21 24 25.9	+1.9
PPM				*e*S	Sn	21 25 27.2	+6.0
PPM	Popocatepetl	5.03	83	*e*P	Pn	21 24 25.9	+1.9
PPM				*e*S	Sn	21 25 27.2	+6.0
HMTT	Tlapaneco	5.14	98	*e*P	Pb	21 24 36.5	-3.3
MAIG	Mazatlaan	5.17	333	*e*P	Pn	21 24 24.8	-0.6
MAIG				*e*S	Sn	21 25 25.3	+1.5
MAIG	Mazatlaan	5.17	333	*e*P	Pn	21 24 24.8	-0.6
MAIG				*e*S	Sn	21 25 25.3	+1.5
PHPU	Puebla	5.46	84	*e*P	Pn	21 24 33.0	+3.3
TPIG	Tehuac#an	6.21	90	*e*P	Pn	21 24 41.6	+1.5
TPIG				*e*S	Sb	21 26 18.0	+5.9
TPIG	Tehuac#an	6.21	90	*e*P	Pn	21 24 41.6	+1.5
TPIG				*e*S	Sb	21 26 18.0	+5.9
H06E1	SOCORRO T-PHAS	6.65	273	T	T	21 31 29.8	
	SNR=1241						
H06S1	SOCORRO T	6.68	273	T	T	21 31 29.6	
	SNR=20						
H06N1	SOCORRO T-PHAS	6.71	274	T	T	21 31 24.3	
	SNR=59						
H06N	Isla Socorro	6.72	274	*e*P	Pn	21 24 53.0	+6.3
VHO	Vista Hermosa	7.00	101	*e*P	Pn	21 24 53.4	+2.6
VHO				*e*S	Sb	21 26 30.7	-3.8
VHO	Vista Hermosa	7.00	101	*e*P	Pn	21 24 53.4	+2.6
VHO				*e*S	Sb	21 26 30.7	-3.8
LVIG	Laguna Verde	7.17	80	*e*Pn	Pn	21 24 54.1	+1.1
LVIG				*e*Sn	Sn	21 25 54.5	-19
LVIG	Laguna Verde	7.17	80	*e*P	Pn	21 24 54.4	+1.4
LVIG				*e*S	Sb	21 26 51.0	+12
LNIG	Linares	7.53	32	*e*Pn	Pn	21 24 59.9	+2.0
LPIG	La Paz	8.12	314	*e*P	Pn	21 25 08.3	+2.3
LPIG	La Paz	8.12	314	Pn	Pn	21 25 08.5	+2.5
	baz=212,slow=1.9,SNR=6.2						
LPIG				LR	LR	21 27 38.0	
	comp=Z,20μm,18.5s,baz=129,slow=32						
HPIG		8.49	349	*e*Pn	Pn	21 25 14.9	+3.7
HPIG				*e*Sn	Sn	21 26 40.9	-5.1
CMIG	Matias Romero	8.72	98	*e*P	Pn	21 25 17.3	+3.0
CMIG	Matias Romero	8.72	98	Pn	Pn	21 25 14.3	0.0
	1.2nm,0.3s,baz=270,slow=10,SNR=55						
CMIG				Sn	Sn	21 26 49.4	-2.0
	4.6nm,0.3s,baz=281,slow=6.9,SNR=4.2						
CMIG				Lg	Lg	21 27 36.0	
	11nm,0.3s,baz=156,slow=20,SNR=6.4						
CMIG				LR	LR	21 28 57.7	
	comp=Z,18μm,18.7s,baz=318,slow=40						
TUIG	Tuzandepetl	9.03	92	*e*P	Pn	21 25 19.3	+0.8
TUIG	Tuzandepetl	9.03	92	*e*P	Pn	21 25 19.3	+0.8
833A	Chaparral WMA,	10.56	22	*e*Pn	Pn	21 25 42.2	+2.7
833A	Chaparral WMA,	10.56	22	P	Pn	21 25 42.7	+3.3
	baz=203						
TX31	Lajitas Ar. Si	10.72	1	*e*Pn	Pn	21 25 44.9	+3.1
TXAR	Lajitas Array	10.72	1	Pn	Pn	21 25 44.8	+3.0
	0.6nm,0.3s,baz=178,slow=12,SNR=112						
TXAR				Lg	Lg	21 28 48.5	
	0.9nm,0.3s,baz=176,slow=29,SNR=3.6						
CCIG	Comitan	11.46	100	*e*Pn	Pn	21 25 54.2	+2.2
SRIG	Santa Rosalia	11.61	320	*e*Pn	Pn	21 25 55.8	+2.1
JCT	Junction City	12.43	17	*e*Pn	Pn	21 26 09.1	+4.0
JCT				*e*Sn	Sn	21 28 14.4	-8.1
JCT	Junction City	12.43	17	*e*P	Pn	21 26 09.1	+4.0
JCT				*e*		21 28 14.4	
JCT	Junction City	12.43	17	P	Pn	21 26 09.1	+4.0
	baz=198,SNR=12						
MNTX	Cornudas Mount	13.14	354	*e*Pn	Pn	21 26 18.7	+3.9
MNTX	Cornudas Mount	13.14	354	P	Pn	21 26 17.6	+2.8
	baz=173,SNR=56						
APG	El Apazote	13.35	103	Pn	Pn	21 26 17.7	-0.2
	0.3nm,0.3s,baz=314,slow=13,SNR=12						
APG				Lg	Lg	21 30 06.0	
	0.9nm,0.3s,baz=51,slow=18,SNR=3.8						
APG				LR	LR	21 31 00.0	
	comp=Z,12μm,20.2s,baz=288,slow=36						
435B	Jarrell	13.45	24	*e*Pn	Pn	21 26 21.3	+2.4
435B	Jarrell	13.45	24	P	Pn	21 26 21.1	+2.1
	baz=206						
HKT	Hockley	13.51	31	*e*Pn	Pn	21 26 20.3	+0.6
HKT	Hockley	13.51	31	*e*P	Pn	21 26 20.3	+0.6
GDL2	Guadalupe Moun	13.58	358	*e*Pn	Pn	21 26 24.8	+3.9
CLNB	Carlsbad	13.64	0	*e*Pn	Pn	21 26 21.3	-0.4
319A	Douglas	13.65	340	*e*Pn	Pn	21 26 24.1	+2.3
319A				*e*Sn	Sn	21 28 37.0	-15
121A	Cookes Peak, D	14.34	347	P	Pn	21 26 34.3	+3.0
	baz=164,SNR=18						
CPRX	Cap Rock	14.40	0	*e*Pn	Pn	21 26 34.9	+2.7
ABTX	Abilene, Hawle	14.52	15	*e*Pn	Pn	21 26 35.4	+1.9
ABTX	Abilene, Hawle	14.52	15	P	Pn	21 26 35.1	+1.6
	baz=196,SNR=13						
WHTX	Lake Whitney,	14.58	22	*e*Pn	Pn	21 26 34.4	0.0
WHTX				*e*Sn	Sn	21 28 59.4	-15
WHTX	Lake Whitney,	14.58	22	P	Pn	21 26 35.9	+1.5
	baz=204,SNR=14						
TEIG	Tepich	14.84	81	*e*Pn	Pn	21 26 36.4	-1.6
TUC	Tucson	15.02	337	*e*Pn	P	21 26 43.5	-1.9
	46nm,0.8s						
TUC	Tucson	15.02	337	*e*P	P	21 26 43.5	-1.9
TUC				pmax	pmax		
	comp=Z,47nm,0.8s						
TUC	Tucson	15.02	337	P	P	21 26 43.6	-1.8
	baz=154						
MSTX	Muleshoe	15.38	4	*e*Pn	Pn	21 26 46.2	+1.2
	comp=Z,184nm,0.9s						
MSTX	Muleshoe	15.38	4	P	Pn	21 26 45.7	+0.7
	baz=183,SNR=97						
214A	Organ Pipe Nat	15.56	331	P	P	21 26 49.5	-1.9
	baz=146,SNR=16						
NATX	Nacogdoches	15.57	31	*e*Pn	Pn	21 26 47.1	-0.2
	comp=Z,258nm,1.1s						
NATX	Nacogdoches	15.57	31	P	Pn	21 26 47.2	-0.2
	baz=214,SNR=9.5						
Y22D	IRIS PASSCAL I	15.68	351	*e*Pn	P	21 26 51.9	-0.9
	comp=Z,776nm,1.9s						
Y22D	IRIS PASSCAL I	15.68	351	P	P	21 26 51.3	-1.5
	baz=169						
BNM	Barren Site	15.71	352	*e*Pn	P	21 26 52.3	-0.9
LENM	Lemitar	15.78	351	*e*Pn	P	21 26 53.0	-0.8
LPM	Los Pinos Moun	15.87	352	*e*Pn	Pn	21 26 50.8	-0.7
LAZ	Ladron	16.03	350	*e*Pn	Pn	21 26 53.5	-0.2
AMTX	Amarillo	16.37	7	*e*Pn	Pn	21 26 58.4	+0.5
	comp=Z,138nm,1.1s						
AMTX	Amarillo	16.37	7	P	Pn	21 26 58.5	+0.7
	baz=187						
ANMO	Albuquerque	16.47	353	*e*Pn	P	21 27 02.0	+0.3
	comp=Z,89nm,1.0s						
ANMO	Albuquerque	16.47	353	*ce*P	P	21 27 02.3	+0.7
ANMO				pmax	pmax		
	comp=Z,86nm,1.0s						
ANMO	Albuquerque	16.47	353	P	P	21 27 01.7	0.0
	baz=171						
ANMO	Albuquerque	16.47	353	Pn	P	21 27 01.9	+0.3
	comp=Z,0.7nm,0.3s,baz=157,slow=12,SNR=49						
ANMO				Lg	Lg	21 31 47.3	
	comp=Z,0.1nm,0.3s,baz=122,slow=18,SNR=3.3						
ANMO				LR	LR	21 34 10.0	
	comp=Z,15μm,20.2s,baz=170,slow=40						
TGUH	Tegucigalpa,Un	16.58	103	*e*Pn	P	21 27 02.2	-0.5
	comp=Z,505nm,1.3s						
113A	Mohawk Valley,	16.69	330	*e*Pn	P	21 27 03.7	0.0
	comp=Z,131nm,1.4s						
WMOK	Wichita Mounta	16.74	15	*e*Pn	Pn	21 27 02.5	+0.1
	comp=Z,98nm,1.1s						
WMOK	Wichita Mounta	16.74	15	*e*P	Pn	21 27 02.5	+0.1
WMOK				pmax	pmax		
	comp=Z,98nm,1.1s						
WMOK	Wichita Mounta	16.74	15	P	Pn	21 27 02.5	+0.1
	baz=196,SNR=17						
X18A	Snowflake	16.79	342	*e*Pn	P	21 27 05.6	+0.5
	comp=Z,80nm,1.3s						
X16A	Lo Mia Camp, P	17.16	338	*e*Pn	P	21 27 10.3	+1.1
	comp=Z,47nm,0.8s						
W18A	Petrified Fore	17.28	344	*e*Pn	P	21 27 12.2	+1.6
	comp=Z,208nm,1.6s						
W18A	Petrified Fore	17.28	344	P	P	21 27 11.4	+0.9
	baz=161,SNR=27						
GLA	Glamis	17.44	328	*e*Pn	P	21 27 13.1	+0.9
	comp=Z,92nm,1.2s						
GLA	Glamis	17.44	328	*e*P	P	21 27 13.1	+0.9
GLA				pmax	pmax		
	comp=Z,92nm,1.2s						
GLA	Glamis	17.44	328	P	P	21 27 13.0	+0.9
	baz=143,SNR=8.0						
Z41A	Richland Creek	17.70	32	*e*Pn	P	21 27 15.0	+0.1
	comp=Z,231nm,1.3s						
Z41A				*e*PcP	PcP	21 31 41.3	-10
Z41A	Richland Creek	17.70	32	P	Pn	21 27 13.7	-0.6
	baz=216,SNR=6.8						
ESTN	Estel	17.72	105	*e*Pn	Pn	21 27 13.6	-1.3
	comp=Z,369nm,1.7s						
ESTN				*e*Sn	Sn	21 30 02.0	-29
IKP	In-Ko-Pah, Jac	17.80	324	P	P	21 27 18.1	+1.9
	baz=139,SNR=9.5						
Y12C	Blythe	17.85	330	*e*Pn	P	21 27 17.9	+1.2
	comp=Z,69nm,1.0s						
Y12C	Blythe	17.85	330	P	P	21 27 18.8	+2.2
	baz=145,SNR=18						
SWSC	Sam W. Stewart	17.86	326	P	P	21 27 19.1	+2.4
	baz=140,SNR=5.7						
WLAR	White Oak Lake	17.89	31	*e*Pn	Pn	21 27 16.2	-0.5
	comp=Z,366nm,1.3s						
WUAZ	Wupatki	18.13	340	*e*Pn	P	21 27 22.6	+2.6
	comp=Z,135nm,1.1s						
WUAZ	Wupatki	18.13	340	P	P	21 27 22.3	+2.4
	baz=156,SNR=52						
PDMCI	Parker Dam,Lak	18.14	332	P	P	21 27 21.9	+2.1
	baz=147,SNR=16						
BAR	Barrett	18.14	323	*e*Pn	P	21 27 21.4	+1.5
MONP2	Monument Peak	18.16	324	P	P	21 27 22.9	+2.6
	baz=138,SNR=10						
VBMS	Vicksburg	18.17	39	*e*Pn	P	21 27 20.9	+0.7
	comp=Z,289nm,1.2s						
VBMS	Vicksburg	18.17	39	P	Pn	21 27 18.9	-1.3
	baz=224						
BC3	Big Chuckawall	18.23	328	P	Pn	21 27 23.5	+2.5
	baz=142,SNR=16						
U32A	Winter Ranch,	18.27	13	*e*P	P	21 27 20.6	-0.6
	comp=Z,380nm,1.5s						
MIAR	Mount Ida	18.38	28	*e*P	P	21 27 21.1	-1.4
	comp=Z,201nm,1.6s						
MIAR	Mount Ida	18.38	28	*e*P	P	21 27 21.1	-1.4
MIAR				pmax	pmax		
	comp=Z,201nm,1.6s						
MIAR	Mount Ida	18.38	28	P	P	21 27 20.9	-1.7
	baz=212						
IRM	Iron Mountain	18.48	329	P	Pn	21 27 26.2	+2.2
	baz=144,SNR=24						
T25A	Trinidad	18.51	359	P	Pn	21 27 25.4	+0.9
	baz=178,SNR=8.6						
109C	Camp Elliot, M	18.54	323	P	Pn	21 27 26.8	+2.1
	baz=137,SNR=5.4						
X40A	Basin Creek Fa	18.68	30	*e*P	P	21 27 24.6	-1.1
	comp=Z,317nm,1.9s						
X40A				*e*PcP	PcP	21 31 55.1	+1.8
X40A	Basin Creek Fa	18.68	30	P	P	21 27 24.7	-1.1
	baz=214						
W13A	Hualapai Mount	18.70	334	*e*P	Pn	21 27 27.9	+1.1
	comp=Z,35nm,0.9s						
TUL1	Leonard	18.71	21	P	P	21 27 25.6	-0.5
	baz=204,SNR=18						
XPFO	Pion Flat	18.72	326	*e*P	Pn	21 27 29.4	+2.4
	comp=Z,110nm,1.0s						
PFO	Pinyon Flats O	18.72	326	*e*P	Pn	21 27 29.3	+2.3
	comp=Z,102nm,1.0s						
PFO	Pinyon Flats O	18.72	326	*e*P	Pn	21 27 29.3	+2.3
PFO				pmax	pmax		
	comp=Z,102nm,1.0s						
PFO	Pinyon Flats O	18.72	326	P	Pn	21 27 29.5	+2.5
	baz=140,SNR=19						
PFO	Pinyon Flats O	18.72	326	P	Pn	21 27 28.9	+1.9
	comp=Z,0.8nm,0.3s,baz=141,slow=7.5,SNR=36						
PFO				LR	LR	21 34 17.6	
	comp=Z,7μm,18.8s,baz=154,slow=36						
NEE2	Needles Airpor	18.74	332	P	Pn	21 27 28.3	+1.3
	baz=146						
CCAR	Cane Creek	18.74	33	*e*P	P	21 27 26.1	-0.4
	comp=Z,1μm,2.0s						
BELC	Belle Mtn. Jos	18.78	327	P	Pn	21 27 30.0	+2.3
	baz=142						
145A	Houston Renfro	18.80	39	P	P	21 27 26.6	-0.4
	baz=225						
W39A	Magazine	18.84	26	*e*P	P	21 27 27.5	-0.1
	comp=Z,334nm,1.6s						
W39A	Magazine	18.84	26	P	P	21 27 27.3	-0.3
	baz=210,SNR=14						
MVCO	Mesa Verde	19.01	349	*e*P	Pn	21 27 31.0	+0.5
	comp=Z,146nm,1.3s						
MVCO	Mesa Verde	19.01	349	P	Pn	21 27 31.1	+0.5
	baz=166,SNR=33						
448A	Bay Minette	19.05	47	P	P	21 27 28.9	-1.0
	baz=233						
MURC	Murrieta	19.12	324	P	Pn	21 27 33.3	+1.6
	baz=138,SNR=9.8						
UALR	University of	19.14	30	*e*P	P	21 27 31.1	+0.2
	comp=Z,283nm,1.7s						
SDCO	Great Sand Dun	19.16	356	*e*P	Pn	21 27 33.0	+0.6
	comp=Z,64nm,1.1s						
SDCO	Great Sand Dun	19.16	356	P	Pn	21 27 32.9	+0.5
	baz=175,SNR=44						
Y43A	Makayla and Ka	19.18	35	P	P	21 27 30.0	-1.3
	baz=220						
LDFC	Landfair	19.22	331	*e*P	Pn	21 27 33.8	+0.8
	comp=Z,130nm,1.0s						
GMRC	Granite Mounta	19.24	329	P	Pn	21 27 34.6	+1.4
	baz=144,SNR=17						
U15A	North Rim	19.27	339	*e*P	Pn	21 27 34.8	+1.1
	comp=Z,257nm,2.0s						
S22A	4UR Ranch, Cre	19.28	353	*e*P	Pn	21 27 34.8	+1.0
	comp=Z,96nm,1.0s						
S22A	4UR Ranch, Cre	19.28	353	P	Pn	21 27 34.8	+1.0
	baz=171,SNR=104						
449A	Pace	19.40	48	P	P	21 27 33.5	-0.2
	baz=235						
SCI2	San Clemente I	19.45	320	P	Pn	21 27 36.9	+1.2
	baz=134						
BBRC	Big Bear Solar	19.47	326	P	Pn	21 27 37.9	+1.8
	baz=140						
W41B	Gary Mavity, V	19.51	30	*e*P	P	21 27 34.2	-0.7
	comp=Z,65nm,0.8s						
W41B	Gary Mavity, V	19.51	30	P	P	21 27 34.5	-0.4
	baz=214,SNR=32						
WHAR	Wooly Hollow	19.59	29	*e*P	P	21 27 35.4	-0.4
	comp=Z,100nm,0.9s						
HEC	Hector,Ludlow	19.61	328	P	Pn	21 27 38.4	+0.9
	baz=142,SNR=42						
CIS	Catalina Islan	19.67	322	P	Pn	21 27 39.1	+0.9
	baz=135						
X43A	Marvell	19.67	34	*e*P	P	21 27 36.8	+0.2
	comp=Z,265nm,0.9s						
X43A	Marvell	19.67	34	P	P	21 27 36.8	+0.2
	baz=219,SNR=11						
HHAR	Hobbs	19.72	24	*e*P	P	21 27 36.6	-0.5
	comp=Z,162nm,1.3s						
BRAL	Brewton	19.75	47	*e*P	P	21 27 35.7	-1.8
	comp=Z,365nm,1.1s						
BRAL	Brewton	19.75	47	P	P	21 27 37.4	-0.1
	baz=234,SNR=7.4						
349A	Repton	19.76	47	P	P	21 27 37.6	0.0
	baz=233,SNR=14						
FMP	Fort Macarthur	19.82	322	P	Pn	21 27 39.3	-0.7
	baz=136						
BFSC	Mount Baldy Ra	19.85	325	P	Pn	21 27 40.9	+0.5
	baz=138,SNR=15						
147A	Livingston	19.87	42	*e*P	P	21 27 37.7	-1.1
	comp=Z,265nm,1.1s						
147A	Livingston	19.87	42	P	P	21 27 38.5	-0.3
	baz=228,SNR=13						
450A	Crestview	19.87	49	P	P	21 27 37.5	-1.4
	baz=236						

TUQ	Turquoise Moun	19.89	330	P	Pn	21 27 41.5	+0.5
	baz=144,SNR=83						
PV01	Paradox Valley	19.92	349	*e*P	Pn	21 27 41.1	-0.2
	comp=Z,76nm,1.0s						
ESPN	Las Esperanzas	19.93	106	*e*P	Pn	21 27 40.9	-0.5
	comp=Z,122nm,1.2s						
W42A	Bald Knob	19.94	31	P	P	21 27 38.3	-1.2
	baz=216						
PV05	Paradox Valley	19.96	348	*e*P	Pn	21 27 41.5	-0.4
	comp=Z,158nm,0.9s						
RRX	Edison Barstow	19.98	327	P	Pn	21 27 42.6	+0.7
	baz=141						
KNB	Kanab	19.98	339	*e*P	Pn	21 27 41.7	-0.3
	comp=Z,74nm,1.0s						
KNB	Kanab	19.98	339	*e*P	Pn	21 27 41.7	-0.3
KNB				pmax	pmax		
	comp=Z,74nm,1.0s						
PV13	Radium Mtn., P	19.99	349	*e*P	Pn	21 27 41.6	-0.6
	comp=Z,118nm,0.9s						
PV02	Paradox Valley	20.02	349	*e*P	P	21 27 41.6	+0.9
	comp=Z,95nm,0.9s						
MWC	Mount Wilson	20.06	324	*e*P	Pn	21 27 43.7	+0.7
	comp=Z,101nm,0.9s						
MWC				LR	LR		
	comp=Z,4µm,18.0s						
MWC	Mount Wilson	20.06	324	*e*P	Pn	21 27 43.7	+0.7
MWC				pmax	pmax		
	comp=Z,101nm,0.9s						
MWC				MLR	MLR		
	comp=Z,4µm,18.0s						
PV03	Paradox Valley	20.09	349	*e*P	P	21 27 41.5	+0.2
	comp=Z,123nm,0.9s						
PV03				LR	LR		
	comp=Z,14µm,22.0s						
PASC	Pasadena Art C	20.09	323	*e*P	Pn	21 27 42.9	-0.3
	comp=Z,72nm,1.1s						
PASC				LR	LR		
	comp=Z,5µm,18.0s						
JTS	JuntasAbangare	20.10	112	*e*P	Pn	21 27 43.7	+0.2
	comp=Z,159nm,1.1s						
JTS	JuntasAbangare	20.10	112*c*	*i*P	Pn	21 27 43.9	+0.4
JTS				*i* *PP	sP	21 27 58.2	+4.1
JTS	JuntasAbangare	20.10	112	P	P	21 27 42.3	+0.8
	comp=Z,0.9nm,0.3s,baz=6.9,slow=9.0,SNR=9.7						
JTS				LR	LR	21 35 12.5	
	comp=Z,3µm,18.4s,baz=5.5,slow=36						
PV15	Paradox Valley	20.10	349	*e*P	Pn	21 27 43.4	-0.1
	comp=Z,142nm,1.3s						
PV15				LR	LR		
	comp=Z,12µm,20.0s						
LCMT	Little Creek M	20.12	338	*e*P	Pn	21 27 43.9	+0.1
	comp=Z,46nm,1.0s						
LCMT				LR	LR		
	comp=Z,8µm,18.0s						
PV17	East Wray Mesa	20.13	348	*e*P	Pn	21 27 43.2	-0.7
	comp=Z,203nm,0.9s						
PV17				LR	LR		
	comp=Z,10µm,20.0s						
PV11	David Mesa, Pa	20.13	349	*e*P	Pn	21 27 43.2	-0.7
	comp=Z,93nm,0.9s						
PV11				LR	LR		
	comp=Z,16µm,22.0s						
PV12	Saucer Basin,	20.14	349	*e*P	Pn	21 27 43.5	-0.4
	comp=Z,175nm,0.9s						
PV12				LR	LR		
	comp=Z,12µm,20.0s						
PV16	Nyswonger Mesa	20.15	349	*e*P	Pn	21 27 43.2	-0.9
	comp=Z,164nm,1.0s						
PV16				LR	LR		
	comp=Z,14µm,22.0s						
PV19	Morning Glory	20.16	348	*e*P	Pn	21 27 43.8	-0.5
	comp=Z,154nm,0.9s						
PV19				LR	LR		
	comp=Z,14µm,22.0s						
249A	Camden	20.18	45	P	P	21 27 41.7	-0.5
	baz=232,SNR=9.3						
PV20	West Nyswonger	20.19	348	*e*P	Pn	21 27 43.8	-0.7
	comp=Z,182nm,0.9s						
PV20				LR	LR		
	comp=Z,8µm,19.0s						
PKCU	Pink Cliffs	20.20	340	*e*P	Pn	21 27 44.6	-0.2
	comp=Z,160nm,1.2s						
PKCU				LR	LR		
	comp=Z,7µm,19.0s						
GSC	Goldstone, Bar	20.21	328	*e*P	Pn	21 27 44.2	-0.6
	comp=Z,124nm,1.0s						
GSC				LR	LR		
	comp=Z,6µm,18.0s						
GSC	Goldstone, Bar	20.21	328	*e*P	Pn	21 27 44.2	-0.5
GSC				pmax	pmax		
	comp=Z,124nm,1.0s						
GSC				MLR	MLR		
	comp=Z,6µm,18.0s						
GSC	Goldstone, Bar	20.21	328	P	Pn	21 27 45.6	+0.8
	baz=142,SNR=41						
PV07	Paradox Valley	20.23	349	*e*P	Pn	21 27 44.6	-0.4
	comp=Z,112nm,1.1s						
PV07				LR	LR		
	comp=Z,12µm,19.0s						
U40A	Yellville	20.23	27	P	P	21 27 41.6	-1.0
	baz=211,SNR=17						
PV04	Paradox Valley	20.23	349	*e*P	Pn	21 27 44.4	-0.6
	comp=Z,160nm,1.0s						
PV04				LR	LR		
	comp=Z,14µm,21.0s						
PV14	Lion Creek, Pa	20.23	348	*e*P	Pn	21 27 44.1	-0.9
	comp=Z,171nm,1.0s						
PV14				LR	LR		
	comp=Z,11µm,18.0s						
DECC	Green Verdugo	20.23	323	P	Pn	21 27 45.8	+0.8
	baz=137,SNR=7.1						
SNCC	San Nicolas Is	20.24	319	PFAKE		21 28 00.0	+15
SNCC				LR	LR		
	comp=Z,6µm,20.0s						
SNCC	San Nicolas Is	20.24	319	P	Pn	21 27 45.4	+0.5
	baz=132						
PV10	Paradox Valley	20.24	348	*e*P	P	21 27 43.5	+0.4
	comp=Z,242nm,0.9s						
PV10				LR	LR		
	comp=Z,7µm,18.0s						
PV23	Carpenter Ridg	20.31	348	*e*P	Pn	21 27 45.1	-0.9
	comp=Z,134nm,1.0s						
PV23				LR	LR		
	comp=Z,11µm,22.0s						
Q24A	Divide	20.35	357	*e*P	P	21 27 45.5	+1.1
	comp=Z,102nm,1.3s						
Q24A				LR	LR		
	comp=Z,7µm,19.0s						
Q24A	Divide	20.35	357	P	P	21 27 45.4	+1.1
	baz=176,SNR=8.5						
PV09	Paradox Valley	20.38	348	*e*P	Pn	21 27 45.8	-1.0
451A	Vernon	20.38	51	*e*P	P	21 27 42.5	-1.8
	comp=Z,381nm,1.3s						
451A	Vernon	20.38	51	P	P	21 27 43.2	-1.2
	baz=238						
350A	Dozier	20.40	48	P	P	21 27 43.2	-1.3
	baz=235						
KSCO	Kaye Shedlock'	20.40	3	*e*P	P	21 27 44.8	+0.1
	comp=Z,149nm,1.0s						
KSCO				LR	LR		
	comp=Z,5µm,20.0s						
KSCO	Kaye Shedlock'	20.40	3	P	P	21 27 45.3	+0.6
	baz=183,SNR=18						
PV21	Cone Mtn., Par	20.41	349	*e*P	Pn	21 27 46.2	-0.9
	comp=Z,86nm,0.9s						
PV21				LR	LR		
	comp=Z,11µm,21.0s						
SHOC	Shoshone, Teco	20.44	330	P	Pn	21 27 47.3	+0.1
	baz=144,SNR=48						
SHPR	Sheep Range	20.44	333	*e*P	Pn	21 27 46.6	-0.8
	comp=Z,87nm,1.0s						
SHPR				LR	LR		
	comp=Z,4µm,20.0s						
552A	Lynn Haven	20.47	52	P	P	21 27 44.9	-0.4
	baz=240						
OXF	Oxford	20.47	36	*e*P	P	21 27 44.3	-1.0
	comp=Z,176nm,1.0s						
OXF	Oxford	20.47	36	*e*P	P	21 27 44.3	-1.0
OXF				pmax	pmax		
	comp=Z,176nm,1.0s						
OXF	Oxford	20.47	36	P	P	21 27 44.2	-1.0
	baz=222,SNR=19						
CBKS	Cedar Bluff	20.50	9	*e*P	P	21 27 44.8	-0.9
	comp=Z,141nm,1.1s						
CBKS				LR	LR		
	comp=Z,5µm,20.0s						
CBKS	Cedar Bluff	20.50	9	*e*P	P	21 27 44.8	-0.9
CBKS				pmax	pmax		
	comp=Z,141nm,1.1s						
CBKS				MLR	MLR		
	comp=Z,5µm,20.0s						
CBKS	Cedar Bluff	20.50	9	P	P	21 27 45.4	-0.2
	baz=191,SNR=8.6						
EDW2	Edwards Air Fo	20.51	325	P	Pn	21 27 47.9	-0.3
	baz=138,SNR=23						
BLG	Laguna Peak, P	20.55	322	P	Pn	21 27 48.3	-0.4
	baz=135						
SZCU	Shurtz Canyon	20.59	339	*e*P	Pn	21 27 48.5	-0.7
	comp=Z,42nm,1.1s						
SZCU				LR	LR		
	comp=Z,6µm,19.0s						
HBAR	Harrisburg	20.59	32	PFAKE		21 28 00.0	+11
HBAR				LR	LR		
	comp=Z,3µm,19.0s						
U41A	Viola	20.63	28	P	P	21 27 46.2	-0.8
	baz=213,SNR=22						
MET	Memphis--Engin	20.64	34	*e*P	P	21 27 46.3	-0.7
	comp=Z,342nm,1.1s						
CCUT	Cedar City	20.65	338	*e*P	P	21 27 48.6	+1.1
	comp=Z,29nm,0.9s						
CCUT				LR	LR		
	comp=Z,7µm,18.0s						
MTPU	Mount Pierson	20.71	341	*e*P	Pn	21 27 50.5	-0.3
	comp=Z,127nm,0.9s						
SMCO	Snowmass	20.71	353	*e*P	P	21 27 48.5	+0.2
	comp=Z,86nm,1.0s						
SMCO				LR	LR		
	comp=Z,16µm,22.0s						
W44A	Shelby Farms P	20.71	34	P	P	21 27 46.9	-1.0
	baz=220						
OSI	Osito Audit: C	20.72	323	*e*P	P	21 27 49.1	+1.1
	comp=Z,151nm,1.1s						
OSI				LR	LR		
	comp=Z,5µm,21.0s						
OSI	Osito Audit: C	20.72	323	P	Pn	21 27 50.6	0.0
	baz=136						
250A	Grady	20.77	47	*e*P	P	21 27 47.6	-0.9
	comp=Z,369nm,1.3s						
250A	Grady	20.77	47	P	P	21 27 47.5	-1.0
	baz=234						
149A	Jones	20.78	44	P	P	21 27 48.0	-0.8
	baz=231,SNR=14						
LRMC	Laurel Mtn Rad	20.80	327	P	Pn	21 27 51.4	-0.3
	baz=140,SNR=23						
SCZ2	Santa Cruz Isl	20.81	321	P	Pn	21 27 51.3	-0.3
	baz=133						
V43A	Jonesboro	20.83	32	P	P	21 27 47.3	-1.9
	baz=218						
351A	Pinckard	20.84	49	P	P	21 27 48.4	-0.9
	baz=236,SNR=5.7						
452A	Marianna	20.91	51	P	P	21 27 49.0	-1.1
	baz=238,SNR=6.7						
LRAL	Lakeview Retre	20.92	43	*e*P	P	21 27 47.6	-2.6
	comp=Z,89nm,1.0s						
LRAL	Lakeview Retre	20.92	43	P	P	21 27 49.1	-1.1
	baz=230						
U42A	Revenden	20.95	30	P	P	21 27 49.9	-0.6
	baz=215,SNR=26						
X46A	Booneville	20.97	38	P	P	21 27 49.8	-0.9
	baz=224,SNR=8.3						
HDC	Heredia	20.97	111	*e*P	P	21 27 51.8	+0.8
	comp=Z,84nm,0.7s						
HDC				LR	LR		
	comp=Z,3µm,20.0s						
W45A	Hickory Valley	21.07	35	P	P	21 27 50.2	-1.5
	baz=222						
MSU	Marysvale	21.14	342	*e*P	P	21 27 54.8	+2.0
553A	Crawfordville	21.14	53	P	P	21 27 51.3	-1.3
	baz=241						
ARVC	Arvin	21.15	324	P	P	21 27 55.2	+2.5
	baz=137,SNR=36						
MPMC	Manual Prospec	21.15	328	P	P	21 27 55.2	+2.3
	baz=142,SNR=66						
SBC	Santa Barbara	21.17	321	P	P	21 27 55.4	+2.6
	baz=134						
FURC	Furnace Creek,	21.17	330	P	P	21 27 55.1	+2.3
	baz=144,SNR=10.0						
V44A	Blytheville	21.20	33	P	P	21 27 52.1	-1.0
	baz=219						
ISCO	Idaho Springs	21.21	356	*e*P	P	21 27 53.8	+0.2
	comp=Z,45nm,1.1s						
ISCO				LR	LR		
	comp=Z,3µm,18.0s						
ISCO	Idaho Springs	21.21	356	*e*P	P	21 27 53.8	+0.2
ISCO				pmax	pmax		
	comp=Z,45nm,1.1s						
ISCO				MLR	MLR		
	comp=Z,3µm,18.0s						
ISCO	Idaho Springs	21.21	356	P	P	21 27 54.3	+0.7
	baz=175,SNR=19						
GNAR	Gosnell	21.24	33	*e*P	P	21 27 51.9	-1.6
	comp=Z,540nm,1.8s						
GNAR				LR	LR		
	comp=Z,3µm,22.0s						
Q16A	Castle Valley	21.24	344	*e*P	P	21 27 54.4	+0.6
	comp=Z,116nm,1.0s						
Q16A				LR	LR		
	comp=Z,6µm,18.0s						
SRU	San Rafael Swe	21.26	346	*e*P	P	21 27 54.7	+0.6
	comp=Z,54nm,0.9s						
SRU				LR	LR		
	comp=Z,7µm,19.0s						
SRU	San Rafael Swe	21.26	346	*e*P	P	21 27 54.7	+0.6
SRU				pmax	pmax		
	comp=Z,54nm,0.9s						
SRU				MLR	MLR		
	comp=Z,7µm,19.0s						
T41A	Mountain View	21.28	28	P	P	21 27 53.1	-0.9
	baz=213,SNR=9.7						
TPNV	Topopah Spring	21.28	332	*e*P	P	21 27 56.5	+2.2
	comp=Z,264nm,1.0s						
TPNV				LR	LR		
	comp=Z,4µm,21.0s						
TPNV	Topopah Spring	21.28	332	*e*P	P	21 27 56.5	+2.2
TPNV				pmax	pmax		
	comp=Z,264nm,1.0s						
TPNV				MLR	MLR		
	comp=Z,4µm,21.0s						
TPNV	Topopah Spring	21.28	332	P	P	21 27 56.7	+2.5
	baz=146,SNR=159						
150A	Eclectic	21.30	46	P	P	21 27 53.2	-1.1
	baz=233,SNR=11						
WBCY	West Bay, Gran	21.30	84	*e*P	P	21 27 53.2	-1.3
	comp=Z,350nm,0.9s						
TCRU	Three Creeks R	21.31	341	*e*P	P	21 27 56.1	+1.5
	comp=Z,77nm,0.9s						
TCRU				LR	LR		
	comp=Z,3µm,19.0s						
Z49A	Columbiana	21.32	44	P	P	21 27 53.4	-1.1
	baz=231,SNR=14						
ISA	Isabella, Lake	21.36	326	*e*P	P	21 27 57.5	+2.5
	comp=Z,181nm,1.0s						
ISA				LR	LR		
	comp=Z,4µm,18.0s						
ISA	Isabella, Lake	21.36	326	P	P	21 27 57.5	+2.5
	baz=139,SNR=50						
U43A	Rector	21.36	31	P	P	21 27 53.9	-1.0
	baz=217						
X47A	Russelville	21.37	39	P	P	21 27 53.5	-1.5
	baz=226,SNR=22						
DAC	Darwin (Calif)	21.38	328	*e*P	P	21 27 57.4	+2.1
	comp=Z,92nm,1.0s						
DAC				LR	LR		
	comp=Z,7µm,18.0s						
DAC	Darwin (Calif)	21.38	328	*e*P	P	21 27 57.4	+2.1
DAC				pmax	pmax		
	comp=Z,92nm,1.0s						
DAC				MLR	MLR		
	comp=Z,7µm,18.0s						
Y48A	Jasper	21.38	41	P	P	21 27 53.8	-1.3
	baz=228,SNR=14						
KSU1	Kansas State U	21.42	16	*e*P	P	21 27 55.0	-0.6
	comp=Z,53nm,0.8s						
KSU1				LR	LR		
	comp=Z,6µm,20.0s						
KSU1	Kansas State U	21.42	16	P	P	21 27 54.8	-0.8
	baz=199,SNR=13						
251A	Midway	21.43	47	P	P	21 27 54.4	-1.3
	baz=235						
352A	Blakely	21.43	50	*e*P	P	21 27 53.3	-2.4
	comp=Z,205nm,1.1s						
352A	Blakely	21.43	50	P	P	21 27 54.4	-1.3
	baz=237						
W46A	Michie	21.50	37	P	P	21 27 54.6	-1.8
	baz=223						
FSCY	Frank Sound, G	21.51	84	*e*P	P	21 27 53.8	-2.8
	comp=Z,412nm,1.1s						
PKM	Mcpherson Peak	21.54	322	P	P	21 27 59.1	+2.0
	baz=135,SNR=12						
HALT	Halls	21.55	34	*e*P	P	21 27 55.5	-1.4
	comp=Z,557nm,1.7s						
453A	Whigham	21.55	52	*e*P	P	21 27 55.8	-1.2
	comp=Z,306nm,1.3s						
453A	Whigham	21.55	52	P	P	21 27 56.0	-1.0
	baz=240,SNR=9.2						
PLAL	Pickwick Lake	21.57	38	*e*P	P	21 27 55.4	-1.7
	comp=Z,67nm,1.0s						
T42A	Van Buren	21.57	29	*e*P	P	21 27 56.3	-0.8
	comp=Z,85nm,1.1s						
T42A				LR	LR		
	comp=Z,3µm,20.0s						
T42A	Van Buren	21.57	29	P	P	21 27 56.1	-1.0
	baz=214,SNR=18						
TMUT	Trail Mountain	21.61	344	*e*P	P	21 27 59.3	+1.5
	comp=Z,152nm,1.0s						
TMUT				LR	LR		
	comp=Z,5µm,18.0s						
V45A	Humboldt	21.62	35	P	P	21 27 55.8	-1.9
	baz=221						
P17A	Butcher Ranch,	21.66	346	*e*P	P	21 27 59.0	+0.8
	comp=Z,58nm,0.9s						
P17A				LR	LR		
	comp=Z,9µm,18.0s						
554A	Perry	21.67	54	P	P	21 27 57.1	-1.1
	baz=242						
PBMO	Poplar Bluff	21.68	30	*e*P	P	21 27 57.4	-0.8
	comp=Z,165nm,1.6s						
PBMO				LR	LR		
	comp=Z,10µm,21.0s						
P18A	Preston Nutter	21.69	347	*e*P	P	21 27 59.0	+0.2
PSUT	Pine Spring	21.70	339	*e*P	P	21 27 58.2	-0.6
	comp=Z,66nm,0.8s						
PSUT				LR	LR		
	comp=Z,8µm,18.0s						
151A	Opelika	21.73	47	P	P	21 27 57.4	-1.5
	baz=234,SNR=8.1						
S41A	Jillco Farms,	21.74	27	P	P	21 27 57.2	-1.8
	baz=212,SNR=14						
655A	Horseshoe Beac	21.75	56	P	P	21 27 57.5	-1.6
	baz=244						
CWC	Cottonwood Cre	21.75	328	P	P	21 28 01.6	+2.3
	baz=141						
PVMO	Portageville	21.75	32	PFAKE		21 28 10.0	+11
PVMO				LR	LR		
	comp=Z,11µm,19.0s						
Z50A	Ashland	21.76	44	*e*P	P	21 27 57.9	-1.4
	comp=Z,264nm,1.5s						
Z50A	Ashland	21.76	44	P	P	21 27 58.1	-1.2
	baz=232,SNR=29						
X48A	Hartselle	21.81	40	*e*P	P	21 27 57.9	-1.9
	comp=Z,56nm,0.9s						
X48A	Hartselle	21.81	40	P	P	21 27 57.9	-1.9
	baz=227,SNR=9.0						
O20A	White River Ci	21.82	351	*e*P	P	21 28 00.7	+0.7
	comp=Z,82nm,1.1s						
O20A				LR	LR		
	comp=Z,15µm,18.0s						
O20A	White River Ci	21.82	351	P	P	21 28 01.3	+1.3
	baz=168,SNR=13						
VES	Vestal, Richgr	21.82	325	P	P	21 28 02.3	+2.5
	baz=138,SNR=36						
Y49A	Blount Mountai	21.82	42	*e*P	P	21 27 56.9	-3.0
	comp=Z,135nm,1.5s						
Y49A	Blount Mountai	21.82	42	P	P	21 27 58.3	-1.6
	baz=230,SNR=5.2						
U44A	Portageville	21.82	32	P	P	21 27 57.9	-2.0
	baz=218						
GRAC	Grapevine Rang	21.84	330	P	P	21 28 02.5	+2.4
	baz=143						
252A	Lumpkin	21.85	49	P	P	21 27 58.5	-1.7
	baz=236,SNR=8.1						
GLAT	Glass	21.85	33	*e*P	P	21 27 58.4	-1.7
	comp=Z,652nm,1.8s						
GLAT				LR	LR		
	comp=Z,4µm,21.0s						
957A	Wimauma	21.87	62	P	P	21 28 00.2	-0.3
	baz=250						
U44B	Burton Farm, H	21.87	33	P	P	21 27 59.2	-1.2
	baz=219						
353A	Camilla	21.88	51	P	P	21 27 59.1	-1.4
	baz=239,SNR=9.5						
PARMO	Parma	21.92	32	*e*P	P	21 27 59.8	-1.0
	comp=Z,120nm,0.9s						
PARMO				LR	LR		
	comp=Z,3µm,22.0s						
SMMC	Simmler	21.95	323	P	P	21 28 03.5	+2.2
	baz=135,SNR=10						
T43A	Greenville	21.99	30	P	P	21 28 00.2	-1.4
	baz=216,SNR=16						
454A	Quitman	22.00	53	P	P	21 28 01.6	-0.3
	baz=241,SNR=6.3						
058A	Arcadia	22.03	63	P	P	21 28 01.0	-1.2
	baz=252						
W47A	Westpoint	22.03	38	P	P	21 28 00.6	-1.6
	baz=225,SNR=18						
857A	Zephyrhills	22.08	60	P	P	21 28 01.0	-1.7
	baz=248						
UTMT	University of	22.12	34	*e*P	P	21 28 02.0	-1.1
	comp=Z,224nm,0.3s						
V46A	Holladay	22.13	36	P	P	21 28 01.2	-2.0
	baz=223,SNR=22						
059Z	Ave Maria	22.14	66	P	P	21 28 01.8	-1.5
	baz=254						
U45A	Rockin P Farm,	22.18	34	P	P	21 28 02.2	-1.5
	baz=220						
R11A	Troy Canyon, C	22.18	335	*e*P	P	21 28 05.5	+1.5
	comp=Z,29nm,1.0s						
R11A				LR	LR		
	comp=Z,4µm,18.0s						
R11A	Troy Canyon, C	22.18	335	P	P	21 28 05.5	+1.5
	baz=149,SNR=13						
152A	Waverly Hall	22.23	47	*e*P	P	21 28 02.3	-2.1
	comp=Z,106nm,1.3s						
152A	Waverly Hall	22.23	47	P	P	21 28 02.6	-1.7
	baz=235,SNR=12						
555A	McAlpin	22.24	55	*e*P	P	21 28 02.7	-1.7
	comp=Z,182nm,1.0s						
555A	McAlpin	22.24	55	P	P	21 28 02.8	-1.6
	baz=243,SNR=7.5						
958A	Wauchula	22.24	62	P	P	21 28 03.2	-1.2
	baz=251						
656A	Willston	22.26	57	*e*P	P	21 28 02.6	-2.0
	comp=Z,123nm,1.2s						
656A	Willston	22.26	57	P	P	21 28 03.2	-1.4
	baz=246						
Y50A	Piedmont	22.28	43	P	P	21 28 02.7	-2.0
	baz=231						
X49A	Woodville	22.30	41	P	P	21 28 03.1	-1.9
	baz=228,SNR=6.2						
Z51A	Franklin	22.30	45	P	P	21 28 03.3	-1.7
	baz=233,SNR=9.5						
TIN	Tinemaha, Big	22.30	329	P	P	21 28 07.5	+2.3
	baz=142,SNR=7.7						
S42A	Caledonia	22.31	28	P	P	21 28 03.5	-1.6
	baz=214,SNR=6.1						
253A	Americus	22.32	49	*e*P	P	21 28 02.3	-3.0
	comp=Z,112nm,0.9s						
253A	Americus	22.32	49	P	P	21 28 03.1	-2.1
	baz=237						
N23A	Red Feather La	22.32	356	*e*P	P	21 28 06.2	+0.7
	comp=Z,36nm,1.1s						
N23A				LR	LR		
	comp=Z,16µm,19.0s						
N23A	Red Feather La	22.32	356	P	P	21 28 06.2	+0.7
	baz=174						
T44A	Benton	22.33	31	P	P	21 28 04.1	-1.2
	baz=218						
VOG	Valley Oaks Go	22.34	325	P	P	21 28 07.5	+2.1
	baz=138						
W48A	Pulaski	22.35	39	P	P	21 28 04.0	-1.5
	baz=226,SNR=12						
CCM	Cathedral Cave	22.35	27	*e*P	P	21 28 04.0	-1.5
	comp=Z,76nm,1.3s						
CCM				LR	LR		
	comp=Z,24µm,18.0s						
CCM	Cathedral Cave	22.35	27	*e*P	P	21 28 04.0	-1.5
CCM				pmax	pmax		
	comp=Z,76nm,1.3s						
CCM				MLR	MLR		
	comp=Z,24µm,18.0s						
CCM	Cathedral Cave	22.35	27	P	P	21 28 04.3	-1.2
	baz=213						
OGNE	Ogallala	22.36	4	*e*P	P	21 28 04.8	-0.9
	comp=Z,203nm,1.4s						

OGNE				LR	LR		
	comp=Z,4µm,20.0s						
OGNE	Ogallala	22.36	4	P	P	21 28 05.3	-0.4
	baz=184						
PAGB	Antelope Grade	22.39	323	*e*P	P	21 28 07.9	+1.9
	comp=Z,174nm,1.2s						
PAGB				LR	LR		
	comp=Z,6µm,18.0s						
TIGA	Tifton	22.39	51	*e*P	P	21 28 03.4	-2.6
	comp=Z,555nm,1.4s						
TIGA	Tifton	22.39	51	P	P	21 28 04.2	-1.8
	baz=239,SNR=20						
MPU	Maple Canyon	22.39	344	*e*P	P	21 28 07.8	+1.6
	comp=Z,77nm,1.1s						
MPU				LR	LR		
	comp=Z,4µm,19.0s						
NLU	North Lily Min	22.45	343	*e*P	P	21 28 08.3	+1.5
	comp=Z,118nm,1.7s						
NLU				LR	LR		
	comp=Z,5µm,20.0s						
757A	Oxford	22.46	59	P	P	21 28 04.8	-2.0
	baz=247						
455A	Stateville	22.48	53	P	P	21 28 04.5	-2.4
	baz=242,SNR=17						
S43A	Fulton Ridge,	22.48	30	P	P	21 28 05.3	-1.6
	baz=216						
061Z	Ochoppi	22.48	67	PFAKE		21 28 20.0	+13
061Z				LR	LR		
	comp=Z,4µm,21.0s						
061Z	Ochoppi	22.48	67	P	P	21 28 06.5	-0.5
	baz=256						
V47A	Nunnelly	22.48	37	P	P	21 28 04.9	-2.1
	baz=224,SNR=39						
R41A	Rosebud	22.49	26	P	P	21 28 05.3	-1.8
	baz=212,SNR=14						
U46A	Springville	22.51	35	P	P	21 28 04.6	-2.6
	baz=222						
WVT	Waverly	22.53	36	*e*P	P	21 28 05.2	-2.2
	comp=Z,55nm,1.0s						
WVT	Waverly	22.53	36	*e*P	P	21 28 05.2	-2.2
WVT				pmax	pmax		
	comp=Z,55nm,1.0s						
WVT	Waverly	22.53	36	P	P	21 28 05.3	-2.2
	baz=223						
059A	Moore Haven	22.57	64	*e*P	P	21 28 05.9	-2.1
	comp=Z,176nm,1.1s						
059A	Moore Haven	22.57	64	P	P	21 28 06.1	-1.8
	baz=253						
556A	Lake Butler	22.62	56	P	P	21 28 06.9	-1.6
	baz=244						
FVM	French Village	22.65	29	*e*P	P	21 28 06.7	-2.1
	comp=Z,71nm,1.1s						
FVM				LR	LR		
	comp=Z,4µm,22.0s						
FVM	French Village	22.65	29	*e*P	P	21 28 06.7	-2.1
FVM				pmax	pmax		
	comp=Z,71nm,1.1s						
FVM				MLR	MLR		
	comp=Z,4µm,22.0s						
DWPF	Disney Wildern	22.69	61	*e*P	P	21 28 06.7	-2.5
	comp=Z,161nm,1.0s						
DWPF				*e*S	S	21 32 19.6	+4.3
DWPF	Disney Wildern	22.69	61	P	P	21 28 07.9	-1.3
	baz=250						
DWPF	Disney Wildern	22.69	61	*e*P	P	21 28 08.1	-1.1
X50B	Fort Payne	22.69	42	P	P	21 28 07.1	-2.1
	baz=230,SNR=6.7						
PHWY	Pilot Hill	22.70	357	*e*P	P	21 28 09.2	-0.3
	comp=Z,57nm,1.4s						
PHWY				LR	LR		
	comp=Z,12µm,19.0s						
Y51A	Rockmart	22.72	44	P	P	21 28 07.6	-1.9
	baz=232,SNR=15						
R42A	Luebbering	22.73	28	P	P	21 28 07.6	-2.0
	baz=213						
W49A	Belvidere	22.74	40	P	P	21 28 07.8	-1.8
	baz=228,SNR=14						
Z52A	Williamson	22.74	46	P	P	21 28 07.9	-1.8
	baz=234,SNR=33						
T45A	Paducah	22.75	33	*e*P	P	21 28 07.0	-2.8
	comp=Z,97nm,1.0s						
T45A				LR	LR		
	comp=Z,5µm,20.0s						
T45A	Paducah	22.75	33	P	P	21 28 07.8	-2.0
	baz=220						
858A	St. Cloud	22.78	61	P	P	21 28 07.5	-2.7
	baz=250						
V48A	Smith Brothers	22.83	38	*e*P	P	21 28 08.0	-2.6
	comp=Z,52nm,1.1s						
V48A				*e*PcP	PcP	21 32 00.7	-0.4
V48A	Smith Brothers	22.83	38	P	P	21 28 08.3	-2.3
	baz=225,SNR=9.3						
153A	Fort Valley	22.85	48	P	P	21 28 08.4	-2.5
	baz=236						
254A	Abbeville	22.86	50	P	P	21 28 08.6	-2.5
	baz=239,SNR=36						
657A	Interlachen	22.88	57	P	P	21 28 09.3	-1.9
	baz=246						
DUG	Dugway, Tooele	22.88	342	*e*P	P	21 28 10.0	-1.3
	comp=Z,165nm,1.5s						
DUG				LR	LR		
	comp=Z,7µm,19.0s						
DUG	Dugway, Tooele	22.88	342	*e*P	P	21 28 10.0	-1.3
DUG				pmax	pmax		
	comp=Z,165nm,1.5s						
DUG				MLR	MLR		
	comp=Z,7µm,19.0s						
DUG	Dugway, Tooele	22.88	342	P	P	21 28 12.6	+1.3
	baz=157,SNR=26						
355A	Pearson	22.89	52	P	P	21 28 09.3	-2.0
	baz=241						
JLU	Jordanelle	22.90	345	*e*P	P	21 28 12.0	+0.4
	comp=Z,21nm,1.0s						
JLU				LR	LR		
	comp=Z,16µm,18.0s						
959A	Okeechobee	22.96	63	P	P	21 28 09.2	-2.8
	baz=252						
S44A	Carbondale	22.97	31	P	P	21 28 09.6	-2.5
	baz=217						
SWET	Sewanee	23.00	40	*e*P	P	21 28 10.4	-2.1
	comp=Z,218nm,1.8s						
SWET				*e*PcP	PcP	21 31 54.8	-6.7
SIUC	Southern Illin	23.00	31	*e*P	P	21 28 09.7	-2.7
	comp=Z,57nm,1.0s						
SIUC				LR	LR		
	comp=Z,2µm,19.0s						
MLAC	Mammoth, Mammo	23.05	329	P	P	21 28 15.6	+2.4
	baz=141,SNR=24						
U47A	Clarksville	23.05	36	P	P	21 28 10.5	-2.5
	baz=223,SNR=11						
CTU	Camp Tracy	23.06	345	*e*P	P	21 28 14.0	+0.9
	comp=Z,32nm,0.9s						
CTU				LR	LR		
	comp=Z,11µm,18.0s						
Q41A	Truxton	23.11	26	P	P	21 28 11.7	-1.8
	baz=212,SNR=18						
859A	Kempfer Cattle	23.11	62	P	P	21 28 12.4	-1.2
	baz=250						
R43A	Red Bud	23.11	29	P	P	21 28 11.9	-1.7
	baz=215						
OMMB	Old Mammoth Mi	23.12	328	*e*P	P	21 28 16.0	+2.0
	comp=Z,93nm,1.1s						
OMMB				LR	LR		
	comp=Z,4µm,19.0s						
557A	Orange Park	23.16	56	P	P	21 28 11.7	-2.3
	baz=245						
T46A	Princeton	23.16	34	P	P	21 28 12.4	-1.6
	baz=221						
MDPB	Devils Postpil	23.18	328	*e*P	P	21 28 16.7	+2.2
	comp=Z,150nm,1.1s						
MDPB				LR	LR		
	comp=Z,4µm,18.0s						
758A	Lake Helen	23.18	59	P	P	21 28 12.7	-1.5
	baz=248						
RWWY	Rawlins	23.22	354	*e*P	P	21 28 14.9	+0.1
	comp=Z,87nm,1.3s						
RWWY				LR	LR		
	comp=Z,30µm,20.0s						
456A	Hilliard	23.24	54	P	P	21 28 13.0	-1.8
	baz=243						
060A	Indiantown	23.26	64	P	P	21 28 13.6	-1.5
	baz=253						
X51A	Calhoun	23.27	43	*e*P	P	21 28 13.4	-1.7
	comp=Z,167nm,1.3s						
X51A	Calhoun	23.27	43	P	P	21 28 13.0	-2.1
	baz=231						
SLM	Saint Louis	23.27	28	*e*P	P	21 28 13.4	-1.7
	comp=Z,115nm,0.9s						
SLM				LR	LR		
	comp=Z,3µm,22.0s						
SLM	Saint Louis	23.27	28	*e*P	P	21 28 13.4	-1.7
SLM				pmax	pmax		
	comp=Z,115nm,0.9s						
SLM				MLR	MLR		
	comp=Z,3µm,22.0s						
S45A	Carrier Mills	23.29	32	P	P	21 28 14.0	-1.3
	baz=219,SNR=11						
BGNE	Belgrade	23.30	11	*e*P	P	21 28 15.2	-0.1
	comp=Z,417nm,1.5s						
BGNE				LR	LR		
	comp=Z,3µm,19.0s						
BGNE	Belgrade	23.30	11	P	P	21 28 14.8	-0.5
	baz=193						
658A	Bunnell	23.30	58	P	P	21 28 13.5	-2.0
	baz=247						
154A	Montrose	23.34	49	*e*P	P	21 28 13.6	-2.3
	comp=Z,339nm,0.9s						
154A	Montrose	23.34	49	P	P	21 28 13.6	-2.3
	baz=238,SNR=19						
NV11	Mina Array Sit	23.36	331	*e*P	P	21 28 18.1	+1.9
	comp=Z,13nm,1.0s						
NV11				LR	LR		
	comp=Z,500nm,18.0s						
Q42A	Golden Eagle	23.37	27	P	P	21 28 14.1	-1.9
	baz=213						
Y52A	Lilburn	23.37	45	*e*P	P	21 28 14.1	-2.0
	comp=Z,301nm,1.7s						
Y52A	Lilburn	23.37	45	P	P	21 28 14.0	-2.0
	baz=234,SNR=19						
Z53A	Monticello	23.37	47	P	P	21 28 13.6	-2.5
	baz=236,SNR=8.9						
W50A	Signal Mountai	23.38	41	*e*P	P	21 28 14.2	-2.1
	comp=Z,58nm,0.9s						
W50A				*e*Sn	Sn	21 33 05.3	+18
W50A	Signal Mountai	23.38	41	P	P	21 28 14.1	-2.1
	baz=229,SNR=12						
TCUT	Toone Canyon	23.38	346	*e*P	P	21 28 16.9	+0.5
	comp=Z,52nm,0.9s						
TCUT				LR	LR		
	comp=Z,12µm,18.0s						
V49A	McMinnville	23.39	39	P	P	21 28 13.9	-2.4
	baz=227,SNR=7.6						
356A	Blackshear	23.43	53	P	P	21 28 13.9	-2.8
	baz=242						
NV01	Mina Array Sit	23.43	331	*e*P	P	21 28 18.2	+1.3
NVAR	Mina Array Bea	23.43	331	P	P	21 28 19.1	+2.2
	comp=Z,63nm,0.9s,baz=152,slow=11,SNR=185						
NVAR				PcP	PcP	21 32 03.5	+0.9
	comp=Z,2.5nm,0.7s,baz=145,slow=3.3,SNR=4.2						
NVAR				Lg	Lg	21 35 37.4	
	comp=Z,0.3nm,0.3s,baz=348,slow=16,SNR=1.9						
NVAR				LR	LR	21 37 38.7	
	comp=Z,5µm,18.8s,baz=146,slow=37						
255A	Hazlehurst	23.45	51	*e*P	P	21 28 13.9	-3.1
	comp=Z,130nm,0.9s						
255A	Hazlehurst	23.45	51	P	P	21 28 14.5	-2.5
	baz=240						
R44A	Waltonville	23.49	30	P	P	21 28 15.7	-1.5
	baz=217,SNR=18						
GOGA	Godfrey	23.52	47	*e*P	P	21 28 15.4	-2.1
	comp=Z,213nm,1.5s						
GOGA	Godfrey	23.52	47	*e*P	P	21 28 15.4	-2.1
GOGA				pmax	pmax		
	comp=Z,213nm,1.5s						
GOGA	Godfrey	23.52	47	P	P	21 28 15.4	-2.1
	baz=236,SNR=23						
U48A	Cassie Pea, Po	23.53	37	P	P	21 28 15.5	-2.2
	baz=225,SNR=8.2						
T47A	Sharon Grove	23.55	35	*e*P	P	21 28 14.4	-3.5
	comp=Z,74nm,0.9s						
T47A				LR	LR		
	comp=Z,1µm,19.0s						
T47A	Sharon Grove	23.55	35	P	P	21 28 16.2	-1.7
	baz=223,SNR=13						
457A	Yulee	23.55	55	P	P	21 28 15.1	-2.8
	baz=244						
BGU	Big Grassy Mou	23.62	343	*e*P	P	21 28 18.1	-0.6
	comp=Z,41nm,0.9s						
BGU				LR	LR		
	comp=Z,9µm,18.0s						
Y53A	Monroe	23.69	46	P	P	21 28 17.1	-2.1
	baz=235,SNR=10						
RYN	Ryan	23.69	331	*e*P	P	21 28 21.3	+1.9
	comp=Z,139nm,1.2s						
RYN				LR	LR		
	comp=Z,7µm,18.0s						
W51A	Cleveland	23.70	42	P	P	21 28 17.0	-2.3
	baz=230						
S46A	Don Dixon Farm	23.74	33	P	P	21 28 17.7	-1.9
	baz=221						
Q43A	New Douglas	23.76	28	P	P	21 28 18.5	-1.3
	baz=215,SNR=9.3						
P41A	Barry, Barry	23.79	25	P	P	21 28 18.4	-1.7
	baz=211,SNR=20						
SAO	San Andreas Ge	23.80	323	*e*P	P	21 28 21.5	+1.3
	comp=Z,81nm,1.1s						
SAO				LR	LR		
	comp=Z,6µm,22.0s						
SAO	San Andreas Ge	23.80	323	*e*P	P	21 28 21.5	+1.3
SAO				pmax	pmax		
	comp=Z,81nm,1.1s						
SAO				MLR	MLR		
	comp=Z,6µm,22.0s						
155A	Kite	23.81	50	P	P	21 28 17.9	-2.4
	baz=239,SNR=20						
V50A	Pikevile	23.82	41	P	P	21 28 18.6	-1.8
	baz=229,SNR=24						
SPUT	South Promonto	23.82	344	PFAKE		21 28 30.0	+9.5
SPUT				LR	LR		
	comp=Z,6µm,20.0s						
KVN	Kaiserville	23.84	332	*e*P	P	21 28 22.8	+2.0
	comp=Z,105nm,1.0s						
KVN				LR	LR		
	comp=Z,6µm,20.0s						
Z54A	Sparta	23.86	48	P	P	21 28 18.5	-2.3
	baz=237,SNR=12						
HWUT	Hardware Ranch	23.88	346	*e*P	P	21 28 21.4	+0.3
	comp=Z,32nm,0.9s						
HWUT				LR	LR		
	comp=Z,10µm,18.0s						
256A	Glennville	23.92	52	P	P	21 28 18.8	-2.5
	baz=241,SNR=10.0						
R45A	Skylar, Fairfi	23.92	32	P	P	21 28 19.8	-1.5
	baz=219,SNR=17						
X52A	Dahlonega	23.92	44	P	P	21 28 19.6	-1.8
	baz=233,SNR=44						
357A	Townsend	23.96	53	P	P	21 28 19.7	-2.1
	baz=243						
U49A	Red Boiling Sp	23.97	38	P	P	21 28 19.8	-2.0
	baz=226						
USIN	University of	23.98	33	*e*P	P	21 28 20.8	-1.1
	comp=Z,136nm,0.9s						
USIN				LR	LR		
	comp=Z,8µm,19.0s						
P42A	Winchester	24.01	26	*e*P	P	21 28 19.7	-2.4
	comp=Z,48nm,1.0s						
P42A				LR	LR		
	comp=Z,20µm,19.0s						
P42A	Winchester	24.01	26	P	P	21 28 20.6	-1.6
	baz=213						
WAKR	Walker	24.03	329	*e*P	P	21 28 25.3	+2.7
	comp=Z,79nm,1.0s						
WAKR				LR	LR		
	comp=Z,3µm,20.0s						
CPCT	Cooper Cave	24.03	42	*e*P	P	21 28 20.4	-2.0
	comp=Z,214nm,1.8s						
T48A	Bowling Green	24.03	36	P	P	21 28 20.4	-1.9
	baz=224,SNR=11						
Q44A	Meyer Farm, Va	24.04	29	*e*P	P	21 28 21.7	-0.8
	comp=Z,155nm,1.0s						
Q44A				LR	LR		
	comp=Z,1µm,20.0s						
Q44A	Meyer Farm, Va	24.04	29	P	P	21 28 21.1	-1.3
	baz=216,SNR=7.9						
K22A	Casper	24.11	355	*e*P	P	21 28 23.0	-0.3
	comp=Z,55nm,1.3s						
K22A				*e*PcP	PcP	21 31 55.2	-8.7
K22A				LR	LR		
	comp=Z,7µm,19.0s						
K22A	Casper	24.11	355	P	P	21 28 23.0	-0.3
	baz=174						
S47A	Hartford	24.12	35	P	P	21 28 21.6	-1.6
	baz=222,SNR=23						
CMB	Columbia Colle	24.15	327	*e*P	P	21 28 24.9	+1.4
	comp=Z,52nm,0.9s						
CMB				LR	LR		
	comp=Z,2µm,20.0s						
CMB	Columbia Colle	24.15	327	*e*P	P	21 28 24.9	+1.4
CMB				pmax	pmax		
	comp=Z,52nm,0.9s						
CMB				MLR	MLR		
	comp=Z,2µm,20.0s						
ELK	Elko	24.15	339	*e*P	P	21 28 22.4	-1.3
	comp=Z,23nm,0.8s						
ELK				LR	LR		
	comp=Z,7µm,18.0s						
ELK	Elko	24.15	339	*e*P	P	21 28 22.4	-1.3
ELK				pmax	pmax		
	comp=Z,23nm,0.8s						
ELK				MLR	MLR		
	comp=Z,7µm,18.0s						
ELK	Elko	24.15	339	P	P	21 28 25.5	+1.8
	comp=Z,21nm,0.7s,baz=258,slow=12,SNR=19						
ELK				Lg	Lg	21 35 52.3	
	comp=Z,0.4nm,0.5s,baz=133,slow=19,SNR=3.0						
ELK				LR	LR	21 38 09.8	
	comp=Z,6µm,18.1s,baz=159,slow=37						
W52A	Murphy	24.19	43	*e*P	P	21 28 22.2	-1.7
	comp=Z,128nm,1.4s						
W52A	Murphy	24.19	43	P	P	21 28 22.1	-1.8
	baz=232						
O41A	Passleys Farm,	24.24	25	P	P	21 28 23.1	-1.1
	baz=211						
R46A	Gibon Southern	24.24	33	P	P	21 28 23.1	-1.2
	baz=220,SNR=11						
X53A	Estanollee	24.25	45	P	P	21 28 23.1	-1.3
	baz=234,SNR=21						
Y54A	Tignall	24.31	47	P	P	21 28 23.1	-1.9
	baz=236,SNR=25						
YERR	Yerington	24.32	330	*e*P	P	21 28 27.6	+2.4
	comp=Z,110nm,1.0s						
YERR				LR	LR		
	comp=Z,6µm,18.0s						
HVU	Hansel Valley	24.34	344	*e*P	P	21 28 26.2	+0.8
	comp=Z,40nm,0.8s						
HVU				LR	LR		
	comp=Z,7µm,18.0s						
HVU	Hansel Valley	24.34	344	*e*P	P	21 28 26.2	+0.8
HVU				pmax	pmax		
	comp=Z,40nm,0.8s						
HVU				MLR	MLR		
	comp=Z,7µm,18.0s						
OLIL	Olney	24.35	31	*e*P	P	21 28 24.1	-1.2
	comp=Z,102nm,1.2s						
OLIL				LR	LR		
	comp=Z,2µm,21.0s						
Z55A	Blythe	24.36	49	P	P	21 28 22.9	-2.5
	baz=238						
V51A	Loudon	24.36	41	*e*P	P	21 28 22.0	-3.4
	comp=Z,76nm,1.0s						
V51A	Loudon	24.36	41	P	P	21 28 23.5	-2.0
	baz=230						
P43A	Skaggs, Pawnee	24.41	28	P	P	21 28 24.2	-1.6
	baz=214						
Q45A	Warren Harvey,	24.45	31	P	P	21 28 25.0	-1.2
	baz=218						
U50A	Jamestown	24.46	40	P	P	21 28 24.7	-1.6
	baz=228						
T49A	Edmonton	24.52	37	*e*P	P	21 28 25.9	-0.9
	comp=Z,78nm,1.1s						
T49A				LR	LR		
	comp=Z,2µm,22.0s						
T49A	Edmonton	24.52	37	P	P	21 28 25.4	-1.4
	baz=226						
156A	Sylvania	24.53	51	P	P	21 28 25.6	-1.4
	baz=240,SNR=28						
257A	Skidaway Islan	24.56	53	*e*P	P	21 28 25.8	-1.4
	comp=Z,246nm,1.0s						
257A	Skidaway Islan	24.56	53	P	P	21 28 25.6	-1.7
	baz=242						
PNTR	Pine Nut	24.57	330	*e*P	P	21 28 30.2	+2.6
	comp=Z,174nm,0.9s						
PNTR				LR	LR		
	comp=Z,3µm,19.0s						
BW06	Boulder Array	24.60	350	*e*P	P	21 28 28.4	+0.7
	comp=Z,20nm,1.0s						
BW06				*e*PcP	PcP	21 32 01.6	-3.4
BW06				LR	LR		
	comp=Z,9µm,19.0s						
BW06	Boulder Array	24.60	350	P	P	21 28 27.3	-0.5
	baz=167,SNR=23						
PD31	Pinedale Array	24.60	350	*e*P	P	21 28 28.6	+0.9
	comp=Z,17nm,0.9s						
PD31				*e*PcP	PcP	21 32 02.2	-2.8
PDAR	Pinedale Array	24.60	350	*e*P	P	21 28 28.5	+0.7
PDAR	Pinedale Array	24.60	350	P	P	21 28 29.4	+1.7
	comp=Z,12nm,0.8s,baz=173,slow=8.2,SNR=87						
PDAR				PcP	PcP	21 32 05.3	+0.2
	comp=Z,3.3nm,1.0s,baz=141,slow=3.5,SNR=3.0						
PDAR				Lg	Lg	21 36 12.6	
	comp=Z,0.1nm,0.3s,baz=310,slow=48,SNR=2.4						
PDAR				LR	LR	21 39 28.2	
	comp=Z,11µm,18.1s,baz=188,slow=40						
S48A	Wiedeman Farm,	24.61	36	P	P	21 28 25.7	-2.0
	baz=224,SNR=12						
BMN	Battle Mountai	24.62	335	*e*P	P	21 28 29.7	+1.8
BMN				LR	LR		
	comp=Z,3µm,18.0s						
BMN	Battle Mountai	24.62	335	*e*P	P	21 28 29.7	+1.8
BMN				MLR	MLR		
	comp=Z,3µm,18.0s						
N40A	Mertquake, Sal	24.63	23	P	P	21 28 25.9	-1.9
	baz=209,SNR=8.6						
O42A	Bath	24.63	26	P	P	21 28 26.3	-1.5
	baz=212						
TKL	Tuckaleechee C	24.64	42	*e*P	P	21 28 26.5	-1.4
	comp=Z,160nm,1.5s						
TKL	Tuckaleechee C	24.64	42	*e*P	P	21 28 26.5	-1.4
TKL				pmax	pmax		
	comp=Z,161nm,1.5s						
TKL	Tuckaleechee C	24.64	42	P	P	21 28 26.8	-1.2
	comp=Z,16nm,0.8s,baz=180,slow=13,SNR=5.7						
TKL				LR	LR	21 40 43.2	
	comp=Z,3µm,20.7s,baz=244,slow=43						
P44A	Sand Creek, Wi	24.68	29	P	P	21 28 27.0	-1.2
	baz=216						
W53A	Cullowhee	24.74	44	P	P	21 28 27.0	-2.0
	baz=233						
N41A	Harden Midland	24.75	24	*e*P	P	21 28 27.6	-1.3
	comp=Z,92nm,1.1s						
N41A				LR	LR		
	comp=Z,19µm,18.0s						
N41A	Harden Midland	24.75	24	P	P	21 28 26.6	-2.3
	baz=210,SNR=9.8						
VCNR	Virginia City	24.75	330	*e*P	P	21 28 32.0	+2.8
	comp=Z,159nm,1.0s						
VCNR				LR	LR		
	comp=Z,4µm,18.0s						
BG3	Lake Jocassee	24.79	45	*e*P	P	21 28 28.5	-0.8
	comp=Z,106nm,1.1s						
BG3				*e*S	S	21 32 54.5	+4.8
RUBR	Rubicon Trail	24.81	329	*e*P	P	21 28 31.2	+1.5
	comp=Z,240nm,0.9s						
RUBR				LR	LR		
	comp=Z,2µm,20.0s						
HODGE	Hodges	24.81	47	*e*P	P	21 28 28.7	-0.8
	comp=Z,143nm,1.4s						
R47A	Wooly Knot Far	24.82	34	P	P	21 28 27.7	-1.8
	baz=222,SNR=11						
V52A	Sevierville	24.87	42	P	P	21 28 28.6	-1.4
	baz=231						
T50A	Nancy	24.87	38	P	P	21 28 28.8	-1.2
	baz=227						
AHID	Auburn Hatcher	24.88	347	PFAKE		21 28 40.0	+10
AHID				LR	LR		
	comp=Z,7µm,19.0s						
WCI	Wyandotte Cave	24.90	34	*e*P	P	21 28 29.7	-0.5
	comp=Z,63nm,0.8s						
WCI				*e*PcP	PcP	21 32 06.5	+1.0
WCI				LR	LR		
	comp=Z,7µm,18.0s						
WCI	Wyandotte Cave	24.90	34	*e*P	P	21 28 29.7	-0.5
WCI				*e*		21 32 06.5	
WCI				pmax	pmax		
	comp=Z,63nm,0.8s						
WCI				MLR	MLR		
	comp=Z,7µm,18.0s						
WCI	Wyandotte Cave	24.90	34	P	P	21 28 29.6	-0.7
	baz=222						
MCJ	Malvern	24.91	87	*i* P	P	21 28 31.9	+1.3
Q46A	CEJHS Indians,	24.94	32	P	P	21 28 29.8	-0.8
	baz=219						
U51A	La Follette	24.94	41	P	P	21 28 29.5	-1.2
	baz=230						

M39A	**Webster** baz=207,SNR=9.9	**24.95**	**21**	P	**P**	**21 28 29.0**	**-1.6**
PAHR	**Pah Rah Range** comp=Z,58nm,0.9s	**24.96**	**331**	*e*P	**P**	**21 28 33.3**	**+2.4**
PAHR	comp=Z,6μm,18.0s			LR	LR		
SCIA	**State Center** comp=Z,193nm,1.8s	**24.99**	**19**	*e*P	**P**	**21 28 29.6**	**-1.4**
SCIA	comp=Z,2μm,21.0s			LR	LR		
SCIA	**State Center** baz=204	**24.99**	**19**	P	**P**	**21 28 30.4**	**-0.7**
CVJ	**Coleyville**	**25.02**	**87**	⇑*i*P	**P**	**21 28 33.5**	**+1.8**
MTDJ	**Mount Denham** comp=Z,492nm,1.1s	**25.02**	**87**	*e*P	**P**	**21 28 33.3**	**+1.6**
MTDJ	comp=Z,4μm,20.0s			LR	LR		
O43A	**Sugar Creek Fa** baz=214	**25.03**	**27**	P	**P**	**21 28 30.1**	**-1.4**
M40A	**Post Highland** baz=208	**25.11**	**22**	P	**P**	**21 28 31.1**	**-1.1**
S49A	**Springfield** baz=225	**25.13**	**37**	P	**P**	**21 28 30.9**	**-1.5**
AFDM	**Forest Hills D** comp=Z,38nm,0.9s	**25.14**	**327**	*e*P	**P**	**21 28 34.6**	**+2.1**
BCIP	**Isla Barro Col**	**25.14**	**109**	PFAKE		21 28 40.0	+7.3
BCIP	comp=Z,3μm,20.0s			LR	LR		
P45A	**Graceland, Par** comp=Z,59nm,0.9s	**25.14**	**30**	*e*P	**P**	**21 28 30.8**	**-1.6**
P45A	**Graceland, Par** baz=218	**25.14**	**30**	P	**P**	**21 28 30.3**	**-2.1**
N42A	**Yates City** baz=212,SNR=6.0	**25.18**	**25**	P	**P**	**21 28 30.9**	**-1.9**
R48A	**Northridge Ran** baz=223	**25.25**	**35**	P	**P**	**21 28 31.3**	**-2.1**
BBJ	**Bamboo Saint A**	**25.26**	**86**	⇑*i*P	**P**	**21 28 35.6**	**+1.8**
HDIL	**Hopedale** comp=Z,143nm,1.1s	**25.27**	**27**	*e*P	**P**	**21 28 32.4**	**-1.2**
HDIL	comp=Z,3μm,19.0s			LR	LR		
HDIL	**Hopedale** baz=214,SNR=6.2	**25.27**	**27**	P	**P**	**21 28 31.0**	**-2.5**
V53A	**Saluda** comp=Z,108nm,1.1s	**25.27**	**43**	*e*P	**P**	**21 28 34.0**	**+0.3**
V53A	**Saluda** baz=233,SNR=8.3	**25.27**	**43**	P	**P**	**21 28 32.9**	**-0.8**
O44A	**Mansfield** baz=216	**25.30**	**29**	P	**P**	**21 28 32.1**	**-1.8**
TZTN	**Tazewell** comp=Z,52nm,1.0s	**25.34**	**41**	*e*P	**P**	**21 28 31.9**	**-2.3**
TZTN	**Tazewell** baz=230	**25.34**	**41**	P	**P**	**21 28 32.4**	**-1.8**
Q47A	**Bedord North L** baz=221,SNR=12	**25.35**	**33**	P	**P**	**21 28 32.7**	**-1.7**
U52A	**Thorn Hill** baz=231	**25.35**	**41**	P	**P**	**21 28 33.2**	**-1.3**
T51A	**Gray** baz=229	**25.36**	**40**	P	**P**	**21 28 33.0**	**-1.5**
X55A	**Gracelyn & Ava** baz=237,SNR=9.3	**25.37**	**47**	P	**P**	**21 28 33.1**	**-1.5**
REDW	**Red Top Meadow** comp=Z,77nm,1.4s	**25.41**	**348**	*e*P	**P**	**21 28 34.5**	**-0.6**
REDW	comp=Z,10μm,21.0s			LR	LR		
PAULI	**Pauline** comp=Z,114nm,1.2s	**25.44**	**46**	*e*P	**P**	**21 28 33.5**	**-1.7**
M41A	**Milan** baz=210	**25.45**	**24**	P	**P**	**21 28 33.5**	**-1.7**
P46A	**Rosedale** baz=219	**25.47**	**31**	P	**P**	**21 28 34.2**	**-1.3**
BLO	**Bloomington** comp=Z,45nm,0.9s	**25.48**	**33**	*e*P	**P**	**21 28 34.7**	**-0.8**
BLO	comp=Z,3μm,21.0s			LR	LR		
BLO	**Bloomington**	**25.48**	**33**	P	**P**	**21 28 34.7**	**-0.8**
RSSD	**Black Hills** comp=Z,33nm,1.3s	**25.48**	**360**	*e*P	**P**	**21 28 34.1**	**-1.6**
RSSD	comp=Z,4μm,20.0s			LR	LR		
RSSD	**Black Hills**	**25.48**	**360**	*e*P	**P**	**21 28 34.1**	**-1.6**
RSSD	comp=Z,33nm,1.3s			pmax	pmax		
RSSD	comp=Z,4μm,20.0s			MLR	MLR		
RSSD	**Black Hills** baz=179	**25.48**	**360**	P	**P**	**21 28 35.6**	**-0.1**
SNOW	**Snow King Moun** comp=Z,45nm,0.9s	**25.48**	**348**	*e*P	**P**	**21 28 36.5**	**+0.6**
SNOW	comp=Z,11μm,22.0s			LR	LR		
JSC	**Jenkinsville** comp=Z,54nm,1.0s	**25.53**	**48**	*e*P	**P**	**21 28 33.8**	**-2.3**
JSC	**Jenkinsville**	**25.53**	**48**	*e*P	**P**	**21 28 33.8**	**-2.3**
JSC	comp=Z,54nm,1.0s			pmax	pmax		
BEKR	**Beckworth** comp=Z,130nm,1.0s	**25.54**	**330**	*e*P	**P**	**21 28 38.9**	**+2.6**
BEKR	comp=Z,2μm,20.0s			LR	LR		
TPAW	**Teton Pass** comp=Z,71nm,0.9s	**25.55**	**348**	*e*P	**P**	**21 28 35.6**	**-0.8**
TPAW	comp=Z,8μm,22.0s			LR	LR		
R49A	**Shelbyville** baz=224	**25.55**	**36**	P	**P**	**21 28 34.6**	**-1.6**
S50A	**Richmond** baz=227	**25.57**	**38**	P	**P**	**21 28 34.5**	**-1.9**
L39A	**Vinton** baz=206,SNR=11	**25.58**	**21**	P	**P**	**21 28 34.7**	**-1.6**
MCCM	**Marconi Confer** comp=Z,146nm,0.9s	**25.58**	**324**	*e*P	**P**	**21 28 36.8**	**+0.3**
MCCM	comp=Z,6μm,18.0s			LR	LR		
LOHW	**Long Hollow** comp=Z,44nm,0.8s	**25.60**	**349**	*e*P	**P**	**21 28 37.5**	**+0.6**
LOHW	comp=Z,15μm,18.0s			LR	LR		
N43A	**Stutzman Famil** baz=213	**25.63**	**26**	P	**P**	**21 28 34.7**	**-2.1**
FXWY	**Fox Creek** comp=Z,38nm,0.9s	**25.71**	**348**	*e*P	**P**	**21 28 38.4**	**+0.6**
Q48A	**North Vernon** baz=222	**25.71**	**34**	P	**P**	**21 28 35.8**	**-1.8**
O45A	**Potomac** baz=217	**25.72**	**29**	P	**P**	**21 28 36.0**	**-1.7**
NHSC	**New Hope** comp=Z,460nm,1.0s	**25.72**	**51**	*e*P	**P**	**21 28 37.1**	**-0.6**
NHSC	**New Hope** baz=241,SNR=23	**25.72**	**51**	P	**P**	**21 28 35.3**	**-2.5**
STH	**Stony Hill**	**25.72**	**87**	*i* P	**P**	**21 28 39.2**	**+1.3**
MOOW	**Moose Ponds** comp=Z,27nm,0.8s	**25.76**	**349**	*e*P	**P**	**21 28 38.9**	**+0.7**
MOOW	comp=Z,8μm,22.0s			LR	LR		
L40A	**Anamosa** comp=Z,96nm,1.3s	**25.80**	**22**	*e*P	**P**	**21 28 37.9**	**-0.4**
L40A	comp=Z,12μm,22.0s			LR	LR		
L40A	**Anamosa** baz=208,SNR=5.7	**25.80**	**22**	P	**P**	**21 28 37.5**	**-0.9**
X56A	**White Oak** baz=238,SNR=6.9	**25.80**	**48**	P	**P**	**21 28 36.7**	**-1.8**
M42A	**Sheffield** baz=212	**25.82**	**25**	P	**P**	**21 28 37.3**	**-1.3**
ECSD	**EROS Data Cent** comp=Z,31nm,1.0s	**25.83**	**12**	*e*P	**P**	**21 28 38.0**	**-0.7**
ECSD	comp=Z,5μm,19.0s			LR	LR		
ECSD	**EROS Data Cent** baz=196,SNR=8.1	**25.83**	**12**	P	**P**	**21 28 39.5**	**+0.8**
P47A	**Martinsville** baz=221	**25.84**	**33**	P	**P**	**21 28 37.9**	**-0.9**
ORV	**Oroville** comp=Z,95nm,1.4s	**25.87**	**328**	*e*P	**P**	**21 28 41.5**	**+2.5**
ORV				*e*PcP	**PcP**	**21 32 05.5**	**-2.1**
ORV	comp=Z,2μm,18.0s			LR	LR		
ORV	**Oroville**	**25.87**	**328**	*e*P	**P**	**21 28 41.5**	**+2.5**
ORV				*e*		21 32 05.5	
ORV	comp=Z,95nm,1.4s			pmax	pmax		
ORV	comp=Z,2μm,18.0s			MLR	MLR		
IMW	**Indian Meadow** comp=Z,20nm,1.0s	**25.94**	**348**	*e*P	**P**	**21 28 39.9**	**-0.1**
IMW	comp=Z,10μm,18.0s			LR	LR		
KMSC	**Kings Mountain** comp=Z,76nm,1.0s	**25.95**	**46**	*e*P	**P**	**21 28 38.0**	**-1.8**
KMSC	**Kings Mountain** baz=236	**25.95**	**46**	P	**P**	**21 28 38.5**	**-1.3**
N44A	**Piper City** baz=216	**25.97**	**28**	P	**P**	**21 28 38.7**	**-1.2**
GDXM	**Geysers** comp=Z,62nm,1.3s	**26.00**	**325**	*e*P	**P**	**21 28 39.7**	**-0.7**
S51A	**Beattyville** comp=Z,87nm,1.3s	**26.02**	**39**	*e*P	**P**	**21 28 38.7**	**-1.7**
S51A	comp=Z,2μm,19.0s			LR	LR		
S51A	**Beattyville** baz=228	**26.02**	**39**	P	**P**	**21 28 39.3**	**-1.1**
R50A	**Paris** baz=226	**26.02**	**37**	P	**P**	**21 28 38.4**	**-2.1**
L41A	**Preston** baz=210	**26.07**	**23**	P	**P**	**21 28 39.7**	**-1.1**
FLWY	**Flagg Ranch** comp=Z,94nm,1.5s	**26.07**	**349**	*e*P	**P**	**21 28 41.6**	**+0.5**
FLWY	comp=Z,14μm,20.0s			LR	LR		
SFIN	**Lafayette** comp=Z,117nm,1.4s	**26.12**	**30**	*e*P	**P**	**21 28 39.8**	**-1.5**
SFIN	comp=Z,3μm,22.0s			LR	LR		
SFIN	**Lafayette** baz=218	**26.12**	**30**	P	**P**	**21 28 39.7**	**-1.6**
SUSD	**Miller** baz=190	**26.13**	**8**	P	**P**	**21 28 41.3**	**-0.1**
K39A	**Oelwein** baz=206	**26.14**	**20**	P	**P**	**21 28 40.0**	**-1.4**
M43A	**Waltham Townsh** baz=213	**26.14**	**26**	P	**P**	**21 28 39.7**	**-1.7**
YPP	**Pitchstone Pla** comp=Z,63nm,2.0s	**26.27**	**349**	*e*P	**P**	**21 28 42.3**	**-0.7**
YPP	comp=Z,7μm,18.0s			LR	LR		
HOPS	**Hopland Field**	**26.29**	**325**	PFAKE		21 29 00.0	+17
HOPS	comp=Z,6μm,18.0s			LR	LR		
N45A	**Kentland** baz=217	**26.29**	**29**	P	**P**	**21 28 42.2**	**-0.6**
L42A	**Oliver, Polo** comp=Z,38nm,1.0s	**26.33**	**24**	*e*P	**P**	**21 28 41.5**	**-1.7**
L42A	comp=Z,17μm,19.0s			LR	LR		
L42A	**Oliver, Polo** baz=211	**26.33**	**24**	P	**P**	**21 28 41.2**	**-2.0**
H17A	**Grant Village** comp=Z,48nm,1.5s	**26.35**	**349**	*e*P	**P**	**21 28 45.6**	**+1.9**
H17A	comp=Z,19μm,18.0s			LR	LR		
H17A	**Grant Village** baz=165	**26.35**	**349**	P	**P**	**21 28 43.8**	**+0.1**
S52A	**Salyersville** baz=229	**26.35**	**39**	P	**P**	**21 28 40.9**	**-2.5**
K40A	**Colesburg** baz=208	**26.38**	**22**	P	**P**	**21 28 41.8**	**-1.9**
HLID	**Hailey** comp=Z,27nm,0.9s	**26.45**	**343**	*e*P	**P**	**21 28 45.5**	**+1.0**
HLID	comp=Z,6μm,18.0s			LR	LR		
HLID	**Hailey** baz=157,SNR=47	**26.45**	**343**	P	**P**	**21 28 45.8**	**+1.3**
YFT	**Old Faithful** comp=Z,14nm,0.8s	**26.45**	**349**	*e*P	**P**	**21 28 43.6**	**-0.9**
YFT	comp=Z,18μm,19.0s			LR	LR		
O47A	**Sheridan** baz=220	**26.45**	**32**	P	**P**	**21 28 42.5**	**-1.9**
R51A	**Hillsboro** baz=227	**26.46**	**38**	P	**P**	**21 28 43.0**	**-1.4**
LKWY	**Lake** comp=Z,12nm,0.9s	**26.49**	**350**	*e*P	**P**	**21 28 46.6**	**+1.7**
LKWY	comp=Z,15μm,21.0s			LR	LR		
LKWY	**Lake**	**26.49**	**350**	*e*P	**P**	**21 28 46.6**	**+1.7**
LKWY	comp=Z,12nm,0.9s			pmax	pmax		
LKWY	comp=Z,15μm,21.0s			MLR	MLR		
M44A	**Midewin, Midew**	**26.49**	**27**	PFAKE		21 29 00.0	+15
M44A	comp=Z,16μm,19.0s			LR	LR		
M44A	**Midewin, Midew** baz=215	**26.49**	**27**	P	**P**	**21 28 43.2**	**-1.4**
O03E	**Paynes Creek** baz=139,SNR=21	**26.58**	**328**	P	**P**	**21 28 46.8**	**+1.3**
K41A	**Shullsburg** baz=209	**26.60**	**23**	P	**P**	**21 28 43.6**	**-2.1**
Q50A	**Georgetown** baz=226	**26.61**	**36**	P	**P**	**21 28 43.7**	**-2.0**
YNR	**Norris Junctio** comp=Z,28nm,1.5s	**26.68**	**349**	*e*P	**P**	**21 28 47.3**	**+0.7**
YNR	comp=Z,17μm,18.0s			LR	LR		
YMR	**Madison River** comp=Z,38nm,1.2s	**26.69**	**349**	*e*P	**P**	**21 28 47.4**	**+0.7**
YMR	comp=Z,7μm,18.0s			LR	LR		
P49A	**Miami Univ. Ec** baz=224	**26.69**	**34**	P	**P**	**21 28 44.5**	**-2.0**
J39A	**Decorah** baz=206	**26.76**	**20**	P	**P**	**21 28 45.7**	**-1.3**
YHH	**Holmes Hill** comp=Z,26nm,1.3s	**26.78**	**349**	*e*P	**P**	**21 28 48.4**	**+0.8**
YHH	comp=Z,10μm,19.0s			LR	LR		
YHB	**Horse Butte** comp=Z,26nm,1.4s	**26.81**	**348**	*e*P	**P**	**21 28 47.8**	**0.0**
YHB	comp=Z,7μm,19.0s			LR	LR		
M45A	**Boilermakers S** baz=217	**26.84**	**29**	P	**P**	**21 28 46.2**	**-1.6**
RLMT	**Red Lodge** comp=Z,21nm,1.3s	**26.85**	**352**	*e*P	**P**	**21 28 48.0**	**-0.2**
RLMT	comp=Z,10μm,19.0s			LR	LR		
RLMT	**Red Lodge** baz=168	**26.85**	**352**	P	**P**	**21 28 47.5**	**-0.6**
WVOR	**Wild Horse Val** comp=Z,27nm,0.9s	**26.88**	**335**	*e*P	**P**	**21 28 49.7**	**+1.4**
WVOR	comp=Z,2μm,20.0s			LR	LR		
WVOR	**Wild Horse Val**	**26.88**	**335**	*e*P	**P**	**21 28 49.7**	**+1.4**
WVOR	comp=Z,27nm,0.9s			pmax	pmax		
WVOR	comp=Z,2μm,20.0s			MLR	MLR		
JFWS	**Jewell Farm** comp=Z,39nm,0.8s	**26.89**	**23**	*e*P	**P**	**21 28 46.8**	**-1.4**
JFWS	comp=Z,26μm,18.0s			LR	LR		
JFWS	**Jewell Farm**	**26.89**	**23**	*e*P	**P**	**21 28 46.8**	**-1.4**
JFWS	comp=Z,39nm,0.8s			pmax	pmax		
JFWS	comp=Z,26μm,18.0s			MLR	MLR		
JFWS	**Jewell Farm** baz=209	**26.89**	**23**	P	**P**	**21 28 46.6**	**-1.6**
T54A	**Tazewell** baz=232,SNR=5.5	**26.90**	**42**	P	**P**	**21 28 47.9**	**-0.6**
QLMT	**Earthquake Lak**	**26.93**	**348**	*e*P	**P**	**21 28 49.1**	**+0.3**
O48A	**Farmland** baz=222	**26.98**	**33**	P	**P**	**21 28 47.4**	**-1.7**
O02D	**Mt. Diablo Mer** baz=137	**26.99**	**327**	P	**P**	**21 28 50.0**	**+0.8**
R52A	**Catlettsburg** baz=229	**27.04**	**39**	P	**P**	**21 28 47.1**	**-2.5**
KCPM	**Cahto Peak** comp=Z,122nm,1.3s	**27.06**	**325**	*e*P	**P**	**21 28 49.9**	**0.0**
Q51A	**Peebles** comp=Z,50nm,1.0s	**27.09**	**37**	*e*P	**P**	**21 28 47.5**	**-2.7**
Q51A	comp=Z,8μm,21.0s			LR	LR		
Q51A	**Peebles** baz=227	**27.09**	**37**	P	**P**	**21 28 48.0**	**-2.1**
J40A	**Soldiers Grove** baz=208	**27.14**	**21**	P	**P**	**21 28 48.4**	**-2.0**
MOD	**Modoc Plateau** comp=Z,50nm,1.1s	**27.14**	**332**	*e*P	**P**	**21 28 52.4**	**+1.8**
MOD	comp=Z,5μm,20.0s			LR	LR		
WDC	**Whiskeytown Da** comp=Z,24nm,0.9s	**27.16**	**328**	*e*P	**P**	**21 28 51.0**	**+0.3**
WDC	comp=Z,2μm,20.0s			LR	LR		
WDC	**Whiskeytown Da**	**27.16**	**328**	*e*P	**P**	**21 28 51.0**	**+0.3**
WDC	comp=Z,24nm,0.9s			pmax	pmax		
WDC	comp=Z,2μm,20.0s			MLR	MLR		
N47A	**Urbana** baz=220	**27.18**	**31**	P	**P**	**21 28 48.6**	**-2.2**
GTBY	**Guantanamo Bay** comp=Z,99nm,1.1s	**27.21**	**82**	*e*P	**P**	**21 28 49.8**	**-1.6**
GTBY	comp=Z,4μm,21.0s			LR	LR		
MCMT	**McKenzie Canyo**	**27.23**	**346**	*e*P	**P**	**21 28 53.7**	**+2.1**
P50A	**Jamestown** baz=225	**27.24**	**35**	P	**P**	**21 28 49.4**	**-2.0**
M46A	**Old House Fiel**	**27.27**	**30**	PFAKE		21 29 00.0	+8.3
M46A	comp=Z,5μm,20.0s			LR	LR		
I39A	**Houston** comp=Z,40nm,1.1s	**27.28**	**20**	*e*P	**P**	**21 28 49.7**	**-2.0**
I39A	comp=Z,17μm,18.0s			LR	LR		
I39A	**Houston** baz=206,SNR=6.6	**27.28**	**20**	P	**P**	**21 28 50.0**	**-1.8**
O49A	**Covington**	**27.36**	**34**	PFAKE		21 29 00.0	+7.5
O49A	comp=Z,9μm,20.0s			LR	LR		
O49A	**Covington** baz=223	**27.36**	**34**	P	**P**	**21 28 50.7**	**-1.9**
J41A	**Loganville** baz=209	**27.37**	**22**	P	**P**	**21 28 50.8**	**-1.7**
K43A	**Burlington**	**27.45**	**25**	PFAKE		21 29 00.0	+6.7
K43A	comp=Z,18μm,21.0s			LR	LR		
K43A	**Burlington** baz=213	**27.45**	**25**	P	**P**	**21 28 52.1**	**-1.1**
N48A	**Decatur** baz=221	**27.50**	**32**	P	**P**	**21 28 51.5**	**-2.3**
KMRM	**Mail Ridge** comp=Z,170nm,1.4s	**27.51**	**326**	*e*P	**P**	**21 28 54.8**	**+0.9**
KMRM	comp=Z,6μm,19.0s			LR	LR		
N02D	**Trinity Center** baz=138	**27.54**	**328**	P	**P**	**21 28 54.5**	**+0.3**
P51A	**Williamsport**	**27.57**	**37**	PFAKE		21 29 10.0	+16
P51A	comp=Z,7μm,21.0s			LR	LR		
GCMT	**Greycliff**	**27.57**	**351**	*e*P	**P**	**21 28 54.0**	**-0.4**
X59A	**McDuffie Farm,** baz=241	**27.57**	**50**	P	**P**	**21 28 51.7**	**-2.7**
J08A	**Circle Bar Ran** comp=Z,43nm,0.9s	**27.61**	**337**	*e*P	**P**	**21 28 56.2**	**+1.5**
J08A	comp=Z,2μm,22.0s			LR	LR		
I40A	**Norwalk** baz=208	**27.61**	**21**	P	**P**	**21 28 53.5**	**-1.2**
J42A	**Columbus** baz=211	**27.66**	**24**	P	**P**	**21 28 54.3**	**-0.8**
Q52A	**Bidwell** baz=228	**27.67**	**38**	P	**P**	**21 28 53.4**	**-1.9**
DLMT	**Dillon** comp=Z,16nm,0.9s	**27.68**	**347**	*e*P	**P**	**21 28 54.2**	**-1.3**
DLMT	comp=Z,9μm,18.0s			LR	LR		
BOZ	**Bozeman (W)** comp=Z,32nm,1.4s	**27.71**	**348**	*e*P	**P**	**21 28 55.6**	**-0.1**
BOZ	comp=Z,4μm,19.0s			LR	LR		
BOZ	**Bozeman (W)**	**27.71**	**348**	*e*P	**P**	**21 28 55.6**	**-0.1**
BOZ	comp=Z,32nm,1.4s			pmax	pmax		
BOZ	comp=Z,4μm,19.0s			MLR	MLR		
BOZ	**Bozeman (W)** baz=164,SNR=7.2	**27.71**	**348**	P	**P**	**21 28 56.5**	**+0.8**
O50A	**Cable** baz=225	**27.72**	**35**	P	**P**	**21 28 53.9**	**-1.8**
BLA	**Blacksburg** comp=Z,45nm,0.9s	**27.73**	**43**	*e*P	**P**	**21 28 54.1**	**-1.8**
BLA	**Blacksburg**	**27.73**	**43**	*e*P	**P**	**21 28 54.1**	**-1.8**
BLA	comp=Z,45nm,0.9s			pmax	pmax		
BLA	**Blacksburg** baz=234	**27.73**	**43**	P	**P**	**21 28 53.9**	**-2.0**
M04C	**Macdoel** baz=141,SNR=13	**27.74**	**330**	P	**P**	**21 28 57.6**	**+1.6**
H38A	**Maiden Rock** baz=204,SNR=7.2	**27.79**	**18**	P	**P**	**21 28 55.1**	**-1.2**
M02C	**Callahan** baz=139	**27.93**	**329**	P	**P**	**21 28 58.6**	**+1.0**
N49A	**Columbus Grove**	**27.98**	**33**	PFAKE		21 29 10.0	+12
N49A	comp=Z,2μm,21.0s			LR	LR		
N49A	**Columbus Grove** baz=223	**27.98**	**33**	P	**P**	**21 28 56.7**	**-1.3**
J43A	**Natural Harves** baz=212	**27.98**	**25**	P	**P**	**21 28 56.5**	**-1.5**
KHMM	**Horse Mountain** comp=Z,132nm,1.1s	**27.99**	**327**	*e*P	**P**	**21 29 00.1**	**+1.8**
KHMM	comp=Z,6μm,20.0s			LR	LR		
S55A	**Lewisburg** baz=233	**28.01**	**42**	P	**P**	**21 28 57.1**	**-1.3**
I41A	**Arkdale**	**28.02**	**22**	PFAKE		21 29 10.0	+12
I41A	comp=Z,7μm,20.0s			LR	LR		
JCC	**Jacoby Creek,**	**28.11**	**326**	PFAKE		21 29 10.0	+11
JCC	comp=Z,6μm,18.0s			LR	LR		
LAO	**LASA Array** comp=Z,34nm,1.2s	**28.11**	**357**	*e*P	**P**	**21 28 58.6**	**-0.5**
LAO	comp=Z,6μm,19.0s			LR	LR		
LAO	**LASA Array** baz=175	**28.11**	**357**	P	**P**	**21 28 58.7**	**-0.5**
YBH	**Yreka Blue Hor** comp=Z,13nm,0.9s	**28.11**	**329**	*e*P	**P**	**21 28 59.4**	**0.0**
YBH	comp=Z,2μm,22.0s			LR	LR		
YBH	**Yreka Blue Hor**	**28.11**	**329**	*e*P	**P**	**21 28 59.4**	**0.0**
YBH	comp=Z,13nm,0.9s			pmax	pmax		
YBH	comp=Z,2μm,22.0s			MLR	MLR		
YBH	**Yreka Blue Hor** comp=Z,13nm,0.9s,baz=129,slow=7.6,SNR=19	**28.11**	**329**	P	**P**	**21 28 59.4**	**0.0**
YBH	comp=Z,1.9nm,1.0s,baz=117,slow=2.3,SNR=3.6			PcP	**PcP**	**21 32 13.4**	**+0.4**
YBH	comp=Z,2μm,19.5s,baz=165,slow=35			LR	LR	21 39 27.1	
M48A	**Edgerton**	**28.12**	**32**	PFAKE		21 29 10.0	+11
M48A	comp=Z,2μm,19.0s			LR	LR		
ACSO	**Alum Creek Sta**	**28.12**	**35**	PFAKE		21 29 10.0	+11
ACSO	comp=Z,7μm,19.0s			LR	LR		
SPMN	**Marine on St.** comp=Z,23nm,1.0s	**28.15**	**17**	*e*P	**P**	**21 28 57.5**	**-1.9**
SPMN	comp=Z,4μm,20.0s			LR	LR		
SPMN	**Marine on St.** baz=202	**28.15**	**17**	P	**P**	**21 28 58.8**	**-0.6**
I42A	**Draeger Farm,**	**28.22**	**23**	PFAKE		21 29 10.0	+10
I42A	comp=Z,20μm,18.0s			LR	LR		
I42A	**Draeger Farm,** baz=211	**28.22**	**23**	P	**P**	**21 28 57.6**	**-2.6**
L04D	**Klamath Falls** baz=141,SNR=8.5	**28.30**	**330**	P	**P**	**21 29 01.7**	**+0.7**
H40A	**Chili** baz=207	**28.34**	**21**	P	**P**	**21 28 59.6**	**-1.6**
K04D	**Chiloquin, OR** baz=142	**28.36**	**332**	P	**P**	**21 29 03.1**	**+1.5**
G38A	**Ridgeland** baz=204	**28.37**	**18**	P	**P**	**21 28 59.8**	**-1.6**
N50A	**Nevada** baz=224	**28.41**	**34**	P	**P**	**21 28 59.5**	**-2.3**
BMO	**Blue Mountains** comp=Z,35nm,1.0s	**28.50**	**340**	*e*P	**P**	**21 29 03.1**	**+0.3**
BMO	comp=Z,7μm,18.0s			LR	LR		
BMO	**Blue Mountains**	**28.50**	**340**	*e*P	**P**	**21 29 03.1**	**+0.3**
BMO	comp=Z,35nm,1.0s			pmax	pmax		
BMO	comp=Z,7μm,18.0s			MLR	MLR		
P53A	**Whipple** comp=Z,86nm,1.6s	**28.53**	**38**	*e*P	**P**	**21 29 00.8**	**-2.1**

P53A				LR	LR		
	comp=Z,2µm,22.0s						
P53A	Whipple	28.53	38	P	P	21 29 01.2	-1.7
	baz=229						
H41A	Junction City	28.58	22	PFAKE		21 29 20.0	+17
H41A				LR	LR		
	comp=Z,2µm,22.0s						
I07A	Izee	28.61	336	*e*P	P	21 29 03.5	-0.3
	comp=Z,7.8nm,0.9s						
I07A				LR	LR		
	comp=Z,4µm,19.0s						
J05D	Fort Rock, OR	28.66	333	P	P	21 29 05.7	+1.4
	baz=144,SNR=21						
G39A	Holcombe	28.68	19	P	P	21 29 02.7	-1.5
	baz=205						
O52A	Adamsville	28.69	37	PFAKE		21 29 20.0	+16
O52A				LR	LR		
	comp=Z,10µm,21.0s						
HRY	Holter Researc	28.82	349	*e*P	P	21 29 04.7	-0.9
HRY				*e*PcP	PcP	21 32 14.8	0.0
J45A	Montague	28.86	27	P	P	21 29 04.8	-1.1
	baz=216						
L02E	Cave Junction	28.87	329	P	P	21 29 07.2	+1.2
	baz=138						
K47A	Vermontville	28.89	30	P	P	21 29 04.8	-1.3
	baz=219						
H42A	Shiocton	28.89	23	PFAKE		21 29 20.0	+14
H42A				LR	LR		
	comp=Z,24µm,18.0s						
H42A	Shiocton	28.89	23	P	P	21 29 05.6	-0.5
	baz=211						
HUMO	Hull Mountain	28.90	330	*e*P	P	21 29 06.8	+0.6
	comp=Z,15nm,1.2s						
HUMO				LR	LR		
	comp=Z,2µm,19.0s						
M50A	Fremont	28.92	34	PFAKE		21 29 20.0	+14
M50A				LR	LR		
	comp=Z,2µm,22.0s						
M50A	Fremont	28.92	34	P	P	21 29 04.6	-1.7
	baz=224						
PINE	Pine Mountain	28.95	334	*e*P	P	21 29 05.2	-1.6
	comp=Z,21nm,1.1s						
PINE				LR	LR		
	comp=Z,7µm,22.0s						
G40A	Rib Lake	28.97	20	PFAKE		21 29 20.0	+13
G40A				LR	LR		
	comp=Z,4µm,18.0s						
J04D	Umpqua Nationa	29.01	332	P	P	21 29 08.7	+1.3
	baz=142,SNR=18						
L49A	Milan	29.06	32	P	P	21 29 06.1	-1.5
	baz=222						
F38A	Pierce - Schro	29.08	17	P	P	21 29 06.1	-1.7
	baz=204						
O53A	New Philadelph	29.13	37	P	P	21 29 06.8	-1.5
	baz=228						
H43A	Windswept, Lux	29.15	24	PFAKE		21 29 20.0	+12
H43A				LR	LR		
	comp=Z,18µm,18.0s						
H43A	Windswept, Lux	29.15	24	P	P	21 29 06.7	-1.7
	baz=212						
AAM	Ann Arbor	29.26	32	PFAKE		21 29 20.0	+11
AAM				LR	LR		
	comp=Z,2µm,22.0s						
AAM	Ann Arbor	29.26	32	P	P	21 29 07.7	-1.7
	baz=222						
K02D	Willamette Mer	29.31	329	P	P	21 29 11.6	+1.7
	baz=139						
F39A	Loretta	29.32	19	P	P	21 29 08.2	-1.7
	baz=205						
MSO	Missoula	29.37	346	*e*P	P	21 29 10.2	-0.2
	comp=Z,22nm,1.2s						
MSO				*e*PcP	PcP	21 32 17.2	+1.1
MSO				LR	LR		
	comp=Z,13µm,18.0s						
MSO	Missoula	29.37	346	P	P	21 29 11.2	+0.7
	baz=160,SNR=7.3						
MDND	Maddock	29.42	6	PFAKE		21 29 20.0	+9.3
MDND				LR	LR		
	comp=Z,30µm,18.0s						
G08A	Pilot Rock	29.45	338	*e*P	P	21 29 12.1	+0.9
	comp=Z,44nm,1.0s						
G08A				LR	LR		
	comp=Z,2µm,21.0s						
F10A	Beach Ranch, E	29.47	341	*e*P	P	21 29 11.8	+0.5
	comp=Z,96nm,1.0s						
F10A				LR	LR		
	comp=Z,4µm,20.0s						
L50A	Kingsville	29.50	33	P	P	21 29 09.7	-1.8
	baz=224						
I05D	Terrebonne, OR	29.56	334	P	P	21 29 13.2	+1.1
	baz=145,SNR=14						
G42A	Mountain	29.56	22	PFAKE		21 29 20.0	+8.0
G42A				LR	LR		
	comp=Z,13µm,18.0s						
MCWV	Mont Chateau	29.56	40	PFAKE		21 29 20.0	+7.9
MCWV				LR	LR		
	comp=Z,800nm,21.0s						
F40A	Park Falls	29.57	20	P	P	21 29 10.4	-1.8
	baz=207,SNR=7.2						
I04A	Tendick Farm,	29.58	332	P	P	21 29 13.2	+0.9
	baz=142						
K49A	Clarkson	29.71	31	P	P	21 29 11.9	-1.5
	baz=222						
F41A	Three Lakes	29.75	21	PFAKE		21 29 30.0	+16
F41A				LR	LR		
	comp=Z,15µm,18.0s						
F41A	Three Lakes	29.75	21	P	P	21 29 12.6	-1.2
	baz=209						
E38A	The Farm, Brul	29.76	17	*e*P	P	21 29 12.1	-1.7
E38A				*e*PP	PnPn	21 30 14.6	+4.5
E38A				LR	LR		
	comp=Z,2µm,18.0s						
E38A	The Farm, Brul	29.76	17	P	P	21 29 12.7	-1.1
	baz=204						
KEBM	Edson Butte	29.77	329	*e*P	P	21 29 14.4	+0.4
	comp=Z,264nm,1.6s						
KEBM				LR	LR		
	comp=Z,5µm,22.0s						
EGMT	Eagleton	29.77	352	*e*P	P	21 29 14.2	+0.2
	comp=Z,34nm,1.0s						
EGMT				LR	LR		
	comp=Z,15µm,18.0s						
EGMT	Eagleton	29.77	352	P	P	21 29 14.1	+0.2
	baz=168,SNR=14						
J01E	Myrtle Point	29.79	330	P	P	21 29 15.0	+1.0
	baz=139,SNR=11						
DGMT	Dagmar	29.83	360	*e*P	P	21 29 13.7	-0.7
	comp=Z,43nm,1.3s						
DGMT				LR	LR		
	comp=Z,5µm,18.0s						
G43A	Wallace	29.85	23	PFAKE		21 29 30.0	+15
G43A				LR	LR		
	comp=Z,16µm,19.0s						
G43A	Wallace	29.85	23	P	P	21 29 13.4	-1.1
	baz=212						
E39A	Mellen	29.85	19	P	P	21 29 13.0	-1.5
	baz=206,SNR=5.3						
I03D	Drain, OR	29.93	331	P	P	21 29 16.7	+1.5
	baz=140						
COWI	Conover	30.06	21	PFAKE		21 29 30.0	+14
COWI				LR	LR		
	comp=Z,11µm,18.0s						
E40A	Wakefield	30.11	19	P	P	21 29 15.6	-1.3
	baz=207,SNR=7.9						
H04A	Detroit Lake	30.19	334	*e*P	P	21 29 18.0	+0.3
	comp=Z,30nm,1.0s						
H04A				LR	LR		
	comp=Z,3µm,18.0s						
E09A	Wood Farm, Sta	30.25	340	*e*P	P	21 29 16.6	-1.5
	comp=Z,22nm,1.0s						
E09A				LR	LR		
	comp=Z,4µm,19.0s						
H46A	Fife Lake	30.26	27	P	P	21 29 17.1	-1.1
	baz=217						
G05D	Wamic, OR	30.29	335	P	P	21 29 19.4	+0.9
	baz=146						
J49A	Marlette	30.30	31	P	P	21 29 16.6	-1.9
	baz=221						
H04D	Lebanon	30.30	333	P	P	21 29 19.1	+0.6
	baz=142						
N54A	Moraine State	30.30	37	PFAKE		21 29 30.0	+11
N54A				LR	LR		
	comp=Z,2µm,20.0s						
N54A	Moraine State	30.30	37	P	P	21 29 17.2	-1.4
	baz=229						
F07A	Phinny Hill Vi	30.31	338	*e*P	P	21 29 18.8	+0.2
	comp=Z,19nm,1.0s						
F07A				LR	LR		
	comp=Z,2µm,18.0s						
AGMN	Agassiz Nation	30.37	11	*e*P	P	21 29 18.5	-0.6
	comp=Z,55nm,0.9s						
AGMN				*e*PcP	PcP	21 32 18.5	0.0
AGMN				LR	LR		
	comp=Z,1µm,19.0s						
AGMN	Agassiz Nation	30.37	11	P	P	21 29 18.5	-0.6
	baz=195,SNR=23						
E41A	Kenton	30.43	21	P	P	21 29 18.6	-1.1
	baz=208						
I02D	Swisshome	30.47	331	P	P	21 29 22.0	+1.9
	baz=140						
E08A	Dider Farm, El	30.52	339	PFAKE		21 29 30.0	+9.5
E08A				LR	LR		
	comp=Z,3µm,21.0s						
SMLC	San Martn de	30.53	104	*e*P	P	21 29 23.9	+2.9
SMLC	San Martn de	30.53	104	*e*P	P	21 29 23.9	+2.9
COR	Corvallis	30.60	332	*e*P	P	21 29 22.2	+1.0
	comp=Z,83nm,0.9s						
COR				LR	LR		
	comp=Z,6µm,18.0s						
COR	Corvallis	30.60	332	*e*P	P	21 29 22.2	+1.0
COR				pmax	pmax		
	comp=Z,83nm,0.9s						
COR				MLR	MLR		
	comp=Z,6µm,18.0s						
HAWA	Hanford	30.60	339	*e*P	P	21 29 21.3	+0.1
	comp=Z,18nm,1.1s						
HAWA				LR	LR		
	comp=Z,2µm,20.0s						
I48A	Sherman Twp	30.66	29	P	P	21 29 19.9	-1.8
	baz=220						
O56A	Blue Knob Stat	30.71	40	PFAKE		21 29 30.0	+7.7
O56A				LR	LR		
	comp=Z,1µm,20.0s						
GLMI	Grayling	30.74	27	PFAKE		21 29 30.0	+7.5
GLMI				LR	LR		
	comp=Z,2µm,20.0s						
M54A	Oil Creek Stat	30.84	37	*e*P	P	21 29 21.2	-2.2
	comp=Z,120nm,1.6s						
M54A				LR	LR		
	comp=Z,5µm,21.0s						
M54A	Oil Creek Stat	30.84	37	P	P	21 29 21.9	-1.6
	baz=229						
E07A	Sunnyside	30.86	338	*e*P	P	21 29 24.5	+1.0
	comp=Z,25nm,0.9s						
E07A				LR	LR		
	comp=Z,3µm,20.0s						
SDDR	Presa de Saban	30.87	84	*e*P	P	21 29 23.3	-0.7
	comp=Z,89nm,1.0s						
SDDR				LR	LR		
	comp=Z,3µm,22.0s						
F05D	White Salmon	30.88	336	P	P	21 29 25.7	+2.0
	baz=146,SNR=20						
GRTK	Grand Turk	30.90	79	PFAKE		21 29 30.0	+5.9
GRTK				LR	LR		
	comp=Z,4µm,21.0s						
OTAV	Otavalo	30.93	123	*e*P	P	21 29 25.8	+0.8
	comp=Z,19nm,0.9s						
OTAV				LR	LR		
	comp=Z,2µm,21.0s						
OTAV	Otavalo	30.93	123	*e*P	P	21 29 27.3	+2.3
OTAV	Otavalo	30.93	123	*e*P	P	21 29 25.8	+0.8
OTAV				pmax	pmax		
	comp=Z,19nm,0.9s						
OTAV				MLR	MLR		
	comp=Z,2µm,21.0s						
OTAV	Otavalo	30.93	123	*e*P	P	21 29 27.3	+2.3
OTAV	Otavalo	30.93	123	*e*P	P	21 29 26.2	+1.3
D08A	Wollman Farm,	30.98	340	*e*P	P	21 29 24.6	+0.1
	comp=Z,12nm,1.0s						
D08A				LR	LR		
	comp=Z,3µm,18.0s						
EYMN	Ely	31.01	16	*e*P	P	21 29 23.3	-1.5
	comp=Z,23nm,0.8s						
EYMN				LR	LR		
	comp=Z,21µm,18.0s						
EYMN	Ely	31.01	16	P	P	21 29 22.9	-1.9
	baz=203,SNR=9.8						
RREF	El Recreo	31.02	112	*e*P	P	21 29 26.9	+1.0
RREF	El Recreo	31.02	112	*e*P	P	21 29 26.9	+1.0
E43A	Lone Tree Farm	31.05	23	PFAKE		21 29 40.0	+15
E43A				LR	LR		
	comp=Z,1µm,20.0s						
ERPA	Erie	31.06	36	PFAKE		21 29 40.0	+15
ERPA				LR	LR		
	comp=Z,7µm,21.0s						
PTBC	PUERTO BERRIO,	31.07	109	*e*P	P	21 29 27.7	+2.0
PTBC	PUERTO BERRIO,	31.07	109	*e*P	P	21 29 27.7	+2.0
D41A	Chassel	31.09	21	PFAKE		21 29 40.0	+15
D41A				LR	LR		
	comp=Z,4µm,18.0s						
D41A	Chassel	31.09	21	P	P	21 29 24.9	-0.6
	baz=209						
ELFO	Elginfield	31.09	33	P	P	21 29 23.3	-2.2
	baz=224						
H48A	Harrisville	31.22	29	P	P	21 29 25.5	-1.2
	baz=220						
GCUF	Volcan Galeras	31.24	120	*e*P	P	21 29 28.9	+1.1
GCUF	Volcan Galeras	31.24	120	*e*P	P	21 29 28.9	+1.1
SDMD	Soldier’s Deli	31.30	43	PFAKE		21 29 40.0	+13
SDMD				LR	LR		
	comp=Z,900nm,19.0s						
SOTA	Rioblanco	31.34	118	*e*P	P	21 29 29.3	+0.6
SOTA	Rioblanco	31.34	118	*e*P	P	21 29 29.3	+0.6
SSPA	Standing Stone	31.35	40	PFAKE		21 29 40.0	+12
SSPA				LR	LR		
	comp=Z,3µm,22.0s						
PCON	Cinco Dias	31.42	118	*e*P	P	21 29 30.8	+1.4
PCON	Cinco Dias	31.42	118	*e*P	P	21 29 30.8	+1.4
C09A	Chrisman Ranch	31.43	341	*e*P	P	21 29 29.0	+0.5
	comp=Z,11nm,0.8s						
C09A				LR	LR		
	comp=Z,4µm,22.0s						
F46A	Macinaw City C	31.44	26	P	P	21 29 27.6	-1.0
	baz=216						
WALA	Waterton Lakes	31.48	347	*e*P	P	21 29 28.1	-1.0
	comp=Z,15nm,1.1s						
WALA				LR	LR		
	comp=Z,13µm,18.0s						
NEW	Newport	31.51	343	*e*P	P	21 29 30.1	+0.8
	comp=Z,22nm,0.9s						
NEW				*e*PcP	PcP	21 32 22.7	+1.1
NEW				LR	LR		
	comp=Z,3µm,19.0s						
NEW	Newport	31.51	343	*e*P	P	21 29 30.1	+0.8
NEW				*e*		21 32 22.7	
NEW				pmax	pmax		
	comp=Z,22nm,0.9s						
NEW				MLR	MLR		
	comp=Z,3µm,19.0s						
NEW	Newport	31.51	343	P	P	21 29 29.8	+0.5
	baz=155,SNR=18						
C40A	Isle Royale Na	31.65	19	PFAKE		21 29 40.0	+10
C40A				LR	LR		
	comp=Z,1µm,19.0s						
E44A	Grand Marais A	31.66	24	PFAKE		21 29 40.0	+9.5
E44A				LR	LR		
	comp=Z,3µm,19.0s						
I51A	Listowel	31.67	32	P	P	21 29 29.4	-1.3
	baz=224						
LON	Longmire	31.73	336	*e*P	P	21 29 32.1	+0.8
	comp=Z,26nm,0.8s						
LON				LR	LR		
	comp=Z,5µm,21.0s						
LON	Longmire	31.73	336	*e*P	P	21 29 32.1	+0.8
LON				pmax	pmax		
	comp=Z,26nm,0.8s						
LON				MLR	MLR		
	comp=Z,5µm,21.0s						
LTY	Liberty	31.75	338	*e*P	P	21 29 31.8	+0.4
	comp=Z,63nm,1.0s						
LTY				LR	LR		
	comp=Z,3µm,21.0s						
F03A	Seaside	31.77	334	PFAKE		21 29 40.0	+8.5
F03A				LR	LR		
	comp=Z,7µm,18.0s						
PAGS	Pennsylvania G	31.83	42	PFAKE		21 29 40.0	+7.9
PAGS				LR	LR		
	comp=Z,3µm,21.0s						
E04D	Cinebar	31.87	335	P	P	21 29 34.1	+1.8
	baz=145,SNR=9.6						
MVL	Millersville	31.94	42	PFAKE		21 29 40.0	+7.0
MVL				LR	LR		
	comp=Z,2µm,20.0s						
ROSC	El Rosal	31.95	112	*e*P	P	21 29 32.0	-1.9
	comp=Z,17nm,1.2s						
ROSC				LR	LR		
	comp=Z,600nm,18.0s						
ROSC	El Rosal	31.95	112	P	P	21 29 33.0	-0.9
	comp=Z,4.2nm,0.3s,baz=307,slow=12,SNR=5.2						
L55A	Hinsdale	31.98	37	P	P	21 29 31.8	-1.6
	baz=230						
BMRO	Meriville Lake	32.15	31	P	P	21 29 33.8	-1.1
	baz=223						
D05A	Enumclaw	32.17	337	*e*P	P	21 29 33.7	-1.3
	comp=Z,48nm,1.1s						
D05A				LR	LR		
	comp=Z,5µm,20.0s						
BARC	Barichara	32.20	108	*e*P	P	21 29 37.0	+1.1
BARC	Barichara	32.20	108	*e*P	P	21 29 37.0	+1.1
SDD	Santo Domingo	32.21	85	PFAKE		21 29 50.0	+14
SDD				LR	LR		
	comp=Z,2µm,20.0s						
B08A	Colville Reser	32.25	341	*e*P	P	21 29 36.7	+0.9
	comp=Z,55nm,1.0s						
B08A				*e*PcP	PcP	21 32 23.8	+0.2
B08A				LR	LR		
	comp=Z,4µm,18.0s						
ULM	Lac du Bonnet	32.26	10	*e*P	P	21 29 34.4	-1.3
	comp=Z,23nm,1.0s						
ULM				LR	LR		
	comp=Z,4µm,19.0s						
ULM	Lac du Bonnet	32.26	10	*e*P	P	21 29 34.4	-1.3
ULM				pmax	pmax		
	comp=Z,23nm,1.0s						
ULM				MLR	MLR		
	comp=Z,4µm,19.0s						
ULM	Lac du Bonnet	32.26	10	P	P	21 29 34.2	-1.5
	comp=Z,20nm,0.9s,baz=194,slow=8.9,SNR=21						
ULM				PcP	PcP	21 32 23.3	-0.2
	comp=Z,10nm,0.9s,baz=214,slow=4.5,SNR=3.4						
ULM				Lg	Lg	21 40 00.6	
	comp=Z,1.7nm,1.0s,baz=87,slow=9.2,SNR=5.7						
ULM				LR	LR	21 42 56.8	
	comp=Z,4µm,18.3s,baz=194,slow=37						
PAMC	Pamplona, Colo	32.34	106	*e*P	P	21 29 39.3	+1.9
PAMC	Pamplona, Colo	32.34	106	*e*P	P	21 29 39.3	+1.9
C06D	Leavenworth	32.39	338	P	P	21 29 38.6	+1.7
	baz=149						
F48A	Evansville	32.41	28	P	P	21 29 35.9	-1.2
	baz=220						
D04E	Lakebay	32.46	336	P	P	21 29 38.5	+0.9
	baz=145						
E47A	Iron Bridge	32.60	27	P	P	21 29 37.2	-1.6
	baz=218						
F49A	Sandfield	32.62	29	P	P	21 29 37.2	-1.7
	baz=221						
D46A	Sault St. Mari	32.63	26	P	P	21 29 37.8	-1.3
	baz=216						
MMNY	Mt. Morris Dam	32.63	37	PFAKE		21 29 50.0	+11
MMNY				LR	LR		
	comp=Z,8µm,19.0s						
N59A	State Game Lan	32.82	41	PFAKE		21 29 50.0	+9.2
N59A				LR	LR		
	comp=Z,4µm,22.0s						
D03D	Eldon	32.88	336	P	P	21 29 42.1	+0.9
	baz=145,SNR=18						
LUPA	Lehigh Univers	32.89	42	PFAKE		21 29 50.0	+8.6
LUPA				LR	LR		
	comp=Z,200nm,19.0s						
NLWA	Neilton Lookou	33.07	335	*e*P	P	21 29 43.0	0.0
	comp=Z,87nm,1.3s						
NLWA				LR	LR		
	comp=Z,6µm,20.0s						
B06A	Marblemount	33.11	338	*e*P	P	21 29 43.8	+0.6
	comp=Z,48nm,0.9s						
B06A				LR	LR		
	comp=Z,4µm,18.0s						
B05A	Bryant	33.11	338	P	P	21 29 43.7	+0.5
	baz=147,SNR=9.0						
KSPA	Keystone Colle	33.18	40	PFAKE		21 30 00.0	+16
KSPA				LR	LR		
	comp=Z,2µm,21.0s						
SADO	Sadowa	33.31	33	*e*P	P	21 29 44.1	-0.9
	comp=Z,144nm,1.9s						
SADO				LR	LR		
	comp=Z,2µm,19.0s						
SADO	Sadowa	33.31	33	P	P	21 29 43.1	-2.0
	comp=Z,8.5nm,0.5s,baz=264,slow=8.9,SNR=7.4						
BINY	Binghamton	33.43	39	PFAKE		21 30 00.0	+14
BINY				LR	LR		
	comp=Z,4µm,21.0s						
BINY	Binghamton	33.43	39	P	P	21 29 44.3	-1.8
	baz=233						
BRNJ	Basking Ridge	33.45	43	PFAKE		21 30 00.0	+14
BRNJ				LR	LR		
	comp=Z,2µm,18.0s						
TAMC	Tame, Arauca	33.52	107	*e*P	P	21 29 48.6	+1.3
TAMC	Tame, Arauca	33.52	107	*e*P	P	21 29 48.6	+1.3
ODNJ	Ogdensburg	33.64	42	PFAKE		21 30 00.0	+12
ODNJ				LR	LR		
	comp=Z,3µm,21.0s						
SDV	Santo Domingo	33.67	102	*e*P	P	21 29 50.5	+1.7
	comp=Z,61nm,0.9s						
SDV				LR	LR		
	comp=Z,2µm,19.0s						
SDV	Santo Domingo	33.67	102	*e*P	P	21 29 49.0	+0.2
SDV	Santo Domingo	33.67	102	*e*P	P	21 29 49.0	+0.2
A04D	Lummi Island	33.71	337	P	P	21 29 49.6	+1.1
	baz=146,SNR=5.8						
I55A	Frankford	33.72	35	P	P	21 29 47.2	-1.3
	baz=229						
E50A	Wahnapitae	33.72	29	P	P	21 29 46.4	-2.1
	baz=222						
F51A	Arnstein	33.74	31	P	P	21 29 46.9	-1.9
	baz=224						
CPNY	Central Park	33.90	43	PFAKE		21 30 00.0	+10
CPNY				LR	LR		
	comp=Z,2µm,18.0s						
PGC	Sidney	33.93	337	*e*P	P	21 29 50.0	-0.3
PGC				LR	LR		
	comp=Z,5µm,21.0s						
PAL	Palisades	34.05	43	PFAKE		21 30 00.0	+8.5
PAL				LR	LR		
	comp=Z,2µm,18.0s						
BANO	Bancroft	34.12	34	P	P	21 29 51.3	-0.8
	baz=227						
H55A	Tweed	34.20	35	P	P	21 29 51.0	-1.8
	baz=229						
E51A	G1948 Merrick	34.38	30	P	P	21 29 53.0	-1.4
	baz=224						
PLVO	Plevna	34.58	34	PFAKE		21 30 10.0	+14
PLVO				LR	LR		
	comp=Z,4µm,19.0s						
E52A	Mattawa	34.62	31	P	P	21 29 54.5	-1.9
	baz=225						
ALGO	Algonquin Park	34.69	32	P	P	21 29 54.9	-2.0
	baz=226						
YLE	Yale	34.83	43	PFAKE		21 30 10.0	+12
YLE				LR	LR		
	comp=Z,2µm,20.0s						
D51A	Lot 18 Range I	34.84	30	P	P	21 29 56.8	-1.5
	baz=223						
MPR	Mayaguez	34.86	85	PFAKE		21 30 10.0	+11
MPR				LR	LR		
	comp=Z,4µm,22.0s						
G55A	Calabogie	34.91	34	P	P	21 29 57.3	-1.6
	baz=229						
PEMO	Pembroke	34.91	33	P	P	21 29 57.3	-1.6
	baz=228						
LLLB	Lillooet	35.03	340	*e*P	P	21 30 01.2	+1.3
	comp=Z,36nm,0.9s						
LLLB				LR	LR		
	comp=Z,3µm,18.0s						
E53A	Dumoine, Ponti	35.17	32	P	P	21 29 59.7	-1.5
	baz=226						
OBIP	Obispado Ponce	35.38	85	*e*P	P	21 30 02.5	-0.7
	comp=Z,89nm,1.1s						
ACCN	Adirondack Com	35.50	39	PFAKE		21 30 20.0	+16
ACCN				LR	LR		
	comp=Z,8µm,19.0s						
NCB	Newcomb	35.51	38	PFAKE		21 30 20.0	+16
NCB				LR	LR		
	comp=Z,6µm,18.0s						
D53A	Lac Vacive, Po	35.64	31	P	P	21 30 03.4	-1.8
	baz=226						
LONY	Lake Ozonia	35.69	37	PFAKE		21 30 20.0	+14
LONY				LR	LR		
	comp=Z,8µm,18.0s						
SJG	San Juan	35.80	85	*e*P	P	21 30 06.7	-0.2
	comp=Z,169nm,1.0s						

SJG				LR	LR		
	comp=Z,2µm,21.0s						
SJG	**San Juan**	**35.80**	**85**	*e*P	**P**	**21 30 06.7**	**-0.2**
SJG				pmax	pmax		
	comp=Z,169nm,1.0s						
SJG				MLR	MLR		
	comp=Z,2µm,21.0s						
CBYP	**Canovanas**	**36.06**	**84**	*e*P	**P**	**21 30 08.2**	**-1.0**
	comp=Z,60nm,0.8s						
CBYP				LR	LR		
	comp=Z,3µm,21.0s						
HUMP	**Col San Antoni**	**36.08**	**84**	*e*P	**P**	**21 30 09.8**	**+0.5**
	comp=Z,178nm,1.2s						
HUMP				LR	LR		
	comp=Z,3µm,20.0s						
FFC	**Flin Flon**	**36.12**	**2**	*e*P	**P**	**21 30 08.1**	**-1.1**
	comp=Z,17nm,0.9s						
FFC				LR	LR		
	comp=Z,28µm,19.0s						
FFC	**Flin Flon**	**36.12**	**2**	*i* P	**P**	**21 30 08.6**	**-0.6**
D54A	**Lac Fusel, La**	**36.21**	**32**	P	**P**	**21 30 08.1**	**-2.0**
	baz=227						
HRV	**Adam Dziewonsk**	**36.33**	**42**	PFAKE		21 30 20.0	+8.9
HRV				LR	LR		
	comp=Z,2µm,21.0s						
MTP	**Monte Pirata**	**36.37**	**84**	*e*P	**P**	**21 30 11.6**	**-0.2**
	comp=Z,322nm,1.2s						
MTP				LR	LR		
	comp=Z,2µm,20.0s						
FRNY	**Flat Rock**	**36.39**	**37**	PFAKE		21 30 20.0	+8.4
FRNY				LR	LR		
	comp=Z,9µm,18.0s						
WES	**Weston**	**36.42**	**42**	PFAKE		21 30 20.0	+8.2
WES				LR	LR		
	comp=Z,2µm,21.0s						
VLDQ	**Val d'Or**	**36.48**	**30**	PFAKE		21 30 20.0	+7.7
VLDQ				LR	LR		
	comp=Z,13µm,19.0s						
CUPR	**Culebra, Puert**	**36.60**	**84**	PFAKE		21 30 20.0	+6.3
CUPR				LR	LR		
	comp=Z,3µm,20.0s						
TRQ	**Mont Tremblant**	**36.70**	**35**	*e*P	**P**	**21 30 12.7**	**-1.6**
STVI	**Saint Thomas**	**36.90**	**84**	*e*P	**P**	**21 30 16.3**	**0.0**
	comp=Z,123nm,1.3s						
LBNH	**Lisbon**	**37.03**	**39**	PFAKE		21 30 30.0	+13
LBNH				LR	LR		
	comp=Z,9µm,20.0s						
CDVI	**St. Croix**	**37.15**	**85**	*e*P	**P**	**21 30 17.8**	**-0.7**
	comp=Z,108nm,0.8s						
LSQQ	**Lebel-sur-Quev**	**37.37**	**29**	P	**P**	**21 30 18.1**	**-1.8**
	baz=225						
MATQ	**Matagami**	**37.58**	**28**	P	**P**	**21 30 20.2**	**-1.4**
	baz=223						
LATQ	**La Tuque**	**38.37**	**34**	P	**P**	**21 30 27.3**	**-1.1**
	baz=232						
SMRT	**St. Maarten**	**38.71**	**84**	PFAKE		21 30 40.0	+8.4
SMRT				LR	LR		
	comp=Z,2µm,20.0s						
SEUS	**St. Eustatius**	**38.88**	**85**	PFAKE		21 30 40.0	+7.1
SEUS				LR	LR		
	comp=Z,2µm,20.0s						
PKME	**Peaks-Kenny Pk**	**39.16**	**39**	PFAKE		21 30 50.0	+15
PKME				LR	LR		
	comp=Z,2µm,18.0s						
CHGQ	**Chibougamau**	**39.19**	**30**	P	**P**	**21 30 34.0**	**-1.2**
	baz=227						
NNA	**Nana**	**40.43**	**137**	PFAKE		21 31 00.0	+14
NNA				LR	LR		
	comp=Z,1µm,19.0s						
GGN	**Saint George**	**40.59**	**41**	PFAKE		21 31 00.0	+13
GGN				LR	LR		
	comp=Z,4µm,21.0s						
FCC	**Fort Churchill**	**40.78**	**8**	*e*P	**P**	**21 30 47.6**	**-0.6**
	comp=Z,44nm,1.4s						
FCC				LR	LR		
	comp=Z,2µm,19.0s						
FCC	**Fort Churchill**	**40.78**	**8**	*e*P	**P**	**21 30 47.6**	**-0.6**
FCC				pmax	pmax		
	comp=Z,44nm,1.4s						
FCC				MLR	MLR		
	comp=Z,2µm,19.0s						
DIB	**Dawson Inlet,**	**41.06**	**334**	*e*P	**P**	**21 30 50.2**	**-0.4**
	comp=Z,306nm,2.0s						
FDF	**Fort de France**	**41.08**	**89**	PFAKE		21 31 00.0	+8.7
FDF				LR	LR		
	comp=Z,2µm,21.0s						
GRGR	**Grenville**	**41.17**	**93**	PFAKE		21 31 00.0	+7.9
GRGR				LR	LR		
	comp=Z,2µm,20.0s						
HAL	**Halifax**	**42.44**	**43**	PFAKE		21 31 10.0	+8.0
HAL				LR	LR		
	comp=Z,2µm,22.0s						
CRAG	**Craig**	**42.98**	**336**	*e*P	**P**	**21 31 06.7**	**+0.4**
	comp=Z,122nm,1.1s						
WRAK	**Wrangell Islan**	**43.39**	**337**	PFAKE		21 31 20.0	+10
WRAK				LR	LR		
	comp=Z,4µm,18.0s						
DLBC	**Dease Lake**	**44.18**	**341**	*e*P	**P**	**21 31 18.2**	**+2.2**
	comp=Z,95nm,0.8s						
YKA	**Yellowknife Ar**	**44.51**	**353**	P	**P**	**21 31 17.6**	**-0.9**
	comp=Z,8.4nm,0.8s,baz=164,slow=7.8,SNR=81						
YKA				PcP	**PP**	**21 33 02.0**	**-0.6**
	comp=Z,3.1nm,0.8s,baz=163,slow=4.1,SNR=6.3						
YKA				LR	LR	21 50 28.1	
	comp=Z,614nm,19.6s,baz=164,slow=37						
YKB5	**Yellowknife Ar**	**44.51**	**353**	*e*P	**P**	**21 31 17.0**	**-1.4**
YKW3	**Yellowknife Ar**	**44.58**	**353**	*e*P	**P**	**21 31 18.2**	**-0.8**
	comp=Z,17nm,1.0s						
YKW3				LR	LR		
	comp=Z,15µm,21.0s						
JIS	**Juneau Island**	**45.52**	**338**	PFAKE		21 31 40.0	+14
JIS				LR	LR		
	comp=Z,3µm,18.0s						
SCHQ	**Schefferville**	**45.89**	**29**	*e*P	**P**	**21 31 29.1**	**-0.5**
	comp=Z,26nm,1.1s						
SCHQ				LR	LR		
	comp=Z,700nm,22.0s						
SCHQ	**Schefferville**	**45.89**	**29**	P	**P**	**21 31 28.7**	**-0.9**
	comp=Z,8.7nm,0.5s,baz=244,slow=7.0,SNR=22						
SCHQ				LR	LR	21 51 58.1	
	comp=Z,5µm,18.2s,baz=235,slow=38						
BESE	**Bessie Mountai**	**45.91**	**338**	PFAKE		21 31 40.0	+10
BESE				LR	LR		
	comp=Z,2µm,19.0s						
SKAG	**Skagway**	**46.73**	**339**	PFAKE		21 31 50.0	+14
SKAG				LR	LR		
	comp=Z,2µm,18.0s						
PTGA	**Pitinga**	**47.24**	**109**	*e*P	**P**	**21 31 41.2**	**+0.5**
	comp=Z,17nm,0.9s						
PTGA				LR	LR		
	comp=Z,1µm,18.0s						
PTGA	**Pitinga**	**47.24**	**109**	*e*P	**P**	**21 31 41.1**	**+0.4**
WHY	**Whitehorse**	**47.47**	**340**	*e*P	**P**	**21 31 41.9**	**-0.1**
	comp=Z,20nm,1.0s						
WHY				LR	LR		
	comp=Z,4µm,18.0s						
STCH	**Steam Cracks**	**48.29**	**280**	PFAKE		21 32 00.0	+11
STCH				LR	LR		
	comp=Z,2µm,21.0s						
BYL	**Byron's Ledge**	**48.41**	**280**	PFAKE		21 32 00.0	+10
BYL				LR	LR		
	comp=Z,2µm,20.0s						
UWB	**Uwekahuna B**	**48.43**	**280**	*e*P	**P**	**21 31 48.5**	**-1.5**
	comp=Z,398nm,1.3s						
OBL	**Observatory Le**	**48.44**	**280**	PFAKE		21 32 00.0	+10
OBL				LR	LR		
	comp=Z,3µm,21.0s						
LPAZ	**La Paz**	**49.39**	**132**	*e*P	**P**	**21 31 57.7**	**-0.2**
	comp=Z,39nm,1.4s						
LPAZ	**La Paz**	**49.39**	**132**	*e*P	**P**	**21 31 57.7**	**-0.2**
LPAZ				pmax	pmax		
	comp=Z,39nm,1.4s						
LPAZ	**La Paz**	**49.39**	**132**	P	**P**	**21 31 57.5**	**-0.4**
	comp=Z,9.6nm,1.1s,baz=338,slow=8.3,SNR=9.9						
LPAZ				LR	LR	21 50 57.4	
	comp=Z,602nm,18.5s,baz=320,slow=34						
LPAZ	**La Paz**	**49.39**	**132**	*e*P	**P**	**21 31 58.8**	**+0.9**
PTCN	**Pitcairn Islan**	**50.31**	**211**	PFAKE		21 32 20.0	+16
PTCN				LR	LR		
	comp=Z,3µm,21.0s						
BALM	**Baldy**	**50.35**	**337**	*e*P	**P**	**21 32 06.3**	**+2.3**
	comp=Z,43nm,1.0s						
BALM				LR	LR		
	comp=Z,2µm,19.0s						
BALM	**Baldy**	**50.35**	**337**	*e*P	**P**	**21 32 06.3**	**+2.3**
BALM				pmax	pmax		
	comp=Z,43nm,1.0s						
BALM				MLR	MLR		
	comp=Z,2µm,19.0s						
MNMC	**Minye Minye**	**50.38**	**136**	*e*P	**P**	**21 32 04.6**	**-0.4**
	comp=Z,50nm,1.3s						
MNMC				LR	LR		
	comp=Z,1µm,21.0s						
PB11	**IPOC Station P**	**50.80**	**137**	*e*P	**P**	**21 32 08.5**	**+0.5**
	comp=Z,44nm,1.1s						
FRB	**Frobisher Bay**	**51.13**	**19**	P	**P**	**21 32 09.9**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=210,slow=7.8,SNR=8.2						
EYAK	**Cordova Ski Ar**	**51.36**	**335**	*e*P	**P**	**21 32 12.4**	**+0.9**
	comp=Z,87nm,0.9s						
EYAK				LR	LR		
	comp=Z,4µm,18.0s						
DAWY	**Dawson**	**51.40**	**341**	*e*P	**P**	**21 32 13.0**	**+1.2**
	comp=Z,26nm,0.8s						
DAWY				LR	LR		
	comp=Z,3µm,18.0s						
DIV	**Divide**	**51.72**	**336**	*e*P	**P**	**21 32 14.3**	**0.0**
	comp=Z,38nm,1.0s						
KLU	**Klutina**	**51.99**	**336**	*e*P	**P**	**21 32 16.9**	**+0.6**
	comp=Z,65nm,1.0s						
KLU				LR	LR		
	comp=Z,2µm,18.0s						
MENT	**Mentasta**	**52.07**	**338**	*e*P	**P**	**21 32 17.7**	**+0.9**
	comp=Z,40nm,1.0s						
MENT				LR	LR		
	comp=Z,4µm,18.0s						
HARP	**HAARP**	**52.25**	**337**	*e*P	**P**	**21 32 19.2**	**+1.1**
	comp=Z,110nm,1.0s						
EPYK	**Eagle Plains**	**52.34**	**344**	*e*P	**P**	**21 32 20.0**	**+1.2**
	comp=Z,71nm,0.8s						
EPYK				*e*PcP	**PcP**	**21 33 29.8**	**+0.3**
EPYK				LR	LR		
	comp=Z,4µm,20.0s						
EPYK	**Eagle Plains**	**52.34**	**344**	P	**P**	**21 32 18.8**	**0.0**
	baz=139,SNR=34						
EGAK	**Eagle**	**52.45**	**341**	*e*P	**P**	**21 32 20.6**	**+1.0**
	comp=Z,46nm,0.9s						
EGAK				LR	LR		
	comp=Z,3µm,18.0s						
DOT	**Dot Lake**	**52.64**	**339**	*e*P	**P**	**21 32 22.8**	**+1.8**
	comp=Z,56nm,1.0s						
DOT				LR	LR		
	comp=Z,4µm,18.0s						
SEW	**Seward**	**52.65**	**333**	*e*P	**P**	**21 32 22.7**	**+1.7**
	comp=Z,53nm,1.1s						
PAX	**Paxson**	**52.71**	**338**	PFAKE		21 32 30.0	+8.3
PAX				LR	LR		
	comp=Z,2µm,19.0s						
SCM	**Sheep Creek Mo**	**52.73**	**336**	*e*P	**P**	**21 32 23.8**	**+2.0**
	comp=Z,62nm,1.0s						
SCM	**Sheep Creek Mo**	**52.73**	**336**	*e*P	**P**	**21 32 23.8**	**+2.0**
SCM				pmax	pmax		
	comp=Z,62nm,1.0s						
SCRK	**Sand Creek**	**52.83**	**339**	*e*P	**P**	**21 32 24.2**	**+1.7**
	comp=Z,56nm,1.1s						
SCRK				LR	LR		
	comp=Z,2µm,18.0s						
KDAK	**Kodiak Island**	**52.93**	**330**	*e*P	**P**	**21 32 23.9**	**+0.7**
	comp=Z,306nm,2.0s						
KDAK	**Kodiak Island**	**52.93**	**330**	*i* P	**P**	**21 32 25.2**	**+2.0**
KDAK	**Kodiak Island**	**52.93**	**330**	P	**P**	**21 32 23.9**	**+0.7**
	comp=Z,9.1nm,0.8s,baz=129,slow=4.3,SNR=7.4						
KNK	**Knik Glacier**	**52.94**	**335**	*e*P	**P**	**21 32 25.4**	**+2.1**
	comp=Z,60nm,1.0s						
KNK				LR	LR		
	comp=Z,2µm,19.0s						
RIDG	**Independ'e Rid**	**52.97**	**339**	*e*P	**P**	**21 32 25.4**	**+1.9**
	comp=Z,247nm,0.8s						
RIDG				LR	LR		
	comp=Z,2µm,19.0s						
PB10	**IPOC Station P**	**53.00**	**141**	PFAKE		21 32 40.0	+16
PB10				LR	LR		
	comp=Z,1µm,19.0s						
BRLK	**Bradley Lake**	**53.09**	**332**	*e*P	**P**	**21 32 26.2**	**+1.7**
	comp=Z,49nm,0.9s						
INK	**Inuvik**	**53.10**	**347**	*e*P	**P**	**21 32 24.9**	**+0.6**
	comp=Z,61nm,0.9s						
INK				LR	LR		
	comp=Z,5µm,20.0s						
INK	**Inuvik**	**53.10**	**347**	*e*P	**P**	**21 32 24.9**	**+0.6**
INK				pmax	pmax		
	comp=Z,61nm,0.9s						
INK				MLR	MLR		
	comp=Z,5µm,20.0s						
INK	**Inuvik**	**53.10**	**347**	LR	LR	21 57 04.6	
	comp=Z,3µm,19.5s,baz=151,slow=38						
SML	**Sawmill**	**53.11**	**335**	*e*P	**P**	**21 32 26.1**	**+1.5**
	comp=Z,95nm,0.9s						
SML	**Sawmill**	**53.11**	**335**	*e*P	**P**	**21 32 26.1**	**+1.5**
SML				pmax	pmax		
	comp=Z,95nm,0.9s						
RC01	**Rabbit Creek A**	**53.29**	**334**	*e*P	**P**	**21 32 27.6**	**+1.8**
	comp=Z,36nm,0.9s						
PMR	**Palmer**	**53.31**	**335**	*e*P	**P**	**21 32 27.4**	**+1.5**
	comp=Z,45nm,0.8s						
PMR	**Palmer**	**53.31**	**335**	*e*P	**P**	**21 32 27.4**	**+1.5**
PMR				pmax	pmax		
	comp=Z,45nm,0.8s						
GHO	**Glory Hole Cre**	**53.33**	**335**	*e*P	**P**	**21 32 27.7**	**+1.5**
	comp=Z,101nm,0.9s						
GHO				LR	LR		
	comp=Z,1µm,20.0s						
LVC	**Limon Verde**	**53.34**	**139**	*e*P	**P**	**21 32 27.1**	**0.0**
	comp=Z,29nm,1.1s						
LVC	**Limon Verde**	**53.34**	**139**	*e*P	**P**	**21 32 27.1**	**0.0**
LVC				pmax	pmax		
	comp=Z,29nm,1.1s						
LVC	**Limon Verde**	**53.34**	**139**	*e*P	**P**	**21 32 27.4**	**+0.3**
DHY	**Denali Highway**	**53.47**	**337**	*e*P	**P**	**21 32 27.5**	**+0.2**
	comp=Z,35nm,0.8s						
DHY				*e*PcP	**PcP**	**21 33 29.0**	**-5.0**
DHY				LR	LR		
	comp=Z,1µm,22.0s						
SUA	**Susitna One**	**53.90**	**334**	*e*P	**P**	**21 32 32.0**	**+1.6**
	comp=Z,100nm,0.9s						
HDA	**Harding Lake**	**54.11**	**339**	*e*P	**P**	**21 32 31.8**	**-0.1**
	comp=Z,63nm,1.0s						
HDA				LR	LR		
	comp=Z,3µm,18.0s						
HDA	**Harding Lake**	**54.11**	**339**	P	**P**	**21 32 32.3**	**+0.5**
	baz=127,SNR=30						
RND	**Reindeer**	**54.21**	**337**	*e*P	**P**	**21 32 34.2**	**+1.6**
	comp=Z,107nm,1.1s						
RND				LR	LR		
	comp=Z,2µm,18.0s						
RND	**Reindeer**	**54.21**	**337**	*e*P	**P**	**21 32 34.2**	**+1.6**
RND				pmax	pmax		
	comp=Z,107nm,1.1s						
RND				MLR	MLR		
	comp=Z,2µm,18.0s						
IL1	**Eielson Array**	**54.31**	**339**	*e*P	**P**	**21 32 34.0**	**+0.8**
ILAR	**Eielson Array**	**54.31**	**339**	P	**P**	**21 32 34.1**	**+0.9**
	comp=Z,57nm,0.9s,baz=148,slow=6.1,SNR=318						
ILB	**Eielson Array**	**54.31**	**339**	*e*P	**P**	**21 32 34.3**	**+1.1**
	comp=Z,101nm,1.0s						
PRP	**Porcupine Dome**	**54.32**	**340**	*e*P	**P**	**21 32 35.2**	**+1.7**
	comp=Z,105nm,0.9s						
PRP				*e*PcP	**PcP**	**21 33 38.8**	**+1.6**
PRP				LR	LR		
	comp=Z,3µm,19.0s						
MCK	**McKinley**	**54.43**	**337**	*e*P	**P**	**21 32 35.4**	**+1.3**
	comp=Z,84nm,0.9s						
MCK				LR	LR		
	comp=Z,2µm,20.0s						
MCK	**McKinley**	**54.43**	**337**	*e*P	**P**	**21 32 35.4**	**+1.3**
MCK				pmax	pmax		
	comp=Z,84nm,0.9s						
MCK				MLR	MLR		
	comp=Z,2µm,20.0s						
WRH	**Wood River Hil**	**54.55**	**338**	*e*P	**P**	**21 32 34.8**	**-0.2**
	comp=Z,40nm,0.9s						
WRH				LR	LR		
	comp=Z,2µm,19.0s						
CCB	**Clear Creek Bu**	**54.55**	**339**	PFAKE		21 32 50.0	+15
CCB				LR	LR		
	comp=Z,2µm,21.0s						
COLA	**College**	**54.70**	**339**	*e*P	**P**	**21 32 35.5**	**-0.5**
	comp=Z,47nm,0.8s						
COLA				*e*PcP	**PcP**	**21 33 40.8**	**+2.4**
COLA				LR	LR		
	comp=Z,2µm,19.0s						
COLA	**College**	**54.70**	**339**	*ce*P	**P**	**21 32 36.9**	**+0.9**
COLA				*i* *PP	**sP**	**21 32 53.1**	**+3.4**
COLA				pmax	pmax		
	comp=Z,44nm,1.0s						
COLA	**College**	**54.70**	**339**	*e*P	**P**	**21 32 37.2**	**+1.1**
POKR	**Poker Plat Res**	**54.71**	**339**	P	**P**	**21 32 37.1**	**+1.0**
	baz=127,SNR=29						
TCOL	**CIGO, UAF Yank**	**54.71**	**339**	P	**P**	**21 32 36.7**	**+0.6**
	baz=126						
TRF	**Thorofare Moun**	**54.77**	**337**	*e*P	**P**	**21 32 37.9**	**+1.1**
	comp=Z,202nm,0.9s						
TRF				LR	LR		
	comp=Z,2µm,21.0s						
GO02	**Mina Guanaco**	**54.82**	**141**	*e*P	**P**	**21 32 37.3**	**-0.5**
	comp=Z,69nm,1.5s						
GO02				LR	LR		
	comp=Z,1µm,20.0s						
BWN	**Browne**	**54.87**	**338**	PFAKE		21 32 50.0	+13
BWN				LR	LR		
	comp=Z,3µm,19.0s						
MDM	**Murphy Dome**	**54.88**	**339**	*e*P	**P**	**21 32 37.3**	**-0.1**
	comp=Z,36nm,1.0s						
MDM				LR	LR		
	comp=Z,2µm,18.0s						
FYU	**Fort Yukon**	**54.90**	**341**	*e*P	**P**	**21 32 39.2**	**+1.7**
	comp=Z,177nm,1.0s						
FYU				*e*PcP	**PcP**	**21 33 38.2**	**-1.0**
FYU				LR	LR		
	comp=Z,2µm,20.0s						
PPLA	**Purkeypile**	**55.22**	**335**	*e*P	**P**	**21 32 41.0**	**+1.0**
	comp=Z,152nm,1.1s						
PPLA				LR	LR		
	comp=Z,3µm,19.0s						
CAST	**Castle Rocks**	**55.44**	**336**	*e*P	**P**	**21 32 42.3**	**+0.8**
	comp=Z,83nm,0.9s						
CAST				LR	LR		
	comp=Z,2µm,19.0s						
SVW2	**Sparrevohn**	**55.78**	**333**	*e*P	**P**	**21 32 44.5**	**+0.6**
	comp=Z,44nm,1.0s						
MLY	**Manley**	**55.80**	**338**	*e*P	**P**	**21 32 45.1**	**+1.0**
	comp=Z,54nm,0.9s						
MLY				LR	LR		
	comp=Z,2µm,21.0s						
RES	**Resolute Bay**	**56.35**	**3**	*e*P	**P**	**21 32 46.5**	**-1.3**
	comp=Z,17nm,1.0s						
RES				LR	LR		
	comp=Z,12µm,19.0s						
RES	**Resolute Bay**	**56.35**	**3**	*e*P	**P**	**21 32 46.5**	**-1.3**
RES				pmax	pmax		
	comp=Z,17nm,1.0s						
RES				MLR	MLR		
	comp=Z,12µm,19.0s						
COLD	**Coldfoot**	**56.86**	**340**	*e*P	**P**	**21 32 53.3**	**+1.8**
	comp=Z,42nm,0.9s						
COLD				LR	LR		
	comp=Z,3µm,19.0s						
LCO	**Las Campanas**	**57.15**	**145**	PFAKE		21 33 10.0	+16
LCO				LR	LR		
	comp=Z,2µm,19.0s						
LCO	**Las Campanas**	**57.15**	**145**	*e*P	**P**	**21 32 55.9**	**+1.5**
IM3	**Indian Mountai**	**57.37**	**338**	*e*P	**P**	**21 32 55.0**	**-0.1**
IM3				*e*PcP	**PcP**	**21 33 49.0**	**+0.2**
PPT	**Papeete**	**57.49**	**234**	LR	LR	21 50 37.6	
	comp=Z,1µm,20.7s,baz=52,slow=29						
TOLK	**Toolik Lake Re**	**57.50**	**342**	*e*P	**P**	**21 32 57.2**	**+1.2**
	comp=Z,98nm,0.9s						
TOLK				*e*PcP	**PcP**	**21 33 44.1**	**-5.2**
TOLK				LR	LR		
	comp=Z,8µm,20.0s						
TOLK	**Toolik Lake Re**	**57.50**	**342**	P	**P**	**21 32 57.1**	**+1.1**
	baz=126,SNR=83						
GO04	**Tololo Observa**	**58.01**	**146**	*e*P	**P**	**21 33 00.5**	**+0.1**
	comp=Z,60nm,1.0s						
GO04				LR	LR		
	comp=Z,1µm,20.0s						
SALV	**Santo Antonio**	**58.53**	**123**	*e*P	**P**	**21 33 04.0**	**0.0**
SFJD	**Kangerlussuaq**	**59.08**	**22**	PFAKE		21 33 20.0	+13
SFJD				LR	LR		
	comp=Z,5µm,20.0s						
UNV	**Unalaska Valle**	**59.09**	**322**	*e*P	**P**	**21 33 07.9**	**+0.6**
	comp=Z,86nm,1.2s						
ILULI	**Ilulissat**	**59.98**	**19**	PFAKE		21 33 30.0	+17
ILULI				LR	LR		
	comp=Z,3µm,19.0s						
PEL	**Peldehue**	**60.43**	**148**	PFAKE		21 33 30.0	+13
PEL				LR	LR		
	comp=Z,900nm,18.0s						
TULEG	**Thule**	**60.69**	**9**	*e*P	**P**	**21 33 17.0**	**-1.0**
	comp=Z,37nm,1.6s						
TULEG				LR	LR		
	comp=Z,2µm,19.0s						
AQDB	**Aquidauana**	**61.14**	**127**	*e*P	**P**	**21 33 21.9**	**+0.1**
ANM	**Nome**	**61.24**	**334**	*e*P	**P**	**21 33 23.2**	**+1.3**
	comp=Z,35nm,1.0s						
ANM				LR	LR		
	comp=Z,2µm,18.0s						
ANM	**Nome**	**61.24**	**334**	*e*P	**P**	**21 33 23.2**	**+1.3**
ANM				pmax	pmax		
	comp=Z,35nm,1.0s						
ANM				MLR	MLR		
	comp=Z,2µm,18.0s						
RDOG	**Red Dog Mine**	**61.52**	**338**	*e*P	**P**	**21 33 24.7**	**+1.0**
	comp=Z,130nm,1.0s						
RDOG				LR	LR		
	comp=Z,2µm,20.0s						
PEXB	**Peixe**	**62.74**	**115**	*e*P	**P**	**21 33 32.3**	**-0.4**
ANGG	**Ammassalik, Gr**	**63.49**	**25**	*e*P	**P**	**21 33 36.4**	**-0.4**
	comp=Z,144nm,1.8s						
ANGG				LR	LR		
	comp=Z,8µm,18.0s						
CPUP	**Villa Florida**	**63.54**	**133**	*e*P	**P**	**21 33 37.8**	**0.0**
	comp=Z,14nm,1.0s						
CPUP	**Villa Florida**	**63.54**	**133**	*e*P	**P**	**21 33 37.8**	**0.0**
CPUP				pmax	pmax		
	comp=Z,14nm,1.0s						
CPUP	**Villa Florida**	**63.54**	**133**	P	**P**	**21 33 38.0**	**+0.2**
	comp=Z,7.1nm,0.8s,baz=312,slow=8.5,SNR=5.9						
CPUP				LR	LR	22 01 09.1	
	comp=Z,580nm,18.1s,baz=337,slow=36						
CPUP	**Villa Florida**	**63.54**	**133**	*e*P	**P**	**21 33 38.8**	**+0.9**
GAMB	**Gambell**	**63.72**	**333**	*e*P	**P**	**21 33 39.7**	**+1.3**
	comp=Z,29nm,1.0s						
GAMB				LR	LR		
	comp=Z,2µm,19.0s						
BDFB	**Brasilia**	**64.68**	**118**	PFAKE		21 34 00.0	+14
BDFB				LR	LR		
	comp=Z,2µm,18.0s						
BDFB	**Brasilia**	**64.68**	**118**	P	**P**	**21 33 45.8**	**+0.1**
	comp=Z,9.5nm,0.8s,baz=267,slow=7.2,SNR=10						
ADK	**Adak**	**65.01**	**319**	*e*P	**P**	**21 33 46.2**	**-0.9**
	comp=Z,153nm,1.3s						
ADK	**Adak**	**65.01**	**319**	*e*P	**P**	**21 33 46.2**	**-0.9**
ADK				pmax	pmax		
	comp=Z,153nm,1.3s						
SUMG	**Summit**	**65.14**	**18**	*e*P	**P**	**21 33 48.3**	**+0.3**
	comp=Z,43nm,1.1s						
SUMG				LR	LR		
	comp=Z,7µm,18.0s						
SUMG	**Summit**	**65.14**	**18**	⇑*i*P	**P**	**21 33 48.4**	**+0.3**
	comp=Z,125nm,1.1s						
	comp=Z,30µm,16.0s						
SUMG	**Summit**	**65.14**	**18**	⇑*i*P	**P**	**21 33 48.4**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,120nm,1.1s						
GO06	**Curarrehue**	**65.30**	**153**	*e*P	**P**	**21 33 49.0**	**-0.2**
	comp=Z,13nm,1.1s						
GO06				LR	LR		
	comp=Z,2µm,18.0s						
PLCA	**Paso Flores**	**66.65**	**153**	*e*P	**P**	**21 33 59.3**	**+1.5**
	comp=Z,21nm,1.1s						
PLCA	**Paso Flores**	**66.65**	**153**	*e*P	**P**	**21 33 59.3**	**+1.5**
PLCA				pmax	pmax		
	comp=Z,21nm,1.1s						
PLCA	**Paso Flores**	**66.65**	**153**	*e*P	**P**	**21 33 59.9**	**+2.1**
BB19B	**Bebedouro**	**67.03**	**123**	*e*P	**P**	**21 34 00.8**	**+0.2**
PMNB	**Patos De Minas**	**67.42**	**120**	*e*P	**P**	**21 34 04.0**	**+0.8**
JANB	**Januaria**	**67.54**	**116**	*e*P	**P**	**21 34 04.7**	**+0.8**
ITAB	**Concordia**	**67.76**	**131**	*e*P	**P**	**21 34 06.0**	**+1.0**
TRQA	**Tornquist**	**68.73**	**146**	PFAKE		21 34 20.0	+9.1
TRQA				LR	LR		
	comp=Z,1µm,18.0s						
TRQA	**Tornquist**	**68.73**	**146**	*e*P	**P**	**21 34 11.9**	**+1.0**
SPB	**Sao Paulo**	**69.23**	**125**	*e*P	**P**	**21 34 13.1**	**-1.2**
	comp=Z,80nm,1.9s						
SPB				LR	LR		
	comp=Z,1µm,18.0s						
SCO	**Scoresbysund**	**69.96**	**21**	PFAKE		21 34 30.0	+12
SCO				LR	LR		
	comp=Z,2µm,19.0s						
SCO	**Scoresbysund**	**69.96**	**21**	*i* P	**P**	**21 34 19.2**	**+1.1**
SCO	**Scoresbysund**	**69.96**	**21**	*e*P	**P**	**21 34 19.2**	**+1.1**

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DAG   Danmarks Havn    70.97  14⇑iP    P      21 34 24.3 +0.2
            comp=Z,39nm,0.9s
            comp=Z,4µm,14.0s
DAG   Danmarks Havn    70.97  14⇑iP    P      21 34 24.3 +0.2
DAG                               pmax   pmax
            comp=Z,33nm,0.9s
DAG                               MLR    MLR
            comp=Z,4µm,14.0s
RCBR  Riachuelo        71.25 103  PFAKE         21 34 40.0  +13
RCBR                              LR     LR
            comp=Z,1µm,20.0s
BILL  Bilibino         72.88 337 eP    P      21 34 36.9 +1.2
            comp=Z,33nm,1.1s
BILL  Bilibino         72.88 337c iP   P      21 34 36.8 +1.1
BILL                              pmax   pmax
            comp=Z,27nm,0.8s
PMOZ  Porto Moniz, M   77.49  59  A      A      22 10 08.9
            comp=Z,636nm,18.0s
VAL   Valentia         77.82  39 eP    P      21 35 11.7 +7.3
VAL                              eS    S      21 44 49.2 -5.5
VAL   Valentia         77.82  39 eP    P      21 35 16.9  +13
IGLA  Glengowla, Co    77.96  38 eP    P      21 35 03.8 -1.3
IGLA                             eS    S      21 44 51.0 -5.1
IGLA  Glengowla, Co    77.96  38 eP    P      21 35 02.7 -2.4
IDGL  Inch Island, C   78.58  36 eP    P      21 35 08.2 -0.3
IDGL                             eS    S      21 44 52.1  -11
IDGL  Inch Island, C   78.58  36 eP    P      21 35 08.8 +0.3
KPL   Plockton         78.93  33 eP    P      21 35 11.6 +1.2
MACI  Morro de la Ar   79.22  64 eP    P      21 35 10.5 -2.4
            comp=Z,138nm,1.3s
LAWE  Loch Awe, Argy   79.38  34 eP    P      21 35 14.1 +1.2
SEY   Seymchan         79.71 333ceP    P      21 35 16.2 +1.6
SEY   Seymchan         79.71 333  P    P      21 35 15.8 +1.3
            comp=Z,57nm,0.8s,baz=96,slow=4.0,SNR=136
DSB   Dublin           79.73  37 eP    P      21 35 10.4 -4.5
DSB   Dublin           79.73  37 eP    P      21 35 15.1 +0.2
DSB   Dublin           79.73  37  PFAKE         21 35 30.0  +15
DSB                               LR     LR
            comp=Z,4µm,18.0s
PET   Petropavlovsk    79.74 323 eP    P      21 35 20.8 +5.9
PET                              eS    S      21 45 20.6 +5.4
PET                               pmax   pmax
            comp=Z,43nm,1.4s
PET                               pmax   pmax
            comp=Z,400nm,12.4s
PET                               MLR    MLR
            comp=Z,400nm,20.0s
IWEX  Carrickbyrne,    79.76  38 eP    P      21 35 13.2 -1.8
IWEX  Carrickbyrne,    79.76  38 eP    P      21 35 15.7 +0.7
PEA1  Petropavlovsk-   80.27 323 eP    P      21 35 19.1 +1.3
PETK  Petropavlovsk-   80.27 323 eP    P      21 35 17.4 -0.4
PETK  Petropavlovsk-   80.27 323 eP    P      21 35 17.4 -0.4
PETK  Petropavlovsk-   80.27 323  P    P      21 35 19.1 +1.3
            comp=Z,15nm,0.9s,baz=92,slow=9.4,SNR=12
EAU   Auchinoon        80.55  34 eP    P      21 35 20.9 +1.6
EDI   Edinburgh        80.66  34 eP    P      21 35 21.4 +1.6
EDI                               IAmb   IAmb   21 35 22.2
            comp=Z,92nm,1.0s
EBL   Broad Law        80.79  34 eP    P      21 35 22.0 +1.4
ESK   Eskdalemuir      80.85  35 eP    P      21 35 20.0 -0.9
            comp=Z,50nm,1.1s
ESK                               LR     LR
            comp=Z,2µm,19.0s
ESK   Eskdalemuir      80.85  35 eP    P      21 35 20.0 -0.9
ESK                               pmax   pmax
            comp=Z,50nm,1.1s
ESK                               MLR    MLR
            comp=Z,2µm,19.0s
EKA   Eskdalemuir Ar   80.87  35  P    P      21 35 22.3 +1.3
            comp=Z,22nm,0.9s,baz=298,slow=4.7,SNR=20
BHH   Howats Hill      80.92  35 eP    P      21 35 22.8 +1.5
RSBS  Rosebush, Pemb   81.08  38 eP    P      21 35 23.3 +1.2
LPW   Lampeter         81.42  38 eP    P      21 35 25.7 +1.7
LPW                               IAmb   IAmb   21 35 26.2
            comp=Z,82nm,1.1s
FOEL  Foel Wylfa       81.67  37 eP    P      21 35 26.2 +0.9
FOEL                              IAmb   IAmb   21 35 27.8
            comp=Z,74nm,1.2s
MA2   Magadan          81.67 330 eP    P      21 35 26.1 +0.9
            comp=Z,42nm,1.1s
MA2                               LR     LR
            comp=Z,1µm,19.0s
MA2   Magadan          81.67 330 eP    P      21 35 26.1 +0.9
MA2                               pmax   pmax
            comp=Z,42nm,1.1s
MA2                               MLR    MLR
            comp=Z,1µm,19.0s
MA2   Magadan          81.67 330  P    P      21 35 26.8 +1.7
            comp=Z,30nm,1.0s,baz=64,slow=4.9,SNR=18
EDMD  Edmundbyers      81.69  35 eP    P      21 35 27.2 +1.9
EDMD                              IAmb   IAmb   21 35 28.0
            comp=Z,137nm,1.0s
PGAV  Gavieira, Arco   81.88  49⇑eP    P      21 35 27.4 +0.7
            comp=Z,70nm,2.2s
PGAV                              A      A      22 13 23.9
            comp=Z,2µm,18.0s
PMAFR Mafra            82.04  52⇑eP    P      21 35 28.2 +0.7
            comp=Z,179nm,1.1s
MCH1  Michaelchurch    82.08  38 eP    P      21 35 28.5 +1.1
MCH1                              IAmb   IAmb   21 35 28.9
            comp=Z,72nm,1.2s
PCAB  Cabril           82.13  49⇑eP    P      21 35 28.6 +0.6
            comp=Z,88nm,1.2s
PMST  Lisbon--Monsan   82.18  52 eP    P      21 35 29.9 +1.7
            comp=Z,217nm,1.2s
HPK   Haverah Park     82.18  36 eP    P      21 35 29.7 +1.8
HPK                               IAmb   IAmb   21 35 31.1
            comp=Z,91nm,1.0s
LIS   Lisbon           82.21  52 eP    P      21 35 29.3 +0.8
LIS                               AMS    AMS    22 06 47.0
            comp=E,2µm,10.9s
LIS   Lisbon           82.21  52 eP    P      21 35 29.2 +0.8
MONM  Monmouth         82.25  38 eP    P      21 35 29.9 +1.5
MONM                              IAmb   IAmb   21 35 30.6
            comp=Z,120nm,1.0s
PCAS  Casmilo, Conde   82.29  50⇑eP    P      21 35 30.1 +1.3
            comp=Z,149nm,1.2s
LBWR  Ladybower, Pea   82.32  36 eP    P      21 35 30.5 +1.8
LBWR                              IAmb   IAmb   21 35 32.3
            comp=Z,116nm,1.0s
POLO  Lamas de Olo     82.39  49 eP    P      21 35 30.2 +0.7
PTOM  Tomar            82.48  51⇑iP    P      21 35 31.1 +1.3
            comp=Z,171nm,1.1s
FOO   Floro            82.49  27 eP    P      21 35 31.5 +2.1
PVIS  Viseu            82.53  50⇑iP    P      21 35 30.8 +0.7
            comp=Z,96nm,1.3s
STRD  Stroud           82.64  38 eP    P      21 35 32.1 +1.7
STRD                              IAmb   IAmb   21 35 32.4
            comp=Z,94nm,0.9s
PMTG  Montargil        82.79  51⇑eP    P      21 35 32.4 +1.0
            comp=Z,122nm,1.1s
CWF   Charnwood Fore   82.80  37 eP    P      21 35 32.8 +1.7
CWF                               IAmb   IAmb   21 35 33.1
            comp=Z,48nm,0.9s
PNCL  Nicolau / Gran   82.86  52 eP    P      21 35 32.5 +0.7
            comp=Z,70nm,1.2s
MTE   Manteigas        82.88  50⇑iP    P      21 35 32.9 +0.9
MTE                               A      A      22 14 47.5
            comp=Z,2µm,16.0s
MTE   Manteigas        82.88  50 eP    P      21 35 31.8 -0.2
            comp=Z,92nm,0.8s
MTE                               LR     LR
            comp=Z,1µm,18.0s
PTEO  Sao Teotonio     82.88  53⇑eP    P      21 35 32.6 +0.7
            comp=Z,129nm,1.1s
PFVI  Vila Bisbo       82.93  53 eP    P      21 35 33.9 +1.7
            comp=Z,155nm,1.2s
PFVI  Vila Bisbo       82.93  53 eP    P      21 35 32.8 +0.6
            comp=Z,129nm,1.1s
PFVI                              LR     LR
            comp=Z,1µm,18.0s
SWN1  Swindon          82.95  38 eP    P      21 35 33.9 +1.9
SWN1                              IAmb   IAmb   21 35 34.1
            comp=Z,131nm,0.9s
MVO   Moncorvo         83.01  49⇑iP    P      21 35 33.5 +0.9
            comp=Z,131nm,1.1s
MVO                               A      A      22 14 13.3
            comp=Z,1µm,18.0s
PBRG  Braganca         83.01  48 eP    P      21 35 33.6 +1.0
            comp=Z,46nm,1.2s
MORF  Marmelete        83.01  53 eP    P      21 35 33.2 +0.4
MORF                             eS    S      21 45 52.9 +3.1
MORF                              AMS    AMS    22 20 01.9
            comp=Z,1µm,16.4s
MORF  Marmelete        83.01  53 eP    P      21 35 33.8 +1.1
            comp=Z,47nm,1.1s
MORF  Marmelete        83.01  53 eP    P      21 35 33.1 +0.4
MORF                             eS    S      21 45 52.9 +3.1
AKN   Aaknes           83.07  26 eP    P      21 35 34.2 +1.7
PCBR  Castelo Branco   83.10  50 eP    P      21 35 33.9 +0.9
            comp=Z,113nm,1.1s
EVO   Evora            83.11  52⇑eP    P      21 35 36.2 +3.1
            comp=Z,103nm,1.1s
MOL   Molde            83.12  26 eP    P      21 35 34.5 +1.8
BER   Bergen           83.14  28  P    P      21 35 33.9 +1.1
BER                               pmax   pmax
            comp=Z,24nm,1.1s
BER   Bergen           83.14  28 eP    P      21 35 34.2 +1.4
H11N3 WAKE ISLAND Hy   83.17 288  T    T      23 07 26.2
            baz=57,slow=75,SNR=13
ROSF  Rostrenen        83.17  41  P    P      21 35 33.7 +0.5
ROSF                              pmax   pmax
            comp=Z,34nm,1.0s
MESJ  Messejana        83.17  53 eP    P      21 35 34.5 +1.0
MESJ                              AMS    AMS    22 15 42.2
            comp=Z,2µm,13.0s
MESJ  Messejana        83.17  53 eP    P      21 35 34.5 +1.0
            comp=Z,113nm,1.1s
MESJ  Messejana        83.17  53 eP    P      21 35 34.4 +1.0
HYA   Hoyanger         83.18  27 eP    P      21 35 35.6 +2.7
H11N2 WAKE ISLAND Hy   83.18 288  T    T      23 07 28.5
            baz=57,slow=75,SNR=11
H11N1 WAKE ISLAND Hy   83.19 288  T    T      23 07 27.3
            baz=57,slow=75,SNR=11
PMRV  Marv??o          83.29  51⇑eP    P      21 35 35.0 +0.9
            comp=Z,204nm,1.0s
PMRV  Marv??o          83.29  51  A    A      22 19 14.6
            comp=Z,835nm,16.0s
PESTR Estremoz         83.32  51⇑eP    P      21 35 35.2 +1.0
            comp=Z,84nm,1.1s
PESTR Estremoz         83.32  51 eP    P      21 35 35.0 +0.7
            comp=Z,36nm,0.9s
PESTR                             LR     LR
            comp=Z,600nm,20.0s
PESTR Estremoz         83.32  51  P    P      21 35 35.2 +1.0
WOL   Wolverton        83.36  38 eP    P      21 35 35.7 +1.6
WOL                               IAmb   IAmb   21 35 36.6
            comp=Z,210nm,0.9s
PBEJ  Beja             83.38  52⇑eP    P      21 35 36.4 +1.9
            comp=Z,74nm,1.1s
PBDV  Barranco-do-Ve   83.58  53⇑eP    P      21 35 36.8 +1.2
            comp=Z,123nm,1.1s
KMY   Karmoy           83.61  29 eP    P      21 35 37.3 +2.1
SGMF  Saint Gilles     83.65  41 eP    P      21 35 38.8 +3.1
SGMF                              pmax   pmax
            comp=Z,79nm,1.4s
PVAQ  Vaqueiros        83.69  53 eP    P      21 35 37.2 +1.1
            comp=Z,88nm,1.2s
PVAQ  Vaqueiros        83.69  53  A    A      22 16 04.0
            comp=Z,2µm,18.0s
PVAQ  Vaqueiros        83.69  53  P    P      21 35 38.1 +2.0
H11S1 WAKE ISLAND Hy   83.72 287  T    T      23 08 04.5
            baz=63,slow=74,SNR=16
H11S2 WAKE ISLAND Hy   83.72 287  T    T      23 08 06.2
            baz=63,slow=74,SNR=12
H11S3 WAKE ISLAND Hy   83.73 287  T    T      23 08 07.3
            baz=63,slow=74,SNR=14
WACR  West Acre        83.89  36 eP    P      21 35 38.6 +1.8
WACR                              IAmb   IAmb   21 35 39.8
            comp=Z,424nm,0.9s
ODD1  Odda             83.93  28 eP    P      21 35 38.9 +2.0
DOMB  Dombas           83.99  26 eP    P      21 35 39.3 +2.1
EAH   EAH              84.02  59  P    P      21 35 41.0 +3.1
BLS5  Blasjo           84.08  29 eP    P      21 35 40.0 +2.3
FLN   La Foliniere     84.75  40 eP    P      21 35 42.3 +1.1
FLN                               pmax   pmax
            comp=Z,195nm,1.0s
MSVF  Nonsavu          84.75 249⇓eP    P      21 35 46.2 +4.4
MSVF                              pmax   pmax
            comp=Z,59nm,1.9s
LDF   La Druitiere     85.03  40 eP    P      21 35 43.6 +0.9
LDF                               pmax   pmax
            comp=Z,75nm,1.0s
NC204 NORSAR Array S   85.08  26 eP    P      21 35 43.0 +0.3
            comp=Z,77nm,1.7s
SRHM  Skhour des Reh   85.12  58  P    P      21 35 45.1 +1.6
SFS   San Fernando     85.14  53⇑iP    P      21 35 45.5 +2.1
SFS                              i S   S      21 46 25.5  +14
ARA0  ARCESS Array S   85.16  16 eP    P      21 35 44.0 +1.0
ARCES ARCESS Array B   85.16  16 eP    P      21 35 43.4 +0.5
ARCES ARCESS Array B   85.16  16 eP    P      21 35 43.4 +0.5
ARCES ARCESS Array B   85.16  16  P    P      21 35 44.0 +1.0
            comp=Z,43nm,1.0s,baz=317,slow=5.1,SNR=18
ARCES                             LR     LR     22 15 39.5
            comp=Z,2µm,18.6s,baz=326,slow=37
GIBL  Gibalbin         85.20  53 i P   P      21 35 46.0 +2.2
NBO00 NORSAR Array S   85.21  26 eP    P      21 35 43.7 +0.4
            comp=Z,39nm,1.0s
AVE   Averroes         85.24  57  P    P      21 35 45.9 +1.9
NAO01 NORSAR Array S   85.35  26 eP    P      21 35 43.6 -0.4
            comp=Z,52nm,1.4s
NC303 NORSAR Array S   85.36  26 eP    P      21 35 44.1 +0.1
            comp=Z,28nm,1.0s
KONO  Kongsberg        85.38  28 eP    P      21 35 45.1 +1.0
            comp=Z,79nm,0.9s
KONO                              LR     LR
            comp=Z,2µm,19.0s
KONO  Kongsberg        85.38  28ceP    P      21 35 45.2 +1.0
KONO                              pmax   pmax
            comp=Z,92nm,1.0s
KONO  Kongsberg        85.38  28 eP    P      21 35 46.1 +1.9
NB2   NORSAR Subarra   85.39  26  P    P      21 35 44.9 +0.6
            comp=Z,51nm,1.2s,baz=299,slow=4.8
NB2   NORSAR Subarra   85.39  26  P    P      21 35 43.7 -0.6
NB2   NORSAR Subarra   85.39  26  P    P      21 35 44.9 +0.6
            baz=299,slow=4.8
NB200 NORSAR Array S   85.39  26 eP    P      21 35 44.9 +0.6
NOA   NORSAR Array B   85.39  26  P    P      21 35 44.9 +0.6
            comp=Z,19nm,1.0s,baz=302,slow=5.0,SNR=31
NOA                               LR     LR     22 14 47.4
            comp=Z,1µm,19.2s,baz=290,slow=36
HORN  Hornachuelos     85.39  52  P    P      21 35 46.1 +1.4
NB201 NORSAR Array S   85.41  26 eP    P      21 35 43.8 -0.6
            comp=Z,42nm,1.0s
PAB   San Pablo        85.48  50 eP    P      21 35 46.6 +1.4
            comp=Z,125nm,1.0s
PAB                               LR     LR
            comp=Z,2µm,19.0s
PAB   San Pablo        85.48  50 eP    P      21 35 46.6 +1.4
PAB                               pmax   pmax
            comp=Z,125nm,1.0s
PAB                               MLR    MLR
            comp=Z,2µm,19.0s
HOMB  Homborsund       85.55  29 eP    P      21 35 47.4 +2.4
NC405 NORSAR Array S   85.56  26 eP    P      21 35 43.4 -1.7
            comp=Z,46nm,1.3s
LIJA  Lijar            85.60  53 i P   P      21 35 48.0 +2.1
NC602 NORSAR Array S   85.68  26 eP    P      21 35 47.0 +1.3
            comp=Z,38nm,1.1s
NC602 NORSAR Array S   85.68  26 eP    P      21 35 47.2 +1.5
NORES NORESS Array B   85.68  26  P    P      21 35 50.7 +5.0
NORES                             pmax   pmax
            comp=Z,20nm,1.0s
ESDC  Sonseca Array    85.71  50  P    P      21 35 47.4 +1.1
            comp=Z,35nm,0.9s,baz=306,slow=5.0,SNR=113
ESDC                              LR     LR     22 15 22.8
            comp=Z,1µm,18.4s,baz=265,slow=37
ESLA  Sonseca Array    85.71  50 eP    P      21 35 47.5 +1.1
            comp=Z,56nm,1.0s
ESLA                              LR     LR
            comp=Z,2µm,19.0s
OSL   Oslo             85.73  27 eP    P      21 35 48.0 +2.0
ES19  SONSECA Array    85.75  50 eP    P      21 35 47.3 +0.8
MFF   Saint Martin d   85.78  42 eP    P      21 35 47.2 +0.8
MFF                               pmax   pmax
            comp=Z,58nm,1.2s
ZHG   ZHG              85.80  56  P    P      21 35 48.3 +1.4
RSA   Sarsar           85.96  55  P    P      21 35 50.0 +2.3
CEU   Ceuta            85.96  54⇑iP    P      21 35 50.0 +2.4
CEU                              i S   S      21 46 21.0 +1.9
CEUT  Ceuta            86.00  54  P    P      21 35 50.1 +2.4
UCM   Universidad Co   86.00  49⇑iP    P      21 35 52.3 +4.5
UCM                              i S   S      21 46 29.4  +10
SMIR  Smir Dam         86.03  54  P    P      21 35 50.4 +2.5
EMAL  Malaga-Limoner   86.38  53⇑iP    P      21 35 49.9 +0.3
EMAL                             i S   S      21 46 19.4 -3.8
SJPF  Ste Jean         86.39  46 eP    P      21 35 50.6 +1.0
SJPF                              pmax   pmax
            comp=Z,211nm,2.2s
OUZM  OUZ              86.54  59  P    P      21 35 53.0 +2.2
SICH  Sidi Chahed      86.62  55  P    P      21 35 53.0 +2.1
CLF   Chambon-Foret    86.72  40 eP    P      21 35 50.2 -0.8
CLF                               LR     LR
            comp=Z,3µm,18.0s
MUD   Monsted U'grnd   86.75  31  P    P      21 35 52.0 +1.0
UCC   Uccle            86.80  37 eP    P      21 35 51.5 +0.1
            comp=Z,24nm,0.9s
UCC                               LR     LR
            comp=Z,3µm,19.0s
UCC   Uccle            86.80  37 eP    P      21 35 51.5 +0.1
UCC                               pmax   pmax
            comp=Z,24nm,0.9s
UCC                               MLR    MLR
            comp=Z,3µm,19.0s
ETSF  Etsaut           86.92  46 eP    P      21 35 53.3 +1.0
ETSF                              pmax   pmax
            comp=Z,47nm,0.9s
LFF   La Frestale      87.00  43 eP    P      21 35 53.3 +0.8
LFF                               pmax   pmax
            comp=Z,41nm,0.9s
BAIF  Baives           87.03  38 eP    P      21 35 53.5 +1.0
BAIF                              pmax   pmax
            comp=Z,29nm,1.0s
SESP  Santiago Espad   87.30  51  P    P      21 35 55.8 +1.5
RJF   Les Rejaudoux    87.36  43 eP    P      21 35 53.9 -0.3
RJF                               pmax   pmax
            comp=Z,59nm,1.2s
GIVF  Givet            87.37  38 eP    P      21 35 55.2 +1.0
GIVF                              pmax   pmax
            comp=Z,20nm,1.0s
TCF   Toulx Ste Croi   87.40  42 eP    P      21 35 53.8 -0.6
MDT   Midelt           87.62  56  P    P      21 35 57.5 +1.6
WTSB  Winterswijk      87.64  35 eP    P      21 35 56.3 +0.9
            comp=Z,54nm,0.9s
BGF   Bois d'Agland    87.69  41 eP    P      21 35 55.1 -0.7
BGF                               pmax   pmax
            comp=Z,23nm,1.0s
HGN   Heimansgroeve    87.71  37 eP    P      21 35 56.0 +0.3
            comp=Z,81nm,1.4s
MEM   Membach          87.82  37 eP    P      21 35 56.6 +0.3
MEM                               pmax   pmax
            comp=Z,35nm,1.1s
CAF   Calviac          87.86  43 eP    P      21 35 56.5 -0.2
CAF                               pmax   pmax
            comp=Z,20nm,1.3s
SSF   Saint Saulge     87.89  41 eP    P      21 35 56.1 -0.6
SSF                               pmax   pmax
            comp=Z,18nm,1.0s
AVF   Avril sur Loir   87.91  41 eP    P      21 35 55.8 -1.0
AVF                               pmax   pmax
            comp=Z,12nm,1.0s
LOR   Lormes           88.02  40 eP    P      21 35 56.9 -0.5
LOR                               pmax   pmax
            comp=Z,27nm,1.0s
OUL   Oulu             88.31  19 eP    P      21 35 57.9 -0.4
WLF   Walferdange      88.33  38 eP    P      21 35 59.4 +0.6
            comp=Z,96nm,1.0s
WLF                               LR     LR
            comp=Z,10µm,18.0s
WLF   Walferdange      88.33  38 eP    P      21 35 59.4 +0.6
WLF                               pmax   pmax
            comp=Z,96nm,1.0s
WLF                               MLR    MLR
            comp=Z,10µm,18.0s
APA   Apatity          88.59  15⇑iP    P      21 35 57.9 -1.7
APA                               pmax   pmax
            comp=Z,11nm,1.0s
APA                               MLR    MLR
            comp=Z,3µm,16.0s
CART  Cartagena        88.63  51  PFAKE         21 36 10.0  +10
CART                              LR     LR
            comp=Z,1µm,18.0s
CART  Cartagena        88.63  51⇑iP    P      21 36 00.5 +0.1
CART                             i S   S      21 46 56.9  +12
HAU   Haudompre        89.20  39 eP    P      21 36 02.5 -0.4
HAU                               pmax   pmax
            comp=Z,28nm,1.2s
YAK   Yakutsk          89.22 338c iP   P      21 36 04.0 +1.4
YAK                              e*PP  sP     21 36 22.1 +5.3
YAK                              e            21 39 31.0
YAK                              eS    SKSac  21 46 25.4 -4.5
YAK                              e            21 46 51.4
YAK                               pmax   pmax
            comp=N,21nm,0.8s
YAK                               pmax   pmax
            comp=E,49nm,1.0s
YAK                               pmax   pmax
            comp=E,607nm,16.0s
YAK                               pmax   pmax
            comp=N,305nm,15.1s
YAK                               pmax   pmax
            comp=Z,487nm,16.9s
YAK                               smax   smax
            comp=N,1µm,4.6s
YAK                               smax   smax
            comp=E,439nm,3.5s
SSB   Saint Sauveur    89.30  42  PFAKE         21 36 10.0 +6.5
SSB                               LR     LR
            comp=Z,2µm,19.0s
TNS   Taunus Mts       89.38  36  P    P      21 36 04.3 +0.5
TNS                               pmax   pmax
            comp=Z,43nm,1.1s
CDF   Champ du Feu     89.56  38 eP    P      21 36 04.2 -0.5
CDF                               pmax   pmax
            comp=Z,14nm,1.0s
NKL   Nikolayevsk      89.57 327 eP    P      21 36 05.0 +0.5
NKL                               pmax   pmax
            comp=Z,22nm,1.0s
NKL                               pmax   pmax
            comp=Z,600nm,9.0s
ECH   Echery           89.59  39  PFAKE         21 36 20.0  +15
ECH                               LR     LR
            comp=Z,3µm,18.0s
HINF  Hinteralfeld     89.59  39 eP    P      21 36 04.1 -0.7
HINF                              pmax   pmax
            comp=Z,16nm,1.2s
TYV   Tymovskoe        89.67 324 eP    P      21 36 05.0  0.0
TYV                               pmax   pmax
            comp=Z,16nm,1.1s
CABF  La Chapelle      89.68  40 eP    P      21 36 05.7 +0.4
CABF                              pmax   pmax
            comp=Z,24nm,1.3s
SUF   Sumiainen        90.03  21 eP    P      21 36 06.3 -0.1
SUF                               pmax   pmax
            comp=Z,40nm,2.2s
BFO   Black Forest     90.22  38  PFAKE         21 36 20.0  +12
BFO                               LR     LR
            comp=Z,2µm,18.0s
BFO   Black Forest     90.22  38 i P   P      21 36 08.7 +1.0
ORIF  Oris-en-Rattie   90.31  42 eP    P      21 36 08.7 +0.4
ORIF                              pmax   pmax
            comp=Z,9.0nm,1.0s
FIGM  Figuig           90.50  56  P    P      21 36 11.1 +1.6
STU   Stuttgart        90.51  37  PFAKE         21 36 20.0  +11
STU                               LR     LR
            comp=Z,1µm,18.0s
SENIN Lac Senin/Sane   90.53  40  PFAKE         21 36 20.0  +11
SENIN                             LR     LR
            comp=Z,1µm,20.0s
LPL   La Plagne        90.58  41 eP    P      21 36 09.7  0.0
LPL                               pmax   pmax
            comp=Z,16nm,1.1s
SLE   Schleitheim      90.59  39  P    P      21 36 09.0 -0.5
SLE                               pmax   pmax
            comp=Z,17nm,1.1s
LPG   La Plagne        90.60  41 eP    P      21 36 10.0 +0.1
LPG                               pmax   pmax
            comp=Z,36nm,1.7s
BNI   Bardonecchia     90.76  42 eP    P      21 36 09.0 -1.4
            comp=Z,10nm,1.0s
BNI                               LR     LR
            comp=Z,3µm,18.0s
BNI   Bardonecchia     90.76  42 eP    P      21 36 09.0 -1.4
BNI                               pmax   pmax
            comp=Z,10.0nm,1.0s
BNI                               MLR    MLR
            comp=Z,3µm,18.0s
FIA0  FINESS Array S   90.88  22 eP    P      21 36 10.7 +0.3
FIA0  FINESS Array S   90.88  22 eP    P      21 36 10.7 +0.3
FIA1  FINESS Array S   90.88  22 eP    P      21 36 10.3 -0.1
FINES FINESS Array B   90.88  22  P    P      21 36 10.7 +0.3
            comp=Z,7.0nm,0.9s,baz=329,slow=2.2,SNR=11
FINES                             LR     LR     22 17 20.0
            comp=Z,2µm,18.8s,baz=322,slow=36
MOX   Moxa             90.93  35  P    P      21 36 10.9  0.0
MOX                               pmax   pmax
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         comp=Z,18nm,2.3s
YUK   Yuzh-Kuril'sk     90.99 317  eP       P       21 36 08.5  -2.8
GRFO  Grafenberg        91.20  36   PFAKE           21 36 20.0 +7.8
GRFO                                LR      LR
         comp=Z,1µm,20.0s
GRA1  Grafenberg Arr    91.20  36   PFAKE           21 36 20.0 +7.8
GRA1                                LR      LR
         comp=Z,1µm,20.0s
CLL   Collm             91.33  34  eP       P       21 36 13.1 +0.3
         comp=Z,9.5nm,0.9s
CLL                                 LR      LR
         comp=Z,2µm,19.0s
CLL   Collm             91.33  34⇑iP       P       21 36 13.0 +0.3
         comp=Z,14nm,1.0s
CLL                                e                21 36 26.0
CLL                                ePP      PP      21 39 50.0 +0.2
CLL                                epSKSac  SKSac   21 46 50.0 +7.4
CLL                                ePS      PS      21 48 24.0 +2.3
CLL                                eSPP     SPP     21 48 46.0
CLL                                eSS      SS      21 53 24.0  +10
CLL                                e                21 54 36.0
CLL                                eSSS     SSS     21 57 24.0
CLL                                eSSSS            22 00 30.0
CLL                                 Lm      MLR     22 18 00.0
         comp=N,1µm,20.5s
CLL                                 Lm      MLR     22 18 00.0
         comp=E,1µm,18.6s
CLL                                 Lm      MLR     22 18 00.0
         comp=Z,2µm,19.0s
CLL   Collm             91.33  34⇑iP       P       21 36 13.0 +0.3
CLL                                e                21 36 26.0
CLL                                e                21 39 50.0
CLL                                 pmax    pmax
         comp=Z,14nm,1.0s
CLL                                 MLR     MLR
         comp=Z,2µm,19.0s
MAHO  Mahon             91.46  47  i P      P       21 36 22.2 +8.6
YSS   Yuzh-Sakhalins    91.54 321⇑eP       P       21 36 14.7 +0.9
YSS                                eS       S       21 47 14.1 +2.8
YSS                                e                21 48 29.0
YSS                                 pmax    pmax
         comp=Z,120nm,7.0s
YSS                                 smax    smax
         comp=N,440nm,16.0s
NKC   Novy Kostel       91.60  35  eP       P       21 36 15.7 +1.6
NKC                                ex       x       21 36 23.0
NKC                                 AMS     AMS     22 18 30.0
         comp=N,2µm,14.1s
NKC   Novy Kostel       91.60  35  eP       P       21 36 15.7 +1.6
NKC                                 MLR     MLR
         comp=Z,2µm,14.1s
TUE   Stuetta           91.73  39   PFAKE           21 36 30.0  +15
TUE                                 LR      LR
         comp=Z,6µm,18.0s
NRIK  Noril'sk          91.95 356   P       P       21 36 16.4 +1.2
         comp=Z,20nm,0.9s,baz=25,slow=3.7,SNR=16
NRIK                                LR      LR      22 19 26.9
         comp=Z,2µm,20.6s,baz=25,slow=37
BRG   Berggiesshubel    92.06  34  i P      P       21 36 16.0  -0.1
         comp=Z,26nm,1.3s
BRG                                 PP      PP      21 39 50.0  -5.6
BRG                                 SKS     SKSac   21 46 45.0  -1.8
BRG                                 S       S       21 47 14.0  -1.9
BRG                                 PS      PS      21 48 24.0  -5.8
BRG                                 SS      SS      21 53 22.0  -2.4
         comp=N,2µm,18.4s
         comp=E,1µm,16.2s
         comp=Z,2µm,17.5s
BRG   Berggiesshubel    92.06  34  i P      P       21 36 16.0  -0.1
BRG                                                 21 46 45.0
BRG                                 S       S       21 47 14.0  -1.9
BRG                                 PS      PS      21 48 24.0  -5.8
BRG                                 SS      SS      21 53 22.0  -2.4
BRG                                 pmax    pmax
         comp=Z,26nm,1.3s
BRG                                 MLR     MLR
         comp=N,2µm,18.4s
BRG                                 MLR     MLR
         comp=E,1µm,16.2s
BRG                                 MLR     MLR
         comp=Z,2µm,17.5s
FUORN Ofenpass-Fuorn    92.20  39  eP       P       21 36 18.2 +1.0
         comp=Z,29nm,1.3s
FUORN                               LR      LR
         comp=Z,3µm,19.0s
FETA  Feichten          92.28  38  i PcP    P       21 36 18.7 +1.2
         comp=Z,7.9nm,1.1s
MOTA  Moosalm           92.33  38  i PcP    P       21 36 18.7 +1.0
         comp=Z,7.8nm,0.8s,SNR=5.5
WET   Wettzell          92.41  36   P       P       21 36 18.9 +1.0
WET                                 pmax    pmax
         comp=Z,23nm,2.3s
TMCR  Tamitsa           92.45  16  eP       P       21 36 16.5  -1.1
TMCR                                pmax    pmax
         comp=Z,20nm,1.1s
SQTA  Sankt Quirin      92.46  38  i PcP    P       21 36 19.3 +1.1
         comp=Z,12nm,1.1s,SNR=5.2
PVCC  Panska Ves        92.58  34   AMS     AMS     22 19 00.0
         comp=Z,2µm,17.5s
WATA  Walderalm         92.61  38  i PcP    P       21 36 19.8 +0.8
         comp=Z,8.6nm,1.2s
WTTA  Wattenberg        92.69  38  i PcP    P       21 36 20.5 +1.1
         comp=Z,7.7nm,1.0s
KHC   Kasperske Hory    92.81  36  eP       P       21 36 19.4  -0.3
         comp=Z,13nm,1.6s
KHC                                 LR      LR
         comp=Z,700nm,20.0s
KHC   Kasperske Hory    92.81  36  eP       P       21 36 20.4 +0.7
KHC                                epP      pP      21 36 27.8  -2.5
KHC                                ePP      PP      21 40 04.4 +2.9
KHC                                eSKS     SKSac   21 46 53.9 +2.8
KHC                                ePS      PS      21 48 44.0 +5.8
KHC                                 AMS     AMS     22 22 40.0
         comp=Z,2µm,15.6s
KHC   Kasperske Hory    92.81  36  eP       P       21 36 19.4  -0.3
KHC                                 pmax    pmax
         comp=Z,13nm,1.6s
KHC                                 MLR     MLR
         comp=Z,700nm,20.0s
PRU   Pruhonice         92.86  35  eP       P       21 36 20.7 +0.8
PRU                                ePP      PP      21 40 00.1  -1.8
PRU                                eSKS     SKSac   21 46 47.8  -3.5
PRU                                 AMS     AMS     22 21 50.0
         comp=Z,2µm,16.2s
PRU   Pruhonice         92.86  35  eP       P       21 36 20.7 +0.8
PRU                                e                21 40 00.1
PRU                                e                21 46 47.8
PRU                                 MLR     MLR
         comp=Z,2µm,16.2s
ASAJ  Asahikawa         93.03 319   P       P       21 36 21.8 +1.1
         comp=Z,12nm,0.9s,baz=135,slow=1.4,SNR=4.0
GEC2  GERESS Array S    93.03  36  eP       P       21 36 20.1  -0.7
         comp=Z,16nm,1.1s
GEC2                                LR      LR
         comp=Z,2µm,19.0s
GEC2  GERESS Array S    93.03  36  eP       P       21 36 20.1  -0.7
GEC2                                pmax    pmax
         comp=Z,16nm,1.1s
GEC2                                MLR     MLR
         comp=Z,2µm,19.0s
GERES GERESS Array B    93.03  36   P       P       21 36 21.4 +0.6
         comp=Z,6.4nm,0.9s,baz=343,slow=4.2,SNR=31
GERES                               LR      LR      22 19 03.7
         comp=Z,2µm,18.9s,baz=300,slow=36
GEA0  GERESS Array S    93.03  36  eP       P       21 36 21.3 +0.5
GOPC  GO Pecny, Ondr    93.04  35  ePP      PP      21 40 05.7 +2.4
GOPC                               eSKS     SKSac   21 47 01.6 +9.3
GOPC                               eSP      SP      21 48 52.5  +17
GOPC                                AMS     AMS     22 19 20.0
         comp=Z,2µm,16.6s
UPC   Upice             93.36  34  eP       P       21 36 23.3 +1.1
UPC                                epP      pP      21 36 29.5  -3.3
UPC                                ex       x       21 48 53.5
UPC                                 AMS     AMS     22 22 40.0
         comp=Z,1µm,15.4s
UPC   Upice             93.36  34  eP       P       21 36 23.3 +1.1
UPC                                 MLR     MLR
         comp=Z,1µm,15.4s
ABTA  Abfaltersbach     93.47  38  i PcP    P       21 36 23.7 +0.9
         comp=Z,13nm,1.0s
VLC   Villacollemand    93.51  41   PFAKE           21 36 30.0 +7.0
VLC                                 LR      LR
         comp=Z,1µm,18.0s
DPC   Dobruska-Polom    93.61  34  eP       P       21 36 24.3 +0.9
DPC                                epP      pP      21 36 30.8  -3.2
DPC                                ePP      PP      21 40 09.1 +1.3
DPC                                 AMS     AMS     22 22 40.0
         comp=Z,1µm,17.0s
DPC   Dobruska-Polom    93.61  34  eP       P       21 36 24.3 +0.9
DPC                                e                21 40 09.1
DPC                                 MLR     MLR
         comp=Z,1µm,17.0s
ERM   Erimo             93.69 317deP       P       21 36 25.8 +2.0
ERM                                 pmax    pmax
         comp=Z,61nm,1.1s
TREC  Trest             93.76  35  eP       P       21 36 25.0 +0.9
TREC                                AMS     AMS     22 19 30.0
         comp=Z,2µm,16.7s
TREC  Trest             93.76  35  eP       P       21 36 25.0 +0.9
TREC                                MLR     MLR
         comp=Z,2µm,16.7s
KBA   Koelnbreinsper    93.78  38  i PcP    P       21 36 25.2 +0.8
         comp=Z,14nm,1.2s
KBA   Koelnbreinsper    93.78  38   P       P       21 36 25.8 +1.4
KBA                                 pmax    pmax
         comp=Z,16nm,2.3s
BKZ   Black Stump Fm    93.78 230   PFAKE           21 36 40.0  +16
BKZ                                 LR      LR
         comp=Z,1µm,19.0s
MOA   Molln             93.89  37  i PcP    P       21 36 25.6 +0.9
         comp=Z,23nm,1.0s,SNR=7.5
VRAC  Vranov            94.35  34⇓iP       P       21 36 27.9 +1.1
VRAC  Vranov            94.35  34 ⇓P       P       21 36 27.9 +1.1
VRAC  Vranov            94.35  34  eP       P       21 36 27.8 +1.0
KRUC  Moravsky          94.39  35   P       P       21 36 27.5 +0.6
KRUC                                pmax    pmax
         comp=Z,19nm,1.2s
KRUC  Moravsky          94.39  35  eP       P       21 36 27.0 +0.1
CADS  Cadrg             94.46  38  eP       P       21 36 27.5 +0.1
KOWA  Kowa              94.54  73   PFAKE           21 36 40.0  +12
KOWA                                LR      LR
         comp=Z,1µm,20.0s
MORC  Moravsky Berou    94.58  34  eP       P       21 36 26.6  -1.3
         comp=Z,19nm,1.3s
MORC                                LR      LR
         comp=Z,900nm,18.0s
MORC  Moravsky Berou    94.58  34⇑iP       P       21 36 27.3  -0.6
MORC  Moravsky Berou    94.58  34  eP       P       21 36 26.6  -1.3
MORC                                pmax    pmax
         comp=Z,19nm,1.3s
MORC                                MLR     MLR
         comp=Z,900nm,18.0s
MORC  Moravsky Berou    94.58  34  eP       P       21 36 28.1 +0.2
SUW   Suwalki           94.71  28   PFAKE           21 36 40.0  +12
SUW                                 LR      LR
         comp=Z,1µm,18.0s
CONA  Conrad Observa    94.74  36  i PcP    P       21 36 29.8 +1.2
         comp=Z,22nm,1.0s,SNR=8.1
HIZ   Hauiti            94.75 231   PFAKE           21 36 40.0  +11
HIZ                                 LR      LR
         comp=Z,800nm,20.0s
OBKA  Obir              94.78  38  i PcP    P       21 36 29.2 +0.4
         comp=Z,15nm,1.2s
ARSA  Arzberg           94.93  37  i PcP    P       21 36 30.1 +0.6
         comp=Z,10.0nm,1.0s
SOKA  Soboth            94.97  37  ePcP     P       21 36 29.7   0.0
         comp=Z,20nm,1.1s,SNR=9.2
JAVC  Velka Javorina    95.19  34  eP       P       21 36 32.8 +2.1
MODS  Modra-Piesok      95.26  35  eP       P       21 36 32.5 +1.6
MODS                                pmax    pmax
         comp=Z,46nm,1.2s
MODS  Modra-Piesok      95.26  35  eP       P       21 36 32.5 +1.6
SMOL  Smolenice         95.26  35  eP       P       21 36 33.0 +2.1
SMOL  Smolenice         95.26  35  eP       P       21 36 33.0 +2.1
SOP   Sopron            95.26  36⇑eP       P       21 36 32.0 +1.1
SOP   Sopron            95.26  36   P       P       21 36 32.0 +1.1
SOP                                 pmax    pmax
         comp=Z,36nm,1.1s
KLMR  Klimovskoe        95.56  17  eP       P       21 36 31.0  -1.0
KLMR                               e                21 40 20.1
KLMR                                pmax    pmax
         comp=Z,24nm,1.3s
KLMR  Klimovskoe        95.56  17  eP       P       21 36 31.0  -1.0
KLMR                                AMP             21 36 32.7
         comp=Z,24nm,1.3s
KLMR                               ePP      PP      21 40 20.2  -2.3
GOLS  Golise            95.68  38  i P      P       21 36 33.6 +0.7
GCIS  Gornji Cirnik     95.76  38  i P      P       21 36 34.2 +0.9
LANS  Liptovska Anna    95.97  33  eP       P       21 36 36.3 +2.1
LANS  Liptovska Anna    95.97  33  eP       P       21 36 36.3 +2.1
VYHS  Vyhne             96.03  34  eP       P       21 36 35.4 +1.0
VYHS                                pmax    pmax
         comp=Z,15nm,1.2s
VYHS  Vyhne             96.03  34  eP       P       21 36 35.4 +1.0
SRO   Srobarova         96.15  35  eP       P       21 36 36.6 +1.6
SRO   Srobarova         96.15  35  eP       P       21 36 36.6 +1.6
SRO2  Moca              96.22  35  eP       P       21 36 36.1 +0.8
SRO2  Moca              96.22  35  eP       P       21 36 36.1 +0.8
TIC   Toumodi           96.27  81  eP       P       21 36 36.1  -0.1
AQU   L'Aquila          96.33  42   PFAKE           21 36 50.0  +14
AQU                                 LR      LR
         comp=Z,2µm,19.0s
AQU   L'Aquila          96.33  42   P       P       21 36 35.8  -0.2
AQU                                 pmax    pmax
         comp=Z,22nm,1.2s
LIC   Lamto             96.40  81  eP       P       21 36 36.9 +0.1
         comp=Z,35nm,1.0s
DBIC  Dimbokro          96.42  81  eP       P       21 36 36.4  -0.5
         comp=Z,7.8nm,0.9s
DBIC  Dimbokro          96.42  81   P       P       21 36 36.7  -0.1
         comp=Z,8.0nm,1.0s,baz=294,slow=5.3,SNR=8.0
DBIC                                LR      LR      22 20 23.2
         comp=Z,485nm,18.2s,baz=267,slow=36
DBIC  Dimbokro          96.42  81  eP       P       21 36 37.1 +0.3
KLR   Kul'dur           96.42 327⇓eP       P       21 36 37.1 +0.9
KLR   Kul'dur           96.42 327   P       P       21 36 36.2   0.0
         comp=Z,1.2nm,0.7s,baz=6.0,slow=5.1,SNR=5.2
PRGR  Permogore         96.45  14  eP       P       21 36 34.4  -1.6
PRGR                                pmax    pmax
         comp=Z,17nm,0.9s
TIH   Tihany            96.46  36⇑eP       P       21 36 37.0 +0.7
DZM   Mont Dzumac       96.48 249   PFAKE           21 36 50.0  +13
DZM                                 LR      LR
         comp=Z,2µm,20.0s
KIC   Kosan Boka        96.63  81  eP       P       21 36 37.9 +0.1
         comp=Z,38nm,1.1s
BUD   Budapest          96.73  35⇑eP       P       21 36 39.0 +1.4
BUD   Budapest          96.73  35   P       P       21 36 39.4 +1.8
BUD                                 pmax    pmax
         comp=Z,37nm,1.1s
KEST  Kesra             96.93  49  eP       P       21 36 38.4  -0.6
         comp=Z,23nm,1.1s
KEST                                LR      LR
         comp=Z,2µm,19.0s
KEST  Kesra             96.93  49   P       P       21 36 39.7 +0.8
         comp=Z,18nm,1.0s,baz=278,slow=4.9,SNR=7.0
KEST                                LR      LR      22 22 15.9
         comp=Z,677nm,18.1s,baz=308,slow=37
PSZ   Piszkesteto       96.94  34  eP       P       21 36 40.2 +1.5
         comp=Z,46nm,1.1s
PSZ                                 LR      LR
         comp=Z,2µm,18.0s
PSZ   Piszkesteto       96.94  34⇑iP       P       21 36 39.5 +0.8
PSZ   Piszkesteto       96.94  34 ⇑P       P       21 36 39.5 +0.8
PSZ   Piszkesteto       96.94  34⇑eP       P       21 36 40.0 +1.3
MORH  Mrgy, Hungar      97.28  36⇑eP       P       21 36 40.0  -0.1
BLY   Banja Luka        97.30  38  eP       P       21 36 37.7  -2.6
         comp=Z,26nm,1.4s
BLY                                 LR      LR
         comp=Z,2µm,20.0s
BLY   Banja Luka        97.30  38⇑iP       Pdif    21 36 42.2 +1.9
BOD   Bodaibo           97.65 341  eP       P       21 36 37.9  -3.6
BOD                                 pmax    pmax
         comp=Z,6.0nm,1.1s
UZH   Uzhgorod          97.75  33  eP       Pdif    21 36 42.3 +0.1
UZH                                e                21 36 54.0
LVV   L'vov             97.86  31  eP       P       21 36 42.5  -0.1
LVV                                e                21 40 42.0
LVV                                e                21 47 19.9
LVV                                eS       S       21 48 02.5  -3.9
LVV                                ePS      PS      21 49 36.6 +3.2
LVV                                 MLR     MLR
         comp=N,800nm,18.0s
LVV                                 MLR     MLR
         comp=E,400nm,18.0s
LVV                                 MLR     MLR
         comp=Z,1µm,18.0s
OXZ   Oxford            98.32 227   PFAKE           21 37 00.0  +15
OXZ                                 LR      LR
         comp=Z,1µm,19.0s
CLTB  Caltabellotta     98.71  46   PFAKE           21 37 00.0  +13
CLTB                                LR      LR
         comp=Z,1µm,18.0s
SIRR  Siria             98.91  35⇓iP       Pdif    21 36 48.4 +0.9
DRGR                    99.14  34⇑iP       Pdif    21 36 48.8 +0.2
DRGR                    99.14  34 ⇑P       Pdif    21 36 48.8 +0.2
OBN   Obninsk           99.29  22   PFAKE           21 37 00.0  +11
OBN                                 LR      LR
         comp=Z,2µm,18.0s
OBN   Obninsk           99.29  22⇓iP       Pdif    21 36 48.8  -0.1
OBN                                e                21 40 52.6
OBN                                i S      SKSac   21 47 24.5  -0.2
OBN                                 pmax    pmax
         comp=Z,54nm,2.6s
OBN                                 MLR     MLR
         comp=Z,2µm,19.0s
BZS   Buzias            99.29  35⇓iP       Pdif    21 36 50.3 +1.1
BZS   Buzias            99.29  35 ⇓P       Pdif    21 36 50.3 +1.1
DIVS  Divibare          99.31  37   PFAKE           21 37 00.0  +11
DIVS                                LR      LR
         comp=Z,1µm,18.0s
KIEV  Kiev              99.68  28⇓eP       Pdif    21 36 49.8  -1.0
KIEV                                pmax    pmax
         comp=Z,5.0nm,1.3s
AKASG Malin Array Be    99.68  28   P       Pdif    21 36 50.0  -0.8
         comp=Z,2.1nm,0.6s,baz=311,slow=3.6,SNR=10.0
AKASG                               LR      LR      22 23 35.1
         comp=Z,1µm,18.7s,baz=335,slow=36
AKBB  Malin Array Si    99.68  28   PFAKE           21 37 00.0 +9.2
AKBB                                LR      LR
         comp=Z,2µm,18.0s
TAM   Tamanrasset       99.75  62  ePdif    Pdif    21 36 53.5 +1.6
         comp=Z,5.8nm,1.2s
TAM                                 LR      LR
         comp=Z,700nm,18.0s
TAM   Tamanrasset       99.75  62  eP       Pdif    21 36 53.5 +1.6
TAM                                 pmax    pmax
         comp=Z,6.0nm,1.2s
TAM                                 MLR     MLR
         comp=Z,700nm,18.0s
MJAR  Matsushiro Arr    99.77 314   P       Pdif    21 36 52.0 +0.5
         comp=Z,2.2nm,0.7s,baz=62,slow=3.8,SNR=3.2
MJAR                                LR      LR      22 15 29.5
         comp=Z,316nm,20.0s,baz=50,slow=31
MDVR  Moldovita         99.86  36⇑iP       Pdif    21 36 52.4 +0.6
TTG   Podgorica         99.87  39   PFAKE           21 37 00.0 +8.2
TTG                                 LR      LR
         comp=Z,1µm,18.0s
BUR04 Bucovina Ar. S    99.90  32  ePdif    Pdif    21 36 51.5  -0.5
BURAR Bucovina Array    99.90  32⇑iP       Pdif    21 36 50.1  -1.9
BURAR Bucovina Array    99.90  32 ⇑P       Pdif    21 36 50.1  -1.9
GZR   Gura Zlata       100.06  35⇑iP       Pdif    21 36 54.0 +1.3
GZR   Gura Zlata       100.06  35 ⇑P       Pdif    21 36 54.1 +1.3
CEL   Celeste          100.14  44   PFAKE           21 37 00.0 +6.8
CEL                                 LR      LR
         comp=Z,1µm,18.0s
TOC7  Torodi Ar. Sit   100.18  72   PFAKE           21 37 00.0 +6.3
TOC7                                LR      LR
         comp=Z,900nm,19.0s
TOB5  Torodi Ar. Sit   100.18  72   PFAKE           21 37 00.0 +6.3
TOB5                                LR      LR
         comp=Z,1µm,19.0s
TOC5  Torodi Ar. Sit   100.19  72   PFAKE           21 37 00.0 +6.3
TOC5                                LR      LR
         comp=Z,1µm,18.0s
TOB4  Torodi Ar. Sit   100.19  72   PFAKE           21 37 00.0 +6.2
TOB4                                LR      LR
         comp=Z,1µm,18.0s
TIP   Timpagrande      100.19  43   PFAKE           21 37 00.0 +6.6
TIP                                 LR      LR
         comp=Z,3µm,18.0s
TOA1  Torodi Ar. Sit   100.19  72   PFAKE           21 37 00.0 +6.2
TOA1                                LR      LR
         comp=Z,900nm,19.0s
TOC1  Torodi Ar. Sit   100.19  72   PFAKE           21 37 00.0 +6.2
TOC1                                LR      LR
         comp=Z,1µm,18.0s
TOA0  Torodi Ar. Sit   100.20  72  ePdif    Pdif    21 36 52.8  -1.0
TOA0                                LR      LR
         comp=Z,1µm,19.0s
TORD  Torodi Ar. Bea   100.20  72   P       Pdif    21 36 51.7  -2.1
         comp=Z,1.0nm,1.0s,baz=319,slow=6.3,SNR=4.9
TOA3  Torodi Ar. Sit   100.20  72   PFAKE           21 37 00.0 +6.2
TOA3                                LR      LR
         comp=Z,1µm,19.0s
TOB2  Torodi Ar. Sit   100.21  72   PFAKE           21 37 00.0 +6.2
TOB2                                LR      LR
         comp=Z,1µm,19.0s
TOB3  Torodi Ar. Sit   100.21  72   PFAKE           21 37 00.0 +6.2
TOB3                                LR      LR
         comp=Z,1µm,19.0s
TOC4  Torodi Ar. Sit   100.21  72   PFAKE           21 37 00.0 +6.1
TOC4                                LR      LR
         comp=Z,1µm,19.0s
TOC2  Torodi Ar. Sit   100.22  72   PFAKE           21 37 00.0 +6.1
TOC2                                LR      LR
         comp=Z,900nm,19.0s
TOC3  Torodi Ar. Sit   100.22  72   PFAKE           21 37 00.0 +6.1
TOC3                                LR      LR
         comp=Z,1µm,18.0s
MDJ   Mudanjiang       100.45 324   PFAKE           21 37 10.0  +16
MDJ                                 LR      LR
         comp=Z,900nm,18.0s
WDD   Wied Dalam       100.52  47   PFAKE           21 37 10.0  +15
WDD                                 LR      LR
         comp=Z,1µm,19.0s
PRAR  RASCA            100.58  32⇑iP       Pdif    21 36 54.3  -0.6
TIR   Tirane           100.88  40   PFAKE           21 37 10.0  +14
TIR                                 LR      LR
         comp=Z,2µm,18.0s
ARR   Arges            101.08  34⇑iP       Pdif    21 36 57.5 +0.3
OZUR                   101.21  33⇑iP       Pdif    21 36 55.6  -2.1
VOIR                   101.26  34⇑iP       Pdif    21 36 59.0 +1.0
VOIR                   101.26  34 ⇑P       Pdif    21 36 59.0 +1.0
CRAR  CRAIOVA          101.31  35⇑iP       Pdif    21 36 59.4 +1.3
CRAR  CRAIOVA          101.31  35 ⇑P       Pdif    21 36 59.4 +1.3
MLR   Muntele Rosu     101.69  33  ePdif    Pdif    21 37 00.6 +0.6
MLR                                 LR      LR
         comp=Z,1µm,21.0s
MLR   Muntele Rosu     101.69  33  eP       Pdif    21 37 00.6 +0.6
MLR                                 MLR     MLR
         comp=Z,1µm,21.0s
VTS   Vitosha          102.08  37   PFAKE           21 37 10.0 +8.1
VTS                                 LR      LR
         comp=Z,900nm,21.0s
KIS   Kishinev         102.11  31  ePP      PKiKP   21 42 12.0  +48
KIS                                eSKKS            21 47 48.0
KIS   Kishinev         102.11  31  ePS      PS      21 50 50.0  +31
KIS                                 LRM     MLR     22 26 22.0
         comp=Z,2µm,18.0s
FNA   Florina          102.13  39   PFAKE           21 37 10.0 +8.0
FNA                                 LR      LR
         comp=Z,2µm,19.0s
LPSR  Galich'ya Gora   102.14  22  eP       Pdif    21 37 01.5  -0.2
LPSR                                pmax    pmax
         comp=Z,10.0nm,1.1s
LPSR                                MLR     MLR
         comp=Z,2µm,18.0s
HIA   Hailar           102.15 332   PFAKE           21 37 10.0 +8.1
HIA                                 LR      LR
         comp=Z,800nm,21.0s
CFR   Carcaliu         103.04  33⇑iP       Pdif    21 37 04.9  -0.9
CFR   Carcaliu         103.04  33 ⇑P       Pdif    21 37 04.9  -0.9
LIT   Litokhoron       103.22  39   PFAKE           21 37 20.0  +13
LIT                                 LR      LR
         comp=Z,1µm,18.0s
HARR  Harsova          103.27  33⇑iP       Pdif    21 36 59.9  -7.0
HARR  Harsova          103.27  33 ⇑P       Pdif    21 36 59.9  -7.0
VSR   Storozhevoye     103.35  23  eP       Pdif    21 37 05.7  -1.4
VSR                                 pmax    pmax
         comp=Z,10.0nm,1.0s
VSR                                 MLR     MLR
         comp=Z,2µm,17.0s
TIRR  Tirgusor         103.68  33   PFAKE           21 37 20.0  +11
TIRR                                LR      LR
         comp=Z,1µm,18.0s
AGG   Agios Georgios   103.79  40   PFAKE           21 37 20.0  +11
AGG                                 LR      LR
         comp=Z,1µm,19.0s
ARU   Arti             103.85  10   PFAKE           21 37 20.0  +11
ARU                                 LR      LR
         comp=Z,2µm,18.0s
VRH   Novokhopyorsk    104.28  21  eP       Pdif    21 37 10.4  -0.8
VRH                                 pmax    pmax
         comp=Z,10.0nm,1.6s
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VRH				MLR	MLR		
	comp=Z,3μm,17.0s						
RABL	**Rabaul**	**104.52**	**270**	PFAKE		21 37 30.0	+17
RABL				LR	LR		
	comp=Z,500nm,20.0s						
ITM	**Ithomi**	**104.66**	**42**	PFAKE		21 37 20.0	+6.7
ITM				LR	LR		
	comp=Z,1μm,19.0s						
ALN	**Alexandroupoli**	**104.80**	**37**	PFAKE		21 37 30.0	+16
ALN				LR	LR		
	comp=Z,1μm,18.0s						
TLY	**Talaya**	**106.02**	**343**	PFAKE		21 41 40.0	+9.0
TLY				LR	LR		
	comp=Z,699nm,19.0s						
SANT	**Santorini**	**107.38**	**41**	PFAKE		21 41 50.0	+16
SANT				LR	LR		
	comp=Z,800nm,20.0s						
ZAA0	**Zalesovo Array**	**107.39**	**355**	PFAKE		21 41 50.0	+17
ZAA0				LR	LR		
	comp=Z,1μm,19.0s						
ZALV	**Zalesovo Beam**	**107.39**	**355**	Pdiff	**Pdif**	**21 37 25.6**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=339,slow=3.7,SNR=2.8						
ZALV				PP	**PP**	**21 41 50.2**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=353,slow=7.3,SNR=3.7						
IDI	**Anoyia**	**107.71**	**42**	PFAKE		21 41 50.0	+15
IDI				LR	LR		
	comp=Z,400nm,19.0s						
MANT	**Manisa**	**107.84**	**37**	PFAKE		21 41 50.0	+15
MANT				LR	LR		
	comp=Z,3μm,18.0s						
ULN	**Ulaanbaatar**	**108.28**	**339**	PFAKE		21 41 50.0	+14
ULN				LR	LR		
	comp=Z,800nm,21.0s						
BRVK	**Borovoye**	**108.50**	**4**	PFAKE		21 41 50.0	+14
BRVK				LR	LR		
	comp=Z,3μm,20.0s						
SONM	**Songino Array**	**108.54**	**339**	Pdiff	**Pdif**	**21 37 30.7**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=18,slow=3.6,SNR=2.5						
SONM				PP	**PP**	**21 42 02.9**	**+2.6**
	comp=Z,0.7nm,0.8s,baz=43,slow=11,SNR=3.6						
DL2	**Dalian**	**108.69**	**324**	*e*Pdif	**Pdif**	**21 37 35.9**	**+4.8**
DL2				AMB	AMB		
	comp=Z,130nm,9.8s						
DL2				LR	LR		
	comp=Z,690nm,20.5s						
DL2				LR	LR		
	comp=Z,360nm,19.9s						
DL2				LR	LR		
	comp=Z,710nm,17.3s						
ILGA	**Ilgaz**	**108.84**	**33**	PFAKE		21 41 50.0	+13
ILGA				LR	LR		
	comp=Z,1μm,20.0s						
KARP	**Karpathos**	**108.97**	**41**	PFAKE		21 41 50.0	+13
KARP				LR	LR		
	comp=Z,600nm,18.0s						
ANTO	**Ankara**	**109.22**	**34**	PFAKE		21 41 50.0	+13
ANTO				LR	LR		
	comp=Z,600nm,18.0s						
ISP	**Isparta**	**109.43**	**37**	PFAKE		21 41 50.0	+12
ISP				LR	LR		
	comp=Z,800nm,18.0s						
BRTR	**Keskin Array B**	**109.78**	**34**	PKiKP	**PKiKP**	**21 41 37.0**	**-1.5**
	comp=Z,1.6nm,0.8s,baz=352,slow=1.4,SNR=5.5						
KIV	**Kislovodsk**	**110.67**	**25**	PFAKE		21 41 50.0	+10
KIV				LR	LR		
	comp=Z,1μm,20.0s						
BJT	**Baijiatuau**	**110.78**	**328**	PFAKE		21 41 50.0	+10
BJT				LR	LR		
	comp=Z,1μm,19.0s						
KURK	**Kurchatov**	**110.99**	**358**	PFAKE		21 41 50.0	+10
KURK				LR	LR		
	comp=Z,2μm,20.0s						
DGZ	**Jazzator, Alta**	**111.30**	**352**	⇓*i*PKIKP	**PKiKP**	**21 41 41.7**	**+0.6**
HHC	**Hu-ho-hao-te**	**112.32**	**332**	*e*PKP	PKiKP	21 41 53.9	+11
HHC				PP	PP	21 43 07.6	+40
HHC				SKKS		21 50 16.0	
HHC	**Hu-ho-hao-te**	**112.32**	**332**	SS	SS	21 58 17.3	+13
HHC				AMB	AMB		
	comp=Z,47nm,5.1s						
HHC				LR	LR		
	comp=N,830nm,13.8s						
HHC				LR	LR		
	comp=E,550nm,11.2s						
HHC				LR	LR		
	comp=Z,2μm,13.8s						
MAK	**Makhachkala**	**113.36**	**22**	*d* *i*P	**Pdif**	**21 37 50.8**	**-1.0**
MAK				*i*		21 41 43.5	
MAK				*e*		21 42 32.9	
MAK				*e*		21 48 24.0	
MAK				*e*SS	SS	21 58 16.1	-1.7
MAK				*e*SSS	SSS	22 02 30.2	
MAK				pmax	pmax		
	comp=Z,124nm,0.8s						
GNI	**Garni**	**114.69**	**26**	PFAKE		21 42 00.0	+12
GNI				LR	LR		
	comp=Z,1μm,19.0s						
MK31	**Makanchi Array**	**114.71**	**355**	*e*PKiKP	PKPdf	21 41 47.7	+0.1
MKAR	**Makanchi Array**	**114.71**	**355**	*e*PKiKP	**PKiKP**	**21 41 47.1**	**-0.5**
MKAR				LR	LR		
	comp=Z,300nm,18.0s						
MKAR	**Makanchi Array**	**114.71**	**355**	PKP	**PKiKP**	**21 41 46.7**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=16,slow=2.4,SNR=13						
MKAR				PKKPab	**PKKPab**	**21 52 33.0**	**-0.9**
	comp=Z,1.2nm,1.0s,baz=186,slow=4.8,SNR=6.0						
MAKZ	**Makanchi**	**114.72**	**356**	*e*PKiKP	**PKiKP**	**21 41 46.4**	**-1.2**
MAKZ				LR	LR		
	comp=Z,2μm,18.0s						
MAKZ	**Makanchi**	**114.72**	**356**	*e*PKIKP	**PKiKP**	**21 41 46.4**	**-1.2**
MAKZ				MLR	MLR		
	comp=Z,2μm,18.0s						
NJ2	**Nanjing**	**115.10**	**320**	*e*PKP	**PKPdf**	**21 41 49.8**	**+1.1**
COEN	**Coen**	**115.75**	**263**	PFAKE		21 42 00.0	+10
COEN				LR	LR		
	comp=Z,500nm,20.0s						
WMQ	**Urumqi**	**117.02**	**351**	PKP	**PKiKP**	**21 41 52.5**	**+0.4**
WMQ				sPKP		21 42 06.8	
WMQ				PP	**PP**	**21 43 04.9**	**+4.5**
WMQ				SKS	**SKSdf**	**21 48 55.3**	**-6.6**
WMQ				SS	**SS**	**21 59 04.8**	**-0.7**
WMQ				AMB	AMB		
	comp=Z,600nm,10.5s						
WMQ				LR	LR		
	comp=Z,4μm,15.3s						
WMQ				LR	LR		
	comp=Z,2μm,17.7s						
WMQ				LR	LR		
	comp=Z,2μm,21.9s						
WMQ	**Urumqi**	**117.02**	**351**	PFAKE		21 42 00.0	+7.9
WMQ				LR	LR		
	comp=Z,2μm,18.0s						
GTA	**Gaotai**	**118.21**	**339**	*e*PKP	**PKiKP**	**21 41 55.3**	**+0.6**
GTA				PP	**PP**	**21 43 13.8**	**+4.8**
GTA				SS	SS	21 59 22.4	+0.9
GTA				AMB	AMB		
	comp=Z,370nm,9.8s						
GTA				LR	LR		
	comp=Z,1μm,16.5s						
GTA				LR	LR		
	comp=Z,800nm,16.5s						
GTA				LR	LR		
	comp=Z,2μm,16.8s						
USP	**Ospenovka**	**118.46**	**1**	P	**PKiKP**	**21 41 55.8**	**+0.8**
	SNR=6.7						
TKM2	**Tokmak 2**	**118.82**	**0**	P	**PKiKP**	**21 41 56.4**	**+0.5**
	SNR=5.5						
EKS2	**Erkin-Say**	**119.04**	**2**	P	**PKiKP**	**21 41 56.9**	**+0.6**
	SNR=7.1						
XAN	**Xi'an**	**119.05**	**329**	PFAKE		21 42 10.0	+14
XAN				LR	LR		
	comp=Z,1μm,18.0s						
AAK	**Ala-Archa**	**119.09**	**1**	*e*PKPdf	**PKPdf**	**21 41 54.4**	**-1.9**
AAK				LR	LR		
	comp=Z,4μm,18.0s						
AAK	**Ala-Archa**	**119.09**	**1**	*e*PKIKP	**PKPdf**	**21 41 54.4**	**-1.9**
AAK				MLR	MLR		
	comp=Z,4μm,18.0s						
PRZ	**Przheval'sk**	**119.22**	**358**	*e*PKPdf	**PKPdf**	**21 41 56.5**	**0.0**
PRZ	**Przheval'sk**	**119.22**	**358**	*e*PKIKP	**PKPdf**	**21 41 56.6**	**0.0**
UCH	**Uchtor**	**119.50**	**1**	P	**PKiKP**	**21 41 59.0**	**+1.5**
	SNR=8.7						
ULHL	**Ulahol**	**119.50**	**360**	P	**PKiKP**	**21 41 58.7**	**+1.5**
	SNR=7.5						
AML	**Almayashu**	**119.57**	**2**	P	**PKiKP**	**21 41 59.0**	**+1.4**
	SNR=6.0						
KDJ	**Kajisay**	**119.60**	**359**	*e*PKPdf	**PKiKP**	**21 41 58.4**	**+1.0**
KDJ	**Kajisay**	**119.60**	**359**	PKIKP	**PKiKP**	**21 41 59.3**	**+1.9**
LZH	**Lanzhou**	**119.63**	**334**	*e*PKP	**PKPdf**	**21 41 50.8**	**-6.7**
LZH				sPKP		21 42 27.3	
LZH				PP	**PP**	**21 43 21.4**	**+2.4**
LZH	**Lanzhou**	**119.63**	**334**	SS	SS	21 59 25.9	-14
LZH				AMB	AMB		
	comp=Z,530nm,5.4s						
LZH				LR	LR		
	comp=N,880nm,19.1s						
LZH				LR	LR		
	comp=E,1μm,17.9s						
LZH				LR	LR		
	comp=Z,1μm,20.6s						
TARG	**Taragay, Kyrgy**	**119.99**	**359**	*e*PKPdf	**PKiKP**	**21 41 58.4**	**0.0**
TARG				LR	LR		
	comp=Z,2μm,20.0s						
STKA	**Stephens Creek**	**120.06**	**243**	PKP	**PKPdf**	**21 41 57.3**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=296,slow=1.5,SNR=4.6						
NRN	**Naryn**	**120.31**	**0**	*e*PKPdf	**PKiKP**	**21 41 59.8**	**+0.8**
NRN	**Naryn**	**120.31**	**0**	PKIKP	**PKiKP**	**21 41 59.8**	**+0.8**
GEYT	**Alibeck**	**121.32**	**17**	PKP	**PKPdf**	**21 41 59.8**	**-0.7**
	comp=Z,5.8nm,0.7s,baz=331,slow=5.8,SNR=7.6						
GYA0B	**ALIBECK ARRAY**	**121.32**	**17**	*e*PKPdf	**PKPdf**	**21 41 59.6**	**-1.0**
GYA0B				LR	LR		
	comp=Z,2μm,18.0s						
BTK	**Batken**	**121.47**	**5**	*e*PKPdf	**PKPdf**	**21 41 59.8**	**-1.1**
BTK	**Batken**	**121.47**	**5**	PKIKP	**PKPdf**	**21 41 59.8**	**-1.1**
ENH	**Enshi**	**121.76**	**326**	*e*PKPdf	**PKiKP**	**21 42 01.9**	**+0.2**
ENH				LR	LR		
	comp=Z,700nm,18.0s						
KSH	**Kashi**	**122.22**	**0**	PKP	**PKiKP**	**21 42 04.4**	**+1.9**
KSH				PP	**PP**	**21 43 38.5**	**+2.2**
KSH				SKS	**SKSdf**	**21 49 13.8**	**+1.7**
KSH				SS	**SS**	**22 00 21.8**	**+9.2**
KSH				AMB	AMB		
	comp=Z,500nm,6.4s						
KSH				LR	LR		
	comp=Z,500nm,6.5s						
KSH				LR	LR		
	comp=Z,330nm,6.0s						
KSH				LR	LR		
	comp=Z,2μm,19.1s						
GAR	**Garm**	**122.48**	**5**	*e*PKPdf	**PKiKP**	**21 42 03.8**	**+0.8**
GAR				LR	LR		
	comp=Z,5μm,18.0s						
CHGR	**Chuyangaron**	**122.71**	**6**	*e*PKPdf	**PKPdf**	**21 42 03.2**	**-0.1**
CHGR				LR	LR		
	comp=Z,5μm,20.0s						
FAKI	**Fak Fak**	**122.93**	**279**	PFAKE		21 42 20.0	+16
FAKI				LR	LR		
	comp=Z,500nm,20.0s						
CD2	**Chengdu**	**124.08**	**331**	PKP	**PKPdf**	**21 42 06.0**	**-0.1**
CD2				PP	**PP**	**21 43 51.8**	**+2.6**
CD2				SKS	**SKSdf**	**21 49 11.9**	**-3.9**
CD2				SKKS	**SKKSac**	**21 50 40.1**	**-6.7**
CD2				SS	**SS**	**22 00 33.8**	**-3.1**
CD2				AMB	AMB		
	comp=Z,550nm,5.7s						
CD2				LR	LR		
	comp=Z,870nm,18.1s						
CD2				LR	LR		
	comp=Z,2μm,21.1s						
CD2				LR	LR		
	comp=Z,1μm,15.7s						
WR6	**Warramunga Arr**	**125.13**	**258**	PFAKE		21 42 20.0	+11
WR6				LR	LR		
	comp=Z,600nm,20.0s						
WB2	**Warramunga Arr**	**125.22**	**258**	*e*PKPdf	**PKPdf**	**21 42 08.3**	**-0.1**
WB2				*e*PP	**PP**	**21 43 52.1**	**-6.6**
WRAB	**Tennant Creek**	**125.22**	**258**	*e*PKPdf	**PKiKP**	**21 42 08.6**	**-0.1**
WRAB	**Tennant Creek**	**125.22**	**258**	⇓*i*PKIKP	**PKiKP**	**21 42 08.7**	**0.0**
WRAB				pmax	pmax		
	comp=Z,19nm,2.5s						
WR1	**Warramunga Arr**	**125.23**	**258**	*e*PKPdf	**PKPdf**	**21 42 08.4**	**0.0**
WRA	**Warramunga Arr**	**125.23**	**258**	PKP	**PKPdf**	**21 42 08.4**	**0.0**
	comp=Z,5.1nm,0.8s,baz=77,slow=2.3,SNR=55						
WC4	**Warramunga Arr**	**125.24**	**258**	PFAKE		21 42 20.0	+11
WC4				LR	LR		
	comp=Z,700nm,20.0s						
AS01	**Alice Springs**	**126.09**	**254**	*e*PKPdf	**PKPdf**	**21 42 09.7**	**-0.3**
AS31	**Alice Springs**	**126.13**	**254**	*e*PKPdf	**PKPdf**	**21 42 10.2**	**+0.2**
ASAR	**Alice Springs**	**126.13**	**254**	PKP	**PKPdf**	**21 42 10.2**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=87,slow=1.8,SNR=33						
GYA	**Guiyang**	**126.29**	**326**	Pdif	**Pdif**	**21 38 48.3**	**-1.5**
GYA				PKP	**PKPdf**	**21 42 09.4**	**-1.1**
GYA				PP	**PP**	**21 44 07.0**	**+2.7**
GYA				PKS	**PKSdf**	**21 45 49.8**	**+2.4**
GYA				SKKS		21 50 57.4	
GYA				SS	**SS**	**22 01 05.3**	**+0.1**
GYA				AMB	AMB		
	comp=Z,160nm,7.9s						
GYA				LR	LR		
	comp=Z,220nm,20.8s						
GYA				LR	LR		
	comp=Z,210nm,21.6s						
GYA				LR	LR		
	comp=Z,290nm,20.0s						
KBL	**Kabul**	**126.76**	**7**	*e*PKPdf	**PKiKP**	**21 42 11.7**	**-0.1**
KBL				LR	LR		
	comp=Z,1μm,20.0s						
KBL	**Kabul**	**126.76**	**7**	PKIKP	**PKiKP**	**21 42 11.7**	**-0.1**
MTN	**Manton Dam**	**126.87**	**268**	PFAKE		21 42 20.0	+7.9
MTN				LR	LR		
	comp=Z,1μm,21.0s						
NIL	**Nilore**	**128.01**	**3**	*e*PKPpre	PKPpre	21 41 57.8	
NIL				*e*PKPdf	**PKPdf**	**21 42 12.9**	**-0.6**
NIL				LR	LR		
	comp=Z,3μm,18.0s						
NIL	**Nilore**	**128.01**	**3**	*e*PKHKP	PKPpre	21 41 57.8	
NIL				*e*		21 42 12.9	
NIL				MLR	MLR		
	comp=Z,3μm,18.0s						
RAYN	**Ar Rayn**	**128.60**	**37**	*e*PKPdf	**PKPdf**	**21 42 14.9**	**0.0**
RAYN				LR	LR		
	comp=Z,600nm,21.0s						
RAYN	**Ar Rayn**	**128.60**	**37**	*e*PKIKP	**PKPdf**	**21 42 14.9**	**0.0**
RAYN				MLR	MLR		
	comp=Z,600nm,21.0s						
KMI	**Kunming**	**129.41**	**328**	PKP	**PKPdf**	**21 42 12.8**	**-3.8**
KMI				PP	**PP**	**21 44 25.4**	**+0.5**
KMI				AMB	AMB		
	comp=Z,250nm,5.1s						
KMI				LR	LR		
	comp=Z,490nm,18.4s						
KMI				LR	LR		
	comp=Z,550nm,17.0s						
KMI				LR	LR		
	comp=Z,1μm,17.7s						
KMI	**Kunming**	**129.41**	**328**	PFAKE		21 42 30.0	+13
KMI				LR	LR		
	comp=Z,1μm,18.0s						
LSA	**Lhasa**	**129.87**	**343**	*e*PKPdf	**PKiKP**	**21 42 19.1**	**+0.6**
LSA				LR	LR		
	comp=Z,900nm,19.0s						
LSA	**Lhasa**	**129.87**	**343**	*e*PKIKP	**PKiKP**	**21 42 19.1**	**+0.6**
LSA				MLR	MLR		
	comp=Z,900nm,19.0s						
QIZ	**Qiongzhong**	**130.06**	**317**	PKP	**PKPdf**	**21 42 15.8**	**-1.9**
QIZ				AMB	AMB		
	comp=Z,220nm,8.3s						
QIZ				LR	LR		
	comp=Z,660nm,15.7s						
QIZ				LR	LR		
	comp=Z,470nm,16.2s						
QIZ				LR	LR		
	comp=Z,720nm,16.2s						
FORT	**Forrest**	**131.62**	**245**	PFAKE		21 42 30.0	+8.8
FORT				LR	LR		
	comp=Z,1μm,20.0s						
MBAR	**Mbarara**	**132.06**	**73**	*e*PKPdf	**PKPdf**	**21 42 21.2**	**-0.6**
MBAR				LR	LR		
	comp=Z,1μm,21.0s						
MBAR	**Mbarara**	**132.06**	**73**	*e*PKIKP	**PKPdf**	**21 42 21.2**	**-0.6**
MBAR				MLR	MLR		
	comp=Z,1μm,21.0s						
UOSS	**Minazif**	**132.61**	**25**	PFAKE		21 42 30.0	+6.5
UOSS				LR	LR		
	comp=Z,400nm,18.0s						
BOSA	**Boshof**	**132.65**	**112**	PKP	**PKPdf**	**21 42 21.9**	**-0.5**
	comp=Z,4.1nm,0.9s,baz=188,slow=2.9,SNR=4.1						
DANN	**Dangsing**	**132.77**	**351**	*e*P	**PKiKP**	**21 42 23.6**	**-0.5**
	comp=Z,18nm,0.7s						
GUN	**Gumba**	**132.84**	**348**	*e*P	**PKPdf**	**21 42 23.6**	**+0.4**
	comp=Z,68nm,1.4s						
KKN	**Kakani**	**133.07**	**349**	*e*P	**PKPdf**	**21 42 23.3**	**-0.2**
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	**133.09**	**262**	PFAKE		21 42 40.0	+15
FITZ				LR	LR		
	comp=Z,600nm,22.0s						
PYUN	**Piuthan**	**133.13**	**352**	*e*P	**PKPdf**	**21 42 24.1**	**+0.5**
	comp=Z,41nm,1.3s						
PKIN	**Phulchoki**	**133.25**	**349**	*e*P	**PKPdf**	**21 42 23.4**	**-0.5**
	comp=Z,12nm,1.0s						
PKI	**Pulchoki**	**133.26**	**349**	*e*P	**PKPdf**	**21 42 23.6**	**-0.4**
	comp=Z,16nm,1.1s						
DMN	**Daman**	**133.28**	**349**	*e*P	**PKPdf**	**21 42 23.3**	**-0.6**
	comp=Z,15nm,1.0s						
KOLN	**Koldanda**	**133.37**	**351**	*e*P	**PKPdf**	**21 42 24.3**	**+0.3**
	comp=Z,16nm,1.1s						
KKM	**Kota Kinabalu**	**133.49**	**298**	PFAKE		21 42 40.0	+14
KKM				LR	LR		
	comp=Z,300nm,20.0s						
RAMN	**Ramite**	**133.62**	**347**	*e*P	**PKPdf**	**21 42 24.7**	**+0.1**
	comp=Z,28nm,0.9s						
FURI	**Furi**	**134.10**	**57**	PFAKE		21 42 40.0	+13
FURI				LR	LR		
	comp=Z,600nm,19.0s						
DAMY	**Dhamar**	**134.61**	**46**	PFAKE		21 42 40.0	+12
DAMY				LR	LR		
	comp=Z,400nm,20.0s						
ATD	**Arta Tunnel**	**135.62**	**50**	PFAKE		21 42 40.0	+10
ATD				LR	LR		
	comp=Z,700nm,20.0s						
CHTO	**Chiang Mai**	**136.60**	**328**	*e*PKPdf	PKPpre	21 42 26.7	
CHTO				LR	LR		
	comp=Z,600nm,20.0s						
CHTO	**Chiang Mai**	**136.60**	**328**	*e*PKIKP	PKPpre	21 42 26.7	
CHTO				MLR	MLR		
	comp=Z,600nm,20.0s						
CM31	**Chiang Mai Arr**	**136.90**	**327**	*e*PKPdf	PKPpre	21 42 25.9	
CMAR	**Chiang Mai Arr**	**136.90**	**327**	PKP	**PKiKP**	**21 42 31.7**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=327,slow=1.5,SNR=7.6						
CM01	**Chiang Mai Arr**	**136.92**	**327**	*e*PKPpre	PKPpre	21 42 19.5	
KMBO	**Kilima Mbogo**	**138.15**	**70**	*e*PKPdf	**PKPdf**	**21 42 31.6**	**-1.6**
KMBO				LR	LR		
	comp=Z,600nm,19.0s						
KMBO	**Kilima Mbogo**	**138.15**	**70**	*e*PKIKP	**PKPdf**	**21 42 31.7**	**-1.6**
KMBO				MLR	MLR		
	comp=Z,600nm,19.0s						
KMBO	**Kilima Mbogo**	**138.15**	**70**	PKP	**PKPdf**	**21 42 31.6**	**-1.6**
	comp=Z,1.6nm,0.9s,baz=158,slow=5.3,SNR=3.9						
KSM	**Kuching**	**140.90**	**297**	PFAKE		21 42 50.0	+9.4
KSM				LR	LR		
	comp=Z,300nm,20.0s						
POO	**Poona**	**143.07**	**4**	*e*P	PKPab	21 42 35.0	-2.1
HYB	**Hyderabad**	**144.16**	**356**	*i* PKP	PKPbc	21 42 42.0	+0.3
SKLT	**Songkhla**	**144.79**	**314**	PKP	**PKPdf**	**21 42 46.3**	**+1.4**
TRTT	**Trang**	**144.92**	**316**	PKP	**PKPdf**	**21 42 45.8**	**+0.7**
PKDT	**Phuket**	**145.75**	**318**	PKP	**PKPab**	**21 42 48.3**	**+1.0**
MYKOM	**Kota Tinggi**	**146.02**	**304**	*e*PKPdf	**PKPab**	**21 42 49.0**	**+0.7**
MYKOM				LR	LR		
	comp=Z,800nm,18.0s						
KULM	**Kulim**	**146.12**	**312**	*e*PKPdf	**PKPbc**	**21 42 48.2**	**+0.1**
KULM				LR	LR		
	comp=Z,600nm,19.0s						
IPM	**Ipoh**	**146.41**	**311**	*e*PKPdf	**PKPab**	**21 42 49.7**	**-0.1**
IPM				LR	LR		
	comp=Z,700nm,19.0s						
CISI	**Cisompet, Garu**	**147.28**	**285**	*e*PKPdf	**PKPdf**	**21 42 48.7**	**-0.5**
CISI				*e*PKPbc	**PKPbc**	**21 42 51.4**	**-0.1**
PSI	**Prapat**	**149.08**	**311**	*e*PKPdf	**PKPdf**	**21 42 52.1**	**-0.1**
PSI				*e*PKPbc	**PKiKP**	**21 42 57.1**	**-0.5**
BKNI	**Bangkinang**	**149.12**	**305**	PFAKE		21 43 00.0	-0.6
BKNI				LR	LR		
	comp=Z,600nm,18.0s						
GSI	**Gunungsitoli**	**151.08**	**311**	*e*PKPbc	**PKiKP**	**21 43 02.1**	**+0.5**
PALK	**Pallekele**	**153.93**	**350**	PFAKE		21 43 10.0	+2.5
PALK				LR	LR		
	comp=Z,1μm,20.0s						

NORS ***20*** *21:33:44.7±0.0, 42°.81N×45°.28E, h10^{km}, MPVA2.9*
MOS ***20*** *21:33:44.3±0.0, 42°.82N×45°.26E, h21^{km}, MPVA3.1*
ISC 20 21:33:46.8±1.1, **42°.92N**±0°.04×**45°.31E**±0°.02, **h8**^{km}±10^{km},
n17, σ**1^{s}.10**/31, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMGR	**Komgaron**	**0.35**	**293**	*i* Pg	**Pg**	**21 33 53.7**	**-0.1**
KMGR				*e*Sg	**Sg**	**21 33 59.9**	**+1.5**
GROC	**Groznyy**	**0.45**	**52**	*e*Pg	**Pb**	**21 33 57.3**	**+0.2**
GROC				*e*Sg	**Sb**	**21 34 05.7**	**+1.8**
DVE	**Vedeno**	**0.60**	**86**	*e*Pg	**Pg**	**21 33 57.9**	**-0.5**
DVE				*e*Sg	**Sb**	**21 34 07.8**	**-0.4**
BTLR	**Botlikh**	**0.72**	**111**	*e*Pg	**Pg**	**21 34 00.5**	**-0.2**
BTLR				*e*Sg	**Sg**	**21 34 10.7**	**+0.6**
LACR	**Lac**	**0.75**	**263**	*i* Pg	**Pg**	**21 33 59.8**	**-1.5**
LACR				*e*Sg	**Sg**	**21 34 10.1**	**-1.0**
KORR	**Kora**	**0.93**	**281**	*e*Pg	**Pb**	**21 34 05.5**	**+0.4**
KORR				*e*Sg	**Sn**	**21 34 19.9**	**+0.3**
DBC	**Dubki**	**1.12**	**84**	*e*Pg	**Pb**	**21 34 08.2**	**-0.3**
DBC				*e*Sg	**Sn**	**21 34 24.5**	**0.0**
LSNR	**Lesken**	**1.14**	**289**	*e*Pg	**Pn**	**21 34 09.9**	**+0.8**
LSNR				*e*Sg	**Sn**	**21 34 26.1**	**+1.1**
DIGR	**Digorskoe uzhe**	**1.27**	**270**	*e*Pg	**Pn**	**21 34 09.2**	**-1.9**
DIGR				*e*Sg	**Sb**	**21 34 26.0**	**-1.7**
LGD	**Lagodekhi**	**1.29**	**147**	P	**Pn**	**21 34 09.5**	**-1.6**
GNBR	**Gunib**	**1.33**	**113**	*e*Pg	**Pn**	**21 34 10.7**	**-1.0**
GNBR				*e*Sg	**Sb**	**21 34 28.4**	**-0.9**
DDFL	**Dedoflistskaro**	**1.59**	**158**	P	**Pg**	**21 34 20.1**	**+2.8**
TRLG	**Trialeti**	**1.65**	**213**	P	**Pn**	**21 34 16.5**	**+0.3**
TRLG				S	**Sb**	**21 34 39.5**	**+1.0**
KBTC	**Kuba-Taba**	**1.65**	**303**	*e*Pg	**Pn**	**21 34 16.3**	**+0.2**
KBTC				*e*Sg	**Sb**	**21 34 38.8**	**+0.4**
KZRT	**Kazreti**	**1.68**	**204**	P	**Sb**	**21 34 39.5**	**+0.3**
NEY	**Neytrino**	**1.92**	**281**	*e*Pg	**Pn**	**21 34 19.2**	**-0.8**
NEY				*e*Sg	**Sn**	**21 34 44.9**	**+0.4**
AKT	**Akhty**	**2.30**	**128**	*e*Pn	**Pb**	**21 34 27.9**	**-0.7**
AKT				*e*Sn	**Sb**	**21 34 57.0**	**-0.3**

NNC 20 21:46:27.5±5.4, **37°.28N**×**70°.83E, h0**^{km}**, mb3.9, mpv3.5,**
6C-1D, Error ellipse: s-maj=41.4km s-min=34.5km
az=164.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.44**	**37**	⇑Pn	Pn	21 47 22.5	-0.1
	17nm,0.3s						
SFK				⇑Sn	Sn	21 48 05.6	+1.4
	9.8nm,0.4s						
MNAS	**Manas**	**5.36**	**13**	⇑Pn	Pn	21 47 49.3	+0.4
	1.3nm,0.3s						
MNAS				⇑Sn	Sn	21 48 52.9	+1.6
	6.1nm,0.4s						
KK31	**Karatay Array**	**5.82**	**358**	Pn	Pn	21 47 56.4	+1.3
	1.1nm,0.4s,baz=179,slow=13,SNR=9.1						
KK31				⇓Sn	Sn	21 49 05.0	+2.4
	2.2nm,0.4s,baz=183,slow=23,SNR=7.2						
AAK	**Ala-Archa**	**6.05**	**27**	⇑Pn	Pn	21 47 57.6	-0.7
	2.0nm,0.4s						
AAK				⇑Sn	Sn	21 49 06.5	-1.8
	5.4nm,0.8s						

IDC 20 21:46:49.6±0.9, **13°.14N**×**143°.72E, h222**^{km}±30^{km}**, mb3.1**/6,
mb1 3.3/6, **mb1mx3.1**/34, **mbtmp3.7**/6, **Error ellipse:**
s-maj=73.1km s-min=14.4km az=81.0, South of Mariana
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.20**	**68**	P	Pn	21 47 23.7	+0.8
	63nm,0.3s,baz=159,slow=22,SNR=21						
GUMO				S	S	21 47 49.1	+0.2
	106nm,0.3s,baz=178,slow=21,SNR=17						
JNU	**Nakatsue**	**23.09**	**332**	P	P	21 51 36.5	+0.6
	3.0nm,0.6s,baz=191,slow=17,SNR=3.2						
WRA	**Warramunga Arr**	**34.14**	**196**	P	P	21 53 14.0	+0.1
	1.7nm,0.6s,baz=18,slow=9.6,SNR=27						
ASAR	**Alice Springs**	**37.82**	**195**	P	P	21 53 44.5	-0.5
	0.4nm,0.7s,baz=16,slow=13,SNR=6.9						
CMAR	**Chiang Mai Arr**	**43.33**	**283**	P	P	21 54 30.0	-0.2
	0.5nm,0.5s,baz=85,slow=6.3,SNR=4.5						
SONM	**Songino Array**	**46.47**	**326**	P	P	21 54 53.5	-1.1
	0.3nm,0.6s,baz=141,slow=7.6,SNR=2.9						
MKAR	**Makanchi Array**	**61.04**	**316**	P	P	21 56 40.5	+0.5
	0.3nm,0.5s,baz=94,slow=8.0,SNR=6.7						

IDC 20 21:56:56.0±1.6, 7°.34S×122°.93E, h0km, mb3.2/1, mb1 3.2/4, mb1mx3.2/29, mbtmp3.1/4, ML2.5/3, Error ellipse: s-maj=139.5km s-min=24.3km az=63.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.94	166	Pn	Pn	21 57 44.6	+0.6
	1.5nm,0.3s,baz=171,slow=4.3,SNR=5.2						
WRA	Warramunga Arr	16.71	140	Pn	Pn	22 00 52.4	+0.6
	0.0nm,0.3s,baz=312,slow=12,SNR=2.7						
ASAR	Alice Springs	19.35	148	P	P	22 01 22.6	-0.7
	0.0nm,0.3s,baz=330,slow=12,SNR=3.1						
MKAR	Makanchi Array	64.86	330	P	P	22 07 37.0	0.0
	0.2nm,0.8s,baz=150,slow=6.7,SNR=2.1						

MEX 20 22:14:26.5±0.4, 17°.77N×99°.40W, h64km±9km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEIG	Mezcala	0.26	307	*e*P	Pn	22 14 35.5	-1.4
MEIG				*e*S	Sn	22 14 42.6	-1.8
PLIG	Platanillo	0.63	351	*i* P	Pn	22 14 39.2	-1.1
PLIG				*e*S	Sn	22 14 48.6	-1.8
YAIG	Yautepec	1.13	16	*i* P	Pn	22 14 45.1	-1.5
YAIG				*i* S	Sn	22 15 00.1	-1.5

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*ISCJB **20** 22:21:24.7±0.5, 27°.89N±0°.09×139°.3E±0°.1, h507km, mb3.6/14, Error ellipse: s-maj=15.1km s-min=11.4km az=154.3*

*IDC **20** 22:21:25.8±0.6, 27°.90N×139°.46E, h509km±8km, mb3.1/13, mb1 3.3/15, mb1mx3.1/42, mbtmp4.0/15, Error ellipse: s-maj=16.5km s-min=10.0km az=91.0*

ISC 20 22:21:25.8±0.7, 27°.9N±0°.1×139°.4E±0°.1, h507km, n16, σ0s.67/17, mb3.5/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.61	107	P	P	22 22 35.8	+0.9
	16nm,0.3s,baz=320,slow=22,SNR=6.8						
JCJ				S	S	22 23 30.6	-0.4
	34nm,0.3s,baz=299,slow=23,SNR=15						
USRK	Ussuriysk Ar.	17.31	342	P	P	22 25 00.7	+1.5
	1.1nm,0.3s,baz=165,slow=9.5,SNR=16						
KLR	Kul'dur	22.09	347	P	P	22 25 43.4	+0.7
	1.0nm,0.3s,baz=165,slow=11,SNR=12						
SONM	Songino Array	32.42	317	P	P	22 27 13.2	-0.2
	0.3nm,0.5s,baz=127,slow=8.4,SNR=3.2						
CMAR	Chiang Mai Arr	38.21	265	P	P	22 28 01.9	0.0
	0.5nm,0.4s,baz=69,slow=5.1,SNR=3.8						
ZALV	Zalesovo Beam	47.25	319	P	P	22 29 11.7	-0.7
	0.6nm,0.4s,baz=104,slow=6.8,SNR=3.8						
FITZ	Fitzroy Crossi	47.63	198	P	P	22 29 15.7	+0.1
	2.4nm,0.6s,baz=25,slow=7.9,SNR=6.2						
WRA	Warramunga Arr	47.82	186	P	P	22 29 16.8	-0.2
	1.1nm,0.3s,baz=7.0,slow=8.6,SNR=108						
MKAR	Makanchi Array	48.04	309	P	P	22 29 18.5	0.0
	0.3nm,0.3s,baz=87,slow=11,SNR=11						
ASAR	Alice Springs	51.54	186	P	P	22 29 44.4	0.0
	0.8nm,0.4s,baz=17,slow=12,SNR=22						
ILAR	Eielson Array	58.20	29	P	P	22 30 29.5	-1.0
	0.3nm,0.4s,baz=248,slow=5.7,SNR=10						
INK	Inuvik	63.33	25	P	P	22 31 03.7	-0.5
	0.5nm,0.3s,baz=285,slow=5.6,SNR=5.6						
ARCES	ARCESS Array B	71.95	340	P	P	22 31 57.4	+0.4
	4.1nm,0.9s,baz=65,slow=8.6,SNR=7.1						
YKA	Yellowknife Ar	72.60	28	P	P	22 32 01.1	+0.2
	0.8nm,0.6s,baz=295,slow=5.8,SNR=12						
FINES	FINESS Array B	76.11	333	P	P	22 32 20.7	0.0
	1.5nm,0.3s,baz=67,slow=5.0,SNR=28						
NOA	NORSAR Array B	81.92	337	P	P	22 32 51.0	-0.7
	40nm,0.6s,baz=38,slow=5.0,SNR=3.1						

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*IDC **20** 22:24:42.4±1.4, 25°.30S×70°.07E, h0km, mb4.0/9, mb1 4.2/9, mb1mx3.8/45, mbtmp4.0/9, MS4.1/2, Ms1 4.1/2, ms1mx3.3/47, Error ellipse: s-maj=46.5km s-min=22.7km az=31.0*

*ISCJB **20** 22:24:43.8±1.2, 25°.3S±0°.3×70°.1E±0°.2, h21km, mb4.0/9, MS4.0/2, Error ellipse: s-maj=41.1km s-min=20.4km az=28.8*

ISC 20 22:24:45.8±1.5, 25°.3S±0°.3×70°.1E±0°.2, h21km, n16, σ0s.88/9, mb3.9/9, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	17.73	8	T	T	22 47 07.8	
	baz=188,slow=76,SNR=28						
H08S2	Diego Garcia H	17.73	8	T	T	22 47 08.2	
	baz=188,slow=76,SNR=84						
H08S3	Diego Garcia H	17.75	8	T	T	22 47 09.4	
	baz=188,slow=76,SNR=50						
H01W2	Cape Leeuwin H	39.02	115	T	T	23 13 54.2	
	baz=269						
H01W3	Cape Leeuwin H	39.02	115	T	T	23 14 02.3	
	baz=269						
H01W1	Cape Leeuwin H	39.04	115	T	T	23 14 04.8	
	baz=269						
BOSA	Boshof	39.91	255	LR	LR	22 45 21.2	
	comp=Z,271nm,19.5s,baz=268,slow=31						
CMAR	Chiang Mai Arr	51.80	36	P	P	22 33 53.2	+0.8
	3.3nm,1.0s,baz=226,slow=6.9,SNR=13						
CMAR				LR	LR	22 51 53.6	
	comp=Z,155nm,21.4s,baz=295,slow=32						
FITZ	Fitzroy Crossi	51.82	94	P	P	22 33 51.3	-1.3
	7.4nm,0.9s,baz=157,slow=1.4,SNR=6.7						
ASAR	Alice Springs	57.60	103	P	P	22 34 35.4	+0.8
	0.7nm,0.6s,baz=253,slow=6.3,SNR=8.1						
WRA	Warramunga Arr	59.07	99	P	P	22 34 45.2	+0.4
	3.5nm,1.1s,baz=254,slow=7.3,SNR=7.8						
MKAR	Makanchi Array	72.63	9	P	P	22 36 10.8	-0.7
	0.7nm,0.6s,baz=196,slow=6.3,SNR=10						
BRTR	Keskin Array B	73.10	331	P	P	22 36 15.3	+0.6
	1.1nm,0.9s,baz=163,slow=6.9,SNR=4.2						
TORD	Torodi Ar. Bea	76.79	292	P	P	22 36 36.2	-0.1
	0.9nm,1.0s,baz=134,slow=4.3,SNR=4.1						
SONM	Songino Array	79.81	24	P	P	22 36 52.1	-0.4
	2.0nm,1.1s,baz=204,slow=4.0,SNR=8.1						
ZALV	Zalesovo Beam	79.97	9	P	P	22 36 52.5	-0.5
	0.7nm,0.6s,baz=166,slow=6.9,SNR=4.7						

IDC 20 22:31:45.3±2.6, 4°.09S×133°.55E, h0km, mb3.6/1, mb1 3.6/5, mb1mx3.5/27, mbtmp3.5/5, ML3.5/4, Error ellipse: s-maj=85.7km s-min=18.1km az=69.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.93	324	Pn	Pn	22 32 45.5	-1.5
	1.4nm,0.3s,baz=205,slow=23,SNR=6.7						
SIJI				Pg	Pg	22 32 58.4	-2.2
	8.4nm,0.3s,baz=246,slow=20,SNR=8.5						
SIJI				Sn	Sn	22 33 28.1	-5.7
	2.8nm,0.3s,baz=162,slow=19,SNR=4.1						
SIJI				Lg	Lg	22 33 50.1	
	2.5nm,0.3s,baz=243,slow=24,SNR=2.4						
WRA	Warramunga Arr	15.78	177	Pn	Pn	22 35 27.4	-1.5
	0.2nm,0.3s,baz=356,slow=13,SNR=7.9						
WRA				Sn	Sn	22 38 16.6	-8.1
	0.1nm,0.3s,baz=359,slow=23,SNR=7.0						
FITZ	Fitzroy Crossi	15.93	208	Pn	Pn	22 35 30.4	-0.6
	0.2nm,0.3s,baz=34,slow=11,SNR=5.8						
FITZ				Sn	Sn	22 38 21.4	-7.0
	0.2nm,0.3s,baz=187,slow=17,SNR=4.6						
ASAR	Alice Springs	19.46	179	P	Pn	22 36 14.8	-0.1
	0.2nm,0.3s,baz=5.5,slow=12,SNR=9.9						
ASAR				S	Sn	22 39 44.8	-9.2
	baz=358,slow=27,SNR=2.8						
MKAR	Makanchi Array	67.83	325	P	P	22 42 45.4	0.0
	0.4nm,0.6s,baz=118,slow=5.9,SNR=5.5						

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*IDC **20** 22:37:46.9±0.9, 6°.02N×72°.86W, h154km±8km, mb3.0/2, mb1 3.3/3, mb1mx3.0/33, mbtmp3.6/3, Error ellipse: s-maj=40.4km s-min=8.4km az=134.0*

*ISCJB **20** 22:37:47.3±0.6, 6°.56N±0°.03×73°.51W±0°.03, h126km±6km, mb3.3/2, Error ellipse: s-maj=5.6km s-min=4.6km az=13.8*

*RSNC **20** 22:37:49.2±1.0, 6°.52N×73°.53W, h109km±6km, ML3.2, Mw3.3*

ISC 20 22:37:48.2±1.0, 6°.55N±0°.03×73°.51W±0°.04, h115km±7km, n22, σ0s.99/36, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.33	83	*e*P	Pn	22 38 05.5	+0.5
BARC				*i*		22 38 19.0	
	comp=Z,682nm,0.2s						
BRRC	Barranca, Sant	0.58	340	*e*P	Pn	22 38 06.3	+0.1
BRRC				*e*S	Sn	22 38 20.2	+0.4
BRRC				*i*		22 38 29.4	
	comp=N,474nm,0.2s						
RUSC	La Rusia	0.78	147	*e*P	Pn	22 38 08.4	0.0
RUSC				*e*S	Sn	22 38 23.3	-0.2
RUSC				*i*		22 38 25.1	
	comp=N,185nm,0.2s						
PTBC	PUERTO BERRIO,	0.94	269	⇑*i*P	Pn	22 38 08.3	-0.9
PTBC				*e*S	Sn	22 38 23.0	-2.1
PTBC				*i*		22 38 23.8	
	comp=N,584nm,0.3s						
PAMC	Pamplona, Colo	1.12	46	*e*P	Pn	22 38 12.2	+0.6
PAMC				*e*S	Sn	22 38 29.8	+0.5
PAMC				*i*		22 38 30.7	
	comp=N,406nm,0.2s						
ZARC	Zaragoza, Cauc	1.63	305	*e*P	Pn	22 38 17.4	+0.6
ZARC				*e*S	Sn	22 38 39.8	+1.1
ZARC				*i*		22 38 43.5	
	comp=N,195nm,0.4s						
OCAC	Ocana	1.69	7	*e*P	Pn	22 38 17.9	+0.1
OCAC				*e*S	Sn	22 38 40.4	+0.2
OCAC				*i*		22 38 46.0	
	comp=N,650nm,0.2s						
TAMC	Tame, Arauca	1.71	94	*e*P	Pn	22 38 18.2	+0.3
TAMC				*e*S	Sn	22 38 40.7	+0.1
TAMC				*i*		22 38 41.9	
	comp=E,158nm,0.1s						
ROSC	El Rosal	1.88	205	*e*P	Pn	22 38 21.6	+1.3
ROSC	El Rosal	1.88	205	P	Pn	22 38 21.7	+1.3
	comp=E,18nm,0.3s,baz=311,slow=18,SNR=29						
ROSC				S	Sn	22 38 47.5	+2.7
	comp=E,13nm,0.3s,baz=65,slow=22,SNR=9.0						
CHIC	Chingaza	1.92	187	*e*P	Pn	22 38 20.7	-0.2
CHIC				*e*S	Sn	22 38 46.4	+0.6
CHIC				*i*		22 38 49.5	
	comp=N,78nm,0.2s						
HELC	Santa Helena	2.04	260	*e*P	Pn	22 38 22.5	+0.3
HELC				*e*S	Sn	22 38 48.0	-0.2
HELC				*i*		22 38 53.3	
	comp=N,80nm,0.4s						
SMLC	San Martn de	2.30	346	*e*P	Pn	22 38 25.5	+0.2
SMLC				*e*S	Sn	22 38 55.3	+1.6
SMLC				*i*		22 39 00.7	
	comp=N,339nm,0.3s						
UREC	San Jos de Ur	2.33	301	*e*P	Pn	22 38 25.2	-0.4
UREC				*e*S	Sn	22 38 53.9	-0.5
UREC				*i*		22 39 03.1	
	comp=N,102nm,0.2s						
VILC	Villavicencio,	2.43	184	*e*P	Pn	22 38 27.2	0.0
VILC				*e*S	Sn	22 38 55.7	-1.3
RREF	El Recreo	2.46	228	*e*P	Pn	22 38 28.6	+0.7
DBBC	Dabeiba	2.72	280	*e*P	Pn	22 38 31.2	+0.4
CODC	Agustn Codazz	3.36	1	*e*P	Pn	22 38 40.1	+0.9
CODC				*e*S	Sn	22 39 19.9	+1.3
CODC				*i*		22 39 26.1	
	comp=N,32nm,0.4s						
SDV	Santo Domingo	3.68	51	P	Pn	22 38 43.0	-0.6
	comp=N,14nm,0.3s,baz=192,slow=3.3,SNR=64						
SDV				S	Sn	22 39 25.9	-0.4
	comp=N,8.8nm,0.3s,baz=27,slow=17,SNR=23						
YKA	Yellowknife Ar	63.38	340	P	P	22 48 03.4	-1.7
	comp=N,0.2nm,0.4s,baz=133,slow=6.2,SNR=4.5						
TORD	Torodi Ar. Bea	74.17	78	P	P	22 49 03.4	-10
	comp=N,0.6nm,1.1s,baz=288,slow=5.7,SNR=2.9						
WRA	Warramunga Arr	149.87	241	PKPbc	PKPdf	22 57 22.2	+1.2
	comp=N,0.2nm,0.8s,baz=106,slow=2.3,SNR=5.4						

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*IDC **20** 22:37:46.7±1.5, 25°.36S×69°.84E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/38, mbtmp3.8/8, MS3.9/1, Ms1 3.9/1, ms1mx3.1/43, Error ellipse: s-maj=47.8km s-min=25.8km az=29.0*

*ISCJB **20** 22:37:48.2±1.3, 25°.4S±0°.3×69°.9E±0°.2, h21km, mb3.7/8, MS3.9/1, Error ellipse: s-maj=42.0km s-min=23.6km az=27.2*

ISC 20 22:37:50.2±1.6, 25°.4S±0°.3×69°.9E±0°.2, h21km, n12, σ0s.63/8, mb3.8/8, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	17.79	8	T	T	23 00 18.8	
	baz=188,slow=76,SNR=9.2						
H08S2	Diego Garcia H	17.79	9	T	T	23 00 00.1	
	baz=188,slow=76,SNR=24						
H08S3	Diego Garcia H	17.80	8	T	T	23 00 16.7	
	baz=188,slow=76,SNR=17						
ATD	Arta Tunnel	45.14	321	LR	LR	23 01 33.4	
	comp=Z,138nm,20.0s,baz=340,slow=32						
CMAR	Chiang Mai Arr	51.93	36	P	P	22 46 57.9	+0.1
	0.9nm,0.3s,baz=222,slow=6.9,SNR=10						
ASAR	Alice Springs	57.77	103	P	P	22 47 39.7	-0.5
	0.8nm,0.9s,baz=241,slow=7.8,SNR=5.7						
WRA	Warramunga Arr	59.25	99	P	P	22 47 50.8	+0.2
	1.1nm,0.9s,baz=256,slow=7.2,SNR=4.0						
MKAR	Makanchi Array	72.68	9	P	P	22 49 16.5	+0.2
	0.6nm,0.6s,baz=200,slow=6.7,SNR=7.2						
BRTR	Keskin Array B	73.04	332	P	P	22 49 17.6	-1.1
	0.6nm,0.9s,baz=132,slow=9.9,SNR=3.0						
TORD	Torodi Ar. Bea	76.62	292	P	P	22 49 40.4	+0.6
	0.9nm,1.1s,baz=159,slow=4.5,SNR=3.8						
SONM	Songino Array	79.91	24	P	P	22 49 57.7	+0.3
	0.7nm,0.9s,baz=194,slow=2.5,SNR=4.6						
ZALV	Zalesovo Beam	80.03	9	P	P	22 49 57.8	+0.1
	0.5nm,0.6s,baz=197,slow=4.5,SNR=2.8						

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*IDC **20** 22:43:21.6±7.2, 31°.77S×69°.18W, h64km±52km, mb3.4/2, mb1 3.8/5, mb1mx3.5/34, mbtmp3.9/5, ML4.1/3, Error ellipse: s-maj=67.1km s-min=32.1km az=17.0*

*ISCJB **20** 22:43:27.4±0.7, 31°.51S±0°.06×68°.73W±0°.08, h115km±5km, mb3.5/2, Error ellipse: s-maj=12.3km s-min=9.6km az=26.1*

*SJA **20** 22:43:27.8±0.7, 31°.49S×68°.78W, h104km±4km, ML3.5, MW3.7*

ISC 20 22:43:28.1±0.8, 31°.51S±0°.07×68°.84W±0°.07, h111km±6km, n20, σ1s.56/27, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.14	104	*e*P	Pn	22 43 43.0	-0.5
ZON				IAML		22 43 43.4	
	comp=Z,1μm,0.2s						
ZON				*e*S	Sn	22 43 53.9	-1.3
SJA	San Juan	0.24	94	*e*P	Pn	22 43 43.5	-0.3
SJA				IAML		22 43 44.3	
	comp=Z,2μm,0.2s						
RTLL	Cerro Villicun	0.36	60	*e*P	Pn	22 43 43.6	-0.8
RTCV	Cerro Valdivia	0.43	144	*e*P	Pn	22 43 44.6	-0.1
RTLS	Leoncito	0.49	234	*e*P	Pn	22 43 45.8	+0.5
RTLS				IAML		22 43 46.6	
	comp=Z,1μm,0.3s						
RTLS				*e*S	Sn	22 43 58.8	+0.5
CFA	Coronel Fontan	0.52	100	*e*P	Pn	22 43 44.7	-0.6
CFA				*e*S	Sn	22 43 56.9	-1.3
AMOG	MOGNA	0.64	27	*e*P	Pn	22 43 45.8	-0.4
AUSP	Uspallata	0.85	213	*e*P	Pn	22 43 49.2	+0.9
AUSP				*e*S	Sn	22 44 04.3	+0.9
ACCO	Cerro Coronel	0.94	348	*e*P	Pn	22 43 49.2	0.0
ACDV	Cuesta del Vie	1.36	350	*e*P	Pn	22 43 53.8	+0.3
ACDV				*e*S	Sn	22 44 13.4	+0.6
ACDV				IAML		22 44 14.0	
	comp=Z,2μm,0.5s						
APLL	PUNTA DE LOS L	2.27	61	*e*P	Pn	22 44 04.4	-0.3
APLL				IAML		22 44 32.6	
	comp=Z,184nm,0.3s						
ACLC	CERRO LA CRUZ	2.64	39	*e*P	Pn	22 44 09.3	-0.3
LVC	Limon Verde	8.87	360	P	Pn	22 45 30.9	-2.8
	comp=Z,1.9nm,0.3s,baz=189,slow=10,SNR=38						
CPUP	Villa Florida	11.32	66	P	Pn	22 46 05.1	-1.4
	comp=Z,0.2nm,0.3s,baz=230,slow=7.9,SNR=2.4						
CPUP				S	Sn	22 48 17.0	+6.0
	comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=2.1						
LPAZ	La Paz	15.17	3	P	Pn	22 46 57.3	+0.2
	comp=Z,0.5nm,0.3s,baz=177,slow=7.4,SNR=18						
TORD	Torodi Ar. Bea	80.81	68	P	P	22 55 29.8	0.0
	comp=Z,1.4nm,0.8s,baz=270,slow=4.9,SNR=7.8						
PDAR	Pinedale Array	82.83	331	P	P	22 55 38.8	-1.2
	comp=Z,0.2nm,0.6s,baz=116,slow=6.1,SNR=2.3						
WRA	Warramunga Arr	124.22	207	PKP	PKPdf	23 02 13.1	-1.2
	comp=Z,0.2nm,0.6s,baz=170,slow=1.7,SNR=4.6						
ZALV	Zalesovo Beam	150.69	32	PKPbc	PKiKP	23 03 07.6	+0.4
	comp=Z,1.9nm,0.7s,baz=278,slow=3.4,SNR=8.0						
MKAR	Makanchi Array	153.10	47	PKPbc	PKiKP	23 03 12.7	+0.2
	comp=Z,0.7nm,0.8s,baz=338,slow=1.3,SNR=6.0						
MKAR				PKPab	PKPab	23 03 24.7	+0.4
	comp=Z,0.4nm,0.6s,baz=300,slow=3.6,SNR=5.1						

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*IDC **20** 22:53:34.9±0.7, 25°.27S×70°.06E, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.1/49, mbtmp4.1/17, MS4.2/20, Ms1 4.2/20, ms1mx4.0/33, Error ellipse: s-maj=22.9km s-min=15.2km az=21.0*

*ISCJB **20** 22:53:36.6±0.5, 25°.4S±0°.1×70°.08E±0°.08, h21km, mb4.3/34, MS4.2/20, Error ellipse: s-maj=15.5km s-min=9.6km az=16.1*

*NEIC **20** 22:53:36.4±0.5, 25°.39S×70°.00E, h10km, mb4.4/10, Error ellipse: s-maj=15.9km s-min=9.9km az=18.0*

*GCMT **20** 22:53:40.4±0.3, 25°.13S±0°.04×69°.92E±0°.02, h19km±1km, MW5.0/73, Moment Tensor Solution. s17,c20; s73,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.12±.25; $M_{\theta\theta}$0.46±.14; $M_{\phi\phi}$2.66±.16; $M_{r\theta}$-0.70±.37; $M_{\theta\phi}$-1.46±.09; $M_{\phi r}$1.39±.30; Best double couple: $M_0$3.60700×10^{16} NP1:ϕ_s153.00000°, δ58.00000°, λ-90.00000°. NP2: ϕ_s334.00000°, δ32.00000°, λ-90.00000°. Principal axes: T 3.7400, Plg13.0000°, Azm244.0000°; N -0.2720, Plg0.0000°, Azm153.0000°; P -3.4730, Plg77.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 22:53:38.2±0.7, 25°.4S±0°.2×70°.0E±0°.1, h21km, n64, σ1s.20/45, mb4.3/34, MS4.2/20, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	17.82	8	T	T	23 15 58.1	
	baz=188,slow=76,SNR=82						
H08S2	Diego Garcia H	17.83	8	T	T	23 15 59.7	
	baz=188,slow=76,SNR=105						
H08S3	Diego Garcia H	17.84	8	T	T	23 16 06.1	
	baz=188,slow=76,SNR=104						
OPO	Ambohidratompo	22.21	283	P	P	22 58 33.2	-0.4
	7.1nm,1.0s,baz=23,slow=8.3,SNR=2.5						
OPO				LR	LR	23 04 37.1	
	comp=Z,773nm,21.8s,baz=86,slow=30						
PALK	Pallekele	34.11	19	LR	LR	23 10 46.2	
	comp=Z,706nm,21.6s,baz=115,slow=30						
H01W2	Cape Leeuwin H	39.04	115	T	T	23 43 01.6	
	baz=272,slow=75,SNR=9.7						
H01W3	Cape Leeuwin H	39.05	115	T	T	23 42 58.1	
	baz=272,slow=75,SNR=9.5						
H01W1	Cape Leeuwin H	39.06	115	T	T	23 43 06.6	
	baz=272,slow=75,SNR=11						
PSI	Prapat	39.65	49	*e*P	P	23 01 10.2	+1.3
	4.2nm,1.0s						
PSI	Prapat	39.65	49	LR	LR	23 13 37.9	
	comp=Z,908nm,20.7s,baz=268,slow=30						
KMBO	Kilima Mbogo	39.76	302	P	P	23 01 10.6	+0.6
	0.6nm,0.5s,baz=23,slow=13,SNR=2.9						
BOSA	Boshof	39.83	255	LR	LR	23 14 46.9	
	comp=Z,527nm,19.0s,baz=82,slow=32						
MAW	Mawson	42.43	184	LR	LR	23 14 27.6	
	comp=Z,398nm,21.8s,baz=346,slow=29						
ATD	Arta Tunnel	45.26	321	P	P	23 01 53.4	-1.1
	3.9nm,0.9s,baz=253,slow=19,SNR=2.2						
FITZ	Fitzroy Crossi	51.88	94	P	P	23 02 45.4	-0.1
	4.5nm,0.9s,baz=244,slow=12,SNR=3.5						
CM01	Chiang Mai Arr	51.88	36	*e*P	P	23 02 46.0	+0.7
CMAR	Chiang Mai Arr	51.90	36	P	P	23 02 44.2	-1.3
	3.5nm,0.7s,baz=227,slow=7.1,SNR=21						
CMAR				LR	LR	23 21 30.7	
	comp=Z,128nm,20.1s,baz=216,slow=32						
CHTO	Chiang Mai	52.20	35	*e*P	P	23 02 48.5	+0.8
	5.4nm,1.0s						
CHTO	Chiang Mai	52.20	35	P	P	23 02 49.3	+1.6
	25nm,2.0s						
CMMT	Chiang Mai	52.20	35	P	P	23 02 49.2	+1.5
	5.6nm,2.0s						
BATI	Baumata	52.93	84	LR	LR	23 25 31.5	
	comp=Z,115nm,18.0s,baz=284,slow=36						
RAYN	Ar Rayn	54.13	332	*e*P	P	23 03 03.1	+1.2
	4.1nm,1.1s						
ASAR	Alice Springs	57.64	103	P	P	23 03 28.1	+0.9
	1.1nm,0.8s,baz=243,slow=6.4,SNR=7.7						
AS01	Alice Springs	57.68	103	*e*P	P	23 03 26.9	-0.7
WR1	Warramunga Arr	59.12	99	*e*P	P	23 03 38.2	+0.6
	6.3nm,1.1s						
WRA	Warramunga Arr	59.12	99	P	P	23 03 38.2	+0.6
	2.3nm,0.9s,baz=253,slow=6.8,SNR=11						
WRA				LR	LR	23 26 39.4	
	comp=Z,286nm,19.3s,baz=265,slow=34						
WB2	Warramunga Arr	59.13	99	*e*P	P	23 03 37.9	+0.3
STKA	Stephens Creek	62.14	114	LR	LR	23 27 01.6	
	comp=Z,235nm,21.7s,baz=231,slow=32						
GEYT	Alibeck	63.99	350	LR	LR	23 29 02.9	
	comp=Z,183nm,19.8s,baz=125,slow=33						
QSPA	South Pole Qui	64.72	180	P	P	23 04 15.4	+0.8
	1.8nm,1.1s,baz=274,slow=6.9,SNR=3.9						
MK01	Makanchi Array	72.70	9	*e*P	P	23 05 03.7	-0.6
MK31	Makanchi Array	72.72	9	*e*P	P	23 05 04.0	-0.4
	1.6nm,0.9s						
MK32	Makanchi Array	72.72	9	*e*P	P	23 05 04.2	-0.3
MKAR	Makanchi Array	72.72	9	P	P	23 05 04.2	-0.3
	1.8nm,0.6s,baz=192,slow=5.8,SNR=23						
MKAR				LR	LR	23 37 09.2	
	comp=Z,122nm,18.2s,baz=185,slow=36						
BR101	Keskin Array S	73.15	331	*e*P	P	23 05 07.5	+0.2
BR131	Keskin Array S	73.15	331	*e*P	P	23 05 06.7	-0.6
	4.9nm,1.0s						
BRTR	Keskin Array B	73.15	331	P	P	23 05 07.5	+0.2
	2.0nm,0.8s,baz=165,slow=6.4,SNR=8.9						
BRTR				LR	LR	23 36 13.3	
	comp=Z,43nm,18.1s,baz=113,slow=35						
KBZ	Khabaz	73.17	340	P	P	23 05 08.4	+1.3
	1.9nm,1.0s,baz=180,slow=8.1,SNR=3.5						
KBZ				LR	LR	23 34 22.1	
	comp=Z,119nm,20.6s,baz=148,slow=34						
ABKAR	Akbulak array	74.87	353	*e*P	P	23 05 17.2	+0.3
	3.6nm,0.8s						
KURK	Kurchatov	76.17	6	*e*P	P	23 05 25.5	+1.1
	2.9nm,1.0s						
TORD	Torodi Ar. Bea	76.76	292	P	P	23 05 28.9	+0.3
	2.6nm,1.1s,baz=118,slow=6.7,SNR=6.3						
TORD				LR	LR	23 38 28.1	
	comp=Z,114nm,20.1s,baz=10.0,slow=35						
TOA1	Torodi Ar. Sit	76.76	292	*e*P	P	23 05 28.9	+0.3
KIC	Kosan Boka	79.08	282	*e*P	P	23 05 49.4	+7.9
	29nm,1.2s						
LIC	Lamto	79.27	282	*e*P	P	23 05 50.5	+7.9
	26nm,1.1s						
DBIC	Dimbokro	79.32	283	P	P	23 05 42.4	-0.5
	3.4nm,1.0s,baz=153,slow=4.5,SNR=2.9						
DBIC				LR	LR	23 37 25.8	
	comp=Z,175nm,21.0s,baz=94,slow=33						
TIC	Toumodi	79.46	283	*e*P	P	23 05 51.4	+7.8
SONA0	Songino Array	79.91	24	*e*P	P	23 05 44.1	-1.3
SONM	Songino Array	79.91	24	P	P	23 05 44.1	-1.3
	1.4nm,0.9s,baz=201,slow=4.9,SNR=8.2						
SONM				LR	LR	23 39 43.5	
	comp=Z,104nm,21.7s,baz=176,slow=35						
ZALV	Zalesovo Beam	80.06	9	P	P	23 05 45.0	-0.9
	1.8nm,0.6s,baz=194,slow=6.2,SNR=9.2						
ZAA1	Zalesovo Array	80.07	9	*e*P	P	23 05 45.0	-0.9
ULN	Ulaanbaatar	80.18	24	*e*P	P	23 05 48.8	+1.9
	1.9nm,0.9s						
MLR	Muntele Rosu	81.16	330	*e*P	P	23 05 53.6	+1.4
	9.5nm,1.1s						
KSAR	Wonju Array Be	82.85	43	P	P	23 05 58.7	-2.4
KSRS	Korea Array	82.88	43	P	P	23 05 58.7	-2.6
	1.1nm,0.7s,baz=220,slow=7.0,SNR=3.2						
KSRS				LR	LR	23 40 55.6	
	comp=Z,84nm,19.9s,baz=234,slow=34						
AKASG	Malin Array Be	83.91	335	P	P	23 06 04.9	-1.3
	1.1nm,0.7s,baz=140,slow=4.3,SNR=5.8						
ARSA	Arzberg	87.39	326	*i* P	P	23 06 25.4	+1.7
	1.9nm,0.7s						
CONA	Conrad Observa	87.69	327	*e*P	P	23 06 25.0	-0.1
	0.5nm,0.4s						
MOA	Molln	88.43	326	*i* P	P	23 06 29.8	+1.2
	1.2nm,0.5s						

ABTA	**Abfaltersbach** 2.2nm,0.7s	88.61	325	*i* P	P	23 06 31.1	+1.5
MJAR	**Matsushiro Arr** comp=Z,73nm,20.1s,baz=265,slow=34	89.00	48	LR	LR	23 44 42.0	
USRK	**Ussuriysk Ar.** comp=Z,80nm,19.5s,baz=245,slow=35	89.48	39	LR	LR	23 45 49.1	
FETA	**Feichten** 0.9nm,0.4s	89.72	324	*i* P	P	23 06 35.5	+0.6
NRIK	**Noril'sk** comp=Z,114nm,19.3s,baz=208,slow=36	95.33	6	LR	LR	23 50 29.6	
YKA	**Yellowknife Ar** 0.3nm,0.9s,baz=349,slow=3.2,SNR=4.9	142.80	4	PKP	PKPdf	23 13 06.5	-2.9

IDC 20 22:58:33.5±6.8**,23°.53S**×**178°.15W,h0^{km},mb3.5**/2**, mb1 3.8**/2**,mb1mx3.5**/33**,mbtmp3.5**/2**,Error ellipse: s-maj=281.8km s-min=57.8km az=148.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 0.3nm,0.4s,baz=92,slow=8.5,SNR=5.4	43.77	260	P	P	23 06 40.5	-0.7
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=103,slow=8.2,SNR=14	44.13	265	P	P	23 06 44.4	+0.3
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=41,slow=2.4,SNR=3.1	145.56	329	PKPbc	PKPdf	23 18 12.8	-0.7

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*NEIC **20** 23:00:40.7±0.0, 15°.48N×95°.12W, h17^{km}, mb4.0/2, MD4.2(MEX), After MEX.*

MEX 20 23:00:40.7±1.2**,15°.48N**×**95°.12W,h17^{km}**±78^{km}**,MD4.2, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.99	287	*e*P	Pb	23 00 56.4	-3.1
HUIG				*e*S	Sb	23 01 08.1	-4.2
HUIG	**Huatulco**	0.99	287	*e*P	Pb	23 00 56.4	-3.1
HUIG				*e*S	Sb	23 01 08.1	-4.2
CMIG	**Matias Romero**	1.62	8	*e*P	Pn	23 01 05.1	-3.5
CMIG				*e*S	Sn	23 01 23.9	-5.2
CMIG	**Matias Romero**	1.62	8	*e*P	Pn	23 01 05.1	-3.5
CMIG				*e*S	Sn	23 01 23.9	-5.2
PCIG		1.85	83	*e*P	Pn	23 01 08.3	-3.3
PCIG				*e*S	Sn	23 01 29.5	-5.1
PCIG		1.85	83	*e*P	Pn	23 01 08.3	-3.3
PCIG				*e*S	Sn	23 01 29.5	-5.1
VHO	**Vista Hermosa**	2.21	316	*e*P	Pn	23 01 15.4	-1.5
VHO	**Vista Hermosa**	2.21	316	*e*P	Pn	23 01 15.4	-1.5
CCIG	**Comitan**	2.98	74	*e*P	Pn	23 01 25.5	-2.0
CCIG				*e*Sn	Sn	23 01 55.9	-7.1
CCIG	**Comitan**	2.98	74	*e*P	Pn	23 01 25.5	-2.0
LVIG	**Laguna Verde**	4.40	344	*e*Pn	Pn	23 01 45.5	-1.2
LVIG				*e*Sn	Sn	23 02 36.3	-1.3
TEIG	**Tepich**	8.05	53	*e*Pn	Pn	23 02 32.7	-4.3
TEIG				*e*Sn	Sn	23 03 56.3	-11
ABTX	**Abilene, Hawle** 16nm,1.2s	17.56	347	*e*Pn	Pn	23 04 42.6	-2.2
MSTX	**Muleshoe** 6.1nm,0.8s	19.67	341	*e*P	P	23 05 08.7	-0.4

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*UPP **20** 23:05:26.2±0.1, 67°.18N×20°.67E, h1^{km}, ML1.6, Explosion*

HEL 20 23:05:26.9±0.1**,67°.16N**×**20°.62E,h0^{km},ML1.3, ML1.6**(UPP)**,Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	0.05	204	P	Pg	23 05 27.8	0.0
DUNU	**Dundret**	0.05	204	*i* P	Pg	23 05 27.8	0.0
RATU	**Laukkuluspa**	0.77	330	P	Pg	23 05 40.5	-1.2
RATU				S	Sg	23 05 51.3	-0.4
RATU	**Laukkuluspa**	0.77	330	*i* P	Pg	23 05 40.5	-1.2
RATU				*i* S	Sg	23 05 51.3	-0.4
KUA	**Kurravaara**	0.80	352	P	Pg	23 05 41.0	-1.2
KUA				S	Sg	23 05 51.9	-0.7
KUA	**Kurravaara**	0.80	352	*i* P	Pg	23 05 41.0	-1.2
KUA				*i* S	Sg	23 05 51.9	-0.7
SALU	**Saltoluokta**	0.85	286	P	Pg	23 05 42.3	-0.8
SALU	**Saltoluokta**	0.85	286	*i* P	Pg	23 05 42.3	-0.8
ERTU	**Ertsjaerv**	0.87	134	P	Pg	23 05 42.1	-1.4
ERTU	**Ertsjaerv**	0.87	134	*e*P	Pg	23 05 42.1	-1.5
NIKU	**Nikkaluokta**	0.93	320	P	Pg	23 05 43.5	-1.2
NIKU	**Nikkaluokta**	0.93	320	*e*P	Pg	23 05 43.5	-1.2
PAJU	**Pajala**	0.99	97	P	Pg	23 05 44.4	-1.4
PAJU				S	Sg	23 05 58.0	-0.6
PAJU	**Pajala**	0.99	97	*e*P	Pg	23 05 44.4	-1.4
PAJU				*e*S	Sg	23 05 58.0	-0.6
HARU	**Harads**	1.01	172	P	Pg	23 05 45.1	-1.2
HARU	**Harads**	1.01	172	*e*P	Pg	23 05 45.1	-1.2
LANU	**Lannavaara**	1.03	30	P	Pg	23 05 45.2	-1.5
LANU	**Lannavaara**	1.03	30	*e*P	Pg	23 05 45.2	-1.5
HEF	**Hetta**	1.70	41	*e*PN	Pn	23 05 58.0	+0.1
HEF	comp=Z,1.3nm,0.2s			MSG		23 06 18.4	
HEF				*e*SN	Sn	23 06 19.8	-0.5
KALU	**Kalix**	1.71	139	P	Pn	23 05 57.4	-0.5
KALU	**Kalix**	1.71	139	*e*P	Pn	23 05 57.3	-0.6
KALU				*e*SN	Sg	23 06 22.1	+0.4
SJUU	**Sjulsmark**	1.71	166	P	Pn	23 05 57.3	-0.6
SJUU	**Sjulsmark**	1.71	166	*e*P	Pn	23 05 57.3	-0.6
TOF	**Tornio** baz=310	1.84	125	*e*PN	Pn	23 05 59.6	0.0
TOF	comp=Z,1.6nm,0.2s			MSG		23 06 21.8	
TOF				*e*SN	Sn	23 06 23.8	+0.2
KIF	**Kilpisjarvi**	1.85	2	*e*PG	Pn	23 06 00.6	+0.8
KIF	comp=Z,1.4nm,0.2s			MSG		23 06 23.1	
KIF				*e*SG	Sg	23 06 25.8	-0.5
RNF	**Rovaniemi**	2.20	102	*e*PB	Pn	23 06 05.3	+0.7
RNF				*e*SG	Sb	23 06 35.3	0.0
SGF	**Sodankyl**	2.31	80	*e*PB	Pn	23 06 07.0	+0.8
ARE0	**ARCESS Array S**	2.99	35	*e*PB	Pn	23 06 17.9	+2.4
MSF	**Maaselka**	3.60	107	*e*P	Pn	23 06 21.6	-2.3

HEL 20 23:06:37.3,64°.98N×**20°.39E,h16^{km},ML1.3,1D,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LILU	**Lilltraesk**	0.38	324	*i* P	Pg	23 06 43.7	-1.4
LILU				*i* S	Sg	23 06 49.0	-1.5
BURU	**Burvik**	0.58	133	*e*SG	Pg	23 06 47.6	-1.1
BURU	**Burvik**	0.58	133	*e*P	Pg	23 06 47.7	-1.0
BURU				*e*S	Sg	23 06 55.6	-0.8
ODEU	**Stanfors**	0.59	166	*i* P	Pg	23 06 47.9	-1.0
ODEU				*i* S	Sg	23 06 56.0	-0.7
SVAU	**Svanoeiden**	0.60	216	⇓*i*P	Pg	23 06 47.7	-1.3
SVAU				*i* S	Sg	23 06 55.7	-1.3
SJUU	**Sjulsmark**	0.74	43	*i* P	Pg	23 06 50.0	-1.7
SJUU				*i* S	Sg	23 06 59.9	-1.6
UMAU	**Umeaa**	1.11	173	*e*SG	Sb	23 07 10.7	-1.4
UMAU	**Umeaa**	1.11	173	*e*P	Pb	23 06 56.5	-1.5
UMAU				*e*S	Sb	23 07 10.6	-1.5
HARU	**Harads**	1.22	11	*e*P	Pn	23 06 58.0	-1.5
HARU				*e*S	Sb	23 07 13.3	-1.9
KALU	**Kalix**	1.52	53	*e*P	Pn	23 07 03.4	-0.5
KALU				*e*S	Sn	23 07 23.0	-0.2
HUSU	**Husum**	1.72	198	*e*P	Pn	23 07 06.8	+0.3
HUSU				*e*S	Sb	23 07 29.0	-0.8
ERTU	**Ertsjaerv**	1.75	24	*e*P	Pn	23 07 07.1	+0.2
ERTU				*e*S	Sn	23 07 28.9	+0.1
OUF	**Merijarvi**	1.97	106	*e*P	Pn	23 07 10.5	+0.7
OUF				*e*S	Sn	23 07 33.2	-1.0
OUF	comp=Z,0.8nm,0.1s			MSG		23 07 34.7	
TOF	**Tornio**	1.98	54	*e*P	Pb	23 07 11.9	-1.0
TOF				*e*S	Sn	23 07 35.6	+1.2
TOF	comp=Z,0.7nm,0.1s			MSG		23 07 37.2	
VAF	**Ylistaro**	2.19	152	*e*P	Pn	23 07 13.3	+0.4
VAF				*e*S	Sn	23 07 39.9	+0.3
VAF	comp=Z,1.1nm,0.1s			MSG		23 07 43.6	
OUL	**Oulu**	2.34	85	*e*S	Sn	23 07 42.5	-0.9
RNF	**Rovaniemi**	2.84	52	*e*S	Sn	23 07 55.3	-0.3
LANU	**Lannavaara**	3.15	11	*e*S	Sn	23 08 02.5	-0.9
SUF	**Sumiainen**	3.41	129	*e*S	Sn	23 08 08.7	-1.1
SUF	comp=Z,0.8nm,0.2s			MSG		23 08 26.5	
KEF	**Keuruu**	3.46	143	*e*S	Sn	23 08 09.7	-1.3
KEF	comp=Z,0.5nm,0.2s			MSG		23 08 24.5	
KAF	**Kangasniemi**	3.91	135	*e*S	Sn	23 08 20.2	-1.8
KAF	comp=Z,0.5nm,0.2s			MSG		23 08 39.4	

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*IDC **20** 23:14:37.2±1.0, 5°.94S×147°.78E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.8/29, mbtmp3.8/9, ML3.9/2, Error ellipse: s-maj=36.6km s-min=19.6km az=105.0*

ISC 20 23:14:39.9±1.2**,6°.3S**±0°.1×**148°.3E**±0°.2**,h50^{km},n13, σ3^{s}.43**/12**,mb3.7**/7**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower** 0.3nm,0.3s,baz=4.1,slow=14,SNR=2.4	13.90	188	Pn	P	23 18 00.1	-1.0
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=52,slow=10,SNR=19	19.22	224	P	Pn	23 19 00.7	-0.8
WRA	0.1nm,0.3s,baz=45,slow=25,SNR=3.3			S	S	23 22 18.7	-17
ASAR	**Alice Springs** 2.4nm,0.7s,baz=50,slow=8.8,SNR=21	22.18	217	P	P	23 19 34.4	+2.4
ASAR	3.5nm,1.0s,baz=36,slow=18,SNR=11			S	S	23 23 31.8	-1.7
FITZ	**Fitzroy Crossi** 5.3nm,0.6s,baz=64,slow=7.2,SNR=16	25.06	240	P	P	23 19 59.7	-0.1
STKA	**Stephens Creek** 2.5nm,0.7s,baz=353,slow=7.2,SNR=5.5	26.25	193	P	P	23 20 14.8	+4.3
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=118,slow=7.2,SNR=3.0	54.52	298	P	P	23 24 04.0	+0.8
MKAR	**Makanchi Array** 0.5nm,0.9s,baz=123,slow=7.1,SNR=3.9	78.53	320	P	P	23 26 36.8	+0.8
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=120,slow=4.7,SNR=2.6	79.93	328	P	P	23 26 43.5	+0.1
ILAR	**Eielson Array** 0.2nm,0.9s,baz=195,slow=24,SNR=2.7	85.20	23	P	P	23 27 13.2	+2.5
GERES	**GERESS Array B** 0.3nm,0.7s,baz=28,slow=4.4,SNR=2.8	122.85	326	PKP	PKiKP	23 33 35.4	+4.4
TORD	**Torodi Ar. Bea** 3.1nm,0.6s,baz=62,slow=3.3,SNR=22	146.42	284	PKPbc	PKiKP	23 34 20.2	+0.7
BDFB	**Brasilia** 1.6nm,0.5s,baz=206,slow=3.6,SNR=4.3	152.89	144	PKPbc	PKPab	23 34 40.1	-3.7
DBIC	**Dimbokro** 2.4nm,0.7s,baz=124,slow=2.1,SNR=4.0	153.34	272	PKPbc	PKPab	23 34 39.3	-6.5

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*ISK **20** 23:26:17.2, 42°.33N×40°.89E, h10^{km}, ML2.7/3*
*TIF **20** 23:26:17.9, 42°.34N×40°.95E, h29^{km}±3^{km}*
*ISCJB **20** 23:26:18.8±0.8, 42°.36N±0°.02×40°.92E±0°.04, h22^{km}±7^{km}, Error ellipse: s-maj=5.4km s-min=3.5km az=168.2*
*MOS **20** 23:26:19.4±0.0, 42°.56N×41°.06E, h9^{km}, MPVA3.3*
*NORS **20** 23:26:20.1±0.0, 42°.58N×41°.38E, h4^{km}, MPVA3.2*
*DDA **20** 23:26:33.1, 41°.55N×41°.86E, h7^{km}±5^{km}, ML2.7*

ISC 20 23:26:18.1±1.2**,42°.41N**±0°.02×**41°.02E**±0°.03**,h23^{km}**±15^{km}**, n26,σ1^{s}.06**/49**,Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	**Batumi**	0.95	148	PG	Pb	23 26 36.0	+0.3
BATM				SG	Sb	23 26 49.2	+1.3
BATM	**Batumi**	0.95	148	P	Pb	23 26 36.1	+0.3
BATM				S	Sb	23 26 50.3	+2.4
BCA	**Borcka**	1.06	155	PG	Pb	23 26 37.2	-0.6
BCA				SG	Sb	23 26 52.2	+1.0
DBOC	**Borcka**	1.17	155	*i* P	Pb	23 26 39.9	+0.3
DBOC				*i* S	Sb	23 26 54.7	+0.5
DBOC	comp=Z,3μm,0.1s			IAML_P			
ARXR	**Arkhyz**	1.17	9	*i* Pg	Pb	23 26 39.0	-0.7
ARXR				*e*Sg	Sn	23 26 52.7	-1.9
CHOM	**Cayeli-Rize**	1.32	188	PN	Pn	23 26 41.0	-0.2
CHOM				SN	Sn	23 26 58.6	+0.5
ARTV	**Artvin**	1.40	151	*i* P	Pb	23 26 43.1	-0.5
ARTV				*i* S	Sb	23 27 00.9	-0.1
RPOR	**Krasnaya Polya**	1.41	337	*i* Pg	Pn	23 26 42.9	+0.6
RPOR				*i* Sg	Sb	23 27 01.7	+0.5
DBAD	**Bademkaya**	1.48	160	*i* P	Pb	23 26 43.9	-1.0
DBAD				*i* S	Sb	23 27 02.4	-0.9
DBAD	comp=Z,1μm,0.1s			IAML_P			
DAGI	**Agillar**	1.49	153	*i* P	Pb	23 26 44.8	-0.3
DAGI				*i* S	Sb	23 27 02.8	-0.8
NEY	**Neytrino**	1.51	56	*i* Pg	Pb	23 26 45.1	-0.4
NEY				*i* Sg	Sb	23 27 04.1	-0.2
EPOS	**Posof**	1.56	125	*i* P	Pb	23 26 46.8	+0.4
EPOS				*i* S	Sb	23 27 06.3	+0.6
DDEM	**Demirkent**	1.61	160	*i* P	Pb	23 26 45.8	-1.4
DDEM	comp=Z,873nm,0.1s			IAML_P			
GUZR	**Guzeripl'**	1.72	338	*i* Pg	Pb	23 26 48.3	-0.7
GUZR				*i* Sg	Sb	23 27 10.4	+0.2
SHA1	**Shidzhatmaz**	1.79	42	*i* Pg	Pb	23 26 50.3	0.0
SHA1				*e*Pg	Pb	23 26 50.3	0.0
SHA1				*i* Sg	Sb	23 27 11.9	-0.6
SHA1				*e*Sg	Sn	23 27 13.1	+3.0
LZRR	**Lazarevskoye**	1.94	322	*e*Pg	Pb	23 26 52.7	-0.1
LZRR				*i* Sg	Sb	23 27 15.9	-0.6
DIGR	**Digorskoe uzhe**	1.95	75	*e*Pg	Pb	23 26 53.1	0.0
DIGR				*e*Sg	Sb	23 27 17.6	+0.5
KIV	**Kislovodsk**	1.97	38	PN	Pb	23 26 53.2	-0.1
KIV	**Kislovodsk**	1.97	38	*e*Pg	Pb	23 26 53.2	-0.1
KIV				*e*Sg	Sb	23 27 17.1	-0.3
KIV0	**Kislovodsk Arr**	1.98	38	*e*Pg	Pb	23 26 53.3	-0.1
KIV0				*e*Sg	Sb	23 27 18.4	+0.8
BEYR	**Belyy Ugol+**	2.08	39	*e*Pg	Pb	23 26 54.6	-0.5
BEYR				*e*Sg	Sb	23 27 21.6	+1.2
SENK	**Senkaya-Erzuru**	2.10	151	PN	Pb	23 26 53.5	-2.0
BAYT	**Aydıntepe-Bayb**	2.12	198	PN	Pn	23 26 52.7	+0.4
LACR	**Lac**	2.46	79	*e*Pn	Pb	23 27 01.4	-0.2
LACR				*e*Sn	Sb	23 27 32.3	+0.8
TRLG	**Trialeti**	2.46	110	P	Pn	23 26 54.2	-2.8
TRLG				S	Sb	23 27 33.7	+2.2
DIKM	**Dikmen**	4.36	262	PN	Pn	23 27 23.8	+0.9

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*DJA **20** 23:36:00.5±1.3, 5°N±3°×9°6E±°, h29^{km}±12^{km}, M3.8/7, MLv3.8/7*
*IDC **20** 23:36:04.7±3.6, 3°.85N×96°.97E, h0^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.3/37, mbtmp3.3/4, ML3.6/1, Error ellipse: s-maj=144.3km s-min=28.4km az=61.0*

ISC 20 23:35:57.6±2.1**,4°.8N**±0°.1×**95°.9E**±0°.1**,h33^{km},n8,σ1^{s}.10**/8**, mb3.1**/3**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	1.14	67	P	Pn	23 36 16.8	-0.4
LHMI				S	Sn	23 36 31.8	+0.1
KCSI	**Kotacane, Aceh**	2.25	124	P	Pb	23 36 36.7	-0.8
KCSI				S	Sb	23 37 04.8	-0.1
SNSI	**Sinabang, Aceh**	2.39	170	P	Pb	23 36 38.4	-1.5
GSI	**Gunungsitoli**	3.83	154	P	Pb	23 37 05.7	+1.2
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=208,slow=13,SNR=4.6	13.92	12	Pn	P	23 39 33.8	+13
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=154,slow=8.0,SNR=2.8	43.48	346	P	P	23 44 18.8	+21
WRA	**Warramunga Arr** 0.2nm,0.8s,baz=303,slow=9.2,SNR=4.7	45.07	124	P	P	23 44 11.1	+0.3
ASAR	**Alice Springs** 0.4nm,0.4s,baz=302,slow=7.5,SNR=5.2	46.61	129	P	P	23 44 24.1	+1.2

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*SOME **20** 23:53:09.7, 42°.78N×76°.93E, h15^{km}*
*NNC **20** 23:53:09.4±0.5, 42°.78N×76°.91E, h0^{km}, mb2.3, mpv2.5, Error ellipse: s-maj=3.6km s-min=1.8km az=144.0*
*KRNET **20** 23:53:10.1±0.1, 42°.81N×76°.91E, h17^{km}, mb2.3*

ISC 20 23:53:09.7±0.9**,42°.79N**±0°.02×**76°.91E**±0°.02**,h14^{km}**±7^{km}**, n54,σ0^{s}.52**/105**,25C-17D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	**Tian-Shan** 20nm,0.1s	0.25	6	P	Pg	23 53 15.1	-0.1
TNSS	34nm,0.1s			S	Sg	23 53 18.7	-0.3
TNSS	**Tian-Shan** baz=7.0	0.25	6	*e*P	Pg	23 53 15.1	-0.1
TNSS	baz=7.0			*e*S	Sg	23 53 18.7	-0.3
TNSS	**Tian-Shan** 20nm,0.1s	0.25	6	*e*P	Pg	23 53 15.1	-0.1
TNSS	34nm,0.1s			*e*S	Sg	23 53 18.7	-0.3
IZV	**Izvestkoviy** 3.5nm,0.1s	0.33	318	P	Pg	23 53 16.6	+0.1
IZV	46nm,0.2s			S	Sg	23 53 21.4	+0.3
IZV	**Izvestkoviy** baz=16	0.33	318	*e*P	Pg	23 53 16.6	+0.1
IZV	baz=16			*e*S	Sg	23 53 21.4	+0.3
IZV	**Izvestkoviy** 3.5nm,0.1s	0.33	318	*e*P	Pg	23 53 16.6	+0.1
IZV	46nm,0.2s			*e*S	Sg	23 53 21.4	+0.3
MDOK	**Medeo** 1.5nm,0.2s	0.39	15	⇑P	Pg	23 53 17.3	-0.2
MDOK	19nm,0.5s			⇑S	Sg	23 53 22.6	-0.2
MDOK	**Medeo** 8.4nm,0.2s	0.39	15	Pg	Pg	23 53 17.4	0.0
MDOK	20nm,0.2s			Lg	Lg	23 53 22.8	
MDOK	**Medeo** baz=16	0.39	15	*e*P	Pg	23 53 17.5	0.0
MDOK	baz=16			*e*S	Sg	23 53 22.9	+0.1
MDOK	**Medeo** 8.4nm,0.2s	0.39	15	*e*P	Pg	23 53 17.4	0.0
MDOK	20nm,0.2s			*e*S	Sg	23 53 22.8	0.0
KNDC	**Almaty** 4.6nm,0.5s	0.43	5	⇑P	Pg	23 53 18.8	+0.6
KNDC	15nm,0.5s			⇑S	Sg	23 53 24.9	+0.9
KOTS	**Kotyrbulak** 11nm,0.2s	0.47	18	P	Pg	23 53 19.1	+0.1
KOTS	18nm,0.2s			S	Sg	23 53 25.7	+0.4
KOTS	**Kotyrbulak** baz=19	0.47	18	*e*P	Pg	23 53 19.1	+0.1
KOTS	baz=19			*e*S	Sg	23 53 25.7	+0.4
KOTS	**Kotyrbulak** 11nm,0.2s	0.47	18	*e*P	Pg	23 53 19.1	+0.1
KOTS	18nm,0.2s			*e*S	Sg	23 53 25.7	+0.4
MTBS	**Maitube** baz=12	0.49	314	*e*P	Pg	23 53 19.6	+0.2
MTBS	baz=12			*e*S	Sg	23 53 26.1	+0.1
MTBS	**Maitube** 2.1nm,0.1s	0.49	314	*e*P	Pg	23 53 19.6	+0.2
MTBS	45nm,0.1s			*e*S	Sg	23 53 26.1	+0.1
KDJ	**Kajisay** baz=63	0.69	163	⇑*i*P	Pb	23 53 23.4	-0.2
KDJ	baz=63			⇑*i*S	Sb	23 53 33.6	+0.5
ULHL	**Ulahol** baz=21	0.74	222	⇑*i*P	Pg	23 53 24.0	0.0
ULHL	baz=21			⇑*i*S	Sb	23 53 34.4	-0.1
KST	**Kastek** 9.0nm,0.2s	0.74	290	P	Pb	23 53 24.4	-0.1
KST	8.4nm,0.3s			S	Sb	23 53 34.6	+0.1
KST	**Kastek** baz=89	0.74	290	*e*P	Pb	23 53 24.4	-0.1
KST	baz=89			*e*S	Sb	23 53 34.6	+0.1
KST	**Kastek** 9.0nm,0.2s	0.74	290	*e*P	Pb	23 53 24.4	-0.1
KST	8.4nm,0.3s			*e*S	Sb	23 53 34.6	+0.1
BOOM	**Boomskoye usch** baz=46	0.78	248	⇓*i*P	Pg	23 53 24.9	+0.1
BOOM	baz=46			⇓*i*S	Sb	23 53 35.8	+0.2
DGS	**Degeres** 0.9nm,0.2s	0.95	299	P	Pb	23 53 27.2	-0.8
DGS	19nm,0.4s			S	Sb	23 53 39.5	-1.0
DGS	**Degeres** baz=98	0.95	299	*e*P	Pb	23 53 27.2	-0.8
DGS	baz=98			*e*S	Sb	23 53 39.6	-1.0
DGS	**Degeres** 0.9nm,0.2s	0.95	299	*e*P	Pb	23 53 27.2	-0.8
DGS	19nm,0.4s			*e*S	Sb	23 53 39.5	-1.0
TKM2	**Tokmak 2** 0.9nm,0.5s	0.98	278	⇑P	Pb	23 53 28.6	0.0
TKM2	0.8nm,0.2s			⇑S	Sg	23 53 41.6	+0.3
TKM2	**Tokmak 2** baz=77	0.98	278	⇑*i*P	Pb	23 53 27.8	-0.7
TKM2	baz=77			⇑*i*S	Sb	23 53 41.4	0.0
CHKK	**Chushkaly** baz=4.0	1.06	3	*e*P	Pb	23 53 29.8	-0.1
CHKK	baz=4.0			*e*S	Sb	23 53 43.7	0.0
CHKK	**Chushkaly** 1.6nm,0.1s	1.06	3	*e*P	Pb	23 53 29.8	-0.1
CHKK	3.4nm,0.2s			*e*S	Sb	23 53 43.7	0.0
PRZ	**Przheval'sk** baz=6.0	1.14	105	⇓*i*P	Pb	23 53 31.2	-0.1
PRZ	baz=6.0			⇓*i*S	Sn	23 53 47.7	+0.7
KURS	**Kuram** 0.4nm,0.2s	1.15	52	P	Pn	23 53 31.3	-0.2
KURS	2.5nm,0.3s			S	Sb	23 53 46.4	+0.1
KURS	**Kuram** baz=53	1.15	52	*e*P	Pn	23 53 31.3	-0.2
KURS	baz=53			*e*S	Sb	23 53 46.5	+0.1
KURS	**Kuram** 0.4nm,0.2s	1.15	52	*e*P	Pn	23 53 31.3	-0.2
KURS	2.5nm,0.3s			*e*S	Sb	23 53 46.4	+0.1
KUU	**Kurty** 0.7nm,0.2s	1.18	339	P	Pn	23 53 31.6	-0.2
KUU	1.8nm,0.2s			S	Sb	23 53 47.2	+0.2
KUU	**Kurty** baz=39	1.18	339	*e*P	Pn	23 53 31.7	-0.2
KUU	baz=39			*e*S	Sb	23 53 47.2	+0.2
KUU	**Kurty** 0.7nm,0.2s	1.18	339	*e*P	Pn	23 53 31.6	-0.2
KUU	1.8nm,0.2s			*e*S	Sb	23 53 47.2	+0.2
KZA	**Kyzart** baz=40	1.42	240	⇓*i*P	Pg	23 53 36.6	-0.5
KZA	baz=40			⇓*i*S	Sg	23 53 56.3	+0.7
KBK	**Karagaybulak** baz=65	1.45	265	⇑*i*P	Pb	23 53 36.9	+0.3
KBK	baz=65			⇑*i*S	Sg	23 53 57.1	+0.6
NRN	**Naryn** baz=7.0	1.52	207	⇑*i*P	Pg	23 53 38.7	-0.2
NRN	baz=7.0			⇑*e*S	Sg	23 53 59.9	+1.3
ARXS	**Arharly** 1.0nm,0.1s	1.57	25	P	Pb	23 53 38.8	+0.2
ARXS	6.1nm,0.2s			S	Sb	23 53 59.2	+0.9
ARXS	**Arharly** 1.0nm,0.1s	1.57	25	*e*P	Pb	23 53 38.8	+0.2
ARXS	6.1nm,0.2s			*e*S	Sb	23 53 59.2	+0.9
UZB	**Uzynbulak** 2.0nm,0.2s	1.59	76	P	Pb	23 53 39.2	+0.2
UZB	5.5nm,0.3s			S	Sg	23 53 59.9	-1.0
UZB	**Uzynbulak** baz=77	1.59	76	*e*P	Pb	23 53 39.2	+0.2
UZB	baz=77			*e*S	Sg	23 53 59.9	-1.0
UZB	**Uzynbulak** 2.0nm,0.2s	1.59	76	*e*P	Pb	23 53 39.1	+0.2
UZB	5.5nm,0.3s			*e*S	Sg	23 53 59.9	-1.0
CHMS	**Chumysh** baz=77	1.60	278	⇓*i*P	Pb	23 53 39.1	0.0
CHMS	baz=77			⇓*i*S	Sg	23 54 01.2	0.0

AAK	Ala-Archa	1.79	266	⇑Pg	Pb	23 53 43.0	+0.7
	1.8nm,0.8s						
AAK				⇑Lg	Lg	23 54 08.0	
	0.9nm,0.5s						
AAK	Ala-Archa	1.79	266	⇑iP	Pb	23 53 42.8	+0.5
	baz=65						
AAK				⇑iS	Sg	23 54 07.0	-0.2
	baz=65						
USP	Ospenovka	1.83	286	⇓iP	Pb	23 53 43.0	0.0
	baz=85						
USP				⇓iS	Sg	23 54 07.7	-0.9
	baz=85						
UCH	Uchtor	1.86	253	⇑iP	Pb	23 53 44.4	+0.6
	baz=53						
UCH				⇑iS	Sg	23 54 09.6	0.0
	baz=53						
PDGK	Podgornoye	1.96	73	⇓Pg	Pb	23 53 45.4	+0.1
	1.5nm,0.8s						
PDGK				⇑Lg	Lg	23 54 11.1	
	3.4nm,0.7s						
PDGK	Podgornoye	1.96	73	⇓iP	Pb	23 53 45.4	+0.1
	baz=74						
PDGK				⇓iS	Sg	23 54 11.8	-1.1
	baz=74						
ARLS	Aral	2.13	245	⇓iP	Pb	23 53 48.0	-0.2
	baz=45						
ARLS				⇓iS	Sg	23 54 16.5	-1.8
	baz=45						
EKS2	Erkin-Say	2.31	268	⇑eP	Pb	23 53 50.5	-0.8
	baz=67						
EKS2				⇑iS	Sb	23 54 21.0	+1.2
	baz=67						
AML	Almayashu	2.47	256	⇓iP	Pb	23 53 53.3	-0.8
	baz=55						
AML				⇓iS	Sb	23 54 25.6	+1.0
	baz=55						

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*CNRM **21** 00:17:50.2, 35.°49N×7.°04W, h30^{km}, ml2.4*

*ISCJB **21** 00:17:50.1±0.4, 35.°67N±0.°02×6.°84W±0.°02, h10^{km}, Error ellipse: s-maj=3.7km s-min=2.3km az=36.8*

*SFS **21** 00:17:54.0, 35.°60N×6.°80W, h25^{km}, ML2.7, GOLFO D ECADIZ*

*IGIL **21** 00:17:54.7, 35.°61N×6.°85W, h58^{km}, ML2.4*

*MDD **21** 00:17:54.6±0.9, 35.°60N×6.°86W, h58^{km}±26^{km}, mb4.0/21, Error ellipse: s-maj=8.9km s-min=4.2km az=19.0, PRXIMO*

*INMG **21** 00:17:54.8±1.5, 35.°57N×6.°84W, h31^{km}±9^{km}, ML2.5, Error ellipse: s-maj=3.7km s-min=3.2km az=16.0*

ISC 21 00:17:48.5±0.8**, 35.°55N**±0.°03×**6.°93W**±0.°03**, h10**^{km}**, n97, σ2^{s}37**/183**, 2C-7D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSA	Sarsar	1.13	126	P	Pn	00 18 11.1	+0.7
RSA				S	Sg	00 18 25.8	+0.9
SMIR	Smir Dam	1.27	84	P	Pg	00 18 14.7	+1.8
SMIR				S	Sb	00 18 29.1	+0.2
ECEU	Ceuta	1.31	74	P	Pg	00 18 15.5	+1.8
	4.9nm,0.2s,SNR=7.2						
CEU	Ceuta	1.31	74	P	Pg	00 18 16.2	+2.4
CEU				S	Sn	00 18 32.4	+1.9
CEU	Ceuta	1.31	74	i P	Pg	00 18 16.2	+2.4
CEU				eS	Sn	00 18 32.4	+1.9
CHEFC	Chefchaouen	1.38	108	P	Pg	00 18 15.7	+0.8
CHEFC				S	Sn	00 18 32.9	+0.7
EJIF	Jimena Fronter	1.49	52	⇓P	Pb	00 18 18.3	+2.0
	8.1nm,0.2s,SNR=18						
EJIF				S	Sn	00 18 33.4	-1.4
	2.2nm,0.2s,SNR=7.9						
ESPR	Espera	1.57	33	P	Pb	00 18 18.6	+0.9
	1.6nm,0.1s,SNR=4.0						
ESPR				S	Sn	00 18 36.3	-0.6
	24nm,0.3s,SNR=11						
PBDV	Barranco-do-Ve	1.87	335	⇓ePn	Pb	00 18 23.0	+0.2
PBDV				eSn	Sn	00 18 44.5	+0.2
PBDV				A	A	00 18 47.1	
	14nm,0.1s						
PBDV	Barranco-do-Ve	1.87	335	P	Pb	00 18 23.0	+0.2
PBDV				S	Sn	00 18 44.5	+0.2
	14nm,0.1s						
PVAQ	Vaqueiros	1.95	341	⇓ePn	Pb	00 18 24.1	-0.1
PVAQ				eSn	Sn	00 18 46.3	0.0
PVAQ				A	A	00 18 48.3	
	17nm,0.1s						
PVAQ	Vaqueiros	1.95	341	P	Pb	00 18 24.1	-0.1
PVAQ				S	Sn	00 18 46.3	0.0
	17nm,0.1s						
PVAQ	Vaqueiros	1.95	341	P	Pb	00 18 23.8	-0.4
PVAQ				S	Sn	00 18 46.6	+0.3
EMIJ	Mijas	2.02	59	⇑P	Pn	00 18 24.0	+1.3
	3.1nm,0.2s,SNR=18						
EMIJ				S	Sn	00 18 46.6	-1.4
	3.4nm,0.1s,SNR=24						
EGRO	El Granado	2.03	347	⇓P	Pb	00 18 25.2	-0.2
	6.2nm,0.1s,SNR=18						
EGRO				S	Sn	00 18 48.1	0.0
	15nm,0.1s,SNR=20						
PFVI	Vila Bisbo	2.20	316	ePn	Pb	00 18 27.7	-0.6
PFVI				eSn	Sb	00 18 53.6	-2.0
PFVI				A	A	00 18 59.6	
	10nm,0.1s						
PFVI	Vila Bisbo	2.20	316	P	Pb	00 18 27.7	-0.6
	5.8nm,0.1s,SNR=10						
PFVI				S	Sb	00 18 53.5	-2.2
	8.4nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.20	316	P	Pb	00 18 27.6	-0.8
PFVI				S	Sn	00 18 50.3	-2.0
EMIN	Mina Concepcio	2.22	5	⇓P	Pn	00 18 27.4	+2.0
	4.3nm,0.1s,SNR=18						
EMIN				S	Sn	00 18 51.9	-1.0
	9.4nm,0.1s,SNR=6.4						
MORF	Marmelete	2.23	322	eP	Pb	00 18 28.1	-0.9
MORF				eS	Sn	00 18 52.8	-0.5
MORF				AML	AML	00 18 57.5	
	comp=N,23nm,0.2s						
MORF	Marmelete	2.23	322	ePn	Pb	00 18 28.3	-0.7
MORF				eSn	Sn	00 18 54.1	+0.8
MORF				A	A	00 19 04.4	
	comp=N,18nm,0.1s						
MORF	Marmelete	2.23	322	P	Pb	00 18 28.1	-0.9
MORF				S	Sn	00 18 52.8	-0.5
	comp=N,23nm,0.2s						
EMAL	Malaga-Limoner	2.36	58	eP	Pn	00 18 29.0	+1.7
EMAL				eS	Sn	00 18 55.5	-0.7
PTEO	Sao Teotonio	2.46	325	ePn	Pb	00 18 30.7	-2.1
PTEO				eSn	Sn	00 18 58.6	-0.1
PTEO				A	A	00 19 17.9	
	comp=N,8.8nm,0.9s						
PTEO	Sao Teotonio	2.46	325	P	Pb	00 18 30.7	-2.1
PTEO				S	Sn	00 18 58.6	-0.1
	comp=N,4.4nm,0.9s						
MESJ	Messejana	2.51	336	eP	Pb	00 18 31.9	-1.7
MESJ				eS	Sn	00 18 58.5	-1.5
MESJ				AML	AML	00 19 03.3	
	comp=E,14nm,0.1s						
MESJ	Messejana	2.51	336	ePn	Pb	00 18 31.9	-1.7
MESJ				eSn	Sn	00 19 00.0	0.0
MESJ				A	A	00 19 05.2	
	comp=E,8.9nm,0.4s						
MESJ	Messejana	2.51	336	P	Pb	00 18 31.9	-1.7
MESJ				S	Sn	00 18 58.5	-1.5
	comp=E,14nm,0.1s						
PBEJ	Beja	2.58	343	ePn	Pb	00 18 33.8	-1.1
PBEJ				eSn	Sn	00 19 02.4	+0.6
PBEJ				A	A	00 19 03.7	
	comp=E,8.4nm,0.1s						
PBEJ	Beja	2.58	343	P	Pb	00 18 33.8	-1.1
PBEJ				S	Sn	00 19 02.4	+0.6
	comp=E,4.2nm,0.1s						
PBAR	Barrancos	2.62	358	ePn	Pn	00 18 33.5	+2.6
PBAR				eSn	Sn	00 19 01.4	-1.3
PBAR	Barrancos	2.62	358	P	Pn	00 18 33.5	+2.6
PBAR				S	Sn	00 19 01.4	-1.3
HORN	Hornachuelos	2.66	30	P	Pn	00 18 32.9	+1.5
HORN				S	Sn	00 19 04.0	+0.3
EGOR	Sierra Gorda,	2.76	55	⇓P	Pn	00 18 35.4	+2.5
	comp=E,4.7nm,0.2s,SNR=18						
EGOR				S	Sn	00 19 04.0	-2.4
	comp=E,2.5nm,0.2s,SNR=7.9						
ECAB	El Cabril	2.79	25	P	Pn	00 18 34.8	+1.4
	comp=E,0.6nm,0.1s,SNR=14						
ECAB				S	Sn	00 19 03.5	-3.6
	comp=E,5.9nm,0.1s,SNR=7.9						
PNCL	Nicolau / Gran	2.86	334	ePn	Pn	00 18 36.6	+2.4
PNCL				eSn	Sn	00 19 08.9	+0.3
PNCL				A	A	00 19 16.0	
	comp=E,5.6nm,0.1s						
PNCL	Nicolau / Gran	2.86	334	P	Pn	00 18 36.6	+2.4
PNCL				S	Sn	00 19 08.9	+0.3
	comp=E,5.6nm,0.1s						
ELGU	Los Guajares,	2.98	63	P	Pn	00 18 36.2	+0.4
	comp=E,5.2nm,0.1s,SNR=7.9						
ELGU				S	Sn	00 19 10.2	-1.5
	comp=E,5.4nm,0.1s,SNR=7.9						
EVO	Evora	3.10	344	ePn	Pb	00 18 42.0	-1.7
EVO				eSn	Sn	00 19 14.2	-0.3
EVO				A	A	00 19 16.8	
	comp=E,24nm,0.1s						
EVO	Evora	3.10	344	P	Pb	00 18 42.0	-1.7
EVO				S	Sn	00 19 14.2	-0.3
	comp=E,24nm,0.1s						
SRHM	Skhour des Reh	3.18	195	P	Pb	00 18 42.0	-3.1
EBAD	Badajoz	3.20	359	⇓P	Pn	00 18 41.0	+2.2
	comp=E,3.8nm,0.1s,SNR=18						
EBAD				S	Sn	00 19 15.1	-1.9
	comp=E,6.4nm,0.1s,SNR=8.9						
EADA	Adamuz	3.22	35	P	Pn	00 18 41.1	+1.9
	comp=E,2.3nm,0.1s,SNR=31						
EADA				S	Sn	00 19 14.8	-2.8
	comp=E,19nm,0.2s,SNR=18						
MD31	MD31	3.23	145	P	Pn	00 18 39.9	+0.6
MD31				S	Sn	00 19 18.0	+0.1
EQUE	Quentar	3.26	59	P	Pn	00 18 42.3	+2.4
	comp=E,2.6nm,0.1s,SNR=9.5						
EQUE				S	Sn	00 19 17.1	-1.7
	comp=E,0.9nm,0.1s,SNR=4.7						
MDT	Midelt	3.34	144	P	Pn	00 18 42.1	+1.2
MDT				S	Sn	00 19 20.6	-0.1
PESTR	Estremoz	3.35	351	ePn	Pn	00 18 43.1	+2.1
PESTR				eSn	Sn	00 19 19.7	-1.1
PESTR				A	A	00 19 20.8	
	comp=E,3.9nm,0.6s						
PESTR	Estremoz	3.35	351	P	Pn	00 18 41.8	+0.9
PESTR				S	Sn	00 19 21.5	+0.7
EBER	Berja	3.53	66	P	Pn	00 18 44.4	+0.8
	comp=E,0.8nm,0.1s,SNR=8.4						
EBER				S	Sn	00 19 24.0	-1.6
	comp=E,0.7nm,0.2s,SNR=7.9						
PMTG	Montargil	3.66	344	ePn	Pn	00 18 47.6	+2.4
PMTG				eSn	Sn	00 19 28.4	0.0
PMTG				A	A	00 19 32.3	
	comp=E,3.9nm,0.2s						
PMTG	Montargil	3.66	344	P	Pn	00 18 47.6	+2.4
PMTG				S	Sn	00 19 28.4	0.0
	comp=E,3.9nm,0.2s						
GORA	Gorafe	3.68	57	P	Pn	00 18 47.9	+2.4
	comp=E,2.1nm,0.1s,SNR=7.9						
GORA				S	Sn	00 19 26.9	-2.0
	comp=E,6.5nm,0.2s,SNR=7.9						
EQES	Quesada	3.83	53	P	Pn	00 18 49.5	+1.9
	comp=E,1.8nm,0.1s,SNR=21						
EQES				S	Sn	00 19 29.6	-3.2
	comp=E,4.1nm,0.1s,SNR=7.9						
PMAFR	Mafra	3.88	332	ePn	Pn	00 18 51.1	+2.9
PMAFR				eSn	Sn	00 19 32.7	-1.2
PMAFR				A	A	00 19 41.9	
	comp=E,21nm,0.9s						
PMAFR	Mafra	3.88	332	P	Pn	00 18 51.2	+2.9
	comp=E,10nm,0.1s,SNR=9.4						
PMAFR				S	Sn	00 19 33.3	-0.6
	comp=E,4.1nm,0.1s,SNR=7.9						
PMRV	Marv??o	3.89	355	ePn	Pn	00 18 50.6	+2.3
PMRV				eSn	Sn	00 19 31.6	-2.4
PMRV				A	A	00 19 34.5	
	comp=E,7.6nm,0.5s						
PMRV	Marv??o	3.89	355	P	Pn	00 18 50.6	+2.3
PMRV				S	Sn	00 19 31.6	-2.4
	comp=E,7.6nm,0.5s						
GOLM	Goulmima	4.18	156	P	Pn	00 18 55.0	+2.6
PTOM	Tomar	4.22	344	ePn	Pn	00 18 55.6	+2.6
PTOM				eSn	Sn	00 19 40.8	-1.5
PTOM				A	A	00 19 44.6	
	comp=E,6.2nm,0.5s						
PTOM	Tomar	4.22	344	P	Pn	00 18 55.6	+2.6
PTOM				S	Sn	00 19 40.8	-1.5
	comp=E,3.1nm,0.5s						
PCBR	Castelo Branco	4.30	354	ePn	Pn	00 18 56.5	+2.5
PCBR				eSn	Sn	00 19 41.7	-2.5
PCBR				A	A	00 19 44.4	
	comp=E,7.2nm,0.2s						
PCBR	Castelo Branco	4.30	354	P	Pn	00 18 56.5	+2.5
PCBR				S	Sn	00 19 41.7	-2.5
	comp=E,3.6nm,0.2s						
SESP	Santiago Espad	4.35	53	P	Pn	00 18 56.4	+1.5
	comp=E,1.4nm,0.1s,SNR=4.0						
SESP				S	Sn	00 19 41.4	-4.3
	comp=E,4.6nm,0.1s,SNR=7.9						
SESP	Santiago Espad	4.35	53	P	Pn	00 18 55.5	+0.6
SESP				S	Sn	00 19 43.6	-2.1
PAB	San Pablo	4.48	26	P	Pn	00 18 58.6	+2.0
	comp=E,0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	00 19 44.8	-4.0
	comp=E,0.8nm,0.1s,SNR=7.9						
OUZM	OUZ	4.63	178	P	Pn	00 19 00.3	+1.6
OUZM				S	Sn	00 19 52.0	-0.6
PCAS	Casmilo, Conde	4.66	345	ePn	Pn	00 19 01.4	+2.4
PCAS				eSn	Sn	00 19 50.8	-2.3
PCAS				A	A	00 19 53.2	
	comp=E,3.5nm,0.8s						
PCAS	Casmilo, Conde	4.66	345	P	Pn	00 19 01.4	+2.4
PCAS				S	Sn	00 19 50.8	-2.3
	comp=E,3.5nm,0.8s						
ESDC	Sonseca Array	4.74	29	P	Pn	00 19 02.2	+2.1
	baz=210,slow=14,SNR=7.9						
ESDC				S	Sn	00 19 50.5	-4.7
	baz=210,slow=24,SNR=7.9						
MTE	Manteigas	4.86	354	ePn	Pn	00 19 03.9	+2.1
MTE				eSn	Sn	00 19 55.2	-3.0
MTE				A	A	00 19 58.3	
	comp=E,9.0nm,0.3s						
MTE	Manteigas	4.86	354	P	Pn	00 19 03.9	+2.1
MTE				S	Sn	00 19 55.2	-3.0
	comp=E,4.5nm,0.3s						
TTIG	Tnine Tigouga,	5.15	195	P	Pn	00 19 04.8	-1.0
TTIG				S	Sn	00 19 56.6	-8.7
PVIS	Viseu	5.21	352	ePn	Pn	00 19 08.3	+1.7
PVIS				eSn	Sn	00 20 03.4	-3.3
PVIS				A	A	00 20 11.1	
	comp=E,4.0nm,0.6s						
PVIS	Viseu	5.21	352	P	Pn	00 19 08.3	+1.7
PVIS				S	Sn	00 20 03.4	-3.3
	comp=E,2.0nm,0.6s						
ETOB	Tobarra	5.29	53	⇑P	Pn	00 19 08.7	+0.9
	comp=E,3.5nm,0.1s,SNR=18						
ETOB				S	Sn	00 20 03.9	-4.9
	comp=E,3.6nm,0.1s,SNR=7.9						
GUD	Guadarrama	5.53	22	P	Pn	00 19 12.9	+1.9
	comp=E,0.3nm,0.1s,SNR=7.9						
GUD				S	Sn	00 20 10.2	-4.6
	comp=E,0.8nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.60	359	ePn	Pn	00 19 14.4	+2.4
MVO				eSn	Sn	00 20 11.9	-4.5
MVO				A	A	00 20 16.3	
	comp=E,5.0nm,0.3s						
MVO	Moncorvo	5.60	359	P	Pn	00 19 14.4	+2.4
	comp=E,3.5nm,0.1s,SNR=22						
MVO				S	Sn	00 20 13.3	-3.2
	comp=E,3.3nm,0.1s,SNR=7.9						
PVRL	Vila Real	5.75	354	eSn	Sn	00 20 16.3	-3.6
PVRL	Vila Real	5.75	354	S	Sn	00 20 16.3	-3.6
POLO	Lamas de Olo	5.85	354	ePn	Pn	00 19 17.5	+2.1
POLO				eSn	Sn	00 20 18.8	-3.8
POLO				A	A	00 20 23.7	
	comp=E,1.5nm,0.9s						
POLO	Lamas de Olo	5.85	354	P	Pn	00 19 17.5	+2.1
POLO				S	Sn	00 20 18.8	-3.8
	comp=E,1.5nm,0.9s						
ECHE	Chera	6.22	48	P	Pn	00 19 21.2	+0.8
	comp=E,1.1nm,0.2s,SNR=7.9						
PBRG	Braganca	6.25	1	ePn	Pn	00 19 22.9	+2.1
PBRG				eSn	Sn	00 20 28.3	-3.9
PBRG				A	A	00 20 31.0	
	comp=E,2.7nm,0.4s						
PBRG	Braganca	6.25	1	P	Pn	00 19 22.9	+2.1
PBRG				S	Sn	00 20 28.3	-3.9
	comp=E,1.4nm,0.4s						
ELOB	Lobios	6.37	352	P	Pn	00 19 24.5	+2.1
	comp=E,0.5nm,0.1s,SNR=7.9						
ELOB				S	Sn	00 20 32.3	-2.9
	comp=E,1.3nm,0.1s,SNR=6.7						
ECAL	Calabor	6.38	1	P	Pn	00 19 25.1	+2.5
	comp=E,2.4nm,0.3s,SNR=7.9						
ECAL				S	Sn	00 20 32.7	-2.9
	comp=E,1.1nm,0.2s,SNR=7.9						
ETOR	Torete	6.51	35	P	Pn	00 19 26.2	+1.8
	comp=E,1.0nm,0.2s,SNR=7.9						
ETOR				S	Sn	00 20 32.7	-6.1
	comp=E,0.7nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	7.01	45	P	Pn	00 19 33.3	+1.9
	comp=E,0.4nm,0.1s,SNR=7.9						
EMOS				S	Sn	00 20 45.3	-5.8
	comp=E,1.0nm,0.2s,SNR=7.9						
ERTA	Horta de San J	7.86	44	P	Pn	00 19 44.1	+1.3
	comp=E,0.3nm,0.1s,SNR=7.9						
ELAN	Lanestosa	8.13	18	P	Pn	00 19 49.0	+2.4
	comp=E,0.3nm,0.1s,SNR=7.9						
ELAN				S	Sn	00 21 11.9	-6.7
	comp=E,0.3nm,0.2s,SNR=7.9						
IELO	Elcoad	8.52	30	P	Pn	00 19 55.3	+3.4
	comp=E,0.7nm,0.2s,SNR=7.9						
IELO				S	Sn	00 21 23.6	-4.5
	comp=E,0.2nm,0.1s,SNR=7.9						
EALK	Alkurruntz	8.73	27	P	Pn	00 19 57.3	+2.5
	comp=E,2.9nm,0.5s,SNR=7.9						
EALK				S	Sn	00 21 26.4	-7.0
	comp=E,3.3nm,0.3s,SNR=7.9						
ATE	Arette	8.94	31	P	Pn	00 20 00.5	+2.9
	comp=E,0.4nm,0.2s,SNR=7.9						
ATE				S	Sn	00 21 32.4	-6.0
	comp=E,0.2nm,0.2s,SNR=7.9						
ECHI	Chisagues Biel	9.00	36	P	Pn	00 20 01.6	+2.9
	comp=E,0.4nm,0.1s,SNR=7.9						
ECHI				S	Sn	00 21 32.6	-7.6
	comp=E,1.2nm,0.3s,SNR=7.9						
EMIR	Miracle	9.16	44	P	Pn	00 20 02.1	+1.4
	comp=E,0.8nm,0.2s,SNR=7.9						
CSOR	Sort	9.26	40	P	Pn	00 20 03.4	+1.1
	comp=E,0.5nm,0.2s,SNR=7.9						
CSOR				S	Sn	00 21 38.0	-8.5
	comp=E,0.2nm,0.2s,SNR=7.9						

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*IDC **21** 00:22:41.1±1.2, 11.°43S×165.°10E, h0^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.7/24, mbtmp3.7/8, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/21, Error ellipse: s-maj=40.7km s-min=22.9km az=135.0*

*ISCJB **21** 00:22:44.9±0.8, 11.°5S±0.°1×164.°91E±0.°09, h34^{km}, mb3.7/6, MS2.9/1, Error ellipse: s-maj=16.6km s-min=11.3km az=31.5*

ISC 21 00:22:46.5±0.9**, 11.°4S**±0.°1×**165.°0E**±0.°1**, h34**^{km}**, n16, σ0^{s}92**/9**, mb3.6**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.33	292	Sn	Sn	00 25 03.6	-0.5
	33nm,0.3s,baz=156,slow=7.5,SNR=4.2						
DZM	Mont Dzumac	10.66	173	Pn	Pn	00 25 17.3	+0.3
	0.3nm,0.3s,baz=321,slow=12,SNR=9.1						
CTA	Charters Tower	19.95	242	P	Pn	00 27 17.3	-0.3
	0.7nm,0.3s,baz=61,slow=13,SNR=2.6						
STKA	Stephens Creek	29.64	223	LR	LR	00 40 05.9	
	comp=Z,31nm,20.1s,baz=26,slow=35						
H11S2	WAKE ISLAND Hy	29.79	3	T	T	01 00 09.2	
	baz=184,slow=76,SNR=6.2						
H11S3	WAKE ISLAND Hy	29.80	3	T	T	01 00 10.1	
	baz=184,slow=76,SNR=5.8						
H11S1	WAKE ISLAND Hy	29.81	3	T	T	01 00 11.1	
	baz=184,slow=76,SNR=6.5						
WRA	Warramunga Arr	30.64	250	P	P	00 28 57.7	-0.2
	0.4nm,0.6s,baz=80,slow=8.9,SNR=3.6						
H11N1	WAKE ISLAND Hy	31.02	4	T	T	01 01 43.4	
	baz=183,slow=76,SNR=5.5						
H11N3	WAKE ISLAND Hy	31.02	4	T	T	01 01 46.0	
	baz=183,slow=76,SNR=6.5						
H11N2	WAKE ISLAND Hy	31.04	4	T	T	01 01 44.5	
	baz=183,slow=76,SNR=6.0						
ASAR	Alice Springs	31.94	243	P	P	00 29 08.8	-0.5
	0.6nm,0.7s,baz=72,slow=9.8,SNR=5.4						
SONM	Songino Array	78.54	324	P	P	00 34 45.7	+1.1
	0.3nm,0.7s,baz=129,slow=5.7,SNR=2.9						
ILAR	Eielson Array	84.13	19	P	P	00 35 13.8	+0.1
	0.5nm,0.9s,baz=213,slow=8.2,SNR=3.4						
NVAR	Mina Array Bea	86.86	50	P	P	00 35 26.6	-1.5
	0.5nm,0.6s,baz=264,slow=6.0,SNR=2.3						
MKAR	Makanchi Array	93.29	317	P	P	00 35 58.8	+0.9
	0.6nm,0.8s,baz=101,slow=6.4,SNR=7.5						

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*ISCJB **21** 01:03:36.0±0.6, 51.°39N±0.°07×176.°89W±0.°07, h48^{km}, mb3.9/15, Error ellipse: s-maj=9.8km s-min=5.9km az=165.7*

*IDC **21** 01:03:36.6±4.3, 51.°59N×176.°92W, h32^{km}±29^{km}, mb3.5/13, mb1 3.8/14, mb1mx3.6/57, mbtmp3.8/14, ML4.7/1, Error ellipse: s-maj=29.4km s-min=15.0km az=171.0*

*NEIC **21** 01:03:38.5±0.0, 51.°50N×176.°67W, h33^{km}, ML4.0(AEIC), After AEIC.*

ISC 21 01:03:37.9±0.7**, 51.°47N**±0.°10×**176.°89W**±0.°06**, h48**^{km}**, n39, σ1^{s}14**/41**, mb4.0**/15**, 2D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	Kanaga Island	0.41	337	P	Pn	01 03 48.8	+0.7
KIWB				S	Sn	01 03 56.7	+1.4
ADK	Adak	0.43	17	P	Pn	01 03 47.5	-0.8
ADK				S	Sn	01 03 54.6	-1.0
GSIG	Igitkin Island	0.79	49	P	Pn	01 03 51.5	-1.3
KOWE	Korovin West	1.86	60	P	Pn	01 04 07.4	0.0
KOFP	Korovin Flat P	1.91	64	P	Pn	01 04 07.8	-0.2
KOSE	Korovin Southe	1.96	62	P	Pn	01 04 09.1	+0.4
NIKH	Nikolski High	5.16	70	P	Pn	01 04 53.0	+0.5
MREP	Makushin Rep't	6.60	65	P	Pn	01 05 12.8	+0.5
MSW	Makushin Switc	6.61	64	P	Pn	01 05 13.6	+1.1
UNV	Unalaska Valle	6.75	65	P	Pn	01 05 15.7	+1.4
SPIA	Saint Paul Isl	6.91	32	P	Pn	01 05 17.9	+1.5
KDAK	Kodiak Island	15.38	56	Pn	Pn	01 07 10.0	-1.4
	2.9nm,0.3s,baz=264,slow=6.5,SNR=12						
KDAK				Sn	Sn	01 10 02.5	+2.1
	0.2nm,0.3s,baz=112,slow=22,SNR=3.1						
SEY	Seymchan	19.99	317	P	Pn	01 08 08.9	+0.9
	baz=121,slow=11,SNR=3.5						
ILAR	Eielson Array	20.43	38	P	P	01 08 10.9	+0.1
	0.6nm,0.5s,baz=242,slow=10.0,SNR=9.2						
ILAR				PcP	PcP	01 12 19.1	-2.0
	0.2nm,0.5s,baz=273,slow=3.2,SNR=3.4						
INK	Inuvik	26.70	35	P	P	01 09 11.9	-0.2
	0.7nm,0.4s,baz=316,slow=32,SNR=7.6						
ASAJ	Asahikawa	27.90	271	P	P	01 09 20.6	-2.5
	12nm,1.0s,baz=54,slow=19,SNR=2.2						
KLR	Kul'dur	32.30	287	P	P	01 10 02.0	0.0
	0.5nm,0.5s,baz=72,slow=9.6,SNR=3.3						
H11N2	WAKE ISLAND Hy	34.15	208	T	T	01 46 41.9	
	baz=18,slow=76,SNR=513						
H11N3	WAKE ISLAND Hy	34.16	208	T	T	01 46 43.4	
	baz=18,slow=76,SNR=612						
H11N1	WAKE ISLAND Hy	34.16	208	T	T	01 46 43.1	
	baz=18,slow=76,SNR=564						
YKA	Yellowknife Ar	34.30	47	P	P	01 10 17.6	-1.6
	0.4nm,0.7s,baz=284,slow=8.1,SNR=5.2						
YKA				PcP	PcP	01 12 54.0	-0.3
	0.8nm,0.8s,baz=284,slow=3.0,SNR=11						
H11S1	WAKE ISLAND Hy	35.36	208	T	T	01 48 15.7	
	baz=18,slow=76,SNR=472						
H11S2	WAKE ISLAND Hy	35.38	208	T	T	01 48 17.9	
	baz=18,slow=76,SNR=377						
H11S3	WAKE ISLAND Hy	35.38	208	T	T	01 48 19.8	
	baz=18,slow=76,SNR=211						
PDAR	Pinedale Array	45.14	73	P	P	01 11 50.1	+0.4
	8.1nm,0.3s,baz=324,slow=4.5,SNR=8.6						
SONM	Songino Array	47.67	298	P	P	01 12 09.0	-0.4
	0.2nm,0.3s,baz=50,slow=4.5,SNR=6.3						
SONM				PcP	PcP	01 13 38.5	+0.3
	0.4nm,0.4s,baz=75,slow=1.2,SNR=3.8						
TXAR	Lajitas Array	57.46	83	P	P	01 13 22.7	+0.7
	1.4nm,0.8s,baz=316,slow=5.0,SNR=2.5						
TXAR				ScP	ScP	01 18 13.7	+2.9
	0.8nm,0.6s,baz=339,slow=3.9,SNR=3.9						
KURK	Kurchatov	59.81	315	P	P	01 13 38.0	+0.1
KURK	Kurchatov	59.81	315	⇓P	P	01 13 36.6	-1.3
	1.3nm,0.7s						
KURBB	Kurchatov Arra	59.92	315	P	P	01 13 38.0	-0.7
	0.7nm,0.3s,baz=46,slow=6.7,SNR=17						
KURBB	Kurchatov Arra	59.92	315	⇓P	P	01 13 37.8	-0.8
	1.4nm,0.4s						
MKAR	Makanchi Array	60.91	309	P	P	01 13 45.0	-0.4

	0.2nm,0.5s,baz=45,slow=8.4,SNR=4.4						
BVAR	Borovoye Array	61.58	321	P	P	01 13 50.3	+0.4
	0.6nm,0.5s,baz=52,slow=8.6,SNR=5.3						
BVAR				PcP	PcP	01 14 31.2	0.0
	0.4nm,0.5s,baz=33,slow=5.5,SNR=2.7						
CMAR	Chiang Mai Arr	72.19	277	P	P	01 14 58.6	+0.8
	0.6nm,0.3s,baz=27,slow=8.3,SNR=2.8						
WRA	Warramunga Arr	82.92	225	P	P	01 15 58.2	+0.8
	0.4nm,0.5s,baz=33,slow=5.9,SNR=5.0						
BRTR	Keskin Array B	85.34	337	P	P	01 16 10.0	+0.1
	0.8nm,0.8s,baz=10,slow=8.8,SNR=3.1						
ASAR	Alice Springs	86.38	224	P	P	01 16 16.5	+1.6
	0.7nm,0.8s,baz=31,slow=5.8,SNR=5.3						
TORD	Torodi Ar. Bea	115.64	2	PKP	PKiKP	01 22 13.6	-1.3
	0.2nm,0.6s,baz=343,slow=3.6,SNR=4.2						
BOSA	Boshof	151.77	316	PKPbc	PKPbc	01 23 27.1	+0.1
	2.1nm,0.6s,baz=356,slow=4.4,SNR=7.1						

IDC ***21*** *01:05:53.7±1.1, 40°.90N×48°.40E, h0^{km}, mb3.5/6, mb1 3.6/11, mb1mx3.4/46, mbtmp3.5/11, ML3.5/4, Error ellipse: s-maj=26.6km s-min=10.6km az=152.0*
MOS ***21*** *01:05:58.4±0.0, 40°.80N×48°.52E, h23^{km}, MPVA4.6*
TEH ***21*** *01:05:58.9, 40°.72N×48°.34E, h28^{km}, ML3.8*
AZER ***21*** *01:05:59.5±0.0, 40°.73N×48°.33E, h42^{km}, ml3.4/30, Error ellipse: s-maj=0.9km s-min=0.6km az=43.0*
ISCJB ***21*** *01:06:00.8±0.2, 40°.66N±0°.02×48°.35E±0°.03, h28^{km}, mb3.7/7, Error ellipse: s-maj=2.8km s-min=2.1km az=167.9*
ISC 21 01:05:58.5±0.6**, 40°.73N**±0°.02×**48°.36E**±0°.02**, h28**^{km}**, n89, σ2^{s}40**/126**, mb3.5**/7**, 24C-34D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IML	Ismayilli	0.15	297	*e*Pg	Pn	01 06 06.9	+1.9
IML	Ismayilli	0.15	297	⇓P	Pn	01 06 07.0	+1.9
	SNR=88						
IML				⇓S	Sb	01 06 13.3	+5.5
PQL	Pirkuli	0.19	70	*e*Pg	Pn	01 06 07.2	+1.6
PQL	Pirkuli	0.19	70	⇑P	Pn	01 06 07.3	+1.6
	SNR=2260						
PQL				⇓S	Sb	01 06 13.9	+5.3
KDMR	Kurdemir	0.37	201	*e*Pg	Pn	01 06 09.0	+1.0
KDMR	Kurdemir	0.37	201	⇓P	Pn	01 06 09.0	+1.0
	SNR=9.1						
KDMR				⇓S	Sn	01 06 17.8	+3.5
QBL	Gabala	0.45	299	*e*Pg	Pn	01 06 10.3	+1.1
QBL	Gabala	0.45	299	⇓P	Pn	01 06 10.3	+1.1
	SNR=189						
QBL				⇑S	Sn	01 06 19.2	+2.7
XNQ	Khinaliq	0.48	340	*e*Pg	Pn	01 06 10.8	+1.1
XNQ	Khinaliq	0.48	340	⇓P	Pn	01 06 10.8	+1.1
	SNR=974						
XNQ				⇑S	Sn	01 06 19.8	+2.6
GBS	Qobustan	0.48	113	*e*Pg	Pn	01 06 11.1	+1.5
GBS	Qobustan	0.48	113	⇓P	Pn	01 06 11.2	+1.5
	SNR=403						
GBS				⇓S	Sn	01 06 21.8	+4.6
SIZA	Siyzn	0.54	49	*e*Pg	Pn	01 06 11.7	+1.3
SIZA	Siyzn	0.54	49	⇑P	Pn	01 06 11.7	+1.3
	SNR=439						
SIZA				⇓S	Sn	01 06 23.1	+4.5
QUBA	Quba, Azerbaij	0.64	9	⇑P	Pn	01 06 13.9	+2.2
	SNR=365						
QUBA				⇓S	Sn	01 06 25.7	+4.7
QUB	Quba	0.65	0	*e*Pg	Pn	01 06 13.8	+1.8
ZRD	Zardab	0.68	229	*e*Pg	Pn	01 06 13.9	+1.7
ZRD	Zardab	0.68	229	⇓P	Pn	01 06 13.9	+1.7
	SNR=75						
ZRD				⇓S	Sn	01 06 26.6	+4.7
QSAR	Qusar	0.79	355	*e*Pg	Pn	01 06 16.0	+2.2
QSAR	Qusar	0.79	355	⇓P	Pn	01 06 16.1	+2.2
	SNR=488						
QSAR				⇓S	Sn	01 06 28.8	+4.0
SAAT	Saatly	0.86	177	*e*Pg	Pb	01 06 16.0	+1.1
SAAT	Saatly	0.86	177	⇑P	Pb	01 06 15.7	+0.8
	SNR=23						
SAAT				⇑S	Sn	01 06 29.8	+3.4
AKT	Akhty	0.89	328	*e*Pg	Pb	01 06 17.4	+1.9
AKT				*e*Sg	Sn	01 06 30.9	+3.5
KSMR	Kasumkent	0.89	349	*i* Pg	Pb	01 06 17.5	+2.0
KSMR				*e*Sg	Sn	01 06 31.5	+4.2
ALIB	Äli-Bayra	0.91	147	*e*Pg	Pb	01 06 18.2	+2.5
ALIB	Äli-Bayra	0.91	147	⇓P	Pb	01 06 18.1	+2.4
	SNR=65						
ALIB				⇑S	Sn	01 06 33.3	+5.7
MNGR	Mingechevir, A	0.97	273	*e*Pg	Pb	01 06 18.5	+1.8
MNGR	Mingechevir, A	0.97	273	⇑P	Pb	01 06 18.3	+1.6
	SNR=47						
MNGR				⇓S	Sb	01 06 33.2	+4.1
SEKA	Sheki	1.00	299	*e*Pg	Pb	01 06 18.6	+1.3
SEKA	Sheki	1.00	299	⇑P	Pb	01 06 18.4	+1.1
	SNR=680						
SEKA				⇓S	Sb	01 06 33.0	+2.9
BRDA	Brd	1.01	243	*e*Pg	Pb	01 06 19.3	+1.9
BRDA	Brd	1.01	243	⇓P	Pb	01 06 18.9	+1.6
	SNR=29						
BRDA				⇑S	Sb	01 06 34.3	+4.0
GOBA	Gobu	1.09	107	⇓P	Pb	01 06 20.1	+1.3
GOBA				⇓S	Sb	01 06 38.0	+5.3
NDR	Nardaran	1.25	96	⇑P	Pb	01 06 22.1	+0.7
NDR				⇑S	Sb	01 06 39.9	+2.9
DRN	Derbent	1.30	359	*e*Pg	Pb	01 06 22.1	-0.2
DRN				*e*Sg	Sb	01 06 40.1	+1.5
GALA	Gala	1.40	102	⇓S	Sb	01 06 42.4	+0.9
GLBA	Clilabad	1.48	179	*e*Pn	Pb	01 06 24.8	-0.5
GLBA	Clilabad	1.48	179	⇑Pn	Pn	01 06 24.1	+0.9
	SNR=117						
GLBA				⇓Sn	Sb	01 06 45.0	+1.2
URKR	Urkarakh	1.54	339	*i* Pg	Pb	01 06 26.6	+0.1
URKR				*e*Sg	Sb	01 06 47.0	+1.4
GANJ	Ganja	1.55	268	*e*Pn	Pb	01 06 25.6	-1.0
GANJ	Ganja	1.55	268	⇑Pn	Pn	01 06 25.5	+1.2
	SNR=38						
GANJ				⇑Sn	Sb	01 06 45.3	-0.5
ZKTA	Zakatala	1.60	305	*e*Pn	Pb	01 06 27.7	+0.4
ZKTA	Zakatala	1.60	305	⇓Pn	Pb	01 06 27.2	-0.2
	SNR=27						
ZKTA				⇑Sn	Sb	01 06 49.6	+2.5
KMKR	Kumukh	1.69	326	⇓*i*PG	Pb	01 06 30.0	+0.9
KMKR				*e*S	Sb	01 06 53.0	+2.9
KMKR				pmax	pmax		
	comp=Z,59nm,0.2s						
KMKR	Kumukh	1.69	326	*i* Pg	Pb	01 06 30.0	+0.9
KMKR				*e*Sg	Sb	01 06 53.0	+2.9
DDFL	Dedoflistskaro	1.84	294	P	Pb	01 06 32.1	+0.6
DDFL				S	Sb	01 07 01.1	+7.0
GNBR	Gunib	1.96	328	*e*Pg	Pb	01 06 33.6	0.0
GNBR				*e*Sg	Sb	01 07 00.0	+2.3
GDB	GEDABAY	1.98	271	*e*Pn	Pn	01 06 31.6	+1.3
GDB	GEDABAY	1.98	271	⇑Pn	Pn	01 06 31.3	+1.0
	SNR=280						
GDB				⇑Sn	Sb	01 06 56.6	-1.6
LKRN	Lenkeran, Azer	2.04	171	*e*Pn	Pn	01 06 32.9	+2.0
LKRN	Lenkeran, Azer	2.04	171	⇓Pn	Pn	01 06 31.0	+0.1
	SNR=14						
LKRN				⇓Sn	Sb	01 06 59.5	-0.2
LRK	Lerik	2.08	180	*e*Pn	Pn	01 06 33.4	+1.7
LRK	Lerik	2.08	180	⇓Pn	Pn	01 06 32.0	+0.3
	SNR=50						
LRK				⇓Sn	Sb	01 06 59.8	-1.3
ASTR	Astara	2.19	171	⇑Pn	Pn	01 06 32.6	-0.4
ASTR				⇓Sn	Sb	01 07 03.3	-0.7
QZX	Qazax, Azerbai	2.29	279	*e*Pn	Pn	01 06 36.1	+1.7
QZX	Qazax, Azerbai	2.29	279	⇓Pn	Pn	01 06 36.2	+1.7
QZX				⇑Sn	Sb	01 07 05.3	-1.7
SBZ	Shahbuz	2.53	239	⇓Sn	Sn	01 07 09.4	+1.7
ORD	Ordubad	2.56	226	⇑Pn	Pn	01 06 40.0	+1.8
ORD				⇓Sn	Sn	01 07 11.6	+3.2
DBC	Dubki	2.56	334	*e*Pn	Pb	01 06 43.6	-0.2
DBC				*e*Sn	Sb	01 07 12.8	-2.1
IHRS	Heris	2.61	203	*e*Pn	Pn	01 06 40.2	+1.2
IHRS				IAMB	IAmb	01 07 18.9	
	comp=Z,5µm,0.2s						
NAX	Nakhchivan	2.69	236	⇓Pn	Pn	01 06 41.6	+1.6
NAX				⇑Sn	Sn	01 07 15.1	+3.4
GNI	Garni	2.82	259	Pn	Pn	01 06 44.5	+2.7
	comp=Z,1.5nm,0.3s,baz=128,slow=23,SNR=6.7						
GNI				Lg	Lg	01 07 24.7	
	comp=Z,6.6nm,0.3s,baz=339,slow=16,SNR=3.6						
HYR	Heyderabad	2.87	251	⇑Pn	Pn	01 06 45.1	+2.7
ISRB	Sarab	2.95	191	*e*Pn	Pn	01 06 45.5	+1.9
ISRB				IAMB	IAmb	01 07 28.9	
	comp=Z,1µm,0.4s						
ITBZ	Tabriz	3.02	215	*e*Pn	Pn	01 06 46.9	+2.3
ITBZ				IAMB	IAmb	01 06 57.0	
	comp=Z,1µm,0.4s						
IBST	Bostanabad	3.23	201	*e*Pn	Pn	01 06 48.4	+0.9
IBST				IAMB	IAmb	01 06 58.2	
	comp=Z,649nm,0.2s						
IAZR	Azarshahr	3.56	212	*e*Pn	Pn	01 06 54.1	+2.0
IAZR				IAMB	IAmb	01 07 58.6	
	comp=N,3µm,0.5s						
IPRN	Peran	5.46	144	*e*Pn	Pn	01 07 17.2	-0.9
IPRN				IAMB	IAmb	01 08 19.1	
	comp=Z,2µm,0.3s						
IALA	Alasht	5.80	142	*e*Pn	Pn	01 07 22.7	-0.3
IALA				IAMB	IAmb	01 08 28.5	
	comp=E,2µm,0.2s						
IDMV	Damavand	5.90	149	*e*Pn	Pn	01 07 25.3	+1.0
IDMV				IAMB	IAmb	01 08 30.8	
	comp=Z,219nm,0.2s						
ISHM	Shahmirzad	6.26	140	*e*Pn	Pn	01 07 28.8	-0.4
ISHM				IAMB	IAmb	01 08 39.4	
	comp=Z,825nm,0.2s						
IVIS	Veis	6.30	191	*e*Pn	Pn	01 07 33.8	+4.1
IVIS				IAMB	IAmb	01 07 35.1	
	comp=Z,110nm,0.4s						
GEYT	Alibeck	8.06	107	Pn	Pn	01 07 51.1	-2.6
	comp=Z,0.8nm,0.3s,baz=12,slow=7.4,SNR=1.8						
GEYT				Sn	Sn	01 09 19.2	-4.8
	comp=Z,0.8nm,0.3s,baz=304,slow=34,SNR=1.4						
ISFR	Sfrayin	8.36	113	*e*Pn	Pn	01 07 57.2	-0.9
ISFR				IAMB	IAmb	01 09 31.3	
	comp=Z,184nm,0.5s						
IEMG	Emamgholi	8.66	109	*e*Pn	Pn	01 07 59.9	-2.3
IEMG				IAMB	IAmb	01 08 06.0	
	comp=Z,124nm,0.1s						
IAKL	Akhelmad	9.11	114	*e*Pn	Pn	01 08 08.0	-0.4
AKTO	Aktyubinsk	11.82	32	Pn	Pn	01 08 41.4	-3.7
	comp=Z,0.1nm,0.3s,baz=217,slow=10,SNR=1.9						
AKTO				Sn	Sn	01 10 45.9	-10
	comp=Z,0.3nm,0.3s,baz=191,slow=23,SNR=4.4						
IDI	Anoyia	19.25	261	P	P	01 10 20.7	0.0
	comp=Z,0.2nm,0.3s,baz=41,slow=11,SNR=3.4						
BVAR	Borovoye Array	19.35	43	P	P	01 10 19.2	-2.4
	comp=Z,0.2nm,0.3s,baz=232,slow=6.5,SNR=5.4						
KURBB	Kurchatov Arra	23.14	55	P	P	01 11 00.1	-2.2
	comp=Z,0.8nm,0.9s,baz=265,slow=9.8,SNR=5.0						
FINES	FINESS Array B	24.79	334	P	P	01 11 16.0	-1.6
FINES	FINESS Array B	24.79	334	P	P	01 11 16.0	-1.6
	comp=Z,1.0nm,0.6s,baz=142,slow=10,SNR=7.3						
MKAR	Makanchi Array	25.11	65	P	P	01 11 19.4	-1.5
	comp=Z,1.0nm,0.8s,baz=264,slow=7.8,SNR=9.1						
HFS	Hagfors	28.89	324	P	P	01 11 52.9	-1.7
HFS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HFS	Hagfors	28.89	324	P	P	01 11 52.9	-1.7
	comp=Z,3.4nm,1.0s,baz=134,slow=10,SNR=3.3						
NOA	NORSAR Array B	30.39	324	P	P	01 12 05.5	-2.4
NOA	NORSAR Array B	30.39	324	P	P	01 12 05.5	-2.4
	comp=Z,15nm,0.4s,baz=113,slow=12,SNR=2.1						
TORD	Torodi Ar. Bea	49.08	250	P	P	01 14 43.5	+0.1
	comp=Z,0.4nm,0.8s,baz=35,slow=9.4,SNR=2.7						
YKA	Yellowknife Ar	76.22	352	P	P	01 17 42.0	-1.8
	comp=Z,0.2nm,0.5s,baz=9.0,slow=5.5,SNR=6.0						

NORS ***21*** *01:06:13.9±0.0, 42°.59N×45°.54E, h10^{km}, MPVA4.0*
DRS ***21*** *01:06:14.7±0.0, 42°.63N×45°.43E, h13^{km}*
TIF ***21*** *01:06:14.3, 42°.64N×45°.66E, h22^{km}±3^{km}*
MOS ***21*** *01:06:15.5±0.9, 42°.57N×45°.53E, h10^{km}, mb4.0/2, Error ellipse: s-maj=6.5km s-min=4.8km az=38.6*
ISC 21 01:06:15.2±1.1**, 42°.55N**±0°.02×**45°.53E**±0°.01**, h4**^{km}±9^{km}**, n88, σ0^{s}84**/161**, 7C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	Botlikh	0.52	78	*e*PG	Pb	01 06 26.1	-0.9
BTLR				*e*S	Sb	01 06 34.0	-0.9
BTLR	Botlikh	0.52	78	*e*Pg	Pb	01 06 26.1	-0.9
BTLR				*e*Sg	Sb	01 06 34.0	-0.9
DVE	Vedeno	0.60	47	⇓*i*PG	Pg	01 06 27.0	+0.4
DVE				*e*S	Sg	01 06 35.2	+0.8
DVE	Vedeno	0.60	47	*i* Pg	Pg	01 06 26.8	+0.2
DVE				*e*Sg	Sg	01 06 35.1	+0.7
GROC	Groznyy	0.68	17	⇓*i*PG	Pb	01 06 29.0	-0.6
GROC				*e*S	Sb	01 06 39.1	-0.2
GROC	Groznyy	0.68	17	*i* Pg	Pb	01 06 28.8	-0.7
GROC				*e*Sg	Sb	01 06 39.1	-0.2
KMGR	Komgaron	0.70	316	⇑*i*PG	Pg	01 06 29.1	+0.5
KMGR				*e*S	Sb	01 06 40.8	+0.8
KMGR	Komgaron	0.70	316	*i* Pg	Pg	01 06 29.1	+0.5
KMGR				*e*Sg	Sb	01 06 40.9	+0.8
GUDG	Gudauri	0.78	264	P	Pb	01 06 31.2	-0.2
GUDG				S	Sg	01 06 40.5	+0.2
VLKR	Vladikavkaz	0.80	308	*e*PG	Pb	01 06 31.3	-0.3
VLKR				*e*S	Sb	01 06 42.6	-0.2
VLKR	Vladikavkaz	0.80	308	*e*Pg	Pb	01 06 31.3	-0.3
VLKR				*e*Pg	Pb	01 06 31.3	-0.3
VLKR				*e*Sg	Sb	01 06 42.6	-0.2
VLKR				*e*Sg	Sb	01 06 42.6	-0.2
XNZR	Khunzakh	0.87	90	⇑*e*PG	Pb	01 06 33.2	+0.3
XNZR				*e*		01 06 45.7	
XNZR	Khunzakh	0.87	90	*e*Pg	Pb	01 06 33.3	+0.3
XNZR				*e*Sg	Sb	01 06 45.6	+0.7
LGD	Lagodekhi	0.89	143	P	Pg	01 06 32.1	-0.2
LGD				S	Sg	01 06 44.6	+0.8
LGD	Lagodekhi	0.89	143	*e*PG	Pg	01 06 32.0	-0.2
LGD				*e*S	Sg	01 06 44.6	+0.8
LGD	Lagodekhi	0.89	143	*e*Pg	Pg	01 06 32.1	-0.2
LGD				*e*Sg	Sg	01 06 44.6	+0.8
UNCR	Uncukul	0.95	80	⇓*i*PG	Pb	01 06 34.0	-0.2
UNCR				*e*S	Sn	01 06 49.0	-0.3
UNCR				pmax	pmax		
	comp=Z,178nm,0.2s						
UNCR	Uncukul	0.95	80	*i* Pg	Pb	01 06 34.0	-0.2
UNCR				*e*Sg	Sn	01 06 49.0	-0.3
LACR	Lac	0.95	287	⇓*i*PG	Pg	01 06 32.9	-0.5
LACR				*e*S	Sg	01 06 44.6	-1.1
LACR	Lac	0.95	287	*i* Pg	Pg	01 06 32.4	-1.0
LACR				*e*Sg	Sg	01 06 44.6	-1.1
DLMR	Dylym	0.96	57	*e*PG	Pg	01 06 33.5	-0.1
DLMR				*e*S	Sb	01 06 47.0	-0.5
DLMR				pmax	pmax		
	comp=Z,172nm,0.1s						
DLMR	Dylym	0.96	57	*e*Pg	Pg	01 06 33.5	-0.1
DLMR				*e*Sg	Sb	01 06 47.0	-0.5
TBLG	Delisi	1.01	216	P	Pn	01 06 36.4	+0.2
TBLG				S	Sn	01 06 51.3	+0.5
TBLG	Delisi	1.01	216	*e*PG	Pn	01 06 36.3	+0.2
TBLG				*e*S	Sn	01 06 51.3	+0.5
TBLG	Delisi	1.01	216	*i* P	Pn	01 06 36.9	+0.7
TBLG				*i* S	Sn	01 06 51.7	+0.9
TBLG				IAML_P			
	comp=Z,5µm,0.2s						
TBLG	Delisi	1.01	216	*e*Pg	Pn	01 06 36.4	+0.2
TBLG				*e*Sg	Sn	01 06 51.3	+0.5
BTNK	Botanikuri	1.02	212	P	Pn	01 06 36.7	+0.3
BTNK				S	Sn	01 06 52.1	+0.9
BTNK	Botanikuri	1.02	212	*i* P	Pn	01 06 37.1	+0.8
BTNK				IAML_P			
	comp=Z,8µm,0.1s						
KRNR	Karanay	1.05	74	*i* PG	Pb	01 06 36.0	0.0
KRNR				*e*S	Sb	01 06 50.0	-0.2
KRNR				pmax	pmax		
	comp=Z,207nm,0.2s						
KRNR	Karanay	1.05	74	*i* Pg	Pb	01 06 36.0	0.0
KRNR				*e*Sg	Sb	01 06 50.0	-0.2
DBC	Dubki	1.06	64	*e*PG	Pb	01 06 36.0	-0.2
DBC				*e*S	Sn	01 06 51.3	-1.0
DBC	Dubki	1.06	64	*e*Pg	Pg	01 06 35.5	-0.1
DBC				*e*Sg	Sn	01 06 51.3	-1.0
GNBR	Gunib	1.07	98	⇓*i*PG	Pn	01 06 36.7	-0.3
GNBR				*e*S	Sn	01 06 51.8	-0.7
GNBR				pmax	pmax		
	comp=Z,276nm,0.4s						
GNBR	Gunib	1.07	98	*e*Pg	Pn	01 06 36.8	-0.3
GNBR				*e*Sg	Sb	01 06 50.9	+0.2
BTKR	Batakoyurt	1.09	319	*e*PG	Pn	01 06 37.1	-0.2
BTKR				*e*S	Sn	01 06 53.6	+0.7
BTKR	Batakoyurt	1.09	319	*e*Pg	Pn	01 06 37.1	-0.2
BTKR				*e*Sg	Sn	01 06 53.6	+0.7
BUJR	Buynaksk	1.20	76	*e*PG	Pn	01 06 38.5	-0.2
BUJR				*e*S	Sn	01 06 55.0	-0.4
BUJR				pmax	pmax		
	comp=Z,82nm,0.3s						
BUJR	Buynaksk	1.20	76	*e*Pg	Pn	01 06 38.5	-0.2
BUJR				*e*Sg	Sn	01 06 55.0	-0.4
KORR	Kora	1.20	297	*e*PG	Pb	01 06 38.7	+0.2
KORR				*e*S	Sn	01 06 55.7	+0.1
KORR	Kora	1.20	297	*e*Pg	Pg	01 06 38.3	+0.1
KORR				*e*Sg	Sn	01 06 55.7	+0.1
ZEI	Tsey	1.22	282	*e*PG	Pg	01 06 37.5	-1.1
ZEI				*e*S	Sb	01 06 55.2	0.0
ZEI	Tsey	1.22	282	*e*Pg	Pg	01 06 37.5	-1.1
ZEI				*e*Sg	Sb	01 06 55.2	0.0
TRKR	Terskaya	1.31	334	*e*PG	Pb	01 06 40.2	-0.1
TRKR				*e*S	Sn	01 06 58.5	+0.4
TRKR	Terskaya	1.31	334	*e*Pg	Pb	01 06 40.2	-0.1
TRKR				*e*Sg	Sn	01 06 58.0	-0.1
STDR	Stavd-Durt	1.35	308	*e*PG	Pb	01 06 41.3	+0.3
STDR				*e*S	Sn	01 07 01.0	+1.8
STDR	Stavd-Durt	1.35	308	*e*Pg	Pb	01 06 41.0	0.0
STDR				*e*Sg	Sn	01 07 00.7	+1.5
KZRT	Kazreti	1.44	216	P	Pg	01 06 43.3	+0.5
KZRT				S	Sn	01 07 02.9	+1.5
LSNR	Lesken	1.45	301	*e*PG	Pg	01 06 42.8	-0.1
LSNR				*e*S	Sn	01 07 03.1	+1.5
LSNR	Lesken	1.45	301	*e*Pg	Pg	01 06 42.8	-0.1
LSNR				*e*Sg	Sn	01 07 03.1	+1.5
TRLG	Trialeti	1.47	227	P	Pg	01 06 44.0	+0.7
DIGR	Digorskoe uzhe	1.48	284	⇓*i*PG	Pn	01 06 42.4	-0.3
DIGR				*e*S	Sg	01 07 01.7	-1.0
DIGR	Digorskoe uzhe	1.48	284	*e*Pg	Pn	01 06 41.8	-1.0
DIGR				*e*Sg	Sg	01 07 01.6	-1.0
PRTR	Priterechnaya	1.51	323	*e*PG	Pn	01 06 42.7	-0.2
PRTR				*e*S	Sg	01 07 04.1	+0.6
PRTR	Priterechnaya	1.51	323	*e*Pg	Pn	01 06 41.7	-1.2
PRTR				*e*Sg	Sg	01 07 03.9	+0.3
MAK	Makhachkala	1.51	74	⇑*i*PG	Pg	01 06 45.4	+1.3
MAK				*e*		01 07 07.5	
MAK				pmax	pmax		
	comp=Z,108nm,0.6s						
MAK				smax	smax		
	comp=E,622nm,0.5s						
MAK				smax	smax		
	comp=E,767nm,0.6s						
MAK	Makhachkala	1.51	74	*e*Pg	Pb	01 06 43.4	-0.4
MAK				*e*Sg	Sg	01 07 04.9	+1.2
NCK	Nalchik	1.70	304	*e*PN	Pb	01 06 47.2	+0.2
NCK				*e*S	Sg	01 07 09.6	-0.3
NCK	Nalchik	1.70	304	*e*Pg	Pb	01 06 46.7	-0.3
NCK				*e*Sg	Sn	01 07 08.4	+0.5
BGD	Bogdanovka	1.93	229	P	Pg	01 06 52.1	-0.1
BGD				S	Sg	01 07 17.9	+0.7
AKT	Akhty	1.96	122	*e*Pg	Pb	01 06 50.8	-0.6
KBTC	Kuba-Taba	2.00	310	*e*PN	Pb	01 06 51.4	-0.7
KBTC	Kuba-Taba	2.00	310	*e*Pg	Pn	01 06 50.7	+0.9
KBTC				*e*Sg	Sb	01 07 17.0	-0.4
DRN	Derbent	2.14	103	*e*Pg	Pb	01 06 54.3	-0.2
NEY	Neytrino	2.18	290	*e*PN	Pb	01 06 54.5	-0.7
NEY				*e*S	Sb	01 07 23.0	+0.4
NEY	Neytrino	2.18	290	*e*Pg	Pn	01 06 53.5	+1.1
NEY				*e*Sg	Sn	01 07 21.3	+1.4
PYA1	Pyatigorsk	2.33	311	*e*PN	Pn	01 06 53.3	-1.0
PYA1	Pyatigorsk	2.33	311	*e*Pn	Pn	01 06 53.3	-1.0
EPOS	Posof	2.34	244	*i* P	Pb	01 06 57.5	-0.4
EPOS				*i* S	Sg	01 07 29.4	-0.8
EAK	Akyaka	2.36	218	*i* P	Pb	01 06 58.1	-0.2
EAK				*i* S	Sb	01 07 28.3	+0.5
EAK				IAML_P			
	comp=Z,1µm,0.5s						
SHA1	Shidzhatmaz	2.41	300	⇑*e*PN	Pn	01 06 55.9	+0.3
SHA1				*e*S	Sb	01 07 28.3	-1.2
SHA1	Shidzhatmaz	2.41	300	*e*Pn	Pn	01 06 55.8	+0.2
SHA1				*e*Pn	Pn	01 06 55.9	+0.2
SHA1				*e*Sn	Sn	01 07 25.0	-0.8
BEYR	Belyy Ugol+	2.46	307	*e*PN	Pn	01 06 55.5	-0.6
BEYR				*e*S	Sn	01 07 27.8	+1.2
KIV0	Kislovodsk Arr	2.50	305	*e*Pn	Pn	01 06 56.7	-0.1
KIV0				*e*Sn	Sn	01 07 27.8	+0.1
KIV	Kislovodsk	2.50	305	*e*PN	Pn	01 06 56.8	0.0
KIV				*e*S	Sb	01 07 30.1	-1.9
KIV	Kislovodsk	2.50	305	*e*Pn	Pn	01 06 57.1	+0.3
KIV				*e*Sn	Sn	01 07 27.9	+0.1
DIGO	Kars	2.68	218	*i* P	Pb	01 07 04.4	+0.5
DIGO				IAML_P			
	comp=Z,770nm,0.2s						
IGDI	IGDIR	2.90	203	*i* P	Pn	01 06 59.1	-3.0
IGDI				IAML_P			
	comp=Z,47nm,0.3s						
DAGI	Agillar	3.08	243	*i* P	Pg	01 07 15.4	+1.2
DAGI				IAML_P			
	comp=Z,170nm,0.3s						
GOF	Gofitskoye	3.08	325	*e*PN	Pg	01 07 17.6	+3.4
GOF				*e*S	Sg	01 07 52.6	-1.6
GOF				pmax	pmax		
	comp=Z,20nm,0.7s						
GOF	Gofitskoye	3.08	325	*e*Pn	Pn	01 07 04.6	0.0
GOF				*e*Sn	Sn	01 07 41.2	-0.8
DBOC	Borcka	3.12	249	*i* P	Pb	01 07 10.0	-1.3
DBOC				IAML_P			
	comp=Z,170nm,0.3s						
DBAD	Bademkaya	3.25	243	*i* P	Pg	01 07 15.9	-1.6
ARXR	Arkhyz	3.28	289	*e*Pn	Pg	01 07 17.4	-0.5
ARXR				*e*Sn	Sg	01 07 57.7	-2.8
GUZR	Guzeripl'	4.21	292	*e*Pn	Pb	01 07 32.1	+2.4
GUZR				*e*Sn	Sb	01 08 20.4	-0.5
ANN	Anapa	6.29	294	*e*P	Pn	01 07 50.3	+1.7
ANN				pmax	pmax		
	comp=Z,109nm,2.2s						
ARU	Arti	16.22	27	⇑*e*P	Pn	01 10 03.6	-0.1
ARU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BRVK	Borovoye	19.57	49	⇑*e*P	Pn	01 10 45.0	-0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.1s						
AAK	Ala-Archa	21.28	80	⇑*e*P	P	01 11 03.1	+0.4
AAK				pmax	pmax		
	comp=Z,5.0nm,2.1s						

NORS ***21*** *01:09:45.6±0.0, 42°.59N×45°.54E, h11^{km}, MPVA3.7*
DRS ***21*** *01:09:47.0±0.0, 42°.55N×45°.50E, h12^{km}*
TIF ***21*** *01:09:47.3, 42°.62N×45°.54E, h18^{km}±3^{km}*
MOS ***21*** *01:09:48.0±0.9, 42°.63N×45°.55E, h14^{km}, mb3.9/1, Error ellipse: s-maj=7.5km s-min=5.0km az=33.8*
ISC 21 01:09:47.7±0.9**, 42°.60N**±0°.02×**45°.53E**±0°.01**, h16**^{km}±8^{km}**, n91, σ1^{s}16**/165**, 6C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	Botlikh	0.52	82	*e*PG	Pb	01 09 57.7	-0.8
BTLR				*e*S	Sb	01 10 05.5	-0.3
BTLR	Botlikh	0.52	82	*e*Pg	Pb	01 09 57.7	-0.8
BTLR				*e*Sg	Sb	01 10 05.5	-0.3
DVE	Vedeno	0.57	51	*c i*PG	Pg	01 09 58.3	-0.7
DVE				*e*S	Sb	01 10 06.8	-0.5
DVE				pmax	pmax		
	comp=Z,109nm,0.2s						
DVE				smax	smax		
	comp=N,455nm,0.3s						
DVE	Vedeno	0.57	51	*i* Pg	Pg	01 09 58.4	-0.7
DVE				*e*Sg	Sb	01 10 06.6	-0.7
GROC	Groznyy	0.64	18	*e*PG	Pb	01 10 00.2	-0.2
GROC				*e*		01 10 08.5	
GROC				pmax	pmax		
	comp=Z,86nm,0.2s						
GROC				smax	smax		
	comp=E,835nm,0.5s						
GROC				smax	smax		
	comp=E,682nm,0.5s						
GROC	Groznyy	0.64	18	*e*Pg	Pb	01 10 00.2	-0.2
GROC				*e*Sg	Sn	01 10 10.8	-1.1
KMGR	Komgaron	0.67	314	*e*PG	Pb	01 10 00.7	-0.3
KMGR				*e*S	Sn	01 10 12.1	-0.6
KMGR	Komgaron	0.67	314	*e*Pg	Pb	01 10 00.7	-0.3
KMGR				*e*Sg	Sn	01 10 12.1	-0.6
VLKR	Vladikavkaz	0.77	306	*e*PG	Pb	01 10 03.0	+0.2
VLKR				*e*S	Sn	01 10 14.4	-0.8
VLKR	Vladikavkaz	0.77	306	*e*Pg	Pb	01 10 03.0	+0.2
VLKR				*e*Pg	Pb	01 10 03.0	+0.2
VLKR				*e*Sg	Sn	01 10 14.4	-0.8
VLKR				*e*Sg	Sn	01 10 14.4	-0.8
GUDG	Gudauri	0.79	261	P	Pb	01 10 03.0	-0.2

GUDG				S	**Sg**	**01 10 12.6**	**-0.9**
XNZR	**Khunzakh**	**0.87**	**93**	*e*PG	**Pb**	**01 10 03.9**	**-0.7**
XNZR				*e*S	**Sb**	**01 10 16.2**	**+0.1**
XNZR	**Khunzakh**	**0.87**	**93**	*e*Pg	**Pn**	**01 10 04.8**	**-0.7**
XNZR				*e*Sg	**Sn**	**01 10 16.9**	**-1.1**
LGD	**Lagodekhi**	**0.93**	**145**	P	**Pn**	**01 10 05.7**	**-0.4**
LGD				S	**Sb**	**01 10 17.8**	**+0.2**
LGD	**Lagodekhi**	**0.93**	**145**	*e*PG	**Pn**	**01 10 05.7**	**-0.4**
LGD				*e*S	**Sb**	**01 10 17.8**	**+0.2**
LGD	**Lagodekhi**	**0.93**	**145**	*e*Pg	**Pn**	**01 10 05.7**	**-0.4**
LGD				*e*Sg	**Sb**	**01 10 17.8**	**+0.2**
LACR	**Lac**	**0.93**	**285**	⇓*i*PG	**Pg**	**01 10 04.4**	**-1.5**
LACR				*e*S	**Sg**	**01 10 16.3**	**-1.9**
LACR	**Lac**	**0.93**	**285**	*e*Pg	**Pg**	**01 10 04.2**	**-1.7**
LACR				*e*Sg	**Sb**	**01 10 17.7**	**-0.1**
DLMR	**Dylym**	**0.94**	**60**	*e*PG	**Pb**	**01 10 05.5**	**-0.1**
DLMR				*e*S	**Sn**	**01 10 18.5**	**-0.9**
DLMR				pmax	pmax		
	comp=Z,103nm,0.1s						
DLMR	**Dylym**	**0.94**	**60**	*e*Pg	**Pb**	**01 10 05.5**	**-0.1**
DLMR				*e*Sg	**Sn**	**01 10 18.5**	**-0.9**
KRNR	**Karanay**	**1.04**	**77**	*i* PG	**Pn**	**01 10 07.8**	**0.0**
KRNR				*i* S	**Sn**	**01 10 22.2**	**+0.1**
KRNR				pmax	pmax		
	comp=Z,129nm,0.2s						
KRNR	**Karanay**	**1.04**	**77**	*i* Pg	**Pn**	**01 10 07.8**	**0.0**
KRNR				*i* Sg	**Sn**	**01 10 22.2**	**+0.1**
TBLG	**Delisi**	**1.05**	**214**	P	**Pn**	**01 10 07.9**	**+0.2**
TBLG				S	**Sn**	**01 10 22.8**	**+0.8**
TBLG	**Delisi**	**1.05**	**214**	*e*PG	**Pn**	**01 10 07.9**	**+0.2**
TBLG				*e*S	**Sn**	**01 10 22.8**	**+0.8**
TBLG	**Delisi**	**1.05**	**214**	*i* P	**Pn**	**01 10 09.0**	**+1.2**
TBLG				*i* S	**Sn**	**01 10 22.9**	**+0.8**
TBLG				IAML_P			
	comp=Z,2μm,0.2s						
TBLG	**Delisi**	**1.05**	**214**	*e*Pg	**Pn**	**01 10 07.9**	**+0.2**
TBLG				*e*Sg	**Sn**	**01 10 22.8**	**+0.8**
DBC	**Dubki**	**1.05**	**66**	*e*PG	**Pn**	**01 10 07.3**	**-0.5**
DBC				*e*S	**Sn**	**01 10 22.1**	**0.0**
DBC	**Dubki**	**1.05**	**66**	*e*Pg	**Pn**	**01 10 07.3**	**-0.5**
DBC				*e*Sg	**Sn**	**01 10 22.1**	**0.0**
BTKR	**Batakoyurt**	**1.06**	**317**	*e*PG	**Pn**	**01 10 08.9**	**+1.0**
BTKR				*e*S	**Sn**	**01 10 24.1**	**+1.7**
BTKR	**Batakoyurt**	**1.06**	**317**	*e*Pg	**Pn**	**01 10 08.9**	**+1.0**
BTKR				*e*Sg	**Sn**	**01 10 24.1**	**+1.7**
BTNK	**Botanikuri**	**1.06**	**211**	P	**Pn**	**01 10 08.3**	**+0.2**
BTNK	**Botanikuri**	**1.06**	**211**	*i* P	**Pn**	**01 10 08.2**	**+0.2**
BTNK				IAML_P			
	comp=Z,3μm,0.1s						
GNBR	**Gunib**	**1.08**	**101**	⇓*i*PG	**Pn**	**01 10 08.3**	**0.0**
GNBR				*e*S	**Sn**	**01 10 23.4**	**+0.4**
GNBR				pmax	pmax		
	comp=Z,184nm,0.4s						
GNBR	**Gunib**	**1.08**	**101**	*i* Pg	**Pn**	**01 10 08.3**	**0.0**
GNBR				*e*Sg	**Sn**	**01 10 23.4**	**+0.4**
KORR	**Kora**	**1.18**	**295**	*e*PG	**Pg**	**01 10 10.0**	**-0.5**
KORR				*e*S	**Sn**	**01 10 26.5**	**+1.2**
KORR	**Kora**	**1.18**	**295**	*e*Pg	**Pg**	**01 10 10.0**	**-0.5**
KORR				*e*Sg	**Sn**	**01 10 26.5**	**+1.2**
BUJR	**Buynaksk**	**1.19**	**78**	*e*PG	**Pg**	**01 10 11.0**	**+0.3**
BUJR				*e*S	**Sn**	**01 10 28.0**	**+2.5**
BUJR				pmax	pmax		
	comp=Z,69nm,0.3s						
BUJR	**Buynaksk**	**1.19**	**78**	*e*Pg	**Pg**	**01 10 11.0**	**+0.3**
BUJR				*e*Sg	**Sn**	**01 10 28.0**	**+2.5**
ZEI	**Tsey**	**1.21**	**280**	*e*PG	**Pn**	**01 10 09.0**	**-1.2**
ZEI				*e*S	**Sb**	**01 10 26.1**	**+0.2**
ZEI	**Tsey**	**1.21**	**280**	*e*Pg	**Pn**	**01 10 09.0**	**-1.2**
ZEI				*e*Sg	**Sb**	**01 10 26.1**	**+0.2**
DDFL	**Dedoflistskaro**	**1.23**	**159**	P	**Pg**	**01 10 14.0**	**+2.5**
DDFL				S	**Sg**	**01 10 35.0**	**+7.3**
KMKR	**Kumukh**	**1.26**	**111**	*e*PG	**Pg**	**01 10 11.5**	**-0.5**
KMKR				*e*S	**Sg**	**01 10 28.5**	**+0.1**
KMKR				pmax	pmax		
	comp=Z,55nm,0.3s						
KMKR	**Kumukh**	**1.26**	**111**	*e*Pg	**Pg**	**01 10 11.5**	**-0.5**
KMKR				*e*Sg	**Sg**	**01 10 28.5**	**+0.1**
TRKR	**Terskaya**	**1.27**	**333**	*e*PG	**Pg**	**01 10 11.8**	**-0.3**
TRKR				*e*S	**Sg**	**01 10 30.1**	**+1.5**
TRKR	**Terskaya**	**1.27**	**333**	*e*Pg	**Pg**	**01 10 11.8**	**-0.3**
TRKR				*e*Sg	**Sg**	**01 10 30.1**	**+1.5**
STDR	**Stavd-Durt**	**1.32**	**306**	*e*PG	**Pg**	**01 10 12.7**	**-0.5**
STDR				*e*S	**Sg**	**01 10 32.4**	**+2.0**
STDR	**Stavd-Durt**	**1.32**	**306**	*e*Pg	**Pg**	**01 10 12.7**	**-0.5**
STDR				*e*Sg	**Sg**	**01 10 32.4**	**+2.0**
LSNR	**Lesken**	**1.42**	**299**	*e*PG	**Pb**	**01 10 13.4**	**-0.4**
LSNR				*e*S	**Sg**	**01 10 33.4**	**-0.2**
LSNR	**Lesken**	**1.42**	**299**	*e*Pg	**Pb**	**01 10 13.4**	**-0.4**
LSNR				*e*Sg	**Sg**	**01 10 33.4**	**-0.2**
DIGR	**Digorskoe uzhe**	**1.46**	**283**	⇓*i*PG	**Pb**	**01 10 14.0**	**-0.7**
DIGR				*e*S	**Sb**	**01 10 33.2**	**+0.1**
DIGR	**Digorskoe uzhe**	**1.46**	**283**	*e*Pg	**Pn**	**01 10 12.8**	**-0.8**
DIGR				*e*Sg	**Sn**	**01 10 32.6**	**0.0**
PRTR	**Priterechnaya**	**1.47**	**322**	*e*PG	**Pg**	**01 10 15.1**	**-0.9**
PRTR				*e*S	**Sg**	**01 10 35.7**	**+0.6**
PRTR	**Priterechnaya**	**1.47**	**322**	*e*Pg	**Pg**	**01 10 15.1**	**-0.9**
PRTR				*e*Sg	**Sg**	**01 10 35.7**	**+0.6**
KZRT	**Kazreti**	**1.47**	**215**	P	**Pg**	**01 10 15.0**	**-1.1**
KZRT				S	**Sg**	**01 10 35.0**	**-0.3**
TRLG	**Trialeti**	**1.50**	**226**	P	**Pg**	**01 10 15.6**	**-1.0**
TRLG				S	**Sg**	**01 10 35.9**	**-0.2**
MAK	**Makhachkala**	**1.50**	**75**	⇑*i*PG	**Pg**	**01 10 16.0**	**-0.6**
MAK				*e*		01 10 38.9	
MAK				pmax	pmax		
	comp=Z,68nm,0.9s						
MAK				smax	smax		
	comp=N,230nm,0.5s						
MAK				smax	smax		
	comp=E,267nm,0.5s						
MAK	**Makhachkala**	**1.50**	**75**	*e*Pg	**Pg**	**01 10 16.2**	**-0.4**
MAK				*e*Sg	**Sg**	**01 10 38.7**	**+2.5**
URKR	**Urkarakh**	**1.62**	**105**	*e*PG	**Pg**	**01 10 18.4**	**-0.5**
URKR				*e*S	**Sg**	**01 10 40.7**	**+0.8**
URKR	**Urkarakh**	**1.62**	**105**	*e*Pg	**Pg**	**01 10 18.5**	**-0.5**
URKR				*e*Sg	**Sg**	**01 10 40.8**	**+0.8**
NCK	**Nalchik**	**1.68**	**303**	*e*PN	**Pb**	**01 10 18.3**	**+0.1**
NCK				*e*S	**Sg**	**01 10 41.7**	**0.0**
NCK	**Nalchik**	**1.68**	**303**	*e*Pg	**Pb**	**01 10 18.3**	**+0.1**
NCK				*e*Sg	**Sg**	**01 10 41.7**	**0.0**
BGD	**Bogdanovka**	**1.96**	**228**	P	Pg	01 10 49.7	+24
KBTC	**Kuba-Taba**	**1.97**	**309**	*e*PN	**Pb**	**01 10 23.3**	**+0.1**
KBTC	**Kuba-Taba**	**1.97**	**309**	*e*Pg	**Pb**	**01 10 23.3**	**+0.1**
KBTC				*e*Sg	**Sb**	**01 10 48.7**	**+1.2**
AKT	**Akhty**	**1.99**	**123**	⇓*e*PN	**Pb**	**01 10 23.6**	**+0.1**
AKT				*e*		01 10 51.4	
AKT				pmax	pmax		
	comp=Z,18nm,0.4s						
AKT				smax	smax		
	comp=N,33nm,0.6s						
AKT	**Akhty**	**1.99**	**123**	*e*Pg	**Pb**	**01 10 23.6**	**+0.1**
AKT				*e*Sg	**Sg**	**01 10 51.0**	**-0.6**
DRN	**Derbent**	**2.16**	**104**	*e*PN	**Pn**	**01 10 22.1**	**-0.8**
DRN	**Derbent**	**2.16**	**104**	*e*Pg	**Pb**	**01 10 25.3**	**-1.0**
DRN				*e*Sg	**Sg**	**01 10 55.3**	**-1.8**
NEY	**Neytrino**	**2.16**	**288**	⇑*e*PN	**Pb**	**01 10 25.1**	**-1.4**
NEY				*e*S	**Sb**	**01 10 54.3**	**+1.2**
NEY	**Neytrino**	**2.16**	**288**	*e*Pg	**Pb**	**01 10 26.1**	**-0.4**
NEY				*e*Sg	**Sb**	**01 10 54.6**	**+1.5**
KSMR	**Kasumkent**	**2.18**	**116**	*e*PN	Pg	01 10 40.0	+10
KSMR				*e*S	**Sn**	**01 10 50.0**	**0.0**
PYA1	**Pyatigorsk**	**2.30**	**310**	*e*PN	**Pn**	**01 10 22.6**	**-2.4**
PYA1	**Pyatigorsk**	**2.30**	**310**	*e*Pn	**Pn**	**01 10 25.1**	**+0.1**
PYA1				*e*Sn	**Sn**	**01 10 54.3**	**+1.3**
EPOS	**Posof**	**2.35**	**243**	*i* P	**Pb**	**01 10 30.2**	**+0.4**
EPOS				*i* S	**Sg**	**01 11 01.1**	**-2.3**
SHA1	**Shidzhatmaz**	**2.39**	**299**	*e*PN	**Pn**	**01 10 27.9**	**+1.5**
SHA1				*e*S	**Sb**	**01 11 00.3**	**+0.5**
SHA1	**Shidzhatmaz**	**2.39**	**299**	*e*Pn	**Pn**	**01 10 27.9**	**+1.5**
SHA1				*e*Sn	**Sb**	**01 10 59.9**	**+0.1**
EAK	**Akyaka**	**2.39**	**218**	*i* P	**Pb**	**01 10 30.5**	**0.0**
EAK				IAML_P			
	comp=Z,610nm,0.5s						
BEYR	**Belyy Ugol+**	**2.43**	**306**	*e*PN	**Pn**	**01 10 27.6**	**+0.8**
BEYR				*e*S	**Sb**	**01 11 00.2**	**-0.6**
BEYR	**Belyy Ugol+**	**2.43**	**306**	*e*Pn	**Pn**	**01 10 27.6**	**+0.8**
BEYR				*e*Sn	**Sb**	**01 11 00.2**	**-0.6**
KIV0	**Kislovodsk Arr**	**2.47**	**304**	*e*Pn	**Pn**	**01 10 28.6**	**+1.2**
KIV0				*e*Sn	**Sb**	**01 11 01.8**	**-0.3**
KIV	**Kislovodsk**	**2.48**	**304**	*e*PN	**Pn**	**01 10 28.6**	**+1.1**
KIV				*e*S	**Sb**	**01 11 01.8**	**-0.4**
KIV	**Kislovodsk**	**2.48**	**304**	*e*Pn	**Pn**	**01 10 28.8**	**+1.3**
KIV				*e*Sn	**Sb**	**01 10 60.0**	**-2.3**
GNI	**Garni**	**2.52**	**194**	c *i*PN	**Pb**	**01 10 32.7**	**+0.1**
GNI	**Garni**	**2.52**	**194**	*e*Pn	**Pb**	**01 10 32.7**	**+0.1**
DIGO	**Kars**	**2.71**	**217**	*i* P	**Pb**	**01 10 36.5**	**+0.5**
DIGO				*i* S	**Sg**	**01 11 11.7**	**-3.3**
DIGO				IAML_P			
	comp=Z,294nm,0.2s						
GOF	**Gofitskoye**	**3.04**	**325**	*e*PN	**Pg**	**01 10 50.0**	**+3.9**
GOF				*e*S	**Sg**	**01 11 26.7**	**+1.2**
GOF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GOF				smax	smax		
	comp=E,20nm,0.5s						
DAGI	**Agillar**	**3.10**	**242**	*i* P	**Pb**	**01 10 42.1**	**-0.3**
DAGI				IAML_P			
	comp=Z,38nm,0.2s						
ANN	**Anapa**	**6.26**	**293**	*e*P	**Pn**	**01 11 20.8**	**+1.4**
ANN				pmax	pmax		
	comp=Z,49nm,1.2s						
BRVK	**Borovoye**	**19.54**	**49**	⇑*e*P	**P**	**01 14 14.2**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.8s						
KURK	**Kurchatov**	**23.96**	**59**	⇑*e*P	**P**	**01 14 59.8**	**-1.3**
BFO	**Black Forest**	**26.52**	**295**	*i* P	**P**	**01 15 23.9**	**-0.5**

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*DDA **21** 01:11:34.4, 35°.43N×31°.20E, h7^{km}±3^{km}, ML2.9*
*NIC **21** 01:11:35.4±0.2, 35°.30N×31°.04E, h71^{km}, ML3.5*
*ISK **21** 01:11:35.7, 35°.21N×31°.15E, h30^{km}, ML3.1/27*
*ISCJB **21** 01:11:36.2±2.0, 35°.24N±0°.04×31°.14E±0°.04, h26^{km}±24^{km}, Error ellipse: s-maj=7.9km s-min=4.4km az=22.8*
ISC 21 01:11:36.8±1.3**, 35°.25N**±0°.04×**31°.17E**±0°.03**, h26**^{km}±15^{km}**, n51, σ1^{s}.58**/59**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.98**	**103**	P	**Pb**	**01 11 55.0**	**-0.2**
	baz=285						
PPCY	**Paphos**	**1.03**	**110**	P	**Pb**	**01 11 56.2**	**+0.1**
	baz=291						
ALFC	**Alefka**	**1.18**	**94**	P	**Pn**	**01 11 57.8**	**+0.2**
	baz=277						
ALFC				S	**Sn**	**01 12 15.3**	**+2.5**
LEF	**Lefka**	**1.42**	**95**	PN	**Pn**	**01 11 59.9**	**-1.0**
LEF	**Lefka**	**1.42**	**95**	*i* P	**Pn**	**01 12 00.6**	**-0.3**
LEF				IAML_P			
	comp=Z,2μm,0.3s						
AKDN	**Akdeniz- Kıbrı**	**1.48**	**88**	PN	**Pn**	**01 12 00.8**	**-0.9**
ALAN	**Alanya-ANTALYA**	**1.48**	**28**	PN	**Pn**	**01 12 01.1**	**-0.6**
SZAC	**Souni**	**1.49**	**109**	P	**Pn**	**01 12 02.2**	**+0.2**
	baz=290						
SZAC				S	**Sb**	**01 12 22.7**	**+0.2**
AKAS	**Kas**	**1.60**	**308**	PN	**Pn**	**01 12 02.9**	**-0.7**
KEPZ	**Antalya-Kepez**	**1.68**	**12**	*i* P	**Pn**	**01 12 04.0**	**-0.5**
KEPZ				*i* S	**Sn**	**01 12 24.1**	**-1.3**
KEPZ				IAML_P			
	comp=Z,681nm,0.3s						
BOZY	**Bozyazi-Mersin**	**1.70**	**59**	PN	**Pn**	**01 12 04.7**	**-0.1**
CSS	**Mathiatis**	**1.80**	**99**	PN	**Pn**	**01 12 05.7**	**-0.5**
ELL	**Elmali**	**1.81**	**326**	PN	**Pn**	**01 12 06.1**	**-0.3**
TEKE	**Tekeli-Mersin**	**1.82**	**60**	PN	**Pn**	**01 12 05.9**	**-0.5**
TEKE				SN	**Sn**	**01 12 28.2**	**-0.4**
KORT	**Korkueli**	**1.86**	**340**	PN	**Pn**	**01 12 07.1**	**-0.1**
KORT	**Korkueli**	**1.86**	**340**	*i* P	**Pb**	**01 12 11.7**	**+1.4**
KORT				*i* S	**Sb**	**01 12 39.9**	**+6.7**
LFK	**Lefkose**	**1.94**	**89**	PN	**Pn**	**01 12 07.5**	**-0.6**
ERMK	**Ermenek**	**1.98**	**45**	*i* P	**Pb**	**01 12 10.5**	**-1.9**
ERMK				*i* S	**Sb**	**01 12 36.1**	**-0.6**
ERMK				IAML_P			
	comp=Z,609nm,0.2s						
AKKU	**Akkuyu-Mersin**	**2.14**	**64**	PN	**Pn**	**01 12 10.5**	**-0.3**
GULN	**MERSIN_Gulnar**	**2.15**	**64**	*i* P	**Pn**	**01 12 12.3**	**+1.4**
GULN				*i* S	**Sn**	**01 12 36.2**	**-0.5**
GULN				IAML_P			
	comp=Z,196nm,0.1s						
FETY	**Fethiye**	**2.18**	**310**	PN	**Pn**	**01 12 11.5**	**+0.1**
FETY	**Fethiye**	**2.18**	**310**	*i* P	**Pb**	**01 12 13.7**	**-1.9**
TEVE	**Tevekalti-Mers**	**2.19**	**57**	PN	**Pn**	**01 12 11.9**	**+0.2**
IKL	**Isikli**	**2.27**	**64**	PN	**Pn**	**01 12 12.8**	**+0.1**
GOLH	**Golhisar**	**2.37**	**327**	*i* P	**Pn**	**01 12 14.2**	**+0.2**
BRDR	**BURDUR-Merkez**	**2.59**	**340**	*i* P	**Pb**	**01 12 19.1**	**-3.6**
BRDR				IAML_P			
	comp=Z,177nm,0.2s						
TURN	**Turunc**	**2.63**	**309**	PN	**Pb**	**01 12 20.7**	**-2.5**
ARG	**Arkhangelos**	**2.65**	**292**	PN	**Pn**	**01 12 17.6**	**-0.3**
KMER	**Konya-Meram**	**2.69**	**21**	*i* P	**Pn**	**01 12 20.2**	**+1.7**
KIZK	**Mersin**	**2.71**	**62**	PN	**Pn**	**01 12 18.5**	**-0.2**
KIZK	**Mersin**	**2.71**	**62**	*i* P	**Pb**	**01 12 21.3**	**-3.3**
KIZK				IAML_P			
	comp=Z,279nm,0.2s						
BAGO	**Egridir - ISPA**	**2.75**	**354**	*i* P	**Pb**	**01 12 22.8**	**-2.5**
KONT	**Konya--Tatoy**	**2.85**	**19**	PN	**Pn**	**01 12 21.7**	**+1.0**
KONT	**Konya--Tatoy**	**2.85**	**19**	*i* P	**Pb**	**01 12 23.9**	**-3.2**
DOGA	**KONYA_Doganhis**	**2.88**	**8**	*i* P	**Pn**	**01 12 23.0**	**+1.9**
LADK	**Ladik-KONYA**	**3.09**	**18**	PN	**Pn**	**01 12 24.9**	**+0.8**
KZIL	**AFYON_Kizioren**	**3.11**	**345**	*i* P	**Pn**	**01 12 25.9**	**+1.7**
KZIL				IAML_P			
	comp=Z,100nm,0.2s						
MERS	**Mersin**	**3.16**	**58**	PN	**Pn**	**01 12 25.4**	**+0.5**
KERG	**Konya-Eregli**	**3.22**	**47**	*i* P	**Pn**	**01 12 27.7**	**+1.9**
KERG				*i* S	**Sn**	**01 13 04.4**	**+1.1**
KERG				IAML_P			
	comp=Z,79nm,0.3s						
KARP	**Karpathos**	**3.28**	**276**	PN	**Pn**	**01 12 26.7**	**+0.1**
KDHN	**Kadinhani**	**3.35**	**13**	*i* P	**Pn**	**01 12 29.4**	**+1.8**
KHAL	**Karahalli**	**3.39**	**337**	*i* P	**Pn**	**01 12 28.2**	**+0.1**
KHAL				IAML_P			
	comp=Z,52nm,0.2s						
MLSB	**Milas**	**3.41**	**308**	PN	**Pn**	**01 12 28.5**	**+0.1**
CHBY	**Cihanbeyli**	**3.60**	**22**	PN	**Pn**	**01 12 31.5**	**+0.5**
BODT	**Bodrum**	**3.60**	**301**	PN	**Pn**	**01 12 30.7**	**-0.3**
KARA	**Karaisali**	**3.73**	**56**	PN	**Pn**	**01 12 33.6**	**+0.9**
GCAM	**G?zelcaml?**	**4.00**	**309**	PN	**Pn**	**01 12 36.4**	**0.0**
ZKR	**Zakros**	**4.05**	**269**	PN	**Pn**	**01 12 37.2**	**0.0**
TAHT	**Tahtakopru-Hat**	**4.23**	**73**	PN	**Pn**	**01 12 40.2**	**+0.6**
KOZT	**Kozan**	**4.37**	**58**	PN	**Pn**	**01 12 42.4**	**+0.9**
MMLI	**Mount Malkishu**	**4.52**	**127**	PN	**Pn**	**01 12 44.3**	**+0.7**

GUC 21 01:15:53.5±0.6**, 23°.87S**×**67°.15W, h209**^{km}±19^{km}**, ML3.9, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.23**	**287**	⇑*i*P	Pn	01 16 36.1	+0.8
PB15				*i* S	S	01 17 08.4	+1.0
PB06	**IPOC Station P**	**2.51**	**297**	⇑*i*P	Pn	01 16 39.5	+1.2
PB06				*i* S	S	01 17 13.9	+1.2
PB06				IAML		01 17 16.0	
	comp=N,219nm,0.3s						
PB03	**IPOC Station P**	**3.01**	**306**	*e*P	Pn	01 16 45.2	+1.3
PB03				*i* S	S	01 17 24.4	+1.6
PB03				IAML		01 17 29.4	
	comp=N,127nm,0.5s						
PB04	**IPOC Station P**	**3.16**	**298**	⇑*i*P	Pn	01 16 46.5	+0.9
PB04				*i* S	S	01 17 27.1	+1.2
PB04				IAML		01 17 31.2	
	comp=N,157nm,0.7s						
PB08	**IPOC Station P**	**4.15**	**333**	*e*P	Pn	01 16 59.4	+1.5
PB08				*i* S	S	01 17 49.7	+1.7
PB08				IAML		01 17 56.3	
	comp=N,39nm,0.9s						

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*ISCJB **21** 01:28:13.6±0.2, 67°.62N±0°.03×142°.54E±0°.08, h10^{km}, mb4.0/42, MS3.3/2, Error ellipse: s-maj=4.8km s-min=4.5km az=164.6*
*IDC **21** 01:28:13.8±0.6, 67°.59N×142°.52E, h0^{km}, mb3.9/23, mb1 4.0/26, mb1mx3.9/49, mbtmp3.8/26, ML2.9/3, MS3.3/2, Ms1 3.3/2, ms1mx2.6/34, Error ellipse: s-maj=15.6km s-min=12.5km az=10.0*
*MOS **21** 01:28:13.4±0.8, 67°.64N×142°.56E, h11^{km}, mb4.2/17, Error ellipse: s-maj=18.9km s-min=8.0km az=93.2*
*YARS **21** 01:28:14.4±0.1, 67°.620N±0°.005×142°.79E±0°.01, h2^{km}*
*NEIC **21** 01:28:15.5±0.2, 67°.62N×142°.49E, h10^{km}, mb4.4/20, Error ellipse: s-maj=5.9km s-min=4.2km az=6.0*
ISC 21 01:28:15.0±0.4**, 67°.57N**±0°.04×**142°.52E**±0°.04**, h10**^{km}**, n87, σ1^{s}.57**/96**, mb4.0**/42**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.14**	**166**	P	**Pb**	**01 28 35.7**	**-1.1**
MOMR						01 28 50.5	
MOMR				pmax	pmax		
	comp=Z,525nm,0.5s						
MOMR				smax	smax		
	comp=N,1μm,0.5s						
MOMR	**Moma**	**1.14**	**166**	*e*P	**Pb**	**01 28 35.7**	**-1.1**
MOMR				*e*S	**Sb**	**01 28 50.5**	**-1.1**
YBGR	**Belaya Gora**	**1.69**	**53**	*e*P	**Pn**	**01 28 42.7**	**-1.7**
YBGR				*e*S	**Sn**	**01 29 02.7**	**-3.3**
YBGR	**Belaya Gora**	**1.69**	**53**	*i* P	**Pn**	**01 28 42.7**	**-1.7**
YBGR				*e*S	**Sn**	**01 29 02.7**	**-3.3**
ATKR	**Artyk**	**3.57**	**161**	P	**Pb**	**01 29 18.8**	**+0.6**
ATKR				pmax	pmax		
	comp=Z,90nm,0.6s						
ATKR	**Artyk**	**3.57**	**161**	*e*P	**Pb**	**01 29 18.8**	**+0.6**
ATKR				*e*S	**Sb**	**01 30 05.5**	**+4.0**
SEY	**Seymchan**	**6.23**	**134**	P	**Pn**	**01 29 47.0**	**+0.2**
SEY				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SEY	**Seymchan**	**6.23**	**134**	Pn	**Pn**	**01 29 47.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=323,slow=14,SNR=9.7						
SEY				Lg	Lg	01 31 28.7	
	comp=Z,3.5nm,0.3s,baz=115,slow=18,SNR=6.0						
YAK	**Yakutsk**	**7.79**	**231**	*e*P	Pb	01 30 36.5	+6.6
YAK				*e*S	**Sn**	**01 31 34.9**	**-1.4**
YAK				*e*S	**Sg**	**01 32 18.4**	**-6.2**
USMR	**Ust'-Maya**	**7.98**	**210**	*e*P	**Pn**	**01 30 12.6**	**+1.8**
USMR				*e*S	**Sn**	**01 31 41.1**	**+0.1**
USMR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
USMR				smax	smax		
	comp=N,92nm,1.2s						
USMR	**Ust'-Maya**	**7.98**	**210**	*e*P	**Pn**	**01 30 12.6**	**+1.8**
USMR				*e*P	Pg	01 30 40.9	-6.6
USMR				*e*S	**Sn**	**01 31 41.1**	**+0.1**
USMR				*e*S	**Sg**	**01 32 25.7**	**-5.0**
MA2	**Magadan**	**8.82**	**152**	Pn	**Pn**	**01 30 25.5**	**+3.2**
	comp=N,0.6nm,0.3s,baz=11,slow=16,SNR=3.1						
MA2				Lg	Lg	01 32 49.7	
	comp=N,1.2nm,0.3s,baz=355,slow=10.0,SNR=4.0						
BILL	**Bilibino**	**8.98**	**76**	*e*Pn	**Pn**	**01 30 24.4**	**-0.1**
	comp=N,2.3nm,0.5s						
BILL				*e*Sn	**Sn**	**01 31 59.3**	**-6.3**
BILL	**Bilibino**	**8.98**	**76**	*e*P	**Pn**	**01 30 24.4**	**-0.1**
BILL				*e*		01 31 59.3	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BOD	**Bodaibo**	**16.15**	**247**	*e*P	**Pn**	**01 32 01.8**	**+0.1**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.8s						
PEA1	**Petropavlovsk-**	**16.25**	**146**	*e*Pn	**P**	**01 32 04.7**	**-1.4**
PETK	**Petropavlovsk-**	**16.25**	**146**	Pn	**Pn**	**01 32 04.7**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=332,slow=15,SNR=2.6						
KLR	**Kul'dur**	**19.18**	**202**	P	**Pn**	**01 32 40.5**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=15,slow=19,SNR=3.1						
USRK	**Ussuriysk Ar.**	**24.09**	**199**	P	**P**	**01 33 30.7**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=3.3,slow=10,SNR=4.1						
TOLK	**Toolik Lake Re**	**24.20**	**56**	*e*P	**P**	**01 33 30.4**	**-0.8**
	comp=Z,5.4nm,1.1s						
IM3	**Indian Mountai**	**24.21**	**64**	*e*P	**P**	**01 33 31.0**	**-0.3**
MLY	**Manley**	**25.79**	**64**	*e*P	**P**	**01 33 46.1**	**+0.5**
	comp=Z,11nm,1.5s						
TRF	**Thorofare Moun**	**26.90**	**66**	*e*P	**P**	**01 33 56.3**	**+0.5**
	comp=Z,6.0nm,1.3s						
SONA0	**Songino Array**	**26.97**	**241**	*e*P	**P**	**01 33 57.1**	**+0.5**
SONM	**Songino Array**	**26.97**	**241**	P	**P**	**01 33 57.1**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=34,slow=8.9,SNR=3.7						
IL1	**Eielson Array**	**27.26**	**62**	*e*P	**P**	**01 33 58.6**	**-0.2**
ILAR	**Eielson Array**	**27.26**	**62**	P	**P**	**01 33 58.8**	**0.0**
	comp=Z,1.3nm,0.7s,baz=299,slow=7.9,SNR=14						
ILB	**Eielson Array**	**27.26**	**62**	*e*P	**P**	**01 34 00.9**	**+2.1**
	comp=Z,6.1nm,1.3s						
NIKH	**Nikolski High**	**27.28**	**98**	*e*P	**P**	**01 34 01.1**	**+2.0**
	comp=Z,117nm,1.1s						
SUA	**Susitna One**	**28.02**	**70**	*e*P	**P**	**01 34 03.9**	**-2.0**
	comp=Z,8.5nm,1.2s						
ZAA1	**Zalesovo Array**	**29.99**	**272**	*e*P	**P**	**01 34 24.6**	**+1.4**
ZALV	**Zalesovo Beam**	**30.00**	**272**	P	**P**	**01 34 24.6**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=46,slow=6.2,SNR=2.8						
SPA0	**Spitsbergen Ar**	**31.03**	**341**	*e*P	**P**	**01 34 32.9**	**+0.7**
	comp=Z,60nm,1.3s						
SPITS	**Spitsbergen Ar**	**31.03**	**341**	P	**P**	**01 34 32.9**	**+0.7**
	comp=Z,11nm,1.0s,baz=52,slow=15,SNR=4.0						
WHY	**Whitehorse**	**34.10**	**61**	*e*P	**P**	**01 35 00.5**	**+1.1**
	comp=Z,6.3nm,1.2s						
KURK	**Kurchatov**	**34.90**	**274**	*e*P	**P**	**01 35 07.3**	**+1.1**
KURK	**Kurchatov**	**34.90**	**274**	P	**P**	**01 35 07.3**	**+1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**35.01**	**274**	P	**P**	**01 35 07.3**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=40,slow=8.8,SNR=4.6						
BVAR	**Borovoye Array**	**36.19**	**283**	P	**P**	**01 35 17.6**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=60,slow=7.5,SNR=9.2						
MK31	**Makanchi Array**	**36.69**	**267**	*e*P	**P**	**01 35 21.8**	**+0.2**
	comp=Z,2.2nm,1.1s						
MK31	**Makanchi Array**	**36.69**	**267**	*e*P	**P**	**01 35 21.8**	**+0.2**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK32	**Makanchi Array**	**36.69**	**267**	*e*P	**P**	**01 35 21.8**	**+0.2**
MKAR	**Makanchi Array**	**36.69**	**267**	*e*P	**P**	**01 35 21.6**	**0.0**
	comp=Z,10.0nm,0.8s						
MKAR	**Makanchi Array**	**36.69**	**267**	*e*P	**P**	**01 35 21.6**	**0.0**
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MKAR	**Makanchi Array**	**36.69**	**267**	P	**P**	**01 35 21.8**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=48,slow=7.0,SNR=20						
MK01	**Makanchi Array**	**36.70**	**266**	*e*P	**P**	**01 35 21.6**	**-0.2**
MAKZ	**Makanchi**	**36.80**	**267**	*e*P	**P**	**01 35 23.1**	**+0.6**
	comp=Z,1.3nm,0.8s						
MAKZ	**Makanchi**	**36.80**	**267**	*e*P	**P**	**01 35 23.1**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**38.91**	**46**	P	**P**	**01 35 41.1**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=324,slow=8.4,SNR=6.9						
YKB5	**Yellowknife Ar**	**38.91**	**46**	*e*P	**P**	**01 35 41.1**	**+1.0**
AKTO	**Aktyubinsk**	**42.82**	**291**	P	**P**	**01 36 12.8**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=48,slow=8.6,SNR=4.7						
ABKAR	**Akbulak array**	**43.10**	**288**	*e*P	**P**	**01 36 15.1**	**+0.3**
	comp=Z,1.0nm,0.6s						
AAK	**Ala-Archa**	**43.18**	**270**	*e*P	**P**	**01 36 15.5**	**-0.2**
	comp=Z,2.7nm,0.7s						
AAK	**Ala-Archa**	**43.18**	**270**	*e*P	**P**	**01 36 15.5**	**-0.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FIA1	**FINESS Array S**	**43.30**	**321**	*e*P	**P**	**01 36 16.2**	**0.0**
FIA0	**FINESS Array S**	**43.30**	**321**	*e*P	**P**	**01 36 15.8**	**-0.4**
FIA0	**FINESS Array S**	**43.30**	**321**	*e*P	**P**	**01 36 15.8**	**-0.4**
FINES	**FINESS Array B**	**43.30**	**321**	P	**P**	**01 36 15.8**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=27,slow=8.6,SNR=10						
FINES				LR	LR	01 56 39.5	
	comp=Z,28nm,18.1s,baz=304,slow=39						
NC204	**NORSAR Array S**	**46.76**	**330**	*e*P	**P**	**01 36 45.7**	**+1.9**
	comp=Z,17nm,1.4s						
NB200	**NORSAR Array S**	**46.89**	**330**	*e*P	**P**	**01 36 44.2**	**-0.6**
NOA	**NORSAR Array B**	**46.89**	**330**	P	**P**	**01 36 44.2**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=24,slow=7.9,SNR=3.6						
NBO00	**NORSAR Array S**	**46.98**	**330**	*e*P	**P**	**01 36 44.6**	**-0.9**
	comp=Z,13nm,1.2s						
GAR	**Garm**	**47.92**	**272**	*e*P	**P**	**01 36 55.1**	**+1.9**
	comp=Z,9.5nm,1.0s						
GAR	**Garm**	**47.92**	**272**	*e*P	**P**	**01 36 55.1**	**+1.9**
GAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CHGR	**Chuyangaron**	**48.66**	**272**	*e*P	**P**	**01 37 00.0**	**+1.1**
	comp=Z,6.9nm,0.8s						
AKASG	**Malin Array Be**	**51.96**	**312**	P	**P**	**01 37 23.4**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=27,slow=4.4,SNR=3.5						
AKBB	**Malin Array Si**	**51.96**	**312**	*e*P	**P**	**01 37 23.4**	**-0.2**
	comp=Z,11nm,1.4s						
AKBB	**Malin Array Si**	**51.96**	**312**	*e*P	**P**	**01 37 23.4**	**-0.2**
AKBB				pmax	pmax		
	comp=Z,11nm,1.4s						
KBZ	**Khabaz**	**53.87**	**298**	P	**P**	**01 37 38.5**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=353,slow=0.2,SNR=5.0						
CLL	**Collm**	**55.56**	**324**	*i* P	**P**	**01 37 49.6**	**-0.3**
	comp=Z,4.0nm,0.8s						
PD31	**Pinedale Array**	**57.47**	**56**	*e*P	**P**	**01 38 05.7**	**+1.7**
	comp=Z,1.4nm,1.2s						
PDAR	**Pinedale Array**	**57.47**	**56**	P	**P**	**01 38 05.7**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=29,slow=3.4,SNR=3.7						
MLR	**Muntele Rosu**	**57.61**	**312**	P	**P**	**01 38 05.6**	**+0.8**
	comp=Z,2.2nm,0.6s						
GEC2	**GERESS Array S**	**57.70**	**322**	*e*P	**P**	**01 38 05.4**	**+0.1**
	comp=Z,4.1nm,1.5s						
GEC2	**GERESS Array S**	**57.70**	**322**	*e*P	**P**	**01 38 05.4**	**+0.1**

GEC2				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GERES	**GERESS Array B**	**57.70**	**322**	P	**P**	**01 38 05.4**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=38,slow=6.8,SNR=4.9						
GERES				LR	LR	02 05 30.4	
	comp=Z,28nm,19.2s,baz=276,slow=39						
NV01	**Mina Array Sit**	**58.43**	**66**	*e*P	**P**	**01 38 11.0**	**+0.3**
NVAR	**Mina Array Bea**	**58.43**	**66**	P	**P**	**01 38 11.0**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=300,slow=5.8,SNR=2.5						
DAVOX	**Davos/Dischmat**	**60.52**	**324**	P	**P**	**01 38 25.3**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=136,slow=12,SNR=2.5						
BR101	**Keskin Array S**	**60.52**	**303**	*e*P	**P**	**01 38 25.5**	**+0.5**
BRTR	**Keskin Array B**	**60.52**	**303**	P	**P**	**01 38 25.5**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=29,slow=5.3,SNR=4.5						
ESDC	**Sonseca Array**	**70.11**	**333**	P	**P**	**01 39 26.0**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=16,slow=6.8,SNR=4.3						
TXAR	**Lajitas Array**	**71.65**	**57**	P	**P**	**01 39 36.7**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=84,slow=33,SNR=4.0						
WR1	**Warramunga Arr**	**87.46**	**188**	*e*P	**P**	**01 41 01.1**	**-1.2**
	comp=Z,3.6nm,1.2s						
WRA	**Warramunga Arr**	**87.46**	**188**	P	**P**	**01 41 01.1**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=326,slow=37,SNR=2.7						
TOA1	**Torodi Ar. Sit**	**94.64**	**322**	*e*P	**P**	**01 41 36.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**94.65**	**322**	P	**P**	**01 41 36.3**	**+0.3**
	comp=Z,0.4nm,1.0s,baz=349,slow=6.8,SNR=4.1						

TRN 21 02:15:11.8, 9°.78N×63°.43W, h31^{km}, MD3.7, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPP	**Pointe-a-Pierr**	**2.02**	**74**	*e*P	Pn	02 15 43.7	-0.1
TPP	**Pointe-a-Pierr**	**2.02**	**74**	*e*S	Sn	02 16 07.4	-0.8
TRN	**Trinidad (W)**	**2.18**	**66**	*e*P	Pn	02 15 47.1	+1.1
TRN				*e*S	Sn	02 16 12.6	+0.7
TBH	**Brigand Hill**	**2.43**	**73**	*e*P	Pn	02 15 49.7	+0.2
TBH				*e*S	Sn	02 16 18.3	+0.1
GRGR	**Grenville**	**2.92**	**37**	*e*P	Pn	02 15 56.6	+0.4
GRGR				*e*S	Sn	02 16 29.1	-1.2
TPR	**Prospect**	**2.96**	**62**	*e*P	Pn	02 15 57.1	+0.3
TPR				*e*S	Sn	02 16 30.5	-0.9
GRHS	**Sauteurs**	**3.00**	**36**	*e*P	Pn	02 15 57.8	+0.5
GRHS				*e*S	Sn	02 16 31.5	-0.8
GRSS	**Sisters**	**3.08**	**35**	*e*P	Pn	02 15 59.4	+1.0
GRSS				*e*S	Sn	02 16 33.5	-0.6
TOSP	**Speyside**	**3.23**	**62**	*e*P	Pn	02 16 00.7	+0.3
TOSP				*e*S	Sn	02 16 37.4	-0.4
SVB	**Belmont**	**4.08**	**31**	*e*P	Pn	02 16 13.7	+1.6

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*ISCJB **21** 02:16:32.2±1.0, 61°.56N±0°.08×42°.4W±0°.2, h10^{km}, mb3.5/6, Error ellipse: s-maj=12.3km s-min=10.1km az=150.5*

*IDC **21** 02:16:32.3±1.1, 61°.28N×42°.40W, h0^{km}, mb3.5/6, mb1 3.8/6, mb1mx3.4/47, mbtmp3.5/6, Error ellipse: s-maj=40.6km s-min=22.7km az=18.0*

ISC 21 02:16:33.9±1.1, **61°.4N**±0°.1×**42°.52W**±0°.09, **h10^{km}, n8,** σ**1^{s}24**/10, **mb3.5**/6, **Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**1.43**	**261**	*i* P	**Pn**	**02 16 58.5**	**-1.3**
NRS				*i* S	**Sb**	**02 17 19.3**	**+0.6**
SFJD	**Kangerlussuaq**	**6.62**	**331**	*i* P	**Pn**	**02 18 10.2**	**-0.9**
SFJD				*e*S	**Sn**	**02 19 25.1**	**-1.3**
YKA	**Yellowknife Ar**	**32.30**	**304**	P	**P**	**02 23 02.4**	**-0.1**
	0.3nm,0.7s,baz=58,slow=9.4,SNR=4.8						
ILAR	**Eielson Array**	**42.18**	**322**	P	**P**	**02 24 27.8**	**+1.6**
	0.9nm,0.9s,baz=38,slow=8.4,SNR=6.5						
PDAR	**Pinedale Array**	**43.00**	**276**	P	**P**	**02 24 33.2**	**-0.2**
	0.7nm,0.7s,baz=56,slow=8.0,SNR=6.9						
NVAR	**Mina Array Bea**	**50.55**	**280**	P	**P**	**02 25 34.0**	**+1.5**
	0.8nm,0.8s,baz=62,slow=6.1,SNR=4.6						
TORD	**Torodi Ar. Bea**	**57.73**	**127**	P	**P**	**02 26 23.8**	**-1.0**
	0.3nm,0.6s,baz=339,slow=8.6,SNR=2.8						
MKAR	**Makanchi Array**	**63.35**	**39**	P	**P**	**02 27 03.3**	**+0.4**
	0.2nm,0.5s,baz=345,slow=5.5,SNR=3.5						

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*AZER **21** 02:24:39.9±0.1, 38°.45N×46°.71E, h2^{km}, ml3.4/25, Error ellipse: s-maj=3.1km s-min=0.9km az=19.0*

*NSSP **21** 02:24:40.7, 38°.42N×46°.67E, h15^{km}, Ms3.5*

*THR **21** 02:24:42.9, 38°.43N×46°.66E, h15^{km}, ML3.1*

*TEH **21** 02:24:42.3, 38°.38N×46°.68E, h10^{km}, ML3.2*

ISC 21 02:24:42.3±1.1, **38°.44N**±0°.02×**46°.66E**±0°.02, **h2^{km}**±12^{km}, **n54,** σ**1^{s}15**/83, **17C-26D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHRS	**Heris**	**0.33**	**112**	*e*Pg	**Pg**	**02 24 48.7**	**0.0**
IHRS				IAMB	IAmb	02 24 56.0	
	comp=Z,11µm,0.2s						
ITBZ	**Tabriz**	**0.45**	**243**	*e*Pg	**Pg**	**02 24 51.1**	**+0.1**
ITBZ				*e*Sg	**Sg**	**02 24 58.0**	**+1.1**
ITBZ				IAMB	IAmb	02 24 58.5	
	comp=Z,31µm,0.2s						
ORD	**Ordubad**	**0.71**	**313**	⇓P	**Pg**	**02 24 56.6**	**+0.6**
ORD				⇑S	**Sb**	**02 25 07.0**	**-0.7**
IBST	**Bostanabad**	**0.77**	**166**	*e*Pg	**Pg**	**02 24 55.3**	**-1.7**
IBST				*e*Sg	**Sg**	**02 25 06.1**	**-0.8**
IBST				IAMB	IAmb	02 25 07.9	
	comp=Z,23µm,0.4s						
IMRD	**Marand**	**0.79**	**290**	*e*Pg	**Pg**	**02 24 57.8**	**+0.2**
IAZR	**Azarshahr**	**0.93**	**215**	*e*Pg	**Pg**	**02 24 59.5**	**-0.7**
IAZR				IAMB	IAmb	02 25 14.7	
	comp=Z,16µm,0.4s						
ISRB	**Sarab**	**1.01**	**127**	*e*Pg	**Pg**	**02 25 00.4**	**-1.3**
ISRB				IAMB	IAmb	02 25 19.0	
	comp=Z,6µm,0.3s						
GRMI	**Germi**	**1.04**	**69**	*e*AML	AML	02 25 18.9	
	comp=N,478nm,0.2s						
GRMI				*e*Pg	**Pb**	**02 25 02.2**	**-0.9**
GRMI				*e*Sg	**Sb**	**02 25 16.6**	**-0.6**
GRMI				*e*AML	AML	02 25 20.3	
	comp=E,407nm,0.4s						
NAX	**Nakhchivan**	**1.16**	**309**	⇓P	**Pn**	**02 25 05.1**	**-0.7**
	SNR=29						
NAX				⇑S	**Sn**	**02 25 22.1**	**-0.2**
LRK	**Lerik**	**1.34**	**81**	⇓P	**Pb**	**02 25 07.5**	**-0.8**
	SNR=274						
LRK				⇑S	**Sg**	**02 25 26.6**	**+1.3**
GLBA	**Clilabad**	**1.57**	**59**	⇓P	**Pg**	**02 25 12.5**	**0.0**
	SNR=89						
GLBA				⇓S	**Sg**	**02 25 36.2**	**+3.2**
ASTR	**Astara**	**1.68**	**85**	⇓P	**Pb**	**02 25 13.6**	**-0.4**
	SNR=34						
ASTR				⇓S	**Sg**	**02 25 37.6**	**+1.3**
LKRN	**Lenkeran, Azer**	**1.69**	**80**	P	**Pb**	**02 25 13.9**	**-0.2**
	SNR=74						
LKRN				⇑S	**Sg**	**02 25 37.9**	**+1.4**
MAKU	**Maku**	**1.79**	**301**	*e*Pn	**Pb**	**02 25 15.4**	**-0.5**
MAKU	**Maku**	**1.79**	**301**	*e*Pn	**Pb**	**02 25 15.4**	**-0.5**
MAKU				*e*Sg	**Sg**	**02 25 39.9**	**+0.1**
BRDA	**Brd**	**1.86**	**12**	⇓P	**Pb**	**02 25 16.2**	**-0.9**
	SNR=5.5						
BRDA				⇓S	**Sg**	**02 25 42.8**	**+0.6**
HYR	**Heyderabad**	**1.90**	**313**	⇓P	**Pb**	**02 25 16.8**	**-0.9**
HYR				⇓S	**Sg**	**02 25 44.5**	**+1.3**
SAAT	**Saatly**	**1.97**	**44**	⇓P	**Pb**	**02 25 17.8**	**-1.2**
	SNR=11						
SAAT				⇓S	**Sg**	**02 25 46.7**	**+1.0**
ZRD	**Zardab**	**2.00**	**23**	⇓P	**Pn**	**02 25 17.1**	**0.0**
	SNR=6.1						
ZRD				⇓S	**Sg**	**02 25 47.4**	**+0.8**
YOVA	**Hakkari_Yksek**	**2.05**	**246**	*i* P	**Pg**	**02 25 21.3**	**-0.4**
YOVA				*i* S	**Sg**	**02 25 47.8**	**-0.6**
YOVA				IAML_P			
	comp=Z,910nm,0.2s						
GANJ	**Ganja**	**2.21**	**353**	⇓P	**Pb**	**02 25 21.2**	**-2.0**
	SNR=42						
GANJ				⇑S	**Sg**	**02 25 52.6**	**-0.9**
CLDR	**Caldiran**	**2.25**	**289**	*i* P	**Pg**	**02 25 24.8**	**-0.7**
CLDR				IAML_P			
	comp=Z,1µm,0.6s						
GNI	**Garni**	**2.26**	**320**	⇓*i*P	**Pb**	**02 25 23.9**	**-0.1**
GNI				⇓*i*S	**Sg**	**02 25 55.7**	**+0.8**
MNGR	**Mingechevir, A**	**2.35**	**8**	⇓P	**Pn**	**02 25 22.7**	**+0.7**
	SNR=3.3						
MNGR				⇓S	**Sb**	**02 25 55.2**	**+0.3**
ALIB	**Äli-Bayra**	**2.37**	**50**	⇑S	**Sb**	**02 25 54.9**	**-0.6**
GDB	**GEDABAY**	**2.38**	**343**	⇓P	**Pn**	**02 25 23.4**	**+0.9**
	SNR=51						
GDB				⇑S	**Sb**	**02 25 56.0**	**+0.1**
ZNJK	**Zanjan**	**2.40**	**137**	*e*Pn	**Pn**	**02 25 23.6**	**+0.8**
ZNJK	**Zanjan**	**2.40**	**137**	*e*Pn	**Pn**	**02 25 23.6**	**+0.8**
IGDI	**IGDIR**	**2.46**	**306**	*i* P	**Pb**	**02 25 26.2**	**-1.1**
IGDI				*i* S	**Sg**	**02 25 59.8**	**-1.5**
IGDI				IAML_P			
	comp=Z,128nm,0.2s						
VMUR	**Van-Muradiye**	**2.47**	**284**	*i* P	**Pg**	**02 25 28.8**	**-1.0**
VMUR				IAML_P			
	comp=Z,307nm,0.7s						
TVAN	**Van**	**2.55**	**273**	*i* P	**Pb**	**02 25 30.2**	**+1.2**
TVAN				IAML_P			
	comp=Z,231nm,0.5s						
DYDN	**Diyadin**	**2.56**	**296**	*i* P	**Pb**	**02 25 30.2**	**+1.1**
DYDN				*i* S	**Sg**	**02 26 07.3**	**+2.7**
DYDN				IAML_P			
	comp=Z,433nm,0.3s						
IML	**Ismayilli**	**2.63**	**26**	⇓P	**Pn**	**02 25 26.7**	**+0.9**
	SNR=10						
IML				⇑S	**Sb**	**02 26 03.0**	**+0.1**
QBL	**Gabala**	**2.66**	**20**	⇓P	**Pn**	**02 25 27.3**	**+1.0**
	SNR=4.3						
QBL				⇓S	**Sb**	**02 26 03.9**	**0.0**
CUKT	**Cukurca**	**2.69**	**245**	*i* P	**Pg**	**02 25 33.2**	**-0.8**
CUKT				IAML_P			
	comp=Z,582nm,0.5s						
GBS	**Qobustan**	**2.74**	**40**	⇑P	**Pn**	**02 25 28.4**	**+1.0**
	SNR=18						
GBS				⇓S	**Sb**	**02 26 05.5**	**-0.6**
PQL	**Pirkuli**	**2.78**	**32**	⇓P	**Pn**	**02 25 29.0**	**+0.9**
	SNR=30						
PQL				⇑S	**Sb**	**02 26 06.6**	**-0.8**
QZX	**Qazax, Azerbai**	**2.79**	**340**	⇑P	**Pn**	**02 25 29.3**	**+1.2**
	SNR=13						
SEKA	**Sheki**	**2.79**	**8**	⇑P	**Pn**	**02 25 29.5**	**+1.3**
	SNR=20						
GEVA	**Gevas**	**2.83**	**268**	*i* P	**Pg**	**02 25 35.3**	**-1.2**
GEVA				IAML_P			
	comp=Z,8.3nm,0.1s						
XNQ	**Khinaliq**	**2.96**	**22**	⇑P	**Pn**	**02 25 31.6**	**+1.1**
	SNR=8.6						
DDFL	**Dedoflistskaro**	**3.03**	**352**	P	**Pg**	**02 25 38.9**	**-1.4**
DDFL				S	**Sg**	**02 26 22.3**	**+2.7**
TUTA	**Tutak**	**3.15**	**289**	*i* P	**Pg**	**02 25 42.2**	**-0.4**
TUTA				IAML_P			
	comp=Z,304nm,0.1s						
SIZA	**Siyzn**	**3.15**	**33**	⇑P	**Pn**	**02 25 34.2**	**+1.2**
	SNR=11						
ZKTA	**Zakatala**	**3.19**	**360**	⇑P	**Pn**	**02 25 35.0**	**+1.4**
	SNR=9.7						
DIGO	**Kars**	**3.21**	**309**	*i* P	**Pb**	**02 25 41.3**	**+1.0**
DIGO				IAML_P			
	comp=Z,208nm,0.3s						
QUBA	**Quba, Azerbaij**	**3.23**	**25**	⇑P	**Pn**	**02 25 35.3**	**+1.1**
	SNR=10						
EAK	**Akyaka**	**3.25**	**315**	*i* P	**Pb**	**02 25 42.4**	**+1.5**
EAK				*i* S	**Sg**	**02 26 28.0**	**+1.2**
EAK				IAML_P			
	comp=Z,241nm,0.4s						
QSAR	**Qusar**	**3.31**	**21**	⇑P	**Pn**	**02 25 36.3**	**+1.2**
	SNR=15						
LGD	**Lagodekhi**	**3.40**	**355**	P	**Pb**	**02 25 42.8**	**-0.6**
SIRN	**Sırnak**	**3.48**	**256**	*i* P	**Pg**	**02 25 48.4**	**-0.6**
SIRN				IAML_P			
	comp=Z,41nm,0.2s						
BTNK	**Botanikuri**	**3.54**	**337**	P	**Pg**	**02 25 47.7**	**-2.4**
BTNK				S	**Sg**	**02 26 35.7**	**-0.3**
TRLG	**Trialeti**	**3.66**	**328**	P	**Pg**	**02 25 50.5**	**-2.0**
TRLG				S	**Sg**	**02 26 37.9**	**-2.1**
SRTM	**Siirt_Merkez**	**3.75**	**265**	*i* P	**Pg**	**02 25 53.7**	**-0.6**
SRTM				IAML_P			
	comp=Z,102nm,0.4s						

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*IDC **21** 02:25:12.6±2.1, 0°.03N×123°.22E, h127^{km}±18^{km}, mb4.1/19, mb1 4.2/21, mb1mx4.1/32, mbtmp4.5/21, MS3.2/2, Ms1 3.3/2, ms1mx2.6/43, Error ellipse: s-maj=22.4km s-min=9.4km az=73.0*

*ISCJB **21** 02:25:13.5±0.3, 0°.02N±0°.03×123°.46E±0°.03, h149^{km}±3^{km}, mb4.6/97, Error ellipse: s-maj=5.1km s-min=3.6km az=138.6*

*DJA **21** 02:25:14.9±0.2, 0°S±3°×12°3E±°, h132^{km}±5^{km}, M4.6/16, mB5.1/7, mb4.8/13, MLv4.8/16, Mw(mB)4.4/7*

*MOS **21** 02:25:14.5±1.0, 0°.04N×123°.32E, h161^{km}, mb4.6/39, Error ellipse: s-maj=14.0km s-min=6.2km az=108.9*

*NEIC **21** 02:25:14.0±0.6, 0°.00N×123°.32E, h140^{km}±6^{km}, mb4.9/49, Error ellipse: s-maj=7.2km s-min=4.3km az=62.0*

ISC 21 02:25:14.6±0.5, **0°.09S**±0°.04×**123°.41E**±0°.04, **h145^{km}**±4^{km}, **n223,** σ**1^{s}64**/264, **mb4.7**/107, **7C-7D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.87**	**41**	P	**Pn**	**02 25 37.1**	**-0.7**
LUWI	**Luwuk**	**1.14**	**214**	*e*Pn	**Pn**	**02 25 38.9**	**-1.3**
LUWI				*e*Sn	**Sn**	**02 25 55.5**	**-4.2**
LUWI	**Luwuk**	**1.14**	**214**	P	**Pn**	**02 25 39.0**	**-1.2**
MRSI	**Marisa**	**1.57**	**291**	P	**Pn**	**02 25 43.3**	**-1.2**
APSI	**Ampana**	**1.94**	**245**	P	**Pn**	**02 25 48.3**	**-0.4**
SANI	**Sanana**	**3.23**	**127**	P	**Pn**	**02 26 02.2**	**-2.6**
PCI	**Palu**	**3.66**	**257**	P	**Pn**	**02 26 10.6**	**+0.3**
TNTI	**Ternate**	**4.05**	**78**	*e*Pn	**Pn**	**02 26 15.3**	**-0.1**
TNTI				*e*Sn	**Sn**	**02 26 59.4**	**-3.2**
TNTI	**Ternate**	**4.05**	**78**	P	**Pn**	**02 26 15.1**	**-0.3**
TTSI	**Tana Toraja**	**4.64**	**231**	P	**Pn**	**02 26 23.6**	**+0.4**
NLAI	**Namlea**	**4.84**	**130**	P	**Pn**	**02 26 26.0**	**+0.2**
SPSI	**Sidrap Palu**	**5.30**	**223**	P	**Pn**	**02 26 32.9**	**+1.0**
BNSI	**Bone**	**5.41**	**218**	P	**Pn**	**02 26 34.7**	**+1.3**
BKSI	**Bulukumba**	**6.15**	**212**	P	**Pn**	**02 26 44.5**	**+1.2**
SMKI	**Samarinda**	**6.21**	**267**	P	**Pn**	**02 26 46.8**	**+2.7**
KCP	**Kidapawan**	**7.25**	**13**	⇓*e*P	**Pn**	**02 26 59.8**	**+1.8**
KCP				*i* S	**Sn**	**02 28 22.6**	**+3.5**
BNDI	**Bandanaira**	**7.84**	**124**	P	**Pn**	**02 27 06.8**	**+0.8**
SIJI	**Sorong**	**7.90**	**96**	P	**Pn**	**02 27 06.6**	**-0.1**
	9.1nm,0.3s,baz=297,slow=9.4,SNR=26						
SIJI				S	**Sn**	**02 28 34.3**	**-0.5**
	1.8nm,0.3s,baz=215,slow=18,SNR=2.6						
FAKI	**Fak Fak**	**9.27**	**108**	*e*Pn	**Pn**	**02 27 23.7**	**-1.4**
FAKI				*e*Sn	**Sn**	**02 29 02.5**	**-5.5**
FAKI	**Fak Fak**	**9.27**	**108**	P	**Pn**	**02 27 23.4**	**-1.7**
KKM	**Kota Kinabalu**	**9.41**	**310**	*e*Pn	**Pn**	**02 27 28.8**	**+1.7**
SOEI	**Soe**	**9.64**	**175**	*e*Pn	**Pn**	**02 27 32.9**	**+2.7**
SOEI	**Soe**	**9.64**	**175**	P	**Pn**	**02 27 31.7**	**+1.6**
BATI	**Baumata**	**10.06**	**179**	P	**Pn**	**02 27 37.4**	**+1.9**
BATI	**Baumata**	**10.06**	**179**	P	**Pn**	**02 27 38.3**	**+2.8**
	7.1nm,0.3s,baz=2.3,slow=1.3,SNR=12						
MTN	**Manton Dam**	**14.81**	**149**	*e*Pn	**Pn**	**02 28 37.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**18.03**	**173**	*e*P	**P**	**02 29 15.1**	**+0.4**
	24nm,1.0s						
FITZ	**Fitzroy Crossi**	**18.03**	**173**	P	**Pn**	**02 29 15.8**	**-0.4**
	3.0nm,0.3s,baz=0.1,slow=7.9,SNR=64						
MBWA	**Marble Bar**	**21.25**	**190**	*e*P	**P**	**02 29 48.8**	**-0.6**
	36nm,1.5s						
WRAB	**Tennant Creek**	**22.45**	**152**	*e*P	**P**	**02 30 02.3**	**+0.5**
	15nm,0.8s						
WRAB	**Tennant Creek**	**22.45**	**152**	*e*P	**P**	**02 30 02.3**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,15nm,0.8s						
WR1	**Warramunga Arr**	**22.45**	**152**	*e*P	**P**	**02 30 01.8**	**0.0**
	comp=Z,17nm,0.6s						
WR1				*e*S	**S**	**02 33 56.1**	**-1.6**
WR1				*e*ScP	**ScP**	**02 37 16.8**	**+1.4**
WRA	**Warramunga Arr**	**22.45**	**152**	P	**P**	**02 30 01.8**	**0.0**
	comp=Z,8.0nm,0.5s,baz=330,slow=11,SNR=198						
WRA				S	**S**	**02 33 56.1**	**-1.6**
	comp=Z,5.6nm,0.8s,baz=334,slow=16,SNR=8.2						
WRA				ScP	**ScP**	**02 37 16.8**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=342,slow=2.8,SNR=6.8						
WRA				PKiKP	**PKiKP**	**02 41 35.6**	**-1.1**
	comp=Z,0.1nm,0.6s,baz=315,slow=1.2,SNR=4.8						
WB2	**Warramunga Arr**	**22.46**	**152**	*e*P	**P**	**02 30 02.2**	**+0.4**
PDSI	**Padang**	**22.96**	**268**	P	**P**	**02 30 09.1**	**+2.4**
QIZ	**Qiongzhong**	**23.20**	**326**	*e*P	**P**	**02 30 08.8**	**+0.1**
	comp=Z,181nm,1.8s						
KULM	**Kulim**	**23.34**	**284**	*e*P	**P**	**02 30 09.1**	**-1.1**
SKLT	**Songkhla**	**23.84**	**288**	P	**P**	**02 30 19.4**	**+4.7**
	comp=Z,29nm,0.9s,comp=Z,862nm						
COEN	**Coen**	**23.93**	**126**	*e*P	**P**	**02 30 16.4**	**+0.9**
	comp=Z,12nm,0.8s						
COEN				*e*PcP	**PcP**	**02 33 56.4**	**+2.1**
MANU	**Manus Island**	**24.03**	**95**	*e*P	**P**	**02 30 18.9**	**+2.5**
	comp=Z,37nm,0.9s						
GIRL	**Giralia**	**24.14**	**201**	*e*P	**P**	**02 30 18.1**	**+0.9**
	comp=Z,102nm,1.4s						
SRAK	**Srakaew**	**25.37**	**304**	P	**P**	**02 30 30.8**	**+2.3**
	comp=Z,29nm,0.6s						
AS31	**Alice Springs**	**25.56**	**157**	*e*P	**P**	**02 30 31.1**	**+0.9**
	comp=Z,2.3nm,0.7s						
AS31				*e*PcP	**PcP**	**02 33 58.4**	**+0.6**
AS31				*e*S	**S**	**02 34 47.2**	**-0.2**
AS31				*e*ScP	**ScP**	**02 37 25.1**	**+1.2**
ASAR	**Alice Springs**	**25.56**	**157**	P	**P**	**02 30 31.0**	**+0.8**
	comp=Z,2.9nm,0.4s,baz=345,slow=13,SNR=20						
ASAR				PcP	**PcP**	**02 33 58.4**	**+0.6**
	comp=Z,2.6nm,0.4s,baz=352,slow=2.2,SNR=10						
ASAR				S	**S**	**02 34 47.2**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=353,slow=20,SNR=4.1						
ASAR				ScP	**ScP**	**02 37 25.1**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=359,slow=2.4,SNR=5.0						
SKNT	**Sakolnakorn**	**25.57**	**312**	P	**P**	**02 30 33.3**	**+3.0**
	comp=Z,11nm,0.9s,comp=Z,794nm						
AS01	**Alice Springs**	**25.58**	**157**	*e*P	**P**	**02 30 30.7**	**+0.4**
AS01				*e*pP	**pP**	**02 30 58.9**	**-1.5**
AS01				*e*PcP	**PcP**	**02 33 58.3**	**+0.5**
CHAI	**Chaiyaphum**	**26.45**	**308**	P	**P**	**02 30 40.3**	**+2.0**
	comp=Z,9.5nm,0.7s,comp=Z,325nm						
PHET	**Kaeng Krachan**	**26.88**	**300**	P	**P**	**02 30 44.9**	**+2.8**
	comp=Z,5.5nm,0.7s						
UTHA	**Uthaitani**	**28.32**	**304**	P	**P**	**02 30 57.6**	**+2.7**
	comp=Z,12nm,0.7s,comp=Z,126nm						
UTTA	**Uttaradit**	**28.63**	**309**	P	**P**	**02 31 00.1**	**+2.5**
	comp=Z,5.4nm,0.8s						
UMPA	**Umpang Tak**	**29.13**	**305**	P	**P**	**02 31 05.2**	**+3.0**
	comp=Z,3.1nm,0.7s,comp=Z,2µm						
SUKH	**Sukhothai**	**29.20**	**308**	P	**P**	**02 31 05.2**	**+2.5**
	comp=Z,11nm,0.7s						
MORW	**Morawa**	**29.67**	**193**	*e*P	**P**	**02 31 06.8**	**+0.1**
	comp=Z,33nm,1.6s						
LAMP	**Lampang**	**29.79**	**310**	P	**P**	**02 31 11.0**	**+3.0**
	comp=Z,7.2nm,0.7s						
CTA	**Charters Tower**	**29.93**	**133**	P	**P**	**02 31 11.5**	**+2.4**
	comp=Z,1.2nm,0.4s,baz=299,slow=13,SNR=3.9						
CM01	**Chiang Mai Arr**	**30.25**	**309**	*e*P	**P**	**02 31 12.9**	**+0.8**
CM31	**Chiang Mai Arr**	**30.29**	**309**	*e*P	**P**	**02 31 13.5**	**+1.1**
	comp=Z,8.8nm,0.8s						
CM31				*e*PcP	**PcP**	**02 34 10.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**30.29**	**309**	P	**P**	**02 31 13.5**	**+1.1**
	comp=Z,8.9nm,0.7s,baz=136,slow=7.3,SNR=38						
CMAR				PcP	**PcP**	**02 34 10.0**	**+0.5**
	comp=Z,1.5nm,0.4s,baz=152,slow=1.6,SNR=6.9						
CMAR				LR	LR	02 44 42.6	
	comp=Z,25nm,19.6s,baz=122,slow=39						
CMMT	**Chiang Mai**	**30.49**	**309**	P	**P**	**02 31 15.7**	**+1.6**
CHTO	**Chiang Mai**	**30.49**	**309**	*e*P	**P**	**02 31 15.5**	**+1.3**
	comp=Z,21nm,0.8s						
CHTO	**Chiang Mai**	**30.49**	**309**	*e*P	**P**	**02 31 15.5**	**+1.3**
CHTO				pmax	pmax		
	comp=Z,21nm,0.8s						
CHTO	**Chiang Mai**	**30.49**	**309**	P	**P**	**02 31 15.8**	**+1.7**
	comp=Z,144nm,0.8s						
FORT	**Forrest**	**30.84**	**172**	*e*P	**P**	**02 31 16.8**	**-0.2**
	comp=Z,31nm,0.7s						
KMI	**Kunming**	**32.06**	**323**	P	**P**	**02 31 30.9**	**+2.8**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NJ2	**Nanjing**	**32.25**	**353**	*e*P	**P**	**02 31 30.1**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NWAO	**Narrogin (SRO)**	**33.18**	**190**	*e*P	**P**	**02 31 37.7**	**+0.2**
	comp=Z,81nm,1.7s						
NWAO	**Narrogin (SRO)**	**33.18**	**190**	*e*P	**P**	**02 31 37.7**	**+0.2**
NWAO				pmax	pmax		
	comp=Z,81nm,1.7s						
BBOO	**Buckleboo**	**34.67**	**161**	*e*P	**P**	**02 31 50.5**	**+0.2**
	comp=Z,71nm,1.8s						
STKA	**Stephens Creek**	**36.00**	**153**	P	**P**	**02 32 03.2**	**+1.5**
	comp=Z,9.9nm,0.7s,baz=327,slow=9.1,SNR=16						
STKA				PcP	**PcP**	**02 34 25.7**	**+0.5**
	comp=Z,2.4nm,0.4s,baz=342,slow=3.6,SNR=4.0						
CD2	**Chengdu**	**36.03**	**331**	*e*P	**P**	**02 32 02.0**	**-0.1**
XAN	**Xi'an**	**36.57**	**340**	P	**P**	**02 32 07.3**	**+0.7**
XAN				pmax	pmax		
	comp=Z,11nm,0.6s						
XAN				pmax	pmax		
	comp=Z,130nm,3.8s						
XAN	**Xi'an**	**36.57**	**340**	*e*P	**P**	**02 32 07.5**	**+0.9**
	comp=Z,8.2nm,0.6s						
XAN	**Xi'an**	**36.57**	**340**	*e*P	**P**	**02 32 07.5**	**+0.9**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KS15	**Wonju Array Si**	**37.57**	**6**	*e*P	**P**	**02 32 14.1**	**-0.8**
	comp=Z,50nm,1.5s						
KSAR	**Wonju Array Be**	**37.57**	**6**	P	**P**	**02 32 14.1**	**-0.8**
KSAR	**Wonju Array Be**	**37.57**	**6**	P	**P**	**02 32 14.1**	**-0.8**
KSRS	**Korea Array**	**37.59**	**6**	P	**P**	**02 32 14.1**	**-0.9**
	comp=Z,2.4nm,0.6s,baz=181,slow=12,SNR=7.0						
MAJO	**Matsushiro**	**38.95**	**19**	*e*P	**P**	**02 32 25.8**	**-0.7**
MAJO	**Matsushiro**	**38.95**	**19**	*e*P	**P**	**02 32 25.8**	**-0.7**
MJAR	**Matsushiro Arr**	**38.95**	**19**	P	**P**	**02 32 25.0**	**-1.5**
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MJAR	**Matsushiro Arr**	**38.95**	**19**	P	**P**	**02 32 25.0**	**-1.5**
	comp=Z,8.5nm,0.8s,baz=201,slow=9.7,SNR=12						
ARMA	**Armidale**	**40.37**	**141**	*e*P	**P**	**02 32 40.2**	**+1.7**
	comp=Z,144nm,1.9s						
BJI	**Beijing**	**40.48**	**351**	⇑*e*P	**P**	**02 32 39.8**	**+0.7**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**42.14**	**347**	*e*P	**P**	**02 32 54.4**	**+1.6**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,240nm,7.3s						
TOO	**Toolangi**	**42.51**	**154**	*e*P	**P**	**02 32 58.1**	**+2.4**
	comp=Z,40nm,1.4s						
TOO	**Toolangi**	**42.51**	**154**	*e*P	**P**	**02 32 58.2**	**+2.4**
TOO				pmax	pmax		
	comp=Z,40nm,1.4s						
LSA	**Lhasa**	**42.69**	**317**	P	**P**	**02 32 59.4**	**+1.6**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LSA	**Lhasa**	**42.69**	**317**	*e*P	**P**	**02 32 59.9**	**+2.1**
	comp=Z,9.3nm,0.6s						
CN2	**Changchun**	**43.73**	**2**	*e*P	**P**	**02 33 08.5**	**+3.1**
RAMN	**Ramite**	**44.44**	**310**	*e*P	**P**	**02 33 12.6**	**+1.0**
	comp=Z,67nm,0.6s						
USRK	**Ussuriysk Ar.**	**44.75**	**9**	P	**P**	**02 33 12.6**	**-0.9**
	comp=Z,4.3nm,0.7s,baz=199,slow=3.7,SNR=8.9						
GTA	**Gaotai**	**44.85**	**334**	P	**P**	**02 33 15.8**	**+1.3**
GTA				pP	pP	02 33 47.3	+0.1
GTA				sP	sP	02 34 03.3	-0.2
GTA				PcP	**PcP**	**02 34 53.8**	**0.0**
GTA				pmax	pmax		
	comp=Z,14nm,1.1s						
JIRN	**Jiri**	**45.12**	**311**	*e*P	**P**	**02 33 17.7**	**+0.6**
	comp=Z,124nm,0.8s						
GUN	**Gumba**	**45.48**	**311**	*e*P	**P**	**02 33 20.4**	**+0.4**
	comp=Z,138nm,0.8s						
PKI	**Pulchoki**	**45.67**	**310**	*e*P	**P**	**02 33 21.5**	**+0.1**
	comp=Z,36nm,0.6s						
PKIN	**Phulchoki**	**45.68**	**310**	*e*P	**P**	**02 33 21.7**	**+0.3**
	comp=Z,27nm,0.6s						
KKN	**Kakani**	**45.88**	**310**	*e*P	**P**	**02 33 23.6**	**+0.7**
	comp=Z,13nm,0.3s						
DMN	**Daman**	**45.92**	**310**	*e*P	**P**	**02 33 23.6**	**+0.3**
	comp=Z,57nm,0.8s						
KOLN	**Koldanda**	**47.16**	**309**	*e*P	**P**	**02 33 33.8**	**+0.9**
	comp=Z,121nm,0.7s						
DZM	**Mont Dzumac**	**47.27**	**120**	*e*P	**P**	**02 33 35.3**	**+1.6**
	comp=Z,39nm,1.7s						
DANN	**Dangsing**	**47.32**	**310**	*e*P	**P**	**02 33 34.5**	**+0.3**
	comp=Z,148nm,0.7s						
HYB	**Hyderabad**	**47.44**	**294**	*i* P	**P**	**02 33 36.0**	**+1.0**
HYB				*e*pP	**pP**	**02 34 09.0**	**+1.5**
OUENC	**Ouen Island, N**	**47.74**	**121**	*e*P	**P**	**02 33 38.1**	**+0.9**
	comp=Z,30nm,1.1s						
PYUN	**Piuthan**	**47.79**	**309**	*e*P	**P**	**02 33 38.3**	**+0.5**
	comp=Z,214nm,0.8s						
KLR	**Kul'dur**	**49.65**	**7**	*d i*P	**P**	**02 33 50.2**	**-1.1**
YSS	**Yuzh-Sakhalins**	**49.81**	**17**	*e*P	**P**	**02 33 51.7**	**-0.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULN	**Ulaanbaatar**	**49.83**	**346**	*e*P	**P**	**02 33 52.6**	**-0.4**
	comp=Z,6.2nm,0.8s						
ULN	**Ulaanbaatar**	**49.83**	**346**	*e*P	**P**	**02 33 52.6**	**-0.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONA0	**Songino Array**	**49.97**	**345**	*e*P	**P**	**02 33 53.4**	**-0.6**
SONA0				*e*PcP	**PcP**	**02 35 11.2**	**-0.7**
SONM	**Songino Array**	**49.97**	**345**	P	**P**	**02 33 53.4**	**-0.6**
	comp=Z,6.2nm,0.7s,baz=162,slow=8.5,SNR=44						

SONM				PcP	PcP	02 35 11.2	-0.7
	comp=Z,2.4nm,0.6s,baz=172,slow=2.9,SNR=6.8						
SONA1	**Songino Array**	49.98	345	*e*P	P	02 33 51.9	-2.2
GRNR	**Gornyy**	51.86	10	*e*P	P	02 34 07.2	-0.7
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
WMQ	**Urumqi**	54.08	329	*e*P	P	02 34 26.1	+1.7
WMQ				pmax	pmax		
	comp=Z,26nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,500nm,4.9s						
WMQ				LR	LR		
	comp=N,83nm,31.5s						
WMQ				LR	LR		
	comp=E,100nm,16.5s						
WMQ				LR	LR		
	comp=Z,52nm,16.5s						
TLY	**Talaya**	54.21	345	*e*P	P	02 34 25.5	+0.4
	comp=Z,4.2nm,0.7s						
TLY	**Talaya**	54.21	345	⇓*i*P	P	02 34 24.9	-0.2
MOY	**Mondy**	54.93	343	*e*P	P	02 34 31.4	+1.0
MOY				pmax	pmax		
	comp=Z,12nm,1.4s						
NKL	**Nikolayevsk**	54.97	13	*e*P	P	02 34 30.0	-0.5
NIL	**Nilore**	57.75	311	*e*P	P	02 34 51.3	+0.6
	comp=Z,10nm,0.8s						
NIL	**Nilore**	57.75	311	*e*P	P	02 34 51.3	+0.6
NIL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BOD	**Bodaibo**	58.22	354	*e*P	P	02 34 52.0	-1.4
BOD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DGZ	**Jazzator, Alta**	58.38	333	*d i*P	P	02 34 54.2	-0.7
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSH	**Kashi**	58.51	318	P	P	02 34 57.8	+1.8
KSH				pP	pP	02 35 32.4	+2.4
KSH				PP	PP	02 37 11.9	+4.8
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,530nm,4.9s						
MK01	**Makanchi Array**	58.88	328	*e*P	P	02 34 57.1	-1.1
MK01				*e*sP	PcP	02 35 45.0	-1.0
MK31	**Makanchi Array**	58.90	328	*e*P	P	02 34 57.5	-0.8
MK31				*e*sP	PcP	02 35 44.9	-1.2
MK31	**Makanchi Array**	58.90	328	*e*P	P	02 34 57.6	-0.8
MK31				*e**SP	PcP	02 35 44.9	-1.2
MK32	**Makanchi Array**	58.90	328	*e*P	P	02 34 57.6	-0.8
MK32				*e*sP	PcP	02 35 44.9	-1.2
MKAR	**Makanchi Array**	58.90	328	*e*P	P	02 34 57.5	-0.8
	comp=Z,26nm,0.6s						
MKAR				*e*sP	PcP	02 35 45.0	-1.1
MKAR	**Makanchi Array**	58.90	328	P	P	02 34 57.6	-0.8
	comp=Z,3.5nm,0.5s,baz=124,slow=8.6,SNR=72						
MKAR				PcP	PcP	02 35 44.9	-1.2
	comp=Z,3.2nm,0.5s,baz=155,slow=3.0,SNR=17						
MAKZ	**Makanchi**	59.08	328	*e*P	P	02 34 58.9	-0.7
	comp=Z,18nm,1.6s						
MAKZ				*e*PcP	PcP	02 35 45.0	-1.9
MAKZ	**Makanchi**	59.08	328	*e*P	P	02 34 58.9	-0.7
MAKZ				*e*		02 35 45.0	
MAKZ				pmax	pmax		
	comp=Z,18nm,1.6s						
FOZ	**Fox Glacier**	59.83	142	*e*P	P	02 35 06.3	+1.6
	comp=Z,93nm,1.8s						
MLZ	**Mavora Lakes**	59.86	145	*e*P	P	02 35 06.2	+1.2
	comp=Z,96nm,1.7s						
PEA0B	**Petropavlovsk-**	60.20	23	*e*P	P	02 35 06.2	-0.9
	comp=Z,230nm,2.0s						
PETK	**Petropavlovsk-**	60.20	23	*e*P	P	02 35 07.3	+0.2
PETK	**Petropavlovsk-**	60.20	23	P	P	02 35 07.6	+0.4
	comp=Z,4.1nm,0.6s,baz=204,slow=5.8,SNR=9.8						
PEA1	**Petropavlovsk-**	60.21	23	*e*P	P	02 35 07.6	+0.4
RPZ	**Rata Peaks**	60.69	142	*e*P	P	02 35 12.6	+2.0
	comp=Z,41nm,1.1s						
THZ	**Tophouse**	60.86	139	*e*P	P	02 35 13.8	+1.9
	comp=Z,51nm,1.5s						
AAK	**Ala-Archa**	61.06	321	⇑*e*P	P	02 35 13.0	-0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	61.06	321	LR	LR	03 03 38.5	
	comp=Z,29nm,20.0s,baz=83,slow=38						
ODZ	**Otahua Downs**	61.16	144	*e*P	P	02 35 13.6	-0.1
	comp=Z,142nm,1.1s						
KBL	**Kabul**	61.31	310	*e*P	P	02 35 14.4	-0.9
	comp=Z,16nm,0.6s						
KBL	**Kabul**	61.31	310	*e*P	P	02 35 14.4	-0.9
KBL				pmax	pmax		
	comp=Z,17nm,0.6s						
TRVZ	**Turoa**	61.50	136	P	P	02 35 18.5	+2.0
MOVZ	**Moawhango**	61.69	136	P	P	02 35 19.0	+1.4
OGWZ	**Otaki Gorge**	61.92	137	P	P	02 35 19.9	+1.0
BKZ	**Black Stump Fm**	62.10	135	*e*P	P	02 35 21.7	+1.4
	comp=Z,13nm,0.7s						
BKZ	**Black Stump Fm**	62.10	135	P	P	02 35 21.6	+1.3
MRZ	**Mangatainoka R**	62.12	137	P	P	02 35 20.1	-0.2
YAK	**Yakutsk**	62.14	3	*e*P	P	02 35 19.2	-0.8
YAK				pmax	pmax		
	comp=E,33nm,1.0s						
GAR	**Garm**	62.16	315	*e*P	P	02 35 20.0	-0.8
	comp=E,27nm,1.3s						
GAR	**Garm**	62.16	315	*e*P	P	02 35 20.0	-0.8
GAR				pmax	pmax		
	comp=Z,27nm,1.3s						
URZ	**Urewera**	62.16	134	P	P	02 35 21.6	+1.0
KWHZ	**Kaweka Forest**	62.16	136	P	P	02 35 22.3	+1.6
MTHZ	**Maungataniwha**	62.22	135	P	P	02 35 22.5	+1.4
RTZ	**Ruatahuna**	62.22	135	P	P	02 35 22.5	+1.4
MWZ	**Matawai**	62.49	134	P	P	02 35 23.4	+0.5
ZAA0	**Zalesovo Array**	62.56	335	*e*P	P	02 35 21.6	-1.3
	comp=Z,4.7nm,1.1s						
ZALV	**Zalesovo Beam**	62.56	335	*e*P	P	02 35 21.1	-1.8
ZALV	**Zalesovo Beam**	62.56	335	P	P	02 35 21.2	-1.7
	comp=Z,2.0nm,0.4s,baz=130,slow=5.4,SNR=11						
ZAA1	**Zalesovo Array**	62.56	335	*e*P	P	02 35 21.2	-1.7
CHGR	**Chuyangaron**	62.84	314	*e*P	P	02 35 24.3	-1.0
	comp=Z,25nm,1.5s						
MA2	**Magadan**	63.21	15	*e*P	P	02 35 27.9	+0.7
	comp=Z,30nm,1.2s						
MA2	**Magadan**	63.21	15	*c i*P	P	02 35 27.2	+0.1
MA2				pmax	pmax		
	comp=Z,32nm,1.3s						
KURK	**Kurchatov**	63.25	330	*e*P	P	02 35 26.4	-1.2
	comp=Z,8.2nm,0.8s						
KURK	**Kurchatov**	63.25	330	*e*P	P	02 35 26.4	-1.2
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SEY	**Seymchan**	66.49	14	⇓*e*P	P	02 35 48.9	+0.6
BRVK	**Borovoye**	68.84	329	*e*P	P	02 36 02.2	-1.0
	comp=Z,16nm,1.9s						
BRVK	**Borovoye**	68.84	329	*e*P	P	02 36 02.2	-1.0
BRVK				pmax	pmax		
	comp=Z,16nm,1.9s						
ABKAR	**Akbulak array**	73.05	322	*e*P	P	02 36 27.1	-1.6
NRIK	**Noril'sk**	73.36	347	P	P	02 36 29.4	-0.8
	comp=Z,5.4nm,0.7s,baz=138,slow=7.6,SNR=3.8						
BILL	**Bilibino**	74.08	15	⇑*i*P	P	02 36 34.2	-0.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ARU	**Arti**	76.42	329	*d i*P	P	02 36 45.9	-2.0
ARU				S	S	02 46 20.1	-1.2
ARU				SS	SS	02 51 10.0	-8.9
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RAYN	**Ar Rayn**	78.95	294	*e*P	P	02 37 00.9	-1.9
	comp=Z,4.0nm,0.9s						
RAYN	**Ar Rayn**	78.95	294	*e*P	P	02 37 00.9	-1.9
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GAMB	**Gambell**	79.21	24	*e*P	P	02 37 04.1	+0.9
	comp=Z,5.8nm,0.9s						
VNDA	**Vanda**	80.11	172	P	P	02 37 08.9	+1.0
	comp=Z,3.8nm,0.7s,baz=305,slow=7.2,SNR=8.5						
KIV	**Kislovodsk**	83.37	314	*e*P	P	02 37 24.1	-1.7
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RDOG	**Red Dog Mine**	84.02	21	*e*P	P	02 37 29.8	+1.4
	comp=Z,49nm,1.8s						
PRGR	**Permogore**	84.27	332	*e*P	P	02 37 27.2	-2.6
PRGR				pmax	pmax		
	comp=Z,14nm,0.7s						
VRH	**Novokhopyorsk**	84.85	321	*e*P	P	02 37 30.1	-2.8
VRH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KMBO	**Kilima Mbogo**	86.16	269	*ce*P	P	02 37 40.7	+0.1
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KMBO	**Kilima Mbogo**	86.16	269	P	P	02 37 40.1	-0.5
	comp=Z,1.8nm,0.8s,baz=58,slow=7.6,SNR=6.9						
VSR	**Storozhevoye**	86.45	321	⇑*e*P	P	02 37 38.1	-2.8
VSR				pmax	pmax		
	comp=Z,15nm,1.0s						
LPSR	**Galich'ya Gora**	86.70	323	*e*P	P	02 37 40.0	-2.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLMR	**Klimovskoe**	87.09	331	*e*P	P	02 37 41.1	-2.6
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KLMR	**Klimovskoe**	87.09	331	*e*P	P	02 37 41.1	-2.6
KLMR				AMP		02 37 43.2	
	comp=Z,7.0nm,0.6s						
IM3	**Indian Mountai**	87.16	24	*e*P	P	02 37 44.0	+0.1
ANN	**Anapa**	87.20	315	*e*P	P	02 37 41.3	-3.3
ANN				*e**PP	pwP	02 38 22.4	-0.5
ANN				pmax	pmax		
	comp=Z,65nm,1.7s						
MLY	**Manley**	88.32	25	*e*P	P	02 37 49.8	+0.2
	comp=Z,9.8nm,1.2s						
BR101	**Keskin Array S**	89.88	310	*e*P	P	02 37 55.4	-2.2
BRTR	**Keskin Array B**	89.88	310	P	P	02 37 55.4	-2.2
	comp=Z,0.6nm,0.7s,baz=108,slow=4.0,SNR=4.0						
ILAR	**Eielson Array**	89.95	25	P	P	02 37 55.5	-1.7
	comp=Z,0.7nm,0.5s,baz=240,slow=5.3,SNR=15						
ILAR				PKKPbc	PKKPbc	02 55 29.1	-2.0
	comp=Z,0.4nm,1.0s,baz=111,slow=2.6,SNR=5.2						
ILB	**Eielson Array**	89.95	25	*e*P	P	02 37 55.5	-1.7
	comp=Z,31nm,1.9s						
AKASG	**Malin Array Be**	92.72	321	*ce*P	P	02 38 07.6	-2.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	92.72	321	P	P	02 38 07.7	-2.6
	comp=Z,0.7nm,0.4s,baz=72,slow=4.4,SNR=7.6						
AKBB	**Malin Array Si**	92.72	321	*e*P	P	02 38 07.7	-2.6
	comp=Z,22nm,1.8s						
AKBB	**Malin Array Si**	92.72	321	*e*P	P	02 38 07.7	-2.6
AKBB				pmax	pmax		
	comp=Z,23nm,1.8s						
ARA0	**ARCESS Array S**	92.85	340	*e*P	P	02 38 09.6	-0.9
ARCES	**ARCESS Array B**	92.85	340	P	P	02 38 09.6	-0.9
	comp=Z,5.5nm,1.0s,baz=84,slow=3.2,SNR=6.1						
FIA0	**FINESS Array S**	93.59	331	*e*P	P	02 38 11.6	-2.4
FIA0	**FINESS Array S**	93.59	331	*e*P	P	02 38 11.6	-2.4
FINES	**FINESS Array B**	93.59	331	*i* P	P	02 38 12.8	-1.2
FINES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FINES	**FINESS Array B**	93.59	331	P	P	02 38 11.6	-2.4
	comp=Z,4.2nm,1.1s,baz=50,slow=6.0,SNR=5.7						
LSZ	**Lusaka**	95.02	255	*e*P	P	02 38 21.2	-0.5
	comp=Z,9.3nm,0.8s						
LSZ	**Lusaka**	95.02	255	*e*P	P	02 38 21.2	-0.5
LSZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BUR08	**Bucovina Ar. S**	95.60	318	*e*P	P	02 38 22.6	-1.2
CLL	**Collm**	102.71	323	*e*PP	PKiKP	02 43 13.0	-2.4
YKA	**Yellowknife Ar**	104.32	24	Pdiff	Pdif	02 39 02.5	+0.3
	comp=Z,0.2nm,0.7s,baz=297,slow=4.6,SNR=4.6						
YKA				PKiKP	PKiKP	02 43 17.6	-0.3
	comp=Z,0.3nm,0.3s,baz=299,slow=1.9,SNR=16						
YKA				PKKPbc	PKKPbc	02 54 48.0	-3.5
	comp=Z,0.4nm,0.5s,baz=121,slow=3.4,SNR=12						
YKB5	**Yellowknife Ar**	104.32	24	*e*Pdif	Pdif	02 39 02.5	+0.3
YKB5				*e*PKiKP	PKiKP	02 43 17.4	-0.5
NV01	**Mina Array Sit**	111.91	48	*e*PKiKP	PKiKP	02 43 34.4	+1.2
NVAR	**Mina Array Bea**	111.91	48	PKiKP	PKiKP	02 43 34.4	+1.2
	comp=Z,0.9nm,0.7s,baz=272,slow=1.8,SNR=6.5						
PD31	**Pinedale Array**	116.39	41	*e*PKPdf	PKiKP	02 43 42.1	+0.3
PDAR	**Pinedale Array**	116.39	41	PKP	PKiKP	02 43 42.1	+0.3
	comp=Z,0.5nm,0.5s,baz=139,slow=1.6,SNR=7.4						
ULM	**Lac du Bonnet**	119.87	28	PKP	PKPdf	02 43 47.1	-0.7
	comp=Z,5.5nm,0.6s,baz=323,slow=1.2,SNR=15						
TORD	**Torodi Ar. Bea**	120.82	285	PKP	PKPdf	02 43 50.0	-0.7
	comp=Z,1.0nm,0.5s,baz=85,slow=1.6,SNR=20						
TORD				PKKPbc	PKKPab	02 53 57.1	+0.6
	comp=Z,1.0nm,0.7s,baz=250,slow=3.8,SNR=7.1						
TOA1	**Torodi Ar. Sit**	120.83	285	*e*PKPdf	PKPdf	02 43 50.0	-0.7
ANMO	**Albuquerque**	122.03	48	⇓*i*PKIKP	PKiKP	02 43 54.1	+1.2
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SCHQ	**Schefferville**	124.79	7	PKP	PKPdf	02 43 57.3	+0.2
	comp=Z,5.0nm,0.5s,baz=326,slow=3.3,SNR=10						
TXAR	**Lajitas Array**	126.54	53	PKP	PKiKP	02 44 02.5	+0.6
	comp=Z,1.2nm,0.8s,baz=158,slow=0.7,SNR=7.5						
CPUP	**Villa Florida**	153.73	179	PKIKP	PKiKP	02 44 58.0	+0.7
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CPUP	**Villa Florida**	153.73	179	PKPbc	PKiKP	02 44 58.0	+0.7
	comp=Z,0.8nm,0.4s,baz=207,slow=4.5,SNR=4.3						
LPAZ	**La Paz**	160.14	146	PKPab	PKPab	02 45 41.1	+2.1
	comp=Z,2.4nm,0.8s,baz=162,slow=4.7,SNR=7.3						

MEX 21 02:40:18.0±0.7, 18.04N×102.43W, h6km±9km, MD3.9, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	1.01	115	*i* P	Pg	02 40 34.6	-2.9
ZIIG				*e*S	Sg	02 40 48.3	-2.3
EZ5V		1.82	322	*e*P	Pn	02 40 46.5	-3.5
EZ5V				*e*S	Sn	02 41 08.8	-4.7
R15V		1.86	308	*e*P	Pn	02 40 47.5	-3.0
R15V				*e*S	Sn	02 41 09.2	-5.1
ARIG	**Puente Sto Nin**	1.99	83	*e*P	Pn	02 40 47.0	-5.3
ARIG				*e*S	Sn	02 41 16.7	-0.9
MEIG	**Mezcala**	2.68	92	*i* P	Pg	02 41 13.2	+3.9
PLIG	**Platanillo**	2.80	82	*e*P	Pn	02 41 00.3	-3.3
PLIG				*e*S	Sn	02 41 38.2	+0.4

IDC 21 02:57:45.8±2.5, 2.17N×128.20E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/48, mbtmp3.4/3, Error ellipse: s-maj=184.4km s-min=25.6km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	22.79	165	P	P	03 02 48.4	-1.8
	0.7nm,0.4s,baz=342,slow=9.9,SNR=15						
ASAR	**Alice Springs**	26.28	168	P	P	03 03 23.1	0.0
	0.3nm,0.5s,baz=348,slow=13,SNR=5.8						
MKAR	**Makanchi Array**	59.66	325	P	P	03 07 53.2	+1.2
	0.1nm,0.3s,baz=120,slow=7.0,SNR=5.1						

KRSC 21 03:43:35.2±0.6, 55.99N×161.10E, h156km±5km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZLN	**Zelenaya**	0.17	279	*e*P	Pn	03 43 57.0	+0.7
ZLN				*e*S	Sn	03 44 13.9	+1.6
BZGR	**Bezymyannyi-Gr**	0.23	257	*e*P	Pn	03 43 56.7	+0.3
BZGR				*e*S	Sn	03 44 13.3	+0.7
LGNR	**Loginova**	0.24	292	*e*P	Pn	03 43 57.4	+0.7
LGNR				*e*S	Sn	03 44 13.4	+0.4
BZWR	**Bezymyannyi-We**	0.34	265	*e*P	Pn	03 43 57.1	+0.3
BZMR	**Bezymyannaya**	0.34	261	*e*P	Pn	03 43 57.3	+0.5
BDR	**Baidarnaya**	0.58	6	*e*P	Pn	03 43 58.6	+0.9
BDR				*e*S	Sn	03 44 16.0	+1.0
SMKR	**Semkarok**	0.63	19	*e*P	Pn	03 43 59.0	+1.0
SMKR				*e*S	Sn	03 44 16.8	+1.3
SRKR	**Sorokina**	0.67	3	*e*P	Pn	03 43 58.8	+0.6
SRKR				*e*S	Sn	03 44 17.2	+1.3
TUMD	**Tumrok D**	0.88	207	*e*P	Pn	03 44 00.4	+0.7
TUMR	**Tumrok**	0.89	218	*e*P	Pn	03 44 01.0	+1.1
KBG	**Krutoberegovo**	0.94	73	*e*P	Pn	03 44 01.2	+1.2
KBG				*e*S	Sn	03 44 20.3	+1.3
KBTR	**Krutoberegovo**	0.99	77	*e*P	Pn	03 44 01.5	+1.1
KBTR				*e*S	Sn	03 44 20.4	+0.7
KZV	**Kizimen**	0.99	208	*e*P	Pn	03 44 01.5	+0.8
GNL	**Ganaly**	2.94	220	*e*P	Pn	03 44 23.3	+1.2
SMAR	**Somma**	3.04	207	*e*P	Pn	03 44 25.5	+2.0
AVH	**Avacha**	3.06	208	*e*P	Pn	03 44 26.0	+2.4
KOK	**Koryaka**	3.06	209	*e*P	Pn	03 44 25.8	+2.2
UGLR	**Uglovaya**	3.09	206	*e*P	Pn	03 44 26.1	+2.1

IDC ***21*** *04:04:08.3±1.2, 37.37N×26.92E, h0km, mb3.6/2, mb1 3.7/7, mb1mx3.4/47, mbtmp3.7/7, ML3.6/5, MS2.2/2, Ms1 2.2/2, ms1mx2.0/45, Error ellipse: s-maj=25.8km s-min=19.1km az=127.0*

ISK ***21*** *04:04:08.9, 37.39N×26.89E, h13km, ML3.8/34*

THE ***21*** *04:04:09.9, 37.38N×26.91E, h6km±1km, ML3.6/6, Error ellipse: s-maj=1.0km s-min=0.3km az=75.0*

ATH ***21*** *04:04:09.2, 37.41N×26.94E, h25km±2km, ML3.7/4, Error ellipse: s-maj=2.6km s-min=1.5km az=279.0*

DDA ***21*** *04:04:09.5, 37.41N×26.98E, h27km±1km, ML3.9*

ISCJB ***21*** *04:04:09.3±0.4, 37.40N±0.01×26.88E±0.02, h8km±3km, mb3.5/2, Error ellipse: s-maj=2.8km s-min=2.3km az=158.3*

ISC 21 04:04:09.8±0.9, 37.36N±0.02×26.89E±0.02, h14km±6km, n144, σ1.48/167, 13C-5D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DIDI	**Didim-Aydin**	0.28	86	PG	Pg	04 04 15.3	-0.4
DIDI				SG	Sg	04 04 19.9	+0.2
SMG	**Samos**	0.35	354	P	Pg	04 04 16.7	-0.3
SMG				S	Sg	04 04 21.0	-0.9
SMG				AML	AML	04 04 22.1	
	comp=N,48019µm,0.3s						
SMG				AML	AML	04 04 24.6	
	comp=E,42123µm,0.4s						
SMG	**Samos**	0.35	354	P	Pg	04 04 16.7	-0.3
SMG				S	Sg	04 04 21.7	-0.2
YKAV	**Yalikavak-Bodr**	0.39	126	PG	Pg	04 04 17.5	-0.1
YKAV				SG	Sg	04 04 23.5	+0.6
GCAM	**G?zelcaml?**	0.44	39	PG	Pg	04 04 18.1	-0.5
GCAM				SG	Sg	04 04 24.0	-0.5
GCAM	**G?zelcaml?**	0.44	39	*i* P	Pb	04 04 19.0	-0.3
GCAM				*i* S	Sg	04 04 24.8	+0.2
GCAM				IAML_P			
	comp=Z,190µm,0.2s						
BODT	**Bodrum**	0.45	131	PG	Pb	04 04 18.9	-0.5
BODT	**Bodrum**	0.45	131	P	Pb	04 04 18.8	-0.6
BODT				S	Sb	04 04 25.5	-0.5
BDRM	**Kayabasi**	0.53	123	*i* P	Pb	04 04 20.5	-0.3
BDRM				*i* S	Sg	04 04 27.9	+0.6
BDRM				IAML_P			
	comp=Z,44µm,0.2s						
DGB	**zmir**	0.69	360	*i* P	Pg	04 04 22.8	-0.5
DGB				IAML_P			
	comp=Z,67µm,0.2s						
MLSB	**Milas**	0.71	95	PG	Pg	04 04 23.1	-0.6
GMLD	**Gumuldur**	0.72	2	PG	Pg	04 04 22.9	-0.9
NISR	**Nisiros**	0.77	165	P	Pb	04 04 25.4	+0.6
NISR	**Nisiros**	0.77	165	P	Pb	04 04 24.9	0.0
NISR				S	Sb	04 04 36.6	+1.5
AYDN	**Tasoluk**	0.85	69	*i* P	Pg	04 04 25.0	-1.2
AYDN				IAML_P			
	comp=Z,149µm,0.2s						
ZEY	**zmir**	0.93	341	*i* P	Pg	04 04 27.2	-0.6
ZEY				*i* S	Sb	04 04 41.3	+1.4
AMGA	**Amorgos Island**	0.95	237	P	Pn	04 04 28.6	-0.1
AMGA				S	Sn	04 04 42.6	+0.6
AMGA				AML	AML	04 04 46.0	
	comp=N,13747µm,0.4s						
AMGA				AML	AML	04 04 46.3	
	comp=E,13465µm,0.4s						
AMGA	**Amorgos Island**	0.95	237	P	Pn	04 04 28.3	-0.4
AMGA				S	Sn	04 04 42.5	+0.5
AYDB	**Zeytinkoy-Aydi**	0.99	53	PG	Pg	04 04 27.8	-1.2
URLA	**Izmir**	1.03	347	PG	Pg	04 04 28.6	-1.1
URLA	**Izmir**	1.03	347	*i* P	Pb	04 04 29.3	-0.1
URLA				*i* S	Sn	04 04 44.4	+0.4
URLA				IAML_P			
	comp=Z,60µm,0.5s						
BLCB	**Balcova**	1.03	7	PG	Pg	04 04 28.5	-1.3
APE	**Apeiranthos**	1.12	256	PN	Pn	04 04 31.2	+0.2
APE	**Apeiranthos**	1.12	256	P	Pn	04 04 31.2	+0.2
APE				S	Sn	04 04 48.8	+2.6
APE				AML	AML	04 04 50.1	
	comp=E,1812µm,0.3s						
APE				AML	AML	04 04 50.5	
	comp=N,3376µm,0.5s						
APE	**Apeiranthos**	1.12	256	⇓*i*P	Pn	04 04 31.2	+0.2
APE	**Apeiranthos**	1.12	256	S	Sg	04 04 44.0	-2.0
APE	**Apeiranthos**	1.12	256	P	Pn	04 04 31.2	+0.2
APE				S	Sn	04 04 47.1	+0.8
YER	**Yerkesik**	1.14	101	PN	Pg	04 04 30.9	-0.8
YER	**Yerkesik**	1.14	101	P	Pg	04 04 30.6	-1.1
YER				S	Sg	04 04 46.3	-0.2
BBRN	**Bozburun-Marma**	1.16	125	PN	Pg	04 04 31.5	-0.5
CHOS	**Chios island**	1.22	328	PN	Pg	04 04 31.9	-1.4
CHOS	**Chios island**	1.22	328	P	Pg	04 04 32.0	-1.3
CHOS	**Chios island**	1.22	328	P	Pg	04 04 31.8	-1.5
CHOS				S	Sn	04 04 49.3	+0.5
MRSB	**Marmaris-Mugla**	1.23	121	PN	Pn	04 04 33.1	+0.6
KRBN	**Karaburun**	1.26	348	PN	Pg	04 04 32.7	-1.4
ANAF	**Anafi Island**	1.34	222	P	Pg	04 04 36.1	+0.6
ANAF	**Anafi Island**	1.34	222	P	Pb	04 04 34.4	-0.2
ANAF				S	Sn	04 04 53.3	+1.7
FOCM	**Foa**	1.36	355	PN	Pn	04 04 33.5	-0.8
TURN	**Turunc**	1.45	109	PN	Pn	04 04 32.5	-3.1
TURN	**Turunc**	1.45	109	*i* P	Pn	04 04 33.1	-2.4
TURN				IAML_P			
	comp=Z,10µm,0.3s						
SANT	**Santorini**	1.51	230	PN	Pb	04 04 36.9	-0.6
SANT	**Santorini**	1.51	230	P	Pb	04 04 36.9	-0.6
SANT	**Santorini**	1.51	230	⇓*i*P	Pn	04 04 36.7	+0.3
SANT	**Santorini**	1.51	230	S	Sg	04 04 57.8	-0.6
ARG	**Arkhangelos**	1.51	138	PN	Pn	04 04 36.8	+0.4
ARG	**Arkhangelos**	1.51	138	P	Pn	04 04 36.8	+0.4
ARG				S	Sn	04 04 57.1	+1.3
ARG				AML	AML	04 05 02.6	
	comp=N,3103µm,1.0s						
ARG				AML	AML	04 05 05.3	
	comp=E,4585µm,0.6s						
THR5	**Thira Island,**	1.55	233	PN	Pb	04 04 37.7	-0.5
GOMA	**Golmarmara-Man**	1.58	31	PN	Pn	04 04 37.1	-0.2
ZEDA	**zmir-Bergama**	1.61	5	*i* P	Pn	04 04 37.3	-0.5
ZEDA				IAML_P			
	comp=Z,3µm,0.1s						
AKHS	**Akhisar**	1.69	25	*i* P	Pn	04 04 38.0	-0.8
AKHS				*i* S	Sg	04 05 04.0	-0.1
AKS	**Akhisar**	1.69	25	PN	Pn	04 04 38.1	-0.7
MANT	**Manisa**	1.74	49	*i* P	Pn	04 04 39.0	-0.7
MANT				*i* S	Sb	04 05 04.6	+1.1
DENT	**Denizli**	1.75	76	PN	Pn	04 04 39.9	+0.2
KULA	**Kula-Manisa**	1.82	50	PN	Pn	04 04 40.1	-0.6
KARP	**Karpathos**	1.82	173	PN	Pn	04 04 40.8	+0.2
KARP	**Karpathos**	1.82	173	P	Pn	04 04 40.8	+0.2
KARP	**Karpathos**	1.82	173	P	Pn	04 04 40.9	+0.2
FETY	**Fethiye**	1.90	112	PN	Pn	04 04 42.4	+0.6
FETY	**Fethiye**	1.90	112	*i* P	Pb	04 04 44.2	0.0
FETY				*i* S	Sb	04 05 09.1	+1.2
FETY				IAML_P			
	comp=Z,8µm,0.3s						
PRK	**Paraskevi**	1.95	346	P	Pn	04 04 43.1	+0.7
AYVA	**Ayvalik**	1.96	356	*i* P	Pn	04 04 42.9	+0.4
SIGR	**SIGRI**	2.02	337	PN	Pn	04 04 43.1	-0.3
SIGR	**SIGRI**	2.02	337	P	Pn	04 04 43.3	-0.1
STEP	**BALIKESIR_Sava**	2.12	18	*i* P	Pb	04 04 48.4	+0.4
STEP				IAML_P			
	comp=Z,4µm,0.3s						
GOLH	**Golhisar**	2.14	92	*i* P	Pb	04 04 47.3	-1.0
GOLH				IAML_P			
	comp=Z,3µm,0.2s						
USAK	**Uak-Merkez**	2.16	50	*i* P	Pn	04 04 45.1	-0.3
USAK				IAML_P			
	comp=Z,564nm,0.2s						
DEMI	**Demirci**	2.22	40	*i* P	Pb	04 04 50.2	+0.6
DEMI				IAML_P			
	comp=Z,3µm,0.2s						
KHAL	**Karahalli**	2.30	63	*i* P	Pn	04 04 47.3	0.0
KHAL				IAML_P			
	comp=Z,2µm,0.2s						
ZKR	**Zakros**	2.30	194	PN	Pn	04 04 48.1	+0.8
BAYC	**CANAKKALE_Bayr**	2.40	354	*i* P	Pn	04 04 47.4	-1.2
BAYC				IAML_P			
	comp=Z,1µm,0.3s						
SMAA	**Simav-Kutahya**	2.40	43	PN	Pn	04 04 49.2	+0.5
AKAS	**Kas**	2.45	116	PN	Pn	04 04 50.0	+0.5
AKAS	**Kas**	2.45	116	*i* P	Pb	04 04 54.3	+0.6
AKAS				IAML_P			
	comp=Z,4µm,0.3s						
SHAP	**Saphane-Kutahy**	2.48	47	PN	Pn	04 04 50.5	+0.7
ELL	**Elmali**	2.49	103	PN	Pn	04 04 50.3	+0.3
EZN	**Ezine**	2.50	350	PN	Pn	04 04 49.6	-0.4
EZN	**Ezine**	2.50	350	⇑*i*P	Pn	04 04 50.2	+0.2

EZN	Ezine	2.50	350	S	Sn	04 05 20.9	+0.5
BRDR	BURDUR-Merkez	2.55	81	iP	Pn	04 04 52.0	+1.2
BRDR				IAML_P			
	comp=Z,1μm,0.3s						
DURS	Dursunbey	2.56	29	iP	Pn	04 04 50.3	-0.6
BOZC	Bozcaada	2.57	346	PN	Pn	04 04 50.9	0.0
BOZC	Bozcaada	2.57	346	iP	Pn	04 04 50.7	-0.2
GEDZ	Gediz	2.61	49	PN	Pn	04 04 51.7	+0.2
IDI	Anoyia	2.62	219	⇑iP	Pn	04 04 52.6	+0.9
IDI	Anoyia	2.62	219	S	Sn	04 05 25.4	+2.1
IDI	Anoyia	2.62	219	Pn	Pn	04 04 52.2	+0.5
	comp=Z,2.0nm,0.3s,baz=50,slow=15,SNR=47						
IDI				Lg	Lg	04 05 35.6	
	comp=Z,37nm,0.3s,baz=287,slow=16,SNR=13						
IDI				LR	LR	04 05 53.5	
	comp=Z,38nm,19.9s,baz=87,slow=40						
DST	Dursunbey	2.62	31	PN	Pn	04 04 51.9	+0.1
GDZ	Gediz	2.68	49	iP	Pb	04 04 59.2	+1.6
KZIL	AFYON_Kizioren	2.73	70	iP	Pn	04 04 54.0	+0.8
KZIL				IAML_P			
	comp=Z,500nm,0.3s						
GONE	Gonen-Balikesi	2.76	13	PN	Pn	04 04 53.5	0.0
KORT	Korkueli	2.79	96	PN	Pn	04 04 55.2	+1.1
KORT	Korkueli	2.79	96	iP	Pn	04 04 57.2	+3.1
KORT				IAML_P			
	comp=Z,984nm,0.3s						
ISP	Isparta	2.92	80	PN	Pn	04 04 56.3	+0.4
ISP	Isparta	2.92	80	⇓iP	Pn	04 04 56.1	+0.2
KNL	Balıkesir	2.95	10	iP	Pg	04 05 06.5	+0.1
KNL				IAML_P			
	comp=Z,4μm,0.6s						
AFYO	Afyonkarahisar	3.05	61	iP	Pg	04 05 06.3	-1.9
AFYO				IAML_P			
	comp=Z,4μm,0.3s						
BAGO	Egridir - ISPA	3.16	77	iP	Pn	04 05 00.4	+1.2
SART	Tekirdag	3.34	4	iP	Pn	04 05 01.8	+0.2
SART				IAML_P			
	comp=Z,2μm,0.2s						
KESN	Edirne-Kesan	3.47	357	iP	Pn	04 05 04.0	+0.4
KESN				IAML_P			
	comp=Z,2μm,0.1s						
BOLV	Bolvadin	3.48	66	iP	Pn	04 05 05.2	+1.5
BOLV				IAML_P			
	comp=Z,515nm,0.3s						
YLV	Yalova	3.75	30	⇓iP	Pb	04 05 14.7	-1.0
BORA	Eskisehir	3.76	47	iP	Pg	04 05 20.6	-1.3
KEPZ	Antalya-Kepez	3.80	95	iP	Pn	04 05 10.4	+2.5
KEPZ				IAML_P			
	comp=Z,494nm,0.2s						
DOGA	KONYA_Doganhis	3.86	77	iP	Pn	04 05 10.6	+1.7
DOGA				IAML_P			
	comp=Z,390nm,0.2s						
BUY	Buyukada	3.90	26	iP	Pg	04 05 25.1	+0.6
GEYV	SAKARYA_Geyve	4.10	39	iP	Pg	04 05 28.9	+0.6
AUSIV	SIVRIHISAR	4.21	59	iP	Pn	04 05 14.7	+1.1
KLYT	Kilyos	4.24	23	⇑iP	Pn	04 05 16.3	+2.5
KLYT	Kilyos	4.24	23	S	Sn	04 06 05.4	+2.4
CTYL	Yalikoy Yolu	4.25	14	S	Sn	04 06 04.8	+1.3
KDHN	Kadinhani	4.29	73	iP	Pn	04 05 16.0	+1.3
KDHN				IAML_P			
	comp=Z,325nm,0.3s						
PHSR	Pinarhisar	4.30	6	⇑iP	Pn	04 05 17.0	+2.3
SILT	Sile	4.35	29	S	Sb	04 06 14.5	-3.9
KMER	Konya-Meram	4.38	83	iP	Pn	04 05 18.8	+2.9
KMER				IAML_P			
	comp=Z,55nm,0.2s						
KONT	Konya--Tatoy	4.38	81	iP	Pn	04 05 18.4	+2.5
KONT				IAML_P			
	comp=Z,136nm,0.2s						
AUMIH	MIHALICIK	4.39	54	iP	Pg	04 05 31.3	-2.5
KIRK	Kırklareli	4.42	2	iP	Pn	04 05 16.8	+0.4
KDZ	Kurdzhali	4.44	346	eP	Pn	04 05 20.7	+4.1
KAND	Kocaeli-Kandir	4.53	33	iP	Pg	04 05 36.0	-0.5
RZN	Rozhen	4.64	339	eP	Pn	04 05 20.2	+0.6
SAHE	Sakarya_HENDEK	4.66	40	iP	Pg	04 05 38.7	-0.3
ERMK	Ermenek	4.88	97	iP	Pn	04 05 26.7	+3.9
ERMK				IAML_P			
	comp=Z,988nm,0.3s						
MMB	Musomiste	4.88	331	eP	Pn	04 05 23.1	+0.3
KKUL	Konya-Kulu	5.08	67	iP	Pn	04 05 28.7	+3.2
KKUL				IAML_P			
	comp=Z,181nm,0.1s						
LEF	Lefka	5.34	113	⇓iP	Pn	04 05 33.3	+4.3
KKB	Krupnik	5.38	328	eP	Pn	04 05 30.8	+1.3
STIP	Stip	5.65	321	iP	Pn	04 05 34.2	+0.9
BRTR	Keskin Array B	5.80	64	Pn	Pn	04 05 37.0	+1.5
	comp=Z,2.9nm,0.3s,baz=245,slow=15,SNR=81						
VTS	Vitosha	5.94	333	⇑iP	Pn	04 05 39.1	+1.7
VTS	Vitosha	5.94	333	eP	Pn	04 05 39.1	+1.7
TLB	Topalu	7.28	7	⇑iP	Pn	04 05 58.3	+2.7
MLR	Muntele Rosu	8.16	355	Pn	Pn	04 06 08.5	+0.7
	comp=Z,0.2nm,0.3s,baz=169,slow=16,SNR=6.3						
VOIR		8.19	351	⇑iP	Pn	04 06 09.8	+1.6
MMAI	Mount Meron Ar	8.21	119	Pn	Pn	04 06 08.4	-0.1
	comp=Z,4.1nm,0.3s,baz=308,slow=16,SNR=21						
MMAI				Sn	Sn	04 07 34.7	-6.3
	comp=Z,7.0nm,0.3s,baz=304,slow=23,SNR=10.0						
MDVR	Moldovita	8.38	334	⇑iP	Pn	04 06 11.5	+0.7
VRI	Vrincioaia	8.51	359	⇑iP	Pn	04 06 14.7	+2.2
GZR	Gura Zlata	8.60	340	⇑iP	Pn	04 06 13.9	+0.1
DOPR	Dopca	8.68	353	⇑iP	Pn	04 06 16.1	+1.3
BZS	Buzias	9.15	336	⇑iP	Pn	04 06 22.9	+1.6
EIL	Elat	10.20	136	Pn	Pn	04 06 34.4	-1.3
	comp=Z,0.7nm,0.3s,baz=243,slow=1.3,SNR=11						
EIL				Sn	Sn	04 08 23.0	-6.8
	comp=Z,1.8nm,0.3s,baz=116,slow=22,SNR=8.4						
BURAR	Bucovina Array	10.33	354	⇑iP	Pn	04 06 39.4	+1.9
GNI	Garni	14.21	73	LR	LR	04 12 49.4	
	comp=Z,11nm,20.5s,baz=286,slow=37						
TORD	Torodi Ar. Bea	32.97	230	P	P	04 10 45.3	+1.1
	comp=Z,0.6nm,0.6s,baz=41,slow=8.0,SNR=8.6						
MKAR	Makanchi Array	41.42	59	P	P	04 11 57.0	+1.3
	comp=Z,0.4nm,0.7s,baz=271,slow=6.7,SNR=5.0						

IDC 21 04:27:46.8±17.0**,22°.21S**×**176°.88W,h161**^{km}±156^{km}**, mb3.8**/5**,mb1 4.1**/5**,mb1mx3.6**/28**,mbtmp4.3**/5**,MS3.2**/1**, Ms1 3.2**/1**,ms1mx2.7**/22**,Error ellipse: s-maj=50.6km s-min=45.0km az=146.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.46	267	P	P	04 31 22.2	+4.7
	0.3nm,0.3s,baz=97,slow=17,SNR=7.7						
PPT	Papeete	26.07	85	LR	LR	04 42 29.1	
	comp=Z,51nm,18.2s,baz=32,slow=34						
STKA	Stephens Creek	38.03	246	P	P	04 34 50.2	+0.7
	4.6nm,0.8s,baz=95,slow=6.1,SNR=3.1						
ASAR	Alice Springs	45.17	258	P	P	04 35 47.7	-0.1
	7.9nm,0.7s,baz=93,slow=7.9,SNR=54						
WRA	Warramunga Arr	45.42	263	P	P	04 35 49.3	-0.5
	5.9nm,0.6s,baz=100,slow=8.5,SNR=70						
TXAR	Lajitas Array	87.10	57	P	P	04 40 15.3	+0.5
	0.7nm,0.7s,baz=274,slow=2.4,SNR=3.8						
ILAR	Eielson Array	89.75	12	P	P	04 40 25.8	-0.4
	0.3nm,0.6s,baz=228,slow=4.5,SNR=5.0						
AKASG	Malin Array Be	145.01	331	PKPbc	PKPbc	04 47 03.1	-1.2
	0.7nm,0.3s,baz=42,slow=4.0,SNR=7.0						
BRTR	Keskin Array B	148.75	311	PKPbc	PKPbc	04 47 15.7	+0.2
	0.6nm,0.8s,baz=130,slow=3.9,SNR=4.3						
TORD	Torodi Ar. Bea	170.89	171	PKPab	PKPab	04 48 54.6	-1.0
	0.2nm,0.7s,baz=151,slow=3.3,SNR=3.6						

IDC 21 04:30:04.5±3.5**,30°.03S**×**138°.34E,h0**^{km}**,mb1 3.0**/3**, mb1mx2.9**/30**,mbtmp2.7**/3**,ML2.5**/3**,Error ellipse: s-maj=99.3km s-min=22.6km az=47.0,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	3.35	124	Pn	Pn	04 30 58.3	+0.1
	0.5nm,0.3s,baz=297,slow=14,SNR=6.8						
STKA				Sn	Sn	04 31 39.8	+1.2
	1.2nm,0.3s,baz=191,slow=22,SNR=6.2						
ASAR	Alice Springs	7.47	327	Pn	Pn	04 31 55.1	+0.2
	0.1nm,0.3s,baz=144,slow=12,SNR=4.2						
ASAR				Sn	Sn	04 33 22.9	+2.6
	0.1nm,0.3s,baz=150,slow=21,SNR=3.8						
WRA	Warramunga Arr	10.67	339	Pn	Pn	04 32 37.9	-0.8
	0.0nm,0.3s,baz=160,slow=13,SNR=3.9						

IDC ***21*** *04:51:02.2±2.1, 32°.05N×140°.04E, h0*^{km}*, mb3.8/4, mb1 4.0/4, mb1mx3.5/37, mbtmp3.8/4, Error ellipse: s-maj=100.3km s-min=30.3km az=79.0*

ISCJB ***21*** *04:51:16.2±1.2, 31°.98N±0°.09×140°.2E±0°.3, h132*^{km}*, mb3.5/4, Error ellipse: s-maj=31.2km s-min=10.3km az=14.3*

JMA ***21*** *04:51:19.4±0.3, 32°.13N×140°.14E, h121*^{km}*±2*^{km}*, M3.5*

ISC 21 04:51:17.8±1.3**,32°.0N**±0°.1×**140°.0E**±0°.2**,h132**^{km}**,n9,** σ**0**^{s}**.82**/11**,mb3.5**/4**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	1.08	349	P	Pn	04 51 41.8	+0.2
BSO1	Boso 1	2.75	16	P	Pn	04 52 01.4	+0.7
BSO1				eS	Sn	04 52 33.2	-0.7
BSO3	Boso 3	2.81	8	P	Pn	04 52 02.5	+0.7
BSO3				eS	Sn	04 52 34.8	-1.0
JRY	Ryogami san	4.11	347	P	Pn	04 52 19.6	+0.6
MAT	Matsushiro	4.77	342	P	Pn	04 52 28.9	+1.1
MKAR	Makanchi Array	45.99	306	P	P	04 59 26.9	-0.9
	0.2nm,0.4s,baz=79,slow=10,SNR=5.2						
WRA	Warramunga Arr	51.95	187	P	P	05 00 13.2	-0.1
	0.2nm,0.5s,baz=5.9,slow=8.1,SNR=5.6						
ARCES	ARCESS Array B	68.30	340	P	P	05 02 04.9	+0.8
	4.1nm,0.9s,baz=58,slow=8.6,SNR=2.6						
FINES	FINESS Array B	72.73	333	P	P	05 02 31.2	0.0
	1.0nm,0.6s,baz=54,slow=7.1,SNR=5.1						

ISCJB ***21*** *05:01:13.8±1.6, 25°.8S±0°.4×179°.8E±0°.2, h507*^{km}*, mb3.7/5, Error ellipse: s-maj=61.2km s-min=19.9km az=158.5*

IDC ***21*** *05:01:17.6±5.2, 25°.52S×179°.60E, h532*^{km}*±52*^{km}*, mb3.2/5, mb1 3.5/6, mb1mx3.3/19, mbtmp4.2/6, Error ellipse: s-maj=45.5km s-min=27.5km az=139.0*

ISC 21 05:01:14.3±1.1**,25°.6S**±0°.3×**179°.9E**±0°.2**,h507**^{km}**,n13,** σ**1**^{s}**.06**/13**,mb3.8**/5**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	12.77	283	P	P	05 04 02.1	+0.9
	1.0nm,0.3s,baz=100,slow=13,SNR=13						
STKA	Stephens Creek	33.99	250	P	P	05 07 15.8	+0.4
	1.5nm,0.5s,baz=100,slow=11,SNR=5.2						
ASAR	Alice Springs	41.66	263	P	P	05 08 17.8	-0.3
	1.2nm,0.4s,baz=89,slow=7.3,SNR=20						
WRA	Warramunga Arr	42.19	268	P	P	05 08 21.6	-0.7
	1.1nm,0.3s,baz=99,slow=6.8,SNR=42						
NVAR	Mina Array Bea	86.08	44	P	P	05 13 02.9	+1.6
	2.2nm,0.7s,baz=221,slow=8.5,SNR=14						
ILAR	Eielson Array	93.73	14	P	P	05 13 35.7	-0.2
	0.2nm,0.6s,baz=216,slow=5.8,SNR=4.7						
ARCES	ARCESS Array B	133.54	348	PKP	PKiKP	05 19 33.2	-0.1
	6.5nm,0.9s,baz=69,slow=2.6,SNR=11						
FINES	FINESS Array B	140.03	341	PKhKP	PKPpre	05 19 36.9	
	1.5nm,0.8s,baz=29,slow=4.4,SNR=4.6						
FINES				SKPbc	SKiKP	05 22 34.2	-0.3
	0.8nm,0.5s,baz=33,slow=4.5,SNR=7.8						
NB2	NORSAR Subarra	143.76	351	PKP	PKPdf	05 19 49.1	-1.7
	comp=Z,2.2nm,0.5s,baz=18,slow=3.2						
NOA	NORSAR Array B	143.76	351	PKP	PKPdf	05 19 49.3	-1.5
	comp=Z,14nm,0.3s,baz=16,slow=4.1,SNR=21						
AKASG	Malin Array Be	146.33	326	PKPbc	PKPbc	05 19 57.4	-0.3
	comp=Z,0.9nm,0.3s,baz=47,slow=4.0,SNR=9.7						
BRTR	Keskin Array B	148.48	305	PKPbc	PKiKP	05 20 04.0	-1.1
	comp=Z,0.6nm,0.5s,baz=140,slow=2.7,SNR=7.9						
TORD	Torodi Ar. Bea	167.47	188	PKPab	PKPab	05 21 32.1	+0.7
	comp=Z,0.5nm,0.6s,baz=172,slow=5.4,SNR=3.7						

MEX 21 05:22:01.4±0.8**,16°.05N**×**98°.68W,h3**^{km}±6^{km}**,MD3.9,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.63	57	eP	Pg	05 22 12.7	-0.7
PNIG				eS	Sg	05 22 22.4	+0.8
VHO	Vista Hermosa	2.12	61	eP	Pn	05 22 27.8	-10
VHO				iS	Sg	05 23 11.2	+1.5

IDC 21 05:48:37.4±2.1**,6°.12S**×**129°.90E,h0**^{km}**,mb4.0**/1**, mb1 4.0**/4**,mb1mx3.5**/49**,mbtmp3.8**/4**,ML3.9**/3**,Error ellipse: s-maj=92.4km s-min=26.7km az=76.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.61	199	Pn	Pn	05 51 39.8	+1.6
	0.7nm,0.3s,baz=20,slow=9.2,SNR=23						
FITZ				Sn	Sn	05 53 48.5	-11
	0.6nm,0.3s,baz=67,slow=8.7,SNR=4.7						
WRA	Warramunga Arr	14.41	163	Pn	Pn	05 52 01.6	-1.1
	0.5nm,0.3s,baz=343,slow=13,SNR=25						
WRA				Sn	Sn	05 54 29.9	-13
	0.9nm,0.3s,baz=338,slow=22,SNR=7.3						
ASAR	Alice Springs	17.87	168	P	Pn	05 52 47.2	-0.4
	0.3nm,0.3s,baz=343,slow=9.3,SNR=15						
MKAR	Makanchi Array	67.44	327	P	P	05 59 35.0	0.0
	0.8nm,0.5s,baz=109,slow=7.9,SNR=15						

NEIC ***21*** *05:54:33.8±0.0, 36°.71N×20°.09E, h0*^{km}*, mb4.5/17, ML4.2(THE), After THE.*

ATH ***21*** *05:54:36.7, 36°.81N×20°.34E, h26*^{km}*±2*^{km}*, ML4.2/9, Error ellipse: s-maj=4.3km s-min=1.5km az=49.0*

BEO ***21*** *05:54:37.8±0.7, 36°.97N×20°.38E, h5*^{km}*, ML4.2/13*

HLW ***21*** *05:54:37.7, 37°.17N×20°.83E, h10*^{km}*±34*^{km}*, Md4.4, Ml4.3*

MOS ***21*** *05:54:37.8±1.1, 37°.01N×20°.40E, h20*^{km}*, mb4.7/26, Error ellipse: s-maj=6.3km s-min=3.4km az=74.1*

THE ***21*** *05:54:38.1, 36°.85N×20°.40E, h4*^{km}*±1*^{km}*, ML4.0/14, Error ellipse: s-maj=2.9km s-min=1.1km az=212.0*

ROM ***21*** *05:54:39.1±0.6, 37°.73N±0°.06×21°.49E±0°.08, h115*^{km}*±7*^{km}*, ML4.5/6*

ISCJB ***21*** *05:54:40.3±0.3, 37°.10N±0°.02×20°.39E±0°.02, h41*^{km}*±2*^{km}*, mb4.4/54, MS3.9/23, Error ellipse: s-maj=3.3km s-min=1.8km az=28.4*

IDC ***21*** *05:54:41.2±3.3, 37°.04N×20°.47E, h31*^{km}*±25*^{km}*, mb4.1/21, mb1 4.2/32, mb1mx4.1/60, mbtmp4.2/32, ML3.8/11, MS3.8/31, Ms1 3.8/31, ms1mx3.7/50, Error ellipse: s-maj=15.0km s-min=11.2km az=166.0*

PDG ***21*** *05:54:42.5±0.6, 37°.49N×20°.33E, h15*^{km}*±5*^{km}*, ML4.5/13, Error ellipse: s-maj=5.9km s-min=2.0km az=90.0*

ISC 21 05:54:40.3±0.9**,36°.94N**±0°.03×**20°.45E**±0°.03**,h29**^{km}±6^{km}**, n541,** σ**2**^{s}**.19**/609**,mb4.6**/65**,MS4.0**/23**,25C-38D,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MES2	Methoni	1.02	96	P	Pn	05 54 58.2	-0.5
MES2				S	Sn	05 55 13.4	+1.4
MES2				AML	AML	05 55 19.0	
	comp=N,34644μm,0.7s						
MES2				AML	AML	05 55 31.1	
	comp=E,40288μm,0.9s						
MES3	Kyparissia	1.03	72	P	Pn	05 54 59.0	+0.2
MES3				S	Sn	05 55 14.3	+2.0
PYL	PYLOS	1.04	92	P	Pn	05 54 58.3	-0.7
PYL				S	Sb	05 55 19.2	+6.2
PYL	PYLOS	1.04	92	P	Pn	05 54 58.0	-1.0
PYL				S	Sb	05 55 13.8	+0.9
PYL				AML	AML	05 55 30.9	
	comp=N,9568μm,1.0s						
PYL				AML	AML	05 55 32.8	
	comp=E,19294μm,0.7s						
PYL	PYLOS	1.04	92	P	Pn	05 54 58.3	-0.7
PYL				S	Sb	05 55 13.9	+0.9
VTN	Vitineika	1.14	31	P	Pb	05 55 01.0	-0.4
VTN	Vitineika	1.14	31	P	Pb	05 55 01.0	-0.4
AMT	Artemida-Makis	1.17	59	P	Pn	05 55 01.1	+0.3
AMT				AML	AML	05 55 39.3	
	comp=N,30991μm,0.7s						
AMT				AML	AML	05 55 47.8	
	comp=E,23917μm,0.6s						
AMT	Artemida-Makis	1.17	59	P	Pn	05 55 01.1	+0.3
ITM	Ithomi	1.21	78	eP	Pn	05 55 00.5	-0.8
ITM	Ithomi	1.21	78	ePn	Pn	05 55 01.7	+0.4
ITM				S	Sb	05 55 23.2	+5.3
ITM	Ithomi	1.21	78	P	Pn	05 55 01.4	+0.1
ITM				AML	AML	05 55 34.9	
	comp=N,5634μm,0.7s						
ITM				AML	AML	05 55 38.7	
	comp=E,11282μm,1.1s						
ITM	Ithomi	1.21	78	P	Pn	05 55 01.4	+0.1
VLS	Valsamata	1.24	5	P	Pn	05 55 01.1	-0.7
VLS				S	Sb	05 55 22.6	+3.8
VLS	Valsamata	1.24	5	P	Pn	05 55 01.1	-0.7
VLS				AML	AML	05 55 32.2	
	comp=N,8522μm,0.6s						
VLS				AML	AML	05 55 33.5	
	comp=E,8985μm,1.2s						
VLS	Valsamata	1.24	5	P	Pn	05 55 01.1	-0.7
VLS				S	Sb	05 55 22.6	+3.8
VLS	Valsamata	1.24	5	P	Pn	05 55 01.1	-0.7
VLS				S	Sb	05 55 22.6	+3.8
RLS	Riolos of Patr	1.38	36	P	Pn	05 55 04.2	+0.5
RLS	Riolos of Patr	1.38	36	P	Pn	05 55 04.2	+0.5
RLS				AML	AML	05 55 43.4	
	comp=N,8346μm,1.1s						
RLS				AML	AML	05 55 59.5	
	comp=E,4849μm,0.8s						
RLS	Riolos of Patr	1.38	36	P	Pn	05 55 04.2	+0.5
RLS				S	Sb	05 55 25.3	+2.5
DRO	Drossia	1.43	44	P	Pn	05 55 05.0	+0.6
DRO				AML	AML	05 55 55.8	
	comp=E,20954μm,0.8s						
DRO				AML	AML	05 55 58.0	
	comp=N,20087μm,0.7s						
DRO	Drossia	1.43	44	P	Pn	05 55 05.1	+0.8
AXS	Araxos	1.46	30	P	Pn	05 55 05.5	+0.8
AXS	Araxos	1.46	30	P	Pn	05 55 05.5	+0.8
AXS				S	Sb	05 55 26.8	+1.9
TRIP	Tripoli	1.57	67	P	Pn	05 55 06.9	+0.6
TRIP	Tripoli	1.57	67	P	Pn	05 55 06.6	+0.2
VLX	Vlachokerasia	1.60	74	P	Pn	05 55 07.2	+0.3
VLX				S	Sb	05 55 29.8	+0.5
VLX				AML	AML	05 55 56.3	
	comp=E,10597μm,0.9s						
VLX				AML	AML	05 56 06.3	
	comp=N,8571μm,0.7s						
VLX	Vlachokerasia	1.60	74	P	Pn	05 55 07.3	+0.5
VLX				S	Sb	05 55 31.2	+2.0
EVGI	Lefkada island	1.69	6	P	Pn	05 55 08.1	+0.2
UPR	University Cam	1.71	38	P	Pb	05 55 09.8	-1.3
MGNA	Meganis	1.74	9	P	Pn	05 55 10.0	+1.5
KLV	Kalavryta, Ach	1.75	50	P	Pn	05 55 09.7	+0.8
KLV	Kalavryta, Ach	1.75	50	P	Pn	05 55 09.6	+0.8
LAKA	Lakka	1.78	43	P	Pb	05 55 10.9	-1.5
LAKA	Lakka	1.78	43	P	Pb	05 55 10.8	-1.5
GUR	Goura	1.81	56	P	Pn	05 55 10.4	+0.7
GUR	Goura	1.81	56	P	Pn	05 55 10.3	+0.7
LKD2	Lefkada island	1.85	5	P	Pn	05 55 10.7	+0.5
LKD2	Lefkada island	1.85	5	P	Pn	05 55 10.9	+0.7
LKD2				S	Sb	05 55 36.6	+0.2
TRAZ	Trapeza	1.86	48	P	Pn	05 55 11.8	+1.4
TRAZ	Trapeza	1.86	48	P	Pn	05 55 11.7	+1.4
PVO	Paravola	1.88	27	P	Pb	05 55 12.5	-1.6
PVO	Paravola	1.88	27	P	Pb	05 55 12.4	-1.6
PVO				S	Sb	05 55 37.8	+0.7
EFP	Efpalio	1.88	37	P	Pb	05 55 12.5	-1.5
EFP	Efpalio	1.88	37	P	Pn	05 55 12.3	+1.7
EFP				S	Sb	05 55 36.6	-0.6
TSLK	Tsoukalades, L	1.89	5	P	Pn	05 55 11.5	+0.8
TRIZ	Trizonia	1.92	42	P	Pb	05 55 13.0	-1.7
TRIZ	Trizonia	1.92	42	P	Pb	05 55 13.0	-1.7
SERG	Sergoula	1.95	40	P	Pb	05 55 13.5	-1.7
SERG	Sergoula	1.95	40	P	Pn	05 55 13.3	+1.8
SERG				S	Sb	05 55 39.6	+0.5
KALE	Kalithea	1.98	42	P	Pb	05 55 14.1	-1.6
KALE	Kalithea	1.98	42	P	Pb	05 55 13.9	-1.8
VLI	Veliai	2.01	96	P	Pn	05 55 13.5	+1.1
VLI				AML	AML	05 55 58.9	
	comp=N,3593μm,0.8s						
VLI				AML	AML	05 56 16.2	
	comp=E,7320μm,1.0s						
VLI	Veliai	2.01	96	P	Pn	05 55 13.3	+1.0
VLI				S	Sn	05 55 38.4	+1.9
ANX	Ano Chora	2.02	35	P	Pn	05 55 14.6	+1.9
ANX	Ano Chora	2.02	35	P	Pn	05 55 14.4	+1.8
ANX				S	Sb	05 55 40.8	-0.5
KYTH	Kithira	2.20	107	P	Pn	05 55 15.7	+0.8
KYTH	Kithira	2.20	107	P	Pn	05 55 16.1	+1.2
KYTH				S	Sn	05 55 43.3	+2.1
DSF	Desfina	2.21	48	P	Pn	05 55 16.4	+1.3
DLFA	Delphi	2.24	46	P	Pb	05 55 18.0	-2.1
EVR	Evrytania	2.25	28	P	Pn	05 55 18.1	+2.3
EVR	Evrytania	2.25	28	P	Pn	05 55 17.6	+1.9
DSL	Palaion Diasel	2.25	13	P	Pn	05 55 17.2	+1.5
LOUT	Loutraki	2.27	62	P	Pn	05 55 16.5	+0.6
LOUT	Loutraki	2.27	62	P	Pn	05 55 16.5	+0.6
LTK	Loutraki	2.28	61	P	Pn	05 55 16.7	+0.6
DID	Didima	2.30	75	P	Pn	05 55 16.6	+0.2
PROD	Prodromos	2.35	55	P	Pn	05 55 17.7	+0.6
PROD	Prodromos	2.35	55	P	Pn	05 55 17.7	+0.6
ANKY	Antikythira Is	2.54	114	P	Pn	05 55 19.6	0.0
AGG	Agios Georgios	2.56	35	eP	Pn	05 55 19.2	-0.7
AGG	Agios Georgios	2.56	35	ePn	Pn	05 55 21.4	+1.5
AGG	Agios Georgios	2.56	35	P	Pn	05 55 21.6	+1.7
AGG	Agios Georgios	2.56	35	P	Pn	05 55 21.4	+1.5
AGG	Agios Georgios	2.56	35	eP	Pn	05 55 21.4	+1.5
VIL2	Platees	2.58	60	P	Pn	05 55 20.2	+0.1
VILL	Villia	2.59	61	P	Pn	05 55 20.2	-0.1
IGT	Igoumenitsa	2.59	358	ePn	Pn	05 55 20.7	+0.4
IGT				eSn	Sn	05 55 52.1	+1.2
IGT	Igoumenitsa	2.59	358	P	Pn	05 55 20.6	+0.2
ATAL	Atalanti	2.69	49	P	Pn	05 55 22.5	+0.9
JAN	Janina	2.73	7	P	Pn	05 55 23.0	+0.7
ATH	Athens Observa	2.80	67	P	Pn	05 55 23.2	0.0
ATH	Athens Observa	2.80	67	P	Pn	05 55 24.9	+1.7
KEK	Kerkira	2.82	350	P	Pn	05 55 22.9	-0.5
VLY	Voula,Athens	2.82	70	P	Pn	05 55 23.1	-0.4
VLY	Voula,Athens	2.82	70	P	Pn	05 55 23.2	-0.2
KASA	Kassiopi	2.83	352	P	Pn	05 55 22.1	-1.5
ATHU	Athens Univers	2.85	68	P	Pn	05 55 23.6	-0.2
ATHU	Athens Univers	2.85	68	P	Pn	05 55 23.6	-0.2
THL	Klokotos Trika	2.90	25	P	Pn	05 55 25.7	+1.2
SMIA	Simia	2.92	48	P	Pn	05 55 25.8	+0.9
SMIA	Simia	2.92	48	P	Pn	05 55 25.8	+0.9
PTL	Penteli	2.94	67	P	Pn	05 55 24.7	-0.4
KERA	Keramoti	2.96	121	P	Pn	05 55 23.3	-2.2
MRKA	Markates	3.05	54	P	Pn	05 55 26.8	+0.2
KPRO	Kipourio	3.10	13	P	Pn	05 55 28.8	+1.5
KPRO	Kipourio	3.10	13	P	Pn	05 55 29.0	+1.7
EREA	Eretria	3.14	61	P	Pn	05 55 28.1	+0.2
FYTO	Fytoko, Volos	3.15	38	P	Pn	05 55 28.6	+0.5
IMMV	Iera Moni Meta	3.22	116	eP	Pb	05 55 33.1	-3.7
IMMV	Iera Moni Meta	3.22	116	P	Pn	05 55 29.1	+0.2
NEO	Neokhori	3.22	42	P	Pn	05 55 29.5	+0.5
SERI	Serifos	3.24	85	P	Pn	05 55 28.7	-0.6
SKIA	Skiathos	3.26	46	P	Pn	05 55 30.2	+0.6
PENT	Pentalofos	3.30	9	P	Pn	05 55 31.8	+1.6
NEST	Nestorio	3.50	8	P	Pn	05 55 34.7	+1.8
AOS	Alonnisos	3.51	50	eP	Pn	05 55 31.8	-1.1
AOS	Alonnisos	3.51	50	P	Pn	05 55 33.2	+0.3
AOS	Alonnisos	3.51	50	P	Pn	05 55 33.3	+0.3
KZN	Kozani	3.52	17	P	Pn	05 55 34.6	+1.5
LIT	Litokhoron	3.54	26	ePn	Pn	05 55 33.6	+0.2
LIT	Litokhoron	3.54	26	eP	Pn	05 55 33.6	+0.2
GVD	Gavdhos	3.62	124	eP	Pb	05 55 39.6	-4.1
TIP	Timpagrande	3.67	309	ePn	Pn	05 55 33.3	-1.9
TIP				eSn	Sn	05 56 15.2	-2.4
TIP	Timpagrande	3.67	309	P	Pn	05 55 34.5	-0.7
TIP	Timpagrande	3.67	309	P	Pn	05 55 34.6	-0.7
CEL	Celeste	3.85	291	ePn	Pn	05 55 36.6	-1.1
FNA	Florina	3.91	10	eP	Pn	05 55 39.2	+0.6
FNA	Florina	3.91	10	ePn	Pn	05 55 38.6	+0.1
FNA				eSn	Sn	05 56 23.8	+0.4
FNA	Florina	3.91	10	ePn	Pn	05 55 39.1	+0.6
FNA	Florina	3.91	10	P	Pn	05 55 39.1	+0.6
FNA	Florina	3.91	10	eP	Pn	05 55 39.1	+0.6
PAIG	Paliouri	3.92	39	P	Pn	05 55 38.2	-0.4
IDI	Anoyia	3.96	113	eP	Pn	05 55 42.9	+3.7
IDI	Anoyia	3.96	113	ePn	Pn	05 55 42.8	+3.7
IDI				Sn	Sn	05 56 26.3	+1.7
IDI	Anoyia	3.96	113	⇓iP	Pb	05 55 45.6	-3.8
IDI	Anoyia	3.96	113	Pn	Pn	05 55 40.0	+0.8
	comp=E,2.0nm,0.3s,baz=310,slow=16,SNR=9.4						
IDI				Sn	Sn	05 56 26.3	+1.7
	comp=E,20nm,0.3s,baz=12,slow=14,SNR=5.9						
IDI				LR	LR	05 57 41.9	
	comp=E,1μm,20.6s,baz=294,slow=45						
SANT	Santorini	4.07	96	eP	Pn	05 55 41.7	+1.0
SANT	Santorini	4.07	96	ePn	Pn	05 55 41.8	+1.1
APE	Apeiranthos	4.07	87	eP	Pn	05 55 39.9	-0.8
APE	Apeiranthos	4.07	87	P	Pn	05 55 39.8	-0.8
APE	Apeiranthos	4.07	87	ceP	Pn	05 55 39.9	-0.8

BIA	Bitola	4.13	9	*i* Pn	Pn	05 55 42.9	+1.4
PLG	Polygyros	4.16	33	P	Pn	05 55 42.1	+0.2
OHR	Ohrid	4.18	4	⇑*i*Pn	Pn	05 55 43.1	+1.0
HORT	Hortiatis	4.20	29	*e*P	Pn	05 55 42.5	0.0
HORT	Hortiatis	4.20	29	P	Pn	05 55 42.3	-0.2
GRG	Griva	4.29	20	*e*P	Pn	05 55 43.9	+0.2
GRG	Griva	4.29	20	P	Pn	05 55 44.0	+0.3
ANAF	Anafi Island	4.32	96	P	Pn	05 55 43.9	-0.2
TAR1	Taranto	4.35	326	⇓*i*Pn	Pn	05 55 43.5	-1.0
TAR1				Sn	Sn	05 56 29.5	-4.7
AMGA	Amorgos Island	4.37	90	P	Pn	05 55 44.3	-0.5
CGL1	Ceglie Messapi	4.38	329	*e*Pn	Pn	05 55 44.1	-0.8
CGL1				Sn	Sn	05 56 31.2	-3.7
OUR	Ouranopolis	4.38	38	*e*P	Pn	05 55 44.3	-0.5
TIR	Tirane	4.43	354	*e*Pn	Pn	05 55 45.1	-0.4
TIR	Tirane	4.43	354	*e*P	Pn	05 55 45.1	-0.4
LAST	Lasithi	4.45	112	P	Pn	05 55 46.5	+0.6
KRUS	Krusevo	4.47	8	*i* Pn	Pn	05 55 46.3	+0.1
MASS	Massafra	4.50	326	⇓*i*Pn	Pn	05 55 45.6	-1.0
MASS				Sn	Sn	05 56 34.2	-3.8
FASA	Fasano	4.56	329	*e*Pn	Pn	05 55 46.3	-1.1
FASA				Sn	Sn	05 56 35.6	-3.8
KNT	Kendrikon	4.63	24	*e*P	Pn	05 55 49.0	+0.7
LTRZ	Laterza	4.63	323	P	Pn	05 55 47.0	-1.3
LTRZ				S	Sn	05 56 38.3	-2.8
LTRZ				AML	AML		
	comp=E,436µm,1.2s						
LTRZ				AML	AML		
	comp=N,422µm,0.7s						
LTRZ				AML	AML		
	comp=N,422µm,0.7s						
LTRZ				AML	AML		
	comp=E,436µm,1.2s						
NOCI	Noci	4.66	327	P	Pn	05 55 47.6	-1.2
NOCI				S	Sn	05 56 39.2	-2.7
NOCI				AML	AML		
	comp=E,1046µm,0.7s						
NOCI				AML	AML		
	comp=N,776µm,0.2s						
NOCI				AML	AML		
	comp=E,1046µm,0.7s						
NOCI				AML	AML		
	comp=N,776µm,0.2s						
VAY	Valandovo	4.68	20	*i* Pn	Pn	05 55 49.1	+0.2
CHOS	Chios island	4.68	70	*e*P	Pn	05 55 48.9	-0.2
MATE	Matera	4.72	323	⇓*i*P	Sn	05 56 40.2	-3.1
MIGL	Miglionico	4.82	321	P	Pn	05 55 51.0	+0.1
MIGL				S	Sn	05 56 43.4	-2.3
MIGL				AML	AML		
	comp=E,1490µm,1.6s						
MIGL				AML	AML		
	comp=N,1075µm,0.8s						
MIGL				AML	AML		
	comp=E,1490µm,1.6s						
MIGL				AML	AML		
	comp=N,1075µm,0.8s						
SIGR	SIGRI	4.83	60	*e*P	Pn	05 55 50.6	-0.5
VAE	Valguarnera	4.85	278	Pn	Pn	05 55 53.4	+2.0
	comp=N,9.7nm,0.3s,baz=180,slow=0.8,SNR=18						
SG1	Sgolgore (BA)	4.88	324	*e*Pn	Pn	05 55 50.7	-1.1
SG1				Sn	Sn	05 56 42.1	-5.2
WDD	Wied Dalam	4.90	259	*e*Pn	Pn	05 55 52.1	0.0
STIP	Stip	4.94	15	*i* Pn	Pn	05 55 54.3	+1.7
AMUR	Altamura	4.97	324	P	Pn	05 55 51.8	-1.2
AMUR				S	Sn	05 56 45.1	-4.4
AMUR				AML	AML		
	comp=E,499µm,0.5s						
AMUR				AML	AML		
	comp=N,545µm,0.8s						
AMUR				AML	AML		
	comp=E,499µm,0.5s						
AMUR				AML	AML		
	comp=N,545µm,0.8s						
BAI	Bari	5.00	327	*e*Pn	Pn	05 55 52.8	-0.6
BAI				Sn	Sn	05 56 46.0	-4.3
ZKR	Zakros	5.02	110	*e*P	Pn	05 55 57.4	+3.7
URLA	Izmir	5.08	72	*e*P	Pn	05 55 54.6	0.0
URLA	Izmir	5.08	72	*i* P	Pn	05 55 54.5	0.0
URLA				IAML_P			
	comp=Z,2µm,0.3s						
ULC	Ulcinj	5.10	350	⇓*i*Pn	Pn	05 55 52.7	-2.2
ULC				*i* Sn	Sn	05 56 43.0	-10
SLCN	Sala Consilina	5.11	314	P	Pn	05 55 56.4	+1.5
SLCN				S	Sn	05 56 54.2	+1.2
SLCN				AML	AML		
	comp=E,610µm,0.5s						
SLCN				AML	AML		
	comp=N,552µm,1.2s						
SLCN				AML	AML		
	comp=E,626µm,0.5s						
SLCN				AML	AML		
	comp=N,557µm,1.3s						
SLCN				AML	AML		
	comp=E,626µm,0.5s						
SLCN				AML	AML		
	comp=N,552µm,1.2s						
SLCN				AML	AML		
	comp=E,610µm,0.5s						
SLCN				AML	AML		
	comp=N,557µm,1.3s						
DGB	zmir	5.24	76	*i* P	Pn	05 55 56.6	0.0
DGB				IAML_P			
	comp=Z,327nm,0.2s						
BOZC	Bozcaada	5.27	55	*e*P	Pn	05 55 57.1	-0.1
MRVN	Minervino Murg	5.28	322	P	Pn	05 55 56.4	-0.9
MRVN				S	Sn	05 56 52.5	-4.8
MRVN				AML	AML		
	comp=E,78µm,0.7s						
MRVN				AML	AML		
	comp=N,92µm,1.5s						
MRVN				AML	AML		
	comp=E,292µm,1.5s						
MRVN				AML	AML		
	comp=N,234µm,0.9s						
MRVN				AML	AML		
	comp=E,292µm,1.5s						
MRVN				AML	AML		
	comp=N,234µm,0.9s						
MMB	Musomiste	5.30	28	*i* P	Pn	05 55 57.2	-0.3
PALZ	Palazzo San Ge	5.31	320	P	Pn	05 55 57.1	-0.7
PALZ				AML	AML		
	comp=E,238µm,1.4s						
PALZ				AML	AML		
	comp=N,276µm,1.1s						
PALZ				AML	AML		
	comp=E,646µm,1.3s						
PALZ				AML	AML		
	comp=N,656µm,0.7s						
PALZ				AML	AML		
	comp=E,646µm,1.3s						
PALZ				AML	AML		
	comp=N,656µm,0.7s						
KKB	Krupnik	5.33	22	*i* P	Pn	05 56 03.4	+5.5
DRME	Dracevica, Mon	5.33	350	⇓*i*Pn	Pn	05 55 56.1	-1.9
DRME				*i* Sn	Sn	05 56 50.5	-7.9
DRME	Dracevica, Mon	5.33	350	⇑*i*Pn	Pn	05 55 56.8	-1.2
BLCB	Balcova	5.43	73	*e*P	Pn	05 55 59.4	+0.1
MRLC	Muro Lucano	5.43	316	P	Pn	05 56 00.4	+1.0
MRLC				AML	AML		
	comp=E,188µm,0.6s						
MRLC				AML	AML		
	comp=N,202µm,0.7s						
MRLC				AML	AML		
	comp=E,188µm,0.6s						
MRLC				AML	AML		
	comp=N,202µm,0.7s						
EZN	Ezine	5.44	56	*e*P	Pn	05 55 59.4	-0.1
BUM	Brajici-Budva	5.49	348	⇑*i*Pn	Pn	05 55 58.4	-1.8
BUM				*i* Sn	Sn	05 56 54.1	-8.2
BODT	Bodrum	5.50	87	*e*P	Pn	05 56 00.9	+0.6
VULT	Monte Vulture	5.50	318	P	Pn	05 56 01.4	+1.0
VULT				AML	AML		
	comp=E,234µm,1.3s						
VULT				AML	AML		
	comp=N,384µm,1.3s						
VULT				AML	AML		
	comp=E,234µm,1.3s						
VULT				AML	AML		
	comp=N,384µm,1.3s						
BAYC	CANAKKALE_Bayr	5.55	58	*i* P	Pn	05 56 00.8	-0.2
BAYC				IAML_P			
	comp=Z,170nm,0.3s						
PDG	Podgorica	5.56	351	⇓*i*P	Pn	05 55 59.8	-1.3
PDG	Podgorica	5.56	351	⇓*i*Pn	Pn	05 56 00.0	-1.1
TTG	Podgorica	5.56	351	⇓*i*Pn	Pn	05 55 58.9	-2.2
TTG				*i* Sn	Sn	05 56 56.0	-8.0
TTG	Podgorica	5.56	351	*e*Pn	Pn	05 55 59.2	-1.8
TTG				*e*Sn	Sn	05 57 02.3	-1.8
TTG	Podgorica	5.56	351	*e*P	Pn	05 55 59.3	-1.8
TTG				*e*		05 57 02.3	
BDRM	Kayabasi	5.60	87	*i* P	Pn	05 56 00.9	-0.8
BDRM				IAML_P			
	comp=Z,359nm,0.4s						
KARP	Karpathos	5.60	102	*e*P	Pn	05 56 04.1	+2.3
KARP	Karpathos	5.60	102	*e*Pn	Pn	05 56 04.0	+2.3
KARP				*e*Sn	Sn	05 57 06.1	+1.0
PVY	Plav	5.66	356	⇓*i*Pn	Pn	05 56 02.9	+0.3
PVY				*i* Sn	Sn	05 56 58.7	-8.0
SNAL	S. Angelo Dei	5.70	316	P	Pn	05 56 04.9	+1.7
SNAL				AML	AML		
	comp=E,387µm,0.7s						
SNAL				AML	AML		
	comp=N,279µm,0.9s						
SNAL				AML	AML		
	comp=E,386µm,0.7s						
SNAL				AML	AML		
	comp=N,331µm,1.6s						
SNAL				AML	AML		
	comp=N,331µm,1.6s						
SNAL				AML	AML		
	comp=E,386µm,0.7s						
HCY	Herceg Novi	5.70	345	⇑*i*Pn	Pn	05 56 00.6	-2.5
HCY				*i* Sn	Sn	05 56 59.7	-7.9
HCY	Herceg Novi	5.70	345	*e*Pn	Pn	05 56 00.9	-2.2
CEME	Cevo	5.72	349	⇑*i*Pn	Pn	05 56 00.1	-3.3
CEME				*i* Sn	Sn	05 57 00.1	-8.1
CAFE	Carife	5.76	317	P	Pn	05 56 05.1	+1.1
CAFE				AML	AML		
	comp=E,349µm,0.4s						
CAFE				AML	AML		
	comp=N,196µm,1.5s						
CAFE				AML	AML		
	comp=E,349µm,0.4s						
CAFE				AML	AML		
	comp=N,278µm,0.5s						
CAFE				AML	AML		
	comp=E,349µm,0.4s						
CAFE				AML	AML		
	comp=N,278µm,0.5s						
SGTA	Sant Agata di	5.76	318	AML	AML		
	comp=E,323µm,1.0s						
SGTA				AML	AML		
	comp=E,323µm,1.0s						
SGTA				AML	AML		
	comp=N,202µm,0.9s						
SGTA				AML	AML		
	comp=N,202µm,0.9s						
RDO	Rodhopi	5.78	42	*e*P	Pn	05 56 04.0	0.0
RZN	Rozhen	5.78	34	*i* P	Pn	05 56 04.5	+0.1
CLTB	Caltabellotta	5.80	278	*e*Pn	Pn	05 56 04.9	+0.4
GELI	Tayfur-Gelibol	5.85	52	*e*P	Pn	05 56 04.6	-0.4
ALN	Alexandroupoli	5.89	46	*e*P	Pn	05 56 05.4	-0.2
ALN	Alexandroupoli	5.89	46	*e*Pn	Pn	05 56 05.6	0.0
ALN	Alexandroupoli	5.89	46	*e*P	Pn	05 56 05.6	0.0
MSAG	Monte S. Angel	5.92	325	P	Pn	05 56 05.2	-1.0
MSAG				AML	AML		
	comp=E,172µm,0.9s						
MSAG				AML	AML		
	comp=N,308µm,1.3s						
MSAG				AML	AML		
	comp=E,412µm,0.6s						
MSAG				AML	AML		
	comp=N,1002µm,1.1s						
MSAG				AML	AML		
	comp=N,1002µm,1.1s						
MSAG				AML	AML		
	comp=E,412µm,0.6s						
NKME	Niksic	5.93	349	⇓*i*Pn	Pn	05 56 03.8	-2.5
NKME				*i* Sn	Sn	05 57 05.2	-8.1
IVA	Berane	5.94	356	⇑*i*Pn	Pn	05 56 05.5	-0.9
IVA				*i* Sn	Sn	05 57 05.4	-8.2
KOME	Kolasin	5.95	353	⇓*i*Pn	Pn	05 56 04.4	-2.1
KOME				*i* Sn	Sn	05 57 05.7	-8.0
BARS	Barje	5.96	10	*e*Pn	Pn	05 56 06.0	-0.7
BARS				*e*Sn	Sn	05 57 12.7	-1.3
AYDN	Tasoluk	5.97	81	*i* P	Pn	05 56 07.3	+0.5
AYDN				IAML_P			
	comp=Z,45nm,0.1s						
MRB1	Monte Rocchett	5.97	316	P	Pn	05 56 08.4	+1.6
MRB1				AML	AML		
	comp=E,460µm,1.4s						
MRB1				AML	AML		
	comp=N,801µm,1.0s						
MRB1				AML	AML		
	comp=E,446µm,0.6s						
MRB1				AML	AML		
	comp=N,752µm,1.0s						
MRB1				AML	AML		
	comp=E,460µm,1.4s						
MRB1				AML	AML		
	comp=N,802µm,1.0s						
MRB1				AML	AML		
	comp=E,446µm,0.6s						
MRB1				AML	AML		
	comp=N,752µm,1.0s						
MRB1				AML	AML		
	comp=E,460µm,1.4s						
MRB1				AML	AML		
	comp=E,446µm,0.6s						
MRB1				AML	AML		
	comp=N,752µm,1.0s						
MRB1				AML	AML		
	comp=N,802µm,1.0s						
NKY	Niksic	5.97	350	⇑*i*Pn	Pn	05 56 04.5	-2.4
NKY				*i* Sn	Sn	05 57 06.1	-8.3
TREB	Trebinje	5.99	345	*e*Pn	Pn	05 56 04.6	-2.5
AYDB	Zeytinkoy-Aydi	6.01	78	*e*P	Pn	05 56 08.1	+0.7
LPK	Lapseki	6.01	53	*e*P	Pn	05 56 07.7	+0.4
ERIK	Erikli-Kesan	6.03	50	*e*P	Pn	05 56 07.6	+0.1
SGRT	San Giovanni R	6.03	324	P	Pn	05 56 06.6	-1.1
SGRT				AML	AML		
	comp=E,142µm,1.5s						
SGRT				AML	AML		
	comp=N,124µm,1.1s						
SGRT				AML	AML		
	comp=E,454µm,0.6s						
SGRT				AML	AML		
	comp=N,438µm,0.5s						
SGRT				AML	AML		
	comp=N,438µm,0.5s						
SGRT				AML	AML		
	comp=E,454µm,0.6s						
MOCO	Biccari - m.te	6.04	319	P	Pn	05 56 08.9	+1.1
MOCO				AML	AML		
	comp=E,240µm,0.7s						
MOCO				AML	AML		
	comp=N,146µm,0.7s						
MOCO				AML	AML		
	comp=E,239µm,0.7s						
MOCO				AML	AML		
	comp=N,154µm,0.7s						
MOCO				AML	AML		
	comp=E,240µm,0.7s						
MOCO				AML	AML		
	comp=N,146µm,0.7s						
MOCO				AML	AML		
	comp=N,154µm,0.7s						
MOCO				AML	AML		
	comp=E,239µm,0.7s						
VTS	Vitosha	6.07	20	*e*Pn	Pn	05 56 06.9	-1.3
VTS				*e*Sn	Sn	05 57 12.8	-3.9
VTS	Vitosha	6.07	20	*e*Pn	Pn	05 56 08.3	+0.1
VTS	Vitosha	6.07	20	⇓*i*P	Pn	05 56 08.9	+0.7
VTS	Vitosha	6.07	20	*e*P	Pn	05 56 08.3	+0.1
VTS	Vitosha	6.07	20	*i* P	Pn	05 56 08.5	+0.3
PLD	Plovdiv	6.12	31	*e*Pn	Pn	05 56 07.5	-1.3
BRY	Bratogost	6.13	347	⇑*i*Pn	Pn	05 56 06.1	-3.0
BRY				*i* Sn	Sn	05 57 10.1	-8.3
BRY	Bratogost	6.13	347	*e*Pn	Pn	05 56 07.0	-2.1
PAOL	Paolisi	6.14	314	P	Pn	05 56 09.6	+0.5
PAOL				AML	AML		
	comp=E,137µm,1.0s						
PAOL				AML	AML		
	comp=N,195µm,0.3s						
PAOL				AML	AML		
	comp=N,195µm,0.3s						
PAOL				AML	AML		
	comp=E,137µm,1.0s						
ARG	Arkhangelos	6.22	94	*e*P	Pn	05 56 12.9	+2.7
STON	Ston	6.29	341	*e*Pn	Pn	05 56 09.9	-1.2
STON				Sn	Sn	05 57 16.6	-5.3
BALY	Balya	6.29	61	*i* P	Pn	05 56 12.3	+1.1
BALY				IAML_P			
	comp=Z,433nm,0.5s						
SELS	Selova	6.29	4	*e*Pn	Pn	05 56 09.9	-1.3
SELS				*e*Sn	Sn	05 57 19.0	-3.2
MELA	Melanico ??? S	6.30	321	P	Pn	05 56 11.1	-0.1
MELA				AML	AML		
	comp=E,492µm,0.8s						
MELA				AML	AML		
	comp=N,634µm,0.8s						
MELA				AML	AML		
	comp=E,431µm,0.7s						
MELA				AML	AML		
	comp=N,605µm,0.9s						
MELA				AML	AML		
	comp=E,492µm,0.8s						
MELA				AML	AML		
	comp=E,431µm,0.7s						
MELA				AML	AML		
	comp=N,605µm,0.9s						
MELA				AML	AML		
	comp=N,634µm,0.8s						
SJES	Sjenica	6.33	357	*e*Pn	Pn	05 56 11.2	-0.5
SJES				*e*Sn	Sn	05 57 20.3	-2.8
PTRJ	Pietraroja	6.38	316	P	Pn	05 56 12.9	+0.5
PTRJ				AML	AML		
	comp=E,339µm,1.6s						
PTRJ				AML	AML		
	comp=N,530µm,0.5s						
PTRJ				AML	AML		
	comp=E,339µm,1.6s						
PTRJ				AML	AML		
	comp=N,530µm,0.5s						
PLE	Pljevlja	6.43	353	⇑*i*Pn	Pn	05 56 11.0	-2.2
PLE				*i* Sn	Sn	05 57 17.3	-8.5
BSSO	Busso	6.46	317	P	Pn	05 56 12.8	-0.8
BSSO				AML	AML		
	comp=E,172µm,0.8s						
BSSO				AML	AML		
	comp=N,206µm,1.3s						
BSSO				AML	AML		
	comp=E,153µm,1.0s						
BSSO				AML	AML		
	comp=N,198µm,1.3s						
BSSO				AML	AML		
	comp=E,153µm,1.0s						
BSSO				AML	AML		
	comp=E,172µm,0.8s						
BSSO				AML	AML		
	comp=N,198µm,1.3s						
BSSO				AML	AML		
	comp=N,206µm,1.3s						
TURN	Turunc	6.54	88	*e*P	Pn	05 56 12.4	-2.1
TURN	Turunc	6.54	88	*i* P	Pn	05 56 14.7	+0.2
TURN				IAML_P			
	comp=Z,86nm,0.2s						
ZAPS	Zavoj	6.55	14	*e*Pn	Pn	05 56 14.2	-0.5
ZAPS				*e*Sn	Sn	05 57 26.0	-2.4
VAGA	Valle Agricola	6.58	315	P	Pn	05 56 15.9	+0.7
VAGA				AML	AML		
	comp=E,159µm,0.9s						
VAGA				AML	AML		
	comp=N,185µm,0.6s						
VAGA				AML	AML		
	comp=E,159µm,0.9s						
VAGA				AML	AML		
	comp=N,185µm,0.6s						
IVAS	Ivanjica	6.63	358	*e*Pn	Pn	05 56 13.9	-2.0
IVAS				*e*Sn	Sn	05 57 27.8	-2.8
SLUM	Salum	6.71	143	P	Pn	05 56 15.8	-1.2
	baz=146						
SLUM				S	Sn	05 57 25.8	-6.8
	baz=146						
BOVS	Bovan	6.76	8	*e*Pn	Pn	05 56 16.1	-1.4
BOVS				*e*Sn	Sn	05 57 30.4	-3.1
RNI2	Rionero Sannit	6.81	316	P	Pn	05 56 16.0	-2.4
RNI2				AML	AML		
	comp=E,243µm,0.5s						
RNI2				AML	AML		
	comp=N,206µm,1.0s						
RNI2				AML	AML		
	comp=N,206µm,1.0s						
RNI2				AML	AML		
	comp=E,243µm,0.5s						
CERA	Filignano	6.82	315	P	Pn	05 56 18.7	+0.2
CERA				AML	AML		
	comp=E,209µm,0.8s						
CERA				AML	AML		
	comp=N,266µm,0.9s						
CERA				AML	AML		
	comp=E,209µm,0.8s						
CERA				AML	AML		
	comp=N,266µm,0.9s						
DURS	Dursunbey	6.85	65	*i* P	Pn	05 56 20.1	+1.2
DURS				IAML_P			
	comp=Z,157nm,0.5s						
FETY	Fethiye	6.94	90	*i* P	Pn	05 56 22.4	+2.3
GRUS	Gruza	6.95	2	*e*Pn	Pn	05 56 18.7	-1.4
GRUS				*e*Sn	Sn	05 57 34.9	-3.2
BBLS	Lazići	6.97	354	*e*Pn	Pn	05 56 18.8	-1.7
BBLS				*e*Sn	Sn	05 57 34.9	-3.8
BBLS	Lazići	6.97	354	⇓*i*Pn	Pn	05 56 19.0	-1.5
ZAGS	Zajecar	7.00	11	*e*Pn	Pn	05 56 20.3	-0.6
USAK	Uak-Merkez	7.01	73	*i* P	Pn	05 56 22.8	+1.7
USAK				IAML_P			
	comp=Z,120nm,0.5s						
LPEL	Lama dei Pelig	7.03	318	S	Sn	05 57 08.0	-32
INTR	Introdacqua	7.16	317	P	Pn	05 56 24.5	+1.4
INTR				AML	AML		
	comp=E,129µm,0.9s						
INTR				AML	AML		
	comp=N,208µm,0.7s						
INTR				AML	AML		
	comp=E,129µm,0.9s						
INTR				AML	AML		
	comp=N,208µm,0.7s						
DIVS	Divibare	7.16	357	*e*Pn	Pn	05 56 21.2	-2.0
DIVS				*e*Sn	Sn	05 57 39.2	-4.4
DIVS	Divibare	7.16	357	*e*Pn	Pn	05 56 21.3	-1.8
DIVS	Divibare	7.16	357	⇑*i*Pn	Pn	05 56 21.2	-2.0
HAPS	Han Pijesak,Bl	7.23	351	⇑*i*Pn	Pn	05 56 21.7	-2.4
TRUS	Trudelj	7.28	360	*e*Pn	Pn	05 56 22.8	-1.9
TRUS				*e*Sn	Sn	05 57 43.3	-3.0
GOLH	Golhisar	7.29	85	*i* P	Pn	05 56 29.7	+4.7
GOLH				IAML_P			
	comp=Z,422nm,0.3s						
AKAS	Kas	7.40	93	*i* P	Pn	05 56 26.7	+0.2
AKAS				IAML_P			
	comp=Z,334nm,0.4s						
KUBS	Kucevo	7.52	7	*e*Pn	Pn	05 56 26.3	-1.8
CTYL	Yalikoy Yolu	7.59	51	⇓*i*P	Pn	05 56 29.2	+0.3
AQU	L'Aquila	7.67	317	*e*Pn	Pn	05 56 29.8	-0.3
AQU	L'Aquila	7.67	317	*e*P	Pn	05 56 29.8	-0.3
YLV	Yalova	7.86	60	⇓*i*P	Pn	05 56 35.7	+3.0
MDVR	Moldovita	7.89	7	⇓*i*P	Pn	05 56 31.7	-1.5
KORT	Korkueli	7.93	87	*i* P	Pn	05 56 31.3	-2.5
KORT				IAML_P			
	comp=Z,244nm,0.1s						
ISP	Isparta	8.07	81	*e*Pn	Pn	05 56 35.0	-0.6
ISP	Isparta	8.07	81	*e*P	Pn	05 56 35.1	-0.6
HERR	Herculane	8.07	10	⇓*i*P	Pn	05 56 35.3	-0.3
BLY	Banja Luka	8.18	343	*e*Pn	Pn	05 56 36.0	-1.1
BLY	Banja Luka	8.18	343	⇓*i*P	Pn	05 56 34.8	-2.3
BLY	Banja Luka	8.18	343	*e*Pn	Pn	05 56 36.7	-0.4
FRGS	Fruska Gora	8.23	357	⇓*i*Pn	Pn	05 56 35.4	-2.3
UDBI	Udbina	8.37	336	*e*Pn	Pn	05 56 40.0	+0.3
UDBI				Sn	Sn	05 58 08.6	-4.7
GZR	Gura Zlata	8.63	11	⇓*i*P	Pn	05 56 41.8	-1.5
NVLJ	Novalja	8.71	333	*e*Pn	Pn	05 56 43.7	-0.6
NVLJ				Sn	Sn	05 58 15.0	-6.5
BZS	Buzias	8.71	5	⇓*i*P	Pn	05 56 42.4	-2.0
SWA2		8.75	150	P	Pn	05 56 43.1	-1.8
	baz=152						
KEPZ	Antalya-Kepez	8.94	87	*i* P	Pn	05 56 50.3	+2.8
KEPZ				IAML_P			
	comp=Z,16nm,0.1s						
MTUR	Matau	8.98	21	⇓*i*P	Pn	05 56 49.0	+0.9
ARR	Arges	8.99	19	⇓*i*P	Pn	05 56 47.9	-0.4
KEST	Kesra	9.04	266	*e*Pn	Pn	05 56 49.1	+0.2
KEST	Kesra	9.04	266	Pn	Pn	05 56 49.5	+0.6
	comp=Z,0.7nm,0.3s,baz=84,slow=2.2,SNR=9.9						
KEST				LR	LR	06 01 52.4	
	comp=Z,374nm,18.1s,baz=0.5,slow=48						

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TAMR  Tamra              9.07 274   P      Pn     05 57 37.3 +48
VOIR                     9.17  21⇓iP       Pn     05 56 51.0 +0.3
MORH  Mrgy, Hungar       9.37 352  ePn     Pn     05 56 52.1 -1.2
MORH                                Sn     Sn     05 58 40.1 +2.5
MORH  Mrgy, Hungar       9.37 352  ePn     Pn     05 56 50.2 -3.1
ISR   Istrita            9.38  27⇓iP       Pn     05 56 52.9 -0.6
BOJS  Bojanci            9.41 337  ePn     Pn     05 56 53.2 -0.7
BOJS                               eSn     Sn     05 58 30.7 -7.9
BOJS  Bojanci            9.41 337   P      Pn     05 56 53.0 -0.9
OZLJ  Ozalj              9.44 338  i Pn    Pn     05 56 53.6 -0.8
MLR   Muntele Rosu       9.49  24   Pn     Pn     05 56 57.1 +2.0
      comp=Z,0.3nm,0.3s,baz=115,slow=20,SNR=8.9
MLR                                 LR     LR     06 00 45.8
      comp=Z,294nm,18.4s,baz=207,slow=39
KONT  Konya--Tatoy       9.53  80  i P     Pn     05 56 58.4 +2.8
KONT                                IAML_P
      comp=Z,110nm,0.3s
TLB   Topalu             9.56  35⇓iP       Pn     05 56 55.9 -0.1
CRES  Cresnjev           9.64 339⇑iPn      Pn     05 56 54.9 -2.1
TIRR  Tirgusor           9.64  36⇓iP       Pn     05 56 57.1 +0.1
DOPR  Dopca              9.75  21⇓iP       Pn     05 56 59.5 +0.9
CEY   Cerknica           9.88 335⇑iPn      Pn     05 56 59.1 -1.4
OZUR                     9.98  22⇓iP       Pn     05 57 02.3 +0.5
DRGR                     9.99   9⇓iP       Pn     05 57 00.8 -1.1
DRGR                     9.99   9   P      Pn     05 57 03.9 +2.0
PLOR  Plostina          10.05  26⇓iP       Pn     05 57 03.6 +0.9
PLOR  Plostina          10.05  26   P      Pn     05 57 03.5 +0.9
CFR   Carcaliu          10.07  33⇓iP       Pn     05 57 01.8 -1.1
VRI   Vrincioaia        10.09  26⇓iP       Pn     05 57 03.5 +0.3
LJU   Ljubljana         10.12 336  ePn     Pn     05 57 02.4 -1.2
LJU   Ljubljana         10.12 336   P      Pn     05 57 03.1 -0.5
OBKA  Obir              10.53 337  ePn     Pn     05 57 09.4 +0.1
      comp=Z,3.6nm,0.2s
OBKA                               i Sn    Sn     05 59 01.6 -4.6
      comp=Z,37nm,0.9s
SOKA  Soboth            10.53 339  i Pn    Pn     05 57 07.6 -1.8
      comp=Z,62nm,1.1s,SNR=16
BRTR  Keskin Array B    10.73  71   Pn     Pn     05 57 15.2 +3.0
      comp=Z,0.1nm,0.3s,baz=256,slow=13,SNR=6.3
BRTR                                LR     LR     06 01 30.7
      comp=Z,256nm,19.5s,baz=250,slow=38
ARSA  Arzberg           10.93 342  ePn     Pn     05 57 13.1 -1.7
      comp=Z,4.7nm,0.4s
ARSA                               i Sn    Sn     05 59 07.6 -8.5
      comp=Z,6.8nm,0.7s
PSZ   Piszkesteto       10.98 358  ePn     Pn     05 57 14.2 -1.3
PSZ   Piszkesteto       10.98 358⇓iP       Pn     05 57 13.5 -2.0
PSZ   Piszkesteto       10.98 358  ePn     Pn     05 57 15.1 -0.4
PSZ                                 Sn     Sn     05 59 20.1 +2.8
PSZ   Piszkesteto       10.98 358  eP      Pn     05 57 14.2 -1.3
HNAT  Natroun           11.20 128   P      Pn     05 57 16.5 -1.9
      baz=129
BURAR Bucovina Array    11.24  17⇓iP       Pn     05 57 17.5 -1.5
BURAR Bucovina Array    11.24  17   P      Pn     05 57 17.5 -1.5
BUR04 Bucovina Ar. S    11.24  17  ePn     Pn     05 57 19.3 +0.3
BUR08 Bucovina Ar. S    11.26  17  ePn     Pn     05 57 17.3 -2.0
KBA   Koelnbreinsper    11.42 335   Pn     Pn     05 57 22.2 +0.6
ABTA  Abfaltersbach     11.44 331  ePn     Pn     05 57 21.3 -0.5
      comp=Z,4.8nm,0.6s
ABTA                               i Sn    Sn     05 59 18.9 -10
      comp=Z,23nm,0.7s
MAGA  Magasa            11.50 323   P      Pn     05 57 20.9 -1.7
VYHS  Vyhne             11.61 355  eP      Pn     05 57 22.5 -1.5
VYHS                               e              05 59 27.3
VYHS  Vyhne             11.61 355  ePN     Pn     05 57 22.5 -1.5
VYHS  Vyhne             11.61 355  eSN     Sn     05 59 27.3 -5.3
MODS  Modra-Piesok      11.66 349  eP      Pn     05 57 23.9 -0.9
MODS                               e              05 59 25.5
MODS  Modra-Piesok      11.66 349  ePN     Pn     05 57 23.9 -0.9
MODS  Modra-Piesok      11.66 349  eSN     Sn     05 59 25.5 -8.4
MOA   Molln             11.82 339  i Pn    Pn     05 57 25.9 -0.9
      comp=Z,8.4nm,0.2s,SNR=29
MOA                                eSn     Sn     05 59 29.5 -8.2
      comp=Z,12nm,0.8s
ABSI  Aberstueckl       11.91 328   P      Pn     05 57 27.9 -0.4
GLL   Jalalah           11.94 125   P      Pn     05 57 26.8 -1.9
      baz=126
JAVC  Velka Javorina    12.09 351  ePN     Pn     05 57 29.7 -0.9
WATA  Walderalm         12.29 330  i Pn    Pn     05 57 35.0 +1.5
      comp=Z,7.9nm,0.4s
FUORN Ofenpass-Fuorn    12.29 325  ePn     Pn     05 57 32.5 -1.1
FUORN                              eSn     Sn     05 59 47.3 -2.3
NBNS  Bani Suef         12.32 129   P      Pn     05 57 31.5 -2.4
      baz=131
SQTA  Sankt Quirin      12.34 329  ePn     Pn     05 57 35.8 +1.6
      comp=Z,5.6nm,0.5s
SQTA                               eSn     Sn     05 59 46.8 -4.0
      comp=Z,11nm,0.6s
FETA  Feichten          12.39 327  ePn     Pn     05 57 36.5 +1.7
      comp=Z,7.7nm,0.7s,SNR=7.9
SNOP  Sinop             12.48  61  ePn     Pn     05 57 36.8 +0.8
MOTA  Moosalm           12.49 329  i Pn    Pn     05 57 37.5 +1.4
      comp=Z,11nm,0.9s,SNR=6.5
RSH                     12.53 115   P      Pn     05 57 33.9 -2.8
      baz=116
DAVOX Davos/Dischmat    12.59 325   Pn     Pn     05 57 38.6 +1.1
      comp=Z,0.7nm,0.3s,baz=145,slow=18,SNR=10
DAVOX                               LR     LR     06 04 23.9
      comp=Z,334nm,21.1s,baz=132,slow=46
TUE   Stuetta           12.62 322  ePn     Pn     05 57 37.3 -0.7
VRAC  Vranov            12.68 348   LR     LR     06 04 10.3
      comp=Z,250nm,18.8s,baz=171,slow=45
GEA0  GERESS Array S    12.87 340  ePn     Pn     05 57 39.0 -2.4
MMAI  Mount Meron Ar    12.87 103   LR     LR     06 02 57.4
      comp=Z,135nm,21.5s,baz=255,slow=38
GEC2  GERESS Array S    12.88 340  ePn     Pn     05 57 40.4 -1.0
GEC2  GERESS Array S    12.88 340  eP      Pn     05 57 40.4 -1.0
GERES GERESS Array B    12.88 340   P      Pn     05 57 40.0 -1.5
GERES                                             05 59 55.6
GERES                               pmax   pmax
      comp=Z,1.0nm,0.3s
GERES                               smax   smax
      comp=N,1.0nm,0.3s
GERES                               MLR    MLR
      comp=Z,246nm,19.1s
GERES GERESS Array B    12.88 340   Pn     Pn     05 57 40.0 -1.5
      comp=Z,0.7nm,0.3s,baz=158,slow=14,SNR=18
GERES                               Sn     Sn     05 59 55.6 -8.2
      comp=Z,0.7nm,0.3s,baz=155,slow=24,SNR=5.6
GERES                               LR     LR     06 04 24.6
      comp=Z,246nm,19.1s,baz=146,slow=46
DAVA  Damuels           12.96 326  ePn     Pn     05 57 44.5 +1.8
      comp=Z,12nm,0.8s,SNR=6.3
DAVA                               i Sn    Sn     06 00 02.3 -3.7
      comp=Z,13nm,0.6s
MORC  Moravsky Berou    13.00 352  ePn     Pn     05 57 42.1 -0.9
MORC  Moravsky Berou    13.00 352  eP      Pn     05 57 42.2 -0.9
KHC   Kasperske Hory    13.17 340  ePn     Pn     05 57 43.5 -1.9
KHC   Kasperske Hory    13.17 340  ePN     Pn     05 57 44.0 -1.4
KHC                                eSN     Sn     06 00 02.9 -7.9
KHC   Kasperske Hory    13.17 340  eP      Pn     05 57 44.0 -1.4
KHC                                e              06 00 02.9
OJC   Ojcow             13.29 358  ePn     Pn     05 57 46.4 -0.5
OJC   Ojcow             13.29 358  eP      Pn     05 57 46.4 -0.5
EIL   Elat              14.12 117   Pn     Pn     05 57 56.7 -1.7
      comp=Z,0.7nm,0.3s,baz=305,slow=12,SNR=4.9
GRFO  Grafenberg        14.39 335  ePn     Pn     05 58 01.5 -0.5
GRFO  Grafenberg        14.39 335  eP      Pn     05 58 01.5 -0.5
GRA1  Grafenberg Arr    14.39 335  ePn     Pn     05 58 01.0 -1.0
GRF   Grafenberg Arr    14.39 335  eP      Pn     05 58 01.0 -1.0
BFO   Black Forest      14.44 326  ePn     Pn     05 58 01.0 -1.7
BRG   Berggiesshubel    14.69 344  eP      Pn     05 58 06.1 +0.1
      comp=Z,6.8nm,1.1s
BRG   Berggiesshubel    14.69 344  eP      Pn     05 58 06.1 +0.1
BRG                                 pmax   pmax
      comp=Z,7.0nm,1.1s
ECH   Echery            14.90 323  ePn     Pn     05 58 08.3 -0.6
ECH   Echery            14.90 323  eP      Pn     05 58 08.3 -0.6
AK11  Malin Array Si    15.09  22  ePn     Pn     05 58 10.1 -1.3
KIEV  Kiev              15.12  22  ePn     Pn     05 58 10.3 -1.4
      comp=Z,7.7nm,0.7s
KIEV                               eSn     S      06 01 09.2 -5.5
KIEV  Kiev              15.12  22⇓iP       Pn     05 58 09.6 -2.1
KIEV  Kiev              15.12  22⇓eP       Pn     05 58 10.4 -1.4
AKASG Malin Array Be    15.13  22ceP       Pn     05 58 09.6 -2.3
AKASG Malin Array Be    15.13  22   Pn     Pn     05 58 09.3 -2.6
      comp=Z,0.9nm,0.3s,baz=209,slow=12,SNR=13
AKASG                               LR     LR     06 04 12.9
      comp=Z,333nm,18.5s,baz=205,slow=38
AKBB  Malin Array Si    15.13  22  ePn     Pn     05 58 11.0 -0.9
      comp=Z,8.2nm,0.8s
AKBB                               eS      S      06 01 09.9 -5.0
AKBB  Malin Array Si    15.13  22  eP      Pn     05 58 11.0 -0.9
AKBB                                pmax   pmax
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      comp=Z,8.0nm,0.8s
CLL   Collm             15.31 342  ePn     P      05 58 20.6 +1.8
      comp=Z,20nm,1.3s
CLL   Collm             15.31 342  eP      Pn     05 58 15.0 +0.7
CLL                                esP     P      05 58 19.0 +0.2
CLL                                ePP     pP     05 58 24.0 -1.6
      comp=Z,44nm,1.8s
CLL                                e              05 58 34.0
CLL                                eS      S      06 01 13.0 -5.7
CLL                                e              06 01 54.0
CLL   Collm             15.31 342  eP      Pn     05 58 15.0 +0.7
WLF   Walferdange       16.39 325  ePn     P      05 58 35.2 +4.4
      comp=Z,90nm,0.9s
WLF   Walferdange       16.39 325  eP      P      05 58 35.2 +4.4
WLF                                 pmax   pmax
      comp=Z,90nm,0.9s
WLF   Walferdange       16.39 325 ⇑x       P      05 58 35.5 +4.6
SUW   Suwalki           17.18   5  ePn     Pn     05 58 37.5 -0.6
      comp=Z,97nm,0.9s
SUW   Suwalki           17.18   5  eP      Pn     05 58 37.5 -0.6
SUW                                 pmax   pmax
      comp=Z,97nm,0.9s
DOU   Dourbes           17.42 324 ⇑pP      P      05 58 44.4 +2.3
NEY   Neytrino          18.15  63ceP       P      05 58 52.2 +1.8
SHA1  Shidzhatmaz       18.21  61  i P     P      05 58 53.1 +1.9
KIV   Kislovodsk        18.29  61  ePn     Pn     05 58 53.3 +1.3
      comp=Z,40nm,1.2s
KIV   Kislovodsk        18.29  61  eP      Pn     05 58 52.9 +0.9
KIV                                 pmax   pmax
      comp=Z,32nm,1.1s
KIV                                 MLR    MLR
      comp=Z,62nm,14.0s
KBZ   Khabaz            18.38  61   P      Pn     05 58 53.9 +0.9
      comp=Z,0.9nm,0.3s,baz=229,slow=7.3,SNR=15
NACGM Naroch            18.49  12  e       P      05 58 50.0 -3.9
NCK   Nalchik           18.82  62⇑eP       Pn     05 58 59.9 +1.6
NCK                                 pmax   pmax
      comp=Z,15nm,0.8s
IIGN  Ignalina          18.83  10  eP      P      05 58 57.6 -0.1
IIGN                                IAmb   IAmb   05 59 04.2
      comp=Z,7.9nm,0.4s
GOF   Gofitskoye        18.84  57  eP      Pn     05 59 00.3 +1.7
TRLG  Trialeti          18.87  69   P      P      05 58 53.8 -4.6
IDID  Didziasalis       18.88  11  eP      P      05 58 57.9 -0.2
IDID                                IAmb   IAmb   05 59 01.8
      comp=Z,6.1nm,0.6s
ZEI   Tsey              18.90  65  eP      P      05 58 59.3 +0.5
ZEI                                 pmax   pmax
      comp=Z,20nm,0.6s
ISAL  Salakas           19.03  10  eP      P      05 58 59.8 -0.1
ISAL                                IAmb   IAmb   05 59 05.3
      comp=Z,6.3nm,0.7s
TAM   Tamanrasset       19.10 227  eP      Pn     05 59 02.5 +0.5
      comp=Z,4.5nm,1.0s
TAM   Tamanrasset       19.10 227  eP      Pn     05 59 02.5 +0.5
TAM                                 pmax   pmax
      comp=Z,5.0nm,1.0s
PBUR  Paburg            19.12   3  eP      P      05 59 00.9 +0.2
PBUR                                IAmb   IAmb   05 59 01.5
      comp=Z,32nm,0.8s
IZAR  Zarasai           19.23  10  eP      P      05 59 01.9  0.0
IZAR                                IAmb   IAmb   05 59 04.5
      comp=Z,9.2nm,0.7s
GNI   Garni             19.26  73  eP      P      05 59 02.8 +0.1
      comp=Z,79nm,1.4s
GNI   Garni             19.26  73⇑eP       P      05 59 03.0 +0.4
GNI                                 pmax   pmax
      comp=Z,140nm,1.4s
GNI   Garni             19.26  73   P      Pn     05 59 03.8 +0.1
      comp=Z,1.6nm,0.3s,baz=242,slow=4.1,SNR=6.5
GNI                                 LR     LR     06 08 10.8
      comp=Z,269nm,18.6s,baz=262,slow=42
ES19  SONSECA Array     19.29 286  eP      P      05 59 02.1 -0.7
ESDC  Sonseca Array     19.34 286   P      Pn     05 59 05.2 +0.6
      comp=Z,0.2nm,0.3s,baz=86,slow=11,SNR=9.9
VSR   Storozhevoye      19.53  37  i P     Pn     05 59 07.3 +0.6
VSR                                 pmax   pmax
      comp=Z,12nm,0.3s
VORR  Voronezh          19.84  36   P      P      05 59 09.0 +0.3
VORR                                pmax   pmax
      comp=Z,250nm,0.6s
LPSR  Galich'ya Gora    20.34  34  eP      P      05 59 13.1 -1.0
LPSR                                pmax   pmax
      comp=Z,40nm,0.7s
GROC  Groznyy           20.34  64  eP      P      05 59 14.4 +0.2
GROC                               e              05 59 30.7
GROC                               eS      Sn     06 03 03.4 -1.3
GROC                                pmax   pmax
      comp=Z,26nm,0.6s
DDFL  Dedoflistskaro    20.37  69   P      Pn     05 59 16.7 -0.1
LGD   Lagodekhi         20.50  68   P      P      05 59 15.6 -0.4
LGD   Lagodekhi         20.50  68  eP      P      05 59 15.5 -0.4
SLIT  Slitere, Latvi    20.74   3  eP      P      05 59 17.1 -1.2
SLIT                                IAmb   IAmb   05 59 18.6
      comp=Z,133nm,0.5s
VRH   Novokhopyorsk     20.80  40  eP      P      05 59 18.6 -0.5
VRH                                 pmax   pmax
      comp=Z,30nm,0.6s
MDT   Midelt            20.94 266   P      P      05 59 21.2 +0.3
      comp=Z,5.3nm,0.8s,baz=99,slow=8.0,SNR=11
MDT                                 LR     LR     06 09 22.8
      comp=Z,135nm,18.4s,baz=86,slow=42
GNBR  Gunib             21.09  67  eP      P      05 59 23.1 +0.7
GNBR                                pmax   pmax
      comp=Z,17nm,0.8s
OBN   Obninsk           21.25  26⇑eP       P      05 59 22.1 -1.8
OBN                                i              05 59 26.6
OBN                                e              05 59 45.9
OBN                                eS      S      06 03 21.5 +3.0
OBN                                eSS     SnSn   06 03 44.8 +3.4
OBN                                 pmax   pmax
      comp=Z,28nm,0.9s
OBN                                 MLR    MLR
      comp=Z,283nm,15.0s
OBN   Obninsk           21.25  26   LR     LR     06 08 20.9
      comp=Z,66nm,19.1s,baz=202,slow=39
PBRG  Braganca          21.53 291  eP      P      05 59 26.8 -0.3
      comp=Z,37nm,1.6s
MVO   Moncorvo          21.71 290  eP      P      05 59 29.7 +0.6
      comp=Z,31nm,1.1s
VSU   Vasula            21.93   9ceP       P      05 59 30.5 -0.6
VSU   Vasula            21.93   9  eP      P      05 59 30.1 -1.0
VSU                                 IAmb   IAmb   05 59 32.5
      comp=Z,74nm,0.7s
PMRV  Marv??o           21.99 285  eP      P      05 59 33.4 +1.3
PCBR  Castelo Branco    22.04 286  eP      P      05 59 32.3 -0.3
MOS   Moscow            22.12  26  eP      P      05 59 35.7 +2.5
MOS                                e              05 59 44.0
MOS                                 pmax   pmax
      comp=Z,39nm,1.1s
PESTR Estremoz          22.18 284  eP      P      05 59 34.7 +0.6
      comp=Z,35nm,1.7s
PMTG  Montargil         22.66 284  eP      P      05 59 38.6 -0.6
      comp=Z,28nm,2.0s
PGAV  Gavieira, Arco    22.68 292  eP      P      05 59 40.3 +0.8
PTOM  Tomar             22.77 286  eP      P      05 59 41.5 +1.1
HFS   Hagfors           23.61 352   P      P      05 59 47.4 -1.2
      comp=Z,21nm,0.6s,baz=158,slow=9.1,SNR=53
HFS                                 LR     LR     06 09 33.3
      comp=Z,143nm,21.1s,baz=167,slow=38
EKA   Eskdalemuir Ar    24.41 326   P      P      05 59 56.0 -0.1
      comp=Z,0.8nm,0.4s,baz=127,slow=8.1,SNR=8.2
NC602 NORSAR Array S    24.48 349  eP      P      05 59 55.2 -1.5
NAO01 NORSAR Array S    24.68 349  eP      P      05 59 58.1 -0.4
FINES FINESS Array B    24.78   6  i P     P      05 59 59.0 -0.4
FINES                               pmax   pmax
      comp=Z,7.0nm,0.6s
FINES FINESS Array B    24.78   6   P      P      05 59 58.8 -0.6
      comp=Z,6.7nm,0.6s,baz=175,slow=8.3,SNR=27
FINES                               LR     LR     06 10 54.5
      comp=Z,476nm,18.5s,baz=188,slow=39
FIA1  FINESS Array S    24.78   6  eP      P      05 59 59.0 -0.3
      comp=Z,54nm,1.6s
NB201 NORSAR Array S    24.82 349  eP      P      05 59 58.6 -1.2
NC405 NORSAR Array S    24.82 350  eP      P      05 59 59.5 -0.2
NB2   NORSAR Subarra    24.82 349   P      P      05 59 59.2 -0.6
      comp=Z,14nm,0.8s,baz=158,slow=9.3
NOA   NORSAR Array B    24.82 349   P      P      05 59 59.2 -0.6
      comp=Z,16nm,0.3s,baz=158,slow=9.1,SNR=36
NOA                                 LR     LR     06 12 24.1
      comp=Z,115nm,18.4s,baz=170,slow=43
NBO00 NORSAR Array S    24.88 349  eP      P      05 59 59.6 -0.7
NC303 NORSAR Array S    24.98 350  eP      P      06 00 00.7 -0.4
NC204 NORSAR Array S    25.11 349  eP      P      06 00 02.2 -0.2
SUF   Sumiainen         26.05   6   P      P      06 00 12.6 +1.8
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SUF                                 pmax   pmax
      comp=Z,28nm,2.7s
KLMR  Klimovskoe        26.82  21  eP      P      06 00 17.4 -0.4
KLMR                                pmax   pmax
      comp=Z,12nm,0.6s
KLMR  Klimovskoe        26.82  21  eP      P      06 00 17.4 -0.4
KLMR                                AMP           06 00 20.6
      comp=Z,12nm,0.6s
TOA0  Torodi Ar. Sit    29.04 220  eP      P      06 00 39.2 +1.2
TORD  Torodi Ar. Bea    29.04 220   P      P      06 00 38.8 +0.8
      comp=Z,1.9nm,0.7s,baz=24,slow=9.6,SNR=11
TORD                                LR     LR     06 13 40.9
      comp=Z,247nm,18.0s,baz=355,slow=39
GEYT  Alibeck           29.80  77   LR     LR     06 14 08.8
      comp=Z,57nm,18.9s,baz=285,slow=39
AKTO  Aktyubinsk        29.99  51   P      P      06 00 45.8 -0.4
      comp=Z,1.2nm,0.5s,baz=271,slow=16,SNR=4.1
ABKAR Akbulak array     31.00  54  eP      P      06 00 55.1  0.0
ARU   Arti              32.03  40  eP      P      06 01 03.6 -0.5
      comp=Z,19nm,1.4s
ARU   Arti              32.03  40c iP      P      06 01 03.7 -0.5
ARU                                               06 02 07.4
ARU                                 S      S      06 06 16.4 +2.4
ARU                                 SS     SnSn   06 08 05.5 +1.1
ARU                                 pmax   pmax
      comp=Z,24nm,3.1s
ARCES ARCESS Array B    32.77   3   P      P      06 01 09.7 -0.8
      comp=Z,3.2nm,0.8s,baz=188,slow=11,SNR=7.5
SVE   Sverdlovsk        33.25  40  eP      P      06 01 14.0 -0.7
BRVK  Borovoye          37.91  49  eP      P      06 01 55.1 +0.3
      comp=Z,3.8nm,1.0s
BRVK  Borovoye          37.91  49  eP      P      06 01 55.1 +0.3
BRVK                                pmax   pmax
      comp=Z,4.0nm,1.0s
DBIC  Dimbokro          37.95 224   P      P      06 01 56.9 +1.4
      comp=Z,4.2nm,1.0s,baz=9.9,slow=12,SNR=3.6
DBIC                                LR     LR     06 19 02.9
      comp=Z,128nm,19.3s,baz=11,slow=38
TIC   Toumodi           38.06 224  ePKP2   P      06 01 58.3 +1.8
KIC   Kosan Boka        38.14 223  ePKP2   P      06 01 58.0 +0.9
      comp=Z,31nm,1.2s
CHGR  Chuyangaron       38.17  72  eP      P      06 01 58.0 +0.7
      comp=Z,16nm,0.8s
KK31  Karatay Array     38.36  65  eP      P      06 01 58.3 -0.5
KK31  Karatay Array     38.36  65  eP      P      06 01 58.3 -0.5
KKAR  Karatay Array     38.36  65  eP      P      06 01 58.4 -0.4
KKAR  Karatay Array     38.36  65  eP      P      06 01 58.4 -0.4
LIC   Lamto             38.41 223  ePKP2   P      06 01 59.3 -0.1
      comp=Z,64nm,1.5s
GAR   Garm              38.98  71  eP      P      06 02 04.4 +0.3
      comp=Z,9.9nm,0.8s
GAR   Garm              38.98  71  eP      P      06 02 04.4 +0.3
GAR                                 pmax   pmax
      comp=Z,10.0nm,0.8s
AAK   Ala-Archa         41.33  65  eP      P      06 02 23.5 -0.1
      comp=Z,8.6nm,1.3s
AAK   Ala-Archa         41.33  65  eP      P      06 02 23.5 -0.1
AAK                                 pmax   pmax
      comp=Z,9.0nm,1.3s
SPITS Spitsbergen Ar    41.38 359   P      P      06 02 24.2 +0.8
      comp=Z,12nm,0.9s,baz=161,slow=13,SNR=4.6
KURBB Kurchatov Arra    43.02  52   P      P      06 02 35.8 -1.2
      comp=Z,1.2nm,0.4s,baz=276,slow=8.6,SNR=7.7
KURK  Kurchatov         43.07  52   P      P      06 02 35.8 -1.6
KURK  Kurchatov         43.07  52  i P     P      06 02 38.2 +0.7
KURK                                pmax   pmax
      comp=Z,2.0nm,1.1s
KSH   Kashi             43.11  69   P      P      06 02 37.3 -0.8
KSH                                 pP     pP     06 02 39.9 -6.0
KSH                                 PP     PP     06 04 19.6 +1.2
KSH                                 pmax   pmax
      comp=Z,550nm,5.5s
NVS   Novosibirsk       45.57  46  eP      P      06 02 59.0 +1.6
MAKZ  Makanchi          45.80  57  eP      P      06 02 58.7 -0.7
      comp=Z,2.9nm,0.9s
MAKZ  Makanchi          45.80  57  eP      P      06 02 58.7 -0.7
MAKZ                                pmax   pmax
      comp=Z,3.0nm,0.9s
MK31  Makanchi Array    46.01  57  eP      P      06 03 00.2 -0.9
MK31  Makanchi Array    46.01  57  eP      P      06 03 00.2 -0.9
MKAR  Makanchi Array    46.01  57  eP      P      06 03 00.2 -0.9
      comp=Z,25nm,0.6s
MKAR  Makanchi Array    46.01  57  eP      P      06 03 00.2 -0.9
MKAR                                pmax   pmax
      comp=Z,25nm,0.6s
MKAR  Makanchi Array    46.01  57   P      P      06 02 59.9 -1.1
      comp=Z,4.1nm,0.6s,baz=274,slow=6.9,SNR=50
MK01  Makanchi Array    46.02  57  eP      P      06 03 00.3 -0.9
ZAA0  Zalesovo Array    46.57  47  eP      P      06 03 05.8 +0.5
      comp=Z,3.3nm,0.8s
ZALV  Zalesovo Beam     46.57  47  eP      P      06 03 05.8 +0.5
ZALV  Zalesovo Beam     46.57  47   P      P      06 03 04.2 -1.1
      comp=Z,2.6nm,0.4s,baz=269,slow=8.7,SNR=13
ZALV                                LR     LR     06 26 16.1
      comp=Z,84nm,18.1s,baz=248,slow=41
NRIK  Noril'sk          47.93  26   LR     LR     06 27 04.8
      comp=Z,100nm,19.1s,baz=38,slow=41
DGZ   Jazzator, Alta    48.82  53  i P     P      06 03 21.7 -1.3
DGZ                                 pmax   pmax
      comp=Z,1.0nm,1.0s
WMQ   Urumqi            50.42  60  eP      P      06 03 36.4 +1.2
WMQ                                 LR     LR
      comp=N,260nm,19.5s
WMQ                                 LR     LR
      comp=E,140nm,19.5s
WMQ                                 LR     LR
      comp=Z,110nm,21.9s
PYUN  Piuthan           52.65  80  eP      P      06 03 51.9 -0.3
      comp=Z,23nm,0.5s
DANN  Dangsing          53.14  80  eP      P      06 03 55.8 -0.2
      comp=Z,61nm,0.5s
KOLN  Koldanda          53.28  81  eP      P      06 03 56.2 -0.7
      comp=Z,14nm,0.6s
DMN   Daman             54.54  80  eP      P      06 04 05.8 -0.4
      comp=Z,39nm,0.7s
KKN   Kakani            54.59  80  eP      P      06 04 06.3 -0.2
      comp=Z,16nm,0.5s
PKIN  Phulchoki         54.78  80  eP      P      06 04 07.1 -0.9
      comp=Z,33nm,1.2s
PKI   Pulchoki          54.80  80  eP      P      06 04 06.9 -1.2
      comp=Z,14nm,0.6s
GUN   Gumba             55.01  79  eP      P      06 04 09.0 -0.7
      comp=Z,51nm,1.0s
JIRN  Jiri              55.37  79  eP      P      06 04 11.7 -0.6
      comp=Z,23nm,0.7s
RAMN  Ramite            56.02  80  eP      P      06 04 15.9 -1.0
      comp=Z,30nm,0.7s
SCHQ  Schefferville     59.33 318   LR     LR     06 29 59.9
      comp=Z,103nm,18.9s,baz=339,slow=36
GTA   Gaotai            60.47  61  eP      P      06 04 48.0 +0.4
GTA                                 pP     pP     06 04 51.8 -3.8
GTA                                 sP     sP     06 04 54.8 -3.8
GTA                                 pmax   pmax
      comp=Z,3.0nm,1.0s
SONM  Songino Array     61.29  50   P      P      06 04 53.4 +0.3
      comp=Z,0.5nm,0.7s,baz=266,slow=7.7,SNR=4.5
BOD   Bodaibo           61.39  37  eP      P      06 04 52.4 -1.0
BOD                                 pmax   pmax
      comp=Z,8.0nm,1.7s
ULN   Ulaanbaatar       61.69  50  i P     P      06 04 56.6 +0.8
ULN                                 pmax   pmax
      comp=Z,1.0nm,0.7s
LZH   Lanzhou           64.82  63  eP      P      06 05 18.3 +1.6
LZH                                 pP     pP     06 05 21.9 -2.8
LZH                                 sP     sP     06 05 24.3 -3.4
LZH                                 pmax   pmax
      comp=Z,21nm,1.1s
BOSA  Boshof            65.36 175   LR     LR     06 38 42.7
      comp=Z,274nm,18.7s,baz=16,slow=40
HHC   Hu-ho-hao-te      67.79  55  eP      P      06 05 35.8 +0.2
HHC                                 pmax   pmax
      comp=Z,17nm,0.7s
HHC                                 pmax   pmax
      comp=Z,160nm,7.1s
XAN   Xi'an             69.44  62   P      P      06 05 46.5 +0.5
XAN                                 pP     pP     06 05 53.0 -1.0
XAN                                 pmax   pmax
      comp=Z,5.0nm,0.9s
XAN                                 pmax   pmax
      comp=Z,120nm,5.2s
KMI   Kunming           69.51  74   P      P      06 05 46.9 +0.2
KMI                                 pmax   pmax
      comp=Z,10.0nm,0.5s
CMAR  Chiang Mai Arr    70.12  82   P      P      06 05 51.0 +0.7
      comp=Z,0.9nm,0.4s,baz=309,slow=7.5,SNR=5.5
BILL  Bilibino          72.24  13  eP      P      06 06 02.0 -0.3
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BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	Inuvik	73.27	350	P	P	06 06 09.0	+0.6
	comp=Z,0.3nm,0.5s,baz=33,slow=4.1,SNR=3.9						
SEY	Seymchan	73.31	21	*i* P	P	06 06 10.1	+1.3
YKA	Yellowknife Ar	74.53	340	P	P	06 06 16.2	+0.3
	comp=Z,1.2nm,1.0s,baz=36,slow=5.3,SNR=11						
CN2	Changchun	74.78	46	*e*P	P	06 06 17.6	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLR	Kul'dur	74.87	39	*ce*P	P	06 06 17.2	-0.9
MA2	Magadan	75.45	24	*i* P	P	06 06 22.0	+0.7
MA2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FFC	Flin Flon	76.22	330	*ce*P	P	06 06 29.6	+3.9
FFC				pmax	pmax		
	comp=Z,11nm,1.7s						
NKL	Nikolayevsk	76.43	32	*e*P	P	06 06 27.0	+0.1
ULM	Lac du Bonnet	76.66	324	P	P	06 06 29.2	+0.9
	comp=Z,3.9nm,1.0s,baz=46,slow=3.3,SNR=6.7						
NJ2	Nanjing	77.49	59	*e*P	P	06 06 34.8	+1.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ILAR	Eielson Array	78.14	354	P	P	06 06 37.1	+0.7
	comp=Z,0.5nm,0.7s,baz=359,slow=1.5,SNR=4.8						
ILAR				LR	LR	06 43 31.6	
	comp=Z,102nm,18.1s,baz=173,slow=38						
USRK	Ussuriysk Ar.	78.22	43	P	P	06 06 37.2	+0.1
	comp=Z,4.1nm,0.9s,baz=303,slow=4.4,SNR=6.7						
USRK				LR	LR	06 44 47.5	
	comp=Z,75nm,20.1s,baz=349,slow=38						
KS01	Wonju Array Si	80.13	50	*e*P	P	06 06 46.3	-1.5
KSAR	Wonju Array Be	80.15	50	P	P	06 06 48.5	+0.7
KSAR	Wonju Array Be	80.15	50	P	P	06 06 48.5	+0.7
KSRS	Korea Array	80.16	50	P	P	06 06 48.5	+0.6
	comp=Z,1.7nm,0.4s,baz=307,slow=5.5,SNR=7.9						
KSRS				LR	LR	06 46 11.5	
	comp=Z,42nm,19.4s,baz=35,slow=39						
YSS	Yuzh-Sakhalins	81.80	36	*e*P	P	06 06 58.6	+2.2
YSS				*e*		06 07 04.0	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,100nm,15.0s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
YSS				MLR	MLR		
	comp=E,200nm,14.0s						
BDFB	Brasilia	82.93	245	LR	LR	06 45 11.2	
	comp=E,98nm,18.1s,baz=123,slow=36						
PETK	Petropavlovsk-	82.95	24	LR	LR	06 47 34.5	
	comp=E,107nm,18.2s,baz=313,slow=38						
PDAR	Pinedale Array	88.54	326	LR	LR	06 49 57.4	
	comp=E,133nm,18.3s,baz=348,slow=38						
NVAR	Mina Array Bea	95.90	329	LR	LR	06 56 19.6	
	comp=E,142nm,18.1s,baz=338,slow=39						
CPUP	Villa Florida	96.42	242	LR	LR	06 53 35.6	
	comp=E,81nm,19.1s,baz=56,slow=37						
LPAZ	La Paz	98.49	256	LR	LR	06 55 11.8	
	comp=E,17nm,18.4s,baz=77,slow=37						

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*THE **21** 06:36:04.0, 36°.67N×20°.12E, h2^{km}±8^{km}, ML2.9/6, Error ellipse: s-maj=11.3km s-min=1.7km az=229.0*

*ATH **21** 06:36:06.2, 36°.87N×20°.31E, h17^{km}±2^{km}, ML3.0/18, Error ellipse: s-maj=4.8km s-min=1.4km az=48.0*

*BEO **21** 06:36:09.4±0.9, 37°.10N×21°.23E, h10^{km}, ML3.6/9*

ISC 21 06:36:01.3±2.1**, 36°.67N**±0°.07×**20°.03E**±0°.06**, h6**^{km}±12^{km}**, n77, σ2ˢ.43**/90**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MES2	Methoni	1.36	83	P	Pg	06 36 27.7	+0.4
MES2				S	Sg	06 36 43.1	-1.8
MES2				AML	AML	06 36 55.3	
	comp=N,2006µm,0.8s						
MES2				AML	AML	06 36 56.9	
	comp=E,1955µm,0.6s						
PYL	PYLOS	1.40	80	P	Pg	06 36 27.7	-0.3
PYL				S	Sg	06 36 42.8	-3.4
PYL				AML	AML	06 36 58.4	
	comp=N,931µm,0.5s						
PYL				AML	AML	06 37 00.2	
	comp=E,1322µm,0.5s						
MES3	Kyparissia	1.44	66	P	Pn	06 36 28.0	+0.1
MES3				S	Sg	06 36 45.2	-2.4
VLS	Valsamata	1.57	16	P	Pn	06 36 31.0	+1.2
VLS				S	Sn	06 36 48.5	-2.0
VLS				AML	AML	06 36 59.4	
	comp=N,1073µm,0.4s						
VLS				AML	AML	06 37 03.1	
	comp=E,978µm,0.5s						
VLS	Valsamata	1.57	16	P	Pn	06 36 31.0	+1.2
VLS				S	Sg	06 36 53.9	+2.1
AMT	Artemida-Makis	1.60	57	P	Pn	06 36 31.0	+0.8
AMT				AML	AML	06 37 03.4	
	comp=E,2064µm,0.5s						
AMT				AML	AML	06 37 07.8	
	comp=N,2000µm,0.7s						
ITM	Ithomi	1.60	71	P	Pn	06 36 31.2	+1.0
ITM				AML	AML	06 36 55.6	
	comp=E,714µm,0.6s						
ITM				AML	AML	06 37 08.3	
	comp=N,614µm,0.4s						
ITM	Ithomi	1.60	71	P	Pn	06 36 31.4	+1.2
ITM				S	Sn	06 36 52.9	+1.6
RLS	Riolos of Patr	1.80	39	P	Pn	06 36 34.3	+1.4
RLS	Riolos of Patr	1.80	39	P	Pn	06 36 34.3	+1.4
RLS				S	Sb	06 36 59.1	+1.6
DRO	Drossia	1.86	46	P	Pn	06 36 35.0	+1.3
DRO				AML	AML	06 37 11.8	
	comp=E,1550µm,0.6s						
DRO				AML	AML	06 37 15.3	
	comp=N,971µm,0.6s						
TRIP	Tripoli	1.99	64	P	Pn	06 36 36.9	+1.3
TRIP				AML	AML	06 37 15.6	
	comp=E,389µm,0.7s						
TRIP				AML	AML	06 37 16.6	
	comp=N,331µm,0.8s						
TRIP	Tripoli	1.99	64	P	Pn	06 36 36.9	+1.3
VLX	Vlachokerasia	2.01	69	P	Pn	06 36 37.2	+1.3
VLX				AML	AML	06 37 20.0	
	comp=E,721µm,0.6s						
VLX				AML	AML	06 37 25.3	
	comp=N,647µm,0.7s						
EVGI	Lefkada island	2.01	14	P	Pn	06 36 38.2	+2.4
EVGI	Lefkada island	2.01	14	P	Pn	06 36 38.0	+2.2
EVGI				S	Sn	06 37 04.4	+3.1
LKD2	Lefkada island	2.17	13	P	Pn	06 36 41.0	+2.9
LKD2				AML	AML	06 37 22.4	
	comp=N,559µm,0.9s						
LKD2				AML	AML	06 37 34.2	
	comp=E,501µm,0.6s						
KLV	Kalavryta, Ach	2.18	50	P	Pn	06 36 39.6	+1.5
KLV				AML	AML	06 37 11.7	
	comp=N,217µm,0.6s						
KLV				AML	AML	06 37 32.3	
	comp=E,263µm,0.7s						
KLV	Kalavryta, Ach	2.18	50	P	Pn	06 36 39.7	+1.5
LAKA	Lakka	2.21	44	P	Pn	06 36 41.0	+2.4
LAKA				AML	AML	06 37 09.0	
	comp=E,310µm,1.0s						
LAKA				AML	AML	06 37 38.5	
	comp=N,407µm,1.1s						
LAKA	Lakka	2.21	44	P	Pn	06 36 40.9	+2.4
TSLK	Tsoukalades, L	2.21	13	P	Pn	06 36 41.7	+3.2
PVO	Paravola	2.28	31	P	Pn	06 36 42.4	+2.9
PVO				AML	AML	06 37 09.8	
	comp=N,744µm,0.5s						
PVO				AML	AML	06 37 11.5	
	comp=E,608µm,0.3s						
TRAZ	Trapeza	2.29	49	P	Pn	06 36 41.9	+2.2
TRAZ	Trapeza	2.29	49	P	Pn	06 36 41.9	+2.2
VLI	Veliai	2.34	88	P	Pn	06 36 43.4	+3.1
VLI				AML	AML	06 37 37.5	
	comp=E,304µm,1.3s						
VLI				AML	AML	06 37 47.5	
	comp=N,225µm,0.7s						
VLI	Veliai	2.34	88	P	Pn	06 36 42.8	+2.5
VLI				S	Sn	06 37 10.8	+1.4
TRIZ	Trizonia	2.35	43	P	Pn	06 36 43.1	+2.6
TRIZ	Trizonia	2.35	43	P	Pn	06 36 43.0	+2.6
KYTH	Kithira	2.47	98	P	Pn	06 36 45.7	+3.6
KYTH	Kithira	2.47	98	P	Pn	06 36 44.5	+2.4
DSF	Desfina	2.64	48	P	Pn	06 36 46.6	+2.1
EVR	Evrytania	2.65	32	P	Pn	06 36 47.6	+2.9
EVR				AML	AML	06 37 19.8	
	comp=E,357µm,0.6s						
EVR				AML	AML	06 37 36.0	
	comp=N,336µm,0.8s						
LOUT	Loutraki	2.69	60	P	Pn	06 36 46.3	+1.1
ANKY	Antikythira Is	2.76	106	P	Pn	06 36 50.2	+4.1
PROD	Prodromos	2.78	54	P	Pn	06 36 47.6	+1.2
PROD	Prodromos	2.78	54	P	Pn	06 36 48.1	+1.7
IGT	Igoumenitsa	2.87	5	*e*Pn	Pn	06 36 50.6	+3.0
IGT				*e*Sn	Sn	06 37 21.6	-0.9
IGT	Igoumenitsa	2.87	5	P	Pn	06 36 49.7	+2.1
IGT				AML	AML	06 37 49.7	
	comp=E,225µm,1.2s						
IGT				AML	AML	06 37 50.5	
	comp=N,135µm,0.8s						
AGG	Agios Georgios	2.97	37	P	Pn	06 36 51.5	+2.4
VIL2	Platees	3.00	58	P	Pn	06 36 50.2	+0.7
VILL	Villia	3.01	59	P	Pn	06 36 50.3	+0.7
KEK	Kerkira	3.04	357	P	Pn	06 36 52.9	+2.9
JAN	Janina	3.05	12	P	Pn	06 36 52.5	+2.3
ATAL	Atalanti	3.12	49	P	Pn	06 36 52.6	+1.5
VLY	Voula,Athens	3.23	67	P	Pn	06 36 52.9	+0.4
THL	Klokotos Trika	3.29	28	P	Pn	06 36 55.4	+2.0
THL				AML	AML	06 37 31.9	
	comp=N,166µm,0.8s						
THL				AML	AML	06 37 32.1	
	comp=E,177µm,0.7s						
THL	Klokotos Trika	3.29	28	P	Pn	06 36 55.7	+2.3
SMIA	Simia	3.35	48	P	Pn	06 36 55.8	+1.6
KPRO	Kipourio	3.44	17	P	Pn	06 36 59.1	+3.5
KPRO				AML	AML	06 37 38.2	
	comp=E,327µm,0.6s						
KPRO				AML	AML	06 37 49.5	
	comp=N,259µm,0.5s						
EREA	Eretria	3.56	59	P	Pn	06 36 58.0	+0.8
FYTO	Fytoko, Volos	3.57	39	P	Pn	06 36 58.2	+1.0
TIP	Timpagrande	3.60	315	P	Pn	06 36 57.3	-0.4
PENT	Pentalofos	3.63	14	P	Pn	06 37 01.9	+3.7
NEO	Neokhori	3.65	43	P	Pn	06 36 59.4	+1.0
XOR	Xorichti	3.67	42	P	Pn	06 36 59.9	+1.2
SKIA	Skiathos	3.69	46	P	Pn	06 37 00.1	+1.2
NEST	Nestorio	3.83	12	P	Pn	06 37 05.0	+4.1
KZN	Kozani	3.88	20	P	Pn	06 37 04.5	+2.9
KZN				AML	AML	06 37 50.1	
	comp=N,144µm,0.4s						
KZN				AML	AML	06 37 51.1	
	comp=E,213µm,0.4s						
LIT	Litokhoron	3.94	29	P	Pn	06 37 03.5	+1.3
FNA	Florina	4.24	14	*e*Pn	Pn	06 37 05.8	-0.7
FNA				*e*Sn	Sn	06 37 49.0	-7.4
FNA	Florina	4.24	14	P	Pn	06 37 09.1	+2.5
BIA	Bitola	4.46	13	*i* Pn	Pn	06 37 13.3	+3.8
OHR	Ohrid	4.48	7	*i* Pn	Pn	06 37 11.3	+1.6
KRUS	Krusevo	4.79	11	*i* Pn	Pn	06 37 16.8	+2.7
KRUS				*i* Sn	Sn	06 38 05.9	-4.0
STIP	Stip	5.29	18	*i* Pn	Pn	06 37 24.4	+3.5
VTS	Vitosha	6.44	22	*e*Pn	Pn	06 37 33.5	-3.3
VTS				*e*Sn	Sn	06 38 36.2	-14
STON	Ston	6.45	345	*i* Pn	Pn	06 37 39.1	+2.3
STON				Sn	Sn	06 38 45.2	-5.5
SJES	Sjenica	6.58	360	*e*Pn	Pn	06 37 41.2	+2.4
SJES				*e*Sn	Sn	06 38 49.3	-4.9
SELS	Selova	6.60	7	*e*Pn	Pn	06 37 39.8	+1.0
IVAS	Ivanjica	6.90	1	*e*Pn	Pn	06 37 44.2	+1.2
IVAS				*e*Sn	Sn	06 38 56.4	-5.5
BOVS	Bovan	7.08	10	*e*Pn	Pn	06 37 45.1	-0.3
BOVS				*e*Sn	Sn	06 38 57.9	-8.2
GRUS	Gruza	7.23	4	*e*Pn	Pn	06 37 48.4	+0.9
GRUS				*e*Sn	Sn	06 39 03.6	-6.4
DIVS	Divibare	7.42	360	*e*Pn	Pn	06 37 51.4	+1.2
DIVS				*e*Sn	Sn	06 39 09.1	-5.7
TRUS	Trudelj	7.55	2	*e*Pn	Pn	06 37 53.2	+1.3
TRUS				*e*Sn	Sn	06 39 10.4	-7.5
UDBI	Udbina	8.49	339	*e*Pn	Pn	06 38 09.6	+4.7
NVLJ	Novalja	8.80	335	*e*Pn	Pn	06 38 13.2	+4.1
NVLJ				Sn	Sn	06 39 43.9	-4.7

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*IDC **21** 06:45:53.8±1.3, 11°.98S×165°.39E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.7/26, mbtmp3.7/6, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/26, Error ellipse: s-maj=48.3km s-min=26.0km az=131.0*

*ISCJB **21** 06:45:57.1±1.0, 12°.1S±0°.1×165°.4E±0°.2, h33^{km}, mb3.7/5, Error ellipse: s-maj=28.4km s-min=19.2km az=8.8*

ISC 21 06:45:59.1±1.1**, 12°.0S**±0°.1×**165°.4E**±0°.2**, h35**^{km}**, n6, σ1ˢ.17**/6**, mb3.5**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.03	175	Pn	Pn	06 48 21.0	+0.3
	0.3nm,0.3s,baz=342,slow=20,SNR=7.1						
DZM				LR	LR	06 51 48.1	
	comp=Z,68nm,18.5s,baz=165,slow=35						
WRA	Warramunga Arr	30.85	251	P	P	06 52 11.8	-0.4
	0.6nm,0.7s,baz=82,slow=9.1,SNR=10						
ASAR	Alice Springs	32.07	245	P	P	06 52 22.3	-0.7
	0.5nm,0.7s,baz=73,slow=10,SNR=6.2						
ILAR	Eielson Array	84.55	19	P	P	06 58 28.5	+0.2
	0.5nm,0.5s,baz=250,slow=5.0,SNR=13						
MKAR	Makanchi Array	94.02	317	P	P	06 59 15.1	+1.4
	0.4nm,0.7s,baz=93,slow=6.1,SNR=4.2						
YKA	Yellowknife Ar	96.00	27	P	P	06 59 21.1	-1.2
	0.1nm,0.5s,baz=259,slow=5.0,SNR=3.5						

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*TIR **21** 06:46:12.3, 41°.46N×20°.97E, h7^{km}, Md2.7/4*

*SKO **21** 06:46:13.1, 41°.45N×20°.93E, h15^{km}, M1.7, ML2.0*

*BEO **21** 06:46:13.9±0.6, 41°.36N×20°.98E, h6^{km}±3^{km}, ML2.0/7*

ISC 21 06:46:14.0±1.0**, 41°.40N**±0°.03×**20°.92E**±0°.02**, h8**^{km}±9^{km}**, n26, σ0ˢ.90**/45**, 1C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRUS	Krusevo	0.25	98	⇑*i*Pg	Pg	06 46 19.2	+0.1
KRUS				*i* Sg	Sg	06 46 22.9	+0.3
KRUS				*e*Lg	Lg	06 46 23.0	
	comp=E,89nm,0.2s						
KRUS				*e*Lg	Lg	06 46 23.6	
	comp=N,106nm,0.2s						
OHR	Ohrid	0.30	197	*i* Pg	Pg	06 46 20.3	+0.2
OHR				*i* Sg	Sg	06 46 25.7	+1.6
OHR				*e*Lg	Lg	06 46 25.8	
	comp=E,187nm,0.4s						
OHR				*e*Lg	Lg	06 46 26.9	
	comp=N,100nm,0.3s						
PHP	Peshkopia	0.45	308	*i* PG	Pg	06 46 22.7	-0.1
PHP				*i* SG	Sg	06 46 29.0	+0.2
BIA	Bitola	0.49	141	⇓*i*Pg	Pg	06 46 23.9	+0.3
BIA				*i* Sg	Sb	06 46 32.2	-0.1
BIA				*e*Lg	Lg	06 46 33.1	
	comp=N,78nm,0.3s						
BIA				*e*Lg	Lg	06 46 33.8	
	comp=E,166nm,0.2s						
FNA	Florina	0.71	150	⇓*i*Pg	Pg	06 46 27.3	-0.5
FNA				*i* Sg	Sb	06 46 38.8	+0.1
FNA	Florina	0.71	150	*i* PG	Pg	06 46 27.6	-0.1
FNA				*i* SG	Sg	06 46 36.3	-0.7
TIR	Tirane	0.79	266	*e*Pg	Pg	06 46 28.4	-0.8
TIR				*e*Sg	Sb	06 46 41.6	+0.7
TIR	Tirane	0.79	266	*i* Pg	Pg	06 46 29.5	+0.2
PUK	Puka	1.00	310	*i* PG	Pg	06 46 31.6	-1.6
PUK				*i* SG	Sg	06 46 45.8	-0.3
STIP	Stip	1.00	73	*i* Pg	Pn	06 46 35.6	+1.3
STIP				*i* Sg	Sn	06 46 51.2	+2.6
STIP				*e*Lg	Lg	06 46 51.9	
	comp=N,9.0nm,0.3s						
STIP				*e*Lg	Lg	06 46 52.7	
	comp=E,6.5nm,0.3s						
BCI	Bajram Curri	1.15	327	*i* PG	Pn	06 46 37.9	+1.5
BCI				*i* SG	Sn	06 46 51.5	-0.9
GRG	Griva	1.21	111	*i* Pg	Pb	06 46 36.3	-0.8
GRG				*i* Sg	Sn	06 46 53.5	-0.3
VAY	Valandovo	1.25	93	*i* Pg	Pn	06 46 37.0	-0.8
VAY				*i* Sg	Sn	06 46 54.7	0.0
VAY				*e*Lg	Lg	06 46 56.0	
	comp=E,26nm,0.5s						
VAY				*e*Lg	Lg	06 46 57.5	
	comp=N,18nm,0.5s						
ULC	Ulcinj	1.37	295	*i* Pg	Pn	06 46 38.5	-0.9
KNT	Kendrikon	1.51	99	⇓*i*Pg	Pb	06 46 41.9	-0.4
KNT				*i* Sg	Sg	06 47 02.2	-0.5
PDG	Podgorica	1.61	310	*e*Pn	Pg	06 46 44.1	-0.7
PDG				*e*Sg	Sg	06 47 06.8	+1.1
PDG	Podgorica	1.61	310	*i* Pg	Pb	06 46 43.8	-0.1
KKB	Krupnik	1.69	73	*i* Pg	Pb	06 46 44.4	-1.0
SELS	Selova	1.82	5	*e*Pn	Pn	06 46 45.9	+0.2
SELS				*e*Sg	Sg	06 47 13.1	+0.6
SJES	Sjenica	1.98	340	*e*Pn	Pn	06 46 48.5	+0.5
SJES				*e*Sg	Sg	06 47 18.8	+1.1
VTS	Vitosha	2.11	54	*e*Pg	Pn	06 46 50.4	+0.6
VTS				*e*Sg	Sb	06 47 19.3	+0.2
MMB	Musomiste	2.12	84	*i* Pn	Pb	06 46 50.6	-2.1
IVAS	Ivanjica	2.24	346	*e*Pn	Pn	06 46 51.8	+0.3
IVAS				*e*Sg	Sg	06 47 26.5	+0.4
ZAPS	Zavoj	2.26	34	*e*Pn	Pn	06 46 52.5	+0.8
ZAPS				*e*Sg	Sg	06 47 26.5	-0.2
BOVS	Bovan	2.31	14	*e*Sn	Pn	06 46 53.1	+0.8
BOVS	Bovan	2.31	14	*e*Pn	Sn	06 47 21.4	+0.6

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*KRNET **21** 06:47:52.0±0.1, 41°.83N×78°.19E, h14^{km}, mb2.3*

*NNC **21** 06:47:52.8±0.8, 41°.80N×78°.14E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=5.8km s-min=4.1km az=171.0, Suspected Mining explosion.*

ISC 21 06:47:52.7±1.2**, 41°.83N**±0°.05×**78°.17E**±0°.04**, h0**^{km}**, n33, σ0ˢ.75**/55**, 34C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.29	250	⇑*i*P	Pg	06 47 57.7	-0.5
	baz=52						
TARG				⇑*i*S	Sg	06 48 02.7	+0.7
	baz=52						
PRZ	Przheval'sk	0.68	15	⇑*i*P	Pg	06 48 04.6	-1.0
	baz=14						
PRZ				⇑*i*S	Sg	06 48 14.2	-0.2
	baz=14						
KDJ	Kajisay	0.80	292	⇑*e*P	Pg	06 48 07.6	-0.3
	baz=92						
KDJ				⇑*i*S	Sg	06 48 18.4	+0.1
	baz=92						
SATY	Saty	1.24	8	P	Pb	06 48 17.0	-0.1
	5.3nm,0.4s						
SATY				S	Sn	06 48 34.8	-0.1
	13nm,0.2s						
ULHL	Ulahol	1.49	287	⇑*e*P	Pn	06 48 19.9	-1.1
	baz=87						
ULHL				⇑*i*S	Sg	06 48 40.4	-0.3
	baz=87						
TNSS	Tian-Shan	1.51	324	P	Pn	06 48 21.0	-0.4
	4.2nm,0.2s						
TNSS				S	Sn	06 48 42.3	+0.4
	6.3nm,0.5s						
MDOK	Medeo	1.57	329	⇑P	Pn	06 48 21.8	-0.2
	4.2nm,0.8s						
MDOK				⇑S	Sn	06 48 43.0	-0.1
	5.2nm,0.9s						
MDOK	Medeo	1.57	329	Pg	Pn	06 48 21.6	-0.4
	1.9nm,0.3s						
MDOK				Lg	Lg	06 48 43.3	
	4.3nm,0.2s						
KOTS	Kotyrbulak	1.61	331	P	Pn	06 48 22.3	-0.2
	1.7nm,0.1s						
KOTS				S	Sb	06 48 44.3	0.0
	6.3nm,0.2s						
KURS	Kuram	1.66	0	P	Pg	06 48 24.6	+0.1
	1.6nm,0.3s						
KURS				S	Sg	06 48 47.8	+1.9
IZV	Izvestkoviy	1.67	317	P	Pb	06 48 23.9	-0.5
	3.3nm,0.2s						
IZV				S	Sg	06 48 46.8	+0.6
	5.8nm,0.2s						
NRN	Naryn	1.67	257	⇑*e*P	Pb	06 48 23.8	-0.8
	baz=57						
NRN				⇑*i*S	Sg	06 48 46.5	+0.1
	baz=57						
BOOM	Boomskoye usch	1.78	292	⇑*i*P	Pn	06 48 25.3	+0.4
	baz=92						
BOOM				⇑*i*S	Sg	06 48 49.7	-0.3
	baz=92						
PDGK	Podgornoye	1.79	33	⇓P	Pn	06 48 24.5	-0.5
	3.0nm,0.6s						
PDGK				⇓S	Sg	06 48 51.7	+1.6
	9.0nm,1.0s						
PDGK	Podgornoye	1.79	33	⇑*e*P	Pn	06 48 24.9	-0.1
	baz=32						
PDGK				⇑*i*S	Sb	06 48 49.2	-0.2
	baz=32						
MTBS	Maitube	1.83	316	P	Pb	06 48 26.5	-0.5
	4.2nm,0.1s						
MTBS				S	Sg	06 48 51.8	+0.4
	7.9nm,0.3s						
KST	Kastek	2.03	307	Pg	Pb	06 48 30.3	-0.3
	4.6nm,0.3s						
KST				Lg	Lg	06 48 57.8	
	8.0nm,0.3s						
KTBS	Karatobe	2.18	330	Pg	Pb	06 48 32.6	-0.4
	5.2nm,0.3s						
KTBS				Lg	Lg	06 49 02.0	
	11nm,0.4s						
KZA	Kyzart	2.19	277	⇑*e*P	Pn	06 48 31.6	+0.9
	baz=77						
KZA				⇑*e*S	Sb	06 49 00.1	-1.2
	baz=77						
TKM2	Tokmak 2	2.20	301	⇑Pg	Pb	06 48 32.8	-0.6
	1.5nm,0.3s						
TKM2				⇑Lg	Lg	06 49 02.2	
	5.1nm,0.6s						
TKM2	Tokmak 2	2.20	301	⇑*i*P	Pn	06 48 31.6	+1.0
	baz=1.0						
TKM2				⇑*i*S	Sb	06 49 00.2	-1.0
	baz=1.0						
CHKK	Chushkaly	2.20	337	Pg	Pb	06 48 33.2	-0.2
	12nm,0.3s						
CHKK				Lg	Lg	06 49 02.6	
	13nm,0.2s						
DGS	Degeres	2.27	309	Pg	Pb	06 48 33.6	-0.9
	6.8nm,0.3s						
DGS				Lg	Lg	06 49 03.7	
	9.2nm,0.4s						
ARXS	Arharly	2.40	354	Pg	Pb	06 48 36.2	-0.6
	4.7nm,0.2s						
ARXS				Lg	Lg	06 49 08.0	
	7.2nm,0.4s						
KUU	Kurty	2.46	328	Pg	Pb	06 48 38.4	+0.5
	4.2nm,0.6s						
KUU				Lg	Lg	06 49 11.8	
	5.9nm,0.2s						
KBK	Karagaybulak	2.53	290	⇑*i*P	Pn	06 48 36.1	+0.9
	baz=90						
KBK				⇑*i*S	Sn	06 49 08.3	+1.5
	baz=90						
UCH	Uchtor	2.75	280	⇑*i*P	Pn	06 48 39.0	+0.5
	baz=80						
UCH				⇑*i*S	Sn	06 49 13.8	+1.1
	baz=80						
DJR	Jarkent	2.77	25	Pg	Pg	06 48 44.7	-1.0
	1.0nm,0.6s						
DJR				Lg	Lg	06 49 22.2	
	3.2nm,0.3s						
AAK	Ala-Archa	2.84	288	⇑Pg	Pb	06 48 44.2	-0.3
	1.0nm,0.4s						
AAK				⇑Lg	Lg	06 49 21.6	
	4.3nm,0.6s						
AAK	Ala-Archa	2.84	288	⇑*i*P	Pn	06 48 40.5	+1.0
	baz=88						
AAK				⇑*i*S	Sn	06 49 15.7	+1.1
	baz=88						
ARLS	Aral	2.87	272	⇑*i*P	Pn	06 48 40.8	+0.9
	baz=72						
ARLS				⇑*i*S	Sn	06 49 16.2	+0.9
	baz=72						
AML	Almayashu	3.35	277	⇑*e*P	Pn	06 48 47.7	+1.0
	baz=77						
AML				⇑*i*S	Sn	06 49 27.9	+0.6
	baz=77						
KAPS	Kapalarasan	3.56	14	Pg	Pb	06 48 57.2	+0.6
	0.6nm,0.3s						
KAPS				Lg	Lg	06 49 42.7	
	1.9nm,0.4s						

MEX 21 06:49:09.4±0.7**, 19°.43N×103°.92W, h36**^{km}±8^{km}**, MD3.6, Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		0.27	192	*e*P	Pn	06 49 15.2	-2.4

R15V				*e*S	Sn	06 49 20.9	-3.9
EZ5V		**0.31**	**81**	*e*P	Pn	06 49 16.2	-1.7
EZ5V				*e*S	Sn	06 49 21.4	-3.5
CJM	**Chamela**	**1.06**	**274**	*e*P	Pn	06 49 26.0	-1.7
CJM				*e*S	Sn	06 49 39.4	-1.8
ANIG	**Ahuacatlan**	**1.71**	**341**	*e*P	Pn	06 49 35.0	-1.8
ANIG				*e*S	Sn	06 49 57.5	0.0

*IGQ **21** 06:57:09.4±0.8, 3°S±5°×7°8W±°, h12^{km}, MLv3.7*

ISC 21 06:57:03.6±1.6**, 2°.88S**±0°.04×**77°.95W**±0°.05**, h9**^{km}±14^{km}**, n59,** σ**1ˢ.19**/66**, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	**Cochancay**	**1.36**	**287**	P	**Pg**	**06 57 29.5**	**-0.3**
COHC				S	**Sg**	**06 57 46.5**	**-1.1**
PUYO	**Puyo, Santa Ro**	**1.38**	**357**	P	**Pg**	**06 57 30.5**	**+0.4**
PUYO				S	**Sg**	**06 57 49.5**	**+1.5**
APUY	**Puyo**	**1.41**	**358**	P	**Pg**	**06 57 31.2**	**+0.5**
APUY				S	**Sg**	**06 57 49.4**	**+0.4**
PAT1	**Patacocha**	**1.45**	**340**	P	**Pb**	**06 57 30.8**	**-0.3**
BPAT	**Tungurahua Vol**	**1.45**	**340**	P	**Pn**	**06 57 30.8**	**+0.3**
BPAT				S	**Sb**	**06 57 48.7**	**-1.1**
ARRY	**Arrayan**	**1.45**	**340**	P	**Pn**	**06 57 30.2**	**-0.2**
BMAS	**Trigal station**	**1.46**	**339**	P	**Pn**	**06 57 30.6**	**0.0**
RETU	**Refugio**	**1.50**	**341**	P	**Pb**	**06 57 31.7**	**-0.3**
BULB	**Ulba Tungurahu**	**1.50**	**342**	P	**Pn**	**06 57 31.5**	**+0.4**
BBIL	**Ulba Tungurahu**	**1.52**	**339**	P	**Pn**	**06 57 31.7**	**+0.5**
BIL2	**Estacion Bilba**	**1.52**	**339**	P	**Pb**	**06 57 32.0**	**-0.2**
BRUN	**Tungurahua Vol**	**1.52**	**342**	P	**Pb**	**06 57 32.1**	**-0.1**
RUN5	**Runtun**	**1.53**	**342**	P	**Pb**	**06 57 32.3**	**-0.1**
POND	**Pondoa**	**1.53**	**341**	P	**Pb**	**06 57 32.1**	**-0.3**
JUI6	**Juive**	**1.53**	**340**	P	**Pb**	**06 57 32.1**	**-0.4**
IGUA	**Igualata**	**1.54**	**333**	P	**Pg**	**06 57 33.1**	**-0.1**
MILO	**Milagro-Astudi**	**1.71**	**290**	P	**Pg**	**06 57 36.7**	**+0.3**
MILO				S	**Sg**	**06 57 59.6**	**+0.9**
SAGO	**Sagoatoa**	**1.85**	**337**	P	**Pb**	**06 57 38.4**	**+0.3**
PIS1	**Pisayambo**	**1.86**	**346**	P	**Pb**	**06 57 38.5**	**+0.4**
PISA	**Pisayambo**	**1.86**	**346**	P	**Pb**	**06 57 38.4**	**+0.3**
ARDO	**Archidona, Ten**	**1.88**	**5**	P	**Pb**	**06 57 38.5**	**+0.3**
ARDO				S	**Sb**	**06 58 02.4**	**+0.6**
GONZ	**Gonzanam**	**1.98**	**227**	P	**Pg**	**06 57 43.0**	**+1.4**
BMOR	**Cotopaxi Volca**	**2.19**	**347**	P	**Pb**	**06 57 44.5**	**+0.7**
BTAM	**Cotopaxi Volca**	**2.23**	**348**	P	**Pb**	**06 57 44.7**	**+0.1**
COV1	**Cotopaxi Volc**	**2.23**	**350**	P	**Pb**	**06 57 44.8**	**+0.2**
BREF	**Cotopaxi Volca**	**2.25**	**347**	P	**Pb**	**06 57 45.5**	**+0.7**
BVC2	**Cotopaxi Volca**	**2.25**	**348**	P	**Pb**	**06 57 44.9**	**0.0**
BNAS	**Cotopaxi Volca**	**2.25**	**346**	P	**Pb**	**06 57 45.2**	**+0.4**
VC1	**Cotopaxi 1**	**2.27**	**348**	P	**Pb**	**06 57 45.0**	**-0.1**
PAST	**Pastocalle**	**2.27**	**342**	P	**Pb**	**06 57 45.5**	**+0.3**
NAS2	**Nasa**	**2.28**	**347**	P	**Pb**	**06 57 46.2**	**+1.0**
ILLI	**Illinizas Sur**	**2.28**	**340**	P	**Pb**	**06 57 46.4**	**+1.0**
ANTM	**Antisana-La Mi**	**2.34**	**353**	P	**Pb**	**06 57 45.8**	**-0.6**
ANTM				S	**Sb**	**06 58 16.0**	**+0.4**
PITA	**Cotopaxi Volc**	**2.35**	**348**	P	**Pb**	**06 57 47.0**	**+0.5**
ANTS	**Antisana-Sarah**	**2.37**	**355**	P	**Pb**	**06 57 46.5**	**-0.5**
ANTG	**Antisana-Guama**	**2.38**	**353**	P	**Pb**	**06 57 47.0**	**0.0**
MORR	**Playas El Morr**	**2.40**	**276**	P	**Pg**	**06 57 48.0**	**-1.6**
ANTI	**Antisana**	**2.42**	**355**	P	**Pb**	**06 57 47.5**	**-0.3**
MCRA	**Macar, Loja**	**2.49**	**233**	P	**Pb**	**06 57 47.9**	**-0.7**
SALI	**Salinas**	**3.11**	**283**	P	**Pn**	**06 57 52.8**	**-0.2**
OTAV	**Otavalo**	**3.13**	**351**	*e*P	**Pb**	**06 58 00.3**	**+0.5**
OTAV	**Otavalo**	**3.13**	**351**	*e*P	**Pb**	**06 58 00.3**	**+0.5**
YAHU	**Yahuarcocha**	**3.23**	**358**	P	**Pb**	**06 58 01.7**	**+0.3**
PAC1	**Pacto, Paraso**	**3.23**	**345**	P	**Pb**	**06 58 01.6**	**+0.2**
URCU	**Urcuqui**	**3.31**	**355**	P	**Pb**	**06 58 02.0**	**-0.8**
CMBC	**Cumbal**	**3.79**	**2**	*e*P	**Pg**	**06 58 17.4**	**+1.0**
CMBC	**Cumbal**	**3.79**	**2**	*e*P	**Pg**	**06 58 17.4**	**+1.0**
GCUF	**Volcan Galeras**	**4.12**	**8**	*e*P	**Pb**	**06 58 19.5**	**+2.8**
GCUF	**Volcan Galeras**	**4.12**	**8**	*e*P	**Pb**	**06 58 19.5**	**+2.8**
PTLC	**Puerto Leguiza**	**4.37**	**46**	*e*P	**Pn**	**06 58 10.3**	**0.0**
PTLC	**Puerto Leguiza**	**4.37**	**46**	*e*P	**Pn**	**06 58 10.3**	**0.0**
CRUC	**La Cruz**	**4.53**	**13**	*e*P	**Pb**	**06 58 24.2**	**+0.7**
CRUC	**La Cruz**	**4.53**	**13**	*e*P	**Pb**	**06 58 24.2**	**+0.7**
FLOC	**Florencia**	**4.99**	**27**	*e*P	**Pn**	**06 58 20.6**	**+1.8**
FLOC	**Florencia**	**4.99**	**27**	*e*P	**Pn**	**06 58 20.6**	**+1.8**
SOTA	**Rioblanco**	**5.16**	**15**	*e*P	**Pb**	**06 58 31.7**	**-2.7**
SOTA	**Rioblanco**	**5.16**	**15**	*e*P	**Pb**	**06 58 31.7**	**-2.7**
POPC	**Popayan, Colom**	**5.53**	**13**	*e*P	**Pg**	**06 58 45.8**	**-3.9**
POPC	**Popayan, Colom**	**5.53**	**13**	*e*P	**Pg**	**06 58 45.8**	**-3.9**

*ISCJB **21** 07:00:06.1±1.1, 27°.67S±0°.03×69°.22W±0°.06, h141^{km}±19^{km}, Error ellipse: s-maj=9.1km s-min=5.4km az=172.3*

*SJA **21** 07:00:06.3±0.9, 27°.68S×69°.20W, h143^{km}±17^{km}, ML3.0, MW3.2*

*GUC **21** 07:00:07.1±0.6, 27°.64S×69°.44W, h120^{km}, ML3.5*

ISC 21 07:00:06.0±2.1**, 27°.66S**±0°.04×**69°.25W**±0°.06**, h150**^{km}±28^{km}**, n12,** σ**0ˢ.94**/21**, 1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.86**	**223**	*e*P	**Pn**	**07 00 40.2**	**+0.4**
LCO				*e*S	**Sn**	**07 01 06.2**	**+0.4**
LCO	**Las Campanas**	**1.86**	**223**	⇓*i*P	**Pn**	**07 00 40.1**	**+0.2**
LCO				*i* S	**Sn**	**07 01 04.7**	**-1.0**
LCO				IAML		07 01 08.1	
	comp=N,320nm,0.3s						
ACDV	**Cuesta del Vie**	**2.50**	**177**	*e*S	**Sn**	**07 01 19.6**	**+0.3**
ACDV				IAML		07 01 20.9	
	comp=Z,54nm,0.5s						
GO02	**Mina Guanaco**	**2.51**	**353**	*e*P	**Pn**	**07 00 48.5**	**+0.8**
GO02				*i* S	**Sn**	**07 01 19.7**	**0.0**
GO02				IAML		07 01 26.1	
	comp=E,240nm,0.6s						
ACLC	**CERRO LA CRUZ**	**2.67**	**132**	*e*P	**Pn**	**07 00 49.9**	**+0.4**
ACLC				*e*S	**Sn**	**07 01 21.6**	**-1.5**
GO04	**Tololo Observa**	**2.85**	**208**	*e*P	**Pn**	**07 00 52.3**	**+0.6**
GO04	**Tololo Observa**	**2.85**	**208**	*e*P	**Pn**	**07 00 52.0**	**+0.3**
GO04				*i* S	**Sn**	**07 01 26.4**	**-0.6**
ACCO	**Cerro Coronel**	**2.92**	**177**	*e*P	**Pn**	**07 00 54.4**	**+1.7**
ACCO				*e*S	**Sn**	**07 01 28.8**	**+0.1**
PB14	**IPOC Station P**	**3.20**	**341**	*e*P	**Pn**	**07 00 56.6**	**+0.3**
PB14				*i* S	**Sn**	**07 01 33.8**	**-1.4**
PB14				IAML		07 01 43.6	
	comp=E,124nm,0.6s						
AHML	**Horco Molle**	**3.59**	**77**	*e*P	**Pn**	**07 01 01.9**	**+0.9**
APLL	**PUNTA DE LOS L**	**3.62**	**139**	*e*P	**Pn**	**07 01 01.6**	**+0.3**
APLL				*e*S	**Sn**	**07 01 42.9**	**-1.4**
CMCH	**Combarbala**	**3.82**	**203**	*e*P	**Pn**	**07 01 04.3**	**+0.3**
CMCH				*i* S	**Sn**	**07 01 47.6**	**-1.4**

MEX 21 07:04:20.0±0.4**, 15°.81N**×**96°.52W, h3**^{km}±12^{km}**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.39**	**96**	*e*P	Pg	07 04 27.4	-0.2
HUIG				*e*S	Sg	07 04 33.0	+0.3
VHO	**Vista Hermosa**	**1.27**	**351**	*e*P	Pg	07 04 41.2	-3.3
VHO				*i* S	Sg	07 04 57.6	-3.4
PNIG	**Pinotepa**	**1.66**	**291**	*e*P	Pn	07 04 46.4	-3.6
CMIG	**Matias Romero**	**2.02**	**51**	*e*P	Pn	07 04 50.9	-4.0
PCIG		**3.18**	**91**	*i* P	Pn	07 05 04.6	-6.3

*SOME **21** 07:16:03.0, 51°.57N×82°.10E, h10^{km}*

*ISCJB **21** 07:16:04.1±0.6, 51°.52N±0°.06×81°.8E±0°.1, h0^{km}, Error ellipse: s-maj=12.1km s-min=5.6km az=36.3*

*IDC **21** 07:16:06.4±1.1, 51°.46N×81°.79E, h0^{km}, mb1 2.3/4, mb1mx2.3/53, mbtmp2.3/4, ML1.9/4, Error ellipse: s-maj=11.2km s-min=10.6km az=177.0*

*NNC **21** 07:16:08.0±3.1, 51°.25N×81°.74E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=29.4km s-min=9.4km az=27.0, Suspected Mining explosion.*

ISC 21 07:16:05.3±0.9**, 51°.51N**±0°.05×**81°.77E**±0°.05**, h0**^{km}**, n10,** σ**1ˢ.19**/18**, 3C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEM	**Semipalatinsk**	**1.47**	**222**	*e*P	**Pn**	**07 16 32.9**	**-0.3**
	12nm,0.3s						
SEM				*e*S	**Sn**	**07 16 54.0**	**+0.7**
	60nm,0.2s						
KURBB	**Kurchatov Arra**	**2.23**	**248**	⇑Pg	**Pb**	**07 16 46.4**	**-0.1**
	4.2nm,0.8s						
KURBB				⇓Lg	Lg	07 17 16.2	
	40nm,0.7s						
KURBB	**Kurchatov Arra**	**2.23**	**248**	Pn	**Pn**	**07 16 44.2**	**+0.7**
	0.2nm,0.3s,baz=71,slow=18,SNR=15						
KURBB				Pg	**Pb**	**07 16 46.2**	**-0.2**
	0.2nm,0.3s,baz=71,slow=18,SNR=16						
KURBB				Lg	Lg	07 17 16.6	
	0.5nm,0.3s,baz=72,slow=34,SNR=16						
I46RU	**ZALESOVO INFRA**	**3.06**	**36**	*i*		07 34 20.0	
	baz=209,slow=345,SNR=4.0						
ZALV	**Zalesovo Beam**	**3.06**	**36**	Pn	**Pn**	**07 16 55.5**	**+0.6**
	0.1nm,0.3s,baz=216,slow=14,SNR=3.3						
ZALV				Pg	**Pg**	**07 17 03.8**	**-0.2**
	0.6nm,0.3s,baz=218,slow=16,SNR=8.6						
ZALV				Sn	**Sn**	**07 17 32.4**	**+0.1**
	0.7nm,0.3s,baz=212,slow=24,SNR=7.6						
ZALV				Lg	Lg	07 17 44.2	
	0.8nm,0.3s,baz=229,slow=31,SNR=6.1						
ZSN	**Zaisan**	**4.54**	**152**	*e*P	**Pb**	**07 17 24.0**	**-1.9**
	1.1nm,0.6s						
ZSN				*e*S	**Sb**	**07 18 23.1**	**+2.0**
	4.9nm,0.8s						
MAKZ	**Makanchi**	**4.71**	**178**	⇑Pn	**Pn**	**07 17 17.6**	**0.0**
	2.8nm,0.9s						
MAKZ				⇓Pg	**Pb**	**07 17 27.8**	**-1.0**
	2.3nm,0.8s						
MAKZ				⇑Lg	Lg	07 18 30.1	
	11nm,1.1s						
MK31	**Makanchi Array**	**4.74**	**176**	Pn	**Pn**	**07 17 18.2**	**+0.2**
	0.1nm,0.3s,baz=4.8,slow=11,SNR=6.0						
MK31				⇓Pg	**Pb**	**07 17 28.8**	**-0.4**
	1.8nm,0.6s,baz=9.9,slow=14,SNR=8.1						
MK31				Lg	Lg	07 18 29.9	
	7.3nm,0.8s,baz=11,slow=26,SNR=9.3						
MKAR	**Makanchi Array**	**4.74**	**176**	Pn	**Pn**	**07 17 18.1**	**+0.1**
	0.1nm,0.3s,baz=2.2,slow=12,SNR=5.9						
MKAR				Pg	**Pb**	**07 17 29.2**	**0.0**
	0.3nm,0.3s,baz=0.9,slow=12,SNR=16						
MKAR				Lg	Lg	07 18 30.1	
	0.5nm,0.3s,baz=359,slow=24,SNR=11						
BVAR	**Borovoye Array**	**7.15**	**287**	Pn	**Pn**	**07 17 52.8**	**+1.7**
	0.1nm,0.3s,baz=126,slow=7.3,SNR=2.7						
BVAR				Sn	**Sn**	**07 19 10.1**	**-2.8**
	0.1nm,0.3s,baz=105,slow=22,SNR=3.6						

DJA 21 07:16:54.4±1.5**, 10°S**±13°×**12°2E**±°**, h10**^{km}**, M3.5**/4**, MLv3.5**/4**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.98**	**279**	P	Pg	07 17 13.3	0.0
WSI	**Waingapu**	**1.43**	**300**	P	Pn	07 17 20.0	-0.4
WSI				S	Sb	07 17 39.4	-0.1
EDFI	**Ende, Flores**	**1.62**	**5**	P	Pn	07 17 22.8	-0.4
MMRI	**Maumere**	**1.86**	**21**	P	Pn	07 17 26.4	+0.1

*ISCJB **21** 07:21:12.8±1.2, 37°.30N±0°.06×20°.57E±0°.05, h19^{km}±8^{km}, Error ellipse: s-maj=11.2km s-min=5.4km az=18.3*

*ATH **21** 07:21:12.9, 37°.30N×20°.69E, h8^{km}±3^{km}, ML3.3/2, Error ellipse: s-maj=5.7km s-min=2.4km az=46.0*

*THE **21** 07:21:13.1, 37°.31N×20°.68E, h7^{km}, ML3.1/5, Error ellipse: s-maj=1.7km s-min=0.6km az=225.0*

ISC 21 07:21:13.1±1.8**, 37°.32N**±0°.06×**20°.70E**±0°.05**, h15**^{km}±11^{km}**, n28,** σ**0ˢ.84**/38**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	**Vitineika**	**0.71**	**33**	P	**Pg**	**07 21 27.0**	**0.0**
VLS	**Valsamata**	**0.86**	**354**	P	**Pg**	**07 21 29.4**	**-0.6**
VLS				S	**Sb**	**07 21 42.3**	**+1.0**
VLS				AML	AML	07 21 44.3	
	comp=E,5738μm,0.1s						
VLS				AML	AML	07 21 45.8	
	comp=N,4324μm,0.1s						
VLS	**Valsamata**	**0.86**	**354**	P	**Pg**	**07 21 29.3**	**-0.6**
VLS				S	**Sb**	**07 21 42.1**	**+0.8**
RLS	**Riolos of Patr**	**0.96**	**39**	P	**Pg**	**07 21 31.5**	**-0.2**
RLS				S	**Sg**	**07 21 44.5**	**+0.3**
RLS				AML	AML	07 21 49.0	
	comp=E,2127μm,0.7s						
RLS				AML	AML	07 21 49.1	
	comp=N,2463μm,1.2s						
RLS	**Riolos of Patr**	**0.96**	**39**	P	**Pg**	**07 21 30.8**	**-0.9**
ITM	**Ithomi**	**0.99**	**97**	P	**Pg**	**07 21 32.1**	**-0.2**
ITM	**Ithomi**	**0.99**	**97**	P	**Pg**	**07 21 31.8**	**-0.5**
ITM				S	**Sn**	**07 21 46.6**	**+0.3**
DRO	**Drossia**	**1.03**	**51**	P	**Pg**	**07 21 32.2**	**-0.7**
TRIP	**Tripoli**	**1.27**	**80**	P	**Pn**	**07 21 36.5**	**+0.1**
TRIP				S	**Sg**	**07 21 54.7**	**+0.5**
EVGI	**Lefkada island**	**1.30**	**359**	P	**Pn**	**07 21 37.1**	**+0.3**
EVGI	**Lefkada island**	**1.30**	**359**	P	**Pn**	**07 21 37.2**	**+0.3**
KLV	**Kalavryta, Ach**	**1.36**	**57**	P	**Pn**	**07 21 37.9**	**+0.2**
KLV	**Kalavryta, Ach**	**1.36**	**57**	P	**Pn**	**07 21 38.0**	**+0.3**
KLV				S	**Sg**	**07 21 57.2**	**+0.1**
LAKA	**Lakka**	**1.37**	**47**	P	**Pb**	**07 21 38.7**	**+0.2**
LAKA	**Lakka**	**1.37**	**47**	P	**Pn**	**07 21 37.6**	**-0.2**
LAKA				S	**Sg**	**07 21 57.3**	**-0.1**
PVO	**Paravola**	**1.46**	**27**	P	**Pg**	**07 21 41.0**	**-0.1**
EVR	**Evrytania**	**1.82**	**28**	P	**Pg**	**07 21 47.3**	**-0.8**
AGG	**Agios Georgios**	**2.14**	**37**	P	**Pb**	**07 21 50.7**	**-0.8**
TIP	**Timpagrande**	**3.62**	**302**	P	**Pn**	**07 22 09.7**	**+1.0**
BIA	**Bitola**	**3.73**	**7**	*i* Pn	**Pn**	**07 22 11.7**	**+1.4**
OHR	**Ohrid**	**3.79**	**1**	*i* Pn	**Pg**	**07 22 26.2**	**+0.4**
KRUS	**Krusevo**	**4.07**	**6**	*i* Pn	**Pn**	**07 22 15.9**	**+1.0**
TAR1	**Taranto**	**4.17**	**321**	*e*Pn	**Pn**	**07 22 17.3**	**+1.1**
TAR1				Sn	**Sn**	**07 23 03.2**	**-1.4**
VAY	**Valandovo**	**4.26**	**19**	*i* Pn	**Pn**	**07 22 18.5**	**+1.1**
MASS	**Massafra**	**4.32**	**321**	*e*Pn	**Pn**	**07 22 19.2**	**+0.9**
MASS				Sn	**Sn**	**07 23 06.5**	**-1.8**
FASA	**Fasano**	**4.36**	**324**	*e*Pn	**Pn**	**07 22 19.5**	**+0.7**
STIP	**Stip**	**4.52**	**14**	*i* Pn	**Pn**	**07 22 22.3**	**+1.2**
SG1	**Sgolgore (BA)**	**4.71**	**320**	*e*Pn	**Pn**	**07 22 24.0**	**+0.4**
SG1				Sn	**Sn**	**07 23 16.4**	**-1.6**

NNC 21 07:37:00.8±0.3**, 50°.00N**×**78°.69E, h0**^{km}**, mb3.8, mpv3.6, 25C-9D, Error ellipse: s-maj=3.0km s-min=1.3km az=74.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.59**	**349**	⇑P	Pg	07 37 12.4	+0.4
KUR07				⇑S	Sg	07 37 21.2	+1.5
KUR06	**Kurchatov Arra**	**0.61**	**350**	⇑P	Pg	07 37 12.8	+0.4
KUR06				⇑S	Sg	07 37 21.6	+1.2
KUR14	**Kurchatov Arra**	**0.61**	**354**	⇑P	Pg	07 37 12.7	+0.2
KUR14				⇑S	Sg	07 37 21.5	+1.0
KUR15	**Kurchatov Arra**	**0.62**	**352**	⇑P	Pg	07 37 13.0	+0.3
KUR15				⇑S	Sg	07 37 21.8	+1.1
KURBB	**Kurchatov Arra**	**0.63**	**351**	⇑P	Pg	07 37 13.1	+0.3
KURBB				⇑S	Sg	07 37 22.0	+1.0
	204nm,0.5s						
KUR16	**Kurchatov Arra**	**0.64**	**349**	⇑P	Pg	07 37 13.2	+0.2
KUR16				⇑S	Sg	07 37 22.0	+0.8
KUR17	**Kurchatov Arra**	**0.64**	**347**	⇑P	Pg	07 37 13.3	+0.2
KUR17				⇑S	Sg	07 37 22.4	+0.9
KUR05	**Kurchatov Arra**	**0.65**	**351**	⇓P	Pg	07 37 13.0	-0.1
KUR05				⇓S	Sg	07 37 22.1	+0.6
KUR04	**Kurchatov Arra**	**0.67**	**352**	⇓P	Pg	07 37 13.6	+0.1
KUR04				⇑S	Sg	07 37 23.0	+0.9
SEM	**Semipalatinsk**	**1.08**	**67**	P	Pg	07 37 20.6	-0.9
	20nm,0.1s						
SEM				S	Sg	07 37 36.3	+0.8
	98nm,0.2s						
MAKZ	**Makanchi**	**3.88**	**144**	⇑Pn	Pn	07 38 02.1	+0.5
	0.5nm,0.4s						
MAKZ				⇑Pg	Pb	07 38 10.6	+0.6
	3.7nm,0.5s						
MAKZ				⇑Lg	Lg	07 39 05.0	
	23nm,0.6s						
MK31	**Makanchi Array**	**4.01**	**142**	⇑Pn	Pn	07 38 05.2	+1.8
	0.3nm,0.1s,baz=323,slow=10.0,SNR=72						
MK31				⇑Pg	Pb	07 38 13.3	+1.0
	4.9nm,0.5s,baz=157,slow=56,SNR=36						
MK31				Lg	Lg	07 39 08.7	
	22nm,0.6s,baz=326,slow=26,SNR=19						
OTUK	**Ortayu**	**4.53**	**250**	⇑Pn	Pn	07 38 10.1	-0.4
	1.6nm,0.2s						
OTUK				⇓Lg	Lg	07 39 25.2	
	7.3nm,0.5s						
KAPS	**Kapalarasan**	**4.74**	**174**	Pg	Pb	07 38 26.7	+1.9
	2.5nm,0.3s						
KAPS				Lg	Lg	07 39 30.3	
	26nm,0.9s						
ZSN	**Zaisan**	**4.82**	**120**	Pg	Pb	07 38 27.3	+1.2
	1.2nm,0.3s						
ZSN				Lg	Lg	07 39 31.1	
	5.8nm,0.6s						
TDK	**Taldyqorghan**	**5.01**	**182**	Pg	Pb	07 38 31.1	+1.8
	36nm,0.2s						
TDK				Lg	Lg	07 39 37.9	
	47nm,0.4s						
ZAA0	**Zalesovo Array**	**5.47**	**41**	⇑Pn	Pn	07 38 23.6	+0.1
	1.6nm,0.3s						
ZAA0				⇓Sn	Sn	07 39 27.3	+0.2
	1.4nm,0.3s						
ZAA0				⇑Lg	Lg	07 39 54.4	
	6.5nm,0.8s						
DJR	**Jarkent**	**5.72**	**172**	Pg	Pb	07 38 44.5	+3.0
	1.9nm,0.4s						
DJR				Lg	Lg	07 40 00.2	
	6.2nm,0.9s						
ARXS	**Arharly**	**5.82**	**186**	Pg	Pb	07 38 46.5	+3.3
	2.3nm,0.2s						
ARXS				Lg	Lg	07 40 03.9	
	29nm,0.6s						
CHKK	**Chushkaly**	**6.26**	**191**	Pg	Pg	07 38 55.7	-5.0
	1.5nm,0.1s						
CHKK				Lg	Lg	07 40 19.3	
	9.3nm,0.6s						
KUU	**Kurty**	**6.32**	**196**	Pg	Pb	07 38 55.4	+3.8
	1.7nm,0.2s						
KUU				Lg	Lg	07 40 19.6	
	18nm,0.7s						
PDGK	**Podgornoye**	**6.70**	**175**	⇓Lg	Lg	07 40 34.3	
	14nm,0.6s						
SATY	**Saty**	**6.95**	**182**	Pg	Pb	07 39 06.3	+3.9
	4.5nm,1.3s						
SATY				Lg	Lg	07 40 38.4	
	14nm,0.7s						
MTBS	**Maitube**	**7.05**	**194**	Pg	Pg	07 39 11.3	-4.5
	3.7nm,0.2s						
MTBS				Lg	Lg	07 40 46.1	
	9.6nm,0.3s						
TNSS	**Tian-Shan**	**7.07**	**190**	Pg	Pg	07 39 11.1	-5.1
	1.2nm,0.1s						
TNSS				Lg	Lg	07 40 47.4	
	12nm,1.0s						
TKM2	**Tokmak 2**	**7.40**	**198**	⇓Lg	Lg	07 40 56.8	
	9.8nm,1.1s						
AAK	**Ala-Archa**	**7.92**	**203**	⇓Lg	Lg	07 41 13.2	
	4.6nm,0.7s						
MNAS	**Manas**	**8.65**	**212**	⇓Lg	Lg	07 41 36.4	
	2.8nm,0.7s						
KK31	**Karatay Array**	**8.90**	**222**	⇑Pn	Pn	07 39 09.6	-1.0
	0.3nm,0.4s						
KK31				⇑Lg	Lg	07 41 43.2	
	2.1nm,0.7s,baz=44,slow=28,SNR=4.8						

*IDC **21** 07:39:56.9±1.9, 5°.95N×126°.21E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.6/48, mbtmp3.9/5, Error ellipse: s-maj=106.7km s-min=25.4km az=67.0*

*ISCJB **21** 07:40:07.7±1.1, 5°.63N±0°.08×126°.3E±0°.1, h79^{km}±15^{km}, mb3.8/5, Error ellipse: s-maj=21.0km s-min=13.4km az=170.3*

*MAN **21** 07:40:09.1, 5°.71N×126°.30E, h52^{km}, mb4.9, ML3.8, MS3.8*

ISC 21 07:40:08.8±1.3**, 5°.68N**±0°.09×**126°.2E**±0°.1**, h88**^{km}±13^{km}**, n12,** σ**1ˢ.36**/18**, mb3.8**/5**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.66**	**310**	*e*P	**Pn**	**07 40 25.1**	**+0.4**
DDMP				*e*S	**Sn**	**07 40 35.6**	**-0.9**
GSPH	**General Santos**	**1.33**	**288**	⇑*i*P	**Pn**	**07 40 33.1**	**+0.7**
GSPH				*i* S	**Sn**	**07 40 48.9**	**-1.4**
DMPH	**Davao City--Mi**	**1.56**	**333**	⇓*e*P	**Pn**	**07 40 34.5**	**-0.7**
DMPH				*e*S	**Sn**	**07 40 55.5**	**+0.3**
KCP	**Kidapawan**	**1.73**	**320**	⇓*i*P	**Pn**	**07 40 38.4**	**+0.8**
KCP				*i* S	**Sn**	**07 40 59.4**	**+0.1**
SKMP	**Bagumbayan, Su**	**1.87**	**297**	*e*P	**Pn**	**07 40 39.6**	**+0.4**
SKMP				*e*S	**Sn**	**07 41 04.0**	**+1.7**
BUKP	**Musuan**	**2.47**	**332**	*e*P	**Pn**	**07 40 47.5**	**+0.3**
BUKP				*e*S	**Sn**	**07 41 17.5**	**+0.9**
CGP	**Cagayan de Oro**	**3.15**	**331**	*e*P	**Pn**	**07 40 58.9**	**+2.6**
FITZ	**Fitzroy Crossi**	**23.64**	**181**	P	**P**	**07 45 13.3**	**+1.1**
	4.7nm,1.2s,baz=9.6,slow=12,SNR=14						
WRA	**Warramunga Arr**	**26.68**	**163**	P	**P**	**07 45 40.0**	**+0.2**
	0.9nm,0.3s,baz=342,slow=10,SNR=13						
ASAR	**Alice Springs**	**30.12**	**166**	P	**P**	**07 46 09.7**	**-0.7**
	1.3nm,0.6s,baz=345,slow=7.2,SNR=6.0						
STKA	**Stephens Creek**	**40.12**	**160**	P	**P**	**07 47 37.4**	**+1.3**
	2.2nm,0.5s,baz=332,slow=6.0,SNR=4.4						
MKAR	**Makanchi Array**	**55.68**	**325**	P	**P**	**07 49 33.4**	**-2.7**
	0.1nm,0.3s,baz=115,slow=7.0,SNR=4.4						

IDC 21 07:45:08.9±4.9**, 16°.20S**×**176°.37W, h0**^{km}**, mb4.3**/4**, mb1 4.5**/4**, mb1mx3.9**/35**, mbtmp4.3**/4**, Error ellipse: s-maj=141.6km s-min=96.5km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.17**	**240**	P	P	07 52 56.0	+0.8
	3.6nm,0.6s,baz=90,slow=14,SNR=8.6						
WRA	**Warramunga Arr**	**46.88**	**258**	P	P	07 53 40.6	-0.8
	0.4nm,0.2s,baz=95,slow=7.9,SNR=51						
ASAR	**Alice Springs**	**47.15**	**253**	P	P	07 53 43.0	-0.5
	4.1nm,0.3s,baz=88,slow=8.1,SNR=67						
ASAR				PcP	PcP	07 55 14.9	-0.4
	0.6nm,0.5s,baz=101,slow=4.6,SNR=5.1						
FITZ	**Fitzroy Crossi**	**55.25**	**259**	P	P	07 54 44.6	+0.2
	2.0nm,0.6s,baz=107,slow=3.4,SNR=5.3						

*IDC **21** 08:06:36.8±1.0, 26°.71N×142°.69E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.6/34, mbtmp3.6/6, ML2.8/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/41, Error ellipse: s-maj=58.8km s-min=20.6km az=98.0*

*ISCJB **21** 08:06:39.3±0.9, 26°.8N±0°.1×142°.5E±0°.3, h31^{km}, mb3.6/5, MS3.5/1, Error ellipse: s-maj=43.4km s-min=16.2km az=178.8*

ISC 21 08:06:41.4±1.1**, 26°.7N**±0°.1×**142°.6E**±0°.3**, h31**^{km}**, n8,** σ**0ˢ.56**/6**, mb3.4**/5**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**10.46**	**340**	Pn	**Pn**	**08 09 09.2**	**-0.2**
	0.1nm,0.3s,baz=166,slow=11,SNR=3.6						
KSRS	**Korea Array**	**16.37**	**314**	LR	LR	08 16 09.0	
	comp=Z,25nm,19.1s,baz=175,slow=35						
WRA	**Warramunga Arr**	**47.09**	**191**	P	**P**	**08 15 10.7**	**+0.1**
	2.5nm,0.5s,baz=12,slow=8.7,SNR=40						
ASAR	**Alice Springs**	**50.80**	**190**	P	**P**	**08 15 38.8**	**-0.3**
	0.2nm,0.5s,baz=2.5,slow=5.8,SNR=4.0						
AAK	**Ala-Archa**	**56.76**	**305**	LR	LR	08 40 56.3	
	comp=Z,37nm,18.1s,baz=360,slow=36						
ILAR	**Eielson Array**	**57.85**	**29**	P	**P**	**08 16 30.4**	**+0.5**
	0.3nm,0.7s,baz=269,slow=6.0,SNR=2.9						
YKA	**Yellowknife Ar**	**72.28**	**28**	P	**P**	**08 18 02.9**	**-0.6**
	0.1nm,0.6s,baz=293,slow=6.2,SNR=4.1						
FINES	**FINESS Array B**	**78.43**	**334**	P	**P**	**08 18 39.3**	**+0.4**
	0.9nm,0.4s,baz=69,slow=7.6,SNR=6.3						

HEL 21 08:21:52.2±0.7**, 67°.83N**×**19°.93E, h0**^{km}**, ML1.7, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIF	**Kilpisjarvi**	**1.23**	**15**	PN	Pn	08 22 17.5	+0.9
KIF				MSG		08 22 30.6	
	comp=Z,6.0nm,0.2s						
KIF				SN	Sn	08 22 34.4	+0.6
HEF	**Hetta**	**1.52**	**66**	PG	Pn	08 22 19.9	-0.6
	baz=245						
HEF				MSG		08 22 37.6	
	comp=Z,3.2nm,0.2s						
HEF				SN	Sn	08 22 43.3	+2.4
TOF	**Tornio**	**2.46**	**133**	PG	Pb	08 22 35.8	-1.4
	baz=313						
TOF				MSG		08 23 05.0	
	comp=Z,3.4nm,0.2s						
TOF				SG	Sb	08 23 07.9	-0.1
SGF	**Sodankyl**	**2.55**	**96**	PG	Pb	08 22 38.1	-0.7
SGF				SG	Sb	08 23 11.6	+1.0

RNF	Rovaniemi	2.66	114	PG	Pb	08 22 38.9	-1.8
	baz=305						
RNF				SB	Sb	08 23 12.2	-1.6
KEV	Kevo	3.22	50	MSG		08 23 26.8	
	comp=Z,1.8nm,0.2s						

MEX 21 08:22:48.5±0.4, 15°.15N×93°.56W, h81km±76km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.64	31	eP	Pn	08 23 02.1	-1.6
PCIG				i S	Sn	08 23 13.5	-1.5

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*UPP **21** 08:23:33.5±0.9, 63°.68N×22°.82E, h0km, ML1.8, Suspected explosion*

HEL 21 08:23:33.2±0.0, 63°.65N×22°.95E, h0km, ML1.9, ML1.8(UPP), Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAF	Ylistaro	0.62	192	eP	Pg	08 23 44.4	-0.6
VAF				eS	Sg	08 23 51.9	-1.1
UMAU	Umeaa	1.04	284	P	Pg	08 23 51.7	-1.3
UMAU	Umeaa	1.04	284	eSN	Sn	08 24 10.3	+0.2
OUF	Merijarvi	1.07	46	SG	Pg	08 23 52.5	-1.1
OUF	Merijarvi	1.07	46	eP	Pg	08 23 52.5	-1.1
	baz=233						
OUF				MSG		08 24 05.4	
	comp=Z,6.6nm,0.2s						
BURU	Burvik	1.17	324	P	Pg	08 23 54.1	-1.5
BURU				S	Sg	08 24 09.6	-1.1
ODEU	Stanfors	1.25	309	P	Pg	08 23 55.5	-1.6
ODEU				S	Sg	08 24 11.7	-1.5
ODEU	Stanfors	1.25	309	eP	Pg	08 23 55.5	-1.6
ODEU				eS	Sg	08 24 11.7	-1.5
HUSU	Husum	1.70	261	P	Pn	08 24 03.9	-0.2
HUSU				S	Sn	08 24 26.6	0.0
HUSU	Husum	1.70	261	eP	Pn	08 24 03.9	-0.2
HUSU				eS	Sn	08 24 26.6	0.0
SVAU	Svanoeiden	1.71	301	P	Pn	08 24 03.8	-0.4
SVAU				S	Sn	08 24 25.6	-1.2
SVAU	Svanoeiden	1.71	301	eP	Pn	08 24 03.8	-0.4
SVAU				eS	Sn	08 24 25.6	-1.2
SUF	Sumiainen	1.72	121	ePG	Pn	08 24 03.9	-0.4
SUF				MSG		08 24 24.8	
	comp=Z,10nm,0.2s						
SUF				eSN	Sn	08 24 26.9	-0.1
KEF	Keuruu	1.72	149	ePN	Pn	08 24 04.4	0.0
KEF				eSN	Sn	08 24 27.4	+0.3
OUL	Oulu	1.93	40	ePG	Pn	08 24 07.6	+0.4
	baz=227						
OUL				eSG	Sb	08 24 33.3	-0.5
SJUU	Sjulsmark	1.96	343	P	Pn	08 24 07.7	+0.1
SJUU				S	Sn	08 24 33.0	+0.2
SJUU	Sjulsmark	1.96	343	eP	Pn	08 24 07.7	+0.1
SJUU				eS	Sn	08 24 33.0	+0.2
LILU	Lilltraesk	2.13	322	S	Sn	08 24 36.6	-0.4
LILU	Lilltraesk	2.13	322	eS	Sn	08 24 36.6	-0.4
KAF	Kangasniemi	2.17	134	ePB	Pn	08 24 11.5	+0.9
KAF				MSG		08 24 37.8	
	comp=Z,9.5nm,0.2s						
KAF				eSG	Sb	08 24 40.2	-0.6
KALU	Kalix	2.23	4	ePB	Pn	08 24 12.4	+1.1
KALU				eSG	Sb	08 24 41.3	-1.1
HEMU	Hemsoen	2.43	249	ePB	Pn	08 24 15.0	+0.9
HEMU				eSG	Sb	08 24 47.6	-0.6
TOF	Tornio	2.51	13	ePB	Pn	08 24 17.0	+1.8
TOF				MSG		08 24 46.9	
	comp=Z,6.5nm,0.2s						
TOF				eSB	Sn	08 24 47.9	+1.3
FIA0	FINESS Array S	2.64	145	ePB	Pn	08 24 18.8	+1.8
	baz=332						
FIA0				eSB	Sb	08 24 52.3	-1.9
RAF	Rauma	2.69	192	MSG		08 24 52.5	
	comp=Z,1.9nm,0.2s						
RAF				eSB	Sb	08 24 53.7	-1.9
ERTU	Ertsjaerv	2.94	354	eS	Sn	08 24 56.8	-0.2
RNF	Rovaniemi	3.25	22	eP	Pn	08 24 25.5	+0.3
MSF	Maaselka	3.46	46	eP	Pn	08 24 28.1	-0.2
	baz=229						
MSF				eS	Sn	08 25 09.6	-0.3
MEF	Metsahovi	3.51	168	eSG	Sg	08 25 22.9	-2.8
KU6	Riekki	3.81	48	eP	Pn	08 24 32.8	-0.2
KU6				eS	Sn	08 25 18.4	0.0
LANU	Lannavaara	4.44	355	eP	Pn	08 24 42.2	+0.4
HEF	Hetta	4.79	3	eP	Pn	08 24 46.2	-0.4
	baz=188						
HEF				eS	Sn	08 25 40.2	-2.5

IDC 21 08:37:33.1±2.7, 4°.88S×133°.74E, h0km, mb3.3/1, mb1 3.7/4, mb1mx3.4/34, mbtmp3.5/4, ML3.1/3, Error ellipse: s-maj=104.8km s-min=28.9km az=82.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.98	178	Pn	Pn	08 41 05.3	-1.1
	0.1nm,0.3s,baz=356,slow=12,SNR=3.8						
FITZ	Fitzroy Crossi	15.34	210	Pn	Pn	08 41 11.3	+0.2
	0.1nm,0.3s,baz=32,slow=8.8,SNR=2.9						
ASAR	Alice Springs	18.68	180	P	Pn	08 41 53.4	0.0
	0.1nm,0.3s,baz=4.3,slow=11,SNR=17						
MKAR	Makanchi Array	68.58	325	P	P	08 48 37.9	0.0
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.3						

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*BJI **21** 08:40:37.7, 18°.65S×169°.45E, h223km, mB4.8/12, mb4.6/23*

*NEIC **21** 08:40:39.6±0.8, 18°.92S×169°.12E, h227km±7km, mb4.5/17, Error ellipse: s-maj=10.1km s-min=8.7km az=177.0*

*ISCJB **21** 08:40:40.6±0.3, 19°.03S±0°.04×169°.09E±0°.05, h250km, mb4.3/35, Error ellipse: s-maj=6.8km s-min=5.2km az=38.8*

*IDC **21** 08:40:40.1±1.5, 19°.13S×169°.23E, h237km±14km, mb3.8/13, mb1 4.0/14, mb1mx3.8/33, mbtmp4.4/14, Error ellipse: s-maj=21.6km s-min=12.3km az=146.0*

ISC 21 08:40:41.4±0.4, 19°.10S±0°.07×169°.18E±0°.07, h250km, n66, σ1s21/75, mb4.2/34, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.61	204	ePn	Pn	08 41 26.6	-3.1
MARNC				eS	S	08 42 04.2	-3.8
PINNC	Pines Island,	3.86	205	ePn	Pn	08 41 42.1	-1.5
PINNC				eS	S	08 42 32.6	-0.2
DZM	Mont Dzumac	3.92	220	ePn	Pn	08 41 43.1	-1.3
DZM				eS	S	08 42 34.2	-0.1
DZM	Mont Dzumac	3.92	220	P	Pn	08 41 42.9	-1.4
	19nm,0.3s,baz=46,slow=21,SNR=124						
DZM				S	S	08 42 30.6	-3.7
	7.4nm,0.3s,baz=108,slow=20,SNR=1.8						
OUENC	Ouen Island, N	3.96	213	ePn	Pn	08 41 43.5	-1.3
OUENC				eS	S	08 42 37.1	+1.9
MSVF	Nonsavu	8.53	82	ePn	Pn	08 42 40.8	-0.7
MSVF				eS	S	08 44 17.9	-0.5
OUZ	Omahuta	16.53	167	eP	Pn	08 44 22.3	+2.6
	39nm,1.4s						
BKZ	Black Stump Fm	20.98	164	eP	Pn	08 45 08.4	-3.6
	25nm,1.5s						
CTA	Charters Tower	21.62	264	P	P	08 45 13.3	+1.2
	5.5nm,0.7s,baz=93,slow=12,SNR=7.3						
BFZ	Birch Farm	22.35	166	eP	P	08 45 20.9	+2.3
	98nm,1.4s						
SNZO	South Karori	22.64	169	eP	P	08 45 21.4	+0.3
	165nm,1.4s						
THZ	Tophouse	22.81	173	eP	P	08 45 24.4	+1.6
	22nm,1.4s						
DCZ	Deep Cove	26.35	183	eP	P	08 45 56.1	+1.6
	45nm,1.4s						
STKA	Stephens Creek	27.88	237	P	P	08 46 08.8	+0.4
	1.6nm,0.6s,baz=99,slow=7.6,SNR=4.2						
WB2	Warramunga Arr	32.81	263	eP	P	08 46 51.6	-0.2
	4.3nm,0.8s						
WRAB	Tennant Creek	32.81	263	eP	P	08 46 51.3	-0.5
	8.2nm,1.3s						
WR1	Warramunga Arr	32.82	263	eP	P	08 46 51.4	-0.5
	6.7nm,1.3s						
WR1				ePcP	PcP	08 49 31.2	+0.6
WRA	Warramunga Arr	32.82	263	P	P	08 46 51.4	-0.5
	2.6nm,0.9s,baz=94,slow=8.7,SNR=12						
WRA				PcP	PcP	08 49 31.2	+0.5
	0.6nm,0.8s,baz=100,slow=6.4,SNR=5.0						
AS01	Alice Springs	33.07	256	eP	P	08 46 54.5	+0.4
AS31	Alice Springs	33.11	256	eP	P	08 46 55.0	+0.6
	4.2nm,0.6s						
ASAR	Alice Springs	33.11	256	P	P	08 46 54.9	+0.4
	9.7nm,0.7s,baz=83,slow=8.9,SNR=129						
ASAR				PcP	PcP	08 49 31.3	-0.1
	0.6nm,0.8s,baz=87,slow=5.8,SNR=4.1						
ASAR				S	S	08 51 55.2	+0.3
	0.7nm,1.1s,baz=85,slow=16,SNR=5.1						
MTN	Manton Dam	37.05	274	eP	P	08 47 26.9	-1.1
	39nm,1.4s						
FITZ	Fitzroy Crossi	41.20	264	eP	P	08 48 03.4	+1.1
	12nm,1.1s						
FITZ	Fitzroy Crossi	41.20	264	P	P	08 48 03.6	+1.4
	4.8nm,0.8s,baz=125,slow=12,SNR=4.6						
MBWA	Marble Bar	46.33	259	eP	P	08 48 42.5	-0.4
	7.6nm,1.0s						
MJAR	Matsushiro Arr	62.60	332	P	P	08 50 38.3	-1.0
	2.2nm,0.8s,baz=181,slow=6.6,SNR=4.8						
MAJO	Matsushiro	62.60	332	eP	P	08 50 38.3	-1.0
NJ2	Nanjing	70.07	316	eP	P	08 51 26.5	-0.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
QSPA	South Pole Qui	70.95	180	P	P	08 51 31.7	0.0
	2.8nm,0.9s,baz=40,slow=2.4,SNR=6.4						
PETK	Petropavlovsk-	72.59	353	P	P	08 51 41.6	+0.4
	9.5nm,0.7s,baz=163,slow=6.9,SNR=15						
PEA1	Petropavlovsk-	72.59	353	eP	P	08 51 41.6	+0.3
CN2	Changchun	74.31	329	eP	P	08 51 51.3	-0.1
GYA	Guiyang	75.70	305	eP	P	08 52 00.3	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	77.98	313	P	P	08 52 22.5	+10
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,130nm,4.3s						
KMI	Kunming	78.15	302	P	P	08 52 14.8	+1.1
KMI				pmax	pmax		
	comp=Z,18nm,0.6s						
CMAR	Chiang Mai Arr	78.40	294	P	P	08 52 16.5	+1.6
	comp=Z,1.5nm,0.4s,baz=133,slow=3.9,SNR=6.1						
HHC	Hu-ho-hao-te	80.08	319	eP	P	08 52 24.3	+0.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,8.1s						
CD2	Chengdu	80.11	307	eP	P	08 52 24.0	0.0
LZH	Lanzhou	82.59	312	eP	P	08 52 37.3	+0.3
LZH				pP	pP	08 53 31.5	-5.1
LZH				sP	sP	08 53 53.0	-10
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
GAMB	Gambell	83.94	8	eP	P	08 52 43.4	+0.5
	comp=Z,4.6nm,0.6s						
GTA	Gaotai	86.99	313	P	P	08 52 59.8	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONA0	Songino Array	87.08	323	eP	P	08 52 59.4	+0.4
SONM	Songino Array	87.08	323	P	P	08 52 59.4	+0.4
	comp=Z,4.0nm,0.9s,baz=139,slow=5.6,SNR=17						
SONA1	Songino Array	87.08	323	eP	P	08 52 59.6	+0.6
YBH	Yreka Blue Hor	87.23	44	P	P	08 53 00.2	+0.4
	comp=Z,3.8nm,0.9s,baz=238,slow=2.6,SNR=7.0						
NVAR	Mina Array Bea	88.75	49	P	P	08 53 07.7	+0.5
	comp=Z,1.6nm,0.8s,baz=237,slow=8.1,SNR=8.2						
MOD	Modoc Plateau	88.91	45	eP	P	08 53 09.1	+1.3
	comp=Z,10nm,1.1s						
IL1	Eielson Array	90.11	17	eP	P	08 53 11.0	-1.7
ILAR	Eielson Array	90.11	17	P	P	08 53 10.9	-1.8
	comp=Z,1.7nm,0.7s,baz=238,slow=4.9,SNR=25						
WVOR	Wild Horse Val	90.25	45	eP	P	08 53 14.2	+0.2
	comp=Z,12nm,1.2s						
U15A	North Rim	92.33	52	eP	P	08 53 23.7	-0.3
	comp=Z,4.9nm,0.8s						
WMQ	Urumqi	97.07	314	eP	Pdif	08 53 45.5	+0.3
YKA	Yellowknife Ar	100.57	27	P	Pdif	08 54 01.0	+0.9
	comp=Z,1.0nm,0.7s,baz=253,slow=4.6,SNR=14						
YKB5	Yellowknife Ar	100.57	27	ePdif	Pdif	08 54 01.1	+0.9
MK32	Makanchi Array	101.60	316	ePdif	Pdif	08 54 06.8	+1.6
MKAR	Makanchi Array	101.60	316	P	Pdif	08 54 06.8	+1.6
	comp=Z,0.4nm,0.7s,baz=86,slow=7.4,SNR=5.0						
ARA0	ARCESS Array S	124.92	345	ePKPdf	PKiKP	08 59 10.1	-1.3
ARCES	ARCESS Array B	124.92	345	PKP	PKiKP	08 59 10.1	-1.3
	comp=Z,5.4nm,0.8s,baz=54,slow=6.2,SNR=4.5						
CONA	Conrad Observa	143.99	329	i PKPdf	PKPdf	08 59 47.7	+0.5
	comp=Z,5.1nm,0.8s						
GERES	GERESS Array B	144.34	332	PKP	PKPdf	08 59 46.6	-1.2
	comp=Z,3.1nm,0.8s,baz=26,slow=3.4,SNR=17						
ARSA	Arzberg	144.63	329	i PKPdf	PKPdf	08 59 48.2	0.0
	comp=Z,8.3nm,1.4s						
MOA	Molln	144.81	330	i PKPdf	PKPdf	08 59 48.9	+0.4
	comp=Z,19nm,1.0s						
SOKA	Soboth	145.27	328	i PKPab	PKPab	08 59 50.4	+0.2
	comp=Z,11nm,0.9s						
SQTA	Sankt Quirin	146.67	332	i PKPab	PKPab	08 59 54.5	-1.1
	comp=Z,8.0nm,0.8s						
TORD	Torodi Ar. Bea	166.60	246	PKP	PKPdf	09 00 18.2	+0.4
	comp=Z,1.3nm,0.9s,baz=55,slow=1.6,SNR=6.0						
TORD				PKPab	PKPab	09 01 21.4	-0.2
	comp=Z,1.0nm,1.0s,baz=145,slow=3.3,SNR=4.3						
TOA1	Torodi Ar. Sit	166.61	246	ePKPdf	PKPdf	09 00 18.2	+0.4
TOA1				ePKPab	PKPab	09 01 21.4	-0.2

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*ISK **21** 08:40:47.3, 38°.34N×40°.96E, h2km, ML2.0/3*

*DDA **21** 08:40:48.5, 38°.33N×40°.95E, h7km±3km, ML2.6*

ISC 21 08:40:48.4±1.0, 38°.33N±0°.04×40°.97E±0°.04, h17km±8km, n7, σ0s65/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVAN	Silvan-Diyarba	0.25	134	PG	Pg	08 40 53.6	-0.5
SVAN				SG	Sg	08 40 58.1	+0.2
SVAN	Silvan-Diyarba	0.25	134	i P	Pb	08 40 54.2	-0.4
SVAN				i S	Sg	08 40 58.8	+0.9
SVAN				IAML_P			
	comp=Z,2μm,0.1s						
HANI	Diyarbakir_Han	0.46	281	i P	Pg	08 40 57.2	-0.4
HANI				i S	Sg	08 41 04.1	+0.2
HANI				IAML_P			
	comp=Z,3μm,0.1s						
BNGB	Bingl	0.70	341	PG	Pg	08 41 01.5	-0.7
BNGB				SG	Sg	08 41 11.8	+0.3
DIYA	Diyarbakir	0.78	239	i P	Pb	08 41 04.3	+0.7
DIYA				i S	Sn	08 41 15.4	-0.7
DIYA				IAML_P			
	comp=Z,937nm,0.1s						
SRTM	Siirt_Merkez	0.82	114	i P	Pn	08 41 05.7	+0.2
SRTM				i S	Sn	08 41 17.8	+0.5
SRTM				IAML_P			
	comp=Z,629nm,0.2s						
MAZI	Mazidag	0.96	206	PG	Pg	08 41 06.1	-0.9
MAZI				SG	Sn	08 41 20.9	+0.3

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*IDC **21** 08:41:42.8±2.1, 8°.09S×122°.09E, h0km, mb3.3/1, mb1 3.5/3, mb1mx3.3/36, mbtmp3.3/3, ML2.2/2, Error ellipse: s-maj=269.2km s-min=28.5km az=55.0*

*ISCJB **21** 08:41:44.5±1.4, 8°.5S±0°.1×121°.7E±0°.1, h31km, mb3.2/1, Error ellipse: s-maj=18.8km s-min=15.3km az=12.7*

*DJA **21** 08:41:45.8±0.8, 9°S±7°×12°2E±°, h10km, M3.1/4, MLv3.1/4*

ISC 21 08:41:45.8±1.4, 8°.6S±0°.1×121°.76E±0°.09, h31km, n6, σ1s88/7, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.21	201	P	Pb	08 41 52.1	-0.3
EDFI				S	Sb	08 41 55.6	-1.2
MMRI	Maumere	0.48	100	P	Pb	08 41 55.3	-0.6
SOEI	Soe	2.75	116	P	Pb	08 42 34.1	-0.2
WRA	Warramunga Arr	16.62	134	Pn	P	08 45 37.3	-1.6
	0.0nm,0.3s,baz=309,slow=15,SNR=2.6						
ASAR	Alice Springs	19.00	144	P	Pn	08 46 09.1	+3.1
	0.1nm,0.3s,baz=326,slow=12,SNR=8.1						
MKAR	Makanchi Array	65.34	331	P	P	08 52 25.3	+0.2
	0.1nm,0.4s,baz=147,slow=8.1,SNR=2.5						

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*IDC **21** 09:02:08.7±1.9, 63°.30N×150°.69W, h104km±20km, mb3.1/4, mb1 3.4/8, mb1mx3.1/48, mbtmp3.4/8, Error ellipse: s-maj=21.6km s-min=18.7km az=149.0*

*ISCJB **21** 09:02:09.2±0.3, 63°.21N±0°.03×150°.49W±0°.07, h127km±3km, mb3.2/4, Error ellipse: s-maj=5.1km s-min=4.2km az=26.4*

*NEIC **21** 09:02:10.4±0.0, 63°.20N×150°.48W, h122km, ML3.1(AEIC), After AEIC.*

ISC 21 09:02:10.2±0.8, 63°.19N±0°.04×150°.51W±0°.04, h126km±6km, n66, σ1s10/76, mb3.2/4, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.28	21	P	Pn	09 02 27.7	-0.3
TRF				S	Sn	09 02 40.6	-0.9
HUR	Hurricane	0.45	118	P	Pn	09 02 28.1	-0.4
HUR				S	Sn	09 02 42.0	-0.4
CAST	Castle Rocks	0.74	289	P	Pn	09 02 30.1	-0.4
CAST				S	Sn	09 02 44.9	-1.0
RND	Reindeer	0.78	73	P	Pn	09 02 30.6	-0.2
RND				S	Sn	09 02 45.7	-0.8
PPLA	Purkeypile	0.82	250	P	Pn	09 02 31.2	0.0
PPLA				S	Sn	09 02 47.0	-0.1
MCK	McKinley	0.89	52	P	Pn	09 02 31.6	-0.1
MCK				S	Sn	09 02 47.6	-0.5
CHUM	Lake Minchumin	1.06	312	P	Pn	09 02 33.0	-0.2
BWN	Browne	1.09	25	P	Pn	09 02 33.7	+0.2
BWN				S	Sn	09 02 51.1	-0.2
DHY	Denali Highway	1.43	93	P	Pn	09 02 37.3	0.0
NEA	Nenana	1.53	24	P	Pn	09 02 37.6	-0.7
NEA				S	Sn	09 02 57.8	-1.9
GHO	Glory Hole Cre	1.60	152	P	Pn	09 02 39.2	0.0
WRH	Wood River Hil	1.68	39	P	Pn	09 02 39.5	-0.5
SML	Sawmill	1.72	143	P	Pn	09 02 40.1	-0.4
PMR	Palmer	1.73	158	P	Pn	09 02 40.2	-0.3
SUA	Susitna One	1.74	184	P	Pn	09 02 41.0	+0.2
MLY	Manley	1.85	357	P	Pn	09 02 41.5	-0.6
HDA	Harding Lake	2.00	51	P	Pn	09 02 43.1	-0.7
SCM	Sheep Creek Mo	2.01	131	P	Pn	09 02 43.5	-0.5
KNK	Knik Glacier	2.03	151	P	Pn	09 02 43.8	-0.4
MDM	Murphy Dome	2.04	28	P	Pn	09 02 43.8	-0.5
COLA	College	2.06	34	P	Pn	09 02 44.0	-0.5
PS08	TAPS Pump Stn8	2.13	49	P	Pn	09 02 44.6	-0.8
RC01	Rabbit Creek A	2.14	170	P	Pn	09 02 45.3	-0.3
SPWE	Spurr West	2.15	207	P	Pn	09 02 46.7	+0.9
PS10	TAPS Pump St10	2.15	82	P	Pn	09 02 46.5	+0.7
IL1	Eielson Array	2.25	44	P	Pn	09 02 46.1	-0.8
ILAR	Eielson Array	2.25	44	P	Pn	09 02 46.2	-0.7
	13nm,0.3s,baz=227,slow=12,SNR=884						
ILAR				S	Sn	09 03 11.8	-3.5
	4.8nm,0.3s,baz=219,slow=16,SNR=9.8						
PAX	Paxson	2.31	93	P	Pn	09 02 47.6	-0.2
TT01	Tatalina	2.52	266	P	Pn	09 02 50.0	-0.4
PWL	Port Wells	2.55	155	P	Pn	09 02 50.5	-0.4
PS11	TAPS Pump St11	2.58	113	P	Pn	09 02 51.3	+0.1
HARP	HAARP	2.58	105	P	Pn	09 02 51.1	-0.1
RIDG	Independ'e Rid	2.61	75	P	Pn	09 02 51.1	-0.4
SLKM	Skilak Lake	2.69	177	P	Pn	09 02 53.0	+0.4
PS06	TAPS Pump Stn6	2.70	7	P	Pn	09 02 52.3	-0.3
KLU	Klutina	2.74	126	P	Pn	09 02 52.5	-0.8
GLI	Glacier Island	2.82	144	P	Pn	09 02 53.4	-0.9
JPK	Jack Peak	2.82	138	P	Pn	09 02 53.5	-0.9
RDWB	Redoubt West	2.93	203	P	Pn	09 02 56.2	+0.4
DOT	Dot Lake	2.94	78	P	Pn	09 02 55.0	-0.7
RED	Redoubt Volcan	2.98	202	P	Pn	09 02 56.8	+0.4
SCRK	Sand Creek	3.02	72	P	Pn	09 02 56.5	-0.5
DIV	Divide	3.04	131	P	Pn	09 02 55.7	-1.4
IM3	Indian Mountai	3.13	335	P	Pn	09 02 57.7	-0.6
SEW	Seward	3.14	170	P	Pn	09 02 57.9	-0.5
SVW2	Sparrevohn	3.17	231	P	Pn	09 02 58.9	0.0
PRP	Porcupine Dome	3.19	41	P	Pn	09 02 58.1	-1.0
GCSA	Galena City Sc	3.21	302	P	Pn	09 02 59.0	-0.2
BRLK	Bradley Lake	3.44	183	P	Pn	09 03 02.5	+0.1
MCARA	McCarthy VSAT	3.94	114	P	Pn	09 03 09.5	+0.5
BCA3	Beaver Creek A	3.96	88	P	Pn	09 03 08.3	-1.0
COLD	Coldfoot	4.06	2	P	Pn	09 03 10.8	+0.3
BALM	Baldy	4.40	116	P	Pn	09 03 14.5	-0.7
EGAK	Eagle	4.42	65	P	Pn	09 03 14.9	-0.3
BVCY	Beaver Creek	4.50	96	P	Pn	09 03 16.2	-0.2
YUK2	White River	4.70	103	P	Pn	09 03 19.4	+0.3
YUK3	Moose Creek	4.88	102	P	Pn	09 03 21.9	+0.3
BM3	Burnt Mountain	4.92	28	P	Pn	09 03 21.4	-0.5
DAWY	Dawson	5.04	75	P	Pn	09 03 23.0	-0.6
KDAK	Kodiak Island	5.52	192	P	Pn	09 03 29.4	-0.6
	0.9nm,0.3s,baz=49,slow=8.6,SNR=91						
KDAK				S	Sn	09 04 26.0	-6.3
	1.9nm,0.3s,baz=66,slow=20,SNR=10						
INK	Inuvik	8.65	46	P	Pn	09 04 12.4	+0.3
	0.1nm,0.3s,baz=237,slow=16,SNR=4.8						
YKA	Yellowknife Ar	16.28	76	P	P	09 05 51.5	-0.2
	0.0nm,0.3s,baz=294,slow=13,SNR=3.2						
SEY	Seymchan	25.15	295	P	P	09 07 21.9	-1.2
	0.5nm,0.4s,baz=88,slow=14,SNR=4.6						
PDAR	Pinedale Array	31.22	111	P	P	09 08 19.4	+1.9
	0.4nm,0.8s,baz=308,slow=4.4,SNR=3.9						
NVAR	Mina Array Bea	31.46	127	P	P	09 08 21.6	+1.9
	0.3nm,0.6s,baz=321,slow=7.0,SNR=2.8						
TXAR	Lajitas Array	45.15	116	P	P	09 10 15.6	+1.6
	0.2nm,0.5s,baz=321,slow=7.1,SNR=5.6						

IDC 21 09:11:48.4±2.9, 53°.69N×87°.11E, h0km, mb1 2.7/2, mb1mx2.7/57, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=25.8km s-min=16.8km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.38	282	i		09 20 03.4	
	baz=96,slow=337,SNR=0.5						
ZALV	Zalesovo Beam	1.38	282	Pg	Pg	09 12 13.8	-1.1
	0.7nm,0.3s,baz=101,slow=16,SNR=7.1						
ZALV				Lg	Lg	09 12 33.0	
	1.0nm,0.3s,baz=106,slow=31,SNR=10						
ZALV				Rg	Rg	09 12 40.2	
	8.0nm,0.9s,baz=117,slow=22,SNR=13						
KURBB	Kurchatov Arra	6.11	243	Pn	Pn	09 13 20.9	+1.0
	0.0nm,0.3s,baz=62,slow=14,SNR=4.2						
KURBB				Lg	Lg	09 14 59.1	
	0.0nm,0.3s,baz=58,slow=32,SNR=3.1						
MKAR	Makanchi Array	7.56	206	Pn	Pn	09 13 41.3	+1.4
	0.1nm,0.3s,baz=31,slow=12,SNR=3.4						
MKAR				Lg	Lg	09 15 45.4	
	0.1nm,0.3s,baz=29,slow=30,SNR=3.2						

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*IDC **21** 09:23:10.8±10.0, 0°.82N×123°.25E, h172km±101km, mb2.9/3, mb1 3.0/3, mb1mx2.8/48, mbtmp3.4/3, Error ellipse: s-maj=256.2km s-min=22.2km az=61.0*

*ISCJB **21** 09:23:12.0±0.7, 0°.16N±0°.08×122°.09E±0°.08, h200km, mb3.2/3, Error ellipse: s-maj=11.7km s-min=11.1km az=153.9*

*DJA **21** 09:23:16.0±0.8, 0°N±4°×12°2E±°, h154km±6km, M3.0/7, MLv3.0/7*

ISC 21 09:23:12.7±1.0, 0°.16N±0°.09×122°.06E±0°.08, h200km, n9, σ2s13/14, mb3.1/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.34	340	P	Pn	09 23 37.2	-2.1
MRSI				S	Sn	09 23 55.2	-4.8
APSI	Ampana	1.14	201	P	Pn	09 23 44.1	+0.6
APSI				S	Sn	09 24 05.8	-1.6
LUWI	Luwuk	1.39	149	P	Pn	09 23 44.8	-0.6
LUWI				S	Sn	09 24 08.1	-2.8
KMSI	Cibinong	1.96	78	P	Pn	09 23 52.1	+1.2
KMSI				S	Sn	09 24 19.2	-1.3
MPSI	Mapaga	2.17	275	P	Pn	09 23 53.9	+0.9
FITZ	Fitzroy Crossi	18.48	169	S	S	09 30 33.6	-0.6
	0.1nm,0.3s,baz=280,slow=17,SNR=5.0						
WRA	Warramunga Arr	23.32	150	P	P	09 28 03.6	+0.5
	0.4nm,0.9s,baz=328,slow=11,SNR=14						
WRA				S	S	09 31 42.4	-18
	0.2nm,0.8s,baz=327,slow=28,SNR=3.8						
ASAR	Alice Springs	26.33	155	P	P	09 28 31.9	+1.6
	0.2nm,0.5s,baz=345,slow=14,SNR=5.5						
ASAR				PcP	PcP	09 31 52.3	+1.2
	0.2nm,0.3s,baz=347,slow=1.9,SNR=5.5						
MKAR	Makanchi Array	57.99	329	P	P	09 32 45.8	+1.4
	0.5nm,0.3s,baz=122,slow=8.1,SNR=11						

IDC 21 09:23:36.4±2.0, 8°.32S×68°.48E, h0km, mb3.6/6, mb1 3.8/6,

mb1mx3.5/50,**mbtmp3.6**/6,**MS3.3**/7,**Ms1 3.3**/7, **ms1mx3.0**/43,**Error ellipse: s-maj=60.6km s-min=28.0km az=61.0,Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**3.17**	**52**	T	T	09 28 15.3	
	baz=230,slow=75,SNR=183						
H08N2	**Diego Garcia H**	**3.19**	**52**	T	T	09 28 13.6	
	baz=230,slow=75,SNR=201						
H08N1	**Diego Carcia H**	**3.19**	**52**	T	T	09 28 12.5	
	baz=230,slow=75,SNR=183						
H08S1	**Diego Carcia H**	**4.02**	**81**	T	T	09 29 44.2	
	baz=256						
H08S3	**Diego Garcia H**	**4.03**	**80**	T	T	09 29 46.4	
	baz=256						
H08S2	**Diego Garcia H**	**4.03**	**81**	T	T	09 29 45.3	
	baz=256						
PALK	**Pallekele**	**19.71**	**39**	LR	LR	09 34 06.7	
	comp=Z,104nm,19.2s,baz=303,slow=32						
PSI	**Prapat**	**32.31**	**71**	LR	LR	09 41 49.3	
	comp=Z,115nm,18.2s,baz=262,slow=34						
CMAR	**Chiang Mai Arr**	**40.15**	**48**	P	P	09 31 14.4	-0.1
	0.6nm,0.3s,baz=240,slow=9.0,SNR=4.1						
CMAR				LR	LR	09 46 47.4	
	comp=Z,14nm,18.1s,baz=225,slow=35						
GEYT	**Alibeck**	**47.02**	**349**	LR	LR	09 51 17.2	
	comp=Z,34nm,18.4s,baz=30,slow=35						
H01W3	**Cape Leeuwin H**	**49.42**	**129**	T	T	10 25 35.1	
	baz=290						
H01W2	**Cape Leeuwin H**	**49.43**	**129**	T	T	10 25 36.2	
	baz=290						
H01W1	**Cape Leeuwin H**	**49.44**	**129**	T	T	10 25 37.3	
	baz=290						
MKAR	**Makanchi Array**	**56.23**	**11**	P	P	09 33 17.9	-0.5
	0.1nm,0.4s,baz=206,slow=7.1,SNR=2.9						
BRTR	**Keskin Array B**	**57.66**	**329**	LR	LR	09 56 56.8	
	comp=Z,17nm,20.2s,baz=132,slow=35						
KURBB	**Kurchatov Arra**	**59.35**	**7**	P	P	09 33 39.0	-1.1
	0.1nm,0.3s,baz=204,slow=7.0,SNR=3.3						
BVAR	**Borovoye Array**	**61.13**	**1**	LR	LR	09 59 17.1	
	comp=Z,25nm,20.6s,baz=226,slow=35						
ASAR	**Alice Springs**	**64.23**	**112**	P	P	09 34 13.6	-0.2
	0.8nm,1.0s,baz=278,slow=8.0,SNR=5.2						
WRA	**Warramunga Arr**	**64.57**	**108**	P	P	09 34 15.8	-0.2
	0.7nm,0.9s,baz=279,slow=6.4,SNR=3.7						
SONM	**Songino Array**	**65.18**	**27**	P	P	09 34 20.7	+1.2
	0.4nm,0.6s,baz=219,slow=7.1,SNR=3.1						
TORD	**Torodi Ar. Bea**	**69.66**	**287**	LR	LR	10 03 41.6	
	comp=Z,32nm,19.3s,baz=305,slow=34						
PDAR	**Pinedale Array**	**145.65**	**357**	PKPbc	PKPdf	09 43 17.2	-0.3
	0.3nm,0.9s,baz=349,slow=0.9,SNR=2.7						
NVAR	**Mina Array Bea**	**149.41**	**10**	PKPbc	PKPbc	09 43 28.0	-0.2
	0.1nm,0.3s,baz=262,slow=1.8,SNR=2.6						

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*ISCJB **21** 09:23:46.5±0.4,24°.23N±0°.01×122°.18E±0°.01,h9^{km}±2^{km}, Error ellipse: s-maj=2.1km s-min=1.9km az=42.5*

*JMA **21** 09:23:47.2±0.2,24°.17N×122°.09E,h45^{km}±4^{km},M3.2*

*TAP **21** 09:23:47.4,24°.28N×122°.10E,h23^{km},ML3.8,B*

ISC 21 09:23:47.0±0.9,**24°.23N**±0°.02×**122°.13E**±0°.02,**h17**^{km}±7^{km}, **n100**,σ**0^{s}.57**/178,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.32**	**360**	*e*P	**Pb**	**09 23 54.4**	**+0.1**
	baz=12						
EOS1				*e*S	**Sb**	**09 23 59.9**	**+0.8**
	baz=12						
NANB	**Nanao**	**0.40**	**300**	*e*P	**Pg**	**09 23 55.2**	**0.0**
	baz=299						
NANB				S	**Sg**	**09 24 00.8**	**-0.1**
	baz=299						
ENA	**Nanau**	**0.41**	**300**	P	**Pg**	**09 23 55.2**	**-0.1**
	baz=298						
ENA				S	**Sg**	**09 24 00.9**	**-0.2**
	baz=298						
TWC	**Suao**	**0.46**	**326**	P	**Pg**	**09 23 55.7**	**-0.6**
	baz=326						
TWC				S	**Sg**	**09 24 01.5**	**-1.1**
	baz=326						
NACB	**Ninganchiao**	**0.49**	**264**	*e*P	**Pb**	**09 23 57.8**	**+0.6**
	baz=259						
NACB				*e*S	**Sn**	**09 24 06.6**	**-0.7**
	baz=259						
TWD	**Chiawan**	**0.51**	**254**	P	**Pb**	**09 23 58.3**	**+0.8**
	baz=250						
TWD				S	**Sn**	**09 24 06.8**	**-1.0**
	baz=250						
ENLB	**Shoufeng**	**0.58**	**236**	P	**Pn**	**09 24 00.2**	**-0.2**
	baz=214						
ETLH	**Xiulin Townshi**	**0.59**	**268**	P	**Pg**	**09 23 59.4**	**+0.6**
	baz=262						
ETLH				*e*S	**Sn**	**09 24 09.0**	**-0.9**
	baz=262						
ILA	**Ilan**	**0.64**	**327**	P	**Pb**	**09 23 59.4**	**-0.4**
	baz=327						
ILA				S	**Sb**	**09 24 07.9**	**-0.5**
	baz=327						
EGS		**0.64**	**344**	P	**Pb**	**09 23 59.4**	**-0.4**
	baz=346						
EGS				*e*S	**Sb**	**09 24 08.2**	**-0.3**
	baz=346						
TWE	**Neicheng**	**0.65**	**320**	*e*P	**Pb**	**09 23 59.3**	**-0.6**
	baz=324						
TWE				*e*S	**Sb**	**09 24 07.8**	**-0.8**
	baz=324						
ENTT	**Nioudou**	**0.66**	**309**	P	**Pb**	**09 23 59.7**	**-0.4**
	baz=307						
ENTT				*e*S	**Sb**	**09 24 08.3**	**-0.6**
	baz=307						
NDT	**Datong Townshi**	**0.68**	**304**	P	**Pb**	**09 24 00.2**	**-0.1**
	baz=306						
NDT				*e*S	**Sb**	**09 24 08.5**	**-0.9**
	baz=306						
NTC	**Toucheng**	**0.68**	**336**	*e*P	**Pb**	**09 24 00.0**	**-0.4**
	baz=346						
NTC				*e*S	**Sg**	**09 24 09.8**	**+0.2**
	baz=346						
NNSB	**Datong**	**0.71**	**287**	P	**Pg**	**09 24 01.2**	**+0.2**
	baz=289						
NNSB				*e*S	**Sg**	**09 24 10.9**	**+0.4**
	baz=289						
NNS	**Nan Shan**	**0.72**	**287**	P	**Pb**	**09 24 01.4**	**+0.2**
	baz=290						
NNS				S	**Sg**	**09 24 12.0**	**+1.2**
	baz=290						
ESL	**Shilin**	**0.76**	**237**	*e*P	**Pb**	**09 24 02.1**	**+0.3**
	baz=231						
ESL				*e*S	**Sn**	**09 24 13.5**	**-0.5**
	baz=231						
JYNG	**Yonagunijimaku**	**0.78**	**73**	P	**Pg**	**09 24 02.5**	**+0.3**
JYNG				*e*S	**Sn**	**09 24 13.7**	**-0.7**
TWB1	**Santiao Chiao**	**0.79**	**351**	P	**Pb**	**09 24 02.0**	**-0.3**
	baz=345						
TWB1				*e*S	**Sg**	**09 24 12.8**	**-0.1**
	baz=345						
NWLT	**Wulai**	**0.79**	**314**	*e*P	**Pb**	**09 24 02.2**	**-0.1**
	baz=308						
NWLT				*e*S	**Sb**	**09 24 12.7**	**-0.1**
	baz=308						
TIPB	**Shuangxi**	**0.79**	**340**	P	**Pb**	**09 24 01.9**	**-0.4**
	baz=349						
TIPB				*e*S	**Sb**	**09 24 11.9**	**-0.9**
	baz=349						
WHF	**Hehuan Shan**	**0.79**	**264**	*e*P	**Pb**	**09 24 02.6**	**+0.1**
	baz=259						
WHF				*e*S	**Sn**	**09 24 14.7**	**-0.7**
	baz=259						
YHNB	**Yeheng**	**0.82**	**303**	P	**Pb**	**09 24 02.8**	**0.0**
	baz=310						
YHNB				*e*S	**Sb**	**09 24 13.7**	**+0.1**
	baz=310						
NSK	**Sanguang**	**0.83**	**303**	P	**Pb**	**09 24 03.1**	**0.0**
	baz=310						
NSK				*e*S	**Sg**	**09 24 14.3**	**0.0**
	baz=310						
YOJ	**Yonaguni jima**	**0.84**	**74**	*e*P	**Pg**	**09 24 03.5**	**+0.2**
	baz=71						
YOJ				*e*S	**Sg**	**09 24 15.0**	**+0.6**
	baz=71						
YOJ	**Yonaguni jima**	**0.84**	**74**	P	**Pg**	**09 24 03.6**	**+0.2**
YOJ				S	**Sn**	**09 24 15.5**	**-0.4**
EGFH	**Guangfu**	**0.85**	**229**	*e*P	**Pb**	**09 24 03.3**	**0.0**
	baz=210						
TWT	**Tachien**	**0.87**	**272**	P	**Pn**	**09 24 04.7**	**+0.1**
	baz=259						
TWT				S	**Sn**	**09 24 16.6**	**-0.4**
	baz=259						
TDCB	**Techi**	**0.89**	**272**	*e*P	**Pb**	**09 24 04.2**	**+0.2**
	baz=261						
TDCB				*e*S	**Sn**	**09 24 17.1**	**-0.3**
	baz=261						
CHGB	**Renai**	**0.89**	**259**	*e*P	**Pb**	**09 24 04.5**	**+0.4**
	baz=239						
CHGB				*e*S	**Sn**	**09 24 17.5**	**+0.1**
	baz=239						
NWF	**Wu-fen Shan**	**0.90**	**339**	*e*P	**Pb**	**09 24 04.2**	**0.0**
	baz=356						
NWF				*e*S	**Sb**	**09 24 16.0**	**+0.1**
	baz=356						
WFSB	**Wu-fen Shan**	**0.90**	**339**	*e*P	**Pb**	**09 24 04.1**	**0.0**
	baz=356						
WFSB				*e*S	**Sg**	**09 24 16.2**	**-0.2**
	baz=356						
TWA	**Mucha**	**0.90**	**327**	P	**Pb**	**09 24 04.3**	**+0.1**
	baz=332						
TWA				*e*S	**Sb**	**09 24 16.1**	**+0.2**
	baz=332						
OWD	**Renai**	**0.91**	**253**	*e*P	**Pb**	**09 24 04.7**	**+0.2**
	baz=248						
OWD				*e*S	**Sb**	**09 24 16.8**	**+0.4**
	baz=248						
NHDH	**Xindian Distri**	**0.92**	**323**	P	**Pb**	**09 24 04.4**	**-0.1**
	baz=314						
NHDH				*e*S	**Sb**	**09 24 16.2**	**-0.2**
	baz=314						
TATO	**Taipei**	**0.95**	**322**	*e*P	**Pb**	**09 24 05.1**	**+0.1**
	baz=313						
TATO				*e*S	**Sb**	**09 24 16.9**	**-0.4**
	baz=313						
HGSD	**Ruisui**	**0.98**	**222**	*e*P	**Pb**	**09 24 05.2**	**-0.3**
	baz=205						
TAP	**Taipei**	**0.99**	**325**	P	**Pg**	**09 24 06.5**	**+0.3**
	baz=340						
TAP				*e*S	**Sg**	**09 24 19.2**	**0.0**
	baz=340						
WLTB	**Daxi**	**1.01**	**308**	*e*P	**Pn**	**09 24 06.5**	**+0.1**
	baz=313						
WLTB				*e*S	**Sb**	**09 24 19.3**	**+0.2**
	baz=313						
VWDT	**VWDT**	**1.02**	**243**	*e*P	**Pb**	**09 24 06.0**	**-0.1**
	baz=228						
VWDT				*e*S	**Sn**	**09 24 20.2**	**-0.2**
	baz=228						
EHY	**Hungye**	**1.03**	**226**	*e*P	**Pb**	**09 24 05.2**	**-1.2**
	baz=221						
YM01	**YM01**	**1.05**	**331**	*e*P	**Pb**	**09 24 06.6**	**-0.1**
	baz=346						
YM01				*e*S	**Sb**	**09 24 20.0**	**-0.2**
	baz=346						
YM11	**YM11**	**1.06**	**332**	*e*P	**Pb**	**09 24 06.6**	**-0.4**
	baz=332						
YM05	**YM05**	**1.07**	**331**	*e*P	**Pb**	**09 24 06.3**	**-0.7**
	baz=346						
YM05				*e*S	**Sn**	**09 24 21.2**	**-0.4**
	baz=346						
YM04	**YM04**	**1.07**	**330**	*e*P	**Pb**	**09 24 06.8**	**-0.3**
	baz=344						
YM04				*e*S	**Sb**	**09 24 20.6**	**-0.1**
	baz=344						
YM08	**YM08**	**1.08**	**333**	*e*P	**Pb**	**09 24 06.8**	**-0.4**
	baz=334						
YM08				*e*S	**Sb**	**09 24 20.9**	**0.0**
	baz=334						
WHP	**Taichung City**	**1.08**	**273**	P	**Pn**	**09 24 07.9**	**+0.4**
	baz=270						
WHP				*e*S	**Sn**	**09 24 22.1**	**0.0**
	baz=270						
TWS1	**Kuangyinshan**	**1.09**	**323**	*e*P	**Pb**	**09 24 07.2**	**-0.1**
	baz=337						
TWS1				S	**Sg**	**09 24 22.5**	**+0.2**
	baz=337						
LIOB	**Emei**	**1.10**	**293**	*e*P	**Pb**	**09 24 07.2**	**-0.4**
	baz=291						
LIOB				*e*S	**Sg**	**09 24 23.3**	**+0.6**
	baz=291						
NSTT	**Nanjuang**	**1.10**	**292**	P	**Pg**	**09 24 08.3**	**-0.1**
	baz=290						
NSTT				*e*S	**Sg**	**09 24 23.6**	**+0.7**
	baz=290						
NTST	**Danshui**	**1.12**	**327**	*e*P	**Pn**	**09 24 07.7**	**-0.2**
	baz=339						
NTST				*e*S	**Sn**	**09 24 23.0**	**+0.1**
	baz=339						
YULB	**Yu-li**	**1.13**	**223**	*e*P	**Pn**	**09 24 06.5**	**-1.5**
	baz=218						
NCU	**National Centr**	**1.13**	**311**	*e*P	**Pb**	**09 24 08.4**	**+0.3**
	baz=312						
NCU				S	**Sg**	**09 24 23.9**	**+0.1**
	baz=312						
NCUH	**Zhongli**	**1.13**	**311**	P	**Pb**	**09 24 08.4**	**+0.3**
	baz=311						
NCUH				*e*S	**Sg**	**09 24 24.2**	**+0.4**
	baz=311						
TWY	**Chenhua**	**1.15**	**335**	P	**Pb**	**09 24 08.8**	**+0.4**
	baz=337						
TWY				*e*S	**Sn**	**09 24 23.7**	**+0.1**
	baz=337						
TWF1	**Yuli**	**1.16**	**221**	*e*P	**Pn**	**09 24 07.5**	**-0.9**
	baz=232						
SSLB	**Suanglung**	**1.16**	**248**	*e*P	**Pn**	**09 24 08.2**	**-0.3**
	baz=244						
SMLT	**Sun Moon Lake**	**1.18**	**253**	P	**Pn**	**09 24 08.6**	**-0.1**
	baz=237						
SBCB	**Hsinchu**	**1.19**	**299**	*e*P	**Pb**	**09 24 09.5**	**+0.5**
	baz=298						
SBCB				*e*S	**Sg**	**09 24 26.0**	**+0.5**
	baz=298						
HSN	**Hsinchu**	**1.20**	**299**	*e*P	**Pb**	**09 24 09.3**	**0.0**
	baz=300						
TYC	**Yuchr**	**1.21**	**255**	*e*P	**Pn**	**09 24 08.9**	**-0.1**
	baz=239						
TWQ1	**Liyutan**	**1.24**	**276**	P	**Pb**	**09 24 10.7**	**+0.6**
	baz=274						
TWQ1				*e*S	**Sg**	**09 24 27.5**	**+0.2**
	baz=274						
NMLH	**Miaoli**	**1.26**	**285**	P	**Pb**	**09 24 10.9**	**+0.6**
	baz=283						
NSY	**Sanyi**	**1.26**	**279**	P	**Pg**	**09 24 11.3**	**-0.1**
	baz=277						
NSY				*e*S	**Sg**	**09 24 28.8**	**+0.8**
	baz=277						
FULB	**Fuli**	**1.28**	**217**	*e*P	**Pn**	**09 24 08.8**	**-1.2**
	baz=200						
WHYT	**Xinyi Township**	**1.28**	**246**	*e*P	**Pn**	**09 24 10.1**	**0.0**
	baz=233						
CHKT	**Chengkung**	**1.32**	**212**	*e*P	**Pn**	**09 24 09.8**	**-0.9**
	baz=194						
TCU	**Taichung**	**1.33**	**267**	*e*P	**Pb**	**09 24 12.1**	**+0.6**
	baz=264						
TCU				*e*S	**Sg**	**09 24 30.3**	**+0.3**
	baz=264						
WJS	**Zhushan**	**1.34**	**253**	*e*P	**Pg**	**09 24 13.2**	**+0.2**
	baz=236						
WJS				*e*S	**Sg**	**09 24 31.6**	**+1.1**
	baz=236						
WDJ	**Dajia District**	**1.36**	**275**	*e*P	**Pg**	**09 24 13.1**	**-0.2**
	baz=274						
WDJ				*e*S	**Sg**	**09 24 30.9**	**-0.3**
	baz=274						
WNT	**Mingjian**	**1.37**	**256**	*e*P	**Pb**	**09 24 12.1**	**0.0**
	baz=237						
WNT				*e*S	**Sg**	**09 24 30.8**	**-0.4**
	baz=237						
ELDTW	**Lidau**	**1.45**	**225**	*e*P	**Pn**	**09 24 12.2**	**-0.3**
	baz=208						
ELDTW				*e*S	**Sn**	**09 24 29.9**	**-1.3**
	baz=208						
IRIF	**Iriomote-Funau**	**1.46**	**85**	P	**Pn**	**09 24 12.8**	**+0.2**
IRIF				S	**Sn**	**09 24 31.7**	**+0.4**
CHN5	**Tsauling**	**1.47**	**245**	*e*P	**Pn**	**09 24 13.5**	**+0.7**
	baz=226						
CHN5				*e*S	**Sg**	**09 24 33.8**	**-0.7**
	baz=226						
WGK	**Gukeng**	**1.53**	**250**	*e*P	**Pb**	**09 24 15.1**	**+0.2**
	baz=246						
WGK				*e*S	**Sg**	**09 24 36.1**	**-0.4**
	baz=246						
WDLH	**Douliu**	**1.55**	**250**	*e*P	**Pb**	**09 24 15.3**	**+0.1**
	baz=247						
WDLH				*e*S	**Sg**	**09 24 36.4**	**-0.7**
	baz=247						
RLNB	**Erlin**	**1.65**	**259**	*e*S	**Sb**	**09 24 38.6**	**+1.2**
	baz=256						
TPUB	**Ta-pu**	**1.66**	**236**	*e*P	**Pb**	**09 24 16.8**	**-0.3**
	baz=221						
TPUB				*e*S	**Sb**	**09 24 38.5**	**+0.9**
	baz=221						
CHN4	**Tsaushan**	**1.66**	**239**	*e*P	**Pb**	**09 24 17.1**	**0.0**
	baz=221						
CHN4				*e*S	**Sg**	**09 24 39.6**	**-0.8**
	baz=221						
CHN2	**Minshiung**	**1.67**	**246**	*e*P	**Pb**	**09 24 17.1**	**-0.1**
	baz=242						
CHN2				*e*S	**Sb**	**09 24 39.5**	**+1.6**
	baz=242						
WTP	**Ta-pu**	**1.70**	**235**	*e*P	**Pb**	**09 24 17.2**	**-0.5**
	baz=220						
TWGBT	**Beinan**	**1.70**	**215**	*e*P	**Pn**	**09 24 14.7**	**-1.1**
	baz=210						
TWGBT				*e*S	**Sn**	**09 24 36.8**	**-0.4**
	baz=210						
TWG	**Pinlang**	**1.70**	**215**	*e*P	**Pn**	**09 24 15.7**	**-0.2**
	baz=210						
TWG				*e*S	**Sn**	**09 24 36.6**	**-0.7**
	baz=210						
JKRS	**Kuro-shima**	**1.72**	**89**	P	**Pb**	**09 24 17.3**	**-0.7**
JKRS				*e*S	**Sn**	**09 24 38.4**	**+0.8**
WTCT	**Ta-ch'eng**	**1.73**	**258**	*e*S	**Sb**	**09 24 40.6**	**+0.9**
	baz=255						
TWK	**Hsinying**	**1.78**	**238**	*e*P	**Pb**	**09 24 18.4**	**-0.8**
	baz=220						
TWK				S	**Sb**	**09 24 41.6**	**+0.3**
	baz=220						
CHN1	**Nanshi**	**1.80**	**235**	*e*P	**Pb**	**09 24 19.9**	**+0.4**
	baz=231						
CHN1				*e*S	**Sb**	**09 24 42.2**	**+0.5**
	baz=231						
SNST	**Tainan City**	**1.80**	**237**	*e*P	**Pn**	**09 24 18.1**	**+0.9**
	baz=219						
SNST				S	**Sb**	**09 24 42.3**	**+0.5**
	baz=219						
SGST	**Jiashian**	**1.82**	**232**	*e*P	**Pb**	**09 24 19.7**	**-0.2**
	baz=215						
SGST				S	**Sb**	**09 24 43.8**	**+1.4**
	baz=215						
SLGT	**Liugui**	**1.83**	**228**	*e*P	**Pb**	**09 24 19.6**	**-0.5**
	baz=214						
SLGT				*e*S	**Sb**	**09 24 42.9**	**+0.2**
	baz=214						
WSF	**Szhu**	**1.84**	**252**	*e*S	**Sb**	**09 24 43.5**	**+0.5**
	baz=248						
JIJ	**Ishigaki jima**	**1.84**	**85**	P	**Pn**	**09 24 18.0**	**+0.2**
JIJ				S	**Sn**	**09 24 40.4**	**-0.3**
SSD	**Sandimen**	**2.02**	**223**	*e*P	**Pn**	**09 24 21.8**	**+1.6**
	baz=219						
SSD				*e*S	**Sb**	**09 24 47.7**	**-0.2**
	baz=219						
JISG	**Ishigakijimahi**	**2.02**	**79**	P	**Pn**	**09 24 20.6**	**+0.4**
JISG				S	**Sn**	**09 24 44.5**	**-0.6**
MASBT	**Mashibuluo**	**2.12**	**221**	*e*P	**Pn**	**09 24 22.1**	**+0.5**
	baz=205						
MASBT				*e*S	**Sb**	**09 24 50.2**	**-0.7**
	baz=205						
LAY	**Lan-yu**	**2.24**	**194**	*e*P	**Pn**	**09 24 22.0**	**-1.3**
	baz=179						
SCZT	**Fangliau**	**2.31**	**217**	*e*P	**Pn**	**09 24 25.4**	**+1.1**
	baz=201						
JTJ	**Tarama**	**2.38**	**79**	P	**Pn**	**09 24 26.2**	**+1.0**
JTJ				S	**Sn**	**09 24 53.9**	**-0.1**
PHUB	**P'eng-hu**	**2.45**	**254**	*e*P	**Pn**	**09 24 25.8**	**-0.3**
	baz=249						
PHUB				*e*S	**Sn**	**09 24 55.6**	**0.0**
	baz=249						
JIRB	**Irabujima**	**2.83**	**77**	P	**Pn**	**09 24 32.3**	**+0.8**

PGC 21 09:30:30.8±1.0,**48°.75N**×**129°.18W**,**h10**^{km},**MLSn2.8**/17, **Mw3.5**/17,**242km west of Tofino, Bc Vancouver Island, Canada Region,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	**NEPTUNE Canada**	**0.81**	**176**	P	Pg	09 30 45.4	-0.9
EDB	**Eliza Dome**	**1.75**	**49**	Pn	Pn	09 30 59.1	-2.1
EDB				Sn	Sn	09 31 18.2	-5.4
PACB	**Port Alice, BC**	**2.01**	**32**	Pn	Pn	09 31 02.9	-1.8
PACB				Sn	Sn	09 31 24.7	-5.2
MAYB	**Maynard**	**2.10**	**38**	Pn	Pn	09 31 04.8	-1.4
MAYB				Sn	Sn	09 31 27.9	-4.6
TOFB	**Tofino**	**2.19**	**78**	Pn	Pn	09 31 05.5	-1.7
TOFB				Sn	Sn	09 31 30.2	-4.2
WOSB	**Woss**	**2.21**	**49**	Pn	Pn	09 31 06.3	-1.3
WOSB				Sn	Sn	09 31 32.1	-2.8
PHC	**Port Hardy**	**2.26**	**29**	Pn	Pn	09 31 07.8	-0.4
PHC				Sn	Sn	09 31 32.6	-3.5
GDR	**Gold River**	**2.30**	**62**	Pn	Pn	09 31 07.0	-1.7
GDR				Sn	Sn	09 31 32.9	-4.3
TLCB	**Telegraph Cove**	**2.35**	**39**	Pn	Pn	09 31 09.0	-0.5
TLCB				Sn	Sn	09 31 34.5	-3.9
BTB	**Buttle Lake**	**2.51**	**72**	Pn	Pn	09 31 10.6	-1.1
BTB				Sn	Sn	09 31 39.3	-3.2
NCRB	**Newcastle Ridg**	**2.62**	**50**	Pn	Pn	09 31 12.6	-0.7
NCRB				Sn	Sn	09 31 41.6	-3.5
B928	**Bamfield**	**2.67**	**87**	Pn	Pn	09 31 12.3	-1.6
B928				Sn	Sn	09 31 41.9	-4.3
CBB	**Campbell River**	**2.80**	**61**	Pn	Pn	09 31 15.0	-0.6
CBB				Sn	Sn	09 31 47.0	-2.4
MGB	**Mount Grey**	**2.97**	**84**	Pn	Pn	09 31 17.1	-1.0
MGB				Sn	Sn	09 31 49.4	-4.4
TXB	**Texada**	**3.25**	**71**	Pn	Pn	09 31 21.7	-0.1
GHNB	**Nanoose**	**3.30**	**78**	Pn	Pn	09 31 22.5	+0.1
B926	**Mesachie Lake**	**3.34**	**87**	Pn	Pn	09 31 22.9	-0.1
B926				Sn	Sn	09 31 58.8	-3.9
NLLB	**Nanaimo Lost L**	**3.45**	**80**	Pn	Pn	09 31 24.6	0.0
NLLB				Sn	Sn	09 32 02.7	-2.8
BBB	**Bella Bella**	**3.50**	**11**	Pn	Pn	09 31 24.9	-0.4
BBB				Sn	Sn	09 32 03.6	-3.1
LZB	**Mount Lazard**	**3.55**	**90**	Pn	Pn	09 31 25.0	-1.0
LZB				Sn	Sn	09 32 04.9	-3.2
SHB	**Sechelt**	**3.58**	**74**	Pn	Pn	09 31 26.2	-0.3
SHB				Sn	Sn	09 32 06.2	-2.6
BIB	**Bowen Island**	**3.91**	**78**	Pn	Pn	09 31 30.2	-0.7
BIB				Sn	Sn	09 32 14.8	-2.1
WPB	**Watts Point**	**4.01**	**75**	Pn	Pn	09 31 32.4	+0.1
WSLR	**Whistler**	**4.31**	**69**	Pn	Pn	09 31 37.0	+0.6

ISC 21 09:34:56.1±2.2,**51°.0N**±0°.1×**18°.99E**±0°.07,**h0**^{km},**n5**, σ**1^{s}.69**/10,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.93**	**146**	*e*Pg	**Pg**	**09 35 13.2**	**-0.8**
OJC				*e*Sg	**Sg**	**09 35 27.7**	**+1.7**
MORC	**Moravsky Berou**	**1.53**	**218**	*e*PN	**Pn**	**09 35 23.6**	**-1.1**
MORC				*e*SG	**Sn**	**09 35 44.9**	**-0.4**
KSP	**Ksiaz**	**1.71**	**266**	*e*Pg	**Pn**	**09 35 27.7**	**+0.5**
KSP				*e*Sg	**Sg**	**09 35 53.0**	**+1.9**
LANS	**Liptovska Anna**	**1.87**	**170**	*e*PG	**Pb**	**09 35 31.3**	**+0.1**
LANS				*e*SG	**Sg**	**09 35 59.1**	**+2.9**
VRAC	**Vranov**	**2.28**	**223**	*e*PN	**Pn**	**09 35 33.9**	**-1.2**
VRAC				*e*SG	**Sb**	**09 36 06.0**	**-1.0**

IDC 21 09:35:06.5±2.9,**6°.75S**×**129°.55E**,**h130**^{km}±38^{km},**mb3.7**/1, **mb1 3.6**/5,**mb1mx3.2**/34,**mbtmp3.9**/5,**Error ellipse: s-maj=67.5km s-min=20.5km az=90.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.08**	**16**	P	Pn	09 36 34.5	+0.3
	2.9nm,0.3s,baz=198,slow=20,SNR=44						
SIJI				S	Sn	09 37 35.6	-7.2
	4.4nm,0.3s,baz=253,slow=23,SNR=14						
FITZ	**Fitzroy Crossi**	**11.91**	**198**	P	Pn	09 37 52.3	0.0
	0.3nm,0.3s,baz=24,slow=12,SNR=12						
FITZ				S	Sn	09 39 59.2	-4.4
	0.6nm,0.3s,baz=83,slow=17,SNR=6.8						
WRA	**Warramunga Arr**	**13.92**	**161**	P	Pn	09 38 16.4	-2.0
	0.2nm,0.3s,baz=344,slow=12,SNR=14						
WRA				S	Sn	09 40 41.9	-10
	1.0nm,0.3s,baz=347,slow=21,SNR=10						
ASAR	**Alice Springs**	**17.34**	**166**	P	Pn	09 39 01.8	+1.0
	0.5nm,0.3s,baz=346,slow=11,SNR=36						
ASAR				S	S	09 42 04.3	-10
	0.1nm,0.3s,baz=348,slow=25,SNR=3.0						
MKAR	**Makanchi Array**	**67.77**	**327**	P	P	09 45 50.2	-0.1
	1.0nm,0.5s,baz=112,slow=7.8,SNR=12						

MEX 21 09:47:22.9±0.6**, 17°.61N**×**101°.08W, h5^{km}, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.37**	**270**	*i* P	Pg	09 47 29.5	-0.6
ZIIG				*e*S	Sg	09 47 35.6	+0.6
CAIG	**El Cayaco**	**0.95**	**126**	*e*P	Pg	09 47 39.1	-2.1
ARIG	**Puente Sto Nin**	**0.96**	**46**	*e*P	Pg	09 47 39.3	-2.2
ARIG				*e*S	Sg	09 47 52.3	-1.6

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*ISCJB **21** 09:49:28.8±0.6, 14°.07N±0°.06×92°.00W±0°.04, h68^{km}±8^{km}, mb3.6/3, Error ellipse: s-maj=11.0km s-min=3.0km az=29.4*

*IDC **21** 09:49:30.8±1.1, 14°.16N×92°.00W, h53^{km}±7^{km}, mb3.4/3, mb1 3.8/6, mb1mx3.4/38, mbtmp3.6/6, MS2.8/3, Ms1 2.8/3, ms1mx2.6/23, Error ellipse: s-maj=17.8km s-min=7.7km az=179.0*

*MEX **21** 09:49:30.3±0.8, 14°.13N×91°.89W, h68^{km}±24^{km}, MD4.5*

*NEIC **21** 09:49:30.3±0.0, 14°.13N×91°.89W, h68^{km}, mb4.2/1, MD4.5(MEX), After MEX.*

*UCR **21** 09:49:31.1±1.6, 14°.09N×91°.80W, h20^{km}±13^{km}, MD3.8, ML3.8, mb4.2(NEIC)*

ISC 21 09:49:29.6±0.8**, 14°.08N**±0°.07×**92°.01W**±0°.05**, h60**^{km}±7^{km}**, n51, σ1^{s}.46**/79**, mb3.7**/3**, 1C-2D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.86**	**343**	*e*Pn	**Pn**	**09 49 45.3**	**-0.6**
THIG				*e*Sn	**Sn**	**09 49 57.8**	**0.0**
THIG		**0.86**	**343**	*e*P	**Pn**	**09 49 45.3**	**-0.6**
THIG				*i* S	**Sn**	**09 49 57.8**	**0.0**
FUG	**Fuego 3**	**1.19**	**72**	*e*P	**Pn**	**09 49 49.9**	**-0.4**
PCG	**Pacaya**	**1.40**	**77**⇓	*e*P	**Pn**	**09 49 53.2**	**+0.1**
PCG				*e*S	**Sn**	**09 50 09.0**	**-1.8**
IXG	**Ixpaco**	**1.51**	**86**⇑	*e*P	**Pn**	**09 49 54.9**	**+0.3**
NBG	**Las Nubes**	**1.69**	**72**⇓	*e*P	**Pn**	**09 49 58.2**	**+1.1**
APG	**El Apazote**	**1.76**	**58**	P	**Pn**	**09 49 57.9**	**-0.1**
	94nm,0.3s,baz=190,slow=12,SNR=727						
APG				S	**Sn**	**09 50 19.5**	**+0.1**
	42nm,0.3s,baz=309,slow=17,SNR=8.9						
PCIG		**2.00**	**324**	*e*Pn	**Pn**	**09 50 01.3**	**+0.3**
PCIG				*e*Sn	**Sn**	**09 50 24.4**	**-0.5**
PCIG		**2.00**	**324**	*e*P	**Pn**	**09 50 01.3**	**+0.3**
PCIG				*i* S	**Sn**	**09 50 24.4**	**-0.5**
CCIG	**Comitan**	**2.20**	**357**	*e*Pn	**Pn**	**09 50 05.9**	**+2.0**
CCIG				*e*Sn	**Sn**	**09 50 30.8**	**+0.7**
RTR	**El Retiro**	**2.30**	**94**	*e*P	**Pn**	**09 50 05.6**	**+0.3**
SBLS	**San Blas**	**2.33**	**96**	*e*P	**Pn**	**09 50 05.7**	**-0.1**
SBLS				*e*S	**Sn**	**09 50 33.0**	**-0.5**
CEVE	**Cerro Verde**	**2.33**	**96**	*e*P	**Pn**	**09 50 05.7**	**-0.1**
CEVE				*e*S	**Sn**	**09 50 34.1**	**+0.7**
CEVE				IAML		09 50 45.0	
	comp=Z,3μm,0.3s						
SNJE	**San Jose**	**2.34**	**95**	*e*P	**Pn**	**09 50 05.9**	**0.0**
MTO3	**Montecristo**	**2.59**	**83**	*e*P	**Pn**	**09 50 08.4**	**-0.8**
BOQS	**Boqueron**	**2.67**	**97**	*e*P	**Pn**	**09 50 10.7**	**+0.2**
BOQS				*e*S	**Sn**	**09 50 41.0**	**-0.8**
UEES	**San Salvador**	**2.71**	**97**	*e*P	**Pn**	**09 50 11.0**	**+0.1**
UEES				*e*S	**Sn**	**09 50 42.3**	**-0.2**
SNET	**Serv Nac Est T**	**2.73**	**98**	*e*P	**Pn**	**09 50 11.1**	**0.0**
SNET				*e*S	**Sn**	**09 50 41.3**	**-1.6**
OPAM	**San Salvador**	**2.75**	**97**	*e*P	**Pn**	**09 50 11.8**	**+0.4**
OPAM				*e*S	**Sn**	**09 50 44.1**	**+0.6**
LOMA	**San Marcos**	**2.79**	**98**	*e*P	**Pn**	**09 50 12.4**	**+0.7**
LOMA				*e*S	**Sn**	**09 50 43.7**	**-0.6**
LFRS	**El Faro**	**2.90**	**99**	*e*P	**Pn**	**09 50 14.2**	**+0.8**
LFRS				*e*S	**Sn**	**09 50 47.5**	**+0.3**
LBRS	**Las Brisas**	**2.90**	**96**	*e*P	**Pn**	**09 50 13.8**	**+0.4**
PAVA	**Las Pavas**	**3.01**	**97**	*e*P	**Pn**	**09 50 15.3**	**+0.4**
PAVA				*e*S	**Sn**	**09 50 50.2**	**+0.4**
PAVA				IAML		09 51 09.0	
	comp=Z,309nm,0.4s						
TECA	**Tecapa**	**3.46**	**99**	*e*P	**Pn**	**09 50 21.9**	**+0.8**
PACA	**Pacayal**	**3.63**	**99**	*e*P	**Pn**	**09 50 24.5**	**+1.0**
LCND	**La Caada**	**4.08**	**100**	*e*P	**Pn**	**09 50 29.7**	**+0.3**
LCND				*e*S	**Sn**	**09 51 15.9**	**-0.1**
CMIG	**Matias Romero**	**4.08**	**318**	*e*Pn	**Pn**	**09 50 30.8**	**+1.3**
CMIG				*e*Sn	**Sn**	**09 51 17.3**	**+1.3**
CMIG	**Matias Romero**	**4.08**	**318**	*e*P	**Pn**	**09 50 30.8**	**+1.3**
CMIG				*i* S	**Sn**	**09 51 17.3**	**+1.3**
CMIG	**Matias Romero**	**4.08**	**318**	P	**Pn**	**09 50 30.9**	**+1.3**
	comp=Z,5.7nm,0.3s,baz=151,slow=15,SNR=48						
CMIG				S	**Sn**	**09 51 16.2**	**+0.2**
	comp=Z,21nm,0.3s,baz=119,slow=16,SNR=7.9						
CNCH	**Conchagua**	**4.14**	**101**	*e*P	**Pn**	**09 50 30.5**	**+0.1**
CNCH				*e*S	**Sn**	**09 51 19.2**	**+1.6**
HUIG	**Huatulco**	**4.30**	**294**	*e*Pn	**Pn**	**09 50 33.2**	**+0.6**
HUIG				*e*Sn	**Sn**	**09 51 21.5**	**0.0**
HUIG	**Huatulco**	**4.30**	**294**	*e*P	**Pn**	**09 50 33.2**	**+0.6**
HUIG				*e*S	**Sn**	**09 51 21.5**	**0.0**
TGUH	**Tegucigalpa,Un**	**4.60**	**90**	*e*Pn	**Pn**	**09 50 36.4**	**-0.2**
VHO	**Vista Hermosa**	**5.44**	**304**	*e*Pn	**Pn**	**09 50 44.9**	**-3.4**
VHO				*e*Sn	**Sn**	**09 51 53.9**	**+4.2**
VHO	**Vista Hermosa**	**5.44**	**304**	*e*P	**Pn**	**09 50 44.9**	**-3.4**
VHO				*e*S	**Sn**	**09 51 53.9**	**+4.2**
ESTN	**Estel**	**5.57**	**99**	*e*Pn	**Pn**	**09 50 51.1**	**+1.1**
COPN	**Copaltepe**	**5.61**	**109**	*e*P	**Pn**	**09 50 51.2**	**+0.8**
TEIG	**Tepich**	**7.08**	**30**	*e*Pn	**Pn**	**09 51 10.6**	**0.0**
ESPN	**Las Esperanzas**	**7.74**	**103**	*e*Pn	**Pn**	**09 51 19.9**	**+0.3**
JTS	**JuntasAbangare**	**7.86**	**118**	*e*Pn	**Pn**	**09 51 21.6**	**+0.2**
JTS	**JuntasAbangare**	**7.86**	**118**	P	**Pn**	**09 51 24.3**	**+3.0**
	comp=Z,1.0nm,0.3s,baz=15,slow=19,SNR=5.8						
JTS				S	**Sn**	**09 52 52.0**	**+3.1**
	comp=Z,0.4nm,0.3s,baz=252,slow=20,SNR=1.7						
JTS				LR	LR	09 53 53.5	
	comp=Z,18nm,21.6s,baz=162,slow=33						
HPIG		**18.07**	**317**	*e*P	**Pn**	**09 53 37.5**	**+0.8**
	comp=Z,12nm,0.8s						
TXAR	**Lajitas Array**	**18.63**	**326**	P	**Pn**	**09 53 44.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=156,slow=16,SNR=5.4						
CPRX	**Cap Rock**	**21.74**	**332**	*e*P	**P**	**09 54 11.1**	**-5.1**
SJG	**San Juan**	**25.16**	**77**	LR	LR	10 03 41.8	
	comp=Z,33nm,20.6s,baz=151,slow=34						
NVAR	**Mina Array Bea**	**33.61**	**321**	P	**P**	**09 56 07.7**	**+3.2**
	comp=Z,0.9nm,0.6s,baz=128,slow=8.8,SNR=6.9						
NVAR				pP	**pP**	**09 56 20.9**	**+1.5**
	comp=Z,2.1nm,0.9s,baz=129,slow=9.3,SNR=6.9						
YKA	**Yellowknife Ar**	**50.95**	**347**	P	**P**	**09 58 24.1**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=147,slow=7.6,SNR=9.6						
YKA				pP	**pP**	**09 58 39.7**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=148,slow=7.7,SNR=4.7						
BDFB	**Brasilia**	**52.57**	**123**	LR	LR	10 21 44.3	
	comp=Z,31nm,18.6s,baz=282,slow=37						
ILAR	**Eielson Array**	**62.77**	**337**	P	**P**	**09 59 49.2**	**+0.8**
	comp=Z,0.7nm,1.1s,baz=106,slow=5.8,SNR=4.7						
ILAR				pP	**pP**	**10 00 04.9**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=140,slow=5.7,SNR=5.1						
RAO	**Raoul Island**	**93.27**	**241**	*e*P	**P**	**10 02 36.3**	**-1.9**
	comp=Z,2μm,0.6s						
CMAR	**Chiang Mai Arr**	**145.92**	**341**	PKPbc	**PKPab**	**10 09 04.5**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=342,slow=3.8,SNR=6.6						
CMAR				pPKPbc	**pPKPdf**	**10 09 18.1**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=342,slow=4.7,SNR=2.2						

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*ATH **21** 09:51:27.6, 35°.15N×26°.29E, h27^{km}±1^{km}, ML3.4/5, Error ellipse: s-maj=3.9km s-min=1.3km az=166.0*

*ISK **21** 09:51:27.8, 35°.31N×26°.22E, h7^{km}, ML3.3/11*

*ISCJB **21** 09:51:28.3±0.7, 35°.14N±0°.08×26°.31E±0°.04, h25^{km}±4^{km}, Error ellipse: s-maj=12.9km s-min=4.5km az=171.3*

*THE **21** 09:51:28.1, 35°.06N×26°.28E, h24^{km}, Error ellipse: s-maj=2.1km s-min=0.8km az=171.0*

ISC 21 09:51:26.9±1.3**, 35°.00N**±0°.08×**26°.28E**±0°.03**, h28**^{km}±5^{km}**, n31, σ1^{s}.13**/46**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.12**	**337**	PG	**Pb**	**09 51 31.9**	**-0.3**
ZKR				SG	**Sb**	**09 51 35.7**	**-0.1**
ZKR	**Zakros**	**0.12**	**337**	P	**Pb**	**09 51 32.1**	**-0.1**
ZKR				S	**Sb**	**09 51 36.0**	**+0.2**
ZKR				AML	AML	09 51 36.1	
	comp=N,15296μm,0.1s						
ZKR				AML	AML	09 51 36.3	
	comp=E,65023μm,0.3s						
ZKR	**Zakros**	**0.12**	**337**	P	**Pb**	**09 51 32.1**	**-0.1**
ZKR				S	**Sb**	**09 51 36.0**	**+0.2**
STIA	**Sitia Lasithi**	**0.25**	**323**	P	**Pb**	**09 51 33.5**	**-0.1**
STIA				S	**Sb**	**09 51 38.0**	**-0.1**
NPS	**Neapolis**	**0.60**	**296**	P	**Pb**	**09 51 39.5**	**+0.5**
NPS				S	**Sn**	**09 51 48.2**	**-0.3**
NPS				AML	AML	09 51 50.1	
	comp=E,7525μm,0.2s						
NPS				AML	AML	09 51 52.7	
	comp=N,4526μm,0.4s						
NPS	**Neapolis**	**0.60**	**296**	P	**Pb**	**09 51 39.4**	**+0.5**
NPS				S	**Sn**	**09 51 48.5**	**0.0**
LAST	**Lasithi**	**0.67**	**284**	P	**Pb**	**09 51 40.6**	**+0.4**
LAST				S	**Sn**	**09 51 50.3**	**0.0**
LAST				AML	AML	09 51 54.8	
	comp=E,4561μm,0.6s						
LAST				AML	AML	09 51 54.9	
	comp=N,2726μm,0.6s						
LAST	**Lasithi**	**0.67**	**284**	P	**Pb**	**09 51 40.5**	**+0.3**
LAST				S	**Sn**	**09 51 50.2**	**-0.1**
KARP	**Karpathos**	**0.91**	**53**	PG	**Pn**	**09 51 43.4**	**-0.5**
KARP				SG	**Sb**	**09 51 55.5**	**-0.4**
KARP	**Karpathos**	**0.91**	**53**	P	**Pn**	**09 51 43.3**	**-0.6**
KARP				S	**Sn**	**09 51 55.8**	**-0.2**
KARP				AML	AML	09 51 59.9	
	comp=N,4155μm,0.2s						
KARP				AML	AML	09 52 01.7	
	comp=E,4877μm,0.5s						
KARP	**Karpathos**	**0.91**	**53**	P	**Pn**	**09 51 43.2**	**-0.6**
KARP				S	**Sb**	**09 51 55.7**	**-0.2**
KSTL	**Kastelli Herak**	**1.03**	**287**	P	**Pn**	**09 51 41.7**	**-3.8**
IDI	**Anoyia**	**1.17**	**285**	PN	**Pb**	**09 51 49.2**	**+0.6**
ANAF	**Anafi Island**	**1.41**	**343**	P	**Pn**	**09 51 51.3**	**+0.5**
ANAF				S	**Sn**	**09 52 08.7**	**+0.2**
ANAF				AML	AML	09 52 12.3	
	comp=E,12228μm,0.4s						
ANAF				AML	AML	09 52 13.1	
	comp=N,14145μm,0.3s						
ANAF	**Anafi Island**	**1.41**	**343**	P	**Pn**	**09 51 50.8**	**0.0**
ANAF				S	**Sn**	**09 52 07.0**	**-1.5**
SANT	**Santorini**	**1.52**	**334**	PN	**Pn**	**09 51 51.8**	**-0.5**
VAM	**Vamos**	**1.75**	**284**	P	**Pb**	**09 51 58.5**	**+0.2**
GVD	**Gavdhos**	**1.81**	**265**	PN	**Pb**	**09 52 00.3**	**+1.0**
IMMV	**Iera Moni Meta**	**1.93**	**284**	PN	**Pb**	**09 52 00.7**	**-0.8**
IMMV	**Iera Moni Meta**	**1.93**	**284**	P	**Pb**	**09 52 00.9**	**-0.6**
ARG	**Arkhangelos**	**1.94**	**51**	PN	**Pb**	**09 52 00.1**	**-1.4**
APE	**Apeiranthos**	**2.15**	**344**	PN	**Pn**	**09 52 00.5**	**-0.5**
BODT	**Bodrum**	**2.22**	**22**	PN	**Pn**	**09 52 02.7**	**+0.8**
TURN	**Turunc**	**2.66**	**45**	PN	**Pn**	**09 52 05.5**	**-2.4**
YER	**Yerkesik**	**2.68**	**37**	PN	**Pn**	**09 52 09.6**	**+1.3**
FETY	**Fethiye**	**2.81**	**54**	PN	**Pn**	**09 52 11.7**	**+1.7**
FETY	**Fethiye**	**2.81**	**54**	*i* P	**Pn**	**09 52 11.0**	**+1.0**
FETY				*i* S	**Sn**	**09 52 42.2**	**-0.7**
FETY				IAML_P			
	comp=Z,186nm,0.2s						
AKAS	**Kas**	**2.98**	**65**	*i* P	**Pn**	**09 52 12.7**	**+0.2**
AKAS				*i* S	**Sn**	**09 52 47.7**	**+0.4**
AKAS				IAML_P			
	comp=Z,34nm,0.1s						
TAVA	**DENIZLI_Tavas**	**3.25**	**40**	*i* P	**Pn**	**09 52 18.9**	**+2.6**
TAVA				IAML_P			
	comp=Z,107nm,0.1s						
GOLH	**Golhisar**	**3.47**	**49**	*i* P	**Pn**	**09 52 21.2**	**+2.0**
GOLH				IAML_P			
	comp=Z,542nm,0.1s						
ITM	**Ithomi**	**4.14**	**303**	PN	**Pn**	**09 52 30.5**	**+2.2**

IDC 21 10:00:46.5±2.4**, 5°.75N**×**126°.56E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/44**, mbtmp3.4**/3**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/27**, 1C, Error ellipse: s-maj=190.0km s-min=26.7km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**1.92**	**311**⇑	*e*P	Pg	10 01 26.7	+3.2
WRA	**Warramunga Arr**	**26.65**	**164**	P	P	10 06 27.2	-0.1
	0.3nm,0.4s,baz=344,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**30.10**	**166**	P	P	10 06 58.1	+0.1
	0.2nm,0.5s,baz=344,slow=7.0,SNR=5.4						
MJAR	**Matsushiro Arr**	**32.46**	**18**	LR	LR	10 20 16.0	
	comp=Z,21nm,21.5s,baz=350,slow=36						
MKAR	**Makanchi Array**	**55.82**	**325**	P	P	10 10 25.6	-0.1
	0.2nm,0.4s,baz=120,slow=8.5,SNR=5.9						

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*ISCJB **21** 10:02:28.1±0.4, 50°.39S±0°.08×112°.7E±0°.2, h5^{km}, mb4.7/20, MS4.0/12, Error ellipse: s-maj=20.6km s-min=9.1km az=21.1*

*IDC **21** 10:02:28.4±0.7, 50°.26S×112°.51E, h0^{km}, mb4.4/7, mb1 4.5/7, mb1mx4.2/30, mbtmp4.4/7, MS4.0/12, Ms1 4.0/12, ms1mx3.8/28, Error ellipse: s-maj=40.0km s-min=16.9km az=101.0*

*BJI **21** 10:02:29.8, 50°.30S×112°.30E, h10^{km}, mB5.0/7, mb4.9/21, Ms7 4.7/1*

*NEIC **21** 10:02:30.9±0.3, 50°.23S×112°.37E, h10^{km}, mb4.8/8, Error ellipse: s-maj=17.6km s-min=7.5km az=105.0*

*GCMT **21** 10:02:31.9±0.4, 50°.21S±0°.03×112°.10E±0°.09, h18^{km}±1^{km}, MW4.9/67, Moment Tensor Solution. s17,c21; s67,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.78±.25; M$_{\theta\theta}$2.32±.16; M$_{\phi\phi}$0.45±.16; M$_{r\theta}$0.72±.34; M$_{\theta\phi}$-0.25±.11; M$_{\phi r}$1.99±.57; Best double couple: M$_0$3.12100×10^{16} NP1:φ$_s$248.00000°, δ58.00000°, λ-119.00000°. NP2: φ$_s$115.00000°, δ42.00000°, λ-52.00000°. Principal axes: T 2.4210, Plg8.0000°, Azm359.0000°; N 1.3960, Plg25.0000°, Azm265.0000°; P -3.8200, Plg64.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 10:02:30.0±1.7**, 50°.39S**±0°.09×**112°.5E**±0°.2**, h6**^{km}±10^{km}**, n133, σ0^{s}.90**/127**, mb4.6**/20**, MS4.0**/12**, 1D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.52**	**5**	T	T	10 21 50.2	
	baz=184,slow=74						
H01W1	**Cape Leeuwin H**	**15.53**	**5**	T	T	10 21 53.8	
	baz=184,slow=74						
H01W3	**Cape Leeuwin H**	**15.54**	**5**	T	T	10 21 51.8	
	baz=184,slow=74						
NWAO	**Narrogin (SRO)**	**17.79**	**13**	LR	LR	10 11 41.5	
	comp=Z,1000nm,21.3s,baz=63,slow=31						
MORW	**Morawa**	**21.46**	**8**	*e*P	**P**	**10 07 18.3**	**-0.7**
	53nm,1.0s						
FORT	**Forrest**	**22.77**	**37**	*e*P	**P**	**10 07 34.0**	**+0.9**
	52nm,1.1s						
BBOO	**Buckleboo**	**24.69**	**54**	*e*P	**P**	**10 07 53.3**	**+1.6**
	9.1nm,1.1s						
STKA	**Stephens Creek**	**28.38**	**60**	LR	LR	10 18 02.9	
	comp=Z,122nm,19.0s,baz=209,slow=33						
MAW	**Mawson**	**29.73**	**216**	LR	LR	10 18 45.6	
	comp=Z,403nm,19.5s,baz=102,slow=33						
ASAR	**Alice Springs**	**31.43**	**40**	P	**P**	**10 08 50.5**	**-1.6**
	2.4nm,0.9s,baz=211,slow=7.7,SNR=16						
ASAR				PcP	**PcP**	**10 11 43.6**	**-1.8**
	0.8nm,0.8s,baz=189,slow=1.4,SNR=5.7						
ASAR				LR	LR	10 19 54.7	
	comp=Z,320nm,21.2s,baz=216,slow=33						
AS31	**Alice Springs**	**31.44**	**40**	*e*P	**P**	**10 08 51.5**	**-0.6**
	1.6nm,1.1s						
AS31				*e*PcP	**PcP**	**10 11 43.6**	**-1.8**
AS01	**Alice Springs**	**31.45**	**40**	*e*P	**P**	**10 08 50.5**	**-1.8**
AS01				*e*PcP	**PcP**	**10 11 43.9**	**-1.5**
VNDA	**Vanda**	**32.80**	**162**	*e*P	**P**	**10 09 04.5**	**+1.0**
VNDA				*e*pP	**P**	**10 09 04.8**	**+1.3**
VNDA	**Vanda**	**32.80**	**162**	P	**P**	**10 09 03.9**	**+0.4**
	5.9nm,0.8s,baz=293,slow=8.7,SNR=9.8						
VNDA				LR	LR	10 21 23.5	
	comp=Z,457nm,20.6s,baz=299,slow=34						
FITZ	**Fitzroy Crossi**	**33.88**	**23**	*e*P	**P**	**10 09 14.3**	**+0.8**
	23nm,1.0s						
FITZ	**Fitzroy Crossi**	**33.88**	**23**	LR	LR	10 22 05.8	
	comp=Z,473nm,18.4s,baz=222,slow=35						
WRA	**Warramunga Arr**	**34.95**	**38**	P	**P**	**10 09 21.2**	**-1.6**
	5.5nm,0.9s,baz=204,slow=8.2,SNR=18						
WRA				PcP	**PcP**	**10 11 53.2**	**-2.0**
	0.6nm,0.9s,baz=228,slow=3.1,SNR=3.8						
WRA				LR	LR	10 21 56.0	
	comp=Z,268nm,21.8s,baz=220,slow=34						
WR1	**Warramunga Arr**	**34.95**	**38**	*e*P	**P**	**10 09 21.2**	**-1.6**
	10nm,1.1s						
WR1				*e*PcP	**PcP**	**10 11 53.2**	**-2.0**
WB2	**Warramunga Arr**	**34.96**	**38**	*e*P	**P**	**10 09 21.7**	**-1.1**
WB2				*e*P	**P**	**10 09 22.1**	**-0.8**
WRAB	**Tennant Creek**	**34.97**	**38**	*e*P	**P**	**10 09 22.2**	**-0.7**
	12nm,1.0s						
SYO	**Syowa Base**	**38.34**	**214**⇓	*e*P	**P**	**10 09 50.0**	**-1.2**
QSPA	**South Pole Qui**	**39.74**	**180**	*e*P	**P**	**10 10 03.5**	**+0.3**
QSPA				*e*P	**P**	**10 10 04.1**	**+0.9**
QSPA	**South Pole Qui**	**39.74**	**180**	P	**P**	**10 10 03.5**	**+0.3**
	5.4nm,0.8s,baz=310,slow=2.8,SNR=25						
BATI	**Baumata**	**41.10**	**17**	LR	LR	10 27 45.0	
	comp=Z,367nm,18.1s,baz=256,slow=37						
SNAA	**Sanae**	**50.06**	**202**	P	**P**	**10 11 25.2**	**+0.2**
SNAA	**Sanae**	**50.06**	**202**	*e*P	**P**	**10 11 25.1**	**0.0**
	14nm,0.9s						
SNAA	**Sanae**	**50.06**	**202**	P	**P**	**10 11 25.1**	**0.0**
	9.8nm,0.8s,baz=138,slow=9.3,SNR=18						
VNA2	**Neumayer--Watz**	**51.65**	**201**	P	**P**	**10 11 36.8**	**-0.1**
	baz=127,slow=8.0						
VNA3	**Neumayer Olymp**	**51.93**	**200**	P	P	10 11 34.0	-5.1
JAY	**Jayapura**	**53.33**	**36**	LR	LR	10 33 25.6	
	comp=Z,299nm,20.6s,baz=212,slow=35						
BOSA	**Boshof**	**66.87**	**253**	LR	LR	10 37 04.7	
	comp=Z,79nm,19.2s,baz=38,slow=31						
CM01	**Chiang Mai Arr**	**69.54**	**346**	*e*P	**P**	**10 13 39.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**69.58**	**346**	P	**P**	**10 13 39.3**	**-0.5**
	2.9nm,0.8s,baz=192,slow=5.3,SNR=14						
KMI	**Kunming**	**75.67**	**351**	P	**P**	**10 14 18.1**	**+1.9**
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
CD2	**Chengdu**	**81.31**	**352**	*e*P	**P**	**10 14 48.0**	**+1.1**
NJ2	**Nanjing**	**82.27**	**5**	*e*P	**P**	**10 14 52.3**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LZH	**Lanzhou**	**86.44**	**353**	*e*P	P	10 15 18.8	+5.6
LZH				pP	pwP	10 15 22.6	+4.1
LZH				sP	PcP	10 15 25.3	+10
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
KSRS	**Korea Array**	**88.51**	**12**	LR	LR	10 53 07.1	
	comp=Z,32nm,21.8s,baz=230,slow=34						
MJAR	**Matsushiro Arr**	**89.47**	**20**	LR	LR	10 52 20.3	
	comp=Z,24nm,21.5s,baz=270,slow=34						
GTA	**Gaotai**	**90.11**	**350**	*e*P	**P**	**10 15 29.9**	**-0.7**
GTA				pP	pwP	10 15 36.8	+1.0
GTA				sP	PcP	10 15 39.8	+8.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**90.86**	**359**	*e*P	**P**	**10 15 35.6**	**+1.6**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,82nm,7.4s						
CN2	**Changchun**	**94.48**	**9**	*e*P	P	10 15 45.0	-5.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH	**Kashi**	**95.11**	**332**	P	**P**	**10 15 56.5**	**+2.8**
WMQ	**Urumqi**	**96.29**	**342**	*e*P	**P**	**10 16 00.1**	**+1.3**
WMQ				LR	LR		
	comp=Z,220nm,18.3s						
SONA0	**Songino Array**	**97.98**	**356**	*e*P	**P**	**10 16 04.5**	**-2.0**
SONM	**Songino Array**	**97.98**	**356**	P	**P**	**10 16 04.5**	**-2.0**
	comp=Z,0.3nm,0.4s,baz=201,slow=2.5,SNR=3.2						
KIRV	**Kirov**	**120.19**	**327**	PKP	**PKPdf**	**10 21 17.8**	**-2.8**
	comp=Z,6.4nm,0.5s,baz=109,slow=4.5,SNR=3.7						
ILAR	**Eielson Array**	**138.12**	**39**	PKP	**PKPdf**	**10 21 54.3**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=235,slow=3.2,SNR=4.2						
INK	**Inuvik**	**144.07**	**35**	PKP	**PKPab**	**10 22 02.8**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=302,slow=1.0,SNR=3.0						
WVOR	**Wild Horse Val**	**144.45**	**83**	*e*PKPdf	**PKPdf**	**10 22 06.4**	**-0.3**
I07A	**Izee**	**144.73**	**80**	*e*PKPdf	**PKPab**	**10 22 05.5**	**-0.5**
LCMT	**Little Creek M**	**144.87**	**95**	*e*PKPbc	**PKPdf**	**10 22 07.8**	**+0.1**
J08A	**Circle Bar Ran**	**145.02**	**81**	*e*PKPbc	**PKPdf**	**10 22 07.6**	**-0.1**
CCUT	**Cedar City**	**145.12**	**94**	*e*PKPbc	**PKPdf**	**10 22 09.0**	**+0.8**
U15A	**North Rim**	**145.12**	**96**	*e*PKPbc	**PKPdf**	**10 22 08.8**	**+0.4**
KNB	**Kanab**	**145.14**	**95**	*e*PKPbc	**PKPdf**	**10 22 08.6**	**+0.4**
SZCU	**Shurtz Canyon**	**145.32**	**94**	*e*PKPdf	**PKPdf**	**10 22 09.5**	**+1.0**
PSUT	**Pine Spring**	**145.38**	**92**	*e*PKPdf	**PKPab**	**10 22 09.6**	**+0.9**
X18A	**Snowflake**	**145.41**	**101**	*e*PKPdf	**PKPab**	**10 22 09.3**	**+0.4**
LTY	**Liberty**	**145.45**	**74**	*e*PKPdf	**PKPbc**	**10 22 08.4**	**+0.1**
G08A	**Pilot Rock**	**145.64**	**78**	*e*PKPdf	**PKPab**	**10 22 09.3**	**-0.1**
TX31	**Lajitas Ar. Si**	**145.64**	**114**	*e*PKPdf	**PKPdf**	**10 22 09.2**	**0.0**
TX31				*e*PKPdf	**pPKPdf**	**10 22 09.7**	**-0.2**
TXAR	**Lajitas Array**	**145.64**	**114**	PKPbc	**PKPdf**	**10 22 08.8**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=213,slow=4.2,SNR=11						
ELK	**Elko**	**145.73**	**88**	*e*PKPdf	**PKPab**	**10 22 10.0**	**0.0**
W18A	**Petrified Fore**	**145.92**	**100**	*e*PKPdf	**PKPab**	**10 22 11.1**	**+0.3**
MTPU	**Mount Pierson**	**146.16**	**94**	*e*PKPdf	**PKPab**	**10 22 11.7**	**-0.1**
TCRU	**Three Creeks R**	**146.32**	**93**	*e*PKPdf	**PKPab**	**10 22 13.3**	**+1.0**
MNTX	**Cornudas Mount**	**146.33**	**109**	*e*PKPdf	**PKPdf**	**10 22 10.7**	**+0.6**
MSU	**Marysvale**	**146.44**	**93**	*e*PKPdf	**PKPdf**	**10 22 11.1**	**+0.7**
D08A	**Wollman Farm,**	**146.45**	**75**	*e*PKPdf	**PKPab**	**10 22 11.8**	**-0.4**
BMO	**Blue Mountains**	**146.48**	**80**	*e*PKPdf	**PKPbc**	**10 22 11.3**	**-0.2**
B08A	**Colville Reser**	**146.73**	**73**	*e*PKPdf	**PKPbc**	**10 22 11.6**	**-0.5**
DUG	**Dugway, Tooele**	**146.98**	**90**	*e*PKPdf	**PKPbc**	**10 22 13.2**	**0.0**
F10A	**Beach Ranch, E**	**147.03**	**78**	*e*PKPdf	**PKPbc**	**10 22 12.8**	**-0.3**
LAZ	**Ladron**	**147.09**	**104**	*e*PKPdf	**PKPbc**	**10 22 13.3**	**-0.4**
C09A	**Chrisman Ranch**	**147.15**	**74**	*e*PKPdf	**PKPbc**	**10 22 13.1**	**-0.1**
BGU	**Big Grassy Mou**	**147.24**	**89**	*e*PKPdf	**PKPbc**	**10 22 13.8**	**-0.2**
Q16A	**Castle Valley**	**147.32**	**93**	*e*PKPbc	**PKPbc**	**10 22 15.2**	**+1.0**
NLU	**North Lily Min**	**147.32**	**91**	*e*PKPbc	**PKPbc**	**10 22 15.1**	**+0.8**
TMUT	**Trail Mountain**	**147.51**	**93**	*e*PKPbc	**PKPbc**	**10 22 15.6**	**+0.7**
MPU	**Maple Canyon**	**147.64**	**91**	*e*PKPbc	**PKPbc**	**10 22 15.9**	**+0.8**
HLID	**Hailey**	**147.70**	**84**	*e*PKPbc	**PKPbc**	**10 22 15.8**	**+0.6**
SRU	**San Rafael Swe**	**147.84**	**94**	*e*PKPbc	**PKPbc**	**10 22 15.9**	**+0.2**
HVU	**Hansel Valley**	**147.85**	**88**	*e*PKPbc	**PKPbc**	**10 22 15.5**	**0.0**
ANMO	**Albuquerque**	**147.87**	**104**	*e*PKPbc	**PKPbc**	**10 22 16.1**	**+0.2**
P17A	**Butcher Ranch,**	**147.91**	**93**	*e*PKPbc	**PKPbc**	**10 22 15.5**	**-0.3**
CTU	**Camp Tracy**	**147.93**	**90**	*e*PKPbc	**PKPbc**	**10 22 15.8**	**0.0**
MVCO	**Mesa Verde**	**148.01**	**98**	*e*PKPbc	**PKPbc**	**10 22 16.4**	**+0.1**
JLU	**Jordanelle**	**148.08**	**91**	*e*PKPbc	**PKPbc**	**10 22 16.8**	**+0.5**
PV14	**Lion Creek, Pa**	**148.37**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.4**	**+0.2**
PV13	**Radium Mtn., P**	**148.37**	**97**	*e*PKPbc	**PKPbc**	**10 22 17.0**	**-0.1**
PV09	**Paradox Valley**	**148.38**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.6**	**+0.4**
PV16	**Nyswonger Mesa**	**148.40**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.6**	**+0.4**
PV03	**Paradox Valley**	**148.41**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.2**	**0.0**
PV11	**David Mesa, Pa**	**148.42**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.3**	**+0.1**
PV23	**Carpenter Ridg**	**148.43**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.6**	**+0.3**
PV04	**Paradox Valley**	**148.46**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.4**	**+0.1**
PV12	**Saucer Basin,**	**148.48**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.8**	**+0.4**
PV21	**Cone Mtn., Par**	**148.51**	**96**	*e*PKPbc	**PKPbc**	**10 22 17.9**	**+0.4**
PV01	**Paradox Valley**	**148.52**	**97**	*e*PKPbc	**PKPbc**	**10 22 17.8**	**+0.3**
S22A	**4UR Ranch, Cre**	**149.39**	**99**	*e*PKPbc	**PKiKP**	**10 22 20.5**	**-0.4**
MSTX	**Muleshoe**	**149.48**	**109**	*e*PKPbc	**PKPbc**	**10 22 19.9**	**0.0**
DLMT	**Dillon**	**149.68**	**82**	*e*PKPbc	**PKiKP**	**10 22 20.9**	**-0.2**
TPAW	**Teton Pass**	**149.87**	**86**	*e*PKPbc	**PKPbc**	**10 22 20.4**	**-0.3**
O20A	**White River Ci**	**149.87**	**94**	*e*PKPbc	**PKiKP**	**10 22 21.4**	**-0.3**
REDW	**Red Top Meadow**	**149.87**	**86**	*e*PKPbc	**PKPbc**	**10 22 21.2**	**+0.4**
FXWY	**Fox Creek**	**149.89**	**86**	*e*PKPbc	**PKPbc**	**10 22 21.3**	**+0.5**
SNOW	**Snow King Moun**	**149.98**	**86**	*e*PKPbc	**PKPbc**	**10 22 21.2**	**+0.1**
IMW	**Indian Meadow**	**150.07**	**85**	*e*PKPbc	**PKiKP**	**10 22 22.0**	**-0.1**
MOOW	**Moose Ponds**	**150.13**	**86**	*e*PKPbc	**PKPbc**	**10 22 21.4**	**0.0**
SMCO	**Snowmass**	**150.14**	**97**	*e*PKPbc	**PKiKP**	**10 22 23.1**	**+0.5**
LOHW	**Long Hollow**	**150.15**	**86**	*e*PKPbc	**PKPbc**	**10 22 21.8**	**+0.5**
SDCO	**Great Sand Dun**	**150.23**	**100**	*e*PKPbc	**PKiKP**	**10 22 22.4**	**-0.3**
YHB	**Horse Butte**	**150.30**	**84**	*e*PKPbc	**PKiKP**	**10 22 23.1**	**+0.6**
FLWY	**Flagg Ranch**	**150.31**	**85**	*e*PKPbc	**PKiKP**	**10 22 22.6**	**0.0**
WALA	**Waterton Lakes**	**150.32**	**74**	*e*PKPbc	**PKPbc**	**10 22 21.7**	**+0.2**
BOZ	**Bozeman (W)**	**150.40**	**82**	*e*PKPbc	**PKiKP**	**10 22 22.6**	**0.0**
BW06	**Boulder Array**	**150.41**	**88**	*e*PKPbc	**PKPbc**	**10 22 21.9**	**-0.1**
PD31	**Pinedale Array**	**150.41**	**88**	*e*PKPbc	**PKPbc**	**10 22 21.9**	**-0.2**
PDAR	**Pinedale Array**	**150.41**	**88**	PKPbc	**PKPbc**	**10 22 21.4**	**-0.6**
	comp=Z,2.5nm,0.9s,baz=213,slow=2.4,SNR=14						
YMR	**Madison River**	**150.41**	**84**	*e*PKPbc	**PKiKP**	**10 22 23.4**	**+0.7**
YHH	**Holmes Hill**	**150.54**	**84**	*e*PKPdf	**PKPdf**	**10 22 18.4**	**+1.5**
T25A	**Trinidad**	**150.54**	**102**	*e*PKPbc	**PKiKP**	**10 22 23.1**	**-0.1**
LKWY	**Lake**	**150.72**	**85**	*e*PKPab	**PKPab**	**10 22 31.5**	**+1.6**
HRY	**Holter Researc**	**150.73**	**80**	*e*PKPbc	**PKPbc**	**10 22 22.4**	**-0.2**
AMTX	**Amarillo**	**150.76**	**109**	*e*PKPbc	**PKPbc**	**10 22 23.0**	**0.0**
ISCO	**Idaho Springs**	**151.36**	**97**	*e*PKPbc	**PKPbc**	**10 22 24.5**	**0.0**
RWWY	**Rawlins**	**151.37**	**92**	*e*PKPbc	**PKPbc**	**10 22 23.9**	**-0.5**
N23A	**Red Feather La**	**151.75**	**95**	*e*PKPbc	**PKPbc**	**10 22 24.9**	**-0.4**
YKW3	**Yellowknife Ar**	**151.95**	**46**	*e*PKPbc	**PKPbc**	**10 22 24.0**	**-0.6**
YKA	**Yellowknife Ar**	**151.96**	**46**	PKPbc	**PKPbc**	**10 22 23.6**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=281,slow=1.9,SNR=28						
YKB5	**Yellowknife Ar**	**151.96**	**46**	*e*PKPbc	**PKPbc**	**10 22 22.6**	**-2.1**
WMOK	**Wichita Mounta**	**152.40**	**113**	*e*PKPbc	**PKPbc**	**10 22 25.6**	**-1.0**

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*NIED **21** 10:09:00, 46°.60N×152°.50E, h5^{km}, Mw3.9 Best double couple: M$_0$7.37000×10^{14} NP1:φ$_s$209.00000°, δ69.00000°, λ174.00000°. NP2:φ$_s$301.00000°, δ84.00000°, λ21.00000°.*

*JMA **21** 10:09:55.3±0.8, 46°.63N×152°.49E, h30^{km}, M4.7*

ISCJB ***21*** *10:09:56.8±0.5, 46°.32N±0°.06×152°.39E±0°.07, h52^{km}, mb3.5/10, MS2.6/1, Error ellipse: s-maj=10.3km s-min=3.7km az=143.9*

SKHL ***21*** *10:09:57.2±0.8, 46°.20N×152°.62E, h65^{km}±4^{km}, mb4.2/5*

MOS ***21*** *10:09:58.7±0.9, 46°.49N×152°.21E, h68^{km}, mb4.0/4, Error ellipse: s-maj=17.7km s-min=9.3km az=54.2*

IDC ***21*** *10:10:01.0±2.7, 46°.48N×152°.24E, h71^{km}±24^{km}, mb3.2/11, mb1 3.6/16, mb1mx3.4/65, mbtmp3.7/16, MS2.8/3, Ms1 2.8/3, ms1mx2.5/24, Error ellipse: s-maj=26.5km s-min=12.0km az=137.0*

ISC 21 10:09:58.6±0.7**, 46°.27N**±0°.08×**152°.45E**±0°.07**, h52^{km}, n55,** σ**1^{s}28**/62**, mb3.6**/10**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.37**	**254**	*i* P	**Pn**	**10 10 49.3**	**+0.6**
KUR				AMB	AMB	10 10 49.8	
	10.0nm,0.3s						
KUR				AMB	AMB	10 10 49.8	
	30nm,0.3s						
KUR				*i* S	**Sn**	**10 11 28.0**	**+0.6**
KUR				A	A	10 11 37.0	
	40nm,0.4s						
KUR				A	A	10 11 37.0	
	160nm,0.4s						
KUR	**Kuril'sk**	**3.37**	**254**	*d i*PN	**Pn**	**10 10 49.3**	**+0.6**
KUR				*e*S	**Sn**	**10 11 28.5**	**+1.1**
KUR				pmax	pmax		
	comp=Z,297nm,0.3s						
KUR				pmax	pmax		
	comp=N,114nm,0.2s						
KUR				pmax	pmax		
	comp=E,32nm,0.2s						
KUR				smax	smax		
	comp=N,441nm,0.3s						
KUR				smax	smax		
	comp=E,163nm,0.7s						
SKR	**Severo-Kuril's**	**5.05**	**28**	*e*P	**Pn**	**10 11 11.0**	**-0.6**
SKR				AMB	AMB	10 11 13.0	
	comp=E,20nm,1.0s						
SKR				*e*S	**Sn**	**10 12 06.7**	**-1.8**
SKR				A	A	10 12 19.0	
	comp=E,130nm,0.9s						
SKR				A	A	10 12 19.0	
	comp=E,160nm,0.9s						
SKR	**Severo-Kuril's**	**5.05**	**28**	*e*PN	**Pn**	**10 11 11.8**	**+0.2**
SKR				*e*S	**Sn**	**10 12 10.1**	**+1.6**
SKR				pmax	pmax		
	comp=Z,169nm,1.0s						
SKR				smax	smax		
	comp=N,127nm,0.7s						
SKR				smax	smax		
	comp=E,158nm,1.1s						
YUK	**Yuzh-Kuril'sk**	**5.17**	**247**	*i* P	**Pn**	**10 11 14.0**	**+0.7**
YUK				AMB	AMB	10 11 17.0	
	comp=E,70nm,0.4s						
YUK				AMB	AMB	10 11 17.0	
	comp=E,20nm,0.4s						
YUK				*i* S	**Sn**	**10 12 11.0**	**-0.6**
YUK				A	A	10 12 28.0	
	comp=E,140nm,0.5s						
YUK				A	A	10 12 28.0	
	comp=E,40nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.17**	**247**	*c i*PN	**Pn**	**10 11 14.4**	**+1.1**
YUK				*i* S	**Sn**	**10 12 11.7**	**+0.1**
YUK				pmax	pmax		
	comp=Z,248nm,0.4s						
YUK				pmax	pmax		
	comp=N,70nm,0.2s						
YUK				pmax	pmax		
	comp=E,68nm,0.2s						
YUK				smax	smax		
	comp=N,145nm,0.3s						
YUK				smax	smax		
	comp=E,360nm,0.5s						
LAGR	**Lagunnoye**	**5.21**	**247**	*e*S	**Sn**	**10 12 12.0**	**-0.5**
GRPR	**Tuman**	**5.25**	**247**	*e*P	**Pn**	**10 11 15.0**	**+0.6**
GRPR				AMB	AMB	10 11 20.0	
	comp=E,100nm,0.3s						
GRPR				AMB	AMB	10 11 20.0	
	comp=E,20nm,0.3s						
GRPR				*e*S	**Sn**	**10 12 14.0**	**+0.5**
GRPR				A	A	10 12 32.0	
	comp=E,110nm,0.4s						
GRPR				A	A	10 12 32.0	
	comp=E,30nm,0.4s						
GRPR	**Tuman**	**5.25**	**247**	*e*PN	**Pn**	**10 11 15.3**	**+0.9**
GRPR				*e*S	**Sn**	**10 12 14.0**	**+0.5**
GRPR				pmax	pmax		
	comp=Z,206nm,0.3s						
GRPR				pmax	pmax		
	comp=N,98nm,0.1s						
GRPR				smax	smax		
	comp=N,112nm,0.6s						
GRPR				smax	smax		
	comp=E,290nm,0.4s						
NEM2	**Nemuro 2**	**5.58**	**241**	P	**Pn**	**10 11 18.0**	**-1.0**
NEM2				*e*S	**Sn**	**10 12 19.3**	**-2.5**
JRA	**Rausu**	**5.69**	**248**	P	**Pn**	**10 11 22.3**	**+1.9**
JNK	**Nakash**	**6.11**	**247**	P	**Pn**	**10 11 27.0**	**+0.8**
JAK	**Akkeshi**	**6.43**	**242**	P	**Pn**	**10 11 29.7**	**-0.9**
JTKR	**Abashiri--Toko**	**6.47**	**252**	P	**Pn**	**10 11 32.7**	**+1.6**
YSS	**Yuzh-Sakhalins**	**6.72**	**279**	*e*P	**Pn**	**10 11 36.1**	**+1.6**
YSS				AMB	AMB	10 11 36.7	
	comp=E,10.0nm,0.9s						
YSS				*e*S	**Sn**	**10 12 49.3**	**-0.3**
YSS	**Yuzh-Sakhalins**	**6.72**	**279**	*e*PN	**Pn**	**10 11 34.8**	**+0.3**
YSS				*e*S	**Sn**	**10 12 49.3**	**-0.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
JMP	**Maruseppu**	**6.82**	**254**	P	**Pn**	**10 11 38.1**	**+2.1**
JAR	**Ashorobuto**	**6.86**	**247**	P	**Pn**	**10 11 37.3**	**+0.8**
JOB	**Onbets**	**7.01**	**244**	P	**Pn**	**10 11 38.5**	**-0.1**
JOB				*e*S	**Sn**	**10 12 55.5**	**-1.4**
HRK	**Horoka**	**7.19**	**250**	*e*P	**Pn**	**10 11 42.6**	**+1.5**
JKK2	**Kamakawa 2**	**7.28**	**254**	P	**Pn**	**10 11 44.2**	**+2.0**
JKA	**Kamikawa-asahi**	**7.29**	**256**	*e*P	**Pn**	**10 11 43.6**	**+1.2**
ASAJ	**Asahikawa**	**7.29**	**256**	P	**Pn**	**10 11 45.1**	**+2.7**
ASAJ	**Asahikawa**	**7.29**	**256**	P	**Pn**	**10 11 43.6**	**+1.2**
	comp=Z,4.2nm,0.3s,baz=76,slow=18,SNR=27						
ASAJ				S	**Sn**	**10 13 06.6**	**+2.9**
	baz=107,slow=14,SNR=1.8						
JCH	**Churui**	**7.46**	**244**	P	**Pn**	**10 11 44.0**	**-0.7**
JCH				*e*S	**Sn**	**10 13 05.0**	**-2.9**
PETK	**Petropavlovsk-**	**7.64**	**24**	P	**Pn**	**10 11 46.9**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=176,slow=12,SNR=35						
PETK				LR	LR	10 15 04.4	
	comp=Z,77nm,18.1s,baz=218,slow=40						
MYR	**Moyori**	**7.69**	**242**	*e*P	**Pn**	**10 11 47.6**	**-0.2**
TYV	**Tymovskoe**	**7.96**	**309**	*e*P	**Pn**	**10 11 52.5**	**+1.0**
JBT2	**Biratori 2**	**8.01**	**248**	P	**Pn**	**10 11 52.2**	**0.0**
JNBK	**Urakawa-nobuka**	**8.02**	**244**	P	**Pn**	**10 11 51.5**	**-0.9**
JNB	**Noboribetsu**	**9.01**	**249**	P	**Pn**	**10 12 05.5**	**-0.5**
JKB	**Kayabe**	**9.31**	**246**	P	**Pn**	**10 12 08.8**	**-1.2**
JYM2	**Yakumo 2**	**9.62**	**249**	P	**Pn**	**10 12 14.0**	**-0.3**
MA2	**Magadan**	**13.37**	**356**	P	**Pn**	**10 13 04.0**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=176,slow=15,SNR=7.6						
KLR	**Kul'dur**	**14.24**	**290**	LR	LR	10 18 26.5	
	comp=Z,34nm,19.0s,baz=66,slow=36						
MJAR	**Matsushiro Arr**	**14.42**	**233**	P	**Pn**	**10 13 20.4**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=5.0						
MAT	**Matsushiro**	**14.43**	**233**	P	**P**	**10 13 26.9**	**+1.6**
USRK	**Ussuriysk Ar.**	**14.57**	**269**	P	**Pn**	**10 13 20.4**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=78,slow=15,SNR=5.3						
KSRS	**Korea Array**	**20.22**	**253**	P	**P**	**10 14 30.0**	**+0.9**
	comp=Z,2.3nm,0.7s,baz=56,slow=11,SNR=7.8						
KSRS				LR	LR	10 21 44.9	
	comp=Z,28nm,20.1s,baz=80,slow=35						
H11N2	**WAKE ISLAND Hy**	**29.01**	**151**	T	T	10 47 14.6	
	baz=339,slow=76,SNR=625						
H11N1	**WAKE ISLAND Hy**	**29.02**	**151**	T	T	10 47 22.6	
	baz=339,slow=76,SNR=372						
H11N3	**WAKE ISLAND Hy**	**29.02**	**151**	T	T	10 47 18.6	
	baz=339,slow=76,SNR=422						
H11S1	**WAKE ISLAND Hy**	**30.08**	**152**	T	T	10 48 40.0	
	baz=340,slow=76,SNR=362						
H11S3	**WAKE ISLAND Hy**	**30.09**	**152**	T	T	10 48 39.6	
	baz=340,slow=76,SNR=375						
H11S2	**WAKE ISLAND Hy**	**30.10**	**152**	T	T	10 48 40.2	
	baz=340,slow=76,SNR=266						
ILAR	**Eielson Array**	**37.21**	**38**	P	**P**	**10 17 03.5**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=275,slow=6.0,SNR=4.4						
INK	**Inuvik**	**42.30**	**32**	P	**P**	**10 17 46.6**	**0.0**
	comp=Z,0.4nm,0.4s,baz=278,slow=8.3,SNR=6.8						
MKAR	**Makanchi Array**	**46.76**	**297**	P	**P**	**10 18 19.8**	**-2.7**
	comp=Z,0.2nm,0.5s,baz=90,slow=7.2,SNR=4.0						
YKA	**Yellowknife Ar**	**51.58**	**36**	P	**P**	**10 18 59.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=301,slow=7.0,SNR=5.0						
CMAR	**Chiang Mai Arr**	**51.81**	**256**	P	**P**	**10 19 02.1**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=42,slow=7.1,SNR=5.5						
PDAR	**Pinedale Array**	**65.40**	**53**	P	**P**	**10 20 36.4**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=284,slow=0.8,SNR=4.8						
WRA	**Warramunga Arr**	**67.91**	**198**	P	**P**	**10 20 51.8**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=19,slow=7.3,SNR=3.9						
HFS	**Hagfors**	**68.75**	**339**	P	**P**	**10 20 54.9**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=57,slow=5.3,SNR=3.8						
ASAR	**Alice Springs**	**71.61**	**198**	P	**P**	**10 21 15.7**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=18,slow=6.0,SNR=3.5						
TXAR	**Lajitas Array**	**78.13**	**60**	P	**P**	**10 21 53.2**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=300,slow=4.6,SNR=9.8						

ISK ***21*** *10:18:49.9, 37°.40N×26°.89E, h4^{km}, ML4.6/33*

IDC ***21*** *10:18:49.9±0.6, 37°.35N×27°.05E, h0^{km}, mb4.2/19, mb1 4.2/31, mb1mx4.1/59, mbtmp4.2/31, ML4.1/9, MS3.7/26, Ms1 3.7/26, ms1mx3.5/58, Error ellipse: s-maj=12.6km s-min=9.4km az=156.0*

GII ***21*** *10:18:49.5±0.6, 37°.39N×26°.91E, h40^{km}, mb4.6/1, MD4.5/1*

DDA ***21*** *10:18:49.4, 37°.35N×26°.89E, h26^{km}±1^{km}, ML4.6*

HLW ***21*** *10:18:50.0, 37°.88N×27°.99E, h10^{km}±36^{km}, Md4.6, Ml4.8*

ATH ***21*** *10:18:50.0, 37°.40N×26°.95E, h24^{km}±1^{km}, ML4.5/12, Error ellipse: s-maj=1.4km s-min=0.8km az=277.0*

NEIC ***21*** *10:18:49.9±0.0, 37°.41N×26°.93E, h5^{km}, mb4.4/19, MW4.5, ML4.4(THE), ML4.6(ISK), Moment Tensor Solution. s18 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.64; M$_{\theta\theta}$4.96; M$_{\phi\phi}$-5.60; M$_{r\theta}$-0.62; M$_{\theta\phi}$2.89; M$_{\phi r}$1.43; Best double couple: M$_{0}$6.20000×10^{15} NP1:φ$_{s}$211.00000°, δ80.00000°, λ-174.00000°. NP2:φ$_{s}$120.00000°, δ84.00000°, λ-11.00000°. Principal axes: T 5.7100, Plg3.0000°, Azm166.0000°; N 0.9500, Plg78.0000°, Azm269.0000°; P -6.6600, Plg12.0000°, Azm75.0000°; After ISK.*

NEIC Felt in Aydin, Turkey.

ISCJB ***21*** *10:18:50.6±0.3, 37°.40N±0°.01×26°.93E±0°.01, h14^{km}±2^{km}, mb4.4/54, MS3.8/16 Error ellipse: s-maj=1.8km s-min=1.6km az=28.4*

MOS ***21*** *10:18:51.1±1.3, 37°.43N×27°.00E, h12^{km}, mb4.4/21, Error ellipse: s-maj=5.7km s-min=4.4km az=83.7*

THE ***21*** *10:18:51.1, 37°.40N×26°.90E, h11^{km}±1^{km}, ML4.4/13, Error ellipse: s-maj=1.2km s-min=0.5km az=65.0*

NIC ***21*** *10:18:55.7±0.4, 37°.10N×26°.98E, h41^{km}, mb4.9, ML4.5*

ISC 21 10:18:51.5±0.8**, 37°.37N**±0°.02×**26°.93E**±0°.01**, h7^{km}**±5^{km}**, n472,** σ**2^{s}09**/537**, mb4.4**/54**, MS3.8**/16**, 34C-28D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIDI	**Didim-Aydin**	**0.25**	**88**	PG	**Pb**	**10 18 56.6**	**+0.3**
DIDI				SG	**Sg**	**10 19 01.1**	**+1.4**
SMG	**Samos**	**0.35**	**348**	*e*Pg	**Pg**	**10 18 57.4**	**-0.9**
SMG	**Samos**	**0.35**	**348**	P	**Pg**	**10 18 57.4**	**-0.9**
SMG				S	**Sg**	**10 19 02.6**	**-0.2**
SMG				AML	AML	10 19 02.9	
SMG				AML	AML	10 19 03.6	
SMG	**Samos**	**0.35**	**348**	P	**Pg**	**10 18 57.4**	**-0.9**
SMG				S	**Sg**	**10 19 02.5**	**-0.3**
YKAV	**Yalikavak-Bodr**	**0.37**	**131**	PG	**Pb**	**10 18 58.6**	**-1.8**
YKAV				SG	**Sb**	**10 19 04.8**	**-1.6**
GCAM	**G?zelcaml?**	**0.41**	**36**	PG	**Pg**	**10 18 58.7**	**-0.7**
GCAM				SG	**Sg**	**10 19 04.6**	**-0.2**
GCAM	**G?zelcaml?**	**0.41**	**36**	⇓*i*P	**Pg**	**10 18 59.3**	**-0.1**
GCAM				*i* S	**Sg**	**10 19 05.8**	**+1.0**
BODT	**Bodrum**	**0.43**	**135**	PG	**Pb**	**10 18 59.7**	**-1.7**
BODT				SG	**Sb**	**10 19 07.0**	**-1.1**
BODT	**Bodrum**	**0.43**	**135**	*e*Pg	**Pb**	**10 18 59.6**	**-1.8**
BODT	**Bodrum**	**0.43**	**135**	P	**Pb**	**10 18 59.6**	**-1.8**
BODT				S	**Sb**	**10 19 07.3**	**-0.8**
BDRM	**Kayabasi**	**0.51**	**126**	⇑*i*P	**Pb**	**10 19 01.5**	**-1.3**
BDRM				*i* S	**Sb**	**10 19 10.0**	**-0.4**
BDRM				IAML_P			
	comp=Z,147μm,0.2s						
MLSB	**Milas**	**0.68**	**96**	PG	**Pg**	**10 19 03.5**	**-1.0**
MLSB				SG	**Sn**	**10 19 14.8**	**-3.6**
GMLD	**Gumuldur**	**0.71**	**359**	PG	**Pg**	**10 19 04.1**	**-1.0**
NISR	**Nisiros**	**0.77**	**168**	*e*Pg	**Pb**	**10 19 06.2**	**-1.0**
NISR				*e*Sn	**Sn**	**10 19 19.8**	**-0.8**
NISR	**Nisiros**	**0.77**	**168**	P	**Pn**	**10 19 06.3**	**-2.4**
NISR				AML	AML	10 19 21.5	
	comp=E,89027μm,0.7s						
NISR				AML	AML	10 19 26.7	
	comp=N,51452μm,0.8s						
NISR	**Nisiros**	**0.77**	**168**	P	**Pb**	**10 19 06.2**	**-1.0**
NISR				S	**Sn**	**10 19 17.9**	**-2.7**
AYDN	**Tasoluk**	**0.81**	**69**	⇓*i*P	**Pb**	**10 19 06.6**	**-1.3**
AYDN				*i* S	**Sb**	**10 19 17.4**	**-1.6**
AYDN				IAML_P			
	comp=Z,131μm,0.1s						
ZEY	**zmir**	**0.93**	**339**	⇑*i*P	**Pg**	**10 19 08.3**	**-1.0**
ZEY				*i* S	**Sg**	**10 19 22.4**	**+1.0**
ZEY				IAML_P			
	comp=Z,281μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**0.96**	**53**	PG	**Pg**	**10 19 08.4**	**-1.4**
AMGA	**Amorgos Island**	**0.99**	**237**	P	**Pg**	**10 19 09.7**	**-0.7**
AMGA				S	**Sb**	**10 19 24.0**	**-0.1**
AMGA				AML	AML	10 19 26.9	
	comp=N,98711μm,0.6s						
AMGA				AML	AML	10 19 27.1	
AMGA	**Amorgos Island**	**0.99**	**237**	P	**Pg**	**10 19 09.7**	**-0.7**
AMGA				S	**Sb**	**10 19 23.6**	**-0.5**
BLCB	**Balcova**	**1.02**	**5**	PG	**Pb**	**10 19 09.4**	**-2.0**
URLA	**Izmir**	**1.02**	**345**	PG	**Pb**	**10 19 09.4**	**-2.1**
URLA	**Izmir**	**1.02**	**345**	⇑*i*P	**Pb**	**10 19 09.8**	**-1.7**
URLA				*i* S	**Sb**	**10 19 25.9**	**+0.7**
URLA				IAML_P			
	comp=Z,557μm,0.5s						
YER	**Yerkesik**	**1.10**	**102**	PN	**Pn**	**10 19 11.8**	**-1.6**
YER	**Yerkesik**	**1.10**	**102**	*e*Pg	**Pn**	**10 19 11.8**	**-1.6**
YER	**Yerkesik**	**1.10**	**102**	P	**Pn**	**10 19 11.8**	**-1.6**
YER	**Yerkesik**	**1.10**	**102**	*e*P	**Pn**	**10 19 11.8**	**-1.6**
BBRN	**Bozburun-Marma**	**1.14**	**127**	PN	**Pn**	**10 19 12.9**	**-0.9**
APE	**Apeiranthos**	**1.16**	**255**	PN	**Pb**	**10 19 12.3**	**-1.5**
APE	**Apeiranthos**	**1.16**	**255**	*e*Pg	**Pb**	**10 19 12.0**	**-1.8**
APE				*e*Sg	**Sg**	**10 19 29.0**	**+0.4**
APE	**Apeiranthos**	**1.16**	**255**	P	**Pb**	**10 19 12.3**	**-1.5**
APE				S	**Sn**	**10 19 29.6**	**-0.6**
APE				AML	AML	10 19 30.6	
	comp=N,27495μm,0.3s						
APE				AML	AML	10 19 31.6	
	comp=E,24246μm,0.4s						
APE	**Apeiranthos**	**1.16**	**255**	⇓*i*P	**Pb**	**10 19 12.1**	**-1.8**
APE	**Apeiranthos**	**1.16**	**255**	P	**Pb**	**10 19 12.0**	**-1.8**
APE				S	**Sb**	**10 19 28.7**	**-0.3**
APE	**Apeiranthos**	**1.16**	**255**	*e*P	**Pb**	**10 19 12.0**	**-1.8**
APE				*e*		10 19 29.0	
MRSB	**Marmaris-Mugla**	**1.21**	**122**	PN	**Pg**	**10 19 13.9**	**-0.7**
CHOS	**Chios island**	**1.23**	**326**	PN	**Pn**	**10 19 13.1**	**-2.0**
CHOS	**Chios island**	**1.23**	**326**	*e*Pn	**Pn**	**10 19 12.7**	**-2.4**
CHOS				*e*Sn	**Sb**	**10 19 28.2**	**-3.0**
CHOS	**Chios island**	**1.23**	**326**	P	**Pn**	**10 19 13.1**	**-2.0**
CHOS				S	**Sb**	**10 19 29.3**	**-1.8**
CHOS				AML	AML	10 19 34.6	
	comp=N,24904μm,0.7s						
CHOS				AML	AML	10 19 36.3	
	comp=E,30475μm,0.7s						
CHOS	**Chios island**	**1.23**	**326**	P	**Pn**	**10 19 12.7**	**-2.4**
CHOS				S	**Sb**	**10 19 28.2**	**-3.0**
KRBN	**Karaburun**	**1.26**	**346**	PN	**Pn**	**10 19 13.9**	**-1.6**
FOCM	**Foa**	**1.35**	**353**	PN	**Pn**	**10 19 14.1**	**-2.6**
ANAF	**Anafi Island**	**1.37**	**223**	P	**Pn**	**10 19 16.0**	**-1.0**
ANAF				AML	AML	10 19 39.3	
ANAF				AML	AML	10 19 42.9	
ANAF	**Anafi Island**	**1.37**	**223**	P	**Pn**	**10 19 15.2**	**-1.8**
ANAF				S	**Sb**	**10 19 33.1**	**-2.1**
TNSA	**Tinos**	**1.42**	**277**	P	**Pn**	**10 19 16.9**	**-0.7**
TNSA				S	**Sb**	**10 19 36.7**	**+0.3**
TURN	**Turunc**	**1.43**	**110**	PN	**Pn**	**10 19 13.4**	**-4.4**
TURN	**Turunc**	**1.43**	**110**	⇓*i*P	**Pn**	**10 19 13.3**	**-4.4**
TURN				*i* S	**Sn**	**10 19 32.9**	**-3.9**
TURN				IAML_P			
	comp=Z,53μm,0.3s						
IOSP	**Ios island**	**1.46**	**244**	P	**Pn**	**10 19 15.8**	**-2.5**
IOSP				S	**Sn**	**10 19 34.5**	**-3.2**
ARG	**Arkhangelos**	**1.50**	**140**	PN	**Pb**	**10 19 17.7**	**-1.9**
ARG	**Arkhangelos**	**1.50**	**140**	P	**Pb**	**10 19 17.7**	**-1.9**
ARG				AML	AML	10 19 44.8	
	comp=N,33570μm,1.1s						
ARG				AML	AML	10 19 47.2	
	comp=E,29223μm,0.5s						
ARG	**Arkhangelos**	**1.50**	**140**	P	**Pb**	**10 19 17.6**	**-2.0**
ARG				S	**Sg**	**10 19 38.0**	**-1.6**
THR8	**Santorini-Mono**	**1.51**	**231**	P	**Pn**	**10 19 17.2**	**-1.6**
SAP2K	**Karterados**	**1.53**	**232**	P	**Pn**	**10 19 18.1**	**-1.0**
THT2	**Imerovigli**	**1.53**	**233**	P	**Pn**	**10 19 17.8**	**-1.4**
SAP4	**Santorini-Oia**	**1.54**	**235**	P	**Pb**	**10 19 19.2**	**-1.0**
SANT	**Santorini**	**1.54**	**230**	*e*Pn	**Pn**	**10 19 17.7**	**-1.7**
SANT				*e*Sn	**Sg**	**10 19 42.4**	**+1.3**
SANT	**Santorini**	**1.54**	**230**	⇓*i*P	**Pn**	**10 19 17.8**	**-1.6**
GOMA	**Golmarmara-Man**	**1.55**	**30**	PN	**Pn**	**10 19 19.2**	**-0.2**
THT1	**Athinios (Pele**	**1.55**	**231**	P	**Pn**	**10 19 17.7**	**-1.8**
SAP3	**Santorini-Thir**	**1.57**	**234**	P	**Pb**	**10 19 19.8**	**-1.1**
TAVA	**DENIZLI_Tavas**	**1.58**	**86**	⇓*i*P	**Pn**	**10 19 19.1**	**-0.9**
TAVA				*i* S	**Sg**	**10 19 46.6**	**+4.2**
THR5	**Thira Island,**	**1.58**	**234**	P	**Pn**	**10 19 19.1**	**-0.9**
PSRA	**Psara**	**1.59**	**318**	P	**Pn**	**10 19 19.7**	**-0.3**
ZEDA	**zmir-Bergama**	**1.60**	**4**	⇑*i*P	**Pn**	**10 19 18.9**	**-1.3**
ZEDA				*i* S	**Sg**	**10 19 43.7**	**+0.8**
THR9	**Santorini-Faro**	**1.61**	**232**	P	**Pn**	**10 19 19.8**	**-0.6**
AKHS	**Akhisar**	**1.66**	**25**	⇑*i*P	**Pn**	**10 19 19.7**	**-1.3**
AKHS				*i* S	**Sg**	**10 19 45.0**	**+0.2**
AKS	**Akhisar**	**1.66**	**25**	PN	**Pn**	**10 19 20.5**	**-0.5**
MANT	**Manisa**	**1.71**	**48**	*e*Pn	**Pn**	**10 19 20.1**	**-1.7**
MANT				*e*Sn	**Sb**	**10 19 44.6**	**-0.4**
MANT	**Manisa**	**1.71**	**48**	⇓*i*P	**Pn**	**10 19 20.3**	**-1.5**
MANT				*i* S	**Sn**	**10 19 42.9**	**-1.1**
DENT	**Denizli**	**1.71**	**76**	PN	**Pn**	**10 19 21.1**	**-0.7**
KULA	**Kula-Manisa**	**1.78**	**50**	PN	**Pn**	**10 19 20.9**	**-1.9**
KARP	**Karpathos**	**1.83**	**174**	PN	**Pn**	**10 19 22.1**	**-1.2**
KARP	**Karpathos**	**1.83**	**174**	*e*Pn	**Pn**	**10 19 22.1**	**-1.2**
KARP	**Karpathos**	**1.83**	**174**	P	**Pn**	**10 19 21.9**	**-1.5**
KARP				AML	AML	10 19 56.1	
	comp=E,6871μm,0.7s						
KARP				AML	AML	10 19 58.0	
	comp=N,12646μm,1.0s						
KARP	**Karpathos**	**1.83**	**174**	P	**Pn**	**10 19 21.8**	**-1.5**
KARP				S	**Sn**	**10 19 45.2**	**-1.6**
FETY	**Fethiye**	**1.87**	**112**	PN	**Pb**	**10 19 24.4**	**-1.6**
FETY	**Fethiye**	**1.87**	**112**	P	**Pn**	**10 19 22.8**	**-1.2**
FETY				S	**Sn**	**10 19 46.3**	**-1.6**
FETY	**Fethiye**	**1.87**	**112**	⇓*i*P	**Pb**	**10 19 24.4**	**-1.6**
FETY				*i* S	**Sg**	**10 19 52.0**	**+0.4**
PRK	**Paraskevi**	**1.94**	**345**	P	**Pn**	**10 19 23.9**	**-1.0**
PRK				AML	AML	10 20 05.1	
	comp=E,34026μm,0.8s						
PRK				AML	AML	10 20 05.5	
	comp=N,33501μm,0.8s						
PRK	**Paraskevi**	**1.94**	**345**	P	**Pn**	**10 19 23.3**	**-1.6**
PRK				S	**Sn**	**10 19 46.4**	**-3.2**
AYVA	**Ayvalik**	**1.94**	**355**	⇑*i*P	**Pn**	**10 19 23.4**	**-1.5**
AYVA				*i* S	**Sg**	**10 19 55.3**	**+1.4**
SERI	**Serifos**	**1.96**	**265**	P	**Pn**	**10 19 23.4**	**-1.7**
SIGR	**SIGRI**	**2.02**	**336**	PN	**Pn**	**10 19 24.1**	**-1.9**
SIGR	**SIGRI**	**2.02**	**336**	P	**Pn**	**10 19 23.9**	**-2.1**
SIGR				AML	AML	10 19 58.8	
	comp=N,6722μm,0.6s						
SIGR				AML	AML	10 20 01.4	
	comp=E,5786μm,0.5s						
SIGR	**SIGRI**	**2.02**	**336**	P	**Pn**	**10 19 24.0**	**-1.9**
SIGR				S	**Sn**	**10 19 48.8**	**-2.7**
STEP	**BALIKESIR_Sava**	**2.10**	**17**	⇑*i*P	**Pn**	**10 19 25.3**	**-1.7**
STEP				*i* S	**Sg**	**10 19 58.8**	**-0.1**
MHLA	**Plaka, Milos I**	**2.10**	**253**	P	**Pn**	**10 19 26.1**	**-0.9**
GOLH	**Golhisar**	**2.10**	**93**	⇓*i*P	**Pb**	**10 19 27.9**	**-2.0**
GOLH				*i* S	**Sg**	**10 20 06.1**	**+7.1**
USAK	**Uak-Merkez**	**2.13**	**50**	⇓*i*P	**Pn**	**10 19 26.0**	**-1.4**
USAK				*i* S	**Sg**	**10 19 59.2**	**-0.6**
MHLO	**Agia Marina, M**	**2.13**	**252**	P	**Pn**	**10 19 26.4**	**-1.1**
MHLO	**Agia Marina, M**	**2.13**	**252**	P	**Pn**	**10 19 26.2**	**-1.3**
MHLO				S	**Sn**	**10 19 51.6**	**-2.6**
DEMI	**Demirci**	**2.19**	**40**	⇓*i*P	**Pn**	**10 19 27.1**	**-1.2**
DEMI				*i* S	**Sg**	**10 20 00.5**	**-1.2**
KHAL	**Karahalli**	**2.26**	**63**	⇓*i*P	**Pn**	**10 19 28.2**	**-1.2**
KHAL				*i* S	**Sg**	**10 20 05.9**	**+1.8**
STIA	**Sitia Lasithi**	**2.27**	**198**	P	**Pn**	**10 19 27.3**	**-2.0**
ZKR	**Zakros**	**2.32**	**195**	PN	**Pn**	**10 19 28.8**	**-1.3**
ZKR	**Zakros**	**2.32**	**195**	P	**Pn**	**10 19 30.3**	**+0.2**
ZKR				AML	AML	10 20 10.8	
	comp=N,6278μm,0.9s						
ZKR				AML	AML	10 20 11.9	
	comp=E,14126μm,0.7s						
NPS	**Neapolis**	**2.36**	**207**	P	**Pn**	**10 19 29.1**	**-1.5**
NPS	**Neapolis**	**2.36**	**207**	P	**Pn**	**10 19 28.5**	**-2.1**
NPS				S	**Sn**	**10 19 57.9**	**-1.9**
BAYC	**CANAKKALE_Bayr**	**2.39**	**353**	⇑*i*P	**Pn**	**10 19 29.5**	**-1.5**
BAYC				*i* S	**Sg**	**10 20 07.3**	**-0.9**
SKY	**Skiros Island**	**2.41**	**309**	P	**Pn**	**10 19 30.4**	**-0.8**
SKY	**Skiros Island**	**2.41**	**309**	P	**Pn**	**10 19 29.5**	**-1.8**
SKY				S	**Sn**	**10 19 57.5**	**-3.5**
BALY	**Balya**	**2.43**	**13**	⇑*i*P	**Pn**	**10 19 30.2**	**-1.4**
BALY				*i* S	**Sg**	**10 20 09.8**	**+0.3**
AKAS	**Kas**	**2.43**	**117**	PN	**Pb**	**10 19 32.1**	**-3.5**
AKAS	**Kas**	**2.43**	**117**	*i* P	**Pb**	**10 19 33.8**	**-1.7**
AKAS				*i* S	**Sg**	**10 20 09.0**	**-0.5**
KSL	**Kastellorizon**	**2.45**	**119**	P	**Pn**	**10 19 31.5**	**-0.4**
KSL				AML	AML	10 20 18.5	
	comp=N,5880μm,0.9s						
KSL				AML	AML	10 20 20.0	
	comp=E,8888μm,0.9s						
ELL	**Elmali**	**2.46**	**104**	PN	**Pn**	**10 19 32.5**	**+0.4**
LAST	**Lasithi**	**2.50**	**208**	P	**Pn**	**10 19 31.7**	**-0.8**
BRDR	**BURDUR-Merkez**	**2.51**	**82**	⇓*i*P	**Pn**	**10 19 33.1**	**+0.3**
BRDR				*i* S	**Sg**	**10 20 17.6**	**+5.5**
PTL	**Penteli**	**2.52**	**287**	P	**Pn**	**10 19 31.8**	**-1.1**
VLY	**Voula,Athens**	**2.54**	**282**	P	**Pn**	**10 19 32.2**	**-0.8**
DURS	**Dursunbey**	**2.54**	**28**	⇓*i*P	**Pn**	**10 19 31.9**	**-1.2**
DURS				*i* S	**Sg**	**10 20 12.9**	**-0.1**
KSTL	**Kastelli Herak**	**2.55**	**217**	P	**Pn**	**10 19 30.6**	**-2.6**
KSTL				S	**Sn**	**10 20 01.3**	**-3.2**
BOZC	**Bozcaada**	**2.56**	**345**	⇑*i*P	**Pn**	**10 19 31.8**	**-1.6**
BOZC				*i* S	**Sg**	**10 20 12.5**	**-1.3**
ATHU	**Athens Univers**	**2.57**	**284**	P	**Pn**	**10 19 32.4**	**-1.1**
GEDZ	**Gediz**	**2.57**	**49**	PN	**Pn**	**10 19 33.7**	**+0.1**
EREA	**Eretria**	**2.59**	**295**	P	**Pn**	**10 19 33.3**	**-0.6**
ATH	**Athens Observa**	**2.62**	**284**	P	**Pn**	**10 19 33.2**	**-0.9**
ATH	**Athens Observa**	**2.62**	**284**	P	**Pn**	**10 19 35.9**	**+1.7**
GDZ	**Gediz**	**2.64**	**49**	⇓*i*P	**Pn**	**10 19 33.2**	**-1.4**
GDZ				*i* S	**Sg**	**10 20 16.5**	**+0.1**
EFSA	**Agios Efstrati**	**2.65**	**325**	P	**Pn**	**10 19 34.3**	**-0.3**
IDI	**Anoyia**	**2.65**	**219**	PN	**Pn**	**10 19 34.9**	**+0.2**
IDI	**Anoyia**	**2.65**	**219**	*e*Pn	**Pn**	**10 19 34.0**	**-0.6**
IDI				*e*Sn	**Sn**	**10 20 05.4**	**-1.7**
IDI				*e*Lg	Lg	10 20 15.1	
IDI				*e*		10 20 34.0	
IDI	**Anoyia**	**2.65**	**219**	⇓*i*P	**Pn**	**10 19 34.4**	**-0.3**
IDI	**Anoyia**	**2.65**	**219**	Pn	**Pn**	**10 19 33.4**	**-1.2**
	comp=E,26nm,0.3s,baz=40,slow=15,SNR=41						
IDI				Sn	**Sn**	**10 20 05.4**	**-1.7**
	comp=E,84nm,0.3s,baz=304,slow=16,SNR=8.0						
IDI				Lg	Lg	10 20 15.1	
	comp=E,109nm,0.3s,baz=286,slow=23,SNR=13						
IDI				LR	LR	10 20 34.0	
	comp=E,920nm,18.9s,baz=72,slow=39						
KZIL	**AFYON_Kizioren**	**2.69**	**70**	⇓*i*P	**Pn**	**10 19 35.2**	**-0.1**
KZIL				*i* S	**Sg**	**10 20 23.3**	**+5.3**
KORT	**Korkueli**	**2.76**	**97**	PN	**Pn**	**10 19 36.7**	**+0.5**
KORT	**Korkueli**	**2.76**	**97**	*i* P	**Pb**	**10 19 38.4**	**-2.8**
KORT				*i* S	**Sg**	**10 20 24.8**	**+4.8**
LIA	**Limnos Island**	**2.87**	**332**	P	**Pn**	**10 19 36.0**	**-1.6**
LIA	**Limnos Island**	**2.87**	**332**	P	**Pn**	**10 19 36.1**	**-1.5**
ISP	**Isparta**	**2.89**	**80**	PN	**Pn**	**10 19 38.3**	**+0.3**
ISP	**Isparta**	**2.89**	**80**	*e*Pn	**Pn**	**10 19 37.9**	**-0.1**
ISP	**Isparta**	**2.89**	**80**	⇑*i*P	**Pn**	**10 19 38.0**	**0.0**
ISP	**Isparta**	**2.89**	**80**	*e*P	**Pn**	**10 19 37.9**	**-0.1**
ISP	**Isparta**	**2.89**	**80**	Pn	**Pn**	**10 19 33.5**	**-4.5**
BCK	**Bucak**	**2.92**	**87**	PN	**Pn**	**10 19 39.1**	**+0.8**
KNL	**Balıkesir**	**2.93**	**9**	*i* P	**Pn**	**10 19 36.2**	**-2.3**
KNL				*i* S	**Sg**	**10 20 24.6**	**-1.1**
VAM	**Vamos**	**2.95**	**229**	P	**Pn**	**10 19 39.3**	**+0.6**
MRKA	**Markates**	**2.96**	**298**	P	**Pn**	**10 19 38.1**	**-0.7**
AOS	**Alonnisos**	**3.00**	**308**	P	**Pn**	**10 19 38.5**	**-0.9**
AFYO	**Afyonkarahisar**	**3.01**	**61**	*i* P	**Pn**	**10 19 38.2**	**-1.5**
AFYO				*i* S	**Sg**	**10 20 30.7**	**+2.5**
ANTB	**Antalya**	**3.01**	**98**	PN	**Pn**	**10 19 40.4**	**+0.8**
VIL2	**Platees**	**3.02**	**287**	P	**Pn**	**10 19 38.4**	**-1.3**

IMMV	Iera Moni Meta	3.05	232	P	Pn	10 19 39.4	-0.7
BAGO	Egridir - ISPA	3.12	77	iP	Pn	10 19 41.2	0.0
BAGO				iS	Sg	10 20 35.9	+4.1
LOUT	Loutraki	3.20	282	P	Pn	10 19 41.4	-0.7
VLI	Veliai	3.26	260	P	Pn	10 19 41.5	-1.4
SKIA	Skiathos	3.26	304	P	Pn	10 19 42.3	-0.7
ANKY	Antikythira Is	3.28	244	P	Pn	10 19 42.1	-1.2
SMTH	Samothraki Isl	3.28	341	P	Pn	10 19 41.6	-1.7
SMIA	Simia	3.30	298	P	Pn	10 19 43.4	-0.1
KYTH	Kithira	3.30	252	P	Pn	10 19 43.3	-0.3
PROD	Prodromos	3.31	287	P	Pn	10 19 43.2	-0.5
SART	Tekirdag	3.32	3	iP	Pn	10 19 42.1	-1.7
SART				iS	Sg	10 20 36.2	-1.9
ATAL	Atalanti	3.36	294	P	Pn	10 19 42.9	-1.5
BOLV	Bolvadin	3.45	66	iP	Pn	10 19 45.4	-0.3
BOLV				iS	Sg	10 20 48.5	+6.2
KESN	Edirne-Kesan	3.46	357	iP	Pn	10 19 44.6	-1.4
KESN				iS	Sb	10 20 39.5	+3.9
NEO	Neokhori	3.50	305	P	Pn	10 19 45.4	-0.9
ALN	Alexandroupoli	3.59	349	ePn	Pn	10 19 46.0	-1.5
ALN	Alexandroupoli	3.59	349	P	Pn	10 19 46.0	-1.5
ALN	Alexandroupoli	3.59	349	eP	Pn	10 19 46.0	-1.5
PAIG	Paliouri	3.60	316	P	Pn	10 19 47.2	-0.5
THAS	Thassos island	3.66	333	P	Pn	10 19 46.9	-1.6
TRIP	Tripoli	3.71	274	P	Pn	10 19 50.4	+1.2
FYTO	Fytoko, Volos	3.74	304	P	Pn	10 19 48.9	-0.6
OUR	Ouranopolis	3.75	323	P	Pn	10 19 48.7	-1.0
TRAZ	Trapeza	3.82	283	P	Pn	10 19 51.0	+0.2
KLV	Kalavryta, Ach	3.85	282	P	Pn	10 19 50.9	-0.2
RDO	Rodhopi	3.92	344	P	Pn	10 19 50.8	-1.3
TRIZ	Trizonia	3.97	286	P	Pn	10 19 52.7	-0.1
AGG	Agios Georgios	3.98	296	ePn	Pn	10 19 53.2	+0.2
AGG	Agios Georgios	3.98	296	P	Pn	10 19 52.7	-0.2
AGG	Agios Georgios	3.98	296	eP	Pn	10 19 53.2	+0.2
ITM	Ithomi	4.00	269	ePn	Pn	10 19 53.8	+0.7
ITM	Ithomi	4.00	269	P	Pn	10 19 53.8	+0.7
LAKA	Lakka	4.02	284	P	Pn	10 19 53.3	-0.2
KVLA	Kavala	4.07	332	P	Pn	10 19 52.9	-1.3
KAVA	Kavala	4.08	333	P	Pn	10 19 52.9	-1.4
MES3	Kyparissia	4.19	270	P	Pn	10 19 56.5	+0.7
MES2	Methoni	4.21	264	P	Pn	10 19 57.2	+1.1
CTYL	Yalikoy Yolu	4.23	14	⇓iP	Pn	10 19 56.5	+0.2
PHSR	Pinarhisar	4.28	6	⇑iP	Pn	10 19 55.8	-1.2
EVR	Evrytania	4.32	292	P	Pn	10 19 58.2	+0.5
LIT	Litokhoron	4.41	310	ePn	Pn	10 19 59.0	+0.1
LIT	Litokhoron	4.41	310	eP	Pn	10 19 59.0	+0.1
THL	Klokotos Trika	4.44	301	P	Pn	10 19 59.1	0.0
RZN	Rozhen	4.64	339	iP	Pn	10 20 01.1	-1.0
MMB	Musomiste	4.89	331	iP	Pn	10 20 04.2	-1.2
AKMC	Akamas	4.95	117	P	Pn	10 20 06.3	0.0
	baz=297						
PLD	Plovdiv	5.03	341	iP	Pn	10 20 06.8	-0.5
PPCY	Paphos	5.04	118	P	Pn	10 20 08.0	+0.6
	baz=298						
ALFC	Alefka	5.09	114	P	Pn	10 20 08.2	+0.1
	baz=294						
ALFC				S	Sn	10 21 04.7	-2.4
VAY	Valandovo	5.20	321	iPn	Pn	10 20 09.4	-0.1
BR231	Keskin MP Arra	5.20	60	ePn	Pn	10 20 10.4	+0.6
ANTO	Ankara	5.23	60	ePn	Pn	10 20 11.1	+1.0
ANTO	Ankara	5.23	60	⇑iP	Pn	10 20 09.4	-0.7
ANTO	Ankara	5.23	60	eP	Pn	10 20 11.1	+1.0
LEF	Lefka	5.32	113	⇑iP	Pn	10 20 09.9	-1.3
KKB	Krupnik	5.38	328	iP	Pn	10 20 11.5	-0.7
FNA	Florina	5.50	310	ePn	Pn	10 20 15.0	+1.1
FNA	Florina	5.50	310	eP	Pn	10 20 15.0	+1.1
PGB	Panagyurishte	5.59	339	iP	Pn	10 20 13.8	-1.3
STIP	Stip	5.67	321	iPn	Pn	10 20 14.9	-1.1
CSS	Mathiatis	5.71	113	ePn	Pn	10 20 16.3	-0.4
CSS	Mathiatis	5.71	113	P	Pn	10 20 17.1	+0.4
	baz=294						
CSS				S	Sn	10 21 21.7	-0.8
CSS	Mathiatis	5.71	113	P	Pn	10 20 15.5	-1.2
	comp=E,29nm,0.8s						
CSS	Mathiatis	5.71	113	Pn	Pn	10 20 12.3	-4.4
CSS				Sn	Sn	10 21 17.4	-5.1
BR101	Keskin Array S	5.76	64	ePn	Pn	10 20 17.7	+0.2
BR101				eSn	Sn	10 21 15.7	-8.3
BR131	Keskin Array S	5.76	64	ePn	Pn	10 20 18.0	+0.5
BRTR	Keskin Array B	5.76	64	iP	Pn	10 20 17.7	+0.2
BRTR				pmax	pmax		
	comp=Z,46nm,0.5s						
BRTR	Keskin Array B	5.76	64	Pn	Pn	10 20 17.7	+0.2
	comp=Z,9.8nm,0.3s,baz=241,slow=14,SNR=214						
BRTR				Sn	Sn	10 21 15.7	-8.3
	baz=241,slow=15,SNR=2.4						
BRTR				LR	LR	10 22 33.0	
	comp=Z,208nm,20.7s,baz=236,slow=39						
PRD	Provadia	5.83	3	iP	Pn	10 20 17.1	-1.2
SZH	Strazhica	5.94	353	iP	Pn	10 20 18.6	-1.2
KRUS	Krusevo	5.94	314	iPn	Pn	10 20 20.9	+1.0
VTS	Vitosha	5.96	333	ePn	Pn	10 20 20.0	-0.3
VTS	Vitosha	5.96	333	⇑iP	Pn	10 20 19.9	-0.3
VTS	Vitosha	5.96	333	eP	Pn	10 20 20.0	-0.3
VTS	Vitosha	5.96	333	iP	Pn	10 20 20.0	-0.3
OHR	Ohrid	6.05	310	iPn	Pn	10 20 26.5	+5.1
ILGA	Ilgaz	6.43	53	ePn	Pn	10 20 27.8	+1.1
TIR	Tirane	6.76	308	ePn	Pn	10 20 33.7	+2.6
TIR	Tirane	6.76	308	eP	Pn	10 20 33.7	+2.6
TIRR	Tirgusor	7.17	9	ePn	Pn	10 20 36.2	-0.5
TIRR	Tirgusor	7.17	9	⇑iP	Pn	10 20 36.2	-0.5
TIRR	Tirgusor	7.17	9	eP	Pn	10 20 36.2	-0.5
TLB	Topalu	7.26	6	⇑iP	Pn	10 20 37.4	-0.5
HUMR	Humele	7.30	349	⇑iP	Pn	10 20 36.9	-1.6
HARR	Harsova	7.35	6	⇓iP	Pn	10 20 38.9	-0.3
DRME	Dracevica, Mon	7.66	311	ePn	Pn	10 20 46.6	+3.2
PDG	Podgorica	7.77	313	ePn	Pn	10 20 48.0	+3.1
CFR	Carcaliu	7.85	6	⇑iP	Pn	10 20 44.8	-1.3
TLCR		7.94	10	⇑iP	Pn	10 20 46.8	-0.4
TLCR		7.94	10	P	Pn	10 20 46.7	-0.4
HWQ	Hawqa	7.95	110	eP	Pn	10 20 46.3	-1.2
MTUR	Matau	7.97	350	⇑iP	Pn	10 20 47.5	-0.3
HNTI	Hanita	7.99	120	Pn	Pn	10 20 44.0	-3.9
HNTI				Sn	Sn	10 22 12.9	-5.6
OFRI	`Ofer	8.13	123	Pn	Pn	10 20 45.1	-4.8
OFRI				Sn	Sn	10 22 16.9	-5.2
MLR	Muntele Rosu	8.15	355	⇓iP	Pn	10 20 50.0	-0.2
MLR	Muntele Rosu	8.15	355	Pn	Pn	10 20 49.6	-0.6
	comp=Z,1.0nm,0.3s,baz=197,slow=4.5,SNR=24						
MLR				Lg	Lg	10 23 11.1	
	comp=Z,0.1nm,0.3s,baz=90,slow=20,SNR=2.2						
MLR				LR	LR	10 24 28.8	
	comp=Z,380nm,21.7s,baz=176,slow=41						
ARR	Arges	8.18	349	⇑iP	Pn	10 20 49.4	-1.1
MMAI	Mount Meron Ar	8.18	120	Pn	Pn	10 20 48.1	-2.6
	comp=Z,13nm,0.3s,baz=306,slow=13,SNR=22						
MMAI				Sn	Sn	10 22 16.0	-7.5
	comp=Z,19nm,0.3s,baz=305,slow=23,SNR=9.8						
VOIR		8.18	351	⇑iP	Pn	10 20 50.0	-0.7
TIP	Timpagrande	8.20	286	ePn	Pn	10 20 50.9	0.0
RCY	Rachaya	8.23	115	eP	Pn	10 20 49.5	-1.9
HERR	Herculane	8.24	337	⇓iP	Pn	10 20 50.2	-1.2
KSDI	Kefar Szold	8.26	118	P	Sn	10 22 20.6	-4.7
	comp=Z,130nm,1.0s						
KSDI	Kefar Szold	8.26	118	Pn	Pn	10 20 47.8	-3.9
KSDI				Sn	Sn	10 22 19.2	-6.1
NATI	Neve Ativ	8.28	117	Pn	Pn	10 20 48.5	-3.5
MDVR	Moldovita	8.38	334	⇑iP	Pn	10 20 53.1	-0.3
KOT	Kottamia	8.47	150	P	Pn	10 20 51.4	-3.2
	baz=157						
KOT				AMP		10 22 00.0	
	baz=157						
KOT				S	Sn	10 22 22.1	-8.4
	baz=157						
TREB	Trebinje	8.47	312	ePn	Pn	10 20 55.5	+0.9
PLOR	Plostina	8.48	359	⇑iP	Pn	10 20 54.8	+0.1
VRI	Vrincioaia	8.49	359	⇑iP	Pn	10 20 53.7	-1.1
MMLI	Mount Malkishu	8.53	123	P	Sn	10 22 29.0	-3.0
	comp=Z,93nm,0.9s						
MMLI	Mount Malkishu	8.53	123	P	Pn	10 20 56.3	+0.8
	comp=Z,28nm,0.8s						
MMLI	Mount Malkishu	8.53	123	Pn	Pn	10 20 51.3	-4.2
MMLI				Sn	Sn	10 22 27.1	-4.9
DIVS	Divibare	8.54	324	ePn	Pn	10 20 55.3	-0.2
DIVS	Divibare	8.54	324	ePn	Pn	10 20 55.2	-0.3
HHAG	Hagoal	8.56	148	P	Pn	10 20 54.2	-1.6
	baz=155						
HHAG				S	Sn	10 22 22.9	-10
	baz=155						
SHMJ	Saham	8.60	120	P	Pn	10 20 56.4	+0.1
GZR	Gura Zlata	8.60	340	⇓iP	Pn	10 20 54.7	-1.7
BBLS	Lazići	8.65	321	ePn	Pn	10 20 57.6	+0.6
DOPR	Dopca	8.67	353	⇑iP	Pn	10 20 57.2	-0.1
HMDT	Nahal Hemdat	8.72	123	Pn	Pn	10 20 54.3	-3.6
HMDT				Sn	Sn	10 22 32.0	-4.5
GLL	Jalalah	8.73	151	P	Pn	10 20 56.5	-1.7
	baz=158						
OZUR		8.76	355	⇓iP	Pn	10 20 58.6	0.0
CEL	Celeste	8.78	279	ePn	Pn	10 20 59.4	+0.5
KZIT	Kziot	8.93	134	P	Sn	10 22 36.7	-5.1
	comp=Z,484nm,0.9s						
KZIT	Kziot	8.93	134	P	Pn	10 21 00.0	-0.9
	comp=Z,204nm,0.9s						
KZIT	Kziot	8.93	134	Pn	Pn	10 20 56.8	-4.1
HAPS	Han Pijesak,Bl	9.04	320	ePn	Pn	10 21 02.1	-0.3
YTIR	Yattir	9.04	129	Pn	Pn	10 20 58.7	-3.7
DSI	Dead Sea	9.06	127	Pn	Pn	10 20 58.9	-3.8
TESR	Tescani	9.14	359	⇓iP	Pn	10 21 03.2	-0.5
BZS	Buzias	9.15	336	⇑iP	Pn	10 21 02.5	-1.4
MZDA	Masada	9.22	128	Sn	Sn	10 22 44.2	-4.7
WALJ	Wala	9.34	126	P	Pn	10 21 08.9	+2.4
	comp=Z,53nm,0.7s						
LISJ	El Lisan	9.35	128	P	Sn	10 22 47.9	-4.0
	comp=Z,65nm,0.9s						
GHAJ	Ghor Haditha	9.36	128	P	Sn	10 22 54.9	+2.7
GHAJ	Ghor Haditha	9.36	128	P	Pn	10 21 06.9	+0.2
	comp=Z,31nm,0.6s						
GHAJ	Ghor Haditha	9.36	128	Pn	Pn	10 21 02.0	-4.7
BIZ	Bicaz	9.58	357	⇑iP	Pn	10 21 08.9	-0.9
PRNI	Paran	9.70	134	Pn	Pn	10 21 07.4	-4.0
ASF	Jabal al Asfar	9.70	119	P	Sn	10 23 00.1	-0.6
ASF	Jabal al Asfar	9.70	119	P	Pn	10 21 11.3	-0.2
	comp=Z,14nm,0.7s						
ASF	Jabal al Asfar	9.70	119	Pn	Pn	10 21 10.5	-1.0
	comp=Z,1.7nm,0.3s,baz=301,slow=5.7,SNR=7.6						
ASF				Sn	Sn	10 22 55.2	-5.5
	comp=Z,0.8nm,0.3s,baz=270,slow=20,SNR=2.3						
SWQJ	Swaqa	9.71	126	P	Pn	10 21 11.5	-0.2
SIRR	Siria	9.72	338	⇓iP	Pn	10 21 10.7	-1.0
KIS	Kishinev	9.72	8	eP	Pn	10 21 17.0	+5.3
KIS				LRM	MLR	10 25 25.0	
	comp=Z,800nm,14.0s						
KIS	Kishinev	9.72	8	eP	Pn	10 21 17.0	+5.3
KIS				MLR	MLR		
	comp=Z,800nm,14.0s						
JDRJ	Daraweish	9.81	130	P	Pn	10 21 13.2	0.0
	comp=Z,50nm,0.7s						
HRFI	Mount Harif	9.95	135	P	Sn	10 23 02.4	-4.4
HRFI	Mount Harif	9.95	135	P	Pn	10 21 12.8	-2.1
	comp=Z,85nm,0.8s						
HRFI	Mount Harif	9.95	135	Pn	Pn	10 21 11.7	-3.2
MBRI	Mt Berech	10.07	136	Pn	Pn	10 21 12.6	-3.9
HSNJ	Maan	10.16	132	P	Sn	10 23 12.8	+0.6
HSNJ	Maan	10.16	132	P	Pn	10 21 17.5	-0.4
EIL	Elat	10.18	137	P	Sn	10 23 04.2	-8.3
	comp=Z,70nm,0.8s						
EIL	Elat	10.18	137	P	Pn	10 21 11.6	-6.5
EIL	Elat	10.18	137	Pn	Pn	10 21 14.6	-3.5
EIL	Elat	10.18	137	Pn	Pn	10 21 14.8	-3.3
	comp=Z,6.3nm,0.3s,baz=304,slow=4.5,SNR=23						
EIL				Sn	Sn	10 23 03.7	-8.8
	comp=Z,5.9nm,0.3s,baz=355,slow=11,SNR=8.0						
EIL				LR	LR	10 26 52.3	
	comp=Z,221nm,19.9s,baz=286,slow=48						
AQBJ	Aqaba	10.19	136	P	Sn	10 23 07.3	-5.5
	comp=Z,191nm,0.8s						
AQBJ	Aqaba	10.19	136	P	Pn	10 21 13.4	-4.8
BURAR	Bucovina Array	10.32	354	⇑iP	Pn	10 21 20.5	+0.6
BUR04	Bucovina Ar. S	10.32	354	ePn	Pn	10 21 20.8	+0.8
BUR08	Bucovina Ar. S	10.35	353	ePn	Pn	10 21 20.9	+0.6
BLY	Banja Luka	10.41	318	ePn	Pn	10 21 23.0	+1.9
HKAT	Jabal Katrina	10.63	144	P	Pn	10 21 20.9	-3.4
	baz=150						
MORH	Mrgy, Hungar	10.78	328	ePn	Pn	10 21 25.4	-0.8
HHRG	Al Ghardaqah	11.57	149	P	Pn	10 21 37.6	+0.5
	baz=154						
UZH	Uzhgorod	11.75	345	eP	Pn	10 21 41.9	+2.5
UZH				eS	Sn	10 23 52.1	+1.3
UZH				MLR	MLR		
	comp=N,130nm,12.0s						
UZH				MLR	MLR		
	comp=E,200nm,12.0s						
UZH				MLR	MLR		
	comp=Z,60nm,12.0s						
CRES	Cresnjev	12.04	318	ePn	Pn	10 21 41.3	-2.1
VYHS	Vyhne	12.59	335	eP	Pn	10 21 50.7	-0.2
VYHS	Vyhne	12.59	335	ePN	Pn	10 21 50.7	-0.2
MODS	Modra-Piesok	13.06	330	esPN	P	10 22 04.4	-3.5
NEY	Neytrino	13.40	59	iP	Pn	10 22 01.1	-1.1
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKASG	Malin Array Be	13.43	6	Pn	Pn	10 22 00.8	-1.6
	comp=Z,0.4nm,0.3s,baz=199,slow=14,SNR=3.0						
AKASG				LR	LR	10 27 13.2	
	comp=Z,417nm,20.3s,baz=170,slow=38						
AKBB	Malin Array Si	13.43	6	ePn	Pn	10 22 00.8	-1.5
AKBB	Malin Array Si	13.43	6	eP	Pn	10 22 00.8	-1.5
KIV	Kislovodsk	13.64	56	eP	Pn	10 22 03.8	-1.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,146nm,10.0s						
KBZ	Khabaz	13.69	57	Pn	Pn	10 22 07.3	+1.4
	comp=Z,0.1nm,0.3s,baz=225,slow=8.6,SNR=3.3						
KBZ				LR	LR	10 27 40.5	
	comp=Z,122nm,18.1s,baz=261,slow=39						
KRUC	Moravsky	13.97	330	ePN	P	10 22 18.6	+0.7
ZEI	Tsey	14.07	62	eP	P	10 22 17.4	-1.9
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NCK	Nalchik	14.08	59	iP	Pn	10 22 12.7	+1.4
NCK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VRAC	Vranov	14.09	331	ePN	P	10 22 20.0	+0.8
VRAC	Vranov	14.09	331	Pn	P	10 22 19.4	+0.2
	comp=Z,0.5nm,0.3s,baz=140,slow=9.8,SNR=11						
VRAC				LR	LR	10 27 55.4	
	comp=Z,274nm,20.6s,baz=156,slow=38						
GNI	Garni	14.18	73	ePn	Pn	10 22 12.7	-0.1
GNI	Garni	14.18	73	eP	Pn	10 22 14.5	+1.7
GNI				pmax	pmax		
	comp=Z,39nm,0.9s						
GNI	Garni	14.18	73	Pn	Pn	10 22 14.9	+2.2
	comp=Z,1.4nm,0.3s,baz=146,slow=9.0,SNR=4.3						
GNI				LR	LR	10 27 56.7	
	comp=Z,394nm,18.2s,baz=276,slow=39						
KEST	Kesra	14.23	269	ePn	Pn	10 22 16.4	+2.9
KEST	Kesra	14.23	269	Pn	Pn	10 22 14.9	+1.4
	comp=Z,0.2nm,0.3s,baz=328,slow=11,SNR=4.8						
KRLC	Kraliky	14.65	333	eP	P	10 22 27.6	+2.1
KRLC	Kraliky	14.65	333	eP	P	10 22 27.6	+2.1
GEA0	GERESS Array S	14.96	324	ePn	Pn	10 22 25.7	+2.4
GEC2	GERESS Array S	14.97	324	ePn	Pn	10 22 25.7	+2.2
GEC2	GERESS Array S	14.97	324	eP	Pn	10 22 25.7	+2.2
GERES	GERESS Array B	14.97	324	Pn	Pn	10 22 24.1	+0.6
	baz=135,slow=9.8,SNR=2.0						
GERES				LR	LR	10 29 19.3	
	comp=Z,172nm,21.4s,baz=142,slow=42						
KHC	Kasperske Hory	15.23	325	ePn	Pn	10 22 28.9	+2.0
	comp=Z,3.3nm,1.0s						
KHC	Kasperske Hory	15.23	325	eP	P	10 22 33.0	+1.1
KHC	Kasperske Hory	15.23	325	eP	Pn	10 22 28.9	+2.0
KHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GOPC	GO Pecny, Ondr	15.29	329	eP	P	10 22 33.5	+1.0
GOPC	GO Pecny, Ondr	15.29	329	eP	P	10 22 33.5	+1.0
FUORN	Ofenpass-Fuorn	15.43	312	ePn	P	10 22 32.3	-2.1
	comp=Z,13nm,1.0s						
PRU	Pruhonice	15.45	329	eP	P	10 22 35.2	+0.9
PRU	Pruhonice	15.45	329	eP	P	10 22 35.2	+0.9
DAVOX	Davos/Dischmat	15.74	312	Pn	Pn	10 22 33.3	-0.4
	comp=Z,0.2nm,0.3s,baz=162,slow=20,SNR=1.8						
DAVOX				LR	LR	10 29 24.9	
	comp=Z,674nm,20.6s,baz=115,slow=40						
VSR	Storozhevoye	16.35	28	eP	P	10 22 43.0	-1.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRG	Berggiesshubel	16.37	330	eP	P	10 22 45.2	+0.7
	comp=Z,15nm,1.2s						
BRG				i		10 22 49.7	
	comp=Z,20nm,1.3s						
BRG	Berggiesshubel	16.37	330	eP	P	10 22 45.2	+0.7
BRG				pmax	pmax		
	comp=Z,15nm,1.2s						
BRG				pmax	pmax		
	comp=Z,20nm,1.3s						
CLL	Collm	17.09	329	esP	P	10 22 53.0	+0.6
CLL				e(PP)		10 23 03.0	
CLL	Collm	17.09	329	eP	P	10 22 53.0	+0.6
SENIN	Lac Senin/Sane	17.13	308	ePn	P	10 22 53.5	+0.3
	comp=Z,8.8nm,0.8s						
VRH	Novokhopyorsk	17.37	33	eP	P	10 22 54.8	-0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.3s						
LPSR	Galich'ya Gora	17.40	25	eP	Pn	10 22 54.3	-0.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
OBN	Obninsk	18.93	17	eP	Pn	10 23 13.3	+0.1
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN	Obninsk	18.93	17	LR	LR	10 30 37.0	
	comp=Z,74nm,18.4s,baz=178,slow=37						
SSF	Saint Saulge	19.80	307	eP	Pn	10 23 26.5	+2.6
CAF	Calviac	20.14	300	eP	Pn	10 23 29.8	+1.9
CAF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BCLA	Clavier	20.23	317	⇓P	Pn	10 23 27.8	-1.1
VSU	Vasula	21.11	360	⇑iP	P	10 23 35.9	-0.5
VSU				pmax	pmax		
	comp=Z,70nm,1.0s						
TAM	Tamanrasset	23.46	238	eP	P	10 24 03.6	+1.8
	comp=Z,4.4nm,0.8s						
TAM	Tamanrasset	23.46	238	eP	P	10 24 03.6	+1.8
TAM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FIA0	FINESS Array S	24.10	359	eP	P	10 24 06.6	-0.9
FIA0	FINESS Array S	24.10	359	eP	P	10 24 06.6	-0.9
FINES	FINESS Array B	24.10	359	P	P	10 24 06.6	-0.9
	comp=Z,5.2nm,0.9s,baz=181,slow=11,SNR=11						
FINES				LR	LR	10 34 40.2	
	comp=Z,151nm,19.2s,baz=170,slow=39						
ES19	SONSECA Array	24.17	285	eP	P	10 24 10.9	+2.5
ESDC	Sonseca Array	24.22	285	P	P	10 24 10.7	+1.9
	comp=Z,8.1nm,0.8s,baz=80,slow=9.6,SNR=25						
ESLA	Sonseca Array	24.22	285	eP	P	10 24 11.7	+2.9
	comp=Z,18nm,1.0s						
HFS	Hagfors	24.30	344	P	P	10 24 11.2	+1.9
	comp=Z,9.3nm,1.1s,baz=180,slow=10,SNR=4.4						
HFS				LR	LR	10 35 25.1	
	comp=Z,263nm,18.5s,baz=166,slow=41						
GEYT	Alibeck	24.65	79	P	P	10 24 11.4	-1.3
	comp=Z,2.5nm,0.7s,baz=258,slow=5.7,SNR=6.2						
GEYT				LR	LR	10 36 07.6	
	comp=Z,123nm,21.7s,baz=250,slow=42						
GYA0B	ALIBECK ARRAY	24.65	79	eP	P	10 24 12.6	-0.1
	comp=Z,7.7nm,0.9s						
KLMR	Klimovskoe	24.82	15	eP	P	10 24 13.1	-0.9
KLMR				pmax	pmax		
	comp=Z,16nm,1.3s						
KLMR	Klimovskoe	24.82	15	eP	P	10 24 13.2	-0.8
KLMR				AMP		10 24 27.7	
	comp=Z,16nm,1.2s						
NB2	NORSAR Subarra	25.68	342	P	P	10 24 21.4	-0.4
	comp=Z,0.8nm,0.6s,baz=153,slow=10						
NB200	NORSAR Array S	25.68	342	eP	P	10 24 20.4	-1.5
NOA	NORSAR Array B	25.68	342	P	P	10 24 20.4	-1.5
	comp=Z,33nm,0.5s,baz=131,slow=7.3,SNR=5.8						
AKTO	Aktyubinsk	25.72	50	P	P	10 24 21.6	-0.6
	comp=Z,8.6nm,1.0s,baz=249,slow=9.7,SNR=16						
AKTO				LR	LR	10 36 58.5	
	comp=Z,138nm,19.3s,baz=263,slow=42						
KIRV	Kirov	25.79	27	LR	LR	10 35 59.4	
	comp=Z,145nm,19.1s,baz=232,slow=40						
MDT	Midelt	26.13	269	P	P	10 24 27.8	+1.4
	comp=Z,14nm,0.8s,baz=83,slow=9.0,SNR=12						
MVO	Moncorvo	26.46	289	eP	P	10 24 29.6	+0.4
MVO				eS	S	10 28 42.0	-21
ABKAR	Akbulak array	26.58	53	eP	P	10 24 30.1	0.0
PMRV	Marv??o	26.88	285	eP	P	10 24 36.3	+3.4
	comp=Z,30nm,1.8s						
PMRV				eS	S	10 29 32.5	+23
MTE	Manteigas	26.91	287	eS	S	10 29 19.8	+10
PCBR	Castelo Branco	26.91	286	eP	P	10 24 36.0	+2.9
	comp=Z,34nm,1.2s						
PRGR	Permogore	26.95	20	eP	P	10 24 36.1	+2.9
PRGR				pmax	pmax		
	comp=Z,11nm,0.7s						
POLO	Lamas de Olo	27.03	289	eS	S	10 29 32.9	+21
PESTR	Estremoz	27.11	284	eP	P	10 24 36.7	+1.8
PESTR				eS	S	10 29 30.7	+17
EKA	Eskdalemuir Ar	27.14	321	P	P	10 24 36.7	+1.6
	comp=Z,1.2nm,0.7s,baz=72,slow=14,SNR=3.2						
PVAQ	Vaqueiros	27.44	281	eP	P	10 24 40.2	+2.3
	comp=Z,34nm,1.5s						
PBEJ	Beja	27.45	282	eP	P	10 24 39.9	+1.9
	comp=Z,47nm,1.9s						
PBDV	Barranco-do-Ve	27.64	280	eP	P	10 24 41.8	+2.1
	comp=Z,48nm,1.2s						
MESJ	Messejana	27.75	282	eP	P	10 24 43.6	+2.9
	comp=Z,47nm,1.4s						
ARU	Arti	28.43	38	P	P	10 24 47.1	+0.5
ARU						10 25 36.3	
ARU				S	S	10 29 37.7	+3.8
ARU				SS	SnSn	10 30 56.2	+4.6
ATD	Arta Tunnel	29.43	147	LR	LR	10 37 27.7	
	comp=Z,85nm,19.2s,baz=27,slow=38						
TOA1	Torodi Ar. Sit	33.00	230	eP	P	10 25 26.5	-0.8
TOA0	Torodi Ar. Sit	33.01	230	eP	P	10 25 26.3	-1.0
TORD	Torodi Ar. Bea	33.01	230	P	P	10 25 26.5	-0.8
	comp=Z,6.9nm,0.8s,baz=29,slow=9.2,SNR=38						
CHGR	Chuyangaron	33.09	75	eP	P	10 25 28.6	+0.6
	comp=Z,33nm,0.7s						
KK31	Karatay Array	33.47	66	eP	P	10 25 30.7	-0.5
KK31	Karatay Array	33.47	66	eP	P	10 25 30.7	-0.5
KKAR	Karatay Array	33.47	66	eP	P	10 25 31.0	-0.2
KKAR	Karatay Array	33.47	66	eP	P	10 25 31.0	-0.2
GAR	Garm	33.91	74	eP	P	10 25 35.5	+0.4
	comp=Z,28nm,1.0s						
GAR	Garm	33.91	74	eP	P	10 25 35.6	+0.4
GAR				pmax	pmax		
	comp=Z,28nm,1.0s						
AAK	Ala-Archa	36.43	67	eP	P	10 25 57.3	+0.4
AAK	Ala-Archa	36.43	67	⇓eP	P	10 25 57.4	+0.5
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AAK	Ala-Archa	36.43	67	P	P	10 25 56.3	-0.6
	comp=Z,4.2nm,0.8s,baz=230,slow=6.0,SNR=8.1						
FRU	Bishkek	36.49	66	eP	P	10 25 57.0	-0.3
NRN	Naryn	37.73	68	eP	P	10 26 09.0	+0.8
	comp=Z,5.8nm,0.9s						
NRN	Naryn	37.73	68	eP	P	10 26 09.0	+0.8
NRN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH	Kashi	38.10	71	P	P	10 26 09.5	-1.5
KSH				pP	sP	10 26 14.4	+0.4
KSH				pmax	pmax		
	comp=Z,140nm,4.1s						
KDJ	Kajisay	38.48	67	eP	P	10 26 16.6	+2.3
	comp=Z,6.8nm,0.9s						
KDJ	Kajisay	38.48	67	P	P	10 26 16.6	+2.3
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURBB	Kurchatov Arra	38.64	53	P	P	10 26 14.6	-0.6
	comp=Z,3.4nm,0.6s,baz=279,slow=8.9,SNR=23						
KURK	Kurchatov	38.69	53	eP	P	10 26 15.9	+0.1
KURK	Kurchatov	38.69	53	⇑iP	P	10 26 15.9	+0.1
KURK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAKZ	Makanchi	41.17	59	eP	P	10 26 36.8	+0.4
	comp=Z,3.2nm,1.0s						
MAKZ	Makanchi	41.17	59	eP	P	10 26 36.8	+0.4
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	41.39	59	eP	P	10 26 38.1	-0.1
	comp=Z,4.4nm,0.9s						
MK31	Makanchi Array	41.39	59	eP	P	10 26 38.1	-0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK32	Makanchi Array	41.39	59	eP	P	10 26 38.0	-0.2
MKAR	Makanchi Array	41.39	59	eP	P	10 26 38.1	-0.2
	comp=Z,33nm,0.8s						
MKAR	Makanchi Array	41.39	59	P	P	10 26 38.0	-0.2
	comp=Z,4.7nm,0.7s,baz=290,slow=6.4,SNR=40						
MK01	Makanchi Array	41.40	59	eP	P	10 26 38.1	-0.1
NVS	Novosibirsk	41.52	47	eP	P	10 26 39.8	+0.6
DBIC	Dimbokro	42.06	231	P	P	10 26 43.4	-0.6
	comp=Z,2.7nm,0.5s,baz=24,slow=11,SNR=6.1						
DBIC				LR	LR	10 44 44.3	
	comp=Z,142nm,18.4s,baz=22,slow=37						
ZAA0	Zalesovo Array	42.45	48	eP	P	10 26 46.6	-0.2
	comp=Z,4.7nm,0.8s						
ZAA1	Zalesovo Array	42.45	48	eP	P	10 26 46.0	-0.8

ZALV	**Zalesovo Beam**	42.45	48	*e*P	P	10 26 46.1	-0.6
ZALV	**Zalesovo Beam**	42.45	48	P	P	10 26 46.0	-0.8
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV				MLR	MLR		
	comp=Z,93nm,18.5s						
ZALV	**Zalesovo Beam**	42.45	48	P	P	10 26 46.0	-0.8
	comp=Z,2.7nm,0.6s,baz=262,slow=6.5,SNR=12						
ZALV				LR	LR	10 47 35.2	
	comp=Z,93nm,18.5s,baz=248,slow=41						
DGZ	**Jazzator, Alta**	44.41	54	⇓*e*P	P	10 27 02.7	-0.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NRIK	**Noril'sk**	45.27	26	LR	LR	10 49 03.3	
	comp=Z,102nm,18.1s,baz=235,slow=40						
WMQ	**Urumqi**	45.68	62	*e*P	P	10 27 13.3	+0.4
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.1s						
WMQ				LR	LR		
	comp=N,260nm,26.9s						
WMQ				LR	LR		
	comp=E,170nm,24.1s						
WMQ				LR	LR		
	comp=Z,230nm,18.5s						
PYUN	**Piuthan**	47.46	84	*e*P	P	10 27 27.0	-0.2
	comp=Z,44nm,0.8s						
DANN	**Dangsing**	47.96	83	*e*P	P	10 27 31.1	-0.1
	comp=Z,95nm,0.8s						
KOLN	**Koldanda**	48.09	84	*e*P	P	10 27 31.6	-0.5
	comp=Z,40nm,0.9s						
DMN	**Daman**	49.35	84	*e*P	P	10 27 41.3	-0.6
	comp=Z,43nm,0.8s						
KKN	**Kakani**	49.41	83	*e*P	P	10 27 41.8	-0.5
	comp=Z,14nm,0.6s						
PKI	**Pulchoki**	49.61	83	*e*P	P	10 27 43.0	-1.0
	comp=Z,30nm,1.1s						
GUN	**Gumba**	49.83	83	*e*P	P	10 27 45.0	-0.6
	comp=Z,25nm,0.7s						
JIRN	**Jiri**	50.19	83	*e*P	P	10 27 47.8	-0.6
	comp=Z,31nm,0.8s						
GTA	**Gaotai**	55.68	64	⇑P	P	10 28 28.9	+0.4
GTA				pP	sP	10 28 33.3	+1.7
GTA				sP	pP	10 28 35.9	+5.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONA0	**Songino Array**	56.99	52	*e*P	P	10 28 36.7	-1.1
SONM	**Songino Array**	56.99	52	P	P	10 28 36.7	-1.1
	comp=Z,1.1nm,0.7s,baz=284,slow=8.1,SNR=6.9						
ULN	**Ulaanbaatar**	57.40	52	*ce*P	P	10 28 41.4	+0.8
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BOD	**Bodaibo**	57.84	39	*e*P	P	10 28 42.5	-0.9
BOD				pmax	pmax		
	comp=Z,6.0nm,1.1s						
FRB	**Frobisher Bay**	59.50	329	LR	LR	10 56 25.5	
	comp=Z,137nm,19.5s,baz=10,slow=38						
LZH	**Lanzhou**	59.97	66	*e*P	P	10 29 00.1	+1.4
LZH				pP	sP	10 29 04.1	+2.3
LZH				sP	pP	10 29 06.8	+5.8
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
RES	**Resolute Bay**	61.90	345	LR	LR	10 55 32.5	
	comp=Z,111nm,18.0s,baz=225,slow=36						
SCHQ	**Schefferville**	62.44	319	LR	LR	10 54 54.2	
	comp=Z,106nm,18.3s,baz=329,slow=35						
HHC	**Hu-ho-hao-te**	63.24	58	*e*P	P	10 29 20.3	-0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,210nm,7.5s						
KMI	**Kunming**	64.39	77	P	P	10 29 29.8	+1.1
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
XAN	**Xi'an**	64.60	66	P	P	10 29 37.0	+7.3
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,180nm,5.2s						
CM31	**Chiang Mai Arr**	64.93	85	*e*P	P	10 29 30.9	-1.0
	comp=Z,7.2nm,1.1s						
CMAR	**Chiang Mai Arr**	64.93	85	*i* P	P	10 29 31.8	-0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	64.93	85	P	P	10 29 30.9	-1.0
	comp=Z,1.3nm,0.8s,baz=297,slow=7.8,SNR=10						
BOSA	**Boshof**	65.66	182	LR	LR	10 59 28.8	
	comp=Z,95nm,18.8s,baz=20,slow=37						
NJ2	**Nanjing**	72.75	63	*e*P	P	10 30 20.0	-0.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	**Ussuriysk Ar.**	74.28	46	P	P	10 30 27.8	-1.5
	comp=Z,1.6nm,0.7s,baz=328,slow=5.1,SNR=3.7						
YKA	**Yellowknife Ar**	75.78	343	P	P	10 30 38.2	+0.6
	comp=Z,0.4nm,0.7s,baz=31,slow=5.3,SNR=4.7						
YKB5	**Yellowknife Ar**	75.78	343	*e*P	P	10 30 38.2	+0.6
KS01	**Wonju Array Si**	75.78	54	*e*P	P	10 30 37.7	-0.4
KS15	**Wonju Array Si**	75.80	54	*e*P	P	10 30 37.3	-0.9
	comp=Z,7.2nm,1.0s						
KSAR	**Wonju Array Be**	75.80	54	P	P	10 30 37.3	-0.9
KSAR	**Wonju Array Be**	75.80	54	P	P	10 30 37.3	-0.9
KSRS	**Korea Array**	75.81	54	P	P	10 30 37.3	-1.0
	comp=Z,1.8nm,0.7s,baz=305,slow=4.8,SNR=7.5						
KSRS				LR	LR	11 07 29.9	
	comp=Z,86nm,20.3s,baz=180,slow=39						
FYU	**Fort Yukon**	76.22	357	*e*P	P	10 30 42.8	+2.8
	comp=Z,15nm,0.8s						
IM3	**Indian Mountai**	76.97	0	*e*P	P	10 30 44.4	0.0
ILAR	**Eielson Array**	78.08	357	P	P	10 30 48.9	-1.6
	comp=Z,0.5nm,0.9s,baz=346,slow=4.2,SNR=5.4						
ILB	**Eielson Array**	78.08	357	*e*P	P	10 30 48.9	-1.6
	comp=Z,0.8nm,0.9s						
WRH	**Wood River Hil**	78.42	358	*e*P	P	10 30 52.1	-0.3
	comp=Z,4.1nm,0.8s						
PDAR	**Pinedale Array**	90.95	330	LR	LR	11 16 48.2	
	comp=Z,63nm,21.4s,baz=22,slow=38						

IDC 21 10:21:30.2±1.5**, 2°.99S**×**129°.82E, h0**^{km}**, mb3.6**/2**, mb1 3.9**/5**, mb1mx3.5**/42**, mbtmp3.7**/5**, ML3.7**/3**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.3**/37**, Error ellipse: s-maj=39.4km s-min=16.9km az=89.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	2.56	34	Pn	Pn	10 22 13.8	+0.9
	25nm,0.3s,baz=266,slow=23,SNR=54						
SIJI				Sn	Sn	10 22 43.9	-0.9
	18nm,0.3s,baz=217,slow=20,SNR=7.6						
SIJI				LR	LR	10 23 40.2	
	comp=Z,115nm,19.1s,baz=46,slow=51						
FITZ	**Fitzroy Crossi**	15.56	195	Pn	Pn	10 25 11.4	+0.4
	0.1nm,0.3s,baz=18,slow=9.6,SNR=2.8						
WRA	**Warramunga Arr**	17.41	166	P	Pn	10 25 33.5	-1.2
	0.3nm,0.3s,baz=349,slow=12,SNR=17						
WRA				S	Sn	10 28 50.6	+1.2
	0.1nm,0.3s,baz=345,slow=21,SNR=3.8						
ASAR	**Alice Springs**	20.93	169	P	P	10 26 14.9	+0.3
	3.7nm,0.6s,baz=348,slow=11,SNR=47						
ASAR				S	S	10 30 05.1	-3.8
	0.3nm,0.7s,baz=351,slow=22,SNR=3.5						
MKAR	**Makanchi Array**	64.81	326	P	P	10 32 10.8	-0.1
	0.2nm,0.4s,baz=108,slow=6.9,SNR=4.3						

ISCJB ***21*** *10:30:30.7±0.5, 3°.01N±0°.05×128°.46E±0°.06, h100*^{km}*, mb3.9/14, Error ellipse: s-maj=8.8km s-min=7.0km az=41.2*

IDC ***21*** *10:30:36.2±2.8, 2°.90N×128°.26E, h141*^{km}*±29*^{km}*, mb3.5/14, mb1 3.6/15, mb1mx3.4/47, mbtmp3.9/15, MS3.3/1, Ms1 3.3/1, ms1mx2.5/27, Error ellipse: s-maj=33.2km s-min=12.2km az=82.0*

DJA ***21*** *10:30:36.9±1.2, 3°N±3°×12°8E±°, h19*^{km}*±12*^{km}*, M4.5/10, mb4.7/4, mB5.2/2, MLv4.5/10, Mw(mB)4.6/2*

ISC 21 10:30:32.9±0.6**, 2°.91N**±0°.06×**128°.34E**±0°.07**, h100**^{km}**, n33,** σ**1ˢ.83**/36**, mb4.2**/21**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	2.34	205	P	Pn	10 31 12.0	+2.1
SGSI	**Sangihe**	2.91	285	P	Pn	10 31 20.2	+2.8
SGSI				S	Sn	10 31 52.5	+0.8
SIJI	**Sorong**	4.76	142	P	Pn	10 31 48.1	+5.7
	4.0nm,0.3s,baz=121,slow=23,SNR=7.9						
SIJI				S	Sn	10 32 41.8	+5.3
	3.5nm,0.3s,baz=32,slow=22,SNR=7.9						
KMSI	**Cibinong**	4.94	242	P	Pn	10 31 47.1	+2.3
KMSI				S	Sn	10 32 41.8	+1.1
KCP	**Kidapawan**	5.20	322	⇓*e*P	Pn	10 31 52.5	+4.1
KCP				*i* S	Sn	10 32 51.0	+3.8
LUWI	**Luwuk**	6.81	235	P	Pn	10 32 12.1	+1.8
MRSI	**Marisa**	6.84	249	P	Pn	10 32 13.6	+3.0
BATI	**Baumata**	13.84	200	LR	LR	10 39 42.8	
	comp=Z,107nm,18.1s,baz=292,slow=40						
WRA	**Warramunga Arr**	23.47	166	P	P	10 35 32.9	-0.8
	0.7nm,0.4s,baz=346,slow=10,SNR=14						
ASAR	**Alice Springs**	26.97	169	P	P	10 36 04.8	-0.5
	0.4nm,0.8s,baz=0.0,slow=7.4,SNR=4.4						
ASAR				PcP	PcP	10 39 23.4	-1.4
	0.1nm,0.5s,baz=330,slow=2.6,SNR=4.1						
KSRS	**Korea Array**	34.38	359	P	P	10 37 10.0	-0.3
	1.0nm,0.5s,baz=171,slow=9.0,SNR=5.2						
MJAR	**Matsushiro Arr**	34.68	14	P	P	10 37 11.9	-1.1
	1.7nm,0.8s,baz=191,slow=10,SNR=4.3						
STKA	**Stephens Creek**	36.82	161	P	P	10 37 30.3	-1.0
	1.0nm,0.3s,baz=326,slow=12,SNR=3.3						
USRK	**Ussuriysk Ar.**	41.24	4	P	P	10 38 06.6	-1.4
	1.5nm,0.5s,baz=216,slow=8.7,SNR=4.0						
ASAJ	**Asahikawa**	42.93	15	P	P	10 38 21.1	-0.6
	2.2nm,0.4s,baz=210,slow=16,SNR=3.6						
TAPN	**Taplejung**	45.79	306	*e*P	P	10 38 45.0	-0.2
	16nm,0.8s						
ODAN	**Odare**	45.85	305	*e*P	P	10 38 45.4	-0.2
KLR	**Kul'dur**	46.24	3	P	P	10 38 47.2	-0.8
	0.7nm,0.4s,baz=199,slow=9.5,SNR=6.2						
RAMN	**Ramite**	46.53	305	*e*P	P	10 38 51.0	+0.1
	16nm,0.6s						
JIRN	**Jiri**	47.15	306	*e*P	P	10 38 55.6	-0.3
	17nm,0.5s						
GUN	**Gumba**	47.50	306	*e*P	P	10 38 58.4	-0.2
	19nm,0.5s						
PKI	**Pulchoki**	47.75	305	*e*P	P	10 38 59.7	-0.8
PKIN	**Phulchoki**	47.76	305	*e*P	P	10 38 59.7	-0.8
DMN	**Daman**	48.01	305	*e*P	P	10 39 01.9	-0.6
SONM	**Songino Array**	48.59	340	P	P	10 39 05.7	-0.7
	0.9nm,0.6s,baz=161,slow=7.9,SNR=5.3						
KOLN	**Koldanda**	49.31	305	*e*P	P	10 39 12.1	-0.2
	7.0nm,0.2s						
DANN	**Dangsing**	49.39	305	*e*P	P	10 39 12.7	-0.4
	31nm,0.5s						
PYUN	**Piuthan**	49.93	305	*e*P	P	10 39 16.9	-0.1
	14nm,0.5s						
PETK	**Petropavlovsk-**	55.59	21	P	P	10 39 57.9	-0.1
	2.9nm,0.7s,baz=188,slow=5.5,SNR=5.5						
MKAR	**Makanchi Array**	59.14	325	P	P	10 40 22.1	-1.1
	1.1nm,0.4s,baz=116,slow=7.8,SNR=22						
ZALV	**Zalesovo Beam**	62.04	333	P	P	10 40 40.9	-1.8
	0.4nm,0.5s,baz=91,slow=7.5,SNR=3.0						
KURBB	**Kurchatov Arra**	63.29	327	P	P	10 40 49.6	-1.4
	1.3nm,0.5s,baz=125,slow=5.8,SNR=7.6						
BVAR	**Borovoye Array**	68.88	327	P	P	10 41 25.1	-1.7
	0.4nm,0.4s,baz=118,slow=5.7,SNR=3.5						

ISCJB ***21*** *10:52:14.4±0.7, 6°.55S±0°.07×129°.91E±0°.08, h146*^{km}*, mb4.0/2, Error ellipse: s-maj=12.5km s-min=8.9km az=28.6*

IDC ***21*** *10:52:15.8±1.7, 6°.48S×129°.99E, h142*^{km}*±20*^{km}*, mb3.8/3, mb1 3.8/7, mb1mx3.4/39, mbtmp4.3/7, Error ellipse: s-maj=24.6km s-min=13.4km az=88.0*

ISC 21 10:52:15.6±0.8**, 6°.53S**±0°.07×**129°.9E**±0°.1**, h146**^{km}**, n8,** σ**1ˢ.81**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	5.77	13	P	Pn	10 53 40.2	+0.8
	3.0nm,0.3s,baz=218,slow=22,SNR=11						
SIJI				S	Sn	10 54 42.5	-2.3
	7.9nm,0.3s,baz=209,slow=21,SNR=7.9						
BATI	**Baumata**	7.20	239	P	Pn	10 54 00.0	+1.6
	14nm,0.3s,baz=158,slow=3.0,SNR=15						
BATI				S	Sn	10 55 16.8	-2.3
	12nm,0.3s,baz=182,slow=17,SNR=7.4						
FITZ	**Fitzroy Crossi**	12.24	200	P	Pn	10 55 05.2	0.0
	0.5nm,0.3s,baz=34,slow=10.0,SNR=27						
FITZ				S	Sn	10 57 10.6	-10
	1.5nm,0.3s,baz=293,slow=23,SNR=8.4						
WRA	**Warramunga Arr**	14.01	163	P	Pn	10 55 25.5	-2.4
	0.6nm,0.3s,baz=348,slow=13,SNR=35						
WRA				S	Sn	10 57 54.0	-9.0
	1.3nm,0.3s,baz=337,slow=22,SNR=8.3						
ASAR	**Alice Springs**	17.46	168	P	P	10 56 10.8	+1.3
	1.3nm,0.3s,baz=346,slow=11,SNR=89						
CTA	**Charters Tower**	20.80	132	P	P	10 56 46.8	+1.2
	2.3nm,0.4s,baz=295,slow=11,SNR=7.5						
STKA	**Stephens Creek**	27.47	158	P	P	10 57 48.1	-0.1
	1.4nm,0.3s,baz=328,slow=10.0,SNR=10						
MKAR	**Makanchi Array**	67.80	327	P	P	11 02 58.5	+0.6
	1.4nm,0.4s,baz=118,slow=7.5,SNR=33						

IDC 21 11:04:32.4±1.9**, 6°.53S**×**142°.40E, h0**^{km}**, mb3.6**/1**, mb1 3.6**/3**, mb1mx3.3**/27**, mbtmp3.3**/3**, ML2.7**/2**, Error ellipse: s-maj=294.5km s-min=34.2km az=116.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	15.46	210	Pn	Pn	11 08 12.2	+0.2
	0.0nm,0.3s,baz=31,slow=13,SNR=3.2						
ASAR	**Alice Springs**	18.90	205	P	P	11 08 54.5	-0.2
	0.0nm,0.3s,baz=34,slow=11,SNR=6.6						
ILAR	**Eielson Array**	87.79	24	P	P	11 17 23.1	0.0
	0.3nm,0.5s,baz=243,slow=5.2,SNR=6.0						

IDC ***21*** *11:09:16.9±2.5, 12°.17S×172°.25E, h0*^{km}*, mb4.4/5, mb1 4.6/6, mb1mx3.9/39, mbtmp4.6/6, ML5.4/1, MS4.8/1, Ms1 4.8/1, ms1mx2.8/27, Error ellipse: s-maj=69.2km s-min=44.3km az=148.0*

ISC 21 11:09:22.2±2.5**, 12°.2S**±0°.3×**172°.2E**±0°.3**, h35**^{km}**, n8,** σ**1ˢ.06**/7**, mb4.4**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	12.38	282	Pn	Pn	11 12 16.3	+0.3
	21nm,0.3s,baz=100,slow=6.1,SNR=4.0						
RAO	**Raoul Island**	19.30	153	LR	LR	11 19 15.6	
	comp=Z,3µm,21.9s,baz=14,slow=31						
CTA	**Charters Tower**	26.14	249	P	P	11 14 54.6	+1.2
	3.2nm,0.9s,baz=75,slow=9.9,SNR=4.7						
STKA	**Stephens Creek**	34.32	230	P	P	11 16 06.2	+0.6
	1.9nm,0.4s,baz=54,slow=8.8,SNR=12						
WRA	**Warramunga Arr**	37.16	253	P	P	11 16 29.7	-0.4
	2.2nm,0.3s,baz=85,slow=8.9,SNR=78						
ASAR	**Alice Springs**	38.10	247	P	P	11 16 37.3	-0.8
	4.3nm,0.3s,baz=78,slow=9.3,SNR=196						
FITZ	**Fitzroy Crossi**	45.27	257	P	P	11 17 35.6	-1.2
	1.5nm,0.4s,baz=71,slow=7.3,SNR=7.7						
ARCES	**ARCESS Array B**	118.93	347	PKP	PKiKP	11 28 07.0	+0.4
	4.4nm,0.9s,baz=64,slow=2.1,SNR=5.6						

NIC ***21*** *11:10:42.7±0.4, 34°.26N×33°.17E, h5*^{km}*, ML3.4*

DDA ***21*** *11:10:45.7, 34°.44N×33°.02E, h54*^{km}*±2*^{km}*, ML3.1*

ISK ***21*** *11:10:45.9, 34°.50N×33°.24E, h12*^{km}*, ML2.8/11*

GII ***21*** *11:10:46.5±0.0, 34°.58N×33°.17E, h27*^{km}*, MD3.3/2*

ISC 21 11:10:45.1±1.3**, 34°.46N**±0°.03×**33°.23E**±0°.03**, h11**^{km}±10^{km}**, n39,** σ**0ˢ.88**/62**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	0.42	316	P	Pg	11 10 53.8	+0.4
	baz=154						
SZAC				S	Sb	11 11 01.8	+0.9
CSS	**Mathiatis**	0.51	9	PG	Pg	11 10 55.5	+0.3
CSS				SG	Sb	11 11 02.8	-0.8
CSS	**Mathiatis**	0.51	9	P	Pb	11 10 56.7	+0.6
	baz=190						
CSS				S	Sn	11 11 07.7	+0.5
CSS	**Mathiatis**	0.51	9	Pg	Pg	11 10 54.8	-0.4
CSS				Sg	Sg	11 11 00.6	-1.4
AKIN	**Akıncılar- Kıb**	0.59	19	PG	Pg	11 10 57.2	+0.6
LEF	**Lefka**	0.72	337	PG	Pg	11 10 59.9	+0.8
LEF	**Lefka**	0.72	337	*i* P	Pn	11 11 00.4	-0.8
LEF				*i* S	Sn	11 11 12.1	-0.2
LEF				IAML_P			
	comp=Z,4µm,0.2s						
PPCY	**Paphos**	0.85	301	P	Pb	11 11 00.8	-1.0
	baz=132						
LFK	**Lefkose**	0.86	17	PG	Pg	11 11 02.3	+0.6
AKDN	**Akdeniz- Kıbrı**	0.87	345	PG	Pg	11 11 02.4	+0.5
ALFC	**Alefka**	0.87	323	P	Pb	11 11 01.5	-0.8
	baz=152						
ALFC				S	Sn	11 11 16.6	+0.5
AKMC	**Akamas**	0.94	308	P	Pb	11 11 03.0	-0.4
	baz=137						
EREN	**Erenkoy**	1.32	35	PN	Pb	11 11 10.4	+0.5
EREN	**Erenkoy**	1.32	35	*i* P	Pg	11 11 11.6	+1.1
EREN				*i* S	Sg	11 11 29.8	+2.1
TEKE	**Tekeli-Mersin**	1.69	357	PN	Pb	11 11 15.2	-0.9
AKKU	**Akkuyu-Mersin**	1.72	9	PN	Pb	11 11 15.9	-0.8
AKKU				SN	Sb	11 11 37.7	-0.6
GULN	**MERSIN_Gulnar**	1.74	8	*i* P	Pb	11 11 16.7	-0.4
GULN				*i* S	Sb	11 11 39.9	+0.9
IKL	**Isikli**	1.82	12	PN	Pb	11 11 17.4	-1.0
BERE	**Bereket-Mersin**	1.89	360	PN	Pn	11 11 18.4	+1.0
TEVE	**Tevekalti-Mers**	1.98	5	PN	Pn	11 11 19.7	+1.0
HNTI	**Hanita**	2.12	130	Pn	Pn	11 11 20.5	+0.1
HNTI				Sn	Sn	11 11 46.3	-0.4
KIZK	**Mersin**	2.15	20	PN	Pn	11 11 22.2	+1.3
KIZK	**Mersin**	2.15	20	*i* P	Pb	11 11 23.1	-1.0
KIZK				*i* S	Sb	11 11 50.9	+0.1
KIZK				IAML_P			
	comp=Z,495nm,0.2s						
ERMK	**Ermenek**	2.20	353	*i* P	Pb	11 11 24.6	-0.4
ERMK				*i* S	Sg	11 11 55.2	-0.6
MMA0B	**Mount Meron ar**	2.31	128	Pn	Pn	11 11 23.2	+0.1
MMA0B				Sn	Sn	11 11 51.4	-0.1
KSDI	**Kefar Szold**	2.38	121	Sn	Sn	11 11 53.0	-0.2
NATI	**Neve Ativ**	2.40	119	Pn	Pn	11 11 23.8	-0.5
NATI				Sn	Sn	11 11 52.9	-0.7
MMLI	**Mount Malkishu**	2.72	137	Pn	Pn	11 11 28.6	-0.1
MMLI				Sn	Sn	11 12 01.5	-0.1
KEPZ	**Antalya-Kepez**	2.78	332	*i* P	Pn	11 11 30.1	+0.5
KEPZ				*i* S	Sb	11 12 08.9	0.0
KEPZ				IAML_P			
	comp=Z,240nm,0.3s						
HMDT	**Nahal Hemdat**	2.92	138	Pn	Pn	11 11 31.5	+0.1
KERG	**Konya-Eregli**	3.04	13	*i* P	Pb	11 11 37.3	-2.1
KERG				*i* S	Sb	11 12 14.0	-2.5
GULE	**Gulek**	3.09	23	*i* P	Pb	11 11 38.0	-2.2
GULE				*i* S	Sb	11 12 17.5	-0.4
GULE				IAML_P			
	comp=Z,151nm,0.2s						
DSI	**Dead Sea**	3.40	147	Pn	Pn	11 11 37.7	-0.3
DSI				Sn	Sn	11 12 18.5	+0.2
YTIR	**Yattir**	3.47	152	Pn	Pn	11 11 38.6	-0.5
YTIR				Sn	Sn	11 12 20.6	+0.5
KZIT	**Kziot**	3.67	164	Pn	Pn	11 11 42.0	+0.2
KZIT				Sn	Sn	11 12 25.4	+0.3
GHAJ	**Ghor Haditha**	3.71	147	Pn	Pn	11 11 42.4	+0.2
PRNI	**Paran**	4.36	159	Pn	Pn	11 11 51.7	+0.4
MBRI	**Mt Berech**	4.86	162	Pn	Pn	11 11 58.5	+0.3
MBRI				Sn	Sn	11 12 55.9	+1.4
EIL	**Elat**	4.99	163	Pn	Pn	11 12 00.2	+0.3
EIL				Sn	Sn	11 12 58.7	+1.1

IDC 21 11:15:09.7±2.0**, 10°.00S**×**166°.99E, h0**^{km}**, mb3.7**/3**, mb1 4.1**/5**, mb1mx3.6**/41**, mbtmp4.1**/5**, ML4.6**/2**, MS2.9**/2**, Ms1 2.9**/2**, ms1mx2.6**/27**, Error ellipse: s-maj=47.0km s-min=33.4km az=132.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	6.97	274	Pn	Pn	11 16 55.1	+1.9
	17nm,0.3s,baz=104,slow=4.2,SNR=4.4						
HNR				LR	LR	11 18 47.3	
	comp=Z,33nm,20.2s,baz=94,slow=31						
DZM	**Mont Dzumac**	12.01	182	Pn	Pn	11 18 03.6	+1.2
	1.9nm,0.3s,baz=12,slow=20,SNR=14						
DZM				LR	LR	11 22 10.0	
	comp=Z,152nm,18.4s,baz=308,slow=35						
WRA	**Warramunga Arr**	33.00	249	P	P	11 21 46.4	-0.5
	2.1nm,1.0s,baz=80,slow=9.1,SNR=8.5						
ASAR	**Alice Springs**	34.35	242	P	P	11 21 58.0	-0.7
	0.5nm,0.7s,baz=66,slow=10,SNR=6.2						
ILAR	**Eielson Array**	82.14	18	P	P	11 27 32.2	+0.1
	0.8nm,1.1s,baz=207,slow=5.8,SNR=2.9						
SNAA	**Sanae**	98.22	183	LR	LR	12 08 55.1	
	comp=Z,192nm,21.4s,baz=164,slow=33						

NSSC ***21*** *11:17:36.0±0.8, 33°.96N×35°.08E, h187*^{km}*±21*^{km}*, ML2.2*

ISCJB ***21*** *11:17:42.2±0.7, 32°.10N±0°.04×36°.0E±0°.1, h10*^{km}*, Error ellipse: s-maj=15.8km s-min=5.4km az=12.2*

JSO ***21*** *11:17:42.5±1.3, 32°N±6°×3°6E±°, h13*^{km}*±13*^{km}*, M2.5/6, Mjma2.4/6, ML2.5/1, MLv2.5/6*

ISC 21 11:17:42.0±1.0**, 32°.09N**±0°.06×**35°.90E**±0°.09**, h10**^{km}**, n7,** σ**2ˢ.27**/10**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSUJ	**Al Zarqa**	0.25	87	P	Pg	11 17 46.9	-0.2
WALJ	**Wala**	0.53	188	P	Pb	11 17 53.2	-0.2
GHAJ	**Ghor Haditha**	0.83	200	P	Pg	11 17 58.8	+0.8
LISJ	**El Lisan**	0.92	203	P	Pg	11 18 00.3	+0.6
BRBR	**Barbar**	1.32	2	*e*P	Pn	11 18 03.6	-3.0
BRBR				*e*S	Sb	11 18 25.0	+1.0
BRBR				AML	AML	11 18 29.3	
	comp=N,27nm,0.5s						
BRBR				AML	AML	11 18 32.2	
	comp=E,23nm,0.4s						
TOTH	**TOTAH**	1.34	19	*e*P	Pn	11 18 07.9	+1.0
TOTH				*e*S	Sg	11 18 29.1	+3.8
TOTH				AML	AML	11 18 30.6	
	comp=N,18nm,0.4s						
TOTH				AML	AML	11 18 33.5	
	comp=E,32nm,0.4s						
QASN	**Qassioun**	1.47	12	*e*P	Pn	11 18 06.0	-2.7
QASN				*e*S	Sn	11 18 26.6	-1.4
QASN				AML	AML	11 18 37.2	
	comp=E,80nm,0.4s						
QASN				AML	AML	11 18 39.6	
	comp=N,71nm,0.5s						

SOME ***21*** *11:26:11.6, 42°.37N×76°.20E, h5*^{km}

KRNET ***21*** *11:26:11.9±0.1, 42°.37N×76°.20E, h14*^{km}*, mb2.0*

NNC ***21*** *11:26:12.0±0.6, 42°.39N×76°.17E, h0*^{km}*, mb2.7, mpv2.5, Error ellipse: s-maj=4.5km s-min=1.9km az=11.0*

ISC 21 11:26:11.9±0.9**, 42°.37N**±0°.02×**76°.19E**±0°.02**, h8**^{km}±9^{km}**, n37,** σ**0ˢ.48**/70**, 24C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	0.13	163	⇑*i*P	Pg	11 26 14.7	-0.3
	baz=65						
ULHL				⇑*i*S	Sg	11 26 16.7	-0.5
	baz=65						
BOOM	**Boomskoye usch**	0.22	302	⇑*i*P	Pg	11 26 16.5	+0.1
	baz=3.0						
BOOM				⇑*i*S	Sg	11 26 19.7	+0.2
	baz=3.0						
KST	**Kastek**	0.69	346	P	Pg	11 26 25.3	0.0
	1.7nm,0.2s						
KST				S	Sb	11 26 35.6	-0.4
	2.3nm,0.3s						
KST	**Kastek**	0.69	346	*e*P	Pg	11 26 25.2	0.0
	baz=46						
KST				*e*S	Sb	11 26 35.6	-0.4
	baz=46						
KST	**Kastek**	0.69	346	*e*P	Pg	11 26 25.2	0.0
	2.4nm,0.1s						
KST				*e*S	Sb	11 26 35.6	-0.4
	2.1nm,0.2s						
TKM2	**Tokmak 2**	0.70	322	⇓P	Pg	11 26 25.4	0.0
	0.4nm,0.2s						
TKM2				⇑S	Sg	11 26 34.9	+0.3
	2.3nm,0.3s						
TKM2	**Tokmak 2**	0.70	322	⇑*i*P	Pg	11 26 25.5	0.0
	baz=21						
TKM2				⇑*i*S	Sg	11 26 35.1	+0.5
	baz=21						
IZV	**Izvestkoviy**	0.73	25	P	Pg	11 26 25.9	-0.1
	1.5nm,0.3s						
IZV				S	Sg	11 26 36.6	+1.0
	7.5nm,0.3s						
IZV	**Izvestkoviy**	0.73	25	*e*P	Pg	11 26 25.9	-0.1
	baz=24						
IZV				*e*S	Sg	11 26 36.6	+1.0
	baz=24						

IZV	**Izvestkoviy**	0.73	25	eP	Pg	11 26 25.9	-0.1
	1.5nm,0.3s						
IZV				eS	Sg	11 26 36.6	+1.0
	7.5nm,0.3s						
KZA	**Kyzart**	0.76	247	⇑iP	Pg	11 26 26.8	+0.2
	baz=48						
KZA				⇑iS	Sg	11 26 37.1	+0.6
	baz=48						
KDJ	**Kajisay**	0.78	108	⇑iP	Pg	11 26 26.7	-0.2
	baz=8.0						
KDJ				⇑iS	Sg	11 26 37.2	+0.2
	baz=8.0						
TNSS	**Tian-Shan**	0.87	40	P	Pg	11 26 28.2	-0.5
	0.6nm,0.1s						
TNSS				S	Sg	11 26 40.6	+0.6
	4.0nm,0.2s						
TNSS	**Tian-Shan**	0.87	40	eP	Pg	11 26 28.2	-0.5
	baz=39						
TNSS				eS	Sg	11 26 40.7	+0.7
	baz=39						
TNSS	**Tian-Shan**	0.87	40	eP	Pg	11 26 28.1	-0.5
	0.6nm,0.1s						
TNSS				eS	Sg	11 26 40.6	+0.6
	4.0nm,0.2s						
DGS	**Degeres**	0.92	341	P	Pg	11 26 28.6	-1.0
	3.1nm,0.1s						
DGS				S	Sg	11 26 41.3	-0.3
	3.0nm,0.2s						
DGS	**Degeres**	0.92	341	eP	Pg	11 26 28.6	-1.0
	baz=40						
DGS				eS	Sg	11 26 41.3	-0.3
	baz=40						
DGS	**Degeres**	0.92	341	eP	Pg	11 26 28.6	-1.0
	3.1nm,0.1s						
DGS				eS	Sg	11 26 41.3	-0.3
	3.0nm,0.2s						
NRN	**Naryn**	0.95	189	⇑iP	Pg	11 26 30.3	+0.1
	baz=90						
NRN				⇑iS	Sg	11 26 42.9	+0.3
	baz=90						
KBK	**Karagaybulak**	0.96	288	⇑iP	Pg	11 26 30.4	0.0
	baz=88						
KBK				⇑iS	Sb	11 26 43.8	0.0
	baz=88						
UCH	**Uchtor**	1.25	264	⇑iP	Pg	11 26 35.8	-0.2
	baz=64						
UCH				⇑iS	Sb	11 26 53.2	+0.8
	baz=64						
AAK	**Ala-Archa**	1.28	282	⇓iP	Pg	11 26 36.0	-0.5
	baz=83						
AAK				⇓iS	Sg	11 26 53.3	+0.2
	baz=83						
TARG	**Taragay, Kyrgy**	1.36	118	⇑iP	Pn	11 26 37.4	-0.2
	baz=18						
TARG				⇑iS	Sg	11 26 55.5	-0.4
	baz=18						
USP	**Ospenovka**	1.53	306	⇑iP	Pb	11 26 40.5	0.0
	baz=6.0						
USP				⇑iS	Sg	11 27 01.2	+0.1
	baz=6.0						
CHKK	**Chushkaly**	1.59	21	P	Pb	11 26 41.6	0.0
	0.9nm,0.1s						
CHKK				S	Sg	11 27 03.8	+0.7
	4.1nm,0.1s						
CHKK	**Chushkaly**	1.59	21	eP	Pb	11 26 41.6	0.0
	baz=21						
CHKK				eS	Sg	11 27 03.8	+0.7
	baz=21						
CHKK	**Chushkaly**	1.59	21	eP	Pb	11 26 41.6	0.0
	0.9nm,0.1s						
CHKK				eS	Sg	11 27 03.8	+0.7
	4.1nm,0.1s						
SATY	**Saty**	1.77	67	P	Pb	11 26 44.5	-0.2
	2.9nm,0.3s						
SATY				S	Sg	11 27 08.9	0.0
	3.8nm,0.2s						
SATY	**Saty**	1.77	67	eP	Pb	11 26 44.5	-0.2
	2.9nm,0.3s						
SATY				eS	Sg	11 27 08.9	0.0
	3.8nm,0.2s						
EKS2	**Erkin-Say**	1.81	280	⇓iP	Pb	11 26 45.6	+0.3
	baz=80						
EKS2				⇓eS	Sg	11 27 09.6	-0.4
	baz=80						
AML	**Almayashu**	1.87	263	⇑iP	Pb	11 26 46.6	+0.1
	baz=64						
AML				⇑iS	Sg	11 27 11.7	-0.3
	baz=64						
MRKS	**Merke**	2.22	281	Pg	Pb	11 26 52.8	+0.5
	1.3nm,0.1s						
MRKS				Lg	Lg	11 27 22.8	
	2.4nm,0.3s						
MRKS	**Merke**	2.22	281	eP	Pb	11 26 52.8	+0.5
	baz=81						
MRKS				eS	Sg	11 27 22.8	-0.4
	baz=81						
MRKS	**Merke**	2.22	281	eP	Pb	11 26 52.8	+0.5
	1.3nm,0.1s						
MRKS				eS	Sg	11 27 22.8	-0.4
	2.4nm,0.3s						
UZB	**Uzynbulak**	2.23	69	Pg	Pb	11 26 52.7	+0.2
	1.5nm,0.2s						
UZB				Lg	Lg	11 27 22.8	
	1.5nm,0.2s						
PDGK	**Podgornoye**	2.61	67	Pg	Pb	11 26 59.9	+0.9
	0.4nm,0.3s						
PDGK				Lg	Lg	11 27 35.3	
	0.5nm,0.5s						
PDGK	**Podgornoye**	2.61	67	⇑Pg	Pb	11 26 59.3	+0.4
	0.8nm,0.7s						
PDGK				⇓Lg	Lg	11 27 34.7	
	2.0nm,1.1s						

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*SOME **21** 11:32:34.1, 42.°58N×79.°70E, h0^{km}*
*KRNET **21** 11:32:35.5±0.1, 42.°63N×79.°56E, h12^{km}, mb2.2*
*NNC **21** 11:32:35.4±1.1, 42.°62N×79.°58E, h0^{km}, mb2.9, mpv2.6,*
Error ellipse: s-maj=6.4km s-min=3.4km az=137.0
ISC 21 11:32:35.3±2.2**, 42.°61N**±0.°07×**79.°62E**±0.°07**, h1**^{km}±11^{km}**,**
n22, σ0.^{s}65/42**, 11C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	0.56	348	P	Pg	11 32 46.6	+0.6
	5.8nm,0.1s						
SHLS				S	Sb	11 32 55.9	-0.6
	75nm,0.3s						
SHLS	**Shalkode**	0.56	348	eP	Pg	11 32 46.7	+0.6
	baz=24						
SHLS				eS	Sb	11 32 56.0	-0.6
	baz=24						
SHLS	**Shalkode**	0.56	348	eP	Pg	11 32 46.6	+0.6
	5.8nm,0.1s						
SHLS				eS	Sb	11 32 55.9	-0.6
	75nm,0.3s						
UZB	**Uzynbulak**	0.69	321	P	Pg	11 32 48.0	-0.6
	3.7nm,0.1s						
UZB				S	Sg	11 32 58.1	+0.4
	3.5nm,0.2s						
UZB	**Uzynbulak**	0.69	321	eP	Pg	11 32 48.0	-0.6
	baz=23						
UZB				eS	Sg	11 32 58.0	+0.4
	baz=23						
UZB	**Uzynbulak**	0.69	321	eP	Pg	11 32 48.0	-0.6
	4.1nm,0.1s						
UZB				eS	Sg	11 32 58.0	+0.3
	4.0nm,0.2s						
PDGK	**Podgornoye**	0.73	353	P	Pg	11 32 48.6	-0.7
	2.2nm,0.1s						
PDGK				S	Sg	11 32 59.2	+0.5
	4.8nm,0.2s						
PDGK	**Podgornoye**	0.73	353	⇑P	Pg	11 32 48.5	-0.7
	0.6nm,0.2s						
PDGK				⇑S	Sg	11 32 59.1	+0.4
	1.0nm,0.2s						
PDGK	**Podgornoye**	0.73	353	⇑iP	Pg	11 32 48.6	-0.7
	baz=56						
PDGK				⇑iS	Sg	11 32 59.0	+0.3
	baz=56						
PRZ	**Przheval'sk**	0.91	263	⇑iP	Pg	11 32 51.9	-0.8
	baz=61						
PRZ				⇑iS	Sg	11 33 04.6	+0.1
	baz=61						
SATY	**Saty**	1.00	297	P	Pg	11 32 53.4	-1.1
	1.6nm,0.1s						
SATY				S	Sg	11 33 07.5	+0.1
	8.0nm,0.1s						
SATY	**Saty**	1.00	297	eP	Pg	11 32 54.0	-0.5
	1.3nm,0.1s						
SATY				eS	Sb	11 33 08.0	-1.2
	8.7nm,0.1s						
DJR	**Jarkent**	1.73	4	P	Pn	11 33 06.8	+0.2
	0.2nm,0.1s						
DJR				S	Sg	11 33 30.3	-0.6
	1.9nm,0.1s						
DJR	**Jarkent**	1.73	4	eP	Pn	11 33 06.7	+0.2
	0.2nm,0.2s						
DJR				eS	Sg	11 33 30.2	-0.6
	1.9nm,0.2s						
KDJ	**Kajisay**	1.87	256	⇓iP	Pn	11 33 08.7	+0.2
	baz=55						
KDJ				⇓iS	Sb	11 33 33.5	-0.7
	baz=55						
KOTS	**Kotyrbulak**	1.94	290	Pg	Pb	11 33 11.6	0.0
KOTS				Lg	Lg	11 33 39.0	
	6.4nm,0.3s						
KOTS	**Kotyrbulak**	1.94	290	eP	Pg	11 33 11.8	-0.8
	baz=89						
KOTS				eS	Sg	11 33 39.0	+1.2
	baz=89						
KOTS	**Kotyrbulak**	1.94	290	eP	Pg	11 33 11.8	-0.8
	1.6nm,0.2s						
KOTS				eS	Sg	11 33 39.0	+1.2
	6.4nm,0.5s						
ULHL	**Ulahol**	2.52	263	⇓iP	Pn	11 33 18.0	+0.4
	baz=62						
ULHL				⇓iS	Sn	11 33 49.3	+0.2
	baz=62						
BOOM	**Boomskoye usch**	2.72	269	⇑iP	Pn	11 33 20.7	+0.5
	baz=68						
BOOM				⇑iS	Sn	11 33 54.1	+0.3
	baz=68						
TKM2	**Tokmak 2**	2.98	277	⇑Pg	Pb	11 33 30.0	+0.8
	2.6nm,1.1s						
TKM2				⇓Lg	Lg	11 34 07.5	
	3.7nm,0.9s						
TKM2	**Tokmak 2**	2.98	277	⇑iP	Pn	11 33 24.3	+0.5
	baz=77						
TKM2				⇑iS	Sn	11 34 00.4	+0.2
	baz=77						

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*ISCJB **21** 11:56:20.0±0.6, 38.°39N±0.°03×39.°01E±0.°04, h8^{km}±5^{km},*
Error ellipse: s-maj=5.3km s-min=4.3km az=155.9
*DDA **21** 11:56:19.1, 38.°39N×39.°01E, h13^{km}±1^{km}, ML2.5*
*ISK **21** 11:56:19.0, 38.°39N×39.°00E, h14^{km}, ML1.9/5*
ISC 21 11:56:19.5±1.0**, 38.°38N**±0.°03×**38.°97E**±0.°03**, h13**^{km}±8^{km}**,**
n14, σ1.^{s}17/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	0.12	4	i P	Pb	11 56 23.1	-0.7
ELZG				i S	Sg	11 56 25.6	+0.3
AKCD	**Akcadag**	0.83	264	i P	Pb	11 56 36.3	+0.4
HEKM	**Malatya_Hekimh**	0.94	302	i P	Pg	11 56 37.4	-0.3
HEKM				i S	Sn	11 56 52.6	+0.7
HEKM				IAML_P			
	comp=Z,992nm,0.2s						
URFA	**Urfa**	0.95	187	PG	Pb	11 56 37.9	+0.1
URFA				SG	Sn	11 56 51.5	-0.5
KEMA	**Kemaliye**	0.96	337	i P	Pb	11 56 38.0	-0.1
KEMA				i S	Sb	11 56 51.1	+0.4
KEMA				IAML_P			
	comp=Z,430nm,0.2s						
DIYA	**Diyarbakir**	1.01	117	i P	Pb	11 56 38.9	0.0
DIYA				i S	Sn	11 56 53.4	-0.2
HANI	**Diyarbakir_Han**	1.12	88	i P	Pn	11 56 40.7	-0.2
HANI				i S	Sn	11 56 56.6	+0.4
HANI				IAML_P			
	comp=Z,663nm,0.2s						
DARE	**Darende-Malaty**	1.19	280	PN	Pn	11 56 41.9	0.0
SANL	**SANLIURFA_Merk**	1.21	179	i P	Pg	11 56 42.3	-0.5
SANL				i S	Sn	11 57 00.7	+2.3
SANL				IAML_P			
	comp=Z,1µm,0.2s						
BNGB	**Bingl**	1.47	65	PN	Pn	11 56 45.4	-0.3
MAZI	**Mazidag**	1.48	128	PN	Pn	11 56 45.9	-0.1
MAZI				SN	Sb	11 57 05.4	-0.4
GZT	**Gaziantep**	1.52	228	i P	Pn	11 56 43.0	-3.5
GZT				i S	Sg	11 57 10.8	+2.5
GZT				IAML_P			
	comp=Z,149nm,0.2s						
SURC	**SANLIURFA_SURC**	1.53	191	i P	Pb	11 56 47.4	-0.3
SURC				i S	Sg	11 57 09.8	+1.0
SURC				IAML_P			
	comp=Z,78nm,0.2s						
YEDI	**Yedisu-Bingol**	1.62	49	PN	Pn	11 56 47.7	-0.1

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*ISK **21** 11:57:16.3, 38.°37N×39.°05E, h9^{km}, ML2.0/4*
*DDA **21** 11:57:16.1, 38.°40N×38.°98E, h12^{km}±2^{km}, ML2.7*
*ISCJB **21** 11:57:17.0±0.6, 38.°38N±0.°03×39.°00E±0.°03, h7^{km}±5^{km},*
Error ellipse: s-maj=5.2km s-min=4.0km az=40.7
ISC 21 11:57:16.6±0.9**, 38.°40N**±0.°03×**39.°02E**±0.°03**, h12**^{km}±7^{km}**,**
n13, σ0.^{s}72/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	0.10	345	i P	Pg	11 57 19.8	+0.1
ELZG				i S	Sg	11 57 22.6	+0.6
AKCD	**Akcadag**	0.87	264	i P	Pg	11 57 33.0	-0.4
AKCD				i S	Sb	11 57 44.8	-0.6
AKCD				IAML_P			
	comp=Z,5µm,0.1s						
HEKM	**Malatya_Hekimh**	0.96	300	i P	Pg	11 57 34.2	-0.9
HEKM				i S	Sg	11 57 46.8	-0.9
HEKM				IAML_P			
	comp=Z,883nm,0.2s						
KEMA	**Kemaliye**	0.96	335	i P	Pg	11 57 34.8	-0.4
KEMA				i S	Sb	11 57 48.7	+0.7
KEMA				IAML_P			
	comp=Z,442nm,0.2s						
URFA	**Urfa**	0.97	189	PG	Pb	11 57 34.8	-0.6
URFA				SG	Sb	11 57 48.3	+0.2
DIYA	**Diyarbakir**	0.99	118	i P	Pn	11 57 36.1	-0.3
DIYA				i S	Sb	11 57 48.3	-0.4
DIYA				IAML_P			
	comp=Z,5µm,0.2s						
HANI	**Diyarbakir_Han**	1.08	89	i P	Pn	11 57 37.7	0.0
HANI				i S	Sn	11 57 53.7	+1.0
HANI				IAML_P			
	comp=Z,779nm,0.2s						
DARE	**Darende-Malaty**	1.22	279	PN	Pg	11 57 40.8	+0.8
DARE				SN	Sn	11 57 57.9	+1.9
BNGB	**Bingl**	1.43	65	PN	Pb	11 57 42.9	-0.3
MAZI	**Mazidag**	1.47	129	PN	Pb	11 57 43.1	-0.8
MAZI				SN	Sb	11 58 02.6	+0.1
CUKAN	**kangal_SIVAS**	1.52	308	i P	Pg	11 57 45.6	-0.2
SURC	**SANLIURFA_SURC**	1.55	192	i P	Pg	11 57 46.6	+0.2
SURC				i S	Sg	11 58 06.8	+0.4
SURC				IAML_P			
	comp=Z,176nm,0.2s						
KELT	**Kelkit**	1.76	6	i P	Pg	11 57 50.3	0.0
KELT				IAML_P			
	comp=Z,95nm,0.4s						

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*ISCJB **21** 12:05:24.5±0.6, 23.°23S±0.°06×67.°80W±0.°08, h161^{km}±8^{km},*
mb3.5/3, Error ellipse: s-maj=12.4km s-min=10.5km
az=166.4
*IDC **21** 12:05:26.0±1.0, 23.°04S×67.°66W, h151^{km}±8^{km}, mb3.3/3,*
mb1 3.5/7, mb1mx3.3/27, mbtmp3.8/7, Error ellipse:
s-maj=20.8km s-min=15.0km az=158.0
*GUC **21** 12:05:25.5±0.5, 23.°38S×68.°06W, h163^{km}±8^{km}, ML4.1*
ISC 21 12:05:24.7±0.8**, 23.°25S**±0.°06×**67.°68W**±0.°07**, h146**^{km}±9^{km}**,**
n19, σ1.^{s}83/28**, mb3.8**/3**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	1.30	299	P	Pn	12 05 53.6	+1.3
	32nm,0.3s,baz=120,slow=7.3,SNR=1174						
LVC				S	Sn	12 06 14.0	+0.8
	258nm,0.3s,baz=270,slow=20,SNR=89						
LVC				LR	LR	12 06 31.8	
	comp=Z,116nm,20.1s,baz=214,slow=54						
PB15	**IPOC Station P**	1.65	271	⇑eP	Pn	12 05 56.0	+0.3
PB15				eS	Sn	12 06 18.7	-0.7
PB06	**IPOC Station P**	1.82	287	⇓eP	Pn	12 05 57.8	+0.1
PB06				eS	Sn	12 06 22.2	-0.8
PB06				IAML		12 06 24.7	
	comp=N,3µm,0.2s						
PB09	**IPOC Station P**	2.04	315	⇑eP	Pn	12 06 01.9	+1.6
PB09				eS	Sn	12 06 29.3	+1.8
PB09				IAML		12 06 32.3	
	comp=E,786nm,0.4s						
PB03	**IPOC Station P**	2.26	302	⇑eP	Pn	12 06 03.3	+0.5
PB03				eS	Sn	12 06 31.6	-0.4
PB03				IAML		12 06 33.6	
	comp=N,1µm,0.2s						
PB05	**IPOC Station P**	2.35	279	⇑eP	Pn	12 06 03.4	-0.5
PB05				eS	Sn	12 06 31.8	-2.3
PB05				IAML		12 06 35.8	
	comp=N,639nm,0.3s						
PB07	**IPOC Station P**	2.54	306	⇑eP	Pn	12 06 06.8	+0.5
PB07				eS	Sn	12 06 37.3	-1.0
PB07				IAML		12 06 39.4	
	comp=E,1µm,0.4s						
GO02	**Mina Guanaco**	2.58	222	⇑iP	Pn	12 06 06.0	-0.8
GO02				eS	Sn	12 06 36.9	-2.5
LPAZ	**La Paz**	6.94	356	P	Pn	12 07 04.6	+0.1
	comp=E,0.5nm,0.3s,baz=145,slow=3.9,SNR=9.3						
LPAZ				S	Sn	12 08 18.6	-4.1
	comp=E,0.1nm,0.3s,baz=243,slow=6.8,SNR=3.2						
SIV	**San Ignacio**	9.54	42	P	Pn	12 07 38.0	-0.7
	comp=E,2.5nm,0.3s,baz=249,slow=9.0,SNR=19						
SIV				S	Sn	12 09 18.8	-5.6
	comp=E,0.1nm,0.3s,baz=0.0,slow=20,SNR=6.3						
CPUP	**Villa Florida**	9.89	110	P	Pn	12 07 45.9	+2.6
	comp=E,0.1nm,0.3s,baz=292,slow=12,SNR=3.8						
BDFB	**Brasilia**	20.02	71	P	P	12 09 46.7	+0.3
	comp=E,0.3nm,0.3s,baz=200,slow=11,SNR=4.5						
TXAR	**Lajitas Array**	62.71	325	P	P	12 15 33.9	-0.4
	comp=E,0.2nm,0.7s,baz=126,slow=4.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	76.89	69	P	P	12 17 01.4	+0.2
	comp=E,1.1nm,0.5s,baz=251,slow=4.9,SNR=11						
YKA	**Yellowknife Ar**	93.21	340	P	P	12 18 22.9	+1.0
	comp=E,0.4nm,0.6s,baz=135,slow=4.4,SNR=11						
ASAR	**Alice Springs**	128.86	206	PKP	PKPdf	12 24 15.6	-0.1
	comp=E,0.4nm,0.6s,baz=134,slow=1.9,SNR=8.1						
WRA	**Warramunga Arr**	131.99	208	PKP	PKPdf	12 24 21.6	0.0
	comp=E,0.6nm,0.6s,baz=155,slow=1.6,SNR=15						
ZALV	**Zalesovo Beam**	143.02	27	PKP	PKPbc	12 24 39.1	+1.1
	comp=E,0.3nm,0.4s,baz=211,slow=2.5,SNR=2.3						
MKAR	**Makanchi Array**	146.34	38	PKPbc	PKPdf	12 24 47.4	+0.6
	comp=E,0.4nm,0.6s,baz=310,slow=2.7,SNR=4.2						

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*IDC **21** 12:07:47.5±3.4, 34.°08S×178.°57W, h0^{km}, mb3.6/2,*
mb1 4.0/3, mb1mx3.7/30, mbtmp3.8/3, ML4.1/1, Error
ellipse: s-maj=78.6km s-min=47.5km az=124.0
*ISCJB **21** 12:07:50.4±1.0, 34.°58S±0.°09×178.°2W±0.°2, h50^{km},*
mb3.6/2, Error ellipse: s-maj=22.0km s-min=6.8km
az=32.0
*WEL **21** 12:07:52.7±1.0, 35°S±14°×17°8W±1°5, h139^{km}±56^{km}*
ISC 21 12:07:51.0±1.9**, 34.°6S**±0.°1×**178.°1W**±0.°2**, h50**^{km}**, n35,**
σ0.^{s}90/51**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	4.20	223	P	Pn	12 08 52.8	+0.4
MXZ				S	Sn	12 09 40.3	+0.1
WMGZ	**Waiomatatini S**	4.32	220	P	Pn	12 08 55.4	+1.3
WMGZ				S	Sn	12 09 44.5	+1.2
PKGZ	**Pakihiroa**	4.56	222	P	Pn	12 08 57.5	+0.1
PKGZ				S	Sn	12 09 49.2	+0.1
PUZ	**Puketiti**	4.59	219	P	Pn	12 08 57.6	-0.3
PUZ				S	Sn	12 09 50.1	+0.1
HAZ	**Te Kaha**	4.63	225	P	Pn	12 08 59.2	+0.8
HAZ				S	Sn	12 09 52.3	+1.4
TWGZ	**Tauwhareparae**	4.82	220	P	Pn	12 09 01.1	0.0
TWGZ				S	Sn	12 09 56.8	+1.3
RUGZ	**Raukumara Rang**	4.83	224	P	Pn	12 09 01.7	+0.3
RUGZ				S	Sn	12 09 56.3	+0.2
CNGZ	**Carnagh Statio**	4.93	216	P	Pn	12 09 03.1	+0.5
TKGZ	**Te Karaka**	5.08	219	P	Pn	12 09 05.6	+1.0
TKGZ				S	Sn	12 10 02.4	+0.5
MWZ	**Matawai**	5.18	222	P	Pn	12 09 05.8	-0.1
MWZ				S	Sn	12 10 03.8	-0.6
WHRZ	**Whale Island**	5.19	229	P	Pn	12 09 06.8	+0.7
WHRZ				S	Sn	12 10 02.3	-2.2
RIGZ	**Rimuhau**	5.33	218	P	Pn	12 09 07.5	-0.5
RIGZ				S	Sn	12 10 07.4	-0.6
RAGZ	**Rawiri**	5.35	222	P	Pn	12 09 09.2	+0.7
RAGZ				S	Sn	12 10 07.8	-1.0
MYRZ	**Mayor Island**	5.36	238	P	Pn	12 09 09.5	+1.1
URZ	**Urewera**	5.36	225	Pn	Pn	12 09 09.4	+0.9
	5.4nm,0.3s,baz=267,slow=3.3,SNR=111						
URZ				Sn	Sn	12 10 07.5	-1.4
	3.6nm,0.3s,baz=260,slow=4.2,SNR=9.0						
URZ	**Urewera**	5.36	225	P	Pn	12 09 08.3	-0.2
URZ				S	Sn	12 10 07.9	-0.9
PRGZ	**Paritu Road**	5.43	216	P	Pn	12 09 09.1	-0.4
PRGZ				S	Sn	12 10 09.5	-1.2
OPRZ	**Ohinepanea**	5.45	231	P	Pn	12 09 10.2	+0.6
MARZ	**Manawahe**	5.45	230	P	Pn	12 09 10.8	+1.1
KUZ	**Kuaotunu**	5.51	245	P	Pn	12 09 10.3	-0.1
TGRZ	**Tauranga**	5.58	234	P	Pn	12 09 11.5	+0.1
SNGZ	**Shannon Statio**	5.60	220	P	Pn	12 09 13.0	+1.2
MHGZ	**Mahia Peninsul**	5.61	214	P	Pn	12 09 11.4	-0.4
KNZ	**Kokohu**	5.61	216	P	Pn	12 09 10.5	-1.4
MKRZ	**Makatiti**	5.68	229	P	Pn	12 09 14.2	+1.3
RTZ	**Ruatahuna**	5.68	223	P	Pn	12 09 14.2	+1.4
RTZ				S	Sn	12 10 17.6	+0.8
MUGZ	**Murupara**	5.71	225	P	Pn	12 09 12.2	-1.0
TARZ	**Mount Tarawera**	5.71	228	P	Pn	12 09 14.8	+1.4
NGRZ	**Ngongotaha**	5.83	231	P	Pn	12 09 14.5	-0.4
RAHZ	**Arahi**	5.84	220	P	Pn	12 09 15.7	+0.7
KMRZ	**Kaimai**	5.85	234	P	Pn	12 09 15.5	+0.4
WHHZ	**Waihua**	5.88	219	P	Pn	12 09 16.2	+0.7
ASAR	**Alice Springs**	42.99	271	P	P	12 15 45.3	-0.3
	0.5nm,0.4s,baz=112,slow=7.5,SNR=11						
WRA	**Warramunga Arr**	44.35	276	P	P	12 15 55.8	-0.8
	0.6nm,0.5s,baz=117,slow=7.5,SNR=12						
FINES	**FINESS Array B**	148.99	338	PKPbc	PKiKP	12 27 34.5	+0.6
	1.2nm,0.7s,baz=47,slow=3.4,SNR=3.3						

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*MDD **21** 12:09:03.7±1.6, 38.°28N×13.°28W, h0^{km}, mb4.4/9, Error*
ellipse: s-maj=14.3km s-min=11.2km az=83.0, PRXIMO
*ISCJB **21** 12:09:04.4±0.7, 38.°27N±0.°03×12.°97W±0.°05, h10^{km}, Error*
ellipse: s-maj=5.5km s-min=4.9km az=172.9
*INMG **21** 12:09:05.4±1.6, 38.°07N×13.°67W, h10^{km}, ML2.9, Error*
ellipse: s-maj=8.5km s-min=7.3km az=73.0
*IGIL **21** 12:09:05.4, 38.°31N×13.°31W, h19^{km}, ML3.0*
*CNRM **21** 12:09:10.4, 37.°86N×13.°06W, h82^{km}*
ISC 21 12:09:03.7±2.3**, 38.°23N**±0.°05×**13.°0W**±0.°1**, h10**^{km}**, n78,**
σ2.^{s}88/141**, 2D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	2.98	75	ePn	Pb	12 09 55.0	-1.9
PMAFR				eSn	Sb	12 10 32.4	-1.0
PMAFR				A	A	12 10 37.7	
	47nm,0.4s						
PMAFR	**Mafra**	2.98	75	Pn	Pb	12 09 54.7	-2.2
	4.5nm,0.1s,SNR=7.9						
PMAFR				Sn	Sb	12 10 32.8	-0.6
	30nm,0.3s,SNR=10.0						
PMST	**Lisbon--Monsan**	3.02	79	eSn	Sb	12 10 32.7	-1.7
PMST				A	A	12 10 37.6	
	53nm,0.2s						
PTEO	**Sao Teotonio**	3.43	100	ePn	Pn	12 09 59.4	+2.2
PTEO				eSn	Sn	12 10 39.2	+1.3
PTEO				A	A	12 10 44.0	
	18nm,0.3s						
PTEO	**Sao Teotonio**	3.43	100	Pn	Pn	12 09 59.4	+2.2
PTEO				Sn	Sn	12 10 39.2	+1.3
	8.9nm,0.3s						
PFVI	**Vila Bisbo**	3.46	107	ePn	Pn	12 09 59.8	+2.1
PFVI				eSn	Sn	12 10 40.4	+1.6
PFVI				A	A	12 10 44.9	
	8.9nm,0.1s						
PFVI	**Vila Bisbo**	3.46	107	⇓Pn	Pn	12 10 00.1	+2.4
	8.9nm,0.3s,SNR=18						
PFVI				Sn	Sn	12 10 40.0	+1.2
	6.0nm,0.3s,SNR=5.9						
PNCL	**Nicolau / Gran**	3.50	90	ePn	Pn	12 10 01.2	+3.0
PNCL				eSn	Sn	12 10 42.5	+2.8
PNCL				A	A	12 10 46.9	
	25nm,0.5s						
PNCL	**Nicolau / Gran**	3.50	90	Pn	Pn	12 10 01.2	+3.0
PNCL				Sn	Sn	12 10 42.5	+2.8

	25nm,0.5s						
MORF	**Marmelete**	3.55	104	*e*P	Pn	12 10 01.5	+2.6
MORF				*e*S	Sn	12 10 43.0	+2.2
MORF				AML	AML	12 10 45.8	
	comp=E,36nm,0.1s						
MORF	**Marmelete**	3.55	104	*e*Pn	Pn	12 10 01.4	+2.6
MORF				*e*Sn	Sn	12 10 43.0	+2.2
MORF				A	A	12 10 50.8	
	comp=E,18nm,0.1s						
MORF	**Marmelete**	3.55	104	Pn	Pn	12 10 01.5	+2.6
MORF				Sn	Sn	12 10 43.0	+2.2
	comp=E,36nm,0.1s						
MESJ	**Messejana**	3.77	94	*e*P	Pn	12 10 05.2	+3.2
MESJ				*e*S	Sn	12 10 48.2	+1.8
MESJ				AML	AML	12 10 54.8	
	comp=N,41nm,0.2s						
MESJ	**Messejana**	3.77	94	*e*Pn	Pn	12 10 05.3	+3.4
MESJ				*e*Sn	Sn	12 10 49.6	+3.2
MESJ				A	A	12 10 54.1	
	comp=N,19nm,0.3s						
MESJ	**Messejana**	3.77	94	Pn	Pn	12 10 05.2	+3.2
MESJ				Sn	Sn	12 10 48.2	+1.8
	comp=N,41nm,0.2s						
PMTG	**Montargil**	3.81	76	*e*Pn	Pn	12 10 05.6	+3.1
PMTG				*e*Sn	Sn	12 10 51.3	+4.0
PMTG				A	A	12 10 55.0	
	comp=N,16nm,0.3s						
PMTG	**Montargil**	3.81	76	Pn	Pn	12 10 05.6	+3.1
PMTG				Sn	Sn	12 10 51.3	+4.0
	comp=N,16nm,0.3s						
PTOM	**Tomar**	3.82	67	*e*Pn	Pn	12 10 05.9	+3.3
PTOM				*e*Sn	Sn	12 10 51.5	+3.9
PTOM				A	A	12 10 56.6	
	comp=N,22nm,0.5s						
PTOM	**Tomar**	3.82	67	Pn	Pn	12 10 05.9	+3.3
PTOM				Sn	Sn	12 10 51.5	+3.9
	comp=N,11nm,0.5s						
EVO	**Evora**	3.91	84	*e*Pn	Pb	12 10 09.2	-3.5
EVO				*e*Sn	Sb	12 10 56.4	-3.7
EVO				A	A	12 10 59.8	
	comp=N,22nm,0.1s						
EVO	**Evora**	3.91	84	Pn	Pb	12 10 09.2	-3.5
EVO				Sn	Sb	12 10 56.4	-3.7
	comp=N,22nm,0.1s						
PCAS	**Casmilo, Conde**	3.93	61	*e*Pn	Pn	12 10 07.5	+3.4
PCAS				*e*Sn	Sn	12 10 53.5	+3.2
PCAS				A	A	12 10 55.7	
	comp=N,8.6nm,0.3s						
PCAS	**Casmilo, Conde**	3.93	61	Pn	Pn	12 10 07.5	+3.4
PCAS				Sn	Sn	12 10 53.5	+3.2
	comp=N,8.6nm,0.3s						
PBEJ	**Beja**	4.03	91	*e*Pn	Pb	12 10 10.7	-4.1
PBEJ				*e*Sn	Sn	12 10 56.9	+4.1
PBEJ				A	A	12 11 00.1	
	comp=N,13nm,0.1s						
PBEJ	**Beja**	4.03	91	Pn	Pb	12 10 10.7	-4.1
PBEJ				Sn	Sn	12 10 56.9	+4.1
	comp=N,6.4nm,0.1s						
PBDV	**Barranco-do-Ve**	4.12	102	*e*Pn	Pn	12 10 09.8	+3.1
PBDV				*e*Sn	Sn	12 10 58.0	+3.1
PBDV				A	A	12 11 04.2	
	comp=N,11nm,0.2s						
PBDV	**Barranco-do-Ve**	4.12	102	Pn	Pn	12 10 09.8	+3.1
PBDV				Sn	Sn	12 10 58.0	+3.1
	comp=N,11nm,0.2s						
PVAQ	**Vaqueiros**	4.24	100	*e*Pn	Pn	12 10 11.8	+3.4
PVAQ				*e*Sn	Sn	12 11 00.4	+2.5
PVAQ				A	A	12 11 07.0	
	comp=N,20nm,0.1s						
PVAQ	**Vaqueiros**	4.24	100	Pn	Pn	12 10 11.8	+3.4
PVAQ				Sn	Sn	12 11 00.4	+2.5
	comp=N,20nm,0.1s						
PVAQ	**Vaqueiros**	4.24	100	P	Pn	12 10 12.1	+3.7
PVAQ				S	Sn	12 11 02.3	+4.4
PESTR	**Estremoz**	4.27	80	*e*Pn	Pn	12 10 11.9	+3.1
PESTR				*e*Sn	Sn	12 11 02.1	+3.5
PESTR				A	A	12 11 07.5	
	comp=N,12nm,0.4s						
PESTR	**Estremoz**	4.27	80	P	Pb	12 10 14.6	-4.3
PESTR				S	Sn	12 11 04.4	+5.8
EGRO	**El Granado**	4.40	97	Pn	Pn	12 10 13.6	+3.1
	comp=N,15nm,0.3s,SNR=61						
EGRO				Sn	Sn	12 11 03.9	+2.1
	comp=N,11nm,0.3s,SNR=23						
PMRV	**Marv??o**	4.52	73	*e*Pn	Pn	12 10 15.2	+3.0
PMRV				*e*Sn	Sn	12 11 07.6	+2.7
PMRV				A	A	12 11 10.6	
	comp=N,12nm,0.3s						
PMRV	**Marv??o**	4.52	73	Pn	Pn	12 10 15.2	+3.0
PMRV				Sn	Sn	12 11 07.6	+2.7
	comp=N,12nm,0.3s						
PCBR	**Castelo Branco**	4.57	68	*e*Sn	Sn	12 11 08.9	+2.8
PCBR				A	A	12 11 11.3	
	comp=N,7.7nm,0.5s						
PCBR	**Castelo Branco**	4.57	68	Sn	Sn	12 11 08.9	+2.8
	comp=N,3.8nm,0.5s						
PVIS	**Viseu**	4.65	56	*e*Sn	Sn	12 11 09.0	+0.9
PVIS				A	A	12 11 11.2	
	comp=N,9.3nm,0.1s						
PVIS	**Viseu**	4.65	56	Sn	Sn	12 11 09.0	+0.9
	comp=N,4.7nm,0.1s						
PBAR	**Barrancos**	4.67	89	*e*Sn	Sn	12 11 13.4	+4.8
PBAR	**Barrancos**	4.67	89	Sn	Sn	12 11 13.4	+4.8
EBAD	**Badajoz**	4.71	82	Pn	Pn	12 10 18.2	+3.5
	comp=N,2.6nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	12 11 13.1	+3.7
	comp=N,5.4nm,0.3s,SNR=8.1						
MTE	**Manteigas**	4.74	61	*e*Sn	Sn	12 11 14.0	+3.7
MTE				A	A	12 11 19.2	
	comp=N,9.8nm,0.2s						
MTE	**Manteigas**	4.74	61	Sn	Sn	12 11 14.0	+3.7
	comp=N,4.9nm,0.2s						
EMIN	**Mina Concepcio**	5.00	93	⇓Pn	Pn	12 10 22.1	+3.3
	comp=N,4.4nm,0.3s,SNR=18						
EMIN				Sn	Sn	12 11 19.0	+2.4
	comp=N,3.7nm,0.1s,SNR=7.7						
PVRL	**Vila Real**	5.07	51	*e*Sn	Sn	12 11 19.1	+0.7
PVRL				A	A	12 11 21.5	
	comp=N,9.4nm,0.1s						
PVRL	**Vila Real**	5.07	51	Sn	Sn	12 11 19.1	+0.7
	comp=N,4.7nm,0.1s						
POLO	**Lamas de Olo**	5.08	50	*e*Pn	Pn	12 10 21.9	+1.9
POLO				*e*Sn	Sn	12 11 19.2	+0.5
POLO				A	A	12 11 25.6	
	comp=N,1.9nm,0.2s						
POLO	**Lamas de Olo**	5.08	50	Pn	Pn	12 10 21.9	+1.9
POLO				Sn	Sn	12 11 19.2	+0.5
	comp=N,1.9nm,0.2s						
EZAM	**Zamans**	5.11	39	Pn	Pn	12 10 22.5	+2.2
	SNR=7.9						
EZAM				Sn	Sn	12 11 16.6	-2.8
	SNR=7.9						
PCAB	**Cabril**	5.15	46	*e*Pn	Pn	12 10 22.3	+1.4
PCAB				*e*Sn	Sn	12 11 19.4	-1.1
PCAB				A	A	12 11 36.8	
	comp=N,6.0nm,0.6s						
PCAB	**Cabril**	5.15	46	Pn	Pn	12 10 22.3	+1.4
PCAB				Sn	Sn	12 11 19.4	-1.1
	comp=N,3.0nm,0.6s						
PGAV	**Gavieira, Arco**	5.19	43	*e*Pn	Pn	12 10 22.8	+1.3
PGAV				*e*Sn	Sn	12 11 20.6	-0.9
PGAV				A	A	12 11 29.6	
	comp=N,4.4nm,0.2s						
PGAV	**Gavieira, Arco**	5.19	43	Pn	Pn	12 10 22.8	+1.3
PGAV				Sn	Sn	12 11 20.6	-0.9
	comp=N,4.4nm,0.2s						
ELOB	**Lobios**	5.24	44	Pn	Pn	12 10 23.4	+1.2
	comp=N,3.0nm,0.3s,SNR=7.3						
ELOB				Sn	Sn	12 11 21.1	-1.5
	comp=N,3.0nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	5.44	56	*e*Pn	Pn	12 10 26.9	+1.9
MVO				*e*Sn	Sn	12 11 27.1	-0.6
MVO				A	A	12 11 30.7	
	comp=N,8.6nm,0.3s						
MVO	**Moncorvo**	5.44	56	Pn	Pn	12 10 26.7	+1.7
	SNR=7.9						
MVO				Sn	Sn	12 11 27.3	-0.3
	comp=N,5.6nm,0.3s,SNR=12						
EMAZ	**Mazaricos**	5.61	32	Sn	Sn	12 11 27.1	-4.7
	comp=N,6.0nm,0.2s,SNR=7.9						
ESPR	**Espera**	5.81	101	Pn	Pn	12 10 34.1	+4.1
	comp=N,7.7nm,0.5s,SNR=10						
ESPR				Sn	Sn	12 11 41.1	+4.4
	comp=N,15nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	5.89	38	Pn	Pn	12 10 31.8	+0.6
	comp=N,0.6nm,0.1s,SNR=7.9						
EAGO				Sn	Sn	12 11 33.9	-4.8
	comp=N,2.7nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	5.96	89	Pn	Pn	12 10 35.3	+3.3
	comp=N,3.6nm,0.3s,SNR=21						
ECAB				Sn	Sn	12 11 40.8	+0.6
	comp=N,5.0nm,0.2s,SNR=7.0						
PBRG	**Braganca**	5.97	51	*e*Pn	Pn	12 10 36.4	+4.2
PBRG				*e*Sn	Sn	12 11 40.6	-0.1
PBRG				A	A	12 11 47.0	
	comp=N,3.0nm,0.5s						
PBRG	**Braganca**	5.97	51	Pn	Pn	12 10 36.4	+4.2
PBRG				Sn	Sn	12 11 40.6	-0.1
	comp=N,1.5nm,0.5s						
ECAL	**Calabor**	6.05	50	Pn	Pn	12 10 35.6	+2.3
	comp=N,6.3nm,0.8s,SNR=8.2						
ECAL				Sn	Sn	12 11 41.4	-1.3
	comp=N,5.8nm,0.3s,SNR=7.8						
HORN	**Hornachuelos**	6.10	91	P	Pn	12 10 37.9	+4.0
HORN				S	Sn	12 11 47.6	+3.8
EADA	**Adamuz**	6.61	88	Pn	Pn	12 10 44.4	+3.4
	comp=N,5.1nm,0.3s,SNR=21						
EADA				Sn	Sn	12 11 58.7	+2.3
	comp=N,5.9nm,0.1s,SNR=7.9						
RSA	**Sarsar**	6.65	118	P	Pn	12 10 48.1	+6.5
RSA				S	Sn	12 12 02.6	+5.2
PAB	**San Pablo**	6.86	76	Pn	Pn	12 10 47.7	+3.3
	SNR=7.9						
PAB				Sn	Sn	12 12 04.1	+1.6
	comp=N,1.3nm,0.2s,SNR=7.9						
ZHG	**ZHG**	7.01	131	P	Pn	12 10 46.7	+0.2
ZHG				S	Sn	12 12 04.0	-2.3
SRHM	**Skhour des Reh**	7.08	143	P	Pn	12 10 50.3	+2.8
SRHM				S	Sn	12 12 06.0	-2.0
ESDC	**Sonseca Array**	7.17	76	Pn	Pn	12 10 51.9	+3.3
	comp=N,2.0nm,0.1s,baz=256,slow=13,SNR=7.9						
ESDC				Sn	Sn	12 12 11.9	+1.7
	baz=264,slow=23,SNR=7.9						
GUD	**Guadarrama**	7.24	68	Sn	Sn	12 12 13.9	+1.9
	comp=N,3.4nm,0.6s,SNR=7.9						
EQES	**Quesada**	7.83	90	Sn	Sn	12 12 28.9	+2.4
	comp=N,0.7nm,0.1s,SNR=7.9						
OUK	**Oukaimeden**	8.16	148	P	Pn	12 11 02.0	-0.6
OUK				S	Sn	12 12 30.8	-4.3
TTIG	**Tnine Tigouga,**	8.52	153	P	Pn	12 11 08.7	+1.4
TTIG				S	Sn	12 12 42.1	-1.5
MD31	**MD31**	8.56	126	P	Pn	12 11 09.8	+1.9
MD31				S	Sn	12 12 43.2	-1.4
MDT	**Midelt**	8.70	126	P	Pn	12 11 11.5	+1.9
MDT				S	Sn	12 12 46.0	-1.8
OUZM	**OUZ**	8.91	143	P	Pn	12 11 12.9	+0.3
OUZM				S	Sn	12 12 49.2	-4.0

IDC 21 12:11:39.2±2.5**,6°.67S**×**129°.19E,h208**km±34km**,mb2.6**/1**,**
mb1 2.8/5**,mb1mx2.7**/39**,mbtmp3.4**/5**,Error ellipse:**
s-maj=55.8km s-min=17.7km az=87.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	6.12	20	P	Pn	12 13 08.3	+0.1
	0.3nm,0.3s,baz=215,slow=23,SNR=8.1						
SIJI				S	S	12 14 11.1	-7.5
	0.4nm,0.3s,baz=233,slow=20,SNR=4.7						
FITZ	**Fitzroy Crossi**	11.88	197	P	Pn	12 14 22.3	-0.1
	0.0nm,0.3s,baz=27,slow=6.8,SNR=1.8						
FITZ				S	S	12 16 26.8	-7.3
	0.1nm,0.3s,baz=106,slow=18,SNR=4.4						
WRA	**Warramunga Arr**	14.11	160	P	Pn	12 14 49.6	-0.7
	0.1nm,0.3s,baz=339,slow=12,SNR=9.2						
WRA				S	S	12 17 17.2	-10
	0.1nm,0.3s,baz=333,slow=23,SNR=2.9						
ASAR	**Alice Springs**	17.50	165	P	P	12 15 29.4	+0.2
	0.1nm,0.3s,baz=344,slow=10,SNR=10						
MKAR	**Makanchi Array**	67.51	327	P	P	12 22 12.9	-0.1
	0.1nm,0.6s,baz=115,slow=6.5,SNR=2.2						

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*SOME **21** 12:31:13.7,41°.70N×72°.88E,h10km*
*KRNET **21** 12:31:13.4±0.1,41°.68N×72°.86E,h12km,mb3.1*
*NNC **21** 12:31:13.8±0.3,41°.72N×72°.88E,h0km,mb3.7,mpv3.5,*
Error ellipse: s-maj=2.8km s-min=1.8km az=56.0
*KNET **21** 12:31:14.4±0.5,41°.67N×73°.00E,h0km,ml2.7,Error*
ellipse: s-maj=4.5km s-min=3.0km az=104.0
ISC 21 12:31:12.8±1.0**,41°.69N**±0°.02×**72°.91E**±0°.02**,h7**km±9km**,**
n66,σ**1**s**.19**/105**,32C-37D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	0.36	171	⇓*e*P	Pg	12 31 20.0	0.0
	baz=66						
ARSB				⇓*i*S	Sg	12 31 25.1	+0.3
	baz=66						
ARK	**Arkit**	0.72	279	⇑*i*P	Pg	12 31 25.9	-0.8
	baz=79						
ARK				⇑*i*S	Sg	12 31 35.7	-0.3
	baz=79						
AML	**Almayashu**	0.74	52	⇑P	Pb	12 31 28.2	0.0
	29nm,0.1s,SNR=37						
AML				⇓S	Sb	12 31 39.0	+0.4
	65nm,0.2s						
AML	**Almayashu**	0.74	52	⇑*i*P	Pb	12 31 28.2	0.0
	baz=54						
AML				⇑*i*S	Sb	12 31 38.9	+0.3
	baz=54						
MNAS	**Manas**	0.86	339	⇓P	Pg	12 31 29.6	+0.3
	17nm,0.5s						
MNAS				⇓S	Sg	12 31 41.0	+0.5
	26nm,0.2s						
MNAS	**Manas**	0.86	339	P	Pg	12 31 29.6	+0.3
	21nm,0.1s						
MNAS				S	Sg	12 31 41.4	+0.9
	70nm,0.1s						
MNAS	**Manas**	0.86	339	⇑*i*P	Pg	12 31 29.5	+0.2
	baz=42						
MNAS				⇑*i*S	Sg	12 31 41.1	+0.6
	baz=42						
ARLS	**Aral**	1.07	80	⇓*i*P	Pn	12 31 34.1	-0.3
	baz=80						
ARLS				⇓*i*S	Sn	12 31 49.2	-0.4
	baz=80						
MRKS	**Merke**	1.08	12	P	Pb	12 31 34.1	+0.1
	21nm,0.3s						
MRKS				S	Sn	12 31 49.0	-0.9
	100nm,0.2s						
MRKS	**Merke**	1.08	12	⇓*i*P	Pb	12 31 34.1	+0.1
	21nm,0.3s						
MRKS				⇓*i*S	Sn	12 31 49.0	-0.9
	100nm,0.2s						
EKS2	**Erkin-Say**	1.17	33	⇓P	Pn	12 31 35.9	+0.1
	9.3nm,0.2s,SNR=19						
EKS2	**Erkin-Say**	1.17	33	⇓*i*P	Pn	12 31 35.9	+0.1
	baz=34						
EKS2				⇓*i*S	Sn	12 31 51.7	-0.3
	baz=34						
UCH	**Uchtor**	1.31	65	⇑P	Pg	12 31 38.7	+0.6
	29nm,0.1s,SNR=36						
UCH				⇑S	Sn	12 31 57.1	+1.1
	82nm,0.2s						
UCH	**Uchtor**	1.31	65	⇓*i*P	Pg	12 31 39.1	+1.1
	baz=66						
UCH				⇓*i*S	Sn	12 31 57.1	+1.1
	baz=66						
AAK	**Ala-Archa**	1.51	51	⇓P	Pg	12 31 42.8	+0.9
	38nm,0.2s,SNR=57						
AAK	**Ala-Archa**	1.51	51	⇓Pn	Pg	12 31 43.0	+1.1
	10nm,0.2s						
AAK				⇓Sn	Sg	12 32 03.8	+2.2
	22nm,0.4s						
AAK	**Ala-Archa**	1.51	51	⇓*i*P	Pg	12 31 42.4	+0.5
	baz=51						
AAK				⇓*i*S	Sg	12 32 03.0	+1.5
	baz=51						
SFK	**Sufi-Kurgan**	1.73	165	⇓Pn	Pg	12 31 46.2	+0.2
	6.4nm,0.3s						
SFK				⇓Sn	Sg	12 32 09.2	+0.8
	48nm,0.3s						
SFK	**Sufi-Kurgan**	1.73	165	⇓*i*P	Pb	12 31 45.5	+0.5
	baz=64						
SFK				⇓*i*S	Sg	12 32 09.4	+1.0
	baz=64						
KZA	**Kyzart**	1.79	77	⇑P	Pg	12 31 47.5	+0.3
	20nm,0.2s,SNR=37						
KZA	**Kyzart**	1.79	77	⇑*i*P	Pg	12 31 47.5	+0.3
	baz=77						
KZA				⇑*i*S	Sg	12 32 11.7	+1.3
	baz=77						
KBK	**Karagaybulak**	1.80	57	⇑P	Pg	12 31 47.9	+0.5
	20nm,0.2s,SNR=10						
KBK	**Karagaybulak**	1.80	57	⇑*i*P	Pg	12 31 47.7	+0.4
	baz=57						
KBK				⇑*i*S	Sg	12 32 11.9	+1.2
	baz=57						
CHMS	**Chumysh**	1.89	45	⇑P	Pg	12 31 49.3	+0.2
	25nm,0.2s,SNR=18						
CHMS	**Chumysh**	1.89	45	⇑*i*P	Pg	12 31 48.8	-0.3
	baz=46						
CHMS				⇑*i*S	Sg	12 32 14.3	+0.6
	baz=46						
USP	**Ospenovka**	1.97	36	⇓P	Pg	12 31 50.2	-0.4
	46nm,0.5s,SNR=56						
USP	**Ospenovka**	1.97	36	⇑*i*P	Pg	12 31 49.9	-0.7
	baz=37						
USP				⇑*i*S	Sg	12 32 16.0	-0.1
	baz=37						
SGDS	**Sogindy**	2.17	35	Pg	Pg	12 31 53.5	-1.0
	19nm,0.3s						
SGDS				Lg	Lg	12 32 23.2	
	63nm,0.6s						
IUG	**Iuzhnay**	2.20	283	Pg	Pb	12 31 52.7	-0.3
	70nm,0.2s						
IUG				Lg	Lg	12 32 21.8	
	116nm,0.3s						
IUG	**Iuzhnay**	2.20	283	*e*P	Pb	12 31 53.4	+0.4
	70nm,0.2s						
IUG				*e*S	Sb	12 32 21.8	+1.4
	116nm,0.3s						
BTK	**Batken**	2.27	225	⇑*i*P	Pb	12 31 53.4	-0.8
	baz=24						
BTK				⇑*i*S	Sb	12 32 22.1	-0.4
	baz=24						
KK31	**Karatay Array**	2.27	309	Pn	Pb	12 31 53.4	-0.8
	14nm,0.3s,baz=139,slow=15,SNR=179						
KK31				⇑Sn	Sb	12 32 23.4	+0.9
	9.8nm,0.3s,baz=122,slow=28,SNR=12						
NRN	**Naryn**	2.33	95	⇑*i*P	Pb	12 31 55.0	-0.4
	baz=95						
NRN				⇑*i*S	Sb	12 32 24.4	-0.1
	baz=95						
TKM2	**Tokmak 2**	2.34	57	⇓P	Pg	12 31 56.8	-1.0
	17nm,0.2s,SNR=33						
TKM2	**Tokmak 2**	2.34	57	⇑Pg	Pg	12 31 56.6	-1.1
	19nm,0.5s						
TKM2				⇓Lg	Lg	12 32 28.8	
	69nm,0.6s						
TKM2	**Tokmak 2**	2.34	57	⇑*i*P	Pb	12 31 55.5	0.0
	baz=58						
TKM2				⇑*i*S	Sb	12 32 25.3	+0.5
	baz=58						
BOOM	**Boomskoye usch**	2.39	69	⇓*e*P	Pb	12 31 55.4	-1.0
	baz=70						
BOOM				⇓*i*S	Sb	12 32 26.0	-0.2
	baz=70						
ULHL	**Ulahol**	2.55	76	⇓P	Pb	12 31 59.4	+0.5
	4.7nm,0.2s,SNR=13						
ULHL	**Ulahol**	2.55	76	⇓*i*P	Pb	12 31 58.5	-0.5
	baz=76						
ULHL				⇓*i*S	Sb	12 32 30.1	-0.5
	baz=76						
DGS	**Degeres**	2.63	53	Pg	Pb	12 32 01.3	+1.0
	10nm,0.4s						
DGS				Lg	Lg	12 32 36.6	
	104nm,0.6s						
DGS	**Degeres**	2.63	53	*e*P	Pb	12 32 01.4	+1.1
	7.9nm,0.4s						
DGS				*e*S	Sg	12 32 36.2	-1.0
	104nm,0.6s						
KST	**Kastek**	2.64	58	Pg	Pg	12 32 02.4	-1.0
	22nm,0.4s						
KST				Lg	Lg	12 32 37.5	
	99nm,0.5s						
KST	**Kastek**	2.64	58	⇑*i*P	Pg	12 32 02.4	-1.0
	22nm,0.4s						
KST				⇓*i*S	Sg	12 32 37.5	0.0
	99nm,0.5s						
IZV	**Izvestkoviy**	3.06	63	Pg	Pg	12 32 10.1	-1.3
	12nm,0.5s						
IZV				Lg	Lg	12 32 51.5	
	33nm,0.7s						
IZV	**Izvestkoviy**	3.06	63	*e*P	Pg	12 32 10.1	-1.3
	12nm,0.5s						
IZV				*e*S	Sg	12 32 51.1	+0.1
	33nm,0.7s						
TNSS	**Tian-Shan**	3.28	64	Pg	Pg	12 32 14.4	-1.3
	9.9nm,0.4s						
TNSS				Lg	Lg	12 32 58.4	
	31nm,0.6s						
TNSS	**Tian-Shan**	3.28	64	*e*P	Pg	12 32 14.4	-1.3
	9.9nm,0.4s						
TNSS				*e*S	Sg	12 32 58.4	+0.1
	31nm,0.6s						
KUU	**Kurty**	3.35	48	Pg	Pg	12 32 15.1	-2.0
	4.1nm,0.4s						
KUU				Lg	Lg	12 32 58.4	
	14nm,0.5s						
KUU	**Kurty**	3.35	48	*e*P	Pg	12 32 14.7	-2.3
	2.0nm,0.3s						
KUU				⇓*i*S	Sg	12 32 58.4	-2.0
	16nm,0.5s						
KNDC	**Almaty**	3.37	62	⇓Lg	Lg	12 33 01.1	
MDOK	**Medeo**	3.40	63	⇓Pg	Pg	12 32 17.1	-0.9
	9.5nm,0.6s						
MDOK				Lg	Lg	12 33 01.9	
	17nm,0.6s						
MDOK	**Medeo**	3.40	63	Pg	Pg	12 32 16.1	-1.9
	5.0nm,0.5s						
MDOK				Lg	Lg	12 33 01.4	
	18nm,0.5s						
MDOK	**Medeo**	3.40	63	⇓*i*P	Pg	12 32 16.1	-1.9
	5.0nm,0.5s						
MDOK				*e*S	Sg	12 33 01.4	-0.6
	18nm,0.5s						
KTBS	**Karatobe**	3.44	53	Pg	Pg	12 32 16.9	-1.8
	2.7nm,0.3s						
KTBS				Lg	Lg	12 33 01.3	
	29nm,0.4s						
KTBS	**Karatobe**	3.44	53	*e*P	Pg	12 32 16.2	-2.5
	2.7nm,0.3s						
KTBS				*e*S	Sg	12 33 01.0	-2.3
	29nm,0.4s						
KOTS	**Kotyrbulak**	3.47	62	Pg	Pg	12 32 17.7	-1.7
	5.9nm,0.4s						
KOTS				Lg	Lg	12 33 04.1	
	32nm,0.5s						
KOTS	**Kotyrbulak**	3.47	62	*e*P	Pg	12 32 17.6	-1.7
	5.9nm,0.4s						
KOTS				*e*S	Sg	12 33 04.1	-0.2
	32nm,0.5s						
CHKK	**Chushkaly**	3.70	53	Pg	Pg	12 32 21.4	-2.4
	3.5nm,0.5s						
CHKK				Lg	Lg	12 33 10.3	
	18nm,0.5s						
CHKK	**Chushkaly**	3.70	53	*e*P	Pg	12 32 21.4	-2.4
	3.5nm,0.5s						
CHKK				*e*S	Sg	12 33 10.3	-1.4
	18nm,0.5s						
SATY	**Saty**	4.30	70	Pg	Pg	12 32 33.2	-1.9
	8.7nm,0.4s						
SATY				Lg	Lg	12 33 29.9	
	16nm,0.5s						
SATY	**Saty**	4.30	70	*e*P	Pg	12 32 33.2	-1.9
	8.7nm,0.4s						
SATY				*e*S	Sg	12 33 29.9	-0.9
	16nm,0.5s						
ARXS	**Arharly**	4.41	53	Pg	Pg	12 32 35.1	-2.1
	4.5nm,0.4s						
ARXS				Lg	Lg	12 33 34.8	
	19nm,0.4s						
ARXS	**Arharly**	4.41	53	*e*P	Pg	12 32 36.0	-1.2
	3.5nm,0.7s						
ARXS				*e*S	Sg	12 33 34.8	+0.5
	19nm,0.4s						
PDGK	**Podgornoye**	5.13	69	Pg	Pb	12 32 46.8	+3.8
	1.2nm,0.6s						
PDGK				Lg	Lg	12 33 53.5	
	4.2nm,0.5s						
OTUK	**Ortayu**	6.57	357	⇑Pn	Pn	12 32 50.7	+0.9
	1.8nm,0.9s						
OTUK				⇓Sn	Sn	12 34 08.4	+3.4
	1.7nm,0.5s						
OTUK				⇑Lg	Lg	12 34 39.7	
	7.1nm,0.5s						
AB31	**Akbulak array**	11.83	314	⇑Pn	Pn	12 34 01.5	-0.3
	0.4nm,0.5s,baz=121,slow=15,SNR=14						

ISCJB ***21*** *12:47:34.5±0.8, 37°.38N±0°.05×26°.93E±0°.06, h12^{km}, Error ellipse: s-maj=8.2km s-min=5.6km az=40.7*
ISK ***21*** *12:47:34.1, 37°.37N×26°.92E, h11^{km}, ML2.4/7*
DDA ***21*** *12:47:35.2, 37°.44N×27°.00E, h7^{km}±1^{km}, ML2.5*
ISC 21 12:47:34.9±1.2**, 37°.38N**±0°.05×**26°.98E**±0°.06**, h12^{km}, n12, σ1^{s}19**/16**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIDI	Didim-Aydin	0.21	92	PG	Pg	12 47 39.9	+0.5
DIDI				SG	Sg	12 47 44.1	+1.6
YKAV	Yalikavak-Bodr	0.35	137	PG	Pg	12 47 41.9	-0.1
YKAV				SG	Sg	12 47 47.9	+1.2
GCAM	G?zelcaml?	0.38	33	i P	Pg	12 47 42.0	-0.4
BODT	Bodrum	0.42	140	PG	Pg	12 47 43.2	0.0
BODT				SG	Sg	12 47 49.9	+1.2
BDRM	Kayabasi	0.49	130	i P	Pb	12 47 46.0	+0.5
BDRM				IAML_P			
	comp=Z,1μm,0.2s						
MLSB	Milas	0.64	98	PG	Pg	12 47 47.8	+0.4
MLSB				SG	Sb	12 47 57.5	+0.5
AYDN	Tasoluk	0.77	69	i P	Pg	12 47 49.8	0.0
AYDN				IAML_P			
	comp=Z,1μm,0.1s						
URLA	Izmir	1.02	343	i P	Pn	12 47 54.7	-0.5
URLA				IAML_P			
	comp=Z,675nm,0.2s						
YER	Yerkesik	1.07	103	PN	Pb	12 47 55.8	+0.4
APE	Apeiranthos	1.20	255	PN	Pn	12 47 56.6	-0.9
TURN	Turunc	1.39	111	PN	Pn	12 47 57.6	-2.6
TURN	Turunc	1.39	111	i P	Pn	12 47 58.1	-2.1
TURN				IAML_P			
	comp=Z,284nm,0.2s						

NIED ***21*** *13:02:00, 36°.20N×139°.50E, h122^{km}, Mw3.6 Best double couple: M$_0$2.68000×10^{14} NP1:φ$_s$298.00000°, δ47.00000°, λ113.00000°. NP2:φ$_s$85.00000°, δ48.00000°, λ67.00000°.*
ISCJB ***21*** *13:02:10.1±0.4, 36°.18N±0°.03×139°.47E±0°.07, h131^{km}±3^{km}, mb3.6/8, Error ellipse: s-maj=9.7km s-min=5.6km az=7.1*
IDC ***21*** *13:02:11.4±0.9, 36°.12N×139°.33E, h128^{km}±7^{km}, mb3.2/7, mb1 3.4/9, mb1mx3.2/40, mbtmp3.7/9, MS3.0/2, Ms1 3.1/2, ms1mx2.4/36, Error ellipse: s-maj=23.7km s-min=9.7km az=69.0*
JMA ***21*** *13:02:11.8±0.1, 36°.16N×139°.56E, h119^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: φ$_s$307.00000°, δ53.00000°, λ120.00000°. NP2: φ$_s$83.00000°, δ46.00000°, λ56.00000°. Principal axes: T Plg66.0000°, Azm277.0000°; N Plg24.0000°, Azm108.0000°; P Plg4.0000°, Azm16.0000°;*
JMA Felt I J1.
ISC 21 13:02:11.3±0.7**, 36°.18N**±0°.04×**139°.44E**±0°.06**, h127^{km}**±5^{km}**, n24, σ0^{s}89**/38**, mb3.5**/8**, 4C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.24	3	⇑P	Pn	13 02 28.4	-0.5
JAG				S	Sn	13 02 41.4	-0.9
JHU	Hanno	0.35	201	⇑P	Pn	13 02 29.5	+0.2
JHU				S	Sn	13 02 42.5	-0.4
JRY	Ryogami san	0.46	249	⇑P	Pn	13 02 30.2	+0.3
JRY				S	Sn	13 02 44.2	+0.3
JKT	Katashina	0.60	346	⇑P	Pn	13 02 30.7	-0.1
JKT				S	Sn	13 02 45.2	-0.4
JOD2	Odawara 2	0.96	197	P	Pn	13 02 32.9	-0.7
JOD2				S	Sn	13 02 49.2	-1.3
JYN	Shimob	0.99	227	⇓P	Pn	13 02 34.2	+0.2
JYN				S	Sn	13 02 51.7	+0.5
MJAR	Matsushiro Arr	1.05	290	P	Pn	13 02 33.8	-0.6
	2.9nm,0.3s,baz=270,slow=9.8,SNR=112						
MJAR				S	Sn	13 02 51.6	-0.5
	2.8nm,0.3s,baz=107,slow=20,SNR=15						
MAT	Matsushiro	1.06	290	P	Pn	13 02 35.0	+0.5
MAT				S	Sn	13 02 52.2	+0.1
MAT	Matsushiro	1.06	290	P	Pn	13 02 35.0	+0.5
MAT				S	Sn	13 02 52.5	+0.4
JFNN	Fujinakano	1.16	212	P	Pn	13 02 36.1	+0.6
JFNN				S	Sn	13 02 54.5	+0.6
JFT	Otama	1.52	28	⇓P	Pn	13 02 39.4	0.0
JFT				eS	Sn	13 02 59.9	-0.9
JNS	Sasagawa	1.64	357	P	Pn	13 02 40.8	+0.1
JNS				eS	Sn	13 03 03.7	+0.5
BSO1	Boso 1	1.98	140	P	Pn	13 02 43.8	-0.5
JHJ	Hachijo jima 2	3.07	175	P	Pn	13 02 56.7	-2.0
	103nm,0.3s,baz=321,slow=20,SNR=20						
JHJ				S	Sn	13 03 35.1	-0.2
	68nm,0.3s,baz=253,slow=19,SNR=2.8						
JNU	Nakatsue	7.68	249	P	Pn	13 03 57.9	-2.6
	0.2nm,0.3s,baz=132,slow=6.9,SNR=3.1						
JNU				LR	LR	13 07 30.0	
	comp=Z,21nm,18.5s,baz=326,slow=42						
ASAJ	Asahikawa	8.29	16	P	Pn	13 04 06.6	-1.8
	1.4nm,0.3s,baz=215,slow=13,SNR=24						
ZALV	Zalesovo Beam	41.32	313	P	P	13 09 44.2	+0.1
	1.0nm,0.5s,baz=91,slow=8.5,SNR=4.7						
ZALV				PcP	PcP	13 11 39.2	-0.8
	0.4nm,0.3s,baz=108,slow=4.7,SNR=3.1						
MKAR	Makanchi Array	43.23	303	P	P	13 09 59.9	+0.2
	0.5nm,0.7s,baz=83,slow=9.9,SNR=7.2						
ILAR	Eielson Array	51.06	32	P	P	13 11 00.4	+0.3
	0.3nm,0.9s,baz=275,slow=7.7,SNR=3.2						
ILAR				LR	LR	13 36 29.8	
	comp=Z,61nm,19.8s,baz=140,slow=40						
WRA	Warramunga Arr	56.03	186	P	P	13 11 36.0	-0.8
	0.3nm,0.3s,baz=1.2,slow=7.6,SNR=24						
ASAR	Alice Springs	59.75	186	P	P	13 12 03.1	+0.4
	0.2nm,0.8s,baz=1.8,slow=5.1,SNR=4.9						
FINES	FINESS Array B	68.82	332	P	P	13 13 00.8	-0.5
	1.1nm,0.8s,baz=63,slow=13,SNR=2.9						
PPT	Papeete	85.69	115	P	P	13 14 37.7	+1.7
	37nm,0.7s,baz=216,slow=17,SNR=4.4						
TXAR	Lajitas Array	91.90	51	P	P	13 15 06.2	+0.7
	0.1nm,0.5s,baz=270,slow=2.4,SNR=3.9						

NIED ***21*** *13:06:00, 46°.80N×152°.70E, h65^{km}, Mw4.2 Best double couple: M$_0$2.02000×10^{15} NP1:φ$_s$240.00000°, δ37.00000°, λ73.00000°. NP2:φ$_s$81.00000°, δ55.00000°, λ102.00000°.*
MOS ***21*** *13:06:31.8±1.1, 46°.57N×152°.97E, h64^{km}, mb4.0/11, Error ellipse: s-maj=13.2km s-min=7.6km az=53.4*
JMA ***21*** *13:06:32.9±0.7, 46°.78N×152°.66E, h30^{km}, M4.7*
ISCJB ***21*** *13:06:33.2±0.4, 46°.62N±0°.06×152°.72E±0°.07, h75^{km}, mb3.7/20, Error ellipse: s-maj=10.6km s-min=3.5km az=140.8*
SKHL ***21*** *13:06:34.8±0.5, 46°.78N×152°.62E, h79^{km}±6^{km}, mb4.5/6*
IDC ***21*** *13:06:35.2±2.3, 46°.71N×152°.77E, h75^{km}±21^{km}, mb3.5/17, mb1 3.8/22, mb1mx3.6/50, mbtmp3.9/22, MS2.8/5, Ms1 2.8/5, ms1mx2.6/44, Error ellipse: s-maj=20.2km s-min=9.9km az=141.0*
ISC 21 13:06:34.2±0.6**, 46°.53N**±0°.07×**152°.84E**±0°.06**, h75^{km}, n98, σ2^{s}09**/109**, mb3.8**/20**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.71	251	eP	Pn	13 07 29.7	+0.6
KUR				AMB	AMB	13 07 31.4	
	90nm,0.3s						
KUR				AMB	AMB	13 07 31.4	
	60nm,0.3s						
KUR				AMB	AMB	13 07 31.4	
	50nm,0.3s						
KUR				eS	Sn	13 08 10.5	-1.1
KUR				A	A	13 08 18.2	
	90nm,0.3s						
KUR				A	A	13 08 18.2	
	150nm,0.3s						
KUR	Kuril'sk	3.71	251	ePN	Pn	13 07 30.8	+1.7
KUR				eS	Sn	13 08 12.3	+0.7
KUR				pmax	pmax		
	comp=Z,227nm,0.4s						
KUR				pmax	pmax		
	comp=N,87nm,0.3s						
KUR				pmax	pmax		
	comp=E,61nm,0.1s						
KUR				smax	smax		
	comp=N,611nm,0.3s						
KUR				smax	smax		
	comp=E,147nm,0.3s						
SKR	Severo-Kuril's	4.69	26	eP	Pn	13 07 40.8	-1.6
SKR				AMB	AMB	13 07 42.0	
	comp=E,100nm,0.9s						
SKR				eS	Sn	13 08 30.7	-4.7
SKR				A	A	13 08 34.0	
	comp=E,230nm,0.8s						
SKR				A	A	13 08 34.0	
	comp=E,240nm,0.8s						
SKR	Severo-Kuril's	4.69	26	ePN	Pn	13 07 39.8	-2.6
SKR				eS	Sn	13 08 29.9	-5.5
SKR				pmax	pmax		
	comp=Z,143nm,0.9s						
SKR				smax	smax		
	comp=E,243nm,0.5s						
SKR				smax	smax		
	comp=N,233nm,0.7s						
SHO	Shikotan	5.01	240	i P	Pn	13 07 48.6	+1.7
SHO	Shikotan	5.01	240	d iPN	Pn	13 07 45.8	-1.1
YUK	Yuzh-Kuril'sk	5.52	246	eP	Pn	13 07 54.8	+0.9
YUK				AMB	AMB	13 07 56.0	
	comp=N,10.0nm,0.3s						
YUK				AMB	AMB	13 07 56.0	
	comp=N,50nm,0.3s						
YUK				AMB	AMB	13 07 56.0	
	comp=N,30nm,0.3s						
YUK				eS	Sn	13 08 55.0	-1.0
YUK				A	A	13 09 01.0	
	comp=N,110nm,0.3s						
YUK				A	A	13 09 01.0	
	comp=N,30nm,0.3s						
YUK	Yuzh-Kuril'sk	5.52	246	ePN	Pn	13 07 54.7	+0.9
YUK				pmax	pmax		
	comp=N,102nm,0.2s						
YUK				pmax	pmax		
	comp=Z,353nm,0.2s						
YUK				pmax	pmax		
	comp=E,53nm,0.1s						
LAGR	Lagunnoye	5.56	246	eP	Pn	13 07 55.0	+0.6
LAGR				AMB	AMB	13 07 57.0	
	comp=E,90nm,0.2s						
LAGR				AMB	AMB	13 07 57.0	
	comp=E,20nm,0.2s						
LAGR				eS	Sn	13 08 56.0	-0.9
LAGR				A	A	13 09 09.3	
	comp=E,40nm,0.5s						
LAGR				A	A	13 09 09.3	
	comp=E,150nm,0.5s						
LAGR	Lagunnoye	5.56	246	ePN	Pn	13 07 55.4	+1.0
LAGR				eS	Sn	13 08 56.6	-0.3
LAGR				pmax	pmax		
	comp=Z,185nm,0.2s						
LAGR				pmax	pmax		
	comp=N,21nm,0.1s						
LAGR				pmax	pmax		
	comp=E,89nm,0.1s						
LAGR				smax	smax		
	comp=N,448nm,0.5s						
LAGR				smax	smax		
	comp=E,276nm,0.5s						
GRPR	Tuman	5.60	246	eP	Pn	13 07 55.0	+0.1
GRPR				AMB	AMB	13 07 59.0	
	comp=E,20nm,0.2s						
GRPR				AMB	AMB	13 07 59.0	
	comp=E,10.0nm,0.2s						
GRPR				eS	Sn	13 08 56.0	-1.9
GRPR				A	A	13 09 03.0	
	comp=E,20nm,0.4s						
GRPR				A	A	13 09 03.0	
	comp=E,120nm,0.4s						
GRPR	Tuman	5.60	246	ePN	Pn	13 07 55.4	+0.5
GRPR				pmax	pmax		
	comp=Z,194nm,0.3s						
GRPR				pmax	pmax		
	comp=E,130nm,0.1s						
GRPR				pmax	pmax		
	comp=N,150nm,0.2s						
NEM2	Nemuro 2	5.95	240	P	Pn	13 07 58.4	-1.3
NEM2				eS	Sn	13 09 01.0	-5.4
JRA	Rausu	6.04	247	P	Pn	13 08 01.9	+1.0
JNK	Nakash	6.46	246	P	Pn	13 08 07.2	+0.5
JAK	Akkeshi	6.79	242	P	Pn	13 08 10.0	-1.2
JAK				eS	Sn	13 09 22.1	-4.9
JTKR	Abashiri--Toko	6.81	251	P	Pn	13 08 12.7	+1.3
YSS	Yuzh-Sakhalins	6.95	277	eP	Pn	13 08 12.3	-1.0
YSS				AMB	AMB	13 08 13.3	
	comp=N,10.0nm,0.5s						
YSS				eS	Sn	13 09 25.0	-5.7
YSS	Yuzh-Sakhalins	6.95	277	ePN	Pn	13 08 16.5	+3.2
YSS				eS	Sn	13 09 33.4	+2.7
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
JMP	Maruseppu	7.15	253	P	Pn	13 08 17.7	+1.6
JAR	Ashorobuto	7.21	247	P	Pn	13 08 17.5	+0.6
PETK	Petropavlovsk-	7.29	24	P	Pn	13 08 16.7	-1.2
	comp=Z,1.3nm,0.3s,baz=194,slow=12,SNR=42						
PETK				S	Sn	13 09 37.2	-1.9
	comp=Z,0.0nm,0.3s,baz=213,slow=26,SNR=2.4						
JOB	Onbets	7.37	244	P	Pn	13 08 18.6	-0.5
JOB				eS	Sn	13 09 36.7	-4.5
PET	Petropavlovsk	7.50	28	ePN	Pn	13 08 14.9	-5.9
PET				MLR	MLR		
	comp=Z,100nm,18.0s						
HRK	Horoka	7.54	249	eP	Pn	13 08 22.6	+1.2
JKK2	Kamakawa 2	7.61	253	P	Pn	13 08 24.1	+1.7
ASAJ	Asahikawa	7.62	255	P	Pn	13 08 24.6	+2.2
ASAJ	Asahikawa	7.62	255	P	Pn	13 08 24.7	+2.3
	comp=Z,4.8nm,0.3s,baz=79,slow=17,SNR=55						
ASAJ				LR	LR	13 10 39.4	
	comp=Z,40nm,19.4s,baz=104,slow=32						
JCH	Churui	7.82	243	P	Pn	13 08 24.5	-0.7
JCH				eS	Sn	13 09 47.5	-4.7
MYR	Moyori	8.05	242	eP	Pn	13 08 27.3	-1.0
ERM	Erimo	8.29	240	i PN	Pn	13 08 31.6	0.0
JBT2	Biratori 2	8.36	247	P	Pn	13 08 32.9	+0.3
JNBK	Urakawa-nobuka	8.38	243	P	Pn	13 08 31.4	-1.5
JNBK				eS	Sn	13 10 00.5	-5.4
JNB	Noboribetsu	9.36	249	P	Pn	13 08 45.5	-0.8
JNB				eS	Sn	13 10 26.5	-3.3
OKH	Okha	9.48	321	eP	Pn	13 08 46.0	-1.8
JKB	Kayabe	9.67	246	P	Pn	13 08 48.9	-1.5
JKB				eS	Sn	13 10 30.1	-7.1
JSH	Shimam	9.92	252	P	Pn	13 08 54.0	+0.1
JYM2	Yakumo 2	9.97	248	P	Pn	13 08 53.7	-0.8
JANG	Nango	10.28	237	P	Pn	13 08 55.3	-3.5
JANG				eS	Sn	13 10 42.3	-10
JTM	Tenmabayashi	10.28	240	P	Pn	13 08 56.0	-2.8
JOSM	Okushiri--Mats	10.56	250	P	Pn	13 09 02.1	-0.5
JRG	Rokugo	11.43	236	P	Pn	13 09 12.3	-2.2
MA2	Magadan	13.12	355	P	Pn	13 09 35.9	-1.4
	comp=Z,0.5nm,0.3s,baz=166,slow=18,SNR=3.8						
MA2				LR	LR	13 14 28.7	
	comp=Z,42nm,20.7s,baz=308,slow=37						
KLR	Kul'dur	14.40	288	LR	LR	13 15 30.6	
	comp=Z,39nm,18.2s,baz=68,slow=37						
MJA0	Matsu Arr-Jizo	14.78	233	eP	P	13 10 03.6	+0.3
MJAR	Matsushiro Arr	14.80	233	P	Pn	13 10 00.8	+1.4
	comp=Z,0.2nm,0.3s,baz=42,slow=8.7,SNR=7.6						
USRK	Ussuriysk Ar.	14.84	269	P	Pn	13 09 59.5	-0.3
	comp=Z,0.7nm,0.3s,baz=70,slow=12,SNR=11						
KROS	Kirovskiy	18.18	305	eP	P	13 10 38.0	-2.7
KSRS	Korea Array	20.56	253	P	P	13 11 07.2	+0.6
	comp=Z,1.7nm,0.6s,baz=56,slow=11,SNR=5.1						
KSRS				LR	LR	13 17 53.2	
	comp=Z,32nm,20.0s,baz=35,slow=33						
JNU	Nakatsue	21.45	239	P	P	13 11 17.8	+1.5
	comp=Z,8.0nm,0.9s,baz=360,slow=4.2,SNR=4.6						
JNU				LR	LR	13 18 55.8	
	comp=Z,41nm,18.4s,baz=346,slow=34						
BILL	Bilibino	22.64	13	eP	P	13 11 30.0	+1.3
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
H11N2	WAKE ISLAND Hy	29.11	152	T	T	13 43 50.9	
	baz=340,slow=75,SNR=740						
H11N1	WAKE ISLAND Hy	29.13	152	T	T	13 43 59.1	
	baz=340,slow=75,SNR=521						
H11N3	WAKE ISLAND Hy	29.13	152	T	T	13 43 57.6	
	baz=340,slow=75,SNR=409						
H11S1	WAKE ISLAND Hy	30.20	153	T	T	13 45 17.0	
	baz=340,slow=76,SNR=782						
H11S3	WAKE ISLAND Hy	30.20	153	T	T	13 45 20.2	
	baz=340,slow=76,SNR=550						
H11S2	WAKE ISLAND Hy	30.21	153	T	T	13 45 22.5	
	baz=340,slow=76,SNR=507						
ULN	Ulaanbaatar	30.80	289	eP	P	13 12 45.2	+2.5
ULN	Ulaanbaatar	30.80	289	i P	P	13 12 45.2	+2.5
ULN				pmax	pmax		
	comp=Z,6.0nm,2.3s						
SONM	Songino Array	31.23	290	P	P	13 12 47.2	+0.7
	comp=Z,0.4nm,0.5s,baz=79,slow=7.5,SNR=2.1						
KDAK	Kodiak Island	34.38	51	P	P	13 13 12.9	-0.8
	comp=Z,4.0nm,0.5s,baz=242,slow=2.4,SNR=6.8						
ILAR	Eielson Array	36.83	38	eP	P	13 13 35.0	+0.3
ILAR	Eielson Array	36.83	38	eP	P	13 13 35.0	+0.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	36.83	38	P	P	13 13 34.0	-0.7
	comp=Z,1.0nm,0.9s,baz=260,slow=6.9,SNR=9.7						
INK	Inuvik	41.93	32	P	P	13 14 17.1	+0.1
	comp=Z,1.3nm,0.5s,baz=294,slow=6.8,SNR=11						
DLBC	Dease Lake	45.88	46	P	P	13 14 49.4	+0.6
	comp=Z,1.8nm,0.7s,baz=281,slow=10,SNR=4.0						
MKAR	Makanchi Array	46.88	297	eP	P	13 14 55.8	-0.9
MKAR	Makanchi Array	46.88	297	P	P	13 14 55.6	-1.1
	comp=Z,0.3nm,0.5s,baz=55,slow=6.4,SNR=7.3						
BRVK	Borovoye	50.89	310	eP	P	13 15 28.5	+1.2
BRVK	Borovoye	50.89	310	i P	P	13 15 28.5	+1.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	51.21	37	P	P	13 15 30.3	+0.8
	comp=Z,0.5nm,0.5s,baz=295,slow=7.0,SNR=11						
YKA				PcP	PcP	13 16 44.9	+1.2
	comp=Z,0.2nm,0.5s,baz=303,slow=3.6,SNR=4.9						
CMAR	Chiang Mai Arr	52.14	256	eP	P	13 15 39.6	+2.6
CMAR	Chiang Mai Arr	52.14	256	eP	P	13 15 39.6	+2.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	52.14	256	P	P	13 15 38.5	+1.4
	comp=Z,0.8nm,0.6s,baz=43,slow=6.2,SNR=6.5						
JIRN	Jiri	54.78	275	eP	P	13 15 58.2	+1.5
	comp=Z,21nm,0.7s						
GUN	Gumba	54.84	275	eP	P	13 15 58.3	+1.2
	comp=Z,7.8nm,0.6s						
RAMN	Ramite	54.94	274	eP	P	13 15 59.0	+1.2
KKN	Kakani	55.32	275	eP	P	13 16 02.3	+1.8
	comp=Z,4.8nm,0.3s						
PKI	Pulchoki	55.37	275	eP	P	13 16 02.7	+1.8
	comp=Z,7.5nm,0.5s						
PKIN	Phulchoki	55.38	275	eP	P	13 16 02.0	+1.1
	comp=Z,4.7nm,0.5s						
DMN	Daman	55.56	275	eP	P	13 16 03.8	+1.6
	comp=Z,20nm,0.9s						
DANN	Dangsing	56.02	277	eP	P	13 16 07.1	+1.6
	comp=Z,18nm,0.6s						
KOLN	Koldanda	56.49	276	eP	P	13 16 09.6	+0.8
	comp=Z,12nm,0.8s						
PYUN	Piuthan	56.70	277	eP	P	13 16 11.5	+1.2
	comp=Z,14nm,0.7s						
NVAR	Mina Array Bea	62.70	62	P	P	13 16 51.7	+0.4
	comp=Z,0.2nm,0.5s,baz=290,slow=6.2,SNR=4.1						
FINES	FINESS Array B	64.16	335	P	P	13 16 59.4	-0.8
	comp=Z,0.6nm,0.4s,baz=46,slow=8.2,SNR=7.0						
PDAR	Pinedale Array	65.02	54	P	P	13 17 07.5	+0.9
	comp=Z,0.4nm,0.6s,baz=216,slow=4.6,SNR=4.3						
WRA	Warramunga Arr	68.25	199	P	P	13 17 28.0	+1.1
	comp=Z,0.3nm,0.5s,baz=18,slow=6.9,SNR=6.9						
NB2	NORSAR Subarra	68.37	341	P	P	13 17 26.6	-0.7
	comp=Z,0.7nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.37	341	eP	P	13 17 27.1	-0.2
NOA	NORSAR Array B	68.37	341	eP	P	13 17 27.1	-0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	68.37	341	P	P	13 17 26.1	-1.2
	comp=Z,0.9nm,0.6s,baz=27,slow=6.2,SNR=4.5						
KBZ	Khabaz	70.88	314	P	P	13 17 43.8	+0.9
	comp=Z,2.3nm,0.9s,baz=137,slow=19,SNR=2.5						
ASAR	Alice Springs	71.94	198	P	P	13 17 51.5	+2.0
	comp=Z,0.5nm,0.5s,baz=11,slow=5.8,SNR=11						
CLL	Collm	76.58	335	eP	P	13 18 16.0	-0.2
CLL				i (PcP)	PcP	13 18 24.5	-2.9
CLL	Collm	76.58	335	eP	P	13 18 16.0	-0.2
CLL				i		13 18 24.5	
TXAR	Lajitas Array	77.76	60	eP	P	13 18 25.1	+1.8
TXAR	Lajitas Array	77.76	60	P	P	13 18 24.1	+0.9
	comp=Z,0.4nm,0.6s,baz=299,slow=5.4,SNR=8.0						

DDA 21 13:25:31.9, 41°.01N×31°.24E, h7^{km}±1^{km}, ML2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YIGI	Dzce	0.16	106	i P	Pg	13 25 36.9	+1.7
YIGI				i S	Sg	13 25 38.8	+1.3
SAHE	Sakarya_HENDEK	0.33	242	i P	Pb	13 25 40.0	-0.2
SAHE				IAML_P			
	comp=Z,1μm,0.1s						
BCAM	Yenicaga	0.65	107	i P	Pb	13 25 45.4	-0.3
BCAM				IAML_P			
	comp=Z,381nm,0.1s						
KIBS	BOLU	0.75	141	i P	Pb	13 25 46.9	-0.4
KAND	Kocaeli-Kandir	0.80	277	i P	Pg	13 25 47.5	+0.2

ISK ***21*** *13:26:38.3, 38°.80N×43°.52E, h5^{km}, ML2.3/4*
ISCJB ***21*** *13:26:40.9±0.7, 38°.91N±0°.05×43°.46E±0°.09, h10^{km}±8^{km}, Error ellipse: s-maj=11.8km s-min=6.5km az=23.3*
DDA ***21*** *13:26:40.6, 38°.91N×43°.52E, h7^{km}±1^{km}, ML2.6*
ISC 21 13:26:39.9±1.1**, 38°.87N**±0°.04×**43°.49E**±0°.05**, h11^{km}**±9^{km}**, n10, σ0^{s}73**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.14	26	i P	Pg	13 26 43.2	-0.1
VMUR				i S	Sg	13 26 46.0	+0.3
TVAN	Van	0.34	191	i P	Pb	13 26 48.4	+0.3
TVAN				i S	Sb	13 26 55.3	+1.5
CLDR	Caldiran	0.43	50	PG	Pg	13 26 48.5	0.0
CLDR				SG	Sb	13 26 55.9	-0.4
CLDR	Caldiran	0.43	50	i P	Pb	13 26 49.3	-0.4
ADCV	BITLIS_Adilcev	0.60	265	i P	Pb	13 26 53.1	+0.6
ADCV				i S	Sn	13 27 04.0	-0.6
ADCV				IAML_P			
	comp=Z,502nm,0.2s						
AKDM	Akdamar-Van	0.67	217	PG	Pg	13 26 51.6	-1.3
TUTA	Tutak	0.75	316	i P	Pb	13 26 55.6	+0.4
MLAZ	Malazgirt-MUS	0.79	291	PG	Pb	13 26 55.6	-0.1
AGRB	Hanur-Agry	0.81	331	PG	Pb	13 26 56.1	0.0
GURO	Guroymak-BITLI	1.19	255	PN	Pb	13 27 02.1	-0.4
GURO				SN	Sn	13 27 19.4	+0.6

ISK ***21*** *13:33:09.8, 37°.38N×36°.74E, h6^{km}, ML1.9/5*
ISCJB ***21*** *13:33:10.2±0.8, 37°.33N±0°.05×36°.72E±0°.05, h2^{km}±10^{km}, Error ellipse: s-maj=8.5km s-min=6.6km az=4.5*
DDA ***21*** *13:33:10.6, 37°.31N×36°.64E, h7^{km}±1^{km}, ML2.5*
ISC 21 13:33:09.9±1.3**, 37°.35N**±0°.05×**36°.71E**±0°.04**, h7^{km}**±14^{km}**, n9, σ1^{s}00**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMRS	Kahramanmaras	0.21	45	PG	Pg	13 33 14.1	-0.1
KMRS				SG	Sg	13 33 16.9	-0.2
ANDN	Andirin	0.37	308	i P	Pb	13 33 18.2	-0.6
ANDN				i S	Sb	13 33 23.7	-1.0
ANDN				IAML_P			
	comp=Z,1μm,0.1s						
GAZ	Gaziantep	0.44	114	PG	Pg	13 33 18.7	+0.3
KUZU	Kuzuini	0.65	153	i P	Pb	13 33 23.2	-0.4
GZT	Gaziantep	0.68	90	i P	Pb	13 33 23.9	-0.3
GZT				IAML_P			
	comp=Z,690nm,0.1s						
KOZT	Kozan	0.71	280	PG	Pg	13 33 24.3	+0.7
TAHT	Tahtakopru-Hat	1.06	203	PN	Pn	13 33 31.2	0.0
TAHT				SN	Sn	13 33 46.8	+0.6
AKCD	Akcadag	1.34	45	i P	Pg	13 33 37.7	+2.0
URFA	Urfa	1.69	86	PN	Pb	13 33 40.1	-1.1

MEX 21 13:34:31.8±0.4**, 16°.18N×96°.20W, h30^{km}**±12^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.42	168	eP	Pb	13 34 39.1	-1.9
HUIG				i S	Sb	13 34 45.5	-1.6
VHO	Vista Hermosa	1.03	330	eP	Pn	13 34 47.9	-2.5
VHO				i S	Sn	13 35 00.8	-3.0
CMIG	Matias Romero	1.55	54	eP	Pn	13 34 55.4	-2.0

CMIG				*e*S	Sn	13 35 14.5	-2.1
PNIG	**Pinotepa**	**1.86**	**277**	*e*P	Pn	13 34 59.7	-2.1

ISCJB ***21*** *13:36:47.2±0.6,36°.00S±0°.05×144°.43E±0°.06,h14^{km}, Error ellipse: s-maj=8.7km s-min=5.6km az=36.9*

AUST ***21*** *13:36:47.5±0.1,36°.09S×144°.43E,h11^{km},Error ellipse: s-maj=0.3km s-min=0.1km az=9.0*

IDC ***21*** *13:36:53.4±6.1,36°.37S×142°.10E,h0^{km},mb1 3.0/3, mb1mx3.0/26,mbtmp2.8/3,ML2.8/2,Error ellipse: s-maj=72.3km s-min=42.3km az=80.0*

ISC 21 13:36:46.9±1.0,36°.07S±0°.07×144°.37E±0°.06,h14^{km},n12, σ3^{s}30/18,Victoria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOO	**Toolangi**	**1.75**	**149**	P	**Pn**	**13 37 17.8**	**+1.0**
	baz=1.7,SNR=42						
ARPS	**Mount Arapiles**	**2.15**	**250**	P	**Pb**	**13 37 25.2**	**-0.4**
	baz=2.2,SNR=28						
YNG	**Young**	**3.75**	**63**	P	**Pn**	**13 37 46.0**	**+1.7**
	baz=3.7						
MILA	**Mila**	**3.98**	**106**	P	**Pn**	**13 37 48.7**	**+1.2**
	baz=3.9,SNR=6.8						
MILA				S	**Sn**	**13 38 33.4**	**-0.6**
	baz=3.9						
CNB	**Canberra Magne**	**4.14**	**81**	P	**Pn**	**13 37 50.9**	**+1.2**
	baz=4.1						
CMSA	**Cobar Meteorol**	**4.66**	**14**	P	**Pn**	**13 37 59.0**	**+2.2**
	baz=4.7						
CMSA				S	**Sn**	**13 38 50.9**	**+0.3**
	baz=4.7						
STKA	**Stephens Creek**	**4.78**	**330**	P	**Pn**	**13 38 01.8**	**+3.4**
	baz=4.8,SNR=6.1						
STKA				S	**Sn**	**13 38 55.7**	**+2.2**
	baz=4.8						
STKA	**Stephens Creek**	**4.78**	**330**	Pn	**Pn**	**13 38 02.1**	**+3.7**
	0.4nm,0.3s,baz=170,slow=14,SNR=22						
STKA				Sn	**Sn**	**13 38 54.5**	**+1.0**
	1.3nm,0.3s,baz=84,slow=20,SNR=5.4						
STKA				Lg	Lg	13 39 16.3	
	2.7nm,0.3s,baz=254,slow=23,SNR=4.4						
HTT	**Hallett**	**5.20**	**299**	P	**Pn**	**13 38 07.1**	**+2.8**
	baz=5.2						
BBOO	**Buckleboo**	**7.59**	**293**	P	**Pn**	**13 38 39.5**	**+2.4**
	baz=7.6						
ASAR	**Alice Springs**	**15.32**	**321**	Pn	**Pn**	**13 40 20.9**	**-1.9**
	baz=149,slow=13,SNR=3.7						
ASAR				Sn	**Sn**	**13 43 03.2**	**-9.1**
	0.0nm,0.3s,baz=155,slow=24,SNR=3.0						
WRA	**Warramunga Arr**	**18.33**	**329**	P	**P**	**13 41 02.2**	**+1.5**
	0.0nm,0.3s,baz=161,slow=11,SNR=3.0						
WRA				S	**Sn**	**13 44 21.0**	**-4.2**
	0.0nm,0.3s,baz=163,slow=24,SNR=2.7						

MEX 21 13:40:42.7±0.9,16°.18N×96°.20W,h20^{km}±39^{km},MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.41**	**168**	*e*P	Pb	13 40 49.5	-1.8
HUIG				*e*S	Sb	13 40 55.9	-1.2
VHO	**Vista Hermosa**	**1.03**	**330**	*e*P	Pb	13 40 58.5	-3.5
VHO				*e*S	Sb	13 41 11.3	-3.8
CMIG	**Matias Romero**	**1.55**	**54**	*e*P	Pn	13 41 07.2	-2.0

WEL 21 13:54:26.6±0.4,44°S±2°×17°3E±°,h5^{km},ML3.9/7,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRLZ	**Canterbury Las**	**0.13**	**252**	P	Pg	13 54 29.9	+0.7
CRLZ				S	Sg	13 54 32.3	+1.3
MQZ	**McQueen's Vall**	**0.20**	**210**	P	Pg	13 54 31.1	+0.5
MQZ				S	Sg	13 54 34.0	+0.8
OKCZ	**Okains Bay**	**0.27**	**134**	P	Pg	13 54 32.5	+0.6
OKCZ				S	Sg	13 54 36.9	+1.4
EYCZ	**Eyrewell**	**0.34**	**289**	P	Pg	13 54 33.7	+0.5
AKCZ	**Akaroa Harbour**	**0.35**	**166**	P	Pg	13 54 34.0	+0.6
AKCZ				S	Sg	13 54 39.2	+1.1
AMCZ	**Amberley**	**0.37**	**344**	P	Pg	13 54 34.3	+0.5
RACZ	**Rakaia**	**0.51**	**248**	P	Pg	13 54 37.3	+0.8
OXZ	**Oxford**	**0.59**	**290**	P	Pg	13 54 38.1	+0.2
LTZ	**Lake Taylor**	**0.84**	**333**	P	Pg	13 54 42.8	0.0
KHZ	**Kahutara**	**1.25**	**26**	P	Pg	13 54 48.0	-2.5
RPZ	**Rata Peaks**	**1.27**	**261**	P	Pg	13 54 49.2	-1.9
INZ	**Inchbonnie**	**1.28**	**309**	P	Pg	13 54 50.3	-0.8
INZ				P	Pn	13 54 50.8	-0.3
WVZ	**Waitaha Valley**	**1.57**	**286**	P	Pn	13 54 53.8	-1.4
THZ	**Tophouse**	**1.77**	**3**	P	Pn	13 54 55.7	-2.3
DSZ	**Denniston Nort**	**1.93**	**337**	P	Pn	13 54 58.6	-1.5
BSWZ	**Blackbirch Sta**	**1.99**	**24**	P	Pn	13 54 58.9	-2.0
LBZ	**Lake Benmore**	**2.07**	**245**	P	Pn	13 55 00.8	-1.2
ODZ	**Otahua Downs**	**2.16**	**225**	P	Pn	13 55 01.4	-1.8
FOZ	**Fox Glacier**	**2.17**	**269**	P	Pn	13 55 03.2	-0.1
TUWZ	**Tuamarina**	**2.27**	**22**	P	Pn	13 55 02.7	-2.1
NNZ	**Nelson**	**2.36**	**11**	P	Pn	13 55 04.1	-1.8
TCW	**Tory Channel**	**2.57**	**26**	P	Pn	13 55 06.4	-2.5
QRZ	**Quartz Range**	**2.71**	**356**	P	Pn	13 55 09.2	-1.7
DUWZ	**D'Urville Isla**	**2.86**	**17**	P	Pn	13 55 14.1	+1.2
JCZ	**Jackson Bay**	**2.95**	**258**	P	Pn	13 55 13.5	-0.7
CAW	**Cannon Point**	**2.95**	**36**	P	Pn	13 55 11.4	-2.8
WKZ	**Wanaka**	**3.01**	**243**	P	Pn	13 55 13.0	-2.0
EAZ	**Earnscleugh**	**3.02**	**235**	P	Pn	13 55 13.5	-1.6
TRWZ	**Traveller**	**3.02**	**46**	P	Pn	13 55 12.4	-2.7
OGWZ	**Otaki Gorge**	**3.24**	**34**	P	Pn	13 55 15.2	-2.9
TUZ	**Tuapeka**	**3.31**	**222**	P	Pn	13 55 17.6	-1.4
HOWZ	**Holdsworth Sta**	**3.32**	**38**	P	Pn	13 55 16.1	-3.2
MRZ	**Mangatainoka R**	**3.54**	**37**	P	Pn	13 55 18.7	-3.5
TIWZ	**Tintock**	**3.59**	**41**	P	Pn	13 55 22.8	-0.2
MSZ	**Milford Sound**	**3.69**	**250**	P	Pn	13 55 23.2	-1.0
PRWZ	**Pori Road**	**3.80**	**40**	P	Pn	13 55 23.3	-2.6
MLZ	**Mavora Lakes**	**3.81**	**240**	P	Pn	13 55 24.4	-1.7
BFZ	**Birch Farm**	**3.84**	**43**	P	Pn	13 55 22.4	-4.0
SYZ	**Scrubby Hill**	**3.96**	**220**	P	Pn	13 55 26.9	-1.1
TSZ	**Takapari Road**	**4.20**	**35**	P	Pn	13 55 28.3	-3.1
KHEZ	**Kahui Hut**	**4.33**	**13**	P	Pn	13 55 33.4	+0.1
NBEZ	**Newall Road No**	**4.34**	**11**	P	Pn	13 55 33.3	0.0
PKE	**Pukeiti**	**4.43**	**12**	P	Pn	13 55 34.1	-0.4
PKVZ	**Pokaka**	**4.66**	**25**	P	Pn	13 55 36.3	-1.4
TRVZ	**Turoa**	**4.71**	**27**	P	Pn	13 55 37.2	-1.4
FWVZ	**Far West T-bar**	**4.75**	**27**	P	Pn	13 55 38.2	-0.9
TUVZ	**Tukino**	**4.78**	**28**	P	Pn	13 55 37.8	-1.6

ISCJB ***21*** *14:00:12.6±0.5,33°.82N±0°.03×73°.12E±0°.07,h22^{km}, mb3.7/12,Error ellipse: s-maj=8.8km s-min=3.2km az=153.8*

NDI ***21*** *14:00:14.1±2.0,34°.18N×72°.84E,h30^{km},ML3.8*

IDC ***21*** *14:00:19.2±4.1,33°.99N×73°.23E,h60^{km}±35^{km},mb3.4/11, mb1 3.7/16,mb1mx3.5/54,mbtmp3.8/16,ML3.8/5,MS2.8/1, Ms1 2.8/1,ms1mx2.3/45,Error ellipse: s-maj=23.8km s-min=16.6km az=32.0*

NNC ***21*** *14:00:20.7±2.9,33°.99N×73°.03E,h73^{km}±31^{km},mb4.0, mpv4.4,Error ellipse: s-maj=33.9km s-min=20.8km az=88.0*

ISC 21 14:00:14.9±0.6,33°.86N±0°.05×73°.14E±0°.07,h22^{km},n53, σ2^{s}07/64,mb3.7/12,8C-5D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHRM	**DHARAMSHALA**	**3.10**	**120**	*e*P	**Pb**	**14 01 06.8**	**-2.6**
DHRM				*e*S	**Sb**	**14 01 45.7**	**-1.1**
DHRM				IAML		14 01 57.9	
	comp=N,285nm,0.2s						
DHRM				IAML		14 01 58.9	
	comp=E,437nm,0.2s						
SMLA	**Simla**	**4.36**	**128**	*e*P	**Pn**	**14 01 22.9**	**+3.2**
SMLA				*e*S	**Sn**	**14 02 15.2**	**+5.4**
SMLA				IAML		14 02 32.6	
	comp=E,281nm,0.3s						
SMLA				IAML		14 02 33.2	
	comp=N,162nm,0.2s						
DDI	**Dehra Dun**	**5.46**	**129**	*e*P	**Pn**	**14 01 39.3**	**+4.3**
DDI				*e*S	**Sn**	**14 02 39.8**	**+2.6**
DDI				IAML		14 03 14.7	
	comp=N,145nm,0.1s						
DDI				IAML		14 03 14.9	
	comp=E,143nm,0.3s						
SFK	**Sufi-Kurgan**	**6.15**	**3**	⇓P	**Pn**	**14 01 49.0**	**+4.4**
	comp=E,20nm,0.4s						
SFK				⇑S	**Sn**	**14 02 58.4**	**+4.0**
	comp=E,19nm,0.3s						
KHET	**Khetri**	**6.20**	**158**	*e*x	**Pn**	**14 01 45.7**	**+0.5**
KHET				*e*S	**Sn**	**14 02 55.9**	**+0.5**
NDI	**New Delhi**	**6.22**	**145**	*e*P	**Pn**	**14 01 50.0**	**+4.5**
NDI				*e*x	x	14 03 28.0	
JOSI	**Joshimath**	**6.36**	**119**	*e*P	**Pn**	**14 01 49.6**	**+2.1**
JOSI				*e*S	**Sn**	**14 03 00.5**	**+1.1**
JOSI				IAML		14 03 45.1	
	comp=N,85nm,0.6s						
JOSI				IAML		14 03 50.8	
	comp=E,82nm,0.5s						
KALG	**Kalgarh**	**6.46**	**131**	*e*S	**Sn**	**14 03 03.5**	**+1.9**
SONA	**Sohna**	**6.53**	**148**	*e*S	**Sn**	**14 03 05.4**	**+2.0**
AML	**Almayashu**	**8.27**	**3**	P	**Pn**	**14 02 16.9**	**+3.0**
	SNR=26						
KZA	**Kyzart**	**8.38**	**11**	P	**Pn**	**14 02 17.8**	**+2.4**
	SNR=14						
UCH	**Uchtor**	**8.43**	**7**	P	**Pn**	**14 02 18.3**	**+2.2**
	SNR=33						
MNAS	**Manas**	**8.63**	**357**	⇑P	**Pn**	**14 02 20.5**	**+1.9**
	comp=E,10nm,0.6s						
MNAS				⇑S	**Sn**	**14 03 54.7**	**-0.7**
	comp=E,5.7nm,0.4s						
EKS2	**Erkin-Say**	**8.81**	**3**	P	**Pn**	**14 02 24.2**	**+3.2**
	SNR=14						
AAK	**Ala-Archa**	**8.83**	**7**	P	**Pn**	**14 02 23.9**	**+2.5**
	SNR=15						
AAK	**Ala-Archa**	**8.83**	**7**	⇑P	**Pn**	**14 02 24.8**	**+3.5**
	comp=E,4.4nm,0.4s						
AAK				⇑S	**Sn**	**14 04 00.4**	**+0.2**
	comp=E,9.1nm,1.0s						
AAK	**Ala-Archa**	**8.83**	**7**	P	**Pn**	**14 02 22.4**	**+1.0**
	comp=E,2.8nm,0.3s,baz=156,slow=6.1,SNR=32						
AAK				S	**Sn**	**14 03 59.7**	**-0.6**
	comp=E,0.6nm,0.3s,baz=315,slow=10.0,SNR=2.8						
AAK				LR	LR	14 06 03.4	
	comp=E,66nm,19.7s,baz=222,slow=40						
KBK	**Karagaybulak**	**8.90**	**9**	P	**Pn**	**14 02 24.8**	**+2.5**
	SNR=6.5						
TKM2	**Tokmak 2**	**9.25**	**11**	P	**Pn**	**14 02 29.5**	**+2.3**
	SNR=14						
TKM2	**Tokmak 2**	**9.25**	**11**	⇓P	**Pn**	**14 02 29.5**	**+2.3**
TKM2				⇓S	**Sn**	**14 04 12.4**	**+1.7**
	comp=E,8.4nm,0.7s						
USP	**Ospenovka**	**9.46**	**6**	P	**Pn**	**14 02 32.9**	**+3.1**
	SNR=5.6						
KK31	**Karatay Array**	**9.46**	**348**	P	**Pn**	**14 02 31.1**	**+1.3**
	comp=E,8.9nm,0.5s,baz=167,slow=12,SNR=62						
KK31				⇓S	**Sn**	**14 04 14.5**	**-1.0**
	comp=E,1.4nm,0.3s,baz=144,slow=21,SNR=4.8						
PYUN	**Piuthan**	**10.21**	**122**	*e*P	**Pn**	**14 02 40.3**	**-0.1**
	comp=E,16nm,0.3s						
DANN	**Dangsing**	**10.62**	**118**	*e*P	**Pn**	**14 02 45.9**	**-0.2**
	comp=E,23nm,0.6s						
PDGK	**Podgornoye**	**10.68**	**26**	⇑P	**Pn**	**14 02 48.0**	**+1.3**
	comp=E,5.3nm,0.6s						
KOLN	**Koldanda**	**10.84**	**121**	*e*P	**Pn**	**14 02 49.1**	**+0.1**
	comp=E,7.4nm,0.3s						
BHPL	**Bhopal**	**11.22**	**159**	*e*S	**Sn**	**14 04 56.9**	**-2.0**
DMN	**Daman**	**12.03**	**118**	*e*P	**Pn**	**14 03 04.2**	**-1.0**
	comp=E,5.5nm,0.2s						
PKIN	**Phulchoki**	**12.26**	**117**	*e*P	**Pn**	**14 03 06.8**	**-1.6**
	comp=E,18nm,0.5s						
PKI	**Pulchoki**	**12.27**	**117**	*e*P	**Pn**	**14 03 07.2**	**-1.4**
	comp=E,16nm,0.4s						
GUN	**Gumba**	**12.44**	**115**	*e*P	**Pn**	**14 03 09.8**	**-1.2**
	comp=E,7.8nm,0.3s						
JIRN	**Jiri**	**12.80**	**115**	*e*P	**Pn**	**14 03 14.2**	**-1.8**
	comp=E,28nm,0.4s						
MK31	**Makanchi Array**	**14.67**	**26**	⇑P	**Pn**	**14 03 42.4**	**+1.3**
	comp=E,1.1nm,0.7s,baz=201,slow=14,SNR=11						
MKAR	**Makanchi Array**	**14.67**	**26**	P	**Pn**	**14 03 40.5**	**-0.5**
	comp=E,0.1nm,0.3s,baz=205,slow=14,SNR=8.7						
KURBB	**Kurchatov Arra**	**17.22**	**12**	P	**Pn**	**14 04 12.0**	**-1.8**
	comp=E,0.1nm,0.3s,baz=200,slow=11,SNR=6.0						
AB31	**Akbulak array**	**18.24**	**331**	⇓P	**P**	**14 04 26.5**	**0.0**
	comp=E,1.4nm,0.5s,baz=149,slow=13,SNR=36						
BVA0	**Borovoye Array**	**19.26**	**355**	P	**P**	**14 04 37.9**	**+0.1**
	comp=E,5.7nm,0.8s,baz=162,slow=14,SNR=22						
BVAR	**Borovoye Array**	**19.26**	**355**	P	**P**	**14 04 36.9**	**-0.9**
	comp=E,0.8nm,0.3s,baz=168,slow=9.9,SNR=24						
AKTO	**Aktyubinsk**	**19.94**	**331**	⇑P	**P**	**14 04 45.0**	**-0.2**
	comp=E,6.2nm,0.7s						
AKTO	**Aktyubinsk**	**19.94**	**331**	P	**P**	**14 04 45.2**	**0.0**
	comp=E,0.7nm,0.3s,baz=135,slow=11,SNR=13						
ZALV	**Zalesovo Beam**	**21.72**	**19**	P	**P**	**14 05 04.0**	**-0.4**
	comp=E,3.8nm,0.4s,baz=216,slow=11,SNR=20						
CMAR	**Chiang Mai Arr**	**27.67**	**117**	P	**P**	**14 06 01.9**	**+0.5**
	comp=E,0.4nm,0.3s,baz=299,slow=9.8,SNR=6.1						
SONM	**Songino Array**	**28.52**	**51**	P	**P**	**14 06 07.9**	**-1.0**
	comp=E,0.3nm,0.7s,baz=269,slow=5.8,SNR=2.3						
BRTR	**Keskin Array B**	**31.98**	**292**	P	**P**	**14 06 41.2**	**+1.6**
	comp=E,1.0nm,0.8s,baz=98,slow=8.9,SNR=5.0						
ARCES	**ARCESS Array B**	**44.25**	**338**	P	**P**	**14 08 21.7**	**-0.5**
	comp=E,2.5nm,0.8s,baz=112,slow=9.8,SNR=3.5						
NB2	**NORSAR Subarra**	**47.55**	**324**	P	**P**	**14 08 47.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**47.55**	**324**	P	**P**	**14 08 47.6**	**-0.8**
	comp=Z,11nm,0.3s,baz=96,slow=7.6,SNR=4.8						
TORD	**Torodi Ar. Bea**	**67.46**	**271**	P	**P**	**14 11 08.7**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=52,slow=5.7,SNR=2.8						
INK	**Inuvik**	**76.22**	**10**	P	**P**	**14 12 00.2**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=323,slow=4.4,SNR=8.1						
ILAR	**Eielson Array**	**76.83**	**16**	P	**P**	**14 12 03.2**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=292,slow=4.8,SNR=4.0						
WRA	**Warramunga Arr**	**79.10**	**123**	P	**P**	**14 12 17.9**	**0.0**
	comp=Z,0.2nm,0.5s,baz=323,slow=5.0,SNR=6.8						
ASAR	**Alice Springs**	**81.30**	**126**	P	**P**	**14 12 29.1**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=310,slow=5.3,SNR=5.1						
YKA	**Yellowknife Ar**	**83.78**	**4**	P	**P**	**14 12 40.5**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=347,slow=5.2,SNR=10						

IDC 21 14:02:20.1±999.0,53°.54N×46°.67E,h0^{km},Error ellipse: s-maj=696.8km s-min=156.7km az=103.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**7.69**	**109**	*i*		14 48 50.0	
	baz=299,slow=322,SNR=4.4						
I46RU	**ZALESOVO INFRA**	**22.39**	**73**	*i*		16 20 20.0	
	baz=286,slow=318,SNR=1.1						
I34MN	**SONGINO INFRAS**	**37.31**	**74**	*i*		17 50 20.0	
	baz=301,slow=343,SNR=0.2						

NIED ***21*** *14:05:00,29°.40N×142°.90E,h5^{km},Mw5.3 Best double couple: M$_0$1.07000×10^{17} NP1:φ$_s$188.00000°,δ25.00000°, λ109.00000°. NP2:φ$_s$347.00000°,δ66.00000°,λ81.00000°.*

JMA ***21*** *14:05:52.8±0.1,29°.42N×142°.86E,h31^{km},M5.3*

ISCJB ***21*** *14:05:53.4±0.7,29°.36N±0°.02×142°.21E±0°.02,h6^{km}±4^{km}, mb5.1/201,MS5.0/57,Error ellipse: s-maj=3.3km s-min=3.1km az=155.9*

BJI ***21*** *14:05:53.6,29°.33N×142°.32E,h21^{km},mB5.2/62,mb5.0/80, Ms5.1/88,Ms7 4.9/84*

MOS ***21*** *14:05:55.4±1.1,29°.31N×142°.25E,h24^{km},mb5.4/77, MS5.1/23,Error ellipse: s-maj=7.6km s-min=4.2km az=114.7*

NEIC ***21*** *14:05:55.9±0.7,29°.27N×142°.28E,h14^{km}±4^{km},mb5.2/109, Error ellipse: s-maj=3.9km s-min=3.2km az=150.0*

IDC ***21*** *14:05:56.5±1.8,29°.24N×142°.35E,h22^{km}±10^{km},mb4.6/30, mb1 4.7/35,mb1mx4.7/43,mbtmp4.7/35,ML3.9/5,MS4.8/29, Ms1 4.8/29,ms1mx4.6/45,Error ellipse: s-maj=11.9km s-min=8.5km az=83.0*

GCMT ***21*** *14:05:56.9±0.1,29°.27N±0°.01×142°.47E±0°.01,h12^{km}, MW5.3/118,Moment Tensor Solution. s79,c134; s118,c214; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.84±.01; M$_{\theta\theta}$0.12±.01; M$_{\phi\phi}$-0.95±.01; M$_{r\theta}$0.13±.04; M$_{\theta\phi}$0.01±.01; M$_{\phi r}$0.38±.03; Best double couple: M$_0$0.98300×10^{17} NP1:φ$_s$8.00000°,δ57.00000°, λ100.00000°. NP2:φ$_s$170.00000°,δ34.00000°,λ75.00000°. Principal axes: T 0.9350, Plg76.0000°, Azm309.0000°; N 0.0950, Plg9.0000°, Azm183.0000°; P -1.0310, Plg11.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 14:05:56.5±0.6,29°.37N±0°.03×142°.39E±0°.04,h20^{km}±2^{km}, n509,σ1^{s}74/572,mb5.2/218,MS5.0/60,23C-14D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.27**	**185**	Pn	**Pn**	**14 06 31.6**	**-1.3**
CBIJ				Sn	**Sn**	**14 06 57.8**	**-2.6**
CBIJ	**Chichi jima**	**2.27**	**185**	P	**Pn**	**14 06 31.2**	**-1.7**
CBIJ				*e*S	**Sn**	**14 06 59.6**	**-0.8**
JCJ	**Chichijima**	**2.27**	**185**	Pn	**Pn**	**14 06 31.6**	**-1.3**
	35nm,0.3s,baz=80,slow=23,SNR=21						
JCJ				Sn	**Sn**	**14 06 57.8**	**-2.6**
	117nm,0.3s,baz=292,slow=19,SNR=10						
JHHJ	**Haha-jima-NKT**	**2.74**	**184**	P	**Pn**	**14 06 38.0**	**-1.3**
JHCJ	**Hachijojimakas**	**4.30**	**330**	P	**Pn**	**14 07 01.2**	**+0.3**
JHJ2	**Mitsune**	**4.33**	**330**	*e*Pn	**Pn**	**14 07 01.1**	**-0.1**
JHJ2	**Mitsune**	**4.33**	**330**	P	**Pn**	**14 07 01.4**	**+0.2**
JHJ2				*e*S	**Sn**	**14 07 50.7**	**-0.4**
JHJ	**Hachijo jima 2**	**4.35**	**330**	Pn	**Pn**	**14 07 00.6**	**-0.9**
	38nm,0.3s,baz=148,slow=24,SNR=6.4						
JHJ				Sn	**Sn**	**14 07 50.1**	**-1.5**
	130nm,0.3s,baz=269,slow=24,SNR=6.3						
JHJ				LR	LR	14 08 47.0	
	comp=Z,12μm,19.7s,baz=182,slow=38						
BSO1	**Boso 1**	**5.40**	**348**	P	**Pn**	**14 07 14.5**	**-0.9**
BSO1				S	**Sn**	**14 08 16.2**	**-0.5**
BSO3	**Boso 3**	**5.64**	**344**	P	**Pn**	**14 07 19.2**	**+0.2**
BSO4	**Boso 4**	**5.87**	**343**	P	**Pn**	**14 07 22.7**	**+0.5**
JOD2	**Odawara 2**	**6.50**	**335**	P	**Pn**	**14 07 30.8**	**-0.3**
JHMK	**Hamakita**	**6.70**	**325**	P	**Pn**	**14 07 35.0**	**+1.4**
HMMJ	**Hamamatsu 2**	**6.75**	**325**	P	**Pn**	**14 07 35.8**	**+1.4**
JIE	**Ise**	**6.96**	**317**	P	**Pn**	**14 07 38.6**	**+1.3**
JHU	**Hanno**	**6.97**	**339**	P	**Pn**	**14 07 37.0**	**-0.5**
JYT	**Yasato**	**7.08**	**345**	P	**Pn**	**14 07 38.2**	**-0.8**
JNY	**Yasuok**	**7.09**	**329**	P	**Pn**	**14 07 40.4**	**+1.2**
JKN2	**Miekihoku**	**7.11**	**315**	P	**Pn**	**14 07 41.7**	**+2.3**
JRY	**Ryogami san**	**7.25**	**337**	P	**Pn**	**14 07 41.4**	**+0.1**
JRY				*e*S	**Sn**	**14 09 02.4**	**-0.7**
JAO	**Obara**	**7.31**	**325**	P	**Pn**	**14 07 43.1**	**+1.0**
JHO	**Hitachi**	**7.38**	**349**	P	**Pn**	**14 07 41.2**	**-1.9**
JAG	**Ashikaga**	**7.45**	**341**	P	**Pn**	**14 07 43.0**	**-1.1**
INU	**Inuyama**	**7.49**	**324**	*e*Pn	**Pn**	**14 07 45.5**	**+0.9**
MJAR	**Matsushiro Arr**	**7.96**	**335**	Pn	**Pn**	**14 07 51.0**	**-0.1**
	2.5nm,0.3s,baz=159,slow=10,SNR=279						
MJAR				Sn	**Sn**	**14 09 18.6**	**-2.0**
	1.2nm,0.3s,baz=156,slow=24,SNR=3.7						
MJAR				LR	LR	14 10 46.4	
	comp=Z,5μm,18.9s,baz=155,slow=36						
MAJO	**Matsushiro**	**7.97**	**335**	*e*Pn	**Pn**	**14 07 51.3**	**+0.1**
MAJO	**Matsushiro**	**7.97**	**335**	*d* *i*P	**Pn**	**14 07 51.6**	**+0.4**
MAT	**Matsushiro**	**7.97**	**335**	P	**Pn**	**14 07 51.2**	**0.0**
MAT				S	**Sn**	**14 09 20.2**	**-0.5**
MJB9	**Matsu-Tunnel**	**7.97**	**335**	*e*Pn	**Pn**	**14 07 51.3**	**+0.1**
JFK	**Kawauchi**	**8.07**	**351**	P	**Pn**	**14 07 50.5**	**-2.1**
JFY	**Yanaizu**	**8.32**	**345**	P	**Pn**	**14 07 55.0**	**-1.0**
JFY				S	**Sn**	**14 09 23.6**	**-5.9**
JMM	**Marumori**	**8.58**	**352**	S	**Sn**	**14 09 27.9**	**-7.8**
JIO	**Ouri**	**9.10**	**355**	S	Sn	14 09 38.4	-10
JMK	**Ichinoseki**	**9.61**	**355**	P	**Pn**	**14 08 11.0**	**-2.6**
JNU	**Nakatsue**	**10.54**	**294**	*e*Pn	**Pn**	**14 08 30.5**	**+4.1**
JNU	**Nakatsue**	**10.54**	**294**	Pn	**Pn**	**14 08 26.8**	**+0.3**
	0.4nm,0.3s,baz=116,slow=5.8,SNR=6.9						
JNU				LR	LR	14 12 16.8	
	comp=Z,5μm,19.1s,baz=114,slow=36						
TJN	**Taejon**	**14.42**	**303**	⇓*e*P	**Pn**	**14 09 20.9**	**+1.4**
KSRS	**Korea Array**	**14.51**	**308**	Pn	**Pn**	**14 09 22.2**	**+1.5**
	1.3nm,0.3s,baz=115,slow=12,SNR=26						
KSRS				LR	LR	14 14 51.9	
	comp=Z,3μm,18.6s,baz=122,slow=37						
KS15	**Wonju Array Si**	**14.53**	**307**	*e*Pn	**Pn**	**14 09 23.4**	**+2.4**
KSAR	**Wonju Array Be**	**14.53**	**307**	Pn	**Pn**	**14 09 22.2**	**+1.2**
KSAR	**Wonju Array Be**	**14.53**	**307**	P	**Pn**	**14 09 22.2**	**+1.2**
KS01	**Wonju Array Si**	**14.54**	**308**	*e*Pn	**Pn**	**14 09 22.0**	**+0.9**
ASAJ	**Asahikawa**	**14.72**	**1**	Pn	**Pn**	**14 09 20.3**	**-3.2**
	1.4nm,0.3s,baz=218,slow=13,SNR=18						
ASAJ				LR	LR	14 16 41.4	
	comp=Z,3μm,20.7s,baz=191,slow=43						
GRPR	**Tuman**	**14.84**	**10**	*e*P	Pn	14 09 20.2	-4.9
GRPR				pmax	pmax		
	comp=Z,102nm,0.4s						
GRPR				pmax	pmax		
	comp=N,41nm,0.1s						
GRPR				pmax	pmax		
	comp=E,49nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**14.90**	**10**	*e*P	Pn	14 09 20.7	-5.2
YUK				pmax	pmax		
	comp=Z,66nm,0.7s						
YUK				pmax	pmax		
	comp=N,14nm,0.6s						
YUK				pmax	pmax		
	comp=E,29nm,0.8s						
LAGR	**Lagunnoye**	**14.90**	**10**	P	Pn	14 09 20.9	-5.1
LAGR				pmax	pmax		
	comp=Z,149nm,0.4s						
LAGR				pmax	pmax		
	comp=N,31nm,0.3s						
LAGR				MLR	MLR		
	comp=Z,8μm,14.0s						
LAGR				MLR	MLR		
	comp=E,4μm,10.0s						
LAGR				MLR	MLR		
	comp=N,3μm,12.0s						
MSHR	**Mys Shultsa**	**15.99**	**329**	*d* *i*P	**Pn**	**14 09 39.2**	**-1.0**
VLA	**Vladivostok**	**16.11**	**331**	*i* P	**Pn**	**14 09 41.6**	**-0.1**
VLA				pmax	pmax		
	comp=Z,79nm,1.0s						
TEY	**Ternei**	**16.29**	**345**	⇓*e*P	**P**	**14 09 45.7**	**-1.2**
TEY				pmax	pmax		
	comp=Z,10.0nm,2.1s						
KUR	**Kuril'sk**	**16.42**	**14**	P	**Pn**	**14 09 39.5**	**-6.1**
KUR				pmax	pmax		
	comp=Z,35nm,1.0s						
KUR				pmax	pmax		
	comp=N,20nm,0.5s						
KUR				pmax	pmax		
	comp=E,16nm,0.3s						
KUR				MLR	MLR		
	comp=Z,2μm,11.0s						
KUR				MLR	MLR		
	comp=N,2μm,10.0s						
USRK	**Ussuriysk Ar.**	**16.96**	**334**	P	**Pn**	**14 09 51.7**	**-0.9**
	comp=N,0.3nm,0.3s,baz=148,slow=13,SNR=12						
YSS	**Yuzh-Sakhalins**	**17.56**	**1**	*e*Pn	**Pn**	**14 09 58.2**	**-1.7**
	comp=N,250nm,1.3s						
YSS	**Yuzh-Sakhalins**	**17.56**	**1**	*e*P	**Pn**	**14 09 57.8**	**-2.1**
YSS				*e*S	**Sn**	**14 13 11.4**	**-3.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,2μm,15.0s						
YSS				MLR	MLR		
	comp=N,3μm,14.0s						
MDJ	**Mudanjiang**	**18.29**	**330**	P	**Pn**	**14 10 08.3**	**-0.7**
MDJ				S	**Sn**	**14 13 27.3**	**-5.4**
MDJ				pmax	pmax		
	comp=N,10.0nm,1.2s						
MDJ				pmax	pmax		
	comp=N,1μm,5.9s						
MDJ				LR	LR		
	comp=N,1μm,12.7s						
MDJ				LR	LR		
	comp=N,5μm,15.9s						
MDJ				LR	LR		
	comp=N,5μm,18.1s						
SSE	**Sheshan**	**18.40**	**281**	P	**P**	**14 10 09.9**	**-0.4**
SSE				S	**Sn**	**14 13 34.3**	**-1.2**
SSE				pmax	pmax		
	comp=N,15nm,1.2s						
SSE				pmax	pmax		
	comp=N,490nm,11.9s						
SSE				LR	LR		
	comp=N,1μm,16.2s						
SSE				LR	LR		
	comp=N,760nm,19.2s						
TATO	**Taipei**	**19.10**	**262**	*e*P	**P**	**14 10 15.8**	**-2.3**
	comp=N,527nm,1.1s						
NACB	**Ninganchiao**	**19.27**	**259**	*e*P	**Pn**	**14 10 21.0**	**0.0**
	comp=N,100nm,1.1s						
YHNB	**Yeheng**	**19.29**	**261**	*e*P	**Pn**	**14 10 20.7**	**-0.6**
	comp=N,266nm,1.3s						
DL2	**Dalian**	**19.60**	**304**	⇓*i*P	**Pn**	**14 10 23.9**	**-1.0**
DL2				pmax	pmax		
	comp=N,50nm,1.0s						
DL2				pmax	pmax		
	comp=N,340nm,5.5s						
DL2				LR	LR		
	comp=N,3μm,16.4s						
DL2				LR	LR		

	comp=N,4µm,16.1s						
DL2				LR	LR		
	comp=N,5µm,16.6s						
SNY	**Shenyang**	**19.66**	**314**	⇓P	**P**	**14 10 22.8**	**-1.2**
SNY				S	**S**	**14 14 04.9**	**0.0**
SNY				pmax	pmax		
	comp=N,20nm,1.4s						
SNY				LR	LR		
	comp=N,3µm,16.0s						
SNY				LR	LR		
	comp=N,2µm,14.9s						
SNY				LR	LR		
	comp=N,3µm,13.5s						
CN2	**Changchun**	**19.75**	**321**	⇓*i*P	**P**	**14 10 25.1**	**0.0**
CN2				*e*pP	sP	14 10 30.3	-0.3
CN2				*e*S	**S**	**14 14 01.3**	**-5.6**
CN2				pmax	pmax		
	comp=N,60nm,1.1s						
CN2				pmax	pmax		
	comp=N,200nm,6.0s						
CN2				LR	LR		
	comp=N,5µm,15.0s						
CN2				LR	LR		
	comp=N,4µm,15.0s						
CN2				LR	LR		
	comp=N,4µm,17.0s						
YULB	**Yu-li**	**19.80**	**257**	*e*P	**P**	**14 10 26.0**	**+0.2**
	comp=N,175nm,1.1s						
SSLB	**Suanglung**	**19.95**	**259**	*e*P	**Pn**	**14 10 28.8**	**-0.4**
	comp=N,452nm,1.4s						
NJ2	**Nanjing**	**20.40**	**283**	⇑*i*P	**P**	**14 10 31.3**	**-0.9**
NJ2				pP	**sP**	**14 10 35.9**	**-1.7**
NJ2				S	**S**	**14 14 19.3**	**-0.6**
NJ2				SS	**SnSn**	**14 14 41.0**	**+2.6**
NJ2				pmax	pmax		
	comp=N,39nm,1.3s						
NJ2				LR	LR		
	comp=N,2µm,11.9s						
NJ2				LR	LR		
	comp=N,3µm,17.3s						
NJ2				LR	LR		
	comp=N,3µm,17.3s						
TPUB	**Ta-pu**	**20.40**	**258**	*e*P	**P**	**14 10 32.7**	**+0.4**
	comp=N,314nm,1.3s						
KLR	**Kul'dur**	**21.43**	**341**	P	**P**	**14 10 43.1**	**-0.1**
	comp=N,15nm,0.9s,baz=157,slow=7.1,SNR=40						
TYV	**Tymovskoe**	**21.47**	**0**	*e*P	**P**	**14 10 45.6**	**+2.0**
TYV				*e*S	Sn	14 14 45.9	-3.2
TYV				pmax	pmax		
	comp=Z,200nm,4.0s						
TYV				pmax	pmax		
	comp=Z,14nm,1.6s						
TYV				smax	smax		
	comp=N,1µm,7.8s						
QZH	**Quanzhou**	**21.61**	**264**	P	**P**	**14 10 47.8**	**+2.4**
QZH				S	**S**	**14 14 42.4**	**-1.6**
QZH				pmax	pmax		
	comp=N,65nm,1.5s						
QZH				LR	LR		
	comp=N,940nm,10.9s						
QZH				LR	LR		
	comp=N,2µm,17.1s						
QZH				LR	LR		
	comp=N,2µm,19.9s						
GRNR	**Gornyy**	**21.84**	**350**	*e*P	**P**	**14 10 48.7**	**+1.1**
GRNR				pmax	pmax		
	comp=Z,37nm,1.2s						
TIA	**Tai'an**	**22.27**	**294**	P	**P**	**14 10 50.8**	**-1.6**
TIA				S	**S**	**14 14 53.3**	**-3.2**
TIA				pmax	pmax		
	comp=Z,170nm,2.2s						
TIA				LR	LR		
	comp=Z,850nm,14.2s						
TIA				LR	LR		
	comp=Z,950nm,17.1s						
TIA				LR	LR		
	comp=Z,990nm,18.5s						
NKL	**Nikolayevsk**	**23.79**	**357**	*e*P	**P**	**14 11 08.0**	**+0.3**
NKL				*e*S	**S**	**14 15 22.0**	**-0.1**
NKL				pmax	pmax		
	comp=N,220nm,2.7s						
NKL				pmax	pmax		
	comp=Z,610nm,2.7s						
NKL				pmax	pmax		
	comp=N,800nm,7.0s						
NKL				pmax	pmax		
	comp=Z,1µm,7.0s						
NKL				smax	smax		
	comp=N,2µm,9.0s						
NKL				smax	smax		
	comp=E,3µm,9.0s						
H11N2	**WAKE ISLAND Hy**	**24.23**	**108**	T	T	14 36 50.9	
	baz=296,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**24.23**	**108**	T	T	14 36 52.0	
	baz=296,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**24.25**	**108**	T	T	14 36 59.3	
	baz=296,slow=75,SNR=19						
WHN	**Wuhan**	**24.30**	**280**	⇓P	**P**	**14 11 11.3**	**-1.4**
WHN				S	**S**	**14 15 32.5**	**+1.8**
WHN				LR	LR		
	comp=E,5µm,13.0s						
WHN				LR	LR		
	comp=E,2µm,9.9s						
WHN				LR	LR		
	comp=E,4µm,26.5s						
TGY	**Tagaytay City**	**24.99**	**237**	P	**P**	**14 11 18.1**	**-1.0**
	comp=E,431nm,1.0s,baz=319,slow=6.1,SNR=4.7						
TIY	**Taiyuan**	**26.23**	**296**	*e*P	**P**	**14 11 29.6**	**-0.7**
TIY				S	**S**	**14 15 55.6**	**-6.0**
TIY				pmax	pmax		
	comp=E,20nm,0.6s						
TIY				pmax	pmax		
	comp=E,280nm,5.1s						
TIY				LR	LR		
	comp=E,530nm,11.6s						
TIY				LR	LR		
	comp=E,4µm,17.6s						
TIY				LR	LR		
	comp=E,3µm,16.5s						
PETK	**Petropavlovsk-**	**26.25**	**21**	P	**P**	**14 11 29.8**	**-0.4**
	comp=E,4.7nm,1.1s,baz=229,slow=5.5,SNR=2.3						
PETK				LR	LR	14 22 34.4	
	comp=E,1µm,20.4s,baz=214,slow=38						
PET	**Petropavlovsk**	**26.49**	**22**	*e*P	**P**	**14 11 35.2**	**+2.9**
PET				*e*S	**S**	**14 16 02.9**	**-2.2**
PET						14 17 15.7	
PET				MLR	MLR		
	comp=Z,3µm,18.0s						
PET				MLR	MLR		
	comp=Z,3µm,15.0s						
ZEA	**Zeya**	**26.74**	**340**	*e*P	**P**	**14 11 34.4**	**-0.1**
ZEA				*e*		14 12 38.0	
ZEA				*e*S	**S**	**14 16 10.0**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,600nm,10.0s						
ZEA				pmax	pmax		
	comp=N,400nm,6.0s						
ZEA				pmax	pmax		
	comp=N,83nm,1.0s						
ZEA				pmax	pmax		
	comp=E,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,150nm,1.0s						
ZEA				smax	smax		
	comp=E,1µm,7.0s						
ZEA				smax	smax		
	comp=N,600nm,9.0s						
HHC	**Hu-ho-hao-te**	**27.55**	**303**	*e*P	**P**	**14 11 42.0**	**-0.2**
HHC				S	**S**	**14 16 20.5**	**-2.0**
HHC				SS	**SnSn**	**14 17 40.0**	**+6.5**
HHC				pmax	pmax		
	comp=N,23nm,1.0s						
HHC				pmax	pmax		
	comp=N,270nm,5.6s						
HHC				LR	LR		
	comp=N,2µm,14.7s						
HHC				LR	LR		
	comp=N,4µm,14.7s						
HHC				LR	LR		
	comp=N,5µm,16.4s						
KCP	**Kidapawan**	**27.58**	**220**	⇓*e*P	**P**	**14 11 41.8**	**-0.7**
BTO	**Baotou**	**28.64**	**302**	*e*P	P	14 11 46.4	-5.4
XAN	**Xi'an**	**28.77**	**288**	P	**P**	**14 11 52.3**	**-0.7**
XAN				pP	sP	14 11 58.0	-0.6
XAN				sP	pwP	14 12 00.9	-3.7
XAN				pmax	pmax		
	comp=N,39nm,1.4s						
XAN				pmax	pmax		
	comp=N,250nm,4.3s						
XAN				LR	LR		
	comp=N,1µm,14.5s						
XAN				LR	LR		
	comp=N,2µm,15.3s						
XAN				LR	LR		
	comp=N,3µm,19.0s						
MA2	**Magadan**	**30.74**	**8**	*ce*P	**P**	**14 12 10.4**	**+0.3**
MA2				pmax	pmax		
	comp=Z,20nm,1.3s						
MA2	**Magadan**	**30.74**	**8**	P	**P**	**14 12 10.1**	**0.0**
	comp=Z,12nm,1.0s,baz=185,slow=6.4,SNR=10						
CIT	**Chita**	**31.11**	**325**	*e*P	**P**	**14 12 13.2**	**-0.3**
CIT				pmax	pmax		
	comp=Z,125nm,1.4s						
QIZ	**Qiongzhong**	**31.32**	**258**	P	**P**	**14 12 13.3**	**-2.4**
QIZ				S	**S**	**14 17 23.3**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,43nm,2.4s						
QIZ				LR	LR		
	comp=Z,1µm,30.4s						
GYA	**Guiyang**	**31.62**	**273**	⇑*i*P	**P**	**14 12 16.6**	**-1.8**
GYA				pP	pwP	14 12 25.6	-4.5
GYA				S	**S**	**14 17 24.8**	**-1.9**
GYA				sS	sS	14 17 35.0	+2.7
GYA				SS	**SnSn**	**14 19 13.3**	**+0.3**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,6.2s						
GYA				LR	LR		
	comp=Z,1µm,15.2s						
GYA				LR	LR		
	comp=Z,1µm,14.3s						
GYA				LR	LR		
	comp=Z,2µm,15.8s						
SIJI	**Sorong**	**31.89**	**201**	LR	LR	14 23 53.2	
	comp=Z,2µm,19.0s,baz=30,slow=34						
ULN	**Ulaanbaatar**	**32.84**	**314**	*e*P	**P**	**14 12 28.9**	**+0.1**
	comp=Z,68nm,1.3s						
ULN	**Ulaanbaatar**	**32.84**	**314**	*ce*P	**P**	**14 12 29.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,76nm,1.7s						
ULN	**Ulaanbaatar**	**32.84**	**314**	P	**P**	**14 12 29.4**	**+0.6**
	SNR=33						
LZH	**Lanzhou**	**32.95**	**292**	*e*P	**P**	**14 12 29.3**	**-0.7**
LZH				pP	sP	14 12 36.6	+0.7
LZH				sP	pwP	14 12 39.8	-1.8
LZH				PP	**PP**	**14 13 40.4**	**-4.1**
LZH				S	**S**	**14 17 47.3**	**0.0**
LZH				sS	sS	14 17 57.0	+3.0
LZH				SS	**SnSn**	**14 19 46.4**	**+1.4**
LZH				pmax	pmax		
	comp=Z,40nm,1.1s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=Z,2µm,13.0s						
LZH				LR	LR		
	comp=Z,3µm,15.7s						
LZH				LR	LR		
	comp=Z,3µm,15.2s						
SONA1	**Songino Array**	**33.24**	**314**	*e*P	**P**	**14 12 32.9**	**+0.5**
SONM	**Songino Array**	**33.24**	**314**	P	**P**	**14 12 32.8**	**+0.5**
	comp=Z,26nm,0.9s,baz=118,slow=8.9,SNR=73						
SONM				PcP	**PcP**	**14 15 15.0**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=95,slow=3.3,SNR=2.8						
SONM				LR	LR	14 26 45.0	
	comp=Z,2µm,19.1s,baz=106,slow=38						
CD2	**Chengdu**	**33.33**	**282**	P	**P**	**14 12 32.4**	**-0.9**
CD2				pP	sP	14 12 38.8	-0.4
CD2				sP	pwP	14 12 41.6	-3.3
CD2				S	**S**	**14 17 51.8**	**-1.3**
CD2				sS	sS	14 18 02.8	+4.0
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,660nm,7.8s						
CD2				LR	LR		
	comp=Z,7µm,14.2s						
CD2				LR	LR		
	comp=Z,4µm,17.2s						
CD2				LR	LR		
	comp=Z,4µm,16.2s						
FAKI	**Fak Fak**	**33.55**	**199**	*e*P	**P**	**14 12 31.7**	**-3.4**
	comp=Z,18nm,0.9s						
YAK	**Yakutsk**	**33.72**	**349**	*e*P	**P**	**14 12 34.4**	**-1.7**
YAK				*e*PPP	PPP	14 13 53.0	
YAK				*e*S	**S**	**14 17 57.2**	**-1.0**
YAK				*e*SS	**SnSn**	**14 19 58.8**	**-4.0**
YAK				*e*		14 22 52.3	
YAK				pmax	pmax		
	comp=Z,195nm,1.3s						
YAK				pmax	pmax		
	comp=N,149nm,1.5s						
YAK				pmax	pmax		
	comp=E,50nm,1.4s						
YAK				smax	smax		
	comp=N,314nm,2.4s						
YAK				smax	smax		
	comp=E,762nm,3.2s						
YAK				MLR	MLR		
	comp=Z,7µm,16.0s						
YAK				MLR	MLR		
	comp=N,6µm,16.0s						
YAK				MLR	MLR		
	comp=E,4µm,15.0s						
KKM	**Kota Kinabalu**	**33.89**	**232**	*e*P	**P**	**14 12 36.8**	**-1.5**
	comp=E,41nm,1.1s						
SEY	**Seymchan**	**34.19**	**8**	P	**P**	**14 12 41.2**	**+0.9**
	comp=E,9.1nm,0.7s,baz=186,slow=6.4,SNR=37						
BOD	**Bodaibo**	**34.60**	**333**	*e*P	**P**	**14 12 43.8**	**0.0**
BOD				pmax	pmax		
	comp=Z,27nm,1.4s						
MRSI	**Marisa**	**34.73**	**218**	P	**P**	**14 12 46.7**	**+1.3**
	comp=Z,48nm,1.0s,comp=Z,609nm						
SANI	**Sanana**	**34.97**	**209**	P	**P**	**14 12 47.5**	**+0.1**
KMI	**Kunming**	**35.38**	**273**	P	**P**	**14 12 50.3**	**-1.0**
KMI				pP	sP	14 12 56.6	-0.7
KMI				sP	pwP	14 12 58.8	-4.2
KMI				PP	**PP**	**14 14 13.0**	**+1.3**
KMI				S	**S**	**14 18 21.0**	**-4.2**
KMI				sS	sS	14 18 33.3	+1.5
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				pmax	pmax		
	comp=Z,240nm,4.4s						
KMI				LR	LR		
	comp=Z,630nm,15.2s						
KMI				LR	LR		
	comp=Z,1µm,18.3s						
KMI				LR	LR		
	comp=Z,1µm,17.3s						
LUWI	**Luwuk**	**35.58**	**215**	*e*P	**P**	**14 12 50.6**	**-2.2**
	comp=Z,51nm,0.9s						
ZAK	**Zakamensk**	**36.05**	**317**	*e*P	**P**	**14 12 56.5**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,60nm,1.4s						
IRK	**Irkutsk**	**36.19**	**320**	*e*P	**P**	**14 12 57.9**	**+0.3**
IRK				pmax	pmax		
	comp=Z,175nm,3.4s						
GTA	**Gaotai**	**36.24**	**298**	⇓P	**P**	**14 12 57.1**	**-1.3**
GTA				pP	sP	14 13 02.1	-2.3
GTA				sP	pwP	14 13 05.6	-4.3
GTA				PcP	**PcP**	**14 15 24.4**	**+1.0**
GTA				S	**S**	**14 18 35.0**	**-2.9**
GTA				sS	sS	14 18 45.9	+1.4
GTA				ScP	**ScP**	**14 19 09.8**	**+1.0**
GTA				ScS	**ScS**	**14 23 13.8**	**-1.0**
GTA				pmax	pmax		
	comp=Z,15nm,1.6s						
GTA				pmax	pmax		
	comp=Z,200nm,6.3s						
GTA				LR	LR		
	comp=Z,1µm,17.8s						
GTA				LR	LR		
	comp=Z,1µm,19.4s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						
TLY	**Talaya**	**36.32**	**319**	*e*P	**P**	**14 13 00.1**	**+1.3**
	comp=Z,97nm,1.3s						
TLY	**Talaya**	**36.32**	**319**	*e*P	**P**	**14 12 59.6**	**+0.8**
TLY				*e*S	**S**	**14 18 37.9**	**-0.7**
TLY				*e*SS	**SnSn**	**14 21 05.2**	**-0.9**
TLY				*e*SSS	SSS	14 21 25.3	
TLY				pmax	pmax		
	comp=Z,246nm,1.5s						
TLY				MLR	MLR		
	comp=Z,9µm,19.0s						
TLY	**Talaya**	**36.32**	**319**	P	**P**	**14 12 60.0**	**+1.2**
	SNR=49						
TLY				P	**P**	**14 12 60.0**	**+1.2**
	SNR=49						
SKNT	**Sakolnakorn**	**37.23**	**259**	P	**P**	**14 13 07.0**	**+0.1**
	comp=Z,32nm,1.0s						
MOY	**Mondy**	**37.85**	**318**	*e*P	**P**	**14 13 12.2**	**+0.3**
MOY				pmax	pmax		
	comp=Z,105nm,1.5s						
CHAI	**Chaiyaphum**	**39.42**	**259**	P	**P**	**14 13 24.7**	**-0.7**
	comp=Z,64nm,0.9s,comp=Z,456nm						
KNGR	**Kungurtug, Tuv**	**39.62**	**315**	⇓*i*P	**P**	**14 13 26.9**	**+0.1**
UTTA	**Uttaradit**	**39.86**	**263**	P	**P**	**14 13 28.3**	**-0.7**
	comp=Z,20nm,1.3s,comp=Z,183nm						
PBKT	**Sadao Pong**	**40.00**	**261**	*e*P	**P**	**14 13 29.7**	**-0.5**
	comp=Z,186nm,1.7s						
PBKT	**Sadao Pong**	**40.00**	**261**	P	**P**	**14 13 29.6**	**-0.5**
	comp=Z,56nm,0.7s						
SRAK	**Srakaew**	**40.26**	**256**	P	**P**	**14 13 28.2**	**-4.1**
	comp=Z,251nm,1.1s,comp=Z,2µm						
LAMP	**Lampang**	**40.34**	**264**	P	**P**	**14 13 33.3**	**+0.3**
	comp=Z,12nm,0.9s,comp=Z,102nm						
SUKH	**Sukhothai**	**40.77**	**263**	P	**P**	**14 13 37.2**	**+0.7**
	comp=Z,4.6nm,0.8s						
CMMT	**Chiang Mai**	**40.82**	**265**	P	**P**	**14 13 35.9**	**-1.1**
	comp=Z,58nm,1.2s,comp=Z,699nm						
CHTO	**Chiang Mai**	**40.82**	**265**	*e*P	**P**	**14 13 35.5**	**-1.5**
	comp=Z,74nm,1.1s						
CHTO	**Chiang Mai**	**40.82**	**265**	*e*P	**P**	**14 13 35.5**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,74nm,1.1s						
CHTO	**Chiang Mai**	**40.82**	**265**	P	**P**	**14 13 36.3**	**-0.7**
	SNR=15						
CHTO				P	**P**	**14 13 36.3**	**-0.7**
	SNR=15						
CHTO	**Chiang Mai**	**40.82**	**265**	P	**P**	**14 13 35.9**	**-1.1**
	comp=Z,255nm,1.2s,comp=Z,3µm						
CM31	**Chiang Mai Arr**	**40.97**	**265**	*e*P	**P**	**14 13 36.7**	**-1.4**
CM31	**Chiang Mai Arr**	**40.97**	**265**	P	**P**	**14 13 38.8**	**+0.6**
	SNR=10						
CMAR	**Chiang Mai Arr**	**40.97**	**265**	P	**P**	**14 13 37.6**	**-0.6**
	comp=Z,9.9nm,0.8s,baz=51,slow=8.0,SNR=64						
CMAR				PcP	**PcP**	**14 15 37.8**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=36,slow=1.7,SNR=2.3						
CMAR				LR	LR	14 32 25.8	
	comp=Z,1µm,19.0s,baz=78,slow=39						
CM01	**Chiang Mai Arr**	**40.97**	**265**	*e*P	**P**	**14 13 37.5**	**-0.6**
BILL	**Bilibino**	**41.21**	**13**	*e*P	**P**	**14 13 40.1**	**+0.6**
	comp=Z,17nm,0.8s						
BILL	**Bilibino**	**41.21**	**13**	⇑*e*P	**P**	**14 13 39.4**	**-0.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
UTHA	**Uthaitani**	**41.76**	**260**	P	**P**	**14 13 44.7**	**0.0**
	comp=Z,12nm,0.8s,comp=Z,111nm						
PATY	**Pattaya**	**41.79**	**256**	P	**P**	**14 13 46.2**	**+1.3**
	comp=Z,4.6nm,0.5s,comp=Z,2µm						
UMPA	**Umpang Tak**	**41.98**	**262**	P	**P**	**14 13 47.6**	**+1.1**
	comp=Z,17nm,1.2s,comp=Z,1µm						
HNR	**Honiara**	**42.13**	**154**	LR	LR	14 30 05.6	
	comp=Z,1µm,21.5s,baz=318,slow=34						
PHET	**Kaeng Krachan**	**42.84**	**257**	P	**P**	**14 13 54.7**	**+1.2**
	comp=Z,14nm,0.8s,comp=Z,147nm						
COEN	**Coen**	**43.08**	**179**	*e*P	**P**	**14 13 56.0**	**+0.7**
	comp=Z,30nm,1.3s						
MTN	**Manton Dam**	**43.35**	**196**	*e*P	**P**	**14 13 56.0**	**-1.4**
	comp=Z,84nm,1.3s						
WMQ	**Urumqi**	**45.42**	**304**	P	**P**	**14 14 13.4**	**-0.6**
WMQ				sP	pwP	14 14 25.3	-0.1
WMQ				S	**S**	**14 20 55.5**	**+1.1**
WMQ				ScS	**ScS**	**14 24 08.8**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,110nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,990nm,3.7s						
WMQ				LR	LR		
	comp=Z,4µm,14.3s						
WMQ				LR	LR		
	comp=Z,2µm,16.5s						
WMQ				LR	LR		
	comp=Z,2µm,18.9s						
TRTT	**Trang**	**45.44**	**251**	P	**P**	**14 14 15.1**	**+0.8**
	comp=Z,11nm,1.5s						
BRDH	**Bariadhala**	**45.80**	**274**	P	**P**	**14 14 17.4**	**+0.4**
	comp=Z,74nm,0.3s,baz=103,slow=19						
DGZ	**Jazzator, Alta**	**45.85**	**312**	*c i*P	**P**	**14 14 18.3**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,64nm,1.2s						
KULM	**Kulim**	**46.11**	**247**	*e*P	**P**	**14 14 19.5**	**-0.1**
	comp=Z,28nm,1.0s						
IPM	**Ipoh**	**46.29**	**246**	*e*P	**P**	**14 14 19.7**	**-1.4**
	comp=Z,23nm,1.0s						
PKDT	**Phuket**	**46.52**	**252**	P	**P**	**14 14 24.4**	**+1.5**
	comp=Z,19nm,1.7s						
ANM	**Nome**	**47.86**	**27**	*e*P	**P**	**14 14 34.4**	**+1.7**
	comp=Z,29nm,1.2s						
ANM	**Nome**	**47.86**	**27**	*e*P	**P**	**14 14 34.4**	**+1.7**
ANM				pmax	pmax		
	comp=Z,29nm,1.2s						
ZAA0	**Zalesovo Array**	**47.91**	**318**	*e*P	**P**	**14 14 33.5**	**+0.3**
	comp=Z,51nm,1.1s						
ZALV	**Zalesovo Beam**	**47.91**	**318**	*e*P	**P**	**14 14 31.9**	**-1.3**
ZALV				PcP	**PcP**	**14 16 00.8**	**-0.6**
ZALV	**Zalesovo Beam**	**47.91**	**318**	P	**P**	**14 14 33.5**	**+0.3**
	comp=Z,19nm,0.6s,baz=99,slow=7.3,SNR=63						
ZALV				PcP	**PcP**	**14 16 00.8**	**-0.6**
	comp=Z,4.2nm,0.6s,baz=90,slow=3.6,SNR=3.2						
ZALV				LR	LR	14 35 32.1	
	comp=Z,2µm,18.3s,baz=80,slow=37						
KPJI	**Karang Pucung**	**48.66**	**227**	P	**P**	**14 14 42.4**	**+3.0**
RAMN	**Ramite**	**48.85**	**281**	*e*P	**P**	**14 14 40.0**	**-1.1**
	comp=Z,101nm,1.3s						
NVS	**Novosibirsk**	**48.93**	**319**	⇑*i*P	**P**	**14 14 42.0**	**+0.9**
NVS				*e*S	**S**	**14 21 50.9**	**+7.0**
NVS				pmax	pmax		
	comp=Z,82nm,1.2s						
NVS				pmax	pmax		
	comp=N,13nm,1.1s						
NVS				pmax	pmax		
	comp=E,39nm,0.8s						
NVS				smax	smax		
	comp=N,3.0nm,0.7s						
NVS				smax	smax		
	comp=E,5.0nm,0.8s						
PSI	**Prapat**	**48.97**	**246**	*e*P	**P**	**14 14 41.5**	**-0.5**
	comp=E,20nm,0.9s						
PSI				PcP	**PcP**	**14 16 05.2**	**-0.9**
PSI	**Prapat**	**48.97**	**246**	*e*P	**P**	**14 14 41.5**	**-0.5**
PSI						14 16 05.2	
PSI				pmax	pmax		
	comp=Z,20nm,0.9s						
PSI	**Prapat**	**48.97**	**246**	P	**P**	**14 14 41.4**	**-0.6**
	comp=Z,9.4nm,0.6s,baz=359,slow=6.4,SNR=5.6						
PSI				PcP	**PcP**	**14 16 05.2**	**-0.9**
	comp=Z,8.0nm,0.8s,baz=0.5,slow=3.4,SNR=4.5						
JIRN	**Jiri**	**49.00**	**282**	*e*P	**P**	**14 14 41.5**	**-0.9**
	comp=Z,277nm,1.4s						
MK01	**Makanchi Array**	**49.19**	**308**	*e*P	**P**	**14 14 43.4**	**+0.2**
MK31	**Makanchi Array**	**49.19**	**308**	*e*P	**P**	**14 14 43.5**	**+0.3**
MK31	**Makanchi Array**	**49.19**	**308**	*i* P	**P**	**14 14 42.5**	**-0.7**
MK31				pmax	pmax		
	comp=Z,22nm,0.9s						
MKAR	**Makanchi Array**	**49.19**	**308**	*e*P	**P**	**14 14 43.5**	**+0.3**
	comp=Z,100nm,0.8s						
MKAR	**Makanchi Array**	**49.19**	**308**	P	**P**	**14 14 43.5**	**+0.3**
	comp=Z,12nm,0.7s,baz=83,slow=9.9,SNR=78						
MKAR				ScP	**ScP**	**14 20 00.4**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=72,slow=5.4,SNR=2.1						
MKAR				S	**S**	**14 21 50.2**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=92,slow=8.7,SNR=2.9						
MKAR				LR	LR	14 36 22.5	
	comp=Z,1µm,19.6s,baz=87,slow=37						
GUN	**Gumba**	**49.20**	**283**	*e*P	**P**	**14 14 42.8**	**-1.1**
	comp=Z,473nm,2.1s						
MAKZ	**Makanchi**	**49.41**	**308**	*e*P	**P**	**14 14 44.7**	**-0.2**
	comp=Z,30nm,1.0s						
MAKZ	**Makanchi**	**49.41**	**308**	*e*P	**P**	**14 14 44.7**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,30nm,1.0s						
KCSI	**Kotacane, Aceh**	**49.46**	**247**	P	**P**	**14 14 43.9**	**-1.8**
WRAB	**Tennant Creek**	**49.63**	**190**	*e*P	**P**	**14 14 45.5**	**-1.2**
	comp=Z,25nm,0.8s						
WRAB	**Tennant Creek**	**49.63**	**190**	*ce*P	**P**	**14 14 45.3**	**-1.4**

WRAB				pmax	pmax		
	comp=Z,35nm,1.0s						
WB2	Warramunga Arr	49.63	190	eP	P	14 14 45.1	-1.7
WRA	Warramunga Arr	49.64	190	P	P	14 14 45.1	-1.6
	comp=Z,21nm,0.8s,baz=9.0,slow=8.0,SNR=186						
WRA				PcP	PcP	14 16 06.1	-2.0
	comp=Z,5.1nm,0.6s,baz=4.0,slow=3.9,SNR=4.5						
WRA				ScP	ScP	14 20 03.8	+1.3
	comp=Z,0.8nm,1.1s,baz=1.2,slow=4.2,SNR=2.9						
WRA				S	S	14 21 48.8	-5.6
	comp=Z,1.9nm,0.9s,baz=10,slow=16,SNR=8.4						
WRA				LR	LR	14 34 20.1	
	comp=Z,869nm,21.8s,baz=10.0,slow=34						
MNSI	Mandailing Nat	49.68	243	P	P	14 14 46.7	-0.6
PKI	Pulchoki	49.69	283	eP	P	14 14 46.2	-1.5
	comp=Z,91nm,1.5s						
PKIN	Phulchoki	49.70	283	eP	P	14 14 46.0	-1.7
	comp=Z,52nm,1.4s						
KKN	Kakani	49.74	283	eP	P	14 14 46.6	-1.3
	comp=Z,73nm,1.3s						
MDSI	Maura Dua	49.77	234	P	P	14 14 47.1	-0.8
DMN	Daman	49.94	283	eP	P	14 14 48.2	-1.3
	comp=Z,80nm,1.4s						
NRIK	Noril'sk	50.61	338	P	P	14 14 53.2	-0.4
	comp=Z,17nm,0.9s,baz=116,slow=6.0,SNR=12						
NRIK				LR	LR	14 38 45.3	
	comp=Z,1µm,19.1s,baz=119,slow=39						
DANN	Dangsing	50.87	284	eP	P	14 14 55.5	-1.1
	comp=Z,174nm,1.2s						
KOLN	Koldanda	51.17	283	eP	P	14 14 57.3	-1.4
	comp=Z,176nm,1.3s						
SNSI	Sinabang, Aceh	51.28	247	P	P	14 15 14.2	+15
PDGK	Podgornoye	51.40	304	P	P	14 14 58.5	-1.7
PDGK				pmax	pmax		
	comp=Z,52nm,1.2s						
KURK	Kurchatov	51.54	313	eP	P	14 15 00.8	-0.1
	comp=Z,187nm,1.1s						
KURK	Kurchatov	51.54	313	P	P	14 15 01.4	+0.5
KURK				pmax	pmax		
	comp=Z,45nm,0.5s						
KURK	Kurchatov	51.54	313	P	P	14 15 01.0	+0.1
	SNR=66						
KURK				P	P	14 15 01.0	+0.1
	SNR=66						
PYUN	Piuthan	51.60	284	eP	P	14 15 00.7	-1.2
	comp=Z,334nm,1.2s						
KURBB	Kurchatov Arra	51.60	313	P	P	14 15 01.4	0.0
	comp=Z,45nm,0.5s,baz=91,slow=6.9,SNR=235						
PRZ	Przheval'sk	52.30	303	eP	P	14 15 08.0	+1.1
	comp=Z,117nm,1.5s						
PRZ	Przheval'sk	52.30	303	eP	P	14 15 08.0	+1.1
PRZ				pmax	pmax		
	comp=Z,117nm,1.5s						
KDAK	Kodiak Island	52.45	38	i P	P	14 15 07.4	-0.1
IM3	Indian Mountai	52.95	27	eP	P	14 15 12.1	+1.0
PPLA	Purkeypile	53.13	31	eP	P	14 15 14.5	+1.8
	comp=Z,119nm,1.8s						
CAST	Castle Rocks	53.24	31	eP	P	14 15 15.1	+1.8
	comp=Z,82nm,1.9s						
KDJ	Kajisay	53.24	303	eP	P	14 15 15.2	+1.3
	comp=Z,23nm,1.3s						
KDJ	Kajisay	53.24	303	P	P	14 15 15.3	+1.3
KDJ				pmax	pmax		
	comp=Z,23nm,1.3s						
AS01	Alice Springs	53.35	190	eP	P	14 15 12.9	-1.6
AS31	Alice Springs	53.36	190	eP	P	14 15 13.7	-1.0
	comp=Z,2.3nm,0.6s						
ASAR	Alice Springs	53.36	190	P	P	14 15 13.3	-1.3
	comp=Z,2.9nm,0.7s,baz=2.0,slow=5.2,SNR=55						
ASAR				S	S	14 22 44.9	-0.8
	comp=Z,0.7nm,0.8s,baz=13,slow=18,SNR=4.4						
ASAR				LR	LR	14 36 35.5	
	comp=Z,860nm,21.2s,baz=14,slow=35						
ULHL	Ulahol	53.92	303	P	P	14 15 19.4	+0.5
	SNR=9.6						
MLY	Manley	54.03	29	eP	P	14 15 20.6	+1.4
	comp=Z,68nm,1.9s						
NRN	Naryn	54.23	302	eP	P	14 15 21.4	+0.2
	comp=Z,23nm,1.2s						
NRN	Naryn	54.23	302	eP	P	14 15 21.5	+0.2
NRN				pmax	pmax		
	comp=Z,23nm,1.2s						
TKM2	Tokmak 2	54.28	304	P	P	14 15 21.8	+0.3
	SNR=21						
TKM2	Tokmak 2	54.28	304	i P	P	14 15 19.1	-2.5
TKM2				pmax	pmax		
	comp=Z,18nm,1.1s						
PMR	Palmer	54.43	33	eP	P	14 15 22.3	+0.3
	comp=Z,55nm,1.6s						
PMR	Palmer	54.43	33	eP	P	14 15 22.3	+0.3
PMR				pmax	pmax		
	comp=Z,55nm,1.6s						
COLD	Coldfoot	54.55	26	eP	P	14 15 28.2	+5.3
	comp=Z,22nm,1.5s						
KSH	Kashi	54.59	300	P	P	14 15 27.0	+3.3
KSH				pP	pwP	14 15 33.3	-1.9
KSH				PP	PP	14 17 33.0	+7.0
KSH				S	S	14 23 04.0	+1.5
KSH				sS	sS	14 23 18.1	+8.4
KSH				SS	SS	14 26 48.1	+3.1
KSH				pmax	pmax		
	comp=Z,38nm,1.1s						
KSH				pmax	pmax		
	comp=Z,740nm,6.0s						
KSH				LR	LR		
	comp=Z,500nm,9.4s						
KSH				LR	LR		
	comp=Z,680nm,7.0s						
KSH				LR	LR		
	comp=Z,1µm,18.2s						
KZA	Kyzart	54.67	303	P	P	14 15 26.0	+1.4
	SNR=15						
RND	Reindeer	54.69	31	eP	P	14 15 24.1	+0.1
	comp=Z,18nm,1.1s						
RND	Reindeer	54.69	31	eP	P	14 15 24.1	+0.1
RND				pmax	pmax		
	comp=Z,18nm,1.1s						
KNK	Knik Glacier	54.75	33	eP	P	14 15 25.1	+0.7
	comp=Z,43nm,1.4s						
KBK	Karagaybulak	54.80	304	P	P	14 15 25.5	+0.3
	SNR=27						
SML	Sawmill	54.83	33	eP	P	14 15 25.8	+0.8
	comp=Z,25nm,0.8s						
SML	Sawmill	54.83	33	eP	P	14 15 25.8	+0.8
SML				pmax	pmax		
	comp=Z,25nm,0.8s						
CHMS	Chumysh	54.88	304	P	P	14 15 25.9	+0.3
	SNR=10						
TOLK	Toolik Lake Re	55.00	25	P	P	14 15 27.5	+1.4
	baz=261						
FRU	Bishkek	55.01	304	eP	P	14 15 26.5	-0.1
FRU				e		14 16 30.0	
FRU				pmax	pmax		
	comp=Z,110nm,2.0s						
USP	Ospenovka	55.02	304	P	P	14 15 27.1	+0.4
	SNR=6.9						
EIDS	Eidsvold	55.06	170	eP	P	14 15 27.1	+0.1
	comp=Z,58nm,1.5s						
AAK	Ala-Archa	55.13	304	P	P	14 15 27.8	+0.1
	SNR=13						
AAK	Ala-Archa	55.13	304	eP	P	14 15 27.6	0.0
	comp=Z,48nm,1.7s						
AAK	Ala-Archa	55.13	304	eP	P	14 15 27.6	0.0
AAK				pmax	pmax		
	comp=Z,49nm,1.7s						
AAK	Ala-Archa	55.13	304	P	P	14 15 28.0	+0.4
	SNR=9.9						
AAK				P	P	14 15 28.0	+0.4
	SNR=9.9						
UCH	Uchtor	55.19	303	P	P	14 15 28.2	-0.2
	SNR=23						
SCM	Sheep Creek Mo	55.30	33	eP	P	14 15 29.7	+1.2
	comp=Z,153nm,2.0s						
SCM	Sheep Creek Mo	55.30	33	eP	P	14 15 29.7	+1.2
SCM				pmax	pmax		
	comp=Z,153nm,2.0s						
POKR	Poker Plat Res	55.43	29	P	P	14 15 30.3	+1.0
	baz=266						
HDA	Harding Lake	55.59	30	eP	P	14 15 30.3	-0.1
	comp=Z,54nm,1.9s						
HDA	Harding Lake	55.59	30	P	P	14 15 29.9	-0.5
	baz=267						
IL1	Eielson Array	55.64	29	eP	P	14 15 30.5	-0.2
ILAR	Eielson Array	55.64	29	P	P	14 15 30.7	-0.1
	comp=Z,3.0nm,0.7s,baz=262,slow=6.3,SNR=36						
ILAR				LR	LR	14 38 38.1	
	comp=Z,364nm,19.9s,baz=276,slow=35						
ILB	Eielson Array	55.64	29	eP	P	14 15 31.0	+0.2
EKS2	Erkin-Say	55.65	304	P	P	14 15 31.1	-0.2
	SNR=11						
AML	Almayashu	55.80	303	P	P	14 15 33.3	+0.6
	SNR=69						
OTUK	Ortayu	55.80	311	P	P	14 15 31.8	-0.4
OTUK				pmax	pmax		
	comp=Z,174nm,1.3s						
DZM	Mont Dzumac	56.15	153	eS	S	14 23 22.6	-0.7
	comp=Z,290nm,26.2s						
DZM				eLR	LR	14 32 02.3	
	comp=Z,990nm,22.1s						
PAX	Paxson	56.20	32	eP	P	14 15 36.0	+1.1
	comp=Z,64nm,1.8s						
PAX	Paxson	56.20	32	eP	P	14 15 36.0	+1.1
PAX				pmax	pmax		
	comp=Z,65nm,1.8s						
SFK	Sufi-Kurgan	56.36	301	i P	P	14 15 35.5	-1.1
SFK				pmax	pmax		
	comp=Z,27nm,1.3s						
ARSB	Arslanbob	56.48	302	eP	P	14 15 38.0	+0.7
	comp=Z,105nm,1.5s						
RIDG	Independ'e Rid	56.49	31	epP	pP	14 15 43.0	+2.2
	comp=Z,34nm,1.5s						
BVAR	Borovoye Array	56.51	316	P	P	14 15 37.8	+0.7
	comp=Z,30nm,0.6s,baz=93,slow=6.5,SNR=83						
BVAR				S	S	14 23 27.9	+0.5
	comp=Z,1.6nm,0.7s,baz=58,slow=18,SNR=4.1						
BRVK	Borovoye	56.57	317	eP	P	14 15 38.4	+0.8
	comp=Z,119nm,1.3s						
BRVK	Borovoye	56.57	317	eP	P	14 15 38.4	+0.8
BRVK				pmax	pmax		
	comp=Z,119nm,1.3s						
BRVK	Borovoye	56.57	317	P	P	14 15 38.0	+0.5
	SNR=33						
BRVK				P	P	14 15 38.0	+0.5
	SNR=33						
MNAS	Manas	56.60	304	i P	P	14 15 36.2	-2.0
MNAS				pmax	pmax		
	comp=Z,26nm,1.3s						
DOT	Dot Lake	56.84	31	eP	P	14 15 39.9	+0.5
	comp=Z,34nm,1.5s						
KK31	Karatay Array	57.92	305	eP	P	14 15 47.7	+0.4
KK31	Karatay Array	57.92	305	i P	P	14 15 47.3	0.0
KK31				pmax	pmax		
	comp=Z,33nm,0.7s						
KKAR	Karatay Array	57.92	305	eP	P	14 15 47.7	+0.4
KKAR	Karatay Array	57.92	305	eP	P	14 15 47.7	+0.4
EGAK	Eagle	58.10	29	eP	P	14 15 48.8	+0.6
	comp=Z,11nm,1.0s						
NIL	Nilore	58.10	293	eP	P	14 15 48.9	+0.2
	comp=Z,112nm,1.6s						
NIL	Nilore	58.10	293	eP	P	14 15 48.9	+0.2
NIL				pmax	pmax		
	comp=Z,112nm,1.6s						
DAWY	Dawson	58.90	30	eP	P	14 15 55.5	+1.7
	comp=Z,89nm,1.9s						
GAR	Garm	58.99	300	eP	P	14 15 55.1	+0.1
	comp=Z,120nm,1.5s						
GAR	Garm	58.99	300	eP	P	14 15 55.1	+0.1
GAR				pmax	pmax		
	comp=Z,120nm,1.5s						
HYB	Hyderabad	59.16	274	i P	P	14 15 55.0	-1.3
CHGR	Chuyangaron	59.95	300	eP	P	14 16 01.7	+0.1
	comp=Z,103nm,0.7s						
INK	Inuvik	60.90	25	eP	P	14 16 08.3	+0.9
	comp=Z,32nm,1.4s						
INK	Inuvik	60.90	25	eP	P	14 16 08.3	+0.9
INK				pmax	pmax		
	comp=Z,32nm,1.4s						
INK	Inuvik	60.90	25	P	P	14 16 08.0	+0.6
	comp=Z,3.5nm,0.6s,baz=302,slow=5.5,SNR=28						
STKA	Stephens Creek	60.92	181	eP	P	14 16 07.4	-0.5
	comp=Z,2.2nm,0.9s						
STKA	Stephens Creek	60.92	181	P	P	14 16 07.1	-0.8
	comp=Z,4.9nm,0.6s,baz=348,slow=8.5,SNR=15						
STKA				LR	LR	14 41 29.5	
	comp=Z,624nm,20.9s,baz=4.2,slow=35						
KBL	Kabul	61.19	295	eP	P	14 16 08.9	-1.3
	comp=Z,15nm,0.8s						
KBL	Kabul	61.19	295	eP	P	14 16 08.9	-1.3
KBL				pmax	pmax		
	comp=Z,15nm,0.8s						
FORT	Forrest	61.35	194	eP	P	14 16 09.7	-1.1
	comp=Z,36nm,0.6s						
SVE	Sverdlovsk	61.55	322⇓	eP	P	14 16 12.2	+0.2
SVE				pmax	pmax		
	comp=Z,56nm,1.5s						
SVE				MLR	MLR		
	comp=Z,1µm,17.0s						
PALK	Pallekele	61.83	262	i P	P	14 16 15.5	+0.9
ARU	Arti	62.75	322c	iP	P	14 16 20.3	+0.2
ARU						14 18 37.9	
ARU				S	S	14 24 53.1	+5.3
ARU				SS	SS	14 28 56.2	+4.1
ARU				pmax	pmax		
	comp=Z,127nm,1.7s						
ARU				MLR	MLR		
	comp=Z,1µm,18.0s						
AB31	Akbulak array	63.65	314	i P	P	14 16 26.0	-0.2
AB31				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AKTO	Aktyubinsk	64.54	315	P	P	14 16 31.7	-0.3
AKTO				pmax	pmax		
	comp=Z,30nm,1.0s						
PRGR	Permogore	67.69	329	eP	P	14 16 51.2	-0.8
PRGR				pmax	pmax		
	comp=Z,30nm,0.8s						
GEYT	Alibeck	68.43	302	P	P	14 16 57.6	+0.4
	comp=Z,21nm,0.9s,baz=40,slow=2.5,SNR=35						
GEYT				LR	LR	14 49 27.5	
	comp=Z,897nm,18.3s,baz=105,slow=38						
GYA0B	ALIBECK ARRAY	68.43	302	eP	P	14 16 58.2	+1.0
	comp=Z,98nm,1.7s						
RES	Resolute Bay	69.81	14	eP	P	14 17 05.5	+0.5
	comp=Z,15nm,1.0s						
RES	Resolute Bay	69.81	14	eP	P	14 17 05.5	+0.5
RES				pmax	pmax		
	comp=Z,15nm,1.0s						
TMCR	Tamitsa	69.89	333	eP	P	14 17 07.1	+1.5
TMCR				pmax	pmax		
	comp=Z,73nm,1.0s						
APA	Apatity	70.02	337⇑	iP	P	14 16 50.9	-16
APA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
APA				MLR	MLR		
	comp=Z,3µm,18.0s						
YKW3	Yellowknife Ar	70.03	29	eP	P	14 17 07.3	+0.7
YKA	Yellowknife Ar	70.06	29	P	P	14 17 07.1	+0.3
	comp=Z,2.2nm,0.6s,baz=293,slow=6.4,SNR=35						
YKB5	Yellowknife Ar	70.06	29	eP	P	14 17 06.7	0.0
KLMR	Klimovskoe	70.71	330	eP	P	14 17 09.6	-1.1
KLMR				e		14 19 47.7	
KLMR				pmax	pmax		
	comp=Z,30nm,1.1s						
KLMR	Klimovskoe	70.71	330	eP	P	14 17 09.6	-1.1
KLMR				AMP		14 17 18.5	
	comp=Z,30nm,1.1s						
KLMR				ePP	PP	14 19 47.7	+0.7
ARCES	ARCESS Array B	71.46	341	P	P	14 17 15.4	+0.2
	comp=Z,3.8nm,0.8s,baz=46,slow=6.9,SNR=7.0						
D03D	Eldon	71.81	45	P	P	14 17 20.1	+2.4
	baz=294						
TULEG	Thule	72.57	7	eP	P	14 17 22.1	+0.4
	comp=Z,22nm,1.0s						
JOF	Joensuu	73.13	333	P	P	14 17 24.6	-0.6
JOF				pmax	pmax		
	comp=Z,27nm,1.4s						
DAG	Danmarks Havn	73.46	356	i P	P	14 17 26.0	-0.9
	comp=Z,38nm,1.4s						
DAG	Danmarks Havn	73.46	356	eP	P	14 17 26.0	-0.9
DAG				pmax	pmax		
	comp=Z,90nm,1.4s						
VRH	Novokhopyorsk	73.88	320	eP	P	14 17 29.8	0.0
VRH				eS	SKiKP	14 26 58.9	+1.2
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
VRH				smax	smax		
	comp=E,240nm,4.5s						
MAK	Makhachkala	73.93	310	eP	P	14 17 25.0	-5.3
MAK				e		14 20 11.0	
MAK				eS	SKiKP	14 26 56.8	-1.2
MAK				pmax	pmax		
	comp=Z,179nm,1.4s						
MAK				MLR	MLR		
	comp=Z,1µm,16.0s						
MOS	Moscow	73.94	325	eP	P	14 17 28.9	-1.2
MOS				e		14 17 38.3	
MOS				e		14 20 15.6	
MOS				pmax	pmax		
	comp=Z,39nm,0.9s						
MOS				MLR	MLR		
	comp=Z,1µm,21.0s						
BIDO	Bidbid	74.11	288	P	P	14 17 34.0	+2.2
	SNR=5.3						
J04D	Umpqua Nationa	74.22	49	P	P	14 17 33.7	+1.4
	baz=296						
L04D	Klamath Falls	74.53	50	P	P	14 17 35.4	+1.3
	baz=296						
LPSR	Galich'ya Gora	74.77	322	eP	P	14 17 34.6	-0.4
LPSR				eS	S	14 27 05.6	-4.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR				smax	smax		
	comp=N,90nm,5.7s						
OBN	Obninsk	74.77	325⇓	eP	P	14 17 35.0	+0.1
OBN				e		14 20 21.7	
OBN				i S	S	14 27 10.5	+0.2
OBN				eSS	SS	14 32 05.2	+7.9
OBN				pmax	pmax		
	comp=Z,51nm,1.4s						
OBN				MLR	MLR		
	comp=Z,2µm,19.0s						
J05D	Fort Rock, OR	74.78	49	P	P	14 17 36.8	+1.3
	baz=296						
M04C	Macdoel	75.03	50	P	P	14 17 38.9	+1.9
	baz=296						
O02D	Mt. Diablo Mer	75.09	52	P	P	14 17 38.3	+1.1
	baz=296						
NEW	Newport	75.12	43	eP	P	14 17 38.5	+1.3
	comp=Z,15nm,1.1s						
NEW	Newport	75.12	43	eP	P	14 17 38.5	+1.3
NEW				pmax	pmax		
	comp=Z,15nm,1.1s						
NEW	Newport	75.12	43	P	P	14 17 38.5	+1.3
	baz=297						
SOHO	SOHO	75.16	289	P	P	14 17 39.1	+1.3
	SNR=12						
VSR	Storozhevoye	75.30	321	eP	P	14 17 36.7	-1.4
VSR				eS	S	14 27 13.7	-2.6
VSR				pmax	pmax		
	comp=Z,20nm,1.3s						
VSR				smax	smax		
	comp=N,20nm,1.1s						
E09A	Wood Farm, Sta	75.30	45	eP	P	14 17 40.1	+1.9
	comp=N,22nm,1.3s						
ASHO	Ashiyiah	75.31	290	P	P	14 17 40.7	+1.9
	SNR=6.2						
ASHO				P	P	14 17 40.7	+1.9
	SNR=6.2						
MHTO	MHTO	75.34	286	P	P	14 17 40.0	+1.1
	SNR=7.8						
MHTO				P	P	14 17 40.0	+1.1
	SNR=7.8						
O03E	Paynes Creek	75.72	52	P	P	14 17 41.5	+0.7
	baz=296						
GOF	Gofitskoye	75.89	314	eP	P	14 17 43.3	+1.7
GOF				pmax	pmax		
	comp=Z,50nm,1.4s						
FIA1	FINESS Array S	75.99	334	eP	P	14 17 42.2	+0.3
	comp=Z,26nm,1.0s						
FINES	FINESS Array B	75.99	334	P	P	14 17 42.1	+0.3
	comp=Z,4.6nm,0.7s,baz=71,slow=6.1,SNR=11						
NCK	Nalchik	76.26	312	i P	P	14 17 43.9	+0.1
NCK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZEI	Tsey	76.38	311	eP	P	14 17 40.2	-4.5
ZEI				pmax	pmax		
	comp=Z,11nm,0.6s						
J08A	Circle Bar Ran	76.54	48	eP	P	14 17 46.7	+1.2
	comp=Z,13nm,0.8s						
BMO	Blue Mountains	76.59	46	eP	P	14 17 47.2	+1.4
	comp=Z,28nm,1.5s						
BMO	Blue Mountains	76.59	46	eP	P	14 17 47.2	+1.4
BMO				pmax	pmax		
	comp=Z,28nm,1.5s						
KBZ	Khabaz	76.60	313	P	P	14 17 46.8	+1.2
	comp=Z,14nm,0.8s,baz=110,slow=4.2,SNR=23						
KBZ				LR	LR	14 54 24.0	
	comp=Z,963nm,19.1s,baz=66,slow=38						
KIV	Kislovodsk	76.63	313	eP	P	14 17 48.1	+2.1
	comp=Z,64nm,1.3s						
KIV	Kislovodsk	76.63	313	eP	P	14 17 47.2	+1.2
KIV				eS	S	14 27 34.6	+3.1
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
KIV				MLR	MLR		
	comp=Z,747nm,18.0s						
KIV	Kislovodsk	76.63	313	P	P	14 17 47.6	+1.6
	SNR=6.2						
KIV				P	P	14 17 47.6	+1.6
	SNR=6.2						
BEKR	Beckworth	76.90	52	eP	P	14 17 48.8	+1.1
	comp=Z,25nm,0.9s						
NEY	Neytrino	76.93	312	i P	P	14 17 49.1	+1.3
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GNI	Garni	77.03	309	eP	P	14 17 51.0	+2.6
GNI				pmax	pmax		
	comp=Z,23nm,1.1s						
GNI	Garni	77.03	309	P	P	14 17 50.5	+2.1
	SNR=6.6						
GNI				P	P	14 17 50.5	+2.1
	SNR=6.6						
VSU	Vasula	77.50	331	i P	P	14 17 51.3	+0.9
VSU				pmax	pmax		
	comp=Z,27nm,1.0s						
VSU	Vasula	77.50	331	eP	P	14 17 49.9	-0.5
VSU				IAmb	IAmb	14 17 59.9	
	comp=Z,66nm,1.1s						
PAHR	Pah Rah Range	77.64	51	eP	P	14 17 53.3	+1.5
	comp=Z,19nm,1.2s						
CMB	Columbia Colle	77.72	53	eP	P	14 17 53.5	+1.3
	comp=Z,32nm,1.3s						
CMB	Columbia Colle	77.72	53	eP	P	14 17 53.5	+1.3
CMB				pmax	pmax		
	comp=Z,31nm,1.3s						
PNTR	Pine Nut	77.78	52	eP	P	14 17 54.6	+1.9
	comp=Z,25nm,0.9s						
YERR	Yerington	78.07	52	eP	P	14 17 55.7	+1.4
	comp=Z,28nm,1.1s						
SUMG	Summit	78.33	0	eP	P	14 17 56.9	+1.6
	comp=Z,99nm,1.9s						
SUMG	Summit	78.33	0	i P	P	14 17 56.7	+1.4
SUMG	Summit	78.33	0	eP	P	14 17 56.9	+1.6
SUMG				pmax	pmax		
	comp=Z,99nm,1.9s						
BCA	Borcka	78.51	311⇑	iP	P	14 17 57.8	+1.4
SOC	Sochi	78.69	314	eP	P	14 17 51.9	-5.4
SOC				e		14 20 51.2	
SOC				ePPP	PPP	14 22 52.1	
SOC				eS	S	14 27 44.9	-8.7
SOC				eSS	SS	14 33 00.0	+2.9
SOC				eSSS	SSS	14 36 22.1	
SOC				MLR	MLR		
	comp=Z,942nm,18.0s						
RYN	Ryan	78.73	52	eP	P	14 17 59.7	+1.8
	comp=Z,19nm,1.0s						
KVN	Kaiserville	78.82	52	eP	P	14 17 59.9	+1.4
	comp=Z,21nm,1.2s						
KVN	Kaiserville	78.82	52	eP	P	14 17 59.9	+1.4
KVN				pmax	pmax		
	comp=Z,21nm,1.2s						
NV01	Mina Array Sit	78.98	52	eP	P	14 17 59.6	+0.3
NVAR	Mina Array Bea	78.98	52	P	P	14 18 00.7	+1.4
	comp=Z,7.1nm,0.7s,baz=295,slow=5.6,SNR=60						
NVAR				LR	LR	14 49 28.6	
	comp=Z,501nm,18.8s,baz=288,slow=33						
HRY	Holter Researc	79.01	42	eP	P	14 18 00.7	+1.5
HLID	Hailey	79.03	46	eP	P	14 18 01.0	+1.5
	comp=Z,8.8nm,1.0s						
HLID	Hailey	79.03	46	P	P	14 18 01.0	+1.5
	baz=300						
NV11	Mina Array Sit	79.08	52	eP	P	14 18 01.2	+1.4
	comp=Z,1.6nm,1.4s						
MICGM	Minsk	79.33	327	e	P	14 18 01.0	+0.4
MNK	Minsk	79.33	327	eP	P	14 18 01.0	+0.4
IZAR	Zarasai	79.34	329	eP	P	14 18 02.4	+1.7
IZAR				IAmb	IAmb	14 18 11.4	
	comp=Z,19nm,1.2s						
IDID	Didziasalis	79.37	328	eP	P	14 18 02.2	+1.4
IDID				IAmb	IAmb	14 18 10.5	

	comp=Z,8.6nm,0.8s						
ANN	Anapa	79.50	316	eP	P	14 18 04.4	+2.7
ANN				pmax	pmax		
	comp=Z,94nm,1.2s						
ISAL	Salakas	79.50	329	eP	P	14 18 03.4	+1.9
ISAL				IAmb	IAmb	14 18 11.2	
	comp=Z,17nm,1.1s						
EGMT	Eagleton	79.52	41	eP	P	14 18 03.1	+1.2
	comp=Z,30nm,1.3s						
EGMT	Eagleton	79.52	41	P	P	14 18 02.7	+0.8
	baz=302						
IIGN	Ignalina	79.59	329	eP	P	14 18 03.9	+1.9
IIGN				IAmb	IAmb	14 18 12.7	
	comp=Z,9.4nm,0.8s						
NACGM	Naroch	79.60	328	e	P	14 18 03.0	+0.9
NACGM				eLR	LR	14 52 42.0	
BOZ	Bozeman (W)	79.70	43	P	P	14 18 04.1	+1.0
	baz=302						
FFC	Flin Flon	79.72	32	eP	P	14 18 03.9	+1.1
	comp=Z,58nm,1.5s						
FFC	Flin Flon	79.72	32	eP	P	14 18 03.9	+1.1
FFC				pmax	pmax		
	comp=Z,58nm,1.5s						
CWC	Cottonwood Cre	80.10	54	P	P	14 18 05.5	+0.1
	baz=299						
ISA	Isabella, Lake	80.19	55	P	P	14 18 06.3	+0.5
	baz=299						
YHB	Horse Butte	80.41	44	eP	P	14 18 09.3	+2.3
	comp=Z,25nm,1.2s						
PPT	Papeete	80.50	116	LR	LR	14 50 13.7	
	comp=Z,225nm,19.7s,baz=282,slow=33						
PPT2	Papeete2	80.51	116	eS	S	14 28 13.0	-0.6
	comp=Z,920nm,28.8s						
PPT2	Papeete2	80.51	116	eLR	LR	14 43 20.6	
	comp=Z,820nm,26.0s,baz=310						
YMR	Madison River	80.59	44	eP	P	14 18 10.5	+2.5
	comp=Z,16nm,1.0s						
MPMC	Manual Prospec	80.70	54	P	P	14 18 09.7	+1.0
	baz=300						
LRMC	Laurel Mtn Rad	80.85	55	P	P	14 18 10.6	+1.2
	baz=300						
R11A	Troy Canyon, C	80.88	51	eP	P	14 18 10.7	+1.1
	comp=Z,12nm,1.0s						
R11A	Troy Canyon, C	80.88	51	P	P	14 18 10.6	+1.1
	baz=300						
AKASG	Malin Array Be	80.89	324	P	P	14 18 08.8	-0.4
	comp=Z,3.4nm,0.7s,baz=51,slow=5.4,SNR=16						
AKASG				LR	LR	14 56 42.6	
	comp=Z,2µm,18.8s,baz=60,slow=38						
AKBB	Malin Array Si	80.89	324	eP	P	14 18 09.0	-0.1
AKBB	Malin Array Si	80.89	324	eP	P	14 18 09.0	-0.1
YPP	Pitchstone Pla	80.90	44	eP	P	14 18 12.9	+3.2
	comp=Z,49nm,1.9s						
KIEV	Kiev	80.91	324	⇑iP	P	14 18 09.3	+0.1
KIEV	Kiev	80.91	324	i P	P	14 18 07.0	-2.2
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EDW2	Edwards Air Fo	80.92	55	P	P	14 18 11.9	+2.2
	baz=299						
AK11	Malin Array Si	80.94	324	eP	P	14 18 10.6	+1.2
FURC	Furnace Creek,	80.94	53	P	P	14 18 11.4	+1.7
	baz=300						
H17A	Grant Village	80.97	44	eP	P	14 18 13.5	+3.4
	comp=Z,31nm,1.1s						
H17A	Grant Village	80.97	44	P	P	14 18 13.3	+3.2
	baz=302						
IMW	Indian Meadow	81.02	45	eP	P	14 18 12.0	+1.6
	comp=Z,11nm,0.9s						
FLWY	Flagg Ranch	81.07	44	eP	P	14 18 13.4	+2.9
	comp=Z,34nm,1.3s						
FXWY	Fox Creek	81.10	45	eP	P	14 18 13.1	+2.3
	comp=Z,17nm,1.3s						
TPNV	Topopah Spring	81.12	53	eP	P	14 18 12.1	+1.2
	comp=Z,17nm,0.9s						
TPNV	Topopah Spring	81.12	53	P	P	14 18 11.9	+1.0
	baz=300						
MOOW	Moose Ponds	81.22	45	eP	P	14 18 13.2	+1.9
	comp=Z,19nm,1.4s						
TPAW	Teton Pass	81.23	45	eP	P	14 18 12.4	+0.9
	comp=Z,12nm,0.9s						
BGU	Big Grassy Mou	81.26	48	eP	P	14 18 13.0	+1.4
NC405	NORSAR Array S	81.35	338	eP	P	14 18 11.5	+0.1
REDW	Red Top Meadow	81.36	45	eP	P	14 18 14.3	+2.2
	comp=Z,37nm,1.6s						
RLMT	Red Lodge	81.37	43	eP	P	14 18 13.6	+1.5
	comp=Z,65nm,1.8s						
RLMT	Red Lodge	81.37	43	P	P	14 18 13.7	+1.5
	baz=303						
LOHW	Long Hollow	81.38	45	eP	P	14 18 14.4	+2.2
	comp=Z,10nm,1.1s						
SIM	Simferopol'	81.42	317	P	P	14 18 13.7	+1.6
SIM				S	S	14 28 26.7	+4.4
SIM				pmax	pmax		
	comp=Z,19nm,0.9s						
SIM				MLR	MLR		
	comp=Z,640nm,18.0s						
NC204	NORSAR Array S	81.54	339	eP	P	14 18 12.7	+0.2
NB2	NORSAR Subarra	81.57	338	P	P	14 18 12.3	-0.3
	comp=Z,1.5nm,0.7s,baz=41,slow=5.3						
NOA	NORSAR Array B	81.57	338	P	P	14 18 12.0	-0.6
NOA				pmax	pmax		
	comp=Z,19nm,0.5s						
NOA	NORSAR Array B	81.57	338	P	P	14 18 12.0	-0.6
	comp=Z,19nm,0.5s,baz=41,slow=5.1,SNR=8.7						
NOA				LR	LR	14 59 34.2	
	comp=Z,520nm,20.2s,baz=45,slow=39						
DUG	Dugway, Tooele	81.78	48	eP	P	14 18 15.6	+1.3
	comp=Z,44nm,1.7s						
DUG	Dugway, Tooele	81.78	48	eP	P	14 18 15.6	+1.3
DUG				pmax	pmax		
	comp=Z,44nm,1.7s						
DUG	Dugway, Tooele	81.78	48	P	P	14 18 15.6	+1.3
	baz=302						
PSUT	Pine Spring	81.96	50	eP	P	14 18 16.8	+1.5
	comp=Z,14nm,0.9s						
SHPR	Sheep Range	82.10	53	eP	P	14 18 17.9	+1.8
	comp=Z,13nm,1.1s						
TUQ	Turquoise Moun	82.11	54	P	P	14 18 17.3	+1.2
	baz=300						
HEC	Hector,Ludlow	82.13	55	P	P	14 18 17.3	+1.2
	baz=300						
TCUT	Toone Canyon	82.21	47	eP	P	14 18 18.5	+1.8
	comp=Z,21nm,1.0s						
CTU	Camp Tracy	82.21	48	eP	P	14 18 18.4	+1.8
	comp=Z,17nm,1.0s						
LAO	LASA Array	82.25	40	eP	P	14 18 18.1	+1.6
	comp=Z,43nm,1.2s						
LAO	LASA Array	82.25	40	P	P	14 18 18.0	+1.4
	baz=305						
DGMT	Dagmar	82.34	38	P	P	14 18 18.0	+1.1
	baz=306						
BW06	Boulder Array	82.48	45	eP	P	14 18 18.9	+0.9
	comp=Z,6.5nm,0.9s						
BW06	Boulder Array	82.48	45	P	P	14 18 18.8	+0.8
	baz=303						
PDAR	Pinedale Array	82.48	45	P	P	14 18 18.8	+0.8
	comp=Z,2.4nm,0.8s,baz=266,slow=2.1,SNR=17						
PDAR				LR	LR	14 50 45.0	
	comp=Z,327nm,21.2s,baz=316,slow=33						
GMRC	Granite Mounta	82.63	54	P	P	14 18 19.8	+1.0
	baz=301						
PFO	Pinyon Flats O	82.65	56	P	P	14 18 19.8	+0.8
	baz=300						
TPFO	Pinon Flats	82.66	56	P	P	14 18 19.9	+0.9
	baz=300						
BELC	Belle Mtn. Jos	82.78	55	P	P	14 18 20.5	+0.8
	baz=301						
MSU	Marysvale	83.09	50	eP	P	14 18 22.9	+1.6
MSU	Marysvale	83.09	50	eP	P	14 18 22.9	+1.6
LCMT	Little Creek M	83.16	51	eP	P	14 18 23.1	+1.5
	comp=Z,19nm,1.2s						
KIS	Kishinev	83.29	321	eP	P	14 18 07.0	-15
KIS				MLR	MLR		
	comp=Z,2µm,18.0s						
BC3	Big Chuckawall	83.35	55	P	P	14 18 23.4	+0.9
	baz=301						
KNB	Kanab	83.44	51	eP	P	14 18 24.9	+1.8
	comp=Z,32nm,1.1s						
KNB	Kanab	83.44	51	eP	P	14 18 24.9	+1.8
KNB				pmax	pmax		
	comp=Z,32nm,1.1s						
P17A	Butcher Ranch,	83.52	48	eP	P	14 18 25.2	+1.8
	comp=Z,17nm,1.0s						
TAOE	Nuku Hiva Isla	83.53	104	eLR	LR	14 44 39.5	
	comp=Z,818nm,26.7s						
Q16A	Castle Valley	83.54	49	eP	P	14 18 25.4	+1.9
	comp=Z,89nm,1.9s						
ILGA	Ilgaz	83.81	314	eP	P	14 18 26.3	+1.4
	comp=Z,72nm,1.6s						
SRU	San Rafael Swe	83.86	48	eP	P	14 18 26.3	+1.1
	comp=Z,18nm,1.2s						
SRU	San Rafael Swe	83.86	48	eP	P	14 18 26.3	+1.1
SRU				pmax	pmax		
	comp=Z,18nm,1.2s						
TBI	Tubuai	83.90	121	eLR	LR	14 44 45.3	
	comp=Z,1µm,29.5s,baz=316						
PDMCI	Parker Dam,Lak	83.95	54	P	P	14 18 26.8	+1.3
	baz=302						
LVV	L'vov	84.08	325	eP	P	14 18 26.4	+0.6
LVV				e		14 21 41.9	
LVV				eS	S	14 28 55.3	+6.1
LVV				eSS	SS	14 34 16.8	0.0
LVV				MLR	MLR		
	comp=Z,1µm,17.0s						
GLA	Glamis	84.11	55	eP	P	14 18 28.0	+1.6
	comp=Z,17nm,1.1s						
GLA	Glamis	84.11	55	eP	P	14 18 28.0	+1.6
GLA				pmax	pmax		
	comp=Z,17nm,1.1s						
GLA	Glamis	84.11	55	P	P	14 18 27.5	+1.1
	baz=301						
BR131	Keskin Array S	84.59	313	eP	P	14 18 29.3	+0.5
BR131	Keskin Array S	84.59	313	P	P	14 18 29.5	+0.7
	SNR=13						
BRTR	Keskin Array B	84.59	313	P	P	14 18 29.2	+0.4
	comp=Z,7.3nm,0.7s,baz=103,slow=4.3,SNR=39						
BRTR				LR	LR	15 00 49.0	
	comp=Z,355nm,19.0s,baz=49,slow=39						
CFR	Carcaliu	84.76	320	⇑iP	P	14 18 29.8	+0.5
O20A	White River Ci	84.76	47	eP	P	14 18 30.8	+1.0
	comp=Z,23nm,1.0s						
O20A	White River Ci	84.76	47	P	P	14 18 30.7	+1.0
	baz=304						
BIZ	Bicaz	84.80	322	⇑iP	P	14 18 30.3	+0.7
BUR08	Bucovina Ar. S	84.85	323	eP	P	14 18 30.4	+0.5
BUR04	Bucovina Ar. S	84.86	323	eP	P	14 18 29.6	-0.3
BURAR	Bucovina Array	84.86	323	⇑iP	P	14 18 30.5	+0.6
RSSD	Black Hills	85.00	41	eP	P	14 18 31.7	+0.8
	comp=Z,59nm,1.9s						
RSSD	Black Hills	85.00	41	eP	P	14 18 31.7	+0.8
RSSD				pmax	pmax		
	comp=Z,59nm,1.9s						
RSSD	Black Hills	85.00	41	P	P	14 18 31.7	+0.8
	baz=307						
VRI	Vrincioaia	85.12	321	⇑iP	P	14 18 32.4	+1.2
TLB	Topalu	85.17	319	⇑iP	P	14 18 32.4	+1.0
PLOR	Plostina	85.18	321	⇑iP	P	14 18 31.2	-0.3
WUAZ	Wupatki	85.23	52	P	P	14 18 33.1	+1.0
	baz=303						
PV14	Lion Creek, Pa	85.24	48	eP	P	14 18 33.5	+1.3
	comp=Z,21nm,0.7s						
PV16	Nyswonger Mesa	85.35	48	eP	P	14 18 34.0	+1.3
	comp=Z,29nm,1.1s						
ULM	Lac du Bonnet	85.45	33	P	P	14 18 32.1	-0.6
ULM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULM				MLR	MLR		
	comp=Z,387nm,20.8s						
ULM	Lac du Bonnet	85.45	33	P	P	14 18 32.1	-0.6
	comp=Z,3.7nm,1.0s,baz=31,slow=4.5,SNR=3.8						
ULM				LR	LR	14 55 28.7	
	comp=Z,387nm,20.8s,baz=303,slow=35						
OZUR		85.50	321	⇑iP	P	14 18 34.2	+1.1
UZH	Uzhgorod	85.71	325	eP	P	14 18 26.2	-7.8
N23A	Red Feather La	85.76	45	eP	P	14 18 36.5	+1.7
N23A	Red Feather La	85.76	45	P	P	14 18 36.1	+1.3
	baz=306						
MLR	Muntele Rosu	85.79	321	⇓iP	P	14 18 35.8	+1.1
VOIR		86.31	321	⇑iP	P	14 18 38.0	+0.8
ISCO	Idaho Springs	86.61	46	eP	P	14 18 40.5	+1.5
	comp=Z,14nm,1.3s						
ISCO	Idaho Springs	86.61	46	eP	P	14 18 40.5	+1.5
ISCO				pmax	pmax		
	comp=Z,14nm,1.3s						
ISCO	Idaho Springs	86.61	46	P	P	14 18 40.4	+1.3
	baz=306						
DRGR		86.70	323	⇑iP	P	14 18 39.6	+0.6
S22A	4UR Ranch, Cre	87.02	48	eP	P	14 18 43.0	+1.9
S22A	4UR Ranch, Cre	87.02	48	P	P	14 18 43.0	+1.9
	baz=305						
Q24A	Divide	87.39	46	P	P	14 18 44.4	+1.6
	baz=306						
DPC	Dobruska-Polom	87.39	329	epP	pP	14 18 50.9	+4.0
DPC				ex	x	14 18 58.9	
DPC				AMS	AMS	15 02 00.0	
	comp=Z,2µm,18.4s						
DPC	Dobruska-Polom	87.39	329	eP	pP	14 18 50.9	+4.0
DPC				e		14 18 58.9	
DPC				MLR	MLR		
	comp=Z,2µm,18.4s						
UPC	Upice	87.42	329	AMS	AMS	15 02 00.0	
	comp=Z,900nm,18.0s						
VYHS	Vyhne	87.51	326	eP	P	14 18 47.1	+4.2
VYHS	Vyhne	87.51	326	eP	P	14 18 47.0	+4.2
GZR	Gura Zlata	87.57	322	⇑iP	P	14 18 44.9	+1.6
SDCO	Great Sand Dun	87.88	47	P	P	14 18 46.6	+1.3
	baz=306						
BRG	Berggiesshubel	88.07	330	eP	P	14 18 52.5	+7.1
	comp=Z,13nm,1.4s						
BRG	Berggiesshubel	88.07	330	S	S	14 29 29.0	+0.7
BRG				SS	SS	14 35 09.0	-6.2
	comp=N,753nm,17.7s						
	comp=E,480nm,13.1s						
	comp=Z,935nm,12.4s						
BRG	Berggiesshubel	88.07	330	eP	P	14 18 52.5	+7.0
BRG				S	S	14 29 29.0	+0.7
BRG				pmax	pmax		
	comp=Z,13nm,1.4s						
BRG				MLR	MLR		
	comp=N,753nm,17.7s						
BRG				MLR	MLR		
	comp=E,480nm,13.1s						
BRG				MLR	MLR		
	comp=Z,935nm,12.4s						
CLL	Collm	88.15	331	eP	P	14 18 46.0	+0.2
CLL				i sP	pwP	14 18 54.0	-4.4
CLL				ePP	PP	14 22 13.0	+0.9
CLL				e(PPP)		14 24 24.0	
CLL				eS	S	14 29 26.0	-3.0
CLL				ePS	PS	14 30 35.0	+1.3
CLL				e(SS)		14 35 06.0	
CLL				eSSS	SSS	14 38 48.0	
CLL				eSSSS		14 42 00.0	
CLL	Collm	88.15	331	eP	P	14 18 45.0	-0.8
CLL				i		14 18 54.0	
CLL				eS	S	14 29 26.0	-3.0
MODS	Modra-Piesok	88.34	327	eP	P	14 18 51.9	+5.1
MODS	Modra-Piesok	88.34	327	eP	P	14 18 51.9	+5.1
GOPC	GO Pecny, Ondr	88.40	329	AMS	AMS	15 02 40.0	
	comp=Z,900nm,15.6s						
PRU	Pruhonice	88.45	329	AMS	AMS	15 04 50.0	
	comp=Z,1µm,16.7s						
TREC	Trest	88.53	328	AMS	AMS	15 02 10.0	
	comp=Z,1µm,16.5s						
ANMO	Albuquerque	88.89	50	P	P	14 18 51.5	+1.6
	baz=306						
KHC	Kasperske Hory	89.51	329	eP	P	14 18 52.1	-0.2
KHC				epP	sP	14 18 58.3	-0.2
KHC				AMS	AMS	15 02 30.0	
	comp=Z,1µm,19.2s						
KHC	Kasperske Hory	89.51	329	eP	P	14 18 52.1	-0.2
KHC				e		14 18 58.3	
KHC				MLR	MLR		
	comp=Z,1µm,19.2s						
GERES	GERESS Array B	89.66	329	P	P	14 18 51.6	-1.5
	comp=Z,0.2nm,0.3s,baz=32,slow=3.9,SNR=2.9						
GERES				LR	LR	15 04 14.2	
	comp=Z,995nm,18.1s,baz=54,slow=39						
E38A	The Farm, Brul	90.05	34	P	P	14 18 55.6	+0.7
	baz=315						
F38A	Pierce - Schro	90.34	34	P	P	14 18 58.3	+2.0
	baz=315						
SOKA	Soboth	90.62	327	pP	P	14 18 59.9	+2.2
	comp=Z,14nm,1.7s						
RETA	Reutte	91.99	330	epP	P	14 19 07.4	+3.5
	comp=Z,13nm,1.4s						
BFO	Black Forest	92.39	331	i P	P	14 19 07.1	+1.4
SCHQ	Schefferville	92.45	16	LR	LR	15 01 28.0	
	comp=Z,249nm,22.0s,baz=320,slow=36						
WMOK	Wichita Mounta	94.01	46	P	P	14 19 14.4	+0.9
	baz=310						
TX31	Lajitas Ar. Si	94.10	53	eP	P	14 19 16.0	+1.9
TXAR	Lajitas Array	94.10	53	P	P	14 19 15.1	+1.0
	comp=Z,3.1nm,0.8s,baz=296,slow=3.3,SNR=23						
TXAR				LR	LR	14 59 51.4	
	comp=Z,463nm,19.2s,baz=0.0,slow=34						
ABTX	Abilene, Hawle	94.80	48	eP	P	14 19 18.8	+1.7
SYO	Syowa Base	121.66	204	⇑ePP	PP	14 26 23.4	+2.4
TORD	Torodi Ar. Bea	123.20	312	PKP	PKPdf	14 24 52.1	-0.5
	comp=Z,0.6nm,0.6s,baz=14,slow=2.7,SNR=4.4						
TORD				PP	PP	14 26 31.8	0.0
	comp=Z,2.4nm,1.1s,baz=85,slow=5.3,SNR=5.8						
LPAZ	La Paz	149.11	72	PKPbc	PKPbc	14 25 45.5	+0.7
	comp=Z,4.2nm,0.7s,baz=293,slow=2.4,SNR=16						
PLCA	Paso Flores	150.91	122	PKPbc	PKPbc	14 25 48.2	+0.4
	comp=Z,5.3nm,0.8s,baz=237,slow=4.1,SNR=25						

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*KRSC **21** 14:25:42.4±1.7, 48°.16N×157°.52E, h8^{km}±27^{km}, ML4.4*
*IDC **21** 14:25:45.4±3.6, 47°.80N×156°.55E, h45^{km}±33^{km}, mb3.3/11, mb1 3.5/13, mb1mx3.4/42, mbtmp3.6/13, ML2.8/2, Error ellipse: s-maj=26.8km s-min=18.0km az=138.0*
ISC 21 14:25:37.2±1.1**, 48°.28N**±0°.06×**157°.6E**±0°.1**, h16**^{km}**, n33,** σ1ˢ**86**/37**, mb3.6**/11**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.60	338	eP	Pg	14 26 26.4	-0.7
SKR				eS	Sg	14 26 59.4	-1.4
PAU	Pauzhetka	3.23	351	eP	Pg	14 26 37.6	-1.6
PAU				eS	Sg	14 27 18.4	-2.6
KDTR	Khodutka, Kamc	3.54	4	eP	Pg	14 26 42.5	-2.6
KDTR				eS	Sg	14 27 27.5	-3.4
RUS	Russkaya	4.19	7	eP	Pb	14 26 52.1	+1.5
RUS				eS	Sb	14 27 44.2	+3.3
MTVR	Mutnovka	4.22	5	eP	Pb	14 26 52.5	+1.4
MTVR				eS	Sb	14 27 44.5	+2.6
KRMR	Karymshinskiy	4.56	4	eP	Pb	14 26 57.8	+0.9
KRMR				eS	Sb	14 27 53.3	+1.7
APC	Apacha	4.66	356	eP	Pb	14 26 59.5	+1.0
PET	Petropavlovsk	4.79	7	eP	Pb	14 27 00.7	-0.1
PET				eS	Sb	14 27 59.0	+0.9
DALK	Dalny	4.81	8	eP	Pb	14 27 00.9	-0.1
DALK				eS	Sb	14 27 58.9	+0.3
PETK	Petropavlovsk-	4.83	0	P	Pb	14 27 01.2	-0.3
	0.5nm,0.3s,baz=151,slow=17,SNR=21						
PETK				S	Sb	14 28 04.6	+5.3
	baz=172,slow=11,SNR=2.2						
UGLR	Uglovaya	4.99	8	eP	Pb	14 27 04.3	+0.1
AVH	Avacha	5.04	8	eP	Pb	14 27 04.9	-0.1
AVH				eS	Sb	14 28 05.7	+0.4
SMAR	Somma	5.04	8	eP	Pb	14 27 05.1	-0.1
SPN	Mys Shipunski	5.05	17	eP	Pb	14 27 05.8	+0.6
SPN				eS	Sb	14 28 07.5	+1.8
KOK	Koryaka	5.06	7	eP	Pb	14 27 05.5	+0.2
KRX	Arik	5.12	7	eP	Pb	14 27 06.4	-0.1
GNL	Ganaly	5.42	2	eP	Pb	14 27 10.9	-0.7
KBTR	Krutoberegovo	8.55	20	eP	Pn	14 27 52.4	+12
KLR	Kul'dur	17.07	283	P	Pn	14 29 33.5	-1.6
	0.1nm,0.3s,baz=70,slow=8.7,SNR=4.4						
KSRS	Korea Array	24.17	254	P	P	14 30 49.4	-3.2
	0.9nm,0.8s,baz=47,slow=12,SNR=3.1						
H11S1	WAKE ISLAND Hy	30.60	163	T	T	15 03 49.8	
	baz=346,slow=76,SNR=5.5						
H11S3	WAKE ISLAND Hy	30.61	163	T	T	15 03 47.2	
	baz=346,slow=76,SNR=6.6						
H11S2	WAKE ISLAND Hy	30.62	163	T	T	15 03 48.3	
	baz=346,slow=76,SNR=5.9						
SONM	Songino Array	33.73	289	P	P	14 32 18.5	+0.7
	0.5nm,0.8s,baz=76,slow=9.8,SNR=2.6						
ZALV	Zalesovo Beam	44.20	306	P	P	14 33 47.5	+2.3
	0.4nm,0.5s,baz=55,slow=8.4,SNR=2.8						
YKA	Yellowknife Ar	47.84	39	P	P	14 34 24.4	+11
	0.3nm,0.6s,baz=294,slow=7.2,SNR=4.5						
MKAR	Makanchi Array	48.94	298	P	P	14 34 23.9	+1.5
	0.5nm,0.5s,baz=62,slow=8.3,SNR=6.9						
CMAR	Chiang Mai Arr	55.69	259	P	P	14 35 12.2	-0.7
	0.4nm,0.6s,baz=46,slow=8.1,SNR=4.1						
FINES	FINESS Array B	63.91	336	P	P	14 36 13.7	+4.9
	1.2nm,0.6s,baz=38,slow=9.6,SNR=6.7						
WRA	Warramunga Arr	71.05	203	P	P	14 36 53.7	-0.6
	1.4nm,1.2s,baz=17,slow=6.6,SNR=3.3						
AKASG	Malin Array Be	71.92	328	P	P	14 37 01.8	+2.5
	0.2nm,0.3s,baz=26,slow=6.0,SNR=4.5						
TXAR	Lajitas Array	74.06	64	P	P	14 37 22.6	+10
	0.6nm,0.7s,baz=300,slow=4.9,SNR=5.5						
ASAR	Alice Springs	74.72	202	P	P	14 37 15.9	-0.2
	0.3nm,0.8s,baz=12,slow=5.0,SNR=4.6						

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*IDC **21** 14:31:36.6±3.7, 62°.21N×149°.98W, h0^{km}, mb3.4/3, mb1 3.8/5, mb1mx3.4/42, mbtmp3.4/5, ML3.0/2, Error ellipse: s-maj=63.9km s-min=19.6km az=84.0*
*ISCJB **21** 14:31:43.0±0.3, 62°.66N±0°.02×149°.87W±0°.05, h82^{km}±4^{km}, mb3.2/3, Error ellipse: s-maj=4.1km s-min=3.4km az=173.2*
*NEIC **21** 14:31:43.9±0.0, 62°.65N×149°.90W, h66^{km}, ML3.4(AEIC), After AEIC.*
ISC 21 14:31:44.0±0.9**, 62°.66N**±0°.03×**149°.88W**±0°.04**, h71**^{km}±8^{km}**, n73,** σ0ˢ**66**/81**, mb3.3**/3**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUR	Hurricane	0.33	19	P	Pn	14 31 55.5	0.0
HUR				S	Sn	14 32 04.1	+0.2
TRF	Thorofare Moun	0.81	347	P	Pn	14 32 00.0	-0.4
TRF				S	Sn	14 32 13.4	+0.8
RND	Reindeer	0.88	32	P	Pn	14 32 01.1	0.0
RND				S	Sn	14 32 13.9	+0.2
GHO	Glory Hole Cre	1.00	153	P	Pn	14 32 02.3	-0.3
GHO				S	Sn	14 32 17.7	+1.3
PPLA	Purkeypile	1.09	283	P	Pn	14 32 03.5	-0.3
PPLA				S	Sn	14 32 18.5	0.0
SML	Sawmill	1.12	139	P	Pn	14 32 03.8	-0.3
SML				S	Sn	14 32 20.4	+1.4
PMR	Palmer	1.13	162	P	Pn	14 32 03.7	-0.4
MCK	McKinley	1.15	21	P	Pn	14 32 04.9	+0.4
DHY	Denali Highway	1.22	69	P	Pn	14 32 05.2	-0.3
CAST	Castle Rocks	1.26	308	P	Pn	14 32 05.6	-0.2
SUA	Susitna One	1.27	199	P	Pn	14 32 05.8	-0.3
KNK	Knik Glacier	1.42	151	P	Pn	14 32 08.3	+0.4
SCM	Sheep Creek Mo	1.46	124	P	Pn	14 32 08.7	+0.3
BWN	Browne	1.52	7	P	Pn	14 32 09.8	+0.5
RC01	Rabbit Creek A	1.58	178	P	Pn	14 32 09.8	-0.2
CHUM	Lake Minchumin	1.65	319	P	Pn	14 32 11.3	+0.4
CHUM				S	Sn	14 32 30.9	-0.3
CRP	Crater Peak	1.77	219	P	Pn	14 32 12.8	+0.1
PTE	Portage	1.85	167	P	Pn	14 32 13.1	-0.4
SPWE	Spurr West	1.88	223	P	Pn	14 32 14.7	+0.5
NEA	Nenana	1.95	10	P	Pn	14 32 15.1	+0.1
PWL	Port Wells	1.95	157	P	Pn	14 32 14.6	-0.5
WRH	Wood River Hil	1.98	23	P	Pn	14 32 15.5	+0.1
PS10	TAPS Pump St10	2.02	66	P	Pn	14 32 16.8	+0.9
PAX	Paxson	2.05	79	P	Pn	14 32 17.1	+0.8
PS11	TAPS Pump St11	2.13	104	P	Pn	14 32 18.6	+1.2
SLKM	Skilak Lake	2.17	185	P	Pn	14 32 18.0	+0.1
HDA	Harding Lake	2.19	36	P	Pn	14 32 18.3	+0.2
KLU	Klutina	2.20	121	P	Pn	14 32 18.0	-0.4
HARP	HAARP	2.20	95	P	Pn	14 32 19.5	+1.1
JPK	Jack Peak	2.24	135	P	Pn	14 32 18.2	-0.7
PS08	TAPS Pump Stn8	2.33	35	P	Pn	14 32 20.2	+0.2
COLA	College	2.39	21	P	Pn	14 32 21.0	+0.2
MLY	Manley	2.41	351	P	Pn	14 32 21.5	+0.4
MDM	Murphy Dome	2.42	17	P	Pn	14 32 21.5	+0.3
DIV	Divide	2.48	127	P	Pn	14 32 21.5	-0.6
ILAR	Eielson Array	2.50	31	Pn	Pn	14 32 21.9	-0.4
	11nm,0.3s,baz=214,slow=14,SNR=332						
ILAR				Sn	Sn	14 32 50.5	-1.2
	26nm,0.3s,baz=215,slow=23,SNR=27						
RIDG	Independ'e Rid	2.52	62	P	Pn	14 32 24.1	+1.4
SEW	Seward	2.58	175	P	Pn	14 32 24.1	+0.8
RDWB	Redoubt West	2.60	214	P	Pn	14 32 24.1	+0.2
RED	Redoubt Volcan	2.65	213	P	Pn	14 32 25.0	+0.6
HIN	Hinchinbrook I	2.79	143	P	Pn	14 32 25.6	-0.7
DOT	Dot Lake	2.82	67	P	Pn	14 32 27.6	+1.0
TT01	Tatalina	2.83	278	P	Pn	14 32 26.1	-0.8
EYAK	Cordova Ski Ar	2.90	135	P	Pn	14 32 27.5	-0.2
BRLK	Bradley Lake	2.95	190	P	Pn	14 32 28.7	+0.2
SCRK	Sand Creek	2.97	61	P	Pn	14 32 29.5	+0.7
ILW	Iliamna West	3.05	212	P	Pn	14 32 30.4	+0.4
ILS	Iliamna Low So	3.12	211	P	Pn	14 32 31.5	+0.6
SVW2	Sparrevohn	3.13	242	P	Pn	14 32 30.2	-0.6
PS06	TAPS Pump Stn6	3.21	1	P	Pn	14 32 32.7	+0.8
PRP	Porcupine Dome	3.44	32	P	Pn	14 32 35.6	+0.4

MCARA	McCarthy VSAT	3.48	109	P	Pn	14 32 35.6	0.0
BCA3	Beaver Creek A	3.73	80	P	Pn	14 32 39.6	+0.5
IM3	Indian Mountai	3.73	335	P	Pn	14 32 39.5	+0.4
GCSA	Galena City Sc	3.75	307	P	Pn	14 32 40.7	+1.4
BALM	Baldy	3.92	111	P	Pn	14 32 41.0	-0.8
KIAG	Kiagna River	3.97	113	P	Pn	14 32 41.6	-0.9
PS05	TAPS Pump Stn5	4.18	356	P	Pn	14 32 46.3	+1.1
YUK2	White River	4.32	98	P	Pn	14 32 47.7	+0.5
EGAK	Eagle	4.42	57	P	Pn	14 32 49.1	+0.7
YUK3	Moose Creek	4.50	97	P	Pn	14 32 50.1	+0.4
COLD	Coldfoot	4.58	358	P	Pn	14 32 51.3	+0.6
DAWY	Dawson	4.92	69	P	Pn	14 32 55.9	+0.5
BM3	Burnt Mountain	5.27	23	P	Pn	14 33 00.8	+0.7
PCA	Pinnacle	5.29	115	P	Pn	14 33 00.1	-0.3
YUK4	Talbot Arm	5.45	99	P	Pn	14 33 03.0	+0.2
TOLK	Toolik Lake Re	6.00	1	P	Pn	14 33 11.6	+1.5
ANM	Nome	7.16	292	P	Pn	14 33 27.0	+1.1
INK	Inuvik	8.82	43	P	Pn	14 33 48.9	+0.4
YKA	Yellowknife Ar	16.13	75	Pn	Pn	14 35 24.9	-1.0
	0.0nm,0.3s,baz=282,slow=11,SNR=3.3						
PDAR	Pinedale Array	30.76	111	P	P	14 37 51.9	-0.6
	0.2nm,0.6s,baz=312,slow=9.5,SNR=3.2						
NVAR	Mina Array Bea	30.91	127	P	P	14 37 53.8	0.0
	0.5nm,0.7s,baz=308,slow=7.5,SNR=3.8						
TXAR	Lajitas Array	44.66	116	P	P	14 39 49.5	+0.1
	0.2nm,0.4s,baz=350,slow=10,SNR=2.7						

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*IDC **21** 14:43:59.3±1.6, 38°.30N×142°.66E, h0^{km}, mb3.2/3, mb1 3.4/5, mb1mx3.2/36, mbtmp3.2/5, ML2.5/2, Error ellipse: s-maj=38.6km s-min=25.6km az=82.0*

*ISCJB **21** 14:44:01.8±1.3, 38°.38N±0°.05×142°.35E±0°.07, h27^{km}±7^{km}, mb3.2/3, Error ellipse: s-maj=10.4km s-min=7.1km az=24.7*

*JMA **21** 14:44:02.3±0.1, 38°.37N×142°.34E, h28^{km}±2^{km}, M3.4*

ISC 21 14:44:00.9±2.0, **38°.31N**±0°.04×**142°.28E**±0°.08, **h10**^{km}±11^{km}, **n24**, σ**1^{s}.43**/28, **mb3.3**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.64	270	P	Pn	14 44 15.2	-0.9
JIKH				eS	Sb	14 44 24.3	+1.1
JIO	Ouri	0.75	281	P	Pn	14 44 16.9	-0.6
JIO				eS	Sg	14 44 26.5	+1.4
JKMT	Kesennumamotoy	0.81	308	P	Pb	14 44 17.2	+0.2
JKMT				eS	Sg	14 44 27.2	+0.3
OFUJ	Ofunato	0.90	328	P	Pg	14 44 18.5	+0.2
JMK	Ichinoseki	1.05	308	P	Pg	14 44 21.1	0.0
JMK				eS	Sg	14 44 34.3	-0.4
JMM	Marumori	1.26	250	P	Pb	14 44 24.7	0.0
JMM				eS	Sg	14 44 40.8	-0.6
JOU	Okura	1.27	273	P	Pg	14 44 25.8	+0.4
JOU				eS	Sg	14 44 42.2	+0.3
JOM	Ohasama	1.39	327	P	Pn	14 44 26.1	-0.3
JOM				eS	Sn	14 44 41.4	-3.4
JFK	Kawauchi	1.46	230	P	Pg	14 44 27.4	-1.5
JFK				eS	Sb	14 44 45.4	-1.4
JYK	Kaneyama	1.62	292	P	Pb	14 44 30.8	-0.1
JFT	Otama	1.73	243	P	Pg	14 44 32.6	-1.5
JFT				eS	Sb	14 44 54.6	0.0
JYS	Shirataka	1.75	268	P	Pb	14 44 32.6	-0.5
MJAR	Matsushiro Arr	3.69	243	Pn	Pn	14 45 00.3	+2.2
	0.2nm,0.3s,baz=62,slow=13,SNR=8.9						
MJAR				Sn	Sb	14 45 48.9	-2.2
	0.1nm,0.3s,baz=65,slow=25,SNR=3.5						
MAT	Matsushiro	3.69	243	P	Pn	14 45 01.2	+3.1
ASAJ	Asahikawa	5.80	2	Pn	Pn	14 45 26.2	-0.7
	0.2nm,0.3s,baz=190,slow=17,SNR=3.1						
H11N2	WAKE ISLAND Hy	28.25	124	T	T	15 19 37.7	
	baz=316,slow=75,SNR=61						
H11N1	WAKE ISLAND Hy	28.26	124	T	T	15 19 42.7	
	baz=316,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	28.27	124	T	T	15 19 45.5	
	baz=316,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	29.01	126	T	T	15 20 38.7	
	baz=323						
H11S3	WAKE ISLAND Hy	29.01	126	T	T	15 20 38.8	
	baz=323						
H11S2	WAKE ISLAND Hy	29.03	126	T	T	15 20 39.9	
	baz=323						
MKAR	Makanchi Array	44.04	301	P	P	14 52 10.9	+2.2
	0.2nm,0.7s,baz=81,slow=8.9,SNR=2.4						
WRA	Warramunga Arr	58.42	189	P	P	14 53 56.9	+0.1
	0.4nm,0.8s,baz=7.1,slow=7.0,SNR=4.6						
ASAR	Alice Springs	62.15	189	P	P	14 54 22.7	+0.4
	0.2nm,0.8s,baz=26,slow=6.4,SNR=2.9						

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*NNC **21** 14:46:30.2±1.0, 42°.74N×76°.22E, h11^{km}±14^{km}, mb2.6, mpv2.0, Error ellipse: s-maj=12.5km s-min=3.1km az=171.0*

*ISCJB **21** 14:46:31.3±0.4, 42°.72N±0°.03×76°.10E±0°.03, h22^{km}±6^{km}, Error ellipse: s-maj=4.8km s-min=3.9km az=24.2*

*KRNET **21** 14:46:31.9±0.1, 42°.55N×75°.93E, h30^{km}, mb1.9*

*SOME **21** 14:46:32.1, 42°.68N×76°.00E, h10^{km}*

ISC 21 14:46:29.8±1.0, **42°.77N**±0°.03×**76°.08E**±0°.02, **h15**^{km}±9^{km}, **n20**, σ**1^{s}.08**/39, **20C-5D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KST	Kastek	0.28	342	P	Pn	14 46 39.5	-0.1
	3.7nm,0.2s						
KST				S	Sn	14 46 45.0	-0.7
	7.8nm,0.6s						
KST	Kastek	0.28	342	eP	Pn	14 46 39.3	-0.3
	3.7nm,0.2s						
KST				⇓iS	Sn	14 46 45.0	-0.7
	7.0nm,0.3s						
BOOM	Boomskoye usch	0.30	200	⇓iP	Pb	14 46 38.0	+1.0
	baz=67						
BOOM				⇓iS	Sb	14 46 42.2	+0.4
	baz=67						
TKM2	Tokmak 2	0.39	293	⇑P	Pn	14 46 40.7	-0.3
	0.1nm,0.3s						
TKM2				⇑S	Sn	14 46 48.6	+0.3
	0.9nm,0.3s						
TKM2	Tokmak 2	0.39	293	⇑iP	Pn	14 46 42.1	+1.1
	baz=27						
TKM2				⇑iS	Sn	14 46 49.0	+0.7
	baz=27						
IZV	Izvestkoviy	0.47	56	P	Pb	14 46 39.9	0.0
	2.2nm,0.1s						
IZV				S	Sb	14 46 46.0	-0.7
	6.5nm,0.3s						
IZV	Izvestkoviy	0.47	56	eP	Pb	14 46 39.9	0.0
	2.2nm,0.1s						
IZV				eS	Sb	14 46 46.0	-0.7
	6.5nm,0.3s						
DGS	Degeres	0.52	334	P	Pn	14 46 42.8	0.0
	0.5nm,0.1s						
DGS				S	Sn	14 46 51.1	-0.4
	3.1nm,0.2s						
DGS	Degeres	0.52	334	eP	Pn	14 46 42.8	0.0
	0.5nm,0.1s						
DGS				eS	Sn	14 46 51.1	-0.4
	3.1nm,0.2s						
ULHL	Ulahol	0.54	167	⇑iP	Pg	14 46 40.8	+0.3
	baz=42						
ULHL				⇑iS	Sg	14 46 46.8	-0.9
	baz=42						
TNSS	Tian-Shan	0.69	67	P	Pg	14 46 43.2	-0.1
	0.6nm,0.1s						
TNSS				S	Sg	14 46 51.7	-0.8
	2.7nm,0.3s						
TNSS	Tian-Shan	0.69	67	eP	Pg	14 46 43.2	-0.1
	0.8nm,0.2s						
TNSS				eS	Sg	14 46 51.7	-0.8
	2.7nm,0.3s						
KBK	Karagaybulak	0.84	262	⇑iP	Pb	14 46 46.4	+0.2
	baz=79						
KBK				⇑iS	Sb	14 46 56.7	-0.7
	baz=79						
KZA	Kyzart	0.93	222	⇑iP	Pb	14 46 45.7	-2.1
	baz=27						
KZA				⇑iS	Sb	14 46 55.8	-4.3
	baz=27						
CHMS	Chumysh	1.00	283	⇑iP	Pn	14 46 50.1	+0.7
	baz=98						
CHMS				⇑iS	Sb	14 47 03.0	+1.1
	baz=98						
KDJ	Kajisay	1.04	128	⇑iP	Pn	14 46 51.4	+1.4
	baz=14						
KDJ				⇑iS	Sn	14 47 05.1	+0.8
	baz=14						
USP	Ospenovka	1.26	294	⇑iP	Pg	14 46 55.1	+1.1
	baz=5.0						
USP				⇑iS	Sg	14 47 11.7	+1.2
	baz=5.0						
TARG	Taragay, Kyrgy	1.65	129	⇑iP	Pb	14 47 00.3	+0.1
	baz=20						
TARG				⇑iS	Sb	14 47 20.9	0.0
	baz=20						
EKS2	Erkin-Say	1.70	267	⇓iP	Pn	14 46 59.8	+0.8
	baz=75						
EKS2				⇓iS	Sn	14 47 20.0	-0.6
	baz=75						
PDGK	Podgornoye	2.56	76	⇑Pg	Pb	14 47 16.7	+1.3
	1.0nm,0.7s						
PDGK				⇑Lg	Lg	14 47 49.3	
	2.0nm,0.8s						

IDC 21 15:17:23.6±5.8, **21°.90N**×**93°.17E**, **h92**^{km}±47^{km}, **mb2.9**/3, **mb1 3.1**/4, **mb1mx2.8**/47, **mbtmp3.2**/4, **Error ellipse: s-maj=94.0km s-min=25.3km az=61.0**, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	3.84	342	eP	Pn	15 18 15.0	-5.6
CMAR	Chiang Mai Arr	6.42	121	P	Pn	15 18 55.6	0.0
	0.2nm,0.3s,baz=297,slow=13,SNR=9.7						
MKAR	Makanchi Array	26.36	343	P	P	15 22 51.0	0.0
	0.3nm,0.7s,baz=157,slow=7.7,SNR=3.5						
WRA	Warramunga Arr	57.86	133	P	P	15 27 05.3	-0.8
	0.3nm,0.8s,baz=324,slow=7.2,SNR=3.9						
ASAR	Alice Springs	60.19	136	P	P	15 27 23.1	+0.9
	0.2nm,0.6s,baz=318,slow=7.0,SNR=5.3						

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*ISK **21** 15:21:05.9, 41°.04N×43°.03E, h8^{km}, ML2.8/9*

*ISCJB **21** 15:21:06.8±0.5, 40°.97N±0°.02×43°.04E±0°.02, h8^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=2.9km az=172.6*

*DDA **21** 15:21:06.0, 40°.95N×43°.04E, h3^{km}±2^{km}, ML3.2*

*TIF **21** 15:21:06.1, 40°.94N×43°.03E, h21^{km}±3^{km}*

ISC 21 15:21:06.2±1.1, **40°.98N**±0°.02×**43°.05E**±0°.02, **h8**^{km}±11^{km}, **n33**, σ**0^{s}.97**/52, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.50	55	P	Pb	15 21 17.0	-0.4
BGD				S	Sb	15 21 24.7	-0.3
EAK	Akyaka	0.51	125	i P	Pb	15 21 17.0	-0.5
EAK				i S	Sg	15 21 23.4	+0.5
EAK				IAML_P			
	comp=Z,10μm,0.2s						
EPOS	Posof	0.58	335	i P	Pb	15 21 18.9	+0.2
EPOS				i S	Sb	15 21 27.4	+0.2
DIGO	Kars	0.61	156	i P	Pg	15 21 18.1	0.0
DIGO				i S	Sb	15 21 27.1	-1.1
DIGO				IAML_P			
	comp=Z,14μm,0.2s						
SENK	Senkaya-Erzuru	0.68	232	PG	Pb	15 21 19.6	-0.8
SENK				SG	Sb	15 21 30.2	+0.2
DAGI	Agillar	0.87	277	i P	Pn	15 21 24.0	-0.8
DAGI				i S	Sn	15 21 36.1	-1.6
ARTV	Artvin	0.87	284	i P	Pb	15 21 23.3	-0.4
ARTV				i S	Sb	15 21 35.4	-0.3
TRLG	Trialeti	0.97	54	P	Pg	15 21 24.9	+0.1
TRLG				S	Sb	15 21 39.1	+0.7
DDEM	Demirkent	0.99	265	i P	Pn	15 21 25.7	-0.8
DDEM				i S	Sb	15 21 38.5	-0.4
DBAD	Bademkaya	1.03	273	i P	Pn	15 21 26.6	-0.4
DBAD				i S	Sb	15 21 39.8	-0.2
KZRT	Kazreti	1.10	68	P	Pg	15 21 26.9	-0.4
KZRT				S	Sg	15 21 41.2	-0.3
BCA	Borcka	1.17	294	PN	Pb	15 21 28.1	-0.7
BCA				SN	Sb	15 21 44.1	0.0
BATM	Batumi	1.20	302	PN	Pb	15 21 28.5	-0.7
BATM				SN	Sg	15 21 44.9	+0.1
BATM	Batumi	1.20	302	P	Pb	15 21 28.7	-0.5
BATM				S	Sg	15 21 44.8	0.0
HOMI	Horasan	1.28	223	i P	Pg	15 21 30.8	+0.1
HOMI				i S	Sn	15 21 50.5	+2.5
KOPR	Koprukoy-ERZUR	1.34	223	PN	Pg	15 21 32.0	0.0
TASB	TASBURUN-IGDIR	1.34	137	PN	Pg	15 21 32.3	+0.3
IGDI	IGDIR	1.36	144	i P	Pn	15 21 30.6	-0.9
AGRB	Hanur-Agry	1.40	182	PN	Pg	15 21 33.1	0.0
TBLG	Delisi	1.48	59	PN	Pn	15 21 32.9	-0.2
TBLG	Delisi	1.48	59	P	Pb	15 21 34.1	+0.2
TBLG				S	Sg	15 21 54.2	+0.6
BTNK	Botanikuri	1.49	61	P	Pb	15 21 34.3	+0.1
GNI	Garni	1.53	122	PN	Pb	15 21 34.9	0.0
TUTA	Tutak	1.59	187	i P	Pg	15 21 36.3	-0.3
CHOM	Cayeli-Rize	1.74	275	PN	Pn	15 21 36.8	+0.1
GUDG	Gudauri	1.83	35	P	Pg	15 21 41.1	-0.2
GUDG				S	Sg	15 22 05.5	+0.5
KOPT	Kop Dagi	2.17	245	i P	Pg	15 21 47.7	-0.1
BAYB	BAYBURT	2.25	252	i P	Pb	15 21 47.3	+0.2
BAYB				i S	Sg	15 22 16.8	-1.5
BAYB				IAML_P			
	comp=Z,441nm,0.2s						
BAYT	Aydıntepe-Bayb	2.29	256	PN	Pn	15 21 44.3	-0.1
KELT	Kelkit	3.01	255	i P	Pb	15 22 00.4	+0.2
KELT				i S	Sb	15 22 38.0	+0.9
ELZG	Elazig	4.00	233	i P	Pg	15 22 19.8	-2.9
ELZG				i S	Sn	15 22 21.5	-34
HEKM	Malatya_Hekimh	4.44	243	i P	Pg	15 22 34.5	+3.3
AKCD	Akcadag	4.78	238	i P	Pb	15 22 32.7	+2.4
AKCD				i S	Sn	15 22 44.4	-30

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*IDC **21** 15:22:53.1±3.5, 36°.22N×71°.31E, h94^{km}±30^{km}, mb3.2/6, mb1 3.4/12, mb1mx3.2/57, mbtmp3.7/12, Error ellipse: s-maj=29.3km s-min=20.8km az=174.0*

*ISCJB **21** 15:22:55.0±0.3, 36°.44N±0°.03×71°.33E±0°.05, h114^{km}, mb3.6/6, Error ellipse: s-maj=5.7km s-min=3.4km az=153.2*

*NNC **21** 15:23:01.3±3.4, 37°.11N×70°.82E, h10^{km}±35^{km}, mb4.2, mpv4.2, Error ellipse: s-maj=36.3km s-min=12.4km az=164.0*

ISC 21 15:22:55.1±0.5, **36°.44N**±0°.05×**71°.29E**±0°.05, **h114**^{km}, **n57**, σ**2^{s}.68**/69, **mb3.4**/6, **5C-10D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.66	169	P	Pn	15 23 42.7	+5.7
CEP				S	Sn	15 24 15.0	+5.9
CHCP	Chirah Chowk	3.22	149	P	Pn	15 23 49.6	+5.5
THW	Thamme Wali	3.66	174	P	Pn	15 23 55.2	+5.2
SFK	Sufi-Kurgan	3.97	25	⇑P	Pn	15 23 57.7	+3.4
	47nm,0.4s						
SFK				⇓S	Sn	15 24 41.2	+1.1
	34nm,0.2s						
SARP	Sargodha	4.65	165	P	Pn	15 24 07.1	+3.8
DHRM	DHARAMSHALA	5.89	134	eP	Pn	15 24 23.6	+3.4
DHRM				eS	Sn	15 25 27.0	+0.4
DHRM				IAML		15 25 30.1	
	comp=N,325nm,0.3s						
DHRM				IAML		15 25 30.2	
	comp=E,373nm,1.6s						
AML	Almayashu	5.98	17	P	Pn	15 24 23.1	+1.5
	SNR=52						
MNAS	Manas	6.11	8	⇓P	Pn	15 24 24.4	+1.4
	comp=E,8.6nm,0.6s						
MNAS				⇑S	Sn	15 25 28.0	-3.7
	comp=E,53nm,0.6s						
UCH	Uchtor	6.29	22	P	Pn	15 24 27.4	+1.6
	SNR=16						
KZA	Kyzart	6.41	27	P	Pn	15 24 28.7	+1.3
	SNR=17						
EKS2	Erkin-Say	6.50	16	P	Pn	15 24 30.0	+1.6
	SNR=14						
AAK	Ala-Archa	6.66	21	P	Pn	15 24 32.5	+1.9
	SNR=8.6						
AAK	Ala-Archa	6.66	21	⇓P	Pn	15 24 32.3	+1.7
	comp=E,4.5nm,0.4s						
AAK				⇓S	Sn	15 25 42.4	-2.7
	comp=E,28nm,0.6s						
AAK	Ala-Archa	6.66	21	P	Pn	15 24 31.9	+1.3
	comp=E,2.9nm,0.3s,baz=154,slow=4.0,SNR=32						
AAK				S	Sn	15 25 42.3	-2.9
	comp=E,3.5nm,0.3s,baz=109,slow=23,SNR=17						
KK31	Karatay Array	6.68	355	⇓P	Pn	15 24 32.0	+1.4
	comp=E,36nm,0.4s,baz=186,slow=15,SNR=327						
KK31				S	Sn	15 25 40.7	-4.5
	comp=E,11nm,0.3s,baz=185,slow=24,SNR=7.7						
CHMS	Chumysh	7.07	21	P	Pn	15 24 37.5	+1.6
	SNR=11						
SMLA	Simla	7.21	136	eP	Pn	15 24 41.0	+3.1
SMLA				eS	Sn	15 25 56.0	-2.3
SMLA				IAmb	IAmb	15 26 00.9	
SMLA				IAmb	IAmb	15 26 02.1	
	comp=E,150nm,0.8s						
USP	Ospenovka	7.25	19	P	Pn	15 24 40.1	+1.7
	SNR=8.0						
TKM2	Tokmak 2	7.27	26	P	Pn	15 24 40.3	+1.5
	SNR=9.2						
TKM2	Tokmak 2	7.27	26	⇑P	Pn	15 24 40.2	+1.3
	comp=E,4.7nm,0.7s						
TKM2				⇑S	Sn	15 26 00.1	+0.1
	comp=E,8.4nm,0.8s						
KKR	Kurukshetra	7.95	143	eS	Sn	15 26 13.0	-3.3
DDI	Dehra Dun	8.32	135	eP	Pn	15 24 56.0	+3.0
DDI				ex	x	15 26 19.3	
DDI				IAML		15 26 28.4	
	comp=N,153nm,0.2s						
DDI				IAML		15 26 28.6	
	comp=E,89nm,0.2s						
JOSI	Joshimath	9.06	128	eP	Pn	15 25 05.9	+2.7
JOSI				eS	Sn	15 26 41.2	-2.3
JOSI				IAML		15 26 44.8	
	comp=N,81nm,0.5s						
JOSI				IAML		15 26 45.4	
	comp=E,63nm,0.3s						
KHET	Khetri	9.18	154	eP	Pn	15 25 05.3	+0.8
KHET				eS	Sn	15 26 40.7	-5.4
KHET				IAML		15 26 44.4	
	comp=N,27nm,0.3s						
KHET				IAML		15 26 44.6	
	comp=E,31nm,0.9s						
KALG	Kalgarh	9.33	136	eS	Sn	15 26 45.7	-4.0
KUDL	Kundal	9.37	151	eP	Pn	15 25 07.5	+0.4
KUDL				eS	Sn	15 26 43.1	-7.6
KUDL				IAML		15 26 50.1	
	comp=N,7.9nm,0.4s						
SONA	Sohna	9.52	147	eS	Sn	15 26 48.9	-5.5
SONA				IAML		15 26 52.5	
	comp=N,27nm,0.8s						
SONA				IAML		15 26 53.7	
	comp=E,38nm,0.1s						
GEYT	Alibeck	10.61	282	P	Pn	15 25 23.9	0.0
	comp=E,2.3nm,0.3s,baz=85,slow=9.4,SNR=30						
GEYT				S	Sn	15 27 16.6	-4.2
	comp=E,0.9nm,0.3s,baz=125,slow=18,SNR=3.8						
GYA0B	ALIBECK ARRAY	10.61	282	⇓P	Pn	15 25 24.6	+0.7
	comp=E,4.4nm,0.3s						
GYA0B				⇓S	Sn	15 27 23.7	+2.9
	comp=E,24nm,0.6s						
PYUN	Piuthan	12.92	127	eP	Pn	15 25 54.2	-0.6
	comp=E,21nm,0.3s						
MK31	Makanchi Array	13.20	35	P	P	15 26 05.5	+1.7
	comp=E,0.2nm,0.3s,baz=206,slow=10,SNR=6.4						
MKAR	Makanchi Array	13.20	35	P	Pn	15 25 58.6	+0.5
	comp=E,0.1nm,0.3s,baz=225,slow=12,SNR=4.3						
DANN	Dangsing	13.26	124	eP	Pn	15 25 58.9	-0.4
	comp=E,34nm,0.4s						
KOLN	Koldanda	13.54	126	eP	Pn	15 26 02.2	-0.6
	comp=E,23nm,0.5s						
BHPL	Bhopal	14.19	156	eP	P	15 26 12.6	-2.3
DMN	Daman	14.65	123	eP	Pn	15 26 16.9	-0.1
	comp=E,23nm,0.4s						
KKN	Kakani	14.65	122	eP	Pn	15 26 16.6	-0.4
	comp=E,19nm,0.4s						
PKIN	Phulchoki	14.87	122	eP	Pn	15 26 19.6	-0.2
	comp=E,23nm,0.4s						
PKI	Pulchoki	14.88	122	eP	Pn	15 26 19.7	-0.3
	comp=E,20nm,0.5s						
GUN	Gumba	14.99	120	eP	Pn	15 26 21.3	-0.1
	comp=E,20nm,0.3s						
KURBB	Kurchatov Arra	15.10	18	P	Pn	15 26 22.9	+0.6
	comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=2.5						
AB31	Akbulak array	15.25	331	⇓P	Pn	15 26 24.3	+0.2
	comp=E,1.5nm,0.3s,baz=157,slow=22,SNR=2.6						
AB31				S	Sn	15 29 06.1	-6.5
	comp=E,3.0nm,0.4s,baz=151,slow=24,SNR=6.9						
JIRN	Jiri	15.36	121	eP	Pn	15 26 25.9	-0.2
	comp=E,44nm,0.3s						
RAMN	Ramite	16.09	122	eP	P	15 26 34.8	-1.4
	comp=E,18nm,0.4s						
BVA0	Borovoye Array	16.59	358	⇑P	P	15 26 41.2	-0.1
	comp=E,0.6nm,0.5s,baz=167,slow=9.9,SNR=7.1						
BVAR	Borovoye Array	16.59	358	P	Pn	15 26 40.6	-0.1
	comp=E,0.3nm,0.3s,baz=159,slow=12,SNR=8.5						
AKTO	Aktyubinsk	16.95	330	⇓P	P	15 26 47.6	+2.4
	comp=E,3.4nm,0.6s						
AKTO				⇓S	Sn	15 29 47.5	-6.0
	comp=E,9.4nm,1.1s						
AKTO	Aktyubinsk	16.95	330	P	P	15 26 45.5	+0.3
	comp=E,0.8nm,0.3s,baz=138,slow=11,SNR=14						
AKTO				S	Sn	15 29 40.8	-13
	comp=E,0.1nm,0.3s,baz=180,slow=19,SNR=2.9						
ZALV	Zalesovo Beam	19.87	24	P	P	15 27 18.1	+1.0
	comp=E,1.7nm,0.3s,baz=219,slow=10,SNR=8.1						
HYB	Hyderabad	20.01	159	eP	Pn	15 27 24.2	+2.4
AKASG	Malin Array Be	33.16	309	P	P	15 29 23.2	+2.7
	comp=E,0.2nm,0.3s,baz=81,slow=7.9,SNR=4.0						
FINES	FINESS Array B	37.66	326	P	P	15 30 01.1	+2.3
	comp=E,0.5nm,0.4s,baz=117,slow=11,SNR=3.4						
NB2	NORSAR Subarra	44.56	323	P	P	15 30 57.0	+1.6
	comp=Z,0.5nm,0.4s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.56	323	P	P	15 30 57.2	+1.8
	comp=Z,17nm,0.4s,baz=97,slow=7.7,SNR=6.0						
TORD	Torodi Ar. Bea	65.95	269	P	P	15 33 28.2	-1.1
	comp=Z,0.2nm,0.4s,baz=64,slow=3.7,SNR=3.1						
YKA	Yellowknife Ar	81.29	3	P	P	15 34 59.6	+1.3
	comp=Z,0.2nm,0.4s,baz=350,slow=5.2,SNR=4.3						
WRA	Warramunga Arr	81.76	122	P	P	15 35 01.6	+0.1
	comp=Z,0.2nm,0.4s,baz=327,slow=4.9,SNR=3.9						

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*NIED **21** 15:34:00, 38°.30N×142°.00E, h62^{km}, Mw4.5 Best double couple: $M_0$5.41000×10^{15} NP1:ϕ_s347.00000°, δ32.00000°, λ85.00000°. NP2:ϕ_s173.00000°, δ58.00000°, λ93.00000°.*

*MOS **21** 15:34:07.9±1.1, 38°.36N×141°.93E, h59^{km}, mb5.0/81, Error ellipse: s-maj=6.1km s-min=4.2km az=100.1*

*BJI **21** 15:34:08.7, 38°.16N×141°.74E, h69^{km}, mB4.9/27, mb4.8/50, Ms4.4/13, Ms7 4.2/13*

*ISCJB **21** 15:34:09.4±0.3, 38°.28N±0°.02×141°.87E±0°.03, h71^{km}±2^{km}, mb4.7/225, Error ellipse: s-maj=4.0km s-min=3.0km az=140.5*

*IDC **21** 15:34:10.1±0.5, 38°.29N×141°.84E, h66^{km}±4^{km}, mb4.3/25, mb1 4.5/33, mb1mx4.4/45, mbtmp4.6/33, MS3.3/9, Ms1 3.3/9, ms1mx3.1/31, Error ellipse: s-maj=10.9km s-min=9.4km az=102.0*

*NEIC **21** 15:34:10.7±0.4, 38°.28N×141°.86E, h70^{km}±3^{km}, mb4.8/166, Error ellipse: s-maj=3.2km s-min=2.4km az=136.0*

NEIC Felt [III] at Fukushima and Sendai. Also felt at Ichinoseki, Ishinomaki, Iwaki, Kitakami, Morioka, Murayama, Natori, Osaki-shi and Wakuya. Recorded [3 JMA] in Iwate and Miyagi.

*JMA **21** 15:34:10.2, 38°.31N×141°.91E, h64^{km}±1^{km}, M4.7 Broadband fault plane solution: P waves. NP1: ϕ_s197.00000°, δ52.00000°, λ117.00000°. NP2: ϕ_s337.00000°, δ45.00000°, λ60.00000°. Principal axes: T Plg69.0000°, Azm169.0000°; N Plg21.0000°, Azm360.0000°; P Plg4.0000°, Azm268.0000°;*

JMA Felt III J1.

ISC 21 15:34:09.2±0.4, **38°.32N**±0°.03×**141°.97E**±0°.04, **h59**^{km}±3^{km}, **h58**^{km}**:pP-P**, **n453**, σ**1^{s}.29**/506, **mb4.8**/235, **MS3.9**/8, **21C-19D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.40	269	P	Pn	15 34 21.1	+1.1
JIKH				S	Sn	15 34 28.9	+1.1
JIO	Ouri	0.51	286	⇑P	Pn	15 34 22.2	+1.1
JIO				S	Sn	15 34 30.7	+1.0
JKMT	Kesennumamotoy	0.62	322	P	Pn	15 34 23.8	+1.3
JKMT				S	Sn	15 34 33.5	+1.4
OFUJ	Ofunato	0.80	343	⇑P	Pn	15 34 25.9	+1.3
OFUJ				S	Sn	15 34 37.3	+1.5
JMK	Ichinoseki	0.86	317	⇑P	Pn	15 34 26.7	+1.3
JMK				S	Sn	15 34 38.6	+1.3
JOFO	Osakifurukawao	0.88	289	P	Pn	15 34 26.6	+1.0
JOFO				eS	Sn	15 34 38.6	+1.0
JOU	Okura	1.03	273	⇓P	Pn	15 34 28.3	+0.7
JOU				S	Sn	15 34 41.7	+0.5

JMM	**Marumori**	1.03	244	⇓P	**Pn**	**15 34 27.8**	**+0.2**
JMM				S	**Sn**	**15 34 40.8**	**-0.4**
JOM	**Ohasama**	1.27	336	⇑P	**Pn**	**15 34 32.0**	**+1.3**
JOM				*e*S	**Sn**	**15 34 48.4**	**+1.6**
JFK	**Kawauchi**	1.29	223	⇓P	**Pn**	**15 34 31.3**	**+0.3**
JFK				*e*S	**Sn**	**15 34 46.8**	**-0.5**
JYK	**Kaneyama**	1.40	296	⇓P	**Pn**	**15 34 33.4**	**+0.9**
JRG	**Rokugo**	1.50	316	P	**Pn**	**15 34 35.1**	**+1.3**
JRG				*e*S	**Sn**	**15 34 54.4**	**+2.0**
JYS	**Shirataka**	1.50	267	⇓P	**Pn**	**15 34 34.7**	**+0.8**
JYS				S	**Sn**	**15 34 53.5**	**+1.1**
JFT	**Otama**	1.52	239	⇓P	**Pn**	**15 34 35.0**	**+0.9**
JFT				S	**Sn**	**15 34 53.4**	**+0.5**
JYA	**Atsumi**	1.79	279	⇓P	**Pn**	**15 34 38.6**	**+0.8**
JYA				*e*S	**Sn**	**15 35 00.2**	**+0.7**
MJAR	**Matsushiro Arr**	3.48	240	P	**Pn**	**15 35 02.1**	**+1.2**
	16nm,0.3s,baz=56,slow=8.4,SNR=696						
MJAR				LR	LR	15 36 41.4	
	comp=Z,672nm,21.5s,baz=65,slow=45						
MAJO	**Matsushiro**	3.48	241	*e*Pn	**Pn**	**15 35 02.5**	**+1.6**
MAJO				*e*		15 36 41.4	
MAJO	**Matsushiro**	3.48	241	*e*P	**Pn**	**15 35 02.5**	**+1.6**
MAT	**Matsushiro**	3.48	241	P	**Pn**	**15 35 02.9**	**+2.0**
MAT				S	**Sn**	**15 35 44.6**	**+3.8**
MJB9	**Matsu-Tunnel**	3.48	241	*e*Pn	**Pn**	**15 35 02.8**	**+1.8**
ERM	**Erimo**	3.80	13	*e*Pn	**Pn**	**15 35 05.7**	**+0.4**
ERM				*e*Sn	**Sn**	**15 35 44.8**	**-3.9**
ERM	**Erimo**	3.80	13	*e*P	**Pn**	**15 35 05.7**	**+0.4**
INU	**Inuyama**	4.96	235	*e*Pn	**Pn**	**15 35 22.2**	**+1.1**
JHJ2	**Mitsune**	5.48	199	*e*Pn	**Pn**	**15 35 27.0**	**-1.3**
JHJ2				*e*Sn	**Sn**	**15 36 25.2**	**-4.8**
JHJ	**Hachijo jima 2**	5.48	200	P	**Pn**	**15 35 27.2**	**-1.2**
	91nm,0.3s,baz=335,slow=18,SNR=17						
JHJ				S	**Sn**	**15 36 24.4**	**-5.7**
	260nm,0.3s,baz=46,slow=22,SNR=19						
ASAJ	**Asahikawa**	5.81	4	P	**Pn**	**15 35 33.4**	**+0.6**
	8.2nm,0.3s,baz=222,slow=9.8,SNR=80						
ASAJ				S	**Sn**	**15 36 35.3**	**-2.7**
	11nm,0.3s,baz=122,slow=31,SNR=6.7						
ASAJ				LR	LR	15 37 56.5	
	comp=Z,164nm,20.3s,baz=170,slow=39						
LAGR	**Lagunnoye**	6.41	25	⇓*i*P	**Pn**	**15 35 40.0**	**-1.0**
LAGR				*e*S	**Sn**	**15 36 48.2**	**-4.5**
LAGR				pmax	pmax		
	comp=N,47nm,0.2s						
LAGR				pmax	pmax		
	comp=E,153nm,0.2s						
LAGR				pmax	pmax		
	comp=Z,518nm,0.2s						
LAGR				smax	smax		
	comp=N,2µm,0.5s						
LAGR				smax	smax		
	comp=E,2µm,0.6s						
YUK	**Yuzh-Kuril'sk**	6.42	26	⇓*i*P	**Pn**	**15 35 39.9**	**-1.2**
YUK				*e*S	**Sn**	**15 36 48.1**	**-4.8**
SHO	**Shikotan**	6.65	32	*d* *i*P	Pn	15 35 37.8	-6.4
TEY	**Ternei**	7.82	331	⇓*e*P	Pn	15 36 07.9	+7.7
TEY				pmax	pmax		
	comp=N,80nm,0.7s						
TEY				pmax	pmax		
	comp=Z,80nm,0.8s						
TEY				pmax	pmax		
	comp=E,50nm,0.7s						
KUR	**Kuril'sk**	8.19	31	⇑*i*P	**Pn**	**15 36 05.0**	**-0.3**
KUR				*e*S	**Sn**	**15 37 31.6**	**-4.8**
YSS	**Yuzh-Sakhalins**	8.65	4	*e*Pn	**Pn**	**15 36 12.3**	**+0.8**
YSS	**Yuzh-Sakhalins**	8.65	4	*e*P	**Pn**	**15 36 12.3**	**+0.8**
YSS				*e*S	**Sn**	**15 37 47.4**	**-0.2**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
VLA	**Vladivostok**	9.03	305	*i* P	**Pn**	**15 36 18.5**	**+1.7**
MSHR	**Mys Shultsa**	9.27	301	*d* *i*P	**Pn**	**15 36 21.4**	**+1.3**
USA0B	**Ussuriysk Arra**	9.53	311	*e*Pn	**Pn**	**15 36 25.5**	**+1.8**
USRK	**Ussuriysk Ar.**	9.53	311	P	**Pn**	**15 36 25.4**	**+1.8**
	comp=Z,4.7nm,0.3s,baz=120,slow=14,SNR=90						
USRK				S	**Sn**	**15 38 09.9**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=120,slow=23,SNR=3.2						
JNU	**Nakatsue**	10.40	243	P	**Pn**	**15 36 36.2**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=94,slow=6.5,SNR=24						
JNU				LR	LR	15 40 40.7	
	comp=Z,411nm,21.3s,baz=31,slow=38						
KSRS	**Korea Array**	11.13	270	P	**Pn**	**15 36 48.4**	**+2.8**
	comp=Z,2.4nm,0.3s,baz=78,slow=14,SNR=29						
KSRS				LR	LR	15 39 57.3	
	comp=Z,98nm,20.8s,baz=90,slow=31						
KS01	**Wonju Array Si**	11.15	270	*e*Pn	**Pn**	**15 36 48.0**	**+2.1**
KS15	**Wonju Array Si**	11.17	270	*e*Pn	**Pn**	**15 36 48.6**	**+2.5**
KSAR	**Wonju Array Be**	11.17	270	P	**Pn**	**15 36 48.4**	**+2.4**
KSAR	**Wonju Array Be**	11.17	270	P	**Pn**	**15 36 48.4**	**+2.4**
CBIJ	**Chichi jima**	11.19	179	*e*Pn	**Pn**	**15 36 45.4**	**-1.1**
CBIJ				*e*Sn	Sn	15 38 36.8	-13
JCJ	**Chichijima**	11.19	179	P	**Pn**	**15 36 45.4**	**-1.1**
	comp=Z,10nm,0.3s,baz=307,slow=20,SNR=6.3						
JCJ				S	Sn	15 38 36.8	-13
	comp=Z,7.6nm,0.3s,baz=288,slow=20,SNR=3.4						
MDJ	**Mudanjiang**	11.21	308	P	**Pn**	**15 36 48.8**	**+2.2**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,390nm,4.3s						
MDJ	**Mudanjiang**	11.21	308	*e*Pn	**Pn**	**15 36 48.0**	**+1.4**
TJN	**Taejon**	11.79	265	*c* *e*P	**Pn**	**15 36 56.0**	**+1.5**
GRNR	**Gornyy**	13.05	344	*e*P	**Pn**	**15 37 10.5**	**-1.2**
KLR	**Kul'dur**	13.15	329	P	**Pn**	**15 37 12.3**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=128,slow=13,SNR=12						
KLR				LR	LR	15 41 14.7	
	comp=Z,64nm,21.8s,baz=158,slow=32						
CN2	**Changchun**	13.61	299	*e*P	**Pn**	**15 37 20.6**	**+1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NKL	**Nikolayevsk**	14.86	357	*e*P	**Pn**	**15 37 34.0**	**-1.7**
DL2	**Dalian**	15.91	278	P	**Pn**	**15 37 50.3**	**+1.0**
DL2				sP	**sP**	**15 38 09.4**	**-2.5**
DL2				*e*S	**Sn**	**15 40 48.0**	**+3.3**
DL2				pmax	pmax		
	comp=Z,77nm,1.0s						
DL2				LR	LR		
	comp=Z,130nm,10.5s						
DL2				LR	LR		
	comp=Z,210nm,10.6s						
DL2				LR	LR		
	comp=Z,220nm,17.1s						
PEA0B	**Petropavlovsk-**	18.36	31	*e*P	**P**	**15 38 18.5**	**-0.4**
	comp=Z,38nm,1.2s						
PETK	**Petropavlovsk-**	18.36	31	*e*P	**Pn**	**15 38 19.6**	**+0.1**
PETK	**Petropavlovsk-**	18.36	31	*e*P	**Pn**	**15 38 19.6**	**+0.1**
PETK	**Petropavlovsk-**	18.36	31	P	**P**	**15 38 18.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=211,slow=10,SNR=7.5						
PETK				LR	LR	15 44 42.3	
	comp=Z,134nm,21.9s,baz=217,slow=34						
PEA1	**Petropavlovsk-**	18.36	31	*e*P	**P**	**15 38 18.6**	**-0.4**
PEA1				*e*		15 44 42.3	
ZEA	**Zeya**	18.44	331	*e*P	**P**	**15 38 17.8**	**-1.9**
ZEA				pmax	pmax		
	comp=E,19nm,0.4s						
ZEA				pmax	pmax		
	comp=N,29nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
BJI	**Beijing**	20.05	283	⇓*e*P	**P**	**15 38 35.0**	**-2.4**
BJI				pmax	pmax		
	comp=Z,13nm,0.8s						
MA2	**Magadan**	22.01	12	*e*P	**P**	**15 38 58.8**	**+0.4**
	comp=Z,12nm,0.7s						
MA2	**Magadan**	22.01	12	*c* *e*P	**P**	**15 38 58.2**	**-0.1**
MA2				pmax	pmax		
	comp=Z,17nm,1.0s						
MA2	**Magadan**	22.01	12	P	**P**	**15 38 58.7**	**+0.4**
	comp=Z,14nm,0.8s,baz=196,slow=8.0,SNR=17						
YHNB	**Yeheng**	22.15	238	*e*P	**P**	**15 38 58.1**	**-2.1**
	comp=Z,137nm,1.6s						
NACB	**Ninganchiao**	22.34	237	*e*P	**P**	**15 38 59.9**	**-2.3**
	comp=Z,64nm,1.4s						
SSLB	**Suanglung**	23.03	237	*e*P	**P**	**15 39 06.5**	**-3.0**
	comp=Z,119nm,1.9s						
HHC	**Hu-ho-hao-te**	23.51	286	*e*P	**P**	**15 39 13.0**	**-1.1**
HHC				S	**S**	**15 43 20.4**	**-3.1**
HHC				pmax	pmax		
	comp=Z,17nm,1.3s						
HHC				pmax	pmax		
	comp=Z,210nm,6.5s						
HHC				LR	LR		
	comp=Z,74nm,7.9s						
HHC				LR	LR		
	comp=Z,200nm,11.5s						
HHC				LR	LR		
	comp=Z,390nm,10.8s						
CIT	**Chita**	24.08	314	*e*P	**P**	**15 39 19.3**	**+0.3**
CIT				*e*		15 39 33.4	
CIT				pmax	pmax		
	comp=Z,68nm,1.1s						
YAK	**Yakutsk**	24.92	346	*e*P	**P**	**15 39 26.0**	**-0.5**
YAK				*e**PP	**pP**	**15 39 40.7**	**-0.1**
YAK				*e*		15 43 02.0	
YAK				*e*S	**S**	**15 43 43.9**	**-1.5**
YAK				*e**SS	**sS**	**15 44 03.3**	**-6.5**
YAK				*e*		15 50 20.9	
YAK				pmax	pmax		
	comp=Z,90nm,1.1s						
YAK				pmax	pmax		
	comp=N,54nm,1.4s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.0s						
YAK				smax	smax		
	comp=N,428nm,3.4s						
YAK				smax	smax		
	comp=E,467nm,3.6s						
YAK				MLR	MLR		
	comp=Z,586nm,10.0s						
YAK				MLR	MLR		
	comp=N,452nm,9.0s						
YAK				MLR	MLR		
	comp=E,417nm,8.0s						
SEY	**Seymchan**	25.45	11	P	**P**	**15 39 32.3**	**+1.0**
	comp=E,25nm,1.2s,baz=197,slow=6.8,SNR=42						
BOD	**Bodaibo**	26.69	326	*e*P	**P**	**15 39 42.2**	**-0.4**
BOD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
XAN	**Xi'an**	26.93	271	P	**P**	**15 39 44.0**	**-1.0**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,170nm,5.4s						
ULN	**Ulaanbaatar**	27.02	302	*e*P	**P**	**15 39 45.5**	**-0.3**
	comp=Z,19nm,1.3s						
ULN	**Ulaanbaatar**	27.02	302	*e*P	**P**	**15 39 45.5**	**-0.3**
ULN				pmax	pmax		
	comp=Z,19nm,1.3s						
SONA1	**Songino Array**	27.45	302	*e*P	**P**	**15 39 49.1**	**-0.6**
SONA0	**Songino Array**	27.46	302	*e*P	**P**	**15 39 49.1**	**-0.6**
SONA0				*e*PcP	**PcP**	**15 43 06.1**	**-0.7**
SONA0				*e*ScS	ScS	15 50 43.7	+10
SONM	**Songino Array**	27.46	302	P	**P**	**15 39 49.1**	**-0.6**
	comp=Z,8.1nm,0.6s,baz=113,slow=8.1,SNR=59						
SONM				PcP	**PcP**	**15 43 06.1**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=138,slow=3.2,SNR=3.8						
SONM				LR	LR	15 50 43.7	
	comp=Z,62nm,18.6s,baz=2.0,slow=36						
H11N2	**WAKE ISLAND Hy**	28.46	124	T	T	16 10 18.2	
	baz=316,slow=75,SNR=4135						
H11N1	**WAKE ISLAND Hy**	28.47	124	T	T	16 10 25.1	
	baz=316,slow=75,SNR=5915						
H11N3	**WAKE ISLAND Hy**	28.48	124	T	T	16 10 19.6	
	baz=316,slow=75,SNR=4947						
H11S1	**WAKE ISLAND Hy**	29.22	126	T	T	16 11 20.8	
	baz=317,slow=76,SNR=884						
H11S3	**WAKE ISLAND Hy**	29.22	126	T	T	16 11 20.9	
	baz=317,slow=76,SNR=798						
H11S2	**WAKE ISLAND Hy**	29.23	126	T	T	16 11 19.8	
	baz=317,slow=76,SNR=834						
ZAK	**Zakamensk**	29.84	306	*e*P	**P**	**15 40 08.6**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TLY	**Talaya**	29.84	309	*e*P	**P**	**15 40 10.8**	**+0.1**
	comp=Z,8.9nm,0.8s						
TLY	**Talaya**	29.84	309	*e*P	**P**	**15 40 11.0**	**+0.3**
TLY				pmax	pmax		
	comp=Z,22nm,0.8s						
LZH	**Lanzhou**	30.31	278	*e*P	**P**	**15 40 15.4**	**+0.2**
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
MOY	**Mondy**	31.46	309	*e*P	**P**	**15 40 25.2**	**0.0**
MOY				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GYA	**Guiyang**	31.89	259	⇑*i*P	**P**	**15 40 27.3**	**-1.8**
GYA				pP	sP	15 40 47.8	-2.7
GYA				sP	pP	15 40 55.0	+11
GYA				PP	**PnPn**	**15 41 37.6**	**+2.0**
GYA				S	**S**	**15 45 34.3**	**-1.7**
GYA				sS	sS	15 46 03.9	+3.3
GYA				SS	**SnSn**	**15 47 28.4**	**-0.5**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=Z,610nm,15.2s						
GYA				LR	LR		
	comp=Z,580nm,14.3s						
GYA				LR	LR		
	comp=Z,520nm,15.8s						
CD2	**Chengdu**	32.13	268	P	**P**	**15 40 29.8**	**-1.3**
CD2				pmax	pmax		
	comp=Z,30nm,0.4s						
GTA	**Gaotai**	32.63	285	⇑P	**P**	**15 40 34.6**	**-0.9**
GTA				PcP	**PcP**	**15 43 21.0**	**+0.6**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,90nm,5.4s						
GTA				LR	LR		
	comp=Z,140nm,15.9s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
GTA				LR	LR		
	comp=Z,190nm,14.6s						
BILL	**Bilibino**	32.67	17	⇓*e*P	**P**	**15 40 34.9**	**-0.5**
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KNGR	**Kungurtug, Tuv**	33.52	306	*i* P	**P**	**15 40 42.6**	**-0.6**
DGZ	**Jazzator, Alta**	40.01	305	*c* *i*P	**P**	**15 41 39.8**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,20nm,0.9s						
ANM	**Nome**	40.27	32	*e*P	**P**	**15 41 42.1**	**+2.1**
	comp=Z,19nm,1.4s						
ANM	**Nome**	40.27	32	*e*P	**P**	**15 41 42.2**	**+2.1**
ANM				pmax	pmax		
	comp=Z,19nm,1.4s						
WMQ	**Urumqi**	40.67	296	P	**P**	**15 41 45.0**	**+1.2**
WMQ				pP	pP	15 42 01.0	+2.4
WMQ				sP	sP	15 42 05.3	-0.1
WMQ				pmax	pmax		
	comp=Z,88nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,3.7s						
WMQ				LR	LR		
	comp=Z,88nm,21.5s						
WMQ				LR	LR		
	comp=Z,120nm,23.7s						
WMQ				LR	LR		
	comp=Z,140nm,18.1s						
ZAA0	**Zalesovo Array**	41.39	311	*e*P	**P**	**15 41 49.5**	**+0.1**
	comp=Z,12nm,0.8s						
ZAA0				*e*PcP	**PcP**	**15 43 45.8**	**-0.7**
ZAA1	**Zalesovo Array**	41.39	311	*e*P	**P**	**15 41 49.6**	**+0.2**
ZAA1				*e*PcP	**PcP**	**15 43 45.9**	**-0.6**
ZALV	**Zalesovo Beam**	41.39	311	*e*P	**P**	**15 41 48.9**	**-0.5**
ZALV				*e*PcP	**PcP**	**15 43 45.2**	**-1.3**
ZALV	**Zalesovo Beam**	41.39	311	P	**P**	**15 41 49.6**	**+0.2**
	comp=Z,13nm,0.5s,baz=82,slow=7.7,SNR=67						
ZALV				pP	**pP**	**15 42 03.9**	**-0.5**
	comp=Z,10nm,0.6s,baz=90,slow=7.4,SNR=8.4						
ZALV				PcP	**PcP**	**15 43 45.9**	**-0.6**
	comp=Z,2.6nm,0.4s,baz=94,slow=2.2,SNR=5.8						
FAKI	**Fak Fak**	42.01	195	*e*P	**P**	**15 41 55.5**	**+0.7**
	comp=Z,62nm,1.8s						
CMMT	**Chiang Mai**	42.04	255	P	P	15 42 00.3	+5.1
	comp=Z,6.1nm,0.6s						
CHTO	**Chiang Mai**	42.04	255	*e*P	**P**	**15 41 54.8**	**-0.4**
	comp=Z,9.5nm,1.3s						
CHTO	**Chiang Mai**	42.04	255	*e*P	**P**	**15 41 54.8**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CHTO	**Chiang Mai**	42.04	255	P	P	15 42 00.4	+5.2
	comp=Z,27nm,0.7s						
RDOG	**Red Dog Mine**	42.16	27	*e*P	**P**	**15 41 55.8**	**+0.2**
	comp=Z,4.4nm,0.8s						
CM31	**Chiang Mai Arr**	42.26	254	*e*P	**P**	**15 41 55.8**	**-1.2**
	comp=Z,3.3nm,0.7s						
CMAR	**Chiang Mai Arr**	42.26	254	P	**P**	**15 41 56.2**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=40,slow=6.2,SNR=8.8						
CMAR				PcP	**PcP**	**15 43 50.4**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=16,slow=2.0,SNR=6.3						
CMAR				LR	LR	15 59 29.9	
	comp=Z,24nm,18.4s,baz=88,slow=36						
CM01	**Chiang Mai Arr**	42.27	254	*e*P	**P**	**15 41 56.1**	**-1.0**
CM01				*e*PcP	**PcP**	**15 43 49.4**	**-0.6**
NVS	**Novosibirsk**	42.28	313	⇓*i*P	**P**	**15 41 58.4**	**+1.7**
NVS				*i*		15 42 12.1	
NVS				pmax	pmax		
	comp=Z,12nm,0.5s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.4s						
NRIK	**Noril'sk**	42.29	335	P	**P**	**15 41 56.2**	**-0.4**
	comp=E,1.6nm,0.4s,baz=126,slow=7.4,SNR=3.9						
MK01	**Makanchi Array**	43.82	301	*e*P	**P**	**15 42 09.7**	**+0.4**
MK31	**Makanchi Array**	43.82	301	*e*P	**P**	**15 42 09.6**	**+0.2**
	comp=E,17nm,0.8s						
MK31	**Makanchi Array**	43.82	301	*i* P	**P**	**15 42 09.8**	**+0.5**
MK31				pmax	pmax		
	comp=Z,13nm,0.6s						
MK32	**Makanchi Array**	43.82	301	*e*P	**P**	**15 42 09.2**	**-0.1**
MKAR	**Makanchi Array**	43.82	301	*e*P	**P**	**15 42 09.8**	**+0.5**
	comp=Z,123nm,0.8s						
MKAR	**Makanchi Array**	43.82	301	P	**P**	**15 42 09.2**	**-0.1**
	comp=Z,16nm,0.7s,baz=79,slow=9.1,SNR=110						
MAKZ	**Makanchi**	44.03	301	*e*P	**P**	**15 42 11.5**	**+0.5**
	comp=Z,15nm,0.7s						
MAKZ	**Makanchi**	44.03	301	*e*P	**P**	**15 42 11.5**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,15nm,0.7s						
SVW2	**Sparrevohn**	44.24	38	*e*P	**P**	**15 42 14.4**	**+2.0**
	comp=Z,32nm,1.7s						
PHET	**Kaeng Krachan**	45.25	248	P	P	15 42 27.2	+6.2
	comp=Z,4.0nm,0.5s						
IM3	**Indian Mountai**	45.33	31	*e*P	**P**	**15 42 22.1**	**+1.1**
IM3				*e*PcP	**PcP**	**15 44 00.7**	**+1.1**
KURK	**Kurchatov**	45.50	307	*e*P	**P**	**15 42 22.5**	**0.0**
	comp=Z,35nm,0.6s						
KURK	**Kurchatov**	45.50	307	*e*P	**P**	**15 42 22.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,35nm,0.6s						
KDAK	**Kodiak Island**	45.85	43	*e*P	**P**	**15 42 25.9**	**+0.7**
	comp=Z,308nm,2.0s						
KDAK	**Kodiak Island**	45.85	43	*e*P	**P**	**15 42 25.9**	**+0.7**
PPLA	**Purkeypile**	45.87	36	*e*P	**P**	**15 42 27.4**	**+1.9**
	comp=Z,68nm,2.0s						
MLY	**Manley**	46.53	33	*e*P	**P**	**15 42 32.1**	**+1.6**
MLY				*e*PcP	**PcP**	**15 44 05.0**	**+1.0**
PDGK	**Podgornoye**	46.57	297	P	**P**	**15 42 30.5**	**-0.8**
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TRF	**Thorofare Moun**	46.73	35	*e*P	**P**	**15 42 33.6**	**+1.4**
	comp=Z,49nm,2.0s						
BWN	**Browne**	47.08	34	*e*P	**P**	**15 42 37.6**	**+2.8**
	comp=Z,48nm,1.4s						
TOLK	**Toolik Lake Re**	47.13	28	*e*P	**P**	**15 42 36.4**	**+1.3**
	comp=Z,7.3nm,1.0s						
TOLK				*e*PcP	**PcP**	**15 44 07.1**	**+1.1**
SEW	**Seward**	47.29	39	*e*P	**P**	**15 42 37.1**	**+0.7**
	comp=Z,108nm,1.8s						
JIRN	**Jiri**	47.35	274	*e*P	**P**	**15 42 37.9**	**+0.1**
	comp=Z,28nm,0.5s						
RAMN	**Ramite**	47.36	273	*e*P	**P**	**15 42 37.8**	**0.0**
	comp=Z,51nm,0.8s						
GHO	**Glory Hole Cre**	47.42	37	*e*P	**P**	**15 42 38.4**	**+0.9**
	comp=Z,14nm,0.8s						
GUN	**Gumba**	47.48	275	*e*P	**P**	**15 42 38.8**	**0.0**
	comp=Z,100nm,0.9s						
PRZ	**Przheval'sk**	47.58	296	*e*P	**P**	**15 42 40.1**	**+0.9**
	comp=Z,13nm,0.8s						
PRZ	**Przheval'sk**	47.58	296	*e*P	**P**	**15 42 40.1**	**+0.9**
PRZ				pmax	pmax		
	comp=Z,13nm,0.8s						
MDM	**Murphy Dome**	47.60	33	*e*P	**P**	**15 42 39.9**	**+1.0**
	comp=Z,40nm,2.0s						
KNK	**Knik Glacier**	47.67	38	*e*P	**P**	**15 42 40.1**	**+0.7**
	comp=Z,28nm,0.5s						
WRH	**Wood River Hil**	47.67	33	*e*P	**P**	**15 42 40.0**	**+0.7**
WRH				*e*PcP	**PcP**	**15 44 08.0**	**+0.1**
SML	**Sawmill**	47.70	37	*e*P	**P**	**15 42 41.2**	**+1.5**
	comp=Z,15nm,0.9s						
SML	**Sawmill**	47.70	37	*e*P	**P**	**15 42 41.2**	**+1.5**
SML				pmax	pmax		
	comp=Z,15nm,0.9s						
KKN	**Kakani**	48.00	275	*e*P	**P**	**15 42 42.6**	**-0.1**
	comp=Z,50nm,0.5s						
PKI	**Pulchoki**	48.00	275	*e*P	**P**	**15 42 42.5**	**-0.3**
	comp=Z,22nm,0.5s						
PKIN	**Phulchoki**	48.01	275	*e*P	**P**	**15 42 42.4**	**-0.4**
	comp=Z,15nm,0.5s						
DHY	**Denali Highway**	48.06	35	*e*P	**P**	**15 42 43.9**	**+1.3**
	comp=Z,13nm,1.4s						
HDA	**Harding Lake**	48.17	33	*e*P	**P**	**15 42 44.2**	**+1.0**
	comp=Z,34nm,1.9s						
IL1	**Eielson Array**	48.18	33	*e*P	**P**	**15 42 43.4**	**+0.2**
ILAR	**Eielson Array**	48.18	33	P	**P**	**15 42 43.7**	**+0.4**
	comp=Z,4.2nm,0.7s,baz=267,slow=6.3,SNR=59						
ILAR				pP	**pP**	**15 43 01.1**	**+2.7**
	comp=Z,3.2nm,0.5s,baz=262,slow=5.4,SNR=11						
ILB	**Eielson Array**	48.18	33	*e*P	**P**	**15 42 43.8**	**+0.6**
	comp=Z,5.7nm,0.8s						
DMN	**Daman**	48.22	275	*e*P	**P**	**15 42 44.3**	**-0.2**
	comp=Z,21nm,0.7s						
TARG	**Taragay, Kyrgy**	48.24	295	*e*P	**P**	**15 42 45.3**	**+0.7**
	comp=Z,16nm,0.9s						
KDJ	**Kajisay**	48.55	296	*e*P	**P**	**15 42 49.1**	**+2.4**
	comp=Z,9.8nm,0.6s						
KDJ	**Kajisay**	48.55	296	*e*P	**P**	**15 42 49.1**	**+2.4**
KDJ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PRP	**Porcupine Dome**	48.71	32	*e*P	**P**	**15 42 48.9**	**+1.4**
	comp=Z,17nm,1.6s						
FYU	**Fort Yukon**	48.78	31	*e*P	**P**	**15 42 48.9**	**+1.0**
	comp=Z,28nm,1.5s						
KLU	**Klutina**	48.88	37	*e*P	**P**	**15 42 50.0**	**+1.2**
	comp=Z,35nm,1.5s						
DANN	**Dangsing**	48.93	276	*e*P	**P**	**15 42 50.2**	**+0.3**
	comp=Z,124nm,0.6s						
DIV	**Divide**	48.99	38	*e*P	**P**	**15 42 50.7**	**+1.0**
	comp=Z,18nm,1.0s						
EYAK	**Cordova Ski Ar**	49.07	39	*e*P	**P**	**15 42 51.5**	**+1.3**
	comp=Z,302nm,2.0s						
HARP	**HAARP**	49.13	36	*e*P	**P**	**15 42 51.6**	**+1.0**
	comp=Z,93nm,1.7s						
RIDG	**Independ'e Rid**	49.14	34	*e*P	**P**	**15 42 50.8**	**+0.1**
	comp=Z,48nm,2.0s						
KOLN	**Koldanda**	49.33	276	*e*P	**P**	**15 42 53.1**	**+0.2**
	comp=Z,39nm,0.8s						
TKM2	**Tokmak 2**	49.42	298	P	**P**	**15 42 55.4**	**+2.0**
	SNR=28						
TKM2	**Tokmak 2**	49.42	298	*i* P	**P**	**15 42 54.0**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SCRK	**Sand Creek**	49.49	34	*e*P	**P**	**15 42 53.8**	**+0.3**
	comp=Z,31nm,1.8s						
NRN	**Naryn**	49.61	296	*e*P	**P**	**15 42 56.0**	**+1.0**
	comp=Z,4.9nm,0.8s						
NRN	**Naryn**	49.61	296	*e*P	**P**	**15 42 56.0**	**+1.0**
NRN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PYUN	**Piuthan**	49.65	277	*e*P	**P**	**15 42 55.3**	**0.0**
	comp=Z,110nm,0.9s						
KULM	**Kulim**	49.85	239	*e*P	**P**	**15 42 56.9**	**+0.3**
	comp=Z,20nm,1.2s						
KZA	**Kyzart**	49.93	297	P	**P**	**15 43 00.0**	**+2.5**
	SNR=12						
KBK	**Karagaybulak**	49.95	297	P	**P**	**15 42 59.3**	**+1.9**
	SNR=22						
OTUK	**Ortayu**	50.04	305	P	**P**	**15 42 57.5**	**-0.3**
OTUK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	50.10	312	*e*P	**P**	**15 42 58.0**	**-0.1**
	comp=Z,9.2nm,1.1s						
BRVK				*e*PcP	**PcP**	**15 44 16.4**	**-0.4**
BRVK	**Borovoye**	50.10	312	*e*P	**P**	**15 42 58.0**	**-0.1**
BRVK				*e*		15 44 16.5	
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AAK	**Ala-Archa**	50.27	298	P	**P**	**15 43 01.4**	**+1.5**
	SNR=7.9						
AAK	**Ala-Archa**	50.27	298	*e*P	**P**	**15 42 59.1**	**-0.7**
	comp=Z,6.3nm,0.4s						
AAK	**Ala-Archa**	50.27	298	*i* P	**P**	**15 43 01.2**	**+1.4**

AAK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KSH	Kashi	50.29	293	P	P	15 43 05.4	+5.5
KSH				pP	sP	15 43 19.6	-2.4
KSH				PP	PP	15 45 03.3	+7.7
KSH				S	S	15 50 12.6	+4.2
KSH				sS	sS	15 50 42.1	+8.0
KSH				SS	SS	15 53 39.4	-2.8
KSH				pmax	pmax		
	comp=Z,18nm,0.9s						
KSH				pmax	pmax		
	comp=Z,390nm,5.1s						
KSH				LR	LR		
	comp=Z,230nm,5.8s						
KSH				LR	LR		
	comp=Z,210nm,4.8s						
KSH				LR	LR		
	comp=Z,310nm,4.7s						
EKS2	Erkin-Say	50.77	298	P	P	15 43 05.2	+1.7
	SNR=8.6						
AML	Almayashu	51.00	297	P	P	15 43 06.6	+1.0
	SNR=11						
DAWY	Dawson	51.49	33	eP	P	15 43 09.8	+1.3
	comp=Z,19nm,1.9s						
MNAS	Manas	51.71	298	i P	P	15 43 11.0	+0.4
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ARSB	Arslanbob	51.78	297	eP	P	15 43 12.9	+1.8
	comp=Z,12nm,0.8s						
SFK	Sufi-Kurgan	51.89	295	i P	P	15 43 11.8	-0.2
SFK				pmax	pmax		
	comp=Z,11nm,0.8s						
MTN	Manton Dam	51.90	193	eP	P	15 43 11.8	-0.1
	comp=Z,37nm,1.2s						
COEN	Coen	52.01	179	eP	P	15 43 13.0	+0.2
	comp=Z,15nm,0.7s						
KK31	Karatay Array	52.87	299	eP	P	15 43 18.8	-0.2
	comp=Z,3.8nm,0.9s						
KK31	Karatay Array	52.87	299	eP	P	15 43 18.8	-0.2
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	Karatay Array	52.87	299	eP	P	15 43 18.6	-0.4
	comp=Z,3.8nm,0.9s						
KKAR	Karatay Array	52.87	299	eP	P	15 43 18.6	-0.4
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	53.05	28	eP	P	15 43 20.4	+0.6
	comp=Z,8.7nm,1.0s						
INK	Inuvik	53.05	28	eP	P	15 43 20.4	+0.6
INK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WHY	Whitehorse	54.30	37	eP	P	15 43 31.2	+1.9
	comp=Z,39nm,1.9s						
SVE	Sverdlovsk	54.48	318	⇑eP	P	15 43 31.1	+0.6
SVE				pmax	pmax		
	comp=Z,18nm,0.9s						
UGM	Wanagama	54.53	219	eP	P	15 43 31.4	0.0
	comp=Z,728nm,1.6s						
GAR	Garm	54.55	295	eP	P	15 43 31.4	-0.1
	comp=Z,8.8nm,0.7s						
GAR	Garm	54.55	295	eP	P	15 43 31.4	-0.1
GAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
JIS	Juneau Island	55.23	40	eP	P	15 43 35.3	-0.6
	comp=Z,83nm,1.8s						
CHGR	Chuyangaron	55.52	295	eP	P	15 43 38.1	-0.3
	comp=Z,24nm,0.7s						
ARU	Arti	55.70	318	eP	P	15 43 38.8	-0.4
	comp=Z,16nm,0.9s						
ARU	Arti	55.70	318	d iP	P	15 43 39.5	+0.2
ARU				*PP	pP	15 43 55.3	+0.5
ARU						15 45 43.7	
ARU				S	S	15 51 24.2	+3.1
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
DLBC	Dease Lake	57.35	39	eP	P	15 43 53.1	+2.0
	comp=Z,58nm,1.9s						
KBL	Kabul	57.37	290	eP	P	15 43 51.0	-0.8
	comp=Z,9.1nm,0.8s						
KBL	Kabul	57.37	290	eP	P	15 43 51.0	-0.8
KBL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AB31	Akbulak array	57.45	310	i P	P	15 43 51.0	-0.9
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ABKAR	Akbulak array	57.45	310	eP	P	15 43 51.0	-0.9
	comp=Z,4.9nm,0.6s						
AKTO	Aktyubinsk	58.15	312	P	P	15 43 55.8	-0.9
AKTO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
FITZ	Fitzroy Crossi	58.17	198	eP	P	15 43 57.3	+0.2
	comp=Z,47nm,2.0s						
CTA	Charters Tower	58.24	175	P	P	15 43 57.3	-0.3
	comp=Z,2.2nm,0.5s,baz=16,slow=7.7,SNR=7.6						
CTAO	Charters Tower	58.24	175	eP	P	15 43 57.3	-0.3
	comp=Z,29nm,1.6s						
CTAO	Charters Tower	58.24	175	eP	P	15 43 57.3	-0.3
CTAO				pmax	pmax		
	comp=Z,29nm,1.6s						
WRAB	Tennant Creek	58.38	188	eP	P	15 43 57.5	-1.1
	comp=Z,17nm,0.9s						
WRAB	Tennant Creek	58.38	188	eP	P	15 43 57.5	-1.1
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s						
WB2	Warramunga Arr	58.39	188	eP	P	15 43 56.6	-2.0
WR1	Warramunga Arr	58.39	188	eP	P	15 43 57.8	-0.8
	comp=Z,16nm,0.6s						
WRA	Warramunga Arr	58.39	188	P	P	15 43 57.8	-0.8
	comp=Z,13nm,0.4s,baz=6.5,slow=7.2,SNR=190						
WC3	Warramunga Arr	58.41	188	eP	P	15 43 57.7	-1.1
	comp=Z,14nm,0.6s						
KBS	Kingsbay	59.47	350	eP	P	15 44 05.4	-0.1
	comp=Z,72nm,1.4s						
KBS	Kingsbay	59.47	350	eP	P	15 44 05.4	-0.1
KBS				pmax	pmax		
	comp=Z,72nm,1.4s						
RES	Resolute Bay	61.25	15	eP	P	15 44 17.5	-0.1
	comp=Z,6.7nm,0.6s						
RES	Resolute Bay	61.25	15	eP	P	15 44 17.5	-0.1
RES				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AS01	Alice Springs	62.11	188	eP	P	15 44 23.3	-0.8
AS31	Alice Springs	62.12	188	eP	P	15 44 23.4	-0.7
	comp=Z,2.7nm,0.8s						
ASAR	Alice Springs	62.12	188	P	P	15 44 23.6	-0.5
	comp=Z,8.2nm,0.7s,baz=8.5,slow=5.0,SNR=134						
YKW3	Yellowknife Ar	62.44	31	eP	P	15 44 25.8	0.0
	comp=Z,8.7nm,1.4s						
YKA	Yellowknife Ar	62.48	31	P	P	15 44 26.4	+0.3
	comp=Z,2.1nm,0.7s,baz=302,slow=6.7,SNR=35						
YKA				pP	pP	15 44 44.6	+2.9
	comp=Z,1.0nm,0.6s,baz=304,slow=6.7,SNR=6.5						
YKA				PcP	PcP	15 45 05.2	+0.4
	comp=Z,1.6nm,0.7s,baz=294,slow=3.4,SNR=10						
YKB5	Yellowknife Ar	62.48	31	eP	P	15 44 25.0	-1.0
YKB5				ePcP	PcP	15 45 05.5	+0.6
ARA0	ARCESS Array S	62.95	339	eP	P	15 44 29.2	+0.1
ARCES	ARCESS Array B	62.95	339	eP	P	15 44 29.3	+0.2
ARCES	ARCESS Array B	62.95	339	P	P	15 44 29.2	+0.1
	comp=Z,3.6nm,0.5s,baz=55,slow=8.0,SNR=27						
GEYT	Alibeck	63.60	299	P	P	15 44 33.7	-0.3
	comp=Z,1.8nm,0.5s,baz=348,slow=2.1,SNR=7.4						
GYA0B	ALIBECK ARRAY	63.60	299	eP	P	15 44 33.5	-0.5
	comp=Z,4.6nm,0.9s						
TULEG	Thule	63.77	8	eP	P	15 44 33.8	-0.6
	comp=Z,9.1nm,0.6s						
EIDS	Eidsvold	63.93	171	eP	P	15 44 35.9	-0.1
	comp=Z,50nm,1.7s						
DZM	Mont Dzumac	64.32	155	eP	P	15 44 40.1	+1.4
	comp=Z,31nm,1.4s						
DAG	Danmarks Havn	64.53	355	i P	P	15 44 39.0	-0.4
	comp=Z,7.3nm,0.9s						
DAG	Danmarks Havn	64.53	355	i P	P	15 44 39.0	-0.4
DAG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN	Obninsk	67.33	323	eP	P	15 44 56.7	-1.0
OBN				i		15 45 12.2	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FIA1	FINESS Array S	67.88	332	eP	P	15 45 00.4	-0.6
FIA0	FINESS Array S	67.88	332	eP	P	15 45 00.9	-0.2
FIA0	FINESS Array S	67.88	332	eP	P	15 45 00.9	-0.2
FINES	FINESS Array B	67.88	332	P	P	15 45 00.9	-0.2
	comp=Z,9.3nm,0.6s,baz=40,slow=8.8,SNR=31						
VSR	Storozhevoye	68.26	319	eP	P	15 45 01.6	-2.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HAWA	Hanford	68.58	47	eP	P	15 45 06.7	+1.0
	comp=Z,30nm,1.8s						
NEW	Newport	68.90	45	eP	P	15 45 08.4	+0.6
	comp=Z,33nm,1.9s						
NEW	Newport	68.90	45	eP	P	15 45 08.4	+0.6
NEW				pmax	pmax		
	comp=Z,33nm,1.9s						
E09A	Wood Farm, Sta	69.31	47	eP	P	15 45 10.4	+0.1
SUMG	Summit	69.40	0	eP	P	15 45 11.1	+0.2
	comp=Z,9.7nm,0.6s						
SUMG	Summit	69.40	0	i P	P	15 45 11.4	+0.5
	comp=Z,27nm,0.7s						
SUMG	Summit	69.40	0	i P	P	15 45 11.4	+0.5
SUMG				pmax	pmax		
	comp=Z,27nm,0.7s						
VSU	Vasula	69.57	330	ceP	P	15 45 12.6	+1.0
VSU				pmax	pmax		
	comp=Z,47nm,1.7s						
STKA	Stephens Creek	69.84	180	eP	P	15 45 13.3	-0.1
	comp=Z,9.2nm,1.9s						
STKA	Stephens Creek	69.84	180	eP	P	15 45 13.3	-0.1
STKA				pmax	pmax		
	comp=Z,9.0nm,1.9s						
STKA	Stephens Creek	69.84	180	P	P	15 45 13.1	-0.4
	comp=Z,3.7nm,0.7s,baz=8.9,slow=4.8,SNR=6.8						
FORT	Forrest	69.96	193	eP	P	15 45 13.9	-0.3
	comp=Z,26nm,0.8s						
WALA	Waterton Lakes	70.19	43	eP	P	15 45 16.6	+0.8
	comp=Z,29nm,1.8s						
KIV	Kislovodsk	70.40	311	eP	P	15 45 17.4	+0.3
KIV	Kislovodsk	70.40	311	eP	P	15 45 17.4	+0.3
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KBZ	Khabaz	70.40	311	P	P	15 45 17.3	+0.3
	comp=Z,5.0nm,0.9s,baz=30,slow=4.7,SNR=9.8						
MOD	Modoc Plateau	70.62	52	eP	P	15 45 19.5	+1.0
	comp=Z,3.4nm,0.8s						
BMO	Blue Mountains	70.74	48	eP	P	15 45 19.9	+0.8
	comp=Z,15nm,1.9s						
BMO	Blue Mountains	70.74	48	eP	P	15 45 20.0	+0.8
BMO				pmax	pmax		
	comp=Z,15nm,1.9s						
SCO	Scoresbysund	70.88	354	i P	P	15 45 19.2	-0.2
	comp=Z,4.5nm,0.8s						
SCO	Scoresbysund	70.88	354	eP	P	15 45 19.2	-0.2
SCO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ORV	Oroville	71.19	54	eP	P	15 45 22.3	+0.4
	comp=Z,17nm,1.9s						
ORV	Oroville	71.19	54	eP	P	15 45 22.3	+0.4
ORV				pmax	pmax		
	comp=Z,17nm,1.9s						
WVOR	Wild Horse Val	71.33	50	eP	P	15 45 23.0	+0.1
	comp=Z,12nm,1.4s						
WVOR	Wild Horse Val	71.33	50	eP	P	15 45 23.0	+0.1
WVOR				pmax	pmax		
	comp=Z,12nm,1.4s						
BEKR	Beckworth	71.73	53	eP	P	15 45 26.4	+1.0
	comp=Z,6.3nm,0.9s						
FFC	Flin Flon	72.39	33	eP	P	15 45 28.8	0.0
	comp=Z,5.6nm,0.8s						
FFC				ePcP	PcP	15 45 46.9	+0.4
FFC	Flin Flon	72.39	33	eP	P	15 45 28.8	0.0
FFC				e		15 45 46.9	
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PAHR	Pah Rah Range	72.44	53	eP	P	15 45 30.4	+0.9
	comp=Z,33nm,2.0s						
FCC	Fort Churchill	72.66	27	eP	P	15 45 29.6	-0.6
	comp=Z,12nm,1.3s						
FCC	Fort Churchill	72.66	27	eP	P	15 45 29.6	-0.6
FCC				pmax	pmax		
	comp=Z,12nm,1.3s						
HRY	Holter Researc	72.72	44	eP	P	15 45 32.2	+1.1
CMB	Columbia Colle	72.77	55	eP	P	15 45 32.3	+0.9
	comp=Z,20nm,1.7s						
CMB	Columbia Colle	72.77	55	eP	P	15 45 32.3	+0.9
CMB				pmax	pmax		
	comp=Z,20nm,1.7s						
LRM	Limekiln Ridge	72.92	45	eP	P	15 45 33.2	+0.7
YERR	Yerington	72.95	54	eP	P	15 45 33.6	+1.0
	comp=Z,7.7nm,1.0s						
NC405	NORSAR Array S	72.96	337	eP	P	15 45 31.9	-0.2
EGMT	Eagleton	73.02	42	eP	P	15 45 33.4	+0.6
	comp=Z,8.3nm,0.8s						
NC204	NORSAR Array S	73.12	338	eP	P	15 45 32.8	-0.3
	comp=Z,17nm,0.8s						
DLMT	Dillon	73.12	45	eP	P	15 45 34.4	+0.9
	comp=Z,10nm,1.1s						
NB201	NORSAR Array S	73.14	337	eP	P	15 45 32.8	-0.4
NB2	NORSAR Subarra	73.17	337	P	P	15 45 32.9	-0.5
	comp=Z,3.0nm,0.7s,baz=36,slow=6.2						
NB200	NORSAR Array S	73.17	337	eP	P	15 45 33.3	-0.1
NB200				e		16 21 21.9	
NOA	NORSAR Array B	73.17	337	P	P	15 45 33.3	-0.1
	comp=Z,5.2nm,0.7s,baz=38,slow=5.9,SNR=23						
NOA				LR	LR	16 21 21.9	
	comp=Z,33nm,19.0s,baz=250,slow=39						
HLID	Hailey	73.18	48	eP	P	15 45 35.0	+1.1
	comp=Z,3.6nm,1.0s						
BMN	Battle Mountai	73.36	51	eP	P	15 45 35.9	+0.9
	comp=Z,4.4nm,0.8s						
NAO01	NORSAR Array S	73.42	337	eP	P	15 45 34.6	-0.2
BOZ	Bozeman (W)	73.52	45	eP	P	15 45 36.7	+0.9
	comp=Z,16nm,1.5s						
BOZ	Bozeman (W)	73.52	45	eP	P	15 45 36.7	+0.9
BOZ				pmax	pmax		
	comp=Z,16nm,1.5s						
AKASG	Malin Array Be	73.55	322	P	P	15 45 35.2	-0.5
	comp=Z,4.7nm,0.6s,baz=47,slow=6.0,SNR=26						
AKBB	Malin Array Si	73.55	322	eP	P	15 45 35.0	-0.7
	comp=Z,8.6nm,0.9s						
AKBB	Malin Array Si	73.55	322	eP	P	15 45 35.0	-0.7
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIEV	Kiev	73.56	322	eP	P	15 45 35.0	-0.8
	comp=Z,7.4nm,0.8s						
AK11	Malin Array Si	73.59	322	eP	P	15 45 35.3	-0.7
RYN	Ryan	73.61	54	eP	P	15 45 37.7	+1.2
	comp=Z,3.7nm,0.8s						
KVN	Kaiserville	73.63	53	eP	P	15 45 38.2	+1.5
	comp=Z,7.6nm,1.0s						
KVN	Kaiserville	73.63	53	eP	P	15 45 38.2	+1.5
KVN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NV01	Mina Array Sit	73.87	54	eP	P	15 45 38.9	+0.8
NVAR	Mina Array Bea	73.87	54	P	P	15 45 39.5	+1.4
	comp=Z,3.5nm,0.8s,baz=281,slow=6.0,SNR=18						
YHB	Horse Butte	74.28	45	eP	P	15 45 41.0	+0.6
ELK	Elko	74.39	50	eP	P	15 45 41.5	+0.4
	comp=Z,2.1nm,1.0s						
ELK	Elko	74.39	50	eP	P	15 45 41.5	+0.4
ELK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YHH	Holmes Hill	74.45	45	eP	P	15 45 42.6	+1.2
YNR	Norris Junctio	74.59	45	eP	P	15 45 44.0	+1.8
YFT	Old Faithful	74.67	45	eP	P	15 45 44.7	+2.0
YPP	Pitchstone Pla	74.80	45	eP	P	15 45 44.9	+1.4
IMW	Indian Meadow	74.96	46	eP	P	15 45 45.1	+0.7
	comp=Z,5.9nm,0.8s						
FXWY	Fox Creek	75.07	46	eP	P	15 45 45.9	+0.9
	comp=Z,5.2nm,0.9s						
RLMT	Red Lodge	75.11	44	eP	P	15 45 46.0	+0.8
	comp=Z,21nm,1.7s						
MOOW	Moose Ponds	75.16	46	eP	P	15 45 47.1	+1.6
	comp=Z,3.8nm,0.9s						
TPAW	Teton Pass	75.21	46	eP	P	15 45 46.3	+0.4
	comp=Z,43nm,1.9s						
HVU	Hansel Valley	75.22	48	eP	P	15 45 47.1	+1.2
REDW	Red Top Meadow	75.34	46	eP	P	15 45 47.7	+1.1
	comp=Z,4.7nm,0.8s						
ISA	Isabella, Lake	75.40	56	eP	P	15 45 47.0	+0.1
	comp=Z,7.6nm,1.3s						
ISA	Isabella, Lake	75.40	56	eP	P	15 45 47.0	+0.1
ISA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
R11A	Troy Canyon, C	75.63	52	eP	P	15 45 49.1	+0.9
	comp=Z,3.3nm,0.8s						
LAO	LASA Array	75.72	41	eP	P	15 45 49.3	+0.9
	comp=Z,9.8nm,0.8s						
TPNV	Topopah Spring	76.06	54	eP	P	15 45 51.5	+0.8
	comp=Z,5.1nm,0.8s						
TPNV	Topopah Spring	76.06	54	eP	P	15 45 51.5	+0.8
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DUG	Dugway, Tooele	76.19	50	eP	P	15 45 52.7	+1.4
	comp=Z,4.1nm,0.6s						
DUG	Dugway, Tooele	76.19	50	eP	P	15 45 52.7	+1.4
DUG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TCUT	Toone Canyon	76.44	48	eP	P	15 45 54.3	+1.4
BW06	Boulder Array	76.45	46	eP	P	15 45 53.6	+0.6
	comp=Z,4.7nm,0.6s						
PD31	Pinedale Array	76.45	46	eP	P	15 45 53.6	+0.7
PDAR	Pinedale Array	76.45	46	eP	P	15 45 53.1	+0.2
PDAR	Pinedale Array	76.45	46	P	P	15 45 53.6	+0.7
	comp=Z,4.6nm,0.6s,baz=250,slow=2.6,SNR=17						
PDAR				pP	pP	15 46 12.2	+3.2
	comp=Z,2.3nm,0.6s,baz=256,slow=1.7,SNR=4.5						
PSUT	Pine Spring	76.58	51	eP	P	15 45 54.7	+1.0
JLU	Jordanelle	76.74	49	eP	P	15 45 55.9	+1.3
SHPR	Sheep Range	77.02	54	eP	P	15 45 57.3	+1.2
KWP	Kalwaria Pacla	77.34	324	eP	P	15 45 58.2	+0.7
	comp=Z,237nm,1.5s						
KWP	Kalwaria Pacla	77.34	324	eP	P	15 45 58.2	+0.7
ILGA	Ilgaz	77.43	313	eP	P	15 45 58.9	+0.5
	comp=Z,8.4nm,0.8s						
BUR08	Bucovina Ar. S	77.56	322	eP	P	15 45 58.4	-0.5
	comp=Z,18nm,1.8s						
BUR04	Bucovina Ar. S	77.58	322	eP	P	15 45 59.0	+0.1
BURAR	Bucovina Array	77.58	322	⇓iP	P	15 45 59.2	+0.3
MSU	Marysvale	77.62	51	eP	P	15 46 01.0	+1.4
MSU	Marysvale	77.62	51	eP	P	15 46 01.0	+1.4
TESR	Tescani	77.63	320	⇑iP	P	15 45 59.1	0.0
SZCU	Shurtz Canyon	77.64	52	eP	P	15 46 00.5	+0.9
TMUT	Trail Mountain	77.71	49	eP	P	15 46 00.8	+0.6
P17A	Butcher Ranch,	77.88	49	eP	P	15 46 02.0	+1.2
LCMT	Little Creek M	77.91	52	eP	P	15 46 02.7	+1.6
MTPU	Mount Pierson	77.92	51	eP	P	15 46 03.1	+1.7
Q16A	Castle Valley	77.97	50	eP	P	15 46 02.5	+1.0
VRI	Vrincioaia	78.03	320	⇑iP	P	15 46 03.0	+1.6
PLOR	Plostina	78.08	320	⇑iP	P	15 46 01.6	-0.1
ULM	Lac du Bonnet	78.19	34	P	P	15 46 01.8	-0.3
	comp=Z,2.9nm,0.7s,baz=312,slow=4.4,SNR=6.4						
SRU	San Rafael Swe	78.24	49	eP	P	15 46 04.2	+1.3
SRU	San Rafael Swe	78.24	49	eP	P	15 46 04.2	+1.3
BR101	Keskin Array S	78.33	312	eP	P	15 46 03.0	-0.3
BRTR	Keskin Array B	78.33	312	P	P	15 46 03.0	-0.3
	comp=Z,0.9nm,0.6s,baz=109,slow=3.1,SNR=5.9						
BRTR				pP	pP	15 46 20.1	+0.5
	comp=Z,1.5nm,0.4s,baz=114,slow=3.4,SNR=7.8						
TRPA	Tarpa	78.49	323	⇓iP	P	15 46 04.4	+0.6
RSSD	Black Hills	78.58	42	eP	P	15 46 05.4	+0.7
	comp=Z,4.7nm,0.6s						
RSSD	Black Hills	78.58	42	eP	P	15 46 05.4	+0.7
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
W13A	Hualapai Mount	78.71	54	eP	P	15 46 06.6	+1.0
	comp=Z,2.9nm,1.0s						
U15A	North Rim	78.87	52	eP	P	15 46 07.8	+1.3
	comp=Z,6.0nm,1.0s						
O20A	White River Ci	78.91	47	eP	P	15 46 06.2	-0.5
	comp=Z,5.5nm,0.9s						
Y12C	Blythe	79.14	56	eP	P	15 46 08.3	+0.6
	comp=Z,9.5nm,0.5s						
VOIR		79.18	320	⇑iP	P	15 46 08.7	+0.9
GLA	Glamis	79.38	56	eP	P	15 46 09.8	+0.8
	comp=Z,8.3nm,0.8s						
ARR	Arges	79.44	320	⇑iP	P	15 46 10.7	+1.5
PV09	Paradox Valley	79.46	49	eP	P	15 46 11.1	+1.4
PV21	Cone Mtn., Par	79.52	49	eP	P	15 46 11.4	+1.4
	comp=Z,6.1nm,0.8s						
MORC	Moravsky Berou	79.52	327	eP	P	15 46 09.5	0.0
	comp=Z,12nm,1.2s						
MORC	Moravsky Berou	79.52	327	⇑iP	P	15 46 10.1	+0.6
MORC	Moravsky Berou	79.52	327	eP	P	15 46 09.5	0.0
MORC				pmax	pmax		
	comp=Z,12nm,1.2s						
PV23	Carpenter Ridg	79.56	49	eP	P	15 46 11.4	+1.1
	comp=Z,13nm,1.2s						
PV10	Paradox Valley	79.60	49	eP	P	15 46 12.0	+1.5
	comp=Z,17nm,0.8s						
PV14	Lion Creek, Pa	79.61	49	eP	P	15 46 11.7	+1.2
	comp=Z,10nm,0.9s						
PV20	West Nyswonger	79.66	49	eP	P	15 46 12.0	+1.2
	comp=Z,13nm,0.8s						
PV04	Paradox Valley	79.67	49	eP	P	15 46 12.0	+1.3
	comp=Z,6.1nm,0.9s						
PV19	Morning Glory	79.67	49	eP	P	15 46 11.6	+0.8
	comp=Z,10nm,0.9s						
PV17	East Wray Mesa	79.71	49	eP	P	15 46 12.2	+1.2
	comp=Z,16nm,0.9s						
PV16	Nyswonger Mesa	79.71	49	eP	P	15 46 12.2	+1.2
	comp=Z,7.1nm,0.9s						
N23A	Red Feather La	79.72	46	eP	P	15 46 11.6	+0.5
	comp=Z,9.4nm,1.1s						
PV11	David Mesa, Pa	79.75	49	eP	P	15 46 12.6	+1.4
	comp=Z,6.8nm,0.8s						
PV05	Paradox Valley	79.76	49	eP	P	15 46 12.6	+1.4
	comp=Z,14nm,0.8s						
PV12	Saucer Basin,	79.78	49	eP	P	15 46 13.1	+1.7
	comp=Z,6.1nm,1.1s						
PV07	Paradox Valley	79.79	49	eP	P	15 46 12.4	+1.0
	comp=Z,5.7nm,1.1s						
PV03	Paradox Valley	79.79	49	eP	P	15 46 13.2	+1.8
	comp=Z,7.7nm,1.0s						
PSZ	Piszkesteto	79.87	325	eP	P	15 46 11.9	+0.4
	comp=Z,14nm,1.3s						
PSZ	Piszkesteto	79.87	325	eP	P	15 46 11.9	+0.4
PSZ				pmax	pmax		
	comp=Z,14nm,1.3s						
PV13	Radium Mtn., P	79.87	49	eP	P	15 46 12.7	+0.8
	comp=Z,12nm,1.0s						
PV02	Paradox Valley	79.89	49	eP	P	15 46 13.4	+1.4
	comp=Z,4.5nm,0.7s						
VYHS	Vyhne	79.92	326	eP	P	15 46 12.1	+0.4
VYHS	Vyhne	79.92	326	eP	P	15 46 12.1	+0.4
Y14A	Wickenburg	80.00	55	eP	P	15 46 13.3	+0.8
	comp=Z,7.1nm,0.8s						
WUAZ	Wupatki	80.03	53	eP	P	15 46 13.8	+1.1
	comp=Z,8.2nm,0.9s						
PV01	Paradox Valley	80.03	49	eP	P	15 46 13.8	+1.0
	comp=Z,4.9nm,0.8s						
BRG	Berggiesshubel	80.17	330	eP	P	15 46 13.0	+0.1
	comp=Z,19nm,1.6s						
BRG	Berggiesshubel	80.17	330	eP	P	15 46 13.0	+0.1
BRG				pmax	pmax		
	comp=Z,19nm,1.6s						
CLL	Collm	80.20	330	eP	P	15 46 12.5	-0.6
	comp=Z,5.8nm,0.8s						
CLL	Collm	80.20	330	⇑iP	P	15 46 12.7	-0.4
	comp=Z,7.0nm,0.9s						
CLL				ePcP	PcP	15 46 19.0	-1.2
CLL				epP	pP	15 46 30.0	+0.6
CLL	Collm	80.20	330	⇑iP	P	15 46 12.7	-0.4
CLL				e*PP	pP	15 46 29.0	-0.4
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GZR	Gura Zlata	80.34	321	⇑iP	P	15 46 14.1	0.0
ISCO	Idaho Springs	80.64	46	eP	P	15 46 17.1	+1.0
	comp=Z,19nm,1.9s						
ISCO	Idaho Springs	80.64	46	eP	P	15 46 17.1	+1.0
ISCO				pmax	pmax		
	comp=Z,19nm,1.9s						
MVCO	Mesa Verde	80.69	50	eP	P	15 46 17.3	+1.0
	comp=Z,13nm,1.4s						
X16A	Lo Mia Camp, P	80.69	53	eP	P	15 46 17.6	+1.3
	comp=Z,6.3nm,0.9s						
MODS	Modra-Piesok	80.69	326	eP	P	15 46 15.2	-0.7
MODS	Modra-Piesok	80.69	326	eP	P	15 46 15.2	-0.7
S22A	4UR Ranch, Cre	81.32	48	eP	P	15 46 21.4	+1.6
	comp=Z,5.0nm,1.1s						
Q24A	Divide	81.47	47	eP	P	15 46 21.3	+0.7
	comp=Z,3.9nm,1.0s						
KHC	Kasperske Hory	81.68	329	eP	P	15 46 20.9	-0.2
	comp=Z,9.2nm,1.8s						
KHC	Kasperske Hory	81.68	329	eP	P	15 46 20.9	-0.2
KHC				pmax	pmax		
	comp=Z,9.0nm,1.8s						
GEC2	GERESS Array S	81.85	328	eP	P	15 46 21.5	-0.6
	comp=Z,24nm,2.0s						
GEC2	GERESS Array S	81.85	328	eP	P	15 46 21.5	-0.6
GEC2				pmax	pmax		
	comp=Z,24nm,2.0s						
GERES	GERESS Array B	81.85	328	P	P	15 46 21.7	-0.4
	comp=Z,0.8nm,0.5s,baz=44,slow=5.9,SNR=7.9						
GERES				pP	pP	15 46 39.1	+0.7
	comp=Z,1.1nm,0.7s,baz=32,slow=5.3,SNR=4.3						
GEA0	GERESS Array S	81.86	328	eP	P	15 46 21.1	-1.0
SDCO	Great Sand Dun	82.10	48	eP	P	15 46 24.4	+0.6
	comp=Z,3.8nm,1.1s						

VTS	Vitosha	82.10	319	eP	P	15 46 23.2	-0.4
	comp=Z,5.8nm,0.9s						
VTS	Vitosha	82.10	319	⇓iP	P	15 46 24.3	+0.7
VTS	Vitosha	82.10	319	eP	P	15 46 23.2	-0.4
VTS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ECSD	EROS Data Cent	82.64	39	eP	P	15 46 25.9	-0.3
	comp=Z,4.5nm,0.7s						
E38A	The Farm, Brul	82.83	34	eP	P	15 46 26.6	-0.5
	comp=Z,9.2nm,0.8s						
T25A	Trinidad	83.15	48	eP	P	15 46 30.2	+1.0
	comp=Z,9.6nm,1.1s						
ANMO	Albuquerque	83.43	50	eP	P	15 46 31.9	+1.3
	comp=Z,6.2nm,1.1s						
ANMO	Albuquerque	83.43	50	eP	P	15 46 31.9	+1.3
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BNM	Barren Site	83.86	51	eP	P	15 46 33.8	+0.9
319A	Douglas	84.05	55	eP	P	15 46 34.7	+0.9
	comp=Z,13nm,1.0s						
ECH	Echery	84.93	332	eP	P	15 46 37.5	-0.4
	comp=Z,14nm,1.2s						
ECH	Echery	84.93	332	eP	P	15 46 37.5	-0.4
ECH				pmax	pmax		
	comp=Z,14nm,1.2s						
I39A	Houston	84.97	36	eP	P	15 46 37.6	-0.4
	comp=Z,11nm,0.6s						
FUORN	Ofenpass-Fuorn	85.03	329	eP	P	15 46 38.8	+0.2
	comp=Z,11nm,0.8s						
I41A	Arkdale	85.56	35	eP	P	15 46 40.8	-0.2
	comp=Z,54nm,0.2s						
KSU1	Kansas State U	86.06	42	eP	P	15 46 43.2	-0.3
	comp=Z,10nm,0.8s						
I42A	Draeger Farm,	86.11	34	eP	P	15 46 43.4	-0.3
	comp=Z,21nm,0.9s						
LBZ	Lake Benmore	86.19	160	eP	P	15 46 44.4	+0.7
	comp=Z,68nm,1.6s						
AMTX	Amarillo	86.30	48	eP	P	15 46 45.6	+0.7
	comp=Z,11nm,1.1s						
WMOK	Wichita Mounta	88.07	46	eP	P	15 46 53.7	+0.3
	comp=Z,3.9nm,1.0s						
WMOK	Wichita Mounta	88.07	46	eP	P	15 46 53.7	+0.3
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
P42A	Winchester	88.84	38	eP	P	15 46 57.2	+0.3
	comp=Z,102nm,1.6s						
TUL1	Leonard	88.86	43	eP	P	15 46 57.4	+0.3
	comp=Z,31nm,1.8s						
TX31	Lajitas Ar. Si	88.99	53	eP	P	15 46 57.9	-0.1
TXAR	Lajitas Array	88.99	53	P	P	15 46 58.6	+0.6
	comp=Z,4.1nm,0.6s,baz=298,slow=3.2,SNR=30						
TXAR				pP	pP	15 47 16.9	+2.5
	comp=Z,1.6nm,0.7s,baz=297,slow=4.1,SNR=4.7						
CCM	Cathedral Cave	89.59	39	eP	P	15 47 00.8	+0.3
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	89.59	39	eP	P	15 47 00.8	+0.3
CCM				pmax	pmax		
	comp=Z,11nm,0.9s						
M48A	Edgerton	89.88	33	eP	P	15 47 00.8	-0.9
	comp=Z,69nm,1.9s						
OXF	Oxford	93.28	40	eP	P	15 47 18.8	+1.2
	comp=Z,41nm,0.8s						
OXF	Oxford	93.28	40	eP	P	15 47 18.8	+1.2
OXF				pmax	pmax		
	comp=Z,41nm,0.8s						
LPAZ	La Paz	145.66	59	ePKPdf	PKPdf	15 53 42.1	0.0
LPAZ				pPKPbc	pPKPab	15 54 02.6	+3.1
LPAZ	La Paz	145.66	59	PKPbc	PKPbc	15 53 42.5	-0.1
	comp=Z,7.2nm,0.5s,baz=328,slow=2.1,SNR=27						
LPAZ				pPKPbc	pPKPab	15 54 02.6	+3.1
	comp=Z,4.0nm,0.5s,baz=34,slow=12,SNR=4.0						
MNMC	Minye Minye	146.60	64	ePKPdf	PKPdf	15 53 43.9	+0.6
LCO	Las Campanas	151.39	81	ePKPbc	PKPbc	15 53 56.9	+0.1
LCO	Las Campanas	151.39	81	ePKIKP	PKPbc	15 53 56.9	+0.1
PLCA	Paso Flores	154.88	106	PKPbc	PKiKP	15 54 03.9	0.0
	comp=Z,3.5nm,1.2s,baz=249,slow=2.7,SNR=3.8						

IDC 21 15:36:37.5±1.8**, 11°.10S**×**165°.64E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.5**/31**, mbtmp3.6**/4**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.8**/14**, Error ellipse: s-maj=53.9km s-min=32.9km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.84	286	LR	LR	15 40 24.8	
	comp=Z,63nm,18.6s,baz=22,slow=39						
DZM	Mont Dzumac	10.94	176	Pn	Pn	15 39 15.6	+0.2
	baz=102,slow=19,SNR=2.7						
DZM				Sn	Sn	15 41 16.8	-1.8
	0.1nm,0.3s,baz=66,slow=20,SNR=2.2						
RAO	Raoul Island	23.70	142	LR	LR	15 49 42.1	
	comp=Z,262nm,20.7s,baz=73,slow=33						
WRA	Warramunga Arr	31.36	250	P	P	15 43 00.4	+0.1
	0.9nm,0.8s,baz=82,slow=9.0,SNR=5.0						
ASAR	Alice Springs	32.67	243	P	P	15 43 11.5	-0.2
	0.4nm,0.9s,baz=68,slow=11,SNR=3.4						
ILAR	Eielson Array	83.60	19	P	P	15 49 07.4	0.0
	0.2nm,0.5s,baz=240,slow=5.9,SNR=4.8						

ROM 21 15:43:28.8±0.0**, 42°.796N**±0°.003×**13°.166E**±0°.005**, h12**^{km}**, Md1.5**/6**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	Norcia	0.05	315	P	Pg	15 43 31.6	+0.4
NRCA				S	Sg	15 43 33.3	+0.2
NRCA				END			
NRCA				END			
SMA1	SAN MARTINO	0.21	143	P	Pg	15 43 33.8	+0.5
SMA1				S	Sg	15 43 37.2	+0.7
SMA1				END			
SMA1				END			
SMA1				END			
SMA1				END			
LNSS	Leonessa	0.21	206	P	Pg	15 43 33.9	+0.4
LNSS				S	Sg	15 43 37.5	+0.8
LNSS				END			
LNSS				END			
LNSS				END			
LNSS				END			
FDMO	Fiordimonte	0.25	347	P	Pg	15 43 34.5	+0.4
FDMO				S	Sg	15 43 38.4	+0.8
FDMO				END			
FDMO				END			
FDMO				END			
FDMO				END			
CESI	CESI - Serrava	0.28	317	P	Pg	15 43 35.1	+0.4
CESI				S	Sb	15 43 39.7	-0.9
CESI				END			
CESI				END			
CESI				END			
CESI				END			
TERO	Teramo	0.37	118	P	Pg	15 43 36.4	+0.3
TERO				S	Sb	15 43 42.2	-0.7
TERO				END			
TERO				END			

IDC ***21*** *15:48:08.8±2.8, 36°.32N×70°.70E, h166^{km}±27^{km}, mb3.5/8, mb1 3.6/14, mb1mx3.3/44, mbtmp4.0/14, Error ellipse: s-maj=20.9km s-min=16.6km az=13.0*

BJI ***21*** *15:48:09.6, 36°.37N×70°.84E, h161^{km}, mb4.3/6*

ISCJB ***21*** *15:48:10.1±0.3, 36°.49N±0°.02×70°.81E±0°.04, h188^{km}, mb4.0/11, Error ellipse: s-maj=4.7km s-min=2.8km az=164.5*

NEIC ***21*** *15:48:11.7±0.5, 36°.56N×70°.76E, h187^{km}±5^{km}, mb4.2/5, Error ellipse: s-maj=8.5km s-min=5.6km az=143.0*

NNC ***21*** *15:48:16.2±1.9, 36°.94N×70°.73E, h176^{km}±23^{km}, mb3.1, mpv3.9, Error ellipse: s-maj=18.7km s-min=13.6km az=57.0*

ISC 21 15:48:10.7±0.5**, 36°.56N**±0°.04×**70°.78E**±0°.05**, h188**^{km}**, n82,** σ**2**^{s}**.13**/97**, mb3.9**/11**, 6C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHGR	Chuyangaron	2.46	329	ePn	Pn	15 48 54.9	+1.5
CHGR				eSn	Sn	15 49 26.1	-0.7
GAR	Garm	2.46	352	ePn	Pn	15 48 55.0	+1.5
GAR				eSn	Sn	15 49 27.3	+0.3
KBL	Kabul	2.46	216	ePn	Pn	15 48 54.7	+1.0
KBL				eSn	Sn	15 49 26.3	-0.7
CEP	Cherat	2.88	161	P	Pn	15 48 59.3	+0.8
CEP				S	Sn	15 49 34.0	-1.8
CHCP	Chirah Chowk	3.54	144	P	Pn	15 49 07.1	+0.7
THW	Thamme Wali	3.84	168	P	Pn	15 49 10.7	+0.6
SFK	Sufi-Kurgan	4.06	31	⇓P	Pn	15 49 14.2	+1.3
	8.0nm,0.4s						
SFK				⇓S	Sn	15 50 00.8	-1.0
	39nm,0.5s						
SARP	Sargodha	4.89	161	P	Pn	15 49 23.0	-0.4
KSH	Kashi	5.05	53	P	Pn	15 49 22.8	-2.7
KSH				S	Sn	15 50 14.6	-10
KSH				smax	smax		
	comp=N,260nm,0.4s						
KSH				smax	smax		
	comp=E,120nm,0.2s						
ARSB	Arslanbob	5.06	19	ePn	Pn	15 49 26.2	+0.6
ARSB				eSn	Sn	15 50 18.1	-6.6
AML	Almayashu	6.00	21	P	Pn	15 49 38.8	+0.7
	SNR=88						
MNAS	Manas	6.07	12	⇓P	Pn	15 49 39.5	+0.8
	6.1nm,0.3s						
MNAS				⇑S	Sn	15 50 46.2	-2.1
	47nm,0.6s						
DHRM	DHARAMSHALA	6.27	132	eP	Pn	15 49 40.5	-1.1
DHRM				eS	Sn	15 50 47.6	-5.7
DHRM				IAML		15 50 50.5	
	comp=N,223nm,0.4s						
DHRM				IAML		15 50 50.7	
	comp=E,190nm,0.2s						
NRN	Naryn	6.34	38	ePn	Pn	15 49 42.8	+0.3
UCH	Uchtor	6.35	26	P	Pn	15 49 43.3	+0.6
	SNR=12						
EKS2	Erkin-Say	6.52	20	P	Pn	15 49 45.6	+1.0
	SNR=16						
KK31	Karatay Array	6.54	358	ePn	Pn	15 49 45.7	+1.0
KK31				eSn	Sn	15 50 54.1	-5.0
KK31	Karatay Array	6.54	358	P	Pn	15 49 45.5	+0.7
	comp=E,4.4nm,0.3s,baz=189,slow=14,SNR=123						
KK31				S	Sn	15 50 54.6	-4.5
	comp=E,21nm,0.3s,baz=176,slow=15,SNR=27						
KKAR	Karatay Array	6.54	358	ePn	Pn	15 49 45.8	+1.1
KKAR				eSn	Sn	15 50 54.4	-4.7
AAK	Ala-Archa	6.71	24	P	Pn	15 49 48.1	+1.0
	SNR=9.8						
AAK	Ala-Archa	6.71	24	⇑P	Pn	15 49 47.9	+0.8
	comp=E,3.0nm,0.3s						
AAK				⇓S	Sn	15 51 01.7	-1.7
	comp=E,8.6nm,0.6s						
AAK	Ala-Archa	6.71	24	P	Pn	15 49 48.3	+1.2
	comp=E,2.8nm,0.3s,baz=171,slow=4.7,SNR=48						
AAK				S	Sn	15 50 57.8	-5.6
	comp=E,1.2nm,0.3s,baz=234,slow=14,SNR=2.8						
KBK	Karagaybulak	6.88	27	P	Pn	15 49 50.8	+1.4
	SNR=7.8						
CHMS	Chumysh	7.12	24	P	Pn	15 49 53.2	+0.9
	SNR=6.7						
USP	Ospenovka	7.28	22	P	Pn	15 49 55.0	+0.5
	SNR=17						
TKM2	Tokmak 2	7.36	29	P	Pn	15 49 56.5	+0.8
	SNR=13						
TKM2	Tokmak 2	7.36	29	⇑P	Pn	15 49 56.3	+0.7
	comp=E,6.5nm,0.7s						
TKM2				⇑S	Sn	15 51 14.9	-3.8
	comp=E,6.1nm,0.8s						
KDJ	Kajisay	7.45	40	ePn	Pn	15 49 58.4	+1.6
TARG	Taragay, Kyrgy	7.51	44	ePn	Pn	15 49 57.9	0.0
SMLA	Simla	7.59	134	eP	Pn	15 49 57.4	-1.2
SMLA				eS	Sn	15 51 18.1	-6.0
SMLA				IAML		15 51 20.8	
	comp=E,111nm,0.2s						
SMLA				IAML		15 51 21.0	
	comp=N,147nm,0.5s						
PRZ	Przheval'sk	8.34	43	ePn	Pn	15 50 10.1	+1.5
DDI	Dehra Dun	8.70	134	eP	Pn	15 50 12.1	-1.1
DDI				eS	Sn	15 51 43.8	-6.8
DDI				IAML		15 53 06.3	
	comp=E,79nm,0.0s						
DDI				IAML		15 53 09.2	
BHGR	Bahadurgarh	9.41	145	eS	Sn	15 51 59.6	-7.9
JOSI	Joshimath	9.46	127	eP	Pn	15 50 22.4	-0.9
JOSI				eS	Sn	15 52 01.1	-7.9
JOSI				IAML		15 52 03.3	
	comp=E,80nm,1.5s						
JOSI				IAML		15 52 04.0	
	comp=N,62nm,0.2s						
KHET	Khetri	9.47	152	eP	Pn	15 50 20.3	-3.0
KHET				eS	Sn	15 51 59.0	-10
JASL	Jaisalmer	9.61	179	ex	x	15 52 01.9	
KUDL	Kundal	9.68	148	eP	Pn	15 50 24.0	-2.0
KUDL				eS	Sn	15 52 05.5	-8.5
KALG	Kalgarh	9.71	134	ex	x	15 50 22.6	
KALG				eS	Sn	15 52 04.8	-10
SONA	Sohna	9.85	146	eS	Sn	15 52 07.8	-10
GEYT	Alibeck	10.19	281	P	Pn	15 50 31.6	-0.9
	comp=N,0.8nm,0.3s,baz=110,slow=10,SNR=8.6						
GEYT				S	Sn	15 52 20.2	-5.8
	comp=N,0.4nm,0.3s,baz=88,slow=19,SNR=3.1						
GYA0B	ALIBECK ARRAY	10.19	281	ePn	Pn	15 50 32.5	-0.1
GYA0B				eSn	Sn	15 52 21.9	-4.1
MAKZ	Makanchi	13.21	36	ePn	Pn	15 51 11.8	+0.8
PYUN	Piuthan	13.32	126	eP	Pn	15 51 10.3	-2.6
	comp=N,16nm,0.3s						
MK01	Makanchi Array	13.33	37	ePn	Pn	15 51 13.7	+1.0
MK31	Makanchi Array	13.35	36	ePn	Pn	15 51 14.2	+1.4
MK31	Makanchi Array	13.35	36	⇑P	P	15 51 16.7	+0.9
	comp=N,3.6nm,0.8s,baz=218,slow=11,SNR=5.1						
MKAR	Makanchi Array	13.35	36	ePn	Pn	15 51 14.1	+1.3
MKAR	Makanchi Array	13.35	36	P	Pn	15 51 12.8	0.0
	comp=N,0.1nm,0.3s,baz=205,slow=13,SNR=10						
DANN	Dangsing	13.67	123	eP	Pn	15 51 15.5	-1.8
	comp=N,27nm,0.4s						
KOLN	Koldanda	13.95	125	eP	Pn	15 51 18.9	-1.7
	comp=N,9.0nm,0.3s						
BHPL	Bhopal	14.46	155	eP	Pn	15 51 28.4	+1.5
WMQ	Urumqi	14.81	55	eP	Pn	15 51 33.5	+2.5
WMQ				LR	LR		
	comp=N,95nm,18.9s						
WMQ				LR	LR		
	comp=N,190nm,17.3s						
WMQ				LR	LR		
	comp=N,98nm,15.5s						
AB31	Akbulak array	14.94	331	P	Pn	15 51 33.4	+0.8
	comp=N,2.5nm,0.5s,baz=146,slow=11,SNR=54						
AB31				⇓S	Sn	15 54 17.0	-2.4
	comp=N,0.8nm,0.4s,baz=154,slow=11,SNR=8.9						
ABKAR	Akbulak array	14.94	331	ePn	Pn	15 51 33.4	+0.9
DMN	Daman	15.06	122	eP	Pn	15 51 33.5	-0.9
	comp=N,17nm,0.4s						
KKN	Kakani	15.06	121	eP	Pn	15 51 34.0	-0.4
	comp=N,9.9nm,0.2s						
KURBB	Kurchatov Arra	15.12	19	P	Pn	15 51 37.0	+2.3
	comp=N,0.2nm,0.3s,baz=207,slow=12,SNR=6.3						
PKIN	Phulchoki	15.28	122	eP	Pn	15 51 36.2	-0.9
	comp=N,22nm,0.5s						
PKI	Pulchoki	15.29	122	eP	Pn	15 51 36.7	-0.6
	comp=N,26nm,0.5s						
GUN	Gumba	15.40	120	eP	Pn	15 51 38.6	-0.1
	comp=N,12nm,0.3s						
JIRN	Jiri	15.77	120	eP	Pn	15 51 43.2	0.0
	comp=N,58nm,0.3s						
BVA0	Borovoye Array	16.46	359	P	P	15 51 52.6	+2.3
	comp=N,3.8nm,1.1s,baz=164,slow=15,SNR=23						
BVAR	Borovoye Array	16.46	359	P	P	15 51 51.8	+1.6
	comp=N,0.9nm,0.3s,baz=152,slow=10,SNR=21						
BVAR				S	S	15 54 51.3	-1.1
	comp=N,0.1nm,0.3s,baz=163,slow=21,SNR=3.7						
BRVK	Borovoye	16.50	359	eP	P	15 51 53.1	+2.5
	comp=N,2.3nm,0.7s						
RAMN	Ramite	16.50	121	eP	P	15 51 51.1	-0.1
	comp=N,12nm,0.2s						
AKTO	Aktyubinsk	16.64	330	⇑P	Pn	15 51 55.2	+2.1
	comp=N,9.9nm,0.6s						
AKTO				⇓S	S	15 54 57.7	+1.6
	comp=N,1.9nm,0.6s						
AKTO	Aktyubinsk	16.64	330	P	Pn	15 51 55.3	+2.2
	comp=N,2.0nm,0.3s,baz=137,slow=10,SNR=29						
AKTO				S	S	15 54 53.1	-3.0
	comp=N,0.0nm,0.3s,baz=13,slow=19,SNR=1.8						
ZAA0	Zalesovo Array	19.93	25	eP	P	15 52 29.6	+1.6
	comp=N,5.9nm,0.6s						
ZALV	Zalesovo Beam	19.93	25	eP	P	15 52 29.6	+1.6
ZALV	Zalesovo Beam	19.93	25	P	P	15 52 29.4	+1.5
	comp=N,7.8nm,0.6s,baz=221,slow=12,SNR=34						
ZALV				S	S	15 56 00.9	-0.7
	comp=N,0.3nm,0.4s,baz=197,slow=20,SNR=2.6						
TLY	Talaya	27.73	47	eP	P	15 53 41.5	+0.1
	comp=N,9.3nm,1.6s						
SONM	Songino Array	28.45	55	P	P	15 53 49.8	+1.8
	comp=N,0.6nm,0.7s,baz=259,slow=8.9,SNR=5.1						
SONA1	Songino Array	28.45	55	eP	P	15 53 49.8	+1.8
MMAI	Mount Meron Ar	29.17	274	P	P	15 53 52.9	-1.5
	comp=N,0.4nm,0.3s,baz=91,slow=8.8,SNR=5.0						
HMDM	Hanimaadhoo	29.73	175	eP	P	15 54 01.1	+1.6
	comp=N,130nm,1.0s						
CMAR	Chiang Mai Arr	30.64	118	P	P	15 54 08.5	+1.1
	comp=N,0.3nm,0.3s,baz=298,slow=7.7,SNR=5.7						
AKBB	Malin Array Si	32.77	309	eP	P	15 54 26.0	+0.3
	comp=N,13nm,1.8s						
KIEV	Kiev	32.78	309	eP	P	15 54 26.4	+0.7
	comp=N,5.4nm,1.5s						
ARCES	ARCESS Array B	41.02	338	P	P	15 55 37.9	+2.9
	comp=N,3.9nm,1.0s,baz=108,slow=7.8,SNR=3.5						
YKA	Yellowknife Ar	81.19	3	P	P	16 00 07.2	+2.2
	comp=N,0.4nm,0.4s,baz=351,slow=5.4,SNR=7.8						
WRA	Warramunga Arr	82.17	122	P	P	16 00 10.4	-0.3
	comp=N,0.9nm,0.4s,baz=325,slow=5.0,SNR=33						
ASAR	Alice Springs	84.44	125	P	P	16 00 22.0	-0.3
	comp=N,1.1nm,0.6s,baz=310,slow=5.1,SNR=27						

IDC 21 16:37:53.8±2.7**, 5°.53S**×**131°.38E, h43**^{km}±35^{km}**, mb3.6**/1**, mb1 4.1**/5**, mb1mx3.6**/27**, mbtmp4.0**/5**, ML4.1**/4**, Error ellipse: s-maj=96.8km s-min=23.6km az=86.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.63	359	P	Pn	16 39 01.8	+0.4
	20nm,0.3s,baz=209,slow=19,SNR=162						
SIJI				S	Sn	16 39 48.6	-5.3
	16nm,0.3s,baz=255,slow=23,SNR=15						
FITZ	Fitzroy Crossi	13.69	204	P	Pn	16 41 04.6	-0.9
	0.7nm,0.3s,baz=29,slow=12,SNR=67						
FITZ				S	Sn	16 43 26.7	-9.5
	0.4nm,0.3s,baz=196,slow=18,SNR=3.8						
WRA	Warramunga Arr	14.61	169	P	Pn	16 41 16.1	-1.8
	0.6nm,0.3s,baz=356,slow=13,SNR=53						
WRA				S	Sn	16 43 49.5	-9.2
	0.4nm,0.3s,baz=356,slow=23,SNR=6.1						
ASAR	Alice Springs	18.19	173	P	Pn	16 42 04.5	+1.2
	0.5nm,0.3s,baz=352,slow=10,SNR=44						
ASAR				S	Sn	16 45 18.0	-7.6
	0.1nm,0.3s,baz=0.1,slow=28,SNR=4.2						
MKAR	Makanchi Array	67.77	326	P	P	16 48 47.1	-0.1
	0.6nm,0.4s,baz=111,slow=8.1,SNR=11						

IDC 21 16:37:59.5±4.5**, 11°.64S**×**165°.17E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/30**, mbtmp3.7**/3**, MS3.3**/3**, Ms1 3.3**/3**, ms1mx2.9**/29**, Error ellipse: s-maj=197.4km s-min=38.1km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.59	293	LR	LR	16 41 12.0	
	comp=Z,64nm,20.6s,baz=88,slow=34						
JAY	Jayapura	25.89	289	LR	LR	16 53 00.4	
	comp=Z,79nm,18.3s,baz=158,slow=35						
ASAR	Alice Springs	32.02	244	P	P	16 44 28.0	-0.1
	0.8nm,0.8s,baz=68,slow=9.4,SNR=6.3						
ILAR	Eielson Array	84.26	19	P	P	16 50 32.7	-0.1
	0.6nm,0.8s,baz=242,slow=4.8,SNR=7.1						
NEW	Newport	90.56	41	LR	LR	17 28 41.6	
	comp=Z,51nm,18.7s,baz=298,slow=34						
MKAR	Makanchi Array	93.57	317	P	P	16 51 17.7	0.0
	0.2nm,0.6s,baz=104,slow=6.1,SNR=2.6						

ISCJB ***21*** *16:41:50.0±0.4, 22°.00S±0°.03×68°.50W±0°.06, h113^{km}±5^{km}, mb4.2/9, Error ellipse: s-maj=9.8km s-min=5.3km az=178.2*

IDC ***21*** *16:41:50.6±0.7, 22°.03S×68°.36W, h102^{km}±8^{km}, mb3.8/5, mb1 3.8/9, mb1mx3.6/33, mbtmp4.0/9, Error ellipse: s-maj=23.3km s-min=17.5km az=119.0*

NEIC ***21*** *16:41:50.3±0.5, 22°.05S×68°.41W, h101^{km}±6^{km}, mb4.2/7, Error ellipse: s-maj=11.8km s-min=6.9km az=92.0*

GUC ***21*** *16:41:51.6±0.6, 22°.00S×68°.72W, h117^{km}±4^{km}, ML4.0*

ISC 21 16:41:50.1±0.6**, 22°.05S**±0°.04×**68°.46W**±0°.06**, h105**^{km}±6^{km}**, n47,** σ**1**^{s}**.79**/68**, mb4.2**/9**, 9C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.70	217	P	Pn	16 42 10.4	+1.9
	131nm,0.3s,baz=355,slow=6.1,SNR=3733						
LVC				S	Sn	16 42 24.1	+2.0
	722nm,0.3s,baz=246,slow=20,SNR=95						
LVC				LR	LR	16 42 26.7	
	comp=Z,65nm,18.8s,baz=352,slow=47						
PB09	IPOC Station P	0.77	289	⇓eP	Pn	16 42 10.2	+1.4
PB09				eS	Sn	16 42 23.5	+0.6
PB09				IAML		16 42 25.8	
	comp=N,5μm,0.6s						
PB03	IPOC Station P	1.20	270	⇑eP	Pn	16 42 13.7	+0.3
PB03				eS	Sn	16 42 30.7	-0.1
PB03				IAML		16 42 32.7	
	comp=E,5μm,0.3s						
PB06	IPOC Station P	1.22	237	⇑eP	Pn	16 42 14.9	+1.3
PB06				eS	Sn	16 42 32.3	+1.1
PB06				IAML		16 42 33.0	
	comp=N,5μm,0.3s						
PB07	IPOC Station P	1.36	283	⇑eP	Pn	16 42 15.5	+0.3
PB07				eS	Sn	16 42 33.5	-0.7
PB07				IAML		16 42 33.9	
	comp=N,5μm,0.2s						
PB01	IPOC Station P	1.39	316	ePn	Pn	16 42 15.9	+0.5
PB01				eSn	Sn	16 42 34.3	-0.2
PB01	IPOC Station P	1.39	316	⇑eP	Pn	16 42 15.8	+0.3
PB01				eS	Sn	16 42 34.4	-0.1
PB01				IAML		16 42 37.1	
	comp=E,3μm,0.3s						
PB15	IPOC Station P	1.48	219	⇑eP	Pn	16 42 18.4	+1.7
PB15				eS	Sn	16 42 39.2	+2.4
PB02	IPOC Station P	1.52	298	⇑eP	Pn	16 42 17.1	0.0
PB02				eS	Sn	16 42 36.3	-1.2
PB02				IAML		16 42 38.0	
	comp=E,5μm,0.2s						
PB04	IPOC Station P	1.59	259	ePn	Pn	16 42 18.1	+0.2
PB04				eSn	Sn	16 42 38.6	-0.4
PB04	IPOC Station P	1.59	259	⇑eP	Pn	16 42 18.2	+0.2
PB04				eS	Sn	16 42 38.7	-0.4
PB04				IAML		16 42 41.0	
	comp=E,5μm,0.8s						
PB05	IPOC Station P	1.80	243	⇑eP	Pn	16 42 20.8	+0.3
PB05				eS	Sn	16 42 43.0	-0.6
PB05				IAML		16 42 49.8	
	comp=E,2μm,0.4s						
PB10	IPOC Station P	2.42	233	ePn	Pn	16 42 29.2	+0.9
PB10				eSn	Sn	16 42 53.9	-3.8
PB10	IPOC Station P	2.42	233	eP	Pn	16 42 29.3	+1.0
PB10				eS	Sn	16 42 57.6	-0.1
PB10				IAML		16 43 07.5	
	comp=N,477nm,0.4s						
PB11	IPOC Station P	2.54	334	ePn	Pn	16 42 30.0	0.0
PB11				eSn	Sn	16 42 58.2	-2.5
PB11	IPOC Station P	2.54	334	⇑eP	Pn	16 42 30.2	+0.1
PB11				eS	Sn	16 42 59.9	-0.8
MNMC	Minye Minye	3.09	340	ePn	Pn	16 42 37.8	+0.2
MNMC				eSn	Sn	16 43 08.2	-5.9
GO02	Mina Guanaco	3.27	198	ePn	Pn	16 42 40.9	+1.0
GO02				eSn	Sn	16 43 11.4	-6.8
LPAZ	La Paz	5.74	3	ePn	Pn	16 43 14.6	+1.0
LPAZ	La Paz	5.74	3	P	Pn	16 43 14.9	+1.3
	comp=N,0.9nm,0.3s,baz=191,slow=7.3,SNR=15						
GO03	Copiap	5.75	196	ePn	Pn	16 43 12.2	-0.9
LCO	Las Campanas	7.22	196	ePn	Pn	16 43 30.6	-2.7
LCO				eSn	Sn	16 44 50.8	-3.0
GO04	Tololo Observa	8.36	194	ePn	Pn	16 43 45.9	-2.8
GO04				eSn	Sn	16 45 18.5	-2.9
SIV	San Ignacio	9.22	50	P	Pn	16 43 59.3	-1.0
	comp=N,2.9nm,0.3s,baz=247,slow=12,SNR=66						
SIV				S	Sn	16 45 32.6	-10
	comp=N,0.2nm,0.3s,baz=266,slow=15,SNR=1.8						
CPUP	Villa Florida	11.01	115	ePn	Pn	16 44 25.4	+0.9
CPUP	Villa Florida	11.01	115	P	Pn	16 44 25.3	+0.8
	comp=N,0.1nm,0.3s,baz=11,slow=16,SNR=2.0						
ROC1	El Roble	11.12	191	ePn	Pn	16 44 27.1	+0.9
TRQA	Tornquist	16.90	162	ePn	P	16 45 42.4	+1.9
	comp=N,25nm,1.8s						
GO06	Curarrehue	17.67	188	eP	Pn	16 45 51.2	+1.6
	comp=N,16nm,1.5s						

PLCA	**Paso Flores**	**18.71**	**185**	P	**P**	**16 46 00.6**	**+0.2**
	comp=N,0.2nm,0.3s,baz=17,slow=11,SNR=4.2						
PTGA	**Pitinga**	**22.75**	**22**	*e*P	**P**	**16 46 42.1**	**-1.5**
	comp=N,25nm,1.8s						
PTGA	**Pitinga**	**22.75**	**22**	P	**P**	**16 46 42.6**	**-1.0**
	comp=N,2.1nm,0.3s,baz=210,slow=23,SNR=8.6						
BCIP	**Isla Barro Col**	**32.97**	**339**	*e*P	**P**	**16 48 13.8**	**-1.2**
	comp=N,74nm,1.3s						
DBIC	**Dimbokro**	**68.49**	**73**	*e*P	**P**	**16 52 41.3**	**-0.2**
	comp=N,23nm,1.6s						
DBIC	**Dimbokro**	**68.49**	**73**	P	**P**	**16 52 41.2**	**-0.4**
	comp=N,1.3nm,0.4s,baz=224,slow=8.0,SNR=3.3						
SDCO	**Great Sand Dun**	**68.93**	**329**	*e*P	**P**	**16 52 46.1**	**+1.9**
	comp=N,1.9nm,0.8s						
SRU	**San Rafael Swe**	**72.46**	**327**	*e*P	**P**	**16 53 06.9**	**+1.4**
	comp=N,4.3nm,0.7s						
CCUT	**Cedar City**	**72.80**	**324**	*e*P	**P**	**16 53 10.5**	**+2.9**
	comp=N,3.7nm,0.8s						
PDAR	**Pinedale Array**	**74.79**	**330**	P	**P**	**16 53 19.8**	**+0.7**
	comp=N,0.5nm,0.7s,baz=133,slow=7.4,SNR=4.6						
TOA1	**Torodi Ar. Sit**	**77.15**	**70**	*e*P	**P**	**16 53 33.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**77.15**	**70**	P	**P**	**16 53 33.1**	**+0.4**
	comp=N,1.4nm,0.4s,baz=264,slow=5.6,SNR=15						
TORD				pP	**pP**	**16 53 58.5**	**-2.6**
	comp=N,1.1nm,1.0s,baz=252,slow=4.1,SNR=1.4						
YKA	**Yellowknife Ar**	**91.84**	**340**	P	**P**	**16 54 46.6**	**+0.8**
	comp=N,1.1nm,0.7s,baz=136,slow=4.5,SNR=16						
ASAR	**Alice Springs**	**129.62**	**207**	PKP	**PKPdf**	**17 00 48.6**	**+1.0**
	comp=N,0.3nm,0.4s,baz=119,slow=1.7,SNR=6.5						
ZAA1	**Zalesovo Array**	**142.26**	**26**	*e*PKPdf	**PKPdf**	**17 01 09.8**	**-0.1**
ZALV	**Zalesovo Beam**	**142.27**	**26**	PKP	**PKPdf**	**17 01 09.8**	**-0.1**
	comp=N,0.9nm,0.5s,baz=318,slow=4.1,SNR=4.5						
MK32	**Makanchi Array**	**145.83**	**37**	*e*PKPdf	**PKPab**	**17 01 18.4**	**+0.6**
MKAR	**Makanchi Array**	**145.83**	**37**	PKPbc	**PKPab**	**17 01 18.4**	**+0.6**
	comp=N,1.5nm,0.7s,baz=339,slow=3.0,SNR=16						

MEX 21 16:44:44.6±0.6,16°.27N×98°.22W,h9^{km}±2^{km},MD3.9,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.15**	**36**	*i* P	Pg	16 44 47.2	-0.7
PNIG				*i* S	Sg	16 44 50.0	-0.2
VHO	**Vista Hermosa**	**1.63**	**61**	*e*P	Pn	16 45 10.5	-3.1
VHO				*i* S	Sn	16 45 30.1	-4.8
HUIG	**Huatulco**	**2.09**	**104**	*e*S	Sn	16 45 40.9	-5.0
CMIG	**Matias Romero**	**3.30**	**75**	*e*P	Pb	16 45 43.0	-0.3

IDC 21 16:53:09.4±608.0,56°.41N×0°.60W,h0^{km},Error ellipse: s-maj=340.0km s-min=197.4km az=111.0,North Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	**11.52**	**125**	*i*		18 02 40.0	
	baz=318,slow=344,SNR=1.3						
I43RU	**DUBNA INFRASON**	**20.67**	**73**	*i*		18 59 30.0	
	baz=286,slow=377,SNR=0.7						
I31KZ	**AKTYUBINSK INF**	**34.52**	**75**	*i*		20 27 30.0	
	baz=301,slow=377,SNR=0.9						

KRSC 21 17:13:53.6±1.3,49°.72N×156°.72E,h7^{km}±18^{km},ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.04**	**338**	*e*P	Pg	17 14 12.8	-0.7
SKR				*e*S	Sg	17 14 26.5	-0.5
PAU	**Pauzhetka**	**1.75**	**2**	*e*P	Pn	17 14 24.6	+0.3
PAU				*e*S	Sb	17 14 47.6	-0.5
KDTR	**Khodutka, Kamc**	**2.26**	**22**	*e*P	Pn	17 14 32.5	+1.2
KDTR				*e*S	Sb	17 15 01.3	-1.5
MTVR	**Mutnovka**	**2.91**	**18**	*e*P	Pb	17 14 44.0	-1.9
MTVR				*e*S	Sb	17 15 19.6	-2.2
RUS	**Russkaya**	**2.94**	**22**	*e*P	Pn	17 14 42.4	+1.8
RUS				*e*S	Sn	17 15 19.1	+3.0
KRMR	**Karymshinskiy**	**3.23**	**15**	*e*P	Pb	17 14 48.0	-3.3
KRMR				*e*S	Sn	17 15 26.9	+3.5
UGLR	**Uglovaya**	**3.73**	**20**	*e*P	Pn	17 14 54.7	+3.1
AVH	**Avacha**	**3.77**	**19**	*e*P	Pn	17 14 54.6	+2.5
KOK	**Koryaka**	**3.77**	**18**	*e*P	Pn	17 14 56.0	+3.9
SDLR	**Sedlovina**	**3.81**	**20**	*e*P	Pn	17 14 56.8	+4.1
GNL	**Ganaly**	**4.05**	**10**	*e*P	Pn	17 15 00.1	+4.1

MEX 21 17:16:44.4±0.3,14°.31N×93°.22W,h16^{km}±66^{km},MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.39**	**0**	*e*P	Pn	17 17 05.5	-3.5
CCIG	**Comitan**	**2.23**	**28**	*e*P	Pn	17 17 17.9	-2.9
CCIG				*e*S	Sn	17 17 43.1	-4.9

IDC ***21*** *17:20:52.6±0.4, 47°.83N×156°.37E, h0^{km}, mb4.9/35, mb1 5.0/40, mb1mx4.9/50, mbtmp4.9/40, ML4.0/5, MS3.9/25, Ms1 3.9/25, ms1mx3.7/46, Error ellipse: s-maj=12.3km s-min=8.7km az=151.0*

ISCJB ***21*** *17:20:54.6±0.1, 47°.85N±0°.02×156°.38E±0°.02, h24^{km}, mb5.1/386, MS4.2/37, Error ellipse: s-maj=3.3km s-min=1.8km az=166.3*

SKHL ***21*** *17:20:54.0±0.5, 47°.74N×156°.37E, h38^{km}±5^{km}, mb5.5/1, Ms4.6/7*

MOS ***21*** *17:20:55.8±1.0, 47°.85N×156°.40E, h33^{km}, mb5.4/111, Error ellipse: s-maj=6.0km s-min=4.1km az=100.2*

BJI ***21*** *17:20:56.3, 47°.90N×155°.96E, h21^{km}, mB5.2/51, mb5.0/67, Ms4.8/66, Ms7 4.5/63*

NEIC ***21*** *17:20:57.6±0.1, 47°.84N×156°.32E, h35^{km}, mb5.2/292, Error ellipse: s-maj=3.4km s-min=1.8km az=160.0*

GCMT ***21*** *17:20:58.6±0.3, 47°.88N±0°.02×156°.55E±0°.03, h12^{km}, MW4.9/91, Moment Tensor Solution. s35,c41; s91,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.59±.07; $M_{\theta\theta}$1.36±.07; $M_{\phi\phi}$1.24±.06; $M_{r\theta}$0.67±.25; $M_{\theta\phi}$1.33±.05; $M_{\phi r}$0.60±.26; Best double couple: $M_0$2.76000×10^{16} NP1:ϕ_s227.00000°,δ54.00000°,λ-89.00000°. NP2: ϕ_s46.00000°,δ36.00000°,λ-91.00000°. Principal axes: T 2.7810, Plg9.0000°, Azm316.0000°; N -0.0310, Plg1.0000°, Azm46.0000°; P -2.7400, Plg81.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 17:20:56.5±0.8,47°.79N±0°.04×156°.32E±0°.04,h27^{km}±5^{km}, n1122,σ1^{s}25/1195,mb5.2/409,MS4.3/37,43C-29D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.90**	**357**	*e*P	**Pn**	**17 21 38.8**	**-1.9**
SKR				AMB	AMB	17 21 43.0	
	710nm,0.7s						
SKR				*e*S	**Sn**	**17 22 12.5**	**-2.1**
SKR				A	A	17 22 17.0	
	4µm,0.9s						
SKR				A	A	17 22 17.0	
	2µm,0.9s						
SKR				AMS	AMS	17 24 10.0	
	6µm,9.0s						
SKR				AMS	AMS	17 24 10.0	
	6µm,9.0s						
SKR				AMS	AMS	17 24 10.0	
	7µm,9.0s						
SKR	**Severo-Kuril's**	**2.90**	**357**	*e*PN	**Pn**	**17 21 38.9**	**-1.8**
SKR				*e*S	**Sn**	**17 22 11.4**	**-3.2**
SKR				pmax	pmax		
	comp=Z,706nm,0.7s						
SKR				smax	smax		
	comp=E,2µm,0.9s						
SKR				smax	smax		
	comp=N,4µm,0.9s						
PAU	**Pauzhetka**	**3.69**	**5**	*e*P	**Pn**	**17 21 50.1**	**-1.6**
PAU				AMB	AMB	17 21 52.3	
	comp=N,500nm,0.4s						
PAU				*e*S	**Sn**	**17 22 31.8**	**-2.4**
PAU				A	A	17 22 39.3	
	comp=N,2µm,0.5s						
PAU				A	A	17 22 39.3	
	comp=N,1µm,0.5s						
PEA0B	**Petropavlovsk-**	**5.39**	**9**	*e*Pn	**Pn**	**17 22 13.4**	**-1.7**
PETK	**Petropavlovsk-**	**5.39**	**9**	*e*Pn	**Pn**	**17 22 12.9**	**-2.2**
PETK				Sn	**Sn**	**17 23 16.4**	**+0.1**
PETK	**Petropavlovsk-**	**5.39**	**9**	Pn	**Pn**	**17 22 13.8**	**-1.2**
	comp=N,7.5nm,0.3s,baz=192,slow=14,SNR=169						
PETK				Sn	**Sn**	**17 23 16.4**	**+0.1**
	comp=N,2.0nm,0.3s,baz=140,slow=9.4,SNR=3.6						
PETK				LR	LR	17 24 23.4	
	comp=N,1µm,19.1s,baz=197,slow=39						
PEA1	**Petropavlovsk-**	**5.40**	**9**	*e*Pn	**Pn**	**17 22 13.8**	**-1.3**
PEA1				*e*Sn	**Sn**	**17 23 16.4**	**0.0**
PET	**Petropavlovsk**	**5.45**	**15**	*e*Pn	**Pn**	**17 22 13.2**	**-2.6**
PET	**Petropavlovsk**	**5.45**	**15**	*i* P	**Pn**	**17 22 13.5**	**-2.3**
PET				AMB	AMB	17 22 13.7	
	comp=N,170nm,0.6s						
PET				*e*S	**Sn**	**17 23 13.5**	**-3.9**
PET				A	A	17 23 20.0	
	comp=N,310nm,0.4s						
PET				A	A	17 23 20.0	
	comp=N,570nm,0.4s						
PET				AMS	AMS	17 25 54.0	
	comp=N,2µm,13.0s						
PET				AMS	AMS	17 25 54.0	
	comp=N,4µm,13.0s						
PET				AMS	AMS	17 25 54.0	
	comp=N,2µm,13.0s						
PET	**Petropavlovsk**	**5.45**	**15**	⇓*i*PN	**Pn**	**17 22 13.5**	**-2.3**
PET				pmax	pmax		
	comp=Z,174nm,0.6s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET				MLR	MLR		
	comp=Z,2µm,15.0s						
KUR	**Kuril'sk**	**6.37**	**249**	*i* P	**Pn**	**17 22 28.3**	**-0.2**
KUR				AMB	AMB	17 22 40.0	
	comp=Z,80nm,0.6s						
KUR				AMB	AMB	17 22 40.0	
	comp=Z,100nm,0.6s						
KUR				AMB	AMB	17 22 40.0	
	comp=Z,320nm,0.6s						
KUR				*e*S	**Sn**	**17 23 37.8**	**-2.4**
KUR				A	A	17 23 46.8	
	comp=Z,870nm,0.7s						
KUR				A	A	17 23 46.8	
	comp=Z,780nm,0.7s						
KUR				AMS	AMS	17 26 23.0	
	comp=Z,3µm,13.0s						
KUR				AMS	AMS	17 26 23.0	
	comp=Z,5µm,13.0s						
KUR				AMS	AMS	17 26 23.0	
	comp=Z,4µm,13.0s						
KUR	**Kuril'sk**	**6.37**	**249**	*d* *i*PN	**Pn**	**17 22 28.3**	**-0.2**
KUR				pmax	pmax		
	comp=N,84nm,0.6s						
KUR				pmax	pmax		
	comp=Z,316nm,0.6s						
KUR				pmax	pmax		
	comp=E,104nm,0.4s						
KUR				pmax	pmax		
	comp=Z,1µm,1.6s						
SHO	**Shikotan**	**7.70**	**243**	*i* P	**Pn**	**17 22 43.4**	**-3.3**
SHO	**Shikotan**	**7.70**	**243**	*d* *i*PN	**Pn**	**17 22 43.1**	**-3.6**
YUK	**Yuzh-Kuril'sk**	**8.20**	**247**	*i* P	**Pn**	**17 22 52.2**	**-1.4**
YUK				AMB	AMB	17 22 55.1	
	comp=Z,70nm,0.4s						
YUK				AMB	AMB	17 22 55.1	
	comp=Z,310nm,0.4s						
YUK				*i* S	**Sn**	**17 24 20.7**	**-4.6**
YUK				AMS	AMS	17 27 37.0	
	comp=Z,900nm,12.0s						
YUK				AMS	AMS	17 27 37.0	
	comp=Z,1µm,12.0s						
YUK	**Yuzh-Kuril'sk**	**8.20**	**247**	⇓*i*PN	**Pn**	**17 22 52.1**	**-1.5**
LAGR	**Lagunnoye**	**8.24**	**247**	*i* P	**Pn**	**17 22 52.0**	**-2.1**
LAGR				AMB	AMB	17 23 11.0	
	comp=Z,380nm,0.5s						
LAGR				AMB	AMB	17 23 11.0	
	comp=Z,390nm,0.5s						
LAGR				AMB	AMB	17 23 11.0	
	comp=Z,550nm,0.5s						
LAGR	**Lagunnoye**	**8.24**	**247**	⇑*i*PN	**Pn**	**17 22 52.9**	**-1.2**
LAGR				pmax	pmax		
	comp=E,388nm,0.6s						
LAGR				pmax	pmax		
	comp=Z,554nm,0.6s						
LAGR				pmax	pmax		
	comp=N,384nm,0.4s						
GRPR	**Tuman**	**8.28**	**247**	*e*P	**Pn**	**17 22 53.0**	**-1.7**
GRPR				AMB	AMB	17 22 57.0	
	comp=N,170nm,0.3s						
GRPR				AMB	AMB	17 22 57.0	
	comp=N,270nm,0.3s						
GRPR				AMB	AMB	17 22 57.0	
	comp=N,330nm,0.3s						
GRPR				*e*S	**Sn**	**17 24 23.0**	**-4.2**
GRPR	**Tuman**	**8.28**	**247**	*e*PN	**Pn**	**17 22 53.3**	**-1.4**
GRPR				pmax	pmax		
	comp=N,167nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,331nm,0.3s						
GRPR				pmax	pmax		
	comp=E,272nm,0.4s						
GLVR	**Golovnino**	**8.57**	**246**	*i* P	**Pn**	**17 22 56.0**	**-2.6**
GLVR				AMB	AMB	17 23 08.0	
	comp=E,120nm,0.5s						
GLVR				AMB	AMB	17 23 08.0	
	comp=E,130nm,0.5s						
GLVR				AMB	AMB	17 23 08.0	
	comp=E,290nm,0.5s						
GLVR				*e*S	**Sn**	**17 24 29.0**	**-5.3**
GLVR	**Golovnino**	**8.57**	**246**	⇑*i*PN	**Pn**	**17 22 56.5**	**-2.1**
GLVR				pmax	pmax		
	comp=Z,294nm,0.5s						
GLVR				pmax	pmax		
	comp=N,121nm,0.4s						
GLVR				pmax	pmax		
	comp=E,130nm,0.4s						
YSS	**Yuzh-Sakhalins**	**9.24**	**270**	*e*Pn	**Pn**	**17 23 09.4**	**+1.5**
YSS	**Yuzh-Sakhalins**	**9.24**	**270**	*e*P	**Pn**	**17 23 09.4**	**+1.5**
YSS				AMB	AMB	17 23 11.0	
	comp=E,30nm,0.4s						
YSS				*e*S	**Sn**	**17 24 47.2**	**-3.7**
YSS				AMS	AMS	17 28 13.0	
	comp=E,800nm,15.0s						
YSS				AMS	AMS	17 28 13.0	
	comp=E,1µm,15.0s						
YSS				AMS	AMS	17 28 13.0	
	comp=E,1µm,15.0s						
YSS	**Yuzh-Sakhalins**	**9.24**	**270**	*e*PN	**Pn**	**17 23 10.4**	**+2.5**
YSS				*e*S	**Sn**	**17 24 59.0**	**+8.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s						
YSS				MLR	MLR		
	comp=N,800nm,16.0s						
TYV	**Tymovskoe**	**9.44**	**294**	*e*P	**Pn**	**17 23 11.8**	**+1.3**
TYV				AMB	AMB	17 23 16.8	
	comp=N,500nm,3.0s						
TYV				AMB	AMB	17 23 17.0	
	comp=N,80nm,1.0s						
TYV				*e*S	**Sn**	**17 24 52.0**	**-3.6**
TYV				A	A	17 25 03.4	
	comp=N,10.0nm,0.6s						
TYV				AMS	AMS	17 28 31.6	
	comp=N,2µm,15.0s						
TYV				AMS	AMS	17 28 31.6	
	comp=N,2µm,15.0s						
TYV				AMS	AMS	17 28 31.6	
	comp=N,1µm,15.0s						
TYV	**Tymovskoe**	**9.44**	**294**	*e*PN	**Pn**	**17 23 13.6**	**+3.1**
TYV				*e*S	**Sn**	**17 25 02.2**	**+6.6**
TYV				pmax	pmax		
	comp=Z,500nm,2.3s						
TYV				pmax	pmax		
	comp=Z,77nm,1.1s						
TYV				smax	smax		
	comp=N,13nm,0.6s						
TYV				smax	smax		
	comp=N,400nm,5.8s						
TYV				MLR	MLR		
	comp=N,2µm,16.0s						
TYV				MLR	MLR		
	comp=Z,1µm,16.0s						
UGL	**Uglegorsk**	**9.56**	**283**	*e*P	**Pn**	**17 23 13.8**	**+1.6**
UGL				AMB	AMB	17 23 17.0	
	comp=Z,90nm,0.8s						
UGL				*e*S	**Sn**	**17 24 56.6**	**-2.1**
UGL				A	A	17 24 58.0	
	comp=Z,70nm,1.0s						
UGL				AMS	AMS	17 28 30.0	
	comp=Z,3µm,14.0s						
UGL				AMS	AMS	17 28 30.0	
	comp=Z,2µm,14.0s						
UGL				AMS	AMS	17 28 30.0	
	comp=Z,1µm,14.0s						
UGL	**Uglegorsk**	**9.56**	**283**	*e*PN	**Pn**	**17 23 15.4**	**+3.2**
UGL				pmax	pmax		
	comp=Z,89nm,0.8s						
UGL				MLR	MLR		
	comp=N,3µm,12.0s						
UGL				MLR	MLR		
	comp=Z,1µm,15.0s						
UGL				MLR	MLR		
	comp=E,2µm,14.0s						
ASAJ	**Asahikawa**	**10.24**	**254**	Pn	**Pn**	**17 23 21.3**	**-0.2**
	comp=E,5.0nm,0.3s,baz=82,slow=19,SNR=34						
OKH	**Okha**	**10.26**	**309**	*e*P	**Pn**	**17 23 22.0**	**+0.3**
OKH				*e*S	**Sn**	**17 25 14.0**	**-1.7**
OKH				AMS	AMS	17 29 45.9	
	comp=E,2µm,13.0s						
OKH	**Okha**	**10.26**	**309**	*d**e*PN	**Pn**	**17 23 21.1**	**-0.6**
OKH				*e*S	**Sn**	**17 25 23.1**	**+7.4**
OKH				pmax	pmax		
	comp=Z,300nm,6.0s						
OKH				MLR	MLR		
	comp=Z,2µm,12.0s						
ERM	**Erimo**	**10.97**	**243**	*e*Pn	**Pn**	**17 23 29.8**	**-1.8**
ERM	**Erimo**	**10.97**	**243**	*e*PN	**Pn**	**17 23 30.3**	**-1.2**
NKL	**Nikolayevsk**	**11.31**	**304**	*e*P	**Pn**	**17 23 37.6**	**+1.5**
NKL	**Nikolayevsk**	**11.31**	**304**	*e*PN	**Pn**	**17 23 37.8**	**+1.7**
NKL				pmax	pmax		
	comp=E,85nm,1.3s						
NKL				pmax	pmax		
	comp=Z,77nm,1.3s						
NKL				pmax	pmax		
	comp=Z,800nm,8.0s						
NKL				MLR	MLR		
	comp=N,2µm,13.0s						
NKL				MLR	MLR		
	comp=E,2µm,13.0s						
NKL				MLR	MLR		
	comp=Z,3µm,13.0s						
MA2	**Magadan**	**12.25**	**347**	*e*Pn	**Pn**	**17 23 47.5**	**-1.3**
MA2	**Magadan**	**12.25**	**347**	*e*P	**Pn**	**17 23 47.6**	**-1.3**
MA2	**Magadan**	**12.25**	**347**	*c**e*PN	**Pn**	**17 23 47.6**	**-1.3**
MA2				pmax	pmax		
	comp=Z,53nm,2.5s						
MA2	**Magadan**	**12.25**	**347**	Pn	**Pn**	**17 23 48.1**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=157,slow=12,SNR=8.8						
MA2				LR	LR	17 29 09.7	
	comp=Z,385nm,18.3s,baz=164,slow=41						
GRNR	**Gornyy**	**13.32**	**290**	*e*P	**Pn**	**17 24 03.4**	**-0.2**
GRNR	**Gornyy**	**13.32**	**290**	*e*PN	**Pn**	**17 24 07.0**	**+3.4**
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
TEY	**Ternei**	**13.88**	**266**	*e*P	**Pn**	**17 24 08.4**	**-2.8**
TEY				AMB	AMB	17 24 16.8	
	comp=Z,30nm,1.0s						
TEY	**Ternei**	**13.88**	**266**	⇓*e*P	**P**	**17 24 22.8**	**+3.7**
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
SEY	**Seymchan**	**15.33**	**353**	*e*P	**Pn**	**17 24 30.0**	**-0.7**
SEY	**Seymchan**	**15.33**	**353**	*c**e*P	**Pn**	**17 24 30.0**	**-0.7**
SEY	**Seymchan**	**15.33**	**353**	Pn	**Pn**	**17 24 29.1**	**-1.6**
	comp=E,0.2nm,0.3s,baz=165,slow=8.7,SNR=14						
EKMR	**Ekimchan**	**15.77**	**298**	*e*P	**Pn**	**17 24 34.0**	**-2.5**
EKMR				AMB	AMB	17 24 44.0	
	comp=E,60nm,0.9s						
KLR	**Kul'dur**	**16.33**	**284**	*i* P	**Pn**	**17 24 43.8**	**+0.2**
KLR	**Kul'dur**	**16.33**	**284**	Pn	**Pn**	**17 24 44.1**	**+0.5**
	comp=E,1.2nm,0.3s,baz=84,slow=12,SNR=26						
KLR				PcP	**PcP**	**17 29 36.7**	**+0.9**
	comp=E,0.3nm,0.3s,baz=128,slow=3.1,SNR=4.5						
KLR				LR	LR	17 30 49.7	
	comp=E,484nm,21.3s,baz=94,slow=36						
USA0B	**Ussuriysk Arra**	**17.26**	**267**	*e*Pn	**Pn**	**17 24 53.9**	**-1.5**
	comp=E,36nm,0.9s						
USRK	**Ussuriysk Ar.**	**17.26**	**267**	P	**Pn**	**17 24 54.0**	**-1.4**
	comp=E,1.2nm,0.3s,baz=70,slow=12,SNR=21						
USRK				LR	LR	17 31 06.7	
	comp=E,179nm,20.7s,baz=62,slow=36						
MJB9	**Matsu-Tunnel**	**17.46**	**237**	*e*Pn	**Pn**	**17 24 56.1**	**-1.9**
	comp=E,72nm,0.8s						
MAJO	**Matsushiro**	**17.46**	**237**	*e*Pn	**Pn**	**17 24 56.2**	**-1.8**
	comp=E,69nm,0.8s						
MAJO	**Matsushiro**	**17.46**	**237**	*e*P	**Pn**	**17 24 53.6**	**-4.4**
MAJO	**Matsushiro**	**17.46**	**237**	*i* P	**Pn**	**17 24 58.5**	**+0.5**
MAT	**Matsushiro**	**17.46**	**237**	P	**P**	**17 25 00.5**	**+1.5**
MAT				S	**S**	**17 28 18.4**	**-0.8**
MJAR	**Matsushiro Arr**	**17.46**	**237**	LR	LR	17 32 11.9	
	comp=E,136nm,19.7s,baz=45,slow=39						
BMKR	**Bomnak**	**18.46**	**302**	*e*P	**P**	**17 25 09.0**	**-0.8**
	comp=Z,30nm,0.6s						
BMKR				AMB	AMB	17 25 15.0	
	comp=Z,30nm,0.6s						
MDJ	**Mudanjiang**	**18.73**	**270**	P	**P**	**17 25 12.0**	**-1.0**
MDJ				pP	sP	17 25 20.6	-0.5
MDJ				sP	pwP	17 25 24.4	-3.1
MDJ				pmax	pmax		
	comp=Z,17nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.5s						
MDJ				LR	LR		
	comp=Z,280nm,10.9s						
MDJ				LR	LR		
	comp=Z,900nm,14.3s						
MDJ				LR	LR		
	comp=Z,1µm,13.5s						
INU	**Inuyama**	**18.99**	**236**	*e*P	**P**	**17 25 14.4**	**-1.5**
	comp=Z,52nm,1.0s						
ZEA	**Zeya**	**19.24**	**299**	*e*P	**P**	**17 25 17.6**	**-0.8**
ZEA				AMB	AMB	17 25 21.0	
	comp=Z,20nm,1.0s						
ZEA				AMB	AMB	17 25 21.0	
	comp=Z,40nm,1.0s						
ZEA				AMS	AMS	17 35 12.0	
	comp=Z,600nm,14.0s						
ZEA				AMS	AMS	17 35 12.0	
	comp=Z,2µm,14.0s						
ZEA				AMS	AMS	17 35 12.0	
	comp=Z,2µm,14.0s						
ZEA	**Zeya**	**19.24**	**299**	*e*P	**P**	**17 25 17.6**	**-0.8**
ZEA				pmax	pmax		
	comp=E,21nm,0.8s						
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
ZEA				MLR	MLR		
	comp=E,2µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
ZEA				MLR	MLR		
	comp=N,600nm,13.0s						
KROS	**Kirovskiy**	**19.49**	**301**	*e*P	**P**	**17 25 18.2**	**-2.9**
KROS				AMB	AMB	17 25 26.0	
	comp=N,30nm,0.8s						
YAK	**Yakutsk**	**20.71**	**323**	*e*P	**P**	**17 25 32.3**	**-2.0**
YAK	**Yakutsk**	**20.71**	**323**	*c* *i*P	**P**	**17 25 32.3**	**-2.0**
YAK				*e*		17 25 49.1	
YAK				*e*S	**S**	**17 29 17.7**	**-6.2**
YAK				*e*		17 29 43.1	
YAK				*e*		17 37 02.5	
YAK				pmax	pmax		
	comp=Z,278nm,0.9s						
YAK				pmax	pmax		
	comp=E,112nm,1.0s						
YAK				pmax	pmax		
	comp=N,73nm,1.0s						
YAK				smax	smax		
	comp=N,1µm,1.5s						
YAK				smax	smax		
	comp=E,937nm,1.6s						
YAK				MLR	MLR		
	comp=Z,4µm,15.0s						
YAK				MLR	MLR		
	comp=N,4µm,14.0s						
YAK				MLR	MLR		
	comp=E,2µm,13.0s						
BILL	**Bilibino**	**20.92**	**10**	*e*P	**P**	**17 25 35.6**	**-1.0**
	comp=E,72nm,0.9s						

BILL	Bilibino	20.92	10	eP	P	17 25 37.3	+0.7
BILL	Bilibino	20.92	10	⇑eP	P	17 25 36.0	-0.6
BILL				pmax	pmax		
	comp=Z,90nm,1.0s						
CN2	Changchun	21.81	271	eP	P	17 25 43.4	-2.9
CN2				eS	S	17 29 37.9	-8.1
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,450nm,12.0s						
CN2				LR	LR		
	comp=Z,780nm,12.0s						
CN2				LR	LR		
	comp=Z,670nm,13.0s						
SPIA	Saint Paul Isl	22.21	53	eP	P	17 25 49.8	-0.7
	comp=Z,487nm,1.3s						
KSRS	Korea Array	23.19	254	P	P	17 26 02.5	+1.6
	comp=Z,53nm,0.9s,baz=54,slow=10,SNR=96						
KSRS				PcP	PcP	17 29 49.1	+0.8
	comp=Z,3.8nm,0.8s,baz=21,slow=1.3,SNR=6.4						
KSRS				LR	LR	17 34 38.7	
	comp=Z,107nm,18.4s,baz=59,slow=36						
KS01	Wonju Array Si	23.19	254	eP	P	17 26 00.1	-0.9
KS15	Wonju Array Si	23.22	254	eP	P	17 26 01.0	-0.2
KSAR	Wonju Array Be	23.22	254	P	P	17 26 02.5	+1.3
KSAR				PcP	PcP	17 29 49.1	+0.7
KSAR	Wonju Array Be	23.22	254	P	P	17 26 02.5	+1.3
KSAR						17 29 49.2	
JCJ	Chichijima	23.44	213	LR	LR	17 33 02.7	
	comp=Z,68nm,21.6s,baz=338,slow=31						
GAMB	Gambell	23.70	36	eP	P	17 26 04.8	-0.8
	comp=Z,52nm,1.2s						
SNY	Shenyang	23.86	268	⇓P	P	17 26 07.0	-0.4
SNY				pmax	pmax		
	comp=Z,14nm,0.6s						
SNY				LR	LR		
	comp=Z,320nm,12.1s						
SNY				LR	LR		
	comp=Z,870nm,14.6s						
SNY				LR	LR		
	comp=Z,1µm,15.3s						
JNU	Nakatsue	24.13	242	eP	P	17 26 10.6	+0.5
	comp=Z,35nm,1.1s						
JNU	Nakatsue	24.13	242	P	P	17 26 10.8	+0.7
	comp=Z,9.3nm,0.7s,baz=127,slow=0.9,SNR=9.8						
JNU				LR	LR	17 36 19.7	
	comp=Z,105nm,19.1s,baz=31,slow=38						
TJN	Taejon	24.18	252	ceP	P	17 26 10.9	+0.4
ANM	Nome	26.55	37	eP	P	17 26 31.3	-0.3
	comp=Z,36nm,0.9s						
ANM	Nome	26.55	37	eP	P	17 26 31.3	-0.3
ANM				pmax	pmax		
	comp=Z,36nm,0.9s						
DL2	Dalian	26.56	263	P	P	17 26 32.8	+0.9
DL2				S	S	17 31 06.3	+1.7
DL2				pmax	pmax		
	comp=Z,72nm,0.8s						
DL2				pmax	pmax		
	comp=Z,270nm,3.6s						
DL2				LR	LR		
	comp=Z,410nm,13.8s						
DL2				LR	LR		
	comp=Z,240nm,15.0s						
DL2				LR	LR		
	comp=Z,490nm,13.2s						
BOD	Bodaibo	27.04	308	eP	P	17 26 33.9	-2.3
BOD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RDOG	Red Dog Mine	28.80	31	eP	P	17 26 51.8	0.0
	comp=Z,25nm,1.2s						
BJI	Beijing	29.67	270	P	P	17 27 00.8	+1.1
BJI				LR	LR		
	comp=Z,500nm,14.1s						
BJI				LR	LR		
	comp=Z,510nm,13.5s						
SVW2	Sparrevohn	30.20	46	eP	P	17 27 04.0	-0.3
	comp=Z,27nm,1.1s						
JOW	Kunigami	30.31	236	eP	P	17 27 05.9	+0.4
	comp=Z,42nm,1.1s						
JOW	Kunigami	30.31	236	P	P	17 27 06.3	+0.8
	comp=Z,4.8nm,0.8s,baz=91,slow=20,SNR=4.8						
OHAK	Old Harbor	31.41	54	eP	P	17 27 13.4	-1.5
	comp=Z,71nm,1.0s						
IM3	Indian Mountai	31.63	37	eP	P	17 27 15.7	-1.1
IM3				ePcP	PcP	17 30 09.1	+0.9
KDAK	Kodiak Island	31.74	52	eP	P	17 27 16.5	-1.4
	comp=Z,70nm,0.8s						
KDAK	Kodiak Island	31.74	52	eP	P	17 27 16.4	-1.4
KDAK	Kodiak Island	31.74	52	eP	P	17 27 16.5	-1.4
KDAK				pmax	pmax		
	comp=Z,70nm,0.8s						
PPLA	Purkeypile	31.92	43	eP	P	17 27 19.6	0.0
	comp=Z,41nm,1.1s						
PPLA				ePcP	PcP	17 30 09.3	+0.1
CAST	Castle Rocks	32.01	42	eP	P	17 27 20.1	-0.1
	comp=Z,11nm,0.9s						
NJ2	Nanjing	32.38	255	eP	P	17 27 25.1	+1.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,600nm,11.4s						
NJ2				LR	LR		
	comp=Z,500nm,11.9s						
NJ2				LR	LR		
	comp=Z,760nm,14.6s						
HHC	Hu-ho-hao-te	32.39	274	eP	P	17 27 24.6	+0.7
HHC				S	S	17 32 34.3	-2.1
HHC				pmax	pmax		
	comp=Z,54nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,5.1s						
HHC				LR	LR		
	comp=Z,350nm,13.0s						
HHC				LR	LR		
	comp=Z,730nm,13.0s						
HHC				LR	LR		
	comp=Z,1µm,13.0s						
BRLK	Bradley Lake	32.51	49	eP	P	17 27 22.6	-2.0
	comp=Z,94nm,1.4s						
SUA	Susitna One	32.55	45	eP	P	17 27 23.9	-1.2
	comp=Z,16nm,0.8s						
SUA				ePcP	PcP	17 30 11.1	+0.1
ULN	Ulaanbaatar	32.62	289	eP	P	17 27 24.9	-0.9
	comp=Z,9.3nm,0.8s						
ULN	Ulaanbaatar	32.62	289	eP	P	17 27 24.7	-1.2
ULN	Ulaanbaatar	32.62	289	eP	P	17 27 24.9	-0.9
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MLY	Manley	32.74	39	eP	P	17 27 26.4	-0.2
	comp=Z,14nm,1.0s						
MLY				ePcP	PcP	17 30 11.9	+0.6
TRF	Thorofare Moun	32.82	42	eP	P	17 27 26.5	-0.9
	comp=Z,15nm,0.8s						
SONA1	Songino Array	33.04	289	eP	P	17 27 29.0	-0.5
SONA1				ePcP	PcP	17 30 12.0	-0.6
RC01	Rabbit Creek A	33.04	46	eP	P	17 27 28.1	-1.0
	comp=Z,21nm,0.9s						
RC01				ePcP	PcP	17 30 12.6	+0.4
SONA0	Songino Array	33.05	289	eP	P	17 27 29.2	-0.4
SONA0				ePcP	PcP	17 30 13.0	+0.4
SONM	Songino Array	33.05	289	P	P	17 27 29.2	-0.4
	comp=Z,4.4nm,0.9s,baz=50,slow=10.0,SNR=28						
SONM				PcP	PcP	17 30 13.0	+0.4
	comp=Z,6.2nm,0.8s,baz=90,slow=2.0,SNR=11						
SONM				LR	LR	17 41 09.1	
	comp=Z,233nm,20.3s,baz=64,slow=37						
COLD	Coldfoot	33.23	35	eP	P	17 27 30.4	-0.4
	comp=Z,7.0nm,1.0s						
PMR	Palmer	33.32	45	eP	P	17 27 30.2	-1.4
	comp=Z,24nm,1.1s						
PMR	Palmer	33.32	45	eP	P	17 27 30.2	-1.4
PMR				pmax	pmax		
	comp=Z,25nm,1.1s						
GHO	Glory Hole Cre	33.42	45	eP	P	17 27 31.7	-0.9
	comp=Z,22nm,1.0s						
MCK	McKinley	33.44	41	eP	P	17 27 31.4	-1.2
	comp=Z,31nm,0.9s						
MCK				ePcP	PcP	17 30 13.0	-0.2
RND	Reindeer	33.46	42	eP	P	17 27 31.4	-1.5
	comp=Z,36nm,0.9s						
RND	Reindeer	33.46	42	eP	P	17 27 31.4	-1.5
RND				pmax	pmax		
	comp=Z,36nm,0.9s						
BTO	Baotou	33.54	275	eP	P	17 27 33.5	-0.4
TLY	Talaya	33.65	297	eP	P	17 27 34.5	-0.2
	comp=Z,40nm,0.9s						
TLY				ePcP	PcP	17 30 14.2	+0.1
TLY	Talaya	33.65	297	eP	P	17 27 34.8	+0.2
TLY	Talaya	33.65	297	eP	P	17 27 35.2	+0.6
TLY				eS	S	17 32 54.0	-1.6
TLY				pmax	pmax		
	comp=Z,70nm,0.7s						
TLY				MLR	MLR		
	comp=Z,1µm,12.0s						
TLY	Talaya	33.65	297	P	P	17 27 35.4	+0.7
	SNR=20						
TLY	Talaya	33.65	297	P	P	17 27 35.4	+0.7
	SNR=20						
KNK	Knik Glacier	33.65	45	eP	P	17 27 34.0	-0.5
	comp=Z,64nm,0.9s						
SML	Sawmill	33.70	45	eP	P	17 27 34.4	-0.5
	comp=Z,107nm,0.8s						
SML	Sawmill	33.70	45	eP	P	17 27 34.4	-0.5
SML				pmax	pmax		
	comp=Z,107nm,0.8s						
TOLK	Toolik Lake Re	33.70	32	eP	P	17 27 34.5	-0.4
	comp=Z,26nm,0.9s						
TOLK				ePcP	PcP	17 30 14.4	+0.5
TOLK	Toolik Lake Re	33.70	32	P	P	17 27 35.0	+0.1
	baz=260						
MDM	Murphy Dome	33.80	39	eP	P	17 27 35.0	-0.7
	comp=Z,19nm,0.8s						
WRH	Wood River Hil	33.83	40	eP	P	17 27 35.3	-0.7
	comp=Z,77nm,1.9s						
WRH				ePcP	PcP	17 30 13.8	-0.5
TCOL	CIGO, UAF Yank	33.95	39	P	P	17 27 37.0	-0.1
	baz=267						
COLA	College	33.95	39	eP	P	17 27 36.8	-0.3
	comp=Z,44nm,0.8s						
COLA	College	33.95	39	eP	P	17 27 36.4	-0.7
COLA	College	33.95	39	eP	P	17 27 36.8	-0.3
COLA				pmax	pmax		
	comp=Z,44nm,0.8s						
DHY	Denali Highway	34.13	42	eP	P	17 27 37.9	-0.9
	comp=Z,28nm,0.9s						
DHY				ePcP	PcP	17 30 15.3	-0.1
POKR	Poker Plat Res	34.14	39	P	P	17 27 39.0	+0.2
	baz=267						
SCM	Sheep Creek Mo	34.18	45	eP	P	17 27 38.8	-0.3
	comp=Z,81nm,1.3s						
SCM	Sheep Creek Mo	34.18	45	eP	P	17 27 38.8	-0.3
SCM				pmax	pmax		
	comp=Z,81nm,1.3s						
ZAK	Zakamensk	34.22	295	eP	P	17 27 39.0	-0.7
ZAK				pmax	pmax		
	comp=Z,14nm,1.2s						
HDA	Harding Lake	34.33	40	eP	P	17 27 39.1	-1.3
	comp=Z,15nm,0.7s						
HDA	Harding Lake	34.33	40	P	P	17 27 40.0	-0.3
	baz=269						
IL1	Eielson Array	34.36	39	eP	P	17 27 38.9	-1.8
IL1				ePcP	PcP	17 30 14.6	-1.2
ILAR	Eielson Array	34.36	39	P	P	17 27 39.8	-0.8
	comp=Z,9.3nm,0.9s,baz=249,slow=7.4,SNR=102						
ILAR				PcP	PcP	17 30 14.9	-0.9
	comp=Z,2.3nm,0.6s,baz=278,slow=3.4,SNR=14						
ILAR				LR	LR	17 42 29.2	
	comp=Z,116nm,19.9s,baz=270,slow=38						
ILB	Eielson Array	34.36	39	eP	P	17 27 39.4	-1.2
ILB				ePcP	PcP	17 30 14.5	-1.3
KLU	Klutina	34.86	45	eP	P	17 27 43.8	-1.3
	comp=Z,40nm,1.0s						
PRP	Porcupine Dome	34.96	38	eP	P	17 27 45.8	-0.2
	comp=Z,22nm,1.2s						
DIV	Divide	34.96	46	eP	P	17 27 45.8	-0.2
	comp=Z,35nm,0.8s						
PAX	Paxson	35.00	43	eP	P	17 27 46.2	0.0
	comp=Z,15nm,1.1s						
PAX				ePcP	PcP	17 30 18.2	+0.4
PAX	Paxson	35.00	43	eP	P	17 27 46.2	0.0
PAX				e		17 30 18.2	
PAX				pmax	pmax		
	comp=Z,15nm,1.1s						
FYU	Fort Yukon	35.12	36	eP	P	17 27 47.8	+0.7
	comp=Z,86nm,1.2s						
HARP	HAARP	35.17	44	eP	P	17 27 47.8	+0.2
	comp=Z,99nm,1.6s						
MOY	Mondy	35.25	297	eP	P	17 27 48.8	+0.3
MOY				pmax	pmax		
	comp=Z,34nm,1.8s						
RIDG	Independ'e Rid	35.26	41	eP	P	17 27 47.2	-1.2
	comp=Z,38nm,1.0s						
RIDG				ePcP	PcP	17 30 19.0	+0.5
GUMO	Guam	35.41	199	LR	LR	17 42 54.9	
	comp=Z,69nm,18.0s,baz=84,slow=37						
DOT	Dot Lake	35.61	41	eP	P	17 27 49.9	-1.5
	comp=Z,15nm,0.8s						
SCRK	Sand Creek	35.63	41	eP	P	17 27 50.1	-1.5
	comp=Z,14nm,1.0s						
CRQM	Cirque	36.28	46	eP	P	17 27 58.0	+0.6
WHN	Wuhan	36.30	257	⇑P	P	17 27 58.0	+0.4
WHN				S	S	17 33 35.8	-0.8
WHN				LR	LR		
	comp=Z,820nm,14.4s						
BALM	Baldy	36.63	46	eP	P	17 27 59.1	-1.2
	comp=Z,37nm,1.1s						
BALM	Baldy	36.63	46	eP	P	17 27 59.1	-1.2
BALM				pmax	pmax		
	comp=Z,37nm,1.1s						
EGAK	Eagle	36.82	39	eP	P	17 28 00.5	-1.2
	comp=Z,36nm,0.9s						
DAWY	Dawson	37.64	40	eP	P	17 28 08.3	-0.5
	comp=Z,19nm,1.1s						
KNGR	Kungurtug, Tuv	37.66	297	⇑iP	P	17 28 08.2	-0.9
XAN	Xi'an	37.77	266	P	P	17 28 10.8	+0.6
XAN				pP	sP	17 28 17.9	-0.8
XAN				sP	pwP	17 28 21.4	-3.7
XAN				PP	PnPn	17 29 39.0	+1.3
XAN				S	S	17 33 57.8	-1.3
XAN				sS	sS	17 34 10.1	+1.1
XAN				SS	SnSn	17 36 31.5	-8.6
XAN				pmax	pmax		
	comp=Z,21nm,1.3s						
XAN				pmax	pmax		
	comp=Z,210nm,4.6s						
XAN				LR	LR		
	comp=Z,650nm,14.4s						
XAN				LR	LR		
	comp=Z,460nm,13.0s						
XAN				LR	LR		
	comp=Z,440nm,13.6s						
HYT	Haines Junctio	38.99	45	eP	P	17 28 20.8	+0.5
	comp=Z,39nm,0.9s						
NRIK	Noril'sk	39.01	328	P	P	17 28 19.2	-0.9
	comp=Z,5.0nm,0.7s,baz=85,slow=6.6,SNR=6.6						
NRIK				LR	LR	17 44 51.8	
	comp=Z,228nm,19.2s,baz=66,slow=37						
INK	Inuvik	39.59	33	eP	P	17 28 25.3	+0.4
	comp=Z,34nm,1.0s						
INK	Inuvik	39.59	33	eP	P	17 28 25.3	+0.4
INK				pmax	pmax		
	comp=Z,34nm,1.0s						
LZH	Lanzhou	40.03	273	eP	P	17 28 30.9	+1.7
LZH				pP	sP	17 28 37.4	-0.4
LZH				sP	pwP	17 28 41.6	-2.5
LZH				S	S	17 34 31.3	-2.0
LZH				sS	sS	17 34 43.8	+0.5
LZH				pmax	pmax		
	comp=Z,110nm,1.2s						
LZH				pmax	pmax		
	comp=Z,410nm,4.9s						
LZH				LR	LR		
	comp=Z,890nm,11.4s						
LZH				LR	LR		
	comp=Z,720nm,11.6s						
LZH				LR	LR		
	comp=Z,990nm,12.4s						
SKAG	Skagway	40.36	47	eP	P	17 28 32.7	+1.2
	comp=Z,29nm,1.0s						
GTA	Gaotai	40.95	280	⇓P	P	17 28 37.1	+0.3
GTA				pP	sP	17 28 44.5	-0.9
GTA				sP	pwP	17 28 49.0	-2.7
GTA				PcP	PcP	17 30 37.4	+0.7
GTA				PcS	PcS	17 34 28.9	+1.2
GTA				ScS	ScS	17 38 39.3	-0.3
GTA				pmax	pmax		
	comp=Z,21nm,1.3s						
GTA				pmax	pmax		
	comp=Z,97nm,4.3s						
GTA				LR	LR		
	comp=Z,320nm,14.9s						
GTA				LR	LR		
	comp=Z,460nm,15.9s						
GTA				LR	LR		
	comp=Z,620nm,14.9s						
CD2	Chengdu	43.13	267	P	P	17 28 55.0	+0.5
CD2				pP	sP	17 29 02.6	-0.5
CD2				sP	pwP	17 29 05.8	-3.8
CD2				S	S	17 35 20.0	+0.9
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,330nm,5.1s						
CD2				LR	LR		
	comp=Z,790nm,11.3s						
CD2				LR	LR		
	comp=Z,610nm,11.3s						
DLBC	Dease Lake	43.29	47	eP	P	17 28 56.1	+0.6
	comp=Z,18nm,1.0s						
ZAA1	Zalesovo Array	43.77	306	eP	P	17 28 58.4	-1.0
ZAA1				ePcP	PcP	17 30 46.0	+0.5
ZAA0	Zalesovo Array	43.77	306	eP	P	17 28 58.2	-1.1
	comp=Z,4.0nm,0.7s						
ZAA0				ePcP	PcP	17 30 45.6	0.0
ZALV	Zalesovo Beam	43.77	306	eP	P	17 28 58.2	-1.1
ZALV				ePcP	PcP	17 30 45.7	+0.2
ZALV	Zalesovo Beam	43.77	306	P	P	17 28 58.4	-1.0
	comp=Z,3.3nm,0.5s,baz=63,slow=6.4,SNR=21						
ZALV				PcP	PcP	17 30 46.0	+0.4
	comp=Z,13nm,0.8s,baz=64,slow=3.4,SNR=16						
ZALV				LR	LR	17 47 57.8	
	comp=Z,168nm,19.9s,baz=70,slow=37						
DGZ	Jazzator, Alta	44.00	299	c iP	P	17 29 02.7	+1.3
DGZ				pmax	pmax		
	comp=Z,12nm,1.0s						
GYA	Guiyang	44.06	259	⇑iP	P	17 29 02.3	+0.1
GYA				pP	sP	17 29 11.8	+1.1
GYA				PP	PcP	17 30 48.0	+0.8
GYA				S	S	17 35 34.6	+1.6
GYA				sS	sS	17 35 46.4	+3.5
GYA				SS	SS	17 38 44.0	-6.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=Z,570nm,18.5s						
GYA				LR	LR		
	comp=Z,540nm,18.3s						
GYA				LR	LR		
	comp=Z,520nm,18.8s						
NVS	Novosibirsk	44.28	308	eP	P	17 29 03.3	-0.1
TGY	Tagaytay City	44.59	233	P	P	17 29 07.2	+0.9
	comp=Z,78nm,0.4s,baz=60,slow=3.4,SNR=4.1						
WMQ	Urumqi	46.57	292	P	P	17 29 23.5	+1.7
WMQ				pP	pP	17 29 26.6	-1.2
WMQ				sP	sP	17 29 33.1	+2.6
WMQ				pmax	pmax		
	comp=Z,33nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,450nm,4.3s						
WMQ				LR	LR		
	comp=Z,2µm,20.5s						
WMQ				LR	LR		
	comp=Z,610nm,22.5s						
WMQ				LR	LR		
	comp=Z,390nm,24.5s						
KMI	Kunming	47.57	261	P	P	17 29 31.3	+1.3
KMI				pP	sP	17 29 38.0	-0.6
KMI				sP	pwP	17 29 41.8	-3.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				LR	LR		
	comp=Z,160nm,5.0s						
KMI				LR	LR		
	comp=Z,110nm,5.0s						
KMI				LR	LR		
	comp=Z,140nm,5.0s						
MK31	Makanchi Array	48.39	298	eP	P	17 29 34.8	-1.0
MK31	Makanchi Array	48.39	298	i P	P	17 29 35.1	-0.7
MK31				pmax	pmax		
	comp=Z,14nm,0.6s						
MK32	Makanchi Array	48.39	298	eP	P	17 29 36.3	+0.4
MKAR	Makanchi Array	48.39	298	eP	P	17 29 35.0	-0.9
	comp=Z,118nm,0.7s						
MKAR	Makanchi Array	48.39	298	P	P	17 29 36.3	+0.4
	comp=Z,14nm,0.7s,baz=55,slow=8.1,SNR=60						
MKAR				LR	LR	17 50 26.9	
	comp=Z,261nm,20.9s,baz=49,slow=37						
MK01	Makanchi Array	48.40	298	eP	P	17 29 35.3	-0.6
MAKZ	Makanchi	48.57	298	eP	P	17 29 37.5	+0.2
	comp=Z,55nm,1.7s						
MAKZ	Makanchi	48.57	298	P	P	17 29 36.8	-0.4
MAKZ				pmax	pmax		
	comp=Z,14nm,1.3s						
KURK	Kurchatov	48.59	304	eP	P	17 29 36.8	-0.5
	comp=Z,25nm,0.8s						
KURK				ePcP	PcP	17 31 02.7	+0.2
KURK	Kurchatov	48.59	304	eP	P	17 29 36.6	-0.7
KURK	Kurchatov	48.59	304	eP	P	17 29 36.8	-0.5
KURK				e		17 31 02.7	
KURK				pmax	pmax		
	comp=Z,25nm,0.8s						
KURK	Kurchatov	48.59	304	P	P	17 29 36.9	-0.4
	SNR=14						
KURK	Kurchatov	48.59	304	P	P	17 29 36.9	-0.4
	SNR=14						
KURBB	Kurchatov Arra	48.69	304	P	P	17 29 38.1	+0.1
	comp=Z,20nm,0.7s,baz=65,slow=7.9,SNR=88						
KURBB				PcP	PcP	17 31 03.5	+0.6
	comp=Z,13nm,0.8s,baz=56,slow=3.8,SNR=10						
YKW3	Yellowknife Ar	48.73	38	eP	P	17 29 38.0	-0.1
	comp=Z,26nm,1.1s						
YKA	Yellowknife Ar	48.77	38	P	P	17 29 38.6	+0.1
	comp=Z,18nm,0.9s,baz=294,slow=7.5,SNR=83						
YKA				PcP	PcP	17 31 03.6	+0.6
	comp=Z,3.0nm,0.7s,baz=296,slow=3.5,SNR=10						
YKB5	Yellowknife Ar	48.77	38	eP	P	17 29 37.4	-1.1
YKB5				ePcP	PcP	17 31 03.3	+0.3
RES	Resolute Bay	49.14	19	eP	P	17 29 41.7	+0.6
	comp=Z,33nm,1.5s						
RES	Resolute Bay	49.14	19	eP	P	17 29 41.7	+0.6
RES				pmax	pmax		
	comp=Z,33nm,1.5s						
KBS	Kingsbay	51.79	352	eP	P	17 30 01.6	+0.5
	comp=Z,52nm,0.9s						
KBS	Kingsbay	51.79	352	eP	P	17 30 01.6	+0.5
KBS				pmax	pmax		
	comp=Z,52nm,0.9s						
BVA0	Borovoye Array	51.87	310	P	P	17 30 01.7	-0.4
BVA0				pmax	pmax		
	comp=Z,19nm,1.2s						
PDGK	Podgornoye	51.90	295	P	P	17 30 02.3	-0.3
PDGK				pmax	pmax		
	comp=Z,17nm,1.1s						
BRVK	Borovoye	51.91	310	eP	P	17 30 01.8	-0.6
	comp=Z,17nm,0.8s						
BRVK	Borovoye	51.91	310	eP	P	17 30 01.9	-0.5
BRVK	Borovoye	51.91	310	⇑iP	P	17 30 01.9	-0.5
BRVK				pmax	pmax		
	comp=Z,21nm,0.9s						
BRVK	Borovoye	51.91	310	P	P	17 30 03.0	+0.7
	SNR=6.1						
BRVK	Borovoye	51.91	310	P	P	17 30 03.0	+0.7
	SNR=6.1						
SPA0	Spitsbergen Ar	51.96	350	eP	P	17 30 03.3	+0.8
SKNT	Sakolnakorn	52.52	253	P	P	17 30 08.9	+1.6
	comp=Z,21nm,1.1s						
TULEG	Thule	52.66	12	eP	P	17 30 07.3	-0.3
	comp=Z,21nm,0.9s						
PRZ	Przheval'sk	53.03	295	eP	P	17 30 12.2	+1.1
	comp=Z,14nm,0.8s						
PRZ	Przheval'sk	53.03	295	eP	P	17 30 12.2	+1.1
PRZ				pmax	pmax		
	comp=Z,14nm,0.8s						
SIJI	Sorong	53.16	212	P	P	17 30 11.9	0.0
	comp=Z,27nm,0.8s,baz=15,slow=7.9,SNR=7.0						
OTUK	Ortayu	53.38	304	P	P	17 30 13.5	+0.1
OTUK				pmax	pmax		
	comp=Z,19nm,1.2s						
B08A	Colville Reser	53.52	56	eP	P	17 30 12.1	-2.4
	comp=Z,5.2nm,0.8s						
TARG	Taragay, Kyrgy	53.83	295	eP	P	17 30 18.4	+1.2
	comp=Z,12nm,0.6s						
KDJ	Kajisay	53.98	295	eP	P	17 30 19.3	+1.2
	comp=Z,20nm,0.8s						

KDJ	**Kajisay**	53.98	295	*e*P	P	17 30 19.3	+1.2
KDJ				pmax	pmax		
	comp=Z,21nm,0.8s						
UTTA	**Uttaradit**	54.18	256	P	P	17 30 20.9	+1.4
	comp=Z,14nm,0.8s,comp=Z,96nm						
C09A	**Chrisman Ranch**	54.42	56	*e*P	P	17 30 20.7	-0.3
	comp=Z,26nm,1.6s						
CMMT	**Chiang Mai**	54.47	259	P	P	17 30 22.8	+1.1
	comp=Z,55nm,0.9s,comp=Z,503nm						
CHTO	**Chiang Mai**	54.47	259	*e*P	P	17 30 22.3	+0.6
	comp=Z,40nm,0.8s						
CHTO	**Chiang Mai**	54.47	259	P	P	17 30 23.2	+1.6
	SNR=11						
CHTO	**Chiang Mai**	54.47	259	P	P	17 30 23.2	+1.6
	SNR=11						
CHTO	**Chiang Mai**	54.47	259	P	P	17 30 22.9	+1.2
	comp=Z,242nm,0.9s,comp=Z,2µm						
TKM2	**Tokmak 2**	54.48	297	P	P	17 30 22.9	+1.1
	SNR=33						
TKM2	**Tokmak 2**	54.48	297	*i* P	P	17 30 22.0	+0.3
TKM2				pmax	pmax		
	comp=Z,20nm,0.8s						
ULHL	**Ulahol**	54.48	296	P	P	17 30 23.1	+1.4
	SNR=5.7						
HAWA	**Hanford**	54.51	58	*e*P	P	17 30 21.2	-0.4
	comp=Z,15nm,1.3s						
SVE	**Sverdlovsk**	54.54	318	⇓*e*P	P	17 30 22.6	+1.0
SVE				pmax	pmax		
	comp=Z,56nm,0.9s						
SHL	**Shillong**	54.56	270	*e*P	P	17 30 21.9	-0.6
	comp=Z,31nm,0.8s						
SHL	**Shillong**	54.56	270	*e*P	P	17 30 21.9	-0.6
SHL				pmax	pmax		
	comp=Z,31nm,0.8s						
SHL	**Shillong**	54.56	270	*e*P	P	17 30 23.0	+0.5
SHL				IAmb	IAmb	17 30 23.3	
	comp=Z,34nm,1.1s						
CHAI	**Chaiyaphum**	54.59	254	P	P	17 30 23.5	+1.0
	comp=Z,22nm,0.8s,comp=Z,188nm						
HUMO	**Hull Mountain**	54.67	63	*e*P	P	17 30 23.3	+0.4
	comp=Z,26nm,1.4s						
CM31	**Chiang Mai Arr**	54.73	258	*e*P	P	17 30 24.6	+1.1
	comp=Z,24nm,0.8s						
CM31	**Chiang Mai Arr**	54.73	258	P	P	17 30 26.1	+2.6
	SNR=8.3						
CM31	**Chiang Mai Arr**	54.73	258	P	P	17 30 26.1	+2.6
	SNR=8.3						
CMAR	**Chiang Mai Arr**	54.73	258	P	P	17 30 25.1	+1.6
	comp=Z,15nm,0.7s,baz=33,slow=7.1,SNR=85						
CMAR				PP	PP	17 32 27.9	+1.7
	comp=Z,1.1nm,0.8s,baz=42,slow=7.3,SNR=2.3						
CMAR				LR	LR	17 54 33.4	
	comp=Z,34nm,20.0s,baz=47,slow=37						
CM01	**Chiang Mai Arr**	54.74	258	*e*P	P	17 30 24.7	+1.1
PBKT	**Sadao Pong**	54.76	255	*e*P	P	17 30 24.7	+0.9
PBKT	**Sadao Pong**	54.76	255	P	P	17 30 25.0	+1.3
	comp=Z,31nm,0.9s						
NEW	**Newport**	54.80	55	*e*P	P	17 30 23.4	-0.3
	comp=Z,24nm,1.7s						
NEW				PcP	PcP	17 31 25.2	-0.6
NEW	**Newport**	54.80	55	*e*P	P	17 30 23.4	-0.3
NEW						17 31 25.2	
NEW				pmax	pmax		
	comp=Z,24nm,1.7s						
NEW	**Newport**	54.80	55	P	P	17 30 23.7	0.0
	comp=Z,2.5nm,0.7s,baz=301,slow=11,SNR=4.1						
NEW				PcP	PcP	17 31 25.2	-0.6
	comp=Z,4.2nm,0.9s,baz=315,slow=4.3,SNR=4.4						
J04D	**Umpqua Nationa**	54.81	62	P	P	17 30 24.8	+0.7
	baz=305						
USP	**Ospenovka**	54.94	298	P	P	17 30 26.1	+1.3
	SNR=67						
CHMS	**Chumysh**	54.95	298	P	P	17 30 26.3	+1.4
	SNR=9.7						
SUKH	**Sukhothai**	54.98	257	P	P	17 30 27.1	+1.8
	comp=Z,5.1nm,0.8s						
KBK	**Karagaybulak**	55.03	297	P	P	17 30 26.8	+1.2
	SNR=26						
NRN	**Naryn**	55.10	295	*e*P	P	17 30 26.2	-0.2
	comp=Z,14nm,1.2s						
NRN	**Naryn**	55.10	295	*e*P	P	17 30 26.2	-0.2
NRN				pmax	pmax		
	comp=Z,14nm,1.2s						
FRU	**Bishkek**	55.12	297	*e*P	P	17 30 26.0	-0.1
FRU				pmax	pmax		
	comp=Z,80nm,2.0s						
FRU1	**Bishkek**	55.13	297	*e*P	P	17 30 27.0	+0.8
	comp=Z,50nm,0.7s						
FRU1	**Bishkek**	55.13	297	*e*P	P	17 30 27.0	+0.8
FRU1				pmax	pmax		
	comp=Z,50nm,0.7s						
KZA	**Kyzart**	55.18	296	P	P	17 30 28.8	+1.7
	SNR=24						
PINE	**Pine Mountain**	55.18	61	*e*P	P	17 30 27.4	+0.6
	comp=Z,66nm,1.6s						
KHMM	**Horse Mountain**	55.21	65	*e*P	P	17 30 28.1	+1.2
	comp=Z,62nm,1.3s						
E09A	**Wood Farm, Sta**	55.23	57	*e*P	P	17 30 25.7	-1.1
	comp=Z,18nm,1.3s						
L04D	**Klamath Falls**	55.29	63	P	P	17 30 28.0	+0.5
	baz=306						
J05D	**Fort Rock, OR**	55.30	62	P	P	17 30 28.7	+1.1
	baz=306						
AAK	**Ala-Archa**	55.31	297	P	P	17 30 28.7	+1.1
	SNR=46						
AAK	**Ala-Archa**	55.31	297	*e*P	P	17 30 28.2	+0.6
AAK	**Ala-Archa**	55.31	297	*i* P	P	17 30 28.6	+0.9
	SNR=62						
AAK	**Ala-Archa**	55.31	297	P	P	17 30 29.0	+1.4
	SNR=12						
AAK	**Ala-Archa**	55.31	297	P	P	17 30 29.0	+1.4
	SNR=12						
AAK	**Ala-Archa**	55.31	297	P	P	17 30 28.7	+1.1
	comp=Z,36nm,0.7s,baz=103,slow=4.5,SNR=172						
YBH	**Yreka Blue Hor**	55.33	64	*e*P	P	17 30 27.6	-0.1
	comp=Z,31nm,1.4s						
YBH	**Yreka Blue Hor**	55.33	64	*e*P	P	17 30 27.6	-0.1
YBH				pmax	pmax		
	comp=Z,31nm,1.4s						
YBH	**Yreka Blue Hor**	55.33	64	P	P	17 30 28.8	+1.1
	comp=Z,15nm,1.1s,baz=278,slow=2.6,SNR=14						
M02C	**Callahan**	55.44	64	P	P	17 30 29.9	+1.4
	baz=306						
UCH	**Uchtor**	55.54	297	P	P	17 30 31.1	+1.5
	SNR=8.8						
DAG	**Danmarks Havn**	55.67	359	⇓*i*P	P	17 30 30.0	+0.5
	comp=Z,31nm,1.1s						
DAG	**Danmarks Havn**	55.67	359	⇓*i*P	P	17 30 30.0	+0.5
DAG				pmax	pmax		
	comp=Z,39nm,1.1s						
ARU	**Arti**	55.70	318	*e*P	P	17 30 29.2	-0.8
	comp=Z,80nm,0.7s						
ARU	**Arti**	55.70	318	*e*P	P	17 30 30.2	+0.2
ARU	**Arti**	55.70	318	*d i*P	P	17 30 30.2	+0.2
ARU				pmax	pmax		
	comp=Z,93nm,0.8s						
EKS2	**Erkin-Say**	55.72	298	P	P	17 30 31.9	+1.3
	SNR=62						
N02D	**Trinity Center**	55.77	65	P	P	17 30 31.3	+0.4
	baz=306						
M04C	**Macdoel**	55.82	63	P	P	17 30 32.2	+0.9
	baz=306						
I07A	**Izee**	55.86	60	*e*P	P	17 30 31.8	+0.3
	comp=Z,25nm,1.5s						
KULLO	**Kullorsuaq**	55.86	10	⇓*i*P	P	17 30 31.3	+0.4
	comp=Z,67nm,0.9s						
KULLO	**Kullorsuaq**	55.86	10	⇓*i*P	P	17 30 31.3	+0.4
KULLO				pmax	pmax		
	comp=Z,67nm,0.9s						
SRAK	**Srakaew**	55.96	252	P	P	17 30 31.3	-1.1
	comp=Z,116nm,0.9s,comp=Z,851nm						
WALA	**Waterton Lakes**	56.08	52	*e*P	P	17 30 32.8	-0.3
AML	**Almayashu**	56.09	297	P	P	17 30 35.0	+1.5
	SNR=24						
WDC	**Whiskeytown Da**	56.11	65	*e*P	P	17 30 33.6	+0.4
	comp=Z,17nm,1.0s						
WDC	**Whiskeytown Da**	56.11	65	*e*P	P	17 30 33.6	+0.4
WDC				pmax	pmax		
	comp=Z,17nm,1.0s						
O02D	**Mt. Diablo Mer**	56.20	66	P	P	17 30 34.9	+0.9
	baz=307						
KSH	**Kashi**	56.26	293	⇓*i*P	P	17 30 39.8	+5.4
KSH				pP	pwP	17 30 48.1	-1.8
KSH				PP	PP	17 32 48.3	+8.8
KSH				S	S	17 38 28.6	+6.1
KSH				sS	sS	17 38 41.5	+9.0
KSH				SS	SS	17 42 17.3	+8.5
KSH				pmax	pmax		
	comp=Z,54nm,0.9s						
KSH				pmax	pmax		
	comp=Z,450nm,4.2s						
KSH				LR	LR		
	comp=Z,250nm,5.8s						
KSH				LR	LR		
	comp=Z,280nm,5.5s						
KSH				LR	LR		
	comp=Z,650nm,8.3s						
UMPA	**Umpang Tak**	56.41	256	P	P	17 30 38.5	+2.9
	comp=Z,12nm,1.0s,comp=Z,449nm						
UTHA	**Uthaitani**	56.49	255	P	P	17 30 38.0	+1.8
	comp=Z,16nm,0.7s,comp=Z,126nm						
MNAS	**Manas**	56.59	298	*i* P	P	17 30 37.3	+0.5
MNAS				pmax	pmax		
	comp=Z,30nm,0.7s						
LVZ	**Lovozero**	56.66	337	*e*P	P	17 30 37.0	+0.2
	comp=Z,278nm,1.8s						
LVZ	**Lovozero**	56.66	337	P	P	17 30 36.8	0.0
LVZ				pmax	pmax		
	comp=Z,278nm,1.8s						
BRDH	**Bariadhala**	56.67	268	P	P	17 30 39.2	+1.8
	comp=Z,76nm,0.3s,baz=74,slow=14,SNR=4.5						
MOD	**Modoc Plateau**	56.67	63	*e*P	P	17 30 36.7	-0.7
	comp=Z,29nm,1.1s						
BMO	**Blue Mountains**	56.67	58	*e*P	P	17 30 36.7	-0.6
	comp=Z,18nm,1.3s						
BMO	**Blue Mountains**	56.67	58	*e*P	P	17 30 36.7	-0.6
BMO				pmax	pmax		
	comp=Z,18nm,1.3s						
O03E	**Paynes Creek**	56.73	65	P	P	17 30 38.0	+0.3
	baz=307						
J08A	**Circle Bar Ran**	56.89	60	*e*P	P	17 30 38.6	-0.2
	comp=Z,21nm,1.2s						
JIRN	**Jiri**	57.02	276	*e*P	P	17 30 41.6	+1.3
	comp=Z,100nm,0.8s						
GUN	**Gumba**	57.07	277	*e*P	P	17 30 41.6	+1.0
	comp=Z,94nm,1.1s						
RAMN	**Ramite**	57.21	275	*e*P	P	17 30 42.4	+0.9
	comp=Z,84nm,0.9s						
APA	**Apatity**	57.23	337	⇓*i*P	P	17 30 40.2	-0.5
APA				pmax	pmax		
	comp=Z,22nm,0.9s						
WVOR	**Wild Horse Val**	57.35	61	*e*P	P	17 30 41.9	-0.2
	comp=Z,18nm,1.0s						
ORV	**Oroville**	57.36	65	*e*P	P	17 30 41.5	-0.7
	comp=Z,13nm,0.9s						
ORV	**Oroville**	57.36	65	*e*P	P	17 30 41.5	-0.7
ORV				pmax	pmax		
	comp=Z,13nm,0.9s						
MSO	**Missoula**	57.39	55	*e*P	P	17 30 42.0	-0.3
	comp=Z,46nm,1.6s						
MSO	**Missoula**	57.39	55	P	P	17 30 42.6	+0.3
	baz=307						
KK31	**Karatay Array**	57.39	300	*e*P	P	17 30 42.1	-0.2
KK31	**Karatay Array**	57.39	300	*i* P	P	17 30 42.7	+0.4
KK31				pmax	pmax		
	comp=Z,23nm,0.8s						
KKAR	**Karatay Array**	57.39	300	*e*P	P	17 30 42.3	0.0
KKAR	**Karatay Array**	57.39	300	*e*P	P	17 30 42.3	0.0
SFK	**Sufi-Kurgan**	57.47	295	*i* P	P	17 30 43.2	0.0
SFK				pmax	pmax		
	comp=Z,28nm,0.9s						
PATY	**Pattaya**	57.53	252	P	P	17 30 45.9	+2.4
	comp=Z,5.4nm,0.9s						
KKN	**Kakani**	57.55	277	*e*P	P	17 30 45.1	+1.3
	comp=Z,87nm,0.9s						
ARA0	**ARCESS Array S**	57.57	342	*e*P	P	17 30 43.3	+0.2
ARA0				*e*PcP	PcP	17 31 37.0	+0.9
ARCES	**ARCESS Array B**	57.57	342	P	P	17 30 43.3	+0.2
	comp=Z,29nm,0.9s,baz=30,slow=9.8,SNR=18						
ARCES				PcP	PcP	17 31 37.0	+0.9
	comp=Z,7.1nm,0.7s,baz=32,slow=5.3,SNR=5.8						
ARCES				LR	LR	17 58 10.1	
	comp=Z,226nm,22.0s,baz=354,slow=39						
ARE0	**ARCESS Array S**	57.57	342	*e*P	P	17 30 43.5	+0.3
PKI	**Pulchoki**	57.60	277	*e*P	P	17 30 45.2	+0.8
	comp=Z,72nm,1.0s						
PKIN	**Phulchoki**	57.61	277	*e*P	P	17 30 45.2	+0.9
	comp=Z,58nm,1.1s						
PRGR	**Permogore**	57.65	328	*e*P	P	17 30 42.7	-1.1
PRGR				*e**PP	sP	17 30 54.9	+2.5
PRGR				pmax	pmax		
	comp=Z,145nm,0.9s						
DMN	**Daman**	57.78	277	*e*P	P	17 30 46.9	+1.4
	comp=Z,144nm,0.9s						
BEKR	**Beckworth**	57.87	65	*e*P	P	17 30 46.1	+0.2
	comp=Z,23nm,1.1s						
AFDM	**Forest Hills D**	58.06	66	*e*P	P	17 30 47.0	0.0
	comp=Z,13nm,1.2s						
DANN	**Dangsing**	58.20	278	*e*P	P	17 30 50.0	+1.5
	comp=Z,90nm,0.6s						
KIRV	**Kirov**	58.24	324	LR	LR	17 57 26.6	
	comp=Z,163nm,22.0s,baz=35,slow=38						
PHET	**Kaeng Krachan**	58.33	253	P	P	17 30 51.2	+2.0
	comp=Z,15nm,0.9s,comp=Z,126nm						
TMCR	**Tamitsa**	58.41	333	*e*P	P	17 30 48.4	-0.6
TMCR				pmax	pmax		
	comp=Z,88nm,0.7s						
KTK1	**Kautokeino**	58.47	342	*e*P	P	17 30 50.2	+0.8
FFC	**Flin Flon**	58.52	42	*e*P	P	17 30 50.0	0.0
	comp=Z,26nm,1.0s						
FFC	**Flin Flon**	58.52	42	*e*P	P	17 30 50.5	+0.5
FFC	**Flin Flon**	58.52	42	*e*P	P	17 30 50.0	0.0
FFC				pmax	pmax		
	comp=Z,26nm,1.0s						
PAHR	**Pah Rah Range**	58.56	64	*e*P	P	17 30 50.9	+0.2
	comp=Z,23nm,1.1s						
HRY	**Holter Researc**	58.61	54	*e*P	P	17 30 51.3	+0.4
VCNR	**Virginia City**	58.65	65	*e*P	P	17 30 52.3	+0.9
	comp=Z,18nm,0.9s						
KOLN	**Koldanda**	58.68	278	*e*P	P	17 30 53.1	+1.3
	comp=Z,81nm,0.9s						
TRO	**Tromso**	58.80	344	*e*P	P	17 30 50.9	-0.8
PNTR	**Pine Nut**	58.81	65	*e*P	P	17 30 52.8	+0.3
	comp=Z,23nm,0.8s						
PYUN	**Piuthan**	58.88	279	*e*P	P	17 30 54.3	+1.2
	comp=Z,139nm,1.0s						
EGMT	**Eagleton**	58.91	51	*e*P	P	17 30 53.1	+0.2
	comp=Z,44nm,1.6s						
EGMT	**Eagleton**	58.91	51	P	P	17 30 53.1	+0.2
	baz=308						
CMB	**Columbia Colle**	58.98	66	*e*P	P	17 30 53.5	-0.1
	comp=Z,21nm,1.1s						
CMB	**Columbia Colle**	58.98	66	*e*P	P	17 30 53.5	-0.1
CMB				pmax	pmax		
	comp=Z,21nm,1.1s						
SBUM	**Sibu**	58.99	234	*e*P	P	17 30 55.2	+1.5
	comp=Z,4.6nm,1.0s						
YERR	**Yerington**	59.10	65	*e*P	P	17 30 54.8	+0.3
	comp=Z,26nm,1.0s						
HLID	**Hailey**	59.11	58	*e*P	P	17 30 54.4	-0.1
	comp=Z,12nm,1.1s						
HLID	**Hailey**	59.11	58	P	P	17 30 55.0	+0.5
	baz=308						
FCC	**Fort Churchill**	59.17	35	*e*P	P	17 30 53.8	-0.7
	comp=Z,18nm,0.8s						
FCC	**Fort Churchill**	59.17	35	*e*P	P	17 30 53.8	-0.7
FCC				pmax	pmax		
	comp=Z,18nm,0.8s						
MCMT	**McKenzie Canyo**	59.21	56	*e*P	P	17 30 55.1	-0.2
WAKR	**Walker**	59.27	65	*e*P	P	17 30 56.2	+0.4
	comp=Z,18nm,0.9s						
BOZ	**Bozeman (W)**	59.41	55	*e*P	P	17 30 56.6	+0.1
	comp=Z,70nm,1.6s						
BOZ	**Bozeman (W)**	59.41	55	*e*P	P	17 30 56.6	+0.1
BOZ				pmax	pmax		
	comp=Z,70nm,1.6s						
BOZ	**Bozeman (W)**	59.41	55	P	P	17 30 56.9	+0.3
	baz=309						
BMN	**Battle Mountai**	59.41	62	*e*P	P	17 30 56.9	+0.3
	comp=Z,18nm,0.9s						
BMN	**Battle Mountai**	59.41	62	*e*P	P	17 30 56.9	+0.3
BMN				pmax	pmax		
	comp=Z,18nm,0.9s						
ABKAR	**Akbulak array**	59.41	311	*e*P	P	17 30 56.6	+0.3
SUMG	**Summit**	59.49	5	*e*P	P	17 30 57.6	+0.7
	comp=Z,62nm,1.0s						
SUMG	**Summit**	59.49	5	⇓*i*P	P	17 30 58.1	+1.2
	comp=Z,214nm,1.2s						
SUMG	**Summit**	59.49	5	*e*P	P	17 30 57.6	+0.7
SUMG				pmax	pmax		
	comp=Z,62nm,1.0s						
KVN	**Kaiserville**	59.75	64	*e*P	P	17 30 59.2	+0.2
	comp=Z,29nm,1.0s						
KVN	**Kaiserville**	59.75	64	*e*P	P	17 30 59.2	+0.2
KVN				pmax	pmax		
	comp=Z,29nm,1.0s						
RYN	**Ryan**	59.76	65	*e*P	P	17 30 59.6	+0.6
	comp=Z,21nm,0.9s						
BOK	**Bokaro**	59.79	273	*e*P	P	17 30 59.6	+0.3
BOK				IAmb	IAmb	17 31 01.4	
	comp=Z,12nm,1.0s						
QLMT	**Earthquake Lak**	60.00	55	*e*P	P	17 31 00.9	+0.2
NV01	**Mina Array Sit**	60.02	65	*e*P	P	17 31 00.6	-0.3
NVAR	**Mina Array Bea**	60.02	65	P	P	17 31 01.4	+0.5
	comp=Z,17nm,0.8s,baz=291,slow=7.2,SNR=61						
NVAR				PcP	PcP	17 31 47.5	+0.8
	comp=Z,6.4nm,0.9s,baz=295,slow=4.9,SNR=3.8						
NV11	**Mina Array Sit**	60.10	65	*e*P	P	17 31 01.6	+0.2
	comp=Z,1.2nm,1.0s						
OMMB	**Old Mammoth Mi**	60.10	66	*e*P	P	17 31 02.1	+0.5
	comp=Z,9.3nm,1.0s						
YHB	**Horse Butte**	60.18	55	*e*P	P	17 31 02.3	+0.4
	comp=Z,45nm,1.4s						
KLMR	**Klimovskoe**	60.32	330	*e*P	P	17 31 01.1	-1.2
KLMR				pmax	pmax		
	comp=Z,123nm,0.9s						
KLMR	**Klimovskoe**	60.32	330	*e*P	P	17 31 01.1	-1.2
KLMR				AMP		17 31 04.1	
	comp=Z,123nm,0.8s						
YHH	**Holmes Hill**	60.35	55	*e*P	P	17 31 03.8	+0.7
	comp=Z,18nm,1.3s						
GCMT	**Greycliff**	60.36	53	*e*P	P	17 31 02.8	-0.2
YMR	**Madison River**	60.36	55	*e*P	P	17 31 03.6	+0.5
	comp=Z,34nm,1.4s						
ELK	**Elko**	60.39	61	*e*P	P	17 31 03.6	+0.2
	comp=Z,6.5nm,0.9s						
ELK	**Elko**	60.39	61	*e*P	P	17 31 03.6	+0.2
ELK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YNR	**Norris Junctio**	60.49	55	*e*P	P	17 31 03.8	-0.2
	comp=Z,20nm,1.4s						
YFT	**Old Faithful**	60.57	55	*e*P	P	17 31 06.2	+1.6
	comp=Z,14nm,1.0s						
DHRM	**DHARAMSHALA**	60.58	287	*e*P	P	17 31 04.9	+0.1
DDI	**Dehra Dun**	60.69	284	*e*P	P	17 31 04.9	-0.5
DDI				IAmb	IAmb	17 31 08.0	
	comp=Z,514nm,0.1s						
YPP	**Pitchstone Pla**	60.70	55	*e*P	P	17 31 06.7	+1.1
	comp=Z,14nm,1.5s						
SMLA	**Simla**	60.74	285	*e*P	P	17 31 06.0	+0.4
SMLA				IAmb	IAmb	17 31 06.7	
	comp=Z,13µm,5.3s						
H17A	**Grant Village**	60.75	55	*e*P	P	17 31 07.7	+1.8
	comp=Z,31nm,1.3s						
H17A	**Grant Village**	60.75	55	P	P	17 31 07.9	+2.1
	baz=310						
KSM	**Kuching**	60.85	235	*e*P	P	17 31 07.6	+1.1
	comp=Z,30nm,1.0s						
IMW	**Indian Meadow**	60.86	56	*e*P	P	17 31 08.0	+1.4
	comp=Z,17nm,1.2s						
FLWY	**Flagg Ranch**	60.88	55	*e*P	P	17 31 07.9	+1.2
	comp=Z,30nm,1.4s						
CHGR	**Chuyangaron**	60.95	297	*e*P	P	17 31 07.3	+0.2
	comp=Z,103nm,0.9s						
STEI	**Steigen**	60.96	344	*e*P	P	17 31 06.8	+0.3
FXWY	**Fox Creek**	60.98	56	*e*P	P	17 31 07.3	-0.1
	comp=Z,24nm,1.7s						
RLMT	**Red Lodge**	61.00	54	*e*P	P	17 31 08.3	+0.8
	comp=Z,19nm,1.1s						
RLMT	**Red Lodge**	61.00	54	P	P	17 31 08.5	+1.0
	baz=310						
MOOW	**Moose Ponds**	61.06	56	*e*P	P	17 31 08.3	+0.4
	comp=Z,26nm,1.6s						
LOF	**Lofoten**	61.08	345	*e*P	P	17 31 08.1	+0.7
TPAW	**Teton Pass**	61.12	56	*e*P	P	17 31 08.1	-0.3
	comp=Z,29nm,1.2s						
HVU	**Hansel Valley**	61.17	59	*e*P	P	17 31 08.8	+0.2
	comp=Z,9.4nm,1.1s						
HVU	**Hansel Valley**	61.17	59	*e*P	P	17 31 08.8	+0.2
HVU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LOHW	**Long Hollow**	61.23	56	*e*P	P	17 31 09.5	+0.4
	comp=Z,20nm,1.2s						
SNOW	**Snow King Moun**	61.24	56	*e*P	P	17 31 10.1	+0.9
	comp=Z,44nm,1.5s						
REDW	**Red Top Meadow**	61.25	56	*e*P	P	17 31 09.6	+0.4
	comp=Z,31nm,1.2s						
CWC	**Cottonwood Cre**	61.42	66	P	P	17 31 10.7	+0.3
	baz=310						
DGMT	**Dagmar**	61.49	48	*e*P	P	17 31 10.5	-0.1
	comp=Z,39nm,1.1s						
DGMT	**Dagmar**	61.49	48	P	P	17 31 10.7	+0.1
	baz=311						
GRAC	**Grapevine Rang**	61.50	65	P	P	17 31 11.5	+0.7
	baz=310						
ILULI	**Ilulissat**	61.57	11	*e*P	P	17 31 10.8	+0.3
	comp=Z,33nm,1.0s						
ILULI	**Ilulissat**	61.57	11	*e*P	P	17 31 10.9	+0.3
ILULI				pmax	pmax		
	comp=Z,33nm,1.0s						
LAO	**LASA Array**	61.62	51	*e*P	P	17 31 12.0	+0.5
	comp=Z,31nm,1.0s						
LAO	**LASA Array**	61.62	51	P	P	17 31 12.2	+0.7
	baz=311						
NIL	**Nilore**	61.63	290	*e*P	P	17 31 12.6	+1.0
	comp=Z,89nm,1.0s						
ISA	**Isabella, Lake**	61.67	67	*e*P	P	17 31 11.0	-1.0
	comp=Z,9.7nm,0.9s						
ISA	**Isabella, Lake**	61.67	67	*e*P	P	17 31 11.0	-1.0
ISA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ISA	**Isabella, Lake**	61.67	67	P	P	17 31 11.6	-0.4
	baz=310						
R11A	**Troy Canyon, C**	61.71	63	*e*P	P	17 31 12.3	0.0
	comp=Z,20nm,1.0s						
R11A	**Troy Canyon, C**	61.71	63	P	P	17 31 12.5	+0.2
	baz=310						
ARVC	**Arvin**	61.80	68	P	P	17 31 13.3	+0.6
	baz=310						
DAC	**Darwin (Calif)**	61.82	66	*e*P	P	17 31 14.6	+1.4
	comp=Z,5.8nm,0.8s						
HWUT	**Hardware Ranch**	61.98	58	*e*P	P	17 31 14.8	+0.7
	comp=Z,8.6nm,1.1s						
MPMC	**Manual Prospec**	62.03	66	P	P	17 31 14.7	+0.2
	baz=311						
SCO	**Scoresbysund**	62.03	359	*e*P	P	17 31 14.3	+0.6
	comp=Z,19nm,1.0s						
SCO	**Scoresbysund**	62.03	359	*i* P	P	17 31 14.9	+1.2
	comp=Z,18nm,1.0s						
SCO	**Scoresbysund**	62.03	359	*i* P	P	17 31 14.9	+1.2
SCO				pmax	pmax		
	comp=Z,18nm,1.0s						
SKLT	**Songkhla**	62.05	248	P	P	17 31 17.4	+2.7
	comp=Z,41nm,1.0s						
TRTT	**Trang**	62.13	249	P	P	17 31 17.1	+2.0
	comp=Z,11nm,1.3s						
FURC	**Furnace Creek,**	62.15	66	P	P	17 31 15.7	+0.7
	baz=311						
DUG	**Dugway, Tooele**	62.17	60	*e*P	P	17 31 16.1	+0.7
	comp=Z,22nm,1.0s						
DUG	**Dugway, Tooele**	62.17	60	P	P	17 31 15.8	+0.5
	baz=310						
TPNV	**Topopah Spring**	62.21	65	*e*P	P	17 31 15.7	0.0
	comp=Z,31nm,1.1s						
TPNV	**Topopah Spring**	62.21	65	*e*P	P	17 31 15.7	0.0
TPNV				pmax	pmax		
	comp=Z,31nm,1.1s						
TPNV	**Topopah Spring**	62.21	65	P	P	17 31 16.1	+0.4
	baz=311						
BWNR	**Bhubaneshwar**	62.24	270	*e*x	P	17 31 11.9	-4.0
BWNR				IAmb	IAmb	17 31 12.9	
	comp=Z,13nm,0.8s						
LRMC	**Laurel Mtn Rad**	62.28	67	P	P	17 31 16.3	+0.1
	baz=311						
NDI	**New Delhi**	62.31	283	*e*P	P	17 31 17.0	+0.7
BW06	**Boulder Array**	62.36	56	*e*P	P	17 31 16.7	0.0
	comp=Z,18nm,1.1s						
BW06	**Boulder Array**	62.36	56	P	P	17 31 16.8	+0.1
	baz=311						
PD31	**Pinedale Array**	62.36	56	*e*P	P	17 31 16.4	-0.3
PDAR	**Pinedale Array**	62.36	56	*e*P	P	17 31 16.1	-0.6
PDAR	**Pinedale Array**	62.36	56	P	P	17 31 16.9	+0.2
	comp=Z,9.5nm,1.0s,baz=298,slow=3.2,SNR=38						
TCUT	**Toone Canyon**	62.38	58	*e*P	P	17 31 16.9	-0.1
	comp=Z,20nm,1.2s						
EDW2	**Edwards Air Fo**	62.48	68	P	P	17 31 17.7	+0.3
	baz=311						
COEN	**Coen**	62.58	194	*e*P	P	17 31 17.5	-0.6
	comp=Z,12nm,0.8s						
KONS	**Konsvik**	62.61	344	*e*P	P	17 31 18.2	+0.6
PSUT	**Pine Spring**	62.63	62	*e*P	P	17 31 18.2	-0.3

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      comp=Z,5.8nm,0.8s
MOR8  Moi Rana          62.66 344  eP     P      17 31 17.4 -0.6
DECC  Green Verdugo     62.67  68   P     P      17 31 18.9 +0.2
      baz=311
JLU   Jordanelle        62.69  59  eP     P      17 31 19.3 +0.3
      comp=Z,26nm,1.5s
NLU   North Lily Min    62.75  60  eP     P      17 31 19.7 +0.4
      comp=Z,16nm,1.0s
MWC   Mount Wilson      62.87  68  eP     P      17 31 20.2  0.0
      comp=Z,26nm,1.0s
MWC   Mount Wilson      62.87  68  eP     P      17 31 20.2  0.0
MWC                                 pmax  pmax
      comp=Z,26nm,1.0s
SHOC  Shoshone, Teco    62.88  66   P     P      17 31 20.9 +0.9
      baz=311
GSC   Goldstone, Bar    62.94  67  eP     P      17 31 20.6 +0.1
      comp=Z,15nm,0.9s
GSC   Goldstone, Bar    62.94  67  eP     P      17 31 20.6 +0.1
GSC                                 pmax  pmax
      comp=Z,15nm,0.9s
GSC   Goldstone, Bar    62.94  67   P     P      17 31 20.7 +0.2
      baz=311
MPU   Maple Canyon      62.97  59  eP     P      17 31 20.8  0.0
      comp=Z,15nm,1.0s
BFSC  Mount Baldy Ra    63.11  68   P     P      17 31 22.1 +0.4
      baz=311
SHPR  Sheep Range       63.16  65  eP     P      17 31 22.1  0.0
      comp=Z,13nm,1.0s
TUQ   Turquoise Moun    63.40  66   P     P      17 31 23.7 +0.1
      baz=311
KULM  Kulim             63.49 247  eP     P      17 31 25.1 +0.8
      comp=Z,25nm,1.0s
HEC   Hector,Ludlow     63.54  67   P     P      17 31 24.2 -0.3
      baz=311
CCUT  Cedar City        63.56  63  eP     P      17 31 24.7 -0.1
      comp=Z,16nm,0.9s
MSU   Marysvale         63.64  61  eP     P      17 31 26.1 +0.9
KBL   Kabul             63.69 293  eP     P      17 31 25.5 -0.1
      comp=Z,31nm,0.9s
KBL   Kabul             63.69 293  eP     P      17 31 25.5 -0.1
KBL                                 pmax  pmax
      comp=Z,31nm,0.9s
TMUT  Trail Mountain    63.69  60  eP     P      17 31 25.5 -0.2
      comp=Z,12nm,1.0s
SZCU  Shurtz Canyon     63.70  62  eP     P      17 31 25.6 -0.1
      comp=Z,17nm,1.2s
PBA   Port Blair        63.76 258  eP     P      17 31 26.3 +0.3
MURC  Murrieta          63.82  68   P     P      17 31 26.3 +0.1
      baz=312
P17A  Butcher Ranch,    63.84  59  eP     P      17 31 27.0 +0.5
      comp=Z,30nm,1.3s
IPM   Ipoh              63.89 246  eP     P      17 31 27.6 +0.6
      comp=Z,28nm,1.4s
MTPU  Mount Pierson     63.94  61  eP     P      17 31 28.1 +0.7
      comp=Z,14nm,0.9s
Q16A  Castle Valley     63.96  60  eP     P      17 31 27.4 +0.1
      comp=Z,16nm,1.1s
GMRC  Granite Mounta    63.99  66   P     P      17 31 27.7 +0.2
      baz=312
LCMT  Little Creek M    63.99  63  eP     P      17 31 27.8 +0.3
      comp=Z,26nm,0.9s
FIA1  FINESS Array S    64.00 336  eP     P      17 31 26.8 -0.1
FIA0  FINESS Array S    64.00 336  eP     P      17 31 27.6 +0.6
FINES FINESS Array B    64.00 336   P     P      17 31 27.6 +0.6
      comp=Z,30nm,0.7s,baz=37,slow=7.8,SNR=92
FINES                               LR    LR     18 01 28.9
      comp=Z,221nm,21.2s,baz=2.0,slow=38
K22A  Casper            64.12  54  eP     P      17 31 28.4 +0.1
      comp=Z,29nm,1.4s
K22A  Casper            64.12  54   P     P      17 31 28.2 -0.1
      baz=312
LDFC  Landfair          64.13  66  eP     P      17 31 27.6 -0.8
      comp=Z,52nm,0.9s
SRU   San Rafael Swe    64.21  60  eP     P      17 31 29.1 +0.1
      comp=Z,24nm,0.9s
KNB   Kanab             64.24  63  eP     P      17 31 29.4 +0.2
      comp=Z,35nm,1.0s
PKCU  Pink Cliffs       64.26  62  eP     P      17 31 29.8 +0.3
      comp=Z,11nm,0.8s
PFO   Pinyon Flats O    64.27  68  eP     P      17 31 27.4 -1.9
      comp=Z,42nm,1.8s
PFO   Pinyon Flats O    64.27  68  eP     P      17 31 27.4 -1.9
PFO                                 pmax  pmax
      comp=Z,42nm,1.8s
PFO   Pinyon Flats O    64.27  68   P     P      17 31 29.1 -0.2
      comp=Z,1.4nm,0.3s,baz=351,slow=2.6,SNR=3.9
TPFO  Pinon Flats       64.28  68   P     P      17 31 29.2 -0.2
      baz=312
ULM   Lac du Bonnet     64.29  43  eP     P      17 31 28.1 -0.9
      comp=Z,9.4nm,0.8s
ULM                                 PcP   PcP    17 32 02.6 -0.9
ULM   Lac du Bonnet     64.29  43  eP     P      17 31 28.2 -0.9
ULM                                              17 32 02.6
ULM                                 pmax  pmax
      comp=Z,9.0nm,0.8s
ULM   Lac du Bonnet     64.29  43   P     P      17 31 28.8 -0.2
      comp=Z,8.9nm,0.8s,baz=312,slow=6.9,SNR=16
ULM                                 PcP   PcP    17 32 02.6 -0.9
      comp=Z,3.5nm,0.7s,baz=326,slow=4.7,SNR=4.7
BELC  Belle Mtn. Jos    64.30  67   P     P      17 31 29.2 -0.4
      baz=312
RWWY  Rawlins           64.38  56  eP     P      17 31 29.3 -0.9
      comp=Z,12nm,1.0s
MTN   Manton Dam        64.41 207  eP     P      17 31 30.0 -0.1
      comp=Z,405nm,0.1s
RSSD  Black Hills       64.47  52  eP     P      17 31 29.6 -1.0
      comp=Z,32nm,1.1s
RSSD  Black Hills       64.47  52  eP     P      17 31 29.6 -1.0
RSSD                                pmax  pmax
      comp=Z,31nm,1.1s
RSSD  Black Hills       64.47  52   P     P      17 31 30.5 -0.1
      baz=313
IRM   Iron Mountain     64.72  66   P     P      17 31 32.4 +0.2
      baz=312
MOS   Moscow            64.79 327  eP     P      17 31 30.7 -1.5
MOS                                e                 17 32 04.2
MOS                                e                 17 33 58.6
MOS                                eS     S      17 40 05.3 -5.6
MOS                                e                 17 41 26.2
MOS                                 pmax  pmax
      comp=Z,43nm,1.0s
O20A  White River Ci    64.84  57  eP     P      17 31 32.8 -0.3
      comp=Z,12nm,1.0s
BC3   Big Chuckawall    64.87  67   P     P      17 31 33.1 -0.2
      baz=312
W13A  Hualapai Mount    64.87  65  eP     P      17 31 33.3 -0.1
      comp=Z,12nm,1.0s
U15A  North Rim         64.95  63  eP     P      17 31 34.3 +0.4
      comp=Z,19nm,1.0s
PDMCI Parker Dam,Lak    65.24  66   P     P      17 31 35.9 +0.4
      baz=312
Y12C  Blythe            65.38  66  eP     P      17 31 36.3 -0.1
      comp=Z,16nm,0.9s
Y12C  Blythe            65.38  66   P     P      17 31 36.7 +0.3
      baz=312
PV09  Paradox Valley    65.43  59  eP     P      17 31 37.4 +0.4
PV21  Cone Mtn., Par    65.48  59  eP     P      17 31 37.5 +0.2
      comp=Z,20nm,1.0s
PV23  Carpenter Ridg    65.53  59  eP     P      17 31 38.1 +0.4
      comp=Z,44nm,1.3s
PV10  Paradox Valley    65.56  59  eP     P      17 31 38.1 +0.3
      comp=Z,41nm,1.0s
PV14  Lion Creek, Pa    65.58  59  eP     P      17 31 38.3 +0.3
      comp=Z,18nm,0.9s
PHWY  Pilot Hill        65.61  55  eP     P      17 31 38.2  0.0
      comp=Z,9.4nm,1.3s
N23A  Red Feather La    65.62  56  eP     P      17 31 38.3 +0.1
      comp=Z,27nm,1.4s
N23A  Red Feather La    65.62  56   P     P      17 31 38.9 +0.6
      baz=313
PV20  West Nyswonger    65.63  59  eP     P      17 31 38.5 +0.3
      comp=Z,32nm,1.1s
PV04  Paradox Valley    65.63  59  eP     P      17 31 38.4 +0.1
      comp=Z,26nm,0.9s
PV19  Morning Glory     65.64  59  eP     P      17 31 38.4 +0.1
      comp=Z,22nm,0.9s
OBN   Obninsk           65.66 327  eP     P      17 31 38.0 +0.2
OBN   Obninsk           65.66 327d iP     P      17 31 38.0 +0.2
OBN                                e                 17 34 05.8
OBN                                 pmax  pmax
      comp=Z,48nm,1.2s
OBN                                 MLR   MLR
      comp=Z,178nm,15.0s
GLA   Glamis            65.66  67  eP     P      17 31 38.4 +0.1
      comp=Z,26nm,0.9s
GLA   Glamis            65.66  67  eP     P      17 31 38.4 +0.1
GLA                                 pmax  pmax
      comp=Z,26nm,0.9s
GLA   Glamis            65.66  67   P     P      17 31 38.3 +0.1
      baz=312
AGMN  Agassiz Nation    65.67  44  eP     P      17 31 37.4 -0.7
      comp=Z,29nm,1.2s
AGMN  Agassiz Nation    65.67  44   P     P      17 31 38.1  0.0
      baz=315
PV17  East Wray Mesa    65.67  59  eP     P      17 31 38.2 -0.3
      comp=Z,43nm,0.9s
PV16  Nyswonger Mesa    65.68  59  eP     P      17 31 38.5  0.0
      comp=Z,29nm,1.0s
PV11  David Mesa, Pa    65.71  59  eP     P      17 31 38.7  0.0
      comp=Z,54nm,1.2s
PV05  Paradox Valley    65.73  60  eP     P      17 31 38.6 -0.3
      comp=Z,35nm,0.9s
PV12  Saucer Basin,     65.74  59  eP     P      17 31 38.9 -0.1
      comp=Z,51nm,1.3s
PV07  Paradox Valley    65.75  59  eP     P      17 31 39.0 -0.1
      comp=Z,25nm,1.3s
PV03  Paradox Valley    65.76  59  eP     P      17 31 39.0  0.0
      comp=Z,29nm,1.0s
PV13  Radium Mtn., P    65.84  59  eP     P      17 31 39.3 -0.3
      comp=Z,30nm,0.9s
BHPL  Bhopal            65.84 278  eP     P      17 31 39.1 -0.5
BHPL                                IAmb  IAmb   17 31 40.5
      comp=Z,24nm,0.6s
PV02  Paradox Valley    65.85  59  eP     P      17 31 39.6 -0.1
      comp=Z,44nm,1.6s
PV15  Paradox Valley    65.91  59  eP     P      17 31 39.7 -0.4
      comp=Z,20nm,1.1s
WUAZ  Wupatki           66.11  63  eP     P      17 31 41.3  0.0
      comp=Z,44nm,1.7s
WUAZ  Wupatki           66.11  63   P     P      17 31 41.8 +0.5
      baz=313
Y14A  Wickenburg        66.19  65  eP     P      17 31 41.4 -0.3
      comp=Z,18nm,1.0s
NGP   Nagpur            66.20 276  eP     P      17 31 41.9 +0.1
NGP                                 IAmb  IAmb   17 31 42.8
      comp=Z,15nm,0.7s
SMCO  Snowmass          66.21  58  eP     P      17 31 41.6 -0.5
      comp=Z,16nm,1.0s
VSU   Vasula            66.27 334⇓ eP     P      17 31 42.3 +0.6
VSU                                 pmax  pmax
      comp=Z,166nm,1.3s
VSU   Vasula            66.27 334  eP     P      17 31 42.0 +0.3
VSU                                 IAmb  IAmb   17 31 43.6
      comp=Z,92nm,0.8s
CMBY  CAMPBELL BAY      66.44 254  eP     P      17 31 43.6 +0.2
CMBY                                IAmb  IAmb   17 31 45.5
      comp=Z,49nm,0.7s
PSI   Prapat            66.50 247  eP     P      17 31 44.9 +0.9
      comp=Z,10nm,0.9s
PSI   Prapat            66.50 247  eP     P      17 31 44.9 +0.9
PSI                                 pmax  pmax
      comp=Z,10.0nm,0.9s
PSI   Prapat            66.50 247   P     P      17 31 45.0 +1.1
      comp=Z,4.2nm,0.3s,baz=360,slow=3.6,SNR=5.9
113A  Mohawk Valley,    66.51  67  eP     P      17 31 43.3 -0.4
      comp=Z,13nm,1.0s
ISCO  Idaho Springs     66.55  56  eP     P      17 31 44.2  0.0
      comp=Z,27nm,1.4s
ISCO  Idaho Springs     66.55  56  eP     P      17 31 44.3  0.0
ISCO                                pmax  pmax
      comp=Z,27nm,1.4s
ISCO  Idaho Springs     66.55  56   P     P      17 31 44.7 +0.5
      baz=314
VRH   Novokhopyorsk     66.58 321  eP     P      17 31 43.3 -0.5
VRH                                 pmax  pmax
      comp=Z,50nm,0.8s
MVCO  Mesa Verde        66.67  60  eP     P      17 31 44.5 -0.5
      comp=Z,22nm,1.0s
MVCO  Mesa Verde        66.67  60   P     P      17 31 45.0 +0.1
      baz=313
LPSR  Galich'ya Gora    66.67 324  eP     P      17 31 44.2 -0.2
LPSR                                pmax  pmax
      comp=Z,60nm,0.8s
X16A  Lo Mia Camp, P    66.81  64  eP     P      17 31 46.2 +0.3
      comp=Z,13nm,1.0s
S22A  4UR Ranch, Cre    67.27  59  eP     P      17 31 48.8  0.0
      comp=Z,25nm,1.2s
S22A  4UR Ranch, Cre    67.27  59   P     P      17 31 49.6 +0.7
      baz=314
W18A  Petrified Fore    67.36  62   P     P      17 31 49.8 +0.5
      baz=313
Q24A  Divide            67.39  57  eP     P      17 31 49.0 -0.6
      comp=Z,18nm,1.5s
DOMB  Dombas            67.42 344  eP     P      17 31 49.7 +0.7
VSR   Storozhevoye      67.63 323⇓ iP     P      17 31 50.0 -0.5
VSR                                 pmax  pmax
      comp=Z,62nm,1.2s
X18A  Snowflake         67.64  63  eP     P      17 31 51.3 +0.2
      comp=Z,45nm,1.8s
214A  Organ Pipe Nat    67.65  67   P     P      17 31 51.6 +0.6
      baz=313
AKN   Aaknes            67.66 345  eP     P      17 31 51.9 +1.3
NC303 NORSAR Array S    67.72 343  eP     P      17 31 51.4 +0.5
OGNE  Ogallala          67.73  53  eP     P      17 31 51.3 -0.1
      comp=Z,67nm,0.9s
OGNE  Ogallala          67.73  53   P     P      17 31 51.5 +0.1
      baz=315
NC405 NORSAR Array S    67.75 342  eP     P      17 31 51.6 +0.5
NC204 NORSAR Array S    67.79 343  eP     P      17 31 51.3 -0.1
NB201 NORSAR Array S    67.89 342  eP     P      17 31 52.2 +0.2
GEYT  Alibeck           67.92 302   P     P      17 31 53.7 +1.1
      comp=Z,7.5nm,0.7s,baz=8.5,slow=3.0,SNR=22
GEYT                                LR    LR     18 02 27.5
      comp=Z,150nm,20.3s,baz=60,slow=37
GYA0B ALIBECK ARRAY     67.92 302  eP     P      17 31 53.5 +0.9
      comp=Z,10nm,0.8s
NB2   NORSAR Subarra    67.92 343   P     P      17 31 52.4 +0.2
      comp=Z,11nm,0.8s,baz=24,slow=6.9
NB2   NORSAR Subarra    67.92 343   P     P      17 31 52.4 +0.2
      baz=24,slow=6.9
NB200 NORSAR Array S    67.92 343  eP     P      17 31 52.8 +0.6
NOA   NORSAR Array B    67.92 343   P     P      17 31 52.8 +0.6
      comp=Z,25nm,0.9s,baz=25,slow=6.5,SNR=49
NOA                                 LR    LR     18 06 25.9
      comp=Z,92nm,18.7s,baz=355,slow=40
EYMN  Ely               67.95  42   P     P      17 31 52.4 -0.1
      baz=318
NBO00 NORSAR Array S    68.01 343  eP     P      17 31 52.6 -0.2
      comp=Z,28nm,1.0s
SDCO  Great Sand Dun    68.03  58  eP     P      17 31 53.5 -0.1
      comp=Z,39nm,1.8s
SDCO  Great Sand Dun    68.03  58   P     P      17 31 54.1 +0.5
      baz=314
NC602 NORSAR Array S    68.13 342  eP     P      17 31 53.3 -0.2
NC602 NORSAR Array S    68.13 342  eP     P      17 31 53.8 +0.3
NAO01 NORSAR Array S    68.16 343  eP     P      17 31 53.9 +0.2
CTAO  Charters Tower    68.17 190  eP     P      17 31 53.5 -0.6
      comp=Z,8.4nm,0.9s
CTAO  Charters Tower    68.17 190  eP     P      17 31 53.5 -0.6
CTAO                                pmax  pmax
      comp=Z,8.0nm,0.9s
SLIT  Slitere, Latvi    68.26 335  eP     P      17 31 54.3  0.0
ECSD  EROS Data Cent    68.58  48  eP     P      17 31 55.6 -1.0
      comp=Z,20nm,1.2s
ECSD  EROS Data Cent    68.58  48   P     P      17 31 56.1 -0.5
      baz=316
TUC   Tucson            68.66  65  eP     P      17 31 57.0 -0.4
      comp=Z,13nm,1.0s
TUC   Tucson            68.66  65  eP     P      17 31 57.0 -0.4
TUC                                 pmax  pmax
      comp=Z,13nm,1.0s
TUC   Tucson            68.66  65   P     P      17 31 57.6 +0.2
      baz=314
IZAR  Zarasai           68.67 332  eP     P      17 31 57.5 +0.5
IZAR                                IAmb  IAmb   17 32 00.6
      comp=Z,16nm,0.8s
ISAL  Salakas           68.86 332  eP     P      17 31 58.6 +0.5
ISAL                                IAmb  IAmb   17 32 01.1
      comp=Z,20nm,0.8s
IDID  Didziasalis       68.88 332  eP     P      17 31 58.6 +0.4
IDID                                IAmb  IAmb   17 32 02.0
      comp=Z,27nm,1.0s
E38A  The Farm, Brul    68.91  43  eP     P      17 31 58.0 -0.7
      comp=Z,25nm,0.8s
E38A  The Farm, Brul    68.91  43   P     P      17 31 57.9 -0.7
      baz=318
IIGN  Ignalina          69.01 332  eP     P      17 31 59.8 +0.8
IIGN                                IAmb  IAmb   17 32 02.0
      comp=Z,29nm,0.9s
F37A  Hinrichs Farm,    69.06  44   P     P      17 31 59.1 -0.5
      baz=318
T25A  Trinidad          69.08  58  eP     P      17 32 00.0 -0.1
      comp=Z,40nm,1.4s
T25A  Trinidad          69.08  58   P     P      17 32 00.2 +0.2
      baz=315
HYB   Hyderabad         69.14 273  i P    P      17 32 00.0 -0.5
HYB   Hyderabad         69.14 273  eP     P      17 32 00.2 -0.2
HYB                                 IAmb  IAmb   17 32 02.0
      comp=Z,20nm,1.0s
MICGM Minsk             69.18 331  e      P      17 32 01.0 +0.9
MNK   Minsk             69.18 331  eP     P      17 32 01.0 +0.9
NACGM Naroch            69.21 332  e      P      17 32 01.0 +0.7
F38A  Pierce - Schro    69.24  44   P     P      17 32 00.9 +0.2
      baz=318
ANMO  Albuquerque       69.42  61  eP     P      17 32 02.2 -0.1
      comp=Z,12nm,1.0s
ANMO  Albuquerque       69.42  61  eP     P      17 32 02.2 -0.1
ANMO                                pmax  pmax
      comp=Z,12nm,1.0s
ANMO  Albuquerque       69.42  61   P     P      17 32 02.6 +0.4
      baz=315
ANMO  Albuquerque       69.42  61   P     P      17 32 02.4 +0.2
      comp=Z,9.3nm,1.0s,baz=313,slow=7.2,SNR=16
KONO  Kongsberg         69.52 343  eP     P      17 32 03.0 +1.0
      comp=Z,21nm,0.9s
KONO  Kongsberg         69.52 343  eP     P      17 32 03.1 +1.0
KONO                                pmax  pmax
      comp=Z,21nm,0.9s
KONO  Kongsberg         69.52 343  eP     P      17 32 02.8 +0.7
E39A  Mellen            69.54  43   P     P      17 32 01.9 -0.6
      baz=319
BER   Bergen            69.63 345  eP     P      17 32 04.2 +1.4
LENM  Lemitar           69.67  61  eP     P      17 32 03.8 +0.1
F39A  Loretta           69.72  43   P     P      17 32 03.4 -0.3
      baz=319
PBUR  Paburg            69.74 335  eP     P      17 32 04.2 +0.6
PBUR                                IAmb  IAmb   17 32 06.2
      comp=Z,71nm,1.0s
E40A  Wakefield         69.79  42   P     P      17 32 04.2 +0.1
      baz=319
G38A  Ridgeland         69.84  44   P     P      17 32 03.6 -0.8
      baz=318
ODD1  Odda              69.84 344  eP     P      17 32 05.4 +1.2
BNM   Barren Site       69.88  61  eP     P      17 32 05.1  0.0
MAK   Makhachkala       70.01 312  eP     P      17 32 02.0 -3.4
MAK                                e                 17 34 37.4
MAK                                eS     S      17 41 09.0 -5.0
MAK                                eSS    SS     17 45 44.4 +1.8
MAK                                 pmax  pmax
      comp=Z,140nm,1.1s
G39A  Holcombe          70.08  44   P     P      17 32 05.2 -0.6
      baz=319
F40A  Park Falls        70.09  43   P     P      17 32 05.3 -0.6
      baz=319
DZM   Mont Dzumac       70.13 170  eLR    LR     17 53 23.0
      comp=Z,120nm,24.6s
E41A  Kenton            70.20  42   P     P      17 32 06.1 -0.5
      baz=320
319A  Douglas           70.22  65  eP     P      17 32 07.3 +0.2
      comp=Z,50nm,1.0s
WRAB  Tennant Creek     70.24 202  eP     P      17 32 06.6 -0.4
      comp=Z,47nm,1.3s
WRAB  Tennant Creek     70.24 202  i P    P      17 32 06.3 -0.7
WRAB                                pmax  pmax
      comp=Z,28nm,1.2s
WB2   Warramunga Arr    70.25 202  eP     P      17 32 05.6 -1.4
WR1   Warramunga Arr    70.25 202  eP     P      17 32 06.5 -0.5
      comp=Z,60nm,1.4s
WRA   Warramunga Arr    70.25 202   P     P      17 32 06.5 -0.5
      comp=Z,17nm,1.0s,baz=20,slow=6.6,SNR=63
121A  Cookes Peak, D    70.32  63   P     P      17 32 08.2 +0.4
      baz=315
BLS5  Blasjo            70.33 344  eP     P      17 32 08.4 +1.2
H39A  Augusta           70.48  44   P     P      17 32 08.1 -0.2
      baz=319
CBKS  Cedar Bluff       70.49  54   P     P      17 32 08.0 -0.5
      baz=316
G40A  Rib Lake          70.54  43  eP     P      17 32 08.0 -0.7
      comp=Z,11nm,0.9s
G40A  Rib Lake          70.54  43   P     P      17 32 08.1 -0.7
      baz=319
GOF   Gofitskoye        70.60 316⇓ iP     P      17 32 10.3 +1.3
GOF                                 pmax  pmax
      comp=Z,180nm,0.8s
GROC  Groznyy           70.68 313  eP     P      17 32 08.8 -0.7
GROC                               e                 17 32 29.5
GROC                               e                 17 34 45.2
GROC                               eS     S      17 41 24.1 +2.3
GROC                                pmax  pmax
      comp=Z,10.0nm,0.6s
F41A  Three Lakes       70.69  42  eP     P      17 32 09.0 -0.6
      comp=Z,20nm,0.8s
F41A  Three Lakes       70.69  42   P     P      17 32 09.3 -0.3
      baz=320
E42A  Champion          70.69  41   P     P      17 32 09.2 -0.4
      baz=320
H40A  Chili             70.94  44   P     P      17 32 10.5 -0.6
      baz=319
BHJ   Bhuj              70.97 284  eP     P      17 32 11.6  0.0
BHJ                                 IAmb  IAmb   17 32 13.2
      comp=Z,34nm,0.5s
I39A  Houston           70.98  45  eP     P      17 32 10.1 -1.3
      comp=Z,22nm,0.9s
I39A  Houston           70.98  45   P     P      17 32 10.8 -0.6
      baz=319
MDRS  Chennai           71.09 269  eP     P      17 32 12.3 -0.1
MDRS                                IAmb  IAmb   17 32 14.4
      comp=Z,36nm,1.3s
SUW   Suwalki           71.09 333  eP     P      17 32 11.8  0.0
SUW   Suwalki           71.09 333  eP     P      17 32 11.0 -0.9
      comp=Z,54nm,1.0s
SUW   Suwalki           71.09 333  eP     P      17 32 11.0 -0.9
SUW                                 pmax  pmax
      comp=Z,54nm,1.0s
FITZ  Fitzroy Crossi    71.12 211  eP     P      17 32 11.7 -0.7
      comp=Z,36nm,1.1s
J39A  Decorah           71.28  46   P     P      17 32 12.5 -0.8
      baz=319
H41A  Junction City     71.29  44   P     P      17 32 12.6 -0.6
      baz=320
G42A  Mountain          71.37  42   P     P      17 32 12.8 -0.9
      baz=320
I40A  Norwalk           71.39  45   P     P      17 32 13.4 -0.5
      baz=319
SCHQ  Schefferville     71.47  25  eP     P      17 32 14.4 +0.2
      comp=Z,14nm,0.9s
SCHQ  Schefferville     71.47  25   P     P      17 32 14.0 -0.2
      comp=Z,8.8nm,0.8s,baz=344,slow=5.4,SNR=7.7
F43A  Flat Rock, Esc    71.49  41   P     P      17 32 14.0 -0.4
      baz=321
POO   Poona             71.51 277  eP     P      17 32 14.4 -0.6
POO                               ⇓ iP     P      17 32 15.0  0.0
      comp=Z,8.0nm,1.0s
POO                                 IAmb  IAmb   17 32 16.4
      comp=Z,30nm,0.8s
NCK   Nalchik           71.52 315⇓ iP     P      17 32 14.9 +0.2
NCK                                 pmax  pmax
      comp=Z,60nm,1.0s
KIV   Kislovodsk        71.60 316  eP     P      17 32 16.3 +1.0
      comp=Z,41nm,0.9s
KIV   Kislovodsk        71.60 316  i P    P      17 32 16.7 +1.4
      SNR=20
KIV   Kislovodsk        71.60 316  eP     P      17 32 16.6 +1.3
KIV                                 pmax  pmax
      comp=Z,49nm,1.0s
KIV                                 MLR   MLR
      comp=Z,174nm,18.0s
KIV   Kislovodsk        71.60 316   P     P      17 32 17.3 +2.0
      SNR=8.6
KIV   Kislovodsk        71.60 316   P     P      17 32 17.3 +2.0
      SNR=8.6
K39A  Oelwein           71.67  46   P     P      17 32 14.5 -1.1
      baz=319
G43A  Wallace           71.70  42   P     P      17 32 15.4 -0.3
      baz=320
F44A  Big Bay de Noc    71.71  41   P     P      17 32 15.1 -0.6
      baz=321
AKASG Malin Array Be    71.86 328   P     P      17 32 16.3 -0.2
      comp=Z,20nm,0.7s,baz=33,slow=6.2,SNR=44
AKASG                               LR    LR     18 06 00.5
      comp=Z,130nm,20.4s,baz=5.0,slow=38
AKBB  Malin Array Si    71.86 328  eP     P      17 32 16.3 -0.2
      comp=Z,27nm,0.8s
KIEV  Kiev              71.87 328  eP     P      17 32 16.0 -0.6
      comp=Z,25nm,0.8s
KIEV  Kiev              71.87 328  eP     P      17 32 16.9 +0.3
KIEV  Kiev              71.87 328  i P    P      17 32 16.4 -0.2
      SNR=20
KIEV  Kiev              71.87 328⇑ iP     P      17 32 16.9 +0.3
KIEV                                pmax  pmax
      comp=Z,29nm,0.8s
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ZEI   Tsey            71.91 314  eP     P        17 32 16.6 -0.7
ZEI                               pmax  pmax
      comp=Z,20nm,1.3s
KSU1  Kansas State U  71.95  51  eP     P        17 32 15.5 -1.8
      comp=Z,15nm,0.8s
D46A  Sault St. Mari  72.02  39   P     P        17 32 16.6 -1.0
      baz=322
K40A  Colesburg       72.04  46   P     P        17 32 17.0 -0.7
      baz=319
L39A  Vinton          72.05  47   P     P        17 32 17.2 -0.6
      baz=319
J41A  Loganville      72.07  45   P     P        17 32 17.3 -0.6
      baz=320
NEY   Neytrino        72.12 315  i P    P        17 32 20.0 +1.5
NEY                               pmax  pmax
      comp=Z,3.0nm,0.8s
I42A  Draeger Farm,   72.19  44   P     P        17 32 18.1 -0.6
      baz=320
D47A  Chapleau        72.28  38   P     P        17 32 18.0 -1.2
      baz=323
TBLG  Delisi          72.30 313  eP     P        17 32 20.1 +0.7
      comp=Z,117nm,1.6s
TBLG  Delisi          72.30 313  eP     P        17 32 20.1 +0.7
TBLG                              pmax  pmax
      comp=Z,117nm,1.6s
M39A  Webster         72.45  47   P     P        17 32 19.7 -0.5
      baz=319
L40A  Anamosa         72.48  46  eP     P        17 32 19.0 -1.4
      comp=Z,21nm,0.9s
L40A  Anamosa         72.48  46   P     P        17 32 19.4 -1.0
      baz=319
K41A  Shullsburg      72.51  45   P     P        17 32 19.8 -0.7
      baz=320
J42A  Columbus        72.53  44   P     P        17 32 19.9 -0.8
      baz=320
I43A  Langenfeld Bro  72.55  43   P     P        17 32 20.0 -0.7
      baz=320
F46A  Macinaw City C  72.59  40   P     P        17 32 20.4 -0.6
      baz=322
E47A  Iron Bridge     72.68  39   P     P        17 32 20.6 -0.9
      baz=323
D48A  Paudash Townsh  72.72  37   P     P        17 32 20.6 -1.2
      baz=323
L41A  Preston         72.82  46   P     P        17 32 21.5 -0.9
      baz=320
M40A  Post Highland   72.83  47   P     P        17 32 21.8 -0.7
      baz=319
K42A  Prairie Point,  72.83  45   P     P        17 32 21.9 -0.6
      baz=320
LSQQ  Lebel-sur-Quev  73.08  33   P     P        17 32 23.2 -0.6
      baz=326
N40A  Mertquake, Sal  73.19  47   P     P        17 32 24.1 -0.6
      baz=319
L42A  Oliver, Polo    73.27  45  eP     P        17 32 23.8 -1.3
      comp=Z,32nm,0.8s
L42A  Oliver, Polo    73.27  45   P     P        17 32 24.3 -0.8
      baz=320
CHGQ  Chibougamau     73.31  31   P     P        17 32 24.7 -0.5
      baz=327
M41A  Milan           73.33  46   P     P        17 32 24.8 -0.6
      baz=320
ANN   Anapa           73.34 319  eP     P        17 32 26.0 +0.6
ANN                              eS     SKiKP    17 41 56.5 +2.1
ANN                               pmax  pmax
      comp=Z,49nm,1.4s
H46A  Fife Lake       73.36  41   P     P        17 32 25.4 -0.2
      baz=322
GNI   Garni           73.49 312  eP     P        17 32 27.1 +0.5
      comp=Z,32nm,0.8s
GNI   Garni           73.49 312  i P    P        17 32 28.7 +2.1
      SNR=8.4
GNI   Garni           73.49 312  eP     P        17 32 27.1 +0.5
GNI                               pmax  pmax
      comp=Z,32nm,0.8s
GNI   Garni           73.49 312   P     P        17 32 29.2 +2.6
      SNR=7.0
GNI   Garni           73.49 312   P     P        17 32 29.2 +2.6
      SNR=7.0
VLDQ  Val d'Or        73.68  34  eP     P        17 32 25.2 -2.1
      comp=Z,38nm,1.6s
GOA   Goa             73.68 275  eP     P        17 32 28.1 +0.2
GOA                               IAmb  IAmb     17 32 30.2
      comp=Z,102nm,1.5s
N41A  Harden Midland  73.69  47  eP     P        17 32 26.4 -1.2
      comp=Z,76nm,1.1s
N41A  Harden Midland  73.69  47   P     P        17 32 27.1 -0.5
      baz=320
BEL   Belsk           73.71 333  eP     P        17 32 28.6 +1.1
BEL   Belsk           73.71 333  eP     P        17 32 28.5 +1.1
F49A  Sandfield       73.75  38   P     P        17 32 26.9 -1.0
      baz=323
BATM  Batumi          73.87 315⇑iP     P        17 32 30.2 +1.6
AS01  Alice Springs   73.92 201  eP     P        17 32 28.5 -0.4
AS31  Alice Springs   73.93 201  eP     P        17 32 29.0  0.0
      comp=Z,3.3nm,0.8s
ASAR  Alice Springs   73.93 201   P     P        17 32 29.5 +0.4
      comp=Z,11nm,0.8s,baz=14,slow=5.3,SNR=96
WMOK  Wichita Mounta  73.97  56   P     P        17 32 29.0 -0.3
      baz=318
N42A  Yates City      74.00  46   P     P        17 32 28.9 -0.5
      baz=320
BCA   Borcka          74.03 315⇑iP     P        17 32 30.8 +1.2
M43A  Waltham Townsh  74.05  45   P     P        17 32 29.1 -0.6
      baz=321
O41A  Passleys Farm,  74.12  47   P     P        17 32 29.5 -0.7
      baz=320
N43A  Stutzman Famil  74.33  46   P     P        17 32 30.7 -0.6
      baz=321
P41A  Barry, Barry    74.37  48   P     P        17 32 31.1 -0.4
      baz=320
LVV   L'vov           74.41 330  eP     P        17 32 31.3 -0.3
D53A  Lac Vacive, Po  74.43  35   P     P        17 32 31.1 -0.8
      baz=326
J47A  Sunmer          74.56  42   P     P        17 32 32.7 +0.1
      baz=322
K46A  Dorr            74.56  43   P     P        17 32 32.0 -0.7
      baz=322
HDIL  Hopedale        74.56  46  eP     P        17 32 31.9 -0.7
      comp=Z,65nm,0.8s
HDIL  Hopedale        74.56  46   P     P        17 32 32.3 -0.4
      baz=321
SIM   Simferopol'     74.64 321deP     P        17 32 33.5 +0.4
SIM                               pmax  pmax
      comp=Z,17nm,0.9s
E52A  Mattawa         74.71  36   P     P        17 32 32.2 -1.3
      baz=325
D54A  Lac Fusel, La   74.77  34   P     P        17 32 32.9 -0.9
      baz=326
P42A  Winchester      74.80  47  eP     P        17 32 33.3 -0.7
      comp=Z,31nm,1.1s
P42A  Winchester      74.80  47   P     P        17 32 33.3 -0.7
      baz=320
Q41A  Truxton         74.83  48   P     P        17 32 34.0 -0.3
      baz=320
KLBO  Killbear Provi  74.84  38   P     P        17 32 33.4 -0.8
      baz=324
N44A  Piper City      74.94  45   P     P        17 32 34.3 -0.5
      baz=321
PALK  Pallekele       74.99 264  i P    P        17 32 37.1 +1.6
KWP   Kalwaria Pacla  75.01 331  eP     P        17 32 36.2 +1.1
KWP   Kalwaria Pacla  75.01 331  eP     P        17 32 35.5 +0.4
      comp=Z,345nm,0.9s
KWP   Kalwaria Pacla  75.01 331  eP     P        17 32 35.5 +0.4
E53A  Dumoine, Ponti  75.03  35   P     P        17 32 34.2 -1.1
      baz=326
TX31  Lajitas Ar. Si  75.08  63  eP     P        17 32 35.9 -0.1
TXAR  Lajitas Array   75.08  63   P     P        17 32 36.3 +0.3
      comp=Z,25nm,0.8s,baz=303,slow=5.1,SNR=44
P43A  Skaggs, Pawnee  75.16  47   P     P        17 32 35.3 -0.8
      baz=321
E54A  Lac Daplat, Po  75.17  35   P     P        17 32 35.2 -0.9
      baz=326
Q42A  Golden Eagle    75.22  48   P     P        17 32 36.3 -0.2
      baz=320
K48A  Perry           75.22  41   P     P        17 32 36.5  0.0
      baz=323
L47A  Sherwood        75.39  43   P     P        17 32 37.0 -0.4
      baz=322
OJC   Ojcow           75.42 333  eP     P        17 32 38.5 +1.0
OJC   Ojcow           75.42 333  eP     P        17 32 37.3 -0.2
      comp=Z,16nm,0.8s
OJC   Ojcow           75.42 333  eP     P        17 32 37.3 -0.2
OJC                               pmax  pmax
      comp=Z,16nm,0.8s
CCM   Cathedral Cave  75.51  49   P     P        17 32 37.5 -0.7
      baz=320
K49A  Clarkson        75.53  41   P     P        17 32 38.8 +0.6
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      baz=323
O45A  Potomac         75.56  45   P     P        17 32 38.2 -0.2
      baz=321
R42A  Luebbering      75.57  48   P     P        17 32 37.9 -0.6
      baz=320
G53A  Haliburton      75.68  37   P     P        17 32 38.5 -0.6
      baz=325
P44A  Sand Creek, Wi  75.73  46   P     P        17 32 39.2 -0.2
      baz=321
SFIN  Lafayette       75.76  45   P     P        17 32 39.0 -0.5
      baz=322
L48A  N Adams         75.76  42   P     P        17 32 39.2 -0.3
      baz=323
BUR08 Bucovina Ar. S  75.86 328  eP     P        17 32 39.7 -0.5
BUR04 Bucovina Ar. S  75.88 328  eP     P        17 32 40.0 -0.2
BURAR Bucovina Array  75.88 328⇑iP     P        17 32 41.1 +0.8
KSP   Ksiaz           75.91 335  eP     P        17 32 41.3 +1.1
KSP   Ksiaz           75.91 335  eP     P        17 32 41.3 +1.1
L49A  Milan           75.93  42   P     P        17 32 40.6 +0.1
      baz=323
S42A  Caledonia       75.96  49   P     P        17 32 40.1 -0.7
      baz=320
NIE   Niedzica        75.97 332  eP     P        17 32 42.2 +1.5
NIE   Niedzica        75.97 332  eP     P        17 32 42.2 +1.5
Q44A  Meyer Farm, Va  75.98  47  eP     P        17 32 40.4 -0.4
      comp=Z,56nm,1.2s
Q44A  Meyer Farm, Va  75.98  47  eP     P        17 32 40.5 -0.3
      comp=Z,56nm,1.2s
Q44A  Meyer Farm, Va  75.98  47   P     P        17 32 40.5 -0.4
      baz=321
U40A  Yellville       75.98  51   P     P        17 32 40.0 -0.9
      baz=320
FVM   French Village  75.98  48  eP     P        17 32 40.3 -0.6
      comp=Z,28nm,1.3s
FVM   French Village  75.98  48  eP     P        17 32 40.3 -0.6
FVM                               pmax  pmax
      comp=Z,28nm,1.3s
M48A  Edgerton        76.00  43  eP     P        17 32 40.2 -0.7
      comp=Z,23nm,1.0s
M48A  Edgerton        76.00  43   P     P        17 32 40.4 -0.5
      baz=323
UZH   Uzhgorod        76.01 331⇑iP     P        17 32 41.0 +0.1
UZH                              e               17 32 46.5
UZH                              e               17 32 56.8
P45A  Graceland, Par  76.11  46  eP     P        17 32 40.6 -1.0
      comp=Z,27nm,0.8s
P45A  Graceland, Par  76.11  46   P     P        17 32 41.2 -0.4
      baz=322
BIZ   Bicaz           76.14 327⇑iP     P        17 32 42.7 +1.1
UPC   Upice           76.29 335  eP     P        17 32 43.6 +1.2
UPC   Upice           76.29 335  eP     P        17 32 43.6 +1.2
P46A  Rosedale        76.30  45   P     P        17 32 42.3 -0.4
      baz=322
TESR  Tescani         76.30 327⇑iP     P        17 32 43.2 +0.6
O47A  Sheridan        76.31  44   P     P        17 32 41.5 -1.2
      baz=322
ACTO  Acton           76.33  38   P     P        17 32 42.2 -0.6
      baz=325
DPC   Dobruska-Polom  76.34 335  eP     P        17 32 44.2 +1.4
DPC   Dobruska-Polom  76.34 335  eP     P        17 32 44.2 +1.4
N48A  Decatur         76.35  43   P     P        17 32 42.3 -0.6
      baz=323
TRPA  Tarpa           76.36 330⇑iP     P        17 32 44.2 +1.3
TRPA  Tarpa           76.36 330  eP     P        17 32 43.1 +0.2
PLVO  Plevna          76.37  36   P     P        17 32 42.0 -1.0
      baz=326
CLL   Collm           76.38 337  eP     P        17 32 43.4 +0.5
      comp=Z,21nm,1.0s
CLL   Collm           76.38 337⇓iP     P        17 32 43.0 +0.1
      comp=Z,26nm,1.4s
CLL                              i Pmax          17 32 46.3
      comp=Z,21nm,1.0s
CLL                              i               17 32 49.7
CLL                              i               17 33 02.3
CLL                              eS     S        17 42 31.0 +5.0
CLL                              ePPS   PPS      17 43 23.0
CLL                              eSS    SS       17 47 42.0  +23
CLL   Collm           76.38 337⇓iP     P        17 32 43.0 +0.1
CLL                              i               17 32 49.7
CLL                              eS     S        17 42 31.0 +5.0
CLL                               pmax  pmax
      comp=Z,21nm,1.0s
Q45A  Warren Harvey,  76.41  46   P     P        17 32 43.1 -0.2
      baz=321
L50A  Kingsville      76.41  41   P     P        17 32 42.8 -0.4
      baz=324
R44A  Waltonville     76.45  47   P     P        17 32 43.1 -0.5
      baz=321
J52A  Paris           76.45  39   P     P        17 32 43.2 -0.3
      baz=325
KRLC  Kraliky         76.45 335  eP     P        17 32 44.6 +1.2
KRLC  Kraliky         76.45 335  eP     P        17 32 44.6 +1.2
LANS  Liptovska Anna  76.47 332  eP     P        17 32 45.2 +1.7
LANS  Liptovska Anna  76.47 332  eP     P        17 32 45.2 +1.7
U41A  Viola           76.47  50   P     P        17 32 43.2 -0.6
      baz=320
S43A  Fulton Ridge,   76.48  48   P     P        17 32 43.1 -0.6
      baz=321
MORC  Moravsky Berou  76.50 334  eP     P        17 32 43.5 -0.2
      comp=Z,26nm,0.9s
MORC  Moravsky Berou  76.50 334⇑iP     P        17 32 45.2 +1.5
MORC  Moravsky Berou  76.50 334  eP     P        17 32 44.6 +0.9
JCT   Junction City   76.52  60  eP     P        17 32 43.3 -0.8
      comp=Z,58nm,1.3s
JCT   Junction City   76.52  60  eP     P        17 32 43.3 -0.8
JCT                               pmax  pmax
      comp=Z,58nm,1.3s
JCT   Junction City   76.52  60   P     P        17 32 43.9 -0.3
      baz=318
BRG   Berggiesshubel  76.53 337  eP     P        17 32 44.0 +0.2
      comp=Z,7.2nm,1.0s
BRG   Berggiesshubel  76.53 337  eP     P        17 32 44.0 +0.2
BRG                               pmax  pmax
      comp=Z,7.0nm,1.0s
OLIL  Olney           76.56  46  eP     P        17 32 42.3 -1.8
      comp=Z,26nm,0.9s
TLCR                  76.59 325⇑iP     P        17 32 45.0 +0.7
TLCR                  76.59 325   P     P        17 32 44.9 +0.7
ARCR  ARCALIA         76.64 329⇑iP     P        17 32 46.3 +1.8
PVCC  Panska Ves      76.67 336  eP     P        17 32 45.7 +1.1
PVCC  Panska Ves      76.67 336  eP     P        17 32 45.7 +1.1
N49A  Columbus Grove  76.69  43   P     P        17 32 44.4 -0.4
      baz=323
ALFO  Alfred          76.72  34   P     P        17 32 44.0 -0.9
      baz=327
O48A  Farmland        76.77  44   P     P        17 32 44.6 -0.7
      baz=323
VRI   Vrincioaia      76.82 326⇑iP     P        17 32 46.6 +1.1
P47A  Martinsville    76.85  45   P     P        17 32 45.2 -0.6
      baz=322
PLOR  Plostina        76.86 326⇑iP     P        17 32 46.6 +0.8
CFR   Carcaliu        76.86 325⇑iP     P        17 32 46.5 +0.8
MIAR  Mount Ida       76.97  53   P     P        17 32 46.2 -0.3
      baz=320
OZUR                  76.97 327⇑iP     P        17 32 47.7 +1.3
HAVZ  Havza           77.06 318  i P    P        17 32 48.9 +1.9
HAVZ                              IAML_P
      comp=Z,765nm,0.8s
T44A  Benton          77.10  48   P     P        17 32 47.2  0.0
      baz=321
S45A  Carrier Mills   77.14  47   P     P        17 32 47.1 -0.3
      baz=321
GOPC  GO Pecny, Ondr  77.17 336  eP     P        17 32 48.6 +1.2
GOPC  GO Pecny, Ondr  77.17 336  eP     P        17 32 48.6 +1.2
PRU   Pruhonice       77.17 336  eP     P        17 32 48.5 +1.1
PRU   Pruhonice       77.17 336  eP     P        17 32 48.5 +1.1
VRAC  Vranov          77.19 334⇑iP     P        17 32 49.2 +1.6
VRAC  Vranov          77.19 334  eP     P        17 32 48.9 +1.3
W41B  Gary Mavity, V  77.19  51   P     P        17 32 47.6 -0.2
      baz=320
Q47A  Bedord North L  77.21  45   P     P        17 32 47.5 -0.4
      baz=322
CJR   Cluj-Napoca     77.23 329⇓iP     P        17 32 49.1 +1.3
VYHS  Vyhne           77.24 333  eP     P        17 32 49.2 +1.3
VYHS                              pmax  pmax
      comp=Z,7.0nm,1.0s
VYHS  Vyhne           77.24 333  eP     P        17 32 49.2 +1.3
P48A  Milroy          77.27  44   P     P        17 32 47.5 -0.6
      baz=323
JAVC  Velka Javorina  77.28 333  eP     P        17 32 50.4 +2.3
N50A  Nevada          77.28  42   P     P        17 32 48.5 +0.3
      baz=324
HARR  Harsova         77.35 325⇑iP     P        17 32 48.2 -0.3
TIRR  Tirgusor        77.36 325  eP     P        17 32 48.8 +0.3
      comp=Z,16nm,0.9s
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TIRR  Tirgusor        77.36 325  eP     P        17 32 48.8 +0.3
TIRR                              pmax  pmax
      comp=Z,16nm,0.9s
TLB   Topalu          77.40 325⇑iP     P        17 32 49.7 +1.0
PSZ   Piszkesteto     77.42 332  eP     P        17 32 49.4 +0.5
      comp=Z,16nm,0.9s
PSZ   Piszkesteto     77.42 332  eP     P        17 32 49.4 +0.5
PSZ                               pmax  pmax
      comp=Z,17nm,0.9s
PSZ   Piszkesteto     77.42 332  eP     P        17 32 49.1 +0.2
MLR   Muntele Rosu    77.43 327  eP     P        17 32 49.7 +0.6
      comp=Z,16nm,0.7s
MLR   Muntele Rosu    77.43 327⇑iP     P        17 32 49.9 +0.8
MLR   Muntele Rosu    77.43 327  eP     P        17 32 49.7 +0.6
MLR                               pmax  pmax
      comp=Z,16nm,0.7s
M52A  Chesterland     77.45  41   P     P        17 32 48.6 -0.6
      baz=324
DRGR                  77.47 329⇑iP     P        17 32 50.2 +1.0
DRGR                  77.47 329   P     P        17 32 50.1 +0.9
KRUC  Moravsky        77.47 334  eP     P        17 32 50.5 +1.4
ISR   Istrita         77.52 326⇑iP     P        17 32 50.9 +1.4
TREC  Trest           77.53 335  eP     P        17 32 50.6 +1.2
TREC  Trest           77.53 335  eP     P        17 32 50.6 +1.2
P49A  Miami Univ. Ec  77.55  44   P     P        17 32 49.2 -0.5
      baz=323
Q48A  North Vernon    77.55  45   P     P        17 32 49.3 -0.4
      baz=323
BANOM Banah           77.56 295  i P    P        17 32 51.1 +1.1
      SNR=7.5
SHME  Shamm           77.56 295   P     P        17 32 50.0 -0.1
O50A  Cable           77.56  43   P     P        17 32 49.5 -0.3
      baz=323
S46A  Don Dixon Farm  77.57  47   P     P        17 32 49.4 -0.4
      baz=322
ERPA  Erie            77.58  39  eP     P        17 32 48.9 -0.9
      comp=Z,46nm,1.3s
L53A  Girard          77.59  40   P     P        17 32 49.7 -0.2
      baz=325
SMOL  Smolenice       77.66 333  e      P        17 32 55.0 +4.8
R47A  Wooly Knot Far  77.67  46   P     P        17 32 49.0 -1.3
      baz=322
ACSO  Alum Creek Sta  77.79  42  eP     P        17 32 50.7 -0.3
      comp=Z,53nm,1.5s
ACSO  Alum Creek Sta  77.79  42   P     P        17 32 50.8 -0.3
      baz=324
VOIR                  77.80 327⇑iP     P        17 32 52.5 +1.4
MODS  Modra-Piesok    77.83 333  eP     P        17 32 53.0 +1.9
MODS                              pmax  pmax
      comp=Z,24nm,1.1s
MODS  Modra-Piesok    77.83 333  eP     P        17 32 53.0 +1.9
WCI   Wyandotte Cave  77.83  46   P     P        17 32 51.1 -0.2
      baz=322
M53A  WI Miller and   77.83  40   P     P        17 32 51.4 +0.1
      baz=325
K55A  Perry           77.88  38   P     P        17 32 51.4 -0.1
      baz=326
ICOR  Ion Corvin      77.89 325⇑iP     P        17 32 52.8 +1.3
R48A  Northridge Ran  77.90  45   P     P        17 32 51.6 -0.1
      baz=323
P50A  Jamestown       77.91  43   P     P        17 32 51.6 -0.1
      baz=323
MOQ   Mont Orford     77.97  33  eP     P        17 32 51.1 -0.9
ILGA  Ilgaz           77.97 319  eP     P        17 32 53.1 +0.7
      comp=Z,48nm,1.1s
T46A  Princeton       77.98  47   P     P        17 32 52.4 +0.3
      baz=322
ARR   Arges           78.01 327⇑iP     P        17 32 54.0 +1.7
O51A  Pataskala       78.03  42   P     P        17 32 51.9 -0.5
      baz=324
ZST   Bratislava      78.04 333  eP     P        17 32 52.9 +0.6
ZST   Bratislava      78.04 333  eP     P        17 32 52.9 +0.6
COAL  Corum-Alaca     78.05 318  i P    P        17 32 54.9 +2.2
COAL                              IAML_P
      comp=Z,186nm,0.8s
MSFE  Esma-Masafi     78.06 294   P     P        17 32 53.3 +0.5
KHC   Kasperske Hory  78.21 336  eP     P        17 32 53.8 +0.5
      comp=Z,6.5nm,0.8s
KHC   Kasperske Hory  78.21 336  eP     P        17 32 54.8 +1.5
KHC                              ex     x        17 32 59.5
KHC   Kasperske Hory  78.21 336  eP     P        17 32 53.8 +0.5
KHC                               pmax  pmax
      comp=Z,7.0nm,0.8s
M54A  Oil Creek Stat  78.22  39  eP     P        17 32 53.1 -0.3
      comp=Z,90nm,1.8s
M54A  Oil Creek Stat  78.22  39   P     P        17 32 53.4  0.0
      baz=325
N53A  Lisbon          78.28  41   P     P        17 32 53.7 -0.1
      baz=325
KBUK  KARABUK-Merkez78.30 320  i P    P        17 32 55.5 +1.6
KBUK                              IAML_P
      comp=Z,111nm,0.2s
UOSS  Minazif         78.33 294  eP     P        17 32 54.6 +0.3
      comp=Z,31nm,1.0s
UOSS  Minazif         78.33 294   P     P        17 32 54.6 +0.3
P51A  Williamsport    78.35  43  eP     P        17 32 53.5 -0.7
      comp=Z,23nm,1.0s
833A  Chaparral WMA,  78.36  61   P     P        17 32 54.8 +0.5
      baz=318
O52A  Adamsville      78.40  42  eP     P        17 32 54.0 -0.4
      comp=Z,85nm,1.6s
O52A  Adamsville      78.40  42   P     P        17 32 53.8 -0.6
      baz=324
S48A  Wiedeman Farm,  78.40  46   P     P        17 32 54.1 -0.3
      baz=323
T47A  Sharon Grove    78.41  47  eP     P        17 32 52.6 -2.0
      comp=Z,69nm,1.4s
T47A  Sharon Grove    78.41  47   P     P        17 32 54.5  0.0
      baz=322
GEC2  GERESS Array S  78.44 336  eP     P        17 32 55.0 +0.4
      comp=Z,13nm,1.2s
GEC2  GERESS Array S  78.44 336  eP     P        17 32 55.0 +0.4
GEC2                              pmax  pmax
      comp=Z,13nm,1.2s
GERES GERESS Array B  78.44 336   P     P        17 32 55.3 +0.7
      comp=Z,4.0nm,0.7s,baz=32,slow=5.9,SNR=28
GERES                             LR    LR       18 11 10.0
      comp=Z,195nm,19.3s,baz=3.5,slow=38
Q50A  Georgetown      78.44  44   P     P        17 32 54.6 -0.1
      baz=323
GEA0  GERESS Array S  78.44 336  eP     P        17 32 54.7  0.0
HATD  Hatta, Dubai    78.46 294   P     P        17 32 56.0 +1.0
NATX  Nacogdoches     78.48  55  eP     P        17 32 55.5 +0.5
      comp=Z,48nm,0.8s
N54A  Moraine State   78.52  40  eP     P        17 32 54.8 -0.3
      comp=Z,28nm,1.3s
N54A  Moraine State   78.52  40   P     P        17 32 54.5 -0.6
      baz=325
ELDT  Eldivan         78.56 319  i P    P        17 32 58.0 +2.5
ELDT                              IAML_P
      comp=Z,4.7nm,0.1s
O53A  New Philadelph  78.57  41   P     P        17 32 55.1 -0.2
      baz=325
Q51A  Peebles         78.59  43   P     P        17 32 55.1 -0.4
      baz=324
ASHO  Ashiyiah        78.61 294   P     P        17 32 56.5 +0.6
M55A  Ridgway         78.63  39   P     P        17 32 55.5 -0.3
      baz=326
NAZ   Nazwa, Dubai    78.63 295   P     P        17 32 56.7 +0.8
CONA  Conrad Observa  78.65 334  eP     P        17 32 57.5 +1.8
      comp=Z,11nm,0.8s
GZR   Gura Zlata      78.66 329⇑iP     P        17 32 56.4 +0.6
SOP   Sopron          78.66 334  eP     P        17 32 51.0 -4.7
T48A  Bowling Green   78.67  46   P     P        17 32 55.7 -0.3
      baz=322
S49A  Springfield     78.67  45   P     P        17 32 55.8 -0.1
      baz=323
MEM   Membach         78.70 341  ⇑P     P        17 32 59.6 +3.7
SOHO  SOHO            78.72 293   P     P        17 32 58.0 +1.5
      SNR=5.0
SOHO  SOHO            78.72 293   P     P        17 32 58.0 +1.5
      SNR=5.0
SOHO                              P     P        17 32 58.0 +1.5
      SNR=5.0
R50A  Paris           78.73  44   P     P        17 32 55.9 -0.4
      baz=323
WVT   Waverly         78.73  48  eP     P        17 32 55.2 -1.1
      comp=Z,15nm,0.9s
WVT   Waverly         78.73  48  eP     P        17 32 55.2 -1.1
WVT                               pmax  pmax
      comp=Z,15nm,0.9s
WVT   Waverly         78.73  48   P     P        17 32 56.1 -0.2
      baz=322
DELI  KIRIKKALE       78.74 319  i P    P        17 32 57.6 +1.2
DELI                              IAML_P
      comp=Z,392nm,0.7s
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U47A	Clarksville	78.75	47	P	P	17 32 56.4	0.0
	baz=322						
V46A	Holladay	78.84	48	P	P	17 32 56.5	-0.4
	baz=322						
FAQ	Al Faqa, Dubai	78.85	294	P	P	17 32 57.6	+0.5
BZS	Buzias	78.86	329	⇑*i*P	P	17 32 57.4	+0.5
BCAM	Yenicaga	78.88	320	*i* P	P	17 32 59.0	+1.8
BCAM				IAML_P			
	comp=Z,571nm,0.8s						
BCLA	Clavier	79.03	342	⇓P	P	17 33 03.4	+5.7
R51A	Hillsboro	79.06	44	P	P	17 32 58.2	+0.1
	baz=324						
U48A	Cassie Pea, Po	79.07	47	P	P	17 32 58.0	-0.1
	baz=322						
BR101	Keskin Array S	79.09	319	*e*P	P	17 32 59.0	+0.6
BR131	Keskin Array S	79.09	319	*e*P	P	17 32 58.7	+0.3
BR131	Keskin Array S	79.09	319	P	P	17 32 59.7	+1.3
	SNR=9.1						
BR131	Keskin Array S	79.09	319	P	P	17 32 59.7	+1.3
	SNR=9.1						
BRTR	Keskin Array B	79.09	319	P	P	17 32 59.0	+0.6
	comp=Z,11nm,0.9s,baz=69,slow=3.4,SNR=53						
T49A	Edmonton	79.09	46	*e*P	P	17 32 58.3	0.0
	comp=Z,68nm,1.7s						
V47A	Nunnelly	79.12	48	P	P	17 32 58.1	-0.3
	baz=322						
MOA	Molln	79.18	335	*e*P	P	17 32 59.6	+1.0
	comp=Z,5.7nm,0.8s						
OXF	Oxford	79.19	50	*e*P	P	17 32 58.6	-0.2
	comp=Z,61nm,1.1s						
OXF	Oxford	79.19	50	*e*P	P	17 32 58.6	-0.2
OXF				pmax	pmax		
	comp=Z,61nm,1.1s						
OXF	Oxford	79.19	50	P	P	17 32 58.7	-0.1
	baz=321						
ALNE	Al Ain	79.26	294	*i* P	P	17 33 00.3	+0.9
	SNR=5.7						
KIBS	BOLU	79.30	320	*i* P	P	17 33 01.1	+1.6
KIBS				IAML_P			
	comp=Z,438nm,0.8s						
ANTO	Ankara	79.34	319	*e*P	P	17 32 59.5	-0.2
ANTO	Ankara	79.34	319	⇑*i*P	P	17 32 59.7	0.0
ANTO	Ankara	79.34	319	*e*P	P	17 32 59.5	-0.2
ANTO	Ankara	79.34	319	P	P	17 33 00.5	+0.8
	SNR=5.4						
ANTO	Ankara	79.34	319	P	P	17 33 00.5	+0.8
	SNR=5.4						
ARSA	Arzberg	79.36	334	*e*P	P	17 33 01.3	+1.7
	comp=Z,7.6nm,1.1s						
TAOE	Nuku Hiva Isla	79.39	116	*e*LR	LR	17 57 36.5	
	comp=Z,295nm,23.5s						
P54A	Burton	79.42	41	P	P	17 33 00.1	0.0
	baz=325						
MNCY	Minicoy	79.42	271	*e*P	P	17 32 59.8	-0.6
O55A	Ligonier	79.44	40	P	P	17 32 59.9	-0.2
	baz=326						
U49A	Red Boiling Sp	79.44	46	P	P	17 32 60.0	-0.2
	baz=323						
R52A	Catlettsburg	79.47	43	P	P	17 33 00.1	-0.3
	baz=324						
T50A	Nancy	79.49	45	P	P	17 33 00.2	-0.2
	baz=323						
W47A	Westpoint	79.53	48	P	P	17 33 00.3	-0.5
	baz=322						
V48A	Smith Brothers	79.54	48	*e*P	P	17 33 00.5	-0.3
	comp=Z,18nm,0.9s						
V48A	Smith Brothers	79.54	48	P	P	17 33 00.4	-0.3
	baz=322						
PUNG	Punghina	79.57	328	⇑*i*P	P	17 33 01.1	+0.4
S51A	Beattyville	79.59	44	*e*P	P	17 33 00.7	-0.3
	comp=Z,19nm,0.9s						
S51A	Beattyville	79.59	44	P	P	17 33 00.7	-0.3
	baz=324						
O56A	Blue Knob Stat	79.71	40	*e*P	P	17 33 00.8	-0.9
	comp=Z,66nm,1.7s						
Q54A	Coxs Mills	79.77	42	P	P	17 33 02.0	+0.1
	baz=325						
P55A	Reedsville	79.79	41	P	P	17 33 02.2	+0.1
	baz=325						
R53A	Hurricane	79.79	43	P	P	17 33 02.1	0.0
	baz=324						
KKUL	Konya-Kulu	79.86	319	*i* P	P	17 33 04.9	+2.4
KKUL				IAML_P			
	comp=Z,217nm,0.7s						
AUMIH	MIHALICIK	79.92	320	*i* P	P	17 33 04.0	+1.1
W48A	Pulaski	79.96	48	P	P	17 33 02.6	-0.4
	baz=322						
U50A	Jamestown	79.97	46	P	P	17 33 03.0	-0.2
	baz=323						
X47A	Russelville	79.98	49	P	P	17 33 02.4	-0.7
	baz=322						
SOKA	Soboth	80.02	334	*e*P	P	17 33 04.4	+1.1
	comp=Z,7.6nm,0.8s						
Q55A	Buckhannon	80.09	41	P	P	17 33 03.9	+0.1
	baz=325						
MHTO	MHTO	80.13	290	P	P	17 33 06.0	+1.8
	SNR=14						
MHTO	MHTO	80.13	290	P	P	17 33 06.0	+1.8
	SNR=14						
MHTO				P	P	17 33 06.0	+1.8
	SNR=14						
KBA	Koelnbreinsper	80.14	335	*e*PcP	P	17 33 06.0	+1.9
	comp=Z,23nm,0.8s,SNR=11						
BFO	Black Forest	80.30	339	*e*P	P	17 33 05.1	+0.4
	comp=Z,45nm,1.7s						
BFO	Black Forest	80.30	339	*i* P	P	17 33 06.8	+2.1
W49A	Belvidere	80.31	48	P	P	17 33 04.6	-0.3
	baz=323						
OBKA	Obir	80.31	334	*e*P	P	17 33 03.7	-1.2
	comp=Z,11nm,1.3s						
N59A	State Game Lan	80.34	37	P	P	17 33 04.9	-0.1
	baz=328						
R54A	Victor	80.35	42	P	P	17 33 05.4	+0.3
	baz=325						
SWET	Sewanee	80.39	47	*e*P	P	17 33 04.7	-0.7
	comp=Z,44nm,1.2s						
WATA	Walderalm	80.39	337	*e*PcP	P	17 33 07.1	+1.8
	comp=Z,5.5nm,0.6s						
STKA	Stephens Creek	80.40	193	*e*P	P	17 33 04.6	-0.5
	comp=Z,5.0nm,1.8s						
STKA	Stephens Creek	80.40	193	*e*P	P	17 33 04.6	-0.5
STKA				pmax	pmax		
	comp=Z,5.0nm,1.8s						
STKA	Stephens Creek	80.40	193	P	P	17 33 04.8	-0.3
	comp=Z,4.1nm,0.9s,baz=341,slow=13,SNR=5.5						
V50A	Pikevile	80.44	46	P	P	17 33 05.5	-0.1
	baz=323						
WTTA	Wattenberg	80.44	336	*e*PcP	P	17 33 07.4	+1.7
	comp=Z,11nm,0.7s						
RETA	Reutte	80.47	337	*e*PcP	P	17 33 07.4	+1.7
	comp=Z,9.0nm,0.8s						
MOTA	Moosalm	80.51	337	*e*PcP	P	17 33 07.6	+1.6
	comp=Z,16nm,0.9s,SNR=8.0						
SQTA	Sankt Quirin	80.60	337	*e*PcP	P	17 33 07.9	+1.5
	comp=Z,24nm,1.1s,SNR=6.5						
T53A	Wise	80.61	44	P	P	17 33 06.7	+0.1
	baz=324						
R55A	Marlinton	80.66	42	P	P	17 33 06.9	0.0
	baz=325						
ABTA	Abfaltersbach	80.68	336	*e*P	P	17 33 07.8	+1.0
	comp=Z,8.2nm,0.9s						
U52A	Thorn Hill	80.70	45	P	P	17 33 06.9	-0.1
	baz=324						
V51A	Loudon	80.70	46	*e*P	P	17 33 07.0	0.0
	comp=Z,18nm,0.9s						
DIVS	Divibare	80.75	330	*e*P	P	17 33 07.0	-0.3
	comp=Z,18nm,1.0s						
Y48A	Jasper	80.80	49	P	P	17 33 06.8	-0.8
	baz=322						
DAVA	Damuels	80.89	338	*e*PcP	P	17 33 10.0	+2.0
	comp=Z,11nm,0.8s						
VTS	Vitosha	80.89	327	*e*P	P	17 33 07.6	-0.5
	comp=Z,22nm,1.0s						
VTS	Vitosha	80.89	327	⇑*i*P	P	17 33 08.8	+0.7
VTS	Vitosha	80.89	327	*e*P	P	17 33 07.6	-0.5
VTS				pmax	pmax		
	comp=Z,22nm,1.0s						
CPCT	Cooper Cave	80.90	46	*e*P	P	17 33 08.0	-0.1
	comp=Z,24nm,1.1s						
FETA	Feichten	80.91	337	*e*P	P	17 33 09.3	+1.1
	comp=Z,14nm,1.1s						
T54A	Tazewell	81.00	43	P	P	17 33 08.7	0.0
	baz=325						
W51A	Cleveland	81.02	47	P	P	17 33 08.1	-0.6
	baz=324						
PPT	Papeete	81.05	129	LR	LR	18 02 22.0	
	comp=Z,65nm,20.1s,baz=357,slow=31						
PPT2	Papeete2	81.07	129	*e*LR	LR	17 58 25.2	
	comp=Z,162nm,23.2s,baz=321						
TKL	Tuckaleechee C	81.09	46	*e*P	P	17 33 08.6	-0.5
	comp=Z,46nm,1.5s						
TKL	Tuckaleechee C	81.09	46	*e*P	P	17 33 08.6	-0.5
TKL				pmax	pmax		
	comp=Z,46nm,1.5s						
U53A	Fall Branch	81.10	44	P	P	17 33 08.9	-0.2
	baz=324						
X50B	Fort Payne	81.13	48	P	P	17 33 09.0	-0.4
	baz=323						
BRYW	Bryant College	81.15	34	*e*P	P	17 33 08.4	-0.9
	comp=Z,67nm,0.9s						
147A	Livingston	81.21	50	*e*P	P	17 33 09.8	0.0
	comp=Z,55nm,1.0s						
147A	Livingston	81.21	50	P	P	17 33 09.8	0.0
	baz=322						
Y49A	Blount Mountai	81.23	48	P	P	17 33 09.6	-0.3
	baz=323						
ALN	Alexandroupoli	81.30	324	*e*P	P	17 33 10.3	+0.2
	comp=Z,11nm,1.1s						
ALN	Alexandroupoli	81.30	324	*e*P	P	17 33 10.3	+0.2
ALN				pmax	pmax		
	comp=Z,11nm,1.1s						
FUORN	Ofenpass-Fuorn	81.40	337	*e*P	P	17 33 11.6	+0.7
	comp=Z,21nm,1.0s						
BLA	Blacksburg	81.41	42	*e*P	P	17 33 10.4	-0.4
	comp=Z,22nm,1.0s						
BLA	Blacksburg	81.41	42	*e*P	P	17 33 10.4	-0.4
BLA				pmax	pmax		
	comp=Z,23nm,1.0s						
BLA	Blacksburg	81.41	42	P	P	17 33 10.7	-0.1
	baz=325						
X51A	Calhoun	81.44	47	P	P	17 33 10.9	-0.1
	baz=324						
Y50A	Piedmont	81.55	48	P	P	17 33 11.2	-0.4
	baz=323						
Z49A	Columbiana	81.70	49	P	P	17 33 11.8	-0.6
	baz=323						
TUE	Stuetta	81.78	338	*e*P	P	17 33 13.3	+0.5
	comp=Z,28nm,1.0s						
Y51A	Rockmart	81.87	48	P	P	17 33 12.7	-0.6
	baz=323						
Z50A	Ashland	81.96	48	*e*P	P	17 33 13.3	-0.4
	comp=Z,35nm,0.9s						
Z50A	Ashland	81.96	48	P	P	17 33 13.4	-0.4
	baz=323						
149A	Jones	82.04	49	P	P	17 33 14.0	-0.1
	baz=323						
EZN	Ezine	82.11	323	⇓*i*P	P	17 33 13.6	-0.7
X53A	Estanollee	82.25	46	P	P	17 33 14.6	-0.6
	baz=324						
Z51A	Franklin	82.28	48	P	P	17 33 14.9	-0.6
	baz=323						
MANT	Manisa	82.32	321	*e*P	P	17 33 15.4	-0.4
	comp=Z,68nm,1.0s						
W54A	Cherokee Point	82.32	45	P	P	17 33 15.4	-0.2
	baz=325						
249A	Camden	82.36	50	P	P	17 33 16.4	+0.5
	baz=323						
Y52A	Lilburn	82.40	47	P	P	17 33 16.0	-0.1
	baz=324						
150A	Eclectic	82.42	49	P	P	17 33 15.7	-0.4
	baz=323						
PDG	Podgorica	82.47	329	⇑*i*P	P	17 33 15.1	-1.1
Y53A	Monroe	82.64	47	P	P	17 33 17.4	+0.1
	baz=324						
X54A	Belton	82.67	45	P	P	17 33 17.6	+0.2
	baz=325						
Z52A	Williamson	82.76	48	P	P	17 33 17.9	0.0
	baz=324						
HODGE	Hodges	82.98	45	*e*P	P	17 33 19.2	+0.2
	comp=Z,28nm,1.1s						
GOGA	Godfrey	83.06	47	P	P	17 33 19.3	-0.1
	baz=324						
Y54A	Tignall	83.07	46	P	P	17 33 19.9	+0.4
	baz=324						
X55A	Gracelyn & Ava	83.08	45	P	P	17 33 19.7	+0.1
	baz=325						
Z53A	Monticello	83.11	47	P	P	17 33 19.5	-0.3
	baz=324						
CSS	Mathiatis	83.12	316	*e*P	P	17 33 20.1	+0.4
	comp=Z,89nm,1.8s						
LPL	La Plagne	83.32	339	*e*P	P	17 33 22.3	+1.4
LPL				pmax	pmax		
	comp=Z,33nm,1.3s						
X56A	White Oak	83.35	44	P	P	17 33 20.9	0.0
	baz=325						
Y55A	Saluda	83.41	45	P	P	17 33 21.4	+0.1
	baz=325						
Z54A	Sparta	83.50	46	P	P	17 33 22.0	+0.3
	baz=324						
154A	Montrose	83.88	47	P	P	17 33 24.2	+0.6
	baz=324						
352A	Blakely	83.88	49	*e*P	P	17 33 23.0	-0.7
	comp=Z,39nm,0.8s						
352A	Blakely	83.88	49	P	P	17 33 24.0	+0.4
	baz=324						
SSB	Saint Sauveur	84.06	340	*e*P	P	17 33 24.6	+0.1
	comp=Z,17nm,1.0s						
SSB	Saint Sauveur	84.06	340	*e*P	P	17 33 24.6	+0.1
SSB				pmax	pmax		
	comp=Z,17nm,1.0s						
254A	Abbeville	84.33	47	P	P	17 33 26.4	+0.4
	baz=324						
353A	Camilla	84.35	48	P	P	17 33 26.5	+0.5
	baz=324						
Z57A	Bowman	84.48	45	P	P	17 33 26.8	+0.1
	baz=326						
TIGA	Tifton	84.59	48	*e*P	P	17 33 27.0	-0.3
	comp=Z,59nm,1.0s						
156A	Sylvania	84.63	46	P	P	17 33 28.2	+0.7
	baz=325						
MORW	Morawa	84.64	215	*e*P	P	17 33 27.3	0.0
	comp=Z,22nm,1.0s						
CAF	Calviac	84.93	342	*e*P	P	17 33 30.2	+1.3
CAF				pmax	pmax		
	comp=Z,26nm,1.4s						
TBI	Tubuai	85.91	132	*e*LR	LR	18 00 43.0	
	comp=Z,385nm,29.0s,baz=324						
656A	Willston	86.80	48	*e*P	P	17 33 39.2	+0.9
	comp=Z,103nm,1.0s						
656A	Willston	86.80	48	P	P	17 33 39.0	+0.8
	baz=325						
NWAO	Narrogin (SRO)	87.67	212	*e*P	P	17 33 41.9	-0.2
	comp=Z,29nm,0.7s						
NWAO	Narrogin (SRO)	87.67	212	*e*P	P	17 33 41.9	-0.2
NWAO				pmax	pmax		
	comp=Z,29nm,0.7s						
ES19	SONSECA Array	91.13	345	*e*P	P	17 33 58.4	-0.3
ESDC	Sonseca Array	91.16	345	P	P	17 33 58.7	-0.1
	comp=Z,2.9nm,0.7s,baz=8.8,slow=3.8,SNR=14						
ESDC				LR	LR	18 20 12.6	
	comp=Z,68nm,20.3s,baz=285,slow=39						
KEST	Kesra	91.75	334	*e*P	P	17 33 59.8	-1.8
	comp=Z,51nm,1.6s						
KEST	Kesra	91.75	334	P	P	17 34 01.9	+0.3
	comp=Z,6.9nm,0.9s,baz=23,slow=7.7,SNR=4.5						
KEST				LR	LR	18 19 27.8	
	comp=Z,139nm,20.0s,baz=312,slow=38						
TOA1	Torodi Ar. Sit	115.24	333	*e*PKiKP	PKiKP	17 39 34.9	-0.7
TORD	Torodi Ar. Bea	115.25	333	PKP	PKiKP	17 39 34.9	-0.7
	comp=Z,0.6nm,0.6s,baz=19,slow=2.0,SNR=5.7						
TORD				PP	PP	17 40 31.0	-4.1
	comp=Z,1.5nm,0.9s,baz=5.4,slow=9.2,SNR=5.2						
DBIC	Dimbokro	123.28	337	PKP	PKPdf	17 39 50.8	-0.3
	comp=Z,4.0nm,0.6s,baz=343,slow=2.2,SNR=8.0						
DBIC				PP	PP	17 41 30.3	-0.1
	comp=Z,3.9nm,0.9s,baz=342,slow=11,SNR=3.9						
TIC	Toumodi	123.35	338	*e*PKIKP	PKPdf	17 39 50.9	-0.4
KIC	Kosan Boka	123.55	337	*e*PKIKP	PKPdf	17 39 51.4	-0.2
	comp=Z,21nm,1.0s						
LIC	Lamto	123.75	338	*e*PKIKP	PKPdf	17 39 51.7	-0.3
	comp=Z,76nm,2.0s						
LSZ	Lusaka	126.52	289	*e*PKPdf	PKPdf	17 39 57.4	+0.1
LSZ	Lusaka	126.52	289	*e*PKIKP	PKPdf	17 39 57.4	+0.1
LPAZ	La Paz	131.92	65	PKP	PKPdf	17 40 08.4	+0.2
	comp=Z,2.9nm,0.8s,baz=315,slow=4.0,SNR=7.2						
QSPA	South Pole Qui	137.53	180	*e*PKPdf	PKPdf	17 40 16.8	+0.4
BOSA	Boshof	137.84	279	PKP	PKPdf	17 40 16.4	-1.9
	comp=Z,2.2nm,0.7s,baz=70,slow=3.7,SNR=3.9						
BDFB	Brasilia	142.16	40	PKhKP	PKPpre	17 40 21.7	
	comp=Z,5.9nm,0.7s,baz=285,slow=3.0,SNR=6.9						
GO06	Curarrehue	144.96	94	*e*PKPdf	PKPab	17 40 29.4	-0.7
CPUP	Villa Florida	146.05	63	PKPbc	PKPbc	17 40 33.5	-0.1
	comp=Z,9.0nm,0.8s,baz=328,slow=2.4,SNR=15						
PLCA	Paso Flores	146.13	96	PKPbc	PKPab	17 40 34.1	-0.2
	comp=Z,20nm,0.7s,baz=294,slow=3.2,SNR=62						
GO09	Cerro Castillo	148.69	115	*e*PKPbc	PKPbc	17 40 40.6	+0.3
TRQA	Tornquist	150.58	85	*e*PKPbc	PKPbc	17 40 45.1	-0.3
TRQA	Tornquist	150.58	85	*e*PKIKP	PKPbc	17 40 45.1	-0.3
NVL	N'lazarevskaya	151.48	204	*e*PKIKP	PKPdf	17 40 43.2	+3.0
NVL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SNAA	Sanae	154.15	195	*e*PKPab	PKPab	17 41 05.8	-0.5
SNAA	Sanae	154.15	195	*e*PKP2	PKPab	17 41 05.8	-0.5

MAN 21 17:21:18.8, 18°.35N×120°.96E, h10^{km}, mb4.2, ML3.0, MS2.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APYP	Conner	0.56	151	*e*P	Pb	17 21 30.3	-0.4
APYP				*e*S	Sn	17 21 41.7	-0.4
APYP	Conner	0.56	151	*e*P	Pb	17 21 30.3	-0.4
APYP				*e*S	Sn	17 21 41.7	-0.5
SGCP	Mt. Cagua	1.04	96	*e*P	Pg	17 21 38.1	-0.8
SGCP				*e*S	Sn	17 21 54.3	+0.2
SGCP	Mt. Cagua	1.04	96	*e*P	Pg	17 21 38.6	-0.3
SGCP				*e*S	Sn	17 21 55.9	+1.8
CVP	Callao Caves	1.05	128	⇑*i*P	Pg	17 21 38.1	-0.8
CVP				*i* S	Sn	17 21 54.8	+0.6

MEX **21** *17:27:19.6±1.0, 14°.21N×93°.25W, h16^{km}±176^{km}, MD4.7*

ISCJB **21** *17:27:20.4±0.3, 14°.36N±0°.04×93°.11W±0°.04, h51^{km}, mb4.6/51, MS3.9/16, Error ellipse: s-maj=6.9km s-min=3.5km az=43.2*

IDC **21** *17:27:21.0±2.0, 14°.44N×93°.05W, h42^{km}±16^{km}, mb4.0/14, mb1 4.3/18, mb1mx4.0/40, mbtmp4.3/18, ML4.0/4, MS3.9/18, Ms1 3.9/18, ms1mx3.8/38, Error ellipse: s-maj=30.1km s-min=9.4km az=44.0*

NEIC **21** *17:27:20.9±1.0, 14°.24N×93°.10W, h44^{km}±8^{km}, mb4.6/59, MD4.7(MEX), Error ellipse: s-maj=10.6km s-min=5.5km az=225.0*

GCMT **21** *17:27:26.9±0.7, 14°.66N±0°.03×93°.41W±0°.04, h20^{km}±1^{km}, MW5.0/69, Moment Tensor Solution. s20,c21; s69,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.62±.22; $M_{\theta\theta}$-2.33±.15; $M_{\phi\phi}$-0.29±.13; $M_{r\theta}$-0.35±.28; $M_{\theta\phi}$1.17±.09; $M_{\phi r}$-2.31±.32; Best double couple: $M_0$3.49000×10^{16} NP1:ϕ_s145.00000°,δ60.00000°,λ124.00000°. NP2: ϕ_s271.00000°,δ44.00000°,λ45.00000°. Principal axes: T 4.0170, Plg59.0000°, Azm106.0000°; N -1.0560, Plg29.0000°, Azm306.0000°; P -2.9640, Plg9.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 17:27:21.8±0.5, 14°.35N±0°.06×93°.16W±0°.07, h51^{km}, n157, σ1^s.65/142, mb4.6/51, MS3.9/16, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.02	57	*e*P	Pn	17 27 37.7	-2.1
THIG				*e*S	Sn	17 27 51.6	-1.6
PCIG		1.34	357	*e*P	Pn	17 27 41.5	-2.7
PCIG				*i* S	Sn	17 27 53.7	-7.3
CCIG	Comitan	2.15	27	*e*Pn	Pn	17 27 55.8	+0.3
CCIG	Comitan	2.15	27	*e*P	Pn	17 27 55.8	+0.3
CCIG				*e*S	Sn	17 28 24.2	+3.1
FUG	Fuego 3	2.25	87	*e*P	Pn	17 27 55.7	-1.0
IXG	Ixpaco	2.63	94	*e*P	Pn	17 28 00.1	-1.8
APG	El Apazote	2.69	76	P	Pn	17 28 01.5	-1.2
	21nm,0.3s,baz=286,slow=7.7,SNR=98						
APG				LR	LR	17 28 49.0	
	comp=Z,881nm,19.6s,baz=248,slow=34						
NBG	Las Nubes	2.73	85	*e*P	Pn	17 28 03.1	-0.3
HUIG	Huatulco	3.18	297	*e*Pn	Pn	17 28 04.3	-5.1
CMIG	Matias Romero	3.19	329	P	Pn	17 28 07.3	-2.2
	27nm,0.3s,baz=136,slow=9.6,SNR=107						
CMIG				S	Sn	17 28 45.0	-1.3
	30nm,0.3s,baz=137,slow=19,SNR=2.9						
MRL	Marmol	3.43	78	*e*P	Pn	17 28 16.1	+3.2
TGUH	Tegucigalpa,Un	5.71	92	*e*Pn	Pn	17 28 39.5	-4.6
LVIG	Laguna Verde	6.18	330	*e*Pn	Pn	17 28 51.7	+1.2
ESTN	Estel	6.71	100	*e*Pn	Pn	17 28 54.8	-3.1
MYIG	Mrida	7.33	26	*e*Pn	Pn	17 29 07.1	+0.8
TEIG	Tepich	7.47	38	*e*Pn	Pn	17 29 07.7	-0.5
JTS	JuntasAbangare	8.97	116	*e*Pn	Pn	17 29 27.7	-1.2
JTS	JuntasAbangare	8.97	116	P	Pn	17 29 28.2	-0.7
	1.6nm,0.3s,baz=11,slow=21,SNR=4.8						
435B	Jarrell	16.85	347	*e*Pn	P	17 31 15.3	-0.4
	17nm,0.8s						
JCT	Junction City	17.18	340	*e*Pn	Pn	17 31 18.1	-0.2
	12nm,0.9s						
SOLC	Bahia Solano	17.46	116	*e*P	P	17 31 22.4	-0.1
SOLC	Bahia Solano	17.46	116	*e*P	P	17 31 22.4	-0.1
H06E1	SOCORRO T-PHAS	17.59	287	T	T	17 49 16.6	
	SNR=8.9						
TXAR	Lajitas Array	17.80	329	P	P	17 31 26.7	+0.5
	0.1nm,0.3s,baz=148,slow=12,SNR=20						
TXAR				LR	LR	17 38 30.8	
	comp=Z,236nm,18.9s,baz=0.0,slow=38						
TX31	Lajitas Ar. Si	17.80	329	*e*Pn	Pn	17 31 25.9	-0.1
555A	McAlpin	18.29	29	*e*P	P	17 31 29.9	-1.6
	36nm,0.8s						
352A	Blakely	18.64	22	*e*P	Pn	17 31 37.0	+0.9
	173nm,1.6s						
147A	Livingston	18.77	13	*e*P	Pn	17 31 39.3	+1.6
Z41A	Richland Creek	18.82	1	*e*P	Pn	17 31 39.0	+0.7
	38nm,1.2s						
LPIG	La Paz	18.86	304	LR	LR	17 39 03.8	
	comp=Z,277nm,18.2s,baz=65,slow=37						
ABTX	Abilene, Hawle	19.13	343	*e*P	Pn	17 31 42.0	0.0
	63nm,1.6s						
TIGA	Tifton	19.14	26	*e*P	P	17 31 41.0	+0.3
	26nm,0.9s						
152A	Waverly Hall	19.79	21	*e*P	P	17 31 48.2	+0.3
	19nm,1.1s						
Z50A	Ashland	19.93	18	*e*P	P	17 31 49.7	+0.2
	9.7nm,0.8s						
POPC	Popayan, Colom	20.06	124	*e*P	P	17 31 47.0	-4.3
POPC	Popayan, Colom	20.06	124	*e*P	P	17 31 47.0	-4.3
MIAR	Mount Ida	20.11	359	*e*P	P	17 31 51.8	+0.4
	23nm,1.1s						
CMBC	Cumbal	20.18	130	*e*P	Pn	17 31 54.3	-0.8
CMBC	Cumbal	20.18	130	*e*P	Pn	17 31 54.3	-0.8
UALR	University of	20.35	2	*e*P	P	17 31 55.0	+1.0
	14nm,0.8s						
GCUF	Volcan Galeras	20.36	128	*e*P	P	17 31 46.3	-8.4
GCUF	Volcan Galeras	20.36	128	*e*P	P	17 31 46.3	-8.4
SOTA	Rioblanco	20.36	125	*e*P	P	17 31 54.3	-0.5
SOTA	Rioblanco	20.36	125	*e*P	P	17 31 54.3	-0.5
PCON	Cinco Dias	20.41	124	*e*P	Pn	17 31 57.0	-1.0
PCON	Cinco Dias	20.41	124	*e*P	Pn	17 31 57.0	-1.0
CRUC	La Cruz	20.44	127	*e*P	Pn	17 31 57.0	-1.1
CRUC	La Cruz	20.44	127	*e*P	Pn	17 31 57.0	-1.1
MARP	Paez Belalcaza	20.47	122	*e*P	P	17 31 55.6	-0.1
MARP	Paez Belalcaza	20.47	122	*e*P	P	17 31 55.6	-0.1
GDL2	Guadalupe Moun	20.50	332	*e*P	P	17 31 55.5	-0.3
MNTX	Cornudas Mount	20.58	329	*e*P	Pn	17 31 58.9	-0.2
	10nm,0.8s						
W41B	Gary Mavity, V	20.75	2	*e*P	P	17 31 59.4	+1.1
	25nm,0.9s						
X48A	Hartselle	20.76	14	*e*P	Pn	17 32 00.8	-0.4
	13nm,1.1s						
W39A	Magazine	20.76	359	*e*P	P	17 31 59.7	+1.3
	14nm,0.9s						
ROSC	El Rosal	20.82	115	*e*P	P	17 32 00.7	+1.0
	17nm,1.0s						
ROSC	El Rosal	20.82	115	*e*P	P	17 31 59.0	-0.7
ROSC	El Rosal	20.82	115	*e*P	P	17 31 59.0	-0.7
ROSC	El Rosal	20.82	115	P	P	17 31 59.8	+0.1
	5.4nm,0.5s,baz=2.3,slow=9.5,SNR=8.8						
ROSC				LR	LR	17 41 18.1	
	comp=Z,161nm,18.4s,baz=293,slow=40						
GOGA	Godfrey	20.92	23	*e*P	P	17 31 59.6	-0.5
	22nm,1.2s						
WMOK	Wichita Mounta	20.92	347	*e*P	P	17 32 00.8	+0.6
	27nm,1.1s						
BARC	Barichara	21.09	109	*e*P	P	17 32 02.3	-0.1
BARC	Barichara	21.09	109	*e*P	P	17 32 02.3	-0.1
Y52A	Lilburn	21.10	21	*e*P	P	17 32 02.1	0.0
	21nm,0.9s						
MSTX	Muleshoe	21.39	338	*e*P	P	17 32 05.7	+0.4
	30nm,1.0s						
CHIC	Chingaza	21.44	115	*e*P	P	17 32 06.3	0.0
CHIC	Chingaza	21.44	115	*e*P	P	17 32 06.3	0.0
FLOC	Florencia	21.45	125	*e*P	P	17 32 04.9	-1.1

FLOC	**Florencia**	**21.45**	**125**	*e*P	**P**	**17 32 04.9**	**-1.1**
RUSC	**La Rusia**	**21.46**	**111**	*e*P	**P**	**17 32 05.6**	**-1.0**
RUSC	**La Rusia**	**21.46**	**111**	*e*P	**P**	**17 32 05.6**	**-1.0**
TUL1	**Leonard**	**21.60**	**354**	*e*P	**P**	**17 32 08.1**	**+0.7**
	44nm,1.4s						
VILC	**Villavicencio,**	**21.72**	**116**	*e*P	**P**	**17 32 07.6**	**-1.4**
VILC	**Villavicencio,**	**21.72**	**116**	*e*P	**P**	**17 32 07.6**	**-1.4**
AMTX	**Amarillo**	**21.84**	**341**	*e*P	**P**	**17 32 09.8**	**-0.3**
	35nm,0.6s						
HHAR	**Hobbs**	**21.85**	**358**	*e*P	**P**	**17 32 09.9**	**-0.2**
	19nm,0.9s						
WVT	**Waverly**	**22.20**	**11**	*e*P	**P**	**17 32 16.1**	**+2.2**
	15nm,0.9s						
TAMC	**Tame, Arauca**	**22.42**	**108**	*e*P	**P**	**17 32 17.6**	**+1.0**
TAMC	**Tame, Arauca**	**22.42**	**108**	*e*P	**P**	**17 32 17.6**	**+1.0**
T42A	**Van Buren**	**22.66**	**4**	*e*P	**P**	**17 32 17.8**	**-1.0**
	15nm,0.9s						
SDV	**Santo Domingo**	**22.71**	**101**	*e*P	**P**	**17 32 18.1**	**-1.7**
	13nm,0.9s						
SDV	**Santo Domingo**	**22.71**	**101**	P	**P**	**17 32 17.9**	**-1.9**
	12nm,0.9s,baz=279,slow=4.7,SNR=12						
SDV				LR	LR	17 43 01.4	
	comp=Z,325nm,19.5s,baz=263,slow=42						
PAULI	**Pauline**	**22.80**	**25**	*e*P	**P**	**17 32 22.9**	**+2.6**
	22nm,1.2s						
TKL	**Tuckaleechee C**	**22.83**	**20**	*e*P	**P**	**17 32 23.5**	**+3.0**
	46nm,1.5s						
TKL	**Tuckaleechee C**	**22.83**	**20**	LR	LR	17 42 59.7	
	comp=Z,558nm,19.2s,baz=204,slow=41						
PTLC	**Puerto Leguiza**	**22.99**	**126**	*e*P	**P**	**17 32 24.9**	**+2.5**
PTLC	**Puerto Leguiza**	**22.99**	**126**	*e*P	**P**	**17 32 24.9**	**+2.5**
GUVC	**San Jose del G**	**23.42**	**118**	*e*P	**P**	**17 32 29.5**	**+2.9**
GUVC	**San Jose del G**	**23.42**	**118**	*e*P	**P**	**17 32 29.5**	**+2.9**
T49A	**Edmonton**	**23.66**	**15**	*e*P	**P**	**17 32 27.1**	**-1.5**
	68nm,1.7s						
FVM	**French Village**	**23.66**	**5**	*e*P	**P**	**17 32 31.0**	**+2.4**
	28nm,1.3s						
CCM	**Cathedral Cave**	**23.67**	**4**	*e*P	**P**	**17 32 26.4**	**-2.3**
	34nm,1.3s						
TZTN	**Tazewell**	**23.71**	**20**	*e*P	**P**	**17 32 31.0**	**+1.9**
	13nm,0.9s						
ANMO	**Albuquerque**	**23.75**	**332**	LR	LR	17 43 04.3	
	comp=Z,188nm,20.4s,baz=144,slow=40						
TUC	**Tucson**	**24.05**	**321**	*e*P	**P**	**17 32 34.6**	**+2.2**
	13nm,1.0s						
WCI	**Wyandotte Cave**	**24.55**	**13**	*e*P	**P**	**17 32 37.3**	**+0.5**
	46nm,0.8s						
OLIL	**Olney**	**24.69**	**9**	*e*P	**P**	**17 32 39.4**	**+1.4**
	26nm,0.9s						
S51A	**Beattyville**	**24.70**	**18**	*e*P	**P**	**17 32 40.8**	**+2.6**
	19nm,0.9s						
SDCO	**Great Sand Dun**	**25.75**	**337**	*e*P	**P**	**17 32 49.1**	**+1.0**
	14nm,1.3s						
ATAH	**Atahualpa**	**25.89**	**145**	LR	LR	17 40 58.4	
	comp=Z,170nm,18.7s,baz=302,slow=32						
PFO	**Pinyon Flats O**	**28.53**	**316**	LR	LR	17 44 28.0	
	comp=Z,296nm,20.9s,baz=126,slow=36						
PDAR	**Pinedale Array**	**31.64**	**337**	P	**P**	**17 33 40.2**	**-0.2**
	1.4nm,1.0s,baz=133,slow=4.0,SNR=3.1						
PDAR				PcP	**PcP**	**17 36 31.7**	**+0.2**
	0.6nm,0.7s,baz=172,slow=2.7,SNR=2.2						
PDAR				LR	LR	17 48 29.7	
	comp=Z,137nm,18.5s,baz=153,slow=40						
ELK	**Elko**	**32.59**	**328**	*e*P	**P**	**17 33 50.2**	**+1.5**
	4.4nm,1.0s						
REDW	**Red Top Meadow**	**32.65**	**336**	*e*P	**P**	**17 33 50.5**	**+1.2**
	23nm,1.4s						
NV01	**Mina Array Sit**	**32.70**	**322**	*e*P	**P**	**17 33 50.7**	**+1.0**
NV01				*e*PcP	**PcP**	**17 36 35.2**	**+0.7**
NVAR	**Mina Array Bea**	**32.70**	**322**	P	**P**	**17 33 49.5**	**-0.2**
	4.7nm,0.8s,baz=134,slow=9.1,SNR=11						
NVAR				PcP	**PcP**	**17 36 35.2**	**+0.7**
	0.4nm,0.5s,baz=145,slow=3.3,SNR=3.7						
NVAR				LR	LR	17 48 49.8	
	comp=Z,451nm,21.7s,baz=153,slow=40						
SNOW	**Snow King Moun**	**32.70**	**336**	*e*P	**P**	**17 33 51.2**	**+1.5**
	16nm,0.9s						
LOHW	**Long Hollow**	**32.77**	**336**	*e*P	**P**	**17 33 51.3**	**+1.1**
	38nm,1.9s						
MOOW	**Moose Ponds**	**32.94**	**336**	*e*P	**P**	**17 33 53.3**	**+1.6**
	14nm,1.8s						
FXWY	**Fox Creek**	**32.95**	**336**	*e*P	**P**	**17 33 53.3**	**+1.5**
	3.1nm,0.9s						
MCMT	**McKenzie Canyo**	**34.67**	**335**	*e*P	**P**	**17 34 08.2**	**+1.4**
BEKR	**Beckworth**	**34.84**	**322**	*e*P	**P**	**17 34 09.4**	**+1.1**
	3.9nm,0.8s						
DLMT	**Dillon**	**35.01**	**336**	*e*P	**P**	**17 34 11.8**	**+2.2**
	9.9nm,1.1s						
ULM	**Lac du Bonnet**	**35.87**	**357**	P	**P**	**17 34 15.2**	**-1.4**
	4.4nm,0.8s,baz=180,slow=9.9,SNR=5.6						
ULM				LR	LR	17 52 07.0	
	comp=Z,222nm,18.1s,baz=146,slow=42						
PTGA	**Pitinga**	**36.11**	**112**	*e*P	**P**	**17 34 19.5**	**+0.3**
	10nm,0.8s						
PTGA	**Pitinga**	**36.11**	**112**	P	**P**	**17 34 18.8**	**-0.4**
	6.5nm,0.8s,baz=303,slow=9.6,SNR=10						
J08A	**Circle Bar Ran**	**36.15**	**328**	*e*P	**P**	**17 34 20.4**	**+1.1**
	10.0nm,1.1s						
EGMT	**Eagleton**	**36.28**	**341**	*e*P	**P**	**17 34 22.7**	**+2.3**
	19nm,1.4s						
YBH	**Yreka Blue Hor**	**37.40**	**323**	P	**P**	**17 34 30.3**	**+0.3**
	0.9nm,0.5s,baz=72,slow=6.4,SNR=2.8						
F10A	**Beach Ranch, E**	**37.47**	**332**	*e*P	**P**	**17 34 31.8**	**+1.3**
	9.3nm,0.9s						
FCC	**Fort Churchill**	**44.34**	**359**	*e*P	**P**	**17 35 26.9**	**+0.2**
	6.2nm,0.8s						
SCHQ	**Schefferville**	**45.29**	**21**	LR	LR	17 56 28.9	
	comp=Z,612nm,18.3s,baz=267,slow=39						
YKA	**Yellowknife Ar**	**50.43**	**347**	P	**P**	**17 36 14.3**	**+0.3**
	10.0nm,0.8s,baz=151,slow=7.4,SNR=87						
YKA				LR	LR	18 02 47.1	
	comp=Z,10nm,18.9s,baz=191,slow=42						
YKW3	**Yellowknife Ar**	**50.49**	**347**	*e*P	**P**	**17 36 14.7**	**+0.2**
	14nm,0.9s						
CPUP	**Villa Florida**	**53.38**	**139**	P	**P**	**17 36 37.1**	**+0.7**
	2.7nm,0.9s,baz=311,slow=14,SNR=2.9						
BDFB	**Brasilia**	**53.66**	**122**	LR	LR	18 01 40.6	
	comp=Z,102nm,19.3s,baz=286,slow=38						
PLCA	**Paso Flores**	**58.68**	**160**	P	**P**	**17 37 13.2**	**-0.9**
	3.7nm,1.0s,baz=355,slow=11,SNR=6.4						
PLCA				LR	LR	17 56 21.2	
	comp=Z,54nm,19.4s,baz=29,slow=30						
INK	**Inuvik**	**59.79**	**344**	*e*P	**P**	**17 37 21.8**	**+0.5**
	5.4nm,0.8s						
RES	**Resolute Bay**	**60.34**	**359**	*e*P	**P**	**17 37 24.6**	**-0.4**
	5.7nm,0.8s						
IL1	**Eielson Array**	**62.08**	**337**	*e*P	**P**	**17 37 37.9**	**+0.9**
ILAR	**Eielson Array**	**62.08**	**337**	P	**P**	**17 37 37.0**	**+0.1**
	2.3nm,0.9s,baz=137,slow=4.4,SNR=16						
ILAR				LR	LR	18 06 38.2	
	comp=Z,154nm,18.2s,baz=152,slow=38						
ILB	**Eielson Array**	**62.08**	**337**	*e*P	**P**	**17 37 38.0**	**+1.1**
	8.7nm,1.2s						
RND	**Reindeer**	**62.24**	**335**	*e*P	**P**	**17 37 39.5**	**+1.4**
	16nm,0.7s						
TRF	**Thorofare Moun**	**62.84**	**335**	*e*P	**P**	**17 37 43.2**	**+0.9**
	18nm,0.8s						
MLY	**Manley**	**63.67**	**336**	*e*P	**P**	**17 37 47.3**	**-0.3**
	32nm,1.9s						
TOLK	**Toolik Lake Re**	**64.81**	**340**	*e*P	**P**	**17 37 56.3**	**+1.3**
	10.0nm,0.6s						
ESDC	**Sonseca Array**	**80.38**	**52**	P	**P**	**17 39 26.5**	**-1.6**
	1.3nm,0.7s,baz=279,slow=5.7,SNR=7.2						
NB200	**NORSAR Array S**	**84.37**	**28**	*e*P	**P**	**17 39 47.0**	**-1.5**
NOA	**NORSAR Array B**	**84.37**	**28**	P	**P**	**17 39 47.0**	**-1.5**
	0.5nm,0.7s,baz=277,slow=7.5,SNR=3.2						
NOA				LR	LR	18 15 35.6	
	comp=Z,138nm,21.7s,baz=290,slow=34						
ARA0	**ARCESS Array S**	**86.15**	**18**	*e*P	**P**	**17 39 57.0**	**-0.1**
ARCES	**ARCESS Array B**	**86.15**	**18**	P	**P**	**17 39 57.0**	**-0.1**
	3.9nm,1.0s,baz=294,slow=3.9,SNR=5.4						
FIA0	**FINESS Array S**	**90.65**	**25**	*e*P	**P**	**17 40 17.2**	**-1.4**
FINES	**FINESS Array B**	**90.65**	**25**	P	**P**	**17 40 17.2**	**-1.4**
	1.0nm,0.7s,baz=328,slow=2.9,SNR=4.3						
VYHS	**Vyhne**	**93.30**	**38**	*e*P	**P**	**17 40 33.9**	**+2.7**
NRIK	**Noril'sk**	**96.53**	**360**	LR	LR	18 29 19.4	
	comp=Z,154nm,18.4s,baz=14,slow=39						
VNA3	**Neumayer Olymp**	**101.39**	**161**	P	**Pdif**	**17 41 11.9**	**+4.7**
MK32	**Makanchi Array**	**119.00**	**4**	*e*PKPdf	**PKiKP**	**17 46 05.1**	**0.0**
MKAR	**Makanchi Array**	**119.00**	**4**	PKP	**PKiKP**	**17 46 05.1**	**0.0**
	0.2nm,0.6s,baz=29,slow=3.3,SNR=3.0						
HHC	**Hu-ho-hao-te**	**120.49**	**338**	*e*P	**PKPdf**	**17 46 06.0**	**-2.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,5.9s						
WR1	**Warramunga Arr**	**134.39**	**256**	*e*PKPdf	PKPpre	17 46 31.4	
WRA	**Warramunga Arr**	**134.39**	**256**	PKhKP	PKPpre	17 46 31.4	
	comp=Z,0.6nm,0.7s,baz=86,slow=2.2,SNR=3.3						
ASAR	**Alice Springs**	**134.72**	**251**	PKP	**PKPdf**	**17 46 34.9**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=97,slow=2.5,SNR=4.2						
CHTO	**Chiang Mai**	**144.95**	**340**	P	**PKPdf**	**17 46 56.0**	**+1.7**
	comp=Z,26nm,2.0s						
CMMT	**Chiang Mai**	**144.95**	**340**	P	**PKPdf**	**17 46 55.3**	**+1.0**
	comp=Z,5.9nm,2.0s						
CMAR	**Chiang Mai Arr**	**145.28**	**340**	PKPbc	**PKPdf**	**17 46 54.8**	**-0.1**
	comp=Z,4.0nm,0.8s,baz=339,slow=3.7,SNR=31						
HYB	**Hyderabad**	**147.39**	**15**	*i* PKP	**PKPab**	**17 47 02.0**	**-0.8**
UTHA	**Uthaitani**	**147.77**	**337**	P	**PKiKP**	**17 47 03.4**	**-0.5**
	comp=Z,4.6nm,0.8s						

IDC 21 17:33:43.3±10.0**, 15°.88S**×**173°.73W, h0**^{km}**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.5**/34**, mbtmp3.6**/2**, Error ellipse: s-maj=503.7km s-min=60.6km az=141.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.42**	**257**	P	P	17 42 34.8	-0.7
	0.3nm,0.8s,baz=90,slow=7.5,SNR=4.8						
ASAR	**Alice Springs**	**49.66**	**252**	P	P	17 42 37.5	+0.3
	1.7nm,0.8s,baz=88,slow=8.1,SNR=20						
BRTR	**Keskin Array B**	**146.32**	**320**	PKPbc	PKPdf	17 53 25.7	+0.3
	0.6nm,0.8s,baz=62,slow=3.4,SNR=3.0						

ISCJB ***21*** *17:49:01.6±0.3, 35°.71N±0°.01×25°.47E±0°.02, h6*^{km}*±2*^{km}*, mb3.6/6, MS4.0/1, Error ellipse: s-maj=2.5km s-min=2.2km az=22.0*

ISK ***21*** *17:49:01.4, 35°.69N×25°.45E, h11*^{km}*, ML3.6/20*

THE ***21*** *17:49:01.7, 35°.70N×25°.46E, h3*^{km}*±1*^{km}*, ML3.7/11, Error ellipse: s-maj=1.2km s-min=0.3km az=159.0*

ATH ***21*** *17:49:01.5, 35°.71N×25°.47E, h22*^{km}*, ML3.5/25, Error ellipse: s-maj=0.9km s-min=0.6km az=135.0*

IDC ***21*** *17:49:02.8±1.6, 35°.51N×25°.48E, h28*^{km}*±16*^{km}*, mb3.7/6, mb1 3.7/11, mb1mx3.4/49, mbtmp3.7/11, ML3.5/5, MS3.9/1, Ms1 3.9/1, ms1mx2.6/43, Error ellipse: s-maj=23.3km s-min=16.7km az=171.0*

ISC 21 17:49:00.9±1.0**, 35°.69N**±0°.02×**25°.54E**±0°.02**, h12**^{km}±7^{km}**, n115, σ1**^{s}**.60**/154**, mb3.8**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.43**	**172**	P	**Pb**	**17 49 10.8**	**+0.3**
NPS				S	**Sb**	**17 49 17.7**	**+0.8**
NPS				AML	AML	17 49 19.1	
	comp=N,12978µm,0.5s						
NPS				AML	AML	17 49 19.4	
	comp=E,17956µm,0.2s						
NPS	**Neapolis**	**0.43**	**172**	P	**Pb**	**17 49 10.7**	**+0.3**
NPS				S	**Sb**	**17 49 17.9**	**+1.0**
LAST	**Lasithi**	**0.53**	**185**	P	**Pb**	**17 49 12.5**	**+0.3**
LAST				S	**Sb**	**17 49 20.4**	**+0.6**
LAST				AML	AML	17 49 21.9	
	comp=N,10932µm,0.4s						
LAST				AML	AML	17 49 23.6	
	comp=E,6613µm,0.4s						
LAST	**Lasithi**	**0.53**	**185**	P	**Pb**	**17 49 12.5**	**+0.3**
LAST				S	**Sb**	**17 49 20.5**	**+0.7**
IACM	**Heraklion**	**0.54**	**225**	P	**Pg**	**17 49 11.7**	**+0.3**
IACM				S	**Sg**	**17 49 19.7**	**+1.1**
IACM	**Heraklion**	**0.54**	**225**	P	**Pg**	**17 49 11.4**	**0.0**
IACM				S	**Sg**	**17 49 19.1**	**+0.5**
KSTL	**Kastelli Herak**	**0.54**	**225**	P	**Pg**	**17 49 11.4**	**-0.1**
KSTL				S	**Sg**	**17 49 19.4**	**+0.8**
IDI	**Anoyia**	**0.66**	**233**	PG	**Pg**	**17 49 13.5**	**-0.3**
IDI				SG	**Sg**	**17 49 22.4**	**-0.1**
IDI	**Anoyia**	**0.66**	**233**	Pg	**Pg**	**17 49 13.3**	**-0.5**
	comp=E,100nm,0.3s,baz=38,slow=6.3,SNR=404						
IDI				Lg	Lg	17 49 21.8	
	comp=E,338nm,0.3s,baz=156,slow=20,SNR=61						
IDI				LR	LR	17 49 34.0	
	comp=E,96nm,20.3s,baz=97,slow=59						
STIA	**Sitia Lasithi**	**0.66**	**137**	P	**Pn**	**17 49 16.1**	**0.0**
STIA				S	**Sb**	**17 49 26.1**	**+2.5**
THR6	**Thira Island,**	**0.68**	**350**	P	**Pb**	**17 49 14.5**	**-0.2**
THR6	**Thira Island,**	**0.68**	**350**	P	**Pb**	**17 49 14.4**	**-0.2**
SANT	**Santorini**	**0.68**	**355**	PG	**Pb**	**17 49 14.6**	**-0.2**
SANT				SG	**Sb**	**17 49 25.5**	**+1.3**
SANT	**Santorini**	**0.68**	**355**	P	**Pb**	**17 49 14.4**	**-0.4**
SANT				S	**Sb**	**17 49 23.9**	**-0.4**
SANT				AML	AML	17 49 28.3	
	comp=E,37089µm,0.5s						
SANT				AML	AML	17 49 28.9	
	comp=N,16620µm,0.6s						
SANT	**Santorini**	**0.68**	**355**	P	**Pb**	**17 49 14.6**	**-0.2**
SANT				S	**Sb**	**17 49 24.5**	**+0.3**
THR9	**Santorini-Faro**	**0.68**	**348**	P	**Pb**	**17 49 14.8**	**0.0**
THT1	**Athinios (Pele**	**0.70**	**353**	P	**Pb**	**17 49 15.0**	**0.0**
THT1				S	**Sb**	**17 49 24.1**	**-0.6**
THT1	**Athinios (Pele**	**0.70**	**353**	P	**Pb**	**17 49 14.8**	**-0.3**
THT1				S	**Sb**	**17 49 25.5**	**+0.8**
THR8	**Santorini-Mono**	**0.72**	**356**	P	**Pb**	**17 49 15.4**	**0.0**
THR8	**Santorini-Mono**	**0.72**	**356**	P	**Pb**	**17 49 14.9**	**-0.4**
SAP2K	**Karterados**	**0.72**	**354**	P	**Pb**	**17 49 15.7**	**+0.2**
THR3	**Thira Island,**	**0.73**	**351**	P	**Pb**	**17 49 15.0**	**-0.6**
THR3	**Thira Island,**	**0.73**	**351**	P	**Pb**	**17 49 14.9**	**-0.6**
THR7	**Fira-Santorini**	**0.74**	**353**	P	**Pb**	**17 49 15.6**	**-0.1**
THR5	**Thira Island,**	**0.74**	**348**	P	**Pb**	**17 49 15.7**	**-0.1**
THR5	**Thira Island,**	**0.74**	**348**	P	**Pb**	**17 49 15.7**	**-0.1**
THT2	**Imerovigli**	**0.75**	**353**	P	**Pb**	**17 49 15.9**	**-0.1**
THT2				S	**Sb**	**17 49 26.3**	**+0.2**
THT2	**Imerovigli**	**0.75**	**353**	P	**Pb**	**17 49 16.0**	**+0.1**
THR2	**Thira island,**	**0.76**	**354**	P	**Pb**	**17 49 16.0**	**-0.1**
THR2	**Thira island,**	**0.76**	**354**	P	**Pb**	**17 49 15.8**	**-0.3**
SAP3	**Santorini-Thir**	**0.76**	**348**	P	**Pb**	**17 49 15.8**	**-0.3**
ZKR	**Zakros**	**0.80**	**136**	PG	**Pn**	**17 49 18.4**	**+0.4**
ZKR				SG	**Sn**	**17 49 30.6**	**+0.7**
ZKR	**Zakros**	**0.80**	**136**	P	**Pn**	**17 49 18.3**	**+0.4**
ZKR				S	**Sb**	**17 49 29.4**	**+1.9**
ZKR				AML	AML	17 49 32.3	
	comp=N,6666µm,0.6s						
ZKR				AML	AML	17 49 34.5	
	comp=E,11715µm,0.6s						
ZKR	**Zakros**	**0.80**	**136**	P	**Pn**	**17 49 18.4**	**+0.4**
ZKR				S	**Sn**	**17 49 30.5**	**+0.7**
TMBK	**Timbaki Herakl**	**0.88**	**226**	P	**Pb**	**17 49 18.6**	**+0.5**
TMBK				S	**Sb**	**17 49 30.5**	**+0.6**
PRNS	**Prines Rethymn**	**0.91**	**249**	P	**Pb**	**17 49 19.3**	**+0.8**
PRNS				S	**Sb**	**17 49 32.0**	**+1.5**
VAM	**Vamos**	**1.13**	**256**	P	**Pg**	**17 49 21.7**	**-0.8**
VAM				S	**Sg**	**17 49 36.5**	**-0.8**
VAM				AML	AML	17 49 37.0	
	comp=N,9528µm,0.4s						
VAM				AML	AML	17 49 40.8	
	comp=E,7966µm,0.3s						
VAM	**Vamos**	**1.13**	**256**	P	**Pg**	**17 49 21.8**	**-0.8**
AMGA	**Amorgos Island**	**1.18**	**14**	P	**Pb**	**17 49 23.1**	**-0.1**
AMGA				S	**Sn**	**17 49 40.4**	**+1.2**
AMGA				AML	AML	17 49 43.5	
	comp=E,3696µm,0.4s						
AMGA				AML	AML	17 49 45.1	
	comp=N,3374µm,0.3s						
IMMV	**Iera Moni Meta**	**1.29**	**260**	PN	**Pn**	**17 49 25.2**	**+0.5**
IMMV	**Iera Moni Meta**	**1.29**	**260**	P	**Pn**	**17 49 25.0**	**+0.2**
IMMV				AML	AML	17 49 43.5	
	comp=N,5517µm,0.3s						
IMMV				AML	AML	17 49 48.8	
	comp=E,5050µm,0.4s						
IMMV	**Iera Moni Meta**	**1.29**	**260**	P	**Pn**	**17 49 24.5**	**-0.2**
IMMV				S	**Sg**	**17 49 41.0**	**-1.4**
KARP	**Karpathos**	**1.33**	**96**	PN	**Pg**	**17 49 27.3**	**+0.8**
KARP	**Karpathos**	**1.33**	**96**	P	**Pg**	**17 49 27.4**	**+1.0**
KARP				S	**Sn**	**17 49 46.1**	**+3.1**
KARP				AML	AML	17 49 53.1	
	comp=E,2707µm,0.5s						
KARP				AML	AML	17 49 55.3	
	comp=N,2003µm,0.7s						
KARP	**Karpathos**	**1.33**	**96**	P	**Pg**	**17 49 26.4**	**-0.1**
KARP				S	**Sn**	**17 49 45.8**	**+2.8**
MHLO	**Agia Marina, M**	**1.36**	**318**	P	**Pg**	**17 49 26.5**	**-0.5**
MHLO				S	**Sg**	**17 49 43.7**	**-0.9**
MHLO				AML	AML	17 49 47.6	
	comp=E,13776µm,0.5s						
MHLO				AML	AML	17 49 49.4	
	comp=N,15668µm,0.5s						
MHLO	**Agia Marina, M**	**1.36**	**318**	P	**Pg**	**17 49 26.4**	**-0.5**
MHLO				S	**Sb**	**17 49 44.0**	**+0.4**
APE	**Apeiranthos**	**1.38**	**360**	PN	**Pg**	**17 49 26.9**	**-0.5**
APE	**Apeiranthos**	**1.38**	**360**	P	**Pn**	**17 49 26.4**	**+0.3**
APE				S	**Sn**	**17 49 45.8**	**+1.6**
APE				AML	AML	17 49 49.0	
	comp=E,1915µm,0.4s						
APE				AML	AML	17 49 60.0	
	comp=N,1211µm,0.4s						
APE	**Apeiranthos**	**1.38**	**360**	P	**Pn**	**17 49 26.3**	**+0.3**
APE				S	**Sn**	**17 49 46.0**	**+1.8**
MHLA	**Plaka, Milos I**	**1.39**	**320**	P	**Pg**	**17 49 27.3**	**-0.2**
MHLA				S	**Sg**	**17 49 44.7**	**-0.8**
MHLA				AML	AML	17 49 49.7	
	comp=E,4743µm,0.6s						
MHLA				AML	AML	17 49 57.7	
	comp=N,4018µm,0.8s						
GVD	**Gavdhos**	**1.46**	**235**	PN	**Pn**	**17 49 27.7**	**+0.6**
GVD	**Gavdhos**	**1.46**	**235**	P	**Pg**	**17 49 28.8**	**-0.1**
GVD				S	**Sb**	**17 49 47.5**	**+1.0**
GVD				AML	AML	17 49 52.1	
	comp=E,4471µm,0.4s						
GVD				AML	AML	17 49 56.3	
	comp=N,6444µm,0.4s						
NISR	**Nisiros**	**1.58**	**54**	P	**Pg**	**17 49 30.8**	**-0.5**
KERA	**Keramoti**	**1.65**	**259**	P	**Pb**	**17 49 31.1**	**-0.1**
KERA				S	**Sn**	**17 49 51.5**	**+0.7**
KERA				AML	AML	17 49 58.0	
	comp=N,2764µm,0.4s						
KERA				AML	AML	17 50 00.2	
	comp=E,2693µm,0.6s						
SERI	**Serifos**	**1.70**	**330**	P	**Pn**	**17 49 31.4**	**+1.1**
SERI				S	**Sn**	**17 49 53.0**	**+1.0**
SERI				AML	AML	17 49 56.7	
	comp=E,1127µm,0.7s						
SERI				AML	AML	17 49 57.5	
	comp=N,1306µm,0.5s						
ANKY	**Antikythira Is**	**1.83**	**276**	P	**Pn**	**17 49 32.6**	**+0.5**
ANKY				AML	AML	17 50 05.5	
	comp=N,1878µm,0.6s						
ANKY				AML	AML	17 50 06.3	
	comp=E,1916µm,0.6s						
TNSA	**Tinos**	**1.87**	**351**	P	**Pb**	**17 49 34.2**	**-0.8**
BODT	**Bodrum**	**1.98**	**46**	PN	**Pb**	**17 49 36.4**	**-0.5**
KYTH	**Kithira**	**2.10**	**287**	P	**Pn**	**17 49 37.1**	**+1.1**
KYTH				AML	AML	17 50 07.7	
	comp=N,1200µm,0.6s						
KYTH				AML	AML	17 50 12.7	
	comp=E,1448µm,0.4s						
ARG	**Arkhangelos**	**2.17**	**75**	PN	**Pb**	**17 49 39.5**	**-0.5**
ARG	**Arkhangelos**	**2.17**	**75**	P	**Pb**	**17 49 39.5**	**-0.5**
ARG				S	**Sb**	**17 50 06.5**	**-0.4**
SMG	**Samos**	**2.27**	**27**	P	**Pn**	**17 49 40.1**	**+1.9**
SMG				AML	AML	17 50 25.7	
	comp=E,740µm,0.5s						
SMG				AML	AML	17 50 32.0	
	comp=N,543µm,0.4s						
VLI	**Veliai**	**2.34**	**297**	P	**Pn**	**17 49 39.2**	**-0.1**
VLI				AML	AML	17 50 09.6	
	comp=E,1392µm,0.3s						
VLI				AML	AML	17 50 22.0	
	comp=N,1162µm,0.6s						
MLSB	**Milas**	**2.41**	**48**	PN	**Pb**	**17 49 42.6**	**-1.7**
GCAM	**G?zelcaml?**	**2.43**	**34**	PN	**Pb**	**17 49 42.9**	**-1.6**
DID	**Didima**	**2.59**	**315**	P	**Pn**	**17 49 43.0**	**+0.3**
DID				AML	AML	17 50 24.3	
	comp=E,582µm,0.5s						
DID				AML	AML	17 50 29.6	
	comp=N,425µm,0.5s						
YER	**Yerkesik**	**2.64**	**56**	PN	**Pn**	**17 49 46.1**	**+2.7**
PTL	**Penteli**	**2.71**	**331**	P	**Pn**	**17 49 46.1**	**+1.8**
PTL				AML	AML	17 50 28.0	
	comp=E,547µm,1.1s						
PTL				AML	AML	17 50 29.9	
	comp=N,348µm,1.0s						
AYDN	**Tasoluk**	**2.72**	**43**	*i* P	**Pg**	**17 49 55.2**	**+2.1**
CHOS	**Chios island**	**2.72**	**9**	PN	**Pn**	**17 49 46.4**	**+1.8**
CHOS	**Chios island**	**2.72**	**9**	P	**Pn**	**17 49 46.3**	**+1.7**
TURN	**Turunc**	**2.74**	**64**	PN	**Pn**	**17 49 43.5**	**-1.2**
TURN	**Turunc**	**2.74**	**64**	*i* P	**Pn**	**17 49 44.9**	**+0.1**
TURN				*i* S	**Sn**	**17 50 14.2**	**-3.6**
URLA	**Izmir**	**2.80**	**17**	PN	**Pn**	**17 49 47.8**	**+2.3**
AYDB	**Zeytinkoy-Aydi**	**2.94**	**39**	PN	**Pn**	**17 49 49.9**	**+2.3**
BLCB	**Balcova**	**2.95**	**24**	PN	**Pn**	**17 49 49.9**	**+2.4**
EREA	**Eretria**	**3.01**	**335**	P	**Pn**	**17 49 49.4**	**+0.9**
EREA				AML	AML	17 50 45.9	
	comp=N,448µm,0.8s						
EREA				AML	AML	17 50 51.2	
	comp=E,433µm,0.7s						
FETY	**Fethiye**	**3.02**	**71**	PN	**Pn**	**17 49 51.2**	**+2.6**
FETY	**Fethiye**	**3.02**	**71**	*i* P	**Pb**	**17 49 53.4**	**-1.2**
FETY				*i* S	**Sn**	**17 50 28.1**	**+3.4**
FETY				IAML_P			
	comp=Z,1µm,0.3s						
VLX	**Vlachokerasia**	**3.05**	**304**	P	**Pn**	**17 49 50.7**	**+1.7**
VLX				AML	AML	17 50 27.2	
	comp=E,796µm,0.4s						
VLX				AML	AML	17 50 31.2	
	comp=N,614µm,0.5s						
VIL2	**Platees**	**3.10**	**325**	P	**Pn**	**17 49 50.2**	**+0.5**
VIL2				AML	AML	17 50 48.5	
	comp=E,476µm,0.5s						
VIL2				AML	AML	17 50 54.8	
	comp=N,281µm,0.8s						
TAVA	**DENIZLI_Tavas**	**3.24**	**56**	*i* P	**Pb**	**17 49 58.1**	**-0.4**
TAVA				*i* S	**Sb**	**17 50 37.6**	**-0.4**
ITM	**Ithomi**	**3.27**	**298**	PN	**Pn**	**17 49 53.7**	**+1.7**
ITM	**Ithomi**	**3.27**	**298**	P	**Pn**	**17 49 53.0**	**+1.0**
AKAS	**Kas**	**3.34**	**79**	PN	**Pn**	**17 49 55.9**	**+2.8**
AKAS	**Kas**	**3.34**	**79**	*i* P	**Pn**	**17 49 56.4**	**+3.3**
GUR	**Goura**	**3.41**	**312**	P	**Pn**	**17 49 55.9**	**+2.0**
GUR				AML	AML	17 50 38.8	
	comp=E,1095µm,0.6s						
GUR				AML	AML	17 50 40.3	
	comp=N,934µm,0.4s						
KLV	**Kalavryta, Ach**	**3.59**	**312**	P	**Pn**	**17 49 58.3**	**+1.8**
KLV				AML	AML	17 50 41.2	
	comp=N,379µm,0.9s						
KLV				AML	AML	17 50 44.1	
	comp=E,324µm,0.7s						
GOLH	**Golhisar**	**3.59**	**63**	*i* P	**Pb**	**17 50 01.8**	**-2.6**
GOLH				*i* S	**Sb**	**17 50 46.6**	**-1.4**
GOLH				IAML_P			
	comp=Z,873nm,0.2s						
ATAL	**Atalanti**	**3.61**	**327**	P	**Pn**	**17 49 59.0**	**+2.3**
DSF	**Desfina**	**3.63**	**319**	P	**Pn**	**17 49 58.9**	**+1.9**
ELL	**Elmali**	**3.69**	**72**	PN	**Pn**	**17 50 00.4**	**+2.5**
AOS	**Alonnisos**	**3.72**	**340**	PN	**Pn**	**17 49 59.9**	**+1.8**
STEP	**BALIKESIR_Sava**	**4.07**	**25**	*i* P	**Pg**	**17 50 21.9**	**+3.1**
STEP				IAML_P			
	comp=Z,343nm,0.4s						
KORT	**Korkueli**	**4.10**	**70**	PN	**Pn**	**17 50 06.3**	**+2.8**
KORT	**Korkueli**	**4.10**	**70**	*i* P	**Pb**	**17 50 09.1**	**-4.0**
KORT				IAML_P			
	comp=Z,460nm,0.3s						
USAK	**Uak-Merkez**	**4.10**	**42**	*i* P	**Pb**	**17 50 10.7**	**-2.4**
USAK				IAML_P			
	comp=Z,220nm,0.3s						
KHAL	**Karahalli**	**4.14**	**49**	*i* P	**Pb**	**17 50 09.3**	**-4.5**
KHAL				IAML_P			
	comp=Z,44nm,0.2s						
BRDR	**BURDUR-Merkez**	**4.15**	**60**	*i* P	**Pb**	**17 50 09.9**	**-4.0**
BRDR				IAML_P			
	comp=Z,184nm,0.2s						
AGG	**Agios Georgios**	**4.19**	**323**	PN	**Pn**	**17 50 06.4**	**+1.7**
DEMI	**Demirci**	**4.20**	**36**	*i* P	**Pn**	**17 50 07.1**	**+2.3**
KDHN	**Kadinhani**	**5.97**	**60**	*i* P	**Pn**	**17 50 33.8**	**+4.6**
KDHN				IAML_P			
	comp=Z,106nm,0.5s						
BRTR	**Keskin Array B**	**7.58**	**55**	Pn	**Pn**	**17 50 55.8**	**+4.4**
	comp=Z,0.1nm,0.3s,baz=236,slow=14,SNR=7.6						
MMAI	**Mount Meron Ar**	**8.58**	**105**	Pn	**Pn**	**17 51 04.3**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=300,slow=12,SNR=6.1						
MMAI				Sn	**Sn**	**17 52 38.9**	**-3.0**
	comp=Z,1.3nm,0.3s,baz=278,slow=39,SNR=4.6						
EIL	**Elat**	**9.94**	**124**	Pn	**Pn**	**17 51 23.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=283,slow=1.6,SNR=7.1						
EIL				Sn	**Sn**	**17 53 09.2**	**-6.0**
	comp=Z,0.7nm,0.3s,baz=270,slow=20,SNR=4.8						
AKASG	**Malin Array Be**	**15.24**	**9**	Pn	**Pn**	**17 52 36.9**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=200,slow=12,SNR=5.0						
GERES	**GERESS Array B**	**15.77**	**330**	Pn	**P**	**17 52 45.7**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=133,slow=11,SNR=7.3						
GEYT	**Alibeck**	**26.11**	**75**	P	**P**	**17 54 35.4**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=265,slow=16,SNR=3.6						
EKA	**Eskdalemuir Ar**	**27.79**	**324**	P	**P**	**17 54 50.8**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=118,slow=8.9,SNR=4.8						
TORD	**Torodi Ar. Bea**	**31.07**	**230**	P	**P**	**17 55 17.1**	**-1.8**

	comp=Z,0.6nm,0.3s,baz=40,slow=8.0,SNR=7.2						
MKAR	Makanchi Array	43.23	57	P	P	17 57 02.7	+0.8
	comp=Z,1.6nm,0.8s,baz=265,slow=8.4,SNR=16						
ZALV	Zalesovo Beam	44.42	47	P	P	17 57 11.1	-0.2
	comp=Z,0.5nm,0.4s,baz=285,slow=8.8,SNR=3.8						
SEY	Seymchan	72.95	23	LR	LR	18 36 34.5	
	comp=Z,85nm,19.8s,baz=280,slow=39						
YKA	Yellowknife Ar	77.04	342	P	P	18 00 52.9	-0.5
	comp=Z,0.2nm,0.6s,baz=30,slow=5.2,SNR=5.0						

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*ISCJB **21** 17:52:27.5±0.5, 26°.49N±0°.06×140°.9E±0°.1, h350^{km}, mb3.3/11, Error ellipse: s-maj=13.6km s-min=7.6km az=165.9*

*IDC **21** 17:52:28.5±1.2, 26°.36N×140°.55E, h341^{km}±13^{km}, mb3.1/11, mb1 3.2/13, mb1mx3.0/45, mbtmp3.8/13, Error ellipse: s-maj=24.3km s-min=10.8km az=84.0*

*JMA **21** 17:52:31.0±0.1, 26°.85N×141°.78E, h352^{km}, M4.2*

ISC 21 17:52:28.9±0.7, **26°.57N**±0°.08×**140°.9E**±0°.1, **h350**^{km}, **n20**, σ**2**^{s}.**37**/23, **mb3.3**/11, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	Haha-jima-NKT	1.17	87	P	Pn	17 53 15.5	+0.1
JHHJ				S	S	17 53 50.4	-2.2
CBIJ	Chichi jima	1.28	66	P	Pn	17 53 15.5	-0.4
CBIJ				S	S	17 53 50.4	-3.1
JCJ	Chichijima	1.28	66	P	Pn	17 53 16.1	+0.2
	24nm,0.3s,baz=266,slow=19,SNR=15						
JCJ				S	S	17 53 50.3	-3.3
	107nm,0.3s,baz=295,slow=22,SNR=32						
JOD2	Odawara 2	8.80	350	*e*S	S	17 56 11.5	-1.9
JYT	Yasato	9.64	357	*e*S	S	17 56 27.0	-4.9
JAG	Ashikaga	9.90	353	P	P	17 54 47.2	+0.1
JHO	Hitachi	10.01	359	*e*S	S	17 56 35.4	-4.6
KSRS	Korea Array	15.42	318	P	Pn	17 55 49.1	-1.4
	0.1nm,0.3s,baz=130,slow=12,SNR=2.8						
USRK	Ussuriysk Ar.	19.00	340	P	P	17 56 27.7	+1.5
	0.1nm,0.3s,baz=163,slow=10,SNR=4.7						
KLR	Kul'dur	23.70	345	P	P	17 57 12.4	+2.0
	0.7nm,0.4s,baz=161,slow=12,SNR=6.0						
SEY	Seymchan	37.15	9	P	P	17 59 10.3	+3.2
	0.5nm,0.3s,baz=236,slow=11,SNR=3.7						
WRA	Warramunga Arr	46.67	188	P	P	18 00 22.2	-1.7
	2.4nm,0.3s,baz=5.9,slow=7.7,SNR=87						
CTA	Charters Tower	46.68	173	P	P	18 00 23.3	-0.6
	1.7nm,0.7s,baz=41,slow=11,SNR=2.4						
ZALV	Zalesovo Beam	49.12	320	P	P	18 00 41.7	-0.3
	0.5nm,0.4s,baz=51,slow=4.6,SNR=3.2						
MKAR	Makanchi Array	49.91	310	P	P	18 00 47.4	-0.7
	0.3nm,0.6s,baz=86,slow=9.6,SNR=3.6						
ASAR	Alice Springs	50.40	188	P	P	18 00 50.2	-1.7
	0.4nm,0.4s,baz=0.5,slow=6.8,SNR=9.0						
ILAR	Eielson Array	58.73	29	P	P	18 01 52.8	+2.1
	0.4nm,0.6s,baz=258,slow=6.2,SNR=5.6						
YKA	Yellowknife Ar	73.15	28	P	P	18 03 24.2	+2.5
	0.3nm,0.7s,baz=296,slow=6.3,SNR=4.0						
ARCES	ARCESS Array B	73.65	341	P	P	18 03 25.8	+1.3
	3.7nm,0.8s,baz=61,slow=13,SNR=3.5						
FINES	FINESS Array B	77.89	334	P	P	18 03 48.9	+0.4
	0.6nm,0.3s,baz=69,slow=4.4,SNR=10						

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*IDC **21** 17:53:57.3±0.8, 11°.50S×165°.19E, h0^{km}, mb4.4/18, mb1 4.6/20, mb1mx4.5/40, mbtmp4.4/20, ML4.7/2, MS3.6/9, Ms1 3.6/9, ms1mx3.3/30, Error ellipse: s-maj=24.5km s-min=15.0km az=130.0*

*NEIC **21** 17:53:59.3±3.6, 11°.44S×165°.07E, h10^{km}±22^{km}, mb4.9/37, Error ellipse: s-maj=8.1km s-min=6.1km az=187.0*

*BJI **21** 17:54:00.1, 11°.15S×165°.69E, h28^{km}, mB5.1/23, mb4.7/34, Ms4.9/7, Ms7 4.6/7*

*ISCJB **21** 17:54:01.3±0.2, 11°.57S±0°.05×165°.02E±0°.04, h34^{km}, mb4.7/60, MS3.9/9, Error ellipse: s-maj=7.0km s-min=6.0km az=164.7*

ISC 21 17:54:02.9±0.5, **11°.49S**±0°.08×**165°.10E**±0°.08, **h34**^{km}, **n106**, σ**1**^{s}.**14**/99, **mb4.8**/60, **MS3.8**/9, **2C-1D**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.47	292	*e*Pn	Pn	17 55 18.8	-3.3
HNR	Honiara	5.47	292	Pn	Pn	17 55 21.7	-0.4
	42nm,0.3s,baz=139,slow=5.8,SNR=27						
HNR				Sn	Sn	17 56 23.3	-0.5
	baz=198,slow=20,SNR=4.0						
HNR				LR	LR	17 57 31.7	
	comp=Z,523nm,18.1s,baz=114,slow=39						
DZM	Mont Dzumac	10.60	173	Pn	Pn	17 56 31.7	-0.8
	3.1nm,0.3s,baz=300,slow=11,SNR=27						
DZM				Sn	Sn	17 58 19.5	-11
	0.1nm,0.3s,baz=63,slow=16,SNR=1.7						
DZM				LR	LR	17 59 10.6	
	comp=Z,47nm,20.4s,baz=7.5,slow=30						
ONTNC	Ouen Toro	10.83	173	*e*Pn	Pn	17 56 35.5	-0.1
PINNC	Pines Island,	11.28	169	*e*Pn	Pn	17 56 41.9	+0.1
CTA	Charters Tower	20.04	242	P	Pn	17 58 34.3	-0.8
	19nm,0.8s,baz=72,slow=12,SNR=18						
CTAO	Charters Tower	20.04	242	*e*P	P	17 58 33.8	+0.6
	31nm,0.9s						
COEN	Coen	21.53	261	*e*P	P	17 58 50.0	+0.6
	27nm,0.8s						
STKA	Stephens Creek	29.69	223	*e*P	P	18 00 05.9	+0.1
	1.2nm,0.7s						
STKA	Stephens Creek	29.69	223	P	P	18 00 06.1	+0.3
	7.4nm,0.8s,baz=29,slow=8.3,SNR=9.9						
STKA				LR	LR	18 11 25.0	
	comp=Z,120nm,18.6s,baz=25,slow=35						
H11S2	WAKE ISLAND Hy	29.84	3	T	T	18 31 23.5	
	baz=183,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.84	3	T	T	18 31 31.9	
	baz=183,slow=76,SNR=7.2						
H11S1	WAKE ISLAND Hy	29.85	3	T	T	18 31 30.3	
	baz=183,slow=76,SNR=8.0						
WRAB	Tennant Creek	30.73	250	*e*P	P	18 00 14.1	-1.1
WB2	Warramunga Arr	30.73	250	*e*P	P	18 00 13.9	-1.2
	25nm,1.1s						
WR1	Warramunga Arr	30.74	250	*e*P	P	18 00 14.4	-0.8
	25nm,1.1s						
WR1				*e*PcP	PcP	18 03 13.3	+0.8
WRA	Warramunga Arr	30.74	250	P	P	18 00 14.4	-0.8
	11nm,0.9s,baz=83,slow=9.0,SNR=57						
WRA				PcP	PcP	18 03 13.3	+0.8
	1.6nm,0.9s,baz=79,slow=3.2,SNR=6.2						
H11N1	WAKE ISLAND Hy	31.06	3	T	T	18 32 59.5	
	baz=182,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	31.07	3	T	T	18 32 58.0	
	baz=182,slow=76,SNR=9.1						
H11N2	WAKE ISLAND Hy	31.08	3	T	T	18 32 59.6	
	baz=182,slow=76,SNR=12						
AS01	Alice Springs	31.99	244	*e*P	P	18 00 24.9	-1.3
GUMO	Guam	32.00	321	LR	LR	18 11 35.4	
	comp=Z,69nm,19.3s,baz=105,slow=33						
AS31	Alice Springs	32.03	244	*e*P	P	18 00 25.5	-1.1
	2.9nm,1.0s						
ASAR	Alice Springs	32.03	244	P	P	18 00 25.5	-1.1
	8.1nm,0.8s,baz=65,slow=9.6,SNR=69						
ASAR				PcP	PcP	18 03 16.6	+0.6
	1.3nm,0.8s,baz=59,slow=3.0,SNR=7.0						
ASAR				LR	LR	18 12 36.3	
	comp=Z,130nm,19.0s,baz=88,slow=35						
RAR	Rarotonga	34.99	111	LR	LR	18 13 10.6	
	comp=Z,76nm,19.8s,baz=251,slow=33						
FITZ	Fitzroy Crossi	38.66	255	*e*P	P	18 01 23.2	-0.4
	14nm,0.9s						
FITZ	Fitzroy Crossi	38.66	255	P	P	18 01 22.2	-1.4
	8.2nm,0.8s,baz=98,slow=6.3,SNR=12						
MJAR	Matsushiro Arr	54.08	333	P	P	18 03 23.4	-1.0
	3.1nm,0.8s,baz=167,slow=8.9,SNR=6.3						
MAJO	Matsushiro	54.08	333	*e*P	P	18 03 23.4	-1.0
JNU	Nakatsue	55.08	325	P	P	18 03 31.4	-0.3
	4.8nm,0.8s,baz=144,slow=6.2,SNR=4.3						
NJ2	Nanjing	61.90	316	*e*P	P	18 04 20.3	+1.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	63.07	334	P	P	18 04 27.6	+0.8
	1.0nm,0.6s,baz=123,slow=5.3,SNR=4.9						
PETK	Petropavlovsk-	64.65	355	P	P	18 04 37.1	0.0
	2.8nm,0.8s,baz=177,slow=7.2,SNR=3.2						
PEA1	Petropavlovsk-	64.66	355	*e*P	P	18 04 37.1	0.0
CN2	Changchun	65.80	330	*e*P	P	18 04 45.0	+0.3
GYA	Guiyang	68.15	305	*e*P	P	18 05 02.0	+1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	Beijing	68.44	322⇓	*e*P	P	18 05 03.3	+1.8
BJI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
XAN	Xi'an	69.96	313	P	P	18 05 11.8	+0.6
XAN				pP	sP	18 05 22.0	-1.5
XAN				sP	pwP	18 05 26.3	-0.9
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,91nm,4.2s						
KMI	Kunming	70.82	302	P	P	18 05 20.0	+3.2
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
CM01	Chiang Mai Arr	71.69	294	*e*P	P	18 05 22.0	0.0
CMAR	Chiang Mai Arr	71.72	294	P	P	18 05 23.4	+1.3
	1.3nm,0.9s,baz=124,slow=4.8,SNR=13						
HHC	Hu-ho-hao-te	71.77	320	*e*P	P	18 05 24.3	+2.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,4.8s						
CHTO	Chiang Mai	71.83	294	P	P	18 05 27.0	+4.2
CD2	Chengdu	72.37	308	*e*P	P	18 05 27.0	+1.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	74.59	313	*e*P	P	18 05 42.3	+3.3
LZH				pP	sP	18 05 49.8	-1.4
LZH				sP	pwP	18 05 56.3	+1.9
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,4.8s						
SEY	Seymchan	74.85	354	P	P	18 05 39.4	-0.2
	0.4nm,0.4s,baz=69,slow=3.6,SNR=4.0						
GAMB	Gambell	77.12	10	*e*P	P	18 05 52.6	+0.1
	6.9nm,0.8s						
ULN	Ulaanbaatar	78.29	324	*e*P	P	18 06 00.5	+0.8
	5.9nm,0.7s						
QSPA	South Pole Qui	78.51	180	*e*P	P	18 06 01.1	+0.4
	12nm,1.2s						
SONA0	Songino Array	78.65	324	*e*P	P	18 06 02.2	+0.6
SONM	Songino Array	78.65	324	P	P	18 06 02.2	+0.6
	1.8nm,0.8s,baz=142,slow=6.9,SNR=12						
SONA1	Songino Array	78.66	324	*e*P	P	18 06 01.9	+0.3
GTA	Gaotai	78.92	314	⇑P	P	18 06 05.0	+1.7
GTA				pP	pP	18 06 13.3	+0.9
GTA				sP	pwP	18 06 18.1	-0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,64nm,7.0s						
GTA				LR	LR		
	comp=N,110nm,17.1s						
GTA				LR	LR		
	comp=E,140nm,17.5s						
GTA				LR	LR		
	comp=Z,170nm,16.5s						
ANM	Nome	79.06	13	*e*P	P	18 06 03.7	+0.4
	14nm,1.7s						
BILL	Bilibino	79.33	0	*e*P	P	18 06 04.5	-0.2
	12nm,1.0s						
IM3	Indian Mountai	83.02	16	*e*P	P	18 06 23.7	-0.7
MDM	Murphy Dome	83.85	18	*e*P	P	18 06 27.3	-1.4
	15nm,1.4s						
HDA	Harding Lake	83.87	19	*e*P	P	18 06 28.2	-0.6
	8.8nm,1.0s						
IL1	Eielson Array	84.14	19	*e*P	P	18 06 28.5	-1.7
ILAR	Eielson Array	84.14	19	P	P	18 06 29.8	-0.4
	2.7nm,0.5s,baz=237,slow=4.9,SNR=50						
ILB	Eielson Array	84.14	19	*e*P	P	18 06 29.7	-0.4
AFDM	Forest Hills D	84.97	49	*e*P	P	18 06 34.8	-0.2
	11nm,1.1s						
CMB	Columbia Colle	85.11	50	*e*P	P	18 06 35.6	-0.1
	6.1nm,0.9s						
BEKR	Beckworth	85.71	48	*e*P	P	18 06 37.7	-1.2
	4.1nm,0.8s						
ISA	Isabella, Lake	85.84	53	*e*P	P	18 06 39.7	+0.2
	8.6nm,1.0s						
WAKR	Walker	85.97	50	*e*P	P	18 06 40.6	+0.4
	12nm,1.4s						
EGAK	Eagle	86.01	20	*e*P	P	18 06 39.3	-0.3
	9.2nm,0.9s						
NV01	Mina Array Sit	86.79	50	*e*P	P	18 06 43.8	-0.5
NVAR	Mina Array Bea	86.79	50	P	P	18 06 44.1	-0.2
	4.1nm,0.8s,baz=229,slow=8.1,SNR=14						
NVAR				LR	LR	18 44 59.3	
	comp=Z,56nm,18.1s,baz=268,slow=35						
NV11	Mina Array Sit	86.90	50	*e*P	P	18 06 44.4	-0.4
	1.0nm,1.4s						
KVN	Kaiserville	87.13	49	*e*P	P	18 06 45.5	-0.4
	3.7nm,0.9s						
LDFC	Landfair	88.32	54	*e*P	P	18 06 52.3	+0.8
	16nm,0.9s						
G08A	Pilot Rock	88.40	43	*e*P	P	18 06 51.8	+0.1
	22nm,2.0s						
SHPR	Sheep Range	88.66	52	*e*P	P	18 06 54.1	+0.9
	16nm,1.5s						
WMQ	Urumqi	88.96	315	*e*P	P	18 06 55.3	+1.0
WMQ				LR	LR		
	comp=N,200nm,16.7s						
WMQ				LR	LR		
	comp=E,96nm,21.3s						
WMQ				LR	LR		
	comp=Z,240nm,20.3s						
W13A	Hualapai Mount	89.30	54	*e*P	P	18 06 55.6	-0.7
	8.3nm,1.2s						
CCUT	Cedar City	90.31	52	*e*P	P	18 07 01.8	+0.8
	6.3nm,1.0s						
SZCU	Shurtz Canyon	90.53	52	*e*P	P	18 07 02.8	+0.8
	5.8nm,0.9s						
U15A	North Rim	90.88	53	*e*P	P	18 07 04.5	+0.7
	8.7nm,0.9s						
X16A	Lo Mia Camp, P	91.09	55	*e*P	P	18 07 05.5	+0.8
	5.2nm,0.9s						
SYO	Syowa Base	91.17	197⇑	*e*sP	sP	18 07 20.0	+3.6
MTPU	Mount Pierson	91.33	52	*e*P	P	18 07 07.4	+1.5
	5.7nm,0.9s						
WUAZ	Wupatki	91.39	54	*e*P	P	18 07 06.9	+0.9
	6.0nm,1.0s						
MSU	Marysvale	91.45	51	*e*P	P	18 07 07.4	+1.2
HVU	Hansel Valley	91.77	48	*e*P	P	18 07 08.1	+0.5
	20nm,1.6s						
NLU	North Lily Min	91.86	50	*e*P	P	18 07 08.2	+0.1
	6.3nm,1.1s						
DLMT	Dillon	92.74	44	*e*P	P	18 07 12.6	+0.6
	6.3nm,1.0s						
MK31	Makanchi Array	93.42	317	*e*P	P	18 07 15.3	+0.4
	3.6nm,0.9s						
MK32	Makanchi Array	93.42	317	*e*P	P	18 07 15.2	+0.2
MKAR	Makanchi Array	93.42	317	*e*P	P	18 07 14.9	0.0
	21nm,0.9s						
MKAR	Makanchi Array	93.42	317	P	P	18 07 15.2	+0.2
	1.8nm,0.7s,baz=86,slow=6.2,SNR=19						
ZALV	Zalesovo Beam	93.55	324	P	P	18 07 14.6	-0.7
	1.1nm,0.6s,baz=123,slow=5.5,SNR=7.3						
ZAA1	Zalesovo Array	93.55	324	*e*P	P	18 07 14.6	-0.7
MAKZ	Makanchi	93.63	317	*e*P	P	18 07 15.1	-0.8
	5.7nm,1.1s						
PD31	Pinedale Array	94.32	47	*e*P	P	18 07 19.1	-0.3
	16nm,1.9s						
PDAR	Pinedale Array	94.32	47	P	P	18 07 19.6	+0.1
	1.9nm,1.1s,baz=248,slow=6.2,SNR=3.8						
PDAR				LR	LR	18 44 35.6	
	comp=Z,34nm,18.5s,baz=318,slow=32						
YKA	Yellowknife Ar	95.66	27	P	P	18 07 23.0	-1.7
	0.8nm,0.6s,baz=256,slow=4.6,SNR=12						
YKB5	Yellowknife Ar	95.66	27	*e*P	P	18 07 23.1	-1.7
TXAR	Lajitas Array	96.59	61	LR	LR	18 44 22.5	
	comp=Z,41nm,19.6s,baz=0.0,slow=31						
ARA0	ARCESS Array S	116.61	345	*e*PKPdf	PKPdf	18 12 41.6	-1.3
ARCES	ARCESS Array B	116.61	345	PKP	PKPdf	18 12 41.6	-1.3
	7.6nm,1.1s,baz=90,slow=3.6,SNR=3.6						
VYHS	Vyhne	133.63	329	*e*PKP	PKiKP	18 13 18.3	+0.9
ES19	SONSECA Array	150.26	343	*e*PKPbc	PKPbc	18 13 50.8	-0.2
ESDC	Sonseca Array	150.30	343	PKPbc	PKPbc	18 13 48.7	-2.4
	0.2nm,0.5s,baz=6.7,slow=3.7,SNR=4.7						
TORD	Torodi Ar. Bea	163.71	278	PKP	PKPdf	18 14 02.6	-0.9
	0.9nm,1.0s,baz=346,slow=0.8,SNR=3.7						
TOA1	Torodi Ar. Sit	163.71	278	*e*PKPdf	PKPdf	18 14 02.6	-0.9

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*ISCJB **21** 17:57:10.7±0.4, 51°.48N±0°.06×179°.94W±0°.05, h45^{km}, mb4.3/57, MS4.1/1, Error ellipse: s-maj=9.3km s-min=4.3km az=170.7*

*NEIC **21** 17:57:15.8±0.0, 51°.64N×179°.66W, h53^{km}, mb4.5/46, ML4.2(AEIC), After AEIC.*

*IDC **21** 17:57:16.9±2.1, 51°.71N×179°.79W, h87^{km}±17^{km}, mb3.6/17, mb1 3.8/19, mb1mx3.6/47, mbtmp3.9/19, MS2.9/1, Ms1 2.9/1, ms1mx2.3/38, Error ellipse: s-maj=20.1km s-min=12.2km az=166.0*

ISC 21 17:57:11.6±0.6, **51°.5N**±0°.1×**179°.97W**±0°.06, **h45**^{km}, **n105**, σ**1**^{s}.**98**/103, **mb4.5**/57, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	Kanaga Island	1.80	76	P	Pn	17 57 42.1	+2.0
ADK	Adak	2.09	77	P	Pn	17 57 45.6	+1.5
ADK				S	Sn	17 58 09.3	+0.4
KOWE	Korovin West	3.66	73	P	Pn	17 58 07.6	+1.9
KOKL	Mount Kliuchef	3.68	74	P	Pn	17 58 07.9	+1.9
KOKL				S	Sn	17 58 47.8	-0.3
KOFP	Korovin Flat P	3.73	75	P	Pn	17 58 09.3	+2.6
SMY	Shemya	3.87	292	P	Pn	17 58 16.1	+7.5
SMY				S	Sn	17 59 04.2	+11
NIKH	Nikolski High	7.00	73	P	Pn	17 58 54.6	+3.1
OKTU	Okmok Mt. Tuli	7.54	71	P	Pn	17 59 01.4	+2.4
SPIA	Saint Paul Isl	8.07	41	P	Pn	17 59 08.9	+2.9
MSW	Makushin Switc	8.38	68	P	Pn	17 59 13.0	+2.6
MSW				S	Sn	18 00 45.4	+1.8
MREP	Makushin Rep't	8.38	69	P	Pn	17 59 13.4	+3.0
UNV	Unalaska Valle	8.53	68	P	Pn	17 59 15.1	+2.7
UNV				S	Sn	18 00 49.2	+2.0
AKMO	Akutan Morgan	8.86	67	P	Pn	17 59 20.5	+3.5
WESP	Westdahl Peak	9.69	66	P	Pn	17 59 32.2	+3.9
SSBA	Shishaldin	10.09	65	P	Pn	17 59 37.1	+3.4
FALS	False Pass	10.50	65	P	Pn	17 59 43.4	+4.0
GAMB	Gambell	13.11	16	*e*Pn	Pn	18 00 17.7	+2.8
PETK	Petropavlovsk-	13.76	286	P	P	18 00 29.6	-1.8
	0.1nm,0.3s,baz=85,slow=14,SNR=3.0						
PETK				LR	LR	18 04 51.6	
	comp=Z,48nm,21.4s,baz=84,slow=33						
OHAK	Old Harbor	16.53	59	*e*Pn	Pn	18 00 59.9	0.0
	126nm,1.6s						
KDAK	Kodiak Island	17.00	57	P	Pn	18 01 04.1	-1.6
	2.9nm,0.3s,baz=210,slow=6.0,SNR=32						
KDAK				S	Sn	18 04 03.3	-10
	0.1nm,0.3s,baz=322,slow=19,SNR=2.4						
BILL	Bilibino	17.94	343	*e*Pn	P	18 01 20.6	+3.2
	8.8nm,1.0s						
RDOG	Red Dog Mine	18.61	20	*e*P	Pn	18 01 29.0	+3.5
	10nm,1.1s						
SUA	Susitna One	18.83	47	*e*P	P	18 01 26.1	-1.4
	20nm,1.3s						
CAST	Castle Rocks	19.01	40	*e*P	P	18 01 29.6	+0.3
	7.7nm,0.8s						
IM3	Indian Mountai	19.70	32	*e*P	P	18 01 37.9	+1.1
TRF	Thorofare Moun	19.75	41	*e*P	P	18 01 38.7	+1.1
	26nm,1.2s						
MLY	Manley	20.27	37	*e*P	P	18 01 43.4	+0.4
	23nm,1.7s						
RND	Reindeer	20.33	42	*e*P	P	18 01 44.9	+1.1
	35nm,1.8s						
SCM	Sheep Creek Mo	20.50	47	*e*P	P	18 01 45.2	-0.3
	123nm,1.8s						
DHY	Denali Highway	20.85	44	*e*P	P	18 01 49.8	+0.4
	21nm,1.5s						
WRH	Wood River Hil	21.05	40	*e*P	P	18 01 51.9	+0.5
	29nm,1.8s						
KLU	Klutina	21.07	48	*e*P	P	18 01 54.3	+2.6
	58nm,1.9s						
MDM	Murphy Dome	21.19	38	*e*P	P	18 01 53.5	+0.5
	15nm,1.4s						
HDA	Harding Lake	21.48	40	*e*P	P	18 01 56.3	+0.2
	4.6nm,0.9s						
ILAR	Eielson Array	21.64	39	P	P	18 01 56.4	-1.4
	0.4nm,0.6s,baz=242,slow=10.0,SNR=5.5						
ILAR				PcP	PcP	18 05 56.5	-1.0
	0.4nm,0.7s,baz=270,slow=3.6,SNR=4.3						
ILAR				ScP	ScP	18 09 25.3	-5.3
	0.4nm,0.7s,baz=256,slow=3.7,SNR=4.2						
IL1	Eielson Array	21.64	39	*e*P	P	18 01 57.0	-0.7
PAX	Paxson	21.64	45	*e*P	P	18 01 58.5	+0.7
	6.8nm,1.0s						
PRP	Porcupine Dome	22.46	38	*e*P	P	18 02 06.0	-0.7
	3.3nm,0.7s						
TOLK	Toolik Lake Re	22.55	29	*e*P	P	18 02 07.6	+0.2
	8.4nm,0.5s						
EGAK	Eagle	23.97	41	*e*P	P	18 02 22.0	+0.6
	41nm,1.9s						
INK	Inuvik	27.82	35	P	P	18 02 56.1	0.0
	1.1nm,0.6s,baz=244,slow=7.8,SNR=4.3						
INK				S	S	18 07 26.5	-9.1
	0.3nm,0.4s,baz=41,slow=20,SNR=3.3						
H11N2	WAKE ISLAND Hy	33.31	203	T	T	18 39 12.1	
	baz=17,slow=76,SNR=38						
H11N3	WAKE ISLAND Hy	33.32	203	T	T	18 39 12.7	
	baz=17,slow=76,SNR=56						
H11N1	WAKE ISLAND Hy	33.33	203	T	T	18 39 13.2	
	baz=17,slow=76,SNR=36						
H11S1	WAKE ISLAND Hy	34.53	203	T	T	18 40 41.1	
	baz=16,slow=76,SNR=59						
H11S2	WAKE ISLAND Hy	34.55	203	T	T	18 40 43.3	
	baz=16,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	34.55	203	T	T	18 40 44.5	
	baz=16,slow=76,SNR=32						
YKA	Yellowknife Ar	35.71	46	P	P	18 04 04.3	-1.0
	0.6nm,0.5s,baz=280,slow=8.0,SNR=10						
YKA				PcP	PcP	18 06 30.9	-1.5
	0.2nm,0.6s,baz=282,slow=3.1,SNR=2.9						
YKA				ScP	ScP	18 10 08.4	-6.1
	0.1nm,0.3s,baz=295,slow=2.7,SNR=2.7						
KSRS	Korea Array	38.91	270	P	P	18 04 35.0	+2.3
	1.4nm,0.9s,baz=44,slow=11,SNR=3.1						
HLID	Hailey	43.62	74	*e*P	P	18 05 12.0	+0.4
	5.3nm,1.0s						
NV01	Mina Array Sit	44.27	82	*e*P	P	18 05 17.2	+0.4
NVAR	Mina Array Bea	44.27	82	P	P	18 05 17.1	+0.3
	0.8nm,0.5s,baz=280,slow=8.6,SNR=6.4						
ELK	Elko	44.75	77	*e*P	P	18 05 21.3	+0.5
	2.2nm,0.6s						
YHH	Holmes Hill	45.05	70	*e*P	P	18 05 22.4	-0.7
	1.9nm,1.0s						
HVU	Hansel Valley	45.64	75	*e*P	P	18 05 27.8	+0.2
	20nm,1.6s						
SONM	Songino Array	45.95	296	P	P	18 05 31.4	+1.4
	0.8nm,0.6s,baz=64,slow=6.9,SNR=6.3						
SONM				ScP	ScP	18 10 51.8	-3.5
	0.4nm,0.8s,baz=74,slow=2.3,SNR=3.3						
R11A	Troy Canyon, C	46.00	80	*e*P	P	18 05 30.8	+0.3
	12nm,1.6s						
TPNV	Topopah Spring	46.46	82	*e*P	P	18 05 34.6	+0.4
	6.8nm,0.8s						
DUG	Dugway, Tooele	46.56	76	*e*P	P	18 05 34.6	-0.3
	4.7nm,0.8s						
HHC	Hu-ho-hao-te	46.96	285	*e*P	P	18 05 40.8	+2.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,84nm,7.6s						
BW06	Boulder Array	46.98	72	*e*P	P	18 05 37.8	-0.5
	comp=Z,7.9nm,1.3s						
PD31	Pinedale Array	46.98	72	*e*P	P	18 05 37.6	-0.6
	comp=Z,6.7nm,1.3s						
PDAR	Pinedale Array	46.98	72	*e*P	P	18 05 37.9	-0.3
PDAR	Pinedale Array	46.98	72	P	P	18 05 37.8	-0.5
	comp=Z,2.6nm,0.8s,baz=301,slow=3.3,SNR=23						
NLU	North Lily Min	47.16	76	*e*P	P	18 05 40.2	+0.6
NJ2	Nanjing	48.08	271	*e*P	P	18 05 51.0	+4.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TMUT	Trail Mountain	48.09	76	*e*P	P	18 05 47.6	+0.6
	comp=Z,6.9nm,1.0s						
SRU	San Rafael Swe	48.62	76	*e*P	P	18 05 52.0	+1.0
	comp=Z,5.5nm,0.8s						
U15A	North Rim	49.24	80	*e*P	P	18 05 56.0	+0.2
	comp=Z,8.7nm,0.9s						
O20A	White River Ci	49.36	74	*e*P	P	18 05 56.4	-0.2
	comp=Z,9.0nm,0.9s						
PV09	Paradox Valley	49.85	76	*e*P	P	18 06 00.2	-0.2
PV04	Paradox Valley	50.06	76	*e*P	P	18 06 01.7	-0.2
	comp=Z,6.7nm,0.7s						
PV17	East Wray Mesa	50.09	76	*e*P	P	18 06 02.0	-0.2
	comp=Z,8.2nm,0.6s						
PV16	Nyswonger Mesa	50.10	76	*e*P	P	18 06 01.7	-0.5
	comp=Z,13nm,1.2s						
PV11	David Mesa, Pa	50.13	76	*e*P	P	18 06 02.5	0.0
	comp=Z,30nm,1.4s						
PV12	Saucer Basin,	50.17	76	*e*P	P	18 06 02.5	-0.3
	comp=Z,8.9nm,1.1s						
PV03	Paradox Valley	50.18	76	*e*P	P	18 06 02.3	-0.5
	comp=Z,5.4nm,0.7s						
SPITS	Spitsbergen Ar	50.24	356	P	P	18 06 02.1	-0.4
	comp=Z,0.9nm,0.4s,baz=39,slow=9.3,SNR=14						
PV13	Radium Mtn., P	50.26	76	*e*P	P	18 06 03.3	-0.1
	comp=Z,13nm,0.7s						

PV02	**Paradox Valley**	**50.28**	**76**	*e*P	**P**	**18 06 03.2**	**-0.4**
	comp=Z,6.3nm,0.7s						
WUAZ	**Wupatki**	**50.40**	**80**	*e*P	**P**	**18 06 04.6**	**+0.2**
	comp=Z,6.0nm,1.0s						
PV01	**Paradox Valley**	**50.42**	**76**	*e*P	**P**	**18 06 04.2**	**-0.5**
	comp=Z,6.1nm,1.0s						
S22A	**4UR Ranch, Cre**	**51.73**	**75**	*e*P	**P**	**18 06 15.3**	**+0.7**
	comp=Z,5.7nm,1.4s						
SDCO	**Great Sand Dun**	**52.53**	**74**	*e*P	**P**	**18 06 20.2**	**-0.3**
	comp=Z,3.7nm,1.1s						
T25A	**Trinidad**	**53.58**	**74**	*e*P	**P**	**18 06 28.4**	**+0.2**
	comp=Z,11nm,1.2s						
LENM	**Lemitar**	**54.00**	**79**	*e*P	**P**	**18 06 32.5**	**+1.3**
LZH	**Lanzhou**	**54.66**	**285**	*e*P	P	18 06 41.3	+5.3
LZH				pP	sP	18 06 53.5	+0.1
LZH				sP	pP	18 07 00.8	+12
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	**Gaotai**	**54.86**	**291**	*e*P	P	18 06 41.8	+4.5
GTA				pP	sP	18 06 51.8	-3.0
GTA				sP	pP	18 06 55.1	+5.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ARCES	**ARCESS Array B**	**57.88**	**350**	P	**P**	**18 06 57.3**	**-1.0**
	comp=Z,3.7nm,0.9s,baz=36,slow=7.8,SNR=3.9						
WMQ	**Urumqi**	**58.68**	**302**	*e*P	P	18 07 09.5	+5.2
WMQ				LR	LR		
	comp=N,150nm,22.5s						
WMQ				LR	LR		
	comp=E,130nm,18.7s						
WMQ				LR	LR		
	comp=Z,120nm,19.5s						
TX31	**Lajitas Ar. Si**	**59.36**	**80**	*e*P	**P**	**18 07 09.0**	**-0.3**
TXAR	**Lajitas Array**	**59.36**	**80**	P	**P**	**18 07 09.2**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=300,slow=5.6,SNR=7.0						
MKAR	**Makanchi Array**	**59.41**	**308**	P	**P**	**18 07 09.6**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=42,slow=8.4,SNR=8.0						
MAKZ	**Makanchi**	**59.55**	**308**	*e*P	**P**	**18 07 11.6**	**+1.3**
	comp=Z,5.7nm,1.1s						
HPIG		**59.83**	**84**	*e*P	**P**	**18 07 10.8**	**-1.8**
	comp=Z,18nm,0.6s						
KMI	**Kunming**	**62.99**	**277**	P	P	18 07 38.1	+4.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
FINES	**FINESS Array B**	**65.54**	**347**	P	**P**	**18 07 47.1**	**-2.8**
	comp=Z,1.1nm,0.7s,baz=43,slow=6.3,SNR=3.3						
NOA	**NORSAR Array B**	**67.50**	**354**	P	**P**	**18 08 01.1**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=0.8,slow=5.0,SNR=3.5						
CMAR	**Chiang Mai Arr**	**70.28**	**275**	P	**P**	**18 08 22.0**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=24,slow=7.0,SNR=7.7						
CM01	**Chiang Mai Arr**	**70.30**	**275**	*e*P	**P**	**18 08 20.5**	**+0.1**
AKASG	**Malin Array Be**	**75.24**	**341**	P	**P**	**18 08 48.1**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=21,slow=6.5,SNR=3.7						
BUR08	**Bucovina Ar. S**	**78.94**	**343**	*e*P	**P**	**18 09 10.1**	**-0.1**
WRA	**Warramunga Arr**	**81.57**	**223**	P	**P**	**18 09 25.2**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=32,slow=6.0,SNR=11						
ASAR	**Alice Springs**	**85.06**	**222**	P	**P**	**18 09 44.0**	**+1.7**
	comp=Z,1.0nm,0.8s,baz=25,slow=5.3,SNR=8.3						
BOSA	**Boshof**	**150.38**	**311**	PKPbc	**PKiKP**	**18 16 58.2**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=52,slow=2.9,SNR=5.7						

ISCJB ***21*** *18:00:39.5±1.1, 21°.34S±0°.07×67°.7W±0°.2, h238^{km}±19^{km}, mb3.3/1, Error ellipse: s-maj=35.2km s-min=9.1km az=10.4*

GUC ***21*** *18:00:39.6±0.7, 21°.36S×67°.68W, h218^{km}±12^{km}, ML3.7*

IDC ***21*** *18:00:42.7±8.4, 21°.03S×66°.96W, h217^{km}±74^{km}, mb3.2/1, mb1 3.3/2, mb1mx3.0/23, mbtmp3.8/2, Error ellipse: s-maj=89.4km s-min=71.9km az=165.0*

ISC 21 18:00:39.8±1.6**, 21°.34S**±0°.08×**67°.5W**±0°.2**, h212**^{km}±18^{km}**, n13, σ0^{s}.75**/22**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**1.86**	**279**	*e*P	**Pn**	**18 01 18.2**	**+0.2**
PB01				*i* S	**Sn**	**18 01 47.8**	**0.0**
PB01				IAML		18 01 49.5	
	comp=N,412nm,0.2s						
PB08	**IPOC Station P**	**1.94**	**308**	*e*P	**Pn**	**18 01 20.0**	**+0.9**
PB08				*i* S	**Sn**	**18 01 50.5**	**+0.8**
PB08				IAML		18 01 52.8	
	comp=N,160nm,0.3s						
PB03	**IPOC Station P**	**2.19**	**251**	*e*P	**Pn**	**18 01 21.4**	**0.0**
PB03				*i* S	**Sn**	**18 01 53.4**	**-0.5**
PB03				IAML		18 01 53.8	
	comp=E,428nm,0.1s						
PB02	**IPOC Station P**	**2.21**	**270**	*e*P	**Pn**	**18 01 21.7**	**+0.1**
PB02				*i* S	**Sn**	**18 01 53.9**	**-0.3**
PB07	**IPOC Station P**	**2.23**	**260**	*e*P	**Pn**	**18 01 22.4**	**+0.5**
PB07				*i* S	**Sn**	**18 01 54.4**	**-0.3**
PB06	**IPOC Station P**	**2.34**	**234**	*i* S	**Sn**	**18 01 56.0**	**-0.6**
PB11	**IPOC Station P**	**2.54**	**308**	*e*P	**Pn**	**18 01 25.6**	**+0.4**
PB11				*i* S	**Sn**	**18 02 00.5**	**-0.1**
PB04	**IPOC Station P**	**2.63**	**248**	*e*P	**Pn**	**18 01 26.4**	**+0.2**
PB04				*i* S	**Sn**	**18 02 01.7**	**-0.7**
PSGC	**Pisagua**	**3.00**	**305**	*e*P	**Pn**	**18 01 29.9**	**-0.3**
PSGC				*i* S	**Sn**	**18 02 08.7**	**-1.0**
PSGC				IAML		18 02 14.1	
	comp=N,137nm,0.2s						
LPAZ	**La Paz**	**5.06**	**353**	P	**Pn**	**18 01 56.5**	**+0.6**
	comp=N,2.2nm,0.3s,baz=174,slow=9.2,SNR=37						
LPAZ				S	**Sn**	**18 02 54.7**	**-1.4**
	comp=N,0.3nm,0.3s,baz=15,slow=19,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.08**	**70**	P	**P**	**18 12 03.4**	**-1.2**
	comp=N,0.3nm,0.4s,baz=251,slow=5.6,SNR=5.1						
WRA	**Warramunga Arr**	**133.73**	**209**	PKP	**PKiKP**	**18 19 34.1**	**+0.7**
	comp=N,0.4nm,0.8s,baz=153,slow=2.0,SNR=5.1						
MKAR	**Makanchi Array**	**144.74**	**37**	PKP	**PKPdf**	**18 19 52.6**	**+1.4**
	comp=N,0.3nm,0.5s,baz=312,slow=3.0,SNR=4.6						

ISCJB ***21*** *18:02:21.7±1.5, 31°.38N±0°.08×142°.9E±0°.3, h50^{km}, mb3.4/2, Error ellipse: s-maj=37.9km s-min=8.7km az=168.8*

IDC ***21*** *18:02:24.7±2.8, 30°.81N×141°.14E, h0^{km}, mb3.2/2, mb1 3.5/4, mb1mx3.2/41, mbtmp3.4/4, ML2.9/2, Error ellipse: s-maj=108.6km s-min=24.2km az=69.0*

JMA ***21*** *18:02:27.9±0.9, 31°.84N×142°.49E, h26^{km}, M4.0*

ISC 21 18:02:23.4±1.5**, 31°.44N**±0°.07×**142°.8E**±0°.2**, h50**^{km}**, n14, σ2^{s}.68**/17**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.00**	**305**	P	**Pn**	**18 03 09.6**	**+1.2**
BSO1	**Boso 1**	**3.54**	**335**	P	**Pn**	**18 03 16.8**	**+1.5**
BSO3	**Boso 3**	**3.85**	**331**	P	**Pn**	**18 03 20.8**	**+1.0**
JCJ	**Chichijima**	**4.35**	**187**	Pn	**Pn**	**18 03 25.8**	**-1.2**
	4.9nm,0.3s,baz=346,slow=22,SNR=11						
JCJ				Sn	**Sn**	**18 04 12.7**	**-3.8**
	5.0nm,0.3s,baz=288,slow=20,SNR=2.9						
JOD2	**Odawara 2**	**4.90**	**322**	P	**Pn**	**18 03 36.4**	**+1.9**
JHU	**Hanno**	**5.27**	**328**	P	**Pn**	**18 03 41.0**	**+1.4**
JHO	**Hitachi**	**5.47**	**341**	P	**Pn**	**18 03 43.2**	**+0.9**
JRY	**Ryogami san**	**5.59**	**326**	P	**Pn**	**18 03 45.7**	**+1.8**
JAG	**Ashikaga**	**5.69**	**332**	P	**Pn**	**18 03 46.6**	**+1.4**
JFK	**Kawauchi**	**6.12**	**346**	*e*S	**Sn**	**18 04 54.3**	**-5.6**
MJAR	**Matsushiro Arr**	**6.34**	**325**	Pn	**Pn**	**18 03 56.0**	**+1.7**
	0.1nm,0.3s,baz=162,slow=13,SNR=6.9						
MJAR				Sn	**Sn**	**18 05 02.2**	**-3.2**
	0.0nm,0.3s,baz=19,slow=24,SNR=2.8						
JFT	**Otama**	**6.39**	**342**	P	**Pn**	**18 03 56.7**	**+1.8**
JFT				S	**Sn**	**18 05 03.1**	**-3.4**
MKAR	**Makanchi Array**	**48.20**	**307**	P	**P**	**18 11 01.9**	**+3.1**
	0.1nm,0.3s,baz=93,slow=8.7,SNR=2.5						
WRA	**Warramunga Arr**	**51.72**	**190**	P	**P**	**18 11 26.7**	**+1.0**
	0.2nm,0.3s,baz=6.4,slow=7.6,SNR=2.7						

MAN 21 18:02:59.4, 11°.74N×125°.48E, h32^{km}, mb4.1, ML2.9, MS2.6, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.14**	**196**	*e*P	Pn	18 03 05.8	+0.5
BESP				*e*S	Sb	18 03 11.3	+2.0
PLP	**Palo**	**0.75**	**221**	⇓*e*P	Pb	18 03 14.4	+0.4
PLP				*e*S	Sn	18 03 24.9	+0.9
OCLP	**Ormoc**	**1.09**	**232**	*e*P	Pb	18 03 20.1	+0.4
CNP	**Catarman**	**1.11**	**314**	*e*P	Pb	18 03 19.4	-0.6
CNP				*e*S	Sn	18 03 32.3	-0.6
MSLP	**Maasin**	**1.70**	**201**	*e*P	Pb	18 03 29.9	-0.2
MSLP				*e*S	Sb	18 03 54.6	+3.5

IDC ***21*** *18:04:43.4±0.9, 11°.49S×165°.17E, h0^{km}, mb4.2/11, mb1 4.4/13, mb1mx4.2/32, mbtmp4.2/13, ML4.2/2, Error ellipse: s-maj=31.0km s-min=19.0km az=134.0*

NEIC ***21*** *18:04:45.5±4.9, 11°.50S×165°.12E, h14^{km}±30^{km}, mb4.6/9, Error ellipse: s-maj=11.6km s-min=9.9km az=180.0*

ISCJB ***21*** *18:04:47.0±0.5, 11°.60S±0°.07×165°.01E±0°.06, h34^{km}, mb4.3/17, Error ellipse: s-maj=10.8km s-min=8.9km az=176.0*

ISC 21 18:04:48.5±0.7**, 11°.51S**±0°.10×**165°.06E**±0°.08**, h34**^{km}**, n32, σ0^{s}.98**/37**, mb4.3**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.44**	**292**	*e*Pn	**Pn**	**18 06 06.3**	**-0.9**
HNR				*e*Sn	**Sn**	**18 07 08.9**	**+0.3**
HNR	**Honiara**	**5.44**	**292**	Pn	**Pn**	**18 06 07.3**	**+0.1**
	13nm,0.3s,baz=152,slow=6.1,SNR=8.3						
HNR				Sn	**Sn**	**18 07 08.9**	**+0.3**
	2.8nm,0.3s,baz=218,slow=19,SNR=4.3						
DZM	**Mont Dzumac**	**10.59**	**173**	Pn	**Pn**	**18 07 17.3**	**-0.6**
	1.1nm,0.3s,baz=304,slow=12,SNR=13						
MANU	**Manus Island**	**19.91**	**297**	*e*P	**P**	**18 09 14.6**	**-2.8**
	144nm,1.6s						
CTA	**Charters Tower**	**19.99**	**242**	P	**Pn**	**18 09 19.5**	**-0.7**
	7.8nm,1.0s,baz=61,slow=11,SNR=8.2						
COEN	**Coen**	**21.48**	**261**	*e*P	**P**	**18 09 35.5**	**+1.1**
	19nm,1.1s						
STKA	**Stephens Creek**	**29.64**	**223**	P	**P**	**18 10 51.2**	**+0.3**
	2.3nm,0.7s,baz=56,slow=10.0,SNR=4.8						
WB2	**Warramunga Arr**	**30.68**	**250**	*e*P	**P**	**18 10 59.3**	**-1.0**
WRAB	**Tennant Creek**	**30.68**	**250**	*e*P	**P**	**18 11 00.6**	**+0.3**
	8.6nm,1.0s						
WR1	**Warramunga Arr**	**30.69**	**250**	*e*P	**P**	**18 11 00.3**	**-0.1**
	16nm,1.1s						
WR1				*e*PcP	**PcP**	**18 13 59.5**	**+1.5**
WRA	**Warramunga Arr**	**30.69**	**250**	P	**P**	**18 11 00.3**	**-0.1**
	5.9nm,0.8s,baz=80,slow=9.3,SNR=31						
WRA				PcP	**PcP**	**18 13 59.5**	**+1.5**
	0.7nm,1.0s,baz=58,slow=1.9,SNR=3.4						
AS01	**Alice Springs**	**31.94**	**244**	*e*P	**P**	**18 11 11.1**	**-0.3**
ASAR	**Alice Springs**	**31.98**	**244**	P	**P**	**18 11 11.1**	**-0.7**
	3.6nm,0.8s,baz=71,slow=9.4,SNR=32						
ASAR				PcP	**PcP**	**18 14 02.9**	**+1.5**
	0.5nm,0.8s,baz=64,slow=4.2,SNR=4.0						
CM01	**Chiang Mai Arr**	**71.66**	**294**	*e*P	**P**	**18 16 07.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**71.68**	**294**	P	**P**	**18 16 09.7**	**+2.2**
	0.6nm,0.9s,baz=134,slow=4.0,SNR=5.0						
ULN	**Ulaanbaatar**	**78.28**	**324**	*e*P	**P**	**18 16 46.0**	**+0.8**
	2.9nm,0.8s						
SONA0	**Songino Array**	**78.64**	**324**	*e*P	**P**	**18 16 47.9**	**+0.7**
SONM	**Songino Array**	**78.64**	**324**	P	**P**	**18 16 47.9**	**+0.7**
	0.8nm,0.8s,baz=144,slow=7.3,SNR=6.1						
BILL	**Bilibino**	**79.34**	**0**	*e*P	**P**	**18 16 50.4**	**0.0**
	6.9nm,1.1s						
ILAR	**Eielson Array**	**84.17**	**19**	P	**P**	**18 17 15.7**	**-0.2**
	1.2nm,0.5s,baz=236,slow=4.8,SNR=24						
ILB	**Eielson Array**	**84.17**	**19**	*e*P	**P**	**18 17 15.5**	**-0.4**
	23nm,1.8s						
NV01	**Mina Array Sit**	**86.83**	**50**	*e*P	**P**	**18 17 29.9**	**-0.2**
NVAR	**Mina Array Bea**	**86.83**	**50**	P	**P**	**18 17 30.4**	**+0.3**
	2.1nm,0.8s,baz=231,slow=5.7,SNR=4.9						
X16A	**Lo Mia Camp, P**	**91.14**	**55**	*e*P	**P**	**18 17 51.3**	**+0.8**
	3.6nm,1.0s						
MK01	**Makanchi Array**	**93.39**	**317**	*e*P	**P**	**18 18 01.0**	**+0.6**
MK31	**Makanchi Array**	**93.40**	**317**	*e*P	**P**	**18 18 01.1**	**+0.6**
	1.2nm,0.9s						
MK32	**Makanchi Array**	**93.40**	**317**	*e*P	**P**	**18 18 00.8**	**+0.4**
MKAR	**Makanchi Array**	**93.40**	**317**	P	**P**	**18 18 00.8**	**+0.4**
	0.8nm,0.7s,baz=89,slow=5.7,SNR=7.4						
ZALV	**Zalesovo Beam**	**93.54**	**324**	P	**P**	**18 18 00.5**	**-0.3**
	0.3nm,0.4s,baz=98,slow=3.0,SNR=3.7						
ZAA1	**Zalesovo Array**	**93.54**	**324**	*e*P	**P**	**18 18 00.5**	**-0.3**
YKA	**Yellowknife Ar**	**95.69**	**27**	P	**P**	**18 18 08.5**	**-1.9**
	0.4nm,0.7s,baz=260,slow=4.6,SNR=5.1						
YKB5	**Yellowknife Ar**	**95.69**	**27**	*e*P	**P**	**18 18 09.8**	**-0.7**

DJA 21 18:23:38.1±0.8**, 2°S**±4°×**13°7E**±°**, h12**^{km}±6^{km}**, M3.9**/5**, MLv3.9**/5**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.67**	**296**	P	Pg	18 23 50.9	-0.2
SRPI				S	Sg	18 23 59.5	-0.5
BAKI	**Biak**	**1.22**	**323**	P	Pn	18 24 00.7	-0.3
BAKI				S	Sg	18 24 17.4	0.0
RKPI	**Ransiki, Papua**	**2.74**	**284**	P	Pn	18 24 21.6	-0.3
RKPI				S	Sn	18 24 55.6	+0.6
RKPI				Sg	Sg	18 25 09.5	+3.2
GENI	**Genyem**	**3.35**	**97**	P	Pn	18 24 29.9	-0.4
FAKI	**Fak Fak**	**4.65**	**261**	P	Pn	18 24 47.6	-0.6

MEX 21 18:26:13.4±0.5**, 15°.50N×95°.21W, h58**^{km}±18^{km}**, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.91**	**287**	*e*P	Pn	18 26 28.5	-1.7
HUIG				*i* S	Sn	18 26 40.8	-1.7
CMIG	**Matias Romero**	**1.61**	**11**	*e*P	Pn	18 26 38.3	-1.3
CMIG				*i* S	Sn	18 26 56.8	-2.5
PCIG		**1.93**	**84**	*e*P	Pn	18 26 39.3	-4.6

ISCJB ***21*** *18:29:10.4±0.7, 67°.60N±0°.05×142°.2E±0°.2, h10^{km}, mb4.0/4, MS3.6/1, Error ellipse: s-maj=9.6km s-min=6.8km az=170.4*

IDC ***21*** *18:29:10.3±1.3, 67°.65N×142°.20E, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.4/45, mbtmp3.6/4, ML2.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/46, Error ellipse: s-maj=35.1km s-min=21.8km az=23.0*

MOS ***21*** *18:29:10.9±3.4, 67°.73N×142°.15E, h11^{km}, mb3.9/3, Error ellipse: s-maj=46.7km s-min=13.3km az=96.8*

YARS ***21*** *18:29:11.9±0.1, 67°.620N±0°.002×142°.430E±0°.009, h10^{km}*

ISC 21 18:29:10.9±0.7**, 67°.62N**±0°.03×**142°.09E**±0°.05**, h10**^{km}**, n17, σ1^{s}.67**/24**, mb3.8**/4**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.24**	**159**	*e*P	**Pn**	**18 29 33.4**	**-0.8**
MOMR				*e*S	**Sb**	**18 29 48.9**	**-1.4**
MOMR				pmax	pmax		
	comp=Z,177nm,0.3s						
MOMR				smax	smax		
	comp=N,2μm,0.2s						
MOMR	**Moma**	**1.24**	**159**	*e*P	**Pn**	**18 29 33.4**	**-0.8**
MOMR				*e*S	**Sb**	**18 29 48.9**	**-1.4**
YBGR	**Belaya Gora**	**1.79**	**57**	*e*P	**Pb**	**18 29 42.1**	**-1.7**
YBGR				*e*S	**Sn**	**18 30 03.9**	**-0.7**
YBGR	**Belaya Gora**	**1.79**	**57**	*e*P	**Pb**	**18 29 42.1**	**-1.7**
YBGR				*e*S	**Sn**	**18 30 03.9**	**-0.7**
DEPR	**Deputatskiy**	**1.96**	**337**	*e*P	**Pb**	**18 29 46.2**	**-0.3**
DEPR				*e*S	**Sg**	**18 30 14.3**	**+0.7**
DEPR	**Deputatskiy**	**1.96**	**337**	*e*P	**Pb**	**18 29 46.2**	**-0.3**
DEPR				*e*P	**Pg**	**18 29 48.0**	**-0.3**
DEPR				*e*S	**Sg**	**18 30 14.3**	**+0.7**
ATKR	**Artyk**	**3.67**	**159**	*e*P	**Pb**	**18 30 17.1**	**+1.3**
ATKR				pmax	pmax		
	comp=Z,53nm,0.6s						
ATKR	**Artyk**	**3.67**	**159**	*e*P	**Pb**	**18 30 17.1**	**+1.3**
ATKR				*e*S	**Sb**	**18 31 03.9**	**+3.6**
SEY	**Seymchan**	**6.38**	**133**	Pn	**Pn**	**18 30 45.0**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=323,slow=13,SNR=4.5						
SEY				Pg	Pb	18 30 54.3	-7.5
	comp=Z,0.6nm,0.3s,baz=297,slow=14,SNR=8.3						
SEY				Lg	Lg	18 32 28.8	
	comp=Z,1.4nm,0.3s,baz=320,slow=10,SNR=4.3						
YAK	**Yakutsk**	**7.70**	**229**	*e*S	**Sn**	**18 32 29.9**	**0.0**
YAK				*e*S	**Sg**	**18 33 12.6**	**-4.9**
MA2	**Magadan**	**8.94**	**150**	Lg	Lg	18 33 50.9	
	comp=Z,0.5nm,0.3s,baz=254,slow=23,SNR=6.8						
ILAR	**Eielson Array**	**27.38**	**62**	P	**P**	**18 34 56.2**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=300,slow=8.8,SNR=6.9						
MKAR	**Makanchi Array**	**36.53**	**266**	P	**P**	**18 36 17.4**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=27,slow=8.0,SNR=13						
FINES	**FINESS Array B**	**43.16**	**321**	P	**P**	**18 37 11.4**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=38,slow=9.2,SNR=3.6						
NOA	**NORSAR Array B**	**46.76**	**330**	P	**P**	**18 37 41.0**	**+1.3**
NOA	**NORSAR Array B**	**46.76**	**330**	P	**P**	**18 37 41.0**	**+1.3**
	comp=Z,22nm,0.5s,baz=24,slow=7.7,SNR=2.5						
VRAC	**Vranov**	**56.44**	**320**	LR	LR	19 05 29.4	
	comp=Z,44nm,18.9s,baz=328,slow=39						

NIED ***21*** *18:33:00, 24°.30N×121°.40E, h8^{km}, Mw4.3 Best double couple: M$_0$3.32000×10^{15} NP1:φ$_s$193.00000°, δ29.00000°, λ-35.00000°. NP2:φ$_s$314.00000°, δ74.00000°, λ-115.00000°.*

JMA ***21*** *18:33:06.6±0.1, 24°.29N×121°.42E, h0^{km}, M4.1*

TAP ***21*** *18:33:07.2, 24°.31N×121°.45E, h5^{km}, ML4.4, C*

ISCJB ***21*** *18:33:08.0±0.2, 24°.336N±0°.009×121°.47E±0°.01, h6^{km}±1^{km}, mb4.0/22, Error ellipse: s-maj=2.0km s-min=1.4km az=29.8*

NEIC ***21*** *18:33:08.0±2.2, 24°.29N×121°.45E, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=5.2km s-min=2.8km az=81.0*

BJI ***21*** *18:33:08.1, 24°.29N×121°.51E, h17^{km}, mB4.0/1, mb3.9/12, ML4.1/7, Ms3.9/1, Ms7 3.8/2*

IDC ***21*** *18:33:13.8±3.7, 24°.24N×121°.61E, h53^{km}±35^{km}, mb3.7/14, mb1 3.8/15, mb1mx3.7/42, mbtmp4.0/15, ML2.6/1, Error ellipse: s-maj=21.2km s-min=16.1km az=61.0*

ISC 21 18:33:07.9±0.8**, 24°.32N**±0°.01×**121°.46E**±0°.01**, h7**^{km}±5^{km}**, n181, σ1^{s}.13**/246**, mb4.1**/22**, 54C-7D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.12**	**169**	*e*P	**Pg**	**18 33 10.5**	**+0.1**
	baz=165						
ETLH				*e*S	**Sg**	**18 33 12.5**	**+0.3**
	baz=165						
NNSB	**Datong**	**0.13**	**327**	⇑P	**Pg**	**18 33 10.5**	**-0.2**
	baz=332						
NNSB				S	**Sg**	**18 33 12.2**	**-0.4**
	baz=332						
NNS	**Nan Shan**	**0.14**	**327**	⇑*i*P	**Pg**	**18 33 10.7**	**-0.2**
	baz=333						
NNS				*i* S	**Sg**	**18 33 12.8**	**-0.2**
	baz=333						
NACB	**Ninganchiao**	**0.19**	**139**	*e*Pg	**Pg**	**18 33 11.1**	**-0.7**
NACB	**Ninganchiao**	**0.19**	**139**	⇑P	**Pg**	**18 33 11.9**	**+0.2**
	baz=137						
NACB				S	**Sg**	**18 33 15.1**	**+0.8**
	baz=137						
WHF	**Hehuan Shan**	**0.25**	**225**	⇑*i*P	**Pg**	**18 33 12.5**	**-0.4**
	baz=224						
TWT	**Tachien**	**0.27**	**256**	⇑*i*P	**Pg**	**18 33 13.3**	**+0.2**
	baz=246						
TWT				S	**Sg**	**18 33 17.2**	**+0.4**
	baz=246						
TWD	**Chiawan**	**0.27**	**152**	*e*P	**Pg**	**18 33 13.4**	**+0.2**
	baz=150						
TWD				S	**Sg**	**18 33 17.4**	**+0.6**
	baz=150						
ENA	**Nanau**	**0.28**	**67**	⇑P	**Pg**	**18 33 13.4**	**0.0**
	baz=70						
TDCB	**Techi**	**0.28**	**256**	⇑P	**Pg**	**18 33 13.4**	**-0.1**
	baz=247						
TDCB				S	**Sg**	**18 33 17.1**	**-0.1**
	baz=247						
NDT	**Datong Townshi**	**0.28**	**10**	⇑*i*P	**Pg**	**18 33 13.7**	**+0.2**
	baz=11						
NDT				*e*S	**Sg**	**18 33 17.8**	**+0.5**
	baz=11						
NANB	**Nanao**	**0.29**	**68**	⇑P	**Pg**	**18 33 13.3**	**-0.2**
	baz=68						
NANB				S	**Sg**	**18 33 17.3**	**-0.1**
	baz=68						
ENTT	**Nioudou**	**0.33**	**17**	⇑*i*P	**Pg**	**18 33 14.6**	**+0.2**
	baz=11						
ENTT				S	**Sg**	**18 33 19.5**	**+0.7**
	baz=11						
YHNB	**Yeheng**	**0.36**	**348**	*e*Pg	**Pg**	**18 33 14.9**	**0.0**
YHNB	**Yeheng**	**0.36**	**348**	⇑P	**Pg**	**18 33 15.3**	**+0.4**
	baz=349						
YHNB				S	**Sg**	**18 33 19.6**	**0.0**
	baz=349						
CHGB	**Renai**	**0.37**	**225**	⇑P	**Pg**	**18 33 14.7**	**-0.4**
	baz=225						
HWA	**Hwalien**	**0.37**	**159**	*e*P	**Pg**	**18 33 15.3**	**+0.2**
	baz=146						
ENLB	**Shoufeng**	**0.43**	**162**	P	**Pg**	**18 33 16.9**	**+0.5**
	baz=150						
TWE	**Neicheng**	**0.44**	**25**	⇑*i*P	**Pg**	**18 33 16.8**	**+0.3**
	baz=40						
TWE				S	**Sg**	**18 33 23.1**	**+0.8**
	baz=40						
OWD	**Renai**	**0.45**	**215**	*e*P	**Pg**	**18 33 16.2**	**-0.4**
	baz=215						
OWD				*e*S	**Sg**	**18 33 22.3**	**-0.1**
	baz=215						
NWLT	**Wulai**	**0.46**	**5**	⇑P	**Pg**	**18 33 17.1**	**+0.4**
	baz=6.0						
NWLT				*e*S	**Sg**	**18 33 23.2**	**+0.5**
	baz=6.0						
TWC	**Suao**	**0.46**	**51**	⇑*i*P	**Pg**	**18 33 16.6**	**-0.2**
	baz=54						
WHP	**Taichung City**	**0.47**	**265**	⇑P	**Pg**	**18 33 17.5**	**+0.5**
	baz=263						
WHP				S	**Sg**	**18 33 24.1**	**+1.0**
	baz=263						
ESL	**Shilin**	**0.51**	**183**	⇑P	**Pg**	**18 33 17.4**	**-0.2**
	baz=171						
ILA	**Ilan**	**0.52**	**31**	⇑*i*P	**Pg**	**18 33 18.2**	**+0.3**
	baz=43						
ILA				S	**Sg**	**18 33 25.9**	**+1.3**
	baz=43						
LIOB	**Emei**	**0.52**	**309**	⇑*i*P	**Pg**	**18 33 17.9**	**0.0**
	baz=308						
LIOB				S	**Sg**	**18 33 25.0**	**+0.3**
	baz=308						
NSTT	**Nanjuang**	**0.52**	**307**	⇑*i*P	**Pb**	**18 33 18.7**	**-0.7**
	baz=306						
NSTT				S	**Sg**	**18 33 25.6**	**+0.8**
	baz=306						
WLTB	**Daxi**	**0.56**	**341**	⇑*e*P	**Pb**	**18 33 20.1**	**0.0**
	baz=352						
WLTB				*e*S	**Sg**	**18 33 27.2**	**+1.1**
	baz=352						
TWQ1	**Liyutan**	**0.62**	**273**	⇑*i*P	**Pb**	**18 33 20.7**	**-0.4**
	baz=271						
NTC	**Toucheng**	**0.63**	**32**	*e*P	**Pg**	**18 33 19.8**	**-0.3**
	baz=46						
VWDT	**VWDT**	**0.63**	**207**	⇑P	**Pg**	**18 33 19.3**	**-0.8**
	baz=212						
VWDT				S	**Sg**	**18 33 28.5**	**+0.2**
	baz=212						
SBCB	**Hsinchu**	**0.64**	**318**	⇑P	**Pb**	**18 33 22.0**	**+0.7**
	baz=317						
SBCB				*e*S	**Sb**	**18 33 30.9**	**+0.4**
	baz=317						
NHDH	**Xindian Distri**	**0.64**	**5**	*e*P	**Pg**	**18 33 20.9**	**+0.6**
	baz=20						
NHDH				S	**Sg**	**18 33 29.6**	**+0.9**
	baz=20						
NSY	**Sanyi**	**0.64**	**279**	⇑*i*P	**Pb**	**18 33 21.6**	**+0.2**
	baz=277						
NMLH	**Miaoli**	**0.65**	**290**	⇑*i*P	**Pb**	**18 33 21.8**	**+0.3**
	baz=289						
NMLH				*e*S	**Sb**	**18 33 30.9**	**+0.1**
	baz=289						
EGFH	**Guangfu**	**0.65**	**182**	*e*P	**Pg**	**18 33 20.1**	**-0.3**
	baz=173						
EOS1	**EOS1**	**0.65**	**69**	*e*P	**Pg**	**18 33 20.8**	**+0.3**
	baz=58						
EOS1				*e*S	**Sb**	**18 33 31.1**	**+0.2**
	baz=58						
TATO	**Taipei**	**0.65**	**2**	*e*Pg	**Pg**	**18 33 20.5**	**+0.1**
TATO	**Taipei**	**0.65**	**2**	⇑P	**Pb**	**18 33 21.3**	**-0.3**
	baz=17						
TATO				*e*S	**Sg**	**18 33 29.5**	**+0.5**
	baz=17						
HSN	**Hsinchu**	**0.65**	**317**	⇑*i*P	**Pb**	**18 33 22.2**	**+0.5**
	baz=319						
TWA	**Mucha**	**0.67**	**10**	⇑*i*P	**Pg**	**18 33 21.4**	**+0.6**
	baz=11						
TWA				S	**Sg**	**18 33 30.4**	**+0.9**
	baz=11						
SMLT	**Sun Moon Lake**	**0.67**	**230**	⇑*i*P	**Pg**	**18 33 20.8**	**-0.1**
	baz=228						
EGS		**0.68**	**39**	*e*P	**Pg**	**18 33 21.2**	**+0.3**
	baz=42						
TYC	**Yuchr**	**0.69**	**233**	⇑*i*P	**Pg**	**18 33 20.9**	**-0.2**
	baz=231						
NCUH	**Zhongli**	**0.69**	**339**	*e*P	**Pb**	**18 33 23.2**	**+0.9**
	baz=339						
NCU	**National Centr**	**0.69**	**339**	*e*P	**Pb**	**18 33 22.9**	**+0.6**
	baz=349						
PTSB	**Yuanli**	**0.70**	**281**	⇑*i*P	**Pb**	**18 33 23.0**	**+0.6**
	baz=278						
SSLB	**Suanglung**	**0.70**	**221**	*e*Pg	**Pg**	**18 33 20.2**	**-1.2**

SSLB	Suanglung baz=231	0.70	221	⇑P	Pg	18 33 20.6	-0.8
TIPB	Shuangxi baz=13	0.73	27	⇑*i*P	Pg	18 33 22.0	0.0
TIPB	baz=13			*e*S	Sg	18 33 30.9	-0.5
TCU	Taichung baz=254	0.73	257	*e*P	Pb	18 33 23.4	+0.5
WDJ	Dajia District baz=270	0.75	272	⇑*i*P	Pn	18 33 24.1	-0.7
TWS1	Kuangyinshan baz=359	0.78	357	⇑*i*P	Pb	18 33 24.4	+0.6
NWF	Wu-fen Shan baz=22	0.80	21	*e*P	Pg	18 33 23.6	+0.3
NWF	baz=22			*e*S	Sb	18 33 35.7	+0.4
WFSB	Wu-fen Shan baz=22	0.80	21	⇑P	Pg	18 33 23.6	+0.3
WFSB	baz=22			*e*S	Sb	18 33 35.1	-0.2
EHY	Hungye baz=181	0.82	189	*e*P	Pg	18 33 23.1	-0.5
HGSD	Ruisui baz=190	0.82	182	⇑*e*P	Pg	18 33 23.9	+0.1
YM01	YM01 baz=7.0	0.83	7	⇑P	Pb	18 33 24.7	+0.1
YM01	baz=7.0			S	Sb	18 33 35.6	-0.4
WHYT	Xinyi Township baz=221	0.83	222	*e*P	Pg	18 33 23.2	-0.7
WJS	Zhushan baz=225	0.83	234	⇑*e*P	Pb	18 33 24.5	-0.2
WNT	Mingjian baz=231	0.83	238	*e*P	Pb	18 33 24.6	-0.1
YM04	YM04 baz=22	0.83	5	*e*P	Pb	18 33 24.7	-0.1
TWB1	Santiao Chiao baz=36	0.84	35	P	Pg	18 33 23.4	-0.6
TWB1	baz=36			*e*S	Sg	18 33 34.2	-0.7
NTST	Danshui baz=11	0.84	359	*e*P	Pn	18 33 25.6	-0.5
NTST	baz=11			*e*S	Sn	18 33 39.2	+0.4
YM05	YM05 baz=7.0	0.85	7	⇑P	Pb	18 33 25.1	+0.1
YM05	baz=7.0			*e*S	Sg	18 33 35.9	+0.7
YM11	YM11 baz=9.0	0.85	7	⇑P	Pb	18 33 25.1	+0.1
WCHH	Zhanghua baz=251	0.86	254	*e*P	Pn	18 33 26.0	-0.3
YM08	YM08 baz=10.0	0.87	8	⇑P	Pg	18 33 25.1	+0.4
YULB	Yu-li	0.94	189	*e*Pg	Pg	18 33 25.1	-0.7
YULB	Yu-li baz=178	0.94	189	*e*P	Pg	18 33 25.1	-0.7
YULB	baz=178			*e*S	Sb	18 33 38.8	-0.3
TWY	Chenhua baz=10.0	0.96	8	*e*P	Pn	18 33 27.4	-0.4
TWF1	Yuli baz=188	0.97	189	*e*P	Pg	18 33 26.0	-0.6
TWF1	baz=188			*e*S	Sb	18 33 39.5	-0.7
CHN5	Tsauling baz=218	1.01	225	⇑P	Pb	18 33 27.7	-0.2
CHN5	baz=218			*e*S	Sn	18 33 43.0	-0.2
WGK	Gukeng baz=230	1.03	233	⇑*i*P	Pn	18 33 28.5	-0.3
WGK	baz=230			*e*S	Sn	18 33 44.0	+0.4
WDLH	Douliu baz=231	1.05	233	P	Pn	18 33 29.0	0.0
RLNB	Erlin baz=259	1.09	247	⇑P	Pn	18 33 29.7	+0.1
RLNB	baz=259			*e*S	Sn	18 33 46.6	+1.7
FULB	Fuli baz=188	1.13	188	*e*P	Pn	18 33 30.2	+0.1
FULB	baz=188			*e*S	Sn	18 33 46.5	+0.6
WTCT	Ta-ch'eng baz=244	1.17	247	*e*P	Pn	18 33 30.7	+0.1
WTCT	baz=244			*e*S	Sn	18 33 47.7	+0.9
CHN2	Minshiung baz=227	1.19	229	⇓*i*P	Pn	18 33 31.6	+0.6
CHN2	baz=227			*e*S	Sn	18 33 49.3	+1.8
ELDTW	Lidau baz=200	1.20	200	*e*P	Pg	18 33 29.6	-1.2
ELDTW	baz=200			*e*S	Sn	18 33 47.4	-0.4
CHKT	Chengkung baz=170	1.22	184	*e*P	Pg	18 33 29.1	-2.1
WMLT	Mailiao baz=243	1.24	246	*e*P	Pg	18 33 31.8	+0.1
CHN4	Tsaushan baz=218	1.25	220	⇑P	Pg	18 33 32.0	+0.1
CHN4	baz=218			S	Sn	18 33 50.7	+1.9
CHY	Chiayi baz=227	1.25	229	P	Pg	18 33 32.7	+0.8
CHY	baz=227			*e*S	Sn	18 33 50.3	+1.4
TPUB	Ta-pu	1.27	217	*e*Pn	Pn	18 33 31.5	-0.6
TPUB	Ta-pu baz=216	1.27	217	⇑P	Pn	18 33 31.9	-0.2
TPUB	baz=216			S	Sn	18 33 50.7	+1.3
STYT	Tauyuan baz=209	1.32	209	⇑P	Pn	18 33 32.2	-0.6
STYT	baz=209			*e*S	Sn	18 33 52.0	+1.3
WSF	Szhu baz=236	1.32	239	*e*P	Pg	18 33 32.9	-0.2
WSF	baz=236			*e*S	Sn	18 33 51.7	+1.1
WTP	Ta-pu baz=215	1.32	216	⇑*i*P	Pb	18 33 32.9	-0.2
WTP	baz=215			*e*S	Sn	18 33 52.1	+1.4
JYNG	Yonagunijimaku	1.36	84	P	Pg	18 33 34.0	0.0
TWK	Hsinying baz=219	1.38	220	⇓*i*P	Pg	18 33 34.2	0.0
TWK	baz=219			*e*S	Sn	18 33 54.5	+2.5
SNST	Tainan City baz=217	1.41	219	*e*P	Pg	18 33 35.0	+0.1
CHN1	Nanshi baz=216	1.42	217	⇑*i*P	Pg	18 33 35.2	+0.2
CHN1	baz=216			*e*S	Sg	18 33 55.0	+1.6
PCYT	Pengchaiyu baz=6.0	1.42	23	*e*P	Pn	18 33 33.7	-0.4
YOJ	Yonaguni jima	1.42	84	*e*Pn	Pb	18 33 34.5	-0.3
YOJ	Yonaguni jima baz=74	1.42	84	⇓P	Pb	18 33 34.8	0.0
YOJ	baz=74			*e*S	Sb	18 33 52.9	-0.2
YOJ	Yonaguni jima	1.42	84	P	Pb	18 33 34.7	0.0
YOJ				*e*S	Sg	18 33 53.4	-0.2
SGST	Jiashian baz=206	1.47	213	⇑*i*P	Pg	18 33 35.7	-0.4
SGST	baz=206			S	Sg	18 33 57.1	+1.9
CHN8	Yiju baz=239	1.50	230	P	Pb	18 33 36.0	0.0
CHN8	baz=239			*e*S	Sg	18 33 58.0	+1.9
SLGT	Liugui baz=198	1.52	210	*e*P	Pg	18 33 36.8	-0.1
TWG	Pinlang	1.53	193	*e*Pn	Pn	18 33 35.1	-0.6
TWG	Pinlang baz=176	1.53	193	*e*P	Pn	18 33 36.0	+0.3
TWGBT	Beinan baz=176	1.54	193	*e*P	Pb	18 33 36.1	-0.6
CHN3	Shinhua baz=218	1.59	219	P	Pg	18 33 38.5	+0.1
CHN3	baz=218			*e*S	Sg	18 34 02.0	+2.9
SCLT	Jiali baz=223	1.62	226	⇑*e*P	Pb	18 33 38.1	-0.1
SCLT	baz=223			S	Sg	18 34 01.4	+1.3
TAI1	Yung-k'ang baz=220	1.70	222	*e*P	Pg	18 33 39.9	-0.6
TAI1	baz=220			*e*S	Sg	18 34 04.4	+1.8
SSD	Sandimen baz=207	1.74	206	*e*P	Pg	18 33 40.6	-0.7
SSD	baz=207			*e*S	Sg	18 34 04.7	+0.8
TWM1	Shoushan baz=211	1.77	213	*e*P	Pg	18 33 41.4	-0.4
ECL	Taimali baz=178	1.78	195	⇓*e*P	Pb	18 33 40.4	-0.4
SGLT	Jiouru baz=208	1.82	209	*e*P	Pg	18 33 42.4	-0.4
MASBT	Mashibuluo baz=204	1.86	204	*e*P	Pg	18 33 43.0	-0.5
SNJT	Kaohsiung City baz=212	1.87	214	*e*P	Pb	18 33 42.8	+0.4
PNG	Penghu baz=244	1.90	247	*e*P	Pn	18 33 40.2	-0.4
PHUB	P'eng-hu baz=242	1.90	245	*e*P	Pn	18 33 40.2	-0.6
PTTC	Pingtan baz=304	1.93	308	*e*P	Pn	18 33 40.4	-0.8
VWUC	VWUC baz=289	1.95	290	*e*P	Pn	18 33 40.0	-1.4
WDGT	Dungji baz=236	1.96	238	*e*P	Pn	18 33 42.1	+0.6
SSPT	Xinbi baz=204	2.00	204	*e*P	Pg	18 33 45.4	-0.9
EAST	Anshuo baz=177	2.01	196	⇓*e*P	Pn	18 33 42.7	+0.4
TAW	Tawu baz=181	2.02	195	*e*P	Pb	18 33 44.2	-0.8
IRIF	Iriomote-Funau	2.07	89	P	Pn	18 33 43.5	+0.4
IRIF				*e*S	Sb	18 34 10.8	-1.0
SCZT	Fangliau baz=202	2.09	202	*e*P	Pb	18 33 45.4	-0.7
HATJ	Hateruma jima	2.16	97	P	Pb	18 33 46.8	-0.5
VCHM	Qimei baz=236	2.16	240	*e*P	Pn	18 33 44.1	-0.2
VCHM	baz=236			*e*S	Sn	18 34 12.1	+0.7
WLCH	Liuqiu baz=207	2.20	207	*e*P	Pn	18 33 46.1	+1.3
PTMZ	Houxiangcun baz=289	2.24	289	*e*P	Pn	18 33 44.4	-1.1
LAY	Lan-yu baz=165	2.27	178	*e*P	Pn	18 33 45.0	-0.9
MATB	Ma-tsu baz=319	2.28	323	*e*P	Pn	18 33 45.1	-0.9
JKRS	Kuro-shima	2.33	92	P	Pn	18 33 48.0	+1.4
JKRS				*e*S	Sb	18 34 17.8	-1.4
HEN	Hengchun baz=180	2.40	196	*e*P	Pn	18 33 49.1	+1.5
TWK1	Hengchun baz=178	2.44	194	*e*P	Pb	18 33 50.1	-2.1
TWKBT	Hengchun baz=178	2.44	194	*e*P	Pn	18 33 49.5	+1.3
JIJ	Ishigaki jima	2.45	88	P	Pn	18 33 49.0	+0.7
JIJ				S	Sn	18 34 20.0	+1.5
JISG	Ishigakijimahi	2.61	84	P	Pn	18 33 50.9	+0.4
JISG				*e*S	Sb	18 34 25.1	-2.3
QZH	Quanzhou	2.68	284	⇓*i*Pn	Pn	18 33 50.8	-0.7
QZH				Sn	Sn	18 34 22.0	-2.2
QZH	comp=N,350nm,1.0s			smax	smax		
QZH	comp=E,250nm,1.1s			smax	smax		
LYJJ	Jianjiangzhen baz=321	2.70	326	*e*P	Pn	18 33 51.3	-0.4
KNM	Kinmen baz=273	2.76	273	*e*P	Pn	18 33 53.6	+1.0
KNMB	Chin-men Tao baz=274	2.80	274	⇓*e*P	Pn	18 33 52.3	-0.8
MHZQ	Yeshan baz=306	2.82	309	*e*P	Pn	18 33 53.1	-0.3
XPSS	Dashiqiu baz=332	2.84	336	*e*P	Pn	18 33 52.8	-0.9
JTJ	Tarama	2.97	83	P	Pn	18 33 57.4	+1.9
AXDP	Jialang baz=281	3.23	281	*e*P	Pn	18 33 58.4	-0.6
ZPLA	Ao Xicun baz=265	3.41	264	*e*P	Pn	18 34 00.9	-0.6
JIRB	Irabujima	3.42	81	P	Pn	18 34 02.9	+1.3
ZZJH	Jiuhuzhen baz=274	3.49	273	*e*P	Pn	18 34 02.0	-0.7
JIKM	Ikemajima	3.50	79	P	Pn	18 34 04.4	+1.7
JOW	Kunigami 0.3nm,0.3s,baz=146,slow=12,SNR=5.1	6.64	66	P	Pn	18 34 47.0	+1.1
KSRS	Korea Array 0.2nm,0.3s,baz=204,slow=11,SNR=6.5	14.21	21	P	P	18 36 37.5	+0.4
HHC	Hu-ho-hao-te	18.45	336	*e*P	P	18 37 19.1	-5.1
HHC				S	Sn	18 40 41.6	-9.0
HHC	comp=Z,11nm,0.9s			pmax	pmax		
HHC	comp=Z,160nm,4.3s			pmax	pmax		
HHC	comp=N,290nm,8.6s			LR	LR		
HHC	comp=E,320nm,8.6s			LR	LR		
HHC	comp=Z,130nm,8.1s			LR	LR		
CM01	Chiang Mai Arr	21.75	259	*e*P	P	18 37 57.0	-3.1
CMAR	Chiang Mai Arr comp=Z,1.0nm,0.8s,baz=60,slow=8.6,SNR=11	21.75	259	P	P	18 38 03.9	+3.7
SBUM	Sibu comp=Z,5.7nm,1.1s	23.50	204	*e*P	P	18 38 17.1	-1.5
GTA	Gaotai	23.67	315	⇑P	P	18 38 22.9	+2.7
GTA				pP	sP	18 38 27.3	+3.4
GTA				sP	pP	18 38 30.0	+7.2
GTA	comp=Z,4.0nm,1.2s			pmax	pmax		
ULN	Ulaanbaatar comp=Z,6.6nm,0.9s	26.13	338	*e*P	P	18 38 43.9	+1.1
SONM	Songino Array comp=Z,6.5nm,0.9s,baz=152,slow=8.5,SNR=44	26.34	337	P	P	18 38 46.0	+1.4
SONA1	Songino Array	26.35	337	*e*P	P	18 38 45.8	+1.2
WMQ	Urumqi	33.74	314	*e*P	P	18 39 51.1	+1.0
MK01	Makanchi Array	38.40	316	*e*P	P	18 40 30.7	+0.8
MK31	Makanchi Array comp=Z,4.9nm,1.0s	38.41	316	*e*P	P	18 40 31.2	+1.2
MKAR	Makanchi Array comp=Z,39nm,1.2s	38.41	316	*e*P	P	18 40 31.2	+1.1
MKAR	Makanchi Array comp=Z,4.9nm,0.9s,baz=102,slow=10.0,SNR=30	38.41	316	P	P	18 40 31.6	+1.5
MAKZ	Makanchi comp=Z,9.3nm,1.1s	38.62	316	*e*P	P	18 40 33.6	+1.8
ZAA0	Zalesovo Array comp=Z,6.6nm,1.0s	40.27	327	*e*P	P	18 40 45.6	+0.2
ZALV	Zalesovo Beam	40.27	327	*e*P	P	18 40 45.0	-0.3
ZALV	Zalesovo Beam comp=Z,5.2nm,0.9s,baz=119,slow=8.6,SNR=18	40.27	327	P	P	18 40 45.5	+0.1
NRN	Naryn	41.31	306	*e*P	P	18 40 55.4	+0.9
KURK	Kurchatov comp=Z,6.6nm,1.4s	42.15	320	*e*P	P	18 41 00.6	-0.3
WRA	Warramunga Arr comp=Z,1.3nm,0.8s,baz=345,slow=8.7,SNR=12	45.75	163	P	P	18 41 28.4	-1.8
ASAR	Alice Springs comp=Z,1.3nm,1.1s,baz=336,slow=7.4,SNR=8.0	49.21	165	P	P	18 41 56.1	-0.9
GEYT	Alibeck comp=Z,2.0nm,0.7s,baz=83,slow=12,SNR=3.6	54.94	300	P	P	18 42 40.8	+1.1
KLMR	Klimovskoe	65.18	328	*e*P	P	18 43 48.8	-0.7
KLMR	comp=Z,16nm,1.3s			AMP		18 43 53.3	
ILAR	Eielson Array comp=Z,0.3nm,0.8s,baz=272,slow=6.2,SNR=3.4	68.98	27	P	P	18 44 15.2	+1.6
FINES	FINESS Array B comp=Z,3.4nm,0.8s,baz=77,slow=8.6,SNR=10	71.45	330	P	P	18 44 28.8	0.0
AKASG	Malin Array Be comp=Z,1.4nm,0.7s,baz=60,slow=5.7,SNR=8.6	72.94	318	P	P	18 44 37.3	-0.6
INK	Inuvik comp=Z,0.9nm,0.8s,baz=255,slow=3.9,SNR=3.3	73.01	22	P	P	18 44 37.6	-0.4
BRTR	Keskin Array B comp=Z,1.8nm,1.0s,baz=123,slow=4.6,SNR=9.1	73.29	306	P	P	18 44 41.2	+0.8
BUR04	Bucovina Ar. S	76.44	316	*e*P	P	18 44 57.2	-1.3
NOA	NORSAR Array B comp=Z,1.4nm,0.9s,baz=62,slow=5.6,SNR=3.1	78.22	332	P	P	18 45 07.9	-0.2
VYHS	Vyhne	80.03	319	*e*P	P	18 45 19.9	+1.7
YKA	Yellowknife Ar comp=Z,0.3nm,0.5s,baz=312,slow=4.7,SNR=6.1	82.75	23	P	P	18 45 31.5	-0.7
GERES	GERESS Array B comp=Z,0.9nm,0.9s,baz=20,slow=4.3,SNR=4.6	82.90	321	P	P	18 45 34.8	+1.3

NIED **21** *18:35:00, 24°.30N×121°.50E, h5^{km}, Mw4.5 Best double couple: $M_0$5.47000×10^{15} NP1:ϕ_s166.00000°, δ27.00000°, λ-63.00000°. NP2:ϕ_s317.00000°, δ66.00000°, λ-103.00000°.*

ISCJB **21** *18:35:57.7±0.2, 24°.332N±0°.008×121°.48E±0°.01, h8^{km}±1^{km}, mb4.5/85, MS3.8/11, Error ellipse: s-maj=1.7km s-min=1.2km az=25.9*

JMA **21** *18:35:57.1, 24°.31N×121°.45E, h0^{km}, M4.6*

TAP **21** *18:35:57.1, 24°.31N×121°.44E, h6^{km}, ML4.8, C*

NEIC **21** *18:35:57.0±0.5, 24°.27N×121°.56E, h4^{km}±3^{km}, mb4.7/41, ML4.5(TAP), Error ellipse: s-maj=4.2km s-min=3.3km az=86.0*

NEIC Recorded [4 TAP] in Yilan; [3 TAP] in Hualien and Nantou; [2 TAP] in Hsinchu and Taichung; [1 TAP] in Miaoli and Taoyuan.

MOS **21** *18:35:58.9±0.9, 24°.27N×121°.62E, h28^{km}, mb4.8/48, Error ellipse: s-maj=9.7km s-min=5.6km az=122.0*

BJI **21** *18:35:58.4, 24°.24N×121°.51E, h19^{km}, mB4.8/31, mb4.2/48, ML4.4/6, Ms4.3/41, Ms7 4.1/42*

IDC **21** *18:36:04.1±3.2, 24°.24N×121°.66E, h59^{km}±29^{km}, mb4.0/23, mb1 4.1/24, mb1mx4.0/44, mbtmp4.3/24, ML2.6/2, MS3.5/12, Ms1 3.5/12, ms1mx3.3/39, Error ellipse: s-maj=16.3km s-min=11.8km az=67.0*

ISC 21 18:35:57.9±0.8**, 24°.31N**±0°.01×**121°.46E**±0°.01**, h6**^{km}±5^{km}**, n365, σ1^{s}42**/456**, mb4.6**/92**, MS3.6**/11**, 93C-11D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi baz=162	0.11	171	⇑P	Pg	18 36 00.4	+0.2
ETLH	baz=162			S	Sg	18 36 02.3	+0.5
NNSB	Datong baz=334	0.14	328	⇑P	Pg	18 36 00.5	-0.3
NNSB	baz=334			S	Sg	18 36 02.4	-0.3
NNS	Nan Shan baz=335	0.15	327	⇑*i*P	Pg	18 36 00.7	-0.3
NNS	baz=335			*i* S	Sg	18 36 02.9	-0.3
NACB	Ninganchiao	0.18	139	*e*Pg	Pg	18 36 01.1	-0.5
NACB	Ninganchiao baz=134	0.18	139	⇑P	Pg	18 36 01.8	+0.2
NACB	baz=134			S	Sg	18 36 04.5	+0.5
WHF	Hehuan Shan baz=223	0.24	227	⇑*i*P	Pg	18 36 02.3	-0.5
WHF	baz=223			*i* S	Sg	18 36 05.7	-0.5
TWD	Chiawan baz=148	0.26	152	⇑*i*P	Pg	18 36 03.2	+0.2
TWD	baz=148			S	Sg	18 36 06.9	+0.5
TWT	Tachien baz=246	0.27	257	⇑*i*P	Pb	18 36 03.1	-2.1
TWT	baz=246			*i* S	Sg	18 36 06.9	+0.1
ENA	Nanau baz=68	0.28	65	⇑*i*P	Pg	18 36 03.3	-0.1
ENA	baz=68			*e*S	Sg	18 36 07.7	+0.7
TDCB	Techi baz=247	0.28	258	⇑P	Pg	18 36 03.2	-0.3
TDCB	baz=247			S	Sg	18 36 06.9	-0.4
NANB	Nanao baz=68	0.29	66	⇑P	Pg	18 36 03.2	-0.2
NANB	baz=68			*e*S	Sg	18 36 07.4	+0.1
NDT	Datong Townshi baz=12	0.29	9	⇑*i*P	Pg	18 36 03.6	0.0
NDT	baz=12			S	Sg	18 36 07.7	+0.1
ENTT	Nioudou baz=12	0.34	16	⇑*i*P	Pg	18 36 04.5	0.0
ENTT	baz=12			S	Sg	18 36 09.5	+0.5
HWA	Hwalien baz=156	0.36	159	⇑*i*P	Pb	18 36 05.5	-1.2
HWA	baz=156			S	Sb	18 36 11.1	-1.4
CHGB	Renai baz=224	0.36	227	⇑P	Pg	18 36 04.5	-0.5
CHGB	baz=224			S	Sg	18 36 09.1	-0.8
YHNB	Yeheng	0.36	347	*e*Pg	Pg	18 36 04.6	-0.4
YHNB	Yeheng baz=351	0.36	347	⇑P	Pb	18 36 05.2	-1.7
YHNB	baz=351			S	Sg	18 36 09.7	-0.2
NSK	Sanguang baz=350	0.38	345	⇑*i*P	Pb	18 36 05.3	-1.7
NSK	baz=350			*e*S	Sg	18 36 09.6	-0.5
ENLB	Shoufeng baz=161	0.43	163	⇑P	Pb	18 36 06.6	-1.2
ENLB	baz=161			S	Sb	18 36 12.7	-1.8
OWD	Renai baz=214	0.44	216	⇑*i*P	Pg	18 36 05.8	-0.7
OWD	baz=214			*e*S	Sg	18 36 11.2	-1.1
TWE	Neicheng baz=40	0.45	24	⇑*i*P	Pg	18 36 06.7	+0.1
TWE	baz=40			S	Sg	18 36 12.6	+0.1
TWC	Suao baz=43	0.46	50	⇑*i*P	Pg	18 36 06.5	-0.2
TWC	baz=43			S	Sg	18 36 12.5	-0.3
NWLT	Wulai baz=358	0.47	4	*e*P	Pg	18 36 06.9	0.0
NWLT	baz=358			*e*S	Sg	18 36 12.9	0.0
WHP	Taichung City baz=264	0.47	266	⇑*i*P	Pb	18 36 07.3	-1.4
WHP	baz=264			S	Sb	18 36 13.4	-2.6
ESL	Shilin baz=181	0.50	183	⇑*i*P	Pg	18 36 07.2	-0.3
ESL	baz=181			*e*S	Sg	18 36 14.0	+0.1
ILA	Ilan baz=43	0.52	30	⇑*i*P	Pg	18 36 08.0	+0.1
ILA	baz=43			S	Sg	18 36 15.6	+0.8
LIOB	Emei baz=310	0.53	309	⇑*i*P	Pb	18 36 07.8	-1.7
LIOB	baz=310			S	Sg	18 36 14.8	-0.1
NSTT	Nanjuang baz=308	0.53	307	⇑*i*P	Pb	18 36 08.5	-1.1
NSTT	baz=308			S	Sb	18 36 15.3	-2.2
WLTB	Daxi baz=343	0.57	340	⇑*e*P	Pb	18 36 09.9	-0.4
WLTB	baz=343			*e*S	Sb	18 36 17.3	-1.5
VWDT	VWDT baz=212	0.63	208	⇑P	Pg	18 36 09.3	-0.7
VWDT	baz=212			*e*S	Sg	18 36 17.3	-0.9
TWQ1	Liyutan baz=272	0.63	273	⇑*i*P	Pb	18 36 10.8	-0.6
NTC	Toucheng baz=46	0.64	32	*e*P	Pg	18 36 09.0	-1.1
EGFH	Guangfu baz=182	0.64	183	⇑P	Pg	18 36 09.9	-0.3
EGFH	baz=182			*e*S	Sb	18 36 18.8	-1.9
SBCB	Hsinchu baz=319	0.65	318	⇑P	Pb	18 36 11.6	-0.1
SBCB	baz=319			*e*S	Sb	18 36 20.3	-0.6
NSY	Sanyi baz=279	0.65	279	⇑*i*P	Pb	18 36 11.5	-0.2
NSY	baz=279			*e*S	Sb	18 36 20.1	-0.9
EOS1	EOS1 baz=58	0.65	69	⇑P	Pb	18 36 10.8	-0.9
EOS1	baz=58			*e*S	Sb	18 36 20.4	-0.6
NHDH	Xindian Distri baz=18	0.65	5	*e*P	Pb	18 36 10.9	-0.8
NHDH	baz=18			S	Sg	18 36 19.3	+0.4

NMLH	Miaoli	0.65	290	⇑iP	Pn	18 36 11.7	-2.0
	baz=290						
NMLH				S	Sb	18 36 20.8	-0.2
	baz=290						
TATO	Taipei	0.66	2	ePg	Pg	18 36 10.5	-0.2
TATO	Taipei	0.66	2	⇑P	Pb	18 36 11.1	-0.8
	baz=15						
TATO				S	Sb	18 36 19.8	-1.5
	baz=15						
HSN	Hsinchu	0.66	317	eP	Pn	18 36 11.9	-1.9
	baz=321						
SMLT	Sun Moon Lake	0.67	230	⇑iP	Pb	18 36 10.6	-1.5
	baz=228						
TWA	Mucha	0.67	9	⇑iP	Pb	18 36 11.2	-0.9
	baz=11						
TWA				eS	Sg	18 36 19.9	+0.2
	baz=11						
EGS		0.68	39	eP	Pg	18 36 10.6	-0.4
	baz=42						
TYC	Yuchr	0.69	234	⇑iP	Pb	18 36 10.8	-1.5
	baz=222						
TYC				S	Sg	18 36 19.1	-0.9
	baz=222						
SSLB	Suanglung	0.70	222	ePg	Pg	18 36 10.1	-1.2
SSLB	Suanglung	0.70	222	⇑P	Pg	18 36 10.5	-0.9
	baz=220						
SSLB				eS	Sg	18 36 18.5	-1.9
	baz=220						
NCUH	Zhongli	0.70	339	eP	Pn	18 36 13.2	-1.1
	baz=340						
NCU	National Centr	0.70	339	⇑eP	Pn	18 36 12.9	-1.5
	baz=342						
NCU				eS	Sn	18 36 24.4	-1.2
	baz=342						
PTSB	Yuanli	0.70	281	⇑P	Pn	18 36 12.7	-1.7
	baz=280						
PTSB				S	Sb	18 36 22.3	-0.3
	baz=280						
TIPB	Shuangxi	0.73	27	⇑iP	Pg	18 36 11.8	-0.3
	baz=15						
TIPB				S	Sg	18 36 20.7	-0.9
	baz=15						
TCU	Taichung	0.74	257	⇑iP	Pn	18 36 13.2	-1.6
	baz=255						
TCU				eS	Sn	18 36 24.3	-2.1
	baz=255						
WDJ	Dajia District	0.75	273	⇑eP	Pn	18 36 13.9	-1.2
	baz=272						
WDJ				eS	Sb	18 36 23.8	-0.1
	baz=272						
TWS1	Kuangyinshan	0.79	357	P	Pn	18 36 14.2	-1.3
	baz=9.0						
TWS1				S	Sb	18 36 25.1	+0.2
	baz=9.0						
NWF	Wu-fen Shan	0.81	21	⇑iP	Pb	18 36 13.6	-0.8
	baz=23						
WFSB	Wu-fen Shan	0.81	21	⇑P	Pb	18 36 13.6	-0.8
	baz=22						
WFSB				S	Sg	18 36 23.9	-0.1
	baz=22						
EHY	Hungye	0.81	189	⇑iP	Pg	18 36 12.7	-0.9
	baz=180						
EHY				eS	Sb	18 36 24.9	-0.8
	baz=180						
HGSD	Ruisui	0.82	183	⇑P	Pb	18 36 13.6	-0.9
	baz=188						
HGSD				eS	Sb	18 36 26.0	+0.2
	baz=188						
WHYT	Xinyi Township	0.83	222	eP	Pg	18 36 12.2	-1.7
	baz=221						
WJS	Zhushan	0.83	234	⇑iP	Pb	18 36 14.2	-0.5
	baz=227						
WJS				eS	Sb	18 36 25.9	-0.2
	baz=227						
WNT	Mingjian	0.83	239	⇑iP	Pn	18 36 14.7	-1.5
	baz=231						
WNT				eS	Sb	18 36 26.1	-0.2
	baz=231						
YM01	YM01	0.84	7	⇑P	Pb	18 36 14.7	-0.2
	baz=8.0						
YM01				S	Sb	18 36 25.4	-1.0
	baz=8.0						
YM04	YM04	0.84	5	eP	Pb	18 36 14.7	-0.2
	baz=21						
TWB1	Santiao Chiao	0.84	34	⇑iP	Pg	18 36 13.5	-0.6
	baz=36						
TWB1				eS	Sg	18 36 24.3	-0.8
	baz=36						
NTST	Danshui	0.85	359	eP	Pn	18 36 15.3	-1.1
	baz=10.0						
NTST				eS	Sn	18 36 27.5	-1.7
	baz=10.0						
YM05	YM05	0.85	6	⇑P	Pb	18 36 14.9	-0.3
	baz=21						
YM05				S	Sg	18 36 25.2	-0.2
	baz=21						
YM11	YM11	0.86	7	⇑P	Pb	18 36 15.0	-0.2
	baz=8.0						
YM11				eS	Sb	18 36 26.4	-0.6
	baz=8.0						
WCHH	Zhanghua	0.86	255	⇑eP	Pn	18 36 15.6	-0.9
	baz=253						
YM08	YM08	0.88	8	P	Pb	18 36 15.1	-0.5
	baz=9.0						
YM08				eS	Sg	18 36 26.2	-0.1
	baz=9.0						
YULB	Yu-li	0.93	189	ePg	Pg	18 36 14.4	-1.3
YULB	Yu-li	0.93	189	⇑P	Pg	18 36 14.7	-1.0
	baz=184						
YULB				S	Sb	18 36 28.2	-0.8
	baz=184						
TWF1	Yuli	0.97	189	eP	Pg	18 36 15.5	-1.0
	baz=179						
TWF1				eS	Sb	18 36 29.3	-0.9
	baz=179						
TWY	Chenhua	0.97	7	eP	Pb	18 36 16.5	-0.6
	baz=10.0						
CHN5	Tsauling	1.01	225	⇑iP	Pn	18 36 17.5	-1.2
	baz=223						
CHN5				eS	Sn	18 36 32.5	-0.8
	baz=223						
WGK	Gukeng	1.03	233	⇑iP	Pn	18 36 18.4	-0.5
	baz=230						
WGK				S	Sn	18 36 33.8	+0.1
	baz=230						
WDLH	Douliu	1.05	234	⇑P	Pn	18 36 18.7	-0.4
	baz=232						
WDLH				eS	Sn	18 36 34.1	+0.1
	baz=232						
RLNB	Erlin	1.09	248	⇑P	Pn	18 36 19.5	-0.3
	baz=259						
RLNB				eS	Sn	18 36 34.6	-0.5
	baz=259						
FULB	Fuli	1.12	188	eP	Pn	18 36 19.2	-1.0
	baz=188						
FULB				eS	Sn	18 36 35.4	-0.5
	baz=188						
WTCT	Ta-ch'eng	1.17	248	⇑eP	Pn	18 36 20.1	-0.6
	baz=245						
WTCT				eS	Sn	18 36 36.8	-0.2
	baz=245						
ELDTW	Lidau	1.19	200	eP	Pg	18 36 19.6	-1.1
	baz=200						
ELDTW				eS	Sb	18 36 35.5	-1.2
	baz=200						
CHN2	Minshiung	1.19	230	⇑iP	Pn	18 36 21.1	0.0
	baz=227						
CHN2				eS	Sn	18 36 38.4	+0.8
	baz=227						
CHKT	Chengkung	1.21	184	eP	Pg	18 36 19.6	-1.5
	baz=169						
WMLT	Mailiao	1.24	246	eP	Pn	18 36 21.1	-0.7
	baz=256						
WMLT				eS	Sn	18 36 38.8	0.0
	baz=256						
CHN4	Tsaushan	1.25	220	⇑iP	Pn	18 36 21.7	-0.1
	baz=217						
CHN4				S	Sn	18 36 40.3	+1.3
	baz=217						
CHY	Chiayi	1.25	230	eP	Pn	18 36 21.9	0.0
	baz=227						
CHY				eS	Sn	18 36 40.0	+1.0
	baz=227						
TPUB	Ta-pu	1.26	217	ePg	Pb	18 36 21.1	-1.1
TPUB	Ta-pu	1.26	217	⇑P	Pn	18 36 21.6	-0.5
	baz=216						
TPUB				S	Sn	18 36 39.7	+0.3
	baz=216						
STYT	Tauyuan	1.31	210	⇑P	Pn	18 36 21.9	-0.9
	baz=197						
STYT				eS	Sn	18 36 42.0	+1.3
	baz=197						
WTP	Ta-pu	1.32	216	⇑iP	Pg	18 36 22.7	-0.5
	baz=215						
WTP				eS	Sn	18 36 41.9	+1.2
	baz=215						
WSF	Szhu	1.32	240	eP	Pg	18 36 22.5	-0.7
	baz=236						
WSF				S	Sn	18 36 41.2	+0.5
	baz=236						
JYNG	Yonagunijimaku	1.36	84	P	Pg	18 36 23.7	-0.3
JYNG				S	Sn	18 36 41.2	-0.5
TWK	Hsinying	1.37	221	eP	Pg	18 36 23.8	-0.4
	baz=218						
TWK				eS	Sn	18 36 44.7	+2.5
	baz=218						
SNST	Tainan City	1.40	219	⇑eP	Pg	18 36 24.2	-0.6
	baz=217						
SNST				eS	Sg	18 36 44.8	+1.8
	baz=217						
CHN1	Nanshi	1.41	218	⇑iP	Pg	18 36 24.9	-0.1
	baz=215						
CHN1				eS	Sg	18 36 44.8	+1.5
	baz=215						
YOJ	Yonaguni jima	1.42	84	ePn	Pn	18 36 23.7	-0.6
YOJ	Yonaguni jima	1.42	84	⇑eP	Pn	18 36 23.8	-0.4
	baz=73						
YOJ				eS	Sb	18 36 42.6	-0.5
	baz=73						
YOJ	Yonaguni jima	1.42	84	eP	Pn	18 36 23.7	-0.6
YOJ	Yonaguni jima	1.42	84	P	Pb	18 36 24.3	-0.5
YOJ				eS	Sg	18 36 43.2	-0.3
PCYT	Pengchaiyu	1.42	23	eP	Pn	18 36 23.5	-0.8
	baz=7.0						
SGST	Jiashian	1.47	214	⇑iP	Pg	18 36 25.5	-0.5
	baz=223						
SGST				S	Sg	18 36 46.1	+1.1
	baz=223						
CHN8	Yiju	1.50	230	⇑P	Pg	18 36 25.6	-0.9
	baz=239						
CHN8				S	Sg	18 36 47.6	+1.6
	baz=239						
SLGT	Liugui	1.51	210	eP	Pg	18 36 26.2	-0.6
	baz=199						
TWG	Pinlang	1.53	194	ePn	Pn	18 36 24.4	-1.3
TWG	Pinlang	1.53	194	eP	Pb	18 36 25.3	-1.4
	baz=173						
TWGBT	Beinan	1.53	193	eP	Pb	18 36 25.3	-1.3
	baz=173						
TTN	Taitung	1.58	191	⇓eP	Pn	18 36 26.0	-0.4
	baz=171						
CHN3	Shinhua	1.59	220	⇑iP	Pg	18 36 28.1	-0.3
	baz=217						
CHN3				eS	Sg	18 36 52.1	+3.1
	baz=217						
SCLT	Jiali	1.62	226	⇑P	Pg	18 36 27.9	-1.1
	baz=208						
SCLT				S	Sg	18 36 50.9	+0.8
	baz=208						
TAI1	Yung-k'ang	1.70	222	eP	Pg	18 36 29.4	-1.1
	baz=219						
TAI1				eS	Sg	18 36 52.5	0.0
	baz=219						
SSD	Sandimen	1.73	206	⇑iP	Pg	18 36 29.9	-1.2
	baz=207						
SSD				eS	Sg	18 36 53.4	-0.3
	baz=207						
TWM1	Shoushan	1.76	213	⇑P	Pg	18 36 31.2	-0.5
	baz=211						
ECL	Taimali	1.77	195	⇑eP	Pb	18 36 29.9	-0.8
	baz=177						
SGLT	Jiouru	1.81	210	⇓P	Pg	18 36 32.5	-0.2
	baz=208						
MASBT	Mashibuluo	1.86	204	⇑P	Pg	18 36 31.9	-1.6
	baz=206						
MASBT				eS	Sg	18 36 56.3	-1.2
	baz=206						
SNJT	Kaohsiung City	1.86	214	eP	Pb	18 36 31.9	-0.5
	baz=211						
PNG	Penghu	1.90	247	eP	Pb	18 36 31.0	-1.9
	baz=248						
PHUB	P'eng-hu	1.90	246	eP	Pn	18 36 30.3	-0.6
	baz=246						
PTTC	Pingtan	1.94	308	eP	Pn	18 36 30.4	-1.0
	baz=309						
VWUC	VWUC	1.95	291	eP	Pn	18 36 30.2	-1.4
	baz=292						
WDGT	Dungji	1.96	238	eP	Pn	18 36 31.6	-0.1
	baz=237						
SSPT	Xinbi	2.00	204	eP	Pg	18 36 35.0	-1.2
	baz=204						
EAST	Anshuo	2.00	197	eP	Pg	18 36 34.6	-1.7
	baz=177						
TAW	Tawu	2.01	195	eP	Pb	18 36 34.5	-0.4
	baz=176						
IRIF	Iriomote-Funau	2.07	89	P	Pn	18 36 33.1	-0.1
IRIF				eS	Sn	18 36 58.2	-1.1
SCZT	Fangliau	2.08	202	eP	Pb	18 36 35.4	-0.7
	baz=219						
HATJ	Hateruma jima	2.15	96	P	Pb	18 36 37.0	-0.3
VCHM	Qimei	2.16	240	eP	Pn	18 36 34.8	+0.4
	baz=240						
WLCH	Liuqiu	2.19	207	eP	Pb	18 36 37.6	-0.4
	baz=205						
TWP	Hsiaoliuchiu	2.20	208	eP	Pg	18 36 39.1	-1.1
	baz=205						
PTMZ	Houxiangcun	2.25	289	eP	Pn	18 36 34.2	-1.5
	baz=292						
MATB	Ma-tsu	2.29	323	eP	Pn	18 36 36.5	+0.2
	baz=323						
JKRS	Kuro-shima	2.33	91	P	Pn	18 36 37.5	+0.8
JKRS				eS	Sb	18 37 07.2	-2.0
HEN	Hengchun	2.39	196	eP	Pb	18 36 40.4	-0.9
	baz=180						
TWK1	Hengchun	2.43	195	eP	Pb	18 36 40.2	-1.8
	baz=178						
TWKBT	Hengchun	2.44	194	eP	Pb	18 36 39.9	-2.2
	baz=178						
JIJ	Ishigaki jima	2.44	88	P	Pn	18 36 38.1	-0.3
JIJ				eS	Sn	18 37 09.1	+0.5
TSEB	Hengchuen, Pin	2.46	192	eP	Pb	18 36 40.5	-2.0
	baz=178						
JISG	Ishigakijimahi	2.61	83	P	Pn	18 36 41.0	+0.4
QZH	Quanzhou	2.69	284	⇓iPn	Pn	18 36 40.8	-0.9
QZH				Sn	Sn	18 37 12.6	-2.0
QZH				smax	smax		
	comp=N,730nm,0.9s						
QZH				smax	smax		
	comp=E,620nm,0.8s						
LYJJ	Jianjiangzhen	2.71	326	eP	Pn	18 36 41.4	-0.6
	baz=324						
KNM	Kinmen	2.77	273	eP	Pn	18 36 43.4	+0.7
	baz=275						
KNMB	Chin-men Tao	2.81	274	eP	Pn	18 36 42.1	-1.2
	baz=277						
MHZQ	Yeshan	2.83	309	eP	Pn	18 36 44.5	+0.9
	baz=311						
XPSS	Dashiqiu	2.85	336	eP	Pn	18 36 43.4	-0.5
	baz=336						
JTJ	Tarama	2.97	83	P	Pn	18 36 45.5	-0.1
JTJ				eS	Sn	18 37 23.3	+1.8
AXDP	Jialang	3.23	281	eP	Pn	18 36 48.6	-0.6
	baz=284						
ZPLA	Ao Xicun	3.41	264	eP	Pn	18 36 51.0	-0.7
	baz=268						
JIRB	Irabujima	3.42	81	P	Pn	18 36 52.8	+1.1
JIKM	Ikemajima	3.50	79	P	Pb	18 36 56.3	-3.9
ZZJH	Jiuhuzhen	3.50	273	eP	Pn	18 36 52.7	-0.1
	baz=276						
JOGS	Gusukube	3.62	82	P	Pn	18 36 56.8	+2.3
JOW	Kunigami	6.64	66	ePn	Pn	18 37 33.6	-2.5
JOW	Kunigami	6.64	66	P	Pn	18 37 39.0	+2.9
	0.2nm,0.3s,baz=216,slow=16,SNR=3.6						
WHN	Wuhan	8.86	316	P	Pn	18 38 10.0	+3.6
WHN				S	Sn	18 39 55.1	+8.5
WHN				LR	LR		
	comp=Z,3µm,9.0s						
QIZ	Qiongzhong	12.01	246	P	Pn	18 38 50.8	+1.1
QIZ				LR	LR		
	comp=Z,490nm,4.3s						
JNU	Nakatsue	12.05	41	P	Pn	18 38 56.9	+6.6
	0.1nm,0.3s,baz=170,slow=10,SNR=4.7						
JNU				LR	LR	18 44 00.6	
	comp=Z,249nm,19.4s,baz=244,slow=40						
GYA	Guiyang	13.55	282	P	P	18 39 14.8	-5.3
GYA				PP	PnPn	18 39 23.6	+4.9
GYA				S	Sn	18 41 45.8	+4.0
GYA				SS	S	18 42 01.4	-4.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,830nm,10.5s						
GYA				LR	LR		
	comp=E,880nm,9.0s						
GYA				LR	LR		
	comp=Z,1µm,9.3s						
KS15	Wonju Array Si	14.20	21	ePn	Pn	18 39 14.9	-4.6
KSAR	Wonju Array Be	14.20	21	P	P	18 39 27.8	+0.7
KSRS	Korea Array	14.22	21	P	P	18 39 27.8	+0.5
	0.3nm,0.3s,baz=196,slow=12,SNR=15						
KSRS				LR	LR	18 45 17.8	
	comp=Z,113nm,19.0s,baz=214,slow=39						
XAN	Xi'an	14.61	314	P	P	18 39 29.3	-2.5
XAN				pP	Pn	18 39 32.8	+7.5
XAN				sP		18 39 36.4	
XAN				PP		18 39 40.8	
XAN				S	Sn	18 42 03.1	-4.6
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
XAN				LR	LR		
	comp=E,470nm,5.9s						
XAN				LR	LR		
	comp=Z,690nm,10.0s						
XAN	Xi'an	14.61	314	ePn	Pn	18 39 25.8	+0.5
XAN	Xi'an	14.61	314	eP	Pn	18 39 25.8	+0.5
BJT	Baijiatuau	16.28	345	ePn	Pn	18 39 44.9	-2.3
	11nm,1.1s						
BJT	Baijiatuau	16.28	345	eP	Pn	18 39 44.9	-2.3
BJT				pmax	pmax		
	comp=Z,11nm,1.1s						
BJI	Beijing	16.30	345	P	P	18 39 52.6	+2.1
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CD2	Chengdu	17.00	297	P	Pn	18 39 55.8	-0.7
CD2				pP	sP	18 40 02.9	+1.4
CD2				sP	pP	18 40 05.5	+5.0
CD2				S	Sn	18 43 05.9	+0.1
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
CD2				pmax	pmax		
	comp=Z,230nm,5.7s						
CD2				LR	LR		
	comp=Z,2µm,9.0s						
CD2				LR	LR		
	comp=Z,2µm,8.2s						
CD2				LR	LR		
	comp=Z,2µm,8.6s						
KMI	Kunming	17.03	277	P	P	18 39 59.8	+0.9
KMI				pP	sP	18 40 02.3	+0.2
KMI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KMI				LR	LR		
	comp=Z,480nm,7.3s						
KMI				LR	LR		
	comp=Z,1µm,9.1s						
KMI				LR	LR		
	comp=Z,1µm,9.9s						
JHJ	Hachijo jima 2	18.29	57	LR	LR	18 47 01.8	
	comp=Z,138nm,20.9s,baz=147,slow=36						
HHC	Hu-ho-hao-te	18.46	336	eP	Pn	18 40 16.6	+2.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,6.2s						
MAJO	Matsushiro	18.86	46	eP	P	18 40 17.8	-1.0
MAJO	Matsushiro	18.86	46	eP	P	18 40 17.8	-1.0
MJAR	Matsushiro Arr	18.86	46	P	P	18 40 17.8	-1.0
	comp=Z,0.0nm,0.3s,baz=224,slow=9.1,SNR=3.5						
MJAR				LR	LR	18 47 53.9	
	comp=Z,112nm,20.7s,baz=225,slow=38						
JCJ	Chichijima	18.88	77	LR	LR	18 46 08.3	
	comp=Z,183nm,20.9s,baz=256,slow=32						
LZH	Lanzhou	19.19	312	eP	Pn	18 40 28.0	+4.5
LZH				pP	sP	18 40 31.8	+6.1
LZH				sP	pP	18 40 34.3	+10
LZH				PP	PnPn	18 40 44.3	+8.1
LZH				SS	S	18 44 24.4	+24
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,290nm,4.3s						
LZH				LR	LR		
	comp=Z,700nm,11.9s						
LZH				LR	LR		
	comp=Z,900nm,12.5s						
CN2	Changchun	19.71	9	eP	Pn	18 40 28.5	-1.0
CN2				eS	S	18 44 05.1	-5.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,390nm,14.0s						
CN2				LR	LR		
	comp=Z,450nm,14.0s						
CN2				LR	LR		
	comp=Z,430nm,14.0s						
CHAI	Chaiyaphum	20.09	249	P	Pn	18 40 39.0	+4.8
	comp=Z,3.8nm,0.8s						
PAYA	Payao	20.63	260	P	Pn	18 40 43.5	+2.9
	comp=Z,4.1nm,0.9s						
PBKT	Sadao Pong	20.67	252	P	Pn	18 40 42.6	+1.6
	comp=Z,17nm,1.1s,comp=Z,1µm						
SRAK	Srakaew	20.99	244	P	Pn	18 40 42.7	-1.9
	comp=Z,41nm,1.0s						
LAMP	Lampang	21.11	258	P	P	18 40 53.9	+10
MDJ	Mudanjiang	21.31	16	P	P	18 40 47.3	+1.9
MDJ				pmax	pmax		
	comp=Z,12nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,250nm,5.9s						
MDJ	Mudanjiang	21.31	16	eP	P	18 40 45.3	-0.1
	comp=Z,14nm,1.2s						
SUKH	Sukhothai	21.48	256	P	P	18 40 52.3	+4.9
	comp=Z,4.5nm,0.8s						
USRK	Ussuriysk Ar.	21.63	21	P	P	18 40 49.0	+0.2
	comp=Z,2.1nm,0.8s,baz=212,slow=5.1,SNR=3.4						
CMMT	Chiang Mai	21.63	260	P	P	18 40 54.8	+5.7
	comp=Z,10nm,1.2s						
CHTO	Chiang Mai	21.64	260	eP	P	18 40 50.9	+1.8
	comp=Z,38nm,1.8s						
CHTO	Chiang Mai	21.64	260	eP	P	18 40 50.9	+1.8
CHTO				pmax	pmax		
	comp=Z,38nm,1.8s						
CHTO	Chiang Mai	21.64	260	P	P	18 40 54.9	+5.8
	comp=Z,46nm,1.3s						
CM01	Chiang Mai Arr	21.75	259	eP	P	18 40 50.9	+0.5
CM31	Chiang Mai Arr	21.75	259	eP	P	18 40 48.3	-2.0
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	21.75	259	P	P	18 40 52.6	+2.3
	comp=Z,2.3nm,0.8s,baz=64,slow=8.8,SNR=16						
CMAR				PcP	PcP	18 44 50.4	-0.8
	comp=Z,0.7nm,0.8s,baz=77,slow=1.5,SNR=6.7						
CMAR				LR	LR	18 50 38.1	
	comp=Z,117nm,19.2s,baz=68,slow=40						
UTHA	Uthaitani	22.43	251	P	P	18 41 02.3	+4.7
	comp=Z,3.1nm,0.8s						
UMPA	Umpang Tak	22.66	253	P	P	18 41 05.7	+5.6
	comp=Z,5.7nm,1.0s,comp=Z,252nm						
SBUM	Sibu	23.50	204	eP	P	18 41 08.2	-0.5
	comp=Z,9.9nm,0.8s						
GTA	Gaotai	23.68	315	⇑P	P	18 41 12.0	+1.6
GTA				pP	sP	18 41 16.3	+2.6
GTA				sP	pP	18 41 19.1	+6.3
GTA				S	S	18 45 29.8	+4.0
GTA				sS	sS	18 45 36.0	+6.1
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,5.1s						
GTA				LR	LR		
	comp=Z,190nm,13.0s						
GTA				LR	LR		
	comp=Z,260nm,12.7s						
GTA				LR	LR		
	comp=Z,350nm,14.9s						
HIA	Hailar	24.95	357	eP	P	18 41 21.6	-0.3
	comp=Z,8.9nm,1.0s						
HIA	Hailar	24.95	357	eP	P	18 41 21.6	-0.3

HIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	Ulaanbaatar	26.14	338	eP	P	18 41 33.4	+0.4
	comp=Z,18nm,1.0s						
ULN	Ulaanbaatar	26.14	338	eP	P	18 41 33.4	+0.4
ULN				pmax	pmax		
	comp=Z,17nm,1.0s						
KLR	Kul'dur	26.15	15	P	P	18 41 32.7	-0.1
	comp=Z,3.7nm,0.9s,baz=251,slow=9.0,SNR=5.0						
KLR				LR	LR	18 52 56.2	
	comp=Z,111nm,18.5s,baz=208,slow=39						
ASAJ	Asahikawa	26.24	36	LR	LR	18 51 31.7	
	comp=Z,86nm,18.7s,baz=346,slow=35						
SONA0	Songino Array	26.35	337	eP	P	18 41 35.9	+1.1
SONM	Songino Array	26.35	337	P	P	18 41 35.9	+1.1
	comp=Z,17nm,0.9s,baz=152,slow=8.7,SNR=55						
SONA1	Songino Array	26.36	337	eP	P	18 41 35.2	+0.3
SHL	Shillong	26.83	279	eP	P	18 41 40.0	+0.6
	comp=Z,18nm,1.1s						
SHL	Shillong	26.83	279	eP	P	18 41 40.0	+0.6
SHL				pmax	pmax		
	comp=Z,19nm,1.1s						
LSA	Lhasa	27.49	288	eP	P	18 41 46.5	+0.8
	comp=Z,4.1nm,0.8s						
LSA	Lhasa	27.49	288	eP	P	18 41 46.5	+0.8
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZEA	Zeya	29.71	7	eP	P	18 42 03.8	-0.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,200nm,13.0s						
ZEA				MLR	MLR		
	comp=N,200nm,12.0s						
PSI	Prapat	30.51	229	LR	LR	18 54 24.8	
	comp=N,102nm,20.5s,baz=60,slow=36						
TLY	Talaya	30.55	338	ceP	P	18 42 13.6	+1.5
TLY				pmax	pmax		
	comp=Z,14nm,1.7s						
RAMN	Ramite	31.48	282	eP	P	18 42 24.4	+3.5
	comp=Z,20nm,1.1s						
JIRN	Jiri	31.82	284	eP	P	18 42 26.6	+2.6
	comp=Z,12nm,0.8s						
GUN	Gumba	32.08	284	eP	P	18 42 28.8	+2.5
	comp=Z,14nm,0.9s						
PKI	Pulchoki	32.51	284	eP	P	18 42 32.0	+2.0
	comp=Z,13nm,1.2s						
PKIN	Phulchoki	32.52	284	eP	P	18 42 31.9	+1.8
	comp=Z,4.6nm,0.9s						
WMQ	Urumqi	33.75	314	P	P	18 42 43.3	+2.9
WMQ				pP	sP	18 42 46.0	+2.3
WMQ				sP	pP	18 42 51.3	+8.6
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,5.3s						
WMQ				LR	LR		
	comp=Z,90nm,14.9s						
WMQ				LR	LR		
	comp=Z,180nm,18.1s						
WMQ				LR	LR		
	comp=Z,130nm,15.5s						
DANN	Dangsing	33.94	285	eP	P	18 42 44.7	+2.2
	comp=Z,10.0nm,0.7s						
KOLN	Koldanda	34.11	284	eP	P	18 42 46.2	+2.4
	comp=Z,16nm,1.1s						
PYUN	Piuthan	34.63	285	eP	P	18 42 50.7	+2.4
	comp=Z,16nm,0.9s						
DGZ	Jazzator, Alta	36.65	322	i P	P	18 43 06.7	+1.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK01	Makanchi Array	38.41	316	eP	P	18 43 21.1	+0.9
MK31	Makanchi Array	38.42	316	eP	P	18 43 21.4	+1.1
	comp=Z,10nm,0.9s						
MK31	Makanchi Array	38.42	316	eP	P	18 43 21.4	+1.1
MK31				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MK32	Makanchi Array	38.42	316	eP	P	18 43 21.6	+1.3
MK32				ePcP	PcP	18 45 32.8	-0.8
MKAR	Makanchi Array	38.42	316	eP	P	18 43 21.1	+0.8
	comp=Z,63nm,0.8s						
MKAR				PcP	PcP	18 45 32.8	-0.8
MKAR	Makanchi Array	38.42	316	eP	P	18 43 21.1	+0.8
MKAR						18 45 32.8	
MKAR				pmax	pmax		
	comp=Z,63nm,0.8s						
MKAR	Makanchi Array	38.42	316	P	P	18 43 21.6	+1.3
	comp=Z,12nm,0.8s,baz=101,slow=10.0,SNR=35						
MKAR				PcP	PcP	18 45 32.8	-0.8
	comp=Z,0.7nm,0.8s,baz=51,slow=4.6,SNR=3.2						
MAKZ	Makanchi	38.63	316	eP	P	18 43 22.8	+0.8
	comp=Z,14nm,0.8s						
MAKZ	Makanchi	38.63	316	eP	P	18 43 22.8	+0.8
MAKZ				pmax	pmax		
	comp=Z,14nm,0.8s						
PETK	Petropavlovsk-	39.62	34	LR	LR	19 00 50.2	
	comp=Z,71nm,18.5s,baz=226,slow=38						
ZAA0	Zalesovo Array	40.28	327	eP	P	18 43 35.3	-0.3
	comp=Z,15nm,1.0s						
ZALV	Zalesovo Beam	40.28	327	eP	P	18 43 35.1	-0.5
ZALV	Zalesovo Beam	40.28	327	P	P	18 43 35.5	-0.1
	comp=Z,13nm,0.9s,baz=118,slow=7.3,SNR=35						
ZAA1	Zalesovo Array	40.28	327	eP	P	18 43 35.5	-0.1
KSH	Kashi	41.04	303	P	P	18 43 48.8	+6.5
KSH				pP	sP	18 43 53.3	+7.6
KSH				S	S	18 50 04.3	+8.9
KSH				sS	sS	18 50 10.3	+11
KSH				SS	SS	18 52 58.1	+0.7
KSH				pmax	pmax		
	comp=Z,200nm,7.0s						
KSH				LR	LR		
	comp=Z,220nm,4.7s						
KSH				LR	LR		
	comp=Z,150nm,5.1s						
KSH				LR	LR		
	comp=Z,360nm,7.4s						
RABL	Rabaul	41.18	129	eP	P	18 43 42.6	-0.9
	comp=Z,20nm,0.8s						
NVS	Novosibirsk	41.54	327	i P	P	18 43 45.5	-0.5
KURK	Kurchatov	42.16	320	eP	P	18 43 51.2	+0.1
	comp=Z,11nm,1.1s						
KURK	Kurchatov	42.16	320	eP	P	18 43 51.2	+0.1
KURK				pmax	pmax		
	comp=Z,11nm,1.1s						
AAK	Ala-Archa	42.63	307	i P	P	18 43 56.7	+1.4
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
COEN	Coen	43.55	149	eP	P	18 44 02.4	-0.4
	comp=Z,12nm,0.9s						
KK31	Karatay Array	45.60	307	eP	P	18 44 20.0	+1.0
	comp=Z,11nm,1.9s						
KK31	Karatay Array	45.60	307	eP	P	18 44 20.0	+1.0
KK31				pmax	pmax		
	comp=Z,11nm,1.9s						
KKAR	Karatay Array	45.60	307	eP	P	18 44 20.3	+1.4
	comp=Z,11nm,1.9s						
KKAR	Karatay Array	45.60	307	eP	P	18 44 20.3	+1.4
KKAR				pmax	pmax		
	comp=Z,11nm,1.9s						
WRAB	Tennant Creek	45.73	163	ceP	P	18 44 19.5	-0.6
WRAB				pmax	pmax		
	comp=Z,13nm,1.7s						
WRA	Warramunga Arr	45.74	163	P	P	18 44 17.8	-2.4
	comp=Z,2.1nm,0.5s,baz=345,slow=8.7,SNR=18						
WR1	Warramunga Arr	45.74	163	eP	P	18 44 17.8	-2.4
	comp=Z,41nm,2.0s						
WB2	Warramunga Arr	45.74	163	eP	P	18 44 18.3	-1.9
BRVK	Borovoye	47.81	321	eP	P	18 44 36.2	+0.1
	comp=Z,12nm,1.0s						
BRVK	Borovoye	47.81	321	i P	P	18 44 36.9	+0.8
BRVK				pmax	pmax		
	comp=Z,14nm,1.1s						
AS31	Alice Springs	49.20	165	eP	P	18 44 45.6	-1.5
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	49.20	165	P	P	18 44 45.3	-1.8
	comp=Z,1.4nm,0.6s,baz=336,slow=6.9,SNR=17						
AS01	Alice Springs	49.21	165	eP	P	18 44 45.8	-1.4
NRIK	Noril'sk	49.35	345	P	P	18 44 48.3	+0.6
	comp=Z,1.3nm,0.3s,baz=161,slow=17,SNR=2.2						
CTA	Charters Tower	50.30	149	P	P	18 44 54.2	-1.3
	comp=Z,3.1nm,1.0s,baz=294,slow=9.7,SNR=3.8						
BILL	Bilibino	51.48	20	i P	P	18 45 04.7	+0.9
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ABKAR	Akbulak array	53.53	314	eP	P	18 45 19.8	+0.4
SVE	Sverdlovsk	54.09	324	eP	P	18 45 24.3	+1.0
SVE				pmax	pmax		
	comp=Z,18nm,1.2s						
AKTO	Aktyubinsk	54.86	316	LR	LR	19 09 50.0	
	comp=Z,54nm,18.2s,baz=90,slow=37						
GEYT	Alibeck	54.95	300	P	P	18 45 31.6	+1.7
	comp=Z,4.0nm,0.7s,baz=84,slow=6.1,SNR=9.5						
GYA0B	ALIBECK ARRAY	54.95	300	eP	P	18 45 31.6	+1.7
	comp=Z,31nm,1.8s						
ARU	Arti	55.16	323	eP	P	18 45 30.7	-0.4
	comp=Z,7.4nm,0.9s						
ARU	Arti	55.16	323	d iP	P	18 45 31.0	-0.1
ARU						18 47 33.3	
ARU				S	S	18 53 16.4	+2.0
ARU				SS	SS	18 56 58.0	-0.1
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STKA	Stephens Creek	59.09	160	P	P	18 45 57.7	-1.5
	comp=Z,3.0nm,1.0s,baz=336,slow=9.7,SNR=3.3						
PRGR	Permogore	62.20	328	eP	P	18 46 17.2	-2.8
PRGR				pmax	pmax		
	comp=Z,13nm,0.9s						
ZEI	Tsey	65.05	308	eP	P	18 46 37.1	-2.4
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VRH	Novokhopyorsk	65.14	317	eP	P	18 46 39.4	-0.2
VRH				pmax	pmax		
	comp=Z,30nm,1.1s						
KLMR	Klimovskoe	65.19	328	eP	P	18 46 38.5	-1.2
KLMR				pmax	pmax		
	comp=Z,18nm,1.0s						
KLMR	Klimovskoe	65.19	328	eP	P	18 46 38.6	-1.2
KLMR				AMP		18 46 40.7	
	comp=Z,18nm,1.1s						
TMCR	Tamitsa	65.56	331	eP	P	18 46 41.7	-0.3
TMCR				pmax	pmax		
	comp=Z,23nm,1.0s						
KBZ	Khabaz	65.60	309	P	P	18 46 43.8	+1.1
	comp=Z,5.9nm,0.9s,baz=142,slow=3.2,SNR=8.1						
KIV	Kislovodsk	65.70	309	eP	P	18 46 43.7	+0.1
	comp=Z,23nm,1.3s						
KIV	Kislovodsk	65.70	309	eP	P	18 46 44.6	+1.1
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
LPSR	Galich'ya Gora	66.62	319	eP	P	18 46 49.1	0.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	66.72	317	eP	P	18 46 48.6	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
APA	Apatity	67.05	335	⇓iP	P	18 46 43.5	-8.1
APA				pmax	pmax		
	comp=Z,15nm,1.2s						
APA				MLR	MLR		
	comp=Z,3µm,17.0s						
OBN	Obninsk	67.56	322	⇑eP	P	18 46 54.5	-0.5
OBN				pmax	pmax		
	comp=Z,13nm,1.3s						
MDM	Murphy Dome	68.38	27	eP	P	18 46 59.9	-0.2
	comp=Z,18nm,1.3s						
RND	Reindeer	68.42	29	eP	P	18 46 59.1	-1.2
	comp=Z,12nm,0.9s						
RND	Reindeer	68.42	29	eP	P	18 46 59.2	-1.2
RND				pmax	pmax		
	comp=Z,12nm,0.9s						
JOF	Joensuu	68.72	331	P	P	18 47 02.6	+0.4
JOF				pmax	pmax		
	comp=Z,33nm,1.6s						
ILAR	Eielson Array	68.98	27	P	P	18 47 03.4	-0.4
	comp=Z,0.6nm,0.7s,baz=291,slow=6.9,SNR=7.8						
ILB	Eielson Array	68.98	27	eP	P	18 47 03.7	-0.2
	comp=Z,12nm,1.6s						
EGAK	Eagle	71.35	27	eP	P	18 47 18.1	-0.3
	comp=Z,18nm,1.6s						
FIA0	FINESS Array S	71.46	330	eP	P	18 47 19.1	0.0
FIA0	FINESS Array S	71.46	330	eP	P	18 47 19.1	0.0
FINES	FINESS Array B	71.46	330	P	P	18 47 19.1	0.0
	comp=Z,8.5nm,0.8s,baz=73,slow=6.4,SNR=22						
VSU	Vasula	72.02	327	ceP	P	18 47 23.1	+0.7
VSU				pmax	pmax		
	comp=Z,111nm,2.5s						
DAWY	Dawson	72.31	27	eP	P	18 47 24.2	+0.1
	comp=Z,13nm,1.4s						
AKASG	Malin Array Be	72.94	318	P	P	18 47 27.4	-0.7
	comp=Z,4.6nm,0.9s,baz=59,slow=6.1,SNR=14						
AKBB	Malin Array Si	72.94	318	eP	P	18 47 26.9	-1.1
	comp=Z,12nm,1.2s						
AKBB	Malin Array Si	72.94	318	eP	P	18 47 27.0	-1.1
AKBB				pmax	pmax		
	comp=Z,12nm,1.2s						
KIEV	Kiev	72.96	318	eP	P	18 47 27.1	-1.0
	comp=Z,12nm,1.2s						
KIEV	Kiev	72.96	318	eP	P	18 47 27.1	-1.0
KIEV				pmax	pmax		
	comp=Z,12nm,1.2s						
AK11	Malin Array Si	72.98	318	eP	P	18 47 27.1	-1.2
INK	Inuvik	73.01	22	eP	P	18 47 26.9	-1.3
	comp=Z,5.2nm,1.1s						
INK	Inuvik	73.01	22	eP	P	18 47 26.9	-1.3
INK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
INK	Inuvik	73.01	22	P	P	18 47 25.9	-2.3
	comp=Z,1.7nm,0.9s,baz=322,slow=7.8,SNR=5.9						
BR101	Keskin Array S	73.30	306	eP	P	18 47 31.1	+0.5
BR131	Keskin Array S	73.30	306	eP	P	18 47 31.4	+0.8
	comp=Z,7.7nm,1.0s						
BRTR	Keskin Array B	73.30	306	i P	P	18 47 31.5	+0.8
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	73.30	306	P	P	18 47 31.1	+0.5
	comp=Z,3.5nm,0.8s,baz=116,slow=5.7,SNR=16						
ANTO	Ankara	73.88	307	⇓iP	P	18 47 34.9	+1.0
SUW	Suwalki	75.35	323	eP	P	18 47 42.2	+0.1
SUW	Suwalki	75.35	323	eP	P	18 47 41.7	-0.4
	comp=Z,55nm,1.0s						
SUW	Suwalki	75.35	323	eP	P	18 47 41.7	-0.4
SUW				pmax	pmax		
	comp=Z,55nm,1.0s						
CFR	Carcaliu	75.41	313	⇑iP	P	18 47 43.2	+0.6
TIRR	Tirgusor	75.46	312	⇓iP	P	18 47 43.7	+0.8
TLB	Topalu	75.67	313	⇓iP	P	18 47 44.9	+0.8
TESR	Tescani	75.92	315	⇑iP	P	18 47 46.0	+0.4
VRI	Vrincioaia	76.10	314	⇑iP	P	18 47 47.3	+0.7
BIZ	Bicaz	76.12	315	⇓iP	P	18 47 47.6	+0.9
PLOR	Plostina	76.16	314	⇑iP	P	18 47 47.5	+0.6
BURAR	Bucovina Array	76.45	316	⇑iP	P	18 47 49.0	+0.3
BURAR	Bucovina Array	76.45	316	P	P	18 47 49.0	+0.3
BUR04	Bucovina Ar. S	76.45	316	eP	P	18 47 48.4	-0.2
MLR	Muntele Rosu	76.75	314	eP	P	18 47 51.0	+0.6
	comp=Z,7.4nm,0.9s						
MLR	Muntele Rosu	76.75	314	⇓iP	P	18 47 51.0	+0.6
MLR	Muntele Rosu	76.75	314	eP	P	18 47 51.0	+0.6
MLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KWP	Kalwaria Pacla	77.25	319	eP	P	18 47 53.8	+0.8
KWP	Kalwaria Pacla	77.25	319	eP	P	18 47 53.6	+0.6
	comp=Z,525nm,1.6s						
KWP	Kalwaria Pacla	77.25	319	eP	P	18 47 53.6	+0.6
VOIR		77.35	314	⇑iP	P	18 47 54.7	+0.9
ARR	Arges	77.65	314	⇑iP	P	18 47 56.2	+0.8
TRPA	Tarpa	77.93	317	⇑iP	P	18 47 57.4	+0.6
NC405	NORSAR Array S	77.98	332	eP	P	18 47 56.5	-0.4
	comp=Z,21nm,1.1s						
NB2	NORSAR Subarra	78.23	332	P	P	18 47 57.9	-0.4
	comp=Z,1.2nm,0.8s,baz=60,slow=5.6						
NB200	NORSAR Array S	78.23	332	eP	P	18 47 57.9	-0.4
NOA	NORSAR Array B	78.23	332	P	P	18 47 57.9	-0.4
	comp=Z,2.9nm,0.9s,baz=59,slow=5.6,SNR=5.7						
NOA				LR	LR	19 26 47.9	
	comp=Z,28nm,19.0s,baz=40,slow=39						
DRGR		78.34	316	⇑iP	P	18 47 59.7	+0.5
DRGR		78.34	316	P	P	18 47 59.7	+0.5
OJC	Ojcow	78.74	320	eP	P	18 48 02.0	+0.7
OJC	Ojcow	78.74	320	eP	P	18 48 01.6	+0.3
	comp=Z,17nm,1.1s						
OJC	Ojcow	78.74	320	eP	P	18 48 01.6	+0.3
OJC				pmax	pmax		
	comp=Z,17nm,1.1s						
NIE	Niedzica	78.77	319	eP	P	18 48 02.6	+1.1
NIE	Niedzica	78.77	319	eP	P	18 48 02.6	+1.1
GZR	Gura Zlata	78.85	315	⇑iP	P	18 48 02.9	+0.9
VTS	Vitosha	79.64	312	eP	P	18 48 05.8	-0.7
	comp=Z,10.0nm,1.0s						
VTS	Vitosha	79.64	312	⇓iP	P	18 48 07.7	+1.2
VTS	Vitosha	79.64	312	eP	P	18 48 05.8	-0.7
VTS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VYHS	Vyhne	80.04	319	eP	P	18 48 09.1	+0.7
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VYHS	Vyhne	80.04	319	eP	P	18 48 09.1	+0.7
MORC	Moravsky Berou	80.25	320	⇑iP	P	18 48 10.2	+0.7
MORC	Moravsky Berou	80.25	320	eP	P	18 48 09.7	+0.2
KSP	Ksiaz	80.49	322	eP	P	18 48 11.6	+0.8
KSP	Ksiaz	80.49	322	eP	P	18 48 11.5	+0.8
JAVC	Velka Javorina	80.57	319	eP	P	18 48 13.0	+1.7
VRAC	Vranov	81.01	320	⇑iP	P	18 48 14.5	+0.9
DIVS	Divibare	81.19	314	eP	P	18 48 14.6	-0.2
	comp=Z,17nm,1.4s						
CLL	Collm	82.10	323	eP	P	18 48 20.0	+0.7
CLL				ePP	PP	18 51 26.0	-0.8
CLL	Collm	82.10	323	eP	P	18 48 20.0	+0.7
YKA	Yellowknife Ar	82.75	23	P	P	18 48 21.5	-1.0
	comp=Z,1.5nm,0.8s,baz=313,slow=4.8,SNR=12						
YKB5	Yellowknife Ar	82.75	23	eP	P	18 48 21.5	-1.0
KHC	Kasperske Hory	82.84	321	eP	P	18 48 23.8	+0.5
KHC	Kasperske Hory	82.84	321	eP	P	18 48 23.8	+0.5
GEC2	GERESS Array S	82.91	321	eP	P	18 48 23.5	-0.2
	comp=Z,4.7nm,1.0s						
GEC2	GERESS Array S	82.91	321	eP	P	18 48 23.5	-0.2
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GERES	GERESS Array B	82.91	321	P	P	18 48 23.1	-0.6
	comp=Z,2.1nm,0.9s,baz=64,slow=4.6,SNR=11						
GEA0	GERESS Array S	82.91	321	eP	P	18 48 23.0	-0.7
KMBO	Kilima Mbogo	85.18	267	P	P	18 48 35.6	-0.4
	comp=Z,0.9nm,0.4s,baz=9.0,slow=5.1,SNR=4.3						
B08A	Colville Reser	89.53	36	eP	P	18 48 56.0	-0.3
	comp=Z,6.6nm,0.9s						
NVAR	Mina Array Bea	96.17	43	P	P	18 49 27.3	0.0
	comp=Z,0.1nm,0.3s,baz=303,slow=4.0,SNR=2.7						

TAP 21 18:38:49.0, 24°.32N×121°.45E, h6^{km}, ML1.9, 2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	Xiulin Townshi	0.11	164	eP	Pg	18 38 52.2	+0.8
	baz=164						
ETLH				eS	Sg	18 38 54.1	+1.0
	baz=164						
NNSB	Datong	0.13	332	⇓P	Pg	18 38 52.2	+0.6
	baz=331						
NNSB				S	Sg	18 38 54.1	+0.5
	baz=331						
NNS	Nan Shan	0.14	331	⇓iP	Pg	18 38 52.5	+0.5
	baz=333						
NNS				i S	Sg	18 38 54.6	+0.6
	baz=333						
NACB	Ninganchiao	0.20	137	eP	Pg	18 38 53.8	+0.9
	baz=137						
NACB				eS	Sg	18 38 56.4	+0.9
	baz=137						
WHF	Hehuan Shan	0.24	224	eP	Pg	18 38 54.4	+0.6
	baz=222						
TWD	Chiawan	0.27	150	eP	Pg	18 38 55.2	+0.9
	baz=136						
ENA	Nanau	0.29	67	P	Pg	18 38 55.1	+0.5
	baz=69						
ENA				eS	Sg	18 38 59.6	+1.1
	baz=69						
NDT	Datong Townshi	0.29	12	P	Pg	18 38 55.3	+0.6
	baz=12						
NDT				S	Sg	18 38 59.7	+1.1
	baz=12						
NANB	Nanao	0.30	68	eP	Pg	18 38 55.0	+0.2
	baz=70						
ENTT	Nioudou	0.34	18	eP	Pg	18 38 56.2	+0.6
	baz=12						
ENTT				eS	Sg	18 39 01.2	+1.1
	baz=12						
YHNB	Yeheng	0.36	349	eP	Pg	18 38 56.7	+0.7
	baz=349						
CHGB	Renai	0.36	224	eP	Pg	18 38 56.4	+0.4
	baz=223						
NSK	Sanguang	0.37	347	eP	Pb	18 38 57.5	-0.4
	baz=348						
OWD	Renai	0.44	215	eP	Pg	18 38 57.6	+0.1
	baz=213						
TWE	Neicheng	0.45	26	eP	Pb	18 38 58.5	-0.8
	baz=42						
WHP	Taichung City	0.46	265	eP	Pb	18 38 59.1	-0.4
	baz=263						
NWLT	Wulai	0.46	6	eP	Pg	18 38 58.3	+0.4
	baz=357						
TWC	Suao	0.47	51	eP	Pg	18 38 58.6	+0.6
	baz=54						
ESL	Shilin	0.50	182	eP	Pg	18 38 59.4	+0.7
	baz=170						
LIOB	Emei	0.51	310	eP	Pg	18 38 59.4	+0.6
	baz=308						
NSTT	Nanjuang	0.51	308	eP	Pb	18 38 59.9	-0.5
	baz=307						
NSTT				eS	Sg	18 39 06.8	+1.3
	baz=307						
VWDT	VWDT	0.63	207	eP	Pg	18 39 01.4	+0.4
	baz=211						

TAP 21 18:38:55.0, 24°.33N×121°.46E, h8^{km}, ML1.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	Xiulin Townshi	0.12	170	eP	Pg	18 38 58.9	+1.2
	baz=170						
ETLH				S	Sg	18 39 00.8	+1.2
	baz=170						
NNSB	Datong	0.12	326	P	Pg	18 38 58.8	+0.9
	baz=325						
NNSB				S	Sg	18 39 00.6	+0.8
	baz=325						
NNS	Nan Shan	0.14	325	i P	Pg	18 38 59.0	+0.9
	baz=327						
NNS				i S	Sg	18 39 01.1	+0.9
	baz=327						
NACB	Ninganchiao	0.19	141	P	Pg	18 39 00.2	+1.3
	baz=140						
NACB				eS	Sg	18 39 03.2	+1.6
	baz=140						
WHF	Hehuan Shan	0.25	225	eP	Pg	18 39 00.8	+0.6
	baz=223						
TWD	Chiawan	0.27	153	eP	Pb	18 39 01.5	-0.7
	baz=151						
TWD				eS	Sb	18 39 05.9	-1.1
	baz=151						
ENA	Nanau	0.28	68	eP	Pb	18 39 01.9	-0.4
	baz=69						
ENA				eS	Sb	18 39 06.4	-0.7
	baz=69						
NANB	Nanao	0.28	69	eP	Pb	18 39 01.8	-0.6
	baz=68						
ENTT	Nioudou	0.33	17	eP	Pg	18 39 01.8	+0.3
	baz=18						
OWD	Renai	0.45	215	eP	Pb	18 39 04.7	-0.6
	baz=215						
TWC	Suao	0.45	51	eP	Pg	18 39 04.2	+0.4
	baz=52						
WHP	Taichung City	0.47	264	eP	Pb	18 39 05.3	-0.3
	baz=264						
WHP	Taichung City	0.47	264	eS	Pb	18 39 05.3	-0.4
	baz=263						
ESL	Shilin	0.51	183	eP	Pb	18 39 06.0	-0.3
	baz=181						
LIOB	Emei	0.52	308	eP	Pb	18 39 06.4	0.0
	baz=308						
NSTT	Nanjuang	0.52	306	eP	Pb	18 39 06.3	-0.1
	baz=306						
NSTT				eS	Sb	18 39 14.0	-0.1
	baz=306						

ISCJB ***21*** *18:41:52.2±0.8, 9°.58S±0°.07×122°.29E±0°.06, h50^{km}, mb3.7/1, Error ellipse: s-maj=11.0km s-min=8.4km az=28.7*

DJA ***21*** *18:41:54.5±1.0, 9°S±4°×12°2E±°, h16^{km}±9^{km}, M3.7/8, MLv3.7/8*

IDC ***21*** *18:41:55.2±4.2, 9°.55S×122°.15E, h103^{km}±46^{km}, mb3.3/1, mb1 3.4/4, mb1mx3.1/38, mbtmp3.6/4, Error ellipse: s-maj=87.2km s-min=33.4km az=69.0*

ISC 21 18:41:50.6±0.9, **9°.58S**±0°.06×**122°.37E**±0°.07, **h50^{km}, n12,** σ**3^s.07**/13, **Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.95**	**352**	P	**Pn**	**18 42 10.9**	**+3.2**
EDFI	**Ende, Flores**	**1.06**	**321**	P	**Pn**	**18 42 09.8**	**+0.5**
EDFI				S	**Sn**	**18 42 20.3**	**-2.8**
BATI	**Baumata**	**1.42**	**116**	P	Pn	18 42 24.5	+10
BATI	**Baumata**	**1.42**	**116**	P	Pn	18 42 23.4	+9.4
	6.2nm,0.3s,baz=301,slow=8.4,SNR=5.4						
SOEI	**Soe**	**1.88**	**95**	P	Pn	18 42 30.8	+10
BASI	**Baing, Sumba**	**1.88**	**250**	P	**Pn**	**18 42 22.2**	**+1.9**
BASI				S	**Sn**	**18 42 43.5**	**+0.7**
WSI	**Waingapu**	**2.05**	**267**	P	**Pn**	**18 42 23.5**	**+0.9**
PLAI	**Plampang**	**4.60**	**279**	P	**Pn**	**18 42 58.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**9.04**	**160**	P	Pn	18 44 04.5	+5.9
	0.4nm,0.3s,baz=337,slow=10,SNR=12						
FITZ				S	**Sn**	**18 45 38.5**	**-0.6**
	0.8nm,0.3s,baz=153,slow=8.4,SNR=9.9						
WRA	**Warramunga Arr**	**15.48**	**133**	P	**Pn**	**18 45 28.4**	**+2.6**
	0.3nm,0.3s,baz=309,slow=14,SNR=13						
WRA				S	**Sn**	**18 48 11.4**	**-5.0**
	0.1nm,0.3s,baz=308,slow=23,SNR=4.4						
ASAR	**Alice Springs**	**17.82**	**143**	P	**P**	**18 45 58.5**	**+3.1**
	0.4nm,0.3s,baz=320,slow=12,SNR=14						
ASAR				S	**Sn**	**18 49 08.2**	**-4.9**
	0.0nm,0.3s,baz=316,slow=23,SNR=3.7						
MKAR	**Makanchi Array**	**66.53**	**331**	P	**P**	**18 52 33.2**	**-2.1**
	0.4nm,0.5s,baz=150,slow=6.5,SNR=6.8						

TAP 21 18:43:21.1, 24°.32N×121°.46E, h5^{km}±1^{km}, ML2.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.11**	**171**	*e*P	Pg	18 43 24.8	+1.2
	baz=171						
ETLH				*e*S	Sg	18 43 26.6	+1.5
	baz=171						
NNSB	**Datong**	**0.13**	**326**	P	Pg	18 43 24.9	+1.1
	baz=325						
NNSB				S	Sg	18 43 26.8	+1.1
	baz=325						
NNS	**Nan Shan**	**0.14**	**326**	*i* P	Pg	18 43 25.1	+1.0
	baz=327						
NNS				*i* S	Sg	18 43 27.3	+1.2
	baz=327						
NACB	**Ninganchiao**	**0.19**	**140**	*e*P	Pg	18 43 26.3	+1.4
	baz=140						
WHF	**Hehuan Shan**	**0.25**	**226**	*e*P	Pg	18 43 26.9	+0.7
	baz=224						
TWD	**Chiawan**	**0.27**	**153**	*e*P	Pb	18 43 27.9	-0.6
	baz=151						
TWT	**Tachien**	**0.27**	**256**	*e*P	Pg	18 43 27.5	+1.1
	baz=255						
ENA	**Nanau**	**0.28**	**67**	P	Pb	18 43 27.7	-1.0
	baz=67						
NANB	**Nanao**	**0.28**	**68**	*e*P	Pg	18 43 27.7	+1.0
	baz=67						
NDT	**Datong Townshi**	**0.28**	**9**	*e*P	Pb	18 43 28.1	-0.7
	baz=9.0						
NDT				*e*S	Sg	18 43 31.6	+1.1
	baz=9.0						
TDCB	**Techi**	**0.29**	**257**	*e*P	Pg	18 43 27.7	+1.0
	baz=256						
ENTT	**Nioudou**	**0.33**	**16**	*e*P	Pb	18 43 29.0	-0.7
	baz=17						
YHNB	**Yeheng**	**0.36**	**347**	*e*P	Pb	18 43 29.6	-0.4
	baz=347						
NSK	**Sanguang**	**0.37**	**345**	*e*P	Pb	18 43 29.7	-0.5
	baz=345						
CHGB	**Renai**	**0.37**	**226**	*e*P	Pg	18 43 29.0	+0.7
	baz=225						
TWE	**Neicheng**	**0.44**	**25**	P	Pb	18 43 31.1	-0.4
	baz=26						
OWD	**Renai**	**0.45**	**216**	*e*P	Pg	18 43 30.3	+0.5
	baz=215						
TWC	**Suao**	**0.46**	**51**	*e*P	Pb	18 43 31.2	-0.5
	baz=51						
NWLT	**Wulai**	**0.46**	**5**	*e*P	Pb	18 43 31.4	-0.4
	baz=4.0						
WHP	**Taichung City**	**0.47**	**265**	*e*P	Pb	18 43 31.8	-0.3
	baz=264						
ESL	**Shilin**	**0.50**	**183**	*e*P	Pg	18 43 31.6	+0.8
	baz=182						
LIOB	**Emei**	**0.52**	**309**	*e*P	Pb	18 43 32.2	-0.6
	baz=308						
NSTT	**Nanjuang**	**0.52**	**306**	*e*P	Pb	18 43 33.0	+0.2
	baz=306						
NHDH	**Xindian Distri**	**0.64**	**5**	*e*P	Pg	18 43 33.1	-0.4
	baz=5.0						
EOS1	**EOS1**	**0.65**	**69**	*e*P	Pb	18 43 35.3	+0.4
	baz=69						
EGFH	**Guangfu**	**0.65**	**183**	*e*P	Pb	18 43 34.3	-0.7
	baz=182						
NMLH	**Miaoli**	**0.65**	**290**	*e*P	Pg	18 43 34.2	+0.6
	baz=289						
SMLT	**Sun Moon Lake**	**0.67**	**230**	*e*P	Pb	18 43 35.1	-0.4
	baz=229						
TYC	**Yuchr**	**0.69**	**233**	*e*P	Pb	18 43 35.5	-0.2
	baz=232						
SSLB	**Suanglung**	**0.70**	**221**	*e*P	Pg	18 43 34.8	+0.1
	baz=221						
TIPB	**Shuangxi**	**0.73**	**27**	*e*P	Pb	18 43 36.4	0.0
	baz=26						
TWS1	**Kuangyinshan**	**0.78**	**357**	*e*P	Pn	18 43 38.3	-0.5
	baz=357						
NWF	**Wu-fen Shan**	**0.80**	**21**	*e*P	Pn	18 43 39.7	+0.5
	baz=21						
EHY	**Hungye**	**0.82**	**189**	*e*P	Pb	18 43 37.7	-0.2
	baz=188						
YM01	**YM01**	**0.83**	**7**	*e*P	Pn	18 43 39.3	-0.3
	baz=6.0						
WJS	**Zhushan**	**0.83**	**234**	*e*P	Pn	18 43 40.3	+0.7
	baz=233						
YM05	**YM05**	**0.84**	**6**	*e*P	Pn	18 43 39.6	-0.2
	baz=6.0						
YM11	**YM11**	**0.85**	**7**	*e*P	Pn	18 43 39.5	-0.4
	baz=6.0						
YULB	**Yu-li**	**0.94**	**189**	*e*P	Pb	18 43 39.8	-0.1
	baz=189						
TWF1	**Yuli**	**0.97**	**189**	*e*P	Pb	18 43 40.6	+0.1
	baz=188						

TAP 21 18:43:24.8, 24°.31N×121°.44E, h7^{km}, ML2.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.10**	**160**	*e*P	Pg	18 43 28.1	+0.9
	baz=161						
ETLH				*e*S	Sg	18 43 29.8	+0.9
	baz=161						
NNSB	**Datong**	**0.13**	**336**	*e*P	Pg	18 43 28.4	+0.6
	baz=335						
NNSB				*e*S	Sg	18 43 30.4	+0.6
	baz=335						
NNS	**Nan Shan**	**0.15**	**335**	*i* P	Pg	18 43 28.5	+0.5
	baz=336						
NNS				S	Sg	18 43 30.8	+0.7
	baz=336						
NACB	**Ninganchiao**	**0.19**	**133**	*e*P	Pg	18 43 29.0	+0.3
	baz=134						
NACB				*e*S	Sg	18 43 32.1	+0.8
	baz=134						
NACB	**Ninganchiao**	**0.19**	**133**	*e*S	Pg	18 43 29.0	+0.3
	baz=140						
WHF	**Hehuan Shan**	**0.23**	**225**	P	Pg	18 43 30.1	+0.6
	baz=213						
WHF				S	Sg	18 43 33.6	+0.9
	baz=213						
TWT	**Tachien**	**0.25**	**258**	*e*S	Sg	18 43 34.8	+1.6
	baz=247						
TDCB	**Techi**	**0.26**	**259**	*e*P	Pg	18 43 31.0	+0.9
	baz=248						
TDCB				*e*S	Sg	18 43 34.5	+0.8
	baz=248						
TWD	**Chiawan**	**0.27**	**148**	*e*S	Sg	18 43 34.8	+1.2
	baz=147						
ENA	**Nanau**	**0.30**	**66**	*e*P	Pg	18 43 31.1	+0.4
	baz=80						
NDT	**Datong Townshi**	**0.30**	**12**	*e*S	Sg	18 43 35.6	+0.7
	baz=12						
NANB	**Nanao**	**0.31**	**67**	*e*P	Pg	18 43 31.1	+0.3
	baz=54						
NANB				*e*S	Sg	18 43 34.7	-0.2
	baz=54						
CHGB	**Renai**	**0.35**	**225**	*e*P	Pg	18 43 32.5	+0.8
	baz=224						
CHGB				*e*S	Sg	18 43 37.1	+0.8
	baz=224						
ENTT	**Nioudou**	**0.35**	**19**	*e*P	Pg	18 43 32.5	+0.8
	baz=12						
ENTT				*e*S	Sg	18 43 37.3	+0.9
	baz=12						
ENTT	**Nioudou**	**0.35**	**19**	*e*S	Pb	18 43 32.6	-0.9
	baz=17						
YHNB	**Yeheng**	**0.37**	**351**	*e*P	Pb	18 43 33.1	-0.6
	baz=351						
YHNB				*e*S	Sg	18 43 38.0	+1.1
	baz=351						
NSK	**Sanguang**	**0.38**	**348**	*e*S	Sg	18 43 38.2	+1.0
	baz=350						
ENLB	**Shoufeng**	**0.43**	**160**	*e*S	Sb	18 43 41.8	+0.4
	baz=161						
OWD	**Renai**	**0.43**	**215**	*e*P	Pg	18 43 33.8	+0.6
	baz=215						
OWD				*e*S	Sg	18 43 39.1	+0.3
	baz=215						
WHP	**Taichung City**	**0.45**	**267**	*e*S	Sg	18 43 40.3	+0.7
	baz=265						
TWE	**Neicheng**	**0.46**	**26**	*e*S	Sg	18 43 40.6	+0.8
	baz=40						
NWLT	**Wulai**	**0.47**	**7**	*e*S	Sg	18 43 41.2	+0.9
	baz=1.0						
TWC	**Suao**	**0.48**	**51**	*e*S	Sg	18 43 40.4	0.0
	baz=43						
ESL	**Shilin**	**0.49**	**181**	*e*S	Sg	18 43 41.5	+0.8
	baz=181						
LIOB	**Emei**	**0.52**	**311**	*e*P	Pb	18 43 35.6	-0.6
	baz=311						
LIOB				*e*S	Sb	18 43 42.8	-1.1
	baz=311						
NSTT	**Nanjuang**	**0.52**	**309**	*e*P	Pb	18 43 36.3	+0.1
	baz=309						
NSTT				*e*S	Sb	18 43 43.4	-0.5
	baz=309						
ILA	**Ilan**	**0.54**	**31**	*e*S	Sb	18 43 44.5	0.0
	baz=40						
WLTB	**Daxi**	**0.57**	**342**	*e*P	Pb	18 43 38.1	+0.9
	baz=344						
WLTB				*e*S	Sb	18 43 46.6	+1.1
	baz=344						
TWQ1	**Liyutan**	**0.61**	**274**	*e*S	Sb	18 43 48.1	+1.4
	baz=273						
VWDT	**VWDT**	**0.61**	**207**	*e*S	Sg	18 43 44.9	+0.1
	baz=212						
NSY	**Sanyi**	**0.63**	**280**	*e*P	Pn	18 43 39.4	-0.8
	baz=280						
EGFH	**Guangfu**	**0.63**	**181**	*e*P	Pg	18 43 37.5	+0.4
	baz=182						
EGFH				*e*S	Sg	18 43 46.2	+0.8
	baz=182						
NMLH	**Miaoli**	**0.64**	**291**	*e*S	Sb	18 43 48.3	+0.8
	baz=290						
SBCB	**Hsinchu**	**0.64**	**319**	*e*P	Pn	18 43 40.5	+0.2
	baz=319						
NTC	**Toucheng**	**0.65**	**33**	*e*S	Sb	18 43 47.2	-0.6
	baz=44						
SMLT	**Sun Moon Lake**	**0.65**	**230**	*e*P	Pb	18 43 38.2	-0.4
	baz=229						
SMLT				*e*S	Sb	18 43 47.6	-0.3
	baz=229						
NHDH	**Xindian Distri**	**0.66**	**7**	*e*P	Pb	18 43 39.0	+0.3
	baz=18						
NHDH				*e*S	Sg	18 43 46.4	+0.3
	baz=18						
TYC	**Yuchr**	**0.67**	**233**	*e*P	Pb	18 43 38.6	-0.2
	baz=232						
TYC				*e*S	Sg	18 43 46.4	0.0
	baz=232						
EOS1	**EOS1**	**0.67**	**69**	*e*S	Sb	18 43 49.3	+1.0
	baz=60						
SSLB	**Suanglung**	**0.68**	**221**	*e*P	Pg	18 43 38.2	+0.2
	baz=220						
SSLB				*e*S	Sg	18 43 46.9	0.0
	baz=220						
TWA	**Mucha**	**0.68**	**11**	*e*S	Sb	18 43 48.5	-0.3
	baz=11						
PTSB	**Yuanli**	**0.69**	**282**	*e*P	Pn	18 43 41.9	+0.9
	baz=282						
TCU	**Taichung**	**0.72**	**257**	*e*P	Pn	18 43 41.9	+0.5
	baz=257						
TIPB	**Shuangxi**	**0.75**	**28**	*e*S	Sg	18 43 48.3	-0.7
	baz=15						
TWS1	**Kuangyinshan**	**0.79**	**358**	*e*S	Sb	18 43 53.1	+1.3
	baz=7.0						
EHY	**Hungye**	**0.80**	**188**	*e*S	Sb	18 43 52.7	+0.5
	baz=182						
HGSD	**Ruisui**	**0.81**	**181**	*e*S	Sn	18 43 57.0	+2.0
	baz=188						
WJS	**Zhushan**	**0.81**	**234**	*e*S	Sn	18 43 55.6	+0.6
	baz=227						
WHYT	**Xinyi Township**	**0.81**	**222**	*e*S	Sb	18 43 52.6	+0.2
	baz=221						
WNT	**Mingjian**	**0.81**	**239**	*e*S	Sn	18 43 54.7	-0.4
	baz=231						
NWF	**Wu-fen Shan**	**0.82**	**22**	*e*S	Sb	18 43 53.1	+0.2
	baz=21						
WFSB	**Wu-fen Shan**	**0.82**	**22**	*e*S	Sb	18 43 52.7	-0.1
	baz=21						
WCHH	**Zhanghua**	**0.84**	**255**	*e*P	Pn	18 43 43.6	+0.6
	baz=254						
YM01	**YM01**	**0.84**	**8**	*e*S	Sb	18 43 53.6	+0.1
	baz=8.0						
YM04	**YM04**	**0.85**	**6**	*e*S	Sb	18 43 53.1	-0.5
	baz=19						
TWB1	**Santiao Chiao**	**0.86**	**35**	*e*S	Sg	18 43 53.0	+0.5
	baz=45						
YM05	**YM05**	**0.86**	**7**	*e*P	Pn	18 43 43.1	-0.3
	baz=21						
YM05				*e*S	Sb	18 43 53.8	-0.1
	baz=21						
YM11	**YM11**	**0.86**	**8**	*e*S	Sb	18 43 54.1	0.0
	baz=8.0						
YM08	**YM08**	**0.89**	**9**	*e*S	Sb	18 43 54.4	-0.3
	baz=8.0						
YULB	**Yu-li**	**0.92**	**188**	*e*S	Sg	18 43 53.9	-0.5
	baz=184						
TWF1	**Yuli**	**0.96**	**188**	*e*S	Sg	18 43 55.9	+0.2
	baz=183						
WDLH	**Douliu**	**1.03**	**234**	*e*P	Pn	18 43 46.8	+1.1
	baz=232						
WDLH				*e*S	Sn	18 44 02.0	+1.7
	baz=232						
RLNB	**Erlin**	**1.07**	**248**	*e*P	Pn	18 43 47.5	+1.2
	baz=248						
FULB	**Fuli**	**1.11**	**187**	*e*S	Sb	18 44 01.3	+0.2
	baz=188						
ELDTW	**Lidau**	**1.18**	**199**	*e*S	Sn	18 44 05.6	+1.4
	baz=200						
CHN4	**Tsaushan**	**1.23**	**219**	*e*S	Sn	18 44 06.6	+1.3
	baz=218						
CHY	**Chiayi**	**1.23**	**229**	*e*S	Sb	18 44 04.7	+0.2
	baz=228						
TPUB	**Ta-pu**	**1.25**	**217**	*e*S	Sn	18 44 08.3	+2.5
	baz=216						
STYT	**Tauyuan**	**1.30**	**209**	*e*P	Pg	18 43 50.3	+0.5
	baz=204						
WSF	**Szhu**	**1.30**	**239**	*e*P	Pn	18 43 49.2	-0.2
	baz=240						
WTP	**Ta-pu**	**1.30**	**216**	*e*P	Pn	18 43 48.9	-0.6
	baz=215						
TWK	**Hsinying**	**1.35**	**220**	*e*P	Pn	18 43 49.3	-0.9
	baz=220						
SNST	**Tainan City**	**1.39**	**219**	*e*P	Pn	18 43 49.7	-0.9
	baz=219						
SGST	**Jiashian**	**1.45**	**213**	*e*P	Pn	18 43 51.0	-0.5
	baz=228						
CHN8	**Yiju**	**1.48**	**230**	*e*P	Pg	18 43 54.2	+1.0
	baz=243						
SLGT	**Liugui**	**1.50**	**209**	*e*P	Pn	18 43 51.6	-0.5
	baz=199						
SSD	**Sandimen**	**1.72**	**206**	*e*P	Pb	18 43 56.5	-0.3
	baz=205						
ECL	**Taimali**	**1.76**	**195**	*e*P	Pn	18 43 56.5	+0.8
	baz=177						
MASBT	**Mashibuluo**	**1.84**	**204**	*e*P	Pn	18 43 57.5	+0.7
	baz=204						
PHUB	**P'eng-hu**	**1.89**	**246**	*e*S	Sn	18 44 20.8	-0.7
	baz=243						
PTTC	**Pingtan**	**1.93**	**308**	*e*S	Sn	18 44 21.9	-0.6
	baz=310						
VWUC	**VWUC**	**1.94**	**291**	*e*P	Pn	18 43 58.5	+0.3
	baz=294						
EAST	**Anshuo**	**1.99**	**196**	*e*P	Pb	18 44 01.2	-0.2
	baz=178						
SCZT	**Fangliau**	**2.07**	**202**	*e*P	Pb	18 44 01.5	-1.2
	baz=220						
PTMZ	**Houxiangcun**	**2.23**	**290**	*e*S	Sn	18 44 29.0	-1.2
	baz=289						

IDC 21 18:45:51.7±1.3, 2°.61S×139°.53E, h0^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.4/32, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=27.5km s-min=12.5km az=168.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.18**	**86**	Pg	Pb	18 46 15.1	+0.1
	7.8nm,0.3s,baz=239,slow=12,SNR=23						
JAY				Lg	Lg	18 46 29.6	
	20nm,0.3s,baz=148,slow=23,SNR=13						
WRA	**Warramunga Arr**	**17.96**	**196**	P	P	18 50 03.7	0.0
	0.2nm,0.3s,baz=18,slow=13,SNR=3.6						
FITZ	**Fitzroy Crossi**	**20.55**	**221**	P	P	18 50 32.6	+0.5
	1.5nm,0.7s,baz=54,slow=11,SNR=3.4						
ASAR	**Alice Springs**	**21.63**	**194**	P	P	18 50 43.2	-0.6
	0.6nm,0.6s,baz=14,slow=10,SNR=7.7						
MKAR	**Makanchi Array**	**70.21**	**322**	P	P	18 57 06.5	-0.2
	0.1nm,0.4s,baz=101,slow=7.2,SNR=3.2						

IDC 21 18:50:37.8±1.7, 12°.67S×165°.71E, h0^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.5/25, mbtmp3.5/5, Error ellipse: s-maj=50.1km s-min=31.6km az=122.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.38**	**176**	Pn	Pn	18 52 53.4	-0.9
	baz=163,slow=19,SNR=1.8						
WRA	**Warramunga Arr**	**30.92**	**252**	P	P	18 56 57.0	+0.4
	0.4nm,0.6s,baz=82,slow=9.1,SNR=5.1						
ASAR	**Alice Springs**	**32.06**	**246**	P	P	18 57 06.7	+0.1
	0.2nm,0.6s,baz=64,slow=10,SNR=3.9						
ILAR	**Eielson Array**	**85.06**	**18**	P	P	19 03 15.6	+0.5
	0.4nm,0.7s,baz=234,slow=6.1,SNR=4.5						
MKAR	**Makanchi Array**	**94.67**	**317**	P	P	19 04 00.1	-0.8
	0.2nm,0.5s,baz=101,slow=6.0,SNR=3.2						

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*DDA **21** 18:59:09.8, 35°.52N×31°.86E, h23^{km}±2^{km}, ML3.6*
*ISK **21** 18:59:09.9, 35°.56N×31°.82E, h12^{km}, ML3.7/43*
*ISCJB **21** 18:59:11.9±0.2, 35°.46N±0°.02×31°.85E±0°.03, h64^{km}±5^{km}, mb3.7/4, Error ellipse: s-maj=3.8km s-min=3.0km az=146.2*
*IDC **21** 18:59:12.7±1.8, 35°.48N×31°.69E, h64^{km}±26^{km}, mb3.5/4, mb1 3.4/10, mb1mx3.2/50, mbtmp3.6/10, ML3.4/6, Error ellipse: s-maj=32.4km s-min=19.4km az=44.0*
*NIC **21** 18:59:14.0±0.3, 35°.62N×31°.96E, h25^{km}, ML3.7*
*HLW **21** 18:59:16.3, 35°.19N×31°.67E, h10^{km}±45^{km}, Md4.2, Ml4.1*

ISC 21 18:59:12.8±1.0, 35°.49N±0°.04×31°.87E±0°.03, h46^{km}±13^{km}, n110, σ1°.79/118, mb3.7/4, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.59**	**140**	P	**Pn**	**18 59 25.7**	**+0.7**
	baz=332						
ALFC	**Alefka**	**0.68**	**119**	P	**Pn**	**18 59 26.3**	**+0.1**
	baz=311						
ALFC				S	**Sn**	**18 59 36.2**	**+0.4**
PPCY	**Paphos**	**0.72**	**147**	P	**Pn**	**18 59 27.9**	**+1.3**
	baz=336						
LEF	**Lefka**	**0.91**	**113**	PG	**Pn**	**18 59 29.0**	**-0.2**
LEF	**Lefka**	**0.91**	**113**	*i* P	**Pn**	**18 59 29.1**	**-0.2**
LEF				*i* S	**Sn**	**18 59 40.7**	**-0.5**
ALAN	**Alanya-ANTALYA**	**1.08**	**7**	PG	**Pn**	**18 59 29.9**	**-1.6**
ALAN				SG	**Sn**	**18 59 44.1**	**-1.2**
BOZY	**Bozyazi-Mersin**	**1.09**	**55**	PN	**Pn**	**18 59 31.2**	**-0.4**
BOZY				SN	**Sn**	**18 59 45.8**	**+0.2**
SZAC	**Souni**	**1.11**	**131**	P	**Pn**	**18 59 33.3**	**+1.4**
	baz=318						
MAMC	**Mammari**	**1.15**	**106**	P	**Pn**	**18 59 32.7**	**+0.3**
	baz=293						
TEKE	**Tekeli-Mersin**	**1.21**	**57**	PN	**Pn**	**18 59 33.1**	**-0.1**
CSS	**Mathiatis**	**1.31**	**113**	PN	**Pn**	**18 59 34.9**	**+0.3**
CSS	**Mathiatis**	**1.31**	**113**	P	**Pn**	**18 59 34.5**	**-0.1**
	baz=300						
AKIN	**Akıncılar- Kıb**	**1.39**	**109**	PN	**Pn**	**18 59 36.4**	**+0.7**
BERE	**Bereket-Mersin**	**1.40**	**52**	PN	**Pn**	**18 59 36.1**	**+0.2**
BERE				SN	**Sn**	**18 59 53.9**	**+0.6**
YORU	**Yoruktepe-Mers**	**1.42**	**61**	PN	**Pn**	**18 59 36.0**	**-0.1**
KEPZ	**Antalya-Kepez**	**1.43**	**351**	*i* P	**Pn**	**18 59 35.8**	**-0.5**
KEPZ				*i* S	**Sn**	**18 59 51.8**	**-2.1**
ERMK	**Ermenek**	**1.43**	**36**	*i* P	**Pn**	**18 59 37.4**	**+1.0**
ERMK				*i* S	**Sn**	**18 59 57.7**	**+3.5**
OREN	**Orenkoy-Mersin**	**1.48**	**60**	PN	**Pn**	**18 59 36.9**	**0.0**
AKK2	**Akkuyu-Mersin**	**1.51**	**64**	PN	**Pn**	**18 59 37.6**	**+0.2**
AKKU	**Akkuyu-Mersin**	**1.52**	**63**	PN	**Pn**	**18 59 37.7**	**+0.2**
GULN	**MERSIN_Gulnar**	**1.53**	**62**	*i* P	**Pn**	**18 59 38.4**	**+0.8**
GULN				*i* S	**Sn**	**18 59 56.8**	**+0.5**
GULN				IAML_P			
	comp=Z,3μm,0.1s						
KEMT	**Kemer-ANTALYA**	**1.54**	**317**	PN	**Pn**	**18 59 37.2**	**-0.6**
TEVE	**Tevekalti-Mers**	**1.59**	**53**	PN	**Pn**	**18 59 39.2**	**+0.7**
YESI	**Yesilovacik-Me**	**1.61**	**63**	PN	**Pn**	**18 59 39.3**	**+0.7**
IKL	**Isikli**	**1.66**	**63**	PN	**Pn**	**18 59 39.8**	**+0.5**
ANTB	**Antalya**	**1.72**	**325**	PN	**Pn**	**18 59 39.4**	**-0.8**
KEBE	**Keben-Mersin**	**1.78**	**57**	PN	**Pn**	**18 59 41.4**	**+0.3**
EREN	**Erenkoy**	**1.88**	**88**	PN	**Pn**	**18 59 43.0**	**+0.6**
EREN	**Erenkoy**	**1.88**	**88**	*i* P	**Pn**	**18 59 43.6**	**+1.2**
EREN				IAML_P			
	comp=Z,2μm,0.2s						
KORT	**Korkueli**	**1.95**	**321**	PN	**Pn**	**18 59 42.7**	**-0.8**
KORT	**Korkueli**	**1.95**	**321**	*i* P	**Pn**	**18 59 45.1**	**+1.6**
KORT				*i* S	**Sn**	**19 00 14.6**	**+7.8**
KORT				IAML_P			
	comp=Z,729nm,0.1s						
AKAS	**Kas**	**1.98**	**293**	PN	**Pn**	**18 59 43.3**	**-0.7**
ELL	**Elmali**	**2.03**	**309**	PN	**Pn**	**18 59 43.9**	**-0.6**
KIZK	**Mersin**	**2.10**	**61**	PN	**Pn**	**18 59 46.2**	**+0.8**
BCK	**Bucak**	**2.22**	**333**	PN	**Pn**	**18 59 47.0**	**-0.2**
KMER	**Konya-Meram**	**2.31**	**10**	*i* P	**Pn**	**18 59 50.9**	**+2.4**
KMER				*i* S	**Sn**	**19 00 18.4**	**+2.6**
KONT	**Konya--Tatoy**	**2.49**	**9**	PN	**Pn**	**18 59 51.1**	**+0.3**
KONT	**Konya--Tatoy**	**2.49**	**9**	*i* P	**Pn**	**18 59 52.5**	**+1.7**
KONT				*i* S	**Sn**	**19 00 27.3**	**+7.4**
FETY	**Fethiye**	**2.53**	**298**	PN	**Pn**	**18 59 50.7**	**-0.7**
FETY	**Fethiye**	**2.53**	**298**	*i* P	**Pn**	**18 59 51.3**	**-0.1**
FETY				IAML_P			
	comp=Z,2μm,0.2s						
MERS	**Mersin**	**2.55**	**57**	PN	**Pn**	**18 59 52.8**	**+1.1**
GOLH	**Golhisar**	**2.55**	**314**	*i* P	**Pn**	**18 59 54.5**	**+2.7**
GOLH				IAML_P			
	comp=Z,663nm,0.2s						
ISP	**Isparta**	**2.57**	**335**	PN	**Pn**	**18 59 51.6**	**-0.4**
DOGA	**KONYA_Doganhis**	**2.62**	**357**	*i* P	**Pn**	**18 59 54.3**	**+1.6**
DOGA				IAML_P			
	comp=Z,3μm,0.3s						
BRDR	**BURDUR-Merkez**	**2.64**	**327**	*i* P	**Pn**	**18 59 53.7**	**+0.7**
BAGO	**Egridir - ISPA**	**2.65**	**341**	*i* P	**Pn**	**18 59 56.3**	**+3.2**
BAGO				IAML_P			
	comp=Z,2μm,0.3s						
KERG	**Konya-Eregli**	**2.65**	**43**	*i* P	**Pn**	**18 59 52.7**	**-0.4**
KERG				IAML_P			
	comp=Z,86nm,0.1s						
LADK	**Ladik-KONYA**	**2.74**	**8**	PN	**Pn**	**18 59 54.2**	**-0.1**
GULE	**Gulek**	**2.95**	**52**	*i* P	**Pn**	**19 00 00.0**	**+2.7**
TURN	**Turunc**	**2.98**	**299**	PN	**Pn**	**19 00 00.2**	**+2.7**
SULT	**Sultanhani-AKS**	**3.01**	**26**	PN	**Pn**	**18 59 58.4**	**+0.3**
KDHN	**Kadinhani**	**3.04**	**4**	*i* P	**Pn**	**19 00 00.6**	**+2.2**
KDHN				IAML_P			
	comp=Z,332nm,0.3s						
KZIL	**AFYON_Kizioren**	**3.09**	**334**	*i* P	**Pn**	**19 00 01.8**	**+2.6**
KZIL				IAML_P			
	comp=Z,1μm,0.2s						
TAVA	**DENIZLI_Tavas**	**3.09**	**311**	*i* P	**Pn**	**19 00 01.0**	**+1.8**
TAVA				IAML_P			
	comp=Z,656nm,0.1s						
KARA	**Karaisali**	**3.12**	**55**	PN	**Pn**	**19 00 00.6**	**+1.1**
ARG	**Arkhangelos**	**3.13**	**285**	PN	**Pn**	**19 00 00.0**	**+0.5**
CHBY	**Cihanbeyli**	**3.20**	**15**	PN	**Pn**	**19 00 01.3**	**+0.7**
SHUT	**Suhut-Afyon**	**3.24**	**341**	PN	**Pn**	**19 00 01.0**	**-0.2**
BOLV	**Bolvadin**	**3.31**	**347**	*i* P	**Pn**	**19 00 04.4**	**+2.2**
BOLV				IAML_P			
	comp=Z,1μm,0.3s						
YURE	**YUREGIR**	**3.33**	**65**	PN	**Pn**	**19 00 03.3**	**+1.0**
YURE	**YUREGIR**	**3.33**	**65**	*i* P	**Pn**	**19 00 04.7**	**+2.4**

YER	Yerkesik	3.33	301	PN	Pn	19 00 02.1	-0.3
KHAL	Karahalli	3.45	327	i P	Pn	19 00 07.0	+2.9
KHAL				IAML_P			
	comp=Z,586nm,0.2s						
CEYT	Ceyhan	3.48	63	PN	Pn	19 00 05.4	+1.0
TAHT	Tahtakopru-Hat	3.61	75	PN	Pn	19 00 07.9	+1.7
KULU	Kulu	3.66	14	PN	Pn	19 00 07.5	+0.5
KOZT	Kozan	3.76	57	PN	Pn	19 00 09.4	+1.2
MLSB	Milas	3.76	300	PN	Pn	19 00 07.8	-0.5
YAYX	Yaylak	3.78	24	PN	Pn	19 00 08.9	+0.3
MMAI	Mount Meron Ar	3.83	129	P	Pn	19 00 10.1	+0.8
	comp=Z,5.3nm,0.3s,baz=306,slow=12,SNR=28						
MMAI				S	Sn	19 00 52.3	-0.7
	comp=Z,8.9nm,0.3s,baz=222,slow=46,SNR=6.6						
YAHY	KAYSERI_Yahyal	3.83	46	i P	Pn	19 00 12.0	+2.7
KARP	Karpathos	3.84	272	PN	Pn	19 00 10.4	+1.0
BDRM	Kayabasi	3.91	295	i P	Pn	19 00 10.5	+0.3
USAK	Uak-Merkez	3.95	326	i P	Pn	19 00 11.6	+0.8
MANT	Manisa	4.00	320	i P	Pn	19 00 13.6	+1.8
AFSR	Afar-Bala (An	4.07	13	PN	Pn	19 00 13.4	+0.9
GDZ	Gediz	4.07	333	i P	Pn	19 00 13.2	+0.6
MMLI	Mount Malkishu	4.24	135	PN	Pn	19 00 17.2	+2.4
SHMJ	Saham	4.24	129	P	Pn	19 00 21.4	+6.5
DEMI	Demirci	4.35	326	i P	Pn	19 00 17.4	+1.0
BRTR	Keskin Array B	4.46	18	P	Pn	19 00 18.6	+0.6
	comp=Z,0.6nm,0.3s,baz=189,slow=16,SNR=18						
BRTR				S	Sn	19 01 09.4	+0.8
	comp=Z,0.3nm,0.3s,baz=113,slow=28,SNR=3.3						
BORA	Eskisehir	4.53	346	i P	Pn	19 00 20.2	+1.4
CDAG	Cicekdag	4.58	25	i P	Pn	19 00 21.5	+1.9
GAZ	Gaziantep	4.63	67	PN	Pn	19 00 22.3	+2.1
HSUJ	Al Zarqa	4.93	132	P	Pn	19 00 11.0	-13
KZIT	Kziot	5.04	154	PN	Pn	19 00 28.8	+3.0
WALJ	Wala	5.11	139	P	Pn	19 00 21.1	-5.7
HBRG	Burj al `Arab	5.19	200	AMP		19 01 00.0	
	baz=199						
GHAJ	Ghor Haditha	5.19	142	P	Pn	19 00 33.4	+5.5
LISJ	El Lisan	5.20	143	P	Pn	19 00 29.1	+1.1
ASF	Jabal al Asfar	5.33	127	P	Pn	19 00 35.8	+5.9
ASF	Jabal al Asfar	5.33	127	P	Pn	19 00 30.8	+0.9
	comp=Z,0.3nm,0.3s,baz=285,slow=8.9,SNR=2.9						
ASF				S	Sn	19 01 30.7	+0.6
	comp=Z,0.3nm,0.3s,baz=311,slow=20,SNR=2.5						
SWQJ	Swaqa	5.50	139	P	Pn	19 00 20.5	-12
KOT	Kottamia	5.54	180	P	Pn	19 00 33.0	+0.3
	baz=178						
MATC	Matruh	5.66	225	P	Pn	19 00 34.9	+0.6
	baz=226						
IDI	Anoyia	5.70	270	P	Pn	19 00 33.4	-1.6
	comp=Z,2.3nm,0.3s,baz=115,slow=9.4,SNR=14						
IDI				S	Sn	19 01 33.5	-5.7
	comp=Z,1.1nm,0.3s,baz=144,slow=18,SNR=3.9						
GLL	Jalalah	5.89	181	P	Pn	19 00 38.1	+0.6
	baz=179						
HNAT	Natroun	5.93	191	P	Pn	19 00 38.6	+0.5
	baz=190						
HSNJ	Maan	6.12	147	P	Pn	19 00 34.0	-6.8
AQBJ	Aqaba	6.34	154	P	Pn	19 00 46.5	+2.9
EIL	Elat	6.36	155	P	Pn	19 00 44.9	+1.0
	comp=Z,0.4nm,0.3s,baz=254,slow=1.2,SNR=19						
EIL				S	Sn	19 01 51.3	-3.9
	comp=Z,0.5nm,0.3s,baz=102,slow=17,SNR=3.3						
NBNS	Bani Suef	6.86	184	P	Pn	19 00 50.6	-0.2
	baz=183						
HKAT	Jabal Katrina	7.17	165	P	Pn	19 00 56.1	+0.8
	baz=162						
SWA2		8.25	223	P	Pn	19 01 09.6	-0.3
	baz=224						
HFRF	Wahat Farafira	8.85	201	P	Pn	19 01 17.7	-0.4
	baz=201						
HFRF				AMP		19 02 00.0	
	baz=201						
AKASG	Malin Array Be	15.33	354	P	Pn	19 02 46.8	+0.9
	comp=Z,0.7nm,0.3s,baz=182,slow=11,SNR=5.3						
FINES	FINESS Array B	26.24	354	P	P	19 04 40.5	-2.5
	comp=Z,0.8nm,0.4s,baz=159,slow=11,SNR=12						
ARCES	ARCESS Array B	34.28	356	P	P	19 05 51.9	-2.2
	comp=Z,3.4nm,0.8s,baz=160,slow=7.6,SNR=8.3						
MKAR	Makanchi Array	39.00	57	P	P	19 06 34.0	-0.6
	comp=Z,0.3nm,0.6s,baz=260,slow=7.3,SNR=5.7						
SONM	Songino Array	54.99	52	P	P	19 08 38.7	-0.7
	comp=Z,0.4nm,0.4s,baz=295,slow=8.2,SNR=4.8						

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*IDC **21** 19:08:27.5±2.3, 5°.96N×127°.02E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.1/33, mbtmp3.2/3, Error ellipse: s-maj=169.3km s-min=27.3km az=66.0*

*ISCJB **21** 19:08:46.2±1.2, 5°.5N±0°.1×127°.3E±0°.1, h150^{km}, mb3.1/3, Error ellipse: s-maj=24.9km s-min=10.6km az=136.8*

ISC 21 19:08:47.6±1.6**, 5°.5N**±0°.1×**127°.3E**±0°.2**, h150^{km}, n6, σ0^{s}72**/7**, mb3.0**/3**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	1.73	324	eP	Pn	19 09 20.4	+0.7
MATI				eS	Sn	19 09 43.4	-0.9
GSPH	General Santos	2.40	283	⇑iP	Pn	19 09 28.2	+0.7
GSPH				i S	Sn	19 09 58.1	-0.3
SKMP	Bagumbayan, Su	2.90	290	eP	Pn	19 09 33.9	+0.2
WRA	Warramunga Arr	26.26	165	P	P	19 14 09.0	0.0
	0.3nm,0.8s,baz=345,slow=10,SNR=6.7						
ASAR	Alice Springs	29.74	168	P	P	19 14 39.7	-0.3
	0.1nm,0.4s,baz=341,slow=7.4,SNR=7.0						
MKAR	Makanchi Array	56.41	324	P	P	19 18 07.2	-6.2
	0.3nm,0.6s,baz=111,slow=7.8,SNR=5.0						

SJA 21 19:22:59.7±0.4**, 31°.55S**×**68°.81W, h114^{km}**±1^{km}**, ML2.0, MW2.6, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.11	88	eP	Pn	19 23 16.0	+0.5
ZON				eS	Sn	19 23 28.4	+1.0
RTLL	Cerro Villicun	0.36	53	eP	Pn	19 23 16.4	0.0
RTLL				eS	Sn	19 23 28.4	-0.4
RTLL	Cerro Villicun	0.36	53	eP	Pn	19 23 17.1	+0.7
RTLL				IAML		19 23 29.0	
	comp=E,89nm,0.4s						
RTLL				eS	Sn	19 23 29.4	+0.6
RTCV	Cerro Valdivia	0.39	144	eP	Pn	19 23 16.7	+0.2
RTCV				eS	Sn	19 23 29.2	+0.2
RTCV	Cerro Valdivia	0.39	144	eP	Pn	19 23 17.2	+0.7
RTCV				eS	Sn	19 23 30.1	+1.0
RTLS	Leoncito	0.49	239	eP	Pn	19 23 18.3	+1.0
RTLS				eS	Sn	19 23 31.9	+1.4
RTLS				IAML		19 23 32.5	
	comp=Z,19nm,0.2s						
RTLS	Leoncito	0.49	239	eP	Pn	19 23 18.4	+1.1
RTLS				eS	Sn	19 23 32.2	+1.6
RTLS				IAML		19 23 32.5	
	comp=Z,19nm,0.2s						
CFA	Coronel Fontan	0.49	97	eP	Pn	19 23 17.5	+0.5
AMOG	MOGNA	0.67	24	eP	Pn	19 23 18.7	+0.4
AMOG				eS	Sn	19 23 31.8	-0.5
AMOG	MOGNA	0.67	24	eP	Pn	19 23 19.1	+0.8
AMOG				eS	Sn	19 23 33.1	+0.8
AUSP	Uspallata	0.83	216	eP	Pn	19 23 21.1	+1.1
AUSP				eS	Sn	19 23 37.0	+1.7
ACCO	Cerro Coronel	0.98	347	eP	Pn	19 23 22.5	+1.1
ACCO				eS	Sn	19 23 39.9	+2.0
ASAL	Salagasta	1.04	181	eP	Pn	19 23 22.7	+1.0
ASAL				eS	Sn	19 23 39.4	+1.0
ARCO	CERRO ARCO	1.29	185	eP	Pn	19 23 26.0	+1.4
ARCO				IAML		19 23 32.5	
	comp=Z,28nm,0.5s						
ARCO				eS	Sn	19 23 45.3	+1.9
ARCO	CERRO ARCO	1.29	185	eP	Pn	19 23 25.2	+0.7
ARCO				IAML		19 23 32.5	
	comp=Z,28nm,0.5s						
ARCO				eS	Sn	19 23 44.6	+1.2
AROD	Rodeo	1.49	337	eP	Pn	19 23 28.4	+1.3
AROD				eS	Sn	19 23 49.1	+1.4
AROD	Rodeo	1.49	337	eP	Pn	19 23 28.6	+1.6
AAGR	Agrelo	1.53	181	eP	Pn	19 23 28.4	+1.2
AAGR				eS	Sn	19 23 49.5	+1.2
ACAN	Cantantal	1.56	118	eP	Pn	19 23 28.4	+1.0
AGUA	GUANDACOL	2.07	8	eP	Pn	19 23 35.0	+1.1
APLL	PUNTA DE LOS L	2.27	60	eP	Pn	19 23 36.7	+0.3
APLL				IAML		19 24 06.9	
	comp=Z,3.3nm,0.3s						
APLL	PUNTA DE LOS L	2.27	60	eP	Pn	19 23 37.6	+1.2
APLL				IAML		19 24 06.9	
	comp=Z,3.3nm,0.3s						

MAN 21 19:23:17.9, 11°.28N×**124°.55E, h10^{km}, mb4.2, ML3.0, MS2.7, 1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	Palo	0.43	105	⇓iP	Pb	19 23 27.1	-0.6
PLP				eS	Sb	19 23 33.8	-0.5
LLP	Lapu-Lapu	1.11	211	eP	Pg	19 23 39.4	0.0
LLP				eS	Sn	19 23 55.3	+0.3

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*DJA **21** 19:26:59.5±1.3, 6°N±9°×12°6E±°, h149^{km}±16^{km}, M4.2/8, mb4.3/7, mB4.7/4, MLv4.3/8, Mw(mB)3.9/4*

*ISCJB **21** 19:27:01.0±0.5, 5°.67N±0°.04×126°.17E±0°.05, h91^{km}±8^{km}, mb3.7/4, Error ellipse: s-maj=8.5km s-min=5.9km az=169.5*

*MAN **21** 19:27:00.5, 5°.64N×126°.19E, h72^{km}, mb4.9, ML3.8, MS3.7*

*IDC **21** 19:27:00.3±6.4, 5°.82N×126°.01E, h94^{km}±71^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.2/43, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=166.1km s-min=24.1km az=66.0*

ISC 21 19:27:01.7±0.9**, 5°.71N**±0°.06×**126°.16E**±0°.07**, h91^{km}**±10^{km}**, n24, σ1^{s}41**/36**, mb3.8**/4**, 2C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.59	312	eP	Pn	19 27 17.2	-0.2
DDMP				eS	Sn	19 27 28.2	-0.8
MATI	Mati	1.23	5	eP	Pn	19 27 22.9	-1.3
MATI				eS	Sn	19 27 40.9	-0.3
GSPH	General Santos	1.26	287	⇑iP	Pn	19 27 24.8	+0.1
GSPH				i S	Sn	19 27 40.4	-1.5
DMPH	Davao City--Mi	1.51	335	⇓iP	Pn	19 27 27.3	-0.4
DMPH				i S	Sn	19 27 48.1	+0.8
KCP	Kidapawan	1.67	321	⇑iP	Pn	19 27 29.6	-0.2
KCP				i S	Sn	19 27 51.7	+0.7
SKMP	Bagumbayan, Su	1.80	297	eP	Pn	19 27 31.3	0.0
SKMP				eS	Sn	19 27 55.6	+1.8
SGSI	Sangihe	2.10	197	P	Pn	19 27 38.0	+2.6
BUKP	Musuan	2.42	333	eP	Pn	19 27 39.5	0.0
BUKP				eS	Sn	19 28 09.3	+0.9
CTBH	Cotabato--PC H	2.42	308	⇓iP	Pn	19 27 40.3	+0.8
CTBH				i S	Sn	19 28 07.8	-0.8
BIPH	Bislig	2.47	5	⇓eP	Pn	19 27 41.1	+0.9
BIPH				eS	Sn	19 28 11.4	+1.8
CGP	Cagayan de Oro	3.09	332	⇓eP	Pn	19 27 49.0	+0.5
CGP				eS	Sn	19 28 25.8	+1.2
BUTP	Butuan	3.28	351	eP	Pn	19 27 52.0	+0.9
BUTP				eS	Sn	19 28 32.6	+3.4
PAGZ	Pagadian	3.48	308	eP	Pn	19 27 54.7	+0.9
IPIL	Ipil	4.12	300	eP	Pn	19 28 04.1	+1.7
IPIL				eS	Sn	19 28 51.1	+1.6
TNTI	Ternate	5.05	166	P	Pn	19 28 17.2	+2.1
	38nm,1.0s,1μm0.2nm						
MRSI	Marisa	6.69	219	P	Pn	19 28 39.1	+1.7
SANI	Sanana	7.71	181	P	Pn	19 28 51.1	-0.2
MPSI	Mapaga	8.22	230	P	Pn	19 28 59.5	+1.3
SIJI	Sorong	8.29	142	P	Pn	19 29 00.4	+1.2
	1.1nm,0.3s,baz=329,slow=18,SNR=5.0						
NLAI	Namlea	8.94	174	P	Pn	19 29 08.3	+0.2
WRA	Warramunga Arr	26.73	163	P	P	19 32 32.1	-0.8
	1.0nm,0.4s,baz=342,slow=10,SNR=3.7						
ASAR	Alice Springs	30.16	166	P	P	19 33 02.8	-0.5
	1.1nm,0.5s,baz=348,slow=7.2,SNR=15						
STKA	Stephens Creek	40.17	159	P	P	19 34 29.2	+0.1
	1.6nm,0.4s,baz=332,slow=6.8,SNR=7.6						
MKAR	Makanchi Array	55.62	325	P	P	19 36 25.1	-3.0
	0.1nm,0.4s,baz=107,slow=7.1,SNR=5.0						

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*NEIC **21** 19:27:46.7±0.0, 16°.72N×94°.46W, h122^{km}, MD4.4(MEX), After MEX.*

MEX 21 19:27:46.7±1.2**, 16°.72N**×**94°.46W, h123^{km}**±13^{km}**, MD4.4, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.54	312	ePn	Pn	19 28 03.9	-1.4
CMIG				eSn	Sn	19 28 17.5	-1.7
CMIG	Matias Romero	0.54	312	i P	Pn	19 28 03.9	-1.4
CMIG				i S	Sn	19 28 17.5	-1.7
TUIG	Tuzandepetl	1.30	2	ePn	Pn	19 28 09.2	-2.9
TUIG	Tuzandepetl	1.30	2	eP	Pn	19 28 09.2	-2.9
PCIG		1.57	130	ePn	Pn	19 28 14.1	-1.0
PCIG		1.57	130	eP	Pn	19 28 14.1	-1.0
HUIG	Huatulco	1.84	239	ePn	Pn	19 28 16.6	-1.8
HUIG	Huatulco	1.84	239	eP	Pn	19 28 16.6	-1.8
VHO	Vista Hermosa	2.20	279	ePn	Pn	19 28 23.2	+0.2
VHO	Vista Hermosa	2.20	279	eP	Pn	19 28 23.2	+0.2
CCIG	Comitan	2.27	101	ePn	Pn	19 28 21.7	-2.2
LVIG	Laguna Verde	3.52	328	ePn	Pn	19 28 36.3	-3.5
PNIG	Pinotepa	3.53	265	ePn	Pn	19 28 38.3	-1.8
PNIG	Pinotepa	3.53	265	eP	Pn	19 28 38.3	-1.8
TEIG	Tepich	6.83	58	ePn	Pn	19 29 18.5	-5.9

IDC 21 19:32:49.5±1.7**, 10°.83S**×**165°.78E, h0^{km}, mb3.9**/5**, mb1 4.1**/6**, mb1mx3.7**/34**, mbtmp3.9**/6**, ML3.9**/1**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx3.0**/31**, Error ellipse: s-maj=49.6km s-min=29.4km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.91	283	LR	LR	19 36 50.0	
	comp=Z,247nm,20.0s,baz=152,slow=41						
DZM	Mont Dzumac	11.20	177	Pn	Pn	19 35 31.1	0.0
	0.8nm,0.3s,baz=344,slow=15,SNR=7.3						
H11S2	WAKE ISLAND Hy	29.14	2	T	T	20 09 11.0	
	baz=181,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.15	2	T	T	20 09 13.8	
	baz=181,slow=76,SNR=6.0						
H11S1	WAKE ISLAND Hy	29.16	2	T	T	20 09 14.1	
	baz=181,slow=76,SNR=8.5						
H11N1	WAKE ISLAND Hy	30.37	2	T	T	20 10 44.4	
	baz=182,slow=76,SNR=7.8						
H11N3	WAKE ISLAND Hy	30.37	2	T	T	20 10 45.4	
	baz=182,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.38	2	T	T	20 10 46.5	
	baz=182,slow=76,SNR=9.4						
WRA	Warramunga Arr	31.59	250	P	P	19 39 14.4	+0.2
	3.5nm,0.8s,baz=81,slow=9.0,SNR=22						
ASAR	Alice Springs	32.92	243	P	P	19 39 25.3	-0.7
	0.7nm,0.8s,baz=66,slow=9.9,SNR=9.8						
FITZ	Fitzroy Crossi	39.47	255	P	P	19 40 22.4	+0.4
	1.9nm,0.8s,baz=106,slow=8.7,SNR=6.5						
ILAR	Eielson Array	83.30	19	P	P	19 45 18.0	+0.2
	0.3nm,0.7s,baz=220,slow=5.4,SNR=4.5						
NEW	Newport	89.56	41	LR	LR	20 19 10.0	
	comp=Z,61nm,20.4s,baz=190,slow=31						
MKAR	Makanchi Array	93.38	317	P	P	19 46 06.3	-0.5
	0.5nm,0.8s,baz=86,slow=7.4,SNR=4.0						

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*MOS **21** 19:50:00.0±0.8, 6°.18S×154°.83E, h33^{km}, mb5.5/62, MS4.7/15, Error ellipse: s-maj=7.8km s-min=5.8km az=96.4*

*NEIC **21** 19:50:01.1±0.1, 6°.31S×154°.90E, h35^{km}, mb5.4/191, MW5.4, Error ellipse: s-maj=4.2km s-min=3.5km az=127.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^{17}Nm; M_{rr}1.37; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-0.98; $M_{r\theta}$-0.12; $M_{\theta\phi}$0.68; $M_{\phi r}$0.31; Best double couple: $M_0$1.40000×10^{17} NP1: ϕ_s144.00000°, δ39.00000°, λ85.00000°. NP2: ϕ_s329.00000°, δ52.00000°, λ94.00000°. Principal axes: T 1.4100, Plg83.0000°, Azm261.0000°; N 0.0400, Plg3.0000°, Azm147.0000°; P -1.4600, Plg7.0000°, Azm57.0000°;*

*ISCJB **21** 19:50:02.5±0.7, 6°.29S±0°.02×154°.86E±0°.02, h56^{km}±6^{km}, mb5.4/281, MS4.7/39 Error ellipse: s-maj=3.8km s-min=3.1km az=14.5*

*BJI **21** 19:50:02.0, 6°.07S×155°.17E, h60^{km}, mB5.3/55, mb5.2/75, Ms5.0/63, Ms7 4.7/60*

*IDC **21** 19:50:03.9±0.5, 6°.33S×154°.86E, h56^{km}±3^{km}, mb5.0/29, mb1 5.1/31, mb1mx4.9/40, mbtmp5.2/31, MS4.6/24, Ms1 4.6/24, ms1mx4.6/28, Error ellipse: s-maj=11.9km s-min=9.0km az=97.0*

*DJA **21** 19:50:05.7±0.7, 6°S±3°×15°5E±°, h69^{km}±6^{km}, M5.5/72, mb5.6/72, mB5.9/40, Mw(mB)5.5/40*

*GCMT **21** 19:50:06.1±0.1, 6°.55S±0°.01×154°.81E±0°.01, h54^{km}, MW5.5/132, Moment Tensor Solution. s132, c212; s108, c190; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}2.07±.03; $M_{\theta\theta}$-1.13±.02; $M_{\phi\phi}$-0.94±.02; $M_{r\theta}$-0.14±.02; $M_{\theta\phi}$1.25±.02; $M_{\phi r}$0.16±.02; Best double couple: $M_0$2.19000×10^{17} NP1: ϕ_s314.00000°, δ48.00000°, λ91.00000°. NP2: ϕ_s132.00000°, δ42.00000°, λ89.00000°. Principal axes: T 2.0800, Plg87.0000°, Azm238.0000°; N 0.2170, Plg1.0000°, Azm133.0000°; P -2.2990, Plg3.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 19:50:03.9±0.3**, 6°.36S**±0°.04×**154°.89E**±0°.04**, h58^{km}**±2^{km}**, h58^{km}:pP-P, n1000, σ1^{s}22**/1069**, mb5.4**/286**, MS4.7**/40**, 24C-6D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.46	308	ePn	Pn	19 50 57.8	+2.4
HNR	Honiara	5.87	122	eP	Pn	19 51 32.0	+3.7
HNR				eS	Sn	19 52 40.0	+5.8
HNR	Honiara	5.87	122	ePn	Pn	19 51 30.0	+1.7
HNR				eSn	Sn	19 52 36.9	+2.7
HNR				e		19 53 47.3	
HNR	Honiara	5.87	122	eP	Pn	19 51 30.0	+1.7
HNR				e		19 52 36.9	
HNR	Honiara	5.87	122	P	Pn	19 51 31.3	+3.0
	68nm,0.3s,baz=209,slow=5.6,SNR=14						
HNR				S	Sn	19 52 36.9	+2.7
	63nm,0.3s,baz=161,slow=21,SNR=4.2						
HNR				LR	LR	19 53 47.3	
	comp=Z,10μm,19.9s,baz=296,slow=38						
MANU	Manus Island	8.64	299	ePn	Pn	19 52 07.7	+1.4
PATS	Pohnpei	13.54	15	P	Pn	19 53 12.5	-0.8
	baz=14,SNR=3.5						
PATS	Pohnpei	13.54	15	ePn	Pn	19 53 12.8	-0.5
COEN	Coen	13.78	236	P	Pn	19 53 17.8	+1.3
	baz=14,SNR=76						
COEN	Coen	13.78	236	ePn	Pn	19 53 17.1	+0.6
GENI	Genyem	15.14	284	P	P	19 53 37.7	-0.7
MTSU	Mount Surprise	15.60	220	P	P	19 53 43.4	-0.1
	baz=16,SNR=17						
CTA	Charters Tower	16.02	211	P	P	19 53 47.5	-0.7
	2.2nm,0.3s,baz=27,slow=15,SNR=33						
CTA				LR	LR	19 59 33.8	
	comp=Z,5μm,19.8s,baz=27,slow=36						
CTAO	Charters Tower	16.02	211	eP	P	19 53 47.7	-0.4
	116nm,1.1s						
CTAO	Charters Tower	16.02	211	eP	P	19 53 47.7	-0.4
CTAO				pmax	pmax		
	comp=Z,116nm,1.1s						
SRPI	Serui, Papua	19.12	283	P	P	19 54 22.2	-0.2
DZM	Mont Dzumac	19.20	146	eP	Pn	19 54 24.6	-0.1
	comp=Z,375nm,1.1s						
DZM				eS	S	19 57 55.0	-2.9
	comp=Z,4μm,32.1s						
DZM				eLR	LR	19 58 53.4	
	comp=Z,8μm,26.6s						
DZM	Mont Dzumac	19.20	146	eP	Pn	19 54 24.2	-0.4
	comp=Z,443nm,1.5s						
DZM	Mont Dzumac	19.20	146	P	Pn	19 54 24.3	-0.4
	comp=Z,12nm,0.3s,baz=289,slow=8.7,SNR=104						
DZM				LR	LR	20 00 57.7	
	comp=Z,3μm,21.0s,baz=326,slow=34						
EIDS	Eidsvold	19.25	191	P	Pn	19 54 26.1	+0.9
	baz=19,SNR=10						
EIDS	Eidsvold	19.25	191	eP	Pn	19 54 25.5	+0.3
	comp=Z,60nm,1.1s						
TARA	Tarawa	19.56	68	eP	Pn	19 54 29.0	+0.1
	comp=Z,605nm,1.0s						
KWAJ	Kwajalein Atol	19.69	40	P	P	19 54 28.5	0.0
KWAJ				pmax	pmax		
	comp=Z,558nm,0.8s						
MARNC	Mare, Loyalty	19.69	141	eP	P	19 54 28.9	+0.4
	comp=Z,636nm,1.3s						
OUENC	Ouen Island, N	19.70	145	eP	P	19 54 28.9	+0.4
	comp=Z,495nm,1.6s						
PINNC	Pines Island,	20.20	144	eP	P	19 54 33.4	-0.6
	comp=Z,98nm,0.8s						
QIS	Mount Isa	20.47	225	P	Pn	19 54 39.2	-0.4
	baz=21,SNR=63						
RMQ	Roma	20.86	196	P	Pn	19 54 43.6	-0.5
	baz=21,SNR=34						
RKPI	Ransiki, Papua	21.21	282	P	P	19 54 48.1	+3.1
	comp=Z,188nm,0.9s,comp=Z,2μm						
FAKI	Fak Fak	22.82	278	eP	P	19 55 00.7	-1.6
	comp=Z,154nm,1.0s						
FAKI	Fak Fak	22.82	278	P	P	19 55 03.3	+1.0
	comp=Z,150nm,0.9s,comp=Z,3μm						
KDU	Kakadu	22.98	252	P	P	19 55 04.2	+0.5
	baz=23,SNR=40						
SAUI	Saumlaki	23.46	265	eP	P	19 55 09.7	+1.2
	comp=Z,889nm,1.4s						
SAUI	Saumlaki	23.46	265	P	P	19 55 10.7	+2.2
	comp=Z,463nm,1.4s,comp=Z,7μm						
WC3	Warramunga Arr	24.08	234	eP	P	19 55 15.4	+1.3
	comp=Z,302nm,1.5s						
WRAB	Tennant Creek	24.09	234	eP	P	19 55 15.5	+1.3
	comp=Z,252nm,1.4s						
WRAB	Tennant Creek	24.09	234	ceP	P	19 55 15.6	+1.4
WRAB				pmax	pmax		
	comp=Z,249nm,1.7s						
WB2	Warramunga Arr	24.09	234	eP	P	19 55 13.9	-0.3
WR1	Warramunga Arr	24.10	234	eP	P	19 55 15.6	+1.3
	comp=Z,292nm,1.3s						
WR1				ePcP	PcP	19 58 54.9	+0.3
WR1				e		20 04 31.2	
WR1				e		20 06 35.7	
WRA	Warramunga Arr	24.10	234	P	P	19 55 15.6	+1.3
	comp=Z,52nm,0.6s,baz=58,slow=9.5,SNR=268						
WRA				PcP	PcP	19 58 54.9	+0.3
	comp=Z,4.7nm,0.3s,baz=67,slow=2.7,SNR=13						
WRA				pPcP		19 59 11.3	
	comp=Z,8.2nm,0.6s,baz=57,slow=2.3,SNR=6.2						
WRA				S	S	19 59 27.4	-0.8
	comp=Z,7.1nm,1.0s,baz=61,slow=15,SNR=3.3						
WRA				LR	LR	20 04 31.2	
	comp=Z,3μm,20.0s,baz=55,slow=36						
WRA				PKiKP	PKiKP	20 06 35.7	-1.9
	comp=Z,0.2nm,0.4s,baz=324,slow=1.2,SNR=5.9						
ARMA	Armidale	24.13	187	P	P	19 55 16.0	+1.4
	baz=24,SNR=17						
ARMA	Armidale	24.13	187	eP	P	19 55 15.5	+0.9
	comp=Z,46nm,0.8s						
SIJI	Sorong	24.19	282	P	P	19 55 16.0	+0.8
	comp=Z,182nm,1.0s,baz=77,slow=7.9,SNR=27						
SWI	Sorong	24.20	282	P	P	19 55 17.6	+2.4
	comp=Z,88nm,1.5s,comp=Z,1μm						
MTN	Manton Dam	24.28	253	P	P	19 55 17.3	+1.3
	baz=24,SNR=22						
MTN	Manton Dam	24.28	253	eP	P	19 55 16.5	+0.5
	comp=Z,171nm,1.1s						
MSVF	Nonsavu	25.28	119	eP	P	19 55 24.4	-0.8
	comp=Z,41nm,0.9s						
MSVF	Nonsavu	25.28	119	i P	P	19 55 24.9	-0.2
MSVF				pmax	pmax		
	comp=Z,26nm,1.1s						
AS01	Alice Springs	26.49	227	eP	P	19 55 36.0	0.0
CMSA	Cobar Meteorol	26.49	198	P	P	19 55 36.4	+0.6
	baz=27,SNR=15						
AS31	Alice Springs	26.52	227	eP	P	19 55 36.5	+0.3
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	26.52	227	P	P	19 55 37.0	+0.6
	comp=Z,15nm,0.6s,baz=58,slow=8.7,SNR=253						
ASAR				PcP	PcP	19 59 00.3	+0.3
	comp=Z,14nm,1.0s,baz=60,slow=2.2,SNR=8.6						
ASAR				pPcP		19 59 16.4	
	comp=Z,8.4nm,0.6s,baz=60,slow=2.2,SNR=9.7						
ASAR				LR	LR	20 05 43.6	
	comp=Z,3μm,20.5s,baz=112,slow=35						
MGCD	Mangrove Creek	26.95	187	P	P	19 55 41.6	+1.7
	baz=27,SNR=5.5						
KNRA	Kununurra	27.24	248	P	P	19 55 43.7	+1.0
	baz=27,SNR=7.2						
H11S3	WAKE ISLAND Hy	27.30	25	T	T	20 24 03.5	
	baz=204,slow=74,SNR=42						
H11S2	WAKE ISLAND Hy	27.30	25	T	T	20 23 52.7	
	baz=204,slow=74,SNR=68						
H11S1	WAKE ISLAND Hy	27.32	25	T	T	20 23 53.9	
	baz=204,slow=74,SNR=56						
NLAI	Namlea	27.86	275	P	P	19 55 49.8	+1.4
STKA	Stephens Creek	28.27	204	P	P	19 55 52.1	+0.3
	baz=28,SNR=16						
STKA	Stephens Creek	28.27	204	eP	P	19 55 51.3	-0.5
	comp=Z,4.4nm,0.8s						
STKA				PcP	PcP	19 59 04.1	+0.1
STKA	Stephens Creek	28.27	204	P	P	19 55 52.0	+0.3
	comp=Z,7.6nm,0.6s,baz=2.9,slow=9.0,SNR=27						

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STKA                              PcP      PcP      19 59 04.1 +0.1
       comp=Z,9.2nm,0.9s,baz=22,slow=1.7,SNR=3.4
STKA                              LR       LR       20 07 10.7
       comp=Z,3µm,19.9s,baz=15,slow=36
H11N1  WAKE ISLAND Hy 28.47  24   T        T        20 26 04.7
       baz=192,slow=76,SNR=57
H11N3  WAKE ISLAND Hy 28.48  24   T        T        20 25 40.8
       baz=192,slow=76,SNR=52
H11N2  WAKE ISLAND Hy 28.49  24   T        T        20 25 45.1
       baz=192,slow=76,SNR=32
SANI   Sanana         29.13 277   P        P        19 56 00.4 +0.7
       comp=Z,114nm,1.2s,comp=Z,1µm
SOEI   Soe            30.50 262   eP       P        19 56 12.6 +0.7
       comp=Z,88nm,0.8s
SOEI   Soe            30.50 262   P        P        19 56 13.4 +1.5
HTT    Hallett        30.75 207   P        P        19 56 14.6 +0.8
       baz=31,SNR=4.7
FITZ   Fitzroy Crossi 30.82 245   P        P        19 56 14.8 +0.3
       baz=31,SNR=101
FITZ   Fitzroy Crossi 30.82 245   eP       P        19 56 14.2 -0.4
       comp=Z,111nm,1.4s
MILA   Mila           31.00 189   P        P        19 56 17.3 +1.3
       baz=31,SNR=3.6
WRKA   Warakurna      31.52 231   P        P        19 56 20.9 +0.2
       baz=32,SNR=53
KMSI   Cibinong       31.61 281   P        P        19 56 23.0 +1.4
       comp=Z,690nm,0.7s,comp=Z,6µm
BBOO   Buckleboo      31.62 211   P        P        19 56 21.7 +0.3
       baz=32,SNR=17
BBOO   Buckleboo      31.62 211   eP       P        19 56 21.5  0.0
       comp=Z,27nm,0.5s
TOO    Toolangi       32.23 194   P        P        19 56 27.6 +0.8
       baz=32,SNR=4.0
MMRI   Maumere        32.45 264   eP       P        19 56 26.6 -2.4
       comp=Z,216nm,0.7s
MMRI   Maumere        32.45 264   P        P        19 56 30.8 +1.9
       comp=Z,352nm,0.8s,comp=Z,4µm
LUWI   Luwuk          32.47 278   eP       P        19 56 30.1 +1.0
       comp=Z,238nm,1.0s
LUWI   Luwuk          32.47 278   P        P        19 56 30.9 +1.8
       comp=Z,233nm,1.0s,comp=Z,2µm
ARPS   Mount Arapiles 32.54 200   P        P        19 56 30.5 +1.1
       baz=33,SNR=8.3
KCP    Kidapawan      32.56 294⇑iP       P        19 56 30.9 +0.9
EDFI   Ende, Flores   32.99 264   P        P        19 56 33.8  0.0
       comp=Z,175nm,0.9s,comp=Z,2µm
OUZ    Omahuta        33.49 152   eP       P        19 56 38.5 +0.7
       comp=Z,60nm,1.2s
MRSI   Marisa         33.58 280   P        P        19 56 39.5 +0.7
       comp=Z,74nm,1.3s,comp=Z,658nm
APSI   Ampana         33.60 278   P        P        19 56 40.8 +1.8
       comp=Z,127nm,1.2s,comp=Z,1µm
BASI   Baing, Sumba   34.16 261   P        P        19 56 46.0 +2.2
       comp=Z,440nm,1.4s,comp=Z,5µm
WSI    Waingapu       34.40 262   P        P        19 56 48.3 +2.4
       comp=Z,502nm,0.6s
FORT   Forrest        34.98 223   P        P        19 56 51.6 +0.8
       baz=35,SNR=13
FORT   Forrest        34.98 223   eP       P        19 56 50.8 +0.1
       comp=Z,88nm,0.8s
TTSI   Tana Toraja    35.10 274   P        P        19 57 01.9  +10
PCI    Palu           35.39 277   P        P        19 56 56.8 +2.3
       comp=Z,325nm,0.9s,comp=Z,2µm
AWAZ   Awhitu Peninsu 35.48 152   P        P        19 56 57.8 +2.8
WIAZ   Waiheke Island 35.49 151   P        P        19 56 56.1 +1.0
MPSI   Mapaga         35.55 279   P        P        19 56 55.8 -0.1
       comp=Z,69nm,0.7s,comp=Z,794nm
MOO    Moorlands      36.58 190   P        P        19 57 07.6 +3.3
       baz=37,SNR=3.8
RCP    Roxas          36.60 299⇑eP       P        19 57 05.7 +0.9
HIZ    Hauiti         36.77 153   eP       P        19 57 07.3 +1.4
       comp=Z,158nm,1.2s
HIZ    Hauiti         36.77 153   P        P        19 57 07.9 +2.0
PLAI   Plampang       36.86 264   P        P        19 57 06.7 -0.4
       comp=Z,319nm,0.8s,comp=Z,2µm
TAU    Tasmania Unive 37.01 189   eP       P        19 57 09.3 +1.5
       comp=Z,180nm,1.5s
TAU    Tasmania Unive 37.01 189   eP       P        19 57 09.4 +1.5
TAU                               pmax     pmax
       comp=Z,180nm,1.5s
MBWA   Marble Bar     37.07 243   eP       P        19 57 08.5 -0.2
       comp=Z,106nm,1.4s
OMRZ   Omania         37.13 151   P        P        19 57 10.3 +1.2
HAZ    Te Kaha        37.55 150   P        P        19 57 14.0 +1.5
URZ    Urewera        37.61 151   eP       P        19 57 13.9 +0.9
       comp=Z,211nm,1.5s
URZ                               e                 20 11 56.9
URZ    Urewera        37.61 151   P        P        19 57 14.1 +1.1
       comp=Z,53nm,0.5s,baz=345,slow=3.5,SNR=32
URZ                               LR       LR       20 11 56.9
       comp=Z,781nm,19.5s,baz=329,slow=35
URZ    Urewera        37.61 151   P        P        19 57 14.1 +1.1
RUGZ   Raukumara Rang 37.66 150   P        P        19 57 14.3 +0.7
FWVZ   Far West T-bar 37.69 153   P        P        19 57 15.8 +1.8
PKGZ   Pakihiroa      37.80 149   P        P        19 57 16.1 +1.4
RTZ    Ruatahuna      37.83 151   P        P        19 57 15.9 +0.9
MWZ    Matawai        37.87 150   P        P        19 57 16.6 +1.3
MOVZ   Moawhango      37.90 153   P        P        19 57 17.6 +2.0
TWGZ   Tauwhareparae  37.97 150   P        P        19 57 17.6 +1.4
PUZ    Puketiti       38.03 149   P        P        19 57 17.1 +0.4
BKZ    Black Stump Fm 38.04 152   eP       P        19 57 17.4 +0.7
       comp=Z,66nm,0.5s
BKZ    Black Stump Fm 38.04 152   P        P        19 57 18.0 +1.2
SNGZ   Shannon Statio 38.13 151   P        P        19 57 18.9 +1.4
THZ    Tophouse       38.73 158   eP       P        19 57 22.6 +0.1
       comp=Z,63nm,0.8s
BFZ    Birch Farm     39.16 154   eP       P        19 57 26.4 +0.4
       comp=Z,274nm,1.8s
FOZ    Fox Glacier    39.29 163   eP       P        19 57 27.2 +0.2
       comp=Z,38nm,1.1s
SRBI   Singaraja      39.39 265   P        P        19 57 30.6 +2.3
LTZ    Lake Taylor    39.40 160   eP       P        19 57 28.2 +0.2
       comp=Z,165nm,1.6s
KHZ    Kahutara       39.53 158   eP       P        19 57 28.5 -0.5
       comp=Z,39nm,0.7s
OXZ    Oxford         39.80 160   eP       P        19 57 30.6 -0.7
       comp=Z,142nm,1.3s
RPZ    Rata Peaks     39.83 162   P        P        19 57 31.7 +0.1
       comp=Z,24nm,0.5s,baz=306,slow=4.0,SNR=22
RPZ                               LR       LR       20 13 22.7
       comp=Z,2µm,18.6s,baz=320,slow=35
MEEK   Meekatharra    39.98 236   P        P        19 57 33.8 +0.6
       baz=40,SNR=39
CRLZ   Canterbury Las 40.22 160   eP       P        19 57 35.1 +0.4
       comp=Z,126nm,1.2s
MTKI   Muara Teweh, K 40.26 276   P        P        19 57 37.8 +2.2
       comp=Z,73nm,0.9s
DCZ    Deep Cove      40.39 167   eP       P        19 57 36.0 -0.2
       comp=Z,46nm,1.2s
JAGI   Jajag, Banyuwa 40.44 264   eP       P        19 57 34.5 -2.5
       comp=Z,141nm,0.9s
JAGI   Jajag, Banyuwa 40.44 264   P        P        19 57 36.1 -1.0
       comp=Z,157nm,0.7s
KKM    Kota Kinabalu  40.52 287   eP       P        19 57 38.4 +0.6
       comp=Z,198nm,1.1s
MLZ    Mavora Lakes   40.53 166   eP       P        19 57 37.5 +0.1
       comp=Z,72nm,1.0s
GIRL   Giralia        42.38 243   P        P        19 57 54.1 +1.3
       baz=42,SNR=9.2
GIRL   Giralia        42.38 243   eP       P        19 57 53.9 +1.1
       comp=Z,210nm,1.0s
PWJI   Pagerwojo      42.77 265   P        P        19 57 56.2 +0.1
       comp=Z,143nm,1.2s
KLBR   Kellerberrin   42.82 229   P        P        19 57 56.2 -0.1
       baz=43,SNR=75
MORW   Morawa         43.05 234   P        P        19 57 58.3 +0.1
       baz=43,SNR=19
MORW   Morawa         43.05 234   eP       P        19 57 57.8 -0.4
       comp=Z,119nm,1.4s
BLDU   Ballidu        43.17 231   P        P        19 57 59.4 +0.2
       baz=43,SNR=60
PCJI   Pacitan        43.39 265   P        P        19 58 02.0 +0.9
       comp=Z,388nm,1.2s
SBUM   Sibu           43.49 280   eP       P        19 58 03.0 +1.0
       comp=Z,42nm,1.2s
NWAO   Narrogin (SRO) 43.84 228   P        P        19 58 04.9 +0.4
       baz=44,SNR=11
NWAO   Narrogin (SRO) 43.84 228   eP       P        19 58 04.3 -0.2
       comp=Z,94nm,1.5s
NWAO   Narrogin (SRO) 43.84 228   eP       P        19 58 04.3 -0.2
NWAO                              pmax     pmax
       comp=Z,94nm,1.5s
MUN    Mundaring      44.16 230   P        P        19 58 07.6 +0.5
       baz=44,SNR=10
YULB   Yu-li          44.17 313   eP       P        19 58 07.0 -0.3
       comp=Z,152nm,1.8s
TPUB   Ta-pu          44.60 313   eP       P        19 58 10.2 -0.5
       comp=Z,76nm,1.2s
SSLB   Suanglung      44.66 313   eP       P        19 58 10.4 -0.8
       comp=Z,57nm,1.2s
RKGY   Rocky Gully    44.85 226   P        P        19 58 13.9 +1.3
       baz=45,SNR=27
KSM    Kuching        45.18 278   eP       P        19 58 15.8 +0.3
       comp=Z,148nm,1.3s
JNU    Nakatsue       45.41 331   eP       P        19 58 16.1 -0.9
       comp=Z,37nm,0.8s
JNU    Nakatsue       45.41 331   P        P        19 58 16.6 -0.3
       comp=Z,31nm,0.7s,baz=85,slow=3.0,SNR=16
MJAR   Matsushiro Arr 45.45 341   P        P        19 58 16.3 -1.0
       comp=Z,1.6nm,0.4s,baz=233,slow=13,SNR=7.9
MJAR                              LR       LR       20 18 35.7
       comp=Z,224nm,18.2s,baz=170,slow=38
MAJO   Matsushiro     45.45 341   eP       P        19 58 16.2 -1.0
MAJO                              e                 20 18 35.7
MAJO   Matsushiro     45.45 341   eP       P        19 58 16.3 -1.0
KPJI   Karang Pucung  45.63 266   P        P        19 58 20.7 +1.7
       comp=Z,196nm,0.7s,comp=Z,3µm
CMJI   Cimerak        46.09 265   P        P        19 58 23.8 +1.1
       comp=Z,190nm,0.9s
RAR    Rarotonga      46.25 113   LR       LR       20 14 41.1
       comp=Z,580nm,21.6s,baz=285,slow=32
JCJI   Jatiwangi      46.32 267   P        P        19 58 26.4 +2.0
       comp=Z,297nm,1.0s
CISI   Cisompet, Garu 46.73 266   eP       P        19 58 27.0 -0.7
       comp=Z,263nm,0.7s
CISI   Cisompet, Garu 46.73 266   P        P        19 58 27.6 -0.1
       comp=Z,411nm,1.0s,comp=Z,3µm
QZH    Quanzhou       47.07 313⇑iP       P        19 58 31.0 +0.9
QZH                               pmax     pmax
       comp=Z,40nm,0.8s
CBJI   Citeko         47.73 267   P        P        19 58 35.9 +0.4
       comp=Z,178nm,0.7s
DBJI   Dramaga        47.82 267   P        P        19 58 39.2 +3.0
       comp=Z,38nm,1.5s
TJN    Taejon         49.73 331ceP       P        19 58 49.9 -0.5
KASI   Kota Agung     50.12 268   P        P        19 58 53.3 -0.4
       comp=Z,117nm,1.1s
KSRS   Korea Array    50.33 332   P        P        19 58 54.7 -0.2
       comp=Z,18nm,1.0s,baz=150,slow=8.7,SNR=32
KSRS                              LR       LR       20 15 53.6
       comp=Z,248nm,22.0s,baz=145,slow=31
KSAR   Wonju Array Be 50.34 332   P        P        19 58 54.7 -0.3
KSAR   Wonju Array Be 50.34 332   P        P        19 58 54.7 -0.3
MDSI   Maura Dua      50.51 269   P        P        19 58 56.2 -0.5
       comp=Z,64nm,1.3s,comp=Z,945nm
LWLI   Liwa           50.58 269   P        P        19 58 58.8 +1.4
       comp=Z,44nm,0.9s
TPRI   Tanjung Pinang 50.79 276   P        P        19 59 00.3 +1.5
       comp=Z,76nm,0.8s,comp=Z,6µm
YUK    Yuzh-Kuril'sk  50.82 352   eP       P        19 58 58.2 -0.2
YUK                               eS       S        20 06 13.2 +3.1
QIZ    Qiongzhong     51.05 301   P        P        19 59 02.0 +1.3
QIZ                               S        S        20 06 13.4 -0.8
QIZ                               pmax     pmax
       comp=Z,49nm,1.0s
QIZ                               LR       LR
       comp=Z,410nm,14.7s
QIZ                               LR       LR
       comp=Z,630nm,20.6s
QIZ                               LR       LR
       comp=Z,960nm,24.0s
LHSI   Lahat          51.21 270   P        P        19 59 05.0 +3.0
       comp=Z,48nm,1.2s,comp=Z,2µm
NJ2    Nanjing        51.36 320  ⇓P        P        19 59 04.3 +1.5
NJ2                               S        S        20 06 23.5 +5.4
NJ2                               sS       sS       20 06 42.1 -1.8
NJ2                               pmax     pmax
       comp=Z,13nm,0.5s
NJ2                               pmax     pmax
       comp=Z,350nm,5.0s
NJ2                               LR       LR
       comp=Z,450nm,20.1s
NJ2                               LR       LR
       comp=Z,460nm,15.2s
NJ2                               LR       LR
       comp=Z,520nm,17.4s
ASAJ   Asahikawa      51.45 349   P        P        19 59 04.2 +1.0
       comp=Z,20nm,0.7s,baz=237,slow=9.5,SNR=10
ASAJ                              LR       LR       20 20 03.0
       comp=Z,770nm,19.5s,baz=174,slow=35
MYKOM  Kota Tinggi    51.59 277   eP       P        19 59 05.3 +0.4
       comp=Z,55nm,0.9s
RGRI   Rengat         52.78 274   P        P        19 59 13.0 -0.7
WHN    Wuhan          53.41 316  ⇑P        P        19 59 18.8 +0.8
WHN                               S        S        20 06 45.0 -1.2
WHN                               LR       LR
       comp=Z,3µm,30.6s
KRJI   Kerinci        53.43 272   P        P        19 59 18.8 +0.2
       comp=Z,168nm,1.0s,comp=Z,2µm
SDSI   Sungai Dareh   53.60 274   P        P        19 59 20.5 +0.8
       comp=Z,177nm,1.2s,comp=Z,3µm
BKNI   Bangkinang     54.15 275   eP       P        19 59 22.2 -1.5
       comp=Z,238nm,1.1s
BKNI   Bangkinang     54.15 275   P        P        19 59 24.6 +0.9
       comp=Z,187nm,0.9s,comp=Z,2µm
YSS    Yuzh-Sakhalins 54.16 350   eP       P        19 59 24.8 +1.7
       comp=Z,25nm,0.7s
YSS    Yuzh-Sakhalins 54.16 350   eP       P        19 59 23.6 +0.5
YSS                               e*SP     pP       19 59 40.5 +1.9
YSS                               eS       S        20 06 51.3 -4.4
YSS                               pmax     pmax
       comp=Z,10.0nm,0.7s
YSS                               MLR      MLR
       comp=N,400nm,17.0s
YSS                               MLR      MLR
       comp=Z,500nm,17.0s
USA0B  Ussuriysk Arra 54.40 340   eP       P        19 59 24.1 -0.9
       comp=Z,37nm,1.3s
USRK   Ussuriysk Ar.  54.40 340   P        P        19 59 25.1 +0.1
       comp=Z,15nm,1.0s,baz=160,slow=8.0,SNR=20
USRK                              LR       LR       20 19 28.5
       comp=Z,371nm,21.9s,baz=140,slow=32
PDSI   Padang         54.56 273   P        P        19 59 25.4 -1.4
       comp=Z,82nm,0.9s,comp=Z,1µm
DL2    Dalian         54.57 328   P        P        19 59 42.6  +16
DL2                               pP       sP       19 59 56.5 +8.2
DL2                               S        S        20 07 29.3  +28
DL2                               pmax     pmax
       comp=Z,30nm,0.8s
DL2                               pmax     pmax
       comp=Z,260nm,4.3s
DL2                               LR       LR
       comp=N,450nm,20.9s
DL2                               LR       LR
       comp=E,370nm,21.1s
DL2                               LR       LR
       comp=Z,790nm,24.7s
IPM    Ipoh           54.84 280   eP       P        19 59 28.5 -0.3
       comp=Z,61nm,0.9s
KHU    Kahuku         54.98  61   eP       P        19 59 31.0 +1.1
       comp=Z,405nm,1.4s
KHU    Kahuku         54.98  61   eP       P        19 59 31.0 +1.1
KHU                               pmax     pmax
       comp=Z,405nm,1.4s
AIN    Ainahou        55.16  61   eP       P        19 59 32.4 +1.2
       comp=Z,152nm,1.0s
TIA    Tai'an         55.20 323   P        P        19 59 30.3 -0.6
TIA                               pmax     pmax
       comp=Z,34nm,1.2s
TIA                               LR       LR
       comp=Z,240nm,12.1s
TIA                               LR       LR
       comp=Z,470nm,13.5s
TIA                               LR       LR
       comp=Z,570nm,12.1s
PPT    Papeete        55.28 107   LR       LR       20 18 12.2
       comp=Z,304nm,21.3s,baz=276,slow=30
PPT2   Papeete2       55.28 107   eS       S        20 07 16.5 +4.5
       comp=Z,471nm,27.5s
PPT2                              eLQ      LQ       20 13 22.5
       comp=Z,823nm,25.0s
PPT2                              eLR      LR       20 15 44.9
       comp=Z,729nm,23.2s
KULM   Kulim          55.37 281   eP       P        19 59 31.8 -0.7
       comp=Z,71nm,1.2s
SKNT   Sakolnakorn    55.40 296   P        P        19 59 34.1 +1.4
       comp=Z,42nm,1.1s
MDJ    Mudanjiang     55.61 338   P        P        19 59 33.8 +0.1
MDJ                               pmax     pmax
       comp=Z,28nm,1.4s
MDJ                               pmax     pmax
       comp=Z,270nm,5.7s
MNSI   Mandailing Nat 55.66 275   P        P        19 59 33.6 -1.1
       comp=Z,127nm,0.9s,comp=Z,972nm
SKLT   Songkhla       55.79 283   P        P        19 59 36.7 +1.2
       comp=Z,45nm,1.3s,comp=Z,832nm
SNY    Shenyang       55.84 332  ⇑P        P        19 59 33.9 -1.4
SNY                               LR       LR
       comp=Z,410nm,16.0s
SNY                               LR       LR
       comp=Z,430nm,18.2s
SNY                               LR       LR
       comp=Z,720nm,17.1s
SISI   Saibi          55.87 273   P        P        19 59 37.3 +1.1
       comp=Z,66nm,0.6s
TBI    Tubuai         56.03 114   eS       S        20 07 22.9 +1.3
       comp=Z,339nm,28.8s
TBI                               eLQ      LQ       20 13 41.7
       comp=Z,775nm,42.8s
TBI                               eLR      LR       20 16 03.7
       comp=Z,3µm,29.5s
SRAK   Srakaew        56.21 291   P        P        19 59 36.0 -2.5
       comp=Z,43nm,1.0s
CN2    Changchun      56.57 335   eP       P        19 59 40.4 -0.2
CN2                               epP      pP       19 59 56.3 +0.2
CN2                               esP      sP       20 00 02.9 +0.2
CN2                               eS       S        20 07 27.8 -0.3
CN2                               pmax     pmax
       comp=Z,20nm,1.1s
CN2                               pmax     pmax
       comp=Z,200nm,4.0s
CN2                               LR       LR
       comp=Z,360nm,22.0s
CN2                               LR       LR
       comp=Z,420nm,22.0s
CN2                               LR       LR
       comp=Z,430nm,25.0s
PSI    Prapat         56.61 278   eP       P        19 59 40.0 -1.6
       comp=Z,84nm,1.6s
PSI    Prapat         56.61 278   eP       P        19 59 40.0 -1.6
PSI                               pmax     pmax
       comp=Z,84nm,1.6s
TRTT   Trang          56.83 284   P        P        19 59 43.6 +0.6
       comp=Z,7.9nm,0.7s
CHAI   Chaiyaphum     56.85 294   P        P        19 59 43.9 +0.9
       comp=Z,18nm,1.1s,comp=Z,167nm
GYA    Guiyang        56.99 307⇑iP       P        19 59 44.8 +0.8
GYA                               pP       pP       20 00 01.0 +1.5
GYA                               PP       PP       20 01 54.3 +3.0
GYA                               sS       sS       20 08 00.4 +0.2
GYA                               SS       SS       20 11 24.5 +0.5
GYA                               pmax     pmax
       comp=Z,30nm,1.0s
GYA                               pmax     pmax
       comp=Z,140nm,5.8s
GYA                               LR       LR
       comp=Z,830nm,18.5s
GYA                               LR       LR
       comp=Z,800nm,19.0s
GYA                               LR       LR
       comp=Z,760nm,19.3s
PATY   Pattaya        56.99 290   P        P        19 59 45.9 +1.9
       comp=Z,13nm,0.9s,comp=Z,1µm
TSI    Tuntungan      57.08 278   P        P        19 59 45.6 +0.8
       comp=Z,82nm,1.1s
KCSI   Kotacane, Aceh 57.87 278   P        P        19 59 49.1 -1.2
       comp=Z,26nm,0.6s
TYV    Tymovskoe      57.96 351   eP       P        19 59 49.8 -0.4
TYV                               e                 20 07 48.2
TYV                               pmax     pmax
       comp=Z,17nm,0.8s
PBKT   Sadao Pong     57.98 294   P        P        19 59 52.4 +1.4
       comp=Z,71nm,1.3s,comp=Z,1µm
PHET   Kaeng Krachan  58.14 289   P        P        19 59 53.9 +1.7
       comp=Z,27nm,1.1s,comp=Z,246nm
BJI    Beijing        58.34 326⇑eP       P        19 59 52.6 -0.5
BJI                               pmax     pmax
       comp=Z,11nm,0.7s
UTTA   Uttaradit      58.74 295   P        P        19 59 57.4 +1.1
KLR    Kul'dur        58.93 342   P        P        19 59 57.4 +0.3
       comp=Z,21nm,0.7s,baz=167,slow=1.8,SNR=30
LHMI   Lhok Sumawe    58.98 280   P        P        19 59 58.9 +0.9
       comp=Z,114nm,1.4s,comp=Z,1µm
UTHA   Uthaitani      59.07 292   P        P        19 59 59.8 +1.2
       comp=Z,49nm,0.9s,comp=Z,425nm
GRNR   Gornyy         59.09 346   eP       P        20 00 02.4 +4.3
XAN    Xi'an          59.18 316   P        P        19 59 58.8 -0.3
XAN                               pP       pP       20 00 14.3 -0.3
XAN                               sP       sP       20 00 21.0 -0.1
XAN                               PP       PP       20 02 11.8 +1.3
XAN                               S        S        20 08 00.0 -2.7
XAN                               sS       pS       20 08 23.1 +2.8
XAN                               SS       SS       20 11 54.5 -3.6
XAN                               pmax     pmax
       comp=Z,28nm,1.0s
XAN                               pmax     pmax
       comp=Z,190nm,5.1s
XAN                               LR       LR
       comp=Z,280nm,23.3s
XAN                               LR       LR
       comp=Z,330nm,24.4s
XAN                               LR       LR
       comp=Z,540nm,24.4s
PET    Petropavlovsk  59.24   3   eP       P        20 00 00.6 +1.6
       comp=Z,58nm,0.8s
PET    Petropavlovsk  59.24   3   eP       P        20 00 00.3 +1.3
PET                               eS       S        20 08 04.0 +1.4
PET                               pmax     pmax
       comp=Z,300nm,9.1s
PET                               pmax     pmax
       comp=Z,87nm,0.7s
PET                               MLR      MLR
       comp=Z,400nm,19.0s
PEA0B  Petropavlovsk- 59.28   2   eP       P        20 00 00.4 +0.9
       comp=Z,87nm,0.8s
PETK   Petropavlovsk- 59.28   2   eP       P        19 59 60.0 +0.5
PETK   Petropavlovsk- 59.28   2   P        P        20 00 00.4 +1.0
       comp=Z,70nm,0.8s,baz=151,slow=8.0,SNR=85
PEA1   Petropavlovsk- 59.29   2   eP       P        20 00 00.4 +1.0
SUKH   Sukhothai      59.49 294   P        P        20 00 02.9 +1.4
       comp=Z,60nm,1.0s,comp=Z,462nm
KMI    Kunming        59.58 304   P        P        20 00 04.4 +2.1
KMI                               pP       pP       20 00 18.9 +1.1
KMI                               sP       sP       20 00 25.6 +1.2
KMI                               S        S        20 08 10.1 +1.6
KMI                               sS       sS       20 08 32.9 -0.8
KMI                               pmax     pmax
       comp=Z,59nm,1.4s
KMI                               pmax     pmax
       comp=Z,290nm,5.8s
KMI                               LR       LR
       comp=Z,120nm,4.1s
KMI                               LR       LR
       comp=Z,110nm,4.1s
KMI                               LR       LR
       comp=Z,150nm,6.7s
UMPA   Umpang Tak     59.80 293   P        P        20 00 05.0 +1.3
       comp=Z,39nm,1.0s,comp=Z,293nm
LAMP   Lampang        59.82 296   P        P        20 00 05.1 +1.3
       comp=Z,70nm,1.0s,comp=Z,523nm
PAYA   Payao          59.89 297   P        P        20 00 05.3 +1.1
       comp=Z,58nm,1.0s,comp=Z,457nm
CM01   Chiang Mai Arr 60.39 295   eP       P        20 00 08.6 +0.9
CM31   Chiang Mai Arr 60.42 295   eP       P        20 00 09.0 +1.1
       comp=Z,180nm,1.0s
CM31   Chiang Mai Arr 60.42 295   P        P        20 00 09.7 +1.8
       SNR=67
CMAR   Chiang Mai Arr 60.42 295ceP       P        20 00 09.5 +1.6
CMAR                              pmax     pmax
       comp=Z,107nm,0.9s
CMAR   Chiang Mai Arr 60.42 295   P        P        20 00 09.4 +1.6
       comp=Z,102nm,0.9s,baz=113,slow=5.3,SNR=364
CMAR                              pP       pP       20 00 24.9 +1.5
       comp=Z,24nm,0.7s,baz=126,slow=5.4,SNR=6.6
CMAR                              LR       LR       20 25 15.2
       comp=Z,221nm,21.4s,baz=107,slow=35
CMAR                              PKPPKP   P'P'df   20 29 29.0 -1.7
       comp=Z,0.7nm,0.9s,baz=275,slow=4.8,SNR=4.6
CMAR                              PKP2bc            20 29 36.8
       comp=Z,3.4nm,1.1s,baz=294,slow=4.5,SNR=8.3
CMMT   Chiang Mai     60.53 296   P        P        20 00 09.4 +0.8
       comp=Z,115nm,1.2s,comp=Z,984nm
CHTO   Chiang Mai     60.53 296   eP       P        20 00 09.2 +0.6
       comp=Z,140nm,1.1s
CHTO   Chiang Mai     60.53 296   eP       P        20 00 09.2 +0.6
CHTO                              pmax     pmax
       comp=Z,140nm,1.1s
CHTO   Chiang Mai     60.53 296   P        P        20 00 09.9 +1.3
       SNR=40
CHTO   Chiang Mai     60.53 296   P        P        20 00 09.5 +0.8
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       comp=Z,519nm,1.2s,comp=Z,4µm
CD2    Chengdu         61.32 310  P      P        20 00 14.0 +0.1
CD2                               pP     pP       20 00 28.8 -0.7
CD2                               sP     sP       20 00 35.3 -0.7
CD2                               S      S        20 08 31.5 +1.2
CD2                               sS     sS       20 08 57.0 +0.8
CD2                               pmax   pmax
       comp=Z,50nm,0.6s
CD2                               pmax   pmax
       comp=Z,470nm,5.1s
CD2                               LR     LR
       comp=Z,940nm,21.1s
CD2                               LR     LR
       comp=Z,1µm,20.1s
CD2                               LR     LR
       comp=Z,1µm,20.1s
HHC    Hu-ho-hao-te    61.52 324  eP     P        20 00 15.3 +0.2
HHC                               S      S        20 08 29.8 -2.8
HHC                               pmax   pmax
       comp=Z,17nm,1.0s
HHC                               pmax   pmax
       comp=Z,160nm,6.7s
HHC                               LR     LR
       comp=Z,690nm,13.0s
HHC                               LR     LR
       comp=Z,540nm,13.0s
HHC                               LR     LR
       comp=Z,850nm,13.8s
CMBY   CAMPBELL BAY    62.26 281  eP     P        20 00 19.0 -1.4
KIWB   Kanaga Island   62.73  19  eP     P        20 00 24.3 +1.6
ADK    Adak            62.90  19  eP     P        20 00 24.8 +0.9
       comp=Z,121nm,1.1s
ADK    Adak            62.90  19  eP     P        20 00 24.8 +0.9
ADK                               pmax   pmax
       comp=Z,121nm,1.1s
LZH    Lanzhou         63.79 315  eP     P        20 00 31.3 +0.9
LZH                               pP     pP       20 00 42.0 -4.0
LZH                               sP     sP       20 00 47.9 -4.5
LZH                               PP     PP       20 02 55.1 +3.7
LZH                               S      S        20 08 59.3 -2.0
LZH                               sS     pS       20 09 23.8 +3.9
LZH                               pmax   pmax
       comp=Z,78nm,1.2s
LZH                               pmax   pmax
       comp=Z,310nm,4.9s
LZH                               LR     LR
       comp=Z,780nm,14.1s
LZH                               LR     LR
       comp=Z,1µm,14.7s
LZH                               LR     LR
       comp=Z,1µm,15.6s
ZEA    Zeya            64.24 342  eP     P        20 00 32.8 +0.1
ZEA                               pmax   pmax
       comp=N,47nm,1.0s
ZEA                               pmax   pmax
       comp=Z,64nm,1.0s
PBA    Port Blair      64.35 286  ex     P        20 00 28.7 -5.5
PBA                               IAmb   IAmb     20 00 29.8
       comp=Z,33nm,1.0s
TAOE   Nuku Hiva Isla  64.37  97  eS     S        20 09 09.3 +0.2
       comp=Z,226nm,28.9s
TAOE   Nuku Hiva Isla  64.37  97  eLR    LR       20 19 47.6
       comp=Z,624nm,23.8s
MA2    Magadan         65.80 358  eP     P        20 00 42.3 -0.5
       comp=Z,70nm,0.8s
MA2    Magadan         65.80 358ceP      P        20 00 42.6 -0.2
MA2                               pmax   pmax
       comp=Z,64nm,0.7s
GTA    Gaotai          68.21 317 ⇑P      P        20 00 59.0 +0.4
GTA                               pP     pP       20 01 14.5 +0.1
GTA                               sP     PcP      20 01 22.9 -1.2
GTA                               S      S        20 09 52.8 -2.1
GTA                               pmax   pmax
       comp=Z,31nm,1.3s
GTA                               pmax   pmax
       comp=Z,120nm,5.4s
GTA                               LR     LR
       comp=Z,220nm,18.7s
GTA                               LR     LR
       comp=Z,310nm,19.4s
GTA                               LR     LR
       comp=Z,430nm,21.3s
ULN    Ulaanbaatar     68.41 328  eP     P        20 01 00.2 +0.4
       comp=Z,26nm,0.9s
ULN    Ulaanbaatar     68.41 328ceP      P        20 01 00.2 +0.4
ULN                               pmax   pmax
       comp=Z,33nm,1.0s
ULN    Ulaanbaatar     68.41 328  P      P        20 01 00.7 +1.0
       SNR=11
SONA0  Songino Array   68.75 327  eP     P        20 01 02.2 +0.4
SONA0                             eP'P'df P'P'df  20 29 16.4 +1.6
SONA0                             e               20 33 44.1
SONM   Songino Array   68.75 327  P      P        20 01 02.2 +0.4
       comp=Z,54nm,1.1s,baz=140,slow=5.4,SNR=128
SONM                              PKPKPKP         20 29 16.4
       comp=Z,2.4nm,1.0s,baz=308,slow=3.0,SNR=11
SONM                              LR     LR       20 33 44.1
       comp=Z,219nm,18.3s,baz=146,slow=38
SONA1  Songino Array   68.75 327  eP     P        20 01 01.4 -0.4
SHL    Shillong        68.89 300  eP     P        20 01 03.0 -0.2
       comp=Z,61nm,1.0s
SHL    Shillong        68.89 300  eP     P        20 01 03.0 -0.2
SHL                               pmax   pmax
       comp=Z,61nm,1.0s
SHL    Shillong        68.89 300  eP     P        20 01 03.2  0.0
SHL                               IAmb   IAmb     20 01 04.7
       comp=Z,35nm,0.5s
SEY    Seymchan        69.12 359ceP      P        20 01 03.9 +0.3
YAK    Yakutsk         70.92 348  eP     P        20 01 14.4 -0.2
YAK                               e               20 01 29.6
YAK                               pmax   pmax
       comp=Z,281nm,1.5s
YAK                               pmax   pmax
       comp=N,103nm,1.4s
YAK                               pmax   pmax
       comp=E,44nm,1.2s
VNDA   Vanda           71.22 178  eP     P        20 01 14.1 -2.3
VNDA   Vanda           71.22 178  P      P        20 01 17.0 +0.7
       comp=E,10.0nm,0.9s,baz=340,slow=6.2,SNR=18
VNDA                              LR     LR       20 28 04.2
       comp=E,237nm,18.4s,baz=347,slow=32
ZAK    Zakamensk       71.90 328  eP     P        20 01 19.9 -1.1
ZAK                               pmax   pmax
       comp=Z,40nm,1.0s
BOD    Bodaibo         71.99 338  eP     P        20 01 20.1 -1.1
BOD                               pmax   pmax
       comp=Z,17nm,1.2s
TLY    Talaya          72.46 329  eP     P        20 01 24.3 +0.1
       comp=Z,18nm,0.9s
TLY    Talaya          72.46 329  eP     P        20 01 24.4 +0.1
TLY                               e               20 04 07.8
TLY                               eS     SKiKP    20 10 53.1 -1.3
TLY                               eSS    SS       20 15 24.1 +0.4
TLY                               pmax   pmax
       comp=Z,55nm,1.0s
TLY                               MLR    MLR
       comp=Z,639nm,19.0s
TLY    Talaya          72.46 329  P      P        20 01 24.7 +0.5
       SNR=8.6
IRK    Irkutsk         72.48 330  eP     P        20 01 23.4 -0.9
IRK                               pmax   pmax
       comp=Z,33nm,3.8s
BWNR   Bhubaneshwar    72.83 293  ex     P        20 01 23.2 -3.9
BWNR                              IAmb   IAmb     20 01 24.8
       comp=Z,59nm,0.6s
BOK    Bokaro          73.62 297  eP     P        20 01 30.9 -0.8
BOK                               IAmb   IAmb     20 01 34.4
       comp=Z,111nm,1.8s
MOY    Mondy           73.82 328  eP     P        20 01 32.1 -0.2
MOY                               pmax   pmax
       comp=Z,30nm,1.1s
GAMB   Gambell         74.33  15  eP     P        20 01 35.4 +0.5
       comp=Z,26nm,1.0s
JIRN   Jiri            74.37 301  eP     P        20 01 36.5 +0.1
       comp=Z,67nm,0.4s
BILL   Bilibino        74.66   4  eP     P        20 01 37.2 +0.5
       comp=Z,56nm,0.8s
BILL   Bilibino        74.66   4c iP     P        20 01 37.5 +0.8
BILL                              pmax   pmax
       comp=Z,70nm,0.9s
GUN    Gumba           74.70 301  eP     P        20 01 38.3  0.0
       comp=Z,114nm,0.7s
PKI    Pulchoki        75.01 301  eP     P        20 01 39.8 -0.3
       comp=Z,48nm,0.5s
PKIN   Phulchoki       75.02 301  eP     P        20 01 39.7 -0.4
       comp=Z,42nm,0.4s
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KKN    Kakani          75.18 301  eP     P        20 01 40.8 -0.1
       comp=Z,50nm,0.4s
PALK   Pallekele       75.24 279  eP     P        20 01 41.5 +0.2
       comp=Z,91nm,1.0s
PALK   Pallekele       75.24 279  eP     P        20 01 41.5 +0.2
PALK                              pmax   pmax
       comp=Z,91nm,1.0s
DMN    Daman           75.28 301  eP     P        20 01 41.7 +0.2
       comp=Z,206nm,0.9s
MDRS   Chennai         76.60 285  eP     P        20 01 48.4 -0.6
MDRS                              IAmb   IAmb     20 01 50.6
KOLN   Koldanda        76.61 300  eP     P        20 01 48.7 -0.3
       comp=Z,117nm,0.9s
DANN   Dangsing        76.62 301  eP     P        20 01 48.5 -0.7
       comp=Z,81nm,0.8s
KDAK   Kodiak Island   76.64  26  P      P        20 01 49.7 +1.5
       comp=Z,20nm,0.8s,baz=234,slow=5.0,SNR=8.7
ANM    Nome            76.65  16  eP     P        20 01 48.8 +0.6
       comp=Z,28nm,1.0s
ANM    Nome            76.65  16  eP     P        20 01 48.8 +0.6
ANM                               pmax   pmax
       comp=Z,28nm,1.0s
PYUN   Piuthan         77.22 301  eP     P        20 01 51.7 -0.8
       comp=Z,129nm,0.9s
SVW2   Sparrevohn      77.45  22  eP     P        20 01 53.7 +1.0
       comp=Z,179nm,2.0s
HOM    Homer           78.13  25  eP     P        20 01 56.1 -0.4
       comp=Z,233nm,0.8s
WMQ    Urumqi          78.29 317  P      P        20 01 58.5 +0.6
WMQ                               PcP    PcP      20 02 07.6 +0.5
WMQ                               pP     sP       20 02 18.8 -1.7
WMQ                               PP     PP       20 05 01.4 +5.8
WMQ                               S      S        20 11 51.1 +2.3
WMQ                               sS     ScS      20 12 13.3 -0.3
WMQ                               SS     SS       20 16 54.6 +2.1
WMQ                               pmax   pmax
       comp=Z,56nm,1.3s
WMQ                               pmax   pmax
       comp=Z,570nm,5.1s
WMQ                               LR     LR
       comp=Z,680nm,25.1s
WMQ                               LR     LR
       comp=Z,550nm,26.5s
WMQ                               LR     LR
       comp=Z,710nm,32.5s
BRLK   Bradley Lake    78.51  25  eP     P        20 01 58.1 -0.6
       comp=Z,59nm,1.2s
JBP    Jabalpur        78.75 295  eP     P        20 02 01.4 +0.7
JBP                               eS     PP       20 04 55.0 -4.7
HYB    Hyderabad       78.97 289  iP     P        20 02 01.0 -1.1
HYB    Hyderabad       78.97 289  eP     P        20 02 00.7 -1.4
HYB                               IAmb   IAmb     20 02 02.8
       comp=Z,37nm,0.3s
TRD    Trivandrum      79.08 280  eP     P        20 02 02.1 -0.6
NGP    Nagpur          79.19 293  eP     P        20 02 02.4 -0.9
NGP                               IAmb   IAmb     20 02 04.5
       comp=Z,97nm,1.7s
RDOG   Red Dog Mine    79.93  15  eP     P        20 02 06.5 +0.3
       comp=Z,65nm,1.2s
CAST   Castle Rocks    80.17  21  eP     P        20 02 06.9 -0.7
       comp=Z,31nm,1.2s
PMR    Palmer          80.25  24  eP     P        20 02 08.1 +0.1
       comp=Z,29nm,0.9s
PMR    Palmer          80.25  24  eP     P        20 02 08.1 +0.1
PMR                               pmax   pmax
       comp=Z,29nm,0.9s
KNK    Knik Glacier    80.42  24  eP     P        20 02 09.7 +0.6
       comp=Z,51nm,1.2s
GHO    Glory Hole Cre  80.43  24  eP     P        20 02 09.1  0.0
       comp=Z,36nm,0.9s
DGZ    Jazzator, Alta  80.58 323c iP     P        20 02 10.0 -0.3
DGZ                               pmax   pmax
       comp=Z,27nm,1.0s
SML    Sawmill         80.69  24  eP     P        20 02 10.8 +0.3
       comp=Z,63nm,0.9s
SML    Sawmill         80.69  24  eP     P        20 02 10.8 +0.3
SML                               pmax   pmax
       comp=Z,63nm,0.9s
BHPL   Bhopal          81.07 295  eP     P        20 02 12.9 -0.5
BHPL                              IAmb   IAmb     20 02 14.2
       comp=Z,25nm,0.9s
SCM    Sheep Creek Mo  81.10  24  eP     P        20 02 13.3 +0.5
       comp=Z,40nm,1.0s
SCM    Sheep Creek Mo  81.10  24  eP     P        20 02 13.3 +0.5
SCM                               pmax   pmax
       comp=Z,40nm,1.0s
IM3    Indian Mountai  81.16  19  eP     P        20 02 13.0 +0.1
DIV    Divide          81.38  25  eP     P        20 02 14.9 +0.7
       comp=Z,56nm,1.2s
KLU    Klutina         81.50  25  eP     P        20 02 15.4 +0.6
       comp=Z,44nm,0.9s
MCK    McKinley        81.51  22  eP     P        20 02 14.5 -0.3
       comp=Z,53nm,1.0s
MCK    McKinley        81.51  22  eP     P        20 02 14.5 -0.3
MCK                               pmax   pmax
       comp=Z,53nm,1.0s
MLY    Manley          81.59  20  eP     P        20 02 14.7 -0.6
       comp=Z,21nm,1.2s
DGAR   Diego Garcia    81.73 263  eP     P        20 02 16.2 -0.8
       comp=Z,345nm,2.0s
DGAR   Diego Garcia    81.73 263  eP     P        20 02 16.2 -0.8
DGAR                              pmax   pmax
       comp=Z,345nm,2.0s
DHY    Denali Highway  81.74  23  eP     P        20 02 16.3 +0.1
       comp=Z,20nm,1.0s
DDI    Dehra Dun       81.92 302  eP     P        20 02 16.6 -1.1
WRH    Wood River Hil  82.22  22  eP     P        20 02 17.7 -0.8
       comp=Z,29nm,1.2s
MDM    Murphy Dome     82.44  21  eP     P        20 02 18.7 -1.0
       comp=Z,22nm,1.2s
TCOL   CIGO, UAF Yank  82.52  21  P      P        20 02 19.7 -0.3
       baz=237
COLA   College         82.53  21  eP     P        20 02 19.1 -0.9
       comp=Z,22nm,0.8s
COLA   College         82.53  21  eP     P        20 02 19.1 -0.9
COLA                              pmax   pmax
       comp=Z,22nm,0.8s
HDA    Harding Lake    82.61  22  eP     P        20 02 19.9 -0.6
       comp=Z,18nm,1.2s
HDA    Harding Lake    82.61  22  P      P        20 02 20.8 +0.3
       baz=238
BALM   Baldy           82.80  26  eP     P        20 02 22.4 +0.6
       comp=Z,30nm,1.0s
POKR   Poker Flat Res  82.81  21  P      P        20 02 21.6 +0.1
       baz=238
ILAR   Eielson Array   82.82  22  P      P        20 02 20.6 -1.0
       comp=Z,4.6nm,0.5s,baz=247,slow=5.1,SNR=44
ILB    Eielson Array   82.82  22  eP     P        20 02 20.3 -1.3
IL1    Eielson Array   82.82  22  eP     P        20 02 20.4 -1.2
SMLA   Simla           82.84 302  eP     P        20 02 21.8 -0.6
SMLA                              IAmb   IAmb     20 02 24.2
       comp=Z,20nm,0.8s
MK01   Makanchi Array  82.85 319  eP     P        20 02 21.0 -1.2
MK31   Makanchi Array  82.86 319  eP     P        20 02 21.7 -0.6
MK31   Makanchi Array  82.86 319  eP     P        20 02 21.7 -0.6
MK32   Makanchi Array  82.86 319  eP     P        20 02 21.5 -0.8
MK32                              epP    pP       20 02 38.8 +0.2
MK32                              e               20 39 50.6
MKAR   Makanchi Array  82.86 319  eP     P        20 02 21.5 -0.8
       comp=Z,330nm,0.9s
MKAR                              pP     pP       20 02 38.8 +0.2
MKAR   Makanchi Array  82.86 319  P      P        20 02 21.5 -0.8
       comp=Z,46nm,0.8s,baz=103,slow=3.9,SNR=256
MKAR                              pP     pP       20 02 38.8 +0.2
       comp=Z,26nm,0.7s,baz=91,slow=5.3,SNR=11
MKAR                              LR     LR       20 39 50.6
       comp=Z,192nm,20.4s,baz=106,slow=36
MNCY   Minicoy         82.90 279  eP     P        20 02 22.5 -0.5
COLD   Coldfoot        83.04  19  eP     P        20 02 22.8 +0.1
       comp=Z,17nm,1.3s
RIDG   Independ'e Rid  83.06  23  eP     P        20 02 23.0  0.0
       comp=Z,42nm,1.2s
MAKZ   Makanchi        83.07 319  eP     P        20 02 22.3 -1.0
       comp=Z,72nm,0.9s
MAKZ   Makanchi        83.07 319  eP     P        20 02 22.3 -1.0
MAKZ                              pmax   pmax
       comp=Z,72nm,0.9s
GOA    Goa             83.13 286  eP     P        20 02 23.6 -0.6
GOA                               IAmb   IAmb     20 02 25.8
       comp=Z,23nm,1.0s
DOT    Dot Lake        83.32  23  eP     P        20 02 24.8 +0.5
       comp=Z,25nm,0.9s
SCRK   Sand Creek      83.51  23  eP     P        20 02 25.5 +0.1
       comp=Z,27nm,1.3s
POO    Poona           83.56 289  eP     P        20 02 25.7 -0.8
POO                               IAmb   IAmb     20 02 27.1
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       comp=Z,17nm,0.4s
ZAA0   Zalesovo Array  83.60 326  eP     P        20 02 24.2 -1.6
       comp=Z,40nm,0.9s
ZALV   Zalesovo Beam   83.60 326  P      P        20 02 24.2 -1.6
       comp=Z,17nm,0.5s,baz=110,slow=5.2,SNR=106
ZALV                              pP     pP       20 02 40.9 -1.3
       comp=Z,16nm,0.7s,baz=116,slow=5.8,SNR=8.3
ZALV                              LR     LR       20 37 22.3
       comp=Z,126nm,21.4s,baz=70,slow=34
ZAA1   Zalesovo Array  83.60 326  eP     P        20 02 24.2 -1.6
ZAA1                              epP    pP       20 02 40.9 -1.3
ZAA1                              e               20 37 22.3
QSPA   South Pole Qui  83.61 180  eP     P        20 02 26.3 +0.4
       comp=Z,136nm,1.1s
DHRM   DHARAMSHALA     83.79 303  eP     P        20 02 26.8 -0.8
DHRM                              IAmb   IAmb     20 02 30.6
       comp=Z,34nm,0.7s
PDGK   Podgornoye      83.82 315  P      P        20 02 27.2 -0.2
PDGK                              pmax   pmax
       comp=Z,17nm,1.2s
TOLK   Toolik Lake Re  84.05  18  eP     P        20 02 28.4 +0.5
       comp=Z,18nm,1.0s
TOLK   Toolik Lake Re  84.05  18  P      P        20 02 28.1 +0.2
       baz=236
FYU    Fort Yukon      84.34  20  eP     P        20 02 26.9 -2.4
       comp=Z,28nm,1.0s
TARG   Taragay, Kyrgy  84.64 313  eP     P        20 02 31.5 -0.5
       comp=Z,14nm,0.9s
NVS    Novosibirsk     84.77 327⇓iP      P        20 02 30.8 -0.9
NVS                               pmax   pmax
       comp=Z,36nm,1.1s
NVS                               pmax   pmax
       comp=N,17nm,1.7s
NVS                               pmax   pmax
       comp=E,15nm,0.7s
HYT    Haines Junctio  84.86  27  eP     P        20 02 33.1 +0.8
       comp=E,36nm,0.8s
MAW    Mawson          84.94 203  eP     P        20 02 33.0 +0.6
       comp=E,105nm,1.8s
MAW    Mawson          84.94 203  P      P        20 02 33.3 +0.9
       comp=E,48nm,0.5s,baz=85,slow=6.3,SNR=12
MAW                               LR     LR       20 36 36.5
       comp=E,459nm,22.0s,baz=86,slow=33
EGAK   Eagle           84.97  23  eP     P        20 02 33.2 +0.6
       comp=E,20nm,0.9s
KDJ    Kajisay         85.19 313  eP     P        20 02 35.4 +1.0
       comp=E,41nm,0.9s
KDJ    Kajisay         85.19 313  eP     P        20 02 35.4 +1.0
KDJ                               pmax   pmax
       comp=Z,41nm,0.9s
DAWY   Dawson          85.36  24  eP     P        20 02 35.3 +0.7
       comp=Z,76nm,1.8s
SKAG   Skagway         85.36  29  eP     P        20 02 34.3 -0.3
       comp=Z,95nm,1.8s
KSH    Kashi           85.52 310  P      P        20 02 38.0 +1.9
KSH                               pP     pP       20 02 54.3 +1.8
KSH                               PP     PP       20 05 58.8 +3.5
KSH                               SKS    SKSac    20 12 54.3 -2.4
KSH                               S      SKKSac   20 13 05.0 +1.4
KSH                               sS     sS       20 13 34.1 +3.0
KSH                               SS     SS       20 18 44.0 +3.6
KSH                               pmax   pmax
       comp=Z,72nm,1.1s
KSH                               pmax   pmax
       comp=Z,730nm,6.4s
KSH                               LR     LR
       comp=Z,220nm,5.6s
KSH                               LR     LR
       comp=Z,320nm,6.7s
KSH                               LR     LR
       comp=Z,630nm,7.9s
ULHL   Ulahol          85.89 313  P      P        20 02 38.6 +0.6
       SNR=5.3
NRN    Naryn           85.90 312  eP     P        20 02 37.8 -0.4
       comp=Z,16nm,1.1s
NRN    Naryn           85.90 312  eP     P        20 02 37.8 -0.4
NRN                               pmax   pmax
       comp=Z,16nm,1.1s
WHY    Whitehorse      85.99  28  eP     P        20 02 38.4 +0.5
       comp=Z,22nm,1.0s
KURK   Kurchatov       86.27 322  eP     P        20 02 37.9 -1.4
       comp=Z,24nm,1.1s
KURK                              epP    pP       20 02 54.0 -1.7
KURK   Kurchatov       86.27 322  eP     P        20 02 37.9 -1.4
KURK                              e*PP   pP       20 02 54.1 -1.7
KURK                              pmax   pmax
       comp=Z,24nm,1.1s
KURK   Kurchatov       86.27 322  P      P        20 02 38.4 -0.9
       SNR=11
TKM2   Tokmak 2        86.50 314  P      P        20 02 40.9  0.0
       SNR=12
NIL    Nilore          86.57 304  eP     P        20 02 39.7 -1.5
       comp=Z,16nm,0.9s
NIL                               epP    pP       20 02 56.1 -1.5
NIL    Nilore          86.57 304  eP     P        20 02 39.7 -1.5
NIL                               e*PP   pP       20 02 56.2 -1.5
NIL                               pmax   pmax
       comp=Z,16nm,0.9s
KZA    Kyzart          86.58 313  P      P        20 02 42.5 +0.8
       SNR=9.0
KBK    Karagaybulak    86.92 313  P      P        20 02 42.2 -0.7
       SNR=7.3
CHMS   Chumysh         87.13 314  P      P        20 02 43.1 -0.6
       SNR=11
UCH    Uchtor          87.15 313  P      P        20 02 45.0 +0.6
       SNR=6.9
FRU    Bishkek         87.19 313  eP     P        20 02 43.0 -1.1
AAK    Ala-Archa       87.24 313  P      P        20 02 44.3 -0.1
       SNR=9.9
AAK    Ala-Archa       87.24 313  eP     P        20 02 43.7 -0.8
       comp=Z,8.8nm,0.7s
AAK                               epP    pP       20 03 00.7 -0.2
AAK    Ala-Archa       87.24 313  eP     P        20 02 43.7 -0.8
AAK                               e*PP   pP       20 03 00.7 -0.2
AAK                               pmax   pmax
       comp=Z,9.0nm,0.7s
EPYK   Eagle Plains    87.31  22  eP     P        20 02 44.5 +0.4
       comp=Z,40nm,0.9s
EPYK   Eagle Plains    87.31  22  P      P        20 02 44.8 +0.7
       baz=248
USP    Ospenovka       87.36 314  P      P        20 02 44.6 -0.2
       SNR=16
SFK    Sufi-Kurgan     87.49 311  P      P        20 02 46.1 +0.3
SFK                               pmax   pmax
       comp=Z,17nm,1.2s
DLBC   Dease Lake      87.65  31  eP     P        20 02 47.0 +1.1
       comp=Z,45nm,1.2s
DLBC   Dease Lake      87.65  31  P      P        20 02 47.1 +1.1
       comp=Z,26nm,1.0s,baz=258,slow=6.1,SNR=18
AML    Almayashu       87.73 313  P      P        20 02 47.0 -0.1
       SNR=18
EKS2   Erkin-Say       87.77 313  P      P        20 02 47.0  0.0
       SNR=15
K02D   Willamette Mer  88.01  47  P      P        20 02 48.1 +0.1
       baz=260
NRIK   Noril'sk        88.10 341  P      P        20 02 46.5 -1.2
       comp=Z,19nm,0.9s,baz=114,slow=5.5,SNR=23
NRIK                              LR     LR       20 43 42.1
       comp=Z,329nm,19.6s,baz=98,slow=36
BHJ    Bhuj            88.12 294  eP     P        20 02 47.4 -1.5
BHJ                               IAmb   IAmb     20 02 49.4
       comp=Z,8.4nm,0.5s
HUMO   Hull Mountain   88.51  47  eP     P        20 02 50.3 -0.1
       comp=Z,20nm,1.4s
MNAS   Manas           88.66 313  P      P        20 02 51.1 -0.1
MNAS                              pmax   pmax
       comp=Z,13nm,1.0s
G03D   McMinnville, O  88.75  44  P      P        20 02 51.6 +0.2
       baz=260
O03E   Paynes Creek    88.98  49  P      P        20 02 53.2 +0.5
       baz=261
ORV    Oroville        89.09  50  eP     P        20 02 52.5 -0.6
       comp=Z,6.9nm,0.9s
ORV    Oroville        89.09  50  eP     P        20 02 52.5 -0.6
ORV                               pmax   pmax
       comp=Z,7.0nm,0.9s
INK    Inuvik          89.16  21  eP     P        20 02 52.8  0.0
       comp=Z,17nm,1.3s
INK    Inuvik          89.16  21  eP     P        20 02 52.8  0.0
INK                               pmax   pmax
       comp=Z,17nm,1.3s
INK    Inuvik          89.16  21  P      P        20 02 52.6  0.0
       comp=Z,7.1nm,1.0s,baz=261,slow=4.1,SNR=17
J04D   Umpqua Nationa  89.23  47  P      P        20 02 54.3 +0.3
       baz=261
D03D   Eldon           89.28  42  P      P        20 02 54.4 +0.6
       baz=260
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AFDM	Forest Hills D	89.41	51	*e*P	P	20 02 55.2	+0.5
	comp=Z,13nm,0.9s						
OTUK	Ortayu	89.75	318	P	P	20 02 54.9	-1.2
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
J05D	Fort Rock, OR	89.87	47	P	P	20 02 57.1	+0.3
	baz=261,SNR=6.9						
BEKR	Beckworth	90.01	50	*e*P	P	20 02 58.4	+0.7
	comp=Z,14nm,0.6s						
G05D	Wamic, OR	90.11	45	P	P	20 02 57.9	+0.1
	baz=261						
KBL	Kabul	90.15	305	*e*P	P	20 02 57.0	-1.5
	comp=Z,5.5nm,0.8s						
KBL	Kabul	90.15	305	*e*P	P	20 02 57.0	-1.5
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PINE	Pine Mountain	90.16	46	*e*P	P	20 02 58.8	+0.5
	comp=Z,15nm,1.1s						
KK31	Karatay Array	90.21	313	*e*P	P	20 02 57.3	-1.0
KK31	Karatay Array	90.21	313	*e*P	P	20 02 57.3	-1.0
KKAR	Karatay Array	90.21	313	*e*P	P	20 02 57.1	-1.2
KKAR	Karatay Array	90.21	313	*e*P	P	20 02 57.1	-1.2
MOD	Modoc Plateau	90.34	48	*e*P	P	20 02 59.2	+0.1
	comp=Z,9.3nm,1.0s						
VES	Vestal, Richgr	90.47	54	P	P	20 03 00.0	+0.4
	baz=263						
VCNR	Virginia City	90.48	51	*e*P	P	20 02 59.3	-0.6
	comp=Z,18nm,1.2s						
PNTR	Pine Nut	90.49	51	*e*P	P	20 02 59.6	-0.4
	comp=Z,23nm,1.0s						
WAKR	Walker	90.53	51	*e*P	P	20 02 59.6	-0.6
	comp=Z,11nm,1.1s						
SCI2	San Clemente I	90.54	57	P	P	20 03 00.4	+0.3
	baz=263						
CHGR	Chuyangaron	90.60	309	*e*P	P	20 02 59.6	-0.7
	comp=Z,25nm,1.0s						
MDPB	Devils Postpil	90.70	52	*e*P	P	20 02 59.3	-1.7
	comp=Z,9.8nm,0.9s						
PAHR	Pah Rah Range	90.73	50	*e*P	P	20 03 00.9	-0.1
	comp=Z,20nm,1.2s						
YERR	Yerington	90.75	51	*e*P	P	20 03 01.1	-0.1
	comp=Z,14nm,1.1s						
OMMB	Old Mammoth Mi	90.76	52	*e*P	P	20 03 02.5	+1.2
	comp=Z,12nm,1.1s						
MWC	Mount Wilson	91.10	56	*e*P	P	20 03 04.3	+1.4
	comp=Z,83nm,1.3s						
I07A	Izee	91.22	46	*e*P	P	20 03 03.4	+0.3
	comp=Z,12nm,1.2s						
EDW2	Edwards Air Fo	91.23	55	P	P	20 03 04.1	+0.8
	baz=263,SNR=7.0						
RYN	Ryan	91.26	51	*e*P	P	20 03 04.1	+0.6
	comp=Z,18nm,1.0s						
E07A	Sunnyside	91.31	43	*e*P	P	20 03 03.7	+0.4
	comp=Z,18nm,1.1s						
CWC	Cottonwood Cre	91.35	54	P	P	20 03 04.0	0.0
	baz=263						
NV01	Mina Array Sit	91.41	52	*e*P	P	20 03 04.8	+0.6
NVAR	Mina Array Bea	91.41	52	P	P	20 03 05.3	+1.1
	comp=Z,26nm,0.9s,baz=251,slow=6.4,SNR=60						
NVAR				PKKPbc	PKKPdf	20 20 24.5	+1.0
	comp=Z,0.5nm,0.4s,baz=102,slow=3.6,SNR=3.8						
NVAR				LR	LR	20 36 37.5	
	comp=Z,534nm,21.9s,baz=276,slow=30						
BFSC	Mount Baldy Ra	91.43	56	P	P	20 03 04.5	+0.1
	baz=263						
HAWA	Hanford	91.51	44	*e*P	P	20 03 04.0	-0.2
	comp=Z,13nm,1.1s						
NV11	Mina Array Sit	91.52	52	*e*P	P	20 03 04.5	-0.2
	comp=Z,2.3nm,1.0s						
LRMC	Laurel Mtn Rad	91.55	55	P	P	20 03 05.7	+0.8
	baz=263,SNR=13						
KVN	Kaiserville	91.64	51	*e*P	P	20 03 06.0	+0.7
	comp=Z,21nm,1.0s						
WVOR	Wild Horse Val	91.64	48	*e*P	P	20 03 04.9	-0.3
	comp=Z,10nm,1.1s						
DAC	Darwin (Calif)	91.72	54	*e*P	P	20 03 06.6	+0.9
	comp=Z,33nm,1.1s						
G08A	Pilot Rock	91.76	45	*e*P	P	20 03 05.7	+0.1
	comp=Z,8.9nm,1.1s						
MPMC	Manual Prospec	91.78	54	P	P	20 03 07.0	+1.0
	baz=264,SNR=15						
BRVK	Borovoye	91.80	323	*e*P	P	20 03 03.4	-1.9
	comp=Z,20nm,1.0s						
BRVK	Borovoye	91.80	323	*i* P	P	20 03 03.5	-1.9
BRVK				pmax	pmax		
	comp=Z,21nm,1.1s						
BRVK	Borovoye	91.80	323	P	P	20 03 04.2	-1.2
	SNR=7.5						
E08A	Dider Farm, El	91.84	44	*e*P	P	20 03 05.8	0.0
	comp=Z,22nm,1.3s						
J08A	Circle Bar Ran	91.87	47	*e*P	P	20 03 06.4	+0.2
	comp=Z,5.8nm,0.8s						
B08A	Colville Reser	91.90	42	*e*P	P	20 03 05.6	-0.4
	comp=Z,38nm,1.9s						
GRAC	Grapevine Rang	91.98	53	P	P	20 03 07.8	+1.1
	baz=264						
GSC	Goldstone, Bar	92.25	55	*e*P	P	20 03 09.0	+1.0
	comp=Z,11nm,1.0s						
GSC	Goldstone, Bar	92.25	55	P	P	20 03 07.7	-0.4
	baz=264						
MONP2	Monument Peak	92.31	57	P	P	20 03 08.2	-0.4
	baz=264						
PFO	Pinyon Flats O	92.35	57	*e*P	P	20 03 08.4	-0.2
	comp=Z,15nm,1.1s						
PFO	Pinyon Flats O	92.35	57	*e*P	P	20 03 08.4	-0.2
PFO				pmax	pmax		
	comp=Z,15nm,1.1s						
PFO	Pinyon Flats O	92.35	57	P	P	20 03 09.1	+0.5
	baz=264						
PFO	Pinyon Flats O	92.35	57	P	P	20 03 09.9	+1.3
	comp=Z,6.2nm,0.7s,baz=298,slow=2.9,SNR=5.6						
XPFO	Pion Flat	92.36	57	*e*P	P	20 03 08.4	-0.2
	comp=Z,14nm,1.0s						
BMN	Battle Mountai	92.47	50	*e*P	P	20 03 08.6	-0.4
	comp=Z,17nm,1.0s						
BMN	Battle Mountai	92.47	50	*e*P	P	20 03 08.6	-0.4
BMN				pmax	pmax		
	comp=Z,17nm,1.0s						
E09A	Wood Farm, Sta	92.47	44	*e*P	P	20 03 08.3	-0.4
	comp=Z,17nm,1.1s						
C09A	Chrisman Ranch	92.53	42	*e*P	P	20 03 08.7	-0.3
	comp=Z,6.9nm,0.9s						
HEC	Hector,Ludlow	92.58	55	P	P	20 03 09.9	+0.3
	baz=264						
SHOC	Shoshone, Teco	92.74	54	P	P	20 03 10.6	+0.4
	baz=264						
BELC	Belle Mtn. Jos	92.77	56	P	P	20 03 11.0	+0.4
	baz=264,SNR=11						
SWSC	Sam W. Stewart	92.83	57	P	P	20 03 10.8	+0.2
	baz=264						
TPNV	Topopah Spring	92.86	53	*e*P	P	20 03 11.7	+0.8
	comp=Z,21nm,1.0s						
TPNV	Topopah Spring	92.86	53	P	P	20 03 11.0	0.0
	baz=264						
BMO	Blue Mountains	92.88	45	*e*P	P	20 03 10.5	-0.2
	comp=Z,16nm,1.4s						
BMO	Blue Mountains	92.88	45	*e*P	P	20 03 10.5	-0.2
BMO				pmax	pmax		
	comp=Z,16nm,1.4s						
SYO	Syowa Base	92.89	199⇓	*e*P	P	20 03 08.6	-1.5
SYO	Syowa Base	92.89	199⇑	*i*PcP	PcP	20 03 11.0	+0.2
TUQ	Turquoise Moun	92.98	55	P	P	20 03 11.7	+0.2
	baz=264,SNR=7.1						
F10A	Beach Ranch, E	93.05	44	*e*P	P	20 03 09.6	-1.9
	comp=Z,10nm,1.0s						
GMRC	Granite Mounta	93.13	56	P	P	20 03 12.3	+0.1
	baz=264,SNR=10						
BC3	Big Chuckawall	93.19	57	P	P	20 03 13.0	+0.6
	baz=265,SNR=7.0						
NEW	Newport	93.35	42	*e*P	P	20 03 11.4	-1.4
	comp=Z,15nm,1.3s						
NEW				pP	pP	20 03 28.2	-1.1
NEW	Newport	93.35	42	*e*P	P	20 03 11.4	-1.4
NEW				*PP	pP	20 03 28.2	-1.1
NEW				pmax	pmax		
	comp=Z,15nm,1.3s						
NEW	Newport	93.35	42	P	P	20 03 12.2	-0.5
	baz=264,SNR=5.9						
NEW	Newport	93.35	42	P	P	20 03 12.6	-0.2
	comp=Z,7.1nm,1.0s,baz=243,slow=3.8,SNR=7.1						
NEW				pP	pP	20 03 28.2	-1.1
	comp=Z,5.1nm,0.8s,baz=256,slow=2.6,SNR=5.0						
IRM	Iron Mountain	93.49	56	P	P	20 03 14.6	+0.9
	baz=265,SNR=23						
R11A	Troy Canyon, C	93.52	52	*e*P	P	20 03 14.7	+0.7
	comp=Z,17nm,1.1s						
R11A	Troy Canyon, C	93.52	52	P	P	20 03 14.3	+0.3
	baz=265,SNR=18						
LDFC	Landfair	93.61	55	*e*P	P	20 03 15.2	+0.9
	comp=Z,35nm,1.1s						
GLA	Glamis	93.66	57	P	P	20 03 14.8	+0.3
	baz=265						
SHPR	Sheep Range	93.69	54	*e*P	P	20 03 16.0	+1.2
	comp=Z,19nm,1.0s						
Y12C	Blythe	93.97	57	P	P	20 03 16.0	+0.1
	baz=265						
ELK	Elko	94.00	50	*e*P	P	20 03 16.3	+0.1
	comp=Z,11nm,1.1s						
ELK				pP	pP	20 03 32.2	-0.5
ELK	Elko	94.00	50	*e*P	P	20 03 16.3	+0.1
ELK				*PP	pP	20 03 32.3	-0.5
ELK				pmax	pmax		
	comp=Z,11nm,1.1s						
ELK	Elko	94.00	50	P	P	20 03 17.1	+0.9
	comp=Z,5.1nm,0.9s,baz=250,slow=5.2,SNR=12						
ELK				pP	pP	20 03 32.2	-0.5
	comp=Z,3.6nm,0.9s,baz=249,slow=4.6,SNR=4.4						
PDMCI	Parker Dam,Lak	94.33	56	P	P	20 03 17.9	+0.4
	baz=265						
W13A	Hualapai Mount	94.61	55	*e*P	P	20 03 19.9	+0.9
	comp=Z,15nm,0.7s						
HLID	Hailey	94.83	47	*e*P	P	20 03 20.0	+0.1
	comp=Z,4.1nm,1.1s						
HLID	Hailey	94.83	47	P	P	20 03 20.3	+0.4
	baz=266						
PSUT	Pine Spring	94.89	52	*e*P	P	20 03 21.1	+0.8
	comp=Z,14nm,1.2s						
CCUT	Cedar City	95.21	53	*e*P	P	20 03 22.9	+1.2
	comp=Z,9.6nm,1.1s						
214A	Organ Pipe Nat	95.27	59	P	P	20 03 21.6	-0.4
	baz=266						
LCMT	Little Creek M	95.27	53	*e*P	P	20 03 22.9	+1.0
	comp=Z,14nm,1.2s						
SZCU	Shurtz Canyon	95.43	53	*e*P	P	20 03 24.2	+1.4
	comp=Z,10nm,1.2s						
KNB	Kanab	95.61	53	*e*P	P	20 03 25.3	+1.7
	comp=Z,18nm,1.2s						
YKW3	Yellowknife Ar	95.82	28	*e*P	P	20 03 23.7	+0.1
	comp=Z,13nm,0.8s						
YKA	Yellowknife Ar	95.82	28	P	P	20 03 23.8	+0.2
	comp=Z,17nm,0.9s,baz=268,slow=4.6,SNR=72						
YKA				pP	pP	20 03 39.6	-0.6
	comp=Z,9.9nm,0.7s,baz=267,slow=4.6,SNR=17						
YKA				PKKPbc	PKKPbc	20 20 11.7	-3.8
	comp=Z,0.8nm,0.7s,baz=82,slow=2.5,SNR=12						
YKB5	Yellowknife Ar	95.82	28	*e*P	P	20 03 23.2	-0.4
HVU	Hansel Valley	95.93	49	*e*P	P	20 03 25.0	+0.1
	comp=Z,7.4nm,1.0s						
HVU	Hansel Valley	95.93	49	*e*P	P	20 03 25.0	+0.1
HVU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
U15A	North Rim	95.99	54	*e*P	P	20 03 26.2	+0.8
	comp=Z,12nm,1.0s						
MCMT	McKenzie Canyo	96.04	46	*e*P	P	20 03 26.0	+0.6
PKCU	Pink Cliffs	96.04	53	*e*P	P	20 03 24.8	-0.9
	comp=Z,21nm,1.2s						
MTPU	Mount Pierson	96.17	52	*e*P	P	20 03 27.3	+0.9
	comp=Z,14nm,1.1s						
MSU	Marysvale	96.20	52	*e*P	P	20 03 27.1	+0.8
MSU	Marysvale	96.20	52	*e*P	P	20 03 27.1	+0.8
NLU	North Lily Min	96.36	51	*e*P	P	20 03 27.2	+0.3
	comp=Z,16nm,1.1s						
WUAZ	Wupatki	96.69	55	*e*P	P	20 03 31.6	+3.1
	comp=Z,6.0nm,1.0s						
MPU	Maple Canyon	96.70	51	*e*P	P	20 03 28.8	+0.3
	comp=Z,25nm,1.8s						
JLU	Jordanelle	96.87	50	*e*P	P	20 03 28.8	-0.5
	comp=Z,18nm,1.2s						
BOZ	Bozeman (W)	96.93	45	P	P	20 03 29.1	-0.3
	baz=268						
TMUT	Trail Mountain	97.00	51	*e*P	P	20 03 27.8	-2.2
	comp=Z,12nm,1.1s						
FXWY	Fox Creek	97.30	47	*e*P	P	20 03 30.9	-0.2
	comp=Z,6.0nm,1.4s						
P17A	Butcher Ranch,	97.37	51	*e*P	Pdif	20 03 31.6	+0.1
	comp=Z,12nm,1.3s						
YFT	Old Faithful	97.46	46	*e*P	P	20 03 31.2	-0.7
	comp=Z,5.2nm,0.8s						
SRU	San Rafael Swe	97.52	51	*e*P	P	20 03 30.8	-1.4
	comp=Z,4.4nm,0.5s						
SRU	San Rafael Swe	97.52	51	*e*P	P	20 03 30.8	-1.4
SRU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
H17A	Grant Village	97.64	46	P	Pdif	20 03 33.8	+1.0
	baz=269						
ABKAR	Akbulak array	98.00	319	*e*P	P	20 03 30.6	-3.2
EGMT	Eagleton	98.27	42	P	P	20 03 34.4	-0.8
	baz=270						
BW06	Boulder Array	98.35	48	*e*P	P	20 03 35.1	-0.8
	comp=Z,8.2nm,1.2s						
BW06	Boulder Array	98.35	48	P	P	20 03 35.7	-0.2
	baz=269						
PD31	Pinedale Array	98.35	48	*e*P	P	20 03 34.9	-1.0
	comp=Z,7.7nm,1.2s						
PDAR	Pinedale Array	98.35	48	*e*P	P	20 03 34.5	-1.4
PDAR				pP	pP	20 03 51.0	-1.5
PDAR	Pinedale Array	98.35	48	P	P	20 03 35.4	-0.5
	comp=Z,2.9nm,0.9s,baz=241,slow=3.1,SNR=17						
PDAR				pP	pP	20 03 51.0	-1.5
	comp=Z,2.0nm,0.8s,baz=247,slow=3.7,SNR=7.4						
PDAR				LR	LR	20 43 56.1	
	comp=Z,479nm,19.4s,baz=296,slow=33						
PV14	Lion Creek, Pa	98.67	52	*e*P	P	20 03 35.7	-1.7
	comp=Z,8.3nm,1.1s						
PV23	Carpenter Ridg	98.69	52	*e*P	P	20 03 35.8	-1.8
	comp=Z,9.0nm,0.9s						
PV17	East Wray Mesa	98.72	52	*e*P	Pdif	20 03 37.7	+0.1
	comp=Z,7.7nm,1.1s						
PV16	Nyswonger Mesa	98.76	52	*e*P	P	20 03 36.7	-1.1
	comp=Z,8.7nm,1.2s						
ARU	Arti	98.76	326	P	P	20 03 34.3	-2.8
ARU						20 07 35.4	
ARU				S	SKSac	20 14 09.6	-0.5
ARU				SS	SS	20 21 49.5	+0.3
PV04	Paradox Valley	98.77	52	*e*P	P	20 03 37.5	-0.3
	comp=Z,13nm,1.1s						
PV11	David Mesa, Pa	98.79	52	*e*P	Pdif	20 03 38.0	+0.1
	comp=Z,12nm,1.1s						
PV03	Paradox Valley	98.81	52	*e*P	Pdif	20 03 39.4	+1.3
	comp=Z,5.3nm,1.1s						
PV12	Saucer Basin,	98.85	52	*e*P	Pdif	20 03 38.8	+0.6
	comp=Z,15nm,1.1s						
GEYT	Alibeck	99.21	307	PP	PP	20 07 46.5	+3.5
	comp=Z,5.0nm,1.2s,baz=119,slow=5.2,SNR=5.6						
GEYT				LR	LR	20 51 23.9	
	comp=Z,134nm,19.8s,baz=85,slow=37						
O20A	White River Ci	99.31	50	*e*P	Pdif	20 03 40.3	+0.1
	comp=Z,9.4nm,1.1s						
O20A	White River Ci	99.31	50	P	Pdif	20 03 40.7	+0.5
	baz=270						
RWWY	Rawlins	100.09	49	*e*Pdif	Pdif	20 03 42.5	-1.2
SMCO	Snowmass	100.28	51	*e*Pdif	Pdif	20 03 43.6	-1.3
S22A	4UR Ranch, Cre	100.40	53	*e*Pdif	Pdif	20 03 47.2	+2.0
S22A	4UR Ranch, Cre	100.40	53	P	Pdif	20 03 46.0	+0.8
	baz=270						
K22A	Casper	100.58	48	P	Pdif	20 03 45.9	+0.2
	baz=271						
LAO	LASA Array	100.69	44	*e*Pdif	Pdif	20 03 46.2	+0.2
LAO	LASA Array	100.69	44	P	Pdif	20 03 46.0	0.0
	baz=272,SNR=5.6						
ANMO	Albuquerque	100.69	56	P	Pdif	20 03 47.1	+0.6
	baz=270						
SNAA	Sanae	100.76	187	P	Pdif	20 03 46.0	+0.2
N23A	Red Feather La	101.05	50	*e*Pdif	Pdif	20 03 48.1	+0.1
N23A	Red Feather La	101.05	50	P	Pdif	20 03 48.5	+0.4
	baz=271,SNR=5.2						
Q24A	Divide	101.71	52	P	Pdif	20 03 51.7	+0.7
	baz=271						
VNA3	Neumayer Olymp	101.88	185	P	Pdif	20 03 51.3	+0.5
DGMT	Dagmar	101.97	42	P	Pdif	20 03 51.9	+0.3
	baz=274						
VNA2	Neumayer--Watz	101.97	186	P	Pdif	20 03 51.3	+0.1
	baz=171,slow=3.1						
RSSD	Black Hills	102.34	46	P	Pdif	20 03 53.7	+0.1
	baz=273						
TXAR	Lajitas Array	103.05	61	PKKPbc	PKKPbc	20 19 53.6	-0.4
	comp=Z,1.4nm,0.8s,baz=118,slow=3.7,SNR=9.7						
WMOK	Wichita Mounta	107.01	56	P	PKiKP	20 08 23.1	-0.7
	baz=274						
APA	Apatity	107.50	340⇓	*i*P	Pdif	20 04 23.2	+7.5
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WHTX	Lake Whitney,	108.31	59	P	PKiKP	20 08 25.5	-0.7
	baz=274						
ARA0	ARCESS Array S	108.95	343	*e*PKiKP	PKiKP	20 08 26.5	+0.1
ARCES	ARCESS Array B	108.95	343	PKiKP	PKiKP	20 08 26.5	+0.1
	comp=Z,2.3nm,0.8s,baz=64,slow=2.8,SNR=4.3						
KIV	Kislovodsk	110.33	315	*i* PKIKP	PKiKP	20 08 30.2	+0.4
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,160nm,21.0s						
F38A	Pierce - Schro	110.63	43	P	PKiKP	20 08 30.1	-0.1
	baz=283						
W39A	Magazine	111.05	55	P	PKiKP	20 08 30.7	-0.6
	baz=277						
OBN	Obninsk	111.16	327	*i* PKIKP	PKiKP	20 08 31.3	+0.4
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
G39A	Holcombe	111.26	44	P	PKiKP	20 08 31.0	-0.4
	baz=283						
F39A	Loretta	111.29	43	P	PKiKP	20 08 31.0	-0.5
	baz=283						
MIAR	Mount Ida	111.30	56	P	PKiKP	20 08 31.0	-0.8
	baz=277						
J39A	Decorah	111.30	46	P	PKiKP	20 08 30.1	-1.5
	baz=282						
H39A	Augusta	111.31	44	P	PKiKP	20 08 30.8	-0.7
	baz=283						
L39A	Vinton	111.33	47	P	PKiKP	20 08 30.7	-0.9
	baz=281						
E39A	Mellen	111.43	43	P	PKiKP	20 08 31.1	-0.6
	baz=284						
U40A	Yellville	111.64	53	P	PKiKP	20 08 31.9	-0.5
	baz=278						
F40A	Park Falls	111.83	43	P	PKiKP	20 08 31.9	-0.6
	baz=284						
K40A	Colesburg	111.84	47	P	PKiKP	20 08 31.8	-0.8
	baz=282						
E40A	Wakefield	111.85	42	P	PKiKP	20 08 31.6	-0.9
	baz=284						
H40A	Chili	111.95	44	P	PKiKP	20 08 32.2	-0.5
	baz=283						
J40A	Soldiers Grove	111.98	46	P	PKiKP	20 08 31.7	-1.1
	baz=283						
W41B	Gary Mavity, V	112.30	55	P	PKiKP	20 08 33.0	-0.6
	baz=278						
S41A	Jillco Farms,	112.33	52	P	PKiKP	20 08 33.0	-0.7
	baz=280						
T41A	Mountain View	112.40	53	P	PKiKP	20 08 32.6	-1.3
	baz=279						
P41A	Barry, Barry	112.49	50	P	PKiKP	20 08 33.6	-0.3
	baz=281						
Q41A	Truxton	112.49	51	P	PKiKP	20 08 33.5	-0.4
	baz=280						
R41A	Rosebud	112.49	51	P	PKiKP	20 08 33.4	-0.6
	baz=280						
J41A	Loganville	112.50	46	P	PKiKP	20 08 32.9	-0.9
	baz=283						
O41A	Passleys Farm,	112.54	49	P	PKiKP	20 08 33.3	-0.7
	baz=281						
F41A	Three Lakes	112.56	43	P	PKiKP	20 08 33.1	-0.9
	baz=285						
CCM	Cathedral Cave	112.64	51	P	PKiKP	20 08 33.2	-1.0
	baz=280						
U42A	Revenden	112.93	53	P	PKiKP	20 08 33.6	-1.3
	baz=279						
T42A	Van Buren	112.93	53	P	PKiKP	20 08 34.0	-0.8
	baz=280						
R42A	Luebbering	112.95	51	P	PKiKP	20 08 34.3	-0.6
	baz=280						
Q42A	Golden Eagle	113.03	50	P	PKiKP	20 08 34.7	-0.3
	baz=281						
S42A	Caledonia	113.04	52	P	PKiKP	20 08 33.9	-1.2
	baz=280						
P42A	Winchester	113.05	50	P	PKiKP	20 08 34.2	-0.8
	baz=281						
L42A	Oliver, Polo	113.05	47	P	PKiKP	20 08 34.3	-0.6
	baz=283						
J42A	Columbus	113.14	46	P	PKiKP	20 08 33.8	-1.2
	baz=284						
G42A	Mountain	113.15	43	P	PKiKP	20 08 34.3	-0.7
	baz=285						
I42A	Draeger Farm,	113.15	45	P	PKiKP	20 08 34.1	-1.0
	baz=284						
FIA0	FINESS Array S	113.32	336	*e*PKiKP	PKiKP	20 08 34.0	-0.8
FIA0				*e*PKKPbc	PKKPbc	20 19 19.0	-3.4
FIA0				*e*PKKPab	PKKPab	20 19 27.6	-0.2
FIA0				*e*PKKPdf	PKKPdf	20 19 42.6	-0.8
FIA0	FINESS Array S	113.32	336	*e*PKIKP	PKiKP	20 08 34.0	-0.8
FINES	FINESS Array B	113.32	336	*i* PKIKP	PKiKP	20 08 34.0	-0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	113.32	336	PKiKP	PKiKP	20 08 34.0	-0.8
	comp=Z,1.5nm,0.9s,baz=100,slow=3.4,SNR=8.1						
FINES				PKKPbc	PKKPbc	20 19 19.0	-3.4
	comp=Z,0.5nm,0.3s,baz=227,slow=1.9,SNR=12						
FINES				PKKPab	PKKPab	20 19 27.5	-0.2
	comp=Z,1.3nm,0.8s,baz=123,slow=7.0,SNR=5.5						
FINES				PKKP	PKKPdf	20 19 42.6	-0.8
	comp=Z,0.8nm,0.6s,baz=194,slow=5.7,SNR=4.0						
J43A	Natural Harves	113.63	45	P	PKiKP	20 08 35.1	-0.9
	baz=284						
S43A	Fulton Ridge,	113.64	52	P	PKiKP	20 08 35.0	-1.2
	baz=281						
HDIL	Hopedale	113.64	48	P	PKiKP	20 08 35.6	-0.5
	baz=282						
P43A	Skaggs, Pawnee	113.66	49	P	PKiKP	20 08 35.9	-0.3
	baz=282						
M43A	Waltham Townsh	113.70	47	P	PKiKP	20 08 35.3	-0.8
	baz=283						
E43A	Lone Tree Farm	113.81	42	P	PKiKP	20 08 35.4	-0.8
	baz=287						
K43A	Burlington	113.85	46	P	PKiKP	20 08 35.6	-0.8
	baz=284						
Q44A	Meyer Farm, Va	114.20	50	P	PKPdf	20 08 36.9	-0.3
	baz=282						
S44A	Carbondale	114.25	52	P	PKPdf	20 08 36.9	-0.5
	baz=281						
F44A	Big Bay de Noc	114.30	42	P	PKPdf	20 08 36.7	-0.5
	baz=287						
P44A	Sand Creek, Wi	114.38	50	P	PKPdf	20 08 36.9	-0.7
	baz=282						
V45A	Humboldt	114.85	54	P	PKPdf	20 08 38.1	-0.4
	baz=281						
Q45A	Warren Harvey,	114.86	50	P	PKiKP	20 08 38.0	-0.4
	baz=283						
R45A	Skylar, Fairfi	114.89	51	P	PKiKP	20 08 38.1	-0.5
	baz=282						
N45A	Kentland	114.89	48	P	PKiKP	20 08 38.3	-0.2
	baz=284						
X46A	Booneville	115.37	55	P	PKiKP	20 08 39.4	-0.2
	baz=280						
P46A	Rosedale	115.41	49	P	PKiKP	20 08 39.3	-0.2
	baz=284						
T46A	Princeton	115.45	52	P	PKiKP	20 08 39.5	-0.2
	baz=282						
N46A	Monticello	115.45	48	P	PKiKP	20 08 39.4	-0.2
	baz=284						
V46A	Holladay	115.52	53	P	PKiKP	20 08 38.5	-1.3
	baz=281						
I46A	Reed City	115.55	44	P	PKiKP	20 08 38.9	-0.8
	baz=287						
E46A	Sault Ste Mari	115.58	41	P	PKiKP	20 08 38.9	-0.7
	baz=289						
D46A	Sault St. Mari	115.59	41	P	PKiKP	20 08 38.9	-0.7
	baz=289						
M46A	Old House Fiel	115.60	47	P	PKiKP	20 08 39.0	-0.9
	baz=285						
K46A	Dorr	115.67	46	P	PKiKP	20 08 38.5	-1.4
	baz=286						
WVT	Waverly	115.68	53	P	PKPdf	20 08 39.0	-1.1
	baz=282						
147A	Livingston	115.95	57	P	PKPdf	20 08 39.7	-1.1
	baz=280						
V47A	Nunnelly	115.99	53	P	PKPdf	20 08 39.5	-1.2
	baz=282						
O47A	Sheridan	116.03	48	P	PKPdf	20 08 39.0	-1.7
	baz=285						
W47A	Westpoint	116.04	54	P	PKPdf	20 08 39.5	-1.4
	baz=281						
U47A	Clarksville	116.05	53	P	PKPdf	20 08 39.5	-1.3
	baz=282						
T47A	Sharon Grove	116.08	52	*e*PKPdf	PKPdf	20 08 38.6	-2.3
T47A	Sharon Grove	116.08	52	P	PKPdf	20 08 40.1	-0.8
	baz=282						
S47A	Hartford	116.12	51	P	PKPdf	20 08 40.1	-0.8
	baz=283						
D47A	Chapleau	116.13	40	P	PKPdf	20 08 39.7	-1.0
	baz=290						
P47A	Martinsville	116.15	49	P	PKPdf	20 08 40.1	-0.8
	baz=284						
M47A	Cromwell	116.15	47	P	PKPdf	20 08 40.6	-0.3

	baz=286						
Q47A	Bedord North L	116.16	50	P	PKPdf	20 08 39.8	-1.2
	baz=284						
J47A	Sunmer	116.19	45	P	PKPdf	20 08 40.4	-0.5
	baz=287						
N47A	Urbana	116.22	47	P	PKPdf	20 08 40.1	-1.0
	baz=285						
E47A	Iron Bridge	116.22	41	P	PKPdf	20 08 39.9	-1.0
	baz=290						
K47A	Vermontville	116.23	45	P	PKPdf	20 08 40.2	-0.8
	baz=287						
R47A	Wooly Knot Far	116.23	50	P	PKPdf	20 08 40.7	-0.5
	baz=283						
G47A	Hillman	116.26	42	P	PKPdf	20 08 40.7	-0.3
	baz=289						
L47A	Sherwood	116.28	46	P	PKPdf	20 08 40.5	-0.6
	baz=286						
WCI	Wyandotte Cave	116.43	50	P	PKPdf	20 08 40.7	-0.8
	baz=284						
V48A	Smith Brothers	116.56	53	P	PKPdf	20 08 40.3	-1.6
	baz=282						
W48A	Pulaski	116.59	54	P	PKPdf	20 08 40.6	-1.4
	baz=282						
T48A	Bowling Green	116.60	52	P	PKPdf	20 08 40.8	-1.1
	baz=283						
U48A	Cassie Pea, Po	116.62	52	P	PKPdf	20 08 41.1	-0.9
	baz=283						
X48A	Hartselle	116.64	55	P	PKPdf	20 08 40.2	-1.8
	baz=281						
I48A	Sherman Twp	116.68	43	P	PKPdf	20 08 40.8	-1.0
	baz=288						
Q48A	North Vernon	116.69	50	P	PKPdf	20 08 41.0	-1.0
	baz=284						
N48A	Decatur	116.71	47	P	PKPdf	20 08 41.2	-0.8
	baz=286						
S48A	Wiedeman Farm,	116.74	51	P	PKPdf	20 08 41.4	-0.8
	baz=283						
M48A	Edgerton	116.77	47	P	PKPdf	20 08 41.4	-0.7
	baz=286						
O48A	Farmland	116.78	48	P	PKPdf	20 08 41.4	-0.8
	baz=285						
P48A	Milroy	116.78	49	P	PKPdf	20 08 41.2	-0.9
	baz=285						
K48A	Perry	116.81	45	P	PKPdf	20 08 41.2	-1.0
	baz=287						
L48A	N Adams	116.84	46	P	PKPdf	20 08 41.3	-0.9
	baz=287						
F48A	Evansville	116.87	41	P	PKPdf	20 08 41.0	-1.1
	baz=290						
D48A	Paudash Townsh	116.92	40	P	PKPdf	20 08 41.2	-1.0
	baz=291						
E48A	Lockeyer	116.94	41	P	PKPdf	20 08 41.5	-0.8
	baz=291						
LRAL	Lakeview Retre	116.94	56	P	PKPdf	20 08 41.7	-1.0
	baz=280						
AKASG	Malin Array Be	116.96	325	PKP	PKPdf	20 08 41.0	-1.1
	comp=Z,0.9nm,0.4s,baz=64,slow=2.1,SNR=5.7						
AKASG				PKKPbc	PKKPbc	20 19 07.0	-2.5
	comp=Z,0.4nm,0.3s,baz=257,slow=3.7,SNR=4.7						
AKBB	Malin Array Si	116.96	325	*e*PKPdf	PKPdf	20 08 40.4	-1.8
AKBB	Malin Array Si	116.96	325	*e*PKIKP	PKPdf	20 08 40.4	-1.8
AK11	Malin Array Si	117.00	325	*e*PKPdf	PKPdf	20 08 40.5	-1.8
349A	Repton	117.07	58	P	PKPdf	20 08 41.5	-1.5
	baz=280						
W49A	Belvidere	117.13	54	P	PKPdf	20 08 41.5	-1.5
	baz=282						
D49A	Beulah Townshi	117.17	40	P	PKPdf	20 08 41.6	-1.1
	baz=292						
149A	Jones	117.19	57	P	PKPdf	20 08 41.7	-1.4
	baz=280						
X49A	Woodville	117.21	54	P	PKPdf	20 08 41.6	-1.5
	baz=282						
U49A	Red Boiling Sp	117.22	52	P	PKPdf	20 08 42.0	-1.1
	baz=283						
F49A	Sandfield	117.27	41	P	PKPdf	20 08 41.8	-1.1
	baz=290						
L49A	Milan	117.27	46	P	PKPdf	20 08 42.2	-0.9
	baz=287						
R49A	Shelbyville	117.27	50	P	PKPdf	20 08 42.0	-1.2
	baz=284						
T49A	Edmonton	117.28	51	*e*PKPdf	PKPdf	20 08 41.8	-1.4
T49A	Edmonton	117.28	51	P	PKPdf	20 08 41.7	-1.4
	baz=284						
V49A	McMinnville	117.28	53	P	PKPdf	20 08 41.8	-1.5
	baz=283						
PLCA	Paso Flores	117.29	142	PKIKP	PKPdf	20 08 43.0	-0.3
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PLCA	Paso Flores	117.29	142	PKP	PKPdf	20 08 43.0	-0.3
	comp=Z,0.6nm,0.4s,baz=191,slow=3.2,SNR=7.1						
Z49A	Columbiana	117.30	56	P	PKPdf	20 08 42.6	-0.7
	baz=281						
P49A	Miami Univ. Ec	117.30	49	P	PKPdf	20 08 42.2	-0.9
	baz=285						
Q49A	Aurora	117.30	49	P	PKPdf	20 08 42.3	-0.8
	baz=285						
S49A	Springfield	117.30	51	P	PKPdf	20 08 42.5	-0.8
	baz=284						
M49A	Liberty Center	117.31	46	P	PKPdf	20 08 42.7	-0.4
	baz=287						
KMBO	Kilima Mbogo	117.31	265	*e*PKPdf	PKPdf	20 08 43.9	-0.4
KMBO	Kilima Mbogo	117.31	265	PKIKP	PKiKP	20 08 44.6	+0.3
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KMBO	Kilima Mbogo	117.31	265	PKP	PKiKP	20 08 44.6	+0.3
	comp=Z,0.8nm,0.5s,baz=41,slow=11,SNR=3.8						
N49A	Columbus Grove	117.31	47	P	PKPdf	20 08 42.8	-0.3
	baz=286						
J49A	Marlette	117.33	44	P	PKPdf	20 08 42.4	-0.7
	baz=288						
I49A	Point Hope	117.36	43	P	PKPdf	20 08 42.1	-1.0
	baz=289						
O49A	Covington	117.40	48	*e*PKPdf	PKPdf	20 08 42.5	-0.9
O49A	Covington	117.40	48	P	PKPdf	20 08 42.5	-0.9
	baz=286						
Z50A	Ashland	117.78	56	P	PKPdf	20 08 43.5	-0.8
	baz=281						
TOBO	Tobermory, Bru	117.80	42	P	PKPdf	20 08 43.2	-0.8
	baz=291						
Y50A	Piedmont	117.81	55	P	PKPdf	20 08 43.5	-0.9
	baz=282						
150A	Eclectic	117.83	57	P	PKPdf	20 08 43.4	-1.0
	baz=281						
T50A	Nancy	117.83	51	P	PKPdf	20 08 43.4	-0.9
	baz=284						
E50A	Wahnapitae	117.88	40	P	PKPdf	20 08 43.4	-0.7
	baz=292						
W50A	Signal Mountai	117.88	54	*e*PKPdf	PKPdf	20 08 42.4	-2.1
W50A	Signal Mountai	117.88	54	P	PKPdf	20 08 43.1	-1.4
	baz=283						
BR101	Keskin Array S	117.89	312	*e*PKPdf	PKPdf	20 08 43.0	-1.5
BR101				*e*PP	PP	20 09 59.5	+0.6
BR101				*e*PKKPbc	PKKPab	20 19 10.1	+1.9
BRTR	Keskin Array B	117.89	312	PKP	PKPdf	20 08 43.0	-1.5
	comp=Z,1.4nm,0.7s,baz=126,slow=1.7,SNR=8.5						
BRTR				PP	PP	20 09 59.5	+0.6
	comp=Z,1.4nm,1.0s,baz=72,slow=4.7,SNR=3.2						
BRTR				PKKPab	PKKPab	20 19 10.1	+1.9
	comp=Z,0.9nm,0.9s,baz=240,slow=2.4,SNR=5.2						
R50A	Paris	117.92	50	P	PKPdf	20 08 43.2	-1.2
	baz=285						
O50A	Cable	117.94	48	P	PKPdf	20 08 43.1	-1.3
	baz=286						
V50A	Pikevile	117.94	53	P	PKPdf	20 08 43.7	-0.8
	baz=283						
P50A	Jamestown	117.96	48	P	PKPdf	20 08 43.5	-1.0
	baz=286						
L50A	Kingsville	117.97	45	P	PKPdf	20 08 43.5	-0.9
	baz=288						
U50A	Jamestown	117.97	52	P	PKPdf	20 08 43.9	-0.7
	baz=284						
M50A	Fremont	118.00	46	P	PKPdf	20 08 43.8	-0.7
	baz=288						
S50A	Richmond	118.01	51	P	PKPdf	20 08 43.7	-0.9
	baz=285						
Q50A	Georgetown	118.03	49	P	PKPdf	20 08 43.7	-0.9
	baz=286						
N50A	Nevada	118.11	47	P	PKPdf	20 08 44.0	-0.7
	baz=287						
BASO	Ashfield	118.12	43	P	PKPdf	20 08 43.7	-0.9
	baz=290						
BRCO	Bruce Peninsul	118.19	43	P	PKPdf	20 08 44.3	-0.5
	baz=290						
BMRO	Meriville Lake	118.22	42	P	PKPdf	20 08 44.1	-0.7
	baz=291						
W51A	Cleveland	118.33	53	P	PKPdf	20 08 44.0	-1.3
	baz=283						
Y51A	Rockmart	118.36	55	P	PKPdf	20 08 43.9	-1.5
	baz=282						
X51A	Calhoun	118.38	54	P	PKPdf	20 08 44.0	-1.4
	baz=283						
ACSO	Alum Creek Sta	118.39	47	*e*PKPdf	PKPdf	20 08 43.9	-1.3
ACSO	Alum Creek Sta	118.39	47	P	PKPdf	20 08 44.3	-0.9
	baz=287						
Z51A	Franklin	118.39	56	P	PKPdf	20 08 44.2	-1.2
	baz=282						
MATQ	Matagami	118.42	36	P	PKPdf	20 08 44.2	-0.8
	baz=296						
451A	Vernon	118.42	59	P	PKPdf	20 08 44.6	-0.9
	baz=280						
151A	Opelika	118.42	56	P	PKPdf	20 08 44.9	-0.7
	baz=281						
BWLO	Walkerton	118.44	43	P	PKPdf	20 08 44.2	-1.1
	baz=290						
CPCT	Cooper Cave	118.45	53	*e*PKPdf	PKPdf	20 08 43.9	-1.6
Q51A	Peebles	118.46	49	P	PKPdf	20 08 44.2	-1.2
	baz=286						
R51A	Hillsboro	118.47	50	P	PKPdf	20 08 44.6	-0.9
	baz=286						
D51A	Lot 18 Range I	118.49	39	P	PKPdf	20 08 44.2	-1.0
	baz=294						
V51A	Loudon	118.51	53	P	PKPdf	20 08 44.9	-0.7
	baz=284						
T51A	Gray	118.54	51	P	PKPdf	20 08 44.5	-1.2
	baz=285						
KLBO	Killbear Provi	118.61	41	P	PKPdf	20 08 44.7	-0.8
	baz=292						
E51A	G1948 Merrick	118.63	40	P	PKPdf	20 08 44.3	-1.3
	baz=293						
I51A	Listowel	118.63	43	P	PKPdf	20 08 44.5	-1.1
	baz=290						
U51A	La Follette	118.63	52	P	PKPdf	20 08 45.6	-0.3
	baz=284						
M51A	Elyria	118.63	46	P	PKPdf	20 08 45.0	-0.7
	baz=288						
ELFO	Elginfield	118.64	44	P	PKPdf	20 08 45.0	-0.6
	baz=290						
S51A	Beattyville	118.64	50	*e*PKPdf	PKPdf	20 08 44.9	-0.8
S51A	Beattyville	118.64	50	P	PKPdf	20 08 45.0	-0.8
	baz=285						
O51A	Pataskala	118.69	47	P	PKPdf	20 08 44.9	-1.0
	baz=287						
552A	Lynn Haven	118.89	59	P	PKPdf	20 08 45.8	-0.7
	baz=280						
152A	Waverly Hall	118.89	56	*e*PKPdf	PKPdf	20 08 45.3	-1.1
152A	Waverly Hall	118.89	56	P	PKPdf	20 08 45.6	-0.8
	baz=282						
TZTN	Tazewell	118.96	52	P	PKPdf	20 08 45.7	-0.7
	baz=285						
TKL	Tuckaleechee C	119.00	53	*e*PKPdf	PKPdf	20 08 45.6	-1.0
W52A	Murphy	119.01	53	*e*PKPdf	PKPdf	20 08 45.9	-0.7
W52A	Murphy	119.01	53	P	PKPdf	20 08 46.1	-0.6
	baz=284						
252A	Lumpkin	119.01	57	P	PKPdf	20 08 46.0	-0.7
	baz=281						
F52A	Sundridge	119.03	40	P	PKPdf	20 08 45.3	-1.0
	baz=293						
Z52A	Williamson	119.03	56	P	PKPdf	20 08 45.6	-1.1
	baz=282						
NB2	NORSAR Subarra	119.07	341	PKPdf	PKPdf	20 08 44.9	-1.1
	comp=Z,8.5nm,1.2s,baz=40,slow=1.7						
NB2	NORSAR Subarra	119.07	341	PKPdf	PKPdf	20 08 44.9	-1.1
	baz=40,slow=1.7						
NB200	NORSAR Array S	119.07	341	*e*PKPdf	PKPdf	20 08 44.9	-1.1
NB200				*e*pPKPdf	pPKPdf	20 09 01.2	-2.0
NOA	NORSAR Array B	119.07	341	PKP	PKPdf	20 08 44.9	-1.1
	comp=Z,1.3nm,0.8s,baz=42,slow=1.9,SNR=5.8						
NOA				pPKP	pPKPdf	20 09 01.2	-2.0
	comp=Z,1.6nm,0.7s,baz=44,slow=1.9,SNR=5.1						
V52A	Sevierville	119.09	52	*e*PKPdf	PKPdf	20 08 45.9	-0.9
V52A	Sevierville	119.09	52	P	PKPdf	20 08 46.1	-0.6
	baz=284						
LSQQ	Lebel-sur-Quev	119.11	36	P	PKPdf	20 08 45.9	-0.5
	baz=297						
D52A	ZEK Kipawa Sen	119.13	39	P	PKPdf	20 08 45.7	-0.8
	baz=294						
U52A	Thorn Hill	119.14	52	P	PKPdf	20 08 46.5	-0.3
	baz=285						
X52A	Dahlonega	119.15	54	P	PKPdf	20 08 46.5	-0.5
	baz=283						
N52A	McGinn's Farm,	119.15	47	P	PKPdf	20 08 46.3	-0.4
	baz=288						
M52A	Chesterland	119.16	46	P	PKPdf	20 08 46.4	-0.3
	baz=289						
R52A	Catlettsburg	119.18	49	P	PKPdf	20 08 46.4	-0.4
	baz=286						
Y52A	Lilburn	119.18	55	*e*PKPdf	PKPdf	20 08 46.1	-0.9
Y52A	Lilburn	119.18	55	P	PKPdf	20 08 46.5	-0.4
	baz=283						
P52A	Corning	119.19	48	P	PKPdf	20 08 46.1	-0.8
	baz=287						
J52A	Paris	119.20	44	P	PKPdf	20 08 45.8	-0.9
	baz=291						
T52A	Hallie	119.25	51	P	PKPdf	20 08 46.4	-0.6
	baz=285						
O52A	Adamsville	119.26	47	P	PKPdf	20 08 46.2	-0.7
	baz=288						
E52A	Mattawa	119.26	40	P	PKPdf	20 08 46.3	-0.5
	baz=294						
Q52A	Bidwell	119.28	49	P	PKPdf	20 08 46.1	-0.9
	baz=287						
ACTO	Acton	119.35	43	P	PKPdf	20 08 46.1	-0.9
	baz=291						
D53A	Lac Vacive, Po	119.53	39	P	PKPdf	20 08 46.3	-0.9
	baz=295						
Y53A	Monroe	119.57	55	P	PKPdf	20 08 46.6	-1.1
	baz=283						
353A	Camilla	119.57	58	P	PKPdf	20 08 46.8	-0.9
	baz=281						
W53A	Cullowhee	119.60	53	P	PKPdf	20 08 47.2	-0.7
	baz=284						
553A	Crawfordville	119.61	59	P	PKPdf	20 08 47.1	-0.7
	baz=281						
T53A	Wise	119.63	51	P	PKPdf	20 08 46.7	-1.1
	baz=286						
X53A	Estanollee	119.65	54	P	PKPdf	20 08 47.1	-0.8
	baz=284						
TYNO	Tyneside	119.67	44	P	PKPdf	20 08 46.8	-0.8
	baz=291						
O53A	New Philadelph	119.67	47	P	PKPdf	20 08 46.8	-1.0
	baz=288						
M53A	WI Miller and	119.67	46	P	PKPdf	20 08 46.8	-0.9
	baz=289						
Z53A	Monticello	119.71	55	P	PKPdf	20 08 46.9	-1.1
	baz=283						
G53A	Haliburton	119.74	41	P	PKPdf	20 08 46.9	-0.8
	baz=293						
V53A	Saluda	119.75	52	*e*PKPdf	PKPdf	20 08 47.4	-0.6
V53A	Saluda	119.75	52	P	PKPdf	20 08 47.5	-0.6
	baz=285						
U53A	Fall Branch	119.76	52	P	PKPdf	20 08 47.1	-1.0
	baz=285,SNR=6.3						
GOGA	Godfrey	119.76	55	*e*PKPdf	PKPdf	20 08 47.0	-1.0
GOGA	Godfrey	119.76	55	*e*PKIKP	PKPdf	20 08 47.1	-1.0
GOGA	Godfrey	119.76	55	P	PKPdf	20 08 47.1	-1.0
	baz=283						
N53A	Lisbon	119.77	46	P	PKPdf	20 08 46.8	-1.1
	baz=289,SNR=6.2						
P53A	Whipple	119.78	48	*e*PKPdf	PKPdf	20 08 47.1	-0.8
P53A	Whipple	119.78	48	P	PKPdf	20 08 47.2	-0.8
	baz=288						
ALGO	Algonquin Park	119.78	40	P	PKPdf	20 08 46.4	-1.4
	baz=294						
L53A	Girard	119.79	45	P	PKPdf	20 08 47.1	-0.8
	baz=290						
BG3	Lake Jocassee	119.83	53	*e*PKPdf	PKPdf	20 08 45.4	-2.8
E53A	Dumoine, Ponti	119.85	39	P	PKPdf	20 08 47.3	-0.6
	baz=295						
ERPA	Erie	119.93	45	P	PKPdf	20 08 47.5	-0.7
	baz=290						
TIGA	Tifton	120.08	57	P	PKPdf	20 08 47.9	-0.8
	baz=282						
E54A	Lac Daplat, Po	120.13	39	P	PKPdf	20 08 47.4	-1.0
	baz=295						
D54A	Lac Fusel, La	120.15	38	P	PKPdf	20 08 46.5	-2.0
	baz=296						
DRWO	Darlington Wes	120.15	42	P	PKPdf	20 08 47.1	-1.4
	baz=292						
DRCO	St. Marys Ceme	120.17	42	P	PKPdf	20 08 48.0	-0.5
	baz=292						
CHGQ	Chibougamau	120.21	35	P	PKPdf	20 08 47.4	-1.1
	baz=300						
254A	Abbeville	120.23	57	P	PKPdf	20 08 48.3	-0.7
	baz=282						
BANO	Bancroft	120.23	41	P	PKPdf	20 08 47.8	-0.9
	baz=294						
554A	Perry	120.27	59	P	PKPdf	20 08 48.2	-1.0
	baz=281						
Y54A	Tignall	120.29	54	P	PKPdf	20 08 48.1	-1.0
	baz=284,SNR=6.2						
O54A	Avella	120.30	47	P	PKPdf	20 08 47.8	-1.1
	baz=289,SNR=6.6						
Z54A	Sparta	120.31	55	P	PKPdf	20 08 48.4	-0.8
	baz=283						
N54A	Moraine State	120.32	46	*e*PKPdf	PKPdf	20 08 47.9	-1.1
N54A	Moraine State	120.32	46	P	PKPdf	20 08 48.3	-0.6
	baz=290						
BOSA	Boshof	120.33	232	PKP	PKPdf	20 08 49.5	0.0
	comp=Z,2.5nm,0.4s,baz=125,slow=0.9,SNR=16						
BOSA				pPKP	pPKPdf	20 09 05.9	-0.8
	comp=Z,5.1nm,0.6s,baz=126,slow=1.8,SNR=4.5						
Q54A	Coxs Mills	120.34	48	P	PKPdf	20 08 48.0	-1.0
	baz=288,SNR=6.3						
T54A	Tazewell	120.34	51	P	PKPdf	20 08 48.0	-1.2
	baz=286,SNR=5.3						
M54A	Oil Creek Stat	120.37	45	*e*PKPdf	PKPdf	20 08 48.1	-1.0
M54A	Oil Creek Stat	120.37	45	P	PKPdf	20 08 47.9	-1.1
	baz=290,SNR=5.5						
X54A	Belton	120.38	54	P	PKPdf	20 08 48.3	-1.0
	baz=284,SNR=5.3						
W54A	Cherokee Point	120.39	53	P	PKPdf	20 08 48.6	-0.7
	baz=285						
V54A	Nebo	120.41	52	P	PKPdf	20 08 48.7	-0.6
	baz=285						
PEMO	Pembroke	120.41	40	P	PKPdf	20 08 48.5	-0.5
	baz=295						
P54A	Burton	120.41	47	P	PKPdf	20 08 48.6	-0.6
	baz=289						
BIZ	Bicaz	120.45	322	⇓*i*P	PKiKP	20 08 49.2	+0.1
R54A	Victor	120.47	49	P	PKPdf	20 08 48.8	-0.5
	baz=287						
HODGE	Hodges	120.55	54	*e*PKPdf	PKPdf	20 08 48.7	-0.9
BURAR	Bucovina Array	120.69	323	⇓*i*P	PKiKP	20 08 50.0	+0.3
BUR04	Bucovina Ar. S	120.69	323	*e*PKPdf	PKPdf	20 08 49.5	-0.1
PAULI	Pauline	120.76	53	*e*PKPdf	PKPdf	20 08 49.1	-0.8
155A	Kite	120.76	56	P	PKPdf	20 08 49.6	-0.4
	baz=283,SNR=7.0						
PLVO	Plevna	120.78	41	P	PKPdf	20 08 49.3	-0.4
	baz=294						
555A	McAlpin	120.87	59	P	PKPdf	20 08 49.9	-0.4
	baz=281						
Q55A	Buckhannon	120.90	48	P	PKPdf	20 08 49.2	-1.0
	baz=289						
H55A	Tweed	120.91	41	P	PKPdf	20 08 49.1	-0.9
	baz=294						
P55A	Reedsville	120.92	47	P	PKPdf	20 08 49.5	-0.7
	baz=289						
G55A	Calabogie	120.92	40	P	PKPdf	20 08 49.2	-0.7
	baz=295						
Y55A	Saluda	120.94	54	P	PKPdf	20 08 49.5	-0.9
	baz=284,SNR=6.0						
S55A	Lewisburg	120.96	50	P	PKPdf	20 08 50.0	-0.3
	baz=288						
V55A	Taylorsville	120.96	52	P	PKPdf	20 08 49.7	-0.7
	baz=286						
L55A	Hinsdale	120.98	44	P	PKPdf	20 08 49.8	-0.4
	baz=292						
X55A	Gracelyn & Ava	120.99	54	P	PKPdf	20 08 49.7	-0.7
	baz=285,SNR=11						
M55A	Ridgway	121.01	45	P	PKPdf	20 08 49.6	-0.7
	baz=291						
KMSC	Kings Mountain	121.06	53	*e*PKPdf	PKPdf	20 08 49.7	-0.9
KMSC	Kings Mountain	121.06	53	P	PKPdf	20 08 49.8	-0.7
	baz=285,SNR=8.3						
O55A	Ligonier	121.07	46	P	PKPdf	20 08 49.9	-0.6
	baz=290						
R55A	Marlinton	121.09	49	P	PKPdf	20 08 49.6	-1.0
	baz=288,SNR=6.4						
N55A	Marion Center	121.10	46	P	PKPdf	20 08 49.9	-0.6
	baz=290						
BLA	Blacksburg	121.19	50	*e*PKPdf	PKPdf	20 08 49.5	-1.3
BLA	Blacksburg	121.19	50	*e*PKIKP	PKPdf	20 08 49.5	-1.3
BLA	Blacksburg	121.19	50	P	PKPdf	20 08 49.9	-0.9
	baz=287						
SCHQ	Schefferville	121.26	27	PKP	PKPdf	20 08 50.2	-0.1
	comp=Z,5.0nm,0.9s,baz=233,slow=3.5,SNR=6.3						
SCHQ				pPKP	pPKPdf	20 09 06.2	-1.3
	comp=Z,2.9nm,0.7s,baz=23,slow=6.0,SNR=1.8						
SCHQ				PKKPbc	PKKPab	20 18 51.8	-1.1
	comp=Z,3.7nm,0.6s,baz=192,slow=3.9,SNR=7.4						
JSC	Jenkinsville	121.34	54	*e*PKPdf	PKPdf	20 08 50.7	-0.4
JSC	Jenkinsville	121.34	54	*e*PKIKP	PKPdf	20 08 50.7	-0.4
556A	Lake Butler	121.37	59	P	PKPdf	20 08 50.7	-0.5
	baz=282						
X56A	White Oak	121.47	53	P	PKPdf	20 08 50.6	-0.7
	baz=285,SNR=6.7						
O56A	Blue Knob Stat	121.58	46	*e*PKPdf	PKPdf	20 08 50.1	-1.3
O56A	Blue Knob Stat	121.58	46	P	PKPdf	20 08 50.6	-0.8
	baz=290						
857A	Zephyrhills	121.85	61	P	PKPdf	20 08 51.7	-0.6
	baz=281						
657A	Interlachen	121.91	59	P	PKPdf	20 08 51.8	-0.6
	baz=282						
ALFO	Alfred	121.92	39	P	PKPdf	20 08 51.3	-0.5
	baz=297						
SSPA	Standing Stone	121.93	46	*e*PKPdf	PKPdf	20 08 51.6	-0.4
SSPA	Standing Stone	121.93	46	P	PKPdf	20 08 51.4	-0.7
	baz=291						
Z57A	Bowman	122.04	55	P	PKPdf	20 08 51.7	-0.7
	baz=285						
ARR	Arges	122.06	321	⇑*i*P	PKPdf	20 08 47.5	-4.7
DRGR		122.58	323	⇑*i*P	PKPdf	20 08 52.9	-0.3
758A	Lake Helen	122.61	60	P	PKPdf	20 08 53.0	-0.7
	baz=282						
BINY	Binghamton	122.66	43	P	PKPdf	20 08 52.8	-0.7
	baz=294						
R58B	Mineral	122.87	49	*e*PKPdf	PKPdf	20 08 52.9	-1.1
R58B	Mineral	122.87	49	P	PKPdf	20 08 53.3	-0.6
	baz=290						
LSZ	Lusaka	122.99	247	*e*PKPdf	PKPdf	20 08 54.5	-0.4
LSZ	Lusaka	122.99	247	*e*PKIKP	PKPdf	20 08 54.5	-0.4
SDMD	Soldier's Deli	123.12	47	*e*PKPdf	PKPdf	20 08 52.2	-2.1
GZR	Gura Zlata	123.21	321	⇑*i*P	PKPdf	20 08 52.1	-2.4
LANS	Liptovska Anna	123.22	327	*e*PKIKP	PKiKP	20 08 54.6	+0.1
LANS	Liptovska Anna	123.22	327	*e*PKP	PKiKP	20 08 54.6	+0.1
MVL	Millersville	123.26	46	*e*PKPdf	PKPdf	20 08 54.3	-0.3
N59A	State Game Lan	123.31	45	P	PKPdf	20 08 53.7	-1.1
	baz=293						
BZS	Buzias	123.82	322	⇑*i*P	PKPdf	20 08 54.1	-1.4
MORC	Moravsky Berou	123.89	328	*e*P	PKPdf	20 08 55.4	-0.2
MORC				*e*		20 09 11.4	
VYHS	Vyhne	123.93	326	*e*PKIKP	PKPdf	20 08 55.1	-0.6
VYHS	Vyhne	123.93	326	*e*PKP	PKPdf	20 08 55.1	-0.6
ODNJ	Ogdensburg	124.06	44	*e*PKPdf	PKPdf	20 08 55.0	-1.1
VTS	Vitosha	124.18	318	*e*PKPdf	PKPdf	20 08 55.9	-0.6
VTS	Vitosha	124.18	318	⇑*i*P	PKPdf	20 08 56.6	+0.1
VTS	Vitosha	124.18	318	*e*PKIKP	PKPdf	20 08 55.9	-0.6
JAVC	Velka Javorina	124.36	327	*e*P	PKiKP	20 08 57.6	+0.8
JAVC				*e*		20 09 13.6	
LBNH	Lisbon	124.43	39	P	PKPdf	20 08 56.3	-0.4
	baz=299						
PAL	Palisades	124.57	44	P	PKPdf	20 08 56.6	-0.4
	baz=295						
VRAC	Vranov	124.67	328	*e*P	PKiKP	20 08 57.3	-0.1
MODS	Modra-Piesok	124.85	327	*e*PKIKP	PKiKP	20 08 58.0	+0.2
MODS	Modra-Piesok	124.85	327	*e*PKP	PKiKP	20 08 58.0	+0.2
KRUC	Moravsky	124.92	328	*e*P	PKPdf	20 08 57.3	-0.2
KRUC				*e*		20 09 13.5	
BRG	Berggiesshubel	125.04	331	*e*PKP	PKPdf	20 08 57.4	-0.4
	comp=Z,11nm,1.1s						
BRG				pPKP	pPKPdf	20 09 13.3	-1.5
	comp=Z,6.2nm,1.0s						
BRG	Berggiesshubel	125.04	331	*e*PKIKP	PKPdf	20 08 57.3	-0.4
BRG						20 09 13.3	
BRG				pmax	pmax		
	comp=Z,11nm,1.1s						
CLL	Collm	125.20	332	*e*PKPdf	PKPdf	20 08 57.0	-1.0
	comp=Z,9.0nm,1.1s						
CLL				*e*sPKPdf	pPKPdf	20 09 13.0	-2.1
CLL				*e*PP	PP	20 10 53.0	+5.4
CLL				*e*PKSdf	PKSdf	20 12 35.0	+0.6
CLL				*e*PS	PS	20 20 48.0	-1.4
CLL				*e*PPS	PPS	20 22 12.0	
CLL				*e*SS	SS	20 27 36.0	-4.0
CLL				*e*SSSS		20 36 24.0	
CLL	Collm	125.20	332	*e*PKIKP	PKPdf	20 08 57.0	-1.0
CLL				*e*		20 09 13.0	
CLL				*e*		20 10 53.0	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CLL				MLR	MLR		

	comp=Z,300nm,21.5s						
HRV	Adam Dziewonsk	125.48	41	P	PKPdf	20 08 58.1	-0.7
	baz=298						
PKME	Peaks-Kenny Pk	125.54	37	P	PKPdf	20 08 58.7	-0.1
	baz=302						
DIVS	Divibare	125.57	321	*e*PKPdf	PKPdf	20 08 58.4	-0.7
CONA	Conrad Observa	125.88	327	PKiKP	PKPdf	20 08 59.3	-0.2
	comp=Z,5.2nm,1.1s						
FNA	Florina	126.25	317	*e*PKPdf	PKPdf	20 08 58.5	-1.8
FNA	Florina	126.25	317	*e*PKIKP	PKPdf	20 08 58.6	-1.8
KHC	Kasperske Hory	126.34	329	*e*PKPdf	PKPdf	20 08 59.7	-0.6
KHC	Kasperske Hory	126.34	329	*e*PKPDF	PKPdf	20 09 00.4	+0.1
KHC				*e*x	x	20 09 16.6	
KHC	Kasperske Hory	126.34	329	*e*PKIKP	PKPdf	20 09 00.4	+0.1
KHC				*e*		20 09 16.6	
OTAV	Otavalo	126.43	94	*e*PKPdf	PKPdf	20 09 01.9	-0.1
OTAV	Otavalo	126.43	94	*e*PKIKP	PKPdf	20 09 01.9	-0.1
GEC2	GERESS Array S	126.46	329	*e*PKPdf	PKPdf	20 08 59.4	-1.2
GEC2	GERESS Array S	126.46	329	*e*PKIKP	PKPdf	20 08 59.4	-1.2
GERES	GERESS Array B	126.46	329	PKP	PKPdf	20 09 00.1	-0.5
	comp=Z,3.4nm,0.9s,baz=50,slow=2.1,SNR=18						
GERES				pPKP	pPKPdf	20 09 16.6	-1.1
	comp=Z,3.3nm,0.7s,baz=48,slow=2.0,SNR=11						
GEA0	GERESS Array S	126.46	329	*e*PKPdf	PKPdf	20 08 59.4	-1.2
GO02	Mina Guanaco	126.59	128	*e*PKPdf	PKPdf	20 09 01.2	-0.6
ABTA	Abfaltersbach	128.41	328	*e*PKPdf	PKPdf	20 09 03.2	-1.1
	comp=Z,12nm,1.6s						
POPC	Popayan, Colom	128.47	92	*e*P	PKPdf	20 09 04.2	-1.5
POPC	Popayan, Colom	128.47	92	*e*P	PKPdf	20 09 04.2	-1.5
SOTA	Rioblanco	128.49	92	*e*P	PKiKP	20 09 08.3	+1.6
SOTA	Rioblanco	128.49	92	*e*P	PKiKP	20 09 08.3	+1.6
WATA	Walderalm	128.52	329	*e*PKiKP	PKPdf	20 09 04.3	-0.4
	comp=Z,6.7nm,0.9s						
WTTA	Wattenberg	128.53	329	*e*PKPdf	PKPdf	20 09 03.6	-1.2
	comp=Z,9.4nm,1.1s						
MOTA	Moosalm	128.75	329	*e*PKiKP	PKPdf	20 09 04.7	-0.5
	comp=Z,9.0nm,1.1s						
SQTA	Sankt Quirin	128.78	329	*e*PKiKP	PKPdf	20 09 05.2	0.0
	comp=Z,9.5nm,1.0s						
MEM	Membach	128.82	335	⇑PKiKP	PKPdf	20 09 04.2	-0.7
RETA	Reutte	128.83	329	PKiKP	PKPdf	20 09 05.2	+0.1
	comp=Z,8.1nm,1.3s						
YOTC	Yotoco, Valle	128.93	90	*e*P	PKPdf	20 09 05.5	-0.8
YOTC	Yotoco, Valle	128.93	90	*e*P	PKPdf	20 09 05.5	-0.8
FETA	Feichten	129.16	329	*e*PKiKP	PKPdf	20 09 05.9	0.0
	comp=Z,5.9nm,1.0s						
MARP	Paez Belalcaza	129.22	92	*e*P	PKiKP	20 09 08.3	+0.5
MARP	Paez Belalcaza	129.22	92	*e*P	PKiKP	20 09 08.3	+0.5
MNMC	Minye Minye	129.39	121	*e*PKPdf	PKPdf	20 09 06.0	-1.3
DAVA	Damuels	129.41	330	PKiKP	PKPdf	20 09 06.6	+0.2
	comp=Z,9.0nm,1.4s						
WLF	Walferdange	129.47	334	⇑PKiKP	PKiKP	20 09 06.7	-0.2
UREC	San Jos de Ur	129.96	85	*e*P	PKPdf	20 09 05.5	-2.6
UREC	San Jos de Ur	129.96	85	*e*P	PKPdf	20 09 05.5	-2.6
RREF	El Recreo	130.00	89	*e*P	PKiKP	20 09 12.4	+2.6
RREF	El Recreo	130.00	89	*e*P	PKiKP	20 09 12.4	+2.6
PTLC	Puerto Leguiza	130.04	95	*e*P	PKPdf	20 09 08.3	-0.1
PTLC	Puerto Leguiza	130.04	95	*e*P	PKPdf	20 09 08.3	-0.1
NORC	Norcasia	130.52	88	*e*P	PKPdf	20 09 06.9	-2.4
NORC	Norcasia	130.52	88	*e*P	PKPdf	20 09 06.9	-2.4
ZARC	Zaragoza, Cauc	130.62	86	*e*P	PKPdf	20 09 08.3	-1.1
ZARC	Zaragoza, Cauc	130.62	86	*e*P	PKPdf	20 09 08.3	-1.1
PTBC	PUERTO BERRIO,	130.98	87	*e*P	PKPdf	20 09 08.3	-1.8
PTBC	PUERTO BERRIO,	130.98	87	*e*P	PKPdf	20 09 08.3	-1.8
ROSC	El Rosal	131.01	89	*e*PKPdf	PKPdf	20 09 09.2	-1.4
CHIC	Chingaza	131.58	89	*e*P	PKPdf	20 09 08.3	-3.5
CHIC	Chingaza	131.58	89	*e*P	PKPdf	20 09 08.3	-3.5
LPAZ	La Paz	131.85	118	*e*PKPdf	PKPdf	20 09 11.6	-0.8
LPAZ	La Paz	131.85	118	PKP	PKPdf	20 09 12.2	-0.2
	comp=Z,4.6nm,0.9s,baz=340,slow=1.8,SNR=14						
RUSC	La Rusia	132.31	88	*e*P	PKPdf	20 09 12.4	-0.8
RUSC	La Rusia	132.31	88	*e*P	PKPdf	20 09 12.4	-0.8
SDV	Santo Domingo	134.83	84	*e*PKPdf	PKPdf	20 09 16.4	-1.2
SDV	Santo Domingo	134.83	84	*e*P	PKPdf	20 09 16.6	-0.9
SDV	Santo Domingo	134.83	84	*e*P	PKPdf	20 09 16.6	-0.9
CPUP	Villa Florida	134.92	137	*e*PKPdf	PKPdf	20 09 16.3	-0.9
CPUP	Villa Florida	134.92	137	PKP	PKiKP	20 09 18.4	-0.3
	comp=Z,3.8nm,0.9s,baz=184,slow=0.7,SNR=6.1						
OBIP	Obispado Ponce	137.91	70	*e*PKPdf	PKPdf	20 09 20.9	-2.0
SJG	San Juan	138.33	70	*e*PKPdf	PKPdf	20 09 22.4	-1.3
SJG	San Juan	138.33	70	*e*PKIKP	PKPdf	20 09 22.4	-1.3
CBYP	Canovanas	138.57	70	*e*PKPdf	PKPdf	20 09 21.8	-2.4
HUMP	Col San Antoni	138.60	70	*e*PKPdf	PKPdf	20 09 23.3	-0.9
STVI	Saint Thomas	139.39	69	*e*PKPdf	PKPdf	20 09 24.1	-1.5
CDVI	St. Croix	139.69	70	*e*PKPdf	PKPdf	20 09 24.2	-1.9
PTGA	Pitinga	144.50	100	*e*PKPdf	PKPab	20 09 31.8	-1.6
TAM	Tamanrasset	146.26	302	*e*PKPdf	PKPdf	20 09 37.0	-0.9
TAM	Tamanrasset	146.26	302	*e*PKIKP	PKPdf	20 09 37.0	-0.9
BDFB	Brasilia	148.50	134	PKP	PKPdf	20 09 41.4	-0.3
	comp=Z,6.1nm,0.5s,baz=150,slow=3.1,SNR=7.9						
BDFB				PKPbc	PKPbc	20 09 44.8	-0.5
	comp=Z,16nm,0.7s,baz=177,slow=1.1,SNR=8.7						
TOA0	Torodi Ar. Sit	152.75	286	*e*PKPdf	PKPdf	20 09 46.6	-1.6
TORD	Torodi Ar. Bea	152.75	286	PKP	PKPdf	20 09 46.8	-1.4
	comp=Z,4.0nm,1.0s,baz=150,slow=1.6,SNR=16						
TORD				PKPbc	PKPbc	20 09 54.2	-1.1
	comp=Z,5.6nm,0.4s,baz=81,slow=1.9,SNR=102						
TORD				PKPab	pPKPdf	20 10 05.7	+0.3
	comp=Z,14nm,0.9s,baz=48,slow=2.8,SNR=8.8						
TOA1	Torodi Ar. Sit	152.75	286	*e*PKPdf	PKPdf	20 09 46.8	-1.4
TOA1				*e*PKPbc	PKPbc	20 09 54.2	-1.1
TOA1				*e*PKPab	pPKPdf	20 10 05.7	+0.3
KIC	Kosan Boka	159.76	271	*e*PKP1	PKPab	20 10 36.1	-0.4
	comp=Z,185nm,1.2s						
DBIC	Dimbokro	159.88	272	*e*PKPab	PKPab	20 10 37.2	+0.2
DBIC	Dimbokro	159.88	272	PKPab	PKPab	20 10 36.4	-0.5
	comp=Z,27nm,1.0s,baz=102,slow=5.5,SNR=4.0						
TIC	Toumodi	160.04	272	*e*PKP1	PKPab	20 10 37.0	-0.7
LIC	Lamto	160.04	271	*e*PKP1	PKPab	20 10 37.2	-0.5
	comp=Z,134nm,1.1s						

TAP 21 19:57:26.1,24°.16N×121°.67E,h14km±1km,ML1.6,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.07	285	P	Pg	19 57 29.8	+0.9
	baz=284						
NACB				S	Sg	19 57 31.6	+0.9
	baz=284						
TWD	Chiawan	0.10	221	P	Pb	19 57 29.8	-0.1
	baz=218						
TWD				S	Sg	19 57 31.5	+0.3
	baz=218						
ENA	Nanau	0.28	14	*e*S	Sb	19 57 37.3	-0.2
	baz=15						
NANB	Nanao	0.28	15	*e*P	Pb	19 57 33.3	+0.3
	baz=15						
NANB				*e*S	Sb	19 57 37.2	-0.3
	baz=15						
WHF	Hehuan Shan	0.37	268	*e*P	Pb	19 57 34.6	-0.1
	baz=268						
ESL	Shilin	0.40	212	*e*P	Pb	19 57 34.8	-0.2
	baz=211						
CHGB	Renai	0.46	258	*e*P	Pb	19 57 36.6	+0.5
	baz=258						
OWD	Renai	0.49	246	*e*P	Pb	19 57 37.0	+0.3
	baz=246						
OWD				*e*S	Sb	19 57 44.0	+0.2
	baz=246						
VWDT	VWDT	0.63	230	*e*S	Sb	19 57 47.7	+0.2
	baz=230						
SSLB	Suanglung	0.75	241	*e*S	Sb	19 57 52.0	+0.9
	baz=240						

TAP 21 19:57:29.9,24°.33N×121°.45E,h5km±1km,ML1.3,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.12	328	P	Pg	19 57 32.3	-0.1
	baz=327						
NNSB				S	Sg	19 57 34.1	0.0
	baz=327						
ETLH	Xiulin Townshi	0.12	167	*e*S	Sg	19 57 34.3	+0.1
	baz=286						
ETLH	Xiulin Townshi	0.12	167	*e*P	Pg	19 57 32.4	-0.1
	baz=167						
ETLH				*e*S	Sg	19 57 34.3	+0.1
	baz=167						
NNS	Nan Shan	0.13	327	P	Pg	19 57 32.6	-0.1
	baz=329						
NNS				*e*S	Sg	19 57 34.5	0.0
	baz=329						
TDCB	Techi	0.28	255	*e*P	Pg	19 57 35.4	0.0
	baz=254						
TDCB				*e*S	Sg	19 57 39.2	+0.1
	baz=254						
NDT	Datong Townshi	0.28	11	*e*P	Pg	19 57 35.3	0.0
	baz=11						
NDT				*e*S	Sg	19 57 39.1	+0.1
	baz=11						
YHNB	Yeheng	0.35	348	*e*P	Pg	19 57 36.9	+0.1
	baz=348						
YHNB				*e*S	Sg	19 57 41.2	-0.1
	baz=348						
NSK	Sanguang	0.36	346	*e*S	Sg	19 57 41.9	+0.3
	baz=347						

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*DDA **21** 19:58:15.3,38°.88N×44°.52E,h5km±2km,ML2.6*
*ISK **21** 19:58:15.7,38°.90N×44°.51E,h3km,ML2.4/7*
*ISCJB **21** 19:58:16.3±0.8,38°.94N±0°.04×44°.57E±0°.07,h5km,Error ellipse: s-maj=7.4km s-min=6.2km az=10.3*

ISC 21 19:58:16.1±1.3,38°.90N±0°.04×44°.50E±0°.06,h5km,n20, σ0ˢ.90/24,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	Caldiran	0.52	298	PG	Pg	19 58 26.5	+0.4
CLDR				SG	Sb	19 58 34.6	-1.1
CLDR	Caldiran	0.52	298	*i* P	Pb	19 58 26.9	-0.9
CLDR				*i* S	Sb	19 58 34.1	-1.5
CLDR				IAML_P			
	comp=Z,6μm,0.2s						
VMUR	Van-Muradiye	0.73	277	*i* P	Pg	19 58 29.2	-0.9
VMUR				*i* S	Sb	19 58 43.0	+1.2
VMUR				IAML_P			
	comp=Z,179nm,0.2s						
DYDN	Diyadin	0.90	316	*i* P	Pn	19 58 34.9	-0.8
TVAN	Van	0.93	247	*i* P	Pb	19 58 34.5	-0.4
TVAN				IAML_P			
	comp=Z,727nm,0.4s						
IGDI	IGDIR	1.02	341	*i* P	Pg	19 58 35.4	-0.3
IGDI				IAML_P			
	comp=Z,278nm,0.2s						
TASB	TASBURUN-IGDIR	1.10	350	PN	Pn	19 58 37.7	-0.6
GNI	Garni	1.26	8	PN	Pn	19 58 40.4	-0.2
GEVA	Gevas	1.27	243	*i* P	Pn	19 58 40.4	-0.3
GEVA				*i* S	Sn	19 59 00.3	+2.1
GEVA				IAML_P			
	comp=Z,551nm,0.2s						
AKDM	Akdamar-Van	1.32	245	PN	Pb	19 58 41.8	+0.3
YOVA	Hakkari_Yksek	1.32	187	*i* P	Pb	19 58 41.6	+0.1
YOVA				IAML_P			
	comp=Z,674nm,0.2s						
AGRB	Hanur-Agry	1.35	300	PN	Pg	19 58 42.4	+0.4
ADCV	BITLIS_Adilcev	1.39	267	*i* P	Pn	19 58 42.1	-0.2
ADCV				IAML_P			
	comp=Z,518nm,0.4s						
TUTA	Tutak	1.40	291	*i* P	Pg	19 58 43.8	+0.7
MLAZ	Malazgirt-MUS	1.54	280	PN	Pb	19 58 44.9	-0.3
DIGO	Kars	1.75	330	*i* P	Pg	19 58 51.0	+1.4
DIGO				IAML_P			
	comp=Z,537nm,0.4s						
CUKT	Cukurca	1.79	203	PN	Pb	19 58 48.6	-0.9
EAK	Akyaka	1.91	339	*i* P	Pg	19 58 53.5	+0.7
EAK				IAML_P			
	comp=Z,505nm,0.4s						
SIRN	Sırnak	2.16	230	*i* P	Pg	19 58 57.1	-0.4
SIRN				IAML_P			
	comp=Z,371nm,0.5s						
SRTM	Siirt_Merkez	2.22	247	*i* P	Pb	19 58 57.1	+0.4
SRTM				IAML_P			
	comp=Z,262nm,0.4s						

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*NIED **21** 19:59:00,30°.10N×131°.30E,h20km,Mw4.5 Best double couple: $M_0$7.06000×10^{15} NP1:ϕ_s195.00000°,δ33.00000°, λ83.00000°. NP2:ϕ_s24.00000°,δ57.00000°,λ95.00000°.*
*JMA **21** 19:59:43.6±0.1,30°.07N×131°.31E,h27km±1km,M4.3*
JMA Felt II J1.
*MOS **21** 19:59:44.0±0.9,30°.14N×131°.07E,h37km,mb4.7/35,Error ellipse: s-maj=10.9km s-min=6.2km az=107.3*
*BJI **21** 19:59:45.4,29°.96N×131°.10E,h55km,mB4.7/32,mb4.4/50, Ms4.4/34,Ms7 4.2/32*
*ISCJB **21** 19:59:45.1±0.4,30°.13N±0°.02×131°.15E±0°.04,h45km±3km, mb4.5/63,MS4.3/10,Error ellipse: s-maj=5.9km s-min=3.1km az=22.2*
*IDC **21** 19:59:46.5±2.9,30°.17N×131°.01E,h37km±25km,mb4.0/21, mb1 4.1/25,mb1mx4.0/48,mbtmp4.1/25,ML3.3/4,MS4.2/5, Ms1 4.2/5,ms1mx3.5/32,Error ellipse: s-maj=16.5km s-min=11.7km az=89.0*
*NEIC **21** 19:59:46.3±0.5,30°.18N×130°.99E,h35km±5km,mb4.8/26, Error ellipse: s-maj=4.7km s-min=4.3km az=75.0*
NEIC Recorded [2 JMA] on Tanega-shima.

ISC 21 19:59:46.0±0.4,30°.11N±0°.03×131°.15E±0°.05,h39km±2km, n173,σ1ˢ.30/191,mb4.6/71,MS4.3/10,7C-5D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	Minamitane	0.36	324	⇓P	Pn	19 59 53.3	-1.5
JMTN				S	Sn	20 00 00.1	-1.2
JTN	Tanegashima 3	0.56	345	⇓P	Pn	19 59 56.4	-1.3
JTN				S	Sn	20 00 05.1	-0.7
JYAK	Yakushimahirau	0.57	283	⇓P	Pn	19 59 57.2	-0.5
JYAK				S	Sn	20 00 07.2	+1.3
JKC	Kuchinoerabu	0.90	294	⇑P	Pn	20 00 02.7	+0.6
JKC				S	Sn	20 00 16.5	+2.6
JTSR	Tashiro 2	1.07	350	⇑P	Pn	20 00 04.0	-0.6
JTSR				S	Sn	20 00 19.6	+1.3
JNN	Nakanoshima	1.14	257	P	Pn	20 00 05.9	+0.5
JNN				*e*S	Sn	20 00 22.8	+3.1
JNAR	Kushima--Naru	1.42	4	P	Pn	20 00 08.8	-0.5
JNAR				S	Sn	20 00 26.8	+0.1
JSU	Suzuyama	1.52	337	⇑P	Pn	20 00 10.5	-0.2
JSU				S	Sn	20 00 30.5	+1.3
JTAJ	Takarajima	1.94	241	P	Pn	20 00 17.6	+1.2
JTAJ				*e*S	Sn	20 00 42.9	+3.3
JZK	Kikaishima	2.06	210	P	Pn	20 00 18.8	+0.7
JZK				*e*S	Sn	20 00 43.6	+1.1
JAM	Amami Oshima	2.16	219	P	Pn	20 00 19.8	+0.3
JAM				S	Sn	20 00 46.1	+1.1
JAMN	Amaminishikomi	2.53	223	P	Pn	20 00 24.8	+0.2
JAMN				S	Sn	20 00 55.7	+1.5
JTK	Tokunoshima	3.01	220	P	Pn	20 00 31.5	+0.3
JTK				S	Sn	20 01 07.2	+1.2
JNU	Nakatsue	3.01	356	*e*Pn	Pn	20 00 30.6	-0.7
JNU	Nakatsue	3.01	356	Pn	Pn	20 00 31.2	-0.1
	7.5nm,0.3s,baz=13,slow=2.4,SNR=96						
JOKE	Okinoerabujima	3.55	220	P	Pn	20 00 38.6	0.0
JOKE				S	Sn	20 01 20.4	+1.1
JYRO	Yoronjima	3.88	218	P	Pn	20 00 42.7	-0.4
JYRO				S	Sn	20 01 26.4	-1.0
JOW	Kunigami	4.13	218	*e*Pn	Pn	20 00 46.5	-0.1
JOW				*e*Sn	Sn	20 01 32.1	-1.5
JOW	Kunigami	4.13	218	P	Pn	20 00 46.1	-0.4
JOW				S	Sn	20 01 32.3	-1.3
JOW	Kunigami	4.13	218	Pn	Pn	20 00 47.3	+0.7
	1.3nm,0.3s,baz=100,slow=17,SNR=22						
JOW				Sn	Sn	20 01 32.3	-1.3
	15nm,0.3s,baz=111,slow=15,SNR=18						
JMZ	Minamidaito 2	4.27	179	S	Sn	20 01 32.3	-4.8
JNTH	Nagotoyohara	4.51	218	S	Sn	20 01 41.2	-1.8
JKE	Kume jima 2	5.38	227	P	Pn	20 01 03.4	-0.4
INU	Inuyama	7.20	42	*e*Pn	Pn	20 01 28.6	-0.1
KS15	Wonju Array Si	7.80	341	*e*Pn	Pn	20 01 34.9	-2.0
KSAR	Wonju Array Be	7.80	341	Pn	Pn	20 01 38.4	+1.5
KSAR	Wonju Array Be	7.80	341	P	Pn	20 01 38.4	+1.5
KSRS	Korea Array	7.80	341	Pn	Pn	20 01 38.4	+1.5
	0.4nm,0.3s,baz=164,slow=15,SNR=6.8						
MAJO	Matsushiro	8.72	41	*e*Pn	Pn	20 01 49.8	+0.2
MAJO	Matsushiro	8.72	41	*e*P	Pn	20 01 49.8	+0.2
MAT	Matsushiro	8.72	41	P	Pn	20 01 49.5	-0.1
MJAR	Matsushiro Arr	8.72	41	Pn	Pn	20 01 49.8	+0.2
	0.2nm,0.3s,baz=235,slow=15,SNR=11						
NJ2	Nanjing	10.72	284	*e*P	Pn	20 02 16.3	-0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=N,720nm,11.9s						
NJ2				LR	LR		
	comp=E,860nm,15.2s						
NJ2				LR	LR		
	comp=Z,1μm,12.5s						
USRK	Ussuriysk Ar.	14.08	2	LR	LR	20 08 55.2	
	comp=Z,252nm,18.6s,baz=190,slow=39						
CN2	Changchun	14.40	343	*e*P	P	20 03 14.5	+1.1
CN2				*e*pP	Pn	20 03 23.6	+16
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,980nm,16.0s						
CN2				LR	LR		
	comp=E,430nm,16.0s						
CN2				LR	LR		
	comp=Z,1μm,15.0s						
TEY	Ternei	15.51	15	⇓*e*P	P	20 03 33.3	+7.6
TEY				pmax	pmax		
	comp=Z,20nm,1.4s						
BJI	Beijing	15.74	313	P	P	20 03 30.0	+1.7
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
BJI				LR	LR		
	comp=Z,520nm,17.5s						
BJI				LR	LR		
	comp=Z,870nm,13.7s						
YSS	Yuzh-Sakhalins	19.08	25	*e*P	Pn	20 04 09.8	+3.6
KLR	Kul'dur	19.11	1	*i* P	Pn	20 04 07.0	+0.5
KLR	Kul'dur	19.11	1	P	Pn	20 04 05.3	-1.1
	comp=Z,0.6nm,0.3s,baz=182,slow=9.5,SNR=8.4						
HHC	Hu-ho-hao-te	19.17	309	*e*P	P	20 04 05.4	-0.9
HHC				S	Sn	20 07 29.1	-12
HHC				SS	SnSn	20 07 58.0	+2.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,8.0s						
HHC				LR	LR		
	comp=Z,710nm,13.0s						
HHC				LR	LR		
	comp=Z,570nm,11.2s						
HHC				LR	LR		
	comp=Z,790nm,12.1s						
XAN	Xi'an	19.23	288	P	Pn	20 04 07.0	-1.2
XAN				pP	sP	20 04 18.5	-3.0
XAN				sP	pP	20 04 27.0	+10
XAN				S	Sn	20 07 28.3	-14
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				LR	LR		
	comp=Z,710nm,13.6s						
XAN				LR	LR		
	comp=Z,570nm,12.2s						
XAN				LR	LR		
	comp=Z,480nm,12.7s						
CD2	Chengdu	23.59	279	P	P	20 04 52.9	-0.5
CD2				S	S	20 09 01.5	-3.6
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				pmax	pmax		
	comp=Z,380nm,5.1s						
CD2				LR	LR		
	comp=Z,1μm,17.7s						
CD2				LR	LR		
	comp=Z,1μm,11.6s						
CD2				LR	LR		
	comp=Z,2μm,13.5s						
LZH	Lanzhou	23.59	292	*e*P	P	20 04 55.0	+1.5
LZH				pP	sP	20 05 05.9	-3.0
LZH				sP	pP	20 05 11.9	+8.0
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
ZEA	Zeya	23.78	354	*e*P	P	20 04 52.8	-2.1
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
NKL	Nikolayevsk	24.06	14	*e*P	P	20 04 57.0	-0.4
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
KMI	Kunming	25.62	266	P	P	20 05 12.6	+0.4
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				LR	LR		
	comp=Z,470nm,14.2s						
KMI				LR	LR		
	comp=Z,310nm,15.1s						
KMI				LR	LR		
	comp=Z,400nm,14.5s						
ULN	Ulaanbaatar	25.62	321	*e*P	P	20 05 11.1	-0.8
	comp=Z,6.4nm,1.0s						
ULN	Ulaanbaatar	25.62	321	*e*P	P	20 05 11.1	-0.8
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONA0	Songino Array	25.97	320	*e*P	P	20 05 14.5	-0.6
SONM	Songino Array	25.97	320	P	P	20 05 14.5	-0.6
	comp=Z,3.9nm,0.7s,baz=140,slow=11,SNR=19						
SONA1	Songino Array	25.97	320	*e*P	P	20 05 13.9	-1.1
GTA	Gaotai	27.25	298	*e*P	P	20 05 28.1	+1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,99nm,5.6s						
GTA				LR	LR		
	comp=Z,220nm,14.9s						
GTA				LR	LR		
	comp=Z,470nm,15.6s						
GTA				LR	LR		
	comp=Z,560nm,16.5s						
CHTO	Chiang Mai	31.29	256	*e*P	P	20 06 02.1	-0.5
	comp=Z,4.7nm,0.6s						
CHTO	Chiang Mai	31.29	256	*e*P	P	20 06 02.1	-0.5
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	Chiang Mai Arr	31.45	256	*i* P	P	20 06 04.0	0.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	31.45	256	P	P	20 06 03.9	-0.2
	comp=Z,1.2nm,0.5s,baz=51,slow=8.4,SNR=10						
MA2	Magadan	32.33	19	*i* P	P	20 06 11.3	+0.1
MA2				pmax	pmax		
	comp=Z,12nm,1.5s						
MA2	Magadan	32.33	19	LR	LR	20 19 57.3	
	comp=Z,108nm,20.5s,baz=233,slow=38						
H11N2	WAKE ISLAND Hy	33.90	99	T	T	20 42 30.7	
	baz=296,slow=74,SNR=68						
H11N1	WAKE ISLAND Hy	33.91	99	T	T	20 42 34.6	
	baz=296,slow=74,SNR=36						
H11N3	WAKE ISLAND Hy	33.92	99	T	T	20 42 35.4	
	baz=296,slow=74,SNR=46						
PATS	Pohnpei	34.46	127	*e*P	P	20 06 33.1	+2.9
	comp=Z,301nm,0.8s						
SEY	Seymchan	35.58	17	P	P	20 06 40.0	+0.6
SEY				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SEY	Seymchan	35.58	17	P	P	20 06 40.0	+0.6
	comp=Z,1.0nm,0.5s,baz=183,slow=3.7,SNR=4.3						
WMQ	Urumqi	36.90	304	*e*P	P	20 06 51.8	+0.8
WMQ				LR	LR		
	comp=Z,450nm,22.3s						
WMQ				LR	LR		
	comp=Z,340nm,23.9s						
WMQ				LR	LR		
	comp=Z,570nm,17.5s						
GUN	Gumba	39.45	278	*e*P	P	20 07 13.1	0.0
	comp=Z,39nm,0.5s						
PKI	Pulchoki	39.94	278	*e*P	P	20 07 16.6	-0.5
	comp=Z,11nm,0.5s						
PKIN	Phulchoki	39.95	278	*e*P	P	20 07 16.6	-0.5
	comp=Z,10.0nm,0.4s						
KKN	Kakani	40.00	278	*e*P	P	20 07 17.0	-0.4
	comp=Z,19nm,0.6s						
DMN	Daman	40.19	278	*e*P	P	20 07 18.6	-0.5
	comp=Z,11nm,0.6s						
ZAA0	Zalesovo Array	40.86	319	*e*P	P	20 07 22.7	-1.3
	comp=Z,3.2nm,0.7s						
ZALV	Zalesovo Beam	40.86	319	*e*P	P	20 07 23.4	-0.6
ZALV	Zalesovo Beam	40.86	319	P	P	20 07 23.2	-0.8
	comp=Z,1.6nm,0.4s,baz=113,slow=8.6,SNR=6.2						
ZAA1	Zalesovo Array	40.86	319	*e*P	P	20 07 23.2	-0.8
MK31	Makanchi Array	41.03	308	*e*P	P	20 07 25.1	-0.3
	comp=Z,2.3nm,0.8s						
MK31	Makanchi Array	41.03	308	*e*P	P	20 07 25.2	-0.3
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	Makanchi Array	41.03	308	*e*P	P	20 07 25.2	-0.2
MKAR	Makanchi Array	41.03	308	*e*P	P	20 07 25.3	-0.2
	comp=Z,16nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	41.03	308	*i* P	**P**	**20 07 25.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	41.03	308	P	**P**	**20 07 25.2**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=87,slow=10,SNR=19						
DANN	**Dangsing**	41.16	280	*e*P	**P**	**20 07 27.0**	**-0.1**
	comp=Z,31nm,0.5s						
KOLN	**Koldanda**	41.44	279	*e*P	**P**	**20 07 29.0**	**-0.3**
	comp=Z,16nm,0.7s						
PYUN	**Piuthan**	41.88	280	*e*P	**P**	**20 07 32.6**	**-0.3**
	comp=Z,20nm,0.6s						
BILL	**Bilibino**	43.20	18⇑	*e*P	**P**	**20 07 43.6**	**+0.8**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PRZ	**Przheval'sk**	43.62	301	*e*P	**P**	**20 07 45.8**	**-1.1**
	comp=Z,13nm,1.0s						
PRZ	**Przheval'sk**	43.62	301	*e*P	**P**	**20 07 45.8**	**-1.1**
PRZ				pmax	pmax		
	comp=Z,13nm,1.0s						
KURK	**Kurchatov**	43.91	313	*ce*P	**P**	**20 07 47.7**	**-1.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
TARG	**Taragay, Kyrgy**	44.09	300	*e*P	**P**	**20 07 50.5**	**-0.4**
	comp=Z,11nm,0.8s						
KDJ	**Kajisay**	44.54	301	*e*P	**P**	**20 07 52.4**	**-1.8**
	comp=Z,7.3nm,1.0s						
KDJ	**Kajisay**	44.54	301	*e*P	**P**	**20 07 52.4**	**-1.8**
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NRN	**Naryn**	45.46	300	*e*P	**P**	**20 08 00.2**	**-1.4**
	comp=Z,12nm,1.1s						
NRN	**Naryn**	45.46	300	*e*P	**P**	**20 08 00.3**	**-1.4**
NRN				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH	**Kashi**	45.64	297	P	P	20 08 07.0	+4.1
KSH				pP	sP	20 08 21.9	+3.1
KSH				PP	**PP**	**20 09 52.3**	**+2.2**
KSH				S	**S**	**20 14 42.8**	**-0.4**
KSH				sS	sS	20 15 07.8	+8.5
KSH				SS	**ScS**	**20 17 58.4**	**+2.2**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,180nm,5.3s						
KSH				LR	LR		
	comp=Z,190nm,4.9s						
KSH				LR	LR		
	comp=Z,170nm,5.2s						
KSH				LR	LR		
	comp=Z,380nm,7.3s						
TKM2	**Tokmak 2**	45.67	302	P	**P**	**20 08 04.2**	**+1.0**
	SNR=14						
KBK	**Karagaybulak**	46.16	302	P	**P**	**20 08 08.0**	**+0.9**
	SNR=7.7						
CHMS	**Chumysh**	46.29	302	P	**P**	**20 08 08.3**	**+0.4**
	SNR=6.5						
USP	**Ospenovka**	46.46	303	P	**P**	**20 08 09.4**	**+0.2**
	SNR=5.3						
AAK	**Ala-Archa**	46.50	302	*e*P	**P**	**20 08 09.4**	**-0.3**
AAK	**Ala-Archa**	46.50	302	*ce*P	**P**	**20 08 10.1**	**+0.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
UCH	**Uchtor**	46.51	301	P	**P**	**20 08 10.9**	**+0.8**
	SNR=15						
AML	**Almayashu**	47.13	301	P	**P**	**20 08 16.0**	**+1.1**
	SNR=6.0						
BRVK	**Borovoye**	49.26	316	*e*P	**P**	**20 08 30.4**	**-0.2**
	comp=Z,18nm,1.1s						
BRVK	**Borovoye**	49.26	316	*e*P	**P**	**20 08 30.5**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,18nm,1.1s						
KK31	**Karatay Array**	49.38	303	*e*P	**P**	**20 08 31.8**	**0.0**
	comp=Z,19nm,1.4s						
KK31	**Karatay Array**	49.38	303	*e*P	**P**	**20 08 31.8**	**0.0**
KK31				pmax	pmax		
	comp=Z,19nm,1.4s						
KKAR	**Karatay Array**	49.38	303	*e*P	**P**	**20 08 31.8**	**0.0**
	comp=Z,19nm,1.4s						
KKAR	**Karatay Array**	49.38	303	*e*P	**P**	**20 08 31.8**	**0.0**
KKAR				pmax	pmax		
	comp=Z,19nm,1.4s						
WR1	**Warramunga Arr**	49.85	176	*e*P	**P**	**20 08 36.3**	**+0.9**
	comp=Z,6.9nm,1.1s						
WRA	**Warramunga Arr**	49.85	176	P	**P**	**20 08 36.3**	**+0.9**
	comp=Z,2.0nm,0.9s,baz=356,slow=8.5,SNR=12						
CHGR	**Chuyangaron**	51.01	297	*e*P	**P**	**20 08 43.6**	**-0.7**
	comp=Z,63nm,1.1s						
CTA	**Charters Tower**	51.98	162	P	**P**	**20 08 53.0**	**+1.5**
CTA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CTA	**Charters Tower**	51.98	162	P	**P**	**20 08 53.0**	**+1.5**
	comp=Z,1.6nm,0.4s,baz=82,slow=4.2,SNR=4.0						
AS31	**Alice Springs**	53.53	177	*e*P	**P**	**20 09 04.9**	**+2.0**
	comp=Z,1.6nm,1.3s						
AS01	**Alice Springs**	53.53	177	*e*P	**P**	**20 09 03.9**	**+1.0**
ASAR	**Alice Springs**	53.53	177	P	**P**	**20 09 03.9**	**+1.0**
	comp=Z,1.9nm,0.9s,baz=11,slow=13,SNR=20						
ABKAR	**Akbulak array**	55.95	312	*e*P	**P**	**20 09 19.7**	**-0.5**
ARU	**Arti**	56.01	320	*e*P	**P**	**20 09 19.3**	**-1.2**
	comp=Z,15nm,1.2s						
ARU	**Arti**	56.01	320	*d i*P	**P**	**20 09 19.9**	**-0.6**
ARU				*PP	**pP**	**20 09 30.2**	**-1.5**
ARU						20 10 15.5	
ARU						20 11 24.5	
ARU				S	**S**	**20 17 04.3**	**-1.6**
ARU				SS	**SS**	**20 20 48.5**	**-3.4**
ARU				pmax	pmax		
	comp=Z,16nm,1.3s						
ARU				MLR	MLR		
	comp=Z,409nm,17.0s						
AKTO	**Aktyubinsk**	57.01	313	LR	LR	20 36 26.7	
	comp=Z,190nm,18.2s,baz=77,slow=39						
MDM	**Murphy Dome**	59.22	29	*e*P	**P**	**20 09 42.8**	**-0.2**
	comp=Z,22nm,1.5s						
GEYT	**Alibeck**	59.63	299	P	**P**	**20 09 46.6**	**+0.3**
	comp=Z,3.6nm,0.7s,baz=8.1,slow=2.1,SNR=7.6						
ILAR	**Eielson Array**	59.81	29	P	**P**	**20 09 47.8**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=280,slow=6.4,SNR=3.9						
PRGR	**Permogore**	61.91	327	*e*P	**P**	**20 09 59.1**	**-2.2**
PRGR				*e**PP	**pP**	**20 10 10.5**	**-2.2**
PRGR				pmax	pmax		
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	62.44	170	P	**P**	**20 10 06.6**	**+1.5**
	comp=Z,1.7nm,0.6s,baz=318,slow=8.9,SNR=5.9						
INK	**Inuvik**	64.32	24	P	**P**	**20 10 17.8**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=315,slow=5.2,SNR=5.6						
TMCR	**Tamitsa**	64.66	331	*e*P	**P**	**20 10 17.8**	**-1.6**
TMCR				pmax	pmax		
	comp=Z,17nm,0.9s						
KLMR	**Klimovskoe**	64.97	327	*e*P	**P**	**20 10 20.3**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	**Klimovskoe**	64.97	327	*e*P	**P**	**20 10 20.4**	**-1.1**
KLMR				AMP		20 10 27.0	
	comp=Z,12nm,1.4s						
ARA0	**ARCESS Array S**	67.35	338	*e*P	**P**	**20 10 36.4**	**-0.3**
ARCES	**ARCESS Array B**	67.35	338	P	**P**	**20 10 36.4**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=57,slow=8.8,SNR=7.9						
VSR	**Storozhevoye**	68.33	317	*e*P	**P**	**20 10 40.7**	**-2.5**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZEI	**Tsey**	68.38	308	*e*P	**P**	**20 10 42.1**	**-1.8**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	68.72	309	P	**P**	**20 10 46.5**	**+0.8**
	comp=Z,10nm,0.9s,baz=94,slow=2.5,SNR=13						
GNI	**Garni**	68.77	305	*ce*P	**P**	**20 10 46.3**	**0.0**
GNI				pmax	pmax		
	comp=Z,59nm,1.3s						
KIV	**Kislovodsk**	68.78	309	*e*P	**P**	**20 10 45.6**	**-0.6**
	comp=Z,22nm,1.1s						
KIV	**Kislovodsk**	68.78	309	*e*P	**P**	**20 10 46.8**	**+0.6**
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KIV				MLR	MLR		
	comp=Z,103nm,17.0s						
FIA1	**FINESS Array S**	70.76	331	*e*P	**P**	**20 10 58.0**	**0.0**
FIA0	**FINESS Array S**	70.77	331	*e*P	**P**	**20 10 57.8**	**-0.2**
FIA0	**FINESS Array S**	70.77	331	*e*P	**P**	**20 10 57.8**	**-0.2**
FINES	**FINESS Array B**	70.77	331	P	**P**	**20 10 57.8**	**-0.2**
	comp=Z,3.6nm,0.5s,baz=70,slow=6.1,SNR=23						
DAG	**Danmarks Havn**	71.75	353	*i* P	**P**	**20 11 03.1**	**-0.6**
	comp=Z,17nm,0.7s						
DAG	**Danmarks Havn**	71.75	353	*i* P	**P**	**20 11 03.1**	**-0.6**
DAG				pmax	pmax		
	comp=Z,11nm,0.7s						
YKA	**Yellowknife Ar**	73.93	26	P	**P**	**20 11 17.5**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=299,slow=5.2,SNR=6.3						
YKB5	**Yellowknife Ar**	73.93	26	*e*P	**P**	**20 11 18.1**	**+1.2**
AKASG	**Malin Array Be**	74.26	320	P	**P**	**20 11 18.4**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=54,slow=6.1,SNR=5.5						
AKBB	**Malin Array Si**	74.26	320	*e*P	**P**	**20 11 17.9**	**-1.1**
	comp=Z,30nm,1.9s						
AKBB	**Malin Array Si**	74.26	320	*e*P	**P**	**20 11 17.9**	**-1.1**
AKBB				pmax	pmax		
	comp=Z,30nm,1.9s						
BR101	**Keskin Array S**	76.68	308	*e*P	**P**	**20 11 32.9**	**-0.4**
BR131	**Keskin Array S**	76.68	308	*e*P	**P**	**20 11 33.1**	**-0.2**
BRTR	**Keskin Array B**	76.68	308	*i* P	**P**	**20 11 34.2**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRTR	**Keskin Array B**	76.68	308	P	**P**	**20 11 32.9**	**-0.4**
	comp=Z,4.2nm,1.0s,baz=106,slow=5.0,SNR=10						
NB2	**NORSAR Subarra**	76.96	334	P	**P**	**20 11 33.7**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=48,slow=5.6						
NB200	**NORSAR Array S**	76.96	334	*e*P	**P**	**20 11 34.5**	**+0.1**
NOA	**NORSAR Array B**	76.96	334	P	**P**	**20 11 34.5**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=50,slow=5.6,SNR=12						
SUMG	**Summit**	77.34	357	*e*P	**P**	**20 11 37.2**	**+0.5**
	comp=Z,17nm,1.3s						
SUMG	**Summit**	77.34	357	*i* P	**P**	**20 11 37.1**	**+0.4**
	comp=Z,11nm,0.7s						
SUMG	**Summit**	77.34	357	*e*P	**P**	**20 11 37.2**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,17nm,1.3s						
DIM	**Dimitrovgrad**	80.83	313	P	P	20 12 11.2	+15
CLL	**Collm**	82.42	326	*e*P	**P**	**20 12 05.0**	**+1.0**
CLL				*e*(PcP)	**pP**	**20 12 12.0**	**-3.9**
CLL				*e*pP	**sP**	**20 12 16.0**	**-4.4**
CLL	**Collm**	82.42	326	*e*P	**P**	**20 12 05.0**	**+1.0**
CLL				*e*		20 12 12.0	
NV01	**Mina Array Sit**	85.98	47	*e*P	**P**	**20 12 23.3**	**+0.6**
NVAR	**Mina Array Bea**	85.98	47	P	**P**	**20 12 24.0**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=294,slow=5.6,SNR=6.4						
H17A	**Grant Village**	86.92	39	*e*P	**P**	**20 12 31.0**	**+3.7**
	comp=Z,9.9nm,1.2s						
PD31	**Pinedale Array**	88.54	40	*e*P	**P**	**20 12 35.5**	**+0.4**
	comp=Z,4.9nm,1.4s						
PDAR	**Pinedale Array**	88.54	40	*e*P	**P**	**20 12 35.8**	**+0.8**
PDAR	**Pinedale Array**	88.54	40	P	**P**	**20 12 36.0**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=257,slow=0.9,SNR=5.0						
PV14	**Lion Creek, Pa**	91.73	43	*e*P	**P**	**20 12 50.0**	**0.0**
	comp=Z,25nm,1.6s						
PV17	**East Wray Mesa**	91.83	43	*e*P	**P**	**20 12 50.6**	**+0.1**
	comp=Z,7.7nm,1.0s						
PV03	**Paradox Valley**	91.92	43	*e*P	**P**	**20 12 52.0**	**+1.2**
	comp=Z,4.8nm,1.0s						
PV01	**Paradox Valley**	92.16	43	*e*P	**P**	**20 12 53.1**	**+1.1**
	comp=Z,6.0nm,0.9s						
KMBO	**Kilima Mbogo**	93.93	271	LR	LR	20 58 49.0	
	comp=Z,197nm,18.7s,baz=94,slow=38						
SCHQ	**Schefferville**	94.00	10	LR	LR	20 56 06.0	
	comp=Z,586nm,22.0s,baz=310,slow=36						

MAN 21 20:10:22.1, 12°.06N×121°.74E, h32^{km}, mb4.1, ML2.1, MS1.4, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTRP	**Odiongan**	0.41	42	*e*P	Pn	20 10 32.3	+0.5
OTRP				*e*S	Sn	20 10 40.2	+1.9
SJMP	**San Jose**	0.73	303	*e*P	Pb	20 10 36.6	+0.2
SJMP				*e*S	Sn	20 10 47.0	+0.8
CUYO	**Cuyo Island**	1.40	211	*e*P	Pn	20 10 45.5	+0.1
BUSP	**Coron**	1.51	268	*e*P	Sb	20 11 09.7	+1.3

MAN 21 20:15:37.1, 11°.27N×124°.62E, h16^{km}, mb4.2, ML3.0, MS2.7, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	0.22	183	*e*P	Pg	20 15 42.2	0.0
OCLP				*e*S	Sg	20 15 45.9	+0.3
PLP	**Palo**	0.37	107⇓	*e*P	Pb	20 15 45.6	+0.3
PLP				*e*S	Sb	20 15 52.0	+1.3
BESP	**Borongan**	0.86	68	*e*P	Pb	20 15 53.6	-0.1
BESP				*e*S	Sn	20 16 07.0	+0.1
LLP	**Lapu-Lapu**	1.15	214⇑	*i*P	Pn	20 15 58.3	-0.2
LLP				*i* S	Sn	20 16 14.0	0.0
MSLP	**Maasin**	1.16	168	*e*P	Pn	20 15 58.4	-0.2
CNP	**Catarman**	1.23	2	*e*P	Pn	20 15 58.4	-1.2
GUIM	**Jordan**	2.10	252	*e*P	Pn	20 16 11.6	+0.1
GUIM				*e*S	Sn	20 16 38.5	+1.2

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*NNC **21** 20:23:29.3±1.7, 44°.17N×77°.18E, h5^{km}±8^{km}, mpv2.7,*
Error ellipse: s-maj=13.7km s-min=6.0km az=158.0
*SOME **21** 20:23:30.2, 44°.17N×77°.17E, h10^{km}*
ISC 21 20:23:29.7±1.1**, 44°.19N**±0°.04×**77°.17E**±0°.03**, h12**^{km}±11^{km}**,**
n16, σ**0^s.44**/32**, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKK	**Chushkaly**	0.36	202	P	**Pg**	**20 23 36.9**	**+0.1**
	3.0nm,0.0s						
CHKK				S	**Sg**	**20 23 42.0**	**+0.3**
	48nm,0.2s						
CHKK	**Chushkaly**	0.36	202	*e*P	**Pg**	**20 23 36.9**	**+0.1**
	3.0nm,0.0s						
CHKK				*e*S	**Sg**	**20 23 41.9**	**+0.3**
	48nm,0.2s						
ARXS	**Arharly**	0.47	87	P	**Pg**	**20 23 38.8**	**-0.1**
	3.3nm,0.1s						
ARXS				S	**Sg**	**20 23 45.2**	**0.0**
	3.7nm,0.1s						
ARXS	**Arharly**	0.47	87	*e*P	**Pg**	**20 23 38.8**	**-0.1**
	3.3nm,0.1s						
ARXS				*e*S	**Sg**	**20 23 45.2**	**0.0**
	3.7nm,0.1s						
KTBS	**Karatobe**	0.59	217	P	**Pg**	**20 23 41.2**	**0.0**
	1.0nm,0.1s						
KTBS				S	**Sg**	**20 23 49.3**	**+0.2**
	7.9nm,0.2s						
KTBS	**Karatobe**	0.59	217	*e*P	**Pg**	**20 23 41.2**	**0.0**
	1.0nm,0.1s						
KTBS				*e*S	**Sg**	**20 23 49.2**	**+0.2**
	7.9nm,0.2s						
KUU	**Kurty**	0.67	244	P	**Pg**	**20 23 42.4**	**-0.2**
	9.9nm,0.1s						
KUU				S	**Sg**	**20 23 51.4**	**0.0**
	15nm,0.2s						
KUU	**Kurty**	0.67	244	*e*P	**Pg**	**20 23 42.4**	**-0.2**
	9.9nm,0.1s						
KUU				*e*S	**Sg**	**20 23 51.4**	**0.0**
	15nm,0.2s						
MNBS	**Baschi**	0.89	96	P	**Pg**	**20 23 46.6**	**-0.2**
	1.3nm,0.2s						
MNBS				S	**Sg**	**20 23 57.8**	**-0.8**
	3.9nm,0.1s						
DGS	**Degeres**	1.39	228	*e*P	**Pn**	**20 23 54.8**	**-0.1**
	0.6nm,0.1s						
DGS				*e*S	**Sb**	**20 24 12.5**	**-0.8**
	9.8nm,0.2s						
SATY	**Saty**	1.44	141	P	**Pb**	**20 23 56.6**	**0.0**
	1.4nm,0.1s						
SATY				S	**Sg**	**20 24 15.4**	**-0.6**
	6.3nm,0.2s						
SATY	**Saty**	1.44	141	*e*P	**Pb**	**20 23 56.6**	**0.0**
	1.4nm,0.1s						
SATY				*e*S	**Sg**	**20 24 15.3**	**-0.6**
	6.3nm,0.2s						
UZB	**Uzynbulak**	1.70	127	P	**Pb**	**20 24 00.8**	**-0.1**
	0.4nm,0.1s						
UZB				S	**Sb**	**20 24 22.7**	**+0.4**
	3.9nm,0.3s						
UZB	**Uzynbulak**	1.70	127	*e*P	**Pb**	**20 24 00.8**	**-0.1**
	0.4nm,0.1s						
UZB				*e*S	**Sb**	**20 24 22.7**	**+0.4**
	3.9nm,0.3s						
DJR	**Jarkent**	1.89	85	*e*P	**Pb**	**20 24 04.5**	**+0.4**
	0.5nm,0.1s						
DJR				*e*S	**Sb**	**20 24 29.1**	**+1.4**
	1.1nm,0.3s						
KAPS	**Kapalarasan**	1.91	54	*e*P	**Pb**	**20 24 04.2**	**-0.2**
	0.4nm,0.2s						
KAPS				*e*S	**Sb**	**20 24 28.6**	**+0.4**
	3.1nm,0.2s						

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*ISCJB **21** 20:55:02.8±0.2, 44°.74N±0°.01×7°.17E±0°.02, h12^{km}±2^{km},*
Error ellipse: s-maj=3.0km s-min=1.7km az=154.3
*ROM **21** 20:55:02.8±0.1, 44°.732N±0°.005×7°.152E±0°.009,*
h12^{km}±1^{km}, ML1.9/12
*GEN **21** 20:55:03.4, 44°.75N×7°.18E, h11^{km}±1^{km}, Ml1.9*
*STR **21** 20:55:04.7±0.4, 45°N±2°×°±°, h2^{km}, M2.0/6, MLv2.0/6*
*LDG **21** 20:55:04.2±0.1, 44°.71N×7°.21E, h10^{km}, Md2.5/2, Ml2.4/20,*
Error ellipse: s-maj=2.8km s-min=1.9km az=70.0
ISC 21 20:55:02.9±0.8**, 44°.73N**±0°.01×**7°.21E**±0°.02**, h15**^{km}±6^{km}**,**
n62, σ**0^s.90**/111**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHB	**Bricherasio**	0.12	20	P	**Pb**	**20 55 06.4**	**-0.5**
BHB				S	**Sb**	**20 55 08.2**	**-1.3**
BHB	**Bricherasio**	0.12	20	P	**Pb**	**20 55 06.3**	**-0.5**
BHB				S	**Sg**	**20 55 08.7**	**-0.1**
BHB				AML	AML		
	comp=E,1825μm,0.3s						
BHB				AML	AML		
	comp=N,3220μm,0.1s						
BHB				AML	AML		
	comp=E,1825μm,0.3s						
BHB				AML	AML		
	comp=N,3220μm,0.1s						
BHB				AML	AML		
	comp=E,1825μm,0.3s						
BHB				AML	AML		
	comp=N,3220μm,0.1s						
DOI	**San Damiano**	0.23	173	P	**Pg**	**20 55 08.6**	**+0.5**
DOI				S	**Sb**	**20 55 11.8**	**-1.0**
DOI				AML	AML		
	comp=E,2275μm,0.4s						
DOI				AML	AML		
	comp=N,1810μm,0.3s						
DOI				AML	AML		
	comp=E,2275μm,0.4s						
DOI				AML	AML		
	comp=N,1810μm,0.3s						
MBDF	**Montbardon**	0.31	269	*e*Pg	**Pg**	**20 55 09.6**	**+0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**20 55 13.4**	**-0.6**
	comp=N,130nm,0.2s						
RRL	**Rocca Remolon**	0.35	303	P	**Pg**	**20 55 10.1**	**-0.1**
RRL				S	**Sg**	**20 55 14.2**	**-1.1**
RRL	**Rocca Remolon**	0.35	303	P	**Pg**	**20 55 10.2**	**-0.1**
RRL				S	**Sg**	**20 55 14.3**	**-1.0**
RRL				AML	AML		
	comp=E,266μm,0.8s						
RRL				AML	AML		
	comp=N,314μm,1.6s						
RRL				AML	AML		
	comp=E,266μm,0.8s						
RRL				AML	AML		
	comp=N,314μm,1.6s						
RRL				AML	AML		
	comp=N,314μm,1.6s						
RRL				AML	AML		
	comp=E,266μm,0.8s						
SURF	**Saint Ours**	0.38	228	Pg	**Pg**	**20 55 10.9**	**+0.2**
SURF				Sg	**Sg**	**20 55 16.0**	**0.0**
RSP	**Reno Superiore**	0.42	6	P	**Pg**	**20 55 11.7**	**+0.3**
RSP				S	**Sg**	**20 55 17.0**	**-0.1**
RSP	**Reno Superiore**	0.42	6	P	**Pg**	**20 55 11.7**	**+0.3**
RSP				S	**Sg**	**20 55 17.3**	**+0.2**
RSP				AML	AML		
	comp=E,290μm,1.5s						
RSP				AML	AML		
	comp=N,302μm,0.1s						
RSP				AML	AML		
	comp=E,290μm,1.5s						
RSP				AML	AML		
	comp=N,302μm,0.1s						
RSP				AML	AML		
	comp=E,290μm,1.5s						
RSP				AML	AML		
	comp=N,302μm,0.1s						
BNI	**Bardonecchia**	0.49	311	P	**Pg**	**20 55 12.7**	**-0.1**
BNI				S	**Sg**	**20 55 18.5**	**-0.9**
BNI				AML	AML		
	comp=E,81μm,1.0s						
BNI				AML	AML		
	comp=N,70μm,1.2s						
BNI				AML	AML		
	comp=E,81μm,1.0s						
BNI				AML	AML		
	comp=N,70μm,1.2s						
BNI				AML	AML		
	comp=E,81μm,1.0s						
BNI				AML	AML		
	comp=N,70μm,1.2s						
STV	**Sant Anna di V**	0.49	170	P	**Pb**	**20 55 13.1**	**-0.3**
STV				S	**Sg**	**20 55 19.7**	**+0.2**
STV	**Sant Anna di V**	0.49	170	P	**Pb**	**20 55 13.0**	**-0.3**
STV				S	**Sb**	**20 55 19.8**	**-0.6**
STV				AML	AML		
	comp=E,130μm,0.5s						
STV				AML	AML		
	comp=N,88μm,0.2s						
STV				AML	AML		
	comp=E,130μm,0.5s						
STV				AML	AML		
	comp=N,88μm,0.2s						
STV				AML	AML		
	comp=E,130μm,0.5s						
STV				AML	AML		
	comp=N,88μm,0.2s						
ENR	**Entracque**	0.53	163	P	**Pg**	**20 55 13.5**	**0.0**
ENR				S	**Sg**	**20 55 20.6**	**+0.1**
ENR	**Entracque**	0.53	163	P	**Pg**	**20 55 13.4**	**0.0**
ENR				S	**Sb**	**20 55 20.9**	**-0.5**
ENR				AML	AML		
	comp=E,376μm,0.3s						
ENR				AML	AML		
	comp=N,262μm,0.1s						
ENR				AML	AML		
	comp=E,376μm,0.3s						
ENR				AML	AML		
	comp=N,262μm,0.1s						
ENR				AML	AML		
	comp=E,376μm,0.3s						
ENR				AML	AML		
	comp=N,262μm,0.1s						
OGAG	**Argentiere**	0.55	240	Pg	**Pg**	**20 55 12.8**	**-1.1**
ISO	**Isola**	0.56	192	Pg	**Pb**	**20 55 14.6**	**+0.1**
ISO				Sg	**Sg**	**20 55 21.2**	**-0.3**
MONC	**Moncucco Torin**	0.61	56	P	**Pn**	**20 55 16.3**	**-0.8**
MONC				AML	AML		
	comp=E,215μm,1.6s						
MONC				AML	AML		
	comp=N,257μm,0.6s						
MONC				AML	AML		
	comp=E,216μm,1.6s						
MONC				AML	AML		
	comp=N,258μm,0.6s						
MONC				AML	AML		
	comp=N,258μm,0.6s						
MONC				AML	AML		
	comp=E,216μm,1.6s						
GBOS	**Grotte di Boss**	0.67	137	P	**Pb**	**20 55 16.1**	**-0.2**
GBOS				S	**Sg**	**20 55 25.3**	**+0.4**
LSD	**Lago del Serru**	0.73	356	P	**Pb**	**20 55 17.2**	**-0.2**
LSD				S	**Sb**	**20 55 25.8**	**-1.6**
LSD	**Lago del Serru**	0.73	356	P	**Pb**	**20 55 17.2**	**-0.2**
LSD				S	**Sb**	**20 55 26.8**	**-0.5**
SAOF	**Saorge**	0.79	161	Pg	**Pb**	**20 55 18.0**	**-0.3**
SAOF				Sg	**Sg**	**20 55 28.9**	**+0.3**
SAOF	**Saorge**	0.79	161	P	**Pb**	**20 55 18.0**	**-0.3**
SAOF				S	**Sg**	**20 55 29.1**	**+0.5**
MGRO	**Montegrosso**	0.81	148	P	**Pb**	**20 55 18.5**	**-0.3**
MGRO				S	**Sg**	**20 55 29.7**	**+0.2**
LPG	**La Plagne**	0.83	337	*e*Pg	**Pb**	**20 55 19.0**	**-0.2**
LPG				*e*Sg	**Sb**	**20 55 30.4**	**+0.1**
	comp=E,22nm,0.2s						
LPL	**La Plagne**	0.85	337	*e*Pg	**Pb**	**20 55 19.4**	**-0.2**
LPL				*e*Sg	**Sb**	**20 55 29.8**	**-1.1**
	comp=E,40nm,0.3s						
RORO	**Rocca Rossa**	0.88	135	P	**Pg**	**20 55 20.2**	**+0.3**
RORO				S	**Sb**	**20 55 30.8**	**-0.4**
RORO	**Rocca Rossa**	0.88	135	P	**Pg**	**20 55 19.8**	**0.0**
RORO				S	**Sg**	**20 55 31.5**	**+0.1**
RORO				AML	AML		
	comp=E,75μm,1.3s						
RORO				AML	AML		
	comp=N,67μm,0.9s						
RORO				AML	AML		

	comp=N,67µm,0.9s						
RORO				AML	AML		
	comp=E,75µm,1.3s						
SBF	**Sospel**	**0.89**	**169**	*e*Pg	**Pn**	**20 55 21.1**	**+0.2**
SBF				*e*Sg	**Sn**	**20 55 32.4**	**-1.1**
	comp=E,33nm,0.3s,SNR=1.0						
ESCA	**l'Escarene**	**0.91**	**172**	Pg	**Pn**	**20 55 21.1**	**-0.1**
ESCA				Sg	**Sn**	**20 55 33.4**	**-0.6**
NEGI	**Seborga**	**0.95**	**158**	P	**Pb**	**20 55 20.9**	**-0.3**
NEGI				S	**Sg**	**20 55 33.7**	**-0.2**
NEGI	**Seborga**	**0.95**	**158**	P	**Pb**	**20 55 21.2**	**0.0**
IMI	**Imperia**	**0.96**	**149**	P	**Pb**	**20 55 21.2**	**-0.1**
IMI				S	**Sb**	**20 55 33.7**	**-0.1**
IMI	**Imperia**	**0.96**	**149**	P	**Pb**	**20 55 21.2**	**-0.1**
ORIF	**Oris-en-Rattie**	**0.96**	**282**	*e*Pg	**Pb**	**20 55 21.4**	**0.0**
	SNR=1.0						
ORIF				*e*Sg	**Sb**	**20 55 33.1**	**-0.8**
	comp=E,22nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**0.96**	**282**	P	**Pb**	**20 55 21.3**	**0.0**
ORIF				AML	AML		
	comp=E,61µm,1.6s						
ORIF				AML	AML		
	comp=N,49µm,1.6s						
ORIF				AML	AML		
	comp=N,49µm,1.6s						
ORIF				AML	AML		
	comp=E,61µm,1.6s						
FINB	**Finale Ligure**	**0.97**	**124**	P	**Pb**	**20 55 21.1**	**-0.4**
PCP	**Piancastagn**	**0.97**	**101**	P	**Pn**	**20 55 21.7**	**-0.4**
PCP				S	**Sn**	**20 55 35.9**	**+0.2**
CALF	**Calern**	**1.00**	**192**	Pg	**Pg**	**20 55 23.5**	**+1.2**
FRF	**La Foret Royal**	**1.24**	**199**	*e*Pg	**Pg**	**20 55 27.2**	**+0.4**
	SNR=1.0						
FRF				*e*Sn	**Sg**	**20 55 43.0**	**0.0**
	comp=E,17nm,0.2s,SNR=1.0						
OGSM	**Saint Maurice**	**1.38**	**310**	Pn	**Pg**	**20 55 29.5**	**0.0**
OGSM				Sg	**Sg**	**20 55 49.7**	**+2.2**
SMRF	**Simiane la Rot**	**1.39**	**238**	*e*Pg	**Pg**	**20 55 30.0**	**+0.3**
	SNR=1.0						
SMRF				*e*Sn	**Sg**	**20 55 47.0**	**-0.9**
	comp=E,9.7nm,0.3s						
LMR	**La Mourre**	**1.49**	**200**	*e*Pg	**Pg**	**20 55 31.6**	**+0.1**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**20 55 50.5**	**-0.3**
	comp=E,17nm,0.3s,SNR=1.0						
ARTF	**Artigues**	**1.53**	**222**	Pn	**Pg**	**20 55 32.0**	**-0.3**
ARTF				Pg	**Pb**	**20 55 33.0**	**+2.0**
ARTF				Sn	**Sg**	**20 55 52.8**	**+0.7**
OG02	**Monnetier-Morn**	**1.58**	**334**	Pn	**Pg**	**20 55 33.6**	**+0.2**
OG02				Sn	**Sg**	**20 55 55.6**	**+1.7**
OG35	**Corcelles**	**1.75**	**319**	Pn	**Pb**	**20 55 35.5**	**+0.8**
VIVF	**Saint-Julien-l**	**1.81**	**275**	*e*Pn	**Pb**	**20 55 34.9**	**-0.8**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**1.81**	**275**	*e*Pg	**Pg**	**20 55 37.8**	**+0.2**
	SNR=1.0						
VIVF				*e*Sn	**Sb**	**20 55 56.8**	**-1.4**
	comp=E,3.2nm,0.3s,SNR=1.0						
CABF	**La Chapelle**	**2.04**	**338**	*e*Pn	**Pb**	**20 55 38.5**	**-1.1**
	SNR=1.0						
CABF	**La Chapelle**	**2.04**	**338**	*e*Pg	**Pg**	**20 55 42.4**	**+0.4**
CABF				*e*Sn	**Sn**	**20 56 03.1**	**+1.2**
	comp=E,3.8nm,0.5s,SNR=1.0						
CABF				*e*Sg	**Sg**	**20 56 08.8**	**+0.4**
	comp=E,2.0nm,0.3s						
LASF	**Ste Croix**	**2.49**	**256**	*e*Pn	**Pn**	**20 55 44.3**	**+1.4**
	SNR=1.0						
LASF	**Ste Croix**	**2.49**	**256**	*e*Pg	**Pg**	**20 55 50.1**	**-0.5**
LASF				*e*Sn	**Sn**	**20 56 12.9**	**-0.1**
	comp=E,0.9nm,0.2s						
PGF	**Pioggiola**	**2.54**	**149**	*e*Pn	**Pn**	**20 55 44.4**	**+0.7**
PGF				*e*Sn	**Sn**	**20 56 14.0**	**-0.4**
	comp=E,0.9nm,0.2s						
SMF	**Signal de Mont**	**3.04**	**310**	*e*Pn	**Pn**	**20 55 51.4**	**+1.0**
	SNR=1.0						
HINF	**Hinteralfeld**	**3.09**	**356**	*e*Pn	**Pn**	**20 55 53.1**	**+1.9**
HINF				*e*Sn	**Sn**	**20 56 28.0**	**+0.1**
	comp=E,0.6nm,0.2s						
HAU	**Haudompre**	**3.33**	**350**	*e*Pn	**Pn**	**20 55 56.2**	**+1.8**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**20 56 33.8**	**+0.1**
	comp=E,1.1nm,0.2s						
AVF	**Avril sur Loir**	**3.39**	**309**	*e*Pn	**Pn**	**20 55 57.5**	**+2.2**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**20 56 36.1**	**+0.9**
	comp=E,0.6nm,0.2s						
LOR	**Lormes**	**3.44**	**319**	*e*Pn	**Pn**	**20 55 57.6**	**+1.6**
	baz=140,SNR=1.0						
LOR				*e*Sn	**Sn**	**20 56 36.4**	**-0.2**
	comp=E,1.8nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**3.48**	**313**	*e*Pn	**Pn**	**20 55 57.9**	**+1.4**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**20 56 37.0**	**-0.3**
	comp=E,2.3nm,0.4s						
BGF	**Bois d'Agland**	**3.56**	**302**	*e*Pn	**Pn**	**20 56 00.4**	**+2.8**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**20 56 38.9**	**-0.5**
	comp=E,2.9nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.84**	**296**	*e*Pn	**Pn**	**20 56 02.3**	**+0.8**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.84**	**296**	*e*Pg	**Pg**	**20 56 15.1**	**-1.4**
RJF	**Les Rejaudoux**	**4.08**	**280**	*e*Sg	**Sg**	**20 57 09.8**	**-3.9**
	SNR=1.0						

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*ISCJB **21** 20:57:38.2±0.3, 33°.25N±0°.01×116°.01W±0°.02, h7^{km}±3^{km}, Error ellipse: s-maj=2.3km s-min=2.2km az=41.1*

*ANF **21** 20:57:38.6±0.2, 33°.24N×116°.05W, h13^{km}±1^{km}, ML3.5/32, Error ellipse: s-maj=1.4km s-min=1.2km az=138.0*

*PAS **21** 20:57:39.9, 33°.23N×116°.06W, h10^{km}, ML3.6*

*NEIC **21** 20:57:39.9±0.0, 33°.23N×116°.06W, h10^{km}, ML3.6(PAS), After PAS.*

NEIC Felt [III] at Thermal and [II] at Palm Desert. Also felt at Cathedral City, El Cajon, Indian Wells, Indio, La Jolla, Rancho Mirage, Riverside, San Diego, San Marcos and Valley Center.

*ECX **21** 20:57:40.4±0.7, 33°.22N×116°.06W, h8^{km}, MD3.5, ML3.6*

ISC 21 20:57:38.2±1.1**, 33°.24N**±0°.01×**116°.02W**±0°.02**, h5**^{km}±10^{km}**, n93, σ0^{s}83**/125**, 9C-3D, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWSC	**Sam W. Stewart**	**0.35**	**148**	P	**Pb**	**20 57 46.9**	**0.0**
	baz=325,SNR=622						
SWSC				S	**Sb**	**20 57 51.8**	**-0.9**
	baz=325						
SWSC	**Sam W. Stewart**	**0.35**	**148**	*e*P	**Pb**	**20 57 46.9**	**0.0**
SWSC				*e*S	**Sb**	**20 57 52.0**	**-0.7**
COK	**Cook Ranch**	**0.46**	**148**	⇑*i*P	**Pb**	**20 57 49.4**	**+0.6**
MONP2	**Monument Peak**	**0.49**	**224**	P	**Pg**	**20 57 48.6**	**+0.9**
	baz=41,SNR=100						
MONP2				S	**Sg**	**20 57 54.5**	**+0.5**
	baz=41						
MONP2	**Monument Peak**	**0.49**	**224**	*e*P	**Pg**	**20 57 48.6**	**+0.9**
XPFO	**Pion Flat**	**0.52**	**315**	*e*Pg	**Pb**	**20 57 49.0**	**-0.9**
PFO	**Pinyon Flats O**	**0.52**	**315**	*e*Pg	**Pg**	**20 57 48.9**	**+0.6**
PFO	**Pinyon Flats O**	**0.52**	**315**	P	**Pb**	**20 57 49.2**	**-0.7**
	baz=137,SNR=192						
PFO				S	**Sg**	**20 57 55.9**	**+0.8**
	baz=137						
WESC	**Westside Schoo**	**0.54**	**153**	*e*P	**Pb**	**20 57 50.5**	**+0.4**
ERPC	**Ernies Place**	**0.58**	**149**	⇑*i*P	**Pb**	**20 57 51.6**	**+0.8**
IKP	**In-Ko-Pah, Jac**	**0.60**	**187**	P	**Pb**	**20 57 50.7**	**-0.5**
	baz=4.5,SNR=180						
IKP				S	**Sg**	**20 57 58.6**	**+1.1**
	baz=4.5						
IKP	**In-Ko-Pah, Jac**	**0.60**	**187**	⇓*e*P	**Pb**	**20 57 50.7**	**-0.5**
YUH	**Yuha Desert**	**0.60**	**172**	⇓*i*P	**Pb**	**20 57 51.0**	**-0.2**
BC3	**Big Chuckawall**	**0.63**	**49**	P	**Pb**	**20 57 52.1**	**+0.4**
	baz=231,SNR=582						
BC3				S	**Sb**	**20 58 00.9**	**0.0**
	baz=231						
RMX	**La Rumorosa**	**0.64**	**184**	*e*P	**Pb**	**20 57 52.4**	**+0.4**
RMX				⇑*e*		20 58 00.9	
RMX				IAML		20 58 00.9	
	comp=E,3µm,0.2s						
RMX				*e*S	**Sb**	**20 58 01.4**	**+0.1**
SGL	**Mount Signal**	**0.64**	**157**	⇓*i*P	**Pb**	**20 57 51.6**	**-0.3**
DREC	**Desert Rsrch C**	**0.65**	**132**	*e*P	**Pb**	**20 57 52.4**	**+0.4**
BELC	**Belle Mtn. Jos**	**0.76**	**1**	P	**Pb**	**20 57 54.0**	**+0.1**
	baz=184,SNR=318						
BELC				S	**Sb**	**20 58 04.3**	**-0.3**
	baz=184						
EML	**El Monte Cty P**	**0.78**	**243**	⇑*e*P	**Pg**	**20 57 53.5**	**+0.3**
BAR	**Barrett**	**0.79**	**225**	*e*Pg	**Pg**	**20 57 53.6**	**+0.4**
BAR	**Barrett**	**0.79**	**225**	⇑*e*P	**Pg**	**20 57 53.7**	**+0.4**
BAR				*e*S	**Sg**	**20 58 03.4**	**-0.1**
COA	**Coachella**	**0.84**	**116**	⇑*i*P	**Pb**	**20 57 55.1**	**-0.3**
SDRC	**San Diego Road**	**0.93**	**237**	⇑*e*P	**Pg**	**20 57 55.9**	**-0.1**
109C	**Camp Elliot, M**	**0.98**	**249**	P	**Pg**	**20 57 56.9**	**0.0**
	baz=68,SNR=111						
109C				S	**Sg**	**20 58 09.0**	**-0.7**
	baz=68						
CPE	**Camp Elliot**	**0.98**	**249**	*e*Pg	**Pg**	**20 57 56.9**	**-0.1**
TJIG	**Tijuana**	**0.98**	**215**	*e*P	**Pg**	**20 57 56.6**	**-0.4**
GLA	**Glamis**	**1.02**	**100**	*e*Pg	**Pg**	**20 57 57.7**	**0.0**
GLA	**Glamis**	**1.02**	**100**	P	**Pg**	**20 57 57.8**	**0.0**
	baz=281,SNR=101						
GLA	**Glamis**	**1.02**	**100**	⇑*e*P	**Pg**	**20 57 57.8**	**0.0**
CPBX	**Cerro Prieto**	**1.02**	**144**	*e*P	**Pb**	**20 57 58.3**	**0.0**
CPBX				*e*S	**Sb**	**20 58 12.2**	**+0.2**
CPBX				IAML		20 58 19.8	
	comp=E,4µm,0.5s						
CPBX				⇑*e*		20 58 19.8	
MURC	**Murrieta**	**1.05**	**290**	P	**Pg**	**20 57 58.0**	**-0.3**
	baz=110,SNR=200						
MURC				S	**Sg**	**20 58 12.0**	**+0.1**
	baz=110						
CBX	**Cerro Bola**	**1.07**	**211**	*e*Pg	**Pg**	**20 57 58.7**	**-0.1**
CBX				*e*Sg	**Sg**	**20 58 11.2**	**-1.6**
CBX	**Cerro Bola**	**1.07**	**211**	*e*P	**Pg**	**20 57 58.8**	**-0.1**
CBX				*e*S	**Sg**	**20 58 12.6**	**-0.2**
IRM	**Iron Mountain**	**1.17**	**38**	P	**Pg**	**20 58 00.4**	**-0.3**
	baz=220,SNR=80						
IRM				S	**Sn**	**20 58 17.0**	**-0.5**
	baz=220						
BBRC	**Big Bear Solar**	**1.26**	**324**	Pb	**Pn**	**20 58 02.9**	**+0.1**
	baz=144,SNR=19						
BBRC				S	**Sb**	**20 58 19.1**	**-0.2**
	baz=144						
Y12C	**Blythe**	**1.35**	**68**	*e*Pn	**Pn**	**20 58 02.5**	**-1.2**
Y12C	**Blythe**	**1.35**	**68**	P	**Pn**	**20 58 02.8**	**-0.9**
	baz=249,SNR=68						
Y12C				Sg	**Sn**	**20 58 23.7**	**+1.7**
	baz=249						
GMRC	**Granite Mounta**	**1.57**	**11**	P	**Pn**	**20 58 06.0**	**-0.8**
	baz=192,SNR=161						
GMRC				Sb	**Sg**	**20 58 29.2**	**+0.6**
	baz=192						
HEC	**Hector,Ludlow**	**1.60**	**351**	Pg	**Pg**	**20 58 09.3**	**+0.3**
	baz=172,SNR=83						
HEC				Sg	**Sg**	**20 58 31.6**	**+1.8**
	baz=172						
BFSC	**Mount Baldy Ra**	**1.69**	**306**	Pb	**Pb**	**20 58 09.6**	**-0.3**
	baz=126,SNR=56						
BFSC				Sb	**Sb**	**20 58 31.1**	**-0.3**
	baz=126						
ZAX	**El Zacaton**	**1.74**	**187**	*e*P	**Pn**	**20 58 09.7**	**+0.6**
RRX	**Edison Barstow**	**1.82**	**334**	Pg	**Pg**	**20 58 13.2**	**0.0**
	baz=154,SNR=25						
RRX				Sb	**Sg**	**20 58 36.9**	**+0.2**
	baz=154						
PDMCI	**Parker Dam,Lak**	**1.89**	**55**	Pb	**Pg**	**20 58 13.9**	**-0.6**
	baz=237						
PDMCI				Sb	**Sg**	**20 58 38.5**	**-0.4**
	baz=237						
NEE2	**Needles Airpor**	**1.92**	**37**	Sb	**Sg**	**20 58 39.8**	**+0.1**
	baz=218						
113A	**Mohawk Valley,**	**1.95**	**103**	*e*Pn	**Pn**	**20 58 10.4**	**-1.6**
FMP	**Fort Macarthur**	**1.96**	**284**	Pb	**Pb**	**20 58 13.8**	**-0.5**
	baz=104						
FMP				Sb	**Sb**	**20 58 39.8**	**+0.8**
	baz=104						
MWC	**Mount Wilson**	**1.96**	**300**	*e*Pn	**Pn**	**20 58 13.2**	**+1.0**
LDFC	**Landfair**	**1.98**	**22**	*e*Pn	**Pn**	**20 58 12.4**	**-0.1**
CIS	**Catalina Islan**	**2.01**	**275**	Pb	**Pb**	**20 58 14.6**	**-0.7**
	baz=94						
CIS				Sb	**Sb**	**20 58 40.6**	**0.0**
	baz=94						
PASC	**Pasadena Art C**	**2.03**	**298**	*e*Pn	**Pb**	**20 58 14.7**	**-0.9**
SCI2	**San Clemente I**	**2.14**	**264**	P	**Pn**	**20 58 14.3**	**-0.2**
	baz=82						
GSC	**Goldstone, Bar**	**2.15**	**343**	*e*Pn	**Pn**	**20 58 14.0**	**-0.9**
GSC	**Goldstone, Bar**	**2.15**	**343**	Pg	**Pg**	**20 58 19.4**	**-0.2**
	baz=163,SNR=80						
GSC				Sb	**Sg**	**20 58 47.3**	**-0.2**
	baz=163						
DECC	**Green Verdugo**	**2.18**	**298**	Pb	**Pb**	**20 58 18.1**	**0.0**
	baz=117						
DECC				Sb	**Sb**	**20 58 45.7**	**+0.3**
	baz=117						
TUQ	**Turquoise Moun**	**2.19**	**2**	P	**Pn**	**20 58 14.8**	**-0.6**
	baz=183						
TUQ				Sb	**Sg**	**20 58 48.2**	**-0.4**
	baz=183						
SPIG	**San Pedro Mart**	**2.24**	**168**	*e*Pn	**Pg**	**20 58 20.5**	**-0.7**
SPIG				S	**Sg**	**20 58 50.0**	**-0.2**
SPX	**San Pedro Mart**	**2.24**	**168**	*e*Pn	**Pg**	**20 58 20.5**	**-0.7**
EDW2	**Edwards Air Fo**	**2.31**	**315**	Pg	**Pg**	**20 58 21.6**	**-1.0**
	baz=135,SNR=52						
EDW2				Sb	**Sb**	**20 58 50.8**	**+1.4**
	baz=135						
W13A	**Hualapai Mount**	**2.56**	**43**	*e*Pn	**Pn**	**20 58 20.4**	**-0.2**
Y14A	**Wickenburg**	**2.61**	**74**	*e*Pn	**Pn**	**20 58 21.1**	**0.0**
LRMC	**Laurel Mtn Rad**	**2.62**	**329**	Pg	**Pg**	**20 58 28.0**	**-0.5**
	baz=148,SNR=22						
LRMC				Sb	**Sg**	**20 59 00.8**	**-1.7**
	baz=148						
OSI	**Osito Audit: C**	**2.63**	**302**	*e*Pn	**Pn**	**20 58 20.8**	**-0.6**
OSI	**Osito Audit: C**	**2.63**	**302**	Sb	**Sb**	**20 58 59.9**	**+1.3**
	baz=121						
SHOC	**Shoshone, Teco**	**2.66**	**356**	Pg	**Pg**	**20 58 29.0**	**-0.2**
	baz=176,SNR=21						
SHOC				Sb	**Sg**	**20 59 02.9**	**-0.8**
	baz=176						
BLG	**Laguna Peak, P**	**2.68**	**290**	Sb	**Sb**	**20 59 01.1**	**+1.2**
	baz=108						
ARVC	**Arvin**	**2.99**	**310**	Pb	**Pb**	**20 58 32.3**	**+0.3**
	baz=129						
ARVC				Sb	**Sb**	**20 59 10.9**	**+2.0**
	baz=129						
ISA	**Isabella, Lake**	**3.15**	**321**	*e*Pg	**Pb**	**20 58 36.5**	**+1.8**
FURC	**Furnace Creek,**	**3.29**	**348**	Pg	**Pg**	**20 58 42.1**	**+0.9**
	baz=168						
DAC	**Darwin (Calif)**	**3.29**	**337**	*e*Pn	**Pn**	**20 58 30.4**	**-0.2**
SHPR	**Sheep Range**	**3.33**	**12**	*e*Pn	**Pn**	**20 58 31.3**	**+0.1**
TPNV	**Topopah Spring**	**3.70**	**357**	*e*Pn	**Pn**	**20 58 36.8**	**+0.5**
TPNV	**Topopah Spring**	**3.70**	**357**	Pg	**Pg**	**20 58 48.6**	**-0.6**
	baz=178						
X16A	**Lo Mia Camp, P**	**3.99**	**72**	*e*Pn	**Pn**	**20 58 40.7**	**+0.5**
LCMT	**Little Creek M**	**4.39**	**30**	*e*Pn	**Pn**	**20 58 46.3**	**+0.6**
U15A	**North Rim**	**4.42**	**43**	*e*Pn	**Pn**	**20 58 47.4**	**+1.3**
WUAZ	**Wupatki**	**4.46**	**58**	*e*Pn	**Pn**	**20 58 46.4**	**-0.3**
TUC	**Tucson**	**4.51**	**100**	*e*Pn	**Pn**	**20 58 47.7**	**+0.5**
KNB	**Kanab**	**4.59**	**34**	*e*Pn	**Pn**	**20 58 49.7**	**+1.3**
CCUT	**Cedar City**	**4.81**	**26**	*e*Pn	**Pn**	**20 58 50.9**	**-0.6**
R11A	**Troy Canyon, C**	**5.11**	**4**	*e*Pn	**Pn**	**20 58 56.5**	**+0.9**
X18A	**Snowflake**	**5.21**	**74**	*e*Pn	**Pn**	**20 58 56.9**	**0.0**
NV11	**Mina Array Sit**	**5.46**	**342**	*e*Pn	**Pn**	**20 59 00.1**	**-0.2**
W18A	**Petrified Fore**	**5.53**	**69**	*e*Pn	**Pn**	**20 59 02.5**	**+1.1**
PSUT	**Pine Spring**	**5.56**	**18**	*e*Pn	**Pn**	**20 59 02.3**	**+0.5**
MTPU	**Mount Pierson**	**5.72**	**32**	*e*Pn	**Pn**	**20 59 04.6**	**+0.5**
WAKR	**Walker**	**5.94**	**333**	*e*Pg	**Pg**	**20 59 27.5**	**-4.5**
MSU	**Marysvale**	**6.11**	**30**	*e*Pn	**Pn**	**20 59 09.5**	**+0.1**
PV17	**East Wray Mesa**	**7.63**	**47**	*e*Pn	**Pn**	**20 59 29.6**	**-0.6**
PV13	**Radium Mtn., P**	**7.64**	**48**	*e*Pn	**Pn**	**20 59 30.1**	**-0.3**
PV16	**Nyswonger Mesa**	**7.67**	**47**	*e*Pn	**Pn**	**20 59 30.6**	**-0.2**
PV03	**Paradox Valley**	**7.68**	**47**	*e*Pn	**Pn**	**20 59 32.0**	**+1.1**
PV11	**David Mesa, Pa**	**7.69**	**47**	*e*Pn	**Pn**	**20 59 32.4**	**+1.3**
PV23	**Carpenter Ridg**	**7.71**	**46**	*e*Pn	**Pn**	**20 59 32.6**	**+1.3**

IDC 21 20:59:33.5±4.9**, 24°.58N**×**98°.17E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.2**/41**, mbtmp3.5**/3**, Error ellipse: s-maj=679.6km s-min=25.8km az=58.0, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**25.55**	**334**	P	P	21 05 03.9	0.0
	0.8nm,0.6s,baz=147,slow=9.7,SNR=11						
WRA	**Warramunga Arr**	**56.55**	**138**	P	P	21 09 18.5	+0.5
	0.5nm,0.7s,baz=320,slow=7.4,SNR=9.8						
ASAR	**Alice Springs**	**59.17**	**141**	P	P	21 09 35.6	-0.8
	0.2nm,0.5s,baz=328,slow=7.5,SNR=5.0						

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*ISCJB **21** 21:16:31.1±1.4, 11°.6S±0°.2×166°.8E±0°.2, h10^{km}, mb3.9/6, Error ellipse: s-maj=35.2km s-min=21.3km az=151.0*

*IDC **21** 21:16:31.2±1.6, 11°.56S×166°.85E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.8/47, mbtmp4.1/7, ML5.2/1, Error ellipse: s-maj=61.9km s-min=26.7km az=144.0*

ISC 21 21:16:32.6±1.4**, 11°.6S**±0°.3×**166°.9E**±0°.2**, h10**^{km}**, n11, σ1^{s}02**/9**, mb3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.17**	**287**	Pn	**Pn**	**21 18 18.1**	**+0.4**
	43nm,0.3s,baz=150,slow=7.0,SNR=6.9						
CTA	**Charters Tower**	**21.57**	**244**	P	**P**	**21 21 23.9**	**+1.4**
	3.3nm,0.8s,baz=79,slow=9.2,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**29.90**	**360**	T	T	21 53 53.1	
	baz=184,slow=74,SNR=2.4						
H11S3	**WAKE ISLAND Hy**	**29.90**	**360**	T	T	21 53 49.2	
	baz=184						
H11S1	**WAKE ISLAND Hy**	**29.92**	**360**	T	T	21 53 52.7	
	baz=184,slow=74,SNR=2.4						
WRA	**Warramunga Arr**	**32.37**	**251**	P	**P**	**21 23 01.6**	**-1.1**
	0.7nm,0.7s,baz=81,slow=8.9,SNR=8.8						
ASAR	**Alice Springs**	**33.57**	**245**	P	**P**	**21 23 12.2**	**-1.0**
	1.4nm,0.8s,baz=79,slow=8.9,SNR=13						
ASAR				PcP	**PcP**	**21 25 54.5**	**+0.7**
	0.5nm,0.5s,baz=74,slow=2.3,SNR=5.6						
ZALV	**Zalesovo Beam**	**94.67**	**324**	P	**P**	**21 29 53.1**	**-0.8**
	0.2nm,0.4s,baz=114,slow=3.6,SNR=3.6						
MKAR	**Makanchi Array**	**94.70**	**317**	P	**P**	**21 29 53.7**	**-0.6**
	1.0nm,0.7s,baz=80,slow=6.4,SNR=9.3						
YKA	**Yellowknife Ar**	**94.94**	**27**	P	**P**	**21 29 55.4**	**+0.5**
	0.2nm,0.6s,baz=257,slow=4.8,SNR=3.5						
ARCES	**ARCESS Array B**	**117.15**	**346**	PKP	**PKiKP**	**21 35 17.8**	**+0.2**
	5.4nm,1.0s,baz=57,slow=1.2,SNR=4.9						

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*IDC **21** 21:21:28.9±1.4, 32°.15N×138°.80E, h0^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.1/49, mbtmp3.3/3, ML2.6/1, Error ellipse: s-maj=32.2km s-min=19.3km az=118.0*

*JMA **21** 21:21:29.6±0.2, 32°.09N×138°.65E, h27^{km}, M3.8*

*ISCJB **21** 21:21:30.2±1.2, 32°.14N±0°.05×138°.58E±0°.04, h23^{km}±13^{km}, mb3.3/2, Error ellipse: s-maj=8.6km s-min=5.6km az=178.8*

ISC 21 21:21:28.7±2.2**, 32°.12N**±0°.08×**138°.62E**±0°.05**, h4**^{km}±16^{km}**, n29, σ1^{s}49**/39**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.03**	**70**	P	**Pg**	**21 21 48.1**	**-0.3**
JHCJ	**Hachijojimakas**	**1.38**	**46**	P	**Pn**	**21 21 53.4**	**-1.2**
JHCJ				S	**Sb**	**21 22 11.2**	**-1.7**
JHJ	**Hachijo jima 2**	**1.40**	**44**	Pn	**Pn**	**21 21 54.0**	**-0.9**
	157nm,0.3s,baz=103,slow=19,SNR=48						
JHJ				Sn	**Sb**	**21 22 12.4**	**-1.1**
	146nm,0.3s,baz=199,slow=21,SNR=12						
JHJ2	**Mitsune**	**1.42**	**45**	P	**Pn**	**21 21 54.0**	**-1.1**
TK01	**Tokai 1**	**1.85**	**333**	S	**Sn**	**21 22 23.6**	**-1.0**
TK02	**Tokai 2**	**1.96**	**339**	P	**Pn**	**21 22 02.1**	**-0.3**
TK02				S	**Sn**	**21 22 27.0**	**-0.3**
TTO3	**TONANKAI O.B.S**	**2.02**	**330**	P	**Pn**	**21 22 03.3**	**0.0**
TTO3				*e*S	**Sn**	**21 22 28.8**	**-0.1**
TTO4	**TONANKAI O.B.S**	**2.09**	**335**	P	**Pn**	**21 22 03.9**	**-0.3**
TTO4				S	**Sn**	**21 22 29.0**	**-1.5**
TTO2	**TONANKAI O.B.S**	**2.09**	**321**	P	**Pn**	**21 22 04.6**	**+0.4**
TTO2				*e*S	**Sn**	**21 22 30.2**	**-0.3**
TTO1	**TONANKAI O.B.S**	**2.15**	**315**	P	**Pn**	**21 22 05.4**	**+0.4**
TTO1				S	**Sn**	**21 22 31.2**	**-0.7**
JIE	**Ise**	**2.77**	**325**	P	**Pn**	**21 22 13.7**	**-0.1**
JIE				S	**Sn**	**21 22 44.9**	**-2.8**
JTNC	**Tanabenakahech**	**3.04**	**305**	P	**Pn**	**21 22 17.7**	**+0.2**
JTNC				*e*S	**Sn**	**21 22 50.9**	**-3.5**
JOD2	**Odawara 2**	**3.16**	**7**	P	**Pn**	**21 22 20.8**	**+1.6**
JWY	**Kouya**	**3.29**	**310**	P	**Pn**	**21 22 21.1**	**+0.1**
JWY				*e*S	**Sn**	**21 22 58.1**	**-2.4**
JYN	**Shimob**	**3.37**	**359**	P	**Pn**	**21 22 22.9**	**+0.8**
JYN				S	**Sn**	**21 23 01.6**	**-0.9**
JYTA	**Yamagatataniai**	**3.80**	**336**	S	**Sn**	**21 23 10.9**	**-2.2**
JAI	**Aioi**	**3.88**	**297**	P	**Pn**	**21 22 30.1**	**+1.1**
JAI				*e*S	**Sn**	**21 23 11.9**	**-3.1**
JRY	**Ryogami san**	**3.89**	**3**	P	**Pn**	**21 22 31.3**	**+2.0**
JRY				*e*S	**Sn**	**21 23 16.3**	**+0.9**
JWT	**Wachi**	**4.14**	**321**	P	**Pn**	**21 22 33.7**	**+1.1**
JWT				*e*S	**Sn**	**21 23 19.4**	**-2.0**
MJAR	**Matsushiro Arr**	**4.42**	**356**	Pn	**Pn**	**21 22 38.1**	**+1.6**
	0.3nm,0.3s,baz=180,slow=15,SNR=14						
MJAR				Sn	**Sn**	**21 23 28.9**	**+0.5**
	0.2nm,0.3s,baz=190,slow=16,SNR=7.0						
MAT	**Matsushiro**	**4.42**	**356**	P	**Pn**	**21 22 38.4**	**+1.8**
MAT				S	**Sn**	**21 23 28.3**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**28.18**	**109**	T	T	21 56 50.7	
	baz=303,slow=75,SNR=6.1						
H11N1	**WAKE ISLAND Hy**	**28.18**	**109**	T	T	21 56 51.1	
	baz=303,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**28.20**	**109**	T	T	21 56 52.0	
	baz=303,slow=75,SNR=14						
H11S3	**WAKE ISLAND Hy**	**28.67**	**111**	T	T	21 57 26.7	
	baz=304,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy**	**28.68**	**111**	T	T	21 57 26.4	
	baz=304,slow=75,SNR=32						
H11S2	**WAKE ISLAND Hy**	**28.69**	**111**	T	T	21 57 26.7	
	baz=304,slow=75,SNR=18						
MKAR	**Makanchi Array**	**44.95**	**306**	P	**P**	**21 29 46.2**	**+1.5**
	0.4nm,0.8s,baz=98,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**51.93**	**185**	P	**P**	**21 30 39.8**	**+1.1**
	0.3nm,0.9s,baz=3.9,slow=8.1,SNR=2.6						

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*DDA **21** 21:29:11.8, 37°.92N×29°.04E, h12^{km}±1^{km}, ML2.6*

*ISCJB **21** 21:29:12.6±0.5, 37°.92N±0°.03×29°.00E±0°.05, h5^{km}±8^{km}, Error ellipse: s-maj=6.9km s-min=4.3km az=3.7*

*ISK **21** 21:29:12.5, 37°.90N×28°.99E, h8^{km}, ML2.1/8*

ISC 21 21:29:12.5±1.0**, 37°.91N**±0°.03×**29°.02E**±0°.05**, h11**^{km}±9^{km}**, n16, σ0^{s}56**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.16**	**176**	PG	**Pg**	**21 29 16.1**	**0.0**
DENT				SG	**Sg**	**21 29 18.9**	**+0.3**
TAVA	**DENIZLI_Tavas**	**0.45**	**191**	*i* P	**Pg**	**21 29 21.2**	**-0.2**
TAVA				*i* S	**Sb**	**21 29 28.6**	**-0.6**
TAVA				IAML_P			
	comp=Z,1µm,0.1s						
KHAL	**Karahalli**	**0.59**	**39**	*i* P	**Pg**	**21 29 23.0**	**-1.1**
KHAL				*i* S	**Sg**	**21 29 31.8**	**-0.1**
KULA	**Kula-Manisa**	**0.67**	**335**	PG	**Pb**	**21 29 25.8**	**-0.4**
MANT	**Manisa**	**0.68**	**328**	*i* P	**Pb**	**21 29 26.7**	**+0.1**
MANT				*i* S	**Sg**	**21 29 35.1**	**+0.2**
MANT				IAML_P			
	comp=Z,800nm,0.1s						
USAK	**Uak-Merkez**	**0.80**	**360**	*i* P	**Pg**	**21 29 27.8**	**-0.2**
BRDR	**BURDUR-Merkez**	**0.85**	**104**	*i* P	**Pn**	**21 29 31.4**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**0.89**	**273**	PG	**Pb**	**21 29 29.7**	**-0.4**
KZIL	**AFYON_Kizioren**	**0.95**	**68**	*i* P	**Pg**	**21 29 30.1**	**-0.7**
YER	**Yerkesik**	**0.97**	**217**	PG	**Pb**	**21 29 31.2**	**-0.1**
DEMI	**Demirci**	**1.16**	**348**	*i* P	**Pb**	**21 29 34.3**	**-0.3**
MLSB	**Milas**	**1.16**	**239**	PN	**Pn**	**21 29 34.7**	**0.0**
GDZ	**Gediz**	**1.23**	**17**	*i* P	**Pg**	**21 29 37.4**	**+1.2**
FETY	**Fethiye**	**1.27**	**178**	PN	**Pg**	**21 29 37.2**	**+0.2**
SHUT	**Suhut-Afyon**	**1.37**	**62**	PN	**Pg**	**21 29 38.6**	**-0.2**
TVSB	**Tavsanli**	**1.58**	**13**	PN	**Pb**	**21 29 41.9**	**+0.2**

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*IDC **21** 21:33:29.3±1.6, 11°.49S×165°.03E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.7/39, mbtmp3.7/6, ML4.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/26, Error ellipse: s-maj=48.1km s-min=29.2km az=117.0*

*ISCJB **21** 21:33:32.7±1.1, 11°.6S±0°.1×165°.0E±0°.2, h34^{km}, mb3.6/5, Error ellipse: s-maj=29.4km s-min=18.0km az=176.0*

ISC 21 21:33:34.4±1.2**, 11°.5S**±0°.1×**165°.0E**±0°.3**, h34**^{km}**, n12, σ0^{s}74**/6**, mb3.5**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.56**	**173**	Pn	**Pn**	**21 36 03.7**	**+0.2**
	2.5nm,0.3s,baz=25,slow=19,SNR=17						
DZM				LR	LR	21 39 20.6	
	comp=Z,87nm,18.1s,baz=260,slow=33						
H11S2	**WAKE ISLAND Hy**	**29.88**	**3**	T	T	22 10 53.1	
	baz=184,slow=76,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**29.89**	**3**	T	T	22 10 57.5	
	baz=184,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**29.90**	**3**	T	T	22 10 58.0	
	baz=184,slow=76,SNR=8.8						
WRA	**Warramunga Arr**	**30.66**	**250**	P	**P**	**21 39 46.1**	**0.0**
	0.6nm,0.9s,baz=83,slow=8.9,SNR=4.3						

H11N1	WAKE ISLAND Hy	31.11	3	T	T	22 12 25.3	
	baz=183,slow=76,SNR=7.8						
H11N3	WAKE ISLAND Hy	31.11	3	T	T	22 12 31.1	
	baz=183,slow=76,SNR=6.3						
H11N2	WAKE ISLAND Hy	31.13	3	T	T	22 12 30.0	
	baz=183,slow=76,SNR=5.7						
ASAR	Alice Springs	31.95	244	P	P	21 39 56.8	-0.6
	0.4nm,0.7s,baz=68,slow=9.5,SNR=3.4						
SONM	Songino Array	78.65	324	P	P	21 45 34.1	+0.9
	0.5nm,0.8s,baz=140,slow=7.5,SNR=3.7						
ILAR	Eielson Array	84.20	19	P	P	21 46 01.4	-0.5
	0.3nm,0.7s,baz=237,slow=4.6,SNR=4.2						
MKAR	Makanchi Array	93.41	317	P	P	21 46 46.1	-0.2
	0.6nm,0.8s,baz=110,slow=3.4,SNR=5.3						

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*ISCJB **21** 21:39:45.9±1.0, 11°.90N±0°.08×87°.76W±0°.06, h52^{km}±9^{km}, mb3.6/5, Error ellipse: s-maj=14.5km s-min=5.7km az=32.5*

*UCR **21** 21:39:45.8±1.1, 11°.98N×87°.74W, h17^{km}±4^{km}, ML3.3*

*IDC **21** 21:39:48.6±5.5, 12°.59N×87°.12W, h33^{km}±52^{km}, mb3.5/5, mb1 3.8/6, mb1mx3.5/32, mbtmp3.7/6, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/20, Error ellipse: s-maj=106.3km s-min=28.3km az=49.0*

ISC 21 21:39:48.4±1.6**, 12°.03N**±0°.10×**87°.68W**±0°.07**, h54**^{km}±14^{km}**, n26, σ1ˢ15**/30**, mb3.5**/5**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.91	43	eP	Pn	21 40 04.1	-1.0
TELN	Telica	1.01	56	eP	Pn	21 40 04.5	-1.9
CNGN	Cerro Negro	1.07	64	eP	Pn	21 40 06.0	-1.2
CNGN				IAML		21 40 24.5	
	comp=N,574nm,0.4s						
COPN	Copaltepe	1.08	82	eP	Pn	21 40 06.4	-0.9
MOMN	Momotombo	1.18	71	eP	Pn	21 40 07.4	-1.3
CNCH	Conchagua	1.25	353	eP	Pn	21 40 08.6	-1.1
LCND	La Caada	1.29	351	eP	Pn	21 40 09.3	-0.8
LCND				eS	Sn	21 40 26.9	+0.6
LCND				IAML		21 40 30.4	
	comp=Z,2μm,0.3s						
MGAN	Managua	1.41	85	eP	Pn	21 40 10.8	-1.0
MGAN				IAML		21 40 33.2	
	comp=N,172nm,0.6s						
PACA	Pacayal	1.56	336	eP	Pn	21 40 12.9	-1.0
PACA				eS	Sn	21 40 33.6	+0.5
CAHU	Cacacuatique	1.80	343	eP	Pn	21 40 17.2	-0.1
MATN	Matagalpa	1.93	62	eP	Pn	21 40 18.5	-0.4
MATN				eS	Sn	21 40 45.1	+2.8
BOAB	BOACO BROADBAN	2.01	78	eP	Pn	21 40 18.9	-1.1
BOAB				eS	Sn	21 40 45.6	+1.6
TGUH	Tegucigalpa,Un	2.05	11	eP	Pn	21 40 20.5	0.0
CONN	Concepcion	2.07	103	eP	Pn	21 40 19.5	-1.2
LFRS	El Faro	2.08	320	eP	Pn	21 40 20.2	-0.7
VICT	Victoria	2.13	334	eP	Pn	21 40 21.3	-0.4
VICT				eS	Sn	21 40 48.5	+1.4
LFU	La Fuente	2.21	321	eP	Pn	21 40 22.2	-0.5
ACON	Acoyapa	2.46	91	eP	Pn	21 40 25.2	-0.8
JTS	JuntasAbangare	3.19	123	Pn	Pn	21 40 36.4	+0.3
	comp=N,3.2nm,0.3s,baz=3.6,slow=18,SNR=8.2						
JTS				Lg	Lg	21 41 27.7	
	comp=N,7.0nm,0.3s,baz=355,slow=22,SNR=4.0						
CMIG	Matias Romero	8.60	307	LR	LR	21 45 45.5	
	comp=N,107nm,20.0s,baz=189,slow=41						
TXAR	Lajitas Array	22.75	322	P	P	21 44 47.6	+1.2
	comp=N,4.2nm,0.8s,baz=137,slow=9.8,SNR=28						
PDAR	Pinedale Array	36.03	332	P	P	21 46 45.5	+0.7
	comp=N,0.4nm,0.6s,baz=129,slow=7.1,SNR=4.0						
ULM	Lac du Bonnet	38.70	352	P	P	21 47 05.7	-1.3
	comp=N,1.1nm,0.5s,baz=179,slow=12,SNR=4.5						
YKA	Yellowknife Ar	53.95	345	P	P	21 49 05.6	-0.8
	comp=N,0.4nm,0.7s,baz=134,slow=8.0,SNR=7.7						
ILAR	Eielson Array	66.31	336	P	P	21 50 31.1	+0.1
	comp=N,0.3nm,0.8s,baz=133,slow=6.6,SNR=4.6						
CMAR	Chiang Mai Arr	149.01	348	PKPbc	PKiKP	21 59 32.4	-0.3
	comp=N,0.7nm,0.6s,baz=348,slow=3.4,SNR=5.9						

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*ISCJB **21** 21:43:39.9±0.3, 26°.69N±0°.03×100°.79E±0°.03, h10^{km}, mb4.1/34, MS3.6/20, Error ellipse: s-maj=4.8km s-min=3.8km az=20.9*

*BJI **21** 21:43:41.3, 26°.73N×100°.80E, h14^{km}, mB4.7/16, mb4.3/27, ML4.3/14, Ms4.2/34, Ms7 3.9/29*

*NEIC **21** 21:43:41.8±0.4, 26°.73N×100°.76E, h10^{km}, mb4.3/3, ML4.3(BJI), Error ellipse: s-maj=8.9km s-min=6.9km az=63.0*

*IDC **21** 21:43:44.8±4.1, 26°.74N×100°.89E, h33^{km}±32^{km}, mb3.9/18, mb1 4.0/19, mb1mx3.8/43, mbtmp4.1/19, ML3.4/1, MS3.6/20, Ms1 3.6/20, ms1mx3.4/54, Error ellipse: s-maj=17.6km s-min=11.5km az=66.0*

*MOS **21** 21:43:44.8±1.0, 26°.70N×100°.88E, h48^{km}, mb4.3/26, Error ellipse: s-maj=13.6km s-min=7.2km az=111.8*

ISC 21 21:43:41.5±0.4**, 26°.78N**±0°.03×**100°.73E**±0°.04**, h10**^{km}**, n93, σ2ˢ16**/101**, mb4.1**/34**, MS3.5**/20**, 6C-2D, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	Kunming	2.45	132	Pn	Pn	21 44 22.5	+0.8
KMI				Pg	Pb	21 44 24.6	-1.2
KMI				Sg	Sb	21 44 55.8	-0.4
KMI				smax	smax		
	comp=N,4μm,0.9s						
KMI				smax	smax		
	comp=E,3μm,0.7s						
KMI	Kunming	2.45	132	Pn	Pn	21 44 22.6	+0.8
KMI	Kunming	2.45	132	P	Pn	21 44 22.6	+0.8
CD2	Chengdu	4.90	32	Pn	Pn	21 44 58.8	+3.6
CD2				Pg	Pg	21 45 13.0	-2.3
CD2				Sn	Sn	21 45 51.8	-0.2
CD2				Sg	Sg	21 46 14.9	-3.9
CD2				smax	smax		
	comp=N,2μm,0.8s						
CD2				smax	smax		
	comp=E,3μm,1.1s						
CD2	Chengdu	4.90	32	Pn	Pn	21 44 58.8	+3.6
CD2				Pg	Pg	21 45 13.0	-2.3
CD2				Sn	Sn	21 45 51.8	-0.2
CD2				Sg	Sg	21 46 14.9	-3.9
GYA	Guiyang	5.32	92	⇑iPn	Pn	21 45 01.8	+0.6
GYA				Pg	Pb	21 45 17.3	+2.6
GYA				Sn	Sn	21 46 03.9	+1.3
GYA				Sg	Sb	21 46 19.0	+0.3
GYA				smax	smax		
	comp=N,200nm,0.9s						
GYA				smax	smax		
	comp=E,170nm,0.8s						
GYA				LR	LR		
	comp=N,2μm,9.6s						
GYA				LR	LR		
	comp=E,920nm,7.8s						
GYA				LR	LR		
	comp=Z,1μm,10.0s						
GYA	Guiyang	5.32	92	⇑iPn	Pn	21 45 01.8	+0.6
SLVN	Son La	6.15	151	Pn	Pn	21 45 12.7	+0.1
CHTO	Chiang Mai	8.10	192	P	Pg	21 46 13.7	-2.9
	95nm,0.8s,1.9nm						
CMMT	Chiang Mai	8.10	192	P	Pg	21 46 13.6	-3.0
	21nm,0.8s,0.4nm						
LAMP	Lampang	8.28	187	P	Pg	21 46 16.8	-3.3
	11nm,0.9s,0.1nm						
CMAR	Chiang Mai Arr	8.45	192	Pn	Pn	21 45 45.1	+1.0
	0.1nm,0.3s,baz=23,slow=9.9,SNR=5.7						
CMAR				Pg	Pg	21 46 20.4	-2.8
	1.5nm,0.3s,baz=8.6,slow=16,SNR=32						
CMAR				Lg	Lg	21 48 11.4	
	0.8nm,0.3s,baz=360,slow=29,SNR=7.9						
CMAR				LR	LR	21 49 10.5	
	comp=Z,203nm,20.2s,baz=6.5,slow=39						
ENH	Enshi	8.45	64	Pn	Pn	21 45 44.5	+0.4
UTTA	Uttaradit	9.00	181	P	Pg	21 46 28.6	-5.2
BRDH	Bariadhala	9.21	246	LR	LR	21 50 15.5	
	comp=Z,329nm,19.1s,baz=88,slow=42						
LZH	Lanzhou	9.65	15	eP	Pn	21 46 04.4	+3.8
LZH				pP		21 46 07.5	
LZH				sP		21 46 11.0	
LZH				S	Sn	21 48 02.6	+13
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=N,1μm,9.8s						
LZH				LR	LR		
	comp=E,2μm,8.1s						
LZH				LR	LR		
	comp=Z,2μm,10.9s						
XAN	Xi'an	10.11	42	P	Pn	21 46 08.3	+1.5
XAN				pP		21 46 10.5	
XAN				S	Sn	21 47 57.1	-3.3
XAN				LR	LR		
	comp=E,700nm,6.8s						
XAN				LR	LR		
	comp=Z,720nm,6.8s						
QIZ	Qiongzhong	11.40	131	P	Pn	21 46 22.8	-1.7
QIZ				S	Sn	21 48 33.4	+1.4
QIZ				LR	LR		
	comp=E,930nm,9.3s						
QIZ				LR	LR		
	comp=Z,630nm,9.8s						
WHN	Wuhan	12.53	69	⇓P	Pn	21 46 39.0	-0.9
WHN				pmax	pmax		
	comp=Z,58nm,1.0s						
WHN				LR	LR		
	comp=N,790nm,4.5s						
WHN				LR	LR		
	comp=E,1μm,7.6s						
WHN				LR	LR		
	comp=Z,2μm,20.7s						
GTA	Gaotai	12.62	357	⇑P	Pn	21 46 44.5	+3.3
GTA				pP		21 46 54.4	
GTA				sP		21 46 58.3	
GTA				S	Sn	21 49 13.3	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,50nm,5.4s						
GTA				LR	LR		
	comp=N,380nm,12.7s						
GTA				LR	LR		
	comp=E,970nm,14.3s						
GTA				LR	LR		
	comp=Z,430nm,15.9s						
GUN	Gumba	13.25	278	eP	Pn	21 46 50.6	+0.6
	38nm,0.8s						
PKI	Pulchoki	13.66	277	eP	Pn	21 46 55.0	-0.7
	18nm,0.7s						
PKIN	Phulchoki	13.67	277	eP	Pn	21 46 55.0	-0.8
	13nm,0.6s						
KKN	Kakani	13.78	278	eP	Pn	21 46 57.4	+0.3
	34nm,0.8s						
PHET	Kaeng Krachan	13.84	184	P	P	21 47 08.8	+2.5
	3.4nm,1.1s						
DMN	Daman	13.93	277	eP	Pn	21 46 58.8	-0.5
	21nm,0.7s						
DANN	Dangsing	15.13	280	eP	Pn	21 47 15.2	-0.5
	32nm,0.7s						
KOLN	Koldanda	15.27	278	eP	Pn	21 47 16.1	-1.3
	13nm,0.7s						
PYUN	Piuthan	15.81	279	eP	Pn	21 47 23.8	-0.6
	36nm,0.7s						
HHC	Hu-ho-hao-te	16.65	30	eP	P	21 47 42.5	+5.0
HHC				sP	sP	21 48 12.1	+29
HHC				S	Sn	21 50 38.8	-1.2
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,4.2s						
HHC				LR	LR		
	comp=N,630nm,8.9s						
HHC				LR	LR		
	comp=E,380nm,7.7s						
HHC				LR	LR		
	comp=Z,510nm,7.4s						
TIA	Tai'an	16.83	52	P	Pn	21 47 37.3	+0.1
TIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,100nm,3.9s						
TIA				LR	LR		
	comp=Z,120nm,8.5s						
TIA				LR	LR		
	comp=Z,290nm,12.8s						
TIA				LR	LR		
	comp=Z,460nm,11.4s						
WMQ	Urumqi	20.01	332	P	Pn	21 48 17.4	+1.3
WMQ				S	S	21 51 52.3	-7.1
WMQ				pmax	pmax		
	comp=Z,15nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.5s						
WMQ				LR	LR		
	comp=Z,450nm,27.1s						
WMQ				LR	LR		
	comp=Z,610nm,23.5s						
WMQ				LR	LR		
	comp=Z,120nm,17.7s						
SONM	Songino Array	21.48	10	P	P	21 48 30.1	-0.2
	comp=Z,1.2nm,0.5s,baz=189,slow=8.6,SNR=5.6						
SONM				LR	LR	21 57 41.0	
	comp=Z,259nm,19.9s,baz=202,slow=39						
ULN	Ulaanbaatar	21.62	12	eP	P	21 48 32.1	+0.2
	comp=Z,6.6nm,1.0s						
ULN	Ulaanbaatar	21.62	12	eP	P	21 48 32.1	+0.2
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZAK	Zakamensk	23.65	4	eP	P	21 48 52.1	-0.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
PDGK	Podgornoye	23.87	319	P	P	21 48 57.7	+2.4
PDGK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
PSI	Prapat	23.91	184	P	P	21 48 56.3	+0.5
	comp=Z,14nm,0.9s,baz=360,slow=7.8,SNR=10						
PSI				LR	LR	21 58 13.1	
	comp=Z,111nm,19.7s,baz=272,slow=36						
NIL	Nilore	24.67	293	eP	P	21 49 03.3	+0.7
	comp=Z,12nm,0.7s						
NIL	Nilore	24.67	293	eP	P	21 49 03.3	+0.7
NIL				pmax	pmax		
	comp=Z,12nm,0.7s						
MKAR	Makanchi Array	24.73	329	P	P	21 49 04.5	+1.5
	comp=Z,2.0nm,0.6s,baz=132,slow=10,SNR=25						
MKAR				LR	LR	22 00 11.2	
	comp=Z,84nm,20.2s,baz=150,slow=40						
DGZ	Jazzator, Alta	25.08	339	⇓iP	P	21 49 08.3	+2.0
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KSAR	Wonju Array Be	25.26	58	P	P	21 49 07.7	-0.1
KSAR	Wonju Array Be	25.26	58	P	P	21 49 07.7	-0.1
KSRS	Korea Array	25.29	58	P	P	21 49 07.7	-0.4
	comp=Z,2.7nm,0.7s,baz=252,slow=9.3,SNR=6.3						
KSRS				LR	LR	21 58 56.0	
	comp=Z,98nm,19.6s,baz=82,slow=36						
KZA	Kyzart	25.84	313	P	P	21 49 16.5	+2.9
	SNR=7.3						
SFK	Sufi-Kurgan	26.16	307	P	P	21 49 19.7	+3.4
SFK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CN2	Changchun	26.22	43	eP	P	21 49 17.5	+1.0
CN2				eS	S	21 53 47.8	-0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,350nm,15.0s						
CN2				LR	LR		
	comp=Z,220nm,15.0s						
CN2				LR	LR		
	comp=Z,280nm,14.0s						
KBK	Karagaybulak	26.31	314	P	P	21 49 20.7	+3.2
	SNR=6.5						
AAK	Ala-Archa	26.60	313	P	P	21 49 21.3	+1.2
	SNR=5.4						
AAK	Ala-Archa	26.60	313	P	P	21 49 22.2	+2.1
	comp=Z,3.3nm,1.0s,baz=95,slow=3.7,SNR=11						
AAK				LR	LR	22 01 48.7	
	comp=Z,176nm,18.7s,baz=106,slow=41						
JNU	Nakatsue	26.82	69	LR	LR	22 00 10.6	
	comp=Z,72nm,19.1s,baz=242,slow=37						
AML	Almayashu	26.89	312	P	P	21 49 26.5	+3.4
	SNR=7.2						
USP	Ospenovka	26.89	314	P	P	21 49 25.1	+2.4
	SNR=8.3						
EKS2	Erkin-Say	27.08	313	P	P	21 49 27.0	+2.5
	SNR=8.7						
PALK	Pallekele	27.18	228	i P	P	21 49 36.1	+11
MNAS	Manas	27.84	311	P	P	21 49 34.3	+3.0
MNAS				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KURBB	Kurchatov Arra	29.23	330	P	P	21 49 44.5	+1.2
	comp=Z,1.1nm,0.6s,baz=142,slow=9.4,SNR=8.4						
KURBB				PcP	PcP	21 52 49.0	-1.2
	comp=Z,0.7nm,0.8s,baz=136,slow=1.9,SNR=5.6						
KURK	Kurchatov	29.25	331	P	P	21 49 44.5	+0.9
KURK				PcP	PcP	21 52 49.0	-1.3
KURK	Kurchatov	29.25	331	P	P	21 49 44.5	+0.9
KURK						21 52 49.0	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	29.58	341	P	P	21 49 47.1	+0.7
	comp=Z,1.3nm,0.8s,baz=151,slow=10,SNR=7.3						
ZALV				LR	LR	22 02 04.5	
	comp=Z,72nm,20.7s,baz=285,slow=37						
USRK	Ussuriysk Ar.	30.57	47	P	P	21 49 55.3	0.0
	comp=Z,2.0nm,0.7s,baz=240,slow=9.2,SNR=7.5						
USRK				LR	LR	22 03 58.3	
	comp=Z,142nm,19.8s,baz=253,slow=40						
OTUK	Ortayu	30.79	322	P	P	21 49 59.7	+2.4
OTUK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLR	Kul'dur	32.79	39	i P	P	21 50 19.1	+4.3
MJAR	Matsushiro Arr	33.17	64	LR	LR	22 05 18.2	
	comp=Z,92nm,18.7s,baz=305,slow=39						
BVAR	Borovoye Array	34.59	327	LR	LR	22 05 18.0	
	comp=Z,80nm,18.4s,baz=222,slow=37						
BRVK	Borovoye	34.66	327	i P	P	21 50 32.3	+1.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
JCJ	Chichijima	36.84	80	LR	LR	22 06 58.5	
	comp=Z,42nm,18.5s,baz=270,slow=38						
GEYT	Alibeck	37.38	298	P	P	21 50 56.6	+2.0
	comp=Z,4.2nm,0.9s,baz=100,slow=6.3,SNR=10						
GEYT				LR	LR	22 09 28.6	
	comp=Z,121nm,20.1s,baz=40,slow=41						
AKTO	Aktyubinsk	40.13	318	P	P	21 51 18.8	+1.4
	comp=Z,0.7nm,0.3s,baz=104,slow=8.0,SNR=4.1						
SVE	Sverdlovsk	41.38	328	eP	P	21 51 29.5	+1.9
SVE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ARU	Arti	42.20	326	c iP	P	21 51 35.8	+1.4
ARU						21 53 12.8	
ARU						21 53 27.6	
ARU				S	S	21 57 49.2	-5.2
ARU				SS	SS	22 00 56.5	-5.7
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BATI	Baumata	42.99	146	LR	LR	22 10 44.0	
	comp=Z,91nm,18.1s,baz=308,slow=38						
MA2	Magadan	47.31	32	ceP	P	21 52 17.1	+2.0
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GNI	Garni	47.85	301	LR	LR	22 16 05.8	
	comp=Z,44nm,19.3s,baz=84,slow=40						
KLMR	Klimovskoe	53.02	328	eP	P	21 52 58.0	-0.2
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
KLMR	Klimovskoe	53.02	328	eP	P	21 52 58.1	-0.2
KLMR				AMP		21 53 08.8	
	comp=Z,12nm,1.2s						
BRTR	Keskin Array B	56.38	301	LR	LR	22 20 36.7	
	comp=Z,41nm,18.6s,baz=82,slow=39						
WRAB	Tennant Creek	56.74	141	eP	P	21 53 24.4	-1.3
	comp=Z,4.0nm,1.2s						
WRAB	Tennant Creek	56.74	141	eP	P	21 53 24.4	-1.3
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WRA	Warramunga Arr	56.74	141	P	P	21 53 24.8	-1.0
WRA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRA	Warramunga Arr	56.74	141	P	P	21 53 24.8	-1.0
	comp=Z,4.8nm,0.8s,baz=330,slow=7.8,SNR=38						
AKASG	Malin Array Be	58.25	315	ceP	P	21 53 38.4	+2.3
AKASG	Malin Array Be	58.25	315	P	P	21 53 35.3	-0.7
	comp=Z,0.4nm,0.4s,baz=74,slow=6.9,SNR=5.1						
AKASG				LR	LR	22 22 51.3	
	comp=Z,46nm,20.6s,baz=255,slow=40						
ASAR	Alice Springs	59.53	144	P	P	21 53 44.3	-1.0
	comp=Z,2.4nm,0.6s,baz=325,slow=6.7,SNR=13						
ASAR				PcP	PcP	21 54 32.1	-0.6
	comp=Z,1.2nm,0.8s,baz=336,slow=4.3,SNR=3.0						
FINES	FINESS Array B	59.55	327	P	P	21 53 45.1	+0.2
	comp=Z,1.4nm,0.9s,baz=106,slow=6.9,SNR=4.4						
NOA	NORSAR Array B	66.72	328	LR	LR	22 23 33.5	
	comp=Z,34nm,18.2s,baz=285,slow=36						
KMBO	Kilima Mbogo	67.02	256	P	P	21 54 35.7	+0.2
	comp=Z,2.2nm,0.8s,baz=42,slow=9.4,SNR=6.9						
GERES	GERESS Array B	68.46	315	LR	LR	22 27 46.4	
	comp=Z,112nm,19.9s,baz=328,slow=38						
STKA	Stephens Creek	70.15	144	P	P	21 54 53.6	-0.7
	comp=Z,1.0nm,0.3s,baz=312,slow=9.4,SNR=3.5						
ILAR	Eielson Array	74.99	24	P	P	21 55 21.6	-1.1
	comp=Z,1.4nm,1.1s,baz=290,slow=5.2,SNR=6.8						
KDAK	Kodiak Island	76.06	32	i P	P	21 55 36.0	+7.0
YKA	Yellowknife Ar	86.66	16	P	P	21 56 23.9	-1.1
	comp=Z,0.6nm,0.6s,baz=327,slow=4.6,SNR=4.9						

KRSC 21 21:51:40.1±1.2**, 49°.82N**×**156°.91E, h63**^{km}±23^{km}**, ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.00	330	eP	Pn	21 51 59.3	+1.1
SKR				eS	Sn	21 52 12.8	+1.2
ALID	Alaid	1.36	321	eP	Pn	21 52 04.2	+1.1
PAU	Pauzhetka	1.65	358	eP	Pn	21 52 09.1	+2.3
PAU				eS	Sn	21 52 30.2	+3.2
KDTR	Khodutka, Kamc	2.12	20	eP	Pn	21 52 15.5	+2.3
KDTR				eS	Sn	21 52 41.4	+2.9
MTVR	Mutnovka	2.78	16	eP	Pn	21 52 25.2	+2.9
MTVR				eS	Sn	21 52 57.8	+3.0
RUS	Russkaya	2.81	21	eP	Pn	21 52 24.6	+2.1
RUS				eS	Sn	21 52 57.3	+2.2
KRMR	Karymshinskiy	3.11	14	eP	Pn	21 52 30.1	+3.5
DALK	Dalny	3.42	19	eP	Pn	21 52 33.2	+2.4
UGLR	Uglovaya	3.60	19	eP	Pn	21 52 36.1	+2.7
AVH	Avacha	3.63	18	eP	Pn	21 52 37.8	+3.9
KOK	Koryaka	3.64	17	eP	Pn	21 52 37.8	+3.8
SDLR	Sedlovina	3.68	19	eP	Pn	21 52 37.1	+2.6
GNL	Ganaly	3.93	9	eP	Pn	21 52 41.0	+3.0

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*SOME **21** 22:03:46.2, 41°.83N×78°.80E, h15^{km}*

*KRNET **21** 22:03:46.5±0.1, 41°.85N×78°.84E, h20^{km}, mb3.5*

*NNC **21** 22:03:47.6±0.8, 41°.91N×78°.84E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=5.3km s-min=2.7km az=159.0*

ISC 21 22:03:49.3±1.5**, 41°.92N**±0°.05×**78°.80E**±0°.03**, h9**^{km}±10^{km}**, n88, σ1ˢ32**/139**, 39C-30D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.64	332	⇓iP	Pg	22 03 59.9	-1.8
	baz=34						
PRZ				⇓iS	Sg	22 04 10.0	-0.1
	baz=34						
SATY	Saty	1.18	346	P	Pb	22 04 09.7	-2.2
	19nm,0.4s						
SATY				S	Sb	22 04 26.8	-0.5
	179nm,0.2s						
SATY	Saty	1.18	346	⇑iP	Pb	22 04 09.7	-2.2
	8.5nm,0.2s						
SATY				⇓iS	Sb	22 04 26.8	-0.5
	66nm,0.2s						
KDJ	Kajisay	1.23	280	⇑iP	Pn	22 04 10.1	-2.7
	baz=83						
KDJ				⇑iS	Sb	22 04 26.9	-1.9
	baz=83						
UZB	Uzynbulak	1.24	7	P	Pn	22 04 10.4	-2.6
	3.9nm,0.2s						
UZB				S	Sb	22 04 28.0	-1.1
	76nm,0.3s						
UZB	Uzynbulak	1.24	7	eP	Pn	22 04 10.4	-2.6
	3.9nm,0.2s						
UZB				eS	Sb	22 04 28.0	-1.1
	76nm,0.3s						
SHLS	Shalkode	1.33	21	P	Pg	22 04 14.8	-0.1
	58nm,0.2s						
SHLS				S	Sg	22 04 35.1	+3.0
	352nm,0.5s						
SHLS	Shalkode	1.33	21	eP	Pg	22 04 14.8	-0.1
	58nm,0.2s						
SHLS				eS	Sg	22 04 35.1	+3.0
	67nm,0.4s						

PDGK	Podgornoye 27nm,0.3s	1.50	20	P	Pn	22 04 15.1	-1.4
PDGK	117nm,0.6s			S	Sn	22 04 35.8	-0.5
PDGK	Podgornoye 18nm,0.3s	1.50	20	⇑P	Pn	22 04 14.7	-1.8
PDGK	171nm,0.7s			⇓S	Sn	22 04 35.3	-1.0
PDGK	Podgornoye baz=18	1.50	20	⇑iP	Pn	22 04 15.1	-1.4
PDGK	baz=18			⇑iS	Sn	22 04 36.0	-0.3
KURS	Kuram 10.0nm,0.4s	1.64	344	P	Pn	22 04 18.3	-0.1
KURS	40nm,0.3s			S	Sb	22 04 41.0	+0.6
KURS	Kuram 10.0nm,0.4s	1.64	344	eP	Pn	22 04 18.3	-0.1
KURS	40nm,0.3s			eS	Sb	22 04 41.0	+0.6
TNSS	Tian-Shan 20nm,0.3s	1.77	310	P	Pn	22 04 20.1	-0.4
TNSS	157nm,0.3s			S	Sb	22 04 44.5	-0.1
TNSS	Tian-Shan 21nm,0.2s	1.77	310	eP	Pn	22 04 20.1	-0.4
TNSS	157nm,0.3s			eS	Sb	22 04 44.5	-0.1
MDOK	Medeo 15nm,0.5s	1.80	314	⇓P	Pn	22 04 20.4	-0.3
MDOK	133nm,0.4s			⇓S	Sb	22 04 44.8	-0.3
MDOK	Medeo 20nm,0.2s	1.80	314	Pg	Pn	22 04 20.6	-0.1
MDOK	207nm,0.4s			Lg	Lg	22 04 45.1	
MDOK	Medeo 20nm,0.2s	1.80	314	⇓iP	Pn	22 04 20.6	-0.1
MDOK	207nm,0.4s			eS	Sb	22 04 45.1	-0.1
KOTS	Kotyrbulak 45nm,0.2s	1.81	317	P	Pn	22 04 21.1	+0.2
KOTS	376nm,0.3s			S	Sb	22 04 46.1	+0.5
KOTS	Kotyrbulak 45nm,0.2s	1.81	317	eP	Pn	22 04 21.1	+0.2
KOTS	376nm,0.3s			eS	Sb	22 04 46.1	+0.5
KNDC	Almaty 24nm,0.5s	1.88	314	⇑P	Pb	22 04 22.9	-0.9
KNDC	106nm,0.3s			⇓S	Sb	22 04 48.2	+0.8
AAA	Alma-Ata 76nm,0.3s	1.90	313	Pg	Pn	22 04 22.9	+0.9
AAA	226nm,0.3s			Lg	Lg	22 04 49.0	
AAA	Alma-Ata 76nm,0.3s	1.90	313	eP	Pn	22 04 22.9	+0.9
AAA	226nm,0.3s			eS	Sb	22 04 49.0	+1.0
KTMS	Ketmen 16nm,0.1s	1.91	36	Pg	Pn	22 04 22.7	+0.6
KTMS	90nm,0.5s			Lg	Lg	22 04 48.4	
KTMS	Ketmen 16nm,0.1s	1.91	36	eP	Pn	22 04 22.7	+0.6
KTMS	90nm,0.5s			eS	Sb	22 04 48.4	0.0
ULHL	Ulahol SNR=172	1.93	281	P	Pn	22 04 22.0	-0.6
ULHL	Ulahol baz=82	1.93	281	⇓iP	Pn	22 04 22.2	-0.4
ULHL	baz=82			⇓iS	Sn	22 04 48.3	+1.2
IZV	Izvestkoviy 48nm,0.1s	1.97	305	Pg	Pn	22 04 23.5	+0.5
IZV	431nm,0.4s			Lg	Lg	22 04 50.1	
IZV	Izvestkoviy 48nm,0.1s	1.97	305	eP	Pn	22 04 23.5	+0.5
IZV	431nm,0.4s			eS	Sb	22 04 50.1	0.0
MTBS	Maitube 50nm,0.3s	2.13	305	Pg	Pn	22 04 26.0	+0.8
MTBS	214nm,0.3s			Lg	Lg	22 04 54.9	
MTBS	Maitube 22nm,0.2s	2.13	305	⇑iP	Pn	22 04 26.0	+0.8
MTBS	214nm,0.3s			⇓iS	Sb	22 04 54.9	+0.1
NRN	Naryn baz=60	2.15	258	⇑iP	Pn	22 04 25.0	-0.7
NRN	baz=60			⇑iS	Sn	22 04 53.3	+0.6
MNBS	Baschi 37nm,0.5s	2.18	352	Pg	Pb	22 04 27.7	-1.3
MNBS	115nm,0.3s			Lg	Lg	22 04 57.8	
MNBS	Baschi 37nm,0.5s	2.18	352	eP	Pb	22 04 27.7	-1.3
MNBS	115nm,0.3s			eS	Sb	22 04 57.8	+1.6
BOOM	Boomskoye usch baz=88	2.20	286	⇓iP	Pn	22 04 25.8	-0.4
BOOM	baz=88			⇓iS	Sn	22 04 54.4	+0.7
CHKK	Chushkaly 50nm,0.4s	2.35	326	Pg	Pb	22 04 30.6	-1.2
CHKK	419nm,0.3s			Lg	Lg	22 05 01.9	
CHKK	Chushkaly 50nm,0.4s	2.35	326	eP	Pb	22 04 30.4	-1.4
CHKK	419nm,0.3s			eS	Sb	22 05 01.9	+1.0
KTBS	Karatobe 40nm,0.5s	2.38	320	Pg	Pn	22 04 30.2	+1.7
KTBS	269nm,0.2s			Lg	Lg	22 05 02.5	
KTBS	Karatobe 40nm,0.5s	2.38	320	eP	Pb	22 04 30.9	-1.4
KTBS	269nm,0.2s			eS	Sb	22 05 02.5	+0.8
KST	Kastek 39nm,0.3s	2.38	299	Pg	Pn	22 04 30.0	+1.4
KST	295nm,0.5s			Lg	Lg	22 05 02.5	
KST	Kastek 32nm,0.3s	2.38	299	eP	Pn	22 04 30.1	+1.4
KST	295nm,0.5s			eS	Sb	22 05 02.1	+0.1
ARXS	Arharly 29nm,0.6s	2.40	343	Pg	Pb	22 04 31.9	-0.9
ARXS	191nm,0.4s			Lg	Lg	22 05 04.6	
ARXS	Arharly 29nm,0.6s	2.40	343	eP	Pb	22 04 31.9	-0.9
ARXS	191nm,0.4s			eS	Sb	22 05 04.6	+2.0
DJR	Jarkent 6.8nm,0.6s	2.52	16	Pg	Pb	22 04 33.4	-1.3
DJR	60nm,0.4s			Lg	Lg	22 05 07.6	
DJR	Jarkent 6.8nm,0.6s	2.52	16	eP	Pb	22 04 33.5	-1.3
DJR	60nm,0.4s			⇓iS	Sb	22 05 07.6	+1.7
TKM2	Tokmak 2 SNR=57	2.58	294	P	Pn	22 04 32.8	+1.4
TKM2	Tokmak 2 24nm,0.3s	2.58	294	⇑Pn	Pn	22 04 32.4	+1.0
TKM2	126nm,0.6s			⇓Lg	Lg	22 05 08.6	
TKM2	Tokmak 2 baz=95	2.58	294	⇑iP	Pn	22 04 31.5	+0.1
TKM2	baz=95			⇑iS	Sn	22 05 03.9	+0.9
DGS	Degeres 26nm,0.6s	2.60	302	Pg	Pn	22 04 32.8	+1.2
DGS	154nm,0.4s			Lg	Lg	22 05 07.4	
DGS	Degeres 26nm,0.6s	2.60	302	eP	Pn	22 04 33.7	+2.0
DGS	154nm,0.4s			eS	Sb	22 05 07.9	-0.4
KZA	Kyzart SNR=103	2.65	275	P	Pn	22 04 34.3	+1.7
KZA	Kyzart baz=76	2.65	275	⇑iP	Pn	22 04 32.3	-0.3
KZA	baz=76			⇑iS	Sn	22 05 05.2	+0.1
KUU	Kurty 18nm,0.7s	2.68	318	Pg	Pb	22 04 35.7	-1.7
KUU	197nm,0.5s			Lg	Lg	22 05 11.6	
KUU	Kurty 15nm,0.4s	2.68	318	⇓iP	Pb	22 04 35.7	-1.7
KUU	246nm,0.4s			eS	Sb	22 05 11.6	+1.2
KBK	Karagaybulak SNR=33	2.95	286	P	Pn	22 04 38.5	+1.9
KBK	Karagaybulak baz=87	2.95	286	⇓iP	Pn	22 04 36.2	-0.4
KBK	baz=87			⇓iS	Sn	22 05 12.6	+0.4
TDK	Taldyqorghan 16nm,0.4s	3.10	355	Pg	Pb	22 04 43.7	-0.9
TDK	149nm,0.4s			Lg	Lg	22 05 25.1	
TDK	Taldyqorghan 16nm,0.4s	3.10	355	eP	Pb	22 04 43.7	-0.9
TDK	149nm,0.4s			eS	Sb	22 05 25.1	+2.7
CHMS	Chumysh SNR=7.7	3.19	291	P	Pn	22 04 40.8	+1.2
CHMS	Chumysh baz=92	3.19	291	⇑iP	Pn	22 04 39.5	-0.1
CHMS	baz=92			⇑iS	Sn	22 05 18.2	+0.4
UCH	Uchtor SNR=29	3.21	277	P	Pb	22 04 43.9	-2.8
UCH	Uchtor baz=78	3.21	277	⇑iP	Pn	22 04 39.8	-0.5
UCH	baz=78			⇑iS	Sn	22 05 18.7	-0.2
FRU1	Bishkek baz=89	3.22	287	⇑iP	Pn	22 04 39.8	-0.3
FRU1	baz=89			⇑iS	Sn	22 05 18.6	0.0
AAK	Ala-Archa SNR=8.2	3.28	284	P	Pb	22 04 45.0	-2.7
AAK	Ala-Archa 6.9nm,0.5s	3.28	284	⇑Pn	Pn	22 04 42.8	+1.8
AAK	110nm,0.8s			⇓Lg	Lg	22 05 33.0	
AAK	Ala-Archa baz=85	3.28	284	⇓iP	Pn	22 04 41.0	0.0
AAK	baz=85			⇓iS	Sn	22 05 20.5	+0.3
ARLS	Aral baz=72	3.34	271	⇓iP	Pn	22 04 41.2	-0.7
ARLS	baz=72			⇓iS	Sn	22 05 21.2	-0.7
KAPS	Kapalarasan 6.9nm,0.8s	3.39	7	Pg	Pb	22 04 48.1	-1.5
KAPS	31nm,0.8s			Lg	Lg	22 05 32.8	
KAPS	Kapalarasan 6.9nm,0.8s	3.39	7	⇓eP	Pb	22 04 48.1	-1.5
KAPS	31nm,0.8s			eS	Sb	22 05 32.8	+1.9
SGDS	Sogindy 14nm,0.6s	3.44	298	Pg	Pb	22 04 48.1	-2.3
SGDS	93nm,0.6s			Lg	Lg	22 05 32.8	
USP	Ospenovka SNR=9.1	3.45	294	P	Pb	22 04 48.4	-2.2
USP	Ospenovka baz=95	3.45	294	⇑eP	Pn	22 04 42.9	-0.4
USP	baz=95			⇑iS	Sn	22 05 24.6	+0.3
EKS2	Erkin-Say SNR=26	3.80	283	P	Pb	22 04 52.9	-3.7
EKS2	Erkin-Say baz=84	3.80	283	⇓iP	Pn	22 04 48.3	+0.1
EKS2	baz=84			⇓iS	Sn	22 05 33.0	-0.1
AML	Almayashu SNR=15	3.81	275	P	Pb	22 04 56.4	-0.5
AML	Almayashu baz=76	3.81	275	⇑iP	Pn	22 04 47.8	-0.8
AML	baz=76			⇑iS	Sn	22 05 33.2	-0.5
MRKS	Merke 12nm,0.4s	4.21	283	Pg	Pb	22 05 02.7	-1.0
MRKS	27nm,0.4s			Lg	Lg	22 05 57.1	
MRKS	Merke 12nm,0.4s	4.21	283	eP	Pb	22 05 02.7	-1.0
MRKS	27nm,0.4s			⇓iS	Sb	22 05 57.1	+2.4
SFK	Sufi-Kurgan 0.5nm,0.4s	4.44	246	⇑Pg	Pb	22 05 08.9	+1.3
SFK	10nm,0.7s			⇑Lg	Lg	22 06 11.9	
SFK	Sufi-Kurgan baz=47	4.44	246	⇑iP	Pn	22 04 56.1	-1.0
SFK	baz=47			⇑iS	Sn	22 05 46.9	-2.1
MNAS	Manas 7.1nm,0.7s	4.71	279	⇓Pg	Pb	22 05 13.9	+1.8
MNAS	10nm,0.6s			⇑Lg	Lg	22 06 16.5	
MNAS	Manas 3.0nm,0.6s	4.71	279	Pg	Pb	22 05 12.6	+0.4
MNAS	5.3nm,0.5s			Lg	Lg	22 06 14.2	
MNAS	Manas baz=80	4.71	279	⇑eP	Pn	22 05 00.4	-0.3
MNAS	baz=80			⇑iS	Sn	22 05 54.6	-1.0
MAKZ	Makanchi 0.9nm,0.5s	5.39	24	⇓Pn	Pn	22 05 09.2	-0.7
MAKZ	1.4nm,0.4s			⇑Sn	Sn	22 06 13.3	+1.2
MAKZ	3.2nm,0.8s			⇑Lg	Lg	22 06 39.1	
MK31	Makanchi Array 0.9nm,0.5s,baz=201,slow=12,SNR=36	5.48	26	⇑Pn	Pn	22 05 12.1	+1.0
MK31	1.4nm,0.4s,baz=202,slow=22,SNR=7.9			Sn	Sn	22 06 13.8	-0.4
MK31	3.1nm,0.5s			⇓Lg	Lg	22 06 41.6	
KK31	Karatay Array 3.3nm,0.7s,baz=88,slow=16,SNR=23	6.24	284	⇑Pg	Pb	22 05 42.0	+3.8
KK31	3.6nm,0.5s,baz=103,slow=27,SNR=11			Lg	Lg	22 07 06.0	
OTUK	Ortayu 10nm,0.7s	7.80	326	⇑Lg	Lg	22 07 54.4	
KURBB	Kurchatov Arra 11nm,0.7s	8.71	359	⇑Lg	Lg	22 08 26.6	

*IDC **21** 22:09:53.2±1.2, 29.°80N×87.°91E, h0^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.5/44, mbtmp3.6/10, ML3.0/1, Error ellipse: s-maj=36.8km s-min=22.8km az=48.0*

*BJI **21** 22:09:53.2, 30.°05N×88.°11E, h7^{km}, mb3.9/3, Ms3.4/2, Ms7 3.4/2*

*ISCJB **21** 22:09:57.1±0.8, 29.°9N±0.°1×87.°8E±0.°2, h37^{km}, mb3.7/9, Error ellipse: s-maj=26.4km s-min=12.0km az=148.2*

ISC 21 22:09:59.1±1.0**, 29.°9N**±0.°1×**88.°0E**±0.°2**, h37^{km}, n12, σ0.s78**/12**, mb3.7**/9**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	13.88	359	eP	Pn	22 13 12.6	-0.7
WMQ				LR	LR		
WMQ	comp=N,71nm,14.5s			LR	LR		
WMQ	comp=E,61nm,18.5s			LR	LR		
	comp=Z,85nm,19.7s						
CMAR	Chiang Mai Arr 0.2nm,0.3s,baz=312,slow=14,SNR=5.6	15.18	136	Pn	Pn	22 13 31.1	+0.2
MKAR	Makanchi Array 0.1nm,0.3s,baz=154,slow=12,SNR=6.6	17.42	347	P	Pn	22 13 59.5	+0.3
KURBB	Kurchatov Arra 1.8nm,0.7s,baz=156,slow=11,SNR=8.2	21.86	344	P	P	22 14 47.9	-0.5
SONM	Songino Array 2.8nm,1.0s,baz=226,slow=9.9,SNR=15	22.84	33	P	P	22 15 00.8	+1.7
AKASG	Malin Array Be 0.7nm,0.5s,baz=84,slow=5.9,SNR=4.9	47.97	313	P	P	22 18 34.1	+0.1
FINES	FINESS Array B 0.8nm,0.7s,baz=108,slow=12,SNR=4.9	50.81	327	P	P	22 18 56.2	+0.6
NOA	NORSAR Array B 0.7nm,0.7s,baz=85,slow=7.0,SNR=3.8	57.97	326	P	P	22 19 47.2	-0.4
GERES	GERESS Array B 0.4nm,0.6s,baz=76,slow=5.6,SNR=3.6	58.12	312	P	P	22 19 49.6	+0.7
WRA	Warramunga Arr 0.3nm,0.5s,baz=326,slow=6.6,SNR=8.6	66.72	132	P	P	22 20 46.3	-0.4
ILAR	Eielson Array 0.4nm,0.8s,baz=318,slow=5.2,SNR=3.7	76.46	21	P	P	22 21 44.3	-0.4
YKA	Yellowknife Ar 0.2nm,0.5s,baz=336,slow=4.8,SNR=5.3	86.14	10	P	P	22 22 35.4	-0.7

MEX 21 22:17:03.9±0.4**, 15.°79N×96.°48W, h28^{km}, MD3.5, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PANG	Puerto Angel	0.13	177	i P	Pb	22 17 08.0	-1.1
PANG				i S	Sb	22 17 11.1	-1.6
HUIG	Huatulco	0.36	94	i P	Pb	22 17 10.5	-1.5
HUIG				eS	Sb	22 17 16.0	-1.6
VHO	Vista Hermosa	1.29	349	eP	Pn	22 17 23.8	-2.6
CMIG	Matias Romero	2.00	50	i P	Pn	22 17 34.3	-1.6
CMIG				i S	Sn	22 17 57.3	-2.7

*SOME **21** 22:27:44.8, 42.°30N×71.°62E, h15^{km}*

*NNC **21** 22:27:44.0±0.5, 42.°38N×71.°60E, h0^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=5.8km s-min=1.6km az=14.0*

*KRNET **21** 22:27:45.5±0.1, 42.°26N×71.°75E, h13^{km}, mb2.6*

ISC 21 22:27:43.1±1.3**, 42.°37N**±0.°03×**71.°58E**±0.°04**, h2^{km}**±11^{km}**, n44, σ1.s61**/70**, 20C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	Arkit baz=61	0.64	153	⇓iP	Pg	22 27 55.5	+0.3
ARK	baz=61			⇓iS	Sg	22 28 03.4	-0.1
MNAS	Manas 3.7nm,0.3s	0.69	80	⇓P	Pg	22 27 57.5	+1.1
MNAS	3.7nm,0.2s			⇑S	Sg	22 28 06.6	+1.2
MNAS	Manas 12nm,0.1s	0.69	80	P	Pg	22 27 57.5	+1.1
MNAS	15nm,0.1s			S	Sg	22 28 06.8	+1.5
MNAS	Manas baz=68	0.69	80	⇓iP	Pg	22 27 57.5	+1.1
MNAS	baz=68			⇓iS	Sg	22 28 05.6	+0.2
KK31	Karatay Array 0.7nm,0.2s,baz=162,slow=13,SNR=50	1.08	313	⇓P	Pn	22 28 05.2	0.0
KK31	4.4nm,0.2s,baz=141,slow=30,SNR=18			S	Sb	22 28 19.0	-0.1
MRKS	Merke 6.2nm,0.1s	1.27	72	P	Pg	22 28 08.2	+0.8
MRKS	12nm,0.3s			S	Sn	22 28 25.3	-0.4
MRKS	Merke baz=66	1.27	72	⇓iP	Pg	22 28 08.2	+0.8
MRKS	baz=66			⇓eS	Sn	22 28 25.2	-0.4
MRKS	Merke 2.3nm,0.1s	1.27	72	⇓iP	Pg	22 28 08.2	+0.8
MRKS	8.1nm,0.1s			eS	Sn	22 28 25.3	-0.4
ARSB	Arslanbob baz=35	1.48	134	⇑iP	Pn	22 28 10.6	-0.2
ARSB	baz=35			⇑iS	Sn	22 28 28.5	-2.3
AML	Almayashu SNR=11	1.59	98	P	Pb	22 28 13.5	+0.1
AML	Almayashu baz=95	1.59	98	⇑iP	Pb	22 28 13.0	-0.3
AML	baz=95			⇑iS	Sb	22 28 33.7	-0.3
EKS2	Erkin-Say SNR=27	1.65	79	P	Pg	22 28 15.2	+0.5
EKS2	Erkin-Say baz=74	1.65	79	⇑iP	Pg	22 28 15.0	+0.3
EKS2	baz=74			⇑iS	Sg	22 28 36.4	+0.3
ARLS	Aral baz=1.0	2.10	103	⇓iP	Pb	22 28 22.2	+0.2
ARLS	baz=1.0			⇓iS	Sb	22 28 48.3	-0.3
AAK	Ala-Archa SNR=7.0	2.17	82	P	Pb	22 28 24.2	+1.0
AAK	Ala-Archa 2.0nm,0.4s	2.17	82	⇓Pg	Pb	22 28 23.8	+0.7
AAK	1.6nm,0.4s			⇑Lg	Lg	22 28 53.9	
AAK	Ala-Archa baz=79	2.17	82	⇑iP	Pb	22 28 23.5	+0.3
AAK	baz=79			⇑iS	Sg	22 28 51.8	-1.0
UCH	Uchtor SNR=6.7	2.18	93	P	Pb	22 28 24.1	+0.6
UCH	Uchtor baz=90	2.18	93	⇑iP	Pb	22 28 23.8	+0.3
UCH	baz=90			⇑iS	Sb	22 28 51.7	+0.6
USP	Ospenovka SNR=5.5	2.33	66	P	Pb	22 28 25.2	-0.6
BTK	Batken baz=98	2.38	194	⇑iP	Pb	22 28 27.5	+0.9
BTK	baz=98			⇑iS	Sb	22 28 57.5	+1.1
SGDS	Sogindy 2.0nm,0.1s	2.49	63	Pg	Pb	22 28 29.5	+0.9
SGDS	5.2nm,0.3s			Lg	Lg	22 29 02.0	
KBK	Karagaybulak SNR=5.5	2.51	82	P	Pg	22 28 30.6	-0.5
KZA	Kyzart SNR=7.0	2.74	95	P	Sb	22 29 10.8	+3.6
KZA	Kyzart baz=93	2.74	95	⇑iP	Pb	22 28 32.2	-0.8
KZA	baz=93			⇑iS	Sb	22 29 05.8	-1.4
SFK	Sufi-Kurgan 0.7nm,0.5s	2.76	148	⇓Pg	Pb	22 28 35.1	+1.8
SFK	2.7nm,0.4s			⇑Lg	Lg	22 29 10.4	
SFK	Sufi-Kurgan 0.5nm,0.1s	2.76	148	Pg	Pb	22 28 33.4	+0.1
SFK	2.8nm,0.4s			Lg	Lg	22 29 08.3	
TKM2	Tokmak 2 0.8nm,0.4s	3.01	78	⇑Pg	Pb	22 28 39.3	+1.8
TKM2	2.9nm,0.6s			⇓Lg	Lg	22 29 18.6	
DGS	Degeres 2.6nm,0.4s	3.21	73	Pg	Pb	22 28 41.5	+0.7
DGS	3.7nm,0.3s			Lg	Lg	22 29 22.4	
DGS	Degeres baz=70	3.21	73	eP	Pb	22 28 41.5	+0.7
DGS	baz=70			eS	Sb	22 29 22.4	+2.1
DGS	Degeres 2.6nm,0.4s	3.21	73	eP	Pb	22 28 41.5	+0.7
DGS	3.7nm,0.3s			eS	Sb	22 29 22.4	+2.1
KST	Kastek 9.3nm,3.0s	3.30	77	Pg	Pb	22 28 43.5	+1.1
KST	3.1nm,0.7s			Lg	Lg	22 29 25.9	
KST	Kastek baz=74	3.30	77	⇓iP	Pb	22 28 43.5	+1.1
KST	baz=74			⇑iS	Sb	22 29 26.0	+2.9
KST	Kastek 9.3nm,3.0s	3.30	77	⇓iP	Pb	22 28 43.5	+1.1
KST	3.1nm,0.7s			⇑iS	Sb	22 29 25.9	+2.9
IZV	Izvestkoviy 2.2nm,0.5s	3.77	78	Pg	Pg	22 28 53.6	-1.7
IZV	2.5nm,0.5s			Lg	Lg	22 29 43.1	
IZV	Izvestkoviy baz=76	3.77	78	eP	Pg	22 28 53.6	-1.7
IZV	baz=76			eS	Sg	22 29 43.1	-1.0
IZV	Izvestkoviy 2.2nm,0.5s	3.77	78	eP	Pg	22 28 53.6	-1.7
IZV	2.5nm,0.5s			eS	Sg	22 29 43.1	-1.0
KTBS	Karatobe	3.97	68	Pg	Pg	22 28 57.3	-1.9

	1.2nm,0.2s						
KTBS				Lg	Lg	22 29 48.3	
	4.6nm,0.6s						
KTBS	Karatobe	3.97	68	*e*P	Pg	22 28 57.3	-1.9
	baz=66						
KTBS				*e*S	Sg	22 29 48.3	-2.4
	baz=66						
KTBS	Karatobe	3.97	68	*e*P	Pg	22 28 57.2	-1.9
	1.2nm,0.2s						
KTBS				*e*S	Sg	22 29 48.3	-2.4
	4.6nm,0.6s						
MDOK	Medeo	4.10	77	⇓Pg	Pg	22 29 00.0	-1.7
	0.8nm,0.4s						
MDOK				Lg	Lg	22 29 54.4	
	2.6nm,0.7s						
CHKK	Chushkaly	4.23	68	Pg	Pb	22 29 01.1	+3.0
	0.6nm,0.3s						
CHKK				Lg	Lg	22 29 54.8	
	2.1nm,0.3s						
CHKK	Chushkaly	4.23	68	*e*P	Pb	22 29 01.1	+3.0
	baz=66						
CHKK				*e*S	Sg	22 29 54.8	-4.1
	baz=66						
CHKK	Chushkaly	4.23	68	*e*P	Pb	22 29 01.1	+3.0
	0.6nm,0.3s						
CHKK				*e*S	Sg	22 29 54.8	-4.1
	2.1nm,0.3s						

NEIC 21 22:33:54.8±0.0**, 41°.22N**×**117°.48W, h0^{km}, ML3.5**(REN)**, After REN., Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMN	Battle Mountai	0.81	166	*e*Pn	Pb	22 34 12.0	+0.1
WVOR	Wild Horse Val	1.49	325	*e*Pn	Pb	22 34 24.9	+1.5
ELK	Elko	1.76	105	*e*Pn	Pg	22 34 30.7	+2.1
PAHR	Pah Rah Range	2.09	224	*e*Pn	Pn	22 34 30.0	-1.2
KVN	Kaiserville	2.21	193	*e*Pn	Pn	22 34 32.5	-0.5
VCNR	Virginia City	2.54	222	*e*Pn	Pn	22 34 35.8	-1.6
BEKR	Beckworth	2.57	239	*e*Pn	Pn	22 34 37.2	-0.7
YERR	Yerington	2.60	212	*e*Pn	Pn	22 34 37.3	-1.0
PNTR	Pine Nut	2.67	218	*e*Pn	Pn	22 34 38.4	-0.9
RYN	Ryan	2.71	198	*e*Pn	Pn	22 34 39.2	-0.5
NV11	Mina Array Sit	2.83	191	*e*Pn	Pn	22 34 41.1	-0.3
NV01	Mina Array Sit	2.85	193	*e*Pn	Pn	22 34 41.2	-0.5
WAKR	Walker	3.10	210	*e*Pn	Pn	22 34 44.9	-0.2
R11A	Troy Canyon, C	3.22	152	*e*Pn	Pg	22 34 55.0	-1.4
HLID	Hailey	3.27	43	*e*Pn	Pb	22 34 52.5	-1.3
BGU	Big Grassy Mou	3.38	93	*e*Pn	Pn	22 34 50.4	+1.4
ORV	Oroville	3.49	243	*e*Pn	Pn	22 34 50.7	+0.4
AFDM	Forest Hills D	3.51	231	*e*Pn	Pn	22 34 53.8	+3.2
HVU	Hansel Valley	3.58	79	*e*Pn	Pb	22 34 56.0	-3.1
BMO	Blue Mountains	3.64	2	*e*Pn	Pn	22 34 55.0	+2.6
DUG	Dugway, Tooele	3.69	105	*e*Pg	Pb	22 35 00.8	-0.3
OMMB	Old Mammoth Mi	3.79	199	*e*Pg	Pg	22 35 05.2	-2.2
MDPB	Devils Postpil	3.79	200	*e*Pg	Pb	22 35 04.4	+1.8
SPUT	South Promonto	3.80	87	*e*Pn	Pn	22 34 58.1	+3.4
WDC	Whiskeytown Da	3.88	262	*e*Pg	Pg	22 35 09.0	-0.3
CMB	Columbia Colle	3.89	216	*e*Pg	Pb	22 35 06.0	+1.8
YBH	Yreka Blue Hor	3.96	279	*e*Pg	Pg	22 35 09.9	-0.7
G08A	Pilot Rock	4.21	346	*e*Pg	Pg	22 35 16.9	+1.4
HUMO	Hull Mountain	4.31	291	*e*Pn	Pn	22 35 06.5	+4.9
TPNV	Topopah Spring	4.37	167	*e*Pg	Pb	22 35 12.4	-0.1
FXWY	Fox Creek	5.36	61	*e*Pg	Pg	22 35 40.4	+2.9

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*ATH **21** 22:51:07.8, 41°.66N×20°.44E, h10^{km}±3^{km}, ML2.3/2, Error ellipse: s-maj=4.4km s-min=1.6km az=187.0*
*TIR **21** 22:51:08.1, 41°.47N×20°.43E, h6^{km}, Md2.6/4*
*ISCJB **21** 22:51:10.7±0.5, 41°.47N±0°.02×20°.40E±0°.03, h2^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=2.9km az=149.8*
*BEO **21** 22:51:10.9±0.5, 41°.37N×20°.41E, h10^{km}±3^{km}, ML2.2/6*
ISC 21 22:51:10.4±1.1**, 41°.42N**±0°.02×**20°.41E**±0°.03**, h4**^{km}±10^{km}**, n29, σ1^{s}.13**/47**, 1C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.26	4	*i* PG	Pg	22 51 14.1	-1.4
PHP				*i* SG	Sg	22 51 19.4	+0.4
TIR	Tirane	0.42	260	*e*Pg	Pg	22 51 17.7	-0.8
TIR				*e*Sg	Sb	22 51 26.3	-0.8
TIR	Tirane	0.42	260	P	Pg	22 51 17.7	-0.8
TIR				S	Sb	22 51 25.9	-1.2
TIR				AML	AML	22 51 29.3	
	comp=E,1068μm,0.5s						
TIR				AML	AML	22 51 30.1	
	comp=N,972μm,0.4s						
TIR	Tirane	0.42	260	*i* PG	Pg	22 51 19.0	+0.5
TIR				*i* SG	Sb	22 51 25.5	-1.6
OHR	Ohrid	0.42	137	⇑*i*Pg	Pb	22 51 19.7	-0.8
KRUS	Krusevo	0.63	95	*i* Pg	Pb	22 51 22.5	-1.6
KRUS				*i* Sg	Sn	22 51 34.5	-2.3
PUK	Puka	0.73	328	*i* PG	Pg	22 51 23.4	-1.1
PUK				*i* SG	Sg	22 51 34.7	+0.7
BIA	Bitola	0.80	120	*i* Pg	Pb	22 51 26.3	-0.6
FNA	Florina	0.97	131	P	Pb	22 51 28.8	-1.0
FNA				S	Sn	22 51 45.3	+0.2
FNA				AML	AML	22 51 49.4	
	comp=E,272μm,0.4s						
FNA				AML	AML	22 51 50.7	
	comp=N,202μm,0.5s						
BCI	Bajram Curri	0.98	345	*i* PG	Pg	22 51 28.7	-0.5
BCI				*i* SG	Sb	22 51 43.1	-0.1
NEST	Nestorio	1.11	154	P	Pn	22 51 32.2	-0.7
NEST				S	Sn	22 51 51.1	+2.4
PDG	Podgorica	1.33	320	*e*Pg	Pg	22 51 34.5	-1.3
PDG				*e*Sg	Sn	22 51 53.9	0.0
PENT	Pentalofos	1.34	156	P	Pn	22 51 36.6	+0.6
STIP	Stip	1.36	78	*i* Pn	Pb	22 51 38.7	+2.3
GRG	Griva	1.57	107	P	Pb	22 51 39.3	-0.7
VAY	Valandovo	1.63	93	*i* Pn	Pb	22 51 39.8	-1.2
VAY				*i* Sn	Sg	22 52 04.8	+2.2
KPRO	Kipourio	1.63	153	P	Pg	22 51 41.4	-0.3
BARS	Barje	1.74	36	*e*Pn	Pn	22 51 40.8	-0.6
BARS				*e*Sg	Sg	22 52 07.8	+1.5
KEK	Kerkira	1.77	196	P	Pg	22 51 44.4	+0.1
SJES	Sjenica	1.87	350	*e*Pn	Pn	22 51 43.6	+0.3
SJES				*e*Sg	Sg	22 52 12.1	+1.7
SELS	Selova	1.87	16	*e*Pn	Pn	22 51 43.0	-0.3
IGT	Igoumenitsa	1.89	182	P	Pb	22 51 45.1	-0.3
TREB	Trebinje	2.01	311	*e*Pn	Pn	22 51 45.8	+0.7
TREB				*e*Sg	Sg	22 52 16.1	+1.2
IVAS	Ivanjica	2.16	355	*e*Pn	Pn	22 51 48.4	+1.1
VTS	Vitosha	2.39	60	*e*Pn	Pn	22 51 50.3	-0.2
VTS				*e*Sn	Sn	22 52 20.6	+0.3
GRUS	Gruza	2.48	5	*e*Pn	Pn	22 51 52.0	+0.5
GRUS				*e*Sn	Sn	22 52 23.6	+1.4
ZAPS	Zavoj	2.48	41	*e*Pn	Pn	22 51 52.4	+0.8
DIVS	Divibare	2.69	354	*e*Pn	Pn	22 51 55.4	+0.8
DIVS				*e*Sn	Sn	22 52 27.8	+0.1
TRUS	Trudelj	2.80	360	*e*Pn	Pn	22 51 57.2	+1.2
TRUS				*e*Sn	Sn	22 52 30.2	0.0

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*ISK **21** 23:07:01.7, 38°.36N×27°.26E, h10^{km}, ML2.1/7*
*ISCJB **21** 23:07:02.3±0.6, 38°.33N±0°.05×27°.25E±0°.06, h10^{km}±9^{km}, Error ellipse: s-maj=9.1km s-min=6.2km az=42.8*
*DDA **21** 23:07:02.0, 38°.35N×27°.24E, h7^{km}±1^{km}, ML2.5*
ISC 21 23:07:02.2±1.0**, 38°.35N**±0°.04×**27°.24E**±0°.03**, h14**^{km}±8^{km}**, n13, σ0^{s}.27**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.16	281	PG	Pg	23 07 05.9	-0.1
BLCB				SG	Sg	23 07 08.9	+0.2
DGB	zmir	0.41	223	*i* P	Pg	23 07 10.4	0.0
DGB				IAML_P			
	comp=Z,1μm,0.1s						
URLA	Izmir	0.51	271	PG	Pg	23 07 12.3	+0.1
URLA				SG	Sb	23 07 20.0	-0.2
URLA	Izmir	0.51	271	*i* P	Pb	23 07 12.5	-0.4
ZEY	zmir	0.59	259	*i* P	Pb	23 07 14.2	-0.1
ZEY				*i* S	Sb	23 07 22.6	0.0
ZEY				IAML_P			
	comp=Z,1μm,0.1s						
ZEDA	zmir-Bergama	0.62	348	*i* P	Pb	23 07 15.1	+0.2
ZEDA				*i* S	Sb	23 07 23.8	+0.2
AYDB	Zeytinkoy-Aydi	0.65	128	PG	Pg	23 07 14.7	-0.2
GCAM	G?zelcaml?	0.65	181	PG	Pg	23 07 14.7	-0.2
AKHS	Akhisar	0.69	40	*i* P	Pn	23 07 17.3	-0.3
AKHS				*i* S	Sb	23 07 25.7	+0.3
CHOS	Chios island	0.94	272	PG	Pb	23 07 20.4	+0.2
MANT	Manisa	1.04	82	*i* P	Pn	23 07 23.0	+0.4
MANT				IAML_P			
	comp=Z,319nm,0.1s						
KULA	Kula-Manisa	1.12	81	PN	Pg	23 07 23.4	-0.4
MLSB	Milas	1.14	158	PN	Pb	23 07 23.9	+0.2

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*IDC **21** 23:17:58.5±0.9, 32°.97S×179°.19W, h0^{km}, mb4.4/4, mb1 4.5/5, mb1mx4.1/36, mbtmp4.4/5, ML4.2/1, MS3.4/3, Ms1 3.4/3, ms1mx3.0/22, Error ellipse: s-maj=31.9km s-min=25.2km az=50.0*
*ISCJB **21** 23:18:03.9±0.5, 33°.33S±0°.04×179°.3W±0°.1, h45^{km}, mb4.3/6, MS3.4/3, Error ellipse: s-maj=13.9km s-min=4.2km az=20.4*
*NEIC **21** 23:18:03.9±0.7, 33°.16S×179°.18W, h35^{km}, mb4.5/3, Error ellipse: s-maj=20.1km s-min=16.0km az=220.0*
*WEL **21** 23:18:04.6±0.7, 33°S±7°×17°9W±1°7, h33^{km}, ML5.1/21*
ISC 21 23:18:05.5±0.7**, 33°.32S**±0°.07×**179°.1W**±0°.1**, h45**^{km}**, n61, σ1^{s}.48**/74**, mb4.3**/6**, MS3.4**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.16	14	P	Pn	23 19 05.7	-0.8
GLKZ				S	Sn	23 19 53.0	-0.8
MXZ	Matakaoa Point	4.74	206	P	Pn	23 19 14.2	-0.2
MXZ				S	Sn	23 20 07.9	-0.2
WMGZ	Waiomatatini S	4.93	204	P	Pn	23 19 17.5	+0.4
WMGZ				S	Sn	23 20 13.5	+0.7
HAZ	Te Kaha	5.12	209	P	Pn	23 19 19.5	0.0
HAZ				S	Sn	23 20 18.8	+1.6
PKGZ	Pakihiroa	5.12	206	P	Pn	23 19 19.2	-0.4
PKGZ				S	Sn	23 20 15.7	-1.7
PUZ	Puketiti	5.21	204	P	Pn	23 19 19.8	-1.2
PUZ				S	Sn	23 20 20.1	+0.3
RUGZ	Raukumara Rang	5.34	209	P	Pn	23 19 22.9	+0.2
RUGZ				S	Sn	23 20 21.7	-1.2
GRZ	Great Barrier	5.37	235	P	Pn	23 19 24.2	+1.2
TWGZ	Tauwhareparae	5.41	205	P	Pn	23 19 22.9	-0.7
TWGZ				S	Sn	23 20 24.2	-0.3
KUZ	Kuaotunu	5.47	230	P	Pn	23 19 26.5	+2.1
MYRZ	Mayor Island	5.50	223	P	Pn	23 19 27.3	+2.4
CNGZ	Carnagh Statio	5.61	202	P	Pn	23 19 25.1	-1.2
TKGZ	Te Karaka	5.69	205	P	Pn	23 19 26.8	-0.6
TKGZ				S	Sn	23 20 30.1	-1.2
MWZ	Matawai	5.71	208	P	Pn	23 19 27.3	-0.5
MWZ				S	Sn	23 20 30.4	-1.7
OPRZ	Ohinepanea	5.75	217	P	Pn	23 19 29.3	+1.0
MARZ	Manawahe	5.80	215	P	Pn	23 19 31.5	+2.5
URZ	Urewera	5.82	211	Pn	Pn	23 19 27.8	-1.4
	5.9nm,0.3s,baz=279,slow=6.5,SNR=35						
URZ				Sn	Sn	23 20 33.5	-1.1
	14nm,0.3s,baz=68,slow=23,SNR=7.3						
URZ	Urewera	5.82	211	P	Pn	23 19 28.0	-1.2
URZ				S	Sn	23 20 32.4	-2.3
RIGZ	Rimuhau	5.95	205	P	Pn	23 19 29.8	-1.3
RIGZ				S	Sn	23 20 36.5	-1.5
PRGZ	Paritu Road	6.11	203	P	Pn	23 19 32.7	-0.5
PRGZ				S	Sn	23 20 38.6	-3.2
MUGZ	Murupara	6.15	212	P	Pn	23 19 33.5	-0.2
SNGZ	Shannon Statio	6.17	207	P	Pn	23 19 34.1	0.0
SNGZ				S	Sn	23 20 41.2	-2.2
RTZ	Ruatahuna	6.18	210	P	Pn	23 19 34.3	+0.1
MHGZ	Mahia Peninsul	6.31	202	P	Pn	23 19 34.8	-1.2
RAHZ	Arahi	6.39	208	P	Pn	23 19 37.3	+0.2
MTHZ	Maungataniwha	6.43	210	P	Pn	23 19 37.9	+0.2
WHHZ	Waihua	6.47	206	P	Pn	23 19 38.5	+0.3
ARHZ	Aropaoanui	6.73	207	P	Pn	23 19 42.0	+0.4
BKZ	Black Stump Fm	6.84	210	P	Pn	23 19 42.5	-0.8
KWHZ	Kaweka Forest	7.09	210	P	Pn	23 19 45.3	-1.4
WTVZ	West Tongariro	7.21	215	P	Pn	23 19 48.1	-0.3
KAHZ	Kahuranaki	7.24	206	P	Pn	23 19 46.8	-1.8
TWVZ	Taurewa	7.25	216	P	Pn	23 19 49.6	+0.6
TUVZ	Tukino	7.30	214	P	Pn	23 19 50.1	+0.5
FWVZ	Far West T-bar	7.34	215	P	Pn	23 19 50.0	-0.3
MOVZ	Moawhango	7.37	213	P	Pn	23 19 50.0	-0.5
TRVZ	Turoa	7.38	214	P	Pn	23 19 50.1	-0.7
STKA	Stephens Creek	33.03	262	LR	LR	23 35 53.6	
	comp=Z,78nm,21.5s,baz=28,slow=33						
CTA	Charters Tower	33.50	284	P	P	23 24 41.4	+0.7
	2.6nm,0.5s,baz=108,slow=10,SNR=5.1						
CTAO	Charters Tower	33.50	284	*e*P	P	23 24 39.2	-1.5
	3.5nm,0.4s						
ASAR	Alice Springs	42.13	271	P	P	23 25 52.7	-0.9
	2.5nm,0.5s,baz=110,slow=7.7,SNR=35						
WRAB	Tennant Creek	43.38	276	*e*P	P	23 26 02.4	-1.3
	4.1nm,0.6s						
WRA	Warramunga Arr	43.39	276	P	P	23 26 02.1	-1.7
	3.7nm,0.7s,baz=118,slow=7.5,SNR=32						
WRA				LR	LR	23 42 52.2	
	comp=Z,53nm,21.0s,baz=125,slow=34						
QSPA	South Pole Qui	56.80	180	*e*P	P	23 27 46.6	+1.7
	2.9nm,0.5s						
QSPA	South Pole Qui	56.80	180	P	P	23 27 47.1	+2.2
	4.2nm,0.7s,baz=19,slow=4.7,SNR=38						
SNAA	Sanae	75.27	179	P	P	23 29 43.7	+0.4
VNA3	Neumayer Olymp	75.46	176	P	P	23 29 44.6	+0.3
VNA2	Neumayer--Watz	75.88	177	P	P	23 29 47.4	+0.7
PLCA	Paso Flores	81.19	133	P	P	23 30 19.1	+2.6
	1.3nm,0.6s,baz=263,slow=6.5,SNR=4.8						
TRQA	Tornquist	88.02	135	*e*P	P	23 30 51.5	+0.5
NNA	Nana	93.48	107	LR	LR	00 04 17.7	
	comp=Z,12nm,19.4s,baz=274,slow=30						
MKAR	Makanchi Array	118.92	309	PKP	PKPdf	23 36 46.9	-1.8
	0.2nm,0.4s,baz=236,slow=0.9,SNR=5.2						
KBZ	Khabaz	145.88	300	PKPbc	PKPdf	23 37 38.3	-0.6
	1.6nm,1.0s,baz=129,slow=6.3,SNR=4.0						
FINES	FINESS Array B	147.53	338	PKPbc	PKPbc	23 37 42.1	-1.7
	5.5nm,0.6s,baz=57,slow=3.6,SNR=31						
NB2	NORSAR Subarra	151.47	350	PKP	PKPbc	23 37 52.1	-1.6
	comp=Z,2.0nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.47	350	PKPbc	PKPbc	23 37 52.6	-1.1
	comp=Z,2.3nm,0.8s,baz=20,slow=4.7,SNR=20						
LIC	Lamto	152.48	167	*e*PKP2	PKiKP	23 38 01.3	+3.6
	comp=Z,42nm,1.4s						
KIC	Kosan Boka	152.66	168	*e*PKP2	PKiKP	23 38 01.3	+3.2
	comp=Z,70nm,1.7s						
TIC	Toumodi	152.89	167	*e*PKP2	PKiKP	23 38 02.9	+4.4
BRTR	Keskin Array B	153.04	293	PKPbc	PKPbc	23 37 56.0	-2.1
	comp=Z,1.1nm,0.8s,baz=116,slow=5.6,SNR=7.4						
TORD	Torodi Ar. Bea	159.91	182	PKPab	PKPab	23 38 39.5	+0.2
	comp=Z,2.8nm,0.9s,baz=171,slow=4.2,SNR=12						

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*TEH **21** 23:36:46.3, 38°.65N×48°.73E, h10^{km}, ML3.3*
*ISCJB **21** 23:36:48.3±0.6, 38°.69N±0°.05×48°.79E±0°.06, h26^{km}, Error ellipse: s-maj=8.1km s-min=5.5km az=135.9*
ISC 21 23:36:49.1±1.2**, 38°.64N**±0°.06×**48°.67E**±0°.06**, h26**^{km}**, n12, σ1^{s}.62**/15**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRB	Sarab	1.14	224	*e*Sg	Sb	23 37 26.2	+1.5
ISRB				*e*Pg	Pb	23 37 09.6	-0.6
ISRB				IAMB	IAmb	23 37 27.0	
	comp=Z,3μm,0.2s						
IHRS	Heris	1.32	256	*e*Pg	Pb	23 37 12.3	-1.0
IHRS				IAMB	IAmb	23 37 32.6	
	comp=Z,5μm,0.3s						
IBST	Bostanabad	1.69	237	*e*Pn	Pn	23 37 17.3	+0.2
IBST				IAMB	IAmb	23 37 43.7	
	comp=N,690nm,0.2s						
ITBZ	Tabriz	2.02	259	*e*Pn	Pb	23 37 23.2	-2.1
ITBZ				IAMB	IAmb	23 37 26.5	
	comp=Z,750nm,0.2s						
IMRD	Marand	2.32	273	*e*Pn	Pb	23 37 27.8	-2.6
IMRD				IAMB	IAmb	23 37 37.1	
	comp=Z,1μm,0.2s						
DDFL	Dedoflistskaro	3.42	326	P	Pn	23 37 42.6	+1.9
DDFL				S	Sn	23 38 23.2	+2.8
LGD	Lagodekhi	3.69	331	P	Pn	23 37 44.2	-0.2
LGD				S	Sn	23 38 26.2	-0.9
IPRN	Peran	3.78	128	*e*Pn	Pn	23 37 44.6	-1.1
IPRN				IAMB	IAmb	23 38 26.9	
	comp=Z,2μm,0.2s						
IDMV	Damavand	4.07	138	*e*Pn	Pn	23 37 51.3	+1.3
IDMV				IAMB	IAmb	23 37 53.3	
	comp=Z,153nm,0.2s						
IALA	Alasht	4.17	127	*e*Pn	Pn	23 37 50.9	-0.4
IALA				IAMB	IAmb	23 37 52.1	
	comp=Z,1μm,0.1s						
IFIR	Firoozkooh	4.43	131	*e*Pn	Pn	23 37 55.7	+0.9
IFIR				IAMB	IAmb	23 37 57.5	
	comp=Z,518nm,0.1s						
ISHM	Shahmirzad	4.65	126	*e*Pn	Pn	23 37 58.5	+0.6
ISHM				IAMB	IAmb	23 37 59.0	
	comp=Z,621nm,0.2s						

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*IDC **21** 23:39:33.6±0.7, 29°.98N×88°.15E, h0^{km}, mb3.9/14, mb1 4.1/16, mb1mx3.9/36, mbtmp3.9/16, ML3.8/2, MS2.9/3, Ms1 2.9/3, ms1mx2.6/40, Error ellipse: s-maj=29.5km s-min=15.2km az=49.0*
*ISCJB **21** 23:39:34.3±0.3, 30°.02N±0°.04×87°.91E±0°.05, h10^{km}, mb3.9/16, MS3.0/2, Error ellipse: s-maj=6.6km s-min=4.3km az=143.5*
*BJI **21** 23:39:36.0, 30°.09N×88°.07E, h9^{km}, mb4.0/16, ML4.0/1, Ms3.8/4, Ms7 3.7/1*
*NEIC **21** 23:39:37.0±2.9, 29°.92N×87°.99E, h21^{km}±21^{km}, mb4.2/1, Error ellipse: s-maj=11.7km s-min=8.0km az=221.0*
*NDI **21** 23:39:38.3±2.5, 30°.14N×87°.99E, h21^{km}, ML4.0, mb4.2(NEIC)*
ISC 21 23:39:35.9±0.5**, 29°.96N**±0°.05×**87°.89E**±0°.05**, h10**^{km}**, n43, σ2^{s}.10**/46**, mb4.0**/16**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTK	Tadong	2.71	167	*e*P	Pb	23 40 22.6	-1.9
GTK				*e*S	Sn	23 40 53.9	+1.4
TAWA	Tawang	4.21	123	*e*P	Pn	23 40 41.8	+1.2
TAWA				*e*S	Sn	23 41 28.1	-1.9
TEZP	TEZPUR	5.46	126	*e*P	Pn	23 40 56.9	-0.5
TEZP				*e*S	Sn	23 41 57.9	-2.3
SHL	Shillong	5.63	140	*e*P	Pn	23 41 00.0	+0.2
SHL				*e*S	Sn	23 42 02.6	-2.0
ZIRO	ZIRO	5.76	113	*e*P	Pn	23 41 03.6	+1.8
ZIRO				*e*S	Sn	23 42 04.8	-3.2
ZIRO				IAML		23 42 09.0	
	comp=N,947nm,1.0s						
ZIRO				IAML		23 42 16.0	
	comp=E,207nm,1.2s						
BOK	Bokaro	6.40	197	*e*P	Pn	23 41 13.6	+3.3
BOK				*e*S	Sn	23 42 25.6	+2.2
KOHI	KOHIMA	6.94	126	*e*x	Pn	23 41 18.3	+0.5
KOHI				*e*S	Sn	23 42 39.2	+2.3
BRDH	Bariadhala	8.00	154	LR	LR	23 44 34.5	
	comp=E,31nm,20.9s,baz=0.0,slow=38						
DDI	Dehra Dun	8.53	275	*e*P	Pn	23 41 42.4	+2.9
DDI				*e*S	Sn	23 43 10.1	-5.7
DDI				IAML		23 43 24.7	
	comp=E,70nm,0.2s						
DDI				IAML		23 43 25.7	
	comp=N,58nm,0.3s						
SMLA	Simla	9.32	280	*e*P	Pn	23 41 51.6	+1.2
SMLA				*e*S	Sn	23 43 29.4	-5.9
DHRM	DHARAMSHALA	10.20	286	*e*P	Pn	23 42 02.4	-0.2
DHRM				*e*x	x	23 43 54.7	
DHRM				IAML		23 44 08.9	
	comp=N,26nm,0.8s						
DHRM				IAML		23 44 12.0	
	comp=E,25nm,1.1s						
BHPL	Bhopal	11.51	237	*e*P	Pn	23 42 21.2	+0.8
BHPL				*e*S	Sn	23 44 22.4	-6.6
NIL	Nilore	12.98	290	*e*P	Pn	23 42 40.9	+0.3
	comp=E,17nm,0.4s						
GTA	Gaotai	13.59	43	*e*P	P	23 42 59.6	+1.6
GTA				pP	Pn	23 43 04.3	+15
GTA				sP		23 43 07.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMQ	Urumqi	13.84	359	*e*P	Pn	23 42 49.8	-2.3
CHTO	Chiang Mai	14.97	135	P	P	23 43 15.9	+2.6
	comp=Z,25nm,1.3s						
CMMT	Chiang Mai	14.97	135	P	P	23 43 15.8	+2.5
	comp=Z,5.4nm,1.4s						
PAYA	Payao	15.15	131	P	P	23 43 23.8	+8.5
	comp=Z,2.7nm,1.0s,comp=Z,528nm						
CMAR	Chiang Mai Arr	15.24	136	Pn	Pn	23 43 09.8	-1.6
	comp=Z,0.3nm,0.3s,baz=313,slow=11,SNR=7.1						
MKAR	Makanchi Array	17.36	347	P	Pn	23 43 38.4	+0.1
	comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=17						
PBKT	Sadao Pong	17.92	135	P	P	23 43 49.2	+3.3
	comp=Z,10nm,1.1s,comp=Z,2μm						
XAN	Xi'an	18.29	72	P	P	23 43 55.4	+5.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,48nm,4.1s						
SRAK	Srakaew	20.56	137	P	Pn	23 44 23.4	+6.3
	comp=Z,30nm,0.9s						
KURBB	Kurchatov Arra	21.80	344	P	P	23 44 28.0	-0.1
	comp=Z,4.7nm,0.7s,baz=156,slow=11,SNR=14						
KURK	Kurchatov	21.87	344	*e*P	P	23 44 28.3	-0.4
SONM	Songino Array	22.83	33	P	P	23 44 39.6	+0.4
	comp=Z,5.5nm,0.8s,baz=215,slow=10,SNR=36						
SONM				LR	LR	23 55 02.0	
	comp=Z,63nm,18.7s,baz=167,slow=41						
ULN	Ulaanbaatar	23.17	34	*e*P	P	23 44 42.9	+0.1
	comp=Z,6.8nm,0.9s						
ZALV	Zalesovo Beam	24.07	356	P	P	23 44 50.2	-1.1
	comp=Z,1.1nm,0.7s,baz=182,slow=10,SNR=4.4						
KRAB	Krabi	24.09	152	P	P	23 45 01.4	+10
GEYT	Alibeck	25.87	296	P	P	23 45 09.8	+1.9
	comp=Z,3.0nm,0.9s,baz=120,slow=8.8,SNR=6.1						
KSRS	Korea Array	33.93	66	LR	LR	00 00 47.3	
	comp=Z,29nm,18.7s,baz=276,slow=38						
NRIK	Noril'sk	39.42	360	P	P	23 47 05.4	-0.2
	comp=Z,1.4nm,0.7s,baz=168,slow=5.5,SNR=4.0						
BRTR	Keskin Array B	44.98	298	P	P	23 47 52.2	+0.6
	comp=Z,0.6nm,0.7s,baz=119,slow=6.7,SNR=6.0						
AKASG	Malin Array Be	47.90	313	P	P	23 48 13.8	-0.4
	comp=Z,0.7nm,0.4s,baz=81,slow=6.9,SNR=8.3						
FINES	FINESS Array B	50.75	327	P	P	23 48 35.9	+0.1
	comp=Z,0.8nm,0.4s,baz=109,slow=9.2,SNR=16						
NB2	NORSAR Subarra	57.90	326	P	P	23 49 27.0	-0.9
	comp=Z,0.8nm,0.7s,baz=85,slow=7.4						
NOA	NORSAR Array B	57.90	326	P	P	23 49 27.3	-0.6
	comp=Z,1.4nm,0.8s,baz=86,slow=7.1,SNR=7.4						
GERES	GERESS Array B	58.05	311	P	P	23 49 29.4	+0.2
	comp=Z,0.9nm,0.6s,baz=90,slow=8.0,SNR=5.7						
WRA	Warramunga Arr	66.79	132	P	P	23 50 26.3	-1.6
	comp=Z,1.1nm,0.6s,baz=326,slow=6.6,SNR=24						
ASAR	Alice Springs	69.25	135	P	P	23 50 41.9	-1.5
	comp=Z,1.0nm,0.6s,baz=320,slow=6.4,SNR=10.0						
ILAR	Eielson Array	76.44	21	P	P	23 51 23.9	-1.5
	comp=Z,1.0nm,0.8s,baz=302,slow=5.3,SNR=6.5						
TORD	Torodi Ar. Bea	80.31	280	P	P	23 51 47.8	+0.1
	comp=Z,0.6nm,0.6s,baz=46,slow=4.3,SNR=4.9						
YKA	Yellowknife Ar	86.11	10	P	P	23 52 15.4	-1.4
	comp=Z,1.2nm,0.8s,baz=336,slow=4.9,SNR=12						

IDC 21 23:42:17.0±6.4**, 49°.66N**×**113°.74W, h0**^{km}**, mb1 3.7**/1**, mb1mx3.0**/39**, mbtmp3.3**/1**, ML3.1**/1**, Error ellipse: s-maj=110.4km s-min=48.6km az=69.0, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	2.63	239	*i*		00 02 00.0	
	baz=53,slow=325,SNR=1.5						
I10CA	LAC DU BONNET	11.43	81	*i*		01 00 10.0	
	baz=271,slow=303,SNR=1.5						
YKA	Yellowknife Ar	12.88	358	Pn	Pn	23 45 16.6	-4.5
	0.1nm,0.3s,baz=183,slow=13,SNR=6.1						
YKA				Lg	Lg	23 48 59.0	
	baz=172,slow=26,SNR=3.0						

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*GUC **21** 23:50:35.2±0.8, 31°.34S×71°.80W, h28^{km}±5^{km}, ML3.7*
*SJA **21** 23:50:35.9±1.1, 31°.26S×71°.99W, h25^{km}±12^{km}, ML4.1, MW3.9*
*IDC **21** 23:51:10.0±16.0, 29°.97S×71°.03W, h268^{km}±123^{km}, mb3.5/2, mb1 3.3/4, mb1mx3.0/29, mbtmp3.9/4, MS2.8/1, Ms1 2.9/1, ms1mx2.5/16, Error ellipse: s-maj=188.7km s-min=56.5km az=5.0*
ISC 21 23:50:36.7±1.8**, 31°.32S**±0°.03×**71°.64W**±0°.08**, h14**^{km}±10^{km}**, n23, σ1^{s}.57**/34**, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	Combarbala	0.57	75	*e*P	Pn	23 50 49.8	-0.6
CMCH				*e*S	Sn	23 50 59.8	+0.1
CMCH				IAML		23 51 02.5	
	comp=N,10μm,0.3s						
GO04	Tololo Observa	1.36	33	*e*P	Pg	23 51 02.8	0.0

GO04				eS	Sn	23 51 23.5	+4.1
GO04	Tololo Observa	1.36	33	⇑eP	Pg	23 51 01.9	-0.9
GO04				eS	Sn	23 51 22.3	+2.9
ROCH	El Roble	1.73	162	⇑eP	Pn	23 51 06.1	-0.5
ROCH				eS	Sb	23 51 30.8	+0.8
ROCH				IAML		23 51 35.0	
	comp=N,1µm,0.5s						
ROC1	El Roble	1.73	162	eS	Sg	23 51 34.4	+1.9
PEL	Peldehue	1.99	156	eP	Pn	23 51 10.2	+0.3
PEL				eS	Sb	23 51 37.1	-0.3
PEL				IAML		23 51 41.4	
	comp=E,1µm,0.2s						
RTLS	Leoncito	2.06	104	eP	Pg	23 51 16.0	-0.1
RTLS				eS	Sg	23 51 46.6	+3.7
RTLS				IAML		23 51 47.0	
	comp=Z,1µm,0.5s						
AUSP	Uspallata	2.12	116	eP	Pg	23 51 16.5	-0.8
AUSP				eS	Sg	23 51 46.6	+1.8
AROD	Rodeo	2.19	59	eP	Pg	23 51 17.6	-1.2
AROD				eS	Sg	23 51 47.9	+0.6
FCH	Farellones	2.30	151	eP	Pn	23 51 15.6	+1.0
FCH				eS	Sb	23 51 46.3	-0.4
FCH				IAML		23 51 52.9	
	comp=E,329nm,0.5s						
ACCO	Cerro Coronel	2.33	72	eP	Pg	23 51 20.2	-1.2
ACCO				eS	Sg	23 51 52.4	+0.7
LCO	Las Campanas	2.44	20	eP	Pn	23 51 17.4	+0.9
LCO				eS	Sb	23 51 49.8	-0.9
LCO				IAML		23 51 59.4	
	comp=E,594nm,0.6s						
ASAL	Salagasta	2.70	119	eP	Pb	23 51 24.6	-0.3
ASAL				eS	Sg	23 52 00.4	-3.0
RTCV	Cerro Valdivia	2.70	102	eP	Pb	23 51 24.6	-0.2
RTLL	Cerro Villicun	2.71	91	eP	Pb	23 51 24.7	-0.2
AMOG	MOGNA	2.73	83	eP	Pb	23 51 25.7	+0.4
LMEL	Las Melosas	2.79	155	eP	Pn	23 51 21.6	+0.4
LMEL				eS	Sn	23 51 56.9	+2.1
LMEL				IAML		23 52 09.9	
	comp=N,306nm,0.5s						
LVC	Limon Verde	9.01	16	P	Pn	23 52 58.4	+12
	comp=N,0.5nm,0.3s,baz=185,slow=11,SNR=5.3						
CPUP	Villa Florida	13.49	72	LR	LR	23 59 23.2	
	comp=N,52nm,21.4s,baz=215,slow=39						
SIV	San Ignacio	18.05	35	P	Pn	23 54 47.1	-0.2
	comp=N,0.1nm,0.3s,baz=210,slow=13,SNR=4.2						
BDFB	Brasilia	26.62	60	P	P	23 56 14.3	-0.7
	comp=N,3.7nm,0.9s,baz=204,slow=12,SNR=3.6						
TORD	Torodi Ar. Bea	82.98	70	P	P	00 03 00.8	-1.0
	comp=N,1.2nm,0.7s,baz=256,slow=4.4,SNR=7.9						
ZALV	Zalesovo Beam	151.77	30	PKPbc	PKPbc	00 10 28.7	-1.7
	comp=N,3.4nm,0.8s,baz=298,slow=4.3,SNR=11						

IDC 22 00:00:15.6±2.0**, 7°.49S**×**126°.92E, h0^{km}, mb3.4**/1**, mb1 4.1**/3**, mb1mx3.6**/27**, mbtmp3.9**/3**, ML3.8**/2**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.4**/16**, Error ellipse: s-maj=280.4km s-min=30.8km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.32	151	Pn	Pn	00 03 39.1	-0.8
	0.4nm,0.3s,baz=327,slow=14,SNR=26						
WRA				Sn	Sn	00 06 03.5	-16
	1.3nm,0.3s,baz=330,slow=23,SNR=13						
ASAR	Alice Springs	17.43	158	P	Pn	00 04 20.8	+0.5
	0.6nm,0.3s,baz=339,slow=11,SNR=46						
ASAR				S	Sn	00 07 17.8	-17
	0.1nm,0.3s,baz=325,slow=18,SNR=4.0						
ASAR				LR	LR	00 12 33.5	
	comp=Z,69nm,18.3s,baz=140,slow=42						
MKAR	Makanchi Array	67.00	328	P	P	00 11 10.4	0.0
	0.1nm,0.4s,baz=134,slow=6.2,SNR=8.6						

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*ISK **22** 00:00:38.8, 38°.76N×43°.17E, h5^{km}, ML2.2/7*
*ISCJB **22** 00:00:39.9±0.4, 38°.79N±0°.03×43°.17E±0°.04, h10^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=4.1km az=35.6*
*DDA **22** 00:00:39.7, 38°.77N×43°.20E, h7^{km}±4^{km}, ML2.7*
ISC 22 00:00:39.5±1.2**, 38°.77N**±0°.03×**43°.20E**±0°.03**, h10**^{km}±12^{km}**, n18, σ0^{s}.42**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERCV	ERCIS-VAN	0.28	24	PG	Pg	00 00 45.4	+0.3
TVAN	Van	0.29	145	i P	Pb	00 00 46.5	-0.4
TVAN				i S	Sb	00 00 51.5	-0.4
TVAN				IAML_P			
	comp=Z,5µm,0.1s						
VMUR	Van-Muradiye	0.37	53	i P	Pg	00 00 47.4	+0.6
VMUR				i S	Sb	00 00 54.1	0.0
VMUR				IAML_P			
	comp=Z,1µm,0.2s						
ADCV	BITLIS_Adilcev	0.37	276	i P	Pb	00 00 48.4	+0.1
ADCV				i S	Sb	00 00 55.0	+0.7
ADCV				IAML_P			
	comp=Z,535nm,0.1s						
GEVA	Gevas	0.47	193	i P	Pg	00 00 48.6	0.0
GEVA				i S	Sb	00 00 57.4	+0.4
AKDM	Akdamar-Van	0.47	201	PG	Pg	00 00 48.3	-0.4
MLAZ	Malazgirt-MUS	0.63	307	PG	Pg	00 00 51.7	0.0
CLDR	Caldiran	0.68	56	PG	Pg	00 00 52.5	-0.1
CLDR				SG	Sb	00 01 02.7	-0.4
CLDR	Caldiran	0.68	56	i P	Pg	00 00 52.5	-0.1
TUTA	Tutak	0.70	335	i P	Pb	00 00 53.6	-0.4
AGRB	Hanur-Agry	0.82	349	PG	Pg	00 00 55.0	-0.4
AGRB				SG	Sb	00 01 07.1	-0.2
GURO	Guroymak-BITLI	0.94	257	PG	Pg	00 00 56.7	-0.8
GURO				SG	Sg	00 01 09.7	0.0
SRTM	Siirt_Merkez	1.27	233	i P	Pn	00 01 04.0	+0.7
SIRN	Sırnak	1.41	206	i P	Pg	00 01 07.0	+0.4
SIRN				IAML_P			
	comp=Z,421nm,0.2s						
VRTB	Varto-Mus	1.41	287	PN	Pb	00 01 05.8	-0.3
VRTB	Varto-Mus	1.41	287	i P	Pg	00 01 06.3	-0.3
CUKT	Cukurca	1.55	168	PN	Pn	00 01 07.5	+0.2
SVAN	Silvan-Diyarba	1.69	249	PN	Pn	00 01 09.4	+0.3

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*ISCJB **22** 00:07:22.8±0.7, 31°.19S±0°.05×179°.1E±0°.1, h350^{km}, mb2.9/2, Error ellipse: s-maj=14.9km s-min=5.4km az=16.3*
*WEL **22** 00:07:27.1±0.9, 31°S±16°×17°9E±4°5, h286^{km}±38^{km}*
*IDC **22** 00:07:27.1±6.7, 31°.86S×179°.64E, h456^{km}±76^{km}, mb2.7/2, mb1 3.1/3, mb1mx2.9/29, mbtmp3.7/3, Error ellipse: s-maj=88.4km s-min=36.1km az=15.0*
ISC 22 00:07:22.0±1.0**, 31°.19S**±0°.09×**179°.1E**±0°.2**, h350**^{km}**, n23, σ2^{s}.15**/40**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.20	54	P	Pn	00 08 23.3	0.0
GLKZ				S	S	00 09 12.3	-0.2
MXZ	Matakaoa Point	6.39	186	P	Pn	00 09 00.4	+3.2
MXZ				S	S	00 10 13.5	-1.1
WMGZ	Waiomatatini S	6.64	185	P	Pn	00 09 03.3	+3.2
WMGZ				S	S	00 10 20.3	+0.5
HAZ	Te Kaha	6.64	189	P	Pn	00 09 03.3	+3.2
HAZ				S	S	00 10 20.5	+0.7
PUZ	Puketiti	6.91	186	P	Pn	00 09 05.0	+1.8
PUZ				S	S	00 10 23.0	-2.4
URZ	Urewera	7.25	193	P	Pn	00 09 10.1	+3.0
	4.3nm,0.3s,baz=14,slow=4.2,SNR=13						
URZ				S	S	00 10 31.0	-1.7
	3.2nm,0.3s,baz=114,slow=20,SNR=8.5						
URZ	Urewera	7.25	193	P	Pn	00 09 08.6	+1.5
URZ				S	S	00 10 30.5	-2.2
MWZ	Matawai	7.25	190	P	Pn	00 09 10.2	+3.0
MWZ				S	S	00 10 31.4	-1.5
TKGZ	Te Karaka	7.31	188	P	Pn	00 09 08.8	+0.9
TKGZ				S	S	00 10 31.2	-2.9
RIGZ	Rimuhau	7.58	188	P	Pn	00 09 13.6	+2.4
RIGZ				S	S	00 10 38.1	-1.9
RTZ	Ruatahuna	7.62	193	P	Pn	00 09 13.8	+2.2
RTZ				S	S	00 10 39.2	-1.6
SNGZ	Shannon Statio	7.72	190	P	Pn	00 09 14.7	+2.0
SNGZ				S	S	00 10 42.3	-0.6
PRGZ	Paritu Road	7.78	187	P	Pn	00 09 16.5	+3.0
PRGZ				S	S	00 10 41.2	-3.2
MTHZ	Maungataniwha	7.87	193	P	Pn	00 09 17.0	+2.4
MTHZ				S	S	00 10 44.4	-1.9
RAHZ	Arahi	7.89	192	P	Pn	00 09 16.8	+2.0
RAHZ				S	S	00 10 44.9	-1.7
WHHZ	Waihua	8.02	191	S	S	00 10 48.9	-0.6
ARHZ	Aropaoanui	8.24	192	P	Pn	00 09 19.8	+1.0
ARHZ				S	S	00 10 52.8	-1.5
BKZ	Black Stump Fm	8.24	194	P	Pn	00 09 20.4	+1.4
BKZ				S	S	00 10 52.8	-1.7
MOVZ	Moawhango	8.65	198	P	Pn	00 09 24.8	+1.0
ASAR	Alice Springs	40.60	269	P	P	00 14 29.9	+0.7
	0.3nm,0.4s,baz=105,slow=6.7,SNR=4.3						
WRA	Warramunga Arr	41.66	275	P	P	00 14 38.3	+0.5
	0.4nm,0.3s,baz=111,slow=8.1,SNR=14						
FINES	FINESS Array B	144.98	338	PKPbc	PKPdf	00 26 12.4	-4.7
	1.7nm,0.5s,baz=50,slow=3.5,SNR=16						
BRTR	Keskin Array B	150.76	297	PKPbc	PKPdf	00 26 28.9	+1.4
	0.4nm,0.4s,baz=90,slow=2.3,SNR=5.2						

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*ISCJB **22** 00:13:02.5±0.4, 8°.01S±0°.09×111°.41E±0°.05, h132^{km}, mb3.7/5, Error ellipse: s-maj=13.0km s-min=6.3km az=10.9*
*DJA **22** 00:13:03.4±0.4, 8°S±6°×11°1E±°, h124^{km}±4^{km}, M3.9/18, mb4.3/1, MLv3.6/18*
*IDC **22** 00:13:04.7±8.4, 7°.45S×111°.60E, h166^{km}±72^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.3/33, mbtmp3.9/6, Error ellipse: s-maj=102.4km s-min=20.7km az=52.0*
ISC 22 00:13:01.6±0.8**, 7°.85S**±0°.09×**111°.38E**±0°.05**, h132**^{km}**, n23, σ1^{s}.86**/26**, mb4.0**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	0.40	210	P	Pn	00 13 22.2	+1.8
PCJI				S	Sn	00 13 36.2	+1.6
WOJI	Wonogiri, Jawa	0.45	271	P	Pn	00 13 22.6	+2.0
WOJI				S	Sn	00 13 37.2	+2.2
PWJI	Pagerwojo	0.46	112	P	Pn	00 13 22.3	+1.6
NGJI	Ngawi	0.49	10	P	Pn	00 13 23.5	+2.6
UGM	Wanagama	0.85	266	P	Pn	00 13 25.1	+1.7
TBJI	Tambak Boyo	1.13	25	P	Pn	00 13 28.2	+2.2
SMRI	Semarang	1.22	310	P	Pn	00 13 29.3	+2.4
GRJI	Gresik	1.43	50	P	Pn	00 13 31.6	+2.5
KPJI	Karang Pucung	2.48	282	P	Pn	00 13 43.3	+1.6
KMMI	Kalianget	2.69	73	P	Pn	00 13 46.1	+1.8
JAGI	Jajag, Banyuwa	2.81	103	P	Pn	00 13 47.0	+1.0
CMJI	Cimerak	2.90	271	P	Pn	00 13 48.2	+1.1
CISI	Cisompet, Garu	3.54	274	P	Pn	00 13 57.4	+1.9
SRBI	Singaraja	3.81	94	P	Pn	00 14 00.2	+1.3
PLAI	Plampang	6.41	99	P	Pn	00 14 34.3	+0.6
FITZ	Fitzroy Crossi	17.22	128	P	Pn	00 16 55.9	+1.6
	0.2nm,0.3s,baz=315,slow=11,SNR=4.2						
WRA	Warramunga Arr	25.28	121	P	P	00 18 15.9	-0.1
	2.5nm,0.5s,baz=297,slow=11,SNR=45						
WRA				PcP	PcP	00 21 45.0	-0.9
	0.2nm,0.3s,baz=325,slow=1.9,SNR=6.4						
ASAR	Alice Springs	26.71	129	P	P	00 18 29.0	+0.1
	1.1nm,0.6s,baz=303,slow=8.3,SNR=13						
ASAR				PcP	PcP	00 21 48.3	-0.9
	0.5nm,0.3s,baz=313,slow=2.0,SNR=6.9						
STKA	Stephens Creek	36.90	135	P	P	00 19 58.8	+1.0
	1.2nm,0.3s,baz=299,slow=5.8,SNR=6.2						
MKAR	Makanchi Array	60.24	337	P	P	00 22 53.7	-2.3
	1.0nm,0.5s,baz=142,slow=6.9,SNR=25						
BRTR	Keskin Array B	85.65	311	P	P	00 25 24.0	-1.9
	0.1nm,0.4s,baz=104,slow=4.4,SNR=3.7						
YKA	Yellowknife Ar	116.09	22	PKP	PKPdf	00 31 25.9	-2.9
	0.1nm,0.4s,baz=324,slow=2.2,SNR=3.6						
CPUP	Villa Florida	144.30	198	PKP	PKPbc	00 32 21.7	+0.3
	1.1nm,0.4s,baz=167,slow=3.9,SNR=4.0						

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*UPP **22** 00:20:00.4±0.0, 67°.83N×20°.21E, h1^{km}, ML2.4, Explosion*
HEL 22 00:20:02.3, 67°.93N×20°.35E, h0^{km}, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.03	354	P	Pg	00 20 03.1	+0.3
	baz=186						
KUA				S	Sg	00 20 05.0	+1.8
KUA	Kurravaara	0.03	354	P	Pg	00 20 05.1	+2.3
KUA				S	Sg	00 20 06.9	+3.6
KUA	Kurravaara	0.03	354	i P	Pg	00 20 05.1	+2.3
KUA				i S	Sg	00 20 06.9	+3.6
RATU	Laukkuluspa	0.30	251	P	Pg	00 20 05.0	-3.1
RATU	Laukkuluspa	0.30	251	P	Pg	00 20 06.7	-1.4
RATU				S	Sg	00 20 10.1	-1.9
RATU	Laukkuluspa	0.30	251	i P	Pg	00 20 06.7	-1.4
RATU				i S	Sg	00 20 10.1	-1.9
NIKU	Nikkaluokta	0.50	264	P	Pg	00 20 08.9	-2.9
NIKU	Nikkaluokta	0.50	264	P	Pg	00 20 10.9	-0.9
NIKU				S	Sg	00 20 17.0	-1.3
NIKU	Nikkaluokta	0.50	264	i P	Pg	00 20 10.9	-0.9
NIKU				i S	Sg	00 20 17.0	-1.3
MASU	Masugnsbyn	0.79	126	P	Pg	00 20 15.1	-2.3
DUNU	Dundret	0.81	174	P	Pg	00 20 13.7	-4.1
SALU	Saltoluokta	0.89	233	P	Pg	00 20 15.2	-4.2
KIF	Kilpisjarvi	1.10	9	eP	Pn	00 20 25.6	+0.7
KIF	Kilpisjarvi	1.10	9	ePB	Pn	00 20 25.3	+0.4
	baz=187						
KIF				MSG		00 20 36.8	
	comp=Z,4.5nm,0.2s						
KIF				eSB	Sn	00 20 41.2	+0.5
HEF	Hetta	1.33	67	eP	Pg	00 20 27.0	-0.8
HEF	Hetta	1.33	67	MSG		00 20 42.5	
	comp=Z,2.7nm,0.2s						
PAJU	Pajala	1.40	129	P	Pg	00 20 25.5	-3.5
PAJU	Pajala	1.40	129	S	Sg	00 20 46.0	-1.2
PAJU	Pajala	1.40	129	eS	Sg	00 20 46.0	-1.2
ERTU	Ertsjaerv	1.55	152	P	Pn	00 20 27.9	-3.3
ERTU	Ertsjaerv	1.55	152	S	Sn	00 20 50.3	-1.6
TOF	Tornio	2.42	138	MSG		00 21 14.1	
	comp=Z,2.1nm,0.2s						

NNC 22 00:21:38.1±9.7**, 42°.46N**×**84°.68E, h0^{km}, mb3.6, mpv3.2, 6C-5D, Error ellipse: s-maj=68.0km s-min=26.7km az=135.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	3.91	285	⇑Pg	Pg	00 22 54.6	+1.6
	2.8nm,0.4s						
PDGK				⇑Lg	Lg	00 23 43.6	
	10nm,0.6s						
MK31	Makanchi Array	4.66	339	⇓Pg	Pb	00 23 01.8	+1.2
	1.1nm,0.4s,baz=152,slow=15,SNR=24						
MK31				⇑Lg	Lg	00 24 06.7	
	1.4nm,0.3s,baz=158,slow=28,SNR=5.2						
MAKZ	Makanchi	4.76	337	⇓Pg	Pb	00 23 03.6	+1.3
	2.7nm,0.6s						
MAKZ				⇓Lg	Lg	00 24 10.5	
	5.2nm,0.8s						
MDOK	Medeo	5.66	280	Sn	Sn	00 24 09.6	+0.3
	1.8nm,0.6s						
MDOK				⇓Lg	Lg	00 24 40.5	
	5.6nm,1.0s						
TKM2	Tokmak 2	6.71	277	⇑Sn	Sn	00 24 32.1	-3.2
	1.0nm,0.5s						
TKM2				⇑Lg	Lg	00 25 16.3	
	3.3nm,0.8s						
KURBB	Kurchatov Arra	9.20	335	⇑Lg	Lg	00 26 34.0	
	5.2nm,0.7s						
KURK	Kurchatov	9.25	335	⇓Lg	Lg	00 26 32.9	
	3.6nm,1.0s						

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*NIED **22** 00:26:00, 33°.60N×132°.10E, h50^{km}, Mw3.5 Best double couple: $M_0$1.92000×10^{14} NP1:ϕ_s274.00000°, δ45.00000°, λ151.00000°. NP2:ϕ_s25.00000°, δ70.00000°, λ49.00000°.*
JMA 22 00:26:31.3, 33°.62N×**132°.06E, h59^{km}, M3.4, 3C-4D Broadband fault plane solution: P waves. NP1:** ϕ_s188.00000°**,** δ89.00000°**,** λ-34.00000°. **NP2:** ϕ_s279.00000°**,** δ56.00000°**,** λ-179.00000°. **Principal axes:** T Plg23.0000°, Azm239.0000°; N Plg56.0000°, Azm7.0000°; P Plg24.0000°, Azm138.0000°; **Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNA	Nagahama	0.35	100	⇑P	Pn	00 26 41.8	0.0
JNA				S	Sn	00 26 49.3	0.0
JKI	Kunimi	0.41	272	⇓P	Pn	00 26 42.4	+0.1
JKI				S	Sn	00 26 50.2	0.0
JKD	Kudamatsu	0.46	340	⇓P	Pn	00 26 42.7	-0.1
JKD				S	Sn	00 26 51.0	-0.1
UWA2	Uwa jima 2	0.62	130	⇓P	Pn	00 26 44.6	0.0
UWA2				S	Sn	00 26 54.1	-0.2
JHM	Kurahashi	0.65	37	⇑P	Pn	00 26 44.9	0.0
JHM				S	Sn	00 26 55.1	+0.3
JET	Tanbara	0.84	79	⇑P	Pn	00 26 47.2	-0.1
JET				S	Sn	00 26 58.8	-0.2
JKU	Kubokawa	0.89	110	P	Pn	00 26 47.7	-0.2
JKU				S	Sn	00 26 59.7	-0.5
JTO	Tosashimizu	0.98	140	⇓P	Pn	00 26 48.9	-0.1
JTO				S	Sn	00 27 01.0	-1.2
JHT	Toyohira	1.08	16	P	Pn	00 26 50.9	+0.5
MAT	Matsushiro	5.82	58	P	Pn	00 27 56.3	+1.3

IDC 22 00:41:35.2±2.1**, 7°.81S**×**122°.52E, h0^{km}, mb3.5**/1**, mb1 3.5**/3**, mb1mx3.3**/39**, mbtmp3.3**/3**, ML2.9**/2 **Error ellipse: s-maj=273.0km s-min=30.5km az=56.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.63	138	Pn	Pn	00 45 29.2	-0.8
	0.0nm,0.3s,baz=310,slow=14,SNR=4.7						
ASAR	Alice Springs	19.18	147	P	Pn	00 46 01.1	-0.4
	0.1nm,0.3s,baz=330,slow=13,SNR=8.2						
MKAR	Makanchi Array	65.06	331	P	P	00 52 17.5	0.0
	0.3nm,0.6s,baz=133,slow=6.0,SNR=3.7						

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*NIED **22** 00:52:00, 43°.10N×146°.80E, h44^{km}, Mw3.9 Best double couple: $M_0$6.86000×10^{14} NP1:ϕ_s235.00000°, δ38.00000°, λ117.00000°. NP2:ϕ_s21.00000°, δ56.00000°, λ70.00000°.*
*JMA **22** 00:52:06.9±0.2, 43°.08N×146°.89E, h52^{km}±4^{km}, M4.0*
JMA Felt I J1.
*SKHL **22** 00:52:07.1±0.5, 43°.02N×146°.90E, h39^{km}±6^{km}, mb4.1/4*
*ISCJB **22** 00:52:08.3±1.1, 43°.11N±0°.06×146°.81E±0°.07, h43^{km}±9^{km}, mb3.6/12, MS3.1/1, Error ellipse: s-maj=11.1km s-min=6.6km az=142.2*
*MOS **22** 00:52:08.8±1.1, 43°.13N×146°.68E, h51^{km}, mb4.1/7, Error ellipse: s-maj=20.4km s-min=10.8km az=108.2*
*IDC **22** 00:52:12.3±3.9, 43°.08N×146°.63E, h65^{km}±34^{km}, mb3.4/12, mb1 3.6/13, mb1mx3.4/32, mbtmp3.7/13, ML3.9/1, MS3.0/3, Ms1 3.1/3, ms1mx2.6/27, Error ellipse: s-maj=25.7km s-min=19.5km az=156.0*
ISC 22 00:52:09.9±1.6**, 43°.16N**±0°.08×**146°.75E**±0°.07**, h40**^{km}±14^{km}**, n42, σ0^{s}.97**/49**, mb3.6**/12**, 2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.76	286	P	Pn	00 52 23.4	-0.8
NEM2				S	Sn	00 52 35.0	+0.6
YUK	Yuzh-Kuril'sk	1.08	324	i P	Pn	00 52 27.0	-1.6
YUK				AMB	AMB	00 52 29.0	
	30nm,0.2s						
YUK				AMB	AMB	00 52 29.0	
	20nm,0.2s						
YUK				i S	Sn	00 52 42.0	-0.4
YUK				A	A	00 52 43.0	
	290nm,0.4s						
YUK				A	A	00 52 43.0	
	520nm,0.4s						
YUK	Yuzh-Kuril'sk	1.08	324c	i PN	Pn	00 52 27.9	-0.7
YUK				i S	Sn	00 52 42.4	0.0
YUK				pmax	pmax		
	comp=E,262nm,0.1s						
YUK				pmax	pmax		
	comp=Z,1µm,0.1s						
YUK				pmax	pmax		
	comp=N,290nm,0.2s						
YUK				smax	smax		
	comp=E,5µm,0.6s						
YUK				smax	smax		
	comp=N,3µm,0.7s						
GRPR	Tuman	1.09	320	i P	Pn	00 52 27.0	-1.7
GRPR				AMB	AMB	00 52 29.0	
	comp=N,50nm,0.3s						
GRPR				AMB	AMB	00 52 29.0	
	comp=N,60nm,0.3s						
GRPR				i S	Sn	00 52 42.0	-0.6
GRPR				A	A	00 52 43.0	
	comp=N,430nm,0.4s						
GRPR				A	A	00 52 43.0	
	comp=N,340nm,0.4s						
GRPR	Tuman	1.09	320d	i PN	Pn	00 52 27.9	-0.8
GRPR				i S	Sn	00 52 42.7	+0.1
GRPR				pmax	pmax		
	comp=N,484nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,648nm,0.2s						
GRPR				smax	smax		
	comp=N,4µm,0.4s						
GRPR				smax	smax		
	comp=E,3µm,0.4s						
LAGR	Lagunnoye	1.14	322	i P	Pn	00 52 28.0	-1.3
LAGR				AMB	AMB	00 52 30.0	
	comp=E,10.0nm,0.4s						
LAGR				AMB	AMB	00 52 30.0	
	comp=E,20nm,0.4s						
LAGR				AMB	AMB	00 52 30.0	
	comp=E,70nm,0.4s						
LAGR				i S	Sn	00 52 44.0	+0.4
LAGR				A	A	00 52 48.0	
	comp=E,680nm,0.4s						
LAGR				A	A	00 52 48.0	
	comp=E,300nm,0.4s						
LAGR	Lagunnoye	1.14	322c	i PN	Pn	00 52 28.8	-0.5
LAGR				i S	Sn	00 52 44.3	+0.7
LAGR				pmax	pmax		
	comp=Z,748nm,0.1s						
LAGR				pmax	pmax		
	comp=N,115nm,0.2s						
LAGR				pmax	pmax		
	comp=E,156nm,0.2s						
LAGR				smax	smax		
	comp=E,3µm,0.4s						
LAGR				smax	smax		
	comp=N,7µm,0.5s						
JKHN	Kushirohamanak	1.16	267	P	Pn	00 52 28.9	-0.8
JKHN				eS	Sn	00 52 45.6	+1.3
JRA	Rausu	1.41	304	P	Pn	00 52 32.2	-0.9
JRA				eS	Sn	00 52 51.6	+1.1
JAK	Akkeshi	1.51	264	P	Pn	00 52 33.3	-1.1
JAK				eS	Sn	00 52 52.7	-0.2
JNK	Nakash	1.54	287	P	Pn	00 52 33.9	-0.9
JNK				eS	Sn	00 52 53.7	+0.1
JAR	Ashorobuto	2.18	275	P	Pn	00 52 43.1	-0.6
JAR				eS	Sn	00 53 10.1	+0.7
JTKR	Abashiri--Toko	2.22	292	P	Pn	00 52 44.6	+0.5
JTKR				eS	Sn	00 53 13.0	+2.7
KUR	Kuril'sk	2.22	21	eP	Pn	00 52 43.7	-0.6
KUR				AMB	AMB	00 52 48.0	
	comp=N,20nm,0.3s						
KUR				AMB	AMB	00 52 48.0	
	comp=N,40nm,0.3s						
KUR				eS	Sn	00 53 10.5	0.0
KUR				A	A	00 53 16.0	
	comp=N,240nm,0.5s						
KUR				A	A	00 53 16.0	
	comp=N,270nm,0.5s						
KUR	Kuril'sk	2.22	21	ePN	Pn	00 52 44.7	+0.4
KUR				eS	Sn	00 53 11.9	+1.4
KUR				pmax	pmax		
	comp=Z,38nm,0.3s						
KUR				pmax	pmax		
	comp=N,20nm,0.1s						
KUR				pmax	pmax		
	comp=E,19nm,0.1s						
KUR				smax	smax		
	comp=E,121nm,0.4s						
KUR				smax	smax		
	comp=N,95nm,0.5s						
JMP	Maruseppu	2.60	290	P	Pn	00 52 49.5	0.0
HRK	Horoka	2.66	278	eP	Pn	00 52 50.5	+0.2
JKA	Kamikawa-asahi	3.16	289	eP	Pn	00 52 58.8	+1.7
ASAJ	Asahikawa	3.16	289	P	Pn	00 52 58.8	+1.7
	comp=N,10nm,0.3s,baz=99,slow=17,SNR=36						
ASAJ				LR	LR	00 54 26.3	
	comp=N,193nm,18.4s,baz=301,slow=43						
KLR	Kul'dur	12.03	306	LR	LR	01 00 17.2	
	comp=N,52nm,20.2s,baz=94,slow=40						
SONM	Songino Array	28.43	294	P	P	00 58 01.0	+0.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	28.43	294	P	P	00 58 01.0	+0.1

	comp=Z,0.5nm,0.6s,baz=88,slow=8.0,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	**28.86**	**138**	T	T	01 28 53.0	
	baz=329,slow=75,SNR=95						
H11N1	**WAKE ISLAND Hy**	**28.87**	**138**	T	T	01 28 54.1	
	baz=329,slow=75,SNR=61						
H11N3	**WAKE ISLAND Hy**	**28.87**	**138**	T	T	01 28 55.1	
	baz=329,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy**	**29.80**	**139**	T	T	01 30 02.9	
	baz=330,slow=76,SNR=178						
H11S3	**WAKE ISLAND Hy**	**29.81**	**139**	T	T	01 30 06.3	
	baz=330,slow=76,SNR=157						
H11S2	**WAKE ISLAND Hy**	**29.82**	**139**	T	T	01 30 22.0	
	baz=330,slow=76,SNR=114						
ILAR	**Eielson Array**	**42.14**	**36**	P	**P**	**00 59 59.2**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=270,slow=8.8,SNR=4.4						
MKAR	**Makanchi Array**	**44.60**	**298**	P	**P**	**01 00 17.7**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=76,slow=9.3,SNR=9.7						
INK	**Inuvik**	**47.06**	**30**	P	**P**	**01 00 37.6**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=306,slow=6.7,SNR=10.0						
CMAR	**Chiang Mai Arr**	**47.08**	**254**	LR	LR	01 20 42.1	
	comp=Z,21nm,19.6s,baz=186,slow=36						
YKA	**Yellowknife Ar**	**56.46**	**33**	P	**P**	**01 01 47.2**	**0.0**
	comp=Z,0.3nm,0.7s,baz=299,slow=7.0,SNR=4.5						
WRA	**Warramunga Arr**	**63.82**	**193**	P	**P**	**01 02 36.9**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=9.8,slow=6.8,SNR=2.9						
FINES	**FINESS Array B**	**65.27**	**333**	P	**P**	**01 02 46.2**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES	**FINESS Array B**	**65.27**	**333**	P	**P**	**01 02 46.2**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=46,slow=8.2,SNR=3.6						
KBZ	**Khabaz**	**69.97**	**311**	P	**P**	**01 03 17.6**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=41,slow=7.1,SNR=5.7						
NB2	**NORSAR Subarra**	**70.05**	**339**	P	**P**	**01 03 16.3**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=32,slow=6.2						
NOA	**NORSAR Array B**	**70.05**	**339**	P	**P**	**01 03 16.7**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=40,slow=6.9,SNR=4.3						
PDAR	**Pinedale Array**	**70.52**	**49**	P	**P**	**01 03 21.8**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=247,slow=4.7,SNR=2.8						
AKASG	**Malin Array Be**	**71.88**	**324**	P	**P**	**01 03 27.9**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=41,slow=6.2,SNR=5.7						
TXAR	**Lajitas Array**	**83.22**	**56**	P	**P**	**01 04 32.1**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=306,slow=3.0,SNR=4.9						

IDC 22 01:16:15.1±1.4**, 3°.18S×139°.12E, h0^{km}, mb3.3**/2**, mb1 3.7**/3**, mb1mx3.4**/29**, mbtmp3.5**/3**, ML3.5**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.3**/18**, Error ellipse: s-maj=29.7km s-min=14.3km az=153.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.71**	**67**	Pg	Pb	01 16 47.6	0.0
	3.5nm,0.3s,baz=205,slow=20,SNR=7.1						
JAY				Lg	Lg	01 17 08.4	
	6.6nm,0.3s,baz=249,slow=23,SNR=7.6						
WRA	**Warramunga Arr**	**17.30**	**195**	P	Pn	01 20 17.3	-1.1
	0.2nm,0.3s,baz=17,slow=13,SNR=15						
ASAR	**Alice Springs**	**20.98**	**193**	P	P	01 21 00.4	+0.2
	0.9nm,0.6s,baz=22,slow=10.0,SNR=17						
HNR	**Honiara**	**21.60**	**108**	LR	LR	01 27 59.4	
	comp=Z,19nm,21.3s,baz=63,slow=33						
MKAR	**Makanchi Array**	**70.41**	**322**	P	P	01 27 31.2	0.0
	0.2nm,0.7s,baz=119,slow=6.7,SNR=2.8						

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*MOS **22** 01:16:43.9±0.0, 43°.78N×43°.17E, h17^{km}, MPVA3.8*
*ISCJB **22** 01:16:44.5±0.3, 43°.79N±0°.02×43°.16E±0°.02, h21^{km}±3^{km}, Error ellipse: s-maj=4.1km s-min=2.3km az=29.7*
*NORS **22** 01:16:44.4±0.0, 43°.75N×43°.17E, h12^{km}, MPVA3.8*
ISC 22 01:16:44.1±0.8**, 43°.76N**±0°.02×**43°.17E**±0°.02**, h16**^{km}±6^{km}**, n31, σ0^{s}.86**/63**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTC	**Kuba-Taba**	**0.18**	**73**	*i* Pg	**Pg**	**01 16 48.5**	**-0.1**
KBTC				*e*Sg	**Sg**	**01 16 52.5**	**+0.9**
PYA1	**Pyatigorsk**	**0.30**	**350**	*e*Pg	**Pg**	**01 16 49.8**	**-0.8**
PYA1				*e*Sg	**Sg**	**01 16 54.2**	**-0.8**
BEYR	**Belyy Ugol+**	**0.36**	**314**	*e*Pg	**Pg**	**01 16 51.2**	**-0.3**
BEYR				*e*Sg	**Sg**	**01 16 56.6**	**+0.1**
SHA1	**Shidzhatmaz**	**0.37**	**266**	*e*Pg	**Pg**	**01 16 52.0**	**+0.1**
SHA1				*e*Sg	**Sg**	**01 16 57.9**	**+0.7**
KIV0	**Kislovodsk Arr**	**0.40**	**299**	*e*Pg	**Pg**	**01 16 52.1**	**-0.2**
KIV0				*e*Sg	**Sg**	**01 16 57.9**	**+0.2**
KIV	**Kislovodsk**	**0.40**	**299**	*e*Pg	**Pg**	**01 16 52.1**	**-0.2**
KIV				*e*Sg	**Sg**	**01 16 57.9**	**+0.1**
NCK	**Nalchik**	**0.41**	**131**	*e*Pg	**Pg**	**01 16 52.4**	**0.0**
NCK				*e*Sg	**Sb**	**01 16 59.1**	**+0.1**
NEY	**Neytrino**	**0.61**	**213**	*i* Pg	**Pb**	**01 16 56.4**	**-0.1**
NEY				*e*Sg	**Sb**	**01 17 04.9**	**-0.1**
LSNR	**Lesken**	**0.68**	**135**	*e*Pg	**Pg**	**01 16 57.5**	**0.0**
LSNR				*e*Sg	**Sb**	**01 17 07.6**	**+0.7**
STDR	**Stavd-Durt**	**0.76**	**121**	*e*Pg	**Pb**	**01 16 59.5**	**+0.5**
STDR				*e*Sg	**Sn**	**01 17 11.0**	**-0.4**
PRTR	**Priterechnaya**	**0.81**	**90**	*e*Pg	**Pg**	**01 16 59.0**	**-0.7**
PRTR				*e*Sg	**Sb**	**01 17 11.4**	**+1.0**
DIGR	**Digorskoe uzhe**	**0.91**	**161**	*e*Pg	**Pg**	**01 17 01.0**	**-0.9**
DIGR				*e*Sg	**Sg**	**01 17 13.1**	**-0.9**
KORR	**Kora**	**0.94**	**136**	*e*Pg	**Pg**	**01 17 01.9**	**-0.5**
KORR				*e*Sg	**Sn**	**01 17 15.7**	**-0.2**
ARNR	**Ardon**	**1.00**	**125**	*e*Pg	**Pb**	**01 17 03.2**	**+0.2**
ARNR				*e*Sg	**Sn**	**01 17 18.1**	**+0.7**
ALER	**Alexandrovskoy**	**1.02**	**350**	*e*Pg	**Pb**	**01 17 03.0**	**-0.4**
ALER				*e*Sg	**Sb**	**01 17 17.3**	**+0.7**
BTKR	**Batakoyurt**	**1.07**	**111**	*e*Pg	**Pb**	**01 17 04.7**	**+0.4**
BTKR				*e*Sg	**Sn**	**01 17 20.4**	**+1.3**
ZEI	**Tsey**	**1.11**	**151**	*e*Pg	**Pb**	**01 17 03.8**	**-1.3**
ZEI				*e*Sg	**Sg**	**01 17 20.0**	**-0.2**
TRKR	**Terskaya**	**1.13**	**92**	*e*Pg	**Pb**	**01 17 04.9**	**-0.4**
TRKR				*e*Sg	**Sn**	**01 17 21.2**	**+0.7**
DOMR	**Dombai**	**1.22**	**248**	*e*Pg	**Pn**	**01 17 06.7**	**-0.1**
DOMR				*e*Sg	**Sb**	**01 17 22.5**	**0.0**
LACR	**Lac**	**1.25**	**138**	*e*Pg	**Pn**	**01 17 07.2**	**+0.1**
LACR				*e*Sg	**Sb**	**01 17 23.6**	**+0.4**
GOF	**Gofitskoye**	**1.30**	**356**	*e*Pg	**Pn**	**01 17 07.6**	**0.0**
GOF				*e*Sg	**Sb**	**01 17 25.7**	**+1.0**
VLKR	**Vladikavkaz**	**1.31**	**123**	*e*Pg	**Pn**	**01 17 07.7**	**-0.2**
VLKR				*e*Pg	**Pb**	**01 17 07.8**	**-0.6**
VLKR				*e*Sg	**Sg**	**01 17 28.0**	**+1.5**
VLKR				*e*Sg	**Sn**	**01 17 28.3**	**+3.2**
ARXR	**Arkhyz**	**1.39**	**262**	*e*Pg	**Pn**	**01 17 09.4**	**+0.3**
ARXR				*e*Sg	**Sb**	**01 17 28.4**	**+0.9**
KMGR	**Komgaron**	**1.42**	**119**	*e*Pg	**Pg**	**01 17 11.4**	**-0.1**
KMGR				*e*Sg	**Sg**	**01 17 30.9**	**+0.8**
GUDG	**Gudauri**	**1.61**	**143**	P	**Pn**	**01 17 11.9**	**-0.3**
GUDG				S	**Sb**	**01 17 34.8**	**+0.9**
GUZR	**Guzeripl'**	**2.22**	**277**	*e*Pg	**Pn**	**01 17 20.8**	**+0.3**
GUZR				*e*Sg	**Sn**	**01 17 48.9**	**+1.4**
DVE	**Vedeno**	**2.30**	**110**	*e*Pn	**Pn**	**01 17 20.7**	**-0.8**
DVE				*e*Sn	**Sn**	**01 17 49.4**	**-0.1**
BTLR	**Botlikh**	**2.49**	**115**	*e*Pn	**Pn**	**01 17 23.0**	**-1.1**
BTLR				*e*Sn	**Sn**	**01 17 52.2**	**-2.0**
DBC	**Dubki**	**2.77**	**104**	*e*Pn	**Pn**	**01 17 26.9**	**-1.1**
DBC				*e*Sn	**Sn**	**01 18 00.4**	**-0.7**
KGUR	**Krasnodar**	**3.22**	**294**	*e*Pn	**Pg**	**01 17 45.9**	**0.0**
KGUR				*e*Sn	**Sn**	**01 18 09.8**	**-2.4**
VOZR	**Vozrozhdenie**	**3.65**	**284**	*e*Pn	**Pn**	**01 17 40.3**	**+0.4**

IDC 22 01:25:40.5±1.6**, 2°.95S×127°.84E, h0^{km}, mb3.6**/2**, mb1 4.0**/4**, mb1mx3.5**/44**, mbtmp3.8**/4**, ML3.9**/2**, Error ellipse: s-maj=44.8km s-min=27.1km az=76.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.00**	**59**	Pn	Pn	01 26 43.2	0.0
	11nm,0.3s,baz=138,slow=18,SNR=19						
SIJI				Sn	Sn	01 27 28.2	-2.7
	4.4nm,0.3s,baz=180,slow=23,SNR=8.0						
WRA	**Warramunga Arr**	**18.04**	**160**	P	P	01 29 53.1	-0.2
	0.3nm,0.3s,baz=342,slow=13,SNR=24						
ASAR	**Alice Springs**	**21.41**	**165**	P	P	01 30 30.4	+0.2
	3.2nm,0.7s,baz=345,slow=11,SNR=24						
MKAR	**Makanchi Array**	**63.68**	**327**	P	P	01 36 13.6	-0.2
	0.4nm,0.7s,baz=115,slow=8.2,SNR=3.7						

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*IDC **22** 01:27:31.2±21.0, 42°.15N×142°.67E, h0^{km}, mb3.7/3, mb1 3.8/3, mb1mx3.3/56, mbtmp3.7/3, Error ellipse: s-maj=466.3km s-min=102.4km az=159.0*
*ISCJB **22** 01:27:37.5±0.6, 41°.49N±0°.04×141°.96E±0°.06, h64^{km}±6^{km}, mb3.6/3, Error ellipse: s-maj=8.8km s-min=5.8km az=40.0*
*JMA **22** 01:27:37.7±0.1, 41°.49N×141°.98E, h64^{km}±2^{km}, M3.1*
ISC 22 01:27:38.2±1.0**, 41°.49N**±0°.05×**141°.96E**±0°.05**, h59**^{km}±10^{km}**, n24, σ0^{s}.66**/25**, mb3.6**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	**Aomorihigashid**	**0.52**	**245**	P	**Pn**	**01 27 50.6**	**+0.2**
JAHD				*e*S	**Sn**	**01 28 00.0**	**+0.8**
JARK	**Aomorirokkasho**	**0.66**	**223**	P	**Pn**	**01 27 51.7**	**-0.2**
JARK				*e*S	**Sn**	**01 28 01.5**	**-0.4**
JOT	**Ohata**	**0.70**	**261**	P	**Pn**	**01 27 52.3**	**-0.1**
JOT				*e*S	**Sn**	**01 28 03.0**	**+0.3**
JKB	**Kayabe**	**0.80**	**300**	P	**Pn**	**01 27 53.3**	**-0.4**
JTM	**Tenmabayashi**	**0.97**	**224**	P	**Pn**	**01 27 56.0**	**+0.1**
JTM				*e*S	**Sn**	**01 28 08.9**	**-0.1**
JNBK	**Urakawa-nobuka**	**0.98**	**37**	P	**Pn**	**01 27 55.5**	**-0.5**
JEM	**Erimo**	**1.04**	**59**	P	**Pn**	**01 27 56.5**	**-0.2**
JEM				*e*S	**Sn**	**01 28 10.7**	**+0.3**
JSR	**Shiriuchi**	**1.16**	**272**	P	**Pn**	**01 27 58.5**	**+0.2**
JANG	**Nango**	**1.17**	**197**	P	**Pn**	**01 27 58.1**	**-0.4**
JANG				*e*S	**Sn**	**01 28 12.7**	**-0.8**
JNB	**Noboribetsu**	**1.20**	**325**	P	**Pn**	**01 27 58.2**	**-0.6**
JNB				*e*S	**Sn**	**01 28 13.0**	**-1.2**
JBT2	**Biratori 2**	**1.32**	**13**	P	**Pn**	**01 28 00.7**	**+0.2**
JYM2	**Yakumo 2**	**1.35**	**298**	P	**Pn**	**01 28 01.2**	**+0.4**
JEW	**Eniwo**	**1.40**	**344**	P	**Pn**	**01 28 01.7**	**+0.1**
JCH	**Churui**	**1.53**	**42**	P	**Pn**	**01 28 03.9**	**+0.6**
JOSM	**Okushiri--Mats**	**1.95**	**288**	P	**Pn**	**01 28 08.8**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**30.32**	**128**	T	T	02 06 10.4	
	baz=321,slow=76,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**30.33**	**128**	T	T	02 06 10.8	
	baz=321,slow=76,SNR=3.8						
H11N3	**WAKE ISLAND Hy**	**30.34**	**128**	T	T	02 06 14.5	
	baz=321,slow=76,SNR=2.9						
H11S1	**WAKE ISLAND Hy**	**31.16**	**130**	T	T	02 07 14.2	
	baz=322,slow=76,SNR=5.1						
H11S3	**WAKE ISLAND Hy**	**31.16**	**130**	T	T	02 07 14.0	
	baz=322,slow=76,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**31.18**	**130**	T	T	02 07 14.5	
	baz=322,slow=76,SNR=5.0						
ZALV	**Zalesovo Beam**	**39.35**	**308**	P	**P**	**01 35 01.9**	**+0.4**
	0.4nm,0.4s,baz=83,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**42.25**	**298**	P	**P**	**01 35 27.2**	**+1.7**
	0.3nm,0.5s,baz=72,slow=9.2,SNR=4.6						
FINES	**FINESS Array B**	**65.09**	**332**	P	**P**	**01 38 10.9**	**-1.1**
	2.3nm,1.0s,baz=53,slow=7.4,SNR=4.5						

PGC 22 01:34:30.3±2.9**, 50°.70N×130°.51W, h10^{km}, MLSn2.8**/8**, Mw3.5**/8**, 217km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.51**	**91**	Pn	Pn	01 34 55.4	-2.1
HOLB				Sn	Sn	01 35 13.2	-4.0
HG4B	**Hotspring**	**1.65**	**345**	Sn	Sn	01 35 16.9	-3.8
BPBC	**Brooks Peninsu**	**1.83**	**106**	Pn	Pn	01 34 59.3	-2.6
BPBC				Sn	Sn	01 35 18.7	-6.4
PACB	**Port Alice, BC**	**1.94**	**97**	Pn	Pn	01 35 00.9	-2.4
PACB				Sn	Sn	01 35 23.1	-4.6
PHC	**Port Hardy**	**1.96**	**89**	Pn	Pn	01 35 01.7	-1.7
PHC				Sn	Sn	01 35 24.2	-3.9
BBB	**Bella Bella**	**2.11**	**44**	Pn	Pn	01 35 03.6	-2.0
BBB				Sn	Sn	01 35 27.5	-4.4
MAYB	**Maynard**	**2.15**	**97**	Pn	Pn	01 35 04.3	-2.0
TLCB	**Telegraph Cove**	**2.34**	**92**	Pn	Pn	01 35 07.6	-1.2
TLCB				Sn	Sn	01 35 34.4	-3.2
WOSB	**Woss**	**2.58**	**101**	Pn	Pn	01 35 10.6	-1.5
NCRB	**Newcastle Ridg**	**2.86**	**94**	Pn	Pn	01 35 14.2	-1.7

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*TEH **22** 01:39:22.7, 29°.66N×57°.10E, h6^{km}, ML4.2*
*ISCJB **22** 01:39:23.9±0.2, 29°.69N±0°.02×57°.10E±0°.03, h10^{km}, mb4.0/17, MS2.8/1, Error ellipse: s-maj=3.5km s-min=2.5km az=5.1*
*IDC **22** 01:39:24.5±0.8, 29°.58N×56°.96E, h14^{km}±4^{km}, mb3.9/14, mb1 4.0/18, mb1mx3.8/58, mbtmp4.0/18, ML4.0/4, MS2.8/3, Ms1 2.8/3, ms1mx2.5/48, Error ellipse: s-maj=19.1km s-min=13.2km az=127.0*
*THR **22** 01:39:24.4, 29°.66N×57°.06E, h16^{km}, ML4.0*
*NEIC **22** 01:39:24.4±0.0, 29°.66N×57°.06E, h16^{km}, mb4.1/5, ML4.0(THR), MN4.2(TEH), After THR.*
*OMAN **22** 01:39:24.6±0.5, 29°.88N×56°.40E, h20^{km}, ml4.3/5, Error ellipse: s-maj=27.2km s-min=6.8km az=264.0*
*DSN **22** 01:39:28.5±1.0, 29°.64N×56°.88E, h24^{km}, ML4.1/10, Error ellipse: s-maj=48.4km s-min=9.7km az=101.0*
ISC 22 01:39:24.2±0.4**, 29°.67N**±0°.04×**57°.07E**±0°.03**, h10**^{km}**, n140, σ1^{s}.87**/148**, mb4.2**/18**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NGRK	**Negar Kerman**	**0.29**	**266**	*e*Pg	**Pg**	**01 39 29.4**	**-0.9**
NGRK				*e*Sg	**Sg**	**01 39 35.0**	**+0.7**
NGRK				IAMB	IAmb	01 39 35.4	
	comp=Z,0.0nm,0.2s						
KRBR	**Kerman**	**0.41**	**320**	Pg	**Pg**	**01 39 32.0**	**-0.4**
KRBR				Sg	**Sg**	**01 39 39.0**	**+1.1**
KRBR	**Kerman**	**0.41**	**320**	*e*Pg	**Pg**	**01 39 32.9**	**+0.5**
KRBR	**Kerman**	**0.41**	**320**	*e*Pg	**Pg**	**01 39 32.9**	**+0.5**
KRBR				*e*Sg	**Sg**	**01 39 39.3**	**+1.4**
TVBK	**TV Kerman**	**0.41**	**320**	*e*Pg	**Pg**	**01 39 32.2**	**-0.3**
TVBK				IAMB	IAmb	01 39 41.1	
	comp=Z,0.0nm,0.2s						
CHMN	**Cheshme madani**	**0.46**	**65**	*e*Pg	**Pg**	**01 39 32.5**	**-0.7**
CHMN				IAMB	IAmb	01 39 32.7	
	comp=Z,0.0nm,0.2s						
KHGB	**Koh Gabri**	**0.87**	**324**	*e*Pg	**Pg**	**01 39 40.0**	**-1.0**
KHGB				IAMB	IAmb	01 39 54.1	
	comp=Z,0.0nm,0.1s						
GENO	**Geno**	**2.39**	**199**	*e*Pn	**Pn**	**01 40 05.4**	**+1.8**
IMEH	**Mehriz**	**2.73**	**310**	Pn	**Pn**	**01 40 09.2**	**+1.0**
IMEH	**Mehriz**	**2.73**	**310**	IAMB	IAmb	01 40 57.4	
	comp=Z,7μm,0.6s						
IMEH				*e*Pn	**Pn**	**01 40 09.3**	**+1.0**
IKOO	**Kooshah**	**3.21**	**31**	Pn	**Pn**	**01 40 15.8**	**+0.8**
IKOO	**Kooshah**	**3.21**	**31**	*e*Pn	**Pn**	**01 40 15.9**	**+0.9**
IKOO				IAMB	IAmb	01 41 14.7	
	comp=Z,19μm,0.7s						
ZHSF	**Zahedan**	**3.23**	**90**	Pn	**Pn**	**01 40 16.0**	**+0.9**
ZHSF	**Zahedan**	**3.23**	**90**	*e*Pn	**Pn**	**01 40 16.5**	**+1.3**
ZHSF	**Zahedan**	**3.23**	**90**	*e*Pn	**Pn**	**01 40 16.4**	**+1.3**
JHRM	**Jahrom**	**3.27**	**250**	*e*Pn	**Pb**	**01 40 20.4**	**-1.9**
JHRM				IAMB	IAmb	01 41 14.7	
	comp=Z,0.0nm,0.4s						
SZD1	**Zahaedan-tmp**	**3.31**	**92**	*e*Pn	**Pn**	**01 40 17.9**	**+1.6**
SZD1				IAMB	IAmb	01 41 14.5	
	comp=N,0.0nm,0.4s						
TPRV	**Parvadeh(Tabas**	**3.37**	**355**	*e*Pn	**Pn**	**01 40 18.7**	**+1.8**
TPRV				IAMB	IAmb	01 41 27.4	
	comp=Z,0.0nm,0.6s						
ICHK	**Chekchek**	**3.44**	**319**	*e*Pn	**Pn**	**01 40 20.8**	**+2.8**
ICHK				IAMB	IAmb	01 41 20.9	
	comp=E,7μm,0.4s						
YZKH	**Yazd**	**3.45**	**323**	*e*Pn	**Pn**	**01 40 19.1**	**+1.1**
YZKH	**Yazd**	**3.45**	**323**	*e*AML	AML	01 41 20.9	
	comp=E,355nm,0.5s						
YZKH	**Yazd**	**3.45**	**323**	*e*Pn	**Pn**	**01 40 19.1**	**+1.1**
ISRV	**Sarvestan**	**3.46**	**266**	Pn	**Pn**	**01 40 21.4**	**+3.1**
ISRV	**Sarvestan**	**3.46**	**266**	*e*Pn	**Pn**	**01 40 21.5**	**+3.1**
ISRV				IAMB	IAmb	01 41 31.7	
	comp=Z,3μm,0.8s						
ITEG	**Tejag**	**3.53**	**24**	Pn	**Pn**	**01 40 20.1**	**+0.9**
ITEG	**Tejag**	**3.53**	**24**	*e*Pn	**Pn**	**01 40 20.2**	**+1.0**
ITEG				IAMB	IAmb	01 41 19.3	
	comp=Z,8μm,0.4s						
ISAD	**Sadrabad**	**3.67**	**308**	Pn	**Pn**	**01 40 23.0**	**+1.8**
ISAD	**Sadrabad**	**3.67**	**308**	*e*Pn	**Pn**	**01 40 23.1**	**+1.8**
ISAD				IAMB	IAmb	01 41 32.8	
	comp=Z,3μm,0.5s						
SHME	**Shamm**	**3.70**	**193**	*i* P	**Pn**	**01 40 22.5**	**+1.1**
	SNR=21						
SHME				S	**Sn**	**01 41 06.6**	**+1.5**
SHME	**Shamm**	**3.70**	**193**	*e*Pn	**Pn**	**01 40 22.5**	**+1.1**
BANOM	**Banah**	**3.79**	**190**	*i* P	**Pn**	**01 40 23.8**	**+1.1**
	SNR=67						
BANOM	**Banah**	**3.79**	**190**	P	**Pn**	**01 40 24.6**	**+1.9**
	SNR=66						
BANOM				S	**Sn**	**01 41 10.2**	**+2.7**
GHIR	**Ghir-Karzin**	**3.83**	**250**	Pn	**Pn**	**01 40 25.0**	**+1.7**
GHIR	**Ghir-Karzin**	**3.83**	**250**	*e*Pn	**Pn**	**01 40 25.1**	**+1.7**
GHIR	**Ghir-Karzin**	**3.83**	**250**	*e*Pn	**Pn**	**01 40 25.1**	**+1.7**
IDAH	**Dahanechah**	**3.89**	**37**	Pn	**Pn**	**01 40 26.1**	**+1.8**
IDAH	**Dahanechah**	**3.89**	**37**	*e*Pn	**Pn**	**01 40 26.2**	**+1.9**
IDAH				IAMB	IAmb	01 40 39.4	
	comp=Z,4μm,0.6s						
TKDS	**Koohdasht(Taba**	**3.94**	**1**	*e*Pn	**Pn**	**01 40 26.6**	**+1.8**
TKDS				IAMB	IAmb	01 41 39.6	
	comp=Z,0.0nm,0.6s						
TABS	**Tabas**	**3.97**	**1**	Pn	**Pn**	**01 40 27.0**	**+1.7**
TABS	**Tabas**	**3.97**	**1**	*e*Pn	**Pn**	**01 40 27.2**	**+2.0**
TABS	**Tabas**	**3.97**	**1**	*e*AML	AML	01 41 48.9	
	comp=N,237nm,0.5s						
TABS	**Tabas**	**3.97**	**1**	*e*Pn	**Pn**	**01 40 27.2**	**+2.0**
TNSJ	**Nastanj**	**4.30**	**355**	*e*Pn	**Pn**	**01 40 31.3**	**+1.5**
TNSJ				IAMB	IAmb	01 41 47.5	
	comp=Z,0.0nm,0.6s						
UMQ	**Umm Al-Quwin**	**4.31**	**197**	*e*Pn	**Pn**	**01 40 33.2**	**+3.4**
MSFE	**Esma-Masafi**	**4.37**	**191**	*i* P	**Pn**	**01 40 32.6**	**+2.0**
	SNR=18						
MSFE	**Esma-Masafi**	**4.37**	**191**	*e*Pn	**Pn**	**01 40 32.5**	**+1.9**
MDH	**Madha**	**4.40**	**189**	P	**Pn**	**01 40 33.1**	**+2.0**
MDH	**Madha**	**4.40**	**189**	P	**Pn**	**01 40 33.2**	**+2.1**
MDH				S	**Sn**	**01 41 26.4**	**+3.9**
MDH	**Madha**	**4.40**	**189**	*e*Pn	**Pn**	**01 40 32.6**	**+1.5**
ANAR	**Anarak**	**4.52**	**322**	*e*Pn	**Pn**	**01 40 33.8**	**+0.9**
IKAZ	**Kazeroun**	**4.55**	**273**	Pn	**Pn**	**01 40 35.0**	**+1.7**
IKAZ	**Kazeroun**	**4.55**	**273**	*e*Pn	**Pn**	**01 40 35.1**	**+1.7**
IKAZ				IAMB	IAmb	01 41 38.9	
	comp=Z,2μm,0.4s						
IRAM	**Ramesheh**	**4.56**	**299**	Pn	**Pn**	**01 40 36.5**	**+3.0**
IRAM	**Ramesheh**	**4.56**	**299**	*e*Pn	**Pn**	**01 40 36.6**	**+3.0**
IRAM				IAMB	IAmb	01 41 59.5	
	comp=N,572nm,0.4s						
UOSS	**Minazif**	**4.76**	**189**	*e*Pn	**Pn**	**01 40 34.6**	**-1.5**
UOSS				*e*Sn	**Sn**	**01 41 27.2**	**-4.2**
UOSS	**Minazif**	**4.76**	**189**	P	**Pn**	**01 40 39.0**	**+2.9**
UOSS	**Minazif**	**4.76**	**189**	P	**Pn**	**01 40 39.6**	**+3.5**
	SNR=12						
UOSS	**Minazif**	**4.76**	**189**	*e*Pn	**Pn**	**01 40 37.6**	**+1.5**
NAZ	**Nazwa, Dubai**	**4.83**	**195**	*i* P	**Pn**	**01 40 39.1**	**+2.2**
	SNR=22						
SHRT	**Shahrakht**	**4.83**	**34**	Pn	**Pn**	**01 40 39.0**	**+2.1**
SHRT	**Shahrakht**	**4.83**	**34**	*e*Pn	**Pn**	**01 40 39.1**	**+2.1**
SHRT	**Shahrakht**	**4.83**	**34**	*e*Pn	**Pn**	**01 40 39.1**	**+2.1**
HATD	**Hatta, Dubai**	**4.89**	**190**	P	**Pn**	**01 40 40.8**	**+2.9**
KLNJ	**Kolanjah**	**4.92**	**287**	*e*Pn	**Pn**	**01 40 41.3**	**+2.8**
KLNJ				IAMB	IAmb	01 41 49.0	
	comp=Z,0.0nm,0.7s						
ASHO	**Ashiyiah**	**5.04**	**190**	*i* P	**Pn**	**01 40 42.3**	**+2.3**
	SNR=8.4						
ASHO	**Ashiyiah**	**5.04**	**190**	P	**Pn**	**01 40 42.7**	**+2.7**
	SNR=11						
ASHO	**Ashiyiah**	**5.04**	**190**	*e*Pn	**Pn**	**01 40 42.0**	**+2.0**
FAQ	**Al Faqa, Dubai**	**5.08**	**195**	*i* P	**Pn**	**01 40 42.2**	**+1.9**
	SNR=25						
IZEF	**Zefreh**	**5.18**	**310**	Pn	**Pn**	**01 40 44.2**	**+2.3**
IZEF	**Zefreh**	**5.18**	**310**	*e*Pn	**Pn**	**01 40 44.3**	**+2.3**
AJN	**Ajban**	**5.41**	**201**	*i* P	**Pn**	**01 40 47.0**	**+2.1**
	SNR=11						
AJN	**Ajban**	**5.41**	**201**	S	**Sn**	**01 41 46.6**	**-0.7**
AJN	**Ajban**	**5.41**	**201**	*e*Pn	**Pn**	**01 40 46.8**	**+1.8**
SOHO	**SOHO**	**5.53**	**185**	P	**Pn**	**01 40 48.0**	**+1.4**
	SNR=10						
ALNE	**Al Ain**	**5.71**	**192**	*i* P	**Pn**	**01 40 51.1**	**+2.0**
	SNR=6.8						
ALNE	**Al Ain**	**5.71**	**192**	*e*Pn	**Pn**	**01 40 51.4**	**+2.3**
ZNGN	**Zangian**	**5.87**	**296**	*e*Pn	**Pn**	**01 40 54.4**	**+2.8**
KRSH	**Karshahi**	**6.00**	**317**	*e*Pn	**Pn**	**01 40 54.9**	**+1.7**
HOQ	**Hoqain**	**6.06**	**178**	P	**Pn**	**01 40 57.0**	**+3.0**
	SNR=14						
HOQ	**Hoqain**	**6.06**	**178**	*e*Pn	**Pn**	**01 40 54.6**	**+0.6**
BIDO	**Bidbid**	**6.19**	**171**	*e*Pn	**Pn**	**01 40 56.3**	**+0.6**
ARQ	**Araqi**	**6.32**	**185**	P	**Pn**	**01 40 57.6**	**0.0**
IANJ	**Anjilo**	**6.37**	**336**	Pn	**Pn**	**01 41 00.1**	**+1.8**
IANJ	**Anjilo**	**6.37**	**336**	*e*Pn	**Pn**	**01 41 00.2**	**+1.9**
WSAR	**Wadi Sarin**	**6.55**	**167**	Pn	**Pn**	**01 41 01.8**	**+1.1**
	comp=Z,9.4nm,0.3s,baz=345,slow=6.7,SNR=187						
WSAR				Sn	**Sn**	**01 42 14.0**	**-1.6**
	comp=Z,17nm,0.3s,baz=114,slow=22,SNR=13						
SMDO	**Samad**	**6.64**	**172**	P	**Pn**	**01 41 05.0**	**+3.0**
	SNR=9.9						
SBZV	**Sabzevar**	**6.72**	**4**	*e*Pn	**Pn**	**01 41 05.5**	**+2.4**
JRKH	**Jarkhoshk**	**6.81**	**23**	*e*Pn	**Pn**	**01 41 06.5**	**+2.2**
BSY	**Bisya**	**6.89**	**179**	P	**Pn**	**01 41 10.0**	**+4.6**
	SNR=6.2						
IAKL	**Akhelmad**	**7.06**	**11**	Pn	**Pn**	**01 41 10.1**	**+2.2**
IAKL	**Akhelmad**	**7.06**	**11**	*e*Pn	**Pn**	**01 41 10.2**	**+2.3**
IKRD	**Kardeh**	**7.19**	**9**	Pn	Pn	01 41 16.3	+6.6
IKRD	**Kardeh**	**7.19**	**9**	*e*Pn	Pn	01 41 16.3	+6.6
IDMV	**Damavand**	**7.26**	**326**	Pn	**Pn**	**01 41 12.8**	**+2.1**
IDMV	**Damavand**	**7.26**	**326**	*e*Pn	**Pn**	**01 41 12.9**	**+2.2**
ISFR	**Sfrayin**	**7.41**	**6**	*e*Pn	**Pn**	**01 41 15.6**	**+3.0**
GEYT	**Alibeck**	**8.29**	**6**	Pn	**Pn**	**01 41 27.5**	**+3.0**
	comp=Z,2.7nm,0.3s,baz=192,slow=17,SNR=17						
GEYT				Lg	Lg	01 43 54.2	
	baz=183,slow=27,SNR=5.6						
GYA0B	**ALIBECK ARRAY**	**8.29**	**6**	*e*Pn	**Pn**	**01 41 25.1**	**+0.6**
MHTO	**MHTO**	**8.68**	**174**	P	**Pn**	**01 41 33.0**	**+3.1**
	SNR=7.3						
CHGR	**Chuyangaron**	**13.43**	**45**	*e*Pn	**Pn**	**01 42 35.5**	**+0.6**
GNI	**Garni**	**14.53**	**319**	*e*Pn	**Pn**	**01 42 48.5**	**-1.5**
KKAR	**Karatay Array**	**17.20**	**35**	*e*Pn	**P**	**01 43 26.2**	**0.0**
ASF	**Jabal al Asfar**	**17.48**	**283**	P	**Pn**	**01 43 27.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=51,slow=14,SNR=5.5						
KSH	**Kashi**	**18.38**	**53**	P	**P**	**01 43 41.3**	**+2.0**
KSH				pmax	pmax		
	comp=Z,12nm,0.6s						
KSH				pmax	pmax		
	comp=Z,280nm,5.1s						
MMAI	**Mount Meron Ar**	**18.80**	**286**	LR	LR	01 52 48.2	
	comp=Z,46nm,18.6s,baz=60,slow=43						
AAK	**Ala-Archa**	**19.07**	**43**	*e*P	**P**	**01 43 43.9**	**-3.1**
	comp=Z,5.8nm,1.0s						
AAK	**Ala-Archa**	**19.07**	**43**	P	**Pn**	**01 43 49.3**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=242,slow=11,SNR=5.0						
AAK				LR	LR	01 51 54.2	
	comp=Z,21nm,21.7s,baz=291,slow=39						
NRN	**Naryn**	**19.32**	**48**	*e*P	**P**	**01 43 50.0**	**+0.1**
	comp=Z,5.2nm,1.1s						
ABKAR	**Akbulak array**	**19.69**	**6**	*e*P	**P**	**01 43 54.1**	**+0.7**
AKTO	**Aktyubinsk**	**20.76**	**2**	P	**P**	**01 44 06.1**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=187,slow=8.9,SNR=7.5						
BR131	**Keskin Array S**	**21.66**	**304**	*e*P	**P**	**01 44 14.7**	**-0.3**
BRTR	**Keskin Array B**	**21.66**	**304**	P	**P**	**01 44 15.6**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=120,slow=13,SNR=18						
BRVK	**Borovoye**	**25.31**	**19**	*e*P	**P**	**01 44 47.4**	**-3.4**
BVAR	**Borovoye Array**	**25.31**	**19**	P	**P**	**01 44 50.8**	**0.0**
	comp=Z,2.8nm,0.6s,baz=201,slow=7.4,SNR=25						
BVAR				pP	**sP**	**01 44 56.0**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=199,slow=7.4,SNR=19						
MAKZ	**Makanchi**	**25.83**	**42**	*e*P	**P**	**01 44 56.3**	**+0.6**
	comp=Z,5.2nm,1.1s						
MK01	**Makanchi Array**	**26.00**	**42**	*e*P	**P**	**01 44 57.5**	**+0.4**
MK31	**Makanchi Array**	**26.00**	**42**	*e*P	**P**	**01 44 57.7**	**+0.5**
MKAR	**Makanchi Array**	**26.00**	**42**	P	**P**	**01 44 57.3**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=231,slow=7.7,SNR=16						
MKAR				pP	**sP**	**01 45 02.6**	**0.0**
	comp=Z,1.9nm,0.7s,baz=234,slow=6.8,SNR=16						
KURBB	**Kurchatov Arra**	**26.42**	**32**	P	**P**	**01 45 01.3**	**+0.4**
	comp=Z,1.9nm,1.0s,baz=229,slow=9.3,SNR=9.8						
KURK	**Kurchatov**	**26.53**	**32**	*e*P	**P**	**01 45 01.8**	**0.0**
WMQ	**Urumqi**	**28.13**	**51**	*e*P	**P**	**01 45 18.4**	**+1.9**
BUR04	**Bucovina Ar. S**	**30.37**	**315**	*e*P	**P**	**01 45 35.1**	**-1.2**
ZALV	**Zalesovo Beam**	**31.52**	**32**	*e*P	**P**	**01 45 45.7**	**-0.5**
ZALV	**Zalesovo Beam**	**31.52**	**32**	P	**P**	**01 45 46.0**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=247,slow=9.0,SNR=8.1						
ZALV				pP	**pP**	**01 45 50.7**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=243,slow=8.6,SNR=8.5						
ZALV				LR	LR	02 01 40.2	
	comp=Z,19nm,19.1s,baz=77,slow=42						
KMBO	**Kilima Mbogo**	**36.00**	**215**	pP	**P**	**01 46 27.3**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=23,slow=12,SNR=3.3						
GEA0	**GERESS Array S**	**38.03**	**313**	*e*P	**P**	**01 46 41.2**	**-1.4**
GERES	**GERESS Array B**	**38.03**	**313**	P	**P**	**01 46 42.0**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=95,slow=9.5,SNR=7.5						
KHC	**Kasperske Hory**	**38.18**	**313**	*e*P	**P**	**01 46 42.5**	**-1.3**
CLL	**Collm**	**39.11**	**316**	*e*P	**P**	**01 46 52.0**	**+0.4**
HFS	**Hagfors**	**42.01**	**329**	P	**P**	**01 47 16.0**	**+0.5**
	comp=Z,4.9nm,1.0s,baz=126,slow=7.5,SNR=9.3						
NB2	**NORSAR Subarra**	**43.51**	**330**	P	**P**	**01 47 27.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=112,slow=7.9						
NOA	**NORSAR Array B**	**43.51**	**330**	P	**P**	**01 47 28.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=116,slow=7.9,SNR=4.2						
HHC	**Hu-ho-hao-te**	**45.23**	**60**	*e*P	**P**	**01 47 42.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						

HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
EKA	Eskdalemuir Ar	49.38	319	P	P	01 48 12.8	-1.0
	comp=Z,0.5nm,0.4s,baz=98,slow=7.7,SNR=4.7						
TOA0	Torodi Ar. Sit	53.62	265	*e*P	P	01 48 43.9	-2.2
	comp=Z,2.7nm,0.6s						
TORD	Torodi Ar. Bea	53.62	265	P	P	01 48 43.1	-3.0
	comp=Z,1.6nm,0.6s,baz=43,slow=6.5,SNR=22						
TSUM	Tsumeb	61.72	223	*e*P	P	01 49 39.5	-3.5
	comp=Z,2.4nm,0.6s						
BOSA	Boshof	65.44	211	P	P	01 50 06.8	-0.7
	comp=Z,2.2nm,0.6s,baz=30,slow=6.6,SNR=5.3						
BOSA				pP	pP	01 50 11.4	-0.2
	comp=Z,2.7nm,0.6s,baz=36,slow=6.8,SNR=3.5						
SEY	Seymchan	66.36	30	P	P	01 50 14.6	+1.7
	comp=Z,1.6nm,0.5s,baz=278,slow=7.6,SNR=4.0						
YKA	Yellowknife Ar	87.92	356	P	P	01 52 13.5	-0.3
	comp=Z,0.5nm,0.7s,baz=0.7,slow=4.8,SNR=10						
YKA				pP	pP	01 52 18.4	+0.4
	comp=Z,0.8nm,0.8s,baz=0.6,slow=4.7,SNR=6.8						

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*IDC **22** 01:41:36.6±0.9, 52°.08N×171°.90W, h0^{km}, mb3.8/8, mb1 4.1/9, mb1mx3.7/66, mbtmp3.8/9, ML3.9/1, MS3.0/1, Ms1 3.1/1, ms1mx2.5/37, Error ellipse: s-maj=31.1km s-min=19.5km az=158.0*

*ISCJB **22** 01:41:42.8±0.4, 52°.10N±0°.06×171°.75W±0°.04, h50^{km}, mb4.1/16, Error ellipse: s-maj=8.9km s-min=3.0km az=163.8*

*NEIC **22** 01:41:43.1±0.0, 51°.97N×171°.63W, h26^{km}, mb4.1/18, ML4.0(AEIC), After AEIC.*

ISC 22 01:41:43.8±0.7, **52°.03N**±0°.09×**171°.75W**±0°.04, **h50**^{km}, **n73**, σ**1**^{s}.**10**/73, **mb4.1**/16, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSE	Korovin Southe	1.45	283	P	Pn	01 42 08.8	+1.2
KOFP	Korovin Flat P	1.47	280	P	Pn	01 42 08.9	+1.0
KONE	Korovin Northe	1.50	285	P	Pn	01 42 09.6	+1.2
KOKL	Mount Kliuchef	1.54	282	P	Pn	01 42 10.1	+1.2
KOWE	Korovin West	1.58	283	P	Pn	01 42 10.7	+1.4
NIKH	Nikolski High	2.00	61	*e*Pn	Pn	01 42 14.6	-0.6
NIKH				*e*Sn	Sn	01 42 38.4	-0.6
OKWE	Okmok W'ng Wal	2.57	55	P	Pn	01 42 24.2	+1.2
GSIG	Igitkin Island	2.58	271	P	Pn	01 42 23.8	+0.7
OKTU	Okmok Mt. Tuli	2.63	58	P	Pn	01 42 24.9	+1.2
ADK	Adak	3.06	269	*e*Pn	Pn	01 42 30.0	+0.5
ADK				*e*Sn	Sn	01 43 04.2	-0.7
KIWB	Kanaga Island	3.35	269	*e*Pn	Pn	01 42 34.1	+0.5
KIWB				*e*Sn	Sn	01 43 12.6	+0.6
MREP	Makushin Rep't	3.51	58	P	Pn	01 42 36.7	+0.8
MSW	Makushin Switc	3.54	56	P	Pn	01 42 37.0	+0.7
MSW				S	Sn	01 43 18.3	+1.4
MTBL	Makushin Table	3.62	56	P	Pn	01 42 38.6	+1.2
UNV	Unalaska Valle	3.66	58	*e*Pn	Pn	01 42 37.9	+0.2
AKMO	Akutan Morgan	4.03	57	P	Pn	01 42 43.7	+0.9
AKMO				S	Sn	01 43 30.9	+2.2
ZRO	Akutan Zero	4.04	57	P	Pn	01 42 44.1	+0.9
AKGG	Akutan Green G	4.09	56	P	Pn	01 42 45.1	+1.4
AHB	Akutan Harbor	4.14	57	P	Pn	01 42 45.7	+1.3
AKUT	Akutan	4.17	57	*e*Pn	Pn	01 42 44.7	-0.2
AKSA	Akutan Strait	4.21	58	P	Pn	01 42 46.4	+1.0
WECS	Westdahl Cape	4.87	56	P	Pn	01 42 55.8	+1.3
WESP	Westdahl Peak	4.88	57	P	Pn	01 42 55.7	+1.1
SPIA	Saint Paul Isl	5.23	9	*e*Pn	Pn	01 42 59.9	+0.6
SPIA				*e*Sn	Sn	01 43 57.2	-1.0
FALS	False Pass	5.72	57	*e*Pn	Pn	01 43 06.3	+0.2
DT1	Dutton Round H	6.42	58	P	Pn	01 43 16.6	+0.9
SDPT	Sand Point	7.47	59	*e*Pn	Pn	01 43 29.9	-0.1
CHGN	Chignik	8.91	56	*e*Pn	Pn	01 43 48.9	-0.8
KDAK	Kodiak Island	12.42	55	Pn	Pn	01 44 35.1	-2.5
	1.1nm,0.3s,baz=266,slow=6.5,SNR=12						
SVW2	Sparrevohn	12.69	38	*e*Pn	Pn	01 44 41.7	+0.4
ANM	Nome	13.00	12	*e*Pn	Pn	01 44 46.2	+0.8
SCM	Sheep Creek Mo	16.44	44	*e*Pn	Pn	01 45 30.4	-0.5
	27nm,1.2s						
MLY	Manley	16.90	32	*e*Pn	P	01 45 37.3	-0.7
	11nm,1.5s						
KLU	Klutina	16.92	46	*e*Pn	Pn	01 45 34.0	-2.8
	37nm,1.6s						
DHY	Denali Highway	17.00	40	*e*Pn	Pn	01 45 36.8	-1.0
	5.5nm,1.2s						
ILAR	Eielson Array	18.07	36	P	P	01 45 49.6	-1.1
	0.4nm,0.3s,baz=224,slow=9.1,SNR=30						
ILAR				LR	LR	01 52 20.5	
	comp=Z,54nm,21.7s,baz=166,slow=36						
ILB	Eielson Array	18.07	36	*e*Pn	P	01 45 49.3	-1.4
BALM	Baldy	18.40	49	*e*P	Pn	01 45 55.2	+0.3
	73nm,1.8s						
PETK	Petropavlovsk-	18.54	285	P	Pn	01 45 57.4	+0.7
	0.3nm,0.3s,baz=94,slow=13,SNR=4.4						
SCRK	Sand Creek	18.76	40	*e*P	P	01 45 57.1	-1.4
	31nm,2.0s						
BILL	Bilibino	19.25	335	*e*P	Pn	01 46 04.8	-0.2
	2.1nm,0.4s						
TOLK	Toolik Lake Re	19.73	24	*e*P	P	01 46 08.8	-0.1
	4.9nm,0.8s						
EGAK	Eagle	20.22	39	*e*P	P	01 46 13.7	-0.5
	13nm,1.5s						
HYT	Haines Junctio	20.66	51	*e*P	P	01 46 19.9	+0.8
	8.4nm,0.7s						
SKAG	Skagway	21.57	56	*e*P	P	01 46 29.5	+0.8
	15nm,0.9s						
DLBC	Dease Lake	24.31	58	*e*P	P	01 46 56.8	+0.4
	36nm,1.8s						
DLBC	Dease Lake	24.31	58	P	P	01 46 58.5	+2.1
	5.4nm,0.8s,baz=281,slow=11,SNR=7.8						
INK	Inuvik	24.44	34	*e*P	P	01 46 56.1	-1.2
	16nm,1.5s						
INK	Inuvik	24.44	34	P	P	01 46 56.0	-1.2
	2.3nm,0.5s,baz=241,slow=8.1,SNR=22						
YKA	Yellowknife Ar	31.56	48	P	P	01 48 00.1	-0.9
	0.7nm,0.3s,baz=273,slow=8.0,SNR=27						
YKB5	Yellowknife Ar	31.56	48	*e*P	P	01 47 59.9	-1.1
H11N2	WAKE ISLAND Hy	36.30	215	T	T	02 27 17.6	
	baz=21,slow=76,SNR=42						
H11N3	WAKE ISLAND Hy	36.31	215	T	T	02 27 14.1	
	baz=21,slow=76,SNR=45						
H11N1	WAKE ISLAND Hy	36.32	215	T	T	02 27 19.0	
	baz=21,slow=76,SNR=42						
H11S1	WAKE ISLAND Hy	37.50	215	T	T	02 28 48.4	
	baz=21,slow=76,SNR=67						
H11S2	WAKE ISLAND Hy	37.52	215	T	T	02 28 46.9	
	baz=21,slow=76,SNR=88						
H11S3	WAKE ISLAND Hy	37.52	215	T	T	02 28 45.2	
	baz=21,slow=76,SNR=34						
MCMT	McKenzie Canyo	38.78	77	*e*P	P	01 49 03.6	+0.1
YHH	Holmes Hill	40.00	75	*e*P	P	01 49 14.3	+0.5
	2.1nm,0.7s						
BW06	Boulder Array	41.90	77	*e*P	P	01 49 29.1	-0.2
	3.8nm,1.0s						
PD31	Pinedale Array	41.90	77	*e*P	P	01 49 30.1	+0.7
PDAR	Pinedale Array	41.90	77	P	P	01 49 29.8	+0.4
	1.3nm,0.6s,baz=302,slow=3.4,SNR=16						
MWC	Mount Wilson	41.98	93	*e*P	P	01 49 29.2	-0.8
	30nm,1.5s						
FCC	Fort Churchill	42.27	49	*e*P	P	01 49 31.4	-0.5
	1.1nm,0.3s						
HHC	Hu-ho-hao-te	51.67	290	*e*P	P	01 50 45.6	+0.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,52nm,5.3s						
TXAR	Lajitas Array	54.22	87	P	P	01 51 04.7	+0.3
	comp=Z,0.5nm,0.6s,baz=296,slow=6.1,SNR=7.4						
WMQ	Urumqi	62.57	307	*e*P	P	01 52 06.0	+3.6
MKAR	Makanchi Array	62.96	312	P	P	01 52 03.7	-1.2
	comp=Z,0.1nm,0.3s,baz=50,slow=5.6,SNR=5.6						
BVAR	Borovoye Array	63.11	323	P	P	01 52 05.5	-0.2
	comp=Z,0.5nm,0.5s,baz=63,slow=4.8,SNR=5.8						
AAK	Ala-Archa	69.69	314	*e*P	P	01 52 47.7	-0.5
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	85.66	230	P	P	01 54 16.3	-0.6
	comp=Z,0.3nm,0.4s,baz=34,slow=5.6,SNR=7.5						
AS01	Alice Springs	89.05	228	*e*P	P	01 54 33.2	0.0
ASAR	Alice Springs	89.07	228	P	P	01 54 33.5	+0.1
	comp=Z,2.4nm,0.8s,baz=29,slow=4.9,SNR=21						

IDC 22 01:52:17.0±1.7, **3°.62S**×**145°.96E**, **h0**^{km}, **mb3.8**/3, **mb1 4.2**/4, **mb1mx3.7**/35, **mbtmp3.9**/4, **ML3.6**/1, **MS3.3**/12, **Ms1 3.3**/12, **ms1mx3.2**/32, **Error ellipse: s-maj=119.8km s-min=26.3km az=122.0**, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	5.36	282	LR	LR	01 55 39.8	
	comp=Z,239nm,19.9s,baz=147,slow=38						
SIJI	Sorong	14.94	280	LR	LR	02 01 43.5	
	comp=Z,95nm,18.4s,baz=254,slow=38						
HNR	Honiara	15.04	113	LR	LR	02 00 47.2	
	comp=Z,100nm,18.2s,baz=314,slow=34						
GUMO	Guam	17.13	356	LR	LR	02 02 13.5	
	comp=Z,67nm,21.5s,baz=82,slow=35						
WRA	Warramunga Arr	19.79	214	P	Pn	01 56 50.1	-0.5
	0.2nm,0.3s,baz=39,slow=12,SNR=25						
WRA				LR	LR	02 04 35.6	
	comp=Z,104nm,20.7s,baz=70,slow=37						
ASAR	Alice Springs	23.08	209	P	P	01 57 24.3	-0.2
	2.7nm,0.9s,baz=40,slow=8.9,SNR=18						
ASAR				LR	LR	02 06 52.5	
	comp=Z,74nm,18.9s,baz=44,slow=38						
FITZ	Fitzroy Crossi	24.56	233	P	P	01 57 38.2	-0.5
	3.3nm,0.9s,baz=27,slow=11,SNR=4.1						
FITZ				LR	LR	02 08 05.5	
	comp=Z,102nm,21.0s,baz=57,slow=39						
DZM	Mont Dzumac	27.04	134	LR	LR	02 07 23.5	
	comp=Z,149nm,21.8s,baz=298,slow=34						
STKA	Stephens Creek	28.41	188	LR	LR	02 10 46.2	
	comp=Z,79nm,21.5s,baz=17,slow=39						
PETK	Petropavlovsk-	57.38	8	LR	LR	02 25 14.5	
	comp=Z,15nm,19.4s,baz=90,slow=34						
ZALV	Zalesovo Beam	76.46	328	LR	LR	02 37 15.3	
	comp=Z,22nm,19.6s,baz=74,slow=35						
ILAR	Eielson Array	83.72	23	P	P	02 04 47.6	+0.1
	0.6nm,1.0s,baz=242,slow=3.8,SNR=3.2						
GEYT	Alibeck	90.50	308	LR	LR	02 45 22.4	
	comp=Z,34nm,21.9s,baz=10.0,slow=35						

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*THR **22** 01:54:32.6, 29°.50N×57°.09E, h14^{km}, ML3.3*

*TEH **22** 01:54:33.0, 29°.69N×57°.08E, h3^{km}, ML3.5*

*ISCJB **22** 01:54:35.0±0.6, 29°.72N±0°.05×57°.04E±0°.06, h10^{km}, Error ellipse: s-maj=7.7km s-min=7.1km az=31.5*

ISC 22 01:54:33.7±1.0, **29°.62N**±0°.04×**57°.08E**±0°.04, **h10**^{km}, **n23**, σ**1**^{s}.**69**/23, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGRK	Negar Kerman	0.30	275	*e*Pg	Pg	01 54 39.5	-0.4
NGRK				IAMB	IAmb	01 54 45.7	
	comp=Z,0.0nm,0.2s						
KRBR	Kerman	0.46	323	*e*Pg	Pb	01 54 43.1	-0.9
KRBR	Kerman	0.46	323	*e*AML	AML	01 54 56.4	
	comp=E,2µm,0.1s						
KRBR				*e*AML	AML	01 54 59.2	
	comp=N,2µm,0.3s						
KRBR	Kerman	0.46	323	*e*Pg	Pb	01 54 43.1	-0.9
KRBR				*e*Sg	Sb	01 54 52.3	+1.4
TVBK	TV Kerman	0.46	323	*e*Pg	Pg	01 54 42.1	-0.6
TVBK				IAMB	IAmb	01 54 51.6	
	comp=Z,0.0nm,0.1s						
CHMN	Cheshme madani	0.47	59	*e*Pg	Pg	01 54 42.1	-0.8
CHMN				IAMB	IAmb	01 54 56.1	
	comp=Z,0.0nm,0.2s						
KHGB	Koh Gabri	0.92	325	*e*Pg	Pg	01 54 50.1	-1.3
KHGB				IAMB	IAmb	01 55 02.6	
	comp=Z,0.0nm,0.1s						
NIAN	Nian	2.06	186	*e*Pn	Pg	01 55 12.4	-0.9
NIAN				IAMB	IAmb	01 55 50.8	
	comp=Z,0.0nm,0.4s						
GENO	Geno	2.35	200	*e*Pn	Pb	01 55 15.3	-1.0
GENO				IAMB	IAmb	01 55 54.4	
	comp=Z,0.0nm,0.3s						
IMEH	Mehriz	2.76	310	*e*Pn	Pn	01 55 20.0	+1.7
IMEH				IAMB	IAmb	01 56 02.6	
	comp=Z,1µm,0.4s						
IKOO	Kooshah	3.25	30	*e*Pn	Pn	01 55 26.0	+1.1
IKOO				IAMB	IAmb	01 56 24.4	
	comp=Z,3µm,0.4s						
TPRV	Parvadeh(Tabas	3.41	354	*e*Pn	Pn	01 55 28.9	+1.8
TPRV				IAMB	IAmb	01 56 37.4	
	comp=Z,0.0nm,0.6s						
YZKH	Yazd	3.49	323	*e*Pn	Pn	01 55 30.0	+1.9
YZKH	Yazd	3.49	323	*e*AML	AML	01 56 30.9	
	comp=E,53nm,0.5s						
YZKH	Yazd	3.49	323	*e*Pn	Pn	01 55 30.0	+1.9
YZKH				*e*Sg	Sg	01 56 24.8	-1.1
ITEG	Tejag	3.57	23	*e*Pn	Pn	01 55 30.3	+1.0
ITEG				IAMB	IAmb	01 56 29.3	
	comp=Z,1µm,0.4s						
IDAH	Dahanechah	3.92	37	*e*Pn	Pn	01 55 36.3	+2.1
IDAH				IAMB	IAmb	01 55 48.8	
	comp=Z,576nm,0.6s						
TKDS	Koohdasht(Taba	3.98	1	*e*Pn	Pn	01 55 36.4	+1.5
TKDS				IAMB	IAmb	01 56 55.2	
	comp=Z,0.0nm,0.7s						
TABS	Tabas	4.02	0	*e*Pn	Pn	01 55 37.7	+2.3
TABS	Tabas	4.02	0	*e*AML	AML	01 56 43.3	
	comp=N,31nm,0.5s						
TABS	Tabas	4.02	0	*e*Pn	Pn	01 55 37.7	+2.3
TABS				*e*Sg	Sg	01 56 40.5	-2.2
SHRT	Shahrakht	4.86	33	*e*Pn	Pn	01 55 49.2	+2.2
SHRT	Shahrakht	4.86	33	*e*Pn	Pn	01 55 49.2	+2.2

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*ISCJB **22** 01:57:40.0±8.4, 0°.8N±0°.6×6°6E±°, h10^{km}, mb3.8/5, MS3.2/4, Error ellipse: s-maj=267.2km s-min=26.3km az=160.5*

*IDC **22** 01:57:44.0±2.4, 1°.04N×67°.24E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.5/36, mbtmp3.8/5, MS3.2/5, Ms1 3.3/5, ms1mx2.9/39, Error ellipse: s-maj=80.7km s-min=28.9km az=67.0*

ISC 22 01:57:41.8±3.0, **0°.8N**±0°.3×**66°.5E**±0°.6, **h10**^{km}, **n13**, σ**0**^{s}.**33**/6, **mb4.0**/5, **MS3.1**/4, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	8.38	147	T	T	02 08 23.8	
	baz=331,slow=75,SNR=534						
H08N3	Diego Garcia H	8.39	147	T	T	02 08 20.3	
	baz=331,slow=75,SNR=544						
H08N1	Diego Carcia H	8.40	147	T	T	02 08 25.5	
	baz=331,slow=75,SNR=473						
PALK	Pallekele	15.61	65	LR	LR	02 05 46.1	
	comp=Z,164nm,19.3s,baz=296,slow=33						
CMAR	Chiang Mai Arr	36.41	59	LR	LR	02 17 48.9	
	comp=Z,29nm,20.2s,baz=258,slow=34						
GEYT	Alibeck	37.77	349	LR	LR	02 19 33.8	
	comp=Z,32nm,21.9s,baz=175,slow=35						
MKAR	Makanchi Array	47.89	15	P	P	02 06 20.6	+0.5
	0.6nm,0.9s,baz=180,slow=7.1,SNR=4.1						
ZALV	Zalesovo Beam	55.13	13	P	P	02 07 14.0	-0.3
	0.7nm,0.5s,baz=223,slow=5.9,SNR=6.0						
SONM	Songino Array	58.24	31	P	P	02 07 36.4	-0.2
	1.5nm,0.9s,baz=218,slow=6.7,SNR=6.9						
SONM				LR	LR	02 32 13.1	
	comp=Z,68nm,20.2s,baz=320,slow=36						
KSRS	Korea Array	67.16	49	LR	LR	02 38 30.4	
	comp=Z,5.9nm,21.7s,baz=230,slow=37						
WRA	Warramunga Arr	69.53	112	P	P	02 08 51.4	0.0
	0.9nm,0.8s,baz=291,slow=5.6,SNR=6.4						
ASAR	Alice Springs	69.74	115	P	P	02 08 52.7	+0.1
	0.8nm,0.8s,baz=282,slow=5.7,SNR=7.2						
TXAR	Lajitas Array	148.62	343	PKPbc	PKPab	02 17 33.5	0.0
	0.9nm,0.8s,baz=33,slow=3.0,SNR=9.1						

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*IDC **22** 02:38:27.6±0.9, 41°.28N×69°.18E, h0^{km}, mb3.8/9, mb1 4.0/16, mb1mx3.7/49, mbtmp3.8/16, ML3.7/7, MS3.0/5, Ms1 3.0/5, ms1mx2.7/56, Error ellipse: s-maj=19.0km s-min=8.9km az=175.0*

*SOME **22** 02:38:28.4, 41°.12N×69°.37E, h15^{km}, MS3.5*

*BJI **22** 02:38:29.5, 41°.40N×68°.92E, h24^{km}, mB4.4/2, mb4.3/12, ML4.3/3, Ms3.6/2, Ms7 3.5/2*

*KRNET **22** 02:38:29.5±0.1, 41°.50N×69°.35E, mb4.5*

*NNC **22** 02:38:29.3±1.3, 41°.39N×69°.19E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=9.8km s-min=7.9km az=53.0*

*MOS **22** 02:38:30.2±1.4, 41°.52N×69°.08E, h26^{km}, mb4.4/8, Error ellipse: s-maj=6.5km s-min=5.5km az=83.0*

*NEIC **22** 02:38:30.7±2.0, 41°.49N×69°.12E, h13^{km}±14^{km}, mb4.1/8, Error ellipse: s-maj=5.0km s-min=4.4km az=165.0*

NEIC Felt [IV] at Tashkent, Uzbekistan.

ISC 22 02:38:28.3±0.8, **41°.24N**±0°.03×**69°.36E**±0°.02, **h9**^{km}±5^{km}, **n175**, σ**2**^{s}.**55**/199, **mb4.2**/19, **MS3.0**/3, **30C-38D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.11	328	*i* P	Pg	02 38 33.1	+2.2
	baz=92						
TAS				*i* S	Sg	02 38 35.8	+3.0
	baz=92						
IUG	Iuzhnay	1.04	29	*e*P	Pg	02 38 50.7	+2.4
	1µm,0.2s						
IUG				*e*S	Sn	02 39 05.8	+2.0
	4µm,0.4s						
CHM	Chimkent	1.09	9	*e*P	Pb	02 38 51.0	+1.6
	2µm,0.2s						
CHM				*e*S	Sn	02 39 07.0	+1.9
	15µm,0.4s						
BTK	Batken	1.62	136	⇓*i*P	Pg	02 39 02.8	+3.5
	baz=42						
BTK				⇓*i*S	Sg	02 39 28.6	+8.4
	baz=42						
ARK	Arkit	2.03	73	⇓*i*P	Pb	02 39 06.6	+1.2
	baz=81						
ARK				⇓*i*S	Sg	02 39 34.0	+0.5
	baz=81						
KK31	Karatay Array	2.05	24	*e*Pn	Pn	02 39 04.1	+1.1
KK31	Karatay Array	2.05	24	⇑Pn	Pb	02 39 05.6	-0.1
	65nm,0.3s,baz=218,slow=15,SNR=1754						
KK31				⇑Sn	Sn	02 39 31.3	+2.7
	356nm,0.2s,baz=213,slow=26,SNR=38						
KK31	Karatay Array	2.05	24	PN	Pn	02 39 04.8	+1.8
KK31						02 39 31.3	
KK31				pmax	pmax		
	comp=Z,65nm,0.3s						
KK31				smax	smax		
	comp=Z,356nm,0.3s						
KKAR	Karatay Array	2.05	24	*e*Pn	Pn	02 39 03.9	+0.9
KKAR	Karatay Array	2.05	24	*e*PN	Pn	02 39 03.9	+0.9
GAR	Garm	2.35	162	*e*Pn	Pg	02 39 13.2	-0.2
GAR	Garm	2.35	162	*e*PN	Pg	02 39 13.2	-0.2
DRK	Karamyk	2.56	133	Pn	Pg	02 39 18.8	+1.5
DRK	Karamyk	2.56	133	⇑*i*P	Pg	02 39 17.4	+0.1
	baz=36						
DRK				⇑*i*S	Sg	02 39 51.9	+1.4
	baz=36						
CHGR	Chuyangaron	2.58	184	*e*Pn	Pg	02 39 16.3	-1.5
MNAS	Manas	2.66	61	⇓Pn	Pb	02 39 14.7	-1.4
	comp=Z,22nm,0.5s						
MNAS				⇓Pg	Pg	02 39 19.2	0.0
	comp=Z,170nm,0.5s						
MNAS				⇑Lg	Lg	02 39 54.2	
	comp=Z,342nm,0.4s						
MNAS	Manas	2.66	61	PN	Pb	02 39 14.7	-1.4
MNAS				LG	Lg	02 39 54.2	
MNAS	Manas	2.66	61	⇑*i*P	Pb	02 39 14.9	-1.2
	baz=66						
MNAS				⇑*i*S	Sb	02 39 47.5	-1.4
	baz=66						
ARSB	Arslanbob	2.73	87	*e*Pn	Pb	02 39 16.3	-1.0
ARSB	Arslanbob	2.73	87	⇓*i*P	Pb	02 39 16.6	-0.7
	baz=93						
ARSB				⇓*i*S	Sb	02 39 51.4	+0.5
	baz=93						
MRKS	Merke	3.25	61	Pg	Pg	02 39 29.6	-0.9
	comp=Z,376nm,0.5s						
MRKS				Lg	Lg	02 40 12.9	
	comp=Z,449nm,0.4s						
MRKS	Merke	3.25	61	*e*P	Pg	02 39 29.6	-0.9
	comp=Z,376nm,0.5s						
MRKS				*e*S	Sg	02 40 12.9	+0.2
	comp=Z,449nm,0.4s						
AML	Almayashu	3.36	73	P	Pb	02 39 25.2	-3.0
	SNR=31						
AML	Almayashu	3.36	73	⇑*i*P	Pb	02 39 25.3	-3.0
	baz=78						
AML				⇑*i*S	Sb	02 40 07.5	-2.0
	baz=78						
SFK	Sufi-Kurgan	3.38	110	⇓Pn	Pb	02 39 25.5	-3.0
	comp=Z,139nm,0.7s						
SFK				⇓Lg	Lg	02 40 19.4	
	comp=Z,340nm,0.5s						
SFK	Sufi-Kurgan	3.38	110	Pg	Pb	02 39 27.5	-0.9
SFK				Lg	Lg	02 40 10.0	
SFK	Sufi-Kurgan	3.38	110	PN	Pb	02 39 25.5	-3.0
SFK				LG	Lg	02 40 19.4	
SFK	Sufi-Kurgan	3.38	110	⇓*i*P	Pb	02 39 26.9	-1.6
	baz=14						
SFK				⇓*i*S	Sb	02 40 09.6	-0.2
	baz=14						
EKS2	Erkin-Say	3.59	65	P	Pn	02 39 28.2	+4.1
	SNR=18						
EKS2	Erkin-Say	3.59	65	⇑*i*P	Pb	02 39 28.4	-3.5
	baz=69						
EKS2				⇑*i*S	Sn	02 40 11.4	+4.7
	baz=69						
ARLS	Aral	3.77	79	⇓*i*P	Pn	02 39 30.8	+4.0
	baz=83						
ARLS				⇓*i*S	Sb	02 40 16.6	-4.4
	baz=83						
UCH	Uchtor	3.98	74	P	Pn	02 39 33.3	+3.5
	SNR=19						
UCH	Uchtor	3.98	74	⇑*i*P	Pn	02 39 33.7	+3.8
	baz=78						
UCH				⇑*i*S	Sn	02 40 22.0	+5.2
	baz=78						
AAK	Ala-Archa	4.08	68	P	Pn	02 39 35.2	+4.2
	SNR=28						
AAK	Ala-Archa	4.08	68	⇓Pn	Pn	02 39 34.9	+3.9
	comp=Z,11nm,0.6s						
AAK				⇑Pg	Pg	02 39 45.6	-0.8
	comp=Z,101nm,0.5s						
AAK				⇓Lg	Lg	02 40 40.8	
	comp=Z,121nm,0.5s						
AAK	Ala-Archa	4.08	68	PN	Pn	02 39 34.8	+3.9
AAK						02 39 45.5	
AAK						02 40 40.7	
AAK				pmax	pmax		
	comp=Z,13nm,0.6s						
AAK				pmax	pmax		
	comp=Z,101nm,0.5s						
AAK	Ala-Archa	4.08	68	⇑*e*P	Pn	02 39 35.1	+4.2
	baz=72						
AAK				⇑*i*S	Sn	02 40 23.3	+4.5
	baz=72						
AAK	Ala-Archa	4.08	68	Pn	Pn	02 39 35.1	+4.2
	comp=Z,5.6nm,0.3s,baz=281,slow=1.6,SNR=52						
AAK				Pg	Pg	02 39 45.9	-0.5
	comp=Z,26nm,0.3s,baz=216,slow=7.6,SNR=48						
AAK				Lg	Lg	02 40 40.4	
	comp=Z,23nm,0.3s,baz=75,slow=21,SNR=7.7						
FRU	Bishkek	4.22	66	*e*PN	Pn	02 39 35.0	+2.1
FRU				*e*		02 39 48.0	
FRU				*e*S	Sb	02 40 34.0	+0.1
FRU				*i*		02 40 46.0	
FRU				pmax	pmax		
	comp=Z,150nm,1.8s						
FRU				smax	smax		
	comp=E,540nm,1.6s						
FRU1	Bishkek	4.23	66	*e*Pn	Pn	02 39 37.1	+4.2
FRU1	Bishkek	4.23	66	*e*PN	Pn	02 39 37.1	+4.2
USP	Ospenovka	4.32	60	P	Pn	02 39 36.8	+2.7
	SNR=10.0						
USP	Ospenovka	4.32	60	⇓*i*P	Pn	02 39 37.0	+2.9
	baz=63						
USP				⇓*i*S	Sn	02 40 28.1	+3.5
	baz=63						
CHMS	Chumysh	4.38	65	P	Pn	02 39 37.8	+2.9
	SNR=6.2						
CHMS	Chumysh	4.38	65	⇑*i*P	Pn	02 39 38.1	+3.2
	baz=68						
CHMS				⇑*i*S	Sn	02 40 29.9	+3.8
	baz=68						
KBK	Karagaybulak	4.40	69	P	Pn	02 39 39.7	+4.3
	SNR=38						
KBK	Karagaybulak	4.40	69	⇓*i*P	Pn	02 39 39.5	+4.1
	baz=73						
KBK				⇓*i*S	Sn	02 40 31.4	+4.6
	baz=73						
SGDS	Sogindy	4.49	59	Pg	Pb	02 39 51.1	+3.9
	comp=E,53nm,0.4s						
SGDS				Lg	Lg	02 40 49.8	
	comp=E,164nm,0.5s						
KZA	Kyzart	4.49	77	P	Pn	02 39 40.8	+4.0
	SNR=17						
KZA	Kyzart	4.49	77	⇓*e*P	Pn	02 39 40.9	+4.0
	baz=81						
KZA				⇓*i*S	Sn	02 40 34.8	+5.4
	baz=81						
TKM2	Tokmak 2	4.93	68	P	Pn	02 39 45.9	+3.2
	SNR=19						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	4.93	68	⇑Pn	Pn	02 39 45.3	+2.5
	comp=E,4.5nm,0.3s						
TKM2				⇓Pg	Pb	02 39 58.9	+3.9
	comp=E,19nm,0.4s						
TKM2				⇑Lg	Lg	02 41 03.5	
	comp=E,259nm,0.8s						
TKM2	Tokmak 2	4.93	68	PN	Pn	02 39 45.3	+2.5
TKM2				PG	Pb	02 39 58.9	+3.9
TKM2				LG	Lg	02 41 03.5	
TKM2	Tokmak 2	4.93	68	⇓iP	Pn	02 39 46.5	+3.7
	baz=71						
TKM2				⇓iS	Sn	02 40 44.0	+3.9
	baz=71						
NRN	Naryn	5.00	86	ePn	Pn	02 39 47.2	+3.5
NRN	Naryn	5.00	86	ePN	Pn	02 39 47.2	+3.5
NRN	Naryn	5.00	86	⇓iP	Pn	02 39 47.3	+3.5
	baz=89						
NRN				⇓iS	Sn	02 40 45.8	+4.0
	baz=89						
BOOM	Boomskoye usch	5.07	74	Pn	Pn	02 39 48.8	+4.2
BTLS	Baital	5.12	40	eP	Pb	02 40 03.5	+5.6
	comp=E,44nm,0.4s						
BTLS				eS	Sg	02 41 10.6	-2.0
	comp=E,79nm,0.5s						
DGS	Degeres	5.16	65	Pg	Pb	02 40 02.2	+3.5
	comp=E,110nm,0.6s						
DGS				Lg	Lg	02 41 09.9	
	comp=E,229nm,0.7s						
DGS	Degeres	5.16	65	eP	Pb	02 40 02.2	+3.5
	comp=E,110nm,0.6s						
DGS				eS	Sg	02 41 09.2	-4.8
	comp=E,229nm,0.7s						
KST	Kastek	5.23	68	eP	Pg	02 40 06.0	-2.4
	comp=E,93nm,0.7s						
KST				eS	Sg	02 41 14.2	-1.9
	comp=E,240nm,0.6s						
ULHL	Ulahol	5.24	77	P	Pn	02 39 51.4	+4.3
	SNR=12						
ULHL	Ulahol	5.24	77	⇑iP	Pn	02 39 52.1	+5.1
	baz=80						
ULHL				⇑iS	Sn	02 40 52.3	+4.6
	baz=80						
KSH	Kashi	5.33	107	Pn	Pn	02 39 51.1	+2.9
KSH				smax	smax		
	comp=E,350nm,0.7s						
KSH				smax	smax		
	comp=E,180nm,0.5s						
MTBS	Maitube	5.58	68	eP	Pg	02 40 11.3	-3.8
	comp=E,16nm,0.6s						
MTBS				eS	Sg	02 41 25.2	-2.2
	comp=E,124nm,0.5s						
IZV	Izvestkoviy	5.68	69	Pg	Pg	02 40 14.5	-2.6
	comp=E,85nm,0.8s						
IZV				Lg	Lg	02 41 30.9	
	comp=E,136nm,0.8s						
IZV	Izvestkoviy	5.68	69	eP	Pg	02 40 14.5	-2.6
	comp=E,85nm,0.8s						
IZV				eS	Sg	02 41 30.9	+0.2
	comp=E,136nm,0.8s						
KUU	Kurty	5.79	60	eP	Pg	02 40 15.8	-3.5
	comp=E,52nm,0.7s						
KUU				eS	Sg	02 41 31.8	-2.4
	comp=E,120nm,0.4s						
KDJ	Kajisay	5.92	79	ePn	Pn	02 40 02.3	+6.0
KDJ	Kajisay	5.92	79	ePN	Pn	02 40 02.3	+6.0
AAA	Alma-Ata	5.94	68	Pg	Pg	02 40 20.1	-2.0
	comp=E,98nm,0.5s						
AAA				Lg	Lg	02 41 40.0	
	comp=E,192nm,0.6s						
AAA	Alma-Ata	5.94	68	ePN	Pg	02 40 22.3	+0.2
AAA				pmax	pmax		
	comp=Z,89nm,0.6s						
AAA	Alma-Ata	5.94	68	eP	Pg	02 40 20.1	-2.0
	comp=Z,98nm,0.5s						
AAA				eS	Sg	02 41 40.0	+1.0
	comp=Z,192nm,0.6s						
KTBS	Karatobe	5.95	63	Pg	Pg	02 40 19.7	-2.5
	comp=Z,35nm,0.6s						
KTBS				Lg	Lg	02 41 39.3	
	comp=Z,158nm,0.6s						
KTBS	Karatobe	5.95	63	eP	Pg	02 40 19.7	-2.5
	comp=Z,35nm,0.6s						
KTBS				eS	Sg	02 41 39.3	0.0
	comp=Z,158nm,0.6s						
KNDC	Almaty	5.98	68	⇑Pg	Pg	02 40 20.6	-2.2
	comp=Z,171nm,0.9s						
KNDC				⇓Lg	Lg	02 41 40.4	
	comp=Z,175nm,0.7s						
MDOK	Medeo	6.02	69	⇑Pg	Pg	02 40 21.8	-1.8
	comp=Z,81nm,0.7s						
MDOK				⇓Lg	Lg	02 41 40.0	
	comp=Z,106nm,0.9s						
MDOK	Medeo	6.02	69	eP	Pg	02 40 21.1	-2.5
	comp=Z,77nm,0.8s						
MDOK				eS	Sg	02 41 41.0	-0.6
	comp=Z,112nm,0.8s						
KOTS	Kotyrbulak	6.09	68	Pg	Pg	02 40 22.4	-2.4
	comp=Z,48nm,0.5s						
KOTS				Lg	Lg	02 41 43.9	
	comp=Z,445nm,0.5s						
KOTS	Kotyrbulak	6.09	68	eP	Pg	02 40 22.4	-2.4
	comp=Z,48nm,0.5s						
KOTS				eS	Sg	02 41 43.9	+0.2
	comp=Z,445nm,0.5s						
KBL	Kabul	6.69	182	ePn	Pn	02 40 13.1	+6.2
PRZ	Przheval'sk	6.86	77	ePn	Pn	02 40 12.6	+3.4
PRZ	Przheval'sk	6.86	77	ePN	Pn	02 40 12.6	+3.4
ARXS	Arharly	6.91	62	Pg	Pg	02 40 35.4	-5.0
	comp=Z,22nm,0.5s						
ARXS				Lg	Lg	02 42 05.7	
	comp=Z,118nm,0.6s						
MNBS	Baschi	7.24	64	Pg	Pg	02 40 43.4	-3.5
MNBS				Lg	Lg	02 42 19.6	
OTUK	Ortayu	7.32	16	⇓Pn	Pn	02 40 16.3	+1.0
	comp=Z,8.5nm,0.4s						
OTUK				⇓Sn	Sn	02 41 34.1	-4.4
	comp=Z,59nm,0.8s						
OTUK				⇑Lg	Lg	02 42 13.4	
	comp=Z,54nm,0.7s						
OTUK	Ortayu	7.32	16	PN	Pn	02 40 16.3	+1.0
CEP	Cherat	7.67	164	P	Pn	02 40 25.9	+5.6
CEP				S	Sn	02 41 50.0	+2.6
PDGK	Podgornoye	7.79	71	⇑Pg	Pb	02 40 55.2	+12
	comp=Z,31nm,0.7s						
PDGK				⇓Lg	Lg	02 42 35.6	
	comp=Z,133nm,1.3s						
NIL	Nilore	8.18	157	ePn	Pn	02 40 32.5	+5.3
	comp=Z,34nm,0.6s						
NIL	Nilore	8.18	157	eP	Pn	02 40 32.5	+5.3
NIL				pmax	pmax		
	comp=Z,34nm,0.6s						
KTMS	Ketmen	8.43	71	Pg	Pb	02 41 04.5	+10
	comp=Z,0.5nm,0.1s						
KTMS				Lg	Lg	02 42 55.2	
	comp=Z,13nm,0.5s						
THW	Thamme Wali	8.64	167	P	Pn	02 40 41.0	+7.5
GEYT	Alibeck	9.29	253	Pn	Pn	02 40 41.4	-1.0
	comp=Z,1.7nm,0.3s,baz=62,slow=12,SNR=13						
GEYT				Sn	Sn	02 42 20.2	-6.8
	comp=Z,4.8nm,0.3s,baz=95,slow=19,SNR=6.7						
GYA0B	ALIBECK ARRAY	9.29	253	ePn	Pn	02 40 42.8	+0.4
AB31	Akbulak array	10.40	324	⇓Pn	Pn	02 40 54.1	-3.4
	comp=Z,4.1nm,0.6s,baz=141,slow=12,SNR=209						
AB31				⇑Sn	Sn	02 42 42.6	-12
	comp=Z,11nm,0.6s						
AB31	Akbulak array	10.40	324	P	Pn	02 40 54.1	-3.4
AB31				SN	Sn	02 42 42.6	-12
ABKAR	Akbulak array	10.40	324	ePn	Pn	02 40 54.6	-3.0
MAKZ	Makanchi	10.65	54	ePn	Pn	02 41 02.4	+1.4
MAKZ	Makanchi	10.65	54	⇑Lg	Lg	02 44 05.7	
	comp=Z,35nm,0.9s						
MAKZ	Makanchi	10.65	54	eP	Pn	02 41 02.4	+1.4
MK01	Makanchi Array	10.83	55	ePn	Pn	02 41 04.5	+1.1
MK31	Makanchi Array	10.84	55	ePn	Pn	02 41 04.4	+0.9
MK31	Makanchi Array	10.84	55	Pn	Pn	02 41 04.6	+1.1
	comp=Z,0.6nm,0.5s,baz=244,slow=14,SNR=20						
MK31				⇑Lg	Lg	02 44 11.5	
	comp=Z,41nm,0.8s						
MK31	Makanchi Array	10.84	55	P	Pn	02 41 04.6	+1.1
MK32	Makanchi Array	10.84	55	ePn	Pn	02 41 05.0	+1.4
MKAR	Makanchi Array	10.84	55	eP	Pn	02 41 05.1	+1.6
MKAR	Makanchi Array	10.84	55	Pn	Pn	02 41 05.0	+1.4
	comp=Z,0.2nm,0.3s,baz=245,slow=13,SNR=12						
MKAR				Lg	Lg	02 44 12.6	
	comp=Z,1.3nm,0.3s,baz=245,slow=26,SNR=5.7						
MKAR				LR	LR	02 45 38.0	
	comp=Z,72nm,21.5s,baz=245,slow=39						
BVA0	Borovoye Array	11.81	3	⇓Pn	Pn	02 41 14.2	-2.6
	comp=Z,1.1nm,0.3s,baz=174,slow=13,SNR=32						
BVA0				⇓Sn	Sn	02 43 27.1	-1.6
	comp=Z,8.1nm,0.7s,baz=171,slow=25,SNR=4.8						
BVA0	Borovoye Array	11.81	3	P	Pn	02 41 14.2	-2.6
BVA0				SN	Sn	02 43 27.7	-1.0
BVAR	Borovoye Array	11.81	3	Pn	Pn	02 41 14.5	-2.3
	comp=Z,0.9nm,0.3s,baz=179,slow=10,SNR=22						
BRVK	Borovoye	11.84	3	ePn	Pn	02 41 15.3	-1.9
BRVK	Borovoye	11.84	3	⇓Pn	Pn	02 41 14.1	-3.1
	comp=Z,0.9nm,0.4s						
BRVK	Borovoye	11.84	3	iP	Pn	02 41 15.4	-1.8
AKTO	Aktyubinsk	12.12	323	⇓Pn	Pn	02 41 16.6	-4.4
	comp=Z,6.3nm,1.1s						
AKTO	Aktyubinsk	12.12	323	Pn	Pn	02 41 18.7	-2.3
	comp=Z,0.6nm,0.3s,baz=114,slow=14,SNR=16						
AKTO				Sn	Sn	02 43 25.0	-11
	comp=Z,0.7nm,0.3s,baz=151,slow=22,SNR=6.2						
AKTO				LR	LR	02 46 50.4	
	comp=Z,51nm,18.2s,baz=153,slow=42						
WMQ	Urumqi	13.77	73	eP	P	02 41 51.1	-1.1
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				LR	LR		
	comp=Z,100nm,18.7s						
WMQ				LR	LR		
	comp=Z,93nm,17.7s						
WMQ				LR	LR		
	comp=Z,140nm,19.3s						
DGZ	Jazzator, Alta	15.21	50	iP	Pn	02 42 04.0	+0.7
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ZAA0	Zalesovo Array	16.39	34	ePn	Pn	02 42 20.1	+1.7
	comp=Z,2.3nm,0.7s						
ZALV	Zalesovo Beam	16.39	34	ePn	Pn	02 42 18.2	-0.2
ZALV	Zalesovo Beam	16.39	34	Pn	Pn	02 42 18.4	0.0
	comp=Z,0.3nm,0.3s,baz=248,slow=14,SNR=3.9						
ZAA1	Zalesovo Array	16.40	34	ePn	Pn	02 42 18.4	0.0
SVE	Sverdlovsk	16.59	343	eP	Pn	02 42 17.0	-3.9
SVE				pmax	pmax		
	comp=Z,21nm,0.9s						
ARU	Arti	16.75	339	ePn	Pn	02 42 19.3	-3.6
	comp=Z,6.5nm,0.8s						
ARU	Arti	16.75	339	⇓iP	Pn	02 42 19.5	-3.4
GNI	Garni	18.69	275	eP	P	02 42 45.5	-1.4
GNI	Garni	18.69	275	eP	P	02 42 45.5	-1.4
ZEI	Tsey	18.97	283	eP	P	02 42 47.0	-3.0
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	19.65	286	P	P	02 42 56.8	-0.4
	comp=Z,0.3nm,0.3s,baz=90,slow=6.1,SNR=12						
KIV	Kislovodsk	19.80	287	eP	P	02 42 58.6	-0.3
	comp=Z,4.7nm,0.4s						
KIV	Kislovodsk	19.80	287	eP	P	02 42 56.4	-2.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VRH	Novokhopyorsk	21.45	307	eP	P	02 43 15.2	-1.4
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VSR	Storozhevoye	23.00	306	eP	P	02 43 30.8	-2.4
VSR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA	Gaotai	23.23	84	eP	P	02 43 39.3	+3.5
GTA				pP	sP	02 43 44.5	+4.6
GTA				sP	pP	02 43 47.9	+9.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LPSR	Galich'ya Gora	23.51	309	eP	P	02 43 42.0	+3.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
OBN	Obninsk	25.62	314	eP	P	02 43 59.0	+1.3
	comp=Z,8.8nm,0.5s						
SONA0	Songino Array	27.01	63	eP	P	02 44 12.7	+2.1
SONM	Songino Array	27.01	63	P	P	02 44 12.7	+2.1
	comp=Z,0.8nm,0.8s,baz=276,slow=10,SNR=5.3						
BR101	Keskin Array S	27.10	279	eP	P	02 44 11.7	+0.2
BRTR	Keskin Array B	27.10	279	P	P	02 44 11.7	+0.2
	comp=Z,1.2nm,1.0s,baz=81,slow=7.8,SNR=5.2						
ULN	Ulaanbaatar	27.46	63	ceP	P	02 44 16.8	+2.2
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AKASG	Malin Array Be	29.14	303	LR	LR	02 57 42.8	
	comp=Z,37nm,20.1s,baz=295,slow=40						
HHC	Hu-ho-hao-te	31.61	76	eP	P	02 44 54.9	+3.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,38nm,5.6s						
FIA0	FINESS Array S	32.89	323	eP	P	02 45 01.9	-0.4
FIA0	FINESS Array S	32.89	323	eP	P	02 45 01.9	-0.4
FIA1	FINESS Array S	32.89	323	eP	P	02 45 01.6	-0.7
FINES	FINESS Array B	32.89	323	P	P	02 45 01.9	-0.4
	comp=Z,1.4nm,0.4s,baz=115,slow=9.0,SNR=27						
ARA0	ARCESS Array S	36.30	336	eP	P	02 45 31.6	-0.1
ARCES	ARCESS Array B	36.30	336	eP	P	02 45 31.8	+0.1
ARCES	ARCESS Array B	36.30	336	P	P	02 45 31.6	-0.1
	comp=Z,5.9nm,1.0s,baz=97,slow=8.7,SNR=6.2						
GEC2	GERESS Array S	39.28	301	eP	P	02 45 57.5	+0.3
	comp=Z,0.5nm,0.9s						
GEC2	GERESS Array S	39.28	301	eP	P	02 45 57.6	+0.3
GEC2				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	GERESS Array B	39.28	301	P	P	02 45 57.6	+0.3
	comp=Z,0.3nm,0.4s,baz=61,slow=8.2,SNR=4.4						
NC405	NORSAR Array S	39.64	320	eP	P	02 46 00.4	+0.4
NC602	NORSAR Array S	39.71	319	eP	P	02 46 00.0	-0.5
NC303	NORSAR Array S	39.82	320	eP	P	02 46 01.4	0.0
NB201	NORSAR Array S	39.84	320	eP	P	02 46 01.2	-0.5
NB2	NORSAR Subarra	39.88	320	P	P	02 46 01.0	-1.1
	comp=Z,0.9nm,0.6s,baz=93,slow=8.6						
NB200	NORSAR Array S	39.88	320	eP	P	02 46 01.2	-0.9
NOA	NORSAR Array B	39.88	320	P	P	02 46 01.2	-0.9
	comp=Z,2.0nm,0.8s,baz=93,slow=8.3,SNR=8.1						
NBO00	NORSAR Array S	40.09	320	eP	P	02 46 03.4	-0.4
NC204	NORSAR Array S	40.11	320	eP	P	02 46 03.4	-0.6
KLR	Kul'dur	43.53	58	LR	LR	03 04 38.3	
	comp=Z,32nm,19.3s,baz=308,slow=36						
KSRS	Korea Array	44.71	75	LR	LR	03 07 51.6	
	comp=Z,18nm,18.6s,baz=45,slow=39						
BNI	Bardonecchia	44.89	297	eP	P	02 46 43.1	0.0
	comp=Z,8.7nm,1.1s						
BNI	Bardonecchia	44.89	297	eP	P	02 46 43.1	0.0
BNI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TOA1	Torodi Ar. Sit	64.69	265	eP	P	02 49 06.3	-0.5
TORD	Torodi Ar. Bea	64.69	265	P	P	02 49 06.3	-0.5
	comp=Z,0.7nm,0.6s,baz=47,slow=7.3,SNR=4.8						
INK	Inuvik	69.43	9	eP	P	02 49 37.5	+1.4
	comp=Z,1.1nm,0.5s						
INK	Inuvik	69.43	9	eP	P	02 49 37.5	+1.4
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	76.57	2	P	P	02 50 18.9	+0.5
	comp=Z,0.4nm,0.9s,baz=354,slow=5.8,SNR=5.6						
YKB5	Yellowknife Ar	76.57	2	eP	P	02 50 18.9	+0.5
WR1	Warramunga Arr	85.56	121	eP	P	02 51 07.9	+1.0
	comp=Z,1.7nm,1.1s						
WRA	Warramunga Arr	85.56	121	P	P	02 51 07.9	+0.9
	comp=Z,0.3nm,0.8s,baz=325,slow=4.8,SNR=6.1						

IDC 22 02:40:55.8±1.7**, 9°.80S**×**166°.13E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/26**, mbtmp3.6**/4**, ML3.6**/1**, Error ellipse: s-maj=58.4km s-min=30.4km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.20	179	Pn	Pn	02 43 51.0	-0.1
	0.4nm,0.3s,baz=324,slow=19,SNR=4.0						
WRA	Warramunga Arr	32.28	248	P	P	02 47 26.6	+0.1
	0.5nm,0.6s,baz=79,slow=8.9,SNR=5.8						
ASAR	Alice Springs	33.70	242	P	P	02 47 38.7	-0.2
	0.4nm,0.6s,baz=64,slow=10,SNR=4.5						
ILAR	Eielson Array	82.22	18	P	P	02 53 18.5	0.0
	0.2nm,0.7s,baz=237,slow=6.3,SNR=3.9						

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*ISCJB **22** 03:07:58.5±0.4, 39°.99N±0°.02×29°.25E±0°.03, h5^{km}±3^{km}, Error ellipse: s-maj=3.4km s-min=2.9km az=161.9*

*DDA **22** 03:07:58.4, 39°.96N×29°.28E, h7^{km}±3^{km}, ML3.8*

*ISK **22** 03:07:58.3, 39°.97N×29°.25E, h9^{km}, ML3.4/45*

ISC 22 03:07:58.7±1.0**, 39°.97N**±0°.02×**29°.26E**±0°.02**, h8^{km}**±10^{km}**, n68, σ0ˢ.42**/77**, 2C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORLT	Orhaneli	0.29	286	PG	Pg	03 08 04.4	-0.1
ORLT				SG	Sg	03 08 08.7	+0.3
IZI	Iznik	0.40	24	PG	Pg	03 08 06.5	-0.1
IZI				SG	Sg	03 08 12.7	+0.7
GEMT	Gemlik	0.47	353	PG	Pg	03 08 08.1	+0.2
MDNY	Mudanya-Bursa	0.49	324	PG	Pg	03 08 08.3	0.0
CAVI	Cavuskoy	0.50	62	PG	Pg	03 08 08.5	0.0
TVSB	Tavsanli	0.54	163	PG	Pg	03 08 09.4	+0.2
TVSB				SG	Sg	03 08 16.4	+0.1
YLV	Yalova	0.60	8	PG	Pg	03 08 10.6	+0.2
DST	Dursunbey	0.61	234	PG	Pg	03 08 10.4	-0.2
ARMT	Armutlu	0.67	333	PG	Pg	03 08 11.8	+0.1
DURS	Dursunbey	0.71	239	iP	Pg	03 08 12.4	0.0
DURS				iS	Sn	03 08 26.6	+0.4
SBT5	Esenkoy-Cinarc	0.72	336	PG	Pb	03 08 12.9	-0.6
KCTX	Karacabey (Bur	0.75	294	PG	Pg	03 08 13.3	+0.1
BUY	Buyukada	0.89	353	iP	Pb	03 08 16.4	0.0
BUY				IAML_P			
	comp=Z,10µm,0.1s						
SMAA	Simav-Kutahya	0.89	194	PG	Pb	03 08 15.9	-0.6
GDZ	Gediz	0.89	169	iP	Pb	03 08 16.0	-0.6
GDZ				iS	Sn	03 08 32.3	+1.4
GDZ				IAML_P			
	comp=Z,27µm,0.2s						
BORA	Eskisehir	0.92	95	iP	Pb	03 08 16.6	-0.4
BORA				IAML_P			
	comp=Z,16µm,0.1s						
GEDZ	Gediz	0.93	173	PG	Pb	03 08 16.8	-0.3
SHAP	Saphane-Kutahy	0.94	182	PG	Pb	03 08 17.1	-0.3
GEYV	SAKARYA_Geyve	0.95	57	iP	Pb	03 08 17.2	-0.1
GEYV				IAML_P			
	comp=Z,10µm,0.1s						
DEMI	Demirci	1.01	205	iP	Pn	03 08 18.8	-0.5
DEMI				iS	Sn	03 08 34.0	+0.2
GULT	Gulveren	1.07	64	PG	Pb	03 08 19.2	-0.3
SPNC	Sapanca-Adapaz	1.08	48	PG	Pb	03 08 19.2	-0.4
KAVV	Kandilli-Istan	1.11	352	PN	Pg	03 08 19.5	-0.4
ISK	Istanbul-Kandi	1.11	352	PN	Pg	03 08 19.5	-0.5
SAUV	Serdivan-Sakar	1.12	46	PN	Pn	03 08 20.2	-0.5
EDC	Edincik	1.14	290	PN	Pg	03 08 20.2	-0.3
AUKIR	Kırka- Seyitga	1.20	125	iP	Pn	03 08 22.6	+0.8
AUKIR				iS	Sb	03 08 37.0	-0.4
GONE	Gonen-Balikesi	1.21	274	PN	Pb	03 08 21.5	-0.4
SILT	Sile	1.22	14	PN	Pn	03 08 21.7	-0.3
SILT	Sile	1.22	14	⇑iP	Pn	03 08 21.7	-0.3
USAK	Uak-Merkez	1.27	189	iP	Pg	03 08 23.0	0.0
USAK				iS	Sg	03 08 39.3	-0.1
BGKT	Bogazkoy	1.27	343	PN	Pb	03 08 22.5	-0.3
KLYT	Kilyos	1.29	353	PN	Pn	03 08 22.8	-0.3
ESKT	Eskisehir	1.30	110	PN	Pg	03 08 23.3	-0.4
STEP	BALIKESIR_Sava	1.33	244	iP	Pg	03 08 24.4	+0.2
STEP				IAML_P			
	comp=Z,3µm,0.2s						
CTKS	Kestanelik-??a	1.39	336	PN	Pn	03 08 24.2	-0.2
AFYO	Afyonkarahisar	1.43	145	iP	Pg	03 08 26.8	+0.7
AFYO				iS	Sg	03 08 45.4	+0.8
AFYO				IAML_P			
	comp=Z,7µm,0.2s						
SLVT	Silivri	1.49	328	PN	Pn	03 08 25.6	-0.2
KULA	Kula-Manisa	1.52	198	PN	Pn	03 08 26.3	0.0
AKHS	Akhisar	1.56	226	iP	Pg	03 08 28.1	-0.6
AKS	Akhisar	1.56	226	PN	Pn	03 08 26.9	+0.1
KRBG	Karabiga-Canak	1.56	286	PN	Pn	03 08 26.8	+0.1
MDUB	Mudurnu	1.57	71	PN	Pn	03 08 26.9	0.0
MANT	Manisa	1.57	201	iP	Pg	03 08 28.4	-0.4
SBT4	Kumbag-Tekirda	1.57	304	PN	Pn	03 08 26.8	+0.1
KHAL	Karahalli	1.60	173	iP	Pb	03 08 27.8	-0.8
KHAL				IAML_P			
	comp=Z,2µm,0.1s						
GOMA	Golmarmara-Man	1.63	220	PN	Pn	03 08 27.7	0.0
KHL	Karahalli	1.66	173	PN	Pn	03 08 28.3	+0.2
TKR	Tekirdag	1.67	308	PN	Pn	03 08 27.9	-0.3
CTYL	Yalikoy Yolu	1.68	334	PN	Pn	03 08 28.3	0.0
CTYL	Yalikoy Yolu	1.68	334	⇑iP	Pn	03 08 28.4	+0.1
AUMIH	MIHALICIK	1.71	93	iP	Pn	03 08 28.5	-0.4
SHUT	Suhut-Afyon	1.73	144	PN	Pn	03 08 29.4	+0.2
BOLV	Bolvadin	1.81	133	iP	Pb	03 08 31.1	-1.1
BOLV				IAML_P			
	comp=Z,4µm,0.2s						
SVRH	Sivrihisar-ESK	1.82	106	PN	Pn	03 08 30.5	+0.1
AUSIV	SIVRIHISAR	1.84	106	iP	Pg	03 08 33.6	-0.3
KZIL	AFYON_Kizioren	1.84	158	iP	Pb	03 08 31.7	-0.9
LPK	Lapseki	1.96	283	PN	Pn	03 08 32.3	+0.1
GELI	Tayfur-Gelibol	2.18	282	PN	Pn	03 08 35.3	+0.1
ERIK	Erikli-Kesan	2.21	289	PN	Pn	03 08 35.8	+0.1
EZN	Ezine	2.26	267	PN	Pn	03 08 36.5	+0.1
EZN	Ezine	2.26	267	⇓iP	Pn	03 08 37.0	+0.6
AYDB	Zeytinkoy-Aydi	2.28	208	PN	Pn	03 08 36.8	0.0
BLCB	Balcova	2.34	228	PN	Pn	03 08 37.5	+0.1
BOZC	Bozcaada	2.47	268	PN	Pn	03 08 39.5	+0.3
ENEZ	Enez	2.50	289	PN	Pn	03 08 39.8	+0.2
ALN	Alexandroupoli	2.62	292	PN	Pn	03 08 41.6	+0.3
EDRB	Edirne	2.68	315	PN	Pn	03 08 42.4	+0.3

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*KRNET **22** 03:18:41.6±0.1, 42°.52N×79°.66E, h8^{km}, mb3.0*

*SOME **22** 03:18:42.8, 42°.53N×79°.62E, h15^{km}*

*NNC **22** 03:18:42.9±1.1, 42°.61N×79°.63E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=7.6km s-min=4.1km az=150.0*

*ISCJB **22** 03:18:43.4±0.7, 42°.55N±0°.03×79°.73E±0°.05, h10^{km}, Error ellipse: s-maj=6.4km s-min=3.2km az=42.6*

ISC 22 03:18:42.1±1.1**, 42°.49N**±0°.04×**79°.67E**±0°.04**, h10^{km}, n44, σ1ˢ.37**/81**, 23C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.68	347	eP	Pb	03 18 55.2	-1.0
	baz=14						
SHLS				eS	Sb	03 19 04.5	-1.3
	baz=14						
SHLS	Shalkode	0.68	347	eP	Pb	03 18 55.1	-1.0
	23nm,0.1s						
SHLS				eS	Sb	03 19 04.5	-1.3
	141nm,0.2s						
UZB	Uzynbulak	0.81	324	P	Pg	03 18 56.7	-1.0
	26nm,0.2s						
UZB				S	Sg	03 19 06.9	-1.4
	63nm,0.2s						
UZB	Uzynbulak	0.81	324	eP	Pg	03 18 56.8	-1.0
	baz=24						
UZB				eS	Sg	03 19 07.0	-1.4
	baz=24						
UZB	Uzynbulak	0.81	324	eP	Pg	03 18 56.8	-1.0
	26nm,0.2s						
UZB				eS	Sg	03 19 06.9	-1.4
	63nm,0.2s						
PDGK	Podgornoye	0.84	351	P	Pg	03 18 57.3	-1.1
	2.3nm,0.1s						
PDGK				S	Sg	03 19 07.8	-1.7
	25nm,0.2s						
PDGK	Podgornoye	0.84	351	⇑P	Pg	03 18 57.3	-1.1
	0.6nm,0.2s						
PDGK				⇑S	Sg	03 19 07.7	-1.7
	4.5nm,0.2s						
PDGK	Podgornoye	0.84	351	⇑iP	Pg	03 18 57.4	-1.1
	baz=51						
PDGK				⇑iS	Sg	03 19 08.0	-1.5
	baz=51						
PRZ	Przheval'sk	0.94	270	⇑iP	Pg	03 18 58.9	-1.3
	baz=68						
PRZ				⇑iS	Sg	03 19 11.5	-1.0
	baz=68						
KTMS	Ketmen	1.08	28	P	Pg	03 19 01.7	-1.1
	5.5nm,0.1s						
KTMS				S	Sg	03 19 15.1	-1.7
	19nm,0.3s						
KTMS	Ketmen	1.08	28	eP	Pg	03 19 01.7	-1.1
	baz=28						
KTMS				eS	Sg	03 19 15.1	-1.7
	baz=28						
KTMS	Ketmen	1.08	28	eP	Pg	03 19 01.7	-1.1
	5.5nm,0.1s						
KTMS				eS	Sg	03 19 15.1	-1.7
	19nm,0.3s						
SATY	Saty	1.09	302	P	Pg	03 19 02.1	-1.0
	6.8nm,0.2s						
SATY				S	Sg	03 19 15.7	-1.5
	29nm,0.1s						
SATY	Saty	1.09	302	eP	Pg	03 19 02.1	-1.0
	6.8nm,0.2s						
SATY				eS	Sg	03 19 15.7	-1.5

	29nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.58**	**242**	⇑*i*P	**Pb**	**03 19 11.5**	**-0.2**
	baz=41						
TARG				⇑*i*S	**Sg**	**03 19 32.7**	**-0.4**
	baz=41						
MNBS	**Baschi**	**1.83**	**330**	*e*P	**Pb**	**03 19 15.0**	**-0.8**
	baz=30						
MNBS				*e*S	**Sb**	**03 19 38.5**	**-0.4**
	baz=30						
MNBS	**Baschi**	**1.83**	**330**	*e*P	**Pb**	**03 19 15.0**	**-0.8**
	6.8nm,0.1s						
MNBS				*e*S	**Sb**	**03 19 38.6**	**-0.4**
	27nm,0.1s						
DJR	**Jarkent**	**1.84**	**3**	*e*P	**Pb**	**03 19 15.3**	**-0.6**
	0.6nm,0.3s						
DJR				*e*S	**Sb**	**03 19 38.8**	**-0.3**
	3.5nm,0.4s						
KDJ	**Kajisay**	**1.88**	**260**	⇑*i*P	**Pb**	**03 19 16.6**	**-0.1**
	baz=59						
KDJ				⇑*i*S	**Sg**	**03 19 41.7**	**-0.9**
	baz=59						
KOTS	**Kotyrbulak**	**2.02**	**292**	Pg	**Pb**	**03 19 18.6**	**-0.4**
	4.1nm,0.2s						
KOTS				Lg	Lg	03 19 44.2	
	56nm,0.5s						
KOTS	**Kotyrbulak**	**2.02**	**292**	*e*P	**Pb**	**03 19 18.6**	**-0.4**
	baz=92						
KOTS				*e*S	**Sb**	**03 19 44.1**	**-0.2**
	baz=92						
KOTS	**Kotyrbulak**	**2.02**	**292**	*e*P	**Pb**	**03 19 18.6**	**-0.4**
	4.1nm,0.2s						
KOTS				*e*S	**Sb**	**03 19 44.2**	**-0.2**
	56nm,0.5s						
MDOK	**Medeo**	**2.04**	**290**	⇓Pn	**Pb**	**03 19 18.7**	**-0.6**
	1.8nm,0.3s						
MDOK				⇑Sn	**Sg**	**03 19 46.8**	**-1.0**
	15nm,0.6s						
TNSS	**Tian-Shan**	**2.08**	**286**	*e*P	**Pb**	**03 19 19.6**	**-0.6**
	baz=86						
TNSS				*e*S	**Sb**	**03 19 46.3**	**+0.1**
	baz=86						
TNSS	**Tian-Shan**	**2.08**	**286**	*e*P	**Pb**	**03 19 19.6**	**-0.6**
	4.9nm,0.4s						
TNSS				*e*S	**Sb**	**03 19 46.3**	**+0.1**
	8.8nm,0.4s						
ARXS	**Arharly**	**2.18**	**323**	Pg	**Pb**	**03 19 21.6**	**-0.1**
	4.9nm,0.5s						
ARXS				Lg	Lg	03 19 49.0	
	23nm,0.6s						
ARXS	**Arharly**	**2.18**	**323**	*e*P	**Pb**	**03 19 21.6**	**-0.1**
	4.9nm,0.5s						
ARXS				*e*S	**Sb**	**03 19 49.0**	**+0.2**
	23nm,0.6s						
IZV	**Izvestkoviy**	**2.31**	**285**	Pg	**Pb**	**03 19 24.4**	**+0.4**
	8.9nm,0.2s						
IZV				Lg	Lg	03 19 54.2	
	34nm,0.3s						
IZV	**Izvestkoviy**	**2.31**	**285**	*e*P	**Pb**	**03 19 24.5**	**+0.4**
	baz=84						
IZV				*e*S	**Sg**	**03 19 54.3**	**-2.2**
	baz=84						
IZV	**Izvestkoviy**	**2.31**	**285**	*e*P	**Pb**	**03 19 24.4**	**+0.4**
	8.9nm,0.2s						
IZV				*e*S	**Sg**	**03 19 54.2**	**-2.2**
	34nm,0.3s						
KTBS	**Karatobe**	**2.50**	**300**	Pg	**Pb**	**03 19 27.2**	**0.0**
	4.5nm,0.2s						
KTBS				Lg	Lg	03 19 58.8	
	30nm,0.3s						
KTBS	**Karatobe**	**2.50**	**300**	*e*P	**Pb**	**03 19 27.2**	**0.0**
	baz=99						
KTBS				*e*S	**Sb**	**03 19 58.9**	**+0.8**
	baz=99						
KTBS	**Karatobe**	**2.50**	**300**	*e*P	**Pb**	**03 19 27.2**	**0.0**
	4.5nm,0.2s						
KTBS				*e*S	**Sb**	**03 19 58.8**	**+0.8**
	30nm,0.3s						
ULHL	**Ulahol**	**2.55**	**266**	⇑*i*P	**Pb**	**03 19 26.3**	**-1.8**
	baz=65						
ULHL				⇑*i*S	**Sb**	**03 19 58.3**	**-1.3**
	baz=65						
BOOM	**Boomskoye usch**	**2.76**	**271**	⇑*i*P	**Pb**	**03 19 29.1**	**-2.5**
	baz=71						
BOOM				⇑*i*S	**Sb**	**03 20 03.3**	**-2.2**
	baz=71						
NRN	**Naryn**	**2.93**	**250**	⇑*i*P	**Pb**	**03 19 32.0**	**-2.7**
	baz=50						
NRN				⇑*i*S	**Sb**	**03 20 08.5**	**-2.2**
	baz=50						
DGS	**Degeres**	**2.96**	**286**	Pg	**Pb**	**03 19 34.6**	**-0.4**
	11nm,0.4s						
DGS				Lg	Lg	03 20 11.4	
	22nm,0.6s						
DGS	**Degeres**	**2.96**	**286**	*e*P	**Pb**	**03 19 34.6**	**-0.4**
	baz=86						
DGS				*e*S	**Sb**	**03 20 11.4**	**+0.1**
	baz=86						
DGS	**Degeres**	**2.96**	**286**	*e*P	**Pb**	**03 19 34.6**	**-0.4**
	11nm,0.4s						
DGS				*e*S	**Sb**	**03 20 11.4**	**+0.1**
	22nm,0.6s						
TKM2	**Tokmak 2**	**3.03**	**279**	⇓Pg	**Pb**	**03 19 37.1**	**+0.7**
	1.6nm,0.5s						
TKM2				⇑Lg	Lg	03 20 14.9	
	6.5nm,0.4s						
TKM2	**Tokmak 2**	**3.03**	**279**	⇓*i*P	**Pn**	**03 19 32.5**	**+2.1**
	baz=79						
TKM2				⇓*i*S	**Sb**	**03 20 09.9**	**-3.5**
	baz=79						
KZA	**Kyzart**	**3.31**	**264**	⇑*i*P	**Pn**	**03 19 36.8**	**+2.5**
	baz=64						
KZA				⇑*i*S	**Sn**	**03 20 16.9**	**+3.1**
	baz=64						
AAK	**Ala-Archa**	**3.83**	**274**	⇑Pg	**Pb**	**03 19 51.4**	**+1.6**
	0.7nm,0.3s						
AAK				⇓Lg	Lg	03 20 39.8	
	2.5nm,0.4s						
MK31	**Makanchi Array**	**4.69**	**23**	⇑Pn	**Pn**	**03 19 56.2**	**+3.2**
	0.1nm,0.2s,baz=206,slow=13,SNR=5.5						
MK31				⇑Sn	**Sn**	**03 20 49.5**	**+2.1**
	0.3nm,0.4s,baz=204,slow=25						
MK31				⇓Lg	Lg	03 21 07.1	
	0.1nm,0.3s,baz=210,slow=29						

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*ISCJB **22** 03:27:12.2±0.3, 50°.08N±0°.02×18°.34E±0°.02, h0^{km}, Error ellipse: s-maj=2.8km s-min=1.9km az=5.6*

*IDC **22** 03:27:13.6±1.9, 49°.90N×18°.47E, h0^{km}, mb1 3.1/4, mb1mx2.9/56, mbtmp3.0/4, ML2.2/3, Error ellipse: s-maj=29.4km s-min=10.6km az=131.0*

*IPEC **22** 03:27:13.4±0.2, 50°.07N×18°.44E, h1^{km}±2^{km}, ML2.6/3, Error ellipse: s-maj=1.9km s-min=1.1km az=163.0*

*PRU **22** 03:27:14.0±0.0, 50°.05N×18°.38E, h0^{km}*

ISC 22 03:27:12.6±0.7**, 50°.11N**±0°.03×**18°.45E**±0°.02**, h0**^{km}**, n56,** σ**1**^{s}**.30**/100**, 4C-4D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.33**	**216**	*e*PG	**Pg**	**03 27 19.7**	**+0.7**
OKC				*e*SG	**Sg**	**03 27 23.4**	**+0.1**
	comp=Z,485nm,0.6s						
CHZP	**Chorzow**	**0.39**	**62**	*e*Pg	**Pb**	**03 27 22.3**	**-0.2**
CHZP				*e*Sg	**Sb**	**03 27 28.9**	**-0.1**
MORC	**Moravsky Berou**	**0.67**	**241**	⇑*i*P	**Pg**	**03 27 25.8**	**+0.3**
MORC				S	**Sg**	**03 27 34.8**	**+0.6**
MORC	**Moravsky Berou**	**0.67**	**241**	*e*PG	**Pg**	**03 27 25.8**	**+0.3**
MORC				*e*SG	**Sg**	**03 27 33.8**	**-0.4**
MORC	**Moravsky Berou**	**0.67**	**241**	*e*Pg	**Pg**	**03 27 25.7**	**+0.3**
	baz=62						
MORC				*e*Sg	**Sg**	**03 27 33.7**	**-0.4**
	130nm,0.3s,baz=62						
OJC	**Ojcow**	**0.87**	**82**	*e*Pg	**Pg**	**03 27 30.2**	**+0.9**
OJC				*e*Sg	**Sb**	**03 27 43.1**	**+0.2**
KRLC	**Kraliky**	**1.07**	**269**	*e*PG	**Pg**	**03 27 32.8**	**-0.4**
KRLC				*e*SG	**Sg**	**03 27 47.2**	**+0.1**
	comp=Z,53nm,0.4s						
LANS	**Liptovska Anna**	**1.17**	**145**	*e*PG	**Pb**	**03 27 35.5**	**-0.1**
LANS				*e*SG	**Sn**	**03 27 52.1**	**-0.7**
JAVC	**Velka Javorina**	**1.35**	**202**	*e*PG	**Pb**	**03 27 38.7**	**-0.1**
JAVC	**Velka Javorina**	**1.35**	**202**	*e*Pg	**Pb**	**03 27 38.6**	**-0.2**
	baz=22						
NIE	**Niedzica**	**1.38**	**119**	*e*Pb	**Pn**	**03 27 39.4**	**+0.2**
NIE				*e*Pg	**Pb**	**03 27 39.9**	**+0.6**
NIE				*e*Sg	**Sn**	**03 27 59.7**	**+1.5**
DPC	**Dobruska-Polom**	**1.39**	**281**	*e*PG	**Pg**	**03 27 39.3**	**+0.1**
DPC				*e*SG	**Sg**	**03 27 57.7**	**+0.6**
	comp=Z,124nm,0.6s						
VRAC	**Vranov**	**1.45**	**237**	⇑*i*P	**Pn**	**03 27 39.9**	**-0.1**
VRAC	**Vranov**	**1.45**	**237**	S	**Sg**	**03 27 58.3**	**-0.7**
VRAC	**Vranov**	**1.45**	**237**	*e*PG	**Pn**	**03 27 39.9**	**-0.1**
VRAC				*e*SG	**Sg**	**03 27 58.0**	**-1.1**
VRAC	**Vranov**	**1.45**	**237**	*e*Pg	**Pn**	**03 27 39.8**	**-0.3**
	baz=57						
VRAC				*e*Sg	**Sg**	**03 27 57.9**	**-1.1**
	92nm,0.4s,baz=57						
VRAC	**Vranov**	**1.45**	**237**	Pg	**Pn**	**03 27 39.7**	**-0.3**
	8.6nm,0.3s,baz=65,slow=16,SNR=28						
VRAC				Lg	Lg	03 27 58.4	
	31nm,0.3s,baz=142,slow=19,SNR=29						
KOLL	**Kolacno**	**1.53**	**181**	*e*PG	**Pg**	**03 27 42.0**	**+0.1**
KOLL				*e*SG	**Sg**	**03 28 01.3**	**-0.4**
KSP	**Ksiaz**	**1.56**	**299**	*e*Pn	**Pn**	**03 27 41.7**	**+0.1**
KSP				*e*Pg	**Pg**	**03 27 43.7**	**+1.2**
KSP				*e*Sg	**Sg**	**03 28 03.9**	**+1.2**
UPC	**Upice**	**1.61**	**285**	*e*PG	**Pb**	**03 27 43.3**	**+0.1**
UPC				*e*SG	**Sb**	**03 28 04.6**	**+0.5**
	comp=Z,68nm,0.6s						
VYHS	**Vyhne**	**1.64**	**171**	*e*PN	**Pn**	**03 27 42.4**	**-0.2**
VYHS				*e*SN	**Sn**	**03 28 04.0**	**-0.3**
VYHS				*e*LG	Lg	03 28 07.5	
KRUC	**Moravsky**	**1.70**	**233**	*e*PN	**Pn**	**03 27 43.8**	**+0.3**
KRUC				*e*SG	**Sn**	**03 28 05.9**	**0.0**
KRUC	**Moravsky**	**1.70**	**233**	*e*Pn	**Pn**	**03 27 43.8**	**+0.3**
	baz=52						
KRUC				*e*Sg	**Sn**	**03 28 05.8**	**-0.1**
	50nm,0.3s,baz=52						
SMOL	**Smolenice**	**1.73**	**203**	*e*PN	**Pn**	**03 27 44.2**	**+0.3**
SMOL				*e*SN	**Sn**	**03 28 05.4**	**-1.3**
MODS	**Modra-Piesok**	**1.90**	**204**	*e*PN	**Pn**	**03 27 46.5**	**+0.3**
MODS				*e*SN	**Sn**	**03 28 09.8**	**-1.1**
MODS				*e*LG	Lg	03 28 19.2	
TREC	**Trest**	**2.09**	**248**	*e*SG	**Sb**	**03 28 17.2**	**-0.6**
	comp=Z,31nm,0.3s						
ZST	**Bratislava**	**2.11**	**205**	*e*PN	**Pn**	**03 27 47.9**	**-1.2**
ZST				*e*SN	**Sn**	**03 28 13.6**	**-2.4**
GOPC	**GO Pecny, Ondr**	**2.37**	**267**	*e*PG	**Pb**	**03 27 55.5**	**-0.7**
GOPC				*e*SG	**Sb**	**03 28 26.9**	**+1.0**
PSZ	**Piszkesteto**	**2.39**	**156**	⇑*i*P	**Pn**	**03 27 53.2**	**+0.2**
PSZ	**Piszkesteto**	**2.39**	**156**	S	**Sg**	**03 28 28.8**	**-0.5**
PSZ	**Piszkesteto**	**2.39**	**156**	*e*Pn	**Pn**	**03 27 52.0**	**-1.0**
PSZ				Sn	**Sn**	**03 28 23.1**	**+0.1**
PRU	**Pruhonice**	**2.52**	**269**	*e*PN	**Pn**	**03 27 54.2**	**-0.6**
PRU				*e*PG	**Pb**	**03 27 58.1**	**-0.6**
PRU				*e*SG	**Sb**	**03 28 31.2**	**+0.9**
	comp=Z,31nm,0.8s						
PVCC	**Panska Ves**	**2.52**	**281**	*e*PN	**Pn**	**03 27 54.9**	**+0.1**
PVCC				*e*PG	**Pg**	**03 28 00.2**	**-0.7**
PVCC				*e*SG	**Sg**	**03 28 34.9**	**+1.3**
	comp=Z,46nm,0.5s						
SOP	**Sopron**	**2.73**	**208**	*e*Pn	**Pn**	**03 27 55.1**	**-2.6**
SOP				Sn	**Sn**	**03 28 31.1**	**-0.2**
CONA	**Conrad Observa**	**2.77**	**219**	Pn	**Pn**	**03 27 58.3**	**0.0**
	0.4nm,0.2s						
CONA				Sn	**Sn**	**03 28 30.9**	**-1.5**
	4.8nm,0.2s						
BRG	**Berggiesshubel**	**2.98**	**287**	PN	**Pb**	**03 28 07.9**	**+1.4**
BRG				PG	**Pg**	**03 28 09.3**	**-0.4**
BRG				SG	**Sg**	**03 28 47.4**	**-0.8**
	28nm,0.8s						
KHC	**Kasperske Hory**	**3.31**	**255**	*e*PN	**Pn**	**03 28 05.1**	**-0.6**
KHC				*e*PG	**Pg**	**03 28 14.6**	**-1.5**
KHC				*e*SG	**Sb**	**03 28 55.6**	**+2.5**
	comp=Z,30nm,0.4s						
TRPA	**Tarpa**	**3.34**	**125**	⇓*i*P	**Pn**	**03 28 08.3**	**+2.4**
GERES	**GERESS Array B**	**3.34**	**250**	Pn	**Pn**	**03 28 06.7**	**+0.5**
	0.2nm,0.3s,baz=73,slow=13,SNR=4.2						
GERES				Pg	**Pb**	**03 28 12.7**	**-0.1**
	1.5nm,0.3s,baz=65,slow=15,SNR=14						
GERES				Lg	Lg	03 28 57.3	
	5.9nm,0.3s,baz=69,slow=28,SNR=17						
ARSA	**Arzberg**	**3.46**	**215**	*e*Pn	**Pn**	**03 28 08.7**	**+1.0**
	2.6nm,0.4s						
ARSA				Sg	**Sg**	**03 29 07.6**	**+4.1**
	5.3nm,0.4s						
MOA	**Molln**	**3.56**	**232**	*e*Pn	**Pn**	**03 28 09.1**	**0.0**
	0.3nm,0.2s						
MOA				Pg	**Pb**	**03 28 18.5**	**+2.0**
	1.6nm,0.3s						
MOA				*e*Sn	**Sn**	**03 28 52.5**	**+0.5**
	2.6nm,0.2s						
MOA				*e*Sg	**Sg**	**03 29 04.5**	**-2.5**
	21nm,0.6s						
CLL	**Collm**	**3.67**	**291**	*e*Pg	**Pg**	**03 28 23.0**	**+0.2**
CLL				*e*Sg	**Sg**	**03 29 09.0**	**-1.3**
	comp=Z,36nm,1.2s						
MORH	**Mrgy, Hungar**	**3.90**	**178**	*e*Pn	**Pn**	**03 28 13.1**	**-0.6**
MORH				Sn	**Sn**	**03 28 56.1**	**-4.0**
DRGR		**4.37**	**138**	⇓*i*P	**Pn**	**03 28 20.8**	**+0.6**
SIRR	**Siria**	**4.40**	**150**	⇓*i*P	**Pn**	**03 28 20.3**	**-0.3**
KBA	**Koelnbreinsper**	**4.55**	**230**	*e*Pn	**Pn**	**03 28 23.8**	**+1.1**
	comp=Z,0.8nm,0.5s						
KBA				*e*Sn	**Sn**	**03 29 16.3**	**0.0**
	comp=Z,1.0nm,0.3s						
KBA				Sg	**Sg**	**03 29 41.0**	**+2.5**
	comp=Z,4.6nm,0.4s						
BZS	**Buzias**	**4.97**	**153**	⇑*i*P	**Pn**	**03 28 29.0**	**+0.5**
BURAR	**Bucovina Array**	**5.12**	**117**	⇓*i*P	**Pn**	**03 28 31.7**	**+1.2**
ABTA	**Abfaltersbach**	**5.19**	**232**	Sg	**Sg**	**03 30 01.1**	**+1.9**
	comp=Z,3.4nm,0.5s						
WTTA	**Wattenberg**	**5.33**	**240**	Sg	**Sg**	**03 30 06.9**	**+3.0**
	comp=Z,15nm,0.8s						
SQTA	**Sankt Quirin**	**5.60**	**242**	Sg	**Sg**	**03 30 15.5**	**+3.1**
	comp=Z,7.3nm,0.6s						
RETA	**Reutte**	**5.72**	**246**	Sg	**Sg**	**03 30 19.8**	**+3.7**
	comp=Z,4.5nm,0.5s						
FETA	**Feichten**	**5.98**	**242**	Sg	**Sg**	**03 30 27.2**	**+2.5**
	comp=Z,5.1nm,0.7s						
DAVOX	**Davos/Dischmat**	**6.60**	**243**	Pn	**Pn**	**03 28 53.1**	**+2.1**
	baz=50,slow=16						
NOA	**NORSAR Array B**	**11.69**	**342**	Pn	**Pn**	**03 29 59.1**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=151,slow=13,SNR=2.5						
FINES	**FINESS Array B**	**12.13**	**18**	Pn	**Pn**	**03 30 04.3**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=198,slow=10.0,SNR=4.1						

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*IDC **22** 03:34:10.9±0.6, 23°.91N×114°.48E, h0^{km}, mb4.2/16, mb1 4.3/16, mb1mx4.1/45, mbtmp4.2/16, MS3.6/12, Ms1 3.7/12, ms1mx3.4/38, Error ellipse: s-maj=28.2km s-min=13.4km az=60.0*

*BJI **22** 03:34:11.8, 23°.90N×114°.48E, h11^{km}, mB4.9/32, mb4.4/41, ML5.1/8, Ms4.6/44, Ms7 4.4/41*

*MOS **22** 03:34:12.0±1.2, 23°.79N×114°.32E, h20^{km}, mb4.6/29, Error ellipse: s-maj=10.5km s-min=6.0km az=110.3*

*NEIC **22** 03:34:12.2±1.6, 23°.88N×114°.47E, h9^{km}±10^{km}, mb4.5/23, Error ellipse: s-maj=4.4km s-min=3.4km az=224.0*

NEIC Felt [III] at Dongguan, Guangzhou, Pingshan and in Hong Kong; [II] at Shenzhen. Also felt at Jiangcheng, Meizhou, Shiqi and Zhuhai.

ISC 22 03:34:13.6±1.7**, 23°.87N**±0°.04×**114°.51E**±0°.04**, h17**^{km}±10^{km}**, n159,** σ**1**^{s}**.83**/181**, mb4.5**/54**, MS3.8**/12**, 7C-3D, Near coast of southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GZH	**Guangzhou**	**1.32**	**234**	Pg	Pn	03 34 27.8	-10
GZH				Sg	Sn	03 34 38.3	-16
GZH				smax	smax		
	comp=N,32µm,0.6s						
GZH				smax	smax		
	comp=E,19µm,0.4s						
HKC	**Hong Kong Obse**	**1.59**	**191**	⇑P	**Pn**	**03 34 41.0**	**0.0**
HKPS	**Hong Kong Po S**	**1.62**	**192**	Pn	**Pn**	**03 34 40.7**	**-0.7**
HKPS				Sn	**Sb**	**03 35 05.1**	**+1.9**
MCO	**Taipa Grande**	**1.95**	**207**	P	**Pn**	**03 34 45.0**	**-0.9**
QZH	**Quanzhou**	**3.87**	**73**	⇓*i*Pn	**Pn**	**03 35 11.5**	**-0.8**
QZH				Sn	**Sn**	**03 35 52.8**	**-4.6**
QZH				smax	smax		
	comp=E,6µm,0.7s						
QZH				smax	smax		
	comp=E,3µm,0.6s						
QZH				LR	LR		
	comp=E,6µm,5.7s						
QZH	**Quanzhou**	**3.87**	**73**	⇓*i*Pn	**Pn**	**03 35 11.5**	**-0.8**
QZH				Sn	**Sn**	**03 35 52.8**	**-4.6**
TPUB	**Ta-pu**	**5.64**	**95**	*e*Pn	**Pn**	**03 35 37.0**	**+0.2**
TPUB				*e*Sn	**Sn**	**03 36 39.9**	**-1.3**
SSLB	**Suanglung**	**5.90**	**90**	*e*Pn	**Pn**	**03 35 40.4**	**+0.1**
SSLB				*e*Sn	**Sn**	**03 36 44.0**	**-3.5**
TWG	**Pinlang**	**6.12**	**99**	*e*Pn	**Pn**	**03 35 44.5**	**+1.2**
YULB	**Yu-li**	**6.24**	**93**	*e*Pn	**Pn**	**03 35 46.1**	**+1.2**
YHNB	**Yeheng**	**6.32**	**81**	*e*Pn	**Pn**	**03 35 45.8**	**-0.2**
TATO	**Taipei**	**6.45**	**79**	*e*Pn	**Pn**	**03 35 46.9**	**-1.0**
NACB	**Ninganchiao**	**6.48**	**86**	*e*Pn	**Pn**	**03 35 47.3**	**-1.0**
QIZ	**Qiongzhong**	**6.49**	**223**	Pn	**Pn**	**03 35 52.6**	**+4.2**
QIZ				Sg	**Sg**	**03 37 36.0**	**-6.0**
QIZ				smax	smax		
	comp=E,870nm,0.9s						
QIZ				smax	smax		
	comp=E,760nm,0.8s						
QIZ	**Qiongzhong**	**6.49**	**223**	*e*Pn	**Pn**	**03 35 47.5**	**-0.9**
WHN	**Wuhan**	**6.65**	**359**	⇑Pn	**Pn**	**03 35 48.3**	**-2.2**
WHN				Sn	**Sn**	**03 37 02.1**	**-3.8**
WHN				Sg	**Sb**	**03 37 29.6**	**+1.7**
GYA	**Guiyang**	**7.56**	**292**	⇑*i*Pn	**Pn**	**03 36 03.4**	**+0.2**
GYA				Sn	**Sn**	**03 37 28.6**	**0.0**
GYA				LR	LR		
	comp=E,1µm,5.2s						
GYA				LR	LR		
	comp=E,2µm,8.4s						
GYA				LR	LR		
	comp=E,3µm,6.8s						
YOJ	**Yonaguni jima**	**7.79**	**84**	*e*Pn	**Pn**	**03 36 06.0**	**-0.2**
YOJ	**Yonaguni jima**	**7.79**	**84**	*e*P	**Pn**	**03 36 06.0**	**-0.2**
ENH	**Enshi**	**7.79**	**326**	*e*Pn	**Pn**	**03 36 05.7**	**-0.6**
NJ2	**Nanjing**	**9.01**	**24**	*e*P	**Pn**	**03 36 22.0**	**-0.9**
KMI	**Kunming**	**10.79**	**279**	P	**Pn**	**03 36 51.3**	**+3.7**
KMI				pP		03 36 53.4	
KMI				sP		03 36 54.9	
KMI				pmax	pmax		
	comp=E,13nm,0.5s						
KMI				pmax	pmax		
	comp=E,220nm,4.7s						
KMI				LR	LR		
	comp=E,4µm,7.7s						
KMI				LR	LR		
	comp=E,2µm,7.9s						
KMI				LR	LR		
	comp=E,2µm,8.4s						
XAN	**Xi'an**	**11.25**	**336**	P	**Pn**	**03 36 51.3**	**-2.4**
XAN				S	**Sn**	**03 38 53.6**	**-5.4**
XAN				pmax	pmax		
	comp=E,23nm,0.6s						
XAN				LR	LR		
	comp=E,2µm,7.0s						
XAN				LR	LR		
	comp=E,3µm,7.9s						
XAN				LR	LR		
	comp=E,2µm,8.2s						
XAN	**Xi'an**	**11.25**	**336**	*e*Pn	**Pn**	**03 36 51.5**	**-2.2**
XAN	**Xi'an**	**11.25**	**336**	P	**Pn**	**03 36 52.3**	**-1.4**
CD2	**Chengdu**	**11.85**	**309**	P	**Pn**	**03 37 02.0**	**+0.2**
CD2				S	**Sn**	**03 39 15.0**	**+1.3**
CD2				pmax	pmax		
	comp=E,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=E,220nm,6.5s						
CD2				LR	LR		
	comp=E,3µm,4.5s						
CD2				LR	LR		
	comp=E,2µm,5.9s						
CD2				LR	LR		
	comp=E,4µm,9.2s						
TIA	**Tai'an**	**12.51**	**10**	P	**Pn**	**03 37 10.3**	**-0.5**
TIA				LR	LR		
	comp=E,850nm,9.5s						
TIA				LR	LR		
	comp=E,470nm,5.9s						
TIA				LR	LR		
	comp=E,1µm,7.3s						
LZH	**Lanzhou**	**15.27**	**325**	*e*P	**P**	**03 37 55.4**	**+2.0**
LZH				pP	pP	03 37 58.5	+0.2
LZH				sP	sP	03 38 01.0	+0.3
LZH				S	**S**	**03 40 47.5**	**-6.4**
LZH				sS	sS	03 40 55.6	-6.2
LZH				pmax	pmax		
	comp=Z,33nm,1.0s						
LZH				pmax	pmax		
	comp=Z,299µm,3.8s						
LZH				LR	LR		
	comp=N,1µm,10.3s						
LZH				LR	LR		
	comp=E,1µm,11.2s						
LZH				LR	LR		
	comp=Z,2µm,11.8s						
CMAR	**Chiang Mai Arr**	**15.48**	**253**	Pn	**P**	**03 37 54.1**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=58,slow=9.3,SNR=17						
CMAR				Lg	Lg	03 42 28.1	
	comp=Z,0.4nm,0.3s,baz=59,slow=30,SNR=5.2						
CMAR				LR	LR	03 43 23.8	
	comp=Z,129nm,19.1s,baz=80,slow=36						
BJT	**Baijiatuau**	**16.16**	**5**	*e*Pn	**Pn**	**03 37 59.4**	**-0.5**
	comp=Z,10nm,0.8s						
BJT	**Baijiatuau**	**16.16**	**5**	*e*P	**Pn**	**03 37 59.4**	**-0.5**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DL2	**Dalian**	**16.16**	**20**	P	**P**	**03 38 08.4**	**+5.3**
DL2				*e*S	**S**	**03 41 14.9**	**+3.1**
DL2				pmax	pmax		
	comp=Z,36nm,1.2s						
DL2				LR	LR		
	comp=N,1µm,7.4s						
DL2				LR	LR		
	comp=E,680nm,7.9s						
DL2				LR	LR		
	comp=Z,1µm,7.6s						
HHC	**Hu-ho-hao-te**	**17.11**	**352**	*e*P	**P**	**03 38 15.6**	**+1.9**
HHC				pmax	pmax		
	comp=Z,24nm,1.2s						
HHC				smax	smax		
	comp=N,670nm,0.3s						
HHC				LR	LR		
	comp=N,280nm,1.3s						
HHC				LR	LR		
	comp=E,130nm,1.0s						
HHC				smax	smax		
	comp=E,880nm,0.3s						
HHC	**Hu-ho-hao-te**	**17.11**	**352**	*e*P	**Pn**	**03 38 09.6**	**-2.5**
HHC				PP	**PnPn**	**03 38 24.0**	**+2.0**
HHC				S	**Sn**	**03 41 17.3**	**-4.7**
HHC				pmax	pmax		
	comp=E,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=E,61nm,5.1s						
HHC				LR	LR		
	comp=E,2µm,9.5s						
HHC				LR	LR		
	comp=E,2µm,9.5s						
HHC				LR	LR		
	comp=E,650nm,8.6s						
KSAR	**Wonju Array Be**	**17.73**	**37**	P	**P**	**03 38 23.1**	**+2.6**
KSAR				Lg	Lg	03 43 37.8	
KSAR	**Wonju Array Be**	**17.73**	**37**	P	**P**	**03 38 23.1**	**+2.6**
KS01	**Wonju Array Si**	**17.76**	**37**	*e*Pn	**Pn**	**03 38 19.6**	**-0.4**
KSRS	**Korea Array**	**17.76**	**37**	P	**P**	**03 38 23.1**	**+2.3**
	comp=E,0.2nm,0.3s,baz=223,slow=12,SNR=14						
KSRS				Lg	Lg	03 43 37.8	
	comp=E,0.2nm,0.3s,baz=222,slow=29,SNR=6.1						
KSRS				LR	LR	03 46 06.7	
	comp=E,133nm,18.2s,baz=214,slow=40						
KKM	**Kota Kinabalu**	**17.80**	**174**	*e*Pn	**Pn**	**03 38 21.2**	**+0.5**
	comp=E,40nm,1.1s						
DAV	**Davao City (W)**	**19.80**	**146**	LR	LR	03 46 48.9	
	comp=E,265nm,18.0s,baz=348,slow=38						
GTA	**Gaotai**	**19.87**	**325**	P	**Pn**	**03 38 45.4**	**-0.3**
GTA				pP	sP	03 38 49.4	-2.0
GTA				sP	pP	03 38 51.9	+2.8
GTA				S	**Sn**	**03 42 28.4**	**-0.4**
GTA				pmax	pmax		
	comp=E,87nm,5.1s						
GTA				LR	LR		
	comp=E,640nm,12.7s						
GTA				LR	LR		
	comp=E,550nm,14.3s						
GTA				LR	LR		
	comp=E,740nm,12.4s						
SHL	**Shillong**	**20.62**	**279**	*e*P	**P**	**03 38 51.9**	**-0.6**
	comp=E,25nm,1.1s						
SHL	**Shillong**	**20.62**	**279**	*e*P	**P**	**03 38 51.9**	**-0.6**
SHL				pmax	pmax		
	comp=Z,25nm,1.1s						
SHL	**Shillong**	**20.62**	**279**	*e*P	**P**	**03 38 52.0**	**-0.4**
BRDH	**Bariadhala**	**21.04**	**271**	LR	LR	03 46 37.5	
	comp=Z,109nm,20.2s,baz=150,slow=36						
LSA	**Lhasa**	**21.63**	**291**	P	**P**	**03 39 06.8**	**+3.2**
LSA				pmax	pmax		

```
            comp=Z,18nm,1.2s
LSA    Lhasa              21.63 291 eP      P        03 39 03.6  0.0
            comp=Z,28nm,1.1s
LSA    Lhasa              21.63 291 eP      P        03 39 03.6  0.0
LSA                                  pmax   pmax
            comp=Z,28nm,1.1s
CN2    Changchun          21.82  22 eP      P        03 39 09.6 +4.7
CN2                                 eS      S        03 43 04.5 -1.0
CN2                                  pmax   pmax
            comp=Z,10.0nm,0.8s
CN2                                  pmax   pmax
            comp=Z,200nm,4.0s
CN2                                  LR     LR
            comp=Z,430nm,10.0s
CN2                                  LR     LR
            comp=Z,560nm,10.0s
CN2                                  LR     LR
            comp=Z,470nm,11.0s
INU    Inuyama            22.61  54 eP      P        03 39 13.8 +0.3
            comp=Z,19nm,0.8s
MAJO   Matsushiro         23.99  53 eP      P        03 39 28.6 +1.3
MAJO   Matsushiro         23.99  53 eP      P        03 39 28.6 +1.3
MAT    Matsushiro         23.99  53  P      P        03 39 26.3 -1.0
MAT                                 eS      S        03 43 45.8 +2.3
MJAR   Matsushiro Arr     23.99  53  P      P        03 39 28.6 +1.3
            comp=Z,12nm,1.2s,baz=237,slow=9.2,SNR=11
MJAR                                 LR     LR       03 48 20.8
            comp=Z,133nm,18.6s,baz=275,slow=35
MDJ    Mudanjiang         24.08  27  P      P        03 39 29.9 +1.8
MDJ                                  pmax   pmax
            comp=Z,9.0nm,1.0s
MDJ                                  pmax   pmax
            comp=Z,240nm,5.0s
ODAN   Odare              24.67 283 eP      P        03 39 37.3 +3.3
            comp=Z,12nm,0.3s
ULN    Ulaanbaatar        24.67 348 eP      P        03 39 33.8 +0.2
            comp=Z,10nm,1.0s
ULN    Ulaanbaatar        24.67 348ceP      P        03 39 33.5 -0.2
ULN                                  pmax   pmax
            comp=Z,19nm,1.3s
SONA0  Songino Array      24.77 347 eP      P        03 39 34.6  0.0
SONM   Songino Array      24.77 347  P      P        03 39 34.6  0.0
            comp=Z,18nm,1.0s,baz=166,slow=10,SNR=35
SONM                                 LR     LR       03 50 38.9
            comp=Z,117nm,19.8s,baz=146,slow=40
SONA1  Songino Array      24.78 347 eP      P        03 39 34.6 -0.1
JCJ    Chichijima         25.17  77  LR     LR       03 48 58.8
            comp=Z,56nm,18.8s,baz=28,slow=35
RAMN   Ramite             25.38 283 eP      P        03 39 43.5 +3.1
            comp=Z,18nm,0.7s
HIA    Hailar             25.68   8 i P     P        03 39 45.1 +2.5
HIA                                  pmax   pmax
            comp=Z,2.0nm,0.9s
JIRN   Jiri               25.76 284 eP      P        03 39 43.5 -0.5
            comp=Z,40nm,0.6s
GUN    Gumba              26.04 285 eP      P        03 39 45.8 -0.7
            comp=Z,34nm,0.7s
PKI    Pulchoki           26.45 284 eP      P        03 39 50.6 +0.4
            comp=Z,10.0nm,0.7s
PKIN   Phulchoki          26.46 284 eP      P        03 39 50.2  0.0
            comp=Z,8.2nm,0.6s
ZAK    Zakamensk          27.87 345 eP      P        03 40 04.5 +2.0
ZAK                                  pmax   pmax
            comp=Z,2.0nm,1.1s
DANN   Dangsing           27.93 286 eP      P        03 40 00.2 -3.2
            comp=Z,11nm,0.8s
KOLN   Koldanda           28.06 285 eP      P        03 40 03.6 -0.9
            comp=Z,21nm,0.9s
PYUN   Piuthan            28.60 285 eP      P        03 40 06.8 -2.5
            comp=Z,11nm,0.8s
KLR    Kul'dur            28.71  24 i P     P        03 40 10.9 +1.1
WMQ    Urumqi             29.65 319 eP      P        03 40 21.3 +3.0
WMQ                                  LR     LR
            comp=Z,2µm,13.7s
WMQ                                  LR     LR
            comp=Z,2µm,14.7s
WMQ                                  LR     LR
            comp=Z,480nm,16.7s
YSS    Yuzh-Sakhalins     32.26  37 eP      P        03 40 41.2  0.0
YSS                                  pmax   pmax
            comp=Z,20nm,1.4s
DGZ    Jazzator, Alta     33.35 327 i P     P        03 40 51.5 +0.6
DGZ                                  pmax   pmax
            comp=Z,3.0nm,1.3s
MK01   Makanchi Array     34.44 320 eP      P        03 41 00.4 +0.1
MK31   Makanchi Array     34.46 320 eP      P        03 41 00.7 +0.3
            comp=Z,1.7nm,1.1s
MK31   Makanchi Array     34.46 320 eP      P        03 41 00.7 +0.3
MK31                                 pmax   pmax
            comp=Z,2.0nm,1.1s
MK32   Makanchi Array     34.46 320 eP      P        03 41 00.0 -0.4
MK32                                ePcP    PcP      03 43 34.8 -0.7
MKAR   Makanchi Array     34.46 320  P      P        03 41 02.8 +2.4
MKAR                                 pmax   pmax
            comp=Z,12nm,1.2s
MKAR   Makanchi Array     34.46 320  P      P        03 41 00.0 -0.4
            comp=Z,0.2nm,0.4s,baz=96,slow=9.0,SNR=6.0
MKAR                                 PcP    PcP      03 43 34.8 -0.7
            comp=Z,1.3nm,0.7s,baz=93,slow=6.6,SNR=5.0
MAKZ   Makanchi           34.66 319 eP      P        03 41 02.4 +0.3
            comp=Z,1.9nm,1.1s
MAKZ   Makanchi           34.66 319 eP      P        03 41 02.4 +0.3
MAKZ                                 pmax   pmax
            comp=Z,2.0nm,1.1s
KSH    Kashi              36.01 305  P      P        03 41 16.8 +2.8
KSH                                  pP     sP       03 41 24.4 +2.8
KSH                                  PP     PP       03 42 40.0 +4.1
KSH                                  S      S        03 46 55.3 +3.1
KSH                                  sS     sS       03 47 05.1 +3.9
KSH                                  SS     SnSn     03 49 21.0 +4.2
KSH                                  pmax   pmax
            comp=Z,190nm,3.4s
KSH                                  LR     LR
            comp=Z,210nm,4.8s
KSH                                  LR     LR
            comp=Z,220nm,5.7s
KSH                                  LR     LR
            comp=Z,640nm,7.3s
ZAA0   Zalesovo Array     37.38 331 eP      P        03 41 25.0 -0.3
            comp=Z,6.4nm,1.0s
ZALV   Zalesovo Beam      37.38 331 eP      P        03 41 24.8 -0.5
ZALV   Zalesovo Beam      37.38 331  P      P        03 41 24.6 -0.7
            comp=Z,2.1nm,0.7s,baz=124,slow=8.0,SNR=10
ZALV                                 LR     LR       03 57 30.2
            comp=Z,121nm,18.4s,baz=68,slow=38
ZAA1   Zalesovo Array     37.38 331 eP      P        03 41 24.6 -0.7
AAK    Ala-Archa          37.91 309 eP      P        03 41 29.8 -0.4
            comp=Z,0.8nm,0.4s
AAK    Ala-Archa          37.91 309 i P     P        03 41 30.6 +0.4
AAK                                  pmax   pmax
            comp=Z,2.0nm,1.5s
KURK   Kurchatov          38.55 323 eP      P        03 41 35.3 +0.1
            comp=Z,5.5nm,1.1s
KURK   Kurchatov          38.55 323ceP      P        03 41 35.0 -0.2
KURK                                 pmax   pmax
            comp=Z,14nm,1.3s
KK31   Karatay Array      40.86 309 eP      P        03 41 51.6 -3.0
KK31   Karatay Array      40.86 309 eP      P        03 41 51.6 -3.0
KKAR   Karatay Array      40.86 309 eP      P        03 41 51.5 -3.1
KKAR   Karatay Array      40.86 309 eP      P        03 41 51.5 -3.1
MA2    Magadan            43.77  26ceP      P        03 42 20.3 +2.2
MA2                                  pmax   pmax
            comp=Z,7.0nm,1.0s
BRVK   Borovoye           44.21 323 eP      P        03 42 21.5 -0.2
            comp=Z,46nm,1.6s
BRVK   Borovoye           44.21 323 eP      P        03 42 21.5 -0.2
BRVK                                 pmax   pmax
            comp=Z,46nm,1.6s
MBWA   Marble Bar         45.05 173 eP      P        03 42 28.4 -0.2
COEN   Coen               46.89 140 eP      P        03 42 43.1 -0.2
            comp=Z,11nm,0.9s
WRAB   Tennant Creek      47.64 154 eP      P        03 42 48.4 -0.6
            comp=Z,3.8nm,0.8s
WRAB   Tennant Creek      47.64 154ceP      P        03 42 48.3 -0.7
WRAB                                 pmax   pmax
            comp=Z,7.0nm,1.0s
WR1    Warramunga Arr     47.64 154 eP      P        03 42 48.8 -0.3
            comp=Z,14nm,1.1s
WR1                                 ePcP    PcP      03 44 18.6  0.0
WRA    Warramunga Arr     47.64 154  P      P        03 42 48.8 -0.3
            comp=Z,3.9nm,0.8s,baz=339,slow=8.7,SNR=18
WRA                                  PcP    PcP      03 44 18.6  0.0
            comp=Z,0.8nm,0.8s,baz=345,slow=4.3,SNR=4.6
WB2    Warramunga Arr     47.65 154 eP      P        03 42 49.2 +0.1
NRIK   Noril'sk           48.26 348  LR     LR       04 03 54.9
            comp=Z,91nm,18.8s,baz=186,slow=37
ABKAR  Akbulak array      49.33 315 eP      P        03 43 02.0 +0.2
GEYT   Alibeck            49.69 300  P      P        03 43 06.1 +1.4
            comp=Z,9.8nm,0.8s,baz=96,slow=6.0,SNR=15
GEYT                                 LR     LR       04 07 27.1
            comp=Z,115nm,18.5s,baz=155,slow=40
GYA0B  ALIBECK ARRAY      49.69 300 eP      P        03 43 05.0 +0.2
            comp=Z,20nm,1.1s
AKTO   Aktyubinsk         50.76 316  P      P        03 43 12.7 +0.1
            comp=Z,2.3nm,0.9s,baz=102,slow=13,SNR=7.6
ASAR   Alice Springs      50.87 157  P      P        03 43 13.9 +0.2
            comp=Z,2.8nm,0.8s,baz=338,slow=7.0,SNR=21
ASAR                                 PcP    PcP      03 44 30.5 +0.2
            comp=Z,0.8nm,0.6s,baz=331,slow=2.3,SNR=5.2
AS01   Alice Springs      50.88 157 eP      P        03 43 13.7 -0.1
ARU    Arti               51.73 324 eP      P        03 43 19.9 +0.1
ARU    Arti               51.73 324d iP     P        03 43 19.5 -0.3
ARU                                                  03 45 14.9
ARU                                  S      S        03 50 39.8 -0.8
ARU                                  SS     SS       03 54 15.0 -1.9
ARU                                  pmax   pmax
            comp=Z,5.0nm,0.5s
CTAO   Charters Tower     53.53 142 eP      P        03 43 34.3 +0.7
CTAO   Charters Tower     53.53 142 eP      P        03 43 34.3 +0.7
BILL   Bilibino           54.13  21 eP      P        03 43 37.2 -0.2
            comp=Z,7.1nm,1.0s
BILL   Bilibino           54.13  21 i P     P        03 43 37.6 +0.3
BILL                                i                03 44 44.9
BILL                                i                03 45 35.3
BILL                                 pmax   pmax
            comp=Z,6.0nm,1.0s
GNI    Garni              59.93 304 eP      P        03 44 18.9 -0.2
GNI    Garni              59.93 304 eP      P        03 44 18.9 -0.2
KIV    Kislovodsk         61.02 308 eP      P        03 44 26.1 -0.3
            comp=Z,5.8nm,0.5s
KIV    Kislovodsk         61.02 308 eP      P        03 44 27.5 +1.1
KIV                                  pmax   pmax
            comp=Z,10.0nm,1.1s
KIV                                  MLR    MLR
            comp=Z,77nm,17.0s
VRH    Novokhopyorsk      61.10 317 eP      P        03 44 26.2 -0.5
VRH                                  pmax   pmax
            comp=Z,20nm,0.8s
STKA   Stephens Creek     61.19 154 eP      P        03 44 27.6 +0.2
            comp=Z,0.8nm,0.8s
STKA   Stephens Creek     61.19 154  P      P        03 44 28.2 +0.8
            comp=Z,3.9nm,0.8s,baz=328,slow=10,SNR=6.9
KLMR   Klimovskoe         62.16 328 eP      P        03 44 31.6 -2.1
KLMR                                 pmax   pmax
            comp=Z,13nm,1.3s
KLMR   Klimovskoe         62.16 328 eP      P        03 44 31.6 -2.1
KLMR                                 AMP             03 44 50.4
            comp=Z,13nm,1.3s
VSR    Storozhevoye       62.71 317 eP      P        03 44 36.0 -1.5
VSR                                  pmax   pmax
            comp=Z,8.0nm,1.0s
LPSR   Galich'ya Gora     62.75 318 eP      P        03 44 37.5 -0.2
LPSR                                 pmax   pmax
            comp=Z,20nm,1.0s
OBN    Obninsk            63.95 321 i P     P        03 44 47.8 +2.2
OBN                                  pmax   pmax
            comp=Z,8.0nm,1.1s
ARA0   ARCESS Array S     67.52 338 eP      P        03 45 08.2 -0.3
ARCES  ARCESS Array B     67.53 338  P      P        03 45 08.2 -0.3
            comp=Z,6.3nm,1.0s,baz=81,slow=7.5,SNR=8.1
BRTR   Keskin Array B     68.40 305  LR     LR       04 21 44.2
            comp=Z,31nm,18.7s,baz=91,slow=42
FIA0   FINESS Array S     68.60 329 eP      P        03 45 14.4 -0.9
FIA0   FINESS Array S     68.60 329 eP      P        03 45 14.4 -0.9
FINES  FINESS Array B     68.60 329  P      P        03 45 14.4 -0.9
            comp=Z,1.8nm,0.9s,baz=67,slow=5.0,SNR=6.0
AKASG  Malin Array Be     69.00 317  P      P        03 45 17.1 -1.0
            comp=Z,0.8nm,0.5s,baz=65,slow=5.5,SNR=9.6
AKBB   Malin Array Si     69.00 317 eP      P        03 45 17.9 -0.1
            comp=Z,3.2nm,1.0s
KIEV   Kiev               69.01 317 eP      P        03 45 17.4 -0.7
KIEV   Kiev               69.01 317 eP      P        03 45 17.4 -0.7
AK11   Malin Array Si     69.04 317 eP      P        03 45 18.4 +0.2
SUA    Susitna One        71.54  30 eP      P        03 45 33.1 -0.5
            comp=Z,13nm,0.9s
BUR04  Bucovina Ar. S     72.31 315 eP      P        03 45 38.0 -0.4
NB200  NORSAR Array S     75.58 331 eP      P        03 45 55.8 -1.4
NOA    NORSAR Array B     75.58 331  P      P        03 45 55.8 -1.4
            comp=Z,3.2nm,1.0s,baz=67,slow=5.8,SNR=4.8
NOA                                  LR     LR       04 21 58.1
            comp=Z,99nm,19.5s,baz=30,slow=38
INK    Inuvik             75.75  21 eP      P        03 45 57.4 -0.6
            comp=Z,1.4nm,0.8s
INK    Inuvik             75.75  21  P      P        03 45 57.9 -0.1
            comp=Z,1.3nm,0.9s,baz=282,slow=7.8,SNR=4.0
CLL    Collm              78.54 321 eP      P        03 46 14.0  0.0
CLL    Collm              78.54 321 eP      P        03 46 14.0  0.0
GEC2   GERESS Array S     79.12 319 eP      P        03 46 17.4  0.0
            comp=Z,3.1nm,1.0s
GEC2   GERESS Array S     79.12 319 eP      P        03 46 17.4  0.0
GEC2                                 pmax   pmax
            comp=Z,3.0nm,1.0s
GERES  GERESS Array B     79.12 319  P      P        03 46 17.4  0.0
            comp=Z,1.0nm,0.7s,baz=54,slow=6.8,SNR=6.8
GEA0   GERESS Array S     79.13 319 eP      P        03 46 17.0 -0.4
YKA    Yellowknife Ar     85.52  21  P      P        03 46 50.0 -0.4
YKA                                  pmax   pmax
            comp=Z,1.0nm,0.7s
YKA    Yellowknife Ar     85.52  21  P      P        03 46 50.0 -0.4
            comp=Z,0.7nm,0.7s,baz=323,slow=4.8,SNR=9.9
YKB5   Yellowknife Ar     85.52  21 eP      P        03 46 50.2 -0.2
SDV    Santo Domingo     147.06   9 ePKPbc  PKPbc    03 53 56.4 -0.2
```

IDC 22 03:36:40.3±3.6**, 22°.92N**×**143°.17E, h113**km±31km**, mb3.3**/5**, mb1 3.5**/6**, mb1mx3.2**/42**, mbtmp3.7**/6**, Error ellipse: s-maj=37.9km s-min=21.7km az=101.0, Volcano Islands region**

```
Code   Station Name        Δ°   AZ°   Phase ID             Time      Res
                                     Op     ISC          h  m  s     ISC
JCJ    Chichijima          4.25 348  P      Pn       03 37 42.9 -0.2
            baz=77,slow=19
JCJ                                  S      Sn       03 38 27.1 -4.7
            24nm,0.3s,baz=271,slow=22,SNR=13
KSRS   Korea Array        19.54 321  P      Pn       03 41 03.3 +1.9
            0.2nm,0.3s,baz=143,slow=9.0,SNR=5.1
WRA    Warramunga Arr     43.47 192  P      P        03 44 32.4  0.0
            0.4nm,0.6s,baz=16,slow=9.3,SNR=9.8
MKAR   Makanchi Array     53.87 312  P      P        03 45 52.1 +0.3
            0.3nm,0.5s,baz=79,slow=8.7,SNR=3.7
ILAR   Eielson Array      60.96  27  P      P        03 46 41.2 -0.1
            0.2nm,0.5s,baz=254,slow=5.7,SNR=3.7
YKA    Yellowknife Ar     75.38  28  P      P        03 48 11.9 +0.7
            0.4nm,0.4s,baz=292,slow=5.8,SNR=7.7
FINES  FINESS Array B     82.07 334  P      P        03 48 46.9 -1.0
            0.6nm,0.4s,baz=74,slow=4.6,SNR=8.4
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*KRNET **22** 03:52:24.0±0.1, 42°.54N×79°.56E, h12km, mb2.9*
*NNC **22** 03:52:23.6±0.9, 42°.56N×79°.63E, h0km, mb2.9, mpv2.9, Error ellipse: s-maj=6.1km s-min=3.3km az=151.0*
*SOME **22** 03:52:24.3, 42°.50N×79°.60E, h15km*
ISC 22 03:52:22.4±1.6**, 42°.49N**±0°.05×**79°.65E**±0°.04**, h7**km±13km**, n35, σ1ˢ.00**/63**, 8C-7D, Lake Issyk-Kul region**

```
Code   Station Name        Δ°   AZ°   Phase ID             Time      Res
                                     Op     ISC          h  m  s     ISC
SHLS   Shalkode            0.69 349 eP      Pb       03 52 37.0 +0.2
            baz=21
SHLS                                eS      Sb       03 52 46.6 +0.1
            baz=21
SHLS   Shalkode            0.69 349 eP      Pb       03 52 37.0 +0.2
            19nm,0.1s
SHLS                                eS      Sb       03 52 46.5 +0.1
            94nm,0.4s
UZB    Uzynbulak           0.81 325  P      Pg       03 52 38.3 +0.4
            6.2nm,0.2s
UZB                                  S      Sg       03 52 48.5 +0.1
            44nm,0.2s
UZB    Uzynbulak           0.81 325 eP      Pg       03 52 38.3 +0.4
            baz=27
UZB                                 eS      Sg       03 52 48.5 +0.1
            baz=27
UZB    Uzynbulak           0.81 325 eP      Pg       03 52 38.3 +0.4
            6.2nm,0.2s
UZB                                 eS      Sg       03 52 48.5 +0.1
            44nm,0.2s
PDGK   Podgornoye          0.85 352  P      Pg       03 52 39.0 +0.2
            9.0nm,0.1s
PDGK                                 S      Sg       03 52 49.7 -0.3
            4.4nm,0.3s
PDGK   Podgornoye          0.85 352 ⇑P      Pg       03 52 38.8  0.0
            2.4nm,0.2s
PDGK                                ⇑S      Sg       03 52 49.3 -0.7
            1.6nm,0.2s
PDGK   Podgornoye          0.85 352⇑iP      Pg       03 52 39.0 +0.2
            baz=56
PDGK                               ⇑iS      Sg       03 52 49.9  0.0
            baz=56
SATY   Saty                1.08 303  P      Pn       03 52 44.0 -0.1
            1.9nm,0.2s
SATY                                 S      Sb       03 52 57.5 -0.4
            20nm,0.2s
SATY   Saty                1.08 303 eP      Pb       03 52 43.9 +0.4
            2.4nm,0.2s
SATY                                eS      Sb       03 52 57.5 -0.4
            13nm,0.1s
KTMS   Ketmen              1.09  28  P      Pb       03 52 43.7  0.0
            6.5nm,0.1s
KTMS                                 S      Sb       03 52 57.7 -0.5
            15nm,0.1s
KTMS   Ketmen              1.09  28 eP      Pb       03 52 43.7  0.0
            6.5nm,0.1s
KTMS                                eS      Sb       03 52 57.7 -0.5
            15nm,0.1s
TARG   Taragay, Kyrgy      1.56 242⇓iP      Pb       03 52 52.6 +0.7
            baz=39
TARG                               ⇓iS      Sg       03 53 13.9 +1.1
            baz=39
MNBS   Baschi              1.83 331 eP      Pb       03 52 57.1 +0.7
            2.0nm,0.2s
MNBS                                eS      Sg       03 53 20.6 -0.8
            13nm,0.3s
DJR    Jarkent             1.85   3 eP      Pb       03 52 56.9 +0.3
            0.5nm,0.3s
DJR                                 eS      Sb       03 53 20.6 +0.7
            4.0nm,0.2s
KDJ    Kajisay             1.86 260⇓iP      Pb       03 52 57.7 +0.8
            baz=58
KDJ                                ⇓iS      Sg       03 53 23.1 +0.7
            baz=58
KOTS   Kotyrbulak          2.01 293  Pg     Pb       03 53 00.3 +0.9
            3.5nm,0.2s
KOTS                                 Lg     Lg       03 53 26.0
            35nm,0.5s
KOTS   Kotyrbulak          2.01 293 eP      Pb       03 53 00.3 +0.9
            baz=92
KOTS                                eS      Sg       03 53 26.0 -1.0
            baz=92
KOTS   Kotyrbulak          2.01 293 eP      Pb       03 53 00.3 +0.9
            3.5nm,0.2s
KOTS                                eS      Sg       03 53 26.0 -1.0
            35nm,0.5s
MDOK   Medeo               2.03 290  Pg     Pn       03 52 57.7 +0.6
            1.3nm,0.4s
MDOK                                 Lg     Lg       03 53 28.4
            5.8nm,0.6s
TNSS   Tian-Shan           2.06 286 eP      Pg       03 53 01.8 -0.2
            baz=85
TNSS                                eS      Sg       03 53 28.8  0.0
            baz=85
TNSS   Tian-Shan           2.06 286 eP      Pg       03 53 01.8 -0.2
            2.9nm,0.2s
TNSS                                eS      Sg       03 53 28.7  0.0
            6.1nm,0.3s
ARXS   Arharly             2.18 323  Pg     Pb       03 53 03.1 +0.9
            1.1nm,0.5s
ARXS                                 Lg     Lg       03 53 30.6
            17nm,0.5s
ARXS   Arharly             2.18 323 eP      Pb       03 53 03.1 +0.9
            0.8nm,0.3s
ARXS                                eS      Sg       03 53 30.6 -1.8
            19nm,0.5s
IZV    Izvestkoviy         2.30 285  Pg     Pb       03 53 05.8 +1.4
            5.3nm,0.2s
IZV                                  Lg     Lg       03 53 35.4
            17nm,0.4s
IZV    Izvestkoviy         2.30 285 eP      Pb       03 53 05.8 +1.4
            5.3nm,0.2s
IZV                                 eS      Sg       03 53 35.4 -1.0
            17nm,0.4s
KTBS   Karatobe            2.50 300  Pg     Pb       03 53 09.1 +1.5
            1.2nm,0.1s
KTBS                                 Lg     Lg       03 53 40.9
            15nm,0.4s
KTBS   Karatobe            2.50 300 eP      Pb       03 53 09.1 +1.5
            baz=99
KTBS                                eS      Sg       03 53 41.0 -1.6
            baz=99
KTBS   Karatobe            2.50 300 eP      Pb       03 53 09.1 +1.5
            1.2nm,0.1s
KTBS                                eS      Sg       03 53 40.9 -1.6
            15nm,0.4s
ULHL   Ulahol              2.54 266⇓iP      Pb       03 53 07.5 -0.9
            baz=64
ULHL                               ⇓iS      Sb       03 53 39.4 -0.4
            baz=64
BOOM   Boomskoye usch      2.74 271⇑iP      Pb       03 53 10.1 -1.8
            baz=70
BOOM                               ⇑iS      Sb       03 53 44.3 -1.4
            baz=70
DGS    Degeres             2.95 286  Pg     Pb       03 53 16.6 +1.3
            2.8nm,0.4s
DGS                                  Lg     Lg       03 53 53.8
            11nm,0.7s
DGS    Degeres             2.95 286 eP      Pb       03 53 16.6 +1.3
            2.8nm,0.4s
DGS                                 eS      Sb       03 53 53.9 +2.3
            11nm,0.7s
TKM2   Tokmak 2            3.02 280  Pg     Pb       03 53 17.1 +0.5
            0.3nm,0.3s
TKM2                                ⇓Lg     Lg       03 53 57.6
            1.9nm,0.5s
TKM2   Tokmak 2            3.02 280⇑iP      Pb       03 53 14.3 -2.3
            baz=79
TKM2                               ⇑iS      Sb       03 53 51.2 -2.5
            baz=79
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*IDC **22** 04:02:03.5±1.3, 40°.13N×113°.99E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.4/39, mbtmp3.5/6, ML3.4/2, Error ellipse: s-maj=26.9km s-min=25.3km az=48.0*
*BJI **22** 04:02:05.0, 39°.89N×113°.82E, h8km, mB4.2/1, mb3.9/4, ML3.9/18, Ms3.6/1*
ISC 22 04:02:04.6±0.6**, 40°.11N**±0°.05×**114°.05E**±0°.04**, h6**km**, n14, σ2ˢ.10**/21**, mb3.6**/4**, 1C, Northeastern China**

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Code   Station Name        Δ°   AZ°   Phase ID             Time      Res
                                     Op     ISC          h  m  s     ISC
BJI    Beijing             1.63  92  Pg     Pg       04 02 37.0 +1.2
BJI                                  Sg     Sg       04 03 00.3 +3.4
BJI                                  smax   smax
            comp=N,2µm,0.5s
BJI                                  smax   smax
            comp=E,700nm,0.6s
TIY    Taiyuan             2.71 208  Pg     Pn       04 02 47.9 -0.9
TIY                                  Sg     Sn       04 03 19.1 -2.8
TIY                                  smax   smax
            comp=N,650nm,0.5s
TIY                                  smax   smax
            comp=E,1µm,0.5s
BTO    Baotou              3.12 280 ePg     Pb       04 02 59.3 -1.2
BTO                                  Sg     Sb       04 03 38.8 -0.1
TIA    Tai'an              4.59 147  Pn     Pn       04 03 11.5 -3.0
TIA                                  Pg     Pb       04 03 23.8 -1.7
TIA                                  Sg     Sb       04 04 21.8 +0.8
TIA                                  smax   smax
            comp=N,34nm,0.8s
TIA                                  smax   smax
            comp=E,45nm,0.7s
XAN    Xi'an               7.32 216  Pg     Pb       04 04 10.1 -1.9
XAN                                  Sn     Sn       04 05 02.4  -13
XAN                                  Sg     Sb       04 05 44.0 +4.4
XAN                                  smax   smax
            comp=N,42nm,0.7s
XAN                                  smax   smax
            comp=E,29nm,0.9s
SNY    Shenyang            7.41  74 ⇑Pg     Pg       04 04 23.9 -2.5
SNY                                  Sg     Sg       04 06 02.4 +0.1
SNY                                  smax   smax
            comp=N,40nm,1.2s
SNY                                  smax   smax
            comp=E,19nm,0.5s
SONM   Songino Array       9.48 327  Pn     Pn       04 04 20.9 -0.9
            0.4nm,0.3s,baz=152,slow=14,SNR=10
SONM                                 Lg     Lg       04 07 03.0
            1.1nm,0.3s,baz=131,slow=26,SNR=4.0
GTA    Gaotai             10.99 271 eP      Pn       04 04 45.6 +3.2
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GTA				pP		04 04 49.9	
GTA				sP		04 04 52.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,41nm,5.6s						
GTA				LR	LR		
	comp=N,170nm,10.5s						
GTA				LR	LR		
	comp=E,120nm,9.5s						
KSRS	Korea Array	11.15	99	Pn	Pn	04 04 46.1	+1.6
	0.3nm,0.3s,baz=290,slow=13,SNR=2.4						
WMQ	Urumqi	19.91	289	*e*P	P	04 06 36.8	-0.1
CMAR	Chiang Mai Arr	25.21	216	P	P	04 07 30.4	-0.8
	0.7nm,0.3s,baz=21,slow=8.3,SNR=4.8						
KURBB	Kurchatov Arra	26.84	305	P	P	04 07 45.8	+0.3
	0.6nm,0.8s,baz=100,slow=9.9,SNR=3.2						
ILAR	Eielson Array	58.12	30	P	P	04 11 58.6	+0.1
	0.3nm,0.5s,baz=284,slow=5.3,SNR=8.3						
YKA	Yellowknife Ar	70.54	22	P	P	04 13 19.1	-0.7
	0.3nm,0.6s,baz=322,slow=6.0,SNR=7.9						

WEL 22 04:36:39.5, 39°.3S±0°.8×17°7E±°, h21km±2km, ML3.8/11,
Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.22	325	P	Pb	04 36 45.2	-0.3
WHHZ				S	Sb	04 36 50.0	+0.4
ARHZ	Aropaoanui	0.31	268	P	Pb	04 36 46.7	+0.3
ARHZ				S	Sb	04 36 52.7	+1.7
KNZ	Kokohu	0.32	43	P	Pb	04 36 47.3	+0.9
KNZ				S	Sb	04 36 52.7	+1.5
MHGZ	Mahia Peninsul	0.41	76	P	Pn	04 36 49.2	-1.0
RAHZ	Arahi	0.41	325	P	Pb	04 36 48.3	+0.3
RAHZ				S	Sb	04 36 55.4	+1.6
CKHZ	Cape Kidnapper	0.47	211	P	Pb	04 36 49.9	+0.8
SNGZ	Shannon Statio	0.47	355	P	Pb	04 36 49.5	+0.4
SNGZ				S	Sn	04 36 57.5	-1.3
NMHZ	Naumai	0.48	289	P	Pb	04 36 49.6	+0.3
NMHZ				S	Sb	04 36 57.4	+1.5
PRGZ	Paritu Road	0.51	49	P	Pb	04 36 50.5	+0.8
MCHZ	McNeill Hill	0.57	250	P	Pb	04 36 51.5	+0.6
MTHZ	Maungataniwha	0.59	313	P	Pb	04 36 50.8	-0.5
RIGZ	Rimuhau	0.62	28	P	Pb	04 36 52.2	+0.4
RIGZ				P	Pb	04 36 52.2	+0.4
KAHZ	Kahuranaki	0.67	216	P	Pb	04 36 52.9	+0.2
BKZ	Black Stump Fm	0.70	277	P	Pb	04 36 52.9	-0.3
RTZ	Ruatahuna	0.71	333	P	Pb	04 36 53.0	-0.3
RAGZ	Rawiri	0.76	1	P	Pb	04 36 54.1	+0.1
KWHZ	Kaweka Forest	0.77	257	P	Pb	04 36 54.1	-0.1
MRHZ	Matea Rd	0.87	299	P	Pb	04 36 55.6	-0.3
PXZ	Pawanui	0.88	208	P	Pb	04 36 54.7	-1.3
TKGZ	Te Karaka	0.89	24	P	Pb	04 36 55.8	-0.4
MUGZ	Murupara	0.92	328	P	Pb	04 36 56.3	-0.4
MWZ	Matawai	0.93	7	P	Pb	04 36 56.0	-0.8
MWZ				P	Pb	04 36 56.0	-0.8
CNGZ	Carnagh Statio	1.00	40	P	Pb	04 36 57.8	-0.3
URZ	Urewera	1.02	347	P	Pb	04 36 57.6	-0.8
BHHZ	Black Hill Sta	1.06	257	P	Pb	04 36 58.1	-1.1
BHHZ				P	Pb	04 36 58.1	-1.1
ALRZ	Allen Road	1.07	310	P	Pn	04 36 58.8	-0.5
HATZ	Hinemaiaia	1.07	289	P	Pn	04 36 59.1	-0.3
PRRZ	Plateau Road	1.08	314	P	Pn	04 36 58.9	-0.6
WPHZ	Waipukurau	1.09	222	P	Pn	04 36 58.2	-1.4
RRRZ	Republican Roa	1.14	323	P	Pn	04 36 59.6	-0.7
PRHZ	Porangahau	1.17	210	P	Pn	04 36 59.1	-1.6
TWGZ	Tauwhareparae	1.17	23	P	Pn	04 36 59.9	-0.8
WPRZ	Whakapapatarin	1.21	307	P	Pn	04 37 00.8	-0.4
HRRZ	Handcock Road	1.22	315	P	Pn	04 37 00.6	-0.8
RITZ	Rihia Road	1.23	283	P	Pn	04 37 01.4	0.0
TARZ	Mount Tarawera	1.23	325	P	Pn	04 37 01.1	-0.4
EDRZ	Edgecumbe	1.25	336	P	Pn	04 37 01.0	-0.8
WHTZ	Whakaora	1.26	297	P	Pb	04 37 03.3	+0.7
MOVZ	Moawhango	1.28	263	P	Pn	04 37 02.0	-0.2
HLRZ	Highlands Stat	1.29	321	P	Pb	04 37 03.6	+0.5
HSRZ	Hossack Road	1.30	316	P	Pn	04 37 01.9	-0.6
RUGZ	Raukumara Rang	1.31	10	P	Pn	04 37 01.7	-0.9
RATZ	Rangitukua	1.32	287	P	Pb	04 37 03.9	+0.3
TUVZ	Tukino	1.35	269	P	Pn	04 37 02.9	-0.4
KATZ	Kakaramea	1.35	281	P	Pn	04 37 02.9	-0.4
PUZ	Puketiti	1.36	30	P	Pn	04 37 02.3	-1.0
TSZ	Takapari Road	1.37	234	P	Pn	04 37 01.6	-1.8
KRVZ	Karewarewa	1.37	276	P	Pn	04 37 03.3	-0.2
MARZ	Manawahe	1.39	336	P	Pn	04 37 03.2	-0.4
NGZ	Ngauruhoe	1.39	273	P	Pn	04 37 03.9	0.0
OMRZ	Omania	1.40	325	P	Pb	04 37 04.9	0.0
WHVZ	Whangaehu Hut	1.40	268	P	Pn	04 37 04.0	0.0
DVHZ	Dannevirke	1.41	222	P	Pn	04 37 02.1	-1.9
WTVZ	West Tongariro	1.41	275	P	Pn	04 37 03.8	-0.2
DRZ	Dome Shelter	1.42	269	P	Pb	04 37 05.1	-0.3
FWVZ	Far West T-bar	1.43	269	P	Pn	04 37 03.7	-0.8
TRVZ	Turoa	1.43	268	P	Pn	04 37 03.8	-0.7
COVZ	Chateau Observ	1.44	272	P	Pn	04 37 04.5	+0.1
HAZ	Te Kaha	1.53	12	P	Pn	04 37 04.7	-0.8
TWVZ	Taurewa	1.53	276	P	Pn	04 37 05.3	-0.4
OPRZ	Ohinepanea	1.55	335	P	Pn	04 37 04.7	-1.2
PKVZ	Pokaka	1.59	268	P	Pn	04 37 06.9	+0.4
BFZ	Birch Farm	1.68	211	P	Pn	04 37 05.0	-2.6
PRWZ	Pori Road	1.70	220	P	Pn	04 37 06.0	-1.9
TLZ	Tolley Road	1.72	302	P	Pn	04 37 07.2	-1.0
MRZ	Mangatainoka R	1.98	224	P	Pn	04 37 09.4	-2.3
HOWZ	Holdsworth Sta	2.18	221	P	Pn	04 37 12.2	-2.4
PKE	Pukeiti	2.65	270	P	Pn	04 37 20.7	-0.3

IDC ***22*** *04:42:50.0±2.5, 39°.42S×177°.57E, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.6/32, mbtmp3.6/2, Error ellipse: s-maj=54.8km s-min=17.6km az=86.0*
ISCJB ***22*** *04:42:55.5±0.4, 39°.33S±0°.02×177°.45E±0°.03, h32km±2km, mb3.4/2, Error ellipse: s-maj=4.6km s-min=2.9km az=27.9*
WEL ***22*** *04:42:56.3, 39°.3S±0°.8×17°7E±°, h22km±2km, ML4.2/19*
ISC 22 04:42:53.9±1.5**, 39°.34S**±0°.02×**177°.44E**±0°.03**, h17**km±10km**,**
n93, σ1§06/111**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.31	329	P	Pb	04 43 02.1	+1.1
WHHZ				S	Sb	04 43 07.3	+1.6
ARHZ	Aropaoanui	0.35	283	P	Pn	04 43 03.6	-0.7
ARHZ				S	Sb	04 43 09.7	+2.7
KNZ	Kokohu	0.37	30	P	Pn	04 43 04.2	-0.2
KNZ				S	Sb	04 43 10.6	+3.2
MHGZ	Mahia Peninsul	0.41	62	P	Pn	04 43 06.0	+1.0
CKHZ	Cape Kidnapper	0.42	222	P	Pn	04 43 06.8	+1.6
RAHZ	Arahi	0.51	327	P	Pb	04 43 05.2	+0.9
RAHZ				S	Sb	04 43 12.4	+1.0
PRGZ	Paritu Road	0.54	39	P	Pn	04 43 07.4	+0.5
NMHZ	Naumai	0.55	296	P	Pn	04 43 06.5	-0.6
NMHZ				S	Sb	04 43 14.6	+1.9
SNGZ	Shannon Statio	0.57	352	P	Pn	04 43 06.5	-0.7
SNGZ				S	Sb	04 43 14.6	+1.5
MCHZ	McNeill Hill	0.59	260	P	Pn	04 43 08.4	+1.0
KAHZ	Kahuranaki	0.63	224	P	Pn	04 43 09.8	+1.8
MTHZ	Maungataniwha	0.68	316	P	Pb	04 43 07.7	+0.4
MTHZ				S	Sb	04 43 16.9	+0.5
RIGZ	Rimuhau	0.68	22	P	Pn	04 43 09.1	+0.3
RIGZ				S	Sn	04 43 19.1	+0.1
BKZ	Black Stump Fm	0.76	283	P	Pn	04 43 09.8	0.0
BKZ				S	Sb	04 43 20.6	+2.0
KWHZ	Kaweka Forest	0.79	264	P	Pn	04 43 11.1	+0.7
KWHZ				S	Sn	04 43 22.7	+0.9
RTZ	Ruatahuna	0.81	334	P	Pb	04 43 09.9	+0.4
RTZ				S	Sb	04 43 20.9	+0.7
PXZ	Pawanui	0.82	213	P	Pn	04 43 11.7	+1.0
PXZ				S	Sn	04 43 24.6	+2.2
RAGZ	Rawiri	0.85	359	P	Pn	04 43 11.1	0.0
RAGZ				S	Sn	04 43 22.9	-0.2
MRHZ	Matea Rd	0.94	302	P	Pn	04 43 12.5	+0.1
TKGZ	Te Karaka	0.96	20	P	Pn	04 43 12.7	+0.2
TKGZ				S	Sn	04 43 26.0	+0.3
MUGZ	Murupara	1.01	329	P	Pb	04 43 13.1	+0.2
MWZ	Matawai	1.01	4	P	Pb	04 43 12.9	-0.1
MWZ				P	Pb	04 43 12.9	-0.1
MWZ				S	Sn	04 43 27.2	+0.1
CNGZ	Carnagh Statio	1.05	35	P	Pn	04 43 14.4	+0.6
WPHZ	Waipukurau	1.06	227	P	Pn	04 43 15.1	+1.2
BHHZ	Black Hill Sta	1.08	262	P	Pn	04 43 15.0	+0.7
BHHZ				P	Pn	04 43 14.9	+0.7
PRHZ	Porangahau	1.11	214	P	Pn	04 43 15.6	+0.9
URZ	Urewera	1.11	346	Pg	Pb	04 43 14.5	-0.2
	78nm,0.3s,baz=240,slow=7.7,SNR=148						
URZ				Lg	Lg	04 43 28.9	
	76nm,0.3s,baz=342,slow=19,SNR=24						
URZ	Urewera	1.11	346	P	Pb	04 43 14.5	-0.2
HATZ	Hinemaiaia	1.14	293	P	Pg	04 43 16.1	0.0
ALRZ	Allen Road	1.16	312	P	Pb	04 43 15.6	+0.1
PRRZ	Plateau Road	1.17	316	P	Pn	04 43 15.5	0.0
RRRZ	Republican Roa	1.24	324	P	Pn	04 43 16.2	-0.2
TWGZ	Tauwhareparae	1.24	20	P	Pg	04 43 16.7	-1.1
RITZ	Rihia Road	1.28	286	P	Pb	04 43 18.1	+0.5
WPRZ	Whakapapatarin	1.29	309	P	Pn	04 43 17.6	+0.5
MOVZ	Moawhango	1.31	267	P	Pg	04 43 18.8	-0.4
HRRZ	Handcock Road	1.31	316	P	Pn	04 43 17.5	0.0
TARZ	Mount Tarawera	1.32	326	P	Pn	04 43 17.9	+0.2
WHTZ	Whakaora	1.34	300	P	Pb	04 43 19.1	+0.6
ANWZ	Angora Road	1.34	213	P	Pb	04 43 18.5	-0.1
TSZ	Takapari Road	1.35	237	P	Pb	04 43 18.6	-0.1
EDRZ	Edgecumbe	1.35	336	P	Pn	04 43 18.0	0.0
DVHZ	Dannevirke	1.37	225	P	Pb	04 43 19.0	-0.1
HLRZ	Highlands Stat	1.38	322	P	Pg	04 43 20.2	-0.4
RATZ	Rangitukua	1.38	290	P	Pn	04 43 19.2	+0.8
RUGZ	Raukumara Rang	1.39	8	P	Pn	04 43 18.4	-0.2
TUVZ	Tukino	1.39	273	P	Pb	04 43 19.7	+0.3
HSRZ	Hossack Road	1.39	317	P	Pn	04 43 18.8	+0.2
KATZ	Kakaramea	1.41	285	P	Pn	04 43 19.6	+0.7
KRVZ	Karewarewa	1.42	279	P	Pb	04 43 20.1	+0.1
MKRZ	Makatiti	1.42	327	P	Pb	04 43 20.0	0.0
GRRZ	Galatos Road	1.44	313	P	Pn	04 43 19.6	+0.4
NGZ	Ngauruhoe	1.44	276	P	Pb	04 43 20.3	0.0
WHVZ	Whangaehu Hut	1.44	272	P	Pb	04 43 20.4	0.0
WTVZ	West Tongariro	1.46	278	P	Pb	04 43 21.0	+0.4
DRZ	Dome Shelter	1.46	272	P	Pb	04 43 21.4	+0.6
DRZ				P	Pb	04 43 21.4	+0.6
FWVZ	Far West T-bar	1.47	273	P	Pn	04 43 20.5	+0.7
TRVZ	Turoa	1.47	271	P	Pn	04 43 20.6	+0.8
WATZ	Wairara	1.47	295	P	Pn	04 43 19.9	+0.2
COVZ	Chateau Observ	1.48	275	P	Pn	04 43 20.7	+0.8
MARZ	Manawahe	1.48	336	P	Pn	04 43 19.9	+0.1
OMRZ	Omania	1.49	326	P	Pn	04 43 20.1	+0.1
KUTZ	Kaahu Road	1.52	304	P	Pn	04 43 20.7	+0.4
TWVZ	Taurewa	1.58	279	P	Pn	04 43 22.2	+0.9
HAZ	Te Kaha	1.61	10	P	Pn	04 43 21.5	0.0
BFZ	Birch Farm	1.62	214	P	Pn	04 43 22.0	+0.3
PKVZ	Pokaka	1.63	271	P	Pb	04 43 23.9	+0.4
OPRZ	Ohinepanea	1.65	335	P	Pn	04 43 21.5	-0.6
PRWZ	Pori Road	1.66	223	P	Pn	04 43 22.9	+0.8
POWZ	Post Office Ro	1.66	230	P	Pb	04 43 23.6	-0.4
WMGZ	Waiomatatini S	1.70	27	P	Pn	04 43 22.7	-0.1
TLZ	Tolley Road	1.80	304	P	Pn	04 43 24.0	-0.1
TIWZ	Tintock	1.86	219	P	Pb	04 43 26.6	-1.0
MXZ	Matakaoa Point	1.90	21	P	Pn	04 43 25.9	+0.3
MRZ	Mangatainoka R	1.94	227	P	Pn	04 43 26.4	+0.3
VRZ	Vera Road	2.10	275	P	Pn	04 43 29.2	+1.1
TMWZ	Te Maipa	2.12	213	P	Pn	04 43 28.3	-0.3
HOWZ	Holdsworth Sta	2.14	223	P	Pn	04 43 29.2	+0.3
HIZ	Hauiti	2.18	292	P	Pn	04 43 29.8	+0.4
MTW	Mount Morrison	2.34	219	P	Pn	04 43 31.5	-0.1
KIW	Kapiti Island	2.46	231	P	Pn	04 43 33.8	+0.5
CAW	Cannon Point	2.53	225	P	Pn	04 43 34.8	+0.6
PAWZ	Paruwai Farm	2.55	216	P	Pn	04 43 33.6	-0.9
PKE	Pukeiti	2.69	272	P	Pn	04 43 38.4	+2.0
PLWZ	Palliser	2.78	216	P	Pn	04 43 36.2	-1.5
TUWZ	Tuamarina	3.39	231	P	Pn	04 43 45.9	-0.1
QRZ	Quartz Range	4.05	247	P	Pn	04 43 53.9	-1.2
THZ	Tophouse	4.22	234	P	Pn	04 43 56.8	-0.6
CTZ	Chatham Island	6.25	136	P	Pn	04 44 26.8	+1.5
RPZ	Rata Peaks	6.48	226	Sn	Sn	04 45 35.6	-6.4
	1.3nm,0.3s,baz=352,slow=20,SNR=9.4						
ASAR	Alice Springs	39.87	280	P	P	04 50 26.4	-0.4
	0.2nm,0.3s,baz=109,slow=6.1,SNR=4.0						
WRA	Warramunga Arr	41.69	285	P	P	04 50 41.0	-0.9
	0.6nm,0.6s,baz=126,slow=7.0,SNR=15						
FINES	FINESS Array B	151.74	331	PKPbc	PKPbc	05 02 45.8	-0.7
	1.7nm,0.9s,baz=30,slow=6.4,SNR=2.7						

NNC 22 04:46:01.8±3.4**, 37°.37N×70°.85E, h0**km**, mb3.5, mpv3.1,**
5C-3D, Error ellipse: s-maj=25.8km s-min=22.5km
az=169.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.36	37	⇑Pn	Pn	04 46 55.7	0.0
	1.9nm,0.3s						
SFK				⇓Sn	Sn	04 47 38.7	+2.3
	2.4nm,0.3s						
MNAS	Manas	5.27	13	⇓Pn	Pn	04 47 21.7	-0.2
	1.5nm,0.7s						
MNAS				⇑Sn	Sn	04 48 24.1	+0.7
	1.4nm,0.5s						
KK31	Karatay Array	5.74	358	⇓Pn	Pn	04 47 29.0	+0.8
	0.6nm,0.3s,baz=178,slow=12,SNR=17						
KK31				⇑Sn	Sn	04 48 36.8	+2.1
	0.8nm,0.5s,baz=178,slow=22						
AAK	Ala-Archa	5.96	27	⇑Pn	Pn	04 47 30.7	-0.7
	1.6nm,0.4s						
AAK				⇑Sn	Sn	04 48 39.3	-1.2
	1.1nm,0.6s						

ISCJB ***22*** *04:46:13.2±0.3, 39°.31S±0°.02×177°.46E±0°.03, h44km±4km, mb4.0/4, Error ellipse: s-maj=4.5km s-min=3.0km az=26.6*
WEL ***22*** *04:46:14.0, 39°.3S±0°.8×17°7E±°, h24km±2km, ML4.8/18*
IDC ***22*** *04:46:17.2±2.4, 39°.15S×177°.26E, h54km±24km, mb3.8/4, mb1 4.0/4, mb1mx3.7/33, mbtmp4.1/4, MS3.2/2, Ms1 3.2/2, ms1mx2.8/25, Error ellipse: s-maj=39.1km s-min=26.1km az=61.0*
ISC 22 04:46:13.7±0.9**, 39°.26S**±0°.02×**177°.44E**±0°.03**, h33**km±5km**,**
n109, σ1§12/124**, mb4.0**/4**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.24	318	P	Pb	04 46 19.7	-1.0
WHHZ				S	Sb	04 46 24.9	-0.5
KNZ	Kokohu	0.29	38	P	Pn	04 46 21.8	0.0
KNZ				S	Sb	04 46 28.5	+2.0
ARHZ	Aropaoanui	0.35	269	P	Pb	04 46 21.2	-0.8
ARHZ				S	Sb	04 46 27.5	-0.2
MHGZ	Mahia Peninsul	0.38	74	P	Pn	04 46 23.7	+0.8
MHGZ				S	Sn	04 46 30.1	+1.0
RAHZ	Arahi	0.44	321	P	Pb	04 46 22.8	-0.5
RAHZ				S	Sn	04 46 30.3	-0.4
PRGZ	Paritu Road	0.48	46	P	Pn	04 46 25.1	+0.8
SNGZ	Shannon Statio	0.48	350	P	Pn	04 46 24.1	-0.3
SNGZ				S	Sn	04 46 31.2	-0.5
CKHZ	Cape Kidnapper	0.49	215	P	Pb	04 46 24.5	+0.3
CKHZ				S	Sb	04 46 33.6	+2.3
NMHZ	Naumai	0.52	288	P	Pb	04 46 24.0	-0.6
NMHZ				S	Sb	04 46 32.0	-0.1
RIGZ	Rimuhau	0.60	24	P	Pn	04 46 26.7	+0.6
MCHZ	McNeill Hill	0.61	252	P	Pb	04 46 26.1	0.0
MCHZ				S	Sb	04 46 36.1	+1.6
MTHZ	Maungataniwha	0.62	311	P	Pb	04 46 25.3	-0.9
MTHZ				S	Sb	04 46 34.5	-0.3
KAHZ	Kahuranaki	0.69	219	P	Pb	04 46 27.4	-0.1
KAHZ				S	Sb	04 46 37.9	+1.0
RTZ	Ruatahuna	0.73	330	P	Pn	04 46 27.6	-0.4
RTZ				S	Sn	04 46 38.3	+0.3
BKZ	Black Stump Fm	0.74	277	P	Pb	04 46 27.5	-0.9
BKZ				S	Sb	04 46 38.1	-0.2
RAGZ	Rawiri	0.76	358	P	Pn	04 46 28.7	+0.5
RAGZ				S	Sn	04 46 40.5	+1.9
KWHZ	Kaweka Forest	0.81	258	P	Pn	04 46 28.8	-0.1
KWHZ				S	Sb	04 46 40.6	+0.5
TKGZ	Te Karaka	0.88	21	P	Pn	04 46 30.4	+0.7
PXZ	Pawanui	0.89	210	P	Pn	04 46 29.4	-0.7
PXZ				P	Pn	04 46 29.3	-0.7
MRHZ	Matea Rd	0.90	298	P	Pn	04 46 30.2	0.0
MWZ	Matawai	0.92	4	P	Pb	04 46 30.5	-0.8
MUGZ	Murupara	0.94	326	P	Pb	04 46 30.8	-0.8
CNGZ	Carnagh Statio	0.97	38	P	Pb	04 46 32.0	-0.2
URZ	Urewera	1.03	345	P	Pb	04 46 32.3	-0.7
	264nm,0.3s,baz=254,slow=3.5,SNR=156						
URZ				S	Sb	04 46 46.8	+0.6
	210nm,0.3s,baz=336,slow=20,SNR=18						
URZ				LR	LR	04 46 55.1	
	comp=Z,168nm,19.3s,baz=183,slow=42						
URZ	Urewera	1.03	345	P	Pb	04 46 32.1	-0.9
BHHZ	Black Hill Sta	1.09	257	P	Pn	04 46 32.8	-0.1
BHHZ				P		04 46 32.8	
ALRZ	Allen Road	1.10	309	P	Pn	04 46 33.2	+0.2
HATZ	Hinemaiaia	1.11	289	P	Pn	04 46 33.7	+0.6
PRRZ	Plateau Road	1.11	312	P	Pn	04 46 33.1	+0.1
WPHZ	Waipukurau	1.12	223	P	Pn	04 46 32.8	-0.3
TWGZ	Tauwhareparae	1.16	21	P	Pb	04 46 34.3	-0.9
RRRZ	Republican Roa	1.17	321	P	Pn	04 46 34.0	+0.1
PRHZ	Porangahau	1.19	211	P	Pn	04 46 33.3	-0.8
WPRZ	Whakapapatarin	1.24	306	P	Pn	04 46 35.2	+0.4
HRRZ	Handcock Road	1.25	313	P	Pn	04 46 35.1	+0.1
TARZ	Mount Tarawera	1.25	324	P	Pb	04 46 35.5	-1.4
RITZ	Rihia Road	1.26	282	P	Pn	04 46 35.8	+0.6
EDRZ	Edgecumbe	1.27	334	P	Pb	04 46 35.5	-1.7
WHTZ	Whakaora	1.30	297	P	Pb	04 46 36.7	-0.9
RUGZ	Raukumara Rang	1.30	8	P	Pb	04 46 36.0	-1.7
HLRZ	Highlands Stat	1.32	319	P	Pb	04 46 37.1	-0.8
MOVZ	Moawhango	1.32	263	P	Pn	04 46 36.5	+0.5
HSRZ	Hossack Road	1.33	315	P	Pn	04 46 36.4	+0.4
PUZ	Puketiti	1.34	29	P	Pb	04 46 36.4	-2.0
RATZ	Rangitukua	1.36	286	P	Pn	04 46 37.0	+0.6
GRRZ	Galatos Road	1.38	311	P	Pn	04 46 37.2	+0.4
KATZ	Kakaramea	1.39	281	P	Pn	04 46 37.3	+0.3
TUVZ	Tukino	1.39	269	P	Pn	04 46 37.4	+0.5
TSZ	Takapari Road	1.40	235	P	Pn	04 46 36.2	-0.8
KRVZ	Karewarewa	1.41	276	P	Pn	04 46 37.7	+0.5
ANWZ	Angora Road	1.41	211	P	Pn	04 46 36.1	-1.0
OMRZ	Omania	1.42	324	P	Pn	04 46 37.7	+0.4
DVHZ	Dannevirke	1.43	223	P	Pn	04 46 36.6	-0.8
NGZ	Ngauruhoe	1.43	273	P	Pn	04 46 37.9	+0.3
WHVZ	Whangaehu Hut	1.44	268	P	Pn	04 46 38.0	+0.2
WATZ	Wairara	1.44	292	P	Pn	04 46 37.5	-0.1
WHRZ	Whale Island	1.45	345	P	Pb	04 46 38.0	-2.1
WTVZ	West Tongariro	1.45	275	P	Pn	04 46 38.3	+0.6
PKGZ	Pakihiroa	1.45	20	P	Pb	04 46 38.3	-1.9
UTU	Utuhina	1.46	317	P	Pb	04 46 39.4	-0.9
DRZ	Dome Shelter	1.46	269	P	Pn	04 46 38.9	+0.9
FWVZ	Far West T-bar	1.47	269	P	Pn	04 46 38.3	+0.1
TRVZ	Turoa	1.47	268	P	Pn	04 46 38.4	+0.2
COVZ	Chateau Observ	1.48	272	P	Pn	04 46 38.4	+0.3
KUTZ	Kaahu Road	1.48	301	P	Pn	04 46 38.3	+0.2
NGRZ	Ngongotaha	1.52	319	P	Pn	04 46 39.3	+0.6
HAZ	Te Kaha	1.52	10	P	Pb	04 46 39.0	-2.3
MTVZ	Mangateitei	1.54	265	P	Pn	04 46 39.5	+0.6
KARZ	Kaharoa	1.55	322	P	Pn	04 46 39.1	0.0
TWVZ	Taurewa	1.57	276	P	Pn	04 46 39.5	0.0
OPRZ	Ohinepanea	1.57	333	P	Pn	04 46 39.0	-0.4
WMGZ	Waiomatatini S	1.62	28	P	Pb	04 46 40.2	-2.8
BFZ	Birch Farm	1.69	212	P	Pn	04 46 39.7	-1.4
POWZ	Post Office Ro	1.72	228	P	Pn	04 46 41.3	-0.1
PRWZ	Pori Road	1.72	221	P	Pn	04 46 40.6	-0.8
TLZ	Tolley Road	1.75	301	P	Pn	04 46 41.7	-0.2
TGRZ	Tauranga	1.79	328	P	Pb	04 46 43.9	-1.9
MXZ	Matakaoa Point	1.82	22	P	Pb	04 46 43.2	-3.2
CPWZ	Castlepoint	1.91	210	P	Pn	04 46 42.9	-1.0
TIWZ	Tintock	1.93	218	P	Pn	04 46 43.5	-0.9
MRZ	Mangatainoka R	2.00	225	P	Pn	04 46 44.1	-1.2
VRZ	Vera Road	2.09	273	P	Pn	04 46 46.8	+0.3
HIZ	Hauiti	2.15	289	P	Pn	04 46 47.8	+0.5
TMWZ	Te Maipa	2.20	212	P	Pn	04 46 46.0	-2.0
HOWZ	Holdsworth Sta	2.21	221	P	Pn	04 46 46.3	-1.8
OGWZ	Otaki Gorge	2.34	228	P	Pn	04 46 48.9	-1.0
MTW	Mount Morrison	2.41	217	P	Pn	04 46 48.4	-2.5
KIW	Kapiti Island	2.52	230	P	Pn	04 46 51.3	-1.1
TRWZ	Traveller	2.52	212	P	Pn	04 46 49.6	-2.9
PREZ	Palmer Road	2.55	267	P	Pn	04 46 54.3	+1.5
CAW	Cannon Point	2.59	224	P	Pn	04 46 54.1	+0.7
PAWZ	Paruwai Farm	2.62	215	P	Pn	04 46 51.2	-2.7
PKE	Pukeiti	2.69	270	P	Pn	04 46 56.1	+1.4
KUZ	Kuaotunu	2.85	331	P	Pn	04 46 57.1	+0.1
WIAZ	Waiheke Island	3.06	323	P	Pn	04 47 01.0	+1.1
DUWZ	D'Urville Isla	3.11	239	P	Pn	04 46 59.9	-0.7
DUWZ				P		04 47 01.2	
WTAZ	Waiatarua	3.24	315	P	Pn	04 47 02.7	+0.3
QRZ	Quartz Range	4.08	246	P	Pn	04 47 11.7	-2.2
LTZ	Lake Taylor	5.26	226	P	Pn	04 47 28.4	-1.8
CTZ	Chatham Island	6.32	137	P	Pn	04 47 44.7	+0.2
WVZ	Waitaha Valley	6.34	231	P	Pn	04 47 43.5	-1.3
RPZ	Rata Peaks	6.54	225	S	Sn	04 48 52.1	-9.1
	6.5nm,0.3s,baz=351,slow=19,SNR=15						
RPZ				LR	LR	04 51 02.3	
	comp=Z,130nm,18.4s,baz=285,slow=44						
DZM	Mont Dzumac	19.54	328	LR	LR	04 56 42.3	
	comp=Z,105nm,20.5s,baz=184,slow=32						
CTA	Charters Tower	32.92	296	P	P	04 52 45.3	+0.1
	1.1nm,0.2s,baz=119,slow=10,SNR=3.6						
ASAR	Alice Springs	39.86	280	P	P	04 53 43.9	-0.6
	1.6nm,0.8s,baz=119,slow=7.5,SNR=8.4						
WRA	Warramunga Arr	41.67	285	P	P	04 53 58.7	-0.7
	1.5nm,0.6s,baz=127,slow=6.9,SNR=44						
QSPA	South Pole Qui	50.87	180	P	P	04 55 14.0	+2.8
	1.4nm,0.7s,baz=57,slow=4.2,SNR=8.1						
ARCES	ARCESS Array B	146.19	343	PKPbc	PKPbc	05 05 49.9	+0.4
	1.6nm,0.7s,baz=51,slow=5.9,SNR=4.0						
FINES	FINESS Array B	151.66	331	PKPbc	PKPbc	05 06 03.1	-0.7
	1.2nm,0.8s,baz=87,slow=7.8,SNR=5.7						

WEL 22 04:51:28.2, 39°.3S±0°.8×**17°7E**±°**, h27**km±2km**, ML3.9**/19**,**
Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.21	326	P	Pb	04 51 33.8	-0.3
WHHZ				S	Sb	04 51 39.0	+0.9
ARHZ	Aropaoanui	0.30	267	P	Pb	04 51 35.3	0.0
ARHZ				S	Sn	04 51 41.4	-1.0
KNZ	Kokohu	0.32	45	P	Pb	04 51 35.9	+0.3
KNZ				S	Sn	04 51 42.3	-0.6
RAHZ	Arahi	0.41	325	P	Pb	04 51 36.9	0.0
RAHZ				S	Sn	04 51 44.3	-0.8
MHGZ	Mahia Peninsul	0.42	77	P	Pb	04 51 37.8	+0.6
MHGZ				S	Sn	04 51 45.4	0.0
SNGZ	Shannon Statio	0.47	356	P	Pb	04 51 38.2	+0.3
SNGZ				S	Sb	04 51 45.2	+0.6
CKHZ	Cape Kidnapper	0.47	210	P	Pb	04 51 38.5	+0.5
CKHZ				S	Sn	04 51 47.7	+1.0
NMHZ	Naumai	0.47	289	P	Pb	04 51 38.2	+0.1
NMHZ				S	Sn	04 51 46.1	-0.7
PRGZ	Paritu Road	0.51	50	P	Pb	04 51 39.2	+0.6
MCHZ	McNeill Hill	0.57	250	P	Pn	04 51 40.1	-0.4
MCHZ				S	Sn	04 51 49.7	+0.7
MTHZ	Maungataniwha	0.58	313	P	Pb	04 51 39.5	-0.3
RIGZ	Rimuhau	0.62	29	P	Pb	04 51 40.9	+0.4
KAHZ	Kahuranaki	0.67	216	P	Pb	04 51 41.5	+0.2
BKZ	Black Stump Fm	0.70	277	P	Pb	04 51 41.6	-0.2
BKZ				P	Pb	04 51 41.6	-0.2
RTZ	Ruatahuna	0.71	334	P	Pb	04 51 41.7	-0.2
RAGZ	Rawiri	0.75	2	P	Pb	04 51 42.8	+0.1
KWHZ	Kaweka Forest	0.76	257	P	Pb	04 51 42.8	-0.1
MRHZ	Matea Rd	0.86	299	P	Pb	04 51 44.2	-0.2
PXZ	Pawanui	0.88	207	P	Pb	04 51 43.4	-1.4
PXZ				P	Pb	04 51 43.4	-1.4
TKGZ	Te Karaka	0.89	24	P	Pn	04 51 44.5	-0.4
TKGZ				P	Pb	04 51 44.6	-0.4
MUGZ	Murupara	0.91	328	P	Pn	04 51 44.8	-0.4
MWZ	Matawai	0.92	7	P	Pn	04 51 44.6	-0.8
CNGZ	Carnagh Statio	1.00	40	P	Pn	04 51 46.2	-0.3
URZ	Urewera	1.01	348	P	Pn	04 51 46.3	-0.4
BHHZ	Black Hill Sta	1.05	256	P	Pn	04 51 46.8	-0.5
ALRZ	Allen Road	1.06	310	P	Pn	04 51 47.3	-0.1
HATZ	Hinemaiaia	1.07	289	P	Pb	04 51 47.8	-0.2
PRRZ	Plateau Road	1.08	314	P	Pn	04 51 47.6	+0.1
WPHZ	Waipukurau	1.09	221	P	Pn	04 51 46.8	-0.9
RRRZ	Republican Roa	1.13	323	P	Pn	04 51 48.3	-0.1
PRHZ	Porangahau	1.17	209	P	Pn	04 51 47.3	-1.5
TWGZ	Tauwhareparae	1.17	24	P	Pn	04 51 48.4	-0.4
WPRZ	Whakapapatarin	1.20	307	P	Pn	04 51 49.4	+0.1
HRRZ	Handcock Road	1.21	315	P	Pn	04 51 49.3	-0.2
RITZ	Rihia Road	1.22	282	P	Pn	04 51 49.8	+0.4
TARZ	Mount Tarawera	1.22	326	P	Pn	04 51 49.7	0.0
WHTZ	Whakaora	1.25	297	P	Pb	04 51 51.0	-0.2
MOVZ	Moawhango	1.27	262	P	Pn	04 51 50.5	+0.2
HSRZ	Hossack Road	1.29	316	P	Pn	04 51 50.5	0.0
RUGZ	Raukumara Rang	1.30	10	P	Pn	04 51 50.1	-0.6
RATZ	Rangitukua	1.31	286	P	Pn	04 51 51.2	+0.4
GRRZ	Galatos Road	1.34	312	P	Pn	04 51 51.3	+0.2
KATZ	Kakaramea	1.34	281	P	Pn	04 51 51.4	+0.1
TUVZ	Tukino	1.34	269	P	Pn	04 51 51.5	+0.2
PUZ	Puketiti	1.36	31	P	Pn	04 51 50.5	-0.9
KRVZ	Karewarewa	1.36	276	P	Pn	04 51 51.8	+0.2
TSZ	Takapari Road	1.36	233	P	Pn	04 51 50.3	-1.2
NGZ	Ngauruhoe	1.39	272	P	Pn	04 51 52.2	+0.3

OMRZ	Omania	1.39	325	P	Pn	04 51 51.9	0.0
WHVZ	Whangaehu Hut	1.39	268	P	Pn	04 51 52.1	0.0
WATZ	Wairara	1.39	292	P	Pn	04 51 51.6	-0.4
ANWZ	Angora Road	1.40	210	P	Pn	04 51 50.2	-1.7
WTVZ	West Tongariro	1.40	275	P	Pn	04 51 52.6	+0.5
DVHZ	Dannevirke	1.41	221	P	Pn	04 51 50.7	-1.4
DRZ	Dome Shelter	1.41	268	P	Pn	04 51 53.1	+0.7
FWVZ	Far West T-bar	1.42	269	P	Pn	04 51 52.4	-0.1
TRVZ	Turoa	1.42	267	P	Pn	04 51 52.4	-0.1
COVZ	Chateau Observ	1.43	271	P	Pn	04 51 52.5	0.0
KUTZ	Kaahu Road	1.43	301	P	Pn	04 51 52.4	-0.1
PKGZ	Pakihiroa	1.46	22	P	Pn	04 51 52.5	-0.4
TWVZ	Taurewa	1.52	276	P	Pn	04 51 53.6	-0.1
HAZ	Te Kaha	1.52	12	P	Pn	04 51 53.1	-0.5
OPRZ	Ohinepanea	1.55	335	P	Pn	04 51 53.3	-0.6
PKVZ	Pokaka	1.58	268	P	Pn	04 51 54.9	+0.4
WMGZ	Waiomatatini S	1.64	30	P	Pn	04 51 54.5	-0.8
BFZ	Birch Farm	1.68	211	P	Pn	04 51 53.7	-2.1
PRWZ	Pori Road	1.70	219	P	Pn	04 51 54.7	-1.4
TLZ	Tolley Road	1.71	302	P	Pn	04 51 55.8	-0.5
MXZ	Matakaoa Point	1.83	24	P	Pn	04 51 57.4	-0.5
TIWZ	Tintock	1.91	217	P	Pn	04 51 56.8	-2.2
MRZ	Mangatainoka R	1.98	224	P	Pn	04 51 58.1	-1.8
TMWZ	Te Maipa	2.18	211	P	Pn	04 51 60.0	-2.7
HOWZ	Holdsworth Sta	2.18	220	P	Pn	04 52 00.3	-2.5
OGWZ	Otaki Gorge	2.31	227	P	Pn	04 52 03.0	-1.5
MTW	Mount Morrison	2.39	216	P	Pn	04 52 02.6	-3.0
KIW	Kapiti Island	2.49	229	P	Pn	04 52 05.5	-1.4
CAW	Cannon Point	2.57	223	P	Pn	04 52 06.0	-2.0
PAWZ	Paruwai Farm	2.60	214	P	Pn	04 52 05.1	-3.5
PKE	Pukeiti	2.64	270	P	Pn	04 52 10.2	+1.2
MSWZ	Moikau Station	2.71	216	P	Pn	04 52 06.6	-3.4
PLWZ	Palliser	2.83	214	P	Pn	04 52 07.9	-3.8
QRZ	Quartz Range	4.04	246	P	Pn	04 52 25.7	-2.6
KHZ	Kahutara	4.30	221	P	Pn	04 52 29.9	-1.9
CTZ	Chatham Island	6.35	137	P	Pn	04 52 58.7	-1.4

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*IDC **22** 05:11:14.9±0.9, 11°.68S×165°.85E, h0^{km}, mb4.2/8, mb1 4.3/9, mb1mx4.0/43, mbtmp4.2/9, ML4.3/1, MS3.3/5, Ms1 3.3/5, ms1mx3.0/28, Error ellipse: s-maj=31.6km s-min=20.1km az=116.0*

*ISCJB **22** 05:11:15.1±0.5, 11°.68S±0°.06×165°.82E±0°.08, h10^{km}, mb4.5/19, MS3.5/3, Error ellipse: s-maj=11.4km s-min=8.3km az=155.5*

*NEIC **22** 05:11:16.5±4.4, 11°.58S×165°.86E, h9^{km}±27^{km}, mb4.6/17, Error ellipse: s-maj=11.6km s-min=8.1km az=218.0*

ISC 22 05:11:16.4±0.6**, 11°.58S**±0°.08×**165°.87E**±0°.10**, h10**^{km}**, n49,** σ**0^{s}92**/46**, mb4.5**/19**, MS3.4**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.21	290	ePn	Pn	05 12 47.3	-0.9
HNR	Honiara	6.21	290	LR	LR	05 15 21.0	
	comp=Z,139nm,19.8s,baz=106,slow=40						
DZM	Mont Dzumac	10.45	177	ePn	Pn	05 13 46.4	-0.1
DZM	Mont Dzumac	10.45	177	Pn	Pn	05 13 46.3	-0.2
	2.2nm,0.3s,baz=360,slow=23,SNR=21						
DZM				LR	LR	05 16 18.7	
	comp=Z,52nm,20.6s,baz=352,slow=29						
ONTNC	Ouen Toro	10.69	177	ePn	Pn	05 13 50.1	+0.5
PINNC	Pines Island,	11.08	172	ePn	Pn	05 13 55.6	+0.7
EIDS	Eidsvold	19.59	224	eP	Pn	05 15 47.8	+1.6
	6.9nm,0.9s						
CTA	Charters Tower	20.67	243	P	P	05 15 57.1	+0.5
	8.2nm,0.9s,baz=76,slow=12,SNR=12						
CTAO	Charters Tower	20.67	243	eP	P	05 15 57.7	+1.0
	12nm,1.0s						
COEN	Coen	22.26	261	eP	P	05 16 14.7	+0.8
	4.1nm,0.9s						
ARMA	Armidale	22.94	213	eP	P	05 16 21.3	+0.2
	37nm,1.0s						
NIUE	Niue	24.48	111	eP	P	05 16 35.3	-0.7
	66nm,0.8s						
STKA	Stephens Creek	30.15	224	eP	P	05 17 27.1	+0.4
	0.5nm,1.0s						
STKA	Stephens Creek	30.15	224	P	P	05 17 26.7	0.0
	2.0nm,0.7s,baz=82,slow=10,SNR=3.9						
STKA				LR	LR	05 28 45.5	
	comp=Z,79nm,19.8s,baz=24,slow=35						
WB2	Warramunga Arr	31.41	251	eP	P	05 17 37.4	-0.6
WR1	Warramunga Arr	31.42	251	eP	P	05 17 36.9	-1.3
	4.7nm,1.1s						
WRA	Warramunga Arr	31.42	251	P	P	05 17 36.9	-1.3
	1.6nm,0.9s,baz=82,slow=9.1,SNR=13						
FOZ	Fox Glacier	32.02	175	eP	P	05 17 43.9	+0.8
	32nm,1.0s						
RPZ	Rata Peaks	32.33	173	eP	P	05 17 47.1	+1.3
	17nm,0.9s						
RPZ	Rata Peaks	32.33	173	P	P	05 17 44.3	-1.5
	15nm,0.9s,baz=258,slow=14,SNR=6.1						
GUMO	Guam	32.55	320	LR	LR	05 30 05.1	
	comp=Z,42nm,21.3s,baz=94,slow=35						
ASAR	Alice Springs	32.67	244	P	P	05 17 47.2	-1.9
	3.1nm,0.7s,baz=73,slow=9.5,SNR=33						
WHZ	Wether Hill Ro	34.24	177	eP	P	05 18 01.2	-1.3
	13nm,1.2s						
BBOO	Buckleboo	34.56	228	eP	P	05 18 04.8	-0.7
	11nm,1.1s						
FITZ	Fitzroy Crossi	39.37	256	eP	P	05 18 46.3	-0.2
	2.6nm,0.8s						
TNTI	Ternate	40.17	285	eP	P	05 18 53.7	+0.4
	35nm,0.8s						
UNV	Unalaska Valle	69.28	17	eP	P	05 22 23.4	-0.2
	24nm,1.1s						
QSPA	South Pole Qui	78.43	180	eP	P	05 23 17.1	-0.3
	4.9nm,1.1s						
SONA0	Songino Array	79.17	324	eP	P	05 23 22.5	+0.8
SONM	Songino Array	79.17	324	P	P	05 23 22.5	+0.8
	0.6nm,0.6s,baz=142,slow=5.4,SNR=5.4						
ILAR	Eielson Array	83.97	18	P	P	05 23 46.7	+0.1
	0.4nm,0.6s,baz=236,slow=5.3,SNR=10.0						
ILB	Eielson Array	83.97	18	eP	P	05 23 48.1	+1.5
	0.7nm,0.6s						
NVAR	Mina Array Bea	86.27	50	LR	LR	05 54 34.1	
	comp=Z,67nm,20.9s,baz=326,slow=30						
MK01	Makanchi Array	93.98	317	eP	P	05 24 35.7	+0.9
MK31	Makanchi Array	93.99	317	eP	P	05 24 35.8	+1.0
	2.3nm,0.9s						
MK32	Makanchi Array	93.99	317	eP	P	05 24 35.5	+0.7
MKAR	Makanchi Array	93.99	317	eP	P	05 24 35.8	+1.0
	11nm,0.8s						
MKAR	Makanchi Array	93.99	317	P	P	05 24 35.5	+0.7
	1.0nm,0.8s,baz=90,slow=6.1,SNR=8.4						
ARA0	ARCESS Array S	116.88	345	ePKPdf	PKPdf	05 29 59.8	-1.0
ARCES	ARCESS Array B	116.88	345	ePKPdf	PKPdf	05 30 00.6	-0.2
ARCES	ARCESS Array B	116.88	345	PKP	PKPdf	05 29 59.8	-1.0
	4.3nm,0.9s,baz=69,slow=3.0,SNR=6.5						
FRNY	Flat Rock	119.63	45	ePKPdf	PKiKP	05 30 07.2	+0.3
NB200	NORSAR Array S	127.25	345	ePKPdf	PKPdf	05 30 20.1	-1.0
NOA	NORSAR Array B	127.25	345	PKP	PKPdf	05 30 20.1	-1.0
	0.3nm,0.7s,baz=24,slow=2.9,SNR=2.7						
SENIN	Lac Senin/Sane	140.85	336	ePKPdf	PKiKP	05 30 48.6	-1.2
KEST	Kesra	147.91	322	PKPbc	PKiKP	05 31 03.6	-0.8
	3.1nm,0.7s,baz=60,slow=8.1,SNR=3.8						
ESDC	Sonseca Array	150.60	344	PKPbc	PKiKP	05 31 09.6	-0.3
	0.1nm,0.3s,baz=32,slow=3.2,SNR=3.2						
TORD	Torodi Ar. Bea	164.47	277	PKP	PKPdf	05 31 22.6	+1.1
	0.8nm,1.1s,baz=90,slow=4.3,SNR=2.7						
TOA1	Torodi Ar. Sit	164.47	277	ePKPdf	PKPdf	05 31 22.6	+1.1

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*SOME **22** 05:12:18.0, 42°.38N×78°.43E, h15^{km}*

*KRNET **22** 05:12:18.7±0.1, 42°.40N×78°.43E, h25^{km}, mb4.2*

*NNC **22** 05:12:18.5±0.8, 42°.42N×78°.43E, h0^{km}, mb4.3, mpv4.2, Error ellipse: s-maj=6.1km s-min=2.4km az=169.0*

ISC 22 05:12:19.3±1.0**, 42°.41N**±0°.04×**78°.38E**±0°.02**, h10**^{km}±6^{km}**, n77,** σ**1^{s}41**/132**, 26C-30D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.07	13	⇑iP	Pg	05 12 21.9	+0.1
	baz=53						
PRZ				⇑iS	Sg	05 12 24.9	+1.3
	baz=53						
SATY	Saty	0.65	2	P	Pg	05 12 31.2	-0.7
	375nm,0.2s						
SATY				S	Sg	05 12 40.7	+0.4
	1μm,0.2s						
SATY	Saty	0.65	2	⇓eP	Pg	05 12 31.1	-0.7
	375nm,0.2s						
SATY				eS	Sg	05 12 40.7	+0.4
	1μm,0.2s						
UZB	Uzynbulak	0.87	33	P	Pg	05 12 34.6	-1.5
	102nm,0.1s						
UZB				S	Sg	05 12 46.4	-1.2
	1μm,0.2s						
UZB	Uzynbulak	0.87	33	eP	Pg	05 12 34.6	-1.5
	baz=30						
UZB				eS	Sg	05 12 46.7	-0.9
	baz=30						
UZB	Uzynbulak	0.87	33	eP	Pg	05 12 34.6	-1.5
	102nm,0.1s						
UZB				eS	Sg	05 12 46.7	-0.9
	1μm,0.2s						
KDJ	Kajisay	0.93	253	⇑iP	Pg	05 12 37.0	-0.2
	baz=54						
KDJ				⇑iS	Sb	05 12 49.8	-0.3
	baz=54						
KURS	Kuram	1.09	352	eP	Pb	05 12 39.2	-1.0
	baz=50						
KURS				eS	Sg	05 12 54.8	+0.5
	baz=50						
KURS	Kuram	1.09	352	eP	Pb	05 12 39.2	-1.0
	46nm,0.2s						
KURS				eS	Sg	05 12 54.8	+0.5
	85nm,0.5s						
SHLS	Shalkode	1.09	47	P	Pn	05 12 43.0	+2.3
	112nm,0.3s						
SHLS				S	Sn	05 13 01.0	+5.1
	402nm,0.5s						
SHLS	Shalkode	1.09	47	eP	Pn	05 12 43.0	+2.3
	baz=54						
SHLS				eS	Sn	05 13 01.1	+5.1
	baz=54						
SHLS	Shalkode	1.09	47	eP	Pn	05 12 43.0	+2.3
	112nm,0.3s						
SHLS				eS	Sn	05 13 01.0	+5.1
	402nm,0.5s						
TNSS	Tian-Shan	1.23	301	⇓eP	Pn	05 12 41.7	-1.1
	baz=1.0						
TNSS				⇓eS	Sg	05 12 59.0	+0.2
	baz=1.0						
TNSS	Tian-Shan	1.23	301	⇓eP	Pn	05 12 41.7	-1.1
	243nm,0.1s						
TNSS				eS	Sg	05 12 59.1	+0.2
	278nm,0.4s						
PDGK	Podgornoye	1.23	41	P	Pn	05 12 40.7	-1.9
	25nm,0.1s						
PDGK				S	Sb	05 12 57.0	-1.6
	123nm,0.2s						
PDGK	Podgornoye	1.23	41	⇓P	Pn	05 12 40.7	-1.9
	11nm,0.3s						
PDGK				⇓S	Sb	05 12 57.0	-1.6
	102nm,0.4s						
PDGK	Podgornoye	1.23	41	⇓iP	Pn	05 12 40.7	-1.9
	baz=40						
PDGK				⇓iS	Sb	05 12 57.0	-1.6
	baz=40						
MDOK	Medeo	1.23	308	⇓P	Pn	05 12 41.8	-0.9
	147nm,0.3s						
MDOK				⇑S	Sb	05 12 58.9	+0.1
	418nm,0.6s						
MDOK	Medeo	1.23	308	⇑eP	Pn	05 12 42.0	-0.7
	baz=7.0						
MDOK				⇑eS	Sg	05 12 59.1	+0.1
	baz=7.0						
MDOK	Medeo	1.23	308	⇑eP	Pn	05 12 42.0	-0.7
	434nm,0.2s						
MDOK				eS	Sg	05 12 59.1	+0.1
	308nm,0.2s						
KOTS	Kotyrbulak	1.24	312	P	Pn	05 12 42.3	-0.5
	586nm,0.2s						
KOTS				S	Sn	05 12 59.6	0.0
	1μm,0.3s						
KOTS	Kotyrbulak	1.24	312	eP	Pn	05 12 42.3	-0.5
	baz=11						
KOTS				eS	Sn	05 12 59.7	0.0
	baz=11						
KOTS	Kotyrbulak	1.24	312	eP	Pn	05 12 42.3	-0.5
	586nm,0.2s						
KOTS				eS	Sn	05 12 59.6	0.0
	1μm,0.3s						
KNDC	Almaty	1.31	308	⇑P	Pn	05 12 43.4	-0.3
KNDC				⇑S	Sg	05 13 02.2	+0.6
AAA	Alma-Ata	1.34	307	P	Pb	05 12 44.2	-0.3
	917nm,0.3s						
AAA				S	Sg	05 13 03.1	+0.7
	2μm,0.3s						
AAA	Alma-Ata	1.34	307	eP	Pb	05 12 44.2	-0.3
	baz=6.0						
AAA				eS	Sg	05 13 03.1	+0.7
	baz=6.0						
AAA	Alma-Ata	1.34	307	eP	Pb	05 12 44.2	-0.3
	917nm,0.3s						
AAA				eS	Sg	05 13 03.1	+0.7
	2μm,0.3s						
IZV	Izvestkoviy	1.44	296	P	Pn	05 12 45.6	+0.1
	418nm,0.2s						
IZV				S	Sg	05 13 05.5	-0.2
	1μm,0.3s						
IZV	Izvestkoviy	1.44	296	eP	Pn	05 12 45.6	+0.1
	baz=96						
IZV				eS	Sg	05 13 05.4	-0.2
	baz=96						
IZV	Izvestkoviy	1.44	296	eP	Pn	05 12 45.6	+0.1
	418nm,0.2s						
IZV				eS	Sg	05 13 05.5	-0.2
	1μm,0.3s						
ULHL	Ulahol	1.59	265	P	Pn	05 12 47.6	-0.1
	SNR=243						
ULHL	Ulahol	1.59	265	⇓iP	Pb	05 12 48.0	-0.9
	baz=65						
ULHL				⇓iS	Sb	05 13 09.6	+0.5
	baz=65						
MTBS	Maitube	1.60	297	⇓eP	Pb	05 12 48.3	-0.7
	baz=97						
MTBS				⇓eS	Sg	05 13 10.2	-0.7
	baz=97						
MTBS	Maitube	1.60	297	⇓eP	Pb	05 12 48.3	-0.7
	373nm,0.3s						
MTBS				eS	Sg	05 13 10.2	-0.7
	671nm,0.3s						
MNBS	Baschi	1.67	1	P	Pb	05 12 49.6	-0.5
	160nm,0.2s						
MNBS				S	Sg	05 13 12.0	-0.8
	1μm,0.3s						
MNBS	Baschi	1.67	1	⇓eP	Pb	05 12 49.5	-0.5
	160nm,0.2s						
MNBS				eS	Sg	05 13 12.0	-0.8
	1μm,0.3s						
CHKK	Chushkaly	1.76	325	⇓eP	Pb	05 12 51.5	-0.2
	339nm,0.2s						
CHKK				eS	Sg	05 13 15.9	0.0
	970nm,0.2s						
KTMS	Ketmen	1.78	54	P	Pn	05 12 50.4	+0.2
	68nm,0.1s						
KTMS				S	Sb	05 13 13.5	-0.9
	264nm,0.3s						
KTMS	Ketmen	1.78	54	eP	Pn	05 12 50.4	+0.2
	baz=52						
KTMS				eS	Sb	05 13 13.6	-0.9
	baz=52						
KTMS	Ketmen	1.78	54	eP	Pn	05 12 50.4	+0.2
	68nm,0.1s						
KTMS				eS	Sb	05 13 13.5	-0.9
	264nm,0.3s						
KTBS	Karatobe	1.80	317	P	Pb	05 12 52.1	-0.2
	302nm,0.3s						
KTBS				S	Sg	05 13 16.7	-0.4
	729nm,0.4s						
KTBS	Karatobe	1.80	317	eP	Pb	05 12 52.1	-0.2
	302nm,0.3s						
KTBS				eS	Sg	05 13 16.7	-0.4
	729nm,0.4s						
BOOM	Boomskoye usch	1.81	273	⇑iP	Pn	05 12 51.2	+0.6
	baz=74						
BOOM				⇑iS	Sb	05 13 15.1	-0.1
	baz=74						
ARXS	Arharly	1.84	348	P	Pb	05 12 52.4	-0.7
	536nm,0.4s						
ARXS				S	Sb	05 13 17.1	+0.9
ARXS	Arharly	1.84	348	eP	Pb	05 12 52.4	-0.7
	536nm,0.4s						
ARXS				eS	Sb	05 13 17.1	+0.9
KST	Kastek	1.89	290	⇓eP	Pb	05 12 53.0	-0.9
	baz=90						
KST				⇓eS	Sb	05 13 18.4	+0.8
	baz=90						
KST	Kastek	1.89	290	⇓eP	Pb	05 12 53.0	-0.9
	190nm,0.3s						
KST				eS	Sb	05 13 18.4	+0.8
	422nm,0.5s						
NRN	Naryn	2.03	242	⇑iP	Pb	05 12 55.6	-0.7
	baz=43						
NRN				⇑iS	Sb	05 13 22.1	+0.4
	baz=43						
DGS	Degeres	2.09	294	Pg	Pb	05 12 56.4	-0.9
	136nm,0.4s						
DGS				Lg	Lg	05 13 23.9	
	683nm,0.5s						
DGS	Degeres	2.09	294	eP	Pb	05 12 56.4	-0.9
	136nm,0.4s						
DGS				eS	Sb	05 13 23.9	+0.6
	683nm,0.5s						
KUU	Kurty	2.10	315	eP	Pb	05 12 57.0	-0.4
	113nm,0.3s						
KUU				eS	Sg	05 13 25.3	-1.5
	576nm,0.6s						
TKM2	Tokmak 2	2.11	285	P	Pb	05 12 56.8	-1.0
	SNR=24						
TKM2	Tokmak 2	2.11	285	⇓Pn	Pb	05 12 56.6	-1.2
	22nm,0.3s						
TKM2				⇓Lg	Lg	05 13 26.1	
	212nm,0.3s						
TKM2	Tokmak 2	2.11	285	⇑iP	Pb	05 12 56.3	-1.5
	baz=85						
TKM2				⇑iS	Sb	05 13 23.3	-0.8
	baz=85						
DJR	Jarkent	2.18	28	eP	Pb	05 12 57.4	-1.4
	17nm,0.2s						
DJR				eS	Sb	05 13 25.6	-0.3
	293nm,0.4s						
KZA	Kyzart	2.35	263	P	Pb	05 13 00.4	-1.5
	SNR=61						
KBK	Karagaybulak	2.55	277	P	Pb	05 13 03.2	-2.0
	SNR=53						
KBK	Karagaybulak	2.55	277	⇑iP	Pn	05 13 02.5	+1.7
	baz=77						
KBK				⇑iS	Sn	05 13 33.9	+2.0
	baz=77						
TDK	Taldyqorghan	2.59	0	eP	Pb	05 13 04.8	-1.0
	69nm,0.3s						
TDK				eS	Sb	05 13 38.0	+0.4
	370nm,0.4s						
CHMS	Chumysh	2.74	284	P	Pb	05 13 07.2	-1.0
	SNR=9.8						
CHMS	Chumysh	2.74	284	⇑iP	Pn	05 13 04.8	+1.6
	baz=84						
CHMS				⇑iS	Sn	05 13 38.0	+1.6
	baz=84						
UCH	Uchtor	2.87	268	P	Pb	05 13 08.7	-2.1
	SNR=10						
UCH	Uchtor	2.87	268	⇓iP	Pn	05 13 07.1	+1.6
	baz=68						
UCH				⇓iS	Sn	05 13 42.5	+2.2
	baz=68						
AAK	Ala-Archa	2.88	276	P	Pn	05 13 07.7	+2.4
	SNR=18						
AAK	Ala-Archa	2.88	276	⇓Pn	Pn	05 13 07.5	+2.2
	4.1nm,0.3s						
AAK				⇑Pg	Pg	05 13 13.2	-1.2
	14nm,0.3s						
AAK				⇓Lg	Lg	05 13 46.8	
	124nm,0.7s						
KAPS	Kapalarasan	2.96	14	eP	Pb	05 13 11.0	-1.1
	38nm,0.4s						
KAPS				eS	Sb	05 13 49.6	+1.3
	104nm,0.3s						
USP	Ospenovka	2.98	288	P	Pb	05 13 11.5	-0.8
	SNR=22						
EKS2	Erkin-Say	3.41	276	P	Pb	05 13 21.8	+2.0
	SNR=12						
AML	Almayashu	3.49	267	P	Pb	05 13 19.2	-2.0
	SNR=10						
BTLS	Baital	4.09	311	eP	Pb	05 13 31.8	+0.4
	12nm,0.3s						
BTLS				eS	Sb	05 14 24.6	+3.7
	12nm,0.7s						
MNAS	Manas	4.35	273	⇑Pg	Pg	05 13 41.2	-1.3
	2.9nm,0.4s						
MNAS				⇓Lg	Lg	05 14 35.4	
	19nm,0.6s						
SFK	Sufi-Kurgan	4.39	239	⇑Pg	Pg	05 13 51.1	+7.7
	4.8nm,0.6s						
SFK				⇑Lg	Lg	05 14 39.5	
	3.0nm,0.3s						
MK31	Makanchi Array	5.20	31	Pn	Pn	05 13 37.6	+0.6
	1.1nm,0.3s,baz=210,slow=12,SNR=48						
MK31				Sn	Sn	05 14 37.2	+0.2
	3.2nm,0.5s,baz=222,slow=16,SNR=4.9						
MK31				⇓Lg	Lg	05 14 56.9	
	3.7nm,0.3s,baz=211,slow=26,SNR=5.0						
KK31	Karatay Array	5.83	279	⇑Pg	Pg	05 14 06.2	-4.7
	2.3nm,0.5s,baz=32,slow=18,SNR=2.8						
KK31				⇑Lg	Lg	05 15 24.7	
	25nm,0.7s						
OTUK	Ortayu	7.22	326	⇓Lg	Lg	05 16 06.1	
	19nm,0.9s						
KURBB	Kurchatov Arra	8.21	1	⇓Lg	Lg	05 16 34.6	
	15nm,0.8s						
KURK	Kurchatov	8.31	1	⇓Lg	Lg	05 16 34.3	
	9.8nm,0.8s						

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*NEIC **22** 05:14:27.9±0.0, 18°.25N×102°.08W, h73^{km}, MD4.0(MEX), After MEX.*

MEX 22 05:14:27.9±0.5**, 18°.25N×102°.08W, h73**^{km}±11^{km}**, MD4.0, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.87	138	ePn	Pn	05 14 43.2	-1.8
ZIIG				eSn	Sn	05 14 56.1	-1.5
ZIIG	Zihuatanejo	0.87	138	i P	Pn	05 14 43.2	-1.8
ZIIG				i S	Sn	05 14 56.1	-1.5
ARIG	Puente Sto Nin	1.64	89	eP	Pn	05 14 53.4	-1.5
ARIG				i S	Sn	05 15 13.4	-2.0
ARIG	Puente Sto Nin	1.64	89	eP	Pn	05 14 53.4	-1.5
ARIG				i S	Sn	05 15 13.4	-2.0
MOIG	Morelia	1.65	30	ePn	Pn	05 14 52.0	-3.2
MOIG				eSn	Sn	05 15 04.6	-11
EZ5V		1.89	310	eP	Pn	05 14 57.2	-1.2
R15V		2.03	297	eP	Pn	05 14 59.0	-1.1
CAIG	El Cayaco	2.10	125	ePn	Pn	05 14 60.0	-1.0
CAIG				eSn	Sn	05 15 34.0	+7.8
CAIG	El Cayaco	2.10	125	i P	Pn	05 14 60.0	-1.0
CAIG				i S	Sn	05 15 34.0	+7.8
PLIG	Platanillo	2.45	86	ePn	Pn	05 15 05.9	+0.2
PLIG				eSn	Sn	05 15 33.0	-1.7
PLIG	Platanillo	2.45	86	i P	Pn	05 15 05.9	+0.2
PLIG				i S	Sn	05 15 33.0	-1.7

DJA 22 05:16:51.3±1.2**, 8°S**±7°×**10°7E**±°**, h23**^{km}±7^{km}**, M3.7**/9**, MLv3.7**/9**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.60	40	P	Pn	05 17 04.2	-0.3
CISI				S	Sn	05 17 13.3	-0.2
CMJI	Cimerak	1.04	77	P	Pn	05 17 10.0	-0.4
CMJI				S	Sb	05 17 23.9	+0.2
SKJI	Sukabumi	1.33	319	P	Pn	05 17 13.5	-1.0
DBJI	Dramaga	1.60	335	P	Pn	05 17 18.5	+0.2
DBJI				S	Sn	05 17 38.9	+0.6
KPJI	Karang Pucung	1.64	65	P	Pn	05 17 19.5	+0.8
UGM	Wanagama	3.06	88	P	Pn	05 17 38.2	-0.2
PCJI	Pacitan	3.71	93	P	Pn	05 17 47.4	+0.1
PWJI	Pagerwojo	4.33	90	P	Pn	05 17 55.7	-0.1

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*AZER **22** 05:22:26.6±5.8, 35°.21N×45°.94E, h10^{km}, ml3.6/7, Error ellipse: s-maj=59.0km s-min=28.2km az=59.0*

*ISN **22** 05:22:27.1±1.0, 35°.69N×45°.53E, h4^{km}±8^{km}, ML3.7*

*TEH **22** 05:22:28.9, 35°.72N×46°.04E, h10^{km}, ML3.7*

ISC 22 05:22:28.1±1.3**, 35°.60N**±0°.02×**45°.79E**±0°.03**, h11**^{km}±12^{km}**, n41,** σ**2^{s}03**/54**, 6C-6D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIN	Lien	1.17	125	ePg	Pg	05 22 49.2	-1.5
ILIN				IAMB	IAmb	05 23 12.2	
	comp=Z,17μm,0.2s						
IKRK	Kirkuk	1.20	261	ePn	Pb	05 22 49.0	-1.9
IKRK				eSn	Sb	05 23 03.0	-3.5
IVIS	Veis	1.38	141	ePn	Pg	05 22 54.1	-0.4
IGHG	Ghaleghazi	1.42	153	ePn	Pg	05 22 56.4	+1.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGHG				IAMB	IAmb	05 23 24.1	
	comp=N,61µm,0.4s						
KCHF	**Cheshme Sefid,**	**1.67**	**142**	*e*Pn	**Pg**	**05 23 00.3**	**+0.1**
KCHF				IAMB	IAmb	05 23 29.0	
	comp=Z,0.0nm,0.3s						
IKOM	**Komasi**	**2.00**	**135**	IAMB	IAmb	05 23 38.8	
	comp=Z,0.0nm,0.6s						
IKOM				*e*Pn	**Pg**	**05 23 05.3**	**-1.2**
HSRG	**Sareghieh**	**2.06**	**99**	*e*Pn	**Pn**	**05 23 03.4**	**+0.4**
HSRG				IAMB	IAmb	05 23 38.2	
	comp=N,0.0nm,0.8s						
IAZR	**Azarshahr**	**2.08**	**4**	IAMB	IAmb	05 23 07.5	
	comp=Z,7µm,0.5s						
IAZR				*e*Pn	**Pn**	**05 23 02.7**	**-0.5**
IBST	**Bostanabad**	**2.28**	**23**	IAMB	IAmb	05 23 05.9	
	comp=Z,2µm,0.5s						
IBST				*e*Pn	**Pn**	**05 23 03.6**	**-2.3**
MSL	**Mosul**	**2.32**	**291**	*e*Pn	**Pn**	**05 23 05.0**	**-1.2**
MSL				*e*Sn	**Sn**	**05 23 32.0**	**-2.8**
YOVA	**Hakkari_Yksek**	**2.33**	**329**	*i* P	**Pb**	**05 23 11.0**	**+0.9**
YOVA				*i* S	**Sg**	**05 23 44.2**	**+1.4**
YOVA				IAML_P			
	comp=Z,2µm,0.5s						
CUKT	**Cukurca**	**2.41**	**314**	*i* P	**Pb**	**05 23 11.0**	**-0.6**
CUKT				*i* S	**Sb**	**05 23 42.4**	**+1.0**
CUKT				IAML_P			
	comp=Z,1µm,0.2s						
IBDR	**Badra**	**2.48**	**177**	*e*Pn	**Pb**	**05 23 12.0**	**-0.8**
IBDR				*e*Sn	**Sb**	**05 23 44.0**	**+0.6**
BHD	**Baghdad**	**2.60**	**207**	*e*Pn	**Pn**	**05 23 12.0**	**+1.9**
BHD				*e*Sn	**Sb**	**05 23 44.0**	**-2.7**
ITBZ	**Tabriz**	**2.65**	**6**	*e*Pn	**Pn**	**05 23 12.7**	**+1.8**
ITBZ				IAMB	IAmb	05 23 16.1	
	comp=Z,1µm,0.4s						
IKFM	**Kafar-mosalman**	**2.67**	**140**	*e*Pn	**Pb**	**05 23 14.6**	**-1.4**
IKFM				IAMB	IAmb	05 24 13.2	
	comp=Z,0.0nm,0.8s						
ISRB	**Sarab**	**2.68**	**34**	*e*Pn	**Pn**	**05 23 11.7**	**+0.2**
ISRB				IAMB	IAmb	05 23 56.0	
	comp=Z,2µm,0.6s						
HSAM	**Samen**	**2.69**	**120**	*e*Pn	**Pb**	**05 23 14.1**	**-2.3**
HSAM				IAMB	IAmb	05 24 03.6	
	comp=Z,0.0nm,1.0s						
HAGD	**Aghdareh**	**2.85**	**105**	*e*Pn	**Pn**	**05 23 16.1**	**+2.4**
HAGD				IAMB	IAmb	05 24 04.6	
	comp=Z,0.0nm,0.4s						
IHRS	**Heris**	**2.89**	**20**	*e*Pn	**Pn**	**05 23 15.2**	**+0.8**
IHRS				IAMB	IAmb	05 24 04.7	
	comp=Z,1µm,0.7s						
IKMR	**Kamar-syah**	**2.98**	**133**	*e*Pn	**Pb**	**05 23 19.6**	**-1.5**
SIRN	**Sırnak**	**3.32**	**306**	*i* P	**Pg**	**05 23 31.3**	**-0.4**
ORD	**Ordubad**	**3.33**	**3**	*e*Pn	**Pb**	**05 23 25.9**	**-1.2**
ORD	**Ordubad**	**3.33**	**3**	⇓P	**Pb**	**05 23 26.0**	**-1.2**
ORD				⇓S	**Sb**	**05 24 08.6**	**+0.8**
NAX	**Nakhchivan**	**3.58**	**356**	⇑S	**Sb**	**05 24 16.0**	**+1.1**
LRK	**Lerik**	**3.66**	**33**	*e*Pn	**Pn**	**05 23 25.2**	**+0.4**
LRK	**Lerik**	**3.66**	**33**	⇓P	**Pn**	**05 23 25.3**	**+0.4**
	SNR=3.7						
LRK				⇑S	**Sb**	**05 24 16.3**	**-1.0**
SBZ	**Shahbuz**	**3.80**	**357**	*e*Pn	**Pn**	**05 23 31.2**	**+4.6**
SBZ	**Shahbuz**	**3.80**	**357**	⇑P	**Pn**	**05 23 31.3**	**+4.6**
SBZ				⇑S	**Sb**	**05 24 21.6**	**+0.4**
ASTR	**Astara**	**3.81**	**38**	*e*Pn	**Pn**	**05 23 28.5**	**+1.8**
ASTR	**Astara**	**3.81**	**38**	⇑P	**Pn**	**05 23 28.5**	**+1.8**
ASTR				⇓S	**Sb**	**05 24 18.7**	**-2.6**
LKRN	**Lenkeran, Azer**	**3.92**	**37**	*e*Pn	**Pn**	**05 23 29.8**	**+1.7**
LKRN	**Lenkeran, Azer**	**3.92**	**37**	⇑P	**Pn**	**05 23 29.8**	**+1.7**
SRTM	**Siirt_Merkez**	**3.92**	**309**	*i* P	**Pn**	**05 23 31.1**	**+2.8**
SRTM				IAML_P			
	comp=Z,94nm,0.3s						
GLBA	**Clilabad**	**4.18**	**29**	*e*Pn	**Pn**	**05 23 33.4**	**+1.6**
GLBA	**Clilabad**	**4.18**	**29**	⇓P	**Pn**	**05 23 33.5**	**+1.6**
GLBA				⇓S	**Sb**	**05 24 29.6**	**-2.6**
NSR	**Nassriya**	**4.58**	**176**	*e*Pn	**Pn**	**05 23 40.0**	**+2.6**
NSR				*e*Sn	**Sn**	**05 24 35.0**	**+4.3**
HANI	**Diyarbakir_Han**	**5.15**	**305**	*i* P	**Pg**	**05 24 08.4**	**+1.6**
RTB	**Rutbah**	**5.21**	**242**	*e*Pn	**Pn**	**05 23 46.0**	**-0.1**
RTB				*e*Sn	**Sn**	**05 24 44.0**	**-2.2**
IZEF	**Zefreh**	**6.05**	**115**	*e*Pn	**Pn**	**05 24 00.5**	**+2.8**
IZEF				IAMB	IAmb	05 26 29.4	
	comp=Z,97nm,0.1s						
KLNJ	**Kolanjah**	**6.67**	**132**	*e*Pn	**Pn**	**05 24 08.9**	**+2.5**

IDC 22 05:33:20.6±11.0**, 8°.77S**×**27°.32E, h0km, mb4.0**/2**, mb1 4.0**/3**, mb1mx3.4**/31**, mbtmp4.0**/3**, ML3.6**/1**, Error ellipse: s-maj=235.6km s-min=31.8km az=164.0, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**12.47**	**53**	Pn	Pn	05 36 18.3	-1.3
	0.3nm,0.3s,baz=217,slow=14,SNR=6.2						
KMBO				Sn	Sn	05 38 34.5	-5.0
	0.2nm,0.3s,baz=150,slow=20,SNR=3.2						
KMBO				Lg	Lg	05 39 54.8	
	0.4nm,0.3s,baz=292,slow=19,SNR=4.2						
TORD	**Torodi Ar. Bea**	**33.49**	**310**	P	P	05 40 01.2	-0.8
	1.7nm,0.3s,baz=122,slow=8.7,SNR=38						
BRTR	**Keskin Array B**	**48.60**	**6**	P	P	05 42 07.5	+1.3
	0.3nm,0.7s,baz=195,slow=10,SNR=3.8						

IDC 22 05:46:44.8±6.4**, 51°.80N**×**178°.99W, h0km, mb3.3**/5**, mb1 3.9**/6**, mb1mx3.4**/50**, mbtmp3.6**/6**, ML4.5**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.3**/28**, Error ellipse: s-maj=120.6km s-min=56.7km az=91.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**16.29**	**58**	Pn	Pn	05 50 34.3	-0.4
	1.6nm,0.3s,baz=167,slow=3.2,SNR=29						
ILAR	**Eielson Array**	**20.99**	**39**	P	P	05 51 29.6	+0.3
	0.2nm,0.5s,baz=244,slow=9.5,SNR=6.8						
YKA	**Yellowknife Ar**	**35.03**	**47**	P	P	05 53 37.8	-0.9
	0.4nm,0.4s,baz=276,slow=9.5,SNR=10						
YKA				LR	LR	06 09 00.8	
	comp=Z,11nm,18.1s,baz=219,slow=38						
NVAR	**Mina Array Bea**	**43.62**	**83**	P	P	05 54 51.5	+0.5
	0.5nm,0.7s,baz=285,slow=7.0,SNR=4.1						
PDAR	**Pinedale Array**	**46.29**	**73**	P	P	05 55 11.3	-0.9
	0.1nm,0.3s,baz=347,slow=3.9,SNR=3.9						
TXAR	**Lajitas Array**	**58.70**	**81**	P	P	05 56 44.6	+0.3
	0.3nm,0.5s,baz=309,slow=7.1,SNR=5.6						

NNC 22 06:00:55.0±2.8**, 37°.49N**×**70°.88E, h0km, mb3.6, mpv3.2, 5C-2D, Error ellipse: s-maj=24.6km s-min=19.4km az=143.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.25**	**38**	⇑P	Pn	06 01 47.3	-0.2
	1.9nm,0.3s						
SFK				⇑S	Sn	06 02 28.8	+1.9
	3.4nm,0.3s						
MNAS	**Manas**	**5.15**	**14**	⇑P	Pn	06 02 13.5	+0.1
	1.7nm,0.5s						
MNAS				⇓S	Sn	06 03 14.5	+0.9
	2.3nm,0.4s						
KK31	**Karatay Array**	**5.62**	**357**	P	Pn	06 02 20.9	+1.2
	1.1nm,0.2s,baz=181,slow=12,SNR=65						
KK31				⇑S	Sn	06 03 26.6	+1.7
	0.3nm,0.2s,baz=188,slow=23,SNR=6.6						
AAK	**Ala-Archa**	**5.84**	**27**	⇓P	Pn	06 02 21.8	-1.2
	2.1nm,0.5s						
AAK				⇑S	Sn	06 03 30.9	+0.1
	3.1nm,0.7s						

IDC 22 06:17:16.3±18.0**, 5°.84S**×**154°.29E, h250km**±196km**, mb3.1**/4**, mb1 3.2**/5**, mb1mx3.0**/35**, mbtmp3.7**/5**, Error ellipse: s-maj=147.0km s-min=58.8km az=114.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.17**	**208**	P	P	06 20 49.7	+0.6
	0.1nm,0.3s,baz=38,slow=15,SNR=4.9						
WRA	**Warramunga Arr**	**23.93**	**232**	P	P	06 22 08.2	+0.2
	1.0nm,0.5s,baz=59,slow=9.8,SNR=25						
ASAR	**Alice Springs**	**26.44**	**226**	P	P	06 22 30.0	-0.6
	0.6nm,0.4s,baz=58,slow=9.2,SNR=7.3						
SONM	**Songino Array**	**67.99**	**327**	P	P	06 27 48.4	-0.3
	0.3nm,0.5s,baz=133,slow=6.1,SNR=2.5						
MKAR	**Makanchi Array**	**82.08**	**319**	P	P	06 29 09.7	+0.7
	0.2nm,0.4s,baz=91,slow=7.8,SNR=4.1						

ISCJB ***22*** *06:20:42.9±0.5, 37°.40N±0°.02×26°.91E±0°.03, h5km±3km, Error ellipse: s-maj=3.8km s-min=2.9km az=138.1*

ISK ***22*** *06:20:42.4, 37°.40N×26°.90E, h6km, ML3.5/22*

DDA ***22*** *06:20:43.3, 37°.46N×27°.07E, h4km±5km, ML3.4*

THE ***22*** *06:20:43.0, 37°.39N×26°.92E, h1km±2km, ML3.0/4, Error ellipse: s-maj=2.3km s-min=0.9km az=166.0*

ATH ***22*** *06:20:43.0, 37°.44N×26°.86E, h26km±1km, ML3.3/1, Error ellipse: s-maj=2.6km s-min=1.1km az=113.0*

ISC 22 06:20:43.1±1.0**, 37°.42N**±0°.02×**26°.91E**±0°.02**, h11km**±9km**, n58, σ0s.81**/79**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIDI	**Didim-Aydin**	**0.26**	**100**	PG	**Pg**	**06 20 48.5**	**0.0**
DIDI				SG	**Sg**	**06 20 52.7**	**+0.6**
SMG	**Samos**	**0.29**	**348**	P	**Pb**	**06 20 49.8**	**-0.7**
SMG				S	**Sb**	**06 20 54.3**	**-1.1**
SMG				AML	AML	06 20 55.8	
	comp=N,12249µm,0.2s						
SMG				AML	AML	06 20 56.3	
	comp=E,16168µm,0.3s						
SMG	**Samos**	**0.29**	**348**	P	**Pb**	**06 20 49.8**	**-0.7**
SMG				S	**Sb**	**06 20 54.5**	**-0.9**
GCAM	**G?zelcaml?**	**0.38**	**42**	PG	**Pb**	**06 20 51.1**	**-0.8**
GCAM				SG	**Sb**	**06 20 57.4**	**-0.4**
GCAM	**G?zelcaml?**	**0.38**	**42**	*i* P	**Pb**	**06 20 51.1**	**-0.8**
GCAM				*i* S	**Sb**	**06 20 57.6**	**-0.2**
YKAV	**Yalikavak-Bodr**	**0.42**	**135**	PG	**Pg**	**06 20 51.7**	**+0.4**
BODT	**Bodrum**	**0.48**	**138**	PG	**Pg**	**06 20 51.7**	**-0.8**
BODT	**Bodrum**	**0.48**	**138**	P	**Pg**	**06 20 52.0**	**-0.5**
BODT				S	**Sg**	**06 20 59.0**	**+0.2**
BDRM	**Kayabasi**	**0.55**	**130**	*i* P	**Pg**	**06 20 53.8**	**-0.1**
BDRM				*i* S	**Sg**	**06 21 01.4**	**+0.2**
DGB	**zmir**	**0.63**	**358**	*i* P	**Pb**	**06 20 56.2**	**0.0**
DGB				*i* S	**Sb**	**06 21 05.0**	**-0.1**
GMLD	**Gumuldur**	**0.66**	**0**	PG	**Pg**	**06 20 55.9**	**+0.1**
MLSB	**Milas**	**0.70**	**100**	PG	**Pg**	**06 20 56.6**	**-0.1**
AYDN	**Tasoluk**	**0.81**	**72**	*i* P	**Pg**	**06 20 58.4**	**-0.3**
AYDN				*i* S	**Sg**	**06 21 08.3**	**-0.8**
NISR	**Nisiros**	**0.83**	**168**	P	**Pb**	**06 21 00.0**	**+0.5**
ZEY	**zmir**	**0.88**	**338**	*i* P	**Pb**	**06 21 01.0**	**+0.6**
ZEY				*i* S	**Sn**	**06 21 13.8**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.94**	**56**	PG	**Pg**	**06 21 01.1**	**-0.1**
BLCB	**Balcova**	**0.97**	**6**	PG	**Pb**	**06 21 02.1**	**+0.1**
URLA	**Izmir**	**0.97**	**345**	PG	**Pb**	**06 21 01.8**	**-0.2**
URLA	**Izmir**	**0.97**	**345**	*i* P	**Pb**	**06 21 02.1**	**0.0**
URLA				*i* S	**Sn**	**06 21 17.3**	**+0.7**
AMGA	**Amorgos Island**	**1.00**	**234**	P	**Pg**	**06 21 02.0**	**-0.4**
AMGA				S	**Sg**	**06 21 16.1**	**+0.5**
AMGA	**Amorgos Island**	**1.00**	**234**	P	**Pg**	**06 21 02.4**	**-0.1**
AMGA				S	**Sg**	**06 21 16.2**	**+0.7**
YER	**Yerkesik**	**1.13**	**104**	PN	**Pg**	**06 21 04.5**	**-0.4**
YER	**Yerkesik**	**1.13**	**104**	P	**Pg**	**06 21 04.1**	**-0.8**
YER				S	**Sg**	**06 21 19.5**	**0.0**
APE	**Apeiranthos**	**1.16**	**253**	PN	**Pg**	**06 21 04.6**	**-0.8**
APE	**Apeiranthos**	**1.16**	**253**	P	**Pg**	**06 21 04.4**	**-1.0**
APE				S	**Sg**	**06 21 20.0**	**-0.4**
APE	**Apeiranthos**	**1.16**	**253**	P	**Pg**	**06 21 04.3**	**-1.1**
APE				S	**Sb**	**06 21 21.6**	**+1.3**
CHOS	**Chios island**	**1.18**	**325**	PN	**Pg**	**06 21 05.5**	**-0.3**
CHOS	**Chios island**	**1.18**	**325**	P	**Pg**	**06 21 05.0**	**-0.8**
CHOS				S	**Sb**	**06 21 21.4**	**+0.5**
CHOS	**Chios island**	**1.18**	**325**	P	**Pg**	**06 21 05.2**	**-0.6**
CHOS				S	**Sb**	**06 21 21.6**	**+0.7**
KRBN	**Karaburun**	**1.21**	**346**	PN	**Pn**	**06 21 06.2**	**+0.2**
FOCM	**Foa**	**1.30**	**354**	PN	**Pg**	**06 21 08.0**	**-0.1**
TURN	**Turunc**	**1.46**	**112**	PN	**Pn**	**06 21 06.5**	**-2.9**
TURN	**Turunc**	**1.46**	**112**	*i* P	**Pn**	**06 21 06.1**	**-3.3**
TURN				IAML_P			
	comp=Z,2µm,0.2s						
GOMA	**Golmarmara-Man**	**1.51**	**31**	PN	**Pb**	**06 21 11.0**	**-0.2**
ARG	**Arkhangelos**	**1.55**	**141**	PN	**Pn**	**06 21 11.1**	**+0.4**
ZEDA	**zmir-Bergama**	**1.55**	**5**	*i* P	**Pb**	**06 21 11.7**	**-0.2**
ZEDA				IAML_P			
	comp=Z,2µm,0.1s						
TAVA	**DENIZLI_Tavas**	**1.59**	**88**	*i* P	**Pn**	**06 21 11.7**	**+0.3**
TAVA				*i* S	**Sb**	**06 21 33.4**	**+0.5**
AKHS	**Akhisar**	**1.62**	**26**	*i* P	**Pn**	**06 21 12.1**	**+0.4**
AKS	**Akhisar**	**1.62**	**26**	PN	**Pb**	**06 21 12.7**	**-0.4**
MANT	**Manisa**	**1.68**	**50**	*i* P	**Pb**	**06 21 14.2**	**-0.1**
DENT	**Denizli**	**1.72**	**78**	PN	**Pn**	**06 21 13.9**	**+0.8**
KULA	**Kula-Manisa**	**1.76**	**51**	PN	**Pn**	**06 21 14.6**	**+0.9**
KULA	**Kula-Manisa**	**1.76**	**51**	P	**Pn**	**06 21 13.2**	**-0.5**
KULA				S	**Sg**	**06 21 39.1**	**-0.7**
AYVA	**Ayvalik**	**1.89**	**355**	*i* P	**Pg**	**06 21 20.1**	**+0.7**
FETY	**Fethiye**	**1.91**	**114**	PN	**Pn**	**06 21 16.3**	**+0.7**
FETY	**Fethiye**	**1.91**	**114**	*i* P	**Pb**	**06 21 17.3**	**-0.6**
STEP	**BALIKESIR_Sava**	**2.05**	**18**	*i* P	**Pg**	**06 21 22.3**	**-0.2**
STEP				*i* S	**Sg**	**06 21 50.5**	**+1.4**
STEP				IAML_P			
	comp=Z,1µm,0.3s						
USAK	**Uak-Merkez**	**2.10**	**52**	*i* P	**Pg**	**06 21 22.9**	**-0.6**
GOLH	**Golhisar**	**2.12**	**94**	*i* P	**Pn**	**06 21 19.7**	**+1.0**
GOLH				IAML_P			
	comp=Z,949nm,0.2s						
DEMI	**Demirci**	**2.15**	**41**	*i* P	**Pg**	**06 21 25.2**	**+0.7**
KHAL	**Karahalli**	**2.25**	**64**	*i* P	**Pn**	**06 21 21.4**	**+1.0**
AKAS	**Kas**	**2.46**	**118**	PN	**Pn**	**06 21 24.3**	**+0.9**
ELL	**Elmali**	**2.49**	**105**	PN	**Pn**	**06 21 24.8**	**+1.1**
DURS	**Dursunbey**	**2.50**	**29**	*i* P	**Pg**	**06 21 29.9**	**-1.1**
GDZ	**Gediz**	**2.62**	**50**	*i* P	**Pb**	**06 21 31.3**	**+1.1**
LIA	**Limnos Island**	**2.82**	**332**	P	**Pn**	**06 21 28.3**	**+0.2**
SMTH	**Samothraki Isl**	**3.23**	**341**	P	**Pn**	**06 21 33.4**	**-0.4**
ALN	**Alexandroupoli**	**3.54**	**349**	P	**Pn**	**06 21 37.9**	**-0.1**

ISCJB ***22*** *06:52:22.3±0.3, 4°.41N±0°.02×125°.81E±0°.05, h173km±2km, mb4.3/51, Error ellipse: s-maj=8.1km s-min=3.8km az=172.7*

IDC ***22*** *06:52:23.6±2.0, 4°.39N×125°.71E, h170km±18km, mb3.8/23, mb1 3.9/24, mb1mx3.8/42, mbtmp4.3/24, MS2.8/1, Ms1 2.8/1, ms1mx2.3/28, Error ellipse: s-maj=20.0km s-min=8.8km az=77.0*

MAN ***22*** *06:52:24.4, 4°.51N×125°.87E, h153km, MS3.6*

DJA ***22*** *06:52:24.6±1.3, 4°N±11°×12°6E±°, h149km±7km, M4.6/11, mb4.6/6, mB5.0/5, MLv4.8/11, Mw(mB)4.2/5*

NEIC ***22*** *06:52:26.5±0.7, 4°.36N×125°.75E, h199km±6km, mb4.5/33, Error ellipse: s-maj=7.7km s-min=4.1km az=78.0*

ISC 22 06:52:23.1±0.5**, 4°.43N**±0°.04×**125°.86E**±0°.06**, h164km**±4km**, n112, σ1s.23**/128**, mb4.3**/56**, 2C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.81**	**204**	P	**Pn**	**06 52 47.4**	**-0.4**
SGSI				S	**Sn**	**06 53 06.0**	**-0.8**
DDMP	**Don Marcelino,**	**1.67**	**355**	*e*P	**Pn**	**06 52 55.2**	**-0.2**
DDMP				*e*S	**Sn**	**06 53 19.5**	**-1.1**
GSPH	**General Santos**	**1.88**	**331**	⇑*i*P	**Pn**	**06 52 58.2**	**+0.3**
GSPH				*i* S	**Sn**	**06 53 24.5**	**-0.3**
SKMP	**Bagumbayan, Su**	**2.46**	**328**	*e*P	**Pn**	**06 53 04.9**	**+0.5**
SKMP				*e*S	**Sn**	**06 53 36.3**	**-0.2**
MATI	**Mati**	**2.53**	**9**	*e*P	**Pn**	**06 53 05.2**	**0.0**
MATI				*e*S	**Sn**	**06 53 40.6**	**+2.5**
DAV	**Davao City (W)**	**2.64**	**354**	*e*Pn	Pn	06 53 13.8	+7.2
DAV				S	**Sn**	**06 53 42.9**	**+2.4**
DAV	**Davao City (W)**	**2.64**	**354**	P	Pn	06 53 14.5	+7.9
	61nm,0.3s,baz=237,slow=11,SNR=3.7						
DAV				S	**Sn**	**06 53 42.8**	**+2.4**
	104nm,0.3s,baz=138,slow=23,SNR=7.0						
DAV				LR	LR	06 54 17.6	
	comp=Z,172nm,20.1s,baz=174,slow=43						
KCP	**Kidapawan**	**2.68**	**343**	⇓*i*P	**Pn**	**06 53 07.8**	**+0.7**
KCP				*i* S	**Sn**	**06 53 43.4**	**+2.0**
BUKP	**Musuan**	**3.52**	**347**	*e*P	**Pn**	**06 53 17.1**	**-0.6**
BUKP				*e*S	**Sn**	**06 53 59.4**	**-0.7**
BIPH	**Bislig**	**3.76**	**8**	⇑*e*P	**Pn**	**06 53 22.4**	**+1.7**
BIPH				*e*S	**Sn**	**06 54 06.0**	**+0.3**
TNTI	**Ternate**	**3.93**	**157**	*e*Pn	**Pn**	**06 53 22.2**	**-0.6**
TNTI	**Ternate**	**3.93**	**157**	P	**Pn**	**06 53 22.4**	**-0.4**
CGP	**Cagayan de Oro**	**4.17**	**344**	⇓*e*P	**Sn**	**06 54 10.9**	**-4.0**
PAGZ	**Pagadian**	**4.20**	**324**	*e*P	**Pn**	**06 53 26.6**	**+0.4**
KMSI	**Cibinong**	**4.26**	**206**	P	**Pn**	**06 53 28.8**	**+1.7**
BUTP	**Butuan**	**4.52**	**357**	*e*P	**Sn**	**06 54 23.6**	**+0.5**
MRSI	**Marisa**	**5.54**	**225**	P	**Pn**	**06 53 45.6**	**+1.7**
LUWI	**Luwuk**	**6.25**	**210**	*e*Pn	**Pn**	**06 53 55.8**	**+2.6**
LUWI	**Luwuk**	**6.25**	**210**	P	Pn	06 54 05.9	+13
SANI	**Sanana**	**6.43**	**179**	P	**Pn**	**06 53 52.9**	**-2.8**
SANI				S	Sn	06 54 59.3	-9.2
APSI	**Ampana**	**6.77**	**219**	P	**Pn**	**06 54 04.0**	**+3.8**
MPSI	**Mapaga**	**7.21**	**236**	P	**Pn**	**06 54 09.9**	**+3.9**
NLAI	**Namlea**	**7.71**	**171**	P	**Pn**	**06 54 11.6**	**-1.1**
TTSI	**Tana Toraja**	**9.57**	**219**	P	**Pn**	**06 54 40.0**	**+2.8**
FAKI	**Fak Fak**	**9.69**	**139**	*e*Pn	**Pn**	**06 54 40.9**	**+1.9**
BATI	**Baumata**	**14.70**	**189**	P	**Pn**	**06 55 43.5**	**+0.2**
	6.0nm,0.3s,baz=16,slow=7.4,SNR=2.3						
PBKI	**Pangkalan Bun**	**15.85**	**244**	P	**P**	**06 55 58.7**	**+0.8**
JAGI	**Jajag, Banyuwa**	**17.34**	**222**	*e*P	**Pn**	**06 56 15.0**	**-0.3**
	35nm,0.6s						
MTN	**Manton Dam**	**17.94**	**163**	*e*P	**P**	**06 56 21.4**	**+0.6**
	16nm,1.0s						
TWG	**Pinlang**	**18.86**	**346**	*e*P	**Pn**	**06 56 34.6**	**+1.4**
	54nm,0.5s						
GUMO	**Guam**	**20.84**	**63**	*e*P	**P**	**06 56 52.7**	**+0.5**
	166nm,1.1s						
FITZ	**Fitzroy Crossi**	**22.38**	**181**	*e*P	**P**	**06 57 07.4**	**-0.5**
	9.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.38**	**181**	P	**P**	**06 57 07.2**	**-0.8**
	5.2nm,0.3s,baz=6.5,slow=7.4,SNR=47						
MANU	**Manus Island**	**22.43**	**106**	*e*PcP	**PcP**	**07 00 57.3**	**0.0**
WRAB	**Tennant Creek**	**25.61**	**161**	*e*P	**P**	**06 57 37.4**	**0.0**
	7.1nm,0.9s						
WR1	**Warramunga Arr**	**25.61**	**161**	*e*P	**P**	**06 57 37.1**	**-0.3**
	11nm,1.1s						
WR1				*e*ScP	**ScP**	**07 04 27.9**	**-0.4**
WRA	**Warramunga Arr**	**25.61**	**161**	P	**P**	**06 57 37.1**	**-0.3**
	3.2nm,0.3s,baz=338,slow=10,SNR=121						
WRA				ScP	**ScP**	**07 04 27.9**	**-0.4**
	0.8nm,0.6s,baz=341,slow=3.0,SNR=10						
WB2	**Warramunga Arr**	**25.61**	**161**	*e*P	**P**	**06 57 37.6**	**+0.2**
	11nm,1.0s						
CHAI	**Chaiyaphum**	**26.08**	**298**	P	**P**	**06 57 43.9**	**+2.2**
	6.2nm,0.7s						
MBWA	**Marble Bar**	**26.13**	**193**	*e*P	**P**	**06 57 41.1**	**-0.9**
	12nm,1.1s						
PSI	**Prapat**	**26.93**	**267**	*e*P	**P**	**06 57 47.8**	**-1.7**
	4.8nm,0.7s						
AS31	**Alice Springs**	**29.00**	**165**	*e*P	**P**	**06 58 07.4**	**-0.2**
	2.7nm,0.3s						
AS31				*e*PcP	**PcP**	**07 01 12.2**	**0.0**
AS31				*e*ScP	**ScP**	**07 04 38.0**	**-0.5**
ASAR	**Alice Springs**	**29.00**	**165**	P	**P**	**06 58 07.7**	**0.0**
	2.2nm,0.3s,baz=343,slow=7.4,SNR=71						
ASAR				PcP	**PcP**	**07 01 12.2**	**0.0**
	0.7nm,0.4s,baz=338,slow=2.4,SNR=4.8						
ASAR				ScP	**ScP**	**07 04 38.0**	**-0.5**
	0.7nm,0.5s,baz=346,slow=3.1,SNR=11						
AS01	**Alice Springs**	**29.02**	**165**	*e*P	**P**	**06 58 07.8**	**+0.1**
CM01	**Chiang Mai Arr**	**29.75**	**300**	*e*P	**P**	**06 58 11.2**	**-3.1**
CM31	**Chiang Mai Arr**	**29.77**	**300**	*e*P	**P**	**06 58 12.7**	**-1.9**
	12nm,0.3s						
CMAR	**Chiang Mai Arr**	**29.77**	**300**	P	**P**	**06 58 15.2**	**+0.6**
	1.6nm,0.3s,baz=116,slow=7.5,SNR=8.6						
KS15	**Wonju Array Si**	**32.91**	**3**	*e*P	**P**	**06 58 43.0**	**+1.3**
	3.0nm,0.9s						
KSAR	**Wonju Array Be**	**32.91**	**3**	P	**P**	**06 58 42.8**	**+1.1**
KSRS	**Korea Array**	**32.92**	**3**	P	**P**	**06 58 42.8**	**+1.0**
	1.8nm,0.6s,baz=180,slow=9.9,SNR=6.8						
MORW	**Morawa**	**34.62**	**195**	*e*P	**P**	**06 58 56.5**	**-0.1**
	9.8nm,1.0s						
FORT	**Forrest**	**35.07**	**177**	*e*P	**P**	**06 59 00.7**	**+0.3**
	29nm,0.6s						
NWAO	**Narrogin (SRO)**	**38.04**	**192**	*e*P	**P**	**06 59 25.9**	**+0.3**
	9.2nm,0.5s						
BBOO	**Buckleboo**	**38.28**	**166**	*e*P	**P**	**06 59 28.2**	**+0.6**
	20nm,0.3s						
SHL	**Shillong**	**38.77**	**306**	*e*P	**P**	**06 59 32.2**	**+0.1**
	9.5nm,0.6s						
STKA	**Stephens Creek**	**39.09**	**159**	*e*P	**P**	**06 59 35.1**	**+0.7**
	1.4nm,0.9s						
STKA	**Stephens Creek**	**39.09**	**159**	P	**P**	**06 59 34.9**	**+0.5**
	3.6nm,0.4s,baz=340,slow=9.2,SNR=13						
USA0B	**Ussuriysk Arra**	**39.98**	**7**	*e*P	**P**	**06 59 42.9**	**+1.4**
	6.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**39.98**	**7**	P	**P**	**06 59 42.5**	**+0.9**
	5.0nm,0.7s,baz=191,slow=8.2,SNR=12						
ASAJ	**Asahikawa**	**42.19**	**18**	P	**P**	**06 59 59.9**	**+0.3**
	5.3nm,0.7s,baz=216,slow=14,SNR=3.2						
ODAN	**Odare**	**42.96**	**305**	*e*P	**P**	**07 00 04.8**	**-1.6**
	6.8nm,0.5s						
GUN	**Gumba**	**44.62**	**306**	*e*P	**P**	**07 00 19.3**	**-0.5**
	15nm,0.6s						
KLR	**Kul'dur**	**44.92**	**5**	P	**P**	**07 00 21.9**	**+0.5**
	2.2nm,0.6s,baz=202,slow=4.9,SNR=9.9						
SONA0	**Songino Array**	**46.37**	**342**	*e*P	**P**	**07 00 32.5**	**-0.5**
SONM	**Songino Array**	**46.37**	**342**	P	**P**	**07 00 32.5**	**-0.5**
	0.4nm,0.5s,baz=161,slow=7.4,SNR=3.0						
SONA1	**Songino Array**	**46.38**	**342**	*e*P	**P**	**07 00 32.9**	**-0.1**
KOLN	**Koldanda**	**46.42**	**305**	*e*P	**P**	**07 00 33.4**	**-0.3**
	13nm,0.4s						
DANN	**Dangsing**	**46.51**	**305**	*e*P	**P**	**07 00 33.9**	**-0.6**
	24nm,0.6s						
PYUN	**Piuthan**	**47.04**	**305**	*e*P	**P**	**07 00 38.3**	**-0.3**
	5.6nm,0.4s						
PEA0B	**Petropavlovsk-**	**55.12**	**23**	*e*P	**P**	**07 01 39.5**	**+1.4**
	16nm,1.0s						
PETK	**Petropavlovsk-**	**55.12**	**23**	*e*P	**P**	**07 01 39.5**	**+1.3**
PETK	**Petropavlovsk-**	**55.12**	**23**	P	**P**	**07 01 39.2**	**+1.1**
	2.1nm,0.6s,baz=195,slow=2.9,SNR=5.5						
PEA1	**Petropavlovsk-**	**55.12**	**23**	*e*P	**P**	**07 01 39.2**	**+1.1**
MK01	**Makanchi Array**	**56.47**	**325**	*e*P	**P**	**07 01 47.2**	**-0.7**
MK31	**Makanchi Array**	**56.49**	**325**	*e*P	**P**	**07 01 47.3**	**-0.7**
	1.3nm,0.6s						
MK32	**Makanchi Array**	**56.49**	**325**	*e*P	**P**	**07 01 47.2**	**-0.9**
MK32				*e*PcP	**sP**	**07 02 42.8**	**0.0**
MKAR	**Makanchi Array**	**56.49**	**325**	*e*P	**P**	**07 01 47.4**	**-0.7**
	17nm,0.5s						
MKAR				PcP	**sP**	**07 02 42.8**	**0.0**
MKAR	**Makanchi Array**	**56.49**	**325**	P	**P**	**07 01 47.2**	**-0.9**
	2.6nm,0.5s,baz=118,slow=7.0,SNR=59						
MKAR				PcP	**sP**	**07 02 42.8**	**0.0**
	1.7nm,0.5s,baz=99,slow=3.9,SNR=8.7						
TARG	**Taragay, Kyrgy**	**56.66**	**318**	*e*P	**P**	**07 01 49.9**	**+0.1**
	2.1nm,1.0s						
MAKZ	**Makanchi**	**56.68**	**325**	*e*P	**P**	**07 01 50.0**	**+0.6**
	2.4nm,0.5s						
NIL	**Nilore**	**56.82**	**308**	*e*P	**P**	**07 01 50.9**	**+0.3**
	4.3nm,0.6s						
AAK	**Ala-Archa**	**59.26**	**318**	P	**P**	**07 02 08.5**	**+0.9**
	1.1nm,0.6s,baz=189,slow=18,SNR=4.2						
ZALV	**Zalesovo Beam**	**59.58**	**333**	*e*P	**P**	**07 02 09.2**	**-0.1**
ZALV	**Zalesovo Beam**	**59.58**	**333**	P	**P**	**07 02 08.7**	**-0.6**
	0.6nm,0.4s,baz=103,slow=6.2,SNR=3.0						
ZAA1	**Zalesovo Array**	**59.58**	**333**	*e*P	**P**	**07 02 08.7**	**-0.6**
KURBB	**Kurchatov Arra**	**60.69**	**328**	P	**P**	**07 02 15.7**	**-1.3**
	2.1nm,0.5s,baz=131,slow=6.5,SNR=46						
KURK	**Kurchatov**	**60.69**	**328**	*e*P	**P**	**07 02 16.1**	**-0.9**
	5.0nm,0.6s						
GAR	**Garm**	**60.82**	**313**	*e*P	**P**	**07 02 18.4**	**+0.1**
	9.5nm,0.7s						
SEY	**Seymchan**	**61.55**	**13**	P	**P**	**07 02 23.1**	**+0.6**
	1.0nm,0.7s,baz=175,slow=6.9,SNR=4.7						
CHGR	**Chuyangaron**	**61.56**	**312**	*e*P	**P**	**07 02 24.3**	**+1.1**
	2.8nm,0.7s						
KK31	**Karatay Array**	**62.13**	**317**	*e*P	**P**	**07 02 27.6**	**+0.7**
	2.6nm,0.8s						
KKAR	**Karatay Array**	**62.13**	**317**	*e*P	**P**	**07 02 27.6**	**+0.7**
	2.6nm,0.8s						
LBZ	**Lake Benmore**	**62.74**	**146**	*e*P	**P**	**07 02 31.5**	**+0.7**
	11nm,1.1s						
BVAR	**Borovoye Array**	**66.27**	**327**	P	**P**	**07 02 52.6**	**-0.9**
	0.6nm,0.5s,baz=142,slow=7.5,SNR=5.9						
NRIK	**Noril'sk**	**69.55**	**346**	P	**P**	**07 03 13.4**	**-0.3**
	1.2nm,0.4s,baz=131,slow=13,SNR=3.9						
CASY	**Casey**	**71.41**	**186**	*e*P	**P**	**07 03 25.9**	**+1.0**
	8.0nm,1.0s						
MLH	**Mauna Loa**	**77.94**	**71**	*e*P	**P**	**07 04 03.3**	**-0.6**
	69nm,0.8s						
IM3	**Indian Mountai**	**82.06**	**24**	*e*P	**P**	**07 04 26.5**	**+1.8**
ILAR	**Eielson Array**	**84.85**	**25**	P	**P**	**07 04 38.6**	**-0.4**
	0.2nm,0.5s,baz=274,slow=5.8,SNR=4.4						
BR101	**Keskin Array S**	**88.91**	**310**	*e*P	**P**	**07 04 58.3**	**-1.1**
BRTR	**Keskin Array B**	**88.91**	**310**	P	**P**	**07 04 58.3**	**-1.1**
	0.3nm,0.3s,baz=133,slow=2.6,SNR=3.7						
ARA0	**ARCESS Array S**	**89.50**	**340**	*e*P	**P**	**07 04 59.8**	**-1.5**
ARCES	**ARCESS Array B**	**89.50**	**340**	P	**P**	**07 04 59.8**	**-1.5**
	3.1nm,0.7s,baz=66,slow=6.8,SNR=9.1						
FIA0	**FINESS Array S**	**90.81**	**332**	*e*P	**P**	**07 05 06.0**	**-1.6**
FINES	**FINESS Array B**	**90.81**	**332**	P	**P**	**07 05 06.0**	**-1.6**
	0.9nm,0.6s,baz=46,slow=5.5,SNR=7.8						
NB200	**NORSAR Array S**	**97.78**	**333**	*e*P	**P**	**07 05 38.0**	**-1.4**
NOA	**NORSAR Array B**	**97.78**	**333**	P	**P**	**07 05 38.0**	**-1.4**
	0.4nm,0.6s,baz=57,slow=8.0,SNR=2.4						
TOA0	**Torodi Ar. Sit**	**121.88**	**288**	*e*PKPdf	**PKPdf**	**07 10 57.9**	**-0.9**

TORD	Torodi Ar. Bea	121.88	288	PKP	PKPdf	07 10 58.1	-0.7
	0.5nm,0.3s,baz=96,slow=3.1,SNR=6.0						
TOA1	Torodi Ar. Sit	121.88	288	ePKPdf	PKPdf	07 10 58.1	-0.7
TRQA	Tornquist	145.77	169	ePKPdf	PKPbc	07 11 43.5	+0.2
LCO	Las Campanas	150.94	149	ePKPbc	PKiKP	07 11 58.3	+0.4

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*NEIC **22** 06:56:41.4±0.0, 15°.76N×94°.29W, h2^{km}, MD4.0(MEX), After MEX.*

MEX 22 06:56:42.3±0.7**, 15°.79N×94°.26W, h68^{km}±21^{km}, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.01	95	eP	Pn	06 56 59.0	-1.7
PCIG				eS	Sn	06 57 12.7	-1.7
PCIG		1.01	95	eP	Pn	06 56 59.0	-1.7
PCIG				eS	Sn	06 57 12.7	-1.7
CMIG	Matias Romero	1.43	335	i P	Pn	06 57 04.9	-1.4
CMIG				eS	Sn	06 57 22.4	-1.9
CMIG	Matias Romero	1.43	335	i P	Pn	06 57 04.9	-1.4
CMIG				eS	Sn	06 57 22.4	-1.9
HUIG	Huatulco	1.78	270	eP	Pn	06 57 09.6	-1.3
HUIG				eS	Sn	06 57 31.7	-1.0
HUIG	Huatulco	1.78	270	eP	Pn	06 57 09.6	-1.3
HUIG				eS	Sn	06 57 31.7	-1.0
VHO	Vista Hermosa	2.70	299	eP	Pn	06 57 23.8	+0.3
VHO	Vista Hermosa	2.70	299	eP	Pn	06 57 23.8	+0.3

MEX 22 07:01:14.5±0.9**, 20°.57N×103°.86W, h20^{km}±45^{km}, MD3.6, Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANIG	Ahuacatlan	0.79	308	i P	Pb	07 01 26.8	-2.8
EZ5V		1.11	168	eP	Pn	07 01 32.6	-2.6
EZ5V				i S	Sb	07 01 46.0	-3.4

NNC 22 07:10:59.3±1.5**, 50°.92N×73°.70E, h0^{km}, mb3.5, mpv3.1, 7C-10D, Error ellipse: s-maj=12.4km s-min=10.9km az=161.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTUK	Ortayu	2.82	199	⇓Pg	Pn	07 11 47.6	+2.0
	5.3nm,0.8s						
OTUK				⇑Lg	Lg	07 12 27.1	
	31nm,0.9s						
BVA0	Borovoye Array	2.94	317	⇓Pg	Pb	07 11 53.7	+1.0
	4.9nm,0.8s,baz=143,slow=18,SNR=17						
BVA0				⇑Lg	Lg	07 12 33.2	
	26nm,0.8s,baz=127,slow=25,SNR=14						
KURBB	Kurchatov Arra	3.08	94	⇓Pg	Pb	07 11 52.3	-2.6
	9.6nm,0.6s,baz=277,slow=13						
KURBB				⇑Lg	Lg	07 12 39.0	
	73nm,0.7s,baz=42,slow=24						
KURK	Kurchatov	3.12	92	⇑Pg	Pn	07 11 52.7	+2.9
	3.9nm,0.6s						
KURK				⇓Lg	Lg	07 12 41.5	
	48nm,0.8s						
SEM	Semipalatinsk	4.20	94	Pg	Pg	07 12 21.2	+1.5
	4.9nm,0.3s						
SEM				Lg	Lg	07 13 14.3	
	52nm,0.9s						
BTLS	Baital	5.88	178	Pg	Pg	07 12 52.2	+0.3
	1.5nm,0.5s						
BTLS				Lg	Lg	07 14 07.1	
	7.9nm,0.8s						
KAPS	Kapalarasan	6.79	144	Pg	Pg	07 13 05.7	-3.5
	0.7nm,0.5s						
KAPS				Lg	Lg	07 14 32.1	
	12nm,0.8s						
MAKZ	Makanchi	6.83	124	⇑Sn	Sn	07 14 00.1	+1.0
	1.7nm,0.7s						
MAKZ				⇓Lg	Lg	07 14 37.1	
	11nm,0.9s						
MK31	Makanchi Array	7.00	123	Pn	Pn	07 12 40.6	-2.5
	0.1nm,0.2s,baz=31,slow=15,SNR=40						
MK31				⇓Pg	Pg	07 13 08.4	-5.0
	0.5nm,0.5s,baz=318,slow=14,SNR=4.2						
MK31				Lg	Lg	07 14 42.7	
	5.3nm,0.7s,baz=316,slow=29,SNR=2.7						
TKM2	Tokmak 2	8.10	170	⇓Lg	Lg	07 15 17.9	
	18nm,0.9s						
KK31	Karatay Array	8.11	197	⇑Lg	Lg	07 15 16.1	
	4.0nm,0.7s,baz=7.2,slow=28,SNR=2.6						
IZV	Izvestkoviy	8.13	165	Pg	Pg	07 13 32.7	-2.2
	1.7nm,1.1s						
IZV				Lg	Lg	07 15 17.0	
	9.3nm,0.8s						
AAK	Ala-Archa	8.30	176	⇓Lg	Lg	07 15 26.6	
	23nm,0.9s						
MNAS	Manas	8.47	186	⇑Lg	Lg	07 15 31.8	
	7.1nm,1.1s						
PDGK	Podgornoye	8.55	150	⇓Lg	Lg	07 15 28.1	
	11nm,0.9s						
SFK	Sufi-Kurgan	10.90	181	⇓Lg	Lg	07 16 45.4	
	4.2nm,1.1s						

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*IDC **22** 07:14:44.9±7.7, 0°.87N×122°.26E, h0^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.6/35, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=135.3km s-min=110.5km az=99.0*

*ISCJB **22** 07:15:15.5±1.3, 0°.0N±0°.2×122°.2E±0°.2, h250^{km}, mb3.7/3, Error ellipse: s-maj=30.6km s-min=15.7km az=38.8*

*DJA **22** 07:15:16.6±1.2, 0°N±6°×12°2E±°, h250^{km}±9^{km}, M2.9/5, MLv2.9/5*

ISC 22 07:15:15.9±1.6**, 0°.0N**±0°.2×**122°.1E**±0°.2**, h250^{km}, n8, σ1^{s}24**/10**, mb3.6**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	0.46	344	P	Pn	07 15 49.7	+1.0
APSI	Ampana	1.03	204	P	Pn	07 15 52.7	+1.6
APSI				S	S	07 16 20.2	+1.4
LUWI	Luwuk	1.28	147	P	Pn	07 15 53.5	+0.9
LUWI				S	S	07 16 21.9	+0.3
MPSI	Mapaga	2.19	278	P	Pn	07 16 00.0	-0.1
FITZ	Fitzroy Crossi	18.36	169	P	P	07 19 11.0	-1.4
	0.2nm,0.3s,baz=7.1,slow=8.2,SNR=7.9						
WRA	Warramunga Arr	23.21	150	P	P	07 19 59.8	-1.3
	2.6nm,0.7s,baz=326,slow=11,SNR=25						
ASAR	Alice Springs	26.21	155	P	P	07 20 27.6	-0.6
	0.8nm,0.5s,baz=344,slow=14,SNR=21						
STKA	Stephens Creek	36.73	152	P	P	07 21 59.0	-0.4
	1.1nm,0.5s,baz=325,slow=11,SNR=4.0						

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*NORS **22** 07:18:41.0±0.0, 42°.55N×45°.49E, h8^{km}, MPVA3.6*

*MOS **22** 07:18:41.0±0.0, 42°.55N×45°.49E, h8^{km}, MPVA3.6*

ISC 22 07:18:42.1±1.0**, 42°.61N**±0°.03×**45°.52E**±0°.02**, h16^{km}**±9^{km}**, n20, σ0^{s}72**/38**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.52	84	ePg	Pg	07 18 51.1	-1.3
BTLR				eSg	Sb	07 19 00.3	+0.1
DVE	Vedeno	0.56	52	ePg	Pg	07 18 53.4	+0.1
DVE				eSg	Sb	07 19 01.6	0.0
GROC	Groznyy	0.63	19	ePg	Pn	07 18 56.1	-0.3
GROC				eSg	Sn	07 19 05.7	-0.5
KMGR	Komgaron	0.66	313	ePg	Pg	07 18 55.3	+0.2
KMGR				eSg	Sb	07 19 04.6	+0.4
XNZR	Khunzakh	0.88	94	ePg	Pn	07 18 59.6	-0.4
XNZR				eSg	Sn	07 19 11.7	-0.7
LACR	Lac	0.93	284	ePg	Pb	07 18 59.3	-0.7
LACR				eSg	Sb	07 19 11.1	-1.0
LGD	Lagodekhi	0.94	145	P	Pn	07 19 00.9	+0.2
LGD				S	Sg	07 19 12.3	-0.3
DBC	Dubki	1.04	66	ePg	Pg	07 19 03.0	+0.6
DBC				eSg	Sn	07 19 17.2	+0.7
BTNK	Botanikuri	1.07	210	P	Pg	07 19 03.0	+0.2
GNBR	Gunib	1.09	101	ePg	Pg	07 19 03.4	+0.3
GNBR				eSg	Sn	07 19 18.2	+0.6
KORR	Kora	1.17	294	ePg	Pb	07 19 04.4	+0.4
KORR				eSg	Sg	07 19 20.7	+0.7
ZEI	Tsey	1.21	279	ePg	Pn	07 19 04.2	-0.4
ZEI				eSg	Sb	07 19 20.0	-0.3
TRKR	Terskaya	1.25	333	ePg	Pg	07 19 06.4	+0.1
TRKR				eSg	Sg	07 19 24.1	+1.4
PRTR	Priterechnaya	1.46	322	ePg	Pb	07 19 09.3	+0.4
PRTR				eSg	Sg	07 19 29.5	+0.4
DIGR	Digorskoe uzhe	1.46	282	ePg	Pb	07 19 08.9	-0.2
DIGR				eSg	Sb	07 19 28.0	+0.5
KZRT	Kazreti	1.48	215	P	Sb	07 19 29.5	+1.6
TRLG	Trialeti	1.50	225	P	Pg	07 19 10.4	-0.6
TRLG				S	Sg	07 19 31.2	+0.6
NCK	Nalchik	1.67	303	ePg	Pb	07 19 12.1	-0.3
NCK				eSg	Sg	07 19 34.9	-0.9
NEY	Neytrino	2.15	288	ePg	Pb	07 19 21.0	+0.1
NEY				eSg	Sb	07 19 48.6	+1.2
SHA1	Shidzhatmaz	2.38	299	ePn	Pb	07 19 24.1	-0.7
SHA1				eSn	Sb	07 19 52.6	-1.4

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*ISCJB **22** 07:41:36.8±0.2, 21°.67S±0°.02×68°.28W±0°.02, h118^{km}±2^{km}, mb4.7/208, Error ellipse: s-maj=4.3km s-min=3.0km az=44.5*

*IDC **22** 07:41:37.4±0.5, 21°.72S×68°.17W, h106^{km}±5^{km}, mb4.3/13, mb1 4.4/17, mb1mx4.3/23, mbtmp4.6/17, MS3.6/4, Ms1 3.6/4, ms1mx3.2/28, Error ellipse: s-maj=13.0km s-min=8.7km az=112.0*

*VAO **22** 07:41:38.9±0.3, 21°.77S×68°.26W, h120^{km}±3^{km}, mb5.0*

*GUC **22** 07:41:39.1±0.6, 21°.79S×68°.58W, h129^{km}±5^{km}, ML5.0*

*NEIC **22** 07:41:39.0±0.0, 21°.79S×68°.58W, h129^{km}, mb4.6/190, ML5.0(GUC), After GUC.*

NEIC Felt [III] at Tocopilla and [II] at Huara and Quillagua.

*GCMT **22** 07:41:44.0±0.4, 21°.77S±0°.03×68°.57W±0°.03, h154^{km}±3^{km}, MW5.0/55, Moment Tensor Solution. s27,c33; s55,c75; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.55±.20; M$_{\theta\theta}$-2.13±.20; M$_{\phi\phi}$2.69±.25; M$_{r\theta}$1.52±.12; M$_{\theta\phi}$-0.95±.17; M$_{\phi r}$-3.42±.18; Best double couple: M$_0$4.29100×10^{16} NP1:ϕ_s322.00000°, δ83.00000°, λ-117.00000°. NP2: ϕ_s219.00000°, δ28.00000°, λ-15.00000°. Principal axes: T 5.2110, Plg33.0000°, Azm75.0000°; N -1.8320, Plg27.0000°, Azm326.0000°; P -3.3710, Plg45.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 07:41:38.7±0.3**, 21°.78S**±0°.03×**68°.31W**±0°.05**, h122^{km}**±3^{km}**, h122^{km}:pP-P, n719, σ1^{s}34**/784**, mb4.7**/208**, 13C-5D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.87	269	⇑iP	Pn	07 41 59.8	0.0
PB09				i S	Sn	07 42 14.8	-0.9
PB09				IAML		07 42 18.4	
	comp=E,23μm,0.2s						
LVC	Limon Verde	0.99	214	ePn	Pn	07 42 01.1	-0.1
LVC				eSn	Sn	07 42 18.0	-0.3
LVC	Limon Verde	0.99	214	P	Pn	07 42 01.2	0.0
	comp=E,869nm,0.3s,baz=29,slow=7.3,SNR=3035						
LVC				S	Sn	07 42 17.0	-1.3
	comp=E,2μm,0.3s,baz=230,slow=19,SNR=84						
LVC				LR	LR	07 42 41.6	
	comp=E,2μm,20.1s,baz=22,slow=57						
LVC	Limon Verde	0.99	214	eP	Pn	07 42 01.4	+0.2
LVC				eS	Sn	07 42 17.9	-0.3
PB01	IPOC Station P	1.32	304	ePn	Pn	07 42 03.6	-0.7
PB01				eSn	Sn	07 42 22.8	-0.9
PB01	IPOC Station P	1.32	304	⇓iP	Pn	07 42 03.8	-0.5
PB01				i S	Sn	07 42 22.4	-1.4
PB01				IAML		07 42 24.1	
	comp=N,34μm,0.4s						
PB03	IPOC Station P	1.37	259	⇑iP	Pn	07 42 04.1	-0.8
PB03				i S	Sn	07 42 22.7	-2.0
PB03				IAML		07 42 23.9	
	comp=E,55μm,0.3s						
PB07	IPOC Station P	1.47	272	⇑iP	Pn	07 42 05.2	-0.9
PB07				i S	Sn	07 42 24.7	-2.1
PB06	IPOC Station P	1.49	232	⇑iP	Pn	07 42 05.9	-0.4
PB06				i S	Sn	07 42 26.0	-1.2
PB06				IAML		07 42 27.2	
	comp=N,21μm,0.5s						
PB02	IPOC Station P	1.55	287	⇑iP	Pn	07 42 06.0	-0.9
PB02				i S	Sn	07 42 26.1	-2.3
PB02				IAML		07 42 28.3	
	comp=N,51μm,0.7s						
PB15	IPOC Station P	1.78	217	⇑iP	Pn	07 42 09.4	-0.3
PB15				i S	Sn	07 42 33.1	-0.3
PB04	IPOC Station P	1.79	252	ePn	Pn	07 42 08.7	-1.1
PB04				eSn	Sn	07 42 30.3	-3.3
PB04	IPOC Station P	1.79	252	⇑iP	Pn	07 42 08.8	-1.1
PB04				i S	Sn	07 42 30.8	-2.8
PB04				IAML		07 42 33.4	
	comp=E,25μm,0.3s						
PB08	IPOC Station P	1.81	334	⇓iP	Pn	07 42 11.2	+0.8
PB08				i S	Sn	07 42 35.1	+0.6
PB08				IAML		07 42 37.0	
	comp=E,10μm,0.3s						
PB05	IPOC Station P	2.05	238	⇑iP	Pn	07 42 11.8	-1.2
PB05				i S	Sn	07 42 36.0	-3.2
PB05				IAML		07 42 38.9	
	comp=N,11μm,0.3s						
PB11	IPOC Station P	2.37	328	ePn	Pn	07 42 16.4	-0.8
PB11				eSn	Sn	07 42 44.8	-1.8
PB11	IPOC Station P	2.37	328	⇓iP	Pn	07 42 16.3	-0.8
PB11				i S	Sn	07 42 45.2	-1.4
PB11				IAML		07 42 47.6	
	comp=N,17μm,0.4s						
PB10	IPOC Station P	2.70	230	⇑iP	Pn	07 42 19.1	-2.0
PB10				eS	Sn	07 42 50.4	-3.3
PB10				IAML		07 43 00.3	
	comp=E,3μm,0.6s						
MNMC	Minye Minye	2.90	335	ePn	Pn	07 42 23.5	-0.5
MNMC				eSn	Sn	07 42 56.1	-2.8
MNMC	Minye Minye	2.90	335	eP	Pn	07 42 23.5	-0.5
MNMC				eS	Sn	07 42 58.4	-0.5
MNMC				IAML		07 43 26.8	
	comp=N,9μm,0.6s						
GO02	Mina Guanaco	3.56	199	ePn	Pn	07 42 31.7	-1.1
PB12	IPOC Station P	3.68	329	eP	Pn	07 42 31.6	-2.5
LPAZ	La Paz	5.47	2	ePn	Pn	07 42 59.8	+1.2
LPAZ				eSn	Sn	07 43 56.2	-4.5
LPAZ	La Paz	5.47	2	P	Pn	07 42 59.0	+0.4
	comp=N,38nm,0.3s,baz=171,slow=6.8,SNR=204						
LPAZ				S	Sn	07 43 52.8	-7.9
	comp=N,2.8nm,0.3s,baz=180,slow=10,SNR=5.8						
LPAZ	La Paz	5.47	2	eP	Pn	07 42 59.3	+0.7
GO03	Copiap	6.04	196	ePn	Pn	07 43 02.2	-3.6
GO03				eSn	Sn	07 44 09.3	-4.5
LCO	Las Campanas	7.51	196	ePn	Pn	07 43 20.9	-4.9
LCO				eSn	Sn	07 44 44.0	-5.7
GO04	Tololo Observa	8.65	194	ePn	Pn	07 43 35.6	-5.6
GO04				eSn	Sn	07 45 10.4	-6.7
SIV	San Ignacio	8.95	51	P	Pn	07 43 42.9	-2.2
	comp=N,106nm,0.3s,baz=246,slow=9.7,SNR=1313						
SIV				S	Sn	07 45 09.8	-14
	comp=N,1.6nm,0.3s,baz=248,slow=17,SNR=1.6						
CPUP	Villa Florida	11.01	116	ePn	Pn	07 44 12.3	-0.4
CPUP	Villa Florida	11.01	116	P	Pn	07 44 11.3	-1.3
	comp=N,0.6nm,0.3s,baz=276,slow=11,SNR=16						
CPUP				LR	LR	07 49 36.2	
	comp=N,157nm,18.6s,baz=292,slow=44						
CPUP	Villa Florida	11.01	116	eP	Pn	07 44 13.2	+0.5
ROC1	El Roble	11.40	192	ePn	Pn	07 44 17.3	-0.9
PEL	Peldehue	11.51	190	ePn	Pn	07 44 18.4	-1.0
AQDB	Aquidauana	11.84	86	eP	Pn	07 44 22.7	-1.1
NNA	Nana	12.71	319	ePn	Pn	07 44 33.4	-1.8
NNA				S	Sn	07 46 39.9	-15
NNA	Nana	12.71	319	P	Pn	07 44 36.3	+1.1
	comp=N,2.2nm,0.3s,baz=142,slow=12,SNR=5.3						
NNA				S	Sn	07 46 39.9	-15
	comp=N,1.2nm,0.3s,baz=205,slow=17,SNR=2.1						
SALV	Santo Antonio	13.29	66	eP	Pn	07 44 42.1	-0.6
TRCB	Terra Rica	14.55	97	eP	Pn	07 44 59.1	+0.3
C2SB	Chapadao do Su	14.82	81	eP	Pn	07 45 02.8	+0.5
ITAB	Concordia	15.69	113	eP	Pn	07 45 13.6	+0.5
CPSB	Cacapava Do Su	15.87	126	eP	Pn	07 45 14.4	-0.8
PLTB	Pedras Altas	16.45	130	eP	Pn	07 45 22.3	-0.1
ITRB	Iturama	16.92	86	eP	P	07 45 28.3	+0.1
TRQA	Tornquist	17.11	163	eP	P	07 45 28.1	-2.1
	comp=N,53nm,0.6s						
FRTB	Fartura	17.39	99	eP	P	07 45 33.7	+0.4
CNLB	Canela	17.43	119	eP	P	07 45 34.0	+0.2
ATAH	Atahualpa	17.52	325	P	Pn	07 45 37.3	+1.4
	comp=N,0.5nm,0.3s,baz=119,slow=10,SNR=9.1						
GO06	Curarrehue	17.95	188	eP	P	07 45 38.5	-1.0
	comp=N,46nm,0.8s						
TIJ01	Guaruva-PR	18.05	105	eP	P	07 45 41.9	+1.2
BB19B	Bebedouro	18.43	91	eP	P	07 45 44.9	+0.1
PLCA	Paso Flores	18.99	185	eP	P	07 45 49.9	-0.9
	comp=N,27nm,1.0s						
PLCA	Paso Flores	18.99	185	P	P	07 45 50.4	-0.4
	comp=N,1.5nm,0.3s,baz=32,slow=12,SNR=62						
PLCA	Paso Flores	18.99	185	eP	P	07 45 50.2	-0.6
IPMB	Ipameri, GO	19.27	82	eP	P	07 45 53.5	-0.5
BDFB	Brasilia	20.16	76	eP	P	07 46 03.0	-0.7
	comp=N,29nm,0.6s						
BDFB	Brasilia	20.16	76	P	P	07 46 03.2	-0.5
	comp=N,26nm,0.5s,baz=247,slow=9.0,SNR=52						
BDFB				LR	LR	07 55 31.5	
	comp=N,185nm,19.7s,baz=263,slow=42						
PMNB	Patos De Minas	20.78	85	eP	P	07 46 08.9	-1.4
PEXB	Peixe	21.40	67	eP	P	07 46 16.0	-1.0
GO07	Milladeo Hill,	21.74	191	eP	P	07 46 19.9	-0.4
	comp=N,117nm,0.9s						
BSCB	Bom Sucesso	21.93	92	eP	P	07 46 22.7	+0.1
ESAR	Angra dos Reis	22.10	98	eP	P	07 46 24.6	+0.4
PTGA	Pitinga	22.45	22	eP	P	07 46 26.1	-1.8
	comp=N,19nm,0.6s						
PTGA				S	S	07 50 19.0	-6.7
PTGA	Pitinga	22.45	22	P	P	07 46 25.7	-2.1
	comp=N,18nm,0.4s,baz=208,slow=11,SNR=54						
PTGA				S	S	07 50 19.0	-6.7
	comp=N,20nm,0.9s,baz=167,slow=17,SNR=9.7						
PTGA				LR	LR	07 56 31.9	
	comp=N,176nm,19.0s,baz=201,slow=40						
PTLC	Puerto Leguiza	22.72	343	eP	P	07 46 26.0	-4.5
PTLC	Puerto Leguiza	22.72	343	eP	P	07 46 26.0	-4.5
VAS01	Vassouras-RJ	23.05	96	eP	P	07 46 34.0	+0.3
MCI6	Montes Claros	23.56	82	eP	P	07 46 36.2	-2.2
MCI8	Montes Claros	23.57	82	eP	P	07 46 37.2	-1.4
MCI9	Montes Claros	23.59	82	eP	P	07 46 37.2	-1.5
MCI7	Montes Claros	23.63	82	eP	P	07 46 37.5	-1.6
JANB	Januaria	23.71	78	eP	P	07 46 38.6	-1.2
OTAV	Otavalo	24.02	334	eP	P	07 46 45.3	+2.3
	comp=N,37nm,1.1s						
OTAV	Otavalo	24.02	334	eP	P	07 46 44.7	+1.7
OTAV	Otavalo	24.02	334	eP	P	07 46 44.7	+1.7
OTAV	Otavalo	24.02	334	eP	P	07 46 43.7	+0.7
DUB01	Friburgo-RJ	24.05	96	eP	P	07 46 43.2	+0.4
FLOC	Florencia	24.31	342	⇓eP	P	07 46 45.5	+0.4
FLOC	Florencia	24.31	342	⇓eP	P	07 46 45.5	+0.4
GCUF	Volcan Galeras	24.51	338	eP	P	07 46 51.9	+4.4
GCUF	Volcan Galeras	24.51	338	eP	P	07 46 51.9	+4.4
GUVC	San Jose del G	24.55	350	eP	P	07 46 46.9	-0.3
GUVC	San Jose del G	24.55	350	eP	P	07 46 46.9	-0.3
CRUC	La Cruz	24.70	339	eP	P	07 46 52.2	+3.2
CRUC	La Cruz	24.70	339	eP	P	07 46 52.2	+3.2
CAM01	Campos-RJ	24.74	95	eP	P	07 46 49.3	+0.3
SOTA	Rioblanco	25.12	340	eP	P	07 46 53.4	+0.4
SOTA	Rioblanco	25.12	340	eP	P	07 46 53.4	+0.4
PCON	Cinco Dias	25.23	341	eP	P	07 46 55.8	+1.6
PCON	Cinco Dias	25.23	341	eP	P	07 46 55.8	+1.6
POPC	Popayan, Colom	25.52	340	eP	P	07 46 57.6	+1.3
POPC	Popayan, Colom	25.52	340	eP	P	07 46 57.6	+1.3
SJMB	Sao Joao De Ma	25.62	88	eP	P	07 46 56.4	-0.6
ALF01	Guarapari-ES	25.73	93	eP	P	07 46 58.4	+0.4
BSFB	Barra de Sao F	25.91	88	eP	P	07 46 59.9	+0.3
RIB01	Linhares ES	26.24	90	eP	P	07 47 03.0	+0.4
VILC	Villavicencio,	26.27	348	eP	P	07 47 03.5	+0.5
VILC	Villavicencio,	26.27	348	eP	P	07 47 03.5	+0.5
CHIC	Chingaza	26.78	348	⇑eP	P	07 47 07.7	-0.2
CHIC	Chingaza	26.78	348	⇑eP	P	07 47 07.7	-0.2
YOTC	Yotoco, Valle	26.79	342	eP	P	07 47 07.4	-0.2
YOTC	Yotoco, Valle	26.79	342	eP	P	07 47 07.4	-0.2
ANIL	Santa Ana	27.02	344	eP	P	07 47 09.6	-0.3
ANIL	Santa Ana	27.02	344	eP	P	07 47 09.6	-0.3
ROSC	El Rosal	27.11	347	eP	P	07 47 11.2	+0.4
	comp=N,5.9nm,0.6s						
ROSC	El Rosal	27.11	347	eP	P	07 47 10.9	+0.1
ROSC	El Rosal	27.11	347	eP	P	07 47 10.9	+0.1
ROSC	El Rosal	27.11	347	P	P	07 47 11.1	+0.4
	comp=N,5.2nm,0.5s,baz=216,slow=13,SNR=5.0						
RREF	El Recreo	27.40	345	eP	P	07 47 16.4	+2.7
RREF	El Recreo	27.40	345	eP	P	07 47 16.4	+2.7
RUSC	La Rusia	27.90	350	eP	P	07 47 18.1	+0.1
RUSC	La Rusia	27.90	350	eP	P	07 47 18.1	+0.1
TAMC	Tame, Arauca	28.25	353	eP	P	07 47 19.7	-0.9
TAMC	Tame, Arauca	28.25	353	eP	P	07 47 19.7	-0.9
BARC	Barichara	28.60	350	eP	P	07 47 23.2	-0.7
BARC	Barichara	28.60	350	eP	P	07 47 23.2	-0.7
HELC	Santa Helena	28.69	345	⇑eP	P	07 47 23.7	-1.1
HELC	Santa Helena	28.69	345	⇑eP	P	07 47 23.7	-1.1
PTBC	PUERTO BERRIO,	28.79	347	eP	P	07 47 22.7	-2.5
PTBC	PUERTO BERRIO,	28.79	347	eP	P	07 47 22.7	-2.5
PAMC	Pamplona, Colo	29.26	351	eP	P	07 47 29.2	-0.8
PAMC	Pamplona, Colo	29.26	351	eP	P	07 47 29.2	-0.8
GO09	Cerro Castillo	29.60	185	eP	P	07 47 32.8	+0.7
	comp=N,3.7nm,0.8s						
ZARC	Zaragoza, Cauc	29.80	347	eP	P	07 47 32.1	-2.1
ZARC	Zaragoza, Cauc	29.80	347	eP	P	07 47 32.1	-2.1
UREC	San Jos de Ur	30.20	346	eP	P	07 47 35.1	-2.7
UREC	San Jos de Ur	30.20	346	eP	P	07 47 35.1	-2.7
SDV	Santo Domingo	30.56	355	eP	P	07 47 39.8	-1.4
	comp=N,8.2nm,0.8s						
SDV	Santo Domingo	30.56	355	eP	P	07 47 38.9	-2.3
SDV	Santo Domingo	30.56	355	eP	P	07 47 38.9	-2.3
SDV	Santo Domingo	30.56	355	eP	P	07 47 39.8	-1.4
EFI	East Falkland	30.88	168	eP	P	07 47 43.1	-0.3
	comp=N,17nm,1.0s						
SJCC	San Jacinto, C	32.20	347	eP	P	07 47 51.7	-3.7
SJCC	San Jacinto, C	32.20	347	eP	P	07 47 51.7	-3.7
USHA	Ushuaia	33.00	180	P	P	07 48 02.3	+0.4
	comp=N,4.9nm,0.9s,baz=6.7,slow=8.9,SNR=5.7						
NBPA	Parau_RN	34.12	67	eP	P	07 48 12.8	+0.6
RCBR	Riachuelo	35.12	68	eP	P	07 48 20.8	0.0
	comp=N,48nm,1.0s						
RCBR	Riachuelo	35.12	68	eP	P	07 48 21.2	+0.4
FDF	Fort de France	36.96	12	eP	P	07 48 36.4	+0.1
	comp=N,80nm,0.8s						
ESTN	Estel	38.94	331	eP	P	07 48 51.6	-1.4
	comp=N,9.9nm,0.9s						
OBIP	Obispado Ponce	39.62	3	eP	P	07 48 55.6	-2.9
	comp=N,21nm,0.6s						
OBIP				epP	pP	07 49 29.1	+2.0
SJG	San Juan	39.70	3	eP	P	07 48 57.0	-2.2
	comp=N,31nm,1.0s						
SJG				epP	pP	07 49 29.1	+1.3
MPR	Mayaguez	39.77	2	eP	P	07 48 58.1	-1.6
	comp=N,21nm,0.8s						
CBYP	Canovanas	39.88	4	eP	P	07 48 60.0	-0.8
	comp=N,11nm,0.8s						
SMRT	St. Maarten	39.92	8	eP	P	07 48 59.7	-1.3
	comp=N,20nm,0.6s						
PMSA	Palmer Station	43.07	177	eP	P	07 49 27.4	+1.2
CCIG	Comitan	44.46	326	eP	P	07 49 38.8	+0.7
	comp=N,6.0nm,0.6s						
TEIG	Tepich	46.09	334	eP	P	07 49 50.7	0.0
	comp=N,16nm,1.1s						
061Z	Ochoppi	48.92	345	eP	P	07 50 13.1	+0.6
	comp=N,107nm,1.1s						
059Z	Ave Maria	49.50	344	P	P	07 50 17.1	+0.3
	baz=164						
059A	Moore Haven	50.03	345	eP	P	07 50 21.3	+0.4
	comp=N,102nm,0.8s						
059A	Moore Haven	50.03	345	P	P	07 50 21.2	+0.4
	baz=165						
058A	Arcadia	50.28	344	P	P	07 50 23.2	+0.4
	baz=164						
959A	Okeechobee	50.50	345	P	P	07 50 25.0	+0.6
	baz=165						
958A	Wauchula	50.77	345	P	P	07 50 27.0	+0.6
	baz=164						
957A	Wimauma	50.97	344	P	P	07 50 28.6	+0.6
	baz=164						
859A	Kempfer Cattle	51.02	346	P	P	07 50 28.8	+0.5
	baz=165						
DWPF	Disney Wildern	51.20	345	eP	P	07 50 30.2	+0.6
	comp=N,58nm,0.8s						
DWPF	Disney Wildern	51.20	345	P	P	07 50 29.9	+0.2
	baz=165						
DWPF	Disney Wildern	51.20	345	eP	P	07 50 30.1	+0.5
858A	St. Cloud	51.28	345	P	P	07 50 30.6	+0.4
	baz=165						
857A	Zephyrhills	51.54	344	P	P	07 50 32.6	+0.4
	baz=164						
758A	Lake Helen	51.96	346	P	P	07 50 35.6	+0.4
	baz=165						
757A	Oxford	52.15	345	P	P	07 50 36.9	+0.2
	baz=164						
658A	Bunnell	52.41	346	eP	P	07 50 39.4	+0.7
	comp=N,56nm,1.0s						

658A	Bunnell baz=165	52.41	346	P	P	07 50 38.8	+0.1
656A	Willston comp=N,30nm,1.0s	52.67	344	eP	P	07 50 41.0	+0.5
656A	Willston baz=164	52.67	344	P	P	07 50 40.6	+0.1
657A	Interlachen baz=164	52.71	345	P	P	07 50 40.9	+0.1
655A	Horseshoe Beac baz=163	52.99	344	P	P	07 50 42.8	-0.1
557A	Orange Park baz=165	53.09	345	P	P	07 50 43.8	+0.2
555A	McAlpin comp=N,6.9nm,0.8s	53.50	344	eP	P	07 50 46.5	0.0
555A	McAlpin baz=163	53.50	344	P	P	07 50 46.6	0.0
457A	Yulee baz=165	53.63	346	P	P	07 50 47.7	+0.2
554A	Perry baz=163	53.65	343	P	P	07 50 47.8	+0.1
456A	Hilliard comp=N,32nm,0.7s	53.84	345	eP	P	07 50 49.8	+0.7
456A	Hilliard baz=164	53.84	345	P	P	07 50 49.4	+0.3
553A	Crawfordville baz=162	53.95	343	P	P	07 50 50.2	+0.4
455A	Stateville baz=163	54.10	344	P	P	07 50 50.8	-0.1
454A	Quitman baz=163	54.23	344	P	P	07 50 51.8	-0.1
356A	Blackshear baz=164	54.44	345	P	P	07 50 53.3	-0.2
453A	Whigham comp=N,25nm,1.0s	54.55	343	eP	P	07 50 54.3	+0.1
453A	Whigham baz=162	54.55	343	P	P	07 50 54.1	-0.1
TIGA	Tifton comp=N,13nm,0.6s	54.91	344	eP	P	07 50 56.9	+0.1
TIGA	Tifton baz=163	54.91	344	P	P	07 50 56.5	-0.3
353A	Camilla baz=162	54.99	343	P	P	07 50 56.9	-0.5
256A	Glennville baz=165	55.02	346	P	P	07 50 57.5	-0.1
255A	Hazlehurst comp=N,8.4nm,0.6s	55.10	345	eP	P	07 50 58.1	-0.1
255A	Hazlehurst baz=164	55.10	345	P	P	07 50 57.9	-0.3
351A	Pinckard baz=161	55.30	342	P	P	07 50 59.2	-0.5
352A	Blakely comp=N,20nm,1.0s	55.30	343	eP	P	07 50 59.5	-0.2
352A	Blakely baz=162	55.30	343	P	P	07 50 59.1	-0.5
254A	Abbeville baz=163	55.32	344	P	P	07 50 59.3	-0.4
RGRS	Roger Stewart comp=N,923nm,0.5s	55.56	348	eP	P	07 51 02.1	+0.7
253A	Americus comp=N,19nm,1.1s	55.64	344	eP	P	07 51 01.7	-0.3
253A	Americus baz=162	55.64	344	P	P	07 51 01.4	-0.6
252A	Lumpkin baz=162	55.74	343	P	P	07 51 02.0	-0.8
NHSC	New Hope	55.75	348	eP	P	07 51 03.5	+0.8
NHSC				epP	pP	07 51 35.3	+2.2
NHSC	New Hope baz=167	55.75	348	P	P	07 51 02.9	+0.1
155A	Kite baz=164	55.77	346	P	P	07 51 02.7	-0.2
349A	Repton baz=159	55.85	340	P	P	07 51 03.3	-0.2
154A	Montrose comp=N,17nm,0.9s	55.91	345	eP	P	07 51 04.1	+0.2
154A	Montrose baz=164	55.91	345	P	P	07 51 03.6	-0.4
251A	Midway baz=161	56.02	342	P	P	07 51 03.9	-0.8
153A	Fort Valley baz=163	56.12	344	P	P	07 51 04.9	-0.6
250A	Grady baz=160	56.16	342	P	P	07 51 05.0	-0.7
Z55A	Blythe baz=165	56.27	346	P	P	07 51 05.9	-0.5
152A	Waverly Hall comp=N,5.5nm,0.8s	56.37	343	eP	P	07 51 06.5	-0.8
152A	Waverly Hall baz=162	56.37	343	P	P	07 51 06.5	-0.8
151A	Opelika baz=161	56.40	343	P	P	07 51 06.6	-0.9
249A	Camden baz=159	56.41	341	P	P	07 51 06.8	-0.7
Z54A	Sparta baz=164	56.44	345	P	P	07 51 07.1	-0.7
Z53A	Monticello baz=163	56.66	345	P	P	07 51 08.6	-0.7
150A	Eclectic baz=161	56.67	342	P	P	07 51 08.5	-0.9
GOGA	Godfrey comp=N,5.2nm,0.8s	56.76	345	eP	P	07 51 09.6	-0.4
GOGA	Godfrey baz=164	56.76	345	P	P	07 51 09.3	-0.7
KVTX	Kingsville comp=N,18nm,0.6s	56.77	328	eP	P	07 51 08.2	-2.0
X59A	McDuffie Farm, baz=169	56.89	350	P	P	07 51 10.4	-0.5
Y55A	Saluda baz=165	56.89	347	P	P	07 51 10.7	-0.3
X58A	Rowland baz=168	57.00	349	P	P	07 51 11.3	-0.3
Y54A	Tignall baz=164	57.01	346	P	P	07 51 11.2	-0.5
X57A	Johnson Farm, baz=167	57.05	348	P	P	07 51 11.1	-0.8
JSC	Jenkinsville comp=N,11nm,0.6s	57.10	347	eP	P	07 51 12.6	+0.3
Z51A	Franklin baz=162	57.11	343	P	P	07 51 11.6	-0.8
Y53A	Monroe baz=163	57.21	345	P	P	07 51 12.4	-0.8
Z50A	Ashland comp=N,10nm,0.8s	57.25	342	eP	P	07 51 13.1	-0.4
Z50A	Ashland baz=161,SNR=5.8	57.25	342	P	P	07 51 12.7	-0.8
X56A	White Oak baz=166,SNR=6.4	57.26	348	P	P	07 51 13.4	0.0
HODGE	Hodges comp=N,2.8nm,0.7s	57.26	346	eP	P	07 51 13.4	-0.1
Y52A	Lilburn comp=N,6.1nm,0.8s	57.34	344	eP	P	07 51 13.6	-0.5
Y52A	Lilburn baz=163	57.34	344	P	P	07 51 13.1	-0.9
LRAL	Lakeview Retre comp=N,4.1nm,0.9s	57.36	341	eP	P	07 51 13.5	-0.7
LRAL	Lakeview Retre baz=160	57.36	341	P	P	07 51 13.2	-1.0
X55A	Gracelyn & Ava baz=166,SNR=5.4	57.36	347	P	P	07 51 14.1	-0.1
Z49A	Columbiana baz=160	57.37	342	P	P	07 51 13.3	-1.0
X54A	Belton baz=165	57.59	346	P	P	07 51 15.6	-0.2
Y51A	Rockmart baz=162	57.63	344	P	P	07 51 15.3	-0.8
PAULI	Pauline comp=N,9.7nm,0.8s	57.74	347	eP	P	07 51 17.1	+0.2
X53A	Estanollee baz=164	57.76	345	P	P	07 51 16.7	-0.3
Y50A	Piedmont baz=161	57.80	343	P	P	07 51 17.2	-0.1
145A	Houston Renfro baz=156	57.90	338	P	P	07 51 17.5	-0.5
KMSC	Kings Mountain comp=N,10nm,0.7s	57.95	347	eP	P	07 51 17.8	-0.5
KMSC	Kings Mountain baz=166	57.95	347	P	P	07 51 18.2	0.0
Y49A	Blount Mountai comp=N,6.9nm,0.9s	57.96	342	eP	P	07 51 17.7	-0.7
Y49A				epP	pP	07 51 49.5	+0.5
Y49A	Blount Mountai baz=160	57.96	342	P	P	07 51 17.4	-1.0
X52A	Dahlonega baz=163	58.00	345	P	P	07 51 18.2	-0.5
W54A	Cherokee Point baz=165,SNR=8.0	58.07	347	P	P	07 51 19.3	+0.1
BG3	Lake Jocassee comp=N,6.5nm,0.7s	58.15	346	eP	P	07 51 20.3	+0.6
X51A	Calhoun comp=N,16nm,0.8s	58.20	344	eP	P	07 51 20.1	0.0
X51A	Calhoun baz=162	58.20	344	P	P	07 51 19.7	-0.4
X50B	Fort Payne baz=161	58.31	343	P	P	07 51 20.4	-0.5
W53A	Cullowhee baz=164,SNR=7.8	58.37	346	P	P	07 51 21.1	-0.3
W52A	Murphy baz=163	58.48	345	P	P	07 51 21.4	-0.6
X49A	Woodville baz=161	58.55	343	P	P	07 51 21.8	-0.7
X48A	Hartselle comp=N,10nm,0.7s	58.70	342	eP	P	07 51 23.1	-0.4
X48A				epP	pP	07 51 55.1	+0.9
X48A	Hartselle baz=160,SNR=5.7	58.70	342	P	P	07 51 22.7	-0.7
W51A	Cleveland baz=162	58.74	344	P	P	07 51 23.2	-0.7
V53A	Saluda comp=N,9.9nm,0.7s	58.77	346	eP	P	07 51 24.0	0.0
V53A	Saluda baz=165	58.77	346	P	P	07 51 23.5	-0.6
W50A	Signal Mountai comp=N,16nm,0.8s	58.92	344	eP	P	07 51 24.9	-0.2
W50A	Signal Mountai baz=162,SNR=6.8	58.92	344	P	P	07 51 24.4	-0.7
CPCT	Cooper Cave comp=N,13nm,1.0s	58.96	345	eP	P	07 51 25.1	-0.3
TKL	Tuckaleechee C comp=N,12nm,0.8s	58.98	345	eP	P	07 51 25.1	-0.4
X47A	Russelville baz=159,SNR=7.4	58.99	341	P	P	07 51 24.4	-1.2
W49A	Belvidere baz=161	59.10	343	P	P	07 51 25.5	-0.8
SWET	Sewanee comp=N,16nm,0.6s	59.10	343	eP	P	07 51 25.7	-0.6
V52A	Sevierville comp=N,19nm,0.8s	59.11	346	eP	P	07 51 26.1	-0.3
V52A	Sevierville baz=164,SNR=7.5	59.11	346	P	P	07 51 25.4	-0.9
SHEL	Horse Pasture comp=N,116nm,1.1s	59.15	96	eP	P	07 51 29.2	+2.0
X46A	Booneville baz=158	59.25	341	P	P	07 51 26.1	-1.2
V51A	Loudon comp=N,8.7nm,0.8s	59.25	345	eP	P	07 51 26.9	-0.4
V51A	Loudon baz=163	59.25	345	P	P	07 51 26.3	-1.0
W48A	Pulaski baz=160,SNR=6.5	59.30	342	P	P	07 51 26.7	-1.0
V50A	Pikevile baz=162,SNR=9.8	59.31	344	P	P	07 51 27.1	-0.7
U53A	Fall Branch baz=165	59.38	347	P	P	07 51 27.6	-0.7
OXF	Oxford baz=158	59.47	340	P	P	07 51 28.1	-0.8
U52A	Thorn Hill baz=164	59.59	346	P	P	07 51 28.5	-1.1
W47A	Westpoint baz=160	59.60	342	P	P	07 51 28.8	-1.0
V49A	McMinnville baz=161,SNR=8.6	59.61	343	P	P	07 51 28.8	-1.0
VNA3	Neumayer Olymp	59.63	161	P	P	07 51 30.3	+0.7
U51A	La Follette baz=163	59.72	345	P	P	07 51 29.9	-0.7
TZTN	Tazewell comp=N,9.9nm,1.1s	59.77	346	eP	P	07 51 30.6	-0.3
TZTN	Tazewell baz=164	59.77	346	P	P	07 51 30.0	-0.9
BLA	Blacksburg comp=N,19nm,0.7s	59.78	349	eP	P	07 51 31.3	+0.4
BLA	Blacksburg baz=167,SNR=5.5	59.78	349	P	P	07 51 31.2	+0.2
VNA1	Neumayer--Stat	59.83	160	P	P	07 51 32.0	+1.1
V48A	Smith Brothers comp=N,12nm,0.6s	59.84	343	eP	P	07 51 30.9	-0.5
V48A	Smith Brothers baz=160,SNR=6.9	59.84	343	P	P	07 51 30.5	-0.8
T54A	Tazewell baz=166,SNR=7.6	59.85	348	P	P	07 51 31.1	-0.4
U50A	Jamestown baz=163,SNR=8.5	59.96	345	P	P	07 51 31.3	-0.9
T53A	Wise baz=165,SNR=7.3	59.97	347	P	P	07 51 31.8	-0.6
WLAR	White Oak Lake comp=N,29nm,0.7s	60.01	336	eP	P	07 51 33.6	+1.0
R58B	Mineral comp=N,6.3nm,1.0s	60.11	351	eP	P	07 51 33.5	+0.4
V47A	Nunnelly baz=160	60.12	342	P	P	07 51 32.1	-1.2
JCT	Junction City comp=N,5.0nm,0.7s	60.13	329	eP	P	07 51 34.6	+1.1
JCT	Junction City baz=146	60.13	329	P	P	07 51 33.2	-0.3
T52A	Hallie baz=165	60.19	346	P	P	07 51 33.0	-0.7
VNA2	Neumayer--Watz baz=293,slow=8.6	60.20	161	P	P	07 51 34.1	+0.7
V46A	Holladay baz=159	60.27	342	P	P	07 51 33.1	-1.2
T51A	Gray baz=164	60.27	346	P	P	07 51 33.4	-0.9
U49A	Red Boiling Sp baz=162	60.29	344	P	P	07 51 33.5	-0.9
S55A	Lewisburg baz=167,SNR=16	60.34	349	P	P	07 51 35.3	+0.5
U48A	Cassie Pea, Po baz=161	60.48	343	P	P	07 51 35.1	-0.7
WVT	Waverly comp=N,12nm,0.6s	60.49	342	eP	P	07 51 34.9	-0.8
WVT	Waverly baz=159	60.49	342	P	P	07 51 34.6	-1.2
T50A	Nancy baz=163,SNR=6.1	60.53	345	P	P	07 51 35.1	-0.9
U47A	Clarksville baz=160,SNR=7.8	60.62	342	P	P	07 51 35.7	-1.0
SLBS	Sierra La Lagu comp=N,9.9nm,1.0s	60.70	316	eP	P	07 51 39.6	+2.1
SLBS				epP	pP	07 52 10.2	+2.1
R55A	Marlinton baz=168	60.77	349	P	P	07 51 38.1	+0.4
T49A	Edmonton comp=N,19nm,0.9s	60.78	344	eP	P	07 51 37.2	-0.6
T49A				epP	pP	07 52 09.5	+0.8
T49A	Edmonton baz=162,SNR=9.7	60.78	344	P	P	07 51 36.7	-1.0
U46A	Springville baz=159	60.80	342	P	P	07 51 36.7	-1.2
R54A	Victor baz=167,SNR=8.4	60.82	349	P	P	07 51 38.0	-0.1
S51A	Beattyville baz=164	60.83	346	P	P	07 51 37.1	-0.9
MIAR	Mount Ida comp=N,5.5nm,0.7s	60.95	336	eP	P	07 51 38.7	-0.2
MIAR				epP	pP	07 52 10.9	+1.1
MIAR	Mount Ida baz=153	60.95	336	P	P	07 51 38.4	-0.5
T48A	Bowling Green baz=161	61.01	344	P	P	07 51 38.3	-1.0
W41B	Gary Mavity, V baz=155	61.03	338	P	P	07 51 38.6	-0.8
S50A	Richmond baz=163,SNR=7.8	61.05	345	P	P	07 51 38.8	-0.8
T47A	Sharon Grove comp=N,17nm,0.8s	61.09	343	eP	P	07 51 39.2	-0.6
T47A	Sharon Grove baz=160,SNR=9.6	61.09	343	P	P	07 51 38.8	-1.0
WHAR	Wooly Hollow comp=N,9.1nm,1.0s	61.15	338	eP	P	07 51 40.0	-0.2
TXAR	Lajitas Array comp=N,0.6nm,0.7s,baz=156,slow=8.7,SNR=7.9	61.18	325	P	P	07 51 41.1	+0.4
TXAR	 comp=N,0.8nm,0.7s,baz=144,slow=11,SNR=5.0			pP	pP	07 52 07.8	-3.7
TX31	Lajitas Ar. Si comp=N,2.5nm,1.0s	61.18	325	eP	P	07 51 41.2	+0.5
TX31				epP	pP	07 52 12.0	+0.6
T46A	Princeton baz=160,SNR=6.6	61.36	342	P	P	07 51 40.6	-1.0
S49A	Springfield baz=162	61.37	345	P	P	07 51 40.6	-1.1
U44A	Portageville baz=158	61.39	340	P	P	07 51 40.9	-0.9
S48A	Wiedeman Farm, baz=162,SNR=6.1	61.44	344	P	P	07 51 40.8	-1.4
Q55A	Buckhannon baz=168	61.46	350	P	P	07 51 43.0	+0.7
R51A	Hillsboro baz=164	61.46	346	P	P	07 51 41.5	-0.8
T45A	Paducah baz=159	61.55	342	P	P	07 51 41.9	-1.0
Q54A	Coxs Mills baz=167	61.58	349	P	P	07 51 42.7	-0.3
S47A	Hartford baz=161,SNR=8.6	61.59	343	P	P	07 51 41.9	-1.3
W39A	Magazine comp=N,8.6nm,0.8s	61.61	336	eP	P	07 51 44.2	+0.8
W39A	Magazine baz=153,SNR=6.4	61.61	336	P	P	07 51 43.4	+0.1
U42A	Revenden baz=156	61.75	339	P	P	07 51 43.3	-1.0
R49A	Shelbyville baz=162	61.82	345	P	P	07 51 44.0	-0.7
Q52A	Bidwell baz=166	61.83	348	P	P	07 51 44.0	-0.7
SNAA	Sanae	61.83	161	P	P	07 51 45.0	+0.4
SNAA	Sanae comp=N,13nm,0.7s	61.83	161	eP	P	07 51 45.1	+0.6
PBMO	Poplar Bluff comp=N,7.6nm,0.7s	61.88	340	eP	P	07 51 44.7	-0.4
T44A	Benton baz=158	61.90	341	P	P	07 51 44.5	-0.7
S46A	Don Dixon Farm baz=160	61.91	343	P	P	07 51 44.1	-1.2
P55A	Reedsville baz=168	61.91	350	P	P	07 51 45.0	-0.4
MVL	Millersville comp=N,11nm,1.1s	61.92	353	eP	P	07 51 45.8	+0.5
U41A	Viola baz=155	61.97	339	P	P	07 51 44.6	-1.1
WCI	Wyandotte Cave comp=N,11nm,0.6s	62.04	344	eP	P	07 51 45.3	-0.9
WCI	Wyandotte Cave baz=161	62.04	344	P	P	07 51 45.3	-0.9
MCWV	Mont Chateau comp=N,13nm,0.8s	62.06	350	eP	P	07 51 47.0	+0.7
MCWV	Mont Chateau baz=168,SNR=5.5	62.06	350	P	P	07 51 46.3	0.0
Q50A	Georgetown baz=164	62.07	346	P	P	07 51 45.4	-0.9
R48A	Northridge Ran baz=162	62.09	344	P	P	07 51 46.2	-0.4
Q51A	Peebles comp=N,5.2nm,0.6s	62.11	347	eP	P	07 51 47.4	+0.8
Q51A	Peebles baz=164	62.11	347	P	P	07 51 46.4	-0.2
T43A	Greenville baz=157	62.11	340	P	P	07 51 46.0	-0.7
P54A	Burton baz=168,SNR=5.7	62.12	349	P	P	07 51 46.1	-0.6
S45A	Carrier Mills baz=159	62.15	342	P	P	07 51 46.0	-0.9
R47A	Wooly Knot Far baz=161	62.16	344	P	P	07 51 45.6	-1.4
P53A	Whipple comp=N,18nm,0.9s	62.16	349	eP	P	07 51 47.6	+0.6
P53A	Whipple baz=167	62.16	349	P	P	07 51 46.7	-0.3
U40A	Yellville baz=154	62.31	338	P	P	07 51 47.3	-0.7
T42A	Van Buren comp=N,1.9nm,0.6s	62.32	340	eP	P	07 51 48.5	+0.4
T42A	Van Buren baz=156	62.32	340	P	P	07 51 47.5	-0.6
S44A	Carbondale baz=158	62.36	341	P	P	07 51 47.4	-0.9
SIUC	Southern Illin comp=N,10nm,0.8s	62.37	341	eP	P	07 51 47.7	-0.6
Q49A	Aurora baz=163	62.43	345	P	P	07 51 48.0	-0.8
P52A	Corning baz=166	62.45	348	P	P	07 51 48.2	-0.7
O56A	Blue Knob Stat comp=N,9.4nm,0.8s	62.47	351	eP	P	07 51 49.7	+0.6
O56A	Blue Knob Stat baz=170	62.47	351	P	P	07 51 49.4	+0.4
P51A	Williamsport baz=165	62.49	347	P	P	07 51 48.5	-0.7
S43A	Fulton Ridge, baz=158	62.49	341	P	P	07 51 48.0	-1.2
O55A	Ligonier baz=169	62.52	351	P	P	07 51 49.7	+0.4
T41A	Mountain View baz=156	62.55	339	P	P	07 51 49.0	-0.7
Q48A	North Vernon baz=162	62.56	345	P	P	07 51 48.6	-1.0
R45A	Skylar, Fairfi baz=159,SNR=8.2	62.63	342	P	P	07 51 49.0	-1.2
O54A	Avella baz=168	62.66	350	P	P	07 51 50.2	-0.1
SSPA	Standing Stone comp=N,9.7nm,1.1s	62.73	352	eP	P	07 51 51.1	+0.3
SSPA	Standing Stone baz=170	62.73	352	P	P	07 51 50.5	-0.2
Q47A	Bedord North L baz=161	62.74	344	P	P	07 51 50.1	-0.7
N59A	State Game Lan comp=N,13nm,1.1s	62.76	354	eP	P	07 51 51.0	0.0
ODNJ	Ogdensburg comp=N,9.8nm,1.1s	62.82	355	eP	P	07 51 51.9	+0.6
R44A	Waltonville baz=159	62.82	342	P	P	07 51 50.1	-1.2
O52A	Adamsville comp=N,13nm,0.9s	62.86	348	eP	P	07 51 51.3	-0.3
O52A	Adamsville baz=166	62.86	348	P	P	07 51 51.1	-0.5
O53A	New Philadelph baz=167	62.87	349	P	P	07 51 51.3	-0.4
P49A	Miami Univ. Ec baz=163	62.90	346	P	P	07 51 50.8	-1.0
S42A	Caledonia baz=157	62.90	340	P	P	07 51 50.7	-1.2
FVM	French Village comp=N,13nm,0.8s	62.98	340	eP	P	07 51 52.3	-0.2
FVM				epP	pP	07 52 24.4	+0.9
BLO	Bloomington comp=N,16nm,1.1s	62.99	344	eP	P	07 51 51.7	-0.8
BLO				epP	pP	07 52 23.9	+0.4
P48A	Milroy baz=162	62.99	345	P	P	07 51 51.3	-1.2
N55A	Marion Center baz=169,SNR=6.0	63.03	351	P	P	07 51 52.6	-0.1
O51A	Pataskala baz=165	63.04	348	P	P	07 51 51.9	-0.9
S41A	Jillco Farms, baz=156	63.04	339	P	P	07 51 52.0	-0.9
R43A	Red Bud baz=158	63.10	341	P	P	07 51 52.3	-0.9
Q45A	Warren Harvey, baz=160	63.16	343	P	P	07 51 52.4	-1.2
ACSO	Alum Creek Sta baz=165	63.19	347	P	P	07 51 53.3	-0.5
P47A	Martinsville baz=162	63.22	344	P	P	07 51 52.9	-1.1
O50A	Cable baz=164	63.24	347	P	P	07 51 53.6	-0.6
CCM	Cathedral Cave comp=N,7.8nm,0.9s	63.31	340	eP	P	07 51 54.0	-0.7
CCM	Cathedral Cave baz=156	63.31	340	P	P	07 51 53.9	-0.7
N53A	Lisbon baz=167	63.35	349	P	P	07 51 54.9	0.0
N54A	Moraine State baz=168	63.36	350	P	P	07 51 54.6	-0.3
R42A	Luebbering baz=157,SNR=6.8	63.37	340	P	P	07 51 54.2	-0.8
KSPA	Keystone Colle comp=N,4.1nm,0.5s	63.40	354	eP	P	07 51 55.4	+0.3
Q44A	Meyer Farm, Va baz=159	63.41	342	P	P	07 51 54.5	-0.8
O49A	Covington baz=164	63.44	346	P	P	07 51 54.5	-0.9
N52A	McGinn's Farm, baz=166	63.51	349	P	P	07 51 55.2	-0.6
R41A	Rosebud baz=156,SNR=5.0	63.57	340	P	P	07 51 55.5	-0.8
Q43A	New Douglas baz=158	63.64	341	P	P	07 51 55.9	-0.9
M55A	Ridgway baz=170	63.67	351	P	P	07 51 56.7	-0.3
O48A	Farmland baz=163	63.69	346	P	P	07 51 56.1	-0.9
N50A	Nevada baz=165	63.75	347	P	P	07 51 56.3	-1.1
P44A	Sand Creek, Wi baz=159	63.82	343	P	P	07 51 56.4	-1.5
M54A	Oil Creek Stat	63.84	351	eP	P	07 51 58.4	+0.3

	comp=N,14nm,0.8s						
M54A				*e*pP	pP	07 52 30.6	+1.6
M54A	Oil Creek Stat	63.84	351	P	P	07 51 57.8	-0.3
	baz=169						
Q42A	Golden Eagle	63.87	341	P	P	07 51 57.3	-1.0
	baz=157,SNR=5.2						
O47A	Sheridan	63.91	345	P	P	07 51 57.5	-1.0
	baz=162						
M53A	WI Miller and	63.94	350	P	P	07 51 58.3	-0.4
	baz=168						
MNTX	Cornudas Mount	63.95	325	*e*P	P	07 51 59.2	+0.2
	comp=N,1.7nm,0.8s						
MNTX				*e*pP	pP	07 52 30.1	+0.1
MNTX	Cornudas Mount	63.95	325	P	P	07 51 58.2	-0.8
	baz=142						
BINY	Binghamton	64.05	354	*e*P	P	07 51 59.8	+0.3
	comp=N,32nm,1.1s						
BINY	Binghamton	64.05	354	P	P	07 51 59.5	+0.1
	baz=172						
M51A	Elyria	64.10	348	P	P	07 51 59.3	-0.4
	baz=166						
N49A	Columbus Grove	64.11	347	*e*P	P	07 51 58.7	-1.1
	comp=N,17nm,0.8s						
N49A				*e*pP	pP	07 52 31.9	+0.9
N49A	Columbus Grove	64.11	347	P	P	07 51 58.6	-1.1
	baz=164						
Q41A	Truxton	64.12	340	P	P	07 51 59.2	-0.7
	baz=157						
M52A	Chesterland	64.15	349	P	P	07 51 59.2	-0.9
	baz=167						
N48A	Decatur	64.23	346	P	P	07 51 59.5	-1.1
	baz=163						
P43A	Skaggs, Pawnee	64.24	342	P	P	07 51 59.5	-1.2
	baz=158						
SFIN	Lafayette	64.27	344	*e*P	P	07 51 59.9	-0.9
	comp=N,11nm,1.1s						
SFIN				*e*pP	pP	07 52 32.2	+0.2
O45A	Potomac	64.31	344	P	P	07 51 59.7	-1.4
	baz=160						
L55A	Hinsdale	64.33	352	P	P	07 52 00.2	-1.1
	baz=170						
L53A	Girard	64.37	350	P	P	07 52 01.1	-0.4
	baz=168						
N47A	Urbana	64.40	345	P	P	07 52 01.6	-0.1
	baz=162						
MSTX	Muleshoe	64.43	329	P	P	07 52 01.3	-0.9
	baz=145						
P42A	Winchester	64.43	341	P	P	07 52 00.7	-1.2
	baz=158						
ERPA	Erie	64.49	350	*e*P	P	07 52 02.4	+0.2
	comp=N,23nm,0.7s						
ERPA				*e*pP	PcP	07 52 34.6	-0.8
ERPA	Erie	64.49	350	P	P	07 52 01.8	-0.5
	baz=168						
M49A	Liberty Center	64.59	347	P	P	07 52 02.1	-0.9
	baz=164						
N46A	Monticello	64.67	345	P	P	07 52 02.6	-0.8
	baz=161						
P41A	Barry, Barry	64.73	341	P	P	07 52 03.2	-0.7
	baz=157						
M48A	Edgerton	64.76	346	P	P	07 52 03.8	-0.2
	baz=163						
K55A	Perry	64.82	352	P	P	07 52 04.2	-0.1
	baz=170						
O41A	Passleys Farm,	65.08	341	P	P	07 52 05.0	-1.1
	baz=157						
L48A	N Adams	65.14	347	P	P	07 52 05.5	-1.0
	baz=164						
L49A	Milan	65.16	347	P	P	07 52 05.3	-1.3
	baz=164						
K52A	Tillsonburg	65.25	350	P	P	07 52 06.6	-0.6
	baz=168						
N43A	Stutzman Famil	65.35	343	P	P	07 52 07.1	-0.7
	baz=159						
STCO	Saint Catharin	65.44	351	P	P	07 52 07.3	-1.0
	baz=169						
N42A	Yates City	65.49	342	P	P	07 52 07.9	-0.9
	baz=158						
N41A	Harden Midland	65.61	341	P	P	07 52 08.2	-1.3
	baz=157						
NCB	Newcomb	65.65	355	*e*P	P	07 52 10.2	+0.4
	comp=N,4.6nm,0.9s						
J52A	Paris	65.66	350	P	P	07 52 09.0	-0.8
	baz=168						
M43A	Waltham Townsh	65.75	343	P	P	07 52 09.1	-1.3
	baz=159						
K48A	Perry	65.90	347	P	P	07 52 10.5	-0.9
	baz=164						
ACTO	Acton	65.96	351	P	P	07 52 11.3	-0.4
	baz=168						
N40A	Mertquake, Sal	66.00	341	P	P	07 52 11.8	-0.2
	baz=157						
DRWO	Darlington Wes	66.03	352	P	P	07 52 12.0	-0.1
	baz=170						
DRCO	St. Marys Ceme	66.03	352	P	P	07 52 12.1	0.0
	baz=170						
PKRO	Pickering	66.17	352	P	P	07 52 12.4	-0.6
	baz=169						
I51A	Listowel	66.30	350	P	P	07 52 13.6	-0.3
	baz=167						
J48A	Bridge Port	66.31	348	P	P	07 52 13.1	-0.8
	baz=165						
L43A	Garden Prairie	66.39	344	P	P	07 52 14.0	-0.5
	baz=160						
H56A	Elgin	66.45	354	P	P	07 52 14.9	+0.1
	baz=172						
M40A	Post Highland	66.45	341	P	P	07 52 14.5	-0.4
	baz=157						
J47A	Sunmer	66.46	347	P	P	07 52 13.8	-1.1
	baz=164						
FRNY	Flat Rock	66.47	356	*e*P	P	07 52 15.4	+0.4
	comp=N,9.1nm,1.1s						
PKME	Peaks-Kenny Pk	66.73	359	P	P	07 52 16.9	+0.3
	baz=179						
L41A	Preston	66.77	342	P	P	07 52 16.5	-0.4
	baz=158						
K43A	Burlington	66.77	344	*e*P	P	07 52 16.1	-0.8
	comp=N,56nm,1.0s						
K43A				*e*pP	pP	07 52 49.1	+0.9
SADO	Sadowa	66.96	352	*e*P	P	07 52 17.7	-0.4
	comp=N,13nm,1.0s						
ANMO	Albuquerque	67.04	327	*e*P	P	07 52 19.6	+0.5
	comp=N,3.3nm,0.8s						
ANMO	Albuquerque	67.04	327	P	P	07 52 19.1	+0.1
	baz=142						
BMRO	Meriville Lake	67.10	350	P	P	07 52 18.7	-0.3
	baz=167						
K42A	Prairie Point,	67.11	343	P	P	07 52 18.9	-0.2
	baz=159						
K41A	Shullsburg	67.21	343	P	P	07 52 19.2	-0.5
	baz=158						
G53A	Haliburton	67.24	352	P	P	07 52 19.5	-0.3
	baz=170						
I46A	Reed City	67.27	347	P	P	07 52 19.1	-0.9
	baz=163						
LMN	Caledonia Moun	67.39	3	*e*P	P	07 52 20.3	-0.4
	comp=N,20nm,1.1s						
PEMO	Pembroke	67.63	353	P	P	07 52 22.0	-0.2
	baz=171						
BUKO	Buck Lake	67.66	352	P	P	07 52 22.0	-0.5
	baz=169						
KLBO	Killbear Provi	67.69	351	P	P	07 52 22.2	-0.4
	baz=168						
K39A	Oelwein	67.75	341	P	P	07 52 22.6	-0.6
	baz=157						
T25A	Trinidad	67.77	329	*e*P	P	07 52 24.7	+1.1
	comp=N,2.1nm,0.8s						
H46A	Fife Lake	67.78	347	P	P	07 52 22.2	-1.1
	baz=163						
TRQ	Mont Tremblant	67.92	355	*e*P	P	07 52 24.4	+0.3
LIC	Lamto	67.93	73	*e*P	P	07 52 24.6	-0.3
	comp=N,84nm,0.7s						
ALGO	Algonquin Park	67.99	353	P	P	07 52 24.5	0.0
	baz=170						
F52A	Sundridge	68.00	352	P	P	07 52 24.1	-0.5
	baz=169						
I42A	Draeger Farm,	68.03	344	*e*P	P	07 52 24.3	-0.6
	comp=N,32nm,1.1s						
I42A	Draeger Farm,	68.03	344	P	P	07 52 24.2	-0.6
	baz=160						
J40A	Soldiers Grove	68.06	343	P	P	07 52 24.4	-0.6
	baz=158						
TIC	Toumodi	68.12	73	*e*P	P	07 52 25.9	-0.2
KIC	Kosan Boka	68.25	73	*e*P	P	07 52 26.8	0.0
	comp=N,134nm,0.8s						
DBIC	Dimbokro	68.28	73	*e*P	P	07 52 27.2	+0.1
	comp=N,74nm,0.8s						
DBIC	Dimbokro	68.28	73	P	P	07 52 27.1	+0.1

	comp=N,63nm,0.7s,baz=220,slow=6.5,SNR=84						
DBIC	Dimbokro	68.28	73	*e*P	P	07 52 26.9	-0.1
E53A	Dumoine, Ponti	68.36	353	P	P	07 52 26.8	-0.1
	baz=171						
E54A	Lac Daplat, Po	68.37	353	P	P	07 52 26.9	0.0
	baz=171						
QSPA	South Pole Qui	68.41	180	*e*P	P	07 52 28.0	+0.8
	comp=N,10nm,0.6s						
F48A	Evansville	68.53	349	P	P	07 52 28.0	+0.1
	baz=166						
BGNE	Belgrade	68.69	336	*e*P	P	07 52 29.1	0.0
	comp=N,29nm,0.5s						
BGNE	Belgrade	68.69	336	P	P	07 52 29.0	0.0
	baz=151						
I39A	Houston	68.70	342	P	P	07 52 29.3	+0.3
	baz=157						
E51A	G1948 Merrick	68.74	352	P	P	07 52 29.5	+0.3
	baz=169						
BATG	Bathurst New B	68.77	2	*e*P	P	07 52 29.6	+0.3
	comp=N,8.0nm,1.0s						
SDCO	Great Sand Dun	68.78	329	*e*P	P	07 52 31.1	+1.2
	comp=N,3.8nm,0.7s						
E50A	Wahnapitae	68.81	351	P	P	07 52 29.6	0.0
	baz=168						
LATQ	La Tuque	68.96	357	P	P	07 52 30.6	+0.1
	baz=176						
D54A	Lac Fusel, La	69.02	354	P	P	07 52 30.4	-0.6
	baz=172						
D52A	ZEK Kipawa Sen	69.04	353	P	P	07 52 30.9	-0.1
	baz=170						
D53A	Lac Vacive, Po	69.06	353	P	P	07 52 30.9	-0.2
	baz=171						
E48A	Lockeyer	69.09	350	P	P	07 52 31.4	+0.1
	baz=166						
H40A	Chili	69.10	343	P	P	07 52 31.3	-0.2
	baz=158						
G42A	Mountain	69.18	345	*e*P	P	07 52 31.2	-0.7
	comp=N,14nm,0.8s						
E47A	Iron Bridge	69.25	349	P	P	07 52 32.2	-0.1
	baz=165						
X16A	Lo Mia Camp, P	69.32	323	*e*P	P	07 52 35.4	+2.1
	comp=N,7.7nm,1.0s						
G41A	Antigo	69.33	344	P	P	07 52 32.5	-0.4
	baz=160						
S22A	4UR Ranch, Cre	69.42	328	*e*P	P	07 52 35.4	+1.4
	comp=N,1.8nm,1.1s						
Q24A	Divide	69.58	330	*e*P	P	07 52 36.5	+1.6
	comp=N,4.1nm,0.7s						
D48A	Paudash Townsh	69.71	350	P	P	07 52 34.8	-0.4
	baz=167						
D49A	Beulah Townshi	69.73	351	P	P	07 52 35.6	+0.3
	baz=167						
D47A	Chapleau	69.81	349	P	P	07 52 35.2	-0.5
	baz=166						
F41A	Three Lakes	69.81	345	P	P	07 52 35.2	-0.6
	baz=160						
MVCO	Mesa Verde	69.84	327	*e*P	P	07 52 37.7	+1.2
	comp=N,4.9nm,0.6s						
MVCO				*e*pP	pP	07 53 09.7	+1.9
MVCO	Mesa Verde	69.84	327	P	P	07 52 37.4	+0.9
	baz=141						
Y14A	Wickenburg	69.86	321	*e*P	P	07 52 38.5	+2.0
	comp=N,4.6nm,1.1s						
G38A	Ridgeland	70.00	342	P	P	07 52 36.7	-0.3
	baz=157						
VLDQ	Val d'Or	70.06	353	*e*P	P	07 52 37.5	+0.3
	comp=N,15nm,0.8s						
WUAZ	Wupatki	70.09	324	*e*P	P	07 52 39.8	+1.8
	comp=N,10nm,0.9s						
WUAZ	Wupatki	70.09	324	P	P	07 52 39.7	+1.7
	baz=138						
F40A	Park Falls	70.23	344	P	P	07 52 38.4	+0.1
	baz=159						
ISCO	Idaho Springs	70.47	330	*e*P	P	07 52 41.1	+0.8
	comp=N,2.6nm,0.7s						
ISCO				*e*pP	pP	07 53 13.4	+1.5
ISCO	Idaho Springs	70.47	330	P	P	07 52 40.4	+0.1
	baz=144						
PV01	Paradox Valley	70.58	327	*e*P	P	07 52 42.4	+1.4
	comp=N,3.7nm,0.7s						
PV01				*e*pP	pP	07 53 14.5	+2.2
SMCO	Snowmass	70.61	329	*e*P	P	07 52 42.6	+1.3
	comp=N,3.0nm,0.6s						
SMCO				*e*pP	pP	07 53 14.6	+1.9
Y12C	Blythe	70.62	320	P	P	07 52 42.6	+1.6
	baz=135						
E40A	Wakefield	70.67	344	P	P	07 52 41.1	+0.1
	baz=159						
PV13	Radium Mtn., P	70.73	327	*e*P	P	07 52 43.0	+1.1
	comp=N,3.4nm,0.8s						
F37A	Hinrichs Farm,	70.73	342	P	P	07 52 41.7	+0.3
	baz=156						
E39A	Mellen	70.77	344	P	P	07 52 41.6	-0.1
	baz=158						
PV03	Paradox Valley	70.82	327	*e*P	P	07 52 42.9	+0.5
	comp=N,2.7nm,1.0s						
PV12	Saucer Basin,	70.84	327	*e*P	P	07 52 44.0	+1.5
	comp=N,3.1nm,0.6s						
D41A	Chassel	70.92	345	*e*P	P	07 52 42.4	-0.1
	comp=N,34nm,1.1s						
LSQQ	Lebel-sur-Quev	70.94	354	P	P	07 52 42.3	-0.3
	baz=172						
BC3	Big Chuckawall	71.11	320	P	P	07 52 45.6	+1.5
	baz=134						
PV09	Paradox Valley	71.15	327	*e*P	P	07 52 45.9	+1.4
MONP2	Monument Peak	71.17	319	P	P	07 52 46.0	+1.3
	baz=133						
BAR	Barrett	71.18	318	*e*P	P	07 52 45.5	+1.1
	comp=N,6.8nm,0.9s						
W13A	Hualapai Mount	71.20	322	*e*P	P	07 52 47.1	+2.3
	comp=N,3.9nm,0.8s						
U15A	North Rim	71.26	324	*e*P	P	07 52 46.9	+1.7
	comp=N,5.3nm,0.8s						
IRM	Iron Mountain	71.27	320	P	P	07 52 46.4	+1.4
	baz=135						
N23A	Red Feather La	71.50	331	*e*P	P	07 52 48.0	+1.6
	comp=N,4.1nm,0.9s						
N23A	Red Feather La	71.50	331	P	P	07 52 47.5	+1.0
	baz=144						
CHGQ	Chibougamau	71.58	356	P	P	07 52 46.2	-0.2
	baz=174						
BELC	Belle Mtn. Jos	71.67	320	P	P	07 52 48.8	+1.2
	baz=134						
XPFO	Pion Flat	71.68	319	*e*P	P	07 52 48.5	+0.9
	comp=N,4.6nm,1.1s						
PFO	Pinyon Flats O	71.69	319	*e*P	P	07 52 48.4	+0.8
	comp=N,4.3nm,1.1s						
PFO	Pinyon Flats O	71.69	319	P	P	07 52 48.7	+1.1
	baz=134						
MATQ	Matagami	71.70	354	P	P	07 52 47.0	-0.1
	baz=171						
O20A	White River Ci	71.97	329	*e*P	P	07 52 50.6	+1.4
	comp=N,9.0nm,0.9s						
O20A	White River Ci	71.97	329	P	P	07 52 50.4	+1.2
	baz=142						
KNB	Kanab	71.98	324	*e*P	P	07 52 51.5	+2.1
	comp=N,13nm,0.9s						
GMRC	Granite Mounta	72.01	320	P	P	07 52 51.0	+1.5
	baz=134						
LCMT	Little Creek M	72.21	324	*e*P	P	07 52 49.2	-1.5
	comp=N,6.0nm,0.7s						
SRU	San Rafael Swe	72.32	327	*e*P	P	07 52 52.6	+1.3
	comp=N,8.2nm,0.7s						
SRU				*e*pP	pP	07 53 24.7	+1.9
MTPU	Mount Pierson	72.39	325	*e*P	P	07 52 53.5	+1.5
	comp=N,3.0nm,0.8s						
MTPU				*e*pP	pP	07 53 24.6	+1.1
HEC	Hector,Ludlow	72.45	320	P	P	07 52 53.7	+1.7
	baz=134						
Q16A	Castle Valley	72.50	326	*e*P	P	07 52 53.8	+1.3
	comp=N,4.3nm,0.8s						
Q16A				*e*pP	pP	07 53 25.6	+1.6
TUQ	Turquoise Moun	72.62	321	P	P	07 52 54.8	+1.6
	baz=134						
CCUT	Cedar City	72.67	324	*e*P	P	07 52 55.9	+2.4
	comp=N,8.2nm,0.8s						
P17A	Butcher Ranch,	72.70	327	*e*P	P	07 52 55.0	+1.5
	comp=N,7.1nm,0.8s						
MSU	Marysvale	72.73	325	*e*P	P	07 52 55.3	+1.5
CIS	Catalina Islan	72.75	318	P	P	07 52 55.9	+2.1
	baz=132						
SHPR	Sheep Range	72.93	322	*e*P	P	07 52 56.6	+1.7
	comp=N,3.3nm,0.9s						
TCRU	Three Creeks R	72.94	325	*e*P	P	07 52 56.8	+1.7
	comp=N,3.7nm,0.8s						
GSC	Goldstone, Bar	73.05	320	*e*P	P	07 52 57.4	+1.8
	comp=N,3.4nm,0.8s						
GSC	Goldstone, Bar	73.05	320	P	P	07 52 57.1	+1.4

	baz=134						
RSSD	Black Hills	73.29	334	P	P	07 52 57.9	+0.9
	baz=146						
EDW2	Edwards Air Fo	73.48	319	P	P	07 52 59.3	+1.2
	baz=133						
MPU	Maple Canyon	73.56	327	*e*P	P	07 53 00.1	+1.4
	comp=N,3.9nm,0.9s						
PSUT	Pine Spring	73.64	324	*e*P	P	07 53 01.0	+1.8
	comp=N,4.1nm,0.7s						
LRMC	Laurel Mtn Rad	73.69	320	P	P	07 53 00.9	+1.5
	baz=133						
NLU	North Lily Min	73.74	326	*e*P	P	07 53 01.1	+1.4
	comp=N,1.8nm,0.9s						
TPNV	Topopah Spring	73.86	322	P	P	07 53 02.3	+1.8
	baz=134						
FURC	Furnace Creek,	73.88	321	P	P	07 53 01.9	+1.6
	baz=134						
JLU	Jordanelle	73.91	327	*e*P	P	07 53 02.2	+1.5
	comp=N,4.8nm,0.7s						
MPMC	Manual Prospec	73.97	320	P	P	07 53 02.1	+1.0
	baz=133						
AGMN	Agassiz Nation	74.00	341	*e*P	P	07 53 02.5	+1.7
DAC	Darwin (Calif)	74.18	320	*e*P	P	07 53 04.2	+1.8
	comp=N,4.9nm,0.8s						
TCUT	Toone Canyon	74.27	328	*e*P	P	07 53 04.9	+2.0
	comp=N,6.0nm,0.7s						
ISA	Isabella, Lake	74.30	319	*e*P	P	07 53 04.6	+1.8
	comp=N,6.8nm,0.9s						
ISA	Isabella, Lake	74.30	319	P	P	07 53 04.3	+1.4
	baz=132						
DUG	Dugway, Tooele	74.30	326	*e*P	P	07 53 04.4	+1.5
	comp=N,2.9nm,0.8s						
DUG	Dugway, Tooele	74.30	326	P	P	07 53 04.4	+1.5
	baz=138						
R11A	Troy Canyon, C	74.46	323	*e*P	P	07 53 05.6	+1.7
	comp=N,2.3nm,0.9s						
R11A	Troy Canyon, C	74.46	323	P	P	07 53 05.3	+1.4
	baz=135						
CWC	Cottonwood Cre	74.58	320	P	P	07 53 06.2	+1.6
	baz=133						
BW06	Boulder Array	74.63	330	*e*P	P	07 53 05.9	+1.0
	comp=N,1.3nm,0.6s						
BW06	Boulder Array	74.63	330	P	P	07 53 06.7	+1.8
	baz=141						
PD31	Pinedale Array	74.63	330	*e*P	P	07 53 05.4	+0.5
PDAR	Pinedale Array	74.63	330	*e*P	P	07 53 04.7	-0.2
PDAR				pP	pP	07 53 31.4	-5.3
PDAR	Pinedale Array	74.63	330	P	P	07 53 05.5	+0.5
	comp=N,1.2nm,0.6s,baz=128,slow=6.6,SNR=14						
PDAR				pP	pP	07 53 31.4	-5.3
	comp=N,0.8nm,0.5s,baz=121,slow=8.5,SNR=5.0						
VES	Vestal, Richgr	74.78	319	P	P	07 53 07.2	+1.6
	baz=132						
SPUT	South Promonto	74.94	327	*e*P	P	07 53 07.7	+1.1
	comp=N,3.7nm,0.6s						
BGU	Big Grassy Mou	74.95	326	*e*P	P	07 53 07.5	+0.8
	comp=N,2.6nm,0.8s						
HVU	Hansel Valley	75.45	327	*e*P	P	07 53 10.2	+0.7
	comp=N,3.4nm,1.0s						
REDW	Red Top Meadow	75.70	329	*e*P	P	07 53 12.0	+1.1
	comp=N,3.0nm,0.6s						
SNOW	Snow King Moun	75.73	330	*e*P	P	07 53 12.4	+1.2
	comp=N,4.5nm,0.8s						
ULM	Lac du Bonnet	75.75	342	P	P	07 53 10.2	-0.6
	comp=N,2.6nm,0.4s,baz=157,slow=7.7,SNR=14						
LOHW	Long Hollow	75.77	330	*e*P	P	07 53 12.5	+1.1
	comp=N,3.3nm,0.7s						
TPAW	Teton Pass	75.84	329	*e*P	P	07 53 12.5	+0.6
	comp=N,4.2nm,0.7s						
OMMB	Old Mammoth Mi	75.92	321	*e*P	P	07 53 13.9	+1.4
	comp=N,3.8nm,0.8s						
MOOW	Moose Ponds	75.94	330	*e*P	P	07 53 13.0	+0.7
	comp=N,2.2nm,0.7s						
MOOW				*e*pP	pP	07 53 46.1	+1.8
ELK	Elko	75.97	325	*e*P	P	07 53 13.8	+1.3
	comp=N,2.1nm,0.8s						
FXWY	Fox Creek	75.99	329	*e*P	P	07 53 13.3	+0.7
	comp=N,1.6nm,0.8s						
NV01	Mina Array Sit	76.06	322	*e*P	P	07 53 14.7	+1.6
NVAR	Mina Array Bea	76.06	322	P	P	07 53 14.4	+1.3
	comp=N,2.2nm,0.8s,baz=159,slow=6.8,SNR=16						
IMW	Indian Meadow	76.15	330	*e*P	P	07 53 14.8	+1.3
	comp=N,3.4nm,0.7s						
FLWY	Flagg Ranch	76.18	330	*e*P	P	07 53 15.4	+1.7
	comp=N,8.4nm,0.8s						
LAO	LASA Array	76.28	334	P	P	07 53 15.0	+1.0
	baz=144						
SCHQ	Schefferville	76.31	1	*e*P	P	07 53 13.8	-0.1
	comp=N,7.3nm,0.7s						
SCHQ	Schefferville	76.31	1	P	P	07 53 13.7	-0.1
	comp=N,5.2nm,0.7s,baz=180,slow=6.4,SNR=7.2						
RLMT	Red Lodge	76.33	331	*e*P	P	07 53 15.7	+1.2
	comp=N,4.7nm,0.8s						
RLMT	Red Lodge	76.33	331	P	P	07 53 15.6	+1.2
	baz=142						
H17A	Grant Village	76.36	330	P	P	07 53 16.3	+1.6
	baz=140						
KVN	Kaiserville	76.37	322	*e*P	P	07 53 15.8	+1.0
	comp=N,5.6nm,1.0s						
YHH	Holmes Hill	76.79	330	*e*P	P	07 53 19.2	+2.0
	comp=N,7.9nm,1.2s						
YHB	Horse Butte	76.92	330	*e*P	P	07 53 18.2	+0.4
	comp=N,5.4nm,1.0s						
TOA0	Torodi Ar. Sit	76.92	70	*e*P	P	07 53 18.1	-0.1
	comp=N,48nm,0.9s						
TOA1	Torodi Ar. Sit	76.92	70	*e*P	P	07 53 16.4	-1.8
TORD	Torodi Ar. Bea	76.92	70	P	P	07 53 16.4	-1.8
	comp=N,27nm,0.8s,baz=288,slow=5.4,SNR=104						
DGMT	Dagmar	76.95	336	*e*P	P	07 53 19.2	+1.5
	comp=N,9.5nm,0.8s						
YERR	Yerington	76.97	322	*e*P	P	07 53 19.7	+1.5
	comp=N,4.3nm,1.0s						
GCMT	Greycliff	77.03	332	*e*P	P	07 53 19.8	+1.5
PAHR	Pah Rah Range	77.54	322	*e*P	P	07 53 23.0	+1.6
	comp=N,11nm,0.8s						
HLID	Hailey	77.58	328	*e*P	P	07 53 23.7	+2.2
	comp=N,5.8nm,0.8s						
HLID	Hailey	77.58	328	P	P	07 53 23.2	+1.7
	baz=137						
SUR	Sutherland	77.95	120	*e*P	P	07 53 25.7	+1.7
	comp=N,22nm,0.8s						
DLMT	Dillon	78.03	330	*e*P	P	07 53 25.1	+1.2
	comp=N,4.2nm,1.1s						
EGMT	Eagleton	78.80	333	P	P	07 53 29.2	+1.2
	baz=142						
O03E	Paynes Creek	79.32	321	P	P	07 53 31.9	+0.9
	baz=131						
TSUM	Tsumeb	79.42	106	*e*P	P	07 53 33.4	+1.2
	comp=N,40nm,0.8s						
J08A	Circle Bar Ran	79.52	325	*e*P	P	07 53 32.9	+0.8
	comp=N,4.1nm,1.1s						
MOD	Modoc Plateau	79.53	323	*e*P	P	07 53 33.5	+1.3
	comp=N,4.6nm,0.9s						
WDC	Whiskeytown Da	79.94	321	*e*P	P	07 53 34.0	-0.2
	comp=N,4.1nm,0.8s						
BMO	Blue Mountains	79.95	327	*e*P	P	07 53 36.0	+1.7
	comp=N,1.4nm,0.8s						
N02D	Trinity Center	80.29	321	P	P	07 53 37.0	+0.9
	baz=130						
M04C	Macdoel	80.31	322	P	P	07 53 36.7	+0.4
	baz=131						
F10A	Beach Ranch, E	80.70	328	*e*P	P	07 53 40.0	+1.7
	comp=N,2.2nm,0.8s						
J05D	Fort Rock, OR	80.96	324	P	P	07 53 40.9	+1.1
	baz=132						
G08A	Pilot Rock	81.10	326	*e*P	P	07 53 41.9	+1.5
	comp=N,1.7nm,0.8s						
PINE	Pine Mountain	81.14	324	*e*P	P	07 53 42.8	+2.0
	comp=N,12nm,0.8s						
PINE				*e*pP	pP	07 54 15.5	+2.4
J04D	Umpqua Nationa	81.41	323	P	P	07 53 42.8	+0.5
	baz=131						
HUMO	Hull Mountain	81.48	322	*e*P	P	07 53 42.7	+0.3
	comp=N,0.9nm,0.7s						
PBDV	Barranco-do-Ve	81.70	45	*e*P	P	07 53 44.0	+0.3
	comp=N,79nm,2.0s						
PNCL	Nicolau / Gran	81.82	44	*e*P	P	07 53 45.5	+1.2
	comp=N,86nm,1.8s						
K02D	Willamette Mer	81.94	322	P	P	07 53 46.4	+1.5
	baz=130						
PBEJ	Beja	82.20	44	*e*P	P	07 53 48.6	+2.3
	comp=N,21nm,1.9s						
PMTG	Montargil	82.57	43	*e*P	P	07 53 49.0	+0.8
	comp=N,29nm,2.2s						
PTOM	Tomar	82.78	42	*e*P	P	07 53 50.2	+1.0
	comp=N,48nm,1.5s						
BOSA	Boshof	82.82	118	*e*P	P	07 53 50.0	-0.1
	comp=N,19nm,0.8s						

BOSA	Boshof	82.82	118	P	P	07 53 50.3	+0.3
	comp=N,16nm,0.8s,baz=246,slow=4.2,SNR=20						
BOSA	Boshof	82.82	118	*e*P	P	07 53 50.4	+0.4
FCC	Fort Churchill	83.03	347	*e*P	P	07 53 50.1	0.0
	comp=N,2.6nm,1.1s						
FCC				*e*pP	pP	07 54 23.8	+1.5
MTE	Manteigas	83.77	42	*e*P	P	07 53 55.0	+0.6
	comp=N,92nm,1.6s						
MTE	Manteigas	83.77	42	*e*P	P	07 53 55.4	+1.0
	comp=N,24nm,1.0s						
POLO	Lamas de Olo	84.18	41	*e*P	P	07 53 57.4	+0.9
PCAB	Cabril	84.24	41	*e*P	P	07 53 57.2	+0.5
	comp=N,45nm,2.3s						
PGAV	Gavieira, Arco	84.24	40	*e*P	P	07 53 52.4	-4.4
	comp=N,118nm,1.4s						
LBTB	Lobatse	84.39	115	*e*P	P	07 53 58.8	+0.7
	comp=N,21nm,0.8s						
TAM	Tamanrasset	84.45	63	*e*P	P	07 53 59.4	+1.0
	comp=N,7.9nm,0.8s						
MVO	Moncorvo	84.53	42	*e*P	P	07 53 59.1	+0.9
	comp=N,50nm,1.7s						
PBRG	Braganca	85.08	41	*e*P	P	07 54 01.6	+0.7
	comp=N,69nm,1.8s						
PAB	San Pablo	85.32	44	*e*P	P	07 54 02.9	+0.7
	comp=N,24nm,0.9s						
ESDC	Sonseca Array	85.64	44	P	P	07 54 04.3	+0.6
	comp=N,6.3nm,0.9s,baz=238,slow=4.8,SNR=20						
ESLA	Sonseca Array	85.64	44	*e*P	P	07 54 05.3	+1.5
	comp=N,18nm,1.1s						
ES19	SONSECA Array	85.70	44	*e*P	P	07 54 04.8	+0.7
SFJD	Kangerlussuaq	89.50	7	LR	LR	08 37 35.8	
	comp=N,40nm,18.4s,baz=241,slow=38						
SFJD	Kangerlussuaq	89.50	7	*e*P	P	07 54 22.4	+1.0
YKA	Yellowknife Ar	91.64	340	P	P	07 54 31.6	0.0
	comp=N,4.8nm,0.7s,baz=134,slow=4.5,SNR=98						
YKB5	Yellowknife Ar	91.64	340	*e*P	P	07 54 31.6	0.0
YKW3	Yellowknife Ar	91.69	340	*e*P	P	07 54 32.0	+0.2
	comp=N,4.7nm,0.7s						
CASY	Casey	92.21	180	*e*P	P	07 54 35.8	+1.5
	comp=N,4.5nm,0.9s						
SNZO	South Karori	94.31	222	*e*P	P	07 54 45.6	+1.1
BR101	Keskin Array S	112.54	55	*e*PP	PP	08 00 45.7	-3.8
BRTR	Keskin Array B	112.54	55	PP	PP	08 00 45.7	-3.8
	comp=N,1.2nm,0.9s,baz=224,slow=6.9,SNR=4.3						
KBZ	Khabaz	119.86	51	PKP	PKiKP	08 00 15.7	+1.0
	comp=N,1.9nm,0.8s,baz=81,slow=2.5,SNR=6.6						
AS01	Alice Springs	129.90	207	*e*PKPdf	PKiKP	08 00 34.6	-0.9
ASAR	Alice Springs	129.92	207	PKP	PKiKP	08 00 34.5	-1.0
	comp=N,0.8nm,0.5s,baz=130,slow=1.7,SNR=19						
ABKAR	Akbulak array	130.98	43	*e*PKPdf	PKiKP	08 00 37.4	+0.7
WC3	Warramunga Arr	132.96	210	*e*PKPdf	PKiKP	08 00 40.6	-1.0
WB2	Warramunga Arr	132.98	210	*e*PKPdf	PKiKP	08 00 40.5	-1.2
WB2				*e*PKPdf	PKPdf	08 00 41.9	+1.4
WR1	Warramunga Arr	132.99	210	*e*PKPdf	PKiKP	08 00 40.9	-0.9
WR1				*e*pPKPdf	pPKPdf	08 01 16.1	+1.3
WRA	Warramunga Arr	132.99	210	PKP	PKiKP	08 00 40.9	-0.9
	comp=N,1.3nm,0.6s,baz=158,slow=1.7,SNR=30						
WRA				pPKP	pPKPdf	08 01 16.1	+1.3
	comp=N,1.7nm,0.7s,baz=154,slow=1.7,SNR=6.6						
WRAB	Tennant Creek	132.99	210	*e*PKPdf	PKiKP	08 00 41.0	-0.8
BVAR	Borovoye Array	135.71	35	PKP	PKiKP	08 00 45.7	-0.5
	comp=N,1.7nm,0.7s,baz=298,slow=3.2						
KURK	Kurchatov	141.26	34	*e*PKPdf	PKPdf	08 00 55.5	+0.8
KURK				*e*PKPdf	PKiKP	08 00 56.1	-1.5
KURBB	Kurchatov Arra	141.26	34	PKP	PKPdf	08 00 55.5	+0.7
	comp=N,1.3nm,0.2s,baz=303,slow=2.7,SNR=12						
ZAA1	Zalesovo Array	141.97	26	*e*PKPpre	PKPpre	08 00 51.4	
ZAA1				*e*PKPdf	PKPdf	08 00 56.7	+0.7
ZAA1				*e*pPKPdf	pPKPdf	08 01 32.4	+2.1
ZAA0	Zalesovo Array	141.97	26	*e*PKPdf	PKPdf	08 00 57.0	+1.1
ZALV	Zalesovo Beam	141.97	26	PKhKP	PKPpre	08 00 51.4	
	comp=N,5.6nm,0.7s,baz=307,slow=5.4,SNR=6.0						
ZALV				PKP	PKPdf	08 00 56.7	+0.7
	comp=N,5.4nm,0.6s,baz=289,slow=2.6,SNR=18						
ZALV				pPKP	pPKPdf	08 01 32.4	+2.1
	comp=N,2.0nm,0.6s,baz=293,slow=3.6,SNR=3.1						
NRN	Naryn	144.18	49	*e*PKPdf	PKPdf	08 01 00.6	-0.1
KDJ	Kajisay	144.72	47	*e*PKPbc	PKPdf	08 01 03.0	+1.6
KSH	Kashi	144.84	52	PKP	PKPdf	08 01 01.4	-0.3
KSH				sPKP		08 01 42.0	
KSH				PP	PP	08 04 12.1	-8.3
KSH				SKS	SKSdf	08 08 00.8	+0.9
TARG	Taragay, Kyrgy	145.31	47	*e*PKPdf	PKPab	08 01 04.3	+1.2
MAKZ	Makanchi	145.35	37	*e*PKPdf	PKPab	08 01 02.9	+0.3
MK31	Makanchi Array	145.53	37	*e*PKPdf	PKPab	08 01 03.4	+0.2
MK32	Makanchi Array	145.53	37	*e*PKPdf	PKPab	08 01 03.1	-0.1
MK32				*e*pPKPdf	pPKPdf	08 01 38.3	+1.5
MKAR	Makanchi Array	145.53	37	*e*PKPdf	PKPab	08 01 03.5	+0.3
MKAR				pPKPbc	pPKPdf	08 01 38.3	+1.5
MKAR	Makanchi Array	145.53	37	PKPbc	PKPab	08 01 03.1	-0.1
	comp=N,12nm,0.9s,baz=316,slow=5.1,SNR=40						
MKAR				pPKPbc	pPKPdf	08 01 38.3	+1.5
	comp=N,5.4nm,0.8s,baz=300,slow=2.7,SNR=3.9						
MK01	Makanchi Array	145.55	37	*e*PKPdf	PKPab	08 01 03.2	0.0
HYB	Hyderabad	148.52	92	*i* PKP	PKPbc	08 01 12.5	+0.4
USRK	Ussuriysk Ar.	152.05	328	PKPbc	PKiKP	08 01 20.0	0.0
	comp=N,5.5nm,0.9s,baz=235,slow=0.5,SNR=5.6						
MJAR	Matsushiro Arr	152.68	308	pPKPbc	pPKPbc	08 01 54.4	-1.0
	comp=N,3.0nm,0.8s,baz=76,slow=1.0,SNR=3.3						
SONA1	Songino Array	153.65	8	*e*PKPdf	PKPdf	08 01 17.0	+1.5
SONA1				*e*PKPbc	PKiKP	08 01 23.9	+0.5
SONA0	Songino Array	153.66	8	*e*PKPdf	PKPdf	08 01 16.7	+1.3
SONA0				*e*PKPbc	PKiKP	08 01 23.5	+0.1
SONM	Songino Array	153.66	8	PKP	PKPdf	08 01 16.7	+1.3
	comp=N,1.4nm,0.8s,baz=29,slow=1.8,SNR=4.5						
SONM				PKPbc	PKiKP	08 01 23.5	+0.1
	comp=N,1.3nm,0.6s,baz=300,slow=2.4,SNR=4.2						
SONM				pPKP	pPKPdf	08 01 43.9	-5.9
	comp=N,1.6nm,0.5s,baz=297,slow=1.5,SNR=5.7						
SONM				pPKPbc	pPKPbc	08 01 52.4	-5.1
	comp=N,1.5nm,0.7s,baz=323,slow=1.5,SNR=3.0						
LZH	Lanzhou	164.19	24	*e*PKP	PKPdf	08 01 29.8	+1.6
LZH				pPKP	pPKPdf	08 01 56.9	-5.8
LZH				sPKP		08 02 09.1	

DJA 22 07:43:44.6±1.1**, 8°S**±10°×**10°8E**±°**, h10**^{km}**, M3.9**/7**, MLv3.9**/7**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.93	3	P	Pg	07 44 02.2	-0.3
CMJI	Cimerak	0.98	44	P	Pg	07 44 03.4	-0.1
KPJI	Karang Pucung	1.63	45	P	Pn	07 44 12.9	-0.5
SKJI	Sukabumi	1.90	321	P	Pn	07 44 16.6	-0.5
UGM	Wanagama	2.79	78	P	Pn	07 44 29.0	-0.5
PCJI	Pacitan	3.39	85	P	Pn	07 44 38.1	+0.4

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*IDC **22** 08:03:57.7±3.0, 53°.61N×88°.47E, h0^{km}, mb1 3.3/4, mb1mx3.1/52, mbtmp3.3/4, ML2.9/4, Error ellipse: s-maj=28.7km s-min=16.4km az=73.0*

*NNC **22** 08:04:01.0±2.5, 53°.58N×87°.86E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=24.6km s-min=16.0km az=176.0, Suspected Mining explosion.*

ISC 22 08:04:00.8±3.6**, 53°.6N**±0°.1×**88°.0E**±0°.2**, h0**^{km}**, n8,** σ**0^{s}.75**/13**, 4C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.90	282	*i*		08 21 22.8	
	baz=98,slow=331,SNR=1.8						
ZALV	Zalesovo Beam	1.90	282	Pn	Pn	08 04 34.0	-0.4
	5.7nm,0.3s,baz=102,slow=15,SNR=50						
ZALV				Sn	Sg	08 05 02.2	+0.4
	5.7nm,0.3s,baz=98,slow=24,SNR=15						
KURK	Kurchatov	6.44	247	⇓Pn	Pn	08 05 35.5	-1.3
	3.1nm,1.1s						
KURK				⇑Sn	Sn	08 06 51.3	+0.3
	0.5nm,0.4s						
KURK				⇑Lg	Lg	08 07 24.7	
	5.7nm,1.3s						
KURBB	Kurchatov Arra	6.54	247	⇓Pn	Pn	08 05 37.8	-0.3
	3.4nm,0.3s						
KURBB				⇓Sn	Sn	08 06 51.9	-1.5
	2.5nm,0.5s						
KURBB				⇓Lg	Lg	08 07 28.0	
	4.5nm,0.7s						
KURBB	Kurchatov Arra	6.54	247	Pn	Pn	08 05 38.4	+0.3
	0.3nm,0.3s,baz=62,slow=14,SNR=13						
KURBB				Lg	Lg	08 07 34.0	
	0.1nm,0.3s,baz=60,slow=31,SNR=5.9						
MK31	Makanchi Array	7.73	210	⇑Pn	Pn	08 05 54.6	0.0
	0.8nm,0.7s,baz=28,slow=13,SNR=20						
MK31				⇑Sn	Sn	08 07 22.7	-0.1
	0.2nm,0.3s,baz=30,slow=25,SNR=4.2						
MK31				⇓Lg	Lg	08 08 04.6	
	0.5nm,0.5s,baz=33,slow=32,SNR=2.6						
MKAR	Makanchi Array	7.73	210	Pn	Pn	08 05 55.1	+0.5
	0.2nm,0.3s,baz=29,slow=12,SNR=13						
MKAR				Sn	Sn	08 07 23.6	+0.8
	0.1nm,0.3s,baz=27,slow=28,SNR=5.0						
MKAR				Lg	Lg	08 08 06.3	
	0.1nm,0.3s,baz=23,slow=33,SNR=4.4						
BVAR	Borovoye Array	10.54	274	Pn	Pn	08 06 33.4	+0.4
	0.2nm,0.3s,baz=82,slow=15,SNR=3.0						
BVAR				Sn	Sn	08 08 31.9	+0.2
	0.2nm,0.3s,baz=65,slow=27,SNR=3.0						

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*IDC **22** 08:05:08.8±2.5, 2°.80N×128°.76E, h251^{km}±28^{km}, mb3.5/10, mb1 3.6/11, mb1mx3.4/40, mbtmp4.1/11, Error ellipse: s-maj=37.7km s-min=11.4km az=74.0*

*DJA **22** 08:05:10.0±0.8, 3°N±4°×12°8E±°, h171^{km}±14^{km}, M4.4/7, mb4.2/2, MLv4.4/7*

ISC 22 08:05:04.1±0.9**, 2°.75N**±0°.07×**128°.7E**±0°.1**, h200**^{km}**, n15,** σ**1^{s}.97**/14**, mb3.9**/9**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	3.31	286	P	Pn	08 05 59.4	+1.9
SIJI	Sorong	4.41	145	P	Pn	08 06 17.5	+6.4
	3.6nm,0.3s,baz=320,slow=17,SNR=4.8						
KMSI	Cibinong	5.20	246	P	Pn	08 06 23.0	+1.9
SANI	Sanana	5.49	210	P	Pn	08 06 26.3	+1.5
SANI				S	Sn	08 07 24.3	-4.2
MTKI	Muara Teweh, K	14.29	255	P	P	08 08 27.0	+7.8
FITZ	Fitzroy Crossi	20.93	188	P	P	08 09 32.6	+1.1
	1.7nm,0.6s,baz=18,slow=11,SNR=5.3						
WRA	Warramunga Arr	23.21	166	P	P	08 09 53.7	+0.2
	0.7nm,0.3s,baz=341,slow=10,SNR=32						
ASAR	Alice Springs	26.74	169	P	P	08 10 26.2	+0.9
	0.8nm,0.3s,baz=351,slow=6.9,SNR=43						
CMAR	Chiang Mai Arr	33.07	300	P	P	08 11 22.5	+1.3
	2.0nm,0.3s,baz=119,slow=7.3,SNR=4.5						
KSRS	Korea Array	34.55	359	P	P	08 11 34.3	+0.7
	0.6nm,0.5s,baz=172,slow=10,SNR=4.2						
STKA	Stephens Creek	36.55	161	P	P	08 11 52.0	+1.2
	1.3nm,0.3s,baz=338,slow=11,SNR=8.6						
SONM	Songino Array	48.87	340	P	P	08 13 27.5	-2.2
	0.8nm,0.6s,baz=154,slow=8.9,SNR=5.7						
MKAR	Makanchi Array	59.49	325	P	P	08 14 45.9	-0.3
	1.6nm,0.6s,baz=113,slow=8.3,SNR=24						
ZALV	Zalesovo Beam	62.36	332	P	P	08 15 04.2	-1.1
	0.8nm,0.5s,baz=147,slow=8.6,SNR=2.9						
ARCES	ARCESS Array B	92.05	340	P	P	08 17 48.3	-1.8
	4.7nm,0.9s,baz=86,slow=4.7,SNR=3.3						

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*SOF **22** 08:23:05.6, 45°.67N×26°.78E, h2^{km}*

*BUC **22** 08:23:12.9±0.1, 45°.32N×26°.90E, h22^{km}±3^{km}, MD3.5/4, Error ellipse: s-maj=2.1km s-min=1.8km az=59.0*

*ISCJB **22** 08:23:13.7±0.3, 45°.34N±0°.01×26°.91E±0°.02, h27^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=2.3km az=163.8*

*SIGU **22** 08:23:13.2, 45°.34N×26°.91E, h21^{km}, mb2.9*

ISC 22 08:23:13.3±0.8**, 45°.33N**±0°.02×**26°.92E**±0°.02**, h22**^{km}±7^{km}**, n83,** σ**0^{s}.82**/116**, 48C-20D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISR	Istrita	0.34	231	⇑*i*P	Pb	08 23 20.6	-0.1
ISR	Istrita	0.34	231	⇑*i*P	Pb	08 23 20.6	-0.1
ISR				*i* S	Sn	08 23 27.6	-1.6
PGOR	Pogoanele	0.43	173	S	Sn	08 23 30.4	-0.8
PGOR	Pogoanele	0.43	173	*i* S	Sn	08 23 30.4	-0.8
ODBI	Odobesti	0.44	13	⇓*i*P	Pn	08 23 23.7	-0.6
ODBI	Odobesti	0.44	13	⇓*i*P	Pn	08 23 23.7	-0.6
PETR	Petresti	0.45	30	⇑*i*P	Pn	08 23 23.6	-0.7
PETR	Petresti	0.45	30	⇑*i*P	Pn	08 23 23.6	-0.7
PETR				*i* S	Sn	08 23 30.8	-0.9
VRI	Vrincioaia	0.55	346	⇑*i*P	Pb	08 23 23.7	-0.6
VRI	Vrincioaia	0.55	346	⇑*i*P	Pb	08 23 23.7	-0.6
VRI				*i* S	Sb	08 23 32.2	+0.5
PLOR	Plostina	0.55	340	⇑*i*P	Pb	08 23 23.8	-0.5
PLOR	Plostina	0.55	340	⇑*i*P	Pb	08 23 23.8	-0.5
PLOR				*i* S	Sn	08 23 32.8	-1.6
MLR	Muntele Rosu	0.70	283	⇑*i*P	Pb	08 23 26.5	-0.4
MLR	Muntele Rosu	0.70	283	⇑*i*P	Pb	08 23 26.5	-0.4
MLR				*i* S	Sn	08 23 36.6	-1.6
AMRR	Amara	0.78	157	⇓*i*P	Pb	08 23 27.9	-0.3
AMRR	Amara	0.78	157	⇓*i*P	Pb	08 23 27.9	-0.3
AMRR				*i* S	Sn	08 23 40.5	+0.6
SULR		0.81	216	⇑*i*P	Pb	08 23 28.0	-0.6
SULR		0.81	216	⇑*i*P	Pb	08 23 28.0	-0.6
SULR				*i* S	Sn	08 23 40.5	0.0
LEHL	Lehliu	0.86	185	⇑*i*P	Pn	08 23 29.6	-0.4
LEHL	Lehliu	0.86	185	⇑*i*P	Pn	08 23 29.6	-0.4
LEHL				*i* S	Sn	08 23 42.1	+0.2
CFR	Carcaliu	0.88	100	⇓*i*P	Pb	08 23 28.8	-0.9
CFR	Carcaliu	0.88	100	⇓*i*P	Pb	08 23 28.8	-0.9
CFR				*i* S	Sb	08 23 41.4	+0.4
GIUM	Giurgiulesti	0.92	80	⇓*i*P	Pb	08 23 29.0	-1.5
GIUM	Giurgiulesti	0.92	80	⇓*i*P	Pb	08 23 29.0	-1.5
GIUM				*i* S	Sn	08 23 43.2	-0.2
HARR	Harsova	0.97	131	⇑*i*P	Pb	08 23 30.6	-0.7
HARR	Harsova	0.97	131	⇑*i*P	Pb	08 23 30.6	-0.7
BIR	Birlad	1.06	28	⇓*i*P	Pn	08 23 32.5	-0.2
BIR	Birlad	1.06	28	⇓*i*P	Pn	08 23 32.5	-0.2
BIR				*i* S	Sn	08 23 47.2	+0.4
TLB	Topalu	1.09	133	⇑*i*P	Pn	08 23 32.7	-0.5
TLB	Topalu	1.09	133	⇑*i*P	Pn	08 23 32.7	-0.5
TLB				*i* S	Sn	08 23 48.4	+0.7
OZUR		1.10	314	⇓*i*P	Pb	08 23 33.2	-0.4
OZUR		1.10	314	⇓*i*P	Pb	08 23 33.2	-0.4
OZUR				*i* S	Sn	08 23 48.7	+0.8
RASA	Rasa	1.13	171	⇑*i*P	Pn	08 23 33.7	0.0
RASA	Rasa	1.13	171	⇑*i*P	Pn	08 23 33.7	0.0
RASA				*i* S	Sn	08 23 49.6	+1.0
BUC1	Bucharest	1.17	213	S	Sn	08 23 50.3	+0.8
BUC1	Bucharest	1.17	213	*i* S	Sn	08 23 50.3	+0.8
TESR	Tescani	1.19	351	⇑*i*P	Pn	08 23 34.0	-0.6
TESR	Tescani	1.19	351	⇑*i*P	Pn	08 23 34.0	-0.6
TESR				*i* S	Sn	08 23 51.6	+1.4
DOPR	Dopca	1.25	301	⇓*i*P	Pn	08 23 34.7	-0.6
DOPR	Dopca	1.25	301	⇓*i*P	Pn	08 23 34.7	-0.6
DOPR				*i* S	Sn	08 23 52.3	+0.9
CVDA	Cernavoda	1.28	141	⇑*i*P	Pn	08 23 35.3	-0.5
CVDA	Cernavoda	1.28	141	⇑*i*P	Pn	08 23 35.3	-0.5
CVDA				*i* S	Sb	08 23 53.9	+1.3
SGRR	Singureni	1.30	211	⇑*i*P	Pn	08 23 35.7	-0.3
SGRR	Singureni	1.30	211	⇑*i*P	Pn	08 23 35.7	-0.3
SGRR				*i* S	Sb	08 23 54.1	+1.0
VOIR		1.32	275	⇑*i*P	Pn	08 23 36.3	-0.1
VOIR		1.32	275	⇑*i*P	Pn	08 23 36.3	-0.1
VOIR				*i* S	Sb	08 23 54.7	+0.8
TLCR		1.35	96	⇑*i*P	Pn	08 23 37.0	+0.3
TLCR		1.35	96	⇑*i*P	Pn	08 23 37.0	+0.3
TLCR				*i* S	Sb	08 23 55.2	+0.6
ICOR	Ion Corvin	1.37	152	⇓*i*P	Pn	08 23 36.9	-0.1
ICOR	Ion Corvin	1.37	152	⇓*i*P	Pn	08 23 36.9	-0.1
ICOR				*i* S	Sb	08 23 55.6	+0.4
TIRR	Tirgusor	1.38	129	⇑*i*P	Pn	08 23 37.3	+0.2
TIRR	Tirgusor	1.38	129	⇑*i*P	Pn	08 23 37.3	+0.2
TIRR				*i* S	Sb	08 23 55.7	+0.3
GOLR		1.47	251	S	Sb	08 23 58.0	-0.1
GOLR		1.47	251	*i* S	Sb	08 23 58.0	-0.1
LEOM	Leova	1.47	39	⇑*i*P	Pb	08 23 39.3	-0.6
LEOM	Leova	1.47	39	⇑*i*P	Pb	08 23 39.3	-0.6
LEOM				*i* S	Sb	08 23 58.8	+0.7
MFTR	Murfatlar	1.58	137	⇑*i*P	Pb	08 23 40.9	-0.8
MFTR	Murfatlar	1.58	137	⇑*i*P	Pb	08 23 40.9	-0.8
MFTR				*i* S	Sb	08 24 01.4	+0.2
HUMR	Humele	1.59	240	⇑*i*P	Pn	08 23 40.1	0.0
HUMR	Humele	1.59	240	⇑*i*P	Pn	08 23 40.1	0.0
HUMR				*i* S	Sb	08 24 00.9	-0.8
ARR	Arges	1.61	272	⇑*i*P	Pb	08 23 41.0	-1.3
ARR	Arges	1.61	272	⇑*i*P	Pb	08 23 41.0	-1.3
ARR				*i* S	Sb	08 24 01.8	-0.4
BIZ	Bicaz	1.70	341	⇓*i*P	Pn	08 23 41.8	+0.2
BIZ	Bicaz	1.70	341	⇓*i*P	Pn	08 23 41.8	+0.2
PSN	Preselentsi	1.88	151	P	Pn	08 23 44.2	+0.1
MANR	Mangalia	1.93	141	⇑*i*P	Pn	08 23 45.2	+0.5
MANR	Mangalia	1.93	141	⇑*i*P	Pn	08 23 45.2	+0.5
MILM	Milestii Mici	2.06	39	⇓*i*P	Pn	08 23 46.6	+0.1
MILM	Milestii Mici	2.06	39	⇓*i*P	Pn	08 23 46.6	+0.1
MILM				*i* S	Sb	08 24 13.4	-1.7
MILM	Milestii Mici	2.06	39	P	Pn	08 23 46.6	+0.1
MILM				S	Sb	08 24 13.4	-1.7
PRD	Provadia	2.16	171	P	Pn	08 23 48.8	+0.9
PVL	Pavlikeni	2.40	209	P	Pn	08 23 52.5	+1.3
BURAR	Bucovina Array	2.57	333	⇑*i*P	Pn	08 23 53.6	0.0
BURAR	Bucovina Array	2.57	333	⇑*i*P	Pn	08 23 53.6	0.0
GZR	Gura Zlata	2.92	273	⇑*i*P	Pn	08 23 58.3	-0.1
GZR	Gura Zlata	2.92	273	⇑*i*P	Pn	08 23 58.3	-0.1
GZR				*i* S	Sn	08 24 33.1	+0.3
MPEP	Malo Peshtene	3.02	230	P	Pn	08 23 58.0	-1.7
KSV	Kosov	3.24	338	*e*Pn	Pn	08 24 04.1	+1.3
KSV				Pm		08 24 18.7	
KSV				*e*Sn	Sn	08 24 42.0	+1.3
KSV				Sm		08 25 25.0	
KMPD	K-Podol'skiy	3.25	355	*e*Pn	Pn	08 24 03.4	+0.6
KMPD				*e*Sn	Sn	08 24 42.6	+1.9
DRGR		3.27	298	⇑*i*P	Pn	08 24 03.2	0.0
DRGR		3.27	298	⇑*i*P	Pn	08 24 03.2	0.0
NDNU	Novodnistrovsk	3.28	5	*e*Pn	Pn	08 24 05.6	+2.4
NDNU				Pm		08 24 24.7	
NDNU				*e*Sn	Sn	08 24 42.5	+1.0
NDNU				Sm		08 25 01.1	
HORU	Horodok	3.90	355	*e*Pn	Pn	08 24 13.8	+2.0
HORU				*e*Sn	Sn	08 24 58.6	+1.8

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*ISCJB **22** 08:37:38.0±0.7, 30°.62S±0°.05×178°.2W±0°.1, h46^{km}, mb4.5/18, MS3.5/5, Error ellipse: s-maj=17.1km s-min=6.2km az=15.8*

*NEIC **22** 08:37:38.1±3.3, 30°.54S×178°.15W, h31^{km}±22^{km}, mb4.5/15, Error ellipse: s-maj=14.9km s-min=11.3km az=106.0*

*IDC **22** 08:37:42.0±1.7, 30°.31S×178°.19W, h65^{km}±14^{km}, mb4.1/8, mb1 4.3/8, mb1mx4.0/30, mbtmp4.4/8, MS3.6/6, Ms1 3.6/6, ms1mx3.3/29, Error ellipse: s-maj=23.4km s-min=16.8km az=137.0*

ISC 22 08:37:39.6±0.6**, 30°.57S**±0°.06×**178°.2W**±0°.1**, h46**^{km}**, n69,** σ**1^{s}.71**/64**, mb4.5**/18**, MS3.5**/5**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.33	10	*e*Pn	Pn	08 38 00.6	-1.2
RAO				*e*Sn	Sn	08 38 17.0	-1.3
RAO	Raoul Island	1.33	10	P	Pn	08 38 00.6	-1.2
	442nm,0.3s,baz=282,slow=22,SNR=17						
RAO				S	Sn	08 38 15.6	-2.7
	693nm,0.3s,baz=53,slow=22,SNR=8.8						
OUZ	Omahuta	8.32	234	*e*Pn	Pn	08 39 46.7	+9.1
URZ	Urewera	8.60	206	*e*Pn	Pn	08 39 35.2	-6.2
URZ				*e*Sn	Sn	08 41 17.8	+0.7
URZ	Urewera	8.60	206	P	Pn	08 39 40.6	-0.8
	1.0nm,0.3s,baz=264,slow=4.0,SNR=16						
URZ				S	Sn	08 41 18.3	+1.3
	8.2nm,0.3s,baz=213,slow=11,SNR=12						
BKZ	Black Stump Fm	9.63	206	*e*Pn	Pn	08 39 53.7	-1.9
HIZ	Hauiti	9.78	214	*e*Pn	Pn	08 40 05.0	+7.4
BFZ	Birch Farm	11.06	203	*e*Pn	Pn	08 40 14.3	-0.8
THZ	Tophouse	13.28	210	*e*Pn	Pn	08 40 44.1	-1.4
THZ				*e*Sn	Sn	08 43 05.9	-5.8
KHZ	Kahutara	13.56	207	*e*Pn	Pn	08 40 45.5	-3.8
LTZ	Lake Taylor	14.38	209	*e*Pn	P	08 41 04.1	-2.2
OXZ	Oxford	14.93	209	*e*Pn	P	08 41 11.4	-0.9
MQZ	McQueen's Vall	15.00	206	*e*P	P	08 41 11.7	-1.4
	17nm,1.1s						
RPZ	Rata Peaks	15.66	210	*e*Pn	P	08 41 20.9	+0.4
	7.8nm,1.0s						
RPZ				*e*Sn	Sn	08 43 55.6	-14
RPZ	Rata Peaks	15.66	210	P	Pn	08 41 16.2	-0.9
	0.2nm,0.3s,baz=329,slow=5.9,SNR=2.7						
RPZ				S	Sn	08 43 55.6	-14
	1.2nm,0.3s,baz=139,slow=22,SNR=10						
DZM	Mont Dzumac	16.16	298	*e*P	P	08 41 29.5	+3.3
	57nm,1.4s						
DZM				*e*LR	LR	08 45 14.3	
	comp=Z,470nm,25.8s						
DZM	Mont Dzumac	16.16	298	LR	LR	08 46 19.0	
	comp=Z,247nm,20.5s,baz=151,slow=32						
ODZ	Otahua Downs	16.91	208	*e*Pn	P	08 41 34.3	0.0
	8.4nm,1.2s						
TBI	Tubuai	26.55	81	*e*LR	LR	08 49 42.0	
	comp=Z,194nm,30.5s						
TBI	Tubuai	26.55	81	*e*T	T	09 10 42.7	
	27nm,0.3s						
PAE	Paea	29.01	70	*e*T	T	09 13 48.5	
	12nm,0.3s						
PPT2	Papeete2	29.05	70	*e*LR	LR	08 51 01.8	
	comp=Z,167nm,26.8s						
PPT2	Papeete2	29.05	70	*e*T	T	09 13 52.6	
	9.1nm,0.3s						
HNR	Honiara	29.29	311	LR	LR	08 52 20.4	
	comp=Z,72nm,20.1s,baz=98,slow=30						
VAH	Vaihoa	31.89	68	*e*T	T	09 17 24.9	
	103nm,0.2s						
CTA	Charters Tower	33.66	280	P	P	08 44 16.9	+0.6
	8.8nm,0.9s,baz=93,slow=10,SNR=10						
CTAO	Charters Tower	33.66	280	*e*P	P	08 44 18.6	+2.3
	11nm,1.1s						
STKA	Stephens Creek	34.28	257	*e*P	P	08 44 23.8	+2.3
	1.6nm,0.6s						
STKA	Stephens Creek	34.28	257	P	P	08 44 23.4	+1.9
	5.1nm,0.4s,baz=96,slow=9.2,SNR=13						
STKA				LR	LR	08 56 24.4	
	comp=Z,65nm,21.1s,baz=29,slow=33						
BBOO	Buckleboo	38.77	254	*e*P	P	08 45 00.8	+1.1
	11nm,1.1s						
COEN	Coen	39.16	286	*e*P	P	08 44 59.3	-3.9
	7.0nm,1.0s						
AS01	Alice Springs	42.90	267	*e*P	P	08 45 34.2	+0.3
AS31	Alice Springs	42.94	267	*e*P	P	08 45 34.0	-0.2
	0.9nm,0.8s						
ASAR	Alice Springs	42.94	267	P	P	08 45 34.4	+0.2
	1.0nm,0.3s,baz=107,slow=7.5,SNR=48						
ASAR				PcP	PcP	08 47 23.3	-1.0
	0.5nm,0.7s,baz=116,slow=4.4,SNR=3.0						
ASAR				ScP	ScP	08 51 09.1	-2.6
	0.7nm,0.7s,baz=121,slow=3.3,SNR=6.4						
ASAR				LR	LR	09 02 38.7	
	comp=Z,72nm,19.9s,baz=104,slow=35						
WB2	Warramunga Arr	43.93	272	*e*P	P	08 45 42.3	+0.1
	6.6nm,0.7s						
WRAB	Tennant Creek	43.94	272	*e*P	P	08 45 42.4	+0.1
	5.9nm,0.8s						
WR1	Warramunga Arr	43.94	272	*e*P	P	08 45 42.2	-0.1
	5.8nm,0.8s						
WRA	Warramunga Arr	43.94	272	P	P	08 45 42.2	-0.1
	3.7nm,0.3s,baz=110,slow=8.1,SNR=169						
WRA				LR	LR	09 04 10.8	
	comp=Z,59nm,18.4s,baz=80,slow=36						
FORT	Forrest	45.85	255	*e*P	P	08 45 58.3	+0.9
	10nm,0.8s						
FITZ	Fitzroy Crossi	52.20	270	P	P	08 46 46.5	+0.4
	3.5nm,0.9s,baz=113,slow=7.7,SNR=3.6						
CASY	Casey	54.92	208	*e*P	P	08 47 05.6	+0.3
	17nm,1.1s						
SOEI	Soe	57.22	278	*e*P	P	08 47 25.9	+3.2
	14nm,0.9s						
BATI	Baumata	57.51	278	LR	LR	09 12 32.5	
	comp=Z,99nm,18.2s,baz=52,slow=36						
MMRI	Maumere	59.51	278	*e*P	P	08 47 37.0	-1.5
	138nm,1.1s						
QSPA	South Pole Qui	59.54	180	*e*P	P	08 47 40.4	+2.2
	5.0nm,0.8s						
QSPA	South Pole Qui	59.54	180	P	P	08 47 40.7	+2.5
	4.7nm,0.9s,baz=333,slow=1.6,SNR=18						
PETK	Petropavlovsk-	85.93	346	P	P	08 50 14.8	+0.6
	1.8nm,0.6s,baz=126,slow=8.8,SNR=6.5						
PEA1	Petropavlovsk-	85.94	346	*e*P	P	08 50 14.8	+0.5
NVAR	Mina Array Bea	88.47	43	P	P	08 50 27.6	+0.4
	0.6nm,0.8s,baz=210,slow=7.1,SNR=3.4						
YLE	Yale	120.25	57	*e*PKPdf	PKiKP	08 56 25.6	+0.1
GAR	Garm	124.29	299	*e*PKPdf	PKPdf	08 56 33.2	-0.3
ARA0	ARCESS Array S	138.72	348	*e*PKPdf	PKiKP	08 57 02.5	+0.7
ARCES	ARCESS Array B	138.72	348	PKP	PKiKP	08 57 02.5	+0.7
	5.8nm,1.0s,baz=29,slow=2.1,SNR=8.8						
KBZ	Khabaz	145.07	304	PKP	PKPab	08 57 11.3	0.0
	1.8nm,0.7s,baz=278,slow=1.7,SNR=6.2						
FIA0	FINESS Array S	145.25	340	*e*PKPbc	PKPbc	08 57 09.1	-2.1
FINES	FINESS Array B	145.25	340	PKPbc	PKPbc	08 57 09.1	-2.1
	5.7nm,0.4s,baz=53,slow=4.3,SNR=48						
NC405	NORSAR Array S	148.75	351	*e*PKPbc	PKiKP	08 57 23.6	+0.9
NB2	NORSAR Subarra	148.89	351	PKP	PKPbc	08 57 20.3	-1.3
	comp=Z,0.9nm,0.7s,baz=17,slow=2.6						
NB200	NORSAR Array S	148.89	351	*e*PKPdf	PKPdf	08 57 19.6	+1.9
NOA	NORSAR Array B	148.89	351	PKPbc	PKPdf	08 57 19.6	+1.9
	comp=Z,0.9nm,0.6s,baz=16,slow=4.3,SNR=5.6						

NC602	NORSAR Array S	149.14	351	ePKPdf	PKPdf	08 57 18.2	+0.2
AKASG	Malin Array Be	151.33	322	PKPbc	PKPbc	08 57 26.6	-1.2
	comp=Z,0.7nm,0.4s,baz=52,slow=3.1,SNR=4.7						
AK11	Malin Array Si	151.38	322	ePKPbc	PKPbc	08 57 27.5	-0.4
BR101	Keskin Array S	152.53	298	ePKPbc	PKPbc	08 57 30.7	-0.4
BRTR	Keskin Array B	152.53	298	PKPbc	PKPbc	08 57 30.7	-0.4
	comp=Z,0.5nm,0.5s,baz=142,slow=4.8,SNR=3.4						
ROSA	Rosais	154.06	64	ePKPdf	PKPdf	08 57 28.4	+2.2
TOA0	Torodi Ar. Sit	162.66	180	ePKPab	PKPab	08 58 25.7	+0.2
TORD	Torodi Ar. Bea	162.66	180	PKPab	PKPab	08 58 25.9	+0.4
	comp=Z,0.8nm,0.7s,baz=169,slow=5.0,SNR=4.7						
TOA1	Torodi Ar. Sit	162.67	180	ePKPab	PKPab	08 58 25.9	+0.4

WEL 22 08:44:52.7,39°.3S±0°.8×17°7E±°,h19^{km}±2^{km},ML4.0/13, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.22	328	P	Pg	08 44 58.6	+0.5
WHHZ				S	Sg	08 45 03.6	+1.8
ARHZ	Aropaoanui	0.30	270	P	Pb	08 45 00.1	+0.5
ARHZ				S	Sn	08 45 06.3	-1.9
KNZ	Kokohu	0.33	43	P	Pb	08 45 00.7	+0.6
KNZ				S	Sb	08 45 06.7	+1.6
RAHZ	Arahi	0.42	326	P	Pb	08 45 01.7	+0.1
RAHZ				S	Sb	08 45 09.2	+1.5
MHGZ	Mahia Peninsul	0.42	75	P	Pb	08 45 02.6	+0.9
MHGZ				S	Sn	08 45 10.5	-0.6
CKHZ	Cape Kidnapper	0.46	211	P	Pn	08 45 03.4	-1.0
NMHZ	Naumai	0.48	290	P	Pb	08 45 03.0	+0.3
NMHZ				S	Sn	08 45 11.2	-1.4
SNGZ	Shannon Statio	0.48	356	P	Pb	08 45 03.0	+0.3
SNGZ				S	Sn	08 45 11.2	-1.5
PRGZ	Paritu Road	0.52	49	P	Pb	08 45 03.9	+0.6
PRGZ				S	Sn	08 45 13.5	0.0
MCHZ	McNeill Hill	0.56	251	P	Pg	08 45 04.9	+0.9
MTHZ	Maungataniwha	0.59	314	P	Pb	08 45 04.3	-0.2
MTHZ				S	Sg	08 45 13.4	+0.9
RIGZ	Rimuhau	0.63	28	P	Pg	08 45 05.6	+0.3
RIGZ				S	Sn	08 45 16.3	0.0
KAHZ	Kahuranaki	0.66	217	P	Pg	08 45 06.3	+0.5
KAHZ				P	Pg	08 45 06.3	+0.5
KAHZ				S	Sn	08 45 17.6	+0.5
BKZ	Black Stump Fm	0.70	278	P	Pb	08 45 06.4	0.0
BKZ				S	Sg	08 45 16.8	+0.8
RTZ	Ruatahuna	0.72	334	P	Pb	08 45 06.5	-0.3
RTZ				S	Sg	08 45 17.4	+0.8
KWHZ	Kaweka Forest	0.76	258	P	Pg	08 45 07.6	-0.1
KWHZ				S	Sn	08 45 19.3	-0.3
RAGZ	Rawiri	0.77	2	P	Pb	08 45 07.7	+0.1
RAGZ				S	Sn	08 45 19.4	-0.4
PXZ	Pawanui	0.86	208	P	Pb	08 45 08.2	-0.9
PXZ				P	Pg	08 45 08.3	-1.4
MRHZ	Matea Rd	0.87	299	P	Pb	08 45 09.2	-0.1
TKGZ	Te Karaka	0.90	24	P	Pb	08 45 09.2	-0.5
TKGZ				P	Pg	08 45 09.3	-1.0
MUGZ	Murupara	0.92	328	P	Pb	08 45 09.7	-0.5
MWZ	Matawai	0.94	7	P	Pb	08 45 09.5	-1.0
CNGZ	Carnagh Statio	1.01	40	P	Pb	08 45 11.0	-0.6
URZ	Urewera	1.03	348	P	Pb	08 45 11.1	-0.8
BHHZ	Black Hill Sta	1.05	257	P	Pb	08 45 11.6	-0.8
HATZ	Hinemaiaia	1.07	290	P	Pb	08 45 12.6	-0.1
ALRZ	Allen Road	1.07	311	P	Pb	08 45 12.1	-0.7
WPHZ	Waipukurau	1.08	222	P	Pb	08 45 11.7	-1.2
PRRZ	Plateau Road	1.09	314	P	Pb	08 45 12.1	-0.9
RRRZ	Republican Roa	1.15	323	P	Pn	08 45 13.1	-0.7
PRHZ	Porangahau	1.16	210	P	Pn	08 45 12.4	-1.5
TWGZ	Tauwhareparae	1.18	23	P	Pn	08 45 13.4	-1.0
WPRZ	Whakapapatarin	1.21	308	P	Pn	08 45 14.2	-0.5
RITZ	Rihia Road	1.22	283	P	Pn	08 45 14.8	-0.1
HRRZ	Handcock Road	1.23	315	P	Pn	08 45 14.0	-0.9
TARZ	Mount Tarawera	1.24	326	P	Pn	08 45 14.4	-0.7
EDRZ	Edgecumbe	1.26	336	P	Pn	08 45 14.6	-0.9
WHTZ	Whakaora	1.26	298	P	Pn	08 45 15.3	-0.2
MOVZ	Moawhango	1.27	263	P	Pn	08 45 15.5	-0.2
HSRZ	Hossack Road	1.30	317	P	Pn	08 45 15.4	-0.6
RUGZ	Raukumara Rang	1.32	10	P	Pn	08 45 15.1	-1.2
TUVZ	Tukino	1.34	269	P	Pn	08 45 16.4	-0.2
KATZ	Kakaramea	1.35	282	P	Pn	08 45 16.5	-0.2
GRRZ	Galatos Road	1.35	312	P	Pn	08 45 16.2	-0.5
KRVZ	Karewarewa	1.37	277	P	Pn	08 45 16.9	0.0
PUZ	Puketiti	1.37	30	P	Pn	08 45 15.4	-1.6
ANWZ	Angora Road	1.38	210	P	Pn	08 45 14.4	-2.7
ANWZ				P	Pb	08 45 15.3	-2.7
NGZ	Ngauruhoe	1.39	273	P	Pn	08 45 17.4	+0.1
DVHZ	Dannevirke	1.40	222	P	Pn	08 45 15.6	-1.6
WHVZ	Whangaehu Hut	1.40	269	P	Pn	08 45 17.0	-0.5
OMRZ	Omania	1.40	325	P	Pn	08 45 16.6	-0.7
WATZ	Wairara	1.40	293	P	Pn	08 45 16.5	-0.8
WTVZ	West Tongariro	1.40	276	P	Pn	08 45 17.7	+0.2
FWVZ	Far West T-bar	1.42	270	P	Pn	08 45 17.2	-0.6
TRVZ	Turoa	1.43	268	P	Pn	08 45 17.4	-0.4
COVZ	Chateau Observ	1.43	272	P	Pn	08 45 18.0	+0.2
KUTZ	Kaahu Road	1.45	302	P	Pn	08 45 17.3	-0.6
PKGZ	Pakihiroa	1.48	22	P	Pn	08 45 17.1	-1.3
MTVZ	Mangateitei	1.49	265	P	Pn	08 45 18.5	-0.1
TWVZ	Taurewa	1.53	277	P	Pn	08 45 18.9	-0.2
HAZ	Te Kaha	1.54	12	P	Pn	08 45 18.0	-1.1
OPRZ	Ohinepanea	1.56	335	P	Pn	08 45 18.2	-1.3
WMGZ	Waiomatatini S	1.66	30	P	Pn	08 45 19.6	-1.2
BFZ	Birch Farm	1.66	211	P	Pn	08 45 18.5	-2.4
PRWZ	Pori Road	1.69	220	P	Pn	08 45 19.8	-1.4
TLZ	Tolley Road	1.72	302	P	Pn	08 45 20.8	-1.0
MXZ	Matakaoa Point	1.85	23	P	Pn	08 45 22.5	-1.0
TIWZ	Tintock	1.90	217	P	Pn	08 45 22.3	-1.9
MRZ	Mangatainoka R	1.97	224	P	Pn	08 45 23.2	-1.9
TMWZ	Te Maipa	2.17	211	P	Pn	08 45 24.9	-2.9
HOWZ	Holdsworth Sta	2.17	221	P	Pn	08 45 25.7	-2.3
MTW	Mount Morrison	2.38	217	P	Pn	08 45 27.6	-3.2
KIW	Kapiti Island	2.48	229	P	Pn	08 45 30.4	-1.7
CAW	Cannon Point	2.56	223	P	Pn	08 45 31.1	-2.1

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*IDC **22** 08:46:02.4±1.8, 19°.54N×64°.25W, h0^{km}, mb3.5/4, mb1 3.9/5, mb1mx3.5/40, mbtmp3.6/5, ML3.3/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/38, Error ellipse: s-maj=46.2km s-min=26.3km az=87.0*

*ISCJB **22** 08:46:05.2±0.8, 19°.64N±0°.04×64°.44W±0°.06, h27^{km}, mb3.5/3, MS3.6/1, Error ellipse: s-maj=8.7km s-min=5.8km az=166.5*

*NEIC **22** 08:46:06.2±0.0, 19°.59N×64°.32W, h66^{km}, MD3.4(RSPR), After RSPR.*

*RSPR **22** 08:46:06.2, 19°.59N×64°.32W, h66^{km}±6^{km}, MD3.4/6*

ISC 22 08:46:07.1±1.0, 19°.54N±0°.06×64°.43W±0°.07, h27^{km}, n41, σ0s.74/48, mb3.7/3, 19C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.81	174	⇑eP	Pb	08 46 22.2	-0.3
ABV	Anegada	0.81	174	eS	Sn	08 46 34.4	+0.6
ABVI	Anegada Island	0.81	174	⇑eP	Pb	08 46 22.2	-0.3
ABVI				eS	Sn	08 46 34.4	+0.6
TBVI	Tortola	1.13	189	⇓eP	Pn	08 46 26.3	-0.8
TBVI	Tortola	1.13	189	⇓eP	Pn	08 46 26.3	-0.8
STVI	Saint Thomas	1.28	203	⇓eP	Pn	08 46 28.5	-0.7
STVI	Saint Thomas	1.28	203	eS	Sn	08 46 45.9	+0.5
STVI	Saint Thomas	1.28	203	⇓eP	Pn	08 46 28.5	-0.7
STVI				eS	Sn	08 46 45.9	+0.5
CUPR	Culebra, Puert	1.47	214	⇓eP	Pn	08 46 31.2	-0.6
CUPR	Culebra, Puert	1.47	214	eS	Sb	08 46 51.1	-0.8
CUPR	Culebra, Puert	1.47	214	⇓eP	Pn	08 46 31.2	-0.6
CUPR				eS	Sb	08 46 51.1	-0.8
MTP	Monte Pirata	1.79	217	⇑eP	Pn	08 46 36.0	-0.2
MTP	Monte Pirata	1.79	217	eS	Sn	08 46 58.8	+0.8
MTP	Monte Pirata	1.79	217	⇑eP	Pn	08 46 36.0	-0.2
MTP				eS	Sn	08 46 58.8	+0.8
CBYP	Canovanas	1.85	227	⇑eP	Pn	08 46 36.2	-0.9
CBYP	Canovanas	1.85	227	⇑eP	Pn	08 46 36.4	-0.7
CBYP	Canovanas	1.85	227	eS	Sn	08 47 00.3	+0.7
CBYP	Canovanas	1.85	227	⇑eP	Pn	08 46 36.4	-0.7
CBYP				eS	Sn	08 47 00.3	+0.7
HUMP	Col San Antoni	1.94	224	⇑eP	Pn	08 46 37.7	-0.5
HUMP				eS	Sn	08 47 02.1	+0.5
HUMP	Col San Antoni	1.94	224	⇑eP	Pn	08 46 38.1	-0.1
HUMP	Col San Antoni	1.94	224	⇑eP	Pn	08 46 37.7	-0.5
HUMP				eS	Sn	08 47 02.5	+0.9
SJG	San Juan	2.16	229	⇑eP	Pn	08 46 40.9	-0.4
SJG	San Juan	2.16	229	Pn	Pn	08 46 40.8	-0.6
	8.7nm,0.3s,baz=71,slow=14,SNR=11						
SJG				LR	LR	08 48 01.2	
	comp=Z,151nm,18.6s,baz=98,slow=52						
EMPR	Esperanza - Ma	2.25	242	⇑eP	Pn	08 46 42.2	-0.3
EMPR	Esperanza - Ma	2.25	242	⇑eP	Pn	08 46 42.2	-0.3
CELP	Cerrillos	2.50	235	⇑eP	Pn	08 46 45.6	-0.4
CELP	Cerrillos	2.50	235	⇑eP	Pn	08 46 45.6	-0.4
OBIP	Obispado Ponce	2.54	235	⇑eP	Pn	08 46 46.3	-0.3
OBIP	Obispado Ponce	2.54	235	⇑eP	Pn	08 46 46.3	-0.3
LSP	Las Mesas	2.86	242	⇑eP	Pn	08 46 51.0	0.0
LSP	Las Mesas	2.86	242	⇑eP	Pn	08 46 51.0	0.0
DR12	Loma Pena Alta	4.74	262	⇓eP	Pn	08 47 16.8	-0.1
DR12	Loma Pena Alta	4.74	262	⇓eP	Pn	08 47 16.8	-0.1
SDDR	Presa de Saban	6.51	266	ePn	Pn	08 47 40.9	-0.2
	39nm,0.5s						
SDDR				eSn	Sn	08 48 52.1	-2.4
ROSC	El Rosal	17.50	215	P	P	08 50 12.6	+1.9
	1.1nm,0.3s,baz=311,slow=20,SNR=3.9						
ROSC				LR	LR	08 57 22.1	
	comp=Z,29nm,19.1s,baz=53,slow=39						
PTGA	Pitinga	20.61	167	P	P	08 50 43.3	-1.1
	0.7nm,0.3s,baz=120,slow=20,SNR=3.6						
TXAR	Lajitas Array	36.89	293	P	P	08 53 15.0	+1.3
	0.5nm,0.8s,baz=97,slow=10,SNR=4.5						
YKA	Yellowknife Ar	54.91	334	P	P	08 55 35.0	-0.1
YKA	Yellowknife Ar	54.91	334	P	P	08 55 35.0	-0.1
	0.5nm,0.6s,baz=109,slow=7.4,SNR=9.9						
ILAR	Eielson Array	69.31	333	P	P	08 57 11.4	-0.3
	0.4nm,0.7s,baz=107,slow=4.6,SNR=5.5						
VRAC	Vranov	69.65	44	LR	LR	09 22 32.5	
	comp=Z,30nm,19.1s,baz=274,slow=32						

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*ISK **22** 08:51:31.5, 38°.69N×39°.95E, h5^{km}, ML2.4/7*

*DDA **22** 08:51:32.1, 38°.68N×39°.91E, h7^{km}±2^{km}, ML3.0*

*ISCJB **22** 08:51:34.0±0.5, 38°.70N±0°.02×40°.00E±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=3.3km az=39.2*

ISC 22 08:51:33.0±1.1, 38°.69N±0°.02×39°.95E±0°.03, h12^{km}±10^{km}, n23, σ1s.46/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HANI	Diyarbakir_Han	0.45	128	iP	Pb	08 51 41.8	-1.1
HANI				iS	Sb	08 51 49.3	-0.2
TNCL	Tunceli-Merkez	0.53	323	iP	Pn	08 51 46.1	-0.5
TNCL				iS	Sn	08 51 53.5	-2.0
BGOL	Bingol	0.64	62	iP	Pb	08 51 45.5	-0.7
BGOL				iS	Sb	08 51 55.1	0.0
BGOL				IAML_P			
	comp=Z,757nm,0.1s						
BNGB	Bingl	0.65	62	PG	Pb	08 51 45.2	-1.1
BNGB				SG	Sb	08 51 55.2	-0.1
DIYA	Diyarbakir	0.78	170	iP	Pn	08 51 49.0	-0.9
DIYA				iS	Sn	08 52 01.9	+0.5
DIYA				IAML_P			
	comp=Z,3μm,0.1s						
ELZG	Elazig	0.78	256	iP	Pg	08 51 46.8	-1.3
ELZG				iS	Sn	08 52 02.6	+0.8
ELZG				IAML_P			
	comp=Z,1μm,0.1s						
YEDI	Yedisu-Bingol	0.88	32	PG	Pb	08 51 49.4	-0.9
YEDI				SG	Sb	08 52 02.7	+0.6
ERZN	Erzincan	0.92	349	PG	Pb	08 51 50.2	-0.7
ERZN				SG	Sb	08 52 03.6	+0.5
SVAN	Silvan-Diyarba	1.12	118	PN	Pn	08 51 54.2	-0.3
SVAN				SN	Sn	08 52 10.7	+0.8
SVAN	Silvan-Diyarba	1.12	118	iP	Pn	08 51 55.0	+0.4
SVAN				iS	Sn	08 52 10.7	+0.8
SVAN				IAML_P			
	comp=Z,2μm,0.2s						
REFA	Refahiye_ERZN	1.16	308	iP	Pn	08 52 01.0	+5.7
REFA				IAML_P			
	comp=Z,261nm,0.1s						
KEMA	Kemaliye	1.27	298	iP	Pg	08 51 55.3	-2.2
KEMA				iS	Sn	08 52 15.0	+1.1
MAZI	Mazidag	1.29	162	PN	Pg	08 51 56.9	-0.8
URFA	Urfa	1.53	216	PN	Pg	08 52 01.2	-1.2
URFA				SN	Sg	08 52 22.7	+0.5
KELT	Kelkit	1.56	340	iP	Pg	08 52 02.9	0.0
KELT				iS	Sg	08 52 23.2	+0.2
KELT				IAML_P			
	comp=Z,390nm,0.2s						
HEKM	Malatya_Hekimh	1.57	278	iP	Pb	08 52 01.1	-1.0
HEKM				iS	Sg	08 52 26.1	+2.7
HEKM				IAML_P			
	comp=Z,612nm,0.2s						
GURO	Guroymak-BITLI	1.64	94	PN	Pb	08 52 02.6	-0.6
AKCD	Akcadag	1.64	257	iP	Pn	08 52 01.6	-0.2
AKCD				iS	Sg	08 52 30.6	+4.9
SANL	SANLIURFA_Merk	1.69	207	iP	Pb	08 52 03.2	-0.9
SANL				iS	Sg	08 52 28.2	+0.8
SANL				IAML_P			
	comp=Z,909nm,0.1s						
BAYT	Aydıntepe-Bayb	1.71	5	PN	Pb	08 52 03.9	-0.6
CUKAN	kangal_SIVAS	2.03	289	iP	Pg	08 52 10.9	-1.1
CUKAN				iS	Sg	08 52 41.8	+3.4
SUSE	Susehri	2.03	319	iP	Pg	08 52 10.3	-1.7
AKDM	Akdamar-Van	2.40	98	PN	Pn	08 52 14.0	+1.6

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*NNC **22** 09:01:19.5±2.3, 53°.48N×87°.37E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=21.5km s-min=14.8km az=178.0, Suspected Mining explosion.*

KRAR 22 09:01:16.0±0.2, 53°.63N×87°.94E, M2.4, 3C-6D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	6.43	247	⇓Pn	Pn	09 02 50.3	-1.6
	1.7nm,0.6s						
KURK				⇑Sn	Sn	09 04 01.2	-4.8
	2.9nm,0.9s						
KURK				⇓Lg	Lg	09 04 35.4	
	14nm,0.9s						
KURBB	Kurchatov Arra	6.53	246	⇓Pn	Pn	09 02 52.0	-1.3
	1.9nm,0.3s						
KURBB				⇓Sn	Sn	09 04 03.1	-5.2
	5.8nm,0.7s						
KURBB				⇑Lg	Lg	09 04 37.1	
	14nm,0.9s						
MK31	Makanchi Array	7.74	210	⇓Pn	Pn	09 03 09.6	-0.3
	0.6nm,0.6s,baz=28,slow=13,SNR=23						
MK31				⇑Sn	Sn	09 04 35.3	-3.0
	1.8nm,0.8s,baz=29,slow=25,SNR=5.4						
MK31				⇓Lg	Lg	09 05 17.0	
	1.8nm,0.6s,baz=36,slow=29,SNR=6.0						

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*NIED **22** 09:05:00, 37°.50N×142°.10E, h23^{km}, Mw3.5 Best double couple: M$_0$2.03000×10^{14} NP1:φ$_s$38.00000°, δ28.00000°, λ-67.00000°. NP2:φ$_s$192.00000°, δ65.00000°, λ-102.00000°.*

*ISCJB **22** 09:05:28.9±1.3, 37°.47N±0°.05×142°.13E±0°.07, h17^{km}±7^{km}, mb3.5/3, Error ellipse: s-maj=11.0km s-min=7.1km az=35.1*

*JMA **22** 09:05:30.3±0.1, 37°.50N×142°.08E, h29^{km}±3^{km}, M3.8*

*IDC **22** 09:05:45.3±1.5, 35°.15N×136°.41E, h0^{km}, mb3.4/3, mb1 3.4/4, mb1mx3.2/58, mbtmp3.2/4, ML1.8/1, Error ellipse: s-maj=34.1km s-min=30.9km az=107.0*

ISC 22 09:05:27.7±2.3, 37°.48N±0°.06×142°.09E±0°.08, h13^{km}±12^{km}, n18, σ1s.60/28, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.97	330	P	Pn	09 05 47.4	+0.4
JIKH				eS	Sb	09 05 59.3	+0.2
JFK	Kawauchi	0.97	264	P	Pn	09 05 47.8	+0.7
JFK				eS	Sb	09 06 00.1	+0.9
ONAJ	Iwakimizuishiy	1.09	250	P	Pn	09 05 49.5	+0.7
ONAJ				eS	Sb	09 06 03.1	+0.4
JMM	Marumori	1.10	291	P	Pn	09 05 49.7	+0.9
JMM				eS	Sb	09 06 03.2	+0.4
JIO	Ouri	1.14	329	P	Pn	09 05 50.1	+0.7
JFT	Otama	1.39	272	P	Pg	09 05 54.8	+0.3
JFT				eS	Sg	09 06 12.3	-0.3
JOU	Okura	1.43	309	P	Pg	09 05 55.1	-0.1
JOU				eS	Sb	09 06 13.1	+0.6
JMK	Ichinoseki	1.62	335	P	Pb	09 05 57.5	-0.1
JYS	Shirataka	1.77	296	P	Pb	09 06 00.2	+0.2
JYS				eS	Sb	09 06 22.7	+0.7
JFY	Yanaizu	1.90	269	P	Pb	09 06 01.9	-0.3
JFY				S	Sb	09 06 25.8	-0.1
JYK	Kaneyama	1.98	317	P	Pb	09 06 02.7	-0.9
JOM	Ohasama	2.09	343	P	Pb	09 06 04.3	-1.2
JYA	Atsumi	2.18	301	P	Pb	09 06 06.1	-0.9
MJAR	Matsushiro Arr	3.24	254	Pn	Pn	09 06 21.2	+2.9
	0.4nm,0.3s,baz=257,slow=17,SNR=21						
MJAR				Sn	Sn	09 06 51.4	-5.5
	0.4nm,0.3s,baz=83,slow=2.7,SNR=4.8						
MAT	Matsushiro	3.24	254	P	Pb	09 06 22.9	-2.2
MAT				eS	Sn	09 06 59.4	+2.6
MKAR	Makanchi Array	44.34	302	P	P	09 13 36.3	-1.2
	0.2nm,0.6s,baz=88,slow=7.8,SNR=2.3						
KURBB	Kurchatov Arra	46.16	308	P	P	09 13 53.3	+1.5
	0.6nm,0.4s,baz=82,slow=8.1,SNR=4.1						
WRA	Warramunga Arr	57.57	189	P	P	09 15 17.2	0.0
	0.2nm,0.4s,baz=6.8,slow=7.2,SNR=5.3						

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*ISCJB **22** 09:08:29.8±0.5, 2°.71S±0°.08×103°.53E±0°.08, h300^{km}, mb3.2/5, Error ellipse: s-maj=13.2km s-min=8.5km az=136.1*

*DJA **22** 09:08:29.7±0.7, 3°S±6°×10°3E±°, h312^{km}±7^{km}, M3.9/11, mb4.2/2, MLv3.7/11*

*IDC **22** 09:08:40.2±7.7, 2°.46S×104°.08E, h391^{km}±99^{km}, mb2.6/4, mb1 2.8/4, mb1mx2.6/50, mbtmp3.4/4, Error ellipse: s-maj=51.4km s-min=16.0km az=41.0*

ISC 22 09:08:30.3±0.9, 2°.76S±0°.08×103°.50E±0°.09, h300^{km}, n18, σ1s.01/18, mb3.1/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHSI	Lahat	1.06	179	P	Pn	09 09 12.3	+1.3
PMBI	Palembang	1.28	97	P	Pn	09 09 12.3	+0.1
MASI	Maura Aman, Be	1.31	253	P	Pn	09 09 13.5	+1.1
MNAI	Manna	1.68	199	P	Pn	09 09 15.0	+0.3
MNAI				S	S	09 09 49.4	-0.7
MDSI	Maura Dua	1.84	158	P	Pn	09 09 16.5	+0.6
MDSI				S	S	09 09 52.9	+0.7
KRJI	Kerinci	2.14	288	P	Pn	09 09 19.4	+1.0
DSRI	Dabo	2.51	25	P	Pn	09 09 22.8	+1.3
KASI	Kota Agung	2.92	160	P	Pn	09 09 25.6	+0.3
PPSI	Pulau Pagai	3.49	270	P	Pn	09 09 31.7	+0.6
SISI	Saibi	4.63	288	P	Pn	09 09 42.7	-1.0
PBSI	Pulau Batu	5.87	297	P	Pn	09 09 56.7	-1.5
CMJI	Cimerak	7.01	136	P	Pn	09 10 10.3	-1.6
PALK	Pallekele	24.84	294	P	P	09 13 33.3	+6.9
	6.2nm,0.4s,baz=125,slow=1.5,SNR=5.3						
WRA	Warramunga Arr	34.61	122	P	P	09 14 51.4	-0.5
	0.6nm,1.0s,baz=303,slow=9.9,SNR=8.9						
ASAR	Alice Springs	36.00	128	P	P	09 15 04.0	+0.3
	0.3nm,0.4s,baz=299,slow=7.6,SNR=7.4						
SONM	Songino Array	50.45	3	P	P	09 16 59.0	+0.8
	0.2nm,0.4s,baz=180,slow=7.2,SNR=3.0						
MKAR	Makanchi Array	52.77	342	P	P	09 17 14.1	-1.1
	0.2nm,0.6s,baz=152,slow=6.5,SNR=2.1						
TXAR	Lajitas Array	143.06	42	PKP	PKPbc	09 27 27.5	+0.3
	0.2nm,0.6s,baz=351,slow=4.7,SNR=2.4						

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*IDC **22** 09:08:42.9±1.8, 51°.79N×171°.18W, h0^{km}, mb3.7/2, mb1 3.8/5, mb1mx3.3/60, mbtmp3.7/5, ML3.0/3, Error ellipse: s-maj=65.5km s-min=25.2km az=145.0*

*NEIC **22** 09:08:49.2±0.0, 51°.82N×171°.61W, h28^{km}, mb4.1/3, ML3.6(AEIC), After AEIC.*

*ISCJB **22** 09:08:50.1±0.6, 52°.02N±0°.08×171°.72W±0°.05, h44^{km}, Error ellipse: s-maj=11.3km s-min=3.6km az=163.1*

ISC 22 09:08:50.6±1.0, 51°.9N±0°.1×171°.67W±0°.05, h44^{km}, n40, σ1s.54/40, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.54	284	ePn	Pn	09 09 15.9	+0.3
KOKL	Mount Kliuchef	1.61	285	ePn	Pn	09 09 17.1	+0.5
NIKH	Nikolski High	2.01	58	ePn	Pn	09 09 22.0	-0.1
NIKH				eSn	Sn	09 09 46.4	+0.4
OKAK	Okmok	2.60	49	ePn	Pn	09 09 29.4	-0.8
GSIG	Igitkin Island	2.63	273	P	Pn	09 09 30.9	+0.4
OKTU	Okmok Mt. Tuli	2.65	55	ePn	Pn	09 09 32.0	+1.2
ADK	Adak	3.11	271	ePn	Pn	09 09 37.5	+0.5
ADK				eSn	Sn	09 10 12.5	-0.3
KIWB	Kanaga Island	3.40	271	ePn	Pn	09 09 41.7	+0.7
KIWB				eSn	Sn	09 10 21.4	+1.4
MREP	Makushin Rep't	3.53	56	P	Pn	09 09 43.9	+1.0
MSW	Makushin Switc	3.56	54	ePn	Pn	09 09 43.9	+0.6
MSW				eSn	Sn	09 10 26.5	+2.3
MTBL	Makushin Table	3.65	54	ePn	Pn	09 09 45.9	+1.4
UNV	Unalaska Valle	3.67	56	ePn	Pn	09 09 45.9	+1.1
UNV				eSn	Sn	09 10 28.2	+1.5
ZRO	Akutan Zero	4.06	56	ePn	Pn	09 09 51.4	+1.2
AHB	Akutan Harbor	4.16	56	P	Pn	09 09 52.9	+1.4
AKUT	Akutan	4.19	56	ePn	Pn	09 09 53.3	+1.4
SPIA	Saint Paul Isl	5.32	8	ePn	Pn	09 10 08.3	+0.9
SPIA				eSn	Sn	09 11 07.7	+0.4
FALS	False Pass	5.74	56	ePn	Pn	09 10 15.8	+2.7
SDPT	Sand Point	7.48	58	ePn	Pn	09 10 37.3	+0.2
CHGN	Chignik	8.93	55	ePn	Pn	09 10 55.5	-1.3
GAMB	Gambell	11.88	360	ePn	Pn	09 11 37.1	0.0
OHAK	Old Harbor	11.89	56	ePn	Pn	09 11 37.5	+0.1
KDAK	Kodiak Island	12.44	54	ePn	Pn	09 11 46.1	+1.3
KDAK	Kodiak Island	12.44	54	Pn	Pn	09 11 42.0	-2.7
	0.2nm,0.3s,baz=229,slow=9.3,SNR=1.9						
SVW2	Sparrevohn	12.74	38	ePn	Pn	09 11 52.1	+3.2
ANM	Nome	13.09	12	ePn	Pn	09 11 55.4	+1.8
SEW	Seward	14.81	48	ePn	Pn	09 12 14.2	-2.8
RC01	Rabbit Creek A	15.11	44	ePn	Pn	09 12 17.9	-3.0
	12nm,1.4s						
CAST	Castle Rocks	15.48	34	ePn	Pn	09 12 24.4	-1.2
GHO	Glory Hole Cre	15.78	43	ePn	Pn	09 12 30.1	+0.5
	12nm,1.5s						
ILAR	Eielson Array	18.12	35	P	P	09 12 56.5	-2.1
	0.1nm,0.3s,baz=226,slow=9.7,SNR=4.6						
PETK	Petropavlovsk-	18.61	286	P	Pn	09 13 04.5	-0.2
	0.1nm,0.3s,baz=90,slow=14,SNR=1.6						
INK	Inuvik	24.50	34	P	P	09 14 03.2	-2.0
	1.2nm,1.0s,baz=262,slow=5.5,SNR=2.4						
H11N2	WAKE ISLAND Hy	36.25	216	T	T	09 54 26.9	
	baz=21,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	36.26	216	T	T	09 54 15.6	
	baz=21,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	36.27	216	T	T	09 54 21.3	
	baz=21,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	37.44	215	T	T	09 55 54.3	
	baz=20,slow=76,SNR=7.6						
H11S2	WAKE ISLAND Hy	37.46	215	T	T	09 55 49.6	
	baz=20,slow=76,SNR=3.9						
H11S3	WAKE ISLAND Hy	37.46	215	T	T	09 55 52.1	
	baz=20,slow=76,SNR=7.4						
U32A	Winter Ranch,	52.22	77	eP	P	09 17 59.4	+2.4
	14nm,1.0s						
ASAR	Alice Springs	89.03	228	P	P	09 21 40.4	-0.3
	0.5nm,0.7s,baz=28,slow=4.7,SNR=7.7						

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*ISCJB **22** 09:15:44.2±0.4, 50°.24N±0°.03×18°.79E±0°.03, h0^{km}, Error ellipse: s-maj=4.6km s-min=2.4km az=7.1*

*IPEC **22** 09:15:45.3±0.2, 50°.27N×18°.86E, h1^{km}±1^{km}, ML2.1/3, Error ellipse: s-maj=2.4km s-min=1.1km az=169.0*

*VIE **22** 09:15:45.6±2.2, 50°.66N×18°.14E, h0^{km}, mb2.4/2, ml2.6/4, Error ellipse: s-maj=18.0km s-min=12.6km az=101.0, Suspected Mining induced.*

*PRU **22** 09:15:45.7±0.0, 50°.25N×18°.83E, h0^{km}*

ISC 22 09:15:44.8±0.8, 50°.19N±0°.03×18°.93E±0°.02, h0^{km}, n32, σ0s.91/51, 3C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.11	22	ePg	Pg	09 15 47.9	+0.9
CHZP				eSg	Sg	09 15 49.2	+0.8
OJC	Ojcow	0.56	86	ePg	Pb	09 15 56.9	-0.7
OJC				eSg	Sb	09 16 05.0	-1.1
MORC	Moravsky Berou	0.98	246	⇓iP	Pb	09 16 04.5	-0.3
MORC	Moravsky Berou	0.98	246	S	Sb	09 16 18.0	-0.3
MORC	Moravsky Berou	0.98	246	ePG	Pg	09 16 04.3	+0.6
MORC				eSG	Sg	09 16 16.5	+0.1
MORC	Moravsky Berou	0.98	246	ePg	Pg	09 16 04.2	+0.6
	baz=60						
MORC				eSg	Sg	09 16 16.5	+0.1
	27nm,0.3s,baz=60						
LANS	Liptovska Anna	1.09	161	ePG	Pn	09 16 08.0	+0.5
LANS				eSG	Sn	09 16 23.8	+0.5

NIE	Niedzica	1.18	130	*e*Pg	Pn	09 16 09.1	+0.6
NIE				*e*Sg	Sn	09 16 26.8	+1.5
KRLC	Kraliky	1.39	266	*e*PG	Pg	09 16 10.5	-0.9
KRLC				*e*SG	Sg	09 16 28.8	-0.5
	comp=Z,13nm,0.6s						
JAVC	Velka Javorina	1.56	212	*e*PN	Pg	09 16 15.2	+0.5
JAVC	Velka Javorina	1.56	212	*e*Pn	Pg	09 16 15.1	+0.4
	baz=28						
DPC	Dobruska-Polom	1.68	277	*e*PG	Pn	09 16 15.3	-0.2
DPC				*e*SG	Sn	09 16 37.6	-0.2
	comp=Z,25nm,0.5s						
VYHS	Vyhne	1.69	182	*e*PN	Pn	09 16 16.4	+0.7
VYHS				*e*SN	Sn	09 16 38.6	+0.5
VYHS				*e*LG	Lg	09 16 45.4	
VRAC	Vranov	1.75	241	⇑*i*P	Pn	09 16 16.7	+0.3
VRAC	Vranov	1.75	241	S	Sb	09 16 40.5	+0.2
VRAC	Vranov	1.75	241	*e*PN	Pn	09 16 16.8	+0.3
VRAC				*e*SG	Sb	09 16 40.3	-0.1
VRAC	Vranov	1.75	241	*e*Pn	Pn	09 16 16.7	+0.3
	baz=56						
VRAC				*e*Sg	Sb	09 16 40.2	-0.1
	20nm,0.4s,baz=56						
KSP	Ksiaz	1.81	292	*e*Pg	Pb	09 16 19.0	+0.2
KSP				*e*Sg	Sb	09 16 42.2	+0.3
UPC	Upice	1.90	281	*e*SG	Sb	09 16 45.0	+0.5
KRUC	Moravsky	1.99	237	*e*PN	Pn	09 16 20.2	+0.4
KRUC				*e*SG	Sb	09 16 48.1	+0.7
KRUC	Moravsky	1.99	237	*e*Pn	Pn	09 16 20.1	+0.3
	baz=52						
KRUC				*e*Sg	Sb	09 16 48.0	+0.7
	8.6nm,0.3s,baz=52						
MODS	Modra-Piesok	2.11	211	*e*	Pg	09 16 26.9	+1.6
MODS				*e*		09 16 48.9	
PSZ	Piszkesteto	2.36	164	⇑*i*P	Pn	09 16 23.4	-1.5
GOPC	GO Pecny, Ondr	2.68	266	*e*PG	Pb	09 16 33.2	-0.5
GOPC				*e*SG	Sb	09 17 07.8	+0.6
	comp=Z,12nm,0.6s						
PRU	Pruhonice	2.83	268	*e*PG	Pb	09 16 35.8	-0.4
PRU				*e*SG	Sb	09 17 12.3	+0.9
	comp=Z,5.8nm,0.3s						
CONA	Conrad Observa	3.03	223	*e*Pn	Pn	09 16 35.1	+1.0
	0.2nm,0.2s						
BRG	Berggiesshubel	3.25	284	PG	Pb	09 16 44.6	+1.1
BRG				SG	Sg	09 17 28.5	-0.8
	4.7nm,0.5s						
KHC	Kasperske Hory	3.63	255	*e*PN	Pn	09 16 42.4	+0.1
KHC				*e*PG	Pb	09 16 48.9	-1.0
KHC				*e*SG	Sg	09 17 40.3	-1.2
	comp=Z,9.0nm,0.5s						
MOA	Molln	3.86	234	Sg	Sg	09 17 46.4	-2.3
	7.0nm,0.6s						
CLL	Collm	3.93	289	*e*Sg	Sg	09 17 48.0	-2.9
DRGR		4.23	142	⇑*i*P	Pn	09 16 50.5	-0.1
BURAR	Bucovina Array	4.88	119	⇓*i*P	Pn	09 16 57.8	-1.8

NIED **22** *09:23:00, 35°.20N×141°.30E, h41^{km}, Mw4.0 Best double couple: $M_0$1.00000×10^{15} NP1:ϕ_s19.00000°, δ40.00000°, λ79.00000°. NP2:ϕ_s213.00000°, δ51.00000°, λ99.00000°.*

IDC **22** *09:23:41.6±0.8, 35°.13N×141°.16E, h0^{km}, mb3.6/8, mb1 3.8/12, mb1mx3.6/45, mbtmp3.6/12, ML3.3/3, MS3.6/4, Ms1 3.6/4, ms1mx2.9/51, Error ellipse: s-maj=23.6km s-min=16.9km az=85.0*

ISCJB **22** *09:23:42.8±1.0, 35°.14N±0°.04×141°.34E±0°.07, h23^{km}±6^{km}, mb3.6/8, MS4.1/2, Error ellipse: s-maj=10.1km s-min=6.9km az=175.8*

JMA **22** *09:23:43.8±0.1, 35°.21N×141°.28E, h35^{km}±3^{km}, M3.5*

ISC 22 09:23:43.9±1.9, **35°.12N**±0°.06×**141°.10E**±0°.07, **h14**^{km}±12^{km}, **n31**, σ**0^{s}80**/26, **mb3.6**/8, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	0.48	192	P	Pn	09 23 55.7	-0.1
BSO3	Boso 3	0.58	237	P	Pn	09 23 57.9	+0.5
CHOJ	Chosi	0.61	341	P	Pg	09 23 55.6	-0.3
CHOJ				S	Sb	09 24 04.4	-0.4
BSO4	Boso 4	0.64	258	P	Pn	09 23 59.0	+0.6
KTR	Katsuura	0.65	273	P	Pn	09 23 58.4	-0.2
JKUC	kamogawauchiur	0.74	273	P	Pn	09 23 59.9	0.0
JKUC				S	Sn	09 24 11.6	+0.7
JSMT	Sammumatsuo	0.75	314	P	Pb	09 23 59.1	+0.5
JCN	Nagara	0.80	292	P	Pn	09 24 00.9	+0.3
JHJ	Hachijo jima 2	2.28	209	Pn	Pn	09 24 21.7	+0.7
	20nm,0.3s,baz=81,slow=23,SNR=11						
JHJ				Sn	Sn	09 24 48.2	-0.7
	40nm,0.3s,baz=72,slow=21,SNR=4.5						
MJAR	Matsushiro Arr	2.75	302	Pn	Pn	09 24 28.2	+0.7
	0.7nm,0.3s,baz=324,slow=12,SNR=22						
MJAR				Sn	Sb	09 25 04.4	-1.8
	0.8nm,0.3s,baz=153,slow=16,SNR=5.0						
MJAR				LR	LR	09 25 12.5	
	comp=Z,37nm,18.7s,baz=125,slow=33						
MAT	Matsushiro	2.75	302	P	Pn	09 24 29.6	+2.1
MAT				*e*S	Sb	09 25 05.8	-0.5
JCJ	Chichijima	8.05	173	LR	LR	09 28 39.4	
	comp=Z,93nm,20.4s,baz=170,slow=37						
ASAJ	Asahikawa	9.06	7	Pn	Pn	09 25 53.9	-0.2
	0.9nm,0.3s,baz=211,slow=5.4,SNR=5.0						
KSRS	Korea Array	10.89	286	LR	LR	09 30 48.0	
	comp=Z,97nm,19.1s,baz=84,slow=39						
USRK	Ussuriysk Ar.	11.46	325	Pn	Pn	09 26 27.7	+0.7
	0.1nm,0.3s,baz=116,slow=16,SNR=2.8						
H11N2	WAKE ISLAND Hy	27.44	117	T	T	09 58 24.7	
	baz=310,slow=75,SNR=86						
H11N1	WAKE ISLAND Hy	27.45	117	T	T	09 58 24.7	
	baz=310,slow=75,SNR=79						
H11N3	WAKE ISLAND Hy	27.46	117	T	T	09 58 24.7	
	baz=310,slow=75,SNR=65						
H11S3	WAKE ISLAND Hy	28.09	119	T	T	09 59 16.2	
	baz=312,slow=75,SNR=90						
H11S1	WAKE ISLAND Hy	28.09	119	T	T	09 59 20.0	
	baz=312,slow=75,SNR=88						
H11S2	WAKE ISLAND Hy	28.10	119	T	T	09 59 20.6	
	baz=312,slow=75,SNR=53						
SONM	Songino Array	28.69	307	P	P	09 29 40.8	+0.4
	0.3nm,0.5s,baz=119,slow=8.4,SNR=3.5						
ZALV	Zalesovo Beam	43.04	314	P	P	09 31 42.3	-0.5
	0.9nm,0.6s,baz=105,slow=7.5,SNR=4.1						
MKAR	Makanchi Array	44.94	304	P	P	09 31 57.5	-0.8
	0.7nm,0.7s,baz=100,slow=7.9,SNR=4.9						
ILAR	Eielson Array	51.25	32	P	P	09 32 45.8	-0.9
	0.2nm,0.7s,baz=267,slow=5.9,SNR=4.6						
BVAR	Borovoye Array	51.69	313	LR	LR	09 53 59.8	
	comp=Z,130nm,18.6s,baz=38,slow=35						
WRA	Warramunga Arr	55.14	188	P	P	09 33 15.3	-0.5
	1.4nm,0.6s,baz=2.6,slow=7.2,SNR=26						
ASAR	Alice Springs	58.86	188	P	P	09 33 42.4	+0.3
	0.6nm,0.7s,baz=17,slow=12,SNR=12						
GEYT	Alibeck	64.55	300	LR	LR	10 03 23.5	
	comp=Z,160nm,18.3s,baz=45,slow=37						
PDAR	Pinedale Array	79.19	45	P	P	09 35 48.9	+0.2
	0.3nm,0.7s,baz=298,slow=1.9,SNR=3.9						
TXAR	Lajitas Array	91.49	52	P	P	09 36 50.8	+0.6
	0.2nm,0.8s,baz=323,slow=7.3,SNR=2.4						

ISCJB **22** *09:29:13.2±0.4, 6°.79N±0°.06×94°.05E±0°.07, h33^{km}, mb4.3/30, MS4.2/1, Error ellipse: s-maj=12.3km s-min=3.9km az=139.3*

DJA **22** *09:29:13.2±1.3, 7°N±7°×9°4E±1°2, h10^{km}, M4.4/6, mb4.4/2, MLv4.4/6*

NEIC **22** *09:29:15.0±0.4, 6°.71N×94°.01E, h35^{km}, mb4.4/19, Error ellipse: s-maj=12.6km s-min=5.7km az=47.0*

IDC **22** *09:29:18.9±3.4, 6°.89N×94°.27E, h68^{km}±32^{km}, mb3.9/13, mb1 4.0/15, mb1mx3.8/43, mbtmp4.2/15, ML4.3/2, MS3.4/4, Ms1 3.5/4, ms1mx3.0/59, Error ellipse: s-maj=26.8km s-min=13.0km az=55.0*

ISC 22 09:29:15.5±0.6, **6°.78N**±0°.07×**94°.11E**±0°.07, **h35**^{km}, **n64**, σ**1^{s}44**/60, **mb4.3**/30, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSI	Banda Aceh	1.73	137	P	Pn	09 29 43.0	-0.2
BSI				S	Sn	09 30 06.0	+1.9
LHMI	Lhok Sumawe	3.21	119	*e*Pn	Pn	09 30 05.4	+1.9
LHMI				*e*Sn	Sn	09 30 38.2	-2.3
LHMI	Lhok Sumawe	3.21	119	P	Pn	09 30 04.9	+1.4
TPTI		4.64	139	P	Pn	09 30 23.1	-0.1
SNSI	Sinabang, Aceh	4.87	153	P	Pn	09 30 24.7	-1.6
KCSI	Kotacane, Aceh	4.87	131	P	Pn	09 30 27.8	+1.5
PBA	Port Blair	5.03	344	*e*Pn	Pn	09 30 31.4	+3.0
PBA				*e*Sn	Sn	09 31 30.0	+4.6
PSI	Prapat	6.21	129	*e*Pn	Pn	09 30 47.8	+2.9
PSI				*e*Sn	Sn	09 31 57.2	+2.4
PSI	Prapat	6.21	129	P	Pn	09 30 47.4	+2.5
	4.1nm,0.3s,baz=360,slow=14,SNR=14						
PSI				LR	LR	09 33 38.3	
	comp=Z,336nm,18.0s,baz=278,slow=42						
KULM	Kulim	6.67	102	*e*Pn	Pn	09 30 51.6	+0.6
KULM				*e*Sn	Sn	09 32 04.5	-1.3
IPM	Ipoh	7.25	108	*e*Pn	Pn	09 30 58.6	-0.4
IPM				*e*Sn	Sn	09 32 15.3	-4.9
CM31	Chiang Mai Arr	12.52	22	*e*Pn	Pn	09 32 14.7	+3.4
CMAR	Chiang Mai Arr	12.52	22	P	Pn	09 32 13.4	+2.1
	0.7nm,0.3s,baz=213,slow=14,SNR=6.1						
CMAR				LR	LR	09 37 20.8	
	comp=Z,67nm,18.4s,baz=194,slow=39						
PALK	Pallekele	13.32	273	LR	LR	09 36 42.9	
	comp=Z,96nm,20.9s,baz=116,slow=33						
LSA	Lhasa	22.97	353	*e*P	P	09 34 18.6	+1.1
	7.2nm,0.6s						
H08S3	Diego Garcia H	25.89	237	T	T	10 01 05.9	
	baz=57,slow=76,SNR=378						
H08S2	Diego Garcia H	25.89	237	T	T	10 01 13.0	
	baz=57,slow=76,SNR=52						
H08S1	Diego Carcia H	25.91	237	T	T	10 01 13.9	
	baz=57,slow=76,SNR=11						
H08N1	Diego Carcia H	26.48	241	T	T	10 02 02.7	
H08N2	Diego Garcia H	26.48	241	T	T	10 02 02.6	
	baz=354,slow=74,SNR=3.4						
H08N3	Diego Garcia H	26.50	241	T	T	10 02 03.8	
	baz=50,slow=74,SNR=3.2						
GTA	Gaotai	32.89	8	*e*P	P	09 35 45.9	-0.5
GTA				pP	pP	09 35 51.6	-4.4
GTA				sP	sP	09 35 54.5	-5.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
NIL	Nilore	32.99	327	*e*P	P	09 35 46.4	-0.9
	comp=Z,25nm,0.4s						
WSAR	Wadi Sarin	37.83	299	P	P	09 36 31.7	+2.7
	comp=Z,1.1nm,0.5s,baz=101,slow=5.2,SNR=3.1						
GAR	Garm	38.60	330	*e*P	P	09 36 34.4	-1.0
	comp=Z,8.0nm,0.8s						
ARSB	Arslanbob	39.21	335	*e*P	P	09 36 40.0	-0.5
	comp=Z,14nm,0.8s						
AAK	Ala-Archa	39.70	337	*e*P	P	09 36 43.2	-1.3
	comp=Z,5.5nm,1.0s						
FITZ	Fitzroy Crossi	39.74	129	*e*P	P	09 36 44.3	-0.7
	comp=Z,4.7nm,0.8s						
FITZ	Fitzroy Crossi	39.74	129	P	P	09 36 44.9	-0.1
	comp=Z,4.2nm,1.1s,baz=275,slow=6.7,SNR=2.4						
MK01	Makanchi Array	41.12	348	*e*P	P	09 36 54.9	-1.2
MK31	Makanchi Array	41.14	348	*e*P	P	09 36 55.2	-1.1
	comp=Z,2.1nm,0.9s						
MK32	Makanchi Array	41.14	348	*e*P	P	09 36 55.0	-1.4
MKAR	Makanchi Array	41.14	348	*e*P	P	09 36 55.2	-1.1
	comp=Z,22nm,1.0s						
MKAR	Makanchi Array	41.14	348	P	P	09 36 55.0	-1.4
	comp=Z,1.7nm,0.4s,baz=161,slow=7.7,SNR=31						
MAKZ	Makanchi	41.22	347	*e*P	P	09 36 56.9	-0.1
	comp=Z,2.2nm,0.6s						
MTN	Manton Dam	41.63	118	*e*P	P	09 36 59.8	-0.9
	comp=Z,21nm,1.1s						
KK31	Karatay Array	41.72	334	*e*P	P	09 37 01.2	+0.1
	comp=Z,6.4nm,1.0s						
KKAR	Karatay Array	41.72	334	*e*P	P	09 37 01.1	0.0
	comp=Z,6.4nm,1.0s						
SONA0	Songino Array	42.23	12	*e*P	P	09 37 04.8	-0.5
SONM	Songino Array	42.23	12	P	P	09 37 04.9	-0.5
	comp=Z,0.7nm,0.9s,baz=187,slow=5.8,SNR=3.0						
GEYT	Alibeck	45.00	319	P	P	09 37 27.7	0.0
	comp=Z,2.9nm,0.5s,baz=141,slow=7.6,SNR=3.8						
KURK	Kurchatov	45.66	346	*e*P	P	09 37 32.3	-0.3
	comp=Z,4.3nm,0.8s						
ZAA0	Zalesovo Array	47.63	353	*e*P	P	09 37 47.9	-0.1
	comp=Z,4.7nm,1.0s						
ZALV	Zalesovo Beam	47.63	353	*e*P	P	09 37 47.2	-0.8
ZALV	Zalesovo Beam	47.63	353	P	P	09 37 47.0	-0.9
	comp=Z,1.9nm,0.3s,baz=178,slow=8.5,SNR=16						
ZAA1	Zalesovo Array	47.63	353	*e*P	P	09 37 47.0	-1.0
WR1	Warramunga Arr	47.66	125	*e*P	P	09 37 48.3	-0.5
	comp=Z,2.0nm,0.6s						
WRA	Warramunga Arr	47.66	125	P	P	09 37 48.3	-0.5
	comp=Z,0.9nm,0.4s,baz=305,slow=8.6,SNR=19						
WB2	Warramunga Arr	47.67	125	*e*P	P	09 37 48.1	-0.7
WC3	Warramunga Arr	47.69	125	*e*P	P	09 37 49.5	+0.4
	comp=Z,3.1nm,0.8s						
ASAR	Alice Springs	49.24	129	P	P	09 38 00.7	-0.3
	comp=Z,0.7nm,0.3s,baz=299,slow=7.8,SNR=12						
BRVK	Borovoye	50.07	341	*e*P	P	09 38 06.3	-0.5
	comp=Z,6.8nm,0.6s						
ABKAR	Akbulak array	51.17	332	*e*P	P	09 38 14.8	-0.4
	comp=Z,3.8nm,0.5s						
BR101	Keskin Array S	63.12	311	*e*P	P	09 39 38.4	-1.7
BRTR	Keskin Array B	63.12	311	P	P	09 39 38.4	-1.7
	comp=Z,1.4nm,0.7s,baz=120,slow=7.2,SNR=7.2						
FIA0	FINESS Array S	73.66	332	*e*P	P	09 40 44.1	-1.2
FINES	FINESS Array B	73.66	332	P	P	09 40 44.1	-1.2
	comp=Z,2.9nm,0.7s,baz=90,slow=5.6,SNR=7.1						
BOSA	Boshof	74.99	238	P	P	09 40 54.7	+0.9
	comp=Z,2.3nm,0.7s,baz=81,slow=5.0,SNR=6.0						
ARA0	ARCESS Array S	76.28	340	*e*P	P	09 41 00.1	-0.2
ARCES	ARCESS Array B	76.28	340	P	P	09 41 00.1	-0.2
	comp=Z,5.1nm,0.9s,baz=101,slow=6.9,SNR=9.5						
GEA0	GERESS Array S	78.62	318	*e*P	P	09 41 13.8	-0.1
GEC2	GERESS Array S	78.62	318	*e*P	P	09 41 14.0	+0.1
	comp=Z,2.7nm,1.0s						
GERES	GERESS Array B	78.62	318	P	P	09 41 13.4	-0.6
	comp=Z,1.8nm,0.5s,baz=106,slow=4.7,SNR=7.7						
BORG	Borgarnes	94.42	337	LR	LR	10 26 37.2	
	comp=Z,74nm,18.4s,baz=175,slow=36						

IDC **22** *09:31:53.2±0.4, 67°.57N×143°.02E, h0^{km}, mb4.3/26, mb1 4.4/31, mb1mx4.3/45, mbtmp4.2/31, ML4.1/4, MS4.0/26, Ms1 4.0/26, ms1mx3.9/44, Error ellipse: s-maj=11.0km s-min=10.5km az=35.0*

ISCJB **22** *09:31:53.8±0.1, 67°.65N±0°.02×142°.83E±0°.04, h10^{km}, mb4.6/213, MS4.2/38, Error ellipse: s-maj=3.3km s-min=2.3km az=157.2*

BJI **22** *09:31:54.8, 67°.43N×142°.35E, h6^{km}, mB5.1/35, mb4.6/42, Ms5.0/40, Ms7 4.7/40*

YARS **22** *09:31:54.3±0.1, 67°.600N±0°.007×142°.94E±0°.03, h9^{km}±4^{km}*

MOS **22** *09:31:54.2±1.1, 67°.60N×142°.91E, h16^{km}, mb4.8/63, MS4.0/17, Error ellipse: s-maj=10.8km s-min=4.5km az=91.2*

GCMT **22** *09:31:55.6±0.3, 67°.71N±0°.03×142°.56E±0°.09, h20^{km}±1^{km}, MW4.9/84, Moment Tensor Solution. s27,c33; s84,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.20±.18; $M_{\theta\theta}$-1.23±.12; $M_{\phi\phi}$-0.96±.12; $M_{r\theta}$0.40±.24; $M_{\theta\phi}$1.50±.09; $M_{\phi r}$-1.14±.27; Best double couple: $M_0$2.70200×10^{16} NP1:ϕ_s146.00000°, δ59.00000°, λ106.00000°. NP2: ϕ_s297.00000°, δ35.00000°, λ66.00000°. Principal axes: T 2.5690, Plg72.0000°, Azm95.0000°; N 0.2670, Plg14.0000°, Azm318.0000°; P -2.8350, Plg12.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **22** *09:31:55.6±0.1, 67°.62N×142°.81E, h10^{km}, mb4.7/162 Error ellipse: s-maj=4.3km s-min=2.6km az=167.0*

ISC 22 09:31:55.4±0.3, **67°.63N**±0°.03×**143°.04E**±0°.03, **h10**^{km}, **n404**, σ**1^{s}52**/421, **mb4.7**/223, **MS4.2**/39, **13C-12D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.17	177	*e*P	Pb	09 32 14.9	-2.7
MOMR				*e*S	Sb	09 32 29.4	-3.4
MOMR	Moma	1.17	177	*e*P	Pb	09 32 14.9	-2.7
MOMR				*e*S	Sb	09 32 29.4	-3.4
YBGR	Belaya Gora	1.49	51	*e*P	Pn	09 32 21.6	-0.6
YBGR				*e*S	Sn	09 32 41.6	0.0
YBGR	Belaya Gora	1.49	51	*e*P	Pn	09 32 21.6	-0.6
YBGR				*e*S	Sn	09 32 41.6	0.0
DEPR	Deputatskiy	2.12	328	*e*P	Pb	09 32 33.0	-0.8
DEPR				*e*S	Sb	09 32 59.8	-0.2
DEPR	Deputatskiy	2.12	328	*e*P	Pb	09 32 33.0	-0.8
DEPR				*e*S	Sb	09 32 59.8	-0.2
ATKR	Artyk	3.57	165	*e*P	Pb	09 32 58.9	+0.4
ATKR	Artyk	3.57	165	*e*P	Pb	09 32 58.9	+0.4
ATKR				*e*S	Sb	09 33 44.4	+2.5
SEY	Seymchan	6.12	136	Pn	Pn	09 33 24.2	-1.6
	0.8nm,0.3s,baz=309,slow=12,SNR=18						
SEY				Sn	Sn	09 34 35.7	-0.1
	4.1nm,0.3s,baz=330,slow=14,SNR=2.5						
SEY				Lg	Lg	09 35 02.8	
	4.9nm,0.3s,baz=349,slow=6.0,SNR=5.8						
YAK	Yakutsk	7.98	232	*e*P	Pn	09 33 49.7	-1.6
YAK				*e*		09 35 16.9	
YAK				pmax	pmax		
	comp=Z,152nm,0.6s						
YAK				pmax	pmax		
	comp=E,10.0nm,0.3s						
YAK				pmax	pmax		
	comp=N,11nm,0.3s						
YAK				smax	smax		
	comp=N,669nm,0.8s						
YAK				smax	smax		
	comp=E,252nm,0.6s						
YAK	Yakutsk	7.98	232	*e*P	Pn	09 33 50.8	-0.5
YAK				*e*P	Pb	09 34 16.6	+3.0
YAK				*e*S	Sn	09 35 16.7	-4.8
YAK				*e*S	Sb	09 35 59.2	+11
YAK				Smax		09 35 59.2	
	comp=E,1μm,1.9s						
USMR	Ust'-Maya	8.13	211	*e*S	Sg	09 36 05.2	-11
BILL	Bilibino	8.77	77	*e*Pn	Pn	09 34 04.2	+2.1
BILL	Bilibino	8.77	77	*i* P	Pn	09 34 04.0	+1.9
BILL				*i* S	Sn	09 35 39.0	-1.8
BILL				pmax	pmax		
	comp=Z,11nm,1.0s						
BILL				MLR	MLR		
	comp=Z,1μm,21.0s						
MA2	Magadan	8.78	153	*e*Pn	Pn	09 34 04.9	+2.8
MA2				*e*Sn	Sn	09 35 43.9	+2.9
MA2	Magadan	8.78	153	Pn	Pn	09 34 02.2	0.0
	comp=Z,0.5nm,0.3s,baz=322,slow=19,SNR=2.5						
MA2				Sn	Sn	09 35 37.9	-3.2
	comp=Z,0.7nm,0.3s,baz=188,slow=23,SNR=2.0						
MA2				Lg	Lg	09 36 27.8	
	comp=Z,1.2nm,0.3s,baz=207,slow=20,SNR=5.2						
MA2				LR	LR	09 37 22.8	
	comp=Z,511nm,21.9s,baz=346,slow=38						
CGD	Chagda	10.50	218	*e*S	Sn	09 37 17.3	+54
ALDR	Aldan	12.01	230	*e*P	Pn	09 34 46.0	-0.4
ALDR	Aldan	12.01	230	*e*P	Pn	09 34 46.0	-0.4
ALDR				*e*S		09 38 04.0	
NKL	Nikolayevsk	14.57	186	*e*P	Pn	09 35 22.0	+0.7
NKL				pmax	pmax		
	comp=Z,17nm,1.0s						
NKL				MLR	MLR		
	comp=Z,1μm,8.0s						
ZEA	Zeya	15.85	216	*e*P	Pn	09 35 38.8	+0.5
ZEA				pmax	pmax		
	comp=N,36nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,46nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,4μm,6.0s						
ZEA				MLR	MLR		
	comp=E,600nm,7.0s						
ZEA				MLR	MLR		
	comp=N,4μm,5.0s						
PEA1	Petropavlovsk-	16.19	147	*e*Pn	Pn	09 35 42.2	-0.4
PEA0B	Petropavlovsk-	16.19	147	*e*Pn	P	09 35 46.1	+0.2
	comp=N,42nm,1.0s						
PETK	Petropavlovsk-	16.19	147	Pn	Pn	09 35 42.2	-0.5
	comp=N,0.1nm,0.3s,baz=139,slow=23,SNR=3.3						
PETK				LR	LR	09 41 59.3	
	comp=N,209nm,18.2s,baz=333,slow=38						
BOD	Bodaibo	16.36	247	*e*P	Pn	09 35 39.6	-5.2
BOD				*e*		09 38 35.1	
BOD				pmax	pmax		
	comp=Z,32nm,1.5s						
PET	Petropavlovsk	16.48	145	*e*Pn	P	09 35 48.0	-1.0
	comp=Z,46nm,1.1s						
PET	Petropavlovsk	16.48	145	*e*P	P	09 35 52.7	+3.7
PET				pmax	pmax		
	comp=Z,63nm,1.3s						
PET				MLR	MLR		
	comp=Z,700nm,16.0s						
TYV	Tymovskoe	16.82	181	*e*P	P	09 35 52.5	-0.3
TYV				*e*		09 39 04.5	
TYV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TYV				MLR	MLR		
	comp=N,1μm,16.0s						
TYV				MLR	MLR		
	comp=Z,1μm,16.0s						
GRNR	Gornyy	17.23	194	*e*P	Pn	09 35 56.0	+0.2
GRNR				pmax	pmax		
	comp=Z,18nm,1.0s						
SKR	Severo-Kuril's	18.20	153	*ce*P	P	09 36 09.5	+1.5
GAMB	Gambell	18.67	80	*e*P	Pn	09 36 14.4	+0.9
	comp=Z,21nm,1.1s						
KLR	Kul'dur	19.31	203	P	P	09 36 19.7	-0.6
	comp=Z,0.3nm,0.3s,baz=16,slow=10.0,SNR=19						
KLR				Lg	Lg	09 41 52.7	
	comp=Z,0.1nm,0.3s,baz=292,slow=15,SNR=3.8						
KLR				LR	LR	09 44 01.8	
	comp=Z,786nm,20.5s,baz=13,slow=38						
NRIK	Noril'sk	19.84	300	P	P	09 36 26.1	+0.3
	comp=Z,1.0nm,0.3s,baz=89,slow=9.8,SNR=12						
NRIK				Lg	Lg	09 42 16.1	
	comp=Z,0.6nm,0.3s,baz=351,slow=12,SNR=4.0						
RDOG	Red Dog Mine	19.86	64	*e*P	Pn	09 36 27.5	-0.1
	comp=Z,35nm,1.0s						
ANM	Nome	20.62	74	*e*P	Pn	09 36 35.5	-1.1
	comp=Z,16nm,1.0s						
ANM	Nome	20.62	74	*e*P	Pn	09 36 35.6	-1.0
ANM				pmax	pmax		
	comp=Z,16nm,1.0s						
YSS	Yuzh-Sakhalins	20.73	181	*e*P	P	09 36 33.6	-2.1
YSS				*e**SP	sP	09 36 40.6	+0.7
YSS				*e*S	S	09 40 15.0	-12
YSS				*e*SS	SnSn	09 40 41.0	-5.2
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,800nm,13.0s						
YSS				MLR	MLR		
	comp=N,700nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,14.0s						
HIA	Hailar	21.82	224	*e*P	P	09 36 47.8	+0.3
	comp=E,38nm,0.9s						
HIA	Hailar	21.82	224	*e*P	P	09 36 47.8	+0.3
HIA				pmax	pmax		
	comp=Z,38nm,0.9s						
SPIA	Saint Paul Isl	23.40	93	*e*P	P	09 37 06.8	+2.9
	comp=Z,35nm,1.0s						
ASAJ	Asahikawa	23.57	181	P	P	09 37 03.9	-1.9
	comp=Z,9.5nm,0.8s,baz=37,slow=5.0,SNR=6.1						
ASAJ				LR	LR	09 46 28.1	
	comp=Z,489nm,18.8s,baz=8.0,slow=37						
TOLK	Toolik Lake Re	24.00	56	*e*P	P	09 37 10.0	+0.2
	comp=Z,16nm,0.9s						
MDJ	Mudanjiang	24.14	204	P	P	09 37 10.3	-0.9
MDJ				pP	pP	09 37 14.0	-0.3
MDJ				sP	sP	09 37 17.3	+1.7
MDJ				PP		09 37 41.0	
MDJ				PcS	PcS	09 44 27.8	-3.4
MDJ				ScS	ScS	09 48 14.6	-2.2
MDJ				pmax	pmax		
	comp=Z,35nm,1.3s						
MDJ				LR	LR		
	comp=Z,970nm,6.4s						
MDJ				LR	LR		
	comp=Z,2μm,6.4s						
MDJ				LR	LR		
	comp=Z,1μm,12.7s						
MDJ	Mudanjiang	24.14	204	*e*P	P	09 37 10.4	-0.8
	comp=Z,42nm,1.0s						
IRK	Irkutsk	24.21	250	*e*P	P	09 37 10.3	-1.5
IRK				pmax	pmax		
	comp=Z,144nm,3.0s						
USA0B	Ussuriysk Arra	24.21	200	*e*P	P	09 37 11.5	-0.3
	comp=Z,20nm,1.1s						
USRK	Ussuriysk Ar.	24.21	200	P	P	09 37 10.8	-1.0
	comp=Z,6.8nm,0.8s,baz=4.7,slow=10,SNR=19						
USRK				Lg	Lg	09 44 33.8	
	comp=Z,0.6nm,0.6s,baz=3.2,slow=28,SNR=3.0						
USRK				LR	LR	09 47 16.1	
	comp=Z,940nm,19.1s,baz=4.4,slow=38						
COLD	Coldfoot	24.53	60	*e*P	P	09 37 15.9	+1.3
	comp=Z,28nm,1.0s						
TLY	Talaya	24.89	250	*e*P	P	09 37 17.9	0.0

	comp=Z,5.7nm,0.9s						
TLY	Talaya	24.89	250	*c i*P	P	09 37 20.4	+2.4
TLY				pmax	pmax		
	comp=Z,68nm,2.2s						
TLY				MLR	MLR		
	comp=Z,2µm,18.0s						
MLY	Manley	25.58	64	*e*P	P	09 37 24.3	+0.2
	comp=Z,14nm,0.9s						
CN2	Changchun	25.66	210	*e*P	P	09 37 23.4	-1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,10.0s						
CN2				LR	LR		
	comp=Z,760nm,10.0s						
CN2				LR	LR		
	comp=Z,1µm,10.0s						
MOY	Mondy	25.86	253	*e*P	P	09 37 27.1	+0.2
MOY				pmax	pmax		
	comp=Z,15nm,1.7s						
CAST	Castle Rocks	26.08	68	*e*P	P	09 37 29.3	+0.7
	comp=Z,16nm,1.0s						
ZAK	Zakamensk	26.09	249	*e*P	P	09 37 28.1	-0.9
ZAK				pmax	pmax		
	comp=Z,55nm,1.1s						
MDM	Murphy Dome	26.48	63	*e*P	P	09 37 32.7	+0.4
	comp=Z,19nm,1.1s						
FYU	Fort Yukon	26.53	58	*e*P	P	09 37 34.0	+1.4
	comp=Z,48nm,1.1s						
COLA	College	26.66	63	*e*P	P	09 37 34.1	+0.3
	comp=Z,17nm,1.0s						
COLA	College	26.66	63	*e*P	P	09 37 34.1	+0.3
COLA				pmax	pmax		
	comp=Z,17nm,1.0s						
TRF	Thorofare Moun	26.69	67	*e*P	P	09 37 34.6	+0.2
	comp=Z,38nm,1.2s						
WRH	Wood River Hil	26.82	64	*e*P	P	09 37 35.5	+0.2
	comp=Z,13nm,1.2s						
ULN	Ulaanbaatar	26.93	241	*e*P	P	09 37 36.6	-0.1
	comp=Z,4.4nm,0.8s						
ULN	Ulaanbaatar	26.93	241	*ce*P	P	09 37 36.5	-0.1
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MCK	McKinley	26.99	65	*e*P	P	09 37 37.4	+0.5
	comp=Z,24nm,1.1s						
MCK	McKinley	26.99	65	*e*P	P	09 37 37.4	+0.5
MCK				pmax	pmax		
	comp=Z,24nm,1.1s						
IL1	Eielson Array	27.05	62	*e*P	P	09 37 37.7	+0.3
ILAR	Eielson Array	27.05	62	P	P	09 37 37.6	+0.2
	comp=Z,11nm,0.9s,baz=297,slow=8.0,SNR=83						
ILAR				LR	LR	09 50 04.6	
	comp=Z,336nm,18.1s,baz=316,slow=40						
ILB	Eielson Array	27.05	62	*e*P	P	09 37 37.4	0.0
	comp=Z,12nm,0.8s						
PRP	Porcupine Dome	27.05	60	*e*P	P	09 37 38.6	+1.1
	comp=Z,3.4nm,0.8s						
SONA1	Songino Array	27.16	242	*e*P	P	09 37 38.7	0.0
SONA0	Songino Array	27.18	242	*e*P	P	09 37 38.8	0.0
SONM	Songino Array	27.18	242	P	P	09 37 38.8	0.0
	comp=Z,6.2nm,1.0s,baz=27,slow=7.7,SNR=21						
SONM				LR	LR	09 49 10.4	
	comp=Z,850nm,18.2s,baz=30,slow=38						
HDA	Harding Lake	27.25	63	*e*P	P	09 37 39.6	+0.4
	comp=Z,8.9nm,1.0s						
DHY	Denali Highway	27.95	66	*e*P	P	09 37 45.8	+0.2
	comp=Z,8.2nm,1.1s						
KNGR	Kungurtug, Tuv	28.01	256	*i* P	P	09 37 45.0	-1.2
GHO	Glory Hole Cre	28.26	69	*e*P	P	09 37 49.0	+0.7
	comp=Z,15nm,1.0s						
PMR	Palmer	28.30	69	*e*P	P	09 37 49.4	+0.8
	comp=Z,2.9nm,0.7s						
PMR	Palmer	28.30	69	*e*P	P	09 37 49.4	+0.8
PMR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RIDG	Independ'e Rid	28.39	63	*e*P	P	09 37 50.8	+1.3
	comp=Z,6.6nm,1.0s						
RC01	Rabbit Creek A	28.43	70	*e*P	P	09 37 50.3	+0.7
	comp=Z,8.3nm,1.1s						
SML	Sawmill	28.45	68	*e*P	P	09 37 50.3	+0.4
	comp=Z,11nm,1.0s						
SML	Sawmill	28.45	68	*e*P	P	09 37 50.3	+0.4
SML				pmax	pmax		
	comp=Z,11nm,1.0s						
SCRK	Sand Creek	28.53	62	*e*P	P	09 37 50.4	-0.4
	comp=Z,2.7nm,1.1s						
KNK	Knik Glacier	28.67	69	*e*P	P	09 37 52.8	+1.0
	comp=Z,22nm,1.2s						
DOT	Dot Lake	28.72	63	*e*P	P	09 37 51.8	-0.5
	comp=Z,5.0nm,1.0s						
SCM	Sheep Creek Mo	28.79	67	*e*P	P	09 37 55.0	+2.1
	comp=Z,7.5nm,1.0s						
SCM	Sheep Creek Mo	28.79	67	*e*P	P	09 37 55.1	+2.1
SCM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
EGAK	Eagle	28.96	59	*e*P	P	09 37 55.3	+0.9
	comp=Z,4.5nm,1.0s						
INK	Inuvik	29.09	49	*e*P	P	09 37 57.6	+2.2
INK	Inuvik	29.09	49	P	P	09 37 56.2	+0.8
	comp=Z,1.4nm,0.8s,baz=304,slow=8.6,SNR=4.8						
INK				LR	LR	09 51 27.1	
	comp=Z,453nm,20.1s,baz=259,slow=40						
EPYK	Eagle Plains	29.35	54	*e*P	P	09 37 59.0	+1.1
	comp=Z,7.6nm,1.0s						
KDAK	Kodiak Island	29.68	77	LR	LR	09 51 05.9	
	comp=Z,744nm,20.4s,baz=320,slow=39						
DAWY	Dawson	30.01	59	*e*P	P	09 38 03.8	+0.1
	comp=Z,2.0nm,1.0s						
NVS	Novosibirsk	30.12	275	*e*P	P	09 37 56.6	-8.1
ZAA1	Zalesovo Array	30.19	272	*e*P	P	09 38 04.3	-1.0
ZALV	Zalesovo Beam	30.20	272	P	P	09 38 04.3	-1.1
	comp=Z,1.5nm,0.7s,baz=169,slow=8.6,SNR=3.8						
MJAR	Matsushiro Arr	31.26	188	LR	LR	09 50 21.9	
	comp=Z,191nm,19.3s,baz=20,slow=36						
BJT	Baijiatuau	31.36	222	*e*P	P	09 38 15.4	-0.4
	comp=Z,13nm,0.9s						
BJT	Baijiatuau	31.36	222	*e*P	P	09 38 15.4	-0.4
BJT				pmax	pmax		
	comp=Z,13nm,0.9s						
KSRS	Korea Array	31.40	203	LR	LR	09 51 30.0	
	comp=Z,580nm,19.4s,baz=22,slow=38						
HHC	Hu-ho-hao-te	31.83	229	*e*P	P	09 38 21.3	+1.2
HHC				PP	PnPn	09 39 26.3	+2.0
HHC				S	S	09 43 29.3	-1.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,210nm,6.1s						
HHC				LR	LR		
	comp=Z,510nm,5.7s						
HHC				LR	LR		
	comp=Z,900nm,11.6s						
HHC				LR	LR		
	comp=Z,670nm,10.4s						
DGZ	Jazzator, Alta	32.54	265	*i* P	P	09 38 26.4	+0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
RES	Resolute Bay	33.22	24	*e*P	P	09 38 32.1	+0.4
	comp=Z,3.7nm,1.1s						
RES	Resolute Bay	33.22	24	*e*P	P	09 38 32.1	+0.4
RES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
JHJ	Hachijo jima 2	34.60	185	LR	LR	09 54 19.7	
	comp=Z,100nm,18.0s,baz=352,slow=39						
KURK	Kurchatov	35.09	274	*e*P	P	09 38 47.6	-0.7
	comp=Z,9.2nm,1.0s						
KURK	Kurchatov	35.09	274	*ce*P	P	09 38 46.8	-1.5
KURK				pmax	pmax		
	comp=Z,19nm,1.3s						
DAG	Danmarks Havn	35.38	353	*i* P	P	09 38 50.2	-0.3
	comp=Z,5.1nm,0.7s						
DAG	Danmarks Havn	35.38	353	*i* P	P	09 38 50.2	-0.3
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	Borovoye	36.38	284	*e*P	P	09 38 59.3	0.0
BRVK	Borovoye	36.38	284	*i* P	P	09 38 58.4	-0.9
BRVK				pmax	pmax		
	comp=Z,12nm,1.1s						
APA	Apatity	36.51	323	⇓*i*P	P	09 38 55.7	-4.5
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,14.0s						
ARA0	ARCESS Array S	36.62	328	*e*P	P	09 39 02.2	+1.0
ARCES	ARCESS Array B	36.62	328	P	P	09 39 02.2	+1.0
	comp=Z,4.9nm,0.9s,baz=46,slow=12,SNR=3.5						
ARCES				LR	LR	09 58 42.8	
	comp=Z,171nm,18.4s,baz=12,slow=44						
GTA	Gaotai	36.85	242	⇓P	P	09 39 04.3	+0.8
GTA				pP	sP	09 39 08.6	+0.6
GTA				sP	pP	09 39 11.4	+4.7
GTA				S	S	09 44 50.0	+2.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,76nm,4.9s						
GTA				LR	LR		
	comp=Z,800nm,18.1s						
GTA				LR	LR		
	comp=Z,900nm,18.7s						
GTA				LR	LR		
	comp=Z,1µm,18.7s						
MK31	Makanchi Array	36.89	267	*e*P	P	09 39 02.8	-0.9
	comp=Z,6.3nm,1.0s						
MK31	Makanchi Array	36.89	267	*e*P	P	09 39 02.8	-0.9
MK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK32	Makanchi Array	36.89	267	*e*P	P	09 39 02.3	-1.4
MKAR	Makanchi Array	36.89	267	*e*P	P	09 39 02.8	-0.9
	comp=Z,30nm,0.7s						
MKAR	Makanchi Array	36.89	267	*e*P	P	09 39 02.8	-0.9
MKAR				pmax	pmax		
	comp=Z,31nm,0.7s						
MKAR	Makanchi Array	36.89	267	P	P	09 39 02.3	-1.4
	comp=Z,4.6nm,0.6s,baz=42,slow=7.4,SNR=23						
MK01	Makanchi Array	36.91	267	*e*P	P	09 39 02.8	-1.1
MAKZ	Makanchi	37.00	267	*e*P	P	09 39 03.9	-0.8
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	37.00	267	*e*P	P	09 39 03.9	-0.8
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DLBC	Dease Lake	37.20	60	*e*P	P	09 39 07.4	+1.1
	comp=Z,5.0nm,1.0s						
WMQ	Urumqi	37.35	259	P	P	09 39 08.3	+0.6
WMQ				pP	sP	09 39 13.3	+1.2
WMQ				ScS	ScS	09 49 21.8	+0.6
WMQ				pmax	pmax		
	comp=Z,25nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,6.1s						
WMQ				LR	LR		
	comp=Z,2µm,12.5s						
WMQ				LR	LR		
	comp=Z,2µm,7.1s						
WMQ				LR	LR		
	comp=Z,630nm,17.7s						
ARU	Arti	37.94	296	*e*P	P	09 39 12.1	-0.4
	comp=Z,12nm,1.1s						
ARU	Arti	37.94	296	*d i*P	P	09 39 10.2	-2.3
ARU				S	S	09 45 02.1	-1.7
ARU				SS	SnSn	09 47 42.4	-2.4
ARU				pmax	pmax		
	comp=Z,17nm,1.4s						
TMCR	Tamitsa	38.09	317	*e*P	P	09 39 12.7	-0.9
NJ2	Nanjing	38.33	214	*e*P	P	09 39 17.9	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,670nm,14.6s						
NJ2				LR	LR		
	comp=Z,620nm,17.4s						
NJ2				LR	LR		
	comp=Z,1µm,15.7s						
LZH	Lanzhou	38.55	235	*e*P	P	09 39 18.8	+0.8
LZH				pP	sP	09 39 22.8	+0.3
LZH				sP	pP	09 39 25.0	+3.8
LZH				PP	PnPn	09 40 49.5	+1.5
LZH				S	S	09 45 19.0	+5.3
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,320nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,940nm,14.6s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
YKW3	Yellowknife Ar	38.66	46	*e*P	P	09 39 18.9	+0.4
	comp=Z,6.0nm,1.0s						
YKA	Yellowknife Ar	38.72	46	P	P	09 39 19.1	+0.1
	comp=Z,2.9nm,0.8s,baz=323,slow=8.1,SNR=43						
YKA				LR	LR	09 58 43.7	
	comp=Z,11nm,18.2s,baz=314,slow=42						
YKB5	Yellowknife Ar	38.72	46	*e*P	P	09 39 19.5	+0.6
MSF	Maaselka	38.87	323	P	P	09 39 22.4	+2.2
MSF				pmax	pmax		
	comp=Z,36nm,2.1s						
OTUK	Ortayu	39.49	277	P	P	09 39 25.7	+0.1
OTUK				pmax	pmax		
	comp=Z,11nm,1.4s						
SUMG	Summit	40.04	1	*e*P	P	09 39 30.9	+0.6
	comp=Z,2.2nm,0.8s						
SUMG	Summit	40.04	1	*i* P	P	09 39 30.3	0.0
SUMG	Summit	40.04	1	*e*P	P	09 39 30.9	+0.6
SUMG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLMR	Klimovskoe	40.38	313	*e*P	P	09 39 29.9	-2.9
KLMR				pmax	pmax		
	comp=Z,35nm,1.5s						
KLMR	Klimovskoe	40.38	313	*e*P	P	09 39 29.9	-2.9
KLMR				AMP		09 39 35.1	
	comp=Z,35nm,1.4s						
KLMR				*e*PP	PP	09 41 02.2	-3.2
WHN	Wuhan	40.81	219	*e*P	P	09 39 37.6	+1.0
WHN				S	S	09 45 53.5	+6.2
WHN				LR	LR		
	comp=Z,980nm,11.9s						
JOF	Joensuu	40.84	319	P	P	09 39 38.4	+1.9
PDGK	Podgornoye	40.88	267	P	P	09 39 39.6	+2.3
PDGK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SCO	Scoresbysund	41.77	352	*e*P	P	09 39 45.2	+1.1
	comp=Z,8.8nm,1.1s						
SCO	Scoresbysund	41.77	352	*e*P	P	09 39 45.2	+1.1
SCO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TARG	Taragay, Kyrgy	42.89	267	*e*P	P	09 39 54.6	+0.5
	comp=Z,2.9nm,0.9s						
FRU	Bishkek	43.17	271	*e*P	P	09 39 57.0	+1.1
ABKAR	Akbulak array	43.28	288	*e*P	P	09 39 56.0	-0.6
CD2	Chengdu	43.37	232	*e*P	P	09 39 57.0	-0.6
FIA1	FINESS Array S	43.38	321	*e*P	P	09 39 57.1	-0.1
AAK	Ala-Archa	43.38	271	*e*P	P	09 39 58.7	+0.9
	comp=Z,6.9nm,0.8s						
AAK	Ala-Archa	43.38	271	*ce*P	P	09 39 58.0	+0.3
AAK				pmax	pmax		
	comp=Z,29nm,2.5s						
AAK	Ala-Archa	43.38	271	LR	LR	09 57 15.4	
	comp=Z,252nm,18.4s,baz=14,slow=35						
FIA0	FINESS Array S	43.38	321	*e*P	P	09 39 56.7	-0.6
FIA0	FINESS Array S	43.38	321	*e*P	P	09 39 56.7	-0.6
FINES	FINESS Array B	43.38	321	P	P	09 39 56.7	-0.6
	comp=Z,3.9nm,0.8s,baz=41,slow=9.2,SNR=13						
FINES				LR	LR	10 00 53.6	
	comp=Z,207nm,19.2s,baz=18,slow=40						
NRN	Naryn	43.84	268	*e*P	P	09 40 02.6	+1.1
	comp=Z,4.2nm,0.9s						
NRN	Naryn	43.84	268	*e*P	P	09 40 02.7	+1.1
NRN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MNAS	Manas	44.27	272	P	P	09 40 05.7	+0.8
MNAS				pmax	pmax		
	comp=Z,13nm,1.4s						
KK31	Karatay Array	44.51	275	*e*P	P	09 40 06.8	+0.2
KK31	Karatay Array	44.51	275	*e*P	P	09 40 06.8	+0.2
KKAR	Karatay Array	44.51	275	P	P	09 40 06.8	+0.2
ARSB	Arslanbob	45.09	271	*e*P	P	09 40 12.3	+0.9
	comp=Z,6.7nm,1.1s						
KSH	Kashi	45.50	267	P	P	09 40 20.4	+5.7
KSH				pP	sP	09 40 23.3	+4.1
KSH				PP	PP	09 42 08.0	+7.1
KSH				S	S	09 47 03.8	+7.6
KSH				sS	sS	09 47 10.5	+9.0
KSH				SS	SS	09 50 18.9	-0.4
KSH				pmax	pmax		
	comp=Z,190nm,4.7s						
KSH				LR	LR		
	comp=Z,220nm,5.4s						
KSH				LR	LR		
	comp=Z,310nm,5.9s						
KSH				LR	LR		
	comp=Z,600nm,7.1s						
VSU	Vasula	45.83	319	*i* P	P	09 40 13.6	-3.2
VSU				pmax	pmax		
	comp=Z,35nm,1.2s						
OBN	Obninsk	46.07	310	*i* P	P	09 40 17.6	-1.1
OBN				*i*		09 41 53.0	
OBN				pmax	pmax		
	comp=Z,16nm,1.0s						
OBN				MLR	MLR		
	comp=Z,160nm,16.0s						
NC405	NORSAR Array S	46.77	330	*e*P	P	09 40 24.1	-0.2
	comp=Z,4.5nm,0.9s						
NC204	NORSAR Array S	46.80	331	*e*P	P	09 40 24.6	0.0
	comp=Z,2.3nm,1.0s						
NB2	NORSAR Subarra	46.94	330	P	P	09 40 24.6	-1.0
	comp=Z,57nm,2.0s,baz=24,slow=7.9						
NB2	NORSAR Subarra	46.94	330	P	P	09 40 24.6	-1.0
	baz=24,slow=7.9						
NB200	NORSAR Array S	46.94	330	*e*P	P	09 40 24.9	-0.7
NOA	NORSAR Array B	46.94	330	P	P	09 40 24.9	-0.7
	comp=Z,4.8nm,0.9s,baz=24,slow=7.8,SNR=9.0						
NOA				LR	LR	10 02 54.8	
	comp=Z,86nm,19.2s,baz=15,slow=40						
NBO00	NORSAR Array S	47.03	331	*e*P	P	09 40 26.1	-0.1
	comp=Z,18nm,1.1s						
FCC	Fort Churchill	47.14	37	*e*P	P	09 40 26.9	-0.2
	comp=Z,12nm,1.1s						
FCC	Fort Churchill	47.14	37	*e*P	P	09 40 26.9	-0.2
FCC				pmax	pmax		
	comp=Z,12nm,1.1s						
NC602	NORSAR Array S	47.16	330	*e*P	P	09 40 27.0	-0.3
NAO01	NORSAR Array S	47.18	330	*e*P	P	09 40 29.2	+1.7
BORG	Borgarnes	47.44	351	*i* P	P	09 40 30.4	+1.1
LPSR	Galich'ya Gora	47.53	307	*e*P	P	09 40 28.9	-1.3
LPSR				pmax	pmax		
	comp=Z,30nm,1.6s						
VRH	Novokhopyorsk	47.87	304	*e*P	P	09 40 31.2	-1.7
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
GAR	Garm	48.12	272	*e*P	P	09 40 35.0	-0.1
	comp=Z,19nm,1.0s						
GAR	Garm	48.12	272	*e*P	P	09 40 35.0	-0.1
GAR				pmax	pmax		
	comp=Z,19nm,1.0s						
LSA	Lhasa	48.63	246	*e*P	P	09 40 40.5	+0.9
	comp=Z,8.0nm,0.8s						
VSR	Storozhevoye	48.66	306	*e*P	P	09 40 36.1	-2.9
VSR				pmax	pmax		
	comp=Z,30nm,1.5s						
FFC	Flin Flon	48.80	44	*e*P	P	09 40 40.2	+0.2
	comp=Z,15nm,1.0s						
FFC	Flin Flon	48.80	44	*e*P	P	09 40 40.2	+0.2
FFC				pmax	pmax		
	comp=Z,15nm,1.0s						
CHGR	Chuyangaron	48.86	273	*e*P	P	09 40 40.8	-0.1
	comp=Z,18nm,0.7s						
KMI	Kunming	49.10	231	P	P	09 40 45.6	+2.7
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
KMI				pmax	pmax		
	comp=Z,160nm,4.9s						
B08A	Colville Reser	49.12	61	*e*P	P	09 40 44.6	+1.9
	comp=Z,3.7nm,0.9s						
WALA	Waterton Lakes	50.28	56	*e*P	P	09 40 53.5	+1.9
	comp=Z,2.5nm,0.9s						
KLNR	Kaliningrad	50.90	321	*i* P	P	09 40 55.0	-1.0
KLNR				pmax	pmax		
	comp=Z,26nm,0.9s						
NIL	Nilore	51.70	266	*e*P	P	09 41 02.3	0.0
	comp=Z,34nm,1.1s						
NIL	Nilore	51.70	266	*e*P	P	09 41 02.3	0.0
NIL				pmax	pmax		
	comp=Z,34nm,1.1s						
TAPN	Taplejung	51.98	248	*e*P	P	09 41 04.5	-0.3
	comp=Z,17nm,0.7s						
AKASG	Malin Array Be	52.07	312	P	P	09 41 03.6	-1.2
	comp=Z,5.1nm,0.7s,baz=28,slow=8.2,SNR=17						
AKASG				LR	LR	10 05 15.6	
	comp=Z,100nm,19.8s,baz=340,slow=38						
AKBB	Malin Array Si	52.07	312	*e*P	P	09 41 04.1	-0.7
	comp=Z,8.8nm,0.9s						
KIEV	Kiev	52.08	312	*e*P	P	09 41 03.8	-1.1
	comp=Z,10.0nm,1.0s						
KIEV	Kiev	52.08	312	⇓*i*P	P	09 41 03.3	-1.5
KIEV	Kiev	52.08	312	*e*P	P	09 41 03.8	-1.1
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AK11	Malin Array Si	52.11	313	*e*P	P	09 41 03.9	-1.2
GUN	Gumba	52.13	250	*e*P	P	09 41 05.8	-0.1
	comp=Z,40nm,0.9s						
MSO	Missoula	52.23	58	*e*P	P	09 41 07.3	+1.1
	comp=Z,4.4nm,1.1s						
JIRN	Jiri	52.25	250	*e*P	P	09 41 06.8	0.0
	comp=Z,50nm,0.8s						
KKN	Kakani	52.46	251	*e*P	P	09 41 08.3	+0.1
	comp=Z,30nm,0.7s						
DANN	Dangsing	52.50	253	*e*P	P	09 41 08.6	0.0
	comp=Z,27nm,0.6s						
ODAN	Odare	52.55	248	*e*P	P	09 41 08.6	-0.3
	comp=Z,75nm,1.4s						
PINE	Pine Mountain	52.55	65	*e*P	P	09 41 10.4	+1.7
	comp=Z,12nm,1.0s						
DMN	Daman	52.68	251	*e*P	P	09 41 10.1	+0.2
	comp=Z,34nm,1.1s						
I07A	Izee	52.79	64	*e*P	P	09 41 12.1	+1.7
	comp=Z,4.7nm,1.0s						
GOF	Gofitskoye	52.80	299	*e*P	P	09 41 09.7	-0.6
PYUN	Piuthan	53.01	253	*e*P	P	09 41 11.9	-0.4
	comp=Z,42nm,1.1s						
KOLN	Koldanda	53.09	253	*e*P	P	09 41 12.8	0.0
	comp=Z,50nm,1.2s						
MAK	Makhachkala	53.11	294	*e*P	P	09 41 10.8	-1.8
MAK				*e*S	S	09 48 39.5	-3.0
MAK				*e*SS	SS	09 52 20.5	-0.7
MAK				MLR	MLR		
	comp=Z,380nm,13.0s						
GROC	Groznyy	53.50	296	*e*P	P	09 41 10.6	-4.8
GROC				*e*		09 42 16.8	
GROC				*e*		09 43 14.6	
GROC				*e*S	S	09 48 44.5	-3.2
GROC				pmax	pmax		
	comp=Z,27nm,0.7s						
GEYT	Alibeck	53.68	282	P	P	09 41 16.9	-0.1
	comp=Z,2.8nm,0.6s,baz=1.9,slow=4.5,SNR=12						
GYA0B	ALIBECK ARRAY	53.68	282	*e*P	P	09 41 17.2	+0.3
	comp=Z,8.7nm,0.9s						
KIV	Kislovodsk	53.89	298	*e*P	P	09 41 19.0	+0.6
	comp=Z,20nm,1.1s						
KIV	Kislovodsk	53.89	298	*e*P	P	09 41 17.7	-0.7
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				MLR	MLR		
	comp=Z,92nm,16.0s						
KBZ	Khabaz	54.02	298	P	P	09 41 19.2	0.0
	comp=Z,6.0nm,0.8s,baz=40,slow=14,SNR=13						
LVV	L'vov	54.30	316	*e*P	P	09 41 20.4	-0.8
MCMT	McKenzie Canyo	54.36	58	*e*P	P	09 41 23.2	+1.2
MOD	Modoc Plateau	54.44	66	*e*P	P	09 41 23.8	+1.3
	comp=Z,3.9nm,1.0s						
ULM	Lac du Bonnet	54.45	43	P	P	09 41 20.1	-2.2
	comp=Z,2.6nm,0.8s,baz=344,slow=16,SNR=4.6						
ULM				LR	LR	10 06 28.3	
	comp=Z,212nm,20.2s,baz=344,slow=38						
NEY	Neytrino	54.51	298	*i* P	P	09 41 22.8	-0.2
NEY				pmax	pmax		
	comp=Z,3.0nm,1.4s						
GCMT	Greycliff	54.52	55	*e*P	P	09 41 23.9	+0.8
QLMT	Earthquake Lak	54.82	57	*e*P	P	09 41 26.9	+1.5
KWP	Kalwaria Pacla	54.82	317	*e*P	P	09 41 24.7	-0.3
KWP	Kalwaria Pacla	54.82	317	*e*P	P	09 41 25.2	+0.2
	comp=Z,195nm,1.0s						
KWP	Kalwaria Pacla	54.82	317	*e*P	P	09 41 25.2	+0.2
WDC	Whiskeytown Da	54.82	68	*e*P	P	09 41 25.7	+0.6
	comp=Z,6.6nm,1.0s						
WDC	Whiskeytown Da	54.82	68	*e*P	P	09 41 25.7	+0.6
WDC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANN	Anapa	54.87	303	*e*P	P	09 41 12.2	-13
ANN				*e**PP	pP	09 41 17.0	-12
ANN				pmax	pmax		
	comp=Z,51nm,1.2s						
ANN				MLR	MLR		
	comp=N,982nm,18.0s						
ANN				MLR	MLR		

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            comp=Z,582nm,18.0s
ANN                                    MLR       MLR
            comp=E,56nm,18.0s
YHB   Horse Butte      54.96  57 eP      P         09 41 27.7 +1.3
            comp=E,8.0nm,1.2s
OJC   Ojcow            55.02 319 eP      P         09 41 26.7 +0.2
OJC   Ojcow            55.02 319 eP      P         09 41 26.4 -0.1
            comp=E,17nm,1.1s
OJC   Ojcow            55.02 319 eP      P         09 41 26.4 -0.1
OJC                               pmax    pmax
            comp=Z,17nm,1.1s
YHH   Holmes Hill      55.04  57 eP      P         09 41 28.5 +1.5
            comp=Z,11nm,1.1s
YMR   Madison River    55.11  57 eP      P         09 41 30.3 +2.9
            comp=Z,4.9nm,0.9s
YNR   Norris Junctio   55.16  56 eP      P         09 41 30.5 +2.7
            comp=Z,5.7nm,1.0s
RLMT  Red Lodge        55.24  55 eP      P         09 41 30.1 +1.7
            comp=Z,24nm,1.1s
KSP   Ksiaz            55.30 322 eP      P         09 41 28.6 +0.1
KSP   Ksiaz            55.30 322 eP      P         09 41 28.6 +0.1
YFT   Old Faithful     55.35  57 eP      P         09 41 31.5 +2.4
            comp=Z,7.7nm,0.8s
LKWY  Lake             55.38  56 eP      P         09 41 32.2 +2.7
            comp=Z,16nm,1.0s
H17A  Grant Village    55.48  57 eP      P         09 41 32.4 +2.3
            comp=Z,8.4nm,1.0s
YPP   Pitchstone Pla   55.52  57 eP      P         09 41 33.4 +2.9
            comp=Z,8.2nm,1.2s
CLL   Collm            55.62 324 eP      P         09 41 30.5 -0.3
            comp=Z,11nm,0.8s
CLL   Collm            55.62 324 i sP    P         09 41 30.2 -0.6
            comp=Z,53nm,1.9s
CLL   Collm            55.62 324 i P     P         09 41 30.2 -0.6
CLL                               pmax    pmax
            comp=Z,53nm,1.9s
NIE   Niedzica         55.64 318 eP      P         09 41 31.6 +0.6
NIE   Niedzica         55.64 318 eP      P         09 41 31.6 +0.6
FLWY  Flagg Ranch      55.72  57 eP      P         09 41 33.4 +1.6
            comp=Z,12nm,0.9s
IMW   Indian Meadow    55.81  57 eP      P         09 41 34.5 +1.9
            comp=Z,6.1nm,1.0s
SCHQ  Schefferville    55.84  20  P      P         09 41 31.0 -1.3
            comp=Z,4.5nm,0.7s,baz=8.9,slow=8.2,SNR=9.4
SCHQ                              LR      LR       10 05 43.5
            comp=Z,191nm,21.9s,baz=326,slow=36
BUR08 Bucovina Ar. S   55.96 314 eP      P         09 41 33.2 -0.2
            comp=Z,9.0nm,1.1s
BUR04 Bucovina Ar. S   55.98 314 eP      P         09 41 30.2 -3.4
BURAR Bucovina Array   55.99 314⇓iP      P         09 41 33.2 -0.3
BURAR Bucovina Array   55.99 314 ⇓P      P         09 41 33.2 -0.3
MORC  Moravsky Berou   55.99 320 eP      P         09 41 33.3 -0.2
            comp=Z,9.4nm,1.0s
MORC  Moravsky Berou   55.99 320 eP      P         09 41 33.3 -0.2
MORC                              pmax    pmax
            comp=Z,9.0nm,1.0s
MOOW  Moose Ponds      56.01  57 eP      P         09 41 35.6 +1.7
            comp=Z,7.4nm,1.0s
FXWY  Fox Creek        56.01  57 eP      P         09 41 35.5 +1.5
            comp=Z,7.6nm,1.1s
TPAW  Teton Pass       56.17  57 eP      P         09 41 35.9 +0.8
            comp=Z,9.3nm,1.0s
LOHW  Long Hollow      56.17  57 eP      P         09 41 36.8 +1.7
            comp=Z,4.3nm,1.1s
BEKR  Beckworth        56.22  67 eP      P         09 41 36.3 +0.9
            comp=Z,7.5nm,1.1s
TRPA  Tarpa            56.24 316⇑iP      P         09 41 34.4 -0.8
AGMN  Agassiz Nation   56.24  43 eP      P         09 41 33.9 -1.3
            comp=Z,9.2nm,1.1s
LAMP  Lampang          56.25 232  P      P         09 41 38.8 +3.2
            comp=Z,7.1nm,0.8s
SNOW  Snow King Moun   56.26  57 eP      P         09 41 37.6 +1.9
            comp=Z,6.8nm,1.0s
REDW  Red Top Meadow   56.32  57 eP      P         09 41 38.0 +1.8
            comp=Z,10nm,1.0s
CMAR  Chiang Mai Arr   56.52 232 i P     P         09 41 37.7 +0.2
CMAR                              pmax    pmax
            comp=Z,2.0nm,0.8s
CMAR  Chiang Mai Arr   56.52 232  P      P         09 41 36.5 -1.1
            comp=Z,1.5nm,0.8s,baz=9.5,slow=8.1,SNR=7.7
CMAR                              LR      LR       10 08 25.2
            comp=Z,259nm,19.3s,baz=22,slow=39
CM01  Chiang Mai Arr   56.55 232 eP      P         09 41 35.9 -1.9
MOX   Moxa             56.55 325  P      P         09 41 38.3 +0.9
MOX                               pmax    pmax
            comp=Z,11nm,1.6s
GNI   Garni            56.56 295 eP      P         09 41 39.1 +1.3
            comp=Z,8.6nm,1.0s
GNI   Garni            56.56 295c iP     P         09 41 38.1 +0.2
GNI                               pmax    pmax
            comp=Z,43nm,1.3s
PAHR  Pah Rah Range    56.71  66 eP      P         09 41 40.0 +1.1
            comp=Z,6.2nm,1.1s
UTTA  Uttaradit        56.71 230  P      P         09 41 40.8 +1.9
            comp=Z,5.7nm,0.8s
VYHS  Vyhne            56.86 319 eP      P         09 41 39.6 -0.1
VYHS  Vyhne            56.86 319 eP      P         09 41 39.6 -0.1
HVU   Hansel Valley    57.11  60 eP      P         09 41 42.7 +1.0
            comp=Z,6.9nm,0.9s
HVU   Hansel Valley    57.11  60 eP      P         09 41 42.7 +1.0
HVU                               pmax    pmax
            comp=Z,7.0nm,0.9s
PSZ   Piszkesteto      57.13 318 eP      P         09 41 42.2 +0.6
            comp=Z,9.4nm,1.0s
PSZ   Piszkesteto      57.13 318⇓iP      P         09 41 42.4 +0.8
PSZ   Piszkesteto      57.13 318 eP      P         09 41 42.2 +0.6
PSZ                               pmax    pmax
            comp=Z,9.0nm,1.0s
ELK   Elko             57.21  62 eP      P         09 41 44.0 +1.5
            comp=Z,6.3nm,1.1s
ELK   Elko             57.21  62 eP      P         09 41 44.0 +1.5
ELK                               pmax    pmax
            comp=Z,6.0nm,1.1s
SUKH  Sukhothai        57.23 231  P      P         09 41 46.1 +3.5
            comp=Z,4.4nm,1.1s
BW06  Boulder Array    57.27  57 eP      P         09 41 43.0 +0.1
            comp=Z,5.4nm,0.9s
PD31  Pinedale Array   57.27  57 eP      P         09 41 43.3 +0.4
PDAR  Pinedale Array   57.27  57 eP      P         09 41 42.8 -0.1
PDAR  Pinedale Array   57.27  57  P      P         09 41 43.0 +0.1
            comp=Z,2.7nm,0.7s,baz=9.0,slow=2.9,SNR=28
MODS  Modra-Piesok     57.36 320 eP      P         09 41 41.9 -1.3
MODS  Modra-Piesok     57.36 320 eP      P         09 41 41.9 -1.3
YERR  Yerington        57.40  66 eP      P         09 41 45.1 +1.2
            comp=Z,10nm,1.1s
DRGR                   57.42 315⇓iP      P         09 41 43.6 -0.1
DRGR                   57.42 315 ⇓P      P         09 41 43.6 -0.1
PBKT  Sadao Pong       57.70 229 eP      P         09 41 45.6 -0.2
            comp=Z,8.5nm,0.9s
PBKT  Sadao Pong       57.70 229  P      P         09 41 47.0 +1.1
            comp=Z,13nm,0.9s,comp=Z,958nm
MLR   Muntele Rosu     57.72 312 eP      P         09 41 46.4 +0.4
            comp=Z,7.2nm,1.0s
MLR   Muntele Rosu     57.72 312⇑iP      P         09 41 46.9 +1.0
MLR   Muntele Rosu     57.72 312 ⇑P      P         09 41 46.9 +1.0
MLR   Muntele Rosu     57.72 312  LR     LR        10 09 50.5
            comp=Z,116nm,20.2s,baz=39,slow=39
KVN   Kaiserville      57.74  65 eP      P         09 41 47.6 +1.4
            comp=Z,6.9nm,1.0s
KVN   Kaiserville      57.74  65 eP      P         09 41 47.6 +1.4
KVN                               pmax    pmax
            comp=Z,7.0nm,1.0s
MEM   Membach          57.75 329 ⇓P      P         09 41 46.0 +0.2
WAKR  Walker           57.76  67 eP      P         09 41 48.1 +1.7
            comp=Z,5.2nm,0.9s
GEC2  GERESS Array S   57.77 323 eP      P         09 41 46.3 +0.1
            comp=Z,7.8nm,1.1s
GEC2  GERESS Array S   57.77 323 eP      P         09 41 46.3 +0.1
GEC2                              pmax    pmax
            comp=Z,8.0nm,1.1s
GERES GERESS Array B   57.77 323  P      P         09 41 45.9 -0.4
            comp=Z,1.2nm,0.6s,baz=12,slow=6.8,SNR=3.9
GERES                             LR      LR       10 08 43.5
            comp=Z,131nm,21.3s,baz=66,slow=38
GEA0  GERESS Array S   57.78 323 eP      P         09 41 45.5 -0.7
RYN   Ryan             57.97  66 eP      P         09 41 49.4 +1.6
            comp=Z,6.8nm,1.1s
VOIR                   58.02 313⇓iP      P         09 41 48.5 +0.5
VOIR                   58.02 313 ⇓P      P         09 41 48.5 +0.5
BCLA  Clavier          58.07 330 ⇑P      P         09 41 47.2 -0.9
TCUT  Toone Canyon     58.15  59 eP      P         09 41 50.7 +1.5
            comp=Z,19nm,1.0s
ARR   Arges            58.21 313⇑iP      P         09 41 49.8 +0.6
NV01  Mina Array Sit   58.22  66 eP      P         09 41 50.5 +0.9
NVAR  Mina Array Bea   58.22  66  P      P         09 41 49.6 -0.1
            comp=Z,3.7nm,0.8s,baz=316,slow=5.2,SNR=18
NVAR                              LR      LR       10 06 53.1
            comp=Z,163nm,19.9s,baz=347,slow=36
NV11  Mina Array Sit   58.27  66 eP      P         09 41 51.3 +1.4
            comp=Z,0.3nm,1.1s
K22A  Casper           58.33  54 eP      P         09 41 50.1 -0.1
            comp=Z,8.2nm,1.0s
DUG   Dugway, Tooele   58.52  61 eP      P         09 41 53.0 +1.4
            comp=Z,9.1nm,1.0s
DUG   Dugway, Tooele   58.52  61 eP      P         09 41 53.0 +1.4
DUG                               pmax    pmax
            comp=Z,9.0nm,1.0s
JLU   Jordanelle       58.60  59 eP      P         09 41 53.7 +1.4
            comp=Z,12nm,1.0s
MDPB  Devils Postpil   58.66  67 eP      P         09 41 54.7 +1.9
            comp=Z,13nm,1.1s
OMMB  Old Mammoth Mi   58.71  67 eP      P         09 41 54.8 +1.6
            comp=Z,6.6nm,1.0s
BZS   Buzias           58.80 316⇑iP      P         09 41 52.8 -0.5
BZS   Buzias           58.80 316 ⇑P      P         09 41 52.8 -0.5
NLU   North Lily Min   58.98  60 eP      P         09 41 55.9 +1.0
            comp=Z,11nm,1.1s
MPU   Maple Canyon     59.07  60 eP      P         09 41 56.8 +1.2
            comp=Z,5.2nm,1.1s
UTHA  Uthaitani        59.11 231  P      P         09 41 57.8 +2.1
R11A  Troy Canyon, C   59.24  64 eP      P         09 41 57.0 +0.4
            comp=Z,8.7nm,1.1s
BFO   Black Forest     59.45 327 i P     P         09 41 58.2 +0.4
PSUT  Pine Spring      59.66  62 eP      P         09 42 00.9 +1.2
            comp=Z,13nm,1.1s
P17A  Butcher Ranch,   59.85  59 eP      P         09 42 01.9 +1.0
            comp=Z,8.4nm,1.1s
O20A  White River Ci   60.07  57 eP      P         09 42 03.1 +0.7
            comp=Z,4.7nm,0.9s
Q16A  Castle Valley    60.22  60 eP      P         09 42 04.5 +1.1
            comp=Z,11nm,1.2s
MSU   Marysvale        60.25  61 eP      P         09 42 05.3 +1.6
ECSD  EROS Data Cent   60.25  46 eP      P         09 42 02.6 -0.7
            comp=Z,7.8nm,0.9s
SRU   San Rafael Swe   60.25  59 eP      P         09 42 04.4 +0.7
            comp=Z,7.7nm,1.0s
SRU   San Rafael Swe   60.25  59 eP      P         09 42 04.4 +0.7
SRU                               pmax    pmax
            comp=Z,8.0nm,1.0s
TPNV  Topopah Spring   60.27  65 eP      P         09 42 04.9 +1.1
            comp=Z,7.7nm,1.1s
TPNV  Topopah Spring   60.27  65 eP      P         09 42 04.9 +1.1
TPNV                              pmax    pmax
            comp=Z,8.0nm,1.1s
BR101 Keskin Array S   60.66 303 eP      P         09 42 06.1 -0.2
BRTR  Keskin Array B   60.66 303 i P     P         09 42 06.4  0.0
BRTR                              pmax    pmax
            comp=Z,1.0nm,0.6s
BRTR  Keskin Array B   60.66 303  P      P         09 42 06.1 -0.2
            comp=Z,1.2nm,0.7s,baz=30,slow=5.6,SNR=5.2
MTPU  Mount Pierson    60.67  61 eP      P         09 42 08.7 +2.0
            comp=Z,7.9nm,1.1s
CCUT  Cedar City       60.72  62 eP      P         09 42 08.2 +1.4
            comp=Z,2.7nm,0.9s
SZCU  Shurtz Canyon    60.77  62 eP      P         09 42 08.6 +1.4
            comp=Z,4.2nm,1.1s
SHPR  Sheep Range      61.04  64 eP      P         09 42 10.7 +1.7
            comp=Z,7.3nm,1.1s
PV21  Cone Mtn., Par   61.26  58 eP      P         09 42 13.0 +2.5
            comp=Z,8.4nm,1.0s
PV09  Paradox Valley   61.26  58 eP      P         09 42 11.7 +1.0
SMCO  Snowmass         61.34  56 eP      P         09 42 12.0 +0.7
            comp=Z,7.7nm,0.9s
PV23  Carpenter Ridg   61.35  58 eP      P         09 42 12.2 +1.0
            comp=Z,15nm,1.0s
KNB   Kanab            61.38  62 eP      P         09 42 13.2 +1.8
            comp=Z,11nm,1.1s
KNB   Kanab            61.38  62 eP      P         09 42 13.2 +1.8
KNB                               pmax    pmax
            comp=Z,11nm,1.1s
PV10  Paradox Valley   61.41  58 eP      P         09 42 15.4 +3.8
            comp=Z,15nm,1.1s
PV14  Lion Creek, Pa   61.41  58 eP      P         09 42 12.6 +1.0
            comp=Z,12nm,0.9s
PV04  Paradox Valley   61.43  58 eP      P         09 42 12.7 +1.1
            comp=Z,19nm,1.2s
PV07  Paradox Valley   61.48  58 eP      P         09 42 15.2 +3.2
            comp=Z,8.9nm,1.2s
PV19  Morning Glory    61.48  58 eP      P         09 42 12.8 +0.7
            comp=Z,14nm,1.1s
PV16  Nyswonger Mesa   61.51  58 eP      P         09 42 13.2 +0.9
            comp=Z,11nm,1.0s
PV17  East Wray Mesa   61.52  58 eP      P         09 42 12.8 +0.5
            comp=Z,12nm,1.0s
PV11  David Mesa, Pa   61.53  58 eP      P         09 42 13.3 +1.0
            comp=Z,12nm,1.1s
PV12  Saucer Basin,    61.54  58 eP      P         09 42 13.5 +1.0
            comp=Z,8.4nm,1.1s
PV15  Paradox Valley   61.62  58 eP      P         09 42 13.2 +0.1
            comp=Z,14nm,0.9s
PV02  Paradox Valley   61.66  58 eP      P         09 42 14.1 +0.8
            comp=Z,5.8nm,0.9s
PV05  Paradox Valley   61.66  59 eP      P         09 42 13.9 +0.6
            comp=Z,8.6nm,1.2s
PV13  Radium Mtn., P   61.67  58 eP      P         09 42 14.2 +0.8
            comp=Z,5.8nm,0.9s
PV01  Paradox Valley   61.78  58 eP      P         09 42 15.0 +0.9
            comp=Z,8.8nm,1.1s
S22A  4UR Ranch, Cre   62.70  57 eP      P         09 42 21.4 +1.1
            comp=Z,1.1nm,1.1s
SDCO  Great Sand Dun   63.12  56 eP      P         09 42 23.6 +0.5
            comp=Z,6.3nm,1.1s
SADO  Sadowa           63.49  32 eP      P         09 42 24.2 -0.9
Y12C  Blythe           63.76  65 eP      P         09 42 28.4 +1.4
            comp=Z,6.6nm,0.8s
HYB   Hyderabad        64.39 253 i P     P         09 42 30.5 -0.9
KSU1  Kansas State U   64.55  48 eP      P         09 42 30.4 -1.7
            comp=Z,23nm,1.0s
ANMO  Albuquerque      65.38  58 i P     P         09 42 36.9 -0.9
ANMO                              pmax    pmax
            comp=Z,2.0nm,1.5s
CCM   Cathedral Cave   67.00  44 eP      P         09 42 46.3 -1.7
            comp=Z,6.8nm,0.8s
CCM   Cathedral Cave   67.00  44 eP      P         09 42 46.3 -1.7
CCM                               pmax    pmax
            comp=Z,7.0nm,0.8s
SSPA  Standing Stone   67.71  33 eP      P         09 42 53.4 +0.9
319A  Douglas          67.72  62 eP      P         09 42 54.1 +1.4
            comp=Z,6.9nm,0.8s
T42A  Van Buren        68.01  44 eP      P         09 42 52.6 -1.7
            comp=Z,5.2nm,0.8s
MNTX  Cornudas Mount   68.71  58 eP      P         09 42 59.5 +0.7
            comp=Z,5.3nm,1.0s
T47A  Sharon Grove     69.08  41 eP      P         09 42 59.9 -1.2
            comp=Z,12nm,1.1s
WHAR  Wooly Hollow     69.32  46 eP      P         09 43 01.1 -1.4
            comp=Z,17nm,1.2s
W41B  Gary Mavity, V   69.44  46 eP      P         09 43 02.0 -1.2
            comp=Z,16nm,1.0s
ABTX  Abilene, Hawle   69.67  53 eP      P         09 43 04.2 -0.5
            comp=Z,13nm,1.0s
WVT   Waverly          69.71  42 eP      P         09 43 04.0 -0.9
            comp=Z,12nm,0.9s
WVT   Waverly          69.71  42 eP      P         09 43 04.0 -0.9
WVT                               pmax    pmax
            comp=Z,12nm,0.9s
ES19  SONSECA Array    70.11 333 eP      P         09 43 05.6 -1.8
ESDC  Sonseca Array    70.14 333  P      P         09 43 06.6 -1.0
            comp=Z,2.1nm,0.7s,baz=6.7,slow=6.9,SNR=9.6
V48A  Smith Brothers   70.34  41 eP      P         09 43 08.8  0.0
            comp=Z,8.8nm,1.0s
TX31  Lajitas Ar. Si   71.45  58 eP      P         09 43 16.1 +0.3
TXAR  Lajitas Array    71.45  58  P      P         09 43 15.6 -0.2
            comp=Z,0.5nm,0.5s,baz=356,slow=3.2,SNR=12
TXAR                              LR      LR       10 19 03.1
            comp=Z,156nm,19.1s,baz=0.0,slow=40
X48A  Hartselle        71.50  42 eP      P         09 43 14.2 -1.7
            comp=Z,6.3nm,0.8s
JCT   Junction City    71.61  54 eP      P         09 43 16.5 -0.2
            comp=Z,13nm,1.1s
JCT   Junction City    71.61  54 eP      P         09 43 16.5 -0.2
JCT                               pmax    pmax
            comp=Z,13nm,1.1s
WR1   Warramunga Arr   87.55 188 eP      P         09 44 40.9 -2.2
WRA   Warramunga Arr   87.55 188  P      P         09 44 40.9 -2.2
            comp=Z,0.8nm,0.8s,baz=3.8,slow=5.5,SNR=5.9
WRA                               LR      LR       10 25 20.6
            comp=Z,9.6nm,18.4s,baz=225,slow=37
ASAR  Alice Springs    91.27 188  P      P         09 44 58.5 -2.0
            comp=Z,0.6nm,0.9s,baz=3.6,slow=5.3,SNR=5.5
TOA1  Torodi Ar. Sit   94.72 322 eP      P         09 45 17.3 +0.5
TORD  Torodi Ar. Bea   94.73 322  P      P         09 45 17.3 +0.5
            comp=Z,0.9nm,0.8s,baz=7.6,slow=4.5,SNR=4.0
TORD                              LR      LR       10 36 54.0
            comp=Z,74nm,20.7s,baz=345,slow=41
PLCA  Paso Flores     147.44  51  PKPbc  PKPbc     09 51 38.2 -0.3
            comp=Z,7.6nm,1.0s,baz=329,slow=5.9,SNR=11
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LJU 22 09:40:22.7, 46°.18N×14°.85E, h18km, ML0.5, 1C, Northwestern Balkan Peninsula

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Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC     h  m  s    ISC
VNDS  Vrh nad Dolski    0.13 232⇑iPg     Pg      09 40 26.6  0.0
VNDS                             i Sg     Sg      09 40 29.9 +0.6
            comp=Z,10.0nm,0.2s
PDKS  Podkum            0.16 139 i Pg     Pg      09 40 26.2 -0.8
VISS  Visnje            0.38 181 i Pg     Pb      09 40 30.7 -0.2
VISS                             i Sg     Sb      09 40 36.4 -0.1
LEGS  Legarje           0.40 125 i Pg     Pb      09 40 31.4 +0.1
LEGS                             i Sg     Sb      09 40 37.4 +0.2
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DJA 22 09:46:03.9±0.6, 1°S±4°×9°9E±°, h61km±15km, M3.5/6, MLv3.5/6, Southern Sumatera

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Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC     h  m  s    ISC
SISI  Saibi             0.82 193  P       Pn      09 46 20.7 +1.0
PBSI  Pulau Batu        1.10 295  P       Pn      09 46 23.3  0.0
PBSI                              S       Sn      09 46 38.0 +0.3
PPI   Padang Panjang    1.12  87  P       Pn      09 46 23.9 +0.4
PPI                               S       Sn      09 46 38.3 +0.2
PDSI  Padang            1.24 108  P       Pn      09 46 25.6 +0.4
MNSI  Mandailing Nat    1.34  13  P       Pn      09 46 26.9 +0.4
PPSI  Pulau Pagai       2.34 162  P       Pn      09 46 39.8 -0.3
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*IDC **22** 09:46:48.1±1.9, 0°.74N×93°.18E, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.5/59, mbtmp3.7/7, ML3.8/2, MS3.1/2, Ms1 3.1/2, ms1mx2.7/43, Error ellipse: s-maj=55.6km s-min=21.5km az=59.0*

*ISCJB **22** 09:46:51.7±1.4, 0°.9N±0°.1×93°.3E±0°.2, h33km, mb3.7/5, MS3.0/1, Error ellipse: s-maj=28.9km s-min=17.2km az=146.6*

ISC 22 09:46:53.5±1.6, 0°.8N±0°.2×93°.3E±0°.2, h35km, n10, σ0ˢ.82/8, mb3.9/5, Off west coast of northern Sumatera

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Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC     h  m  s    ISC
PSI   Prapat            6.01  71  Pn      Pn      09 48 20.5 +0.4
            3.0nm,0.3s,baz=2.2,slow=0.7,SNR=5.5
PALK  Pallekele        14.06 298  LR      LR      09 54 48.3
            comp=Z,78nm,18.8s,baz=116,slow=34
CMAR  Chiang Mai Arr   18.41  17  P       P       09 51 04.7 -1.2
            0.1nm,0.3s,baz=212,slow=12,SNR=14
WRA   Warramunga Arr   45.23 119  P       P       09 55 07.8  0.0
            1.1nm,0.7s,baz=297,slow=8.5,SNR=11
ASAR  Alice Springs    46.37 124  P       P       09 55 16.5 -0.3
            0.3nm,0.5s,baz=299,slow=7.8,SNR=6.0
MKAR  Makanchi Array   46.80 350  P       P       09 55 20.6 +0.8
            0.5nm,0.7s,baz=188,slow=7.1,SNR=2.9
SONM  Songino Array    48.22  12  P       P       09 55 30.6 -0.3
            0.6nm,0.5s,baz=191,slow=6.8,SNR=2.9
KSRS  Korea Array      48.48  37  LR      LR      10 17 09.7
            comp=Z,17nm,19.0s,baz=60,slow=38
ZALV  Zalesovo Beam    53.42 354  P       P       09 56 10.6 +0.8
            0.6nm,0.5s,baz=173,slow=7.5,SNR=2.2
TXAR  Lajitas Array   145.95  27  PKPbc   PKPdf   10 06 29.2 -0.4
            0.7nm,0.9s,baz=29,slow=2.9,SNR=3.8
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WEL 22 09:56:38.5±0.4, 44°S±2°×17°3E±°, h5km, ML4.1/7, South Island

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Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC     h  m  s    ISC
CRLZ  Canterbury Las    0.12 252  P       Pg      09 56 41.8 +0.8
CRLZ                              S       Sg      09 56 44.2 +1.5
MQZ   McQueen’s Vall    0.20 210  P       Pg      09 56 42.9 +0.6
MQZ                               S       Sg      09 56 46.1 +1.1
OKCZ  Okains Bay        0.27 134  P       Pg      09 56 44.3 +0.5
OKCZ                              S       Sg      09 56 48.6 +1.2
AKCZ  Akaroa Harbour    0.35 165  P       Pg      09 56 45.8 +0.6
AKCZ                              S       Sg      09 56 50.9 +1.1
AMCZ  Amberley          0.37 345  P       Pg      09 56 46.2 +0.5
AMCZ                              S       Sg      09 56 52.1 +1.5
RACZ  Rakaia            0.51 248  P       Pb      09 56 49.1 -0.8
RACZ                              S       Sb      09 56 56.3 -1.2
OXZ   Oxford            0.58 291  P       Pg      09 56 49.9 +0.2
OXZ                               S       Sg      09 56 58.3 +1.0
LTZ   Lake Taylor       0.84 333  P       Pg      09 56 54.7  0.0
KHZ   Kahutara          1.25  27  P       Pg      09 57 00.3 -2.1
RPZ   Rata Peaks        1.27 261  P       Pg      09 57 01.1 -1.8
INZ   Inchbonnie        1.27 309  P       Pg      09 57 01.5 -1.3
INZ                               P       Pn      09 57 02.5 -0.5
WVZ   Waitaha Valley    1.57 286  P       Pn      09 57 05.6 -1.3
THZ   Tophouse          1.77   3  P       Pn      09 57 07.6 -2.3
DSZ   Denniston Nort    1.93 338  P       Pn      09 57 10.5 -1.5
BSWZ  Blackbirch Sta    1.99  24  P       Pn      09 57 10.6 -2.1
LBZ   Lake Benmore      2.06 245  P       Pn      09 57 12.7 -1.1
ODZ   Otahua Downs      2.15 225  P       Pn      09 57 13.2 -1.9
FOZ   Fox Glacier       2.16 269  P       Pn      09 57 15.1  0.0
TUWZ  Tuamarina         2.27  23  P       Pn      09 57 14.3 -2.3
NNZ   Nelson            2.36  11  P       Pn      09 57 16.2 -1.6
TCW   Tory Channel      2.57  26  P       Pn      09 57 17.9 -2.9
BHW   Baring Head       2.63  37  P       Pn      09 57 18.7 -2.9
PLWZ  Palliser          2.68  44  P       Pn      09 57 18.9 -3.4
QRZ   Quartz Range      2.71 356  P       Pn      09 57 21.0 -1.7
MSWZ  Moikau Station    2.79  42  P       Pn      09 57 20.5 -3.4
HHSZ  Highcliff Hill    2.82 213  P       Pn      09 57 22.2 -2.0
DUWZ  D’Urville Isla    2.86  18  P       Pn      09 57 23.3 -1.5
PAWZ  Paruwai Farm      2.91  43  P       Pn      09 57 21.9 -3.5
JCZ   Jackson Bay       2.95 258  P       Pn      09 57 24.6 -1.4
CAW   Cannon Point      2.96  36  P       Pn      09 57 22.9 -3.1
WKZ   Wanaka            3.00 243  P       Pn      09 57 25.2 -1.6
EAZ   Earnscleugh       3.02 235  P       Pn      09 57 25.3 -1.6
TRWZ  Traveller         3.03  46  P       Pn      09 57 24.2 -2.9
KIW   Kapiti Island     3.10  31  P       Pn      09 57 25.2 -2.9
MTW   Mount Morrison    3.11  41  P       Pn      09 57 24.6 -3.6
OGWZ  Otaki Gorge       3.24  34  P       Pn      09 57 27.2 -2.8
TUZ   Tuapeka           3.30 222  P       Pn      09 57 29.0 -1.8
HOWZ  Holdsworth Sta    3.33  38  P       Pn      09 57 28.0 -3.2
MRZ   Mangatainoka R    3.54  37  P       Pn      09 57 30.6 -3.6
MSZ   Milford Sound     3.68 250  P       Pn      09 57 34.3 -1.7
PRWZ  Pori Road         3.81  40  P       Pn      09 57 35.0 -2.7
MLZ   Mavora Lakes      3.81 240  P       Pn      09 57 35.9 -1.9
BFZ   Birch Farm        3.84  43  P       Pn      09 57 34.2 -4.0
SYZ   Scrubby Hill      3.96 219  P       Pb      09 57 38.4  -10
SYZ                               P       Pn      09 57 38.4 -1.5
WAZ   Wanganui          4.12  24  P       Pn      09 57 42.0 -0.1
ANWZ  Angora Road       4.12  43  P       Pn      09 57 38.5 -3.6
WHZ   Wether Hill Ro    4.18 234  P       Pn      09 57 40.3 -2.6
NMEZ  Namu Road         4.20  12  P       Pn      09 57 43.1  0.0
PREZ  Palmer Road       4.32  14  P       Pn      09 57 44.6 -0.2
KHEZ  Kahui Hut         4.34  13  P       Pn      09 57 45.1  0.0
NBEZ  Newall Road No    4.34  11  P       Pn      09 57 44.2 -0.9
PKE   Pukeiti           4.43  12  P       Pn      09 57 45.7 -0.6
MTVZ  Mangateitei       4.61  27  P       Pn      09 57 47.6 -1.3
VRZ   Vera Road         4.65  19  P       Pn      09 57 48.4 -1.0
MOVZ  Moawhango         4.69  29  P       Pn      09 57 47.8 -2.2
TRVZ  Turoa             4.71  27  P       Pn      09 57 48.9 -1.5
BHHZ  Black Hill Sta    4.73  32  P       Pn      09 57 47.9 -2.7
WHVZ  Whangaehu Hut     4.74  27  P       Pn      09 57 49.8 -1.1
FWVZ  Far West T-bar    4.76  27  P       Pn      09 57 49.7 -1.3
TUVZ  Tukino            4.78  28  P       Pn      09 57 49.5 -1.8
KAHZ  Kahuranaki        4.83  41  P       Pn      09 57 49.4 -2.5
NGZ   Ngauruhoe         4.84  27  P       Pn      09 57 50.0 -2.2
WTVZ  West Tongariro    4.89  26  P       Pn      09 57 51.1 -1.7
BKZ   Black Stump Fm    5.18  34  P       Pn      09 57 52.7 -3.9
HIZ   Hauiti            5.26  18  P       Pn      09 57 55.8 -1.9
TLZ   Tolley Road       5.60  23  P       Pn      09 57 60.0 -2.5
ALRZ  Allen Road        5.65  30  P       Pn      09 57 59.8 -3.3
MUGZ  Murupara          5.88  32  P       Pn      09 58 02.5 -3.8
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*IDC **22** 09:59:18.6±2.1, 27°.65N×52°.80E, h0km, mb3.8/6, mb1 3.8/10, mb1mx3.6/49, mbtmp3.7/10, ML3.3/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/49, Error ellipse: s-maj=44.8km s-min=28.1km az=39.0*

*ISCJB **22** 09:59:19.5±1.0, 27°.55N±0°.08×52°.71E±0°.08, h20km, mb3.7/6, MS3.0/1, Error ellipse: s-maj=13.1km s-min=9.1km az=34.4*

TEH ***22*** *09:59:21.5, 27°.79N×52°.70E, h10^{km}, ML3.6*
THR ***22*** *09:59:23.9, 27°.90N×52°.85E, h25^{km}, ML3.3*
ISC 22 09:59:20.3±1.3**, 27°.6N**±0°.1×**52°.8E**±0°.1**, h20^{km}, n26, σ1ˢ.48**/23**, mb3.7**/6**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.75	15	*e*Pg	Pn	09 59 32.7	-3.3
JHRM	Jahrom	1.19	37	*e*Pg	Pn	09 59 42.7	+0.8
JHRM				IAMB	IAmb	10 00 02.4	
	comp=Z,0.0nm,0.4s						
IKAZ	Kazeroun	2.36	340	*e*Pn	Pb	10 00 00.1	-2.3
IKAZ				IAMB	IAmb	10 01 00.7	
	comp=N,12μm,0.7s						
KLNJ	Kolanjah	3.59	344	*e*Pn	Pn	10 00 15.3	+0.1
NIAN	Nian	3.61	89	*e*Pn	Pb	10 00 20.7	-2.8
NGRK	Negar Kerman	4.06	58	*e*Pn	Pn	10 00 23.0	+1.3
IMEH	Mehriz	4.15	22	*e*Pn	Pb	10 00 24.9	-7.9
IRAM	Ramesheh	4.25	356	*e*Pn	Pn	10 00 24.8	+0.6
IRAM				IAMB	IAmb	10 01 46.3	
	comp=Z,360nm,0.6s						
KRBR	Kerman	4.26	54	*e*Pn	Pb	10 00 26.3	-8.4
KHGB	Koh Gabri	4.30	48	*e*Pn	Pn	10 00 26.6	+1.8
IGAR	Gharneh	4.87	353	*e*Pn	Pn	10 00 34.0	+1.3
IGAR				IAMB	IAmb	10 01 32.4	
	comp=Z,257nm,0.3s						
ICHK	Chekchek	4.89	17	*e*Pn	Pn	10 00 34.9	+2.0
ICHK				IAMB	IAmb	10 00 35.8	
	comp=Z,698nm,0.3s						
YZKH	Yazd	5.07	18	*e*Pn	Pn	10 00 36.1	+0.8
IZEF	Zefreh	5.34	356	*e*Pn	Pn	10 00 39.5	+0.4
ANAR	Anarak	5.68	8	*e*Pn	Pn	10 00 44.4	+0.7
IKLH	Kolahrood	5.84	350	*e*Pn	Pn	10 00 47.0	+1.0
WSAR	Wadi Sarin	6.82	128	Pn	Pn	10 01 01.6	+2.3
	comp=Z,0.6nm,0.3s,baz=318,slow=11,SNR=11						
WSAR				Sn	Sn	10 02 14.6	-1.8
	comp=Z,0.6nm,0.3s,baz=49,slow=15,SNR=1.3						
GEYT	Alibeck	11.28	22	Pn	Pn	10 02 00.4	-0.1
	comp=Z,0.5nm,0.3s,baz=209,slow=15,SNR=2.2						
KBZ	Khabaz	18.00	336	P	P	10 03 30.5	+0.8
	comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=1.6						
BRTR	Keskin Array B	19.98	312	P	Pn	10 03 53.2	-0.1
	comp=Z,0.1nm,0.3s,baz=140,slow=12,SNR=2.8						
AKTO	Aktyubinsk	23.20	9	P	P	10 04 27.4	+1.6
	comp=Z,1.5nm,0.7s,baz=191,slow=16,SNR=2.7						
BVAR	Borovoye Array	28.62	22	P	P	10 05 14.9	-0.4
	comp=Z,0.3nm,0.4s,baz=203,slow=5.8,SNR=3.0						
ZALV	Zalesovo Beam	35.32	33	P	P	10 06 14.4	+0.5
	comp=Z,1.4nm,0.6s,baz=250,slow=9.6,SNR=7.9						
ZALV				LR	LR	10 23 52.5	
	comp=Z,30nm,21.1s,baz=248,slow=42						
FINES	FINESS Array B	38.31	340	P	P	10 06 39.7	+0.4
	comp=Z,0.6nm,0.3s,baz=137,slow=11,SNR=5.8						
ARCES	ARCESS Array B	44.90	347	P	P	10 07 33.5	+0.3
	comp=Z,3.3nm,1.0s,baz=147,slow=8.3,SNR=24						
YKA	Yellowknife Ar	89.70	354	P	P	10 12 17.2	+0.5
	comp=Z,0.1nm,0.6s,baz=8.0,slow=4.6,SNR=5.8						

ISCJB ***22*** *10:21:06.4±0.4, 67°.58N±0°.04×142°.9E±0°.1, h10^{km}, mb3.4/10, MS3.1/2, Error ellipse: s-maj=6.8km s-min=5.4km az=5.6*
YARS ***22*** *10:21:06.0±0.2, 67°.62N±0°.01×142°.70E±0°.04, h10^{km}*
MOS ***22*** *10:21:06.5±1.5, 67°.67N×142°.98E, h11^{km}, mb4.0/3, Error ellipse: s-maj=29.9km s-min=10.8km az=86.6*
IDC ***22*** *10:21:07.1±1.1, 67°.78N×142°.84E, h0^{km}, mb3.5/10, mb1 3.6/11, mb1mx3.5/58, mbtmp3.5/11, ML2.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/44, Error ellipse: s-maj=32.3km s-min=16.7km az=167.0*
ISC 22 10:21:07.3±0.6**, 67°.55N**±0°.04×**143°.09E**±0°.06**, h10^{km}, n26, σ1ˢ.87**/30**, mb3.4**/10**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.09	177	*e*P	Pb	10 21 27.5	-0.7
MOMR				*e*S	Sg	10 21 42.1	-0.3
MOMR				pmax	pmax		
	comp=Z,102nm,0.5s						
MOMR				smax	smax		
	comp=N,829nm,0.8s						
MOMR	Moma	1.09	177	*e*P	Pb	10 21 27.5	-0.7
MOMR				Pmax		10 21 27.5	
	comp=Z,102nm,0.5s						
MOMR				*e*S	Sg	10 21 42.1	-0.3
MOMR				Smax		10 21 42.1	
	comp=E,829nm,0.8s						
YBGR	Belaya Gora	1.53	48	*e*P	Pn	10 21 34.3	-0.3
YBGR				*e*S	Sg	10 21 55.6	-0.8
YBGR	Belaya Gora	1.53	48	*e*P	Pn	10 21 34.3	-0.3
YBGR				Pmax		10 21 34.3	
	comp=Z,33nm,0.3s						
YBGR				*e*S	Sg	10 21 55.6	-0.8
YBGR				Smax		10 21 55.6	
	comp=N,300nm,0.3s						
DEPR	Deputatskiy	2.19	329	*e*P	Pn	10 21 42.6	-1.2
DEPR				*e*S	Sn	10 22 10.2	-0.7
DEPR	Deputatskiy	2.19	329	*e*P	Pn	10 21 42.6	-1.2
DEPR				Pmax		10 21 42.6	
	comp=Z,15nm,0.3s						
DEPR				*e*S	Sn	10 22 10.2	-0.7
DEPR				Smax		10 22 10.2	
	comp=E,413nm,0.3s						
ATKR	Artyk	3.49	165	*e*S	Sg	10 22 57.9	-1.3
ATKR				Smax		10 22 57.9	
	comp=E,210nm,1.0s						
SEY	Seymchan	6.05	136	Pn	Pn	10 22 39.0	+2.2
	comp=E,0.1nm,0.3s,baz=315,slow=17,SNR=2.0						
SEY				Lg	Lg	10 24 20.7	
	comp=E,0.3nm,0.3s,baz=209,slow=22,SNR=9.0						
YAK	Yakutsk	7.95	232	*e*P	Pn	10 23 03.6	+0.8
YAK				*e*		10 24 33.1	
YAK				pmax	pmax		
	comp=Z,18nm,0.3s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.3s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.3s						
YAK				smax	smax		
	comp=E,73nm,0.6s						
YAK				smax	smax		
	comp=N,18nm,0.4s						
YAK	Yakutsk	7.95	232	*e*S	Sn	10 24 27.2	-5.4
YAK				*e*S	Sb	10 25 09.8	+10
YAK				Smax		10 25 09.8	
	comp=E,80nm,0.2s						
USMR	Ust'-Maya	8.07	212	*e*P	Pn	10 23 11.2	+6.7
USMR				*e*S	Sn	10 24 32.6	-3.1
USMR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
USMR				smax	smax		
	comp=N,27nm,1.2s						
USMR	Ust'-Maya	8.07	212	*e*P	Pn	10 23 11.2	+6.7
USMR				*e*P	Pb	10 23 31.3	+4.2
USMR				Pmax		10 23 31.3	
	comp=Z,5.0nm,0.9s						
USMR				*e*S	Sn	10 24 32.6	-3.1
USMR				*e*S	Sg	10 25 16.1	-10
USMR				Smax		10 25 16.1	
	comp=E,27nm,1.2s						
MA2	Magadan	8.70	153	Lg	Lg	10 25 47.1	
	comp=E,0.2nm,0.3s,baz=208,slow=23,SNR=2.2						
ILAR	Eielson Array	27.07	62	P	P	10 26 50.7	+1.2
	comp=E,0.9nm,0.8s,baz=293,slow=7.5,SNR=13						
SONM	Songino Array	27.16	242	P	P	10 26 52.4	+1.9
	comp=E,0.5nm,1.0s,baz=56,slow=8.8,SNR=1.9						
INK	Inuvik	29.12	49	LR	LR	10 40 54.1	
	comp=E,81nm,18.5s,baz=140,slow=41						
SPITS	Spitsbergen Ar	31.12	341	LR	LR	10 39 07.9	
	comp=E,21nm,18.7s,baz=200,slow=35						
KURK	Kurchatov	35.12	274	P	P	10 28 02.2	+1.8
KURBB	Kurchatov Arra	35.23	274	P	P	10 28 02.2	+0.8
	comp=E,0.3nm,0.6s,baz=38,slow=8.8,SNR=2.3						
BVAR	Borovoye Array	36.41	284	P	P	10 28 12.4	+0.9
	comp=E,0.3nm,0.5s,baz=47,slow=8.5,SNR=2.1						
MKAR	Makanchi Array	36.91	267	P	P	10 28 15.4	-0.4
	comp=E,0.3nm,0.6s,baz=35,slow=8.9,SNR=4.2						
YKA	Yellowknife Ar	38.76	46	P	P	10 28 31.7	+0.5
	comp=E,0.3nm,0.7s,baz=323,slow=8.0,SNR=7.2						
FINES	FINESS Array B	43.45	322	P	P	10 29 08.7	-1.1
	comp=E,0.8nm,0.7s,baz=23,slow=10,SNR=4.4						
FRB	Frobisher Bay	47.03	19	P	P	10 29 37.2	-0.9
	comp=E,1.3nm,0.8s,baz=350,slow=12,SNR=2.0						
AKASG	Malin Array Be	52.14	313	P	P	10 30 16.5	-0.8
	comp=E,0.3nm,0.4s,baz=29,slow=8.3,SNR=1.7						
PDAR	Pinedale Array	57.29	57	P	P	10 30 56.5	+1.5
	comp=E,0.5nm,0.7s,baz=45,slow=4.4,SNR=5.4						

ISCJB ***22*** *10:27:19.5±0.5, 67°.58N±0°.04×142°.9E±0°.1, h10^{km}, mb3.5/8, Error ellipse: s-maj=8.2km s-min=5.8km az=24.3*
IDC ***22*** *10:27:19.6±0.9, 67°.65N×142°.82E, h0^{km}, mb3.5/8, mb1 3.8/9, mb1mx3.5/52, mbtmp3.6/9, ML3.4/1, Error ellipse: s-maj=28.1km s-min=16.2km az=177.0*
MOS ***22*** *10:27:19.9±2.6, 67°.70N×142°.89E, h9^{km}, mb3.9/2, Error ellipse: s-maj=30.6km s-min=10.4km az=88.3*
YARS ***22*** *10:27:20.7±0.2, 67°.600N±0°.009×142°.97E±0°.03, h15^{km}*
ISC 22 10:27:20.4±0.6**, 67°.55N**±0°.03×**142°.69E**±0°.05**, h10^{km}, n26, σ1ˢ.91**/37**, mb3.5**/8**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.11	169	*e*P	Pb	10 27 41.3	-0.3
MOMR				*e*S	Sg	10 27 55.2	-0.8
MOMR	Moma	1.11	169	*e*P	Pb	10 27 41.3	-0.3
MOMR				*e*S	Sg	10 27 55.2	-0.8
YBGR	Belaya Gora	1.64	52	*e*P	Pn	10 27 47.7	-1.5
YBGR				*e*S	Sn	10 28 08.6	-1.8
YBGR	Belaya Gora	1.64	52	*e*P	Pn	10 27 47.7	-1.5
YBGR				*e*S	Sn	10 28 08.6	-1.8
DEPR	Deputatskiy	2.12	332	*e*P	Pb	10 27 58.4	-0.4
DEPR				*e*S	Sb	10 28 26.4	+1.4
DEPR	Deputatskiy	2.12	332	*e*P	Pb	10 27 58.4	-0.4
DEPR				*e*S	Sb	10 28 26.4	+1.4
ATKR	Artyk	3.53	162	*e*P	Pb	10 28 24.5	+1.6
ATKR				*e*S	Sg	10 29 10.7	-2.9
ATKR	Artyk	3.53	162	*e*P	Pb	10 28 24.5	+1.6
ATKR				*e*S	Sg	10 29 10.7	-2.9
SEY	Seymchan	6.16	134	P	Pn	10 28 52.0	+0.7
SEY				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SEY	Seymchan	6.16	134	Pn	Pn	10 28 52.0	+0.7
	comp=Z,0.9nm,0.3s,baz=316,slow=3.4,SNR=8.4						
SEY				Lg	Lg	10 30 33.7	
	comp=Z,1.3nm,0.3s,baz=214,slow=21,SNR=10						
YAK	Yakutsk	7.83	231	*e*P	Pn	10 29 20.8	+6.6
YAK				*e*		10 30 47.1	
YAK				pmax	pmax		
	comp=Z,19nm,0.4s						
YAK				smax	smax		
	comp=E,64nm,1.0s						
YAK	Yakutsk	7.83	231	*e*S	Sn	10 30 42.1	-0.6
YAK				*e*S	Sg	10 31 26.6	-4.8
USMR	Ust'-Maya	8.00	210	*e*P	Pn	10 29 19.5	+3.0
USMR				*e*S	Sn	10 30 47.1	+0.3
USMR	Ust'-Maya	8.00	210	*e*P	Pn	10 29 19.5	+3.0
USMR				*e*P	Pg	10 29 46.7	-6.6
USMR				*e*S	Sn	10 30 47.1	+0.3
USMR				*e*S	Sg	10 31 32.2	-4.5
MA2	Magadan	8.77	152	Lg	Lg	10 31 58.8	
	comp=E,0.6nm,0.3s,baz=37,slow=13,SNR=4.7						
CGD	Chagda	10.36	217	*e*S	Sn	10 31 42.1	-2.7
CGD				*e*S		10 32 44.9	
ILAR	Eielson Array	27.20	62	P	P	10 33 03.9	+0.1
	comp=E,1.6nm,0.8s,baz=294,slow=7.6,SNR=21						
KURK	Kurchatov	34.97	274	P	P	10 34 14.4	+2.3
KURBB	Kurchatov Arra	35.08	274	P	P	10 34 14.4	+1.3
	comp=E,0.4nm,0.8s,baz=39,slow=8.5,SNR=3.5						
BVAR	Borovoye Array	36.26	283	P	P	10 34 24.4	+1.2
	comp=E,0.7nm,0.7s,baz=54,slow=7.3,SNR=3.6						
MKAR	Makanchi Array	36.76	267	P	P	10 34 28.9	+1.3
	comp=E,0.5nm,0.8s,baz=39,slow=5.5,SNR=3.4						
MKAR				PP	PP	10 35 52.7	+1.7
	comp=E,0.6nm,0.9s,baz=45,slow=8.7,SNR=3.8						
YKA	Yellowknife Ar	38.87	46	P	P	10 34 45.6	+0.4
	comp=E,0.4nm,0.7s,baz=322,slow=8.0,SNR=9.6						
AKASG	Malin Array Be	52.02	312	P	P	10 36 29.0	-0.4
AKASG	Malin Array Be	52.02	312	P	P	10 36 28.9	-0.4
	comp=E,0.3nm,0.4s,baz=30,slow=8.2,SNR=4.1						
PDAR	Pinedale Array	57.42	56	P	P	10 37 09.6	+0.6
	comp=E,0.4nm,0.8s,baz=357,slow=3.0,SNR=5.0						
TXAR	Lajitas Array	71.61	57	P	P	10 38 40.5	-1.2
	comp=E,0.3nm,0.8s,baz=350,slow=4.6,SNR=2.1						

IDC ***22*** *10:51:22.6±1.5, 10°.05S×118°.61E, h0^{km}, mb3.8/5, mb1 3.7/9, mb1mx3.5/43, mbtmp3.6/9, ML3.4/4, MS3.2/1, Ms1 3.2/1, ms1mx2.4/27, Error ellipse: s-maj=69.6km s-min=19.5km az=47.0*
ISCJB ***22*** *10:51:23.2±0.8, 10°.60S±0°.07×118°.58E±0°.07, h35^{km}, mb3.8/5, MS3.2/1, Error ellipse: s-maj=12.7km s-min=5.8km az=44.2*
DJA ***22*** *10:51:28.7±0.8, 10°S±7°×11°9E±°, h10^{km}, M4.0/7, MLv4.0/7*
ISC 22 10:51:26.4±0.9**, 10°.43S**±0°.09×**118°.69E**±0°.08**, h35^{km}, n14, σ3ˢ.22**/18**, mb3.9**/5**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.75	65	P	Pn	10 51 55.4	+1.1
PLAI	Plampang	1.83	330	P	Pn	10 51 55.8	+0.4
PLAI				S	Sn	10 52 17.8	+0.5
EDFI	Ende, Flores	3.39	61	P	Pn	10 52 17.7	+0.7
BATI	Baumata	4.90	88	Pn	Pn	10 52 39.5	+1.9
	7.4nm,0.3s,baz=261,slow=5.3,SNR=6.7						
BATI				Sn	Sn	10 53 34.8	+1.6
	5.9nm,0.3s,baz=76,slow=21,SNR=1.6						
BKSI	Bulukumba	5.26	16	P	Pn	10 52 42.1	-0.6
FITZ	Fitzroy Crossi	10.17	139	Pn	Pn	10 53 53.5	+3.5
	0.2nm,0.3s,baz=334,slow=11,SNR=9.2						
FITZ				Sn	Sn	10 55 41.2	-1.7
	0.7nm,0.3s,baz=161,slow=22,SNR=6.7						
WRA	Warramunga Arr	17.81	124	P	P	10 55 34.2	+2.1
	0.1nm,0.3s,baz=302,slow=12,SNR=1.4						
WRA				S	Sn	10 58 40.8	-8.4
	0.1nm,0.3s,baz=291,slow=22,SNR=1.7						
ASAR	Alice Springs	19.59	134	P	Pn	10 55 56.9	+3.6
	0.1nm,0.3s,baz=313,slow=11,SNR=7.2						
ASAR				S	S	10 59 25.0	-6.2
	0.0nm,0.3s,baz=302,slow=22,SNR=1.5						
KSRS	Korea Array	48.41	10	LR	LR	11 20 34.5	
	comp=Z,23nm,19.0s,baz=322,slow=36						
SONM	Songino Array	59.02	350	P	P	11 01 21.4	-1.5
	0.6nm,0.6s,baz=166,slow=7.8,SNR=5.8						
MKAR	Makanchi Array	65.58	333	P	P	11 02 06.0	-0.7
	0.6nm,0.5s,baz=150,slow=7.2,SNR=4.9						
KURBB	Kurchatov Arra	70.11	334	P	P	11 02 34.5	-0.6
	0.2nm,0.3s,baz=145,slow=6.0,SNR=4.2						
ZALV	Zalesovo Beam	70.26	340	P	P	11 02 34.6	-1.3
	1.3nm,0.5s,baz=135,slow=5.1,SNR=5.8						
BVAR	Borovoye Array	75.41	332	P	P	11 03 06.7	+0.2
	0.4nm,0.6s,baz=92,slow=4.8,SNR=2.0						

ISCJB ***22*** *11:17:25.9±0.6, 18°.57S±0°.04×69°.51W±0°.09, h124^{km}±6^{km}, mb3.3/2, Error ellipse: s-maj=14.4km s-min=6.6km az=5.8*
GUC ***22*** *11:17:26.7±0.5, 18°.54S×69°.47W, h110^{km}±3^{km}, ML3.4*
IDC ***22*** *11:17:27.7±1.6, 18°.63S×69°.04W, h126^{km}±12^{km}, mb3.3/2, mb1 3.5/5, mb1mx3.3/27, mbtmp3.9/5, Error ellipse: s-maj=53.2km s-min=9.6km az=99.0*
ISC 22 11:17:26.2±0.9**, 18°.55S**±0°.05×**69°.52W**±0°.10**, h119^{km}**±8^{km}**, n12, σ1ˢ.02**/21**, 5C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	Minye Minye	0.58	187	⇑*i*P	Pn	11 17 45.1	+0.1
MNMC				*i* S	Sn	11 17 58.8	-0.3
PB12	IPOC Station P	0.77	265	⇑*i*P	Pn	11 17 46.5	+0.3
PB12				*i* S	Sn	11 18 01.3	0.0
PB12				IAML		11 18 02.1	
	comp=N,2μm,0.2s						
PSGC	Pisagua	1.19	209	⇑*i*P	Pn	11 17 50.4	+0.2
PSGC				*i* S	Sn	11 18 08.8	+0.3
PSGC				IAML		11 18 10.6	
	comp=N,439nm,0.5s						
PB11	IPOC Station P	1.21	186	⇑*i*P	Pn	11 17 50.9	+0.3
PB11				*i* S	Sn	11 18 09.3	+0.3
PB11				IAML		11 18 11.0	
	comp=E,1μm,0.6s						
PB08	IPOC Station P	1.62	168	⇑*i*P	Pn	11 17 56.3	+0.8
PB08				*e*S	Sn	11 18 18.2	+0.6
PB08				IAML		11 18 22.3	
	comp=E,219nm,0.2s						
PB01	IPOC Station P	2.48	179	⇓*i*P	Pn	11 18 06.6	+0.7
PB01				*i* S	Sn	11 18 35.7	-0.5
PB01				IAML		11 18 48.9	
	comp=E,147nm,0.3s						
LPAZ	La Paz	2.61	31	P	Pn	11 18 09.4	+1.4
	comp=E,6.9nm,0.3s,baz=199,slow=7.0,SNR=95						
LPAZ				S	Sn	11 18 39.4	-0.7
	comp=E,0.7nm,0.3s,baz=200,slow=7.9,SNR=1.9						
PB02	IPOC Station P	2.78	187	*e*P	Pn	11 18 10.7	+1.0
PB02				*i* S	Sn	11 18 42.0	-1.2
PB02				IAML		11 18 55.6	
	comp=E,280nm,0.5s						
LVC	Limon Verde	4.08	172	P	Pn	11 18 28.7	+1.6
	comp=E,2.0nm,0.3s,baz=346,slow=6.3,SNR=13						
LVC				S	Sn	11 19 13.1	-1.3
	comp=E,5.1nm,0.3s,baz=322,slow=20,SNR=9.7						
PTGA	Pitinga	20.04	29	P	P	11 21 48.2	-1.9
	comp=E,1.9nm,0.3s,baz=276,slow=23,SNR=15						
TORD	Torodi Ar. Bea	76.93	71	P	P	11 29 05.0	-1.1
	comp=E,0.2nm,0.3s,baz=252,slow=5.4,SNR=4.9						
YKA	Yellowknife Ar	88.23	341	P	P	11 30 05.0	+1.5
	comp=E,0.2nm,0.5s,baz=132,slow=4.7,SNR=8.9						

HLW ***22*** *11:17:29.8, 29°.94N×36°.55E, h10^{km}±9^{km}, Ml3.6*
ISCJB ***22*** *11:17:31.0±1.7, 29°.94N±0°.08×36°.2E±0°.1, h3^{km}, Error ellipse: s-maj=19.8km s-min=6.4km az=34.1*
JSO ***22*** *11:17:33.6±1.0, 30°N±7°×3°6E±°, h10^{km}, M3.0/12, Mjma3.0/12, ML3.0/6, MLv3.0/12*
ISC 22 11:17:29.8±1.8**, 29°.92N**±0°.07×**36°.21E**±0°.10**, h3^{km}, n14, σ0ˢ.74**/15**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSNJ	Maan	0.56	306	P	Pb	11 17 41.6	-0.8
JDRJ	Daraweish	0.93	330	P	Pg	11 17 47.5	-0.2
HRFI	Mount Harif	1.02	277	P	Pb	11 17 50.1	-0.1
AQBJ	Aqaba	1.02	259	P	Pb	11 17 50.0	-0.2
EIL	Elat	1.12	257	P	Pn	11 17 52.5	+0.1
SWQJ	Swaqa	1.32	355	P	Pb	11 17 57.1	+1.8
LISJ	El Lisan	1.45	335	P	Pg	11 17 57.2	-0.5
HBST	Basata	1.47	242	P	Pb	11 17 57.5	-0.3
	baz=247						
HBST				AMP		11 18 00.0	
	baz=247						
HBST				S	Sg	11 18 17.8	+0.9
	baz=247						
GHAJ	Ghor Haditha	1.48	338	P	Pb	11 17 57.5	-0.5
WALJ	Wala	1.67	348	P	Pg	11 18 01.6	-0.2
KZIT	Kziot	1.84	303	P	Pb	11 18 04.0	-0.2
ASF	Jabal al Asfar	2.32	15	P	Pb	11 18 11.3	-1.0
RSH		2.38	296	P	Pn	11 18 10.2	+0.4
	baz=294						
HKAT	Jabal Katrina	2.39	235	P	Pn	11 18 10.2	+0.1
	baz=239						

NNC ***22*** *11:30:20.6±3.4, 37°.39N×71°.52E, h175^{km}±44^{km}, mb2.6, mpv3.7, Error ellipse: s-maj=30.9km s-min=30.2km az=50.0*
ISC 22 11:30:18.5±3.4**, 37°.2N**±0°.2×**71°.4E**±0°.1**, h109^{km}, n14, σ1ˢ.08**/19**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.26	30	⇓P	Pn	11 31 09.1	+0.9
	9.0nm,0.3s						
SFK				⇑S	Sn	11 31 49.1	+2.7
	5.4nm,0.2s						
AML	Almayashu	5.23	19	P	Pn	11 31 34.9	+0.1
	SNR=34						
MNAS	Manas	5.34	9	⇑P	Pn	11 31 36.6	+0.5
	6.0nm,0.5s						
MNAS				⇑S	Sn	11 32 37.0	+0.5
	15nm,0.6s						
UCH	Uchtor	5.57	25	P	Pn	11 31 39.5	+0.1
	SNR=6.0						
KZA	Kyzart	5.71	30	P	Pn	11 31 41.1	-0.2
	SNR=6.2						
EKS2	Erkin-Say	5.75	18	P	Pn	11 31 42.3	+0.7
	SNR=16						
AAK	Ala-Archa	5.93	23	P	Pn	11 31 44.3	+0.3
	SNR=15						
AAK	Ala-Archa	5.93	23	⇑P	Pn	11 31 44.2	+0.3
	6.8nm,0.4s						
AAK				⇓S	Sn	11 32 49.9	-0.7
	2.0nm,0.5s						
KK31	Karatay Array	5.93	354	P	Pn	11 31 44.8	+0.9
	0.5nm,0.2s,baz=180,slow=14,SNR=53						
KK31				S	Sn	11 32 49.9	-0.6
	1.6nm,0.3s,baz=170,slow=24,SNR=10						
CHMS	Chumysh	6.34	23	P	Pn	11 31 49.5	+0.1
	SNR=6.2						
USP	Ospenovka	6.51	21	P	Pn	11 31 52.4	+0.7
	SNR=11						
TKM2	Tokmak 2	6.56	28	P	Pn	11 31 52.8	+0.2
	SNR=10						
TKM2	Tokmak 2	6.56	28	⇓P	Pn	11 31 52.5	-0.1
	4.6nm,0.5s						
TKM2				⇓S	Sn	11 33 03.4	-2.5
	0.9nm,0.6s						
AB31	Akbulak array	14.63	329	P	Pn	11 33 39.3	-0.6
	0.2nm,0.3s,baz=60,slow=75,SNR=11						

ISCJB ***22*** *11:39:31.2±0.2, 10°.74S±0°.04×164°.88E±0°.05, h10^{km}, mb4.7/56, MS4.5/12, Error ellipse: s-maj=7.0km s-min=5.1km az=166.0*
IDC ***22*** *11:39:31.6±0.5, 10°.62S×164°.90E, h0^{km}, mb4.4/26, mb1 4.6/27, mb1mx4.5/42, mbtmp4.4/27, ML4.7/1, MS4.6/12, Ms1 4.6/12, ms1mx4.2/34, Error ellipse: s-maj=17.5km s-min=12.6km az=98.0*
NEIC ***22*** *11:39:32.9±0.3, 10°.66S×164°.94E, h10^{km}, mb4.9/29, Error ellipse: s-maj=8.3km s-min=5.9km az=84.0*
BJI ***22*** *11:39:32.0, 10°.60S×164°.90E, h10^{km}, mB5.3/21, mb4.7/36, Ms5.1/12, Ms7 4.8/12*
GCMT ***22*** *11:39:33.9±0.3, 10°.69S±0°.01×164°.91E±0°.02, h12^{km}, MW5.0/76, Moment Tensor Solution. s26,c36; s76,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.34±.14; $M_{\theta\theta}$3.76±.12; $M_{\phi\phi}$-3.42±.13; $M_{r\theta}$-1.15±.34; $M_{\theta\phi}$-1.86±.12; $M_{\phi r}$-2.13±.36; Best double couple: $M_0$4.67800×10^{16} NP1:ϕ_s61.00000°, δ78.00000°, λ-154.00000°. NP2: ϕ_s325.00000°, δ65.00000°, λ-13.00000°. Principal axes: T 4.3080, Plg9.0000°, Azm191.0000°; N 0.7430, Plg62.0000°, Azm84.0000°; P -5.0470, Plg27.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 11:39:32.9±0.4**, 10°.74S**±0°.05×**164°.99E**±0°.06**, h10^{km}, n109, σ1ˢ.70**/104**, mb4.8**/56**, MS4.5**/12**, 1D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.13	284	*e*P	Pn	11 40 53.0	+3.2
HNR	Honiara	5.13	284	*e*Pn	Pn	11 40 52.3	+2.5
HNR				*e*Sn	Sn	11 41 43.5	-5.7
HNR	Honiara	5.13	284	Pn	Pn	11 40 52.6	+2.8
	80nm,0.3s,baz=143,slow=2.9,SNR=45						
HNR				Sn	Sn	11 41 52.6	+3.5
	4.8nm,0.3s,baz=235,slow=8.3,SNR=3.7						
HNR				LR	LR	11 43 01.2	
	comp=Z,13μm,20.0s,baz=147,slow=42						
MARNC	Mare, Loyalty	11.07	165	*e*Pn	Pn	11 42 11.7	+0.3
DZM	Mont Dzumac	11.35	173	*e*Pn	Pn	11 42 15.2	-0.1
	76nm,0.7s						
DZM				*e*LR	LR	11 44 54.9	
	comp=Z,5μm,25.2s						
DZM	Mont Dzumac	11.35	173	*e*Pn	Pn	11 42 15.4	0.0
DZM				*e*Sn	Sn	11 44 16.8	-5.6
DZM	Mont Dzumac	11.35	173	Pn	Pn	11 42 15.1	-0.2
	4.7nm,0.3s,baz=315,slow=11,SNR=58						
DZM				Sn	Sn	11 44 18.0	-4.4
	0.3nm,0.3s,baz=124,slow=22,SNR=1.2						
DZM				LR	LR	11 46 19.0	
	comp=Z,5μm,18.4s,baz=10.0,slow=36						
ONTNC	Ouen Toro	11.59	173	*e*Pn	Pn	11 42 18.8	+0.4
OUENC	Ouen Island, N	11.75	172	*e*Pn	Pn	11 42 21.1	+0.4
PINNC	Pines Island,	12.04	169	*e*Pn	Pn	11 42 25.0	+0.4
RABL	Rabaul	14.28	296	*e*Pn	Pn	11 42 49.5	-5.8
TARA	Tarawa	14.38	34	*e*Pn	Pn	11 42 54.1	-2.5
MSVF	Nonsavu	14.44	120	*e*Pn	Pn	11 42 57.7	+0.1
EIDS	Eidsvold	19.63	220	*e*P	P	11 44 02.4	+0.7
	39nm,1.1s						
CTA	Charters Tower	20.29	241	P	Pn	11 44 10.4	-0.5
	12nm,0.6s,baz=69,slow=13,SNR=13						
CTAO	Charters Tower	20.29	241	*e*P	P	11 44 09.6	+0.6

	47nm,1.0s						
COEN	Coen	21.54	259	*e*P	P	11 44 20.9	-1.6
	43nm,1.5s						
JAY	Jayapura	25.45	287	LR	LR	11 56 12.2	
	comp=Z,826nm,18.4s,baz=143,slow=40						
OUZ	Omahuta	25.60	164	*e*P	P	11 45 04.3	+1.9
	34nm,1.1s						
H11S2	WAKE ISLAND Hy	29.09	3	T	T	12 16 04.5	
	baz=184,slow=76,SNR=932						
H11S3	WAKE ISLAND Hy	29.10	3	T	T	12 15 58.8	
	baz=184,slow=76,SNR=446						
H11S1	WAKE ISLAND Hy	29.11	3	T	T	12 16 04.2	
	baz=184,slow=76,SNR=700						
URZ	Urewera	29.48	160	P	P	11 45 39.0	+1.9
	10nm,1.0s,baz=349,slow=10,SNR=2.6						
STKA	Stephens Creek	30.16	222	*e*P	P	11 45 44.8	+1.5
	3.9nm,0.9s						
STKA	Stephens Creek	30.16	222	P	P	11 45 44.2	+1.0
	11nm,0.6s,baz=56,slow=12,SNR=27						
STKA				LR	LR	11 56 29.6	
	comp=Z,1µm,18.1s,baz=41,slow=34						
H11N1	WAKE ISLAND Hy	30.32	4	T	T	12 17 36.7	
	baz=182,slow=76,SNR=858						
H11N3	WAKE ISLAND Hy	30.32	4	T	T	12 17 36.8	
	baz=182,slow=76,SNR=657						
H11N2	WAKE ISLAND Hy	30.34	4	T	T	12 17 38.0	
	baz=182,slow=76,SNR=708						
WRAB	Tennant Creek	30.88	249	*e*P	P	11 45 48.6	-1.1
	23nm,1.6s						
WB2	Warramunga Arr	30.88	249	*e*P	P	11 45 47.1	-2.7
WR1	Warramunga Arr	30.89	249	*e*P	P	11 45 48.4	-1.5
	16nm,1.2s						
WRA	Warramunga Arr	30.89	249	P	P	11 45 48.4	-1.5
	1.9nm,0.6s,baz=76,slow=9.0,SNR=26						
WRA				LR	LR	11 58 19.0	
	comp=Z,2µm,18.1s,baz=75,slow=36						
SNZO	South Karori	31.63	166	*e*P	P	11 45 58.6	+2.5
	95nm,1.4s						
THZ	Tophouse	31.68	169	*e*P	P	11 45 59.1	+2.5
	36nm,1.1s						
AS01	Alice Springs	32.23	242	*e*P	P	11 46 01.5	-0.1
ASAR	Alice Springs	32.27	242	P	P	11 46 00.6	-1.5
	5.3nm,0.8s,baz=66,slow=9.8,SNR=39						
ASAR				LR	LR	11 56 51.8	
	comp=Z,260nm,20.5s,baz=71,slow=32						
KHZ	Kahutara	32.43	168	*e*P	P	11 46 04.7	+1.6
	34nm,1.2s						
RPZ	Rata Peaks	33.27	172	P	P	11 46 11.7	+1.2
	9.1nm,1.0s,baz=290,slow=7.5,SNR=2.9						
MQZ	McQueen's Vall	33.51	170	*e*P	P	11 46 13.6	+1.1
	58nm,1.5s						
BBOO	Buckleboo	34.50	226	*e*P	P	11 46 22.0	+0.7
	29nm,0.8s						
SIJI	Sorong	34.91	284	P	P	11 46 23.2	-1.8
	5.0nm,0.4s,baz=123,slow=17,SNR=3.1						
FITZ	Fitzroy Crossi	38.74	254	*e*P	P	11 46 56.5	-1.2
	29nm,1.4s						
FITZ	Fitzroy Crossi	38.74	254	P	P	11 46 57.0	-0.7
	5.6nm,0.6s,baz=78,slow=6.7,SNR=15						
PPT2	Papeete2	44.49	104	*e*S	S	11 54 25.1	+4.5
	337nm,25.2s						
PPT2				*e*LQ	LQ	11 58 23.4	
	962nm,25.8s						
PPT2				*e*LR	LR	12 00 08.3	
	comp=Z,682nm,23.2s,baz=273						
TBI	Tubuai	45.14	112	*e*S	S	11 54 30.2	+0.5
	309nm,28.5s						
TBI				*e*LR	LR	12 00 31.4	
	comp=Z,2µm,28.2s,baz=276						
MJAR	Matsushiro Arr	53.36	333	P	P	11 48 51.7	-0.9
	1.6nm,0.7s,baz=180,slow=7.4,SNR=5.2						
MAJO	Matsushiro	53.36	333	*e*P	P	11 48 51.7	-0.9
TAOE	Nuku Hiva Isla	54.04	93	*e*S	S	11 56 34.2	-0.6
	261nm,25.5s						
TAOE				*e*LR	LR	12 04 20.8	
	comp=Z,432nm,28.3s						
JNU	Nakatsue	54.40	325	*e*P	P	11 49 00.8	+0.5
	30nm,1.2s						
JNU	Nakatsue	54.40	325	P	P	11 49 00.2	-0.1
	12nm,0.8s,baz=52,slow=4.6,SNR=10						
ASAJ	Asahikawa	58.26	341	P	P	11 49 28.2	+0.6
	7.0nm,0.7s,baz=163,slow=10,SNR=5.8						
KSRS	Korea Array	59.21	326	P	P	11 49 34.6	+0.3
	1.5nm,0.8s,baz=132,slow=6.7,SNR=2.9						
NJ2	Nanjing	61.28	316	*e*P	P	11 49 50.5	+1.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	Ussuriysk Ar.	62.34	334	P	P	11 49 55.4	-0.1
	2.4nm,0.6s,baz=115,slow=5.5,SNR=4.3						
USRK				LR	LR	12 14 03.7	
	comp=Z,104nm,21.5s,baz=135,slow=33						
PEA0B	Petropavlovsk-	63.90	355	*e*P	P	11 50 06.0	+0.3
	33nm,1.4s						
PETK	Petropavlovsk-	63.90	355	*e*P	P	11 50 06.3	+0.6
PETK	Petropavlovsk-	63.90	355	P	P	11 50 06.0	+0.2
	3.9nm,0.8s,baz=198,slow=4.2,SNR=6.4						
PETK				LR	LR	12 12 24.2	
	comp=Z,375nm,21.4s,baz=171,slow=31						
PEA1	Petropavlovsk-	63.90	355	*e*P	P	11 50 06.0	+0.2
CN2	Changchun	65.10	329	*e*P	P	11 50 13.8	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VNDA	Vanda	66.79	181	P	P	11 50 26.3	+2.2
	4.5nm,0.9s,baz=354,slow=6.4,SNR=2.1						
XAN	Xi'an	69.37	313	P	P	11 50 41.5	+0.4
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,190nm,4.1s						
KMI	Kunming	70.33	302	P	P	11 50 49.0	+1.5
KMI				sP	pwP	11 50 55.4	+0.1
KMI				S	S	12 00 00.1	-0.2
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
MA2	Magadan	71.01	352	P	P	11 50 49.6	-1.0
	1.4nm,0.3s,baz=313,slow=2.6,SNR=3.8						
HHC	Hu-ho-hao-te	71.12	320	*e*P	P	11 50 52.8	+1.0
HHC				PP	PP	11 53 32.5	+2.8
HHC				S	S	12 00 07.5	-1.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,98nm,6.0s						
HHC				LR	LR		
	comp=N,240nm,4.2s						
HHC				LR	LR		
	comp=E,220nm,5.0s						
HHC				LR	LR		
	comp=Z,480nm,5.2s						
CM01	Chiang Mai Arr	71.28	294	*e*P	P	11 50 51.8	-1.3
CM31	Chiang Mai Arr	71.31	294	*e*P	P	11 50 50.1	-3.2
	6.3nm,0.9s						
CMAR	Chiang Mai Arr	71.31	294	P	P	11 50 53.5	+0.3
	2.4nm,0.7s,baz=116,slow=4.5,SNR=11						
CHTO	Chiang Mai	71.42	294	P	P	11 50 55.8	+1.9
	28nm,1.9s						
CD2	Chengdu	71.83	308	*e*P	P	11 50 56.0	-0.2
LZH	Lanzhou	74.00	312	*e*P	P	11 51 10.6	+1.4
LZH				pP	pwP	11 51 15.1	-1.9
LZH				sP	PcP	11 51 18.1	-6.3
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				pmax	pmax		
	comp=Z,240nm,4.1s						
LZH				LR	LR		
	comp=N,470nm,14.1s						
LZH				LR	LR		
	comp=E,490nm,13.6s						
LZH				LR	LR		
	comp=Z,500nm,15.2s						
GAMB	Gambell	76.40	10	*e*P	P	11 51 23.1	+1.0
	14nm,1.2s						
ULN	Ulaanbaatar	77.62	324	*e*P	P	11 51 27.4	-2.1
	12nm,0.9s						
SONA0	Songino Array	77.98	324	*e*P	P	11 51 31.6	0.0
SONM	Songino Array	77.98	324	P	P	11 51 31.6	0.0
	3.4nm,0.7s,baz=147,slow=7.9,SNR=15						
SONA1	Songino Array	77.98	324	*e*P	P	11 51 31.6	0.0
GTA	Gaotai	78.31	314	⇓P	P	11 51 34.3	+0.7
GTA				pP	pwP	11 51 40.3	-1.2
GTA				sP	PcP	11 51 43.8	+0.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,98nm,5.4s						
GTA				LR	LR		
	comp=N,230nm,18.4s						
GTA				LR	LR		
	comp=E,230nm,18.4s						
GTA				LR	LR		
	comp=Z,200nm,18.7s						
QSPA	South Pole Qui	79.26	180	*e*P	P	11 51 39.4	+1.0
	38nm,1.5s						
QSPA	South Pole Qui	79.26	180	P	P	11 51 40.5	+2.1
	8.6nm,0.9s,baz=33,slow=0.9,SNR=18						
IM3	Indian Mountai	82.33	16	*e*P	P	11 51 53.7	-0.8
HDA	Harding Lake	83.20	19	*e*P	P	11 51 58.4	-0.7
	6.7nm,0.9s						
IL1	Eielson Array	83.46	19	*e*P	P	11 51 60.0	-0.4
ILAR	Eielson Array	83.46	19	P	P	11 51 59.5	-0.9
	1.7nm,0.7s,baz=238,slow=5.3,SNR=24						
ILAR				LR	LR	12 23 54.7	
	comp=Z,243nm,21.8s,baz=254,slow=32						
ILB	Eielson Array	83.46	19	*e*P	P	11 52 00.8	+0.4
SCRK	Sand Creek	83.89	20	*e*P	P	11 52 01.6	-1.1
	6.9nm,1.0s						
EGAK	Eagle	85.35	20	*e*P	P	11 52 08.6	-1.3
	11nm,1.0s						
NVAR	Mina Array Bea	86.40	50	P	P	11 52 16.1	+0.1
	1.7nm,0.9s,baz=231,slow=7.4,SNR=7.3						
NV11	Mina Array Sit	86.51	50	*e*P	P	11 52 15.6	-0.9
	0.5nm,1.3s						
WMQ	Urumqi	88.35	315	*e*P	P	11 52 26.1	+0.9
INK	Inuvik	89.86	19	LR	LR	12 26 39.6	
	comp=Z,409nm,21.2s,baz=132,slow=32						
U15A	North Rim	90.52	53	*e*P	P	11 52 35.8	+0.1
	3.6nm,0.9s						
HVU	Hansel Valley	91.36	48	*e*P	P	11 52 40.1	+0.7
	2.9nm,0.9s						
MK01	Makanchi Array	92.78	317	*e*P	P	11 52 45.1	-0.6
MK31	Makanchi Array	92.79	317	*e*P	P	11 52 46.8	+1.0
	4.4nm,1.1s						
MK32	Makanchi Array	92.79	317	*e*P	P	11 52 45.1	-0.6
MKAR	Makanchi Array	92.79	317	*e*P	P	11 52 45.5	-0.2
	19nm,0.9s						
MKAR	Makanchi Array	92.79	317	P	P	11 52 45.1	-0.6
	1.9nm,0.8s,baz=94,slow=5.8,SNR=16						
ZAA0	Zalesovo Array	92.87	324	*e*P	P	11 52 43.2	-2.7
	4.7nm,1.1s						
ZALV	Zalesovo Beam	92.87	324	P	P	11 52 44.1	-1.8
	0.8nm,0.6s,baz=116,slow=5.1,SNR=5.5						
ZAA1	Zalesovo Array	92.88	324	*e*P	P	11 52 44.1	-1.8
BOZ	Bozeman (W)	93.00	44	*e*P	P	11 52 49.1	+2.2
	3.4nm,1.0s						
MAKZ	Makanchi	93.00	317	*e*P	P	11 52 46.4	-0.4
	8.6nm,1.3s						
PDAR	Pinedale Array	93.89	47	P	P	11 52 50.6	-0.5
	0.9nm,0.8s,baz=251,slow=4.5,SNR=6.9						
YKA	Yellowknife Ar	95.05	27	P	P	11 52 53.6	-2.0
	0.6nm,0.8s,baz=254,slow=4.6,SNR=7.2						
NRIK	Noril'sk	95.58	340	LR	LR	12 38 43.8	
	comp=Z,172nm,18.2s,baz=120,slow=37						
TXAR	Lajitas Array	96.34	61	P	P	11 53 02.9	+0.3
	0.3nm,0.7s,baz=251,slow=2.8,SNR=3.2						
SNAA	Sanae	97.37	184	LR	LR	12 35 27.4	
	comp=Z,713nm,19.5s,baz=231,slow=34						
KEST	Kesra	146.72	322	*e*PKPbc	PKPab	11 59 16.1	-0.7
KEST	Kesra	146.72	322	PKPbc	PKPbc	11 59 14.7	-1.0
	4.8nm,0.6s,baz=99,slow=1.6,SNR=4.2						
ESDC	Sonseca Array	149.56	343	PKPbc	PKPbc	11 59 21.6	-1.5
	0.1nm,0.3s,baz=343,slow=3.9,SNR=1.3						

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*ISCJB **22** 11:51:25.4±0.4,36°.74N±0°.03×4°.85E±0°.04,h13^{km},Error ellipse: s-maj=5.1km s-min=3.6km az=135.5*

*MDD **22** 11:51:26.4±0.4,36°.58N×4°.86E,h0^{km},mb4.3/14,Error ellipse: s-maj=5.8km s-min=4.0km az=33.0,PRXIMO*

*CRAAG **22** 11:51:27.1,36°.43N×4°.93E,Ml3.6*

*LDG **22** 11:51:30.4±0.5,36°.78N×5°.01E,h10^{km},Ml3.2/10,Error ellipse: s-maj=9.6km s-min=5.1km az=152.0*

ISC 22 11:51:24.9±0.9,**36°.67N**±0°.05×**4°.89E**±0°.03,**h13**^{km}**,n64,** σ**2^{s}70**/91**,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SET	Setif	0.62	139	P	Pg	11 51 37.0	0.0
SET	Setif	0.62	139	Pg	Pg	11 51 37.0	0.0
DFRA	Djebel Bou Aff	0.80	99	P	Pb	11 51 42.0	+1.2
DFRA	Djebel Bou Aff	0.80	99	Pg	Pb	11 51 42.0	+1.2
CKHR	Kef el Ahmar	0.82	142	P	Pg	11 51 39.6	-1.2
CKHR	Kef el Ahmar	0.82	142	Pg	Pg	11 51 39.6	-1.2
ATAF	Djebel Tarf	0.94	212	P	Pg	11 51 41.8	-1.2
ATAF	Djebel Tarf	0.94	212	Pg	Pg	11 51 41.8	-1.2
AKET	Djebel Ketaf	1.02	233	P	Pb	11 51 44.5	-0.1
AKET	Djebel Ketaf	1.02	233	Pg	Pb	11 51 44.5	-0.1
ABMS	Boumerdes	1.14	275	P	Pb	11 51 46.4	0.0
ABMS	Boumerdes	1.14	275	Pg	Pb	11 51 46.4	0.0
CASM	Ain Smara	1.35	107	P	Pg	11 51 51.6	+0.7
CASM	Ain Smara	1.35	107	Pn	Pg	11 51 51.6	+0.7
CTEI	Djebel Teioual	1.36	116	P	Pg	11 51 52.4	+1.3
CTEI	Djebel Teioual	1.36	116	Pn	Pg	11 51 52.4	+1.3
ABA	Alger-Bouzarea	1.50	276	P	Pn	11 51 51.8	+0.3
ABA	Alger-Bouzarea	1.50	276	Pn	Pn	11 51 51.8	+0.3
CAEH	'Ain El Ouahch	1.58	85	P	Pn	11 51 53.6	+1.0
CAEH	'Ain El Ouahch	1.58	85	Pn	Pn	11 51 53.6	+1.0
CMAH	Djebel Manchou	2.03	90	P	Pb	11 52 01.5	-0.2
CMAH	Djebel Manchou	2.03	90	Pn	Pb	11 52 01.5	-0.2
ETOS	Mallorca	3.50	333	Pn	Pn	11 52 22.1	+3.1
	2.4nm,0.2s,SNR=15						
ETOS				Sn	Sn	11 53 01.8	+1.5
	4.4nm,0.2s,SNR=6.6						
CFON	Fontmartina	5.43	340	Pn	Pn	11 52 48.3	+2.7
	2.3nm,0.1s,SNR=8.4						
CFON				Sn	Sn	11 53 47.7	-0.4
	5.5nm,0.3s,SNR=7.9						
ECHE	Chera	5.46	304	Pn	Pn	11 52 49.3	+3.3
	21nm,0.6s,SNR=7.9						
ETOB	Tobarra	5.48	293	Pn	Pn	11 52 49.3	+3.0
	11nm,0.3s,SNR=13						
ETOB				Sn	Sn	11 53 49.3	+0.1
	10nm,0.5s,SNR=7.9						
EPOB	Poblet	5.54	329	Pn	Pn	11 52 51.0	+3.9
	5.5nm,0.6s,SNR=6.9						
EPOB				Sn	Sn	11 53 49.5	-1.1
	1.4nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	5.59	313	Pn	Pn	11 52 50.5	+2.5
	12nm,0.7s,SNR=7.2						
EMOS				Sn	Sn	11 53 53.0	+0.8
	0.9nm,0.3s						
EMIR	Miracle	5.85	335	Pn	Pn	11 52 55.6	+4.2
	19nm,0.3s,SNR=22						
EMIR				Sn	Sn	11 53 57.6	-0.8
	28nm,0.5s,SNR=7.9						
SJAF	Saint Jean de	6.01	346	Pn	Pn	11 52 56.3	+2.8
	2.2nm,0.3s,SNR=7.9						
CLLI	Llivia	6.23	340	Pn	Pn	11 53 01.0	+4.4
	5.9nm,0.6s,SNR=9.3						
CLLI				Sn	Sn	11 54 09.0	+1.3
	1.4nm,0.4s						
CSOR	Sort	6.40	334	Pn	Pn	11 53 03.6	+4.7
	2.9nm,0.3s,SNR=7.8						
CSOR				Sn	Sn	11 54 12.8	+1.0
	2.2nm,0.4s,SNR=7.9						
EQES	Quesada	6.45	282	Pn	Pn	11 53 03.7	+4.0
	8.4nm,0.5s,SNR=8.1						
EQES				Sn	Sn	11 54 12.3	-1.0
	14nm,0.5s,SNR=7.9						
PGF	Pioggiola	6.67	27	*e*Pn	Pn	11 53 05.0	+2.3
PGF				*e*Sn	Sn	11 54 14.1	-4.5
	6.6nm,0.4s						
PGF	Pioggiola	6.67	27	Pn	Pn	11 53 05.0	+2.3
PGF				Sn	Sn	11 54 14.1	-4.5
	3.3nm,0.4s						
LMR	La Mourre	6.77	10	*e*Pn	Pn	11 53 05.7	+1.8
LMR				*e*Sn	Sn	11 54 17.5	-3.4
	1.1nm,0.2s						
LMR	La Mourre	6.77	10	Pn	Pn	11 53 05.7	+1.8
LMR				Sn	Sn	11 54 17.5	-3.4
	0.6nm,0.2s						
ELGU	Los Guajares,	6.84	274	Pn	Pn	11 53 06.4	+1.4
	2.9nm,0.3s,SNR=7.9						
MTLF	Montolieu	6.97	344	*e*Pn	Pn	11 53 08.5	+1.8
MTLF	Montolieu	6.97	344	Pn	Pn	11 53 08.5	+1.8
FRF	La Foret Royal	7.01	10	*e*Pn	Pn	11 53 08.8	+1.5
FRF				*e*Sn	Sn	11 54 22.7	-4.2
	2.2nm,0.3s						
FRF	La Foret Royal	7.01	10	Pn	Pn	11 53 08.8	+1.5
FRF				Sn	Sn	11 54 22.7	-4.2
	1.1nm,0.3s						
EPF	Esparros	7.25	333	*e*Pn	Pn	11 53 13.2	+2.6
EPF				*e*Sn	Sn	11 54 30.3	-2.6
	1.9nm,0.4s						
EPF	Esparros	7.25	333	Pn	Pn	11 53 13.2	+2.6
EPF				Sn	Sn	11 54 30.3	-2.6
	0.9nm,0.4s						
SMRF	Simiane la Rot	7.32	4	*e*Pn	Pn	11 53 12.4	+0.9
SMRF				*e*Sn	Sn	11 54 29.5	-4.9
	1.1nm,0.3s						
SMRF	Simiane la Rot	7.32	4	Pn	Pn	11 53 12.4	+0.9
SMRF				Sn	Sn	11 54 29.5	-4.9
	1.1nm,0.3s						
LASF	Ste Croix	7.44	354	*e*Pn	Pn	11 53 15.1	+1.9
LASF				*e*Sn	Sn	11 54 31.6	-5.8
	5.2nm,0.5s						
LASF	Ste Croix	7.44	354	Pn	Pn	11 53 15.1	+1.9
LASF				Sn	Sn	11 54 31.6	-5.8
	2.6nm,0.5s						
SBF	Sospel	7.45	14	*e*Pn	Pn	11 53 15.1	+1.9
SBF				*e*Sn	Sn	11 54 33.8	-3.8
	3.6nm,0.3s						
SBF	Sospel	7.45	14	Pn	Pn	11 53 15.1	+1.9
SBF				Sn	Sn	11 54 33.8	-3.8
	1.8nm,0.3s						
ETSF	Etsaut	7.50	328	*e*Pn	Pn	11 53 17.2	+3.1
ETSF				*e*Sn	Sn	11 54 35.9	-3.1
	1.7nm,0.3s						
ETSF	Etsaut	7.50	328	Pn	Pn	11 53 17.2	+3.1
ETSF				Sn	Sn	11 54 35.9	-3.1
	0.9nm,0.3s						
ATE	Arette	7.72	328	Pn	Pn	11 53 22.0	+5.1
	1.2nm,0.3s,SNR=7.9						
ATE				Sn	Sn	11 54 43.9	-0.3
	1.1nm,0.4s,SNR=7.9						
PAB	San Pablo	7.83	294	Pn	Pn	11 53 21.6	+3.0
	2.4nm,0.4s,SNR=7.9						
SJPF	Ste Jean	7.97	326	*e*Pn	Pn	11 53 22.5	+2.1
SJPF	Ste Jean	7.97	326	Pn	Pn	11 53 22.5	+2.1
MBDF	Montbardon	8.18	9	*e*Pn	Pn	11 53 24.9	+1.6
MBDF	Montbardon	8.18	9	Pn	Pn	11 53 24.9	+1.6
VIVF	Saint-Julien-l	8.18	359	*e*Pn	Pn	11 53 23.2	-0.1
VIVF				*e*Sn	Sn	11 54 49.6	-6.0
	4.6nm,0.4s						
VIVF	Saint-Julien-l	8.18	359	Pn	Pn	11 53 23.2	-0.1
VIVF				Sn	Sn	11 54 49.6	-6.0
	2.3nm,0.4s						
CAF	Calviac	8.52	346	*e*Pn	Pn	11 53 29.8	+1.8
CAF	Calviac	8.52	346	Pn	Pn	11 53 29.8	+1.8
LFF	La Frestale	8.84	340	*e*Pn	Pn	11 53 35.3	+3.0
LFF	La Frestale	8.84	340	Pn	Pn	11 53 35.3	+3.0

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*SJA **22** 12:01:47.1±0.9,27°.98S×63°.28W,h672^{km}±11^{km},ML6.4,MW6.0*

*NEIC **22** 12:01:58.2±0.2,27°.93S×63°.10W,h575^{km}±2^{km},mb5.8/294,MW6.1,MW6.2,MW6.1,Error ellipse: s-maj=3.5km s-min=2.2km az=82.0,Moment Tensor Solution. s57 Moment tensor: Scale 10^{18}Nm; M_{rr}-1.30; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$1.62; $M_{r\theta}$-1.07; $M_{\theta\phi}$-0.60; $M_{\phi r}$1.71; Best double couple: $M_0$2.60000×10^{18} NP1:ϕ_s5.00000°,δ22.00000°,λ-57.00000°. NP2:ϕ_s150.00000°,δ72.00000°,λ-102.00000°. Principal axes: T 2.7400, Plg26.0000°, Azm249.0000°; N -0.3800, Plg12.0000°, Azm153.0000°; P -2.3700, Plg61.0000°, Azm41.0000°; Complex event observed on broadband displacement seismograms.*

NEIC Felt [II] at Cascavel, Brazil. Also felt at Fernandopolis and Uruguaiana.

*IDC **22** 12:01:59.0±0.2,27°.87S×63°.12W,h583^{km}±2^{km},mb5.4/39,mb1 5.5/43,mb1mx5.5/44,mbtmp6.4/43 Error ellipse: s-maj=5.9km s-min=4.5km az=73.0*

*MOS **22** 12:01:58.4±1.0,27°.93S×63°.23W,h584^{km},mb5.9/66,Error ellipse: s-maj=8.4km s-min=5.5km az=95.4*

*NEIC **22** 12:01:58.0±0.0,27°.93S×63°.03W,h580^{km},Moment Tensor Solution. s33 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.77; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$1.18; $M_{r\theta}$-0.76; $M_{\theta\phi}$-0.61; $M_{\phi r}$1.15; Best double couple: $M_0$1.80000×10^{18} NP1:ϕ_s144.00000°,δ73.00000°,λ-107.00000°. NP2:ϕ_s10.00000°,δ24.00000°,λ-46.00000°. Principal axes: T 2.0300, Plg25.0000°, Azm247.0000°; N -0.5200, Plg16.0000°, Azm149.0000°; P -1.5100, Plg58.0000°, Azm30.0000°;*

*ISCJB **22** 12:01:58.2±0.1,27°.86S±0°.02×63°.14W±0°.02,h586^{km}±1^{km},mb5.8/553 Error ellipse: s-maj=2.5km s-min=2.3km az=171.5*

*VAO **22** 12:01:58.4±0.2,27°.98S×63°.20W,h582^{km}±3^{km},mb6.2*

*BJI **22** 12:01:59.5,27°.75S×63°.20W,h590^{km},mB5.9/45*

*GCMT **22** 12:02:01.2±0.1,27°.89S±0°.01×63°.00W±0°.01,h586^{km},MW6.1/130,Moment Tensor Solution. s130,c280; s83,c107; Duration: 2^{s}7 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.66±.01; $M_{\theta\theta}$-0.47±.02; $M_{\phi\phi}$1.12±.02; $M_{r\theta}$-0.84±.01; $M_{\theta\phi}$-0.54±.01; $M_{\phi r}$1.17±.01; Best double couple: $M_0$1.77500×10^{18} NP1:ϕ_s142.00000°,δ75.00000°,λ-110.00000°. NP2:ϕ_s17.00000°,δ25.00000°,λ-37.00000°. Principal axes: T 2.0080, Plg28.0000°, Azm248.0000°; N -0.4680, Plg19.0000°, Azm147.0000°; P -1.5410, Plg55.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **22** 12:02:10.1±0.0,27°.86S×63°.61W,h594^{km},Moment Tensor Solution. s25 Moment tensor: Scale 10^{18}Nm; M_{rr}-1.00; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$1.49; $M_{r\theta}$-0.81; $M_{\theta\phi}$-0.70; $M_{\phi r}$0.96; Best double couple: $M_0$1.90000×10^{18} NP1:ϕ_s140.00000°,δ69.00000°,λ-115.00000°. NP2:ϕ_s13.00000°,δ32.00000°,λ-42.00000°. Principal axes: T 2.1500, Plg21.0000°, Azm249.0000°; N -0.5000, Plg23.0000°, Azm150.0000°; P -1.6500, Plg58.0000°, Azm16.0000°;*

ISC 22 12:01:58.7±0.2,**27°.91S**±0°.03×**63°.14W**±0°.03,**h586**^{km}±2^{km},**h586**^{km}**:pP-P,n2365,**σ**1^{s}32**/2759**,mb5.8**/567**,66C-57D, Santiago del Estero Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CYA	Choya	2.41	257	⇓*e*P	P	12 03 12.5	-1.0
CYA				*i* S	S	12 04 09.3	-5.2
CYA	Choya	2.41	257	⇓*i*P	P	12 03 12.4	-1.2
TCA	Tanti	3.65	200	*e*P	P	12 03 19.3	-1.4
TCA				*i* S	S	12 04 23.2	-4.6
TCA	Tanti	3.65	200	⇓*i*P	P	12 03 19.2	-1.5
ACLC	CERRO LA CRUZ	3.68	245	*e*P	P	12 03 19.7	-1.3
SLA	San Lorenzo	3.82	326	*e*P	P	12 03 22.4	+0.2
SLA				*i* S	S	12 04 31.6	+1.6
SLA				IAML		12 04 32.3	
	comp=Z,3µm,1.1s						
SLA	San Lorenzo	3.82	326	⇓*i*P	P	12 03 22.3	+0.2
APLL	PUNTA DE LOS L	3.87	229	*e*P	P	12 03 20.4	-1.8
APLL				*e*S	S	12 04 20.4	-10
APLL				IAML		12 04 27.7	
	comp=Z,7µm,1.1s						
AGUA	GUANDACOL	4.96	250	*e*P	P	12 03 30.3	-0.2
AGUA				⇓*e*S	S	12 04 43.7	-1.7
MRA	San Martin	5.02	206	*e*P	P	12 03 29.0	-1.8
MRA				*e*S	S	12 04 42.5	-3.7
MRA				IAML		12 04 47.2	
	comp=Z,1µm,1.1s						
CPUP	Villa Florida	5.41	74	*e*P	P	12 03 35.3	+1.3
CPUP				*e*S	S	12 04 54.3	+2.5
CPUP	Villa Florida	5.41	74	⇑*i*P	P	12 03 35.2	+1.3
CPUP	Villa Florida	5.41	74	P	P	12 03 35.3	+1.3
	comp=Z,1µm,0.3s,baz=253,slow=8.7,SNR=9153						
CPUP				S	S	12 04 51.9	0.0
	baz=155,slow=19,SNR=1.4						
CPUP	Villa Florida	5.41	74	*e*P	P	12 03 35.3	+1.3
I41PY	VILLA FLORIDA	5.42	75	P	P	12 03 35.1	+1.0
	baz=247,slow=10,SNR=2.0						
AMOG	MOGNA	5.57	236	*e*P	P	12 03 35.3	-0.1
AMOG				*e*S	S	12 04 54.2	-0.2
AMOG				IAML		12 05 15.5	
	comp=Z,4µm,1.7s						
ACAN	Cantantal	5.59	218	*e*P	P	12 03 34.5	-1.0
ACAN				*e*S	S	12 04 51.2	-3.6
SUCO	SUCO	5.63	195	*e*P	P	12 03 34.7	-1.0
ACDV	Cuesta del Vie	5.71	245	⇓*e*P	P	12 03 36.9	+0.2
ACDV				*e*S	S	12 04 56.1	-0.7
ACDV				IAML		12 04 56.9	
	comp=Z,5µm,1.8s						
RTLL	Cerro Villicun	5.77	232	*e*P	P	12 03 36.1	-0.9
RTLL				*e*S	S	12 04 55.8	-1.7
RTLL				IAML		12 05 27.3	
	comp=Z,3µm,2.8s						
RTLL	Cerro Villicun	5.77	232	⇑*i*P	P	12 03 36.6	-0.4

CFA	**Coronel Fontan**	**5.77**	**229**	eP	**P**	**12 03 36.4**	**-0.6**
CFA				eS	**S**	**12 04 54.5**	**-3.0**
ACCO	**Cerro Coronel**	**5.83**	**241**	⇓eP	**P**	**12 03 37.8**	**-0.1**
ACCO				⇓eS	**S**	**12 04 57.6**	**-1.5**
ACCO				IAML		12 05 32.3	
	comp=Z,2µm,2.1s						
SJA	**San Juan**	**5.94**	**231**	eP	**P**	**12 03 38.7**	**+0.2**
SJA				eS	**S**	**12 04 58.4**	**-1.8**
AROD	**Rodeo**	**5.99**	**246**	eP	**P**	**12 03 39.4**	**+0.1**
AROD				eS	**S**	**12 05 01.0**	**-0.6**
AROD				IAML		12 05 19.2	
	comp=Z,1µm,2.0s						
ZON	**Zonda**	**6.03**	**232**	eP	**P**	**12 03 38.7**	**-0.6**
ZON				eS	**S**	**12 05 00.2**	**-1.5**
ZON				IAML		12 05 14.4	
	comp=Z,4µm,1.6s						
YJA	**Yavi**	**6.10**	**339**	eP	**P**	**12 03 41.7**	**+1.1**
RTCV	**Cerro Valdivia**	**6.13**	**229**	eP	**P**	**12 03 39.4**	**-0.8**
RTCV				eS	**S**	**12 04 59.1**	**-4.2**
GO03	**Copiap**	**6.30**	**271**	eP	**P**	**12 03 41.5**	**-0.3**
GO03				eS	**S**	**12 05 05.3**	**-0.8**
GO03	**Copiap**	**6.30**	**271**	eP	**P**	**12 03 41.0**	**-0.7**
GO03				eS	**S**	**12 05 03.7**	**-2.4**
GO03	**Copiap**	**6.30**	**271**	⇓iP	**P**	**12 03 41.5**	**-0.3**
GO02	**Mina Guanaco**	**6.39**	**294**	eP	**P**	**12 03 43.5**	**+0.5**
GO02				eS	**S**	**12 05 08.0**	**-0.1**
GO02	**Mina Guanaco**	**6.39**	**294**	eP	**P**	**12 03 43.1**	**+0.2**
RTLS	**Leoncito**	**6.61**	**233**	eP	**P**	**12 03 44.7**	**-0.1**
RTLS				eS	**S**	**12 05 11.3**	**-0.3**
LCO	**Las Campanas**	**6.75**	**259**	eP	**P**	**12 03 45.7**	**-0.4**
LCO				eS	**S**	**12 05 12.2**	**-1.7**
LCO	**Las Campanas**	**6.75**	**259**	eP	**P**	**12 03 45.7**	**-0.4**
LCO				eS	**S**	**12 05 12.3**	**-1.6**
LCO	**Las Campanas**	**6.75**	**259**	eP	**P**	**12 03 45.7**	**-0.4**
LCO				eS	**S**	**12 05 12.2**	**-1.7**
LCO	**Las Campanas**	**6.75**	**259**	eP	**P**	**12 03 45.6**	**-0.4**
LCO				eS	**S**	**12 05 12.0**	**-2.0**
ASAL	**Salagasta**	**6.79**	**225**	eP	**P**	**12 03 45.7**	**-0.5**
ASAL				eS	**S**	**12 05 11.3**	**-2.9**
AUSP	**Uspallata**	**6.92**	**230**	eP	**P**	**12 03 47.0**	**-0.6**
AUSP				eS	**S**	**12 05 15.6**	**-1.1**
ARCO	**CERRO ARCO**	**7.02**	**224**	eP	**P**	**12 03 48.0**	**-0.3**
ARCO				eS	**S**	**12 05 18.2**	**0.0**
GO04	**Tololo Observa**	**7.08**	**250**	eP	**P**	**12 03 48.5**	**-0.5**
GO04				eS	**S**	**12 05 16.9**	**-2.6**
GO04	**Tololo Observa**	**7.08**	**250**	eP	**P**	**12 03 48.6**	**-0.4**
GO04				eS	**S**	**12 05 16.6**	**-2.8**
GO04	**Tololo Observa**	**7.08**	**250**	⇑iP	**P**	**12 03 48.3**	**-0.7**
AAGR	**Agrelo**	**7.12**	**222**	⇓eP	**P**	**12 03 48.9**	**-0.3**
AAGR				eS	**S**	**12 05 13.5**	**-6.3**
AAGR				IAML		12 05 24.0	
	comp=Z,2µm,1.4s						
AVIZ	**Vizcacheras**	**7.23**	**219**	eP	**P**	**12 03 49.6**	**-0.5**
PB14	**IPOC Station P**	**7.30**	**295**	eP	**P**	**12 03 51.3**	**0.0**
PB14				eS	**S**	**12 05 21.6**	**-1.8**
PB14	**IPOC Station P**	**7.30**	**295**	⇑iP	**P**	**12 03 50.9**	**-0.4**
PB15	**IPOC Station P**	**7.39**	**308**	eP	**P**	**12 03 52.3**	**+0.2**
PB15				eS	**S**	**12 05 23.9**	**-0.9**
LVC	**Limon Verde**	**7.42**	**314**	eP	**P**	**12 03 52.7**	**+0.1**
LVC				eS	**S**	**12 05 22.1**	**-3.5**
LVC				eScP	**ScP**	**12 12 03.9**	**+1.7**
LVC	**Limon Verde**	**7.42**	**314**	eP	**P**	**12 03 52.3**	**-0.3**
LVC				eS	**S**	**12 05 17.1**	**-8.5**
LVC				IAML		12 05 26.1	
	comp=Z,3µm,1.9s						
LVC	**Limon Verde**	**7.42**	**314**	P	**P**	**12 03 53.0**	**+0.5**
	comp=Z,2µm,0.3s,baz=140,slow=5.7,SNR=4039						
LVC				S	**S**	**12 05 22.1**	**-3.5**
	comp=Z,601nm,0.3s,baz=173,slow=8.6,SNR=4.1						
LVC				ScP	**ScP**	**12 12 03.9**	**+1.7**
	comp=Z,3.3nm,0.3s,baz=0.7,slow=1.6,SNR=5.5						
LVC	**Limon Verde**	**7.42**	**314**	eP	**P**	**12 03 52.9**	**+0.3**
PB06	**IPOC Station P**	**7.79**	**310**	eP	**P**	**12 03 56.2**	**+0.4**
PB06				eS	**S**	**12 05 29.8**	**-1.8**
PB10	**IPOC Station P**	**7.99**	**302**	eP	**P**	**12 03 57.5**	**0.0**
PB10	**IPOC Station P**	**7.99**	**302**	eP	**P**	**12 03 57.6**	**0.0**
PB10				eS	**S**	**12 05 34.7**	**-0.2**
PB05	**IPOC Station P**	**8.13**	**307**	eP	**P**	**12 03 58.2**	**-0.8**
PB05				eS	**S**	**12 05 36.8**	**-0.8**
PB09	**IPOC Station P**	**8.23**	**316**	eP	**P**	**12 04 00.5**	**+0.5**
PB09				eS	**S**	**12 05 38.4**	**-0.9**
PEL	**Peldehue**	**8.35**	**229**	eP	**P**	**12 03 59.9**	**-0.9**
PEL				eS	**S**	**12 05 38.6**	**-2.4**
PEL	**Peldehue**	**8.35**	**229**	eP	**P**	**12 04 00.2**	**-0.6**
PEL				eS	**S**	**12 05 39.1**	**-1.9**
PEL	**Peldehue**	**8.35**	**229**	eP	**P**	**12 03 59.9**	**-0.9**
PEL				eS	**S**	**12 05 38.6**	**-2.4**
PB03	**IPOC Station P**	**8.37**	**313**	eP	**P**	**12 04 01.9**	**+0.5**
PB03				eS	**S**	**12 05 40.4**	**-1.4**
PB04	**IPOC Station P**	**8.44**	**310**	eP	**P**	**12 04 01.9**	**-0.1**
PB04				eS	**S**	**12 05 41.5**	**-1.5**
PB04	**IPOC Station P**	**8.44**	**310**	eP	**P**	**12 04 01.9**	**-0.1**
PB04				eS	**S**	**12 05 42.1**	**-0.9**
ROC1	**El Roble**	**8.47**	**231**	eP	**P**	**12 04 00.9**	**-1.4**
ROC1				eS	**S**	**12 05 42.0**	**-1.5**
ROC1	**El Roble**	**8.47**	**231**	eP	**P**	**12 04 01.2**	**-1.1**
ROC1				eS	**S**	**12 05 42.1**	**-1.5**
PB07	**IPOC Station P**	**8.68**	**314**	eP	**P**	**12 04 03.9**	**-0.6**
PB07				eS	**S**	**12 05 46.0**	**-1.4**
CPSB	**Cacapava Do Su**	**8.84**	**109**	eP	**P**	**12 04 05.9**	**+0.3**
PB01	**IPOC Station P**	**8.95**	**318**	eP	**P**	**12 04 06.9**	**-0.1**
PB01				eS	**S**	**12 05 50.4**	**-1.7**
PB01	**IPOC Station P**	**8.95**	**318**	eP	**P**	**12 04 06.8**	**-0.1**
PB01				eS	**S**	**12 05 50.7**	**-1.4**
PB02	**IPOC Station P**	**8.99**	**315**	eP	**P**	**12 04 07.2**	**-0.2**
PB02				eS	**S**	**12 05 51.3**	**-1.5**
PLTB	**Pedras Altas**	**9.13**	**117**	eP	**P**	**12 04 08.5**	**+0.1**
PB08	**IPOC Station P**	**9.48**	**323**	eP	**P**	**12 04 13.1**	**+0.5**
PB08				eS	**S**	**12 06 02.6**	**+0.3**
ITAB	**Concordia**	**9.79**	**89**	eP	**P**	**12 04 15.3**	**+0.3**
AQDB	**Aquidauana**	**10.04**	**44**	eP	**P**	**12 04 18.7**	**+1.1**
AQDB				eS	**S**	**12 06 13.6**	**+2.0**
PB11	**IPOC Station P**	**10.06**	**322**	eP	**P**	**12 04 18.0**	**-0.1**
PB11	**IPOC Station P**	**10.06**	**322**	eP	**P**	**12 04 18.1**	**-0.1**
PB11				eS	**S**	**12 06 13.5**	**+1.0**
TRQA	**Tornquist**	**10.17**	**175**	eP	**P**	**12 04 16.8**	**-1.9**
TRQA	**Tornquist**	**10.17**	**175**	eP	**P**	**12 04 16.8**	**-1.9**
TRQA	**Tornquist**	**10.17**	**175**	eP	**P**	**12 04 16.8**	**-1.9**
PTGB	**Pitanga**	**10.43**	**75**	eP	**P**	**12 04 22.4**	**+0.8**
PSGCX	**Pisagua**	**10.45**	**321**	eP	**P**	**12 04 21.7**	**-0.2**
PSGCX				eS	**S**	**12 06 19.8**	**+0.2**
MNMC	**Minye Minye**	**10.55**	**324**	eP	**P**	**12 04 23.5**	**+0.4**
MNMCX	**Minye Minye**	**10.55**	**324**	eP	**P**	**12 04 23.4**	**+0.2**
MNMCX				eS	**S**	**12 06 22.1**	**+0.4**
TRCB	**Terra Rica**	**10.77**	**64**	eP	**P**	**12 04 25.8**	**+0.8**
CNLB	**Canela**	**10.88**	**100**	eP	**P**	**12 04 26.1**	**0.0**
PB12	**IPOC Station P**	**11.36**	**323**	eP	**P**	**12 04 30.6**	**-0.5**
PB12				eS	**S**	**12 06 36.3**	**-0.1**
TER01	**Tubaro-SC**	**12.37**	**96**	eP	**P**	**12 04 41.3**	**+0.2**
LPAZ	**La Paz**	**12.45**	**337**	eP	**P**	**12 04 42.2**	**-0.5**
LPAZ				eS	**S**	**12 06 54.2**	**-3.4**
LPAZ	**La Paz**	**12.45**	**337**	P	**P**	**12 04 42.3**	**-0.5**
	comp=Z,330nm,0.3s,baz=130,slow=5.7,SNR=1344						
LPAZ				S	**S**	**12 06 53.4**	**-4.2**
	comp=Z,14nm,0.3s,baz=335,slow=19,SNR=3.1						
LPAZ				ScP	**ScP**	**12 12 10.6**	**+1.7**
	comp=Z,2.3nm,0.3s,baz=124,slow=2.2,SNR=7.1						
LPAZ	**La Paz**	**12.45**	**337**	eP	**P**	**12 04 42.4**	**-0.4**
I08BO	**LAS PENAS INFR**	**12.63**	**336**	P	**P**	**12 04 44.4**	**-0.1**
	baz=168,slow=11,SNR=1.2						
TIJ01	**Guaruva-PR**	**12.90**	**82**	eP	**P**	**12 04 44.8**	**-2.0**
FRTB	**Fartura**	**13.06**	**73**	eP	**P**	**12 04 49.4**	**+1.2**
C2SB	**Chapadao do Su**	**13.11**	**48**	eP	**P**	**12 04 49.7**	**+0.9**
GO06	**Curarrehue**	**13.55**	**209**	eP	**P**	**12 04 50.8**	**-2.3**
SALV	**Santo Antonio**	**13.79**	**32**	eP	**P**	**12 04 55.7**	**-0.1**
PLCA	**Paso Flores**	**14.18**	**204**	eP	**P**	**12 04 56.8**	**-2.6**
PLCA				eS	**S**	**12 07 25.7**	**-1.7**
PLCA				eScP	**ScP**	**12 12 10.7**	**-0.1**
PLCA	**Paso Flores**	**14.18**	**204**	P	**P**	**12 04 57.3**	**-2.1**
	comp=Z,328nm,0.3s,baz=48,slow=11,SNR=1858						
PLCA				S	**S**	**12 07 25.7**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=204,slow=18,SNR=3.5						
PLCA				ScP	**ScP**	**12 12 10.7**	**-0.1**
	comp=Z,9.3nm,0.3s,baz=46,slow=1.6,SNR=16						
PLCA	**Paso Flores**	**14.18**	**204**	eP	**P**	**12 04 56.8**	**-2.6**
ITRB	**Iturama**	**14.25**	**58**	eP	**P**	**12 05 00.6**	**+0.3**
BB19B	**Bebedouro**	**14.93**	**66**	eP	**P**	**12 05 06.9**	**+0.1**
IPMB	**Ipameri, GO**	**16.91**	**57**	eP	**P**	**12 05 25.6**	**+0.5**
GO07	**Milladeo Hill,**	**17.41**	**207**	eP	**P**	**12 05 27.2**	**-2.1**
	comp=Z,7µm,0.4s						
ESAR	**Angra dos Reis**	**17.56**	**78**	eP	**P**	**12 05 31.6**	**+0.6**
PMNB	**Patos De Minas**	**17.94**	**62**	eP	**P**	**12 05 34.5**	**-0.1**
BSCB	**Bom Sucesso**	**18.07**	**72**	eP	**P**	**12 05 36.5**	**+0.8**
BDFB	**Brasilia**	**18.58**	**52**	P	**P**	**12 05 41.3**	**+0.8**
	comp=Z,490nm,0.3s,baz=227,slow=8.5,SNR=1009						
BDFB				S	**S**	**12 08 40.1**	**-0.4**
	comp=Z,9.4nm,0.3s,baz=353,slow=19,SNR=2.2						
VAS01	**Vassouras-RJ**	**18.69**	**77**	eP	**P**	**12 05 42.8**	**+1.5**
DUB01	**Friburgo-RJ**	**19.68**	**77**	eP	**P**	**12 05 50.6**	**+0.3**
NNA	**Nana**	**20.38**	**318**	eP	**P**	**12 05 57.1**	**+0.4**
	comp=Z,181nm,1.1s						
NNA				eS	**S**	**12 09 06.7**	**-2.4**
NNA				eScP	**ScP**	**12 12 24.5**	**+0.3**
NNA	**Nana**	**20.38**	**318**	P	**P**	**12 05 57.1**	**+0.4**
	comp=Z,674nm,0.9s,baz=163,slow=8.7,SNR=191						
NNA				S	**S**	**12 09 06.7**	**-2.4**
	comp=Z,29nm,0.7s,baz=253,slow=19,SNR=5.6						
NNA				ScP	**ScP**	**12 12 24.5**	**+0.3**
	comp=Z,86nm,0.7s,baz=166,slow=3.4,SNR=8.6						
CAM01	**Campos-RJ**	**20.39**	**78**	eP	**P**	**12 05 56.9**	**+0.2**
MCI6	**Montes Claros**	**20.91**	**62**	eP	**P**	**12 06 02.2**	**+0.7**
PEXB	**Peixe**	**20.97**	**44**	eP	**P**	**12 06 03.0**	**+0.9**
MCI9	**Montes Claros**	**20.98**	**62**	eP	**P**	**12 06 02.7**	**+0.6**
MCI8	**Montes Claros**	**20.98**	**62**	eP	**P**	**12 06 02.7**	**+0.7**
MCI7	**Montes Claros**	**20.99**	**62**	eP	**P**	**12 06 03.0**	**+0.8**
JANB	**Januaria**	**21.65**	**58**	eP	**P**	**12 06 09.0**	**+0.9**
ALF01	**Guarapari-ES**	**21.66**	**75**	eP	**P**	**12 06 09.1**	**+1.0**
SJMB	**Sao Joao De Ma**	**22.11**	**70**	eP	**P**	**12 06 12.9**	**+0.7**
BSFB	**Barra de Sao F**	**22.34**	**71**	eP	**P**	**12 06 15.2**	**+1.1**
RIB01	**Linhares ES**	**22.50**	**73**	eP	**P**	**12 06 15.2**	**-0.4**
EFI	**East Falkland**	**24.05**	**172**	eP	**P**	**12 06 27.9**	**-0.9**
	comp=Z,237nm,0.7s						
EFI	**East Falkland**	**24.05**	**172**	eP	**P**	**12 06 27.9**	**-0.9**
EFI				pmax	pmax		
	comp=Z,237nm,0.7s						
GO09	**Cerro Castillo**	**24.35**	**194**	eP	**P**	**12 06 30.6**	**-0.9**
	comp=Z,192nm,0.8s						
ATAH	**Atahualpa**	**25.21**	**322**	P	**P**	**12 06 42.0**	**+1.8**
	comp=Z,285nm,0.9s,baz=161,slow=7.9,SNR=100						
ATAH				S	**S**	**12 10 26.4**	**+0.6**
	comp=Z,63nm,1.0s,baz=107,slow=19,SNR=4.7						
ATAH				ScP	**ScP**	**12 12 38.5**	**+1.0**
	comp=Z,64nm,0.9s,baz=182,slow=4.7,SNR=5.6						
GO10	**Punta Arenas**	**25.90**	**191**	eP	**P**	**12 06 45.8**	**+0.6**
	comp=Z,2µm,0.8s						
USHA	**Ushuaia**	**27.18**	**187**	P	**P**	**12 06 55.5**	**-0.9**
	comp=Z,468nm,0.6s,baz=13,slow=7.9,SNR=350						
USHA				PcP	**PcP**	**12 09 56.7**	**0.0**
	comp=Z,68nm,0.8s,baz=18,slow=4.5,SNR=3.4						
USHA				S	**S**	**12 10 52.6**	**-2.1**
	comp=Z,31nm,0.8s,baz=308,slow=18,SNR=6.5						
USHA				ScP	**ScP**	**12 12 42.9**	**+0.7**
	comp=Z,63nm,0.8s,baz=357,slow=3.6,SNR=7.3						
PTGA	**Pitinga**	**27.19**	**7**	eP	**P**	**12 06 57.1**	**+0.1**
	comp=Z,1µm,0.6s						
PTGA	**Pitinga**	**27.19**	**7**	P	**P**	**12 06 57.1**	**+0.1**
	comp=Z,1µm,0.6s,baz=196,slow=11,SNR=1651						
PTGA				S	**S**	**12 10 54.4**	**-1.4**
	comp=Z,154nm,0.9s,baz=291,slow=22,SNR=19						
PTGA				ScP	**ScP**	**12 12 44.3**	**+1.4**
	comp=Z,40nm,0.5s,baz=0.0,slow=2.0,SNR=4.4						
PTGA	**Pitinga**	**27.19**	**7**	eP	**P**	**12 06 57.1**	**+0.1**
PTLC	**Puerto Leguiza**	**30.08**	**336**	eP	P	12 07 16.7	-5.3
PTLC	**Puerto Leguiza**	**30.08**	**336**	eP	P	12 07 16.7	-5.3
OTAV	**Otavalo**	**31.61**	**330**	eP	**P**	**12 07 37.4**	**+1.8**
	comp=Z,472nm,1.0s						
OTAV	**Otavalo**	**31.61**	**330**	eP	**P**	**12 07 37.4**	**+1.8**
OTAV	**Otavalo**	**31.61**	**330**	eP	**P**	**12 07 37.4**	**+1.8**
OTAV				pmax	pmax		
	comp=Z,473nm,1.0s						
OTAV	**Otavalo**	**31.61**	**330**	eP	**P**	**12 07 37.4**	**+1.8**
OTAV	**Otavalo**	**31.61**	**330**	eP	**P**	**12 07 35.0**	**-0.6**
GUVC	**San Jose del G**	**31.62**	**342**	eP	**P**	**12 07 34.0**	**-1.2**
GUVC	**San Jose del G**	**31.62**	**342**	eP	**P**	**12 07 34.0**	**-1.2**
CMBC	**Cumbal**	**31.96**	**331**	eP	**P**	**12 07 41.0**	**+2.4**
CMBC	**Cumbal**	**31.96**	**331**	eP	**P**	**12 07 41.0**	**+2.4**
CPAS1	**Pasto**	**31.98**	**332**	eP	**P**	**12 07 40.4**	**+1.7**
CPAS1	**Pasto**	**31.98**	**332**	eP	**P**	**12 07 40.4**	**+1.7**
GCUF	**Volcan Galeras**	**32.02**	**332**	eP	**P**	**12 07 41.3**	**+2.2**
GCUF	**Volcan Galeras**	**32.02**	**332**	eP	**P**	**12 07 41.3**	**+2.2**
CCUFI	**Cufio, Nario**	**32.02**	**332**	eP	**P**	**12 07 40.9**	**+1.7**
CCUFI	**Cufio, Nario**	**32.02**	**332**	eP	**P**	**12 07 40.9**	**+1.7**
NBLI	**Livramento-PB**	**32.11**	**55**	eP	**P**	**12 07 40.0**	**+0.5**
CRUC	**La Cruz**	**32.17**	**333**	eP	**P**	**12 07 42.2**	**+1.9**
CRUC	**La Cruz**	**32.17**	**333**	eP	**P**	**12 07 42.2**	**+1.9**
SOTA	**Rioblanco**	**32.56**	**334**	eP	**P**	**12 07 44.7**	**+1.0**
SOTA	**Rioblanco**	**32.56**	**334**	eP	**P**	**12 07 44.7**	**+1.0**
BETC	**Betania**	**32.64**	**337**	eP	**P**	**12 07 43.9**	**0.0**
BETC	**Betania**	**32.64**	**337**	eP	**P**	**12 07 43.9**	**0.0**
PCON	**Cinco Dias**	**32.66**	**335**	eP	**P**	**12 07 45.8**	**+1.2**
PCON	**Cinco Dias**	**32.66**	**335**	eP	**P**	**12 07 45.8**	**+1.2**
SJAC	**San Juan de Ar**	**32.70**	**340**	eP	**P**	**12 07 45.6**	**+1.2**
SJAC	**San Juan de Ar**	**32.70**	**340**	eP	**P**	**12 07 45.6**	**+1.2**
HOPE	**Hope Point**	**32.76**	**151**	eP	**P**	**12 07 44.8**	**+0.6**
	comp=Z,2µm,1.0s						
POPC	**Popayan, Colom**	**32.96**	**335**	eP	**P**	**12 07 47.9**	**+1.1**
POPC	**Popayan, Colom**	**32.96**	**335**	eP	**P**	**12 07 47.9**	**+1.1**
MARP	**Paez Belalcaza**	**32.97**	**336**	eP	**P**	**12 07 46.7**	**-0.2**
MARP	**Paez Belalcaza**	**32.97**	**336**	eP	**P**	**12 07 46.7**	**-0.2**
NBPA	**Parau_RN**	**33.10**	**53**	eP	**P**	**12 07 48.6**	**+0.9**
CTUM2	**Tumaco**	**33.14**	**331**	eP	**P**	**12 07 50.0**	**+1.9**
CTUM2	**Tumaco**	**33.14**	**331**	eP	**P**	**12 07 50.0**	**+1.9**
TUMC	**Tumaco**	**33.14**	**331**	eP	**P**	**12 07 49.5**	**+1.4**
TUMC	**Tumaco**	**33.14**	**331**	eP	**P**	**12 07 49.5**	**+1.4**
VILC	**Villavicencio,**	**33.42**	**341**	eP	**P**	**12 07 50.7**	**+0.2**
VILC	**Villavicencio,**	**33.42**	**341**	eP	**P**	**12 07 50.7**	**+0.2**
RCBR	**Riachuelo**	**33.92**	**55**	P	**P**	**12 07 55.5**	**+0.9**
	comp=Z,884nm,0.9s,baz=226,slow=0.5,SNR=157						
RCBR				S	**S**	**12 12 38.6**	**-0.4**
	comp=Z,27nm,0.6s,baz=141,slow=7.8,SNR=3.0						
RCBR	**Riachuelo**	**33.92**	**55**	eP	**P**	**12 07 55.1**	**+0.5**
CHIC	**Chingaza**	**33.92**	**341**	eP	**P**	**12 07 54.7**	**-0.4**
CHIC	**Chingaza**	**33.92**	**341**	eP	**P**	**12 07 54.7**	**-0.4**
YOTC	**Yotoco, Valle**	**34.17**	**336**	eP	**P**	**12 07 55.0**	**-1.7**
YOTC	**Yotoco, Valle**	**34.17**	**336**	eP	**P**	**12 07 55.0**	**-1.7**
ROSC	**El Rosal**	**34.30**	**340**	eP	**P**	**12 07 58.8**	**+0.6**
	comp=Z,193nm,0.4s						
ROSC	**El Rosal**	**34.30**	**340**	eP	**P**	**12 07 58.4**	**+0.3**
ROSC	**El Rosal**	**34.30**	**340**	eP	**P**	**12 07 58.4**	**+0.3**
ROSC	**El Rosal**	**34.30**	**340**	P	**P**	**12 07 58.8**	**+0.6**
	comp=Z,215nm,0.4s,baz=143,slow=5.2,SNR=51						
ROSC				PcP	**PcP**	**12 10 17.1**	**0.0**
	comp=Z,34nm,0.5s,baz=129,slow=19,SNR=2.4						
ROSC				S	**S**	**12 12 43.6**	**-1.7**
	comp=Z,29nm,0.8s,baz=31,slow=9.6,SNR=4.0						
ROSC				ScP	**ScP**	**12 13 08.0**	**+0.7**
	comp=Z,72nm,0.7s,baz=197,slow=15,SNR=3.6						
ANIL	**Santa Ana**	**34.31**	**338**	eP	**P**	**12 07 57.4**	**-0.7**
ANIL	**Santa Ana**	**34.31**	**338**	eP	**P**	**12 07 57.4**	**-0.7**
MDP	**Montagnes des**	**34.34**	**19**	P	**P**	**12 07 58.1**	**+0.1**
	comp=Z,625nm,0.4s,baz=196,slow=10,SNR=592						
MDP				S	**S**	**12 12 42.5**	**-2.7**
	comp=Z,30nm,0.7s,baz=310,slow=19,SNR=5.2						
MDP				ScP	**ScP**	**12 13 07.5**	**+0.6**
	comp=Z,72nm,0.7s,baz=196,slow=4.9,SNR=5.9						
RREF	**El Recreo**	**34.68**	**338**	eP	**P**	**12 08 01.5**	**0.0**
RREF	**El Recreo**	**34.68**	**338**	eP	**P**	**12 08 01.5**	**0.0**
RUSC	**La Rusia**	**34.95**	**343**	eP	**P**	**12 08 02.8**	**-0.9**
RUSC	**La Rusia**	**34.95**	**343**	eP	**P**	**12 08 02.8**	**-0.9**
TAMC	**Tame, Arauca**	**35.15**	**345**	eP	**P**	**12 08 03.5**	**-1.3**
TAMC	**Tame, Arauca**	**35.15**	**345**	eP	**P**	**12 08 03.5**	**-1.3**
BARC	**Barichara**	**35.64**	**343**	eP	**P**	**12 08 06.9**	**-2.2**
BARC	**Barichara**	**35.64**	**343**	eP	**P**	**12 08 06.9**	**-2.2**
PTBC	**PUERTO BERRIO,**	**35.95**	**341**	eP	**P**	**12 08 08.1**	**-3.3**
PTBC	**PUERTO BERRIO,**	**35.95**	**341**	eP	**P**	**12 08 08.1**	**-3.3**
HELC	**Santa Helena**	**35.95**	**339**	eP	**P**	**12 08 09.6**	**-2.2**
HELC	**Santa Helena**	**35.95**	**339**	eP	**P**	**12 08 09.6**	**-2.2**
PMSA	**Palmer Station**	**36.88**	**181**	eP	**P**	**12 08 18.4**	**+0.1**
	comp=Z,384nm,1.1s						
PMSA				eScP	**ScP**	**12 13 16.2**	**+0.8**
PMSA				eS	**S**	**12 13 24.5**	**+2.7**
PMSA	**Palmer Station**	**36.88**	**181**	P	**P**	**12 08 19.1**	**+0.8**
	comp=Z,146nm,0.5s,baz=21,slow=6.2,SNR=91						
PMSA				ScP	**ScP**	**12 13 16.2**	**+0.8**
	comp=Z,71nm,1.0s,baz=42,slow=3.0,SNR=4.7						
PMSA				S	**S**	**12 13 24.5**	**+2.7**
	comp=Z,18nm,0.7s,baz=112,slow=23,SNR=7.7						
PMSA	**Palmer Station**	**36.88**	**181**	eP	**P**	**12 08 17.8**	**-0.5**
ZARC	**Zaragoza, Cauc**	**36.97**	**340**	eP	**P**	**12 08 17.0**	**-2.8**
ZARC	**Zaragoza, Cauc**	**36.97**	**340**	eP	**P**	**12 08 17.0**	**-2.8**
SDV	**Santo Domingo**	**37.29**	**348**	eP	**P**	**12 08 21.3**	**-1.2**
	comp=Z,659nm,0.3s						
SDV				eScP	**ScP**	**12 13 18.8**	**+0.7**
SDV				eS	**S**	**12 13 22.7**	**-6.7**
SDV	**Santo Domingo**	**37.29**	**348**	eP	**P**	**12 08 21.1**	**-1.5**
SDV	**Santo Domingo**	**37.29**	**348**	eP	**P**	**12 08 21.1**	**-1.5**
SDV	**Santo Domingo**	**37.29**	**348**	P	**P**	**12 08 21.4**	**-1.2**
	comp=Z,566nm,0.3s,baz=172,slow=9.3						
SDV				ScP	**ScP**	**12 13 18.8**	**+0.7**
	comp=Z,54nm,0.6s,baz=180,slow=4.7,SNR=7.3						
SDV				S	**S**	**12 13 22.7**	**-6.7**
	comp=Z,32nm,0.7s,baz=274,slow=22,SNR=12						
SDV	**Santo Domingo**	**37.29**	**348**	eP	**P**	**12 08 21.1**	**-1.5**
UREC	**San Jos de Ur**	**37.42**	**340**	eP	**P**	**12 08 21.1**	**-2.4**
UREC	**San Jos de Ur**	**37.42**	**340**	eP	**P**	**12 08 21.1**	**-2.4**
TPP	**Pointe-a-Pierr**	**38.03**	**3**	eP	**P**	**12 08 30.5**	**+2.2**
TPP	**Pointe-a-Pierr**	**38.03**	**3**	eP	**P**	**12 08 30.5**	**+2.2**
TPP	**Pointe-a-Pierr**	**38.03**	**3**	eP	**P**	**12 08 30.5**	**+2.2**
TBH	**Brigand Hill**	**38.21**	**3**	eP	**P**	**12 08 32.4**	**+2.6**
TBH	**Brigand Hill**	**38.21**	**3**	eP	**P**	**12 08 32.4**	**+2.6**
TBH	**Brigand Hill**	**38.21**	**3**	eP	**P**	**12 08 32.4**	**+2.6**
TRN	**Trinidad (W)**	**38.36**	**3**	eP	**P**	**12 08 33.3**	**+2.3**
TRN	**Trinidad (W)**	**38.36**	**3**	eP	**P**	**12 08 33.3**	**+2.3**
TRN	**Trinidad (W)**	**38.36**	**3**	eP	**P**	**12 08 33.3**	**+2.3**
BOT	**Bacolet**	**38.91**	**4**	eP	**P**	**12 08 37.1**	**+1.7**
BOT	**Bacolet**	**38.91**	**4**	eP	**P**	**12 08 37.1**	**+1.7**
TPR	**Prospect**	**38.93**	**4**	eP	**P**	**12 08 37.4**	**+1.8**
TPR	**Prospect**	**38.93**	**4**	eP	**P**	**12 08 37.4**	**+1.8**
TOSP	**Speyside**	**39.05**	**4**	eP	**P**	**12 08 36.9**	**+0.4**
AZU	**Azuero**	**39.17**	**332**	⇓iP	**P**	**12 08 39.2**	**+1.7**
GRGR	**Grenville**	**39.83**	**2**	eP	**P**	**12 08 42.7**	**-0.1**
	comp=Z,2µm,0.6s						
GRHS	**Sauteurs**	**39.92**	**2**	eP	**P**	**12 08 44.4**	**+0.9**
GRHS	**Sauteurs**	**39.92**	**2**	eP	**P**	**12 08 44.4**	**+0.9**
UPA	**Univ. de Panam**	**39.96**	**334**	⇓iP	**P**	**12 08 45.3**	**+1.5**
GRSS	**Sisters**	**39.99**	**2**	eP	**P**	**12 08 45.6**	**+1.5**
GRSS	**Sisters**	**39.99**	**2**	eP	**P**	**12 08 45.6**	**+1.5**
ZANG	**Zanguenga, Cho**	**40.06**	**334**	⇓eP	**P**	**12 08 46.2**	**+1.6**
BCIP	**Isla Barro Col**	**40.24**	**334**	eP	**P**	**12 08 47.0**	**+0.9**
	comp=Z,598nm,1.1s						
BCIP	**Isla Barro Col**	**40.24**	**334**	i P	**P**	**12 08 47.3**	**+1.2**
SMRC	**Santa Marta, M**	**40.30**	**343**	eP	**P**	**12 08 43.2**	**-3.3**
SMRC	**Santa Marta, M**	**40.30**	**343**	eP	**P**	**12 08 43.2**	**-3.3**
URIC	**Uribia, Colomb**	**40.30**	**347**	eP	**P**	**12 08 42.3**	**-4.2**
URIC	**Uribia, Colomb**	**40.30**	**347**	eP	**P**	**12 08 42.3**	**-4.2**
RPN	**Rapa Nui**	**40.79**	**260**	eP	**P**	**12 08 50.5**	**+0.1**
RPN	**Rapa Nui**	**40.79**	**260**	P	**P**	**12 08 51.0**	**+0.6**
RPN				pmax	pmax		
	comp=Z,142nm,0.5s						
RPN	**Rapa Nui**	**40.79**	**260**	P	**P**	**12 08 51.0**	**+0.6**
	comp=Z,142nm,0.5s,baz=139,slow=8.3,SNR=27						
RPN				ScP	**ScP**	**12 13 31.7**	**+0.3**
	comp=Z,55nm,0.7s,baz=141,slow=2.9,SNR=5.3						
FCV	**Fort Charlotte**	**40.86**	**3**	eP	**P**	**12 08 50.7**	**-0.3**
FCV	**Fort Charlotte**	**40.86**	**3**	eP	**P**	**12 08 50.7**	**-0.3**
BBGH	**Gun Hill**	**40.95**	**5**	eP	**P**	**12 08 53.4**	**+1.7**
	comp=Z,5µm,1.8s						
SVB	**Belmont**	**40.97**	**3**	eP	**P**	**12 08 51.7**	**-0.2**
	comp=Z,718nm,0.4s						
SVB	**Belmont**	**40.97**	**3**	eP	**P**	**12 08 51.7**	**-0.2**
SVCV	**St. Vincent, C**	**40.98**	**3**	eP	**P**	**12 08 52.0**	**+0.1**
SVV	**Soufriere Volc**	**41.02**	**3**	eP	**P**	**12 08 52.2**	**-0.1**
SVV	**Soufriere Volc**	**41.02**	**3**	eP	**P**	**12 08 52.2**	**-0.1**
SSV	**Crater Summit**	**41.03**	**3**	eP	**P**	**12 08 52.4**	**-0.1**
SSV	**Crater Summit**	**41.03**	**3**	eP	**P**	**12 08 52.4**	**-0.1**
SFAN	**Fancy Village**	**41.09**	**3**	eP	**P**	**12 08 52.5**	**-0.3**
SFAN	**Fancy Village**	**41.09**	**3**	eP	**P**	**12 08 52.5**	**-0.3**
BRU2	**Volcan**	**41.10**	**330**	⇓iP	**P**	**12 08 55.0**	**+1.9**
MCLT	**Moule a Chique**	**41.42**	**3**	eP	**P**	**12 08 54.5**	**-0.9**
MCLT	**Moule a Chique**	**41.42**	**3**	eP	**P**	**12 08 54.5**	**-0.9**
SLB	**Belfond**	**41.53**	**3**	eP	**P**	**12 08 56.1**	**-0.2**
SLB	**Belfond**	**41.53**	**3**	eP	**P**	**12 08 56.1**	**-0.2**
EDPN	**Palmar Norte**	**41.59**	**329**	eP	**P**	**12 08 59.2**	**+2.4**
FDF	**Fort de France**	**42.43**	**3**	eP	**P**	**12 09 03.0**	**-0.3**
FDF	**Fort de France**	**42.43**	**3**	eP	**P**	**12 09 02.8**	**-0.5**
FDF	**Fort de France**	**42.43**	**3**	eP	**P**	**12 09 03.0**	**-0.3**
LCR2	**La Lucha 2**	**42.53**	**329**	eP	**P**	**12 09 06.7**	**+2.3**
HDC	**Heredia**	**42.81**	**329**	eP	**P**	**12 09 06.7**	**+0.3**
	comp=Z,987nm,0.9s						
HDC	**Heredia**	**42.81**	**329**	eP	**P**	**12 09 08.9**	**+2.5**
DBCT	**Belle View Cho**	**42.95**	**3**	eP	**P**	**12 09 08.6**	**+1.1**
DBCT	**Belle View Cho**	**42.95**	**3**	eP	**P**	**12 09 08.6**	**+1.1**
MDN	**Morne-Daniel**	**43.00**	**2**	eP	**P**	**12 09 08.4**	**+0.7**
MDN	**Morne-Daniel**	**43.00**	**2**	eP	**P**	**12 09 08.4**	**+0.7**
DLPL	**La Plaine**	**43.02**	**3**	eP	**P**	**12 09 07.6**	**-0.3**
BBL	**Barber's Block**	**43.20**	**2**	eP	**P**	**12 09 09.0**	**-0.3**
BBL	**Barber's Block**	**43.20**	**2**	eP	**P**	**12 09 09.0**	**-0.3**
DWS	**Wesley**	**43.25**	**3**	eP	**P**	**12 09 09.3**	**-0.3**
DWS	**Wesley**	**43.25**	**3**	eP	**P**	**12 09 09.3**	**-0.3**
MDPO	**Dominica; Chan**	**43.25**	**2**	eP	**P**	**12 09 09.9**	**+0.2**
MDPV	**Dominica, Penn**	**43.31**	**2**	eP	**P**	**12 09 10.4**	**+0.3**
JTS	**JuntasAbangare**	**43.45**	**328**	eP	**P**	**12 09 12.9**	**+1.6**
	comp=Z,453nm,0.9s						
JTS	**JuntasAbangare**	**43.45**	**328**	P	**P**	**12 09 12.3**	**+1.0**
	comp=Z,472nm,0.9s,baz=208,slow=3.5,SNR=175						
JTS				ScP	**ScP**	**12 13 42.8**	**+0.5**
	comp=Z,99nm,0.8s,baz=77,slow=3.3,SNR=14						
JTS				S	**S**	**12 14 59.2**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=319,slow=19,SNR=2.5						
JTS	**JuntasAbangare**	**43.45**	**328**	eP	**P**	**12 09 12.8**	**+1.5**
ARE1	**Arenal 1**	**43.49**	**328**	eP	**P**	**12 09 12.8**	**+1.2**
CEDE	**Laguna Cedeo**	**43.51**	**328**	⇓eP	**P**	**12 09 13.1**	**+1.3**
TBG	**Guadaloupe-3**	**43.52**	**2**	eP	**P**	**12 09 12.7**	**+1.0**
MGG	**Marie-Galante**	**43.60**	**3**	eP	**P**	**12 09 12.0**	**-0.4**
MGG	**Marie-Galante**	**43.60**	**3**	eP	**P**	**12 09 12.0**	**-0.4**
PLVR	**Palo Verde**	**43.69**	**327**	⇓eP	**P**	**12 09 14.8**	**+1.4**
CUI	**Cuipilapa**	**43.87**	**328**	eP	**P**	**12 09 15.7**	**+1.1**
MESS	**Mesas**	**43.96**	**328**	⇓iP	**P**	**12 09 16.7**	**+1.4**
DEG	**La Desirade**	**44.00**	**3**	eP	**P**	**12 09 15.1**	**-0.4**
DEG	**La Desirade**	**44.00**	**3**	eP	**P**	**12 09 15.1**	**-0.4**
GPS2	**Hotel Rincn d**	**44.04**	**328**	eP	**P**	**12 09 16.7**	**+0.7**
BUEV	**Buena Vista**	**44.11**	**328**	⇓eP	**P**	**12 09 17.3**	**+0.9**
MLYT	**Lee's Yard**	**44.37**	**1**	eP	**P**	**12 09 17.8**	**-0.5**
PRVC	**Isla de Provid**	**44.68**	**334**	eP	**P**	**12 09 20.4**	**-0.3**
PRVC	**Isla de Provid**	**44.68**	**334**	eP	**P**	**12 09 20.4**	**-0.3**
BPA	**Boggy Peak**	**44.70**	**2**	eP	**P**	**12 09 19.8**	**-1.0**
BPA	**Boggy Peak**	**44.70**	**2**	eP	**P**	**12 09 19.8**	**-1.0**
NEV	**Hard Times**	**44.78**	**1**	eP	**P**	**12 09 21.6**	**+0.2**
NEV	**Hard Times**	**44.78**	**1**	eP	**P**	**12 09 21.6**	**+0.2**
ESPN	**Las Esperanzas**	**44.83**	**330**	eP	**P**	**12 09 22.0**	**+0.2**
	comp=Z,443nm,1.2s						
ESPN	**Las Esperanzas**	**44.83**	**330**	eP	**P**	**12 09 22.1**	**+0.3**
ACON	**Acoyapa**	**45.02**	**329**	eP	**P**	**12 09 22.8**	**-0.5**
SEUS	**St. Eustatius**	**45.13**	**0**	eP	**P**	**12 09 23.6**	**-0.4**
	comp=Z,561nm,0.7s						
SEUS	**St. Eustatius**	**45.13**	**0**	eP	**P**	**12 09 24.1**	**0.0**
ANWB	**Willy Bob**	**45.32**	**2**	eP	**P**	**12 09 23.8**	**-1.7**
	comp=Z,2µm,0.6s						
ANWB	**Willy Bob**	**45.32**	**2**	eP	**P**	**12 09 23.9**	**-1.7**
CDVI	**St. Croix**	**45.41**	**358**	eP	**P**	**12 09 24.9**	**-1.3**
	comp=Z,906nm,0.6s						
BOAB	**BOACO BROADBAN**	**45.67**	**328**	eP	**P**	**12 09 27.8**	**-0.5**
	comp=Z,106nm,1.1s						
SMRT	**St. Maarten**	**45.68**	**0**	eP	**P**	**12 09 26.2**	**-2.1**
	comp=Z,743nm,0.4s						
SMRT	**St. Maarten**	**45.68**	**0**	eP	**P**	**12 09 26.5**	**-1.8**
MTP	**Monte Pirata**	**45.79**	**357**	eP	**P**	**12 09 27.3**	**-1.8**
	comp=Z,211nm,0.5s						
OBIP	**Obispado Ponce**	**45.80**	**355**	eP	**P**	**12 09 26.9**	**-2.3**
	comp=Z,554nm,0.7s						
SJG	**San Juan**	**45.84**	**356**	eP	**P**	**12 09 28.4**	**-1.0**
	comp=Z,138nm,0.8s						
SJG				eS	**S**	**12 15 26.3**	**-5.3**
SJG	**San Juan**	**45.84**	**356**	P	**P**	**12 09 28.4**	**-1.0**
	comp=Z,311nm,0.6s,baz=163,slow=5.0,SNR=110						
SJG				S	**S**	**12 15 26.3**	**-5.3**
	comp=Z,103nm,0.8s,baz=340,slow=20,SNR=8.4						
HUMP	**Col San Antoni**	**45.85**	**356**	eP	**P**	**12 09 27.6**	**-1.9**
	comp=Z,274nm,0.5s						
CBYP	**Canovanas**	**45.98**	**356**	eP	**P**	**12 09 29.0**	**-1.6**
	comp=Z,438nm,0.6s						
CUPR	**Culebra, Puert**	**45.99**	**357**	eP	**P**	**12 09 28.9**	**-1.6**
MPR	**Mayaguez**	**46.01**	**355**	eP	**P**	**12 09 29.7**	**-1.0**
	comp=Z,539nm,0.7s						
STVI	**Saint Thomas**	**46.02**	**358**	eP	**P**	**12 09 29.3**	**-1.5**
	comp=Z,318nm,0.6s						
AGP	**Aguadilla**	**46.20**	**355**	eP	**P**	**12 09 30.9**	**-1.3**
	comp=Z,3µm,2.0s						
CNGN	**Cerro Negro**	**46.20**	**327**	eP	**P**	**12 09 31.5**	**-0.8**
MATN	**Matagalpa**	**46.21**	**328**	⇓iP	**P**	**12 09 32.8**	**+0.3**
EMPR	**Esperanza - Ma**	**46.23**	**356**	eP	**P**	**12 09 30.6**	**-1.8**
	comp=Z,487nm,0.9s						
ABVI	**Anegada Island**	**46.37**	**358**	eP	**P**	**12 09 32.1**	**-1.4**
	comp=Z,904nm,0.9s						
CRIN	**San Cristobal**	**46.54**	**327**	eP	**P**	**12 09 34.1**	**-0.9**
BANI	**BANI**	**46.55**	**351**	eP	**P**	**12 09 35.1**	**+0.1**
SDD	**Santo Domingo**	**46.55**	**351**	eP	**P**	**12 09 34.0**	**-0.8**

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            comp=Z,349nm,0.5s
ESTN  Estel            46.57 328  eP       P         12 09 35.5 +0.3
            comp=Z,756nm,0.9s
ESTN  Estel            46.57 328⇓eP       P         12 09 35.4 +0.3
SDDR  Presa de Saban   47.27 349  eP       P         12 09 39.5  -0.8
            comp=Z,200nm,0.5s
PCJ   Portland Cotta   47.37 342⇓iP       P         12 09 41.3 +0.4
GWJ   Greenwich        47.57 342⇓iP       P         12 09 43.2 +0.6
STH   Stony Hill       47.59 342⇓iP       P         12 09 42.8 +0.1
MCJ   Malvern          47.69 341⇑iP       P         12 09 44.3 +0.8
TGUH  Tegucigalpa,Un   47.83 328  eP       P         12 09 44.2  -0.2
            comp=Z,424nm,1.1s
TGUH  Tegucigalpa,Un   47.83 328  eP       P         12 09 44.2  -0.2
TGUH  Tegucigalpa,Un   47.83 328  eP       P         12 09 44.2  -0.2
CVJ   Coleyville       47.93 341⇓iP       P         12 09 46.0 +0.7
MTDJ  Mount Denham     47.93 341  eP       P         12 09 45.6 +0.3
            comp=Z,408nm,0.9s
BBJ   Bamboo Saint A   48.01 342⇓iP       P         12 09 46.0 +0.2
MBJ   Montego Bay      48.19 341⇓iP       P         12 09 47.5 +0.4
GTBY  Guantanamo Bay   48.94 345  eP       P         12 09 52.6   0.0
            comp=Z,717nm,0.4s
H10S3 ASCENSION HYDR49.33   77   P        P         12 09 42.8   -13
            baz=251,slow=8.6,SNR=33
H10S2 ASCENSION HYDR49.34   77   P        P         12 09 56.4 +0.9
            baz=251,slow=8.6,SNR=34
H10S1 ASCENSION HYDR49.35   77   P        P         12 09 56.4 +0.9
            baz=251,slow=8.6,SNR=49
GRTK  Grand Turk       49.73 350  eP       P         12 09 58.2  -0.2
            comp=Z,3µm,1.8s
H10N3 ASCENSION HYDR50.02   76   P        P         12 10 01.9 +1.6
            baz=232,slow=6.0,SNR=27
H10N1 ASCENSION HYDR50.03   76   P        P         12 10 02.0 +1.5
            baz=232,slow=6.0,SNR=33
H10N2 ASCENSION HYDR50.03   76   P        P         12 10 01.8 +1.3
            baz=232,slow=6.0,SNR=37
FSCY  Frank Sound, G   50.09 338  eP       P         12 10 00.7  -0.3
            comp=Z,969nm,1.6s
ASCN  Ascension        50.09  76  eP       P         12 10 02.2 +0.9
            comp=Z,2µm,0.6s
APG   El Apazote       50.21 325   P       P         12 10 02.1  -0.1
            comp=Z,177nm,0.5s,baz=141,slow=9.7,SNR=317
APG                                ScP     ScP       12 14 11.8 +0.8
            comp=Z,21nm,0.9s,baz=254,slow=3.6,SNR=3.7
CCIG  Comitan          52.15 324  eP       P         12 10 15.8  -0.4
            comp=Z,423nm,0.7s
VNA3  Neumayer Olymp   52.34 161   P       P         12 10 17.0 +0.4
VNA1  Neumayer--Stat   52.51 160   P       P         12 10 18.6 +0.9
VNA2  Neumayer--Watz   52.88 160   P       P         12 10 20.9 +0.4
            baz=291,slow=8.1
TEIG  Tepich           53.67 330  eP       P         12 10 26.4  -0.3
            comp=Z,774nm,1.1s
SHEL  Horse Pasture    54.12  90  eP       P         12 10 30.5 +0.4
            comp=Z,811nm,0.7s
SHEL  Horse Pasture    54.12  90  eP       P         12 10 30.5 +0.4
SHEL                               pmax    pmax
            comp=Z,811nm,0.7s
CMIG  Matias Romero    54.28 322   P       P         12 10 31.2 +0.2
            comp=Z,168nm,0.8s,baz=129,slow=5.1,SNR=133
CMIG                               PcP     PcP       12 11 25.8  -0.1
            comp=Z,44nm,0.8s,baz=68,slow=5.4,SNR=4.3
CMIG                               ScP     ScP       12 14 29.4 +0.9
            comp=Z,18nm,0.6s,baz=124,slow=2.9,SNR=6.2
SNAA  Sanae            54.52 160   P       P         12 10 32.2 +0.2
SNAA  Sanae            54.52 160  eP       P         12 10 32.3 +0.2
            comp=Z,752nm,1.1s
SNAA                              ePcP     PcP       12 11 27.7 +1.6
SNAA  Sanae            54.52 160   P       P         12 10 32.4 +0.3
            comp=Z,400nm,0.9s,baz=297,slow=7.3,SNR=245
SNAA                               PcP     PcP       12 11 26.5 +0.4
            comp=Z,41nm,0.7s,baz=236,slow=3.6,SNR=4.4
SNAA                               pP      pP        12 12 22.2  -0.3
            comp=Z,177nm,1.0s,baz=295,slow=6.4,SNR=7.3
SNAA                               ScP     ScP       12 14 29.9 +1.1
            comp=Z,69nm,0.7s,baz=277,slow=4.4,SNR=8.5
SNAA                               S       S         12 17 27.7 +0.2
            comp=Z,10nm,0.9s,baz=8.1,slow=23,SNR=12
MYIG  Mrida            54.97 329  eP       P         12 10 34.9  -0.8
            comp=Z,380nm,0.8s
062Z  Marathon         55.10 340   P       P         12 10 37.5 +0.8
            baz=161
061Z  Ochoppi          56.13 341  eP       P         12 10 44.9 +1.2
            comp=Z,2µm,0.4s
061Z  Ochoppi          56.13 341   P       P         12 10 44.9 +1.2
            baz=161,SNR=74
060Z  West Palm Beac   56.54 341   P       P         12 10 47.7 +1.2
            baz=162,SNR=11
059Z  Ave Maria        56.73 340   P       P         12 10 48.7 +0.9
            baz=161,SNR=17
060A  Indiantown       57.08 342  eP       P         12 10 51.5 +1.3
            comp=Z,534nm,0.5s
060A  Indiantown       57.08 342   P       P         12 10 51.3 +1.1
            baz=162,SNR=11
059A  Moore Haven      57.24 341  eP       P         12 10 52.2 +1.0
            comp=Z,377nm,0.8s
059A  Moore Haven      57.24 341   P       P         12 10 52.0 +0.8
            baz=161,SNR=15
LVIG  Laguna Verde     57.26 322  eP       P         12 10 51.5  -0.1
            comp=Z,104nm,0.9s
SACV  Santiago Islan   57.30  47  eP       P         12 10 51.7  -0.2
            comp=Z,929nm,0.8s
058A  Arcadia          57.52 340   P       P         12 10 53.8 +0.7
            baz=160,SNR=22
959A  Okeechobee       57.69 341   P       P         12 10 55.2 +0.9
            baz=161,SNR=8.4
958A  Wauchula         58.00 340   P       P         12 10 57.0 +0.6
            baz=161,SNR=21
859A  Kempfer Cattle   58.20 342   P       P         12 10 58.5 +0.8
            baz=162,SNR=46
957A  Wimauma          58.22 340  eP       P         12 10 58.5 +0.6
            comp=Z,418nm,1.0s
957A  Wimauma          58.22 340   P       P         12 10 58.5 +0.6
            baz=160,SNR=20
DWPF  Disney Wildern   58.40 341  eP       P         12 10 59.7 +0.6
            comp=Z,936nm,1.8s
DWPF  Disney Wildern   58.40 341   P       P         12 10 59.4 +0.4
            baz=161
DWPF  Disney Wildern   58.40 341  eP       P         12 10 59.3 +0.2
858A  St. Cloud        58.47 341   P       P         12 11 00.1 +0.6
            baz=161
UNM   Universidad Na   58.49 319  eP       P         12 11 02.2 +2.0
            comp=Z,316nm,0.9s
UNM   Universidad Na   58.49 319  eP       P         12 11 02.2 +2.0
UNM                                pmax    pmax
            comp=Z,316nm,0.9s
857A  Zephyrhills      58.78 340   P       P         12 11 02.0 +0.3
            baz=160,SNR=10
857A                               S       S         12 18 23.2 +0.3
            baz=160
NVL   N'lazarevskaya   58.98 158⇓iP       P         12 11 02.7 +0.3
NVL                               e                  12 11 43.4
NVL                               e*PP     pP        12 12 56.2 +0.7
NVL                               i S      S         12 18 19.2  -5.1
NVL                                pmax    pmax
            comp=Z,637nm,0.8s
758A  Lake Helen       59.13 342   P       P         12 11 04.7 +0.7
            baz=161,SNR=12
757A  Oxford           59.36 341   P       P         12 11 06.1 +0.5
            baz=161,SNR=27
658A  Bunnell          59.58 342  eP       P         12 11 07.5 +0.5
            comp=Z,249nm,0.6s
658A  Bunnell          59.58 342   P       P         12 11 07.4 +0.5
            baz=161,SNR=11
656A  Willston         59.90 340  eP       P         12 11 09.6 +0.5
            comp=Z,145nm,0.9s
656A  Willston         59.90 340   P       P         12 11 09.3 +0.2
            baz=160,SNR=15
657A  Interlachen      59.91 341   P       P         12 11 09.6 +0.5
            baz=161,SNR=40
MOIG  Morelia          59.94 318  eP       P         12 11 10.1 +0.2
BBSR  BB Station       59.96 358  eP       P         12 11 10.4 +1.0
            comp=Z,304nm,0.8s
655A  Horseshoe Beac   60.25 340   P       P         12 11 11.5 +0.1
            baz=160,SNR=10
557A  Orange Park      60.28 341   P       P         12 11 12.0 +0.5
            baz=161,SNR=25
556A  Lake Butler      60.46 341   P       P         12 11 13.0 +0.3
            baz=160,SNR=16
555A  McAlpin          60.73 340  eP       P         12 11 14.6   0.0
            comp=Z,191nm,0.6s
555A  McAlpin          60.73 340   P       P         12 11 14.8 +0.2
            baz=160,SNR=24
457A  Yulee            60.80 342   P       P         12 11 15.5 +0.5
            baz=161,SNR=6.7
554A  Perry            60.92 340   P       P         12 11 15.9 +0.1
            baz=159,SNR=14
456A  Hilliard         61.03 341  eP       P         12 11 17.3 +0.8
            comp=Z,375nm,0.6s
456A  Hilliard         61.03 341   P       P         12 11 17.2 +0.8
            baz=161,SNR=18
553A  Crawfordville    61.25 339   P       P         12 11 18.5 +0.6
            baz=159,SNR=30
455A  Stateville       61.33 340   P       P         12 11 18.6 +0.2
            baz=160,SNR=16
552A  Lynn Haven       61.48 338   P       P         12 11 19.6 +0.2
            baz=158
454A  Quitman          61.49 340   P       P         12 11 19.6 +0.1
            baz=159,SNR=15
357A  Townsend         61.54 342   P       P         12 11 20.1 +0.4
            baz=162,SNR=8.8
356A  Blackshear       61.62 342   P       P         12 11 20.8 +0.4
            baz=161,SNR=13
453A  Whigham          61.83 339  eP       P         12 11 21.9 +0.2
            comp=Z,894nm,1.6s
453A  Whigham          61.83 339   P       P         12 11 22.0 +0.3
            baz=159,SNR=19
355A  Pearson          61.85 341   P       P         12 11 22.1 +0.3
            baz=160,SNR=7.1
257A  Skidaway Islan   61.94 343  eP       P         12 11 23.3 +0.9
            comp=Z,2µm,1.8s
257A  Skidaway Islan   61.94 343   P       P         12 11 23.1 +0.8
            baz=162,SNR=5.9
451A  Vernon           62.07 338  eP       P         12 11 23.7 +0.5
            comp=Z,252nm,1.0s
451A  Vernon           62.07 338   P       P         12 11 23.4 +0.1
            baz=157,SNR=7.5
452A  Marianna         62.10 339   P       P         12 11 23.4   0.0
            baz=158,SNR=11
TIGA  Tifton           62.15 340  eP       P         12 11 24.0 +0.3
            comp=Z,150nm,0.8s
TIGA  Tifton           62.15 340   P       P         12 11 23.7   0.0
            baz=160,SNR=17
256A  Glennville       62.17 342   P       P         12 11 24.5 +0.6
            baz=161,SNR=36
353A  Camilla          62.26 340   P       P         12 11 24.5   0.0
            baz=159,SNR=64
255A  Hazlehurst       62.28 341  eP       P         12 11 24.9 +0.4
            comp=Z,275nm,1.0s
255A                              epP      pP        12 13 21.6 +1.7
255A  Hazlehurst       62.28 341   P       P         12 11 25.0 +0.4
            baz=161,SNR=28
QSPA  South Pole Qui   62.32 180   P       P         12 11 25.3 +0.8
            comp=Z,808nm,0.7s,baz=306,slow=0.3,SNR=1948
QSPA                               PcP     PcP       12 11 58.2 +0.7
            comp=Z,83nm,0.8s,baz=38,slow=1.6,SNR=3.2
QSPA                               S       S         12 19 06.8 +0.7
            comp=Z,51nm,0.9s,baz=358,slow=19,SNR=23
QSPA                               P4KPbc            12 48 18.2
            comp=Z,5.4nm,1.0s,baz=149,slow=2.1,SNR=8.8
450A  Crestview        62.52 337   P       P         12 11 26.2   0.0
            baz=157,SNR=5.9
254A  Abbeville        62.54 341   P       P         12 11 26.3 +0.1
            baz=160,SNR=45
352A  Blakely          62.60 339  eP       P         12 11 26.6   0.0
            comp=Z,348nm,0.9s
352A  Blakely          62.60 339   P       P         12 11 26.7   0.0
            baz=158,SNR=55
RGRS  Roger Stewart    62.61 344  eP       P         12 11 27.7 +1.0
            comp=Z,5µm,0.5s
RGRS                              epP      pP        12 13 24.9 +2.7
351A  Pinckard         62.63 338   P       P         12 11 27.0 +0.1
            baz=158,SNR=66
CSU   Charleston Sou   62.66 344  eP       P         12 11 28.2 +1.2
CSU                               epP      pP        12 13 24.7 +2.2
449A  Pace             62.70 337   P       P         12 11 27.5 +0.1
            baz=156,SNR=12
156A  Sylvania         62.70 343   P       P         12 11 28.3 +1.0
            baz=162,SNR=5.9
NHSC  New Hope         62.80 344  eP       P         12 11 29.2 +1.3
NHSC  New Hope         62.80 344   P       P         12 11 29.0 +1.1
            baz=163,SNR=26
253A  Americus         62.90 340  eP       P         12 11 28.4  -0.2
            comp=Z,216nm,0.6s
253A  Americus         62.90 340   P       P         12 11 28.4  -0.2
            baz=159,SNR=41
155A  Kite             62.94 342   P       P         12 11 29.2 +0.4
            baz=161,SNR=34
350A  Dozier           63.01 338   P       P         12 11 29.3   0.0
            baz=157,SNR=14
BRAL  Brewton          63.02 337  eP       P         12 11 29.6 +0.2
            comp=Z,428nm,0.5s
BRAL  Brewton          63.02 337   P       P         12 11 29.6 +0.2
            baz=156
252A  Lumpkin          63.02 339   P       P         12 11 29.1  -0.2
            baz=159,SNR=35
448A  Bay Minette      63.09 336   P       P         12 11 29.8 +0.1
            baz=156,SNR=15
LNIG  Linares          63.09 323  eP       P         12 11 30.2 +0.2
            comp=Z,364nm,0.8s
154A  Montrose         63.11 341  eP       P         12 11 30.0 +0.1
            comp=Z,335nm,0.8s
154A  Montrose         63.11 341   P       P         12 11 30.2 +0.3
            baz=160,SNR=38
349A  Repton           63.23 337   P       P         12 11 31.0 +0.3
            baz=156,SNR=70
251A  Midway           63.32 339   P       P         12 11 31.1  -0.2
            baz=158,SNR=75
Z55A  Blythe           63.41 342   P       P         12 11 32.5 +0.7
            baz=161,SNR=15
250A  Grady            63.49 338  eP       P         12 11 32.1  -0.2
            comp=Z,221nm,0.7s
250A  Grady            63.49 338   P       P         12 11 32.2  -0.2
            baz=157,SNR=70
Z54A  Sparta           63.62 342   P       P         12 11 33.3 +0.1
            baz=161,SNR=34
152A  Waverly Hall     63.64 340  eP       P         12 11 33.2  -0.1
            comp=Z,102nm,0.6s
152A  Waverly Hall     63.64 340   P       P         12 11 33.1  -0.1
            baz=159,SNR=66
151A  Opelika          63.70 339   P       P         12 11 33.4  -0.3
            baz=158,SNR=41
249A  Camden           63.78 337   P       P         12 11 34.2 +0.1
            baz=156,SNR=88
X59A  McDuffie Farm,   63.84 346   P       P         12 11 35.2 +0.7
            baz=165,SNR=22
Z53A  Monticello       63.87 341   P       P         12 11 34.6  -0.2
            baz=160,SNR=38
GOGA  Godfrey          63.96 341  eP       P         12 11 35.4 +0.1
            comp=Z,86nm,0.8s
GOGA  Godfrey          63.96 341  eP       P         12 11 35.4 +0.1
GOGA                               pmax    pmax
            comp=Z,86nm,0.8s
GOGA  Godfrey          63.96 341   P       P         12 11 35.3 +0.1
            baz=160,SNR=36
X58A  Rowland          63.99 345   P       P         12 11 36.3 +0.8
            baz=164,SNR=69
150A  Eclectic         63.99 339   P       P         12 11 35.5   0.0
            baz=158,SNR=77
Y55A  Saluda           64.02 343   P       P         12 11 36.3 +0.7
            baz=162,SNR=70
Z52A  Williamson       64.03 340   P       P         12 11 35.8   0.0
            baz=159,SNR=52
X57A  Johnson Farm,    64.08 344   P       P         12 11 37.0 +1.0
            baz=163,SNR=81
Y54A  Tignall          64.17 342   P       P         12 11 36.9 +0.3
            baz=161,SNR=82
JSC   Jenkinsville     64.19 343  eP       P         12 11 37.5 +0.8
            comp=Z,253nm,0.5s
JSC   Jenkinsville     64.19 343  eP       P         12 11 37.5 +0.8
JSC                                pmax    pmax
            comp=Z,253nm,0.5s
149A  Jones            64.24 338   P       P         12 11 36.7  -0.3
            baz=157,SNR=106
X56A  White Oak        64.33 344   P       P         12 11 38.6 +1.0
            baz=162,SNR=193
CNNC  Cliffs of the    64.33 347  eP       P         12 11 38.3 +0.7
            comp=Z,248nm,0.5s
CNNC  Cliffs of the    64.33 347   P       P         12 11 38.4 +0.7
            baz=166,SNR=23
Z51A  Franklin         64.38 340   P       P         12 11 38.1 +0.1
            baz=158,SNR=48
HODGE Hodges           64.40 342  eP       P         12 11 38.5 +0.4
            comp=Z,132nm,0.9s
Y53A  Monroe           64.41 341   P       P         12 11 38.3 +0.1
            baz=160,SNR=96
KVTX  Kingsville       64.44 326  eP       P         12 11 40.6 +2.1
            comp=Z,1µm,0.9s
X55A  Gracelyn & Ava   64.46 343   P       P         12 11 39.2 +0.8
            baz=162,SNR=122
Y52A  Lilburn          64.56 341  eP       P         12 11 39.1   0.0
            comp=Z,152nm,0.5s
Y52A  Lilburn          64.56 341   P       P         12 11 39.1   0.0
            baz=160,SNR=78
Z50A  Ashland          64.56 339  eP       P         12 11 39.3 +0.2
            comp=Z,594nm,0.4s
Z50A  Ashland          64.56 339   P       P         12 11 39.3 +0.2
            baz=158,SNR=505
Z49A  Columbiana       64.70 338   P       P         12 11 39.9  -0.1
            baz=157,SNR=126
LRAL  Lakeview Retre   64.71 338  eP       P         12 11 40.0   0.0
            comp=Z,315nm,1.1s
LRAL  Lakeview Retre   64.71 338   P       P         12 11 40.0   0.0
            baz=157,SNR=176
X54A  Belton           64.73 342   P       P         12 11 40.9 +0.8
            baz=161,SNR=72
147A  Livingston       64.81 337  eP       P         12 11 40.5  -0.2
            comp=Z,155nm,0.7s
147A  Livingston       64.81 337   P       P         12 11 40.5  -0.2
            baz=156,SNR=29
PAULI Pauline          64.84 343  eP       P         12 11 41.7 +0.9
            comp=Z,194nm,0.6s
Y51A  Rockmart         64.89 340   P       P         12 11 41.1  -0.1
            baz=159,SNR=68
X53A  Estanollee       64.94 342   P       P         12 11 41.9 +0.4
            baz=160,SNR=82
KMSC  Kings Mountain   65.02 344  eP       P         12 11 42.8 +0.8
            comp=Z,238nm,0.8s
KMSC  Kings Mountain   65.02 344   P       P         12 11 42.8 +0.8
            baz=162,SNR=106
Y50A  Piedmont         65.09 339   P       P         12 11 42.3  -0.1
            baz=158,SNR=37
W54A  Cherokee Point   65.19 343   P       P         12 11 44.0 +1.0
            baz=162,SNR=168
X52A  Dahlonega        65.20 341   P       P         12 11 43.3 +0.2
            baz=160,SNR=98
VBMS  Vicksburg        65.22 335  eP       P         12 11 43.9 +0.6
            comp=Z,239nm,1.0s
VBMS  Vicksburg        65.22 335   P       P         12 11 43.7 +0.5
            baz=153,SNR=18
Y49A  Blount Mountai   65.27 339  eP       P         12 11 43.7 +0.2
            comp=Z,291nm,0.6s
Y49A  Blount Mountai   65.27 339   P       P         12 11 43.6   0.0
            baz=157,SNR=163
BG3   Lake Jocassee    65.30 342  eP       P         12 11 44.4 +0.6
            comp=Z,268nm,1.0s
145A  Houston Renfro   65.35 335   P       P         12 11 44.8 +0.8
            baz=154,SNR=49
X51A  Calhoun          65.44 340  eP       P         12 11 45.0 +0.3
            comp=Z,516nm,0.4s
X51A  Calhoun          65.44 340   P       P         12 11 44.9 +0.3
            baz=159,SNR=173
HKT   Hockley          65.47 329  eP       P         12 11 45.8 +1.0
            comp=Z,158nm,1.1s
HKT   Hockley          65.47 329  eP       P         12 11 45.8 +1.0
HKT                                pmax    pmax
            comp=Z,158nm,1.1s
LIC   Lamto            65.50  68  eP       P         12 11 45.4   0.0
            comp=Z,5µm,0.9s
W53A  Cullowhee        65.53 342   P       P         12 11 45.7 +0.4
            baz=161,SNR=137
Y48A  Jasper           65.57 338   P       P         12 11 45.2  -0.2
            baz=157,SNR=78
X50B  Fort Payne       65.59 340   P       P         12 11 45.5  -0.1
            baz=158,SNR=39
W52A  Murphy           65.67 341  eP       P         12 11 46.5 +0.4
            comp=Z,180nm,0.6s
W52A  Murphy           65.67 341   P       P         12 11 46.3 +0.3
            baz=160,SNR=66
TIC   Toumodi          65.74  68  eP       P         12 11 46.4  -0.6
KIC   Kosan Boka       65.81  68  eP       P         12 11 46.8  -0.6
            comp=Z,873nm,0.7s
833A  Chaparral WMA,   65.83 325  eP       P         12 11 48.0 +0.9
            comp=Z,1µm,0.8s
833A  Chaparral WMA,   65.83 325   P       P         12 11 48.2 +1.0
            baz=145,SNR=275
X49A  Woodville        65.85 339   P       P         12 11 47.1   0.0
            baz=158,SNR=72
DBIC  Dimbokro         65.89  68  eP       P         12 11 48.4 +0.6
            comp=Z,2µm,0.8s
DBIC  Dimbokro         65.89  68   P       P         12 11 48.5 +0.6
            comp=Z,2µm,0.6s,baz=216,slow=7.0,SNR=973
DBIC                               S       S         12 19 49.9  -0.3
            comp=Z,18nm,0.8s,baz=118,slow=23,SNR=8.0
DBIC                               PKP2bc            12 40 19.2
            comp=Z,10nm,1.0s,baz=10,slow=3.1,SNR=6.0
DBIC  Dimbokro         65.89  68  eP       P         12 11 48.4 +0.6
V53A  Saluda           65.90 343  eP       P         12 11 48.1 +0.6
            comp=Z,264nm,0.6s
V53A  Saluda           65.90 343   P       P         12 11 47.9 +0.4
            baz=161,SNR=159
W51A  Cleveland        65.97 341   P       P         12 11 48.1 +0.2
            baz=159,SNR=136
X48A  Hartselle        66.02 338  eP       P         12 11 48.5 +0.3
            comp=Z,353nm,0.8s
X48A  Hartselle        66.02 338   P       P         12 11 48.6 +0.3
            baz=157,SNR=272
TKL   Tuckaleechee C   66.15 342  eP       P         12 11 49.0   0.0
            comp=Z,138nm,0.7s
TKL   Tuckaleechee C   66.15 342  eP       P         12 11 49.0   0.0
TKL                                pmax    pmax
            comp=Z,138nm,0.7s
CPCT  Cooper Cave      66.17 341  eP       P         12 11 49.3 +0.2
            comp=Z,202nm,0.5s
W50A  Signal Mountai   66.17 340  eP       P         12 11 49.3 +0.1
            comp=Z,381nm,0.8s
W50A  Signal Mountai   66.17 340   P       P         12 11 49.3 +0.1
            baz=159,SNR=226
V52A  Sevierville      66.28 342  eP       P         12 11 49.7  -0.1
            comp=Z,135nm,0.8s
V52A  Sevierville      66.28 342   P       P         12 11 49.7  -0.1
            baz=160,SNR=74
X47A  Russelville      66.35 338   P       P         12 11 50.1  -0.1
            baz=156,SNR=213
SWET  Sewanee          66.37 340  eP       P         12 11 50.6 +0.1
            comp=Z,434nm,0.6s
W49A  Belvidere        66.39 339   P       P         12 11 50.5 +0.1
            baz=158,SNR=310
V51A  Loudon           66.45 341  eP       P         12 11 50.7  -0.2
            comp=Z,160nm,0.6s
V51A  Loudon           66.45 341   P       P         12 11 50.6  -0.2
            baz=160,SNR=73
U53A  Fall Branch      66.50 343   P       P         12 11 51.2 +0.1
            baz=161,SNR=92
NATX  Nacogdoches      66.50 331  eP       P         12 11 52.5 +1.3
            comp=Z,620nm,0.8s
NATX  Nacogdoches      66.50 331   P       P         12 11 52.5 +1.3
            baz=150,SNR=56
V50A  Pikevile         66.55 341   P       P         12 11 51.5 +0.1
            baz=159,SNR=302
W48A  Pulaski          66.61 339   P       P         12 11 52.1 +0.2
            baz=157,SNR=544
X46A  Booneville       66.63 337   P       P         12 11 51.8  -0.2
            baz=156,SNR=77
U52A  Thorn Hill       66.73 342   P       P         12 11 52.4  -0.2
            baz=161,SNR=53
BLA   Blacksburg       66.78 345  eP       P         12 11 54.0 +1.1
            comp=Z,221nm,0.7s
BLA   Blacksburg       66.78 345   P       P         12 11 54.0 +1.1
            baz=163,SNR=66
PLAL  Pickwick Lake    66.84 338  eP       P         12 11 53.0  -0.2
            comp=Z,417nm,0.4s
V49A  McMinnville      66.87 340   P       P         12 11 53.1  -0.3
            baz=158,SNR=416
OXF   Oxford           66.87 337  eP       P         12 11 53.0  -0.5
            comp=Z,458nm,1.0s
OXF   Oxford           66.87 337  eP       P         12 11 53.0  -0.5
OXF                                pmax    pmax
            comp=Z,458nm,1.0s
OXF   Oxford           66.87 337   P       P         12 11 53.1  -0.4
            baz=155,SNR=82
Y43A  Makayla and Ka   66.89 335   P       P         12 11 54.2 +0.7
            baz=153,SNR=42
U51A  La Follette      66.90 342   P       P         12 11 53.5  -0.1
            baz=160,SNR=48
T54A  Tazewell         66.91 344   P       P         12 11 54.2 +0.5
            baz=162,SNR=124
TZTN  Tazewell         66.92 342  eP       P         12 11 53.5  -0.3
            comp=Z,92nm,0.6s
TZTN  Tazewell         66.92 342   P       P         12 11 53.7   0.0
            baz=160,SNR=42
W47A  Westpoint        66.93 338   P       P         12 11 53.8   0.0
            baz=157,SNR=556
R58B  Mineral          66.97 347  eP       P         12 11 54.9 +1.0
            comp=Z,150nm,0.6s
R58B  Mineral          66.97 347   P       P         12 11 55.2 +1.2
            baz=166,SNR=56
435B  Jarrell          66.98 328  eP       P         12 11 55.0 +0.8
            comp=Z,454nm,1.0s
435B  Jarrell          66.98 328   P       P         12 11 55.0 +0.8
            baz=147,SNR=37
Z41A  Richland Creek   67.03 333  eP       P         12 11 55.0 +0.5
            comp=Z,297nm,0.6s
Z41A  Richland Creek   67.03 333   P       P         12 11 55.2 +0.7
            baz=152,SNR=51
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T53A	Wise	67.07	343	P	P	12 11 54.9	+0.1
	baz=161,SNR=64						
W46A	Michie	67.08	338	P	P	12 11 54.3	-0.5
	baz=156,SNR=133						
CBN	Corbin Frederi	67.10	348	*e*P	P	12 11 56.0	+1.2
	comp=Z,229nm,0.6s						
CBN	Corbin Frederi	67.10	348	P	P	12 11 55.9	+1.1
	baz=166,SNR=15						
V48A	Smith Brothers	67.13	339	*e*P	P	12 11 55.0	-0.1
	comp=Z,345nm,0.6s						
V48A	Smith Brothers	67.13	339	P	P	12 11 54.9	-0.1
	baz=157,SNR=263						
U50A	Jamestown	67.17	341	P	P	12 11 54.9	-0.4
	baz=159,SNR=103						
CCAR	Cane Creek	67.21	334	*e*P	P	12 11 56.4	+0.8
	comp=Z,401nm,1.0s						
T52A	Hallie	67.31	343	P	P	12 11 56.0	-0.1
	baz=161,SNR=30						
S55A	Lewisburg	67.33	345	P	P	12 11 57.4	+1.2
	baz=163,SNR=151						
W45A	Hickory Valley	67.38	337	P	P	12 11 56.6	+0.1
	baz=155,SNR=176						
X43A	Marvell	67.41	335	*e*P	P	12 11 57.6	+0.8
	comp=Z,613nm,0.8s						
X43A	Marvell	67.41	335	P	P	12 11 57.5	+0.8
	baz=154,SNR=89						
T51A	Gray	67.43	342	P	P	12 11 56.9	+0.1
	baz=160,SNR=142						
V47A	Nunnelly	67.44	339	P	P	12 11 56.4	-0.5
	baz=157,SNR=299						
U49A	Red Boiling Sp	67.53	340	P	P	12 11 57.1	-0.3
	baz=158,SNR=100						
WLAR	White Oak Lake	67.53	333	*e*P	P	12 11 58.8	+1.4
	comp=Z,803nm,0.9s						
W44A	Shelby Farms P	67.58	337	P	P	12 11 57.8	0.0
	baz=155,SNR=7.7						
V46A	Holladay	67.61	338	P	P	12 11 57.2	-0.7
	baz=156,SNR=250						
MET	Memphis--Engin	67.61	336	*e*P	P	12 11 58.4	+0.5
	comp=Z,605nm,0.6s						
S53A	Williamson	67.63	344	P	P	12 11 58.2	+0.2
	baz=162,SNR=31						
T50A	Nancy	67.73	341	P	P	12 11 58.4	-0.3
	baz=159,SNR=101						
R55A	Marlinton	67.74	346	P	P	12 12 00.3	+1.5
	baz=164,SNR=126						
U48A	Cassie Pea, Po	67.76	340	P	P	12 11 58.4	-0.4
	baz=158,SNR=80						
JCT	Junction City	67.80	326	*e*P	P	12 11 59.9	+0.6
	comp=Z,321nm,0.8s						
JCT	Junction City	67.80	326	P	P	12 11 59.8	+0.6
	baz=145,SNR=185						
WVT	Waverly	67.81	339	*e*P	P	12 11 58.7	-0.4
	comp=Z,301nm,0.6s						
WVT	Waverly	67.81	339	*e*P	P	12 11 58.7	-0.4
WVT				pmax	pmax		
	comp=Z,301nm,0.6s						
WVT	Waverly	67.81	339	P	P	12 11 58.7	-0.4
	baz=156						
V45A	Humboldt	67.83	338	P	P	12 11 59.3	0.0
	baz=156,SNR=117						
R54A	Victor	67.83	345	P	P	12 12 00.0	+0.7
	baz=163,SNR=105						
S52A	Salyersville	67.87	343	P	P	12 11 59.5	0.0
	baz=161,SNR=12						
U47A	Clarksville	67.92	339	P	P	12 11 59.5	-0.4
	baz=157,SNR=315						
WHTX	Lake Whitney,	67.94	329	*e*P	P	12 12 00.4	+0.4
	comp=Z,206nm,1.0s						
WHTX	Lake Whitney,	67.94	329	P	P	12 12 00.4	+0.4
	baz=148,SNR=16						
S51A	Beattyville	67.97	343	*e*P	P	12 12 00.2	+0.1
	comp=Z,135nm,0.6s						
S51A	Beattyville	67.97	343	P	P	12 12 00.2	+0.1
	baz=161,SNR=62						
T49A	Edmonton	68.01	341	*e*P	P	12 12 00.1	-0.2
	comp=Z,318nm,0.6s						
T49A	Edmonton	68.01	341	P	P	12 12 00.1	-0.2
	baz=159,SNR=244						
HALT	Halls	68.11	337	*e*P	P	12 12 00.8	-0.2
	comp=Z,697nm,0.5s						
X40A	Basin Creek Fa	68.12	334	*e*P	P	12 12 00.9	-0.2
	comp=Z,110nm,1.1s						
X40A	Basin Creek Fa	68.12	334	P	P	12 12 00.9	-0.2
	baz=152,SNR=66						
HPIG		68.13	319	*e*P	P	12 12 02.2	+0.6
	comp=Z,229nm,0.9s						
U46A	Springville	68.13	338	P	P	12 12 00.7	-0.4
	baz=156,SNR=98						
SDMD	Soldier’s Deli	68.18	349	*e*P	P	12 12 02.4	+1.1
	comp=Z,99nm,0.9s						
UALR	University of	68.19	334	*e*P	P	12 12 01.7	+0.2
	comp=Z,256nm,0.6s						
R53A	Hurricane	68.20	344	P	P	12 12 02.0	+0.5
	baz=162,SNR=77						
S50A	Richmond	68.22	342	P	P	12 12 01.7	+0.1
	baz=160,SNR=66						
V44A	Blytheville	68.23	337	P	P	12 12 02.0	+0.4
	baz=155,SNR=15						
HBAR	Harrisburg	68.26	336	*e*P	P	12 12 02.1	+0.3
	comp=Z,260nm,0.7s						
T48A	Bowling Green	68.27	340	P	P	12 12 01.3	-0.6
	baz=158,SNR=61						
U45A	Rockin P Farm,	68.32	338	P	P	12 12 01.9	-0.3
	baz=156,SNR=21						
W42A	Bald Knob	68.32	335	P	P	12 12 02.5	+0.2
	baz=153,SNR=107						
SLBS	Sierra La Lagu	68.33	314	*e*P	P	12 12 03.8	+1.1
	comp=Z,92nm,0.7s						
UTMT	University of	68.34	338	*e*P	P	12 12 02.2	-0.1
	comp=Z,331nm,0.8s						
T47A	Sharon Grove	68.37	340	*e*P	P	12 12 02.0	-0.5
	comp=Z,237nm,0.5s						
T47A	Sharon Grove	68.37	340	P	P	12 12 02.0	-0.5
	baz=157,SNR=162						
R52A	Catlettsburg	68.38	344	P	P	12 12 02.7	+0.1
	baz=162,SNR=29						
GNAR	Gosnell	68.40	337	*e*P	P	12 12 03.5	+0.8
	comp=Z,1µm,0.8s						
GLAT	Glass	68.42	337	*e*P	P	12 12 02.8	0.0
	comp=Z,630nm,0.5s						
V43A	Jonesboro	68.42	336	P	P	12 12 03.4	+0.5
	baz=154,SNR=38						
MIAR	Mount Ida	68.47	333	*e*P	P	12 12 03.6	+0.4
	comp=Z,132nm,0.6s						
MIAR	Mount Ida	68.47	333	*e*P	P	12 12 03.6	+0.4
MIAR				pmax	pmax		
	comp=Z,132nm,0.6s						
MIAR	Mount Ida	68.47	333	P	P	12 12 03.5	+0.4
	baz=151,SNR=116						
W41B	Gary Mavity, V	68.50	335	*e*P	P	12 12 03.5	+0.2
	comp=Z,180nm,0.8s						
W41B	Gary Mavity, V	68.50	335	P	P	12 12 03.5	+0.2
	baz=152,SNR=143						
U44B	Burton Farm, H	68.51	337	P	P	12 12 03.3	0.0
	baz=155,SNR=13						
Q54A	Coxs Mills	68.57	345	P	P	12 12 04.1	+0.5
	baz=163,SNR=50						
S49A	Springfield	68.57	341	P	P	12 12 03.2	-0.5
	baz=159,SNR=46						
R51A	Hillsboro	68.59	343	P	P	12 12 04.0	+0.2
	baz=161,SNR=115						
WHAR	Wooly Hollow	68.62	335	*e*P	P	12 12 04.3	+0.2
	comp=Z,199nm,0.9s						
T46A	Princeton	68.67	339	P	P	12 12 03.7	-0.6
	baz=157,SNR=60						
MVL	Millersville	68.67	349	*e*P	P	12 12 05.6	+1.4
	comp=Z,140nm,0.7s						
S48A	Wiedeman Farm,	68.67	341	P	P	12 12 03.5	-0.9
	baz=158,SNR=69						
PVMO	Portageville	68.69	337	*e*P	P	12 12 05.3	+0.8
	comp=Z,2µm,1.0s						
R50A	Paris	68.77	342	P	P	12 12 04.9	0.0
	baz=160,SNR=84						
U44A	Portageville	68.77	337	P	P	12 12 05.1	+0.2
	baz=155,SNR=35						
P55A	Reedsville	68.85	346	P	P	12 12 06.6	+1.2
	baz=164,SNR=63						
S47A	Hartford	68.86	340	P	P	12 12 04.6	-0.9
	baz=158,SNR=90						
TXAR	Lajitas Array	68.87	323	P	P	12 12 06.5	+0.6
	comp=Z,53nm,0.4s,baz=150,slow=7.4,SNR=1517						
TXAR				pP	pP	12 14 04.2	-0.4
	comp=Z,1.9nm,0.5s,baz=148,slow=8.6,SNR=1.1						
TXAR				S	S	12 20 25.1	+0.5
	comp=Z,1.5nm,1.0s,baz=142,slow=15,SNR=5.0						
TXAR				PKP2bc		12 40 09.2	
	comp=Z,8.9nm,1.1s,baz=318,slow=1.7,SNR=16						
TXAR				P4KPbc		12 48 43.8	
	comp=Z,0.3nm,0.8s,baz=146,slow=6.6,SNR=2.4						
TX31	Lajitas Ar. Si	68.87	323	*e*P	P	12 12 06.4	+0.5
Q52A	Bidwell	68.88	344	P	P	12 12 05.9	+0.3
	baz=162,SNR=104						
T45A	Paducah	68.89	338	*e*P	P	12 12 05.1	-0.5
	comp=Z,352nm,0.8s						
T45A	Paducah	68.89	338	P	P	12 12 05.1	-0.5
	baz=156,SNR=26						
U43A	Rector	68.90	337	P	P	12 12 06.0	+0.3
	baz=154,SNR=176						
PARMO	Parma	68.94	337	*e*P	P	12 12 06.1	+0.2
	comp=Z,2µm,0.9s						
PAGS	Pennsylvania G	68.95	349	*e*P	P	12 12 07.1	+1.2
	comp=Z,282nm,0.5s						
MCWV	Mont Chateau	69.00	346	*e*P	P	12 12 07.3	+1.1
	comp=Z,117nm,0.8s						
MCWV	Mont Chateau	69.00	346	P	P	12 12 07.3	+1.1
	baz=164,SNR=68						
R49A	Shelbyville	69.01	342	P	P	12 12 06.0	-0.4
	baz=159,SNR=33						
BRNJ	Basking Ridge	69.06	351	*e*P	P	12 12 08.0	+1.5
	comp=Z,217nm,0.6s						
P54A	Burton	69.08	346	P	P	12 12 07.6	+0.8
	baz=164,SNR=47						
CPNY	Central Park	69.08	351	*e*P	P	12 12 07.8	+1.2
	comp=Z,446nm,1.9s						
LUPA	Lehigh Univers	69.10	350	*e*P	P	12 12 08.0	+1.2
	comp=Z,9.3nm,0.7s						
W39A	Magazine	69.12	333	*e*P	P	12 12 08.0	+0.9
	comp=Z,276nm,0.7s						
W39A	Magazine	69.12	333	P	P	12 12 08.0	+0.9
	baz=151,SNR=171						
P53A	Whipple	69.17	345	*e*P	P	12 12 07.8	+0.5
	comp=Z,330nm,1.0s						
P53A	Whipple	69.17	345	P	P	12 12 07.9	+0.6
	baz=163,SNR=57						
U42A	Revenden	69.18	336	P	P	12 12 07.4	+0.1
	baz=154,SNR=300						
S46A	Don Dixon Farm	69.20	339	P	P	12 12 06.5	-1.0
	baz=157,SNR=50						
Q50A	Georgetown	69.20	343	P	P	12 12 07.3	-0.2
	baz=160,SNR=43						
Q51A	Peebles	69.21	343	*e*P	P	12 12 07.6	+0.1
	comp=Z,139nm,0.6s						
Q51A	Peebles	69.21	343	P	P	12 12 07.6	+0.1
	baz=161,SNR=56						
T44A	Benton	69.26	338	P	P	12 12 07.2	-0.7
	baz=155,SNR=62						
WCI	Wyandotte Cave	69.27	341	*e*P	P	12 12 07.4	-0.5
	comp=Z,252nm,0.6s						
WCI	Wyandotte Cave	69.27	341	*e*P	P	12 12 07.4	-0.5
WCI				pmax	pmax		
	comp=Z,252nm,0.6s						
WCI	Wyandotte Cave	69.27	341	P	P	12 12 07.4	-0.5
	baz=158						
PBMO	Poplar Bluff	69.27	337	*e*P	P	12 12 07.9	-0.1
	comp=Z,373nm,0.6s						
PAL	Palisades	69.29	351	*e*P	P	12 12 08.5	+0.6
	comp=Z,84nm,1.0s						
PAL	Palisades	69.29	351	*e*P	P	12 12 08.5	+0.6
PAL				pmax	pmax		
	comp=Z,84nm,1.0s						
PAL	Palisades	69.29	351	P	P	12 12 08.7	+0.8
	baz=170,SNR=6.6						
R48A	Northridge Ran	69.31	341	P	P	12 12 07.9	-0.2
	baz=159,SNR=84						
O56A	Blue Knob Stat	69.33	347	*e*P	P	12 12 09.6	+1.3
	comp=Z,215nm,0.7s						
O56A	Blue Knob Stat	69.33	347	P	P	12 12 09.5	+1.3
	baz=165,SNR=77						
R47A	Wooly Knot Far	69.40	341	P	P	12 12 07.9	-0.8
	baz=158,SNR=52						
O55A	Ligonier	69.41	347	P	P	12 12 09.8	+1.1
	baz=165,SNR=83						
U41A	Viola	69.42	335	P	P	12 12 08.9	+0.1
	baz=153,SNR=443						
USIN	University of	69.44	339	*e*P	P	12 12 08.0	-0.9
	comp=Z,216nm,0.9s						
ODNJ	Ogdensburg	69.46	351	*e*P	P	12 12 10.1	+1.2
	comp=Z,104nm,0.7s						
M65A	Busby, Falmout	69.47	354	P	P	12 12 09.9	+0.9
	baz=173						
YLE	Yale	69.47	352	*e*P	P	12 12 10.7	+1.7
	comp=Z,177nm,0.8s						
S45A	Carrier Mills	69.47	339	P	P	12 12 08.4	-0.6
	baz=156,SNR=83						
N59A	State Game Lan	69.47	350	*e*P	P	12 12 10.4	+1.4
	comp=Z,215nm,0.6s						
N59A	State Game Lan	69.47	350	P	P	12 12 10.5	+1.5
	baz=168,SNR=63						
ABTX	Abilene, Hawle	69.48	328	*e*P	P	12 12 09.7	+0.3
	comp=Z,392nm,1.2s						
ABTX	Abilene, Hawle	69.48	328	P	P	12 12 09.6	+0.3
	baz=146,SNR=141						
P52A	Corning	69.49	344	P	P	12 12 09.4	+0.2
	baz=162,SNR=110						
T43A	Greenville	69.50	337	P	P	12 12 08.9	-0.4
	baz=154,SNR=235						
SSPA	Standing Stone	69.56	348	*e*P	P	12 12 10.7	+1.1
	comp=Z,139nm,0.9s						
SSPA	Standing Stone	69.56	348	P	P	12 12 10.6	+1.1
	baz=166						
P51A	Williamsport	69.57	344	*e*P	P	12 12 09.6	0.0
	comp=Z,134nm,0.5s						
P51A	Williamsport	69.57	344	P	P	12 12 09.6	0.0
	baz=161,SNR=48						
Q49A	Aurora	69.60	342	P	P	12 12 09.7	-0.1
	baz=160,SNR=73						
O54A	Avella	69.61	346	P	P	12 12 10.4	+0.5
	baz=164,SNR=59						
R46A	Gibon Southern	69.62	340	P	P	12 12 08.9	-1.1
	baz=157,SNR=31						
S44A	Carbondale	69.70	338	P	P	12 12 09.9	-0.6
	baz=156,SNR=136						
SIUC	Southern Illin	69.71	338	*e*P	P	12 12 10.0	-0.5
	comp=Z,248nm,0.4s						
T42A	Van Buren	69.73	336	*e*P	P	12 12 10.1	-0.6
	comp=Z,402nm,1.8s						
T42A	Van Buren	69.73	336	P	P	12 12 10.1	-0.6
	baz=154,SNR=86						
Q48A	North Vernon	69.76	341	P	P	12 12 10.5	-0.3
	baz=159,SNR=60						
U40A	Yellville	69.78	335	P	P	12 12 11.1	+0.1
	baz=152,SNR=125						
O53A	New Philadelph	69.86	345	P	P	12 12 11.8	+0.5
	baz=163,SNR=33						
S43A	Fulton Ridge,	69.87	337	P	P	12 12 10.7	-0.7
	baz=155,SNR=162						
P50A	Jamestown	69.87	343	P	P	12 12 11.4	0.0
	baz=161,SNR=71						
O52A	Adamsville	69.88	345	*e*P	P	12 12 11.7	+0.3
	comp=Z,173nm,0.8s						
O52A	Adamsville	69.88	345	P	P	12 12 11.8	+0.3
	baz=162,SNR=51						
N55A	Marion Center	69.90	347	P	P	12 12 12.7	+1.1
	baz=165,SNR=62						
BRYW	Bryant College	69.91	353	*e*P	P	12 12 12.9	+1.3
	comp=Z,211nm,0.7s						
R45A	Skylar, Fairfi	69.93	339	P	P	12 12 11.0	-0.8
	baz=156,SNR=82						
Q47A	Bedord North L	69.97	341	P	P	12 12 11.5	-0.5
	baz=158,SNR=38						
T41A	Mountain View	69.98	336	P	P	12 12 12.1	-0.1
	baz=153,SNR=174						
P49A	Miami Univ. Ec	70.05	342	P	P	12 12 12.2	-0.3
	baz=160,SNR=79						
O51A	Pataskala	70.09	344	P	P	12 12 12.8	+0.1
	baz=162,SNR=100						
KSPA	Keystone Colle	70.09	350	*e*P	P	12 12 13.9	+1.2
	comp=Z,100nm,0.7s						
HHAR	Hobbs	70.13	334	*e*P	P	12 12 13.2	+0.1
	comp=Z,131nm,0.9s						
R44A	Waltonville	70.15	339	P	P	12 12 12.3	-0.8
	baz=156,SNR=64						
P48A	Milroy	70.17	342	P	P	12 12 12.7	-0.5
	baz=159,SNR=63						
BLO	Bloomington	70.21	341	*e*P	P	12 12 13.2	-0.2
	comp=Z,502nm,0.5s						
BLO	Bloomington	70.21	341	*e*P	P	12 12 13.2	-0.2
BLO				pmax	pmax		
	comp=Z,502nm,0.5s						
ACSO	Alum Creek Sta	70.26	344	*e*P	P	12 12 13.8	+0.1
	comp=Z,242nm,0.5s						
ACSO	Alum Creek Sta	70.26	344	P	P	12 12 13.8	+0.1
	baz=161,SNR=73						
N54A	Moraine State	70.28	347	*e*P	P	12 12 15.0	+1.1
	comp=Z,504nm,0.6s						
N54A	Moraine State	70.28	347	P	P	12 12 15.0	+1.1
	baz=164,SNR=137						
OLIL	Olney	70.28	339	*e*P	P	12 12 13.1	-0.8
	comp=Z,228nm,0.4s						
BCX	Boston College	70.28	354	*e*P	P	12 12 15.2	+1.4
	comp=Z,58nm,0.6s						
S42A	Caledonia	70.29	337	P	P	12 12 13.3	-0.7
	baz=154,SNR=200						
N53A	Lisbon	70.31	346	P	P	12 12 14.7	+0.6
	baz=163,SNR=23						
Q46A	CEJHS Indians,	70.32	340	P	P	12 12 13.2	-0.9
	baz=157,SNR=21						
O50A	Cable	70.34	343	P	P	12 12 14.0	-0.2
	baz=161,SNR=38						
WES	Weston	70.35	354	*e*P	P	12 12 15.1	+0.9
	comp=Z,53nm,0.8s						
QUA2	Belchertown	70.35	353	*e*P	P	12 12 15.2	+1.0
	comp=Z,70nm,0.6s						
FVM	French Village	70.36	337	*e*P	P	12 12 14.2	-0.2
	comp=Z,331nm,0.4s						
FVM	French Village	70.36	337	*e*P	P	12 12 14.2	-0.2
FVM				pmax	pmax		
	comp=Z,331nm,0.4s						
P47A	Martinsville	70.43	341	P	P	12 12 14.4	-0.3
	baz=158,SNR=76						
Q45A	Warren Harvey,	70.45	339	P	P	12 12 14.2	-0.6
	baz=157,SNR=207						
R43A	Red Bud	70.45	338	P	P	12 12 14.3	-0.6
	baz=155,SNR=70						
S41A	Jillco Farms,	70.46	336	P	P	12 12 15.0	0.0
	baz=153,SNR=294						
SBA	Scott Base	70.47	190	*e*P	P	12 12 16.8	+2.3
	comp=Z,126nm,0.8s						
HRV	Adam Dziewonsk	70.49	353	*e*P	P	12 12 16.3	+1.2
	comp=Z,452nm,1.6s						
HRV	Adam Dziewonsk	70.49	353	P	P	12 12 16.4	+1.3
	baz=172						
N52A	McGinn’s Farm,	70.50	345	P	P	12 12 15.5	+0.3
	baz=163,SNR=28						
M55A	Ridgway	70.53	348	P	P	12 12 16.2	+0.9
	baz=165,SNR=82						
TUL1	Leonard	70.55	332	*e*P	P	12 12 15.8	+0.3
	comp=Z,197nm,0.6s						
TUL1	Leonard	70.55	332	P	P	12 12 15.8	+0.3
	baz=150,SNR=104						
O49A	Covington	70.56	343	*e*P	P	12 12 15.3	-0.2
	comp=Z,174nm,0.6s						
O49A	Covington	70.56	343	P	P	12 12 15.3	-0.2
	baz=160,SNR=64						
CCM	Cathedral Cave	70.70	337	*e*P	P	12 12 16.2	-0.2
	comp=Z,308nm,0.6s						
CCM	Cathedral Cave	70.70	337	*e*P	P	12 12 16.2	-0.2
CCM				pmax	pmax		
	comp=Z,308nm,0.6s						
CCM	Cathedral Cave	70.70	337	P	P	12 12 16.2	-0.2
	baz=154						
Q44A	Meyer Farm, Va	70.72	339	*e*P	P	12 12 15.5	-1.0
	comp=Z,163nm,0.8s						
Q44A	Meyer Farm, Va	70.72	339	P	P	12 12 15.6	-0.9
	baz=156,SNR=48						
M54A	Oil Creek Stat	70.74	347	*e*P	P	12 12 17.3	+0.8
	comp=Z,233nm,0.5s						
M54A	Oil Creek Stat	70.74	347	P	P	12 12 17.3	+0.8
	baz=165,SNR=76						
R42A	Luebbering	70.75	337	P	P	12 12 16.6	-0.1
	baz=154,SNR=281						
BINY	Binghamton	70.76	350	*e*P	P	12 12 17.8	+1.2
	comp=Z,165nm,0.8s						
BINY	Binghamton	70.76	350	P	P	12 12 17.8	+1.2
	baz=168,SNR=43						
N50A	Nevada	70.81	344	P	P	12 12 17.0	0.0
	baz=161,SNR=60						
P46A	Rosedale	70.82	341	P	P	12 12 16.5	-0.6
	baz=158,SNR=85						
O48A	Farmland	70.84	342	P	P	12 12 17.0	-0.2
	baz=160,SNR=208						
WMOK	Wichita Mounta	70.84	329	*e*P	P	12 12 17.1	-0.2
	comp=Z,217nm,1.2s						
WMOK	Wichita Mounta	70.84	329	P	P	12 12 17.2	-0.1
	baz=147,SNR=186						
SLM	Saint Louis	70.88	338	*e*P	P	12 12 16.6	-0.7
	comp=Z,557nm,1.6s						
SLM	Saint Louis	70.88	338	*e*P	P	12 12 16.7	-0.7
SLM				pmax	pmax		
	comp=Z,557nm,1.6s						
M53A	WI Miller and	70.88	346	P	P	12 12 17.9	+0.6
	baz=164,SNR=49						
P45A	Graceland, Par	70.90	340	*e*P	P	12 12 16.8	-0.7
	comp=Z,268nm,0.6s						
P45A	Graceland, Par	70.90	340	P	P	12 12 16.8	-0.7
	baz=157,SNR=69						
SUR	Sutherland	70.91	117	*e*P	P	12 12 19.6	+1.4
	comp=Z,467nm,0.7s						
SUR	Sutherland	70.91	117	P	P	12 12 19.5	+1.4
	SNR=22						
SUR	Sutherland	70.91	117	P	P	12 12 19.5	+1.4
	SNR=22						
SUR	Sutherland	70.91	117	P	P	12 12 19.4	+1.2
	comp=Z,369nm,0.6s,baz=229,slow=6.0,SNR=297						
SUR				S	S	12 20 49.7	+1.6
	comp=Z,5.8nm,0.8s,baz=107,slow=19,SNR=4.9						
TRY	Troy	70.95	352	*e*P	P	12 12 19.2	+1.5
	comp=Z,197nm,0.6s						
R41A	Rosebud	70.97	337	P	P	12 12 17.6	-0.3
	baz=154,SNR=140						
ALLY	Alegheny Colle	70.97	347	*e*P	P	12 12 18.6	+0.7
	comp=Z,322nm,0.8s						
Q43A	New Douglas	70.98	338	P	P	12 12 17.5	-0.5
	baz=155,SNR=87						
O47A	Sheridan	71.10	342	P	P	12 12 18.2	-0.4
	baz=159,SNR=183						
M51A	Elyria	71.11	345	P	P	12 12 19.0	+0.3
	baz=162,SNR=33						
P44A	Sand Creek, Wi	71.11	339	P	P	12 12 18.1	-0.7
	baz=156,SNR=79						
M52A	Chesterland	71.13	346	P	P	12 12 19.3	+0.5
	baz=163,SNR=68						
L55A	Hinsdale	71.16	348	P	P	12 12 20.0	+1.0
	baz=166,SNR=67						
N49A	Columbus Grove	71.21	343	*e*P	P	12 12 19.2	0.0
	comp=Z,385nm,0.5s						
N49A	Columbus Grove	71.21	343	P	P	12 12 19.3	0.0
	baz=160,SNR=136						
Q42A	Golden Eagle	71.23	338	P	P	12 12 19.1	-0.4
	baz=155,SNR=172						
L53A	Girard	71.29	347	P	P	12 12 20.4	+0.7
	baz=164,SNR=118						
CLNB	Carlsbad	71.29	324	*e*P	P	12 12 21.1	+1.0
N48A	Decatur	71.37	343	P	P	12 12 19.9	-0.3
	baz=160,SNR=46						
M50A	Fremont	71.38	344	*e*P	P	12 12 20.5	+0.2
	comp=Z,188nm,0.6s						
M50A	Fremont	71.38	344	P	P	12 12 20.4	+0.1
	baz=162,SNR=47						
ERPA	Erie	71.39	347	*e*P	P	12 12 21.1	+0.8
	comp=Z,779nm,0.5s						
ERPA	Erie	71.39	347	P	P	12 12 21.1	+0.8
	baz=164,SNR=117						
VNDA	Vanda	71.44	189	*e*P	P	12 12 21.7	+1.5
	comp=Z,246nm,0.8s						
VNDA	Vanda	71.44	189	P	P	12 12 21.9	+1.6
	comp=Z,276nm,0.8s,baz=140,slow=5.1,SNR=255						
VNDA				S	S	12 20 54.7	+2.6
	comp=Z,4.3nm,1.0s,baz=315,slow=4.3,SNR=3.0						
VNDA				PKPPKP	P'P'df	12 39 56.4	-10
	comp=Z,7.0nm,0.9s,baz=303,slow=9.0,SNR=5.0						
FFD	Franklin Falls	71.45	353	*e*P	P	12 12 22.7	+2.1
	comp=Z,266nm,1.0s						
GDL2	Guadalupe Moun	71.49	324	*e*P	P	12 12 21.7	+0.4
SFIN	Lafayette	71.50	341	*e*P	P	12 12 20.3	-0.7
	comp=Z,432nm,0.4s						
SFIN	Lafayette	71.50	341	P	P	12 12 20.3	-0.7
	baz=158,SNR=100						
Q41A	Truxton	71.50	337	P	P	12 12 20.7	-0.4
	baz=154,SNR=126						
MACI	Morro de la Ar	71.52	43	*e*P	P	12 12 22.4	+0.8
P43A	Skaggs, Pawnee	71.56	339	P	P	12 12 20.9	-0.4
	baz=156,SNR=127						
O45A	Potomac	71.56	340	P	P	12 12 20.6	-0.7
	baz=157,SNR=70						
N47A	Urbana	71.57	342	P	P	12 12 20.9	-0.5
	baz=159,SNR=94						
MMNY	Mt. Morris Dam	71.59	349	*e*P	P	12 12 22.4	+0.9
	comp=Z,372nm,0.5s						
ACCN	Adirondack Com	71.60	352	*e*P	P	12 12 22.6	+1.2
	comp=Z,63nm,0.7s						
K55A	Perry	71.62	348	P	P	12 12 22.4	+0.8
	baz=166,SNR=60						

MNTX	**Cornudas Mount**	**71.64**	**323**	*e*P	**P**	**12 12 21.6**	**-0.4**
	comp=Z,122nm,0.8s						
MNTX	**Cornudas Mount**	**71.64**	**323**	P	**P**	**12 12 21.6**	**-0.4**
	baz=141,SNR=190						
M49A	**Liberty Center**	**71.68**	**344**	P	**P**	**12 12 22.0**	**0.0**
	baz=161,SNR=96						
O44A	**Mansfield**	**71.69**	**340**	P	**P**	**12 12 21.4**	**-0.7**
	baz=157,SNR=144						
HNH	**Hanover**	**71.75**	**353**	*e*P	**P**	**12 12 24.3**	**+1.9**
	comp=Z,222nm,0.7s						
P42A	**Winchester**	**71.78**	**338**	*e*P	**P**	**12 12 22.1**	**-0.5**
	comp=Z,270nm,0.5s						
P42A	**Winchester**	**71.78**	**338**	P	**P**	**12 12 22.1**	**-0.5**
	baz=155,SNR=127						
N46A	**Monticello**	**71.87**	**341**	P	**P**	**12 12 22.6**	**-0.5**
	baz=158,SNR=68						
M48A	**Edgerton**	**71.88**	**343**	*e*P	**P**	**12 12 23.0**	**-0.2**
	comp=Z,377nm,0.5s						
M48A	**Edgerton**	**71.88**	**343**	P	**P**	**12 12 22.9**	**-0.2**
	baz=160,SNR=11						
CPRX	**Cap Rock**	**71.89**	**325**	*e*P	**P**	**12 12 24.9**	**+1.2**
L50A	**Kingsville**	**71.93**	**345**	P	**P**	**12 12 23.3**	**-0.2**
	baz=162,SNR=18						
M47A	**Cromwell**	**72.00**	**342**	P	**P**	**12 12 23.7**	**-0.1**
	baz=159,SNR=47						
N45A	**Kentland**	**72.05**	**341**	P	**P**	**12 12 23.5**	**-0.6**
	baz=158,SNR=34						
O43A	**Sugar Creek Fa**	**72.08**	**339**	P	**P**	**12 12 24.1**	**-0.3**
	baz=156,SNR=38						
MSTX	**Muleshoe**	**72.09**	**326**	*e*P	**P**	**12 12 24.9**	**+0.2**
	comp=Z,644nm,0.9s						
MSTX	**Muleshoe**	**72.09**	**326**	P	**P**	**12 12 25.1**	**+0.3**
	baz=144,SNR=483						
P41A	**Barry, Barry**	**72.09**	**338**	P	**P**	**12 12 24.0**	**-0.4**
	baz=154,SNR=126						
J55A	**Hilton**	**72.10**	**349**	P	**P**	**12 12 24.8**	**+0.5**
	baz=166,SNR=17						
MEDO	**Medina**	**72.11**	**348**	P	**P**	**12 12 25.1**	**+0.7**
	baz=166,SNR=18						
K52A	**Tillsonburg**	**72.18**	**346**	P	**P**	**12 12 25.5**	**+0.6**
	baz=164,SNR=41						
N44A	**Piper City**	**72.18**	**340**	P	**P**	**12 12 24.3**	**-0.6**
	baz=157,SNR=53						
HAL	**Halifax**	**72.19**	**360**	*e*P	**P**	**12 12 26.5**	**+1.6**
	comp=Z,282nm,0.7s						
L49A	**Milan**	**72.22**	**344**	P	**P**	**12 12 25.1**	**0.0**
	baz=161,SNR=36						
L48A	**N Adams**	**72.23**	**343**	P	**P**	**12 12 25.0**	**-0.2**
	baz=160,SNR=58						
M46A	**Old House Fiel**	**72.24**	**342**	*e*P	**P**	**12 12 24.9**	**-0.3**
	comp=Z,189nm,0.6s						
M46A	**Old House Fiel**	**72.24**	**342**	P	**P**	**12 12 24.9**	**-0.3**
	baz=159,SNR=25						
O42A	**Bath**	**72.24**	**339**	P	**P**	**12 12 25.0**	**-0.3**
	baz=155,SNR=41						
LBNH	**Lisbon**	**72.24**	**353**	*e*P	**P**	**12 12 26.9**	**+1.7**
	comp=Z,446nm,0.5s						
LBNH	**Lisbon**	**72.24**	**353**	P	**P**	**12 12 26.9**	**+1.7**
	baz=172,SNR=64						
NCB	**Newcomb**	**72.24**	**352**	*e*P	**P**	**12 12 26.4**	**+1.2**
	comp=Z,152nm,0.6s						
STCO	**Saint Catharin**	**72.28**	**348**	P	**P**	**12 12 26.1**	**+0.7**
	baz=165,SNR=35						
K51A	**Iona Station**	**72.29**	**346**	P	**P**	**12 12 25.8**	**+0.3**
	baz=163,SNR=28						
AMTX	**Amarillo**	**72.30**	**327**	*e*P	**P**	**12 12 26.3**	**+0.4**
	comp=Z,308nm,1.1s						
AMTX	**Amarillo**	**72.30**	**327**	P	**P**	**12 12 26.2**	**+0.3**
	baz=145						
TYNO	**Tyneside**	**72.31**	**347**	P	**P**	**12 12 26.0**	**+0.5**
	baz=164,SNR=37						
U32A	**Winter Ranch,**	**72.31**	**330**	*e*P	**P**	**12 12 26.6**	**+0.7**
	comp=Z,452nm,0.9s						
HDIL	**Hopedale**	**72.32**	**339**	*e*P	**P**	**12 12 25.6**	**-0.2**
	comp=Z,734nm,0.4s						
SRIG	**Santa Rosalia**	**72.36**	**315**	*e*P	**P**	**12 12 27.5**	**+1.2**
	comp=Z,348nm,1.1s						
WVL	**Waterville**	**72.36**	**355**	*e*P	**P**	**12 12 27.6**	**+1.7**
	comp=Z,294nm,0.6s						
EMMW	**East Machias**	**72.37**	**357**	*e*P	**P**	**12 12 27.7**	**+1.8**
	comp=Z,560nm,0.6s						
AAM	**Ann Arbor**	**72.38**	**344**	*e*P	**P**	**12 12 26.2**	**+0.2**
	comp=Z,136nm,0.6s						
AAM	**Ann Arbor**	**72.38**	**344**	*e*P	**P**	**12 12 26.2**	**+0.2**
AAM				pmax	pmax		
	comp=Z,136nm,0.6s						
AAM	**Ann Arbor**	**72.38**	**344**	P	**P**	**12 12 25.9**	**-0.1**
	baz=161,SNR=11						
VT1	**Waterbury**	**72.42**	**353**	*e*P	**P**	**12 12 27.8**	**+1.5**
	comp=Z,97nm,0.6s						
O41A	**Passleys Farm,**	**72.43**	**338**	P	**P**	**12 12 25.7**	**-0.7**
	baz=154,SNR=64						
L47A	**Sherwood**	**72.46**	**343**	P	**P**	**12 12 26.1**	**-0.4**
	baz=160,SNR=78						
M45A	**Boilermakers S**	**72.47**	**341**	P	**P**	**12 12 25.9**	**-0.7**
	baz=158,SNR=5.1						
J52A	**Paris**	**72.57**	**347**	P	**P**	**12 12 27.8**	**+0.7**
	baz=164,SNR=113						
N43A	**Stutzman Famil**	**72.63**	**340**	P	**P**	**12 12 27.5**	**0.0**
	baz=156,SNR=63						
ELFO	**Elginfield**	**72.70**	**346**	P	**P**	**12 12 28.0**	**+0.1**
	baz=163,SNR=18						
M44A	**Midewin, Midew**	**72.70**	**341**	*e*P	**P**	**12 12 27.4**	**-0.5**
	comp=Z,84nm,0.5s						
M44A	**Midewin, Midew**	**72.70**	**341**	P	**P**	**12 12 27.3**	**-0.6**
	baz=157,SNR=11						
TORO	**Toronto--Lesli**	**72.71**	**348**	P	**P**	**12 12 28.7**	**+0.9**
	baz=165						
GGN	**Saint George**	**72.75**	**357**	*e*P	**P**	**12 12 29.5**	**+1.4**
	comp=Z,192nm,0.8s						
L46A	**Eue Claire**	**72.79**	**342**	P	**P**	**12 12 27.9**	**-0.5**
	baz=159,SNR=29						
K49A	**Clarkson**	**72.79**	**344**	P	**P**	**12 12 28.2**	**-0.2**
	baz=161,SNR=19						
N42A	**Yates City**	**72.80**	**339**	P	**P**	**12 12 28.1**	**-0.3**
	baz=155,SNR=66						
WLVO	**Wesleyville**	**72.83**	**349**	P	**P**	**12 12 29.2**	**+0.6**
	baz=166,SNR=20						
ACTO	**Acton**	**72.84**	**347**	P	**P**	**12 12 29.1**	**+0.5**
	baz=164,SNR=28						
DRCO	**St. Marys Ceme**	**72.84**	**348**	P	**P**	**12 12 29.3**	**+0.6**
	baz=166,SNR=31						
DRWO	**Darlington Wes**	**72.84**	**348**	P	**P**	**12 12 29.2**	**+0.6**
	baz=166,SNR=27						
LONY	**Lake Ozonia**	**72.93**	**351**	*e*P	**P**	**12 12 30.3**	**+1.1**
	comp=Z,526nm,1.6s						
N41A	**Harden Midland**	**72.95**	**338**	*e*P	**P**	**12 12 29.1**	**-0.3**
	comp=Z,289nm,1.0s						
N41A	**Harden Midland**	**72.95**	**338**	P	**P**	**12 12 29.0**	**-0.3**
	baz=155,SNR=59						
I53A	**Kortright Cn E**	**72.96**	**348**	P	**P**	**12 12 29.9**	**+0.6**
	baz=165,SNR=18						
K48A	**Perry**	**72.97**	**344**	P	**P**	**12 12 29.3**	**0.0**
	baz=161,SNR=53						
GBN	**Guysborough**	**72.98**	**1**	*e*P	**P**	**12 12 30.6**	**+1.3**
	comp=Z,175nm,0.6s						
I55A	**Frankford**	**73.00**	**349**	P	**P**	**12 12 30.2**	**+0.7**
	baz=167,SNR=18						
PKRO	**Pickering**	**73.00**	**348**	P	**P**	**12 12 30.1**	**+0.6**
	baz=165,SNR=19						
FRNY	**Flat Rock**	**73.02**	**352**	*e*P	**P**	**12 12 30.8**	**+1.2**
	comp=Z,390nm,0.6s						
M43A	**Waltham Townsh**	**73.02**	**340**	P	**P**	**12 12 29.6**	**-0.1**
	baz=156,SNR=58						
PKME	**Peaks-Kenny Pk**	**73.03**	**355**	*e*P	**P**	**12 12 31.3**	**+1.6**
	comp=Z,358nm,0.6s						
PKME	**Peaks-Kenny Pk**	**73.03**	**355**	P	**P**	**12 12 31.3**	**+1.6**
	baz=174,SNR=46						
K47A	**Vermontville**	**73.06**	**343**	P	**P**	**12 12 29.6**	**-0.3**
	baz=160,SNR=12						
H56A	**Elgin**	**73.14**	**350**	P	**P**	**12 12 31.3**	**+1.0**
	baz=168,SNR=71						
I51A	**Listowel**	**73.22**	**347**	P	**P**	**12 12 31.4**	**+0.6**
	baz=164,SNR=85						
H55A	**Tweed**	**73.24**	**350**	P	**P**	**12 12 31.7**	**+0.8**
	baz=167,SNR=46						
J49A	**Marlette**	**73.26**	**345**	P	**P**	**12 12 30.9**	**-0.2**
	baz=162,SNR=19						
H07S1	**FLORES T-PHASE**	**73.26**	**25**	*e*P	**P**	**12 12 32.2**	**+1.0**
K46A	**Dorr**	**73.28**	**343**	P	**P**	**12 12 30.5**	**-0.6**
	baz=159,SNR=24						
DELO	**Deloro Mine**	**73.28**	**349**	P	**P**	**12 12 31.7**	**+0.6**
	baz=167,SNR=28						
M42A	**Sheffield**	**73.28**	**339**	P	**P**	**12 12 30.8**	**-0.4**
	baz=156,SNR=9.8						
I52A	**Shelburne**	**73.31**	**347**	P	**P**	**12 12 32.0**	**+0.7**
	baz=164,SNR=8.2						
TSUM	**Tsumeb**	**73.32**	**103**	*e*P	**P**	**12 12 32.9**	**+0.8**
	comp=Z,527nm,0.8s						
TSUM				*e*pP	**pP**	**12 14 32.3**	**-0.2**
TSUM	**Tsumeb**	**73.32**	**103**	P	**P**	**12 12 33.0**	**+0.8**
	comp=Z,425nm,0.8s,baz=224,slow=6.0,SNR=284						
TSUM				pP	**pP**	**12 14 32.3**	**-0.2**
	comp=Z,26nm,0.7s,baz=251,slow=5.1,SNR=2.6						
MOQ	**Mont Orford**	**73.34**	**353**	*e*P	**P**	**12 12 33.0**	**+1.4**
J48A	**Bridge Port**	**73.35**	**344**	P	**P**	**12 12 31.6**	**+0.1**
	baz=161,SNR=33						
N40A	**Mertquake, Sal**	**73.36**	**338**	P	**P**	**12 12 31.4**	**-0.2**
	baz=154,SNR=107						
L44A	**Lake County Fo**	**73.39**	**341**	P	**P**	**12 12 31.5**	**-0.3**
	baz=157,SNR=6.9						
LMN	**Caledonia Moun**	**73.42**	**359**	*e*P	**P**	**12 12 33.1**	**+1.2**
	comp=Z,375nm,0.6s						
M41A	**Milan**	**73.46**	**339**	P	**P**	**12 12 31.7**	**-0.5**
	baz=155,SNR=80						
BWLO	**Walkerton**	**73.55**	**347**	P	**P**	**12 12 33.2**	**+0.6**
	baz=164,SNR=64						
319A	**Douglas**	**73.55**	**320**	*e*P	**P**	**12 12 34.5**	**+1.3**
	comp=Z,428nm,0.8s						
HOR	**Horta**	**73.55**	**28**	*e*P	**P**	**12 12 34.8**	**+2.0**
	comp=Z,619nm,1.3s						
J47A	**Sunmer**	**73.55**	**344**	P	**P**	**12 12 32.6**	**0.0**
	baz=160,SNR=48						
BASO	**Ashfield**	**73.56**	**346**	P	**P**	**12 12 33.3**	**+0.6**
	baz=163,SNR=26						
H07N1	**FLORES T-PHASE**	**73.57**	**25**	*e*P	**P**	**12 12 34.5**	**+1.6**
121A	**Cookes Peak, D**	**73.58**	**322**	P	**P**	**12 12 34.8**	**+1.4**
	baz=140,SNR=87						
PCED	**Cedros**	**73.60**	**27**	*e*P	**P**	**12 12 34.5**	**+1.4**
	comp=Z,493nm,1.2s						
PICO	**Pico**	**73.61**	**28**	*e*P	**P**	**12 12 34.9**	**+1.7**
	comp=Z,1µm,1.6s						
KSU1	**Kansas State U**	**73.62**	**333**	*e*P	**P**	**12 12 33.3**	**0.0**
	comp=Z,284nm,0.7s						
KSU1	**Kansas State U**	**73.62**	**333**	P	**P**	**12 12 33.2**	**0.0**
	baz=150,SNR=86						
L43A	**Garden Prairie**	**73.64**	**340**	P	**P**	**12 12 33.2**	**0.0**
	baz=157,SNR=31						
PLVO	**Plevna**	**73.70**	**350**	*e*P	**P**	**12 12 34.5**	**+1.0**
	comp=Z,262nm,0.5s						
PLVO	**Plevna**	**73.70**	**350**	P	**P**	**12 12 34.4**	**+1.0**
	baz=167,SNR=67						
BRCO	**Bruce Peninsul**	**73.73**	**346**	P	**P**	**12 12 34.4**	**+0.7**
	baz=163,SNR=34						
I49A	**Point Hope**	**73.74**	**345**	P	**P**	**12 12 33.9**	**+0.2**
	baz=162,SNR=27						
L42A	**Oliver, Polo**	**73.75**	**340**	*e*P	**P**	**12 12 33.8**	**-0.2**
	comp=Z,228nm,0.7s						
L42A	**Oliver, Polo**	**73.75**	**340**	P	**P**	**12 12 33.7**	**-0.2**
	baz=156,SNR=33						
PSMA	**Santa Maria**	**73.78**	**31**	*e*P	**P**	**12 12 35.5**	**+1.4**
	comp=Z,842nm,1.9s						
SADO	**Sadowa**	**73.79**	**348**	*e*P	**P**	**12 12 34.3**	**+0.3**
	comp=Z,265nm,0.4s						
M40A	**Post Highland**	**73.80**	**338**	P	**P**	**12 12 33.8**	**-0.3**
	baz=154,SNR=88						
PSMN	**Pico do Norte,**	**73.81**	**31**	*e*P	**P**	**12 12 34.9**	**+0.6**
	comp=Z,971nm,2.1s						
BANO	**Bancroft**	**73.82**	**349**	P	**P**	**12 12 34.9**	**+0.7**
	baz=166,SNR=32						
G55A	**Calabogie**	**73.85**	**350**	P	**P**	**12 12 35.2**	**+0.8**
	baz=168,SNR=23						
PMAN	**Manadas**	**73.86**	**28**	*e*P	**P**	**12 12 36.1**	**+1.6**
	comp=Z,2µm,1.1s						
J46A	**Howard City**	**73.86**	**343**	P	**P**	**12 12 34.0**	**-0.5**
	baz=159,SNR=22						
ROSA	**Rosais**	**73.87**	**28**	*e*P	**P**	**12 12 36.5**	**+1.9**
	comp=Z,1µm,1.3s						
ROSA	**Rosais**	**73.87**	**28**	*e*P	**P**	**12 12 35.9**	**+1.3**
	comp=Z,1µm,0.9s						
ALFO	**Alfred**	**73.96**	**351**	P	**P**	**12 12 35.9**	**+1.0**
	baz=169,SNR=107						
K43A	**Burlington**	**74.00**	**341**	*e*P	**P**	**12 12 35.2**	**0.0**
	comp=Z,357nm,0.8s						
K43A	**Burlington**	**74.00**	**341**	P	**P**	**12 12 35.3**	**+0.1**
	baz=157,SNR=22						
BMRO	**Meriville Lake**	**74.02**	**347**	P	**P**	**12 12 35.9**	**+0.6**
	baz=163,SNR=61						
G53A	**Haliburton**	**74.04**	**349**	P	**P**	**12 12 36.2**	**+0.8**
	baz=166,SNR=89						
L41A	**Preston**	**74.08**	**339**	P	**P**	**12 12 35.3**	**-0.4**
	baz=155,SNR=55						
M39A	**Webster**	**74.08**	**338**	P	**P**	**12 12 35.2**	**-0.5**
	baz=154,SNR=41						
J45A	**Montague**	**74.14**	**343**	P	**P**	**12 12 35.4**	**-0.6**
	baz=159						
PDA	**Ponta Delgada**	**74.16**	**30**	*e*P	**P**	**12 12 37.4**	**+1.2**
	comp=Z,570nm,0.9s						
I48A	**Sherman Twp**	**74.17**	**345**	P	**P**	**12 12 36.5**	**+0.3**
	baz=161,SNR=57						
PSET	**Sete Cidades**	**74.19**	**30**	*e*P	**P**	**12 12 38.0**	**+1.5**
	comp=Z,604nm,2.2s						
BNM	**Barren Site**	**74.20**	**324**	*e*P	**P**	**12 12 38.1**	**+1.2**
I47A	**Gladwin**	**74.21**	**344**	P	**P**	**12 12 36.5**	**+0.1**
	baz=160,SNR=45						
CMLA	**Cha da Macela**	**74.23**	**30**	*e*P	**P**	**12 12 37.7**	**+1.0**
	comp=Z,943nm,1.6s						
GRON	**Grota Negra**	**74.23**	**30**	*e*P	**P**	**12 12 38.9**	**+2.2**
	comp=Z,939nm,0.6s						
ADH	**Angra Heroismo**	**74.23**	**28**	*e*P	**P**	**12 12 38.5**	**+1.9**
	comp=Z,1µm,1.5s						
PGRA	**Graciosa**	**74.24**	**28**	*e*P	**P**	**12 12 38.0**	**+1.3**
	comp=Z,742nm,2.4s						
Y22D	**IRIS PASSCAL I**	**74.29**	**323**	*e*P	**P**	**12 12 39.0**	**+1.7**
	comp=Z,186nm,1.2s						
L40A	**Anamosa**	**74.30**	**339**	*e*P	**P**	**12 12 36.5**	**-0.5**
	comp=Z,444nm,0.8s						
L40A	**Anamosa**	**74.30**	**339**	P	**P**	**12 12 36.9**	**-0.1**
	baz=154,SNR=78						
PSCM	**Serra do Cume**	**74.32**	**29**	*e*P	**P**	**12 12 38.7**	**+1.5**
	comp=Z,1µm,1.1s						
LPM	**Los Pinos Moun**	**74.33**	**324**	*e*P	**P**	**12 12 38.8**	**+1.3**
PEMO	**Pembroke**	**74.35**	**350**	P	**P**	**12 12 37.9**	**+0.8**
	baz=167,SNR=72						
PQI	**Presque Isle**	**74.36**	**357**	*e*P	**P**	**12 12 38.4**	**+1.2**
	comp=Z,244nm,0.7s						
K42A	**Prairie Point,**	**74.36**	**340**	P	**P**	**12 12 37.4**	**+0.1**
	baz=156,SNR=42						
I46A	**Reed City**	**74.36**	**343**	P	**P**	**12 12 36.9**	**-0.3**
	baz=160,SNR=32						
F55A	**Otter Lake**	**74.36**	**350**	P	**P**	**12 12 38.0**	**+0.8**
	baz=168,SNR=73						
LENM	**Lemitar**	**74.39**	**323**	*e*P	**P**	**12 12 39.1**	**+1.2**
BART	**Pico Bartolome**	**74.40**	**30**	*e*P	**P**	**12 12 38.8**	**+1.1**
	comp=Z,1µm,1.2s						
TAOE	**Nuku Hiva Isla**	**74.47**	**268**	*e*P	**P**	**12 12 39.8**	**+1.1**
	comp=Z,1µm,0.9s						
TAOE	**Nuku Hiva Isla**	**74.47**	**268**	*e*P	**P**	**12 12 39.9**	**+1.1**
	comp=Z,553nm,0.8s						
BUKO	**Buck Lake**	**74.48**	**348**	P	**P**	**12 12 38.6**	**+0.7**
	baz=165,SNR=34						
K41A	**Shullsburg**	**74.50**	**340**	P	**P**	**12 12 38.1**	**+0.1**
	baz=155,SNR=83						
TRQ	**Mont Tremblant**	**74.50**	**352**	*e*P	**P**	**12 12 39.0**	**+0.9**
PMOZ	**Porto Moniz, M**	**74.51**	**39**	*e*P	**P**	**12 12 39.4**	**+0.9**
	comp=Z,726nm,2.2s						
FUL	**Funchal**	**74.55**	**39**	*e*P	**P**	**12 12 40.2**	**+1.6**
	comp=Z,755nm,1.0s						
KLBO	**Killbear Provi**	**74.55**	**348**	P	**P**	**12 12 38.9**	**+0.6**
	baz=164,SNR=43						
H48A	**Harrisville**	**74.57**	**345**	P	**P**	**12 12 38.8**	**+0.4**
	baz=162,SNR=43						
L39A	**Vinton**	**74.60**	**338**	P	**P**	**12 12 38.5**	**-0.2**
	baz=154,SNR=46						
J43A	**Natural Harves**	**74.64**	**341**	P	**P**	**12 12 39.1**	**+0.2**
	baz=157,SNR=39						
I45A	**Fountain**	**74.66**	**343**	P	**P**	**12 12 38.5**	**-0.4**
	baz=159						
LAZ	**Ladron**	**74.66**	**323**	*e*P	**P**	**12 12 40.9**	**+1.5**
CBKS	**Cedar Bluff**	**74.67**	**331**	*e*P	**P**	**12 12 40.2**	**+1.1**
	comp=Z,943nm,0.9s						
CBKS	**Cedar Bluff**	**74.67**	**331**	P	**P**	**12 12 40.3**	**+1.1**
	baz=147,SNR=127						
H47A	**Mio**	**74.68**	**345**	P	**P**	**12 12 39.3**	**+0.3**
	baz=161,SNR=33						
TOBO	**Tobermory, Bru**	**74.69**	**347**	P	**P**	**12 12 39.3**	**+0.3**
	baz=163,SNR=22						
ANMO	**Albuquerque**	**74.72**	**324**	*e*P	**P**	**12 12 41.0**	**+1.2**
	comp=Z,144nm,0.9s						
ANMO	**Albuquerque**	**74.72**	**324**	*ce*P	**P**	**12 12 37.1**	**-2.7**
ANMO				pmax	pmax		
	comp=Z,137nm,0.9s						
ANMO	**Albuquerque**	**74.72**	**324**	P	**P**	**12 12 40.9**	**+1.2**
	baz=141						
ALGO	**Algonquin Park**	**74.75**	**349**	P	**P**	**12 12 39.9**	**+0.5**
	baz=166,SNR=162						
JFWS	**Jewell Farm**	**74.76**	**340**	*e*P	**P**	**12 12 39.6**	**+0.1**
	comp=Z,668nm,0.6s						
JFWS	**Jewell Farm**	**74.76**	**340**	*e*P	**P**	**12 12 39.6**	**+0.1**
JFWS				pmax	pmax		
	comp=Z,668nm,0.6s						
JFWS	**Jewell Farm**	**74.76**	**340**	P	**P**	**12 12 39.6**	**+0.1**
	baz=155,SNR=130						
J42A	**Columbus**	**74.79**	**341**	P	**P**	**12 12 39.9**	**+0.3**
	baz=156,SNR=60						
F52A	**Sundridge**	**74.81**	**348**	P	**P**	**12 12 40.2**	**+0.5**
	baz=165,SNR=99						
SCIA	**State Center**	**74.82**	**337**	*e*P	**P**	**12 12 39.9**	**0.0**
	comp=Z,277nm,1.1s						
SCIA	**State Center**	**74.82**	**337**	P	**P**	**12 12 39.9**	**0.0**
	baz=153,SNR=39						
K40A	**Colesburg**	**74.84**	**339**	P	**P**	**12 12 39.7**	**-0.3**
	baz=155,SNR=28						
TOA0	**Torodi Ar. Sit**	**74.84**	**66**	*e*P	**P**	**12 12 39.0**	**-1.6**
TOA0	**Torodi Ar. Sit**	**74.84**	**66**	P	**P**	**12 12 41.1**	**+0.5**
	SNR=363						
TOA0	**Torodi Ar. Sit**	**74.84**	**66**	P	**P**	**12 12 41.1**	**+0.5**
	SNR=363						
TORD	**Torodi Ar. Bea**	**74.84**	**66**	P	**P**	**12 12 40.5**	**-0.1**
	comp=Z,1µm,0.6s,baz=247,slow=4.6,SNR=851						
TORD				pP	**pP**	**12 14 41.3**	**-0.4**
	comp=Z,116nm,1.1s,baz=246,slow=5.9,SNR=5.4						
TORD				S	**S**	**12 21 31.7**	**+0.3**
	comp=Z,15nm,1.1s,baz=251,slow=9.2,SNR=7.4						
TORD				PKKP	PKKPdf	12 31 22.9	-22
	comp=Z,1.1nm,0.8s,baz=46,slow=4.7,SNR=4.9						
TORD				PKKPbc	**PKKPbc**	**12 31 57.1**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=75,slow=3.5,SNR=4.1						
TOA1	**Torodi Ar. Sit**	**74.84**	**66**	*e*P	**P**	**12 12 40.5**	**-0.1**
TOA1				*e*pP	**pP**	**12 14 41.3**	**-0.4**
TOA1				*e*S	**S**	**12 21 31.7**	**+0.3**
H46A	**Fife Lake**	**74.86**	**344**	P	**P**	**12 12 40.0**	**-0.1**
	baz=160,SNR=34						
BATG	**Bathurst New B**	**74.88**	**358**	*e*P	**P**	**12 12 41.5**	**+1.4**
	comp=Z,178nm,0.7s						
GLMI	**Grayling**	**74.99**	**344**	*e*P	**P**	**12 12 41.3**	**+0.5**
	comp=Z,387nm,0.6s						
GLMI	**Grayling**	**74.99**	**344**	P	**P**	**12 12 41.3**	**+0.5**
	baz=160,SNR=22						
I43A	**Langenfeld Bro**	**75.03**	**342**	P	**P**	**12 12 41.0**	**0.0**
	baz=157,SNR=14						
F51A	**Arnstein**	**75.05**	**348**	P	**P**	**12 12 41.4**	**+0.4**
	baz=165,SNR=43						
E54A	**Lac Daplat, Po**	**75.08**	**350**	P	**P**	**12 12 41.8**	**+0.6**
	baz=167,SNR=79						
K39A	**Oelwein**	**75.09**	**338**	P	**P**	**12 12 41.0**	**-0.3**
	baz=154,SNR=92						
TUC	**Tucson**	**75.09**	**320**	*e*P	**P**	**12 12 42.7**	**+0.9**
	comp=Z,124nm,0.9s						
TUC	**Tucson**	**75.09**	**320**	*e*P	**P**	**12 12 42.7**	**+0.9**
TUC				pmax	pmax		
	comp=Z,124nm,0.9s						
TUC	**Tucson**	**75.09**	**320**	P	**P**	**12 12 42.7**	**+0.9**
	baz=138						
E53A	**Dumoine, Ponti**	**75.10**	**350**	P	**P**	**12 12 42.0**	**+0.7**
	baz=167,SNR=97						
J41A	**Loganville**	**75.10**	**340**	P	**P**	**12 12 41.4**	**0.0**
	baz=156,SNR=41						
G47A	**Hillman**	**75.14**	**345**	P	**P**	**12 12 42.0**	**+0.5**
	baz=161,SNR=15						
H45A	**Beulah**	**75.15**	**343**	P	**P**	**12 12 41.4**	**-0.2**
	baz=159						
PMPS	**Porto Santo**	**75.17**	**39**	*e*P	**P**	**12 12 44.2**	**+2.2**
	comp=Z,981nm,1.6s						
E52A	**Mattawa**	**75.17**	**349**	P	**P**	**12 12 41.9**	**+0.2**
	baz=166,SNR=26						
I42A	**Draeger Farm,**	**75.25**	**341**	*e*P	**P**	**12 12 42.6**	**+0.4**
	comp=Z,520nm,0.4s						
I42A	**Draeger Farm,**	**75.25**	**341**	P	**P**	**12 12 42.6**	**+0.4**
	baz=157,SNR=56						
F49A	**Sandfield**	**75.31**	**346**	P	**P**	**12 12 42.7**	**+0.3**
	baz=163,SNR=55						
J40A	**Soldiers Grove**	**75.35**	**340**	P	**P**	**12 12 42.7**	**-0.1**
	baz=155,SNR=65						
T25A	**Trinidad**	**75.43**	**327**	*e*P	**P**	**12 12 45.1**	**+1.4**
	comp=Z,350nm,0.9s						
T25A	**Trinidad**	**75.43**	**327**	P	**P**	**12 12 45.1**	**+1.4**
	baz=143,SNR=248						
LATQ	**La Tuque**	**75.44**	**353**	P	**P**	**12 12 44.0**	**+0.9**
	baz=171,SNR=49						
G45A	**Suttons Bay**	**75.45**	**344**	P	**P**	**12 12 43.6**	**+0.3**
	baz=160,SNR=29						
H43A	**Windswept, Lux**	**75.47**	**342**	*e*P	**P**	**12 12 43.9**	**+0.5**
	comp=Z,316nm,0.5s						
H43A	**Windswept, Lux**	**75.47**	**342**	P	**P**	**12 12 43.5**	**+0.1**
	baz=158,SNR=20						
F48A	**Evansville**	**75.49**	**346**	P	**P**	**12 12 43.7**	**+0.3**
	baz=162,SNR=26						
G46A	**Petoskey**	**75.51**	**344**	P	**P**	**12 12 44.0**	**+0.4**
	baz=160,SNR=43						
E51A	**G1948 Merrick**	**75.56**	**348**	P	**P**	**12 12 44.4**	**+0.5**
	baz=165,SNR=83						
J39A	**Decorah**	**75.60**	**339**	P	**P**	**12 12 44.0**	**-0.1**
	baz=154,SNR=183						
E50A	**Wahnapitae**	**75.68**	**348**	P	**P**	**12 12 44.9**	**+0.4**
	baz=164,SNR=54						
I41A	**Arkdale**	**75.69**	**340**	*e*P	**P**	**12 12 44.8**	**+0.2**
	comp=Z,189nm,1.1s						
I41A	**Arkdale**	**75.69**	**340**	P	**P**	**12 12 44.6**	**0.0**
	baz=156,SNR=33						
D54A	**Lac Fusel, La**	**75.70**	**351**	P	**P**	**12 12 44.6**	**0.0**
	baz=168,SNR=34						
H42A	**Shiocton**	**75.71**	**342**	*e*P	**P**	**12 12 45.1**	**+0.3**
	comp=Z,312nm,0.4s						
H42A	**Shiocton**	**75.71**	**342**	P	**P**	**12 12 45.1**	**+0.3**
	baz=157,SNR=34						
I40A	**Norwalk**	**75.76**	**340**	P	**P**	**12 12 44.9**	**-0.1**
	baz=155,SNR=36						
D53A	**Lac Vacive, Po**	**75.79**	**350**	P	**P**	**12 12 45.6**	**+0.5**
	baz=167,SNR=70						
D52A	**ZEK Kipawa Sen**	**75.80**	**349**	P	**P**	**12 12 45.9**	**+0.7**
	baz=166						
BOSA	**Boshof**	**75.90**	**115**	P	**P**	**12 12 46.6**	**+0.1**
	comp=Z,604nm,0.8s,baz=250,slow=4.4,SNR=372						
BOSA				S	**S**	**12 21 41.5**	**-1.2**
	comp=Z,10.0nm,1.0s,baz=40,slow=18,SNR=14						
BOSA	**Boshof**	**75.90**	**115**	*e*P	**P**	**12 12 46.8**	**+0.3**
F46A	**Macinaw City C**	**75.92**	**345**	P	**P**	**12 12 46.4**	**+0.5**
	baz=160,SNR=109						
I39A	**Houston**	**76.00**	**339**	*e*P	**P**	**12 12 46.3**	**-0.1**
	comp=Z,207nm,0.6s						
I39A	**Houston**	**76.00**	**339**	P	**P**	**12 12 46.3**	**-0.1**
	baz=154,SNR=64						
F45A	**CMU Biological**	**76.02**	**344**	P	**P**	**12 12 46.9**	**+0.5**
	baz=160,SNR=233						
E48A	**Lockeyer**	**76.02**	**347**	P	**P**	**12 12 46.9**	**+0.5**
	baz=163,SNR=50						
214A	**Organ Pipe Nat**	**76.02**	**318**	P	**P**	**12 12 48.2**	**+1.3**
	baz=136,SNR=120						
D51A	**Lot 18 Range I**	**76.07**	**349**	P	**P**	**12 12 47.1**	**+0.4**
	baz=165,SNR=48						
KSCO	**Kaye Shedlock’**	**76.10**	**329**	*e*P	**P**	**12 12 48.4**	**+1.2**
	comp=Z,437nm,1.1s						
KSCO	**Kaye Shedlock’**	**76.10**	**329**	P	**P**	**12 12 48.5**	**+1.3**
	baz=145,SNR=126						
H41A	**Junction City**	**76.13**	**341**	*e*P	**P**	**12 12 47.3**	**+0.2**
	comp=Z,186nm,0.9s						
H41A	**Junction City**	**76.13**	**341**	P	**P**	**12 12 47.2**	**+0.2**
	baz=156,SNR=39						
G43A	**Wallace**	**76.17**	**342**	*e*P	**P**	**12 12 47.5**	**+0.2**
	comp=Z,151nm,0.6s						
G43A	**Wallace**	**76.17**	**342**	P	**P**	**12 12 47.4**	**+0.2**
	baz=158,SNR=22						
BGNE	**Belgrade**	**76.20**	**334**	*e*P	**P**	**12 12 48.0**	**+0.4**
	comp=Z,739nm,0.6s						
BGNE	**Belgrade**	**76.20**	**334**	P	**P**	**12 12 48.0**	**+0.4**
	baz=149,SNR=48						
E47A	**Iron Bridge**	**76.23**	**346**	P	**P**	**12 12 47.8**	**+0.2**
	baz=162,SNR=61						
X18A	**Snowflake**	**76.27**	**322**	*e*P	**P**	**12 12 49.8**	**+1.5**
	comp=Z,140nm,0.8s						
H40A	**Chili**	**76.35**	**340**	P	**P**	**12 12 48.3**	**0.0**
	baz=155,SNR=27						
G42A	**Mountain**	**76.36**	**342**	*e*P	**P**	**12 12 48.6**	**+0.4**
	comp=Z,83nm,0.8s						
G42A	**Mountain**	**76.36**	**342**	P	**P**	**12 12 48.7**	**+0.4**
	baz=157,SNR=13						
E46A	**Sault Ste Mari**	**76.37**	**345**	P	**P**	**12 12 48.4**	**+0.1**
	baz=161,SNR=41						
TBI	**Tubuai**	**76.37**	**251**	*e*P	**P**	**12 12 50.5**	**+1.5**
	comp=Z,590nm,0.8s						
SDCO	**Great Sand Dun**	**76.43**	**327**	*e*P	**P**	**12 12 50.5**	**+1.2**
	comp=Z,234nm,1.3s						
SDCO	**Great Sand Dun**	**76.43**	**327**	P	**P**	**12 12 50.6**	**+1.3**

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      baz=142,SNR=297
F44A  Big Bay de Noc   76.51 344   P      P        12 12 49.6 +0.5
      baz=159,SNR=50
G41A  Antigo           76.54 341   P      P        12 12 49.7 +0.4
      baz=156,SNR=30
E45A  Wooded Hills,    76.56 344   P      P        12 12 50.0 +0.6
      baz=160,SNR=41
F43A  Flat Rock, Esc   76.57 343   P      P        12 12 49.9 +0.4
      baz=158,SNR=93
W18A  Petrified Fore   76.59 322  eP      P        12 12 51.5 +1.3
      comp=Z,373nm,1.1s
W18A  Petrified Fore   76.59 322   P      P        12 12 51.4 +1.3
      baz=139,SNR=154
D48A  Paudash Townsh   76.61 347   P      P        12 12 49.9 +0.3
      baz=163,SNR=88
D49A  Beulah Townshi   76.61 347   P      P        12 12 50.2 +0.5
      baz=164,SNR=134
MAW   Mawson           76.66 161  eP      P        12 12 50.6 +0.9
      comp=Z,83nm,0.9s
MAW   Mawson           76.66 161   P      P        12 12 50.4 +0.7
      comp=Z,236nm,0.7s,baz=229,slow=7.3,SNR=30
MAW                               pP      pP       12 14 51.7 +0.1
      comp=Z,47nm,0.8s,baz=233,slow=7.5,SNR=2.4
H39A  Augusta          76.68 340   P      P        12 12 50.0 -0.1
      baz=155,SNR=21
VLDQ  Val d'Or         76.75 350  eP      P        12 12 51.2 +0.9
      comp=Z,114nm,1.0s
F42A  Maple Grove Fa   76.76 342   P      P        12 12 51.0 +0.5
      baz=157,SNR=25
D47A  Chapleau         76.76 346   P      P        12 12 50.4 -0.1
      baz=162,SNR=27
D46A  Sault St. Mari   76.81 345   P      P        12 12 50.5 -0.2
      baz=161,SNR=32
G40A  Rib Lake         76.89 341  eP      P        12 12 51.6 +0.4
      comp=Z,87nm,1.1s
G40A  Rib Lake         76.89 341   P      P        12 12 51.6 +0.4
      baz=156,SNR=15
DRLN  Deer Lake        76.98   4  eP      P        12 12 52.6 +1.1
      comp=Z,753nm,0.6s
H38A  Maiden Rock      76.98 339   P      P        12 12 51.7 -0.1
      baz=154,SNR=27
E44A  Grand Marais A   76.99 344  eP      P        12 12 52.8 +1.1
      comp=Z,587nm,0.4s
E44A  Grand Marais A   76.99 344   P      P        12 12 52.7 +1.1
      baz=159,SNR=53
F41A  Three Lakes      77.00 342  eP      P        12 12 52.5 +0.7
      comp=Z,241nm,0.5s
F41A  Three Lakes      77.00 342   P      P        12 12 52.5 +0.7
      baz=157,SNR=76
X16A  Lo Mia Camp, P   77.01 321  eP      P        12 12 53.9 +1.5
      comp=Z,383nm,1.0s
E43A  Lone Tree Farm   77.03 343  eP      P        12 12 52.7 +0.8
      comp=Z,541nm,0.5s
E43A  Lone Tree Farm   77.03 343   P      P        12 12 52.7 +0.8
      baz=158,SNR=90
S22A  4UR Ranch, Cre   77.09 326  eP      P        12 12 54.0 +1.2
      comp=Z,88nm,0.8s
S22A  4UR Ranch, Cre   77.09 326   P      P        12 12 54.0 +1.2
      baz=141,SNR=154
113A  Mohawk Valley,   77.16 318  eP      P        12 12 54.2 +1.3
      comp=Z,113nm,0.8s
G39A  Holcombe         77.19 340   P      P        12 12 52.9  0.0
      baz=155,SNR=30
Q24A  Divide           77.23 328  eP      P        12 12 55.0 +1.3
      comp=Z,247nm,0.9s
Q24A  Divide           77.23 328   P      P        12 12 54.9 +1.3
      baz=143,SNR=109
G38A  Ridgeland        77.29 340   P      P        12 12 53.3 -0.1
      baz=154,SNR=40
E42A  Champion         77.32 343   P      P        12 12 54.4 +0.9
      baz=158,SNR=108
COWI  Conover          77.34 342  eP      P        12 12 54.3 +0.6
      comp=Z,235nm,1.3s
F40A  Park Falls       77.46 341   P      P        12 12 54.9 +0.6
      baz=156,SNR=38
MVCO  Mesa Verde       77.52 324  eP      P        12 12 56.3 +1.2
      comp=Z,139nm,0.7s
MVCO  Mesa Verde       77.52 324   P      P        12 12 56.3 +1.2
      baz=140,SNR=134
Y14A  Wickenburg       77.56 319  eP      P        12 12 56.3 +1.1
      comp=Z,171nm,0.8s
LSQQ  Lebel-sur-Quev   77.61 351   P      P        12 12 55.3 +0.3
      baz=168
ECSD  EROS Data Cent   77.62 336  eP      P        12 12 55.3 +0.1
      comp=Z,169nm,0.6s
ECSD  EROS Data Cent   77.62 336   P      P        12 12 55.3 +0.1
      baz=150,SNR=292
E41A  Kenton           77.63 342   P      P        12 12 55.7 +0.5
      baz=157,SNR=47
SPMN  Marine on St.    77.64 339  eP      P        12 12 55.1 -0.1
      comp=Z,190nm,0.4s
SPMN  Marine on St.    77.64 339   P      P        12 12 55.2 -0.1
      baz=153,SNR=66
LBTB  Lobatse          77.67 112  eP      P        12 12 56.5 +0.3
      comp=Z,1µm,0.8s
LBTB  Lobatse          77.67 112  eP      P        12 12 56.5 +0.3
LBTB                               pmax   pmax
      comp=Z,1µm,0.8s
F39A  Loretta          77.68 341   P      P        12 12 56.0 +0.4
      baz=155,SNR=41
WUAZ  Wupatki          77.78 321  eP      P        12 12 58.0 +1.5
      comp=Z,273nm,1.1s
WUAZ  Wupatki          77.78 321   P      P        12 12 57.9 +1.5
      baz=138,SNR=148
E40A  Wakefield        77.87 341   P      P        12 12 57.4 +0.9
      baz=156,SNR=76
GLA   Glamis           77.99 318  eP      P        12 12 58.2 +0.7
      comp=Z,131nm,0.9s
GLA   Glamis           77.99 318  eP      P        12 12 58.2 +0.7
GLA                                pmax   pmax
      comp=Z,131nm,0.9s
GLA   Glamis           77.99 318   P      P        12 12 58.5 +1.0
      baz=135,SNR=25
E39A  Mellen           78.00 341   P      P        12 12 57.8 +0.7
      baz=155,SNR=68
F38A  Pierce - Schro   78.01 340   P      P        12 12 57.8 +0.6
      baz=154,SNR=82
F37A  Hinrichs Farm,   78.03 339   P      P        12 12 57.8 +0.4
      baz=154,SNR=69
D41A  Chassel          78.07 343  eP      P        12 12 58.5 +1.0
      comp=Z,573nm,0.8s
D41A  Chassel          78.07 343   P      P        12 12 58.5 +1.0
      baz=157,SNR=56
CHGQ  Chibougamau      78.11 353   P      P        12 12 58.0 +0.3
      baz=170,SNR=88
ISCO  Idaho Springs    78.11 328  eP      P        12 12 59.6 +1.3
      comp=Z,310nm,1.4s
ISCO  Idaho Springs    78.11 328  eP      P        12 12 59.6 +1.3
ISCO                               pmax   pmax
      comp=Z,310nm,1.4s
ISCO  Idaho Springs    78.11 328   P      P        12 12 59.6 +1.3
      baz=142,SNR=212
VAH   Vaihoa           78.25 259  eP      P        12 13 00.9 +1.6
      comp=Z,507nm,0.8s
PV01  Paradox Valley   78.26 325  eP      P        12 13 00.5 +1.4
      comp=Z,240nm,1.4s
SMCO  Snowmass         78.27 327  eP      P        12 13 01.0 +1.7
      comp=Z,200nm,0.8s
Y12C  Blythe           78.31 318  eP      P        12 13 00.4 +1.3
      comp=Z,234nm,1.0s
Y12C  Blythe           78.31 318   P      P        12 13 00.4 +1.3
      baz=135,SNR=105
PV15  Paradox Valley   78.38 325  eP      P        12 13 01.3 +1.6
      comp=Z,331nm,1.0s
MATQ  Matagami         78.39 350   P      P        12 12 59.2 +0.1
      baz=167,SNR=54
PV02  Paradox Valley   78.40 325  eP      P        12 13 01.1 +1.3
      comp=Z,85nm,0.8s
PV13  Radium Mtn., P   78.41 325  eP      P        12 13 01.1 +1.2
      comp=Z,192nm,1.0s
PDMCI Parker Dam,Lak   78.47 319   P      P        12 13 00.9 +0.9
      baz=136,SNR=29
IKP   In-Ko-Pah, Jac   78.49 317   P      P        12 13 01.1 +0.9
      baz=134,SNR=44
PV05  Paradox Valley   78.49 325  eP      P        12 13 01.4 +1.1
PV03  Paradox Valley   78.50 325  eP      P        12 13 01.4 +1.1
      comp=Z,171nm,1.4s
E38A  The Farm, Brul   78.50 340  eP      P        12 13 00.1 +0.2
      comp=Z,176nm,0.8s
E38A  The Farm, Brul   78.50 340   P      P        12 13 00.1 +0.2
      baz=155,SNR=51
SWSC  Sam W. Stewart   78.50 317   P      P        12 13 01.1 +1.0
      baz=134,SNR=35
PV12  Saucer Basin,    78.52 325  eP      P        12 13 01.6 +1.2
      comp=Z,158nm,0.9s
PV07  Paradox Valley   78.53 325  eP      P        12 13 01.9 +1.4
      comp=Z,222nm,0.9s
PV11  David Mesa, Pa   78.54 325  eP      P        12 13 01.7 +1.1
      comp=Z,359nm,1.7s
TVO   Taravao          78.56 256  eP      P        12 13 02.6 +1.6
      comp=Z,181nm,0.9s
PV17  East Wray Mesa   78.57 325  eP      P        12 13 01.8 +1.1
      comp=Z,93nm,1.0s
PV16  Nyswonger Mesa   78.57 325  eP      P        12 13 01.9 +1.2
      comp=Z,142nm,1.2s
PMOR  Pomariorio Ree   78.59 259  eP      P        12 13 02.7 +1.7
      comp=Z,508nm,0.8s
PV19  Morning Glory    78.61 325  eP      P        12 13 02.1 +1.2
      comp=Z,129nm,1.2s
PV20  West Nyswonger   78.62 325  eP      P        12 13 01.5 +0.5
      comp=Z,166nm,1.5s
PV04  Paradox Valley   78.63 325  eP      P        12 13 02.3 +1.3
      comp=Z,132nm,1.1s
PV14  Lion Creek, Pa   78.67 325  eP      P        12 13 02.3 +1.0
      comp=Z,209nm,1.2s
PV10  Paradox Valley   78.69 325  eP      P        12 13 02.1 +0.8
      comp=Z,135nm,1.0s
PV23  Carpenter Ridg   78.73 325  eP      P        12 13 02.7 +1.1
      comp=Z,207nm,1.2s
TIAR  Tiarei           78.73 256  eP      P        12 13 03.3 +1.5
      comp=Z,80nm,0.9s
BC3   Big Chuckawall   78.79 318   P      P        12 13 02.7 +0.9
      baz=135,SNR=108
PV21  Cone Mtn., Par   78.79 325  eP      P        12 13 03.2 +1.3
      comp=Z,147nm,1.1s
PV09  Paradox Valley   78.83 325  eP      P        12 13 03.4 +1.3
MONP2 Monument Peak    78.84 317   P      P        12 13 03.3 +1.0
      baz=134,SNR=48
BAR   Barrett          78.85 316  eP      P        12 13 02.9 +0.9
      comp=Z,162nm,0.9s
PAE   Paea             78.89 256  eP      P        12 13 04.0 +1.4
      comp=Z,66nm,0.9s
PAE                               epP     pP       12 15 05.8  0.0
      comp=Z,27nm,1.0s
W13A  Hualapai Mount   78.89 320  eP      P        12 13 03.8 +1.4
      comp=Z,116nm,0.9s
PPTF  Pamatai, Papee   78.91 256  eP      P        12 13 04.5 +1.7
      comp=Z,665nm,0.9s
PPT2  Papeete2         78.92 256  eP      P        12 13 04.5 +1.6
      comp=Z,596nm,1.0s
PPT2                              epP     pP       12 15 06.3 +0.3
      comp=Z,116nm,1.1s
PPT   Papeete          78.93 256   P      P        12 13 04.3 +1.4
      comp=Z,664nm,0.9s,baz=98,slow=3.5,SNR=29
PPT                                pP     pP       12 15 05.4 -0.6
      comp=Z,97nm,0.9s,baz=92,slow=14,SNR=5.0
U15A  North Rim        78.96 322  eP      P        12 13 04.5 +1.6
      comp=Z,197nm,0.8s
IRM   Iron Mountain    78.96 318   P      P        12 13 03.7 +1.1
      baz=135,SNR=126
C40A  Isle Royale Na   79.02 343  eP      P        12 13 02.4  0.0
      comp=Z,73nm,0.7s
C40A  Isle Royale Na   79.02 343   P      P        12 13 02.5  0.0
      baz=157,SNR=6.9
NEE2  Needles Airpor   79.08 319   P      P        12 13 04.1 +0.8
      baz=135,SNR=9.2
SUSD  Miller           79.10 335   P      P        12 13 03.2 +0.1
      baz=148,SNR=30
N23A  Red Feather La   79.13 328  eP      P        12 13 04.9 +1.3
      comp=Z,112nm,0.8s
N23A  Red Feather La   79.13 328   P      P        12 13 05.0 +1.3
      baz=142,SNR=77
PHWY  Pilot Hill       79.23 329  eP      P        12 13 05.3 +1.1
      comp=Z,190nm,0.9s
109C  Camp Elliot, M   79.26 316   P      P        12 13 04.9 +0.7
      baz=133,SNR=13
CPE   Camp Elliot      79.26 316  eP      P        12 13 05.5 +1.4
      comp=Z,97nm,1.3s
BELC  Belle Mtn. Jos   79.35 318   P      P        12 13 05.9 +1.0
      baz=134,SNR=75
XPFO  Pion Flat        79.36 317  eP      P        12 13 06.0 +1.2
      comp=Z,146nm,0.8s
PFO   Pinyon Flats O   79.36 317  eP      P        12 13 06.0 +1.1
      comp=Z,137nm,0.8s
PFO   Pinyon Flats O   79.36 317  eP      P        12 13 06.0 +1.1
PFO                                pmax   pmax
      comp=Z,137nm,0.8s
PFO   Pinyon Flats O   79.36 317   P      P        12 13 05.8 +1.0
      baz=134,SNR=74
LDFC  Landfair         79.58 319  eP      P        12 13 07.5 +1.5
      comp=Z,166nm,0.8s
O20A  White River Ci   79.63 326  eP      P        12 13 07.4 +1.2
      comp=Z,191nm,0.9s
O20A  White River Ci   79.63 326   P      P        12 13 07.4 +1.2
      baz=140,SNR=149
KNB   Kanab            79.68 322  eP      P        12 13 08.3 +1.8
      comp=Z,526nm,0.8s
KNB   Kanab            79.68 322  eP      P        12 13 08.3 +1.8
KNB                                pmax   pmax
      comp=Z,526nm,0.8s
EYMN  Ely              79.69 341  eP      P        12 13 06.2 +0.1
      comp=Z,130nm,0.8s
EYMN  Ely              79.69 341   P      P        12 13 06.2 +0.1
      baz=155,SNR=24
GMRC  Granite Mounta   79.70 318   P      P        12 13 07.9 +1.3
      baz=135,SNR=198
PKCU  Pink Cliffs      79.71 322  eP      P        12 13 08.2 +1.3
      comp=Z,173nm,0.8s
MURC  Murrieta         79.80 317   P      P        12 13 08.0 +0.9
      baz=133,SNR=54
LCMT  Little Creek M   79.91 321  eP      P        12 13 08.9 +1.2
      comp=Z,109nm,0.8s
SRU   San Rafael Swe   80.00 324  eP      P        12 13 09.1 +0.9
      comp=Z,296nm,0.9s
SRU   San Rafael Swe   80.00 324  eP      P        12 13 09.1 +0.9
SRU                                pmax   pmax
      comp=Z,296nm,0.9s
MTPU  Mount Pierson    80.08 323  eP      P        12 13 10.0 +1.1
      comp=Z,181nm,0.8s
BBRC  Big Bear Solar   80.09 317   P      P        12 13 10.2 +1.4
      baz=134,SNR=25
HEC   Hector,Ludlow    80.13 318   P      P        12 13 10.2 +1.4
      baz=134,SNR=42
Q16A  Castle Valley    80.19 324  eP      P        12 13 10.4 +1.2
      comp=Z,123nm,1.0s
SCI2  San Clemente I   80.21 315   P      P        12 13 09.3 +0.1
      baz=132,SNR=7.1
SZCU  Shurtz Canyon    80.24 322  eP      P        12 13 10.8 +1.3
      comp=Z,86nm,0.8s
TUQ   Turquoise Moun   80.31 319   P      P        12 13 10.6 +0.8
      baz=134,SNR=42
RWWY  Rawlins          80.34 328  eP      P        12 13 10.1 +0.1
      comp=Z,310nm,0.8s
CCUT  Cedar City       80.36 322  eP      P        12 13 11.9 +1.8
      comp=Z,299nm,0.8s
P17A  Butcher Ranch,   80.38 325  eP      P        12 13 11.2 +1.0
      comp=Z,248nm,1.0s
CIS   Catalina Islan   80.41 316   P      P        12 13 11.0 +0.8
      baz=133,SNR=32
MSU   Marysvale        80.42 323  eP      P        12 13 11.8 +1.4
MSU   Marysvale        80.42 323  eP      P        12 13 11.8 +1.4
TMUT  Trail Mountain   80.49 324  eP      P        12 13 12.0 +1.1
      comp=Z,137nm,0.7s
BFSC  Mount Baldy Ra   80.52 317   P      P        12 13 11.5 +0.7
      baz=133,SNR=50
FMP   Fort Macarthur   80.55 316   P      P        12 13 11.7 +0.8
      baz=133,SNR=6.6
RRX   Edison Barstow   80.55 318   P      P        12 13 12.3 +1.3
      baz=134,SNR=10.0
AVE   Averroes         80.61  45  eP      P        12 13 12.7 +1.4
AVE                               eS      S        12 22 14.0  -17
SHPR  Sheep Range      80.62 320  eP      P        12 13 12.6 +1.2
      comp=Z,101nm,1.1s
TCRU  Three Creeks R   80.64 323  eP      P        12 13 13.1 +1.5
      comp=Z,136nm,0.8s
GSC   Goldstone, Bar   80.73 318  eP      P        12 13 13.0 +1.1
      comp=Z,130nm,1.1s
GSC   Goldstone, Bar   80.73 318   P      P        12 13 13.0 +1.1
      baz=134,SNR=87
MWC   Mount Wilson     80.75 317  eP      P        12 13 13.0 +0.9
      comp=Z,153nm,0.9s
K22A  Casper           80.78 329  eP      P        12 13 13.1 +1.0
      comp=Z,141nm,0.9s
K22A  Casper           80.78 329   P      P        12 13 13.1 +1.0
      baz=142,SNR=89
PASC  Pasadena Art C   80.79 316  eP      P        12 13 13.1 +0.9
      comp=Z,259nm,1.1s
SHOC  Shoshone, Teco   80.84 319   P      P        12 13 12.9 +0.6
      baz=134,SNR=7.7
RSSD  Black Hills      80.86 331  eP      P        12 13 12.9 +0.3
      comp=Z,75nm,0.6s
RSSD  Black Hills      80.86 331  eP      P        12 13 12.9 +0.3
RSSD                               pmax   pmax
      comp=Z,75nm,0.6s
RSSD  Black Hills      80.86 331   P      P        12 13 13.0 +0.4
      baz=144
DECC  Green Verdugo    80.94 316   P      P        12 13 13.8 +0.8
      baz=133,SNR=31
SNCC  San Nicolas Is   81.00 315  eP      P        12 13 14.6 +1.4
      comp=Z,189nm,0.8s
SNCC  San Nicolas Is   81.00 315   P      P        12 13 14.0 +0.8
      baz=132,SNR=8.2
EDW2  Edwards Air Fo   81.16 317   P      P        12 13 14.5 +0.4
      baz=133,SNR=87
MPU   Maple Canyon     81.25 324  eP      P        12 13 15.6 +1.0
      comp=Z,134nm,0.9s
BLG   Laguna Peak, P   81.29 316   P      P        12 13 15.4 +0.6
      baz=132,SNR=17
AGMN  Agassiz Nation   81.34 339  eP      P        12 13 15.0 +0.4
      comp=Z,162nm,0.8s
AGMN  Agassiz Nation   81.34 339   P      P        12 13 15.0 +0.4
      baz=151,SNR=172
PSUT  Pine Spring      81.34 322  eP      P        12 13 16.5 +1.3
      comp=Z,206nm,1.0s
LRMC  Laurel Mtn Rad   81.38 318   P      P        12 13 16.1 +0.8
      baz=133,SNR=112
OSI   Osito Audit: C   81.42 317  eP      P        12 13 16.7 +1.3
      comp=Z,167nm,0.9s
OSI   Osito Audit: C   81.42 317   P      P        12 13 15.9 +0.5
      baz=132,SNR=11
RTC   Rabat Centre     81.42  44  eP      P        12 13 15.0 -0.4
      comp=Z,3µm,0.9s
NLU   North Lily Min   81.43 324  eP      P        12 13 16.8 +1.2
      comp=Z,71nm,0.8s
TPNV  Topopah Spring   81.55 320  eP      P        12 13 17.1 +0.9
      comp=Z,118nm,0.9s
TPNV  Topopah Spring   81.55 320  eP      P        12 13 17.1 +0.9
TPNV                               pmax   pmax
      comp=Z,118nm,0.9s
TPNV  Topopah Spring   81.55 320   P      P        12 13 17.5 +1.3
      baz=134,SNR=98
SCZ2  Santa Cruz Isl   81.56 316   P      P        12 13 17.0 +0.9
      baz=132,SNR=26
FURC  Furnace Creek,   81.57 319   P      P        12 13 17.2 +1.2
      baz=134,SNR=80
JLU   Jordanelle       81.59 325  eP      P        12 13 17.6 +1.2
      comp=Z,135nm,0.8s
MPMC  Manual Prospec   81.66 318   P      P        12 13 17.5 +0.7
      baz=134,SNR=71
CTU   Camp Tracy       81.81 325  eP      P        12 13 18.2 +0.8
      comp=Z,50nm,0.7s
ARVC  Arvin            81.83 317   P      P        12 13 18.3 +0.9
      baz=132,SNR=16
DAC   Darwin (Calif)   81.87 318  eP      P        12 13 18.8 +0.9
      comp=Z,123nm,0.9s
DAC   Darwin (Calif)   81.87 318  eP      P        12 13 18.8 +0.9
DAC                                pmax   pmax
      comp=Z,123nm,0.9s
SBC   Santa Barbara    81.91 316   P      P        12 13 18.8 +1.0
      baz=132,SNR=8.6
TCUT  Toone Canyon     81.95 325  eP      P        12 13 19.2 +1.0
      comp=Z,318nm,0.9s
ISA   Isabella, Lake   81.97 317  eP      P        12 13 19.3 +1.1
      comp=Z,133nm,1.0s
ISA   Isabella, Lake   81.97 317  eP      P        12 13 19.3 +1.1
ISA                                pmax   pmax
      comp=Z,133nm,1.0s
ISA   Isabella, Lake   81.97 317   P      P        12 13 19.4 +1.1
      baz=133,SNR=115
DUG   Dugway, Tooele   81.99 324  eP      P        12 13 19.4 +1.1
      comp=Z,102nm,0.9s
DUG   Dugway, Tooele   81.99 324  eP      P        12 13 19.4 +1.1
DUG                                pmax   pmax
      comp=Z,102nm,0.9s
DUG   Dugway, Tooele   81.99 324   P      P        12 13 19.4 +1.1
      baz=137,SNR=113
MDT   Midelt           82.07  46   P      P        12 13 20.1 +1.3
      comp=Z,213nm,0.7s,baz=238,slow=3.8,SNR=162
MATP  Matopo           82.08 109   PKKPbc PKKPbc   12 31 42.0 -0.6
      comp=Z,2.1nm,0.4s,baz=49,slow=2.8,SNR=7.2
R11A  Troy Canyon, C   82.16 321  eP      P        12 13 20.6 +1.3
      comp=Z,105nm,0.9s
R11A  Troy Canyon, C   82.16 321   P      P        12 13 20.6 +1.3
      baz=135,SNR=204
MDND  Maddock          82.22 336  eP      P        12 13 20.1 +1.0
      comp=Z,525nm,0.8s
MDND  Maddock          82.22 336   P      P        12 13 20.1 +1.0
      baz=148,SNR=133
GRAC  Grapevine Rang   82.23 319   P      P        12 13 20.7 +1.2
      baz=134,SNR=38
CWC   Cottonwood Cre   82.27 318   P      P        12 13 20.8 +1.0
      baz=133
PKM   Mcpherson Peak   82.27 316   P      P        12 13 21.0 +1.1
      baz=132,SNR=75
BW06  Boulder Array    82.28 327  eP      P        12 13 20.3 +0.4
      comp=Z,95nm,1.1s
BW06  Boulder Array    82.28 327   P      P        12 13 20.3 +0.4
      baz=140,SNR=123
PD31  Pinedale Array   82.28 327  eP      P        12 13 20.4 +0.5
PDAR  Pinedale Array   82.28 327   P      P        12 13 20.3 +0.5
      comp=Z,44nm,0.6s,baz=122,slow=7.6,SNR=489
PDAR                               pP     pP       12 15 24.2 -0.2
      comp=Z,20nm,1.0s,baz=119,slow=7.3,SNR=3.2
PDAR                               S      SKSac    12 22 43.9 -1.4
      comp=Z,1.0nm,0.7s,baz=82,slow=6.6,SNR=5.4
PDAR                               PKKP   PKKPdf   12 31 29.6 -5.4
      comp=Z,0.7nm,0.8s,baz=281,slow=1.4,SNR=3.0
PDAR                               PKKPbc PKKPbc   12 31 42.4 -1.4
      comp=Z,1.2nm,0.5s,baz=46,slow=3.1,SNR=14
PDAR                               PKPPKP P'P'df   12 39 40.8 -4.9
      comp=Z,2.3nm,1.1s,baz=8.5,slow=1.8,SNR=5.9
BLWY  Bulawayo         82.30 109  i P     P        12 13 21.4 +1.0
BLWY  Bulawayo         82.30 109  i P     P        12 13 21.4 +1.0
PFVI  Vila Bisbo       82.37  41  eP      P        12 13 20.8 +0.7
      comp=Z,447nm,2.2s
PFVI  Vila Bisbo       82.37  41  eP      P        12 13 21.0 +0.9
      comp=Z,262nm,1.0s
SCHQ  Schefferville    82.46 358  eP      P        12 13 20.5 +0.4
      comp=Z,289nm,1.0s
SCHQ  Schefferville    82.46 358   P      P        12 13 20.6 +0.4
      comp=Z,207nm,0.7s,baz=176,slow=4.0,SNR=292
SCHQ                               S      SKSac    12 22 43.5 -1.8
      comp=Z,4.8nm,0.7s,baz=341,slow=15,SNR=4.0
SCHQ                               PKKPbc PKKPbc   12 31 42.0 -1.8
      comp=Z,3.1nm,0.5s,baz=344,slow=2.0,SNR=6.3
SCHQ                               PKPPKP P'P'df   12 39 41.1 -2.9
      comp=Z,2.7nm,0.8s,baz=338,slow=7.1,SNR=3.4
VES   Vestal, Richgr   82.46 317   P      P        12 13 21.3 +0.8
      baz=132,SNR=119
MORF  Marmelete        82.59  41  eP      P        12 13 22.1 +0.8
MORF                               AMb    AMB      12 13 25.5
      comp=Z,428nm,1.4s
MORF  Marmelete        82.59  41  eP      P        12 13 22.1 +0.8
      comp=Z,441nm,1.1s
MORF  Marmelete        82.59  41  eP      P        12 13 22.0 +0.8
MORF                               pmax   pmax
      comp=Z,428nm,1.5s
SPUT  South Promonto   82.62 325  eP      P        12 13 22.2 +0.7
      comp=Z,189nm,1.0s
BGU   Big Grassy Mou   82.64 324  eP      P        12 13 22.3 +0.8
      comp=Z,150nm,1.0s
SMMC  Simmler          82.66 316   P      P        12 13 23.0 +1.4
      baz=132,SNR=35
PTEO  Sao Teotonio     82.71  41  eP      P        12 13 23.3 +1.5
      comp=Z,754nm,1.5s
TIN   Tinemaha, Big    82.77 319   P      P        12 13 23.4 +1.1
      baz=133,SNR=32
VOG   Valley Oaks Go   82.96 317   P      P        12 13 22.8 -0.2
      baz=132
PBDV  Barranco-do-Ve   82.96  41  eP      P        12 13 24.4 +1.3
      comp=Z,782nm,1.2s
AHID  Auburn Hatcher   83.03 327  eP      P        12 13 24.1 +0.5
      comp=Z,119nm,0.6s
ULM   Lac du Bonnet    83.05 340  eP      P        12 13 23.4 +0.3
      comp=Z,122nm,0.6s
ULM   Lac du Bonnet    83.05 340   P      P        12 13 23.4 +0.2
      comp=Z,128nm,0.6s,baz=150,slow=5.0,SNR=125
ULM                                pP     pP       12 15 27.8 -0.1
      comp=Z,36nm,0.8s,baz=149,slow=4.6,SNR=3.5
ULM                                S      SKSac    12 22 47.4 -1.9
      comp=Z,12nm,1.1s,baz=329,slow=11,SNR=4.5
ULM                                PKKP   PKKPdf   12 31 33.7  0.0
      comp=Z,4.5nm,0.7s,baz=292,slow=1.6,SNR=2.9
ULM                                PKKPbc PKKPbc   12 31 40.0 -2.1
      comp=Z,9.6nm,0.7s,baz=329,slow=2.4,SNR=12
PAGB  Antelope Grade   83.09 317  eP      P        12 13 24.6 +0.8
      comp=Z,248nm,0.9s
HVU   Hansel Valley    83.13 325  eP      P        12 13 24.6 +0.6
      comp=Z,192nm,1.1s
HVU   Hansel Valley    83.13 325  eP      P        12 13 24.6 +0.6
HVU                                pmax   pmax
      comp=Z,193nm,1.1s
PVAQ  Vaqueiros        83.20  41  eP      P        12 13 25.5 +1.3
      comp=Z,646nm,1.2s
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MESJ	Messejana	83.20	41	eP	P	12 13 25.1	+0.8
MESJ				AMb	AMB	12 13 27.9	
	comp=Z,590nm,1.1s						
MESJ	Messejana	83.20	41	eP	P	12 13 25.0	+0.8
MESJ				pmax	pmax		
	comp=Z,590nm,1.1s						
PNCL	Nicolau / Gran	83.21	40	eP	P	12 13 25.4	+1.1
	comp=Z,498nm,1.3s						
TAM	Tamanrasset	83.23	60	eP	P	12 13 25.8	+0.9
	comp=Z,499nm,1.0s						
TAM	Tamanrasset	83.23	60	eP	P	12 13 25.8	+0.9
TAM				pmax	pmax		
	comp=Z,499nm,1.0s						
PMST	Lisbon--Monsan	83.27	40	eP	P	12 13 26.2	+1.6
	comp=Z,858nm,1.4s						
LIS	Lisbon	83.28	40	eP	P	12 13 25.5	+0.9
LIS				AMb	AMB	12 13 30.1	
	comp=Z,673nm,1.7s						
LIS	Lisbon	83.28	40	eP	P	12 13 25.4	+0.9
LIS				pmax	pmax		
	comp=Z,673nm,1.7s						
REDW	Red Top Meadow	83.35	327	eP	P	12 13 25.8	+0.6
	comp=Z,248nm,1.5s						
PMAFR	Mafra	83.37	39	eP	P	12 13 26.7	+1.6
	comp=Z,571nm,2.6s						
SNOW	Snow King Moun	83.38	327	eP	P	12 13 26.0	+0.7
	comp=Z,447nm,1.8s						
LOHW	Long Hollow	83.42	327	eP	P	12 13 26.1	+0.6
	comp=Z,107nm,0.9s						
SFS	San Fernando	83.47	43	i P	P	12 13 24.4	-1.2
CNIL	Conil	83.49	43	i P	P	12 13 27.6	+1.9
TPAW	Teton Pass	83.50	327	eP	P	12 13 25.5	-0.5
	comp=Z,68nm,0.8s						
MLAC	Mammoth, Mammo	83.52	319	P	P	12 13 27.4	+1.3
	baz=133,SNR=13						
PBEJ	Beja	83.53	41	eP	P	12 13 27.9	+2.0
	comp=Z,547nm,1.1s						
MOOW	Moose Ponds	83.59	327	eP	P	12 13 26.8	+0.4
	comp=Z,190nm,1.6s						
CEU	Ceuta	83.60	44	⇓iP	P	12 13 27.4	+1.2
FXWY	Fox Creek	83.64	327	eP	P	12 13 27.2	+0.5
	comp=Z,50nm,0.9s						
MDPB	Devils Postpil	83.66	319	eP	P	12 13 27.8	+0.9
	comp=Z,113nm,1.0s						
ELK	Elko	83.67	323	eP	P	12 13 27.5	+0.7
	comp=Z,267nm,1.0s						
ELK	Elko	83.67	323	eP	P	12 13 27.5	+0.7
ELK				pmax	pmax		
	comp=Z,267nm,1.0s						
NV11	Mina Array Sit	83.67	320	eP	P	12 13 27.4	+0.7
	comp=Z,5.6nm,1.0s						
NV01	Mina Array Sit	83.75	320	eP	P	12 13 28.0	+0.7
NVAR	Mina Array Bea	83.75	320	P	P	12 13 28.0	+0.8
	comp=Z,83nm,0.9s,baz=144,slow=4.7,SNR=227						
NVAR				pP	pP	12 15 32.0	-0.4
	comp=Z,21nm,1.1s,baz=157,slow=5.4,SNR=2.9						
NVAR				S	SKSac	12 22 53.8	-1.0
	comp=Z,0.6nm,0.8s,baz=174,slow=20,SNR=2.2						
NVAR				PKKPbc	PKKPbc	12 31 40.4	+0.3
	comp=Z,0.5nm,0.3s,baz=296,slow=2.0,SNR=13						
NVAR				PKPPKP	P'P'df	12 39 39.3	-4.2
	comp=Z,0.6nm,0.3s,baz=289,slow=2.8,SNR=19						
EVO	Evora	83.80	40	eP	P	12 13 29.9	+2.7
	comp=Z,430nm,2.1s						
IMW	Indian Meadow	83.80	327	eP	P	12 13 28.2	+0.7
	comp=Z,251nm,1.1s						
FLWY	Flagg Ranch	83.82	328	eP	P	12 13 28.5	+1.0
	comp=Z,388nm,1.8s						
LAO	LASA Array	83.84	332	eP	P	12 13 27.6	+0.3
	comp=Z,112nm,0.9s						
LAO	LASA Array	83.84	332	P	P	12 13 27.7	+0.4
	baz=143,SNR=102						
ALJ	Aljibe	83.84	43	⇓iP	P	12 13 29.1	+1.6
GIBL	Gibalbin	83.85	43	i P	P	12 13 29.1	+1.6
RLMT	Red Lodge	83.95	329	eP	P	12 13 28.5	+0.5
	comp=Z,93nm,0.9s						
RLMT	Red Lodge	83.95	329	P	P	12 13 28.6	+0.5
	baz=140,SNR=87						
H17A	Grant Village	84.00	328	eP	P	12 13 29.9	+1.5
	comp=Z,30nm,0.9s						
H17A	Grant Village	84.00	328	P	P	12 13 29.5	+1.1
	baz=139,SNR=30						
RYN	Ryan	84.01	320	eP	P	12 13 29.4	+1.0
	comp=Z,90nm,0.9s						
YPP	Pitchstone Pla	84.01	328	eP	P	12 13 29.5	+1.0
	comp=Z,41nm,1.0s						
PMTG	Montargil	84.04	40	eP	P	12 13 29.3	+0.9
	comp=Z,1µm,1.1s						
LKWY	Lake	84.05	328	eP	P	12 13 30.1	+1.5
	comp=Z,46nm,0.9s						
KVN	Kaiserville	84.06	320	eP	P	12 13 29.4	+0.7
	comp=Z,170nm,0.9s						
KVN	Kaiserville	84.06	320	eP	P	12 13 29.4	+0.7
KVN				pmax	pmax		
	comp=Z,171nm,0.9s						
REAL	Reales	84.08	43	⇓iP	P	12 13 30.7	+1.8
LSZ	Lusaka	84.14	104	eP	P	12 13 31.6	+2.0
	comp=Z,1µm,1.0s						
LSZ	Lusaka	84.14	104	eP	P	12 13 31.6	+2.0
LSZ				pmax	pmax		
	comp=Z,1µm,1.0s						
LSZ	Lusaka	84.14	104	PcP	P	12 13 31.3	+1.7
	SNR=185						
LSZ	Lusaka	84.14	104	P	P	12 13 31.3	+1.7
	SNR=185						
LSZ	Lusaka	84.14	104	PKKPbc	PKKPbc	12 31 38.0	+0.2
	comp=Z,9.7nm,0.6s,baz=31,slow=3.9,SNR=12						
YFT	Old Faithful	84.17	328	eP	P	12 13 31.1	+1.9
	comp=Z,81nm,0.9s						
LIJA	Lijar	84.24	43	i P	P	12 13 30.9	+1.4
PESTR	Estremoz	84.27	40	eP	P	12 13 30.5	+1.0
	comp=Z,610nm,1.5s						
PESTR	Estremoz	84.27	40	eP	P	12 13 30.4	+1.0
	comp=Z,554nm,1.3s						
YNR	Norris Junctio	84.29	328	eP	P	12 13 31.5	+1.7
	comp=Z,86nm,1.3s						
PTOM	Tomar	84.31	39	eP	P	12 13 30.5	+0.8
	comp=Z,1µm,1.0s						
YMR	Madison River	84.39	328	eP	P	12 13 31.6	+1.3
	comp=Z,177nm,1.0s						
YHH	Holmes Hill	84.43	328	eP	P	12 13 31.6	+1.1
	comp=Z,173nm,1.0s						
DGMT	Dagmar	84.46	334	eP	P	12 13 31.1	+0.9
	comp=Z,501nm,1.4s						
DGMT	Dagmar	84.46	334	P	P	12 13 31.3	+1.1
	baz=144,SNR=86						
WAKR	Walker	84.46	319	eP	P	12 13 32.2	+1.5
	comp=Z,199nm,0.9s						
SAO	San Andreas Ge	84.50	317	eP	P	12 13 31.8	+1.1
	comp=Z,80nm,0.9s						
SAO	San Andreas Ge	84.50	317	eP	P	12 13 31.8	+1.1
SAO				pmax	pmax		
	comp=Z,80nm,0.9s						
YHB	Horse Butte	84.56	328	eP	P	12 13 32.0	+0.9
	comp=Z,81nm,1.0s						
PCAS	Casmilo, Conde	84.56	39	eP	P	12 13 31.7	+0.8
	comp=Z,938nm,1.0s						
GCMT	Greycliff	84.64	329	eP	P	12 13 31.7	+0.4
YERR	Yerington	84.67	319	eP	P	12 13 32.9	+1.2
	comp=Z,148nm,0.9s						
CMB	Columbia Colle	84.70	318	eP	P	12 13 32.2	+0.5
	comp=Z,56nm,0.9s						
CMB	Columbia Colle	84.70	318	eP	P	12 13 32.2	+0.5
CMB				pmax	pmax		
	comp=Z,57nm,0.9s						
MELI	Melilla	84.72	45	⇓iP	P	12 13 32.9	+1.1
QLMT	Earthquake Lak	84.73	328	eP	P	12 13 33.1	+1.3
EMAL	Malaga-Limoner	84.74	44	⇓iP	P	12 13 31.1	-0.7
PMRV	Marv??o	84.76	40	eP	P	12 13 32.3	+0.4
	comp=Z,425nm,1.2s						
PNTR	Pine Nut	84.94	319	eP	P	12 13 34.5	+1.4
	comp=Z,431nm,0.8s						
PCBR	Castelo Branco	84.99	40	eP	P	12 13 33.5	+0.5
	comp=Z,585nm,1.2s						
VCNR	Virginia City	85.11	319	eP	P	12 13 35.0	+1.1
	comp=Z,139nm,1.0s						
PAHR	Pah Rah Range	85.23	320	eP	P	12 13 35.5	+1.1
	comp=Z,261nm,1.1s						
RUBR	Rubicon Trail	85.24	319	eP	P	12 13 35.8	+1.3
	comp=Z,339nm,0.9s						
HLID	Hailey	85.25	325	eP	P	12 13 35.9	+1.5
	comp=Z,272nm,0.9s						
HLID	Hailey	85.25	325	P	P	12 13 35.9	+1.5
	baz=136,SNR=558						
MTE	Manteigas	85.33	39	eP	P	12 13 35.3	+0.6
	comp=Z,832nm,1.4s						
MTE	Manteigas	85.33	39	eP	P	12 13 35.2	+0.5
	comp=Z,772nm,1.0s						
PVIS	Viseu	85.35	39	eP	P	12 13 35.5	+0.7
	comp=Z,302nm,1.5s						
BOZ	Bozeman (W)	85.40	328	eP	P	12 13 35.5	+0.5
	comp=Z,53nm,1.0s						
BOZ	Bozeman (W)	85.40	328	eP	P	12 13 35.5	+0.5
BOZ				pmax	pmax		
	comp=Z,53nm,1.0s						
BOZ	Bozeman (W)	85.40	328	P	P	12 13 35.4	+0.5
	baz=138,SNR=43						
MCMT	McKenzie Canyo	85.41	327	eP	P	12 13 36.4	+1.2
CRZF	Crozet Islands	85.55	141	eP	P	12 13 35.6	-0.1
	comp=Z,367nm,1.5s						
AFDM	Forest Hills D	85.65	319	eP	P	12 13 36.7	+0.5
	comp=Z,120nm,0.9s						
DLMT	Dillon	85.68	327	eP	P	12 13 37.4	+1.1
	comp=Z,270nm,1.1s						
PVRL	Vila Real	85.83	38	eP	P	12 13 37.7	+0.7
	comp=Z,802nm,1.5s						
POLO	Lamas de Olo	85.86	38	eP	P	12 13 38.7	+1.5
	comp=Z,330nm,1.2s						
RAR	Rarotonga	85.87	248	eP	P	12 13 38.2	+0.5
	comp=Z,140nm,1.4s						
RAR	Rarotonga	85.87	248	P	P	12 13 38.2	+0.5
	comp=Z,37nm,0.6s,baz=201,slow=6.5,SNR=7.7						
BEKR	Beckworth	85.90	320	eP	P	12 13 38.1	+0.5
	comp=Z,135nm,0.9s						
LRM	Limekiln Ridge	85.95	328	eP	P	12 13 38.7	+0.9
PCAB	Cabril	85.96	38	eP	P	12 13 38.7	+1.1
	comp=Z,414nm,1.5s						
CASY	Casey	85.99	177	eP	P	12 13 38.4	+1.0
	comp=Z,259nm,0.8s						
PGAV	Gavieira, Arco	86.00	38	eP	P	12 13 39.1	+1.2
	comp=Z,412nm,1.5s						
MVO	Moncorvo	86.14	39	eP	P	12 13 39.4	+0.9
	comp=Z,542nm,1.4s						
MCCM	Marconi Confer	86.26	317	eP	P	12 13 40.9	+1.8
	comp=Z,197nm,0.9s						
CTZ	Chatham Island	86.27	222	P	P	12 13 40.5	+1.3
HRY	Holter Researc	86.32	329	eP	P	12 13 40.2	+0.9
ORV	Oroville	86.35	319	eP	P	12 13 40.3	+0.8
	comp=Z,148nm,1.0s						
ORV	Oroville	86.35	319	eP	P	12 13 40.3	+0.8
ORV				pmax	pmax		
	comp=Z,148nm,1.0s						
EGMT	Eagleton	86.39	331	eP	P	12 13 39.7	+0.2
	comp=Z,206nm,1.3s						
EGMT	Eagleton	86.39	331	P	P	12 13 39.7	+0.2
	baz=140,SNR=60						
PAB	San Pablo	86.59	41	eP	P	12 13 41.4	+0.6
	comp=Z,143nm,1.0s						
PAB	San Pablo	86.59	41	eP	P	12 13 41.4	+0.6
PAB				pmax	pmax		
	comp=Z,143nm,1.0s						
GDXM	Geysers	86.64	318	eP	P	12 13 42.6	+1.6
	comp=Z,91nm,1.0s						
WVOR	Wild Horse Val	86.67	322	eP	P	12 13 41.6	+0.5
	comp=Z,109nm,1.4s						
WVOR	Wild Horse Val	86.67	322	eP	P	12 13 41.6	+0.5
WVOR				pmax	pmax		
	comp=Z,109nm,1.4s						
PBRG	Braganca	86.73	39	eP	P	12 13 42.0	+0.7
	comp=Z,326nm,1.7s						
ESDC	Sonseca Array	86.91	42	P	P	12 13 42.8	+0.7
	comp=Z,81nm,0.6s,baz=240,slow=4.3,SNR=257						
ESDC				pP	pP	12 15 48.3	0.0
	comp=Z,23nm,1.1s,baz=218,slow=6.0,SNR=3.9						
ESLA	Sonseca Array	86.91	42	eP	P	12 13 42.9	+0.7
	comp=Z,505nm,1.6s						
HOPS	Hopland Field	86.92	318	eP	P	12 13 43.9	+1.7
	comp=Z,106nm,1.1s						
ES19	SONSECA Array	86.96	42	eP	P	12 13 42.8	+0.3
O03E	Paynes Creek	87.01	319	P	P	12 13 42.5	-0.2
	baz=131,SNR=68						
J08A	Circle Bar Ran	87.21	323	eP	P	12 13 44.7	+1.1
	comp=Z,256nm,0.9s						
MOD	Modoc Plateau	87.22	321	eP	P	12 13 44.5	+0.8
	comp=Z,156nm,1.0s						
CART	Cartagena	87.37	45	eP	P	12 13 44.5	+0.2
	comp=Z,257nm,0.8s						
CART	Cartagena	87.37	45	eP	P	12 13 47.8	+3.5
MSO	Missoula	87.39	328	eP	P	12 13 44.8	+0.4
	comp=Z,169nm,1.5s						
MSO	Missoula	87.39	328	P	P	12 13 45.2	+0.9
	baz=137,SNR=35						
O02D	Mt. Diablo Mer	87.51	319	P	P	12 13 45.4	+0.4
	baz=130,SNR=30						
WDC	Whiskeytown Da	87.63	319	eP	P	12 13 45.0	-0.4
	comp=Z,96nm,0.8s						
WDC	Whiskeytown Da	87.63	319	eP	P	12 13 45.0	-0.4
WDC				pmax	pmax		
	comp=Z,96nm,0.8s						
BMO	Blue Mountains	87.64	325	eP	P	12 13 46.0	+0.5
	comp=Z,32nm,0.8s						
BMO	Blue Mountains	87.64	325	eP	P	12 13 46.0	+0.5
BMO				pmax	pmax		
	comp=Z,32nm,0.8s						
KCPM	Cahto Peak	87.67	318	eP	P	12 13 47.5	+1.7
	comp=Z,332nm,1.2s						
UCM	Universidad Co	87.73	41	⇓iP	P	12 13 48.5	+2.5
N02D	Trinity Center	87.98	319	P	P	12 13 47.2	0.0
	baz=130,SNR=18						
M04C	Macdoel	88.01	320	P	P	12 13 48.1	+0.8
	baz=131,SNR=112						
KMRM	Mail Ridge	88.08	318	eP	P	12 13 49.3	+1.6
	comp=Z,419nm,1.2s						
I07A	Izee	88.25	323	eP	P	12 13 49.2	+0.8
	comp=Z,34nm,0.9s						
M02C	Callahan	88.33	319	P	P	12 13 49.3	+0.5
	baz=130,SNR=28						
F10A	Beach Ranch, E	88.38	326	eP	P	12 13 49.7	+0.7
	comp=Z,82nm,1.0s						
YBH	Yreka Blue Hor	88.47	320	eP	P	12 13 49.2	-0.3
	comp=Z,70nm,0.8s						
YBH	Yreka Blue Hor	88.47	320	eP	P	12 13 49.2	-0.3
YBH				pmax	pmax		
	comp=Z,70nm,0.8s						
K04D	Chiloquin, OR	88.51	321	P	P	12 13 50.5	+0.8
	baz=131,SNR=27						
KHMM	Horse Mountain	88.51	319	eP	P	12 13 51.0	+1.2
	comp=Z,138nm,0.8s						
L04D	Klamath Falls	88.55	320	P	P	12 13 50.3	+0.4
	baz=131,SNR=38						
JCC	Jacoby Creek,	88.65	318	eP	P	12 13 51.8	+1.7
	comp=Z,203nm,0.8s						
J05D	Fort Rock, OR	88.66	322	P	P	12 13 50.9	+0.5
	baz=131,SNR=31						
G08A	Pilot Rock	88.79	324	eP	P	12 13 51.6	+0.7
	comp=Z,72nm,1.6s						
FFC	Flin Flon	88.82	339	eP	P	12 13 51.0	+0.4
	comp=Z,124nm,1.5s						
FFC	Flin Flon	88.82	339	ceP	P	12 13 51.0	+0.4
PINE	Pine Mountain	88.83	322	eP	P	12 13 52.4	+1.2
	comp=Z,99nm,0.8s						
WALA	Waterton Lakes	89.00	329	eP	P	12 13 52.2	+0.4
	comp=Z,149nm,1.0s						
KRMB	Red Mountain	89.03	319	eP	P	12 13 53.7	+1.6
J04D	Umpqua Nationa	89.11	321	P	P	12 13 53.0	+0.4
	baz=131,SNR=25						
HUMO	Hull Mountain	89.17	320	eP	P	12 13 53.1	+0.4
	comp=Z,30nm,0.6s						
E09A	Wood Farm, Sta	89.21	326	eP	P	12 13 52.8	+0.1
	comp=Z,15nm,0.6s						
L02E	Cave Junction	89.25	320	P	P	12 13 54.0	+1.0
	baz=130,SNR=59						
I05D	Terrebonne, OR	89.41	322	P	P	12 13 54.6	+0.9
	baz=131,SNR=27						
ABA	Alger-Bouzarea	89.47	47	P	P	12 13 54.0	-0.1
IVI	Ivigtut	89.62	7	eP	P	12 13 55.7	+1.6
	comp=Z,240nm,0.7s						
K02D	Willamette Mer	89.63	320	P	P	12 13 55.6	+0.8
	baz=130,SNR=22						
I04A	Tendick Farm,	89.64	321	P	P	12 13 54.7	-0.1
	baz=131,SNR=13						
E08A	Dider Farm, El	89.66	325	eP	P	12 13 55.1	+0.4
	comp=Z,22nm,0.7s						
F07A	Phinny Hill Vi	89.70	324	eP	P	12 13 56.5	+1.5
	comp=Z,42nm,0.9s						
ABMS	Boumerdes	89.73	47	P	P	12 13 58.0	+2.7
HAWA	Hanford	89.83	325	eP	P	12 13 56.2	+0.7
	comp=Z,61nm,0.9s						
NRS	Narsarsuaq	89.91	8	eP	P	12 13 56.1	+0.7
	comp=Z,220nm,1.1s						
NEW	Newport	89.92	327	eP	P	12 13 55.9	-0.1
	comp=Z,24nm,0.8s						
NEW	Newport	89.92	327	eP	P	12 13 55.9	-0.1
NEW				pmax	pmax		
	comp=Z,24nm,0.8s						
NEW	Newport	89.92	327	P	P	12 13 55.5	-0.5
	baz=134,SNR=16						
D08A	Wollman Farm,	89.97	326	eP	P	12 13 56.6	+0.4
	comp=Z,41nm,0.7s						
G05D	Wamic, OR	89.99	323	P	P	12 13 57.2	+0.9
	baz=131,SNR=18						
J01E	Myrtle Point	90.08	320	P	P	12 13 57.7	+1.0
	baz=130						
H04A	Detroit Lake	90.09	322	eP	P	12 13 56.9	0.0
	comp=Z,108nm,0.9s						
I03D	Drain, OR	90.09	321	P	P	12 13 57.4	+0.7
	baz=130,SNR=7.4						
FCC	Fort Churchill	90.10	344	eP	P	12 13 56.8	+0.4
	comp=Z,118nm,0.6s						
FCC	Fort Churchill	90.10	344	eP	P	12 13 56.8	+0.4
FCC				pmax	pmax		
	comp=Z,118nm,0.6s						
E07A	Sunnyside	90.11	325	eP	P	12 13 57.8	+1.0
	comp=Z,29nm,0.8s						
KEBM	Edson Butte	90.12	320	eP	P	12 13 58.9	+1.8
	comp=Z,258nm,1.0s						
C09A	Chrisman Ranch	90.16	326	eP	P	12 13 57.3	+0.2
	comp=Z,99nm,0.6s						
H04D	Lebanon	90.29	322	P	P	12 13 57.7	+0.1
	baz=130						
F05D	White Salmon	90.49	324	P	P	12 13 58.9	+0.2
	baz=131,SNR=11						
I02D	Swisshome	90.63	321	P	P	12 14 00.1	+0.8
	baz=130						
COR	Corvallis	90.64	322	eP	P	12 14 00.7	+1.4
	comp=Z,166nm,0.8s						
COR	Corvallis	90.64	322	eP	P	12 14 00.7	+1.4
COR				pmax	pmax		
	comp=Z,166nm,0.8s						
CKHR	Kef el Ahmar	90.65	49	P	P	12 14 01.9	+2.1
SET	Setif	90.68	49	P	P	12 14 02.0	+2.2
LTY	Liberty	90.99	325	eP	P	12 14 01.2	+0.3
	comp=Z,181nm,1.9s						
G03D	McMinnville, O	91.02	322	P	P	12 14 01.3	+0.3
	baz=130						
B08A	Colville Reser	91.06	326	eP	P	12 14 00.8	-0.5
	comp=Z,75nm,1.5s						
DFRA	Djebel Bou Aff	91.19	49	P	P	12 14 04.1	+1.9
LON	Longmire	91.24	324	eP	P	12 14 02.1	0.0
	comp=Z,41nm,1.1s						
LON				epP	pP	12 16 10.8	+1.3
LON	Longmire	91.24	324	eP	P	12 14 02.1	0.0
LON				e*PP	pP	12 16 10.8	+1.3
LON				pmax	pmax		
	comp=Z,41nm,1.1s						
CTEI	Djebel Teioual	91.27	49	P	P	12 14 04.6	+2.0
CASM	Ain Smara	91.44	49	P	P	12 14 04.7	+1.4
F04D	Rainier, OR	91.44	323	P	P	12 14 03.2	+0.2
	baz=130						
E04D	Cinebar	91.51	324	P	P	12 14 03.2	0.0
	baz=130						
C06D	Leavenworth	91.54	325	P	P	12 14 02.6	-0.8
	baz=132						
D05A	Enumclaw	91.62	324	eP	P	12 14 04.1	+0.3
	comp=Z,122nm,1.1s						
CAEH	'Ain El Ouahch	91.97	49	P	P	12 14 07.5	+1.8
VAL	Valentia	92.01	30	eP	P	12 14 04.6	-0.8
MAHO	Mahon	92.05	45	⇓iP	P	12 14 06.2	+0.3
ABSA	Djebel Ababsia	92.11	50	P	P	12 14 08.0	+1.6
SYZ	Scrubby Hill	92.12	213	P	P	12 14 05.3	-1.0
B06A	Marblemount	92.23	325	eP	P	12 14 06.1	-0.4
	comp=Z,62nm,0.8s						
TUZ	Tuapeka	92.30	214	P	P	12 14 07.6	+0.5
MQZ	McQueen’s Vall	92.31	217	eP	P	12 14 08.2	+1.0
	comp=Z,59nm,1.0s						
MQZ	McQueen’s Vall	92.31	217	P	P	12 14 07.5	+0.3
BFZ	Birch Farm	92.32	221	P	P	12 14 08.7	+1.3
B05A	Bryant	92.38	325	P	P	12 14 06.6	-0.6
	baz=131,SNR=11						
D03D	Eldon	92.41	324	P	P	12 14 07.4	0.0
	baz=130,SNR=5.8						
CRLZ	Canterbury Las	92.42	217	eP	P	12 14 08.8	+1.1
	comp=Z,216nm,1.6s						
ODZ	Otahua Downs	92.43	215	eP	P	12 14 08.1	+0.3
	comp=Z,91nm,1.3s						
ODZ	Otahua Downs	92.43	215	P	P	12 14 08.1	+0.3
MTW	Mount Morrison	92.44	220	P	P	12 14 09.8	+1.9
HOWZ	Holdsworth Sta	92.60	220	P	P	12 14 09.9	+1.2
KHZ	Kahutara	92.70	218	eP	P	12 14 09.8	+0.8
	comp=Z,403nm,1.6s						
KHZ	Kahutara	92.70	218	P	P	12 14 09.6	+0.6
CAW	Cannon Point	92.72	220	P	P	12 14 10.6	+1.4
MRZ	Mangatainoka R	92.72	221	P	P	12 14 10.2	+1.0
SNZO	South Karori	92.79	220	eP	P	12 14 09.1	-0.4
TSZ	Takapari Road	92.89	221	P	P	12 14 10.8	+0.7
OXZ	Oxford	92.90	217	eP	P	12 14 11.7	+1.7
	comp=Z,71nm,1.1s						
LFF	La Frestale	92.92	40	eP	P	12 14 10.0	+0.2
LFF				pmax	pmax		
	comp=Z,275nm,0.5s						
EAZ	Earnscleugh	92.97	214	P	P	12 14 10.2	-0.1
KIW	Kapiti Island	92.97	220	P	P	12 14 11.5	+1.1
NMHZ	Naumai	93.01	222	P	P	12 14 13.1	+2.4
MWZ	Matawai	93.06	223	P	P	12 14 12.1	+1.3
KEST	Kesra	93.09	51	eP	P	12 14 12.3	+1.4
	comp=Z,60nm,0.7s						
KEST	Kesra	93.09	51	P	P	12 14 12.3	+1.4
	comp=Z,54nm,0.7s,baz=206,slow=1.6,SNR=51						
TCW	Tory Channel	93.10	220	P	P	12 14 11.8	+0.9
LBZ	Lake Benmore	93.12	215	eP	P	12 14 11.1	+0.1
	comp=Z,43nm,0.8s						
LBZ	Lake Benmore	93.12	215	P	P	12 14 11.3	+0.3
LTZ	Lake Taylor	93.14	217	eP	P	12 14 12.1	+1.0
	comp=Z,124nm,0.9s						
LTZ	Lake Taylor	93.14	217	P	P	12 14 11.7	+0.5
RPZ	Rata Peaks	93.15	216	eP	P	12 14 11.3	+0.2
	comp=Z,171nm,1.2s						
RPZ				epP	pP	12 16 18.5	+0.1
RPZ				ePKKPdf	PKKPdf	12 31 13.4	+0.7
RPZ	Rata Peaks	93.15	216	P	P	12 14 11.8	+0.7
	comp=Z,93nm,0.9s,baz=134,slow=1.1,SNR=36						
RPZ				pP	pP	12 16 18.5	+0.1
	comp=Z,74nm,1.0s,baz=162,slow=3.8,SNR=14						
RPZ				PKKP	PKKPdf	12 31 13.4	+0.7
	comp=Z,11nm,0.7s,baz=268,slow=5.1,SNR=8.7						
MBAR	Mbarara	93.15	92	i P	P	12 14 14.2	+2.4
MBAR				pmax	pmax		
	comp=Z,19nm,1.5s						
MBAR	Mbarara	93.15	92	P	P	12 14 13.7	+1.9
	comp=Z,9.7nm,0.5s,baz=300,slow=2.3,SNR=16						
MTHZ	Maungataniwha	93.15	223	P	P	12 14 12.9	+1.7
BKZ	Black Stump Fm	93.16	222	eP	P	12 14 12.7	+1.4
	comp=Z,145nm,1.4s						
BKZ	Black Stump Fm	93.16	222	P	P	12 14 13.2	+1.9
WHZ	Wether Hill Ro	93.16	213	eP	P	12 14 11.9	+0.8
	comp=Z,68nm,0.8s						
RTZ	Ruatahuna	93.22	223	P	P	12 14 12.6	+1.0
PGC	Sidney	93.31	325	eP	P	12 14 13.4	+1.9
	comp=Z,57nm,1.1s						
URZ	Urewera	93.36	223	P	P	12 14 12.8	+0.7
	comp=Z,23nm,0.7s,baz=56,slow=1.0,SNR=9.4						
URZ	Urewera	93.36	223	P	P	12 14 12.6	+0.4
WKZ	Wanaka	93.40	214	eP	P	12 14 13.8	+1.6
	comp=Z,172nm,1.4s						
IGLA	Glengowla, Co	93.43	29	i P	P	12 14 11.1	-0.8
MLZ	Mavora Lakes	93.46	213	eP	P	12 14 13.4	+0.9
	comp=Z,138nm,1.5s						
THZ	Tophouse	93.49	218	eP	P	12 14 14.0	+1.2
	comp=Z,359nm,1.2s						
THZ	Tophouse	93.49	218	P	P	12 14 13.7	+0.9
PYZ	Puysegur Point	93.56	212	eP	P	12 14 13.9	+1.0
	comp=Z,89nm,0.9s						
NNZ	Nelson	93.60	219	P	P	12 14 13.9	+0.7
INZ	Inchbonnie	93.63	217	P	P	12 14 12.9	-0.4
TRVZ	Turoa	93.63	222	P	P	12 14 14.6	+0.9
FWVZ	Far West T-bar	93.65	222	P	P	12 14 14.8	+1.0
CAF	Calviac	93.67	40	eP	P	12 14 13.5	+0.2
CAF				pmax	pmax		
	comp=Z,96nm,0.8s						
NGZ	Ngauruhoe	93.68	222	P	P	12 14 15.1	+1.3
COVZ	Chateau Observ	93.69	222	P	P	12 14 14.9	+1.1
WVZ	Waitaha Valley	93.76	216	P	P	12 14 13.7	-0.2
LLLB	Lillooet	93.80	327	eP	P	12 14 13.7	-0.1
	comp=Z,26nm,0.7s						
DCZ	Deep Cove	93.85	213	eP	P	12 14 14.1	-0.2
	comp=Z,31nm,0.8s						
IWEX	Carrickbyrne,	93.86	31	eP	P	12 14 14.5	+0.7
FOZ	Fox Glacier	93.92	216	eP	P	12 14 14.5	0.0
	comp=Z,50nm,0.9s						

FOZ	Fox Glacier	93.92	216	P	P	12 14 14.2	-0.4
DSZ	Denniston Nort	94.11	218	P	P	12 14 14.9	-0.7
VRZ	Vera Road	94.20	221	P	P	12 14 16.4	+0.4
TLZ	Tolley Road	94.26	222	P	P	12 14 16.7	+0.4
QRZ	Quartz Range	94.34	219	P	P	12 14 15.7	-0.9
NEZ	North Egmont	94.49	221	P	P	12 14 18.2	+0.7
RSBS	Rosebush, Pemb	94.51	32	⇑eP	P	12 14 16.6	-0.2
RSBS				IAmb	IAmb	12 14 17.9	
	comp=Z,36nm,0.7s						
HIZ	Hauiti	94.55	222	eP	P	12 14 17.7	+0.1
	comp=Z,306nm,1.4s						
HIZ	Hauiti	94.55	222	P	P	12 14 18.0	+0.4
TCF	Toulx Ste Croi	94.56	39	eP	P	12 14 17.1	-0.2
TCF				pmax	pmax		
	comp=Z,125nm,0.7s						
DSB	Dublin	94.62	30	i P	P	12 14 19.8	+2.5
TOZ	Tahuroa Road	94.67	223	P	P	12 14 18.4	+0.3
LPW	Lampeter	94.93	32	⇑eP	P	12 14 18.6	-0.2
LPW				IAmb	IAmb	12 14 20.0	
	comp=Z,129nm,0.7s						
SFJD	Kangerlussuaq	95.08	5	eP	P	12 14 20.2	+1.2
	comp=Z,81nm,1.1s						
SFJD				eP'P'df	P'P'df	12 39 23.8	+3.4
SFJD	Kangerlussuaq	95.08	5	i P	P	12 14 19.0	-0.1
SFJD	Kangerlussuaq	95.08	5	eP	P	12 14 20.2	+1.2
SFJD				pmax	pmax		
	comp=Z,81nm,1.1s						
SFJD	Kangerlussuaq	95.08	5	PKPPKP	P'P'df	12 39 23.8	+3.4
	comp=Z,36nm,0.5s,baz=34,slow=3.6,SNR=31						
SFJD	Kangerlussuaq	95.08	5	eP	P	12 14 18.9	-0.1
ANGG	Ammassalik, Gr	95.27	10	eP	P	12 14 20.2	+0.3
	comp=Z,107nm,0.7s						
SSB	Saint Sauveur	95.30	41	eP	P	12 14 21.7	+1.0
	comp=Z,212nm,0.7s						
SSB	Saint Sauveur	95.30	41	eP	P	12 14 21.7	+1.0
SSB				pmax	pmax		
	comp=Z,212nm,0.7s						
BATH	Bath	95.33	33	eP	P	12 14 20.2	-0.3
MONM	Monmouth	95.35	33	⇑eP	P	12 14 20.5	-0.2
MONM				IAmb	IAmb	12 14 21.9	
	comp=Z,177nm,1.1s						
MCH1	Michaelchurch	95.36	33	⇑eP	P	12 14 20.3	-0.4
MCH1				IAmb	IAmb	12 14 21.4	
	comp=Z,73nm,0.8s						
YRC	Rhoscolyn	95.44	31	⇑eP	P	12 14 20.9	0.0
GMM	Mts of Mourne	95.47	30	eP	P	12 14 21.4	+0.2
WLF1	Llynfaes	95.54	31	⇑eP	P	12 14 21.2	-0.3
WLF1				IAmb	IAmb	12 14 22.0	
	comp=Z,265nm,1.3s						
LLW	Llanuwychllyn	95.59	32	eP	P	12 14 21.4	-0.4
CLF	Chambon-Foret	95.61	38	eP	P	12 14 22.2	+0.3
	comp=Z,316nm,1.0s						
STRD	Stroud	95.62	33	eP	P	12 14 21.6	-0.3
STRD				IAmb	IAmb	12 14 22.5	
	comp=Z,182nm,0.7s						
SWN1	Swindon	95.63	33	eP	P	12 14 22.3	+0.3
WME	Myndd Eilian	95.66	31	eP	P	12 14 21.0	-1.0
SSF	Saint Saulge	95.73	39	eP	P	12 14 22.2	-0.3
SSF				pmax	pmax		
	comp=Z,195nm,0.7s						
HLM1	Long Mynd	95.75	32	⇑eP	P	12 14 22.1	-0.3
HLM1				IAmb	IAmb	12 14 23.6	
	comp=Z,102nm,1.0s						
WOL	Wolverton	95.79	34	⇑eP	P	12 14 22.4	-0.3
WOL				IAmb	IAmb	12 14 23.8	
	comp=Z,169nm,1.1s						
FOEL	Foel Wylfa	95.84	32	eP	P	12 14 22.7	-0.1
FOEL				IAmb	IAmb	12 14 24.9	
	comp=Z,84nm,0.7s						
CLGH	Cloghs, Cushen	95.97	29	⇑eP	P	12 14 23.4	+0.1
WIM	Isle of Man	95.98	30	eP	P	12 14 23.4	-0.1
BNI	Bardonecchia	96.43	42	eP	P	12 14 26.9	+1.1
	comp=Z,130nm,1.4s						
BNI	Bardonecchia	96.43	42	eP	P	12 14 27.0	+1.1
BNI				pmax	pmax		
	comp=Z,130nm,1.4s						
GAL1	Galloway	96.43	30	eP	P	12 14 25.1	-0.3
GAL1				IAmb	IAmb	12 14 26.5	
	comp=Z,65nm,1.2s						
CWF	Charnwood Fore	96.64	33	eP	P	12 14 26.4	0.0
CWF				IAmb	IAmb	12 14 27.8	
	comp=Z,68nm,0.7s						
LPL	La Plagne	96.71	42	eP	P	12 14 28.1	+0.9
LPL				pmax	pmax		
	comp=Z,100nm,0.8s						
LBWR	Ladybower, Pea	96.85	32	⇑eP	P	12 14 27.6	+0.2
LBWR				IAmb	IAmb	12 14 29.1	
	comp=Z,144nm,0.9s						
ELSH	Elham, Standar	96.87	35	eP	P	12 14 27.8	+0.4
ELSH				IAmb	IAmb	12 14 29.2	
	comp=Z,360nm,0.7s						
KESW	Keswick, Cumbr	96.97	31	eP	P	12 14 28.0	+0.1
KESW				IAmb	IAmb	12 14 29.0	
	comp=Z,111nm,0.7s						
BBO1	Bothel	97.00	30	eP	P	12 14 27.9	-0.1
PGBU	Glenifferbraes	97.14	29	eP	Pdif	12 14 28.4	-0.2
PGBU				IAmb	IAmb	12 14 30.0	
	comp=Z,374nm,1.6s						
ILULI	Ilulissat	97.23	4	eP	P	12 14 29.2	+0.6
	comp=Z,72nm,1.4s						
ILULI	Ilulissat	97.23	4	i P	P	12 14 29.4	+0.7
	comp=Z,22nm,0.7s						
ILULI	Ilulissat	97.23	4	eP	P	12 14 29.2	+0.6
ILULI				pmax	pmax		
	comp=Z,72nm,1.4s						
BHH	Howats Hill	97.23	30	eP	Pdif	12 14 28.9	-0.1
HPK	Haverah Park	97.24	32	eP	Pdif	12 14 28.4	-0.6
ESK	Eskdalemuir	97.38	30	eP	Pdif	12 14 29.6	-0.1
	comp=Z,60nm,0.6s						
ESK	Eskdalemuir	97.38	30	⇑eP	Pdif	12 14 29.4	-0.3
ESK				IAmb	IAmb	12 14 30.4	
	comp=Z,62nm,0.7s						
ESK	Eskdalemuir	97.38	30	eP	Pdif	12 14 29.6	-0.1
ESK				pmax	pmax		
	comp=Z,60nm,0.6s						
EKA	Eskdalemuir Ar	97.41	30	P	Pdif	12 14 29.7	-0.1
	comp=Z,51nm,0.7s,baz=237,slow=4.6,SNR=98						
EKA				pP	pP	12 16 37.2	-0.5
	comp=Z,7.3nm,0.9s,baz=229,slow=3.8,SNR=4.0						
EKA				PKKPbc	PKKPbc	12 31 04.8	-1.3
	comp=Z,7.6nm,0.7s,baz=56,slow=4.1,SNR=15						
VAE	Valguarnera	97.48	52	P	P	12 14 34.0	+3.3
	comp=Z,7.2nm,0.2s,baz=15,slow=12,SNR=5.2						
SENIN	Lac Senin/Sane	97.50	41	ePdif	P	12 14 31.6	+0.9
	comp=Z,76nm,0.9s						
WACR	West Acre	97.56	33	eP	P	12 14 30.8	+0.3
WACR				IAmb	IAmb	12 14 31.8	
	comp=Z,354nm,0.9s						
EAU	Auchinoon	97.61	29	eP	P	12 14 31.4	+0.7
EDMD	Edmundbyers	97.63	31	eP	Pdif	12 14 30.7	-0.1
EDMD				IAmb	IAmb	12 14 32.4	
	comp=Z,92nm,0.7s						
KPL	Plockton	97.66	27	⇑eP	Pdif	12 14 30.5	-0.3
KPL				IAmb	IAmb	12 14 31.9	
	comp=Z,55nm,0.8s						
KPL	Plockton	97.66	27	eP	Pdif	12 14 30.5	-0.3
INVG	Invergeldie, C	97.73	29	⇑eP	Pdif	12 14 31.0	-0.2
INVG				IAmb	IAmb	12 14 32.0	
	comp=Z,52nm,0.7s						
EBL	Broad Law	97.75	30	eP	Pdif	12 14 31.1	-0.2
KAC	Achnashellach	97.91	27	⇑eP	Pdif	12 14 31.7	-0.2
BORG	Borgarnes	97.91	17	ePdif	P	12 14 33.1	+1.3
	comp=Z,384nm,1.9s						
BORG	Borgarnes	97.91	17	P	P	12 14 33.1	+1.3
	comp=Z,24nm,0.7s,baz=30,slow=4.8,SNR=11						
ESY	Stoneypath	98.02	30	eP	Pdif	12 14 32.2	-0.3
DOU	Dourbes	98.06	37	⇑Pdif	P	12 14 33.4	+0.6
	comp=Z,60nm,1.1s						
DOU				⇑PP	PP	12 18 37.7	-4.6
EDU	Dundee	98.25	29	eP	P	12 14 33.8	+0.2
MDO	Dochfour	98.25	28	eP	Pdif	12 14 33.1	-0.4
UCC	Uccle	98.33	36	⇑Pdif	P	12 14 34.3	+0.3
	comp=Z,74nm,1.0s						
ECH	Echery	98.42	40	ePdif	P	12 14 35.1	+0.5
	comp=Z,140nm,0.9s						
ECH	Echery	98.42	40	eP	P	12 14 35.1	+0.5
ECH				pmax	pmax		
	comp=Z,140nm,0.9s						
BCLA	Clavier	98.61	37	⇑Pdif	P	12 14 35.8	+0.4
	comp=Z,35nm,0.9s						
BCLA				⇑PP	PP	12 18 44.9	-1.6
KMBO	Kilima Mbogo	98.65	96	Pdiff	P	12 14 46.8	+10
	SNR=5.2						
KMBO	Kilima Mbogo	98.65	96	P	P	12 14 39.0	+2.3
	comp=Z,4.9nm,0.8s,baz=222,slow=2.6,SNR=9.3						
WLF	Walferdange	98.66	38	ePdif	P	12 14 36.7	+1.2
	comp=Z,919nm,0.9s						
WLF	Walferdange	98.66	38	eP	P	12 14 36.7	+1.2
WLF	Walferdange	98.66	38	⇓Pdif	P	12 14 36.6	+1.1
	comp=Z,188nm,1.1s						
TUE	Stuetta	98.76	42	ePdif	P	12 14 37.4	+1.0
	comp=Z,63nm,0.7s						
MCD	Coleburn Disti	98.80	28	eP	P	12 14 36.3	+0.3
YKA	Yellowknife Ar	99.00	338	P	P	12 14 36.8	+0.1
	comp=Z,20nm,0.6s,baz=127,slow=4.5,SNR=287						
YKA				pP	pP	12 16 44.4	-0.3
	comp=Z,17nm,0.9s,baz=128,slow=4.5,SNR=17						
YKA				PP	PP	12 18 49.4	+0.4
	comp=Z,9.7nm,1.1s,baz=137,slow=7.6,SNR=5.8						
YKA				PKiKP	PKiKP	12 19 02.8	-0.5
	comp=Z,0.9nm,0.5s,baz=143,slow=1.4,SNR=5.0						
YKA				PKKPbc	PKKPbc	12 30 58.9	-2.9
	comp=Z,2.1nm,0.7s,baz=313,slow=3.1,SNR=11						
YKA				PKPPKP		12 38 58.5	
	comp=Z,0.3nm,0.7s,baz=310,slow=2.0,SNR=3.5						
YKB5	Yellowknife Ar	99.00	338	ePdif	Pdif	12 14 36.5	-0.2
BEBN	Eben Emael	99.02	37	⇑Pdif	Pdif	12 14 37.5	+0.5
BEBN				⇑PP	PP	12 18 48.2	-1.3
YKW3	Yellowknife Ar	99.05	338	ePdif	Pdif	12 14 36.9	0.0
	comp=Z,24nm,0.6s						
MEM	Membach	99.09	37	⇑Pdif	Pdif	12 14 38.2	+0.8
	comp=Z,69nm,1.1s						
MEM				⇑PP	PP	12 18 48.9	-1.1
BIGH	Upper Bighouse	99.11	27	eP	Pdif	12 14 37.4	+0.1
BIGH				IAmb	IAmb	12 14 39.5	
	comp=Z,84nm,1.1s						
HGN	Heimansgroeve	99.14	37	eP	Pdif	12 14 38.1	+0.5
	comp=Z,145nm,1.4s						
BFO	Black Forest	99.15	40	ceP	Pdif	12 14 38.6	+0.8
DAVOX	Davos/Dischmat	99.24	42	PKKPbc	PKKPbc	12 31 00.3	-0.6
	comp=Z,23nm,0.6s,baz=119,slow=6.4,SNR=18						
FUORN	Ofenpass-Fuorn	99.38	42	ePdif	Pdif	12 14 40.2	+1.1
	comp=Z,64nm,0.9s						
DAVA	Damuels	99.50	41	ePdiff	Pdif	12 14 40.9	+1.3
	comp=Z,62nm,0.8s,SNR=14						
DAVA				ePP	PP	12 18 52.2	-1.2
	comp=Z,56nm,1.0s						
DAVA				ePKKPdf	PKKPbc	12 30 59.6	-0.5
	comp=Z,11nm,0.8s						
FETA	Feichten	99.86	42	ePdiff	Pdif	12 14 42.0	+0.8
	comp=Z,54nm,0.9s,SNR=16						
FETA				ePKiKP	PKiKP	12 19 02.2	-3.3
	comp=Z,53nm,2.3s						
FETA				ePKKPdf	PKKPbc	12 30 59.0	-0.2
	comp=Z,7.8nm,0.6s						
STU	Stuttgart	99.87	40	ePdif	Pdif	12 14 42.1	+1.3
	comp=Z,110nm,1.1s						
STU	Stuttgart	99.87	40	eP	Pdif	12 14 42.2	+1.3
STU				pmax	pmax		
	comp=Z,110nm,1.1s						
RETA	Reutte	100.12	41	ePdiff	Pdif	12 14 43.2	+1.1
	comp=Z,30nm,0.8s,SNR=14						
RETA				ePP	PP	12 18 55.8	-2.1
	comp=Z,27nm,1.1s						
RETA				eSKSac	SKSac	12 24 30.4	+5.9
	comp=Z,15nm,1.5s						
RETA				ePKKPbc	PKKPbc	12 30 57.7	-0.6
	comp=Z,4.4nm,0.4s,SNR=6.0						
SQTA	Sankt Quirin	100.24	42	ePdiff	Pdif	12 14 43.9	+1.1
	comp=Z,78nm,0.8s,SNR=22						
SQTA				ePKKPbc	PKKPbc	12 30 57.6	-0.5
	comp=Z,13nm,0.6s,SNR=6.7						
MOTA	Moosalm	100.25	42	ePdiff	Pdif	12 14 43.8	+0.9
	comp=Z,29nm,0.7s,SNR=21						
MOTA				ePKKPbc	PKKPbc	12 30 57.6	-0.5
	comp=Z,14nm,0.5s,SNR=7.0						
WTSB	Winterswijk	100.25	36	eP	Pdif	12 14 43.1	+0.7
	comp=Z,88nm,0.7s						
WATA	Walderalm	100.52	42	ePdiff	Pdif	12 14 45.5	+1.5
	comp=Z,4.0nm,0.4s,SNR=5.7						
WTTA	Wattenberg	100.52	42	ePdiff	Pdif	12 14 45.1	+1.0
	comp=Z,25nm,0.8s,SNR=6.5						
WTTA				eSKSac	SKSac	12 24 29.0	+2.4
	comp=Z,17nm,1.1s						
WTTA				ePKKPdf	PKKPbc	12 30 57.4	0.0
	comp=Z,7.2nm,0.6s						
ABTA	Abfaltersbach	100.79	43	ePdiff	Pdif	12 14 46.4	+1.2
	comp=Z,47nm,0.9s,SNR=12						
ABTA				ePP	PP	12 19 01.6	-1.3
	comp=Z,38nm,1.2s						
ABTA				ePKKPbc	PKKPbc	12 30 55.4	-1.0
	comp=Z,10nm,0.7s						
JAVS	Javornik	101.32	44	i Pdiff	Pdif	12 14 48.8	+1.2
JAVS				i PP	PP	12 19 04.5	-2.4
JAVS	Javornik	101.32	44	i P	PKKPbc	12 30 54.7	-0.1
MYKA	Terra Mystica	101.41	43	ePdiff	Pdif	12 14 49.3	+1.3
	comp=Z,30nm,0.7s,SNR=7.2						
MYKA				ePP	PKiKP	12 19 08.6	+0.4
	comp=Z,38nm,1.2s						
MYKA				ePKKPbc	PKKPbc	12 30 54.2	-0.4
	comp=Z,5.8nm,1.0s						
KBA	Koelnbreinsper	101.45	43	ePdiff	Pdif	12 14 49.1	+0.9
	comp=Z,29nm,1.0s,SNR=7.5						
KBA				ePKiKP	PKiKP	12 19 10.3	+1.9
	comp=Z,27nm,1.1s						
KBA				ePKKPbc	PKKPbc	12 30 54.4	-0.2
	comp=Z,9.6nm,1.1s						
GRFO	Grafenberg	101.48	40	ePdif	Pdif	12 14 49.8	+1.7
GRFO	Grafenberg	101.48	40	eP	Pdif	12 14 49.8	+1.7
GRA1	Grafenberg Arr	101.48	40	ePdif	Pdif	12 14 49.7	+1.6
GRF	Grafenberg Arr	101.48	40	eP	Pdif	12 14 49.7	+1.6
SUMG	Summit	101.63	7	ePdif	Pdif	12 14 50.0	+1.3
SUMG	Summit	101.63	7	i P	Pdif	12 14 49.6	+0.9
SUMG	Summit	101.63	7	i P	pP	12 16 59.0	+2.1
	comp=Z,121nm,1.2s						
SUMG	Summit	101.63	7	i P	PKKPbc	12 30 53.3	-1.8
SUMG	Summit	101.63	7	i P	Pdif	12 14 49.6	+0.9
VISS	Visnje	101.75	44	i P	PKKPbc	12 30 54.1	+0.6
BOJS	Bojanci	101.87	45	i Pdiff	Pdif	12 14 53.0	+3.1
BOJS				i PP	PKiKP	12 19 06.0	-3.0
BOJS				eSKSac	SKSac	12 24 31.6	-1.1
BOJS	Bojanci	101.87	45	i P	PKKPbc	12 30 53.8	+0.7
OBKA	Obir	101.91	44	ePdiff	Pdif	12 14 51.8	+1.7
	comp=Z,28nm,1.1s						
OBKA				ePKiKP	PP	12 19 10.6	-0.6
	comp=Z,21nm,0.8s						
SOKA	Soboth	102.28	44	ePdiff	Pdif	12 14 53.9	+2.1
	comp=Z,9.7nm,1.2s						
SOKA				ePKiKP	PKiKP	12 19 08.7	-1.1
	comp=Z,30nm,1.4s						
SOKA				ePKKPbc	PKKPbc	12 30 52.8	+0.6
	comp=Z,7.5nm,1.0s						
PERS	Pernice	102.31	44	i Pdiff	Pdif	12 14 53.5	+1.6
PERS				i PP	PKiKP	12 19 01.4	-8.4
DLBC	Dease Lake	102.31	330	ePdif	Pdif	12 14 53.5	+1.8
MOA	Molln	102.36	42	ePdiff	Pdif	12 14 53.1	+1.0
	comp=Z,11nm,0.7s						
MOA				ePKiKP	PP	12 19 12.3	-2.1
	comp=Z,35nm,1.4s						
MOA				ePKKPbc	PKKPbc	12 30 51.2	-0.6
	comp=Z,2.9nm,0.6s						
SCO	Scoresbysund	102.39	13	i P	Pdif	12 14 55.8	+4.2
SCO	Scoresbysund	102.39	13	eP	Pdif	12 14 55.8	+4.2
NKC	Novy Kostel	102.44	40	ePDIFF	Pdif	12 14 54.9	+2.6
NKC				ePP	PP	12 19 13.2	-1.7
NKC				ePS	PS	12 28 36.2	-3.1
NKC	Novy Kostel	102.44	40	i P	Pdif	12 14 54.9	+2.6
NKC				e		12 19 13.2	
NKC				e		12 28 36.2	
GEA0	GERESS Array S	102.49	41	ePdif	Pdif	12 14 52.9	+0.2
GEC2	GERESS Array S	102.50	41	ePdif	Pdif	12 14 53.5	+0.7
GEC2	GERESS Array S	102.50	41	eP	Pdif	12 14 53.5	+0.7
GERES	GERESS Array B	102.50	41	P	Pdif	12 14 53.2	+0.4
	comp=Z,3.7nm,0.8s,baz=213,slow=4.1,SNR=13						
GERES				PP	PP	12 18 57.5	-18
	comp=Z,5.4nm,0.7s,baz=214,slow=6.9,SNR=4.8						
GERES				PKKPbc	PKKPbc	12 30 51.0	-0.6
	comp=Z,6.1nm,0.7s,baz=27,slow=1.5,SNR=15						
KHC	Kasperske Hory	102.56	41	ePdif	Pdif	12 14 54.7	+1.8
KHC	Kasperske Hory	102.56	41	ePDIFF	Pdif	12 14 54.4	+1.5
KHC				ex	x	12 18 10.0	
KHC				ePKP	PKiKP	12 19 10.0	-0.2
KHC				ex	x	12 19 21.5	
KHC				eSKS		12 24 39.0	
KHC				ePS	PS	12 28 38.0	-2.6
KHC				ePKKP	PKKPbc	12 30 51.1	-0.2
KHC	Kasperske Hory	102.56	41	i P	Pdif	12 14 54.4	+1.5
KHC				e		12 19 21.5	
KHC				e		12 24 39.0	
KHC				e		12 28 38.0	
BLY	Banja Luka	102.74	46	⇑iP	Pdif	12 14 55.8	+2.0
ARSA	Arzberg	102.84	43	ePdiff	Pdif	12 14 55.3	+1.1
	comp=Z,11nm,1.1s						
ARSA				ePKiKP	PKiKP	12 19 13.1	+2.4
	comp=Z,17nm,0.9s						
PDG	Podgorica	103.07	49	⇑iP	Pdif	12 14 55.1	-0.2
BEHE	Becsehely	103.26	44	⇓ePKiKP	PKiKP	12 19 18.1	+6.5
CLL	Collm	103.26	39	ePdif	Pdif	12 14 57.6	+1.7
CLL	Collm	103.26	39	i Pdif	Pdif	12 14 57.6	+1.7
	comp=Z,36nm,1.2s						
CLL				i PP	PP	12 19 17.7	-3.2
	comp=Z,87nm,1.4s						
CLL				epPP		12 21 12.0	
CLL				esPP		12 22 15.0	
CLL				eSKSac	SKSac	12 24 37.0	-1.8
CLL				eSdif	SKKSac	12 25 48.0	+24
CLL				e		12 26 48.0	
CLL				eSP	SP	12 27 30.0	-3.8
CLL				ePS	PS	12 28 41.0	-5.8
CLL				e(sSdiff)		12 29 53.0	
CLL				ePKKPbc	PKKPbc	12 30 47.0	-2.3
CLL				ePKKPmax		12 30 49.0	
	comp=Z,14nm,1.3s						
CLL				esPS		12 31 12.0	
CLL				eSS	SKKPbc	12 33 30.0	-7.8
CLL				esSS		12 36 30.0	
CLL				eSSS	SSS	12 37 18.0	
CLL				e		12 40 12.0	
CLL				eSSSS		12 40 42.0	
CLL				esSSSS		12 43 54.0	
CLL	Collm	103.26	39	i P	Pdif	12 14 57.6	+1.7
CLL				e		12 24 37.0	
CLL				pmax	pmax		
	comp=Z,36nm,1.2s						
CONA	Conrad Observa	103.35	43	ePdiff	Pdif	12 14 58.5	+1.9
	comp=Z,8.5nm,0.9s						
CONA				ePP	PP	12 19 19.3	-2.5
	comp=Z,60nm,1.5s						
CONA				ePKKPbc	PKKPbc	12 30 49.2	+0.2
	comp=Z,2.7nm,0.6s						
KMY	Karmoy	103.39	29	ePdif	Pdif	12 14 56.9	+0.7
PRU	Pruhonice	103.51	40	ePDIFF	Pdif	12 14 58.6	+1.5
PRU				ePP	PP	12 19 19.8	-3.0
PRU				eSKS		12 24 44.5	
PRU				ePS	PS	12 28 46.7	-2.6
PRU				ePKKP	PKKPbc	12 30 48.8	+0.3
PRU	Pruhonice	103.51	40	i P	Pdif	12 14 58.6	+1.5
PRU				e		12 19 19.8	
PRU				e		12 24 44.5	
PRU				e		12 28 46.7	
BRG	Berggiesshubel	103.58	39	ePDIFF	Pdif	12 14 59.5	+2.2
	comp=Z,42nm,1.7s						
BRG	Berggiesshubel	103.58	39	ePKP	PKiKP	12 19 12.7	+0.7
	comp=Z,32nm,1.8s						
BRG				i PP	PP	12 19 20.4	-2.9
	comp=Z,109nm,1.6s						
BRG				SKS		12 24 41.0	
BRG				PKKP	PKKPdf	12 31 16.0	+19
BRG	Berggiesshubel	103.58	39	eP	Pdif	12 14 59.5	+2.2
BRG				pmax	pmax		
	comp=Z,42nm,1.7s						
GOPC	GO Pecny, Ondr	103.62	41	ePDIFF	Pdif	12 15 00.1	+2.5
GOPC				ePKP	PKiKP	12 19 14.2	+2.1
GOPC				eSKS		12 24 41.5	
GOPC				ex	x	12 28 35.7	
GOPC	GO Pecny, Ondr	103.62	41	i P	Pdif	12 15 00.1	+2.5
GOPC				e		12 24 41.5	
GOPC				e		12 28 35.7	
SOP	Sopron	103.66	43	⇓ePKiKP	PP	12 19 20.1	-3.9
AGG	Agios Georgios	103.73	53	eP	PKiKP	12 19 17.9	+5.2
TREC	Trest	103.75	41	ePDIFF	Pdif	12 15 02.6	+4.4
TREC	Trest	103.75	41	i P	Pdif	12 15 02.6	+4.4
MUD	Monsted U'grnd	103.76	33	i P	Pdif	12 14 58.9	+0.9
	comp=Z,25nm,1.0s						
MUD	Monsted U'grnd	103.76	33	i P	Pdif	12 14 58.9	+0.9
MUD				pmax	pmax		
	comp=Z,25nm,1.0s						
PVCC	Panska Ves	103.78	40	ePDIFF	Pdif	12 14 59.5	+1.3
PVCC				ePKKP	PKKPbc	12 30 48.6	+0.9
PVCC	Panska Ves	103.78	40	i P	Pdif	12 14 59.5	+1.3
SNART	Snartemo	103.80	31	ePdif	Pdif	12 14 58.9	+0.8
BLS5	Blasjo	104.03	30	ePdif	Pdif	12 15 00.1	+0.9
ASK	Askoy	104.04	28	ePdif	Pdif	12 15 00.0	+0.9
BER	Bergen	104.05	28	ePdif	Pdif	12 14 59.7	+0.5
IDI	Anoyia	104.05	57	Pdiff	Pdif	12 15 01.1	+1.2
	comp=Z,19nm,0.9s,baz=214,slow=15,SNR=2.4						
TIH	Tihany	104.14	44	⇓ePKiKP	PP	12 19 25.1	-2.4
SUE	Sulen	104.17	28	ePdif	Pdif	12 15 00.4	+0.8
KRUC	Moravsky	104.17	42	ePDIFF	Pdif	12 15 02.1	+2.0
KRUC				ePP	PP	12 19 24.3	-3.4
KRUC				eSKS		12 24 45.0	
KRUC				e		12 30 46.0	
KRUC				e		12 31 09.1	
KRUC				e		12 33 15.8	
RUE	Ruedersdorf	104.23	38	eP	PP	12 19 23.7	-4.2
RUE				IAmb	IAmb	12 19 26.0	
	comp=Z,107nm,1.4s						
ODD1	Odda	104.35	29	ePdif	Pdif	12 15 01.9	+1.2
MODS	Modra-Piesok	104.40	43	eP	Pdif	12 15 03.0	+1.9
MODS	Modra-Piesok	104.40	43	ePDIFF	Pdif	12 15 03.0	+1.9
MODS				ePP	PP	12 19 26.0	-3.4
VRAC	Vranov	104.40	42	⇑iP	Pdif	12 15 03.2	+2.1
VRAC	Vranov	104.40	42	ePDIFF	Pdif	12 15 02.8	+1.7
VRAC				ePP	PP	12 19 25.9	-3.4
VRAC				eSKS		12 24 46.9	
VRAC				e		12 30 45.9	
VRAC				e		12 31 08.2	
VRAC				e		12 33 15.0	
RES	Resolute Bay	104.41	352	ePdif	Pdif	12 15 01.5	+1.0
RES	Resolute Bay	104.41	352	eP	Pdif	12 15 01.5	+1.0
FOO	Floro	104.57	27	ePdif	Pdif	12 15 02.7	+1.2
FOO				ePP	PP	12 19 29.9	-0.3
GRG	Griva	104.59	51	eP	PKiKP	12 19 22.9	+8.7
UPC	Upice	104.59	40	ePDIFF	Pdif	12 15 04.2	+2.3
UPC				ex	x	12 28 49.5	
UPC				ePKKP	PKKPbc	12 30 46.0	+0.7
UPC	Upice	104.59	40	i P	Pdif	12 15 04.2	+2.3
UPC				e		12 28 50.2	
HYA	Hoyanger	104.81	28	ePdif	Pdif	12 15 03.5	+1.0
JAVC	Velka Javorina	104.84	42	ePDIFF	Pdif	12 15 05.7	+2.6
JAVC				e		12 30 45.6	
JAVC				e		12 31 06.5	
JAVC				e		12 33 14.0	
KRLC	Kraliky	104.84	41	ePDIFF	Pdif	12 15 06.2	+3.1
KRLC				ePKKP	PKKPbc	12 30 45.4	+0.8
KRLC	Kraliky	104.84	41	i P	Pdif	12 15 06.2	+3.1
KSP	Ksiaz	104.90	40	eP	Pdif	12 15 05.8	+2.6
KSP	Ksiaz	104.90	40	eP	PP	12 19 29.8	-3.1
KSP	Ksiaz	104.90	40	eP	Pdif	12 15 05.8	+2.6
BUD	Budapest	105.08	44	⇓ePKiKP	PP	12 19 31.1	-3.2
MORC	Moravsky Berou	105.16	42	ePdif	Pdif	12 15 06.5	+2.0
MORC	Moravsky Berou	105.16	42	⇑iP	Pdif	12 15 06.8	+2.3
MORC	Moravsky Berou	105.16	42	⇑iP	PKKPbc	12 30 44.3	+0.7
MORC	Moravsky Berou	105.16	42	eP	Pdif	12 15 06.5	+2.0
MORC	Moravsky Berou	105.16	42	ePDIFF	Pdif	12 15 06.6	+2.1
MORC				e		12 30 43.7	
MORC				e		12 31 04.2	
VYHS	Vyhne	105.39	43	eP	Pdif	12 15 07.6	+2.1
VYHS				e		12 19 33.5	
VYHS	Vyhne	105.39	43	ePDIFF	Pdif	12 15 07.6	+2.1
VYHS	Vyhne	105.39	43	ePKP	PKiKP	12 19 12.9	-2.5
VYHS				ePP	PP	12 19 33.5	-3.1
KONO	Kongsberg	105.53	30	ePdif	Pdif	12 15 07.9	+2.2
AKN	Aaknes	105.67	27	ePdif	Pdif	12 15 07.3	+1.0
AKN				ePP	PP	12 19 37.7	-0.5
PSZ	Piszkesteto	105.80	44	⇓ePKiKP	PP	12 19 35.1	-4.5
BZS	Buzias	105.95	47	⇑iP	Pdif	12 15 11.3	+3.3
BZS	Buzias	105.95	47	⇑iP	PKKPab	12 30 59.4	+1.5
LANS	Liptovska Anna	106.04	43	ePKP	PKiKP	12 19 13.4	-3.2
LANS				ePP	PP	12 19 38.5	-2.8
MOL	Molde	106.08	27	ePdif	Pdif	12 15 09.7	+1.5
SIRR	Siria	106.24	46	⇑iP	Pdif	12 15 12.4	+3.1
SIRR	Siria	106.24	46	⇑iP	PKKPab	12 30 58.6	+1.9
PUNG	Punghina	106.28	48	⇑iP	PKKPab	12 30 59.3	+2.8
DOMB	Dombas	106.45	28	ePdif	Pdif	12 15 10.4	+0.5
YKAV	Yalikavak-Bodr	106.55	56	i P	PKKPab	12 30 58.0	+2.4
GZR	Gura Zlata	106.61	47	⇑iP	Pdif	12 15 15.7	+4.6
NIE	Niedzica	106.65	43	eP	Pdif	12 15 14.1	+3.0
NIE	Niedzica	106.65	43	eP	PP	12 19 42.8	-2.9
NIE	Niedzica	106.65	43	eP	Pdif	12 15 14.1	+3.0
OJC	Ojcow	106.67	42	eP	PP	12 19 38.9	-6.8

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LTVH  Ltavrtes, Hu      106.83  45⇓ePKiKP  PP      12 19 45.1 -1.9
DEV   Deva              106.88  47⇑iP      Pdif    12 15 16.6 +4.4
NB2   NORSAR Subarra    106.89  29  P      Pdif    12 15 12.9 +1.0
      comp=Z,40nm,2.0s,baz=236,slow=4.6
NB2   NORSAR Subarra    106.89  29  P      Pdif    12 15 12.9 +1.0
      baz=236,slow=4.6
NB200 NORSAR Array S    106.89  29 ePdif   Pdif    12 15 12.8 +1.0
NB200                              ePKiKP  PKiKP   12 19 17.7 -0.1
NB200                              ePP     PP      12 19 42.3 -4.8
NB200                              ePKKPbc PKKPbc  12 30 36.8 -1.9
NB200                              ePKKPab PKKPab  12 30 52.5 -0.8
NOA   NORSAR Array B    106.89  29  Pdiff  Pdif    12 15 12.8 +1.0
      comp=Z,1.4nm,0.6s,baz=235,slow=4.6,SNR=7.8
NOA                                 PKiKP  PKiKP   12 19 17.7 -0.1
      comp=Z,2.2nm,0.8s,baz=249,slow=2.3,SNR=6.4
NOA                                 PP     PP      12 19 42.3 -4.8
      comp=Z,6.4nm,0.9s,baz=239,slow=6.7,SNR=5.3
NOA                                 PKKPbc PKKPbc  12 30 36.8 -1.9
      comp=Z,1.8nm,0.7s,baz=65,slow=4.2,SNR=8.9
NOA                                 PKKPab PKKPab  12 30 52.5 -0.8
      comp=Z,9.4nm,0.8s,baz=63,slow=4.5,SNR=31
NC602 NORSAR Array S    106.89  30 ePdif   Pdif    12 15 13.1 +1.2
ALN   Alexandroupoli    107.10  52 eP      PKiKP   12 19 23.6 +4.8
ALN   Alexandroupoli    107.10  52 eP      PKiKP   12 19 23.6 +4.8
DRGR                    107.11  46⇑iP      Pdif    12 15 18.6 +5.3
ENEZ  Enez              107.11  53 eP      PKKPab  12 30 57.7 +4.8
NC405 NORSAR Array S    107.14  29 ePdif   Pdif    12 15 14.6 +1.6
LOT   Lotru             107.28  47  P      PP      12 19 54.3 +3.9
LOT   Lotru             107.28  47⇑iP      PKKPab  12 30 54.6 +2.4
TURN  Turunc            107.44  57 eP      PKiKP   12 19 18.9 -0.6
TURN  Turunc            107.44  57 eP      PKiKP   12 19 18.9 -0.6
TBLU  Trondheim         107.50  27 ePdif   Pdif    12 15 14.7 +0.2
TRPA  Tarpa             107.51  44⇑iP      Pdif    12 15 16.4 +1.5
TRPA  Tarpa             107.51  44⇑iP      PKiKP   12 19 19.8 +0.5
TRPA  Tarpa             107.51  44⇓ePKiKP  PP      12 19 49.0 -2.8
HFS   Hagfors           107.58  31  Pdiff  Pdif    12 15 15.6 +0.7
      comp=Z,3.5nm,0.6s,baz=251,slow=4.4,SNR=8.3
HFS                                 PKKPbc PKKPbc  12 30 34.5 -1.9
      comp=Z,12nm,0.7s,baz=128,slow=2.4,SNR=12
HFS                                 PKKPab PKKPab  12 30 49.9 -0.3
      comp=Z,26nm,0.6s,baz=92,slow=4.5,SNR=35
GOMA  Golmarmara-Man    107.62  55 i P     PKiKP   12 19 29.0 +9.2
ARR   Arges             107.81  48⇑iP      Pdif    12 15 20.1 +3.7
ARR   Arges             107.81  48⇑iP      PKKPab  12 30 51.7 +1.9
DAG   Danmarks Havn     107.92  10 i P     Pdif    12 15 18.1 +2.0
DAG   Danmarks Havn     107.92  10 i P     PKKPbc  12 30 32.9 -2.8
      comp=Z,13nm,0.8s
DAG                                i               12 30 49.0
DAG   Danmarks Havn     107.92  10 i P     Pdif    12 15 18.1 +2.0
EDRB  Edirne            107.94  52 eP      PKiKP   12 19 18.9 -1.4
EDRB  Edirne            107.94  52 eP      PKiKP   12 19 18.9 -1.4
AKAS  Kas               107.95  58 eP      PKiKP   12 19 17.9 -2.8
AKAS  Kas               107.95  58 eP      PKiKP   12 19 17.9 -2.8
JMB   Yambol            108.06  51 eP      PP      12 19 51.2 -4.7
VOIR                    108.11  48⇓iP      PKKPbc  12 30 34.6 +0.1
VOIR                    108.11  48⇓iP      PKKPab  12 30 53.3 +4.8
KWP   Kalwaria Pacla    108.18  43 eP      PKiKP   12 19 20.7 +0.2
ARCR  ARCALIA           108.26  46⇑iP      PKKPbc  12 30 34.8 +0.8
PHSR  Pinarhisar        108.41  52⇑iP      PKKPab  12 30 49.2 +2.0
MLR   Muntele Rosu      108.72  48⇑iP      Pdif    12 15 23.7 +3.2
MLR   Muntele Rosu      108.72  48  Pdiff  Pdif    12 15 21.0 +0.5
      comp=Z,3.0nm,0.7s,baz=136,slow=6.9,SNR=4.8
MLR                                 PKiKP  PKiKP   12 19 21.7 -0.1
      comp=Z,12nm,0.6s,baz=334,slow=2.9,SNR=6.2
MLR                                 PP     PP      12 19 50.0  -11
      comp=Z,12nm,0.8s,baz=303,slow=6.8,SNR=3.3
MLR                                 PKKPbc PKKPbc  12 30 32.0 -0.7
      comp=Z,5.1nm,0.5s,baz=5.2,slow=6.6,SNR=7.4
MLR                                 PKKPab PKKPab  12 30 46.2 +0.3
      comp=Z,7.0nm,0.7s,baz=113,slow=7.7,SNR=5.5
INK   Inuvik            108.77 338 ePdif   Pdif    12 15 22.1 +2.1
INK   Inuvik            108.77 338  Pdiff  Pdif    12 15 20.7 +0.7
      comp=Z,2.7nm,0.7s,baz=67,slow=3.4,SNR=14
INK                                 PKiKP  PKiKP   12 19 21.1 +0.1
      comp=Z,5.4nm,0.7s,baz=31,slow=2.5,SNR=5.0
INK                                 PKKPbc PKKPbc  12 30 31.3 -1.6
      comp=Z,16nm,0.8s,baz=294,slow=4.3,SNR=17
INK                                 PKKPab PKKPab  12 30 44.5 -0.3
      comp=Z,18nm,1.1s,baz=263,slow=5.2,SNR=5.9
INK                                 SKKPbc SKKPbc  12 33 19.2 -4.1
      comp=Z,6.5nm,0.9s,baz=332,slow=4.6,SNR=4.7
CTYL  Yalikoy Yolu      108.89  53 eP      PKiKP   12 19 21.1 -1.0
CTYL  Yalikoy Yolu      108.89  53 eP      PKiKP   12 19 21.1 -1.0
CTKS  Kestanelik-??a    108.96  53 eP      PKKPbc  12 30 26.3 -5.3
ANTB  Antalya           108.98  58 eP      PP      12 19 50.6  -12
EPYK  Eagle Plains      108.98 336  P      PKiKP   12 19 21.5 -0.1
      baz=116
BURAR Bucovina Array    109.00  46⇓iP      Pdif    12 15 26.1 +4.4
BURAR Bucovina Array    109.00  46⇑iP      PKKPdf  12 30 46.3  0.0
TVSB  Tavsanli          109.01  55 eP      PKiKP   12 19 22.1 -0.5
TVSB  Tavsanli          109.01  55 eP      PKiKP   12 19 22.1 -0.5
SBT5  Esenkoy-Cinarc    109.01  54 eP      PP      12 20 03.3 +0.7
BGKT  Bogazkoy          109.12  53 eP      PP      12 19 51.1  -12
KAVV  Kandilli-Istan    109.29  53 eP      PKKPbc  12 30 30.8 +0.2
PLOR  Plostina          109.31  48⇑iP      PKiKP   12 19 22.5 -0.3
BIZ   Bicaz             109.33  47⇑iP      Pdif    12 15 26.5 +3.4
VRI   Vrincioaia        109.36  48⇑iP      PKiKP   12 19 09.8  -13
VRI   Vrincioaia        109.36  48⇓iP      PKKPab  12 30 31.5  -11
PRAR  RASCA             109.56  46⇑iP      PKKPab  12 30 43.7 +1.8
PSN   Preselentsi       109.58  50 eP      PKiKP   12 19 37.2  +14
EIL   Elat              109.73  66 eP      PKiKP   12 19 25.2 +1.1
EIL   Elat              109.73  66 eP      PKiKP   12 19 25.2 +1.1
EIL   Elat              109.73  66  PKiKP  PKiKP   12 19 24.2 +0.2
      comp=Z,5.8nm,0.6s,baz=120,slow=1.7,SNR=7.6
TLB   Topalu            109.80  49⇑iP      PKKPbc  12 30 29.1 +0.1
HRFI  Mount Harif       109.94  66 eP      PKiKP   12 19 24.2 -0.3
HRFI  Mount Harif       109.94  66 eP      PKiKP   12 19 24.2 -0.3
SUW   Suwalki           110.02  39 eP      PKiKP   12 19 22.8 -1.1
SUW   Suwalki           110.02  39 ePKIKP  PKiKP   12 19 22.7 -1.1
PBUR  Paburg            110.03  37 eP      PKiKP   12 19 24.5 +0.7
PBUR                                IAmb   IAmb    12 19 25.5
      comp=Z,46nm,0.8s
LEF   Lefka             110.05  60 i P     PP      12 19 53.0  -17
CSS   Mathiatis         110.33  60 eP      PKiKP   12 19 25.7 +0.6
CSS   Mathiatis         110.33  60 eP      PKiKP   12 19 25.7 +0.6
MOR8  Moi Rana          110.37  25 ePdif   Pdif    12 15 28.5 +1.3
MOR8                               ePP     PP      12 20 11.9 +0.2
AKIN  Akıncılar- Kıb    110.45  60 eP      PKiKP   12 19 32.5 +7.2
TLCR                    110.52  49⇑iP      PKiKP   12 19 26.4 +1.4
LFK   Lefkose           110.59  60 eP      PP      12 20 12.0 -2.2
BERE  Bereket-Mersin    110.72  59 eP      PKiKP   12 19 26.7 +0.7
BERE  Bereket-Mersin    110.72  59 eP      PKiKP   12 19 26.7 +0.7
SLIT  Slitere, Latvi    110.76  35 eP      PKiKP   12 19 25.1  0.0
SLIT                                IAmb   IAmb    12 19 25.7
      comp=Z,64nm,0.6s
LOF   Lofoten           110.81  23 ePdif   Pdif    12 15 28.4 -0.6
AKK2  Akkuyu-Mersin     110.90  59 eP      PP      12 20 01.4  -15
DZM   Mont Dzumac       111.00 229  PKiKP  PKiKP   12 19 27.4 +0.4
      comp=Z,8.0nm,0.7s,baz=202,slow=5.0,SNR=9.9
DZM                                 PKKPbc PKKPbc  12 30 25.7 +0.3
      comp=Z,15nm,0.6s,baz=249,slow=8.9,SNR=25
DZM                                 PKKPab PKKPab  12 30 39.4  0.0
      comp=Z,42nm,0.8s,baz=326,slow=15,SNR=14
KIS   Kishinev          111.10  47 e       PKKPbc  12 30 10.0  -15
CHBY  Cihanbeyli        111.22  57 eP      PKiKP   12 19 27.2 +0.4
CHBY  Cihanbeyli        111.22  57 eP      PKiKP   12 19 27.2 +0.4
MMAI  Mount Meron Ar    111.28  63  Pdiff  Pdif    12 15 32.4 +0.2
      comp=Z,0.4nm,0.3s,baz=214,slow=7.0,SNR=2.6
MMAI                                PKiKP  PKiKP   12 19 27.4 +0.4
      comp=Z,9.3nm,0.5s,baz=85,slow=1.8,SNR=16
MMAI                                PP     PP      12 20 07.9  -11
      comp=Z,7.1nm,0.7s,baz=291,slow=4.5,SNR=3.9
MMAI                                PKKPbc PKKPbc  12 30 23.7 -0.4
      baz=71,slow=4.1
MMAI                                SKKPbc SKKPbc  12 33 12.9 -0.7
      comp=Z,5.3nm,0.7s,baz=59,slow=3.2,SNR=6.6
STEI  Steigen           111.32  23 ePP     PP      12 20 18.1 -0.3
STEI  Steigen           111.32  23 i       PKKPbc  12 30 23.4 -1.3
STEI                               e               12 30 33.9
KULU  Kulu              111.45  56 eP      PKiKP   12 19 27.8 +0.6
KULU  Kulu              111.45  56 eP      PKiKP   12 19 27.8 +0.6
AFSR  Afar-Bala (An     111.64  56 eP      PKiKP   12 19 28.3 +0.8
AFSR  Afar-Bala (An     111.64  56 eP      PKiKP   12 19 28.3 +0.8
IIGN  Ignalina          112.12  38 eP      PKiKP   12 19 28.1 +0.3
IIGN                                IAmb   IAmb    12 19 28.7
      comp=Z,6.2nm,0.7s
ISAL  Salakas           112.13  38 eP      PKiKP   12 19 28.4 +0.7
ISAL                                IAmb   IAmb    12 19 29.6
      comp=Z,9.6nm,0.7s
BR101 Keskin Array S    112.14  56 ePdif   Pdif    12 15 37.1 +1.2
BR101                              ePKiKP  PKiKP   12 19 28.6  0.0
BR101                              ePP     PP      12 20 07.4  -18
BR101                              ePKKPbc PKKPbc  12 30 21.1 -0.5
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BR101                              ePKKPab PKKPab  12 30 30.8 -0.2
BR131 Keskin Array S    112.14  56  PKiKP  PKiKP   12 19 29.1 +0.6
      SNR=6.3
BR131 Keskin Array S    112.14  56  P      PKiKP   12 19 29.1 +0.6
      SNR=6.3
BRTR  Keskin Array B    112.14  56  Pdiff  Pdif    12 15 37.1 +1.2
      comp=Z,0.3nm,0.4s,baz=214,slow=5.1,SNR=2.8
BRTR                                PKiKP  PKiKP   12 19 28.6  0.0
      comp=Z,14nm,0.8s,baz=198,slow=2.7,SNR=26
BRTR                                PP     PP      12 20 07.4  -18
      comp=Z,8.9nm,0.8s,baz=233,slow=6.0,SNR=7.2
BRTR                                PKKPbc PKKPbc  12 30 21.1 -0.5
      comp=Z,1.0nm,0.7s,baz=80,slow=4.0,SNR=3.5
BRTR                                PKKPab PKKPab  12 30 30.8 -0.2
      comp=Z,4.5nm,0.8s,baz=92,slow=4.4,SNR=9.4
ASF   Jabal al Asfar    112.18  64  PKiKP  PKiKP   12 19 29.4 +0.6
      comp=Z,7.8nm,0.7s,baz=347,slow=0.2,SNR=9.8
ASF                                 PP     PP      12 20 13.9  -12
      comp=Z,5.9nm,0.9s,baz=130,slow=6.1,SNR=3.0
HDA   Harding Lake      112.21 332  P      PKiKP   12 19 27.5 -0.2
      baz=108
IZAR  Zarasai           112.25  38 eP      PKiKP   12 19 27.3 -0.7
NACGM Naroch            112.29  39 eP      PKiKP   12 19 27.0 -1.1
NACGM                               PM             12 19 28.0
      comp=Z,0.4nm,1.0s
ILAR  Eielson Array     112.29 333  Pdiff  Pdif    12 15 36.7 +0.8
      comp=Z,0.6nm,0.9s,baz=158,slow=4.2,SNR=6.4
ILAR                                PKiKP  PKiKP   12 19 27.8 -0.1
      comp=Z,5.9nm,1.0s,baz=197,slow=0.5,SNR=26
ILAR                                PP     PP      12 20 15.5  -10
      comp=Z,3.6nm,0.7s,baz=108,slow=6.1,SNR=6.8
ILAR                                SKiKP  SKiKP   12 22 08.9 +0.6
      comp=Z,2.4nm,0.5s,baz=220,slow=1.1,SNR=4.8
ILAR                                PKKPbc PKKPbc  12 30 19.4 -2.1
      comp=Z,2.8nm,0.8s,baz=301,slow=3.1,SNR=7.5
ILB   Eielson Array     112.29 333 ePdif   Pdif    12 15 36.6 +0.8
ILB                                ePKiKP  PKiKP   12 19 28.6 +0.7
IDID  Didziasalis       112.39  38 eP      PKiKP   12 19 29.2 +0.9
IDID                                IAmb   IAmb    12 19 29.9
      comp=Z,19nm,0.5s
KRTS  Karatas           112.43  59 i P     PP      12 19 58.0  -29
KIEV  Kiev              112.47  43⇑iP      PKKPbc  12 30 21.1 +0.6
KIEV  Kiev              112.47  43 i PKiKP PKiKP   12 19 28.3 -0.3
      SNR=15
KIEV  Kiev              112.47  43 i PKIKP PKiKP   12 19 27.8 -0.8
AKASG Malin Array Be    112.49  43  Pdiff  Pdif    12 15 38.9 +1.9
      comp=Z,0.6nm,0.4s,baz=262,slow=4.1,SNR=3.9
AKASG                               PKiKP  PKiKP   12 19 28.2 -0.5
      comp=Z,16nm,0.6s,baz=264,slow=2.6,SNR=49
AKASG                               PP     PP      12 20 18.7 -8.3
      comp=Z,16nm,0.8s,baz=255,slow=6.7,SNR=9.5
AKASG                               SKiKP  SKiKP   12 22 08.7 -0.3
      comp=Z,4.9nm,0.7s,baz=256,slow=2.6,SNR=4.3
AKASG                               PKKPbc PKKPbc  12 30 18.4 -2.1
      comp=Z,1.3nm,0.4s,baz=57,slow=3.5,SNR=4.1
AKASG                               PKKPab PKKPab  12 30 28.9 +0.1
      comp=Z,14nm,0.9s,baz=60,slow=4.3,SNR=12
AKBB  Malin Array Si    112.49  43 ePKiKP  PKiKP   12 19 28.1 -0.6
POKR  Poker Plat Res    112.62 333  P      PKiKP   12 19 28.2 -0.3
      baz=107
YURE  YUREGIR           112.71  59 eP      PKiKP   12 19 29.3 -0.3
YURE  YUREGIR           112.71  59 eP      PKiKP   12 19 29.3 -0.3
COLA  College           112.72 333 i PKIKP PKiKP   12 19 27.5 -1.1
TCOL  CIGO, UAF Yank    112.72 333  P      PKiKP   12 19 28.1 -0.6
      baz=107
MNK   Minsk             112.79  39 ePKIKP  PKiKP   12 19 28.0 -1.1
KOZT  Kozan             113.06  59 eP      PKiKP   12 19 30.3 +0.1
KOZT  Kozan             113.06  59 eP      PKiKP   12 19 30.3 +0.1
TRO   Tromso            113.16  22 ePdif   Pdif    12 15 40.7 +1.2
TRO                                ePKPdf  PKiKP   12 19 30.5 +1.2
TRO   Tromso            113.16  22 i       PKKPbc  12 30 17.7 -1.0
TRO                                e       PKKPab  12 30 26.2 +0.9
VSU   Vasula            113.27  35c iPKIKP PKiKP   12 19 28.8 -1.1
VSU                                 pmax   pmax
      comp=Z,140nm,0.6s
VSU   Vasula            113.27  35 eP      PKiKP   12 19 29.9 +0.1
VSU                                 IAmb   IAmb    12 19 31.3
      comp=Z,170nm,0.7s
YOZ   Yozgat            113.35  56  P      PKiKP   12 19 31.4 +0.5
YOZ   Yozgat            113.35  56 eP      PKiKP   12 19 31.4 +0.5
KIF   Kilpisjarvi       113.61  23 i       PKKPbc  12 30 14.6 -2.6
KIF                                e               12 30 24.5
FIA0  FINESS Array S    113.73  32 ePdif   Pdif    12 15 44.4 +2.2
FIA0                               ePKiKP  PKiKP   12 19 30.7  0.0
FIA0                               ePP     PP      12 20 26.4 -9.0
FIA0                               ePKKPbc PKKPbc  12 30 15.1 -1.6
FIA0                               ePKKPab PKKPab  12 30 23.1 +0.1
FIA0                               e               12 33 03.5
FIA0  FINESS Array S    113.73  32 eP      Pdif    12 15 44.4 +2.2
FIA0                               i               12 19 30.7
FIA0                               e               12 30 23.1
FINES FINESS Array B    113.73  32  Pdiff  Pdif    12 15 44.4 +2.2
      comp=Z,0.7nm,0.6s,baz=204,slow=5.8,SNR=2.4
FINES                               PKiKP  PKiKP   12 19 30.7  0.0
      comp=Z,9.7nm,0.7s,baz=124,slow=0.7,SNR=12
FINES                               PP     PP      12 20 26.4 -9.0
      comp=Z,6.5nm,0.8s,baz=291,slow=3.9,SNR=3.3
FINES                               PKKPbc PKKPbc  12 30 15.1 -1.6
      comp=Z,13nm,0.5s,baz=72,slow=4.5,SNR=28
FINES                               PKKPab PKKPab  12 30 23.1 +0.1
      comp=Z,19nm,0.5s,baz=79,slow=4.7,SNR=24
FINES                               SKKPbc SKKPbc  12 33 03.5 -4.7
      comp=Z,1.5nm,0.6s,baz=74,slow=6.8,SNR=3.4
KMRS  Kahramanmaras     113.88  59 i P     PKiKP   12 19 54.0  +22
GAZ   Gaziantep         114.02  59 eP      PKiKP   12 19 57.7  +26
SIM   Simferopol'       114.02  50  PKIKP  PKiKP   12 19 32.7 +0.9
SIM                                 pmax   pmax
      comp=Z,38nm,0.6s
KVT   Kavak             114.30  55  P      PKiKP   12 19 39.4 +6.9
TOLK  Toolik Lake Re    114.40 336  P      PKiKP   12 19 32.4 +0.5
      baz=104,SNR=14
HSPB  Hornsund (broa    114.46  14 ePdif   Pdif    12 15 44.9 -0.3
KTK1  Kautokeino        114.46  23 ePdif   Pdif    12 15 46.5 +1.2
KTK1                               ePKPdf  PKiKP   12 19 32.0 +0.1
KTK1                               e               12 30 20.2
KTK1  Kautokeino        114.46  23 i       PKKPbc  12 30 12.9 -1.5
KTK1                               e               12 30 20.4
HEF   Hetta             114.47  24 e       PKKPab  12 30 19.5 -0.1
DARE  Darende-Malaty    114.64  58 eP      PKPdf   12 19 31.9 -1.4
DARE  Darende-Malaty    114.64  58 eP      PKPdf   12 19 31.9 -1.4
SPA0  Spitsbergen Ar    114.98  13 ePdif   Pdif    12 15 48.5 +0.9
SPA0                               ePKPdf  PKiKP   12 19 33.1 +0.4
SPA0  Spitsbergen Ar    114.98  13 e               12 30 12.0
SPITS Spitsbergen Ar    114.98  13  PKP    PKPdf   12 19 31.4 -1.4
      comp=Z,11nm,0.7s,baz=336,slow=3.2,SNR=26
SPITS                               PKKPbc PKKPbc  12 30 11.4 -1.3
      comp=Z,24nm,0.8s,baz=96,slow=8.5,SNR=17
SPITS                               PKKPab PKKPab  12 30 18.6 +1.5
      comp=Z,5.4nm,0.4s,baz=96,slow=6.8,SNR=19
HAMF  Hammerfest        115.00  22 ePdif   Pdif    12 15 47.9 +0.3
HAMF                               ePKPdf  PKiKP   12 19 33.8 +0.9
HAMF  Hammerfest        115.00  22 e               12 30 10.6
ARA0  ARCESS Array S    115.37  23 ePdif   Pdif    12 15 50.8 +1.4
ARA0                               ePKPdf  PKPdf   12 19 33.5 -0.2
ARA0                               ePP     PP      12 20 42.5 -4.1
ARA0                               eSKPdf  SKiKP   12 22 15.3 +1.2
ARA0                               ePKKPbc PKKPbc  12 30 09.8 -1.5
ARA0                               ePKKPab PKKPab  12 30 16.6 +1.0
ARCES ARCESS Array B    115.37  23  Pdiff  Pdif    12 15 50.8 +1.4
      comp=Z,7.3nm,1.1s,baz=286,slow=3.4,SNR=2.4
ARCES                               PKP    PKPdf   12 19 33.5 -0.2
      comp=Z,9.8nm,0.8s,baz=270,slow=1.8,SNR=17
ARCES                               PP     PP      12 20 42.5 -4.1
      comp=Z,13nm,0.8s,baz=263,slow=7.2,SNR=7.8
ARCES                               SKiKP  SKiKP   12 22 15.3 +1.2
      comp=Z,6.0nm,0.8s,baz=245,slow=3.5,SNR=3.6
ARCES                               PKKPbc PKKPbc  12 30 09.8 -1.5
      comp=Z,27nm,0.5s,baz=72,slow=5.2,SNR=110
ARCES                               PKKPab PKKPab  12 30 16.6 +1.0
      comp=Z,50nm,0.6s,baz=84,slow=5.0,SNR=12
ARCES                               SKKPbc SKKPbc  12 32 60.0 -3.8
      comp=Z,9.6nm,0.7s,baz=88,slow=3.3,SNR=7.8
ARE0  ARCESS Array S    115.37  23 ePKPdf  PKiKP   12 19 34.8 +1.1
ARE0  ARCESS Array S    115.37  23 e       PKKPbc  12 30 10.3 -1.0
PUL   Pulkovo           115.37  34c iPKIKP PKiKP   12 19 34.9 +1.0
PUL                                 pmax   pmax
      comp=Z,113nm,0.6s
IM3   Indian Mountai    115.38 333 ePKPdf  PKiKP   12 19 34.4 +0.6
STKA  Stephens Creek    116.05 203  PKP    PKPdf   12 19 35.8 -0.5
      comp=Z,12nm,0.7s,baz=73,slow=0.7,SNR=16
STKA                                PP     PP      12 20 49.4 -1.1
      comp=Z,10nm,0.9s,baz=160,slow=7.7,SNR=4.6
STKA                                PKKPbc PKKPbc  12 30 07.9 -1.2
      comp=Z,10nm,0.7s,baz=339,slow=4.8,SNR=14
STKA                                PKKPab PKKPab  12 30 14.8 -2.8
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      comp=Z,26nm,0.7s,baz=331,slow=6.5,SNR=21
ANN   Anapa             116.26  51 i PKIKP PKPdf   12 19 35.9 -0.2
ANN                                e               12 20 51.1
ANN                                e               12 25 31.4
ANN                                 pmax   pmax
      comp=Z,128nm,1.3s
HOPEN Hopen             116.48  15 ePKPdf  PKiKP   12 19 36.1 +0.5
MAZI  Mazidag           116.57  60 eP      PKiKP   12 19 38.1 +1.0
MAZI  Mazidag           116.57  60 eP      PKiKP   12 19 38.1 +1.0
BBOO  Buckleboo         116.92 198 ePKPdf  PKPdf   12 19 37.2 -0.7
BAYT  Aydıntepe-Bayb    117.11  57 i P     PKPpre  12 19 24.2
BAYT  Aydıntepe-Bayb    117.11  57 eP      PKPpre  12 19 24.2
BNGB  Bingl             117.16  58  P      PKiKP   12 19 39.1 +0.9
BNGB  Bingl             117.16  58 eP      PKiKP   12 19 39.1 +0.9
YEDI  Yedisu-Bingol     117.17  58 eP      PKiKP   12 20 08.6  +30
SVAN  Silvan-Diyarba    117.33  59 eP      PKiKP   12 19 39.6 +1.1
SVAN  Silvan-Diyarba    117.33  59 eP      PKiKP   12 19 39.6 +1.1
SOC   Sochi             117.57  53 i PKIKP PKiKP   12 19 39.0 +0.3
SOC                                e               12 21 06.7
SOC                                e               12 21 53.0
SOC                                ePPP    PPP     12 23 45.2
SOC                                e               12 25 37.0
SOC                                ePS     PKKPdf  12 30 51.6  +22
SOC                                 pmax   pmax
      comp=Z,105nm,0.7s
CHOM  Cayeli-Rize       117.74  56 eP      PKPpre  12 19 28.8
CHOM  Cayeli-Rize       117.74  56 eP      PKPpre  12 19 28.8
VRTB  Varto-Mus         117.78  58 eP      PKiKP   12 19 47.4 +7.9
OBN   Obninsk           117.82  40 ePKPdf  PKPdf   12 19 38.3 -0.4
OBN   Obninsk           117.82  40 i PKIKP PKPdf   12 19 38.7 -0.1
OBN                                 pmax   pmax
      comp=Z,76nm,0.8s
OBN   Obninsk           117.82  40  PKP    PKPdf   12 19 38.6 -0.1
      comp=Z,22nm,0.5s,baz=237,slow=0.6,SNR=15
OBN                                 PKKPab PKKPab  12 30 04.6 -0.5
      comp=Z,13nm,0.9s,baz=9.9,slow=21,SNR=3.8
APA   Apatity           117.94  26⇓iPKIKP  PKPdf   12 19 38.2 -0.4
APA                                i               12 23 39.0
APA                                 pmax   pmax
      comp=Z,25nm,0.7s
KOPR  Koprukoy-ERZUR    118.28  57  P      PKiKP   12 19 41.2 +0.7
KOPR  Koprukoy-ERZUR    118.28  57 eP      PKiKP   12 19 41.2 +0.7
HOMI  Horasan           118.34  57 i P     PKPdf   12 19 40.0 -0.6
HOMI                                IAML_P
      comp=Z,30nm,0.1s
DBAD  Bademkaya         118.41  56 i P     PKiKP   12 19 42.1 +1.5
DDEM  Demirkent         118.42  56 i P     PKiKP   12 19 42.6 +2.0
DDEM                                IAML_P
      comp=Z,207nm,0.2s
LVZ   Lovozero          118.44  25c iPKIKP PKiKP   12 19 41.6 +1.9
LVZ                                 pmax   pmax
      comp=Z,152nm,2.5s
BCA   Borcka            118.45  56 eP      PKiKP   12 19 41.2 +0.7
BCA   Borcka            118.45  56 eP      PKiKP   12 19 41.2 +0.7
DBOC  Borcka            118.47  56 i P     PKPdf   12 19 40.4 -0.1
MOS   Moscow            118.52  39 i PKIKP PKPdf   12 19 39.9 -0.2
MOS                                e               12 21 18.4
MOS                                e               12 25 38.9
MOS                                 pmax   pmax
      comp=Z,100nm,0.8s
MOS                                 pmax   pmax
      comp=Z,106nm,0.8s
DAGI  Agillar           118.58  56 i P     PKPdf   12 19 40.4 -0.4
DAGI                                IAML_P
      comp=Z,509nm,0.5s
MLAZ  Malazgirt-MUS     118.60  59 eP      PKiKP   12 20 07.5  +26
ARTV  Artvin            118.62  56 i P     PKiKP   12 19 41.9 +0.8
ARTV                                IAML_P
      comp=Z,4µm,0.5s
VSR   Storozhevoye      118.72  44 ePKIKP  PKPdf   12 19 38.9 -1.7
VSR                                e               12 25 37.1
VSR                                 pmax   pmax
      comp=Z,60nm,0.6s
AKDM  Akdamar-Van       118.73  60 i P     PKiKP   12 19 43.3 +1.9
AKDM  Akdamar-Van       118.73  60 eP      PKiKP   12 19 43.3 +1.9
SENK  Senkaya-Erzuru    118.79  57 eP      PKiKP   12 19 44.1 +2.6
LPSR  Galich'ya Gora    118.80  43 ePKIKP  PKPdf   12 19 40.5 -0.2
LPSR                               e               12 25 38.1
LPSR                                pmax   pmax
      comp=Z,170nm,0.7s
VORR  Voronezh          118.82  44  PKIKP  PKiKP   12 19 42.0 +1.1
VORR                                pmax   pmax
      comp=Z,250nm,0.8s
CUKT  Cukurca           118.95  61 eP      PKiKP   12 19 42.2 +0.4
CUKT  Cukurca           118.95  61 eP      PKiKP   12 19 42.2 +0.4
AGRB  Hanur-Agry        119.04  58 eP      PKiKP   12 19 43.8 +1.8
AGRB  Hanur-Agry        119.04  58 eP      PKiKP   12 19 43.8 +1.8
RDOG  Red Dog Mine      119.20 335 ePKPdf  PKiKP   12 19 41.6 +0.4
EPOS  Posof             119.28  56 i P     PKiKP   12 19 43.3 +1.0
NWAO  Narrogin (SRO)    119.50 180  PKP    PKPdf   12 19 42.6 -0.3
      comp=Z,26nm,0.7s,baz=3.7,slow=4.4,SNR=11
NWAO                                PKKPbc PKKPbc  12 29 56.5 -0.7
      comp=Z,30nm,1.2s,baz=59,slow=5.9,SNR=5.5
DYDN  Diyadin           119.56  58 i P     PKiKP   12 19 44.2 +1.2
DYDN                                IAML_P
      comp=Z,3µm,0.6s
TMCR  Tamitsa           119.58  30 ePKIKP  PKiKP   12 19 42.1 +0.2
TMCR                                pmax   pmax
      comp=Z,47nm,0.6s
CLDR  Caldiran          119.64  59 eP      PKiKP   12 19 43.8 +0.6
CLDR  Caldiran          119.64  59 eP      PKiKP   12 19 43.8 +0.6
NEY   Neytrino          119.64  54 i PKIKP PKPdf   12 19 42.3 -0.6
EAK   Akyaka            119.75  57 i P     PKiKP   12 19 45.1 +1.8
KIV   Kislovodsk        119.75  53 ePKPdf  PKPdf   12 19 42.9 -0.1
KIV   Kislovodsk        119.75  53⇑iP      PKKPab  12 30 00.4 +3.1
KIV   Kislovodsk        119.75  53 i PKPdf PKiKP   12 19 43.7 +0.6
      SNR=11
KIV   Kislovodsk        119.75  53 i P     Pdif    12 16 15.4 +5.8
KIV                                e               12 21 22.5
KIV                                e               12 25 48.3
KIV   Kislovodsk        119.75  53  PKPdf  PKiKP   12 19 43.6 +0.6
      SNR=18
KIV   Kislovodsk        119.75  53  P      PKiKP   12 19 43.6 +0.6
      SNR=18
KVAR  Kislovodsk Arr    119.76  53  PKP    PKiKP   12 19 43.1  0.0
      comp=Z,18nm,0.8s,baz=255,slow=20,SNR=28
KBZ   Khabaz            119.86  53  PKP    PKiKP   12 19 43.5 +0.3
      comp=Z,59nm,1.0s,baz=221,slow=2.1,SNR=42
KBZ                                 PP     PP      12 21 13.5 -4.3
      comp=Z,22nm,0.8s,baz=229,slow=7.0,SNR=5.3
KBZ                                 PKKPab PKKPab  12 29 56.3 -0.3
      comp=Z,15nm,0.8s,baz=76,slow=3.8,SNR=17
BGD   Bogdanovka        119.87  56 eP      PKiKP   12 19 43.8 +0.2
BGD   Bogdanovka        119.87  56 eP      PKiKP   12 19 43.8 +0.2
KLMR  Klimovskoe        120.06  33 ePKIKP  PKPdf   12 19 42.8 -0.1
KLMR                                pmax   pmax
      comp=Z,98nm,0.7s
KLMR  Klimovskoe        120.06  33 ePKPdf  PKPdf   12 19 42.9  0.0
KLMR                                AMP            12 19 44.3
      comp=Z,98nm,0.7s
KLMR                               ePP     PP      12 21 15.1 -3.5
KLMR                               ePKKPab PKKPbc  12 29 53.9 -0.7
ANM   Nome              120.06 331 ePKPdf  PKiKP   12 19 43.4 +0.5
ANM   Nome              120.06 331 ePKIKP  PKiKP   12 19 43.4 +0.5
GOF   Gofitskoye        120.21  52 ePKIKP  PKiKP   12 19 43.9 +0.1
GOF                                eS      SKSac   12 25 50.1 +3.4
GOF                                 pmax   pmax
      comp=Z,260nm,0.7s
GOF                                 smax   smax
      comp=E,180nm,1.4s
VRH   Novokhopyorsk     120.31  45 ePKIKP  PKPdf   12 19 43.2 -0.4
VRH                                e               12 25 43.8
VRH                                 pmax   pmax
      comp=Z,150nm,0.9s
NCK   Nalchik           120.31  54 i PKIKP PKPdf   12 19 43.9 -0.1
GNI   Garni             120.48  58 eP      PKiKP   12 19 44.8 +0.1
GNI   Garni             120.48  58 eP      PKiKP   12 19 44.8 +0.1
GNI   Garni             120.48  58 ePKPdf  PKiKP   12 19 44.9 +0.1
GNI                                ePKPdf  PKiKP   12 19 45.5 +0.7
GNI                                ePP     PP      12 21 15.9 -6.5
GNI                                ePKKPbc PKKPbc  12 29 52.9  0.0
GNI   Garni             120.48  58 i PKiKP PKiKP   12 19 45.6 +0.7
      SNR=14
GNI   Garni             120.48  58  PKiKP  PKiKP   12 19 45.4 +0.7
      SNR=11
GNI   Garni             120.48  58  P      PKiKP   12 19 45.4 +0.7
      SNR=11
GNI   Garni             120.48  58  PKP    PKiKP   12 19 44.9 +0.1
      comp=Z,51nm,0.8s,baz=332,slow=3.0,SNR=25
GNI                                 PP     PP      12 21 15.9 -6.5
      comp=Z,18nm,0.9s,baz=194,slow=9.6,SNR=4.1
GNI                                 PKKPbc PKKPbc  12 29 52.9  0.0
      comp=Z,9.5nm,0.8s,baz=49,slow=20,SNR=4.0
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FORT	Forrest	120.67	191	ePKPdf	PKPdf	12 19 44.7	-0.5
TBLG	Delisi	120.80	56	ePKPdf	PKiKP	12 19 45.6	+0.5
TBLG	Delisi	120.80	56	ePKIKP	PKiKP	12 19 45.6	+0.5
GROC	Groznyy	121.84	55	i PKIKP	PKPdf	12 19 45.7	-1.2
GROC				e		12 21 28.9	
GROC				e		12 25 54.1	
GROC				ePS	PS	12 31 34.7	+0.2
GROC				pmax	pmax		
	comp=Z,55nm,0.6s						
GAMB	Gambell	122.84	330	ePKPdf	PKiKP	12 19 48.9	+0.5
PRGR	Permogore	123.02	33⇑	iPKIKP	PKiKP	12 19 49.3	+0.5
PRGR				pmax	pmax		
	comp=Z,154nm,0.8s						
MAK	Makhachkala	123.03	55	i P	Pdif	12 16 24.6	+0.6
MAK				i		12 19 48.8	
MAK				e		12 21 40.6	
MAK				e		12 25 59.3	
MAK				eSS	SS	12 37 45.7	+6.3
MAK				eSSS	SSS	12 42 25.9	
MAK				pmax	pmax		
	comp=Z,96nm,0.6s						
MZR	Muzera	123.11	80	i PKiKP	PKiKP	12 19 50.5	+0.2
	SNR=16						
MZR	Muzera	123.11	80	PKiKP	PKiKP	12 19 50.4	+0.2
	SNR=6.7						
MZR	Muzera	123.11	80	P	PKiKP	12 19 50.4	+0.2
	SNR=6.7						
MORW	Morawa	123.34	179	ePKPdf	PKPdf	12 19 49.7	-0.6
HNR	Honiara	124.19	235	ePKPdf	PKPdf	12 19 51.4	-0.9
HNR				ePKPdf	PKPdf	12 19 52.1	-0.2
HNR				ePKKPbc	PKKPbc	12 29 38.8	-0.2
HNR	Honiara	124.19	235	PKP	PKPdf	12 19 52.1	-0.2
	comp=Z,68nm,0.7s,baz=170,slow=2.8,SNR=11						
HNR				PKKPbc	PKKPbc	12 29 38.8	-0.2
	comp=Z,13nm,0.3s,baz=27,slow=2.3,SNR=4.2						
CTA	Charters Tower	124.46	214	PKP	PKPdf	12 19 52.8	0.0
	comp=Z,63nm,0.8s,baz=118,slow=2.6,SNR=61						
CTA				PP	PP	12 21 46.1	-1.4
	comp=Z,20nm,1.0s,baz=149,slow=6.8,SNR=10						
CTA				pPKP	pPKPdf	12 22 07.0	-1.4
	comp=Z,10nm,0.8s,baz=195,slow=2.8,SNR=4.2						
CTA				SKiKP	SKiKP	12 22 33.7	-0.2
	comp=Z,24nm,0.8s,baz=220,slow=2.7,SNR=6.4						
CTA				PKKPbc	PKKPbc	12 29 38.3	-0.1
	comp=Z,33nm,0.8s,baz=324,slow=4.9,SNR=32						
CTAO	Charters Tower	124.46	214	ePKPdf	PKPdf	12 19 52.6	-0.1
DGAR	Diego Garcia	124.56	123	ePKPdf	PKiKP	12 19 55.0	+1.6
KIRV	Kirov	125.06	36	PKP	PKPdf	12 19 52.6	+0.1
	comp=Z,107nm,0.6s,baz=341,slow=1.1,SNR=33						
KIRV				PP	PP	12 21 48.8	-3.1
	comp=Z,14nm,0.5s,baz=275,slow=9.2,SNR=9.4						
KIRV				PKKPbc	PKKPbc	12 29 35.2	-0.5
	comp=Z,13nm,0.5s,baz=22,slow=1.4,SNR=4.5						
ALNE	Al Ain	125.42	79	i PKiKP	PKiKP	12 19 54.7	-0.1
	SNR=22						
FAQ	Al Faqa, Dubai	125.49	78	i PKPdf	PKPdf	12 19 54.6	+0.1
	SNR=25						
NAZ	Nazwa, Dubai	125.62	78	i PKPdf	PKPdf	12 19 54.7	0.0
	SNR=18						
DQM	DQM	125.63	85	PKPdf	PKPdf	12 19 52.5	-2.3
	SNR=11						
DQM	DQM	125.63	85	P	PKPdf	12 19 52.5	-2.3
	SNR=11						
ADK	Adak	125.77	316	ePKPdf	PKPdf	12 19 53.9	-0.2
ASHO	Ashiyiah	125.88	79	i PKPdf	PKPdf	12 19 55.0	-0.3
	SNR=20						
ASHO	Ashiyiah	125.88	79	PKPdf	PKPdf	12 19 54.7	-0.5
	SNR=12						
ASHO	Ashiyiah	125.88	79	P	PKPdf	12 19 54.7	-0.5
	SNR=12						
HATD	Hatta, Dubai	125.98	78	i PKPdf	PKPdf	12 19 55.2	-0.2
	SNR=21						
UOSS	Minazif	126.08	78	ePKPdf	PKPdf	12 19 53.9	-1.6
UOSS	Minazif	126.08	78	i PKPdf	PKPdf	12 19 55.3	-0.3
	SNR=22						
UOSS	Minazif	126.08	78	PKPdf	PKPdf	12 19 54.8	-0.8
	SNR=7.3						
UOSS	Minazif	126.08	78	P	PKPdf	12 19 54.8	-0.8
	SNR=7.3						
SOHO	SOHO	126.12	79	PKPdf	PKPdf	12 19 55.4	-0.3
	SNR=39						
SOHO	SOHO	126.12	79	P	PKPdf	12 19 55.4	-0.3
	SNR=39						
ASAR	Alice Springs	126.16	199	Pdiff	Pdif	12 16 38.3	-0.4
	comp=Z,0.2nm,0.7s,baz=157,slow=4.0,SNR=3.2						
ASAR				PKP	PKPdf	12 19 55.7	-0.3
	comp=Z,138nm,0.6s,baz=138,slow=1.5,SNR=82						
ASAR				PP	PP	12 21 54.5	-3.7
	comp=Z,12nm,0.9s,baz=167,slow=4.6,SNR=4.5						
ASAR				pPKP	pPKPdf	12 22 10.5	-1.1
	comp=Z,12nm,0.8s,baz=162,slow=3.4,SNR=4.8						
ASAR				SKiKP	SKiKP	12 22 37.4	0.0
	comp=Z,15nm,0.5s,baz=146,slow=2.1,SNR=4.7						
ASAR				PKKPbc	PKKPbc	12 29 31.3	-0.6
	comp=Z,18nm,0.7s,baz=343,slow=3.1,SNR=47						
AS31	Alice Springs	126.16	199	ePdif	Pdif	12 16 38.2	-0.4
AS31				ePKPdf	PKPdf	12 19 55.6	-0.3
MSFE	Esma-Masafi	126.16	78	i PKPdf	PKPdf	12 19 55.5	-0.2
	SNR=14						
MDH	Madha	126.27	78	i PKPdf	PKPdf	12 19 55.3	-0.6
	SNR=10						
MDH	Madha	126.27	78	PKPdf	PKPdf	12 19 55.3	-0.6
	SNR=5.1						
MDH	Madha	126.27	78	P	PKPdf	12 19 55.3	-0.6
	SNR=5.1						
BSY	Bisya	126.27	81	PKiKP	PKiKP	12 19 56.8	+0.3
	SNR=9.0						
BSY	Bisya	126.27	81	P	PKiKP	12 19 56.8	+0.3
	SNR=9.0						
SHME	Shamm	126.35	77	i PKPdf	PKPdf	12 19 56.1	0.0
	SNR=12						
MHTO	MHTO	126.37	84	PKiKP	PKiKP	12 19 57.0	+0.2
	SNR=21						
MHTO	MHTO	126.37	84	P	PKiKP	12 19 57.0	+0.2
	SNR=21						
BANOM	Banah	126.45	77	i PKPdf	PKPdf	12 19 56.0	-0.3
	SNR=12						
HOQ	Hoqain	126.63	80	PKiKP	PKiKP	12 19 57.2	0.0
	SNR=8.5						
HOQ	Hoqain	126.63	80	P	PKiKP	12 19 57.2	0.0
	SNR=8.5						
SMDO	Samad	127.11	81	PKiKP	PKiKP	12 19 59.2	+0.8
	SNR=10.0						
SMDO	Samad	127.11	81	P	PKiKP	12 19 59.2	+0.8
	SNR=10.0						
WSAR	Wadi Sarin	127.68	81	PKiKP	PKiKP	12 19 59.1	-0.3
	SNR=5.8						
WSAR	Wadi Sarin	127.68	81	P	PKiKP	12 19 59.1	-0.3
	SNR=5.8						
WSAR	Wadi Sarin	127.68	81	PP	PP	12 22 06.8	-3.2
	comp=Z,21nm,1.0s,baz=214,slow=7.3,SNR=3.3						
WB2	Warramunga Arr	129.51	201	ePKPdf	PKPdf	12 20 02.2	-0.1
WR1	Warramunga Arr	129.52	201	ePdif	Pdif	12 16 53.8	+0.2
WR1				ePKPdf	PKPdf	12 20 02.5	+0.1
WR1				epPKPdf	pPKPdf	12 22 17.4	-0.7
WR1				eSKPbc	SKPab	12 22 28.9	-1.3
WR1				eSdif	PKKPbc	12 29 18.6	
WRA	Warramunga Arr	129.52	201	Pdiff	Pdif	12 16 53.8	+0.2
	comp=Z,0.8nm,1.2s,baz=177,slow=4.2,SNR=2.7						
WRA				PKP	PKPdf	12 20 02.5	+0.1
	comp=Z,136nm,0.6s,baz=164,slow=1.6,SNR=85						
WRA				pPKP	pPKPdf	12 22 17.4	-0.7
	comp=Z,28nm,0.9s,baz=160,slow=1.2,SNR=11						
WRA				SKPbc	SKPab	12 22 28.9	-1.3
	comp=Z,368nm,0.8s,baz=161,slow=3.9,SNR=57						
WRA				PKKPbc	PKKPbc	12 29 18.6	
	comp=Z,5.6nm,0.5s,baz=345,slow=4.1,SNR=25						
WRA				SKKPbc	SKKPbc	12 32 11.9	-0.4
	comp=Z,1.9nm,0.6s,baz=339,slow=4.1,SNR=3.2						
WRAB	Tennant Creek	129.52	201	i PKIKP	PKPdf	12 20 00.0	-2.4
ARU	Arti	130.20	38	ePKPdf	PKiKP	12 20 03.7	+0.4
ARU	Arti	130.20	38	i PKIKP	PKiKP	12 20 03.6	+0.3
ARU						12 22 30.1	
ARU				PPP	PPP	12 25 19.8	
BILL	Bilibino	130.39	338	ePKPdf	PKiKP	12 20 03.1	-0.3
BILL	Bilibino	130.39	338	i PKIKP	PKiKP	12 20 03.1	-0.3
BILL				i		12 22 32.5	
BILL				pmax	pmax		
	comp=Z,48nm,1.1s						
GEYT	Alibeck	130.40	63	PKhKP	PKPpre	12 19 48.9	
	comp=Z,4.7nm,0.5s,baz=264,slow=2.7,SNR=7.9						
GEYT				PKP	PKPdf	12 20 03.5	0.0
	comp=Z,47nm,0.8s,baz=302,slow=3.3,SNR=21						
GEYT				pPKP	pPKPdf	12 22 18.3	-1.0
	comp=Z,18nm,0.9s,baz=275,slow=6.8,SNR=5.7						
GEYT				PP	PP	12 22 25.4	-1.7
	comp=Z,24nm,0.7s,baz=282,slow=7.4,SNR=7.9						
GEYT				SKPbc	SKPbc	12 22 33.1	+0.2
	comp=Z,116nm,0.8s,baz=275,slow=5.2,SNR=9.9						
GEYT				SKKPbc	SKKPbc	12 32 11.1	-0.9
	comp=Z,2.8nm,0.7s,baz=122,slow=1.9,SNR=3.0						
GYA0B	ALIBECK ARRAY	130.40	63	ePKPdf	PKPdf	12 20 03.5	+0.1
AKTO	Aktyubinsk	130.59	46	PKhKP	PKPpre	12 19 47.0	
	comp=Z,4.5nm,0.7s,baz=233,slow=3.4,SNR=5.8						
AKTO				PKP	sPdif	12 20 03.9	+0.3
	comp=Z,63nm,1.0s,baz=358,slow=2.4,SNR=14						
AKTO				pPKP	pPKPdf	12 22 18.8	-0.3
	comp=Z,13nm,0.9s,baz=320,slow=2.5,SNR=4.5						
AKTO				PP	PP	12 22 28.5	+0.5
	comp=Z,24nm,0.7s,baz=273,slow=7.7,SNR=7.4						
AKTO				SKPbc	SKPbc	12 22 33.1	0.0
	comp=Z,199nm,0.9s,baz=270,slow=3.2,SNR=35						
MBWA	Marble Bar	131.15	184	eP	PKPdf	12 20 05.5	+0.1
COEN	Coen	131.20	215	ePKPdf	PKPdf	12 20 06.0	+0.4
SVE	Sverdlovsk	131.25	37	ePKIKP	PKiKP	12 20 05.7	+0.2
SVE				pmax	pmax		
	comp=Z,116nm,1.5s						
AB31	Akbulak array	131.93	48	i PKIKP	PKiKP	12 20 07.5	+0.4
AB31				pmax	pmax		
	comp=Z,57nm,0.6s						
RABL	Rabaul	133.36	232	ePKPdf	PKPdf	12 20 09.7	-0.1
FITZ	Fitzroy Crossi	133.49	192	ePKPdf	PKPdf	12 20 09.7	-0.1
FITZ	Fitzroy Crossi	133.49	192	PKhKP	PKPpre	12 19 56.2	
	comp=Z,6.6nm,0.6s,baz=214,slow=4.0,SNR=12						
FITZ				PKP	PKPdf	12 20 10.2	+0.4
	comp=Z,82nm,0.7s,baz=346,slow=3.6,SNR=53						
MNCY	Minicoy	134.30	107	IAMs_20	IAMs_20	13 17 11.2	
NRIK	Noril'sk	135.16	14	PKhKP	PKPpre	12 19 57.9	
	comp=Z,6.3nm,0.6s,baz=61,slow=1.4,SNR=9.8						
NRIK				PKP	PKPdf	12 20 11.6	+0.2
	comp=Z,17nm,0.6s,baz=19,slow=1.1,SNR=17						
NRIK				pPKP	pPKPdf	12 22 27.0	-0.3
	comp=Z,7.2nm,0.6s,baz=339,slow=2.6,SNR=1.8						
NRIK				SKPbc	SKPbc	12 22 47.6	-0.3
	comp=Z,13nm,0.7s,baz=266,slow=3.1,SNR=6.5						
NRIK				SKKPbc	SKKPbc	12 31 53.0	-3.5
	comp=Z,22nm,0.6s,baz=129,slow=3.5,SNR=23						
MTN	Manton Dam	137.20	201	ePKPdf	PKPdf	12 20 17.2	+0.3
BHJ	Bhuj	137.37	85	eP	PKPdf	12 20 16.1	-0.8
BRVK	Borovoye	137.59	41	ePKPdf	PKiKP	12 20 17.8	-0.6
BRVK	Borovoye	137.59	41	i PKIKP	PKPdf	12 20 17.1	+0.7
BRVK	Borovoye	137.59	41	PKPdf	PKPpre	12 20 07.1	
	SNR=26						
BVA0	Borovoye Array	137.66	41	i PKHKP	PKPpre	12 20 06.5	
BVA0				pmax	pmax		
	comp=Z,80nm,0.7s						
BVAR	Borovoye Array	137.66	41	PKhKP	PKPpre	12 20 06.9	
	comp=Z,14nm,0.6s,baz=286,slow=3.0,SNR=46						
BVAR				PKP	PKPdf	12 20 16.4	-0.1
	comp=Z,79nm,0.7s,baz=290,slow=2.3,SNR=38						
BVAR				pPKP	pPKPdf	12 22 31.1	-1.3
	comp=Z,18nm,0.9s,baz=291,slow=2.5,SNR=4.0						
BVAR				SKPbc	SKPbc	12 22 56.8	+1.1
	comp=Z,138nm,0.6s,baz=284,slow=3.6,SNR=46						
BVAR				SKKPbc	SKKPbc	12 31 42.4	-3.8
	comp=Z,5.5nm,0.8s,baz=122,slow=3.1,SNR=6.5						
TRD	Trivandrum	137.73	109	eP	PKPdf	12 20 16.7	-1.0
TRD				IAMs_20	IAMs_20	13 09 52.6	
	comp=N,603nm,14.9s						
SEY	Seymchan	138.03	337	PKhKP	PKPpre	12 20 08.3	
	comp=N,15nm,0.6s,baz=83,slow=5.7,SNR=5.7						
SEY				PKP	PKPdf	12 20 17.7	+0.8
	comp=N,80nm,0.8s,baz=116,slow=5.1,SNR=17						
SEY				pPKP	pPKPdf	12 22 32.5	-0.3
	comp=N,19nm,0.9s,baz=172,slow=1.3,SNR=5.1						
SEY				SKPbc	SKPbc	12 22 56.3	-0.1
	comp=N,52nm,0.6s,baz=48,slow=2.7,SNR=17						
SEY				SKKPbc	SKKPbc	12 31 43.4	-1.9
	comp=N,20nm,1.0s,baz=218,slow=7.2,SNR=12						
MANU	Manus Island	138.21	230	ePKPdf	PKPdf	12 20 18.5	-0.2
GOA	Goa	138.35	98	eP	PKPdf	12 20 18.2	-0.6
POO	Poona	139.55	94	eP	PKPdf	12 20 20.2	-0.8
KK31	Karatay Array	139.85	55	ePKPdf	PKiKP	12 20 22.2	-1.2
KK31	Karatay Array	139.85	55	i PKHKP	PKPpre	12 20 12.7	
KK31				pmax	pmax		
	comp=Z,18nm,0.6s						
KKAR	Karatay Array	139.85	55	ePKPdf	PKiKP	12 20 22.2	-1.2
GAR	Garm	140.00	62	ePKPdf	PKiKP	12 20 23.6	-0.4
PALK	Pallekele	140.12	114	ePKPdf	PKPdf	12 20 20.9	-1.3
PALK	Pallekele	140.12	114	i PKPdf	PKPdf	12 20 20.5	-1.8
	SNR=6.7						
PALK	Pallekele	140.12	114	ePKIKP	PKPdf	12 20 20.9	-1.3
PALK	Pallekele	140.12	114	SKPbc	SKPbc	12 23 03.5	-0.2
	comp=Z,34nm,0.8s,baz=116,slow=2.3,SNR=7.3						
PALK				SKKPbc	SKKPbc	12 31 33.9	-0.1
	comp=Z,7.8nm,0.7s,baz=117,slow=4.5,SNR=4.8						
OTUK	Ortayu	140.18	47	PKHKP	PKPpre	12 20 14.9	
OTUK				pmax	pmax		
	comp=Z,35nm,0.7s						
PET	Petropavlovsk	140.32	321	ePKPdf	PKPdf	12 20 21.4	+0.1
PET	Petropavlovsk	140.32	321	ePKIKP	PKPpre	12 20 17.9	
PET				e		12 23 32.3	
PET				eSS	SS	12 41 07.9	+2.0
PET				eSSS	SSS	12 46 34.5	
PET				pmax	pmax		
	comp=Z,36nm,0.7s						
PET				pmax	pmax		
	comp=Z,600nm,16.5s						
MA2	Magadan	140.77	333	PKhKP	PKPpre	12 20 16.5	
	comp=Z,33nm,0.7s,baz=98,slow=4.5,SNR=14						
MA2				SKPbc	SKPbc	12 23 03.7	-0.1
	comp=Z,40nm,0.8s,baz=81,slow=4.2,SNR=10						
MA2				SKKPbc	SKKPab	12 31 33.3	-1.0
	comp=Z,16nm,0.7s,baz=174,slow=2.6,SNR=13						
PEA1	Petropavlovsk-	140.81	321	ePKPpre	PKPpre	12 20 17.3	
PEA1				epPKPdf	pPKPdf	12 22 37.5	-0.6
PEA1				eSKPbc	SKPbc	12 23 03.6	-0.6
PEA1				e		12 31 32.8	
PETK	Petropavlovsk-	140.82	321	ePKPdf	PKPdf	12 20 22.6	+0.4
PETK	Petropavlovsk-	140.82	321	PKhKP	PKPpre	12 20 17.3	
	comp=Z,18nm,0.7s,baz=89,slow=11,SNR=49						
PETK				pPKP	pPKPdf	12 22 37.5	-0.6
	comp=Z,14nm,0.9s,baz=157,slow=4.7,SNR=3.3						
PETK				SKPbc	SKPbc	12 23 03.6	-0.7
	comp=Z,35nm,0.8s,baz=110,slow=4.6,SNR=8.8						
PETK				SKKPbc	SKKPbc	12 31 32.8	-1.3
	comp=Z,2.5nm,0.7s,baz=244,slow=8.8,SNR=4.7						
MNAS	Manas	141.38	56	PKHKP	PKPpre	12 20 18.8	
MNAS				pmax	pmax		
	comp=Z,58nm,0.6s						
BATI	Baumata	141.55	191	PKhKP	PKPpre	12 20 20.1	
	comp=Z,146nm,0.6s,baz=246,slow=2.1,SNR=14						
BATI				SKPbc	SKPbc	12 23 07.4	0.0
	comp=Z,96nm,0.6s,baz=318,slow=1.2,SNR=5.1						
ARSB	Arslanbob	141.88	58	ePKPpre	PKPpre	12 20 22.5	
SOEI	Soe	141.88	192	PKP	PKPdf	12 20 22.1	-3.4
JAY	Jayapura	142.04	221	PKP	PKPdf	12 20 22.9	-2.8
JAY	Jayapura	142.04	221	PKhKP	PKPpre	12 20 22.6	
	comp=Z,56nm,0.6s,baz=177,slow=6.5,SNR=18						
JAY				pPKP	pPKPdf	12 22 39.8	-1.8
	comp=Z,31nm,1.1s,baz=63,slow=2.4,SNR=2.2						
JAY				SKPbc	SKPbc	12 23 08.5	-0.1
	comp=Z,81nm,0.8s,baz=205,slow=2.2,SNR=9.7						
GENI	Genyem	142.29	220	PKP	PKPdf	12 20 23.3	-2.8
EKS2	Erkin-Say	142.29	55	P	PKPdf	12 20 22.9	-2.5
	SNR=321						
AML	Almayashu	142.31	56	P	PKPdf	12 20 22.7	-3.0
	SNR=287						
SFK	Sufi-Kurgan	142.40	60	PKHKP	PKPpre	12 20 23.0	
SFK				pmax	pmax		
	comp=Z,904nm,0.7s						
SKR	Severo-Kuril's	142.67	318	ePKHKP	PKPpre	12 20 16.6	
SKR				e		12 23 46.6	
SKR				e		12 26 34.4	
SKR				eSS	SS	12 41 40.5	+7.6
SKR				pmax	pmax		
	comp=Z,412nm,1.0s						
SKR				pmax	pmax		
	comp=Z,800nm,14.9s						
USP	Ospenovka	142.71	54	P	PKPdf	12 20 23.7	-2.2
	SNR=311						
AAK	Ala-Archa	142.81	55	P	PKPdf	12 20 25.2	-1.1
	SNR=62						
AAK	Ala-Archa	142.81	55	i PKPdf	PKPdf	12 20 25.2	-1.1
	SNR=61						
AAK	Ala-Archa	142.81	55	PKPab	PKPdf	12 20 24.9	-1.4
	SNR=283						
AAK	Ala-Archa	142.81	55	P	PKPdf	12 20 24.9	-1.4
	SNR=283						
AAK	Ala-Archa	142.81	55	PKP	PKPdf	12 20 25.4	-0.9
	comp=Z,630nm,0.5s,baz=226,slow=2.1,SNR=136						
AAK				SKPbc	SKiKP	12 23 11.1	+0.3
	comp=Z,100nm,0.9s,baz=184,slow=1.3,SNR=8.4						
AAK				SKKPbc	SKKPab	12 31 24.1	-1.4
	comp=Z,13nm,0.7s,baz=102,slow=5.3,SNR=17						
MDRS	Chennai	142.82	106	eP	PKPdf	12 20 24.7	-2.1
FRU	Bishkek	142.87	55⇓	iPKHKP	PKPpre	12 20 24.0	
FRU				i		12 23 44.0	
FRU				pmax	pmax		
	comp=Z,2µm,1.8s						
FRU1	Bishkek	142.88	55	ePKPdf	PKPdf	12 20 25.3	-1.0
FRU1	Bishkek	142.88	55	ePKIKP	PKPdf	12 20 25.3	-1.0
UCH	Uchtor	142.89	56	P	PKPdf	12 20 25.4	-1.5
	SNR=954						
CHMS	Chumysh	142.94	55	P	PKPdf	12 20 24.9	-1.5
	SNR=531						
KBK	Karagaybulak	143.14	55	P	PKPbc	12 20 26.1	+0.7
	SNR=2007						
KURBB	Kurchatov Arra	143.23	41	PKP	PKPdf	12 20 26.4	-0.2
	comp=Z,1µm,0.7s,baz=294,slow=3.9,SNR=1774						
KURBB				SKPbc	SKiKP	12 23 11.1	-0.1
	comp=Z,88nm,0.8s,baz=297,slow=3.3,SNR=13						
KURBB				PP	PP	12 23 46.2	+0.9
	comp=Z,43nm,1.1s,baz=294,slow=7.0,SNR=4.4						
KURBB				SKKPbc	SKKPab	12 31 21.8	-1.5
	comp=Z,6.8nm,0.8s,baz=108,slow=3.9,SNR=11						
KURK	Kurchatov	143.25	41	ePKPdf	PKPdf	12 20 26.0	-0.6
KURK				ePKPdf	PKPbc	12 20 26.4	+1.3
KURK				eSKPbc	SKiKP	12 23 11.1	-0.1
KURK				ePP	PP	12 23 46.2	+0.9
KURK	Kurchatov	143.25	41	PKIKP	PKPdf	12 20 26.4	-0.2
KURK						12 23 46.3	
KURK				pmax	pmax		
	comp=Z,1µm,0.7s						
KURK				pmax	pmax		
	comp=Z,43nm,1.1s						
KURK	Kurchatov	143.25	41	PKPab	PKPdf	12 20 26.1	-0.5
	SNR=326						
KURK	Kurchatov	143.25	41	P	PKPdf	12 20 26.1	-0.5
	SNR=326						
EDFI	Ende, Flores	143.26	188	PKP	PKPbc	12 20 26.2	-0.2
HYB	Hyderabad	143.27	98	i PKP	PKPbc	12 20 26.5	+0.3
HYB				eSKP		12 23 07.0	
HYB				ePP	PP	12 23 49.0	+2.4
HYB				eSKS	SKSdf	12 26 40.0	-2.6
HYB	Hyderabad	143.27	98	eP	PKPbc	12 20 26.4	+0.1
MMRI	Maumere	143.31	189	ePKPdf	PKPdf	12 20 27.3	-0.5
MMRI	Maumere	143.31	189	PKP	PKPab	12 20 25.9	-0.1
KZA	Kyzart	143.46	56	P	PKPdf	12 20 27.6	-0.2
	SNR=830						
PLAI	Plampang	143.47	182	PKP	PKPab	12 20 26.5	-0.2
TKM2	Tokmak 2	143.56	55	P	PKPdf	12 20 27.3	-0.4
	SNR=223						
TKM2	Tokmak 2	143.56	55	PKIKP	PKPbc	12 20 27.1	+0.4
TKM2				pmax	pmax		
	comp=Z,2µm,0.7s						
CMJI	Cimerak	143.60	166	PKP	PKPab	12 20 24.3	-2.8
CISI	Cisompet, Garu	143.68	165	ePKPbc	PKPab	12 20 27.5	0.0
CISI	Cisompet, Garu	143.68	165	PKP	PKPab	12 20 26.1	-1.4
PCJI	Pacitan	143.69	170	PKP	PKPbc	12 20 27.9	+0.4
NVS	Novosibirsk	143.71	33	ePKIKP	PKPdf	12 20 27.7	+0.5
NVS				e		12 22 43.5	
NVS				pmax	pmax		
	comp=Z,1µm,0.6s						
NVS				pmax	pmax		
	comp=N,93nm,0.7s						
NVS				pmax	pmax		
	comp=E,159nm,0.7s						
JAGI	Jajag, Banyuwa	143.74	175	ePKPbc	PKPbc	12 20 27.8	+0.1
JAGI	Jajag, Banyuwa	143.74	175	PKP	PKPab	12 20 26.9	-0.8
UGM	Wanagama	143.87	169	ePKPbc	PKPdf	12 20 28.8	-0.1
UGM	Wanagama	143.87	169	PKP	PKPdf	12 20 29.3	+0.4
SKJI	Sukabumi	143.89	162	PKP	PKPdf	12 20 28.9	0.0
WOJI	Wonogiri, Jawa	144.01	170	PKP	PKPdf	12 20 29.2	+0.1
NRN	Naryn	144.11	57	ePKPbc	PKPab	12 20 29.2	+0.3
NRN	Naryn	144.11	57	ePKIKP	PKPab	12 20 29.2	+0.3
KPJI	Karang Pucung	144.14	166	PKP	PKPbc	12 20 28.9	0.0
ULHL	Ulahol	144.16	56	P	PKPab	12 20 29.9	+0.9
	SNR=95						
SRBI	Singaraja	144.19	177	PKP	PKPab	12 20 29.4	0.0
BHPL	Bhopal	144.23	88	eP	PKPbc	12 20 28.9	-0.1
KSH	Kashi	144.35	60⇓	iPKP	PKPbc	12 20 29.1	0.0
KSH				pPKP	pPKPdf	12 22 47.0	+1.9
KSH				sPKP		12 23 45.3	
KSH				PP	PP	12 23 50.3	-2.4
KSH				SKS	SKSdf	12 26 38.8	-4.7
KSH				SKKS	SKKSac	12 29 42.6	-3.4
KSH				SS	SS	12 41 48.8	-4.5
KASI	Kota Agung	144.69	158	PKP	PKPbc	12 20 30.6	0.0
SMRI	Semarang	144.70	169	ePKPdf	PKPab	12 20 31.8	+0.4
DHRM	DHARAMSHALA	144.78	73	eP	PKPab	12 20 31.2	-0.5
DHRM				IAMs_20	IAMs_20	13 14 54.9	
	comp=N,4µm,33.3s						
YAK	Yakutsk	144.83	350	ePKIKP	PKPdf	12 20 29.2	+0.3
YAK				e		12 22 43.7	
YAK				e		12 23 52.9	
YAK				eSS	SS	12 41 56.9	+1.0
YAK				pmax	pmax		
	comp=Z,2µm,0.8s						
YAK				pmax	pmax		
	comp=N,188nm,0.9s						
YAK				pmax	pmax		
	comp=E,91nm,0.9s						
YAK				pmax	pmax		
	comp=Z,2µm,2.3s						
YAK				pmax	pmax		
	comp=N,2µm,2.2s						
YAK				pmax	pmax		
	comp=E,317nm,2.2s						
KDJ	Kajisay	144.86	56	ePKPdf	PKPab	12 20 32.2	+0.6
ZAA1	Zalesovo Array	144.98	33	ePKPdf	PKPbc	12 20 30.3	0.0
ZAA1				epPKPdf	pPKPdf	12 22 45.2	-0.3
ZAA1				eSKPbc	SKiKP	12 23 15.0	+0.3
ZAA0	Zalesovo Array	144.98	33	ePKPdf	PKPbc	12 20 30.4	0.0
ZALV	Zalesovo Beam	144.98	33	ePKPdf	PKPbc	12 20 30.4	+0.1
ZALV	Zalesovo Beam	144.98	33	PKP	PKPbc	12 20 30.3	0.0
	comp=E,810nm,0.7s,baz=290,slow=3.8,SNR=687						
ZALV				pPKP	pPKPdf	12 22 45.2	-0.3
	comp=E,224nm,1.0s,baz=298,slow=3.2,SNR=11						
ZALV				SKPbc	SKiKP	12 23 15.0	+0.3
	comp=E,199nm,0.6s,baz=306,slow=3.1,SNR=15						
ZALV				SKKPbc	SKKPab	12 31 13.5	-2.0
	comp=E,15nm,0.6s,baz=135,slow=3.6,SNR=17						
NGP	Nagpur	145.05	93	eP	PKPbc	12 20 31.8	+0.3
GRJI	Gresik	145.13	172	PKP	PKPab	12 20 33.1	+0.1
KMMI	Kalianget	145.14	175	PKP	PKPab	12 20 32.6	-0.4
NDI	New Delhi	145.19	79	eP	PKPbc	12 20 32.0	+0.2
NDI				ex	x	12 21 15.5	
MNAI	Manna	145.23	155	ePKPdf	PKPab	12 20 33.0	-0.5
MNAI	Manna	145.23	155	PKP	PKPab	12 20 33.1	-0.3
KLI	Kotabumi	145.42	159	PKP	PKPbc	12 20 33.0	+0.2
SMLA	Simla	145.43	75	eP	PKPbc	12 20 32.3	-0.1
MDSI	Maura Dua	145.55	157	PKP	PKPdf	12 20 30.7	-1.0
PRZ	Przheval'sk	145.68	55	ePKPdf	PKPbc	12 20 33.3	+0.3
PRZ	Przheval'sk	145.68	55	ePKIKP	PKPbc	12 20 33.3	+0.3
FAKI	Fak Fak	145.96	208	ePKPdf	PKPbc	12 20 33.8	-0.6
FAKI	Fak Fak	145.96	208	PKP	PKPdf	12 20 33.0	+0.6
DDI	Dehra Dun	146.12	76	eP	PKPbc	12 20 33.4	-1.0
DDI				IAMs_20	IAMs_20	13 18 19.8	
PDGK	Podgornoye	146.26	53	PKIKP	PKPdf	12 20 32.9	+0.7
PDGK				pmax	pmax		
	comp=Z,774nm,0.7s						
RKPI	Ransiki, Papua	146.35	212	PKP	PKPdf	12 20 32.5	-0.6
JBP	Jabalpur	146.47	90⇑	eP	PKPdf	12 20 32.1	-0.8
JBP				ex	x	12 23 55.3	
BKSI	Bulukumba	146.82	186	PKP	PKPdf	12 20 32.8	-1.0
MAKZ	Makanchi	146.82	46	ePKPbc	PKPbc	12 20 36.6	+0.8
MK31	Makanchi Array	147.03	46	ePKPdf	PKPdf	12 20 34.1	+0.9
MK31				ePKPbc	PKPbc	12 20 36.7	+0.4
MK31				ePKPab	PKPab	12 20 41.5	+1.7
MK31	Makanchi Array	147.03	46	ePKIKP	PKPdf	12 20 34.1	+0.9
MK31				e		12 20 41.6	
MK32	Makanchi Array	147.03	46	ePKPdf	PKPdf	12 20 33.7	+0.5
MK32				ePKPbc	PKPbc	12 20 36.8	+0.4
MK32				epPKPdf	pPKPab	12 22 50.8	+0.6
MK32				eSKPbc	SKiKP	12 23 19.6	+0.4
MK32				ePP	PP	12 24 02.4	-5.3
MKAR	Makanchi Array	147.03	46	ePKPdf	PKPdf	12 20 33.9	+0.7
MKAR				ePKPbc	PKPbc	12 20 36.6	+0.2
MKAR				ePKPab	PKPab	12 20 41.5	+1.6
MKAR	Makanchi Array	147.03	46	PKIKP	PKPdf	12 20 33.7	+0.5
MKAR						12 20 36.8	
MKAR						12 24 02.4	
MKAR				pmax	pmax		
	comp=Z,508nm,0.6s						

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MKAR                                pmax     pmax
      comp=Z,508nm,0.6s
MKAR                                pmax     pmax
      comp=Z,20nm,0.8s
MKAR  Makanchi Array   147.03  46   PKP      PKPdf    12 20 33.7 +0.5
      comp=Z,506nm,0.6s,baz=318,slow=1.6,SNR=364
MKAR                                PKPbc    PKPbc    12 20 36.8 +0.4
      comp=Z,508nm,0.6s,baz=294,slow=2.8,SNR=266
MKAR                                pPKPbc   pPKPab   12 22 50.8 +0.6
      comp=Z,168nm,0.8s,baz=295,slow=3.7,SNR=14
MKAR                                SKPbc    SKiKP    12 23 19.6 +0.4
      comp=Z,36nm,0.9s,baz=294,slow=2.9,SNR=2.2
MKAR                                PP       PP       12 24 02.4 -5.3
      comp=Z,20nm,0.8s,baz=283,slow=5.3,SNR=2.4
MKAR                                SKKPbc            12 31 01.6
      comp=Z,12nm,0.7s,baz=93,slow=5.2,SNR=10
MK01  Makanchi Array   147.04  46  ePKPdf    PKPdf    12 20 34.0 +0.8
MK01                               ePKPbc    PKPbc    12 20 37.1 +0.7
MK01                               ePKPab    PKPab    12 20 41.2 +1.2
PDSI  Padang           147.30 148   PKP      PKPdf    12 20 32.1 -2.6
BNSI  Bone             147.73 186   PKP      PKPdf    12 20 35.3  0.0
SIJI  Sorong           148.22 208   PKP      PKPdf    12 20 36.5 +0.3
      comp=Z,450nm,0.8s,baz=36,slow=4.4,SNR=20
SIJI                                PKPbc    PKPbc    12 20 40.4  0.0
      comp=Z,450nm,0.8s,baz=16,slow=5.7,SNR=78
SIJI                                pPKPbc   pPKPdf   12 22 53.0 +0.7
      comp=Z,110nm,0.7s,baz=355,slow=5.8,SNR=14
SIJI                                SKPbc    SKiKP    12 23 23.1 +0.3
      comp=Z,36nm,0.7s,baz=18,slow=3.2,SNR=2.6
SIJI                                SKKPbc   SKKPbc   12 31 01.1
      comp=Z,33nm,0.8s,baz=8.7,slow=3.9,SNR=13
BKNI  Bangkinang       148.66 148  ePKPbc    PKPbc    12 20 40.6 -0.7
BKNI                               ePKPab    PKPab    12 20 46.0 -1.3
DGZ   Jazzator, Alta   148.71  38d iPKHKP    PKPdf    12 20 36.4 +0.4
TTSI  Tana Toraja      149.10 186   PKP      PKPdf    12 20 37.5  0.0
TPTI                   149.12 139   PKP      PKPdf    12 20 35.8 -1.8
NKL   Nikolayevsk      149.24 332  ePKIKP    PKPdf    12 20 36.0 -0.5
NKL                                e                  12 22 51.0
NKL                                 pmax     pmax
      comp=Z,2µm,5.0s
NKL                                 pmax     pmax
      comp=Z,750nm,1.0s
PSI   Prapat           149.72 142  ePKPdf    PKPdf    12 20 38.4 -0.3
PSI                                ePKPbc    PKPbc    12 20 43.6 -0.5
PSI                                ePKPab    PKPab    12 20 51.7 -0.1
PSI   Prapat           149.72 142   PKP      PKPdf    12 20 38.4 -0.3
      comp=Z,46nm,1.1s,baz=180,slow=6.6,SNR=16
PSI                                 PKPbc    PKPbc    12 20 43.8 -0.3
      comp=Z,324nm,0.9s,baz=180,slow=4.9,SNR=58
PSI                                 pPKPbc   pPKPbc   12 22 57.3 -1.3
      comp=Z,128nm,1.0s,baz=180,slow=5.1,SNR=14
BSI   Banda Aceh       149.72 133   PKP      PKPdf    12 20 38.1 -0.4
TYV   Tymovskoe        149.90 327  ePKHKP    PKPdf    12 20 39.1 +1.5
TYV                                 pmax     pmax
      comp=Z,700nm,6.3s
TYV                                 pmax     pmax
      comp=Z,254nm,1.0s
KUR   Kuril'sk         149.94 313  i PKIKP   PKPdf    12 20 37.6 -0.2
CMBY  CAMPBELL BAY     149.94 129  eP        PKPdf    12 20 40.3 +1.5
CMBY                                IAMs_20  IAMs_20  13 09 41.4
      comp=E,12µm,27.7s
CMBY                                IAMs_20  IAMs_20  13 11 02.2
      comp=Z,468nm,6.9s
CMBY                                IAMs_20  IAMs_20  13 13 40.4
      comp=N,6µm,23.7s
BOD   Bodaibo          150.03   3  ePKIKP    PKPdf    12 20 37.7 +0.1
BOD                                 pmax     pmax
      comp=Z,263nm,1.7s
PYUN  Piuthan          150.14  82  eP        PKPdf    12 20 39.4 +0.4
      comp=Z,383nm,1.1s
PYUN  Piuthan          150.14  82  eP        PKPdf    12 20 39.4 +0.4
      comp=Z,383nm,1.1s
GUMO  Guam             150.28 247   PKPbc    PKPbc    12 20 44.9 -0.3
      comp=Z,433nm,0.3s,baz=153,slow=0.6,SNR=43
GUMO                                pPKPbc   pPKPbc   12 22 59.1 -0.8
      comp=Z,207nm,0.9s,baz=219,slow=3.9,SNR=4.2
LHMI  Lhok Sumawe      150.55 136  ePKPdf    PKPdf    12 20 40.7 +0.9
LHMI                               ePKPbc    PKPbc    12 20 45.8 -0.1
LHMI                               ePKPab    PKPab    12 20 54.6 -0.6
KOLN  Koldanda         150.63  82  eP        PKPdf    12 20 40.0 +0.2
      comp=Z,231nm,1.2s
KOLN  Koldanda         150.63  82  eP        PKPdf    12 20 40.0 +0.2
      comp=Z,231nm,1.2s
LUWI  Luwuk            150.66 192  ePKPdf    PKPdf    12 20 41.5 +1.5
LUWI                               ePKPbc    PKiKP    12 20 47.0 +0.4
LUWI                               ePKPab    PKPab    12 20 53.8 -1.8
LUWI  Luwuk            150.66 192   PKP      PKPdf    12 20 42.2 +2.2
DANN  Dangsing         150.85  81  eP        PKPdf    12 20 40.9 +0.7
      comp=Z,479nm,0.8s
DANN  Dangsing         150.85  81  eP        PKPdf    12 20 41.0 +0.7
      comp=Z,567nm,0.9s
APSI  Ampana           150.98 190   PKP      PKPdf    12 20 40.5  0.0
SARN  Sarigan          151.09 253  ePKPbc    PKPbc    12 20 46.2 -0.8
MYKOM Kota Tinggi      151.20 152  ePKPdf    PKPdf    12 20 39.3 -1.5
MYKOM                              ePKPbc    PKiKP    12 20 47.5 -0.1
MYKOM                              ePKPab    PKPab    12 20 58.7 +0.8
TNTI  Ternate          151.20 202  ePKPdf    PKPdf    12 20 40.7 -0.1
TNTI                               ePKPbc    PKPbc    12 20 46.6 -0.7
TNTI                               ePKPab    PKPab    12 20 57.4 -0.5
WMQ   Urumqi           151.71  48   PKPbc    PKPdf    12 20 41.1 +0.4
WMQ                                 PKPab    PKPab    12 21 00.1 +0.6
WMQ                                 PP       PP       12 24 35.6 +1.1
WMQ                                 SKKS              12 30 26.8
WMQ                                 SS       SS       12 43 11.6 -2.4
WMQ                                 AMB      AMB
      comp=Z,1µm,5.1s
WMQ   Urumqi           151.71  48  ePKPdf    PKPdf    12 20 41.6 +0.9
WMQ                                ePKPbc    PKiKP    12 20 48.9 +1.0
WMQ                                ePKPab    PKPab    12 21 00.8 +1.3
WMQ   Urumqi           151.71  48  ePKIKP    PKPdf    12 20 41.6 +0.9
WMQ                                e                  12 21 00.8
YUK   Yuzh-Kuril'sk    151.74 312  i PKIKP   PKPbc    12 20 47.7 +0.1
YUK                                i                  12 22 56.4
YUK                                i                  12 24 34.8
YUK                                ePPP      PPP      12 28 10.6
YUK                                eSS       SS       12 43 17.1 +3.1
YUK                                eSSS      SSS      12 49 09.8
YUK                                 pmax     pmax
      comp=Z,321nm,1.4s
BOK   Bokaro           151.86  91  eP        PKPdf    12 20 42.0 +0.5
BOK                                 IAMs_20  IAMs_20  12 53 55.1
      comp=E,1µm,34.0s
DMN   Daman            151.93  83  eP        PKPdf    12 20 42.1 +0.3
DMN   Daman            151.93  83  eP        PKPdf    12 20 42.1 +0.3
      comp=E,191nm,1.2s
KKN   Kakani           152.11  83  eP        PKPdf    12 20 42.3 +0.2
KKN   Kakani           152.11  83  eP        PKPdf    12 20 42.2 +0.2
      comp=E,159nm,1.0s
PKIN  Phulchoki        152.18  83  eP        PKPdf    12 20 42.2  0.0
PKIN  Phulchoki        152.18  83  eP        PKPdf    12 20 42.2  0.0
PKI   Pulchoki         152.19  83  eP        PKPdf    12 20 42.1 -0.2
PKI   Pulchoki         152.19  83  eP        PKPdf    12 20 42.2 -0.1
YSS   Yuzh-Sakhalins   152.20 320  ePKPdf    PKPdf    12 20 41.9 +0.7
YSS                                ePKPbc    PKiKP    12 20 49.1 +0.5
YSS                                ePKPab    PKPab    12 21 02.5 +1.2
YSS   Yuzh-Sakhalins   152.20 320  i PKIKP   PKPdf    12 20 42.0 +0.8
YSS                                e                  12 21 01.7
YSS                                e                  12 22 58.6
YSS                                e                  12 24 36.4
YSS                                e                  12 26 56.9
YSS                                e                  12 43 25.0
YSS                                 pmax     pmax
      comp=Z,50nm,0.9s
YSS                                 pmax     pmax
      comp=N,10.0nm,0.8s
YSS                                 pmax     pmax
      comp=E,40nm,1.0s
YSS                                 pmax     pmax
      comp=Z,130nm,1.0s
YSS                                 pmax     pmax
      comp=E,80nm,0.9s
PBA   Port Blair       152.22 121  ePKPdf    PKPdf    12 20 42.2  0.0
PBA                                ePKPbc    PKiKP    12 20 50.4 +0.7
PBA                                ePKPab    PKPab    12 21 02.9 +0.6
PBA   Port Blair       152.22 121  eP        PKPdf    12 20 42.8 +0.6
IPM   Ipoh             152.25 144  ePKPdf    PKPdf    12 20 42.7 +0.3
IPM                                ePKPbc    PKiKP    12 20 49.8 -0.1
MPSI  Mapaga           152.44 187   PKP      PKPdf    12 20 42.6  0.0
GUN   Gumba            152.65  83  eP        PKPdf    12 20 43.3 +0.3
GUN   Gumba            152.65  83  eP        PKPdf    12 20 43.3 +0.3
      comp=E,222nm,1.2s
KULM  Kulim            152.73 143  ePKPdf    PKPdf    12 20 43.0  0.0
KULM                               ePKPbc    PKiKP    12 20 51.1 +0.3
KULM                               ePKPab    PKPab    12 21 05.2 +0.8
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GRNR  Gornyy           152.77 332  ePKIKP    PKPdf    12 20 41.2 -0.8
GRNR                                pmax     pmax
      comp=Z,26nm,1.0s
JIRN  Jiri             152.89  83  eP        PKPdf    12 20 43.6 +0.3
JIRN  Jiri             152.89  83  eP        PKPdf    12 20 43.4 +0.1
      comp=Z,214nm,1.1s
KSM   Kuching          152.98 165  ePKPdf    PKPdf    12 20 43.6 +0.2
KSM                                ePKPbc    PKiKP    12 20 51.8 +0.5
KSM                                ePKPab    PKPab    12 21 07.0 +1.7
ZEA   Zeya             153.08 346  ePKIKP    PKPdf    12 20 42.1 -0.2
ZEA                                e                  12 21 05.0
ZEA                                e                  12 24 41.0
ZEA                                e                  12 43 24.0
ZEA                                 pmax     pmax
      comp=N,49nm,1.6s
ZEA                                 pmax     pmax
      comp=Z,87nm,1.4s
ZEA                                 pmax     pmax
      comp=Z,600nm,8.0s
RAMN  Ramite           153.15  85  eP        PKPdf    12 20 44.2 +0.6
RAMN  Ramite           153.15  85  eP        PKPdf    12 20 44.2 +0.6
      comp=Z,161nm,0.6s
JMP   Maruseppu        153.36 314   P        PKPdf    12 20 43.7 +0.7
MOY   Mondy            153.43  22  ePKIKP    PKPdf    12 20 44.5 +1.5
MOY                                e                  12 21 07.6
MOY                                 pmax     pmax
      comp=Z,199nm,2.0s
PKDT  Phuket           153.48 135   PKP      PKPdf    12 20 45.5 +1.4
ASAJ  Asahikawa        153.79 315   PKP      PKPdf    12 20 43.8 +0.1
      comp=Z,28nm,0.9s,baz=220,slow=4.2,SNR=12
ASAJ                                PKPbc    PKiKP    12 20 52.5 +0.4
      comp=Z,80nm,0.9s,baz=62,slow=0.9,SNR=26
ASAJ                                PKPab    PKPab    12 21 08.3 +0.1
      comp=Z,86nm,0.9s,baz=309,slow=6.9,SNR=11
ASAJ                                pPKPbc   pPKPbc   12 23 06.8 -0.6
      comp=Z,67nm,1.0s,baz=279,slow=12,SNR=8.7
ODAN  Odare            153.83  85  eP        PKPdf    12 20 45.0 +0.5
      comp=Z,109nm,0.8s
ODAN  Odare            153.83  85  eP        PKPdf    12 20 45.0 +0.5
      comp=Z,243nm,1.2s
IRK   Irkutsk          153.93  18  ePKIKP    PKPdf    12 20 43.9 +0.3
IRK                                e                  12 23 00.5
IRK                                 pmax     pmax
      comp=Z,613nm,2.0s
TLY   Talaya           154.25  19  ePKPdf    PKPdf    12 20 46.7 +2.7
TLY                                ePKPbc    PKPbc    12 20 55.7 +2.8
TLY                                ePKPab    PKPab    12 21 11.7 +1.8
TLY   Talaya           154.25  19d iPKIKP    PKPdf    12 20 44.5 +0.5
TLY                                e                  12 21 08.4
TLY                                e                  12 23 01.6
TLY   Talaya           154.25  19   PKPdf    PKPdf    12 20 46.5 +2.5
      SNR=18
TLY   Talaya           154.25  19   P        PKPdf    12 20 46.5 +2.5
      SNR=18
TRTT  Trang            154.27 138   PKP      PKPdf    12 20 46.2 +1.0
SKLT  Songkhla         154.27 140   PKP      PKPdf    12 20 46.5 +1.3
SBUM  Sibu             154.30 169  ePKPdf    PKPdf    12 20 44.0 -1.2
SBUM                               ePKPbc    PKPbc    12 20 55.1 +1.1
SBUM                               ePKPab    PKPab    12 21 12.3 +1.3
JEM   Erimo            154.39 310   P        PKPab    12 21 13.3 +2.5
ERM   Erimo            154.39 310  ePKPdf    PKPdf    12 20 45.4 +0.9
ERM                                ePKPbc    PKPbc    12 20 53.5 +0.1
ERM                                ePKPab    PKPab    12 21 13.0 +2.2
ERM   Erimo            154.39 310  ePKIKP    PKPdf    12 20 45.4 +0.9
ZAK   Zakamensk        155.28  21  ePKIKP    PKPdf    12 20 45.2 -0.4
ZAK                                 pmax     pmax
      comp=Z,76nm,1.1s
KLR   Kul'dur          155.82 336   PKP      PKPdf    12 20 45.9 -0.3
      comp=Z,50nm,1.1s,baz=53,slow=1.3,SNR=41
KLR                                 PKPbc    PKPbc    12 20 56.3
      comp=Z,14nm,0.7s,baz=309,slow=1.7,SNR=18
KLR                                 PKPab    PKPab    12 21 16.7 -0.1
      comp=Z,20nm,0.6s,baz=67,slow=4.7,SNR=8.5
KLR                                 pPKP     pPKPdf   12 23 03.0 +0.3
      comp=Z,37nm,1.1s,baz=15,slow=2.7,SNR=7.7
KLR                                 PP       PP       12 24 57.1 +0.8
      comp=Z,9.2nm,0.7s,baz=40,slow=3.9,SNR=4.8
JTM   Tenmabayashi     156.33 309   P        PKPab    12 21 19.3  0.0
BRDH  Bariadhala       156.63  97   PKP      PKPdf    12 20 49.5 +1.5
      comp=Z,100nm,0.3s,baz=71,slow=8.8,SNR=12
BRDH                                PKPab    PKPab    12 21 21.5 +0.4
      comp=Z,629nm,0.9s,baz=84,slow=4.4,SNR=31
BRDH                                pPKP     pPKPdf   12 23 05.3 +0.7
      comp=Z,88nm,0.3s,baz=85,slow=5.7,SNR=1.8
JOM   Ohasama          156.70 306   P        PKPab    12 21 21.6 +0.6
TEY   Ternei           156.77 323⇓ePKP2     PKPab    12 21 21.7 +0.7
TEY                                 pmax     pmax
      comp=Z,50nm,1.1s
TEY                                 pmax     pmax
      comp=E,20nm,0.9s
TEY                                 pmax     pmax
      comp=N,20nm,1.3s
MATI  Mati             157.33 205  eP        PKPdf    12 20 52.5 +3.3
LSA   Lhasa            157.41  79  ePKPdf    PKPdf    12 20 50.5 +1.0
LSA                                ePKPab    PKPab    12 21 26.4 +1.4
JCJ   Chichijima       157.53 274   PKP      PKPdf    12 20 48.6 -0.4
      comp=N,29nm,0.7s,baz=274,slow=19,SNR=1.7
JCJ                                 PKPab    PKPab    12 21 24.9 -0.1
      comp=N,241nm,0.8s,baz=135,slow=2.9,SNR=10
CBIJ  Chichi jima      157.53 274  ePKPdf    PKPdf    12 20 48.6 -0.4
CBIJ                               ePKPab    PKPab    12 21 24.9 -0.1
CBIJ  Chichi jima      157.53 274   P        PKPab    12 21 25.2 +0.2
SHL   Shillong         157.58  90  ePKPdf    PKPdf    12 20 49.9 +0.5
SHL                                ePKPab    PKPab    12 21 25.7 +0.3
SHL   Shillong         157.58  90  ePKIKP    PKPdf    12 20 49.9 +0.5
SHL                                e                  12 21 25.7
SHL   Shillong         157.58  90⇓iP        PKPdf    12 20 49.0 -0.4
      comp=Z,17nm,1.2s
SHL                                ex        x        12 27 13.0
SHL                                 IAMs_20  IAMs_20  13 09 23.3
      comp=N,497nm,26.1s
KCP   Kidapawan        157.80 202⇓iP        PKPdf    12 20 50.5 +0.6
PHET  Kaeng Krachan    158.05 129   PKP      PKPdf    12 20 51.1 +1.1
PHET  Kaeng Krachan    158.05 129   P        PKPab    12 21 28.1 +0.8
JYA   Atsumi           158.18 305   P        PKPab    12 21 27.8 +0.4
KKM   Kota Kinabalu    158.25 178  ePKPab    PKPab    12 21 29.4 +1.3
SONA1 Songino Array    158.49  19  ePKPdf    PKPdf    12 20 50.5 +0.7
SONA1                              ePKPab    PKPab    12 21 29.9 +1.4
SONA0 Songino Array    158.49  20  ePKPdf    PKPdf    12 20 50.3 +0.6
SONA0                              ePKPab    PKPab    12 21 28.7 +0.1
SONA0                              epPKPdf   pPKPdf   12 23 05.7 -0.8
SONM  Songino Array    158.49  20   PKP      PKPdf    12 20 50.3 +0.6
      comp=N,50nm,0.8s,baz=272,slow=1.1,SNR=215
SONM                                PKPab    PKPab    12 21 28.7 +0.1
      comp=N,33nm,0.5s,baz=269,slow=2.2,SNR=5.3
SONM                                pPKP     pPKPdf   12 23 05.7 -0.8
      comp=N,13nm,1.0s,baz=327,slow=2.4,SNR=2.1
HIA   Hailar           158.56 355  ePKPdf    PKPdf    12 20 50.1 +0.5
HIA                                ePKPab    PKPab    12 21 29.7 +1.1
HIA   Hailar           158.56 355  ePKIKP    PKPdf    12 20 50.1 +0.5
HIA                                e                  12 21 29.7
BUKP  Musuan           158.62 203  eP        PKPab    12 21 30.4 +0.6
ULN   Ulaanbaatar      158.66  18  ePKPdf    PKPdf    12 20 50.8 +0.8
ULN                                ePKPab    PKPab    12 21 30.4 +1.1
ULN   Ulaanbaatar      158.66  18  ePKIKP    PKPdf    12 20 50.8 +0.8
ULN                                e                  12 21 30.4
ULN   Ulaanbaatar      158.66  18   PKPdf    PKPdf    12 20 51.0 +1.0
      SNR=54
ULN   Ulaanbaatar      158.66  18   P        PKPdf    12 20 51.0 +1.0
      SNR=54
PATY  Pattaya          158.90 132   PKP      PKPdf    12 20 52.8 +1.8
PATY  Pattaya          158.90 132   P        PKPab    12 21 32.0 +1.0
JRY   Ryogami san      159.66 299   P        PKPab    12 21 35.2 +1.2
UMPA  Umpang Tak       159.68 121   PKP      PKPdf    12 20 53.0 +1.1
USA0B Ussuriysk Arra   159.71 327  ePKPdf    PKPdf    12 20 51.5 +0.5
USRK  Ussuriysk Ar.    159.71 327   PKP      PKPdf    12 20 51.1 +0.1
      comp=N,9.2nm,0.9s,baz=270,slow=1.9,SNR=14
USRK                                PKPab    PKPab    12 21 33.6 -0.2
      comp=N,12nm,0.6s,baz=24,slow=4.3,SNR=11
USRK                                pPKP     pPKPdf   12 23 06.8 -1.0
      comp=N,8.0nm,1.0s,baz=254,slow=3.6,SNR=2.2
USRK                                pPKPab   pPKPab   12 23 43.0 +0.5
      comp=N,3.5nm,0.7s,baz=357,slow=3.8,SNR=1.8
UTHA  Uthaitani        159.71 124   PKP      PKPdf    12 20 52.8 +0.9
UTHA  Uthaitani        159.71 124   P        PKPab    12 21 35.0 +0.4
      comp=N,104nm,1.0s,comp=N,880nm
JOD2  Odawara 2        159.72 297   P        PKPab    12 21 34.4 +0.1
MJAR  Matsushiro Arr   160.03 301   PKIKP    PKPdf    12 20 51.9 +0.2
MJAR                                                  12 21 35.7
MJAR                                                  12 23 07.6
MJAR                                pmax     pmax
      comp=Z,9.0nm,1.0s
MJAR                                pmax     pmax
      comp=Z,49nm,0.8s
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MJAR  Matsushiro Arr   160.03 301   PKP      PKPdf    12 20 51.9 +0.2
      comp=Z,10.0nm,1.1s,baz=252,slow=1.0,SNR=10
MJAR                                PKPab    PKPab    12 21 35.7 +0.1
      comp=Z,49nm,0.8s,baz=91,slow=1.2,SNR=31
MJAR                                pPKP     pPKPdf   12 23 07.6 -1.0
      comp=Z,3.4nm,0.8s,baz=107,slow=2.1,SNR=2.0
MJAR                                pPKPab   pPKPab   12 23 44.1 -0.1
      comp=Z,39nm,1.1s,baz=78,slow=1.2,SNR=15
MAJO  Matsushiro       160.03 301  ePKPdf    PKPdf    12 20 52.2 +0.6
MAJO                               ePKPab    PKPab    12 21 36.5 +0.8
MAJO                               epPKPdf   pPKPdf   12 23 07.5 -1.0
MAJO  Matsushiro       160.03 301  ePKIKP    PKPdf    12 20 52.3 +0.6
MAJO                               e                  12 21 36.5
MAJO                               e                  12 23 07.6
MAJO  Matsushiro       160.03 301  eP        PKPdf    12 20 53.0 +1.3
MAT   Matsushiro       160.03 301   P        PKPab    12 21 36.5 +0.9
MJB9  Matsu-Tunnel     160.03 301  ePKPdf    PKPdf    12 20 52.5 +0.8
MJB9                               ePKPab    PKPab    12 21 36.6 +1.0
MDJ   Mudanjiang       160.46 332   PKP      PKPdf    12 20 51.8  0.0
MDJ                                 pPKP     pPKPdf   12 23 08.4 -0.3
MDJ                                 sPKP              12 24 02.8
MDJ                                 PP       PP       12 25 22.1 +0.7
MDJ                                 AMB      AMB
      comp=Z,650nm,14.7s
MDJ   Mudanjiang       160.46 332  ePKPdf    PKPdf    12 20 51.8  0.0
SRAK  Srakaew          160.47 132   PKP      PKPdf    12 20 54.3 +1.6
JGN   Niukaw           160.81 301   P        PKPab    12 21 39.9 +0.8
SUKH  Sukhothai        161.04 120   PKP      PKPdf    12 20 54.6 +1.4
CM01  Chiang Mai Arr   161.04 116  ePKPdf    PKPdf    12 20 53.8 +0.5
CM01                               ePKPab    PKPab    12 21 40.7 +0.2
CM31  Chiang Mai Arr   161.05 116  ePKPdf    PKPdf    12 20 54.2 +1.0
CM31                               ePKPab    PKPab    12 21 40.5 +0.1
CM31  Chiang Mai Arr   161.05 116   PKPdf    PKPdf    12 20 54.2 +1.0
      SNR=22
CM31  Chiang Mai Arr   161.05 116   P        PKPdf    12 20 54.2 +1.0
      SNR=22
CMAR  Chiang Mai Arr   161.05 116   PKP      PKPdf    12 20 53.6 +0.4
      comp=Z,22nm,1.1s,baz=254,slow=2.3,SNR=70
CMAR                                PKPab    PKPab    12 21 40.7 +0.2
      comp=Z,37nm,0.8s,baz=243,slow=4.5,SNR=22
CMAR                                pPKP     pPKPdf   12 23 09.3 -0.8
      comp=Z,16nm,1.1s,baz=240,slow=2.5,SNR=3.4
CMAR                                PP       PP       12 25 26.1 +0.4
      comp=Z,21nm,1.0s,baz=250,slow=5.9,SNR=9.2
CHTO  Chiang Mai       161.24 115  ePKPdf    PKPdf    12 20 53.8 +0.4
CHTO                               ePKPab    PKPab    12 21 41.4 +0.1
CHTO  Chiang Mai       161.24 115  ePKIKP    PKPdf    12 20 53.8 +0.4
CHTO                               e                  12 21 41.4
CHTO  Chiang Mai       161.24 115   PKPdf    PKPdf    12 20 54.3 +0.8
      SNR=17
CHTO  Chiang Mai       161.24 115   P        PKPdf    12 20 54.3 +0.8
      SNR=17
CHTO  Chiang Mai       161.24 115   PKP      PKPdf    12 20 53.9 +0.4
CHTO  Chiang Mai       161.24 115   P        PKPab    12 21 41.8 +0.5
      comp=Z,488nm,1.4s,comp=Z,9µm
CHTO  Chiang Mai       161.24 115  eP        PKPdf    12 20 54.6 +1.2
CMMT  Chiang Mai       161.24 115   PKP      PKPdf    12 20 53.8 +0.3
CMMT  Chiang Mai       161.24 115   P        PKPab    12 21 41.8 +0.5
      comp=Z,109nm,1.4s,comp=Z,2µm
INU   Inuyama          161.32 298  ePKPdf    PKPdf    12 20 53.4 +0.3
INU                                ePKPab    PKPab    12 21 41.6 +0.3
PBKT  Sadao Pong       161.48 124   PKP      PKPdf    12 20 54.4 +0.7
LAMP  Lampang          161.63 117   PKP      PKPdf    12 20 54.9 +1.0
GTA   Gaotai           161.78  47 ⇓PKP      PKPdf    12 20 54.3 +0.7
GTA                                 PKPab    PKPab    12 21 44.0 +0.7
GTA                                 pPKP     pPKPdf   12 23 11.9 +1.4
GTA                                 PP       PP       12 25 32.0 +2.9
GTA                                 SKKS              12 31 16.8
GTA                                 SS       SS       12 45 01.8 +1.5
GTA                                 AMB      AMB
      comp=Z,850nm,7.5s
JIE   Ise              161.84 296   P        PKPab    12 21 45.3 +1.7
UTTA  Uttaradit        161.90 121   PKP      PKPdf    12 20 55.1 +1.0
JWT   Wachi            162.59 300   P        PKPab    12 21 47.5 +0.6
CN2   Changchun        162.70 339  ePKP      PKPdf    12 20 53.8 -0.4
CN2                                epPKP     pPKPdf   12 23 11.6 +0.5
CN2                                ePP       PP       12 25 31.9 -1.0
CN2                                eSS       SS       12 45 08.9 +1.0
SKNT  Sakolnakorn      163.88 130   PKP      PKPdf    12 20 56.9 +0.8
BTO   Baotou           166.13  22  ePKP      PKPdf    12 20 57.5 +0.1
LZH   Lanzhou          166.28  50 ⇓PKP      PKPdf    12 20 59.4 +1.7
LZH                                 PKPab    PKPab    12 22 04.8 +1.5
LZH                                 pPKP     pPKPdf   12 23 16.5 +1.7
LZH                                 PP       PP       12 25 51.1 -1.4
LZH                                 SKKS              12 31 40.3
LZH                                 SS       SS       12 45 48.6 +2.5
LZH                                 AMB      AMB
      comp=Z,2µm,7.6s
HHC   Hu-ho-hao-te     166.37  17  ePKP      PKPdf    12 20 59.3 +1.7
KSRS  Korea Array      166.69 318   PKP      PKPdf    12 20 57.8 +0.1
      comp=Z,13nm,0.9s,baz=278,slow=0.7,SNR=18
KSRS                                PKPab    PKPab    12 22 05.5 +0.7
      comp=Z,20nm,0.7s,baz=57,slow=4.4,SNR=28
KSRS                                pPKP     pPKPdf   12 23 14.4 -0.5
      comp=Z,10nm,1.0s,baz=81,slow=1.2,SNR=4.2
KSRS                                pPKPab   pPKPab   12 24 14.5 +1.2
      comp=Z,4.6nm,0.8s,baz=51,slow=3.5,SNR=3.4
KSRS                                PP       PP       12 25 54.9 +0.8
      comp=Z,5.7nm,1.0s,baz=32,slow=2.9,SNR=4.0
KS01  Wonju Array Si   166.69 319  ePKPdf    PKPdf    12 20 58.0 +0.2
KS01                               ePKPab    PKPab    12 22 04.9 +0.1
KS15  Wonju Array Si   166.72 319  ePKPdf    PKPdf    12 20 57.6 -0.2
KS15                               ePKPab    PKPab    12 22 06.3 +1.3
JNU   Nakatsue         166.85 297  ePKPab    PKPab    12 22 05.4 -0.4
JNU   Nakatsue         166.85 297   P        PKPab    12 22 06.2 +0.4
JNU   Nakatsue         166.85 297   PKPab    PKPab    12 22 05.7 -0.1
      comp=Z,33nm,0.7s,baz=5.1,slow=3.3,SNR=18
KMI   Kunming          167.05  99   PKP      PKPdf    12 20 58.4 -0.3
KMI   Kunming          167.05  99  ePKPdf    PKPdf    12 20 58.3 -0.4
KMI                                ePKPab    PKPab    12 22 07.3 +0.2
KMI   Kunming          167.05  99  ePKIKP    PKPdf    12 20 58.3 -0.4
KMI                                e                  12 22 07.4
JSU   Suzuyama         167.65 290   P        PKPab    12 22 09.8 +0.4
BJI   Beijing          167.88   3   PKP      PKPdf    12 20 59.3 +0.8
BJI                                 pPKP     pPKPdf   12 23 16.0 +0.3
BJI                                 PP       PP       12 25 58.9 -0.2
BJI                                 SKKS              12 31 48.6
BJI                                 SS       SS       12 46 00.1 +0.7
BJT   Baijiatuau       167.90   3  ePKPdf    PKPdf    12 20 58.8 +0.2
BJT                                ePKPab    PKPab    12 22 09.9 -0.1
BJT   Baijiatuau       167.90   3  ePKIKP    PKPdf    12 20 58.8 +0.2
BJT                                e                  12 22 09.9
CD2   Chengdu          168.19  72   PKP      PKPdf    12 20 59.6 +0.5
CD2                                 pPKP     pPKPdf   12 23 16.8 +0.5
CD2                                 sPKP              12 24 13.0
CD2                                 PP       PP       12 26 03.3 +0.7
CD2                                 SKS      SKSdf    12 27 08.4 +0.1
CD2                                 SKKS     SKKSac   12 31 52.3 +0.2
CD2                                 SS       SS       12 46 07.1 +1.1
CD2                                 AMB      AMB
      comp=Z,3µm,6.7s
DL2   Dalian           168.33 341 ⇓PKP      PKPdf    12 20 59.6 +0.8
DL2                                 PKPab    PKPab    12 22 10.1 -1.8
DL2                                 pPKP     pPKPdf   12 23 16.8 +0.8
DL2                                 PP       PP       12 25 58.4 -3.2
DL2                                 AMB      AMB
      comp=Z,960nm,6.5s
QIZ   Qiongzhong       169.07 142   PKP      PKPdf    12 20 58.6 -1.3
QIZ                                 PP       PP       12 26 04.3 -1.4
QIZ                                 SS       SS       12 46 11.4 -0.9
QIZ                                 AMB      AMB
      comp=Z,350nm,13.5s
QIZ   Qiongzhong       169.07 142  ePKPdf    PKPdf    12 20 59.9 -0.1
QIZ                                ePKPab    PKPab    12 22 16.7 +1.0
TIY   Taiyuan          169.53  20  ePKP      PKPdf    12 21 00.1 +0.3
TIY                                 PKPab    PKPab    12 22 18.6 +1.2
TIY                                 pPKP     pPKPdf   12 23 18.3 +1.3
TIY                                 PP       PP       12 26 06.5 -1.2
TIY                                 SKKS              12 31 59.3
TIY                                 AMB      AMB
      comp=Z,1µm,4.6s
JOW   Kunigami         169.80 267  ePKPdf    PKPdf    12 21 00.5 +0.4
JOW                                ePKPab    PKPab    12 22 19.4 +0.3
JOW   Kunigami         169.80 267   PKP      PKPdf    12 21 01.3 +1.1
      comp=Z,14nm,1.1s,baz=132,slow=12,SNR=4.9
JOW                                 PKPab    PKPab    12 22 19.4 +0.3
      comp=Z,2.0nm,0.5s,baz=85,slow=17,SNR=2.9
GYA   Guiyang          170.80  97  i PKP     PKPdf    12 21 00.8 -0.1
GYA                                 PKPab    PKPab    12 22 24.8 +1.1
GYA                                 pPKP     pPKPdf   12 23 17.0 -1.1
GYA                                 sPKP              12 24 12.4
GYA                                 PKS      pPKPab   12 24 30.6 -1.2
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GYA				PP	PP	12 26 17.1	+1.3
GYA				SKKS		12 32 05.0	
GYA				SS	SS	12 46 30.3	-1.7
GYA				AMB	AMB		
	comp=Z,1µm,10.2s						
XAN	Xi'an	170.84	46	PKP	PKPdf	12 21 00.9	+0.3
XAN				PKPab	PKPab	12 22 23.8	+0.4
XAN				sPKP		12 24 18.0	
XAN				PP	PP	12 26 14.4	-0.6
XAN				SKS	SKSdf	12 27 05.8	-3.6
XAN				SKKS	SKKSac	12 32 02.5	-2.1
XAN				SS	SS	12 46 33.1	+2.6
XAN				AMB	AMB		
	comp=Z,710nm,3.9s						
XAN	Xi'an	170.84	46	ePKPdf	PKPdf	12 21 01.1	+0.5
XAN				ePKPab	PKPab	12 22 24.0	+0.6
XAN	Xi'an	170.84	46	ePKIKP	PKPdf	12 21 01.1	+0.5
XAN				e		12 22 24.0	
TIA	Tai'an	171.72	359	PKP	PKPdf	12 21 01.3	+0.4
TIA				pPKP	pPKPdf	12 23 16.3	-1.9
TIA				PP	PP	12 26 15.8	-2.3
TIA				SKKS		12 32 07.3	
ENH	Enshi	173.13	68	ePKPdf	PKPdf	12 21 01.7	0.0
ENH				ePKPab	PKPab	12 22 33.7	-0.1
YULB	Yu-li	173.99	223	ePKPab	PKPab	12 22 36.5	-0.9
TPUB	Ta-pu	174.29	217	ePKPdf	PKPdf	12 21 02.3	0.0
SSLB	Suanglung	174.49	223	ePKPdf	PKPdf	12 21 01.8	-0.5
SSLB				ePKPab	PKPab	12 22 38.8	-1.0
SSE	Sheshan	175.07	311	PKP	PKPdf	12 21 02.5	+0.3
SSE				PP	PP	12 26 36.0	+0.8
SSE				SS	SS	12 47 09.3	-1.7
SSE				AMB	AMB		
	comp=Z,470nm,4.2s						
NJ2	Nanjing	175.52	338	ePKP	PKPdf	12 21 02.3	0.0
NJ2				PKPab	PKPab	12 22 43.6	-0.4
NJ2				pPKP	pPKPdf	12 23 20.3	+0.6
NJ2				AMB	AMB		
	comp=Z,2µm,4.3s						
WHN	Wuhan	176.57	39	PKP	PKPdf	12 21 02.9	+0.3
WHN				PKPab	PKPab	12 22 49.8	+1.0
WHN				pPKP	pPKPdf	12 23 19.1	-0.9
WHN				PP	PP	12 26 46.4	+4.5
WHN				SKKS		12 32 30.8	
WHN				AMB	AMB		
	comp=Z,2µm,15.8s						
QZH	Quanzhou	176.67	208	i PKP	PKPdf	12 21 04.4	+1.6
QZH				pPKP	pPKPdf	12 23 19.4	-0.7
QZH				SKKS		12 32 33.5	
QZH				eSS	SS	12 47 31.1	+6.8

*ISCJB **22** 12:04:35.3±0.2, 51°.46N±0°.01×16°.07E±0°.02, h0^{km}, mb3.7/10, Error ellipse: s-maj=2.0km s-min=1.7km az=2.6*

*LDG **22** 12:04:35.9±0.1, 51°.52N×16°.17E, h1^{km}, Ml3.5/2, Error ellipse: s-maj=3.7km s-min=2.7km az=23.0, Suspected Mining induced.*

*IDC **22** 12:04:37.9±0.5, 51°.48N×16°.05E, h0^{km}, mb3.8/10, mb1 3.8/17, mb1mx3.7/59, mbtmp3.7/17, ML3.2/7, Error ellipse: s-maj=9.4km s-min=5.7km az=109.0*

*PRU **22** 12:04:38.5±0.0, 51°.47N×16°.10E, h0^{km}*

*BNS **22** 12:04:38.4±0.4, 51°.59N×16°.14E, h5^{km}, ML3.4*

*BGR **22** 12:04:39.8±0.8, 51°.37N×16°.01E, h1^{km}, ML3.6/6, Error ellipse: s-maj=8.9km s-min=3.3km az=26.0*

*VIE **22** 12:04:39.7±0.7, 51°.30N×16°.06E, h0^{km}, mb3.1/17, ml3.4/15, ms3.8/2, Error ellipse: s-maj=6.2km s-min=2.7km az=34.0, Suspected Mining induced.*

*UPP **22** 12:04:41.0±2.8, 51°.70N×15°.53E, h0^{km}, ML2.8, Suspected explosion*

ISC 22 12:04:36.2±0.5**, 51°.52N**±0°.02×**16°.10E**±0°.02**, h0**^{km}**, n114, σ1^{s}.77**/177**, mb3.7**/10**, 3C-4D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	170	i Pg	Pb	12 04 50.3	-0.8
KSP				eSg	Sg	12 04 58.7	+0.4
KSP	Ksiaz	0.69	170	ePg	Pb	12 04 50.3	-0.8
UPC	Upice	1.01	183	ePG	Pb	12 04 56.3	-0.4
UPC				eSG	Sg	12 05 08.9	+0.1
	comp=Z,400nm,0.3s						
DPC	Dobruska-Polom	1.18	173	ePG	Pb	12 04 59.2	-0.3
DPC				eSG	Sb	12 05 15.0	-0.3
	comp=Z,334nm,0.9s						
DPC	Dobruska-Polom	1.18	173	ePg	Pb	12 04 59.2	-0.3
DPC				eSg	Sg	12 05 13.1	-0.9
PVCC	Panska Ves	1.39	225	ePG	Pb	12 05 03.6	+0.6
PVCC				eSG	Sn	12 05 23.2	+1.4
	comp=Z,943nm,0.7s						
BRG	Berggiesshubel	1.50	245	PG	Pn	12 05 04.5	+0.1
BRG	Berggiesshubel	1.50	245	PG	Pg	12 05 06.3	+1.3
BRG				SG	Sn	12 05 26.0	+1.3
	386nm,0.6s						
BRG	Berggiesshubel	1.50	245	ePn	Pn	12 05 04.5	+0.1
KRLC	Kraliky	1.51	163	ePG	Pb	12 05 04.9	-0.2
KRLC				eSG	Sg	12 05 23.8	-0.8
	comp=Z,231nm,1.0s						
RUE	Ruedersdorf	1.73	305	eP	Pb	12 05 08.7	-0.2
GOPC	GO Pecny, Ondr	1.81	208	ePN	Pn	12 05 08.7	0.0
GOPC				ePG	Pg	12 05 10.7	-0.2
GOPC				eSG	Sg	12 05 34.9	+0.5
	comp=Z,369nm,1.2s						
PRU	Pruhonice	1.82	213	ePN	Pn	12 05 09.1	+0.3
PRU				ePG	Pg	12 05 11.3	+0.1
PRU				eSG	Sg	12 05 35.2	+0.4
	comp=Z,385nm,1.1s						
FBE	Freiberg	1.83	252	ePn	Pn	12 05 09.5	+0.6
FBE				eSg	Sg	12 05 34.7	-0.2
GKP	Gorka Klasztor	1.89	21	ePg	Pg	12 05 12.4	0.0
GKP				eSg	Sg	12 05 40.9	+4.1
CLL	Collm	1.95	265	ePn	Pn	12 05 11.0	+0.4
CLL				ePg	Pg	12 05 14.0	+0.4
CLL				e		12 05 18.0	
CLL				eSg	Sg	12 05 40.0	+1.1
	comp=Z,194nm,0.8s						
CLL	Collm	1.95	265	ePn	Pn	12 05 11.0	+0.4
CLL				eSg	Sg	12 05 39.4	+0.5
MORC	Moravsky Berou	1.97	152⇓	iP	Pn	12 05 10.9	+0.1
MORC	Moravsky Berou	1.97	152	S	Sn	12 05 36.5	+0.2
MORC	Moravsky Berou	1.97	152	ePN	Pn	12 05 11.0	+0.1
MORC				eSG	Sb	12 05 38.5	+0.4
CHZP	Chorzow	2.20	123	ePg	Pg	12 05 18.7	+0.2
CHZP				eSg	Sg	12 05 47.7	+0.7
VRAC	Vranov	2.24	172⇓	iP	Pn	12 05 15.4	+0.9
VRAC	Vranov	2.24	172	S	Sb	12 05 45.4	-0.3
VRAC	Vranov	2.24	172	ePN	Pn	12 05 15.3	+0.8
VRAC				eSG	Sb	12 05 46.1	+0.4
VRAC	Vranov	2.24	172	Pn	Pn	12 05 15.5	+0.9
	comp=Z,6.6nm,0.3s,baz=348,slow=17,SNR=32						
VRAC				Lg	Lg	12 05 47.7	
	comp=Z,19nm,0.3s,baz=251,slow=21,SNR=11						
TREC	Trest	2.26	190	ePN	Pn	12 05 16.0	+1.1
TREC				ePG	Pg	12 05 19.3	-0.2
TREC				eSG	Sg	12 05 48.1	-0.7
	comp=Z,281nm,1.0s						
KRUC	Moravsky	2.47	176	ePN	Pn	12 05 18.2	+0.5
KRUC				eSG	Sb	12 05 53.7	+1.4
TANN	Tannenbergstha	2.55	246	ePn	Pn	12 05 19.9	+1.0
TANN				eSg	Sg	12 05 57.1	-1.1
NKC	Novy Kostel	2.65	242	ePN	Pn	12 05 21.3	+1.1
NKC				ePG	Pg	12 05 27.5	+0.5
NKC				eSG	Sg	12 06 03.3	+2.0
	comp=Z,243nm,0.7s						
OJC	Ojcow	2.68	118	ePn	Pn	12 05 21.4	+0.8
OJC				ePg	Pg	12 05 29.2	+1.7
OJC				eSg	Sg	12 06 03.8	+1.6
JAVC	Velka Javorina	2.85	159	ePN	Pn	12 05 25.3	+2.3
KHC	Kasperske Hory	2.89	215	ePN	Pn	12 05 24.0	+0.5
KHC				ePG	Pb	12 05 30.0	+1.4
KHC				eSN	Sn	12 05 58.2	-0.7
KHC				eSG	Sg	12 06 08.1	-0.8
	comp=Z,135nm,0.9s						
MOX	Moxa	2.96	255	ePn	Pn	12 05 25.3	+0.8
MOX				eSg	Sg	12 06 11.0	-0.3
MANZ	Manzenberg	2.96	240	ePn	Pn	12 05 25.5	+1.0
GERES	GERESS Array B	3.09	211	Pn	Pn	12 05 27.3	+0.9
	comp=Z,3.2nm,0.3s,baz=24,slow=13,SNR=49						
GERES				Pg	Pb	12 05 33.5	+1.4
	comp=Z,11nm,0.3s,baz=30,slow=16,SNR=64						
GERES				Lg	Lg	12 06 13.2	
	comp=Z,12nm,0.3s,baz=39,slow=26,SNR=8.3						
SMOL	Smolenice	3.13	164	ePG	Pg	12 05 37.3	+1.2
SMOL				eSG	Sg	12 06 17.5	+0.9
LANS	Liptovska Anna	3.21	136	ePN	Pn	12 05 28.8	+0.9
LANS				ePG	Pg	12 05 37.0	-0.6
LANS				eSG	Sg	12 06 19.7	+0.6
MODS	Modra-Piesok	3.24	166	ePN	Pn	12 05 29.8	+1.5
MODS				ePG	Pg	12 05 38.4	+0.1
MODS				eSG	Sg	12 06 19.5	-0.7
MODS				eLG	Lg	12 06 24.5	
ZST	Bratislava	3.39	169	ePN	Pn	12 05 30.2	-0.1
ZST				ePG	Pg	12 05 41.1	0.0
ZST				eSG	Sg	12 06 24.3	-0.7
NIE	Niedzica	3.41	126	eP	Pg	12 05 40.8	-0.7
NIE				eS	Sg	12 06 25.4	-0.2
VYHS	Vyhne	3.50	149	ePN	Pn	12 05 32.3	+0.4
VYHS				ePG	Pg	12 05 43.6	+0.3
VYHS				eSG	Sg	12 06 27.9	-0.8
VYHS				eLG	Lg	12 06 42.1	
CONA	Conrad Observa	3.60	183	i Pn	Pn	12 05 34.2	+0.9
	comp=Z,7.0nm,0.5s,SNR=7.6						
CONA				Pg	Pg	12 05 44.7	-0.5
	comp=Z,25nm,0.4s						
CONA				Sg	Sg	12 06 31.1	-0.6
	comp=Z,38nm,0.4s						
BSD	Bornholm Skovb	3.67	349	i P	Pn	12 05 34.8	+0.6
BSD				i S	Sn	12 06 15.4	-2.7
MOA	Molln	3.86	199	ePn	Pn	12 05 37.8	+0.9
	comp=Z,2.8nm,0.2s,SNR=7.3						
MOA				ePg	Pg	12 05 50.1	-0.1
	comp=Z,12nm,0.2s						
MOA				Sg	Sg	12 06 39.9	-0.3
	comp=Z,130nm,0.8s						
ARSA	Arzberg	4.29	185	ePn	Pn	12 05 43.3	+0.6
	comp=Z,4.5nm,0.3s						
ARSA				Pg	Pg	12 05 58.1	-0.3
	comp=Z,11nm,0.6s						
ARSA				Sg	Sg	12 06 53.5	-0.4
	comp=Z,100nm,0.8s						
LUNU	Lund	4.41	340	P	Pn	12 05 44.3	-0.1
KWP	Kalwaria Pacla	4.61	112	ePn	Pn	12 05 48.3	+1.1
KWP				ePg	Pg	12 06 02.3	-2.3
KWP				eSg	Sg	12 07 01.0	-3.3
KBA	Koelnbreinsper	4.80	203	ePn	Pn	12 05 50.9	+1.0
	comp=Z,3.3nm,0.3s						
KBA				Sg	Sg	12 07 10.8	+0.5
	comp=Z,64nm,0.9s						
BLEU	Blekinge	4.80	358	P	Pn	12 05 50.7	+1.0
SOKA	Soboth	4.90	189	Pg	Pg	12 06 08.4	-1.6
	comp=Z,2.5nm,0.3s						
SOKA				Sg	Sg	12 07 14.5	+1.0
	comp=Z,22nm,0.9s						
BJUU	Bjuv	4.92	339	P	Pn	12 05 51.3	+0.1
GROS	Grobnik	5.08	185	i Pn	Pn	12 05 55.3	+1.7
OBKA	Obir	5.12	192	i Pn	Pn	12 05 55.9	+1.7
	comp=Z,1.1nm,0.3s						
OBKA				ePg	Pg	12 06 14.4	+0.2
	comp=Z,10nm,0.5s						
OBKA				Sg	Sg	12 07 20.6	+0.1
	comp=Z,44nm,0.8s						
MYKA	Terra Mystica	5.15	199	Sg	Sg	12 07 23.5	+1.8
	comp=Z,46nm,0.9s						
WTTA	Wattenberg	5.16	216	ePn	Pn	12 05 56.8	+1.9
	comp=Z,3.9nm,0.3s						
WTTA				Sg	Sg	12 07 23.0	+1.1
	comp=Z,47nm,0.8s						
ABTA	Abfaltersbach	5.33	208	Pn	Pn	12 05 59.2	+2.2
	comp=Z,2.0nm,0.3s						
ABTA				Sg	Sg	12 07 27.4	+0.2
	comp=Z,49nm,0.9s						
RETA	Reutte	5.33	223	ePn	Pn	12 05 57.6	+0.6
	comp=Z,3.1nm,0.2s						
RETA				Sg	Sg	12 07 27.9	+0.7
	comp=Z,52nm,0.9s						
SQTA	Sankt Quirin	5.36	219	ePn	Pn	12 05 59.4	+1.9
	comp=Z,5.8nm,0.2s						
SQTA				Sg	Sg	12 07 31.8	+3.6
	comp=Z,20nm,0.5s						
DOBS	Dobrina	5.39	185	i Pn	Pn	12 06 02.1	+4.2
KOE	Koeppel	5.40	262	ePn	Pn	12 05 58.7	+0.7
VXJU	Vaexsjoe	5.46	353	P	Pn	12 05 59.7	+1.0
VXJU				S	Sn	12 06 59.0	-3.1
OSKU	Oskarshamn	5.69	360	P	Pn	12 06 03.1	+1.3
OSKU				S	Sn	12 07 06.2	-1.5
BGG	Burgeitz	5.70	260	ePn	Pn	12 06 03.2	+1.1
FETA	Feichten	5.71	220	ePn	Pn	12 06 03.9	+1.5
	comp=Z,1.3nm,0.4s						
CRES	Cresnjev	5.71	185	i Pn	Pn	12 06 04.2	+2.0
BYXU	Byxelkrok	5.81	5	P	Pn	12 06 04.9	+1.4
BYXU				S	Sn	12 07 09.0	-1.7
FABU	Falkenberg	5.84	341	P	Pn	12 06 04.0	+0.1
DAVA	Damuels	5.87	226	ePn	Pn	12 06 05.4	+0.8
	comp=Z,3.5nm,0.3s						
STB	Steinbach	5.91	265	ePn	Pn	12 06 06.0	+1.0
STB				eSn	Sn	12 07 12.1	-1.3
	comp=Z,16nm,0.6s						
ASPU	Aespoe	5.92	3	P	Pn	12 06 06.7	+1.6
GNOU	Gnosjoe	5.94	348	P	Pn	12 06 06.0	+0.6
EKSU	Eksjoe	6.08	356	P	Pn	12 06 08.4	+1.1
EKSU				S	Sn	12 07 14.9	-2.7
DAVOX	Davos/Dischmat	6.26	223	Pn	Pn	12 06 10.9	+1.0
	comp=Z,0.8nm,0.3s,baz=56,slow=7.1,SNR=7.7						
DAVOX				Sn	Sn	12 07 23.4	+1.3
	comp=Z,0.4nm,0.3s,baz=30,slow=20,SNR=2.4						
DAVOX				Lg	Lg	12 07 55.4	
	comp=Z,0.4nm,0.3s,baz=116,slow=9.5,SNR=3.8						
DREG	Dreilaegerbach	6.28	266	ePn	Pn	12 06 10.5	+0.5
GOTU	Gotland	6.34	12	P	Pn	12 06 12.3	+1.5
SIRR	Siria	6.41	143⇓	iP	Pn	12 06 12.7	+0.9
DRGR		6.42	135⇑	iP	Pn	12 06 12.9	+0.9
CDF	Champ du Feu	6.49	245	ePn	Pn	12 06 11.0	-2.0
LNKU	Linkoeping	6.73	357	P	Pn	12 06 16.9	+0.7
BZS	Buzias	6.95	146⇑	iP	Pn	12 06 18.7	-0.5
BZS	Buzias	6.95	146	S	Sn	12 06 58.7	-40
HINF	Hinteralfeld	7.05	242	ePn	Pn	12 06 18.7	-2.0
HINF				eSn	Sn	12 07 34.2	-7.4
	comp=Z,7.1nm,0.4s						
BURAR	Bucovina Array	7.10	120⇑	iP	Pn	12 06 21.8	+0.4
IIGN	Ignalina	7.16	54	eP	Pg	12 06 52.6	-0.7
ISAL	Salakas	7.22	52	eP	Pb	12 06 48.1	+5.8
HAU	Haudompre	7.23	245	ePn	Pn	12 06 20.9	-2.2
HAU				eSn	Sn	12 07 34.6	-11
	comp=Z,6.1nm,0.3s						
NACGM	Naroch	7.25	58	e	Sn	12 07 53.0	+6.7
IZAR	Zarasai	7.37	51	eP	Pb	12 06 50.9	+6.0
IDID	Didziasalis	7.41	55	eP	Pg	12 06 52.9	-5.1
GZR	Gura Zlata	7.56	142⇓	iP	Pn	12 06 11.3	-16
BAIF	Baives	7.68	264	ePn	Pn	12 06 28.1	-1.1
MICGM	Minsk	7.71	63	eP	Pg	12 06 58.0	-5.8
MICGM				eS	Sg	12 08 48.0	+4.4
MEZF	Maizieres J'vi	7.73	251	ePn	Pn	12 06 27.6	-2.4
AKASG	Malin Array Be	8.30	91	Pn	Pn	12 06 36.5	-1.3
	comp=Z,2.6nm,0.3s,baz=280,slow=12,SNR=9.9						
AKASG				Sn	Sn	12 08 06.8	-5.3
	comp=Z,2.2nm,0.3s,baz=273,slow=23,SNR=4.2						
AKASG				Lg	Lg	12 09 03.0	
	comp=Z,0.6nm,0.3s,baz=269,slow=26,SNR=4.1						
HFS	Hagfors	8.74	352	Pn	Pn	12 06 43.9	+0.2
	comp=Z,0.2nm,0.3s,baz=167,slow=14,SNR=16						
HFS				Sn	Sn	12 08 19.9	-3.0
	comp=Z,0.3nm,0.3s,baz=156,slow=23,SNR=3.0						
HFS				Lg	Lg	12 09 15.1	
	comp=Z,0.1nm,0.3s,baz=173,slow=29,SNR=2.9						
MBDF	Montbardon	9.22	226	ePn	Pn	12 06 50.6	+0.1
VSU	Vasula	9.25	37	eP	Pn	12 06 36.8	-14
SBF	Sospel	9.63	221	ePn	Pn	12 06 54.9	-1.1
NOA	NORSAR Array B	9.92	346	Pn	Pn	12 06 58.1	-1.8
	comp=Z,0.0nm,0.3s,baz=176,slow=12,SNR=6.3						
NOA				Lg	Lg	12 09 52.8	
	baz=79,slow=13,SNR=3.4						
SMRF	Simiane la Rot	10.35	227	ePn	Pn	12 07 04.4	-1.4
FINES	FINESS Array B	11.36	25	Pn	Pn	12 07 17.9	-1.6
	comp=Z,0.6nm,0.3s,baz=207,slow=12,SNR=19						
FINES				Sn	Sn	12 09 18.6	-8.4
	comp=Z,0.3nm,0.3s,baz=211,slow=21,SNR=3.6						
EKA	Eskdalemuir Ar	12.10	296	Pn	Pn	12 07 27.0	-2.7
	baz=106,slow=14,SNR=3.5						
EKA				Sn	Sn	12 09 39.9	-5.2
	baz=96,slow=22,SNR=7.3						
KLMR	Klimovskoe	15.95	45	ePn	Pn	12 08 13.3	-8.4
KLMR				AMP		12 08 29.5	
	comp=Z,11nm,1.1s						
ARCES	ARCESS Array B	18.61	10	P	P	12 08 52.1	-2.7
	comp=Z,0.4nm,0.3s,baz=189,slow=14,SNR=23						
AKTO	Aktyubinsk	26.16	76	P	P	12 10 13.1	+1.2
	comp=Z,2.1nm,0.8s,baz=299,slow=15,SNR=5.2						
BVAR	Borovoye Array	32.59	66	P	P	12 11 11.4	+2.3
	comp=Z,1.9nm,1.0s,baz=285,slow=7.5,SNR=6.9						
KURBB	Kurchatov Arra	38.18	66	P	P	12 11 58.5	+1.4
	comp=Z,1.2nm,0.7s,baz=297,slow=9.4,SNR=3.6						
AAK	Ala-Archa	39.77	79	P	P	12 12 12.5	+1.8
	comp=Z,1.5nm,0.9s,baz=278,slow=6.9,SNR=2.3						
TORD	Torodi Ar. Bea	40.01	202	P	P	12 12 13.5	+0.8
	comp=Z,2.3nm,1.1s,baz=2.7,slow=10,SNR=8.4						
ZALV	Zalesovo Beam	40.20	59	P	P	12 12 16.2	+2.3
	comp=Z,0.6nm,0.5s,baz=297,slow=9.8,SNR=4.5						
MKAR	Makanchi Array	42.22	69	P	P	12 12 32.7	+2.1
	comp=Z,0.2nm,0.4s,baz=328,slow=7.1,SNR=3.6						
SONM	Songino Array	54.91	55	P	P	12 14 11.2	+2.7
	comp=Z,0.5nm,0.3s,baz=284,slow=7.3,SNR=4.2						
ILAR	Eielson Array	63.30	352	P	P	12 15 08.6	+2.4
	comp=Z,0.4nm,1.0s,baz=20,slow=8.1,SNR=3.6						
CMAR	Chiang Mai Arr	71.36	84	P	P	12 15 59.8	+1.8
	comp=Z,0.5nm,0.5s,baz=310,slow=9.3,SNR=5.5						

BEO 22 12:05:37.5±0.6**, 43°.26N**×**23°.48E, h1**^{km}±3^{km}**, ML1.7**/7**, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAPS	Zavoj	0.62	271	ePg	Pg	12 05 48.8	-0.6
ZAPS				eSg	Sg	12 05 56.8	-0.6
VTS	Vitosha	0.67	196	ePg	Pg	12 05 50.8	+0.5
VTS				eSg	Sg	12 05 59.2	+0.2
ZAGS	Zajecar	1.06	302	ePg	Pg	12 05 56.6	-1.2
ZAGS				eSg	Sg	12 06 11.5	-0.1
BOVS	Bovan	1.34	287	ePg	Pg	12 06 01.7	-1.6
BOVS				eSg	Sg	12 06 19.9	-0.8
PLD	Plovdiv	1.47	142	ePn	Pn	12 06 04.4	-0.7
SELS	Selova	1.73	269	ePn	Pn	12 06 07.9	-0.8
SELS				eSn	Sn	12 06 31.6	+0.2
GRUS	Gruza	2.10	288	ePn	Pn	12 06 14.7	+0.8
GRUS				eSn	Sn	12 06 39.9	-0.8
IVAS	Ivanjica	2.44	278	ePn	Pn	12 06 19.3	+0.7
IVAS				eSn	Sn	12 06 49.3	+0.1
BZS	Buzias	2.71	331	ePn	Pn	12 06 22.1	0.0
BZS				eSn	Sn	12 06 54.8	-0.7

WEL 22 12:24:40.1, 39°.3S±0°.8×**17°7E**±°**, h23**^{km}±2^{km}**, ML3.6**/21**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.22	326	P	Pb	12 24 45.7	-0.2
WHHZ				S	Sb	12 24 50.8	+1.1
ARHZ	Aropaoanui	0.31	269	P	Pb	12 24 47.2	+0.1
ARHZ				S	Sb	12 24 53.4	+1.5
KNZ	Kokohu	0.32	43	P	Pb	12 24 47.9	+0.6
KNZ				S	Sn	12 24 54.5	-0.8
MHGZ	Mahia Peninsul	0.41	76	P	Pn	12 24 49.8	-0.9
RAHZ	Arahi	0.41	325	P	Pb	12 24 48.9	0.0
RAHZ				S	Sb	12 24 56.2	+1.3
CKHZ	Cape Kidnapper	0.47	211	P	Pb	12 24 50.5	+0.8
SNGZ	Shannon Statio	0.48	355	P	Pb	12 24 50.2	+0.3
SNGZ				S	Sn	12 24 58.4	-0.9
NMHZ	Naumai	0.48	289	P	Pb	12 24 50.1	+0.1
NMHZ				S	Sb	12 24 58.0	+1.3
PRGZ	Paritu Road	0.51	49	P	Pb	12 24 51.1	+0.7
MCHZ	McNeill Hill	0.57	251	P	Pn	12 24 52.2	-0.6
MTHZ	Maungataniwha	0.59	313	P	Pb	12 24 51.5	-0.3
RIGZ	Rimuhau	0.62	28	P	Pb	12 24 52.9	+0.5
KAHZ	Kahuranaki	0.67	216	P	Pb	12 24 53.5	+0.3
BKZ	Black Stump Fm	0.70	277	P	Pb	12 24 53.6	-0.2
BKZ				P	Pb	12 24 53.6	-0.2
RTZ	Ruatahuna	0.72	333	P	Pb	12 24 53.7	-0.3
RAGZ	Rawiri	0.76	1	P	Pb	12 24 54.9	+0.2
KWHZ	Kaweka Forest	0.77	257	P	Pb	12 24 54.9	+0.1
MRHZ	Matea Rd	0.87	299	P	Pb	12 24 56.3	-0.3
PXZ	Pawanui	0.87	208	P	Pb	12 24 55.4	-1.2
TKGZ	Te Karaka	0.89	24	P	Pb	12 24 56.6	-0.3
MUGZ	Murupara	0.92	328	P	Pb	12 24 56.9	-0.5
MWZ	Matawai	0.93	7	P	Pb	12 24 56.7	-0.8
CNGZ	Carnagh Statio	1.00	40	P	Pn	12 24 58.2	-0.5
URZ	Urewera	1.02	348	P	Pn	12 24 58.3	-0.6
BHHZ	Black Hill Sta	1.05	257	P	Pn	12 24 58.9	-0.7
ALRZ	Allen Road	1.07	310	P	Pn	12 24 59.4	-0.3
HATZ	Hinemaiaia	1.07	290	P	Pn	12 24 59.9	+0.1
WPHZ	Waipukurau	1.09	222	P	Pn	12 24 58.8	-1.2
RRRZ	Republican Roa	1.14	323	P	Pn	12 25 00.5	-0.3
PRHZ	Porangahau	1.16	210	P	Pn	12 24 59.3	-1.7
TWGZ	Tauwhareparae	1.17	23	P	Pn	12 25 00.5	-0.7
WPRZ	Whakapapatarin	1.21	307	P	Pn	12 25 01.5	-0.1
HRRZ	Handcock Road	1.22	315	P	Pn	12 25 01.3	-0.5
RITZ	Rihia Road	1.22	283	P	Pn	12 25 02.1	+0.3
TARZ	Mount Tarawera	1.23	326	P	Pn	12 25 01.8	-0.2
EDRZ	Edgecumbe	1.26	336	P	Pb	12 25 03.0	-0.2
MOVZ	Moawhango	1.28	263	P	Pn	12 25 02.7	+0.1
HSRZ	Hossack Road	1.30	316	P	Pn	12 25 02.7	-0.2
RUGZ	Raukumara Rang	1.31	10	P	Pn	12 25 02.5	-0.7
RATZ	Rangitukua	1.32	287	P	Pn	12 25 03.1	0.0
TUVZ	Tukino	1.35	269	P	Pn	12 25 04.2	+0.5
KATZ	Kakaramea	1.35	282	P	Pn	12 25 03.6	0.0
GRRZ	Galatos Road	1.35	312	P	Pn	12 25 03.3	-0.2
PUZ	Puketiti	1.36	30	P	Pn	12 25 02.7	-1.0
KRVZ	Karewarewa	1.37	276	P	Pn	12 25 04.2	+0.3
ANWZ	Angora Road	1.39	210	P	Pn	12 25 02.2	-1.9
NGZ	Ngauruhoe	1.39	273	P	Pn	12 25 04.6	+0.3
OMRZ	Omania	1.40	325	P	Pn	12 25 04.7	+0.5
WHVZ	Whangaehu Hut	1.40	268	P	Pn	12 25 04.2	-0.3
WATZ	Wairara	1.40	293	P	Pn	12 25 03.6	-0.7
DVHZ	Dannevirke	1.40	222	P	Pn	12 25 02.7	-1.6
WTVZ	West Tongariro	1.41	275	P	Pn	12 25 04.8	+0.4
FWVZ	Far West T-bar	1.43	270	P	Pn	12 25 04.4	-0.4
TRVZ	Turoa	1.43	268	P	Pn	12 25 04.5	-0.3
COVZ	Chateau Observ	1.44	272	P	Pn	12 25 04.6	-0.2
KUTZ	Kaahu Road	1.44	302	P	Pn	12 25 04.6	-0.3
PKGZ	Pakihiroa	1.47	22	P	Pn	12 25 04.5	-0.8
MTVZ	Mangateitei	1.50	265	P	Pn	12 25 05.5	-0.1
HAZ	Te Kaha	1.53	12	P	Pn	12 25 05.4	-0.6
TWVZ	Taurewa	1.53	276	P	Pn	12 25 06.0	-0.1
OPRZ	Ohinepanea	1.56	335	P	Pn	12 25 05.5	-0.9
PKVZ	Pokaka	1.59	268	P	Pn	12 25 07.5	+0.6
WMGZ	Waiomatatini S	1.65	30	P	Pn	12 25 06.9	-0.7
BFZ	Birch Farm	1.67	211	P	Pn	12 25 05.7	-2.3
PRWZ	Pori Road	1.69	220	P	Pn	12 25 06.7	-1.6
MXZ	Matakaoa Point	1.84	23	P	Pn	12 25 11.1	+0.9
TIWZ	Tintock	1.91	217	P	Pn	12 25 09.3	-2.0
MRZ	Mangatainoka R	1.98	224	P	Pn	12 25 10.2	-2.0
TMWZ	Te Maipa	2.17	211	P	Pn	12 25 12.0	-2.9
HOWZ	Holdsworth Sta	2.18	221	P	Pn	12 25 12.9	-2.0
OGWZ	Otaki Gorge	2.31	227	P	Pn	12 25 15.2	-1.5
MTW	Mount Morrison	2.39	217	P	Pn	12 25 14.5	-3.3
KIW	Kapiti Island	2.49	229	P	Pn	12 25 17.8	-1.4
CAW	Cannon Point	2.57	223	P	Pn	12 25 18.0	-2.2
PKE	Pukeiti	2.64	270	P	Pn	12 25 22.2	+0.8
PLWZ	Palliser	2.83	215	P	Pn	12 25 20.0	-3.9

*IDC **22** 12:30:46.3±0.9, 36°.75N×5°.09E, h0^{km}, mb4.1/17, mb1 4.1/26, mb1mx4.0/65, mbtmp4.1/26, ML3.8/8, MS3.8/2, Ms1 3.8/2, ms1mx3.2/48, Error ellipse: s-maj=18.2km s-min=15.2km az=33.0*

*NEIC **22** 12:30:48.5±1.1, 36°.75N×5°.28E, h11^{km}±7^{km}, mb4.5/15, ML4.2(ALG), Error ellipse: s-maj=5.0km s-min=4.3km az=202.0*

NEIC Felt at Bejaia.

*CRAAG **22** 12:30:48.1, 36°.65N×5°.27E, Ml4.2*

*ISCJB **22** 12:30:48.2±0.2, 36°.93N±0°.02×5°.26E±0°.02, h18^{km}, mb4.3/32, MS3.7/2, Error ellipse: s-maj=2.9km s-min=2.2km az=23.2*

*MDD **22** 12:30:49.3±0.6, 36°.76N×5°.31E, h14^{km}±9^{km}, mb4.8/31, Error ellipse: s-maj=7.3km s-min=4.9km az=155.0, PRXIMO*

*LDG **22** 12:30:50.2±0.2, 36°.67N×5°.35E, h25^{km}, Ml3.6/17, Error ellipse: s-maj=4.8km s-min=4.3km az=29.0*

ISC 22 12:30:49.4±0.4**, 36°.82N**±0°.04×**5°.27E**±0°.03**, h18**^{km}**, n196, σ2^{s}.33**/252**, mb4.3**/32**, 1C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.56	119	P	Pb	12 30 59.5	-1.2
DFRA	Djebel Bou Aff	0.56	119	Pg	Pb	12 30 59.5	-1.2
SET	Setif	0.63	170	P	Pg	12 30 59.0	-2.9
SET	Setif	0.63	170	Pg	Pg	12 30 59.0	-2.9

CKHR	Kef el Ahmar	0.83	166	P	Pb	12 31 03.0	-2.3
CKHR	Kef el Ahmar	0.83	166	P	Pb	12 31 03.0	-2.3
CKHR	Kef el Ahmar	0.83	166	Pg	Pb	12 31 03.0	-2.3
CASM	Ain Smara	1.13	119	P	Pn	12 31 09.0	-1.4
CASM	Ain Smara	1.13	119	P	Pn	12 31 09.0	-1.4
CASM	Ain Smara	1.13	119	Pg	Pn	12 31 09.0	-1.4
CTEI	Djebel Teioual	1.19	129	P	Pn	12 31 09.5	-1.7
CTEI	Djebel Teioual	1.19	129	P	Pn	12 31 09.5	-1.7
CTEI	Djebel Teioual	1.19	129	Pg	Pn	12 31 09.5	-1.7
ATAF	Djebel Tarf	1.24	221	P	Pg	12 31 11.6	-1.7
ATAF	Djebel Tarf	1.24	221	Pg	Pg	12 31 11.6	-1.7
CAEH	'Ain El Ouahch	1.27	91	P	Pn	12 31 11.0	-1.2
CAEH	'Ain El Ouahch	1.27	91	Pg	Pn	12 31 11.0	-1.2
AKET	Djebel Ketaf	1.36	236	P	Pn	12 31 12.2	-1.3
AKET	Djebel Ketaf	1.36	236	P	Pn	12 31 12.3	-1.3
AKET	Djebel Ketaf	1.36	236	Pn	Pn	12 31 12.2	-1.3
ABMS	Boumerdes	1.44	268	P	Pn	12 31 12.6	-1.9
ABMS	Boumerdes	1.44	268	Pn	Pn	12 31 12.6	-1.9
ADJB	Djebel Djouab	1.62	246	P	Pb	12 31 16.7	-2.0
ADJB	Djebel Djouab	1.62	246	Pn	Pb	12 31 16.7	-2.0
CMAH	Djebel Manchou	1.74	96	P	Pn	12 31 17.6	-1.1
CMAH	Djebel Manchou	1.74	96	Pn	Pn	12 31 17.6	-1.1
ABA	Alger-Bouzarea	1.79	270	P	Pn	12 31 18.5	-0.9
ABA	Alger-Bouzarea	1.79	270	Pn	Pn	12 31 18.5	-0.9
ABSA	Djebel Ababsia	1.86	106	P	Pn	12 31 20.0	-0.4
CABS	Djebel Ababsia	1.86	106	Pn	Pn	12 31 20.0	-0.4
TAMR	Tamra	3.09	85	ePn	Pn	12 31 36.5	-0.7
TAMR				eSn	Sn	12 32 14.5	+0.9
MAHO	Mahon	3.17	346	Pn	Pn	12 31 37.0	-1.3
MAHO				Sn	Sn	12 32 12.7	-3.0
MAHO	Mahon	3.17	346	eP	Pn	12 31 37.0	-1.3
MAHO				eS	Sn	12 32 12.7	-3.0
MAHO				eCod		12 34 11.2	
KEST	Kesra	3.47	107	ePn	Pn	12 31 42.5	0.0
KEST				eSn	Sn	12 32 21.5	-1.7
KEST	Kesra	3.47	107	Pn	Pn	12 31 42.8	+0.2
	12nm,0.3s,baz=248,slow=4.3,SNR=42						
KEST				Sn	Sn	12 32 24.2	+1.0
	12nm,0.3s,baz=295,slow=14,SNR=4.8						
ETOS	Mallorca	3.52	327	Pn	Pn	12 31 43.5	+0.3
	83nm,0.5s,SNR=49						
ETOS				Sn	Sn	12 32 23.7	-0.6
	39nm,0.3s,SNR=7.9						
EIBI	Ibiza	3.81	307	Pn	Pn	12 31 49.0	+1.9
	25nm,0.4s,SNR=7.9						
EIBI				Sn	Sn	12 32 31.0	-0.3
	12nm,0.2s,SNR=7.9						
EBEN2	Beniarda presa	4.71	295	Pn	Pn	12 32 00.2	+0.7
	16nm,0.3s,SNR=7.9						
CART	Cartagena	5.06	281	ePn	Pn	12 32 05.7	+1.4
CART				eSn	Sn	12 33 03.4	+1.0
EMUR	La Murta	5.29	283	Pn	Pn	12 32 08.1	+0.6
	6.5nm,0.3s,SNR=8.5						
EMUR				Sn	Sn	12 33 07.7	-0.2
	57nm,0.8s,SNR=7.9						
CFON	Fontmartina	5.40	337	Pn	Pn	12 32 08.8	-0.3
	20nm,0.3s,SNR=20						
CFON				Sn	Sn	12 33 07.4	-3.4
	20nm,0.3s,SNR=7.9						
EPOB	Poblet	5.58	326	Pn	Pn	12 32 11.3	-0.2
	10nm,0.2s,SNR=20						
EPOB				Sn	Sn	12 33 10.3	-4.8
	7.2nm,0.3s,SNR=7.9						
ECHE	Chera	5.63	301	Pn	Pn	12 32 12.9	+0.6
	19nm,0.4s,SNR=7.9						
ERTA	Horta de San J	5.64	319	Pn	Pn	12 32 13.1	+0.7
	5.6nm,0.3s,SNR=7.9						
ETOB	Tobarra	5.70	291	Pn	Pn	12 32 15.7	+2.5
	19nm,0.3s,SNR=41						
ETOB				Sn	Sn	12 33 22.5	+4.3
	14nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	5.72	310	Pn	Pn	12 32 14.0	+0.5
	11nm,0.4s,SNR=7.6						
EMIR	Miracle	5.85	331	Pn	Pn	12 32 16.5	+1.3
	23nm,0.3s,SNR=26						
EMIR				Sn	Sn	12 33 19.2	-2.8
	27nm,0.3s,SNR=7.9						
EJON	La Jonquera	5.91	343	Pn	Pn	12 32 15.9	-0.1
	18nm,0.3s,SNR=24						
EJON				Sn	Sn	12 33 22.1	-1.3
	9.2nm,0.3s,SNR=7.9						
SJAF	Saint Jean de	5.95	343	Pn	Pn	12 32 15.6	-0.9
	20nm,0.4s,SNR=7.9						
SJAF				Sn	Sn	12 33 20.7	-3.5
	18nm,0.7s,SNR=7.9						
CLLI	Llivia	6.20	337	Pn	Pn	12 32 21.7	+1.7
	28nm,0.7s,SNR=7.9						
CLLI				Sn	Sn	12 33 29.6	-0.8
	16nm,0.7s,SNR=7.9						
SESP	Santiago Espad	6.35	284	Pn	Pn	12 32 24.2	+2.1
	22nm,0.4s,SNR=7.9						
CLTB	Caltabellotta	6.39	81	ePn	Pn	12 32 22.5	-0.2
CSOR	Sort	6.40	331	Pn	Pn	12 32 24.7	+1.9
	19nm,0.3s,SNR=26						
CSOR				Sn	Sn	12 33 36.2	+0.7
	12nm,0.4s,SNR=7.9						
PGF	Pioggiola	6.40	26	ePn	Pn	12 32 22.1	-0.7
PGF				eSn	Sn	12 33 29.1	-6.4
	61nm,0.6s,SNR=1.0						
PGF	Pioggiola	6.40	26	Pn	Pn	12 32 22.1	-0.7
PGF				Sn	Sn	12 33 29.1	-6.4
	30nm,0.6s						
EBER	Berja	6.54	273	Pn	Pn	12 32 25.5	+0.6
	7.2nm,0.3s,SNR=9.2						
EBER				Sn	Sn	12 33 37.1	-2.0
	30nm,0.7s,SNR=7.9						
LMR	La Mourre	6.58	8	ePn	Pn	12 32 24.5	-0.6
LMR				eSn	Sn	12 33 34.6	-5.0
	14nm,0.3s,SNR=1.0						
LMR	La Mourre	6.58	8	Pn	Pn	12 32 24.5	-0.6
LMR				Sn	Sn	12 33 34.6	-5.0
	7.2nm,0.3s						
ESAC	San Caprasio	6.61	319	Pn	Pn	12 32 26.6	+0.9
	34nm,0.3s,SNR=6.6						
ESAC				Sn	Sn	12 33 38.0	-2.7
	25nm,0.3s,SNR=7.9						
EQES	Quesada	6.72	281	Pn	Pn	12 32 28.7	+1.5
	141nm,1.0s,SNR=20						
EQES				Sn	Sn	12 33 43.1	-0.3
	58nm,0.9s,SNR=7.9						
FRF	La Foret Royal	6.81	8	ePn	Pn	12 32 27.7	-0.7
FRF				eSn	Sn	12 33 40.6	-4.9
	15nm,0.2s,SNR=1.0						
FRF	La Foret Royal	6.81	8	Pn	Pn	12 32 27.7	-0.7
FRF				Sn	Sn	12 33 40.6	-4.9
	7.4nm,0.2s						
MTLF	Montolieu	6.92	341	ePn	Pn	12 32 30.7	+0.9
MTLF				eSn	Sn	12 33 43.3	-4.8
	12nm,0.5s						
MTLF	Montolieu	6.92	341	Pn	Pn	12 32 30.7	+0.9
MTLF				Sn	Sn	12 33 43.3	-4.8
	5.9nm,0.5s						
EQUE	Quentar	6.98	276	Pn	Pn	12 32 31.8	+1.0
	14nm,0.7s,SNR=9.8						
ECHI	Chisagues Biel	7.02	328	Pn	Pn	12 32 33.0	+1.6
	2.6nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	7.13	273	Pn	Pn	12 32 32.4	-0.4
	11nm,0.4s,SNR=7.9						
ELGU				Sn	Sn	12 33 52.7	-0.8
	26nm,0.5s,SNR=7.9						
SMRF	Simiane la Rot	7.15	2	ePn	Pn	12 32 32.2	-0.9
SMRF				eSn	Sn	12 33 48.2	-5.6
	3.2nm,0.3s						
SMRF	Simiane la Rot	7.15	2	Pn	Pn	12 32 32.2	-0.9
SMRF				Sn	Sn	12 33 48.2	-5.6
	3.2nm,0.3s						
SBF	Sospel	7.23	13	ePn	Pn	12 32 33.4	-0.7
SBF				eSn	Sn	12 33 49.1	-6.6
	SNR=1.0						
SBF	Sospel	7.23	13	Pn	Pn	12 32 33.4	-0.7
SBF				Sn	Sn	12 33 49.1	-6.6
EPF	Esparros	7.26	330	ePn	Pn	12 32 35.8	+1.2
	SNR=1.0						
EPF				eSn	Sn	12 33 51.5	-5.2
	6.4nm,0.4s						
EPF	Esparros	7.26	330	Pn	Pn	12 32 35.8	+1.2
EPF				Sn	Sn	12 33 51.5	-5.2
	3.2nm,0.4s						
LASF	Ste Croix	7.33	352	ePn	Pn	12 32 35.5	0.0
	SNR=1.0						
LASF				eSn	Sn	12 33 55.1	-3.0
	4.5nm,0.3s,SNR=1.0						
LASF				eSg	Sg	12 34 43.3	-1.0
	6.6nm,0.7s,SNR=1.0						
LASF	Ste Croix	7.33	352	Pn	Pn	12 32 35.5	0.0
LASF				Sn	Sn	12 33 55.1	-3.0
	2.2nm,0.3s						
LASF				Lg	Lg	12 34 43.3	
	3.3nm,0.7s						
VAE	Valguarnera	7.33	82	Pn	Pn	12 32 37.5	+1.9
	1.1nm,0.3s,baz=252,slow=6.4,SNR=2.5						
EGOR	Sierra Gorda,	7.51	275	Pn	Pn	12 32 41.0	+2.9
	18nm,0.8s,SNR=7.9						
EGOR				Sn	Sn	12 34 05.8	+2.9
	76nm,1.4s,SNR=7.9						
WDD	Wied Dalam	7.54	95	ePn	Pn	12 32 36.3	-2.0
ETSF	Etsaut	7.54	325	ePn	Pn	12 32 35.7	-2.8
ETSF				eSn	Sn	12 33 58.2	-5.3
	5.3nm,0.5s						
ETSF	Etsaut	7.54	325	Pn	Pn	12 32 35.7	-2.8
ETSF				Sn	Sn	12 33 58.2	-5.3
	2.7nm,0.5s						
ATE	Arette	7.75	326	Pn	Pn	12 32 43.2	+1.9
	14nm,0.3s,SNR=7.9						
ATE				Sn	Sn	12 34 07.1	-1.6
	14nm,0.7s,SNR=7.9						
ES19	SONSECA Array	7.76	295	ePn	Pn	12 32 44.8	+3.3
ESLA	Sonseca Array	7.80	294	ePn	Pn	12 32 44.4	+2.4
ESDC	Sonseca Array	7.80	294	Pn	Pn	12 32 45.0	+3.0
	1.2nm,0.3s,baz=112,slow=14,SNR=4.0						
ESDC	Sonseca Array	7.80	294	Pn	Pn	12 32 40.1	-1.9
	0.3nm,0.3s,baz=111,slow=13,SNR=5.0						
IELO	Elcoad	7.82	322	Pn	Pn	12 32 43.4	+1.1
	12nm,0.3s,SNR=7.9						
EADA	Adamuz	7.94	283	Pn	Pn	12 32 44.5	+0.6
	1.6nm,0.3s,SNR=7.9						
EADA				Sn	Sn	12 34 11.4	-1.9
	14nm,0.8s,SNR=7.9						
MBDF	Montbardon	7.98	8	ePn	Pn	12 32 45.2	+0.7
	SNR=1.0						
MBDF				eSn	Sn	12 34 07.7	-6.7
	5.9nm,0.4s						
MBDF	Montbardon	7.98	8	Pn	Pn	12 32 45.2	+0.7
MBDF				Sn	Sn	12 34 07.7	-6.7
	3.0nm,0.4s						
SJPF	Ste Jean	8.02	324	ePn	Pn	12 32 46.4	+1.4
	SNR=1.0						
SJPF				eSn	Sn	12 34 08.9	-6.3
	1.9nm,0.3s						
SJPF	Ste Jean	8.02	324	Pn	Pn	12 32 46.4	+1.4
SJPF				Sn	Sn	12 34 08.9	-6.3
	0.9nm,0.3s						
VIVF	Saint-Julien-l	8.04	357	ePn	Pn	12 32 44.3	-0.9
	SNR=1.0						
VIVF				eSn	Sn	12 34 11.5	-4.2
	6.6nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	8.04	357	Pn	Pn	12 32 44.3	-0.9
VIVF				Sn	Sn	12 34 11.5	-4.2
	3.3nm,0.4s						
PAB	San Pablo	8.05	293	ePn	Pn	12 32 47.5	+2.1
PAB	San Pablo	8.05	293	Pn	Pn	12 32 46.4	+1.0
	4.1nm,0.3s,SNR=7.9						
EMIJ	Mijas	8.07	271	Pn	Pn	12 32 43.7	-2.0
	10nm,0.6s,SNR=7.9						
ORIF	Oris-en-Rattie	8.10	3	ePn	Pn	12 32 44.3	-1.9
ORIF	Oris-en-Rattie	8.10	3	Pn	Pn	12 32 44.3	-1.9
EALK	Alkurruntz	8.23	323	Pn	Pn	12 32 49.4	+1.5
	7.4nm,0.3s,SNR=14						
EALK				Sn	Sn	12 34 17.2	-3.3
	20nm,0.5s,SNR=7.9						
BNI	Bardonecchia	8.29	7	ePn	Pn	12 32 49.6	+0.8
BNI				eSn	Sn	12 34 20.4	-1.7
VLC	Villacollemand	8.30	26	ePn	Pn	12 32 49.3	+0.5
CAF	Calviac	8.45	344	ePn	Pn	12 32 51.1	+0.2
	SNR=1.0						
CAF				eSn	Sn	12 34 21.8	-4.0
	5.0nm,0.5s,SNR=1.0						
CAF	Calviac	8.45	344	Pn	Pn	12 32 51.1	+0.2
CAF				Sn	Sn	12 34 21.8	-4.0
	2.5nm,0.5s						
SSB	Saint Sauveur	8.47	357	ePn	Pn	12 32 51.7	+0.5
SSB				eSn	Sn	12 34 24.0	-2.2
LPG	La Plagne	8.74	7	ePn	Pn	12 32 54.5	-0.6
LPG	La Plagne	8.74	7	Pn	Pn	12 32 54.5	-0.6
LPL	La Plagne	8.76	7	ePn	Pn	12 32 54.6	-0.7
LPL	La Plagne	8.76	7	Pn	Pn	12 32 54.6	-0.7
LFF	La Frestale	8.80	339	ePn	Pn	12 32 58.5	+2.8
	SNR=1.0						
LFF	La Frestale	8.80	339	Pn	Pn	12 32 58.5	+2.8
RJF	Les Rejaudoux	8.94	343	ePn	Pn	12 32 57.5	0.0
RJF				eSn	Sn	12 34 33.9	-3.7
	2.5nm,0.2s						
RJF	Les Rejaudoux	8.94	343	Pn	Pn	12 32 57.5	0.0
RJF				Sn	Sn	12 34 33.9	-3.7
	1.2nm,0.2s						
ELAN	Lanestosa	9.24	317	Pn	Pn	12 33 03.2	+1.4
	13nm,0.8s,SNR=7.3						
SENIN	Lac Senin/Sane	9.65	8	ePn	Pn	12 33 08.8	+1.2
SENIN				eSn	Sn	12 34 55.6	0.0
TCF	Toulx Ste Croi	9.73	347	ePn	Pn	12 33 06.4	-2.0
TCF	Toulx Ste Croi	9.73	347	Pn	Pn	12 33 06.4	-2.0
CABF	La Chapelle	9.80	3	ePn	Pn	12 33 09.5	+0.1
	SNR=1.0						
CABF	La Chapelle	9.80	3	Pn	Pn	12 33 09.5	+0.1
SMF	Signal de Mont	9.87	354	ePn	Pn	12 33 08.4	-2.0
SMF	Signal de Mont	9.87	354	Pn	Pn	12 33 08.4	-2.0
BGF	Bois d'Agland	9.89	350	ePn	Pn	12 33 08.4	-2.2
BGF	Bois d'Agland	9.89	350	Pn	Pn	12 33 08.4	-2.2
AVF	Avril sur Loir	10.06	352	ePn	Pn	12 33 10.7	-2.2
AVF	Avril sur Loir	10.06	352	Pn	Pn	12 33 10.7	-2.2
TUE	Stuetta	10.11	16	ePn	Pn	12 33 14.5	+0.7
SSF	Saint Saulge	10.32	353	ePn	Pn	12 33 15.1	-1.3
	SNR=1.0						
SSF				eSn	Sn	12 35 07.1	-4.4
	1.7nm,0.4s						
SSF	Saint Saulge	10.32	353	Pn	Pn	12 33 15.1	-1.3
SSF				Sn	Sn	12 35 07.1	-4.4
	0.9nm,0.4s						
DAVOX	Davos/Dischmat	10.53	18	Pn	Pn	12 33 20.6	+1.2
	0.3nm,0.3s,baz=194,slow=17,SNR=2.3						
ECAL	Calabor	10.60	303	Pn	Pn	12 33 21.8	+1.3
	12nm,0.7s,SNR=6.8						
HAU	Haudompre	11.21	4	ePn	Pn	12 33 27.9	-0.7
	SNR=1.0						
HAU	Haudompre	11.21	4	Pn	Pn	12 33 27.9	-0.7
ECH	Echery	11.47	6	ePn	Pn	12 33 30.3	-2.0
TIR	Tirane	12.21	64	ePn	Pn	12 33 43.3	+1.0
ROSF	Rostrenen	13.11	334	ePn	Pn	12 33 57.6	+3.1
ROSF	Rostrenen	13.11	334	Pn	Pn	12 33 57.6	+3.1
DOU	Dourbes	13.28	358	⇑P	Pn	12 33 59.2	+2.4
GERES	GERESS Array B	13.51	25	Pn	Pn	12 34 00.5	+0.4
	0.1nm,0.3s,baz=214,slow=10,SNR=2.4						
KHC	Kasperske Hory	13.71	24	ePn	Pn	12 34 03.1	+0.3
VRAC	Vranov	14.95	30	Pn	Pn	12 34 20.0	+0.2
	0.4nm,0.3s,baz=234,slow=8.7,SNR=2.1						
VYHS	Vyhne	15.32	36	eP	P	12 34 32.1	+2.8
VYHS				e		12 35 07.1	
PSZ	Piszkesteto	15.46	40	ePn	Pn	12 34 26.2	-0.2
	8.4nm,1.0s						
CLL	Collm	15.50	18	e(PP)		12 34 38.0	
CLL				e		12 34 53.0	
IDI	Anoyia	15.95	90	Pn	P	12 34 33.9	-2.5
	baz=299,slow=18,SNR=1.7						
MLR	Muntele Rosu	17.78	54	P	P	12 34 57.2	+0.6
	0.3nm,0.3s,baz=241,slow=11,SNR=3.4						
EKA	Eskdalemuir Ar	19.39	345	P	Pn	12 35 14.8	-0.4
	baz=148,slow=11,SNR=3.1						
SUW	Suwalki	21.20	30	eP	P	12 35 34.4	+0.7
	32nm,0.9s						
AKASG	Malin Array Be	22.05	43	P	P	12 35 44.3	+1.4
	5.6nm,0.7s,baz=241,slow=12,SNR=4.2						
BR101	Keskin Array S	22.42	74	eP	P	12 35 48.5	+1.3
BR131	Keskin Array S	22.42	74	eP	P	12 35 47.2	0.0
	5.7nm,0.8s						
BRTR	Keskin Array B	22.42	74	P	P	12 35 48.5	+1.3
	5.2nm,0.8s,baz=264,slow=8.8,SNR=13						
TOA1	Torodi Ar. Sit	23.79	189	eP	P	12 35 59.4	-1.6
TOA0	Torodi Ar. Sit	23.79	189	eP	P	12 36 00.1	-1.0
	4.7nm,0.9s						
TORD	Torodi Ar. Bea	23.79	189	P	P	12 35 59.4	-1.7
	2.8nm,0.8s,baz=0.2,slow=10,SNR=8.9						
HFS	Hagfors	23.95	10	P	P	12 36 02.5	+0.3
	3.4nm,0.8s,baz=171,slow=10,SNR=7.1						
NC602	NORSAR Array S	24.27	8	eP	P	12 36 06.0	+0.8
	35nm,1.5s						
NB2	NORSAR Subarra	24.53	7	P	P	12 36 08.6	+0.9
	comp=Z,3.4nm,0.9s,baz=187,slow=9.3						
NB200	NORSAR Array S	24.53	7	eP	P	12 36 08.3	+0.6
NOA	NORSAR Array B	24.53	7	P	P	12 36 08.3	+0.6
	comp=Z,1.8nm,0.8s,baz=189,slow=9.5,SNR=6.8						
MMAI	Mount Meron Ar	24.95	90	P	P	12 36 13.9	+2.2
	comp=Z,2.5nm,0.6s,baz=322,slow=9.5,SNR=3.8						
EIL	Elat	25.76	97	P	P	12 36 20.2	+1.1
	comp=Z,7.6nm,0.9s,baz=286,slow=5.7,SNR=4.5						
ASF	Jabal al Asfar	26.41	91	P	P	12 36 27.0	+1.9
	comp=Z,3.2nm,0.8s,baz=236,slow=3.6,SNR=4.7						
FIA0	FINESS Array S	27.90	21	eP	P	12 36 38.3	+0.3
FINES	FINESS Array B	27.90	21	P	P	12 36 38.3	+0.3
	comp=Z,2.3nm,0.9s,baz=189,slow=9.7,SNR=3.7						
FIA1	FINESS Array S	27.90	21	eP	P	12 36 38.7	+0.7
	comp=Z,17nm,1.4s						
OBN	Obninsk	28.07	39	LR	LR	12 50 01.5	
	comp=Z,82nm,20.3s,baz=208,slow=41						
KIV	Kislovodsk	29.19	64	eP	P	12 36 49.6	-0.2
	comp=Z,9.1nm,0.5s						
ARA0	ARCESS Array S	34.57	12	eP	P	12 37 37.1	+0.5
ARCES	ARCESS Array B	34.57	12	P	P	12 37 37.1	+0.5
	comp=Z,1.5nm,0.8s,baz=219,slow=9.3,SNR=3.9						
KIRV	Kirov	35.91	38	P	P	12 37 48.2	0.0
	comp=Z,8.6nm,0.6s,baz=266,slow=0.7,SNR=3.7						
ARU	Arti	40.30	44	eP	P	12 38 25.4	+0.1
	comp=Z,11nm,0.8s						
GEYT	Alibeck	41.54	72	LR	LR	12 59 46.1	
	comp=Z,274nm,18.3s,baz=175,slow=42						
BRVK	Borovoye	47.13	48	eP	P	12 39 19.4	-0.8
	comp=Z,10.0nm,1.2s						
KURBB	Kurchatov Arra	52.61	50	P	P	12 40 02.2	+0.3
	comp=Z,2.1nm,0.8s,baz=287,slow=7.7,SNR=6.8						
KURK	Kurchatov	52.64	50	eP	P	12 40 02.2	+0.1
TARG	Taragay, Kyrgy	54.83	61	eP	P	12 40 21.0	+2.1
	comp=Z,3.4nm,0.8s						
ZAA1	Zalesovo Array	55.43	45	eP	P	12 40 22.8	+0.3
ZAA0	Zalesovo Array	55.44	45	eP	P	12 40 23.3	+0.8
	comp=Z,3.1nm,0.8s						
ZALV	Zalesovo Beam	55.44	45	eP	P	12 40 23.2	+0.7
ZALV	Zalesovo Beam	55.44	45	P	P	12 40 22.8	+0.3
	comp=Z,2.8nm,0.7s,baz=278,slow=8.6,SNR=11						
MAKZ	Makanchi	55.92	54	eP	P	12 40 26.1	-0.1
	comp=Z,3.9nm,1.1s						
MK31	Makanchi Array	56.12	54	eP	P	12 40 27.8	+0.2
	comp=Z,2.5nm,0.8s						
MK32	Makanchi Array	56.12	54	eP	P	12 40 27.6	0.0
MKAR	Makanchi Array	56.12	54	eP	P	12 40 27.5	-0.1
	comp=Z,19nm,0.7s						
MKAR	Makanchi Array	56.12	54	P	P	12 40 27.6	0.0
	comp=Z,3.5nm,0.7s,baz=284,slow=6.0,SNR=18						
MK01	Makanchi Array	56.14	54	eP	P	12 40 27.8	0.0
WMQ	Urumqi	60.77	55	eP	P	12 41 03.9	+3.7
FCC	Fort Churchill	63.81	325	eP	P	12 41 20.9	+0.7
	comp=Z,5.7nm,1.1s						
YKA	Yellowknife Ar	69.94	335	P	P	12 41 59.5	+0.4
	comp=Z,1.5nm,0.7s,baz=50,slow=6.0,SNR=16						
SONA0	Songino Array	70.33	45	eP	P	12 42 02.6	+0.6
SONM	Songino Array	70.33	45	P	P	12 42 02.6	+0.6
	comp=Z,0.7nm,0.9s,baz=308,slow=7.1,SNR=3.0						
GTA	Gaotai	70.85	55	eP	P	12 42 09.0	+3.7
GTA				pP	sP	12 42 13.9	+0.9
GTA				sP	pP	12 42 16.3	+5.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HHC	Hu-ho-hao-te	77.41	48	eP	P	12 42 44.8	+1.3
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,210nm,5.8s						
PDAR	Pinedale Array	81.05	317	P	P	12 43 03.4	-0.1
	comp=Z,0.7nm,0.8s,baz=39,slow=4.9,SNR=2.1						
NJ2	Nanjing	87.56	51	eP	P	12 43 38.3	+1.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WRA	Warramunga Arr	132.70	84	PKP	PKiKP	12 50 03.4	-1.2
	comp=Z,0.2nm,0.5s,baz=322,slow=1.9,SNR=3.3						
WR1	Warramunga Arr	132.70	84	ePKPdf	PKiKP	12 50 03.4	-1.2

ISCJB **22** *12:39:45.6±0.3, 67°.60N±0°.03×142°.78E±0°.10, h10^{km}, mb3.9/19, Error ellipse: s-maj=5.4km s-min=4.5km az=5.9*

MOS **22** *12:39:45.7±1.2, 67°.63N×142°.83E, h11^{km}, mb4.0/9, Error ellipse: s-maj=23.4km s-min=7.9km az=92.2*

IDC **22** *12:39:46.5±0.8, 67°.72N×142°.70E, h0^{km}, mb3.8/11, mb1 4.0/14, mb1mx3.7/49, mbtmp3.7/14, ML3.7/3, Error ellipse: s-maj=20.5km s-min=14.9km az=19.0*

YARS **22** *12:39:46.9±0.2, 67°.590N±0°.009×142°.78E±0°.03*

NEIC **22** *12:39:47.6±0.3, 67°.71N×142°.84E, h10^{km}, mb4.0/12, Error ellipse: s-maj=7.6km s-min=5.4km az=183.0*

ISC 22 12:39:46.8±0.5**, 67°.53N**±0°.03×**142°.68E**±0°.05**, h10^{km}, n60,** σ**1^{s}55**/74**, mb4.0**/19**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.09	169	eP	Pb	12 40 07.2	-0.4
MOMR				eS	Sn	12 40 22.4	-0.7
MOMR	Moma	1.09	169	eP	Pb	12 40 07.2	-0.4
MOMR				eS	Sn	12 40 22.4	-0.7
YBGR	Belaya Gora	1.66	51	eP	Pn	12 40 14.8	-1.1
YBGR				eS	Sn	12 40 36.2	-1.0
YBGR	Belaya Gora	1.66	51	eP	Pn	12 40 14.8	-1.1
YBGR				eS	Sn	12 40 36.2	-1.0
DEPR	Deputatskiy	2.13	333	eP	Pb	12 40 24.7	-0.8
DEPR				eS	Sb	12 40 52.2	+0.3
DEPR	Deputatskiy	2.13	333	eP	Pb	12 40 24.7	-0.8
DEPR				eS	Sb	12 40 52.2	+0.3
ATKR	Artyk	3.51	162	eP	Pn	12 40 43.5	+2.1
ATKR				eS	Sn	12 41 22.9	0.0
ATKR	Artyk	3.51	162	eP	Pn	12 40 43.5	+2.1
ATKR				eP	Pg	12 40 51.1	-2.9
ATKR				eS	Sn	12 41 22.9	0.0
ATKR				eS	Sg	12 41 36.9	-2.5
SEY	Seymchan	6.15	134	Pn	Pn	12 41 19.9	+2.4
	0.6nm,0.3s,baz=303,slow=14,SNR=14						
SEY				Sn	Sn	12 42 29.7	+1.9
	1.4nm,0.3s,baz=329,slow=14,SNR=3.8						
SEY				Lg	Lg	12 42 59.8	
	3.3nm,0.3s,baz=212,slow=23,SNR=9.5						
YAK	Yakutsk	7.81	231	eS	Sn	12 43 07.4	-1.3
YAK				eS	Sg	12 43 49.5	-7.7
USMR	Ust'-Maya	7.98	210	eP	Pn	12 41 45.1	+2.5
USMR				eS	Sn	12 43 12.0	-0.7
USMR	Ust'-Maya	7.98	210	eP	Pn	12 41 45.1	+2.5
USMR				eP	Pg	12 42 13.8	-5.5
USMR				eS	Sn	12 43 12.0	-0.7
USMR				eS	Sg	12 43 57.7	-4.7
MA2	Magadan	8.75	152	Pn	Pn	12 41 56.3	+3.1
	0.2nm,0.3s,baz=243,slow=17,SNR=2.0						
MA2				Lg	Lg	12 44 23.9	
	0.9nm,0.3s,baz=353,slow=9.6,SNR=6.2						
BILL	Bilibino	8.93	76	ePn	Pn	12 41 55.4	-0.2
BILL	Bilibino	8.93	76	eP	Pn	12 41 55.4	-0.2
PETK	Petropavlovsk-	16.19	146	ePn	P	12 43 36.3	-0.9
PETK	Petropavlovsk-	16.19	146	eP	P	12 43 36.3	-0.9
PETK	Petropavlovsk-	16.19	146	Pn	P	12 43 42.4	+5.2
	0.1nm,0.3s,baz=54,slow=6.2,SNR=4.0						
GAMB	Gambell	18.82	80	eP	Pn	12 44 05.8	-0.9
	2.9nm,1.0s						
KLR	Kul'dur	19.17	202	P	Pn	12 44 13.4	+2.4
	0.1nm,0.3s,baz=6.2,slow=12,SNR=3.8						
ANM	Nome	20.77	73	eP	P	12 44 25.5	-1.9
	2.3nm,0.6s						
ANM	Nome	20.77	73	eP	P	12 44 25.5	-1.9
ANM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
IM3	Indian Mountai	24.17	64	eP	P	12 45 01.6	-1.0
TOLK	Toolik Lake Re	24.17	56	eP	P	12 45 02.1	-0.6
	comp=Z,4.4nm,0.6s						
COLD	Coldfoot	24.70	59	eP	P	12 45 09.0	+1.6
	comp=Z,3.6nm,0.9s						
MDM	Murphy Dome	26.65	62	eP	P	12 45 23.1	-2.1
	comp=Z,3.7nm,0.9s						
FYU	Fort Yukon	26.70	58	eP	P	12 45 25.4	-0.1
	comp=Z,7.2nm,0.9s						
MCK	McKinley	27.16	65	eP	P	12 45 30.6	+0.9
IL1	Eielson Array	27.22	62	eP	P	12 45 29.2	-1.0
ILAR	Eielson Array	27.22	62	P	P	12 45 30.6	+0.4
	comp=Z,2.1nm,0.7s,baz=299,slow=8.4,SNR=32						
ILB	Eielson Array	27.22	62	eP	P	12 45 30.9	+0.7
	comp=Z,4.6nm,1.1s						
KNK	Knik Glacier	28.83	68	eP	P	12 45 44.9	+0.2
	comp=Z,2.7nm,1.2s						
BMRM	Bremner River	30.50	67	eP	P	12 45 55.7	-3.8
	comp=Z,7.7nm,0.8s						
ARA0	ARCESS Array S	36.64	328	eP	P	12 46 52.5	-0.2
ARCES	ARCESS Array B	36.64	328	P	P	12 46 52.5	-0.2
	comp=Z,2.5nm,1.0s,baz=35,slow=11,SNR=2.9						
MK31	Makanchi Array	36.75	267	eP	P	12 46 54.8	+0.9

	comp=Z,0.7nm,1.0s						
MK31	**Makanchi Array**	**36.75**	**267**	*e*P	**P**	**12 46 54.8**	**+0.9**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK32	**Makanchi Array**	**36.75**	**267**	*e*P	**P**	**12 46 54.6**	**+0.7**
MKAR	**Makanchi Array**	**36.75**	**267**	*e*P	**P**	**12 46 54.8**	**+0.9**
	comp=Z,5.7nm,0.6s						
MKAR	**Makanchi Array**	**36.75**	**267**	*e*P	**P**	**12 46 54.8**	**+0.9**
MKAR	**Makanchi Array**	**36.75**	**267**	P	**P**	**12 46 54.6**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=52,slow=7.4,SNR=8.0						
MK01	**Makanchi Array**	**36.77**	**267**	*e*P	**P**	**12 46 54.6**	**+0.6**
MAKZ	**Makanchi**	**36.86**	**267**	*e*P	**P**	**12 46 56.7**	**+1.9**
	comp=Z,0.4nm,0.6s						
MAKZ	**Makanchi**	**36.86**	**267**	*e*P	**P**	**12 46 56.7**	**+1.9**
YKA	**Yellowknife Ar**	**38.89**	**46**	P	**P**	**12 47 11.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=322,slow=8.2,SNR=11						
YKB5	**Yellowknife Ar**	**38.89**	**46**	*e*P	**P**	**12 47 11.3**	**-0.5**
FIA1	**FINESS Array S**	**43.37**	**321**	*e*P	**P**	**12 47 49.1**	**+0.5**
FIA0	**FINESS Array S**	**43.37**	**321**	*e*P	**P**	**12 47 48.9**	**+0.3**
FIA0	**FINESS Array S**	**43.37**	**321**	*e*P	**P**	**12 47 48.9**	**+0.3**
FINES	**FINESS Array B**	**43.37**	**321**	P	**P**	**12 47 48.9**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=29,slow=8.7,SNR=14						
NB200	**NORSAR Array S**	**46.95**	**330**	*e*P	**P**	**12 48 17.3**	**+0.2**
NOA	**NORSAR Array B**	**46.95**	**330**	P	**P**	**12 48 17.3**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=24,slow=7.8,SNR=3.2						
FCC	**Fort Churchill**	**47.30**	**36**	*e*P	**P**	**12 48 19.5**	**-0.3**
FCC	**Fort Churchill**	**47.30**	**36**	*e*P	**P**	**12 48 19.5**	**-0.3**
AKASG	**Malin Array Be**	**52.04**	**312**	P	**P**	**12 48 56.0**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=27,slow=7.7,SNR=3.7						
KBZ	**Khabaz**	**53.95**	**298**	P	**P**	**12 49 11.3**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=37,slow=4.1,SNR=4.5						
PDAR	**Pinedale Array**	**57.44**	**56**	*e*P	**P**	**12 49 35.7**	**+0.2**
PDAR	**Pinedale Array**	**57.44**	**56**	P	**P**	**12 49 36.0**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=10,slow=1.9,SNR=7.4						
NVAR	**Mina Array Bea**	**58.39**	**66**	P	**P**	**12 49 42.9**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=316,slow=6.2,SNR=3.5						
TXAR	**Lajitas Array**	**71.62**	**57**	P	**P**	**12 51 08.6**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=345,slow=5.9,SNR=2.9						

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*SOME **22** 12:51:07.9, 42°.55N×79°.62E, h15^{km}*
*KRNET **22** 12:51:07.0±0.1, 42°.55N×79°.59E, h16^{km}, mb2.4*
*NNC **22** 12:51:09.0±1.4, 42°.66N×79°.61E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=9.6km s-min=4.6km az=151.0*
ISC 22 12:51:06.1±1.8**, 42°.53N**±0°.06×**79°.70E**±0°.04**, h3**^{km}±12^{km}**, n30, σ0^{s}56**/54**, 10C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.66**	**345**	P	**Pb**	**12 51 19.9**	**-0.4**
	9.7nm,0.1s						
SHLS				S	**Sg**	**12 51 28.4**	**+1.2**
	28nm,0.2s						
SHLS	**Shalkode**	**0.66**	**345**	*e*P	**Pb**	**12 51 19.8**	**-0.5**
	baz=20						
SHLS				*e*S	**Sb**	**12 51 28.8**	**-1.1**
	baz=20						
SHLS	**Shalkode**	**0.66**	**345**	*e*P	**Pb**	**12 51 19.9**	**-0.4**
	9.7nm,0.1s						
SHLS				*e*S	**Sb**	**12 51 28.8**	**-1.1**
	28nm,0.2s						
UZB	**Uzynbulak**	**0.80**	**322**	P	**Pg**	**12 51 21.4**	**+0.1**
	1.0nm,0.1s						
UZB				S	**Sg**	**12 51 31.0**	**-0.6**
	14nm,0.1s						
UZB	**Uzynbulak**	**0.80**	**322**	*e*P	**Pg**	**12 51 21.4**	**+0.1**
	baz=26						
UZB				*e*S	**Sg**	**12 51 31.3**	**-0.4**
	baz=26						
UZB	**Uzynbulak**	**0.80**	**322**	*e*P	**Pg**	**12 51 21.4**	**+0.1**
	1.0nm,0.1s						
UZB				*e*S	**Sg**	**12 51 31.1**	**-0.6**
	14nm,0.2s						
PDGK	**Podgornoye**	**0.82**	**349**	P	**Pg**	**12 51 21.9**	**+0.1**
	1.1nm,0.1s						
PDGK				S	**Sg**	**12 51 31.9**	**-0.5**
	2.4nm,0.1s						
PDGK	**Podgornoye**	**0.82**	**349**	⇑P	**Pg**	**12 51 21.6**	**-0.1**
	0.3nm,0.2s						
PDGK				⇓S	**Sg**	**12 51 32.2**	**-0.2**
	0.9nm,0.2s						
PDGK	**Podgornoye**	**0.82**	**349**	⇑*i*P	**Pg**	**12 51 21.6**	**-0.1**
	baz=55						
PDGK				⇑*i*S	**Sg**	**12 51 32.4**	**0.0**
	baz=55						
KTMS	**Ketmen**	**1.04**	**27**	P	**Pb**	**12 51 26.6**	**-0.2**
	1.7nm,0.1s						
KTMS				S	**Sg**	**12 51 40.1**	**+0.6**
	2.5nm,0.1s						
KTMS	**Ketmen**	**1.04**	**27**	*e*P	**Pb**	**12 51 26.6**	**-0.2**
	1.7nm,0.1s						
KTMS				*e*S	**Sg**	**12 51 40.0**	**+0.6**
	2.5nm,0.1s						
SATY	**Saty**	**1.09**	**300**	P	**Pg**	**12 51 27.1**	**+0.1**
	1.8nm,0.2s						
SATY				S	**Sg**	**12 51 40.3**	**-0.8**
	6.8nm,0.1s						
SATY	**Saty**	**1.09**	**300**	*e*P	**Pg**	**12 51 27.1**	**+0.1**
	1.8nm,0.2s						
SATY				*e*S	**Sg**	**12 51 40.7**	**-0.4**
	7.6nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.62**	**241**	⇑*i*P	**Pn**	**12 51 35.6**	**-0.3**
	baz=39						
TARG				⇑*i*S	**Sn**	**12 51 56.6**	**-0.9**
	baz=39						
DJR	**Jarkent**	**1.81**	**2**	*e*P	**Pg**	**12 51 40.4**	**-0.3**
	0.5nm,0.2s						
DJR				*e*S	**Sb**	**12 52 03.3**	**+0.3**
	1.0nm,0.3s						
KDJ	**Kajisay**	**1.91**	**259**	⇑*i*P	**Pn**	**12 51 40.4**	**+0.7**
	baz=58						
KDJ				⇑*i*S	**Sb**	**12 52 05.2**	**-0.8**
	baz=58						
KOTS	**Kotyrbulak**	**2.03**	**291**	Pg	**Pg**	**12 51 45.1**	**+0.2**
	1.8nm,0.2s						
KOTS	**Kotyrbulak**	**2.03**	**291**	*e*P	**Pg**	**12 51 45.1**	**+0.2**
	1.8nm,0.2s						
KOTS				*e*S	**Sg**	**12 52 11.9**	**+0.7**
	12nm,0.5s						
TNSS	**Tian-Shan**	**2.09**	**285**	Pg	**Pb**	**12 51 44.7**	**-0.2**
	1.4nm,0.5s						
TNSS				Lg	Lg	12 52 11.2	
	3.1nm,0.4s						
TNSS	**Tian-Shan**	**2.09**	**285**	*e*P	**Pb**	**12 51 44.7**	**-0.2**
	1.4nm,0.5s						
TNSS				*e*S	**Sb**	**12 52 11.2**	**-0.1**
	3.1nm,0.4s						
ARXS	**Arharly**	**2.17**	**322**	Pg	**Pb**	**12 51 46.0**	**-0.1**
	0.9nm,0.2s						
ARXS				Lg	Lg	12 52 13.3	
	7.3nm,0.4s						
ARXS	**Arharly**	**2.17**	**322**	*e*P	**Pb**	**12 51 46.0**	**-0.1**
	0.9nm,0.2s						
ARXS				*e*S	**Sb**	**12 52 13.3**	**-0.1**
	7.3nm,0.4s						
IZV	**Izvestkoviy**	**2.33**	**284**	Pg	**Pb**	**12 51 49.1**	**+0.3**
	1.5nm,0.2s						
IZV				Lg	Lg	12 52 18.6	
	6.6nm,0.3s						
IZV	**Izvestkoviy**	**2.33**	**284**	*e*P	**Pb**	**12 51 49.1**	**+0.3**
	1.5nm,0.2s						
IZV				*e*S	**Sb**	**12 52 18.6**	**+0.6**
	6.6nm,0.3s						
CHKK	**Chushkaly**	**2.38**	**305**	Pg	**Pb**	**12 51 49.8**	**+0.1**
	1.0nm,0.1s						
CHKK				Lg	Lg	12 52 19.7	
	8.5nm,0.3s						
CHKK	**Chushkaly**	**2.38**	**305**	*e*P	**Pb**	**12 51 49.8**	**+0.1**
	1.0nm,0.1s						
CHKK				*e*S	**Sb**	**12 52 19.7**	**+0.2**
	8.5nm,0.3s						
BOOM	**Boomskoye usch**	**2.78**	**271**	⇑*i*P	**Pn**	**12 51 52.8**	**+1.1**
	baz=70						
BOOM				⇑*i*S	**Sn**	**12 52 26.2**	**+0.4**
	baz=70						
KUU	**Kurty**	**2.81**	**300**	Pg	**Pb**	**12 51 56.8**	**-0.2**
	1.2nm,0.1s						
KUU				Lg	Lg	12 52 31.9	
	3.5nm,0.5s						
KUU	**Kurty**	**2.81**	**300**	*e*P	**Pb**	**12 51 56.8**	**-0.2**
	1.2nm,0.1s						
KUU				*e*S	**Sb**	**12 52 31.9**	**+0.2**
	3.5nm,0.5s						
TKM2	**Tokmak 2**	**3.05**	**279**	⇓Pn	**Pb**	**12 51 59.4**	**-1.7**
	1.9nm,1.1s						
TKM2				⇑Sn	**Sb**	**12 52 39.7**	**+0.9**
	1.0nm,0.3s						

IDC 22 12:54:58.3±54.0**, 16°.57S**×**173°.14W, h0**^{km}**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/32**, mbtmp4.1**/3**, Error ellipse: s-maj=1031.0km s-min=187.3km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.68**	**241**	P	P	13 03 05.2	0.0
	0.7nm,0.4s,baz=100,slow=6.1,SNR=2.9						
WRA	**Warramunga Arr**	**49.83**	**258**	P	P	13 03 53.1	-0.4
	0.5nm,0.5s,baz=95,slow=7.1,SNR=25						
ASAR	**Alice Springs**	**49.99**	**253**	P	P	13 03 54.9	+0.1
	5.3nm,0.4s,baz=89,slow=7.8,SNR=230						

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*NEIC **22** 13:05:13.7±0.0, 18°.22N×68°.77W, h142^{km}, MD3.5(RSPR), After RSPR.*
RSPR 22 13:05:13.7, 18°.22N×**68°.77W, h142**^{km}±5^{km}**, MD3.5**/8**, 2C-11D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.81**	**314**	⇓*e*P	Pn	13 05 35.8	-0.4
DR12				*e*S	Sn	13 05 52.3	-1.1
DR12	**Loma Pena Alta**	**0.81**	**314**	⇓*e*P	Pn	13 05 35.8	-0.4
DR12				*e*S	Sn	13 05 52.3	-1.1
IDE	**Isla Desecheo**	**1.24**	**82**	⇓*e*P	Pn	13 05 41.2	+1.2
IDE	**Isla Desecheo**	**1.24**	**82**	*e*S	Sn	13 06 01.6	+1.7
IDE	**Isla Desecheo**	**1.24**	**82**	⇓*e*P	Pn	13 05 41.2	+1.2
IDE				*e*S	Sn	13 06 01.6	+1.7
CELP	**Cerrillos**	**2.09**	**94**	⇓*e*P	Pn	13 05 50.4	+1.1
CELP				*e*S	Sn	13 06 16.8	+0.1
CELP	**Cerrillos**	**2.09**	**94**	⇓*e*P	Pn	13 05 50.4	+1.1
CELP				*e*S	Sn	13 06 16.8	+0.1
EMPR	**Esperanza - Ma**	**2.14**	**83**	*e*S	Sn	13 06 19.1	+1.2
CBYP	**Canovanas**	**2.77**	**88**	⇓*e*P	Pn	13 05 57.4	-0.4
CBYP	**Canovanas**	**2.77**	**88**	⇓*e*P	Pn	13 05 57.4	-0.4
CBYP	**Canovanas**	**2.77**	**88**	*e*S	Sn	13 06 30.8	-1.1
CBYP	**Canovanas**	**2.77**	**88**	⇓*e*P	Pn	13 05 57.4	-0.4
CBYP				*e*S	Sn	13 06 30.8	-1.1
MTP	**Monte Pirata**	**3.06**	**92**	⇑*e*P	Pn	13 06 01.9	+0.4
MTP	**Monte Pirata**	**3.06**	**92**	*e*S	Sn	13 06 38.9	+0.5
MTP	**Monte Pirata**	**3.06**	**92**	⇑*e*P	Pn	13 06 01.9	+0.4
MTP				*e*S	Sn	13 06 38.9	+0.5
CUPR	**Culebra, Puert**	**3.31**	**88**	⇓*e*P	Pn	13 06 04.9	+0.1
CUPR	**Culebra, Puert**	**3.31**	**88**	*e*S	Sn	13 06 41.4	-2.9
CUPR	**Culebra, Puert**	**3.31**	**88**	⇓*e*P	Pn	13 06 04.9	+0.1
CUPR				*e*S	Sn	13 06 41.4	-2.9

ISC 22 13:12:59.7±1.2**, 48°.98N**±0°.04×**18°.33E**±0°.04**, h10**^{km}**, n6, σ0^{s}42**/10**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLL	**Kolacno**	**0.40**	**173**	*e*PG	**Pg**	**13 13 07.4**	**-0.2**
KOLL				*e*SG	**Sg**	**13 13 13.3**	**+0.4**
JAVC	**Velka Javorina**	**0.45**	**255**	*e*PG	**Pg**	**13 13 08.8**	**+0.3**
VYHS	**Vyhne**	**0.59**	**145**	*e*PG	**Pg**	**13 13 11.7**	**+0.6**
VYHS				*e*SG	**Sg**	**13 13 18.5**	**-0.4**
VYHS				*e*LG	Lg	13 13 18.9	
LANS	**Liptovska Anna**	**0.77**	**77**	*e*PG	**Pg**	**13 13 14.4**	**-0.1**
LANS				*e*SG	**Sg**	**13 13 24.7**	**+0.2**
MODS	**Modra-Piesok**	**0.92**	**229**	*e*SG	**Sn**	**13 13 31.4**	**-0.7**
MORC	**Moravsky Berou**	**0.95**	**327**	*e*PG	**Pg**	**13 13 18.0**	**+0.1**
MORC				*e*SG	**Sb**	**13 13 31.0**	**+0.1**

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*ISCJB **22** 13:18:05.4±1.0, 12°.3S±0°.2×65°.7E±0°.1, h10^{km}, mb4.2/18, MS3.8/5, Error ellipse: s-maj=26.9km s-min=14.6km az=159.8*
*IDC **22** 13:18:05.7±1.0, 12°.15S×65°.71E, h0^{km}, mb4.2/14, mb1 4.3/14, mb1mx4.1/41, mbtmp4.2/14, MS3.8/6, Ms1 3.8/6, ms1mx3.4/37, Error ellipse: s-maj=32.6km s-min=22.3km az=172.0*
ISC 22 13:18:06.8±1.0**, 12°.3S**±0°.2×**65°.7E**±0°.2**, h10**^{km}**, n40, σ0^{s}85**/32**, mb4.4**/18**, MS3.8**/5**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**7.88**	**42**	T	T	13 27 53.9	
	baz=221,slow=75,SNR=4218						
H08N1	**Diego Carcia H**	**7.89**	**42**	T	T	13 27 55.7	
	baz=221,slow=75,SNR=1621						
H08N2	**Diego Garcia H**	**7.90**	**42**	T	T	13 27 54.1	
	baz=221,slow=75,SNR=2226						
H08S1	**Diego Carcia H**	**8.11**	**56**	T	T	13 28 25.2	
	baz=236,slow=75,SNR=40						
H08S2	**Diego Garcia H**	**8.12**	**56**	T	T	13 28 24.1	
	baz=236,slow=75,SNR=44						
H08S3	**Diego Garcia H**	**8.13**	**56**	T	T	13 28 18.0	
	baz=236,slow=75,SNR=102						
OPO	**Ambohidratompo**	**18.90**	**248**	LR	LR	13 27 55.7	
	comp=Z,213nm,18.2s,baz=84,slow=31						
LSZ	**Lusaka**	**36.52**	**261**	P	**P**	**13 25 13.6**	**+0.6**
	1.7nm,0.2s,baz=94,slow=9.5,SNR=5.4						
LBTB	**Lobatse**	**39.90**	**246**	LR	LR	13 41 46.4	
	comp=Z,59nm,19.4s,baz=45,slow=36						
BOSA	**Boshof**	**41.00**	**240**	LR	LR	13 41 10.0	
	comp=Z,141nm,19.3s,baz=35,slow=34						
KOLN	**Koldanda**	**43.43**	**23**	*e*P	**P**	**13 26 11.3**	**+1.0**
	16nm,0.9s						
PYUN	**Piuthan**	**43.49**	**22**	*e*P	**P**	**13 26 11.4**	**+0.6**
	30nm,0.9s						
RAMN	**Ramite**	**43.96**	**27**	*e*P	**P**	**13 26 16.6**	**+1.9**
	28nm,0.8s						
PKI	**Pulchoki**	**43.98**	**26**	*e*P	**P**	**13 26 15.9**	**+1.0**
DANN	**Dangsing**	**44.01**	**23**	*e*P	**P**	**13 26 16.0**	**+0.9**
	31nm,1.2s						
KKN	**Kakani**	**44.12**	**25**	*e*P	**P**	**13 26 17.2**	**+1.3**
ODAN	**Odare**	**44.24**	**28**	*e*P	**P**	**13 26 18.5**	**+1.6**
	27nm,0.9s						
CMAR	**Chiang Mai Arr**	**44.81**	**48**	P	**P**	**13 26 20.2**	**-1.1**
	0.4nm,0.3s,baz=238,slow=8.3,SNR=7.3						
CMAR				LR	LR	13 44 04.9	
	comp=Z,75nm,19.4s,baz=120,slow=35						
SUR	**Sutherland**	**45.69**	**237**	LR	LR	13 41 56.8	
	comp=Z,154nm,18.0s,baz=40,slow=31						
MKAR	**Makanchi Array**	**60.66**	**13**	P	**P**	**13 28 17.4**	**-0.7**
	0.9nm,0.6s,baz=201,slow=7.7,SNR=8.8						
MKAR				PcP	**PcP**	**13 29 02.1**	**-0.2**
	1.3nm,0.9s,baz=224,slow=5.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**67.95**	**12**	P	**P**	**13 29 05.3**	**-0.4**
	3.4nm,0.8s,baz=217,slow=6.5,SNR=13						
SONM	**Songino Array**	**69.93**	**28**	P	**P**	**13 29 19.0**	**+0.6**
	3.4nm,0.8s,baz=223,slow=6.2,SNR=18						
SONM				LR	LR	13 59 03.4	
	comp=Z,165nm,20.9s,baz=219,slow=35						
AKASG	**Malin Array Be**	**70.32**	**336**	P	**P**	**13 29 20.0**	**-0.5**
	3.7nm,0.8s,baz=136,slow=5.4,SNR=9.5						
CONA	**Conrad Observa**	**74.48**	**328**	*e*P	**P**	**13 29 46.0**	**+0.4**
	3.4nm,0.7s						
MOA	**Molln**	**75.27**	**327**	*i* P	**P**	**13 29 50.6**	**+0.6**
	7.5nm,0.8s						
GERES	**GERESS Array B**	**76.17**	**328**	P	**P**	**13 29 55.0**	**-0.3**
	1.0nm,0.7s,baz=134,slow=7.0,SNR=4.1						
KSRS	**Korea Array**	**76.44**	**46**	P	**P**	**13 29 56.7**	**-0.2**
	3.6nm,1.0s,baz=249,slow=6.6,SNR=4.7						
SQTA	**Sankt Quirin**	**76.56**	**325**	*e*P	**P**	**13 29 57.6**	**0.0**
	4.0nm,0.6s						
MOTA	**Moosalm**	**76.69**	**325**	*i* P	**P**	**13 29 58.1**	**-0.2**
	5.0nm,0.9s						
CTA	**Charters Tower**	**77.12**	**108**	P	**P**	**13 30 02.0**	**+0.7**
	3.5nm,0.9s,baz=79,slow=10.0,SNR=6.5						
FINES	**FINESS Array B**	**79.83**	**342**	P	**P**	**13 30 15.2**	**0.0**
	1.9nm,0.9s,baz=152,slow=13,SNR=4.7						
USRK	**Ussuriysk Ar.**	**82.19**	**42**	P	**P**	**13 30 28.0**	**-0.2**
	2.2nm,0.6s,baz=249,slow=5.6,SNR=7.6						
ESDC	**Sonseca Array**	**82.65**	**313**	P	**P**	**13 30 31.1**	**+0.3**
	0.5nm,0.5s,baz=103,slow=3.3,SNR=3.2						
NOA	**NORSAR Array B**	**84.73**	**337**	P	**P**	**13 30 41.0**	**+0.1**
	0.6nm,0.7s,baz=117,slow=5.0,SNR=3.3						
ARCES	**ARCESS Array B**	**86.28**	**347**	P	**P**	**13 30 49.1**	**+0.6**
	2.4nm,0.7s,baz=58,slow=7.3,SNR=5.3						
ILAR	**Eielson Array**	**122.95**	**16**	PKP	**PKiKP**	**13 37 02.2**	**-1.1**
	0.3nm,0.8s,baz=267,slow=2.8,SNR=4.1						
YKA	**Yellowknife Ar**	**129.86**	**0**	PKP	**PKiKP**	**13 37 16.0**	**-1.0**
	0.6nm,0.7s,baz=355,slow=2.3,SNR=10						
PDAR	**Pinedale Array**	**149.34**	**353**	PKP	**PKPdf**	**13 37 51.6**	**-0.6**
	1.1nm,1.0s,baz=344,slow=4.8,SNR=4.6						
PDAR				PKPbc	**PKiKP**	**13 37 56.5**	**-1.3**
	2.0nm,0.6s,baz=81,slow=2.8,SNR=20						
NVAR	**Mina Array Bea**	**153.71**	**7**	PKPbc	**PKiKP**	**13 38 08.0**	**+1.0**
	2.2nm,0.8s,baz=300,slow=1.8,SNR=12						
TXAR	**Lajitas Array**	**160.35**	**331**	PKPab	**PKPab**	**13 38 47.8**	**-0.3**
	0.9nm,0.9s,baz=58,slow=4.3,SNR=6.9						

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*ISCJB **22** 13:21:40.5±0.6, 7°.07S±0°.05×129°.89E±0°.08, h104^{km}, mb3.7/5, Error ellipse: s-maj=11.1km s-min=6.7km az=5.5*
*IDC **22** 13:21:44.3±1.9, 7°.10S×129°.87E, h124^{km}±17^{km}, mb3.4/5, mb1 3.9/10, mb1mx3.7/31, mbtmp4.3/10, Error ellipse: s-maj=30.5km s-min=14.8km az=77.0*
ISC 22 13:21:41.7±0.7**, 7°.18S**±0°.05×**130°.01E**±0°.10**, h104**^{km}**, n10, σ2^{s}61**/16**, mb3.7**/5**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.40**	**11**	P	**Pn**	**13 23 15.2**	**+1.7**
	22nm,0.3s,baz=72,slow=2.8,SNR=141						
SIJI				S	**Sn**	**13 24 21.9**	**-3.3**
	11nm,0.3s,baz=225,slow=19,SNR=4.1						
BATI	**Baumata**	**6.95**	**244**	P	**Pn**	**13 23 23.7**	**+2.6**
	14nm,0.3s,baz=92,slow=3.1,SNR=13						
BATI				S	**Sn**	**13 24 37.5**	**-1.2**
	23nm,0.3s,baz=68,slow=20,SNR=10						
FITZ	**Fitzroy Crossi**	**11.65**	**201**	P	**Pn**	**13 24 25.4**	**+0.6**
	6.8nm,0.3s,baz=35,slow=9.3,SNR=74						
FITZ				S	**Sn**	**13 26 28.8**	**-4.2**
	1.1nm,0.3s,baz=135,slow=18,SNR=3.4						
WRA	**Warramunga Arr**	**13.36**	**162**	P	**Pn**	**13 24 49.4**	**+2.0**
	2.7nm,0.3s,baz=331,slow=14,SNR=62						
WRA				S	**Sn**	**13 27 11.4**	**-3.0**
	4.2nm,0.3s,baz=334,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.81**	**168**	P	**P**	**13 25 34.0**	**+2.6**
	2.0nm,0.3s,baz=337,slow=9.3,SNR=151						
ASAR				S	**Sn**	**13 28 34.3**	**-3.5**
	0.7nm,0.3s,baz=352,slow=26,SNR=4.4						
ASAR				ScP	**ScP**	**13 33 35.7**	**-2.9**
	0.2nm,0.3s,baz=4.6,slow=1.7,SNR=7.1						
STKA	**Stephens Creek**	**26.84**	**158**	P	**P**	**13 27 15.0**	**+2.4**
	0.4nm,0.4s,baz=338,slow=11,SNR=2.3						
CMAR	**Chiang Mai Arr**	**39.85**	**310**	P	**P**	**13 29 04.2**	**-1.2**
	0.7nm,0.6s,baz=133,slow=7.7,SNR=6.0						
SONM	**Songino Array**	**58.62**	**342**	P	**P**	**13 31 27.9**	**0.0**
	0.3nm,0.4s,baz=164,slow=7.7,SNR=2.7						
MKAR	**Makanchi Array**	**68.38**	**327**	P	**P**	**13 32 31.6**	**-0.6**
	1.6nm,0.4s,baz=114,slow=8.8,SNR=68						
ZALV	**Zalesovo Beam**	**71.75**	**334**	P	**P**	**13 32 51.7**	**-0.9**
	0.5nm,0.4s,baz=149,slow=6.6,SNR=3.6						

IDC 22 13:57:51.5±1.2**, 18°.25S**×**177°.47W, h0**^{km}**, mb4.0**/7**, mb1 4.3**/7**, mb1mx4.0**/29**, mbtmp4.0**/7**, Error ellipse: s-maj=47.5km s-min=23.9km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.49**	**192**	P	P	14 02 30.6	-0.4
	4.3nm,0.8s,baz=297,slow=9.0,SNR=4.0						
STKA	**Stephens Creek**	**39.25**	**242**	P	P	14 05 22.0	0.0
	2.0nm,0.5s,baz=81,slow=8.6,SNR=8.5						
WRA	**Warramunga Arr**	**45.45**	**260**	P	P	14 06 13.0	+0.3
	0.9nm,0.3s,baz=96,slow=7.7,SNR=70						
ASAR	**Alice Springs**	**45.56**	**255**	P	P	14 06 13.7	+0.1
	4.5nm,0.7s,baz=87,slow=7.6,SNR=124						
FITZ	**Fitzroy Crossi**	**53.85**	**261**	P	P	14 07 16.1	-0.7
	5.5nm,1.0s,baz=108,slow=3.2,SNR=7.9						
TXAR	**Lajitas Array**	**85.42**	**57**	P	P	14 10 31.9	+0.4
	0.2nm,0.6s,baz=224,slow=5.0,SNR=3.1						
ILAR	**Eielson Array**	**86.02**	**13**	P	P	14 10 32.9	-0.6
	0.2nm,0.6s,baz=219,slow=4.8,SNR=4.3						

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*PRU **22** 14:18:19.4±0.0, 51°.46N×16°.15E, h0^{km}*
*VIE **22** 14:18:21.8±0.6, 51°.25N×16°.07E, h0^{km}, mb2.5/1, ml2.5/4, Error ellipse: s-maj=4.9km s-min=4.0km az=75.0, Suspected Mining induced.*
ISC 22 14:18:18.0±1.9**, 51°.47N**±0°.09×**16°.19E**±0°.05**, h0**^{km}**, n18, σ0^{s}78**/37**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**174**	*i* Pg	**Pb**	**14 18 31.6**	**-0.3**
KSP				*e*Sg	**Sb**	**14 18 40.2**	**-1.0**
UPC	**Upice**	**0.97**	**187**	*e*PG	**Pb**	**14 18 37.6**	**0.0**
UPC				*e*SG	**Sb**	**14 18 50.7**	**-0.3**
	comp=Z,24nm,0.3s						
DPC	**Dobruska-Polom**	**1.12**	**176**	*e*PG	**Pb**	**14 18 40.5**	**+0.2**
DPC				*e*SG	**Sb**	**14 18 55.4**	**0.0**
	comp=Z,8.9nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**228**	*e*PG	**Pb**	**14 18 45.0**	**+0.1**
PVCC				*e*SG	**Sn**	**14 19 04.4**	**+0.6**
	comp=Z,48nm,0.2s						
KRLC	**Kraliky**	**1.44**	**165**	*e*PG	**Pb**	**14 18 46.7**	**+0.9**
KRLC				*e*SG	**Sn**	**14 19 04.6**	**-0.5**
	comp=Z,2.5nm,0.2s						
BRG	**Berggiesshubel**	**1.54**	**248**	PG	**Pb**	**14 18 47.2**	**-0.2**
BRG				SG	**Sg**	**14 19 06.9**	**-0.5**
	19nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.79**	**210**	*e*PG	**Pg**	**14 18 51.9**	**-0.5**
GOPC				*e*SG	**Sg**	**14 19 16.0**	**+0.4**
	comp=Z,5.6nm,0.2s						
PRU	**Pruhonice**	**1.81**	**216**	*e*PN	**Pn**	**14 18 50.6**	**+0.1**
PRU				*e*PG	**Pg**	**14 18 52.3**	**-0.5**
PRU				*e*SG	**Sg**	**14 19 16.6**	**+0.3**
	comp=Z,6.0nm,0.3s						
MORC	**Moravsky Berou**	**1.90**	**153**	*e*PN	**Pn**	**14 18 52.2**	**+0.5**
MORC				*e*SG	**Sg**	**14 19 18.8**	**-0.1**
VRAC	**Vranov**	**2.17**	**173**	*e*PN	**Pn**	**14 18 55.6**	**+0.1**
VRAC				*e*SG	**Sg**	**14 19 27.1**	**-0.8**
TREC	**Trest**	**2.22**	**192**	*e*SG	**Sg**	**14 19 29.2**	**-0.1**
	comp=Z,6.7nm,0.2s						
KRUC	**Moravsky**	**2.41**	**177**	*e*PN	**Pn**	**14 18 59.8**	**+1.1**
KRUC				*e*SG	**Sg**	**14 19 35.2**	**-0.2**
NKC	**Novy Kostel**	**2.68**	**244**	*e*PN	**Pn**	**14 19 03.5**	**+1.1**
NKC				*e*PG	**Pg**	**14 19 08.7**	**-0.6**
NKC				*e*SG	**Sg**	**14 19 44.3**	**+0.4**
	comp=Z,14nm,0.3s						
KHC	**Kasperske Hory**	**2.88**	**217**	*e*PN	**Pn**	**14 19 05.8**	**+0.6**
KHC				*e*PG	**Pb**	**14 19 11.4**	**+1.2**
KHC				*e*SN	**Sn**	**14 19 38.8**	**-1.7**
KHC				*e*SG	**Sg**	**14 19 49.6**	**-0.8**
MODS	**Modra-Piesok**	**3.17**	**167**	*e*PG	**Pg**	**14 19 20.4**	**+1.6**
VYHS	**Vyhne**	**3.43**	**149**	*e*PN	**Pn**	**14 19 10.8**	**-1.9**
CONA	**Conrad Observa**	**3.55**	**184**	*i* Pn	**Pn**	**14 19 14.6**	**+0.2**
	0.4nm,0.2s						
CONA				*e*Sg	**Sg**	**14 20 12.3**	**+0.4**
	2.4nm,0.3s						
MOA	**Molln**	**3.83**	**200**	*i* Pn	**Pn**	**14 19 19.4**	**+1.1**
	0.6nm,0.2s						
MOA				*e*Sg	**Sg**	**14 20 20.5**	**-0.5**
	2.2nm,0.3s						

IDC 22 14:24:55.2±1.6**, 11°.38S**×**164°.84E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/29**, mbtmp3.6**/5**, ML3.2**/1**, Error ellipse: s-maj=49.4km s-min=30.7km az=123.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.74**	**172**	Pn	Pn	14 27 30.0	-0.5
	0.2nm,0.3s,baz=310,slow=19,SNR=6.4						
H11S2	**WAKE ISLAND Hy**	**29.74**	**4**	T	T	15 02 26.2	
	baz=184						
H11S3	**WAKE ISLAND Hy**	**29.74**	**4**	T	T	15 02 24.1	
	baz=184						
H11S1	**WAKE ISLAND Hy**	**29.76**	**4**	T	T	15 02 26.7	
	baz=184						
WRA	**Warramunga Arr**	**30.53**	**250**	P	P	14 31 10.8	+0.1
	0.4nm,0.9s,baz=75,slow=8.6,SNR=3.0						
H11N1	**WAKE ISLAND Hy**	**30.96**	**4**	T	T	15 03 57.2	
	baz=183						
H11N3	**WAKE ISLAND Hy**	**30.97**	**4**	T	T	15 03 59.1	
	baz=183						
H11N2	**WAKE ISLAND Hy**	**30.98**	**4**	T	T	15 04 01.3	
	baz=183						
ASAR	**Alice Springs**	**31.85**	**243**	P	P	14 31 21.8	-0.5
	0.6nm,0.8s,baz=65,slow=11,SNR=5.8						
ILAR	**Eielson Array**	**84.11**	**19**	P	P	14 37 27.4	-0.3
	0.3nm,0.7s,baz=218,slow=6.7,SNR=5.7						
MKAR	**Makanchi Array**	**93.16**	**317**	P	P	14 38 12.2	+0.7
	0.2nm,0.4s,baz=95,slow=4.6,SNR=3.4						

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*ISCJB **22** 14:26:16.5±0.2, 51°.51N±0°.01×16°.11E±0°.02, h0^{km}, mb3.6/8, Error ellipse: s-maj=2.1km s-min=1.9km*

az=167.5

BNS ***22*** *14:26:17.4±0.3, 52°.02N×16°.00E, h5^{km}, ML3.3*

LDG ***22*** *14:26:18.0±0.1, 51°.46N×16°.12E, h1^{km}, Ml4.1/1, Error ellipse: s-maj=3.1km s-min=2.7km az=15.0, Suspected Mining induced.*

IDC ***22*** *14:26:19.3±0.5, 51°.48N×16°.01E, h0^{km}, mb3.7/8, mb1 3.7/16, mb1mx3.6/49, mbtmp3.6/16, ML3.4/7, Error ellipse: s-maj=12.4km s-min=7.1km az=106.0*

PRU ***22*** *14:26:19.5±0.0, 51°.48N×16°.21E, h0^{km}*

BGR ***22*** *14:26:20.1±0.7, 51°.45N×16°.09E, h1^{km}, ML3.5/5, Error ellipse: s-maj=7.8km s-min=3.3km az=26.0*

VIE ***22*** *14:26:21.8±0.7, 51°.26N×16°.02E, h0^{km}, mb3.2/14, ml3.2/17, Error ellipse: s-maj=6.7km s-min=4.5km az=48.0, Suspected Mining induced.*

UPP ***22*** *14:26:22.0±3.1, 51°.67N×15°.64E, h0^{km}, ML2.7, Suspected explosion*

ISC 22 14:26:17.2±0.5**, 51°.53N**±0°.02×**16°.10E**±0°.02**, h0**^{km}**, n120,** σ**1^{s}83**/187**, mb3.7**/8**, 2C-4D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.70**	**170**	*i* Pg	**Pg**	**14 26 31.6**	**+0.9**
KSP				*e*Sg	**Sg**	**14 26 40.0**	**+0.3**
KSP	**Ksiaz**	**0.70**	**170**	*e*Pg	**Pg**	**14 26 31.5**	**+0.9**
UPC	**Upice**	**1.03**	**183**	*e*PG	**Pb**	**14 26 37.6**	**-0.3**
UPC				*e*SG	**Sg**	**14 26 50.7**	**+0.4**
	comp=Z,382nm,0.3s						
DPC	**Dobruska-Polom**	**1.19**	**173**	*e*PG	**Pg**	**14 26 40.5**	**+0.4**
DPC				*e*SG	**Sg**	**14 26 55.3**	**-0.2**
	comp=Z,149nm,0.3s						
DPC	**Dobruska-Polom**	**1.19**	**173**	*e*Pg	**Pg**	**14 26 40.3**	**+0.2**
DPC				*e*Sg	**Sg**	**14 26 55.4**	**-0.2**
PVCC	**Panska Ves**	**1.40**	**224**	*e*PG	**Pb**	**14 26 45.1**	**+0.9**
PVCC				*e*SG	**Sn**	**14 27 04.5**	**+1.4**
BRG	**Berggiesshubel**	**1.51**	**245**	PN	**Pn**	**14 26 45.8**	**+0.2**
BRG				PG	**Pg**	**14 26 47.1**	**+0.9**
BRG				SG	**Sn**	**14 27 07.4**	**+1.5**
	291nm,0.5s						
BRG	**Berggiesshubel**	**1.51**	**245**	*e*Pn	**Pb**	**14 26 46.1**	**0.0**
BRG				*e*Pg	**Pg**	**14 26 47.5**	**+1.3**
BRG				*e*Sg	**Sn**	**14 27 07.2**	**+1.3**
KRLC	**Kraliky**	**1.52**	**163**	*e*PG	**Pb**	**14 26 46.3**	**-0.1**
RUE	**Ruedersdorf**	**1.72**	**304**	*e*P	**Pn**	**14 26 47.3**	**-1.0**
GOPC	**GO Pecny, Ondr**	**1.82**	**208**	*e*PN	**Pn**	**14 26 50.4**	**+0.5**
GOPC				*e*PG	**Pb**	**14 26 51.8**	**+0.3**
GOPC				*e*SG	**Sg**	**14 27 16.3**	**+0.5**
FBE	**Freiberg**	**1.83**	**252**	*e*Pg	**Pg**	**14 26 53.6**	**+1.3**
PRU	**Pruhonice**	**1.84**	**213**	*e*PN	**Pn**	**14 26 50.6**	**+0.6**
PRU				*e*PG	**Pg**	**14 26 52.5**	**+0.1**
PRU				*e*SG	**Sg**	**14 27 17.6**	**+1.4**
	comp=Z,101nm,0.5s						
CLL	**Collm**	**1.95**	**265**	*e*Pn	**Pn**	**14 26 52.0**	**+0.4**
CLL				*e*Pg	**Pg**	**14 26 55.0**	**+0.3**
CLL				*i*		14 26 59.0	
CLL				*e*		14 27 10.0	
CLL				*e*Sg	**Sg**	**14 27 21.0**	**+1.0**
	comp=Z,269nm,1.4s						
CLL	**Collm**	**1.95**	**265**	*e*Pn	**Pn**	**14 26 52.5**	**+0.9**
CLL				*e*Sg	**Sg**	**14 27 21.5**	**+1.5**
MORC	**Moravsky Berou**	**1.98**	**152**	⇑*i*P	**Pn**	**14 26 52.1**	**0.0**
MORC	**Moravsky Berou**	**1.98**	**152**	S	**Sb**	**14 27 19.5**	**0.0**
MORC	**Moravsky Berou**	**1.98**	**152**	*e*PN	**Pn**	**14 26 52.4**	**+0.3**
MORC				*e*SG	**Sn**	**14 27 16.2**	**-1.5**
CHZP	**Chorzow**	**2.21**	**123**	*e*Pg	**Pg**	**14 26 59.9**	**+0.3**
CHZP				*e*Sg	**Sg**	**14 27 29.0**	**+0.8**
VRAC	**Vranov**	**2.25**	**172**	⇑*i*P	**Pn**	**14 26 57.0**	**+1.3**
VRAC	**Vranov**	**2.25**	**172**	S	**Sb**	**14 27 28.0**	**+0.9**
VRAC	**Vranov**	**2.25**	**172**	*e*PN	**Pn**	**14 26 57.0**	**+1.3**
VRAC				*e*SG	**Sb**	**14 27 27.8**	**+0.7**
VRAC	**Vranov**	**2.25**	**172**	Pn	**Pn**	**14 26 56.7**	**+1.0**
	comp=Z,9.3nm,0.3s,baz=330,slow=13,SNR=31						
VRAC				Lg	Lg	14 27 27.6	
	comp=Z,16nm,0.3s,baz=252,slow=20,SNR=11						
TREC	**Trest**	**2.28**	**190**	*e*PN	**Pn**	**14 26 57.0**	**+0.9**
TREC				*e*PG	**Pg**	**14 27 00.7**	**-0.1**
TREC				*e*SG	**Sg**	**14 27 30.2**	**-0.1**
	comp=Z,88nm,0.5s						
KRUC	**Moravsky**	**2.48**	**176**	*e*PN	**Pn**	**14 27 00.3**	**+1.4**
KRUC				*e*PG	**Pb**	**14 27 03.6**	**+0.9**
KRUC				*e*SG	**Sg**	**14 27 36.3**	**-0.6**
TANN	**Tannenbergstha**	**2.56**	**245**	*e*Pn	**Pn**	**14 27 01.3**	**+1.3**
TANN				*e*Pg	**Pg**	**14 27 07.3**	**+1.0**
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**14 27 02.7**	**+1.4**
NKC				*e*PG	**Pg**	**14 27 08.7**	**+0.6**
NKC				*e*SG	**Sg**	**14 27 46.4**	**+3.9**
	comp=Z,131nm,0.4s						
OJC	**Ojcow**	**2.69**	**118**	*e*Pn	**Pn**	**14 27 02.5**	**+0.8**
OJC				*e*Pg	**Pg**	**14 27 10.9**	**+2.2**
OJC				*e*Sn	**Sn**	**14 27 31.7**	**-3.3**
OJC				*e*Sg	**Sg**	**14 27 45.5**	**+2.0**
JAVC	**Velka Javorina**	**2.86**	**159**	*e*PN	**Pn**	**14 27 05.8**	**+1.6**
JAVC				*e*SG	**Sg**	**14 27 49.9**	**+0.8**
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN	**Pn**	**14 27 05.6**	**+0.9**
KHC				*e*PG	**Pg**	**14 27 11.6**	**-1.2**
KHC				*e*SN	**Sn**	**14 27 40.1**	**-0.1**
KHC				*e*SG	**Sg**	**14 27 50.4**	**+0.1**
	comp=Z,78nm,0.4s						
MOX	**Moxa**	**2.97**	**254**	*e*Pn	**Pn**	**14 27 06.8**	**+1.3**
MOX				*e*Pg	**Pg**	**14 27 15.4**	**+1.4**
MOX				*e*Sg	**Sg**	**14 27 52.9**	**+0.5**
ROTZ	**Rotzenmuhle**	**3.05**	**236**	*e*Pn	**Pn**	**14 27 07.8**	**+1.2**
GEC2	**GERESS Array S**	**3.10**	**211**	*e*Pn	**Pn**	**14 27 08.9**	**+1.3**
GERES	**GERESS Array B**	**3.10**	**211**	Pn	**Pn**	**14 27 08.8**	**+1.3**
	comp=Z,4.8nm,0.3s,baz=28,slow=12,SNR=78						
GERES				Pg	**Pg**	**14 27 15.3**	**-1.3**
	comp=Z,16nm,0.3s,baz=29,slow=18,SNR=61						
GERES				Sn	**Sn**	**14 27 40.7**	**-4.6**
	comp=Z,8.8nm,0.3s,baz=28,slow=21,SNR=6.9						
GERES				Lg	Lg	14 27 54.6	
	comp=Z,8.2nm,0.3s,baz=32,slow=28,SNR=5.1						
SMOL	**Smolenice**	**3.14**	**164**	*e*PG	**Pg**	**14 27 18.3**	**+0.9**
SMOL				*e*SG	**Sg**	**14 27 58.8**	**+0.7**
WET	**Wettzell**	**3.16**	**222**	*e*Pn	**Pn**	**14 27 09.1**	**+0.8**
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PN	**Pn**	**14 27 10.2**	**+1.2**
LANS				*e*PG	**Pg**	**14 27 19.3**	**+0.5**
LANS				*e*SG	**Sg**	**14 27 59.6**	**-0.9**
MODS	**Modra-Piesok**	**3.25**	**166**	*e*PN	**Pn**	**14 27 11.3**	**+1.8**
MODS				*e*SG	**Sg**	**14 28 01.9**	**+0.2**
MODS				*e*LG	Lg	14 28 16.8	
KOLL	**Kolacno**	**3.31**	**152**	*e*PN	**Pn**	**14 27 11.7**	**+1.4**
KOLL				*e*PG	**Pg**	**14 27 21.0**	**+0.4**
ZST	**Bratislava**	**3.40**	**169**	*e*	**Pg**	**14 27 20.6**	**-1.8**
ZST	**Bratislava**	**3.40**	**169**	*e*SG	**Sg**	**14 28 04.9**	**-1.6**
NIE	**Niedzica**	**3.42**	**127**	*e*Pn	**Pn**	**14 27 13.4**	**+1.6**
NIE				*e*Pg	**Pg**	**14 27 22.9**	**+0.3**
NIE				*e*Sg	**Sg**	**14 28 07.6**	**+0.7**
RGN	**Rugen**	**3.45**	**332**	*e*P	**Pn**	**14 27 15.0**	**+2.8**
VYHS	**Vyhne**	**3.52**	**149**	*e*PN	**Pn**	**14 27 13.7**	**+0.6**
VYHS				*e*PG	**Pg**	**14 27 24.1**	**-0.5**
VYHS				*e*SG	**Sg**	**14 28 08.7**	**-1.5**
VYHS				*e*LG	Lg	14 28 23.5	
CONA	**Conrad Observa**	**3.61**	**183**	*i* Pn	**Pn**	**14 27 15.7**	**+1.1**
	comp=Z,5.0nm,0.2s,SNR=7.3						
CONA				*e*Sg	**Sg**	**14 28 11.6**	**-1.7**
	comp=Z,41nm,0.3s						
GRF	**Grafenberg Arr**	**3.61**	**241**	*e*Pn	**Pn**	**14 27 15.8**	**+1.3**
GRF				*e*Sg	**Sg**	**14 28 13.9**	**+0.6**
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	**Pn**	**14 27 16.1**	**+1.1**
BSD				*e*S	**Sn**	**14 27 57.9**	**-0.9**
SOP	**Sopron**	**3.87**	**175**	*e*Pn	**Pn**	**14 27 18.0**	**+0.1**
SOP				*e*Sg	**Pg**	**14 27 32.0**	**+0.7**
SOP				Sn	**Sn**	**14 28 04.1**	**+0.1**
MOA	**Molln**	**3.88**	**199**	*i* Pn	**Pn**	**14 27 19.5**	**+1.4**
	comp=Z,5.5nm,0.2s,SNR=6.8						
MOA				*e*Sg	**Sg**	**14 28 21.2**	**-0.5**
	comp=Z,53nm,0.4s						
ARSA	**Arzberg**	**4.30**	**185**	*i* Pn	**Pn**	**14 27 24.7**	**+0.8**
	comp=Z,5.3nm,0.3s						
ARSA				Sg	**Sg**	**14 28 34.3**	**-1.1**
	comp=Z,25nm,0.4s						
PSZ	**Piszkesteto**	**4.38**	**144**	⇓*i*P	**Pn**	**14 27 26.4**	**+1.4**
PSZ	**Piszkesteto**	**4.38**	**144**	*e*Pn	**Pn**	**14 27 26.1**	**+1.1**
PSZ				Sn	**Sn**	**14 28 18.0**	**+1.4**
BLEU	**Blekinge**	**4.78**	**358**	P	**Pn**	**14 27 32.1**	**+1.7**
KBA	**Koelnbreinsper**	**4.81**	**203**	*i* Pn	**Pn**	**14 27 32.3**	**+1.2**
	comp=Z,9.4nm,0.5s						
KBA				Sg	**Sg**	**14 28 51.9**	**+0.2**
	comp=Z,26nm,0.6s						
BJUU	**Bjuv**	**4.90**	**339**	P	**Pn**	**14 27 32.6**	**+0.6**
BJUU				S	**Sn**	**14 28 26.4**	**-3.0**
SOKA	**Soboth**	**4.91**	**189**	*i* Pn	**Pn**	**14 27 33.8**	**+1.4**
	comp=Z,4.0nm,0.5s						
PERS	**Pernice**	**4.95**	**188**	*i* Pn	**Pn**	**14 27 35.1**	**+2.3**
GROS	**Grobnik**	**5.09**	**185**	*i* Pn	**Pn**	**14 27 36.6**	**+1.8**
DEL	**Delary**	**5.12**	**346**	P	**Pn**	**14 27 36.0**	**+0.9**
OBKA	**Obir**	**5.13**	**192**	*e*Pn	**Pn**	**14 27 35.8**	**+0.4**
	comp=Z,1.5nm,0.3s						
OBKA				*e*Pg	**Pg**	**14 27 56.0**	**+0.5**
	comp=Z,15nm,0.6s						
OBKA				Sg	**Sg**	**14 29 00.8**	**-1.3**
	comp=Z,76nm,1.3s						
WATA	**Walderalm**	**5.13**	**217**	*i* Pn	**Pn**	**14 27 38.3**	**+2.8**
	comp=Z,3.7nm,0.2s,SNR=5.3						
WTTA	**Wattenberg**	**5.17**	**216**	*e*Pn	**Pn**	**14 27 38.1**	**+2.1**
	comp=Z,2.5nm,0.1s,SNR=5.8						
MOTA	**Moosalm**	**5.31**	**220**	*e*Pn	**Pn**	**14 27 38.4**	**+0.5**
	comp=Z,4.8nm,0.2s						
ABTA	**Abfaltersbach**	**5.34**	**208**	*e*Pn	**Pn**	**14 27 39.7**	**+1.5**
	comp=Z,8.0nm,0.5s						
RETA	**Reutte**	**5.34**	**223**	*i* Pn	**Pn**	**14 27 39.0**	**+0.8**
	comp=Z,4.1nm,0.2s						
SQTA	**Sankt Quirin**	**5.37**	**218**	*e*Pn	**Pn**	**14 27 40.2**	**+1.5**
	comp=Z,8.8nm,0.2s,SNR=5.1						
TRPA	**Tarpa**	**5.38**	**127**	⇓*i*P	**Pn**	**14 27 38.6**	**-0.1**
TRPA	**Tarpa**	**5.38**	**127**	*e*Pn	**Pn**	**14 27 38.0**	**-0.7**
TRPA				*e*Sg	**Pg**	**14 27 59.1**	**-1.2**
TRPA				Sn	**Sn**	**14 28 37.0**	**-4.3**
KOE	**Koeppel**	**5.40**	**261**	*e*Pn	**Pn**	**14 27 38.0**	**-1.0**
DOBS	**Dobrina**	**5.41**	**185**	*i* Pn	**Pn**	**14 27 42.0**	**+3.0**
VXJU	**Vaexsjoe**	**5.44**	**353**	P	**Pn**	**14 27 41.0**	**+1.5**
PBUR	**Paburg**	**5.67**	**35**	*e*P	**Pn**	**14 27 46.1**	**+3.5**
BGG	**Burgeitz**	**5.71**	**260**	*e*Pn	**Pn**	**14 27 41.9**	**-1.3**
FETA	**Feichten**	**5.72**	**220**	*i* Pn	**Pn**	**14 27 44.9**	**+1.3**
	comp=Z,1.2nm,0.3s						
FETA				Sg	**Sg**	**14 29 20.2**	**-0.7**
	comp=Z,11nm,0.7s						
CRES	**Cresnjev**	**5.73**	**185**	*i* Pn	**Pn**	**14 27 45.5**	**+2.0**
BYXU	**Byxelkrok**	**5.79**	**5**	P	**Pn**	**14 27 46.1**	**+1.9**
FABU	**Falkenberg**	**5.83**	**341**	P	**Pn**	**14 27 45.6**	**+0.9**
FABU				S	**Sn**	**14 28 49.9**	**-2.3**
STB	**Steinbach**	**5.92**	**264**	*e*Pn	**Pn**	**14 27 44.4**	**-1.6**
STB				*e*Sn	**Sn**	**14 28 50.4**	**-4.1**
	comp=Z,9.0nm,0.7s						
GNOU	**Gnosjoe**	**5.93**	**348**	P	**Pn**	**14 27 47.4**	**+1.2**
DAVOX	**Davos/Dischmat**	**6.27**	**223**	Pn	**Pn**	**14 27 51.7**	**+0.6**
DAVOX				Lg	Lg	14 29 31.3	
DREG	**Dreilaegerbach**	**6.28**	**266**	*e*Pn	**Pn**	**14 27 49.1**	**-1.9**
GOTU	**Gotland**	**6.33**	**12**	P	**Pn**	**14 27 53.8**	**+2.1**
DRGR		**6.43**	**135**	⇓*i*P	**Pn**	**14 27 53.1**	**0.0**
CDF	**Champ du Feu**	**6.49**	**245**	*e*Pn	**Pn**	**14 27 53.8**	**-0.3**
CDF				*e*Sn	**Sn**	**14 29 02.8**	**-6.1**
	comp=Z,70nm,1.0s						
LNKU	**Linkoeping**	**6.71**	**357**	P	**Pn**	**14 27 58.5**	**+1.5**
HINF	**Hinteralfeld**	**7.06**	**242**	*e*Pn	**Pn**	**14 28 01.6**	**-0.2**
SLIT	**Slitere, Latvi**	**7.08**	**28**	*e*P	**Pn**	**14 28 02.9**	**+0.9**
BURAR	**Bucovina Array**	**7.11**	**120**	⇓*i*P	**Pn**	**14 28 04.0**	**+1.5**
IIGN	**Ignalina**	**7.15**	**54**	*e*P	**Pn**	**14 28 06.3**	**+3.4**
ISAL	**Salakas**	**7.21**	**52**	*e*P	Pn	14 28 11.8	+8.0
HAU	**Haudompre**	**7.24**	**245**	*e*Pn	**Pn**	**14 28 02.5**	**-1.7**
NACGM	**Naroch**	**7.25**	**58**	*e*	**Sb**	**14 29 52.0**	**+1.3**
IDID	**Didziasalis**	**7.40**	**55**	*e*P	**Pn**	**14 28 07.3**	**+1.0**
BAIF	**Baives**	**7.68**	**264**	*e*Pn	**Pn**	**14 28 09.1**	**-1.2**
MEZF	**Maizieres J'vi**	**7.74**	**251**	*e*Pn	**Pn**	**14 28 09.0**	**-2.0**
SFTF	**Sexfontaines**	**7.89**	**249**	*e*Pn	**Pn**	**14 28 11.1**	**-2.0**
AKASG	**Malin Array Be**	**8.30**	**91**	Pn	**Pn**	**14 28 18.4**	**-0.4**
	comp=Z,2.2nm,0.3s,baz=279,slow=12,SNR=9.2						
AKASG				Sn	**Sn**	**14 29 46.2**	**-6.9**
	comp=Z,2.1nm,0.3s,baz=264,slow=25,SNR=5.4						
AKASG				Lg	Lg	14 30 46.5	
	comp=Z,0.2nm,0.3s,baz=276,slow=28,SNR=3.1						
LPL	**La Plagne**	**8.65**	**230**	*e*Pn	**Pn**	**14 28 21.0**	**-2.8**
LPG	**La Plagne**	**8.66**	**229**	*e*Pn	**Pn**	**14 28 21.6**	**-2.3**
HFS	**Hagfors**	**8.72**	**352**	Pn	**Pn**	**14 28 24.7**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=167,slow=14,SNR=16						
HFS				Sn	**Sn**	**14 29 59.0**	**-4.5**
	comp=Z,0.3nm,0.3s,baz=170,slow=19,SNR=3.1						
HFS				Lg	Lg	14 30 54.7	
	baz=162,slow=24,SNR=1.8						
LOR	**Lormes**	**9.05**	**247**	*e*Pn	**Pn**	**14 28 27.2**	**-1.9**
MBDF	**Montbardon**	**9.23**	**226**	*e*Pn	**Pn**	**14 28 29.4**	**-2.3**
VSU	**Vasula**	**9.24**	**37**	*e*P	**Pn**	**14 28 33.5**	**+2.0**
ORIF	**Oris-en-Rattie**	**9.50**	**230**	*e*Pn	**Pn**	**14 28 32.8**	**-2.5**
SBF	**Sospel**	**9.64**	**221**	*e*Pn	**Pn**	**14 28 35.0**	**-2.2**
NOA	**NORSAR Array B**	**9.90**	**346**	Pn	**Pn**	**14 28 40.1**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=152,slow=10,SNR=7.7						
NOA				Sn	**Sn**	**14 30 26.4**	**-6.1**
	comp=Z,0.0nm,0.3s,baz=161,slow=19,SNR=2.6						
LMR	**La Mourre**	**10.46**	**222**	*e*Pn	**Pn**	**14 28 45.8**	**-2.5**
TCF	**Toulx Ste Croi**	**10.54**	**246**	*e*Pn	**Pn**	**14 28 47.4**	**-2.1**
FINES	**FINESS Array B**	**11.34**	**25**	Pn	**Pn**	**14 29 00.2**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=206,slow=11,SNR=16						
FINES				Sn	**Sn**	**14 31 00.4**	**-7.3**
	comp=Z,0.4nm,0.3s,baz=212,slow=20,SNR=4.9						
EKA	**Eskdalemuir Ar**	**12.09**	**296**	Pn	**Pn**	**14 29 08.6**	**-2.0**
	baz=104,slow=14,SNR=4.6						
ARCES	**ARCESS Array B**	**18.60**	**10**	Pn	**P**	**14 30 33.5**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=191,slow=12,SNR=14						
AKTO	**Aktyubinsk**	**26.15**	**76**	P	**P**	**14 31 54.6**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=292,slow=13,SNR=4.7						
TORD	**Torodi Ar. Bea**	**40.02**	**202**	P	**P**	**14 33 54.8**	**+1.0**
	comp=Z,1.8nm,1.1s,baz=16,slow=9.0,SNR=6.4						
ZALV	**Zalesovo Beam**	**40.19**	**59**	P	**P**	**14 33 57.6**	**+2.8**
	comp=Z,0.9nm,0.8s,baz=284,slow=9.0,SNR=4.2						
MKAR	**Makanchi Array**	**42.21**	**69**	P	**P**	**14 34 14.2**	**+2.5**
	comp=Z,0.3nm,0.7s,baz=308,slow=7.2,SNR=3.8						
SONM	**Songino Array**	**54.91**	**55**	P	**P**	**14 35 52.5**	**+3.0**
	comp=Z,0.9nm,1.1s,baz=295,slow=3.0,SNR=6.1						
YKA	**Yellowknife Ar**	**59.83**	**336**	P	**P**	**14 36 26.1**	**+2.3**
	comp=Z,0.7nm,0.6s,baz=29,slow=6.8,SNR=12						
CMAR	**Chiang Mai Arr**	**71.36**	**84**	P	**P**	**14 37 40.3**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=312,slow=7.5,SNR=4.6						
PDAR	**Pinedale Array**	**74.92**	**322**	P	**P**	**14 38 02.4**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=45,slow=5.5,SNR=3.7						
ASAR	**Alice Springs**	**125.37**	**84**	PKP	**PKPdf**	**14 45 19.6**	**-0.3**
	comp=Z,0.1nm,0.7s,baz=299,slow=1.0,SNR=2.8						

ISCJB ***22*** *14:33:30.4±0.7, 5°.34N±0°.08×94°.21E±0°.07, h46^{km}, mb3.9/8, MS3.9/1, Error ellipse: s-maj=13.2km s-min=7.5km az=38.2*

IDC ***22*** *14:33:33.5±4.7, 5°.30N×94°.24E, h61^{km}±41^{km}, mb3.6/8, mb1 3.8/10, mb1mx3.5/41, mbtmp3.9/10, ML4.0/2, MS3.1/3, Ms1 3.2/3, ms1mx2.8/34, Error ellipse: s-maj=49.6km s-min=16.2km az=56.0*

DJA ***22*** *14:33:36.3±1.1, 5°N±4°×9°5E±°, h40^{km}±13^{km}, M3.8/7, mb3.9/3, mB4.8/2, MLv3.8/7, Mw(mB)4.1/2*

ISC 22 14:33:32.1±0.8**, 5°.38N**±0°.09×**94°.30E**±0°.09**, h46**^{km}**, n23,** σ**1^{s}29**/21**, mb3.8**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**1.00**	**84**	P	**Pn**	**14 33 49.6**	**-0.1**
BSI				S	**Sn**	**14 34 02.8**	**0.0**
LHMI	**Lhok Sumawe**	**2.65**	**93**	P	**Pn**	**14 34 13.8**	**+1.6**
TPTI		**3.57**	**126**	P	**Pn**	**14 34 25.3**	**+0.4**
TPTI				S	**Sn**	**14 35 03.4**	**-2.4**
SNSI	**Sinabang, Aceh**	**3.58**	**145**	P	**Pn**	**14 34 25.6**	**+0.5**
KCSI	**Kotacane, Aceh**	**3.93**	**118**	P	**Pn**	**14 34 31.3**	**+1.4**
PSI	**Prapat**	**5.28**	**119**	P	**Pn**	**14 34 50.6**	**+2.0**
	1.8nm,0.3s,baz=360,slow=4.2,SNR=7.4						
PSI				LR	LR	14 37 25.1	
	comp=Z,61nm,18.4s,baz=269,slow=43						
MNSI	**Mandailing Nat**	**6.97**	**131**	P	**Pn**	**14 35 13.2**	**+1.5**
PALK	**Pallekele**	**13.64**	**279**	LR	LR	14 41 28.2	
	comp=Z,57nm,19.3s,baz=116,slow=35						
CMAR	**Chiang Mai Arr**	**13.76**	**19**	P	**P**	**14 36 49.0**	**-3.1**
	0.4nm,0.3s,baz=204,slow=14,SNR=17						
CHTO	**Chiang Mai**	**14.10**	**18**	P	**P**	**14 36 56.6**	**+0.8**
	32nm,0.7s						
CMMT	**Chiang Mai**	**14.10**	**18**	P	**P**	**14 36 56.6**	**+0.8**
	7.1nm,0.7s						
H08S3	**Diego Garcia H**	**25.31**	**239**	T	T	15 04 53.1	
	baz=59,slow=76,SNR=36						
H08S2	**Diego Garcia H**	**25.31**	**239**	T	T	15 04 54.3	
	baz=59,slow=76,SNR=13						
H08S1	**Diego Carcia H**	**25.33**	**239**	T	T	15 04 54.1	
	baz=59,slow=76,SNR=16						
MKAR	**Makanchi Array**	**42.54**	**348**	P	**P**	**14 41 23.7**	**+0.5**
	3.5nm,0.7s,baz=168,slow=8.1,SNR=46						
SONM	**Songino Array**	**43.55**	**12**	P	**P**	**14 41 31.3**	**-0.1**
	0.8nm,0.6s,baz=187,slow=8.3,SNR=6.1						
SONM				PcP	**PcP**	**14 43 19.0**	**+0.4**
	0.2nm,0.6s,baz=218,slow=3.3,SNR=2.9						
WRA	**Warramunga Arr**	**46.73**	**124**	P	**P**	**14 41 56.7**	**-0.3**
	1.1nm,0.6s,baz=306,slow=8.4,SNR=19						
ASAR	**Alice Springs**	**48.23**	**128**	P	**P**	**14 42 08.5**	**-0.2**
	0.7nm,0.7s,baz=302,slow=8.0,SNR=12						
ZALV	**Zalesovo Beam**	**49.03**	**353**	P	**P**	**14 42 14.6**	**+0.3**
	2.1nm,0.3s,baz=175,slow=7.4,SNR=14						
BVAR	**Borovoye Array**	**51.38**	**342**	P	**P**	**14 42 31.5**	**-0.6**
	0.8nm,0.7s,baz=146,slow=10,SNR=4.5						
BRTR	**Keskin Array B**	**64.17**	**312**	P	**P**	**14 44 01.8**	**-0.5**
	0.5nm,0.7s,baz=115,slow=8.6,SNR=3.3						
ARCES	**ARCESS Array B**	**77.65**	**340**	LR	LR	15 22 40.0	
	comp=Z,58nm,19.6s,baz=224,slow=38						
GERES	**GERESS Array B**	**79.78**	**319**	P	**P**	**14 45 36.5**	**+0.9**
	0.5nm,0.6s,baz=86,slow=5.5,SNR=4.3						

IDC 22 14:36:06.4±2.3**, 8°.55S×121°.44E, h0**^{km}**, mb3.3**/1**, mb1 3.4**/3**, mb1mx3.3**/29**, mbtmp3.3**/3**, ML2.6**/2**, Error ellipse: s-maj=267.8km s-min=28.5km az=54.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.85**	**134**	Pn	Pn	14 40 02.1	-1.8
	0.0nm,0.3s,baz=305,slow=14,SNR=2.9						
ASAR	**Alice Springs**	**19.19**	**143**	P	Pn	14 40 33.0	+0.2
	0.0nm,0.3s,baz=324,slow=12,SNR=8.8						
MKAR	**Makanchi Array**	**65.19**	**331**	P	P	14 46 49.4	-0.1
	0.2nm,0.7s,baz=134,slow=6.7,SNR=3.0						

JMA ***22*** *14:51:22.9±0.1, 38°.91N×142°.50E, h41^{km}±1^{km}, M3.4*

IDC ***22*** *14:51:23.1±3.2, 38°.77N×142°.66E, h49^{km}±32^{km}, mb3.0/3, mb1 3.2/5, mb1mx3.0/39, mbtmp3.2/5, ML2.8/2, Error ellipse: s-maj=41.9km s-min=23.0km az=109.0*

ISC 22 14:51:19.7±1.4**, 38°.87N**±0°.04×**142°.62E**±0°.07**, h19**^{km}±4^{km}**, n24,** σ**1^{s}01**/29**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.77**	**286**	P	**Pn**	**14 51 36.2**	**+0.6**
OFUJ				S	**Sb**	**14 51 45.5**	**+0.9**
JKMT	**Kesennumamotoy**	**0.90**	**267**	P	**Pn**	**14 51 37.9**	**+0.6**
JKMT				S	**Sb**	**14 51 48.5**	**+0.3**
MIYJ	**Miyakonagasawa**	**0.94**	**319**	P	**Pn**	**14 51 38.5**	**+0.6**
MIYJ				S	**Sb**	**14 51 49.7**	**+0.2**
JIO	**Ouri**	**1.08**	**248**	P	**Pn**	**14 51 40.5**	**+0.7**
JIO				S	**Sb**	**14 51 52.7**	**-0.7**
JMK	**Ichinoseki**	**1.09**	**275**	P	**Pg**	**14 51 40.9**	**-0.1**
JMK				S	**Sb**	**14 51 53.8**	**-0.1**
JOM	**Ohasama**	**1.19**	**301**	P	**Pg**	**14 51 42.3**	**-0.6**
JOM				S	**Sb**	**14 51 56.5**	**-0.3**
JTH	**Tanohata**	**1.22**	**331**	P	**Pg**	**14 51 42.8**	**-0.5**
JKZ	**Kuzumaki**	**1.50**	**318**	P	**Pb**	**14 51 46.9**	**0.0**
JKZ				S	**Sn**	**14 52 04.8**	**+0.2**
JOU	**Okura**	**1.61**	**252**	P	**Pb**	**14 51 48.5**	**-0.4**
JOU				S	**Sn**	**14 52 07.6**	**+0.1**
JRG	**Rokugo**	**1.63**	**289**	P	**Pb**	**14 51 48.6**	**-0.6**
JRG				S	**Sn**	**14 52 08.1**	**+0.2**
JANG	**Nango**	**1.73**	**331**	P	**Pn**	**14 51 49.5**	**+0.8**
JMM	**Marumori**	**1.75**	**236**	P	**Pb**	**14 51 50.3**	**-0.9**
JMM				S	**Sn**	**14 52 11.1**	**+0.3**
JYK	**Kaneyama**	**1.77**	**272**	P	**Pb**	**14 51 50.7**	**-0.8**
MJAR	**Matsushiro Arr**	**4.20**	**238**	P	**Pn**	**14 52 25.0**	**+2.2**
	0.1nm,0.3s,baz=66,slow=9.0,SNR=6.1						
ASAJ	**Asahikawa**	**5.24**	**360**	P	**Pn**	**14 52 39.4**	**+2.4**
	0.5nm,0.3s,baz=191,slow=13,SNR=12						
ASAJ				S	**Sn**	**14 53 34.5**	**-2.4**
	0.2nm,0.3s,baz=199,slow=18,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**28.35**	**125**	T	T	15 27 42.5	
	baz=317,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**28.36**	**125**	T	T	15 27 44.3	
	baz=317,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**28.37**	**125**	T	T	15 27 48.0	
	baz=317,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**29.13**	**127**	T	T	15 28 41.3	
	baz=319						
H11S3	**WAKE ISLAND Hy**	**29.14**	**127**	T	T	15 28 41.6	
	baz=319,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.15**	**127**	T	T	15 28 41.8	
	baz=319,slow=74						
KURBB	**Kurchatov Arra**	**45.65**	**307**	P	**P**	**14 59 38.9**	**+0.1**
	0.2nm,0.3s,baz=78,slow=8.1,SNR=3.2						
ILAR	**Eielson Array**	**47.44**	**33**	P	**P**	**14 59 53.4**	**+0.7**
	0.4nm,0.9s,baz=262,slow=6.6,SNR=4.7						
WRA	**Warramunga Arr**	**59.02**	**189**	P	**P**	**15 01 16.8**	**-1.4**
	0.2nm,0.3s,baz=6.8,slow=7.1,SNR=12						

BJI ***22*** *15:14:25.8, 7°.14S×132°.72E, h6^{km}, mB5.1/25, mb4.7/40, Ms4.8/8, Ms7 4.5/8*

IDC ***22*** *15:14:30.0±0.4, 6°.81S×132°.38E, h0^{km}, mb4.6/17, mb1 4.7/20, mb1mx4.6/32, mbtmp4.6/20, ML4.8/3, MS3.6/10, Ms1 3.6/10, ms1mx3.3/33, Error ellipse: s-maj=19.9km s-min=11.1km az=63.0*

NEIC ***22*** *15:14:31.1±0.3, 6°.94S×132°.34E, h10^{km}, mb4.9/21, Error ellipse: s-maj=8.8km s-min=6.3km az=79.0*

ISCJB ***22*** *15:14:32.6±0.2, 6°.90S±0°.03×132°.36E±0°.03, h33^{km}, mb4.7/43, MS3.6/10, Error ellipse: s-maj=5.0km s-min=4.5km az=148.8*

DJA ***22*** *15:14:34.1±0.5, 7°S±2°×13°2E±°, h31^{km}±6^{km}, M5.1/30, mB5.5/11, mb5.0/30, MLv5.3/11, Mw(mB)4.9/11*

ISC 22 15:14:34.9±0.3**, 6°.87S**±0°.04×**132°.39E**±0°.05**, h35**^{km}**, n136,** σ**2^{s}03**/136**, mb4.8**/54**, MS3.8**/10**, 2C-3D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.55**	**224**	*e*Pn	**Pn**	**15 15 01.4**	**+1.4**
SAUI	**Saumlaki**	**1.55**	**224**	P	**Pn**	**15 15 00.7**	**+0.7**
SAUI				S	**Sn**	**15 15 25.0**	**+6.1**
BNDI	**Bandanaira**	**3.39**	**313**	P	**Pn**	**15 15 25.3**	**-0.1**
FAKI	**Fak Fak**	**3.92**	**358**	*e*Pn	**Pn**	**15 15 31.9**	**-0.8**
FAKI	**Fak Fak**	**3.92**	**358**	P	**Pn**	**15 15 31.7**	**-1.0**
RKPI	**Ransiki, Papua**	**5.61**	**19**	P	**Pn**	**15 15 57.3**	**+1.4**
	740nm,0.9s,8µm4.0nm						
SIJI	**Sorong**	**6.06**	**349**	Pn	**Pn**	**15 16 00.4**	**-1.8**
	8.9nm,0.3s,baz=264,slow=23,SNR=33						
SIJI				Sn	**Sn**	**15 17 05.1**	**-5.2**
	19nm,0.3s,baz=197,slow=19,SNR=8.6						
SWI	**Sorong**	**6.07**	**349**	P	**Pn**	**15 16 00.1**	**-2.1**
	80nm,0.4s,2µm1.3nm						
MTN	**Manton Dam**	**6.07**	**192**	*e*Pn	**Pn**	**15 16 01.1**	**-1.1**
SRPI	**Serui, Papua**	**6.28**	**38**	P	**Pn**	**15 16 05.8**	**+0.7**
	241nm,0.5s,5µm2.3nm						
NLAI	**Namlea**	**6.38**	**304**	P	**Pn**	**15 16 07.0**	**+0.5**
	148nm,0.9s,0.7nm						
BAKI	**Biak**	**6.75**	**34**	P	**Pn**	**15 16 13.3**	**+1.7**
SANI	**Sanana**	**7.97**	**307**	P	**Pn**	**15 16 28.6**	**+0.2**
	112nm,0.6s,1µm0.4nm						
MMPI	**Merauke**	**8.09**	**102**	P	**Pn**	**15 16 32.8**	**+2.9**
	506nm,0.8s,6µm						
SOEI	**Soe**	**8.53**	**250**	*e*Pn	**Pn**	**15 16 35.3**	**-0.9**
SOEI	**Soe**	**8.53**	**250**	P	**Pn**	**15 16 36.2**	**0.0**
	209nm,0.7s,2µm						
GENI	**Genyem**	**8.84**	**62**	P	**Pn**	**15 16 41.1**	**+0.8**
	184nm,0.6s						
BATI	**Baumata**	**9.24**	**248**	P	**Pn**	**15 16 45.8**	**0.0**
	64nm,0.4s,1µm						
BATI	**Baumata**	**9.24**	**248**	Pn	**Pn**	**15 16 45.7**	**-0.2**
	39nm,0.3s,baz=78,slow=4.2,SNR=13						
BATI				Sn	**Sn**	**15 18 23.0**	**-5.7**
	29nm,0.3s,baz=127,slow=20,SNR=5.3						
JAY	**Jayapura**	**9.35**	**63**	P	**Pn**	**15 16 49.2**	**+1.9**
	474nm,0.8s						
JAY	**Jayapura**	**9.35**	**63**	Pn	**Pn**	**15 16 48.9**	**+1.6**
	3.1nm,0.3s,baz=234,slow=9.1,SNR=9.0						
JAY				Sn	**Sn**	**15 18 30.6**	**-0.7**
	0.8nm,0.3s,baz=212,slow=19,SNR=1.9						
EDFI	**Ende, Flores**	**10.76**	**259**	P	**Pn**	**15 17 07.1**	**+0.4**
	26nm,0.7s						
APSI	**Ampana**	**12.23**	**298**	P	**Pn**	**15 17 28.1**	**+1.3**
	24nm,0.7s						
MRSI	**Marisa**	**12.72**	**305**	P	**Pn**	**15 17 32.2**	**-1.3**
COEN	**Coen**	**12.73**	**124**	*e*Pn	**Pn**	**15 17 31.6**	**-2.1**
SPSI	**Sidrap Palu**	**12.88**	**282**	P	P	15 17 56.4	+10
FITZ	**Fitzroy Crossi**	**12.96**	**210**	*e*Pn	**Pn**	**15 17 32.3**	**-4.4**
FITZ				Sn	Sn	15 19 46.6	-13
FITZ	**Fitzroy Crossi**	**12.96**	**210**	Pn	Pn	15 17 31.6	-5.1
	7.8nm,0.3s,baz=38,slow=12,SNR=169						
FITZ				Sn	Sn	15 19 46.6	-13
	11nm,0.3s,baz=72,slow=20,SNR=9.2						
FITZ				LR	LR	15 23 24.4	
	comp=Z,413nm,18.6s,baz=30,slow=41						

TTSI	Tana Toraja	13.08	286	P	Pn	15 17 41.4	+3.0
WRAB	Tennant Creek	13.13	172	ePn	Pn	15 17 34.2	-4.8
WRA	Warramunga Arr	13.14	172	Pn	Pn	15 17 33.1	-6.0
	7.4nm,0.3s,baz=345,slow=14,SNR=120						
WRA				Sn	Sn	15 19 51.5	-13
	4.9nm,0.3s,baz=360,slow=24,SNR=3.8						
WRA				Lg	Lg	15 21 26.6	
	baz=354,slow=30,SNR=3.5						
WB2	Warramunga Arr	13.14	172	ePn	Pn	15 17 34.5	-4.7
WC3	Warramunga Arr	13.16	172	ePn	Pn	15 17 34.7	-4.7
PCI	Palu	13.84	295	P	P	15 17 54.8	-1.9
MPSI	Mapaga	14.37	299	P	Pn	15 17 54.8	-1.2
	7.7nm,1.0s						
PLAI	Plampang	14.60	261	P	Pn	15 17 56.3	-2.9
	66nm,0.9s						
KCP	Kidapawan	15.59	332⇓	eP	P	15 18 28.8	+13
AS31	Alice Springs	16.77	175	ePn	Pn	15 18 22.4	-4.9
	20nm,0.6s						
ASAR	Alice Springs	16.77	175	Pn	Pn	15 18 22.1	-5.1
	8.3nm,0.3s,baz=354,slow=14,SNR=432						
ASAR				Sn	Sn	15 21 20.4	-12
	1.8nm,0.3s,baz=355,slow=27,SNR=5.3						
ASAR				Lg	Lg	15 23 21.6	
	1.0nm,0.3s,baz=353,slow=29,SNR=2.8						
ASAR				LR	LR	15 25 25.2	
	comp=Z,428nm,18.8s,baz=354,slow=39						
AS01	Alice Springs	16.77	175	ePn	Pn	15 18 23.2	-4.0
JAGI	Jajag, Banyuwa	18.14	264	ePn	Pn	15 18 39.2	-5.1
	60nm,1.1s						
MTKI	Muara Teweh, K	18.41	288	P	Pn	15 18 47.7	+0.2
MBWA	Marble Bar	18.76	219	eP	P	15 18 46.8	-4.3
	48nm,0.9s						
CTA	Charters Tower	18.81	136	P	Pn	15 18 52.7	+0.3
	1.1nm,0.3s,baz=316,slow=12,SNR=43						
CTA				Lg	Lg	15 24 18.8	
	0.4nm,0.3s,baz=233,slow=20,SNR=2.7						
CTAO	Charters Tower	18.81	136	eP	Pn	15 18 53.4	+1.0
	18nm,0.6s						
GIRL	Giralia	23.49	226	eP	P	15 19 41.8	+0.1
	537nm,1.6s						
FORT	Forrest	24.13	189	eP	P	15 19 46.8	-0.9
	123nm,0.6s						
BBOO	Buckleboo	26.04	173	eP	P	15 20 04.2	-0.8
	30nm,0.8s						
STKA	Stephens Creek	26.33	162	eP	P	15 20 07.5	-0.2
	4.3nm,0.8s						
STKA	Stephens Creek	26.33	162	P	P	15 20 07.5	-0.2
	5.3nm,0.4s,baz=340,slow=8.5,SNR=44						
STKA				LR	LR	15 31 24.8	
	comp=Z,399nm,18.2s,baz=327,slow=38						
MORW	Morawa	26.94	213	eP	P	15 20 12.7	-0.4
	38nm,1.1s						
HNR	Honiara	27.40	97	P	P	15 20 16.6	-0.8
	7.5nm,0.3s,baz=270,slow=6.1,SNR=2.6						
HNR				LR	LR	15 31 33.4	
	comp=Z,168nm,18.8s,baz=255,slow=37						
PMBI	Palembang	27.78	277	P	P	15 20 27.9	+7.0
NWAO	Narrogin (SRO)	29.51	207	eP	P	15 20 34.9	-1.1
	47nm,1.3s						
NWAO	Narrogin (SRO)	29.51	207	P	P	15 20 35.5	-0.5
	7.5nm,0.5s,baz=315,slow=19,SNR=12						
NWAO				LR	LR	15 33 43.3	
	comp=Z,316nm,18.1s,baz=264,slow=39						
DZM	Mont Dzumac	36.16	118	P	P	15 21 35.1	+0.7
	9.3nm,1.1s,baz=302,slow=19,SNR=2.3						
UTHA	Uthaitani	39.51	305	P	P	15 22 02.6	0.0
	4.3nm,0.8s						
NJ2	Nanjing	40.80	342	eP	P	15 22 11.9	-1.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WHN	Wuhan	41.02	336	P	P	15 22 15.4	+0.5
CM01	Chiang Mai Arr	41.46	308	eP	P	15 22 18.0	-0.7
CMAR	Chiang Mai Arr	41.49	308	P	P	15 22 18.6	-0.4
	2.2nm,0.5s,baz=138,slow=7.5,SNR=20						
CMAR				PcP	PcP	15 24 16.9	+0.5
	1.3nm,0.7s,baz=170,slow=2.5,SNR=5.4						
CMMT	Chiang Mai	41.69	308	P	P	15 22 20.6	0.0
	6.4nm,0.7s						
CHTO	Chiang Mai	41.69	308	eP	P	15 22 17.6	-3.0
	6.5nm,0.8s						
CHTO	Chiang Mai	41.69	308	P	P	15 22 20.6	0.0
	42nm,0.9s						
KMI	Kunming	42.94	319	P	P	15 22 32.8	+1.9
KMI				pP	pP	15 22 35.9	-5.0
KMI				sP	sP	15 22 37.5	-7.5
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,130nm,4.0s						
KMI				LR	LR		
	comp=N,230nm,4.8s						
KMI				LR	LR		
	comp=E,250nm,4.7s						
KMI				LR	LR		
	comp=Z,170nm,4.9s						
MJAR	Matsushiro Arr	43.52	7	P	P	15 22 33.6	-1.7
	4.6nm,0.9s,baz=193,slow=10,SNR=6.6						
MJAR				LR	LR	15 39 25.1	
	comp=Z,42nm,21.8s,baz=125,slow=34						
KSRS	Korea Array	44.28	355	LR	LR	15 42 59.4	
	comp=Z,42nm,18.6s,baz=182,slow=39						
XAN	Xi'an	46.36	333	P	P	15 22 57.1	-0.8
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,56nm,3.5s						
CD2	Chengdu	46.50	325	eP	P	15 22 58.5	-0.5
BJI	Beijing	49.01	344⇑	eP	P	15 23 18.3	0.0
BJI				S	S	15 30 26.8	+6.4
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RPZ	Rata Peaks	49.92	144	P	P	15 23 26.5	+1.2
	7.2nm,0.5s,baz=312,slow=2.7,SNR=13						
LZH	Lanzhou	50.44	330	eP	P	15 23 32.3	+2.8
LZH				pP	pP	15 23 36.4	-3.3
LZH				sP	sP	15 23 38.9	-4.8
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,4.4s						
CN2	Changchun	50.82	354	eP	P	15 23 38.4	+6.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	Ussuriysk Ar.	50.83	360	P	P	15 23 32.4	+0.4
	comp=Z,2.8nm,0.6s,baz=184,slow=7.3,SNR=11						
SHL	Shillong	50.88	311	eP	P	15 23 39.0	+6.0
URZ	Urewera	51.05	135	P	P	15 23 33.3	-0.6
	comp=Z,4.2nm,0.5s,baz=254,slow=7.7,SNR=6.9						
HHC	Hu-ho-hao-te	51.20	340	eP	P	15 23 35.8	+0.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,6.1s						
ASAJ	Asahikawa	51.58	9	LR	LR	15 45 36.9	
	comp=Z,9.8nm,20.9s,baz=164,slow=36						
GTA	Gaotai	55.03	329	⇓P	P	15 24 03.6	+0.3
GTA				pP	pP	15 24 11.3	-2.3
GTA				sP	sP	15 24 14.6	-3.0
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,99nm,4.3s						
GTA				LR	LR		
	comp=Z,110nm,17.8s						
GTA				LR	LR		
	comp=Z,100nm,18.4s						
RAMN	Ramite	55.63	309	eP	P	15 24 07.8	-0.2
	comp=Z,54nm,0.5s						
KLR	Kul'dur	55.86	359	LR	LR	15 46 56.8	
	comp=Z,21nm,19.1s,baz=182,slow=35						
JIRN	Jiri	56.30	310	eP	P	15 24 12.6	-0.4
	comp=Z,20nm,0.3s						
GUN	Gumba	56.67	310	eP	P	15 24 15.1	-0.4
	comp=Z,49nm,0.4s						
PKI	Pulchoki	56.86	309	eP	P	15 24 16.1	-0.8
	comp=Z,8.9nm,0.3s						
PKIN	Phulchoki	56.87	309	eP	P	15 24 16.0	-0.9
	comp=Z,9.4nm,0.3s						
KKN	Kakani	57.06	309	eP	P	15 24 17.6	-0.6
	comp=Z,16nm,0.4s						
DMN	Daman	57.11	309	eP	P	15 24 18.2	-0.4
	comp=Z,19nm,0.3s						
GKN	Gorkha	57.66	309	eP	P	15 24 21.9	-0.5
	comp=Z,0.4nm,0.2s						
KOLN	Koldanda	58.35	308	eP	P	15 24 27.0	-0.2
	comp=Z,29nm,0.3s						
DANN	Dangsing	58.51	309	eP	P	15 24 27.9	-0.5
	comp=Z,23nm,0.4s						
ULN	Ulaanbaatar	58.90	340	eP	P	15 24 29.1	-1.5
	comp=Z,5.2nm,0.8s						
PYUN	Piuthan	58.98	308	eP	P	15 24 31.4	-0.2
	comp=Z,54nm,0.5s						
SONM	Songino Array	59.10	340	P	P	15 24 32.3	+0.3
	comp=Z,1.3nm,0.6s,baz=151,slow=8.1,SNR=12						
SONA1	Songino Array	59.10	340	eP	P	15 24 30.9	-1.1
PETK	Petropavlovsk-	63.49	17	P	P	15 25 02.5	+1.1
	comp=Z,7.5nm,1.0s,baz=195,slow=8.6,SNR=2.3						
WMQ	Urumqi	64.59	326	P	P	15 25 10.1	+1.2
WMQ				pP	pP	15 25 14.6	-4.9
WMQ				sP	sP	15 25 19.9	-3.5
WMQ				pmax	pmax		
	comp=Z,43nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.7s						
WMQ				LR	LR		
	comp=Z,120nm,13.7s						
WMQ				LR	LR		
	comp=Z,100nm,21.1s						
WMQ				LR	LR		
	comp=Z,71nm,15.1s						
NIL	Nilore	68.94	310	eP	P	15 25 37.2	+0.4
	comp=Z,8.0nm,0.6s						
MK01	Makanchi Array	69.41	326	eP	P	15 25 40.0	+0.5
MK31	Makanchi Array	69.43	326	eP	P	15 25 40.1	+0.5
MKAR	Makanchi Array	69.43	326	P	P	15 25 40.1	+0.5
	comp=Z,8.3nm,0.8s,baz=121,slow=8.0,SNR=73						
KSH	Kashi	69.53	317	P	P	15 25 42.4	+1.9
KSH				sP	pP	15 25 51.0	-0.1
KSH				PP	PP	15 28 19.9	+5.3
KSH				S	S	15 34 48.0	+1.8
KSH				SS	SS	15 39 19.3	+4.8
KSH				pmax	pmax		
	comp=Z,310nm,4.5s						
KSH				LR	LR		
	comp=Z,120nm,4.4s						
KSH				LR	LR		
	comp=Z,92nm,4.8s						
KSH				LR	LR		
	comp=Z,410nm,4.8s						
MAKZ	Makanchi	69.61	326	eP	P	15 25 41.1	+0.5
	comp=Z,7.6nm,0.9s						
TKM2	Tokmak 2	71.40	320	P	P	15 25 52.5	+0.5
	SNR=5.3						
UCH	Uchtor	71.78	319	P	P	15 25 56.1	+1.6
	SNR=7.1						
USP	Ospenovka	72.27	319	P	P	15 25 57.6	+0.6
	SNR=12						
AML	Almayashu	72.28	318	P	P	15 25 58.5	+1.1
	SNR=11						
VNDA	Vanda	72.31	174	P	P	15 25 57.0	+0.5
	comp=Z,9.5nm,1.0s,baz=342,slow=6.7,SNR=4.6						
ARSB	Arslanbob	72.39	317	eP	P	15 25 58.9	+1.0
	comp=Z,11nm,1.0s						
EKS2	Erkin-Say	72.46	319	P	P	15 25 59.4	+1.2
	SNR=6.0						
KBL	Kabul	72.50	309	eP	P	15 25 58.5	-0.2
	comp=Z,8.4nm,1.1s						
ZAA0	Zalesovo Array	72.53	333	eP	P	15 25 57.6	-0.5
	comp=Z,5.7nm,0.6s						
ZALV	Zalesovo Beam	72.53	333	P	P	15 25 57.8	-0.3
	comp=Z,4.5nm,0.5s,baz=117,slow=5.2,SNR=21						
GAR	Garm	73.26	314	eP	P	15 26 02.5	-0.5
	comp=Z,13nm,0.7s						
KURK	Kurchatov	73.65	328	eP	P	15 26 04.9	+0.1
	comp=Z,10nm,1.1s						
CHGR	Chuyangaron	73.96	313	eP	P	15 26 06.1	-1.0
	comp=Z,13nm,0.8s						
GEYT	Alibeck	81.94	310	P	P	15 26 51.9	+0.5
	comp=Z,3.6nm,0.5s,baz=159,slow=4.5,SNR=8.5						
NRIK	Noril'sk	82.02	345	P	P	15 26 51.3	+0.3
	comp=Z,5.9nm,0.6s,baz=137,slow=7.7,SNR=15						
NRIK				LR	LR	16 07 10.8	
	comp=Z,47nm,18.8s,baz=194,slow=39						
QSPA	South Pole Qui	83.11	180	eP	P	15 26 57.1	+0.1
	comp=Z,8.2nm,0.8s						
ABKAR	Akbulak array	83.88	321	eP	P	15 27 01.0	-0.1
SYO	Syowa Base	84.64	201⇑	eP	P	15 27 04.6	0.0
SYO	Syowa Base	84.64	201⇓	ePcP	PcP	15 27 08.7	+0.6
ILAR	Eielson Array	92.22	25	P	P	15 27 39.4	-1.5
	comp=Z,0.5nm,0.6s,baz=273,slow=4.2,SNR=12						
ARCES	ARCESS Array B	102.27	340	P	Pdif	15 28 25.6	-0.6
	comp=Z,8.9nm,1.0s,baz=79,slow=6.3,SNR=6.4						
FINES	FINESS Array B	103.78	332	Pdiff	Pdif	15 28 31.5	-1.5
	comp=Z,0.7nm,0.8s,baz=90,slow=5.6,SNR=3.2						
GERES	GERESS Array B	113.83	321	PKiKP	PKiKP	15 33 10.2	0.0
	comp=Z,0.8nm,0.6s,baz=85,slow=1.6,SNR=4.9						
TXAR	Lajitas Array	122.82	60	PKP	PKiKP	15 33 28.9	+0.6
	comp=Z,0.2nm,0.5s,baz=219,slow=1.2,SNR=4.6						
PLCA	Paso Flores	128.15	158	PKP	PKiKP	15 33 39.4	+0.7
	comp=Z,1.0nm,0.5s,baz=331,slow=1.5,SNR=4.3						
TORD	Torodi Ar. Bea	131.11	281	PKP	PKPdf	15 33 44.2	0.0
	comp=Z,1.7nm,0.9s,baz=66,slow=2.5,SNR=9.2						
LVC	Limon Verde	144.04	145	PKP	PKPdf	15 34 08.2	-0.1
	comp=Z,5.7nm,0.7s,baz=232,slow=7.9,SNR=5.9						
PB01	IPOC Station P	144.92	143	ePKPdf	PKPdf	15 34 09.5	0.0
NNA	Nana	145.42	123	PKPbc	PKPab	15 34 11.5	+1.0
	comp=Z,13nm,0.7s,baz=262,slow=4.9,SNR=4.1						
CPUP	Villa Florida	145.68	164	ePKPdf	PKPab	15 34 12.0	+0.9
CPUP	Villa Florida	145.68	164	PKPbc	PKPab	15 34 11.5	+0.4
	comp=Z,5.6nm,0.8s,baz=225,slow=2.9,SNR=8.7						
PB11	IPOC Station P	145.78	141	ePKPdf	PKPbc	15 34 11.3	-0.2
LPAZ	La Paz	149.32	139	PKPbc	PKiKP	15 34 23.6	+0.5
	comp=Z,6.4nm,0.9s,baz=192,slow=1.1,SNR=13						
SIV	San Ignacio	153.67	150	PKPbc	PKiKP	15 34 32.0	+0.7
	comp=Z,1.0nm,0.6s,baz=225,slow=2.9,SNR=5.5						
SIV				PKPab	PKPab	15 34 44.7	+0.9
	comp=Z,2.5nm,0.6s,baz=194,slow=2.4,SNR=11						

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*DDA **22** 15:17:17.1, 38°.12N×42°.81E, h7^{km}±3^{km}, ML2.6*
*ISK **22** 15:17:17.2, 38°.20N×42°.75E, h5^{km}, ML2.4/7*
ISC 22 15:17:17.4±1.0**, 38°.14N**±0°.03×**42°.82E**±0°.03**, h15**^{km}±8^{km}**,**
n16, σ0^{s}67/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.22	33	PG	Pg	15 17 22.4	-0.3
AKDM				SG	Sg	15 17 26.6	+0.4
GEVA	Gevas	0.25	47	i P	Pg	15 17 23.1	0.0
GEVA				i S	Sb	15 17 27.8	-0.2
TVAN	Van	0.60	50	i P	Pb	15 17 29.9	+0.2
TVAN				i S	Sg	15 17 37.0	-0.3
TVAN				IAML_P			
	comp=Z,690nm,0.2s						
ADCV	BITLIS_Adilcev	0.67	353	i P	Pg	15 17 30.6	0.0
ADCV				i S	Sb	15 17 41.0	+0.9
SIRN	Sırnak	0.72	207	i P	Pg	15 17 31.5	0.0
SIRN				i S	Sg	15 17 41.5	+0.5
SIRN				IAML_P			
	comp=Z,1μm,0.1s						
SRTM	Siirt_Merkez	0.73	258	i P	Pg	15 17 31.3	-0.3
SRTM				i S	Sb	15 17 42.2	+0.6
SRTM				IAML_P			
	comp=Z,1μm,0.3s						
GURO	Guroymak-BITLI	0.74	304	PG	Pg	15 17 31.1	-0.9
GURO				SG	Sg	15 17 41.2	-0.7
BASK	Baskale_VAN	0.94	95	i P	Pg	15 17 34.1	-1.5
BASK				i S	Sn	15 17 49.8	+0.4
BASK				IAML_P			
	comp=Z,704nm,0.1s						
MLAZ	Malazgirt-MUS	1.02	348	PG	Pg	15 17 36.6	-0.6
MLAZ				SG	Sb	15 17 50.6	+0.4
TUTA	Tutak	1.26	360	i P	Pb	15 17 41.2	+0.2
TUTA				IAML_P			
	comp=Z,827nm,0.2s						
SVAN	Silvan-Diyarba	1.28	271	PN	Pb	15 17 41.6	+0.4
SVAN				SN	Sg	15 17 59.5	+0.7
AGRB	Hanur-Agry	1.44	5	PN	Pb	15 17 44.6	+0.6
AGRB				SN	Sg	15 18 04.6	+0.7
MARD	Mardin	1.82	244	i P	Pb	15 17 50.8	+0.3
MARD				i S	Sg	15 18 16.9	+0.9
MARD				IAML_P			
	comp=Z,222nm,0.2s						
BNGB	Bingl	1.88	297	PN	Pb	15 17 50.6	-0.9
HANI	Diyarbakir_Han	1.93	279	i P	Pb	15 17 51.9	-0.4
HANI				i S	Sg	15 18 18.3	-1.2
MAZI	Mazidag	2.00	251	PN	Pb	15 17 53.1	-0.5

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*ISK **22** 15:22:46.1, 38°.02N×30°.03E, h7^{km}, ML2.3/6*
*DDA **22** 15:22:47.9, 38°.06N×30°.16E, h7^{km}±5^{km}, ML2.5*
*ISCJB **22** 15:22:48.6±0.4, 38°.02N±0°.03×30°.16E±0°.04, h19^{km}±7^{km}, Error ellipse: s-maj=5.2km s-min=4.9km az=177.8*
ISC 22 15:22:47.8±1.0**, 38°.01N**±0°.03×**30°.22E**±0°.03**, h17**^{km}±8^{km}**,**
n15, σ1^{s}26/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZIL	AFYON_Kizioren	0.26	346	i P	Pg	15 22 52.7	-1.0
KZIL				i S	Sg	15 22 57.3	-0.5
KZIL				IAML_P			
	comp=Z,12μm,0.2s						
ISP	Isparta	0.30	127	PG	Pb	15 22 55.2	+0.4
ISP				SG	Sn	15 23 01.7	-1.9
BRDR	BURDUR-Merkez	0.33	202	i P	Pg	15 22 55.1	+0.2
BRDR				i S	Sb	15 23 01.0	+0.6
BRDR				IAML_P			
	comp=Z,2μm,0.1s						
BAGO	Egridir - ISPA	0.45	92	i P	Pb	15 22 57.9	+0.6
BAGO				i S	Sn	15 23 06.6	-0.7
SHUT	Suhut-Afyon	0.60	25	PG	Pg	15 22 59.5	-0.4
SHUT				SG	Sb	15 23 09.5	+1.1
BCK	Bucak	0.62	152	PG	Pb	15 23 00.3	+0.1
KHAL	Karahalli	0.68	303	i P	Pg	15 22 59.9	-1.4
KHAL				i S	Sg	15 23 10.6	+0.3
KHAL				IAML_P			
	comp=Z,2μm,0.2s						
BOLV	Bolvadin	0.91	39	i P	Pn	15 23 06.4	+0.4
BOLV				i S	Sn	15 23 19.5	+0.7
BOLV				IAML_P			
	comp=Z,828nm,0.1s						
KORT	Korkueli	1.01	174	PG	Pb	15 23 06.6	-0.3
TAVA	DENIZLI_Tavas	1.17	243	i P	Pg	15 23 11.0	+0.6
TAVA				i S	Sg	15 23 27.1	+1.3
TAVA				IAML_P			
	comp=Z,282nm,0.3s						
USAK	Uak-Merkez	1.18	307	i P	Pn	15 23 08.2	-1.5
USAK				i S	Sg	15 23 29.5	+3.4
USAK				IAML_P			
	comp=Z,167nm,0.2s						
GDZ	Gediz	1.23	332	i P	Pn	15 23 10.0	-0.4
KULA	Kula-Manisa	1.33	293	PN	Pn	15 23 09.2	-2.5
MANT	Manisa	1.40	291	i P	Pb	15 23 14.2	+0.6
MANT				i S	Sn	15 23 31.2	+0.3
MANT				IAML_P			
	comp=Z,314nm,0.2s						
TVSB	Tavsanli	1.56	338	PN	Pn	15 23 14.1	-0.8

IDC 22 15:24:38.9±18.0**, 57°.79S**×**27°.78W, h0**^{km}**, mb3.7**/1**,**
mb1 3.7/1**, mb1mx3.4**/24**, mbtmp3.7**/1**, MS3.4**/1**, Ms1 3.4**/1**,**
ms1mx2.8/24**, Error ellipse: s-maj=1144.0km**
s-min=68.4km az=143.0, South Sandwich Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USHA	Ushuaia	22.50	260	LR	LR	15 35 53.3	
	comp=Z,102nm,22.0s,baz=99,slow=30						
TORD	Torodi Ar. Bea	74.73	30	P	P	15 36 20.3	+0.1
	0.5nm,0.7s,baz=195,slow=6.6,SNR=2.7						
YKA	Yellowknife Ar	137.24	317	PKP	PKPdf	15 44 01.9	-0.5
	0.3nm,0.6s,baz=120,slow=2.4,SNR=6.1						
ILAR	Eielson Array	151.00	309	PKPbc	PKPbc	15 44 31.7	-0.3
	0.8nm,0.8s,baz=142,slow=2.6,SNR=12						

IDC 22 15:37:32.0±1.9**, 7°.57S**×**122°.78E, h0**^{km}**, mb3.2**/1**,**
mb1 3.4/3**, mb1mx3.2**/38**, mbtmp3.2**/3**, ML2.9**/2**, Error**
ellipse: s-maj=264.0km s-min=28.6km az=57.0, Flores
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.64	139	Pn	Pn	15 41 26.2	-0.6
	0.0nm,0.3s,baz=312,slow=15,SNR=3.3						
ASAR	Alice Springs	19.24	148	P	P	15 41 58.4	+0.4
	0.1nm,0.3s,baz=331,slow=14,SNR=7.8						
MKAR	Makanchi Array	64.98	331	P	P	15 48 13.7	0.0
	0.2nm,0.7s,baz=132,slow=6.3,SNR=2.5						

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*NIED **22** 15:54:00, 29°.30N×130°.70E, h32^{km}, Mw4.1 Best double couple: M$_0$1.68000×10^{15} NP1:ϕ_s135.00000°, δ56.00000°, λ-6.00000°. NP2:ϕ_s229.00000°, δ85.00000°, λ-146.00000°.*
*JMA **22** 15:54:04.0±0.1, 29°.32N×130°.67E, h66^{km}±3^{km}, M3.9*
*IDC **22** 15:54:06.0±2.1, 29°.41N×130°.55E, h45^{km}±21^{km}, mb3.4/13, mb1 3.5/17, mb1mx3.5/41, mbtmp3.6/17, ML3.1/4, MS3.1/1, Ms1 3.1/1, ms1mx2.6/22, Error ellipse: s-maj=23.6km s-min=15.6km az=91.0*
ISC 22 15:54:02.1±1.2**, 29°.27N**±0°.03×**130°.70E**±0°.06**, h19**^{km}±4^{km}**,**
n42, σ1^{s}42/52**, mb3.8**/17**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.92	309	P	Pn	15 54 20.5	+0.5
JNN				eS	Sn	15 54 33.0	+0.4
JYAK	Yakushimahirau	0.98	351	P	Pn	15 54 21.3	+0.4
JYAK				S	Sn	15 54 35.2	+1.0
JMTN	Minamitane	1.14	9	P	Pn	15 54 23.7	+0.6
JMTN				eS	Sn	15 54 39.1	+0.9
JZK	Kikaishima	1.14	214	P	Pg	15 54 24.9	+0.6
JKC	Kuchinoerabu	1.27	340	P	Pb	15 54 25.4	0.0
JAM	Amami Oshima	1.28	229	P	Pb	15 54 26.4	+0.8
JAM				eS	Sg	15 54 43.9	+0.2
JTAJ	Takarajima	1.31	265	P	Pg	15 54 27.1	-0.4
JTN	Tanegashima 3	1.40	10	P	Pn	15 54 27.4	+0.7
JAMN	Amaminishikomi	1.68	233	P	Pb	15 54 31.9	-0.5
JAMN				eS	Sb	15 54 53.3	+0.1
JTSR	Tashiro 2	1.90	6	P	Pn	15 54 34.7	+1.1
JTK	Tokunoshima	2.13	227	P	Pn	15 54 38.8	+2.1
JSU	Suzuyama	2.24	355	P	Pn	15 54 38.6	+0.4
JNAR	Kushima--Naru	2.31	12	P	Pn	15 54 40.3	+1.2
JOKE	Okinoerabujima	2.67	225	P	Pn	15 54 46.0	+1.9
JOKE				eS	Sn	15 55 17.6	+1.7
JYRO	Yoronjima	2.99	222	P	Pn	15 54 50.4	+1.9
JYRO				eS	Sn	15 55 24.4	+0.6
JOW	Kunigami	3.24	222	P	Pn	15 54 53.9	+2.0
JOW	Kunigami	3.24	222	P	Pn	15 54 53.6	+1.7
	0.8nm,0.3s,baz=91,slow=19,SNR=7.8						
JOW				S	Sn	15 55 30.2	+0.3
	2.1nm,0.3s,baz=106,slow=16,SNR=7.4						
JIH	Iheya	3.28	228	P	Pn	15 54 54.2	+1.7
JIH				eS	Sn	15 55 31.2	+0.2
JMZ	Minamidaito 2	3.47	172	eS	Sn	15 55 32.3	-3.3
JNU	Nakatsue	3.84	2	P	Pn	15 55 01.8	+1.5
	6.8nm,0.3s,baz=198,slow=12,SNR=94						
JNU				S	Sn	15 55 45.2	+0.2
	3.3nm,0.3s,baz=288,slow=19,SNR=2.8						
KSRS	Korea Array	8.49	345	P	Pn	15 56 07.2	+3.2
	0.2nm,0.3s,baz=159,slow=14,SNR=4.9						
KSRS				LR	LR	15 59 39.4	
	comp=Z,128nm,21.4s,baz=163,slow=40						
MJAR	Matsushiro Arr	9.61	39	P	Pn	15 56 22.1	+2.6
	0.1nm,0.3s,baz=245,slow=15,SNR=4.8						
USRK	Ussuriysk Ar.	14.94	4	P	P	15 57 37.8	+0.1
	0.3nm,0.3s,baz=172,slow=9.1,SNR=8.9						
KLR	Kul'dur	19.95	2	P	P	15 58 31.8	-1.1
	0.5nm,0.3s,baz=211,slow=6.3,SNR=17						
SONM	Songino Array	26.37	321	P	P	15 59 35.8	-1.4
	0.9nm,0.7s,baz=140,slow=9.9,SNR=6.0						
GUN	Gumba	39.20	279	eP	P	16 01 29.9	+0.4
	6.5nm,0.3s						
PKI	Pulchoki	39.68	279	eP	P	16 01 32.9	-0.6
PKIN	Phulchoki	39.69	279	eP	P	16 01 32.9	-0.7
	5.2nm,0.5s						
DANN	Dangsing	40.92	281	eP	P	16 01 43.3	-0.5
	13nm,0.7s						
MKAR	Makanchi Array	41.24	309	P	P	16 01 45.8	-0.1
	0.6nm,0.5s,baz=89,slow=11,SNR=13						
ZALV	Zalesovo Beam	41.24	320	P	P	16 01 44.8	-0.9
	0.7nm,0.5s,baz=104,slow=6.1,SNR=2.9						
PYUN	Piuthan	41.64	280	eP	P	16 01 46.4	-3.2
	10.0nm,0.8s						
NRIK	Noril'sk	47.08	341	P	P	16 02 30.8	-1.5
	1.2nm,0.4s,baz=115,slow=11,SNR=7.5						
WRA	Warramunga Arr	49.05	175	P	P	16 02 49.0	+0.9
	0.3nm,0.6s,baz=353,slow=8.1,SNR=3.9						
ASAR	Alice Springs	52.72	176	P	P	16 03 18.2	+2.6
	0.2nm,0.6s,baz=11,slow=13,SNR=4.1						
ILAR	Eielson Array	60.73	29	P	P	16 04 12.1	-0.1
	0.3nm,0.8s,baz=265,slow=4.7,SNR=8.9						
KBZ	Khabaz	68.94	309	P	P	16 05 06.5	+0.6
	1.5nm,0.8s,baz=156,slow=7.2,SNR=3.7						
FINES	FINESS Array B	71.30	331	P	P	16 05 18.9	-1.2

	1.3nm,0.9s,baz=57,slow=7.1,SNR=4.7						
AKASG	Malin Array Be	74.64	320	P	P	16 05 39.7	-0.4
	0.6nm,0.5s,baz=59,slow=6.1,SNR=4.1						
YKA	Yellowknife Ar	74.85	26	P	P	16 05 42.1	+1.1
	0.3nm,0.8s,baz=305,slow=5.3,SNR=5.1						
BRTR	Keskin Array B	76.89	308	P	P	16 05 53.6	+0.3
	0.6nm,0.6s,baz=90,slow=4.9,SNR=3.9						
NOA	NORSAR Array B	77.55	334	P	P	16 05 54.1	-2.4
	0.2nm,0.5s,baz=49,slow=5.7,SNR=2.7						

ISCJB **22** *16:17:49.4±0.3, 10°.95S±0°.04×166°.15E±0°.05, h10^{km}, mb4.7/35, MS4.2/18, Error ellipse: s-maj=7.6km s-min=4.7km az=142.9*

NEIC **22** *16:17:50.9±0.3, 10°.85S×166°.17E, h10^{km}, mb5.1/16, Error ellipse: s-maj=9.0km s-min=7.0km az=81.0*

BJI **22** *16:17:54.0, 10°.90S×166°.10E, h30^{km}, mB5.1/25, mb4.6/27, Ms5.1/9, Ms7 4.8/6*

GCMT **22** *16:17:55.9±0.4, 10°.90S±0°.02×165°.89E±0°.02, h17^{km}±2^{km}, MW4.8/63, Moment Tensor Solution. s18,c20; s63,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.22±.12; M$_{\theta\theta}$0.42±.10; M$_{\phi\phi}$-0.63±.10; M$_{r\theta}$-1.11±.30; M$_{\theta\phi}$-2.05±.10; M$_{\phi r}$0.31±.25; Best double couple: M$_0$2.41000×10^{16} NP1:φ$_s$261.00000°,δ80.00000°,λ154.00000°. NP2: φ$_s$356.00000°,δ64.00000°,λ11.00000°. Principal axes: T 2.5130, Plg25.0000°, Azm215.0000°; N -0.2050, Plg62.0000°, Azm62.0000°; P -2.3080, Plg11.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC **22** *16:17:56.6±2.1, 10°.98S×166°.08E, h50^{km}±17^{km}, mb4.2/17, mb1 4.4/19, mb1mx4.3/36, mbtmp4.5/19, ML5.0/2, MS4.0/16, Ms1 4.0/16, ms1mx3.8/31 Error ellipse: s-maj=18.3km s-min=13.9km az=93.0*

ISC 22 16:17:51.4±0.4,**10°.95S**±0°.06×**166°.11E**±0°.07,**h10**^{km}**,n118,** σ**1**^{s}**.73**/111,**mb4.8**/35,**MS4.1**/18,**2C,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.25	283	*e*P	Pn	16 19 25.0	+1.3
HNR				*e*S	Sn	16 20 35.0	-0.2
HNR	Honiara	6.25	283	P	Pn	16 19 25.3	+1.6
	67nm,0.3s,baz=146,slow=2.8,SNR=66						
HNR				S	Sn	16 20 35.4	+0.2
	baz=180,slow=20,SNR=1.7						
HNR				LR	LR	16 21 32.1	
	comp=Z,862nm,21.5s,baz=104,slow=35						
MARNC	Mare, Loyalty	10.64	170	*e*Pn	Pn	16 20 27.6	+3.7
DZM	Mont Dzumac	11.07	178	*e*Pn	Pn	16 20 31.6	+1.7
	40nm,0.4s						
DZM				*e*LR	LR	16 23 05.5	
	comp=Z,2μm,23.6s						
DZM	Mont Dzumac	11.07	178	P	Pn	16 20 31.6	+1.7
	6.2nm,0.3s,baz=358,slow=15,SNR=54						
DZM				S	Sn	16 22 30.3	-3.6
	baz=343,slow=19,SNR=1.7						
DZM				LR	LR	16 24 24.8	
	comp=Z,2μm,21.9s,baz=9.5,slow=35						
PINNC	Pines Island,	11.67	174	*e*Pn	Pn	16 20 41.2	+3.1
RABL	Rabaul	15.36	295	*e*Pn	Pn	16 21 30.0	+1.6
	66nm,0.6s						
EIDS	Eidsvold	20.21	223	P	Pn	16 22 28.4	-0.1
	baz=20,SNR=12						
EIDS	Eidsvold	20.21	223	*e*P	Pn	16 22 29.2	+0.7
	122nm,1.0s						
CTA	Charters Tower	21.16	242	P	P	16 22 38.0	+1.1
	14nm,0.9s,baz=73,slow=13,SNR=21						
CTAO	Charters Tower	21.16	242	*e*P	P	16 22 38.5	+1.5
	30nm,1.0s						
MTSU	Mount Surprise	22.26	249	P	P	16 22 49.5	+0.7
	baz=22,SNR=41						
RMQ	Roma	22.52	224	P	P	16 22 53.0	+1.6
	baz=23,SNR=51						
ARMA	Armidale	23.59	213	P	P	16 23 04.2	+1.6
	baz=24,SNR=4.6						
ARMA	Armidale	23.59	213	*e*P	P	16 23 03.6	+1.0
	73nm,1.0s						
QIS	Mount Isa	27.20	246	P	P	16 23 35.9	+0.3
	baz=27,SNR=6.0						
CNB	Canberra Magne	28.64	209	P	P	16 23 49.8	+1.5
	baz=29,SNR=6.5						
URZ	Urewera	28.93	162	P	P	16 23 51.9	+1.2
	12nm,1.0s,baz=270,slow=5.1,SNR=3.2						
MUGZ	Murupara	29.03	163	P	P	16 23 52.6	+0.9
H11S2	WAKE ISLAND Hy	29.25	1	T	T	16 54 16.9	
	baz=181,slow=76,SNR=175						
H11S3	WAKE ISLAND Hy	29.26	1	T	T	16 54 16.8	
	baz=181,slow=76,SNR=79						
H11S1	WAKE ISLAND Hy	29.27	1	T	T	16 54 14.7	
	baz=181,slow=76,SNR=66						
OTVZ	Oturere	29.36	165	P	P	16 23 55.9	+1.1
MTHZ	Maungataniwha	29.40	163	P	P	16 23 55.1	+0.1
FWVZ	Far West T-bar	29.42	165	P	P	16 23 56.5	+1.1
SNGZ	Shannon Statio	29.48	162	P	P	16 23 54.8	-0.8
WNVZ	Wahianoa	29.50	165	P	P	16 23 57.0	+1.0
RAHZ	Arahi	29.53	162	P	P	16 23 56.0	-0.1
BKZ	Black Stump Fm	29.59	164	*e*P	P	16 23 56.2	-0.5
	40nm,1.3s						
BKZ	Black Stump Fm	29.59	164	P	P	16 23 56.3	-0.4
NMHZ	Naumai	29.61	163	P	P	16 23 56.2	-0.7
MOVZ	Moawhango	29.62	165	P	P	16 23 56.7	-0.3
BHHZ	Black Hill Sta	29.77	164	P	P	16 23 57.6	-0.7
KWHZ	Kaweka Forest	29.81	164	P	P	16 23 57.8	-0.8
TSZ	Takapari Road	30.28	165	P	P	16 24 01.6	-1.2
QRZ	Quartz Range	30.30	170	P	P	16 24 04.2	+1.3
H11N1	WAKE ISLAND Hy	30.48	1	T	T	16 55 47.7	
	baz=182,slow=76,SNR=148						
H11N3	WAKE ISLAND Hy	30.48	1	T	T	16 55 46.9	
	baz=182,slow=76,SNR=61						
H11N2	WAKE ISLAND Hy	30.49	1	T	T	16 55 49.8	
	baz=182,slow=76,SNR=67						
DVHZ	Dannevirke	30.56	165	P	P	16 24 04.4	-0.8
PRWZ	Pori Road	30.75	165	P	P	16 24 05.9	-1.0
MRZ	Mangatainoka R	30.76	166	P	P	16 24 05.1	-1.8
STKA	Stephens Creek	30.76	224	P	P	16 24 08.1	+1.0
	baz=31,SNR=22						
STKA	Stephens Creek	30.76	224	*e*P	P	16 24 07.4	+0.4
	3.1nm,0.8s						
STKA	Stephens Creek	30.76	224	P	P	16 24 07.5	+0.4
	13nm,0.7s,baz=33,slow=9.6,SNR=28						
STKA				LR	LR	16 36 25.2	
	comp=Z,438nm,18.1s,baz=32,slow=36						
OGWZ	Otaki Gorge	30.81	167	P	P	16 24 06.0	-1.4
NNZ	Nelson	30.83	169	P	P	16 24 09.4	+1.9
BFZ	Birch Farm	30.94	165	P	P	16 24 06.9	-1.7
HOWZ	Holdsworth Sta	30.97	166	P	P	16 24 07.1	-1.7
CAW	Cannon Point	31.06	167	P	P	16 24 08.3	-1.3
THZ	Tophouse	31.27	170	*e*P	P	16 24 10.8	-0.8
	36nm,1.0s						
WB2	Warramunga Arr	31.84	250	*e*P	P	16 24 16.4	-0.4
WRAB	Tennant Creek	31.84	250	*e*P	P	16 24 16.3	-0.5
	28nm,0.8s						
WRA	Warramunga Arr	31.85	250	P	P	16 24 16.1	-0.7
	26nm,0.8s,baz=82,slow=9.2,SNR=58						
WRA				PcP	PcP	16 27 07.1	-0.7
	0.9nm,0.9s,baz=76,slow=2.5,SNR=3.4						
WRA				ScP	ScP	16 30 45.3	-6.2
	0.6nm,1.0s,baz=76,slow=3.4,SNR=2.6						
WRA				LR	LR	16 37 01.4	
	comp=Z,310nm,18.6s,baz=75,slow=36						
GUMO	Guam	32.22	319	LR	LR	16 37 58.4	
	comp=Z,96nm,18.3s,baz=140,slow=37						
FOZ	Fox Glacier	32.63	175	*e*P	P	16 24 24.2	+0.9
	28nm,0.9s						
OXZ	Oxford	32.67	172	*e*P	P	16 24 23.5	-0.2
	54nm,1.4s						
RPZ	Rata Peaks	32.93	173	*e*P	P	16 24 25.1	-0.9
	30nm,0.9s						
RPZ	Rata Peaks	32.93	173	P	P	16 24 25.9	-0.1
	20nm,0.8s,baz=32,slow=1.9,SNR=9.8						
AS01	Alice Springs	33.11	243	*e*P	P	16 24 26.7	-1.2
MQZ	McQueen's Vall	33.13	171	*e*P	P	16 24 26.8	-0.9
	33nm,0.9s						
AS31	Alice Springs	33.15	243	*e*P	P	16 24 27.4	-0.9
	3.7nm,0.6s						
ASAR	Alice Springs	33.16	243	P	P	16 24 27.3	-1.0
	11nm,0.7s,baz=69,slow=9.9,SNR=193						
ASAR				PcP	PcP	16 27 09.7	-1.7
	0.8nm,0.8s,baz=75,slow=3.9,SNR=3.5						
ASAR				ScP	ScP	16 30 51.0	-4.9
	1.9nm,1.3s,baz=77,slow=3.1,SNR=3.0						
ASAR				LR	LR	16 37 23.4	
	comp=Z,227nm,18.3s,baz=74,slow=35						
HTT	Hallett	33.49	224	P	P	16 24 31.7	+0.6
	baz=34,SNR=9.5						
MTN	Manton Dam	34.26	263	*e*P	P	16 24 37.8	-0.2
	18nm,1.1s						
BBOO	Buckleboo	35.16	227	P	P	16 24 45.6	+0.1
	baz=35,SNR=18						
BBOO	Buckleboo	35.16	227	*e*P	P	16 24 45.0	-0.5
	13nm,0.7s						
SIJI	Sorong	36.03	284	LR	LR	16 41 21.9	
	comp=Z,228nm,18.2s,baz=112,slow=39						
KNRA	Kununurra	36.61	258	P	P	16 24 57.7	-0.5
	baz=37,SNR=5.3						
WRKA	Warakurna	38.45	243	P	P	16 25 13.1	-0.6
	baz=38,SNR=18						
FITZ	Fitzroy Crossi	39.75	255	P	P	16 25 24.3	-0.3
	baz=40,SNR=12						
FITZ	Fitzroy Crossi	39.75	255	*e*P	P	16 25 24.6	0.0
	19nm,0.8s						
FITZ	Fitzroy Crossi	39.75	255	LR	LR	16 40 36.4	
	comp=Z,174nm,21.0s,baz=81,slow=34						
PPT2	Papeete2	43.37	104	*e*S	S	16 32 28.0	+5.3
	63nm,24.2s						
PPT2				*e*LQ	LQ	16 36 11.6	
	615nm,27.0s						
PPT2				*e*LR	LR	16 38 02.1	
	comp=Z,206nm,24.5s						
TBI	Tubuai	44.04	112	*e*LQ	LQ	16 36 28.7	
	461nm,31.5s						
TBI				*e*LR	LR	16 38 19.4	
	comp=Z,477nm,28.8s						
MEEK	Meekatharra	47.31	244	P	P	16 26 26.1	+0.5
	baz=47,SNR=15						
MJAR	Matsushiro Arr	54.05	332	P	P	16 27 17.7	+1.6
	1.7nm,0.7s,baz=168,slow=8.2,SNR=4.7						
ASAJ	Asahikawa	58.82	340	P	P	16 27 49.8	-0.2
	5.7nm,1.0s,baz=110,slow=12,SNR=3.0						
NJ2	Nanjing	62.20	315	*e*P	P	16 28 13.3	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PETK	Petropavlovsk-	64.20	354	LR	LR	16 50 08.2	
	comp=Z,79nm,20.6s,baz=155,slow=30						
MDJ	Mudanjiang	64.43	332	P	P	16 28 28.3	+0.4
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,180nm,3.8s						
CN2	Changchun	65.84	329	*e*P	P	16 28 41.0	+4.0
VNDA	Vanda	66.60	181	P	P	16 28 40.7	-0.8
	5.4nm,1.0s,baz=354,slow=9.7,SNR=3.4						
KLR	Kul'dur	67.11	336	LR	LR	16 57 55.3	
	comp=Z,66nm,18.1s,baz=146,slow=36						
GYA	Guiyang	68.66	304	*e*P	P	16 28 56.0	+0.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	Xi'an	70.32	312	P	P	16 29 04.6	-0.9
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,71nm,3.6s						
KMI	Kunming	71.37	301	P	P	16 29 12.5	+0.2
KMI				pP	PcP	16 29 24.0	-8.0
KMI				sP	sP	16 29 27.1	+11
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				pmax	pmax		
	comp=Z,92nm,5.5s						
KMI				LR	LR		
	comp=N,370nm,8.6s						
KMI				LR	LR		
	comp=E,220nm,6.3s						
KMI				LR	LR		
	comp=Z,290nm,17.5s						
HHC	Hu-ho-hao-te	71.99	319	*e*P	P	16 29 16.8	+1.3
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,71nm,6.0s						
CMAR	Chiang Mai Arr	72.40	293	P	P	16 29 18.9	+0.6
	2.7nm,0.7s,baz=120,slow=5.5,SNR=17						
CHTO	Chiang Mai	72.51	294	P	P	16 29 25.3	+6.3
CD2	Chengdu	72.83	307	P	P	16 29 20.9	+0.2
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH	Lanzhou	74.95	312	*e*P	P	16 29 37.4	+4.2
LZH				pP	PcP	16 29 47.5	+0.5
LZH				sP	sP	16 29 51.5	+14
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,4.3s						
LZH				LR	LR		
	comp=N,280nm,11.4s						
LZH				LR	LR		
	comp=E,310nm,13.0s						
LZH				LR	LR		
	comp=Z,340nm,15.2s						
SONM	Songino Array	78.80	324	P	P	16 29 54.6	0.0
	1.3nm,1.1s,baz=139,slow=3.5,SNR=4.9						
QSPA	South Pole Qui	79.06	180	*e*P	P	16 29 54.8	-0.9
GTA	Gaotai	79.25	314	⇑P	P	16 30 01.0	+3.8
GTA				pP	PcP	16 30 10.4	+4.9
GTA				sP	sP	16 30 15.0	+14
GTA				pmax	pmax		
	comp=Z,37nm,5.1s						
GTA				LR	LR		
	comp=N,120nm,17.8s						
GTA				LR	LR		
	comp=E,210nm,19.7s						
HDA	Harding Lake	83.03	19	*e*P	P	16 30 16.0	-0.6
IL1	Eielson Array	83.31	18	*e*P	P	16 30 16.3	-1.8
ILAR	Eielson Array	83.31	18	P	P	16 30 17.2	-0.8
	2.7nm,0.7s,baz=234,slow=4.8,SNR=14						
ILAR				LR	LR	17 05 14.7	
	comp=Z,92nm,21.2s,baz=216,slow=34						
ILB	Eielson Array	83.31	18	*e*P	P	16 30 17.2	-0.8
MAW	Mawson	84.95	202	LR	LR	17 03 01.3	
	comp=Z,163nm,20.2s,baz=74,slow=32						
NVAR	Mina Array Bea	85.69	50	P	P	16 30 31.1	+0.1
	0.8nm,0.9s,baz=238,slow=5.2,SNR=3.3						
NVAR				LR	LR	17 03 59.2	
	comp=Z,103nm,18.2s,baz=276,slow=32						
WMQ	Urumqi	89.28	315	*e*P	P	16 30 47.0	-1.0
WMQ				LR	LR		
	comp=N,210nm,21.5s						
WMQ				LR	LR		
	comp=E,150nm,21.5s						
SYO	Syowa Base	91.98	197	⇑*e*sP	sP	16 31 14.8	+11
PDAR	Pinedale Array	93.22	47	P	P	16 31 07.2	+0.6
	0.5nm,0.8s,baz=256,slow=5.5,SNR=2.5						
PDAR				LR	LR	17 11 07.6	
	comp=Z,39nm,19.0s,baz=287,slow=34						
ZALV	Zalesovo Beam	93.68	324	P	P	16 31 07.7	-0.4
	1.4nm,0.9s,baz=83,slow=6.1,SNR=5.1						
MKAR	Makanchi Array	93.69	317	P	P	16 31 07.3	-1.0
	2.5nm,1.1s,baz=98,slow=5.6,SNR=5.6						
MKAR				PKKP	PKKPbc	16 48 15.4	+0.6
	0.3nm,0.7s,baz=265,slow=4.3,SNR=4.4						
YKA	Yellowknife Ar	94.72	27	P	P	16 31 10.6	-2.1
	0.6nm,0.7s,baz=251,slow=4.7,SNR=3.3						
TXAR	Lajitas Array	95.47	61	LR	LR	17 06 25.2	
	comp=Z,98nm,20.1s,baz=0.0,slow=30						
NRIK	Noril'sk	96.15	340	LR	LR	17 16 49.5	
	comp=Z,43nm,18.2s,baz=108,slow=37						
KSH	Kashi	96.97	309	P	P	16 31 24.3	+0.6
KSH				pP	sP	16 31 35.3	+7.7
KSH				PP	PP	16 35 21.3	+1.9
KSH				SKS	SKSac	16 41 58.9	-2.3
KSH				S	S	16 42 40.3	-6.4
KSH				sS	sS	16 43 02.3	+10
KSH				SS	SS	16 49 23.3	+0.2
KSH				LR	LR		
	comp=N,140nm,4.5s						
KSH				LR	LR		
	comp=E,190nm,4.7s						
KSH				LR	LR		
	comp=Z,150nm,7.0s						
ARCES	ARCESS Array B	116.33	346	PKP	PKiKP	16 36 33.0	-1.7
	1.4nm,0.8s,baz=66,slow=2.2,SNR=2.4						
BOSA	Boshof	125.43	223	PKP	PKPdf	16 36 52.9	-0.8
	2.2nm,0.7s,baz=117,slow=3.6,SNR=4.0						
NOA	NORSAR Array B	126.70	345	PKP	PKPdf	16 36 53.7	-1.2
	0.6nm,0.8s,baz=31,slow=2.0,SNR=2.4						
LBTB	Lobatse	127.47	227	PKP	PKPdf	16 36 57.0	-0.6
	1.9nm,0.8s,baz=135,slow=4.3,SNR=2.9						
MATP	Matopo	127.94	233	PKP	PKPdf	16 36 57.1	-1.5
	3.3nm,1.1s,baz=172,slow=7.1,SNR=3.2						
BRTR	Keskin Array B	129.16	313	PKP	PKiKP	16 37 01.3	+0.2
	1.1nm,1.0s,baz=8.9,slow=10,SNR=3.6						
KEST	Kesra	147.55	323	PKPbc	PKPbc	16 37 35.0	-1.5
	4.7nm,0.8s,baz=102,slow=5.1,SNR=3.4						
ESDC	Sonseca Array	150.06	345	PKPbc	PKPbc	16 37 41.6	-1.2
	1.5nm,0.8s,baz=350,slow=3.2,SNR=2.9						

IDC **22** *16:21:35.7±1.8, 39°.73N×73°.02E, h0^{km}, mb3.4/3, mb1 3.4/5, mb1mx3.3/48, mbtmp3.3/5, ML2.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/23, Error ellipse: s-maj=32.9km s-min=28.4km az=144.0*

KRNET **22** *16:21:38.9±0.1, 40°.04N×73°.06E, h21^{km}, mb3.9*

NNC **22** *16:21:38.8±0.5, 40°.10N×73°.07E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=5.5km s-min=1.7km az=32.0*

SOME **22** *16:21:39.6, 40°.12N×73°.10E, h10^{km}*

ISC 22 16:21:38.6±1.2,**39°.97N**±0°.04×**72°.99E**±0°.02,**h3**^{km}±9^{km}**, n68,** σ**1**^{s}**.73**/104,**mb3.6**/3,**47C-23D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.40	84	⇓P	Pg	16 21 45.5	-0.8
	56nm,0.3s						
SFK				⇑S	Sg	16 21 50.7	-0.8
	978nm,0.3s						
SFK	Sufi-Kurgan	0.40	84	⇑*i*P	Pg	16 21 45.7	-0.6
	baz=92						
SFK				⇑*i*S	Sg	16 21 50.9	-0.6
	baz=92						
DRK	Karamyk	1.04	242	⇑*e*P	Pn	16 22 00.2	-0.3
	baz=41						
DRK				⇑*e*S	Sn	16 22 15.1	-0.6
	baz=41						
ARSB	Arslanbob	1.35	360	⇑*i*P	Pn	16 22 02.7	-1.9
	baz=57						
ARSB				⇑*i*S	Sg	16 22 19.7	-2.4
	baz=57						
BTK	Batken	1.67	274	⇑*e*P	Pg	16 22 10.5	-0.2
	baz=71						
BTK				⇑*i*S	Sg	16 22 33.4	+1.1
	baz=71						
ARK	Arkit	1.99	337	⇑*e*P	Pn	16 22 12.8	-0.5
	baz=35						
ARK				⇑*i*S	Sn	16 22 38.1	-0.7
	baz=35						
ARLS	Aral	2.14	28	⇑*i*P	Pn	16 22 14.5	-1.0
	baz=27						
ARLS				⇑*i*S	Sn	16 22 42.3	-0.4
	baz=27						
AML	Almayashu	2.22	14	P	Pn	16 22 16.4	-0.4
	SNR=216						
AML	Almayashu	2.22	14	⇑*e*P	Pn	16 22 16.5	-0.4
	baz=13						
AML				⇑*i*S	Sn	16 22 45.0	0.0
	baz=13						
UCH	Uchtor	2.53	27	P	Pn	16 22 21.4	+0.3
	SNR=37						
UCH	Uchtor	2.53	27	⇓*i*P	Pn	16 22 21.3	+0.2
	baz=26						
UCH				⇓*i*S	Sn	16 22 52.3	-0.4
	baz=26						
MNAS	Manas	2.54	352	⇓Pn	Pn	16 22 21.1	+0.1
	4.0nm,0.4s						
MNAS				⇑Pg	Pb	16 22 23.6	-1.4
	31nm,0.4s						
MNAS				⇑Lg	Lg	16 22 56.3	
	119nm,0.6s						
MNAS	Manas	2.54	352	⇑*i*P	Pn	16 22 21.3	+0.3
	baz=50						
MNAS				⇑*i*S	Sn	16 22 52.0	-0.5
	baz=50						
KZA	Kyzart	2.71	38	P	Pn	16 22 23.7	+0.1
	SNR=14						
KZA	Kyzart	2.71	38	⇑*i*P	Pn	16 22 23.1	-0.5
	baz=38						
KZA				⇑*i*S	Sn	16 22 55.5	-1.6
	baz=38						
NRN	Naryn	2.71	56	⇑*i*P	Pn	16 22 22.7	-0.8
	baz=57						
NRN				⇑*i*S	Sn	16 22 56.0	-1.0
	baz=57						
EKS2	Erkin-Say	2.75	12	P	Pn	16 22 25.1	+1.2
	SNR=18						
EKS2	Erkin-Say	2.75	12	⇓*i*P	Pn	16 22 25.2	+1.3
	baz=11						
EKS2				⇓*i*S	Sn	16 22 58.7	+1.0
	baz=11						
MRKS	Merke	2.78	4	*e*P	Pb	16 22 26.8	-2.2
	70nm,0.4s						
MRKS				*e*S	Sb	16 23 01.9	-1.6
	138nm,0.3s						
AAK	Ala-Archa	2.90	23	P	Pn	16 22 26.8	+1.0
	SNR=13						
AAK	Ala-Archa	2.90	23	⇑Pg	Pb	16 22 29.2	-1.9
	86nm,0.4s						
AAK				⇓Lg	Lg	16 23 04.8	
	74nm,0.5s						
AAK	Ala-Archa	2.90	23	*i* P	Pn	16 22 26.5	+0.6
	baz=22						
AAK				*i* S	Sn	16 23 01.3	0.0
	baz=22						
KBK	Karagaybulak	3.06	28	P	Pn	16 22 29.1	+1.0
	SNR=51						
KBK	Karagaybulak	3.06	28	⇓*i*P	Pn	16 22 28.7	+0.5
	baz=28						
KBK				⇓*i*S	Sn	16 23 04.7	-0.7
	baz=28						
FRU1	Bishkek	3.09	23	⇑*i*P	Pn	16 22 28.6	+0.1
	baz=23						
FRU1				⇑*i*S	Sn	16 23 05.0	-1.0
	baz=23						
IUG	Iuzhnay	3.12	315	*e*P	Pb	16 22 36.0	+1.1
	83nm,0.4s						
IUG				*e*S	Sg	16 23 17.7	-1.2
	249nm,0.3s						
TAS	Tashkent	3.13	297	⇑*i*P	Pn	16 22 30.6	+1.7
	baz=96						
TAS				⇑*i*S	Sn	16 23 07.9	+1.1
	baz=96						
CHMS	Chumysh	3.30	23	P	Pn	16 22 31.8	+0.5
	SNR=9.0						
CHMS	Chumysh	3.30	23	⇑*i*P	Pn	16 22 31.8	+0.5
	baz=23						
CHMS				⇑*i*S	Sn	16 23 10.5	-0.6
	baz=23						
ULHL	Ulahol	3.35	46	P	Pn	16 22 33.7	+1.6
	SNR=16						
ULHL	Ulahol	3.35	46	⇑*i*P	Pn	16 22 31.5	-0.6
	baz=46						
ULHL				⇑*i*S	Sn	16 23 10.0	-2.5
	baz=46						
BOOM	Boomskoye usch	3.36	40	⇓*e*P	Pn	16 22 32.2	0.0
	baz=41						
BOOM				⇓*i*S	Sn	16 23 10.7	-2.0
	baz=41						
USP	Ospenovka	3.48	18	P	Pb	16 22 40.2	-0.8
	SNR=7.2						
USP	Ospenovka	3.48	18	⇑*i*P	Pn	16 22 34.9	+1.1
	baz=18						
USP				⇑*i*S	Sn	16 23 15.4	-0.2
	baz=18						
TKM2	Tokmak 2	3.54	33	P	Pb	16 22 41.7	-0.3
	SNR=24						
TKM2	Tokmak 2	3.54	33	⇓Pg	Pb	16 22 41.4	-0.6
	23nm,0.5s						
TKM2				⇓Lg	Lg	16 23 25.4	
	36nm,0.6s						
TKM2	Tokmak 2	3.54	33	⇓*i*P	Pn	16 22 34.7	0.0
	baz=33						
TKM2				⇓*i*S	Sn	16 23 15.6	-1.6
	baz=33						
KK31	Karatay Array	3.64	330	Pn	Pn	16 22 36.2	+0.2
	1.1nm,0.4s,baz=158,slow=16,SNR=63						
KK31				⇑Pg	Pb	16 22 43.0	-0.7
	3.7nm,0.3s,baz=134,slow=12,SNR=21						
KK31				⇑Lg	Lg	16 23 30.4	
	64nm,0.7s,baz=143,slow=30,SNR=4.6						
KST	Kastek	3.80	35	*e*P	Pb	16 22 45.0	-1.4
	42nm,0.3s						
KST				⇓*i*S	Sb	16 23 34.0	+1.2
	63nm,0.7s						
KDJ	Kajisay	3.83	54	⇑*e*P	Pn	16 22 39.2	+0.5
	baz=55						
KDJ				⇑*i*S	Sn	16 23 22.6	-1.8
	baz=55						
DGS	Degeres	3.88	32	*e*P	Pb	16 22 46.3	-1.5
	48nm,0.8s						
DGS				*e*S	Sb	16 23 36.2	+1.1

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        91nm,0.8s
MTBS  Maitube             4.08  38 eP      Pb      16 22 50.9 -0.2
        19nm,0.3s
MTBS                              ⇓iS      Sb      16 23 44.2 +3.3
        25nm,0.4s
IZV   Izvestkoviy         4.10  40 eP      Pb      16 22 50.9 -0.6
        40nm,0.5s
IZV                                eS      Sb      16 23 44.5 +3.0
        142nm,0.8s
TNSS  Tian-Shan           4.27  43 eP      Pb      16 22 54.5 -0.1
        32nm,0.4s
TNSS                               eS      Sb      16 23 50.3 +3.6
        97nm,0.6s
AAA   Alma-Ata            4.37  41 eP      Pb      16 22 56.8 +0.6
        12nm,0.1s
AAA                                eS      Sb      16 23 53.5 +4.1
        102nm,0.6s
KNDC  Almaty              4.41  41 ⇑Pg     Pb      16 22 57.6 +0.9
        32nm,0.7s
KNDC                               ⇑Lg     Lg      16 23 53.8
        247nm,0.8s
MDOK  Medeo               4.41  42  Pg     Pb      16 22 56.4 -0.5
        15nm,0.6s
MDOK                                Lg     Lg      16 23 53.4
        62nm,0.7s
MDOK  Medeo               4.41  42 eP      Pb      16 22 57.0 +0.1
        18nm,0.5s
MDOK                               eS      Sb      16 23 53.2 +2.7
        81nm,0.5s
KOTS  Kotyrbulak          4.49  42 eP      Pb      16 22 58.4 +0.1
        24nm,0.6s
KOTS                               eS      Sb      16 23 56.5 +3.6
        115nm,0.6s
KTBS  Karatobe            4.64  35 eP      Pb      16 23 00.9 +0.1
        17nm,0.4s
KTBS                               eS      Sb      16 24 00.3 +3.1
        52nm,0.7s
KUU   Kurty               4.65  31 eP      Pb      16 23 01.3 +0.5
        15nm,0.4s
KUU                                eS      Sb      16 24 00.6 +3.4
        65nm,0.6s
CHKK  Chushkaly           4.89  36⇑iP      Pb      16 23 05.4 +0.3
        8.1nm,0.6s
CHKK                              ⇓iS      Sb      16 24 08.8 +4.5
        50nm,0.4s
SATY  Saty                5.10  51 eP      Pb      16 23 09.5 +0.8
        19nm,0.8s
SATY                               eS      Sb      16 24 15.1 +4.6
        46nm,1.4s
KURS  Kuram               5.23  46⇓eP      Pb      16 23 11.3 +0.5
        6.1nm,0.6s
KURS                              ⇓eS      Sb      16 24 19.8 +5.8
        21nm,0.6s
ARXS  Arharly             5.56  39 eP      Pb      16 23 16.7 +0.3
        11nm,0.3s
ARXS                               eS      Sb      16 24 28.8 +5.3
        50nm,0.5s
PDGK  Podgornoye          5.91  53 ⇑Pn     Pn      16 23 07.3  0.0
        2.5nm,0.8s
PDGK                               ⇑Pg     Pb      16 23 24.4 +1.9
        6.4nm,0.6s
PDGK                               ⇑Lg     Lg      16 24 39.1
        52nm,0.8s
OTUK  Ortayu              8.29 357 ⇑Lg     Lg      16 25 54.7
        15nm,0.7s
MAKZ  Makanchi            9.46  41 ⇑Lg     Lg      16 26 32.6
        3.7nm,1.0s
MK31  Makanchi Array      9.61  42 ⇓Pg     Pn      16 24 34.4  +37
        1.0nm,0.6s,baz=225,slow=13,SNR=5.4
MK31                               ⇓Lg     Lg      16 26 38.7
        4.7nm,0.9s,baz=227,slow=27,SNR=5.6
MKAR  Makanchi Array      9.61  42  Pn     Pn      16 23 58.1 +0.3
        0.1nm,0.3s,baz=228,slow=15,SNR=2.9
MKAR                                Lg     Lg      16 26 35.9
        0.1nm,0.3s,baz=230,slow=26,SNR=3.8
KURBB Kurchatov Arra     11.34  18 ⇓Lg     Lg      16 27 36.0
        8.9nm,0.9s
KURK  Kurchatov          11.45  18 ⇑Lg     Lg      16 27 35.6
        13nm,1.1s
GEYT  Alibeck            11.76 265  LR     LR      16 29 10.7
        comp=Z,44nm,18.4s,baz=15,slow=39
AB31  Akbulak array      13.12 319  Pn     Pn      16 24 48.0 +2.2
        1.0nm,0.6s,baz=126,slow=14,SNR=15
ZALV  Zalesovo Beam      16.11  26  Pn     Pn      16 25 27.1 +1.1
        0.1nm,0.3s,baz=215,slow=12,SNR=2.5
SONM  Songino Array      25.17  61  P      P       16 27 03.9 -1.4
        0.2nm,0.4s,baz=274,slow=9.0,SNR=2.3
FINES FINESS Array B     35.57 323  P      P       16 28 36.1 -0.8
        0.9nm,0.9s,baz=115,slow=9.3,SNR=2.4
WRA   Warramunga Arr     82.55 124  P      P       16 33 59.8 -3.3
        0.2nm,0.4s,baz=323,slow=4.7,SNR=5.9
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BJI ***22*** *16:25:54.0, 25°.30S×69°.90E, h6^{km}, mB5.1/23, mb4.7/43, Ms4.8/9, Ms7 4.5/10*

IDC ***22*** *16:25:54.3±0.4, 25°.29S×70°.06E, h0^{km}, mb4.4/27, mb1 4.5/27, mb1mx4.4/51, mbtmp4.4/27, MS4.1/19, Ms1 4.1/19, ms1mx3.9/32, Error ellipse: s-maj=15.5km s-min=11.5km az=15.0*

MOS ***22*** *16:25:54.3±0.8, 25°.25S×70°.14E, h10^{km}, mb5.0/29, Error ellipse: s-maj=12.0km s-min=7.6km az=101.7*

NEIC ***22*** *16:25:56.0±0.2, 25°.28S×70°.04E, h10^{km}, mb5.0/18, Error ellipse: s-maj=7.3km s-min=5.6km az=196.0*

ISCJB ***22*** *16:25:55.7±0.3, 25°.30S±0°.06×70°.11E±0°.05, h19^{km}, mb4.7/90, MS4.1/22, Error ellipse: s-maj=8.4km s-min=6.2km az=5.7*

GCMT ***22*** *16:25:57.0±0.4, 25°.02S±0°.04×69°.84E±0°.03, h14^{km}±1^{km}, MW4.9/62, Moment Tensor Solution. s18,c18; s62,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.95±.21; $M_{\theta\theta}$0.57±.12; $M_{\phi\phi}$1.38±.13; $M_{r\theta}$0.57±.27; $M_{\theta\phi}$-1.00±.07; $M_{\phi r}$1.68±.32; Best double couple: $M_0$2.63900×10^{16} NP1:ϕ_s174.00000°, δ65.00000°, λ-65.00000°. NP2: ϕ_s306.00000°, δ35.00000°, λ-133.00000°. Principal axes: T 2.3810, Plg17.0000°, Azm246.0000°; N 0.5210, Plg23.0000°, Azm343.0000°; P -2.8980, Plg61.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 16:25:57.7±0.4**, 25°.21S**±0°.07×**70°.04E**±0°.07**, h19^{km}, n203, σ1^{s}.14**/176**, mb4.9**/98**, MS4.2**/22**, 22C-5D, Mid-Indian Ridge**

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Code  Station Name        Δ°   AZ°   Phase ID           Time     Res
                                   Op      ISC       h  m  s     ISC
H08S1 Diego Carcia H     17.62   8  T      T       16 48 15.8
        baz=188,slow=76,SNR=79
H08S2 Diego Garcia H     17.62   8  T      T       16 48 16.7
        baz=188,slow=76,SNR=142
H08S3 Diego Garcia H     17.64   8  T      T       16 48 15.3
        baz=188,slow=76,SNR=153
OPO   Ambohidratompo     22.19 283  P      P       16 30 54.6 +1.5
        16nm,1.1s,baz=104,slow=9.0,SNR=5.6
OPO                                 LR     LR      16 37 17.1
        comp=Z,336nm,19.0s,baz=94,slow=31
PDSI  Padang             38.03  55  P      P       16 33 14.4 -0.6
MATP  Matopo             38.48 268  P      P       16 33 18.6 -0.3
        1.4nm,0.5s,baz=122,slow=7.7,SNR=6.1
MATP                                LR     LR      16 46 58.6
        comp=Z,299nm,19.0s,baz=106,slow=33
H01W2 Cape Leeuwin H     39.10 115  T      T       17 15 25.6
        baz=271
H01W3 Cape Leeuwin H     39.10 115  T      T       17 15 18.6
        baz=271
H01W1 Cape Leeuwin H     39.12 115  T      T       17 15 29.3
        baz=271
PSI   Prapat             39.50  49  LR     LR      16 46 06.6
        comp=Z,328nm,20.1s,baz=266,slow=31
KMBO  Kilima Mbogo       39.68 302ceP      P       16 33 30.8 +1.7
KMBO                                pmax   pmax
        comp=Z,1.0nm,0.5s
KMBO  Kilima Mbogo       39.68 302  P      P       16 33 30.4 +1.3
        comp=Z,0.9nm,0.5s,baz=97,slow=3.6,SNR=4.1
BOSA  Boshof             39.91 255 eP      P       16 33 29.6 -1.2
        comp=Z,13nm,1.2s
BOSA  Boshof             39.91 255 eP      P       16 33 29.6 -1.2
BOSA                                pmax   pmax
        comp=Z,13nm,1.2s
BOSA  Boshof             39.91 255  P      P       16 33 29.5 -1.2
        comp=Z,11nm,1.2s,baz=104,slow=8.2,SNR=5.7
BOSA                                LR     LR      16 47 22.2
        comp=Z,382nm,18.8s,baz=100,slow=32
LBTB  Lobatse            40.10 260  LR     LR      16 48 18.4
        comp=Z,384nm,18.1s,baz=101,slow=34
LSZ   Lusaka             40.35 276  P      P       16 33 35.4 +0.8
        comp=Z,1.3nm,0.5s,baz=123,slow=10,SNR=3.4
NWAO  Narrogin (SRO)     41.68 112  P      P       16 33 45.8 +0.5
        comp=Z,8.7nm,0.9s,baz=268,slow=9.0,SNR=3.7
MAW   Mawson             42.64 184  LR     LR      16 48 10.6
        comp=Z,368nm,18.6s,baz=22,slow=31
HYB   Hyderabad          43.17  12 i P     P       16 33 59.5 +2.1
HYB                                esP     pwP     16 34 05.5 -1.4
SUR   Sutherland         43.42 249  LR     LR      16 48 40.3
        comp=Z,481nm,20.1s,baz=119,slow=32
MBAR  Mbarara            45.14 297 i P     P       16 34 14.7 +1.2
MBAR                                pmax   pmax
        comp=Z,5.0nm,1.3s
SYO   Syowa Base         47.43 194⇑epP     P       16 34 32.5 +2.0
PBKT  Sadao Pong         51.31  39 eP      P       16 35 02.0 +1.2
        comp=Z,15nm,0.9s
CHAI  Chaiyaphum         51.37  41  P      P       16 35 03.6 +2.3
        comp=Z,5.0nm,0.9s
CM01  Chiang Mai Arr     51.70  36 eP      P       16 35 04.9 +1.1
CM31  Chiang Mai Arr     51.73  36 eP      P       16 35 05.3 +1.3
CMAR  Chiang Mai Arr     51.73  36  P      P       16 35 05.0 +1.0
CMAR  Chiang Mai Arr     51.73  36  P      P       16 35 05.0 +1.0
        comp=Z,7.2nm,0.9s,baz=227,slow=6.9,SNR=51
CMAR                                LR     LR      16 53 15.9
        comp=Z,132nm,21.6s,baz=209,slow=32
FITZ  Fitzroy Crossi     51.86  94 eP      P       16 35 06.1 +1.0
        comp=Z,53nm,1.3s
FITZ  Fitzroy Crossi     51.86  94  P      P       16 35 05.0 -0.1
        comp=Z,16nm,0.9s,baz=227,slow=6.5,SNR=12
CHTO  Chiang Mai         52.02  36 eP      P       16 35 05.5 -0.6
        comp=Z,13nm,1.3s
CHTO  Chiang Mai         52.02  36 eP      P       16 35 05.5 -0.6
CHTO                                pmax   pmax
        comp=Z,13nm,1.3s
BNSI  Bone               52.26  75  P      P       16 35 05.9 -2.2
RAMN  Ramite             54.26  18 eP      P       16 35 23.9 +1.1
        comp=Z,31nm,1.2s
KOLN  Koldanda           54.27  15 eP      P       16 35 23.4 +0.6
        comp=Z,30nm,1.0s
DMN   Daman              54.48  16 eP      P       16 35 25.3 +0.9
        comp=Z,25nm,0.9s
PKI   Pulchoki           54.52  17 eP      P       16 35 24.8  0.0
        comp=Z,10nm,0.9s
PKIN  Phulchoki          54.53  17 eP      P       16 35 25.1 +0.3
KKN   Kakani             54.70  17 eP      P       16 35 26.5 +0.5
        comp=Z,19nm,0.9s
SHL   Shillong           54.72  24 eP      P       16 35 27.3 +1.2
        comp=Z,31nm,1.2s
SHL   Shillong           54.72  24 eP      P       16 35 27.3 +1.2
SHL                                 pmax   pmax
        comp=Z,31nm,1.2s
JIRN  Jiri               54.82  18 eP      P       16 35 27.5 +0.5
        comp=Z,41nm,1.1s
DANN  Dangsing           54.86  15 eP      P       16 35 27.5 +0.3
        comp=Z,34nm,0.9s
GUN   Gumba              54.97  17 eP      P       16 35 28.7 +0.6
        comp=Z,35nm,1.0s
APSI  Ampana             55.31  72  P      P       16 35 31.1 +0.7
ASAR  Alice Springs      57.66 103  P      P       16 35 46.4 -0.8
        comp=Z,2.6nm,0.7s,baz=251,slow=6.0,SNR=29
ASAR                                LR     LR      16 58 26.2
        comp=Z,130nm,19.0s,baz=274,slow=34
AS31  Alice Springs      57.66 103 eP      P       16 35 46.7 -0.5
        comp=Z,2.6nm,0.8s
AS01  Alice Springs      57.70 103 eP      P       16 35 46.4 -1.0
LSA   Lhasa              58.23  22  P      P       16 35 52.4 +0.9
LSA                                 pmax   pmax
        comp=Z,6.0nm,1.1s
LSA   Lhasa              58.23  22 eP      P       16 35 52.3 +0.9
        comp=Z,12nm,1.0s
LSA   Lhasa              58.23  22 eP      P       16 35 52.3 +0.9
LSA                                 pmax   pmax
        comp=Z,12nm,1.0s
WRA   Warramunga Arr     59.12  99  P      P       16 35 56.5 -0.9
        comp=Z,7.2nm,1.0s,baz=256,slow=7.0,SNR=21
WRA                                 LR     LR      16 58 57.4
        comp=Z,230nm,19.5s,baz=275,slow=34
WB2   Warramunga Arr     59.13  99 eP      P       16 35 57.0 -0.4
WRAB  Tennant Creek      59.13  99 eP      P       16 35 57.1 -0.4
        comp=Z,28nm,1.2s
WRAB  Tennant Creek      59.13  99 eP      P       16 35 57.1 -0.4
WRAB                                pmax   pmax
        comp=Z,28nm,1.2s
KMI   Kunming            59.19  35  P      P       16 36 00.8 +2.9
KMI                                 pP     sP      16 36 05.3 +0.6
KMI                                 sP     pwP     16 36 06.5 -1.1
KMI                                 pmax   pmax
        comp=Z,8.0nm,0.7s
KMI                                 pmax   pmax
        comp=Z,210nm,4.3s
KMI                                 LR     LR
        comp=Z,220nm,6.3s
KMI                                 LR     LR
        comp=Z,290nm,17.5s
SNAA  Sanae              60.91 200  P      P       16 36 09.0 +0.1
SNAA  Sanae              60.91 200  P      P       16 36 09.0 +0.1
        comp=Z,2.2nm,0.8s,baz=107,slow=3.0,SNR=4.1
STKA  Stephens Creek     62.20 114  P      P       16 36 17.4 -0.7
        comp=Z,2.0nm,0.9s,baz=214,slow=4.8,SNR=3.8
STKA                                LR     LR      16 59 31.3
        comp=Z,165nm,20.4s,baz=213,slow=32
GYA   Guiyang            62.35  37  P      P       16 36 20.4 +1.1
GYA                                 pmax   pmax
        comp=Z,20nm,1.0s
KCP   Kidapawan          62.37  67⇑eP      P       16 36 19.7 +0.1
TGY   Tagaytay City      63.14  58  P      P       16 36 25.2 +0.5
        comp=Z,148nm,0.3s,baz=156,slow=14,SNR=3.7
SIJI  Sorong             63.74  78  P      P       16 36 28.4 -0.3
        comp=Z,16nm,0.5s,baz=260,slow=12,SNR=5.7
GEYT  Alibeck            63.80 350  LR     LR      17 00 03.5
        comp=Z,73nm,21.9s,baz=340,slow=32
CD2   Chengdu            64.47  32 eP      P       16 36 35.0 +1.9
CD2                                 pmax   pmax
        comp=Z,10.0nm,0.5s
KSH   Kashi              64.63   5  P      P       16 36 31.4 -2.7
KSH                                 pP     pP      16 36 38.0 -1.1
KSH                                 PP     PP      16 38 58.8 +2.2
KSH                                 S      S       16 45 03.0  -10
KSH                                 sS     sS      16 45 21.4 +0.1
KSH                                 pmax   pmax
        comp=Z,10.0nm,0.7s
KSH                                 pmax   pmax
        comp=Z,260nm,3.8s
KSH                                 LR     LR
        comp=Z,170nm,4.3s
KSH                                 LR     LR
        comp=Z,170nm,5.5s
KSH                                 LR     LR
        comp=Z,250nm,8.4s
QSPA  South Pole Qui     64.92 180 eP      P       16 36 34.6 -1.2
QSPA  South Pole Qui     64.92 180  P      P       16 36 34.0 -1.8
        comp=Z,3.3nm,0.8s,baz=280,slow=1.7,SNR=15
SFK   Sufi-Kurgan        64.97   3  P      P       16 36 36.8 +0.4
SFK                                 pmax   pmax
        comp=Z,7.0nm,2.0s
VNDA  Vanda              65.97 166  P      P       16 36 41.7 -0.5
        comp=Z,3.9nm,0.8s,baz=289,slow=3.7,SNR=2.9
RKPI  Ransiki, Papua     66.04  80  P      P       16 36 44.1 +0.4
ARSB  Arslanbob          66.25   2 eP      P       16 36 45.0 +0.5
        comp=Z,32nm,1.5s
MNAS  Manas              67.40   2  P      P       16 36 52.8 +1.0
MNAS                                pmax   pmax
        comp=Z,6.0nm,1.5s
AAK   Ala-Archa          67.63   4 eP      P       16 36 52.9 -0.5
        comp=Z,10nm,1.4s
AAK   Ala-Archa          67.63   4 eP      P       16 36 52.9 -0.5
AAK                                 pmax   pmax
        comp=Z,10.0nm,1.4s
PDGK  Podgornoye         68.75   7  P      P       16 37 01.0 +0.7
PDGK                                pmax   pmax
        comp=Z,13nm,1.4s
LZH   Lanzhou            68.82  29 eP      P       16 37 06.3 +5.4
LZH                                 pP     pwP     16 37 11.9 +1.2
LZH                                 sP     sP      16 37 14.6 +6.5
LZH                                 pmax   pmax
        comp=Z,29nm,1.2s
GNI   Garni              69.17 339  P      P       16 37 02.9 -0.1
        comp=Z,34nm,0.8s
GNI   Garni              69.17 339ceP      P       16 37 03.6 +0.6
GNI                                 pmax   pmax
        comp=Z,49nm,1.0s
XAN   Xi'an              69.54  34  P      P       16 37 05.0 -0.3
XAN                                 pP     sP      16 37 11.8 -0.7
XAN                                 pmax   pmax
        comp=Z,8.0nm,0.8s
XAN                                 pmax   pmax
        comp=Z,110nm,5.4s
CTA   Charters Tower     69.66 103  P      P       16 37 06.0 -0.4
        comp=Z,2.0nm,0.6s,baz=259,slow=8.7,SNR=3.7
WHN   Wuhan              69.82  40 ⇓P      P       16 37 14.9 +7.9
GTA   Gaotai             70.05  24  P      P       16 37 08.8 +0.4
GTA                                 pP     sP      16 37 15.4 -0.2
GTA                                 sP     pwP     16 37 19.1 +0.9
GTA                                 pmax   pmax
        comp=Z,6.0nm,1.2s
GTA                                 pmax   pmax
        comp=Z,110nm,5.2s
GTA                                 LR     LR
        comp=Z,130nm,17.5s
GTA                                 LR     LR
        comp=Z,210nm,19.4s
GTA                                 LR     LR
        comp=Z,190nm,19.7s
WMQ   Urumqi             70.58  13  P      P       16 37 10.9 -0.6
WMQ                                 pP     sP      16 37 17.3 -1.3
WMQ                                 pmax   pmax
        comp=Z,21nm,1.5s
WMQ                                 pmax   pmax
        comp=Z,280nm,3.7s
WMQ                                 LR     LR
        comp=Z,250nm,21.1s
WMQ                                 LR     LR
        comp=Z,150nm,21.1s
WMQ                                 LR     LR
        comp=Z,220nm,24.1s
GROC  Groznyy            71.64 342 eP      P       16 37 17.5 -0.3
GROC                               e               16 37 37.1
GROC                               e               16 39 56.3
GROC                                pmax   pmax
        comp=Z,37nm,1.1s
ZEI   Tsey               71.83 340 eP      P       16 37 17.6 -1.6
ZEI                                 pmax   pmax
        comp=Z,8.0nm,1.0s
MAKZ  Makanchi           72.49   9 eP      P       16 37 21.4 -1.5
        comp=Z,7.7nm,1.4s
MAKZ  Makanchi           72.49   9 eP      P       16 37 21.4 -1.5
MAKZ                                pmax   pmax
        comp=Z,8.0nm,1.4s
MK01  Makanchi Array     72.50   9 eP      P       16 37 22.4 -0.5
MK31  Makanchi Array     72.52   9 eP      P       16 37 22.4 -0.6
MK31  Makanchi Array     72.52   9 eP      P       16 37 22.5 -0.6
MKAR  Makanchi Array     72.52   9 eP      P       16 37 22.3 -0.7
        comp=Z,40nm,0.9s
MKAR  Makanchi Array     72.52   9 eP      P       16 37 22.3 -0.7
MKAR                                pmax   pmax
        comp=Z,40nm,0.9s
MKAR  Makanchi Array     72.52   9  P      P       16 37 22.8 -0.3
        comp=Z,3.4nm,0.8s,baz=195,slow=5.8,SNR=32
MKAR                                LR     LR      17 08 19.8
        comp=Z,76nm,18.1s,baz=166,slow=35
NCK   Nalchik            72.56 340 i P     P       16 37 22.8 -0.6
NCK                                 pmax   pmax
        comp=Z,6.0nm,0.8s
NEY   Neytrino           72.61 339 i P     P       16 37 25.2 +1.3
NEY                                 pmax   pmax
        comp=Z,1.0nm,0.8s
BRTR  Keskin Array B     72.98 331ceP      P       16 37 26.6 +0.5
BRTR                                pmax   pmax
        comp=Z,3.0nm,0.9s
BRTR  Keskin Array B     72.98 331  P      P       16 37 26.1  0.0
        comp=Z,3.0nm,0.9s,baz=150,slow=6.4,SNR=12
BR131 Keskin Array S     72.98 331 eP      P       16 37 26.6 +0.5
KBZ   Khabaz             72.99 340  P      P       16 37 26.2 +0.4
        comp=Z,3.1nm,0.9s,baz=190,slow=4.6,SNR=6.6
KBZ                                 LR     LR      17 06 28.7
        comp=Z,50nm,21.5s,baz=79,slow=33
OTUK  Ortayu             73.14   2  P      P       16 37 27.2 +0.5
OTUK                                pmax   pmax
        comp=Z,6.0nm,1.6s
KIV   Kislovodsk         73.26 340 eP      P       16 37 27.7 +0.1
KIV                                 pmax   pmax
        comp=Z,16nm,1.1s
NJ2   Nanjing            73.57  42 eP      P       16 37 29.9 +0.3
NJ2                                 pmax   pmax
        comp=Z,7.0nm,0.5s
ABKAR Akbulak array      74.67 353 eP      P       16 37 35.6  0.0
ANN   Anapa              75.77 337 eP      P       16 37 38.8 -3.2
ANN                                e*PP    pwP     16 37 50.4 -1.4
ANN                                eS      S       16 47 16.9 -5.9
ANN                                 pmax   pmax
        comp=Z,37nm,1.1s
KURK  Kurchatov          75.97   6 eP      P       16 37 43.4 +0.4
        comp=Z,25nm,1.4s
KURK  Kurchatov          75.97   6 eP      P       16 37 43.4 +0.4
KURK                                pmax   pmax
        comp=Z,25nm,1.4s
DGZ   Jazzator, Alta     76.17  12 i P     P       16 37 43.7 -0.7
DGZ                                 pmax   pmax
        comp=Z,2.0nm,1.3s
HHC   Hu-ho-hao-te       76.20  31 eP      P       16 37 46.8 +2.0
HHC                                 pmax   pmax
        comp=Z,9.0nm,0.7s
HHC                                 pmax   pmax
        comp=Z,180nm,5.7s
TOA0  Torodi Ar. Sit     76.71 292 eP      P       16 37 47.8 -0.3
TORD  Torodi Ar. Bea     76.71 292  P      P       16 37 47.6 -0.5
        comp=Z,2.0nm,0.9s,baz=122,slow=7.7,SNR=9.2
TORD                                LR     LR      17 09 44.9
        comp=Z,119nm,18.5s,baz=320,slow=34
BRVK  Borovoye           77.94   0 eP      P       16 37 54.2 +0.2
        comp=Z,3.7nm,0.9s
BRVK  Borovoye           77.94   0 eP      P       16 37 54.2 +0.2
BRVK                                pmax   pmax
        comp=Z,4.0nm,0.9s
KIC   Kosan Boka         79.06 282 ePKP2   P       16 38 02.3 +1.1
        comp=Z,74nm,1.6s
LIC   Lamto              79.25 282 ePKP2   P       16 38 03.3 +1.0
        comp=Z,57nm,1.4s
DBIC  Dimbokro           79.31 283  P      P       16 38 02.7 +0.2
        comp=Z,3.1nm,0.9s,baz=134,slow=10,SNR=3.8
DBIC                                LR     LR      17 11 04.9
        comp=Z,90nm,18.5s,baz=106,slow=34
TIC   Toumodi            79.44 282 ePKP2   P       16 38 03.7 +0.4
SONM  Songino Array      79.72  24  P      P       16 38 04.6 +0.4
        comp=Z,3.2nm,1.0s,baz=209,slow=5.0,SNR=17
SONM                                LR     LR      17 11 50.4
        comp=Z,85nm,21.4s,baz=209,slow=34
CFR   Carcaliu           79.78 331⇓iP      P       16 38 11.9 +7.5
CFR   Carcaliu           79.78 331 ⇓P      P       16 38 11.9 +7.5
ZALV  Zalesovo Beam      79.86   9 eP      P       16 38 04.1 -0.5
ZALV  Zalesovo Beam      79.86   9 eP      P       16 38 04.1 -0.5
ZALV  Zalesovo Beam      79.86   9  P      P       16 38 04.3 -0.2
        comp=Z,2.6nm,0.7s,baz=206,slow=4.9,SNR=13
ULN   Ulaanbaatar        79.99  24ceP      P       16 38 04.9 -0.8
ULN                                 pmax   pmax
        comp=Z,10.0nm,1.7s
VRH   Novokhopyorsk      80.07 342 eP      P       16 38 04.9 -0.9
VRH                                 pmax   pmax
        comp=Z,10.0nm,1.3s
NVS   Novosibirsk        80.53   8 eP      P       16 38 08.1  0.0
NVS                                 pmax   pmax
        comp=Z,26nm,2.0s
NVS                                 pmax   pmax
        comp=N,13nm,1.8s
NVS                                 pmax   pmax
        comp=E,8.0nm,1.7s
VSR   Storozhevoye       80.81 341 eP      P       16 38 08.3 -1.5
VSR                                 pmax   pmax
        comp=Z,10.0nm,1.2s
ZAK   Zakamensk          80.81  21 eP      P       16 38 04.6 -5.4
ZAK                                 pmax   pmax
        comp=Z,2.0nm,1.9s
VRI   Vrincioaia         80.94 331⇑iP      P       16 38 11.1 +0.5
VRI   Vrincioaia         80.94 331 ⇑P      P       16 38 11.1 +0.5
PLOR  Plostina           80.96 331⇑iP      P       16 38 11.8 +1.0
PLOR  Plostina           80.96 331 ⇑P      P       16 38 11.8 +1.0
MLR   Muntele Rosu       81.00 330⇑iP      P       16 38 12.3 +1.2
MLR   Muntele Rosu       81.00 330 ⇑P      P       16 38 12.3 +1.2
VOIR                     81.36 330⇑iP      P       16 38 12.7 -0.3
VOIR                     81.36 330 ⇑P      P       16 38 12.7 -0.3
ARR   Arges              81.50 329⇑iP      P       16 38 13.7  0.0
ARU   Arti               81.90 354 eP      P       16 38 15.8 +0.4
        comp=Z,56nm,1.4s
ARU   Arti               81.90 354  P      P       16 38 15.7 +0.3
ARU                                                16 41 19.7
ARU                                 S      S       16 48 27.5 -0.3
ARU                                 SS     SS      16 53 43.9 -3.3
SVE   Sverdlovsk         82.10 355 eP      P       16 38 17.6 +1.1
SVE                                 pmax   pmax
        comp=Z,25nm,1.4s
LPSR  Galich'ya Gora     82.11 341 eP      P       16 38 20.2 +3.6
LPSR                                pmax   pmax
        comp=Z,10.0nm,1.4s
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GZR	Gura Zlata	82.38	329	⇑iP	P	16 38 20.0	+1.7
GZR	Gura Zlata	82.38	329	⇑P	P	16 38 20.0	+1.7
KSAR	Wonju Array Be	82.69	43	P	P	16 38 20.4	+0.4
KSAR	Wonju Array Be	82.69	43	P	P	16 38 20.4	+0.4
KSRS	Korea Array	82.72	43	P	P	16 38 20.4	+0.2
	comp=Z,1.6nm,1.0s,baz=242,slow=5.2,SNR=3.6						
KSRS				LR	LR	17 14 10.9	
	comp=Z,56nm,18.9s,baz=212,slow=35						
BUR04	Bucovina Ar. S	82.95	331	eP	P	16 38 20.7	-0.6
BZS	Buzias	83.10	328	⇑iP	P	16 38 22.5	+0.5
BZS	Buzias	83.10	328	⇑P	P	16 38 22.5	+0.5
DRGR		83.45	329	P	P	16 38 23.9	+0.1
DRGR				pmax	pmax		
	comp=Z,20nm,1.4s						
SIRR	Siria	83.55	329	⇑iP	P	16 38 25.5	+1.2
AKASG	Malin Array Be	83.74	335	ceP	P	16 38 24.7	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	83.74	335	P	P	16 38 24.5	-0.6
	comp=Z,0.7nm,0.5s,baz=143,slow=4.3,SNR=12						
AKBB	Malin Array Si	83.74	335	eP	P	16 38 24.6	-0.5
	comp=Z,11nm,1.0s						
AKBB	Malin Array Si	83.74	335	eP	P	16 38 24.6	-0.5
AKBB				pmax	pmax		
	comp=Z,11nm,1.0s						
KIEV	Kiev	83.74	335	eP	P	16 38 25.1	0.0
	comp=Z,10.0nm,1.0s						
KIEV	Kiev	83.74	335	⇓iP	P	16 38 24.7	-0.4
KIEV	Kiev	83.74	335	eP	P	16 38 25.1	0.0
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	Obninsk	84.98	341	iP	P	16 38 30.9	-0.4
OBN				i		16 38 35.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CN2	Changchun	85.40	37	eP	P	16 38 39.5	+5.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HIA	Hailar	86.35	30	iP	P	16 38 38.3	0.0
HIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NIE	Niedzica	86.47	330	eP	P	16 38 46.3	+7.3
NIE	Niedzica	86.47	330	eP	P	16 38 46.3	+7.4
VYHS	Vyhne	86.49	329	eP	P	16 38 46.4	+7.4
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
VYHS	Vyhne	86.49	329	esP	sP	16 38 46.3	+0.2
ZST	Bratislava	87.11	328	eP	P	16 38 48.0	+6.0
ZST	Bratislava	87.11	328	esP	sP	16 38 48.0	-1.1
MODS	Modra-Piesok	87.15	328	eP	P	16 38 49.0	+6.8
MODS				pmax	pmax		
	comp=Z,13nm,1.1s						
MODS	Modra-Piesok	87.15	328	esP	sP	16 38 49.0	-0.3
ARSA	Arzberg	87.24	326	eP	P	16 38 41.6	-1.1
	comp=Z,12nm,1.3s						
OJC	Ojcow	87.28	330	eP	P	16 38 50.0	+7.2
OJC	Ojcow	87.28	330	eP	P	16 38 50.0	+7.2
JAVC	Velka Javorina	87.30	328	eP	P	16 38 44.2	+1.2
JAVC				e		16 38 51.0	
CONA	Conrad Observa	87.53	327	eP	P	16 38 44.5	+0.3
	comp=Z,22nm,1.3s						
MSHR	Mys Shultsa	87.85	40	iP	P	16 38 45.4	-0.3
MORC	Moravsky Berou	88.00	329	P	P	16 38 46.4	+0.1
MORC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MORC	Moravsky Berou	88.00	329	eP	P	16 38 46.5	+0.1
MORC				e		16 38 53.3	
KRUC	Moravsky	88.04	328	eP	P	16 38 46.4	-0.1
KRUC				e		16 38 53.2	
VRAC	Vranov	88.12	328	eP	P	16 38 47.0	+0.1
VRAC				e		16 38 54.0	
MOA	Molln	88.28	326	eP	P	16 38 48.0	+0.3
	comp=Z,17nm,1.4s						
IDID	Didziasalis	88.32	337	eP	P	16 38 41.6	-6.0
ABTA	Abfaltersbach	88.46	325	eP	P	16 38 49.3	+0.7
	comp=Z,20nm,1.2s						
IIGN	Ignalina	88.53	337	eP	P	16 38 41.9	-6.7
ISAL	Salakas	88.74	337	eP	P	16 38 43.6	-5.9
MJAR	Matsushiro Arr	88.84	48	LR	LR	17 18 43.3	
	comp=Z,57nm,18.6s,baz=150,slow=36						
GERES	GERESS Array B	89.22	327	P	P	16 38 52.4	+0.2
	comp=Z,0.3nm,0.5s,baz=107,slow=4.0,SNR=3.0						
KLMR	Klimovskoe	89.28	346	eP	P	16 38 51.6	-0.4
KLMR				pmax	pmax		
	comp=Z,34nm,1.3s						
KLMR	Klimovskoe	89.28	346	eP	P	16 38 51.6	-0.4
KLMR				AMP		16 39 00.4	
	comp=Z,34nm,1.3s						
GOPC	GO Pecny, Ondr	89.39	328	eP	P	16 39 00.3	+7.4
GOPC	GO Pecny, Ondr	89.39	328	eP	P	16 39 00.3	+7.4
KHC	Kasperske Hory	89.47	327	eP	P	16 38 54.1	+0.9
KHC				epP	sP	16 38 59.5	-0.9
KHC	Kasperske Hory	89.47	327	eP	P	16 38 54.1	+0.9
KHC				e		16 38 59.5	
FETA	Feichten	89.58	324	P	P	16 38 50.6	-3.4
	comp=Z,23nm,1.4s						
KLNR	Kaliningrad	90.26	334	iP	P	16 38 56.9	+0.2
KLNR				pmax	pmax		
	comp=Z,32nm,1.2s						
VSU	Vasula	90.80	339	iP	P	16 39 00.1	+1.0
VSU				pmax	pmax		
	comp=Z,22nm,0.9s						
CLL	Collm	91.17	328	iP	P	16 39 01.7	+0.6
CLL				i (sP)	sP	16 39 07.4	-0.8
CLL	Collm	91.17	328	iP	P	16 39 01.7	+0.6
CLL				i		16 39 07.4	
ESDC	Sonseca Array	94.40	312	P	P	16 39 15.7	-0.7
	comp=Z,0.1nm,0.2s,baz=108,slow=4.5,SNR=3.8						
YSS	Yuzh-Sakhalins	97.14	41	⇓eP	P	16 39 22.2	-6.3
YSS				pmax	pmax		
	comp=Z,20nm,1.5s						
YKA	Yellowknife Ar	142.60	4	PKhKP	PKPpre	16 45 24.6	
	comp=Z,0.7nm,0.9s,baz=347,slow=3.6,SNR=7.2						
FFC	Flin Flon	149.93	351	c iPKP2	PKPbc	16 45 46.4	0.0
ULM	Lac du Bonnet	152.73	340	PKPbc	PKPbc	16 45 51.5	-1.5
	comp=Z,2.5nm,0.9s,baz=360,slow=3.3,SNR=2.8						

MEX 22 16:26:40.8±0.6**,16°.26N**×**98°.03W,h8**^{km}±18^{km}**,MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.16	323	iP	Pg	16 26 43.7	-0.6
PNIG				iS	Sg	16 26 46.5	-0.2

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*ISCJB **22** 16:34:16.2±0.6, 5°.16S±0°.06×129°.55E±0°.10, h182^{km}, mb3.5/2, Error ellipse: s-maj=14.0km s-min=7.7km az=11.0*

*IDC **22** 16:34:17.1±1.9, 5°.07S×129°.47E, h176^{km}±22^{km}, mb3.2/2, mb1 3.7/7, mb1mx3.3/42, mbtmp4.1/7, Error ellipse: s-maj=35.8km s-min=16.8km az=92.0*

*DJA **22** 16:34:18.4±0.7, 5°S±6°×13°0E±°, h194^{km}±6^{km}, M4.2/7, MLv4.2/7*

ISC 22 16:34:17.6±0.9**,5°.03S**±0°.07×**129°.54E**±0°.09**,h182**^{km}**,n12,** σ**2**^{s}.**18**/14**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.62	36	P	Pn	16 34 45.9	+2.7
BNDI				S	Sn	16 35 07.4	+4.5
SAUI	Saumlaki	3.41	149	P	Pn	16 35 12.7	+1.3
FAKI	Fak Fak	3.42	52	P	Pn	16 35 12.0	+0.5
SIJI	Sorong	4.48	23	P	Pn	16 35 25.1	+0.1
	25nm,0.3s,baz=164,slow=15,SNR=274						
SIJI				S	Sn	16 36 14.3	-3.5
	8.3nm,0.3s,baz=252,slow=19,SNR=14						
SWI	Sorong	4.48	23	P	Pn	16 35 25.3	+0.4
SANI	Sanana	4.62	310	P	Pn	16 35 28.1	+1.4
BATI	Baumata	7.77	228	P	Pn	16 36 06.9	-1.0
	5.8nm,0.3s,baz=76,slow=5.9,SNR=5.9						
FITZ	Fitzroy Crossi	13.53	196	P	Pn	16 37 21.2	-1.2
	0.3nm,0.3s,baz=31,slow=12,SNR=6.9						
FITZ				S	Sn	16 39 43.0	-10
	0.1nm,0.3s,baz=349,slow=16,SNR=2.5						
WRA	Warramunga Arr	15.54	163	P	Pn	16 37 44.9	-2.3
	0.7nm,0.3s,baz=342,slow=12,SNR=48						
WRA				S	S	16 40 27.9	-13
	0.3nm,0.3s,baz=332,slow=24,SNR=4.9						
ASAR	Alice Springs	19.00	168	P	P	16 38 25.9	+0.4
	2.5nm,0.3s,baz=348,slow=11,SNR=314						
MKAR	Makanchi Array	66.34	327	P	P	16 44 46.7	0.0
	0.4nm,0.4s,baz=122,slow=7.7,SNR=8.8						
KURBB	Kurchatov Arra	70.61	328	P	P	16 45 13.0	0.0
	0.3nm,0.5s,baz=130,slow=5.6,SNR=3.1						

MEX 22 16:38:31.6±0.5**,16°.31N**×**98°.01W,h5**^{km}±14^{km}**,MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.14	306	iP	Pg	16 38 33.9	-0.5
PNIG				eS	Sg	16 38 36.4	+0.1

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*ISCJB **22** 16:46:00.7±0.7, 19°.82S±0°.03×69°.39W±0°.08, h101^{km}±6^{km}, mb3.6/2, Error ellipse: s-maj=13.1km s-min=5.2km az=175.5*

*GUC **22** 16:46:00.4±0.6, 19°.80S×69°.25W, h91^{km}±3^{km}, ML3.5*

*IDC **22** 16:46:02.2±1.1, 19°.91S×68°.78W, h127^{km}±12^{km}, mb3.5/2, mb1 3.4/5, mb1mx3.1/29, mbtmp3.6/5, Error ellipse: s-maj=39.8km s-min=8.9km az=97.0*

ISC 22 16:46:00.8±1.1**,19°.81S**±0°.04×**69°.32W**±0°.08**,h91**^{km}±8^{km}**, n14,** σ**1**^{s}.**50**/23**,4C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	IPOC Station P	0.32	278	⇑iP	Pn	16 46 14.7	+0.1
PB11				eS	Sn	16 46 25.6	+0.7
PB11				IAML		16 46 26.6	
	comp=E,4μm,0.4s						
PB08	IPOC Station P	0.36	155	⇓iP	Pn	16 46 15.3	+0.1
PB08				eS	Sn	16 46 26.6	+0.8
PB08				IAML		16 46 27.9	
	comp=E,2μm,0.2s						
MNMC	Minye Minye	0.72	338	⇑eP	Pn	16 46 18.4	+0.5
MNMC				eS	Sn	16 46 32.1	+1.4
MNMC				IAML		16 46 32.4	
	comp=N,2μm,0.2s						
PSGC	Pisagua	0.79	285	⇑iP	Pn	16 46 18.4	0.0
PSGC				eS	Sn	16 46 32.4	+0.9
PB01	IPOC Station P	1.24	187	⇓iP	Pn	16 46 23.6	+0.1
PB01				eS	Sn	16 46 41.5	+0.9
PB01				IAML		16 46 42.9	
	comp=E,892nm,0.3s						
PB12	IPOC Station P	1.52	321	⇑eP	Pn	16 46 26.5	-0.5
PB12				eS	Sn	16 46 48.1	+1.2
PB12				IAML		16 46 54.8	
	comp=E,552nm,0.2s						
PB02	IPOC Station P	1.60	200	eP	Pn	16 46 28.1	+0.1
PB02				eS	Sn	16 46 49.4	+0.8
PB02				IAML		16 46 56.1	
	comp=E,1μm,0.2s						
PB09	IPOC Station P	1.98	178	eP	Pn	16 46 33.5	+0.6
PB07	IPOC Station P	1.98	196	eP	Pn	16 46 33.4	+0.4
PB07				eS	Sn	16 46 59.1	+1.6
LVC	Limon Verde	2.81	172	P	Pn	16 46 45.0	+0.8
	comp=E,7.9nm,0.3s,baz=357,slow=9.0,SNR=40						
LVC				S	Sn	16 47 18.6	+1.1
	comp=E,6.3nm,0.3s,baz=90,slow=22,SNR=7.3						
LPAZ	La Paz	3.68	18	P	Pn	16 46 57.7	+1.6
	comp=E,1.1nm,0.3s,baz=197,slow=5.3,SNR=13						
LPAZ				S	Sn	16 47 41.6	+2.8
	baz=68,slow=19,SNR=3.0						
SIV	San Ignacio	8.72	65	P	Pn	16 48 00.0	-4.2
	comp=E,0.3nm,0.3s,baz=264,slow=12,SNR=6.1						
DBIC	Dimbokro	68.63	74	P	P	16 56 49.3	-5.5
	comp=E,1.1nm,0.6s,baz=225,slow=4.3,SNR=3.0						
YKA	Yellowknife Ar	89.47	341	P	P	16 58 45.8	-1.5
	comp=E,0.2nm,0.5s,baz=133,slow=4.8,SNR=5.9						

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*IDC **22** 17:06:08.6±3.1, 39°.32N×143°.19E, h0^{km}, mb3.2/2, mb1 3.5/3, mb1mx3.2/27, mbtmp3.2/3, ML2.3/1, Error ellipse: s-maj=72.0km s-min=38.4km az=67.0*

*ISCJB **22** 17:06:16.2±1.8, 39°.12N±0°.05×142°.4E±0°.1, h29^{km}±8^{km}, mb3.3/2, Error ellipse: s-maj=16.0km s-min=7.5km az=10.8*

*JMA **22** 17:06:16.6±0.1, 39°.11N×142°.37E, h33^{km}±1^{km}, M3.4*

ISC 22 17:06:16.3±2.2**,39°.14N**±0°.05×**142°.4E**±0°.1**,h29**^{km}±12^{km}**, n18,** σ**1**^{s}.**51**/19**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.56	264	P	Pb	17 06 27.7	0.0
OFUJ				S	Sb	17 06 35.3	-0.2
MIYJ	Miyakonagasawa	0.62	315	P	Pb	17 06 28.8	+0.1
MIYJ				S	Sb	17 06 37.0	-0.1
JKMT	Kesennumamotoy	0.79	245	P	Pn	17 06 30.6	-0.9
JKMT				S	Sb	17 06 40.4	-1.3
JTH	Tanohata	0.89	333	P	Pn	17 06 32.9	-0.1
JOM	Ohasama	0.91	292	P	Pn	17 06 33.4	+0.2
JOM				S	Sn	17 06 45.3	-0.1
JMK	Ichinoseki	0.93	259	P	Pn	17 06 33.1	-0.3
JMK				S	Sn	17 06 44.8	-1.0
JIO	Ouri	1.06	230	P	Pn	17 06 34.2	-1.1
JKZ	Kuzumaki	1.17	316	P	Pn	17 06 37.8	+0.9
JKZ				S	Sn	17 06 52.7	+0.8
MAT	Matsushiro	4.21	233	P	Pn	17 07 21.7	+3.2
MAT				eS	Sn	17 08 08.2	+1.5
MJAR	Matsushiro Arr	4.21	233	Pn	Pn	17 07 22.2	+3.7
	0.1nm,0.3s,baz=39,slow=11,SNR=9.2						
H11N2	WAKE ISLAND Hy	28.65	125	T	T	17 42 42.7	
	baz=318,slow=75,SNR=9.8						
H11N1	WAKE ISLAND Hy	28.66	125	T	T	17 42 49.4	
	baz=318,slow=75,SNR=8.6						
H11N3	WAKE ISLAND Hy	28.67	125	T	T	17 42 41.5	
	baz=318,slow=75,SNR=9.3						
H11S1	WAKE ISLAND Hy	29.44	127	T	T	17 43 44.6	
	baz=318						
H11S3	WAKE ISLAND Hy	29.45	127	T	T	17 43 45.9	
	baz=318						
H11S2	WAKE ISLAND Hy	29.46	127	T	T	17 43 36.4	
	baz=318						
MKAR	Makanchi Array	43.68	300	P	P	17 14 18.6	0.0
	0.2nm,0.7s,baz=88,slow=7.2,SNR=2.3						
WRA	Warramunga Arr	59.26	189	P	P	17 16 13.7	-1.5
	0.4nm,0.7s,baz=6.6,slow=7.0,SNR=4.8						

IDC 22 17:16:54.7±2.2**,8°.18S**×**121°.92E,h0**^{km}**,mb3.5**/1**, mb1 3.6**/3**,mb1mx3.4**/26**,mbtmp3.4**/3**,ML2.9**/2**,Error ellipse: s-maj=270.1km s-min=29.2km az=55.0,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.78	135	Pn	Pn	17 20 50.0	-1.3
	0.0nm,0.3s,baz=308,slow=15,SNR=3.3						
ASAR	Alice Springs	19.21	145	P	Pn	17 21 21.2	-0.1
	0.1nm,0.3s,baz=328,slow=12,SNR=13						
MKAR	Makanchi Array	65.09	331	P	P	17 27 37.1	0.0
	0.4nm,0.7s,baz=139,slow=7.4,SNR=5.2						

IDC 22 17:27:16.3±2.8**,10°.54S**×**111°.24E,h0**^{km}**,mb3.3**/4**, mb1 3.5**/4**,mb1mx3.3**/29**,mbtmp3.3**/4**,Error ellipse: s-maj=131.5km s-min=22.5km az=47.0,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.14	116	P	P	17 32 34.1	-0.1
	0.9nm,0.7s,baz=287,slow=11,SNR=6.4						
ASAR	Alice Springs	25.24	124	P	P	17 32 43.8	-0.5
	0.2nm,0.7s,baz=291,slow=8.4,SNR=5.6						
CMAR	Chiang Mai Arr	31.27	337	P	P	17 33 37.8	-0.3
	0.4nm,0.7s,baz=159,slow=7.7,SNR=3.9						
MKAR	Makanchi Array	62.67	338	P	P	17 37 43.6	+0.7
	0.2nm,0.5s,baz=153,slow=7.4,SNR=4.3						

IDC 22 17:28:50.9±29.0**,23°.28S**×**178°.05W,h326**^{km}±240^{km}**, mb3.0**/3**,mb1 3.2**/3**,mb1mx3.0**/21**,mbtmp3.7**/3**,Error ellipse: s-maj=166.8km s-min=80.8km az=105.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	36.61	247	P	P	17 35 27.0	-0.1
	0.4nm,0.3s,baz=79,slow=10,SNR=2.7						
ASAR	Alice Springs	43.90	260	P	P	17 36 26.3	-0.2
	0.4nm,0.7s,baz=99,slow=7.7,SNR=12						
ASAR				PcP	PcP	17 38 05.0	-1.3
	0.2nm,0.8s,baz=116,slow=4.2,SNR=4.1						
WRA	Warramunga Arr	44.24	265	P	P	17 36 29.1	-0.1
	0.8nm,0.3s,baz=102,slow=8.3,SNR=43						
WRA				PcP	PcP	17 38 08.1	+0.7
	0.6nm,1.1s,baz=105,slow=3.2,SNR=2.2						
FINES	FINESS Array B	138.40	343	PKP	PKPdf	17 47 38.0	+0.8
	0.7nm,0.8s,baz=46,slow=4.0,SNR=4.0						
AKASG	Malin Array Be	145.38	329	PKPbc	PKPdf	17 47 49.6	-0.4
	0.7nm,0.4s,baz=40,slow=3.5,SNR=7.8						

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*ISK **22** 17:41:18.5, 37°.37N×26°.89E, h7^{km}, ML3.6/24*

*ISCJB **22** 17:41:19.3±0.4, 37°.39N±0°.02×26°.91E±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=3.6km s-min=2.7km az=177.4*

*DDA **22** 17:41:19.4, 37°.44N×27°.00E, h5^{km}±3^{km}, ML3.4*

*THE **22** 17:41:19.4, 37°.41N×26°.98E, h1^{km}±2^{km}, ML3.5/2, Error ellipse: s-maj=2.8km s-min=1.0km az=59.0*

*ATH **22** 17:41:19.8, 37°.42N×26°.85E, h19^{km}±2^{km}, ML3.4/4, Error ellipse: s-maj=2.9km s-min=1.1km az=222.0*

ISC 22 17:41:19.2±1.1**,37°.42N**±0°.02×**26°.93E**±0°.02**,h7**^{km}±10^{km}**, n56,** σ**0**^{s}.**70**/76**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	G?zelcaml?	0.37	40	PG	Pb	17 41 27.5	-0.7
GCAM				SG	Sb	17 41 34.2	0.0
GCAM	G?zelcaml?	0.37	40	iP	Pb	17 41 27.2	-1.0
YKAV	Yalikavak-Bodr	0.40	136	PG	Pg	17 41 26.9	-0.1
YKAV				SG	Sg	17 41 32.9	+0.6
BODT	Bodrum	0.47	139	PG	Pg	17 41 28.1	-0.1
BODT				SG	Sg	17 41 34.9	+0.6
BODT	Bodrum	0.47	139	P	Pg	17 41 28.3	+0.1
BODT				S	Sg	17 41 34.4	+0.1
BDRM	Kayabasi	0.54	130	iP	Pb	17 41 30.7	-0.3
BDRM				IAML_P			
	comp=Z,7μm,0.2s						
DGB	zmir	0.64	357	iP	Pb	17 41 32.6	-0.1
DGB				iS	Sb	17 41 42.1	+0.2
DGB				IAML_P			
	comp=Z,21μm,0.1s						
GMLD	Gumuldur	0.66	359	PG	Pg	17 41 32.6	+0.7
GMLD				SG	Sb	17 41 42.9	+0.4
MLSB	Milas	0.69	100	PG	Pb	17 41 32.6	-1.0
AYDN	Tasoluk	0.79	72	iP	Pb	17 41 35.5	0.0
AYDN				IAML_P			
	comp=Z,16μm,0.2s						
NISR	Nisiros	0.82	169	P	Pb	17 41 35.8	0.0
NISR				S	Sb	17 41 48.0	+1.0
ZEY	zmir	0.89	338	iP	Pg	17 41 36.7	+0.4
ZEY				iS	Sb	17 41 50.5	+1.3
AYDB	Zeytinkoy-Aydi	0.93	55	PG	Pb	17 41 37.6	-0.2
AYDB				SG	Sn	17 41 51.9	-0.6
BLCB	Balcova	0.97	5	PG	Pb	17 41 38.5	+0.1
URLA	Izmir	0.98	344	PG	Pb	17 41 38.6	0.0
URLA	Izmir	0.98	344	iP	Pb	17 41 38.9	+0.3
URLA				iS	Sn	17 41 53.2	-0.5
URLA				IAML_P			
	comp=Z,5μm,0.2s						
AMGA	Amorgos Island	1.01	235	P	Pg	17 41 38.1	-0.5
AMGA				S	Sg	17 41 51.9	+0.1
AMGA				AML	AML	17 41 54.0	
	comp=N,4511μm,0.4s						
AMGA				AML	AML	17 41 55.2	
	comp=E,4835μm,0.5s						
YER	Yerkesik	1.11	104	PN	Pb	17 41 40.5	-0.5
YER	Yerkesik	1.11	104	P	Pb	17 41 40.4	-0.5
APE	Apeiranthos	1.17	253	PN	Pg	17 41 40.1	-1.6
APE	Apeiranthos	1.17	253	P	Pg	17 41 40.5	-1.1
APE				S	Sg	17 41 56.7	-0.1
APE				AML	AML	17 41 59.0	
	comp=N,1763μm,0.2s						
APE				AML	AML	17 41 59.4	
	comp=E,1583μm,0.3s						
CHOS	Chios island	1.19	325	PN	Pg	17 41 41.9	-0.2
CHOS	Chios island	1.19	325	P	Pg	17 41 41.5	-0.7
CHOS				S	Sb	17 41 58.7	+0.8
CHOS				AML	AML	17 42 00.8	
	comp=E,2945μm,0.3s						
CHOS				AML	AML	17 42 01.5	
	comp=N,1665μm,0.4s						
CHOS	Chios island	1.19	325	P	Pg	17 41 41.4	-0.7
CHOS				S	Sn	17 41 59.4	+0.4
KRBN	Karaburun	1.21	346	PN	Pb	17 41 42.7	+0.1
FOCM	Foa	1.30	353	PN	Pg	17 41 44.6	+0.3
ANAF	Anafi Island	1.41	222	P	Pn	17 41 45.5	+0.1
ANAF				S	Sb	17 42 04.4	+0.4
ANAF				AML	AML	17 42 10.0	
	comp=N,5158μm,0.4s						
ANAF				AML	AML	17 42 10.1	
	comp=E,4700μm,0.4s						
ANAF	Anafi Island	1.41	222	P	Pn	17 41 45.0	-0.3
ANAF				S	Sn	17 42 05.2	+1.0
TNSA	Tinos	1.41	276	P	Pn	17 41 45.7	+0.3
TNSA				S	Sn	17 42 04.1	-0.2
GOMA	Golmarmara-Man	1.51	31	PN	Pg	17 41 47.6	-0.5
ARG	Arkhangelos	1.53	141	PN	Pn	17 41 46.8	-0.3
ARG	Arkhangelos	1.53	141	P	Pg	17 41 49.3	+0.6
ZEDA	zmir-Bergama	1.55	4	iP	Pn	17 41 46.2	-1.2
ZEDA				IAML_P			
	comp=Z,2μm,0.1s						
PSRA	Psara	1.56	317	P	Pn	17 41 47.6	+0.2
PSRA				S	Sn	17 42 08.5	+0.6
THR7	Fira-Santorini	1.56	231	P	Pn	17 41 46.6	-0.8
SANT	Santorini	1.57	229	PN	Pn	17 41 46.8	-0.9
TAVA	DENIZLI_Tavas	1.58	88	iP	Pg	17 41 50.3	+0.8
THR3	Thira Island,	1.58	231	P	Pn	17 41 48.4	+0.6
AKHS	Akhisar	1.62	25	iP	Pb	17 41 49.7	+0.2
AKHS				iS	Sg	17 42 10.5	-0.8
AKHS				IAML_P			
	comp=Z,2μm,0.2s						
AKS	Akhisar	1.62	25	PN	Pb	17 41 48.8	-0.7
THR6	Thira Island,	1.62	230	P	Pn	17 41 48.5	+0.2
MANT	Manisa	1.68	50	iP	Pb	17 41 49.7	-0.9
DENT	Denizli	1.70	78	PN	Pb	17 41 49.8	-1.2
KULA	Kula-Manisa	1.75	51	PN	Pb	17 41 50.9	-0.9
KULA	Kula-Manisa	1.75	51	P	Pn	17 41 49.5	-0.7
KARP	Karpathos	1.87	174	PN	Pn	17 41 51.3	-0.5
FETY	Fethiye	1.89	114	PN	Pn	17 41 52.3	+0.3
FETY	Fethiye	1.89	114	iP	Pn	17 41 51.9	-0.1
STEP	BALIKESIR_Sava	2.05	17	iP	Pg	17 41 57.9	-0.7
STEP				iS	Sg	17 42 27.4	+2.2
USAK	Uak-Merkez	2.10	51	iP	Pg	17 41 58.5	-0.9
GOLH	Golhisar	2.10	94	iP	Pg	17 41 58.5	-1.1
DEMI	Demirci	2.15	40	iP	Pg	17 42 01.4	+1.0
BAYC	CANAKKALE_Bayr	2.34	353	iP	Pn	17 41 57.3	-0.9
ZKR	Zakros	2.37	194	PN	Pn	17 41 58.1	-0.4
AKAS	Kas	2.45	118	PN	Pn	17 42 00.1	+0.3
ELL	Elmali	2.47	105	PN	Pn	17 42 00.7	+0.6

NNC 22 17:41:35.0±2.7**,38°.81N**×**72°.81E,h0**^{km}**,mb3.9,mpv3.5, 6C-3D,Error ellipse: s-maj=20.2km s-min=14.5km az=156.0,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.31	24	⇑P	Pg	17 41 58.4	-1.7
	9.4nm,0.3s						
SFK				⇓S	Sb	17 42 17.9	-0.3
	107nm,0.6s						
SFK	Sufi-Kurgan	1.31	24	Pg	Pg	17 41 59.3	-0.9
	14nm,0.2s						
SFK				Lg	Lg	17 42 18.3	
	37nm,0.2s						
MNAS	Manas	3.68	356	⇑Pn	Pn	17 42 32.7	-0.5
	6.0nm,0.4s						
MNAS				⇑Sn	Sn	17 43 19.4	+2.0
	4.0nm,0.5s						
MNAS	Manas	3.68	356	Pg	Pg	17 42 43.4	-2.1
	3.9nm,0.5s						
MNAS				Lg	Lg	17 43 32.1	
	7.8nm,0.4s						
MRKS	Merke	3.94	4	Pg	Pb	17 42 47.5	+2.1
	18nm,0.5s						
MRKS				Lg	Lg	17 43 40.1	
	12nm,0.6s						
IUG	Iuzhnay	3.95	328	Pg	Pb	17 42 46.7	+1.2
	51nm,0.3s						
IUG				Lg	Lg	17 43 38.8	
	49nm,0.3s						
AAK	Ala-Archa	4.03	18	⇑Pg	Pb	17 42 44.3	-2.6
	5.4nm,0.8s						
AAK				⇑Lg	Lg	17 43 40.6	
	15nm,0.8s						
TKM2	Tokmak 2	4.61	26	⇓Pg	Pg	17 43 02.4	-1.0
	1.7nm,0.4s						

TKM2				⇓Lg	Lg	17 44 04.5	
	4.6nm,0.7s						
KK31	Karatay Array	4.63	339	Pn	Pn	17 42 44.6	-1.5
	2.2nm,0.3s,baz=148,slow=12,SNR=45						
KK31				⇑Sn	Sn	17 43 40.8	+0.2
	3.4nm,0.4s,baz=147,slow=25						
KST	Kastek	4.85	28	Pg	Pg	17 43 05.3	-2.7
	7.0nm,3.2s						
KST				Lg	Lg	17 44 10.7	
	11nm,1.3s						
DGS	Degeres	4.96	26	Pg	Pg	17 43 07.0	-3.0
	6.3nm,0.5s						
DGS				Lg	Lg	17 44 13.4	
	12nm,0.8s						
IZV	Izvestkoviy	5.11	33	Pg	Pg	17 43 10.4	-2.5
	3.7nm,0.4s						
IZV				Lg	Lg	17 44 19.4	
	13nm,0.6s						
TNSS	Tian-Shan	5.25	35	Pg	Pg	17 43 12.7	-3.0
	5.7nm,0.3s						
TNSS				Lg	Lg	17 44 24.1	
	5.7nm,0.7s						
MDOK	Medeo	5.40	35	Pg	Pg	17 43 15.6	-2.9
	2.2nm,0.6s						
MDOK				Lg	Lg	17 44 29.1	
	5.4nm,0.6s						
KOTS	Kotyrbulak	5.48	35	Pg	Pg	17 43 16.4	-3.6
	2.5nm,0.4s						
KOTS				Lg	Lg	17 44 29.9	
	10nm,0.6s						
KTBS	Karatobe	5.70	30	Pg	Pg	17 43 21.2	-3.0
	2.3nm,0.5s						
KTBS				Lg	Lg	17 44 37.9	
	8.6nm,0.3s						
KUU	Kurty	5.72	26	Pg	Pg	17 43 20.7	-4.0
	1.7nm,0.6s						
KUU				Lg	Lg	17 44 37.1	
	5.8nm,0.7s						

IDC 22 17:44:45.1±10.0,**4°.42S**×**152°.22E**,**h245**^{km}±133^{km}, **mb3.6**/6,**mb1 3.6**/7,**mb1mx3.2**/33,**mbtmp4.1**/7,**Error ellipse: s-maj=44.6km s-min=21.0km az=25.0**,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	16.62	200	P	P	17 48 22.8	-0.3
	0.1nm,0.3s,baz=24,slow=10.0,SNR=3.1						
SIJI	Sorong	21.23	279	P	P	17 49 12.8	+0.2
	3.0nm,0.4s,baz=78,slow=13,SNR=5.5						
DZM	Mont Dzumac	22.31	143	P	P	17 49 22.5	-0.1
	4.5nm,0.8s,baz=345,slow=20,SNR=3.6						
WRA	Warramunga Arr	23.27	227	P	P	17 49 31.5	+0.2
	6.4nm,0.4s,baz=53,slow=9.7,SNR=199						
ASAR	Alice Springs	26.04	221	P	P	17 49 56.2	-0.1
	0.8nm,0.3s,baz=53,slow=9.1,SNR=55						
STKA	Stephens Creek	29.07	199	P	P	17 50 23.9	+0.8
	1.0nm,0.6s,baz=34,slow=15,SNR=3.3						
FITZ	Fitzroy Crossi	29.34	240	P	P	17 50 25.0	-0.5
	1.4nm,0.4s,baz=54,slow=8.7,SNR=13						

SJA 22 17:45:50.5±0.9,**31°.73S**×**68°.36W**,**h11**^{km}±3^{km},**ML3.2**, **MW3.5**,**San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.21	229	*e*P	Pb	17 45 56.0	-0.3
ZON	Zonda	0.33	303	*e*P	Pb	17 45 58.1	-0.3
ZON				*e*S	Sb	17 46 03.0	-0.7
ZON				IAML		17 46 04.0	
	comp=Z,2μm,0.3s						
RTLL	Cerro Villicun	0.41	346	*e*P	Pb	17 45 59.4	-0.3
RTLL				*e*S	Sb	17 46 05.5	-0.5
RTLL				IAML		17 46 07.5	
	comp=E,2μm,0.5s						
RTLL				IAML		17 46 07.8	
	comp=Z,2μm,0.3s						
AMOG	MOGNA	0.79	352	*e*P	Pb	17 46 06.3	0.0
AMOG				*e*S	Sb	17 46 18.0	+1.0
RTLS	Leoncito	0.80	264	IAML		17 46 06.3	
	comp=Z,558nm,0.1s						
RTLS				*e*P	Pg	17 46 06.3	+0.2
ASAL	Salagasta	0.95	205	*e*P	Pg	17 46 08.9	-0.1
ASAL				*e*S	Sn	17 46 22.8	-0.7
AUSP	Uspallata	1.01	240	*e*P	Pg	17 46 10.0	0.0
AUSP				*e*S	Sn	17 46 25.3	+0.2
ACAN	Cantantal	1.13	119	*e*P	Pb	17 46 12.0	-0.2
ACAN				*e*S	Sn	17 46 27.8	-0.1
ARCO	CERRO ARCO	1.22	203	*e*P	Pb	17 46 13.7	+0.1
ARCO				*e*S	Sn	17 46 30.9	+0.9
ARCO				IAML		17 46 36.3	
	comp=Z,469nm,0.7s						
ACCO	Cerro Coronel	1.29	332	*e*P	Pb	17 46 15.1	+0.2
ACCO				*e*S	Sn	17 46 34.0	+2.0
AAGR	Agrelo	1.41	196	*e*P	Pg	17 46 17.4	-0.3
ACDV	Cuesta del Vie	1.68	337	*e*P	Pb	17 46 21.8	+0.2
AROD	Rodeo	1.82	328	*e*P	Pb	17 46 24.3	+0.2
APLL	PUNTA DE LOS L	2.06	50	*e*P	Pb	17 46 27.1	-0.7
APLL				IAML		17 46 54.4	
	comp=Z,290nm,0.4s						
MRA	San Martin	2.34	108	*e*P	Pn	17 46 30.3	+1.2
MRA				*e*S	Sb	17 47 01.7	-0.1
MRA				IAML		17 47 04.8	
	comp=Z,209nm,0.6s						
ROC1	El Roble	2.57	240	*e*P	Pb	17 46 35.3	-1.4
ACLC	CERRO LA CRUZ	2.59	28	*e*P	Pb	17 46 35.3	-1.8
TCA	Tanti	3.23	84	*e*P	Pn	17 46 41.9	+0.6
TCA				*e*S	Sb	17 47 23.7	-3.7
TCA				IAML		17 47 41.6	
	comp=Z,74nm,0.4s						
CYA	Choya	3.95	35	IAML		17 48 07.7	
	comp=Z,52nm,0.3s						

KRNET ***22*** *17:47:59.0±0.1,42°.53N×79°.71E,h14^{km},mb1.9*

SOME ***22*** *17:48:00.2,42°.50N×79°.67E,h10^{km}*

NNC ***22*** *17:48:00.8±1.3,42°.59N×79°.64E,h0^{km},mb2.8,mpv2.4, Error ellipse: s-maj=8.9km s-min=4.3km az=151.0*

ISC 22 17:48:00.0±1.6,**42°.53N**±0°.05×**79°.65E**±0°.04,**h2**^{km}±12^{km}, **n22**,σ**0^{s}.56**/40,**7C-4D**,**Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.64	348	*e*P	Pb	17 48 13.4	-0.6
	7.6nm,0.1s						
SHLS				*e*S	Sb	17 48 22.6	-0.9
	23nm,0.3s						
PDGK	Podgornoye	0.81	352	P	Pg	17 48 15.4	-0.1
	0.4nm,0.2s						
PDGK				S	Sg	17 48 26.2	+0.2
	1.9nm,0.3s						
PDGK	Podgornoye	0.81	352	⇑P	Pg	17 48 15.6	+0.1
	0.3nm,0.4s						
PDGK				⇑S	Sg	17 48 25.8	-0.1
	0.8nm,0.2s						
PDGK	Podgornoye	0.81	352	⇓*i*P	Pg	17 48 14.8	-0.7
	baz=48						
PDGK				⇓*i*S	Sg	17 48 26.0	+0.1
	baz=48						
KTMS	Ketmen	1.05	29	P	Pg	17 48 20.0	-0.2
	2.7nm,0.1s						
KTMS				S	Sg	17 48 34.2	+0.4
	1.3nm,0.1s						
KTMS	Ketmen	1.05	29	*e*P	Pg	17 48 20.0	-0.2
	2.7nm,0.1s						
KTMS				*e*S	Sg	17 48 34.2	+0.4
	1.3nm,0.1s						
SATY	Saty	1.05	300	P	Pg	17 48 20.2	0.0
	1.0nm,0.1s						
SATY				S	Sb	17 48 34.9	-0.4
	5.3nm,0.1s						
SATY	Saty	1.05	300	*e*P	Pg	17 48 20.2	0.0
	1.0nm,0.1s						
SATY				*e*S	Sb	17 48 35.0	-0.4
	5.3nm,0.1s						
TARG	Taragay, Kyrgy	1.59	240	⇑*i*P	Pn	17 48 29.6	+0.1
	baz=41						
TARG				⇑*i*S	Sb	17 48 51.4	+0.4
	baz=41						
DJR	Jarkent	1.80	3	P	Pb	17 48 33.2	-0.6
	0.7nm,0.3s						
DJR				S	Sb	17 48 57.0	+0.1
	2.4nm,0.3s						
DJR	Jarkent	1.80	3	*e*P	Pb	17 48 33.3	-0.6
	0.5nm,0.2s						
DJR				*e*S	Sb	17 48 57.0	+0.1
	2.2nm,0.3s						
KDJ	Kajisay	1.87	258	⇓*i*P	Pb	17 48 34.3	-0.7
	baz=59						
KDJ				⇓*i*S	Sg	17 49 00.3	+0.2
	baz=59						
KOTS	Kotyrbulak	1.99	292	Pg	Pg	17 48 38.4	+0.2
	3.1nm,0.2s						
KOTS				Lg	Lg	17 49 06.0	
	9.3nm,0.4s						
KOTS	Kotyrbulak	1.99	292	*e*P	Pb	17 48 37.3	+0.3
	3.1nm,0.2s						
KOTS				*e*S	Sg	17 49 04.2	+0.2
	9.3nm,0.4s						
MDOK	Medeo	2.01	289	⇑P	Pn	17 48 35.4	+0.2
	2.9nm,1.0s						
MDOK				S	Sn	17 49 00.5	-0.5
	1.7nm,0.7s						
ARXS	Arharly	2.14	322	Pg	Pb	17 48 39.0	-0.6
	1.4nm,0.4s						
ARXS				Lg	Lg	17 49 07.2	
	2.6nm,0.3s						
ARXS	Arharly	2.14	322	*e*P	Pb	17 48 39.0	-0.6
	1.4nm,0.4s						
ARXS				*e*S	Sb	17 49 07.2	+0.6
	2.6nm,0.3s						
CHKK	Chushkaly	2.35	305	Pg	Pb	17 48 42.6	-0.5
	1.0nm,0.2s						
CHKK				Lg	Lg	17 49 13.2	
	1.9nm,0.3s						
CHKK	Chushkaly	2.35	305	*e*P	Pb	17 48 42.6	-0.5
	1.0nm,0.2s						
CHKK				*e*S	Sb	17 49 13.2	+0.6
	1.9nm,0.3s						
ULHL	Ulahol	2.54	265	⇑*i*P	Pn	17 48 43.9	+1.5
	baz=65						
ULHL				⇑*i*S	Sb	17 49 16.9	-1.2
	baz=65						
KAPS	Kapalarasan	2.76	356	Pg	Pb	17 48 50.0	-0.1
	0.4nm,0.3s						
KAPS				Lg	Lg	17 49 25.6	
	2.7nm,0.3s						
KAPS	Kapalarasan	2.76	356	*e*P	Pb	17 48 50.0	-0.1
	0.4nm,0.3s						
KAPS				*e*S	Sb	17 49 25.6	+1.2
	2.7nm,0.3s						

IDC 22 17:54:44.4±2.4,**7°.26S**×**129°.39E**,**h135**^{km}±24^{km},**mb3.4**/2, **mb1 3.5**/5,**mb1mx3.2**/29,**mbtmp3.9**/5,**Error ellipse: s-maj=33.8km s-min=20.6km az=82.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.38	242	P	Pn	17 56 16.0	-0.2
	8.0nm,0.3s,baz=90,slow=5.1,SNR=14						
BATI				S	Sn	17 57 22.5	-5.3
	16nm,0.3s,baz=127,slow=2.9,SNR=10						
SIJI	Sorong	6.61	16	P	Pn	17 56 19.2	-0.1
	0.6nm,0.3s,baz=221,slow=19,SNR=12						
SIJI				S	Sn	17 57 30.8	-2.7
	2.3nm,0.3s,baz=241,slow=23,SNR=11						
FITZ	Fitzroy Crossi	11.38	198	P	Pn	17 57 18.9	-4.2
	1.4nm,0.3s,baz=34,slow=11,SNR=32						
FITZ				S	Sn	17 59 17.0	-12
	0.9nm,0.3s,baz=90,slow=20,SNR=5.2						
WRA	Warramunga Arr	13.49	160	P	Pn	17 57 46.8	-3.8
	2.2nm,0.3s,baz=324,slow=14,SNR=47						
WRA				S	Sn	18 00 07.1	-13
	1.4nm,0.3s,baz=338,slow=22,SNR=8.0						
ASAR	Alice Springs	16.88	166	P	P	17 58 31.8	-0.8
	0.7nm,0.3s,baz=339,slow=9.8,SNR=62						
ASAR				S	Sn	18 01 26.1	-15
	0.1nm,0.3s,baz=340,slow=24,SNR=3.2						
STKA	Stephens Creek	27.01	157	P	P	18 00 14.6	+0.7
	1.0nm,0.4s,baz=319,slow=10,SNR=5.5						
MKAR	Makanchi Array	68.11	327	P	P	18 05 30.1	+0.4
	0.2nm,0.3s,baz=115,slow=8.2,SNR=7.2						
LPAZ	La Paz	150.88	144	PKPbc	PKPbc	18 14 21.6	-1.3
	1.1nm,0.6s,baz=243,slow=2.3,SNR=3.5						

IDC ***22*** *18:21:48.0±0.6,39°.37S×177°.28E,h0^{km},mb4.7/10, mb1 4.8/12,mb1mx4.6/27,mbtmp4.7/12,ML4.5/2,MS4.0/19, Ms1 4.0/19,ms1mx3.9/35,Error ellipse: s-maj=19.4km s-min=10.8km az=84.0*

NEIC ***22*** *18:21:48.2±0.2,39°.41S×177°.58E,h10^{km},mb5.1/26, MW4.8,Error ellipse: s-maj=5.7km s-min=3.1km az=125.0, Moment Tensor Solution. s18 Moment tensor: Scale 10^{16}Nm; M_{rr}1.15; $M_{\theta\theta}$0.86; $M_{\phi\phi}$-2.01; $M_{r\theta}$-1.25; $M_{\theta\phi}$-0.20; $M_{\phi r}$-0.03; Best double couple: $M_0$2.10000×10^{16} NP1: ϕ_s331.00000°,δ56.00000°,λ37.00000°. NP2: ϕ_s218.00000°,δ60.00000°,λ140.00000°. Principal axes: T 2.2600, Plg48.0000°, Azm182.0000°; N -0.2300, Plg42.0000°, Azm7.0000°; P -2.0300, Plg3.0000°, Azm275.0000°;*

BJI ***22*** *18:21:49.8,39°.23S×177°.78E,h26^{km},mB5.7/13,mb5.3/14, Ms5.4/9,Ms7 5.1/7*

ISCJB ***22*** *18:21:51.1±0.3,39°.39S±0°.02×177°.51E±0°.03,h44^{km}±2^{km}, mb5.3/53,MS4.2/21,Error ellipse: s-maj=4.5km s-min=2.5km az=23.7*

WEL ***22*** *18:21:53.2,39°S±1°×17°7E±°,h25^{km}±2^{km},ML5.4/18*

ISC 22 18:21:50.3±0.5,**39°.39S**±0°.02×**177°.47E**±0°.03,**h20**^{km}±2^{km}, **h20**^{km}**:pP-P**,**n278**,σ**1^{s}.42**/304,**mb5.3**/53,**MS4.1**/21,**1C-1D**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.37	330	P	Pb	18 21 58.6	+0.4
WHHZ				S	Sb	18 22 03.8	+0.2
ARHZ	Aropaoanui	0.39	289	P	Pn	18 22 00.1	-0.8
ARHZ				S	Sb	18 22 06.1	+1.9
CKHZ	Cape Kidnapper	0.40	229	P	Pn	18 22 03.6	+2.5
CKHZ				P	Pn	18 22 03.5	+2.5
KNZ	Kokohu	0.40	23	P	Pn	18 22 00.8	-0.2
KNZ				S	Sn	18 22 07.6	-0.5
MHGZ	Mahia Peninsul	0.42	55	P	Pn	18 22 02.9	+1.7
RAHZ	Arahi	0.56	328	P	Pg	18 22 01.9	+0.3
RAHZ				S	Sb	18 22 09.4	+0.2
PRGZ	Paritu Road	0.57	34	P	Pn	18 22 04.3	+0.9
NMHZ	Naumai	0.59	300	P	Pn	18 22 03.2	-0.6
NMHZ				S	Sg	18 22 11.1	+0.8
MCHZ	McNeill Hill	0.60	265	P	Pn	18 22 05.2	+1.4
KAHZ	Kahuranaki	0.61	229	P	Pn	18 22 06.6	+2.6
SNGZ	Shannon Statio	0.62	351	P	Pg	18 22 03.1	+0.4
SNGZ				S	Sg	18 22 11.7	+0.7
RIGZ	Rimuhau	0.72	18	P	Pn	18 22 05.8	+0.3
MTHZ	Maungataniwha	0.73	318	P	Pb	18 22 04.4	0.0
PXZ	Pawanui	0.79	216	P	Pn	18 22 08.4	+2.0
PXZ				P	Pn	18 22 08.4	+2.0
BKZ	Black Stump Fm	0.79	286	*e*Pn	Pg	18 22 06.3	+0.4
BKZ				*e*Sg	Sn	18 22 17.6	-0.1
BKZ	Black Stump Fm	0.79	286	P	Pn	18 22 06.5	0.0
BKZ				P	Pn	18 22 06.4	0.0
KWHZ	Kaweka Forest	0.81	268	P	Pn	18 22 08.0	+1.3
RTZ	Ruatahuna	0.87	334	P	Pb	18 22 06.6	-0.1
RAGZ	Rawiri	0.90	357	P	Pg	18 22 07.7	-0.2
MRHZ	Matea Rd	0.99	304	P	Pb	18 22 09.0	+0.1
TKGZ	Te Karaka	1.00	17	P	Pg	18 22 09.4	-0.3
WPHZ	Waipukurau	1.04	230	P	Pg	18 22 11.7	+1.1
MWZ	Matawai	1.06	2	P	Pb	18 22 09.9	-0.1
MUGZ	Murupara	1.07	329	P	Pb	18 22 09.8	-0.3
CNGZ	Carnagh Statio	1.08	33	P	Pg	18 22 11.1	-0.1
PRHZ	Porangahau	1.08	216	P	Pg	18 22 12.2	+0.8
BHHZ	Black Hill Sta	1.09	265	P	Pg	18 22 11.9	+0.2
BHHZ				P	Pg	18 22 11.8	+0.2
URZ	Urewera	1.17	346	Pg	Pn	18 22 11.1	-0.5
	951nm,0.3s,baz=186,slow=7.2,SNR=506						
URZ				Lg	Lg	18 22 25.8	
	1μm,0.3s,baz=24,slow=20,SNR=29						
URZ	Urewera	1.17	346	P	Pn	18 22 11.3	-0.3
HATZ	Hinemaiaia	1.18	295	P	Pb	18 22 12.5	+0.3
ALRZ	Allen Road	1.21	313	P	Pn	18 22 12.3	+0.1
PRRZ	Plateau Road	1.23	316	P	Pn	18 22 12.3	-0.1
TWGZ	Tauwhareparae	1.28	18	P	Pb	18 22 13.5	-0.3
RRRZ	Republican Roa	1.29	324	P	Pn	18 22 13.4	+0.1
ANWZ	Angora Road	1.31	215	P	Pg	18 22 15.2	-0.5
RITZ	Rihia Road	1.32	288	P	Pb	18 22 14.9	+0.4
MOVZ	Moawhango	1.33	269	P	Pg	18 22 15.5	-0.6
TSZ	Takapari Road	1.34	240	P	Pb	18 22 15.2	+0.4
WPRZ	Whakapapatarin	1.34	310	P	Pn	18 22 14.1	+0.2
DVHZ	Dannevirke	1.35	228	P	Pb	18 22 15.5	+0.5
HRRZ	Handcock Road	1.36	317	P	Pn	18 22 14.1	-0.2
TARZ	Mount Tarawera	1.38	327	P	Pn	18 22 14.6	0.0
WHTZ	Whakaora	1.39	301	P	Pb	18 22 15.5	-0.1
EDRZ	Edgecumbe	1.41	336	P	Pn	18 22 14.5	-0.4
TUVZ	Tukino	1.41	275	P	Pb	18 22 16.6	+0.4
RATZ	Rangitukua	1.42	291	P	Pb	18 22 15.8	-0.4
RUGZ	Raukumara Rang	1.44	7	P	Pn	18 22 15.3	-0.1
HLRZ	Highlands Stat	1.44	322	P	Pb	18 22 16.3	-0.1
KATZ	Kakaramea	1.44	286	P	Pb	18 22 16.6	0.0
HSRZ	Hossack Road	1.44	318	P	Pn	18 22 15.4	0.0
KRVZ	Karewarewa	1.45	281	P	Pb	18 22 17.0	+0.2
PUZ	Puketiti	1.46	25	P	Pb	18 22 15.8	-1.0
PUZ				P	Pn	18 22 15.6	0.0
WHVZ	Whangaehu Hut	1.46	274	P	Pb	18 22 17.1	+0.1
NGZ	Ngauruhoe	1.47	278	P	Pb	18 22 17.5	+0.5
DRZ	Dome Shelter	1.48	274	P	Pb	18 22 18.1	+0.7
WTVZ	West Tongariro	1.49	280	P	Pb	18 22 17.7	+0.3
GRRZ	Galatos Road	1.49	314	P	Pn	18 22 16.6	+0.5
FWVZ	Far West T-bar	1.49	275	P	Pb	18 22 17.3	-0.2
TRVZ	Turoa	1.49	273	P	Pb	18 22 17.5	-0.1
COVZ	Chateau Observ	1.51	277	P	Pb	18 22 17.6	-0.2
WATZ	Wairara	1.52	296	P	Pn	18 22 16.5	+0.1
MARZ	Manawahe	1.54	336	P	Pn	18 22 16.7	0.0
OMRZ	Omania	1.55	326	P	Pn	18 22 16.9	+0.1
MTVZ	Mangateitei	1.55	270	P	Pb	18 22 18.6	+0.2
KUTZ	Kaahu Road	1.57	305	P	Pn	18 22 17.2	+0.1
UTU	Utuhina	1.57	320	P	Pn	18 22 17.5	+0.3
PKGZ	Pakihiroa	1.58	18	P	Pn	18 22 17.3	0.0
WHRZ	Whale Island	1.58	346	P	Pn	18 22 17.0	-0.3
BFZ	Birch Farm	1.59	216	*e*Pn	Pn	18 22 18.0	+0.6
BFZ				*e*Sn	Sn	18 22 35.1	-2.3
BFZ	Birch Farm	1.59	216	P	Pb	18 22 18.5	-0.5
TWVZ	Taurewa	1.61	281	P	Pb	18 22 18.8	-0.7
LIRZ	Lichensteins R	1.63	328	P	Pn	18 22 18.0	+0.1
PRWZ	Pori Road	1.63	224	P	Pb	18 22 19.6	-0.2
NGRZ	Ngongotaha	1.64	322	P	Pn	18 22 18.3	+0.2
POWZ	Post Office Ro	1.65	232	P	Pb	18 22 20.0	0.0
HAZ	Te Kaha	1.65	9	P	Pn	18 22 18.2	0.0
KARZ	Kaharoa	1.67	325	P	Pn	18 22 18.1	-0.5
OPRZ	Ohinepanea	1.71	335	P	Pn	18 22 18.3	-0.7
WMGZ	Waiomatatini S	1.74	25	P	Pn	18 22 19.6	+0.2
CPWZ	Castlepoint	1.80	212	P	Pb	18 22 21.7	-0.9
TIWZ	Tintock	1.84	221	P	Pb	18 22 22.0	-1.3
TLZ	Tolley Road	1.85	305	P	Pn	18 22 20.7	-0.3
OHWZ	Ohakea	1.85	243	P	Pb	18 22 23.9	+0.5
TGRZ	Tauranga	1.91	330	P	Pn	18 22 21.4	-0.5
MRZ	Mangatainoka R	1.93	228	P	Pn	18 22 23.0	+1.0
MXZ	Matakaoa Point	1.94	20	*e*Pn	Pn	18 22 22.0	-0.2
MXZ				*e*Sn	Sn	18 22 44.7	-1.3
MXZ	Matakaoa Point	1.94	20	P	Pn	18 22 22.5	+0.2
WAZ	Wanganui	1.95	259	P	Pb	18 22 25.5	+0.2
KMRZ	Kaimai	1.96	322	P	Pn	18 22 22.3	-0.2
TMWZ	Te Maipa	2.10	215	P	Pn	18 22 25.0	+0.6
HOWZ	Holdsworth Sta	2.12	224	P	Pn	18 22 25.2	+0.5
VRZ	Vera Road	2.12	276	P	Pn	18 22 26.4	+1.7
HIZ	Hauiti	2.22	293	*e*Pn	Pn	18 22 26.7	+0.6
HIZ	Hauiti	2.22	293	P	Pn	18 22 26.6	+0.6
OGWZ	Otaki Gorge	2.27	230	P	Pn	18 22 27.8	+1.2
MTW	Mount Morrison	2.32	220	P	Pn	18 22 27.6	+0.2
MYRZ	Mayor Island	2.32	335	P	Pn	18 22 27.0	-0.5
TRWZ	Traveller	2.42	214	P	Pn	18 22 28.4	-0.4
KIW	Kapiti Island	2.45	232	P	Pn	18 22 30.1	+0.9
CAW	Cannon Point	2.51	226	P	Pn	18 22 30.8	+0.8
PAWZ	Paruwai Farm	2.52	218	P	Pn	18 22 30.1	-0.2
MSWZ	Moikau Station	2.64	219	P	Pn	18 22 31.3	-0.4
PKE	Pukeiti	2.71	273	P	Pn	18 22 35.1	+2.3
PKE				P	Pn	18 22 35.1	+2.3
PLWZ	Palliser	2.75	217	P	Pn	18 22 33.0	-0.4
NBEZ	Newall Road No	2.80	271	P	Pn	18 22 36.2	+2.3
BHW	Baring Head	2.83	224	P	Pn	18 22 34.1	-0.2
SNZO	South Karori	2.85	227	*e*Pn	Pn	18 22 34.8	+0.1
MKAZ	Moumakai	2.92	321	P	Pn	18 22 36.2	+0.6
KUZ	Kuaotunu	2.98	332	P	Pn	18 22 35.9	-0.6
TCW	Tory Channel	3.04	232	P	Pn	18 22 37.7	+0.4
DUWZ	D’Urville Isla	3.06	242	P	Pn	18 22 38.2	+0.6
ETAZ	East Tamaki Re	3.15	320	P	Pn	18 22 39.7	+0.8
WIAZ	Waiheke Island	3.19	324	P	Pn	18 22 39.8	+0.5
AWAZ	Awhitu Peninsu	3.22	315	P	Pn	18 22 40.5	+0.8
MBAZ	Motutapu North	3.31	321	P	Pn	18 22 41.8	+0.7
MBAZ				P	Pb	18 22 42.0	-6.5
WTAZ	Waiatarua	3.35	316	P	Pn	18 22 42.1	+0.4
TUWZ	Tuamarina	3.37	232	P	Pn	18 22 41.2	-0.7
ABAZ	Army Bay	3.48	322	P	Pn	18 22 44.0	+0.6
GRZ	Great Barrier	3.52	332	P	Pn	18 22 44.0	+0.1
GRZ				P	Pn	18 22 44.0	+0.1
BSWZ	Blackbirch Sta	3.59	229	P	Pn	18 22 44.6	-0.2
NNZ	Nelson	3.62	238	P	Pn	18 22 45.7	+0.5
QRZ	Quartz Range	4.05	248	P	Pn	18 22 50.7	-0.5
THZ	Tophouse	4.21	234	*e*Pn	Pn	18 22 53.2	-0.2
THZ	Tophouse	4.21	234	P	Pn	18 22 53.1	-0.2
KHZ	Kahutara	4.24	223	*e*Pn	Pn	18 22 53.8	0.0
KHZ				*e*Sn	Sn	18 23 40.4	-2.3
KHZ	Kahutara	4.24	223	P	Pn	18 22 53.6	-0.2
DSZ	Denniston Nort	4.91	240	P	Pn	18 23 03.3	+0.2
LTZ	Lake Taylor	5.18	228	*e*Pn	Pn	18 23 05.7	-1.1
LTZ	Lake Taylor	5.18	228	P	Pn	18 23 06.2	-0.6
OUZ	Omahuta	5.19	322	*e*Pn	Pn	18 23 07.5	+0.7
OUZ	Omahuta	5.19	322	P	Pn	18 23 07.9	+1.1
AMCZ	Amberley	5.24	222	P	Pn	18 23 07.4	-0.1
CRLZ	Canterbury Las	5.54	220	*e*Pn	Pn	18 23 11.0	-0.6
CRLZ				*e*Sn	Sn	18 24 10.0	-4.7
CRLZ	Canterbury Las	5.54	220	P	Pn	18 23 11.5	-0.2
MQZ	McQueen’s Vall	5.62	218	*e*Pn	Pn	18 23 11.4	-1.4
MQZ				*e*Sn	Sn	18 24 11.4	-5.3
AKCZ	Akaroa Harbour	5.63	216	P	Pn	18 23 12.4	-0.5
INZ	Inchbonnie	5.64	232	P	Pn	18 23 13.0	0.0
OXZ	Oxford	5.67	224	*e*Pn	Pn	18 23 12.9	-0.5
OXZ				*e*Sn	Sn	18 24 13.9	-4.0
OXZ	Oxford	5.67	224	P	Pn	18 23 13.4	0.0
CTZ	Chatham Island	6.20	136	P	Pn	18 23 23.4	+2.7
RPZ	Rata Peaks	6.46	226	Pn	Pn	18 23 24.0	-0.4
	4.2nm,0.3s,baz=104,slow=2.7,SNR=10						
RPZ				Sn	Sn	18 24 31.2	-6.3
	15nm,0.3s,baz=343,slow=19,SNR=18						
FOZ	Fox Glacier	7.08	232	*e*Pn	Pn	18 23 32.1	-0.6
LBZ	Lake Benmore	7.38	225	*e*Pn	Pn	18 23 36.0	-0.9
ODZ	Otahua Downs	7.58	220	*e*Pn	Pn	18 23 38.8	-0.9
ODZ				*e*Sn	Sn	18 24 58.1	-6.9
WKZ	Wanaka	8.30	226	*e*Pn	Pn	18 23 48.9	-0.7
MLZ	Mavora Lakes	9.13	226	*e*Pn	Pn	18 24 00.3	-0.7
WHZ	Wether Hill Ro	9.56	224	*e*Pn	Pn	18 24 05.2	-1.5
DCZ	Deep Cove	9.74	228	*e*Pn	Pn	18 24 07.0	-2.2
PYZ	Puysegur Point	10.42	226	*e*Pn	Pn	18 24 18.7	+0.1
PINNC	Pines Island,	18.78	330	*e*P	P	18 26 06.5	-1.9
	76nm,1.2s						
OUENC	Ouen Island, N	19.20	329	*e*P	Pn	18 26 13.6	-0.3
	27nm,1.1s						
MARNC	Mare, Loyalty	19.60	333	*e*P	P	18 26 17.2	-0.1
	165nm,1.3s						
MCQ	Macquarie Isla	19.61	214	*e*P	Pn	18 26 18.2	-0.3
	615nm,2.0s						
DZM	Mont Dzumac	19.67	328	*e*P	P	18 26 18.7	+0.5
	26nm,1.0s						
DZM	Mont Dzumac	19.67	328	P	P	18 26 18.9	+0.7
	3.1nm,0.3s,baz=220,slow=21,SNR=38						
DZM				LR	LR	18 33 10.0	
	comp=Z,536nm,20.2s,baz=168,slow=35						
MSVF	Nonsavu	21.59	2	*e*P	P	18 26 37.9	-1.1
MSVF				*e*sP	P	18 26 38.7	-0.3
ARMA	Armidale	22.95	285	*e*P	P	18 26 54.4	+0.9
	140nm,1.8s						
EIDS	Eidsvold	26.19	294	P	P	18 27 24.6	+0.9
	baz=27						
EIDS	Eidsvold	26.19	294	*e*P	P	18 27 24.6	+0.9
	46nm,1.5s						
RAR	Rarotonga	26.61	54	LR	LR	18 36 36.1	
	comp=Z,126nm,20.3s,baz=260,slow=33						
STKA	Stephens Creek	29.96	273	*e*P	P	18 27 58.9	+1.6
	1.8nm,1.1s						
STKA	Stephens Creek	29.96	273	P	P	18 27 57.5	+0.1
	2.5nm,0.8s,baz=114,slow=14,SNR=5.8						
STKA				LR	LR	18 39 51.3	
	comp=Z,270nm,18.3s,baz=93,slow=36						
HTT	Hallett	31.42	269	P	P	18 28 10.1	-0.1
	baz=32,SNR=4.4						
CTA	Charters Tower	33.00	297	P	P	18 28 24.0	-0.1
	8.8nm,0.6s,baz=132,slow=11,SNR=19						
CTAO	Charters Tower	33.00	297	*e*P	P	18 28 25.3	+1.2
	27nm,1.1s						
HNR	Honiara	33.70	328	*e*P	P	18 28 30.3	+0.1

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          58nm,0.7s
BBOO  Buckleboo          33.87 268   P       P         18 28 32.2 +0.6
          baz=34,SNR=5.1
BBOO  Buckleboo          33.87 268  eP       P         18 28 32.7 +1.0
          49nm,1.9s
MTSU  Mount Surprise     35.66 297   P       P         18 28 45.7 -1.5
          baz=36,SNR=8.0
PPTF  Pamatai, Papee     35.91  62  eP       P         18 28 49.1 -0.3
          137nm,1.3s
PPT   Papeete            35.91  62  eP       P         18 28 48.6 -0.8
PPT   Papeete            35.91  62   P       P         18 28 50.8 +1.5
          44nm,0.8s,baz=256,slow=12,SNR=3.6
QIS   Mount Isa          37.45 289   P       P         18 29 02.9 +0.5
          baz=38,SNR=3.9
VNDA  Vanda              38.80 185   LR      LR        18 42 01.6
          comp=Z,96nm,20.7s,baz=2.0,slow=31
COEN  Coen               39.38 300   P       P         18 29 19.3 +0.6
          baz=40,SNR=12
COEN  Coen               39.38 300  eP       P         18 29 19.0 +0.3
          20nm,0.8s
AS19  Alice Springs      39.84 280   P       P         18 29 22.5 -0.1
          baz=40
AS01  Alice Springs      39.87 280  eP       P         18 29 22.3 -0.5
AS31  Alice Springs      39.91 280  eP       P         18 29 22.6 -0.5
          6.6nm,1.0s
AS31                                eS       S         18 35 21.9 -5.3
ASAR  Alice Springs      39.91 280   P       P         18 29 23.2 +0.1
          14nm,0.8s,baz=120,slow=7.3,SNR=74
ASAR                                 S       S         18 35 21.9 -5.3
          0.4nm,0.7s,baz=124,slow=14,SNR=4.7
ASAR                                 LR      LR        18 46 28.7
          comp=Z,471nm,18.1s,baz=124,slow=37
TARA  Tarawa             40.77 353  eP       P         18 29 29.4 -0.7
          489nm,1.6s
FORT  Forrest            40.91 266  eP       P         18 29 31.2 -0.1
          24nm,0.9s
WB2   Warramunga Arr     41.72 285  eP       P         18 29 37.4 -0.7
WRAB  Tennant Creek      41.73 285  eP       P         18 29 37.5 -0.6
          24nm,0.6s
WR1   Warramunga Arr     41.73 285  eP       P         18 29 37.6 -0.5
          27nm,0.6s
WRA   Warramunga Arr     41.73 285   P       P         18 29 37.6 -0.5
          16nm,0.7s,baz=127,slow=7.0,SNR=239
WRA                                  LR      LR        18 47 29.7
          comp=Z,561nm,18.9s,baz=135,slow=37
WB5   Warramunga Arr     41.75 285   P       P         18 29 38.1 -0.1
          baz=42
RABL  Rabaul             41.88 320  eP       P         18 29 39.3 -0.1
          123nm,0.6s
WRKA  Warakurna          43.48 274   P       P         18 29 51.5 -0.9
          baz=44,SNR=9.7
CASY  Casey              45.50 211  eP       P         18 30 08.0 +0.1
          64nm,1.5s
KDU   Kakadu             47.73 291   P       P         18 30 25.6 -0.4
          baz=48,SNR=3.7
NWAO  Narrogin (SRO)     48.28 258  eP       P         18 30 29.0 -1.2
          230nm,1.9s
TAOE  Nuku Hiva Isla     48.52  63  eP       P         18 30 29.9 -2.3
          462nm,2.0s
KNRA  Kununurra          48.52 285   P       P         18 30 32.1 -0.1
          baz=49,SNR=5.5
MTN   Manton Dam         48.59 290   P       P         18 30 31.9 -0.8
          baz=49,SNR=6.0
MTN   Manton Dam         48.59 290  eP       P         18 30 31.9 -0.8
          16nm,0.6s
FITZ  Fitzroy Crossi     49.41 280   P       P         18 30 39.1 +0.1
          baz=50,SNR=5.2
FITZ  Fitzroy Crossi     49.41 280  eP       P         18 30 39.2 +0.3
          88nm,2.0s
MEEK  Meekatharra        50.16 266   P       P         18 30 44.2 -0.5
          baz=51,SNR=7.7
QSPA  South Pole Qui     50.73 180  eP       P         18 30 53.0 +4.5
          9.6nm,0.9s
QSPA  South Pole Qui     50.73 180   P       P         18 30 51.4 +2.9
          5.2nm,0.7s,baz=351,slow=0.9,SNR=30
QSPA                                 LR      LR        18 49 00.8
          comp=Z,236nm,19.9s,baz=45,slow=32
MORW  Morawa             50.95 262  eP       P         18 30 51.3 +0.7
          104nm,1.8s
MBWA  Marble Bar         52.20 273  eP       P         18 30 60.0  0.0
          48nm,1.6s
FAKI  Fak Fak            54.76 300  eP       P         18 31 17.4 -1.3
          24nm,1.1s
GIRL  Giralia            55.65 268  eP       P         18 31 26.3 +1.2
          325nm,1.4s
BATI  Baumata            55.83 286   LR      LR        18 56 48.3
          comp=Z,440nm,19.4s,baz=189,slow=38
SIJI  Sorong             56.92 301   LR      LR        18 57 24.5
          comp=Z,194nm,19.2s,baz=104,slow=38
TNTI  Ternate            60.76 298  eP       P         18 31 59.5 -1.5
          104nm,1.9s
SDHHI Sand Hill          63.78  29  eP       P         18 32 19.3 -1.8
          294nm,1.7s
RIM   Rim                63.80  29  eP       P         18 32 20.1 -1.1
          87nm,0.8s
WRMHI West Rim           63.80  29  eP       P         18 32 19.7 -1.5
          96nm,1.0s
KKO   Keanakako`i        63.80  29  eP       P         18 32 19.6 -1.6
          505nm,1.9s
NPH   North Pit          63.81  29  eP       P         18 32 19.4 -1.9
          188nm,1.4s
OBL   Observatory Le     63.81  29  eP       P         18 32 19.4 -1.9
          204nm,0.4s
UWE   Uwekahuna          63.81  29  eP       P         18 32 20.2 -1.1
          224nm,1.3s
BYL   Byron's Ledge      63.82  29  eP       P         18 32 20.0 -1.3
          408nm,1.8s
UWB   Uwekahuna B        63.82  29  eP       P         18 32 19.8 -1.6
          262nm,1.7s
HATHI Halema‘uma‘u T     63.83  29  eP       P         18 32 20.1 -1.3
          104nm,1.0s
SBLHI Steaming Bluff     63.83  29  eP       P         18 32 19.9 -1.5
          133nm,1.3s
SYO   Syowa Base         67.51 195⇑iX      P         18 32 38.0 -6.5
SYO   Syowa Base         67.51 195⇓esP     sP        18 32 54.8 +1.6
JCJ   Chichijima         73.89 328   LR      LR        19 03 02.6
          comp=Z,49nm,19.3s,baz=160,slow=34
PLCA  Paso Flores        79.02 134  eP       P         18 33 56.5 +3.5
          6.3nm,1.0s
PLCA  Paso Flores        79.02 134   P       P         18 33 56.5 +3.5
          1.5nm,0.9s,baz=273,slow=5.5,SNR=5.2
PLCA                                 LR      LR        19 00 31.6
          comp=Z,65nm,21.7s,baz=236,slow=29
MJAR  Matsushiro Arr     83.78 329   P       P         18 34 17.6 -0.3
          3.3nm,0.9s,baz=172,slow=5.7,SNR=5.2
MJAR                                 LR      LR        19 09 00.1
          comp=Z,36nm,21.9s,baz=305,slow=34
MAJO  Matsushiro         83.78 329  eP       P         18 34 17.6 -0.3
ASAJ  Asahikawa          88.89 336   LR      LR        19 06 26.8
          comp=Z,164nm,21.6s,baz=183,slow=30
KSRS  Korea Array        89.01 323   P       P         18 34 44.1 +0.6
          7.0nm,0.9s,baz=140,slow=5.3,SNR=11
KSRS                                 LR      LR        19 11 07.8
          comp=Z,56nm,18.8s,baz=142,slow=33
KS15  Wonju Array Si     89.02 323  eP       P         18 34 43.3 -0.2
          92nm,1.8s
KSAR  Wonju Array Be     89.02 323   P       P         18 34 44.1 +0.6
KS01  Wonju Array Si     89.04 323  eP       P         18 34 44.1 +0.4
NJ2   Nanjing            89.49 314  eP       P         18 34 46.0 +0.1
NJ2                                  pmax    pmax
          comp=Z,10.0nm,0.5s
WHN   Wuhan              91.00 310   P       P         18 34 54.8 +1.8
USRK  Ussuriysk Ar.      92.77 329   LR      LR        19 15 43.1
          comp=Z,44nm,18.7s,baz=189,slow=35
GYA   Guiyang            92.97 302   P       P         18 35 04.0 +1.6
GYA                                  pP      sP        18 35 11.3  0.0
GYA                                  PP      PP        18 38 50.5 +4.9
GYA                                  SKS     SKSac     18 45 35.5 +0.1
GYA                                  S       S         18 46 07.0 -0.5
GYA                                  sS      sS        18 46 19.3 +0.9
GYA                                  SS      SS        18 52 27.8 +5.3
GYA                                  pmax    pmax
          comp=Z,30nm,1.0s
GYA                                  pmax    pmax
          comp=Z,130nm,5.8s
GYA                                  LR      LR
          comp=N,530nm,19.8s
GYA                                  LR      LR
          comp=E,580nm,20.4s
GYA                                  LR      LR
          comp=Z,550nm,19.6s
CM01  Chiang Mai Arr     92.98 291  eP       P         18 35 02.5  0.0
CM31  Chiang Mai Arr     93.02 291  eP       P         18 35 02.9 +0.2
          12nm,1.2s
CMAR  Chiang Mai Arr     93.02 291   P       P         18 35 02.6  0.0
          2.0nm,0.8s,baz=144,slow=3.7,SNR=11
CMAR                                 LR      LR        19 21 21.0
          comp=Z,44nm,18.2s,baz=152,slow=38
CMMT  Chiang Mai         93.24 292   P       P         18 35 05.3 +1.6
          4.1nm,1.6s
CHTO  Chiang Mai         93.25 292   P       P         18 35 05.5 +1.8
          19nm,1.6s
PETK  Petropavlovsk-     93.71 348   LR      LR        19 13 06.1
          comp=Z,71nm,19.0s,baz=146,slow=33
MDJ   Mudanjiang         94.09 328   P       P         18 35 08.6 +1.7
MDJ                                  pmax    pmax
          comp=Z,4.0nm,1.2s
MDJ                                  pmax    pmax
          comp=Z,210nm,4.8s
KMI   Kunming            94.70 299   P       P         18 35 11.8 +1.3
KMI                                  pP      sP        18 35 19.3 -0.1
KMI                                  sP      pP        18 35 23.8 +6.7
KMI                                  pmax    pmax
          comp=Z,8.0nm,0.7s
KMI                                  pmax    pmax
          comp=Z,110nm,5.3s
KMI                                  LR      LR
          comp=N,190nm,5.2s
KMI                                  LR      LR
          comp=E,200nm,5.0s
KMI                                  LR      LR
          comp=Z,170nm,5.6s
CN2   Changchun          95.21 325  eP       P         18 35 12.5 +0.4
CPUP  Villa Florida      97.01 132   LR      LR        19 15 25.1
          comp=Z,84nm,18.2s,baz=204,slow=33
LPAZ  La Paz             97.54 118   LR      LR        19 11 03.5
          comp=Z,45nm,19.8s,baz=142,slow=30
CD2   Chengdu            97.83 304  eP       Pdif      18 35 25.0 +0.5
CD2                                  pmax    pmax
          comp=Z,10.0nm,0.5s
HHC   Hu-ho-hao-te       99.90 315  eP       Pdif      18 35 34.3 +0.8
HHC                                  pmax    pmax
          comp=Z,4.0nm,0.6s
HHC                                  pmax    pmax
          comp=Z,77nm,5.9s
LZH   Lanzhou           101.17 308  eP       Pdif      18 35 44.9 +5.6
LZH                                  pP      sPdif     18 35 51.3 +3.1
LZH                                  sP      pP        18 35 54.6 +8.6
LZH                                  pmax    pmax
          comp=Z,19nm,1.2s
LZH                                  pmax    pmax
          comp=Z,120nm,5.4s
LZH                                  LR      LR
          comp=N,180nm,11.7s
LZH                                  LR      LR
          comp=E,200nm,13.8s
LZH                                  LR      LR
          comp=Z,290nm,15.2s
HWUT  Hardware Ranch    103.22  47  eSdif    Sdif      18 47 37.0 +2.6
YKA   Yellowknife Ar    115.13  28   PKP     PKiKP     18 40 30.1 +1.1
          0.1nm,0.5s,baz=261,slow=0.4,SNR=3.8
YKA                                  PP      PP        18 41 31.1 +1.3
          0.3nm,0.9s,baz=232,slow=7.0,SNR=3.8
WMQ   Urumqi            115.72 307  ePKP     PKiKP     18 40 30.9  0.0
WMQ                                  LR      LR
          comp=N,170nm,20.7s
WMQ                                  LR      LR
          comp=E,130nm,17.7s
MK01  Makanchi Array    120.47 307  ePKPdf   PKPdf     18 40 38.8 -1.1
MK32  Makanchi Array    120.49 307  ePKPdf   PKPdf     18 40 39.4 -0.5
MKAR  Makanchi Array    120.49 307   PKP     PKPdf     18 40 39.4 -0.5
          0.5nm,0.5s,baz=208,slow=0.6,SNR=8.8
KSH   Kashi             121.34 297   PKP     PKPdf     18 40 41.4 -0.6
KSH                                  SKS     SKSdf     18 47 48.4 -4.5
KSH                                  SKKS    SKKSac    18 49 08.8 -2.7
KSH                                  SS      SS        18 58 49.4 +2.1
KSH                                  LR      LR
          comp=N,130nm,4.5s
KSH                                  LR      LR
          comp=E,160nm,4.8s
KSH                                  LR      LR
          comp=Z,180nm,6.0s
KK31  Karatay Array     126.58 299  ePKPdf   PKiKP     18 40 51.9 -0.3
KKAR  Karatay Array     126.58 299  ePKPdf   PKPdf     18 40 51.6 -0.1
RES   Resolute Bay      126.93  19  eSdif    Sdif      18 50 55.2 +4.9
GEYT  Alibeck           133.42 288   PKP     PKPdf     18 41 05.1 +0.1
          1.5nm,0.7s,baz=72,slow=4.7,SNR=3.3
KBZ   Khabaz            146.06 292   PKPbc   PKPdf     18 41 27.4 -0.1
          3.8nm,1.0s,baz=167,slow=0.4,SNR=5.4
ARA0  ARCESS Array S    146.33 343  ePKPdf   PKPbc     18 41 28.6 +0.1
ARCES ARCESS Array B    146.33 343   PKPbc   PKPbc     18 41 28.6 +0.1
          6.3nm,0.7s,baz=46,slow=4.2,SNR=38
MMAI  Mount Meron Ar    148.90 270   PKPbc   PKPbc     18 41 37.1 +0.3
          1.1nm,0.5s,baz=94,slow=5.0,SNR=4.9
FIA0  FINESS Array S    151.79 331  ePKPbc   PKiKP     18 41 42.7 -0.3
FIA0                                ePKPab   sPKPbc    18 41 50.5 -1.1
FINES FINESS Array B    151.79 331   PKPbc   PKiKP     18 41 42.7 -0.3
          5.6nm,0.5s,baz=51,slow=2.7,SNR=44
FINES                                PKPab   sPKPbc    18 41 50.5 -1.1
          4.7nm,0.6s,baz=64,slow=4.4,SNR=8.1
BR101 Keskin Array S    152.23 282  ePKPbc   PKPbc     18 41 44.5  0.0
BR101                               ePKPab   sPKPbc    18 41 53.0 -0.6
BR131 Keskin Array S    152.23 282  ePKPdf   PKPdf     18 41 36.4 -1.4
BR131                               ePKPbc   pPKPdf    18 41 43.9 -0.7
BRTR  Keskin Array B    152.23 282   PKPbc   PKPbc     18 41 44.5  0.0
          4.1nm,0.8s,baz=139,slow=5.7,SNR=22
BRTR                                 PKPab   sPKPbc    18 41 53.0 -0.6
          2.5nm,0.8s,baz=142,slow=4.7,SNR=6.6
TORD  Torodi Ar. Bea    153.59 189   PKPbc   PKiKP     18 41 49.2 +1.0
          0.5nm,0.5s,baz=127,slow=4.0,SNR=5.5
TORD                                 PKPab   PKPab     18 42 01.5 +1.1
          0.9nm,0.6s,baz=176,slow=2.0,SNR=5.5
TOA1  Torodi Ar. Sit    153.60 189  ePKPbc   PKiKP     18 41 49.2 +1.0
TOA1                                ePKPab   PKPab     18 42 01.5 +1.1
AKASG Malin Array Be    155.07 307   PKP     PKPdf     18 41 40.5 -0.8
          0.2nm,0.4s,baz=335,slow=1.3,SNR=4.2
AKASG                                PKPbc   sPKPdf    18 41 49.1 -1.1
          1.0nm,0.6s,baz=73,slow=2.7,SNR=6.0
AKBB  Malin Array Si    155.07 307  ePKPdf   PKPdf     18 41 42.3 +1.1
AKBB                                ePKPbc   sPKPdf    18 41 49.8 -0.5
NB2   NORSAR Subarra    156.71 343   PKP     PKPdf     18 41 53.0  +10
          comp=Z,0.4nm,0.6s,baz=28,slow=4.1
NB200 NORSAR Array S    156.71 343  ePKPdif  PKPdf     18 41 52.6 +9.5
NB200                               ePKPab   PKPab     18 42 11.2 -1.4
NOA   NORSAR Array B    156.71 343   PKPbc   PKPdf     18 41 52.6 +9.5
          comp=Z,0.5nm,0.8s,baz=31,slow=2.0,SNR=4.2
NOA                                  PKPab   PKPab     18 42 11.2 -1.4
          comp=Z,0.6nm,0.6s,baz=27,slow=3.4,SNR=5.8
VYHS  Vyhne             162.18 308  ePKP     PKPdf     18 41 51.7 +1.8
CLL   Collm             163.88 323  i PKPab  PKPab     18 42 43.6 -0.5
          comp=Z,5.0nm,0.8s
CLL                                  LmV               21 58 00.0
          comp=Z,400nm,20.0s
CLL                                  LmV               22 50 00.0
          comp=Z,500nm,18.5s
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ISCJB ***22*** *18:25:44.7±0.3, 51.°50N±0.°02×16.°13E±0.°03, h0^{km}, Error ellipse: s-maj=2.9km s-min=2.2km az=170.1*

IDC ***22*** *18:25:47.4±0.8, 51.°48N×15.°95E, h0^{km}, mb1 3.3/7, mb1mx3.1/58, mbtmp3.2/7, ML2.7/7, Error ellipse: s-maj=19.4km s-min=7.9km az=94.0*

PRU ***22*** *18:25:49.7±0.0, 51.°41N×16.°15E, h0^{km}*

VIE ***22*** *18:25:51.2±0.9, 51.°20N×16.°08E, h0^{km}, mb2.5/5, ml2.8/5, Error ellipse: s-maj=9.7km s-min=5.9km az=70.0, Suspected Mining induced.*

UPP ***22*** *18:25:52.8±3.2, 51.°85N×15.°54E, h1^{km}, ML1.9, Suspected explosion*

ISC 22 18:25:45.9±0.7**, 51.°54N**±0.°03×**16.°10E**±0.°03**, h0**^{km}**, n44, **σ**1.^{s}24**/78**, Poland**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC       h  m  s   ISC
KSP   Ksiaz              0.71 170  i Pg      Pg        18 25 60.0 +0.5
KSP                                eSg       Sg        18 26 08.5 -0.1
UPC   Upice              1.04 183  ePG       Pg        18 26 06.0 +0.3
UPC                                eSG       Sg        18 26 19.2 +0.1
          comp=Z,77nm,0.5s
DPC   Dobruska-Polom     1.20 173  ePG       Pg        18 26 08.6 -0.3
DPC                                eSG       Sg        18 26 23.4 -1.0
          comp=Z,30nm,0.4s
PVCC  Panska Ves         1.40 224  ePG       Pb        18 26 13.2 +0.3
PVCC                               eSG       Sn        18 26 32.6 +0.7
          comp=Z,83nm,0.2s
BRG   Berggiesshubel     1.51 245   PN       Pn        18 26 14.1 -0.1
BRG                                 PG       Pg        18 26 15.6 +0.7
BRG                                 SG       Sn        18 26 35.9 +1.2
          48nm,0.5s
KRLC  Kraliky            1.53 163  ePG       Pg        18 26 15.1 -0.1
KRLC                               eSG       Sg        18 26 33.0 -2.0
          comp=Z,9.8nm,0.4s
GOPC  GO Pecny, Ondr     1.83 208  ePN       Pn        18 26 18.6  0.0
GOPC                               ePG       Pb        18 26 20.3 +0.1
GOPC                               eSG       Sg        18 26 44.4 -0.3
PRU   Pruhonice          1.84 213  ePN       Pn        18 26 18.7 -0.1
PRU                                ePG       Pb        18 26 20.6 +0.2
PRU                                eSG       Sg        18 26 44.8 -0.3
          comp=Z,18nm,0.6s
CLL   Collm              1.95 264  ePn       Pn        18 26 20.0 -0.3
CLL                                ePg       Pb        18 26 23.0 +0.7
CLL                                i                   18 26 27.9
CLL                                e                   18 26 39.0
CLL                                eSg       Sg        18 26 49.0 +0.4
          comp=Z,20nm,0.8s
MORC  Moravsky Berou     1.99 152  ePN       Pn        18 26 20.5 -0.3
MORC                               eSG       Sn        18 26 47.1 +0.6
CHZP  Chorzow            2.22 123  ePg       Pg        18 26 30.6 +2.2
CHZP                               eSg       Sg        18 26 58.9 +1.8
VRAC  Vranov             2.26 172  ePN       Pn        18 26 25.4 +0.9
VRAC                               eSG       Sb        18 26 56.3 +0.3
VRAC  Vranov             2.26 172   Pn       Pn        18 26 25.0 +0.5
          comp=Z,3.0nm,0.3s,baz=344,slow=17,SNR=12
VRAC                                Lg       Lg        18 26 56.5
          comp=Z,3.7nm,0.3s,baz=280,slow=22,SNR=8.8
TREC  Trest              2.28 190  ePN       Pn        18 26 25.8 +1.0
TREC                               ePG       Pg        18 26 29.0 -0.6
TREC                               eSG       Sg        18 26 58.0 -1.2
KRUC  Moravsky           2.49 176  ePN       Pn        18 26 28.1 +0.5
KRUC                               eSG       Sg        18 27 04.6 -1.2
NKC   Novy Kostel        2.66 242  ePN       Pn        18 26 31.2 +1.2
NKC                                ePG       Pg        18 26 37.0 +0.2
NKC                                eSG       Sg        18 27 13.4 +2.2
          comp=Z,34nm,0.3s
OJC   Ojcow              2.69 118  ePg       Pg        18 26 39.0 +1.6
OJC                                eSg       Sg        18 27 13.9 +1.7
JAVC  Velka Javorina     2.87 159  ePN       Pn        18 26 34.4 +1.5
KHC   Kasperske Hory     2.91 215  ePN       Pn        18 26 34.2 +0.8
KHC                                ePG       Pb        18 26 40.0 +1.4
KHC                                eSG       Sg        18 27 18.9 -0.2
          comp=Z,13nm,0.5s
GERES GERESS Array B     3.11 211   Pn       Pn        18 26 36.5 +0.3
          comp=Z,0.9nm,0.3s,baz=25,slow=13,SNR=22
GERES                               Lg       Lg        18 27 22.8
          comp=Z,2.7nm,0.3s,baz=33,slow=29,SNR=6.8
SMOL  Smolenice          3.15 164  ePG       Pg        18 26 46.8 +0.6
SMOL                               eSG       Sg        18 27 26.3 -0.7
LANS  Liptovska Anna     3.22 137  ePG       Pg        18 26 46.1 -1.5
LANS                               eSG       Sb        18 27 26.1 +2.4
MODS  Modra-Piesok       3.26 166  ePG       Pg        18 26 47.8 -0.5
MODS                               eSG       Sg        18 27 29.2 -1.4
VYHS  Vyhne              3.52 149  ePN       Pn        18 26 41.2 -0.7
VYHS                               ePG       Pg        18 26 51.7 -1.7
VYHS                               eSG       Sg        18 27 37.9 -1.1
CONA  Conrad Observa     3.62 183  i Pn      Pn        18 26 44.5 +1.2
          comp=Z,1.1nm,0.2s
CONA                               eSg       Sg        18 27 40.8 -1.4
          comp=Z,8.2nm,0.3s
BSD   Bornholm Skovb     3.65 349  i P       Pn        18 26 44.4 +0.9
BSD                                i S       Sn        18 27 24.6 -2.6
MOA   Molln              3.88 199  i Pn      Pn        18 26 46.5 -0.3
          comp=Z,1.3nm,0.2s
MOA                                 Sg       Sg        18 27 49.5 -1.1
          comp=Z,17nm,0.6s
ARSA  Arzberg            4.31 185  i Pn      Pn        18 26 54.8 +2.1
          comp=Z,0.9nm,0.2s
ARSA                               eSg       Sg        18 28 02.1 -2.2
          comp=Z,11nm,0.7s
BLEU  Blekinge           4.78 358   P        Pn        18 27 00.5 +1.5
BLEU                                S        Sn        18 27 52.8 -2.2
BJUU  Bjuv               4.89 339   P        Pn        18 27 00.8 +0.2
VXJU  Vaexsjoe           5.43 353   P        Pn        18 27 09.2 +1.2
OSKU  Oskarshamn         5.67 360   P        Pn        18 27 12.7 +1.5
BYXU  Byxelkrok          5.79   5   P        Pn        18 27 14.4 +1.5
FABU  Falkenberg         5.82 341   P        Pn        18 27 13.8 +0.5
ASPU  Aespoe             5.90   3   P        Pn        18 27 16.0 +1.6
GNOU  Gnosjoe            5.92 348   P        Pn        18 27 15.5 +0.7
EKSU  Eksjoe             6.06 356   P        Pn        18 27 17.9 +1.3
DAVOX Davos/Dischmat     6.27 223   Pn       Pn        18 27 21.0 +1.2
          comp=Z,0.3nm,0.3s,baz=16,slow=19,SNR=2.9
VIKU  Vikbolandet        6.98   3   P        Pn        18 27 30.6 +1.3
NYNU  Nynaeshamn         7.56   8   P        Pn        18 27 38.5 +1.3
HFS   Hagfors            8.72 352   Pn       Pn        18 27 53.2 +0.1
          comp=Z,0.1nm,0.3s,baz=171,slow=14,SNR=4.5
NOA   NORSAR Array B     9.90 346   Pn       Pn        18 28 07.8 -1.4
          comp=Z,0.0nm,0.3s,baz=165,slow=12,SNR=3.8
FINES FINESS Array B    11.34  25   Pn       Pn        18 28 28.1 -0.8
          comp=Z,0.1nm,0.3s,baz=216,slow=11,SNR=5.5
ARCES ARCESS Array B    18.59  10   Pn       P         18 30 00.7 -3.5
          comp=Z,0.1nm,0.3s,baz=202,slow=14,SNR=4.8
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KRNET ***22*** *18:26:53.0±0.1, 42.°57N×79.°66E, h20^{km}, mb2.7*

SOME ***22*** *18:26:54.5, 42.°62N×79.°67E, h15^{km}*

NNC ***22*** *18:26:54.0±1.0, 42.°64N×79.°64E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=6.8km s-min=3.4km az=147.0*

ISC 22 18:26:51.6±2.2**, 42.°55N**±0.°07×**79.°79E**±0.°06**, h5**^{km}±11^{km}**, n47, **σ**0.^{s}65**/81**, 6C-8D, Lake Issyk-Kul region**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC       h  m  s   ISC
PDGK  Podgornoye         0.81 344   P        Pb        18 27 07.9 -0.3
          1.8nm,0.1s
PDGK                                S        Sg        18 27 17.5 -0.2
          3.8nm,0.2s
PDGK  Podgornoye         0.81 344 ⇑P        Pg        18 27 07.3 +0.1
          1.4nm,0.4s
PDGK                              ⇓S        Sg        18 27 17.5 -0.2
          1.9nm,0.3s
PDGK  Podgornoye         0.81 344⇑iP        Pg        18 27 07.6 +0.5
          baz=51
PDGK                             ⇑iS        Sg        18 27 18.0 +0.3
          baz=51
UZB   Uzynbulak          0.82 317   P        Pg        18 27 07.7 +0.3
          5.5nm,0.1s
UZB                                 S        Sg        18 27 17.1 -1.0
          13nm,0.3s
UZB   Uzynbulak          0.82 317  eP        Pg        18 27 07.7 +0.3
          baz=21
UZB                                eS        Sg        18 27 17.1 -1.0
          baz=21
UZB   Uzynbulak          0.82 317  eP        Pg        18 27 07.7 +0.3
          5.5nm,0.1s
UZB                                eS        Sg        18 27 17.1 -1.0
          13nm,0.3s
KTMS  Ketmen             0.99  25   P        Pn        18 27 12.4 +0.1
          3.3nm,0.1s
KTMS                                S        Sn        18 27 25.5 -1.2
          2.9nm,0.1s
KTMS  Ketmen             0.99  25  eP        Pn        18 27 12.4 +0.1
          baz=29
KTMS                               eS        Sn        18 27 25.5 -1.2
          baz=29
KTMS  Ketmen             0.99  25  eP        Pn        18 27 12.4 +0.1
          3.3nm,0.1s
KTMS                               eS        Sn        18 27 25.5 -1.2
          2.9nm,0.1s
SATY  Saty               1.14 297   P        Pb        18 27 13.7 -0.2
          1.5nm,0.1s
SATY                                S        Sg        18 27 27.0 -1.2
          9.2nm,0.1s
SATY  Saty               1.14 297  eP        Pb        18 27 13.7 -0.2
          1.5nm,0.1s
SATY                               eS        Sg        18 27 27.0 -1.2
          9.2nm,0.1s
TARG  Taragay, Kyrgy     1.69 242⇑iP        Pn        18 27 22.2  0.0
          baz=39
TARG                             ⇑iS        Sn        18 27 42.9 -1.5
          baz=39
DJR   Jarkent            1.78   0   S        Sg        18 27 49.1 +0.3
          2.3nm,0.1s
DJR   Jarkent            1.78   0  eP        Pg        18 27 26.4 +0.6
          0.3nm,0.1s
DJR                                eS        Sg        18 27 48.9 +0.1
          2.2nm,0.2s
KDJ   Kajisay            1.98 259⇓iP        Pn        18 27 26.9 +1.0
          baz=57
KDJ                              ⇓iS        Sn        18 27 51.9 +0.7
          baz=57
KOTS  Kotyrbulak         2.08 290   Pg       Pg        18 27 32.3 +0.8
          1.6nm,0.3s
KOTS  Kotyrbulak         2.08 290  eP        Pg        18 27 30.9 -0.6
          baz=90
KOTS                               eS        Sg        18 27 57.8 -0.7
          baz=90
KOTS  Kotyrbulak         2.08 290  eP        Pg        18 27 30.9 -0.6
          1.1nm,0.3s
```

KOTS				eS	Sg	18 27 57.8	-0.7
	16nm,0.5s						
MDOK	Medeo	2.11	288	Pg	Pb	18 27 29.3	-1.1
	1.0nm,0.6s						
MDOK				Lg	Lg	18 27 57.0	
	4.1nm,0.6s						
MDOK	Medeo	2.11	288	Pg	Pb	18 27 30.5	+0.1
	1.0nm,0.1s						
MDOK				Lg	Lg	18 27 56.7	
	3.6nm,0.5s						
MDOK	Medeo	2.11	288	eP	Pb	18 27 30.5	+0.1
	baz=88						
MDOK				eS	Sb	18 27 56.7	-0.2
	baz=88						
MDOK	Medeo	2.11	288	eP	Pb	18 27 30.5	+0.1
	1.0nm,0.1s						
MDOK				eS	Sb	18 27 56.7	-0.2
	3.6nm,0.5s						
TNSS	Tian-Shan	2.15	284	Pg	Pb	18 27 31.6	+0.4
	1.0nm,0.1s						
TNSS				Lg	Lg	18 27 58.4	
	3.6nm,0.5s						
TNSS	Tian-Shan	2.15	284	eP	Pb	18 27 31.6	+0.4
	baz=84						
TNSS				eS	Sb	18 27 58.4	+0.1
	baz=84						
TNSS	Tian-Shan	2.15	284	eP	Pb	18 27 31.6	+0.4
	1.0nm,0.1s						
TNSS				eS	Sb	18 27 58.4	+0.1
	3.6nm,0.5s						
ARXS	Arharly	2.19	320	Pg	Pb	18 27 32.3	+0.5
	1.5nm,0.3s						
ARXS				Lg	Lg	18 27 59.6	
	3.8nm,0.2s						
ARXS	Arharly	2.19	320	eP	Pb	18 27 32.3	+0.5
	1.5nm,0.3s						
ARXS				eS	Sb	18 27 59.6	+0.3
	3.8nm,0.2s						
IZV	Izvestkoviy	2.39	283	Pg	Pb	18 27 35.6	+0.4
	1.4nm,0.1s						
IZV				Lg	Lg	18 28 05.3	
	5.4nm,0.1s						
IZV	Izvestkoviy	2.39	283	eP	Pb	18 27 35.6	+0.4
	baz=83						
IZV				eS	Sb	18 28 05.3	+0.3
	baz=83						
IZV	Izvestkoviy	2.39	283	eP	Pb	18 27 35.6	+0.4
	1.4nm,0.1s						
IZV				eS	Sb	18 28 05.3	+0.3
	5.4nm,0.1s						
CHKK	Chushkaly	2.43	303	Pg	Pb	18 27 36.1	+0.3
	0.7nm,0.1s						
CHKK				Lg	Lg	18 28 05.9	
	5.3nm,0.2s						
CHKK	Chushkaly	2.43	303	eP	Pb	18 27 36.1	+0.3
	baz=5.0						
CHKK				eS	Sb	18 28 05.9	-0.1
	baz=5.0						
CHKK	Chushkaly	2.43	303	eP	Pb	18 27 36.1	+0.3
	0.7nm,0.1s						
CHKK				eS	Sb	18 28 05.9	-0.1
	5.3nm,0.2s						
KTBS	Karatobe	2.55	298	Pg	Pb	18 27 38.4	+0.5
	0.8nm,0.2s						
KTBS				Lg	Lg	18 28 10.0	
	8.1nm,0.3s						
KTBS	Karatobe	2.55	298	eP	Pb	18 27 38.4	+0.5
	baz=98						
KTBS				eS	Sb	18 28 10.0	+0.3
	baz=98						
KTBS	Karatobe	2.55	298	eP	Pb	18 27 38.4	+0.5
	0.8nm,0.2s						
KTBS				eS	Sb	18 28 10.0	+0.3
	8.1nm,0.3s						
ULHL	Ulahol	2.65	265	⇓iP	Pn	18 27 35.9	+0.8
	baz=64						
ULHL				⇓iS	Sn	18 28 07.6	-0.1
	baz=64						
KAPS	Kapalarasan	2.75	354	Pg	Pb	18 27 41.5	+0.2
	0.4nm,0.2s						
KAPS				Lg	Lg	18 28 15.4	
	2.4nm,0.2s						
KAPS	Kapalarasan	2.75	354	eP	Pb	18 27 41.5	+0.2
	0.4nm,0.2s						
KAPS				eS	Sb	18 28 15.4	0.0
	2.4nm,0.2s						
BOOM	Boomskoye usch	2.85	270	⇓iP	Pn	18 27 38.7	+0.8
	baz=70						
BOOM				⇓iS	Sn	18 28 12.9	+0.3
	baz=70						
KST	Kastek	2.86	281	Pg	Pb	18 27 44.0	+0.8
	0.8nm,0.1s						
KST				Lg	Lg	18 28 19.8	
	2.2nm,0.3s						
KST	Kastek	2.86	281	eP	Pb	18 27 44.0	+0.8
	baz=81						
KST				eS	Sb	18 28 19.9	+1.3
	baz=81						
KST	Kastek	2.86	281	eP	Pb	18 27 44.0	+0.8
	1.0nm,0.1s						
KST				eS	Sb	18 28 19.8	+1.3
	1.7nm,0.4s						
DGS	Degeres	3.03	285	Pg	Pb	18 27 46.1	0.0
	0.9nm,0.2s						
DGS				Lg	Lg	18 28 23.2	
	5.2nm,0.3s						
DGS	Degeres	3.03	285	eP	Pb	18 27 46.1	0.0
	baz=85						
DGS				eS	Sb	18 28 23.2	-0.3
	baz=85						
DGS	Degeres	3.03	285	eP	Pb	18 27 46.1	0.0
	0.9nm,0.2s						
DGS				eS	Sb	18 28 23.2	-0.3
	5.2nm,0.3s						
TKM2	Tokmak 2	3.11	278	⇓Pg	Pb	18 27 45.7	-1.9
	0.7nm,0.7s						
TKM2				⇑Lg	Lg	18 28 24.7	
	1.9nm,0.6s						

WEL 22 18:34:00.8, 39°.3S±0°.8×**17°7E**±°, **h22**^{km}±2^{km}, **ML4.0**/14, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.21	323	P	Pb	18 34 06.5	+0.1
WHHZ				S	Sb	18 34 11.6	+1.4
KNZ	Kokohu	0.31	44	P	Pb	18 34 08.4	+0.7
KNZ				S	Sb	18 34 13.9	+1.4
ARHZ	Aropaoanui	0.32	267	P	Pb	18 34 08.2	+0.3
ARHZ				S	Sb	18 34 14.2	+1.5
MHGZ	Mahia Peninsul	0.40	77	P	Pn	18 34 10.3	-1.0
RAHZ	Arahi	0.41	323	P	Pb	18 34 09.6	+0.2
RAHZ				S	Sn	18 34 16.9	-1.5
SNGZ	Shannon Statio	0.47	354	P	Pb	18 34 10.8	+0.4
SNGZ				S	Sn	18 34 18.6	-1.1
CKHZ	Cape Kidnapper	0.48	211	P	Pn	18 34 11.6	-0.7
NMHZ	Naumai	0.48	288	P	Pb	18 34 11.0	+0.3
NMHZ				S	Sn	18 34 19.1	-1.2
PRGZ	Paritu Road	0.49	49	P	Pb	18 34 11.6	+0.7
MCHZ	McNeill Hill	0.58	250	P	Pn	18 34 13.2	-0.6
MTHZ	Maungataniwha	0.59	312	P	Pb	18 34 12.2	-0.2
RIGZ	Rimuhau	0.61	28	P	Pb	18 34 13.4	+0.5
KAHZ	Kahuranaki	0.68	216	P	Pb	18 34 14.5	+0.4
BKZ	Black Stump Fm	0.71	276	P	Pb	18 34 14.5	-0.1
RTZ	Ruatahuna	0.71	332	P	Pb	18 34 14.3	-0.2
RAGZ	Rawiri	0.75	1	P	Pb	18 34 15.6	+0.3
KWHZ	Kaweka Forest	0.78	257	P	Pb	18 34 15.7	0.0
KWHZ				P	Pn	18 34 15.7	-0.8
MRHZ	Matea Rd	0.87	298	P	Pb	18 34 17.1	-0.1
TKGZ	Te Karaka	0.88	24	P	Pb	18 34 17.2	-0.2
MUGZ	Murupara	0.91	327	P	Pb	18 34 17.6	-0.3
MWZ	Matawai	0.92	6	P	Pn	18 34 17.4	-1.0
MWZ				P	Pb	18 34 17.3	-0.7
CNGZ	Carnagh Statio	0.99	40	P	Pb	18 34 18.5	-0.7
URZ	Urewera	1.01	347	P	Pn	18 34 18.9	-0.7
BHHZ	Black Hill Sta	1.06	256	P	Pn	18 34 19.6	-0.8
BHHZ				P	Pn	18 34 19.6	-0.8
ALRZ	Allen Road	1.07	309	P	Pn	18 34 20.1	-0.3
HATZ	Hinemaiaia	1.08	289	P	Pn	18 34 20.6	0.0
PRRZ	Plateau Road	1.08	313	P	Pb	18 34 21.1	+0.2
WPHZ	Waipukurau	1.10	222	P	Pn	18 34 20.1	-0.9
RRRZ	Republican Roa	1.14	322	P	Pn	18 34 21.2	-0.3
TWGZ	Tauwhareparae	1.16	23	P	Pn	18 34 21.2	-0.5
PRHZ	Porangahau	1.18	210	P	Pn	18 34 20.7	-1.2
WPRZ	Whakapapatarin	1.21	307	P	Pn	18 34 22.2	-0.2
HRRZ	Handcock Road	1.22	314	P	Pn	18 34 22.0	-0.5
TARZ	Mount Tarawera	1.23	325	P	Pn	18 34 22.3	-0.4
RITZ	Rihia Road	1.23	282	P	Pn	18 34 22.7	0.0
EDRZ	Edgecumbe	1.25	335	P	Pn	18 34 22.3	-0.7
WHTZ	Whakaora	1.27	297	P	Pb	18 34 23.7	-0.3
HLRZ	Highlands Stat	1.29	320	P	Pb	18 34 25.0	+0.6
MOVZ	Moawhango	1.29	262	P	Pn	18 34 23.4	-0.1
RUGZ	Raukumara Rang	1.30	10	P	Pn	18 34 22.9	-0.8
HSRZ	Hossack Road	1.30	316	P	Pn	18 34 23.5	-0.1
RATZ	Rangitukua	1.32	286	P	Pn	18 34 23.8	-0.2
GRRZ	Galatos Road	1.35	311	P	Pn	18 34 24.2	-0.1
PUZ	Puketiti	1.35	30	P	Pn	18 34 24.2	-0.1
KATZ	Kakaramea	1.35	281	P	Pn	18 34 24.2	-0.3
TUVZ	Tukino	1.36	269	P	Pn	18 34 24.4	-0.2
KRVZ	Karewarewa	1.38	276	P	Pn	18 34 24.7	-0.1
TSZ	Takapari Road	1.38	233	P	Pn	18 34 24.5	-0.2
MARZ	Manawahe	1.38	335	P	Pb	18 34 25.5	-0.5
OMRZ	Omania	1.39	324	P	Pn	18 34 24.6	-0.3
NGZ	Ngauruhoe	1.40	272	P	Pn	18 34 25.6	+0.5
WATZ	Wairara	1.41	292	P	Pn	18 34 24.5	-0.6
WHVZ	Whangaehu Hut	1.41	268	P	Pn	18 34 25.0	-0.3
WTVZ	West Tongariro	1.41	275	P	Pn	18 34 25.6	+0.4
DVHZ	Dannevirke	1.42	222	P	Pn	18 34 24.0	-1.3
DRZ	Dome Shelter	1.43	268	P	Pb	18 34 26.9	0.0
WHRZ	Whale Island	1.43	346	P	Pn	18 34 25.9	+0.5
FWVZ	Far West T-bar	1.44	269	P	Pn	18 34 25.2	-0.5
TRVZ	Turoa	1.44	267	P	Pn	18 34 25.3	-0.5
COVZ	Chateau Observ	1.44	271	P	Pn	18 34 24.9	-0.8
KUTZ	Kaahu Road	1.45	301	P	Pn	18 34 24.8	-0.8
PKGZ	Pakihiroa	1.46	22	P	Pn	18 34 25.0	-0.8
MTVZ	Mangateitei	1.50	264	P	Pn	18 34 26.2	-0.3
HAZ	Te Kaha	1.52	12	P	Pn	18 34 24.9	-1.7
TWVZ	Taurewa	1.54	276	P	Pn	18 34 26.9	-0.1
OPRZ	Ohinepanea	1.55	334	P	Pn	18 34 26.1	-0.9
PKVZ	Pokaka	1.59	268	P	Pn	18 34 27.7	-0.1
WMGZ	Waiomatatini S	1.63	29	P	Pn	18 34 27.3	-0.8
BFZ	Birch Farm	1.69	211	P	Pn	18 34 26.7	-2.3
POWZ	Post Office Ro	1.70	227	P	Pn	18 34 28.9	-0.2
PRWZ	Pori Road	1.71	220	P	Pn	18 34 28.0	-1.2
MXZ	Matakaoa Point	1.83	23	P	Pn	18 34 30.6	-0.2
TIWZ	Tintock	1.92	217	P	Pn	18 34 30.8	-1.4
MRZ	Mangatainoka R	1.99	224	P	Pn	18 34 31.3	-1.8
TMWZ	Te Maipa	2.19	211	P	Pn	18 34 33.9	-2.0
HOWZ	Holdsworth Sta	2.19	221	P	Pn	18 34 34.2	-1.7
OGWZ	Otaki Gorge	2.32	227	P	Pn	18 34 36.0	-1.7
MTW	Mount Morrison	2.40	217	P	Pn	18 34 36.1	-2.7
KIW	Kapiti Island	2.50	229	P	Pn	18 34 38.3	-1.8
TUWZ	Tuamarina	3.43	229	P	Pn	18 34 49.9	-2.9
QRZ	Quartz Range	4.06	246	P	Pn	18 34 58.7	-2.8
THZ	Tophouse	4.25	232	P	Pn	18 35 01.4	-2.8

CRAAG ***22*** *18:36:02.7, 36°.85N×5°.25E, Ml3.2*

ISCJB ***22*** *18:36:05.1±0.4, 36°.90N±0°.04×5°.24E±0°.06, h18*^{km}*, Error ellipse: s-maj=7.0km s-min=4.2km az=147.6*

MDD ***22*** *18:36:07.0±1.0, 36°.76N×5°.25E, h20*^{km}*±17*^{km}*, mb4.2/1, Error ellipse: s-maj=12.1km s-min=6.1km az=162.0, PRXIMO*

LDG ***22*** *18:36:09.3±0.7, 36°.94N×5°.45E, h10*^{km}*, Ml3.1/6, Error ellipse: s-maj=15.4km s-min=8.9km az=159.0*

ISC 22 18:36:04.9±0.9, **36°.82N**±0°.04×**5°.29E**±0°.04, **h18**^{km}, **n49**, σ**2**^{s}**.37**/63, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.55	120	P	Pg	18 36 17.1	+1.2
DFRA	Djebel Bou Aff	0.55	120	Pg	Pg	18 36 17.1	+1.2
SET	Setif	0.62	172	P	Pb	18 36 18.0	+0.6
SET	Setif	0.62	172	Pg	Pb	18 36 18.0	+0.6
CKHR	Kef el Ahmar	0.82	167	P	Pb	18 36 20.6	-0.2
CKHR	Kef el Ahmar	0.82	167	Pg	Pb	18 36 20.6	-0.2
CASM	Ain Smara	1.12	120	P	Pg	18 36 28.2	+1.6
CASM	Ain Smara	1.12	120	Pg	Pg	18 36 28.2	+1.6
CTEI	Djebel Teioual	1.18	130	P	Pn	18 36 27.5	+0.9
CTEI	Djebel Teioual	1.18	130	Pg	Pn	18 36 27.5	+0.9
ATAF	Djebel Tarf	1.25	221	P	Pb	18 36 29.0	+1.0
ATAF	Djebel Tarf	1.25	221	Pg	Pb	18 36 29.0	+1.0
CAEH	'Ain El Ouahch	1.25	91	P	Pb	18 36 29.4	+1.3
CAEH	'Ain El Ouahch	1.25	91	Pg	Pb	18 36 29.4	+1.3
ABMS	Boumerdes	1.45	268	P	Pn	18 36 30.0	-0.3
ABMS	Boumerdes	1.45	268	Pn	Pn	18 36 30.0	-0.3
CMAH	Djebel Manchou	1.72	96	P	Pn	18 36 35.8	+1.7
CMAH	Djebel Manchou	1.72	96	Pn	Pn	18 36 35.8	+1.7
ABA	Alger-Bouzarea	1.81	270	P	Pn	18 36 34.2	-1.0
ABA	Alger-Bouzarea	1.81	270	Pn	Pn	18 36 34.2	-1.0
ETOS	Mallorca	3.53	327	Pn	Pn	18 37 00.7	+1.8
	12nm,0.4s,SNR=7.9						
ETOS				Sn	Sn	18 37 40.5	+0.3
	1.2nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.82	306	Pn	Pn	18 37 05.6	+2.8
	1.0nm,0.2s,SNR=4.0						
CFON	Fontmartina	5.41	337	Pn	Pn	18 37 26.2	+1.4
	0.7nm,0.2s,SNR=7.9						
EPOB	Poblet	5.59	325	Pn	Pn	18 37 28.6	+1.4
	0.5nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	18 38 29.6	-1.4
	0.4nm,0.2s,SNR=7.9						
PGF	Pioggiola	6.40	25	ePn	Pn	18 37 39.3	+1.0
PGF				eSn	Sn	18 38 46.4	-4.5
	5.7nm,0.3s						
PGF	Pioggiola	6.40	25	Pn	Pn	18 37 39.3	+1.0
PGF				Sn	Sn	18 38 46.4	-4.5
	2.8nm,0.3s						
LMR	La Mourre	6.57	8	ePn	Pn	18 37 42.0	+1.3
LMR				eSn	Sn	18 38 52.2	-2.9
	2.8nm,0.4s						
LMR	La Mourre	6.57	8	Pn	Pn	18 37 42.0	+1.3
LMR				Sn	Sn	18 38 52.2	-2.9
	1.4nm,0.4s						
FRF	La Foret Royal	6.81	8	ePn	Pn	18 37 45.5	+1.5
FRF				eSn	Sn	18 38 57.9	-3.1
	1.8nm,0.3s						
FRF	La Foret Royal	6.81	8	Pn	Pn	18 37 45.5	+1.5
FRF				Sn	Sn	18 38 57.9	-3.1
	0.9nm,0.3s						
MTLF	Montolieu	6.93	341	ePn	Pn	18 37 47.8	+2.3
MTLF	Montolieu	6.93	341	Pn	Pn	18 37 47.8	+2.3
SMRF	Simiane la Rot	7.15	2	ePn	Pn	18 37 49.4	+0.8
SMRF	Simiane la Rot	7.15	2	Pn	Pn	18 37 49.4	+0.8
SBF	Sospel	7.22	12	ePn	Pn	18 37 50.7	+1.0
SBF				eSn	Sn	18 39 06.3	-4.9
	4.4nm,0.3s						
SBF	Sospel	7.22	12	Pn	Pn	18 37 50.7	+1.0
SBF				Sn	Sn	18 39 06.3	-4.9
	2.2nm,0.3s						
EPF	Esparros	7.28	330	ePn	Pn	18 37 53.1	+2.7
EPF				eSn	Sn	18 39 08.8	-3.7
	0.7nm,0.3s						
EPF	Esparros	7.28	330	Pn	Pn	18 37 53.1	+2.7
EPF				Sn	Sn	18 39 08.8	-3.7
	0.3nm,0.3s						
LASF	Ste Croix	7.33	352	ePn	Pn	18 37 52.8	+1.7
LASF	Ste Croix	7.33	352	Pn	Pn	18 37 52.8	+1.7
ETSF	Etsaut	7.55	325	ePn	Pn	18 37 53.2	-1.0
ETSF	Etsaut	7.55	325	Pn	Pn	18 37 53.2	-1.0
MBDF	Montbardon	7.98	8	ePn	Pn	18 38 02.6	+2.5
MBDF				eSn	Sn	18 39 24.9	-5.0
	1.4nm,0.5s						
MBDF	Montbardon	7.98	8	Pn	Pn	18 38 02.6	+2.5
MBDF				Sn	Sn	18 39 24.9	-5.0
	0.7nm,0.5s						
SJPF	Ste Jean	8.03	324	ePn	Pn	18 38 04.0	+3.3
SJPF	Ste Jean	8.03	324	Pn	Pn	18 38 04.0	+3.3
VIVF	Saint-Julien-l	8.04	357	ePn	Pn	18 38 01.6	+0.7
VIVF	Saint-Julien-l	8.04	357	Pn	Pn	18 38 01.6	+0.7
EALK	Alkurruntz	8.25	323	Pn	Pn	18 38 06.6	+2.9
	0.3nm,0.2s,SNR=7.9						

IDC 22 18:48:37.9±2.2, **7°.99S**×**122°.18E**, **h0**^{km}, **mb3.4**/1, **mb1 3.5**/3, **mb1mx3.3**/35, **mbtmp3.3**/3, **ML2.9**/1, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.6**/20, **Error ellipse: s-maj=270.2km s-min=30.5km az=55.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	15.34	13	LR	LR	18 59 31.3	
	comp=Z,77nm,19.8s,baz=130,slow=43						
WRA	Warramunga Arr	16.73	137	Pn	Pn	18 52 32.7	-1.3
	baz=310,slow=15,SNR=4.3						
ASAR	Alice Springs	19.22	146	P	Pn	18 53 04.6	-0.1
	0.0nm,0.3s,baz=326,slow=12,SNR=5.9						
MKAR	Makanchi Array	65.05	331	P	P	18 59 20.1	-0.1
	0.3nm,0.8s,baz=132,slow=6.7,SNR=3.8						

TIR 22 19:03:32.0, 40°.09N×**19°.77E**, **h9**^{km}, **Md2.3**/3, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.28	140	i PG	Pg	19 03 37.8	+0.2
SRN				i SG	Sb	19 03 42.7	-1.2
SRN	Sarande	0.28	140	i PG	Pg	19 03 37.8	+0.2
SRN				i SG	Sb	19 03 42.7	-1.2
TPE	Tepelena	0.28	42	i PG	Pg	19 03 38.2	+0.7
TPE				i SG	Sg	19 03 41.9	+0.6
TPE	Tepelena	0.28	42	i PG	Pg	19 03 38.2	+0.7
TPE				i SG	Sg	19 03 41.9	+0.6
IGT	Igoumenitsa	0.71	142	i PG	Pg	19 03 45.7	+0.1
IGT				i SG	Sb	19 03 56.3	-0.1
IGT	Igoumenitsa	0.71	142	i PG	Pg	19 03 45.7	+0.1
IGT				i SG	Sb	19 03 56.3	-0.1

BJI ***22*** *19:16:13.5, 35°.68N×99°.16E, h5*^{km}*, mb3.8/1, ML3.8/13, Ms3.7/6, Ms7 3.7/2*

IDC ***22*** *19:16:15.0±2.6, 35°.81N×99°.20E, h0*^{km}*, mb3.5/4, mb1 3.7/7, mb1mx3.4/54, mbtmp3.6/7, ML3.5/3, Error ellipse: s-maj=57.8km s-min=32.4km az=85.0*

ISC 22 19:16:14.6±0.9, **35°.68N**±0°.07×**99°.24E**±0°.05, **h10**^{km}, **n11**, σ**2**^{s}**.33**/20, **mb3.5**/3, **Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	Gaotai	3.75	7	Pn	Pn	19 17 15.0	+2.4
GTA				Pg	Pb	19 17 22.0	+1.0
GTA				Sn	Sn	19 17 54.6	-2.3
GTA				Sg	Sb	19 18 09.0	+2.5
GTA				smax	smax		
	comp=N,68nm,0.9s						
GTA				smax	smax		
	comp=E,160nm,0.9s						
GTA				LR	LR		
	comp=N,200nm,7.9s						
GTA				LR	LR		
	comp=E,360nm,6.8s						
LZH	Lanzhou	3.76	82	Pn	Pn	19 17 15.4	+2.6
LZH				Pg	Pb	19 17 22.9	+1.7
LZH				Sn	Sn	19 18 01.1	+3.8
LZH				Sg	Sg	19 18 12.3	-3.2
LZH				smax	smax		
	comp=N,600nm,1.0s						
LZH				smax	smax		
	comp=E,1µm,1.0s						
LZH				LR	LR		
	comp=N,630nm,5.4s						
LZH				LR	LR		
	comp=E,530nm,4.3s						
LZH				LR	LR		
	comp=Z,680nm,6.0s						
XAN	Xi'an	8.13	99	Pn	Pn	19 18 08.6	-4.1
XAN				Pg	Pg	19 18 44.6	-5.6
XAN				Sn	Sn	19 19 43.9	-0.7
XAN				Sg	Sg	19 20 33.3	-2.1
XAN				smax	smax		
	comp=N,22nm,0.8s						
XAN				smax	smax		
	comp=E,23nm,0.8s						
WMQ	Urumqi	12.03	316	P	Pn	19 19 04.8	-1.3
WMQ				pP		19 19 08.1	
WMQ				S	Sn	19 21 19.9	-0.4
WMQ				LR	LR		
	comp=E,170nm,20.1s						
WMQ				LR	LR		
	comp=E,66nm,21.7s						
SONM	Songino Array	13.26	21	Pn	Pn	19 19 23.3	+0.4
	comp=E,0.3nm,0.3s,baz=204,slow=14,SNR=19						
MKAR	Makanchi Array	16.86	316	Pn	Pn	19 20 08.3	-2.3
	comp=E,0.4nm,0.3s,baz=124,slow=13,SNR=24						
CMAR	Chiang Mai Arr	17.16	181	P	P	19 20 17.8	+1.7
	comp=E,0.0nm,0.3s,baz=352,slow=11,SNR=5.0						
ZALV	Zalesovo Beam	20.86	336	P	P	19 20 56.1	-0.3
	comp=E,1.3nm,0.5s,baz=134,slow=14,SNR=3.1						
KURBB	Kurchatov Arra	21.14	321	P	P	19 20 58.6	-0.8
	comp=E,1.6nm,0.6s,baz=125,slow=12,SNR=9.0						
BVAR	Borovoye Array	26.68	320	P	P	19 21 56.1	+2.6
	comp=E,0.5nm,0.7s,baz=132,slow=12,SNR=3.3						
BRTR	Keskin Array B	51.02	295	P	P	19 25 17.7	+0.8
	comp=E,0.5nm,0.8s,baz=66,slow=11,SNR=2.6						

SJA ***22*** *19:32:11.6±0.8, 33°.65S×71°.31W, h33*^{km}*±3*^{km}*, ML2.5, MW3.2*

GUC ***22*** *19:32:13.5±0.6, 33°.46S×71°.15W, h74*^{km}*±10*^{km}*, ML3.1*

ISC 22 19:32:15.9±2.4, **33°.54S**±0°.08×**71°.1W**±0°.1, **h30**^{km}±13^{km}, **n14**, σ**1**^{s}**.38**/22, **3C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLCH	Cerro Calan	0.53	75	⇑eP	Pb	19 32 27.0	+0.2
CLCH				eS	Sn	19 32 37.1	+1.7
CLCH				IAML		19 32 38.0	
	comp=N,1µm,0.3s						
PEL	Peldehue	0.55	45	eP	Pb	19 32 27.0	-0.1
PEL				eS	Sn	19 32 37.6	+1.7
ROC1	El Roble	0.57	11	eP	Pb	19 32 27.0	-0.6
ROC1				eS	Sn	19 32 37.4	+0.7
ROCH	El Roble	0.57	11	⇑iP	Pb	19 32 27.0	-0.7
ROCH				eS	Sn	19 32 37.0	+0.3
ROCH				IAML		19 32 37.7	
	comp=E,911nm,0.2s						
FCH	Farellones	0.74	74	eP	Pb	19 32 29.8	-0.7
FCH				eS	Sb	19 32 41.9	+1.4
FCH				IAML		19 32 43.0	
	comp=N,1µm,0.2s						
LMEL	Las Melosas	0.84	112	⇑iP	Pb	19 32 31.0	-1.1
LMEL				eS	Sb	19 32 44.2	+0.9
LMEL				IAML		19 32 47.2	
	comp=N,1µm,0.1s						
AUSP	Uspallata	1.98	49	eP	Pb	19 32 49.1	-2.3
AUSP				eS	Sb	19 33 15.7	+0.1
ARCO	CERRO ARCO	1.98	70	eP	Pn	19 32 47.5	0.0
AAGR	Agrelo	1.99	78	eP	Pb	19 32 47.8	-3.7
ASAL	Salagasta	2.16	65	eP	Pn	19 32 50.1	+0.3
RTLS	Leoncito	2.33	42	eP	Pn	19 32 53.0	+0.6
RTLS				eS	Sb	19 33 24.3	-1.6
RTLS				IAML		19 33 30.7	
	comp=Z,24nm,0.4s						
RTCV	Cerro Valdivia	2.76	53	eP	Pn	19 32 58.7	+0.6
CFA	Coronel Fontan	3.12	53	eP	Pn	19 33 04.0	+0.9
AMOG	MOGNA	3.43	42	eP	Pn	19 33 07.7	+0.3

IDC 22 19:50:45.1±8.1, **18°.84N**×**143°.44E**, **h0**^{km}, **mb3.4**/4, **mb1 3.6**/4, **mb1mx3.3**/29, **mbtmp3.4**/4, **Error ellipse: s-maj=318.9km s-min=25.1km az=77.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.56	194	P	P	19 58 18.0	-0.2
	0.6nm,0.8s,baz=14,slow=8.8,SNR=6.6						
ASAR	Alice Springs	43.26	193	P	P	19 58 48.5	-0.1
	0.3nm,0.8s,baz=9.8,slow=12,SNR=3.1						
MKAR	Makanchi Array	56.82	314	P	P	20 00 31.9	+0.5
	0.2nm,0.7s,baz=98,slow=7.8,SNR=2.6						
KURBB	Kurchatov Arra	59.78	318	P	P	20 00 51.3	-0.7
	0.5nm,0.3s,baz=100,slow=7.2,SNR=4.2						

KRSC 22 19:51:34.7±1.0, **51°.67N**×**158°.32E**, **h50**^{km}±8^{km}, **ML4.1**, **FELT [III] at lighthouse Krugliy; [II] at GMS Vodopadnay., Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.21	314	i P	Pn	19 51 44.4	+1.3
KDTR				eS	Sn	19 51 50.1	+1.0
RUS	Russkaya	0.78	9	i P	Pn	19 51 50.4	+1.0
RUS				eS	Sn	19 52 00.8	+0.6
MTVR	Mutnovka	0.82	354	eP	Pn	19 51 51.6	+1.4
MTVR				eS	Sn	19 52 02.8	+1.3
GRL	Gorelyy	0.90	350	eP	Pn	19 51 52.8	+1.6
GRL				eS	Sn	19 52 05.1	+1.8
PAU	Pauzhetka	0.96	259	eP	Pn	19 51 53.3	+1.4
PAU				eS	Sn	19 52 05.9	+1.4

KRMR	**Karymshinskiy**	**1.17**	**354**	eP	Pn	19 51 56.4	+1.7
KRMR				eS	Sn	19 52 11.4	+1.8
DALK	**Dalny**	**1.39**	**11**	eP	Pn	19 51 59.4	+1.7
DALK				eS	Sn	19 52 16.4	+1.5
APC	**Apacha**	**1.45**	**331**	eP	Pn	19 52 00.2	+1.7
APC				eS	Sn	19 52 18.4	+2.1
UGLR	**Uglovaya**	**1.58**	**11**	eP	Pn	19 52 03.1	+2.8
AVH	**Avacha**	**1.62**	**9**	eP	Pn	19 52 03.5	+2.6
AVH				eS	Sn	19 52 23.8	+3.1
SMAR	**Somma**	**1.63**	**10**	eP	Pn	19 52 03.1	+2.0
NLC	**Nalytchevo**	**1.63**	**22**	eP	Pn	19 52 02.4	+1.4
NLC				eS	Sn	19 52 20.3	-0.5
KOK	**Koryaka**	**1.64**	**7**	eP	Pn	19 52 04.0	+2.8
SDLR	**Sedlovina**	**1.65**	**12**	i P	Pn	19 52 03.0	+1.6
SKR	**Severo-Kuril's**	**1.70**	**235**	eP	Pn	19 52 03.3	+1.4
SKR				eS	Sn	19 52 23.1	+0.7
KRX	**Arik**	**1.71**	**7**	eP	Pn	19 52 05.1	+2.9
SPN	**Mys Shipunski**	**1.77**	**35**	eP	Pn	19 52 04.9	+2.0
SPN				eS	Sn	19 52 25.9	+1.6
ALID	**Alaid**	**1.91**	**246**	eP	Pn	19 52 06.6	+1.6
GNL	**Ganaly**	**2.04**	**354**	eP	Pn	19 52 08.9	+2.2
KII	**Karymskiy**	**2.47**	**16**	eP	Pn	19 52 15.7	+3.2
KII				eS	Sn	19 52 44.1	+2.6
MKZ	**Mys Kozlova**	**3.55**	**34**	eP	Pn	19 52 30.8	+3.6
MKZ				eS	Sn	19 53 10.2	+2.4
TUMD	**Tumrok D**	**3.75**	**19**	eP	Pn	19 52 34.3	+4.2
TUMR	**Tumrok**	**3.78**	**16**	eP	Pn	19 52 34.5	+4.0
KBTR	**Krutoberegovo**	**5.27**	**29**	eP	Pn	19 52 56.2	+5.4

NEIC ***22*** *20:09:55.0±0.0, 14°.49S×75°.92W, h60km, ML4.3(ARE), After ARE.*

NEIC Felt [II] at Ica.

IDC ***22*** *20:09:56.2±2.6, 14°.31S×75°.71W, h55km±22km, mb3.4/3, mb1 3.8/6, mb1mx3.5/38, mbtmp3.9/6, ML4.0/3, MS3.4/1, Ms1 3.4/1, ms1mx2.7/20, Error ellipse: s-maj=39.8km s-min=23.2km az=48.0*

ISC 22 20:09:52.4±0.9**, 14°.6S**±0°.1×**75°.8W**±0°.1**, h29km, n14, σ2^{s}.31**/18**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**2.78**	**339**	ePn	**Pn**	**20 10 34.1**	**-1.0**
NNA				eSn	**Sn**	**20 11 07.8**	**+0.2**
NNA	**Nana**	**2.78**	**339**	P	**Pn**	**20 10 35.4**	**+0.4**
	46nm,0.3s,baz=122,slow=11,SNR=41						
NNA				S	**Sn**	**20 11 08.7**	**+1.1**
	67nm,0.3s,baz=241,slow=19,SNR=4.1						
MNMC	**Minye Minye**	**7.47**	**128**	ePn	**Pn**	**20 11 41.0**	**+1.3**
MNMC				eSn	**Sn**	**20 13 01.6**	**-2.2**
LPAZ	**La Paz**	**7.60**	**104**	ePn	**Pn**	**20 11 45.4**	**+3.5**
LPAZ	**La Paz**	**7.60**	**104**	P	**Pn**	**20 11 45.9**	**+4.0**
	0.6nm,0.3s,baz=285,slow=6.0,SNR=7.5						
PB11	**IPOC Station P**	**7.82**	**132**	ePn	**Pn**	**20 11 46.1**	**+1.7**
PB11				eSn	**Sn**	**20 13 08.7**	**-3.3**
PB01	**IPOC Station P**	**8.80**	**138**	ePn	**Pn**	**20 12 00.9**	**+3.1**
LVC	**Limon Verde**	**10.31**	**142**	P	**Pn**	**20 12 22.7**	**+3.8**
	2.4nm,0.3s,baz=341,slow=12,SNR=17						
PTGA	**Pitinga**	**20.87**	**50**	P	**P**	**20 14 31.1**	**-1.2**
	1.3nm,0.4s,baz=320,slow=20,SNR=3.2						
PTGA				LR	LR	20 23 50.5	
	comp=Z,103nm,18.1s,baz=227,slow=40						
TORD	**Torodi Ar. Bea**	**81.53**	**74**	P	**P**	**20 22 06.7**	**-1.2**
	0.5nm,0.7s,baz=266,slow=4.7,SNR=4.3						
YKA	**Yellowknife Ar**	**82.61**	**343**	P	**P**	**20 22 11.0**	**-1.5**
	0.3nm,0.6s,baz=141,slow=6.0,SNR=6.3						
ASAR	**Alice Springs**	**132.14**	**218**	PKP	**PKPdf**	**20 29 04.9**	**+0.6**
	0.9nm,1.2s,baz=147,slow=1.9,SNR=3.5						
WRA	**Warramunga Arr**	**134.63**	**222**	PKP	**PKiKP**	**20 29 10.6**	**+0.1**
	0.4nm,1.0s,baz=127,slow=1.8,SNR=5.7						
SONM	**Songino Array**	**146.81**	**357**	PKPbc	**PKPbc**	**20 29 32.3**	**+0.3**
	0.6nm,0.8s,baz=344,slow=2.6,SNR=4.2						

ISCJB ***22*** *20:15:21.9±0.2, 15°.66S±0°.03×71°.38W±0°.07, h10km, mb4.7/67, MS4.1/17, Error ellipse: s-maj=10.3km s-min=3.1km az=161.7*

ARE ***22*** *20:15:21.0±0.0, 15°.82S×71°.86W, h24km*

NEIC ***22*** *20:15:23.6±0.2, 15°.70S×71°.31W, h10km, mb4.9/64, ML4.6(ARE), Error ellipse: s-maj=7.6km s-min=3.5km az=70.0*

NEIC Felt [II] at Maca.

GCMT ***22*** *20:15:24.5±0.4, 15°.85S±0°.02×71°.68W±0°.03, h28km±1km, MW5.0/66, Moment Tensor Solution. s19,c23; s66,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.52±.23; M$_{\theta\theta}$3.24±.15; M$_{\phi\phi}$-2.72±.18; M$_{r\theta}$-1.26±.23; M$_{\theta\phi}$0.84±.14; M$_{\phi r}$0.98±.37; Best double couple: M$_0$3.50100×10^{16} NP1:φ$_s$125.00000°, δ85.00000°, λ-28.00000°. NP2: φ$_s$218.00000°, δ62.00000°, λ-174.00000°. Principal axes: T 3.6670, Plg16.0000°, Azm175.0000°; N -0.3310, Plg61.0000°, Azm296.0000°; P -3.3340, Plg23.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***22*** *20:15:25.6±3.9, 15°.59S×71°.26W, h21km±25km, mb4.2/15, mb1 4.3/18, mb1mx4.2/37, mbtmp4.3/18, ML3.8/3, MS4.0/20, Ms1 4.0/20, ms1mx3.9/32 Error ellipse: s-maj=21.3km s-min=13.4km az=61.0*

ISC 22 20:15:23.4±0.3**, 15°.72S**±0°.04×**71°.38W**±0°.07**, h10km, n149, σ1^{s}.51**/151**, mb4.8**/67**, MS4.2**/17**, 1C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**3.05**	**161**⇑	eP	**Pn**	**20 16 14.5**	**+2.7**
PB12				eS	**Sb**	**20 16 54.7**	**-0.4**
LPAZ	**La Paz**	**3.17**	**101**	Pg	**Pg**	**20 16 21.5**	**-2.8**
	1.2nm,0.3s,baz=277,slow=12,SNR=32						
MNMC	**Minye Minye**	**3.79**	**154**	ePn	**Pn**	**20 16 25.9**	**+3.6**
MNMC				eSg	**Sg**	**20 17 21.6**	**-3.8**
PSGCX	**Pisagua**	**4.04**	**163**	eP	**Pn**	**20 16 27.0**	**+1.6**
PB11	**IPOC Station P**	**4.34**	**158**	ePn	**Pn**	**20 16 27.5**	**-2.1**
PB11				eSg	**Sg**	**20 17 38.5**	**-4.4**
PB11	**IPOC Station P**	**4.34**	**158**	eP	**Pn**	**20 16 32.7**	**+3.1**
PB08	**IPOC Station P**	**4.88**	**155**	eP	**Pn**	**20 16 40.6**	**+3.3**
PB01	**IPOC Station P**	**5.59**	**162**	ePn	**Pn**	**20 16 48.2**	**+1.5**
PB01				eSn	**Sn**	**20 17 52.5**	**+1.4**
PB01	**IPOC Station P**	**5.59**	**162**	eP	**Pn**	**20 16 48.6**	**+1.9**
PB02	**IPOC Station P**	**5.74**	**166**	eP	**Pn**	**20 16 49.6**	**+0.7**
PB07	**IPOC Station P**	**6.14**	**167**	eP	**Pn**	**20 16 55.3**	**+0.9**
PB09	**IPOC Station P**	**6.37**	**162**	eP	**Pn**	**20 16 59.2**	**+1.6**
NNA	**Nana**	**6.48**	**304**	ePn	**Pn**	**20 16 58.7**	**-0.2**
NNA	**Nana**	**6.48**	**304**	Pn	**Pn**	**20 17 01.8**	**+2.9**
	2.0nm,0.3s,baz=157,slow=11,SNR=13						
NNA				LR	LR	20 19 56.5	
	comp=Z,359nm,18.1s,baz=140,slow=42						
PB03	**IPOC Station P**	**6.48**	**167**	eP	**Pn**	**20 16 59.6**	**+0.6**
PB04	**IPOC Station P**	**6.68**	**170**	ePn	**Pn**	**20 17 01.4**	**-0.4**
PB04	**IPOC Station P**	**6.68**	**170**	eP	**Pn**	**20 17 01.3**	**-0.5**
LVC	**Limon Verde**	**7.24**	**162**	ePn	**Pn**	**20 17 11.2**	**+1.5**
LVC				eSn	**Sn**	**20 18 36.9**	**+4.8**
LVC	**Limon Verde**	**7.24**	**162**	Pn	**Pn**	**20 17 11.8**	**+2.1**
	6.3nm,0.3s,baz=330,slow=9.4,SNR=5.5						
LVC				Sn	**Sn**	**20 18 36.9**	**+4.8**
	1.9nm,0.3s,baz=173,slow=16,SNR=5.1						
LVC				LR	LR	20 19 56.8	
	comp=Z,3μm,19.2s,baz=338,slow=37						
GO02	**Mina Guanaco**	**9.54**	**170**	ePn	**Pn**	**20 17 40.1**	**-1.1**
ATAH	**Atahualpa**	**10.96**	**320**	LR	LR	20 23 12.0	
	comp=Z,1μm,21.6s,baz=166,slow=43						
GO03	**Copiap**	**11.86**	**175**	ePn	**Pn**	**20 18 12.9**	**+0.2**
GO03				eSn	**Sn**	**20 20 22.3**	**-3.0**
LCO	**Las Campanas**	**13.24**	**177**	ePn	**Pn**	**20 18 31.0**	**-0.9**
GO04	**Tololo Observa**	**14.39**	**178**	ePn	**Pn**	**20 18 48.6**	**+1.1**
CPUP	**Villa Florida**	**16.82**	**131**	ePn	**P**	**20 19 23.0**	**+1.8**
	29nm,1.7s						
CPUP	**Villa Florida**	**16.82**	**131**	LR	LR	20 27 02.0	
	comp=Z,522nm,20.7s,baz=316,slow=41						
ROC1	**El Roble**	**17.18**	**179**	ePn	**Pn**	**20 19 24.6**	**+0.7**
	24nm,0.9s						
OTAV	**Otavalo**	**17.33**	**336**	ePn	**Pn**	**20 19 25.6**	**-0.4**
	60nm,1.9s						
PEL	**Peldehue**	**17.36**	**178**	ePn	**P**	**20 19 28.1**	**+0.9**
	51nm,1.3s						
PTGA	**Pitinga**	**18.67**	**38**	eP	**Pn**	**20 19 42.9**	**+0.8**
	70nm,1.8s						
PTGA	**Pitinga**	**18.67**	**38**	P	**Pn**	**20 19 42.3**	**+0.1**
	0.2nm,0.3s,baz=219,slow=11,SNR=7.4						
ROSC	**El Rosal**	**20.64**	**352**	eP	**P**	**20 20 02.9**	**-0.8**
	34nm,1.7s						
ROSC	**El Rosal**	**20.64**	**352**	LR	LR	20 28 25.8	
	comp=Z,1μm,20.4s,baz=200,slow=38						
BDFB	**Brasilia**	**22.49**	**93**	P	**P**	**20 20 24.5**	**+1.1**
	1.5nm,0.4s,baz=209,slow=14,SNR=3.2						
BDFB				LR	LR	20 29 59.7	
	comp=Z,564nm,19.8s,baz=266,slow=39						
TRQA	**Tornquist**	**23.75**	**161**	eP	**P**	**20 20 36.9**	**+0.9**
	23nm,1.0s						
GO06	**Curarrehue**	**23.77**	**180**	eP	**P**	**20 20 36.4**	**+0.1**
	108nm,1.9s						
SDV	**Santo Domingo**	**24.46**	**2**	eP	**P**	**20 20 41.9**	**-1.1**
	17nm,1.1s						
SDV	**Santo Domingo**	**24.46**	**2**	P	**P**	**20 20 43.4**	**+0.4**
	3.0nm,0.4s,baz=151,slow=3.3,SNR=4.5						
PLCA	**Paso Flores**	**24.93**	**179**	eP	**P**	**20 20 47.7**	**+0.8**
	32nm,0.9s						
PLCA	**Paso Flores**	**24.93**	**179**	P	**P**	**20 20 48.5**	**+1.6**
	20nm,0.9s,baz=21,slow=10,SNR=18						
PLCA				LR	LR	20 30 47.4	
	comp=Z,130nm,20.0s,baz=22,slow=37						
ESPN	**Las Esperanzas**	**30.54**	**335**	eP	**P**	**20 21 36.1**	**-1.2**
	21nm,1.0s						
BOAB	**BOACO BROADBAN**	**31.36**	**332**	eP	**P**	**20 21 42.9**	**-1.6**
	6.0nm,0.8s						
SJG	**San Juan**	**34.01**	**9**	eP	**P**	**20 22 09.5**	**+1.8**
	84nm,1.9s						
SEUS	**St. Eustatius**	**34.03**	**14**	eP	**P**	**20 22 09.0**	**+1.3**
	137nm,1.0s						
APG	**El Apazote**	**35.88**	**327**	P	**P**	**20 22 24.4**	**+0.2**
	5.5nm,1.0s,baz=193,slow=9.8,SNR=4.8						
CCIG	**Comitan**	**37.83**	**326**	eP	**P**	**20 22 40.7**	**+0.1**
	9.3nm,0.8s						
CCIG				eS	**S**	**20 28 30.1**	**-2.0**
USHA	**Ushuaia**	**39.10**	**177**	P	**P**	**20 22 52.5**	**+1.8**
	5.3nm,0.8s,baz=4.2,slow=7.6,SNR=4.1						
CMIG	**Matias Romero**	**40.01**	**324**	P	**P**	**20 22 59.1**	**+0.4**
	3.7nm,0.9s,baz=84,slow=2.3,SNR=4.8						
LNIG	**Linares**	**48.79**	**325**	eP	**P**	**20 24 08.4**	**-0.5**
152A	**Waverly Hall**	**49.78**	**345**	eP	**P**	**20 24 17.6**	**+1.3**
	16nm,1.1s						
Z50A	**Ashland**	**50.64**	**344**	eP	**P**	**20 24 23.5**	**+0.6**
	13nm,1.0s						
LRAL	**Lakeview Retre**	**50.73**	**343**	eP	**P**	**20 24 23.0**	**-0.5**
	50nm,1.7s						
TKL	**Tuckaleechee C**	**52.43**	**347**	LR	LR	20 47 43.2	
	comp=Z,167nm,20.6s,baz=171,slow=37						
T49A	**Edmonton**	**54.21**	**346**	eP	**P**	**20 24 48.7**	**-0.6**
	9.8nm,0.9s						
MIAR	**Mount Ida**	**54.27**	**337**	eP	**P**	**20 24 50.2**	**+0.5**
	11nm,0.9s						
TXAR	**Lajitas Array**	**54.58**	**325**	P	**P**	**20 24 51.4**	**-0.9**
	1.0nm,0.7s,baz=148,slow=8.9,SNR=9.8						
TXAR				LR	LR	20 46 22.8	
	comp=Z,151nm,20.5s,baz=0.0,slow=34						
TX31	**Lajitas Ar. Si**	**54.58**	**325**	eP	**P**	**20 24 52.2**	**0.0**
W39A	**Magazine**	**54.92**	**338**	eP	**P**	**20 24 56.0**	**+1.5**
	14nm,1.0s						
ABTX	**Abilene, Hawle**	**55.16**	**331**	eP	**P**	**20 24 56.7**	**+0.4**
	24nm,1.1s						
PBMO	**Poplar Bluff**	**55.23**	**341**	eP	**P**	**20 24 56.2**	**-0.4**
	8.5nm,0.9s						
SIUC	**Southern Illin**	**55.74**	**343**	eP	**P**	**20 25 00.5**	**+0.2**
	18nm,0.8s						
HHAR	**Hobbs**	**55.95**	**338**	eP	**P**	**20 25 02.2**	**+0.4**
	11nm,1.1s						
FVM	**French Village**	**56.34**	**342**	eP	**P**	**20 25 05.4**	**+0.8**
	17nm,1.1s						
WMOK	**Wichita Mounta**	**56.54**	**333**	eP	**P**	**20 25 06.3**	**+0.2**
	20nm,2.0s						
N54A	**Moraine State**	**56.96**	**352**	eP	**P**	**20 25 09.3**	**+0.3**
	105nm,2.0s						
MNTX	**Cornudas Mount**	**57.34**	**326**	eP	**P**	**20 25 11.1**	**-0.8**
	7.7nm,1.1s						
M54A	**Oil Creek Stat**	**57.45**	**353**	eP	**P**	**20 25 12.0**	**-0.5**
	23nm,1.0s						
ALLY	**Alegheny Colle**	**57.65**	**352**	eP	**P**	**20 25 15.3**	**+1.4**
	28nm,0.9s						
MSTX	**Muleshoe**	**57.76**	**329**	eP	**P**	**20 25 14.6**	**-0.4**
	21nm,1.2s						
ERPA	**Erie**	**58.09**	**352**	eP	**P**	**20 25 16.8**	**-0.2**
	38nm,0.9s						
319A	**Douglas**	**59.31**	**322**	eP	**P**	**20 25 25.3**	**-0.5**
	9.9nm,1.1s						
BNM	**Barren Site**	**59.88**	**326**	eP	**P**	**20 25 30.3**	**+0.4**
CBKS	**Cedar Bluff**	**60.40**	**335**	eP	**P**	**20 25 33.3**	**+0.2**
	25nm,1.2s						
ANMO	**Albuquerque**	**60.40**	**327**	eP	**P**	**20 25 33.6**	**+0.2**
	12nm,1.8s						
ANMO	**Albuquerque**	**60.40**	**327**	P	**P**	**20 25 33.3**	**-0.1**
	1.7nm,0.7s,baz=133,slow=9.5,SNR=5.2						
SADO	**Sadowa**	**60.61**	**354**	eP	**P**	**20 25 34.9**	**+0.6**
	21nm,1.0s						
SADO	**Sadowa**	**60.61**	**354**	P	**P**	**20 25 33.9**	**-0.4**
	16nm,1.0s,baz=211,slow=3.9,SNR=4.6						
T25A	**Trinidad**	**61.10**	**330**	eP	**P**	**20 25 38.5**	**+0.4**
	9.9nm,1.1s						
SDCO	**Great Sand Dun**	**62.11**	**330**	eP	**P**	**20 25 45.0**	**0.0**
	12nm,1.1s						
X16A	**Lo Mia Camp, P**	**62.75**	**323**	eP	**P**	**20 25 48.8**	**-0.4**
	6.6nm,1.1s						
ECSD	**EROS Data Cent**	**63.52**	**340**	eP	**P**	**20 25 54.8**	**+0.9**
	18nm,1.4s						
SMCO	**Snowmass**	**63.95**	**330**	eP	**P**	**20 25 58.2**	**+0.9**
	5.7nm,1.0s						
PV15	**Paradox Valley**	**64.05**	**328**	eP	**P**	**20 25 58.2**	**+0.4**
	15nm,1.1s						
PV13	**Radium Mtn., P**	**64.08**	**328**	eP	**P**	**20 25 58.4**	**+0.4**
	6.9nm,1.2s						
PV16	**Nyswonger Mesa**	**64.25**	**328**	eP	**P**	**20 25 59.4**	**+0.3**
	18nm,1.8s						
PV16				eS	**S**	**20 34 37.8**	**+0.8**
KNB	**Kanab**	**65.39**	**324**	eP	**P**	**20 26 06.8**	**+0.2**
	10.0nm,1.2s						
P17A	**Butcher Ranch,**	**66.06**	**328**	eP	**P**	**20 26 11.6**	**+0.9**
	18nm,1.3s						
CCUT	**Cedar City**	**66.08**	**324**	eP	**P**	**20 26 12.2**	**+1.2**
	6.3nm,1.1s						
MSU	**Marysvale**	**66.11**	**326**	eP	**P**	**20 26 12.3**	**+1.1**
PSUT	**Pine Spring**	**67.05**	**325**	eP	**P**	**20 26 18.0**	**+0.8**
	6.8nm,1.2s						
JLU	**Jordanelle**	**67.26**	**328**	eP	**P**	**20 26 18.3**	**-0.3**
	8.4nm,1.2s						
TPNV	**Topopah Spring**	**67.32**	**322**	eP	**P**	**20 26 19.6**	**+0.7**
	11nm,1.3s						
AGMN	**Agassiz Nation**	**67.37**	**343**	eP	**P**	**20 26 19.9**	**+1.2**
	17nm,1.4s						
DUG	**Dugway, Tooele**	**67.67**	**327**	eP	**P**	**20 26 20.6**	**-0.4**
	5.1nm,1.0s						
R11A	**Troy Canyon, C**	**67.89**	**324**	eP	**P**	**20 26 23.2**	**+0.7**
	7.2nm,1.3s						
PD31	**Pinedale Array**	**67.96**	**331**	eP	**P**	**20 26 22.7**	**-0.2**
	16nm,2.0s						
PDAR	**Pinedale Array**	**67.96**	**331**	eP	**P**	**20 26 23.5**	**+0.6**
PDAR	**Pinedale Array**	**67.96**	**331**	P	**P**	**20 26 21.8**	**-1.1**
	0.6nm,0.8s,baz=159,slow=5.7,SNR=5.7						
PDAR				LR	LR	20 58 51.2	
	comp=Z,111nm,19.8s,baz=129,slow=38						
HVU	**Hansel Valley**	**68.80**	**328**	eP	**P**	**20 26 28.6**	**+0.5**
	4.6nm,1.1s						
LOHW	**Long Hollow**	**69.10**	**331**	eP	**P**	**20 26 29.7**	**-0.3**
	4.9nm,1.1s						
ULM	**Lac du Bonnet**	**69.14**	**343**	eP	**P**	**20 26 28.7**	**-1.1**
	19nm,1.4s						
ULM	**Lac du Bonnet**	**69.14**	**343**	P	**P**	**20 26 28.6**	**-1.1**
	3.2nm,0.7s,baz=130,slow=3.5,SNR=3.7						
ULM				LR	LR	21 00 18.4	
	comp=Z,97nm,18.3s,baz=136,slow=39						
NV11	**Mina Array Sit**	**69.44**	**322**	eP	**P**	**20 26 31.9**	**-0.2**
	1.4nm,2.0s						
NV11				eS	**S**	**20 35 33.3**	**-6.3**
FLWY	**Flagg Ranch**	**69.50**	**331**	eP	**P**	**20 26 33.0**	**+0.5**
	56nm,1.9s						
DBIC	**Dimbokro**	**69.51**	**77**	eP	**P**	**20 26 32.1**	**-0.7**
	13nm,1.3s						
DBIC	**Dimbokro**	**69.51**	**77**	P	**P**	**20 26 32.3**	**-0.5**
	5.7nm,1.0s,baz=233,slow=6.4,SNR=5.6						
DBIC				LR	LR	20 55 56.4	
	comp=Z,127nm,19.0s,baz=234,slow=35						
NV01	**Mina Array Sit**	**69.52**	**322**	eP	**P**	**20 26 33.2**	**+0.5**
NVAR	**Mina Array Bea**	**69.52**	**322**	P	**P**	**20 26 33.0**	**+0.3**
	0.9nm,0.8s,baz=155,slow=5.8,SNR=5.2						
YHH	**Holmes Hill**	**70.11**	**331**	eP	**P**	**20 26 37.1**	**+0.8**
	11nm,1.5s						
SCHQ	**Schefferville**	**70.38**	**3**	LR	LR	20 59 28.5	
	comp=Z,114nm,19.5s,baz=304,slow=38						
ORV	**Oroville**	**72.15**	**321**	eP	**P**	**20 26 49.4**	**+1.0**
	5.2nm,0.9s						
TOA0	**Torodi Ar. Sit**	**77.74**	**72**	eP	**P**	**20 27 19.8**	**-1.4**
TOA1	**Torodi Ar. Sit**	**77.74**	**72**	eP	**P**	**20 27 19.6**	**-1.7**
TORD	**Torodi Ar. Bea**	**77.74**	**72**	P	**P**	**20 27 19.6**	**-1.7**
	1.9nm,0.8s,baz=278,slow=5.7,SNR=12						
TORD				LR	LR	21 01 47.8	
	comp=Z,151nm,18.9s,baz=295,slow=36						
VNDA	**Vanda**	**82.10**	**190**	LR	LR	20 57 23.6	
	comp=Z,106nm,18.1s,baz=182,slow=31						
SYO	**Syowa Base**	**82.70**	**160**⇓	eP	**P**	**20 27 47.6**	**+0.6**
YKA	**Yellowknife Ar**	**84.99**	**341**	P	**P**	**20 27 58.0**	**-0.6**
	2.6nm,0.7s,baz=135,slow=5.0,SNR=14						
YKA				LR	LR	21 08 42.0	
	comp=Z,8.8nm,19.4s,baz=140,slow=38						
YKB5	**Yellowknife Ar**	**84.99**	**341**	eP	**P**	**20 27 57.5**	**-1.2**
YKW3	**Yellowknife Ar**	**85.05**	**341**	eP	**P**	**20 27 57.9**	**-1.0**
	22nm,1.6s						
BOSA	**Boshof**	**88.25**	**119**	LR	LR	21 06 12.6	
	comp=Z,87nm,19.3s,baz=226,slow=34						
MAW	**Mawson**	**90.50**	**164**	LR	LR	21 10 37.4	
	comp=Z,211nm,18.2s,baz=142,slow=37						
SUMG	**Summit**	**90.76**	**9**	eP	**P**	**20 28 25.6**	**-1.1**
	16nm,1.0s						
SUMG	**Summit**	**90.76**	**9**	i P	**P**	**20 28 26.1**	**-0.6**
	42nm,1.0s						
KEST	**Kesra**	**91.73**	**53**	LR	LR	21 10 39.1	
	comp=Z,105nm,18.9s,baz=278,slow=36						
ILAR	**Eielson Array**	**98.05**	**335**	LR	LR	21 18 09.6	
	comp=Z,90nm,18.4s,baz=122,slow=38						
ABKAR	**Akbulak array**	**128.32**	**39**	ePKPdf	**PKiKP**	**20 34 31.8**	**+0.9**
ASAR	**Alice Springs**	**133.71**	**213**	PKP	**PKPdf**	**20 34 41.2**	**-0.1**
	0.3nm,0.7s,baz=153,slow=2.1,SNR=3.1						
WR1	**Warramunga Arr**	**136.47**	**216**	ePKPdf	**PKPdf**	**20 34 46.4**	**-0.2**
WRA	**Warramunga Arr**	**136.47**	**216**	PKP	**PKPdf**	**20 34 46.4**	**-0.2**
	1.5nm,0.8s,baz=144,slow=1.6,SNR=3.6						
ZAA1	**Zalesovo Array**	**137.56**	**21**	ePKPdf	**PKPdf**	**20 34 48.0**	**+0.5**
ZAA0	**Zalesovo Array**	**137.56**	**21**	ePKPdf	**PKPdf**	**20 34 48.4**	**+0.9**
ZALV	**Zalesovo Beam**	**137.56**	**21**	ePKPpre	PKPpre	20 34 37.8	
ZALV				ePKPdf	**PKPdf**	**20 34 47.9**	**+0.4**
ZALV	**Zalesovo Beam**	**137.56**	**21**	PKP	**PKPdf**	**20 34 48.0**	**+0.4**
	1.7nm,0.7s,baz=291,slow=4.1,SNR=6.2						
MK32	**Makanchi Array**	**142.06**	**30**	ePKPdf	**PKPdf**	**20 34 54.8**	**-1.2**
MKAR	**Makanchi Array**	**142.06**	**30**	PKP	**PKPdf**	**20 34 54.8**	**-1.2**
	0.9nm,0.9s,baz=298,slow=2.6,SNR=6.1						
KSH	**Kashi**	**142.93**	**44**	PKP	**PKiKP**	**20 34 59.8**	**-1.3**
KSH				PP	**PP**	**20 38 12.1**	**+5.2**
KSH				AMB	AMB		
	comp=Z,400nm,5.2s						
MJAR	**Matsushiro Arr**	**146.52**	**314**	PKPbc	**PKPdf**	**20 35 04.8**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=207,slow=1.0,SNR=4.9						
MAJO	**Matsushiro**	**146.52**	**314**	ePKPdf	**PKPdf**	**20 35 04.8**	**+0.8**
SONA1	**Songino Array**	**147.91**	**3**	ePKPdf	**PKPbc**	**20 35 08.8**	**-0.3**
ULN	**Ulaanbaatar**	**147.92**	**2**	ePKPdf	**PKPbc**	**20 35 09.3**	**+0.1**
SONA0	**Songino Array**	**147.93**	**3**	ePKPbc	**PKPbc**	**20 35 09.5**	**+0.4**
SONM	**Songino Array**	**147.93**	**3**	PKPbc	**PKPbc**	**20 35 09.5**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=329,slow=1.7,SNR=12						
CN2	**Changchun**	**148.56**	**336**	ePKPbc	**PKPdf**	**20 35 04.3**	**-2.9**
CN2				epPKP		20 41 36.3	
CN2				esPKP		20 41 40.8	
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,290nm,23.0s						
CN2				LR	LR		
	comp=E,230nm,23.0s						
CN2				LR	LR		
	comp=Z,370nm,27.0s						
KS01	**Wonju Array Si**	**152.43**	**325**	ePKPbc	**PKPbc**	**20 35 20.4**	**+0.2**
KSRS	**Korea Array**	**152.43**	**325**	PKPbc	**PKiKP**	**20 35 21.3**	**+0.8**
	comp=Z,2.8nm,0.8s,baz=35,slow=3.0,SNR=8.7						
KSAR	**Wonju Array Be**	**152.46**	**325**	PKPbc	**PKiKP**	**20 35 21.3**	**+0.8**
LSA	**Lhasa**	**158.75**	**46**	ePKPdf	**PKPdf**	**20 35 21.3**	**-1.4**
LZH	**Lanzhou**	**159.27**	**11**	ePKP	**PKPdf**	**20 35 20.8**	**-1.9**
LZH				pPKP	sPKPdf	20 35 32.4	+3.0
LZH				sPKP		20 35 39.4	
SHL	**Shillong**	**161.54**	**55**	ePKPdf	**PKPdf**	**20 35 25.0**	**-0.6**
SHL				ePKPab	**PKPab**	**20 36 11.6**	**+1.4**

DJA 22 20:26:54.8±1.9**, 0°S**±17°×**13°3E**±°**, h17km**±26km**, M3.5**/4**, MLv3.5**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	**Sorong**	**1.56**	**241**	P	Pn	20 27 22.4	+0.7
SWI				S	Sn	20 27 39.7	-1.8
RKPI	**Ransiki, Papua**	**2.10**	**132**	P	Pn	20 27 29.2	0.0
RKPI				S	Sn	20 27 55.5	+0.7
FAKI	**Fak Fak**	**2.83**	**188**	P	Pn	20 27 38.4	-0.8
FAKI				S	Sn	20 28 14.3	+1.4

IDC ***22*** *20:27:31.9±1.1, 11°.04S×164°.82E, h0km, mb4.0/10, mb1 4.2/12, mb1mx4.0/51, mbtmp4.1/12, ML4.2/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/34, Error ellipse: s-maj=29.1km s-min=19.3km az=130.0*

NEIC ***22*** *20:27:33.6±0.4, 11°.11S×164°.78E, h10km, mb4.5/7, Error ellipse: s-maj=9.1km s-min=5.9km az=50.0*

ISCJB ***22*** *20:27:34.8±0.6, 11°.28S±0°.07×164°.76E±0°.07, h31km, mb4.1/13, MS3.2/4, Error ellipse: s-maj=11.0km s-min=7.5km az=135.9*

ISC 22 20:27:36.5±0.8**, 11°.15S**±0°.10×**164°.81E**±0°.09**, h31km, n37, σ0^{s}.79**/30**, mb4.1**/13**, MS3.2**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.08**	**289**	ePn	**Pn**	**20 28 49.2**	**-1.4**
HNR				eSn	**Sn**	**20 29 47.9**	**-0.3**
HNR	**Honiara**	**5.08**	**289**	Pn	**Pn**	**20 28 51.0**	**+0.4**
	20nm,0.3s,baz=138,slow=3.7,SNR=5.7						
HNR				Sn	**Sn**	**20 29 47.9**	**-0.3**
	18nm,0.3s,baz=199,slow=22,SNR=6.3						
HNR				LR	LR	20 30 57.1	
	comp=Z,340nm,20.4s,baz=118,slow=41						
MARNC	**Mare, Loyalty**	**10.73**	**164**	ePn	**Pn**	**20 30 06.9**	**-1.2**
DZM	**Mont Dzumac**	**10.98**	**172**	ePn	**Pn**	**20 30 12.2**	**+0.6**
DZM	**Mont Dzumac**	**10.98**	**172**	Pn	**Pn**	**20 30 12.4**	**+0.8**
	0.7nm,0.3s,baz=319,slow=21,SNR=14						
OUENC	**Ouen Island, N**	**11.38**	**170**	ePn	**Pn**	**20 30 15.3**	**-1.6**
PINNC	**Pines Island,**	**11.68**	**168**	ePn	**Pn**	**20 30 20.2**	**-0.9**
CTA	**Charters Tower**	**19.95**	**241**	P	**P**	**20 32 06.3**	**+0.1**
	6.0nm,0.9s,baz=58,slow=17,SNR=7.1						
CTAO	**Charters Tower**	**19.95**	**241**	eP	**Pn**	**20 32 07.9**	**-0.1**
	14nm,1.1s						
COEN	**Coen**	**21.30**	**260**	eP	**P**	**20 32 21.1**	**+0.2**
	58nm,1.8s						
RAO	**Raoul Island**	**24.17**	**141**	eSn	S	20 37 36.2	+30
H11S2	**WAKE ISLAND Hy**	**29.51**	**4**	T	T	21 04 40.2	
	baz=184,slow=76,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**29.51**	**4**	T	T	21 04 39.7	
	baz=184,slow=76,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**29.52**	**4**	T	T	21 04 45.7	
	baz=184,slow=76,SNR=4.9						
STKA	**Stephens Creek**	**29.74**	**223**	eP	**P**	**20 33 41.1**	**+0.8**
	3.3nm,1.5s						
STKA	**Stephens Creek**	**29.74**	**223**	P	**P**	**20 33 41.2**	**+1.0**
	1.8nm,0.7s,baz=14,slow=11,SNR=3.7						
STKA				LR	LR	20 43 45.2	
	comp=Z,58nm,21.8s,baz=25,slow=33						
WRAB	**Tennant Creek**	**30.58**	**250**	eP	**P**	**20 33 48.0**	**+0.3**
	26nm,1.6s						
WB2	**Warramunga Arr**	**30.58**	**250**	eP	**P**	**20 33 47.2**	**-0.6**
WR1	**Warramunga Arr**	**30.59**	**250**	eP	**P**	**20 33 47.3**	**-0.6**
	5.1nm,0.7s						
WRA	**Warramunga Arr**	**30.59**	**250**	P	**P**	**20 33 47.3**	**-0.6**
	4.6nm,0.6s,baz=81,slow=8.8,SNR=27						
H11N1	**WAKE ISLAND Hy**	**30.73**	**4**	T	T	21 06 18.0	
	baz=184,slow=76,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**30.74**	**4**	T	T	21 06 19.1	
	baz=184,slow=76,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**30.75**	**4**	T	T	21 06 15.2	
	baz=184,slow=76,SNR=5.3						
AS31	**Alice Springs**	**31.93**	**243**	eP	**P**	**20 33 59.5**	**-0.2**
	5.6nm,1.9s						
ASAR	**Alice Springs**	**31.93**	**243**	P	**P**	**20 33 59.8**	**+0.1**
	2.4nm,0.9s,baz=66,slow=9.8,SNR=24						
ASAR				LR	LR	20 46 26.3	
	comp=Z,50nm,18.8s,baz=97,slow=36						
FITZ	**Fitzroy Crossi**	**38.47**	**255**	eP	**P**	**20 34 55.6**	**-0.3**
	60nm,1.8s						
FITZ	**Fitzroy Crossi**	**38.47**	**255**	P	**P**	**20 34 56.3**	**+0.3**
	4.7nm,0.8s,baz=78,slow=10,SNR=6.2						
PPT	**Papeete**	**44.56**	**104**	LR	LR	20 52 06.5	
	comp=Z,88nm,18.2s,baz=350,slow=33						
KLR	**Kul'dur**	**66.79**	**337**	P	**P**	**20 38 23.9**	**-1.0**
	1.6nm,0.8s,baz=106,slow=7.4						
CMAR	**Chiang Mai Arr**	**71.31**	**294**	LR	LR	21 10 34.7	
	comp=Z,6.5nm,19.2s,baz=355,slow=36						

SONA0	Songino Array	78.21	324	*e*P	P	20 39 33.9	+0.7
SONM	Songino Array	78.21	324	P	P	20 39 33.9	+0.7
	0.4nm,0.8s,baz=146,slow=6.3,SNR=2.9						
ILAR	Eielson Array	83.90	19	P	P	20 40 02.1	-0.9
	0.4nm,0.6s,baz=228,slow=5.4,SNR=4.8						
NV01	Mina Array Sit	86.79	50	*e*P	P	20 40 19.2	+1.0
NVAR	Mina Array Bea	86.79	50	P	P	20 40 18.6	+0.3
	0.7nm,0.8s,baz=248,slow=6.3,SNR=4.0						
MK32	Makanchi Array	92.97	317	*e*P	P	20 40 47.9	+1.0
MKAR	Makanchi Array	92.97	317	P	P	20 40 47.9	+1.0
	0.4nm,0.8s,baz=100,slow=3.7,SNR=3.7						

ISCJB **22** *21:01:46.5±0.1, 15°.75S±0°.03×71°.72W±0°.04, h10^{km}, mb5.1/91, MS4.8/30, Error ellipse: s-maj=6.3km s-min=2.4km az=151.8*

NEIC **22** *21:01:47.2±2.2, 15°.75S×71°.43W, h8^{km}±14^{km}, mb5.3/75, Error ellipse: s-maj=9.7km s-min=4.6km az=68.0*

NEIC Felt at Arequipa.

BJI **22** *21:01:48.4, 15°.80S×71°.50W, h10^{km}, mB5.5/16, Ms5.6/17, Ms7 5.3/18*

VAO **22** *21:01:48.4±0.3, 15°.78S×71°.83W, h10^{km}, mb4.7*

MOS **22** *21:01:49.2±2.0, 15°.88S×71°.93W, h23^{km}, mb5.3/24, Error ellipse: s-maj=16.4km s-min=6.2km az=113.4*

IDC **22** *21:01:49.5±3.5, 15°.67S×71°.32W, h19^{km}±21^{km}, mb4.5/21, mb1 4.6/27, mb1mx4.5/41, mbtmp4.6/27, ML4.2/6, MS4.7/28, Ms1 4.7/28, ms1mx4.6/32, Error ellipse: s-maj=17.7km s-min=10.8km az=53.0*

GCMT **22** *21:01:50.2±0.2, 15°.81S±0°.01×71°.73W±0°.02, h20^{km}, MW5.3/103, Moment Tensor Solution. s64,c91; s103,c160; Duration: 1.^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.23±.03; $M_{\theta\theta}$1.16±.02; $M_{\phi\phi}$-0.92±.04; $M_{r\theta}$-0.27±.04; $M_{\theta\phi}$0.67±.02; $M_{\phi r}$0.30±.07; Best double couple: $M_0$1.31500×10^{17} NP1:ϕ_s117.00000°, δ81.00000°, λ-19.00000°. NP2:ϕ_s210.00000°, δ71.00000°, λ-170.00000°. Principal axes: T 1.3770, Plg7.0000°, Azm165.0000°; N -0.1200, Plg69.0000°, Azm272.0000°; P -1.2540, Plg20.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 21:01:47.9±0.3**, 15°.76S**±0°.04×**71°.51W**±0°.06**, h10^{km}, n615, σ1.^{s}34**/604**, mb5.2**/91**, MS4.8**/31**, 13C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	IPOC Station P	3.06	159	⇑*e*P	Pn	21 02 37.8	+1.3
PB12				*e*S	Sb	21 03 18.6	-1.4
LPAZ	La Paz	3.29	100	P	Pg	21 02 47.5	-3.6
LPAZ	La Paz	3.29	100	Pg	Pb	21 02 45.7	-1.1
	5.4nm,0.3s,baz=290,slow=11,SNR=51						
MNMC	Minye Minye	3.82	152	*e*Pn	Pn	21 02 49.5	+2.4
PB11	IPOC Station P	4.36	156	*e*Pn	Pn	21 02 55.2	+0.8
PB11	IPOC Station P	4.36	156	⇑*e*P	Pn	21 02 56.0	+1.6
PB08	IPOC Station P	4.90	153	⇑*e*P	Pn	21 03 04.0	+1.9
PB08				*e*S	Sn	21 04 04.7	+5.6
PB01	IPOC Station P	5.60	160	*e*Pn	Pn	21 03 11.2	-0.2
PB01	IPOC Station P	5.60	160	⇑*e*P	Pn	21 03 11.7	+0.3
PB02	IPOC Station P	5.74	165	*e*P	Pn	21 03 13.3	-0.1
PB07	IPOC Station P	6.13	166	⇑*i*P	Pn	21 03 18.2	-0.7
PB07				*e*S	Sn	21 04 29.5	+0.3
NNA	Nana	6.39	305	*e*Pn	Pn	21 03 22.6	+0.3
NNA	Nana	6.39	305	*e*P	Pn	21 03 22.6	+0.3
NNA	Nana	6.39	305	Pn	Pn	21 03 23.7	+1.3
	3.7nm,0.3s,baz=143,slow=9.3,SNR=33						
NNA				LR	LR	21 05 56.4	
	comp=Z,16µm,19.4s,baz=140,slow=38						
PB03	IPOC Station P	6.47	165	⇑*e*P	Pn	21 03 22.7	-0.8
PB04	IPOC Station P	6.67	169	*e*Pn	Pn	21 03 24.2	-1.9
PB04	IPOC Station P	6.67	169	*e*P	Pn	21 03 24.2	-1.9
LVC	Limon Verde	7.25	161	*e*Pn	Pn	21 03 34.2	-0.1
LVC				Sn	Sn	21 04 59.5	+2.6
LVC	Limon Verde	7.25	161	*e*P	Pn	21 03 34.2	-0.1
LVC						21 04 59.5	
LVC	Limon Verde	7.25	161	Pn	Pn	21 03 34.9	+0.6
	19nm,0.3s,baz=326,slow=8.6,SNR=70						
LVC				Sn	Sn	21 04 59.5	+2.6
	14nm,0.3s,baz=162,slow=12,SNR=5.5						
LVC				LR	LR	21 06 45.9	
	comp=Z,8µm,21.9s,baz=331,slow=41						
LVC	Limon Verde	7.25	161	*e*P	Pn	21 03 34.9	+0.6
GO02	Mina Guanaco	9.53	169	*e*Pn	Pn	21 04 03.6	-1.9
SIV	San Ignacio	10.04	93	Pn	Pn	21 04 11.6	-0.8
	3.9nm,0.3s,baz=277,slow=13,SNR=52						
SIV				Lg	Lg	21 07 06.6	
	0.4nm,0.3s,baz=177,slow=17,SNR=3.6						
ATAH	Atahualpa	10.90	321	Pn	Pn	21 04 24.6	+0.1
	0.5nm,0.3s,baz=153,slow=6.7,SNR=3.9						
ATAH				LR	LR	21 08 56.4	
	comp=Z,18µm,18.4s,baz=166,slow=39						
GO03	Copiap	11.84	174	*e*Pn	Pn	21 04 34.1	-2.9
LCO	Las Campanas	13.21	177	*e*Pn	Pn	21 04 54.3	-1.7
LCO	Las Campanas	13.21	177	*e*P	Pn	21 04 54.3	-1.7
LCO	Las Campanas	13.21	177	*e*P	Pn	21 04 57.1	+1.2
GO04	Tololo Observa	14.36	178	*e*Pn	Pn	21 05 10.5	-1.2
SALV	Santo Antonio	15.22	93	*e*P	P	21 05 27.2	-0.9
AQDB	Aquidauana	15.74	110	*e*P	P	21 05 33.5	-0.3
CPUP	Villa Florida	16.89	131	*e*Pn	P	21 05 45.1	-1.5
	39nm,1.4s						
CPUP	Villa Florida	16.89	131	*e*P	P	21 05 45.1	-1.5
CPUP				pmax	pmax		
	comp=Z,39nm,1.4s						
CPUP	Villa Florida	16.89	131	Pn	P	21 05 44.9	-1.7
	comp=Z,0.2nm,0.3s,baz=302,slow=9.9,SNR=4.6						
CPUP				LR	LR	21 14 04.4	
	comp=Z,2µm,20.4s,baz=316,slow=44						
CPUP	Villa Florida	16.89	131	*e*P	P	21 05 47.2	+0.6
OTAV	Otavalo	17.31	336	*e*P	P	21 05 51.8	0.0
	comp=Z,56nm,1.2s						
OTAV	Otavalo	17.31	336	*e*P	P	21 05 51.8	0.0
OTAV				pmax	pmax		
	comp=Z,56nm,1.2s						
PEL	Peldehue	17.33	178	*e*Pn	Pn	21 05 48.3	-1.8
	comp=Z,245nm,1.5s						
PEL	Peldehue	17.33	178	*e*P	Pn	21 05 48.3	-1.8
PEL				pmax	pmax		
	comp=Z,245nm,1.5s						
C2SB	Chapadao do Su	18.08	102	*e*P	P	21 06 02.9	+3.1
PTGA	Pitinga	18.78	38	*e*P	Pn	21 06 06.7	-1.2
	comp=Z,66nm,1.1s						
PTGA	Pitinga	18.78	38	P	P	21 06 06.4	-1.1
	comp=Z,0.8nm,0.3s,baz=222,slow=15,SNR=12						
PTGA				Lg	Lg	21 11 42.7	
	comp=Z,0.3nm,0.3s,baz=124,slow=18,SNR=4.6						
PTGA				LR	LR	21 13 60.0	
	comp=Z,5µm,19.1s,baz=221,slow=39						
TRCB	Terra Rica	19.13	114	*e*P	Pn	21 06 14.8	+2.6
PTGB	Pitanga	20.28	119	*e*P	Pn	21 06 28.0	+2.0
ITRB	Iturama	20.52	104	*e*P	Pn	21 06 30.4	+1.6
ROSC	El Rosal	20.65	352	*e*P	P	21 06 27.8	-0.6
	comp=Z,18nm,1.1s						
ROSC	El Rosal	20.65	352	P	Pn	21 06 29.0	-1.7
	comp=Z,4.8nm,0.4s,baz=118,slow=18,SNR=3.1						
ROSC				LR	LR	21 14 58.5	
	comp=Z,5µm,18.2s,baz=204,slow=38						
ITAB	Concordia	21.31	126	*e*P	P	21 06 36.6	+1.6
FRTB	Fartura	21.99	113	*e*P	P	21 06 46.0	+3.6
CPSB	Cacapava Do Su	22.06	134	*e*P	P	21 06 44.1	+1.0
BB19B	Bebedouro	22.42	107	*e*P	P	21 06 51.1	+4.0
BDFB	Brasilia	22.62	93	*e*P	P	21 06 46.8	-2.5
	comp=Z,20nm,0.9s						
BDFB	Brasilia	22.62	93	*e*P	P	21 06 46.8	-2.5
BDFB				pmax	pmax		
	comp=Z,20nm,0.9s						
BDFB	Brasilia	22.62	93	P	P	21 06 49.3	0.0
	comp=Z,18nm,0.9s,baz=260,slow=8.6,SNR=11						
BDFB				LR	LR	21 16 14.3	
	comp=Z,1µm,19.8s,baz=271,slow=38						
PLTB	Pedras Altas	22.80	137	*e*P	P	21 06 54.2	+3.2
TIJ01	Guaruva-PR	23.09	118	*e*P	P	21 06 57.7	+3.6
CNLB	Canela	23.31	129	*e*P	P	21 06 58.9	+2.6
GO06	Curarrehue	23.74	180	*e*P	P	21 06 59.9	-0.6
	comp=Z,142nm,1.4s						
TRQA	Tornquist	23.75	161	*e*P	P	21 07 00.9	+0.4
	comp=Z,78nm,1.3s						
TRQA	Tornquist	23.75	161	*e*P	P	21 07 00.9	+0.4
TRQA				pmax	pmax		
	comp=Z,77nm,1.3s						
TRQA	Tornquist	23.75	161	*e*P	P	21 07 01.0	+0.4
PMNB	Patos De Minas	24.11	100	*e*P	P	21 07 07.7	+3.5
SDV	Santo Domingo	24.50	2	*e*P	P	21 07 07.0	-0.8
	comp=Z,80nm,1.1s						
SDV	Santo Domingo	24.50	2	P	P	21 07 07.1	-0.8
	comp=Z,50nm,1.0s,baz=227,slow=6.6,SNR=17						
SDV				LR	LR	21 17 25.0	
	comp=Z,4µm,18.4s,baz=189,slow=38						
SDV	Santo Domingo	24.50	2	*e*P	P	21 07 07.3	-0.5
PLCA	Paso Flores	24.90	178	*e*P	P	21 07 10.8	-0.3
	comp=Z,180nm,1.3s						
PLCA	Paso Flores	24.90	178	*e*P	P	21 07 10.8	-0.3
PLCA				pmax	pmax		
	comp=Z,180nm,1.3s						
PLCA	Paso Flores	24.90	178	P	P	21 07 11.1	-0.1
	comp=Z,74nm,1.0s,baz=15,slow=11,SNR=18						
PLCA				LR	LR	21 17 14.2	
	comp=Z,505nm,20.7s,baz=22,slow=37						
PLCA	Paso Flores	24.90	178	*e*P	P	21 07 11.2	+0.1
BSCB	Bom Sucesso	25.88	106	*e*P	P	21 07 23.8	+3.5
MCI8	Montes Claros	26.50	96	*e*P	P	21 07 28.6	+2.8
ESAR	Angra dos Reis	26.50	110	*e*P	P	21 07 29.7	+3.9
MCI6	Montes Claros	26.52	96	*e*P	P	21 07 29.2	+3.2
MCI9	Montes Claros	26.52	96	*e*P	P	21 07 29.2	+3.2
MDP	Montagnes des	27.90	43	LR	LR	21 19 31.5	
	comp=Z,4µm,18.5s,baz=220,slow=38						
DUB01	Friburgo-RJ	28.24	107	*e*P	P	21 07 45.1	+3.6
SJMB	Sao Joao De Ma	29.09	100	*e*P	P	21 07 52.2	+3.2
JTS	JuntasAbangare	29.10	332	*e*P	P	21 07 47.9	-1.2
	comp=Z,8.1nm,0.9s						
JTS	JuntasAbangare	29.10	332	*i* P	P	21 07 50.8	+1.7
JTS				pmax	pmax		
	comp=Z,13nm,1.2s						
JTS	JuntasAbangare	29.10	332	P	P	21 07 48.9	-0.2
	comp=Z,2.9nm,0.3s,baz=224,slow=4.6,SNR=7.9						
JTS				LR	LR	21 19 40.7	
	comp=Z,2µm,18.1s,baz=224,slow=37						
OBIP	Obispado Ponce	33.93	8	*e*P	P	21 08 31.5	0.0
	comp=Z,58nm,1.2s						
CBYP	Canovanas	34.27	10	*e*P	P	21 08 34.5	0.0
	comp=Z,28nm,0.8s						
SDDR	Presa de Saban	34.52	0	*e*P	P	21 08 36.6	0.0
	comp=Z,30nm,1.1s						
APG	El Apazote	35.85	328	P	P	21 08 48.5	+0.2
	comp=Z,11nm,0.9s,baz=151,slow=6.7,SNR=11						
RCBR	Riachuelo	36.28	78	*e*P	P	21 08 55.2	+3.2
EFI	East Falkland	37.41	166	*i* P	P	21 09 05.2	+4.2
EFI				pmax	pmax		
	comp=Z,49nm,1.1s						
USHA	Ushuaia	39.07	177	P	P	21 09 16.6	+1.6
	comp=Z,8.2nm,0.8s,baz=24,slow=8.6,SNR=6.5						
CMIG	Matias Romero	39.96	324	P	P	21 09 23.8	+0.9
	comp=Z,4.5nm,0.8s,baz=142,slow=7.0,SNR=10						
061Z	Ochoppi	42.37	347	P	P	21 09 44.0	+1.5
	baz=166						
060A	Indiantown	43.40	348	P	P	21 09 52.7	+1.8
	baz=168						
DWPF	Disney Wildern	44.66	347	*e*P	P	21 10 01.0	+0.1
758A	Lake Helen	45.43	348	P	P	21 10 08.5	+1.4
	baz=167						
757A	Oxford	45.59	347	P	P	21 10 09.5	+1.1
	baz=166						
656A	Willston	46.11	347	P	P	21 10 13.6	+1.2
	baz=165						
657A	Interlachen	46.17	347	P	P	21 10 14.2	+1.3
	baz=166						
556A	Lake Butler	46.69	347	P	P	21 10 18.1	+1.1
	baz=166						
555A	McAlpin	46.93	346	P	P	21 10 19.9	+1.0
	baz=165						
554A	Perry	47.06	346	P	P	21 10 21.1	+1.2
	baz=164						
455A	Stateville	47.54	347	P	P	21 10 25.1	+1.4
	baz=165						
453A	Whigham	47.95	345	P	P	21 10 28.0	+1.2
	baz=163						
451A	Vernon	48.10	343	P	P	21 10 29.0	+1.1
	baz=161						
452A	Marianna	48.17	344	P	P	21 10 29.5	+1.0
	baz=162						
353A	Camilla	48.40	345	P	P	21 10 31.3	+1.0
	baz=164						
351A	Pinckard	48.68	344	P	P	21 10 33.6	+1.1
	baz=162						
352A	Blakely	48.70	345	P	P	21 10 33.7	+1.1
	baz=163						
254A	Abbeville	48.76	347	P	P	21 10 34.2	+1.2
	baz=165						
BRAL	Brewton	48.99	342	P	P	21 10 35.9	+1.1
	baz=160						
253A	Americus	49.06	346	P	P	21 10 36.4	+1.0
	baz=164						
156A	Sylvania	49.08	349	P	P	21 10 36.6	+1.1
	baz=167						
252A	Lumpkin	49.15	345	P	P	21 10 37.0	+1.0
	baz=163						
349A	Repton	49.20	342	P	P	21 10 37.6	+1.1
	baz=160,SNR=5.2						
155A	Kite	49.23	348	P	P	21 10 37.9	+1.2
	baz=166						
NHSC	New Hope	49.29	350	P	P	21 10 38.3	+1.2
	baz=169						
154A	Montrose	49.36	347	P	P	21 10 38.7	+1.0
	baz=165						
251A	Midway	49.41	344	P	P	21 10 38.6	+0.6
	baz=162,SNR=8.5						
250A	Grady	49.53	343	*e*P	P	21 10 37.7	-1.2
	comp=Z,87nm,1.2s						
250A	Grady	49.53	343	P	P	21 10 39.6	+0.7
	baz=161,SNR=7.4						
249A	Camden	49.77	343	P	P	21 10 41.6	+0.9
	baz=160,SNR=7.8						
152A	Waverly Hall	49.78	345	P	P	21 10 41.7	+0.8
	baz=163,SNR=9.9						
Z54A	Sparta	49.91	348	P	P	21 10 42.9	+1.1
	baz=166						
Z53A	Monticello	50.10	347	P	P	21 10 44.1	+0.8
	baz=165						
GOGA	Godfrey	50.21	347	*e*P	P	21 10 43.7	-0.4
	comp=Z,30nm,1.2s						
GOGA	Godfrey	50.21	347	*e*P	P	21 10 43.7	-0.4
GOGA				pmax	pmax		
	comp=Z,30nm,1.2s						
GOGA	Godfrey	50.21	347	P	P	21 10 45.0	+0.9
	baz=165,SNR=5.8						
Z52A	Williamson	50.21	346	P	P	21 10 45.0	+0.8
	baz=164,SNR=7.8						
149A	Jones	50.26	343	P	P	21 10 44.8	+0.4
	baz=161						
Y55A	Saluda	50.39	349	P	P	21 10 46.9	+1.5
	baz=167						
Y54A	Tignall	50.48	348	P	P	21 10 47.3	+1.2
	baz=166						
X59A	McDuffie Farm,	50.50	352	P	P	21 10 47.6	+1.3
	baz=171						
Z51A	Franklin	50.51	345	P	P	21 10 47.3	+0.8
	baz=163						
X58A	Rowland	50.58	352	P	P	21 10 48.1	+1.2
	baz=170						
Z50A	Ashland	50.64	344	*e*P	P	21 10 46.9	-0.6
	comp=Z,50nm,1.1s						
Z50A	Ashland	50.64	344	P	P	21 10 48.2	+0.7
	baz=162,SNR=6.7						
Y53A	Monroe	50.66	347	P	P	21 10 48.2	+0.7
	baz=165						
LRAL	Lakeview Retre	50.73	343	*e*P	P	21 10 47.7	-0.3
	comp=Z,26nm,1.2s						
LRAL	Lakeview Retre	50.73	343	P	P	21 10 48.5	+0.5
	baz=161,SNR=5.1						
Z49A	Columbiana	50.75	344	P	P	21 10 48.7	+0.6
	baz=161,SNR=6.0						
147A	Livingston	50.76	342	P	P	21 10 48.7	+0.5
	baz=159						
Y52A	Lilburn	50.77	346	P	P	21 10 49.2	+0.8
	baz=164						
X56A	White Oak	50.78	350	P	P	21 10 49.6	+1.2
	baz=168						
X55A	Gracelyn & Ava	50.87	349	P	P	21 10 50.4	+1.3
	baz=167						
Y51A	Rockmart	51.04	345	P	P	21 10 51.0	+0.6
	baz=163,SNR=7.7						
X54A	Belton	51.08	348	P	P	21 10 52.2	+1.5
	baz=166						
HKT	Hockley	51.14	333	*i* P	P	21 10 51.4	+0.3
HKT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
Y50A	Piedmont	51.20	345	P	P	21 10 52.2	+0.6
	baz=162						
145A	Houston Renfro	51.22	340	P	P	21 10 52.3	+0.6
	baz=157,SNR=5.5						
X53A	Estanollee	51.23	347	P	P	21 10 52.7	+0.9
	baz=165						
Y49A	Blount Mountai	51.34	344	P	P	21 10 53.0	+0.4
	baz=162						
X52A	Dahlonega	51.45	347	P	P	21 10 54.1	+0.7
	baz=165						
833A	Chaparral WMA,	51.47	328	P	P	21 10 54.4	+0.7
	baz=145						
KMSC	Kings Mountain	51.47	350	P	P	21 10 55.0	+1.4
	baz=168						
W54A	Cherokee Point	51.57	349	P	P	21 10 55.8	+1.5
	baz=167						
Y48A	Jasper	51.60	343	P	P	21 10 54.7	+0.2
	baz=161						
X51A	Calhoun	51.63	346	P	P	21 10 55.4	+0.6
	baz=164						
X50B	Fort Payne	51.72	345	P	P	21 10 55.9	+0.4
	baz=162						
W53A	Cullowhee	51.84	348	P	P	21 10 57.3	+0.8
	baz=166						
W52A	Murphy	51.93	347	P	P	21 10 58.0	+0.9
	baz=165						
X49A	Woodville	51.94	344	P	P	21 10 57.4	+0.3
	baz=162						
X48A	Hartselle	52.07	344	P	P	21 10 58.4	+0.3
	baz=161						
W51A	Cleveland	52.18	346	P	P	21 10 59.4	+0.6
	baz=164						
V53A	Saluda	52.26	348	*e*P	P	21 11 00.8	+1.3
	comp=Z,20nm,0.6s						
W50A	Signal Mountai	52.34	346	P	P	21 11 00.7	+0.6
	baz=163						
X47A	Russelville	52.36	343	P	P	21 10 59.9	-0.3
	baz=160						
V52A	Sevierville	52.58	348	*e*P	P	21 11 03.7	+1.8
	comp=Z,35nm,0.9s						
W48A	Pulaski	52.69	344	P	P	21 11 02.9	+0.2
	baz=161						
V51A	Loudon	52.70	347	P	P	21 11 03.3	+0.6
	baz=164						
V50A	Pikevile	52.74	346	P	P	21 11 03.6	+0.5
	baz=163,SNR=6.3						
Y43A	Makayla and Ka	52.75	340	P	P	21 11 03.6	+0.5
	baz=156						
OXF	Oxford	52.81	341	P	P	21 11 04.4	+0.9
	baz=158						
Z41A	Richland Creek	52.81	338	P	P	21 11 04.7	+1.1
	baz=154						
W47A	Westpoint	52.98	343	P	P	21 11 04.8	0.0
	baz=160						
V49A	McMinnville	53.02	345	P	P	21 11 05.2	0.0
	baz=162,SNR=5.0						
U50A	Jamestown	53.40	347	P	P	21 11 08.3	+0.4
	baz=164						
V47A	Nunnelly	53.50	344	P	P	21 11 09.7	+1.1
	baz=161						
T51A	Gray	53.73	348	P	P	21 11 11.1	+0.8
	baz=165						
WVT	Waverly	53.87	344	P	P	21 11 11.1	-0.2
	baz=160						
T49A	Edmonton	54.22	346	P	P	21 11 14.3	+0.4
	baz=163						
MIAR	Mount Ida	54.25	338	*e*P	P	21 11 12.5	-1.7
	comp=Z,42nm,0.9s						
MIAR	Mount Ida	54.25	338	*e*P	P	21 11 12.5	-1.7
MIAR				pmax	pmax		
	comp=Z,42nm,0.9s						
MIAR	Mount Ida	54.25	338	P	P	21 11 14.8	+0.6
	baz=154,SNR=19						
W41B	Gary Mavity, V	54.34	339	P	P	21 11 15.2	+0.4
	baz=155,SNR=8.7						
T48A	Bowling Green	54.42	345	P	P	21 11 15.7	+0.4
	baz=162,SNR=6.3						
TXAR	Lajitas Array	54.53	325	P	P	21 11 16.6	+0.2
	comp=Z,3.7nm,0.8s,baz=147,slow=8.1,SNR=21						
TXAR				LR	LR	21 32 47.4	
	comp=Z,673nm,20.9s,baz=0.0,slow=34						
TX31	Lajitas Ar. Si	54.53	325	*e*P	P	21 11 16.2	-0.3
T46A	Princeton	54.74	344	P	P	21 11 17.7	0.0
	baz=161						
U44A	Portageville	54.74	342	P	P	21 11 18.0	+0.3
	baz=158						
S49A	Springfield	54.81	347	P	P	21 11 18.4	+0.3
	baz=164						
S48A	Wiedeman Farm,	54.86	346	P	P	21 11 18.3	-0.2
	baz=163,SNR=7.6						
W39A	Magazine	54.91	338	P	P	21 11 19.6	+0.7
	baz=154,SNR=11						
S47A	Hartford	55.00	345	P	P	21 11 19.4	-0.1
	baz=162,SNR=8.6						
U42A	Revenden	55.08	341	P	P	21 11 20.1	0.0
	baz=157,SNR=11						
ABTX	Abilene, Hawle	55.13	331	*e*P	P	21 11 20.5	-0.1
	comp=Z,58nm,1.0s						
ABTX	Abilene, Hawle	55.13	331	P	P	21 11 21.2	+0.6
	baz=146,SNR=14						
T44A	Benton	55.26	342	P	P	21 11 21.4	0.0
	baz=159						
U41A	Viola	55.30	340	P	P	21 11 21.9	+0.1
	baz=156						
S46A	Don Dixon Farm	55.30	344	P	P	21 11 21.8	+0.1
	baz=161,SNR=8.1						
T43A	Greenville	55.46	342	P	P	21 11 23.0	+0.1
	baz=158,SNR=9.4						
WCI	Wyandotte Cave	55.47	346	*e*P	P	21 11 22.5	-0.4
	comp=Z,52nm,1.1s						
WCI	Wyandotte Cave	55.47	346	*e*P	P	21 11 22.5	-0.4
WCI				pmax	pmax		
	comp=Z,52nm,1.1s						
WCI	Wyandotte Cave	55.47	346	P	P	21 11 23.0	+0.2
	baz=163						
S45A	Carrier Mills	55.52	344	P	P	21 11 23.2	-0.1
	baz=160,SNR=6.0						
USIN	University of	55.55	345	*e*P	P	21 11 22.1	-1.4
	comp=Z,88nm,1.3s						
R47A	Wooly Knot Far	55.58	346	P	P	21 11 23.7	0.0
	baz=162						
U40A	Yellville	55.62	339	P	P	21 11 24.0	-0.1
	baz=155,SNR=10						
T42A	Van Buren	55.66	341	*e*P	P	21 11 23.6	-0.6
	comp=Z,20nm,1.0s						
T42A	Van Buren	55.66	341	P	P	21 11 23.9	-0.3
	baz=157,SNR=6.1						
MCWV	Mont Chateau	55.67	352	*e*P	P	21 11 25.0	+0.6
	comp=Z,23nm,0.5s						
MCWV	Mont Chateau	55.67	352	S	P	21 11 24.7	+0.3
	baz=217						
S44A	Carbondale	55.73	343	P	P	21 11 24.2	-0.5
	baz=159,SNR=13						
SIUC	Southern Illin	55.73	343	*e*P	P	21 11 23.9	-0.9
	comp=Z,118nm,1.3s						
R46A	Gibon Southern	55.75	345	P	P	21 11 24.7	-0.2
	baz=161						
S43A	Fulton Ridge,	55.85	342	P	P	21 11 25.3	-0.3
	baz=158,SNR=5.9						
T41A	Mountain View	55.88	340	P	P	21 11 25.3	-0.6
	baz=156,SNR=6.3						
Q48A	North Vernon	56.01	347	P	P	21 11 26.7	0.0
	baz=163						
R45A	Skylar, Fairfi	56.02	344	P	P	21 11 27.0	+0.2
	baz=160,SNR=7.7						
O56A	Blue Knob Stat	56.12	353	*e*P	P	21 11 28.3	+0.7
	comp=Z,98nm,1.2s						
O56A	Blue Knob Stat	56.12	353	P	P	21 11 28.6	+1.0
	baz=172,SNR=7.7						
O55A	Ligonier	56.15	353	P	P	21 11 28.6	+0.8
	baz=171						
Q47A	Bedord North L	56.17	346	P	P	21 11 28.2	+0.3
	baz=163						
R44A	Waltonville	56.19	343	P	P	21 11 28.2	+0.1
	baz=160,SNR=11						
S42A	Caledonia	56.25	342	P	P	21 11 28.0	-0.5
	baz=158						
TUL1	Leonard	56.30	336	*e*P	P	21 11 27.7	-1.2
	comp=Z,54nm,1.0s						
TUL1	Leonard	56.30	336	P	P	21 11 28.7	-0.2
	baz=152,SNR=7.1						
FVM	French Village	56.33	342	*e*P	P	21 11 27.6	-1.5
	comp=Z,58nm,1.1s						
FVM	French Village	56.33	342	*e*P	P	21 11 27.6	-1.5
FVM				pmax	pmax		
	comp=Z,58nm,1.1s						
S41A	Jillco Farms,	56.37	341	P	P	21 11 29.2	-0.2
	baz=156,SNR=9.1						
R43A	Red Bud	56.46	343	P	P	21 11 29.0	-1.0
	baz=159,SNR=5.5						
WMOK	Wichita Mounta	56.51	333	*e*P	P	21 11 30.3	-0.2
	comp=Z,11nm,1.0s						
WMOK	Wichita Mounta	56.51	333	*e*P	P	21 11 30.3	-0.2
WMOK				pmax	pmax		

	comp=Z,11nm,1.0s						
WMOK	**Wichita Mounta**	**56.51**	**333**	P	**P**	**21 11 30.2**	**-0.2**
	baz=148,SNR=9.4						
PAL	**Palisades**	**56.52**	**358**	P	**P**	**21 11 30.9**	**+0.5**
	baz=177						
Q45A	**Warren Harvey,**	**56.55**	**344**	P	**P**	**21 11 30.8**	**+0.1**
	baz=161						
CCM	**Cathedral Cave**	**56.65**	**341**	*e*P	**P**	**21 11 31.1**	**-0.3**
	comp=Z,40nm,1.2s						
CCM	**Cathedral Cave**	**56.65**	**341**	*e*P	**P**	**21 11 31.1**	**-0.3**
CCM				pmax	pmax		
	comp=Z,40nm,1.2s						
CCM	**Cathedral Cave**	**56.65**	**341**	P	**P**	**21 11 31.4**	**0.0**
	baz=157						
N55A	**Marion Center**	**56.67**	**353**	P	**P**	**21 11 32.3**	**+0.8**
	baz=171,SNR=11						
R42A	**Luebbering**	**56.72**	**342**	P	**P**	**21 11 32.0**	**+0.1**
	baz=158,SNR=7.4						
Q44A	**Meyer Farm, Va**	**56.79**	**344**	*e*P	**P**	**21 11 31.6**	**-0.7**
	comp=Z,47nm,1.0s						
Q44A	**Meyer Farm, Va**	**56.79**	**344**	P	**P**	**21 11 32.2**	**-0.2**
	baz=160						
R41A	**Rosebud**	**56.91**	**341**	P	**P**	**21 11 32.6**	**-0.6**
	baz=157,SNR=11						
N54A	**Moraine State**	**56.98**	**352**	*e*P	**P**	**21 11 33.0**	**-0.6**
	comp=Z,230nm,1.5s						
N54A	**Moraine State**	**56.98**	**352**	P	**P**	**21 11 33.4**	**-0.3**
	baz=170,SNR=7.0						
P46A	**Rosedale**	**57.00**	**346**	P	**P**	**21 11 33.2**	**-0.6**
	baz=162						
Q43A	**New Douglas**	**57.01**	**343**	P	**P**	**21 11 33.7**	**-0.3**
	baz=159,SNR=5.5						
P45A	**Graceland, Par**	**57.05**	**345**	P	**P**	**21 11 34.1**	**-0.1**
	baz=161						
O48A	**Farmland**	**57.16**	**348**	P	**P**	**21 11 34.8**	**-0.1**
	baz=164						
P44A	**Sand Creek, Wi**	**57.22**	**344**	P	**P**	**21 11 35.2**	**-0.1**
	baz=160						
Q42A	**Golden Eagle**	**57.22**	**342**	P	**P**	**21 11 35.2**	**-0.2**
	baz=158,SNR=9.6						
MNTX	**Cornudas Mount**	**57.29**	**326**	*e*P	**P**	**21 11 35.3**	**-0.8**
	comp=Z,9.9nm,0.9s						
MNTX	**Cornudas Mount**	**57.29**	**326**	P	**P**	**21 11 35.9**	**-0.2**
	baz=140,SNR=6.1						
M55A	**Ridgway**	**57.33**	**354**	P	**P**	**21 11 36.9**	**+0.7**
	baz=172,SNR=16						
O47A	**Sheridan**	**57.35**	**347**	P	**P**	**21 11 36.0**	**-0.4**
	baz=163,SNR=5.7						
Q41A	**Truxton**	**57.47**	**342**	P	**P**	**21 11 36.5**	**-0.7**
	baz=157,SNR=8.4						
M54A	**Oil Creek Stat**	**57.47**	**353**	P	**P**	**21 11 37.1**	**-0.1**
	baz=171,SNR=7.8						
M53A	**WI Miller and**	**57.53**	**352**	P	**P**	**21 11 37.8**	**+0.3**
	baz=170						
N49A	**Columbus Grove**	**57.60**	**349**	P	**P**	**21 11 38.2**	**+0.1**
	baz=166						
P43A	**Skaggs, Pawnee**	**57.62**	**344**	P	**P**	**21 11 38.1**	**-0.1**
	baz=159,SNR=7.7						
ALLY	**Alegheny Colle**	**57.67**	**352**	*e*P	**P**	**21 11 38.4**	**-0.1**
	comp=Z,142nm,1.1s						
SFIN	**Lafayette**	**57.70**	**346**	P	**P**	**21 11 38.3**	**-0.4**
	baz=162						
N48A	**Decatur**	**57.71**	**348**	P	**P**	**21 11 38.7**	**-0.1**
	baz=164						
O45A	**Potomac**	**57.73**	**345**	P	**P**	**21 11 38.2**	**-0.7**
	baz=161						
MSTX	**Muleshoe**	**57.73**	**329**	*e*P	**P**	**21 11 38.0**	**-1.2**
	comp=Z,43nm,1.2s						
MSTX	**Muleshoe**	**57.73**	**329**	P	**P**	**21 11 38.6**	**-0.6**
	baz=144						
P42A	**Winchester**	**57.79**	**343**	P	**P**	**21 11 39.2**	**-0.2**
	baz=158,SNR=5.5						
BINY	**Binghamton**	**57.81**	**356**	P	**P**	**21 11 39.0**	**-0.5**
	baz=175						
O44A	**Mansfield**	**57.82**	**345**	P	**P**	**21 11 39.1**	**-0.5**
	baz=161						
M50A	**Fremont**	**57.87**	**350**	P	**P**	**21 11 40.4**	**+0.6**
	baz=167						
AMTX	**Amarillo**	**57.95**	**331**	P	**P**	**21 11 40.2**	**-0.5**
	baz=145						
L53A	**Girard**	**57.99**	**352**	P	**P**	**21 11 41.2**	**+0.5**
	baz=170,SNR=10						
L55A	**Hinsdale**	**58.00**	**354**	P	**P**	**21 11 41.6**	**+0.7**
	baz=172,SNR=9.9						
P41A	**Barry, Barry**	**58.08**	**342**	P	**P**	**21 11 41.5**	**0.0**
	baz=158						
M49A	**Liberty Center**	**58.10**	**349**	P	**P**	**21 11 41.6**	**+0.1**
	baz=166						
N46A	**Monticello**	**58.11**	**346**	P	**P**	**21 11 41.0**	**-0.6**
	baz=163						
ERPA	**Erie**	**58.11**	**353**	*e*P	**P**	**21 11 40.2**	**-1.4**
	comp=Z,168nm,1.1s						
ERPA	**Erie**	**58.11**	**353**	P	**P**	**21 11 42.0**	**+0.4**
	baz=170,SNR=17						
N45A	**Kentland**	**58.24**	**346**	P	**P**	**21 11 42.2**	**-0.4**
	baz=162						
O42A	**Bath**	**58.29**	**343**	P	**P**	**21 11 42.0**	**-0.8**
	baz=159						
M47A	**Cromwell**	**58.31**	**348**	P	**P**	**21 11 42.6**	**-0.4**
	baz=164						
N44A	**Piper City**	**58.34**	**345**	P	**P**	**21 11 42.5**	**-0.8**
	baz=161						
HDIL	**Hopedale**	**58.41**	**344**	P	**P**	**21 11 42.9**	**-0.8**
	baz=160						
O41A	**Passleys Farm,**	**58.44**	**343**	P	**P**	**21 11 43.4**	**-0.5**
	baz=158,SNR=5.8						
MMNY	**Mt. Morris Dam**	**58.49**	**354**	*e*P	**P**	**21 11 43.9**	**-0.4**
	comp=Z,67nm,1.3s						
K55A	**Perry**	**58.51**	**354**	P	**P**	**21 11 44.3**	**-0.1**
	baz=172,SNR=6.8						
N43A	**Stutzman Famil**	**58.74**	**344**	P	**P**	**21 11 45.7**	**-0.3**
	baz=160,SNR=8.2						
L47A	**Sherwood**	**58.82**	**348**	P	**P**	**21 11 46.3**	**-0.3**
	baz=164						
K52A	**Tillsonburg**	**58.86**	**352**	P	**P**	**21 11 46.8**	**0.0**
	baz=170						
N42A	**Yates City**	**58.87**	**344**	P	**P**	**21 11 46.7**	**-0.2**
	baz=159,SNR=6.1						
MEDO	**Medina**	**58.98**	**354**	P	**P**	**21 11 48.0**	**+0.4**
	baz=172						
N41A	**Harden Midland**	**58.98**	**343**	*e*P	**P**	**21 11 46.9**	**-0.8**
	comp=Z,40nm,1.0s						
N41A	**Harden Midland**	**58.98**	**343**	P	**P**	**21 11 47.5**	**-0.2**
	baz=158						
J55A	**Hilton**	**59.02**	**355**	P	**P**	**21 11 48.7**	**+0.8**
	baz=173						
TYNO	**Tyneside**	**59.06**	**353**	P	**P**	**21 11 48.7**	**+0.5**
	baz=170,SNR=7.7						
STCO	**Saint Catharin**	**59.09**	**353**	P	**P**	**21 11 48.8**	**+0.4**
	baz=171,SNR=5.1						
M43A	**Waltham Townsh**	**59.15**	**345**	P	**P**	**21 11 48.7**	**-0.1**
	baz=160						
121A	**Cookes Peak, D**	**59.25**	**324**	P	**P**	**21 11 49.3**	**-0.7**
	baz=138,SNR=9.6						
319A	**Douglas**	**59.26**	**322**	*e*P	**P**	**21 11 50.9**	**+0.9**
	comp=Z,21nm,0.9s						
J52A	**Paris**	**59.28**	**352**	P	**P**	**21 11 50.1**	**+0.4**
	baz=170,SNR=10						
ELFO	**Elginfield**	**59.35**	**352**	P	**P**	**21 11 50.4**	**+0.2**
	baz=169						
N40A	**Mertquake, Sal**	**59.35**	**342**	P	**P**	**21 11 50.6**	**+0.4**
	baz=157						
KSU1	**Kansas State U**	**59.41**	**337**	*e*P	**P**	**21 11 50.6**	**-0.1**
	comp=Z,32nm,1.0s						
KSU1	**Kansas State U**	**59.41**	**337**	P	**P**	**21 11 50.9**	**+0.2**
	baz=152						
K48A	**Perry**	**59.41**	**349**	P	**P**	**21 11 50.7**	**+0.1**
	baz=166						
K47A	**Vermontville**	**59.45**	**348**	P	**P**	**21 11 51.0**	**+0.1**
	baz=165						
ACTO	**Acton**	**59.59**	**353**	P	**P**	**21 11 51.5**	**-0.4**
	baz=170						
K46A	**Dorr**	**59.62**	**348**	P	**P**	**21 11 51.5**	**-0.6**
	baz=164						
DRWO	**Darlington Wes**	**59.70**	**354**	P	**P**	**21 11 52.7**	**+0.1**
	baz=172						
DRCO	**St. Marys Ceme**	**59.71**	**354**	P	**P**	**21 11 53.6**	**+1.0**
	baz=172						
WLVO	**Wesleyville**	**59.72**	**354**	P	**P**	**21 11 53.1**	**+0.3**
	baz=172,SNR=5.9						
J49A	**Marlette**	**59.79**	**350**	P	**P**	**21 11 53.2**	**0.0**
	baz=167						
L43A	**Garden Prairie**	**59.80**	**345**	P	**P**	**21 11 53.0**	**-0.3**
	baz=161						
PKRO	**Pickering**	**59.83**	**354**	P	**P**	**21 11 53.7**	**+0.2**
	baz=172,SNR=6.0						
J48A	**Bridge Port**	**59.84**	**350**	P	**P**	**21 11 53.2**	**-0.3**
	baz=166						
I51A	**Listowel**	**59.91**	**352**	P	**P**	**21 11 54.2**	**+0.1**
	baz=169						
I55A	**Frankford**	**59.95**	**355**	P	**P**	**21 11 54.8**	**+0.5**
	baz=173						
M39A	**Webster**	**60.07**	**342**	P	**P**	**21 11 54.9**	**-0.3**
	baz=157						
LONY	**Lake Ozonia**	**60.15**	**357**	P	**P**	**21 11 56.5**	**+0.8**
	baz=176						
L41A	**Preston**	**60.15**	**344**	P	**P**	**21 11 55.4**	**-0.4**
	baz=159						
BASO	**Ashfield**	**60.20**	**352**	P	**P**	**21 11 56.6**	**+0.5**
	baz=169						
H56A	**Elgin**	**60.21**	**356**	P	**P**	**21 11 56.6**	**+0.5**
	baz=175						
H55A	**Tweed**	**60.24**	**355**	P	**P**	**21 11 57.1**	**+0.8**
	baz=174						
DELO	**Deloro Mine**	**60.24**	**355**	P	**P**	**21 11 56.8**	**+0.5**
	baz=173						
L40A	**Anamosa**	**60.34**	**343**	P	**P**	**21 11 57.0**	**0.0**
	baz=158						
ANMO	**Albuquerque**	**60.37**	**327**	*e*P	**P**	**21 11 57.5**	**-0.1**
	comp=Z,5.2nm,0.9s						
ANMO	**Albuquerque**	**60.37**	**327**	*ce*P	**P**	**21 11 56.6**	**-1.0**
ANMO				pmax	pmax		
	comp=Z,17nm,1.7s						
ANMO	**Albuquerque**	**60.37**	**327**	P	**P**	**21 11 57.9**	**+0.3**
	baz=141						
ANMO	**Albuquerque**	**60.37**	**327**	P	**P**	**21 11 58.3**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=134,slow=17,SNR=8.8						
K42A	**Prairie Point,**	**60.51**	**345**	P	**P**	**21 11 58.5**	**+0.3**
	baz=160						
K41A	**Shullsburg**	**60.60**	**344**	P	**P**	**21 11 58.6**	**-0.2**
	baz=159						
SADO	**Sadowa**	**60.63**	**354**	*e*P	**P**	**21 11 58.3**	**-0.7**
	comp=Z,96nm,1.2s						
I48A	**Sherman Twp**	**60.68**	**350**	P	**P**	**21 11 59.4**	**0.0**
	baz=166						
BMRO	**Meriville Lake**	**60.71**	**352**	P	**P**	**21 12 00.0**	**+0.5**
	baz=169						
PLVO	**Plevna**	**60.72**	**355**	*e*P	**P**	**21 11 59.9**	**+0.4**
	comp=Z,34nm,1.2s						
PLVO	**Plevna**	**60.72**	**355**	P	**P**	**21 12 00.0**	**+0.5**
	baz=174						
I46A	**Reed City**	**60.76**	**348**	P	**P**	**21 12 00.5**	**+0.6**
	baz=164						
BANO	**Bancroft**	**60.77**	**355**	P	**P**	**21 12 00.7**	**+0.8**
	baz=173						
J43A	**Natural Harves**	**60.86**	**346**	P	**P**	**21 12 00.9**	**+0.4**
	baz=161						
G55A	**Calabogie**	**60.90**	**356**	P	**P**	**21 12 01.2**	**+0.4**
	baz=174,SNR=6.7						
G53A	**Haliburton**	**60.93**	**354**	P	**P**	**21 12 01.2**	**+0.2**
	baz=172,SNR=15						
J42A	**Columbus**	**60.97**	**345**	P	**P**	**21 12 01.6**	**+0.3**
	baz=160						
T25A	**Trinidad**	**61.07**	**330**	*e*P	**P**	**21 12 02.5**	**+0.2**
	comp=Z,26nm,1.0s						
T25A	**Trinidad**	**61.07**	**330**	P	**P**	**21 12 02.8**	**+0.4**
	baz=143,SNR=15						
H48A	**Harrisville**	**61.12**	**350**	P	**P**	**21 12 02.8**	**+0.5**
	baz=167						
ALFO	**Alfred**	**61.17**	**357**	P	**P**	**21 12 03.6**	**+1.0**
	baz=176						
J41A	**Loganville**	**61.23**	**345**	P	**P**	**21 12 03.5**	**+0.4**
	baz=160						
I43A	**Langenfeld Bro**	**61.27**	**346**	P	**P**	**21 12 04.6**	**+1.3**
	baz=162						
BUKO	**Buck Lake**	**61.33**	**354**	P	**P**	**21 12 04.7**	**+1.0**
	baz=171,SNR=21						
KLBO	**Killbear Provi**	**61.33**	**353**	P	**P**	**21 12 04.6**	**+0.9**
	baz=170,SNR=8.3						
PEMO	**Pembroke**	**61.36**	**355**	P	**P**	**21 12 04.9**	**+1.0**
	baz=174,SNR=5.2						
J40A	**Soldiers Grove**	**61.45**	**344**	P	**P**	**21 12 04.8**	**+0.2**
	baz=159						
I42A	**Draeger Farm,**	**61.46**	**346**	P	**P**	**21 12 05.0**	**+0.4**
	baz=161						
J39A	**Decorah**	**61.65**	**343**	P	**P**	**21 12 05.8**	**-0.2**
	baz=158,SNR=7.2						
F52A	**Sundridge**	**61.67**	**354**	P	**P**	**21 12 06.8**	**+0.8**
	baz=171,SNR=11						
G47A	**Hillman**	**61.67**	**350**	P	**P**	**21 12 06.5**	**+0.5**
	baz=166						
ALGO	**Algonquin Park**	**61.70**	**355**	P	**P**	**21 12 07.1**	**+0.9**
	baz=173,SNR=5.2						
TRQ	**Mont Tremblant**	**61.75**	**358**	*e*P	**P**	**21 12 06.4**	**-0.2**
KSCO	**Kaye Shedlock'**	**61.77**	**333**	P	**P**	**21 12 07.4**	**+0.3**
	baz=146						
214A	**Organ Pipe Nat**	**61.79**	**320**	P	**P**	**21 12 07.4**	**+0.2**
	baz=134						
I41A	**Arkdale**	**61.85**	**345**	P	**P**	**21 12 07.5**	**+0.3**
	baz=160						
F51A	**Arnstein**	**61.86**	**353**	P	**P**	**21 12 07.6**	**+0.3**
	baz=171						
I40A	**Norwalk**	**61.88**	**344**	P	**P**	**21 12 07.8**	**+0.3**
	baz=159						
X18A	**Snowflake**	**61.94**	**324**	*e*P	**P**	**21 12 08.5**	**+0.2**
	comp=Z,18nm,1.2s						
H42A	**Shiocton**	**61.95**	**346**	P	**P**	**21 12 08.4**	**+0.5**
	baz=161						
G46A	**Petoskey**	**61.98**	**349**	P	**P**	**21 12 08.5**	**+0.4**
	baz=165						
BGNE	**Belgrade**	**61.99**	**338**	P	**P**	**21 12 08.7**	**+0.4**
	baz=151,SNR=5.6						
SDCO	**Great Sand Dun**	**62.07**	**330**	*e*P	**P**	**21 12 07.7**	**-1.5**
	comp=Z,26nm,1.0s						
SDCO	**Great Sand Dun**	**62.07**	**330**	P	**P**	**21 12 09.6**	**+0.3**
	baz=142,SNR=22						
I39A	**Houston**	**62.08**	**344**	P	**P**	**21 12 09.3**	**+0.5**
	baz=158						
E52A	**Mattawa**	**62.09**	**354**	P	**P**	**21 12 09.6**	**+0.8**
	baz=172,SNR=8.3						
E53A	**Dumoine, Ponti**	**62.09**	**355**	P	**P**	**21 12 09.6**	**+0.7**
	baz=173						
E54A	**Lac Daplat, Po**	**62.11**	**356**	P	**P**	**21 12 09.8**	**+0.9**
	baz=174						
W18A	**Petrified Fore**	**62.26**	**325**	*e*P	**P**	**21 12 09.7**	**-0.7**
	comp=Z,31nm,1.4s						
H41A	**Junction City**	**62.32**	**345**	P	**P**	**21 12 10.9**	**+0.5**
	baz=160						
F46A	**Macinaw City C**	**62.41**	**350**	P	**P**	**21 12 11.8**	**+0.8**
	baz=166						
E51A	**G1948 Merrick**	**62.41**	**354**	P	**P**	**21 12 12.1**	**+1.1**
	baz=171,SNR=7.0						
E50A	**Wahnapitae**	**62.45**	**353**	P	**P**	**21 12 12.0**	**+0.8**
	baz=170,SNR=6.4						
F45A	**CMU Biological**	**62.45**	**349**	P	**P**	**21 12 11.8**	**+0.5**
	baz=165						
G43A	**Wallace**	**62.48**	**347**	P	**P**	**21 12 11.6**	**+0.2**
	baz=162						
H40A	**Chili**	**62.50**	**345**	P	**P**	**21 12 12.1**	**+0.4**
	baz=159,SNR=5.1						
G42A	**Mountain**	**62.62**	**347**	P	**P**	**21 12 13.4**	**+1.0**
	baz=162						
X16A	**Lo Mia Camp, P**	**62.71**	**323**	*e*P	**P**	**21 12 14.8**	**+1.4**
	comp=Z,12nm,1.0s						
S22A	**4UR Ranch, Cre**	**62.72**	**329**	P	**P**	**21 12 13.6**	**0.0**
	baz=141,SNR=6.9						
D52A	**ZEK Kipawa Sen**	**62.75**	**355**	P	**P**	**21 12 13.8**	**+0.6**
	baz=172,SNR=12						
G41A	**Antigo**	**62.77**	**346**	P	**P**	**21 12 13.5**	**+0.1**
	baz=161						
H39A	**Augusta**	**62.79**	**344**	P	**P**	**21 12 13.6**	**+0.1**
	baz=158						
D54A	**Lac Fusel, La**	**62.79**	**356**	P	**P**	**21 12 14.0**	**+0.5**
	baz=174,SNR=8.7						
D53A	**Lac Vacive, Po**	**62.79**	**355**	P	**P**	**21 12 14.5**	**+1.0**
	baz=173,SNR=6.5						
E47A	**Iron Bridge**	**62.83**	**351**	P	**P**	**21 12 14.1**	**+0.4**
	baz=167						
LATQ	**La Tuque**	**62.86**	**359**	P	**P**	**21 12 14.6**	**+0.7**
	baz=178						
Q24A	**Divide**	**62.88**	**331**	P	**P**	**21 12 15.0**	**+0.3**
	baz=143,SNR=5.6						
E46A	**Sault Ste Mari**	**62.90**	**350**	P	**P**	**21 12 14.5**	**+0.2**
	baz=166						
F44A	**Big Bay de Noc**	**62.90**	**348**	P	**P**	**21 12 14.5**	**+0.3**
	baz=164						
113A	**Mohawk Valley,**	**62.93**	**320**	*e*P	**P**	**21 12 15.1**	**+0.4**
	comp=Z,9.3nm,1.1s						
D51A	**Lot 18 Range I**	**62.95**	**354**	P	**P**	**21 12 15.4**	**+0.8**
	baz=171,SNR=8.4						
E45A	**Wooded Hills,**	**63.04**	**349**	P	**P**	**21 12 15.6**	**+0.4**
	baz=165						
H38A	**Maiden Rock**	**63.05**	**344**	P	**P**	**21 12 15.8**	**+0.5**
	baz=157						
OGNE	**Ogallala**	**63.12**	**334**	P	**P**	**21 12 16.5**	**+0.5**
	baz=147						
MVCO	**Mesa Verde**	**63.16**	**327**	P	**P**	**21 12 16.6**	**+0.1**
	baz=140						
F41A	**Three Lakes**	**63.25**	**346**	*e*P	**P**	**21 12 16.4**	**-0.2**
	comp=Z,46nm,1.2s						
F41A	**Three Lakes**	**63.25**	**346**	P	**P**	**21 12 17.2**	**+0.6**
	baz=161,SNR=6.4						
Y14A	**Wickenburg**	**63.28**	**322**	*e*P	**P**	**21 12 16.3**	**-0.9**
	comp=Z,11nm,1.1s						
D48A	**Paudash Townsh**	**63.32**	**352**	P	**P**	**21 12 17.6**	**+0.5**
	baz=169						
G39A	**Holcombe**	**63.32**	**345**	P	**P**	**21 12 17.5**	**+0.5**
	baz=159						
D49A	**Beulah Townshi**	**63.36**	**353**	P	**P**	**21 12 18.2**	**+0.9**
	baz=169						
D47A	**Chapleau**	**63.38**	**351**	P	**P**	**21 12 18.4**	**+0.9**
	baz=167						
G38A	**Ridgeland**	**63.39**	**344**	P	**P**	**21 12 17.8**	**+0.3**
	baz=158						
E43A	**Lone Tree Farm**	**63.40**	**348**	P	**P**	**21 12 18.7**	**+1.1**
	baz=163						
WUAZ	**Wupatki**	**63.46**	**324**	P	**P**	**21 12 18.9**	**+0.4**
	baz=136,SNR=8.3						
ECSD	**EROS Data Cent**	**63.51**	**340**	*e*P	**P**	**21 12 16.8**	**-1.6**
	comp=Z,48nm,1.2s						
ECSD	**EROS Data Cent**	**63.51**	**340**	P	**P**	**21 12 18.8**	**+0.5**
	baz=153,SNR=9.7						
E42A	**Champion**	**63.64**	**347**	P	**P**	**21 12 19.6**	**+0.4**
	baz=162						
F40A	**Park Falls**	**63.66**	**346**	P	**P**	**21 12 19.8**	**+0.5**
	baz=160						
SPMN	**Marine on St.**	**63.70**	**343**	*e*P	**P**	**21 12 18.5**	**-1.1**
	comp=Z,33nm,1.0s						
SPMN	**Marine on St.**	**63.70**	**343**	P	**P**	**21 12 19.9**	**+0.3**
	baz=157,SNR=5.5						
ISCO	**Idaho Springs**	**63.76**	**331**	*e*P	**P**	**21 12 20.3**	**-0.2**
	comp=Z,15nm,1.2s						
ISCO	**Idaho Springs**	**63.76**	**331**	*e*P	**P**	**21 12 20.3**	**-0.2**
ISCO				pmax	pmax		
	comp=Z,15nm,1.2s						
F39A	**Loretta**	**63.85**	**345**	P	**P**	**21 12 20.9**	**+0.4**
	baz=159						
E41A	**Kenton**	**63.90**	**347**	P	**P**	**21 12 21.6**	**+0.7**
	baz=161						
SMCO	**Snowmass**	**63.91**	**330**	*e*P	**P**	**21 12 21.4**	**-0.2**
	comp=Z,13nm,0.9s						
E40A	**Wakefield**	**64.10**	**346**	P	**P**	**21 12 23.0**	**+0.9**
	baz=160,SNR=9.7						
F37A	**Hinrichs Farm,**	**64.11**	**344**	P	**P**	**21 12 23.1**	**+0.9**
	baz=157						
F38A	**Pierce - Schro**	**64.13**	**344**	P	**P**	**21 12 23.2**	**+0.9**
	baz=158,SNR=6.6						
E39A	**Mellen**	**64.19**	**345**	P	**P**	**21 12 23.3**	**+0.5**
	baz=160,SNR=7.2						
IKP	**In-Ko-Pah, Jac**	**64.31**	**319**	P	**P**	**21 12 24.5**	**+0.5**
	baz=131						
D41A	**Chassel**	**64.38**	**347**	P	**P**	**21 12 25.7**	**+1.7**
	baz=162						
BC3	**Big Chuckawall**	**64.57**	**320**	P	**P**	**21 12 26.5**	**+0.8**
	baz=132						
W13A	**Hualapai Mount**	**64.61**	**322**	*e*P	**P**	**21 12 26.2**	**+0.1**
	comp=Z,7.4nm,1.2s						
U15A	**North Rim**	**64.63**	**324**	*e*P	**P**	**21 12 27.8**	**+1.5**
	comp=Z,8.6nm,1.0s						
E38A	**The Farm, Brul**	**64.65**	**345**	P	**P**	**21 12 26.3**	**+0.6**
	baz=159						
MONP2	**Monument Peak**	**64.67**	**319**	P	**P**	**21 12 27.5**	**+1.0**
	baz=131						
LSQQ	**Lebel-sur-Quev**	**64.71**	**356**	P	**P**	**21 12 27.1**	**+1.0**
	baz=174						
IRM	**Iron Mountain**	**64.72**	**321**	P	**P**	**21 12 27.5**	**+0.9**
	baz=133						
BELC	**Belle Mtn. Jos**	**65.14**	**320**	P	**P**	**21 12 30.3**	**+0.9**
	baz=132						
PFO	**Pinyon Flats O**	**65.17**	**319**	P	**P**	**21 12 30.9**	**+1.3**
	comp=Z,3.9nm,0.8s,baz=104,slow=8.8,SNR=4.0						
C40A	**Isle Royale Na**	**65.32**	**347**	P	**P**	**21 12 30.6**	**+0.5**
	baz=161						
KNB	**Kanab**	**65.35**	**324**	*e*P	**P**	**21 12 32.6**	**+1.8**
	comp=Z,20nm,1.0s						
KNB	**Kanab**	**65.35**	**324**	*e*P	**P**	**21 12 32.6**	**+1.8**
KNB				pmax	pmax		
	comp=Z,20nm,1.0s						
CHGQ	**Chibougamau**	**65.43**	**358**	P	**P**	**21 12 31.8**	**+1.0**
	baz=177,SNR=7.0						
MATQ	**Matagami**	**65.45**	**356**	P	**P**	**21 12 31.8**	**+0.9**
	baz=173,SNR=13						
GMRC	**Granite Mounta**	**65.46**	**321**	P	**P**	**21 12 31.1**	**-0.4**
	baz=133						
MTPU	**Mount Pierson**	**65.73**	**326**	*e*P	**P**	**21 12 32.0**	**-1.4**
	comp=Z,6.7nm,1.1s						
Q16A	**Castle Valley**	**65.83**	**327**	*e*P	**P**	**21 12 33.7**	**-0.2**
	comp=Z,9.7nm,1.2s						
EYMN	**Ely**	**65.88**	**345**	P	**P**	**21 12 34.4**	**+0.7**
	baz=159						
SZCU	**Shurtz Canyon**	**65.91**	**325**	*e*P	**P**	**21 12 34.3**	**-0.1**
	comp=Z,14nm,1.5s						
VNA3	**Neumayer Olymp**	**66.27**	**162**	P	**P**	**21 12 36.8**	**+0.8**
TCRU	**Three Creeks R**	**66.29**	**326**	*e*P	**P**	**21 12 36.6**	**-0.3**
	comp=Z,10nm,0.9s						
BFSC	**Mount Baldy Ra**	**66.33**	**319**	P	**P**	**21 12 38.3**	**+1.2**
	baz=131						
VNA1	**Neumayer--Stat**	**66.49**	**161**	P	**P**	**21 12 39.5**	**+2.1**
PASC	**Pasadena Art C**	**66.62**	**319**	*e*P	**P**	**21 12 39.0**	**+0.2**
	comp=Z,24nm,1.4s						
VNA2	**Neumayer--Watz**	**66.85**	**161**	P	**P**	**21 12 42.3**	**+2.5**
	baz=278,slow=11						
EDW2	**Edwards Air Fo**	**66.96**	**320**	P	**P**	**21 12 42.2**	**+1.2**
	baz=131						
TAOE	**Nuku Hiva Isla**	**67.18**	**267**	*e*LR	LR	21 32 51.7	
	comp=Z,944nm,24.9s						
JLU	**Jordanelle**	**67.22**	**328**	*e*P	**P**	**21 12 43.2**	**+0.3**
	comp=Z,11nm,1.0s						
TPNV	**Topopah Spring**	**67.27**	**322**	*e*P	**P**	**21 12 43.3**	**+0.2**
	comp=Z,17nm,1.1s						
TPNV	**Topopah Spring**	**67.27**	**322**	*e*P	**P**	**21 12 43.3**	**+0.2**
TPNV				pmax	pmax		
	comp=Z,17nm,1.1s						
TPNV	**Topopah Spring**	**67.27**	**322**	P	**P**	**21 12 44.7**	**+1.6**
	baz=133,SNR=7.8						
FURC	**Furnace Creek,**	**67.31**	**322**	P	**P**	**21 12 44.7**	**+1.6**
	baz=132						
AGMN	**Agassiz Nation**	**67.36**	**343**	*e*P	**P**	**21 12 41.8**	**-1.4**
	comp=Z,48nm,1.2s						
AGMN	**Agassiz Nation**	**67.36**	**343**	P	**P**	**21 12 44.0**	**+0.8**
	baz=154,SNR=9.8						
MPMC	**Manual Prospec**	**67.42**	**321**	P	**P**	**21 12 45.2**	**+1.1**
	baz=132						
DUG	**Dugway, Tooele**	**67.63**	**327**	P	**P**	**21 12 46.6**	**+1.3**
	baz=137,SNR=7.3						
ISA	**Isabella, Lake**	**67.76**	**320**	P	**P**	**21 12 47.6**	**+1.4**
	baz=131						
R11A	**Troy Canyon, C**	**67.84**	**324**	*e*P	**P**	**21 12 46.5**	**-0.2**
	comp=Z,6.9nm,1.0s						
R11A	**Troy Canyon, C**	**67.84**	**324**	P	**P**	**21 12 48.1**	**+1.4**
	baz=134,SNR=8.5						
PDAR	**Pinedale Array**	**67.93**	**331**	P	**P**	**21 12 49.1**	**+1.9**
	comp=Z,2.9nm,0.8s,baz=143,slow=5.2,SNR=4.9						
PDAR				LR	LR	21 45 41.9	
	comp=Z,451nm,19.5s,baz=135,slow=39						
CWC	**Cottonwood Cre**	**68.03**	**321**	P	**P**	**21 12 49.3**	**+1.4**
	baz=131						
MDND	**Maddock**	**68.12**	**340**	*e*P	**P**	**21 12 48.2**	**+0.2**
	comp=Z,150nm,1.1s						
MDND	**Maddock**	**68.12**	**340**	P	**P**	**21 12 49.0**	**+1.0**
	baz=151,SNR=8.3						
SNAA	**Sanae**	**68.48**	**162**	P	P	21 12 55.7	+5.6
SNAA	**Sanae**	**68.48**	**162**	*e*P	**P**	**21 12 50.2**	**+0.1**
	comp=Z,14nm,0.8s						
SNAA	**Sanae**	**68.48**	**162**	*e*P	**P**	**21 12 50.2**	**+0.1**
SNAA				pmax	pmax		
	comp=Z,14nm,0.8s						
SNAA	**Sanae**	**68.48**	**162**	LR	LR	21 40 12.0	
	comp=Z,311nm,21.3s,baz=312,slow=34						
ULM	**Lac du Bonnet**	**69.14**	**344**	*e*P	**P**	**21 12 53.8**	**-0.5**
	comp=Z,50nm,1.3s						
ULM	**Lac du Bonnet**	**69.14**	**344**	*e*P	**P**	**21 12 53.8**	**-0.5**
ULM				pmax	pmax		
	comp=Z,50nm,1.3s						
ULM	**Lac du Bonnet**	**69.14**	**344**	P	**P**	**21 12 53.5**	**-0.8**
	comp=Z,26nm,1.1s,baz=149,slow=6.1,SNR=15						
ULM				LR	LR	21 46 25.3	
	comp=Z,317nm,18.0s,baz=152,slow=39						
LIC	**Lamto**	**69.33**	**77**	*e*P	**P**	**21 12 54.2**	**-2.1**
	comp=Z,30nm,0.9s						
NV01	**Mina Array Sit**	**69.47**	**322**	*e*P	**P**	**21 12 55.9**	**-1.0**
NVAR	**Mina Array Bea**	**69.47**	**322**	P	**P**	**21 12 57.3**	**+0.4**
	comp=Z,2.9nm,0.9s,baz=152,slow=6.7,SNR=11						
NVAR				LR	LR	21 42 21.7	

	comp=Z,222nm,20.9s,baz=132,slow=35						
TIC	Toumodi	69.48	77	*e*P	P	21 12 55.4	-1.8
DBIC	Dimbokro	69.64	77	P	P	21 12 55.5	-2.7
	comp=Z,6.1nm,0.8s,baz=223,slow=6.9,SNR=8.8						
DBIC				LR	LR	21 42 18.6	
	comp=Z,884nm,19.4s,baz=230,slow=35						
KIC	Kosan Boka	69.64	77	*e*P	P	21 12 56.4	-1.8
	comp=Z,25nm,0.8s						
H17A	Grant Village	69.65	331	P	P	21 12 59.3	+1.3
	baz=140						
DGMT	Dagmar	70.25	338	P	P	21 13 02.8	+1.5
	baz=146						
SCHQ	Schefferville	70.42	3	LR	LR	21 45 51.3	
	comp=Z,412nm,19.1s,baz=194,slow=38						
HLID	Hailey	70.89	328	P	P	21 13 06.9	+1.4
	baz=136						
BOZ	Bozeman (W)	71.05	331	*e*P	P	21 13 06.7	+0.3
	comp=Z,11nm,1.1s						
BOZ	Bozeman (W)	71.05	331	*e*P	P	21 13 06.7	+0.3
BOZ				pmax	pmax		
	comp=Z,11nm,1.1s						
BOZ	Bozeman (W)	71.05	331	P	P	21 13 07.9	+1.6
	baz=139						
EGMT	Eagleton	72.08	334	P	P	21 13 13.9	+1.5
	baz=141						
O03E	Paynes Creek	72.74	322	P	P	21 13 18.5	+1.9
	baz=129						
MSO	Missoula	73.04	331	P	P	21 13 19.9	+1.7
	baz=137,SNR=7.0						
NVL	N'lazarevskaya	73.04	160	*e*P	P	21 13 22.8	+5.0
NVL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TBI	Tubuai	73.08	250	*e*LR	LR	21 35 42.6	
	comp=Z,450nm,29.8s						
N02D	Trinity Center	73.70	322	P	P	21 13 22.7	+0.5
	baz=129						
M04C	Macdoel	73.71	323	P	P	21 13 23.2	+0.9
	baz=130						
M02C	Callahan	74.05	322	P	P	21 13 25.1	+0.9
	baz=129						
K04D	Chiloquin, OR	74.19	324	P	P	21 13 26.3	+1.2
	baz=130						
PPT2	Papeete2	74.28	256	*e*S	SKiKP	21 22 53.6	-0.4
	comp=Z,227nm,27.5s						
PPT2	Papeete2	74.28	256	*e*LR	LR	21 36 11.1	
	comp=Z,234nm,21.8s,baz=104						
PPT	Papeete	74.29	256	LR	LR	21 38 31.4	
	comp=Z,167nm,19.4s,baz=98,slow=30						
J05D	Fort Rock, OR	74.33	325	P	P	21 13 27.1	+1.2
	baz=130						
FFC	Flin Flon	74.84	342*c*	*e*P	P	21 13 30.6	+2.2
L02E	Cave Junction	74.97	323	P	P	21 13 30.7	+1.2
	baz=128						
I04A	Tendick Farm,	75.31	324	P	P	21 13 32.5	+1.1
	baz=129						
FCC	Fort Churchill	76.53	348	*e*P	P	21 13 38.0	+0.1
	comp=Z,30nm,1.4s						
FCC	Fort Churchill	76.53	348	*e*P	P	21 13 38.0	+0.1
FCC				pmax	pmax		
	comp=Z,30nm,1.4s						
TOA0	Torodi Ar. Sit	77.87	73	*e*P	P	21 13 43.0	-3.5
TORD	Torodi Ar. Bea	77.87	73	P	P	21 13 43.8	-2.7
	comp=Z,3.2nm,0.8s,baz=265,slow=4.4,SNR=23						
TORD				LR	LR	21 48 23.2	
	comp=Z,736nm,18.0s,baz=285,slow=36						
VNDA	Vanda	82.05	190	LR	LR	21 44 39.0	
	comp=Z,375nm,18.6s,baz=124,slow=31						
SYO	Syowa Base	82.71	160⇑	*e*P	P	21 14 09.0	-2.6
SYO	Syowa Base	82.71	160⇓	*e*pP	P	21 14 12.4	+0.8
ESDC	Sonseca Array	83.55	46	P	P	21 14 15.8	-0.7
	comp=Z,0.3nm,0.5s,baz=297,slow=5.6,SNR=3.6						
ESDC				LR	LR	21 48 01.6	
	comp=Z,390nm,21.0s,baz=220,slow=33						
SFJD	Kangerlussuaq	83.95	8	*e*P	P	21 14 18.6	+0.9
YKA	Yellowknife Ar	84.98	341	P	P	21 14 21.8	-1.3
	comp=Z,8.9nm,0.9s,baz=136,slow=5.1,SNR=49						
YKA				LR	LR	21 56 30.8	
	comp=Z,37nm,19.3s,baz=130,slow=39						
YKB5	Yellowknife Ar	84.98	341	*e*P	P	21 14 21.0	-2.2
DLBC	Dease Lake	88.00	333	P	P	21 14 36.9	-1.3
	comp=Z,6.9nm,0.9s,baz=93,slow=2.8,SNR=7.1						
BOSA	Boshof	88.34	119	LR	LR	21 49 43.3	
	comp=Z,662nm,22.0s,baz=248,slow=33						
BOSA	Boshof	88.34	119	*e*P	P	21 14 42.2	+1.5
MAW	Mawson	90.50	164	LR	LR	21 54 55.0	
	comp=Z,247nm,20.5s,baz=212,slow=35						
KULLO	Kullorsuaq	90.59	4	*i* P	P	21 14 51.5	+1.6
	comp=Z,48nm,1.2s						
KULLO	Kullorsuaq	90.59	4	*e*P	P	21 14 51.5	+1.6
KULLO				pmax	pmax		
	comp=Z,48nm,1.2s						
SUMG	Summit	90.81	9	*e*P	P	21 14 53.3	+1.9
	comp=Z,55nm,0.9s						
SUMG	Summit	90.81	9	*i* P	P	21 14 50.9	-0.5
	comp=Z,162nm,1.0s						
SUMG	Summit	90.81	9	*e*P	P	21 14 53.3	+1.9
SUMG				pmax	pmax		
	comp=Z,55nm,0.9s						
KEST	Kesra	91.85	53	LR	LR	21 57 02.9	
	comp=Z,368nm,19.5s,baz=202,slow=36						
INK	Inuvik	94.73	341	P	P	21 15 09.1	0.0
	comp=Z,9.6nm,1.1s,baz=109,slow=4.8,SNR=8.6						
EPYK	Eagle Plains	94.83	338	P	P	21 15 10.5	+0.8
	baz=119						
HDA	Harding Lake	97.93	335	P	Pdif	21 15 24.2	+0.4
	baz=110						
ILAR	Eielson Array	98.03	335	P	P	21 15 22.6	-1.5
	comp=Z,1.3nm,1.0s,baz=142,slow=3.4,SNR=6.9						
ILAR				PP	PP	21 19 20.6	-2.7
	comp=Z,1.1nm,0.9s,baz=112,slow=7.2,SNR=7.9						
ILAR				LR	LR	22 04 13.6	
	comp=Z,225nm,19.2s,baz=112,slow=38						
POKR	Poker Plat Res	98.36	335	P	Pdif	21 15 26.3	+0.6
	baz=109						
COLA	College	98.45	335	*i* P	Pdif	21 15 25.8	-0.2
COLA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
COLA	College	98.45	335	*e*P	Pdif	21 15 25.9	-0.2
GERES	GERESS Array B	98.60	42	LR	LR	21 59 49.5	
	comp=Z,221nm,18.3s,baz=256,slow=35						
PVCC	Panska Ves	99.54	40	AMS	AMS	21 58 10.0	
	comp=Z,700nm,22.8s						
NOA	NORSAR Array B	100.16	29	LR	LR	21 57 18.6	
	comp=Z,490nm,20.9s,baz=275,slow=33						
VYHS	Vyhne	101.85	43	*e*P	Pdif	21 15 45.8	+4.2
VYHS	Vyhne	101.85	43	*e*PDIFF	Pdif	21 15 45.8	+4.2
KBZ	Khabaz	118.31	49	PKP	PKiKP	21 20 37.6	+1.9
	comp=Z,2.4nm,0.9s,baz=270,slow=2.5,SNR=5.5						
STKA	Stephens Creek	122.98	214	PKP	PKiKP	21 20 47.3	+1.9
	comp=Z,2.1nm,0.8s,baz=167,slow=6.3,SNR=4.0						
SEY	Seymchan	123.88	338*c*	*i*PKIKP	PKiKP	21 20 48.6	+2.5
ARU	Arti	124.66	31	*i* PKIKP	PKiKP	21 20 48.4	+0.5
ARU						21 27 59.9	
ARU				SS	SS	21 39 28.5	+0.3
ABKAR	Akbulak array	128.43	39	*e*PKPdf	PKiKP	21 20 55.5	-0.1
GEYT	Alibeck	130.60	53	PKP	PKiKP	21 20 59.2	-1.2
	comp=Z,1.0nm,0.6s,baz=323,slow=2.2,SNR=3.1						
BRVK	Borovoye	132.21	30	*i* PKIKP	PKiKP	21 21 03.0	-0.1
AS01	Alice Springs	133.59	213	*e*PKPdf	PKiKP	21 21 08.6	+1.7
ASAR	Alice Springs	133.61	213	PKP	PKPdf	21 21 03.5	-2.2
	comp=Z,1.9nm,0.9s,baz=134,slow=2.0,SNR=12						
WB2	Warramunga Arr	136.36	216	*e*PKPdf	PKPdf	21 21 10.7	-0.3
WRA	Warramunga Arr	136.37	216	PKP	PKPdf	21 21 09.2	-1.7
	comp=Z,1.7nm,0.9s,baz=143,slow=1.7,SNR=12						
WRAB	Tennant Creek	136.37	216	*e*PKPdf	PKPdf	21 21 10.5	-0.4
WRAB	Tennant Creek	136.37	216*c*	*i*PKIKP	PKiKP	21 21 15.0	+2.4
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAA0	Zalesovo Array	137.64	21	*e*PKPdf	PKPdf	21 21 11.9	-0.3
ZALV	Zalesovo Beam	137.64	21	PKhKP	PKPpre	21 21 03.2	
	comp=Z,1.2nm,0.8s,baz=335,slow=6.6,SNR=3.6						
ZALV				PKP	PKPdf	21 21 11.1	-1.1
	comp=Z,3.2nm,0.8s,baz=279,slow=3.2,SNR=8.3						
KURK	Kurchatov	137.66	28*c*	*i*PKIKP	PKiKP	21 21 14.8	+0.6
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	140.46	40*c*	*i*PKIKP	PKiKP	21 21 20.8	+0.3
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KLR	Kul'dur	141.60	335	*i* PKIKP	PKiKP	21 21 21.9	-0.5
NRN	Naryn	142.05	41	*e*PKPdf	PKiKP	21 21 22.2	-1.8
DGZ	Jazzator, Alta	142.06	22	*i* PKIKP	PKPdf	21 21 20.7	+0.1
MK31	Makanchi Array	142.16	30	*e*PKPdf	PKPdf	21 21 18.2	-2.5
MK31	Makanchi Array	142.16	30	*e*PKIKP	PKPdf	21 21 18.2	-2.5
MKAR	Makanchi Array	142.16	30	*e*PKPdf	PKPdf	21 21 18.2	-2.5
MKAR	Makanchi Array	142.16	30	*e*PKIKP	PKPdf	21 21 18.2	-2.5
MKAR	Makanchi Array	142.16	30	PKhKP	PKPpre	21 21 16.4	
	comp=Z,1.2nm,0.8s,baz=316,slow=2.9,SNR=9.2						
MK01	Makanchi Array	142.18	30	*e*PKPpre	PKPpre	21 21 16.5	
BHJ	Bhuj	142.72	72	*e*P	PKPdf	21 21 19.2	-3.1
KSH	Kashi	143.04	44	PKP	PKiKP	21 21 27.0	+1.2
KSH				PP	PP	21 24 35.8	+3.7
KSH				SKS	SKSdf	21 28 33.3	+0.6
KSH				SKKS	SKKSac	21 31 27.0	+1.2
KSH				SS	SS	21 43 15.8	+4.6
KSH				AMB	AMB		
	comp=Z,310nm,5.8s						
KSH				LR	LR		
	comp=Z,130nm,4.6s						
KSH				LR	LR		
	comp=Z,160nm,4.8s						
KSH				LR	LR		
	comp=Z,270nm,5.6s						
NIL	Nilore	143.59	54	*e*PKPdf	PKiKP	21 21 25.3	-1.7
MOY	Mondy	143.68	8	*e*PKIKP	PKPdf	21 21 23.4	+0.1
MOY				pmax	pmax		
	comp=Z,29nm,3.0s						
TLY	Talaya	143.95	5	*e*PKPdf	PKPdf	21 21 24.2	+0.6
TLY	Talaya	143.95	5	*e*PKIKP	PKPdf	21 21 23.7	0.0
TLY				*e*SS	SS	21 43 26.9	+7.3
TLY				pmax	pmax		
	comp=Z,34nm,1.6s						
KNGR	Kungurtug, Tuv	144.13	12	*i* PKIKP	PKPdf	21 21 23.5	-0.6
MNCY	Minicoy	144.57	98	*e*P	PKPbc	21 21 23.5	-1.0
ZAK	Zakamensk	145.21	6	*e*PKP2	PKPbc	21 21 23.5	-2.1
ZAK				pmax	pmax		
	comp=Z,24nm,1.2s						
USRK	Ussuriysk Ar.	145.35	330	PKPbc	PKPbc	21 21 25.5	-0.6
	comp=Z,19nm,1.0s,baz=151,slow=4.4,SNR=18						
MDJ	Mudanjiang	146.15	333	PKPbc	PKPab	21 21 29.3	+0.1
MDJ				pPKP	PKiKP	21 21 30.6	-1.3
MDJ				sPKP		21 21 31.9	
MDJ				SKS	SKSdf	21 28 31.9	-4.9
MDJ				AMB	AMB		
	comp=Z,280nm,5.3s						
MDJ				LR	LR		
	comp=Z,370nm,19.1s						
MDJ				LR	LR		
	comp=Z,230nm,12.3s						
MDJ				LR	LR		
	comp=Z,550nm,21.5s						
MJAR	Matsushiro Arr	146.46	314	PKPbc	PKPdf	21 21 28.5	0.0
	comp=Z,32nm,0.9s,baz=121,slow=0.7,SNR=30						
MAJO	Matsushiro	146.46	314	*e*PKPdf	PKPbc	21 21 29.5	-0.3
MAJO	Matsushiro	146.46	314	*e*PKP2	PKPbc	21 21 29.5	-0.3
MAJO	Matsushiro	146.46	314	*e*P	PKPbc	21 21 28.8	-1.0
MAT	Matsushiro	146.46	314	PKP	PKPdf	21 21 26.5	-2.0
MJB9	Matsu-Tunnel	146.46	314	*e*PKPdf	PKPbc	21 21 29.6	-0.2
DHRM	DHARAMSHALA	146.49	55	*e*P	PKPdf	21 21 28.0	-0.9
GOA	Goa	146.63	86	*e*P	PKPdf	21 21 26.7	-2.6
POO	Poona	146.81	80	*e*P	PKPdf	21 21 26.9	-2.7
WMQ	Urumqi	146.90	28	*e*PKPbc	PKPdf	21 21 28.6	-0.5
WMQ				pPKP	pPKPdf	21 21 33.5	-0.5
WMQ				LR	LR		
	comp=Z,810nm,21.1s						
WMQ				LR	LR		
	comp=Z,650nm,16.1s						
WMQ				LR	LR		
	comp=Z,460nm,23.9s						
SMLA	Simla	147.58	56	*e*P	PKPdf	21 21 30.7	+0.3
SONA1	Songino Array	147.96	3	*e*PKPbc	PKPbc	21 21 32.9	-0.9
ULN	Ulaanbaatar	147.96	2	*e*PKPbc	PKPbc	21 21 33.0	-0.8
ULN	Ulaanbaatar	147.96	2	*e*PKP2	PKPbc	21 21 33.0	-0.8
SONM	Songino Array	147.97	3	PKPbc	PKPbc	21 21 33.5	-0.3
	comp=Z,20nm,1.0s,baz=313,slow=1.7,SNR=30						
TRD	Trivandrum	148.37	99	*e*P	PKPdf	21 21 29.6	-2.6
DDI	Dehra Dun	148.58	57	*e*P	PKPdf	21 21 30.1	-2.1
BHPL	Bhopal	149.83	71	*e*P	PKPdf	21 21 32.3	-2.1
HYB	Hyderabad	151.27	82	*i* PKP	PKiKP	21 21 44.5	+1.3
HYB	Hyderabad	151.27	82	*e*P	PKPdf	21 21 33.8	-3.0
KS01	Wonju Array Si	152.38	325	*e*PKPdf	PKPdf	21 21 40.5	+2.7
KSRS	Korea Array	152.38	325	PKP	PKPdf	21 21 39.4	+1.5
	comp=Z,6.6nm,1.2s,baz=31,slow=3.4,SNR=8.1						
KSRS				PKPbc	pPKPbc	21 21 47.4	-2.1
	comp=Z,24nm,0.9s,baz=29,slow=1.9,SNR=34						
KSAR	Wonju Array Be	152.41	325	PKP	PKPdf	21 21 39.4	+1.5
KSAR				PKPbc	pPKPbc	21 21 47.4	-2.2
KSAR	Wonju Array Be	152.41	325	PKIKP	PKPdf	21 21 39.4	+1.5
KSAR						21 21 47.4	
MDRS	Chennai	152.52	92	*e*P	PKPdf	21 21 35.7	-2.9
MDRS				IAMs_20	IAMs_20	21 32 01.6	
	comp=Z,98nm,4.8s						
MDRS				IAMs_20	IAMs_20	21 32 02.0	
	comp=E,117nm,3.6s						
MDRS				IAMs_20	IAMs_20	21 32 32.3	
	comp=N,60nm,6.9s						
HHC	Hu-ho-hao-te	154.86	355	*e*PKPbc	PKPdf	21 21 41.3	-0.1
HHC				PP	PP	21 25 44.0	+4.3
HHC				SS	SS	21 45 24.8	+3.3
HHC				LR	LR		
	comp=N,260nm,16.7s						
HHC				LR	LR		
	comp=N,740nm,18.2s						
GTA	Gaotai	155.24	16	*e*PKP	PKPdf	21 21 46.9	+4.9
GTA				PKPab	sPKPab	21 22 13.8	+0.5
GTA				LR	LR		
	comp=N,280nm,22.5s						
GTA				LR	LR		
	comp=N,240nm,19.7s						
GTA				LR	LR		
	comp=N,480nm,23.5s						
BOK	Bokaro	157.29	66	*e*P	PKPdf	21 21 41.8	-3.2
BOK				IAMs_20	IAMs_20	21 32 16.7	
	comp=N,280nm,10.8s						
LSA	Lhasa	158.86	46	PKP	PKPdf	21 21 49.9	+2.5
LSA	Lhasa	158.86	46	*e*PKPdf	PKPdf	21 21 44.9	-2.5
LSA	Lhasa	158.86	46	*e*PKIKP	PKPdf	21 21 44.9	-2.5
LZH	Lanzhou	159.33	11	*e*PKP	PKPab	21 22 15.3	-9.3
LZH				pPKP	pPKPab	21 22 25.1	-4.3
LZH				sPKP		21 22 27.8	
LZH				LR	LR		
	comp=N,220nm,14.8s						
LZH				LR	LR		
	comp=E,230nm,15.0s						
LZH				LR	LR		
	comp=Z,400nm,16.3s						
NJ2	Nanjing	161.24	332	*e*PKP	PKPdf	21 21 48.6	-0.7
SHL	Shillong	161.66	55	*e*P	PKPdf	21 21 46.9	-3.4
SHL				IAmb	IAmb	21 21 52.4	
SHL				IAMs_20	IAMs_20	21 31 13.3	
	comp=Z,156nm,6.2s						
XAN	Xi'an	161.79	359	PKP	PKPdf	21 21 50.0	+0.1
CMBY	CAMPBELL BAY	163.29	120	*e*P	PKPdf	21 21 45.0	-6.9
CMBY				IAMs_20	IAMs_20	21 32 30.8	
	comp=Z,464nm,6.5s						
PBA	Port Blair	164.16	103	*e*P	PKPdf	21 21 49.0	-3.7
PBA				IAMs_20	IAMs_20	21 33 01.2	
	comp=Z,400nm,2.5s						
CD2	Chengdu	164.31	15	PKP	PKPdf	21 21 50.5	-2.0
GYA	Guiyang	169.22	9	*e*PKP	PKPdf	21 21 55.0	-1.4
GYA				PKPab	PKPab	21 23 09.4	+1.3
GYA				PKS	PKSdf	21 25 26.8	-2.3
GYA				PP	PP	21 26 59.6	+3.4
GYA				AMB	AMB		
	comp=Z,130nm,8.2s						
KMI	Kunming	169.24	29	PKP	PKPdf	21 21 53.1	-3.5
KMI				LR	LR		
	comp=Z,310nm,10.2s						
KMI				LR	LR		
	comp=Z,220nm,10.2s						
KMI				LR	LR		
	comp=Z,240nm,10.5s						
CMAR	Chiang Mai Arr	170.48	72	PKP	PKPdf	21 21 58.1	+1.0
	comp=Z,0.5nm,0.9s,baz=287,slow=1.7,SNR=5.1						
CMAR				PKPab	PKPab	21 23 13.6	-0.6
	comp=Z,0.7nm,0.8s,baz=284,slow=6.6,SNR=6.0						
CM01	Chiang Mai Arr	170.51	72	*e*PKPdf	PKPdf	21 21 55.5	-1.7

ANF 22 21:10:18.1±0.2, 37°.86N×81°.55W, h4^{km}±2^{km}, ML3.0/42, Error ellipse: s-maj=1.7km s-min=1.3km az=127.0, West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
S53A	Williamson	0.49	249	P	Pg	21 10 27.9	+0.3
	baz=68						
S53A				S	Sg	21 10 34.6	+0.6
	baz=68						
R54A	Victor	0.54	54	P	Pg	21 10 28.6	+0.1
	baz=234						
R54A				S	Sg	21 10 36.4	+0.8
	baz=234						
R53A	Hurricane	0.57	326	P	Pg	21 10 28.3	-0.7
	baz=146						
R53A				S	Sb	21 10 37.8	-1.4
	baz=146						
T54A	Tazewell	0.80	182	P	Pg	21 10 33.6	+0.1
	baz=1.7						
T54A				S	Sb	21 10 46.0	+0.1
	baz=1.7						
S55A	Lewisburg	0.83	96	P	Pg	21 10 33.7	-0.4
	baz=277						
S55A				S	Sb	21 10 46.2	-0.6
	baz=277						
R52A	Catlettsburg	0.99	299	P	Pg	21 10 35.8	-1.2
	baz=118						
R52A				S	Sb	21 10 51.9	+0.7
	baz=118						
BLA	Blacksburg	1.11	126	P	Pg	21 10 38.9	-0.4
	baz=306						
BLA				Sb	Sn	21 10 55.7	-0.6
	baz=306						
T53A	Wise	1.18	222	P	Pg	21 10 40.7	0.0
	baz=41						
T53A				S	Sb	21 10 57.0	+0.2
	baz=41						
R55A	Marlinton	1.20	69	P	Pg	21 10 40.6	-0.6
	baz=250						
R55A				S	Sg	21 10 57.1	+0.3
	baz=250						
S52A	Salyersville	1.23	262	P	Pg	21 10 40.4	-1.3
	baz=81						
S52A				S	Sb	21 10 58.0	-0.2
	baz=81						
Q52A	Bidwell	1.23	333	P	Pg	21 10 39.9	-1.9
	baz=153,SNR=7.4						
Q52A				S	Sb	21 10 58.5	+0.1
	baz=153						
Q54A	Coxs Mills	1.25	26	P	Pn	21 10 42.6	+0.1
	baz=207,SNR=11						
Q54A				S	Sn	21 11 00.2	+0.4
	baz=207						
T52A	Hallie	1.37	237	P	Pn	21 10 44.2	+0.1
	baz=56						
T52A				S	Sn	21 11 03.0	+0.2
	baz=56						
P53A	Whipple	1.63	4	P	Pn	21 10 47.0	-0.6
	baz=184,SNR=9.3						
P53A				S	Sn	21 11 08.4	-0.7
	baz=184						
S51A	Beattyville	1.64	263	P	Pn	21 10 47.7	0.0
	baz=82						
S51A				S	Sb	21 11 09.8	-0.1
	baz=82						
R51A	Hillsboro	1.67	286	P	Pn	21 10 48.0	-0.2
	baz=105						
R51A				S	Sb	21 11 10.6	-0.2
	baz=105						
U53A	Fall Branch	1.71	209	P	Pn	21 10 49.1	+0.4
	baz=28						
P52A	Corning	1.83	346	P	Pn	21 10 49.9	-0.5
	baz=165,SNR=12						
P52A				S	Sn	21 11 14.6	+0.6
	baz=165						
Q51A	Peebles	1.83	310	P	Pn	21 10 50.0	-0.4
	baz=129,SNR=6.2						
Q51A				S	Sn	21 11 14.1	+0.1
	baz=129						
P54A	Burton	1.93	25	P	Pn	21 10 51.0	-0.8
	baz=206,SNR=8.9						
P54A				S	Sb	21 11 17.7	-0.6
	baz=206						
P51A	Williamsport	2.00	324	P	Pn	21 10 53.1	+0.3
	baz=143						
P51A				S	Sn	21 11 19.3	+1.0
	baz=143						
TZTN	Tazewell	2.07	231	Pb	Pb	21 10 55.3	-1.0
	baz=50						
TZTN				Sb	Sg	21 11 23.8	-0.9
	baz=50						
T51A	Gray	2.11	246	Pb	Pb	21 10 55.8	-1.1
	baz=64						
T51A				Sb	Sb	21 11 24.3	+0.8
	baz=64						
P55A	Reedsville	2.12	39	P	Pn	21 10 55.0	+0.5
	baz=220						
Q50A	Georgetown	2.15	298	P	Pn	21 10 55.1	+0.3
	baz=116,SNR=8.3						
Q50A				S	Sn	21 11 22.8	+0.9
	baz=116						
R50A	Paris	2.23	282	P	Pn	21 10 56.5	+0.5
	baz=100						
R50A				S	Sn	21 11 24.8	+0.8
	baz=100						
O52A	Adamsville	2.26	354	P	Pn	21 10 57.0	+0.6
	baz=174,SNR=5.8						
O52A				S	Sn	21 11 26.1	+1.4
	baz=174						
S50A	Richmond	2.27	266	P	Pn	21 10 57.0	+0.5
	baz=84						
S50A				Sb	Sb	21 11 29.2	+1.0
	baz=84						
O53A	New Philadelph	2.40	6	Pb	Pb	21 11 00.5	-1.4
	baz=186						
O53A				S	Sn	21 11 28.8	+0.7
	baz=186						
V53A	Saluda	2.41	205	P	Pn	21 11 00.2	+1.7
	baz=24,SNR=12						
V53A				Sb	Sg	21 11 34.2	-1.5
	baz=24						
O51A	Pataskala	2.43	340	P	Pn	21 10 59.1	+0.5
	baz=160						
O51A				S	Sn	21 11 30.4	+1.7
	baz=160						
U51A	La Follette	2.47	234	Pb	Pb	21 11 02.4	-0.7
	baz=52						
U51A				Sb	Sg	21 11 36.2	-1.2
	baz=52						
P50A	Jamestown	2.48	315	S	Sb	21 11 32.3	-1.9
	baz=134						
V52A	Sevierville	2.60	220	P	Pn	21 11 02.2	+1.2
	baz=38,SNR=9.3						
V52A				Sb	Sg	21 11 40.4	-1.3
	baz=38						
ACSO	Alum Creek Sta	2.62	335	S	Sn	21 11 34.1	+0.6
	baz=154						
T50A	Nancy	2.75	253	S	Sn	21 11 37.8	+1.0
	baz=71						
O50A	Cable	2.79	325	S	Sn	21 11 39.4	+1.5
	baz=144						
W54A	Cherokee Point	2.82	191	Sb	Sb	21 11 46.1	+2.2
	baz=10						
R49A	Shelbyville	2.89	280	S	Sn	21 11 42.2	+1.9
	baz=97						
R58B	Mineral	2.90	87	Sb	Sb	21 11 48.0	+1.7
	baz=269						
O55A	Ligonier	2.92	36	S	Sn	21 11 42.0	+1.0
	baz=217						

IDC 22 21:24:02.7±12.0, 17°.45S×178°.71W, h556^{km}±155^{km}, mb2.6/5, mb1 3.0/5, mb1mx2.8/36, mbtmp3.5/5, Error ellipse: s-maj=128.9km s-min=42.5km az=164.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.43	259	P	P	21 31 24.8	-0.1
	0.4nm,0.9s,baz=94,slow=7.7,SNR=3.7						
ASAR	Alice Springs	44.64	254	P	P	21 31 26.2	-0.3
	0.3nm,0.7s,baz=85,slow=8.5,SNR=4.8						
ILAR	Eielson Array	85.50	13	P	P	21 35 41.6	-0.1
	0.2nm,0.5s,baz=217,slow=4.8,SNR=5.5						
TXAR	Lajitas Array	85.99	58	P	P	21 35 45.0	0.0
	0.4nm,0.6s,baz=232,slow=6.8,SNR=2.2						
PDAR	Pinedale Array	87.22	44	P	P	21 35 50.4	-0.2
	0.4nm,0.7s,baz=239,slow=5.1,SNR=3.7						
GERES	GERESS Array B	147.09	345	PKPbc	PKPbc	21 42 42.9	-0.7
	0.3nm,0.4s,baz=343,slow=3.1,SNR=3.2						

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*ISCJB **22** 21:28:03.5±0.6, 49°.1S±0°.1×106°.3E±0°.3, h10^{km}, mb4.3/9, MS3.8/3, Error ellipse: s-maj=27.8km s-min=12.2km az=27.8*

*IDC **22** 21:28:03.6±0.7, 49°.06S×106°.30E, h0^{km}, mb4.4/8, mb1 4.5/8, mb1mx4.2/26, mbtmp4.3/8, MS3.8/4, Ms1 3.8/4,* *ms1mx3.5/21, Error ellipse: s-maj=36.9km s-min=17.5km az=115.0*

*NEIC **22** 21:28:05.2±0.4, 49°.06S×106°.30E, h10^{km}, mb4.5/1, Error ellipse: s-maj=17.4km s-min=9.9km az=115.0*

ISC 22 21:28:05.0±0.7**, 49°.1S**±0°.1×**106°.3E**±0°.2**, h10^{km}, n28, σ0^{s}.65**/24**, mb4.3**/9**, MS3.4**/3**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.29	25	T	T	21 47 13.6	
	baz=199,slow=74,SNR=54						
H01W1	Cape Leeuwin H	15.30	25	T	T	21 47 14.5	
	baz=199,slow=74,SNR=60						
H01W3	Cape Leeuwin H	15.30	25	T	T	21 47 14.5	
	baz=199,slow=74,SNR=58						
NWAO	Narrogin (SRO)	18.07	31	LR	LR	21 37 25.0	
	comp=Z,291nm,20.2s,baz=74,slow=31						
STKA	Stephens Creek	31.50	70	P	P	21 34 27.1	+0.2
	3.2nm,0.8s,baz=235,slow=8.0,SNR=6.0						
STKA				LR	LR	21 44 48.5	
	comp=Z,83nm,20.6s,baz=183,slow=32						
ASAR	Alice Springs	33.37	51	P	P	21 34 43.7	+0.3
	3.0nm,0.8s,baz=211,slow=7.4,SNR=18						
ASAR				PcP	PcP	21 37 23.6	-1.4
	0.4nm,0.7s,baz=184,slow=0.8,SNR=5.0						
ASAR				LR	LR	21 46 14.6	
	comp=Z,60nm,20.8s,baz=212,slow=33						
WRA	Warramunga Arr	36.71	48	P	P	21 35 12.7	+0.4
	4.5nm,0.8s,baz=210,slow=8.1,SNR=15						
WRA				PcP	PcP	21 37 33.1	-1.6
	1.0nm,0.8s,baz=224,slow=2.8,SNR=6.2						
QSPA	South Pole Qui	41.07	180	P	P	21 35 48.8	+0.3
	5.3nm,0.9s,baz=317,slow=3.8,SNR=12						
QSPA				PcP	PcP	21 37 47.4	-0.4
	2.1nm,0.8s,baz=299,slow=8.2,SNR=3.6						
SNAA	Sanae	49.74	203	P	P	21 36 57.5	+0.6
SNAA	Sanae	49.74	203	P	P	21 36 57.3	+0.4
	20nm,0.8s,baz=128,slow=10,SNR=29						
VNA2	Neumayer--Watz	51.36	203	P	P	21 37 09.7	+0.6
	baz=122,slow=6.1						
VNA3	Neumayer Olymp	51.72	202	P	P	21 37 11.0	-0.8
VNA1	Neumayer--Stat	51.76	203	P	P	21 37 12.5	+0.4
CMAR	Chiang Mai Arr	67.54	352	P	P	21 39 02.1	+0.8
	1.8nm,1.0s,baz=192,slow=5.2,SNR=11						
NIL	Nilore	87.46	333	*e*P	P	21 40 52.1	-0.2
	2.1nm,0.7s						
PLCA	Paso Flores	90.54	182	P	P	21 41 07.2	0.0
	2.7nm,0.8s,baz=206,slow=5.2,SNR=5.4						
SONM	Songino Array	96.52	0	P	P	21 41 34.0	-0.2
	0.1nm,0.4s,baz=190,slow=7.3,SNR=2.6						
MKAR	Makanchi Array	97.74	344	LR	LR	22 23 54.5	
	comp=Z,259nm,21.2s,baz=316,slow=34						
H10S2	ASCENSION HYDR	102.58	240	T	T	23 37 08.9	
	baz=146						
H10S3	ASCENSION HYDR	102.59	240	T	T	23 37 08.8	
	baz=146,slow=74,SNR=4.4						
H10S1	ASCENSION HYDR	102.59	240	T	T	23 37 11.9	
	baz=146,slow=74,SNR=4.3						
ILAR	Eielson Array	139.64	39	PKP	PKPdf	21 47 32.1	+0.6
	0.4nm,0.7s,baz=230,slow=5.0,SNR=6.2						
NVAR	Mina Array Bea	146.50	91	PKPbc	PKPab	21 47 47.1	-0.2
	2.9nm,0.6s,baz=225,slow=5.4,SNR=17						
MOD	Modoc Plateau	146.97	85	*e*PKPbc	PKPbc	21 47 47.8	+0.4
TXAR	Lajitas Array	149.83	120	PKPbc	PKPbc	21 47 55.5	+0.3
	4.9nm,0.9s,baz=197,slow=5.8,SNR=16						
DUG	Dugway, Tooele	151.05	93	*e*PKPbc	PKiKP	21 47 58.3	-0.1
DUG				*e*PKPab	PKPab	21 48 05.7	+0.2
YKA	Yellowknife Ar	153.88	44	PKPbc	PKPbc	21 48 02.9	-0.3
	0.9nm,0.7s,baz=288,slow=2.2,SNR=13						
PDAR	Pinedale Array	154.43	91	PKPbc	PKPbc	21 48 04.7	-0.7
	0.3nm,0.6s,baz=264,slow=1.5,SNR=3.7						

IDC 22 21:40:13.5±2.1**, 5°.50S×128°.95E, h0^{km}, mb3.1**/1**, mb1 4.1**/3**, mb1mx3.6**/22**, mbtmp3.8**/3**, ML4.1**/2**, Error ellipse: s-maj=153.9km s-min=29.5km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.29	160	Pn	Pn	21 43 51.8	+1.0
	0.7nm,0.3s,baz=343,slow=13,SNR=41						
WRA				Sn	Sn	21 46 30.1	-11
	0.4nm,0.3s,baz=338,slow=22,SNR=5.8						
ASAR	Alice Springs	18.69	166	P	P	21 44 32.9	-0.6
	1.2nm,0.3s,baz=347,slow=10,SNR=97						
MKAR	Makanchi Array	66.40	327	P	P	21 51 04.5	0.0
	0.2nm,0.6s,baz=135,slow=5.9,SNR=2.9						

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*NNC **22** 21:43:03.7±0.8, 42°.79N×78°.38E, h0^{km}, mb2.1, mpv2.6, Error ellipse: s-maj=6.3km s-min=2.9km az=171.0*

*KRNET **22** 21:43:04.8±0.1, 42°.85N×78°.40E, h24^{km}, mb2.3*

*SOME **22** 21:43:05.1, 42°.83N×78°.42E, h20^{km}*

ISC 22 21:43:05.2±1.0**, 42°.83N**±0°.02×**78°.36E**±0°.02**, h8^{km}**±8^{km}**, n43, σ1^{s}.10**/86**, 8C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.23	8	P	Pg	21 43 10.3	+0.4
	5.3nm,0.1s						
SATY				S	Sg	21 43 13.9	+0.8
	118nm,0.1s						
SATY	Saty	0.23	8	*e*P	Pg	21 43 10.3	+0.4
	5.3nm,0.1s						
SATY				*e*S	Sg	21 43 13.9	+0.8
	118nm,0.1s						
PRZ	Przheval'sk	0.35	175	⇓*i*P	Pg	21 43 12.9	+0.8
	baz=78						
PRZ				⇓*i*S	Sb	21 43 18.8	-0.7
	baz=78						
UZB	Uzynbulak	0.58	57	P	Pg	21 43 15.5	-0.9
	2.2nm,0.0s						
UZB				S	Sg	21 43 23.0	-1.0
	28nm,0.1s						
UZB	Uzynbulak	0.58	57	*e*P	Pg	21 43 15.5	-0.9
	baz=56						
UZB				*e*S	Sg	21 43 23.0	-1.0
	baz=56						
UZB	Uzynbulak	0.58	57	*e*P	Pg	21 43 15.5	-0.9
	2.2nm,0.0s						
UZB				*e*S	Sg	21 43 23.0	-1.0
	28nm,0.1s						
KURS	Kuram	0.67	348	P	Pg	21 43 18.0	-0.2
	1.1nm,0.3s						
KURS				S	Sg	21 43 27.2	+0.3
	1.3nm,0.2s						
KURS	Kuram	0.67	348	*e*P	Pg	21 43 17.9	-0.2
	baz=45						
KURS				*e*S	Sg	21 43 27.2	+0.3
	baz=45						
KURS	Kuram	0.67	348	*e*P	Pg	21 43 17.9	-0.2
	0.3nm,0.1s						
KURS				*e*S	Sg	21 43 27.2	+0.3
	2.3nm,0.2s						
SHLS	Shalkode	0.87	68	*e*P	Pn	21 43 26.4	+2.6
	baz=74						
SHLS				*e*S	Sn	21 43 41.1	+4.4
	baz=74						
SHLS	Shalkode	0.87	68	*e*P	Pn	21 43 26.4	+2.6
	6.7nm,0.1s						
SHLS				*e*S	Sn	21 43 41.2	+4.4
	11nm,0.3s						
PDGK	Podgornoye	0.96	59	P	Pg	21 43 22.3	-1.4
	1.6nm,0.1s						
PDGK				S	Sg	21 43 34.7	-1.6
	2.7nm,0.1s						
PDGK	Podgornoye	0.96	59	⇑P	Pg	21 43 22.2	-1.6
	0.3nm,0.1s						
PDGK				⇓S	Sg	21 43 34.4	-1.8
	1.6nm,0.3s						
PDGK	Podgornoye	0.96	59	⇑*i*P	Pg	21 43 22.1	-1.6
	baz=58						
PDGK				⇑*i*S	Sg	21 43 34.4	-1.8
	baz=58						
KOTS	Kotyrbulak	1.00	294	P	Pg	21 43 23.5	-0.8
	2.9nm,0.6s						
KOTS				S	Sg	21 43 37.0	-0.4
	9.5nm,0.1s						
KOTS	Kotyrbulak	1.00	294	*e*P	Pg	21 43 23.6	-0.8
	baz=93						
KOTS				*e*S	Sg	21 43 37.0	-0.4
	baz=93						
KOTS	Kotyrbulak	1.00	294	*e*P	Pg	21 43 23.6	-0.8
	2.9nm,0.6s						
KOTS				*e*S	Sg	21 43 37.0	-0.4
	9.5nm,0.1s						
MDOK	Medeo	1.02	289	P	Pg	21 43 23.6	-1.1
	0.7nm,0.5s						
MDOK				S	Sg	21 43 36.4	-1.6
	2.3nm,0.6s						
TNSS	Tian-Shan	1.06	282	P	Pg	21 43 24.9	-0.7
	2.4nm,0.3s						
TNSS				S	Sg	21 43 39.1	-0.2
	4.2nm,0.4s						
TNSS	Tian-Shan	1.06	282	*e*P	Pg	21 43 24.9	-0.7
	baz=81						
TNSS				*e*S	Sg	21 43 39.1	-0.2
	baz=81						
TNSS	Tian-Shan	1.06	282	*e*P	Pg	21 43 24.9	-0.7
	2.4nm,0.3s						
TNSS				*e*S	Sg	21 43 39.1	-0.2
	4.2nm,0.4s						
KDJ	Kajisay	1.12	232	⇓*i*P	Pg	21 43 26.5	-0.2
	baz=32						
KDJ				⇓*i*S	Sg	21 43 42.0	+0.7
	baz=32						
TARG	Taragay, Kyrgy	1.18	201	⇓*i*P	Pg	21 43 26.5	-1.3
	baz=2.0						
TARG				⇓*i*S	Sg	21 43 42.1	-1.0
	baz=2.0						
MNBS	Baschi	1.25	1	P	Pn	21 43 28.0	-0.9
	1.5nm,0.2s						
MNBS				S	Sb	21 43 44.5	-0.8
	10nm,0.2s						
MNBS	Baschi	1.25	1	*e*P	Pn	21 43 28.1	-0.9
	1.5nm,0.2s						
MNBS				*e*S	Sb	21 43 44.5	-0.8
	10nm,0.2s						
IZV	Izvestkoviy	1.30	280	P	Pn	21 43 29.3	-0.4
	1.8nm,0.1s						
IZV				S	Sb	21 43 46.7	-0.1
	9.0nm,0.3s						
IZV	Izvestkoviy	1.30	280	*e*P	Pn	21 43 29.3	-0.4
	baz=79						
IZV				*e*S	Sb	21 43 46.7	-0.1
	baz=79						
IZV	Izvestkoviy	1.30	280	*e*P	Pn	21 43 29.3	-0.4
	1.8nm,0.1s						
IZV				*e*S	Sb	21 43 46.7	-0.1
	9.0nm,0.3s						
CHKK	Chushkaly	1.43	316	P	Pn	21 43 31.6	+0.2
	1.1nm,0.2s						
CHKK				S	Sn	21 43 50.9	+0.5
	9.7nm,0.2s						
CHKK	Chushkaly	1.43	316	*e*P	Pn	21 43 31.6	+0.2
	baz=15						
CHKK				⇑*i*S	Sn	21 43 50.9	+0.5
	baz=15						
CHKK	Chushkaly	1.43	316	*e*P	Pn	21 43 31.6	+0.2
	1.1nm,0.2s						
CHKK				⇑*i*S	Sn	21 43 50.9	+0.5
	9.7nm,0.2s						
ARXS	Arharly	1.43	344	P	Pn	21 43 31.7	+0.2
	1.3nm,0.1s						
ARXS				S	Sn	21 43 50.6	0.0
	6.6nm,0.1s						
ARXS	Arharly	1.43	344	*e*P	Pn	21 43 31.7	+0.2
	1.3nm,0.1s						
ARXS				*e*S	Sn	21 43 50.6	0.0
	6.6nm,0.1s						
KTBS	Karatobe	1.51	306	P	Pn	21 43 33.0	+0.5
	1.1nm,0.1s						
KTBS				S	Sb	21 43 53.3	+0.5
	13nm,0.2s						
KTBS	Karatobe	1.51	306	*e*P	Pn	21 43 33.0	+0.5
	1.1nm,0.1s						
KTBS				*e*S	Sb	21 43 53.3	+0.5
	13nm,0.2s						
KTMS	Ketmen	1.58	67	P	Pn	21 43 33.5	-0.1
	2.7nm,0.1s						
KTMS				S	Sn	21 43 54.0	-0.3
	11nm,0.3s						
KTMS	Ketmen	1.58	67	*e*P	Pn	21 43 33.5	-0.1
	baz=66						
KTMS				*e*S	Sn	21 43 54.0	-0.3
	baz=66						
KTMS	Ketmen	1.58	67	*e*P	Pn	21 43 33.5	-0.1
	2.7nm,0.1s						
KTMS				*e*S	Sn	21 43 54.0	-0.3
	11nm,0.3s						
ULHL	Ulahol	1.67	250	⇓*i*P	Pn	21 43 35.4	+0.5
	baz=50						
ULHL				⇓*i*S	Sn	21 43 57.5	+0.9
	baz=50						
BOOM	Boomskoye usch	1.82	260	⇑*i*P	Pn	21 43 37.2	+0.3
	baz=60						
BOOM				⇑*i*S	Sn	21 44 01.2	+1.0
	baz=60						
TKM2	Tokmak 2	2.03	273	⇓P	Pb	21 43 42.7	+0.3
	1.2nm,0.5s						
TKM2				⇑S	Sn	21 44 06.3	+0.8
	2.0nm,0.5s						
TKM2	Tokmak 2	2.03	273	⇓*i*P	Pn	21 43 40.7	+0.8
	baz=73						
TKM2				⇓*i*S	Sn	21 44 06.8	+1.2
	baz=73						
NRN	Naryn	2.25	232	⇓*i*P	Pn	21 43 42.9	0.0
	baz=33						
NRN				⇓*i*S	Sn	21 44 10.6	-0.3
	baz=33						

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*ISCJB **22** 21:43:13.2±0.2, 51°.59N±0°.01×6°.62E±0°.03, h0^{km}, Error ellipse: s-maj=2.6km s-min=1.7km az=14.3*

*BUG **22** 21:43:15.0±0.0, 51°.61N×6°.81E, h1^{km}, ML2.4*

BUG Felt IV EMS.

*PRU **22** 21:43:15.5±0.0, 51°.87N×6°.95E, h0^{km}*

*LDG **22** 21:43:15.6±0.1, 51°.64N×6°.81E, h1^{km}, Md3.0/1, Ml2.8/28, Error ellipse: s-maj=2.7km s-min=1.9km az=35.0, Suspected Mining induced.*

*BNS **22** 21:43:16.0±1.0, 51°.60N×6°.86E, h1^{km}, ML2.3*

*BGR **22** 21:43:16.2±0.7, 51°.58N×6°.81E, h1^{km}, ML2.6/6, Error ellipse: s-maj=10.0km s-min=4.4km az=107.0*

ISC 22 21:43:14.1±0.7**, 51°.59N**±0°.02×**6°.69E**±0°.02**, h0^{km}, n66, σ1^{s}.47**/122**, 3D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAUG	Laupendahl	0.29	146	⇓*i*Pg	Pb	21 43 21.0	-1.1
LAUG				*e*Sg	Sg	21 43 24.9	+1.6
	241nm,0.5s						
WTSB	Winterswijk	0.39	10	*e*Pg	Pb	21 43 23.4	-0.4
WTSB				*e*Sg	Sb	21 43 28.9	-1.5
BUG	Bochum--Univer	0.39	112	*e*Pg	Pg	21 43 22.3	+0.6
BUG				Sg	Sg	21 43 28.0	+1.3
ENTS	Ennepetalsperr	0.57	127	*e*Pg	Pg	21 43 25.7	+0.6
ENTS				*e*Sg	Sg	21 43 32.5	0.0
RWB	Wassenberg	0.59	215	*e*Sg	Sb	21 43 38.0	+1.8
	202nm,0.7s						
PLH	Pulheim	0.59	172	*e*Pg	Pb	21 43 27.5	+0.2
PLH				*e*Sg	Sb	21 43 35.4	-0.8
HMES	Hamm, Michael-	0.65	83	*e*Pg	Pg	21 43 26.5	-0.1
HMES				*e*Sg	Sg	21 43 35.0	-0.1
BNS	Bensberg	0.70	154	*e*Pg	Pb	21 43 28.8	-0.3
HOBG	Hohbusch	0.73	146	⇓*i*Pg	Pb	21 43 29.3	-0.4
SORT	Sorpetalsperre	0.84	106	*e*Pg	Pg	21 43 30.1	0.0
SORT				*e*Sg	Sg	21 43 40.2	-0.9
	108nm,0.4s						
WBS	Wahnbachtalspe	0.87	154	*e*Pg	Pb	21 43 32.0	0.0
WBS				*e*Sg	Sg	21 43 43.2	+1.2
	88nm,0.4s						
GSH	Grosshau	0.88	193	*e*Pg	Pn	21 43 33.7	0.0
GSH				*e*Sg	Sb	21 43 45.6	+1.1
	55nm,0.3s						
HGN	Heimansgroeve	0.95	210	*e*Pg	Pn	21 43 35.4	+0.7
HGN				*e*Sg	Sn	21 43 49.4	+0.5
DREG	Dreilaegerbach	0.97	197	⇓*i*Pg	Pn	21 43 35.5	+0.5
DREG				*e*Sg	Sn	21 43 48.9	-0.6
	144nm,0.5s						
KLL	Kalltalsperre	0.97	194	*e*Pg	Pb	21 43 34.5	+0.7
KLL				*e*Sg	Sn	21 43 49.6	0.0
	52nm,0.3s						
IBBN	Ibbenburen	0.98	42	*e*Pg	Pb	21 43 33.6	-0.3
IBBN				*e*Sg	Sb	21 43 46.8	-0.6
STB	Steinbach	1.00	174	*e*Pg	Pn	21 43 34.9	-0.5
STB				*e*Sg	Sb	21 43 48.8	+0.8
	86nm,0.3s						
TDN	Todenfeld	1.03	171	*e*Pg	Pn	21 43 35.5	-0.3
TDN				*e*Sg	Sb	21 43 48.9	+0.1
	71nm,0.4s						
AHRW	Bad Neuenahr-A	1.08	167	*e*Pg	Pn	21 43 36.4	-0.1
AHRW				*e*Sg	Sb	21 43 50.5	+0.3
OLFT	Oleftalsperre	1.11	189	*e*Pg	Pn	21 43 37.4	+0.5
OLFT				*e*Sg	Sn	21 43 52.7	-0.2
HILG	Hillesheim	1.30	180	*e*Pg	Pn	21 43 40.0	+0.5
HILG				*e*Sg	Sb	21 43 57.0	+0.4
	81nm,0.4s						
ENV4	Elp / Enerveen	1.31	359	*e*Sg	Sn	21 43 59.8	+2.0
KOE	Koeppel	1.34	150	*e*Pg	Pn	21 43 40.1	0.0
VLW4	Vlagtwedde	1.41	10	*e*Sg	Sn	21 44 01.9	+1.7
LOH	Wallersheim-Lo	1.41	184	*e*Pg	Pb	21 43 42.4	+1.0
LOH				*e*Sg	Sn	21 44 00.9	+0.5
	119nm,0.6s						
BGG	Burgeitz	1.44	163	*e*Pg	Pb	21 43 42.1	+0.3
HWF4	Haulerwijk	1.50	352	*e*Sg	Sn	21 44 02.9	+0.4
ZL24	Zuidlaardervee	1.51	2	*e*Sg	Sn	21 44 03.0	+0.3
ZLV4	Zuidlaardervee	1.51	2	*e*Sg	Sn	21 44 03.5	+0.8
WDB4	Woudbloem 4	1.62	1	*e*Sg	Sn	21 44 05.2	-0.3
FSW4	Finsterwolde 4	1.65	9	*e*Sg	Sg	21 44 07.4	+0.3
TNS	Taunus Mts	1.77	140	*e*Pn	Pn	21 43 45.9	-0.1
GIVF	Givet	1.90	219	*e*Pn	Pb	21 43 49.0	-0.6
GIVF	Givet	1.90	219	*e*Pg	Pg	21 43 52.4	+1.9
GIVF				*e*Sn	Sn	21 44 12.3	-0.1
GIVF				*e*Sg	Sg	21 44 18.6	+3.5
	33nm,0.4s						
BAIF	Baives	2.19	227	*e*Pn	Pn	21 43 52.3	+0.5
BAIF				*e*Sn	Sn	21 44 19.1	-0.5
BAIF				*e*Sg	Sg	21 44 27.4	+2.8
	22nm,0.5s						
CLZ	Clausthal	2.31	82	*e*Pn	Pn	21 43 52.2	-1.2
PAGF	Fort de Pagny	3.10	192	*e*Pn	Pn	21 44 04.5	+0.2
	baz=12						
PAGF				*e*Sn	Sn	21 44 40.1	-1.9
	7.0nm,0.3s,baz=14						
PAGF				*e*Sg	Sg	21 44 55.4	+1.8
	76nm,0.8s						
CDF	Champ du Feu	3.20	173	*e*Pn	Pn	21 44 06.0	+0.2
CDF				*e*Sn	Sn	21 44 43.3	-1.4
	5.8nm,0.4s						
CDF				*e*Sg	Sg	21 44 57.8	+0.8
	8.6nm,0.5s						
MEZF	Maizieres J'vi	3.26	199	*e*Pn	Pn	21 44 07.0	+0.5
	baz=20						
MEZF	Maizieres J'vi	3.26	199	*e*Pg	Pg	21 44 17.2	+0.5
MEZF				*e*Sn	Sn	21 44 45.4	-0.6
	baz=17						
MEZF				*e*Sg	Sg	21 45 01.0	+2.1
	9.7nm,0.4s						
SFTF	Sexfontaines	3.55	198	*e*Pn	Pn	21 44 10.9	+0.4
	baz=20						
SFTF	Sexfontaines	3.55	198	*e*Pg	Pg	21 44 23.3	+1.2
SFTF				*e*Sn	Sn	21 44 52.1	-1.0
SFTF				*e*Sg	Sg	21 45 08.9	+0.8
	8.8nm,0.4s,baz=22						
HAU	Haudompre	3.59	184	*e*Pn	Pn	21 44 10.9	-0.2
HAU	Haudompre	3.59	184	*e*Pg	Pg	21 44 23.9	+0.9
HAU				*e*Sn	Sn	21 44 52.2	-2.0
HAU				*e*Sg	Sg	21 45 09.7	+0.2
	8.2nm,0.4s						
HINF	Hinteralfeld	3.78	178	*e*Pn	Pn	21 44 14.0	+0.4
HINF	Hinteralfeld	3.78	178	*e*Pg	Pg	21 44 26.8	+0.3
HINF				*e*Sn	Sn	21 44 57.3	-1.5
HINF				*e*Sg	Sg	21 45 16.2	+0.8
	3.5nm,0.4s						
NKC	Novy Kostel	3.89	108	*e*PN	Pn	21 44 15.1	-0.1
NKC				*e*SN	Sn	21 45 01.5	-0.1
NKC				*e*SG	Sg	21 45 17.7	-1.4
	comp=Z,8.2nm,0.7s						
BRG	Berggiesshubel	4.62	96	SG	Sb	21 45 36.7	+4.6
	3.2nm,0.7s						
LOR	Lormes	4.70	204	*e*Pn	Pn	21 44 27.1	+0.8
	baz=27						
LOR				*e*Sn	Sn	21 45 19.3	-2.2
	1.2nm,0.2s,baz=30						
LOR				*e*Sg	Sg	21 45 45.5	+0.4
	4.5nm,0.3s,baz=20						
SSF	Saint Saulge	4.99	206	*e*Pn	Pn	21 44 30.4	+0.2
SSF				*e*Sn	Sn	21 45 26.5	-2.0
	1.4nm,0.3s						
CABF	La Chapelle	5.00	185	*e*Pn	Pn	21 44 31.2	+0.8
CABF				*e*Sn	Sn	21 45 25.7	-3.2
CABF				*e*Sg	Sg	21 45 54.0	-0.6
	3.1nm,0.5s						
KHC	Kasperske Hory	5.05	116	*e*PN	Pn	21 44 31.7	+0.6
KHC				*e*SG	Sg	21 45 55.7	-0.6
HYF	Humbligny	5.07	213	*e*Pn	Pn	21 44 31.5	+0.2
PRU	Pruhonice	5.24	105	*e*PN	Pn	21 44 34.1	+0.5
AVF	Avril sur Loir	5.28	206	*e*Pn	Pn	21 44 34.3	+0.1
AVF				*e*Sn	Sn	21 45 32.1	-3.5
AVF				*e*Sg	Sg	21 46 03.2	-0.3
	1.1nm,0.4s						
SMF	Signal de Mont	5.29	202	*e*Pn	Pn	21 44 34.4	0.0
SMF				*e*Sg	Sg	21 46 03.9	0.0
	1.2nm,0.2s						
LDF	La Druitiere	5.31	238	*e*Pn	Pn	21 44 34.9	+0.3
LDF				*e*Sn	Sn	21 45 34.6	-1.8
	2.1nm,0.4s						
FLN	La Foliniere	5.40	241	*e*Pn	Pn	21 44 36.6	+0.7
	baz=64						
FLN				*e*Sn	Sn	21 45 36.4	-2.4
	2.8nm,0.4s,baz=60						
BGF	Bois d'Agland	5.63	208	*e*Pn	Pn	21 44 39.5	+0.4
BGF				*e*Sn	Sn	21 45 40.8	-3.6
BGF				*e*Sg	Sg	21 46 14.2	-0.7
	7.2nm,0.4s						
GRR	Gorron	5.82	240	*e*Pn	Pn	21 44 42.5	+0.8
GRR				*e*Sn	Sn	21 45 45.6	-3.5
	1.6nm,0.3s						
TCF	Toulx Ste Croi	6.07	211	*e*Pn	Pn	21 44 45.4	+0.3
TCF				*e*Sn	Sn	21 45 51.8	-3.4
	0.4nm,0.2s						
MFF	Saint Martin d	6.71	225	*e*Pn	Pn	21 44 54.0	+0.2
MFF				*e*Sn	Sn	21 46 06.7	-4.2
	1.6nm,0.3s						
SGMF	Saint Gilles	6.84	244	*e*Pn	Pn	21 44 56.2	+0.6
SGMF	Saint Gilles	6.84	244	*e*Pg	Pg	21 45 23.0	-2.0
SGMF				*e*Sn	Sn	21 46 09.6	-4.4
	0.8nm,0.3s						
ROSF	Rostrenen	7.20	247	*e*Pn	Pn	21 45 00.5	-0.1
ROSF				*e*Sn	Sn	21 46 19.0	-4.0
	3.0nm,0.5s						
QUIF	Quistinic	7.36	244	*e*Pn	Pn	21 45 02.6	-0.2
QUIF				*e*Sn	Sn	21 46 23.3	-3.7
	0.3nm,0.2s						

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*ISK **22** 21:49:53.3, 42°.41N×41°.18E, h5^{km}, ML2.3/4*

*MOS **22** 21:49:54.3±0.0, 42°.47N×41°.08E, h8^{km}, MPVA3.2*

*DDA **22** 21:49:54.8, 42°.23N×41°.08E, h7^{km}±1^{km}, ML2.7*

*NORS **22** 21:49:55.0±0.0, 42°.54N×41°.12E, h4^{km}, MPVA3.1*

ISC 22 21:49:53.4±1.4**, 42°.39N**±0°.02×**41°.11E**±0°.04**, h4^{km}**±11^{km}**, n24, σ0^{s}.70**/42**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.90	151	PG	Pg	21 50 10.8	+0.1
DOMR	Dombai	0.97	23	*e*Pg	Pg	21 50 12.6	+0.4
DOMR				*e*Sg	Sg	21 50 24.4	-0.4
BCA	Borcka	1.02	158	PG	Pg	21 50 13.3	+0.3
BCA				SG	Sb	21 50 27.8	+0.3
DBOC	Borcka	1.13	158	*i* P	Pb	21 50 15.5	0.0
DBOC				*i* S	Sb	21 50 30.9	+0.4
ARXR	Arkhyz	1.17	6	*e*Pg	Pb	21 50 14.8	-1.5
ARXR				*e*Sg	Sg	21 50 30.4	-0.7
CHOM	Cayeli-Rize	1.32	191	PN	Pn	21 50 19.3	+0.6
ARTV	Artvin	1.36	153	*i* P	Pn	21 50 18.5	-0.8
ARTV				IAML_P			
	comp=Z,2μm,0.1s						
DBAD	Bademkaya	1.44	162	*i* P	Pn	21 50 19.7	-0.7
DAGI	Agillar	1.45	155	*i* P	Pn	21 50 20.3	-0.2
DAGI				*i* S	Sn	21 50 38.6	-1.4
DAGI				IAML_P			
	comp=Z,170nm,0.1s						
NEY	Neytrino	1.46	54	*e*Pg	Pn	21 50 20.8	0.0
NEY				*e*Sg	Sn	21 50 40.5	0.0
EPOS	Posof	1.50	126	*i* P	Pb	21 50 22.2	+0.3
EPOS				*i* S	Sg	21 50 42.4	+0.8
DDEM	Demirkent	1.58	162	*i* P	Pn	21 50 22.6	+0.4
DDEM				*i* S	Sn	21 50 42.3	-0.9
GUZR	Guzeripl'	1.76	336	*i* Pg	Pn	21 50 24.4	-0.4
GUZR				*e*Sg	Sn	21 50 47.9	+0.3
SHA1	Shidzhatmaz	1.76	40	*e*Pg	Pn	21 50 25.9	+1.1
SHA1				*i* Pg	Pb	21 50 26.1	-0.3
SHA1				*i* Sg	Sb	21 50 49.1	+0.2

SHA1				eSg	Sb	21 50 49.1	+0.2
DIGR	Digorskoe uzhe	1.89	74	ePg	Pb	21 50 28.8	+0.2
DIGR				eSg	Sb	21 50 52.5	-0.3
KIV	Kislovodsk	1.94	36	PN	Pn	21 50 27.2	-0.1
KIV	Kislovodsk	1.94	36	ePg	Pn	21 50 29.0	+1.7
KIV				eSg	Sb	21 50 54.5	+0.5
KIV0	Kislovodsk Arr	1.94	36	ePg	Pn	21 50 28.6	+1.3
KIV0				eSg	Sb	21 50 54.5	+0.4
LZRR	Lazarevskoye	1.99	321	ePg	Pn	21 50 28.5	+0.7
LZRR				eSg	Sn	21 50 53.5	+0.3
SENK	Senkaya-Erzuru	2.06	153	PN	Pn	21 50 29.2	+0.3
ZEI	Tsey	2.10	78	ePg	Pb	21 50 31.7	-0.5
ZEI				eSg	Sb	21 50 59.4	+0.7
BAYT	Aydıntepe-Bayb	2.13	200	PN	Pn	21 50 30.8	+0.9
LACR	Lac	2.39	79	ePn	Pg	21 50 39.3	0.0
LACR				eSn	Sg	21 51 09.4	-0.9
ERBR	Yeremizino-Bor	3.35	352	ePn	Pn	21 50 30.6	-16
ERBR				eSn	Sn	21 51 26.3	-0.5

ISCJB ***22*** *21:50:46.5±0.1, 15°.69S±0°.02×71°.50W±0°.04, h10^{km}, mb5.0/171, MS4.9/26, Error ellipse: s-maj=6.2km s-min=2.5km az=155.2*

VAO ***22*** *21:50:46.7±0.4, 15°.64S×71°.94W, h10^{km}, mb4.7*

MOS ***22*** *21:50:47.0±1.7, 15°.82S×71°.75W, h10^{km}, mb5.2/31, Error ellipse: s-maj=15.7km s-min=6.1km az=117.8*

BJI ***22*** *21:50:48.3, 16°.45S×71°.09W, h19^{km}, mB5.6/23, Ms5.5/13, Ms7 5.4/16*

IDC ***22*** *21:50:48.7±3.8, 15°.63S×71°.37W, h17^{km}±23^{km}, mb4.5/21, mb1 4.6/27, mb1mx4.5/43, mbtmp4.5/27, ML4.1/6, MS4.8/24, Ms1 4.8/24, ms1mx4.7/28, Error ellipse: s-maj=18.7km s-min=11.7km az=52.0*

NEIC ***22*** *21:50:49.6±2.5, 15°.83S×71°.50W, h18^{km}±16^{km}, mb5.2/157, Error ellipse: s-maj=9.7km s-min=5.2km az=66.0*

GCMT ***22*** *21:50:50.6±0.2, 15°.80S±0°.01×71°.68W±0°.01, h16^{km}, MW5.3/111, Moment Tensor Solution. s67,c87; s111,c177; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.10±.03; $M_{\theta\theta}$1.16±.02; $M_{\phi\phi}$-1.07±.03; $M_{r\theta}$-0.27±.06; $M_{\theta\phi}$-0.11±.02; $M_{\phi r}$0.71±.09; Best double couple: $M_0$1.34300×10^{17} NP1:ϕ_s136.00000°, δ81.00000°, λ-31.00000°. NP2:ϕ_s231.00000°, δ59.00000°, λ-170.00000°. Principal axes: T 1.2440, Plg15.0000°, Azm187.0000°; N 0.1890, Plg58.0000°, Azm302.0000°; P -1.4430, Plg28.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 21:50:48.2±0.3**, 15°.79S**±0°.04×**71°.57W**±0°.06**, h10^{km}, n667, σ1^s.45**/660**, mb5.2**/171**, MS4.9**/27**, 10C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	IPOC Station P	3.04	157⇑	eP	Pn	21 51 38.3	+1.7
PB12				eS	Sb	21 52 20.1	+0.1
LPAZ	La Paz	3.34	99	ePn	Pb	21 51 46.9	-1.1
LPAZ	La Paz	3.34	99	eP	Pb	21 51 46.9	-1.1
LPAZ	La Paz	3.34	99	Pg	Pb	21 51 45.9	-2.1
	4.8nm,0.3s,baz=286,slow=16,SNR=76						
MNMC	Minye Minye	3.82	151	ePn	Pn	21 51 50.0	+2.6
MNMC				eSg	Sb	21 52 43.8	+1.4
PB11	IPOC Station P	4.35	156	ePn	Pn	21 51 55.7	+1.1
PB11	IPOC Station P	4.35	156	eP	Pn	21 51 56.0	+1.5
PB08	IPOC Station P	4.90	152⇑	iP	Pn	21 52 04.6	+2.2
PB08				eS	Sn	21 53 06.0	+6.7
PB01	IPOC Station P	5.58	160	ePn	Pn	21 52 11.0	-0.5
PB01				eSn	Sn	21 53 11.2	-4.6
PB01	IPOC Station P	5.58	160⇑	eP	Pn	21 52 11.7	+0.2
PB02	IPOC Station P	5.72	164⇑	iP	Pn	21 52 13.4	0.0
PB07	IPOC Station P	6.11	165⇑	iP	Pn	21 52 18.5	-0.4
PB09	IPOC Station P	6.37	160	eP	Pn	21 52 22.6	+0.3
NNA	Nana	6.37	306	ePn	Pn	21 52 23.5	+1.2
NNA	Nana	6.37	306	eP	Pn	21 52 23.5	+1.2
NNA	Nana	6.37	306	Pn	Pn	21 52 24.1	+1.9
	4.2nm,0.3s,baz=117,slow=13,SNR=12						
NNA				LR	LR	21 54 29.7	
	comp=Z,5µm,21.9s,baz=132,slow=34						
PB03	IPOC Station P	6.46	165⇑	eP	Pn	21 52 23.1	-0.5
PB03				eS	Sn	21 53 39.2	+1.8
PB04	IPOC Station P	6.64	169	ePn	Pn	21 52 24.5	-1.7
PB04				eSn	Sn	21 53 41.3	-0.8
PB04	IPOC Station P	6.64	169	eP	Pn	21 52 24.9	-1.2
PB06	IPOC Station P	7.13	165	eP	Pn	21 52 31.9	-0.9
LVC	Limon Verde	7.23	160	ePn	Pn	21 52 34.9	+0.5
LVC				eSn	Sn	21 54 00.2	+3.5
LVC	Limon Verde	7.23	160	eP	Pn	21 52 34.9	+0.5
LVC				e		21 54 00.3	
LVC	Limon Verde	7.23	160	Pn	Pn	21 52 35.4	+1.1
	22nm,0.3s,baz=350,slow=8.5,SNR=54						
LVC				Sn	Sn	21 53 59.6	+2.8
	9.1nm,0.3s,baz=154,slow=17,SNR=6.2						
LVC				LR	LR	21 55 20.7	
	comp=Z,18µm,18.1s,baz=339,slow=37						
LVC	Limon Verde	7.23	160	eP	Pn	21 52 35.2	+0.8
GO02	Mina Guanaco	9.50	169	ePn	Pn	21 53 03.6	-1.9
GO02				eSn	Sn	21 54 50.2	-2.4
SIV	San Ignacio	10.10	93	Pn	Pn	21 53 12.7	-0.8
	3.9nm,0.3s,baz=284,slow=12,SNR=56						
ATAH	Atahualpa	10.90	321	Pn	Pn	21 53 25.4	+0.7
	0.2nm,0.3s,baz=138,slow=12,SNR=2.3						
ATAH				LR	LR	21 57 47.9	
	comp=Z,16µm,19.8s,baz=171,slow=38						
GO03	Copiap	11.81	174	ePn	Pn	21 53 33.9	-3.0
GO03				eSn	Sn	21 55 59.1	+10
LCO	Las Campanas	13.18	177	ePn	Pn	21 53 52.7	-3.1
LCO	Las Campanas	13.18	177	eP	Pn	21 53 52.7	-3.1
GO04	Tololo Observa	14.33	177	ePn	Pn	21 54 10.6	-1.0
SALV	Santo Antonio	15.28	93	eP	P	21 54 28.5	-0.5
AQDB	Aquidauana	15.78	110	eP	P	21 54 33.6	-1.0
CPUP	Villa Florida	16.91	131	ePn	Pn	21 54 44.1	-1.0
	73nm,1.8s						
CPUP	Villa Florida	16.91	131	eP	Pn	21 54 44.1	-1.0
CPUP				pmax	pmax		
	comp=Z,73nm,1.8s						
CPUP	Villa Florida	16.91	131	Pn	Pn	21 54 45.4	+0.2
	comp=Z,0.1nm,0.3s,baz=316,slow=14,SNR=4.4						
CPUP	Villa Florida	16.91	131	eP	P	21 54 49.2	+2.1
ROC1	El Roble	17.11	178	ePn	Pn	21 54 47.7	-0.2
	comp=Z,88nm,1.0s						
PEL	Peldehue	17.29	178	ePn	Pn	21 54 49.1	-0.8
	comp=Z,353nm,2.0s						
PEL	Peldehue	17.29	178	eP	Pn	21 54 49.1	-0.8
PEL				pmax	pmax		
	comp=Z,353nm,2.0s						
OTAV	Otavalo	17.32	336	eP	Pn	21 54 53.2	+2.5
	comp=Z,44nm,1.2s						
OTAV	Otavalo	17.32	336	eP	Pn	21 54 53.3	+2.5
OTAV				pmax	pmax		
	comp=Z,44nm,1.2s						
OTAV	Otavalo	17.32	336	eP	Pn	21 54 44.2	-6.5
PTGA	Pitinga	18.84	39	eP	P	21 55 07.3	-1.2
	comp=Z,166nm,1.5s						
PTGA	Pitinga	18.84	39	P	P	21 55 06.5	-2.0
	comp=Z,0.5nm,0.3s,baz=222,slow=12,SNR=24						
PTGA	Pitinga	18.84	39	eP	P	21 55 07.1	-1.4
POPC	Popayan, Colom	18.90	344	eP	P	21 55 11.2	+1.8
POPC	Popayan, Colom	18.90	344	eP	P	21 55 11.2	+1.8
TRCB	Terra Rica	19.17	114	eP	Pn	21 55 15.2	+2.2
YOTC	Yotoco, Valle	20.21	346	eP	Pn	21 55 26.9	+1.4
YOTC	Yotoco, Valle	20.21	346	eP	Pn	21 55 26.9	+1.4
PTGB	Pitanga	20.32	119	eP	Pn	21 55 26.2	-0.5
CHIC	Chingaza	20.40	354	eP	P	21 55 27.6	+1.6
CHIC	Chingaza	20.40	354	eP	P	21 55 27.6	+1.6
ITRB	Iturama	20.57	104	eP	P	21 55 28.3	+0.9
ROSC	El Rosal	20.68	352	LR	LR	22 03 50.9	
	comp=Z,6µm,20.7s,baz=208,slow=38						
PLMC	San Jos del P	21.09	347	eP	P	21 55 35.0	+2.0
PLMC	San Jos del P	21.09	347	eP	P	21 55 35.0	+2.0
FRTB	Fartura	22.03	113	eP	P	21 55 46.4	+3.2
CPSB	Cacapava Do Su	22.08	134	eP	P	21 55 45.5	+1.9
PTBC	PUERTO BERRIO,	22.37	352	eP	P	21 55 46.2	-0.6
PTBC	PUERTO BERRIO,	22.37	352	eP	P	21 55 46.2	-0.6
BB19B	Bebedouro	22.47	107	eP	P	21 55 48.3	+0.4
BDFB	Brasilia	22.67	93	eP	P	21 55 49.7	-0.5
	comp=Z,39nm,1.4s						
BDFB	Brasilia	22.67	93	eP	P	21 55 49.7	-0.5
BDFB				pmax	pmax		
	comp=Z,39nm,1.4s						
BDFB	Brasilia	22.67	93	P	P	21 55 48.4	-1.7
	comp=Z,7.5nm,0.8s,baz=272,slow=10,SNR=7.6						
BDFB				LR	LR	22 05 22.6	
	comp=Z,4µm,18.5s,baz=282,slow=39						
PLTB	Pedras Altas	22.81	137	eP	P	21 55 53.4	+2.0
TIJ01	Guaruva-PR	23.12	118	eP	P	21 55 57.4	+2.6
CNLB	Canela	23.34	129	eP	P	21 55 57.9	+1.0
GO06	Curarrehue	23.70	180	eP	P	21 56 00.1	-0.4
	comp=Z,238nm,1.8s						
UREC	San Jos de Ur	23.72	350	eP	P	21 55 54.8	-5.8
UREC	San Jos de Ur	23.72	350	eP	P	21 55 54.8	-5.8
TRQA	Tornquist	23.74	161	eP	P	21 56 00.4	-0.3
	comp=Z,278nm,1.9s						
TRQA	Tornquist	23.74	161	eP	P	21 56 00.4	-0.3
TRQA				pmax	pmax		
	comp=Z,277nm,1.9s						
TRQA	Tornquist	23.74	161	eP	P	21 56 01.1	+0.5
PMNB	Patos De Minas	24.16	100	eP	P	21 56 07.7	+2.7
SDV	Santo Domingo	24.54	2	eP	P	21 56 06.6	-1.9
	comp=Z,68nm,1.0s						
SDV	Santo Domingo	24.54	2	eP	P	21 56 04.7	-3.7
SDV	Santo Domingo	24.54	2	eP	P	21 56 04.7	-3.7
SDV	Santo Domingo	24.54	2	P	P	21 56 07.1	-1.4
	comp=Z,19nm,0.8s,baz=205,slow=8.4,SNR=14						
SDV	Santo Domingo	24.54	2	eP	P	21 56 05.3	-3.2
PLCA	Paso Flores	24.87	178	eP	P	21 56 10.7	-0.4
	comp=Z,150nm,1.3s						
PLCA	Paso Flores	24.87	178	eP	P	21 56 10.7	-0.4
PLCA				pmax	pmax		
	comp=Z,150nm,1.3s						
PLCA	Paso Flores	24.87	178	P	P	21 56 11.8	+0.7
	comp=Z,78nm,1.1s,baz=21,slow=11,SNR=24						
PLCA				LR	LR	22 06 27.8	
	comp=Z,1µm,19.6s,baz=24,slow=38						
PLCA	Paso Flores	24.87	178	eP	P	21 56 12.0	+0.8
BSCB	Bom Sucesso	25.93	106	eP	P	21 56 23.3	+2.3
MCI6	Montes Claros	26.57	96	eP	P	21 56 28.6	+1.8
MCI9	Montes Claros	26.58	96	eP	P	21 56 28.9	+2.1
MCI7	Montes Claros	26.64	96	eP	P	21 56 29.7	+2.2
DUB01	Friburgo-RJ	28.28	107	eP	P	21 56 45.7	+3.5
JTS	JuntasAbangare	29.11	332	eP	P	21 56 49.9	+0.5
	comp=Z,35nm,1.4s						
JTS	JuntasAbangare	29.11	332	iP	P	21 56 49.9	+0.5
JTS				pmax	pmax		
	comp=Z,12nm,1.1s						
JTS	JuntasAbangare	29.11	332	P	P	21 56 49.6	+0.2
	comp=Z,3.4nm,0.3s,baz=91,slow=4.6,SNR=4.5						
RIB01	Linhares ES	29.91	101	eP	P	21 56 58.9	+2.4
SJG	San Juan	34.11	9	LR	LR	22 12 53.8	
	comp=Z,2µm,19.4s,baz=194,slow=39						
CBYP	Canovanas	34.31	10	eP	P	21 57 32.9	-2.2
	comp=Z,25nm,0.8s						
NBLI	Livramento-PB	34.89	80	eP	P	21 57 41.4	+1.1
USHA	Ushuaia	39.03	177	P	P	21 58 15.1	+0.1
	comp=Z,7.7nm,0.8s,baz=9.2,slow=5.1,SNR=4.5						
CMIG	Matias Romero	39.95	324	LR	LR	22 13 45.0	
	comp=Z,784nm,19.1s,baz=150,slow=34						
957A	Wimauma	44.43	346	P	P	21 59 00.6	+1.2
	baz=165						
758A	Lake Helen	45.46	348	P	P	21 59 09.4	+1.8
	baz=167						
353A	Camilla	48.42	345	P	P	21 59 31.9	+1.2
	baz=164						
351A	Pinckard	48.70	344	P	P	21 59 33.3	+0.4
	baz=162						
352A	Blakely	48.72	345	P	P	21 59 34.2	+1.1
	baz=163						
LNIG	Linares	48.74	326	eP	P	21 59 31.0	-2.3
	comp=Z,23nm,1.0s						
254A	Abbeville	48.78	347	P	P	21 59 34.7	+1.2
	baz=165						
253A	Americus	49.08	346	P	P	21 59 37.0	+1.1
	baz=164						
252A	Lumpkin	49.17	345	P	P	21 59 38.3	+1.8
	baz=163						
349A	Repton	49.22	342	P	P	21 59 37.6	+0.7
	baz=160						
NHSC	New Hope	49.31	350	P	P	21 59 37.5	0.0
	baz=169						
154A	Montrose	49.38	347	P	P	21 59 38.2	+0.1
	baz=165						
251A	Midway	49.43	344	P	P	21 59 38.5	+0.1
	baz=162,SNR=6.0						
250A	Grady	49.55	344	P	P	21 59 39.1	-0.3
	baz=161						
249A	Camden	49.78	343	P	P	21 59 41.2	+0.1
	baz=160						
152A	Waverly Hall	49.80	345	eP	P	21 59 40.6	-0.7
	comp=Z,25nm,0.9s						
152A	Waverly Hall	49.80	345	P	P	21 59 41.3	0.0
	baz=163,SNR=9.0						
151A	Opelika	49.82	345	P	P	21 59 41.4	-0.1
	baz=163						
Z54A	Sparta	49.93	348	P	P	21 59 42.4	+0.1
	baz=166						
150A	Eclectic	50.08	344	P	P	21 59 43.5	+0.1
	baz=162						
GOGA	Godfrey	50.23	347	P	P	21 59 44.4	-0.2
	baz=165						
Z52A	Williamson	50.23	346	P	P	21 59 44.0	-0.6
	baz=164						
149A	Jones	50.27	343	P	P	21 59 45.0	+0.1
	baz=161						
Y55A	Saluda	50.42	349	P	P	21 59 47.2	+1.2
	baz=167						
Y54A	Tignall	50.50	348	P	P	21 59 46.4	-0.2
	baz=166						
X59A	McDuffie Farm,	50.53	352	P	P	21 59 46.8	0.0
	baz=171						
X58A	Rowland	50.61	352	P	P	21 59 46.3	-1.1
	baz=170						
Z50A	Ashland	50.66	344	eP	P	21 59 47.4	-0.4
	comp=Z,70nm,1.6s						
Z50A	Ashland	50.66	344	P	P	21 59 46.9	-1.0
	baz=162,SNR=6.0						
Y53A	Monroe	50.68	347	P	P	21 59 47.2	-0.8
	baz=165						
LRAL	Lakeview Retre	50.74	343	eP	P	21 59 48.3	-0.1
	comp=Z,20nm,1.1s						
LRAL	Lakeview Retre	50.74	343	P	P	21 59 48.0	-0.4
	baz=161						
Z49A	Columbiana	50.77	344	P	P	21 59 48.4	-0.2
	baz=161						
147A	Livingston	50.77	342	P	P	21 59 47.4	-1.2
	baz=159						
HODGE	Hodges	50.78	349	eP	P	21 59 48.4	-0.3
HODGE				ePcP	PcP	22 01 04.2	-1.4
Y52A	Lilburn	50.80	347	P	P	21 59 48.5	-0.3
	baz=164						
X56A	White Oak	50.81	350	P	P	21 59 48.5	-0.4
	baz=168						
X55A	Gracelyn & Ava	50.89	349	P	P	21 59 49.5	0.0
	baz=167						
Y51A	Rockmart	51.06	346	P	P	21 59 50.1	-0.7
	baz=163						
X54A	Belton	51.11	349	P	P	21 59 51.0	-0.2
	baz=167						
HKT	Hockley	51.14	333	iP	P	21 59 51.8	+0.4
HKT				pmax	pmax		
	comp=Z,9.0nm,1.3s						
Y50A	Piedmont	51.22	345	P	P	21 59 51.8	-0.3
	baz=162						
145A	Houston Renfro	51.23	340	P	P	21 59 52.1	0.0
	baz=157						
PAULI	Pauline	51.27	349	eP	P	21 59 52.6	+0.2
	comp=Z,53nm,1.6s						
Y49A	Blount Mountai	51.36	344	P	P	21 59 52.5	-0.6
	baz=162						
833A	Chaparral WMA,	51.47	328	eP	P	21 59 53.6	-0.4
	comp=Z,33nm,0.9s						
833A	Chaparral WMA,	51.47	328	P	P	21 59 52.9	-1.0
	baz=145						
X52A	Dahlonega	51.47	347	P	P	21 59 53.4	-0.6
	baz=165						
KMSC	Kings Mountain	51.50	350	P	P	21 59 53.9	-0.2
	baz=168						
W54A	Cherokee Point	51.59	349	P	P	21 59 55.1	+0.3
	baz=167						
Y48A	Jasper	51.62	343	P	P	21 59 54.4	-0.6
	baz=161						
X50B	Fort Payne	51.74	345	P	P	21 59 55.1	-0.9
	baz=163						
W53A	Cullowhee	51.86	348	P	P	21 59 56.7	-0.3
	baz=166						
X49A	Woodville	51.96	345	P	P	21 59 57.3	-0.2
	baz=162						
X48A	Hartselle	52.09	344	eP	P	21 59 57.9	-0.6
	comp=Z,30nm,1.3s						
X48A	Hartselle	52.09	344	P	P	21 59 57.9	-0.6
	baz=161,SNR=5.6						
W51A	Cleveland	52.20	346	P	P	21 59 58.8	-0.5
	baz=164						
V53A	Saluda	52.28	348	eP	P	21 59 58.0	-2.0
	comp=Z,12nm,0.9s						
V53A	Saluda	52.28	348	P	P	21 59 59.4	-0.6
	baz=166						
W50A	Signal Mountai	52.36	346	P	P	22 00 00.1	-0.5
	baz=163						
X47A	Russelville	52.38	343	P	P	21 59 59.4	-1.3
	baz=160						
W49A	Belvidere	52.52	345	P	P	22 00 01.5	-0.2
	baz=162						
SWET	Sewanee	52.53	345	eP	P	22 00 00.9	-1.0
	comp=Z,65nm,2.0s						
V52A	Sevierville	52.60	348	eP	P	21 59 59.7	-2.6
	comp=Z,30nm,1.1s						
V52A	Sevierville	52.60	348	P	P	22 00 01.5	-0.8
	baz=165						
W48A	Pulaski	52.71	344	P	P	22 00 02.2	-0.9
	baz=161						
V51A	Loudon	52.72	347	P	P	22 00 03.7	+0.5
	baz=164						
V50A	Pikevile	52.77	346	P	P	22 00 04.0	+0.5
	baz=164						
PLAL	Pickwick Lake	52.87	343	eP	P	22 00 03.1	-1.2
	comp=Z,23nm,1.1s						
W47A	Westpoint	52.99	344	P	P	22 00 04.9	-0.3
	baz=161						
V49A	McMinnville	53.05	345	P	P	22 00 05.3	-0.2
	baz=163						
V48A	Smith Brothers	53.25	345	eP	P	22 00 05.8	-1.3
	comp=Z,40nm,1.4s						
V48A	Smith Brothers	53.25	345	P	P	22 00 07.1	0.0
	baz=162						
WLAR	White Oak Lake	53.32	338	eP	P	22 00 07.0	-0.6
	comp=Z,80nm,1.0s						
BLA	Blacksburg	53.38	351	eP	P	22 00 08.3	+0.3
	comp=Z,156nm,1.8s						
U50A	Jamestown	53.42	347	P	P	22 00 08.2	-0.2
	baz=164						
JCT	Junction City	53.44	329	eP	P	22 00 06.8	-1.8
	comp=Z,14nm,1.0s						
JCT	Junction City	53.44	329	eP	P	22 00 06.8	-1.8
JCT				pmax	pmax		
	comp=Z,14nm,1.0s						
JCT	Junction City	53.44	329	P	P	22 00 09.2	+0.6
	baz=146						
WHTX	Lake Whitney,	53.60	333	eP	P	22 00 08.6	-1.2
	comp=Z,28nm,1.0s						
WHTX	Lake Whitney,	53.60	333	P	P	22 00 10.1	+0.3
	baz=149						
V46A	Holladay	53.65	343	P	P	22 00 10.5	+0.5
	baz=160						
U49A	Red Boiling Sp	53.73	346	P	P	22 00 10.1	-0.5
	baz=163						
T51A	Gray	53.76	348	P	P	22 00 10.8	0.0
	baz=165						
R58B	Mineral	53.80	354	eP	P	22 00 11.7	+0.7
	comp=Z,62nm,1.6s						
R58B	Mineral	53.80	354	P	P	22 00 12.0	+1.0
	baz=172						
WVT	Waverly	53.88	344	eP	P	22 00 10.2	-1.5
	comp=Z,20nm,1.2s						
WVT	Waverly	53.88	344	eP	P	22 00 10.2	-1.5
WVT				pmax	pmax		
	comp=Z,21nm,1.2s						
WVT	Waverly	53.88	344	P	P	22 00 12.2	+0.5
	baz=160						
U48A	Cassie Pea, Po	53.91	345	P	P	22 00 12.4	+0.5
	baz=162						
S55A	Lewisburg	53.94	351	P	P	22 00 12.4	+0.2
	baz=169						
X40A	Basin Creek Fa	53.94	338	P	P	22 00 12.5	+0.3
	baz=154						
UALR	University of	54.03	339	eP	P	22 00 12.8	0.0
	comp=Z,40nm,1.1s						
U47A	Clarksville	54.03	344	P	P	22 00 12.3	-0.5
	baz=161						
W42A	Bald Knob	54.20	340	P	P	22 00 13.9	-0.1
	baz=156						
T49A	Edmonton	54.24	346	eP	P	22 00 13.3	-1.0
	comp=Z,23nm,0.9s						
T49A	Edmonton	54.24	346	P	P	22 00 13.4	-0.9
	baz=163,SNR=6.7						
MIAR	Mount Ida	54.26	338	eP	P	22 00 14.0	-0.5
	comp=Z,24nm,0.8s						
MIAR	Mount Ida	54.26	338	eP	P	22 00 14.0	-0.5
MIAR				pmax	pmax		
	comp=Z,24nm,0.8s						
MIAR	Mount Ida	54.26	338	P	P	22 00 14.0	-0.5
	baz=154,SNR=11						
W41B	Gary Mavity, V	54.35	339	eP	P	22 00 13.4	-1.8
	comp=Z,18nm,1.0s						
W41B	Gary Mavity, V	54.35	339	P	P	22 00 14.5	-0.7
	baz=155						
R55A	Marlinton	54.38	352	P	P	22 00 16.0	+0.5
	baz=170						
R54A	Victor	54.41	351	P	P	22 00 15.2	-0.4
	baz=169						
T48A	Bowling Green	54.44	345	P	P	22 00 15.3	-0.5
	baz=162						
WHAR	Wooly Hollow	54.47	339	eP	P	22 00 16.1	0.0
	comp=Z,34nm,1.2s						
T47A	Sharon Grove	54.50	345	eP	P	22 00 16.1	-0.2
	comp=Z,19nm,1.1s						
T47A	Sharon Grove	54.50	345	P	P	22 00 14.9	-1.4
	baz=162						
TXAR	Lajitas Array	54.53	325	P	P	22 00 15.4	-1.3
	comp=Z,3.3nm,0.8s,baz=140,slow=7.9,SNR=14						
TXAR				LR	LR	22 21 58.8	
	comp=Z,638nm,20.8s,baz=0.0,slow=34						
TX31	Lajitas Ar. Si	54.53	325	eP	P	22 00 16.8	+0.1
T46A	Princeton	54.76	344	P	P	22 00 16.7	-1.4
	baz=161						
S49A	Springfield	54.83	347	P	P	22 00 16.7	-1.9
	baz=164						
S48A	Wiedeman Farm,	54.88	346	P	P	22 00 17.8	-1.2
	baz=163,SNR=5.7						
W39A	Magazine	54.92	338	eP	P	22 00 18.5	-0.8
	comp=Z,33nm,1.1s						
W39A	Magazine	54.92	338	P	P	22 00 17.8	-1.4
	baz=154,SNR=8.3						
S47A	Hartford	55.02	345	P	P	22 00 18.4	-1.6
	baz=162						
U42A	Revenden	55.09	341	P	P	22 00 18.5	-2.0
	baz=157,SNR=6.9						
ABTX	Abilene, Hawle	55.13	331	eP	P	22 00 20.1	-0.9
	comp=Z,38nm,0.9s						
ABTX	Abilene, Hawle	55.13	331	P	P	22 00 19.8	-1.2
	baz=147,SNR=10						
Q54A	Coxs Mills	55.17	351	P	P	22 00 20.3	-0.8
	baz=169						
PBMO	Poplar Bluff	55.24	342	eP	P	22 00 20.3	-1.2
	comp=Z,25nm,0.9s						
R49A	Shelbyville	55.29	347	P	P	22 00 20.4	-1.5
	baz=164						
U41A	Viola	55.31	340	P	P	22 00 20.4	-1.7
	baz=156						
S46A	Don Dixon Farm	55.32	344	P	P	22 00 20.5	-1.6
	baz=161						
T43A	Greenville	55.47	342	P	P	22 00 22.0	-1.3
	baz=158						
WCI	Wyandotte Cave	55.48	346	eP	P	22 00 22.3	-1.0
	comp=Z,45nm,1.3s						
WCI	Wyandotte Cave	55.48	346	eP	P	22 00 22.3	-1.0
WCI				pmax	pmax		
	comp=Z,45nm,1.3s						
WCI	Wyandotte Cave	55.48	346	P	P	22 00 22.5	-0.8
	baz=163						
S45A	Carrier Mills	55.54	344	P	P	22 00 22.8	-0.9
	baz=160						
P55A	Reedsville	55.55	352	P	P	22 00 23.3	-0.5
	baz=170						
R48A	Northridge Ran	55.55	346	P	P	22 00 23.3	-0.5
	baz=163						
R47A	Wooly Knot Far	55.60	346	P	P	22 00 23.7	-0.5
	baz=162						
U40A	Yellville	55.63	339	P	P	22 00 23.7	-0.7
	baz=155						
T42A	Van Buren	55.67	341	eP	P	22 00 23.9	-0.8
	comp=Z,45nm,1.8s						
T42A	Van Buren	55.67	341	P	P	22 00 23.4	-1.3
	baz=157						
MCWV	Mont Chateau	55.70	352	P	P	22 00 24.1	-0.7
	baz=170						
P54A	Burton	55.73	352	P	P	22 00 24.5	-0.6
	baz=170,SNR=6.8						
S44A	Carbondale	55.74	343	P	P	22 00 24.3	-0.8

	baz=159,SNR=8.1						
P53A	**Whipple**	**55.75**	**351**	*e*P	**P**	**22 00 25.2**	**0.0**
	comp=Z,77nm,1.4s						
P53A	**Whipple**	**55.75**	**351**	P	**P**	**22 00 24.6**	**-0.6**
	baz=168,SNR=5.7						
SIUC	**Southern Illin**	**55.75**	**343**	*e*P	**P**	**22 00 23.6**	**-1.7**
	comp=Z,42nm,0.9s						
S43A	**Fulton Ridge,**	**55.86**	**342**	P	**P**	**22 00 25.2**	**-0.9**
	baz=158,SNR=6.1						
T41A	**Mountain View**	**55.90**	**341**	P	**P**	**22 00 25.6**	**-0.7**
	baz=156,SNR=6.2						
HHAR	**Hobbs**	**55.95**	**338**	*e*P	**P**	**22 00 26.4**	**-0.3**
	comp=Z,29nm,1.2s						
P52A	**Corning**	**56.01**	**350**	P	**P**	**22 00 26.7**	**-0.4**
	baz=168						
Q48A	**North Vernon**	**56.03**	**347**	P	**P**	**22 00 26.7**	**-0.5**
	baz=164						
R45A	**Skylar, Fairfi**	**56.04**	**344**	P	**P**	**22 00 26.7**	**-0.5**
	baz=160						
O56A	**Blue Knob Stat**	**56.15**	**354**	*e*P	**P**	**22 00 29.7**	**+1.6**
	comp=Z,107nm,1.8s						
O56A	**Blue Knob Stat**	**56.15**	**354**	P	**P**	**22 00 27.7**	**-0.5**
	baz=172						
O55A	**Ligonier**	**56.17**	**353**	P	**P**	**22 00 27.3**	**-1.0**
	baz=171						
Q47A	**Bedord North L**	**56.19**	**346**	P	**P**	**22 00 27.3**	**-1.1**
	baz=163						
R44A	**Waltonville**	**56.21**	**343**	P	**P**	**22 00 26.8**	**-1.7**
	baz=160,SNR=6.5						
S42A	**Caledonia**	**56.26**	**342**	P	**P**	**22 00 27.1**	**-1.8**
	baz=158						
P50A	**Jamestown**	**56.28**	**349**	P	**P**	**22 00 28.6**	**-0.5**
	baz=166						
O54A	**Avella**	**56.29**	**352**	P	**P**	**22 00 28.2**	**-0.9**
	baz=170						
TUL1	**Leonard**	**56.30**	**336**	*e*P	**P**	**22 00 30.2**	**+0.9**
	comp=Z,30nm,0.9s						
TUL1	**Leonard**	**56.30**	**336**	P	**P**	**22 00 28.8**	**-0.4**
	baz=152						
FVM	**French Village**	**56.35**	**342**	*e*P	**P**	**22 00 29.8**	**+0.2**
	comp=Z,128nm,1.8s						
FVM	**French Village**	**56.35**	**342**	*e*P	**P**	**22 00 29.8**	**+0.2**
FVM				pmax	pmax		
	comp=Z,129nm,1.8s						
S41A	**Jillco Farms,**	**56.39**	**341**	P	**P**	**22 00 28.8**	**-1.0**
	baz=156,SNR=7.1						
P49A	**Miami Univ. Ec**	**56.39**	**348**	P	**P**	**22 00 28.4**	**-1.4**
	baz=165						
O52A	**Adamsville**	**56.44**	**351**	P	**P**	**22 00 30.4**	**+0.3**
	baz=168						
SSPA	**Standing Stone**	**56.45**	**354**	*e*P	**P**	**22 00 32.3**	**+2.2**
	comp=Z,59nm,1.5s						
SSPA	**Standing Stone**	**56.45**	**354**	P	**P**	**22 00 30.6**	**+0.4**
	baz=173						
P48A	**Milroy**	**56.47**	**347**	P	**P**	**22 00 29.2**	**-1.2**
	baz=164						
O53A	**New Philadelph**	**56.47**	**351**	P	**P**	**22 00 30.3**	**-0.1**
	baz=169						
R43A	**Red Bud**	**56.48**	**343**	P	**P**	**22 00 29.8**	**-0.6**
	baz=159						
WMOK	**Wichita Mounta**	**56.52**	**333**	*e*P	**P**	**22 00 30.1**	**-0.7**
	comp=Z,9.2nm,1.1s						
WMOK	**Wichita Mounta**	**56.52**	**333**	*e*P	**P**	**22 00 30.1**	**-0.7**
WMOK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMOK	**Wichita Mounta**	**56.52**	**333**	P	**P**	**22 00 30.5**	**-0.3**
	baz=148						
O51A	**Pataskala**	**56.59**	**350**	P	**P**	**22 00 30.0**	**-1.3**
	baz=167						
CCM	**Cathedral Cave**	**56.66**	**341**	*e*P	**P**	**22 00 31.7**	**0.0**
	comp=Z,32nm,1.4s						
CCM	**Cathedral Cave**	**56.66**	**341**	*e*P	**P**	**22 00 31.7**	**0.0**
CCM				pmax	pmax		
	comp=Z,32nm,1.4s						
CCM	**Cathedral Cave**	**56.66**	**341**	P	**P**	**22 00 31.2**	**-0.5**
	baz=157						
P47A	**Martinsville**	**56.68**	**346**	P	**P**	**22 00 31.2**	**-0.6**
	baz=163						
N55A	**Marion Center**	**56.70**	**353**	P	**P**	**22 00 32.4**	**+0.4**
	baz=171,SNR=6.9						
R42A	**Luebbering**	**56.73**	**342**	P	**P**	**22 00 31.5**	**-0.7**
	baz=158						
ACSO	**Alum Creek Sta**	**56.74**	**350**	*e*P	**P**	**22 00 35.0**	**+2.7**
	comp=Z,50nm,1.4s						
ACSO	**Alum Creek Sta**	**56.74**	**350**	P	**P**	**22 00 32.1**	**-0.1**
	baz=167						
Q44A	**Meyer Farm, Va**	**56.81**	**344**	*e*P	**P**	**22 00 32.5**	**-0.3**
	comp=Z,44nm,1.3s						
Q44A	**Meyer Farm, Va**	**56.81**	**344**	P	**P**	**22 00 31.8**	**-0.9**
	baz=160						
R41A	**Rosebud**	**56.93**	**341**	P	**P**	**22 00 33.0**	**-0.6**
	baz=157,SNR=8.3						
O49A	**Covington**	**56.95**	**348**	*e*P	**P**	**22 00 33.1**	**-0.7**
	comp=Z,33nm,1.3s						
N54A	**Moraine State**	**57.00**	**352**	*e*P	**P**	**22 00 33.7**	**-0.5**
	comp=Z,97nm,1.3s						
N54A	**Moraine State**	**57.00**	**352**	P	**P**	**22 00 33.6**	**-0.5**
	baz=170,SNR=7.1						
P46A	**Rosedale**	**57.02**	**346**	P	**P**	**22 00 33.6**	**-0.6**
	baz=162						
Q43A	**New Douglas**	**57.03**	**343**	P	**P**	**22 00 34.0**	**-0.4**
	baz=159						
P45A	**Graceland, Par**	**57.07**	**345**	P	**P**	**22 00 34.8**	**+0.2**
	baz=161						
O48A	**Farmland**	**57.18**	**348**	P	**P**	**22 00 34.3**	**-1.1**
	baz=164,SNR=5.3						
P44A	**Sand Creek, Wi**	**57.23**	**344**	P	**P**	**22 00 34.9**	**-0.9**
	baz=160						
Q42A	**Golden Eagle**	**57.24**	**342**	P	**P**	**22 00 35.2**	**-0.6**
	baz=158						
MNTX	**Cornudas Mount**	**57.29**	**326**	*e*P	**P**	**22 00 34.7**	**-1.7**
	comp=Z,11nm,1.0s						
MNTX	**Cornudas Mount**	**57.29**	**326**	P	**P**	**22 00 35.0**	**-1.4**
	baz=140,SNR=12						
N50A	**Nevada**	**57.29**	**350**	P	**P**	**22 00 35.4**	**-0.8**
	baz=167						
M55A	**Ridgway**	**57.36**	**354**	P	**P**	**22 00 36.9**	**+0.3**
	baz=172						
O47A	**Sheridan**	**57.38**	**347**	P	**P**	**22 00 35.2**	**-1.5**
	baz=163						
Q41A	**Truxton**	**57.48**	**342**	P	**P**	**22 00 36.8**	**-0.7**
	baz=157,SNR=5.9						
M54A	**Oil Creek Stat**	**57.50**	**353**	*e*P	**P**	**22 00 36.9**	**-0.8**
	comp=Z,70nm,1.2s						
M54A	**Oil Creek Stat**	**57.50**	**353**	P	**P**	**22 00 37.2**	**-0.4**
	baz=171,SNR=7.3						
M53A	**WI Miller and**	**57.56**	**352**	P	**P**	**22 00 37.4**	**-0.6**
	baz=170						
N49A	**Columbus Grove**	**57.63**	**349**	*e*P	**P**	**22 00 38.0**	**-0.5**
	comp=Z,27nm,0.9s						
N49A	**Columbus Grove**	**57.63**	**349**	P	**P**	**22 00 38.1**	**-0.5**
	baz=166						
P43A	**Skaggs, Pawnee**	**57.63**	**344**	P	**P**	**22 00 37.8**	**-0.8**
	baz=159						
SFIN	**Lafayette**	**57.72**	**346**	P	**P**	**22 00 38.0**	**-1.2**
	baz=162						
MSTX	**Muleshoe**	**57.73**	**329**	*e*P	**P**	**22 00 38.8**	**-0.7**
	comp=Z,37nm,1.1s						
MSTX	**Muleshoe**	**57.73**	**329**	P	**P**	**22 00 38.2**	**-1.3**
	baz=144,SNR=9.1						
N48A	**Decatur**	**57.73**	**348**	P	**P**	**22 00 38.5**	**-0.8**
	baz=165						
O45A	**Potomac**	**57.75**	**345**	P	**P**	**22 00 38.1**	**-1.2**
	baz=162						
M52A	**Chesterland**	**57.76**	**351**	P	**P**	**22 00 39.7**	**+0.3**
	baz=169						
P42A	**Winchester**	**57.81**	**343**	*e*P	**P**	**22 00 39.5**	**-0.3**
	comp=Z,17nm,1.0s						
P42A	**Winchester**	**57.81**	**343**	P	**P**	**22 00 39.3**	**-0.6**
	baz=158						
BINY	**Binghamton**	**57.84**	**356**	*e*P	**P**	**22 00 42.1**	**+2.0**
	comp=Z,39nm,1.3s						
BINY	**Binghamton**	**57.84**	**356**	P	**P**	**22 00 40.3**	**+0.3**
	baz=175						
N47A	**Urbana**	**57.89**	**347**	P	**P**	**22 00 39.9**	**-0.5**
	baz=164						
AMTX	**Amarillo**	**57.95**	**331**	*e*P	**P**	**22 00 41.5**	**+0.4**
	comp=Z,39nm,1.8s						
AMTX	**Amarillo**	**57.95**	**331**	P	**P**	**22 00 39.9**	**-1.1**
	baz=145						
HRV	**Adam Dziewonsk**	**58.01**	**0**	P	**P**	**22 00 40.5**	**-0.7**
	baz=180						
L53A	**Girard**	**58.01**	**352**	P	**P**	**22 00 40.6**	**-0.6**
	baz=170,SNR=7.4						
L55A	**Hinsdale**	**58.03**	**354**	P	**P**	**22 00 41.4**	**0.0**
	baz=172						
P41A	**Barry, Barry**	**58.10**	**342**	P	**P**	**22 00 41.3**	**-0.6**
	baz=158						
M49A	**Liberty Center**	**58.12**	**349**	P	**P**	**22 00 41.6**	**-0.3**
	baz=166						
N46A	**Monticello**	**58.13**	**346**	P	**P**	**22 00 41.9**	**-0.1**
	baz=163						
ERPA	**Erie**	**58.14**	**353**	*e*P	**P**	**22 00 41.2**	**-0.9**
	comp=Z,92nm,1.0s						
ERPA	**Erie**	**58.14**	**353**	P	**P**	**22 00 41.3**	**-0.9**
	baz=170,SNR=7.7						
O41A	**Passleys Farm,**	**58.46**	**343**	P	**P**	**22 00 43.4**	**-0.9**
	baz=158						
K55A	**Perry**	**58.53**	**354**	P	**P**	**22 00 44.9**	**+0.1**
	baz=173						
N43A	**Stutzman Famil**	**58.76**	**344**	P	**P**	**22 00 45.2**	**-1.2**
	baz=160						
L47A	**Sherwood**	**58.84**	**348**	P	**P**	**22 00 45.5**	**-1.5**
	baz=165						
N42A	**Yates City**	**58.88**	**344**	P	**P**	**22 00 46.1**	**-1.2**
	baz=159						
MEDO	**Medina**	**59.01**	**354**	P	**P**	**22 00 48.3**	**+0.2**
	baz=172						
J55A	**Hilton**	**59.05**	**355**	P	**P**	**22 00 48.1**	**-0.2**
	baz=173						
TYNO	**Tyneside**	**59.09**	**353**	P	**P**	**22 00 48.7**	**0.0**
	baz=171						
STCO	**Saint Catharin**	**59.12**	**354**	P	**P**	**22 00 48.3**	**-0.6**
	baz=171						
M43A	**Waltham Townsh**	**59.17**	**345**	P	**P**	**22 00 48.2**	**-1.1**
	baz=160						
121A	**Cookes Peak, D**	**59.25**	**324**	P	**P**	**22 00 49.9**	**-0.4**
	baz=139,SNR=5.9						
319A	**Douglas**	**59.25**	**322**	*e*P	**P**	**22 00 51.6**	**+1.4**
	comp=Z,20nm,1.0s						
J52A	**Paris**	**59.31**	**352**	P	**P**	**22 00 49.1**	**-1.1**
	baz=170						
N40A	**Mertquake, Sal**	**59.37**	**342**	P	**P**	**22 00 49.7**	**-0.9**
	baz=158						
KSU1	**Kansas State U**	**59.42**	**338**	*e*P	**P**	**22 00 50.9**	**-0.1**
	comp=Z,14nm,0.7s						
K48A	**Perry**	**59.44**	**349**	P	**P**	**22 00 50.1**	**-1.0**
	baz=166						
K47A	**Vermontville**	**59.47**	**349**	P	**P**	**22 00 50.1**	**-1.3**
	baz=165						
K46A	**Dorr**	**59.64**	**348**	P	**P**	**22 00 50.9**	**-1.6**
	baz=164						
DRWO	**Darlington Wes**	**59.73**	**354**	P	**P**	**22 00 52.4**	**-0.7**
	baz=172						
DRCO	**St. Marys Ceme**	**59.73**	**354**	P	**P**	**22 00 53.0**	**-0.1**
	baz=172						
WLVO	**Wesleyville**	**59.75**	**354**	P	**P**	**22 00 52.8**	**-0.4**
	baz=172						
L43A	**Garden Prairie**	**59.82**	**345**	P	**P**	**22 00 52.9**	**-0.8**
	baz=161						
M40A	**Post Highland**	**59.83**	**343**	P	**P**	**22 00 53.3**	**-0.6**
	baz=158						
BNM	**Barren Site**	**59.84**	**327**	*e*P	**P**	**22 00 56.0**	**+1.6**
J48A	**Bridge Port**	**59.86**	**350**	P	**P**	**22 00 52.1**	**-1.9**
	baz=166						
I51A	**Listowel**	**59.93**	**352**	P	**P**	**22 00 53.3**	**-1.2**
	baz=169						
L41A	**Preston**	**60.17**	**344**	P	**P**	**22 00 54.9**	**-1.2**
	baz=159						
LONY	**Lake Ozonia**	**60.18**	**358**	*e*P	**P**	**22 00 58.1**	**+1.8**
	comp=Z,49nm,1.6s						
H56A	**Elgin**	**60.24**	**356**	P	**P**	**22 00 57.4**	**+0.8**
	baz=175						
BWLO	**Walkerton**	**60.26**	**352**	P	**P**	**22 00 56.7**	**-0.1**
	baz=169						
LAZ	**Ladron**	**60.31**	**326**	*e*P	**P**	**22 00 58.9**	**+1.3**
FRNY	**Flat Rock**	**60.36**	**358**	*e*P	**P**	**22 00 59.3**	**+1.8**
	comp=Z,82nm,1.9s						
ANMO	**Albuquerque**	**60.36**	**327**	*e*P	**P**	**22 00 58.7**	**+0.8**
	comp=Z,11nm,1.3s						
ANMO	**Albuquerque**	**60.36**	**327**	*ce*P	**P**	**22 00 56.4**	**-1.5**
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANMO	**Albuquerque**	**60.36**	**327**	P	**P**	**22 00 57.5**	**-0.4**
	baz=141						
ANMO	**Albuquerque**	**60.36**	**327**	P	**P**	**22 00 57.3**	**-0.6**
	comp=Z,3.9nm,1.0s,baz=154,slow=9.0,SNR=7.4						
CBKS	**Cedar Bluff**	**60.38**	**335**	*e*P	**P**	**22 00 58.4**	**+0.6**
	comp=Z,36nm,1.1s						
CBKS	**Cedar Bluff**	**60.38**	**335**	*e*P	**P**	**22 00 58.4**	**+0.6**
CBKS				pmax	pmax		
	comp=Z,36nm,1.1s						
K42A	**Prairie Point,**	**60.53**	**345**	P	**P**	**22 00 58.4**	**-0.2**
	baz=160						
SADO	**Sadowa**	**60.66**	**354**	*e*P	**P**	**22 00 57.5**	**-1.9**
	comp=Z,59nm,1.3s						
PLVO	**Plevna**	**60.75**	**356**	P	**P**	**22 01 00.6**	**+0.6**
	baz=174						
BANO	**Bancroft**	**60.80**	**355**	P	**P**	**22 01 00.4**	**0.0**
	baz=173						
TUC	**Tucson**	**60.81**	**322**	*e*P	**P**	**22 01 02.2**	**+1.3**
	comp=Z,6.8nm,1.1s						
TUC	**Tucson**	**60.81**	**322**	*e*P	**P**	**22 01 02.2**	**+1.3**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TUC	**Tucson**	**60.81**	**322**	P	**P**	**22 01 00.1**	**-0.8**
	baz=136						
K40A	**Colesburg**	**60.93**	**344**	P	**P**	**22 01 00.9**	**-0.5**
	baz=158						
G55A	**Calabogie**	**60.93**	**356**	P	**P**	**22 01 01.7**	**+0.3**
	baz=174						
G53A	**Haliburton**	**60.96**	**354**	P	**P**	**22 01 01.3**	**-0.3**
	baz=172						
J42A	**Columbus**	**60.99**	**345**	P	**P**	**22 01 02.6**	**+0.8**
	baz=161						
T25A	**Trinidad**	**61.07**	**330**	*e*P	**P**	**22 01 04.2**	**+1.5**
	comp=Z,19nm,1.0s						
T25A	**Trinidad**	**61.07**	**330**	P	**P**	**22 01 01.9**	**-0.8**
	baz=143,SNR=6.3						
J41A	**Loganville**	**61.25**	**345**	P	**P**	**22 01 03.4**	**-0.2**
	baz=160						
I43A	**Langenfeld Bro**	**61.29**	**346**	P	**P**	**22 01 04.3**	**+0.6**
	baz=162						
H46A	**Fife Lake**	**61.31**	**349**	P	**P**	**22 01 03.8**	**-0.1**
	baz=165						
BUKO	**Buck Lake**	**61.36**	**354**	P	**P**	**22 01 04.2**	**0.0**
	baz=171						
KLBO	**Killbear Provi**	**61.36**	**353**	P	**P**	**22 01 03.5**	**-0.7**
	baz=170						
PEMO	**Pembroke**	**61.39**	**355**	P	**P**	**22 01 04.6**	**+0.2**
	baz=174						
J40A	**Soldiers Grove**	**61.47**	**344**	P	**P**	**22 01 04.8**	**-0.2**
	baz=159						
J39A	**Decorah**	**61.67**	**343**	P	**P**	**22 01 06.0**	**-0.4**
	baz=158						
F52A	**Sundridge**	**61.70**	**354**	P	**P**	**22 01 06.7**	**+0.2**
	baz=172						
ALGO	**Algonquin Park**	**61.73**	**355**	P	**P**	**22 01 06.9**	**+0.2**
	baz=173						
KSCO	**Kaye Shedlock’**	**61.77**	**333**	*e*P	**P**	**22 01 08.8**	**+1.4**
	comp=Z,51nm,1.1s						
KSCO	**Kaye Shedlock’**	**61.77**	**333**	P	**P**	**22 01 07.0**	**-0.3**
	baz=146						
214A	**Organ Pipe Nat**	**61.78**	**321**	P	**P**	**22 01 07.4**	**0.0**
	baz=134						
F51A	**Arnstein**	**61.89**	**353**	P	**P**	**22 01 07.4**	**-0.3**
	baz=171						
H42A	**Shiocton**	**61.97**	**346**	P	**P**	**22 01 07.6**	**-0.8**
	baz=161						
BGNE	**Belgrade**	**62.00**	**338**	*e*P	**P**	**22 01 08.6**	**-0.1**
	comp=Z,68nm,1.0s						
BGNE	**Belgrade**	**62.00**	**338**	P	**P**	**22 01 08.6**	**-0.1**
	baz=151						
SDCO	**Great Sand Dun**	**62.08**	**330**	*e*P	**P**	**22 01 08.5**	**-1.1**
	comp=Z,23nm,1.0s						
SDCO	**Great Sand Dun**	**62.08**	**330**	P	**P**	**22 01 09.0**	**-0.6**
	baz=143,SNR=22						
I39A	**Houston**	**62.10**	**344**	*e*P	**P**	**22 01 09.2**	**-0.1**
	comp=Z,74nm,1.7s						
I39A	**Houston**	**62.10**	**344**	P	**P**	**22 01 09.0**	**-0.2**
	baz=158						
E52A	**Mattawa**	**62.12**	**354**	P	**P**	**22 01 09.5**	**+0.2**
	baz=172						
E53A	**Dumoine, Ponti**	**62.12**	**355**	P	**P**	**22 01 09.7**	**+0.3**
	baz=173						
E54A	**Lac Daplat, Po**	**62.14**	**356**	P	**P**	**22 01 10.8**	**+1.4**
	baz=174						
W18A	**Petrified Fore**	**62.25**	**325**	P	**P**	**22 01 11.2**	**+0.5**
	baz=138						
H41A	**Junction City**	**62.34**	**346**	P	**P**	**22 01 11.5**	**+0.7**
	baz=160						
E51A	**G1948 Merrick**	**62.45**	**354**	P	**P**	**22 01 12.1**	**+0.6**
	baz=171,SNR=5.3						
X16A	**Lo Mia Camp, P**	**62.70**	**323**	*e*P	**P**	**22 01 13.2**	**-0.5**
S22A	**4UR Ranch, Cre**	**62.73**	**329**	*e*P	**P**	**22 01 14.9**	**+1.0**
	comp=Z,15nm,1.3s						
S22A	**4UR Ranch, Cre**	**62.73**	**329**	P	**P**	**22 01 13.9**	**-0.1**
	baz=141,SNR=7.2						
D52A	**ZEK Kipawa Sen**	**62.78**	**355**	P	**P**	**22 01 13.9**	**+0.2**
	baz=172,SNR=5.9						
H39A	**Augusta**	**62.80**	**344**	P	**P**	**22 01 14.6**	**+0.7**
	baz=159						
D54A	**Lac Fusel, La**	**62.82**	**356**	P	**P**	**22 01 14.1**	**+0.1**
	baz=174						
D53A	**Lac Vacive, Po**	**62.82**	**355**	P	**P**	**22 01 14.3**	**+0.3**
	baz=173						
Q24A	**Divide**	**62.88**	**331**	P	**P**	**22 01 14.6**	**-0.4**
	baz=143						
113A	**Mohawk Valley,**	**62.92**	**321**	*e*P	**P**	**22 01 16.8**	**+1.8**
H38A	**Maiden Rock**	**63.07**	**344**	P	**P**	**22 01 16.2**	**+0.5**
	baz=158						
OGNE	**Ogallala**	**63.13**	**334**	*e*P	**P**	**22 01 17.6**	**+1.3**
	comp=Z,36nm,1.1s						
OGNE	**Ogallala**	**63.13**	**334**	P	**P**	**22 01 16.0**	**-0.3**
	baz=147						
MVCO	**Mesa Verde**	**63.16**	**327**	*e*P	**P**	**22 01 16.4**	**-0.3**
	comp=Z,20nm,1.2s						
MVCO	**Mesa Verde**	**63.16**	**327**	P	**P**	**22 01 15.9**	**-0.9**
	baz=140,SNR=5.4						
Y14A	**Wickenburg**	**63.27**	**322**	*e*P	**P**	**22 01 16.5**	**-0.9**
D48A	**Paudash Townsh**	**63.35**	**352**	P	**P**	**22 01 17.3**	**-0.2**
	baz=169						
WUAZ	**Wupatki**	**63.45**	**324**	*e*P	**P**	**22 01 18.7**	**0.0**
	comp=Z,22nm,1.1s						
WUAZ	**Wupatki**	**63.45**	**324**	P	**P**	**22 01 17.8**	**-0.9**
	baz=136,SNR=9.4						
ECSD	**EROS Data Cent**	**63.52**	**340**	*e*P	**P**	**22 01 19.3**	**+0.6**
	comp=Z,42nm,1.4s						
ECSD	**EROS Data Cent**	**63.52**	**340**	P	**P**	**22 01 17.9**	**-0.8**
	baz=153,SNR=12						
E42A	**Champion**	**63.66**	**347**	P	**P**	**22 01 19.5**	**-0.1**
	baz=162						
F40A	**Park Falls**	**63.67**	**346**	P	**P**	**22 01 19.0**	**-0.7**
	baz=160						
SPMN	**Marine on St.**	**63.72**	**343**	*e*P	**P**	**22 01 20.2**	**+0.2**
	comp=Z,20nm,1.0s						
SPMN	**Marine on St.**	**63.72**	**343**	P	**P**	**22 01 18.5**	**-1.5**
	baz=157						
ISCO	**Idaho Springs**	**63.76**	**331**	*e*P	**P**	**22 01 21.8**	**+1.0**
	comp=Z,14nm,1.3s						
ISCO	**Idaho Springs**	**63.76**	**331**	P	**P**	**22 01 20.2**	**-0.6**
	baz=143,SNR=6.0						
GLA	**Glamis**	**63.77**	**320**	*e*P	P	22 01 16.8	-3.9
	comp=Z,2µm,1.3s						
GLA	**Glamis**	**63.77**	**320**	*e*P	P	22 01 16.8	-3.8
GLA	**Glamis**	**63.77**	**320**	P	**P**	**22 01 19.5**	**-1.1**
	baz=133						
VLDQ	**Val d'Or**	**63.83**	**356**	*e*P	**P**	**22 01 21.6**	**+1.0**
	comp=Z,26nm,1.3s						
F39A	**Loretta**	**63.87**	**345**	P	**P**	**22 01 20.3**	**-0.7**
	baz=159						
PV01	**Paradox Valley**	**63.90**	**328**	*e*P	**P**	**22 01 21.5**	**-0.2**
	comp=Z,19nm,1.1s						
SMCO	**Snowmass**	**63.91**	**330**	*e*P	**P**	**22 01 23.2**	**+1.3**
	comp=Z,12nm,1.0s						
PV15	**Paradox Valley**	**64.01**	**328**	*e*P	**P**	**22 01 24.3**	**+1.9**
	comp=Z,27nm,1.1s						
PV02	**Paradox Valley**	**64.04**	**328**	*e*P	**P**	**22 01 24.2**	**+1.7**
	comp=Z,18nm,1.3s						
PV13	**Radium Mtn., P**	**64.05**	**328**	*e*P	**P**	**22 01 23.7**	**+1.1**
	comp=Z,21nm,1.2s						
Y12C	**Blythe**	**64.06**	**321**	*e*P	**P**	**22 01 24.6**	**+2.1**
	comp=Z,43nm,1.5s						
E40A	**Wakefield**	**64.12**	**346**	P	**P**	**22 01 22.1**	**-0.5**
	baz=160						
PV03	**Paradox Valley**	**64.13**	**328**	*e*P	**P**	**22 01 23.4**	**+0.2**
	comp=Z,16nm,1.3s						
F38A	**Pierce - Schro**	**64.15**	**344**	P	**P**	**22 01 22.6**	**-0.2**
	baz=158						
PV12	**Saucer Basin,**	**64.16**	**328**	*e*P	**P**	**22 01 25.0**	**+1.7**
	comp=Z,11nm,1.1s						
PV07	**Paradox Valley**	**64.17**	**328**	*e*P	**P**	**22 01 25.0**	**+1.6**
	comp=Z,23nm,1.5s						
PV11	**David Mesa, Pa**	**64.18**	**328**	*e*P	**P**	**22 01 24.8**	**+1.4**
	comp=Z,59nm,1.9s						
PV16	**Nyswonger Mesa**	**64.21**	**328**	*e*P	**P**	**22 01 25.0**	**+1.4**
	comp=Z,15nm,1.3s						
PV14	**Lion Creek, Pa**	**64.31**	**328**	*e*P	**P**	**22 01 25.7**	**+1.4**
	comp=Z,13nm,1.2s						
PV09	**Paradox Valley**	**64.46**	**328**	*e*P	**P**	**22 01 27.1**	**+1.6**
BC3	**Big Chuckawall**	**64.56**	**320**	P	**P**	**22 01 27.1**	**+1.2**
	baz=132						
U15A	**North Rim**	**64.63**	**324**	*e*P	**P**	**22 01 27.5**	**+1.0**
MONP2	**Monument Peak**	**64.66**	**319**	P	**P**	**22 01 27.4**	**+0.7**
	baz=131						
E38A	**The Farm, Brul**	**64.67**	**345**	P	**P**	**22 01 26.4**	**+0.2**
	baz=159						
BAR	**Barrett**	**64.68**	**319**	*e*P	**P**	**22 01 28.7**	**+2.1**
	comp=Z,17nm,1.2s						
IRM	**Iron Mountain**	**64.71**	**321**	P	**P**	**22 01 27.2**	**+0.4**
	baz=133,SNR=6.7						
LSQQ	**Lebel-sur-Quev**	**64.74**	**356**	P	**P**	**22 01 26.6**	**0.0**
	baz=174						
N23A	**Red Feather La**	**64.79**	**332**	*e*P	**P**	**22 01 29.0**	**+1.5**
	comp=Z,12nm,1.1s						
XPFO	**Pion Flat**	**65.15**	**320**	*e*P	**P**	**22 01 32.0**	**+2.2**
	comp=Z,15nm,1.3s						
PFO	**Pinyon Flats O**	**65.16**	**320**	*e*P	**P**	**22 01 32.0**	**+2.2**
	comp=Z,15nm,1.3s						
PFO	**Pinyon Flats O**	**65.16**	**320**	P	**P**	**22 01 29.6**	**-0.3**
	baz=132						
PFO	**Pinyon Flats O**	**65.16**	**320**	P	**P**	**22 01 29.9**	**+0.1**
	comp=Z,6.2nm,1.1s,baz=117,slow=7.1,SNR=5.0						
O20A	**White River Ci**	**65.27**	**330**	*e*P	**P**	**22 01 30.7**	**+0.2**
	comp=Z,27nm,1.3s						
O20A	**White River Ci**	**65.27**	**330**	P	**P**	**22 01 30.5**	**0.0**
	baz=141,SNR=8.4						
KNB	**Kanab**	**65.34**	**324**	*e*P	**P**	**22 01 30.3**	**-0.7**
	comp=Z,50nm,1.5s						
KNB	**Kanab**	**65.34**	**324**	*e*P	**P**	**22 01 30.3**	**-0.7**
KNB				pmax	pmax		
	comp=Z,50nm,1.5s						
GMRC	**Granite Mounta**	**65.45**	**321**	P	**P**	**22 01 31.6**	**-0.1**
	baz=133						
CHGQ	**Chibougamau**	**65.46**	**358**	P	**P**	**22 01 32.3**	**+1.1**
	baz=177						
MATQ	**Matagami**	**65.48**	**356**	P	**P**	**22 01 32.1**	**+0.7**
	baz=174						
LCMT	**Little Creek M**	**65.58**	**324**	*e*P	**P**	**22 01 34.6**	**+2.1**
	comp=Z,8.9nm,1.1s						
SRU	**San Rafael Swe**	**65.64**	**328**	*e*P	**P**	**22 01 34.4**	**+1.5**
	comp=Z,17nm,1.2s						
SRU	**San Rafael Swe**	**65.64**	**328**	*e*P	**P**	**22 01 34.4**	**+1.5**
SRU				pmax	pmax		
	comp=Z,17nm,1.2s						
MTPU	**Mount Pierson**	**65.73**	**326**	*e*P	**P**	**22 01 35.2**	**+1.4**
	comp=Z,18nm,1.3s						
Q16A	**Castle Valley**	**65.83**	**327**	*e*P	**P**	**22 01 36.8**	**+2.6**
	comp=Z,10.0nm,1.0s						
HEC	**Hector,Ludlow**	**65.89**	**321**	P	**P**	**22 01 35.4**	**+0.9**
	baz=132						
SZCU	**Shurtz Canyon**	**65.91**	**325**	*e*P	**P**	**22 01 37.0**	**+2.3**
	comp=Z,32nm,1.7s						
RWWY	**Rawlins**	**66.00**	**331**	*e*P	**P**	**22 01 35.8**	**+0.5**
	comp=Z,28nm,0.9s						
P17A	**Butcher Ranch,**	**66.02**	**328**	*e*P	**P**	**22 01 35.0**	**-0.4**
	comp=Z,22nm,1.3s						
CCUT	**Cedar City**	**66.03**	**325**	*e*P	**P**	**22 01 36.1**	**+0.6**
	comp=Z,17nm,1.2s						
MSU	**Marysvale**	**66.07**	**326**	*e*P	**P**	**22 01 37.4**	**+1.7**
MSU	**Marysvale**	**66.07**	**326**	*e*P	**P**	**22 01 37.4**	**+1.7**
K22A	**Casper**	**66.45**	**333**	*e*P	**P**	**22 01 39.5**	**+1.4**
	comp=Z,43nm,0.7s						
GSC	**Goldstone, Bar**	**66.49**	**321**	*e*P	**P**	**22 01 40.4**	**+2.1**
	comp=Z,40nm,1.8s						
GSC	**Goldstone, Bar**	**66.49**	**321**	P	**P**	**22 01 39.1**	**+0.7**
	baz=132						
RSSD	**Black Hills**	**66.59**	**335**	*e*P	**P**	**22 01 40.4**	**+1.4**
	comp=Z,30nm,0.6s						
RSSD	**Black Hills**	**66.59**	**335**	*e*P	**P**	**22 01 40.4**	**+1.4**
RSSD				pmax	pmax		
	comp=Z,31nm,0.6s						
MPU	**Maple Canyon**	**66.88**	**327**	*e*P	**P**	**22 01 42.7**	**+1.8**
	comp=Z,12nm,1.2s						
EDW2	**Edwards Air Fo**	**66.95**	**320**	P	**P**	**22 01 41.8**	**+0.5**
	baz=131						
PSUT	**Pine Spring**	**67.00**	**325**	*e*P	**P**	**22 01 43.6**	**+1.9**
	comp=Z,13nm,1.1s						
NLU	**North Lily Min**	**67.07**	**327**	*e*P	**P**	**22 01 44.1**	**+2.0**
	comp=Z,15nm,1.2s						
TAOE	**Nuku Hiva Isla**	**67.12**	**267**	*e*LR	LR	22 21 50.7	
	comp=Z,611nm,24.5s						
LRMC	**Laurel Mtn Rad**	**67.14**	**320**	P	**P**	**22 01 43.1**	**+0.5**
	baz=131						

JLU	Jordanelle	67.22	328	*e*P	P	22 01 44.9	+1.8
	comp=Z,21nm,1.3s						
TPNV	Topopah Spring	67.26	322	*e*P	P	22 01 45.4	+2.0
	comp=Z,28nm,1.4s						
TPNV	Topopah Spring	67.26	322	*e*P	P	22 01 45.4	+2.0
TPNV				pmax	pmax		
	comp=Z,28nm,1.4s						
TPNV	Topopah Spring	67.26	322	P	P	22 01 43.3	-0.1
	baz=133,SNR=12						
FURC	Furnace Creek,	67.30	322	P	P	22 01 43.8	+0.5
	baz=132,SNR=5.1						
AGMN	Agassiz Nation	67.38	343	*e*P	P	22 01 42.0	-1.6
	comp=Z,22nm,1.0s						
AGMN	Agassiz Nation	67.38	343	P	P	22 01 42.4	-1.2
	baz=155,SNR=6.8						
MPMC	Manual Prospec	67.41	321	P	P	22 01 44.4	+0.1
	baz=132						
TCUT	Toone Canyon	67.58	328	*e*P	P	22 01 47.0	+1.6
	comp=Z,37nm,1.3s						
DAC	Darwin (Calif)	67.62	321	*e*P	P	22 01 47.4	+1.8
	comp=Z,14nm,1.3s						
DUG	Dugway, Tooele	67.63	327	*e*P	P	22 01 45.6	0.0
	comp=Z,18nm,1.1s						
DUG	Dugway, Tooele	67.63	327	*e*P	P	22 01 45.6	0.0
DUG				pmax	pmax		
	comp=Z,18nm,1.1s						
DUG	Dugway, Tooele	67.63	327	P	P	22 01 45.4	-0.2
	baz=137,SNR=12						
ISA	Isabella, Lake	67.75	320	*e*P	P	22 01 48.6	+2.2
	comp=Z,14nm,1.4s						
ISA	Isabella, Lake	67.75	320	*e*P	P	22 01 48.6	+2.2
ISA				pmax	pmax		
	comp=Z,14nm,1.4s						
ISA	Isabella, Lake	67.75	320	P	P	22 01 46.5	+0.2
	baz=131						
R11A	Troy Canyon, C	67.84	324	*e*P	P	22 01 47.5	+0.5
	comp=Z,14nm,1.3s						
R11A	Troy Canyon, C	67.84	324	P	P	22 01 47.2	+0.2
	baz=134,SNR=9.6						
BW06	Boulder Array	67.93	331	*e*P	P	22 01 48.4	+0.9
	comp=Z,6.3nm,0.8s						
BW06	Boulder Array	67.93	331	P	P	22 01 47.0	-0.5
	baz=140,SNR=6.4						
PD31	Pinedale Array	67.93	331	*e*P	P	22 01 48.3	+0.8
PDAR	Pinedale Array	67.93	331	*e*P	P	22 01 47.8	+0.3
PDAR	Pinedale Array	67.93	331	P	P	22 01 46.8	-0.8
	comp=Z,3.0nm,1.0s,baz=152,slow=6.6,SNR=13						
PDAR				LR	LR	22 33 32.4	
	comp=Z,498nm,21.7s,baz=135,slow=38						
CWC	Cottonwood Cre	68.02	321	P	P	22 01 48.5	+0.4
	baz=131						
HWUT	Hardware Ranch	68.03	329	*e*P	P	22 01 49.4	+1.3
	comp=Z,10nm,1.2s						
MDND	Maddock	68.13	340	P	P	22 01 49.8	+1.4
	baz=151						
SPUT	South Promonto	68.25	328	*e*P	P	22 01 51.0	+1.5
	comp=Z,13nm,1.2s						
BGU	Big Grassy Mou	68.27	327	*e*P	P	22 01 50.2	+0.6
	comp=Z,12nm,1.3s						
SNAA	Sanae	68.47	162	*e*P	P	22 01 50.2	-0.1
	comp=Z,39nm,1.5s						
SNAA	Sanae	68.47	162	*e*P	P	22 01 50.2	-0.1
SNAA				pmax	pmax		
	comp=Z,39nm,1.5s						
HVU	Hansel Valley	68.77	328	*e*P	P	22 01 51.9	-0.8
	comp=Z,8.7nm,1.1s						
HVU	Hansel Valley	68.77	328	*e*P	P	22 01 51.9	-0.8
HVU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
REDW	Red Top Meadow	69.00	330	*e*P	P	22 01 54.9	+0.7
	comp=Z,36nm,1.6s						
LOHW	Long Hollow	69.07	331	*e*P	P	22 01 54.0	-0.6
	comp=Z,10.0nm,1.2s						
TPAW	Teton Pass	69.14	330	*e*P	P	22 01 55.6	+0.5
	comp=Z,19nm,1.4s						
ULM	Lac du Bonnet	69.15	344	*e*P	P	22 01 52.9	-1.8
	comp=Z,21nm,1.1s						
ULM	Lac du Bonnet	69.15	344	*e*P	P	22 01 52.9	-1.8
ULM				pmax	pmax		
	comp=Z,21nm,1.1s						
ULM	Lac du Bonnet	69.15	344	P	P	22 01 51.9	-2.8
	comp=Z,8.2nm,0.9s,baz=151,slow=5.4,SNR=11						
ULM				LR	LR	22 33 46.1	
	comp=Z,662nm,21.6s,baz=143,slow=37						
MOOW	Moose Ponds	69.24	331	*e*P	P	22 01 56.6	+0.9
	comp=Z,12nm,1.3s						
FXWY	Fox Creek	69.29	330	*e*P	P	22 01 54.8	-1.2
	comp=Z,10.0nm,1.2s						
ELK	Elko	69.31	326	*e*P	P	22 01 57.5	+1.2
	comp=Z,7.2nm,1.2s						
ELK	Elko	69.31	326	P	P	22 01 54.7	-1.6
	comp=Z,1.8nm,0.8s,baz=122,slow=4.8,SNR=6.1						
NV11	Mina Array Sit	69.38	322	*e*P	P	22 01 58.4	+1.8
	comp=Z,1.2nm,1.5s						
LIC	Lamto	69.39	77	*e*P	P	22 01 54.3	-2.7
	comp=Z,36nm,1.0s						
NV01	Mina Array Sit	69.46	322	*e*P	P	22 01 56.8	-0.4
NVAR	Mina Array Bea	69.46	322	P	P	22 01 56.0	-1.2
	comp=Z,2.6nm,0.9s,baz=144,slow=6.2,SNR=13						
NVAR				LR	LR	22 31 31.0	
	comp=Z,271nm,18.1s,baz=143,slow=35						
FLWY	Flagg Ranch	69.47	331	*e*P	P	22 01 58.7	+1.6
	comp=Z,27nm,1.1s						
TIC	Toumodi	69.54	77	*e*P	P	22 01 55.0	-2.9
LAO	LASA Array	69.58	335	*e*P	P	22 01 59.1	+1.6
	comp=Z,75nm,1.8s						
LAO	LASA Array	69.58	335	P	P	22 01 57.6	+0.1
	baz=144						
RLMT	Red Lodge	69.62	332	*e*P	P	22 01 59.4	+1.4
	comp=Z,39nm,1.5s						
RLMT	Red Lodge	69.62	332	P	P	22 01 57.1	-0.9
	baz=141,SNR=6.6						
H17A	Grant Village	69.65	331	*e*P	P	22 02 03.2	+5.0
	comp=Z,39nm,1.9s						
DBIC	Dimbokro	69.70	77	*e*P	P	22 01 56.5	-2.3
	comp=Z,9.1nm,0.8s						
DBIC	Dimbokro	69.70	77	*e*P	P	22 01 56.6	-2.3
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DBIC	Dimbokro	69.70	77	P	P	22 01 56.5	-2.3
	comp=Z,10nm,0.9s,baz=213,slow=4.7,SNR=12						
DBIC				LR	LR	22 30 01.0	
	comp=Z,668nm,21.6s,baz=228,slow=34						
KIC	Kosan Boka	69.71	77	*e*P	P	22 01 56.4	-2.5
	comp=Z,36nm,1.0s						
YFT	Old Faithful	69.82	331	*e*P	P	22 02 03.0	+3.7
	comp=Z,16nm,1.2s						
YHH	Holmes Hill	70.08	331	*e*P	P	22 02 03.3	+2.4
	comp=Z,43nm,1.7s						
DGMT	Dagmar	70.26	338	*e*P	P	22 02 03.2	+1.6
	comp=Z,140nm,1.8s						
DGMT	Dagmar	70.26	338	P	P	22 02 03.2	+1.6
	baz=147						
SCHQ	Schefferville	70.46	3	LR	LR	22 35 02.3	
	comp=Z,692nm,19.3s,baz=194,slow=38						
HLID	Hailey	70.89	328	*e*P	P	22 02 07.5	+1.7
	comp=Z,13nm,1.4s						
HLID	Hailey	70.89	328	P	P	22 02 05.3	-0.4
	baz=136,SNR=5.3						
MCMT	McKenzie Canyo	71.05	330	*e*P	P	22 02 09.0	+2.3
BOZ	Bozeman (W)	71.05	331	*e*P	P	22 02 05.4	-1.3
	comp=Z,16nm,1.4s						
BOZ	Bozeman (W)	71.05	331	*e*P	P	22 02 05.4	-1.3
BOZ				pmax	pmax		
	comp=Z,16nm,1.4s						
AFDM	Forest Hills D	71.39	321	*e*P	P	22 02 10.5	+1.8
	comp=Z,9.8nm,1.3s						
ORV	Oroville	72.09	322	*e*P	P	22 02 12.8	0.0
	comp=Z,32nm,1.4s						
ORV	Oroville	72.09	322	*e*P	P	22 02 12.8	0.0
ORV				pmax	pmax		
	comp=Z,32nm,1.4s						
EGMT	Eagleton	72.09	334	*e*P	P	22 02 14.2	+1.4
	comp=Z,31nm,1.4s						
EGMT	Eagleton	72.09	334	P	P	22 02 13.5	+0.7
	baz=141						
MOD	Modoc Plateau	72.90	324	*e*P	P	22 02 19.9	+2.0
	comp=Z,22nm,1.3s						
TBI	Tubuai	73.01	250	*e*S	S	22 11 40.9	-5.4
	comp=Z,332nm,32.2s						
TBI				*e*LQ	LQ	22 21 32.0	
	comp=Z,704nm,34.8s						
TBI				*e*LR	LR	22 24 38.7	
	comp=Z,375nm,29.3s						
MSO	Missoula	73.04	331	*e*P	P	22 02 20.7	+2.2
	comp=Z,23nm,1.4s						
MSO	Missoula	73.04	331	P	P	22 02 18.4	-0.1
	baz=137,SNR=6.6						
BMO	Blue Mountains	73.27	328	*e*P	P	22 02 21.4	+1.5
	comp=Z,6.3nm,1.0s						
BMO	Blue Mountains	73.27	328	*e*P	P	22 02 21.4	+1.5
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
M04C	Macdoel	73.70	323	P	P	22 02 24.0	+1.4
	baz=130						
F10A	Beach Ranch, E	74.01	329	*e*P	P	22 02 26.2	+2.0
	comp=Z,12nm,1.1s						
M02C	Callahan	74.05	322	P	P	22 02 24.8	+0.3
	baz=129						
PPT2	Papeete2	74.22	256	*e*S	SKiKP	22 11 55.4	+1.2
	comp=Z,203nm,26.2s						
PPT2	Papeete2	74.22	256	*e*LR	LR	22 25 11.5	
	comp=Z,240nm,22.2s						
L04D	Klamath Falls	74.25	323	P	P	22 02 25.4	-0.3
	baz=129						
J05D	Fort Rock, OR	74.32	325	P	P	22 02 26.6	+0.4
	baz=130						
QSPA	South Pole Qui	74.37	180	*e*P	P	22 02 28.4	+2.3
	comp=Z,29nm,1.5s						
PINE	Pine Mountain	74.49	325	*e*P	P	22 02 26.4	-0.8
	comp=Z,44nm,1.5s						
FFC	Flin Flon	74.85	342	*e*P	P	22 02 25.5	-3.3
	comp=Z,42nm,1.9s						
FFC	Flin Flon	74.85	342	*e*P	P	22 02 25.5	-3.3
FFC				pmax	pmax		
	comp=Z,42nm,1.9s						
NEW	Newport	75.57	330	P	P	22 02 32.1	-1.0
	comp=Z,1.8nm,1.0s,baz=138,slow=14,SNR=3.9						
C09A	Chrisman Ranch	75.80	330	*e*P	P	22 02 36.6	+2.2
	comp=Z,37nm,1.6s						
FCC	Fort Churchill	76.55	348	*e*P	P	22 02 38.6	+0.2
FCC	Fort Churchill	76.55	348	*e*P	P	22 02 38.6	+0.2
TORD	Torodi Ar. Bea	77.94	73	P	P	22 02 44.1	-3.1
	comp=Z,7.6nm,0.8s,baz=268,slow=5.5,SNR=33						
TORD				LR	LR	22 37 21.6	
	comp=Z,628nm,18.8s,baz=290,slow=36						
VNDA	Vanda	82.00	190	LR	LR	22 33 35.5	
	comp=Z,602nm,18.4s,baz=124,slow=31						
SYO	Syowa Base	82.70	160⇓	*e*P	P	22 03 08.8	-3.0
SYO	Syowa Base	82.70	160⇑	*i*PcP	P	22 03 14.4	+2.6
ESDC	Sonseca Array	83.62	46	P	P	22 03 15.4	-1.7
	comp=Z,0.9nm,0.7s,baz=250,slow=6.0,SNR=4.4						
ESDC				LR	LR	22 37 12.9	
	comp=Z,441nm,20.8s,baz=240,slow=33						
TSUM	Tsumeb	84.15	108	*e*P	P	22 03 20.5	+0.1
TAM	Tamanrasset	84.59	65	*e*P	P	22 03 23.7	+1.2
YKA	Yellowknife Ar	85.00	341	P	P	22 03 21.7	-1.8
	comp=Z,5.9nm,0.9s,baz=136,slow=4.8,SNR=31						
YKA				LR	LR	22 44 25.7	
	comp=Z,51nm,19.2s,baz=132,slow=38						
ILULI	Ilulissat	86.02	7	*e*P	P	22 03 30.3	+1.9
ILULI	Ilulissat	86.02	7	*e*P	P	22 03 30.3	+1.9
DLBC	Dease Lake	88.00	333	P	P	22 03 37.0	-1.5
	comp=Z,12nm,1.0s,baz=182,slow=1.5,SNR=8.5						
BOSA	Boshof	88.38	119	LR	LR	22 40 12.1	
	comp=Z,429nm,19.9s,baz=249,slow=34						
MAW	Mawson	90.48	164	LR	LR	22 43 43.4	
	comp=Z,484nm,20.5s,baz=222,slow=35						
SUMG	Summit	90.86	9	*e*P	P	22 03 51.3	-0.6
SUMG	Summit	90.86	9	*i* P	P	22 03 51.2	-0.7
	comp=Z,121nm,1.0s						
SUMG	Summit	90.86	9	*i* P	P	22 03 51.2	-0.7
RES	Resolute Bay	91.48	354	*e*P	P	22 03 55.4	+1.1
RES	Resolute Bay	91.48	354	*e*P	P	22 03 55.4	+1.1
RES	Resolute Bay	91.48	354	P	P	22 03 53.1	-1.2
	comp=Z,1.9nm,0.7s,baz=202,slow=8.8,SNR=5.3						
KEST	Kesra	91.92	54	LR	LR	22 46 12.2	
	comp=Z,377nm,19.7s,baz=194,slow=36						
TULEG	Thule	92.16	1	*e*P	P	22 03 59.4	+2.0
SCO	Scoresbysund	92.59	15	*i* P	P	22 04 02.1	+2.6
SCO	Scoresbysund	92.59	15	*e*P	P	22 04 02.1	+2.6
INK	Inuvik	94.75	341	*e*P	P	22 04 10.5	+1.1
INK	Inuvik	94.75	341	*e*P	P	22 04 10.5	+1.1
INK	Inuvik	94.75	341	P	P	22 04 07.5	-2.0
	comp=Z,3.2nm,0.9s,baz=256,slow=1.2,SNR=5.9						
IL1	Eielson Array	98.04	335	*e*P	P	22 04 24.0	-0.5
ILAR	Eielson Array	98.04	335	P	P	22 04 22.5	-2.0
	comp=Z,0.5nm,0.8s,baz=126,slow=1.2,SNR=4.7						
ILAR				LR	LR	22 53 15.0	
	comp=Z,358nm,19.1s,baz=131,slow=38						
COLA	College	98.46	335	*i* P	P	22 04 24.6	-1.7
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MDM	Murphy Dome	98.64	335	*e*P	P	22 04 27.9	+0.6
GERES	GERESS Array B	98.66	42	LR	LR	22 48 41.0	
	comp=Z,219nm,18.2s,baz=256,slow=35						
NOA	NORSAR Array B	100.22	29	LR	LR	22 46 20.7	
	comp=Z,577nm,21.2s,baz=255,slow=33						
BILL	Bilibino	116.32	339	*i* PKIKP	PKPdf	22 09 32.5	+1.0
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
BILL				MLR	MLR		
	comp=Z,542nm,22.0s						
SEY	Seymchan	123.89	338*c*	*i*PKIKP	PKPdf	22 09 47.0	+0.8
CTA	Charters Tower	128.49	227	PKP	PKPdf	22 09 57.0	+0.6
	comp=Z,2.7nm,0.9s,baz=200,slow=11,SNR=3.4						
GEYT	Alibeck	130.67	53	PKP	PKPdf	22 10 00.5	+0.5
	comp=Z,2.1nm,0.8s,baz=292,slow=5.6,SNR=4.1						
BRVK	Borovoye	132.27	30	*i* PKIKP	PKPdf	22 10 04.0	+1.5
ASAR	Alice Springs	133.55	213	PKP	PKPdf	22 10 04.9	-1.0
	comp=Z,2.8nm,1.1s,baz=141,slow=2.4,SNR=9.3						
WRA	Warramunga Arr	136.30	217	PKP	PKPdf	22 10 10.2	-0.9
	comp=Z,7.1nm,1.0s,baz=146,slow=1.4,SNR=23						
WRAB	Tennant Creek	136.30	217*c*	*i*PKIKP	PKPdf	22 10 11.6	+0.5
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NVS	Novosibirsk	136.43	21	*e*PKIKP	PKPdf	22 10 09.2	-1.0
NVS				pmax	pmax		
	comp=Z,13nm,1.6s						
ZALV	Zalesovo Beam	137.70	21	PKP	PKPdf	22 10 09.8	-2.8
	comp=Z,5.1nm,1.0s,baz=270,slow=1.5,SNR=13						
KURK	Kurchatov	137.72	28	PKP	PKPdf	22 10 11.1	-1.6
KURK	Kurchatov	137.72	28	PKIKP	PKPdf	22 10 11.1	-1.6
KURBB	Kurchatov Arra	137.74	28	PKP	PKPdf	22 10 11.1	-1.6
	comp=Z,2.0nm,1.0s,baz=305,slow=2.6,SNR=5.2						
BOD	Bodaibo	137.84	356	*e*PKHKP	PKPpre	22 10 03.2	
BOD				pmax	pmax		
	comp=Z,8.0nm,1.8s						
AAK	Ala-Archa	140.53	40	PKP	PKPdf	22 10 17.6	-0.7
	comp=Z,1.0nm,0.7s,baz=183,slow=19,SNR=2.8						
KLR	Kul'dur	141.61	335	PKP	PKPdf	22 10 17.6	-2.2
	comp=Z,0.3nm,0.3s,baz=0.0,slow=3.0,SNR=2.2						
MBWA	Marble Bar	141.64	197	*e*P	PKPdf	22 10 19.3	-1.5
MKAR	Makanchi Array	142.22	30	PKhKP	PKPpre	22 10 14.9	
	comp=Z,1.6nm,0.8s,baz=322,slow=1.9,SNR=11						
FITZ	Fitzroy Crossi	142.30	207	PKP	PKPdf	22 10 19.8	-2.2
	comp=Z,16nm,1.3s,baz=297,slow=2.3,SNR=2.8						
KSH	Kashi	143.11	44	PKP	PKPdf	22 10 23.0	0.0
KSH				pPKP	sPKPdf	22 10 31.8	+2.0
KSH				PP	PP	22 13 35.0	+2.2
KSH				SKS	SKSdf	22 17 23.6	-10
KSH				SKKS	SKKSac	22 20 17.3	-9.1
KSH				AMB	AMB		
	comp=Z,170nm,4.7s						
KSH				LR	LR		
	comp=Z,250nm,4.5s						
KSH				LR	LR		
	comp=Z,90nm,4.3s						
KSH				LR	LR		
	comp=Z,510nm,6.2s						
MOY	Mondy	143.72	8	*e*PKIKP	PKPab	22 10 20.9	+0.5
MOY				pmax	pmax		
	comp=Z,34nm,2.5s						
ZAK	Zakamensk	145.25	6	*e*PKP2	PKPbc	22 10 24.9	-1.1
ZAK				pmax	pmax		
	comp=Z,22nm,1.4s						
USRK	Ussuriysk Ar.	145.35	330	PKPbc	PKPbc	22 10 25.0	-1.4
	comp=Z,13nm,1.1s,baz=36,slow=3.5,SNR=12						
HIA	Hailar	145.36	347	*e*PKPbc	PKPbc	22 10 26.2	-0.1
HIA	Hailar	145.36	347	*e*PKIKP	PKPbc	22 10 26.2	-0.1
MDJ	Mudanjiang	146.15	332	PKPbc	PKPdf	22 10 28.8	+0.9
MDJ				AMB	AMB		
	comp=Z,200nm,4.5s						
MAJO	Matsushiro	146.44	314	*e*PKPab	PKPdf	22 10 30.7	+2.0
MAJO	Matsushiro	146.44	314	*e*PKP2	PKPdf	22 10 30.7	+2.0
MAJO	Matsushiro	146.44	314	*e*P	PKPdf	22 10 27.6	-1.1
MJAR	Matsushiro Arr	146.44	314	PKPbc	PKPdf	22 10 28.7	0.0
	comp=Z,25nm,1.1s,baz=84,slow=0.6,SNR=24						
WMQ	Urumqi	146.96	28	PKPbc	PKPdf	22 10 31.3	+1.8
WMQ				pPKP	pPKPbc	22 10 38.0	+1.6
WMQ				AMB	AMB		
	comp=Z,500nm,6.7s						
WMQ				LR	LR		
	comp=Z,880nm,15.9s						
WMQ				LR	LR		
	comp=Z,680nm,17.7s						
WMQ				LR	LR		
	comp=Z,570nm,18.9s						
WMQ	Urumqi	146.96	28	*e*PKPbc	PKPdf	22 10 31.2	+1.8
WMQ	Urumqi	146.96	28	*e*PKP2	PKPdf	22 10 31.2	+1.8
ULN	Ulaanbaatar	148.00	2	*e*PKPbc	PKPdf	22 10 33.4	+2.2
ULN	Ulaanbaatar	148.00	2	*e*PKP2	PKPdf	22 10 33.4	+2.2
SONM	Songino Array	148.00	3	PKPbc	PKPdf	22 10 33.7	+2.6
	comp=Z,13nm,1.0s,baz=336,slow=1.3,SNR=23						
CN2	Changchun	148.55	336	*e*PKPbc	PKPbc	22 10 36.8	+1.2
CN2				*e*PP	PP	22 14 13.8	+10
CN2				LR	LR		
	comp=Z,380nm,19.0s						
CN2				LR	LR		
	comp=Z,280nm,19.0s						
CN2				LR	LR		
	comp=Z,330nm,20.0s						
HYB	Hyderabad	151.33	83	*i* PKP	PKPbc	22 10 44.5	+1.3
KSRS	Korea Array	152.38	325	PKPbc	PKPbc	22 10 43.8	-1.1
	comp=Z,6.2nm,1.0s,baz=293,slow=2.1,SNR=12						
KSAR	Wonju Array Be	152.41	325	PKPbc	PKPbc	22 10 43.8	-1.2
KSAR	Wonju Array Be	152.41	325	PKIKP	PKPbc	22 10 43.8	-1.2
HHC	Hu-ho-hao-te	154.89	354	*e*PKP	PKPdf	22 10 38.8	-3.0
HHC				PP	PP	22 14 41.6	+1.5
HHC				LR	LR		
	comp=Z,270nm,13.5s						
HHC				LR	LR		
	comp=Z,120nm,5.1s						
HHC				LR	LR		
	comp=Z,640nm,19.9s						
GTA	Gaotai	155.29	16	*e*PKP	PKPdf	22 10 43.6	+1.2
GTA				pPKP	sPKPdf	22 10 50.1	+0.9
GTA				sPKP		22 10 53.8	
GTA				PKPab	PKPab	22 11 09.4	+2.1
GTA				LR	LR		
	comp=Z,430nm,22.2s						
GTA				LR	LR		
	comp=Z,240nm,21.6s						
GTA				LR	LR		
	comp=Z,560nm,22.8s						
LSA	Lhasa	158.93	46	PKP	PKPdf	22 10 49.8	+2.1
LSA	Lhasa	158.93	46	*e*PKPdf	PKPdf	22 10 49.9	+2.2
LSA	Lhasa	158.93	46	*e*PKIKP	PKPdf	22 10 49.9	+2.2
LZH	Lanzhou	159.38	11	*e*PKP	PKPab	22 11 19.8	-5.2
LZH				pPKP	pPKPab	22 11 27.4	-2.6
LZH				sPKP		22 11 31.8	
LZH				LR	LR		
	comp=N,340nm,14.1s						
LZH				LR	LR		
	comp=E,330nm,15.2s						
LZH				LR	LR		
	comp=Z,490nm,17.3s						
NJ2	Nanjing	161.24	331	*e*PKP	PKPdf	22 10 49.6	0.0
XAN	Xi'an	161.83	359	PKP	PKPdf	22 10 51.8	+1.5
XAN				AMB	AMB		
	comp=Z,280nm,4.3s						
CD2	Chengdu	164.36	15	PKP	PKPdf	22 10 52.0	-0.8
GYA	Guiyang	169.26	9	*e*PKP	PKPdf	22 10 55.4	-1.3
GYA				PKPab	PKPab	22 12 10.0	+1.4
GYA				PKS	PKSdf	22 14 26.6	-2.8
GYA				PP	PP	22 16 00.3	+3.5
GYA				AMB	AMB		
	comp=Z,130nm,8.0s						
KMI	Kunming	169.30	29	PKP	PKPdf	22 10 55.4	-1.5
KMI				AMB	AMB		
	comp=Z,170nm,4.2s						
CMAR	Chiang Mai Arr	170.55	72	PKP	PKPdf	22 10 58.2	+0.7
	comp=Z,0.3nm,0.3s,baz=257,slow=0.8,SNR=7.2						
CMAR				PKPab	PKPab	22 12 12.8	-1.9
	comp=Z,0.4nm,0.3s,baz=288,slow=4.6,SNR=5.1						

RSNC 22 21:51:01.5±0.3, 6°.75N×73°.14W, h137km±3km, ML2.1, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BARC	Barichara	0.16	195	*e*P	Pn	21 51 19.9	-0.6
BARC	Barichara	0.16	195	*e*P	Pn	21 51 19.9	-0.5
BARC				*i*		21 51 35.6	
	comp=Z,21nm,0.3s						
BRRC	Barranca, Sant	0.67	302	*e*P	Pn	21 51 22.0	-0.4
BRRC				*e*S	Sn	21 51 37.9	-0.4
BRRC				*i*		21 51 43.7	
	comp=N,33nm,0.1s						
BRRC	Barranca, Sant	0.67	302	*e*P	Pn	21 51 22.0	-0.4
BRRC				*e*S	Sn	21 51 37.4	-0.8
BRRC				*i*		21 51 43.6	
	comp=N,33nm,0.1s						
PAMC	Pamplona, Colo	0.73	37	*e*P	Pn	21 51 23.0	-0.4
PAMC				*e*S	Sn	21 51 39.8	-0.2
PAMC				*i*		21 51 40.8	
	comp=N,32nm,0.5s						
PAMC	Pamplona, Colo	0.73	37	*e*P	Pn	21 51 23.1	-0.4
PAMC				*e*S	Sn	21 51 39.7	-0.3
PAMC				*i*		21 51 40.7	
	comp=N,32nm,0.5s						
RUSC	La Rusia	0.85	176	*e*P	Pn	21 51 24.1	-0.3
RUSC				*e*S	Sn	21 51 41.4	-0.3
RUSC				*i*		21 51 43.4	
	comp=N,8.0nm,0.2s						
PTBC	PUERTO BERRIO,	1.32	261	*e*P	Pn	21 51 26.8	-1.4
PTBC				*e*S	Sn	21 51 47.1	-1.4
PTBC				*i*		21 51 49.8	
	comp=N,20nm,0.3s						
ZARC	Zaragoza, Cauc	1.86	294	*e*P	Pn	21 51 33.7	-0.5
ZARC				*e*S	Sn	21 51 58.4	-0.8
ZARC				*i*		21 52 00.5	
	comp=N,13nm,0.1s						
ZARC	Zaragoza, Cauc	1.86	294	*e*P	Pn	21 51 34.8	+0.6
ZARC				*e*S	Sn	21 51 58.7	-0.5
ZARC				*i*		21 52 00.4	
	comp=N,13nm,0.1s						
CHIC	Chingaza	2.18	196	*e*P	Pn	21 51 37.9	-0.6
CHIC				*e*S	Sn	21 52 05.0	-1.8
CHIC				*i*		21 52 13.9	
	comp=N,2.8nm,0.4s						

WEL 22 21:51:41.2±1.2, 31°S±8°×17°9E±1°2, h33km, ML4.9/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.39	67	P	Pn	21 52 31.4	-0.4
GLKZ				S	Sn	21 53 12.3	+1.4
MXZ	Matakaoa Point	6.89	181	P	Pn	21 53 21.1	+1.2
MXZ				S	Sn	21 54 37.8	+0.7
HAZ	Te Kaha	7.11	185	P	Pn	21 53 24.0	+1.2
HAZ				S	Sn	21 54 45.5	+3.1
WMGZ	Waiomatatini S	7.14	181	P	Pn	21 53 22.2	-1.1
WMGZ				S	Sn	21 54 45.1	+1.7
PKGZ	Pakihiroa	7.22	183	P	Pn	21 53 25.4	+0.9
PKGZ				S	Sn	21 54 46.0	+0.6
RUGZ	Raukumara Rang	7.32	185	P	Pn	21 53 25.6	-0.3
RUGZ				S	Sn	21 54 47.8	-0.1
PUZ	Puketiti	7.40	182	P	Pn	21 53 26.1	-0.8
PUZ				S	Sn	21 54 48.1	-1.6
URZ	Urewera	7.67	188	P	Pn	21 53 30.8	+0.2
URZ				S	Sn	21 54 58.6	+2.2
MWZ	Matawai	7.70	186	P	Pn	21 53 31.4	+0.4
MWZ				S	Sn	21 54 57.3	+0.2
CNGZ	Carnagh Statio	7.81	182	P	Pn	21 53 30.2	-2.4
MUGZ	Murupara	7.93	190	P	Pn	21 53 34.9	+0.7
MUGZ				S	Sn	21 55 04.8	+2.1
SNGZ	Shannon Statio	8.16	186	P	Pn	21 53 36.8	-0.5
SNGZ				S	Sn	21 55 08.3	-0.2
RAHZ	Arahi	8.32	188	P	Pn	21 53 38.4	-1.2
RAHZ				S	Sn	21 55 11.8	-0.5
KNZ	Kokohu	8.37	185	P	Pn	21 53 37.4	-2.8
KNZ				S	Sn	21 55 10.7	-2.8
BKZ	Black Stump Fm	8.65	191	P	Pn	21 53 41.2	-2.9
BKZ				S	Sn	21 55 19.3	-1.2
ARHZ	Aropaoanui	8.68	188	P	Pn	21 53 42.0	-2.4
TSZ	Takapari Road	9.61	192	P	Pn	21 53 53.0	-4.2
TSZ				S	Sn	21 55 37.9	-6.1
BFZ	Birch Farm	10.17	190	P	Pn	21 53 58.3	-6.6
BFZ				S	Sn	21 55 49.0	-8.8
MRZ	Mangatainoka R	10.26	193	P	Pn	21 53 59.1	-7.0
MRZ				S	Sn	21 55 52.8	-7.2
KIW	Kapiti Island	10.59	195	P	Pn	21 54 03.4	-7.3
KIW				S	Sn	21 56 00.2	-7.9

KRSC 22 22:03:19.9±1.7**,54°.47N**×**167°.99E,h6**^{km}±21^{km}**,ML3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**1.38**	**303**	*e*P	Pn	22 03 42.4	-3.2
BKI				*e*S	Sb	22 04 03.2	-0.6
KBTR	**Krutoberegovo**	**3.43**	**303**	*e*P	Pn	22 04 16.3	+2.6
KBTR				*e*S	Sb	22 04 59.4	-3.4
MKZ	**Mys Kozlova**	**3.65**	**274**	*e*P	Pn	22 04 20.0	+3.3
MKZ				*e*S	Sb	22 05 04.8	-4.3
SMKR	**Semkarok**	**4.27**	**302**	*e*P	Pn	22 04 28.8	+3.5
BDR	**Baidarnaya**	**4.39**	**301**	*e*P	Pn	22 04 31.8	+4.8
SRKR	**Sorokina**	**4.45**	**302**	*e*P	Pn	22 04 32.4	+4.6
TUMD	**Tumrok D**	**4.45**	**283**	*e*P	Pn	22 04 32.2	+4.4
TUMD				*e*S	Sn	22 05 25.6	+5.8
KZV	**Kizimen**	**4.50**	**281**	*e*P	Pn	22 04 33.2	+4.6
TUMR	**Tumrok**	**4.60**	**283**	*e*P	Pn	22 04 34.1	+4.1
SPN	**Mys Shipunski**	**4.92**	**257**	*e*P	Pn	22 04 38.2	+4.0
SPN				*e*S	Sn	22 05 35.4	+4.1
SMAR	**Somma**	**5.57**	**261**	*e*P	Pn	22 04 46.1	+2.8
UGLR	**Uglovaya**	**5.57**	**261**	*e*P	Pn	22 04 48.2	+5.0
AVH	**Avacha**	**5.61**	**261**	*e*P	Pn	22 04 47.3	+3.6
KRX	**Arik**	**5.63**	**262**	*e*P	Pn	22 04 49.1	+5.0
KOK	**Koryaka**	**5.66**	**262**	*e*P	Pn	22 04 49.2	+4.8
GNL	**Ganaly**	**5.96**	**267**	*e*P	Pn	22 04 54.2	+5.6
KRMR	**Karymshinskiy**	**6.09**	**258**	*e*P	Pn	22 04 54.5	+4.3
KRMR				*e*S	Sn	22 06 04.1	+4.0
KDTR	**Khodutka, Kamc**	**6.53**	**250**	*e*P	Pn	22 05 01.2	+4.9

ISCJB ***22*** *22:19:50.0±0.7,36°.2S±0°.1×100°.0W±0°.1,h14^{km},mb4.3/19, MS4.0/5,Error ellipse: s-maj=18.7km s-min=10.5km az=36.5*

IDC ***22*** *22:19:50.2±1.2,36°.05S×99°.96W,h0^{km},mb4.2/10, mb1 4.5/10,mb1mx4.3/31,mbtmp4.2/10,MS4.0/6, Ms1 4.0/6,ms1mx3.7/22,Error ellipse: s-maj=35.5km s-min=22.1km az=19.0*

NEIC ***22*** *22:19:51.5±0.8,36°.19S×99°.89W,h10^{km},mb4.6/12,Error ellipse: s-maj=19.0km s-min=10.7km az=215.0*

GCMT ***22*** *22:19:52.5±0.4,36°.19S±0°.02×99°.83W±0°.03,h13^{km}±2^{km}, MW4.9/75,Moment Tensor Solution. s11,c12; s75,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.13±.13; $M_{\theta\theta}$-0.79±.11; $M_{\phi\phi}$0.92±.13; $M_{r\theta}$0.87±.39; $M_{\theta\phi}$-2.44±.14; $M_{\phi r}$-0.36±.33; Best double couple: $M_0$2.74600×10^{16} NP1:ϕ_s100.00000°,δ88.00000°,λ161.00000°. NP2: ϕ_s190.00000°,δ71.00000°,λ2.00000°. Principal axes: T 2.8660, Plg15.0000°, Azm53.0000°; N -0.2380, Plg71.0000°, Azm273.0000°; P -2.6270, Plg12.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 22:19:51.9±0.8**,36°.2S**±0°.1×**100°.0W**±0°.1**,h14**^{km}**,n32, σ1§13**/28**,mb4.3**/19**,MS4.1**/5**,1C,Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**12.03**	**316**	*e*Pn	**Pn**	**22 22 42.5**	**-0.4**
RPN	**Rapa Nui**	**12.03**	**316**	LR	LR	22 25 59.2	
	comp=Z,932nm,18.7s,baz=125,slow=31						
GO06	**Curarrehue**	**22.71**	**107**	*e*P	**P**	**22 24 52.6**	**-0.7**
	10nm,0.9s						
PLCA	**Paso Flores**	**23.43**	**110**	*e*P	**P**	**22 25 00.9**	**+0.3**
	22nm,1.4s						
PLCA	**Paso Flores**	**23.43**	**110**	P	**P**	**22 25 00.9**	**+0.3**
	3.7nm,0.9s,baz=300,slow=9.0,SNR=6.4						
PLCA				LR	LR	22 30 59.7	
	comp=Z,166nm,18.1s,baz=326,slow=28						
GO09	**Cerro Castillo**	**24.84**	**136**	*e*P	**P**	**22 25 12.9**	**-0.7**
	83nm,1.5s						
GO04	**Tololo Observa**	**25.07**	**85**	*e*P	**P**	**22 25 16.5**	**+0.3**
	59nm,1.4s						
LCO	**Las Campanas**	**25.60**	**82**	*e*P	**P**	**22 25 21.9**	**+0.9**
	14nm,1.0s						
PB10	**IPOC Station P**	**28.33**	**72**	*e*P	**P**	**22 25 42.1**	**-3.2**
	39nm,1.2s						
LVC	**Limon Verde**	**30.09**	**72**	*e*P	**P**	**22 26 00.8**	**-0.6**
	14nm,1.2s						
LVC	**Limon Verde**	**30.09**	**72**	P	**P**	**22 26 02.2**	**+0.7**
	4.1nm,0.7s,baz=207,slow=6.1,SNR=3.4						
LVC				LR	LR	22 35 07.1	
	comp=Z,229nm,18.1s,baz=336,slow=30						
TRQA	**Tornquist**	**30.21**	**105**	*e*P	**P**	**22 26 01.3**	**-0.7**
	2.4nm,0.9s						
MNMC	**Minye Minye**	**31.62**	**66**	*e*P	**P**	**22 26 14.1**	**-0.7**
	16nm,1.0s						
NNA	**Nana**	**31.84**	**47**	LR	LR	22 35 20.4	
	comp=Z,432nm,18.5s,baz=289,slow=29						
LPAZ	**La Paz**	**34.51**	**63**	*e*P	**P**	**22 26 40.2**	**-0.2**
	10nm,1.0s						
LPAZ	**La Paz**	**34.51**	**63**	P	**P**	**22 26 40.8**	**+0.3**
	6.0nm,0.9s,baz=213,slow=5.6,SNR=10						
ATAH	**Atahualpa**	**34.98**	**40**	P	**P**	**22 26 44.5**	**+0.2**
	7.0nm,0.9s,baz=191,slow=6.2,SNR=4.0						
CPUP	**Villa Florida**	**37.49**	**87**	P	**P**	**22 27 05.1**	**-0.1**
	1.8nm,0.4s,baz=287,slow=6.1,SNR=3.2						
SIV	**San Ignacio**	**39.94**	**70**	P	**P**	**22 27 25.1**	**-0.8**
	3.8nm,0.6s,baz=245,slow=5.9,SNR=13						
BDFB	**Brasilia**	**50.36**	**80**	P	**P**	**22 28 50.4**	**+1.6**
	1.6nm,0.4s,baz=88,slow=22,SNR=3.2						
BDFB				LR	LR	22 48 22.4	
	comp=Z,229nm,18.4s,baz=269,slow=34						
QSPA	**South Pole Qui**	**54.05**	**180**	*e*P	**P**	**22 29 15.2**	**-0.5**
	2.0nm,0.9s						
TXAR	**Lajitas Array**	**65.24**	**356**	P	**P**	**22 30 31.5**	**-1.5**
	0.4nm,0.5s,baz=170,slow=8.4,SNR=4.0						
SYO	**Syowa Base**	**70.97**	**166⇑**	*e*P	P	22 31 02.4	-6.0
NV01	**Mina Array Sit**	**76.13**	**345**	*e*P	**P**	**22 31 39.9**	**+0.5**
NVAR	**Mina Array Bea**	**76.13**	**345**	P	**P**	**22 31 39.6**	**+0.3**
	1.6nm,0.8s,baz=172,slow=7.3,SNR=8.3						
PD31	**Pinedale Array**	**79.04**	**353**	*e*P	**P**	**22 31 57.9**	**+2.4**
PDAR	**Pinedale Array**	**79.04**	**353**	*e*P	**P**	**22 31 55.6**	**+0.1**
PDAR	**Pinedale Array**	**79.04**	**353**	P	**P**	**22 31 56.1**	**+0.6**
	1.0nm,0.7s,baz=161,slow=5.7,SNR=7.1						
DZM	**Mont Dzumac**	**80.07**	**250**	LR	LR	22 59 51.2	
	comp=Z,90nm,18.9s,baz=200,slow=30						
HLID	**Hailey**	**80.43**	**349**	*e*P	**P**	**22 32 05.0**	**+2.1**
	3.0nm,1.0s						
KBZ	**Khabaz**	**150.73**	**64**	PKPbc	**PKPbc**	**22 39 43.5**	**+0.2**
	3.7nm,0.9s,baz=274,slow=3.2,SNR=9.6						
CMAR	**Chiang Mai Arr**	**155.72**	**228**	PKPab	**PKPab**	**22 40 13.2**	**+1.0**
	0.5nm,0.3s,baz=185,slow=3.4,SNR=5.1						

IDC ***22*** *22:22:02.6±0.4,11°.05S×165°.81E,h0^{km},mb4.6/22, mb1 4.8/24,mb1mx4.7/31,mbtmp4.7/24,ML4.9/2,MS4.5/12, Ms1 4.5/12,ms1mx4.2/26,Error ellipse: s-maj=15.7km s-min=12.7km az=91.0*

ISCJB ***22*** *22:22:03.0±0.1,11°.12S±0°.03×165°.73E±0°.03,h10^{km}, mb5.0/134,MS4.6/17,Error ellipse: s-maj=4.1km s-min=3.7km az=38.9*

BJI ***22*** *22:22:04.3,11°.09S×165°.67E,h14^{km},mB5.4/29,mb4.7/44, Ms5.1/17,Ms7 4.9/19*

NEIC ***22*** *22:22:06.6±2.6,11°.07S×165°.70E,h22^{km}±18^{km},mb5.2/96, Error ellipse: s-maj=6.3km s-min=5.2km az=202.0*

MOS ***22*** *22:22:07.1±1.3,10°.92S×165°.54E,h33^{km},mb5.1/38, MS4.6/6,Error ellipse: s-maj=9.4km s-min=8.9km az=27.6*

ISC 22 22:22:04.6±0.3**,11°.08S**±0°.06×**165°.80E**±0°.06**,h10**^{km}**,n317, σ1§40**/318**,mb5.1**/134**,MS4.6**/17**,7C-1D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.99**	**285**	*e*P	**Pn**	**22 23 35.0**	**+1.6**
HNR				*e*S	**Sn**	**22 24 45.0**	**+2.9**
HNR	**Honiara**	**5.99**	**285**	*e*Pn	**Pn**	**22 23 33.2**	**-0.2**
HNR				Sn	**Sn**	**22 24 42.6**	**+0.5**
HNR	**Honiara**	**5.99**	**285**	Pn	**Pn**	**22 23 34.1**	**+0.7**
	51nm,0.3s,baz=174,slow=3.4,SNR=58						
HNR				Sn	**Sn**	**22 24 42.6**	**+0.5**
	13nm,0.3s,baz=255,slow=20,SNR=2.4						
HNR				LR	LR	22 26 10.3	
	comp=Z,7μm,19.6s,baz=138,slow=41						
MARNC	**Mare, Loyalty**	**10.56**	**169**	*e*Pn	**Pn**	**22 24 37.0**	**+1.0**
DZM	**Mont Dzumac**	**10.95**	**177**	*e*Pn	**Pn**	**22 24 42.2**	**+0.7**
	129nm,0.6s						
DZM				*e*LR	LR	22 27 15.6	
	comp=Z,3μm,23.0s						
DZM	**Mont Dzumac**	**10.95**	**177**	*e*Pn	**Pn**	**22 24 42.0**	**+0.6**
DZM	**Mont Dzumac**	**10.95**	**177**	Pn	**Pn**	**22 24 42.2**	**+0.7**
	5.4nm,0.3s,baz=134,slow=23,SNR=42						
DZM				LR	LR	22 28 49.3	
	comp=Z,2μm,18.9s,baz=28,slow=37						
PINNC	**Pines Island,**	**11.57**	**172**	*e*Pn	**Pn**	**22 24 50.8**	**+0.9**
MSVF	**Nonsavu**	**13.58**	**121**	*i* P	**P**	**22 25 30.0**	**+3.4**
EIDS	**Eidsvold**	**19.90**	**222**	P	**Pn**	**22 26 37.9**	**-0.2**
	baz=20,SNR=9.7						
EIDS	**Eidsvold**	**19.90**	**222**	*e*P	**P**	**22 26 36.4**	**-0.1**
	76nm,0.9s						
MANU	**Manus Island**	**20.38**	**295**	*e*P	**P**	**22 26 41.8**	**0.0**
	482nm,1.3s						
CTA	**Charters Tower**	**20.83**	**242**	P	**P**	**22 26 47.7**	**+1.1**
	baz=21						
CTA	**Charters Tower**	**20.83**	**242**	P	**P**	**22 26 46.6**	**0.0**
	73nm,1.0s,baz=70,slow=13,SNR=54						
CTA				LR	LR	22 34 18.8	
	comp=Z,2μm,18.1s,baz=66,slow=35						
CTAO	**Charters Tower**	**20.83**	**242**	*e*P	**P**	**22 26 46.4**	**-0.2**
	143nm,1.1s						
CTAO	**Charters Tower**	**20.83**	**242**	*e*P	**P**	**22 26 46.4**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,143nm,1.1s						
MTSU	**Mount Surprise**	**21.93**	**249**	P	**P**	**22 26 59.3**	**+0.9**
	baz=22,SNR=44						
RMQ	**Roma**	**22.21**	**224**	P	**P**	**22 27 02.2**	**+0.8**
	baz=22,SNR=18						
COEN	**Coen**	**22.27**	**260**	P	**P**	**22 27 02.6**	**+0.5**
	baz=22,SNR=27						
COEN	**Coen**	**22.27**	**260**	*e*P	**P**	**22 27 02.6**	**+0.5**
	comp=Z,143nm,1.1s						
ARMA	**Armidale**	**23.32**	**212**	P	**P**	**22 27 13.6**	**+0.5**
	baz=24,SNR=4.3						
ARMA	**Armidale**	**23.32**	**212**	*e*P	**P**	**22 27 07.6**	**-5.5**
	comp=Z,252nm,1.6s						
JAY	**Jayapura**	**26.31**	**287**	P	**P**	**22 27 39.4**	**-1.5**
	comp=Z,41nm,1.0s,baz=324,slow=3.7,SNR=4.0						
JAY				LR	LR	22 39 24.4	
	comp=Z,651nm,18.1s,baz=145,slow=40						
QIS	**Mount Isa**	**26.87**	**246**	P	**P**	**22 27 45.6**	**-0.2**
	baz=27,SNR=23						
CNB	**Canberra Magne**	**28.38**	**209**	P	**P**	**22 27 59.6**	**+0.4**
	baz=28,SNR=5.3						
HIZ	**Hauiti**	**28.49**	**165**	P	**P**	**22 28 03.0**	**+2.9**
RUGZ	**Raukumara Rang**	**28.81**	**160**	P	**P**	**22 28 02.5**	**-0.6**
PKGZ	**Pakihiroa**	**28.88**	**160**	P	**P**	**22 28 03.2**	**-0.4**
URZ	**Urewera**	**28.89**	**161**	*e*P	**P**	**22 28 07.5**	**+3.8**
	comp=Z,30nm,0.8s						
URZ	**Urewera**	**28.89**	**161**	P	**P**	**22 28 03.9**	**+0.2**
	comp=Z,21nm,0.8s,baz=252,slow=2.6,SNR=5.6						
WMGZ	**Waiomatatini S**	**28.93**	**159**	P	**P**	**22 28 04.1**	**+0.1**
MWZ	**Matawai**	**29.10**	**161**	P	**P**	**22 28 05.4**	**-0.2**
PUZ	**Puketiti**	**29.10**	**160**	P	**P**	**22 28 04.7**	**-0.9**
MTHZ	**Maungataniwha**	**29.36**	**162**	P	**P**	**22 28 08.6**	**+0.7**
SNGZ	**Shannon Statio**	**29.45**	**161**	P	**P**	**22 28 08.4**	**-0.2**
RAHZ	**Arahi**	**29.49**	**162**	P	**P**	**22 28 09.2**	**+0.2**
BKZ	**Black Stump Fm**	**29.55**	**163**	*e*P	**P**	**22 28 09.6**	**+0.1**
	comp=Z,26nm,0.8s						
BKZ	**Black Stump Fm**	**29.55**	**163**	P	**P**	**22 28 09.3**	**-0.2**
NMHZ	**Naumai**	**29.57**	**162**	P	**P**	**22 28 10.1**	**+0.3**
STKA	**Stephens Creek**	**30.45**	**223**	P	**P**	**22 28 17.9**	**+0.3**
	baz=31,SNR=42						
STKA				P	**P**	**22 28 18.3**	**+0.7**
	baz=31						
STKA	**Stephens Creek**	**30.45**	**223**	*e*P	**P**	**22 28 17.9**	**+0.3**
	comp=Z,7.7nm,0.8s						
STKA	**Stephens Creek**	**30.45**	**223**	P	**P**	**22 28 17.6**	**0.0**
	comp=Z,30nm,0.8s,baz=33,slow=9.2,SNR=60						
STKA				LR	LR	22 40 06.6	
	comp=Z,1μm,19.3s,baz=49,slow=36						
THZ	**Tophouse**	**31.19**	**170**	*e*P	**P**	**22 28 24.7**	**+0.7**
	comp=Z,71nm,1.2s						
WRAB	**Tennant Creek**	**31.51**	**250**	*e*P	**P**	**22 28 26.2**	**-0.9**
	comp=Z,77nm,0.9s						
WRAB	**Tennant Creek**	**31.51**	**250**	*ce*P	**P**	**22 28 25.6**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,152nm,1.7s						
WB2	**Warramunga Arr**	**31.51**	**250**	*e*P	**P**	**22 28 25.3**	**-1.8**
WB2				*e*P	**P**	**22 28 26.2**	**-0.9**
WRA	**Warramunga Arr**	**31.52**	**250**	P	**P**	**22 28 26.1**	**-1.1**
WRA						22 31 19.5	
WRA				pmax	pmax		
	comp=Z,57nm,0.8s						
WRA				MLR	MLR		
	comp=Z,1μm,18.2s						
WRA	**Warramunga Arr**	**31.52**	**250**	P	**P**	**22 28 26.1**	**-1.1**
	comp=Z,58nm,0.8s,baz=82,slow=9.1,SNR=178						
WRA				PcP	**PcP**	**22 31 19.5**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=78,slow=3.3,SNR=5.6						
WRA				LR	LR	22 41 05.5	
	comp=Z,1μm,18.1s,baz=80,slow=36						
KHZ	**Kahutara**	**31.94**	**169**	*e*P	**P**	**22 28 31.2**	**+0.6**
	comp=Z,24nm,0.8s						
LTZ	**Lake Taylor**	**32.08**	**171**	*e*P	**P**	**22 28 32.1**	**+0.3**
	comp=Z,53nm,0.8s						
FOZ	**Fox Glacier**	**32.52**	**175**	*e*P	**P**	**22 28 36.9**	**+1.3**
	comp=Z,52nm,0.8s						
OXZ	**Oxford**	**32.58**	**172**	*e*P	**P**	**22 28 36.1**	**-0.1**
	comp=Z,66nm,0.9s						
KDU	**Kakadu**	**32.64**	**264**	P	**P**	**22 28 35.5**	**-1.5**
	baz=33,SNR=10						
AS01	**Alice Springs**	**32.78**	**243**	*e*P	**P**	**22 28 36.4**	**-1.8**
AS01				*e*PcP	**PcP**	**22 31 22.9**	**-0.6**
AS31	**Alice Springs**	**32.82**	**243**	*e*P	**P**	**22 28 37.4**	**-1.2**
	comp=Z,3.8nm,0.8s						
ASAR	**Alice Springs**	**32.82**	**243**	P	**P**	**22 28 37.1**	**-1.5**
	comp=Z,14nm,0.8s,baz=74,slow=9.5,SNR=115						
ASAR				PcP	**PcP**	**22 31 23.2**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=75,slow=3.0,SNR=7.3						
ASAR				ScP	**ScP**	**22 35 08.2**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=60,slow=3.7,SNR=4.5						
ASAR				LR	LR	22 41 17.0	
	comp=Z,1μm,18.2s,baz=78,slow=35						
ASPA	**Alice Springs**	**32.83**	**243**	P	**P**	**22 28 37.4**	**-1.3**
	baz=33						
RPZ	**Rata Peaks**	**32.83**	**173**	*e*P	**P**	**22 28 38.2**	**-0.2**
	comp=Z,62nm,0.8s						
RPZ	**Rata Peaks**	**32.83**	**173**	P	**P**	**22 28 38.1**	**-0.2**
	comp=Z,18nm,0.6s,baz=272,slow=4.2,SNR=17						
CRLZ	**Canterbury Las**	**32.91**	**171**	*e*P	**P**	**22 28 41.2**	**+2.2**
	comp=Z,80nm,1.1s						
MQZ	**McQueen's Vall**	**33.04**	**171**	*e*P	**P**	**22 28 40.0**	**-0.2**
	comp=Z,57nm,0.9s						
HTT	**Hallett**	**33.19**	**224**	P	**P**	**22 28 41.6**	**-0.1**
	baz=33,SNR=14						
LBZ	**Lake Benmore**	**33.40**	**174**	*e*P	**P**	**22 28 44.6**	**+1.3**
	comp=Z,21nm,0.8s						
ARPS	**Mount Arapiles**	**33.48**	**216**	P	**P**	**22 28 44.5**	**+0.4**
	baz=34,SNR=7.8						
DCZ	**Deep Cove**	**34.28**	**178**	*e*P	**P**	**22 28 51.1**	**+0.2**
	comp=Z,41nm,1.0s						
BBOO	**Buckleboo**	**34.84**	**227**	P	**P**	**22 28 55.6**	**-0.4**
	baz=35,SNR=15						
BBOO	**Buckleboo**	**34.84**	**227**	*e*P	**P**	**22 28 55.6**	**-0.4**
	comp=Z,62nm,1.0s						
KNRA	**Kununurra**	**36.29**	**259**	P	**P**	**22 29 07.9**	**-0.8**
	baz=36,SNR=5.5						
WRKA	**Warakurna**	**38.12**	**243**	P	**P**	**22 29 23.0**	**-1.1**
	baz=38,SNR=12						
FITZ	**Fitzroy Crossi**	**39.42**	**255**	P	**P**	**22 29 34.8**	**-0.3**
	baz=40,SNR=12						
FITZ	**Fitzroy Crossi**	**39.42**	**255**	*e*P	**P**	**22 29 34.9**	**-0.3**
FORT	**Forrest**	**40.06**	**235**	*e*P	**P**	**22 29 40.2**	**-0.2**
	comp=Z,62nm,1.0s						
SANI	**Sanana**	**40.51**	**280**	P	**P**	**22 29 43.8**	**-0.4**
	comp=Z,17nm,1.0s						
KMSI	**Cibinong**	**43.15**	**283**	P	**P**	**22 30 05.3**	**-0.5**
PPT	**Papeete**	**43.63**	**104**	P	**P**	**22 30 08.0**	**-1.8**
PPT				pmax	pmax		
	comp=Z,47nm,0.8s						
PPT	**Papeete**	**43.63**	**104**	P	**P**	**22 30 08.0**	**-1.8**
	comp=Z,47nm,0.8s,baz=26,slow=11,SNR=3.7						
PPT2	**Papeete2**	**43.64**	**104**	*e*LR	LR	22 42 31.9	
	comp=Z,870nm,21.8s,baz=282						
LUWI	**Luwuk**	**43.87**	**280**	*e*P	**P**	**22 30 11.2**	**-0.5**
	comp=Z,75nm,1.1s						
LUWI	**Luwuk**	**43.87**	**280**	P	**P**	**22 30 11.0**	**-0.7**
	comp=Z,78nm,1.2s,comp=Z,2μm						
TBI	**Tubuai**	**44.27**	**112**	*e*LR	LR	22 42 39.9	
	comp=Z,1μm,27.8s						
APSI	**Ampana**	**44.99**	**280**	P	**P**	**22 30 21.4**	**+0.8**
	comp=Z,38nm,1.0s						
MBWA	**Marble Bar**	**45.23**	**251**	*e*P	**P**	**22 30 22.4**	**-0.1**
	comp=Z,243nm,1.0s						
BNSI	**Bone**	**45.72**	**275**	P	**P**	**22 30 24.4**	**-2.0**
	comp=Z,55nm,1.3s						
TTSI	**Tana Toraja**	**46.27**	**276**	P	**P**	**22 30 34.5**	**+3.7**
PCI	**Palu**	**46.75**	**279**	P	**P**	**22 30 34.3**	**-0.2**
	comp=Z,92nm,1.5s,comp=Z,1μm						
PCI				pP	PcP	22 31 24.4	-44
	comp=Z,92nm,1.5s,comp=Z,1μm						
MEEK	**Meekatharra**	**46.98**	**244**	P	**P**	**22 30 36.3**	**+0.1**
	baz=47,SNR=15						
MPSI	**Mapaga**	**47.00**	**281**	P	**P**	**22 30 35.6**	**-0.9**
	comp=Z,20nm,1.3s						
PLAI	**Plampang**	**47.32**	**268**	P	P	22 30 33.0	-6.0
	comp=Z,42nm,1.0s						
KLBR	**Kellerberrin**	**48.73**	**238**	P	**P**	**22 30 49.0**	**-0.7**
	baz=49,SNR=5.5						
MORW	**Morawa**	**49.65**	**241**	P	**P**	**22 30 56.7**	**-0.1**
	baz=50,SNR=4.2						
MORW	**Morawa**	**49.65**	**241**	*e*P	**P**	**22 30 56.9**	**+0.1**
	comp=Z,64nm,1.1s						
MUN	**Mundaring**	**50.10**	**238**	P	**P**	**22 31 00.2**	**0.0**
	baz=50,SNR=5.3						
KKM	**Kota Kinabalu**	**52.20**	**287**	*e*P	**P**	**22 31 16.0**	**-0.3**
	comp=Z,44nm,1.0s						
TAOE	**Nuku Hiva Isla**	**53.23**	**93**	*e*LR	LR	22 46 43.9	
	comp=Z,535nm,24.5s						
MJAR	**Matsushiro Arr**	**54.03**	**333**	P	**P**	**22 31 27.4**	**-1.9**
	comp=Z,2.4nm,0.7s,baz=169,slow=8.1,SNR=6.2						
MAJO	**Matsushiro**	**54.03**	**333**	*i* P	**P**	**22 31 26.3**	**-3.0**
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSM	**Kuching**	**56.56**	**279**	*e*P	**P**	**22 31 47.9**	**-0.1**
	comp=Z,39nm,1.2s						
KSRS	**Korea Array**	**59.94**	**326**	P	**P**	**22 32 09.7**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=142,slow=6.2,SNR=4.0						
KSAR	**Wonju Array Be**	**59.95**	**326**	P	**P**	**22 32 09.7**	**-1.5**
KSAR	**Wonju Array Be**	**59.95**	**326**	P	**P**	**22 32 09.7**	**-1.5**
YSS	**Yuzh-Sakhalins**	**61.34**	**342⇓**	*e*P	P	22 32 29.3	+8.8
YSS				*e*		22 32 36.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
YSS				MLR	MLR		
	comp=N,200nm,12.0s						
NJ2	**Nanjing**	**62.08**	**315**	*e*P	**P**	**22 32 26.0**	**+0.2**
NJ2				pmax	pmax		
	comp=N,10.0nm,0.6s						
QIZ	**Qiongzhong**	**62.74**	**298**	P	**P**	**22 32 32.0**	**+1.5**
QIZ				S	**S**	**22 41 00.6**	**+0.8**
USRK	**Ussuriysk Ar.**	**63.01**	**333**	P	**P**	**22 32 31.2**	**-0.5**
	comp=N,4.2nm,1.0s,baz=106,slow=8.9,SNR=4.2						
PETK	**Petropavlovsk-**	**64.31**	**355**	P	**P**	**22 32 41.4**	**+1.2**
	comp=N,2.7nm,0.9s,baz=170,slow=8.8,SNR=3.3						
MDJ	**Mudanjiang**	**64.41**	**332**	P	**P**	**22 32 43.6**	**+2.6**
MDJ				pmax	pmax		
	comp=N,10.0nm,1.2s						
CN2	**Changchun**	**65.80**	**329**	*e*P	P	22 32 59.8	+10
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IPM	**Ipoh**	**66.28**	**280**	*e*P	**P**	**22 32 54.0**	**+0.2**
	comp=Z,86nm,1.2s						
CASY	**Casey**	**66.36**	**201**	*e*P	**P**	**22 32 53.0**	**-0.4**
	comp=Z,74nm,1.4s						
VNDA	**Vanda**	**66.46**	**181**	P	**P**	**22 32 55.0**	**+1.2**
	comp=Z,5.0nm,1.0s,baz=45,slow=1.4,SNR=3.4						
KULM	**Kulim**	**66.84**	**281**	*e*P	**P**	**22 32 57.5**	**+0.1**
	comp=Z,40nm,1.3s						
KLR	**Kul'dur**	**67.11**	**337**	*i* P	**P**	**22 32 56.2**	**-2.1**
SKNT	**Sakolnakorn**	**67.16**	**294**	P	**P**	**22 33 01.0**	**+1.7**
	comp=Z,17nm,1.4s						
NKL	**Nikolayevsk**	**67.49**	**344**	*e*P	**P**	**22 33 01.4**	**+0.8**
NKL				*e*		22 33 10.0	
PSI	**Prapat**	**67.93**	**278**	*e*P	**P**	**22 33 02.9**	**-1.5**
	comp=Z,39nm,1.2s						
PSI	**Prapat**	**67.93**	**278**	*e*P	**P**	**22 33 02.9**	**-1.5**
PSI				pmax	pmax		
	comp=Z,39nm,1.2s						
ENH	**Enshi**	**67.96**	**309**	*e*P	**P**	**22 33 03.9**	**-0.3**
	comp=Z,9.5nm,0.8s						
GYA	**Guiyang**	**68.48**	**304**	P	**P**	**22 33 09.0**	**+1.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
PBKT	**Sadao Pong**	**69.74**	**292**	*e*P	**P**	**22 33 16.4**	**+1.0**
PBKT	**Sadao Pong**	**69.74**	**292**	P	**P**	**22 33 16.4**	**+1.0**
XAN	**Xi'an**	**70.19**	**312**	P	**P**	**22 33 17.3**	**-0.6**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,270nm,4.3s						
XAN	**Xi'an**	**70.19**	**312**	*e*P	**P**	**22 33 17.5**	**-0.4**
	comp=Z,55nm,1.3s						
XAN	**Xi'an**	**70.19**	**312**	*e*P	**P**	**22 33 17.5**	**-0.4**
XAN				pmax	pmax		
	comp=Z,55nm,1.3s						
UTTA	**Uttaradit**	**70.50**	**293**	P	P	22 33 31.5	+11
NANT	**Nan**	**70.71**	**294**	P	**P**	**22 33 22.1**	**+0.7**
KMI	**Kunming**	**71.19**	**301**	P	**P**	**22 33 25.8**	**+1.4**
KMI				pP	pwP	22 33 31.5	+1.8
KMI				sP	sP	22 33 34.4	+6.4
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
KMI				pmax	pmax		
	comp=Z,78nm,3.9s						
KMI				LR	LR		
	comp=Z,220nm,7.7s						
KMI				LR	LR		
	comp=Z,260nm,9.5s						
KMI				LR	LR		
	comp=Z,260nm,15.6s						
LAMP	**Lampang**	**71.58**	**294**	P	**P**	**22 33 29.0**	**+2.4**
HHC	**Hu-ho-hao-te**	**71.89**	**320**	*e*P	**P**	**22 33 30.1**	**+1.9**
HHC				PP	**PP**	**22 36 11.8**	**+3.7**
HHC				S	**S**	**22 42 49.9**	**+0.5**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.5s						
HHC				LR	LR		
	comp=Z,180nm,5.7s						
HHC				LR	LR		
	comp=Z,160nm,4.4s						
HHC				LR	LR		
	comp=Z,610nm,19.9s						
CM01	**Chiang Mai Arr**	**72.15**	**294**	*e*P	**P**	**22 33 29.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**72.18**	**294**	P	**P**	**22 33 31.2**	**+0.9**
	comp=Z,6.6nm,0.8s,baz=118,slow=4.4,SNR=35						
CMMT	**Chiang Mai**	**72.28**	**294**	P	**P**	**22 33 31.5**	**+0.6**
CHTO	**Chiang Mai**	**72.29**	**294**	*e*P	**P**	**22 33 31.2**	**+0.3**
	comp=Z,25nm,1.4s						
CHTO	**Chiang Mai**	**72.29**	**294**	*e*P	**P**	**22 33 31.2**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,25nm,1.4s						
CHTO	**Chiang Mai**	**72.29**	**294**	P	**P**	**22 33 31.5**	**+0.6**
	comp=Z,61nm,1.9s						
ZEA	**Zeya**	**72.40**	**337**	*e*P	P	22 33 41.0	+10
ZEA				pmax	pmax		
	comp=Z,48nm,1.8s						
HIA	**Hailar**	**72.43**	**330**	*i* P	**P**	**22 33 28.7**	**-2.5**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CD2	**Chengdu**	**72.67**	**307**	P	**P**	**22 33 33.1**	**+0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
SEY	**Seymchan**	**74.52**	**354**	*ce*P	**P**	**22 33 40.9**	**-2.2**
LZH	**Lanzhou**	**74.82**	**312**	*e*P	**P**	**22 33 47.0**	**+1.3**
LZH				pP	pwP	22 33 52.3	+1.3
LZH				sP	PcP	22 33 55.5	-4.2
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,84nm,4.3s						
LZH				LR	LR		
	comp=Z,410nm,13.6s						
LZH				LR	LR		
	comp=Z,480nm,15.7s						
LZH				LR	LR		
	comp=Z,520nm,16.3s						
GAMB	**Gambell**	**76.60**	**10**	*e*P	**P**	**22 33 55.0**	**0.0**
	comp=Z,19nm,0.8s						
ULN	**Ulaanbaatar**	**78.36**	**324**	*e*P	**P**	**22 34 06.0**	**+0.5**
	comp=Z,4.5nm,0.7s						
ULN	**Ulaanbaatar**	**78.36**	**324**	*ce*P	**P**	**22 34 03.3**	**-2.2**
ULN				pmax	pmax		
	comp=Z,13nm,2.5s						
ANM	**Nome**	**78.52**	**12**	*e*P	**P**	**22 34 06.0**	**+0.3**
	comp=Z,9.7nm,1.0s						
ANM	**Nome**	**78.52**	**12**	*e*P	**P**	**22 34 06.0**	**+0.3**
ANM				pmax	pmax		
	comp=Z,10.0nm,1.0s						

SONM	Songino Array	78.73	324	P	P	22 34 06.9	-0.6
	comp=Z,2.1nm,1.1s,baz=152,slow=5.8,SNR=6.7						
SONA1	Songino Array	78.73	324	eP	P	22 34 07.1	-0.3
BILL	Bilibino	78.92	0	eP	P	22 34 06.9	-1.0
	comp=Z,30nm,0.9s						
BILL	Bilibino	78.92	0	iP	P	22 34 06.2	-1.7
BILL				i		22 34 16.4	
BILL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
QSPA	South Pole Qui	78.92	180	eP	P	22 34 09.1	+0.8
	comp=Z,24nm,0.9s						
QSPA	South Pole Qui	78.92	180	P	P	22 34 07.7	-0.6
	comp=Z,9.6nm,0.9s,baz=341,slow=1.4,SNR=18						
GTA	Gaotai	79.12	314	⇑P	P	22 34 10.6	+0.8
GTA				pP	pwP	22 34 15.9	+0.8
GTA				sP	PcP	22 34 19.3	+1.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,50nm,5.7s						
GTA				LR	LR		
	comp=Z,180nm,18.7s						
GTA				LR	LR		
	comp=Z,230nm,19.0s						
GTA				LR	LR		
	comp=Z,320nm,18.7s						
SHL	Shillong	80.58	298	eP	P	22 34 18.1	0.0
	comp=Z,41nm,1.8s						
SHL	Shillong	80.58	298	eP	P	22 34 18.1	0.0
SHL				pmax	pmax		
	comp=Z,41nm,1.8s						
SHL	Shillong	80.58	298	eP	P	22 34 21.5	+3.4
CAST	Castle Rocks	80.97	18	eP	P	22 34 19.3	+0.2
	comp=Z,12nm,0.7s						
DIV	Divide	81.42	22	eP	P	22 34 22.5	+0.9
	comp=Z,28nm,0.9s						
ZAK	Zakamensk	81.76	325	eP	P	22 34 22.3	-1.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RND	Reindeer	81.95	19	eP	P	22 34 25.3	+0.9
	comp=Z,12nm,1.0s						
RND	Reindeer	81.95	19	eP	P	22 34 25.3	+0.9
RND				pmax	pmax		
	comp=Z,12nm,1.0s						
RDOG	Red Dog Mine	82.05	11	eP	P	22 34 25.4	+0.7
	comp=Z,17nm,0.8s						
MCK	McKinley	82.16	19	eP	P	22 34 25.9	+0.5
	comp=Z,24nm,1.2s						
MCK	McKinley	82.16	19	eP	P	22 34 25.9	+0.5
MCK				pmax	pmax		
	comp=Z,24nm,1.2s						
TLY	Talaya	82.18	326	eP	P	22 34 29.7	+3.9
	comp=Z,7.3nm,1.0s						
TLY	Talaya	82.18	326	eP	P	22 34 25.7	-0.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,754nm,19.0s						
LSA	Lhasa	82.42	302	eP	P	22 34 27.5	-0.6
	comp=Z,12nm,1.4s						
LSA	Lhasa	82.42	302	eP	P	22 34 27.5	-0.6
LSA				pmax	pmax		
	comp=Z,12nm,1.4s						
IM3	Indian Mountai	82.45	16	eP	P	22 34 26.5	-0.3
HARP	HAARP	82.50	21	eP	P	22 34 29.6	+2.4
	comp=Z,40nm,1.0s						
MLY	Manley	82.56	17	eP	P	22 34 28.3	+0.8
	comp=Z,14nm,1.4s						
BALM	Baldy	82.63	23	eP	P	22 34 30.9	+2.9
	comp=Z,16nm,0.9s						
BALM	Baldy	82.63	23	eP	P	22 34 30.9	+2.9
BALM				pmax	pmax		
	comp=Z,16nm,0.9s						
KMRM	Mail Ridge	82.64	47	eP	P	22 34 29.0	+0.5
	comp=Z,31nm,0.9s						
WRH	Wood River Hil	82.95	18	eP	P	22 34 28.5	-1.0
	comp=Z,12nm,0.8s						
MDM	Murphy Dome	83.25	18	eP	P	22 34 30.0	-1.0
	comp=Z,12nm,0.8s						
HDA	Harding Lake	83.26	19	eP	P	22 34 30.3	-0.8
	comp=Z,28nm,0.7s						
HDA	Harding Lake	83.26	19	P	P	22 34 30.5	-0.6
	baz=227						
O02D	Mt. Diablo Mer	83.28	47	P	P	22 34 32.2	+0.3
	baz=250						
TCOL	CIGO, UAF Yank	83.30	18	P	P	22 34 30.7	-0.5
	baz=226						
COLA	College	83.31	18	eP	P	22 34 33.0	+1.7
	comp=Z,19nm,0.7s						
COLA	College	83.31	18	iP	P	22 34 29.7	-1.6
COLA				pmax	pmax		
	comp=Z,12nm,0.8s						
MENT	Mentasta	83.35	21	eP	P	22 34 31.2	-0.4
	comp=Z,13nm,0.7s						
L02E	Cave Junction	83.41	45	P	P	22 34 33.0	+0.6
	baz=249						
RIDG	Independ’e Rid	83.49	20	eP	P	22 34 33.0	+0.6
	comp=Z,18nm,0.9s						
IL1	Eielson Array	83.53	18	eP	P	22 34 31.0	-1.5
ILAR	Eielson Array	83.53	18	P	P	22 34 31.5	-1.0
	comp=Z,6.0nm,0.7s,baz=227,slow=5.0,SNR=31						
ILB	Eielson Array	83.53	18	eP	P	22 34 31.4	-1.0
POKR	Poker Plat Res	83.60	18	P	P	22 34 30.9	-2.0
	baz=226						
M02C	Callahan	83.66	46	P	P	22 34 33.9	+0.1
	baz=249						
DOT	Dot Lake	83.69	20	eP	P	22 34 33.4	0.0
	comp=Z,21nm,1.0s						
SCRK	Sand Creek	83.93	20	eP	P	22 34 34.4	-0.3
	comp=Z,16nm,1.0s						
ORV	Oroville	84.00	48	eP	P	22 34 35.8	+0.3
	comp=Z,9.0nm,0.9s						
ORV	Oroville	84.00	48	eP	P	22 34 35.8	+0.3
ORV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AFDM	Forest Hills D	84.19	49	eP	P	22 34 36.0	-0.4
	comp=Z,20nm,1.0s						
CMB	Columbia Colle	84.33	50	eP	P	22 34 36.6	-0.6
	comp=Z,8.4nm,0.8s						
CMB	Columbia Colle	84.33	50	eP	P	22 34 36.6	-0.6
CMB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAW	Mawson	84.71	202	LR	LR	23 08 39.7	
	comp=Z,196nm,18.2s,baz=146,slow=33						
MWC	Mount Wilson	84.96	54	eP	P	22 34 40.1	-0.6
	comp=Z,9.3nm,0.8s						
MWC	Mount Wilson	84.96	54	eP	P	22 34 40.1	-0.6
MWC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ISA	Isabella, Lake	85.05	52	eP	P	22 34 40.9	-0.1
	comp=Z,9.6nm,0.9s						
ISA	Isabella, Lake	85.05	52	eP	P	22 34 40.9	-0.1
ISA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ISA	Isabella, Lake	85.05	52	P	P	22 34 40.5	-0.5
	baz=253						
KNGR	Kungurtug, Tuv	85.17	324	iP	P	22 34 40.1	-1.2
MDPB	Devils Postpil	85.18	50	eP	P	22 34 42.0	+0.2
	comp=Z,16nm,0.9s						
EDW2	Edwards Air Fo	85.20	53	P	P	22 34 41.7	0.0
	baz=253						
EGAK	Eagle	85.39	20	eP	P	22 34 42.0	+0.1
	comp=Z,23nm,0.8s						
J05D	Fort Rock, OR	85.44	44	P	P	22 34 42.5	-0.3
	baz=250						
TOLK	Toolik Lake Re	85.51	15	P	P	22 34 43.3	+0.8
	baz=224						
DAWY	Dawson	85.57	21	eP	P	22 34 42.8	-0.1
	comp=Z,8.4nm,0.8s						
CWC	Cottonwood Cre	85.59	52	P	P	22 34 43.2	-0.6
	baz=253						
LRMC	Laurel Mtn Rad	85.62	53	P	P	22 34 43.4	-0.5
	baz=253						
MOD	Modoc Plateau	85.63	46	eP	P	22 34 45.8	+2.0
	comp=Z,12nm,0.8s						
DAC	Darwin (Calif)	85.92	52	eP	P	22 34 48.0	+2.5
	comp=Z,4.1nm,0.8s						
DAC	Darwin (Calif)	85.92	52	eP	P	22 34 48.0	+2.5
DAC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MPMC	Manual Prospec	85.93	52	P	P	22 34 45.3	-0.2
	baz=253						
NVAR	Mina Array Bea	86.01	50	P	P	22 34 45.2	-0.6
	comp=Z,5.3nm,0.9s,baz=229,slow=8.0,SNR=12						
NVAR				LR	LR	23 06 11.6	
	comp=Z,540nm,19.9s,baz=245,slow=31						
NV01	Mina Array Sit	86.01	50	eP	P	22 34 44.7	-1.2
NV11	Mina Array Sit	86.12	50	eP	P	22 34 45.7	-0.6
	comp=Z,0.9nm,1.0s						
GSC	Goldstone, Bar	86.25	53	P	P	22 34 46.8	-0.2
	baz=254						
GRAC	Grapevine Rang	86.30	51	P	P	22 34 46.9	-0.2
	baz=253						
HEC	Hector,Ludlow	86.49	54	P	P	22 34 47.6	-0.5
	baz=254						
BELC	Belle Mtn. Jos	86.53	55	P	P	22 34 47.9	-0.6
	baz=254						
FURC	Furnace Creek,	86.53	52	P	P	22 34 48.2	0.0
	baz=254						
PALK	Pallekele	86.61	278	iP	P	22 34 47.9	-1.2
BC3	Big Chuckawall	86.88	55	P	P	22 34 50.1	0.0
	baz=255						
I07A	Izee	86.89	44	eP	P	22 34 52.2	+2.3
	comp=Z,12nm,1.0s						
TUQ	Turquoise Moun	86.98	53	P	P	22 34 50.3	-0.3
	baz=254						
GMRC	Granite Mounta	87.02	54	P	P	22 34 50.3	-0.5
	baz=254						
TPNV	Topopah Spring	87.14	52	P	P	22 34 50.7	-0.7
	baz=254						
IRM	Iron Mountain	87.26	55	P	P	22 34 51.8	0.0
	baz=255						
J08A	Circle Bar Ran	87.37	45	eP	P	22 34 51.3	-1.0
	comp=Z,15nm,1.1s						
LDFC	Landfair	87.53	54	eP	P	22 34 53.0	-0.2
	comp=Z,21nm,0.9s						
Y12C	Blythe	87.65	55	P	P	22 34 53.9	+0.2
	baz=255						
R11A	Troy Canyon, C	88.03	50	eP	P	22 34 55.5	-0.2
	comp=Z,5.2nm,1.1s						
R11A	Troy Canyon, C	88.03	50	P	P	22 34 55.4	-0.3
	baz=254						
ELK	Elko	88.93	48	eP	P	22 34 59.8	-0.2
	comp=Z,16nm,1.8s						
ELK	Elko	88.93	48	eP	P	22 34 59.8	-0.2
ELK				pmax	pmax		
	comp=Z,16nm,1.8s						
WMQ	Urumqi	89.16	315	eP	P	22 35 02.0	+1.3
WMQ				pP	pwP	22 35 06.5	+0.5
WMQ				sP	sP	22 35 11.3	+7.0
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,310nm,4.9s						
WMQ				LR	LR		
	comp=Z,540nm,20.9s						
WMQ				LR	LR		
	comp=Z,480nm,27.7s						
WMQ				LR	LR		
	comp=Z,560nm,20.9s						
PSUT	Pine Spring	89.39	51	eP	P	22 35 02.1	0.0
	comp=Z,7.4nm,0.9s						
LCMT	Little Creek M	89.48	52	eP	P	22 35 02.6	+0.2
	comp=Z,9.3nm,0.9s						
CCUT	Cedar City	89.52	52	eP	P	22 35 03.2	+0.5
	comp=Z,13nm,1.0s						
SZCU	Shurtz Canyon	89.75	52	eP	P	22 35 06.4	+2.6
	comp=Z,11nm,0.9s						
KNB	Kanab	89.81	52	eP	P	22 35 04.4	+0.3
	comp=Z,14nm,1.0s						
INK	Inuvik	89.92	19	P	P	22 35 04.1	+0.5
	comp=Z,0.6nm,0.7s,baz=135,slow=5.7,SNR=2.0						
HLID	Hailey	90.27	46	eP	P	22 35 06.2	+0.1
	comp=Z,7.2nm,0.8s						
HLID	Hailey	90.27	46	P	P	22 35 06.0	0.0
	baz=255						
TUC	Tucson	90.36	57	eP	P	22 35 08.9	+2.3
	comp=Z,5.3nm,0.9s						
TUC	Tucson	90.36	57	P	P	22 35 06.8	+0.2
	baz=257						
MTPU	Mount Pierson	90.55	51	eP	P	22 35 08.2	+0.5
	comp=Z,13nm,0.9s						
DUG	Dugway, Tooele	90.58	49	eP	P	22 35 09.6	+2.0
	comp=Z,4.8nm,0.9s						
DUG	Dugway, Tooele	90.58	49	P	P	22 35 07.3	-0.3
	baz=256						
BGU	Big Grassy Mou	90.60	48	eP	P	22 35 07.2	-0.4
	comp=Z,6.9nm,0.9s						
WUAZ	Wupatki	90.60	54	eP	P	22 35 10.4	+2.6
	comp=Z,9.3nm,0.9s						
WUAZ	Wupatki	90.60	54	P	P	22 35 07.4	-0.4
	baz=257						
MSU	Marysvale	90.66	51	eP	P	22 35 08.5	+0.4
MSU	Marysvale	90.66	51	eP	P	22 35 08.5	+0.4
DGZ	Jazzator, Alta	90.96	321	iP	P	22 35 05.9	-3.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HVU	Hansel Valley	90.99	48	eP	P	22 35 09.6	+0.2
	comp=Z,18nm,0.9s						
HVU	Hansel Valley	90.99	48	eP	P	22 35 09.6	+0.2
HVU				pmax	pmax		
	comp=Z,18nm,0.9s						
SPUT	South Promonto	91.12	48	eP	P	22 35 11.3	+1.2
	comp=Z,6.0nm,0.8s						
CTU	Camp Tracy	91.49	49	eP	P	22 35 14.6	+2.8
	comp=Z,7.0nm,0.7s						
JLU	Jordanelle	91.69	49	eP	P	22 35 15.1	+2.3
	comp=Z,6.3nm,0.9s						
SYO	Syowa Base	91.76	197	⇑eP	P	22 35 10.5	-1.8
SYO	Syowa Base	91.76	197	⇑ePcP	PcP	22 35 14.0	+0.9
SYO	Syowa Base	91.76	197	⇑esP	sP	22 35 19.8	+4.4
TCUT	Toone Canyon	91.84	49	eP	P	22 35 14.0	+0.5
	comp=Z,11nm,0.8s						
FXWY	Fox Creek	92.67	46	eP	P	22 35 17.1	-0.2
	comp=Z,4.8nm,0.8s						
HRY	Holter Researc	92.80	43	eP	P	22 35 18.4	+0.7
MOOW	Moose Ponds	92.90	46	eP	P	22 35 21.9	+3.6
	comp=Z,4.6nm,1.1s						
PV14	Lion Creek, Pa	93.05	52	eP	P	22 35 18.5	-0.7
	comp=Z,14nm,0.7s						
PD31	Pinedale Array	93.54	47	eP	P	22 35 24.0	+2.7
PDAR	Pinedale Array	93.54	47	eP	P	22 35 20.9	-0.4
PDAR	Pinedale Array	93.54	47	P	P	22 35 20.7	-0.6
	comp=Z,1.2nm,0.9s,baz=249,slow=4.1,SNR=5.3						
PDAR				LR	LR	23 10 19.5	
	comp=Z,113nm,20.3s,baz=286,slow=31						
MK01	Makanchi Array	93.57	317	eP	P	22 35 20.2	-0.8
MK31	Makanchi Array	93.58	317	eP	P	22 35 20.7	-0.4
MKAR	Makanchi Array	93.58	317	eP	P	22 35 20.7	-0.4
	comp=Z,20nm,0.9s						
MKAR				PKKPbc	PKKPdf	22 52 24.8	-2.6
MKAR	Makanchi Array	93.58	317	P	P	22 35 20.2	-1.0
	comp=Z,1.4nm,0.7s,baz=98,slow=6.1,SNR=20						
MKAR				PKKPbc	PKKPdf	22 52 24.8	-2.6
	comp=Z,1.1nm,0.6s,baz=282,slow=2.8,SNR=16						
ZALV	Zalesovo Beam	93.62	324	P	P	22 35 19.6	-1.4
	comp=Z,0.7nm,0.6s,baz=117,slow=5.5,SNR=3.3						
MAKZ	Makanchi	93.80	317	eP	P	22 35 21.6	-0.5
	comp=Z,11nm,1.4s						
MAKZ	Makanchi	93.80	317	eP	P	22 35 21.6	-0.5
MAKZ				pmax	pmax		
	comp=Z,11nm,1.4s						
S22A	4UR Ranch, Cre	94.63	53	eP	P	22 35 28.9	+2.3
	comp=Z,5.2nm,1.2s						
NVS	Novosibirsk	94.72	325	eP	P	22 35 35.5	+9.4
NVS				pmax	pmax		
	comp=Z,12nm,2.1s						
YKA	Yellowknife Ar	94.98	27	P	P	22 35 25.0	-2.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,25nm,19.9s						
YKA	Yellowknife Ar	94.98	27	P	P	22 35 25.0	-2.1
	comp=Z,1.0nm,0.7s,baz=255,slow=4.7,SNR=12						
YKA				LR	LR	23 11 44.0	
	comp=Z,25nm,19.9s,baz=242,slow=31						
YKB5	Yellowknife Ar	94.98	27	eP	P	22 35 24.7	-2.4
TXAR	Lajitas Array	95.80	61	LR	LR	23 11 03.1	
	comp=Z,424nm,20.5s,baz=0.0,slow=31						
KSH	Kashi	96.82	309	P	P	22 35 37.4	+1.2
KSH				pP	pwP	22 35 44.3	+2.8
KSH				pmax	pmax		
	comp=Z,150nm,5.2s						
ARCES	ARCESS Array B	116.38	345	PKP	PKPdf	22 40 46.5	-1.6
	comp=Z,3.5nm,0.8s,baz=64,slow=2.8,SNR=3.9						
FINES	FINESS Array B	121.83	339	PKP	PKPdf	22 40 58.4	-0.3
	comp=Z,3.1nm,1.0s,baz=2.7,slow=5.8,SNR=3.6						
BOSA	Boshof	125.12	223	PKP	PKPdf	22 41 04.8	-1.5
	comp=Z,2.5nm,0.7s,baz=124,slow=3.5,SNR=10						
NB2	NORSAR Subarra	126.75	345	PKPdf	PKPdf	22 41 06.8	-1.5
	comp=Z,3.6nm,0.8s,baz=32,slow=1.9						
NB2	NORSAR Subarra	126.75	345	PKPdf	PKPdf	22 41 06.8	-1.5
	baz=32,slow=1.9						
NOA	NORSAR Array B	126.75	345	PKP	PKPdf	22 41 08.3	+0.1
	comp=Z,0.6nm,0.8s,baz=30,slow=1.9,SNR=5.1						
AKASG	Malin Array Be	126.92	327	PKP	PKPdf	22 41 08.9	+0.1
	comp=Z,0.4nm,0.4s,baz=105,slow=2.2,SNR=4.4						
VYHS	Vyhne	133.63	330	ePKIKP	PKiKP	22 41 22.6	-0.3
VYHS	Vyhne	133.63	330	ePKP	PKiKP	22 41 22.6	-0.3
BRG	Berggiesshubel	134.12	335	ePKP	PKiKP	22 41 33.1	+9.3
	comp=Z,5.1nm,0.9s						
BRG	Berggiesshubel	134.12	335	ePKIKP	PKiKP	22 41 33.1	+9.3
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	134.16	336	ePKiKP	PKiKP	22 41 25.0	+1.1
CLL				epPKiKP	pPKiKP	22 41 32.0	+5.4
CLL				LmV		23 47 00.0	
	comp=Z,200nm,18.7s						
CLL	Collm	134.16	336	ePKIKP	PKiKP	22 41 25.0	+1.1
CLL				e		22 41 32.0	
MODS	Modra-Piesok	134.47	331	ePKIKP	PKiKP	22 41 33.4	+8.8
MODS	Modra-Piesok	134.47	331	ePKP	PKiKP	22 41 33.4	+8.8
KHC	Kasperske Hory	135.60	334	ePKP	PKPdf	22 41 25.9	+0.5
KHC				epPKP	sPKPdf	22 41 31.4	+2.3
KHC	Kasperske Hory	135.60	334	ePKIKP	PKPdf	22 41 25.9	+0.5
KHC				e		22 41 31.4	
GERES	GERESS Array B	135.76	334	PKP	PKPdf	22 41 26.1	+0.3
	comp=Z,0.3nm,0.6s,baz=178,slow=3.9,SNR=3.5						
KEST	Kesra	147.48	323	PKPbc	PKPbc	22 41 50.2	+0.7
	comp=Z,7.9nm,0.9s,baz=261,slow=0.6,SNR=3.6						
POLO	Lamas de Olo	149.31	351	ePKPab	PKPab	22 42 03.2	+4.6
MVO	Moncorvo	149.38	349	ePKPab	PKPab	22 42 03.4	+4.5
PVRL	Vila Real	149.39	350	ePKPab	PKPab	22 42 03.8	+4.9
ESDC	Sonseca Array	150.11	344	PKPbc	PKPbc	22 41 56.3	+0.2
	comp=Z,0.6nm,0.5s,baz=36,slow=2.8,SNR=5.0						
MTE	Manteigas	150.21	350	ePKPab	PKPab	22 42 02.7	+0.4
PTOM	Tomar	151.12	351	ePKPab	PKPab	22 42 05.1	-0.9
PMRV	Marv??o	151.13	349	ePKPab	PKPab	22 42 07.9	+1.8
PMTG	Montargil	151.62	350	ePKPdf	PKPbc	22 41 59.0	-0.6
PMTG	Montargil	151.62	350	ePKPab	PKPab	22 42 09.0	+0.9
PVAQ	Vaqueiros	153.15	349	ePKPab	PKiKP	22 42 08.0	+4.7
TORD	Torodi Ar. Bea	164.32	279	PKP	PKPdf	22 42 09.2	-0.3
	comp=Z,0.6nm,0.8s,baz=350,slow=1.8,SNR=4.9						
TORD				PKPab	PKPab	22 43 02.8	-1.0
	comp=Z,2.6nm,1.0s,baz=93,slow=4.4,SNR=5.8						
DBIC	Dimbokro	169.78	245	PKP	PKPdf	22 42 12.8	-0.9
	comp=Z,2.3nm,0.9s,baz=260,slow=10,SNR=3.3						

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*KRNET **22** 22:30:17.1±0.1, 40.°34N×76.°84E, h21km, mb2.2*

*NNC **22** 22:30:25.5±2.1, 40.°58N×76.°61E, h0km, mb3.0, mpv2.6,*

Error ellipse: s-maj=17.7km s-min=9.0km az=132.0

*SOME **22** 22:30:28.2, 40.°68N×76.°82E, h5km*

ISC 22 22:30:24.1±2.0**, 40.°56N**±0.°07×**76.°79E**±0.°05**, h5km**±11km**,**

n29, σ1.s75/43**, 13C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.06	326	⇓iP	Pg	22 30 40.8	-3.7
	baz=29						
NRN				⇓iS	Sg	22 30 58.2	-0.1
	baz=29						
TARG	Taragay, Kyrgy	1.40	33	⇓iP	Pn	22 30 46.2	-4.5
	baz=27						
TARG				⇓iS	Sg	22 31 07.2	-2.0
	baz=27						
KDJ	Kajisay	1.60	10	⇑iP	Pn	22 30 50.7	-2.5
	baz=8.0						
KDJ				⇑iS	Sn	22 31 14.7	+0.3
	baz=8.0						
ULHL	Ulahol	1.74	346	⇓iP	Pn	22 30 52.7	-2.5
	baz=47						
ULHL				⇓iS	Sn	22 31 18.8	+1.0
	baz=47						
KZA	Kyzart	1.91	323	⇑iP	Pn	22 30 55.1	-2.6
	baz=26						
KZA				⇑iS	Sn	22 31 23.1	+0.7
	baz=26						
BOOM	Boomskoye usch	2.04	342	⇑eP	Pn	22 30 57.2	-2.0
	baz=43						
BOOM				⇑iS	Sn	22 31 26.5	+1.4
	baz=43						
ARLS	Aral	2.27	306	⇓iP	Pn	22 30 59.3	-3.1
	baz=10.0						
ARLS				⇓iS	Sn	22 31 31.3	+0.4
	baz=10.0						
UCH	Uchtor	2.39	315	⇑iP	Pn	22 31 01.6	-2.8
	baz=18						
UCH				⇑iS	Sn	22 31 34.1	-0.2
	baz=18						
IZV	Izvestkoviy	2.48	357	Pg	Pg	22 31 11.8	+0.1
	1.9nm,0.3s						
IZV				Lg	Lg	22 31 43.3	
	5.5nm,0.6s						
IZV	Izvestkoviy	2.48	357	eP	Pg	22 31 11.8	+0.1
	1.9nm,0.3s						
IZV				eS	Sg	22 31 43.3	-0.6
	5.5nm,0.6s						
TNSS	Tian-Shan	2.48	3	Pg	Pg	22 31 11.9	+0.2
	5.8nm,0.7s						
TNSS				Lg	Lg	22 31 43.5	
	3.0nm,0.5s						
TNSS	Tian-Shan	2.48	3	eP	Pg	22 31 11.9	+0.2
	5.8nm,0.7s						
TNSS				eS	Sg	22 31 43.5	-0.4
	3.0nm,0.5s						
TKM2	Tokmak 2	2.53	340	⇑Pg	Pb	22 31 10.1	0.0
	1.1nm,0.5s						
TKM2				⇑Lg	Lg	22 31 43.0	
	0.6nm,0.4s						
KST	Kastek	2.56	346	Pg	Pg	22 31 13.7	+0.5
	2.7nm,0.5s						
KST				Lg	Lg	22 31 46.5	
	2.5nm,0.5s						
KST	Kastek	2.56	346	eP	Pg	22 31 13.7	+0.5
	2.8nm,0.3s						
KST				eS	Sg	22 31 46.5	+0.1
	2.9nm,0.5s						
SFK	Sufi-Kurgan	2.57	259	⇓Pg	Pn	22 31 09.2	+2.6
	0.2nm,0.4s						
SFK				⇓Lg	Lg	22 31 38.5	
	1.2nm,0.6s						
SFK	Sufi-Kurgan	2.57	259	⇓iP	Pn	22 31 01.5	-5.1
	baz=64						
SFK				⇓iS	Sn	22 31 34.3	-4.1
	baz=64						
MDOK	Medeo	2.61	4	Pg	Pb	22 31 11.5	0.0
	0.5nm,0.5s						
MDOK				Lg	Lg	22 31 46.4	
	1.6nm,0.5s						
MDOK	Medeo	2.61	4	Pg	Pg	22 31 13.9	-0.3
	3.0nm,0.6s						
MDOK				Lg	Lg	22 31 46.7	
	3.5nm,0.4s						
MDOK	Medeo	2.61	4	eP	Pg	22 31 13.8	-0.3
	1.4nm,0.5s						
MDOK				eS	Sg	22 31 46.7	-1.3
	3.5nm,0.4s						
KOTS	Kotyrbulak	2.69	5	Pg	Pb	22 31 14.8	+2.0
	1.8nm,0.3s						
KOTS				Lg	Lg	22 31 48.3	
	5.7nm,0.3s						
KOTS	Kotyrbulak	2.69	5	eP	Pb	22 31 14.8	+2.0
	1.8nm,0.3s						
KOTS				eS	Sb	22 31 48.3	+2.2
	5.7nm,0.3s						
AAK	Ala-Archa	2.70	321	⇑Pg	Pb	22 31 14.6	+1.6
	1.3nm,0.6s						
AAK				⇓Lg	Lg	22 31 49.3	
	1.2nm,0.4s						
SATY	Saty	2.78	25	Pg	Pb	22 31 16.3	+2.0
	2.6nm,0.5s						
SATY				Lg	Lg	22 31 50.9	
	3.1nm,0.2s						
SATY	Saty	2.78	25	eP	Pb	22 31 16.3	+2.0
	1.9nm,0.2s						
SATY				eS	Sb	22 31 50.8	+2.1
	2.7nm,0.3s						
DGS	Degeres	2.79	345	Pg	Pb	22 31 16.0	+1.5
	2.4nm,0.5s						
DGS				Lg	Lg	22 31 50.4	
	2.1nm,0.5s						
DGS	Degeres	2.79	345	eP	Pb	22 31 16.0	+1.5
	2.4nm,0.5s						
DGS				eS	Sb	22 31 50.4	+1.4
	2.1nm,0.5s						
AML	Almayashu	2.81	305	⇑iP	Pn	22 31 07.0	-3.1
	baz=8.0						
AML				⇑iS	Sn	22 31 43.8	-0.8
	baz=8.0						

PDGK	Podgornoye	3.43	35	⇓Pg	Pb	22 31 25.5	+0.2
	1.1nm,0.8s						
PDGK				⇓Lg	Lg	22 31 57.9	
	1.2nm,0.4s						

IDC 22 22:47:20.5±24.0, 11°.08S×165°.37E, h0^{km}, mb3.8/3, mb1 4.1/4, mb1mx3.6/29, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=417.5km s-min=49.7km az=50.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.98	175	Pn	Pn	22 49 58.6	-0.4
	1.0nm,0.3s,baz=336,slow=16,SNR=8.9						
H11S2	WAKE ISLAND Hy	29.41	3	T	T	23 23 37.8	
	baz=181,slow=76,SNR=5.8						
H11S3	WAKE ISLAND Hy	29.41	3	T	T	23 23 38.2	
	baz=181,slow=76,SNR=2.4						
H11S1	WAKE ISLAND Hy	29.43	3	T	T	23 23 39.2	
	baz=181,slow=76,SNR=5.2						
STKA	Stephens Creek	30.17	223	P	P	22 53 32.9	+0.4
	0.4nm,0.3s,baz=55,slow=7.1,SNR=2.2						
WRA	Warramunga Arr	31.13	250	P	P	22 53 40.9	-0.2
	2.1nm,0.7s,baz=82,slow=9.1,SNR=14						
ASAR	Alice Springs	32.45	243	P	P	22 53 52.5	-0.2
	0.4nm,0.6s,baz=61,slow=10,SNR=5.6						

IDC 22 22:54:56.7±1.8, 11°.43S×164°.95E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.6/29, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=51.0km s-min=32.6km az=128.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.68	172	Pn	Pn	22 57 31.4	+0.2
	0.3nm,0.3s,baz=331,slow=9.6,SNR=5.6						
WRA	Warramunga Arr	30.62	250	P	P	23 01 12.9	+0.1
	1.6nm,1.0s,baz=82,slow=9.2,SNR=7.0						
ASAR	Alice Springs	31.92	243	P	P	23 01 24.2	-0.1
	1.0nm,0.8s,baz=68,slow=9.5,SNR=9.7						
ILAR	Eielson Array	84.12	19	P	P	23 07 29.2	0.0
	0.1nm,0.5s,baz=241,slow=5.0,SNR=5.2						

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*HEL **22** 23:06:12.6, 67°.18N×20°.57E, h0^{km}, ML1.2, Explosion*
UPP 22 23:06:12.6±0.0, 67°.19N×20°.66E, h0^{km}, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	206	P	Pg	23 06 14.3	+0.2
DUNU	Dundret	0.08	206	*i* P	Pg	23 06 14.3	+0.2
MASU	Masugnsbyn	0.58	62	P	Pg	23 06 23.8	0.0
MASU				S	Sg	23 06 31.6	+0.3
MASU	Masugnsbyn	0.58	62	*i* P	Pg	23 06 23.8	0.0
MASU				*i* S	Sg	23 06 31.6	+0.3
RATU	Laukkuluspa	0.76	328	P	Pg	23 06 26.8	-0.3
RATU				S	Sg	23 06 37.1	+0.2
RATU	Laukkuluspa	0.76	328	*i* P	Pg	23 06 26.8	-0.3
RATU				*i* S	Sg	23 06 37.1	+0.2
KUA	Kurravaara	0.78	351	P	Pg	23 06 27.0	-0.4
KUA				S	Sg	23 06 37.6	+0.1
KUA	Kurravaara	0.78	351	*i* P	Pg	23 06 27.0	-0.4
KUA				*i* S	Sg	23 06 37.6	+0.1
SALU	Saltoluokta	0.86	284	P	Pg	23 06 28.7	-0.3
SALU	Saltoluokta	0.86	284	*i* P	Pg	23 06 28.7	-0.3
ERTU	Ertsjaerv	0.88	136	P	Pg	23 06 28.6	-0.8
ERTU	Ertsjaerv	0.88	136	*e*P	Pg	23 06 28.5	-0.9
	baz=309						
NIKU	Nikkaluokta	0.92	318	P	Pg	23 06 29.7	-0.6
NIKU	Nikkaluokta	0.92	318	*e*P	Pg	23 06 29.7	-0.6
PAJU	Pajala	0.97	99	P	Pg	23 06 30.6	-0.7
PAJU	Pajala	0.97	99	*e*P	Pg	23 06 30.6	-0.7
LANU	Lannavaara	1.00	30	P	Pg	23 06 31.2	-0.5
LANU				S	Sg	23 06 44.5	-0.2
LANU	Lannavaara	1.00	30	*e*P	Pg	23 06 31.1	-0.6
HARU	Harads	1.04	173	P	Pg	23 06 31.6	-0.8
HARU	Harads	1.04	173	*e*P	Pg	23 06 31.6	-0.8
HEF	Hetta	1.67	42	*e*PG	Pn	23 06 43.3	+0.3
HEF				MSG		23 07 03.7	
	comp=Z,1.4nm,0.2s						
HEF				*e*SN	Sb	23 07 05.5	-0.2
KALU	Kalix	1.72	140	P	Pn	23 06 44.0	+0.4
KALU	Kalix	1.72	140	*e*PG	Pn	23 06 43.8	+0.2
	baz=314						
KALU				*e*SN	Sg	23 07 08.1	+0.4
SJUU	Sjulsmark	1.73	167	P	Pn	23 06 43.9	+0.1
SJUU	Sjulsmark	1.73	167	*e*P	Pn	23 06 43.9	+0.1
KIF	Kilpisjarvi	1.82	2	*e*PN	Pb	23 06 46.4	-0.3
KIF				MSG		23 07 08.6	
	comp=Z,1.7nm,0.2s						
KIF				*e*SG	Sg	23 07 11.0	-0.1
TOF	Tornio	1.84	126	*e*PG	Pn	23 06 45.9	+0.6
	baz=299						
TOF				MSG		23 07 08.1	
	comp=Z,1.0nm,0.2s						
TOF				*e*SN	Sb	23 07 10.6	+0.1
SGF	Sodankyl	2.29	81	*e*PG	Pb	23 06 53.9	-0.8
SGF				*e*SG	Sb	23 07 24.0	+0.6

UPP 22 23:07:02.0±0.0, 67°.18N×20°.67E, h1^{km}, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	214	P	Pg	23 07 03.5	+0.2
MASU	Masugnsbyn	0.59	61	P	Pg	23 07 13.1	-0.1
RATU	Laukkuluspa	0.77	328	P	Pg	23 07 16.1	-0.6
RATU				S	Sg	23 07 26.4	-0.2
KUA	Kurravaara	0.79	351	P	Pg	23 07 16.9	-0.2
KUA				S	Sg	23 07 26.5	-0.8
SALU	Saltoluokta	0.86	284	P	Pg	23 07 18.0	-0.5
ERTU	Ertsjaerv	0.87	136	P	Pg	23 07 17.8	-0.8
PAJU	Pajala	0.97	98	P	Pg	23 07 19.8	-0.7
LANU	Lannavaara	1.01	29	P	Pg	23 07 20.6	-0.7
HARU	Harads	1.03	173	P	Pg	23 07 20.7	-1.0
KALU	Kalix	1.71	140	S	Sg	23 07 56.5	-0.2

WEL 22 23:31:06.4, 40°S±1°×175°.7E±0°.9, h47^{km}±3^{km}, ML3.7/26, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSZ	Takapari Road	0.20	108	P	Pn	23 31 14.5	-0.1
TSZ				S	Sn	23 31 20.6	+0.3
OHWZ	Ohakea	0.37	235	P	Pn	23 31 16.4	+0.4
OHWZ				S	Sn	23 31 24.3	+1.6
POWZ	Post Office Ro	0.40	173	P	Pn	23 31 16.3	0.0
POWZ				S	Sn	23 31 24.7	+1.3
DVHZ	Dannevirke	0.47	131	P	Pn	23 31 17.4	+0.3
DVHZ				P	Pn	23 31 17.4	+0.3
DVHZ				S	Sn	23 31 26.1	+1.3
WPHZ	Waipukurau	0.57	97	P	Pn	23 31 18.9	+0.5
BHHZ	Black Hill Sta	0.57	29	P	Pn	23 31 18.0	-0.5
BHHZ				S	Sn	23 31 28.0	+0.8
MOVZ	Moawhango	0.59	3	P	Pn	23 31 18.1	-0.6
MOVZ				S	Sn	23 31 27.4	-0.1
PRWZ	Pori Road	0.59	160	P	Pn	23 31 19.2	+0.5
PRWZ				S	Sn	23 31 28.7	+1.1
WAZ	Wanganui	0.60	293	P	Pn	23 31 19.2	+0.3
WAZ				S	Sn	23 31 28.7	+1.0
MTVZ	Mangateitei	0.64	343	P	Pn	23 31 19.2	-0.1
MTVZ				S	Sn	23 31 29.5	+0.9
MRZ	Mangatainoka R	0.67	188	P	Pn	23 31 19.8	0.0
MRZ				S	Sn	23 31 30.2	+0.8
TRVZ	Turoa	0.70	350	P	Pn	23 31 20.3	-0.1
TRVZ				S	Sn	23 31 31.5	+1.1
WHVZ	Whangaehu Hut	0.72	353	P	Pn	23 31 20.4	-0.1
WHVZ				S	Sn	23 31 31.3	+0.6
DRZ	Dome Shelter	0.73	351	P		23 31 20.9	
DRZ				P	Pn	23 31 20.8	+0.1
TUVZ	Tukino	0.73	357	P	Pn	23 31 20.5	0.0
FWVZ	Far West T-bar	0.75	351	P	Pn	23 31 20.8	-0.1
ANWZ	Angora Road	0.75	129	P	Pn	23 31 21.1	+0.4
PKVZ	Pokaka	0.76	338	P	Pn	23 31 20.9	0.0
PRHZ	Porangahau	0.76	111	P	Pn	23 31 21.2	+0.3
KWHZ	Kaweka Forest	0.79	44	P	Pn	23 31 22.0	+0.7
TIWZ	Tintock	0.79	170	P	Pn	23 31 21.5	+0.1
BFZ	Birch Farm	0.80	149	P	Pn	23 31 21.5	+0.1
COVZ	Chateau Observ	0.80	351	P	Pn	23 31 21.7	+0.1
NGZ	Ngauruhoe	0.82	354	P	Pn	23 31 22.0	+0.1
WTVZ	West Tongariro	0.88	354	P	Pn	23 31 22.9	+0.3
KRVZ	Karewarewa	0.90	357	P	Pn	23 31 23.1	+0.3
KRVZ				P	Pn	23 31 23.1	+0.3
HOWZ	Holdsworth Sta	0.91	189	P	Pn	23 31 22.8	-0.1
OGWZ	Otaki Gorge	0.92	206	P	Pn	23 31 23.3	+0.3
KAHZ	Kahuranaki	0.92	78	P	Pn	23 31 23.4	+0.4
MCHZ	McNeill Hill	0.94	55	P		23 31 24.2	
MCHZ				P	Pn	23 31 24.1	+0.8
TWVZ	Taurewa	0.94	347	P	Pn	23 31 23.4	-0.1
CPWZ	Castlepoint	0.99	158	P	Pn	23 31 24.8	+0.9
KATZ	Kakaramea	1.02	359	P	Pn	23 31 24.8	+0.3
RITZ	Rihia Road	1.02	7	P	Pn	23 31 24.9	+0.5
BKZ	Black Stump Fm	1.03	36	P	Pn	23 31 25.0	+0.5
KIW	Kapiti Island	1.06	215	P	Pn	23 31 25.1	+0.2
CKHZ	Cape Kidnapper	1.11	73	P	Pn	23 31 25.8	+0.2
TMWZ	Te Maipa	1.12	173	P	Pn	23 31 25.4	-0.3
TMWZ				P	Pn	23 31 25.4	-0.3
RATZ	Rangitukua	1.13	3	P	Pn	23 31 26.1	+0.2
VRZ	Vera Road	1.14	320	P	Pn	23 31 26.2	+0.2
LREZ	Lake Rotokare	1.14	297	P	Pn	23 31 27.0	+1.0
HATZ	Hinemaiaia	1.14	15	P	Pn	23 31 26.3	+0.2
MTW	Mount Morrison	1.17	188	P	Pn	23 31 26.0	-0.5
CAW	Cannon Point	1.22	204	P	Pn	23 31 26.7	-0.3
ARHZ	Aropaoanui	1.23	54	P	Pn	23 31 27.5	+0.2
NMHZ	Naumai	1.23	44	P	Pn	23 31 27.9	+0.6
MRHZ	Matea Rd	1.28	26	P	Pn	23 31 28.1	+0.1
WATZ	Wairara	1.28	1	P	Pn	23 31 28.0	0.0
WHTZ	Whakaora	1.34	8	P	Pn	23 31 29.2	+0.4
PAWZ	Paruwai Farm	1.40	189	P	Pn	23 31 28.8	-0.8
TRWZ	Traveller	1.40	181	P	Pn	23 31 28.9	-0.7
MHEZ	Mangahewa	1.41	310	P	Pn	23 31 30.8	+1.2
DREZ	Durham Road	1.42	304	P	Pn	23 31 30.7	+0.9
MTHZ	Maungataniwha	1.44	38	P	Pn	23 31 30.2	+0.1
MSWZ	Moikau Station	1.46	194	P	Pn	23 31 29.5	-0.9
KHEZ	Kahui Hut	1.48	298	P	Pn	23 31 31.8	+1.1
WHHZ	Waihua	1.49	53	P	Pn	23 31 31.2	+0.4
KUTZ	Kaahu Road	1.51	3	P	Pn	23 31 30.9	-0.1
ALRZ	Allen Road	1.51	19	P	Pn	23 31 30.7	-0.4
WPRZ	Whakapapatarin	1.51	14	P	Pn	23 31 31.7	+0.5
RAHZ	Arahi	1.52	45	P	Pn	23 31 31.1	0.0
NMEZ	Namu Road	1.53	292	P	Pn	23 31 32.5	+1.3
BHW	Baring Head	1.55	204	P	Pn	23 31 30.6	-1.0
PKE	Pukeiti	1.55	300	P	Pn	23 31 32.8	+1.2
DUWZ	D'Urville Isla	1.58	239	P	Pn	23 31 32.5	+0.4
PRRZ	Plateau Road	1.58	20	P	Pn	23 31 31.9	-0.1
NBEZ	Newall Road No	1.59	296	P	Pn	23 31 33.5	+1.3
PLWZ	Palliser	1.61	192	P	Pn	23 31 31.3	-1.2
HIZ	Hauiti	1.62	336	P	Pn	23 31 32.8	+0.3
TCW	Tory Channel	1.63	221	P	Pn	23 31 32.1	-0.6
TLZ	Tolley Road	1.67	355	P	Pn	23 31 32.8	-0.5
GRRZ	Galatos Road	1.67	11	P	Pn	23 31 33.6	+0.3
RTZ	Ruatahuna	1.69	36	P	Pn	23 31 33.4	-0.3
MUGZ	Murupara	1.73	29	P	Pn	23 31 34.2	+0.3
SNGZ	Shannon Statio	1.75	47	P	Pn	23 31 34.5	+0.2
KNZ	Kokohu	1.80	58	P	Pn	23 31 34.2	-0.8
TARZ	Mount Tarawera	1.86	20	P	Pn	23 31 36.4	+0.4
TUWZ	Tuamarina	1.96	223	P	Pn	23 31 36.4	-0.9
PRGZ	Paritu Road	2.00	58	P	Pn	23 31 36.6	-1.1
URZ	Urewera	2.05	33	P	Pn	23 31 37.6	-0.8
RIGZ	Rimuhau	2.05	52	P	Pn	23 31 37.7	-0.7
NNZ	Nelson	2.15	235	P	Pn	23 31 39.5	-0.3
MWZ	Matawai	2.18	41	P	Pn	23 31 39.2	-1.0
BSWZ	Blackbirch Sta	2.21	218	P	Pn	23 31 39.7	-0.9
TOZ	Tahuroa Road	2.27	356	P	Pn	23 31 41.0	-0.4
TKGZ	Te Karaka	2.27	48	P	Pn	23 31 40.5	-1.0
TWGZ	Tauwhareparae	2.53	45	P	Pn	23 31 44.9	-0.2
RUGZ	Raukumara Rang	2.54	38	P	Pn	23 31 44.2	-1.1
QRZ	Quartz Range	2.56	250	P	Pn	23 31 44.7	-0.8
THZ	Tophouse	2.76	229	P	Pn	23 31 47.4	-0.9

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*YARS **22** 23:31:54.7±0.1, 67°.770N±0°.007×141°.97E±0°.02, h10^{km}*
*IDC **22** 23:31:57.9±0.4, 67°.57N×142°.46E, h0^{km}, mb4.4/34, mb1 4.5/39, mb1mx4.5/54, mbtmp4.4/39, ML4.3/4, MS3.9/16, Ms1 3.9/16, ms1mx3.7/38, Error ellipse: s-maj=9.5km s-min=9.4km az=19.0*
*BJI **22** 23:31:58.7, 67°.53N×142°.51E, h12^{km}, mB5.1/43, mb4.7/57, Ms4.9/45, Ms7 4.7/44*
*MOS **22** 23:31:58.1±1.1, 67°.64N×142°.51E, h11^{km}, mb4.8/75, MS3.8/12, Error ellipse: s-maj=11.0km s-min=4.7km az=90.8*
*ISCJB **22** 23:31:58.5±0.1, 67°.65N±0°.02×142°.41E±0°.05, h10^{km}, mb4.6/169, MS4.1/27, Error ellipse: s-maj=3.3km s-min=2.5km az=154.0*
*GCMT **22** 23:32:00.4±0.4, 67°.62N±0°.04×142°.5E±0°.1, h17^{km}±1^{km}, MW4.8/64, Moment Tensor Solution. s22,c26; s64,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.92±.18; $M_{\theta\theta}$-0.63±.13; $M_{\phi\phi}$-0.28±.13; $M_{r\theta}$0.74±.40; $M_{\theta\phi}$1.64±.11; $M_{\phi r}$-0.11±.38; Best double couple: $M_0$1.88500×10^{16} NP1:ϕ_s96.00000°, δ72.00000°, λ38.00000°. NP2: ϕ_s352.00000°, δ54.00000°, λ158.00000°. Principal axes: T 1.5350, Plg39.0000°, Azm320.0000°; N 0.7000, Plg48.0000°, Azm117.0000°; P -2.2350, Plg11.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **22** 23:32:01.4±3.4, 67°.60N×142°.30E, h18^{km}±22^{km}, mb4.8/87 Error ellipse: s-maj=6.3km s-min=3.3km az=162.0*
ISC 22 23:31:59.7±0.3, 67°.56N±0°.03×142°.58E±0°.03, h10^{km}, n361, σ1^{s}.85/387, mb4.7/180, MS4.1/27, 11C-4D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.12	167	*e*P	Pb	23 32 20.4	-0.8
MOMR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MOMR	Moma	1.12	167	*e*P	Pb	23 32 20.4	-0.8
MOMR				*e*S	Sn	23 32 37.1	+0.1
YBGR	Belaya Gora	1.67	53	*e*P	Pn	23 32 26.2	-2.8
YBGR				*e*S	Sn	23 32 49.5	-1.0
YBGR	Belaya Gora	1.67	53	*e*P	Pn	23 32 26.2	-2.8
YBGR				*e*S	Sn	23 32 49.5	-1.0
DEPR	Deputatskiy	2.09	333	*e*P	Pn	23 32 27.6	-7.2
DEPR				*e*S	Sn	23 32 49.7	-11
DEPR	Deputatskiy	2.09	333	*e*P	Pn	23 32 27.6	-7.2
DEPR				*e*S	Sn	23 32 49.7	-11
ATKR	Artyk	3.55	162	*e*P	Pn	23 32 54.1	-0.8
ATKR				pmax	pmax		
	comp=Z,448nm,0.5s						
ATKR	Artyk	3.55	162	*e*P	Pn	23 32 54.1	-0.8
ATKR				*e*P	Pb	23 33 03.0	+0.4
ATKR				*e*S	Sn	23 33 27.4	-9.5
ATKR				*e*S	Sg	23 33 53.0	-0.6
SEY	Seymchan	6.20	134	*ce*P	Pn	23 33 31.7	+0.5
SEY	Seymchan	6.20	134	Pn	Pn	23 33 31.5	+0.4
	comp=Z,2.9nm,0.3s,baz=324,slow=13,SNR=43						
SEY				Lg	Lg	23 35 15.4	
	comp=Z,7.8nm,0.3s,baz=235,slow=11,SNR=12						
YAK	Yakutsk	7.80	231	*e*P	Pn	23 33 53.5	+0.4
YAK				*e*		23 35 20.0	
YAK				pmax	pmax		
	comp=Z,65nm,0.4s						
YAK				smax	smax		
	comp=N,644nm,0.4s						
YAK				smax	smax		
	comp=E,419nm,0.4s						
YAK	Yakutsk	7.80	231	*e*P	Pn	23 33 48.3	-4.8
YAK				*e*P	Pb	23 34 14.7	-0.2
YAK				*e*S	Sn	23 35 13.0	-8.4
YAK				*e*S	Sb	23 35 54.3	+6.5
USMR	Ust'-Maya	7.98	210	*e*P	Pn	23 33 53.9	-1.7
USMR				*e*S	Sn	23 35 20.3	-5.5
USMR				smax	smax		
	comp=N,985nm,1.7s						
USMR	Ust'-Maya	7.98	210	*e*P	Pn	23 33 53.9	-1.7
USMR				*e*S	Sn	23 35 20.3	-5.5
USMR				*e*S	Sg	23 36 05.9	-10
MA2	Magadan	8.80	152	*e*Pn	Pn	23 34 09.2	+2.4
MA2				Lg	Lg	23 36 38.0	
MA2	Magadan	8.80	152	*e*P	Pn	23 34 09.2	+2.4
MA2	Magadan	8.80	152	Pn	Pn	23 34 06.9	+0.1
	comp=N,0.7nm,0.3s,baz=344,slow=11,SNR=8.4						
MA2				Lg	Lg	23 36 38.0	
	comp=N,2.6nm,0.3s,baz=63,slow=23,SNR=12						
BILL	Bilibino	8.96	76	*e*Pn	Pn	23 34 11.8	+2.8
BILL	Bilibino	8.96	76	*i* P	Pn	23 34 11.4	+2.4
BILL				*i* S	Sn	23 35 44.5	-5.3
BILL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,821nm,17.0s						
CGD	Chagda	10.34	217	*e*P	Pn	23 34 25.5	-2.4
CGD	Chagda	10.34	217	*e*P	Pn	23 34 25.5	-2.4
CGD				*e*S	Sn	23 37 15.1	+51
ALDR	Aldan	11.83	229	*e*P	Pn	23 34 43.7	-4.6
ALDR	Aldan	11.83	229	*e*P	Pn	23 34 43.7	-4.6
ALDR				*e*S	Sn	23 37 59.3	+59
YCRN	Chernyshevskiy	13.29	264	*e*P	Pn	23 35 01.7	-6.4
YCRN	Chernyshevskiy	13.29	264	*e*P	Pn	23 35 01.7	-6.4
YCRN				*e*P	P	23 35 49.7	+32
YCRN				*e*S	S	23 38 38.1	+38
IENR	Iengra	14.03	225	*e*P	Pn	23 35 14.5	-3.8
IENR	Iengra	14.03	225	*e*P	Pn	23 35 14.5	-3.8
IENR				*e*S	S	23 39 07.9	+52
IENR				Smax		23 39 07.9	
	comp=N,744nm,1.7s						
NKL	Nikolayevsk	14.49	185	*e*P	P	23 35 30.0	-1.3
NKL				pmax	pmax		
	comp=Z,36nm,0.9s						
NKL				MLR	MLR		
	comp=E,800nm,10.0s						
NKL				MLR	MLR		
	comp=Z,2μm,10.0s						
YKLR	Yuktali	14.63	231	*e*P	Pn	23 35 23.0	-3.5
YKLR	Yuktali	14.63	231	*e*P	Pn	23 35 23.0	-3.5
YKLR				*e*S	S	23 39 24.6	+57
KHNR	Khani	14.87	235	*e*P	Pn	23 35 25.9	-3.9
KHN	Khani	14.93	236	*e*P	Pn	23 35 25.9	-4.7
KHN				*e*S	S	23 39 33.1	+59
TNDR	Tynda	15.02	223	*e*P	P	23 38 19.7	
TNDR				*e*S	S	23 39 39.1	+63
ZEA	Zeya	15.69	216	*e*P	P	23 35 43.2	-1.5
ZEA				pmax	pmax		
	comp=Z,64nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,3μm,9.0s						
ZEA				MLR	MLR		
	comp=N,3μm,8.0s						
BOD	Bodaibo	16.17	247	*e*P	Pn	23 35 42.5	-4.2
BOD				pmax	pmax		
	comp=Z,35nm,1.7s						
PEA0B	Petropavlovsk-	16.23	146	*e*Pn	Pn	23 35 49.2	+1.7
	comp=Z,74nm,0.9s						
PETK	Petropavlovsk-	16.23	146	*e*Pn	P	23 35 50.5	-0.2
PETK	Petropavlovsk-	16.23	146	*e*P	P	23 35 50.5	-0.2
PETK	Petropavlovsk-	16.23	146	Pn	Pn	23 35 47.7	+0.2
	comp=Z,0.3nm,0.3s,baz=347,slow=12,SNR=10						
PETK				LR	LR	23 42 35.0	
	comp=Z,152nm,18.2s,baz=332,slow=39						
PET	Petropavlovsk	16.52	144	*e*Pn	P	23 35 58.4	+4.6
	comp=Z,177nm,0.8s						
PET	Petropavlovsk	16.52	144	*e*P	P	23 35 59.6	+5.8
PET				pmax	pmax		
	comp=Z,271nm,0.9s						
PET				MLR	MLR		
	comp=Z,600nm,15.0s						
TYV	Tymovskoe	16.75	180	*e*P	P	23 35 57.5	+1.1
TYV				*e*S	S	23 39 06.1	-4.8
TYV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TYV				smax	smax		
	comp=N,4.0nm,1.3s						
TYV				smax	smax		
	comp=N,300nm,7.7s						
GRNR	Gornyy	17.12	193	*e*P	Pn	23 35 53.8	-5.0
GAMB	Gambell	18.86	80	*e*P	Pn	23 36 20.2	+0.2
	comp=N,9.3nm,0.9s						
KLR	Kul'dur	19.18	202	*i* P	Pn	23 36 24.1	0.0
KLR	Kul'dur	19.18	202	P	P	23 36 22.9	-0.3
	comp=N,0.6nm,0.3s,baz=19,slow=6.5,SNR=16						
KLR				Lg	Lg	23 42 07.3	
	comp=N,0.1nm,0.3s,baz=83,slow=17,SNR=6.5						
KLR				LR	LR	23 44 03.3	
	comp=N,387nm,19.4s,baz=352,slow=38						
NRIK	Noril'sk	19.72	300	P	P	23 36 28.3	-0.6
	comp=N,0.4nm,0.3s,baz=60,slow=16,SNR=9.1						
NRIK				Lg	Lg	23 42 23.9	
	comp=N,0.6nm,0.3s,baz=346,slow=23,SNR=7.3						
RDOG	Red Dog Mine	20.04	63	*e*P	Pn	23 36 33.6	-0.6
	comp=N,26nm,0.8s						
YSS	Yuzh-Sakhalins	20.66	180	*e*P	P	23 36 40.0	+0.7
	comp=N,14nm,0.8s						
YSS	Yuzh-Sakhalins	20.66	180	*e*P	P	23 36 40.6	+1.3
YSS				*e*		23 36 45.4	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
ANM	Nome	20.80	73	*e*P	Pn	23 36 42.0	-1.1
	comp=Z,16nm,0.9s						
ANM	Nome	20.80	73	*e*P	Pn	23 36 42.1	-1.1
ANM				pmax	pmax		
	comp=Z,16nm,0.9s						
HIA	Hailar	21.65	224	*i* P	P	23 36 52.0	+2.0
HIA				pmax	pmax		
	comp=Z,29nm,1.0s						
KUR	Kuril'sk	22.55	170	*ce*P	P	23 37 01.4	+1.8
TEY	Ternei	22.80	191	⇓*e*P	P	23 37 03.4	+1.2
TEY				pmax	pmax		
	comp=Z,50nm,0.7s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.5s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
ASAJ	Asahikawa	23.50	180	P	P	23 37 09.0	-0.4
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ASAJ	Asahikawa	23.50	180	P	P	23 37 09.0	-0.4
	comp=Z,8.9nm,0.6s,baz=40,slow=10,SNR=8.5						
YUK	Yuzh-Kuril'sk	23.64	174	*e*P	P	23 37 10.6	-0.2
YUK				*e*S	S	23 41 23.2	-1.9
YUK				pmax	pmax		
	comp=Z,98nm,2.6s						
YUK				pmax	pmax		
	comp=N,20nm,1.1s						
YUK				pmax	pmax		
	comp=Z,42nm,1.1s						
YUK				pmax	pmax		
	comp=E,28nm,0.9s						
YUK				MLR	MLR		
	comp=Z,469nm,19.0s						
YUK				MLR	MLR		
	comp=N,619nm,20.0s						
MDJ	Mudanjiang	24.01	203	P	P	23 37 14.4	+0.1
MDJ				pP	sP	23 37 18.8	+0.1
MDJ				sP	pP	23 37 20.8	+3.4
MDJ				PP	PnPn	23 37 44.8	+2.1
MDJ				PcP	PcP	23 40 53.0	-2.7
MDJ				SS	S	23 42 20.1	+49
MDJ				ScP	ScP	23 44 31.3	-2.4
MDJ				PcS	PcS	23 44 33.3	-1.9
MDJ				ScS	ScS	23 48 19.0	-1.6
MDJ				pmax	pmax		
	comp=N,55nm,1.1s						
MDJ				pmax	pmax		
	comp=N,260nm,2.2s						
MDJ				LR	LR		
	comp=N,440nm,6.0s						
MDJ				LR	LR		
	comp=N,640nm,8.4s						
MDJ				LR	LR		
	comp=N,940nm,8.4s						
IRK	Irkutsk	24.02	249	*e*P	P	23 37 14.1	-0.3
IRK				pmax	pmax		
	comp=Z,123nm,2.0s						
USA0B	Ussuriysk Arra	24.08	199	*e*P	P	23 37 15.5	+0.5
	comp=Z,23nm,0.9s						
USRK	Ussuriysk Ar.	24.08	199	P	P	23 37 15.3	+0.3
	comp=Z,14nm,0.6s,baz=12,slow=10,SNR=32						
USRK				LR	LR	23 47 09.5	
	comp=Z,297nm,21.3s,baz=346,slow=38						
TOLK	Toolik Lake Re	24.19	56	*e*P	P	23 37 16.5	+0.6
	comp=Z,38nm,1.4s						
IM3	Indian Mountai	24.19	64	*e*P	P	23 37 16.3	+0.4
TLY	Talaya	24.70	249	*e*P	P	23 37 21.8	+1.2
	comp=Z,29nm,1.5s						
TLY	Talaya	24.70	249	*c i*P	P	23 37 22.7	+2.1
TLY				*e*S	S	23 41 46.5	+4.4
TLY				pmax	pmax		

	comp=Z,84nm,2.4s						
TLY				MLR	MLR		
	comp=Z,2µm,16.0s						
COLD	**Coldfoot**	**24.71**	**59**	eP	**P**	**23 37 22.1**	**+1.5**
	comp=Z,18nm,0.9s						
VLA	**Vladivostok**	**25.16**	**199**	i P	**P**	**23 37 23.9**	**-0.9**
VLA				pmax	pmax		
	comp=Z,29nm,1.0s						
CN2	**Changchun**	**25.51**	**210**	eP	**P**	**23 37 27.4**	**-0.5**
CN2				pmax	pmax		
	comp=Z,50nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,9.0s						
CN2				LR	LR		
	comp=Z,1µm,9.0s						
CN2				LR	LR		
	comp=Z,3µm,9.0s						
MOY	**Mondy**	**25.68**	**253**	eP	**P**	**23 37 30.5**	**+1.0**
MOY				pmax	pmax		
	comp=Z,34nm,2.5s						
MLY	**Manley**	**25.77**	**64**	eP	**P**	**23 37 30.7**	**+0.5**
	comp=Z,15nm,1.2s						
ZAK	**Zakamensk**	**25.90**	**248**	eP	**P**	**23 37 27.7**	**-3.9**
ZAK				pmax	pmax		
	comp=Z,11nm,1.2s						
CAST	**Castle Rocks**	**26.27**	**67**	eP	**P**	**23 37 36.4**	**+1.6**
	comp=Z,7.7nm,0.8s						
MDM	**Murphy Dome**	**26.67**	**62**	eP	**P**	**23 37 38.9**	**+0.5**
	comp=Z,8.5nm,1.0s						
FYU	**Fort Yukon**	**26.71**	**58**	eP	**P**	**23 37 39.6**	**+1.0**
	comp=Z,58nm,1.4s						
ULN	**Ulaanbaatar**	**26.74**	**240**	eP	**P**	**23 37 36.6**	**-2.7**
	comp=Z,16nm,1.5s						
ULN	**Ulaanbaatar**	**26.74**	**240**c	eP	**P**	**23 37 40.3**	**+1.0**
ULN				pmax	pmax		
	comp=Z,18nm,2.5s						
COLA	**College**	**26.85**	**62**	i P	**P**	**23 37 40.4**	**+0.5**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TRF	**Thorofare Moun**	**26.88**	**66**	eP	**P**	**23 37 42.2**	**+1.8**
	comp=Z,19nm,1.1s						
SONA1	**Songino Array**	**26.97**	**241**	eP	**P**	**23 37 42.6**	**+1.3**
SONM	**Songino Array**	**26.99**	**241**	P	**P**	**23 37 42.0**	**+0.5**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,73nm,20.1s						
SONM	**Songino Array**	**26.99**	**241**	P	**P**	**23 37 42.0**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=22,slow=7.4,SNR=24						
SONM				Lg	Lg	23 46 14.8	
	comp=Z,2.7nm,1.1s,baz=48,slow=35,SNR=4.5						
SONM				LR	LR	23 50 20.9	
	comp=Z,72nm,20.1s,baz=34,slow=41						
WRH	**Wood River Hil**	**27.01**	**63**	eP	**P**	**23 37 43.8**	**+2.5**
	comp=Z,4.8nm,0.8s						
MCK	**McKinley**	**27.18**	**65**	eP	**P**	**23 37 44.0**	**+1.0**
	comp=Z,7.8nm,0.9s						
IL1	**Eielson Array**	**27.24**	**62**	eP	**P**	**23 37 43.8**	**+0.4**
ILAR	**Eielson Array**	**27.24**	**62**	P	**P**	**23 37 43.7**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=298,slow=7.9,SNR=64						
ILAR				LR	LR	23 48 56.0	
	comp=Z,176nm,19.4s,baz=289,slow=37						
ILB	**Eielson Array**	**27.24**	**62**	eP	**P**	**23 37 43.8**	**+0.3**
SUA	**Susitna One**	**28.00**	**70**	eP	**P**	**23 37 51.0**	**+0.6**
	comp=Z,15nm,1.1s						
INK	**Inuvik**	**29.27**	**49**	P	**P**	**23 38 01.6**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=323,slow=5.1,SNR=3.5						
KDAK	**Kodiak Island**	**29.87**	**77**	i P	**P**	**23 38 07.5**	**+0.7**
NVS	**Novosibirsk**	**29.95**	**275**	eP	**P**	**23 38 07.7**	**+0.1**
NVS				eS	**S**	**23 43 05.3**	**+0.6**
NVS				pmax	pmax		
	comp=Z,25nm,1.9s						
NVS				pmax	pmax		
	comp=N,9.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,14nm,2.0s						
NVS				smax	smax		
	comp=E,9.0nm,1.6s						
ZAA0	**Zalesovo Array**	**30.02**	**272**	eP	**P**	**23 38 08.1**	**-0.1**
	comp=E,7.2nm,1.0s						
ZALV	**Zalesovo Beam**	**30.02**	**272**	eP	**P**	**23 38 06.4**	**-1.8**
ZALV	**Zalesovo Beam**	**30.02**	**272**	P	**P**	**23 38 07.0**	**-1.2**
	comp=E,1.3nm,0.4s,baz=46,slow=6.4,SNR=13						
ZALV				LR	LR	23 50 42.6	
	comp=E,167nm,21.1s,baz=66,slow=38						
MJAR	**Matsushiro Arr**	**31.16**	**187**	P	**P**	**23 38 18.6**	**+0.1**
	comp=E,1.8nm,0.9s,baz=20,slow=14,SNR=3.3						
MJAR				LR	LR	23 51 50.3	
	comp=E,175nm,18.1s,baz=340,slow=38						
BJI	**Beijing**	**31.16**	**221**	P	**P**	**23 38 20.3**	**+1.9**
BJI				pmax	pmax		
	comp=E,7.0nm,1.0s						
BJI				LR	LR		
	comp=E,630nm,5.2s						
BJI				LR	LR		
	comp=E,1µm,6.1s						
KSRS	**Korea Array**	**31.27**	**203**	P	**P**	**23 38 19.5**	**+0.2**
	comp=E,2.4nm,0.6s,baz=6.2,slow=8.5,SNR=8.8						
KSRS				LR	LR	23 51 39.6	
	comp=E,195nm,18.4s,baz=24,slow=38						
KSAR	**Wonju Array Be**	**31.29**	**203**	P	**P**	**23 38 19.5**	**0.0**
KSAR	**Wonju Array Be**	**31.29**	**203**	P	**P**	**23 38 19.5**	**0.0**
HHC	**Hu-ho-hao-te**	**31.66**	**228**	eP	**P**	**23 38 25.4**	**+2.5**
HHC				PP	**PnPn**	**23 39 29.9**	**+3.5**
HHC				S	**S**	**23 43 32.8**	**+0.9**
HHC				pmax	pmax		
	comp=E,13nm,0.6s						
HHC				pmax	pmax		
	comp=E,99nm,5.6s						
HHC				LR	LR		
	comp=E,940nm,8.8s						
HHC				LR	LR		
	comp=E,370nm,6.3s						
HHC				LR	LR		
	comp=E,940nm,8.6s						
DGZ	**Jazzator, Alta**	**32.36**	**265**c	iP	**P**	**23 38 29.4**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RES	**Resolute Bay**	**33.35**	**24**	eP	**P**	**23 38 38.6**	**+1.4**
	comp=Z,24nm,1.4s						
RES	**Resolute Bay**	**33.35**	**24**	eP	**P**	**23 38 38.6**	**+1.4**
RES				pmax	pmax		
	comp=Z,24nm,1.4s						
KURK	**Kurchatov**	**34.92**	**274**	eP	**P**	**23 38 50.3**	**-0.8**
	comp=Z,10nm,0.9s						
KURK				PP	**PP**	**23 40 10.6**	**+0.6**
KURK	**Kurchatov**	**34.92**	**274**	eP	**P**	**23 38 50.3**	**-0.8**
KURK						23 40 10.6	
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KURBB	**Kurchatov Arra**	**35.03**	**274**	P	**P**	**23 38 51.7**	**-0.4**
	comp=Z,7.4nm,0.5s,baz=38,slow=8.6,SNR=44						
KURBB				PP	**PP**	**23 40 10.6**	**-0.7**
	comp=Z,4.8nm,0.9s,baz=42,slow=12,SNR=6.1						
DAG	**Danmarks Havn**	**35.43**	**353**	i P	**P**	**23 38 53.8**	**-1.4**
	comp=Z,8.3nm,0.7s						
DAG	**Danmarks Havn**	**35.43**	**353**	i P	**P**	**23 38 53.8**	**-1.4**
DAG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
JIS	**Juneau Island**	**36.05**	**63**	eP	**P**	**23 39 00.5**	**-0.1**
	comp=Z,24nm,0.7s						
BVAR	**Borovoye Array**	**36.22**	**283**	P	**P**	**23 39 01.7**	**-0.5**
	comp=Z,5.4nm,0.5s,baz=48,slow=8.2,SNR=28						
BVAR				PP	**PP**	**23 40 26.0**	**+1.7**
	comp=Z,3.3nm,0.7s,baz=46,slow=13,SNR=4.0						
BRVK	**Borovoye**	**36.23**	**283**	eP	**P**	**23 39 01.4**	**-0.9**
	comp=Z,11nm,1.4s						
BRVK	**Borovoye**	**36.23**	**283**	eP	**P**	**23 39 01.4**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,11nm,1.4s						
APA	**Apatity**	**36.46**	**322**⇓	iP	P	23 38 52.1	-12
APA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
ARCES	**ARCESS Array B**	**36.59**	**328**	P	**P**	**23 39 06.0**	**+0.7**
	comp=Z,3.7nm,0.9s,baz=24,slow=9.6,SNR=8.7						
ARCES				PcP	**PcP**	**23 41 28.2**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=35,slow=4.4,SNR=7.2						
GTA	**Gaotai**	**36.66**	**242**	⇓P	**P**	**23 39 07.8**	**+1.5**
GTA				pP	sP	23 39 11.9	+1.1
GTA				sP	pP	23 39 14.9	+5.4
GTA				PcP	**PcP**	**23 41 30.0**	**+1.1**
GTA				S	**S**	**23 44 49.0**	**-0.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,5.2s						
GTA				LR	LR		
	comp=Z,250nm,16.8s						
GTA				LR	LR		
	comp=Z,620nm,17.5s						
GTA				LR	LR		
	comp=Z,470nm,15.9s						
MK31	**Makanchi Array**	**36.71**	**267**	eP	**P**	**23 39 05.7**	**-0.9**
MK31	**Makanchi Array**	**36.71**	**267**	eP	**P**	**23 39 05.7**	**-0.9**
MKAR	**Makanchi Array**	**36.71**	**267**	eP	**P**	**23 39 05.7**	**-0.9**
	comp=Z,72nm,0.8s						
MKAR				PP	**PP**	**23 40 30.5**	**+0.6**
MKAR	**Makanchi Array**	**36.71**	**267**	eP	**P**	**23 39 05.7**	**-0.9**
MKAR						23 40 30.5	
MKAR				pmax	pmax		
	comp=Z,72nm,0.8s						
MKAR	**Makanchi Array**	**36.71**	**267**	P	**P**	**23 39 05.8**	**-0.8**
	comp=Z,9.4nm,0.5s,baz=41,slow=7.4,SNR=149						
MKAR				PP	**PP**	**23 40 30.5**	**+0.6**
	comp=Z,7.6nm,0.9s,baz=47,slow=8.8,SNR=5.4						
MKAR				LR	LR	23 54 16.6	
	comp=Z,97nm,18.3s,baz=17,slow=36						
MK01	**Makanchi Array**	**36.73**	**267**	eP	**P**	**23 39 05.8**	**-1.0**
MAKZ	**Makanchi**	**36.82**	**267**	eP	**P**	**23 39 06.5**	**-1.0**
	comp=Z,21nm,1.3s						
MAKZ	**Makanchi**	**36.82**	**267**	eP	**P**	**23 39 06.5**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,21nm,1.3s						
WMQ	**Urumqi**	**37.16**	**259**	P	**P**	**23 39 12.4**	**+2.0**
WMQ				pP	sP	23 39 15.5	+0.6
WMQ				sP	pP	23 39 19.8	+6.1
WMQ				pmax	pmax		
	comp=Z,24nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,300nm,11.6s						
WMQ				LR	LR		
	comp=Z,1µm,11.1s						
WMQ				LR	LR		
	comp=Z,660nm,10.1s						
WMQ				LR	LR		
	comp=Z,360nm,17.3s						
ARU	**Arti**	**37.82**	**296**d	iP	**P**	**23 39 15.9**	**+0.1**
ARU						23 40 39.4	
ARU				S	**S**	**23 45 07.7**	**+1.5**
ARU				SS	**SnSn**	**23 47 45.2**	**-0.9**
ARU				pmax	pmax		
	comp=Z,19nm,1.8s						
TMCR	**Tamitsa**	**38.02**	**316**	eP	**P**	**23 39 18.3**	**+0.9**
TMCR				pmax	pmax		
	comp=Z,17nm,0.8s						
NJ2	**Nanjing**	**38.18**	**214**	eP	**P**	**23 39 20.8**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,800nm,11.5s						
NJ2				LR	LR		
	comp=Z,420nm,11.9s						
NJ2				LR	LR		
	comp=Z,540nm,12.5s						
LZH	**Lanzhou**	**38.37**	**235**	eP	**P**	**23 39 23.4**	**+2.6**
LZH				pP	sP	23 39 26.8	+1.5
LZH				sP	pP	23 39 29.1	+5.1
LZH				PP	**PnPn**	**23 40 57.3**	**+7.2**
LZH				S	**S**	**23 45 12.1**	**-3.2**
LZH				sS	ScP	23 45 22.6	+1.0
LZH				SS	**SnSn**	**23 47 54.9**	**-5.3**
LZH				pmax	pmax		
	comp=Z,73nm,1.2s						
LZH				pmax	pmax		
	comp=Z,200nm,4.9s						
LZH				LR	LR		
	comp=Z,610nm,14.2s						
LZH				LR	LR		
	comp=Z,630nm,13.9s						
LZH				LR	LR		
	comp=Z,780nm,15.9s						
XAN	**Xi'an**	**38.75**	**227**	P	**P**	**23 39 24.3**	**+0.4**
XAN				pP	sP	23 39 28.6	+0.1
XAN				sP	pP	23 39 31.4	+4.2
XAN				PP	**PnPn**	**23 40 56.0**	**+1.4**
XAN				S	**S**	**23 45 19.3**	**-1.6**
XAN				SS	**SnSn**	**23 48 01.9**	**-7.6**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,81nm,4.7s						
XAN				LR	LR		
	comp=Z,660nm,13.3s						
XAN				LR	LR		
	comp=Z,400nm,13.0s						
XAN				LR	LR		
	comp=Z,640nm,11.7s						
YKA	**Yellowknife Ar**	**38.90**	**46**	P	**P**	**23 39 25.0**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=322,slow=8.0,SNR=38						
YKA				LR	LR	23 57 55.5	
	comp=Z,8.0nm,20.7s,baz=309,slow=40						
YKB5	**Yellowknife Ar**	**38.90**	**46**	eP	**P**	**23 39 23.6**	**-1.2**
OTUK	**Ortayu**	**39.33**	**277**	i P	**P**	**23 39 27.8**	**-0.8**
OTUK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SUMG	**Summit**	**40.11**	**0**	i P	**P**	**23 39 38.7**	**+3.4**
SUMG	**Summit**	**40.11**	**0**	i P	**P**	**23 39 38.7**	**+3.4**
WHN	**Wuhan**	**40.65**	**219**	P	**P**	**23 39 40.5**	**+0.9**
PDGK	**Podgornoye**	**40.70**	**266**	i P	**P**	**23 39 39.8**	**-0.4**
PDGK				pmax	pmax		
	comp=Z,17nm,1.1s						
JOF	**Joensuu**	**40.78**	**319**	P	**P**	**23 39 43.2**	**+2.8**
TKM2	**Tokmak 2**	**42.54**	**270**	P	**P**	**23 39 55.8**	**+0.5**
	SNR=8.1						
TKM2	**Tokmak 2**	**42.54**	**270**	i P	**P**	**23 39 55.4**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KDJ	**Kajisay**	**42.61**	**268**	eP	**P**	**23 39 57.5**	**+1.6**
	comp=Z,16nm,1.3s						
KDJ	**Kajisay**	**42.61**	**268**	P	**P**	**23 39 57.5**	**+1.6**
KDJ				pmax	pmax		
	comp=Z,16nm,1.3s						
USP	**Ospenovka**	**42.67**	**271**	P	**P**	**23 39 57.0**	**+0.9**
	SNR=15						
CHMS	**Chumysh**	**42.80**	**270**	P	**P**	**23 39 57.9**	**+0.7**
	SNR=15						
AKTO	**Aktyubinsk**	**42.85**	**291**	P	**P**	**23 39 56.5**	**-1.0**
	comp=Z,7.5nm,0.5s,baz=48,slow=7.6,SNR=33						
FRU	**Bishkek**	**42.99**	**270**	eP	**P**	**23 40 00.0**	**+1.2**
FRU				e		23 41 48.0	
FRU1	**Bishkek**	**43.01**	**270**	eP	**P**	**23 40 00.5**	**+1.6**
	comp=Z,36nm,1.2s						
FRU1	**Bishkek**	**43.01**	**270**	P	**P**	**23 40 00.5**	**+1.6**
FRU1				pmax	pmax		
	comp=Z,36nm,1.2s						
KBK	**Karagaybulak**	**43.02**	**270**	P	**P**	**23 40 00.2**	**+1.1**
	SNR=9.6						
AB31	**Akbulak array**	**43.13**	**288**	i P	**P**	**23 39 59.2**	**-0.6**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ABKAR	**Akbulak array**	**43.13**	**288**	eP	**P**	**23 39 59.0**	**-0.7**
CD2	**Chengdu**	**43.19**	**232**	eP	**P**	**23 40 01.0**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AAK	**Ala-Archa**	**43.21**	**270**	P	**P**	**23 40 01.7**	**+0.9**
	SNR=31						
AAK	**Ala-Archa**	**43.21**	**270**	eP	**P**	**23 40 01.6**	**+0.9**
	comp=Z,17nm,0.6s						
AAK	**Ala-Archa**	**43.21**	**270**	i P	**P**	**23 40 01.6**	**+0.9**
AAK				pmax	pmax		
	comp=Z,11nm,1.2s						
AAK	**Ala-Archa**	**43.21**	**270**	P	**P**	**23 40 01.6**	**+0.9**
	comp=Z,15nm,0.6s,baz=95,slow=3.7,SNR=110						
FIA1	**FINESS Array S**	**43.33**	**321**	eP	**P**	**23 40 00.0**	**-1.2**
FINES	**FINESS Array B**	**43.33**	**321**	P	**P**	**23 40 00.3**	**-0.9**
	comp=Z,4.6nm,0.7s,baz=35,slow=8.8,SNR=33						
FINES				LR	LR	00 03 41.4	
	comp=Z,103nm,18.2s,baz=20,slow=44						
KZA	**Kyzart**	**43.39**	**269**	P	**P**	**23 40 03.2**	**+0.8**
	SNR=23						
EKS2	**Erkin-Say**	**43.46**	**271**	P	**P**	**23 40 03.4**	**+0.7**
	SNR=5.7						
UCH	**Uchtor**	**43.55**	**270**	P	**P**	**23 40 04.8**	**+1.0**
	SNR=9.2						
NRN	**Naryn**	**43.66**	**268**	eP	**P**	**23 40 05.6**	**+1.1**
	comp=Z,14nm,1.1s						
NRN	**Naryn**	**43.66**	**268**	eP	**P**	**23 40 05.6**	**+1.1**
NRN				pmax	pmax		
	comp=Z,14nm,1.1s						
AML	**Almayashu**	**43.95**	**271**	P	**P**	**23 40 08.0**	**+1.1**
	SNR=13						
MNAS	**Manas**	**44.10**	**272**	i P	**P**	**23 40 08.7**	**+0.9**
MNAS				pmax	pmax		
	comp=Z,26nm,1.1s						
KK31	**Karatay Array**	**44.34**	**274**	eP	**P**	**23 40 09.9**	**+0.4**
KK31	**Karatay Array**	**44.34**	**274**	eP	**P**	**23 40 10.0**	**+0.4**
KKAR	**Karatay Array**	**44.34**	**274**	eP	**P**	**23 40 09.9**	**+0.4**
KKAR	**Karatay Array**	**44.34**	**274**	eP	**P**	**23 40 10.0**	**+0.4**
ARSB	**Arslanbob**	**44.91**	**271**	eP	**P**	**23 40 15.4**	**+1.1**
	comp=Z,9.9nm,1.0s						
KSH	**Kashi**	**45.32**	**267**	P	P	23 40 24.1	+6.5
KSH				pP	sP	23 40 26.6	+4.4
KSH				PP	**PP**	**23 42 10.6**	**+7.3**
KSH				S	**S**	**23 47 04.6**	**+6.6**
KSH				sS	sS	23 47 11.1	+7.7
KSH				SS	**SS**	**23 50 19.8**	**-0.7**
KSH				pmax	pmax		
	comp=Z,250nm,5.2s						
KSH				LR	LR		
	comp=Z,120nm,3.9s						
KSH				LR	LR		
	comp=Z,130nm,4.8s						
KSH				LR	LR		
	comp=Z,330nm,7.6s						
SFK	**Sufi-Kurgan**	**45.84**	**269**	i P	**P**	**23 40 22.0**	**+0.2**
SFK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OBN	**Obninsk**	**45.98**	**310**	i P	**P**	**23 40 21.9**	**-0.5**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,136nm,19.0s						
NC405	**NORSAR Array S**	**46.75**	**330**	eP	**P**	**23 40 27.6**	**-0.8**
NB2	**NORSAR Subarra**	**46.91**	**330**	P	**P**	**23 40 28.2**	**-1.5**
	comp=Z,1.7nm,0.6s,baz=24,slow=7.9						
NOA	**NORSAR Array B**	**46.91**	**330**	P	**P**	**23 40 28.4**	**-1.3**
	comp=Z,4.2nm,0.8s,baz=24,slow=7.8,SNR=20						
NC602	**NORSAR Array S**	**47.13**	**330**	eP	**P**	**23 40 30.2**	**-1.2**
NAO01	**NORSAR Array S**	**47.16**	**330**	eP	**P**	**23 40 30.9**	**-0.7**
FCC	**Fort Churchill**	**47.30**	**36**	eP	**P**	**23 40 32.6**	**-0.1**
	comp=Z,30nm,1.4s						
FCC	**Fort Churchill**	**47.30**	**36**	eP	**P**	**23 40 32.6**	**-0.1**
FCC				pmax	pmax		
	comp=Z,30nm,1.4s						
LPSR	**Galich'ya Gora**	**47.43**	**306**	eP	**P**	**23 40 36.6**	**+2.8**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VRH	**Novokhopyorsk**	**47.76**	**303**	eP	**P**	**23 40 34.4**	**-2.0**
VRH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LSA	**Lhasa**	**48.44**	**245**	P	**P**	**23 40 44.1**	**+1.6**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KONO	**Kongsberg**	**48.51**	**330**c	eP	**P**	**23 40 44.9**	**+2.8**
KONO				pmax	pmax		
	comp=Z,11nm,1.7s						
VSR	**Storozhevoye**	**48.56**	**305**	eP	**P**	**23 40 41.5**	**-1.1**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KMI	**Kunming**	**48.92**	**230**	P	**P**	**23 40 46.8**	**+0.9**
KMI				pP	sP	23 40 50.3	-0.2
KMI				sP	pP	23 40 59.4	+10
KMI				pmax	pmax		
	comp=Z,22nm,0.8s						
KMI				pmax	pmax		
	comp=Z,140nm,4.0s						
FFC	**Flin Flon**	**48.97**	**44**	eP	**P**	**23 40 45.2**	**-0.5**
	comp=Z,12nm,0.7s						
FFC	**Flin Flon**	**48.97**	**44**	eP	**P**	**23 40 45.2**	**-0.5**
FFC				pmax	pmax		
	comp=Z,12nm,0.7s						
SHL	**Shillong**	**51.98**	**243**	eP	**P**	**23 41 09.2**	**+0.3**
SHL	**Shillong**	**51.98**	**243**	eP	**P**	**23 41 09.3**	**+0.3**
SHL	**Shillong**	**51.98**	**243**	eP	**P**	**23 41 13.0**	**+4.0**
AKASG	**Malin Array Be**	**51.99**	**312**	P	**P**	**23 41 07.4**	**-1.1**
	comp=Z,4.3nm,0.6s,baz=28,slow=8.2,SNR=10.0						
KIEV	**Kiev**	**52.00**	**312**	i P	**P**	**23 41 09.3**	**+0.7**
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JIRN	**Jiri**	**52.06**	**250**	eP	**P**	**23 41 10.4**	**+0.6**
	comp=Z,245nm,1.1s						
KKN	**Kakani**	**52.27**	**251**	eP	**P**	**23 41 12.2**	**+1.1**
	comp=Z,80nm,0.8s						
DANN	**Dangsing**	**52.31**	**252**	eP	**P**	**23 41 12.3**	**+0.7**
	comp=Z,102nm,0.8s						
KBL	**Kabul**	**52.34**	**270**	eP	**P**	**23 41 11.1**	**-0.5**
	comp=Z,3.3nm,0.6s						
KBL	**Kabul**	**52.34**	**270**	eP	**P**	**23 41 11.1**	**-0.5**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PKIN	**Phulchoki**	**52.42**	**250**	eP	**P**	**23 41 12.8**	**+0.5**
	comp=Z,37nm,0.8s						
PKI	**Pulchoki**	**52.42**	**250**	eP	**P**	**23 41 12.9**	**+0.5**
	comp=Z,83nm,1.2s						
DMN	**Daman**	**52.49**	**251**	eP	**P**	**23 41 13.6**	**+0.7**
	comp=Z,27nm,0.8s						
RAMN	**Ramite**	**52.56**	**249**	eP	**P**	**23 41 13.8**	**+0.5**
	comp=Z,75nm,1.0s						
PYUN	**Piuthan**	**52.82**	**253**	eP	**P**	**23 41 15.4**	**+0.2**
	comp=Z,113nm,1.0s						
KOLN	**Koldanda**	**52.90**	**252**	eP	**P**	**23 41 16.2**	**+0.4**
	comp=Z,136nm,1.0s						
MAK	**Makhachkala**	**52.98**	**294**	eP	**P**	**23 41 13.2**	**-2.8**
MAK				e		23 43 11.6	
MAK				ePPP	PPP	23 44 17.5	
MAK				eS	**S**	**23 48 42.1**	**-3.0**
MAK				eSS	**SS**	**23 52 21.8**	**-1.6**
MAK				pmax	pmax		
	comp=Z,11nm,0.3s						
MAK				MLR	MLR		
	comp=Z,409nm,16.0s						
GEYT	**Alibeck**	**53.52**	**282**	P	**P**	**23 41 19.0**	**-1.1**
	comp=Z,2.6nm,0.6s,baz=344,slow=4.8,SNR=7.9						
GYA0B	**ALIBECK ARRAY**	**53.52**	**282**	eP	**P**	**23 41 21.5**	**+1.4**
	comp=Z,6.6nm,0.8s						
KIV	**Kislovodsk**	**53.77**	**298**	eP	**P**	**23 41 22.2**	**+0.3**
	comp=Z,13nm,1.1s						
KIV	**Kislovodsk**	**53.77**	**298**	eP	**P**	**23 41 21.8**	**-0.1**
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,62nm,17.0s						
KBZ	**Khabaz**	**53.90**	**298**	P	**P**	**23 41 22.0**	**-0.7**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	**53.90**	**298**	P	**P**	**23 41 22.0**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=81,slow=3.0,SNR=22						
LVV	**L'vov**	**54.22**	**315**	eP	**P**	**23 41 27.4**	**+2.4**
ZEI	**Tsey**	**54.39**	**296**	eP	**P**	**23 41 25.0**	**-1.6**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MCMT	**McKenzie Canyo**	**54.55**	**58**	eP	**P**	**23 41 29.7**	**+1.9**
ULM	**Lac du Bonnet**	**54.62**	**42**	P	**P**	**23 41 26.4**	**-1.5**
	comp=Z,2.2nm,0.6s,baz=342,slow=4.2,SNR=5.1						
ULM				LR	LR	00 08 01.2	
	comp=Z,193nm,19.0s,baz=338,slow=40						
GCMT	**Greycliff**	**54.70**	**55**	eP	**P**	**23 41 27.7**	**-1.1**
ANN	**Anapa**	**54.76**	**303**	eP	P	23 41 39.7	+11
ANN				e*PP	sP	23 41 47.6	+14
ANN				eS	S	23 49 30.7	+22
OJC	**Ojcow**	**54.96**	**319**	eP	**P**	**23 41 30.2**	**-0.2**
OJC	**Ojcow**	**54.96**	**319**	eP	**P**	**23 41 30.0**	**-0.4**
	comp=Z,10nm,1.0s						
OJC	**Ojcow**	**54.96**	**319**	eP	**P**	**23 41 30.0**	**-0.4**
OJC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YHH	**Holmes Hill**	**55.23**	**56**	eP	**P**	**23 41 34.9**	**+2.2**
	comp=Z,6.9nm,1.0s						
RLMT	**Red Lodge**	**55.43**	**55**	eP	**P**	**23 41 36.1**	**+2.0**
	comp=Z,14nm,0.8s						
YFT	**Old Faithful**	**55.53**	**56**	eP	**P**	**23 41 38.0**	**+3.1**
	comp=Z,9.1nm,0.8s						
NIE	**Niedzica**	**55.57**	**318**	eP	**P**	**23 41 35.7**	**+0.9**
NIE	**Niedzica**	**55.57**	**318**	eP	**P**	**23 41 35.7**	**+0.9**
CLL	**Collm**	**55.58**	**324**	eP	**P**	**23 41 33.3**	**-1.5**
	comp=Z,11nm,0.8s						
CLL	**Collm**	**55.58**	**324**	eP	**P**	**23 41 33.0**	**-1.8**
	comp=Z,12nm,0.7s						
CLL				e		23 41 37.0	
CLL	**Collm**	**55.58**	**324**	eP	**P**	**23 41 33.0**	**-1.8**
CLL				e		23 41 37.0	
CLL				pmax	pmax		
	comp=Z,12nm,0.7s						
H17A	**Grant Village**	**55.67**	**56**	eP	**P**	**23 41 39.0**	**+3.1**

	comp=Z,8.8nm,1.1s						
DPC	**Dobruska-Polom**	**55.70**	**321**	*e*P	**P**	**23 41 35.2**	**-0.5**
DPC	**Dobruska-Polom**	**55.70**	**321**	*e*P	**P**	**23 41 35.2**	**-0.5**
BRG	**Berggiesshubel**	**55.77**	**323**	*e*P	**P**	**23 41 35.0**	**-1.2**
	comp=Z,1.9nm,0.7s						
BRG	**Berggiesshubel**	**55.77**	**323**	*e*P	**P**	**23 41 35.0**	**-1.2**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KRLC	**Kraliky**	**55.84**	**321**	*e*P	**P**	**23 41 36.4**	**-0.4**
KRLC	**Kraliky**	**55.84**	**321**	*e*P	**P**	**23 41 36.4**	**-0.4**
BUR08	**Bucovina Ar. S**	**55.88**	**314**	*e*P	**P**	**23 41 36.6**	**-0.6**
BUR04	**Bucovina Ar. S**	**55.91**	**313**	*e*P	**P**	**23 41 36.3**	**-1.0**
FLWY	**Flagg Ranch**	**55.91**	**56**	*e*P	**P**	**23 41 39.2**	**+1.7**
	comp=Z,11nm,0.8s						
MORC	**Moravsky Berou**	**55.94**	**320**	*e*P	**P**	**23 41 37.2**	**-0.2**
	comp=Z,7.2nm,1.0s						
MORC	**Moravsky Berou**	**55.94**	**320**	*e*P	**P**	**23 41 37.2**	**-0.2**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MORC	**Moravsky Berou**	**55.94**	**320**	*e*P	**P**	**23 41 36.7**	**-0.7**
PVCC	**Panska Ves**	**55.95**	**323**	*e*P	**P**	**23 41 37.3**	**-0.2**
PVCC	**Panska Ves**	**55.95**	**323**	*e*P	**P**	**23 41 37.3**	**-0.2**
SCHQ	**Schefferville**	**55.97**	**20**	P	**P**	**23 41 36.3**	**-1.3**
	comp=Z,6.4nm,0.8s,baz=357,slow=6.4,SNR=10						
CHTO	**Chiang Mai**	**56.00**	**232**	*e*P	**P**	**23 41 38.5**	**+0.3**
	comp=Z,14nm,1.3s						
CHTO	**Chiang Mai**	**56.00**	**232**	*e*P	**P**	**23 41 38.5**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,14nm,1.3s						
CHTO	**Chiang Mai**	**56.00**	**232**	P	**P**	**23 41 42.2**	**+4.0**
	comp=Z,39nm,1.2s						
CMMT	**Chiang Mai**	**56.00**	**232**	P	**P**	**23 41 42.1**	**+3.9**
	comp=Z,8.7nm,1.2s						
LANS	**Liptovska Anna**	**56.03**	**318**	*e*P	**P**	**23 41 38.6**	**+0.5**
LANS	**Liptovska Anna**	**56.03**	**318**	*e*P	**P**	**23 41 38.6**	**+0.5**
LAMP	**Lampang**	**56.07**	**231**	P	**P**	**23 41 39.6**	**+0.9**
	comp=Z,8.0nm,1.0s,comp=Z,96nm						
MOOW	**Moose Ponds**	**56.19**	**57**	*e*P	**P**	**23 41 40.9**	**+1.3**
	comp=Z,4.4nm,0.8s						
FXWY	**Fox Creek**	**56.20**	**57**	*e*P	**P**	**23 41 42.0**	**+2.3**
	comp=Z,11nm,1.5s						
CMAR	**Chiang Mai Arr**	**56.34**	**232**	*i*P	**P**	**23 41 40.2**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**56.34**	**232**	P	**P**	**23 41 39.3**	**-1.3**
	comp=Z,1.1nm,0.5s,baz=357,slow=7.1,SNR=10						
CMAR				LR	LR	00 08 33.5	
	comp=Z,138nm,18.9s,baz=28,slow=39						
TPAW	**Teton Pass**	**56.36**	**57**	*e*P	**P**	**23 41 41.8**	**+1.0**
	comp=Z,6.3nm,0.8s						
CM01	**Chiang Mai Arr**	**56.37**	**232**	*e*P	**P**	**23 41 40.8**	**0.0**
GNI	**Garni**	**56.44**	**294**	*ce*P	**P**	**23 41 42.9**	**+1.6**
GNI				pmax	pmax		
	comp=Z,19nm,1.0s						
GOPC	**GO Pecny, Ondr**	**56.47**	**322**	*e*P	**P**	**23 41 41.8**	**+0.6**
GOPC	**GO Pecny, Ondr**	**56.47**	**322**	*e*P	**P**	**23 41 41.8**	**+0.6**
REDW	**Red Top Meadow**	**56.50**	**57**	*e*P	**P**	**23 41 43.3**	**+1.4**
	comp=Z,6.6nm,0.8s						
MOX	**Moxa**	**56.51**	**325**	P	**P**	**23 41 41.8**	**+0.3**
MOX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
UTTA	**Uttaradit**	**56.53**	**230**	P	**P**	**23 41 43.7**	**+1.8**
	comp=Z,5.9nm,0.8s,comp=Z,56nm						
VRAC	**Vranov**	**56.60**	**321**	*e*P	**P**	**23 41 41.5**	**-0.7**
NKC	**Novy Kostel**	**56.71**	**324**	*e*P	**P**	**23 41 42.8**	**-0.1**
NKC	**Novy Kostel**	**56.71**	**324**	*e*P	**P**	**23 41 42.8**	**-0.1**
JAVC	**Velka Javorina**	**56.75**	**320**	*e*P	**P**	**23 41 43.9**	**+0.6**
VYHS	**Vyhne**	**56.80**	**319**	*e*P	**P**	**23 41 43.4**	**-0.2**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
VYHS	**Vyhne**	**56.80**	**319**	*e*P	**P**	**23 41 43.4**	**-0.2**
KRUC	**Moravsky**	**56.88**	**321**	*e*P	**P**	**23 41 43.6**	**-0.5**
TREC	**Trest**	**56.88**	**321**	*e*P	**P**	**23 41 44.1**	**-0.1**
TREC	**Trest**	**56.88**	**321**	*e*P	**P**	**23 41 44.1**	**-0.1**
SUKH	**Sukhothai**	**57.05**	**231**	P	P	23 41 50.9	+5.3
	comp=Z,3.7nm,0.9s						
PSZ	**Piszkesteto**	**57.06**	**318**	*e*P	**P**	**23 41 45.7**	**+0.2**
	comp=Z,9.3nm,0.9s						
PSZ	**Piszkesteto**	**57.06**	**318**	*e*P	**P**	**23 41 45.7**	**+0.2**
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MODS	**Modra-Piesok**	**57.30**	**320**	*e*P	**P**	**23 41 46.1**	**-1.0**
MODS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MODS	**Modra-Piesok**	**57.30**	**320**	*e*P	**P**	**23 41 46.1**	**-1.0**
BW06	**Boulder Array**	**57.45**	**56**	*e*P	**P**	**23 41 49.2**	**+0.7**
	comp=Z,5.9nm,0.8s						
PD31	**Pinedale Array**	**57.45**	**56**	*e*P	**P**	**23 41 49.2**	**+0.6**
PDAR	**Pinedale Array**	**57.45**	**56**	*e*P	**P**	**23 41 48.0**	**-0.5**
PDAR	**Pinedale Array**	**57.45**	**56**	P	**P**	**23 41 48.2**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=9.8,slow=2.7,SNR=37						
PDAR				LR	LR	00 09 43.8	
	comp=Z,199nm,19.8s,baz=339,slow=39						
KHC	**Kasperske Hory**	**57.48**	**323**	*e*P	**P**	**23 41 47.8**	**-0.6**
KHC	**Kasperske Hory**	**57.48**	**323**	*e*P	**P**	**23 41 47.8**	**-0.6**
PBKT	**Sadao Pong**	**57.52**	**229**	*e*P	**P**	**23 41 50.6**	**+1.6**
	comp=Z,6.1nm,0.8s						
PBKT	**Sadao Pong**	**57.52**	**229**	P	P	23 41 54.9	+6.0
	comp=Z,6.7nm,1.1s						
MLR	**Muntele Rosu**	**57.64**	**312**	*e*P	**P**	**23 41 50.4**	**+0.7**
	comp=Z,6.5nm,0.6s						
MEM	**Membach**	**57.72**	**329**	⇑P	**P**	**23 41 50.1**	**+0.1**
MEM				⇑pP	**pP**	**23 41 52.9**	**-0.4**
	comp=Z,8.8nm,1.1s						
GERES	**GERESS Array B**	**57.72**	**323**	P	**P**	**23 41 49.4**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=33,slow=6.2,SNR=14						
GEA0	**GERESS Array S**	**57.73**	**323**	*e*P	**P**	**23 41 49.4**	**-0.8**
SPUT	**South Promonto**	**57.83**	**59**	*e*P	**P**	**23 41 53.3**	**+2.2**
	comp=Z,2.5nm,0.9s						
BCLA	**Clavier**	**58.04**	**329**	⇑P	**P**	**23 41 51.6**	**-0.7**
BCLA				⇑pP	**pP**	**23 41 55.0**	**-0.5**
CONA	**Conrad Observa**	**58.06**	**321**	*e*pP	**P**	**23 41 54.0**	**+1.4**
	comp=Z,9.5nm,1.5s						
TCUT	**Toone Canyon**	**58.34**	**59**	*e*P	**P**	**23 41 57.1**	**+2.3**
	comp=Z,11nm,0.7s						
NV01	**Mina Array Sit**	**58.41**	**66**	*e*P	**P**	**23 41 56.2**	**+0.9**
NVAR	**Mina Array Bea**	**58.41**	**66**	P	**P**	**23 41 56.2**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=322,slow=5.4,SNR=20						
NVAR				LR	LR	00 09 23.9	
	comp=Z,193nm,21.6s,baz=330,slow=38						
K22A	**Casper**	**58.51**	**54**	*e*P	**P**	**23 41 56.1**	**+0.2**
	comp=Z,24nm,1.5s						
MOA	**Molln**	**58.52**	**322**	*e*P	**P**	**23 41 55.3**	**-0.4**
	comp=Z,2.5nm,0.7s						
DUG	**Dugway, Tooele**	**58.71**	**60**	*e*P	**P**	**23 41 59.0**	**+1.7**
	comp=Z,5.6nm,0.8s						
DUG	**Dugway, Tooele**	**58.71**	**60**	*e*P	**P**	**23 41 59.0**	**+1.7**
DUG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JLU	**Jordanelle**	**58.79**	**59**	*e*P	**P**	**23 41 59.9**	**+1.9**
	comp=Z,9.0nm,1.0s						
MDPB	**Devils Postpil**	**58.85**	**67**	*e*P	**P**	**23 42 00.9**	**+2.4**
	comp=Z,6.9nm,0.8s						
UTHA	**Uthaitani**	**58.92**	**230**	P	**P**	**23 42 01.3**	**+2.5**
	comp=Z,3.0nm,1.1s,comp=Z,86nm						
NLU	**North Lily Min**	**59.17**	**60**	*e*P	**P**	**23 42 02.2**	**+1.6**
	comp=Z,6.0nm,0.8s						
MPU	**Maple Canyon**	**59.26**	**59**	*e*P	**P**	**23 42 03.2**	**+2.1**
	comp=Z,4.4nm,1.0s						
R11A	**Troy Canyon, C**	**59.43**	**63**	*e*P	**P**	**23 42 03.2**	**+0.9**
	comp=Z,5.0nm,0.9s						
SOKA	**Soboth**	**59.44**	**321**	*e*P	**P**	**23 42 02.8**	**+0.7**
	comp=Z,7.1nm,1.3s						
KBA	**Koelnbreinsper**	**59.46**	**322**	*e*P	**P**	**23 42 02.9**	**+0.4**
	comp=Z,11nm,1.0s						
WATA	**Walderalm**	**59.63**	**323**	*i*P	**P**	**23 42 03.2**	**-0.4**
	comp=Z,2.5nm,0.4s						
WTTA	**Wattenberg**	**59.69**	**323**	*e*P	**P**	**23 42 03.9**	**-0.1**
	comp=Z,11nm,1.0s						
OBKA	**Obir**	**59.71**	**321**	*e*P	**P**	**23 42 04.0**	**0.0**
	comp=Z,16nm,1.0s						
SQTA	**Sankt Quirin**	**59.83**	**324**	*e*P	**P**	**23 42 04.8**	**0.0**
	comp=Z,5.1nm,0.9s						
PSUT	**Pine Spring**	**59.85**	**62**	*e*P	**P**	**23 42 07.0**	**+1.7**
	comp=Z,7.7nm,0.8s						
P17A	**Butcher Ranch,**	**60.04**	**59**	*e*P	**P**	**23 42 08.5**	**+2.0**
	comp=Z,11nm,1.1s						
Q16A	**Castle Valley**	**60.40**	**59**	*e*P	**P**	**23 42 11.1**	**+2.0**
	comp=Z,7.3nm,0.8s						
ECSD	**EROS Data Cent**	**60.42**	**46**	*e*P	**P**	**23 42 07.8**	**-1.1**
	comp=Z,8.3nm,0.8s						
MSU	**Marysvale**	**60.44**	**60**	*e*P	**P**	**23 42 11.9**	**+2.6**
MSU	**Marysvale**	**60.44**	**60**	*e*P	**P**	**23 42 11.9**	**+2.6**
SRU	**San Rafael Swe**	**60.44**	**59**	*e*P	**P**	**23 42 10.9**	**+1.6**
	comp=Z,5.2nm,0.7s						
SRU	**San Rafael Swe**	**60.44**	**59**	*e*P	**P**	**23 42 10.9**	**+1.6**
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BR131	**Keskin Array S**	**60.55**	**303**	*e*P	**P**	**23 42 09.9**	**-0.1**
BRTR	**Keskin Array B**	**60.55**	**303**	P	**P**	**23 42 09.8**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=25,slow=4.0,SNR=19						
CHBT	**CHBT**	**60.76**	**226**	P	P	23 42 17.5	+6.1
MTPU	**Mount Pierson**	**60.86**	**61**	*e*P	**P**	**23 42 14.4**	**+2.1**
	comp=Z,12nm,1.4s						
CCUT	**Cedar City**	**60.90**	**62**	*e*P	**P**	**23 42 14.4**	**+1.8**
	comp=Z,2.9nm,0.8s						
LCMT	**Little Creek M**	**61.43**	**62**	*e*P	**P**	**23 42 17.5**	**+1.6**
	comp=Z,3.0nm,0.8s						
SMCO	**Snowmass**	**61.53**	**56**	*e*P	**P**	**23 42 17.8**	**+0.9**
	comp=Z,5.7nm,0.8s						
KNB	**Kanab**	**61.57**	**62**	*e*P	**P**	**23 42 19.5**	**+2.5**
	comp=Z,10.0nm,1.1s						
KNB	**Kanab**	**61.57**	**62**	*e*P	**P**	**23 42 19.5**	**+2.5**
KNB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PV14	**Lion Creek, Pa**	**61.60**	**58**	*e*P	**P**	**23 42 19.1**	**+1.8**
	comp=Z,12nm,0.8s						
PV16	**Nyswonger Mesa**	**61.69**	**58**	*e*P	**P**	**23 42 19.6**	**+1.8**
	comp=Z,7.5nm,1.0s						
PV17	**East Wray Mesa**	**61.71**	**58**	*e*P	**P**	**23 42 19.7**	**+1.8**
	comp=Z,9.1nm,1.0s						
PV15	**Paradox Valley**	**61.81**	**58**	*e*P	**P**	**23 42 19.9**	**+1.3**
	comp=Z,7.9nm,1.0s						
PV02	**Paradox Valley**	**61.84**	**58**	*e*P	**P**	**23 42 21.1**	**+2.2**
	comp=Z,3.6nm,0.7s						
PV13	**Radium Mtn., P**	**61.86**	**58**	*e*P	**P**	**23 42 20.6**	**+1.6**
	comp=Z,9.2nm,1.3s						
PV01	**Paradox Valley**	**61.97**	**58**	*e*P	**P**	**23 42 21.5**	**+1.8**
	comp=Z,5.5nm,1.1s						
SDCO	**Great Sand Dun**	**63.30**	**55**	*e*P	**P**	**23 42 29.5**	**+0.8**
HYB	**Hyderabad**	**64.20**	**252**	*i*P	**P**	**23 42 34.0**	**-0.5**
KSU1	**Kansas State U**	**64.72**	**48**	*e*P	**P**	**23 42 36.8**	**-0.9**
	comp=Z,11nm,0.9s						
CCM	**Cathedral Cave**	**67.17**	**44**	*e*P	**P**	**23 42 51.7**	**-1.7**
	comp=Z,9.3nm,0.8s						
CCM	**Cathedral Cave**	**67.17**	**44**	*e*P	**P**	**23 42 51.7**	**-1.7**
CCM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WMOK	**Wichita Mounta**	**68.15**	**51**	*e*P	**P**	**23 42 59.3**	**-0.3**
	comp=Z,3.8nm,0.7s						
WMOK	**Wichita Mounta**	**68.15**	**51**	*e*P	**P**	**23 42 59.3**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
T42A	**Van Buren**	**68.18**	**44**	*e*P	**P**	**23 42 58.0**	**-1.7**
	comp=Z,6.6nm,0.8s						
MRSI	**Marisa**	**68.47**	**202**	P	**P**	**23 43 01.2**	**-0.6**
	comp=Z,13nm,0.5s						
W41B	**Gary Mavity, V**	**69.61**	**46**	*e*P	**P**	**23 43 07.0**	**-1.7**
	comp=Z,8.8nm,0.6s						
ABTX	**Abilene, Hawle**	**69.85**	**53**	*e*P	**P**	**23 43 09.8**	**-0.5**
	comp=Z,7.5nm,0.8s						
WVT	**Waverly**	**69.88**	**42**	*e*P	**P**	**23 43 09.3**	**-1.0**
	comp=Z,6.6nm,0.9s						
WVT	**Waverly**	**69.88**	**42**	*e*P	**P**	**23 43 09.3**	**-1.0**
WVT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ES19	**SONSECA Array**	**70.09**	**333**	*e*P	**P**	**23 43 11.1**	**-0.6**
ESDC	**Sonseca Array**	**70.13**	**333**	P	**P**	**23 43 11.1**	**-0.8**
	comp=Z,4.1nm,0.8s,baz=4.1,slow=6.4,SNR=14						
KEST	**Kesra**	**71.16**	**321**	P	**P**	**23 43 18.1**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=354,slow=2.4,SNR=7.8						
PSI	**Prapat**	**71.20**	**227**	P	**P**	**23 43 17.3**	**-1.4**
	comp=Z,7.2nm,0.7s,baz=179,slow=10,SNR=5.9						
TX31	**Lajitas Ar. Si**	**71.64**	**57**	*e*P	**P**	**23 43 21.9**	**+0.6**
TXAR	**Lajitas Array**	**71.64**	**57**	P	**P**	**23 43 21.6**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=342,slow=4.0,SNR=14						
TXAR				LR	LR	00 17 23.9	
	comp=Z,131nm,19.2s,baz=0.0,slow=38						
JCT	**Junction City**	**71.80**	**54**	*e*P	**P**	**23 43 22.0**	**-0.1**
	comp=Z,13nm,0.9s						
JCT	**Junction City**	**71.80**	**54**	*e*P	**P**	**23 43 22.0**	**-0.1**
JCT				pmax	pmax		
	comp=Z,13nm,0.9s						
PALK	**Pallekele**	**72.80**	**246**	LR	LR	00 18 32.7	
	comp=Z,182nm,20.4s,baz=299,slow=38						
WRA	**Warramunga Arr**	**87.46**	**188**	P	**P**	**23 44 44.8**	**-2.1**
	comp=Z,1.2nm,0.7s,baz=3.4,slow=5.6,SNR=14						
ASAR	**Alice Springs**	**91.18**	**188**	P	**P**	**23 45 03.6**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=4.0,slow=4.5,SNR=15						
TORD	**Torodi Ar. Bea**	**94.67**	**322**	P	**P**	**23 45 19.8**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=31,slow=3.0,SNR=6.8						
VNDA	**Vanda**	**145.33**	**173**	PKPbc	**PKPbc**	**23 51 35.3**	**-0.1**
	comp=Z,4.0nm,0.9s,baz=337,slow=5.4,SNR=5.6						
PLCA	**Paso Flores**	**147.62**	**51**	PKPbc	**PKPbc**	**23 51 43.6**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=343,slow=4.7,SNR=9.7						

MEX 22 23:57:30.9±0.6, 16°.28N×98°.22W, h5^{km}±4^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.15**	**38**	*i*P	Pg	23 57 33.1	-0.7
PNIG				*e*S	Sg	23 57 36.1	+0.2

IDC **23** *00:04:31.9±0.6, 13°.65N×51°.76E, h0^{km}, mb4.1/30, mb1 4.2/31, mb1mx4.1/50, mbtmp4.1/31, ML4.3/2, MS4.0/26, Ms1 4.0/26, ms1mx3.9/44, Error ellipse: s-maj=15.4km s-min=11.1km az=119.0*

ISCJB **23** *00:04:33.7±0.4, 13°.74N±0°.05×51°.67E±0°.05, h21^{km}, mb4.2/46, MS4.0/24, Error ellipse: s-maj=8.3km s-min=5.7km az=148.5*

NEIC **23** *00:04:33.4±0.4, 13°.67N×51°.73E, h10^{km}, mb4.5/11, Error ellipse: s-maj=8.6km s-min=5.8km az=135.0*

GCMT **23** *00:04:37.4±0.3, 13°.93N±0°.02×51°.56E±0°.02, h22^{km}±1^{km}, MW5.0/77, Moment Tensor Solution. s27,c29; s77,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.23±.16; M$_{\theta\theta}$2.57±.12; M$_{\phi\phi}$-2.35±.12; M$_{r\theta}$-1.05±.20; M$_{\theta\phi}$2.16±.10; M$_{\phi r}$0.40±.20; Best double couple: M$_0$3.46100×10^{16} NP1:φ$_s$114.00000°,δ89.00000°,λ-19.00000°. NP2: φ$_s$204.00000°,δ71.00000°,λ-179.00000°. Principal axes: T 3.5740, Plg13.0000°, Azm161.0000°; N -0.2310, Plg71.0000°, Azm292.0000°; P -3.3490, Plg14.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

OMAN **23** *00:04:38.4±0.4, 14°.20N×51°.77E, h10^{km}, ml4.5/5 Error ellipse: s-maj=8.5km s-min=7.5km az=285.0*

ISC 23 00:04:35.9±0.5, 13°.82N±0°.07×51°.66E±0°.07, h21^{km}, n80, σ1^{s}.57/73, mb4.3/46, MS4.0/25, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABTO	**Aybut**	**3.85**	**24**	S	**Sn**	**00 06 14.6**	**-4.1**
RBK	**Rabkut**	**4.40**	**33**	P	**Pn**	**00 05 40.6**	**-1.0**
	SNR=17						
RBK				S	**Sn**	**00 06 29.0**	**-3.4**
WHFO	**Wadi Hawf**	**4.55**	**26**	P	**Pn**	**00 05 44.0**	**+0.3**
	SNR=13						
WHFO				S	**Sn**	**00 06 31.3**	**-4.7**
DMTO	**DMTO**	**5.00**	**39**	S	**Sn**	**00 06 44.5**	**-2.5**
DAMY	**Dhamar**	**7.09**	**277**	*e*Pn	**Pn**	**00 06 18.6**	**-0.2**
ATD	**Arta Tunnel**	**8.90**	**256**	*e*Pn	**Pn**	**00 06 45.3**	**+1.9**
ATD	**Arta Tunnel**	**8.90**	**256**	Pn	**Pn**	**00 06 44.2**	**+0.8**
	12nm,0.3s,baz=97,slow=5.8,SNR=48						
ATD				LR	LR	00 09 20.2	
	comp=Z,1μm,20.8s,baz=88,slow=32						
MHTO	**MHTO**	**9.32**	**39**	P	**Pn**	**00 06 48.0**	**-1.2**
	SNR=12						
WSAR	**Wadi Sarin**	**11.46**	**34**	Pn	**Pn**	**00 07 16.9**	**-1.6**
	0.6nm,0.3s,baz=219,slow=1.6,SNR=9.0						
WSAR				LR	LR	00 11 20.5	
	comp=Z,933nm,21.5s,baz=227,slow=35						
UOSS	**Minazif**	**11.86**	**20**	*e*Pn	**Pn**	**00 07 22.6**	**-1.4**
BANOM	**Banah**	**12.80**	**19**	P	**Pn**	**00 07 35.7**	**-1.1**
	SNR=28						
FURI	**Furi**	**13.64**	**250**	*e*Pn	**Pn**	**00 07 45.5**	**-3.1**
KMBO	**Kilima Mbogo**	**20.60**	**225**	*e*P	**P**	**00 09 13.8**	**-0.4**
	18nm,1.4s						
KMBO	**Kilima Mbogo**	**20.60**	**225**	P	**P**	**00 09 12.7**	**-1.5**
	4.3nm,0.8s,baz=39,slow=13,SNR=11						
POO	**Poona**	**21.81**	**75**	*e*P	**P**	**00 09 28.0**	**+1.0**
EIL	**Elat**	**22.08**	**318**	P	**P**	**00 09 31.1**	**+1.4**
	4.5nm,0.8s,baz=151,slow=13,SNR=3.4						
EIL				LR	LR	00 17 15.0	
	comp=Z,826nm,18.2s,baz=140,slow=34						
ASF	**Jabal al Asfar**	**22.72**	**326**	P	**P**	**00 09 38.5**	**+1.9**
	3.5nm,0.7s,baz=108,slow=4.5,SNR=4.1						
ASF				LR	LR	00 19 00.4	
	comp=Z,691nm,19.2s,baz=92,slow=38						
MMAI	**Mount Meron Ar**	**24.18**	**325**	P	**P**	**00 09 53.0**	**+1.9**
	4.0nm,1.0s,baz=127,slow=11,SNR=3.0						
MMAI				LR	LR	00 19 45.6	
	comp=Z,709nm,18.2s,baz=155,slow=38						
GEYT	**Alibeck**	**24.69**	**12**	P	**P**	**00 09 56.4**	**+0.9**
	7.4nm,1.0s,baz=210,slow=8.6,SNR=13						
GEYT				LR	LR	00 20 04.4	
	comp=Z,452nm,19.0s,baz=215,slow=38						
GYA0B	**ALIBECK ARRAY**	**24.69**	**12**	*e*P	**P**	**00 09 55.4**	**-0.2**
	15nm,1.0s						
MBAR	**Mbarara**	**25.20**	**237**	P	**P**	**00 09 58.2**	**-2.4**
	1.6nm,0.2s,baz=45,slow=2.9,SNR=2.4						
KBL	**Kabul**	**25.94**	**34**	*e*P	**P**	**00 10 06.7**	**-0.4**
	15nm,1.4s						
HYB	**Hyderabad**	**26.13**	**79**	*i*P	**P**	**00 10 10.0**	**+1.1**
GNI	**Garni**	**26.92**	**348**	P	**P**	**00 10 17.8**	**+1.9**
	9.3nm,0.9s,baz=64,slow=3.4,SNR=3.5						
GNI				LR	LR	00 22 04.4	
	comp=Z,582nm,19.0s,baz=171,slow=39						
BRTR	**Keskin Array B**	**30.28**	**332**	P	**P**	**00 10 47.3**	**+1.5**
	1.1nm,0.9s,baz=161,slow=12,SNR=5.3						
BRTR				LR	LR	00 25 37.9	
	comp=Z,174nm,18.6s,baz=148,slow=42						
KBZ	**Khabaz**	**30.74**	**348**	P	**P**	**00 10 49.9**	**+0.4**
	5.2nm,1.2s,baz=148,slow=8.9,SNR=5.3						
KBZ				LR	LR	00 25 44.5	
	comp=Z,589nm,18.4s,baz=136,slow=41						
KVAR	**Kislovodsk Arr**	**31.00**	**347**	P	**P**	**00 10 52.2**	**+0.2**
	1.5nm,0.8s,baz=124,slow=7.3,SNR=2.2						
KVAR				LR	LR	00 23 52.1	
	comp=Z,312nm,19.2s,baz=98,slow=37						
KIV	**Kislovodsk**	**31.00**	**347**	*e*P	**P**	**00 10 52.7**	**+0.7**
	10nm,1.1s						
ABKAR	**Akbulak array**	**35.98**	**9**	*e*P	**P**	**00 11 36.5**	**+1.3**
LIT	**Litokhoron**	**36.59**	**321**	*e*P	**P**	**00 11 41.6**	**+1.0**
	11nm,1.1s						
AKTO	**Aktyubinsk**	**36.88**	**7**	P	**P**	**00 11 43.4**	**+0.5**
	2.8nm,0.8s,baz=187,slow=9.5,SNR=6.4						
LSZ	**Lusaka**	**37.08**	**220**	*e*P	**P**	**00 11 44.8**	**-0.4**
	2.9nm,0.9s						
LSZ	**Lusaka**	**37.08**	**220**	P	**P**	**00 11 44.4**	**-0.7**
	1.0nm,0.5s,baz=45,slow=8.6,SNR=2.8						
VTS	**Vitosha**	**37.74**	**325**	*e*P	**P**	**00 11 51.9**	**+1.4**
	6.0nm,1.0s						
SHL	**Shillong**	**39.48**	**67**	*e*P	**P**	**00 12 05.5**	**+0.2**
	22nm,1.4s						
BUR04	**Bucovina Ar. S**	**40.25**	**332**	*e*P	**P**	**00 12 11.0**	**-0.4**
MATP	**Matopo**	**40.95**	**214**	P	**P**	**00 12 16.3**	**-1.1**
	2.1nm,0.6s,baz=26,slow=10,SNR=7.2						
AKASG	**Malin Array Be**	**41.05**	**338**	P	**P**	**00 12 18.1**	**+0.4**
	2.4nm,0.7s,baz=147,slow=7.4,SNR=8.8						
AKASG				LR	LR	00 32 52.0	
	comp=Z,133nm,18.6s,baz=200,slow=41						
MKAR	**Makanchi Array**	**41.69**	**32**	LR	LR	00 31 52.1	
	comp=Z,125nm,19.1s,baz=238,slow=39						
BVAR	**Borovoye Array**	**41.85**	**17**	P	**P**	**00 12 26.1**	**+1.7**
	1.0nm,0.7s,baz=216,slow=7.1,SNR=3.1						
WMQ	**Urumqi**	**42.91**	**39**	*e*P	**P**	**00 12 35.3**	**+2.1**
WMQ				LR	LR		
	comp=N,300nm,35.9s						
WMQ				LR	LR		
	comp=E,200nm,24.9s						
WMQ				LR	LR		
	comp=Z,170nm,27.3s						
KEST	**Kesra**	**43.74**	**308**	LR	LR	00 31 06.5	
	comp=Z,186nm,19.9s,baz=237,slow=36						
VYHS	**Vyhne**	**43.92**	**329**	*e*P	**P**	**00 12 42.9**	**+1.7**
TAM	**Tamanrasset**	**44.55**	**288**	*e*P	**P**	**00 12 46.3**	**-0.6**
	comp=Z,3.4nm,0.8s						
CONA	**Conrad Observa**	**45.12**	**326**	*e*P	**P**	**00 12 50.7**	**-0.2**
	comp=Z,4.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**45.55**	**78**	P	**P**	**00 12 52.8**	**-1.9**
	comp=Z,3.3nm,0.4s,baz=275,slow=8.7,SNR=12						
CMAR				LR	LR	00 30 36.8	
	comp=Z,73nm,20.4s,baz=285,slow=34						
CM01	**Chiang Mai Arr**	**45.57**	**78**	*e*P	**P**	**00 12 57.7**	**+2.9**
MOA	**Molln**	**45.95**	**325**	*e*P	**P**	**00 12 58.3**	**+0.9**
	comp=Z,5.7nm,1.1s						
UTHA	**Uthaitani**	**46.18**	**82**	P	P	00 13 08.1	+8.5
LAMP	**Lampang**	**46.21**	**78**	P	P	00 13 07.5	+7.7
	comp=Z,6.8nm,0.9s						
GERES	**GERESS Array B**	**46.83**	**326**	P	**P**	**00 13 04.0**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=133,slow=7.5,SNR=4.3						
UTTA	**Uttaradit**	**47.11**	**79**	P	P	00 13 17.5	+11
	comp=Z,2.3nm,1.1s						
NANT	**Nan**	**47.21**	**77**	P	P	00 13 19.5	+12
MOTA	**Moosalm**	**47.47**	**323**	P	**P**	**00 13 09.2**	**-0.3**
	comp=Z,9.0nm,1.0s						
PBKT	**Sadao Pong**	**47.57**	**80**	*e*P	**P**	**00 13 13.2**	**+2.7**
	comp=Z,16nm,1.3s						
PBKT	**Sadao Pong**	**47.57**	**80**	P	P	00 13 19.8	+9.3
ZALV	**Zalesovo Beam**	**47.76**	**26**	P	**P**	**00 13 10.4**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=232,slow=7.3,SNR=4.3						
ZALV				LR	LR	00 35 53.9	
	comp=Z,108nm,18.2s,baz=250,slow=39						
TOA0	**Torodi Ar. Sit**	**48.52**	**275**	*e*P	**P**	**00 13 16.8**	**-1.1**
	comp=Z,5.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**48.52**	**275**	P	**P**	**00 13 16.7**	**-1.2**
	comp=Z,1.4nm,0.8s,baz=79,slow=7.4,SNR=11						
TORD				LR	LR	00 34 02.0	
	comp=Z,143nm,21.9s,baz=0.0,slow=36						
BOSA	**Boshof**	**49.32**	**211**	P	**P**	**00 13 22.9**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=9.5,slow=6.1,SNR=3.1						
BOSA				LR	LR	00 34 10.2	
	comp=Z,197nm,18.3s,baz=32,slow=36						
FIA1	**FINESS Array S**	**51.01**	**345**	*e*P	**P**	**00 13 35.9**	**-0.2**
FINES	**FINESS Array B**	**51.01**	**345**	P	**P**	**00 13 36.2**	**+0.1**
	comp=Z,7.1nm,1.1s,baz=156,slow=9.6,SNR=9.1						
FINES				LR	LR	00 38 08.3	
	comp=Z,150nm,18.1s,baz=139,slow=39						
ES19	**SONSECA Array**	**54.91**	**309**	*e*P	**P**	**00 14 05.1**	**-0.3**
ESDC	**Sonseca Array**	**54.95**	**309**	P	**P**	**00 14 04.7**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=88,slow=6.2,SNR=6.5						
ESDC				LR	LR	00 39 17.8	
	comp=Z,56nm,18.1s,baz=10.0,slow=38						
XAN	**Xi'an**	**55.35**	**58**	P	**P**	**00 14 09.0**	**+0.4**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,100nm,4.1s						
NB2	**NORSAR Subarra**	**55.45**	**337**	P	**P**	**00 14 08.1**	**-0.7**
	comp=Z,28nm,2.5s,baz=130,slow=7.4						
NOA	**NORSAR Array B**	**55.45**	**337**	P	**P**	**00 14 08.7**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=125,slow=7.5,SNR=4.4						
NOA				LR	LR	00 42 15.6	
	comp=Z,76nm,18.1s,baz=140,slow=41						
DBIC	**Dimbokro**	**55.96**	**269**	P	**P**	**00 14 13.8**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=9.9,slow=6.9,SNR=3.5						
DBIC				LR	LR	00 40 34.5	
	comp=Z,117nm,18.2s,baz=44,slow=39						
SONM	**Songino Array**	**56.41**	**41**	P	**P**	**00 14 16.6**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=241,slow=6.5,SNR=2.4						
SONM				LR	LR	00 42 37.3	
	comp=Z,102nm,18.6s,baz=266,slow=40						
SONA1	**Songino Array**	**56.41**	**41**	*e*P	**P**	**00 14 17.0**	**+0.9**
ARCES	**ARCESS Array B**	**58.07**	**349**	P	**P**	**00 14 27.9**	**+0.6**
	comp=Z,5.2nm,1.0s,baz=151,slow=2.8,SNR=4.7						
ARCES				LR	LR	00 42 36.9	
	comp=Z,189nm,18.9s,baz=110,slow=39						
HHC	**Hu-ho-hao-te**	**58.38**	**50**	*e*P	**P**	**00 14 28.0**	**-2.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,61nm,4.5s						
NRIK	**Noril'sk**	**59.92**	**14**	P	**P**	**00 14 41.4**	**+1.3**
	comp=Z,0.6nm,0.2s,baz=231,slow=6.5,SNR=3.4						
NRIK				LR	LR	00 43 34.1	
	comp=Z,129nm,19.1s,baz=209,slow=39						
NJ2	**Nanjing**	**63.57**	**61**	*e*P	**P**	**00 15 07.5**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
SEY	**Seymchan**	**82.62**	**27**	P	**P**	**00 16 57.5**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=297,slow=6.8,SNR=2.3						
WRA	**Warramunga Arr**	**87.94**	**111**	P	**P**	**00 17 22.6**	**-2.3**
	comp=Z,1.6nm,0.8s,baz=301,slow=3.7,SNR=8.6						
PETK	**Petropavlovsk-**	**88.42**	**35**	LR	LR	01 01 56.2	
	comp=Z,86nm,19.1s,baz=258,slow=39						
ASAR	**Alice Springs**	**88.54**	**115**	P	**P**	**00 17 25.9**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=286,slow=4.8,SNR=5.9						
STKA	**Stephens Creek**	**97.11**	**121**	LR	LR	00 53 52.2	
	comp=Z,62nm,21.6s,baz=219,slow=30						
NVAR	**Mina Array Bea**	**127.18**	**350**	PKP	**PKiKP**	**00 23 40.8**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=306,slow=0.6,SNR=4.4						

SOME ***23*** *00:07:39.4, 42.°55N×79.°63E, h25^{km}*
KRNET ***23*** *00:07:39.5±0.1, 42.°59N×79.°57E, h17^{km}, mb2.6*
NNC ***23*** *00:07:39.4±0.9, 42.°59N×79.°59E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=6.0km s-min=2.9km az=134.0*
ISC 23 00:07:37.6±2.0**, 42.°52N**±0.°05×**79.°62E**±0.°06**, h1**^{km}±14^{km}**, n44,** σ1.^{s}**50**/80**, 18C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode** 12nm,0.1s	0.65	350	P	Pb	00 07 51.6	-0.3
SHLS	117nm,0.2s			S	Sb	00 08 00.6	-0.9
SHLS	**Shalkode** baz=22	0.65	350	*e*P	Pb	00 07 51.6	-0.3
SHLS	baz=22			*e*S	Sb	00 08 00.6	-0.9
SHLS	**Shalkode** 12nm,0.1s	0.65	350	*e*P	Pb	00 07 51.6	-0.3
SHLS	117nm,0.2s			*e*S	Sb	00 08 00.6	-0.9
UZB	**Uzynbulak** 2.6nm,0.1s	0.77	325	P	Pg	00 07 53.0	+0.6
UZB	17nm,0.3s			S	Sb	00 08 03.0	-1.9
UZB	**Uzynbulak** baz=25	0.77	325	*e*P	Pg	00 07 53.0	+0.6
UZB	baz=25			*e*S	Sb	00 08 03.1	-1.9
UZB	**Uzynbulak** 2.6nm,0.1s	0.77	325	*e*P	Pg	00 07 53.0	+0.6
UZB	17nm,0.3s			*e*S	Sb	00 08 03.0	-1.9
PDGK	**Podgornoye** 0.9nm,0.1s	0.82	353	P	Pb	00 07 53.6	-1.1
PDGK	4.6nm,0.2s			S	Sb	00 08 04.2	-2.1
PDGK	**Podgornoye** 0.4nm,0.4s	0.82	353	⇓P	Pb	00 07 53.7	-1.1
PDGK	3.9nm,0.3s			⇓S	Sb	00 08 04.3	-2.0
PDGK	**Podgornoye** baz=55	0.82	353	⇓*i*P	Pb	00 07 53.7	-1.1
PDGK	baz=55			⇓*i*S	Sb	00 08 04.3	-2.0
PRZ	**Przheval'sk** baz=64	0.90	268	⇓*i*P	Pb	00 07 55.9	-0.3
PRZ	baz=64			⇓*i*S	Sg	00 08 08.5	+1.8
SATY	**Saty**	1.05	302	P	Pb	00 07 58.1	-0.5
SATY				S	Sg	00 08 11.8	+0.6
SATY	**Saty** 0.8nm,0.1s	1.05	302	*e*P	Pb	00 07 58.1	-0.5
SATY	23nm,0.1s			*e*S	Sg	00 08 11.8	+0.6
KURS	**Kuram** 0.6nm,0.2s	1.44	313	P	Pg	00 08 05.4	+0.1
KURS	4.0nm,0.4s			S	Sg	00 08 24.0	+0.1
KURS	**Kuram** baz=12	1.44	313	*e*P	Pg	00 08 05.4	+0.1
KURS	baz=12			*e*S	Sg	00 08 24.0	+0.1
KURS	**Kuram** 0.6nm,0.2s	1.44	313	*e*P	Pg	00 08 05.4	+0.1
KURS	4.0nm,0.4s			*e*S	Sg	00 08 24.0	+0.1
DJR	**Jarkent** 0.4nm,0.2s	1.82	4	P	Pb	00 08 11.9	+0.1
DJR	3.0nm,0.2s			S	Sg	00 08 35.2	-0.9
DJR	**Jarkent** 0.4nm,0.2s	1.82	4	*e*P	Pb	00 08 11.9	+0.1
DJR	3.0nm,0.2s			*e*S	Sg	00 08 35.2	-0.9
KDJ	**Kajisay** baz=56	1.85	259	⇑*i*P	Pb	00 08 13.4	+1.1
KDJ	baz=56			⇑*i*S	Sg	00 08 37.9	+0.8
MDOK	**Medeo** 1.9nm,0.5s	2.00	290	⇓Pn	Pb	00 08 14.2	-0.7
MDOK	5.0nm,0.5s			⇑Sn	Sg	00 08 41.8	-0.1
MDOK	**Medeo** 3.1nm,0.2s	2.00	290	Pg	Pb	00 08 15.3	+0.4
MDOK	5.5nm,0.5s			Lg	Lg	00 08 41.4	
MDOK	**Medeo** baz=88	2.00	290	*e*P	Pb	00 08 15.3	+0.4
MDOK	baz=88			*e*S	Sg	00 08 41.4	-0.5
MDOK	**Medeo** 3.1nm,0.2s	2.00	290	*e*P	Pb	00 08 15.3	+0.4
MDOK	5.5nm,0.5s			*e*S	Sg	00 08 41.4	-0.5
TNSS	**Tian-Shan** 3.1nm,0.2s	2.04	286	Pg	Pb	00 08 16.3	+0.6
TNSS	6.7nm,0.2s			Lg	Lg	00 08 42.7	
TNSS	**Tian-Shan** baz=84	2.04	286	*e*P	Pb	00 08 16.3	+0.6
TNSS	baz=84			⇑*i*S	Sg	00 08 42.7	-0.4
TNSS	**Tian-Shan** 3.1nm,0.2s	2.04	286	*e*P	Pb	00 08 16.3	+0.6
TNSS	6.7nm,0.2s			⇑*i*S	Sg	00 08 42.7	-0.4
CHKK	**Chushkaly** 1.4nm,0.2s	2.34	306	Pg	Pb	00 08 21.2	+0.5
CHKK	13nm,0.2s			Lg	Lg	00 08 51.1	
CHKK	**Chushkaly** baz=5.0	2.34	306	*e*P	Pb	00 08 21.2	+0.5
CHKK	baz=5.0			*e*S	Sg	00 08 51.1	-1.9
CHKK	**Chushkaly** 1.4nm,0.2s	2.34	306	*e*P	Pb	00 08 21.2	+0.5
CHKK	13nm,0.2s			*e*S	Sg	00 08 51.1	-1.9
ULHL	**Ulahol** baz=63	2.52	265	⇑*i*P	Pb	00 08 22.7	-1.0
ULHL	baz=63			⇑*e*S	Sb	00 08 54.4	-0.9
BOOM	**Boomskoye usch** baz=69	2.72	271	⇓*i*P	Pb	00 08 25.6	-1.6
BOOM	baz=69			⇓*i*S	Sb	00 08 59.3	-1.8
KST	**Kastek** 3.2nm,0.2s	2.74	282	Pg	Pb	00 08 28.5	+0.9
KST	6.4nm,0.5s			Lg	Lg	00 09 03.7	
KST	**Kastek** baz=81	2.74	282	*e*P	Pb	00 08 28.5	+0.9
KST	baz=81			⇑*i*S	Sg	00 09 03.7	-2.1
KST	**Kastek** 3.2nm,0.2s	2.74	282	*e*P	Pb	00 08 28.5	+0.9
KST	6.4nm,0.5s			⇑*i*S	Sg	00 09 03.7	-2.1
KUU	**Kurty** 0.5nm,0.2s	2.77	301	Pg	Pb	00 08 28.3	+0.4
KUU	8.5nm,0.2s			Lg	Lg	00 09 03.4	
KUU	**Kurty** baz=0.0	2.77	301	*e*P	Pb	00 08 28.3	+0.4
KUU	baz=0.0			*e*S	Sb	00 09 03.4	+1.2
KUU	**Kurty** 0.5nm,0.2s	2.77	301	*e*P	Pb	00 08 28.3	+0.4
KUU	8.5nm,0.2s			*e*S	Sb	00 09 03.4	+1.2
KAPS	**Kapalarasan** 0.6nm,0.3s	2.77	356	Pg	Pb	00 08 28.6	+0.5
KAPS	2.0nm,0.4s			Lg	Lg	00 09 03.9	
KAPS	**Kapalarasan** 0.1nm,0.2s	2.77	356	*e*P	Pb	00 08 28.6	+0.5
KAPS	2.0nm,0.4s			*e*S	Sg	00 09 03.9	-2.9
NRN	**Naryn** baz=48	2.91	249	⇑*i*P	Pb	00 08 28.6	-1.9
NRN	baz=48			⇑*i*S	Sb	00 09 04.6	-2.0
TKM2	**Tokmak 2** 0.9nm,0.5s	2.99	279	⇑Pg	Pb	00 08 30.7	-1.2
TKM2	2.2nm,0.5s			⇑Lg	Lg	00 09 10.4	
TKM2	**Tokmak 2** baz=78	2.99	279	⇑*i*P	Pb	00 08 29.2	-2.6
TKM2	baz=78			⇑*i*S	Sb	00 09 05.7	-3.2
KZA	**Kyzart** baz=62	3.27	264	⇓*e*P	Pn	00 08 33.4	+3.0
KZA	baz=62			⇓*i*S	Sb	00 09 13.0	-4.2
KBK	**Karagaybulak** baz=73	3.45	274	⇑*i*P	Pn	00 08 35.7	+3.0
KBK	baz=73			⇑*i*S	Sb	00 09 16.9	-5.3
AAK	**Ala-Archa** 1.6nm,1.0s	3.79	274	⇓Pg	Pb	00 08 44.3	-1.0
AAK	1.3nm,0.5s			⇑Lg	Lg	00 09 35.3	

IDC ***23*** *00:09:54.1±1.7, 42.°61N×79.°57E, h0^{km}, mb3.6/5, mb1 3.6/10, mb1mx3.4/50, mbtmp3.5/10, ML3.0/4, MS3.2/2, Ms1 3.2/2, ms1mx2.6/40, Error ellipse: s-maj=24.9km s-min=10.3km az=145.0*
SOME ***23*** *00:09:56.9, 42.°53N×79.°58E, h15^{km}*
KRNET ***23*** *00:09:56.2±0.1, 42.°54N×79.°63E, h12^{km}, mb4.0*
MOS ***23*** *00:09:56.7±2.1, 42.°69N×79.°63E, h21^{km}, mb4.0/2, Error ellipse: s-maj=10.0km s-min=6.9km az=84.3*
BJI ***23*** *00:09:56.1, 42.°57N×79.°52E, h8^{km}, ML3.4/10*
NNC ***23*** *00:09:57.0±0.7, 42.°59N×79.°63E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=4.9km s-min=2.7km az=138.0*
ISC 23 00:09:55.9±1.3**, 42.°58N**±0.°04×**79.°72E**±0.°03**, h13**^{km}±7^{km}**, n126,** σ1.^{s}**89**/199**, mb3.6**/5**, 43C-25D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode** 365nm,0.2s	0.60	342	P	Pb	00 10 09.1	+0.7
SHLS	8μm,0.3s			S	Sb	00 10 18.1	+1.2
SHLS	**Shalkode** baz=17	0.60	342	*e*P	Pb	00 10 09.1	+0.7
SHLS	baz=17			*e*S	Sb	00 10 18.1	+1.2
SHLS	**Shalkode** 46nm,0.1s	0.60	342	*e*P	Pb	00 10 09.1	+0.7
SHLS	8μm,0.3s			*e*S	Sb	00 10 18.1	+1.2
UZB	**Uzynbulak** 116nm,0.2s	0.76	318	P	Pg	00 10 10.5	-0.1
UZB	929nm,0.2s			S	Sg	00 10 20.7	0.0
UZB	**Uzynbulak** baz=23	0.76	318	*e*P	Pg	00 10 10.6	-0.1
UZB	baz=23			*e*S	Sg	00 10 20.8	0.0
UZB	**Uzynbulak** 11nm,0.1s	0.76	318	*e*P	Pg	00 10 10.6	-0.1
UZB	929nm,0.2s			*e*S	Sg	00 10 20.7	0.0
PDGK	**Podgornoye** 50nm,0.2s	0.76	347	P	Pb	00 10 11.2	+0.1
PDGK	311nm,0.4s			S	Sb	00 10 21.8	+0.3
PDGK	**Podgornoye** 45nm,0.4s	0.76	347	⇑P	Pb	00 10 11.2	+0.1
PDGK	417nm,0.6s			⇓S	Sb	00 10 22.2	+0.7
PDGK	**Podgornoye**	0.76	347	PG	Pb	00 10 11.2	+0.1
PDGK				S	Sb	00 10 22.2	+0.7
PDGK	comp=Z,45nm,0.4s			pmax	pmax		
PDGK	comp=N,417nm,0.6s			smax	smax		
PDGK	**Podgornoye** baz=52	0.76	347	⇑*i*P	Pb	00 10 11.2	+0.1
PDGK	baz=52			⇑*i*S	Sn	00 10 22.6	-1.4
KTMS	**Ketmen** comp=N,142nm,0.1s	0.98	28	P	Pn	00 10 16.0	+0.5
KTMS	comp=N,383nm,0.4s			S	Sn	00 10 29.6	+0.2
KTMS	**Ketmen** baz=29	0.98	28	*e*P	Pn	00 10 16.0	+0.5
KTMS	baz=29			*e*S	Sn	00 10 29.6	+0.2
KTMS	**Ketmen** comp=N,142nm,0.1s	0.98	28	*e*P	Pn	00 10 16.0	+0.5
KTMS	comp=N,383nm,0.4s			*e*S	Sn	00 10 29.6	+0.2
PRZ	**Przheval'sk** baz=67	0.98	265	⇓*i*P	Pb	00 10 13.4	-1.5
PRZ	baz=67			⇓*i*S	Sg	00 10 25.6	-2.1
SATY	**Saty** comp=N,104nm,0.1s	1.08	297	P	Pb	00 10 15.9	-0.6
SATY	comp=N,221nm,0.4s			S	Sb	00 10 29.4	-1.1
SATY	**Saty** comp=N,104nm,0.1s	1.08	297	*e*P	Pb	00 10 15.9	-0.6
SATY	comp=N,221nm,0.4s			*e*S	Sb	00 10 29.4	-1.1
KURS	**Kuram** comp=N,63nm,0.4s	1.45	309	P	Pb	00 10 23.4	+0.6
KURS	comp=N,236nm,0.5s			S	Sg	00 10 42.3	-0.4
KURS	**Kuram** baz=12	1.45	309	*e*P	Pb	00 10 23.4	+0.6
KURS	baz=12			⇓*e*S	Sg	00 10 42.3	-0.4
KURS	**Kuram** comp=N,63nm,0.4s	1.45	309	*e*P	Pb	00 10 23.4	+0.6
KURS	comp=N,236nm,0.5s			⇓*e*S	Sg	00 10 42.3	-0.4
DJR	**Jarkent** comp=N,97nm,0.3s	1.75	2	P	Pg	00 10 29.5	+0.1
DJR	comp=N,268nm,0.3s			S	Sg	00 10 53.4	+1.2
DJR	**Jarkent** comp=N,97nm,0.3s	1.75	2	*e*P	Pg	00 10 29.5	+0.1
DJR	comp=N,268nm,0.3s			⇓*i*S	Sg	00 10 53.4	+1.2
MNBS	**Baschi** comp=N,135nm,0.3s	1.78	328	P	Pg	00 10 29.5	-0.5
MNBS	comp=N,557nm,0.4s			S	Sg	00 10 53.0	-0.1
KDJ	**Kajisay** baz=58	1.94	257	⇓*i*P	Pn	00 10 30.5	+1.8
KDJ	baz=58			⇓*i*S	Sb	00 10 55.8	+0.5
KOTS	**Kotyrbulak** comp=N,204nm,0.3s	2.02	290	Pg	Pb	00 10 33.9	+1.3
KOTS	comp=N,1μm,0.5s			Lg	Lg	00 11 00.5	
KOTS	**Kotyrbulak** baz=91	2.02	290	*e*P	Pb	00 10 33.9	+1.3
KOTS	baz=91			*e*S	Sg	00 11 00.5	-0.4
KOTS	**Kotyrbulak** comp=N,204nm,0.3s	2.02	290	*e*P	Pb	00 10 33.9	+1.3
KOTS	comp=N,1μm,0.5s			*e*S	Sg	00 11 00.6	-0.4
MDOK	**Medeo** comp=N,93nm,0.5s	2.05	287	Pn	Pn	00 10 31.7	+1.5
MDOK	comp=N,461nm,0.6s			Sn	Sb	00 10 59.0	+0.6
MDOK	**Medeo** comp=N,137nm,0.4s	2.05	287	Pg	Pb	00 10 33.0	0.0
MDOK	comp=N,531nm,0.7s			Lg	Lg	00 10 58.8	
MDOK	**Medeo** baz=89	2.05	287	*e*P	Pb	00 10 33.0	0.0
MDOK	baz=89			*e*S	Sb	00 10 58.8	+0.3
MDOK	**Medeo** comp=N,137nm,0.4s	2.05	287	*e*P	Pb	00 10 33.0	0.0
MDOK	comp=N,531nm,0.7s			*e*S	Sb	00 10 58.8	+0.3
TNSS	**Tian-Shan** comp=N,181nm,0.4s	2.09	283	Pg	Pb	00 10 34.5	+0.6
TNSS	comp=N,192nm,0.5s			Lg	Lg	00 11 01.3	
TNSS	**Tian-Shan** baz=85	2.09	283	*e*P	Pb	00 10 34.5	+0.6
TNSS	baz=85			*e*S	Sb	00 11 01.3	+1.3
TNSS	**Tian-Shan** comp=N,181nm,0.4s	2.09	283	*e*P	Pb	00 10 34.5	+0.6
TNSS	comp=N,192nm,0.5s			*e*S	Sb	00 11 01.3	+1.3
KNDC	**Almaty**	2.12	288	⇑Pn	Pb	00 10 34.2	0.0
KNDC				⇓Lg	Lg	00 11 02.8	
ARXS	**Arharly** comp=N,74nm,0.5s	2.13	320	Pg	Pb	00 10 35.6	+1.2
ARXS	comp=N,935nm,0.6s			Lg	Lg	00 11 03.5	
ARXS	**Arharly** comp=N,41nm,0.4s	2.13	320	*e*P	Pb	00 10 35.6	+1.2
ARXS	comp=N,935nm,0.6s			*e*S	Sg	00 11 03.5	-1.0
AAA	**Alma-Ata** comp=N,163nm,0.4s	2.15	288	Pg	Pb	00 10 35.3	+0.5
AAA	comp=N,368nm,0.4s			Lg	Lg	00 11 02.8	
AAA	**Alma-Ata**	2.15	288	*e*PN	Pb	00 10 34.4	-0.4
AAA				*e*S	Sb	00 11 02.8	+1.4
AAA	comp=Z,164nm,0.5s			pmax	pmax		
AAA	comp=N,370nm,0.5s			smax	smax		
AAA	**Alma-Ata** baz=89	2.15	288	*e*P	Pb	00 10 35.3	+0.5
AAA	baz=89			*e*S	Sb	00 11 02.8	+1.4
AAA	**Alma-Ata** comp=N,163nm,0.4s	2.15	288	*e*P	Pb	00 10 35.3	+0.5
AAA	comp=N,368nm,0.4s			*e*S	Sb	00 11 02.8	+1.4
IZV	**Izvestkoviy** comp=N,53nm,0.3s	2.33	282	Pg	Pb	00 10 38.0	+0.1
IZV	comp=N,317nm,0.5s			Lg	Lg	00 11 07.5	
IZV	**Izvestkoviy** baz=83	2.33	282	*e*P	Pb	00 10 38.0	+0.1
IZV	baz=83			*e*S	Sb	00 11 07.5	+0.8
IZV	**Izvestkoviy** comp=N,53nm,0.3s	2.33	282	*e*P	Pb	00 10 38.0	+0.1
IZV	comp=N,317nm,0.5s			*e*S	Sb	00 11 07.5	+0.8
CHKK	**Chushkaly** comp=N,43nm,0.3s	2.37	303	Pg	Pb	00 10 39.1	+0.7
CHKK	comp=N,252nm,0.4s			Lg	Lg	00 11 09.3	
CHKK	**Chushkaly** baz=5.0	2.37	303	*e*P	Pb	00 10 39.1	+0.7
CHKK	baz=5.0			*e*S	Sb	00 11 09.2	+1.7
CHKK	**Chushkaly** comp=N,43nm,0.3s	2.37	303	*e*P	Pb	00 10 39.1	+0.7
CHKK	comp=N,252nm,0.4s			*e*S	Sb	00 11 09.3	+1.7
MTBS	**Maitube** comp=N,83nm,0.4s	2.48	284	Pg	Pb	00 10 40.4	0.0
MTBS	comp=N,278nm,0.4s			Lg	Lg	00 11 11.4	
MTBS	**Maitube** baz=85	2.48	284	*e*P	Pb	00 10 40.4	0.0
MTBS	baz=85			⇑*i*S	Sb	00 11 11.5	+0.6
MTBS	**Maitube** comp=N,83nm,0.4s	2.48	284	*e*P	Pb	00 10 40.4	0.0
MTBS	comp=N,278nm,0.4s			⇑*i*S	Sb	00 11 11.4	+0.6
KTBS	**Karatobe** comp=N,96nm,0.4s	2.49	298	Pg	Pb	00 10 40.8	+0.2
KTBS	comp=N,575nm,0.6s			Lg	Lg	00 11 12.4	
KTBS	**Karatobe** baz=98	2.49	298	*e*P	Pb	00 10 40.8	+0.2
KTBS	baz=98			*e*S	Sb	00 11 12.4	+1.2
KTBS	**Karatobe** comp=N,96nm,0.4s	2.49	298	*e*P	Pb	00 10 40.8	+0.2
KTBS	comp=N,575nm,0.6s			*e*S	Sb	00 11 12.4	+1.2
ULHL	**Ulahol** SNR=18	2.60	264	P	Pn	00 10 39.4	+1.6
ULHL	**Ulahol** baz=64	2.60	264	⇑*i*P	Pn	00 10 39.7	+1.9
ULHL	baz=64			⇑*i*S	Sn	00 11 12.4	+3.0
KAPS	**Kapalarasan** comp=N,34nm,0.5s	2.71	355	Pg	Pg	00 10 46.4	-1.4
KAPS	comp=N,253nm,0.5s			Lg	Lg	00 11 21.8	
KAPS	**Kapalarasan** comp=N,34nm,0.5s	2.71	355	*e*P	Pg	00 10 46.5	-1.4
KAPS	comp=N,253nm,0.5s			*e*S	Sg	00 11 21.8	-1.2
BOOM	**Boomskoye usch** baz=70	2.79	269	⇓*i*P	Pn	00 10 43.3	+2.8
BOOM	baz=70			⇓*i*S	Sn	00 11 17.3	+3.1
KUU	**Kurty** comp=N,19nm,0.4s	2.80	299	Pg	Pb	00 10 46.1	+0.4
KUU	comp=N,292nm,0.4s			Lg	Lg	00 11 21.2	
KUU	**Kurty** baz=0.0	2.80	299	*e*P	Pb	00 10 46.1	+0.4
KUU	baz=0.0			⇑*i*S	Sb	00 11 21.2	+1.3
KUU	**Kurty** comp=N,19nm,0.4s	2.80	299	*e*P	Pb	00 10 46.1	+0.4
KUU	comp=N,292nm,0.4s			⇑*i*S	Sb	00 11 21.2	+1.3
KST	**Kastek** comp=N,103nm,0.6s	2.80	281	Pg	Pb	00 10 46.2	+0.3
KST	comp=N,174nm,0.6s			Lg	Lg	00 11 21.4	
KST	**Kastek** baz=82	2.80	281	*e*P	Pb	00 10 46.2	+0.3
KST	baz=82			⇑*i*S	Sb	00 11 21.4	+1.2
KST	**Kastek** comp=N,103nm,0.6s	2.80	281	*e*P	Pb	00 10 46.2	+0.3
KST	comp=N,174nm,0.6s			⇑*i*S	Sb	00 11 21.4	+1.2
DGS	**Degeres** comp=N,73nm,0.3s	2.97	284	Pg	Pb	00 10 49.5	+0.7
DGS	comp=N,284nm,0.6s			Lg	Lg	00 11 26.1	
DGS	**Degeres** baz=85	2.97	284	*e*P	Pb	00 10 48.7	-0.1
DGS	baz=85			*e*S	Sb	00 11 26.0	+0.9
DGS	**Degeres** comp=N,19nm,0.4s	2.97	284	*e*P	Pb	00 10 48.7	-0.1
DGS	comp=N,286nm,0.5s			*e*S	Sb	00 11 26.1	+0.9
NRN	**Naryn** baz=49	3.00	249	⇑*e*P	Pn	00 10 46.4	+2.9
NRN	baz=49			⇑*i*S	Sn	00 11 22.6	+3.1
TKM2	**Tokmak 2** SNR=13	3.06	278	P	Pn	00 10 47.1	+3.0
TKM2	**Tokmak 2** comp=N,16nm,0.8s	3.06	278	⇓Pn	Pn	00 10 46.7	+2.6
TKM2	comp=N,23nm,0.5s			⇓Pg	Pg	00 10 52.9	-1.5
TKM2	comp=N,123nm,0.5s			⇑Lg	Lg	00 11 29.2	
TKM2	**Tokmak 2**	3.06	278	PN	Pn	00 10 46.7	+2.6
TKM2				PG	Pg	00 10 52.9	-1.5
TKM2				LG	Lg	00 11 29.2	
TKM2	**Tokmak 2** baz=79	3.06	278	⇑*i*P	Pn	00 10 46.6	+2.5
TKM2	baz=79			⇑*i*S	Sn	00 11 23.5	+2.8
KZA	**Kyzart** SNR=13	3.35	263	P	Pn	00 10 50.9	+2.5
KZA	**Kyzart** baz=63	3.35	263	⇑*e*P	Pn	00 10 51.1	+2.7
KZA	baz=63			⇑*i*S	Sn	00 11 30.8	+2.5
KBK	**Karagaybulak** SNR=21	3.52	273	P	Pn	00 10 52.9	+2.4
KBK	**Karagaybulak** baz=73	3.52	273	⇓*i*P	Pn	00 10 53.0	+2.4
KBK	baz=73			⇓*i*S	Sn	00 11 34.6	+2.5
CHMS	**Chumysh** baz=79	3.68	278	⇓*i*P	Pn	00 10 55.2	+2.7
CHMS	baz=79			⇓*i*S	Sn	00 11 38.5	+2.7
FRU1	**Bishkek**	3.76	275	⇑*i*P	Pn	00 10 56.2	+2.5

	baz=76						
FRU1				⇑iS	Sn	00 11 40.2	+2.4
	baz=76						
AAK	Ala-Archa	3.86	273	P	Pg	00 11 07.5	-2.2
	SNR=5.3						
AAK	Ala-Archa	3.86	273	⇓Pn	Pn	00 10 58.7	+3.6
AAK				⇑Pg	Pg	00 11 09.0	-0.7
	comp=N,9.0nm,0.4s						
AAK				⇑Lg	Lg	00 11 55.7	
	comp=N,42nm,0.6s						
AAK	Ala-Archa	3.86	273	PN	Pn	00 10 58.6	+3.6
AAK						00 11 11.7	
AAK						00 11 53.6	
AAK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
AAK				smax	smax		
	comp=Z,42nm,0.6s						
AAK	Ala-Archa	3.86	273	⇑iP	Pn	00 10 57.9	+2.8
	baz=73						
AAK				⇑iS	Sn	00 11 42.6	+2.2
	baz=73						
AAK	Ala-Archa	3.86	273	Pn	Pn	00 10 57.3	+2.2
	comp=Z,0.9nm,0.3s,baz=92,slow=8.9,SNR=9.5						
AAK				Pg	Pb	00 11 04.0	+0.1
	comp=Z,4.3nm,0.3s,baz=102,slow=12,SNR=24						
AAK				Lg	Lg	00 11 51.8	
	comp=Z,5.2nm,0.3s,baz=110,slow=24,SNR=10						
UCH	Uchtor	3.87	266	⇓iP	Pn	00 10 58.2	+2.6
	baz=67						
UCH				⇓iS	Sn	00 11 43.4	+2.3
	baz=67						
USP	Ospenovka	3.89	282	P	Pn	00 10 59.4	+4.0
	SNR=7.4						
USP	Ospenovka	3.89	282	⇑iP	Pn	00 10 58.4	+2.9
	baz=83						
USP				⇑iS	Sn	00 11 43.5	+2.4
	baz=83						
ARLS	Aral	4.07	262	⇑iP	Pn	00 11 00.2	+2.1
	baz=62						
ARLS				⇑iS	Sn	00 11 47.5	+1.8
	baz=62						
MAKZ	Makanchi	4.52	20	⇑Pn	Pn	00 11 07.4	+3.4
	comp=Z,5.3nm,0.3s						
MAKZ				⇑Lg	Lg	00 12 18.1	
	comp=Z,11nm,0.7s						
MAKZ	Makanchi	4.52	20	PN	Pn	00 11 07.4	+3.4
MK31	Makanchi Array	4.59	23	⇑Pn	Pn	00 11 08.7	+3.7
	comp=Z,3.1nm,0.3s						
MK31				⇑Pg	Pb	00 11 15.8	-0.5
	comp=Z,2.1nm,0.2s						
MK31				⇑Sn	Sn	00 12 02.5	+4.2
	comp=Z,8.6nm,0.4s						
MK31				⇑Lg	Lg	00 12 20.7	
	comp=Z,14nm,0.4s						
MK31	Makanchi Array	4.59	23	PN	Pn	00 11 08.5	+3.5
MK31						00 12 02.2	
MK31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MK31				smax	smax		
	comp=N,9.0nm,0.4s						
MKAR	Makanchi Array	4.59	23	Pn	Pn	00 11 07.8	+2.8
	comp=N,6.5nm,0.3s,baz=212,slow=15,SNR=182						
MKAR				Sn	Sn	00 11 51.2	-7.0
	comp=N,3.8nm,0.3s,baz=207,slow=16,SNR=5.1						
MKAR				Lg	Lg	00 12 21.8	
	comp=N,9.4nm,0.3s,baz=208,slow=28,SNR=9.5						
MKAR				LR	LR	00 13 01.6	
	comp=N,58nm,18.9s,baz=148,slow=41						
MRKS	Merke	4.79	274	Pg	Pb	00 11 23.1	+3.4
	comp=N,12nm,0.4s						
MRKS				Lg	Lg	00 12 24.6	
	comp=N,41nm,0.5s						
MRKS	Merke	4.79	274	eP	Pb	00 11 23.1	+3.4
	baz=75						
MRKS				eS	Sg	00 12 24.6	-5.1
	baz=75						
MRKS	Merke	4.79	274	eP	Pb	00 11 23.1	+3.4
	comp=N,12nm,0.4s						
MRKS				eS	Sg	00 12 24.6	-5.1
	comp=N,41nm,0.5s						
MNAS	Manas	5.33	271	⇑Pg	Pb	00 11 32.9	+3.9
	comp=N,3.6nm,0.5s						
MNAS				⇑Lg	Lg	00 12 42.9	
	comp=N,13nm,0.8s						
MNAS	Manas	5.33	271	PN	Pb	00 11 32.9	+3.9
MNAS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SFK	Sufi-Kurgan	5.34	243	⇓Pn	Pn	00 11 15.1	-0.5
	comp=Z,8.1nm,0.7s						
SFK				⇑Lg	Lg	00 12 47.0	
	comp=Z,19nm,0.9s						
SFK	Sufi-Kurgan	5.34	243	PN	Pn	00 11 15.8	+0.3
WMQ	Urumqi	5.96	75	Pn	Pn	00 11 26.3	+2.4
WMQ				Sn	Sn	00 12 34.0	+2.0
WMQ				smax	smax		
	comp=Z,71nm,0.9s						
WMQ				smax	smax		
	comp=Z,68nm,0.7s						
KK31	Karatay Array	6.79	277	⇓Pg	Pb	00 11 59.5	+5.7
	comp=Z,2.8nm,0.7s,baz=85,slow=16,SNR=6.9						
KK31				⇑Lg	Lg	00 13 30.3	
	comp=Z,5.4nm,0.6s,baz=90,slow=27,SNR=5.4						
OTUK	Ortayu	7.68	320	⇓Pn	Pn	00 11 49.0	+1.5
	comp=Z,9.6nm,1.0s						
OTUK				⇓Lg	Lg	00 13 58.7	
	comp=Z,21nm,0.8s						
OTUK	Ortayu	7.68	320	P	Pn	00 11 48.9	+1.5
OTUK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURBB	Kurchatov Arra	8.08	355	⇑Pn	Pn	00 11 57.0	+4.1
	comp=Z,0.7nm,0.9s						
KURBB				⇑Lg	Lg	00 14 10.9	
	comp=Z,75nm,0.7s						
KURBB	Kurchatov Arra	8.08	355	Pn	Pn	00 11 51.5	-1.4
	comp=Z,0.0nm,0.3s,baz=226,slow=8.1,SNR=8.3						
KURBB				Pg	Pb	00 12 15.3	-0.3
	comp=Z,0.1nm,0.3s,baz=181,slow=16,SNR=8.5						
KURBB				Lg	Lg	00 14 07.7	
	comp=Z,0.2nm,0.3s,baz=27,slow=18,SNR=4.6						
KURK	Kurchatov	8.17	355	⇑Pn	Pn	00 11 56.2	+2.1
	comp=Z,1.2nm,0.8s						
KURK				⇑Lg	Lg	00 14 13.7	
	comp=Z,55nm,1.2s						
KURK	Kurchatov	8.17	355	P	Pn	00 11 51.5	-2.6
DGZ	Jazzator, Alta	8.90	34	i P	Pn	00 12 07.6	+3.3
ZALV	Zalesovo Beam	11.86	15	Pn	Pn	00 12 44.0	-0.7
	comp=Z,0.4nm,0.3s,baz=199,slow=14,SNR=6.9						
ZALV				Sn	Sn	00 14 54.5	-2.3
	comp=Z,0.2nm,0.3s,baz=208,slow=26,SNR=4.3						
BVAR	Borovoye Array	12.17	332	Pn	Pn	00 12 46.9	-2.0
	baz=151,slow=16,SNR=2.9						
BVAR				Lg	Lg	00 16 15.4	
	baz=152,slow=35,SNR=3.1						
BRVK	Borovoye	12.24	332	i P	Pn	00 12 52.0	+2.2
KNGR	Kungurtug, Tuv	14.60	51	i P	Pn	00 13 21.6	-0.6
TLY	Talaya	18.57	52	i P	Pn	00 14 16.7	+4.0
TLY				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ARU	Arti	19.40	323	d iP	P	00 14 19.7	-1.7
ARU				S	Sn	00 17 55.5	-4.4
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SONM	Songino Array	19.46	65	eP	Pn	00 14 25.1	+1.5
ULN	Ulaanbaatar	19.91	65	i P	P	00 14 28.0	+0.7
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRDH	Bariadhala	22.20	150	LR	LR	00 26 08.1	
	comp=Z,226nm,19.7s,baz=292,slow=44						
MAK	Makhachkala	23.58	282	eP	P	00 15 05.3	-0.8
MAK				e		00 15 32.7	
MAK				eS	S	00 19 19.4	-0.5
MAK				eSS	SnSn	00 19 58.1	+1.6
MAK				MLR	MLR		
	comp=Z,383nm,15.0s						
GNI	Garni	26.25	277	i P	P	00 15 31.3	+0.4
SOC	Sochi	29.04	286	eP	P	00 15 46.4	-9.2
SOC				e		00 16 46.1	
SOC				eSS	SS	00 22 06.5	-43
BRTR	Keskin Array B	34.49	281	P	P	00 16 43.3	-0.4
	comp=Z,0.6nm,0.7s,baz=91,slow=7.2,SNR=3.6						
FINES	FINESS Array B	36.71	320	P	P	00 16 59.6	-2.7
	comp=Z,2.4nm,1.0s,baz=98,slow=10.0,SNR=2.5						
NB2	NORSAR Subarra	43.89	319	P	P	00 18 01.4	-0.4
	comp=Z,0.3nm,0.6s,baz=83,slow=7.9						
NOA	NORSAR Array B	43.89	319	eP	P	00 18 02.1	+0.3
NOA	NORSAR Array B	43.89	319	P	P	00 18 01.0	-0.9
	comp=Z,0.3nm,0.6s,baz=84,slow=8.0,SNR=3.8						
TORD	Torodi Ar. Bea	72.44	272	P	P	00 21 20.2	-2.0
	comp=Z,0.3nm,0.6s,baz=60,slow=4.6,SNR=2.9						
YKA	Yellowknife Ar	74.64	7	P	P	00 21 34.9	+0.5
	comp=Z,0.3nm,0.6s,baz=345,slow=5.9,SNR=8.2						

IDC 23 00:24:01.4±2.9**,13°.72S**×**70°.83W,h0**^{km}**,mb3.5**/2**,**
mb1 3.6/3**,mb1mx3.4**/33**,mbtmp3.4**/3**,ML2.6**/1**,MS2.7**/2**,**
Ms1 2.8/2**,ms1mx2.5**/23**,Error ellipse: s-maj=129.5km**
s-min=36.7km az=47.0,Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.65	135	Pn	Pn	00 24 59.9	+0.2
	0.4nm,0.3s,baz=304,slow=14,SNR=6.1						
LPAZ				LR	LR	00 26 41.6	
	comp=Z,68nm,20.9s,baz=254,slow=44						
NNA	Nana	6.11	286	LR	LR	00 28 01.4	
	comp=Z,109nm,19.7s,baz=94,slow=39						
TORD	Torodi Ar. Bea	76.65	73	P	P	00 35 54.4	-0.3
	0.5nm,1.0s,baz=269,slow=4.2,SNR=2.4						
YKA	Yellowknife Ar	83.28	341	P	P	00 36 29.4	-0.2
	0.2nm,0.6s,baz=143,slow=4.8,SNR=4.7						
SONM	Songino Array	145.91	3	PKPbc	PKPdf	00 43 42.8	+0.3
	0.4nm,0.6s,baz=333,slow=0.3,SNR=4.2						

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*SOME **23** 00:25:34.4,42°.58N×79°.62E,h15^{km}*
*NNC **23** 00:25:35.0±0.9,42°.63N×79°.62E,h0^{km},mb2.8,mpv2.5,*
Error ellipse: s-maj=5.6km s-min=2.8km az=134.0
*KRNET **23** 00:25:35.2±0.1,42°.63N×79°.59E,h17^{km},mb2.3*
ISC 23 00:25:34.5±1.7**,42°.60N**±0°.05×**79°.61E**±0°.05**,h15**^{km}±13^{km}**,**
n52,σ**1ˢ05**/93**,15C-4D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	0.57	349	P	Pb	00 25 46.3	+0.1
	5.2nm,0.1s						
SHLS				S	Sb	00 25 55.3	+1.1
	63nm,0.2s						
SHLS	Shalkode	0.57	349	eP	Pb	00 25 46.4	+0.1
	baz=22						
SHLS				eS	Sb	00 25 55.3	+1.1
	baz=22						
SHLS	Shalkode	0.57	349	eP	Pb	00 25 46.4	+0.1
	3.0nm,0.1s						
SHLS				eS	Sb	00 25 55.3	+1.1
	63nm,0.2s						
UZB	Uzynbulak	0.70	322	P	Pg	00 25 48.2	0.0
	1.5nm,0.1s						
UZB				S	Sb	00 25 58.3	+0.3
	10.0nm,0.2s						
UZB	Uzynbulak	0.70	322	eP	Pg	00 25 48.2	0.0
	baz=21						
UZB				eS	Sb	00 25 58.3	+0.3
	baz=21						
UZB	Uzynbulak	0.70	322	eP	Pg	00 25 48.2	0.0
	1.5nm,0.1s						
UZB				eS	Sb	00 25 58.3	+0.3
	10.0nm,0.2s						
PDGK	Podgornoye	0.74	353	P	Pg	00 25 48.6	-0.3
	1.2nm,0.2s						
PDGK				S	Sb	00 25 59.0	0.0
	1.7nm,0.2s						
PDGK	Podgornoye	0.74	353	⇓P	Pg	00 25 48.2	-0.6
	0.8nm,0.4s						
PDGK				⇓S	Sb	00 25 58.6	-0.4
	2.2nm,0.6s						
PDGK	Podgornoye	0.74	353	⇑iP	Pg	00 25 48.5	-0.3
	baz=54						
PDGK				⇑iS	Sb	00 25 58.9	-0.1
	baz=54						
PRZ	Przheval'sk	0.90	263	⇑iP	Pb	00 25 52.5	+0.6
	baz=61						
PRZ				⇑iS	Sg	00 26 05.2	+1.4
	baz=61						
SATY	Saty	1.00	298	P	Pb	00 25 53.5	0.0
	1.1nm,0.1s						
SATY				S	Sg	00 26 07.4	+0.5
	11nm,0.1s						
SATY	Saty	1.00	298	eP	Pb	00 25 53.5	0.0
	1.1nm,0.1s						
SATY				eS	Sg	00 26 07.4	+0.5
	11nm,0.1s						
KURS	Kuram	1.38	311	P	Pb	00 26 00.3	+0.3
	1.4nm,0.4s						
KURS				S	Sg	00 26 19.3	+0.3
	1.7nm,0.4s						
KURS	Kuram	1.38	311	eP	Pb	00 26 00.3	+0.3
	baz=10.0						
KURS				eS	Sg	00 26 19.3	+0.3
	baz=10.0						
KURS	Kuram	1.38	311	eP	Pb	00 26 00.3	+0.3
	1.8nm,0.5s						
KURS				eS	Sg	00 26 19.3	+0.3
	2.2nm,0.5s						
DJR	Jarkent	1.74	4	P	Pb	00 26 06.8	+0.7
	0.4nm,0.3s						
DJR				S	Sg	00 26 30.3	-0.2
	1.3nm,0.2s						
DJR	Jarkent	1.74	4	eP	Pb	00 26 06.9	+0.7
	0.3nm,0.1s						
DJR				eS	Sg	00 26 30.3	-0.2
	1.2nm,0.2s						
KDJ	Kajisay	1.86	256	⇑iP	Pb	00 26 09.4	+1.2
	baz=55						
KDJ				⇑iS	Sg	00 26 35.1	+0.7
	baz=55						
KOTS	Kotyrbulak	1.94	290	Pg	Pb	00 26 10.8	+1.2
	1.8nm,0.3s						
KOTS				Lg	Lg	00 26 37.0	
	13nm,0.3s						
KOTS	Kotyrbulak	1.94	290	eP	Pb	00 26 10.8	+1.2
	baz=89						
KOTS				eS	Sg	00 26 37.0	0.0
	baz=89						
KOTS	Kotyrbulak	1.94	290	eP	Pb	00 26 10.8	+1.2
	1.8nm,0.3s						
KOTS				eS	Sg	00 26 37.0	0.0
	13nm,0.3s						
MDOK	Medeo	1.97	288	Pn	Pb	00 26 09.9	-0.2
	1.6nm,0.5s						
MDOK				⇑Sn	Sg	00 26 38.1	+0.4
	1.7nm,0.5s						
MDOK	Medeo	1.97	288	Pg	Pb	00 26 10.9	+0.9
	1.5nm,0.3s						
MDOK				Lg	Lg	00 26 37.3	
	2.7nm,0.4s						
MDOK	Medeo	1.97	288	eP	Pb	00 26 10.9	+0.9
	baz=87						
MDOK				eS	Sg	00 26 37.3	-0.4
	baz=87						
MDOK	Medeo	1.97	288	eP	Pb	00 26 10.9	+0.9
	2.1nm,0.4s						
MDOK				eS	Sg	00 26 37.3	-0.4
	3.4nm,0.6s						
TNSS	Tian-Shan	2.01	284	Pg	Pb	00 26 11.6	+0.7
	1.6nm,0.3s						
TNSS				Lg	Lg	00 26 38.6	
	2.3nm,0.2s						
TNSS	Tian-Shan	2.01	284	eP	Pb	00 26 11.6	+0.7
	baz=83						
TNSS				eS	Sg	00 26 38.7	-0.5
	baz=83						
TNSS	Tian-Shan	2.01	284	eP	Pb	00 26 11.6	+0.7
	1.6nm,0.3s						
TNSS				eS	Sg	00 26 38.6	-0.5
	2.3nm,0.2s						
ARXS	Arharly	2.07	322	Pg	Pb	00 26 12.4	+0.6
	7.5nm,0.4s						
ARXS				Lg	Lg	00 26 39.8	
	4.7nm,0.4s						
ARXS	Arharly	2.07	322	eP	Pb	00 26 12.4	+0.6
	7.5nm,0.4s						
ARXS				eS	Sg	00 26 39.8	-1.4
	4.7nm,0.4s						
CHKK	Chushkaly	2.29	304	Pg	Pb	00 26 16.6	+1.1
	0.6nm,0.1s						
CHKK				Lg	Lg	00 26 46.8	
	4.1nm,0.3s						
CHKK	Chushkaly	2.29	304	eP	Pb	00 26 16.6	+1.1
	baz=4.0						
CHKK				eS	Sg	00 26 46.8	-1.3
	baz=4.0						
CHKK	Chushkaly	2.29	304	eP	Pb	00 26 16.6	+1.1
	0.6nm,0.1s						
CHKK				eS	Sg	00 26 46.8	-1.3
	4.1nm,0.3s						
KTBS	Karatobe	2.42	298	Pg	Pb	00 26 18.7	+1.1
	0.6nm,0.3s						
KTBS				Lg	Lg	00 26 50.6	
	7.4nm,0.2s						
KTBS	Karatobe	2.42	298	eP	Pb	00 26 18.7	+1.1
	baz=97						
KTBS				eS	Sg	00 26 50.6	-1.5
	baz=97						
KTBS	Karatobe	2.42	298	eP	Pb	00 26 18.7	+1.1
	0.2nm,0.2s						
KTBS				eS	Sg	00 26 50.6	-1.5
	7.4nm,0.2s						
ULHL	Ulahol	2.52	263	⇑iP	Pb	00 26 19.2	-0.3
	baz=62						
ULHL				⇑iS	Sb	00 26 51.3	+1.0
	baz=62						
KAPS	Kapalarasan	2.69	356	Pg	Pb	00 26 23.6	+1.2
	0.2nm,0.3s						
KAPS				Lg	Lg	00 26 58.8	
	2.0nm,0.4s						
KAPS	Kapalarasan	2.69	356	eP	Pb	00 26 23.6	+1.2
	0.1nm,0.1s						
KAPS				eS	Sg	00 26 58.8	-2.2
	2.0nm,0.4s						
BOOM	Boomskoye usch	2.71	269	⇑eP	Pb	00 26 21.6	-1.2
	baz=68						
BOOM				⇑iS	Sb	00 26 56.1	+0.2
	baz=68						
KUU	Kurty	2.72	300	Pg	Pb	00 26 23.8	+1.1
	0.6nm,0.5s						
KUU				Lg	Lg	00 26 59.2	
	1.8nm,0.3s						
KUU	Kurty	2.72	300	eP	Pb	00 26 23.9	+1.1
	baz=99						
KUU				eS	Sg	00 26 59.3	-2.5
	baz=99						
KUU	Kurty	2.72	300	eP	Pb	00 26 23.9	+1.1
	0.4nm,0.4s						
KUU				eS	Sg	00 26 59.2	-2.5
	2.0nm,0.3s						
KST	Kastek	2.72	281	Pg	Pb	00 26 24.6	+1.7
	1.5nm,0.3s						
KST				Lg	Lg	00 27 00.5	
	1.5nm,0.4s						
KST	Kastek	2.72	281	eP	Pb	00 26 24.6	+1.7
	baz=80						
KST				eS	Sg	00 27 00.5	-1.3
	baz=80						
KST	Kastek	2.72	281	eP	Pb	00 26 24.6	+1.7
	0.6nm,0.1s						
KST				eS	Sg	00 27 00.6	-1.3
	2.5nm,0.6s						
DGS	Degeres	2.89	284	Pg	Pb	00 26 27.7	+1.9
	0.9nm,0.3s						
DGS				Lg	Lg	00 27 05.7	
	5.1nm,0.5s						
DGS	Degeres	2.89	284	eP	Pb	00 26 27.7	+1.9
	baz=84						
DGS				eS	Sg	00 27 05.7	-1.7
	baz=84						
DGS	Degeres	2.89	284	eP	Pb	00 26 27.7	+1.9
	0.9nm,0.3s						
DGS				eS	Sg	00 27 05.7	-1.7
	5.1nm,0.5s						
NRN	Naryn	2.93	248	⇓iP	Pb	00 26 25.6	-1.0
	baz=47						
NRN				⇓iS	Sb	00 27 02.2	-0.1
	baz=47						
TKM2	Tokmak 2	2.97	278	⇑Pg	Pb	00 26 26.4	-0.8
	0.7nm,0.7s						
TKM2				⇑Lg	Lg	00 27 07.7	
	0.7nm,0.5s						
TKM2	Tokmak 2	2.97	278	⇑eP	Pb	00 26 25.8	-1.4
	baz=77						
TKM2				⇑iS	Sb	00 27 02.8	-0.6
	baz=77						

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*DRS **23** 00:43:05.8±0.0,42°.64N×45°.33E,h14^{km}*
*MOS **23** 00:43:06.0±0.0,42°.60N×45°.52E,h10^{km},MPVA3.5*
*NORS **23** 00:43:07.2±0.0,42°.56N×45°.51E,h5^{km},MPVA3.5*
*TIF **23** 00:43:08.9,42°.61N×45°.40E,h15^{km}±4^{km}*
ISC 23 00:43:08.5±1.0**,42°.62N**±0°.02×**45°.48E**±0°.02**,h11**^{km}±9^{km}**,**
n37,σ**1ˢ18**/72**,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	Botlikh	0.55	85	ePg	Pg	00 43 18.0	-1.3
BTLR				eSg	Sg	00 43 26.0	-0.5
DVE	Vedeno	0.59	54	ePg	Pg	00 43 18.7	-1.2
DVE				eSg	Sg	00 43 27.3	-0.4
KMGR	Komgaron	0.63	315	ePg	Pb	00 43 21.1	-0.4
KMGR				eSg	Sn	00 43 31.3	-2.2
GROC	Groznyy	0.63	22	ePg	Pb	00 43 21.0	-0.5
GROC				eSg	Sn	00 43 31.2	-2.2
VLKR	Vladikavkaz	0.73	306	ePg	Pb	00 43 22.7	-0.5
VLKR				ePg	Pg	00 43 22.9	+0.3
VLKR				eSg	Sn	00 43 34.5	-1.4
VLKR				eSg	Sb	00 43 34.6	+1.4
GUDG	Gudauri	0.76	259	P	Pb	00 43 23.3	-0.5
GUDG				S	Sg	00 43 32.7	-0.3
LACR	Lac	0.90	284	ePg	Pg	00 43 24.5	-1.3
LACR				eSg	Sn	00 43 38.8	-1.3
XNZR	Khunzakh	0.91	94	ePg	Pg	00 43 25.3	-0.7
XNZR				eSg	Sg	00 43 37.2	-0.8
LGD	Lagodekhi	0.96	144	P	Pb	00 43 26.4	-0.8
LGD	Lagodekhi	0.96	144	ePg	Pb	00 43 26.4	-0.8
BTKR	Batakoyurt	1.02	318	ePg	Pn	00 43 29.2	+0.4
BTKR				eSg	Sn	00 43 44.5	+1.4
TBLG	Delisi	1.04	212	P	Pb	00 43 28.2	-0.3
TBLG				S	Sn	00 43 43.3	-0.3
TBLG	Delisi	1.04	212	ePg	Pb	00 43 28.2	-0.3
TBLG				eSg	Sn	00 43 43.3	-0.3
ARNR	Ardon	1.04	303	ePg	Pn	00 43 29.3	+0.2
ARNR				eSg	Sn	00 43 44.2	+0.6
BTNK	Botanikuri	1.06	209	P	Pb	00 43 28.5	-0.3
BTNK				S	Sn	00 43 44.0	-0.1
DBC	Dubki	1.07	67	ePg	Pb	00 43 27.8	-1.4
DBC				eSg	Sn	00 43 44.5	+0.1
KRNR	Karanay	1.07	78	i Pg	Pb	00 43 28.0	-1.1
KRNR				eSg	Sb	00 43 42.5	-0.7
GNBR	Gunib	1.12	101	i Pg	Pb	00 43 28.9	-1.0
GNBR				eSg	Sb	00 43 44.5	-0.1
KORR	Kora	1.14	295	ePg	Pg	00 43 30.3	0.0
KORR				eSg	Sn	00 43 47.2	+1.2
ZEI	Tsey	1.18	279	ePg	Pb	00 43 29.2	-1.7
ZEI				eSg	Sb	00 43 45.1	-1.1
BUJR	Buynaksk	1.22	80	ePg	Pg	00 43 34.0	+2.1
BUJR				eSg	Sg	00 43 52.5	+4.7
TRKR	Terskaya	1.23	334	ePg	Pg	00 43 32.6	+0.4
TRKR				eSg	Sg	00 43 50.5	+2.2
STDR	Stavd-Durt	1.28	306	ePg	Pg	00 43 33.5	+0.4
STDR				eSg	Sg	00 43 52.7	+2.9
KMKR	Kumukh	1.29	111	ePg	Pn	00 43 32.5	-0.2
KMKR				eSg	Sb	00 43 50.0	+0.3
LSNR	Lesken	1.38	299	ePg	Pg	00 43 34.7	-0.4
LSNR				eSg	Sg	00 43 54.2	+1.2
DIGR	Digorskoe uzhe	1.43	282	ePg	Pb	00 43 34.2	-1.0
DIGR				eSg	Sg	00 43 53.8	-0.6
PRTR	Priterechnaya	1.43	323	ePg	Pg	00 43 35.4	-0.6
PRTR				eSg	Sg	00 43 56.1	+1.5
KZRT	Kazreti	1.47	214	P	Pb	00 43 35.4	-0.4
KZRT				S	Sb	00 43 55.1	+0.7
TRLG	Trialeti	1.49	224	P	Pb	00 43 35.9	-0.3
TRLG				S	Sg	00 43 56.2	-0.1
NCK	Nalchik	1.64	303	ePg	Pb	00 43 38.3	-0.3
NCK				eSg	Sg	00 44 02.0	+0.9
KBTC	Kuba-Taba	1.93	309	ePg	Pb	00 43 43.1	-0.6
KBTC				eSg	Sg	00 44 09.4	-1.2
BGD	Bogdanovka	1.95	227	P	Pn	00 43 09.7	-32
AKT	Akhty	2.02	123	ePg	Pb	00 43 46.3	+0.9
AKT				eSg	Sb	00 44 12.0	+1.4
NEY	Neytrino	2.12	288	ePg	Pb	00 43 46.1	-0.9
NEY				eSg	Sb	00 44 13.6	+0.2
SHA1	Shidzhatmaz	2.35	299	ePn	Pn	00 43 48.0	+0.8
SHA1				eSn	Sb	00 44 19.8	-0.2
KIV0	Kislovodsk Arr	2.43	304	ePn	Pn	00 43 49.0	+0.8
KIV0				eSn	Sb	00 44 22.9	+0.5
KIV	Kislovodsk	2.44	304	ePn	Pb	00 43 50.8	-1.6
KIV				eSn	Sb	00 44 21.9	-0.6

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*NIED **23** 00:46:00,38°.20N×142°.30E,h32^{km},Mw4.1   Best double* *couple: M$_0$1.76000×10^{15} NP1:ϕ_s122.00000°, δ56.00000°, λ-164.00000°. NP2:ϕ_s23.00000°, δ77.00000°, λ-35.00000°.*

*NEIC **23** 00:46:23.0±0.9, 37°.92N×142°.94E, h46^{km}±6^{km}, mb4.6/15, Error ellipse: s-maj=12.2km s-min=6.9km az=123.0*

NEIC Recorded [2 JMA] in Miyagi.

*MOS **23** 00:46:24.7±0.9, 38°.19N×142°.38E, h42^{km}, mb4.4/22, Error ellipse: s-maj=9.4km s-min=6.2km az=101.9*

*JMA **23** 00:46:25.4±0.1, 38°.22N×142°.28E, h36^{km}±1^{km}, M4.2*

JMA Felt II J1.

*IDC **23** 00:46:27.8±1.9, 38°.13N×142°.25E, h53^{km}±17^{km}, mb3.6/21, mb1 3.8/27, mb1mx3.7/44, mbtmp3.9/27, ML3.5/6, MS3.4/7, Ms1 3.4/7, ms1mx3.0/39, Error ellipse: s-maj=16.1km s-min=11.3km az=128.0*

ISC 23 00:46:21.6±1.5**, 38°.14N**±0°.04×**142°.44E**±0°.05**, h10**^{km}±8^{km}**, n121,** σ**1^{s}76**/133**, mb4.2**/48**, MS3.7**/7**, 6C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.79	283	P	Pn	00 46 38.0	-0.7
JIKH				S	Sg	00 46 46.7	-0.3
JIO	Ouri	0.91	290	P	Pn	00 46 39.9	-0.6
JIO				S	Sg	00 46 49.9	-1.1
JKMT	Kesennumamotoy	1.01	312	P	Pn	00 46 41.5	-0.3
JKMT				S	Sg	00 46 52.7	-1.5
OFUJ	Ofunato	1.11	328	P	Pn	00 46 42.9	-0.4
OFUJ				*e*S	Sg	00 46 55.6	-1.9
JMK	Ichinoseki	1.25	311	P	Pg	00 46 45.0	-0.6
JMK				*e*S	Sb	00 46 59.1	-2.4
JMM	Marumori	1.33	259	P	Pn	00 46 46.0	-0.2
JMM				*e*S	Sb	00 47 01.1	-2.6
JOU	Okura	1.42	280	P	Pb	00 46 47.7	-0.4
JOU				*e*S	Sb	00 47 04.1	-2.1
JFK	Kawauchi	1.46	239	P	Pn	00 46 48.0	-0.1
JFK				*e*S	Sn	00 47 04.3	-3.0
JOM	Ohasama	1.60	326	P	Pb	00 46 50.4	-0.9
JOM				*e*S	Sn	00 47 08.9	-1.9
JFT	Otama	1.78	250	P	Pb	00 46 53.5	-0.8
JFT				S	Sn	00 47 14.9	-0.2
JYK	Kaneyama	1.81	296	P	Pb	00 46 53.6	-1.2
JYS	Shirataka	1.87	273	P	Pn	00 46 54.3	+0.6
JYS				*e*S	Sn	00 47 15.7	-1.7
JRG	Rokugo	1.89	312	P	Pb	00 46 55.3	-0.8
JRG				*e*S	Sb	00 47 18.2	-1.6
JYA	Atsumi	2.19	283	P	Pn	00 46 59.0	+1.0
JYA				*e*S	Sn	00 47 24.6	-0.6
MJAR	Matsushiro Arr	3.73	246	P	Pn	00 47 21.1	+1.9
	1.7nm,0.3s,baz=71,slow=11,SNR=40						
MJAR				S	Sn	00 48 01.3	-1.9
	0.8nm,0.3s,baz=71,slow=22,SNR=3.1						
MAJO	Matsushiro	3.73	246	*e*Pn	Pn	00 47 21.9	+2.7
MAJO	Matsushiro	3.73	246	*i* P	Pn	00 47 22.7	+3.4
MAT	Matsushiro	3.73	246	P	Pn	00 47 22.4	+3.1
MAT				*e*S	Sn	00 48 05.8	+2.5
MJB9	Matsu-Tunnel	3.73	246	*e*Pn	Pn	00 47 22.5	+3.2
ERM	Erimo	3.91	8	*e*Pn	Pn	00 47 22.8	+1.1
ERM				*e*Sn	Sn	00 48 07.5	-0.1
ERM	Erimo	3.91	8	*e*P	Pn	00 47 22.8	+1.1
ERM				*e*		00 48 07.5	
INU	Inuyama	5.17	239	*e*Pn	Pn	00 47 41.2	+2.2
JHJ	Hachijo jima 2	5.46	204	P	Pn	00 47 45.1	+2.1
	18nm,0.3s,baz=47,slow=12,SNR=3.8						
JHJ				S	Sn	00 48 42.8	-3.0
	36nm,0.3s,baz=90,slow=20,SNR=3.4						
ASAJ	Asahikawa	5.97	1	P	Pn	00 47 52.3	+2.3
	1.8nm,0.3s,baz=211,slow=14,SNR=9.6						
ASAJ				S	Sn	00 48 55.8	-2.6
	0.9nm,0.3s,baz=127,slow=20,SNR=1.8						
ASAJ				LR	LR	00 50 38.4	
	comp=Z,214nm,21.6s,baz=162,slow=42						
YUK	Yuzh-Kuril'sk	6.43	23	*e*P	Pn	00 47 56.9	+0.6
YUK				*e*S	Sn	00 49 06.8	-2.9
YUK				pmax	pmax		
	comp=N,33nm,0.3s						
YUK				pmax	pmax		
	comp=Z,63nm,0.3s						
YUK				pmax	pmax		
	comp=E,16nm,0.5s						
YUK				smax	smax		
	comp=N,159nm,0.4s						
YUK				smax	smax		
	comp=E,193nm,0.5s						
TEY	Ternei	8.16	329	⇑ *e*P	Pn	00 48 26.8	+6.8
TEY				pmax	pmax		
	comp=Z,40nm,0.7s						
TEY				pmax	pmax		
	comp=N,30nm,1.5s						
TEY				pmax	pmax		
	comp=E,20nm,1.3s						
KUR	Kuril'sk	8.17	28	P	Pn	00 48 22.7	+2.6
KUR				*e*S	Sn	00 49 47.3	-5.1
KUR				smax	smax		
	comp=N,85nm,0.6s						
KUR				smax	smax		
	comp=E,71nm,0.5s						
YSS	Yuzh-Sakhalins	8.81	1	*e*P	Pn	00 48 31.6	+2.6
YSS				*e*S	Sn	00 50 08.0	-0.3
YSS				MLR	MLR		
	comp=Z,100nm,15.0s						
USA0B	Ussuriysk Arra	9.93	311	*e*Pn	Pn	00 48 48.5	+4.2
USRK	Ussuriysk Ar.	9.93	311	P	Pn	00 48 48.3	+3.9
	comp=Z,0.9nm,0.3s,baz=122,slow=13,SNR=26						
JNU	Nakatsue	10.65	245	LR	LR	00 53 17.5	
	comp=Z,116nm,19.1s,baz=356,slow=39						
JCJ	Chichijima	11.02	181	S	Sn	00 50 54.9	-7.7
	comp=Z,5.4nm,0.3s,baz=287,slow=19,SNR=3.1						
KSRS	Korea Array	11.51	271	P	Pn	00 49 08.3	+2.4
	comp=Z,0.2nm,0.3s,baz=162,slow=17,SNR=2.7						
MDJ	Mudanjiang	11.61	308	P	Pn	00 49 14.5	+7.2
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,3.3s						
KLR	Kul'dur	13.50	329	P	Pn	00 49 36.6	+3.6
	comp=Z,0.3nm,0.3s,baz=151,slow=6.9,SNR=9.5						
KLR				LR	LR	00 54 27.8	
	comp=Z,110nm,20.8s,baz=182,slow=36						
ZEA	Zeya	18.77	331	*e*P	Pn	00 50 41.1	-0.1
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
NJ2	Nanjing	20.21	260	*e*P	Pn	00 50 59.6	+1.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MA2	Magadan	22.11	11	*e*P	P	00 51 16.3	-0.6
	comp=Z,6.9nm,0.9s						
MA2	Magadan	22.11	11	P	P	00 51 19.3	+2.5
	comp=Z,7.5nm,0.8s,baz=194,slow=10,SNR=6.5						
HHC	Hu-ho-hao-te	23.92	286	*e*P	P	00 51 33.3	-2.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,93nm,5.1s						
SEY	Seymchan	25.55	11	P	P	00 51 52.4	+2.1
	comp=Z,2.9nm,0.6s,baz=185,slow=5.8,SNR=13						
BOD	Bodaibo	27.05	326	*e*P	P	00 52 04.0	+0.1
BOD				pmax	pmax		
	comp=Z,7.0nm,1.8s						
XAN	Xi'an	27.30	272	P	P	00 52 14.6	+8.1
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,140nm,4.9s						
ULN	Ulaanbaatar	27.43	302	*c e*P	P	00 52 08.7	+1.1
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SONA1	Songino Array	27.86	302	*e*P	P	00 52 11.9	+0.4
SONM	Songino Array	27.87	302	P	P	00 52 12.0	+0.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	27.87	302	P	P	00 52 12.0	+0.5
	comp=Z,1.1nm,0.5s,baz=113,slow=9.2,SNR=13						
H11N2	WAKE ISLAND Hy	28.05	124	T	T	01 21 54.5	
	baz=316,slow=75						
H11N1	WAKE ISLAND Hy	28.06	124	T	T	01 21 57.0	
	baz=316,slow=75						
H11N3	WAKE ISLAND Hy	28.07	124	T	T	01 21 58.7	
	baz=316,slow=75						
H11S1	WAKE ISLAND Hy	28.81	126	T	T	01 22 48.9	
	baz=317,slow=76						
H11S3	WAKE ISLAND Hy	28.81	126	T	T	01 22 52.1	
	baz=317,slow=76						
H11S2	WAKE ISLAND Hy	28.83	126	T	T	01 22 52.8	
	baz=317,slow=76						
ZAK	Zakamensk	30.24	307	*e*P	P	00 52 31.7	-0.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LZH	Lanzhou	30.70	278	*e*P	P	00 52 39.0	+2.2
LZH				pP	sP	00 52 49.6	+9.0
LZH				sP	pP	00 52 55.5	+16
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
CD2	Chengdu	32.50	269	*e*P	P	00 52 52.5	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
BILL	Bilibino	32.74	16	⇑ *e*P	P	00 52 54.8	+0.7
BILL				*e*		00 54 00.9	
BILL				*e*S	S	00 58 06.4	-4.0
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA	Gaotai	33.03	286	*e*P	P	00 52 47.3	-10
GTA				pP	pP	00 52 58.4	-1.5
GTA				sP	sP	00 53 01.8	+0.8
GTA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,100nm,4.8s						
GTA				LR	LR		
	comp=N,130nm,16.8s						
GTA				LR	LR		
	comp=E,170nm,15.2s						
GTA				LR	LR		
	comp=Z,150nm,14.9s						
KMI	Kunming	35.94	261	P	P	00 53 22.9	+0.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,5.3s						
DGZ	Jazzator, Alta	40.42	305	*d i*P	P	00 54 00.5	+0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	41.08	296	P	P	00 54 05.3	-0.1
WMQ				pP	sP	00 54 16.8	+7.5
WMQ				sP	pP	00 54 19.6	+11
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.7s						
WMQ				LR	LR		
	comp=N,160nm,18.9s						
WMQ				LR	LR		
	comp=E,110nm,21.5s						
WMQ				LR	LR		
	comp=Z,56nm,20.7s						
ZAA0	Zalesovo Array	41.78	311	*e*P	P	00 54 11.2	+0.2
	comp=Z,3.7nm,0.6s						
ZALV	Zalesovo Beam	41.78	311	P	P	00 54 10.9	-0.1
	comp=Z,3.2nm,0.5s,baz=86,slow=7.2,SNR=20						
ZALV				PcP	PcP	00 56 07.2	+0.2
	comp=Z,0.8nm,0.6s,baz=52,slow=2.4,SNR=3.7						
ZALV				LR	LR	01 13 59.3	
	comp=Z,35nm,18.4s,baz=76,slow=40						
CMAR	Chiang Mai Arr	42.57	255	P	P	00 54 17.1	-0.7
	comp=Z,0.4nm,0.3s,baz=55,slow=7.8,SNR=3.0						
NRIK	Noril'sk	42.61	335	P	P	00 54 17.6	+0.1
	comp=Z,0.9nm,0.4s,baz=79,slow=7.6,SNR=4.0						
NRIK				LR	LR	01 12 53.9	
	comp=Z,114nm,18.3s,baz=36,slow=37						
MK01	Makanchi Array	44.23	301	*e*P	P	00 54 30.9	0.0
MK31	Makanchi Array	44.23	301	*e*P	P	00 54 31.1	+0.1
MK31	Makanchi Array	44.23	301	*e*P	P	00 54 31.1	+0.1
MKAR	Makanchi Array	44.23	301	*e*P	P	00 54 31.4	+0.4
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	44.23	301	*i* P	P	00 54 31.6	+0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	44.23	301	P	P	00 54 30.8	-0.2
	comp=Z,1.5nm,0.7s,baz=83,slow=9.5,SNR=16						
MAKZ	Makanchi	44.44	301	*e*P	P	00 54 31.7	-0.9
	comp=Z,6.6nm,1.5s						
MAKZ	Makanchi	44.44	301	*e*P	P	00 54 31.7	-0.9
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BRDH	Bariadhala	45.89	265	LR	LR	01 15 14.8	
	comp=Z,67nm,19.2s,baz=202,slow=38						
KURK	Kurchatov	45.90	307	*e*P	P	00 54 44.0	-0.1
	comp=Z,11nm,0.8s						
KURK	Kurchatov	45.90	307	*c e*P	P	00 54 44.4	+0.3
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						
ILAR	Eielson Array	48.12	33	P	P	00 55 02.6	+1.3
	comp=Z,0.4nm,0.7s,baz=264,slow=6.2,SNR=8.5						
ILAR				PcP	PcP	00 56 27.7	-1.0
	comp=Z,0.6nm,1.0s,baz=258,slow=4.3,SNR=2.7						
BRVK	Borovoye	50.49	312	*e*P	P	00 55 19.7	+0.1
	comp=Z,2.6nm,0.9s						
BRVK	Borovoye	50.49	312	*e*P	P	00 55 19.7	+0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	Ala-Archa	50.69	298	*e*P	P	00 55 21.4	0.0
	comp=Z,1.5nm,0.9s						
AAK	Ala-Archa	50.69	298	*e*P	P	00 55 21.4	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH	Kashi	50.70	294	P	P	00 55 25.9	+4.4
KSH				pP	sP	00 55 36.1	+11
KSH				pmax	pmax		
	comp=Z,510nm,5.6s						
KK31	Karatay Array	53.28	300	*e*P	P	00 55 41.0	+0.4
KK31	Karatay Array	53.28	300	*e*P	P	00 55 41.0	+0.4
KKAR	Karatay Array	53.28	300	*e*P	P	00 55 40.9	+0.4
KKAR	Karatay Array	53.28	300	*e*P	P	00 55 40.9	+0.4
GAR	Garm	54.96	295	*e*P	P	00 55 52.4	-0.6
	comp=Z,6.8nm,1.1s						
GAR	Garm	54.96	295	*e*P	P	00 55 52.4	-0.6
GAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NIL	Nilore	55.05	288	*e*P	P	00 55 53.8	+0.2
	comp=Z,6.0nm,0.7s						
NIL	Nilore	55.05	288	*e*P	P	00 55 53.8	+0.2
NIL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CHGR	Chuyangaron	55.93	295	*e*P	P	00 56 00.5	+0.5
	comp=Z,15nm,0.6s						
ARU	Arti	56.08	318	*e*P	P	00 56 01.2	+0.7
	comp=Z,8.7nm,0.7s						
ARU	Arti	56.08	318	*c i*P	P	00 56 01.5	+0.9
ARU						00 58 02.2	
ARU				S	S	01 03 49.4	+0.4
ARU				SS	SS	01 07 33.2	-1.4
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KBL	Kabul	57.78	291	*e*P	P	00 56 13.3	0.0
	comp=Z,3.2nm,0.9s						
KBL	Kabul	57.78	291	*e*P	P	00 56 13.3	0.0
KBL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ABKAR	Akbulak array	57.85	310	*e*P	P	00 56 13.9	+0.6
WRA	Warramunga Arr	58.27	189	*i* P	P	00 56 16.8	+0.4
WRA	Warramunga Arr	58.27	189	P	P	00 56 16.9	+0.5
	comp=Z,0.3nm,0.3s,baz=7.8,slow=7.7,SNR=6.2						
AS31	Alice Springs	62.00	189	*e*P	P	00 56 36.9	-5.1
	comp=Z,2.3nm,1.4s						
ASAR	Alice Springs	62.00	189	P	P	00 56 43.6	+1.7
	comp=Z,0.7nm,0.9s,baz=13,slow=5.8,SNR=4.1						
YKA	Yellowknife Ar	62.44	31	P	P	00 56 45.7	+1.1
	comp=Z,0.3nm,0.7s,baz=297,slow=7.0,SNR=5.2						
ARCES	ARCESS Array B	63.25	339	P	P	00 56 49.5	-0.3
	comp=Z,11nm,1.1s,baz=44,slow=6.6,SNR=3.4						
GEYT	Alibeck	64.01	299	P	P	00 56 54.8	-0.6
	comp=Z,0.8nm,0.4s,baz=72,slow=4.7,SNR=3.0						
OBN	Obninsk	67.70	323	⇑ *e*P	P	00 57 18.1	-0.6
OBN				*e*		00 59 53.2	
OBN				*e*S	S	01 06 19.3	+3.3
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,92nm,16.0s						
FIA1	FINESS Array S	68.21	332	*e*P	P	00 57 20.5	-1.4
FINES	FINESS Array B	68.21	332	*i* P	P	00 57 22.7	+0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	68.21	332	P	P	00 57 21.7	-0.2
	comp=Z,3.9nm,0.8s,baz=24,slow=11,SNR=16						
E09A	Wood Farm, Sta	69.16	47	*e*P	P	00 57 23.6	-4.6
	comp=Z,9.5nm,0.8s						
KIV	Kislovodsk	70.80	311	*e*P	P	00 57 38.5	+0.2
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	70.80	311	P	P	00 57 38.9	+0.7
	comp=Z,1.6nm,0.9s,baz=112,slow=5.4,SNR=2.8						
GNI	Garni	71.70	307	*i* P	P	00 57 45.6	+1.7
GNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NB2	NORSAR Subarra	73.48	338	P	P	00 57 54.4	+0.4
	comp=Z,0.9nm,0.6s,baz=38,slow=6.2						
NOA	NORSAR Array B	73.48	338	P	P	00 57 53.8	-0.2
	comp=Z,1.1nm,0.6s,baz=39,slow=6.0,SNR=13						
NOA				LR	LR	01 32 46.0	
	comp=Z,37nm,21.5s,baz=240,slow=38						
NVAR	Mina Array Bea	73.68	54	P	P	00 57 55.3	-0.5
	comp=Z,0.5nm,0.8s,baz=304,slow=6.4,SNR=2.1						
AKASG	Malin Array Be	73.92	323	P	P	00 57 55.7	-1.0
	comp=Z,0.5nm,0.4s,baz=45,slow=7.4,SNR=4.3						
PDAR	Pinedale Array	76.31	46	P	P	00 58 12.7	+1.7
	comp=Z,0.1nm,0.4s,baz=317,slow=7.8,SNR=2.7						
ILGA	Ilgaz	77.82	313	*e*P	P	00 58 17.2	-2.2
	comp=Z,9.8nm,1.1s						
BRTR	Keskin Array B	78.72	312	P	P	00 58 23.6	-0.8
	comp=Z,0.3nm,0.7s,baz=53,slow=5.6,SNR=2.8						
CLL	Collm	80.54	331	*e*P	P	00 58 34.0	+0.1
CLL	Collm	80.54	331	*e*P	P	00 58 34.0	+0.1
TXAR	Lajitas Array	88.80	53	P	P	00 59 16.9	+0.8
	comp=Z,0.2nm,0.7s,baz=282,slow=4.3,SNR=2.6						

MEX 23 01:04:04.6±0.9**, 17°.35N**×**101°.35W, h14**^{km}±13^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.28	336	*i* P	Pg	01 04 09.8	-0.7
ZIIG				*i* S	Sg	01 04 14.6	0.0
CAIG	El Cayaco	1.07	106	*e*P	Pb	01 04 21.3	-3.7
CAIG				*e*S	Sb	01 04 34.6	-4.3
ARIG	Puente Sto Nin	1.33	46	*e*P	Pn	01 04 25.4	-3.4
ARIG				*e*S	Sb	01 04 40.5	-5.7
MEIG	Mezcala	1.74	71	*e*P	Pn	01 04 31.2	-3.3
MEIG				*e*S	Sn	01 04 51.7	-4.8
PLIG	Platanillo	2.04	59	*i* P	Pn	01 04 35.0	-3.6
PLIG				*e*S	Sn	01 04 59.3	-4.6

MEX 23 01:14:45.4±0.4**, 16°.30N**×**98°.12W, h16**^{km}±7^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.09	358	*i* P	Pg	01 14 48.0	-0.9
PNIG				*e*S	Sg	01 14 50.2	-0.9

MEX 23 01:29:49.6±0.4**, 14°.09N**×**92°.10W, h33**^{km}±8^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.94	326	*e*P	Pn	01 30 18.7	-1.6
PCIG				*e*S	Sn	01 30 40.8	-2.7
CCIG	Comitan	2.18	359	*e*P	Pn	01 30 20.6	-3.2
CCIG				*e*S	Sn	01 30 51.1	+1.2

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*ISCJB **23** 01:37:14.5±0.6, 6°.31S±0°.04×131°.06E±0°.07, h100^{km}, mb3.9/1, Error ellipse: s-maj=10.1km s-min=5.0km az=3.3*

*IDC **23** 01:37:15.4±2.9, 6°.25S×130°.46E, h85^{km}±37^{km}, mb3.7/1, mb1 3.8/5, mb1mx3.4/34, mbtmp4.0/5, Error ellipse: s-maj=74.4km s-min=21.9km az=89.0*

*DJA **23** 01:37:16.2±0.5, 6°S±3°×13°1E±°, h142^{km}±13^{km}, M4.5/6, mb4.5/2, mB5.3/2, MLv4.6/6, Mw(mB)4.7/2*

ISC 23 01:37:14.7±0.8**, 6°.34S**±0°.05×**131°.00E**±0°.09**, h100**^{km}**, n9,** σ**2^{s}67**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.11	329	P	Pn	01 37 50.9	+2.2
BNDI				S	Sn	01 38 15.7	+1.0
FAKI	Fak Fak	3.62	20	P	Pn	01 38 09.6	+0.8
FAKI				S	Sn	01 38 49.4	-1.2
SIJI	Sorong	5.44	3	P	Pn	01 38 33.3	-0.2
	17nm,0.3s,baz=255,slow=23,SNR=35						
SIJI				S	Sn	01 39 29.1	-5.7
	16nm,0.3s,baz=271,slow=22,SNR=17						
RKPI	Ransiki, Papua	5.75	34	P	Pn	01 38 38.6	+0.9
RKPI				S	Sn	01 39 42.3	0.0
SOEI	Soe	7.48	243	P	Pn	01 39 02.6	+1.3
FITZ	Fitzroy Crossi	12.80	204	P	Pn	01 40 13.1	-0.1
	1.0nm,0.3s,baz=25,slow=13,SNR=38						
FITZ				S	Sn	01 42 29.6	-4.4
	0.5nm,0.3s,baz=283,slow=19,SNR=3.1						
WRA	Warramunga Arr	13.91	167	P	Pn	01 40 29.7	+2.1
	0.3nm,0.3s,baz=346,slow=13,SNR=20						
WRA				S	Sn	01 42 59.3	-1.5
	1.2nm,0.3s,baz=336,slow=23,SNR=8.9						
ASAR	Alice Springs	17.45	171	P	Pn	01 41 16.1	+4.1
	0.4nm,0.3s,baz=345,slow=9.5,SNR=21						
ASAR				S	Sn	01 44 23.9	-2.6
	0.2nm,0.3s,baz=359,slow=30,SNR=5.3						
MKAR	Makanchi Array	68.22	326	P	P	01 48 04.8	+0.1
	1.1nm,0.6s,baz=124,slow=7.2,SNR=10						

IDC 23 02:22:20.9±8.8**, 16°.48S**×**173°.12W, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/35**, mbtmp3.6**/3**, Error ellipse: s-maj=388.2km s-min=38.9km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.87	258	P	P	02 31 16.6	+0.1
	0.6nm,1.0s,baz=96,slow=7.6,SNR=5.0						
ASAR	Alice Springs	50.04	253	P	P	02 31 17.6	-0.2
	0.6nm,0.5s,baz=88,slow=8.9,SNR=12						
ILAR	Eielson Array	83.44	11	P	P	02 34 49.9	-0.1
	0.4nm,0.8s,baz=207,slow=5.8,SNR=4.6						

IDC 23 02:22:23.5±2.9**, 10°.71S**×**164°.42E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/36**, mbtmp3.7**/4**, ML4.3**/1**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.8**/18**, Error ellipse: s-maj=61.6km s-min=42.3km az=82.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.59	286	LR	LR	02 25 26.4	
	comp=Z,85nm,19.1s,baz=52,slow=40						
DZM	Mont Dzumac	11.46	171	Pn	Pn	02 25 09.0	+0.3
	1.9nm,0.3s,baz=344,slow=15,SNR=34						
DZM				Sn	Sn	02 27 08.9	-8.7
	0.1nm,0.3s,baz=114,slow=19,SNR=1.9						
DZM				LR	LR	02 29 07.5	
	comp=Z,154nm,18.1s,baz=206,slow=35						
H11S2	WAKE ISLAND Hy	29.10	4	T	T	02 58 37.9	
	baz=184,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.10	4	T	T	02 58 33.0	
	baz=184,slow=76,SNR=35						
H11S1	WAKE ISLAND Hy	29.12	4	T	T	02 58 36.3	
	baz=184,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	30.33	5	T	T	03 00 14.0	
	baz=183,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	30.33	5	T	T	03 00 27.2	
	baz=183,slow=76,SNR=9.6						
H11N2	WAKE ISLAND Hy	30.34	5	T	T	03 00 16.5	
	baz=183,slow=76,SNR=7.2						
WRA	Warramunga Arr	30.39	249	P	P	02 28 37.8	+0.2
	0.2nm,0.8s,baz=81,slow=9.1,SNR=2.9						
ASAR	Alice Springs	31.79	242	P	P	02 28 49.8	-0.2
	0.1nm,0.6s,baz=62,slow=10,SNR=2.6						
MKAR	Makanchi Array	92.39	317	P	P	02 35 36.1	-0.1
	0.7nm,0.8s,baz=98,slow=6.5,SNR=6.1						

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*IDC **23** 02:29:37.2±1.2, 11°.47S×165°.10E, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.9/38, mbtmp3.9/8, ML3.6/1, MS3.2/1, Ms1 3.1/1, ms1mx2.6/24, Error ellipse: s-maj=42.5km s-min=23.2km az=135.0*

*ISCJB **23** 02:29:40.7±0.9, 11°.6S±0°.1×165°.1E±0°.2, h34^{km}, mb3.9/6, MS3.1/1, Error ellipse: s-maj=22.7km s-min=17.0km az=20.7*

ISC 23 02:29:42.3±0.9**, 11°.5S**±0°.1×**165°.1E**±0°.2**, h34**^{km}**, n9,** σ**0^{s}99**/7**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	10.56	173	Pn	**Pn**	**02 32 11.6**	**+0.2**
	0.5nm,0.3s,baz=328,slow=13,SNR=6.3						
CTA	**Charters Tower**	19.99	243	P	Pn	02 34 12.8	-1.2
	2.3nm,0.8s,baz=63,slow=10.0,SNR=4.9						
STKA	**Stephens Creek**	29.64	223	LR	LR	02 46 36.1	
	comp=Z,47nm,20.2s,baz=25,slow=34						
WRA	**Warramunga Arr**	30.70	250	P	**P**	**02 35 54.5**	**+0.3**
	4.0nm,0.9s,baz=80,slow=9.2,SNR=14						
ASAR	**Alice Springs**	31.99	244	P	**P**	**02 36 05.0**	**-0.7**
	1.5nm,1.0s,baz=81,slow=9.5,SNR=7.7						
SONM	**Songino Array**	78.67	324	P	**P**	**02 41 42.6**	**+1.4**
	0.4nm,0.7s,baz=145,slow=5.4,SNR=3.7						
ILAR	**Eielson Array**	84.19	19	P	**P**	**02 42 09.7**	**-0.1**
	1.6nm,0.8s,baz=244,slow=5.8,SNR=1.9						
NVAR	**Mina Array Bea**	86.84	50	P	**P**	**02 42 23.7**	**-0.2**
	1.0nm,0.9s,baz=234,slow=7.5,SNR=4.5						
MKAR	**Makanchi Array**	93.43	317	P	**P**	**02 42 53.3**	**-1.1**
	0.2nm,0.6s,baz=96,slow=5.8,SNR=2.3						

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*VIE **23** 02:31:16.8±0.7, 47°.25N×9°.54E, h8^{km}±5^{km}, mb0.5/1, ml0.9/1, Error ellipse: s-maj=3.5km s-min=1.6km az=148.0*

ZUR 23 02:31:17.0, 47°.23N×9°.57E, h2^{km}±2^{km}, MLh0.6/5, 3C-1D, Error ellipse: s-maj=4.8km s-min=1.6km az=163.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIENZ	**Kamor/St.Gall**	0.08	321	⇓Pg	Pg	02 31 19.1	+0.4
SBUH	**Buchs, Hochsch**	0.09	227	⇑Pg	Pg	02 31 19.0	+0.3
SBUA2	**Buchs, Altendo**	0.10	222	⇑Pg	Pg	02 31 19.1	+0.2
SBUB	**Buchserberg Ma**	0.12	227	⇑Pg	Pg	02 31 19.6	+0.2
SGT04	**Schlatt-Haslen**	0.19	308	Pg	Pg	02 31 21.5	+0.8
DAVA	**Damuels**	0.22	75	*e*Pg	Pg	02 31 21.7	+0.4
	0.6nm,0.1s						
DAVA				*e*Sg	Sg	02 31 25.4	+1.2
	3.7nm,0.2s						
DAVA	**Damuels**	0.22	75	Pg	Pg	02 31 21.7	+0.4
PLONS	**Plons/SG**	0.22	215	Pg	Pg	02 31 21.6	+0.3
DAVOX	**Davos/Dischmat**	0.50	155	Pg	Pg	02 31 27.0	+0.5
MOTA	**Moosalm**	1.05	83	*e*Pg	Pn	02 31 39.7	+0.8
	0.5nm,0.1s						
MOTA				*i* Sg	Sn	02 31 56.3	+2.0
	0.8nm,0.2s						
SQTA	**Sankt Quirin**	1.12	90	*e*Pg	Pn	02 31 41.2	+1.4
	0.8nm,0.1s						
SQTA				*e*Sg	Sn	02 31 57.8	+1.9
	1.4nm,0.2s						

IDC 23 02:35:22.7±4.1, 29°.82S×178°.39W, h0^{km}, mb3.1/2, mb1 3.4/2, mb1mx3.4/26, mbtmp3.1/2, Error ellipse: s-maj=131.5km s-min=15.6km az=142.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	0.70	36	Pn	Pn	02 35 39.2	-0.7
	297nm,0.3s,baz=82,slow=9.8,SNR=14						
RAO				Sn	Sn	02 35 54.0	+2.6
	144nm,0.3s,baz=108,slow=22,SNR=7.6						
ASAR	**Alice Springs**	42.80	266	P	P	02 43 22.1	-0.4
	0.1nm,0.3s,baz=100,slow=7.7,SNR=3.3						
WRA	**Warramunga Arr**	43.74	272	P	P	02 43 30.1	+0.1
	0.1nm,0.3s,baz=109,slow=8.0,SNR=8.7						
FINES	**FINESS Array B**	144.49	340	PKP	PKPdf	02 55 00.7	+0.4
	2.9nm,1.0s,baz=48,slow=2.1,SNR=3.4						

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*NEIC **23** 02:35:34.4±0.0, 60°.36N×162°.45W, h0^{km}, mb4.4/46, ML4.7(AEIC), After AEIC.*

NEIC Felt at Eek.

*ISCJB **23** 02:35:35.1±0.2, 60°.43N±0°.03×162°.12W±0°.04, h10^{km}, mb4.3/72, MS3.7/26, Error ellipse: s-maj=3.7km s-min=2.8km az=14.3*

*IDC **23** 02:35:35.5±0.7, 60°.33N×162°.27W, h0^{km}, mb3.9/22, mb1 4.1/26, mb1mx4.0/42, mbtmp3.9/26, ML3.7/4, MS3.7/26, Ms1 3.7/26, ms1mx3.5/48, Error ellipse: s-maj=19.6km s-min=10.0km az=8.0*

ISC 23 02:35:36.2±0.4, 60°.30N±0°.06×162°.35W±0°.04, h10^{km}, n187, σ1^{s}.50/179, mb4.3/72, MS3.6/26, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVW2	**Sparrevohn**	3.42	74	P	**Pn**	**02 36 27.6**	**-2.0**
SVW2				S	**Sn**	**02 37 10.1**	**-0.1**
KELA	**Mount Kelaz**	3.86	116	P	**Pn**	**02 36 34.4**	**-1.2**
PLK1	**Peulik 1**	3.88	128	P	**Pn**	**02 36 35.4**	**-0.5**
CNTC	**Contact Creek**	3.90	119	P	**Pn**	**02 36 34.8**	**-1.3**
PLK3	**Peulik 3**	4.09	127	P	**Pn**	**02 36 38.4**	**-0.4**
ANCK	**Angle Creek**	4.10	118	P	**Pn**	**02 36 37.6**	**-1.4**
KJL	**Kejulik**	4.15	120	P	**Pn**	**02 36 38.3**	**-1.3**
ACHA	**Angle Creek He**	4.17	117	P	**Pn**	**02 36 38.3**	**-1.6**
ACHA				S	**Sn**	**02 37 27.2**	**-1.5**
KAKN	**Katmai Knife C**	4.24	115	P	**Pn**	**02 36 39.3**	**-1.6**
KAKN				S	**Sn**	**02 37 33.4**	**+2.9**
CAHL	**Cahill**	4.27	119	P	**Pn**	**02 36 39.9**	**-1.3**
VNFG	**Veniaminof 2**	4.29	159	P	**Pn**	**02 36 41.4**	**-0.1**
VNSS	**Veniaminof 8**	4.36	158	P	**Pn**	**02 36 42.1**	**-0.5**
KAHG	**Katmai Hook Gl**	4.38	111	P	**Pn**	**02 36 41.5**	**-1.3**
ANM	**Nome**	4.50	343	P	**Pn**	**02 36 43.7**	**-0.7**
CHGN	**Chignik**	4.51	151	P	**Pn**	**02 36 44.1**	**-0.4**
ILW	**Iliamna West**	4.61	89	P	**Pn**	**02 36 44.3**	**-1.7**
ILS	**Iliamna Low So**	4.66	90	P	**Pn**	**02 36 45.3**	**-1.3**
RDWB	**Redoubt West**	4.72	84	P	**Pn**	**02 36 45.4**	**-2.1**
RED	**Redoubt Volcan**	4.76	84	P	**Pn**	**02 36 46.0**	**-2.0**
RSO	**Redoubt South**	4.77	84	*e*Pn	**Pn**	**02 36 47.0**	**-1.1**
RSO				*e*Sn	**Sn**	**02 37 41.9**	**-1.6**
SPWE	**Spurr West**	4.90	74	P	**Pn**	**02 36 48.7**	**-1.3**
SDPT	**Sand Point**	5.06	168	*e*Pn	**Pn**	**02 36 51.9**	**-0.2**
GCSA	**Galena City Sc**	5.13	27	P	**Pn**	**02 36 51.1**	**-1.8**
SPIA	**Saint Paul Isl**	5.17	236	*e*Pn	**Pn**	**02 36 55.5**	**+2.0**
SPIA				*e*Pg	**Pg**	**02 37 12.0**	**-3.1**
SPIA				*e*Lg	Lg	02 38 24.4	
HOM	**Homer**	5.42	92	*e*Pn	**Pn**	**02 36 57.1**	**+0.2**
HOM				*e*Sg	**Sb**	**02 38 21.1**	**+5.3**
FALS	**False Pass**	5.49	186	*e*Pn	**Pn**	**02 36 58.1**	**+0.2**
PPLA	**Purkeypile**	5.51	57	P	**Pn**	**02 36 55.9**	**-2.4**
GAMB	**Gambell**	5.61	312	*e*Pn	**Pn**	**02 37 00.2**	**+0.6**
OHAK	**Old Harbor**	5.64	119	P	**Pn**	**02 36 59.7**	**-0.2**
KDAK	**Kodiak Island**	5.64	112	*e*Pn	**Pn**	**02 37 00.4**	**+0.5**
KDAK				*e*Sg	**Sg**	**02 38 31.8**	**-5.2**
KDAK	**Kodiak Island**	5.64	112	Pn	**Pn**	**02 36 59.6**	**-0.3**
	9.5nm,0.3s,baz=309,slow=7.0,SNR=59						
KDAK				Lg	Lg	02 38 28.4	
	3.8nm,0.3s,baz=319,slow=19,SNR=4.2						
KDAK				LR	LR	02 39 17.2	
	comp=Z,863nm,19.6s,baz=306,slow=40						
SII	**Sitkinak Islan**	5.70	128	*e*Pn	**Pn**	**02 37 01.6**	**+0.8**
BRLK	**Bradley Lake**	5.77	90	*e*Pn	**Pn**	**02 37 01.1**	**-0.7**
BRLK				*e*Lg	Lg	02 38 31.0	
CAST	**Castle Rocks**	5.78	53	P	**Pn**	**02 36 58.9**	**-3.0**
SUA	**Susitna One**	5.79	73	P	**Pn**	**02 37 00.2**	**-1.9**
RC01	**Rabbit Creek A**	6.25	77	*e*Pn	**Pn**	**02 37 07.3**	**-1.0**
RC01				*e*Lg	Lg	02 38 42.8	
SEW	**Seward**	6.44	86	*e*Pn	**Pn**	**02 37 11.0**	**+0.1**
SEW				*e*Lg	Lg	02 38 48.9	
AKUT	**Akutan**	6.45	198	*e*Pn	**Pn**	**02 37 10.1**	**-1.0**
TRF	**Thorofare Moun**	6.52	56	*e*Pn	**Pn**	**02 37 09.8**	**-2.4**
PMR	**Palmer**	6.57	73	*e*Pn	**Pn**	**02 37 12.4**	**-0.4**
GHO	**Glory Hole Cre**	6.69	71	*e*Pn	**Pn**	**02 37 13.7**	**-0.8**
UNV	**Unalaska Valle**	6.85	201	*e*Pn	**Pn**	**02 37 17.9**	**+1.2**
KNK	**Knik Glacier**	6.88	75	P	**Pn**	**02 37 16.3**	**-0.7**
IM3	**Indian Mountai**	6.90	31	*e*Pn	**Pn**	**02 37 14.4**	**-2.9**
SML	**Sawmill**	6.97	71	P	**Pn**	**02 37 17.5**	**-0.8**
RND	**Reindeer**	7.10	58	*e*Pn	**Pn**	**02 37 19.0**	**-1.1**
MLY	**Manley**	7.14	43	*e*Pn	**Pn**	**02 37 17.6**	**-3.0**
MCK	**McKinley**	7.19	56	*e*Pn	**Pn**	**02 37 20.6**	**-0.6**
SCM	**Sheep Creek Mo**	7.45	72	*e*Pn	**Pn**	**02 37 23.9**	**-0.9**
DHY	**Denali Highway**	7.64	62	*e*Pn	**Pn**	**02 37 25.1**	**-2.5**
RDOG	**Red Dog Mine**	7.79	358	*e*Pn	**Pn**	**02 37 29.2**	**-0.3**
WRH	**Wood River Hil**	7.83	52	*e*Pn	**Pn**	**02 37 26.6**	**-3.3**
MDM	**Murphy Dome**	8.00	48	*e*Pn	**Pn**	**02 37 29.2**	**-3.1**
CCB	**Clear Creek Bu**	8.02	51	*e*Pn	**Pn**	**02 37 28.7**	**-3.8**
KLU	**Klutina**	8.10	74	*e*Pn	**Pn**	**02 37 32.4**	**-1.4**
I53US	**FAIRBANKS INFR**	8.10	49	*i*		03 22 30.0	
	baz=238,slow=336,SNR=0.1						
COLA	**College**	8.10	49	*e*Pn	**Pn**	**02 37 32.4**	**-1.3**
	72nm,0.9s						
COLA				*e*Lg	Lg	02 39 40.2	
NIKH	**Nikolski High**	8.17	209	*e*Pn	Pn	02 37 38.6	+3.9
DIV	**Divide**	8.17	77	*e*Pn	**Pn**	**02 37 34.4**	**-0.3**
HDA	**Harding Lake**	8.26	53	*e*Pn	**Pn**	**02 37 34.7**	**-1.2**
IL1	**Eielson Array**	8.43	51	*e*Pn	**Pn**	**02 37 37.5**	**-0.7**
ILAR	**Eielson Array**	8.43	51	Pn	**Pn**	**02 37 34.7**	**-3.5**
	0.3nm,0.3s,baz=232,slow=13,SNR=32						
ILAR				Lg	Lg	02 39 56.9	
	1.1nm,0.3s,baz=239,slow=32,SNR=4.7						
ILAR				LR	LR	02 41 17.2	
	comp=Z,382nm,18.1s,baz=252,slow=41						
ILB	**Eielson Array**	8.43	51	*e*Pn	**Pn**	**02 37 36.9**	**-1.3**
PAX	**Paxson**	8.47	64	*e*Pn	**Pn**	**02 37 38.5**	**-0.3**
HARP	**HAARP**	8.53	68	*e*Pn	**Pn**	**02 37 40.5**	**+1.0**
COLD	**Coldfoot**	8.78	32	*e*Pn	**Pn**	**02 37 43.7**	**+0.8**
RIDG	**Independ'e Rid**	8.91	60	*e*Pn	**Pn**	**02 37 44.5**	**-0.4**
DOT	**Dot Lake**	9.23	61	*e*Pn	**Pn**	**02 37 48.0**	**-1.2**
MENT	**Mentasta**	9.25	65	*e*Pn	**Pn**	**02 37 49.3**	**-0.2**
PRP	**Porcupine Dome**	9.27	48	*e*Pn	**Pn**	**02 37 47.7**	**-2.2**
SCRK	**Sand Creek**	9.34	59	*e*Pn	**Pn**	**02 37 49.9**	**-1.0**
BALM	**Baldy**	9.84	77	*e*Pn	**Pn**	**02 37 57.5**	**-0.1**
FYU	**Fort Yukon**	9.89	43	*e*Pn	**Pn**	**02 37 57.6**	**-0.6**
TOLK	**Toolik Lake Re**	10.00	28	*e*Pn	**Pn**	**02 37 59.0**	**-0.7**
EGAK	**Eagle**	10.74	56	*e*Pn	**Pn**	**02 38 08.9**	**-0.8**
EGAK				*e*Lg	Lg	02 41 12.7	
DAWY	**Dawson**	11.34	61	*e*Pn	**Pn**	**02 38 16.8**	**-1.3**
EPYK	**Eagle Plains**	12.94	51	*e*Pn	**Pn**	**02 38 38.5**	**-1.4**
INK	**Inuvik**	14.71	45	*e*Pn	**Pn**	**02 39 02.5**	**-1.5**
	20nm,1.0s						
INK	**Inuvik**	14.71	45	Pn	**Pn**	**02 39 01.7**	**-2.3**
	0.2nm,0.3s,baz=243,slow=14,SNR=23						
INK				LR	LR	02 45 06.4	
	comp=Z,394nm,19.2s,baz=208,slow=39						
BILL	**Bilibino**	15.54	313	*e*Pn	**P**	**02 39 15.5**	**-3.9**
	22nm,0.7s						
DLBC	**Dease Lake**	16.49	82	Pn	**P**	**02 39 28.2**	**-1.8**
	0.1nm,0.3s,baz=286,slow=18,SNR=3.2						
BBB	**Bella Bella**	20.48	98	LR	LR	02 46 56.8	
	comp=Z,169nm,18.1s,baz=354,slow=33						
SEY	**Seymchan**	21.34	297	P	**P**	**02 40 23.4**	**+0.5**
	0.5nm,0.4s,baz=31,slow=19,SNR=1.6						
YKW3	**Yellowknife Ar**	22.53	63	*e*P	**P**	**02 40 35.0**	**-0.8**
	10nm,0.8s						
YKA	**Yellowknife Ar**	22.55	64	P	**P**	**02 40 35.0**	**-1.0**
	2.6nm,0.6s,baz=285,slow=10,SNR=36						
YKA				PcP	**PcP**	**02 44 28.8**	**-0.1**
	0.5nm,0.6s,baz=293,slow=2.3,SNR=6.6						
YKA				LR	LR	02 49 53.9	
	comp=Z,65nm,18.1s,baz=282,slow=38						
YKB5	**Yellowknife Ar**	22.55	64	*e*P	**P**	**02 40 34.3**	**-1.7**
PETK	**Petropavlovsk-**	22.78	269	P	**P**	**02 40 38.8**	**+0.3**
	2.1nm,0.8s,baz=89,slow=13,SNR=2.9						
PETK				LR	LR	02 48 29.2	
	comp=Z,140nm,21.9s,baz=70,slow=34						
MA2	**Magadan**	23.12	289	*e*P	**P**	**02 40 42.0**	**0.0**
	16nm,0.7s						
MA2	**Magadan**	23.12	289	P	**P**	**02 40 41.8**	**-0.1**
	1.4nm,0.3s,baz=83,slow=13,SNR=2.3						
MA2				LR	LR	02 48 59.2	
	comp=Z,157nm,21.9s,baz=88,slow=35						
LLLB	**Lillooet**	24.53	95	*e*P	**P**	**02 40 56.8**	**+1.2**
	10nm,1.0s						
RES	**Resolute Bay**	27.53	32	P	**P**	**02 41 22.2**	**-0.2**
	0.7nm,0.6s,baz=323,slow=10,SNR=2.2						
RES				LR	LR	02 54 10.5	
	comp=Z,152nm,18.8s,baz=272,slow=41						
NEW	**Newport**	28.41	95	P	**P**	**02 41 32.1**	**+1.4**
	2.1nm,0.7s,baz=322,slow=9.2,SNR=5.0						
NEW				LR	LR	02 52 51.8	
	comp=Z,152nm,18.9s,baz=318,slow=36						
YBH	**Yreka Blue Hor**	30.45	110	LR	LR	02 51 58.9	
	comp=Z,104nm,19.6s,baz=324,slow=32						
HRY	**Holter Researc**	32.10	92	*e*P	**P**	**02 42 04.4**	**+1.1**
FCC	**Fort Churchill**	33.26	62	*e*P	**P**	**02 42 12.0**	**-1.1**
	18nm,1.7s						
VCNR	**Virginia City**	33.80	109	*e*P	**P**	**02 42 19.4**	**+1.1**
	4.5nm,0.8s						
GCMT	**Greycliff**	33.82	91	*e*P	**P**	**02 42 19.2**	**+0.9**
YHH	**Holmes Hill**	33.94	94	*e*P	**P**	**02 42 20.4**	**+0.8**
	3.5nm,0.7s						
FLWY	**Flagg Ranch**	34.53	94	*e*P	**P**	**02 42 25.5**	**+0.9**
	7.7nm,0.8s						
FXWY	**Fox Creek**	34.69	95	*e*P	**P**	**02 42 27.0**	**+1.0**
	16nm,1.9s						
ELK	**Elko**	34.78	103	*e*P	**P**	**02 42 28.1**	**+1.2**
	4.3nm,0.9s						
TPAW	**Teton Pass**	34.83	95	*e*P	**P**	**02 42 28.1**	**+0.8**
	4.0nm,0.6s						
LOHW	**Long Hollow**	34.92	95	*e*P	**P**	**02 42 28.7**	**+0.8**
	3.9nm,0.7s						
NVAR	**Mina Array Bea**	35.13	108	P	**P**	**02 42 30.6**	**+0.8**
	1.8nm,0.8s,baz=315,slow=8.9,SNR=8.1						
NVAR				LR	LR	02 55 00.4	
	comp=Z,90nm,18.6s,baz=318,slow=33						
BW06	**Boulder Array**	36.06	95	*e*P	**P**	**02 42 37.9**	**+0.2**
	2.4nm,0.6s						
PD31	**Pinedale Array**	36.06	95	*e*P	**P**	**02 42 38.5**	**+0.7**
PDAR	**Pinedale Array**	36.06	95	*e*P	**P**	**02 42 37.7**	**0.0**
PDAR	**Pinedale Array**	36.06	95	P	**P**	**02 42 37.6**	**-0.2**
	2.1nm,0.6s,baz=311,slow=4.2,SNR=20						
TCUT	**Toone Canyon**	36.37	98	*e*P	**P**	**02 42 41.5**	**+1.0**
	7.1nm,0.7s						
DUG	**Dugway, Tooele**	36.39	101	*e*P	**P**	**02 42 41.2**	**+0.7**
	17nm,1.8s						
PAGB	**Antelope Grade**	36.41	113	*e*P	**P**	**02 42 40.0**	**-0.6**
	56nm,2.0s						
NLU	**North Lily Min**	36.94	100	*e*P	**P**	**02 42 46.2**	**+0.9**
	6.6nm,1.3s						
PSUT	**Pine Spring**	37.17	104	*e*P	**P**	**02 42 47.8**	**+0.4**
	4.1nm,1.0s						
ULM	**Lac du Bonnet**	37.58	75	P	**P**	**02 42 48.8**	**-1.6**
	1.5nm,0.7s,baz=290,slow=12,SNR=3.1						
ULM				LR	LR	02 59 07.1	
	comp=Z,173nm,18.5s,baz=324,slow=38						
RSSD	**Black Hills**	37.81	88	*e*P	**P**	**02 42 53.4**	**+0.7**
	5.1nm,0.7s						
MSU	**Marysvale**	38.00	102	*e*P	**P**	**02 42 55.3**	**+0.9**
Q16A	**Castle Valley**	38.18	100	*e*P	**P**	**02 42 56.4**	**+0.6**
	6.0nm,0.9s						
SRU	**San Rafael Swe**	38.35	100	*e*P	**P**	**02 42 57.9**	**+0.7**
	13nm,0.7s						
O20A	**White River Ci**	38.69	96	*e*P	**P**	**02 43 00.6**	**+0.5**
	5.8nm,0.8s						
KNB	**Kanab**	38.87	104	*e*P	**P**	**02 43 02.4**	**+0.8**
	25nm,2.0s						
PV09	**Paradox Valley**	39.51	99	*e*P	**P**	**02 43 07.5**	**+0.5**
U15A	**North Rim**	39.60	104	*e*P	**P**	**02 43 09.3**	**+1.5**
	7.2nm,1.2s						
PV23	**Carpenter Ridg**	39.60	99	*e*P	**P**	**02 43 08.8**	**+1.0**
	8.7nm,0.8s						
PV14	**Lion Creek, Pa**	39.66	99	*e*P	**P**	**02 43 09.0**	**+0.7**
	6.3nm,0.7s						
PV04	**Paradox Valley**	39.70	99	*e*P	**P**	**02 43 09.0**	**+0.5**
	9.2nm,0.7s						
PV19	**Morning Glory**	39.73	99	*e*P	**P**	**02 43 09.6**	**+0.8**
	5.8nm,0.8s						
PV16	**Nyswonger Mesa**	39.76	99	*e*P	**P**	**02 43 10.0**	**+0.9**
	5.1nm,0.8s						
PV17	**East Wray Mesa**	39.76	99	*e*P	**P**	**02 43 10.2**	**+1.1**
	25nm,1.7s						
PV11	**David Mesa, Pa**	39.79	99	*e*P	**P**	**02 43 09.7**	**+0.4**
	9.5nm,0.7s						
PV07	**Paradox Valley**	39.79	99	*e*P	**P**	**02 43 10.1**	**+0.7**
	5.5nm,0.7s						
PV12	**Saucer Basin,**	39.81	99	*e*P	**P**	**02 43 10.7**	**+1.2**
	7.6nm,1.0s						
PV03	**Paradox Valley**	39.84	99	*e*P	**P**	**02 43 10.0**	**+0.3**
	5.4nm,0.7s						
PV05	**Paradox Valley**	39.85	99	*e*P	**P**	**02 43 10.7**	**+0.8**
PV13	**Radium Mtn., P**	39.92	99	*e*P	**P**	**02 43 10.6**	**+0.1**
	11nm,0.7s						
PV15	**Paradox Valley**	39.95	98	*e*P	**P**	**02 43 11.1**	**+0.4**
	11nm,0.7s						
PV01	**Paradox Valley**	40.07	99	*e*P	**P**	**02 43 12.0**	**+0.4**
	7.1nm,0.7s						
WUAZ	**Wupatki**	40.77	104	*e*P	**P**	**02 43 16.3**	**-1.1**
	4.3nm,0.8s						
NRIK	**Noril'sk**	41.41	330	LR	LR	03 04 50.2	
	comp=Z,63nm,18.3s,baz=48,slow=42						
SDCO	**Great Sand Dun**	41.88	96	*e*P	**P**	**02 43 27.1**	**+0.5**
	2.4nm,0.6s						
MJAR	**Matsushiro Arr**	44.11	265	LR	LR	03 02 46.3	
	comp=Z,55nm,19.4s,baz=60,slow=37						
CN2	**Changchun**	44.90	282	*e*P	**P**	**02 43 46.0**	**-4.6**
MNTX	**Cornudas Mount**	46.78	101	*e*P	**P**	**02 44 06.3**	**+0.8**
	3.5nm,0.8s						
SCHQ	**Schefferville**	47.19	52	LR	LR	03 05 04.0	
	comp=Z,273nm,18.3s,baz=324,slow=38						
WMOK	**Wichita Mounta**	47.59	93	*e*P	**P**	**02 44 12.6**	**+0.7**
	3.4nm,0.8s						
KSRS	**Korea Array**	48.51	275	P	P	02 44 21.6	+2.6
	2.0nm,0.9s,baz=37,slow=7.0,SNR=4.0						
KSRS				LR	LR	03 05 31.9	
	comp=Z,28nm,18.2s,baz=22,slow=37						
KSAR	**Wonju Array Be**	48.54	275	P	**P**	**02 44 21.6**	**+2.4**
TX31	**Lajitas Ar. Si**	49.56	101	*e*P	**P**	**02 44 27.7**	**+0.5**
TXAR	**Lajitas Array**	49.56	101	P	**P**	**02 44 26.4**	**-0.8**
	1.4nm,0.7s,baz=321,slow=5.5,SNR=15						
JNU	**Nakatsue**	50.47	269	LR	LR	03 05 46.6	
	comp=Z,35nm,18.8s,baz=88,slow=36						
JCT	**Junction City**	50.52	97	*e*P	**P**	**02 44 35.5**	**+1.1**
	9.7nm,0.6s						
SONA1	**Songino Array**	50.68	299	*e*P	**P**	**02 44 37.2**	**+1.7**
SONM	**Songino Array**	50.69	299	P	**P**	**02 44 37.1**	**+1.5**
	1.6nm,0.7s,baz=40,slow=7.0,SNR=10						
HHC	**Hu-ho-hao-te**	53.78	290	*e*P	**P**	**02 44 56.8**	**-1.8**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAA0	**Zalesovo Array**	54.18	318	*e*P	**P**	**02 45 02.0**	**+0.8**
	comp=Z,2.1nm,0.9s						
ZALV	**Zalesovo Beam**	54.18	318	*e*P	**P**	**02 45 02.0**	**+0.8**
ZALV	**Zalesovo Beam**	54.18	318	P	**P**	**02 45 01.7**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=32,slow=7.0,SNR=4.1						
ZALV				LR	LR	03 10 16.1	
	comp=Z,124nm,20.2s,baz=68,slow=38						
NJ2	**Nanjing**	57.30	278	*e*P	**P**	**02 45 22.4**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
FINES	**FINESS Array B**	58.41	355	P	**P**	**02 45 31.8**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=38,slow=7.0,SNR=5.1						
KIRV	**Kirov**	58.87	341	LR	LR	03 13 59.7	
	comp=Z,54nm,18.3s,baz=163,slow=39						
NOA	**NORSAR Array B**	58.89	4	P	**P**	**02 45 33.7**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=356,slow=7.1,SNR=3.1						
KURK	**Kurchatov**	58.95	320	*e*P	**P**	**02 45 34.6**	**-0.6**
ARU	**Arti**	59.20	335	*e*P	**P**	**02 45 36.9**	**0.0**
BRVK	**Borovoye**	59.40	326	*e*P	**P**	**02 45 38.0**	**-0.2**
BVAR	**Borovoye Array**	59.40	326	LR	LR	03 13 44.9	
	comp=Z,103nm,19.2s,baz=31,slow=38						
GTA	**Gaotai**	60.28	298	*e*P	P	02 45 48.4	+3.7
GTA				pP	sP	02 45 54.3	+5.2
GTA				sP	pP	02 45 57.0	+9.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,66nm,5.6s						
GTA				LR	LR		
	comp=N,150nm,18.4s						
GTA				LR	LR		
	comp=E,270nm,20.0s						
GTA				LR	LR		
	comp=Z,190nm,19.0s						
GUMO	**Guam**	60.31	243	LR	LR	03 09 49.6	
	comp=Z,64nm,19.4s,baz=120,slow=34						
MKAR	**Makanchi Array**	61.08	315	P	**P**	**02 45 49.6**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=48,slow=6.7,SNR=6.6						
MKAR				LR	LR	03 14 10.9	
	comp=Z,90nm,19.4s,baz=15,slow=38						
MK01	**Makanchi Array**	61.10	315	*e*P	**P**	**02 45 50.7**	**+0.7**
LZH	**Lanzhou**	61.20	293	*e*P	**P**	**02 45 52.0**	**+1.0**
LZH				pP	sP	02 45 56.5	+1.1
LZH				sP	pP	02 45 59.8	+5.6
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,91nm,4.1s						
LZH				LR	LR		
	comp=N,290nm,14.1s						
LZH				LR	LR		
	comp=E,290nm,13.0s						
LZH				LR	LR		
	comp=Z,360nm,14.8s						
WMQ	**Urumqi**	61.62	309	*e*P	**P**	**02 45 54.3**	**+0.7**
WMQ				LR	LR		
	comp=N,110nm,23.9s						
WMQ				LR	LR		
	comp=E,160nm,22.1s						
WMQ				LR	LR		
	comp=Z,150nm,20.3s						
AKTO	**Aktyubinsk**	64.91	333	LR	LR	03 18 18.3	
	comp=Z,47nm,18.0s,baz=19,slow=40						
ABKAR	**Akbulak array**	65.56	331	*e*P	**P**	**02 46 20.7**	**+1.3**
AAK	**Ala-Archa**	67.40	318	*e*P	**P**	**02 46 33.0**	**+1.4**
	comp=Z,1.7nm,0.8s						
AAK	**Ala-Archa**	67.40	318	LR	LR	03 18 29.8	
	comp=Z,158nm,18.5s,baz=360,slow=38						
GYA	**Guiyang**	67.88	285	*e*P	**P**	**02 46 34.0**	**-0.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKASG	**Malin Array Be**	68.96	352	P	**P**	**02 46 43.3**	**+2.3**
	comp=Z,0.4nm,0.4s,baz=11,slow=6.1,SNR=2.8						
KSH	**Kashi**	69.68	315	P	**P**	**02 46 47.4**	**+1.6**
KSH				pmax	pmax		
	comp=Z,220nm,5.3s						
KMI	**Kunming**	70.88	287	P	**P**	**02 46 52.8**	**-0.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,150nm,4.0s						
GERES	**GERESS Array B**	71.17	3	P	**P**	**02 46 54.7**	**0.0**
	comp=Z,0.3nm,0.5s,baz=347,slow=7.4,SNR=2.0						
CHGR	**Chuyangaron**	72.73	320	*e*P	**P**	**02 47 05.8**	**+1.6**
	comp=Z,7.2nm,0.7s						
KIV	**Kislovodsk**	74.10	341	*e*P	**P**	**02 47 12.5**	**+0.3**
	comp=Z,2.7nm,0.4s						
KBZ	**Khabaz**	74.29	341	P	**P**	**02 47 15.2**	**+2.1**
	comp=Z,0.9nm,0.7s,baz=346,slow=3.4,SNR=2.5						
KBZ				LR	LR	03 22 15.1	
	comp=Z,40nm,21.3s,baz=360,slow=38						
GEYT	**Alibeck**	76.63	328	P	**P**	**02 47 29.1**	**+2.3**
	comp=Z,1.4nm,0.7s,baz=318,slow=6.2,SNR=2.3						
CMAR	**Chiang Mai Arr**	78.38	287	P	**P**	**02 47 38.6**	**+1.8**
	comp=Z,2.4nm,0.8s,baz=15,slow=5.6,SNR=8.8						
CM01	**Chiang Mai Arr**	78.41	287	*e*P	**P**	**02 47 39.4**	**+2.5**
BRTR	**Keskin Array B**	79.47	348	P	**P**	**02 47 43.6**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=23,slow=7.8,SNR=2.2						
WRA	**Warramunga Arr**	94.80	238	LR	LR	03 28 36.4	
	comp=Z,18nm,21.1s,baz=155,slow=34						

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*NEIC **23** 02:37:52.7±0.0, 16°.57N×94°.39W, h125^{km}, MD4.0(MEX), After MEX.*

MEX 23 02:37:52.7±0.5, 16°.57N×94°.39W, h126^{km}±6^{km}, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	0.70	317	*i* P	Pn	02 38 11.2	-1.4
CMIG				*i* S	Sn	02 38 25.9	-1.9
CMIG	**Matias Romero**	0.70	317	*i* P	Pn	02 38 11.2	-1.4
CMIG				*i* S	Sn	02 38 25.9	-1.9
PCIG		1.41	127	*i* P	Pn	02 38 18.7	-0.9
PCIG				*e*S	Sn	02 38 38.1	-1.8
PCIG		1.41	127	*i* P	Pn	02 38 18.7	-0.9
PCIG				*e*S	Sn	02 38 38.1	-1.8
TUIG	**Tuzandepetl**	1.45	359	*e*P	Pn	02 38 12.5	-7.5
TUIG				*i* S	Sn	02 38 36.7	-4.1
TUIG	**Tuzandepetl**	1.45	359	*e*P	Pn	02 38 12.5	-7.5
TUIG				*i* S	Sn	02 38 36.7	-4.1
HUIG	**Huatulco**	1.84	244	*e*P	Pn	02 38 22.9	-1.6
HUIG				*e*S	Sn	02 38 47.0	-1.7
HUIG	**Huatulco**	1.84	244	*e*P	Pn	02 38 22.9	-1.6
HUIG				*e*S	Sn	02 38 47.0	-1.7
CCIG	**Comitan**	2.18	97	*i* P	Pn	02 38 27.4	-1.5
CCIG				*i* S	Sn	02 38 53.3	-3.2
CCIG	**Comitan**	2.18	97	*i* P	Pn	02 38 27.4	-1.5
CCIG				*i* S	Sn	02 38 53.3	-3.2
VHO	**Vista Hermosa**	2.30	283	*i* P	Pn	02 38 31.2	+0.8
VHO				*i* S	Sn	02 39 02.1	+2.8
VHO	**Vista Hermosa**	2.30	283	*i* P	Pn	02 38 31.2	+0.8
VHO				*i* S	Sn	02 39 02.1	+2.8

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*NEIC **23** 02:53:44.0±0.0, 17°.56N×95°.66W, h108^{km}, MD4.0(MEX), After MEX.*

MEX 23 02:53:44.0±0.8, 17°.56N×95°.66W, h108^{km}±11^{km}, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	0.87	122	*i* P	Pn	02 54 03.4	-0.5
CMIG				*e*S	Sn	02 54 17.6	-1.1
CMIG	**Matias Romero**	0.87	122	*i* P	Pn	02 54 03.4	-0.5

CMIG				*e*S	Sn	02 54 17.6	-1.1
VHO	**Vista Hermosa**	**1.14**	**245**	*e*P	Pn	02 54 06.1	-0.7
VHO				*e*S	Sn	02 54 22.3	-1.7
VHO	**Vista Hermosa**	**1.14**	**245**	*e*P	Pn	02 54 06.1	-0.7
VHO				*e*S	Sn	02 54 22.3	-1.7
TUIG	**Tuzandepetl**	**1.27**	**68**	*i* P	Pn	02 54 06.3	-1.6
TUIG				*i* S	Sn	02 54 23.7	-2.4
TUIG	**Tuzandepetl**	**1.27**	**68**	*i* P	Pn	02 54 06.3	-1.6
TUIG				*i* S	Sn	02 54 23.7	-2.4
HUIG	**Huatulco**	**1.83**	**194**	*e*P	Pn	02 54 13.5	-1.4
HUIG				*e*S	Sn	02 54 36.2	-2.2
HUIG	**Huatulco**	**1.83**	**194**	*e*P	Pn	02 54 13.5	-1.4
HUIG				*e*S	Sn	02 54 36.2	-2.2
TPIG	**Tehuac#an**	**1.83**	**298**	*i* P	Pn	02 54 14.3	-0.7
TPIG				*i* S	Sn	02 54 37.2	-1.5
TPIG	**Tehuac#an**	**1.83**	**298**	*i* P	Pn	02 54 14.3	-0.7
TPIG				*i* S	Sn	02 54 37.2	-1.5

IDC 23 02:59:32.3±1.5**, 3°.57N×127°.65E, h0^{km}, mb3.6**/7**,**
mb1 3.7/7**, mb1mx3.5**/41**, mbtmp3.6**/7**, Error ellipse:**
s-maj=195.1km s-min=17.0km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.27**	**165**	P	P	03 04 51.8	+0.4
	0.5nm,0.7s,baz=346,slow=9.4,SNR=12						
ASAR	**Alice Springs**	**27.75**	**168**	P	P	03 05 22.5	-0.4
	0.3nm,0.9s,baz=333,slow=7.2,SNR=4.0						
STKA	**Stephens Creek**	**37.66**	**160**	P	P	03 06 49.1	-0.2
	0.6nm,0.3s,baz=320,slow=10,SNR=3.7						
SONM	**Songino Array**	**47.75**	**341**	P	P	03 08 11.4	+0.2
	0.3nm,0.7s,baz=151,slow=6.7,SNR=2.5						
MKAR	**Makanchi Array**	**58.21**	**325**	P	P	03 09 28.6	+0.2
	0.6nm,0.4s,baz=122,slow=7.5,SNR=14						
ZALV	**Zalesovo Beam**	**61.15**	**333**	P	P	03 09 47.8	-0.7
	0.4nm,0.4s,baz=141,slow=9.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**62.37**	**327**	P	P	03 09 56.8	0.0
	0.6nm,0.6s,baz=130,slow=6.1,SNR=7.7						

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*UPP **23** 03:23:41.8±2.7, 67°.64N×33°.70E, h0^{km}, ML1.5, Suspected explosion*
*KOLA **23** 03:23:41.8, 67°.68N×33°.77E, M1.8, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NAO **23** 03:23:42.8±1.5, 67°.69N×33°.56E, ML2.4*
*IDC **23** 03:23:45.6±2.2, 67°.50N×32°.74E, h0^{km}, mb1 3.0/4, mb1mx2.8/49, mbtmp3.0/4, ML2.2/4, Error ellipse: s-maj=22.7km s-min=8.7km az=83.0*
ISC 23 03:23:41.5±1.9**, 67°.65N**±0°.04×**33°.78E**±0°.09**, h0^{km}, n36,**
σ**1^{s}78**/57**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	**Apatity**	**0.17**	**240**	P	**Pg**	**03 23 45.0**	**+0.4**
APA				S	**Sg**	**03 23 47.3**	**+0.5**
APA0	**Apatity Array**	**0.31**	**262**	Pg	**Pg**	**03 23 47.4**	**0.0**
APA0				Lg	Lg	03 23 51.3	
APA0	**Apatity Array**	**0.31**	**262**	P	**Pg**	**03 23 47.3**	**0.0**
APA0				S	**Sg**	**03 23 51.3**	**+0.1**
APA0	**Apatity Array**	**0.31**	**262**	Pg	**Pg**	**03 23 47.4**	**0.0**
APA0				Sg	**Sg**	**03 23 51.3**	**+0.1**
KEV	**Kevo**	**3.25**	**314**	Pn	**Pn**	**03 24 34.0**	**+0.4**
KEV				Sn	**Sn**	**03 25 12.2**	**-0.8**
KEV	**Kevo**	**3.25**	**314**	*e*P	**Pn**	**03 24 34.2**	**+0.6**
KEV				Sn	**Sn**	**03 25 12.2**	**-0.8**
ARA0	**ARCESS Array S**	**3.58**	**306**	Pn	**Pn**	**03 24 37.9**	**-0.2**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**03 24 46.6**	**+1.1**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**03 25 18.7**	**-2.3**
	baz=122,slow=28						
ARA0				Lg	Lg	03 25 29.6	
	baz=113,slow=37						
ARA0	**ARCESS Array S**	**3.58**	**306**	Pn	**Pn**	**03 24 37.9**	**-0.2**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**03 24 46.6**	**+1.1**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**03 25 18.7**	**-2.3**
	baz=122,slow=28						
ARA0				Sg	**Sb**	**03 25 29.6**	**+0.2**
	baz=113,slow=37						
ARCES	**ARCESS Array B**	**3.58**	**306**	Pn	**Pn**	**03 24 37.6**	**-0.5**
	1.5nm,0.3s,baz=122,slow=14,SNR=102						
ARCES				Pg	**Pb**	**03 24 46.5**	**+1.0**
	2.0nm,0.3s,baz=120,slow=15,SNR=18						
ARCES				Sn	**Sn**	**03 25 18.7**	**-2.3**
	1.4nm,0.3s,baz=123,slow=29,SNR=7.6						
ARCES				Lg	Lg	03 25 29.5	
	3.2nm,0.3s,baz=128,slow=29,SNR=14						
ARE0	**ARCESS Array S**	**3.58**	**306**	IAML		03 25 36.7	
	comp=Z,0.3nm,0.3s						
HEF	**Hetta**	**3.88**	**286**	Pn	**Pn**	**03 24 41.8**	**-0.5**
HEF				Sn	**Sn**	**03 25 25.9**	**-2.6**
HEF				Lg	Lg	03 25 39.6	
HEF	**Hetta**	**3.88**	**286**	Pn	**Pn**	**03 24 41.8**	**-0.5**
HEF				Sn	**Sn**	**03 25 25.9**	**-2.6**
HEF				Sg	**Sb**	**03 25 39.6**	**+1.5**
KTK1	**Kautokeino**	**4.14**	**294**	*e*P	**Pn**	**03 24 46.3**	**+0.4**
KTK1				IAML		03 25 30.9	
	comp=Z,2.5nm,1.1s						
PAJU	**Pajala**	**4.18**	**266**	P	**Pn**	**03 24 45.6**	**-0.7**
PAJU				S	**Sn**	**03 25 34.7**	**-1.2**
LANU	**Lannavaara**	**4.48**	**281**	P	**Pn**	**03 24 49.1**	**-1.4**
KALU	**Kalix**	**4.51**	**251**	P	**Pn**	**03 24 50.7**	**-0.1**
KALU				S	**Sn**	**03 25 42.4**	**-1.4**
MASU	**Masugnsbyn**	**4.52**	**273**	P	**Pn**	**03 24 49.5**	**-1.6**
ERTU	**Ertsjaerv**	**4.66**	**262**	P	**Pn**	**03 24 52.2**	**-0.8**
ERTU				S	**Sn**	**03 25 46.4**	**-1.4**
KIF	**Kilpisjarvi**	**5.00**	**292**	Pn	**Pn**	**03 24 56.8**	**-0.8**
KIF				Sn	**Sn**	**03 25 52.6**	**-3.4**
KIF				Lg	Lg	03 26 13.9	
KIF	**Kilpisjarvi**	**5.00**	**292**	*e*P	**Pn**	**03 24 56.7**	**-0.9**
KIF				*e*S	**Sn**	**03 25 53.7**	**-2.3**
KIF				Sg	**Sb**	**03 26 13.9**	**+3.7**
KUA	**Kurravaara**	**5.11**	**280**	P	**Pn**	**03 24 58.1**	**-1.0**
DUNU	**Dundret**	**5.13**	**270**	P	**Pn**	**03 24 58.7**	**-0.7**
HARU	**Harads**	**5.26**	**259**	P	**Pn**	**03 24 59.4**	**-1.7**
SJUU	**Sjulsmark**	**5.31**	**252**	P	**Pn**	**03 25 00.6**	**-1.3**
RATU	**Laukkuluspa**	**5.40**	**278**	P	**Pn**	**03 25 02.7**	**-0.4**
NIKU	**Nikkaluokta**	**5.61**	**279**	P	**Pn**	**03 25 06.2**	**+0.3**
TRO	**Tromso**	**5.78**	**297**	*e*P	**Pn**	**03 25 08.9**	**+0.7**
SALU	**Saltoluokta**	**5.87**	**274**	P	**Pn**	**03 25 08.9**	**-0.6**
LILU	**Lilltraesk**	**6.06**	**253**	P	**Pn**	**03 25 11.0**	**-1.1**
FIA0	**FINESS Array S**	**7.06**	**212**	Pn	**Pn**	**03 25 25.1**	**-0.8**
	baz=24,slow=14						
FIA0				Sn	**Sn**	**03 26 42.9**	**-3.7**
	baz=16,slow=28						
FIA0				Lg	Lg	03 27 15.7	
	baz=30,slow=28						
FIA0	**FINESS Array S**	**7.06**	**212**	Pn	**Pn**	**03 25 25.1**	**-0.8**
	baz=24,slow=14						
FIA0				Sn	**Sn**	**03 26 42.9**	**-3.7**
	baz=16,slow=28						
FIA0				Sg	**Sb**	**03 27 15.7**	**+6.3**
	baz=30,slow=28						
FINES	**FINESS Array B**	**7.06**	**212**	Pn	**Pn**	**03 25 24.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=19,slow=18,SNR=2.9						
FINES				Sn	Sn	03 26 38.0	-8.7
	comp=Z,0.0nm,0.3s,baz=18,slow=24,SNR=3.0						
FINES				Lg	Lg	03 27 17.7	
	comp=Z,0.7nm,0.3s,baz=18,slow=23,SNR=11						
HFS	**Hagfors**	**11.57**	**239**	Pn	Pn	03 26 21.9	-5.7
	comp=Z,0.1nm,0.3s,baz=47,slow=6.7,SNR=2.5						
HFS				Lg	Lg	03 29 36.1	
	comp=Z,0.1nm,0.3s,baz=48,slow=20,SNR=2.9						
NOA	**NORSAR Array B**	**11.75**	**247**	Pn	Pn	03 26 22.7	-7.4
	comp=Z,0.0nm,0.3s,baz=23,slow=18,SNR=2.7						
NOA				Lg	Lg	03 29 43.8	
	comp=Z,0.0nm,0.3s,baz=50,slow=25,SNR=3.4						
NRA0	**NORESS Array S**	**11.85**	**245**	Pn	**Pn**	**03 26 29.1**	**-2.4**
	baz=47,slow=16						
NRA0	**NORESS Array S**	**11.85**	**245**	Pn	**Pn**	**03 26 29.1**	**-2.4**
	baz=47,slow=16						

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*IDC **23** 03:26:13.7±1.0, 7°.08N×71°.87W, h0^{km}, mb3.3/4, mb1 3.8/6, mb1mx3.5/30, mbtmp3.6/6, ML3.9/2, Error ellipse: s-maj=24.0km s-min=14.5km az=132.0*
*ISCJB **23** 03:26:15.9±0.9, 7°.24N±0°.04×71°.74W±0°.05, h11^{km}±8^{km}, mb3.3/4, Error ellipse: s-maj=9.1km s-min=5.9km az=19.2*
*RSNC **23** 03:26:19.7±0.7, 7°.16N×71°.90W, h5^{km}±5^{km}, ML3.1, Mw3.4*
ISC 23 03:26:15.3±1.6**, 7°.11N**±0°.04×**71°.79W**±0°.04**, h4^{km}**±11^{km}**,**
n26, σ**1^{s}63**/34**, mb3.4**/4**, 2C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAMC	**Tame, Arauca**	**0.67**	**180**	⇑*e*P	**Pn**	**03 26 32.6**	**+1.0**
TAMC				*e*S	**Sn**	**03 26 43.0**	**+0.4**
PAMC	**Pamplona, Colo**	**0.93**	**284**	*e*P	**Pg**	**03 26 32.4**	**-0.8**
BARC	**Barichara**	**1.47**	**250**	*e*Pg	**Pn**	**03 26 43.5**	**+0.7**
RUSC	**La Rusia**	**1.77**	**227**	⇑*e*P	**Pb**	**03 26 49.5**	**+1.0**
RUSC				*e*S	**Sn**	**03 27 11.8**	**+1.6**
RUSC				*i*		03 27 22.7	
	comp=Z,108nm,0.6s						
OCAC	**Ocana**	**1.88**	**307**	*e*P	**Pn**	**03 26 49.4**	**+1.0**
OCAC				*e*S	**Sn**	**03 27 12.7**	**0.0**
OCAC				*i*		03 27 17.3	
	comp=Z,560nm,0.4s						
BRRC	**Barranca, Sant**	**1.91**	**270**	*e*P	**Pn**	**03 26 50.6**	**+2.0**
BRRC				*e*S	**Sn**	**03 27 13.7**	**+0.7**
BRRC				*i*		03 27 19.0	
	comp=Z,112nm,0.4s						
SDV	**Santo Domingo**	**2.10**	**33**	*e*P	**Pb**	**03 26 54.1**	**0.0**
SDV				*e*Pg	**Pg**	**03 26 55.8**	**+0.2**
SDV				*e*S	**Sb**	**03 27 22.0**	**+1.3**
SDV	**Santo Domingo**	**2.10**	**33**	Pg	**Pb**	**03 26 54.3**	**+0.2**
	comp=Z,60nm,0.3s,baz=209,slow=5.5,SNR=151						
SDV				Lg	Lg	03 27 22.0	
	comp=Z,155nm,0.3s,baz=247,slow=23,SNR=37						
PTBC	**PUERTO BERRIO,**	**2.71**	**258**	*e*P	**Pn**	**03 27 01.8**	**+2.2**
PTBC				*e*S	**Sn**	**03 27 37.0**	**+4.2**
PTBC				*i*		03 27 41.2	
	comp=Z,146nm,0.4s						
ZARC	**Zaragoza, Cauc**	**3.07**	**277**	*e*P	**Pn**	**03 27 05.7**	**+1.1**
ZARC				*e*S	**Sn**	**03 27 42.4**	**+0.7**
ZARC				*i*		03 27 52.8	
	comp=Z,63nm,0.5s						
CHIC	**Chingaza**	**3.13**	**218**	*e*P	**Pn**	**03 27 08.2**	**+2.4**
CODC	**Agustn Codazz**	**3.25**	**330**	*e*P	**Pn**	**03 27 08.9**	**+1.9**
ROSC	**El Rosal**	**3.38**	**228**	*e*P	**Pb**	**03 27 14.2**	**-1.8**
ROSC	**El Rosal**	**3.38**	**228**	Pg	**Pb**	**03 27 14.4**	**-1.6**
	comp=Z,2.8nm,0.3s,baz=100,slow=17,SNR=7.4						
ROSC				Lg	Lg	03 28 03.2	
	comp=Z,3.3nm,0.3s,baz=201,slow=20,SNR=3.6						
VILC	**Villavicencio,**	**3.53**	**213**	*e*P	**Pn**	**03 27 13.4**	**+2.3**
VILC				*i*		03 28 19.4	
	comp=Z,74nm,0.5s						
UREC	**San Jos de Ur**	**3.76**	**280**	*e*P	**Pn**	**03 27 15.8**	**+1.7**
HELC	**Santa Helena**	**3.82**	**256**	*e*P	**Pn**	**03 27 16.8**	**+1.5**
HELC				*i*		03 28 24.8	
	comp=Z,20nm,0.4s						
RREF	**El Recreo**	**4.16**	**238**	*e*P	**Pn**	**03 27 22.8**	**+2.6**
SJCC	**San Jacinto, C**	**4.35**	**310**	*e*P	**Pn**	**03 27 24.0**	**+1.8**
SJCC				*i*		03 28 39.6	
	comp=N,25nm,0.4s						
SJG	**San Juan**	**12.24**	**26**	Pn	**Pn**	**03 29 10.5**	**+0.1**
	comp=N,1.1nm,0.3s,baz=204,slow=20,SNR=3.5						
PTGA	**Pitinga**	**14.14**	**123**	Pn	**Pn**	**03 29 36.3**	**-0.2**
	comp=N,0.4nm,0.3s,baz=314,slow=19,SNR=2.4						
PTGA				Lg	Lg	03 33 42.8	
	comp=N,0.5nm,0.3s,baz=330,slow=20,SNR=3.1						
TXAR	**Lajitas Array**	**37.27**	**310**	P	**P**	**03 33 27.9**	**-0.7**
	comp=N,0.1nm,0.4s,baz=128,slow=10,SNR=4.5						
YKA	**Yellowknife Ar**	**63.45**	**339**	P	**P**	**03 36 45.5**	**-0.5**
	comp=N,0.3nm,0.6s,baz=131,slow=6.8,SNR=6.9						
TORD	**Torodi Ar. Bea**	**72.39**	**78**	P	**P**	**03 37 43.2**	**0.0**
	comp=N,0.2nm,0.6s,baz=286,slow=5.5,SNR=6.2						
ILAR	**Eielson Array**	**77.26**	**335**	P	**P**	**03 38 08.5**	**-2.1**
	comp=N,0.2nm,0.8s,baz=88,slow=7.2,SNR=3.6						
WRA	**Warramunga Arr**	**151.63**	**241**	PKPbc	**PKPbc**	**03 46 10.4**	**-1.6**
	comp=N,0.7nm,1.1s,baz=101,slow=2.4,SNR=3.1						

MEX 23 03:34:28.3±0.5**, 16°.39N×98°.43W, h5^{km}**±4^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.29**	**90**	*e*P	Pg	03 34 33.2	-0.7
PNIG				*i* S	Sg	03 34 38.1	+0.3

JMA 23 03:47:12.5, 35°.79N×135°.79E, h13^{km}±1^{km}**, M3.1, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFM	**Mihama**	**0.30**	**149**	P	Pg	03 47 18.7	-0.1
JFM				S	Sg	03 47 23.1	+0.1
JKY	**Yasaka**	**0.58**	**254**	P	Pg	03 47 23.4	-0.5
JKY				S	Sg	03 47 31.2	-0.4
JWT	**Wachi**	**0.60**	**212**	P	Pg	03 47 23.9	-0.3
JWT				S	Sg	03 47 31.5	-0.6
JKG	**Kaga**	**0.66**	**42**	P	Pg	03 47 25.2	-0.1
JKG				S	Sg	03 47 34.2	+0.3
JYTA	**Yamagatataniai**	**0.79**	**104**	P	Pg	03 47 27.4	-0.5
JYTA				S	Sg	03 47 37.6	-0.7
JKSM	**Kasumi**	**0.94**	**258**	P	Pb	03 47 29.5	-1.1
JKSM				S	Sg	03 47 42.1	-0.8
JKS	**Kasai**	**1.12**	**224**	P	Pb	03 47 33.1	-0.6
JKS				S	Sb	03 47 47.6	-0.5
JHE	**Heguri**	**1.14**	**184**	P	Pn	03 47 34.1	0.0
JHE				S	Sb	03 47 48.7	0.0
MAT	**Matsushiro**	**2.10**	**68**	P	Pn	03 47 47.6	+0.3
MAT				S	Sg	03 48 20.8	+0.9

DJA 23 03:50:37.7±1.2**, 10°S**±7°×**12°2E**±°**, h10^{km}, M3.6**/3**,**
MLv3.6/3**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.99**	**0**	P	Pg	03 50 56.6	-0.3
EDFI				S	Sb	03 51 10.5	+0.2
MMRI	**Maumere**	**1.23**	**26**	P	Pn	03 51 00.3	-0.7
WSI	**Waingapu**	**1.38**	**273**	P	Pn	03 51 02.5	-0.5

IDC 23 03:54:14.7±3.1**, 5°.52S×148°.87E, h0^{km}, mb3.6**/4**,**
mb1 3.8/4**, mb1mx3.5**/23**, mbtmp3.6**/4**, Error ellipse:**
s-maj=72.1km s-min=47.5km az=101.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.13**	**223**	P	Pn	03 58 51.6	-0.7
	1.2nm,0.7s,baz=48,slow=12,SNR=26						
ASAR	**Alice Springs**	**23.09**	**217**	P	P	03 59 23.3	+1.0
	0.8nm,0.6s,baz=51,slow=9.0,SNR=11						
FITZ	**Fitzroy Crossi**	**25.90**	**239**	P	P	03 59 47.3	-1.3
	1.8nm,0.8s,baz=40,slow=7.9,SNR=2.6						
STKA	**Stephens Creek**	**27.09**	**194**	P	P	03 59 58.6	-0.6
	0.6nm,0.4s,baz=348,slow=20,SNR=2.0						
TORD	**Torodi Ar. Bea**	**146.77**	**286**	PKPbc	PKPbc	04 13 59.6	-0.2
	0.3nm,0.7s,baz=76,slow=1.6,SNR=4.1						

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*KRNET **23** 04:00:59.9±0.1, 42°.59N×79°.68E, h15^{km}, mb2.2*
*SOME **23** 04:01:00.9, 42°.62N×79°.62E, h10^{km}*
*NNC **23** 04:01:00.9±1.1, 42°.63N×79°.64E, h0^{km}, mb2.6, mpv2.6, Error ellipse: s-maj=6.8km s-min=3.5km az=131.0*
ISC 23 04:00:58.5±2.0**, 42°.53N**±0°.06×**79°.72E**±0°.07**, h9^{km}**±13^{km}**,**
n23, σ**0^{s}98**/44**, 15C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.65**	**343**	P	**Pb**	**04 01 12.4**	**+0.2**
	26nm,0.1s						
SHLS				S	**Sb**	**04 01 20.8**	**-0.6**
	51nm,0.2s						
SHLS	**Shalkode**	**0.65**	**343**	*e*P	**Pb**	**04 01 12.4**	**+0.2**
	26nm,0.1s						
SHLS				*e*S	**Sb**	**04 01 20.8**	**-0.6**
	51nm,0.2s						
UZB	**Uzynbulak**	**0.80**	**321**	P	**Pb**	**04 01 14.7**	**0.0**
	1.2nm,0.1s						
UZB				S	**Sb**	**04 01 24.5**	**-1.1**
	16nm,0.3s						
UZB	**Uzynbulak**	**0.80**	**321**	*e*P	**Pb**	**04 01 14.7**	**0.0**
	0.8nm,0.1s						
UZB				*e*S	**Sb**	**04 01 24.5**	**-1.1**
	16nm,0.3s						
PDGK	**Podgornoye**	**0.81**	**348**	P	**Pg**	**04 01 14.7**	**+0.5**
	1.8nm,0.1s						
PDGK				S	**Sg**	**04 01 24.8**	**-0.1**
	2.4nm,0.2s						
PDGK	**Podgornoye**	**0.81**	**348**	⇑P	**Pg**	**04 01 13.8**	**-0.4**
	1.3nm,0.4s						
PDGK				⇑S	**Sg**	**04 01 24.7**	**-0.2**
	0.9nm,0.3s						
PDGK	**Podgornoye**	**0.81**	**348**	⇑*i*P	**Pg**	**04 01 14.2**	**0.0**
	baz=49						
PDGK				⇑*i*S	**Sb**	**04 01 25.0**	**-1.1**
	baz=49						
PRZ	**Przheval'sk**	**0.97**	**268**	⇑*i*P	**Pb**	**04 01 17.9**	**+0.2**
	baz=64						
PRZ				⇑*i*S	**Sb**	**04 01 30.5**	**-0.2**
	baz=64						
SATY	**Saty**	**1.10**	**299**	P	**Pn**	**04 01 20.4**	**+0.2**
	1.9nm,0.1s						
SATY				S	**Sg**	**04 01 34.3**	**+0.3**
	12nm,0.1s						
SATY	**Saty**	**1.10**	**299**	*e*P	**Pn**	**04 01 20.4**	**+0.2**
	0.8nm,0.1s						
SATY				*e*S	**Sg**	**04 01 34.3**	**+0.3**
	12nm,0.1s						
KURS	**Kuram**	**1.48**	**311**	P	**Pg**	**04 01 27.1**	**+0.1**
	1.7nm,0.4s						
KURS				S	**Sg**	**04 01 45.8**	**-0.4**
	2.4nm,0.3s						
KURS	**Kuram**	**1.48**	**311**	*e*P	**Pg**	**04 01 27.1**	**+0.1**
	0.8nm,0.5s						
KURS				*e*S	**Sg**	**04 01 45.8**	**-0.4**
	2.6nm,0.3s						
DJR	**Jarkent**	**1.80**	**2**	P	**Pg**	**04 01 33.0**	**0.0**
	0.7nm,0.1s						
DJR				S	**Sg**	**04 01 56.0**	**-0.4**
	2.0nm,0.3s						
DJR	**Jarkent**	**1.80**	**2**	*e*P	**Pg**	**04 01 33.0**	**0.0**
	0.7nm,0.1s						
DJR				*e*S	**Sg**	**04 01 56.0**	**-0.4**
	2.0nm,0.3s						
KDJ	**Kajisay**	**1.92**	**259**	⇑*i*P	**Pb**	**04 01 35.0**	**+1.2**
	baz=57						
KDJ				⇑*i*S	**Sg**	**04 02 00.6**	**+0.3**
	baz=57						
MDOK	**Medeo**	**2.06**	**289**	⇓Pn	**Pb**	**04 01 36.5**	**+0.3**
	2.1nm,0.6s						
MDOK				⇑Sn	**Sb**	**04 02 02.2**	**+0.3**
	2.2nm,0.7s						
TNSS	**Tian-Shan**	**2.10**	**285**	Pg	**Pb**	**04 01 38.2**	**+1.2**
	1.7nm,0.1s						
TNSS				Lg	Lg	04 02 05.2	
	1.8nm,0.2s						
TNSS	**Tian-Shan**	**2.10**	**285**	*e*P	**Pb**	**04 01 38.2**	**+1.2**
	1.7nm,0.1s						
TNSS				*e*S	**Sg**	**04 02 05.2**	**-0.8**
	1.8nm,0.2s						
ULHL	**Ulahol**	**2.59**	**265**	⇓*i*P	**Pb**	**04 01 45.2**	**0.0**
	baz=64						
ULHL				⇓*i*S	**Sb**	**04 02 17.0**	**-0.2**
	baz=64						
BOOM	**Boomskoye usch**	**2.79**	**270**	⇓*i*P	**Pb**	**04 01 47.1**	**-1.5**
	baz=69						
BOOM				⇓*i*S	**Sb**	**04 02 21.8**	**-1.2**
	baz=69						
NRN	**Naryn**	**2.98**	**250**	⇑*i*P	**Pb**	**04 01 50.1**	**-1.8**
	baz=48						
NRN				⇑*i*S	**Sb**	**04 02 27.0**	**-1.5**
	baz=48						
TKM2	**Tokmak 2**	**3.06**	**279**	⇑Pg	**Pb**	**04 01 54.0**	**+0.8**
	0.7nm,0.7s						
TKM2				⇑Lg	Lg	04 02 33.4	
	1.2nm,0.7s						
TKM2	**Tokmak 2**	**3.06**	**279**	⇑*i*P	**Pn**	**04 01 49.8**	**+2.6**
	baz=78						
TKM2				⇑*i*S	**Sb**	**04 02 27.5**	**-3.2**
	baz=78						

IDC 23 04:01:53.2±3.0**, 1°.34S×135°.43E, h0^{km}, mb3.4**/2**,**
mb1 3.6/3**, mb1mx3.3**/23**, mbtmp3.5**/3**, ML3.2**/1**, Error**
ellipse: s-maj=149.8km s-min=29.8km az=82.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.52**	**183**	P	Pn	04 06 11.9	+0.5
	0.1nm,0.3s,baz=1.5,slow=11,SNR=17						
ASAR	**Alice Springs**	**22.25**	**184**	P	P	04 06 50.7	-1.2
	0.6nm,0.8s,baz=9.4,slow=11,SNR=5.1						
ZALV	**Zalesovo Beam**	**69.13**	**331**	P	P	04 13 01.7	+0.5
	0.4nm,0.4s,baz=111,slow=7.9,SNR=2.4						

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*KRNET **23** 04:20:31.9±0.1, 40°.26N×76°.87E, h8^{km}, mb2.8*
ISC 23 04:20:32.3±2.7**, 40°.28N**±0°.07×**76°.79E**±0°.06**, h5^{km}**±20^{km}**,**
n20, σ**1^{s}50**/33**, 14C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.30**	**333**	⇓*i*P	**Pn**	**04 20 56.8**	**-0.6**
	baz=30						
NRN				⇓*i*S	**Sg**	**04 21 15.8**	**+1.7**
	baz=30						
TARG	**Taragay, Kyrgy**	**1.64**	**28**	⇑*i*P	**Pb**	**04 21 02.5**	**-0.7**
	baz=25						
TARG				⇑*i*S	**Sg**	**04 21 24.3**	**-0.7**
	baz=25						
KDJ	**Kajisay**	**1.87**	**9**	⇑*i*P	**Pb**	**04 21 07.0**	**-0.1**
	baz=7.0						
KDJ				⇑*i*S	**Sg**	**04 21 32.2**	**-0.2**
	baz=7.0						
ULHL	**Ulahol**	**2.01**	**348**	P	**Pb**	**04 21 10.0**	**+0.6**
	SNR=13						
ULHL	**Ulahol**	**2.01**	**348**	⇓*e*P	**Pb**	**04 21 09.2**	**-0.2**
	baz=47						
ULHL				⇓*i*S	**Sg**	**04 21 36.3**	**-0.5**
	baz=47						
KZA	**Kyzart**	**2.14**	**328**	P	**Pb**	**04 21 12.3**	**+0.5**
	SNR=11						
KZA	**Kyzart**	**2.14**	**328**	⇓*e*P	**Pb**	**04 21 11.2**	**-0.6**
	baz=27						
KZA				⇓*i*S	**Sb**	**04 21 40.1**	**+1.3**
	baz=27						
BOOM	**Boomskoye usch**	**2.30**	**344**	⇑*i*P	**Pb**	**04 21 13.0**	**-1.4**
	baz=43						
BOOM				⇑*i*S	**Sb**	**04 21 43.3**	**+0.1**
	baz=43						
ARLS	**Aral**	**2.45**	**311**	⇑*i*P	**Pb**	**04 21 15.6**	**-1.2**
	baz=11						
ARLS				⇑*i*S	**Sb**	**04 21 47.5**	**+0.1**
	baz=11						
SFK	**Sufi-Kurgan**	**2.54**	**265**	⇑*i*P	**Pb**	**04 21 17.3**	**-1.1**
	baz=66						
SFK				⇑*e*S	**Sb**	**04 21 49.4**	**-0.6**
	baz=66						
UCH	**Uchtor**	**2.60**	**319**	P	**Pb**	**04 21 21.1**	**+1.5**
	SNR=6.9						
UCH	**Uchtor**	**2.60**	**319**	⇓*i*P	**Pb**	**04 21 17.8**	**-1.8**
	baz=19						
UCH				⇓*i*S	**Sb**	**04 21 51.3**	**-0.7**
	baz=19						
KBK	**Karagaybulak**	**2.75**	**330**	P	**Pb**	**04 21 21.9**	**-0.1**
	SNR=5.1						
KBK	**Karagaybulak**	**2.75**	**330**	⇓*e*P	**Pb**	**04 21 19.5**	**-2.5**
	baz=30						
KBK				⇓*i*S	**Sb**	**04 21 54.2**	**-1.9**
	baz=30						
TKM2	**Tokmak 2**	**2.79**	**342**	P	**Pb**	**04 21 21.8**	**-0.9**
	SNR=6.9						
TKM2	**Tokmak 2**	**2.79**	**342**	⇓*e*P	**Pn**	**04 21 19.9**	**+2.1**
	baz=41						
TKM2				⇓*i*S	**Sb**	**04 21 55.1**	**-2.1**
	baz=41						
AAK	**Ala-Archa**	**2.92**	**325**	P	**Sg**	**04 22 06.9**	**+0.8**
	SNR=5.4						
AML	**Almayashu**	**2.98**	**309**	P	**Pb**	**04 21 25.1**	**-1.0**
	SNR=12						
AML	**Almayashu**	**2.98**	**309**	⇑*i*P	**Pn**	**04 21 23.0**	**+2.4**
	baz=9.0						
AML				⇑*i*S	**Sb**	**04 22 00.5**	**-2.5**
	baz=9.0						
ARSB	**Arslanbob**	**3.08**	**291**	⇑*i*P	**Pn**	**04 21 24.0**	**+2.3**
	baz=91						
ARSB				⇑*i*S	**Sb**	**04 22 02.7**	**-2.8**
	baz=91						

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*IDC **23** 04:20:33.4±4.6, 35°.94N×69°.89E, h74^{km}±31^{km}, mb3.4/7, mb1 3.6/13, mb1mx3.3/56, mbtmp3.8/13, Error ellipse: s-maj=48.2km s-min=16.6km az=153.0*

ISCJB ***23*** *04:20:35.8±0.5, 36°.20N±0°.04×69°.80E±0°.04, h100^{km}, mb3.5/6, Error ellipse: s-maj=5.9km s-min=4.8km az=169.7*

NNC ***23*** *04:20:41.2±2.8, 36°.69N×69°.55E, h20^{km}±26^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=26.1km s-min=8.8km az=165.0*

ISC 23 04:20:35.2±0.7**, 36°.09N**±0°.07×**69°.93E**±0°.06**, h100^{km}, n33, σ2ˢ.81**/43**, mb3.5**/6**, 8C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.83**	**35**	⇓P	**Pn**	**04 21 48.8**	**+3.0**
	15nm,0.4s						
SFK				⇑S	**Sn**	**04 22 42.6**	**+2.0**
	47nm,0.4s						
MNAS	**Manas**	**6.69**	**17**	⇓P	**Pn**	**04 22 12.5**	**+1.4**
	5.9nm,0.7s						
MNAS				⇑S	**Sn**	**04 23 24.1**	**-1.7**
	28nm,0.6s						
AML	**Almayashu**	**6.71**	**25**	P	**Pn**	**04 22 13.3**	**+1.8**
	SNR=12						
KK31	**Karatay Array**	**7.02**	**3**	⇑P	**Pn**	**04 22 16.7**	**+1.3**
	1.9nm,0.3s,baz=193,slow=16,SNR=60						
KK31				⇑S	**Sn**	**04 23 29.7**	**-3.9**
	6.8nm,0.5s,baz=193,slow=24,SNR=11						
UCH	**Uchtor**	**7.09**	**29**	P	**Pn**	**04 22 19.0**	**+2.3**
	SNR=8.2						
EKS2	**Erkin-Say**	**7.21**	**23**	P	**Pn**	**04 22 20.7**	**+2.7**
	SNR=11						
KZA	**Kyzart**	**7.27**	**33**	P	**Pn**	**04 22 20.4**	**+1.2**
	SNR=6.7						
AAK	**Ala-Archa**	**7.43**	**27**	P	**Pn**	**04 22 22.3**	**+1.2**
	11nm,0.6s						
AAK				S	**Sn**	**04 23 44.1**	**+0.2**
	28nm,0.8s						
AAK	**Ala-Archa**	**7.43**	**27**	P	**Pn**	**04 22 23.2**	**+2.1**
	5.3nm,0.3s,baz=160,slow=5.9,SNR=13						
AAK				S	**Sn**	**04 23 43.7**	**-0.2**
	1.4nm,0.3s,baz=119,slow=10,SNR=3.7						
CHMS	**Chumysh**	**7.84**	**27**	P	**Pn**	**04 22 28.2**	**+1.7**
	SNR=6.4						
TKM2	**Tokmak 2**	**8.11**	**31**	P	**Pn**	**04 22 32.0**	**+1.7**
	SNR=6.2						
TKM2	**Tokmak 2**	**8.11**	**31**	⇓P	**Pn**	**04 22 31.7**	**+1.4**
	9.5nm,0.6s						
TKM2				⇑S	**Sn**	**04 24 01.0**	**+0.7**
	6.5nm,0.6s						
GEYT	**Alibeck**	**9.62**	**285**	P	**Pn**	**04 22 50.4**	**-0.4**
	1.2nm,0.3s,baz=108,slow=10,SNR=8.5						
GEYT				S	**Sn**	**04 24 34.9**	**-2.2**
	0.5nm,0.3s,baz=118,slow=18,SNR=2.9						
GYA0B	**ALIBECK ARRAY**	**9.62**	**285**	⇓P	**Pn**	**04 22 53.9**	**+3.0**
	1.9nm,0.3s						
GYA0B				⇓S	**Sn**	**04 24 36.5**	**-0.6**
	14nm,0.7s						
PYUN	**Piuthan**	**13.63**	**122**	*e*P	**P**	**04 23 46.5**	**-3.5**
	3.1nm,0.2s						
PYUN				*e*S	**Sn**	**04 26 08.4**	**-6.3**
DANN	**Dangsing**	**14.01**	**120**	*e*P	**P**	**04 23 52.1**	**-2.2**
	5.9nm,0.3s						
MKAR	**Makanchi Array**	**14.13**	**37**	P	**Pn**	**04 23 50.6**	**-0.2**
	0.1nm,0.3s,baz=226,slow=15,SNR=5.7						
KOLN	**Koldanda**	**14.26**	**122**	*e*P	**P**	**04 23 54.9**	**-2.0**
	3.0nm,0.3s						
AB31	**Akbulak array**	**15.05**	**334**	⇑P	**Pn**	**04 24 02.6**	**+0.2**
	0.4nm,0.3s,baz=1.4,slow=26,SNR=28						
AB31				⇑S	**Sn**	**04 26 39.5**	**-8.9**
	1.7nm,0.7s,baz=152,slow=23,SNR=4.1						
DMN	**Daman**	**15.41**	**119**	*e*P	**P**	**04 24 10.6**	**+0.8**
	3.4nm,0.3s						
KURBB	**Kurchatov Arra**	**15.80**	**20**	P	**Pn**	**04 24 11.8**	**0.0**
	0.0nm,0.3s,baz=212,slow=12,SNR=3.6						
JIRN	**Jiri**	**16.15**	**117**	*e*P	**P**	**04 24 20.4**	**+2.2**
	13nm,0.4s						
AKTO	**Aktyubinsk**	**16.73**	**333**	⇑P	**P**	**04 24 25.9**	**+2.0**
	2.5nm,0.8s						
AKTO				⇓S	**Sn**	**04 27 20.9**	**-7.9**
	4.1nm,1.1s						
AKTO	**Aktyubinsk**	**16.73**	**333**	P	**P**	**04 24 24.1**	**+0.2**
	0.5nm,0.3s,baz=136,slow=17,SNR=5.3						
BVAR	**Borovoye Array**	**16.94**	**1**	P	**P**	**04 24 27.5**	**+1.3**
	0.6nm,0.3s,baz=172,slow=9.3,SNR=9.2						
ZALV	**Zalesovo Beam**	**20.65**	**26**	P	Pn	04 25 09.2	-0.7
	5.6nm,0.6s,baz=223,slow=12,SNR=17						
BRTR	**Keskin Array B**	**28.74**	**288**	P	**P**	**04 26 24.3**	**+1.0**
	0.2nm,0.5s,baz=116,slow=7.9,SNR=2.6						
FINES	**FINESS Array B**	**37.35**	**327**	P	**P**	**04 27 39.7**	**+2.0**
	0.8nm,0.7s,baz=108,slow=11,SNR=4.0						
ARCES	**ARCESS Array B**	**41.20**	**338**	P	**P**	**04 28 12.1**	**+2.5**
	6.1nm,1.0s,baz=112,slow=8.9,SNR=3.8						
NB2	**NORSAR Subarra**	**44.19**	**323**	P	**P**	**04 28 35.7**	**+1.8**
	comp=Z,0.3nm,0.4s,baz=90,slow=8.6						
NOA	**NORSAR Array B**	**44.19**	**323**	P	**P**	**04 28 35.7**	**+1.8**
	comp=Z,0.4nm,1.0s,baz=100,slow=7.9,SNR=6.4						
TORD	**Torodi Ar. Bea**	**64.84**	**268**	P	**P**	**04 31 03.9**	**0.0**
	comp=Z,0.5nm,0.7s,baz=46,slow=6.0,SNR=10.0						
YKA	**Yellowknife Ar**	**81.69**	**2**	P	**P**	**04 32 44.1**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=348,slow=5.2,SNR=8.3						

DRS ***23*** *04:34:17.3±0.0, 42°.64N×45°.49E, h12^{km}*

NORS ***23*** *04:34:17.0±0.0, 42°.57N×45°.47E, h11^{km}, MPVA3.5*

ISC 23 04:34:17.8±1.0**, 42°.63N**±0°.04×**45°.48E**±0°.02**, h12^{km}**±9^{km}**, n18, σ0ˢ.63**/35**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.55**	**86**	*e*Pg	**Pg**	**04 34 28.5**	**-0.1**
BTLR				*e*Sg	**Sg**	**04 34 36.2**	**+0.3**
DVE	**Vedeno**	**0.58**	**55**	*i* Pg	**Pg**	**04 34 29.1**	**-0.1**
DVE				*e*Sg	**Sg**	**04 34 37.3**	**+0.5**
GROC	**Groznyy**	**0.62**	**22**	*e*Pg	**Pn**	**04 34 32.1**	**-0.4**
GROC				*e*Sg	**Sn**	**04 34 41.3**	**-1.0**
GUDG	**Gudauri**	**0.76**	**258**	P	**Pb**	**04 34 33.2**	**+0.1**
GUDG				S	**Sg**	**04 34 42.7**	**+0.2**
LACR	**Lac**	**0.89**	**283**	*e*Pg	**Pg**	**04 34 34.5**	**-0.5**
LACR				*e*Sg	**Sg**	**04 34 46.6**	**-0.2**
XNZR	**Khunzakh**	**0.91**	**95**	*e*Pg	**Pb**	**04 34 35.6**	**-0.1**
XNZR				*e*Sg	**Sb**	**04 34 47.5**	**-0.3**
DBC	**Dubki**	**1.07**	**68**	*i* Pg	**Pn**	**04 34 38.7**	**0.0**
DBC				*e*Sg	**Sn**	**04 34 54.4**	**+0.9**
BTNK	**Botanikuri**	**1.07**	**208**	P	**Pn**	**04 34 38.5**	**-0.1**
BTNK				S	**Sn**	**04 34 53.8**	**+0.3**
KRNR	**Karanay**	**1.07**	**79**	*e*Pg	**Pb**	**04 34 38.0**	**-0.4**
KRNR				*e*Sg	**Sn**	**04 34 53.5**	**-0.2**
GNBR	**Gunib**	**1.12**	**102**	*i* Pg	**Pb**	**04 34 38.9**	**-0.3**
GNBR				*e*Sg	**Sn**	**04 34 54.4**	**-0.5**
KORR	**Kora**	**1.13**	**294**	*e*Pg	**Pg**	**04 34 40.0**	**+0.4**
KORR				*e*Sg	**Sn**	**04 34 57.3**	**+2.2**
ZEI	**Tsey**	**1.17**	**278**	*i* Pg	**Pn**	**04 34 40.1**	**-0.2**
ZEI				*e*Sg	**Sn**	**04 34 56.0**	**-0.3**
KMKR	**Kumukh**	**1.30**	**112**	*e*Pg	**Pg**	**04 34 43.0**	**+0.2**
KMKR				*e*Sg	**Sg**	**04 35 01.0**	**+1.3**
DIGR	**Digorskoe uzhe**	**1.42**	**282**	*i* Pg	**Pb**	**04 34 44.3**	**-0.1**
DIGR				*e*Sg	**Sg**	**04 35 03.5**	**-0.2**
TRLG	**Trialeti**	**1.49**	**224**	P	**Pg**	**04 34 45.8**	**-0.7**
TRLG				S	**Sg**	**04 35 06.1**	**+0.2**
NEY	**Neytrino**	**2.12**	**288**	*e*Pg	**Pb**	**04 34 56.0**	**-0.2**
NEY				*e*Sg	**Sb**	**04 35 23.4**	**+0.9**
SHA1	**Shidzhatmaz**	**2.34**	**299**	*e*Pn	**Pn**	**04 34 55.9**	**-0.4**
SHA1				*e*Sn	**Sb**	**04 35 28.8**	**-0.3**
KIV	**Kislovodsk**	**2.43**	**304**	*e*Sn	**Sn**	**04 35 27.7**	**+0.5**

NORS ***23*** *04:34:54.9±0.0, 42°.58N×45°.48E, h11^{km}, MPVA3.4*

MOS ***23*** *04:34:54.0±0.0, 42°.61N×45°.50E, h18^{km}, MPVA3.3*

DRS ***23*** *04:34:56.8±0.0, 42°.60N×45°.52E, h15^{km}*

ISC 23 04:34:55.4±1.0**, 42°.64N**±0°.04×**45°.48E**±0°.02**, h12^{km}**±9^{km}**, n17, σ0ˢ.97**/34**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.55**	**87**	*e*Pg	**Pg**	**04 35 06.0**	**-0.1**
BTLR				*e*Sg	**Sg**	**04 35 13.7**	**+0.3**
DVE	**Vedeno**	**0.57**	**56**	*e*Pg	**Pg**	**04 35 06.7**	**+0.2**
DVE				*e*Sg	**Sb**	**04 35 15.1**	**-0.4**
GROC	**Groznyy**	**0.61**	**22**	*e*Pg	**Pn**	**04 35 09.8**	**-0.1**
GROC				*e*Sg	**Sn**	**04 35 18.9**	**-0.6**
GUDG	**Gudauri**	**0.76**	**257**	P	**Pb**	**04 35 10.7**	**0.0**
GUDG				S	**Sg**	**04 35 20.1**	**-0.1**
LACR	**Lac**	**0.89**	**282**	*e*Pg	**Pg**	**04 35 12.4**	**-0.2**
LACR				*e*Sg	**Sg**	**04 35 24.3**	**0.0**
XNZR	**Khunzakh**	**0.91**	**96**	*e*Pg	**Pb**	**04 35 13.1**	**-0.1**
XNZR				*e*Sg	**Sb**	**04 35 25.2**	**-0.1**
DBC	**Dubki**	**1.06**	**69**	*e*Pg	**Pn**	**04 35 16.3**	**+0.1**
DBC				*e*Sg	**Sn**	**04 35 32.3**	**+1.4**
KRNR	**Karanay**	**1.07**	**80**	*e*Pg	**Pb**	**04 35 15.5**	**-0.3**
KRNR				*e*Sg	**Sg**	**04 35 30.0**	**+0.1**
BTNK	**Botanikuri**	**1.08**	**208**	P	**Pn**	**04 35 16.1**	**-0.3**
BTNK				S	**Sn**	**04 35 31.4**	**0.0**
GNBR	**Gunib**	**1.13**	**102**	*i* Pg	**Pb**	**04 35 16.5**	**-0.3**
GNBR				*e*Sg	**Sn**	**04 35 32.3**	**-0.1**
KORR	**Kora**	**1.13**	**294**	*e*Pg	**Pg**	**04 35 18.4**	**+1.3**
KORR				*e*Sg	**Sn**	**04 35 35.3**	**+2.8**
ZEI	**Tsey**	**1.17**	**278**	*e*Pg	**Pb**	**04 35 17.7**	**0.0**
ZEI				*e*Sg	**Sn**	**04 35 34.3**	**+0.5**
KMKR	**Kumukh**	**1.30**	**113**	*e*Pg	**Pn**	**04 35 19.5**	**-0.1**
KMKR				*e*Sg	**Sg**	**04 35 38.0**	**+0.6**
DIGR	**Digorskoe uzhe**	**1.42**	**281**	*i* Pg	**Pb**	**04 35 22.0**	**0.0**
DIGR				*e*Sg	**Sg**	**04 35 41.6**	**+0.4**
TRLG	**Trialeti**	**1.51**	**223**	P	**Pb**	**04 35 23.4**	**+0.1**
TRLG				S	**Sg**	**04 35 43.5**	**-0.4**
NEY	**Neytrino**	**2.11**	**288**	*e*Pg	**Pg**	**04 35 35.6**	**-0.3**
NEY				*e*Sg	**Sb**	**04 36 01.7**	**+1.7**
SHA1	**Shidzhatmaz**	**2.34**	**299**	*e*Pn	**Pn**	**04 35 30.5**	**-3.3**
SHA1				*e*Sn	**Sb**	**04 36 05.8**	**-0.6**

ISCJB ***23*** *04:40:11.4±0.9, 32°.05N±0°.02×117°.71W±0°.02, h6^{km}±7^{km}, mb3.1/2, Error ellipse: s-maj=4.4km s-min=2.7km az=32.8*

NEIC ***23*** *04:40:14.6±0.0, 32°.13N×117°.69W, h10^{km}, MD4.1(MEX), ML4.0(PAS), After PAS.*

NEIC Felt [III] at Tijuana. Also felt at Ensenada, Playas de Rosarito and Rosarito. Felt [III] at Carlsbad, Escondido, Imperial Beach, La Jolla, Lakeside, La Mesa, Rancho Santa Fe, San Diego and San Marcos, California. Felt in much of San Diego and southwestern Riverside Counties.

SCEDC ***23*** *04:40:14.9, 32°.09N×117°.63W, h33^{km}*

PAS ***23*** *04:40:14.6, 32°.13N×117°.69W, h10^{km}, ML4.0, MD4.1(MEX)*

ANF ***23*** *04:40:15.1±0.7, 32°.20N×117°.67W, h20^{km}±5^{km}, ML4.0/42, Error ellipse: s-maj=2.8km s-min=1.8km az=7.0*

IDC ***23*** *04:40:15.7±1.6, 32°.22N×117°.52W, h0^{km}, mb3.2/2, mb1 3.6/7, mb1mx3.4/33, mbtmp3.2/7, ML3.4/5, MS3.1/2, Ms1 3.1/2, ms1mx2.8/13, Error ellipse: s-maj=17.6km s-min=14.5km az=56.0*

ECX ***23*** *04:40:15.5±0.7, 32°.08N×117°.59W, h15^{km}, MD3.8, ML4.0, Fault plane solution: NP1:ϕ_s30.00000°, δ90.00000°, λ0.00000°.*

MEX ***23*** *04:40:16.5±0.3, 32°.16N×117°.64W, h10^{km}, MD4.1*

ISC 23 04:40:12.7±1.5**, 32°.06N**±0°.04×**117°.67W**±0°.04**, h2^{km}**±10^{km}**, n122, σ1ˢ.54**/151**, 10C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBX	**Punta Banda**	**0.86**	**111**	⇑*e*P	**Pg**	**04 40 29.7**	**+0.4**
PBX				*e*S	**Sg**	**04 40 40.5**	**0.0**
CBX	**Cerro Bola**	**0.89**	**73**	*e*P	**Pg**	**04 40 30.5**	**+0.7**
CBX				*i* S	**Sg**	**04 40 41.2**	**-0.1**
CBX	**Cerro Bola**	**0.89**	**73**	*e*P	**Pg**	**04 40 30.5**	**+0.7**
CBX				*i* S	**Sg**	**04 40 41.2**	**-0.1**
CBX	**Cerro Bola**	**0.89**	**73**	⇑*i*P	**Pg**	**04 40 30.5**	**+0.7**
CBX				IAML		04 40 46.6	
	comp=E,7μm,0.5s						
CBX				⇑*e*		04 40 46.6	
SDRC	**San Diego Road**	**0.91**	**42**	*e*P	**Pb**	**04 40 30.2**	**-1.1**
TJIG	**Tijuana**	**0.92**	**66**	*i* P	**Pb**	**04 40 30.7**	**-0.7**
TJIG				*e*S	**Sg**	**04 40 41.6**	**-0.7**
TJIG	**Tijuana**	**0.92**	**66**	⇑*e*P	**Pb**	**04 40 30.7**	**-0.7**
109C	**Camp Elliot, M**	**0.95**	**30**	P	**Pb**	**04 40 30.6**	**-1.4**
	baz=209,SNR=490						
109C				S	**Sb**	**04 40 42.1**	**-3.0**
	baz=209						
CPE	**Camp Elliot**	**0.95**	**30**	*e*Pn	**Pb**	**04 40 30.8**	**-1.2**
CPE				*e*Sn	**Sb**	**04 40 41.0**	**-4.1**
ECNX	**Esteban Cantu**	**1.00**	**114**	⇑*e*P	**Pb**	**04 40 29.3**	**-3.5**
BAR	**Barrett**	**1.05**	**54**	*e*Pn	**Pb**	**04 40 32.5**	**-1.1**
BAR				*e*Sn	**Sb**	**04 40 44.4**	**-3.4**
BAR	**Barrett**	**1.05**	**54**	⇑*e*P	**Pb**	**04 40 32.4**	**-1.2**
SCI2	**San Clemente I**	**1.18**	**321**	P	**Pn**	**04 40 34.6**	**-1.7**
	baz=139,SNR=84						
SCI2				S	**Sb**	**04 40 49.8**	**-1.8**
	baz=139						
ZAX	**El Zacaton**	**1.31**	**114**	⇓*e*P	**Pn**	**04 40 36.9**	**-1.3**
ZAX				IAML		04 41 03.8	
	comp=E,3μm,0.9s						
ZAX				⇓*e*		04 41 03.8	
MONP2	**Monument Peak**	**1.34**	**52**	P	**Pn**	**04 40 37.1**	**-1.7**
	baz=232,SNR=405						
MONP2				S	**Sb**	**04 40 53.5**	**-3.0**
	baz=232						
MONP2	**Monument Peak**	**1.34**	**52**	⇑*e*P	**Pn**	**04 40 37.2**	**-1.5**
IKP	**In-Ko-Pah, Jac**	**1.45**	**66**	P	**Pn**	**04 40 39.1**	**-0.9**
	baz=247,SNR=518						
IKP				S	**Sn**	**04 40 57.2**	**-2.4**
	baz=247						
IKP	**In-Ko-Pah, Jac**	**1.45**	**66**	⇑*e*P	**Pn**	**04 40 39.2**	**-0.9**
RMX	**La Rumorosa**	**1.45**	**68**	⇑*e*P	**Pn**	**04 40 39.8**	**-0.4**
RMX				⇑*e*		04 40 59.9	
RMX				IAML		04 40 59.9	
	comp=N,2μm,0.3s						
CIS	**Catalina Islan**	**1.48**	**335**	P	**Pn**	**04 40 37.7**	**-2.8**
	baz=153,SNR=76						
CIS				S	**Sn**	**04 40 57.1**	**-3.3**
	baz=153						
MURC	**Murrieta**	**1.59**	**14**	P	**Pn**	**04 40 39.7**	**-2.2**
	baz=194,SNR=258						
MURC				S	**Sn**	**04 41 00.0**	**-3.1**
	baz=194						
FMP	**Fort Macarthur**	**1.73**	**343**	P	**Pn**	**04 40 41.3**	**-2.5**
	baz=161,SNR=9.1						
WESC	**Westside Schoo**	**1.78**	**66**	*e*P	**Pn**	**04 40 44.6**	**+0.1**
SWSC	**Sam W. Stewart**	**1.81**	**60**	P	**Pn**	**04 40 44.2**	**-0.8**
	baz=242,SNR=311						
SWSC				Sb	**Sb**	**04 41 08.9**	**-0.9**
	baz=242						
SWSC	**Sam W. Stewart**	**1.81**	**60**	*e*P	**Pn**	**04 40 44.4**	**-0.6**
PFO	**Pinyon Flats O**	**1.85**	**33**	*e*Pn	**Pn**	**04 40 44.5**	**-1.2**
PFO				*e*Sn	**Sn**	**04 41 04.5**	**-5.2**
PFO	**Pinyon Flats O**	**1.85**	**33**	P	**Pn**	**04 40 44.8**	**-0.8**
	baz=213,SNR=184						
PFO				Sb	**Sn**	**04 41 08.9**	**-0.9**
	baz=213						
PFO	**Pinyon Flats O**	**1.85**	**33**	Pn	**Pn**	**04 40 44.9**	**-0.8**
	comp=N,58nm,0.3s,baz=215,slow=13,SNR=275						
PFO				Pg	**Pb**	**04 40 46.6**	**-0.8**
	comp=N,58nm,0.3s,baz=219,slow=16,SNR=322						
PFO				Lg	Lg	04 41 08.3	
	comp=N,302nm,0.3s,baz=150,slow=20,SNR=34						
XPFO	**Pion Flat**	**1.85**	**33**	*e*Pn	**Pn**	**04 40 44.3**	**-1.4**
XPFO				*e*Sn	**Sn**	**04 41 06.2**	**-3.6**
SNCC	**San Nicolas Is**	**1.96**	**308**	*e*Pn	**Pn**	**04 40 45.9**	**-1.1**
SNCC	**San Nicolas Is**	**1.96**	**308**	P	**Pn**	**04 40 45.7**	**-1.4**
	baz=125,SNR=14						
SNCC				S	**Sn**	**04 41 09.4**	**-2.9**
	baz=125						
SPIG	**San Pedro Mart**	**2.14**	**118**	*e*P	**Pn**	**04 40 49.2**	**-0.6**
SPIG				*e*S	**Sn**	**04 41 15.7**	**-1.3**
SPIG	**San Pedro Mart**	**2.14**	**118**	*e*P	**Pn**	**04 40 49.2**	**-0.6**
SPIG				*e*S	**Sn**	**04 41 15.7**	**-1.3**
SPIG	**San Pedro Mart**	**2.14**	**118**	*e*P	**Pn**	**04 40 49.3**	**-0.5**
SPX	**San Pedro Mart**	**2.14**	**118**	*e*P	**Pn**	**04 40 49.3**	**-0.5**
SPX				*e*S	**Sn**	**04 41 15.6**	**-1.5**
SPX	**San Pedro Mart**	**2.14**	**118**	*e*P	**Pn**	**04 40 49.3**	**-0.5**
SPX				*e*S	**Sn**	**04 41 15.6**	**-1.5**
SPX	**San Pedro Mart**	**2.14**	**118**	*e*P	**Pn**	**04 40 49.9**	**+0.1**
PASC	**Pasadena Art C**	**2.15**	**349**	*e*Pn	**Pn**	**04 40 47.7**	**-1.9**
BFSC	**Mount Baldy Ra**	**2.17**	**0**	P	**Pn**	**04 40 48.1**	**-2.0**
	baz=179,SNR=111						
BFSC				Sb	**Sn**	**04 41 18.3**	**+0.6**
	baz=179						
MWC	**Mount Wilson**	**2.18**	**352**	*e*Pn	**Pn**	**04 40 48.1**	**-2.2**
DECC	**Green Verdugo**	**2.26**	**346**	P	**Pn**	**04 40 49.0**	**-2.1**
	baz=165,SNR=8.7						
BBRC	**Big Bear Solar**	**2.28**	**16**	P	**Pn**	**04 40 50.9**	**-0.8**
	baz=196,SNR=24						
BBRC				Sb	**Sn**	**04 41 21.6**	**+1.0**
	baz=196						
ECBX	**El Chinero**	**2.31**	**104**	*e*P	**Pn**	**04 40 51.3**	**-0.5**
ECBX				*e*S	**Sn**	**04 41 20.6**	**-0.1**
BLG	**Laguna Peak, P**	**2.35**	**331**	P	**Pn**	**04 40 51.5**	**-1.0**
	baz=149						
BLG				Sb	**Sn**	**04 41 23.9**	**+1.9**
	baz=149						
BELC	**Belle Mtn. Jos**	**2.39**	**36**	Pb	**Pb**	**04 40 55.9**	**-0.7**
	baz=216						
BELC				Sb	**Sb**	**04 41 25.6**	**-1.0**
	baz=216						
BC3	**Big Chuckawall**	**2.45**	**49**	P	**Pn**	**04 40 52.9**	**-1.0**
	baz=230,SNR=91						
BC3				Sb	**Sb**	**04 41 27.8**	**-0.5**
	baz=230						
SCZ2	**Santa Cruz Isl**	**2.54**	**320**	P	**Pn**	**04 40 53.6**	**-1.4**
	baz=138						
GLA	**Glamis**	**2.60**	**67**	*e*Pn	**Pn**	**04 40 54.5**	**-1.3**
GLA				*e*Sn	**Sn**	**04 41 27.1**	**-1.0**
GLA	**Glamis**	**2.60**	**67**	P	**Pn**	**04 40 55.3**	**-0.5**
	baz=249,SNR=28						
GLA				Sb	**Sb**	**04 41 32.6**	**+0.1**
	baz=249						
OSI	**Osito Audit: C**	**2.69**	**341**	*e*Pn	**Pn**	**04 40 55.4**	**-1.8**
OSI	**Osito Audit: C**	**2.69**	**341**	Pb	**Pn**	**04 41 00.1**	**+2.9**
	baz=160						
EDW2	**Edwards Air Fo**	**2.83**	**355**	P	**Pn**	**04 40 58.2**	**-0.8**
	baz=174,SNR=33						
RRX	**Edison Barstow**	**2.86**	**11**	P	**Pn**	**04 40 59.0**	**-0.5**
	baz=191						
RRX				Sb	**Sb**	**04 41 38.7**	**-1.4**
	baz=191						
IRM	**Iron Mountain**	**2.98**	**45**	P	**Pn**	**04 41 00.5**	**-0.6**
	baz=226						
IRM				Sb	**Sb**	**04 41 43.4**	**0.0**
	baz=226						
HEC	**Hector,Ludlow**	**2.98**	**22**	P	**Pn**	**04 41 00.5**	**-0.6**
	baz=202,SNR=36						
HEC				Sb	**Sb**	**04 41 42.7**	**-0.8**
	baz=202						
Y12C	**Blythe**	**3.14**	**57**	*e*Pn	**Pn**	**04 41 01.8**	**-1.4**
Y12C	**Blythe**	**3.14**	**57**	P	**Pn**	**04 41 02.8**	**-0.4**
	baz=238						
Y12C				Sb	**Sb**	**04 41 48.4**	**+0.4**
	baz=238						
GMRC	**Granite Mounta**	**3.19**	**31**	P	**Pn**	**04 41 03.4**	**-0.7**
	baz=212,SNR=7.5						
ARVC	**Arvin**	**3.21**	**343**	P	**Pn**	**04 41 03.4**	**-0.8**
	baz=161,SNR=7.5						
GSC	**Goldstone, Bar**	**3.31**	**12**	*e*Pn	**Pn**	**04 41 04.8**	**-0.9**
GSC	**Goldstone, Bar**	**3.31**	**12**	P	**Pn**	**04 41 05.3**	**-0.4**
	baz=192,SNR=27						
GSC				Sb	**Sb**	**04 41 52.5**	**-0.6**
	baz=192						
PKM	**Mcpherson Peak**	**3.34**	**328**	P	**Pn**	**04 41 05.3**	**-0.9**
	baz=146						
113A	**Mohawk Valley,**	**3.38**	**77**	*e*Pn	**Pn**	**04 41 05.3**	**-1.2**
LRMC	**Laurel Mtn Rad**	**3.41**	**360**	P	**Pn**	**04 41 06.6**	**-0.5**
	baz=179,SNR=12						
ISA	**Isabella, Lake**	**3.66**	**350**	*e*Pn	**Pn**	**04 41 09.8**	**-0.6**
ISA	**Isabella, Lake**	**3.66**	**350**	P	**Pn**	**04 41 09.5**	**-0.9**
	baz=169						
TUQ	**Turquoise Moun**	**3.67**	**23**	P	**Pn**	**04 41 10.2**	**-0.5**
	baz=204						
TUQ				Sb	**Sb**	**04 42 04.0**	**+0.6**
	baz=204						
LDFC	**Landfair**	**3.69**	**35**	*e*Pn	**Pn**	**04 41 10.3**	**-0.6**
LDFC				*e*Lg	Lg	04 42 08.3	
NEE2	**Needles Airpor**	**3.71**	**43**	Sb	**Sb**	**04 42 06.2**	**+1.6**
	baz=224						
SMMC	**Simmler**	**3.78**	**330**	P	**Pn**	**04 41 11.2**	**-0.9**
	baz=148						
VES	**Vestal, Richgr**	**3.95**	**343**	P	**Pn**	**04 41 13.8**	**-0.6**
	baz=162						
MPMC	**Manual Prospec**	**3.99**	**2**	P	**Pn**	**04 41 14.6**	**-0.6**
	baz=182,SNR=13						
SHOC	**Shoshone, Teco**	**4.00**	**16**	P	**Pn**	**04 41 14.8**	**-0.4**
	baz=197						
214A	**Organ Pipe Nat**	**4.13**	**90**	P	**Pn**	**04 41 16.6**	**-0.3**
	baz=273						
DAC	**Darwin (Calif)**	**4.21**	**1**	*e*Pn	**Pn**	**04 41 16.5**	**-1.6**
PAGB	**Antelope Grade**	**4.24**	**330**	*e*Pn	**Pn**	**04 41 17.1**	**-1.3**
Y14A	**Wickenburg**	**4.34**	**63**	*e*Pn	**Pn**	**04 41 18.6**	**-1.3**
W13A	**Hualapai Mount**	**4.38**	**45**	*e*Pn	**Pn**	**04 41 19.0**	**-1.5**
W13A				*e*Lg	Lg	04 42 27.1	
CWC	**Cottonwood Cre**	**4.38**	**356**	P	**Pn**	**04 41 19.9**	**-0.6**
	baz=175						
FURC	**Furnace Creek,**	**4.45**	**8**	P	**Pn**	**04 41 20.7**	**-0.5**
	baz=188						
SHPR	**Sheep Range**	**4.90**	**24**	*e*Pn	**Pn**	**04 41 27.3**	**-0.3**
SHPR				*e*Lg	Lg	04 42 42.8	
GRAC	**Grapevine Rang**	**4.93**	**3**	P	**Pn**	**04 41 28.6**	**+0.7**
	baz=183,SNR=39						
TIN	**Tinemaha, Big**	**5.00**	**355**	P	**Pn**	**04 41 29.8**	**+0.8**
	baz=174						
TPNV	**Topopah Spring**	**5.01**	**13**	*e*Pn	**Pn**	**04 41 29.2**	**0.0**
TPNV	**Topopah Spring**	**5.01**	**13**	P	**Pn**	**04 41 30.1**	**+0.9**
	baz=194,SNR=50						
SAO	**San Andreas Ge**	**5.63**	**327**	*e*Pn	**Pn**	**04 41 36.0**	**-1.6**
MLAC	**Mammoth, Mammo**	**5.64**	**351**	P	**Pn**	**04 41 38.9**	**+1.1**
	baz=170						
OMMB	**Old Mammoth Mi**	**5.65**	**349**	*e*Pn	**Pn**	**04 41 36.9**	**-1.1**
MDPB	**Devils Postpil**	**5.68**	**349**	*e*Pn	**Pn**	**04 41 39.0**	**+0.6**
X16A	**Lo Mia Camp, P**	**5.72**	**64**	*e*Pn	**Pn**	**04 41 39.8**	**+0.8**
TUC	**Tucson**	**5.84**	**86**	*e*Pn	**Pn**	**04 41 41.0**	**+0.5**
TUC	**Tucson**	**5.84**	**86**	P	**Pn**	**04 41 43.2**	**+2.7**
	baz=270						
LCMT	**Little Creek M**	**6.14**	**35**	*e*Pn	**Pn**	**04 41 45.3**	**+0.7**
LCMT				*e*Lg	Lg	04 43 23.9	
U15A	**North Rim**	**6.23**	**44**	*e*Pn	**Pn**	**04 41 49.3**	**+3.3**
U15A				*e*Lg	Lg	04 43 28.0	
WUAZ	**Wupatki**	**6.27**	**55**	*e*Pn	**Pn**	**04 41 47.3**	**+0.8**
WUAZ	**Wupatki**	**6.27**	**55**	P	**Pn**	**04 41 46.5**	**+0.1**
	baz=238						
KNB	**Kanab**	**6.36**	**38**	*e*Pn	**Pn**	**04 41 48.5**	**+0.8**
NV11	**Mina Array Sit**	**6.37**	**357**	*e*Pn	**Pn**	**04 41 48.4**	**+0.6**
NV01	**Mina Array Sit**	**6.38**	**356**	*e*Pn	**Pn**	**04 41 48.3**	**+0.4**
NVAR	**Mina Array Bea**	**6.38**	**356**	Pn	**Pn**	**04 41 49.4**	**+1.5**
	comp=N,0.5nm,0.3s,baz=176,slow=14,SNR=11						
NVAR				Lg	Lg	04 43 32.1	
	baz=193,slow=32,SNR=1.5						
NVAR				LR	LR	04 44 24.0	
	comp=N,164nm,21.5s,baz=234,slow=40						
R11A	**Troy Canyon, C**	**6.50**	**15**	*e*Pn	**Pn**	**04 41 49.6**	**-0.1**
R11A	**Troy Canyon, C**	**6.50**	**15**	P	**Pn**	**04 41 50.0**	**+0.3**
	baz=196						
RYN	**Ryan**	**6.59**	**354**	*e*Pn	**Pn**	**04 41 51.3**	**+0.4**
X18A	**Snowflake**	**6.92**	**67**	*e*Pn	**Pn**	**04 41 55.9**	**+0.5**
KVN	**Kaiserville**	**6.98**	**357**	*e*Pn	**Pn**	**04 41 56.3**	**0.0**
PSUT	**Pine Spring**	**7.17**	**25**	*e*Pn	**Pn**	**04 42 00.3**	**+1.5**
121A	**Cookes Peak, D**	**8.38**	**84**	P	**Pn**	**04 42 16.0**	**+0.5**
	baz=270						
ELK	**Elko**	**8.88**	**12**	*e*Pn	**Pn**	**04 42 23.4**	**+1.0**
ELK				Lg	Lg	04 44 52.5	
ELK	**Elko**	**8.88**	**12**	Pn	**Pn**	**04 42 24.2**	**+1.8**
	comp=N,0.6nm,0.3s,baz=198,slow=13,SNR=10						
ELK				Lg	Lg	04 44 52.5	
	comp=N,0.1nm,0.3s,baz=127,slow=20,SNR=3.8						
PV14	**Lion Creek, Pa**	**9.47**	**46**	*e*Pn	**Pn**	**04 42 32.8**	**+2.4**
ANMO	**Albuquerque**	**9.79**	**70**	Pn	**Pn**	**04 42 35.3**	**+0.5**
	comp=N,0.1nm,0.3s,baz=264,slow=11,SNR=2.6						
ANMO				Lg	Lg	04 45 22.8	
	comp=N,0.1nm,0.3s,baz=217,slow=20,SNR=2.2						
LPIG	**La Paz**	**10.25**	**139**	LR	LR	04 46 56.6	
	comp=N,99nm,19.2s,baz=44,slow=39						
TXAR	**Lajitas Array**	**12.36**	**99**	Pn	**Pn**	**04 43 13.6**	**+3.8**
	comp=N,0.2nm,0.3s,baz=284,slow=13,SNR=10						
PDAR	**Pinedale Array**	**12.47**	**29**	Pn	**Pn**	**04 43 15.0**	**+3.5**
	comp=N,0.0nm,0.3s,baz=216,slow=13,SNR=2.5						
YKA	**Yellowknife Ar**	**30.51**	**3**	P	**P**	**04 46 28.6**	**+1.6**
	comp=N,0.1nm,0.5s,baz=178,slow=8.6,SNR=6.1						
ILAR	**Eielson Array**	**37.35**	**340**	P	**P**	**04 47 29.2**	**+2.8**
	comp=N,0.4nm,0.8s,baz=146,slow=6.6,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**67.76**	**280**	T	T	06 05 10.3	
	baz=63,slow=75,SNR=8.0						
H11N2	**WAKE ISLAND Hy**	**67.76**	**280**	T	T	06 05 11.5	
	baz=63,slow=75,SNR=8.0						
H11N1	**WAKE ISLAND Hy**	**67.78**	**280**	T	T	06 05 11.8	
	baz=63,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**68.49**	**279**	T	T	06 05 40.0	
	baz=62,slow=75,SNR=8.5						
H11S2	**WAKE ISLAND Hy**	**68.50**	**279**	T	T	06 05 37.7	
	baz=62,slow=75,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**68.51**	**279**	T	T	06 05 38.6	
	baz=62,slow=75,SNR=7.4						

IDC 23 04:40:51.5±4.7**, 41°.77N**×**126°.95E, h0^{km}, mb1 2.5**/1**, mb1mx2.5**/34**, mbtmp2.5**/1**, ML2.5**/1**, Error ellipse: s-maj=51.6km s-min=18.3km az=115.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**4.37**	**170**	Pn	Pn	04 41 59.7	+0.5

	0.2nm,0.3s,baz=354,slow=14,SNR=2.6						
KSRS				Pg	Pg	04 42 12.7	-2.6
	0.6nm,0.3s,baz=348,slow=17,SNR=4.6						
KSRS				Lg	Lg	04 43 09.9	
	2.3nm,0.3s,baz=346,slow=29,SNR=11						
I45RU	**USSURIYSK INFR**	**4.41**	**55**	*i*		05 07 12.8	
	baz=234,slow=329,SNR=1.2						
USRK	**Ussuriysk Ar.**	**4.42**	**55**	Pg	Pb	04 42 10.2	+0.1
	0.3nm,0.3s,baz=239,slow=14,SNR=3.9						
USRK				Lg	Lg	04 43 13.0	
	0.9nm,0.3s,baz=237,slow=28,SNR=8.2						

JMA 23 04:58:51.8±0.1**, 27°.58N×140°.79E, h182^{km}, M3.9, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.33**	**111**	P	Pn	04 59 22.7	+0.3
CBIJ				S	Sn	04 59 46.1	+0.1
JHHJ	**Haha-jima-NKT**	**1.56**	**127**	P	Pn	04 59 24.5	0.0
JHHJ				*e*S	Sn	04 59 50.0	+0.2
BSO3	**Boso 3**	**7.20**	**358**	P	Pn	05 00 34.8	+0.5
BSO3				S	Sn	05 01 54.9	-0.5
BSO4	**Boso 4**	**7.40**	**357**	P	Pn	05 00 38.4	+1.4
JAG	**Ashikaga**	**8.89**	**353**	P	Pn	05 00 55.4	-1.3
JHO	**Hitachi**	**9.01**	**359**	P	Pn	05 00 57.8	-0.4

IDC ***23*** *05:10:51.5±1.0, 7°.31N×127°.16E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/42, mbtmp3.6/6, Error ellipse: s-maj=25.0km s-min=20.2km az=66.0*

MAN ***23*** *05:10:52.9, 7°.00N×127°.13E, h1^{km}, MS3.0*

ISC 23 05:10:52.7±2.5**, 7°.13N**±0°.07×**127°.13E**±0°.09**, h8^{km}**±15^{km}**, n13, σ1^s.11**/19**, mb3.6**/6**, 2C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.89**	**258**	*e*P	**Pg**	**05 11 09.7**	**-0.1**
MATI				*e*S	**Sg**	**05 11 19.6**	**-1.7**
DAV	**Davao City (W)**	**1.54**	**268**	Pn	**Pg**	**05 11 22.5**	**+0.2**
	82nm,0.3s,baz=77,slow=19,SNR=6.0						
DAV				Sn	**Sg**	**05 11 42.9**	**+0.6**
	108nm,0.3s,baz=49,slow=20,SNR=6.1						
DAV				LR	LR	05 11 58.1	
	comp=Z,227nm,21.7s,baz=116,slow=42						
DMPH	**Davao City--Mi**	**1.61**	**268**	⇑*e*P	**Pg**	**05 11 23.4**	**-0.2**
DMPH				*e*S	**Sb**	**05 11 44.1**	**+0.8**
DDMP	**Don Marcelino,**	**1.74**	**234**	*e*P	**Pn**	**05 11 23.5**	**+0.1**
KCP	**Kidapawan**	**2.03**	**267**	⇑*i*P	**Pn**	**05 11 28.7**	**+1.3**
KCP				*i* S	**Sb**	**05 11 55.4**	**0.0**
BUKP	**Musuan**	**2.18**	**290**	*e*P	**Pb**	**05 11 31.4**	**-1.2**
BUKP				*e*S	**Sg**	**05 12 04.2**	**+1.4**
BUTP	**Butuan**	**2.36**	**321**	*e*P	**Pb**	**05 11 35.3**	**-0.3**
BUTP				*e*S	**Sg**	**05 12 09.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**25.11**	**183**	P	**P**	**05 16 19.2**	**+0.9**
	3.6nm,1.1s,baz=0.0,slow=8.1,SNR=1.7						
WRA	**Warramunga Arr**	**27.83**	**165**	P	**P**	**05 16 44.2**	**+1.4**
	0.1nm,0.3s,baz=341,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**31.32**	**168**	P	**P**	**05 17 15.1**	**+1.2**
	0.1nm,0.5s,baz=335,slow=7.5,SNR=2.9						
MKAR	**Makanchi Array**	**55.03**	**324**	P	**P**	**05 20 23.3**	**-1.7**
	0.4nm,0.5s,baz=113,slow=7.0,SNR=8.6						
KURBB	**Kurchatov Arra**	**59.13**	**326**	P	**P**	**05 20 52.7**	**-1.2**
	0.5nm,0.6s,baz=129,slow=6.0,SNR=4.9						
ILAR	**Eielson Array**	**81.88**	**26**	P	**P**	**05 23 12.1**	**-0.5**
	0.4nm,0.8s,baz=245,slow=5.4,SNR=8.1						

MEX 23 05:22:54.8±0.4**, 15°.42N×95°.86W, h31^{km}**±4^{km}**, MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.42**	**325**	*e*P	Pb	05 23 02.3	-1.8
HUIG				*i* S	Sb	05 23 08.6	-1.7
CMIG	**Matias Romero**	**1.91**	**29**	*e*P	Pn	05 23 23.2	-2.0
CMIG				*e*S	Sn	05 23 45.7	-2.5

SVSA 23 05:23:15.6±1.1**, 36°.93N×24°.08W, h10^{km}, MD3.5, ML2.9, 1C, Error ellipse: s-maj=8.1km s-min=6.0km az=79.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMN	**Pico do Norte,**	**0.79**	**276**	⇑*i*P	Pg	05 23 27.9	-3.0
PSMN				*e*S	Sg	05 23 37.5	-3.7
PSMN				A	A	05 23 38.5	
	43nm,0.1s						
PSMA	**Santa Maria**	**0.84**	**275**	*e*P	Pg	05 23 28.5	-3.3
PSMA				*e*S	Sg	05 23 38.8	-4.0
PSMA				A	A	05 23 41.2	
	76nm,0.2s						
BART	**Pico Bartolome**	**1.21**	**315**	*e*P	Pb	05 23 33.5	-5.2
BART				*e*S	Sb	05 23 47.4	-7.1
BART				A	A	05 23 50.5	
	111nm,0.3s						
PCALD	**Caldeiras da R**	**1.42**	**308**	*e*S	Sn	05 23 53.2	-7.0
PCALD				A	A	05 23 57.7	
	70nm,0.2s						
CMLA	**Cha da Macela**	**1.42**	**306**	*e*P	Pn	05 23 37.0	-4.5
CMLA				*e*S	Sn	05 23 52.8	-7.5
CMLA				A	A	05 23 57.9	
	123nm,0.3s						
GRON	**Grota Negra**	**1.43**	**306**	*e*P	Pn	05 23 35.9	-5.8
GRON				*e*S	Sn	05 23 50.9	-10
GRON				A	A	05 23 54.2	
	185nm,0.2s						
PDA	**Ponta Delgada**	**1.50**	**303**	*e*P	Pn	05 23 37.8	-4.8
PDA				*e*S	Sn	05 23 54.4	-7.9
PDA				A	A	05 23 56.9	
	37nm,0.2s						
PSET	**Sete Cidades**	**1.58**	**305**	*e*P	Pn	05 23 39.2	-4.6
PSET				*e*S	Sn	05 23 57.0	-7.3
PSET				A	A	05 23 59.7	
	60nm,0.2s						
PSCM	**Serra do Cume**	**2.99**	**307**	*e*P	Pn	05 23 58.8	-4.2
PSCM				*e*S	Sn	05 24 31.1	-7.8
PSCM				A	A	05 24 33.4	
	35nm,0.4s						
ADH	**Angra Heroismo**	**3.04**	**306**	*e*P	Pn	05 23 59.8	-3.9

MEX 23 05:25:13.6±0.5**, 16°.08N×96°.25W, h52^{km}**±8^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.34**	**157**	*i* P	Pn	05 25 21.7	-1.6
HUIG				*e*S	Sn	05 25 28.5	-1.8
VHO	**Vista Hermosa**	**1.09**	**335**	*e*P	Pn	05 25 31.7	-1.1
VHO				*e*S	Sn	05 25 44.5	-2.5
CMIG	**Matias Romero**	**1.65**	**52**	*e*P	Pn	05 25 38.7	-1.5
CMIG				*e*S	Sn	05 25 57.8	-2.5

IDC ***23*** *05:26:33.0±1.1, 1°.76N×122°.45E, h0^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.6/37, mbtmp3.8/5, MS2.8/1, Ms1 3.0/1, ms1mx2.5/42, Error ellipse: s-maj=157.9km s-min=20.5km az=65.0*

ISCJB ***23*** *05:26:35.7±0.9, 1°.54N±0°.07×121°.49E±0°.08, h33^{km}, mb3.8/5, MS2.7/1, Error ellipse: s-maj=12.1km s-min=9.9km az=152.2*

DJA ***23*** *05:26:36.4±0.8, 1°N±7°×12°1E±°, h10^{km}, M4.1/7, mb4.3/1, MLv4.0/7*

ISC 23 05:26:38.1±1.0**, 1°.42N**±0°.09×**121°.58E**±0°.09**, h35^{km}, n16, σ1^s.83**/15**, mb3.7**/5**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.00**	**159**	P	**Pn**	**05 26 56.3**	**+0.6**
MRSI				S	**Sn**	**05 27 10.2**	**+1.6**
MPSI	**Mapaga**	**2.00**	**238**	P	Pn	05 27 06.3	-3.1
APSI	**Ampana**	**2.31**	**178**	P	**Pn**	**05 27 14.1**	**+0.3**
KMSI	**Cibinong**	**2.54**	**109**	P	**Pn**	**05 27 18.8**	**+1.9**
LUWI	**Luwuk**	**2.72**	**154**	P	Pn	05 27 24.4	+5.1
PCI	**Palu**	**2.89**	**217**	P	**Pn**	**05 27 21.9**	**+0.1**
TTSI	**Tana Toraja**	**4.77**	**202**	P	**Pn**	**05 27 48.2**	**+0.6**
KDI	**Kendari**	**5.44**	**169**	P	**Pn**	**05 27 53.6**	**-3.2**
SPSI	**Sidrap Palu**	**5.64**	**199**	P	**Pn**	**05 28 01.1**	**+1.5**
BNSI	**Bone**	**5.96**	**194**	P	**Pn**	**05 28 07.0**	**+3.0**
WRA	**Warramunga Arr**	**24.64**	**150**	P	**P**	**05 31 54.4**	**-1.3**
	5.5nm,0.5s,baz=326,slow=11,SNR=67						
ASAR	**Alice Springs**	**27.66**	**155**	P	**P**	**05 32 22.4**	**-0.6**
	1.0nm,0.6s,baz=342,slow=12,SNR=14						
ASAR				PcP	**PcP**	**05 35 40.3**	**+0.5**
	0.2nm,0.4s,baz=356,slow=2.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**27.93**	**309**	LR	LR	05 44 33.1	
	comp=Z,18nm,19.4s,baz=35,slow=38						
STKA	**Stephens Creek**	**38.16**	**152**	P	**P**	**05 33 53.4**	**-0.9**
	3.0nm,0.8s,baz=335,slow=11,SNR=6.1						
SONM	**Songino Array**	**48.07**	**346**	P	**P**	**05 35 12.2**	**-2.2**
	0.2nm,0.6s,baz=141,slow=7.1,SNR=2.7						
MKAR	**Makanchi Array**	**56.67**	**329**	P	**P**	**05 36 20.0**	**+1.9**
	0.3nm,0.7s,baz=133,slow=8.7,SNR=4.5						

IDC 23 05:30:40.5±1.5**, 1°.57N×127°.01E, h0^{km}, mb3.2**/3**, mb1 3.5**/4**, mb1mx3.3**/34**, mbtmp3.3**/4**, ML3.7**/1**, Error ellipse: s-maj=69.3km s-min=23.5km az=60.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.90**	**120**	Pn	Pn	05 31 55.0	-0.4
	3.2nm,0.3s,baz=270,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**22.55**	**162**	P	P	05 35 42.8	+0.4
	0.5nm,0.4s,baz=340,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.96**	**165**	P	P	05 36 14.7	-0.3
	0.2nm,0.5s,baz=340,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**59.48**	**326**	P	P	05 40 45.5	0.0
	0.1nm,0.5s,baz=124,slow=7.2,SNR=2.7						

SOME ***23*** *05:39:35.1, 40°.20N×76°.83E, h5^{km}*

KRNET ***23*** *05:39:36.7±0.1, 40°.25N×76°.69E, mb2.8*

NNC ***23*** *05:39:36.1±1.3, 40°.22N×76°.78E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=10.2km s-min=5.0km az=139.0*

ISC 23 05:39:38.1±1.6**, 40°.30N**±0°.07×**76°.75E**±0°.04**, h10^{km}, n55, σ1^s.48**/80**, 19C-11D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**1.27**	**334**	⇑*i*P	**Pn**	**05 40 01.4**	**-0.9**
	baz=35						
NRN				⇑*i*S	**Sn**	**05 40 19.6**	**0.0**
	baz=35						
KDJ	**Kajisay**	**1.86**	**10**	⇑*i*P	**Pg**	**05 40 12.7**	**-1.2**
	baz=11						
KDJ				⇑*i*S	**Sg**	**05 40 38.4**	**+0.4**
	baz=11						
ULHL	**Ulahol**	**1.99**	**349**	P	**Pg**	**05 40 16.2**	**-0.1**
	SNR=6.2						
ULHL	**Ulahol**	**1.99**	**349**	⇓*i*P	**Pb**	**05 40 14.2**	**-0.3**
	baz=50						
ULHL				⇓*i*S	**Sg**	**05 40 41.5**	**-0.5**
	baz=50						
KZA	**Kyzart**	**2.11**	**328**	P	**Pb**	**05 40 17.1**	**+0.3**
	SNR=15						
KZA	**Kyzart**	**2.11**	**328**	⇓*i*P	**Pb**	**05 40 15.9**	**-0.8**
	baz=30						
KZA				⇓*i*S	**Sb**	**05 40 44.7**	**+1.5**
	baz=30						
BOOM	**Boomskoye usch**	**2.28**	**345**	⇑*i*P	**Pb**	**05 40 18.5**	**-0.9**
	baz=46						
BOOM				⇑*i*S	**Sb**	**05 40 48.6**	**+0.9**
	baz=46						
ARLS	**Aral**	**2.41**	**311**	⇑*i*P	**Pb**	**05 40 19.2**	**-2.5**
	baz=13						
ARLS				⇑*i*S	**Sb**	**05 40 50.7**	**-0.9**
	baz=13						
SFK	**Sufi-Kurgan**	**2.50**	**265**	⇓Pg	**Pb**	**05 40 22.1**	**-1.2**
	0.8nm,0.4s						
SFK				⇑Lg	Lg	05 40 57.9	
	4.6nm,0.5s						
SFK	**Sufi-Kurgan**	**2.50**	**265**	Pg	**Pb**	**05 40 23.0**	**-0.3**
	1.4nm,0.1s						
SFK				Lg	Lg	05 40 58.3	
	4.5nm,0.3s						
UCH	**Uchtor**	**2.56**	**320**	P	**Pg**	**05 40 26.1**	**-1.2**
	SNR=7.4						
KBK	**Karagaybulak**	**2.72**	**331**	P	**Pg**	**05 40 30.6**	**+0.3**
	SNR=6.7						
KBK	**Karagaybulak**	**2.72**	**331**	⇑*i*P	**Pb**	**05 40 24.3**	**-2.7**
	baz=32						
KBK				⇑*i*S	**Sb**	**05 40 59.1**	**-1.4**
	baz=32						
IZV	**Izvestkoviy**	**2.74**	**358**	Pg	**Pg**	**05 40 28.8**	**-1.9**
	2.1nm,0.1s						
IZV				Lg	Lg	05 41 07.6	
	11nm,0.2s						
IZV	**Izvestkoviy**	**2.74**	**358**	*e*P	**Pg**	**05 40 28.8**	**-1.9**
	2.1nm,0.1s						
IZV				*e*S	**Sg**	**05 41 07.6**	**+1.4**
	11nm,0.2s						
TNSS	**Tian-Shan**	**2.74**	**3**	Pg	**Pb**	**05 40 28.0**	**+0.5**
	5.1nm,0.4s						
TNSS				Lg	Lg	05 41 06.5	
	10nm,0.3s						
TNSS	**Tian-Shan**	**2.74**	**3**	*e*P	**Pb**	**05 40 28.1**	**+0.5**
	5.1nm,0.4s						
TNSS				*e*S	**Sg**	**05 41 06.5**	**+0.2**
	10nm,0.3s						
TKM2	**Tokmak 2**	**2.76**	**342**	P	**Pb**	**05 40 26.5**	**-1.2**
	SNR=6.1						
TKM2	**Tokmak 2**	**2.76**	**342**	⇑Pg	**Pb**	**05 40 25.9**	**-1.8**
	1.4nm,0.4s						
TKM2				⇓Lg	Lg	05 41 07.3	
	4.5nm,0.7s						
TKM2	**Tokmak 2**	**2.76**	**342**	⇓*i*P	**Pb**	**05 40 25.3**	**-2.4**
	baz=43						
TKM2				⇓*i*S	**Sb**	**05 41 00.4**	**-1.3**
	baz=43						
KST	**Kastek**	**2.81**	**348**	Pg	**Pg**	**05 40 29.8**	**-2.1**
	3.6nm,0.3s						
KST				Lg	Lg	05 41 09.5	
	7.0nm,0.5s						
KST	**Kastek**	**2.81**	**348**	*e*P	**Pg**	**05 40 29.8**	**-2.1**
	3.6nm,0.3s						
KST				*e*S	**Sg**	**05 41 09.5**	**+1.2**
	7.0nm,0.5s						
MTBS	**Maitube**	**2.84**	**355**	Pg	**Pb**	**05 40 29.9**	**+0.9**
	3.3nm,0.2s						
MTBS				Lg	Lg	05 41 09.2	
	11nm,0.3s						
MTBS	**Maitube**	**2.84**	**355**	*e*P	**Pb**	**05 40 29.9**	**+0.9**
	3.3nm,0.2s						
MTBS				*e*S	**Sg**	**05 41 09.2**	**-0.2**
	11nm,0.3s						
MDOK	**Medeo**	**2.87**	**4**	Pg	**Pb**	**05 40 30.0**	**+0.4**
	1.3nm,0.5s						
MDOK				Lg	Lg	05 41 09.5	
	13nm,0.6s						
MDOK	**Medeo**	**2.87**	**4**	Pg	**Pb**	**05 40 30.3**	**+0.7**
	2.3nm,0.3s						
MDOK				Lg	Lg	05 41 10.0	
	15nm,0.5s						
MDOK	**Medeo**	**2.87**	**4**	*e*P	**Pb**	**05 40 30.3**	**+0.7**
	2.3nm,0.3s						
MDOK				*e*S	**Sg**	**05 41 10.1**	**-0.4**
	15nm,0.5s						
AAK	**Ala-Archa**	**2.89**	**325**	P	**Pg**	**05 40 33.6**	**+0.1**
	SNR=6.4						
AAK	**Ala-Archa**	**2.89**	**325**	⇑Pg	**Pb**	**05 40 30.8**	**+1.0**
	5.9nm,0.8s						
AAK				⇓Lg	Lg	05 41 10.7	
	20nm,1.2s						
AAK	**Ala-Archa**	**2.89**	**325**	⇑*i*P	**Pn**	**05 40 26.3**	**+1.9**
	baz=26						
AAK				⇑*i*S	**Sb**	**05 41 02.7**	**-2.6**
	baz=26						
AML	**Almayashu**	**2.95**	**309**	P	**Pb**	**05 40 29.0**	**-2.0**
	SNR=9.5						
AML	**Almayashu**	**2.95**	**309**	⇑*i*P	**Pn**	**05 40 27.2**	**+1.8**
	baz=11						
AML				⇑*i*S	**Sb**	**05 41 04.2**	**-3.0**
	baz=11						
KOTS	**Kotyrbulak**	**2.95**	**5**	Pg	**Pg**	**05 40 32.2**	**-2.5**
	3.2nm,0.3s						
KOTS				Lg	Lg	05 41 13.5	
	32nm,0.6s						
KOTS	**Kotyrbulak**	**2.95**	**5**	*e*P	**Pg**	**05 40 32.2**	**-2.5**
	3.2nm,0.3s						
KOTS				*e*S	**Sg**	**05 41 13.6**	**+0.7**
	32nm,0.6s						
SATY	**Saty**	**3.03**	**24**	Pg	**Pb**	**05 40 32.7**	**+0.5**
	4.4nm,0.3s						
SATY				Lg	Lg	05 41 14.4	
	18nm,0.5s						
SATY	**Saty**	**3.03**	**24**	*e*P	**Pb**	**05 40 32.7**	**+0.5**
	4.4nm,0.3s						
SATY				*e*S	**Sg**	**05 41 14.3**	**-1.0**
	18nm,0.5s						
DGS	**Degeres**	**3.03**	**346**	Pg	**Pb**	**05 40 32.8**	**+0.5**
	2.1nm,0.5s						
DGS				Lg	Lg	05 41 14.6	
	6.8nm,0.5s						
DGS	**Degeres**	**3.03**	**346**	*e*P	**Pb**	**05 40 32.8**	**+0.5**
	2.1nm,0.5s						
DGS				*e*S	**Sg**	**05 41 14.6**	**-1.0**
	6.8nm,0.5s						
EKS2	**Erkin-Say**	**3.25**	**318**	⇑*i*P	**Pn**	**05 40 31.6**	**+2.3**
	baz=19						
EKS2				⇑*i*S	**Sn**	**05 41 11.5**	**+3.3**
	baz=19						
UZB	**Uzynbulak**	**3.32**	**30**	Pg	**Pb**	**05 40 37.6**	**+0.5**
	0.8nm,0.2s						
UZB				Lg	Lg	05 41 22.7	
	3.5nm,0.4s						
UZB	**Uzynbulak**	**3.32**	**30**	*e*P	**Pb**	**05 40 37.6**	**+0.5**
	0.8nm,0.2s						
UZB				*e*S	**Sg**	**05 41 22.7**	**-2.0**
	3.5nm,0.4s						
KURS	**Kuram**	**3.36**	**18**	Pg	**Pb**	**05 40 38.7**	**+0.8**
	2.1nm,0.5s						
KURS				Lg	Lg	05 41 24.3	
	8.6nm,0.5s						
KURS	**Kuram**	**3.36**	**18**	*e*P	**Pb**	**05 40 38.7**	**+0.8**
	2.1nm,0.5s						
KURS				*e*S	**Sg**	**05 41 24.3**	**-1.8**
	8.6nm,0.5s						
KTBS	**Karatobe**	**3.42**	**359**	Pg	**Pb**	**05 40 40.4**	**+1.6**
	1.3nm,0.4s						
KTBS				Lg	Lg	05 41 27.5	
	7.7nm,0.5s						
KTBS	**Karatobe**	**3.42**	**359**	*e*P	**Pb**	**05 40 40.4**	**+1.6**
	1.3nm,0.4s						
KTBS				*e*S	**Sg**	**05 41 27.5**	**-0.2**
	7.7nm,0.5s						
SGDS	**Sogindy**	**3.53**	**334**	Pg	**Pb**	**05 40 42.3**	**+1.6**
	5.1nm,0.5s						
SGDS				Lg	Lg	05 41 30.5	
	2.5nm,0.4s						
CHKK	**Chushkaly**	**3.56**	**3**	Pg	**Pb**	**05 40 42.8**	**+1.5**
	1.5nm,0.1s						
CHKK				Lg	Lg	05 41 31.3	
	7.1nm,0.3s						
CHKK	**Chushkaly**	**3.56**	**3**	*e*P	**Pb**	**05 40 42.8**	**+1.5**
	1.5nm,0.1s						
CHKK				*e*S	**Sg**	**05 41 31.3**	**-1.2**
	7.1nm,0.3s						
MRKS	**Merke**	**3.60**	**314**	Pg	**Pb**	**05 40 43.8**	**+1.8**
	3.6nm,0.4s						
MRKS				Lg	Lg	05 41 33.2	
	2.5nm,0.2s						
MRKS	**Merke**	**3.60**	**314**	*e*P	**Pb**	**05 40 43.8**	**+1.8**
	3.6nm,0.4s						
MRKS				*e*S	**Sg**	**05 41 33.2**	**-0.7**
	2.5nm,0.2s						
KUU	**Kurty**	**3.61**	**355**	Pg	**Pb**	**05 40 42.9**	**+0.9**
	1.9nm,0.3s						
KUU				Lg	Lg	05 41 31.6	
	6.7nm,0.6s						
KUU	**Kurty**	**3.61**	**355**	*e*P	**Pb**	**05 40 42.9**	**+0.9**
	1.9nm,0.3s						
KUU				*e*S	**Sg**	**05 41 31.6**	**-2.4**
	6.7nm,0.6s						
PDGK	**Podgornoye**	**3.66**	**33**	Pg	**Pb**	**05 40 43.6**	**+0.7**
	0.9nm,0.3s						
PDGK				Lg	Lg	05 41 32.9	
	2.3nm,0.4s						
MNAS	**Manas**	**3.87**	**306**	⇓Pg	**Pn**	**05 40 40.7**	**+2.8**
	1.3nm,0.9s						
MNAS				⇓Lg	Lg	05 41 43.8	
	2.2nm,1.0s						
MNAS	**Manas**	**3.87**	**306**	Pg	**Pb**	**05 40 47.8**	**+1.2**
	0.3nm,0.4s						
MNAS				Lg	Lg	05 41 40.7	
	0.5nm,0.4s						

IDC 23 05:50:27.6±8.2**, 10°.97S×114°.01E, h75^{km}**±73^{km}**, mb3.2**/4**, mb1 3.4**/5**, mb1mx3.2**/47**, mbtmp3.6**/5**, ML3.0**/1**, Error ellipse: s-maj=103.2km s-min=29.8km az=51.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.30**	**124**	P	Pn	05 53 32.5	-0.8
	0.1nm,0.3s,baz=280,slow=12,SNR=2.4						
WRA	**Warramunga Arr**	**21.51**	**117**	P	P	05 55 10.5	-0.1
	1.1nm,0.6s,baz=291,slow=11,SNR=13						
ASAR	**Alice Springs**	**22.77**	**126**	P	P	05 55 24.0	0.0
	0.8nm,0.7s,baz=301,slow=9.0,SNR=9.5						
SONM	**Songino Array**	**58.93**	**354**	P	P	06 00 18.6	-0.5
	0.4nm,0.8s,baz=166,slow=12,SNR=3.9						
MKAR	**Makanchi Array**	**64.12**	**336**	P	P	06 00 54.7	+0.8
	0.4nm,0.5s,baz=161,slow=6.5,SNR=7.0						
YKA	**Yellowknife Ar**	**117.96**	**23**	PKP	PKPdf	06 09 04.7	-0.6
	0.1nm,0.6s,baz=317,slow=2.5,SNR=3.2						

KRNET ***23*** *05:53:23.3±0.1, 40°.16N×78°.24E, mb2.0*

SOME ***23*** *05:53:24.9, 40°.17N×78°.32E, h20^{km}*

NNC ***23*** *05:53:24.2±2.3, 40°.22N×78°.34E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=15.4km s-min=13.3km az=171.0*

ISC 23 05:53:26.3±2.4**, 40°.3N**±0°.1×**78°.25E**±0°.06**, h10^{km}, n32, σ1^s.64**/48**, 10C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.46**	**347**	⇑*i*P	**Pb**	**05 53 53.5**	**-0.3**
	baz=48						
TARG				⇑*i*S	**Sg**	**05 54 15.6**	**+2.3**
	baz=48						
KDJ	**Kajisay**	**1.99**	**336**	⇑*e*P	**Pb**	**05 54 02.1**	**-0.6**
	baz=38						
KDJ				⇑*i*S	**Sg**	**05 54 30.5**	**+0.2**
	baz=38						
NRN	**Naryn**	**2.04**	**304**	⇓*i*P	**Pb**	**05 54 02.5**	**-1.2**
	baz=7.0						
NRN				⇓*i*S	**Sb**	**05 54 30.8**	**+1.5**
	baz=7.0						
SATY	**Saty**	**2.75**	**2**	Pg	**Pg**	**05 54 18.0**	**-1.0**
	6.1nm,0.4s						
SATY				Lg	Lg	05 54 56.8	
	8.0nm,0.5s						
SATY	**Saty**	**2.75**	**2**	*e*P	**Pg**	**05 54 18.3**	**-0.7**
	5.7nm,0.3s						
SATY				*e*S	**Sg**	**05 54 56.8**	**+2.2**
	7.0nm,0.5s						
BOOM	**Boomskoye usch**	**2.79**	**322**	⇑*e*P	**Pn**	**05 54 12.7**	**+1.5**
	baz=24						
BOOM				⇑*i*S	**Sb**	**05 54 49.1**	**-1.5**
	baz=24						
KZA	**Kyzart**	**2.87**	**309**	⇑*i*P	**Pn**	**05 54 14.2**	**+1.6**
	baz=11						
KZA				⇑*i*S	**Sb**	**05 54 51.2**	**-2.1**
	baz=11						
UZB	**Uzynbulak**	**2.89**	**11**	Pg	**Pb**	**05 54 19.0**	**+0.9**
	1.5nm,0.5s						
UZB				Lg	Lg	05 54 58.4	
	1.8nm,0.4s						
UZB	**Uzynbulak**	**2.89**	**11**	*e*P	**Pb**	**05 54 19.2**	**+1.1**
	2.1nm,0.7s						
UZB				*e*S	**Sg**	**05 54 58.3**	**-0.9**
	2.3nm,0.5s						
TNSS	**Tian-Shan**	**2.89**	**341**	Pg	**Pg**	**05 54 20.0**	**-1.8**
	3.2nm,0.2s						
TNSS				Lg	Lg	05 54 60.0	
	4.8nm,0.4s						
TNSS	**Tian-Shan**	**2.89**	**341**	*e*P	**Pg**	**05 54 20.1**	**-1.8**
	1.4nm,0.1s						
TNSS				*e*S	**Sg**	**05 54 60.0**	**+0.6**
	4.8nm,0.4s						
IZV	**Izvestkoviy**	**2.99**	**336**	Pg	**Pb**	**05 54 21.6**	**+1.8**
	1.1nm,0.2s						
IZV				Lg	Lg	05 55 02.6	
	5.4nm,0.3s						
IZV	**Izvestkoviy**	**2.99**	**336**	*e*P	**Pb**	**05 54 21.6**	**+1.8**
	1.1nm,0.2s						
IZV				*e*S	**Sg**	**05 55 02.4**	**+0.2**
	5.4nm,0.3s						
MDOK	**Medeo**	**2.99**	**343**	Pg	**Pb**	**05 54 16.8**	**-3.0**
	1.3nm,0.6s						
MDOK				Lg	Lg	05 55 01.4	
	2.5nm,0.4s						
MDOK	**Medeo**	**2.99**	**343**	Pg	**Pb**	**05 54 21.4**	**+1.6**
	1.6nm,0.3s						

MDOK				Lg	Lg	05 55 02.6	
	4.4nm,0.4s						
MDOK	Medeo	2.99	343	eP	Pb	05 54 21.2	+1.5
	1.2nm,0.2s						
MDOK				eS	Sg	05 55 01.8	-0.5
	4.1nm,0.6s						
KOTS	Kotyrbulak	3.04	344	Pg	Pg	05 54 22.9	-1.7
	5.6nm,0.8s						
KOTS				Lg	Lg	05 55 04.8	
	14nm,0.4s						
KOTS	Kotyrbulak	3.04	344	eP	Pg	05 54 22.9	-1.7
	5.6nm,0.8s						
KOTS				eS	Sg	05 55 04.8	+0.7
	14nm,0.4s						
PDGK	Podgornoye	3.15	17	Pg	Pb	05 54 23.2	+0.7
	1.0nm,0.4s						
PDGK				Lg	Lg	05 55 05.7	
	2.3nm,0.4s						
PDGK	Podgornoye	3.15	17	⇑Pg	Pb	05 54 20.9	-1.7
	1.3nm,0.5s						
PDGK				⇓Lg	Lg	05 55 04.3	
	4.0nm,0.9s						
KST	Kastek	3.22	329	Pg	Pg	05 54 27.0	-1.1
	1.2nm,0.4s						
KST				Lg	Lg	05 55 11.5	
	2.5nm,0.6s						
KST	Kastek	3.22	329	eP	Pg	05 54 27.0	-1.1
	0.3nm,0.1s						
KST				eS	Sg	05 55 11.5	+1.7
	1.4nm,0.4s						
TKM2	Tokmak 2	3.28	323	⇓Pg	Pb	05 54 25.0	+0.2
	0.9nm,0.8s						
TKM2				⇓Lg	Lg	05 55 14.6	
	1.4nm,0.5s						
DGS	Degeres	3.47	328	Pg	Pg	05 54 31.5	-1.3
	1.5nm,0.5s						
DGS				Lg	Lg	05 55 19.3	
	2.8nm,0.8s						
DGS	Degeres	3.47	328	eP	Pg	05 54 31.5	-1.3
	1.5nm,0.5s						
DGS				eS	Sg	05 55 19.3	+1.7
	2.8nm,0.8s						
KTBS	Karatobe	3.59	342	Pg	Pg	05 54 32.6	-2.6
	1.0nm,0.5s						
KTBS				Lg	Lg	05 55 21.2	
	5.6nm,0.2s						
KTBS	Karatobe	3.59	342	eP	Pg	05 54 32.5	-2.6
	1.0nm,0.5s						
KTBS				eS	Sg	05 55 21.2	-0.5
	5.6nm,0.2s						
AAK	Ala-Archa	3.66	311	⇓Pg	Pb	05 54 31.3	+0.2
	2.5nm,1.1s						
AAK				⇑Lg	Lg	05 55 19.2	
	1.6nm,0.7s						
CHKK	Chushkaly	3.66	346	Pg	Pg	05 54 34.0	-2.5
	0.9nm,0.2s						
CHKK				Lg	Lg	05 55 23.6	
	8.3nm,0.3s						
CHKK	Chushkaly	3.66	346	eP	Pg	05 54 34.0	-2.5
	0.9nm,0.2s						
CHKK				eS	Sg	05 55 23.6	-0.3
	8.3nm,0.3s						
KUU	Kurty	3.85	339	Pg	Pb	05 54 37.0	+2.6
	0.9nm,0.3s						
KUU				Lg	Lg	05 55 28.8	
	2.2nm,0.4s						
KUU	Kurty	3.85	339	eP	Pb	05 54 37.0	+2.6
	0.4nm,0.1s						
KUU				eS	Sg	05 55 28.8	-1.2
	1.8nm,0.4s						

JMA 23 05:55:05.8±0.1**,37°.29N**×**141°.75E,h40**^{km}±3^{km}**,M3.5,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.70	277	P	Pn	05 55 19.4	+0.1
JFK				S	Sn	05 55 28.4	-0.6
ONAJ	Iwakimizuishiy	0.78	256	P	Pn	05 55 20.6	+0.2
ONAJ				S	Sn	05 55 30.5	-0.5
JMM	Marumori	0.95	307	P	Pn	05 55 23.0	+0.3
JMM				S	Sn	05 55 34.4	-0.7
JFFD	Fukushimafurud	0.97	259	P	Pn	05 55 23.2	+0.2
JFFD				S	Sn	05 55 35.1	-0.4
JIKH	Ishinomakikobu	1.04	348	P	Pn	05 55 24.0	+0.1
JIKH				S	Sn	05 55 36.4	-0.9
JFT	Otama	1.15	282	P	Pn	05 55 26.6	+1.2
JFT				S	Sn	05 55 40.7	+0.8
JHO	Hitachi	1.16	235	P	Pn	05 55 25.6	0.0
JHO				S	Sn	05 55 39.0	-1.3
JIO	Ouri	1.21	345	P	Pn	05 55 26.4	+0.2
JIO				S	Sn	05 55 40.3	-1.0
JOU	Okura	1.38	322	P	Pn	05 55 30.3	+1.8
JOU				S	Sn	05 55 46.8	+1.3
JYS	Shirataka	1.63	305	P	Pn	05 55 33.4	+1.4
JYS				S	Sn	05 55 53.7	+2.0
JFY	Yanaizu	1.63	275	P	Pn	05 55 33.8	+1.7
JFY				S	Sn	05 55 53.4	+1.5
JMK	Ichinoseki	1.71	346	P	Pn	05 55 34.1	+1.0
JMK				S	Sn	05 55 54.2	+0.5
MAT	Matsushiro	2.94	256	P	Pn	05 55 52.0	+2.0
MAT				eS	Sn	05 56 28.9	+4.9

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*ISK **23** 06:08:38.5,38°.28N×42°.51E,h5^{km},ML2.3/7*
*ISCJB **23** 06:08:39.4±0.6,38°.30N±0°.04×42°.50E±0°.05,h8^{km},Error ellipse: s-maj=6.1km s-min=5.5km az=174.9*
*DDA **23** 06:08:39.3,38°.31N×42°.51E,h7^{km}±1^{km},ML2.5*
ISC 23 06:08:39.1±1.0**,38°.30N**±0°.04×**42°.50E**±0°.04**,h8**^{km}**,n12,**
σ**0^s.27**/14**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKDM	Akdamar-Van	0.38	85	PG	Pg	06 08 46.4	-0.2
AKDM				SG	Sg	06 08 51.8	+0.2
GEVA	Gevas	0.44	88	i P	Pg	06 08 47.8	+0.1
GURO	Guroymak-BITLI	0.45	304	PG	Pg	06 08 47.6	-0.2
ADCV	BITLIS_Adilcev	0.54	19	i P	Pb	06 08 50.7	-0.2
ADCV				i S	Sb	06 08 58.4	-0.5
ADCV				IAML_P			
	comp=Z,898nm,0.1s						
SRTM	Siirt_Merkez	0.55	236	i P	Pb	06 08 51.0	-0.1
SRTM				IAML_P			
	comp=Z,292nm,0.1s						
MLAZ	Malazgirt-MUS	0.84	3	PG	Pg	06 08 55.6	+0.3
AGRB	Hanur-Agry	1.33	17	PN	Pb	06 09 04.6	+0.1
CUKT	Cukurca	1.37	140	PN	Pn	06 09 04.6	0.0
CUKT	Cukurca	1.37	140	i P	Pg	06 09 05.3	0.0
YOVA	Hakkari_Yksek	1.58	116	i P	Pg	06 09 09.6	+0.1
BNGB	Bingl	1.58	296	PN	Pn	06 09 07.9	+0.3
MAZI	Mazidag	1.83	243	PN	Pn	06 09 11.3	+0.3

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*ISCJB **23** 06:20:43.7±0.3,6°.58S±0°.03×130°.02E±0°.05,h150^{km}, mb4.1/27,Error ellipse: s-maj=6.9km s-min=3.9km az=176.9*
*NEIC **23** 06:20:46.3±0.6,6°.62S×129°.97E,h160^{km}±7^{km},mb4.3/17, Error ellipse: s-maj=8.8km s-min=5.8km az=80.0*
*IDC **23** 06:20:46.2±2.1,6°.54S×129°.97E,h154^{km}±19^{km},mb3.9/12, mb1 4.0/15,mb1mx3.7/37,mbtmp4.4/15,Error ellipse: s-maj=22.5km s-min=13.6km az=84.0*
*DJA **23** 06:20:47.5±0.3,7°S±3°×13°0E±°,h176^{km}±11^{km},M4.7/9, mb4.9/7,mB5.0/7,MLv4.9/9,Mw(mB)4.3/7*
ISC 23 06:20:45.5±0.4**,6°.59S**±0°.04×**129°.96E**±0°.06**,h150**^{km}**,n76,**
σ**1^s.77**/81**,mb4.1**/27**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.92	136	ePn	Pn	06 21 23.9	+4.2
SAUI				eSn	Sn	06 21 47.9	+1.9
SAUI	Saumlaki	1.92	136	P	Pn	06 21 24.3	+4.6
BNDI	Bandanaira	2.06	359	P	Pn	06 21 25.5	+4.1
FAKI	Fak Fak	4.31	32	ePn	Pn	06 21 50.3	+0.5
FAKI	Fak Fak	4.31	32	P	Pn	06 21 50.7	+0.9
SIJI	Sorong	5.83	13	P	Pn	06 22 10.3	+0.3
	18nm,0.3s,baz=24,slow=23,SNR=32						
SIJI				S	Sn	06 23 12.4	-3.9
	12nm,0.3s,baz=78,slow=23,SNR=12						
MTN	Manton Dam	6.32	170	ePn	Pn	06 22 17.7	+1.2
MTN				eSn	Sn	06 23 24.5	-3.2
SOEI	Soe	6.45	240	ePn	Pn	06 22 18.8	+0.5
SOEI	Soe	6.45	240	P	Pn	06 22 20.1	+1.8
RKPI	Ransiki, Papua	6.58	40	P	Pn	06 22 22.0	+2.1
BATI	Baumata	7.18	240	P	Pn	06 22 29.7	+1.6
BATI	Baumata	7.18	240	P	Pn	06 22 29.7	+1.6
	64nm,0.3s,baz=125,slow=1.7,SNR=23						
BATI				S	Sn	06 23 49.1	+0.5
	20nm,0.3s,baz=18,slow=20,SNR=4.7						
BAKI	Biak	8.15	49	P	Pn	06 22 44.1	+3.1
BASI	Baing, Sumba	9.95	248	P	Pn	06 23 05.9	+1.0
MRSI	Marisa	10.64	311	P	Pn	06 23 17.1	+3.0
	37nm,1.1s,473nm						
FITZ	Fitzroy Crossi	12.18	200	P	Pn	06 23 32.6	-1.6
	3.4nm,0.3s,baz=31,slow=9.1,SNR=39						
FITZ				S	Sn	06 25 38.6	-10
	3.9nm,0.3s,baz=274,slow=23,SNR=7.6						
WRAB	Tennant Creek	13.93	163	ePn	Pn	06 23 55.9	-0.8
WR1	Warramunga Arr	13.94	163	ePn	Pn	06 23 54.6	-2.1
WR1				eSn	Sn	06 26 19.5	-12
WRA	Warramunga Arr	13.94	163	P	Pn	06 23 54.6	-2.1
	1.5nm,0.3s,baz=351,slow=13,SNR=34						
WRA				S	Sn	06 26 19.5	-12
	4.7nm,0.3s,baz=334,slow=22,SNR=11						
WB2	Warramunga Arr	13.94	163	ePn	Pn	06 23 55.0	-1.7
WC3	Warramunga Arr	13.96	163	ePn	Pn	06 23 55.4	-1.6
COEN	Coen	14.92	120	ePn	Pn	06 24 09.6	+0.6
AS31	Alice Springs	17.39	168	eP	P	06 24 38.4	+0.2
	2.0nm,0.8s						
ASAR	Alice Springs	17.39	168	P	Pn	06 24 40.0	+0.7
	0.8nm,0.3s,baz=330,slow=8.9,SNR=61						
ASAR				S	S	06 27 45.1	-6.7
	1.1nm,0.3s,baz=357,slow=28,SNR=6.2						
AS01	Alice Springs	17.40	168	eP	P	06 24 38.6	+0.3
MBWA	Marble Bar	17.54	213	eP	P	06 24 40.4	+0.6
	9.5nm,0.7s						
FORT	Forrest	24.12	184	eP	P	06 25 49.9	+2.4
	19nm,1.1s						
BBOO	Buckleboo	26.70	169	eP	P	06 26 14.7	+4.0
STKA	Stephens Creek	27.40	158	eP	P	06 26 16.3	-0.7
	0.3nm,1.1s						
STKA	Stephens Creek	27.40	158	P	P	06 26 17.1	0.0
	0.5nm,0.3s,baz=324,slow=8.7,SNR=2.4						
CMAR	Chiang Mai Arr	39.44	310	P	P	06 28 00.9	-0.4
	1.0nm,0.4s,baz=132,slow=7.2,SNR=4.6						
MJAR	Matsushiro Arr	43.60	10	P	P	06 28 33.2	-1.7
	1.3nm,0.6s,baz=191,slow=11,SNR=2.6						
MAJO	Matsushiro	43.60	10	eP	P	06 28 33.2	-1.7
BJT	Baijiatuau	48.09	346	eP	P	06 29 10.9	+0.9
	5.7nm,0.4s						
USA0B	Ussuriysk Arra	50.59	2	eP	P	06 29 29.2	+0.4
	3.0nm,0.7s						
USRK	Ussuriysk Ar.	50.59	2	P	P	06 29 28.9	0.0
	2.0nm,0.6s,baz=177,slow=8.6,SNR=6.3						
SONA0	Songino Array	58.05	341	eP	P	06 30 23.1	+0.2
SONM	Songino Array	58.05	341	P	P	06 30 23.1	+0.2
	0.6nm,0.4s,baz=155,slow=6.4,SNR=5.9						
SONA1	Songino Array	58.05	342	eP	P	06 30 23.6	+0.6
PETK	Petropavlovsk-	63.95	18	eP	P	06 31 03.2	+0.7
PETK	Petropavlovsk-	63.95	18	P	P	06 31 02.9	+0.4
	1.3nm,0.6s,baz=208,slow=7.5,SNR=3.7						
PEA1	Petropavlovsk-	63.96	18	eP	P	06 31 02.9	+0.4
MK01	Makanchi Array	67.84	327	eP	P	06 31 27.5	-0.1
MK31	Makanchi Array	67.86	327	eP	P	06 31 27.6	-0.1
	6.3nm,0.7s						
MK32	Makanchi Array	67.86	327	eP	P	06 31 27.7	0.0
MKAR	Makanchi Array	67.86	327	eP	P	06 31 27.6	0.0
	67nm,0.5s						
MKAR	Makanchi Array	67.86	327	P	P	06 31 27.7	0.0
	9.0nm,0.5s,baz=114,slow=8.6,SNR=170						
MAKZ	Makanchi	68.04	327	eP	P	06 31 28.7	-0.1
	6.8nm,0.6s						
AAK	Ala-Archa	70.20	320	eP	P	06 31 43.0	+0.6
	3.7nm,0.6s						
ARSB	Arslanbob	70.56	318	eP	P	06 31 45.0	+0.4
	6.8nm,0.8s						
ZALV	Zalesovo Beam	71.20	334	eP	P	06 31 47.4	-0.6
ZALV	Zalesovo Beam	71.20	334	P	P	06 31 46.9	-1.1
	1.6nm,0.5s,baz=123,slow=5.0,SNR=8.0						
ZAA1	Zalesovo Array	71.20	334	eP	P	06 31 46.9	-1.1
GAR	Garm	71.35	315	eP	P	06 31 48.8	-0.5
	7.4nm,0.7s						
SEY	Seymchan	71.42	11	P	P	06 31 49.3	+0.2
	2.0nm,0.6s,baz=172,slow=6.0,SNR=7.3						
CHGR	Chuyangaron	72.03	314	eP	P	06 31 52.6	-0.8
	7.4nm,0.7s						
KURK	Kurchatov	72.15	329	eP	P	06 31 53.5	-0.1
	2.3nm,0.6s						
KK31	Karatay Array	73.01	319	eP	P	06 31 58.7	-0.3
	4.9nm,1.1s						
KKAR	Karatay Array	73.01	319	eP	P	06 31 58.8	-0.2
	4.9nm,1.1s						
GEYT	Alibeck	79.92	310	P	P	06 32 38.4	+0.3
	1.5nm,0.4s,baz=108,slow=7.9,SNR=2.9						
NRIK	Noril'sk	81.16	346	P	P	06 32 44.5	+0.7
	2.2nm,0.4s,baz=135,slow=8.6,SNR=2.3						
ABKAR	Akbulak array	82.17	322	eP	P	06 32 48.6	-1.0
	1.4nm,0.8s						
QSPA	South Pole Qui	83.38	180	eP	P	06 32 55.4	-0.4
	1.6nm,0.9s						
IM3	Indian Mountai	90.44	23	eP	P	06 33 30.6	+0.9
RND	Reindeer	91.91	26	eP	P	06 33 35.1	-1.6
	3.7nm,1.2s						
IL1	Eielson Array	93.00	25	eP	P	06 33 39.9	-1.7
ILAR	Eielson Array	93.00	25	P	P	06 33 37.7	-3.9
	0.4nm,0.7s,baz=256,slow=4.2,SNR=5.8						
PDAR	Pinedale Array	116.64	45	PKP	PKPdf	06 39 12.3	-0.1
	0.1nm,0.3s,baz=248,slow=9.6,SNR=2.5						
PV03	Paradox Valley	118.39	50	ePKPdf	PKiKP	06 39 17.2	+1.2
TORD	Torodi Ar. Bea	128.69	282	PKP	PKPdf	06 39 35.7	-0.3
	0.3nm,0.6s,baz=73,slow=2.2,SNR=2.3						
TOA1	Torodi Ar. Sit	128.69	282	ePKPdf	PKPdf	06 39 35.7	-0.3
CPUP	Villa Florida	146.52	168	ePKPdf	PKPdf	06 40 08.6	+0.3
CPUP	Villa Florida	146.52	168	PKPbc	PKPdf	06 40 08.9	+0.6
	1.2nm,0.8s,baz=243,slow=4.5,SNR=3.6						
LPAZ	La Paz	151.06	142	ePKPbc	PKPbc	06 40 22.8	+0.2
LPAZ	La Paz	151.06	142	PKPbc	PKPbc	06 40 23.0	+0.4
	0.7nm,0.4s,baz=22,slow=2.1,SNR=4.1						
GRTK	Grand Turk	154.79	52	ePKPdf	PKPdf	06 40 21.1	-0.1

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*NIED **23** 06:24:00,37°.80N×142°.10E,h35^{km},Mw3.7 Best double couple: M$_0$4.56000×10^{14} NP1:φ$_s$222.00000°,δ19.00000°, λ-60.00000°. NP2:φ$_s$11.00000°,δ74.00000°, λ-100.00000°.*
*IDC **23** 06:24:42.8±1.5,37°.92N×142°.62E,h0^{km},mb3.8/7, mb1 3.9/8,mb1mx3.6/33,mbtmp3.7/8,ML2.6/1,MS3.5/1, Ms1 3.5/1,ms1mx2.4/45,Error ellipse: s-maj=38.4km s-min=22.6km az=73.0*
*ISCJB **23** 06:24:48.8±0.9,37°.84N±0°.04×142°.15E±0°.07,h43^{km}±7^{km}, mb4.1/13,MS3.4/1,Error ellipse: s-maj=9.4km s-min=5.6km az=18.0*
*JMA **23** 06:24:48.8±0.1,37°.81N×142°.07E,h35^{km}±2^{km},M4.0*
JMA Felt I J1.
*NEIC **23** 06:24:49.5±0.6,37°.82N×142°.32E,h35^{km},mb4.3/5,Error ellipse: s-maj=11.4km s-min=10.6km az=132.0*
NEIC Recorded [1 JMA] in Miyagi.
ISC 23 06:24:48.4±2.0**,37°.84N**±0°.04×**142°.11E**±0°.07**,h23**^{km}±13^{km}**,**
n49,σ**1^s.18**/54**,mb4.1**/13**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.69	313	P	Pb	06 25 02.2	+0.5
JIKH				S	Sb	06 25 11.2	+0.3
JIO	Ouri	0.86	316	P	Pb	06 25 04.7	+0.2
JIO				S	Sb	06 25 15.6	0.0
JMM	Marumori	1.04	272	P	Pn	06 25 06.9	-0.6
JMM				S	Sb	06 25 19.7	-1.3
JKMT	Kesennumamotoy	1.09	333	P	Pn	06 25 08.0	-0.2
JKMT				eS	Sb	06 25 21.5	-0.8
JFK	Kawauchi	1.09	245	P	Pn	06 25 07.0	-1.3
JFK				S	Sb	06 25 20.2	-2.2
JOU	Okura	1.25	295	P	Pn	06 25 10.7	+0.2
JMK	Ichinoseki	1.31	328	P	Pn	06 25 11.3	+0.1
JMK				eS	Sn	06 25 27.5	-0.4
JFT	Otama	1.45	258	P	Pn	06 25 13.3	+0.2
JFT				eS	Sn	06 25 31.4	+0.1
JYS	Shirataka	1.66	284	P	Pn	06 25 16.4	+0.4
JYS				eS	Sb	06 25 38.2	-0.5
JYK	Kaneyama	1.75	308	P	Pn	06 25 17.7	+0.5
JYK				eS	Sn	06 25 38.3	-0.4
JOM	Ohasama	1.75	339	P	Pn	06 25 17.7	+0.4
JOM				S	Sn	06 25 39.3	+0.5
JRG	Rokugo	1.94	324	P	Pn	06 25 21.1	+1.3
JFY	Yanaizu	1.96	258	P	Pn	06 25 20.7	+0.5
JFY				eS	Sn	06 25 45.6	+1.5
JYA	Atsumi	2.03	292	P	Pn	06 25 21.8	+0.7
JYA				eS	Sn	06 25 46.9	+1.1
MJAR	Matsushiro Arr	3.38	249	Pn	Pn	06 25 42.7	+3.0
	0.4nm,0.3s,baz=106,slow=33,SNR=14						
MJAR				Sn	Sb	06 26 26.9	-1.2
	0.6nm,0.3s,baz=76,slow=16,SNR=5.5						
MAJO	Matsushiro	3.38	249	ePn	Pn	06 25 42.5	+2.8
MAJO				eSn	Sb	06 26 26.9	-1.3
MAT	Matsushiro	3.38	249	P	Pn	06 25 41.5	+1.8
MAT				eS	Sn	06 26 19.3	+0.3
MJB9	Matsu-Tunnel	3.38	249	ePn	Pn	06 25 42.6	+2.9
INU	Inuyama	4.80	240	ePn	Pn	06 26 02.0	+2.9
USRK	Ussuriysk Ar.	9.94	313	Pn	Pn	06 27 14.6	+5.0
	0.2nm,0.3s,baz=122,slow=14,SNR=2.4						
KSRS	Korea Array	11.26	272	Pn	Pn	06 27 34.5	+6.7
	baz=80,slow=16,SNR=2.8						
KSAR	Wonju Array Be	11.29	272	Pn	Pn	06 27 34.5	+6.3
SONA1	Songino Array	27.80	303	eP	P	06 30 36.2	+0.5
SONA0	Songino Array	27.81	303	eP	P	06 30 36.7	+1.0
SONM	Songino Array	27.81	303	P	P	06 30 36.7	+1.0
	1.4nm,0.7s,baz=103,slow=8.8,SNR=9.4						
H11N2	WAKE ISLAND Hy	28.10	123	T	T	07 00 13.9	
	baz=315,slow=75,SNR=50						
H11N1	WAKE ISLAND Hy	28.11	123	T	T	07 00 11.8	
	baz=315,slow=75,SNR=40						
H11N3	WAKE ISLAND Hy	28.12	123	T	T	07 00 23.8	
	baz=315,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	28.85	125	T	T	07 01 09.4	
	baz=317,slow=75,SNR=26						
H11S3	WAKE ISLAND Hy	28.85	125	T	T	07 01 09.6	
	baz=317,slow=75,SNR=33						
H11S2	WAKE ISLAND Hy	28.87	125	T	T	07 01 10.7	
	baz=317,slow=75,SNR=19						
DAV	Davao City (W)	34.11	210	LR	LR	06 42 34.6	
	comp=Z,77nm,20.8s,baz=52,slow=31						
ZAA1	Zalesovo Array	41.78	312	eP	P	06 32 35.9	+0.2
ZALV	Zalesovo Beam	41.79	312	P	P	06 32 35.9	+0.2
	1.1nm,0.6s,baz=100,slow=5.8,SNR=4.0						
MK32	Makanchi Array	44.16	302	eP	P	06 32 54.8	-0.3
MKAR	Makanchi Array	44.16	302	P	P	06 32 54.8	-0.3
	0.4nm,0.7s,baz=105,slow=7.2,SNR=1.6						
KURK	Kurchatov	45.88	308	eP	P	06 33 08.6	-0.1
	3.3nm,0.8s						
INK	Inuvik	53.41	27	eP	P	06 34 06.7	+0.9
	3.3nm,1.0s						
INK	Inuvik	53.41	27	P	P	06 34 06.5	+0.7
	1.4nm,0.7s,baz=296,slow=7.0,SNR=4.2						
RIM	Rim	56.95	90	eP	P	06 34 32.4	+0.3
	143nm,0.7s						
ABKAR	Akbulak array	57.84	310	eP	P	06 34 37.9	0.0
	0.3nm,0.6s						
WB2	Warramunga Arr	57.94	189	eP	P	06 34 37.4	-1.4
WR1	Warramunga Arr	57.94	189	eP	P	06 34 37.5	-1.3
	2.4nm,0.8s						
WRA	Warramunga Arr	57.94	189	P	P	06 34 37.5	-1.3
	1.4nm,0.7s,baz=6.1,slow=7.3,SNR=11						
ASAR	Alice Springs	61.67	189	P	P	06 35 03.8	-0.6
	0.3nm,0.7s,baz=10,slow=5.7,SNR=2.8						
FIA0	FINESS Array S	68.36	332	eP	P	06 35 46.3	-1.1
FINES	FINESS Array B	68.36	332	P	P	06 35 46.3	-1.1
	1.9nm,1.0s,baz=46,slow=12,SNR=1.5						
AKASG	Malin Array Be	74.00	322	P	P	06 36 21.1	-0.7
	0.4nm,0.4s,baz=52,slow=6.0,SNR=2.3						
MWC	Mount Wilson	76.70	57	eP	P	06 36 38.0	+0.1
	3.9nm,1.0s						

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*IDC **23** 06:57:51.6±0.6,29°.49S×176°.20W,h0^{km},mb4.5/12, mb1 4.7/14,mb1mx4.6/26,mbtmp4.5/14,ML4.0/2,MS4.0/10, Ms1 4.0/10,ms1mx3.6/33,Error ellipse: s-maj=27.1km s-min=18.4km az=150.0*
*BJI **23** 06:57:53.9,28°.83S×175°.83W,h9^{km},mB5.4/1,mb5.1/15, Ms5.2/1*
*ISCJB **23** 06:57:54.3±0.2,29°.47S±0°.05×176°.38W±0°.05,h21^{km}, mb4.9/76,MS4.0/9,Error ellipse: s-maj=8.2km s-min=4.5km az=135.8*
*MOS **23** 06:57:58.9±0.9,29°.23S×176°.38W,h53^{km},mb4.9/25, Error ellipse: s-maj=12.0km s-min=10.5km az=142.2*
*NEIC **23** 06:58:00.2±0.8,29°.31S×176°.38W,h56^{km}±7^{km},mb4.8/71, Error ellipse: s-maj=8.1km s-min=5.3km az=140.0*
ISC 23 06:57:55.5±0.3**,29°.45S**±0°.06×**176°.24W**±0°.05**,h21**^{km}**,**
n229,σ**1^s.59**/226**,mb4.9**/76**,MS4.0**/9**,8C-2D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.48	277	ePn	Pb	06 58 23.1	+0.8
RAO				eSn	Sn	06 58 36.0	-3.7
RAO				Sn	Sb	06 58 43.0	+2.3
RAO	Raoul Island	1.48	277	Pn	Pb	06 58 23.3	+1.0
	998nm,0.3s,baz=86,slow=23,SNR=32						
RAO				Sn	Sb	06 58 43.0	+2.3
	2μm,0.3s,baz=73,slow=19,SNR=15						
MXZ	Matakaoa Point	9.28	208	ePn	Pn	07 00 13.7	+5.7
OUZ	Omahuta	10.34	234	ePn	Pn	07 00 29.9	+7.4
URZ	Urewera	10.38	210	ePn	Pn	07 00 21.9	-1.0
URZ				eSn	Sn	07 02 17.6	-1.0
URZ	Urewera	10.38	210	Pn	Pn	07 00 19.7	-3.3
	0.8nm,0.3s,baz=3.5,slow=19,SNR=7.3						
URZ				Sn	Sn	07 02 14.6	-4.0
	8.7nm,0.3s,baz=74,slow=18,SNR=15						
BKZ	Black Stump Fm	11.40	210	ePn	Pn	07 00 34.6	-2.4
HIZ	Hauiti	11.67	217	ePn	Pn	07 00 45.1	+4.4
MSVF	Nonsavu	12.79	335	ePn	Pn	07 00 54.7	-1.4
MSVF	Nonsavu	12.79	335	eP	Pn	07 00 54.7	-1.4
SNZO	South Karori	13.94	210	eP	P	07 01 21.2	+1.6
THZ	Tophouse	15.11	213	ePn	Pn	07 01 26.7	-1.0
	27nm,0.7s						
THZ				eSn	Sn	07 04 05.5	-8.9
KHZ	Kahutara	15.34	210	ePn	Pn	07 01 27.9	-2.7
	42nm,0.8s						
KHZ				eSn	Sn	07 04 08.0	-12
LTZ	Lake Taylor	16.20	212	ePn	P	07 01 44.1	-0.7
	21nm,1.2s						
OXZ	Oxford	16.73	211	ePn	Pn	07 01 47.4	-1.1
	51nm,1.3s						
OXZ				eSn	Sn	07 04 39.4	-14
MQZ	McQueen’s Vall	16.77	209	ePn	P	07 01 55.4	+4.4
	26nm,1.2s						
MQZ				eSn	Sn	07 04 40.2	-14
RAR	Rarotonga	16.98	65	ePn	P	07 01 53.9	+0.4
	39nm,1.0s						
RAR				Sn	Sn	07 04 31.3	-29
RAR	Rarotonga	16.98	65	eP	P	07 01 53.9	+0.4
RAR				pmax	pmax		
	comp=Z,39nm,1.0s						
RAR	Rarotonga	16.98	65	Pn	Pn	07 01 45.7	-6.1
	comp=Z,1.5nm,0.3s,baz=353,slow=8.1,SNR=3.4						
RAR				Sn	Sn	07 04 31.3	-29
	comp=Z,1.0nm,0.3s,baz=92,slow=18,SNR=2.7						
RAR				LR	LR	07 07 39.7	
	comp=Z,484nm,19.2s,baz=278,slow=35						
DZM	Mont Dzumac	17.24	291	eP	P	07 01 59.6	+3.1
	comp=Z,59nm,1.4s						
DZM				eLR	LR	07 05 53.8	
	comp=Z,492nm,21.5s						
DZM	Mont Dzumac	17.24	291	ePn	P	07 01 59.5	+3.1
	comp=Z,17nm,0.9s						
DZM	Mont Dzumac	17.24	291	P	P	07 01 59.2	+2.8
	comp=Z,0.3nm,0.3s,baz=123,slow=17,SNR=6.6						
DZM				LR	LR	07 08 09.7	
	comp=Z,612nm,18.6s,baz=195,slow=36						
RPZ	Rata Peaks	17.48	212	ePn	Pn	07 01 56.6	-1.3
	comp=Z,20nm,1.1s						
RPZ				S	Sn	07 04 55.7	-16
RPZ				eSn	S	07 05 01.2	-19
RPZ	Rata Peaks	17.48	212	P	Pn	07 01 56.2	-1.7
	comp=Z,0.9nm,0.3s,baz=18,slow=9.6,SNR=2.7						
RPZ				S	Sn	07 04 55.7	-16
	comp=Z,0.3nm,0.3s,baz=352,slow=15,SNR=6.3						
FOZ	Fox Glacier	17.94	215	ePn	Pn	07 02 02.2	-1.3
	comp=Z,43nm,1.5s						
ODZ	Otahua Downs	18.70	210	eP	Pn	07 02 16.0	+3.1
	comp=Z,18nm,0.9s						
WKZ	Wanaka	19.28	213	eP	Pn	07 02 20.2	+0.4
	comp=Z,32nm,1.2s						
MLZ	Mavora Lakes	20.11	214	eP	Pn	07 02 29.2	-0.5
	comp=Z,16nm,1.0s						
WHZ	Wether Hill Ro	20.58	213	eP	Pn	07 02 34.3	-0.9
	comp=Z,14nm,1.1s						
TBI	Tubuai	24.71	82	eLR	LR	07 09 21.6	
	comp=Z,230nm,24.8s						
TBI	Tubuai	24.71	82	eT	T	07 28 21.1	
	comp=Z,7.6nm,0.3s						
PAE	Paea	27.04	70	eT	T	07 31 11.7	

	comp=Z,9.5nm,0.4s						
PPT2	Papeete2	27.08	70	eLR	LR	07 10 14.1	
	comp=Z,185nm,23.8s						
PPT	Papeete	27.09	70	LR	LR	07 12 49.9	
	comp=Z,226nm,18.4s,baz=261,slow=33						
MCQ	Macquarie Isla	30.78	209	eP	P	07 04 12.8	+3.5
	comp=Z,186nm,1.3s						
MCQ	Macquarie Isla	30.78	209	eP	P	07 04 12.8	+3.5
CTAO	Charters Tower	35.19	277	eP	P	07 04 48.9	+0.7
	comp=Z,7.1nm,0.8s						
CTAO	Charters Tower	35.19	277	eP	P	07 04 48.9	+0.7
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STKA	Stephens Creek	36.19	255	eP	P	07 04 57.4	+0.7
	comp=Z,2.2nm,0.8s						
STKA	Stephens Creek	36.19	255	P	P	07 04 57.1	+0.4
	comp=Z,9.9nm,0.7s,baz=89,slow=10,SNR=19						
STKA				LR	LR	07 19 29.7	
	comp=Z,246nm,18.0s,baz=72,slow=36						
BBOO	Buckleboo	40.70	253	eP	P	07 05 35.0	+0.3
	comp=Z,14nm,0.8s						
AS01	Alice Springs	44.66	265	eP	P	07 06 06.8	-0.2
AS31	Alice Springs	44.70	265	eP	P	07 06 07.2	-0.1
	comp=Z,2.1nm,0.6s						
ASAR	Alice Springs	44.70	265	P	P	07 06 06.8	-0.5
	comp=Z,3.4nm,0.7s,baz=96,slow=7.1,SNR=63						
ASAR				S	S	07 12 42.0	-1.0
	comp=Z,0.7nm,0.8s,baz=104,slow=14,SNR=4.2						
WB2	Warramunga Arr	45.60	270	eP	P	07 06 13.6	-0.8
	comp=Z,14nm,1.0s						
WRAB	Tennant Creek	45.60	270	eP	P	07 06 14.8	+0.3
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	45.60	270	c eP	P	07 06 14.4	0.0
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WR1	Warramunga Arr	45.61	270	eP	P	07 06 13.2	-1.3
	comp=Z,13nm,0.8s						
WR1				eS	S	07 12 48.9	-7.2
WRA	Warramunga Arr	45.61	270	P	P	07 06 13.2	-1.3
	comp=Z,9.0nm,0.8s,baz=109,slow=7.8,SNR=31						
WRA				S	S	07 12 48.9	-7.2
	comp=Z,0.5nm,0.9s,baz=109,slow=14,SNR=3.2						
WRA				LR	LR	07 24 46.2	
	comp=Z,96nm,18.1s,baz=115,slow=35						
FORT	Forrest	47.77	254	eP	P	07 06 31.1	-0.2
	comp=Z,18nm,0.8s						
FITZ	Fitzroy Crossi	53.91	268	LR	LR	07 30 28.1	
	comp=Z,121nm,18.3s,baz=111,slow=36						
BATI	Baumata	59.06	276	LR	LR	07 34 50.4	
	comp=Z,347nm,18.1s,baz=98,slow=38						
QSPA	South Pole Qui	60.65	180	eP	P	07 08 07.2	+2.5
	comp=Z,21nm,1.1s						
QSPA	South Pole Qui	60.65	180	P	P	07 08 07.3	+2.5
	comp=Z,12nm,0.9s,baz=39,slow=2.0,SNR=22						
MJAR	Matsushiro Arr	78.36	324	P	P	07 09 53.2	-1.0
	comp=Z,2.3nm,0.8s,baz=165,slow=6.8,SNR=3.7						
MAJO	Matsushiro	78.36	324	eP	P	07 09 53.2	-1.0
MAJO	Matsushiro	78.36	324	eP	P	07 09 53.2	-1.0
SYO	Syowa Base	78.37	192	⇑eP	P	07 09 53.6	-0.3
SYO	Syowa Base	78.37	192	⇑esP	sP	07 10 00.2	+0.6
SNAA	Sanae	79.05	178	i P	P	07 09 58.5	+0.8
ERM	Erimo	80.38	331	i P	P	07 10 06.2	+1.2
ERM				pmax	pmax		
	comp=Z,48nm,1.0s						
EFI	East Falkland	82.74	146	i P	P	07 10 17.9	+0.3
PFO	Pinyon Flats O	84.44	46	eP	P	07 10 26.9	+0.2
	comp=Z,9.0nm,1.1s						
PFO	Pinyon Flats O	84.44	46	eP	P	07 10 26.9	+0.2
PFO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XPFO	Pion Flat	84.44	46	eP	P	07 10 27.1	+0.4
	comp=Z,11nm,1.2s						
ISA	Isabella, Lake	84.55	44	eP	P	07 10 27.6	+0.4
	comp=Z,11nm,1.4s						
ISA	Isabella, Lake	84.55	44	eP	P	07 10 27.6	+0.4
ISA				pmax	pmax		
	comp=Z,11nm,1.4s						
YSS	Yuzh-Sakhalins	84.58	333	eP	P	07 10 21.9	-4.9
KSRS	Korea Array	84.64	319	P	P	07 10 27.8	+0.4
	comp=Z,3.0nm,0.9s,baz=133,slow=5.5,SNR=7.3						
KSRS				LR	LR	07 47 06.3	
	comp=Z,25nm,18.5s,baz=105,slow=35						
KS15	Wonju Array Si	84.65	319	eP	P	07 10 27.8	+0.3
	comp=Z,22nm,1.4s						
KSAR	Wonju Array Be	84.65	319	P	P	07 10 27.8	+0.3
KS01	Wonju Array Si	84.67	319	eP	P	07 10 27.5	-0.1
CMB	Columbia Colle	85.04	41	eP	P	07 10 29.7	+0.2
	comp=Z,6.0nm,1.0s						
CMB	Columbia Colle	85.04	41	eP	P	07 10 29.7	+0.2
CMB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GLA	Glamis	85.12	48	eP	P	07 10 30.8	+0.8
	comp=Z,22nm,1.5s						
GLA	Glamis	85.12	48	eP	P	07 10 30.8	+0.8
GLA				pmax	pmax		
	comp=Z,22nm,1.5s						
PETK	Petropavlovsk-	85.30	345	eP	P	07 10 30.4	+0.1
PETK	Petropavlovsk-	85.30	345	P	P	07 10 29.8	-0.6
	comp=Z,1.6nm,0.6s,baz=135,slow=9.4,SNR=4.7						
PEA1	Petropavlovsk-	85.30	345	eP	P	07 10 29.8	-0.6
GSC	Goldstone, Bar	85.33	45	eP	P	07 10 31.5	+0.4
	comp=Z,9.5nm,1.3s						
GSC	Goldstone, Bar	85.33	45	eP	P	07 10 31.5	+0.4
GSC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
AFDM	Forest Hills D	85.34	40	eP	P	07 10 31.3	+0.4
	comp=Z,7.7nm,1.1s						
MDPB	Devils Postpil	85.52	42	eP	P	07 10 32.5	+0.3
	comp=Z,3.6nm,1.0s						
OMMB	Old Mammoth Mi	85.55	42	eP	P	07 10 33.0	+0.6
	comp=Z,5.1nm,1.5s						
WDC	Whiskeytown Da	85.62	38	eP	P	07 10 32.7	+0.4
	comp=Z,15nm,1.1s						
WDC	Whiskeytown Da	85.62	38	eP	P	07 10 32.7	+0.4
WDC				pmax	pmax		
	comp=Z,15nm,1.1s						
WAKR	Walker	85.91	41	eP	P	07 10 34.8	+0.8
	comp=Z,14nm,1.3s						
LDFC	Landfair	86.24	46	eP	P	07 10 37.0	+1.4
	comp=Z,20nm,1.1s						
YERR	Yerington	86.35	41	eP	P	07 10 36.3	+0.1
	comp=Z,11nm,1.2s						
NV01	Mina Array Sit	86.51	42	eP	P	07 10 37.1	+0.1
NVAR	Mina Array Bea	86.51	42	P	P	07 10 37.1	+0.1
	comp=Z,3.9nm,0.8s,baz=219,slow=8.2,SNR=20						
RYN	Ryan	86.52	42	eP	P	07 10 37.1	+0.2
	comp=Z,10nm,1.5s						
NV11	Mina Array Sit	86.60	42	eP	P	07 10 37.7	+0.3
	comp=Z,0.8nm,1.3s						
TPNV	Topopah Spring	86.75	44	eP	P	07 10 38.4	+0.3
	comp=Z,5.3nm,1.0s						
TPNV	Topopah Spring	86.75	44	eP	P	07 10 38.4	+0.3
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PAHR	Pah Rah Range	86.75	40	eP	P	07 10 38.4	+0.3
	comp=Z,12nm,1.2s						
NJ2	Nanjing	86.81	310	eP	P	07 10 39.1	+0.8
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
Y14A	Wickenburg	86.86	48	eP	P	07 10 39.5	+0.9
	comp=Z,9.3nm,1.1s						
PSI	Prapat	86.87	275	eP	P	07 10 38.5	-0.8
	comp=Z,16nm,1.1s						
W13A	Hualapai Mount	87.03	47	eP	P	07 10 40.4	+0.7
	comp=Z,5.4nm,1.1s						
KVN	Kaiserville	87.05	41	eP	P	07 10 39.8	+0.2
	comp=Z,9.1nm,1.1s						
KVN	Kaiserville	87.05	41	eP	P	07 10 39.8	+0.2
KVN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SHPR	Sheep Range	87.13	45	eP	P	07 10 40.4	+0.4
	comp=Z,3.2nm,1.2s						
USRK	Ussuriysk Ar.	87.23	326	P	P	07 10 40.4	+0.3
	comp=Z,5.2nm,1.0s,baz=154,slow=3.8,SNR=7.0						
TUC	Tucson	87.33	50	eP	P	07 10 41.8	+0.8
	comp=Z,6.3nm,1.0s						
TUC	Tucson	87.33	50	eP	P	07 10 41.8	+0.8
TUC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
X16A	Lo Mia Camp, P	88.18	48	eP	P	07 10 45.7	+0.6
	comp=Z,5.5nm,0.9s						
OHAK	Old Harbor	88.49	12	eP	P	07 10 46.5	+0.8
	comp=Z,55nm,1.4s						
LCMT	Little Creek M	88.64	46	eP	P	07 10 48.1	+1.0
	comp=Z,4.9nm,1.1s						
U15A	North Rim	88.87	46	eP	P	07 10 49.2	+0.7
	comp=Z,8.1nm,0.9s						
WUAZ	Wupatki	88.89	48	eP	P	07 10 48.9	+0.5
	comp=Z,11nm,1.0s						
CCUT	Cedar City	88.90	45	eP	P	07 10 49.4	+0.9
	comp=Z,3.5nm,1.1s						
KNB	Kanab	88.90	46	eP	P	07 10 49.5	+1.0
	comp=Z,9.1nm,1.0s						
KNB	Kanab	88.90	46	eP	P	07 10 49.5	+1.0
KNB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MTPU	Mount Pierson	89.94	45	eP	P	07 10 54.8	+1.3
	comp=Z,4.4nm,1.0s						
MSU	Marysvale	90.23	45	eP	P	07 10 55.9	+1.2
CN2	Changchun	90.33	322	eP	P	07 10 54.5	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIA	Tai'an	90.46	312	P	P	07 10 56.6	+1.0
TIA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TX31	Lajitas Ar. Si	90.59	56	eP	P	07 10 57.0	+0.5
	comp=Z,10.0nm,1.4s						
TXAR	Lajitas Array	90.59	56	P	P	07 10 55.6	-0.8
	comp=Z,1.7nm,0.9s,baz=216,slow=6.2,SNR=9.4						
G08A	Pilot Rock	90.78	36	eP	P	07 10 57.7	+0.7
	comp=Z,16nm,1.2s						
LENM	Lemitar	91.00	51	eP	P	07 10 59.3	+1.0
KLR	Kul'dur	91.01	329	i P	P	07 10 57.4	-0.3
KLR	Kul'dur	91.01	329	LR	LR	07 48 30.1	
	comp=Z,51nm,18.8s,baz=98,slow=33						
LAZ	Ladron	91.02	51	eP	P	07 10 59.1	+0.7
E07A	Sunnyside	91.19	35	eP	P	07 10 59.4	+0.7
	comp=Z,21nm,0.9s						
TMUT	Trail Mountain	91.31	45	eP	P	07 11 01.4	+1.6
	comp=Z,5.2nm,1.0s						
BRLK	Bradley Lake	91.32	13	eP	P	07 10 59.4	+0.4
	comp=Z,37nm,1.4s						
SRU	San Rafael Swe	91.62	45	eP	P	07 11 01.5	+0.4
	comp=Z,5.3nm,1.0s						
SRU	San Rafael Swe	91.62	45	eP	P	07 11 01.5	+0.4
SRU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANMO	Albuquerque	91.79	50	c eP	P	07 11 02.4	+0.4
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
D08A	Wollman Farm,	92.00	35	eP	P	07 11 03.3	+0.8
	comp=Z,20nm,1.0s						
HLID	Hailey	92.10	40	eP	P	07 11 03.9	+0.7
	comp=Z,4.8nm,1.0s						
PV09	Paradox Valley	92.12	46	eP	P	07 11 04.0	+0.4
PV01	Paradox Valley	92.26	47	eP	P	07 11 04.8	+0.7
	comp=Z,2.3nm,0.8s						
GHO	Glory Hole Cre	93.55	13	eP	P	07 11 09.6	+0.3
	comp=Z,10nm,0.9s						
MSTX	Muleshoe	93.77	53	eP	P	07 11 11.6	+0.5
	comp=Z,3.3nm,0.9s						
SCM	Sheep Creek Mo	93.92	13	eP	P	07 11 11.5	+0.5
	comp=Z,29nm,1.3s						
SCM	Sheep Creek Mo	93.92	13	eP	P	07 11 11.5	+0.5
SCM				pmax	pmax		
	comp=Z,29nm,1.3s						
PD31	Pinedale Array	94.40	43	eP	P	07 11 12.4	-1.5
	comp=Z,2.9nm,1.3s						
PDAR	Pinedale Array	94.40	43	P	P	07 11 13.1	-0.9
	comp=Z,0.9nm,0.9s,baz=197,slow=4.6,SNR=5.2						
KMI	Kunming	94.77	296	P	P	07 11 17.8	+1.8
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,64nm,4.2s						
YHH	Holmes Hill	94.86	41	eP	P	07 11 16.7	+0.6
	comp=Z,6.7nm,1.3s						
BOZ	Bozeman (W)	94.92	40	eP	P	07 11 15.4	-0.7
	comp=Z,6.2nm,1.0s						
BOZ	Bozeman (W)	94.92	40	eP	P	07 11 15.4	-0.7
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HDA	Harding Lake	96.33	12	eP	P	07 11 21.6	-0.3
	comp=Z,6.3nm,0.8s						
COLA	College	96.59	12	i P	P	07 11 22.5	-0.5
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
IL1	Eielson Array	96.67	12	eP	P	07 11 22.6	-0.8
ILAR	Eielson Array	96.67	12	P	P	07 11 22.5	-0.9
	comp=Z,1.9nm,0.8s,baz=220,slow=5.8,SNR=14						
ILB	Eielson Array	96.67	12	eP	P	07 11 22.7	-0.7
	comp=Z,3.7nm,0.9s						
HHC	Hu-ho-hao-te	96.69	313	eP	P	07 11 24.8	+0.6
LPAZ	La Paz	97.12	113	eP	Pdif	07 11 29.1	+1.5
LPAZ	La Paz	97.12	113	P	P	07 11 27.4	-0.1
	comp=Z,1.6nm,0.8s,baz=258,slow=1.3,SNR=6.6						
BILL	Bilibino	98.07	353	⇓eP	P	07 11 28.6	-1.1
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,127nm,19.0s						
CPUP	Villa Florida	99.35	127	LR	LR	07 51 04.1	
	comp=Z,83nm,18.8s,baz=200,slow=32						
LZH	Lanzhou	99.40	306	eP	Pdif	07 11 39.4	+2.8
LZH				pP	sP	07 11 44.0	+1.7
LZH				sP	pwP	07 11 46.9	-5.0
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
YKA	Yellowknife Ar	103.94	25	Pdiff	Pdif	07 11 56.2	+0.3
	comp=Z,0.2nm,0.8s,baz=230,slow=4.8,SNR=3.6						
WMQ	Urumqi	113.85	308	ePKP	PKiKP	07 16 35.9	+3.3
MK01	Makanchi Array	118.33	310	ePKPdf	PKPdf	07 16 40.2	-0.8
MK31	Makanchi Array	118.34	310	ePKPdf	PKPdf	07 16 40.2	-0.9
MK31	Makanchi Array	118.34	310	ePKIKP	PKPdf	07 16 40.2	-0.9
MK32	Makanchi Array	118.34	310	ePKPdf	PKPdf	07 16 40.1	-1.0
MKAR	Makanchi Array	118.34	310	PKP	PKPdf	07 16 40.1	-1.0
	comp=Z,1.9nm,0.8s,baz=64,slow=2.8,SNR=17						
ZAA0	Zalesovo Array	118.34	318	ePKPdf	PKPdf	07 16 39.7	-1.0
ZAA1	Zalesovo Array	118.34	318	ePKPdf	PKPdf	07 16 39.6	-1.2
ZALV	Zalesovo Beam	118.34	318	ePKPdf	PKPdf	07 16 39.4	-1.4
ZALV	Zalesovo Beam	118.34	318	PKP	PKPdf	07 16 39.6	-1.2
	comp=Z,1.0nm,0.6s,baz=118,slow=0.5,SNR=6.3						
MAKZ	Makanchi	118.55	310	ePKPdf	PKPdf	07 16 40.4	-1.1
MAKZ	Makanchi	118.55	310	ePKIKP	PKPdf	07 16 40.4	-1.1
HRV	Adam Dziewonsk	119.52	55	ePKPdf	PKPdf	07 16 43.1	-0.3
HRV	Adam Dziewonsk	119.52	55	ePKIKP	PKPdf	07 16 43.1	-0.3
KURK	Kurchatov	121.50	314	ePKPdf	PKPdf	07 16 46.0	-0.9
KURK	Kurchatov	121.50	314	c iPKIKP	PKPdf	07 16 46.6	-0.3
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TULEG	Thule	122.46	15	ePKPdf	PKPdf	07 16 47.1	-1.0
GAR	Garm	125.24	299	ePKPdf	PKiKP	07 16 55.3	+0.2
KK31	Karatay Array	125.82	304	ePKPdf	PKPdf	07 16 55.2	-0.3
KK31	Karatay Array	125.82	304	ePKIKP	PKPdf	07 16 55.2	-0.3
KKAR	Karatay Array	125.82	304	ePKPdf	PKPdf	07 16 55.2	-0.3
KKAR	Karatay Array	125.82	304	ePKIKP	PKPdf	07 16 55.2	-0.3
BRVK	Borovoye	126.86	316	ePKPdf	PKPdf	07 16 57.0	-0.2
BRVK	Borovoye	126.86	316	c iPKIKP	PKPdf	07 16 57.3	+0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
AKTO	Aktyubinsk	134.59	313	PKP	PKPdf	07 17 12.5	+0.6
	comp=Z,2.0nm,0.7s,baz=151,slow=5.2,SNR=5.1						
FIA1	FINESS Array S	144.76	342	ePKPdf	PKPab	07 17 28.0	-0.9
FIA1				ePKPdf	PKPbc	07 17 28.1	-0.9
FIA0	FINESS Array S	144.76	342	ePKPdf	PKPab	07 17 27.8	-1.1
FIA0	FINESS Array S	144.76	342	ePKIKP	PKPab	07 17 27.8	-1.1
FINES	FINESS Array B	144.76	342	PKP	PKPab	07 17 27.8	-1.1
	comp=Z,5.7nm,0.6s,baz=67,slow=3.1,SNR=25						
OBN	Obninsk	145.25	327	ePKPbc	PKPbc	07 17 30.4	-0.3
OBN	Obninsk	145.25	327	⇓iPKIKP	PKPbc	07 17 30.0	-0.7
OBN				e		07 20 50.5	
OBN				pmax	pmax		
	comp=Z,22nm,1.0s						
OBN	Obninsk	145.25	327	PKPbc	PKPbc	07 17 29.9	-0.7
	comp=Z,3.0nm,0.3s,baz=86,slow=2.7,SNR=5.9						
ZEI	Tsey	145.28	304	i PKP2	PKPbc	07 17 29.4	-2.2
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
LPSR	Galich'ya Gora	145.34	322	ePKIKP	PKPbc	07 17 30.4	-0.7
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
KBZ	Khabaz	145.84	305	PKPbc	PKPbc	07 17 33.3	+0.4
	comp=Z,3.9nm,0.9s,baz=90,slow=3.0,SNR=4.5						
VSR	Storozhevoye	145.84	320	ePKIKP	PKPdf	07 17 30.7	-1.5
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
KVAR	Kislovodsk Arr	145.93	306	PKPbc	PKPab	07 17 34.3	+0.3
	comp=Z,3.3nm,0.7s,baz=291,slow=17,SNR=2.7						
KIV	Kislovodsk	145.94	306	ePKPdf	PKPab	07 17 34.3	+0.3
KIV	Kislovodsk	145.94	306	i PKP2	PKPdf	07 17 33.1	+0.4
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
VSU	Vasula	146.96	338	c iPKP2	PKPdf	07 17 34.5	+0.7
VSU				pmax	pmax		
	comp=Z,199nm,2.5s						
NC303	NORSAR Array S	147.83	353	ePKPbc	PKPbc	07 17 37.6	-0.6
NC204	NORSAR Array S	147.84	354	ePKPbc	PKPbc	07 17 37.7	-0.6
NC405	NORSAR Array S	147.90	353	ePKPbc	PKPbc	07 17 38.0	-0.4
NB201	NORSAR Array S	148.00	353	ePKPbc	PKPbc	07 17 38.5	-0.2
NB2	NORSAR Subarra	148.02	353	PKP	PKPbc	07 17 37.5	-1.2
	comp=Z,9.2nm,1.0s,baz=10,slow=3.2						
NB200	NORSAR Array S	148.02	353	ePKPbc	PKPbc	07 17 38.0	-0.7
NOA	NORSAR Array B	148.02	353	PKPbc	PKPbc	07 17 38.0	-0.7
	comp=Z,5.0nm,0.8s,baz=13,slow=4.5,SNR=23						
NBO00	NORSAR Array S	148.08	354	ePKPbc	PKPbc	07 17 38.4	-0.4
NAO01	NORSAR Array S	148.25	353	ePKPbc	PKPbc	07 17 39.3	0.0
NAO01				ePKPab	PKPab	07 17 41.9	-0.4
NC602	NORSAR Array S	148.29	353	ePKPbc	PKPbc	07 17 38.8	-0.6
KONO	Kongsberg	149.55	354	ePKPbc	PKPbc	07 17 41.8	-0.8
KONO	Kongsberg	149.55	354	c iPKHKP	PKPbc	07 17 40.9	-1.7
KONO				pmax	pmax		
	comp=Z,20nm,1.7s						
AKASG	Malin Array Be	151.44	325	PKPbc	PKPbc	07 17 46.8	-0.6
	comp=Z,12nm,0.7s,baz=46,slow=2.8,SNR=41						
AKBB	Malin Array Si	151.44	325	ePKPbc	PKPbc	07 17 46.8	-0.5
KIEV	Kiev	151.45	325	ePKPbc	PKPbc	07 17 46.7	-0.7
KIEV	Kiev	151.45	325	ePKIKP	PKPbc	07 17 46.7	-0.7
AK11	Malin Array Si	151.48	325	ePKPbc	PKPbc	07 17 47.1	-0.4
BR101	Keskin Array S	153.47	301	ePKPbc	PKPbc	07 17 52.2	-0.3
BR101				ePKPab	PKPab	07 18 04.3	-0.6
BRTR	Keskin Array B	153.47	301	PKPbc	PKPbc	07 17 52.2	-0.3
	comp=Z,2.0nm,1.0s,baz=174,slow=2.2,SNR=7.6						
BRTR				PKPab	PKPab	07 18 04.3	-0.6
	comp=Z,1.1nm,0.7s,baz=86,slow=4.9,SNR=4.8						
BUR04	Bucovina Ar. S	155.43	323	ePKPbc	PKPbc	07 17 57.5	
CLL	Collm	157.10	345	ePKPab	PKPab	07 18 19.0	-0.7
CLL	Collm	157.10	345	ePKP2	PKPab	07 18 19.0	-0.7
BRG	Berggiesshubel	157.28	343	ePKP	PKPab	07 18 19.9	-0.6
	comp=Z,20nm,1.8s						
BRG	Berggiesshubel	157.28	343	ePKP2	PKPab	07 18 19.9	-0.6
BRG				pmax	pmax		
	comp=Z,20nm,1.8s						
VYHS	Vyhne	157.74	333	ePKIKP	PKPdf	07 17 53.6	+3.5
VYHS	Vyhne	157.74	333	ePKP	PKPdf	07 17 53.6	+3.5
VYHS				e		07 18 22.4	
MODS	Modra-Piesok	158.44	335	ePKP2	PKPab	07 18 25.0	-0.6
MODS	Modra-Piesok	158.44	335	ePKP	PKPab	07 18 25.0	-0.6
TOA0	Torodi Ar. Sit	163.66	173	ePKPab	PKPab	07 18 49.9	+0.8
TORD	Torodi Ar. Bea	163.66	173	PKP	PKPdf	07 17 55.3	-2.2
	comp=Z,0.9nm,1.0s,baz=323,slow=1.2,SNR=4.1						
TORD				PKPab	PKPab	07 18 48.7	-0.4
	comp=Z,2.2nm,0.9s,baz=180,slow=4.3,SNR=8.8						
TOA1	Torodi Ar. Sit	163.66	173	ePKPdf	PKPdf	07 17 55.3	-2.2
TOA1				ePKPab	PKPab	07 18 48.7	-0.4
CEL	Celeste	166.64	314	ePKPab	PKPab	07 19 03.4	+1.4

JMA 23 07:00:07.7±0.1**, 37°.81N**×**142°.04E, h37**km±2km**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.68	318	P	Pn	07 00 20.7	-0.1
JIKH				S	Sn	07 00 29.6	-0.5
JIO	Ouri	0.84	320	P	Pn	07 00 23.3	+0.3
JIO				S	Sn	07 00 34.0	-0.2
JMM	Marumori	0.99	274	P	Pn	07 00 25.4	+0.4
JMM				S	Sn	07 00 37.9	+0.2
JFK	Kawauchi	1.03	245	P	Pn	07 00 25.6	0.0
JFK				S	Sn	07 00 38.6	-0.1
JKMT	Kesennumamotoy	1.09	336	P	Pn	07 00 26.6	+0.2
JKMT				eS	Sn	07 00 39.8	-0.5
JOU	Okura	1.22	297	P	Pn	07 00 29.2	+1.0
JOU				eS	Sn	07 00 44.8	+1.4
JMK	Ichinoseki	1.31	331	P	Pn	07 00 29.9	+0.5
JFT	Otama	1.38	258	P	Pn	07 00 31.8	+1.4
JFT				S	Sn	07 00 49.2	+1.7
JYS	Shirataka	1.61	285	P	Pn	07 00 35.1	+1.5
JYS				eS	Sn	07 00 55.4	+2.3
JYK	Kaneyama	1.72	310	P	Pn	07 00 36.4	+1.3
JYK				eS	Sn	07 00 57.4	+1.6
JOM	Ohasama	1.76	341	P	Pn	07 00 36.4	+0.8
JOM				S	Sn	07 00 58.0	+1.2
JFY	Yanaizu	1.90	258	P	Pn	07 00 39.0	+1.5
JFY				eS	Sn	07 01 03.0	+2.8
JRG	Rokugo	1.93	326	P	Pn	07 00 39.5	+1.6
JRG				eS	Sn	07 01 03.8	+2.9
JYA	Atsumi	1.99	294	P	Pn	07 00 40.7	+1.9
JYA				eS	Sn	07 01 05.6	+3.1
MAT	Matsushiro	3.31	249	P	Pn	07 00 56.5	-0.5
MAT				eS	Sn	07 01 40.7	+5.6

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*ISCJB **23** 07:03:12.2±0.5, 49°.85N±0°.03×78°.60E±0°.06, h0km, Error ellipse: s-maj=5.7km s-min=3.8km az=159.6*

*NNC **23** 07:03:16.2±0.6, 50°.02N×78°.69E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=4.9km s-min=2.9km az=76.0, Suspected Mining explosion.*

*IDC **23** 07:03:17.5±0.7, 50°.06N×78°.71E, h0km, mb1 3.3/4, mb1mx3.1/47, mbtmp3.3/4, ML3.0/4, Error ellipse: s-maj=11.7km s-min=5.7km az=65.0*

ISC 23 07:03:16.7±0.7**, 49°.99N**±0°.03×**78°.70E**±0°.04**, h0**km**, n25, σ1s.36**/28**, 17C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	0.65	350	⇑P	Pg	07 03 28.5	-0.7
	32nm,0.3s						
KURBB				⇑S	Sg	07 03 36.9	-0.7
	306nm,0.6s						
KURBB	Kurchatov Arra	0.65	350	Pg	Pg	07 03 28.3	-0.8
	5.5nm,0.3s,baz=166,slow=19,SNR=58						
KURBB				Lg	Lg	07 03 36.9	
	8.2nm,0.3s,baz=179,slow=29,SNR=25						
KURBB				Rg	Rg	07 03 43.8	
	60nm,0.6s,baz=160,slow=41,SNR=10						
KURK	Kurchatov	0.73	356	⇑P	Pg	07 03 29.7	-1.1
	16nm,0.4s						
KURK				⇑S	Sg	07 03 39.9	-0.4
	73nm,0.6s						
SEM	Semipalatinsk	1.08	66	P	Pg	07 03 36.9	-0.6
	11nm,0.2s						
SEM				S	Sg	07 03 51.3	-0.2
	146nm,0.5s						
MAKZ	Makanchi	3.86	144	⇓Pg	Pb	07 04 25.7	+0.1
	2.1nm,0.6s						
MAKZ				⇓Lg	Lg	07 05 16.8	
	5.6nm,0.5s						
MK31	Makanchi Array	3.99	142	⇑Pn	Pn	07 04 20.3	+1.1
	0.4nm,0.3s,baz=324,slow=9.7,SNR=70						
MK31				⇑Pg	Pb	07 04 28.9	+1.0
	2.4nm,0.5s,baz=323,slow=13,SNR=36						
MK31				⇑Lg	Lg	07 05 22.8	
	4.1nm,0.4s,baz=324,slow=26,SNR=16						
MKAR	Makanchi Array	3.99	142	Pn	Pn	07 04 20.7	+1.6
	1.0nm,0.3s,baz=321,slow=10,SNR=42						
MKAR				Pg	Pb	07 04 28.8	+0.8
	1.9nm,0.3s,baz=316,slow=16,SNR=13						
MKAR				Sn	Sn	07 05 09.3	+2.6
	0.9nm,0.3s,baz=325,slow=25,SNR=3.6						
OTUK	Ortayu	4.53	250	Pg	Pg	07 04 44.9	+1.4
OTUK				Lg	Lg	07 05 41.1	
OTUK	Ortayu	4.53	250	⇓Pn	Pn	07 04 26.9	+0.4
	1.8nm,0.3s						
OTUK				⇓Lg	Lg	07 05 40.3	
	12nm,0.5s						
KAPS	Kapalarasan	4.72	174	Pg	Pg	07 04 45.0	-2.2
	2.2nm,0.3s						
KAPS				Lg	Lg	07 05 45.4	
	9.8nm,0.6s						
ZAA0	Zalesovo Array	5.48	41	⇑Pn	Pn	07 04 39.9	+0.4
	2.9nm,0.5s						
ZAA0				⇑Lg	Lg	07 06 10.9	
	1.7nm,0.4s						
ZALV	Zalesovo Beam	5.48	41	Pn	Pn	07 04 41.0	+1.5
	2.2nm,0.3s,baz=232,slow=14,SNR=20						
ZALV				Lg	Lg	07 06 14.3	
	0.6nm,0.3s,baz=236,slow=27,SNR=6.4						
I46RU	ZALESOVO INFRA	5.48	41	i		07 33 31.7	
	baz=220,slow=348,SNR=1.9						
DJR	Jarkent	5.71	172	Pg	Pg	07 05 03.3	-2.7
	1.2nm,0.5s						
DJR				Lg	Lg	07 06 15.6	
	3.4nm,0.8s						
MNBS	Baschi	5.91	182	Pg	Pg	07 05 08.5	-1.5
	3.4nm,0.3s						

MNBS				Lg	Lg	07 06 23.3	
	12nm,0.5s						
BVA0	Borovoye Array	6.01	304	⇑Pg	Pb	07 05 02.3	-0.1
	1.0nm,0.5s,baz=116,slow=15,SNR=3.8						
BVA0				⇑Sn	Sn	07 05 55.7	-0.7
	2.2nm,0.4s,baz=114,slow=23,SNR=7.8						
BVA0				⇓Lg	Lg	07 06 23.4	
	2.7nm,0.6s,baz=114,slow=23,SNR=7.8						
BVAR	Borovoye Array	6.01	304	Pn	Pn	07 04 48.0	+1.1
	0.1nm,0.3s,baz=123,slow=13,SNR=1.1						
BVAR				Pg	Pb	07 04 59.8	-2.5
	0.6nm,0.3s,baz=114,slow=15,SNR=3.3						
BVAR				Sn	Sn	07 05 55.7	-0.7
	1.4nm,0.3s,baz=109,slow=23,SNR=7.5						
BVAR				Lg	Lg	07 06 24.4	
	0.6nm,0.3s,baz=118,slow=27,SNR=2.1						
BRVK	Borovoye	6.09	304	⇑Pg	Pb	07 05 02.9	-0.7
	1.6nm,0.7s						
BRVK				⇑Sn	Sn	07 05 56.6	-1.6
	3.3nm,0.7s						
BRVK				⇓Lg	Lg	07 06 22.8	
	2.6nm,0.4s						
PDGK	Podgornoye	6.68	175	⇑Lg	Lg	07 06 48.2	
	5.3nm,0.7s						
MDOK	Medeo	6.92	190	⇓Lg	Lg	07 06 55.6	
	4.1nm,0.6s						
TKM2	Tokmak 2	7.38	198	⇓Lg	Lg	07 07 10.5	
	3.0nm,0.8s						
AAK	Ala-Archa	7.90	203	⇑Lg	Lg	07 07 28.9	
	3.3nm,0.7s						
AAK	Ala-Archa	7.90	203	Pn	Pn	07 05 13.6	+0.6
	0.6nm,0.3s,baz=350,slow=0.9,SNR=5.8						
AAK				Sn	Sn	07 06 32.0	-11
	0.2nm,0.3s,baz=230,slow=20,SNR=3.8						
AAK				Lg	Lg	07 07 27.5	
	0.1nm,0.3s,baz=189,slow=19,SNR=1.5						
MNAS	Manas	8.64	212	⇑Lg	Lg	07 07 50.6	
	1.6nm,0.7s						
KK31	Karatay Array	8.90	222	⇑Lg	Lg	07 08 02.1	
	1.2nm,0.5s,baz=24,slow=28,SNR=4.1						

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*IDC **23** 07:05:02.6±5.7, 14°.42N×91°.34W, h0^{km}, mb3.6/3, mb1 4.0/3, mb1mx3.6/25, mbtmp3.6/3, Error ellipse: s-maj=155.4km s-min=102.2km az=33.0*

*ISCJB **23** 07:05:06.4±1.2, 14°.04N±0°.07×92°.6W±0°.1, h46^{km}, mb3.6/3, Error ellipse: s-maj=15.3km s-min=9.6km az=160.8*

*NEIC **23** 07:05:07.9±0.0, 14°.38N×92°.22W, h107^{km}, MD4.1(MEX), After MEX.*

*MEX **23** 07:05:07.9±0.8, 14°.37N×92°.22W, h107^{km}±15^{km}, MD4.1*

ISC 23 07:05:10.0±1.2**, 14°.2N**±0°.1×**92°.59W**±0°.10**, h46^{km}, n13, σ1^s.59**/18**, mb3.5**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.80	23	*e*Pn	Pn	07 05 22.9	-2.0
THIG				*e*Sn	Sn	07 05 35.8	0.0
THIG		0.80	23	*i* P	Pn	07 05 22.9	-2.0
THIG				*i* S	Sn	07 05 35.8	0.0
PCIG		1.65	338	*e*Pn	Pn	07 05 35.0	-1.5
PCIG				*e*Sn	Sn	07 05 55.8	-0.7
PCIG		1.65	338	*e*P	Pn	07 05 35.0	-1.5
PCIG				*i* S	Sn	07 05 55.8	-0.7
CCIG	Comitan	2.15	12	*e*Pn	Pn	07 05 44.9	+1.4
CCIG				*e*Sn	Sn	07 06 09.4	+0.3
CCIG	Comitan	2.15	12	*e*P	Pn	07 05 45.1	+1.5
CCIG				*e*S	Sn	07 06 09.4	+0.3
ESTN	Estel	6.14	99	*e*Pn	Pn	07 06 30.5	-7.8
TEIG	Tepich	7.30	34	*e*Pn	Pn	07 06 53.1	-1.0
JTS	JuntasAbangare	8.40	116	*e*Pn	Pn	07 07 01.8	-7.5
HDC	Heredia	9.27	116	*e*Pn	Pn	07 07 19.2	-2.0
NVAR	Mina Array Bea	33.19	321	P	P	07 11 46.3	+3.7
	0.4nm,0.6s,baz=133,slow=7.9,SNR=1.5						
YKA	Yellowknife Ar	50.74	347	P	P	07 14 04.1	-0.8
	0.9nm,0.7s,baz=149,slow=7.5,SNR=18						
YKA				PcP	PcP	07 15 21.1	-0.4
	0.2nm,0.7s,baz=145,slow=4.2,SNR=3.8						
ILAR	Eielson Array	62.46	337	P	P	07 15 28.8	+0.5
	0.3nm,0.7s,baz=139,slow=6.0,SNR=4.4						

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*NNC **23** 07:08:15.5±1.7, 41°.78N×78°.62E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=11.5km s-min=8.3km az=168.0, Suspected Mining explosion.*

*KRNET **23** 07:08:17.3±0.1, 41°.70N×78°.33E, h26^{km}, mb2.1*

ISC 23 07:08:14.1±1.7**, 41°.68N**±0°.07×**78°.54E**±0°.06**, h0^{km}, n22, σ1^s.18**/32**, 16C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	0.55	276	⇑*i*P	Pg	07 08 25.6	+0.9
	baz=75						
TARG				⇑*e*S	Sg	07 08 31.8	-0.1
	baz=75						
PRZ	Przheval'sk	0.81	353	⇑*e*P	Pb	07 08 32.3	+1.0
	baz=5.0						
PRZ				⇑*i*S	Sb	07 08 43.0	+0.1
	baz=5.0						
KDJ	Kajisay	1.11	294	⇑*e*P	Pg	07 08 35.3	-0.1
	baz=97						
KDJ				⇑*i*S	Sg	07 08 48.1	-1.7
	baz=97						
SATY	Saty	1.38	356	P	Pg	07 08 39.3	-1.4
	2.0nm,0.3s						
SATY				S	Sg	07 08 56.0	-2.7
	3.1nm,0.3s						
ULHL	Ulahol	1.81	289	⇑*i*P	Pn	07 08 47.5	+0.8
	baz=90						
ULHL				⇑*i*S	Sn	07 09 09.1	-1.3
	baz=90						
MDOK	Medeo	1.85	324	⇑Pn	Pn	07 08 48.4	+1.1
	1.7nm,0.7s						
MDOK				⇓Sn	Sg	07 09 14.1	+0.5
	3.2nm,0.6s						
MDOK	Medeo	1.85	324	Pg	Pn	07 08 49.2	+1.9
	1.6nm,0.2s						
MDOK				Lg	Lg	07 09 12.9	
	3.1nm,0.5s						
KOTS	Kotyrbulak	1.88	326	P	Pn	07 08 49.1	+1.4
	2.9nm,0.5s						
KOTS				S	Sn	07 09 13.0	+0.8
	6.8nm,0.6s						
NRN	Naryn	1.92	264	⇑*i*P	Pn	07 08 48.9	+0.5
	baz=62						
NRN				⇑*i*S	Sn	07 09 12.1	-1.3
	baz=62						
IZV	Izvestkoviy	1.97	314	Pg	Pb	07 08 52.1	+1.2
	2.5nm,0.2s						
IZV				Lg	Lg	07 09 18.4	
	3.8nm,0.3s						
BOOM	Boomskoye usch	2.10	294	⇑*i*P	Pn	07 08 51.7	+1.0
	baz=95						
BOOM				⇑*i*S	Sn	07 09 16.4	-1.2
	baz=95						
KTMS	Ketmen	2.22	37	Pg	Pn	07 08 53.8	+1.4
	0.5nm,0.2s						
KTMS				Lg	Lg	07 09 20.9	
	1.2nm,0.2s						
KST	Kastek	2.35	306	Pg	Pb	07 08 58.2	+0.8
	4.6nm,0.3s						
KST				Lg	Lg	07 09 28.4	
	10nm,0.9s						
MNBS	Baschi	2.40	358	Pg	Pg	07 09 00.5	+0.3
	4.8nm,0.5s						
MNBS				Lg	Lg	07 09 32.4	
	10.0nm,0.5s						
KTBS	Karatobe	2.45	327	Pg	Pb	07 09 00.1	+1.0
KTBS				Lg	Lg	07 09 32.2	
CHKK	Chushkaly	2.46	333	Pg	Pb	07 09 00.1	+0.9
	11nm,0.3s						
CHKK				Lg	Lg	07 09 31.8	
	14nm,0.4s						
KZA	Kyzart	2.49	280	⇑*i*P	Pn	07 08 57.2	+0.9
	baz=80						
KZA				⇑*e*S	Sn	07 09 25.6	-2.0
	baz=80						
TKM2	Tokmak 2	2.51	301	⇓Pg	Pb	07 08 59.9	-0.3
	1.9nm,0.5s						
TKM2				⇓Lg	Lg	07 09 30.5	
	5.1nm,0.6s						
ARXS	Arharly	2.59	349	Pg	Pb	07 09 01.5	0.0
	6.8nm,0.4s						
ARXS				Lg	Lg	07 09 34.3	
	9.0nm,0.8s						
KUU	Kurty	2.74	325	Pg	Pb	07 09 04.6	+0.5
	5.2nm,0.7s						
KUU				Lg	Lg	07 09 39.4	
	12nm,0.9s						
DJR	Jarkent	2.81	19	Pg	Pb	07 09 04.6	-0.6
	0.3nm,0.2s						
DJR				Lg	Lg	07 09 39.4	
	4.5nm,0.7s						
AAK	Ala-Archa	3.16	289	⇑Pg	Pb	07 09 10.4	-0.8
	1.6nm,0.8s						
AAK				⇓Lg	Lg	07 09 51.9	
	6.9nm,1.0s						

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*IDC **23** 07:11:28.0±1.0, 3°.75N×126°.04E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/44, mbtmp3.6/6, MS3.6/1, Ms1 3.6/1, ms1mx2.6/39, Error ellipse: s-maj=95.3km s-min=18.1km az=72.0*

ISC 23 07:11:39.4±0.9**, 3°.6N**±0°.1×**125°.7E**±0°.4**, h100^{km}, n9, σ1^s.53**/10**, mb3.6**/6**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKMP	Bagumbayan, Su	3.11	337	*e*P	Pn	07 12 25.9	-0.8
SKMP				*e*S	Sn	07 13 01.8	-1.3
KCP	Kidapawan	3.42	349	⇓*e*P	Pn	07 12 30.1	-0.7
KCP				*e*S	Sn	07 13 13.2	+2.6
TGY	Tagaytay City	11.44	336	LR	LR	07 18 56.7	
	comp=Z,314nm,20.8s,baz=223,slow=39						
WRA	Warramunga Arr	24.90	160	P	P	07 16 53.1	-0.1
	0.9nm,0.5s,baz=342,slow=11,SNR=11						
ASAR	Alice Springs	28.27	164	P	P	07 17 23.0	-0.5
	0.3nm,0.7s,baz=340,slow=7.1,SNR=6.7						
KSRS	Korea Array	33.72	3	P	P	07 18 09.2	-1.9
	1.0nm,0.5s,baz=180,slow=9.2,SNR=5.3						
STKA	Stephens Creek	38.40	158	P	P	07 18 51.7	+0.6
	0.9nm,0.4s,baz=346,slow=12,SNR=3.7						
SONM	Songino Array	47.09	342	P	P	07 20 02.6	+1.3
	0.2nm,0.5s,baz=154,slow=8.5,SNR=3.0						
MKAR	Makanchi Array	57.08	326	P	P	07 21 16.2	+0.9
	0.4nm,0.5s,baz=124,slow=7.4,SNR=8.4						

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*IDC **23** 07:19:58.9±3.2, 14°.57S×172°.30E, h588^{km}±28^{km}, mb3.5/7, mb1 3.6/8, mb1mx3.1/34, mbtmp4.4/8, Error ellipse: s-maj=54.0km s-min=31.9km az=138.0*

ISC 23 07:19:59.5±1.8**, 14°.7S**±0°.3×**172°.4E**±0°.3**, h600^{km}, n9, σ1^s.01**/11**, mb4.3**/7**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.29	217	P	P	07 22 11.7	+0.4
	0.5nm,0.3s,baz=92,slow=17,SNR=1.7						
CTA	Charters Tower	25.52	254	P	P	07 24 42.0	-0.5
	4.0nm,0.6s,baz=81,slow=12,SNR=8.6						
STKA	Stephens Creek	32.93	233	P	P	07 25 46.0	0.0
	9.8nm,0.4s,baz=61,slow=8.7,SNR=31						
WRA	Warramunga Arr	36.67	256	P	P	07 26 15.8	-1.5
	4.0nm,0.5s,baz=81,slow=6.0,SNR=86						
ASAR	Alice Springs	37.36	250	P	P	07 26 21.9	-1.1
	7.3nm,0.4s,baz=76,slow=9.3,SNR=230						
ASAR				PcP	PcP	07 28 25.5	-0.1
	0.7nm,0.7s,baz=104,slow=4.0,SNR=5.2						
ASAR				ScP	ScP	07 31 17.2	+0.6
	0.4nm,0.8s,baz=98,slow=4.8,SNR=4.5						
FITZ	Fitzroy Crossi	44.91	259	P	P	07 27 22.4	-0.1
	4.5nm,0.3s,baz=100,slow=8.2,SNR=28						
CMAR	Chiang Mai Arr	79.50	292	P	P	07 31 07.2	+1.7
	1.4nm,0.3s,baz=131,slow=3.7,SNR=2.2						
ILAR	Eielson Array	85.00	16	P	P	07 31 31.3	-0.9
	0.3nm,0.8s,baz=233,slow=4.2,SNR=1.8						
TORD	Torodi Ar. Bea	170.86	262	PKPab	PKPab	07 40 24.1	+0.3
	0.1nm,0.4s,baz=93,slow=4.1,SNR=4.1						

IDC 23 07:26:37.4±5.8**, 19°.70S**×**176°.27W, h0^{km}, mb4.2**/2**, mb1 4.4**/2**, mb1mx3.7**/36**, mbtmp4.2**/2**, Error ellipse: s-maj=291.7km s-min=60.6km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	46.29	256	P	P	07 35 05.0	-0.2
	2.5nm,0.5s,baz=98,slow=7.9,SNR=32						
WRA	Warramunga Arr	46.33	261	P	P	07 35 05.5	-0.1
	1.1nm,0.5s,baz=97,slow=7.4,SNR=13						
AKASG	Malin Array Be	143.07	333	PKP	PKPdf	07 46 13.3	+0.1
	0.5nm,0.5s,baz=43,slow=4.8,SNR=5.6						
BRTR	Keskin Array B	147.48	314	PKPbc	PKPbc	07 46 22.8	-1.0
	0.2nm,0.4s,baz=90,slow=1.4,SNR=1.6						

IDC 23 07:30:23.3±3.0**, 8°.28S**×**123°.85E, h180^{km}**±30^{km}**, mb3.2**/1**, mb1 3.2**/4**, mb1mx2.9**/44**, mbtmp3.6**/4**, Error ellipse: s-maj=83.8km s-min=14.7km az=59.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	1.92	185	P	Pn	07 30 59.7	+0.2
	46nm,0.3s,baz=16,slow=4.1,SNR=14						
BATI				S	Sn	07 31 27.9	+0.2
	26nm,0.3s,baz=251,slow=23,SNR=9.2						
FITZ	Fitzroy Crossi	9.91	170	P	Pn	07 32 40.6	-1.1
	0.3nm,0.3s,baz=354,slow=10,SNR=7.8						
FITZ				S	Sn	07 34 25.7	-6.3
	1.4nm,0.3s,baz=116,slow=18,SNR=10						
WRA	Warramunga Arr	15.41	140	P	P	07 33 52.6	+0.4
	0.3nm,0.3s,baz=316,slow=13,SNR=16						
WRA				S	Sn	07 36 32.0	-12
	0.2nm,0.3s,baz=318,slow=26,SNR=3.0						
ASAR	Alice Springs	18.08	149	P	Pn	07 34 23.2	-0.2
	0.1nm,0.3s,baz=329,slow=12,SNR=11						
ASAR				S	S	07 37 39.4	0.0
	0.1nm,0.3s,baz=327,slow=24,SNR=2.5						
MKAR	Makanchi Array	66.12	330	P	P	07 40 51.1	-0.1
	0.4nm,0.4s,baz=128,slow=7.1,SNR=14						

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*GUC **23** 07:38:41.9±0.7, 27°.98S×69°.43W, h120^{km}±6^{km}, ML3.6*

*ISCJB **23** 07:38:42.6±0.9, 27°.97S±0°.03×69°.37W±0°.06, h119^{km}±13^{km}, Error ellipse: s-maj=8.5km s-min=5.7km az=175.2*

*SJA **23** 07:38:42.9±0.8, 27°.95S×69°.33W, h100^{km}±22^{km}, ML3.0, MW3.3*

ISC 23 07:38:43.1±1.7**, 27°.96S**±0°.04×**69°.38W**±0°.05**, h117^{km}**±19^{km}**, n14, σ0^s.99**/23**, 2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	Copiap	0.84	295	*e*P	Pn	07 39 03.0	-0.4
GO03				*e*S	Sn	07 39 18.3	-0.5
GO03				IAML		07 39 18.9	
	comp=N,3μm,0.3s						
LCO	Las Campanas	1.57	228	*e*P	Pn	07 39 11.4	0.0
LCO				*e*S	Sn	07 39 33.4	+0.5
LCO	Las Campanas	1.57	228	⇓*i*P	Pn	07 39 11.4	0.0
LCO				*e*S	Sn	07 39 33.1	+0.2
LCO				IAML		07 39 35.4	
	comp=N,328nm,0.4s						
AROD	Rodeo	2.21	182	*e*P	Pn	07 39 20.9	+1.6
ACDV	Cuesta del Vie	2.22	174	*e*S	Sn	07 39 47.3	+0.2
ACDV				IAML		07 39 50.5	
	comp=Z,36nm,0.4s						
GO04	Tololo Observa	2.54	209	*e*P	Pn	07 39 23.0	-0.4
GO04				*e*S	Sn	07 39 54.1	-0.3
GO04				IAML		07 39 56.1	
	comp=N,423nm,0.4s						
ACLC	CERRO LA CRUZ	2.59	125	*e*P	Pn	07 39 24.7	+0.7
ACLC				*e*S	Sn	07 39 54.8	-0.7
ACCO	Cerro Coronel	2.64	174	*e*P	Pn	07 39 26.0	+1.2
ACCO				*e*S	Sn	07 39 58.1	+1.2
GO02	Mina Guanaco	2.79	356	*e*P	Pn	07 39 27.4	+0.5
GO02				*e*S	Sn	07 40 01.6	+1.1
GO02				IAML		07 40 08.1	
	comp=N,176nm,0.3s						
AMOG	MOGNA	3.07	166	*e*P	Pn	07 39 30.7	+0.5
CYA	Choya	3.19	100	*e*P	Pn	07 39 32.1	+0.2
CYA				IAML		07 40 08.2	
	comp=Z,67nm,0.3s						
CYA	Choya	3.19	100	⇓*i*P	Pn	07 39 32.0	+0.2
CYA				*i* S	Sn	07 40 07.0	-2.6
PB14	IPOC Station P	3.44	344	*e*P	Pn	07 39 35.6	+0.1
CMCH	Combarbala	3.50	203	*e*P	Pn	07 39 35.0	-1.0
CMCH				*i* S	Sn	07 40 15.6	-1.4

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*NIED **23** 07:41:00, 38°.90N×142°.00E, h44^{km}, Mw3.7 Best double couple: $M_0$3.81000×10^{14} NP1:ϕ_s203.00000°, δ21.00000°, λ99.00000°. NP2:ϕ_s13.00000°, δ69.00000°, λ86.00000°.*

*ISCJB **23** 07:41:14.7±0.9, 38°.87N±0°.04×142°.02E±0°.09, h51^{km}±6^{km}, mb3.6/7, Error ellipse: s-maj=12.9km s-min=5.8km az=21.8*

*JMA **23** 07:41:15.6±0.1, 38°.89N×141°.97E, h49^{km}±1^{km}, M3.7*

JMA Felt II J1.

*IDC **23** 07:41:18.1±2.3, 38°.89N×142°.07E, h74^{km}±19^{km}, mb3.3/7, mb1 3.4/11, mb1mx3.3/39, mbtmp3.6/11, MS2.5/1, Ms1 2.5/1, ms1mx2.1/31, Error ellipse: s-maj=28.2km s-min=11.5km az=116.0*

ISC 23 07:41:15.7±1.3**, 38°.87N**±0°.05×**142°.00E**±0°.09**, h44^{km}**±10^{km}**, n27, σ1^s.59**/31**, mb3.7**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.34	309	P	Pn	07 41 24.8	+0.1
OFUJ				S	Sn	07 41 31.1	+0.1
JKMT	Kesennumamotoy	0.42	262	P	Pn	07 41 25.6	+0.1
JKMT				*i* S	Sn	07 41 32.4	-0.1
JMK	Ichinoseki	0.62	278	P	Pn	07 41 27.9	-0.2
JMK				S	Sn	07 41 36.5	-0.5
JIO	Ouri	0.66	231	P	Pn	07 41 28.5	-0.1
JIO				S	Sn	07 41 37.3	-0.6
JOM	Ohasama	0.82	318	P	Pn	07 41 30.5	-0.3
JOM				S	Sn	07 41 41.3	-0.5
JOU	Okura	1.16	245	P	Pn	07 41 35.2	-0.3
JOU				*e*S	Sn	07 41 49.8	-0.4
JRG	Rokugo	1.19	297	P	Pn	07 41 35.5	-0.4
JYK	Kaneyama	1.28	273	P	Pn	07 41 36.9	-0.3
JYK				*e*S	Sn	07 41 53.2	0.0
JMM	Marumori	1.38	224	P	Pn	07 41 37.9	-0.6
JMM				S	Sn	07 41 54.8	-0.7
MJAR	Matsushiro Arr	3.80	234	P	Pn	07 42 13.7	+2.0
	0.5nm,0.3s,baz=38,slow=12,SNR=38						
MJAR				S	Sn	07 43 00.3	+5.1
	0.2nm,0.3s,baz=49,slow=26,SNR=4.0						
MJAR				LR	LR	07 43 49.5	
	comp=Z,65nm,18.4s,baz=30,slow=39						
MAT	Matsushiro	3.80	234	P	Pn	07 42 15.0	+3.3
MAT				*e*S	Sn	07 42 57.7	+2.5
ASAJ	Asahikawa	5.26	5	P	Pn	07 42 32.5	+0.7
	0.6nm,0.3s,baz=240,slow=16,SNR=4.0						
ASAJ				S	Sn	07 43 32.9	+1.8
	0.5nm,0.3s,baz=176,slow=32,SNR=3.8						
USRK	Ussuriysk Ar.	9.20	309	P	Pn	07 43 28.8	+3.1
	0.2nm,0.3s,baz=128,slow=13,SNR=6.1						
KSRS	Korea Array	11.18	267	P	Pn	07 43 57.6	+4.8
	0.2nm,0.3s,baz=72,slow=17,SNR=2.2						
SEY	Seymchan	24.91	11	P	P	07 46 34.8	+0.6
	0.9nm,0.6s,baz=195,slow=20,SNR=5.5						
SONM	Songino Array	27.20	301	P	P	07 46 55.6	+0.4
	0.2nm,0.3s,baz=119,slow=8.9,SNR=2.9						
H11N2	WAKE ISLAND Hy	28.74	124	T	T	08 17 33.9	
	baz=317,slow=75,SNR=72						
H11N1	WAKE ISLAND Hy	28.75	124	T	T	08 17 33.9	
	baz=317,slow=75,SNR=87						
H11N3	WAKE ISLAND Hy	28.76	124	T	T	08 17 35.2	
	baz=317,slow=75,SNR=81						
H11S1	WAKE ISLAND Hy	29.52	126	T	T	08 18 34.6	
	baz=319,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.52	126	T	T	08 18 30.6	
	baz=319,slow=76,SNR=67						
H11S2	WAKE ISLAND Hy	29.53	126	T	T	08 18 33.6	
	baz=319,slow=76,SNR=32						
ZALV	Zalesovo Beam	41.05	311	P	P	07 48 53.4	-1.2
	0.7nm,0.3s,baz=80,slow=7.8,SNR=3.9						
MKAR	Makanchi Array	43.56	301	P	P	07 49 14.2	-1.0
	1.2nm,0.6s,baz=87,slow=9.2,SNR=10						
ILAR	Eielson Array	47.70	33	P	P	07 49 47.7	+0.2
	0.2nm,0.5s,baz=254,slow=6.5,SNR=3.3						
WRA	Warramunga Arr	58.94	188	P	P	07 51 09.1	-1.4
	0.3nm,0.5s,baz=6.3,slow=7.0,SNR=6.0						
FINES	FINESS Array B	67.41	332	P	P	07 52 05.4	-0.8
	1.2nm,0.9s,baz=26,slow=9.9,SNR=5.1						

IDC 23 07:52:20.9±1.6**, 10°.28N**×**126°.80E, h0^{km}, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.4**/41**, mbtmp3.7**/4**, ML4.7**/1**, Error ellipse: s-maj=86.9km s-min=24.2km az=79.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	3.41	201	Pn	Pn	07 53 15.9	+0.5
	73nm,0.3s,baz=22,slow=3.6,SNR=4.7						
DAV				Sn	Sn	07 53 40.8	-16
	71nm,0.3s,baz=288,slow=24,SNR=4.5						
WRA	Warramunga Arr	30.93	166	P	P	07 58 40.5	+0.7
	0.2nm,0.6s,baz=347,slow=7.9,SNR=4.7						
ASAR	Alice Springs	34.44	168	P	P	07 59 09.7	-0.9
	0.2nm,0.4s,baz=346,slow=7.4,SNR=7.6						
SONM	Songino Array	41.20	339	P	P	08 00 07.5	-0.1
	0.7nm,0.5s,baz=164,slow=13,SNR=6.8						

IDC 23 08:39:22.4±55.0**, 19°.93S**×**174°.00W, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/37**, mbtmp3.7**/3**, Error ellipse: s-maj=1037.0km s-min=204.5km az=84.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	41.41	244	P	P	08 47 08.8	-1.9
	1.9nm,0.8s,baz=90,slow=13,SNR=4.1						
ASAR	Alice Springs	48.30	256	P	P	08 48 07.6	+1.7
	0.8nm,0.5s,baz=88,slow=8.0,SNR=22						
WRA	Warramunga Arr	48.40	261	P	P	08 48 05.4	-1.2
	0.2nm,0.5s,baz=91,slow=7.0,SNR=1.5						

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*IDC **23** 08:42:39.2±10.0, 21°.58S×176°.63W, h118^{km}±95^{km}, mb3.7/10, mb1 3.9/11, mb1mx3.7/33, mbtmp4.0/11, ML4.3/1, Error ellipse: s-maj=32.6km s-min=24.5km az=1.0*

*NEIC **23** 08:42:41.2±1.6, 21°.65S×176°.56W, h136^{km}±15^{km}, mb4.2/19, Error ellipse: s-maj=13.2km s-min=8.1km az=138.0*

ISC 23 08:42:43.6±0.6**, 21°.9S**±0°.1×**176°.4W**±0°.1**, h150^{km}, n47, σ1^s.70**/43**, mb4.1**/26**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.63	307	*e*Pn	Pn	08 44 21.7	+2.9
NIUE	Niue	6.71	67	*e*Pn	Pn	08 44 17.6	-2.1
NIUE				*e*Sn	Sn	08 45 24.6	-10
OUZ	Omahuta	15.90	211	*e*Pn	P	08 46 22.9	+3.3
	6.0nm,1.0s						
URZ	Urewera	17.25	197	*e*P	P	08 46 34.2	-0.2
	23nm,1.2s						
URZ				*e*S	S	08 49 31.8	-15
URZ	Urewera	17.25	197	P	P	08 46 33.8	-0.6
	0.9nm,0.3s,baz=9.5,slow=4.1,SNR=6.6						
URZ				S	S	08 49 31.8	-15
	0.2nm,0.3s,baz=230,slow=16,SNR=2.3						
THZ	Tophouse	21.76	202	*e*P	P	08 47 25.3	+2.0
	8.1nm,1.0s						
KHZ	Kahutara	22.14	200	*e*P	P	08 47 26.2	-0.8
	16nm,1.1s						
OXZ	Oxford	23.44	202	*e*P	P	08 47 39.4	+0.2
	12nm,1.2s						
RPZ	Rata Peaks	24.13	203	*e*P	P	08 47 46.7	+1.2
	12nm,1.1s						
FOZ	Fox Glacier	24.43	205	*e*P	P	08 47 48.9	+0.7
	17nm,1.2s						
CTAO	Charters Tower	34.83	266	*e*P	P	08 49 20.6	+0.3
	4.0nm,0.6s						
STKA	Stephens Creek	38.53	246	*e*P	P	08 49 50.5	-1.2
	0.4nm,1.0s						
STKA	Stephens Creek	38.53	246	P	P	08 49 50.3	-1.3
	1.0nm,0.3s,baz=72,slow=6.4,SNR=6.2						
COEN	Coen	39.14	275	*e*P	P	08 49 56.5	-0.3
	3.0nm,0.8s						
BBOO	Buckleboo	43.27	245	*e*P	P	08 50 28.4	-1.9
	3.0nm,1.0s						
ASAR	Alice Springs	45.64	258	P	P	08 50 47.9	-1.5
	6.7nm,0.8s,baz=90,slow=8.2,SNR=48						
WB2	Warramunga Arr	45.86	263	*e*P	P	08 50 49.4	-1.7
WR1	Warramunga Arr	45.87	263	*e*P	P	08 50 48.9	-2.2
	5.2nm,0.9s						
WRA	Warramunga Arr	45.87	263	P	P	08 50 48.9	-2.2
	0.9nm,0.3s,baz=95,slow=8.3,SNR=19						
FITZ	Fitzroy Crossi	54.30	263	*e*P	P	08 51 53.6	-1.1

	6.1nm,1.1s						
MBWA	Marble Bar	58.98	258	*e*P	P	08 52 25.9	-1.9
	7.4nm,1.0s						
MORW	Morawa	60.66	248	*e*P	P	08 52 39.2	0.0
	8.4nm,1.0s						
QSPA	South Pole Qui	68.20	180	*e*P	P	08 53 28.8	+1.2
	3.1nm,0.8s						
MJAR	Matsushiro Arr	72.18	323	P	P	08 53 47.8	-4.3
	0.8nm,0.5s,baz=176,slow=5.4,SNR=4.8						
MAJO	Matsushiro	72.18	323	*e*P	P	08 53 47.8	-4.3
NVAR	Mina Array Bea	81.03	42	P	P	08 54 41.6	-0.4
	0.4nm,0.6s,baz=228,slow=9.4,SNR=3.3						
BMN	Battle Mountai	82.90	41	*e*P	P	08 54 48.1	-3.5
	3.5nm,0.7s						
GAMB	Gambell	85.45	2	*e*P	P	08 55 03.0	-0.7
	1.4nm,0.6s						
SUA	Susitna One	85.59	12	*e*P	P	08 55 04.2	-0.4
	2.0nm,0.8s						
TX31	Lajitas Ar. Si	86.58	57	*e*P	P	08 55 10.4	+0.2
TXAR	Lajitas Array	86.58	57	P	P	08 55 10.3	0.0
	1.4nm,0.9s,baz=213,slow=7.1,SNR=12						
ANMO	Albuquerque	87.14	51	*e*P	P	08 55 12.5	-0.5
	0.1nm,0.5s						
ANMO	Albuquerque	87.14	51	P	P	08 55 12.4	-0.5
	0.6nm,0.7s,baz=256,slow=8.3,SNR=4.8						
PLCA	Paso Flores	87.27	133	*e*P	P	08 55 14.5	+1.0
	3.1nm,1.1s						
PLCA	Paso Flores	87.27	133	P	P	08 55 14.0	+0.5
	2.3nm,1.1s,baz=281,slow=4.8,SNR=3.7						
PDAR	Pinedale Array	88.97	43	P	P	08 55 20.2	-1.3
	0.2nm,0.6s,baz=226,slow=6.1,SNR=2.2						
ILAR	Eielson Array	89.34	12	P	P	08 55 20.2	-2.2
	0.5nm,0.8s,baz=228,slow=5.8,SNR=5.3						
ARA0	ARCESS Array S	130.53	350	*e*PKPdf	PKPdf	09 01 34.6	-1.1
ARCES	ARCESS Array B	130.53	350	PKP	PKPdf	09 01 34.6	-1.1
	5.6nm,1.0s,baz=350,slow=2.7,SNR=1.7						
AKASG	Malin Array Be	144.92	331	PKP	PKPab	09 01 59.3	-2.9
	0.3nm,0.3s,baz=40,slow=4.0,SNR=4.4						
BR101	Keskin Array S	148.84	312	*e*PKPbc	PKPdf	09 02 12.1	+2.3
BRTR	Keskin Array B	148.84	312	PKPbc	PKPdf	09 02 12.1	+2.3
	0.5nm,0.6s,baz=96,slow=1.4,SNR=2.4						
BUR08	Bucovina Ar. S	148.96	331	*e*PKPbc	PKPbc	09 02 14.3	+0.5
BUR04	Bucovina Ar. S	148.97	331	*e*PKPbc	PKPdf	09 02 14.0	+4.4
CLL	Collm	149.72	348	*e*PKPbc	PKPdf	09 02 14.0	+3.4
TORD	Torodi Ar. Bea	171.13	168	PKPab	PKPab	09 03 54.8	0.0
	0.7nm,0.9s,baz=226,slow=3.4,SNR=2.9						
TOA1	Torodi Ar. Sit	171.14	168	*e*PKPab	PKPab	09 03 54.8	0.0

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*NEIC **23** 08:50:14.4±0.0, 17°.30N×100°.83W, h16^{km}, MD4.0(MEX), After MEX.*

MEX 23 08:50:14.5±0.5**, 17°.30N×100°.83W, h16^{km}**±4^{km}**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.59	115	*i* P	Pg	08 50 24.1	-2.1
CAIG				*i* S	Sg	08 50 31.2	-2.9
CAIG	El Cayaco	0.59	115	*i* P	Pg	08 50 24.1	-2.1
CAIG				*i* S	Sg	08 50 31.2	-2.9
ZIIG	Zihuatanejo	0.68	296	*e*P	Pg	08 50 25.3	-2.5
ZIIG				*i* S	Sg	08 50 33.7	-3.1
ZIIG	Zihuatanejo	0.68	296	*e*P	Pg	08 50 25.3	-2.5
ZIIG				*i* S	Sg	08 50 33.7	-3.1
ACP2	Acapulco	0.99	115	*i* P	Pb	08 50 30.4	-3.0
ACP2				*e*S	Sb	08 50 41.9	-4.4
ARIG	Puente Sto Nin	1.07	25	*e*P	Pb	08 50 30.8	-4.0
ARIG				*e*S	Sb	08 50 43.6	-5.0
ARIG	Puente Sto Nin	1.07	25	*e*P	Pb	08 50 30.8	-4.0
ARIG				*e*S	Sb	08 50 43.6	-5.0
MEIG	Mezcala	1.31	62	*e*P	Pn	08 50 34.7	-3.5
MEIG				*e*S	Sb	08 50 49.9	-5.4
MEIG	Mezcala	1.31	62	*e*P	Pn	08 50 34.7	-3.5
MEIG				*e*S	Sb	08 50 49.9	-5.4
PLIG	Platanillo	1.66	49	*e*P	Pn	08 50 39.6	-3.5
PLIG				*e*S	Sn	08 50 59.1	-5.1
PLIG	Platanillo	1.66	49	*e*P	Pn	08 50 39.6	-3.5
PLIG				*e*S	Sn	08 50 59.1	-5.1
PNIG	Pinotepa	2.74	109	*e*P	Pn	08 50 54.4	-3.5
PNIG				*e*S	Sn	08 51 25.8	-4.9
PNIG	Pinotepa	2.74	109	*e*P	Pn	08 50 54.4	-3.5
PNIG				*e*S	Sn	08 51 25.8	-4.9

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*KRNET **23** 08:50:23.0±0.1, 41°.17N×69°.42E, mb2.5*

*SOME **23** 08:50:24.0, 40°.82N×69°.97E, h0^{km}*

*NNC **23** 08:50:27.7±2.0, 41°.00N×69°.88E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=16.0km s-min=11.5km az=53.0*

ISC 23 08:50:25.9±2.4**, 40°.98N**±0°.06×**69°.4E**±0°.1**, h11^{km}**±13^{km}**, n17, σ1^{s}88**/26**, 8C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.26	21	*e*P	Pg	08 50 50.3	+0.3
	47nm,0.4s						
IUG				*e*S	Sg	08 51 08.8	+2.4
	74nm,0.4s						
BTK	Batken	1.41	130	⇓*i*P	Pg	08 50 52.3	-0.6
	baz=36						
BTK				⇓*i*S	Sg	08 51 13.4	+2.3
	baz=36						
ARK	Arkit	2.08	66	⇑*e*P	Pn	08 51 00.2	-0.7
	baz=72						
ARK				⇑*i*S	Sn	08 51 28.2	+1.3
	baz=72						
KK31	Karatay Array	2.27	21	⇑Pn	Pb	08 51 05.1	-1.9
	1.8nm,0.3s,baz=198,slow=15,SNR=31						
KK31				⇓Lg	Lg	08 51 35.8	
	5.1nm,0.3s,baz=198,slow=30,SNR=18						
ARSB	Arslanbob	2.71	81	⇓*e*P	Pn	08 51 10.1	+0.5
	baz=86						
ARSB				⇓*i*S	Sn	08 51 44.2	+1.8
	baz=86						
MNAS	Manas	2.76	56	⇑Pn	Pn	08 51 11.1	+1.0
	1.7nm,0.5s						
MNAS				⇓Lg	Lg	08 51 45.6	
	3.0nm,0.4s						
MNAS	Manas	2.76	56	Pg	Pn	08 51 12.1	+1.9
	1.0nm,0.3s						
MNAS				Lg	Lg	08 51 46.5	
	2.9nm,0.3s						
MNAS	Manas	2.76	56	⇓*i*P	Pn	08 51 09.7	-0.5
	baz=59						
MNAS				⇓*i*S	Sn	08 51 43.7	+0.1
	baz=59						
SFK	Sufi-Kurgan	3.26	106	⇑Pn	Pn	08 51 16.8	-0.3
	0.8nm,0.3s						
SFK				⇑Lg	Lg	08 51 58.5	
	1.4nm,0.4s						
SFK	Sufi-Kurgan	3.26	106	Pg	Pn	08 51 19.8	+2.6
	1.2nm,0.1s						
SFK				Lg	Lg	08 51 59.5	
	2.4nm,0.3s						
MRKS	Merke	3.35	57	Pg	Pb	08 51 22.6	-2.7
	2.5nm,0.3s						
MRKS				Lg	Lg	08 52 04.7	
	5.6nm,0.4s						
MRKS	Merke	3.35	57	*e*P	Pb	08 51 22.6	-2.7
	1.0nm,0.3s						
MRKS				*e*S	Sb	08 52 04.7	-1.3
	5.6nm,0.4s						
AML	Almayashu	3.41	69	⇓*i*P	Pn	08 51 21.4	+2.0
	baz=72						
AML				⇓*i*S	Sn	08 52 01.2	+1.2
	baz=72						
ARLS	Aral	3.79	75	⇓*i*P	Pn	08 51 25.3	+0.9
	baz=78						
ARLS				⇓*i*S	Sn	08 52 10.0	+0.9
	baz=78						
UCH	Uchtor	4.02	70	⇓*i*P	Pn	08 51 29.9	+2.1
	baz=73						
UCH				⇓*i*S	Sn	08 52 15.9	+0.8
	baz=73						
AAK	Ala-Archa	4.14	65	⇑Pg	Pb	08 51 35.3	-3.5
	3.1nm,1.1s						
AAK				Lg	Lg	08 52 29.8	
	1.0nm,0.5s						
TKM2	Tokmak 2	5.00	65	⇓Pg	Pb	08 51 51.3	-2.2
	0.8nm,0.4s						
TKM2				⇑Lg	Lg	08 52 54.8	
	1.1nm,0.5s						

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*IDC **23** 08:59:06.6±0.3, 10°.65S×165°.38E, h0^{km}, mb5.3/34, mb1 5.4/36, mb1mx5.3/41, mbtmp5.3/36, ML6.0/2, MS5.6/42, Ms1 5.6/42, ms1mx5.5/51, Error ellipse: s-maj=12.7km s-min=10.8km az=94.0*

*BJI **23** 08:59:06.9, 10°.32S×165°.40E, h6^{km}, mB5.9/72, mb5.6/84, Ms5.9/93, Ms7 5.7/85*

*ISCJB **23** 08:59:07.4±1.0, 10°.64S±0°.02×165°.24E±0°.02, h11^{km}±5^{km}, mb5.5/340, MS5.8/667, Error ellipse: s-maj=3.0km s-min=2.7km az=135.1*

*NEIC **23** 08:59:08.0±0.0, 10°.64S×165°.18E, h19^{km}, Moment Tensor Solution. s44 Moment tensor: Scale 10^{17}Nm; M$_{rr}$7.42; M$_{\theta\theta}$1.64; M$_{\phi\phi}$-9.06; M$_{r\theta}$-1.91; M$_{\theta\phi}$-1.05; M$_{\phi r}$-2.71; Best double couple: M$_0$9.10000×10^{17} NP1:φ$_s$198.00000°, δ56.00000°, λ106.00000°. NP2:φ$_s$351.00000°, δ37.00000°, λ67.00000°. Principal axes: T 8.3100, Plg73.0000°, Azm152.0000°; N 1.3400, Plg13.0000°, Azm9.0000°; P -9.6600, Plg9.0000°, Azm276.0000°;*

*NEIC **23** 08:59:08.7±0.1, 10°.66S×165°.30E, h12^{km}, mb5.6/268, MS5.8/298, MW5.9, MW6.1, MW5.9 Error ellipse: s-maj=3.0km s-min=2.5km az=126.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.86; M$_{\theta\theta}$1.55; M$_{\phi\phi}$-7.41; M$_{r\theta}$-2.74; M$_{\theta\phi}$-1.91; M$_{\phi r}$-1.15; Best double couple: M$_0$7.60000×10^{17} NP1:φ$_s$214.00000°, δ57.00000°, λ120.00000°. NP2:φ$_s$348.00000°, δ43.00000°, λ53.00000°. Principal axes: T 7.2000, Plg64.0000°, Azm178.0000°; N 0.8200, Plg24.0000°, Azm17.0000°; P -8.0100, Plg7.0000°, Azm283.0000°;*

*MOS **23** 08:59:09.6±0.9, 10°.54S×165°.24E, h23^{km}, mb5.7/97, MS5.7/80 Error ellipse: s-maj=6.9km s-min=5.6km az=104.6*

*GCMT **23** 08:59:12.7±0.1, 10°.58S±0°.01×165°.19E, h24^{km}, MW5.9/134, Moment Tensor Solution. s125,c268; s134,c436; Duration: 2^{s}1 Moment tensor: Scale 10^{18} Nm; M$_{rr}$0.68±.01; M$_{\theta\theta}$0.23±.01; M$_{\phi\phi}$-0.91±.01; M$_{r\theta}$-0.18±.01; M$_{\theta\phi}$-0.11±.01; M$_{\phi r}$-0.11±.01; Best double couple: M$_0$0.83700×10^{18} NP1:φ$_s$202.00000°, δ52.00000°, λ113.00000°. NP2:φ$_s$347.00000°, δ44.00000°, λ63.00000°. Principal axes: T 0.7430, Plg71.0000°, Azm173.0000°; N 0.1890, Plg18.0000°, Azm7.0000°; P -0.9320, Plg4.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 08:59:32.4±0.0, 9°.87S×165°.15E, h31^{km}, Moment Tensor Solution. s14 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.96; M$_{\theta\theta}$0.16; M$_{\phi\phi}$-1.12; M$_{r\theta}$-0.93; M$_{\theta\phi}$-0.09; M$_{\phi r}$-0.49; Best double couple: M$_0$1.50000×10^{18} NP1:φ$_s$216.00000°, δ68.00000°, λ119.00000°. NP2:φ$_s$341.00000°, δ36.00000°, λ40.00000°. Principal axes: T 1.6300, Plg57.0000°, Azm166.0000°; N -0.3200, Plg27.0000°, Azm24.0000°; P -1.3000, Plg18.0000°, Azm285.0000°;*

ISC 23 08:59:09.3±0.4**, 10°.63S**±0°.03×**165°.32E**±0°.03**, h16^{km}**±2^{km}**, h16^{km}:pP-P, n1501, σ1^{s}30**/1257**, mb5.6**/347**, MS5.8**/674**, 58C-7D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.43	282	*i* P	Pn	09 00 31.0	+1.4
HNR				*i* S	Sn	09 01 31.0	-0.8
HNR	Honiara	5.43	282	*e*Pn	Pn	09 00 31.9	+2.3
HNR				Sn	Sn	09 01 33.1	+1.3
HNR	Honiara	5.43	282	Pn	Pn	09 00 31.5	+1.9
	1μm,0.3s,baz=144,slow=3.9,SNR=130						
HNR				Sn	Sn	09 01 33.1	+1.3
	106nm,0.3s,baz=270,slow=20,SNR=2.0						
HNR				LR	LR	09 02 25.0	
	comp=Z,51μm,19.7s,baz=83,slow=36						
MARNC	Mare, Loyalty	11.10	167	*e*Pn	Pn	09 01 48.4	+1.1
DZM	Mont Dzumac	11.42	175	*e*Pn	Pn	09 01 52.8	+0.9
	343nm,0.5s						
DZM				*e*Sn	Sn	09 03 58.0	-1.4
	148nm,0.7s						
DZM				*e*LR	LR	09 04 36.7	
	comp=Z,55μm,24.9s						
DZM	Mont Dzumac	11.42	175	*e*Pn	Pn	09 01 52.9	+0.9
DZM				*e*Sn	Sn	09 04 00.5	+1.1
DZM	Mont Dzumac	11.42	175	Pn	Pn	09 01 52.9	+0.9
	41nm,0.3s,baz=325,slow=13,SNR=199						
DZM				Sn	Sn	09 03 56.3	-3.1
	2.4nm,0.3s,baz=319,slow=19,SNR=2.6						
DZM				LR	LR	09 05 52.0	
	comp=Z,39μm,19.2s,baz=42,slow=36						
PINNC	Pines Island,	12.09	171	*e*Pn	Pn	09 02 03.1	+2.2
PINNC				*e*Sn	Sn	09 04 17.0	+1.6
FUNA	Funafuti	13.84	82	*e*Pn	Pn	09 02 27.4	+2.5
TARA	Tarawa	14.11	33	*e*Pn	Pn	09 02 31.2	+2.6
MSVF	Nonsavu	14.21	121	*e*Pn	Pn	09 02 33.8	+3.7
MSVF				*e*P	P	09 02 40.3	+2.8
MSVF	Nonsavu	14.21	121	*e*P	Pn	09 02 33.8	+3.7
RABL	Rabaul	14.53	295	*e*Pn	Pn	09 02 35.1	+0.7
NFK	Norfolk Island	18.48	173	P	Pn	09 03 29.5	+4.8
	baz=19,SNR=3.0						
PATS	Pohnpei	18.71	338	P	Pn	09 03 30.0	+2.4
	baz=19,SNR=3.7						
PATS	Pohnpei	18.71	338	*e*P	Pn	09 03 28.9	+1.2
	401nm,1.2s						
KWAJ	Kwajalein Atol	19.44	7	*e*P	Pn	09 03 38.0	+1.5
	2μm,1.8s						
KWAJ	Kwajalein Atol	19.44	7	*e*P	Pn	09 03 38.0	+1.5
KWAJ				pmax	pmax		
	comp=Z,2μm,1.8s						
MANU	Manus Island	19.77	294	*e*P	Pn	09 03 40.8	+0.4
	comp=Z,4μm,1.7s						
EIDS	Eidsvold	19.93	221	P	Pn	09 03 42.8	+0.6
	baz=20,SNR=50						
EIDS	Eidsvold	19.93	221	*e*P	Pn	09 03 42.6	+0.4
	comp=Z,220nm,0.8s						
CTA	Charters Tower	20.63	241	P	Pn	09 03 49.7	-0.9
	comp=Z,105nm,1.1s,baz=69,slow=12,SNR=57						
CTA				LR	LR	09 11 07.1	
	comp=Z,18μm,18.3s,baz=57,slow=35						
CTAO	Charters Tower	20.63	241	*e*P	P	09 03 48.6	+0.3
	comp=Z,2μm,1.6s						
CTAO				LR	LR		
	comp=Z,17μm,19.0s						
CTAO	Charters Tower	20.63	241	*e*P	P	09 03 48.6	+0.3
CTAO				pmax	pmax		
	comp=Z,2μm,1.6s						
CTAO				MLR	MLR		
	comp=Z,17μm,19.0s						
LHI	Lord Howe Isla	21.58	195	P	P	09 04 00.5	+2.2
	baz=22,SNR=5.4						
LHI	Lord Howe Isla	21.58	195	*e*P	P	09 04 00.0	+1.7
	comp=Z,506nm,1.0s						
LHI				LR	LR		
	comp=Z,19μm,19.0s						
MTSU	Mount Surprise	21.66	247	P	P	09 04 00.1	+0.8
	baz=22,SNR=44						
COEN	Coen	21.89	259	P	P	09 04 02.2	+0.4
	baz=22,SNR=39						
COEN	Coen	21.89	259	*e*P	P	09 04 02.7	+0.9
	comp=Z,126nm,1.0s						
COEN				LR	LR		
	comp=Z,16μm,19.0s						
RMQ	Roma	22.21	223	P	P	09 04 06.9	+1.7
	baz=22,SNR=74						
ARMA	Armidale	23.45	211	P	P	09 04 19.4	+1.3
	baz=24,SNR=13						
ARMA	Armidale	23.45	211	*e*P	P	09 04 19.0	+0.8
	comp=Z,265nm,1.4s						
ARMA				LR	LR		
	comp=Z,15μm,20.0s						
KNTN	Kanton	24.08	73	*e*P	P	09 04 24.1	-0.2
	comp=Z,807nm,1.8s						
KNTN				LR	LR		
	comp=Z,14μm,20.0s						
RAO	Raoul Island	24.26	142	LR	LR	09 12 20.9	
	comp=Z,26μm,18.6s,baz=324,slow=33						
OUZ	Omahuta	25.61	164	*e*P	P	09 04 39.4	+1.4
	comp=Z,1μm,2.0s						
OUZ				LR	LR		
	comp=Z,22μm,18.0s						
JAY	Jayapura	25.73	287	P	P	09 04 38.5	-0.9
JAY				pmax	pmax		
	comp=Z,125nm,1.1s						
JAY	Jayapura	25.73	287	P	P	09 04 38.1	-1.2
	comp=Z,1μm,1.3s,comp=Z,21μm						
JAY	Jayapura	25.73	287	P	P	09 04 38.5	-0.9
	comp=Z,126nm,1.1s,baz=100,slow=4.7,SNR=9.6						
GENI	Genyem	26.21	286	P	P	09 04 42.0	-1.7
QIS	Mount Isa	26.62	245	P	P	09 04 48.5	+1.1
	baz=27,SNR=3.9						
MBAZ	Motutapu North	27.42	163	P	P	09 04 58.4	+4.1
KUZ	Kuaotunu	27.64	162	P	P	09 04 57.4	+1.1
CAN	Canberra	28.72	209	PFAKE		09 05 20.0	+14
CAN				LR	LR		
	comp=Z,8μm,19.0s						
TGRZ	Tauranga	28.72	162	P	P	09 05 05.5	-0.3
KMRZ	Kaimai	28.73	162	P	P	09 05 07.9	+1.9
H11S2	WAKE ISLAND Hy	28.97	3	T	T	09 35 37.0	
	baz=183,slow=76,SNR=1547						
H11S3	WAKE ISLAND Hy	28.98	3	T	T	09 35 50.8	
	baz=183,slow=76,SNR=1621						
H11S1	WAKE ISLAND Hy	28.99	3	T	T	09 35 43.0	
	baz=183,slow=76,SNR=1401						
HIZ	Hauiti	29.05	164	*e*P	P	09 05 11.0	+2.3
	comp=Z,345nm,1.3s						
HIZ				LR	LR		
	comp=Z,28μm,19.0s						
OMRZ	Omania	29.10	162	P	P	09 05 11.2	+1.9
HLRZ	Highlands Stat	29.23	162	P	P	09 05 14.3	+3.8
HAZ	Te Kaha	29.24	160	P	P	09 05 11.7	+1.2
GRRZ	Galatos Road	29.24	162	P	P	09 05 14.3	+3.7
HSRZ	Hossack Road	29.25	162	P	P	09 05 14.1	+3.5
MXZ	Matakaoa Point	29.25	159	PFAKE		09 05 20.0	+9.4
MXZ				LR	LR		
	comp=Z,28μm,21.0s						
MXZ	Matakaoa Point	29.25	159	P	P	09 05 10.2	-0.3
TARZ	Mount Tarawera	29.26	162	P	P	09 05 15.2	+4.4
HRRZ	Handcock Road	29.33	162	P	P	09 05 14.0	+2.6
RRRZ	Republican Roa	29.36	162	P	P	09 05 14.8	+3.2
RUGZ	Raukumara Rang	29.39	160	P	P	09 05 12.3	+0.4
WPRZ	Whakapapatarin	29.42	163	P	P	09 05 16.5	+4.4
PKGZ	Pakihiroa	29.46	159	P	P	09 05 12.5	0.0
PRRZ	Plateau Road	29.46	162	P	P	09 05 14.8	+2.3
WATZ	Wairara	29.47	163	P	P	09 05 14.7	+2.1
URZ	Urewera	29.47	161	*e*P	P	09 05 13.1	+0.6
	comp=Z,422nm,1.4s						
URZ				S	S	09 10 06.3	+0.1
URZ	Urewera	29.47	161	P	P	09 05 12.4	-0.2
	comp=Z,73nm,0.6s,baz=281,slow=2.6,SNR=37						
URZ				S	S	09 10 06.3	+0.1
	comp=Z,16nm,0.8s,baz=45,slow=24,SNR=6.0						
URZ				LR	LR	09 15 15.1	
	comp=Z,20μm,21.2s,baz=338,slow=33						
URZ	Urewera	29.47	161	P	P	09 05 14.1	+1.6
URZ				P	P	09 05 14.1	+1.6
ALRZ	Allen Road	29.51	162	P	P	09 05 14.9	+2.0
WMGZ	Waiomatatini S	29.52	159	P	P	09 05 13.1	+0.2
MUGZ	Murupara	29.56	162	P	P	09 05 15.5	+2.1
MWZ	Matawai	29.67	160	P	P	09 05 15.5	+1.1
TWGZ	Tauwhareparae	29.68	160	P	P	09 05 15.6	+1.1
PUZ	Puketiti	29.68	159	P	P	09 05 14.6	+0.1
KATZ	Kakaramea	29.70	164	P	P	09 05 17.0	+2.2
RITZ	Rihia Road	29.75	163	P	P	09 05 18.3	+3.3
RTZ	Ruatahuna	29.75	161	P	P	09 05 16.6	+1.5
WAKE	Wake Island	29.76	3	PFAKE		09 05 30.0	+15
WAKE				LR	LR		
	comp=Z,16μm,18.0s						
MRHZ	Matea Rd	29.78	162	P	P	09 05 18.2	+2.8
KRVZ	Karewarewa	29.80	164	P	P	09 05 18.2	+2.6
WTVZ	West Tongariro	29.81	164	P	P	09 05 17.9	+2.3
COVZ	Chateau Observ	29.87	164	P	P	09 05 18.0	+1.8
TKGZ	Te Karaka	29.88	160	P	P	09 05 16.5	+0.4
PKVZ	Pokaka	29.90	164	P	P	09 05 19.1	+2.6
FWVZ	Far West T-bar	29.93	164	P	P	09 05 18.7	+1.9
MTHZ	Maungataniwha	29.93	162	P	P	09 05 18.7	+2.0
WHVZ	Whangaehu Hut	29.96	164	P	P	09 05 20.2	+3.1
TRVZ	Turoa	29.97	164	P	P	09 05 18.8	+1.6
SNGZ	Shannon Statio	30.02	161	P	P	09 05 17.7	+0.3
MTVZ	Mangateitei	30.03	164	P	P	09 05 21.4	+3.9
CNGZ	Carnagh Statio	30.04	160	P	P	09 05 18.2	+0.7
RAHZ	Arahi	30.06	161	P	P	09 05 19.5	+1.6
MILA	Mila	30.08	206	P	P	09 05 19.0	+1.0
	baz=30,SNR=4.0						
RIGZ	Rimuhau	30.09	160	P	P	09 05 19.3	+1.2
BKZ	Black Stump Fm	30.11	163	*e*P	P	09 05 18.4	+0.2
	comp=Z,1μm,1.9s						
BKZ				LR	LR		
	comp=Z,20μm,21.0s						
BKZ	Black Stump Fm	30.11	163	P	P	09 05 19.5	+1.2
MOVZ	Moawhango	30.12	164	P	P	09 05 19.7	+1.2
NMHZ	Naumai	30.14	162	P	P	09 05 20.1	+1.6
H11N1	WAKE ISLAND Hy	30.20	3	T	T	09 37 05.9	
	baz=182,slow=76,SNR=1127						
H11N3	WAKE ISLAND Hy	30.20	3	T	T	09 37 06.3	
	baz=182,slow=76,SNR=1021						
H11N2	WAKE ISLAND Hy	30.21	3	T	T	09 37 07.3	
	baz=182,slow=76,SNR=1444						
WHHZ	Waihua	30.25	161	P	P	09 05 19.2	-0.3
BHHZ	Black Hill Sta	30.29	163	P	P	09 05 20.7	+0.8
PRGZ	Paritu Road	30.32	160	P	P	09 05 22.7	+2.6
KWHZ	Kaweka Forest	30.33	163	P	P	09 05 21.9	+1.7
KWHZ				P	P	09 05 21.5	+1.3
KNZ	Kokohu	30.34	161	P	P	09 05 21.8	+1.5
ARHZ	Aropaoanui	30.35	162	P	P	09 05 21.8	+1.5
STKA	Stephens Creek	30.46	222	P	P	09 05 22.3	+0.9
	baz=30,SNR=75						
STKA	Stephens Creek	30.46	222	*e*P	P	09 05 22.1	+0.7
	comp=Z,37nm,1.4s						
STKA	Stephens Creek	30.46	222	P	P	09 05 22.3	+0.9
	comp=Z,44nm,0.9s,baz=32,slow=7.2,SNR=64						
STKA				LR	LR	09 16 40.4	
	comp=Z,16μm,19.4s,baz=43,slow=35						
MHGZ	Mahia Peninsul	30.54	161	P	P	09 05 22.8	+0.8
KAHZ	Kahuranaki	30.80	162	P	P	09 05 25.1	+0.7
WPHZ	Waipukurau	30.93	163	P	P	09 05 25.4	0.0
PXZ	Pawanui	31.02	163	P	P	09 05 26.7	+0.5
WR0	Warramunga Arr	31.06	249	PFAKE		09 05 40.0	+13
WR0				LR	LR		
	comp=Z,26μm,18.0s						
WR9	Warramunga Arr	31.08	249	PFAKE		09 05 40.0	+13
WR9				LR	LR		
	comp=Z,25μm,18.0s						
WR8	Warramunga Arr	31.09	249	PFAKE		09 05 40.0	+13
WR8				LR	LR		
	comp=Z,26μm,18.0s						
WR7	Warramunga Arr	31.11	249	PFAKE		09 05 40.0	+13
WR7				LR	LR		
	comp=Z,26μm,18.0s						
WR6	Warramunga Arr	31.13	249	PFAKE		09 05 40.0	+12
WR6				LR	LR		
	comp=Z,23μm,18.0s						
WB0	Warramunga Arr	31.15	249	PFAKE		09 05 40.0	+12
WB0				LR	LR		
	comp=Z,28μm,18.0s						
WR5	Warramunga Arr	31.16	249	PFAKE		09 05 40.0	+12
WR5				LR	LR		
	comp=Z,26μm,18.0s						
WB9	Warramunga Arr	31.16	249	PFAKE		09 05 40.0	+12
WB9				LR	LR		
	comp=Z,52μm,18.0s						
PRHZ	Porangahau	31.17	163	P	P	09 05 27.6	0.0
WB8	Warramunga Arr	31.17	249	PFAKE		09 05 40.0	+12
WB8				LR	LR		
	comp=Z,28μm,18.0s						
WR4	Warramunga Arr	31.18	249	PFAKE		09 05 40.0	+12
WR4				LR	LR		
	comp=Z,26μm,18.0s						
WB6	Warramunga Arr	31.19	249	PFAKE		09 05 40.0	+12
WB6				LR	LR		
	comp=Z,26μm,18.0s						
WR3	Warramunga Arr	31.20	249	PFAKE		09 05 40.0	+12
WR3				LR	LR		
	comp=Z,14μm,20.0s						
WB5	Warramunga Arr	31.20	249	PFAKE		09 05 40.0	+12
WB5				LR	LR		
	comp=Z,28μm,18.0s						
WC2	Warramunga Arr	31.21	249	PFAKE		09 05 40.0	+12
WC2				LR	LR		
	comp=Z,26μm,18.0s						
WB4	Warramunga Arr	31.21	249	PFAKE		09 05 40.0	+12
WB4				LR	LR		
	comp=Z,14μm,19.0s						
WC3	Warramunga Arr	31.21	249	*e*P	P	09 05 27.1	-1.1
	comp=Z,190nm,1.6s						
WC3				LR	LR		
	comp=Z,28μm,18.0s						
WR2	Warramunga Arr	31.22	249	PFAKE		09 05 40.0	+12
WR2				LR	LR		
	comp=Z,25μm,18.0s						
WB3	Warramunga Arr	31.22	249	PFAKE		09 05 40.0	+12
WB3				LR	LR		
	comp=Z,26μm,18.0s						
WRAB	Tennant Creek	31.23	249	*e*P	P	09 05 26.8	-1.6
	comp=Z,121nm,1.3s						

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WRAB                                LR      LR
       comp=Z,26µm,18.0s
WRAB  Tennant Creek     31.23 249ceP      P       09 05 27.3  -1.0
WRAB                                pmax    pmax
       comp=Z,27nm,0.9s
WB2   Warramunga Arr    31.23 249 eP      P       09 05 27.1  -1.2
       comp=Z,158nm,1.4s
WB2                                 LR      LR
       comp=Z,33µm,19.0s
WC1   Warramunga Arr    31.23 249  PFAKE          09 05 40.0  +12
WC1                                 LR      LR
       comp=Z,18µm,18.0s
WR1   Warramunga Arr    31.24 249 eP      P       09 05 27.3  -1.1
       comp=Z,149nm,1.3s
WR1                               ePcP    PcP     09 08 21.9  -1.1
WR1                               eScS    ScS     09 15 51.0   -12
WR1                               e               09 18 06.6
WR1                               e               09 37 10.0
WR1                                 LR      LR
       comp=Z,25µm,18.0s
WRA   Warramunga Arr    31.24 249  P      P       09 05 27.3  -1.1
       comp=Z,30nm,0.9s,baz=78,slow=9.0,SNR=32
WRA                                 PcP     PcP     09 08 21.9  -1.1
       comp=Z,8.9nm,1.0s,baz=75,slow=2.9,SNR=5.0
WRA                                 PKiKP   PKiKP   09 15 51.0  -2.1
       comp=Z,1.1nm,0.8s,baz=348,slow=0.5,SNR=6.0
WRA                                 LR      LR      09 18 06.6
       comp=Z,18µm,18.3s,baz=70,slow=36
WRA                                 P3KPbc          09 37 10.0
       comp=Z,0.6nm,0.8s,baz=258,slow=2.5,SNR=5.9
WC4   Warramunga Arr    31.24 249  PFAKE          09 05 40.0  +12
WC4                                 LR      LR
       comp=Z,24µm,18.0s
ANWZ  Angora Road       31.30 163  P      P       09 05 28.9  +0.1
BFZ   Birch Farm        31.45 164 eP      P       09 05 29.8  -0.2
       comp=Z,406nm,1.2s
BFZ                                 LR      LR
       comp=Z,29µm,20.0s
GUMO  Guam              31.48 319  LR     LR      09 18 52.6
       comp=Z,8µm,18.1s,baz=136,slow=38
CPWZ  Castlepoint       31.65 164  P      P       09 05 32.0  +0.2
SNZO  South Karori      31.65 166 eP      P       09 05 32.8  +1.1
       comp=Z,290nm,1.1s
SNZO                                LR      LR
       comp=Z,22µm,18.0s
THZ   Tophouse          31.71 169 eP      P       09 05 33.0  +0.6
       comp=Z,109nm,0.8s
THZ                                 LR      LR
       comp=Z,7µm,18.0s
KDU   Kakadu            32.23 263  P      P       09 05 35.1  -2.0
       baz=32,SNR=22
KHZ   Kahutara          32.47 169 eP      P       09 05 38.8  -0.1
       comp=Z,77nm,0.7s
KHZ                                 LR      LR
       comp=Z,10µm,18.0s
AS01  Alice Springs     32.57 242 eP      P       09 05 38.6  -1.5
LTZ   Lake Taylor       32.60 170 eP      P       09 05 39.3  -0.8
       comp=Z,158nm,0.8s
LTZ                                 LR      LR
       comp=Z,16µm,19.0s
AS31  Alice Springs     32.61 242 eP      P       09 05 39.0  -1.5
       comp=Z,11nm,0.9s
AS31                                LR      LR
       comp=Z,200nm,18.0s
ASAR  Alice Springs     32.61 242  P      P       09 05 38.7  -1.8
       comp=Z,12nm,0.7s,baz=63,slow=10,SNR=90
ASAR                                PcP     PcP     09 08 26.7   0.0
       comp=Z,3.9nm,0.7s,baz=66,slow=2.3,SNR=4.9
ASAR                                PKiKP   PKiKP   09 15 52.5  -1.6
       comp=Z,1.2nm,1.0s,baz=329,slow=0.4,SNR=4.7
ASAR                                LR      LR      09 18 22.5
       comp=Z,12µm,18.3s,baz=69,slow=35
ASAR                                P3KPbc          09 37 04.3
       comp=Z,1.2nm,0.8s,baz=241,slow=4.6,SNR=14
FOZ   Fox Glacier       33.01 174 eP      P       09 05 43.6   0.0
       comp=Z,73nm,0.9s
FOZ                                 LR      LR
       comp=Z,14µm,18.0s
OXZ   Oxford            33.09 171 eP      P       09 05 44.1  -0.2
       comp=Z,120nm,0.7s
OXZ                                 LR      LR
       comp=Z,20µm,19.0s
HTT   Hallett           33.19 223  P      P       09 05 46.4  +1.0
       baz=33,SNR=80
RPZ   Rata Peaks        33.33 172 eP      P       09 05 46.3  -0.2
       comp=Z,133nm,0.8s
RPZ                                 LR      LR
       comp=Z,14µm,18.0s
RPZ   Rata Peaks        33.33 172  P      P       09 05 46.9  +0.4
       comp=Z,63nm,0.7s,baz=271,slow=2.0,SNR=20
SARN  Sarigan           33.34 324  PFAKE          09 06 00.0  +13
SARN                                LR      LR
       comp=Z,5µm,20.0s
CRLZ  Canterbury Las    33.43 170 eP      P       09 05 47.5  +0.2
       comp=Z,778nm,1.7s
CRLZ                                LR      LR
       comp=Z,13µm,19.0s
MTN   Manton Dam        33.53 263  P      P       09 05 47.6  -1.0
       baz=33,SNR=5.3
MTN   Manton Dam        33.53 263 eP      P       09 05 47.9  -0.7
       comp=Z,131nm,1.6s
MTN                                 LR      LR
       comp=Z,8µm,18.0s
MQZ   McQueen's Vall    33.56 170 eP      P       09 05 48.8  +0.4
       comp=Z,174nm,1.1s
MQZ                                 LR      LR
       comp=Z,12µm,18.0s
ARPS  Mount Arapiles    33.57 215  P      P       09 05 49.8  +1.1
       baz=34,SNR=15
SAUI  Saumlaki          33.67 272  PFAKE          09 06 00.0  +10
SAUI                                LR      LR
       comp=Z,9µm,21.0s
FAKI  Fak Fak           33.70 281  PFAKE          09 06 00.0  +10
FAKI                                LR      LR
       comp=Z,10µm,19.0s
LBZ   Lake Benmore      33.89 174  PFAKE          09 06 00.0  +8.6
LBZ                                 LR      LR
       comp=Z,12µm,18.0s
WKZ   Wanaka            34.22 175 eP      P       09 05 54.5  +0.3
       comp=Z,88nm,1.0s
WKZ                                 LR      LR
       comp=Z,15µm,19.0s
ODZ   Otahua Downs      34.59 173 eP      P       09 05 57.6  +0.2
       comp=Z,89nm,1.4s
ODZ                                 LR      LR
       comp=Z,9µm,18.0s
MLZ   Mavora Lakes      34.69 177  PFAKE          09 06 10.0  +12
MLZ                                 LR      LR
       comp=Z,24µm,19.0s
DCZ   Deep Cove         34.74 178 eP      P       09 05 57.6  -1.0
       comp=Z,66nm,1.1s
DCZ                                 LR      LR
       comp=Z,10µm,19.0s
BBOO  Buckleboo         34.81 226  P      P       09 05 59.4   0.0
       baz=35,SNR=229
BBOO  Buckleboo         34.81 226 eP      P       09 05 59.7  +0.2
       comp=Z,122nm,0.8s
BBOO                                LR      LR
       comp=Z,17µm,18.0s
RAR   Rarotonga         35.10 112  LR     LR      09 16 59.3
       comp=Z,7µm,21.5s,baz=269,slow=31
SIJI  Sorong            35.20 284  P      P       09 06 03.2  +0.1
       comp=Z,33nm,0.6s,baz=48,slow=4.9,SNR=9.9
WHZ   Wether Hill Ro    35.21 177 eP      P       09 06 01.7  -1.0
       comp=Z,127nm,1.7s
WHZ                                 LR      LR
       comp=Z,20µm,19.0s
SWI   Sorong            35.21 284  P      P       09 05 58.6  -4.5
       comp=Z,64nm,0.6s
PYZ   Puysegur Point    35.43 178  PFAKE          09 06 20.0  +15
PYZ                                 LR      LR
       comp=Z,8µm,22.0s
BNDI  Bandanaira        35.61 277  P      P       09 06 06.0  -0.6
TAU   Tasmania Unive    35.78 203  PFAKE          09 06 20.0  +12
TAU                                 LR      LR
       comp=Z,7µm,20.0s
KNRA  Kununurra         35.92 258  P      P       09 06 08.0  -1.2
       baz=36,SNR=15
JOHN  Johnston Islan    36.85  43  PFAKE          09 06 30.0  +13
JOHN                                LR      LR
       comp=Z,11µm,20.0s
WRKA  Warakurna         37.90 243  P      P       09 06 25.0  -1.0
       baz=38,SNR=31
FITZ  Fitzroy Crossi    39.09 254 eP      P       09 06 35.4  -0.7
FITZ  Fitzroy Crossi    39.09 254  LR     LR      09 22 18.2
       comp=Z,13µm,19.2s,baz=84,slow=36
XMAS  Kiritimati        39.13  73  PFAKE          09 06 50.0  +14
XMAS                                LR      LR
       comp=Z,12µm,20.0s
TNTI  Ternate           39.41 284  PFAKE          09 06 50.0  +11
TNTI                                LR      LR
       comp=Z,4µm,20.0s
TNTI  Ternate           39.41 284  P      P       09 06 36.2  -2.6
       comp=Z,101nm,1.2s,comp=Z,2µm
FORT  Forrest           39.94 234  P      P       09 06 43.0   0.0
       baz=40,SNR=8.4
FORT  Forrest           39.94 234 eP      P       09 06 43.4  +0.3
       comp=Z,126nm,1.0s
FORT                                LR      LR
       comp=Z,14µm,19.0s
SANI  Sanana            39.97 280  P      P       09 06 42.3  -1.2
BATI  Baumata           40.95 267  LR     LR      09 24 57.4
       comp=Z,6µm,18.8s,baz=84,slow=38
SGSI  Sangihe           42.09 288  P      P       09 07 02.1  +1.1
MIDW  Midway            42.10  23  PFAKE          09 07 10.0  +9.3
MIDW                                LR      LR
       comp=Z,7µm,20.0s
KMSI  Cibinong          42.59 283  P      P       09 07 03.9  -1.1
BBSI  Bau Bau           42.61 273  P      P       09 07 06.6  +1.4
KDI   Kendari           42.84 276  P      P       09 07 03.1  -3.9
DAV   Davao City (W)    43.30 292⇑iP      P       09 07 10.0  -0.8
DAV   Davao City (W)    43.30 292  LR     LR      09 24 59.9
       comp=Z,5µm,18.6s,baz=96,slow=36
LUWI  Luwuk             43.33 280  P      P       09 07 10.5  -0.5
       comp=Z,204nm,1.0s
KCP   Kidapawan         43.72 292⇓eP      P       09 07 14.8  +0.6
SKMP  Bagumbayan, Su    44.03 291 eP      P       09 07 16.7   0.0
MCQ   Macquarie Isla    44.05 185  PFAKE          09 07 30.0  +14
MCQ                                 LR      LR
       comp=Z,8µm,20.0s
BUKP  Musuan            44.09 293 eP      P       09 07 18.1  +1.0
PPT   Papeete           44.20 104  LR     LR      09 22 31.4
       comp=Z,10µm,18.2s,baz=260,slow=32
PAE   Paea              44.20 104 eP      P       09 07 19.6  +1.6
       comp=Z,7.9nm,0.7s
PPT2  Papeete2          44.20 104 eP      P       09 07 19.8  +1.7
       comp=Z,71nm,1.0s
PPT2                              eS      S       09 13 54.5  +3.3
       comp=Z,6µm,26.5s
PPT2                              eLQ     LQ      09 17 48.9
       comp=Z,10µm,24.5s
PPT2                              eLR     LR      09 19 41.2
       comp=Z,13µm,21.5s,baz=275
PPTF  Pamatai, Papee    44.21 104  PFAKE          09 07 30.0  +12
PPTF                                LR      LR
       comp=Z,10µm,20.0s
TIAR  Tiarei            44.42 104 eP      P       09 07 21.1  +1.3
       comp=Z,19nm,0.8s
APSI  Ampana            44.45 280  P      P       09 07 20.5  +0.4
TVO   Taravao           44.52 105 eP      P       09 07 22.0  +1.4
       comp=Z,17nm,0.7s
MRSI  Marisa            44.53 282  P      P       09 07 20.0  -0.6
TBI   Tubuai            44.87 112 eP      P       09 07 24.8  +1.5
       comp=Z,250nm,1.0s
TBI                               eS      S       09 14 04.3  +3.6
       comp=Z,6µm,27.2s
TBI                               eLQ     LQ      09 18 06.7
       comp=Z,8µm,35.2s
TBI                               eLR     LR      09 20 00.1
       comp=Z,16µm,24.8s,baz=282
MBWA  Marble Bar        44.94 251 eP      P       09 07 24.1  +0.3
       comp=Z,204nm,1.9s
MBWA                                LR      LR
       comp=Z,8µm,20.0s
BNSI  Bone              45.21 274  P      P       09 07 26.1   0.0
       comp=Z,132nm,1.1s,comp=Z,2µm
MSLP  Maasin            45.22 296 eP      P       09 07 27.1  +1.0
PAGZ  Pagadian          45.60 292 eP      P       09 07 30.2  +1.0
SPSI  Sidrap Palu       45.62 275  P      P       09 07 28.0  -1.4
       comp=Z,40nm,1.1s,comp=Z,893nm
TTSI  Tana Toraja       45.76 276  P      P       09 07 32.4  +2.0
PMOR  Pomariorio Ree    45.76 101 eP      P       09 07 31.0  +0.6
       comp=Z,84nm,0.8s
VAH   Vaihoa            46.02 101 eP      P       09 07 33.5  +1.1
       comp=Z,49nm,0.8s
PCI   Palu              46.21 279  P      P       09 07 35.7  +1.7
       comp=Z,333nm,1.1s,comp=Z,5µm
MPSI  Mapaga            46.46 281  P      P       09 07 32.4  -3.6
MEEK  Meekatharra       46.76 243  P      P       09 07 38.0  -0.2
       baz=47,SNR=17
GUIM  Jordan            47.45 295 eP      P       09 07 43.6   0.0
RCP   Roxas             47.71 296⇑eP      P       09 07 49.3  +3.6
OPA   Opana             48.24  48 eP      P       09 07 50.9  +1.2
       comp=Z,158nm,0.8s
OPA   Opana             48.24  48 eP      P       09 07 50.9  +1.2
OPA                                 pmax    pmax
       comp=Z,159nm,0.8s
KLBR  Kellerberrin      48.58 237  P      P       09 07 51.9  -0.3
       baz=48,SNR=9.0
KHLU  Kahalu`u          48.60  52 eP      P       09 07 52.9  +0.3
       comp=Z,335nm,1.5s
KHLU                                LR      LR
       comp=Z,5µm,20.0s
MWH   Moku‘aweowe       48.77  52  PFAKE          09 08 10.0  +16
MWH                                 LR      LR
       comp=Z,5µm,20.0s
SMKI  Samarinda         48.87 279  P      P       09 07 57.7  +3.0
HMH   Humu‘ula Sheep    48.92  52 eP      P       09 07 56.4  +1.1
       comp=Z,925nm,1.9s
POHA  Pohakuloa         48.97  52 eP      P       09 07 54.2  -1.4
       comp=Z,418nm,1.5s
POHA                                LR      LR
       comp=Z,5µm,20.0s
OBL   Observatory Le    48.97  53  PFAKE          09 08 10.0  +15
OBL                                 LR      LR
       comp=Z,6µm,20.0s
BYL   Byron's Ledge     48.99  53  PFAKE          09 08 10.0  +14
BYL                                 LR      LR
       comp=Z,5µm,20.0s
SBLHI Steaming Bluff    48.99  53  PFAKE          09 08 10.0  +14
SBLHI                               LR      LR
       comp=Z,5µm,21.0s
HATHI Halema‘uma‘u T    48.99  53  PFAKE          09 08 10.0  +14
HATHI                               LR      LR
       comp=Z,5µm,18.0s
KBKI  Kotabaru          49.28 275  P      P       09 07 57.1  -0.8
       comp=Z,10nm,1.7s,comp=Z,514nm
NWAO  Narrogin (SRO)    49.35 236  P      P       09 07 58.9  +0.8
       baz=49,SNR=7.4
NWAO  Narrogin (SRO)    49.35 236 eP      P       09 07 57.8  -0.3
       comp=Z,106nm,1.1s
NWAO  Narrogin (SRO)    49.35 236 eP      P       09 07 57.8  -0.3
NWAO                                pmax    pmax
       comp=Z,106nm,1.1s
NWAO  Narrogin (SRO)    49.35 236  LR     LR      09 28 57.4
       comp=Z,22µm,18.1s,baz=318,slow=36
MORW  Morawa            49.46 241  P      P       09 07 59.0   0.0
       baz=49,SNR=7.5
MORW  Morawa            49.46 241 eP      P       09 07 59.2  +0.2
       comp=Z,66nm,1.2s
MORW                                LR      LR
       comp=Z,11µm,19.0s
TSM   Tawau             49.51 285  P      P       09 08 01.0  +1.4
GIRL  Giralia           50.16 249  PFAKE          09 08 20.0  +16
GIRL                                LR      LR
       comp=Z,14µm,18.0s
TGY   Tagaytay City     50.41 298  LR     LR      09 27 30.4
       comp=Z,5µm,20.7s,baz=124,slow=34
SDKM  Sandakan          50.57 286  P      P       09 08 09.7  +2.0
KDM   Kudat             51.32 288  P      P       09 08 16.0  +2.7
SMPP  San Manuel, Pa    51.57 300 eP      P       09 08 14.9  -0.2
KKM   Kota Kinabalu     51.62 286 eP      P       09 08 16.2  +0.5
       comp=Z,243nm,1.3s
KKM   Kota Kinabalu     51.62 286  P      P       09 08 16.9  +1.2
INU   Inuyama           52.99 331 eP      P       09 08 26.0  +0.6
       comp=Z,156nm,1.7s
INU                                 LR      LR
       comp=Z,3µm,22.0s
MJAR  Matsushiro Arr    53.42 333  P      P       09 08 28.3  -0.2
       comp=Z,15nm,0.8s,baz=168,slow=7.9,SNR=24
MJAR                                LR      LR      09 29 01.4
       comp=Z,3µm,21.9s,baz=140,slow=34
MAJO  Matsushiro        53.42 333 eP      P       09 08 28.2  -0.3
       comp=Z,68nm,1.3s
MAJO                                LR      LR
       comp=Z,4µm,21.0s
MAJO  Matsushiro        53.42 333 eP      P       09 08 28.2  -0.3
MAJO                                pmax    pmax
       comp=Z,68nm,1.3s
MAJO                                MLR     MLR
       comp=Z,4µm,21.0s
MAT   Matsushiro        53.42 333  P      P       09 08 28.3  -0.2
MAT                                 S       S       09 15 58.0  -2.3
PCJI  Pacitan           53.42 268  P      P       09 08 38.1  +9.2
MJB9  Matsu-Tunnel      53.42 333 eP      P       09 08 28.4  -0.2
       comp=Z,73nm,1.3s
MJB9                                LR      LR
       comp=Z,4µm,21.0s
TAOE  Nuku Hiva Isla    53.72  93 eS      S       09 16 06.3  +1.0
       comp=Z,5µm,26.2s
TAOE                              eSS     SKiKP   09 19 49.6  +3.7
       comp=Z,2µm,29.8s
TAOE                              eLQ     LQ      09 21 46.4
       comp=Z,6µm,22.7s
TAOE                              eLR     LR      09 24 02.3
       comp=Z,5µm,23.3s,baz=269
TAOE  Nuku Hiva Isla    53.72  93  PFAKE          09 08 40.0  +8.8
TAOE                                LR      LR
       comp=Z,6µm,18.0s
YOJ   Yonaguni jima     54.06 311  PFAKE          09 08 50.0  +17
YOJ                                 LR      LR
       comp=Z,6µm,19.0s
UGM   Wanagama          54.10 268 eP      P       09 08 34.2  +0.3
       comp=Z,269nm,1.2s
SBUM  Sibu              54.42 281 eP      P       09 08 36.4  +0.2
       comp=Z,63nm,1.3s
SBUM  Sibu              54.42 281  P      P       09 08 37.6  +1.4
JNU   Nakatsue          54.51 324 eP      P       09 08 37.2  +0.7
       comp=Z,93nm,1.0s
JNU   Nakatsue          54.51 324  P      P       09 08 36.9  +0.4
       comp=Z,47nm,0.8s,baz=175,slow=3.8,SNR=16
JNU                                 LR      LR      09 28 32.3
       comp=Z,3µm,21.9s,baz=129,slow=32
TWG   Pinlang           54.62 308  PFAKE          09 08 50.0  +12
TWG                                 LR      LR
       comp=Z,21µm,20.0s
YULB  Yu-li             54.76 309 eP      P       09 08 38.9  +0.4
       comp=Z,126nm,1.4s
YULB                                LR      LR
       comp=Z,6µm,20.0s
NACB  Ninganchiao       54.96 310  PFAKE          09 08 50.0  +10
NACB                                LR      LR
       comp=Z,6µm,21.0s
TPUB  Ta-pu             55.22 308 eP      P       09 08 41.8  -0.1
       comp=Z,195nm,1.3s
TPUB                                LR      LR
       comp=Z,6µm,20.0s
SSLB  Suanglung         55.23 309  PFAKE          09 08 50.0  +8.0
SSLB                                LR      LR
       comp=Z,9µm,22.0s
YHNB  Yeheng            55.40 310 eP      P       09 08 44.5  +1.2
       comp=Z,138nm,1.2s
YHNB                                LR      LR
       comp=Z,9µm,20.0s
TATO  Taipei            55.49 310  PFAKE          09 09 00.0  +16
TATO                                LR      LR
       comp=Z,8µm,20.0s
KSM   Kuching           56.03 279 eP      P       09 08 47.7  -0.1
       comp=Z,56nm,1.1s
KSM   Kuching           56.03 279  P      P       09 08 48.5  +0.6
ERM   Erimo             56.21 340  PFAKE          09 09 00.0  +11
ERM                                 LR      LR
       comp=Z,8µm,19.0s
JCJI  Jatiwangi         56.51 269  P      P       09 09 03.3  +12
YUK   Yuzh-Kuril'sk     57.21 343d iP     P       09 08 55.8  +0.2
YUK                               i               09 09 48.2
YUK                               e               09 11 01.1
YUK                               i S     S       09 16 49.2  -1.5
YUK                               i               09 18 43.3
YUK                               eSS     SS      09 20 42.4  +2.1
YUK                                 pmax    pmax
       comp=Z,104nm,1.6s
YUK                                 pmax    pmax
       comp=E,73nm,0.8s
YUK                                 pmax    pmax
       comp=N,122nm,1.3s
YUK                                 pmax    pmax
       comp=Z,173nm,2.6s
QZH   Quanzhou          57.67 309⇑iP      P       09 09 00.0  +0.7
QZH                                 S       S       09 16 55.3  -2.1
QZH                                 pmax    pmax
       comp=Z,1µm,10.9s
QZH                                 LR      LR
       comp=Z,3µm,20.8s
QZH                                 LR      LR
       comp=Z,3µm,18.9s
QZH                                 LR      LR
       comp=Z,4µm,19.4s
KUR   Kuril'sk          57.80 345c iP     P       09 09 00.0  +0.3
KUR                               i S     S       09 17 04.1  +5.8
KUR                                 pmax    pmax
       comp=Z,135nm,2.2s
KUR                                 MLR     MLR
       comp=N,5µm,15.0s
KUR                                 MLR     MLR
       comp=Z,4µm,15.0s
ASAJ  Asahikawa         58.27 341  P      P       09 09 04.2  +1.1
       comp=Z,43nm,1.1s,baz=223,slow=13,SNR=16
ASAJ                                LR      LR      09 29 52.9
       comp=Z,8µm,21.7s,baz=174,slow=32
SSE   Sheshan           59.27 316  P      P       09 09 11.1  +0.8
SSE                                 S       S       09 17 18.3  +0.2
SSE                                 pmax    pmax
       comp=Z,27nm,0.9s
SSE                                 pmax    pmax
       comp=Z,480nm,3.5s
SSE                                 LR      LR
       comp=Z,920nm,15.5s
SSE                                 LR      LR
       comp=Z,2µm,14.9s
SSE   Sheshan           59.27 316  PFAKE          09 09 20.0  +10
SSE                                 LR      LR
       comp=Z,4µm,22.0s
KSRS  Korea Array       59.30 326  P      P       09 09 11.7  +1.3
       comp=Z,8.8nm,0.9s,baz=152,slow=6.7,SNR=24
KSRS                                LR      LR      09 33 26.5
       comp=Z,2µm,19.4s,baz=133,slow=35
KS15  Wonju Array Si    59.32 326 eP      P       09 09 11.0  +0.5
       comp=Z,173nm,1.7s
KSAR  Wonju Array Be    59.32 326  P      P       09 09 11.7  +1.2
KSAR  Wonju Array Be    59.32 326  P      P       09 09 11.7  +1.2
YSS   Yuzh-Sakhalins    60.77 342 eP      P       09 09 21.5  +1.2
       comp=Z,134nm,1.3s
YSS                                 LR      LR
       comp=Z,4µm,20.0s
YSS   Yuzh-Sakhalins    60.77 342α iP     P       09 09 21.5  +1.2
YSS                               e*SP    sP      09 09 26.0  -0.1
YSS                               e               09 09 33.8
YSS                               e               09 10 10.5
YSS                               eS      S       09 17 35.6  -1.2
YSS                               ePS     PnS     09 17 46.7  -4.4
YSS                               ePPS    PPS     09 18 07.0
YSS                                 pmax    pmax
       comp=Z,60nm,1.2s
GZH   Guangzhou         60.91 304  P      P       09 09 22.0  +0.2
GZH                                 S       S       09 17 41.4  +1.9
GZH                                 LR      LR
       comp=Z,2µm,19.8s
GZH                                 LR      LR
       comp=Z,2µm,18.8s
TEY   Ternei            61.18 337⇑eP      P       09 09 23.8  +0.7
TEY                                 pmax    pmax
       comp=E,20nm,1.2s
TEY                                 pmax    pmax
       comp=Z,40nm,1.2s
TEY                                 pmax    pmax
       comp=N,20nm,0.9s
NJ2   Nanjing           61.44 315 ⇑P      P       09 09 26.3  +1.2
NJ2                                 pP      sP      09 09 31.0  +0.1
NJ2                                 S       S       09 17 48.6  +2.8
NJ2                                 sS      sS      09 17 52.0  -0.4
NJ2                                 pmax    pmax
       comp=N,69nm,1.1s
NJ2                                 pmax    pmax
       comp=N,900nm,9.8s
NJ2                                 LR      LR
       comp=N,4µm,21.2s
NJ2                                 LR      LR
       comp=N,3µm,22.1s
NJ2                                 LR      LR
       comp=N,4µm,23.0s
MSHR  Mys Shultsa       61.50 332c iP     P       09 09 26.3  +1.0
SKR   Severo-Kuril's    61.58 353 eP      P       09 09 25.3  -0.4
SKR                               e               09 09 37.9
SKR                               ePPP    PPP     09 13 09.7
SKR                               eS      S       09 17 49.2  +2.2
SKR                               eSS     SS      09 21 50.2  +1.5
SKR                                 pmax    pmax
       comp=Z,2µm,5.5s
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SKR				pmax	pmax		
	comp=Z,1µm,9.6s						
SKR				MLR	MLR		
	comp=Z,3µm,17.0s						
SKR				MLR	MLR		
	comp=Z,3µm,18.0s						
VLA	**Vladivostok**	**61.59**	**333**	c *i*P	**P**	**09 09 26.4**	**+0.5**
VLA				pmax	pmax		
	comp=Z,61nm,1.4s						
QIZ	**Qiongzhong**	**62.12**	**298**	P	**P**	**09 09 31.6**	**+1.6**
QIZ				PP	**PP**	**09 11 49.6**	**+2.7**
QIZ				S	**S**	**09 17 58.4**	**+3.4**
QIZ				SS	**SS**	**09 22 01.3**	**+3.1**
QIZ				pmax	pmax		
	comp=Z,58nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,660nm,4.9s						
QIZ				LR	LR		
	comp=Z,1µm,14.7s						
QIZ				LR	LR		
	comp=Z,2µm,19.6s						
QIZ				LR	LR		
	comp=Z,3µm,25.5s						
MYKOM	**Kota Tinggi**	**62.38**	**278**	P	**P**	**09 09 32.9**	**+1.0**
USRK	**Ussuriysk Ar.**	**62.40**	**334**	P	**P**	**09 09 33.0**	**+1.7**
USRK	**Ussuriysk Ar.**	**62.40**	**334**	P	**P**	**09 09 33.0**	**+1.7**
	comp=Z,48nm,1.2s,baz=140,slow=6.5,SNR=28						
USA0B	**Ussuriysk Arra**	**62.40**	**334**	*e*P	**P**	**09 09 32.5**	**+1.1**
	comp=Z,260nm,1.6s						
KGM	**Kluang**	**62.95**	**278**	P	**P**	**09 09 36.7**	**+1.0**
PET	**Petropavlovsk**	**63.66**	**356**	*e*P	**P**	**09 09 39.7**	**+0.2**
	comp=Z,87nm,1.3s						
PET				LR	LR		
	comp=Z,4µm,20.0s						
PET	**Petropavlovsk**	**63.66**	**356**	c *e*P	**P**	**09 09 40.0**	**+0.5**
PET				*e*S	**S**	**09 18 10.5**	**-2.5**
PET				pmax	pmax		
	comp=Z,60nm,1.2s						
PET				pmax	pmax		
	comp=Z,1µm,9.0s						
PET				pmax	pmax		
	comp=Z,1µm,10.7s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
MDJ	**Mudanjiang**	**63.79**	**332**	P	**P**	**09 09 42.0**	**+1.4**
MDJ				pP	sP	09 09 45.4	-1.0
MDJ				S	**S**	**09 18 19.1**	**+4.1**
MDJ				pmax	pmax		
	comp=Z,61nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,2µm,3.3s						
MDJ				LR	LR		
	comp=Z,2µm,18.2s						
MDJ				LR	LR		
	comp=Z,820nm,9.8s						
MDJ				LR	LR		
	comp=Z,3µm,17.2s						
MDJ	**Mudanjiang**	**63.79**	**332**	*e*P	**P**	**09 09 41.8**	**+1.1**
	comp=Z,125nm,1.4s						
WHN	**Wuhan**	**63.81**	**312**	⇓P	**P**	**09 09 41.8**	**+0.8**
WHN				S	**S**	**09 18 11.4**	**-4.3**
WHN				LR	LR		
	comp=Z,12µm,18.7s						
WHN				LR	LR		
	comp=Z,4µm,15.6s						
WHN				LR	LR		
	comp=Z,12µm,18.9s						
PEA0B	**Petropavlovsk-**	**63.82**	**355**	*e*P	**P**	**09 09 41.5**	**+0.9**
	comp=Z,93nm,1.1s						
PEA0B				LR	LR		
	comp=Z,4µm,22.0s						
PETK	**Petropavlovsk-**	**63.82**	**355**	*e*P	**P**	**09 09 41.0**	**+0.3**
PETK	**Petropavlovsk-**	**63.82**	**355**	P	**P**	**09 09 41.6**	**+1.0**
	comp=Z,32nm,0.8s,baz=156,slow=9.1,SNR=43						
PETK				LR	LR	09 31 58.1	
	comp=Z,4µm,21.8s,baz=179,slow=31						
PEA1	**Petropavlovsk-**	**63.83**	**355**	*e*P	**P**	**09 09 41.6**	**+0.9**
DL2	**Dalian**	**63.90**	**323**	⇑*i*P	**P**	**09 09 42.3**	**+0.9**
DL2				PP	**PP**	**09 12 01.8**	**-0.4**
DL2				S	**S**	**09 18 18.8**	**+2.2**
DL2				SS	**SS**	**09 22 20.5**	**-4.9**
DL2				pmax	pmax		
	comp=Z,72nm,1.2s						
DL2				pmax	pmax		
	comp=Z,1µm,4.7s						
DL2				LR	LR		
	comp=Z,2µm,18.6s						
DL2				LR	LR		
	comp=Z,2µm,18.4s						
DL2				LR	LR		
	comp=Z,3µm,18.8s						
KTGM	**Kuala Trenggan**	**63.91**	**281**	P	**P**	**09 09 43.8**	**+1.7**
KIWB	**Kanaga Island**	**64.05**	**12**	*e*P	**P**	**09 09 44.0**	**+1.8**
ADK	**Adak**	**64.17**	**12**	*e*P	**P**	**09 09 43.8**	**+0.9**
	comp=Z,46nm,0.7s						
ADK	**Adak**	**64.17**	**12**	*e*P	**P**	**09 09 43.8**	**+0.9**
ADK				pmax	pmax		
	comp=Z,46nm,0.7s						
TYV	**Tymovskoe**	**64.34**	**344**	*e*P	**P**	**09 09 45.1**	**+1.1**
TYV				*e*S	**S**	**09 18 25.8**	**+4.3**
TYV				pmax	pmax		
	comp=Z,32nm,1.2s						
TYV				pmax	pmax		
	comp=Z,1µm,4.2s						
TYV				smax	smax		
	comp=N,1µm,9.4s						
SNY	**Shenyang**	**64.76**	**327**	⇑P	**P**	**09 09 47.3**	**+0.3**
SNY				PP	**PP**	**09 12 14.4**	**+4.7**
SNY				S	**S**	**09 18 30.6**	**+3.5**
SNY				SS	**SS**	**09 22 41.6**	**+2.9**
SNY				pmax	pmax		
	comp=N,53nm,1.3s						
SNY				pmax	pmax		
	comp=N,1µm,7.1s						
SNY				LR	LR		
	comp=N,2µm,18.4s						
SNY				LR	LR		
	comp=N,4µm,17.8s						
SNY				LR	LR		
	comp=N,6µm,18.4s						
BKNI	**Bangkinang**	**64.81**	**275**	P	**P**	**09 09 48.4**	**+0.4**
FRIM	**Kepong**	**64.87**	**279**	P	**P**	**09 09 49.1**	**+0.8**
TIA	**Tai'an**	**65.03**	**318**	P	**P**	**09 09 49.1**	**+0.2**
TIA				S	**S**	**09 18 31.8**	**+1.1**
TIA				SS	**SS**	**09 22 47.0**	**+3.8**
TIA				pmax	pmax		
	comp=N,13nm,0.9s						
TIA				pmax	pmax		
	comp=N,490nm,5.0s						
TIA				LR	LR		
	comp=N,2µm,17.5s						
TIA				LR	LR		
	comp=N,1µm,18.8s						
TIA				LR	LR		
	comp=N,3µm,18.2s						
PDSI	**Padang**	**65.14**	**274**	P	P	09 09 58.4	+8.3
CN2	**Changchun**	**65.18**	**329**	*e*P	**P**	**09 09 49.8**	**+0.1**
CN2				*e*sP	pwP	09 09 56.8	-1.0
CN2				*e*PP	**PP**	**09 12 15.9**	**+2.5**
CN2				*e*S	**S**	**09 18 33.0**	**+0.8**
CN2				*e*SS	**SS**	**09 22 45.6**	**+0.4**
CN2				pmax	pmax		
	comp=N,60nm,1.0s						
CN2				pmax	pmax		
	comp=N,200nm,6.0s						
CN2				LR	LR		
	comp=N,2µm,16.0s						
CN2				LR	LR		
	comp=N,2µm,16.0s						
CN2				LR	LR		
	comp=N,3µm,17.0s						
IPM	**Ipoh**	**65.74**	**280**	*e*P	**P**	**09 09 54.0**	**0.0**
	comp=N,106nm,1.2s						
IPM	**Ipoh**	**65.74**	**280**	P	**P**	**09 09 55.0**	**+1.0**
GRNR	**Gornyy**	**66.12**	**340**	⇑*i*P	**P**	**09 09 57.4**	**+1.8**
GRNR				pmax	pmax		
	comp=Z,39nm,1.0s						
KULM	**Kulim**	**66.30**	**281**	*e*P	**P**	**09 09 57.2**	**-0.3**
	comp=Z,82nm,1.4s						
KULM	**Kulim**	**66.30**	**281**	P	**P**	**09 09 58.3**	**+0.8**
MNSI	**Mandailing Nat**	**66.34**	**276**	P	**P**	**09 09 56.9**	**-0.9**
KLR	**Kul'dur**	**66.52**	**337**	c *i*P	**P**	**09 09 58.3**	**+0.1**
SKNT	**Sakolnakorn**	**66.55**	**294**	P	**P**	**09 09 59.9**	**+0.8**
	comp=Z,44nm,1.3s,comp=Z,1µm						
CASY	**Casey**	**66.61**	**201**	*e*P	**P**	**09 09 59.1**	**+0.5**
	comp=Z,123nm,1.1s						
CASY				LR	LR		
	comp=Z,4µm,18.0s						
VNDA	**Vanda**	**66.90**	**181**	*e*P	**P**	**09 10 01.2**	**+0.9**
	comp=Z,423nm,1.9s						
VNDA	**Vanda**	**66.90**	**181**	P	**P**	**09 10 01.2**	**+0.9**
	comp=Z,49nm,1.2s,baz=1.1,slow=8.0,SNR=9.7						
VNDA				LR	LR	09 37 22.5	
	comp=Z,5µm,18.1s,baz=4.0,slow=34						
NKL	**Nikolayevsk**	**66.93**	**344**	*i* P	**P**	**09 10 01.8**	**+1.1**
NKL				pmax	pmax		
	comp=N,15nm,1.0s						
NKL				pmax	pmax		
	comp=Z,80nm,1.0s						
NKL				pmax	pmax		
	comp=Z,1µm,15.0s						
NKL				MLR	MLR		
	comp=N,2µm,17.0s						
NKL				MLR	MLR		
	comp=Z,3µm,17.0s						
NIKH	**Nikolski High**	**67.10**	**17**	*e*P	**P**	**09 10 02.7**	**+0.9**
	comp=Z,374nm,0.8s						
SBA	**Scott Base**	**67.21**	**180**	*e*P	**P**	**09 10 04.3**	**+2.1**
	comp=Z,939nm,2.2s						
SBA				LR	LR		
	comp=Z,4µm,20.0s						
ENH	**Enshi**	**67.32**	**309**	*e*P	**P**	**09 10 03.7**	**-0.1**
	comp=Z,104nm,1.0s						
SRAK	**Srakaew**	**67.36**	**290**	P	**P**	**09 10 04.6**	**+0.3**
	comp=Z,48nm,1.5s						
PSI	**Prapat**	**67.40**	**278**	*e*P	**P**	**09 10 04.0**	**-0.8**
	comp=Z,69nm,1.2s						
PSI	**Prapat**	**67.40**	**278**	*e*P	**P**	**09 10 04.0**	**-0.8**
PSI				pmax	pmax		
	comp=Z,69nm,1.2s						
GYA	**Guiyang**	**67.84**	**304**	⇑*i*P	**P**	**09 10 07.9**	**+0.6**
GYA				PP	**PP**	**09 12 41.8**	**+4.6**
GYA				S	**S**	**09 19 07.3**	**+1.9**
GYA				SKS	**SKiKP**	**09 20 04.6**	**+0.6**
GYA				SS	**SS**	**09 23 31.5**	**+4.0**
GYA				pmax	pmax		
	comp=Z,60nm,0.8s						
GYA				pmax	pmax		
	comp=Z,180nm,5.8s						
GYA				LR	LR		
	comp=Z,930nm,19.8s						
GYA				LR	LR		
	comp=Z,880nm,20.4s						
GYA				LR	LR		
	comp=Z,850nm,19.6s						
TRTT	**Trang**	**67.85**	**283**	P	**P**	**09 10 08.7**	**+1.3**
	comp=Z,23nm,1.7s,comp=Z,957nm						
BJT	**Baijiatuau**	**67.89**	**321**	*e*P	**P**	**09 10 07.5**	**+0.3**
	comp=Z,224nm,1.8s						
BJT				LR	LR		
	comp=Z,5µm,22.0s						
BJT	**Baijiatuau**	**67.89**	**321**	*e*P	**P**	**09 10 07.5**	**+0.3**
BJT				pmax	pmax		
	comp=Z,224nm,1.8s						
BJT				MLR	MLR		
	comp=Z,5µm,22.0s						
BJI	**Beijing**	**67.90**	**321**	⇑*i*P	**P**	**09 10 07.9**	**+0.7**
BJI				S	**S**	**09 19 07.5**	**+2.2**
BJI				pmax	pmax		
	comp=Z,39nm,1.3s						
BJI				LR	LR		
	comp=Z,3µm,19.4s						
CHAI	**Chaiyaphum**	**68.00**	**292**	P	**P**	**09 10 08.8**	**+0.5**
	comp=Z,9.6nm,0.9s,comp=Z,188nm						
PATY	**Pattaya**	**68.13**	**289**	P	**P**	**09 10 11.8**	**+2.7**
	comp=Z,13nm,1.0s,comp=Z,2µm						
UNV	**Unalaska Valle**	**68.54**	**17**	PFAKE		09 10 20.0	+9.1
UNV				LR	LR		
	comp=Z,5µm,21.0s						
TIY	**Taiyuan**	**68.98**	**317**	*e*P	**P**	**09 10 15.3**	**+1.2**
TIY				S	**S**	**09 19 19.3**	**+0.9**
TIY				pmax	pmax		
	comp=Z,110nm,1.3s						
TIY				pmax	pmax		
	comp=Z,960nm,3.7s						
TIY				LR	LR		
	comp=Z,2µm,15.3s						
TIY				LR	LR		
	comp=Z,2µm,19.0s						
TIY				LR	LR		
	comp=Z,5µm,25.3s						
PHET	**Kaeng Krachan**	**69.28**	**288**	P	**P**	**09 10 19.7**	**+3.4**
	comp=Z,9.8nm,0.8s						
XAN	**Xi'an**	**69.54**	**312**	P	**P**	**09 10 18.1**	**+0.4**
XAN				pP	pwP	09 10 28.4	+2.5
XAN				sP	PcP	09 10 32.1	-8.6
XAN				PP	**PP**	**09 12 49.3**	**-2.3**
XAN				S	**S**	**09 19 22.1**	**-3.1**
XAN				sS	sS	09 19 39.8	+8.0
XAN				ScS	**SKSac**	**09 20 13.6**	**-4.2**
XAN				SS	**SS**	**09 23 51.3**	**-2.0**
XAN				pmax	pmax		
	comp=Z,54nm,1.0s						
XAN				pmax	pmax		
	comp=Z,1µm,4.1s						
XAN				LR	LR		
	comp=Z,3µm,17.6s						
XAN				LR	LR		
	comp=Z,3µm,19.5s						
XAN				LR	LR		
	comp=Z,5µm,20.6s						
XAN	**Xi'an**	**69.54**	**312**	*e*P	**P**	**09 10 18.0**	**+0.4**
	comp=Z,133nm,1.4s						
XAN				LR	LR		
	comp=Z,5µm,21.0s						
XAN	**Xi'an**	**69.54**	**312**	*e*P	**P**	**09 10 18.0**	**+0.4**
XAN				pmax	pmax		
	comp=Z,133nm,1.4s						
XAN				MLR	MLR		
	comp=Z,5µm,21.0s						
NANT	**Nan**	**70.10**	**294**	P	**P**	**09 10 22.1**	**+0.8**
	comp=Z,15nm,1.1s,comp=Z,199nm						
UTHA	**Uthaitani**	**70.22**	**291**	P	**P**	**09 10 23.5**	**+1.4**
	comp=Z,12nm,1.1s,comp=Z,147nm						
FALS	**False Pass**	**70.35**	**19**	PFAKE		09 10 30.0	+8.0
FALS				LR	LR		
	comp=Z,6µm,20.0s						
SPIA	**Saint Paul Isl**	**70.51**	**14**	PFAKE		09 10 40.0	+17
SPIA				LR	LR		
	comp=Z,10µm,22.0s						
KMI	**Kunming**	**70.55**	**301**	P	**P**	**09 10 26.0**	**+1.7**
KMI				sP	pwP	09 10 31.0	-1.6
KMI				S	**S**	**09 19 39.3**	**+1.6**
KMI				sS	sS	09 19 44.8	+0.3
KMI				pmax	pmax		
	comp=Z,130nm,1.3s						
KMI				pmax	pmax		
	comp=Z,1µm,4.4s						
KMI				LR	LR		
	comp=Z,2µm,17.4s						
KMI				LR	LR		
	comp=Z,2µm,20.2s						
KMI				LR	LR		
	comp=Z,4µm,20.8s						
KMI	**Kunming**	**70.55**	**301**	*e*P	**P**	**09 10 25.9**	**+1.7**
	comp=Z,226nm,1.4s						
KMI				LR	LR		
	comp=Z,4µm,20.0s						
SUKH	**Sukhothai**	**70.64**	**293**	P	**P**	**09 10 26.1**	**+1.5**
	comp=Z,9.0nm,0.9s						
MA2	**Magadan**	**70.95**	**352**	*e*P	**P**	**09 10 25.1**	**-0.5**
	comp=Z,33nm,1.0s						
MA2	**Magadan**	**70.95**	**352**	c *e*P	**P**	**09 10 25.7**	**+0.1**
MA2				pmax	pmax		
	comp=Z,112nm,2.5s						
MA2	**Magadan**	**70.95**	**352**	P	**P**	**09 10 25.4**	**-0.2**
	comp=Z,18nm,0.7s,baz=154,slow=6.2,SNR=30						
MA2				LR	LR	09 36 49.2	
	comp=Z,7µm,21.0s,baz=170,slow=32						
UMPA	**Umpang Tak**	**70.95**	**291**	P	**P**	**09 10 28.6**	**+2.0**
	comp=Z,7.8nm,1.4s,comp=Z,2µm						
LAMP	**Lampang**	**70.97**	**294**	P	**P**	**09 10 28.0**	**+1.4**
	comp=Z,21nm,1.0s,comp=Z,224nm						
HHC	**Hu-ho-hao-te**	**71.25**	**320**	*e*P	**P**	**09 10 28.9**	**+0.9**
HHC				pP	sP	09 10 33.6	-0.2
HHC				sP	pwP	09 10 35.9	-0.4
HHC				S	**S**	**09 19 45.3**	**+0.3**
HHC				sS	sS	09 19 54.1	+2.4
HHC				SS	**SS**	**09 24 17.0**	**-2.5**
HHC				pmax	pmax		
	comp=Z,53nm,1.3s						
HHC				pmax	pmax		
	comp=Z,1µm,5.9s						
HHC				LR	LR		
	comp=Z,3µm,22.5s						
HHC				LR	LR		
	comp=Z,4µm,20.7s						
HHC				LR	LR		
	comp=Z,6µm,23.0s						
CM01	**Chiang Mai Arr**	**71.54**	**294**	*e*P	**P**	**09 10 30.9**	**+0.8**
CM31	**Chiang Mai Arr**	**71.57**	**294**	*e*P	**P**	**09 10 31.4**	**+1.1**
	comp=Z,163nm,1.6s						
CMAR	**Chiang Mai Arr**	**71.57**	**294**	P	**P**	**09 10 31.6**	**+1.4**
	comp=Z,1.6nm,0.3s,baz=176,slow=24,SNR=8.0						
CMAR				PKPPKP		09 38 20.2	
	comp=Z,0.9nm,0.5s,baz=269,slow=3.6,SNR=3.0						
CMAR				LR	LR	09 43 27.7	
	comp=Z,2µm,18.6s,baz=99,slow=37						
CMMT	**Chiang Mai**	**71.67**	**294**	P	**P**	**09 10 31.7**	**+0.8**
	comp=Z,53nm,1.4s,comp=Z,1µm						
CHTO	**Chiang Mai**	**71.68**	**294**	*e*P	**P**	**09 10 31.1**	**+0.2**
	comp=Z,72nm,1.2s						
CHTO				LR	LR		
	comp=Z,2µm,19.0s						
CHTO	**Chiang Mai**	**71.68**	**294**	*e*P	**P**	**09 10 31.1**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,72nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,2µm,19.0s						
CHTO	**Chiang Mai**	**71.68**	**294**	P	**P**	**09 10 31.8**	**+0.9**
	comp=Z,241nm,1.3s,comp=Z,5µm						
SDPT	**Sand Point**	**71.71**	**20**	PFAKE		09 10 40.0	+10
SDPT				LR	LR		
	comp=Z,6µm,20.0s						
ZEA	**Zeya**	**71.80**	**337**	⇑*e*P	**P**	**09 10 32.1**	**+1.2**
ZEA				*e*		09 10 48.0	
ZEA				*e*		09 13 20.0	
ZEA				*e*S	**S**	**09 19 54.0**	**+3.4**
ZEA				*e*SS	**SS**	**09 24 23.0**	**-4.2**
ZEA				pmax	pmax		
	comp=Z,2µm,7.0s						
ZEA				pmax	pmax		
	comp=N,500nm,6.0s						
ZEA				pmax	pmax		
	comp=E,170nm,2.0s						
ZEA				pmax	pmax		
	comp=N,320nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,420nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,500nm,9.0s						
ZEA				smax	smax		
	comp=E,1µm,9.0s						
ZEA				smax	smax		
	comp=N,1µm,10.0s						
HIA	**Hailar**	**71.81**	**330**	*e*P	**P**	**09 10 32.0**	**+0.9**
	comp=N,108nm,1.3s						
HIA				LR	LR		
	comp=Z,3µm,19.0s						
HIA	**Hailar**	**71.81**	**330**	*e*P	**P**	**09 10 32.0**	**+0.9**
HIA				pmax	pmax		
	comp=Z,108nm,1.3s						
HIA				MLR	MLR		
	comp=Z,3µm,19.0s						
CD2	**Chengdu**	**72.02**	**307**	P	**P**	**09 10 33.5**	**+0.7**
CD2				pP	sP	09 10 37.1	-1.5
CD2				PP	**PP**	**09 13 13.5**	**+0.4**
CD2				S	**S**	**09 19 55.0**	**+0.8**
CD2				sS	sS	09 20 02.5	+1.6
CD2				SS	**SS**	**09 24 31.3**	**-0.3**
CD2				pmax	pmax		
	comp=Z,220nm,0.7s						
CD2				pmax	pmax		
	comp=Z,2µm,4.7s						
CD2				LR	LR		
	comp=Z,6µm,19.1s						
CD2				LR	LR		
	comp=Z,5µm,20.1s						
CD2				LR	LR		
	comp=Z,7µm,18.6s						
CMBY	**CAMPBELL BAY**	**73.20**	**281**	*e*P	**P**	**09 10 39.5**	**-0.5**
CMBY				IAmb	IAmb	09 10 43.9	
	comp=Z,2µm,0.1s						
SEY	**Seymchan**	**74.02**	**354**	P	**P**	**09 10 44.1**	**+0.3**
	comp=Z,18nm,0.9s,baz=157,slow=5.4,SNR=74						
SEY				LR	LR	09 38 31.2	
	comp=Z,8µm,21.6s,baz=157,slow=32						
LZH	**Lanzhou**	**74.17**	**312**	⇑P	**P**	**09 10 47.3**	**+1.7**
LZH				pP	sP	09 10 51.5	+0.1
LZH				sP	pwP	09 10 55.3	+1.4
LZH				PP	**PP**	**09 13 30.8**	**-0.7**
LZH				S	**SKiKP**	**09 20 15.8**	**+2.7**
LZH				sS	sS	09 20 25.3	-0.1
LZH				SS	**SS**	**09 24 58.3**	**-6.2**
LZH				pmax	pmax		
	comp=Z,130nm,1.4s						
LZH				pmax	pmax		
	comp=Z,1µm,4.3s						
LZH				LR	LR		
	comp=Z,4µm,13.6s						
LZH				LR	LR		
	comp=Z,5µm,16.8s						
LZH				LR	LR		
	comp=Z,6µm,17.3s						
PBA	**Port Blair**	**75.43**	**285**	*e*P	P	09 10 52.2	-0.8
OHAK	**Old Harbor**	**75.68**	**22**	*e*P	**P**	**09 10 53.7**	**+0.1**
	comp=Z,129nm,1.2s						
GAMB	**Gambell**	**76.24**	**10**	*e*P	**P**	**09 10 57.4**	**+0.8**
	comp=Z,89nm,1.0s						
GAMB				LR	LR		
	comp=Z,5µm,20.0s						
KDAK	**Kodiak Island**	**76.35**	**22**	*e*P	**P**	**09 10 58.2**	**+0.8**
	comp=Z,94nm,1.3s						
KDAK	**Kodiak Island**	**76.35**	**22**	P	**P**	**09 10 57.8**	**+0.4**
	comp=Z,28nm,0.9s,baz=221,slow=5.2,SNR=11						
KDAK				LR	LR	09 39 41.1	
	comp=Z,3µm,20.2s,baz=229,slow=32						
CIT	**Chita**	**76.60**	**330**	*e*P	**P**	**09 10 59.9**	**+0.9**
CIT				*e*		09 11 12.9	
CIT				pmax	pmax		
	comp=Z,300nm,1.4s						
YAK	**Yakutsk**	**77.59**	**344**	c *i*P	**P**	**09 11 04.5**	**+0.3**
YAK				*e*		09 11 11.7	
YAK				*e**PP	**PcP**	**09 11 17.4**	**+3.0**
YAK				*e*		09 13 55.8	
YAK				*e*PPP	PPP	09 15 48.4	
YAK				*e*S	**S**	**09 20 53.8**	**-1.1**
YAK				*e**SS	**SKSac**	**09 21 11.7**	**-5.0**
YAK				*e*		09 21 21.0	
YAK				*e*SS	**SS**	**09 25 52.9**	**-1.9**
YAK				*e*SSS	SSS	09 29 17.7	
YAK				pmax	pmax		
	comp=Z,334nm,0.9s						
YAK				pmax	pmax		
	comp=N,140nm,1.0s						
YAK				pmax	pmax		
	comp=E,106nm,1.1s						
YAK				pmax	pmax		
	comp=Z,681nm,3.8s						
YAK				pmax	pmax		
	comp=N,561nm,3.5s						
YAK				pmax	pmax		
	comp=E,447nm,3.4s						
YAK				smax	smax		
	comp=N,447nm,3.3s						
YAK				smax	smax		
	comp=E,893nm,3.8s						
ULN	**Ulaanbaatar**	**77.73**	**324**	*e*P	**P**	**09 11 06.7**	**+1.1**
	comp=E,80nm,1.0s						
ULN				LR	LR		
	comp=Z,2µm,20.0s						
ULN	**Ulaanbaatar**	**77.73**	**324**	*e*P	**P**	**09 11 06.7**	**+1.1**
ULN				pmax	pmax		
	comp=Z,80nm,1.0s						
ULN				MLR	MLR		
	comp=Z,2µm,20.0s						
SVW2	**Sparrevohn**	**77.85**	**18**	*e*P	**P**	**09 11 07.0**	**+1.2**
	comp=Z,99nm,1.2s						
SVW2				LR	LR		
	comp=Z,4µm,20.0s						
HOM	**Homer**	**78.06**	**21**	*e*P	**P**	**09 11 08.8**	**+1.8**
	comp=Z,245nm,0.9s						
HOM				LR	LR		
	comp=Z,4µm,18.0s						
SONA0	**Songino Array**	**78.09**	**324**	*e*P	**P**	**09 11 08.5**	**+0.9**
SONM	**Songino Array**	**78.09**	**324**	P	**P**	**09 11 08.5**	**+0.9**
	comp=Z,23nm,0.8s,baz=140,slow=6.1,SNR=112						
SONM				LR	LR	09 42 15.0	

	comp=Z,2µm,21.7s,baz=118,slow=33						
SONA1	**Songino Array**	**78.09**	**324**	*e*P	**P**	**09 11 08.3**	**+0.7**
ANM	**Nome**	**78.18**	**12**	*e*P	**P**	**09 11 08.9**	**+1.4**
	comp=Z,118nm,1.5s						
ANM				LR	LR		
	comp=Z,5µm,21.0s						
ANM	**Nome**	**78.18**	**12**	*e*P	**P**	**09 11 08.9**	**+1.4**
ANM				pmax	pmax		
	comp=Z,118nm,1.5s						
ANM				MLR	MLR		
	comp=Z,5µm,21.0s						
BRLK	**Bradley Lake**	**78.40**	**21**	*e*P	**P**	**09 11 09.1**	**+0.2**
	comp=Z,94nm,1.2s						
BRLK				LR	LR		
	comp=Z,5µm,18.0s						
BILL	**Bilibino**	**78.47**	**0**	*e*P	**P**	**09 11 09.6**	**+0.6**
	comp=Z,179nm,1.4s						
BILL				LR	LR		
	comp=Z,3µm,18.0s						
BILL	**Bilibino**	**78.47**	**0***c*	*i*P	**P**	**09 11 09.7**	**+0.6**
BILL				*i*		09 11 21.6	
BILL				*e*		09 14 09.7	
BILL				*i* S	**S**	**09 21 03.7**	**-0.6**
BILL				*i* SS	**SS**	**09 26 04.9**	**-3.0**
BILL				pmax	pmax		
	comp=Z,128nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,19.0s						
GTA	**Gaotai**	**78.47**	**314**	⇑P	**P**	**09 11 11.4**	**+1.5**
GTA				pP	pwP	09 11 16.1	-2.2
GTA				sP	PcP	09 11 18.5	-0.6
GTA				S	**S**	**09 21 05.8**	**0.0**
GTA				sS	sS	09 21 11.6	-0.9
GTA				SKS	**SKSac**	**09 21 22.8**	**-1.7**
GTA				SS	**SS**	**09 26 10.9**	**+1.5**
GTA				pmax	pmax		
	comp=Z,71nm,1.4s						
GTA				pmax	pmax		
	comp=Z,1µm,5.7s						
GTA				LR	LR		
	comp=Z,2µm,19.7s						
GTA				LR	LR		
	comp=Z,4µm,21.9s						
GTA				LR	LR		
	comp=Z,6µm,21.3s						
SEW	**Seward**	**79.16**	**21**	*e*P	**P**	**09 11 13.0**	**+0.1**
	comp=Z,68nm,1.0s						
QSPA	**South Pole Qui**	**79.37**	**180**	*e*P	**P**	**09 11 15.0**	**+0.7**
	comp=Z,266nm,1.2s						
QSPA	**South Pole Qui**	**79.37**	**180**	LR	LR	09 44 32.8	
	comp=Z,7µm,18.6s,baz=19,slow=34						
SUA	**Susitna One**	**79.68**	**20**	*e*P	**P**	**09 11 16.2**	**+0.2**
	comp=Z,59nm,1.0s						
SUA				LR	LR		
	comp=Z,3µm,20.0s						
RC01	**Rabbit Creek A**	**79.75**	**20**	*e*P	**P**	**09 11 16.6**	**+0.4**
	comp=Z,61nm,1.3s						
RC01				LR	LR		
	comp=Z,5µm,22.0s						
SHL	**Shillong**	**79.96**	**298**	*e*P	**P**	**09 11 18.4**	**0.0**
	comp=Z,134nm,1.3s						
SHL	**Shillong**	**79.96**	**298**	*e*P	**P**	**09 11 18.4**	**0.0**
SHL				pmax	pmax		
	comp=Z,134nm,1.3s						
SHL	**Shillong**	**79.96**	**298**	*e*P	**P**	**09 11 18.5**	**+0.1**
SHL				IAmb	IAmb	09 11 23.4	
	comp=Z,40nm,0.5s						
BOD	**Bodaibo**	**79.98**	**335**	*e*P	**P**	**09 11 17.4**	**-0.1**
BOD				pmax	pmax		
	comp=Z,71nm,1.8s						
PPLA	**Purkeypile**	**80.27**	**18**	*e*P	**P**	**09 11 20.1**	**+0.9**
	comp=Z,58nm,1.5s						
PPLA				LR	LR		
	comp=Z,4µm,22.0s						
PMR	**Palmer**	**80.32**	**20**	*e*P	**P**	**09 11 19.6**	**+0.4**
	comp=Z,66nm,1.4s						
PMR				LR	LR		
	comp=Z,4µm,21.0s						
PMR	**Palmer**	**80.32**	**20**	*e*P	**P**	**09 11 19.7**	**+0.4**
PMR				pmax	pmax		
	comp=Z,66nm,1.4s						
PMR				MLR	MLR		
	comp=Z,4µm,21.0s						
KNK	**Knik Glacier**	**80.42**	**21**	*e*P	**P**	**09 11 20.4**	**+0.5**
	comp=Z,122nm,1.6s						
KNK				LR	LR		
	comp=Z,5µm,20.0s						
GHO	**Glory Hole Cre**	**80.51**	**20**	*e*P	**P**	**09 11 20.8**	**+0.4**
	comp=Z,198nm,1.8s						
GHO				LR	LR		
	comp=Z,4µm,22.0s						
GLI	**Glacier Island**	**80.53**	**21**	*e*P	**P**	**09 11 21.9**	**+1.4**
	comp=Z,102nm,1.1s						
GLI				LR	LR		
	comp=Z,3µm,18.0s						
CAST	**Castle Rocks**	**80.69**	**18**	*e*P	**P**	**09 11 20.6**	**-0.6**
	comp=Z,167nm,1.7s						
CAST				LR	LR		
	comp=Z,4µm,20.0s						
SML	**Sawmill**	**80.74**	**20**	*e*P	**P**	**09 11 22.0**	**+0.4**
	comp=Z,140nm,1.5s						
SML				LR	LR		
	comp=Z,4µm,18.0s						
SML	**Sawmill**	**80.74**	**20**	*e*P	**P**	**09 11 22.0**	**+0.4**
SML				pmax	pmax		
	comp=Z,141nm,1.5s						
SML				MLR	MLR		
	comp=Z,4µm,18.0s						
EYAK	**Cordova Ski Ar**	**80.81**	**22**	PFAKE		09 11 30.0	+8.1
EYAK				LR	LR		
	comp=Z,7µm,20.0s						
SCM	**Sheep Creek Mo**	**81.10**	**21**	*e*P	**P**	**09 11 23.9**	**+0.3**
	comp=Z,231nm,1.8s						
SCM				LR	LR		
	comp=Z,3µm,20.0s						
SCM	**Sheep Creek Mo**	**81.10**	**21**	*e*P	**P**	**09 11 23.9**	**+0.3**
SCM				pmax	pmax		
	comp=Z,231nm,1.8s						
SCM				MLR	MLR		
	comp=Z,3µm,20.0s						
RPN	**Rapa Nui**	**81.13**	**116**	P	**P**	**09 11 23.4**	**-1.0**
RPN				LR	LR		
	comp=Z,6µm,20.0s						
RPN	**Rapa Nui**	**81.13**	**116**	P	**P**	**09 11 23.4**	**-1.0**
	comp=Z,48nm,0.6s,baz=255,slow=4.7,SNR=3.8						
ZAK	**Zakamensk**	**81.13**	**325**	*e*P	**P**	**09 11 23.9**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,44nm,1.3s						
DIV	**Divide**	**81.18**	**22**	*e*P	**P**	**09 11 24.4**	**+0.4**
	comp=Z,107nm,1.2s						
DIV				LR	LR		
	comp=Z,5µm,21.0s						
HMT	**Hamilton**	**81.23**	**23**	*e*P	**P**	**09 11 24.6**	**+0.4**
	comp=Z,56nm,0.9s						
HMT				LR	LR		
	comp=Z,6µm,22.0s						
TRF	**Thorofare Moun**	**81.26**	**19**	*e*P	**P**	**09 11 24.4**	**-0.1**
	comp=Z,28nm,1.0s						
TRF				LR	LR		
	comp=Z,4µm,20.0s						
KLU	**Klutina**	**81.37**	**21**	*e*P	**P**	**09 11 25.4**	**+0.4**
	comp=Z,61nm,1.2s						
KLU				LR	LR		
	comp=Z,3µm,20.0s						
IRK	**Irkutsk**	**81.49**	**327**	*e*P	**P**	**09 11 24.6**	**-1.2**
IRK				pmax	pmax		
	comp=Z,107nm,2.7s						
TLY	**Talaya**	**81.55**	**326**	*e*P	**P**	**09 11 26.4**	**+0.2**
	comp=Z,35nm,1.0s						
TLY				LR	LR		
	comp=Z,2µm,20.0s						
TLY	**Talaya**	**81.55**	**326***c*	*i*P	**P**	**09 11 26.4**	**+0.2**
TLY				*e*		09 11 31.6	
TLY				*e*S	**S**	**09 21 38.4**	**+0.9**
TLY				*e*SS	**SS**	**09 26 57.2**	**+2.4**
TLY				pmax	pmax		
	comp=Z,98nm,1.0s						
TLY				MLR	MLR		
	comp=Z,3µm,17.0s						
RND	**Reindeer**	**81.69**	**19**	*e*P	**P**	**09 11 26.0**	**-0.7**
	comp=Z,214nm,1.8s						
RND				LR	LR		
	comp=Z,3µm,20.0s						
RND	**Reindeer**	**81.69**	**19**	*e*P	**P**	**09 11 26.0**	**-0.7**
RND				pmax	pmax		
	comp=Z,214nm,1.8s						
RND				MLR	MLR		
	comp=Z,3µm,20.0s						
RDOG	**Red Dog Mine**	**81.70**	**12**	*e*P	**P**	**09 11 27.7**	**+1.1**
	comp=Z,63nm,1.0s						
RDOG				LR	LR		
	comp=Z,4µm,21.0s						
LSA	**Lhasa**	**81.78**	**302**	P	**P**	**09 11 28.3**	**-0.1**
LSA				S	**S**	**09 21 40.8**	**-0.9**
LSA				pmax	pmax		
	comp=Z,28nm,2.1s						
LSA				LR	LR		
	comp=Z,410nm,21.4s						
LSA				LR	LR		
	comp=Z,650nm,22.3s						
LSA				LR	LR		
	comp=Z,3µm,18.9s						
LSA	**Lhasa**	**81.78**	**302**	*e*P	**P**	**09 11 29.6**	**+1.2**
	comp=Z,30nm,1.2s						
MCK	**McKinley**	**81.89**	**19**	*e*P	**P**	**09 11 27.3**	**-0.4**
	comp=Z,107nm,1.5s						
MCK				LR	LR		
	comp=Z,5µm,21.0s						
MCK	**McKinley**	**81.89**	**19**	*e*P	**P**	**09 11 27.3**	**-0.4**
MCK				pmax	pmax		
	comp=Z,107nm,1.5s						
MCK				MLR	MLR		
	comp=Z,5µm,21.0s						
DHY	**Denali Highway**	**81.94**	**20**	*e*P	**P**	**09 11 28.4**	**+0.3**
	comp=Z,92nm,1.8s						
DHY				LR	LR		
	comp=Z,4µm,20.0s						
BWN	**Browne**	**82.04**	**18**	PFAKE		09 11 40.0	+12
BWN				LR	LR		
	comp=Z,4µm,20.0s						
TGL	**Tana Glacier**	**82.04**	**23**	*e*P	**P**	**09 11 29.0**	**+0.4**
	comp=Z,323nm,1.9s						
IM3	**Indian Mountai**	**82.14**	**16**	*e*P	**P**	**09 11 29.3**	**+0.4**
HARP	**HAARP**	**82.25**	**21**	*e*P	**P**	**09 11 30.2**	**+0.6**
	comp=Z,86nm,1.1s						
HARP				LR	LR		
	comp=Z,3µm,20.0s						
MLY	**Manley**	**82.27**	**17**	*e*P	**P**	**09 11 30.1**	**+0.5**
	comp=Z,59nm,1.6s						
MLY				LR	LR		
	comp=Z,5µm,18.0s						
BALM	**Baldy**	**82.40**	**23**	*e*P	**P**	**09 11 30.7**	**+0.2**
	comp=Z,46nm,0.6s						
BALM	**Baldy**	**82.40**	**23**	*e*P	**P**	**09 11 30.7**	**+0.2**
BALM				pmax	pmax		
	comp=Z,46nm,0.6s						
PAX	**Paxson**	**82.51**	**20**	*e*P	**P**	**09 11 31.1**	**+0.2**
	comp=Z,60nm,1.6s						
PAX				LR	LR		
	comp=Z,3µm,20.0s						
PAX	**Paxson**	**82.51**	**20**	*e*P	**P**	**09 11 31.2**	**+0.2**
PAX				pmax	pmax		
	comp=Z,60nm,1.6s						
PAX				MLR	MLR		
	comp=Z,3µm,20.0s						
MCCM	**Marconi Confer**	**82.57**	**49**	PFAKE		09 11 40.0	+8.3
MCCM				LR	LR		
	comp=Z,4µm,20.0s						
KCPM	**Cahto Peak**	**82.58**	**47**	*e*P	**P**	**09 11 33.0**	**+1.1**
	comp=Z,73nm,1.2s						
WRH	**Wood River Hil**	**82.67**	**19**	*e*P	**P**	**09 11 31.4**	**-0.3**
	comp=Z,60nm,1.4s						
WRH				LR	LR		
	comp=Z,5µm,21.0s						
KMRM	**Mail Ridge**	**82.67**	**47**	*e*P	**P**	**09 11 31.9**	**-0.5**
	comp=Z,59nm,1.1s						
KMRM				LR	LR		
	comp=Z,4µm,20.0s						
HOPS	**Hopland Field**	**82.71**	**48**	*e*P	**P**	**09 11 33.6**	**+1.1**
	comp=Z,114nm,1.5s						
GDXM	**Geysers**	**82.85**	**48**	*e*P	**P**	**09 11 34.2**	**+0.8**
	comp=Z,25nm,0.9s						
GDXM				LR	LR		
	comp=Z,5µm,20.0s						
KHMM	**Horse Mountain**	**82.89**	**46**	PFAKE		09 11 50.0	+16
KHMM				LR	LR		
	comp=Z,5µm,19.0s						
MDM	**Murphy Dome**	**82.97**	**18**	*e*P	**P**	**09 11 32.5**	**-0.7**
	comp=Z,34nm,1.0s						
MDM				LR	LR		
	comp=Z,3µm,22.0s						
HDA	**Harding Lake**	**82.99**	**19**	*e*P	**P**	**09 11 33.3**	**-0.1**
	comp=Z,56nm,0.8s						
HDA				LR	LR		
	comp=Z,4µm,20.0s						
HDA	**Harding Lake**	**82.99**	**19**	P	**P**	**09 11 33.3**	**-0.1**
	baz=227						
MOY	**Mondy**	**83.00**	**326**	*e*P	**P**	**09 11 34.0**	**+0.1**
MOY				pmax	pmax		
	comp=Z,163nm,3.1s						
TCOL	**CIGO, UAF Yank**	**83.02**	**18**	P	**P**	**09 11 33.0**	**-0.5**
	baz=226						
COLA	**College**	**83.03**	**18**	*e*P	**P**	**09 11 33.1**	**-0.4**
	comp=Z,55nm,1.0s						
COLA				LR	LR		
	comp=Z,3µm,19.0s						
COLA	**College**	**83.03**	**18**	*e*P	**P**	**09 11 33.1**	**-0.4**
COLA				pmax	pmax		
	comp=Z,55nm,1.0s						
COLA				MLR	MLR		
	comp=Z,3µm,19.0s						
KEBM	**Edson Butte**	**83.18**	**44**	PFAKE		09 11 50.0	+15
KEBM				LR	LR		
	comp=Z,5µm,20.0s						
SAO	**San Andreas Ge**	**83.19**	**51**	*e*P	**P**	**09 11 36.0**	**+1.0**
	comp=Z,22nm,0.9s						
SAO				LR	LR		
	comp=Z,7µm,19.0s						
RIDG	**Independ'e Rid**	**83.23**	**20**	*e*P	**P**	**09 11 34.1**	**-0.6**
	comp=Z,127nm,1.4s						
RIDG				LR	LR		
	comp=Z,4µm,20.0s						
ILAR	**Eielson Array**	**83.26**	**19**	P	**P**	**09 11 34.6**	**-0.1**
	comp=Z,11nm,0.5s,baz=236,slow=4.6,SNR=106						
ILAR				PKKP	**PKKPdf**	**09 29 52.1**	**+2.4**
	comp=Z,0.6nm,1.0s,baz=48,slow=1.3,SNR=3.9						
ILAR				LR	LR	09 43 25.5	
	comp=Z,3µm,21.3s,baz=258,slow=32						
ILB	**Eielson Array**	**83.26**	**19**	*e*P	**P**	**09 11 34.6**	**-0.1**
IL1	**Eielson Array**	**83.26**	**19**	*e*P	**P**	**09 11 34.0**	**-0.7**
O02D	**Mt. Diablo Mer**	**83.32**	**47**	P	**P**	**09 11 36.9**	**+1.2**
	baz=250,SNR=7.5						
POKR	**Poker Plat Res**	**83.33**	**18**	P	**P**	**09 11 34.7**	**-0.4**
	baz=227						
L02E	**Cave Junction**	**83.43**	**45**	P	**P**	**09 11 37.0**	**+0.8**
	baz=249						
DOT	**Dot Lake**	**83.44**	**20**	*e*P	**P**	**09 11 36.2**	**+0.5**
	comp=Z,131nm,1.5s						
DOT				LR	LR		
	comp=Z,3µm,19.0s						
J01E	**Myrtle Point**	**83.56**	**44**	P	**P**	**09 11 37.5**	**+0.7**
	baz=249						
K02D	**Willamette Mer**	**83.57**	**45**	P	**P**	**09 11 37.7**	**+0.8**
	baz=249						
SNCC	**San Nicolas Is**	**83.62**	**55**	PFAKE		09 11 50.0	+13
SNCC				LR	LR		
	comp=Z,4µm,20.0s						
SNCC	**San Nicolas Is**	**83.62**	**55**	P	**P**	**09 11 37.9**	**+0.5**
	baz=253						
WDC	**Whiskeytown Da**	**83.63**	**47**	*e*P	**P**	**09 11 36.7**	**-0.5**
	comp=Z,52nm,1.4s						
WDC				LR	LR		
	comp=Z,4µm,21.0s						
WDC	**Whiskeytown Da**	**83.63**	**47**	*e*P	**P**	**09 11 36.7**	**-0.5**
WDC				pmax	pmax		
	comp=Z,52nm,1.4s						
WDC				MLR	MLR		
	comp=Z,4µm,21.0s						
N02D	**Trinity Center**	**83.65**	**46**	P	**P**	**09 11 38.4**	**+1.0**
	baz=250						
SCRK	**Sand Creek**	**83.67**	**20**	*e*P	**P**	**09 11 37.3**	**+0.2**
	comp=Z,182nm,1.6s						
SCRK				LR	LR		
	comp=Z,3µm,20.0s						
M02C	**Callahan**	**83.69**	**46**	P	**P**	**09 11 38.5**	**+0.9**
	baz=250						
SCZ2	**Santa Cruz Isl**	**83.76**	**54**	P	**P**	**09 11 38.4**	**+0.3**
	baz=253						
PAGB	**Antelope Grade**	**83.79**	**52**	*e*P	**P**	**09 11 38.9**	**+0.7**
	comp=Z,64nm,1.6s						
PAGB				LR	LR		
	comp=Z,6µm,18.0s						
SBC	**Santa Barbara**	**83.83**	**53**	P	**P**	**09 11 38.9**	**+0.6**
	baz=253						
SMMC	**Simmler**	**83.86**	**52**	P	**P**	**09 11 39.1**	**+0.5**
	baz=252						
PKM	**Mcpherson Peak**	**83.88**	**53**	P	**P**	**09 11 39.5**	**+0.6**
	baz=252,SNR=6.8						
YBH	**Yreka Blue Hor**	**83.90**	**46**	*e*P	**P**	**09 11 39.4**	**+0.6**
	comp=Z,40nm,1.1s						
YBH	**Yreka Blue Hor**	**83.90**	**46**	P	**P**	**09 11 39.5**	**+0.8**
	comp=Z,16nm,0.9s,baz=207,slow=2.2,SNR=18						
YBH				LR	LR	09 40 44.6	
	comp=Z,2µm,21.8s,baz=247,slow=30						
I02D	**Swisshome**	**83.95**	**43**	P	**P**	**09 11 39.7**	**+1.0**
	baz=249						
BWNR	**Bhubaneshwar**	**83.99**	**292**	*e*P	**P**	**09 11 34.8**	**-4.6**
COLD	**Coldfoot**	**84.02**	**16**	*e*P	**P**	**09 11 40.2**	**+1.6**
	comp=Z,24nm,1.4s						
COLD				LR	LR		
	comp=Z,4µm,20.0s						
HUMO	**Hull Mountain**	**84.03**	**45**	*e*P	**P**	**09 11 40.2**	**+0.9**
	comp=Z,25nm,0.9s						
HUMO				LR	LR		
	comp=Z,4µm,22.0s						
ORV	**Oroville**	**84.05**	**48**	*e*P	**P**	**09 11 39.3**	**-0.1**
	comp=Z,27nm,1.2s						
ORV				LR	LR		
	comp=Z,2µm,18.0s						
ORV	**Oroville**	**84.05**	**48**	*e*P	**P**	**09 11 39.3**	**-0.1**
ORV				pmax	pmax		
	comp=Z,27nm,1.2s						
ORV				MLR	MLR		
	comp=Z,2µm,18.0s						
O03E	**Paynes Creek**	**84.07**	**47**	P	**P**	**09 11 39.6**	**0.0**
	baz=251,SNR=11						
I03D	**Drain, OR**	**84.14**	**44**	P	**P**	**09 11 40.8**	**+1.0**
	baz=249						
HYT	**Haines Junctio**	**84.19**	**24**	*e*P	**P**	**09 11 40.1**	**+0.3**
	comp=Z,38nm,1.2s						
HYT				LR	LR		
	comp=Z,7µm,20.0s						
PRP	**Porcupine Dome**	**84.19**	**18**	*e*P	**P**	**09 11 38.6**	**-1.0**
	comp=Z,31nm,1.5s						
PRP				LR	LR		
	comp=Z,3µm,21.0s						
ODAN	**Odare**	**84.19**	**299**	*e*P	**P**	**09 11 41.0**	**+0.3**
	comp=Z,96nm,0.9s						
BLG	**Laguna Peak, P**	**84.24**	**54**	P	**P**	**09 11 40.5**	**0.0**
	baz=253						
AFDM	**Forest Hills D**	**84.24**	**49**	*e*P	**P**	**09 11 40.1**	**-0.4**
	comp=Z,37nm,1.1s						
AFDM				LR	LR		
	comp=Z,3µm,18.0s						
L04D	**Klamath Falls**	**84.35**	**45**	P	**P**	**09 11 41.5**	**+0.4**
	baz=250						
SKAG	**Skagway**	**84.36**	**26**	*e*P	**P**	**09 11 41.5**	**+1.1**
	comp=Z,76nm,1.4s						
SKAG				LR	LR		
	comp=Z,8µm,20.0s						
CMB	**Columbia Colle**	**84.39**	**50**	*e*P	**P**	**09 11 41.0**	**-0.2**
	comp=Z,25nm,0.9s						
CMB				LR	LR		
	comp=Z,6µm,19.0s						
CMB	**Columbia Colle**	**84.39**	**50**	*e*P	**P**	**09 11 41.0**	**-0.2**
CMB				pmax	pmax		
	comp=Z,25nm,0.9s						
CMB				MLR	MLR		
	comp=Z,6µm,19.0s						
BBB	**Bella Bella**	**84.48**	**35**	LR	LR	09 41 47.0	
	comp=Z,4µm,20.8s,baz=264,slow=30						
COR	**Corvallis**	**84.49**	**43**	PFAKE		09 11 50.0	+8.6
COR				LR	LR		
	comp=Z,6µm,20.0s						
KNGR	**Kungurtug, Tuv**	**84.53**	**324***c*	*i*P	**P**	**09 11 41.3**	**-0.4**
M04C	**Macdoel**	**84.53**	**46**	P	**P**	**09 11 42.6**	**+0.6**
	baz=251						
CIS	**Catalina Islan**	**84.56**	**55**	P	**P**	**09 11 42.1**	**0.0**
	baz=254						
VOG	**Valley Oaks Go**	**84.64**	**52**	P	**P**	**09 11 42.4**	**0.0**
	baz=253						
OSI	**Osito Audit: C**	**84.66**	**53**	PFAKE		09 11 50.0	+7.3
OSI				LR	LR		
	comp=Z,4µm,18.0s						
OSI	**Osito Audit: C**	**84.66**	**53**	P	**P**	**09 11 43.2**	**+0.5**
	baz=253						
ARVC	**Arvin**	**84.72**	**53**	P	**P**	**09 11 43.0**	**+0.1**
	baz=253						
VES	**Vestal, Richgr**	**84.73**	**52**	P	**P**	**09 11 42.5**	**-0.4**
	baz=253,SNR=10						
G03D	**McMinnville, O**	**84.73**	**42**	P	**P**	**09 11 43.2**	**+0.6**
	baz=249						
FMP	**Fort Macarthur**	**84.74**	**54**	P	**P**	**09 11 43.1**	**+0.1**
	baz=254						
BOK	**Bokaro**	**84.75**	**295**	*e*P	**P**	**09 11 43.0**	**-0.2**
BOK				IAmb	IAmb	09 11 44.3	
	comp=Z,25nm,0.5s						
I04A	**Tendick Farm,**	**84.81**	**44**	P	**P**	**09 11 43.5**	**+0.3**
	baz=250						
J04D	**Umpqua Nationa**	**84.83**	**44**	P	**P**	**09 11 43.9**	**+0.4**
	baz=250						
H04D	**Lebanon**	**84.84**	**43**	P	**P**	**09 11 43.7**	**+0.5**
	baz=250						
DECC	**Green Verdugo**	**84.86**	**54**	P	**P**	**09 11 43.5**	**-0.2**
	baz=254						
K04D	**Chiloquin, OR**	**84.87**	**45**	P	**P**	**09 11 44.0**	**+0.4**
	baz=251						
RUBR	**Rubicon Trail**	**84.88**	**49**	PFAKE		09 12 00.0	+16
RUBR				LR	LR		
	comp=Z,3µm,19.0s						
RAMN	**Ramite**	**84.90**	**298**	*e*P	**P**	**09 11 44.3**	**0.0**
	comp=Z,86nm,1.3s						
MAW	**Mawson**	**84.94**	**202**	P	**P**	**09 11 44.8**	**+1.5**
	baz=85,SNR=9.1						
MAW	**Mawson**	**84.94**	**202**	*e*P	**P**	**09 11 44.6**	**+1.2**
	comp=Z,33nm,1.0s						
MAW	**Mawson**	**84.94**	**202**	P	**P**	**09 11 44.9**	**+1.5**
	comp=Z,88nm,0.8s,baz=99,slow=6.5,SNR=17						
MAW				LR	LR	09 46 03.6	
	comp=Z,2µm,18.6s,baz=100,slow=33						
PASC	**Pasadena Art C**	**84.96**	**54**	*e*P	**P**	**09 11 44.1**	**0.0**
	comp=Z,107nm,1.9s						
PASC				LR	LR		
	comp=Z,4µm,18.0s						
FYU	**Fort Yukon**	**84.97**	**18**	*e*P	**P**	**09 11 45.0**	**+1.6**
	comp=Z,75nm,1.5s						
FYU				LR	LR		
	comp=Z,4µm,21.0s						
BEKR	**Beckworth**	**84.98**	**48**	*e*P	**P**	**09 11 44.0**	**-0.3**
	comp=Z,151nm,2.0s						
BEKR				LR	LR		
	comp=Z,3µm,19.0s						
MWC	**Mount Wilson**	**85.08**	**54**	*e*P	**P**	**09 11 44.9**	**0.0**
	comp=Z,221nm,2.0s						
MWC				LR	LR		
	comp=Z,3µm,18.0s						
MWC	**Mount Wilson**	**85.08**	**54**	*e*P	**P**	**09 11 44.9**	**0.0**
MWC				pmax	pmax		
	comp=Z,221nm,2.0s						
MWC				MLR	MLR		
	comp=Z,3µm,18.0s						
EGAK	**Eagle**	**85.14**	**20**	*e*P	**P**	**09 11 45.0**	**+0.7**
	comp=Z,169nm,1.3s						
ISA	**Isabella, Lake**	**85.15**	**53**	*e*P	**P**	**09 11 45.1**	**0.0**
	comp=Z,26nm,1.0s						
ISA				LR	LR		
	comp=Z,4µm,21.0s						
ISA	**Isabella, Lake**	**85.15**	**53**	*e*P	**P**	**09 11 45.1**	**0.0**
ISA				pmax	pmax		
	comp=Z,26nm,1.0s						
ISA				MLR	MLR		
	comp=Z,4µm,21.0s						
ISA	**Isabella, Lake**	**85.15**	**53**	P	**P**	**09 11 45.1**	**0.0**
	baz=253,SNR=20						
WHY	**Whitehorse**	**85.18**	**25**	PFAKE		09 12 00.0	+15
WHY				LR	LR		
	comp=Z,7µm,20.0s						
F04D	**Rainier, OR**	**85.20**	**42**	P	**P**	**09 11 45.9**	**+0.8**
	baz=249						
TOLK	**Toolik Lake Re**	**85.20**	**15**	*e*P	**P**	**09 11 45.7**	**+1.0**
	comp=Z,69nm,1.5s						
TOLK				LR	LR		
	comp=Z,6µm,21.0s						
TOLK	**Toolik Lake Re**	**85.20**	**15**	P	**P**	**09 11 45.9**	**+1.2**
	baz=224						
WAKR	**Walker**	**85.25**	**50**	PFAKE		09 12 00.0	+14
WAKR				LR	LR		
	comp=Z,5µm,19.0s						
MDPB	**Devils Postpil**	**85.26**	**50**	*e*P	**P**	**09 11 46.2**	**+0.3**
	comp=Z,27nm,0.9s						
MDPB				LR	LR		
	comp=Z,6µm,20.0s						
PNTR	**Pine Nut**	**85.30**	**49**	*e*P	**P**	**09 11 46.3**	**+0.3**

	comp=Z,150nm,1.9s						
PNTR				LR	LR		
	comp=Z,3µm,20.0s						
EDW2	**Edwards Air Fo**	**85.31**	**53**	P	**P**	**09 11 46.1**	**+0.2**
	baz=254,SNR=32						
OMMB	**Old Mammoth Mi**	**85.31**	**51**	*e*P	**P**	**09 11 46.2**	**0.0**
	comp=Z,62nm,1.6s						
OMMB				LR	LR		
	comp=Z,7µm,20.0s						
DAWY	**Dawson**	**85.33**	**21**	*e*P	**P**	**09 11 46.7**	**+1.4**
	comp=Z,91nm,1.5s						
PAF	**Port-aux-Franc**	**85.33**	**221**	PFAKE		09 12 00.0	+14
PAF				LR	LR		
	comp=Z,4µm,19.0s						
VCNR	**Virginia City**	**85.33**	**49**	*e*P	**P**	**09 11 46.4**	**+0.3**
	comp=Z,21nm,1.3s						
VCNR				LR	LR		
	comp=Z,3µm,18.0s						
BFSC	**Mount Baldy Ra**	**85.40**	**54**	P	**P**	**09 11 46.1**	**-0.3**
	baz=254,SNR=20						
MLAC	**Mammoth, Mammo**	**85.44**	**51**	P	**P**	**09 11 47.4**	**+0.7**
	baz=253						
J05D	**Fort Rock, OR**	**85.45**	**45**	P	**P**	**09 11 47.1**	**+0.5**
	baz=251						
109C	**Camp Elliot, M**	**85.47**	**56**	P	**P**	**09 11 47.0**	**+0.3**
	baz=254						
CPE	**Camp Elliot**	**85.47**	**56**	*e*P	**P**	**09 11 46.4**	**-0.3**
	comp=Z,29nm,1.1s						
CPE				LR	LR		
	comp=Z,4µm,19.0s						
YERR	**Yerington**	**85.54**	**49**	*e*P	**P**	**09 11 47.5**	**+0.4**
	comp=Z,79nm,1.6s						
YERR				LR	LR		
	comp=Z,4µm,20.0s						
MURC	**Murrieta**	**85.59**	**55**	P	**P**	**09 11 47.3**	**0.0**
	baz=254,SNR=6.2						
PAHR	**Pah Rah Range**	**85.65**	**48**	*e*P	**P**	**09 11 47.7**	**+0.1**
	comp=Z,35nm,1.1s						
PAHR				LR	LR		
	comp=Z,3µm,18.0s						
E04D	**Cinebar**	**85.66**	**41**	P	**P**	**09 11 47.8**	**+0.5**
	baz=250						
MOD	**Modoc Plateau**	**85.66**	**46**	*e*P	**P**	**09 11 47.8**	**+0.2**
	comp=Z,33nm,1.1s						
MOD				LR	LR		
	comp=Z,3µm,18.0s						
D03D	**Eldon**	**85.67**	**40**	P	**P**	**09 11 47.9**	**+0.6**
	baz=249						
CWC	**Cottonwood Cre**	**85.68**	**52**	P	**P**	**09 11 48.1**	**+0.2**
	baz=254						
LRMC	**Laurel Mtn Rad**	**85.72**	**53**	P	**P**	**09 11 48.3**	**+0.2**
	baz=254,SNR=8.4						
I05D	**Terrebonne, OR**	**85.72**	**44**	P	**P**	**09 11 47.9**	**+0.1**
	baz=251						
TIN	**Tinemaha, Big**	**85.74**	**51**	P	**P**	**09 11 48.5**	**+0.4**
	baz=253,SNR=7.9						
GUN	**Gumba**	**85.75**	**299**	*e*P	**P**	**09 11 48.8**	**+0.1**
	comp=Z,215nm,1.3s						
BAR	**Barrett**	**85.77**	**56**	*e*P	**P**	**09 11 48.4**	**+0.1**
	comp=Z,18nm,1.1s						
BAR				LR	LR		
	comp=Z,3µm,20.0s						
PINE	**Pine Mountain**	**85.82**	**44**	*e*P	**P**	**09 11 49.0**	**+0.5**
	comp=Z,52nm,1.2s						
PINE				LR	LR		
	comp=Z,6µm,19.0s						
RYN	**Ryan**	**85.97**	**50**	*e*P	**P**	**09 11 49.5**	**+0.3**
	comp=Z,25nm,1.1s						
RYN				LR	LR		
	comp=Z,4µm,18.0s						
BBRC	**Big Bear Solar**	**85.99**	**54**	P	**P**	**09 11 49.6**	**0.0**
	baz=254						
DAC	**Darwin (Calif)**	**86.01**	**52**	*e*P	**P**	**09 11 49.2**	**-0.4**
	comp=Z,28nm,1.1s						
DAC				LR	LR		
	comp=Z,5µm,21.0s						
DAC	**Darwin (Calif)**	**86.01**	**52**	*e*P	**P**	**09 11 49.2**	**-0.4**
DAC				pmax	pmax		
	comp=Z,28nm,1.1s						
DAC				MLR	MLR		
	comp=Z,5µm,21.0s						
MONP2	**Monument Peak**	**86.03**	**56**	P	**P**	**09 11 50.2**	**+0.4**
	baz=255,SNR=18						
MPMC	**Manual Prospec**	**86.03**	**52**	P	**P**	**09 11 49.8**	**+0.1**
	baz=254,SNR=18						
G05D	**Wamic, OR**	**86.04**	**43**	P	**P**	**09 11 49.3**	**+0.1**
	baz=251						
PKI	**Pulchoki**	**86.08**	**299**	*e*P	**P**	**09 11 49.9**	**-0.3**
	comp=Z,118nm,1.2s						
NV01	**Mina Array Sit**	**86.08**	**50**	*e*P	**P**	**09 11 49.5**	**-0.4**
NVAR	**Mina Array Bea**	**86.08**	**50**	P	**P**	**09 11 50.0**	**+0.1**
	comp=Z,17nm,0.9s,baz=233,slow=7.5,SNR=68						
NVAR				LR	LR	09 44 46.5	
	comp=Z,6µm,19.0s,baz=264,slow=32						
PALK	**Pallekele**	**86.08**	**278**	*e*P	**P**	**09 11 50.0**	**-0.2**
	comp=Z,28nm,0.9s						
PALK				LR	LR		
	comp=Z,1µm,21.0s						
PALK	**Pallekele**	**86.08**	**278**	*e*P	**P**	**09 11 50.0**	**-0.2**
PALK				pmax	pmax		
	comp=Z,28nm,0.9s						
PALK				MLR	MLR		
	comp=Z,1µm,21.0s						
PKIN	**Phulchoki**	**86.09**	**299**	*e*P	**P**	**09 11 49.9**	**-0.3**
	comp=Z,78nm,1.1s						
RRX	**Edison Barstow**	**86.10**	**54**	P	**P**	**09 11 49.5**	**-0.3**
	baz=254						
F05D	**White Salmon**	**86.16**	**42**	P	**P**	**09 11 50.2**	**+0.4**
	baz=251						
PFO	**Pinyon Flats O**	**86.19**	**55**	*e*P	**P**	**09 11 50.4**	**0.0**
	comp=Z,18nm,0.9s						
PFO				LR	LR		
	comp=Z,5µm,19.0s						
PFO	**Pinyon Flats O**	**86.19**	**55**	P	**P**	**09 11 50.5**	**0.0**
	baz=255,SNR=14						
PFO	**Pinyon Flats O**	**86.19**	**55**	P	**P**	**09 11 50.4**	**0.0**
	comp=Z,11nm,0.8s,baz=276,slow=4.3,SNR=24						
NV11	**Mina Array Sit**	**86.19**	**50**	*e*P	**P**	**09 11 50.3**	**0.0**
	comp=Z,3.7nm,1.3s						
NV11				LR	LR		
	comp=Z,400nm,20.0s						
XPFO	**Pion Flat**	**86.19**	**55**	*e*P	**P**	**09 11 50.4**	**0.0**
	comp=Z,21nm,1.0s						
XPFO				LR	LR		
	comp=Z,6µm,19.0s						
LON	**Longmire**	**86.22**	**41**	*e*P	**P**	**09 11 51.0**	**+0.8**
	comp=Z,60nm,1.7s						
LON				LR	LR		
	comp=Z,3µm,21.0s						
LON	**Longmire**	**86.22**	**41**	*e*P	**P**	**09 11 51.0**	**+0.8**
LON				pmax	pmax		
	comp=Z,60nm,1.7s						
LON				MLR	MLR		
	comp=Z,3µm,21.0s						
IKP	**In-Ko-Pah, Jac**	**86.22**	**56**	P	**P**	**09 11 50.9**	**+0.4**
	baz=255,SNR=8.7						
KKN	**Kakani**	**86.24**	**299**	*e*P	**P**	**09 11 50.9**	**0.0**
	comp=Z,79nm,1.0s						
DLBC	**Dease Lake**	**86.25**	**28**	*e*P	**P**	**09 11 50.3**	**+0.2**
	comp=Z,92nm,1.7s						
DLBC	**Dease Lake**	**86.25**	**28**	LR	LR	09 46 45.3	
	comp=Z,5µm,18.2s,baz=256,slow=33						
D05A	**Enumclaw**	**86.25**	**41**	*e*P	**P**	**09 11 50.8**	**+0.6**
	comp=Z,263nm,1.8s						
A04D	**Lummi Island**	**86.32**	**39**	P	**P**	**09 11 51.1**	**+0.6**
	baz=249						
DMN	**Daman**	**86.35**	**299**	*e*P	**P**	**09 11 51.5**	**0.0**
	comp=Z,196nm,1.2s						
GSC	**Goldstone, Bar**	**86.36**	**53**	*e*P	**P**	**09 11 51.0**	**-0.2**
	comp=Z,28nm,1.3s						
GSC				LR	LR		
	comp=Z,4µm,20.0s						
GSC	**Goldstone, Bar**	**86.36**	**53**	*e*P	**P**	**09 11 51.0**	**-0.2**
GSC				pmax	pmax		
	comp=Z,28nm,1.3s						
GSC				MLR	MLR		
	comp=Z,4µm,20.0s						
GSC	**Goldstone, Bar**	**86.36**	**53**	P	**P**	**09 11 51.5**	**+0.3**
	baz=254,SNR=8.6						
GRAC	**Grapevine Rang**	**86.39**	**52**	P	**P**	**09 11 51.7**	**+0.5**
	baz=254,SNR=8.6						
KVN	**Kaiserville**	**86.41**	**49**	*e*P	**P**	**09 11 51.6**	**+0.2**
	comp=Z,26nm,1.1s						
KVN				LR	LR		
	comp=Z,4µm,19.0s						
KVN	**Kaiserville**	**86.41**	**49**	*e*P	**P**	**09 11 51.6**	**+0.2**
KVN				pmax	pmax		
	comp=Z,26nm,1.1s						
KVN				MLR	MLR		
	comp=Z,4µm,19.0s						
B05A	**Bryant**	**86.55**	**40**	P	**P**	**09 11 52.3**	**+0.7**
	baz=250						
SWSC	**Sam W. Stewart**	**86.55**	**56**	P	**P**	**09 11 52.4**	**+0.3**
	baz=255,SNR=11						
HEC	**Hector,Ludlow**	**86.61**	**54**	P	**P**	**09 11 52.5**	**+0.1**
	baz=255,SNR=6.1						
FURC	**Furnace Creek,**	**86.63**	**52**	P	**P**	**09 11 52.7**	**+0.4**
	baz=254,SNR=14						
BELC	**Belle Mtn. Jos**	**86.66**	**55**	P	**P**	**09 11 53.1**	**+0.4**
	baz=255,SNR=38						
I07A	**Izee**	**86.89**	**44**	*e*P	**P**	**09 11 53.7**	**+0.1**
	comp=Z,35nm,1.1s						
I07A				LR	LR		
	comp=Z,7µm,18.0s						
SHOC	**Shoshone, Teco**	**86.94**	**53**	P	**P**	**09 11 53.9**	**0.0**
	baz=255						
BC3	**Big Chuckawall**	**87.01**	**55**	P	**P**	**09 11 54.8**	**+0.4**
	baz=255,SNR=18						
B06A	**Marblemount**	**87.02**	**40**	PFAKE		09 12 10.0	+16
B06A				LR	LR		
	comp=Z,6µm,20.0s						
TUQ	**Turquoise Moun**	**87.09**	**53**	P	**P**	**09 11 55.1**	**+0.3**
	baz=255,SNR=10						
LTY	**Liberty**	**87.12**	**41**	*e*P	**P**	**09 11 53.9**	**-0.7**
	comp=Z,25nm,1.1s						
LTY				LR	LR		
	comp=Z,3µm,19.0s						
GMRC	**Granite Mounta**	**87.13**	**54**	P	**P**	**09 11 55.1**	**+0.1**
	baz=255,SNR=17						
F07A	**Phinny Hill Vi**	**87.17**	**42**	PFAKE		09 12 10.0	+15
F07A				LR	LR		
	comp=Z,5µm,21.0s						
C06D	**Leavenworth**	**87.19**	**40**	P	**P**	**09 11 54.8**	**0.0**
	baz=251						
TPNV	**Topopah Spring**	**87.23**	**52**	*e*P	**P**	**09 11 55.4**	**-0.1**
	comp=Z,114nm,1.8s						
TPNV				LR	LR		
	comp=Z,5µm,19.0s						
TPNV	**Topopah Spring**	**87.23**	**52**	*e*P	**P**	**09 11 55.4**	**-0.1**
TPNV				pmax	pmax		
	comp=Z,114nm,1.8s						
TPNV				MLR	MLR		
	comp=Z,5µm,19.0s						
TPNV	**Topopah Spring**	**87.23**	**52**	P	**P**	**09 11 55.7**	**+0.2**
	baz=255,SNR=12						
GLA	**Glamis**	**87.36**	**56**	*e*P	**P**	**09 11 56.4**	**+0.3**
	comp=Z,49nm,1.0s						
GLA				LR	LR		
	comp=Z,3µm,19.0s						
GLA	**Glamis**	**87.36**	**56**	*e*P	**P**	**09 11 56.4**	**+0.3**
GLA				pmax	pmax		
	comp=Z,49nm,1.0s						
GLA				MLR	MLR		
	comp=Z,3µm,19.0s						
GLA	**Glamis**	**87.36**	**56**	P	**P**	**09 11 56.9**	**+0.9**
	baz=256,SNR=8.1						
IRM	**Iron Mountain**	**87.38**	**55**	P	**P**	**09 11 56.6**	**+0.5**
	baz=255,SNR=29						
J08A	**Circle Bar Ran**	**87.39**	**45**	*e*P	**P**	**09 11 56.4**	**+0.3**
	comp=Z,34nm,1.1s						
J08A				LR	LR		
	comp=Z,3µm,21.0s						
E07A	**Sunnyside**	**87.43**	**42**	*e*P	**P**	**09 11 56.3**	**+0.3**
	comp=Z,111nm,1.9s						
E07A				LR	LR		
	comp=Z,4µm,19.0s						
BMN	**Battle Mountai**	**87.45**	**48**	*e*P	**P**	**09 11 56.8**	**+0.3**
BMN				LR	LR		
	comp=Z,2µm,22.0s						
BMN	**Battle Mountai**	**87.45**	**48**	*e*P	**P**	**09 11 56.8**	**+0.3**
BMN				MLR	MLR		
	comp=Z,2µm,22.0s						
LLLB	**Lillooet**	**87.48**	**38**	*e*P	**P**	**09 11 57.6**	**+1.4**
	comp=Z,86nm,2.0s						
EPYK	**Eagle Plains**	**87.57**	**20**	*e*P	**P**	**09 11 56.7**	**+0.4**
	comp=Z,68nm,1.3s						
EPYK				LR	LR		
	comp=Z,3µm,18.0s						
EPYK	**Eagle Plains**	**87.57**	**20**	P	**P**	**09 11 56.7**	**+0.4**
	baz=236						
HAWA	**Hanford**	**87.59**	**42**	*e*P	**P**	**09 11 57.6**	**+0.9**
	comp=Z,38nm,1.3s						
G08A	**Pilot Rock**	**87.63**	**43**	*e*P	**P**	**09 11 57.4**	**+0.2**
	comp=Z,32nm,1.2s						
G08A				LR	LR		
	comp=Z,4µm,20.0s						
LDFC	**Landfair**	**87.64**	**54**	*e*P	**P**	**09 11 58.5**	**+1.1**
	comp=Z,61nm,1.0s						
LDFC				LR	LR		
	comp=Z,3µm,18.0s						
MDRS	**Chennai**	**87.65**	**284**	*e*P	**P**	**09 11 57.1**	**-0.6**
MDRS				IAmb	IAmb	09 12 04.3	
	comp=Z,81nm,0.1s						
DANN	**Dangsing**	**87.68**	**299**	*e*P	**P**	**09 11 57.0**	**-1.0**
	comp=Z,45nm,0.9s						
KOLN	**Koldanda**	**87.68**	**299**	*e*P	**P**	**09 11 57.1**	**-0.8**
	comp=Z,30nm,1.0s						
Y12C	**Blythe**	**87.78**	**55**	*e*P	**P**	**09 11 58.8**	**+0.8**
	comp=Z,42nm,1.1s						
Y12C				LR	LR		
	comp=Z,4µm,19.0s						
Y12C	**Blythe**	**87.78**	**55**	P	**P**	**09 11 58.5**	**+0.5**
	baz=256,SNR=18						
E08A	**Dider Farm, El**	**87.93**	**42**	*e*P	**P**	**09 11 58.9**	**+0.6**
	comp=Z,54nm,1.3s						
NEE2	**Needles Airpor**	**87.96**	**54**	P	**P**	**09 11 59.3**	**+0.5**
	baz=256						
SHPR	**Sheep Range**	**87.97**	**52**	*e*P	**P**	**09 11 59.6**	**+0.6**
	comp=Z,59nm,1.6s						
SHPR				LR	LR		
	comp=Z,5µm,21.0s						
R11A	**Troy Canyon, C**	**88.11**	**51**	PFAKE		09 12 10.0	+10
R11A				LR	LR		
	comp=Z,6µm,20.0s						
R11A	**Troy Canyon, C**	**88.11**	**51**	P	**P**	**09 12 00.0**	**+0.3**
	baz=255						
113A	**Mohawk Valley,**	**88.16**	**56**	*e*P	**P**	**09 11 59.7**	**-0.1**
	comp=Z,27nm,1.1s						
113A				LR	LR		
	comp=Z,4µm,18.0s						
D08A	**Wollman Farm,**	**88.19**	**42**	*e*P	**P**	**09 12 00.3**	**+0.7**
	comp=Z,34nm,1.3s						
SRIG	**Santa Rosalia**	**88.20**	**62**	PFAKE		09 12 10.0	+10
SRIG				LR	LR		
	comp=Z,5µm,19.0s						
PDMCI	**Parker Dam,Lak**	**88.23**	**55**	P	**P**	**09 12 00.7**	**+0.6**
	baz=256,SNR=9.6						
PYUN	**Piuthan**	**88.28**	**299**	*e*P	**P**	**09 11 59.5**	**-1.3**
	comp=Z,53nm,1.0s						
B08A	**Colville Reser**	**88.32**	**40**	*e*P	**P**	**09 11 59.9**	**-0.4**
	comp=Z,38nm,1.4s						
B08A				LR	LR		
	comp=Z,4µm,20.0s						
WMQ	**Urumqi**	**88.51**	**315**⇑	*i*P	**P**	**09 12 01.3**	**0.0**
WMQ				pP	sP	09 12 06.8	-0.3
WMQ				sP	pwP	09 12 09.3	-0.5
WMQ				PP	**PP**	**09 15 27.6**	**-2.1**
WMQ				SKS	**SKSac**	**09 22 26.1**	**-3.9**
WMQ				S	**SKKSac**	**09 22 42.0**	**+1.1**
WMQ				SS	**SS**	**09 28 34.1**	**-3.7**
WMQ				pmax	pmax		
	comp=Z,100nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,2µm,3.7s						
WMQ				LR	LR		
	comp=Z,4µm,20.3s						
WMQ				LR	LR		
	comp=Z,4µm,22.3s						
WMQ				LR	LR		
	comp=Z,5µm,24.1s						
WMQ	**Urumqi**	**88.51**	**315**	*e*P	**P**	**09 12 01.3**	**0.0**
	comp=Z,150nm,1.8s						
WMQ				LR	LR		
	comp=Z,3µm,21.0s						
WMQ	**Urumqi**	**88.51**	**315**	*e*P	**P**	**09 12 01.3**	**0.0**
WMQ				pmax	pmax		
	comp=Z,150nm,1.8s						
WMQ				MLR	MLR		
	comp=Z,3µm,21.0s						
E09A	**Wood Farm, Sta**	**88.54**	**42**	*e*P	**P**	**09 12 01.3**	**0.0**
	comp=Z,39nm,1.3s						
E09A				LR	LR		
	comp=Z,3µm,20.0s						
W13A	**Hualapai Mount**	**88.62**	**54**	*e*P	**P**	**09 12 02.6**	**+0.4**
	comp=Z,25nm,1.1s						
W13A				LR	LR		
	comp=Z,2µm,18.0s						
BMO	**Blue Mountains**	**88.62**	**44**	*e*P	**P**	**09 12 02.0**	**+0.1**
	comp=Z,29nm,1.3s						
BMO				LR	LR		
	comp=Z,4µm,20.0s						
BMO	**Blue Mountains**	**88.62**	**44**	*e*P	**P**	**09 12 02.0**	**+0.1**
BMO				pmax	pmax		
	comp=Z,29nm,1.3s						
BMO				MLR	MLR		
	comp=Z,4µm,20.0s						
214A	**Organ Pipe Nat**	**88.76**	**57**	P	**P**	**09 12 03.6**	**+0.9**
	baz=257,SNR=14						
C09A	**Chrisman Ranch**	**88.83**	**41**	*e*P	**P**	**09 12 03.1**	**+0.5**
	comp=Z,20nm,1.3s						
C09A				LR	LR		
	comp=Z,4µm,18.0s						
ELK	**Elko**	**88.99**	**48**	*e*P	**P**	**09 12 04.0**	**+0.1**
	comp=Z,82nm,1.9s						
ELK	**Elko**	**88.99**	**48**	*e*P	**P**	**09 12 04.0**	**+0.1**
ELK				pmax	pmax		
	comp=Z,82nm,1.9s						
F10A	**Beach Ranch, E**	**88.99**	**43**	*e*P	**P**	**09 12 03.5**	**-0.1**
	comp=Z,42nm,1.0s						
Y14A	**Wickenburg**	**89.06**	**55**	*e*P	**P**	**09 12 04.1**	**0.0**
	comp=Z,32nm,1.4s						
Y14A				LR	LR		
	comp=Z,5µm,19.0s						
SLBS	**Sierra La Lagu**	**89.46**	**66**	*e*P	**P**	**09 12 07.1**	**+0.9**
	comp=Z,23nm,0.9s						
SLBS				LR	LR		
	comp=Z,3µm,18.0s						
PSUT	**Pine Spring**	**89.47**	**51**	*e*P	**P**	**09 12 06.2**	**+0.1**
	comp=Z,21nm,1.1s						
PSUT				LR	LR		
	comp=Z,7µm,20.0s						
LCMT	**Little Creek M**	**89.58**	**52**	*e*P	**P**	**09 12 07.2**	**+0.6**
	comp=Z,28nm,1.1s						
LCMT				LR	LR		
	comp=Z,5µm,22.0s						
CCUT	**Cedar City**	**89.61**	**52**	*e*P	**P**	**09 12 07.8**	**+1.0**
	comp=Z,32nm,1.1s						
CCUT				LR	LR		
	comp=Z,6µm,20.0s						
INK	**Inuvik**	**89.65**	**19**	*e*P	**P**	**09 12 05.6**	**-0.4**
	comp=Z,13nm,1.2s						
INK				PKKP	**PKKPdf**	**09 29 38.3**	**-0.3**
INK	**Inuvik**	**89.65**	**19**	*e*P	**P**	**09 12 05.6**	**-0.4**
INK				pmax	pmax		
	comp=Z,13nm,1.2s						
INK	**Inuvik**	**89.65**	**19**	P	**P**	**09 12 05.1**	**-0.9**
	comp=Z,3.8nm,0.9s,baz=305,slow=6.9,SNR=7.7						
INK				PKKP	**PKKPdf**	**09 29 38.3**	**-0.3**
	comp=Z,1.6nm,1.0s,baz=57,slow=2.2,SNR=3.0						
INK				LR	LR	09 46 33.0	
	comp=Z,3µm,21.9s,baz=229,slow=32						
NEW	**Newport**	**89.70**	**41**	*e*P	**P**	**09 12 06.7**	**-0.1**
	comp=Z,47nm,1.6s						
NEW	**Newport**	**89.70**	**41**	*e*P	**P**	**09 12 06.7**	**-0.1**
NEW				pmax	pmax		
	comp=Z,47nm,1.6s						
NEW	**Newport**	**89.70**	**41**	P	**P**	**09 12 07.0**	**+0.2**
	baz=254						
NEW	**Newport**	**89.70**	**41**	P	**P**	**09 12 06.4**	**-0.4**
	comp=Z,4.6nm,0.9s,baz=226,slow=5.9,SNR=9.3						
NEW				LR	LR	09 47 04.9	
	comp=Z,2µm,19.4s,baz=258,slow=32						
SZCU	**Shurtz Canyon**	**89.84**	**52**	*e*P	**P**	**09 12 08.7**	**+0.8**
	comp=Z,30nm,1.1s						
SZCU				LR	LR		
	comp=Z,6µm,21.0s						
KNB	**Kanab**	**89.91**	**52**	*e*P	**P**	**09 12 08.7**	**+0.5**
	comp=Z,88nm,1.5s						
KNB				LR	LR		
	comp=Z,5µm,21.0s						
KNB	**Kanab**	**89.91**	**52**	*e*P	**P**	**09 12 08.7**	**+0.5**
KNB				pmax	pmax		
	comp=Z,88nm,1.5s						
KNB				MLR	MLR		
	comp=Z,5µm,21.0s						
TRD	**Trivandrum**	**89.95**	**279**	*e*P	**P**	**09 12 07.7**	**-0.9**
TRD				IAMs_20	IAMs_20	10 00 25.1	
	comp=Z,2µm,18.7s						
HYB	**Hyderabad**	**90.09**	**288**	*i* P	**P**	**09 12 08.5**	**-0.8**
HYB				*e*pP	**sP**	**09 12 13.5**	**-1.5**
HYB				*e*		09 23 00.0	
HYB	**Hyderabad**	**90.09**	**288**	*e*P	**P**	**09 12 08.3**	**-0.9**
HYB				IAmb	IAmb	09 12 09.1	
	comp=Z,10nm,0.8s						
U15A	**North Rim**	**90.19**	**53**	PFAKE		09 12 20.0	+10
U15A				LR	LR		
	comp=Z,3µm,18.0s						
HLID	**Hailey**	**90.29**	**46**	*e*P	**P**	**09 12 10.4**	**+0.6**
	comp=Z,28nm,1.1s						
HLID				LR	LR		
	comp=Z,3µm,20.0s						
HLID	**Hailey**	**90.29**	**46**	P	**P**	**09 12 10.6**	**+0.8**
	baz=256						
DGZ	**Jazzator, Alta**	**90.32**	**321***c*	*i*P	**P**	**09 12 08.9**	**-0.8**
DGZ				pmax	pmax		
	comp=Z,14nm,0.9s						
NGP	**Nagpur**	**90.35**	**291**	*e*P	**P**	**09 12 09.3**	**-1.1**
NGP				IAmb	IAmb	09 12 10.0	
	comp=Z,12nm,0.5s						
PKCU	**Pink Cliffs**	**90.41**	**52**	*e*P	**P**	**09 12 11.9**	**+1.2**
	comp=Z,278nm,2.0s						
PKCU				LR	LR		
	comp=Z,4µm,20.0s						
X16A	**Lo Mia Camp, P**	**90.43**	**55**	*e*P	**P**	**09 12 11.1**	**+0.4**
	comp=Z,16nm,0.8s						
X16A				LR	LR		
	comp=Z,3µm,18.0s						
TUC	**Tucson**	**90.51**	**57**	PFAKE		09 12 20.0	+9.0
TUC				LR	LR		
	comp=Z,3µm,20.0s						
TUC	**Tucson**	**90.51**	**57**	P	**P**	**09 12 11.7**	**+0.7**
	baz=258						
TCRU	**Three Creeks R**	**90.56**	**51**	*e*P	**P**	**09 12 12.0**	**+0.7**
	comp=Z,35nm,0.8s						
TCRU				LR	LR		
	comp=Z,8µm,20.0s						
MTPU	**Mount Pierson**	**90.64**	**52**	*e*P	**P**	**09 12 12.4**	**+0.6**
	comp=Z,31nm,1.0s						
MTPU				LR	LR		
	comp=Z,6µm,21.0s						
DUG	**Dugway, Tooele**	**90.65**	**49**	*e*P	**P**	**09 12 11.9**	**+0.4**
	comp=Z,16nm,1.0s						
DUG				LR	LR		
	comp=Z,3µm,18.0s						
DUG	**Dugway, Tooele**	**90.65**	**49**	*e*P	**P**	**09 12 11.9**	**+0.4**
DUG				pmax	pmax		
	comp=Z,16nm,1.0s						
DUG				MLR	MLR		
	comp=Z,3µm,18.0s						
DUG	**Dugway, Tooele**	**90.65**	**49**	P	**P**	**09 12 11.8**	**+0.4**
	baz=257						
BGU	**Big Grassy Mou**	**90.66**	**49**	*e*P	**P**	**09 12 12.0**	**+0.5**
	comp=Z,24nm,1.1s						
BGU				LR	LR		
	comp=Z,2µm,20.0s						
WUAZ	**Wupatki**	**90.72**	**54**	*e*P	**P**	**09 12 12.4**	**+0.5**
	comp=Z,26nm,1.0s						
WUAZ				LR	LR		
	comp=Z,3µm,20.0s						
WUAZ	**Wupatki**	**90.72**	**54**	P	**P**	**09 12 12.6**	**+0.6**
	baz=258						
MSU	**Marysvale**	**90.75**	**51**	*e*P	**P**	**09 12 13.1**	**+1.0**
MSU	**Marysvale**	**90.75**	**51**	*e*P	**P**	**09 12 13.1**	**+1.0**
HVU	**Hansel Valley**	**91.04**	**48**	*e*P	**P**	**09 12 13.9**	**+0.6**
	comp=Z,47nm,1.1s						
HVU	**Hansel Valley**	**91.04**	**48**	*e*P	**P**	**09 12 13.9**	**+0.6**
HVU				pmax	pmax		
	comp=Z,47nm,1.1s						
NLU	**North Lily Min**	**91.14**	**50**	*e*P	**P**	**09 12 14.5**	**+0.6**
	comp=Z,24nm,1.1s						
NLU				LR	LR		
	comp=Z,4µm,20.0s						
MSO	**Missoula**	**91.41**	**43**	*e*P	**P**	**09 12 14.3**	**-0.5**
	comp=Z,12nm,1.1s						
MSO	**Missoula**	**91.41**	**43**	P	**P**	**09 12 14.7**	**-0.2**
	baz=256						
DGAR	**Diego Garcia**	**91.45**	**262**	PFAKE		09 12 30.0	+14
DGAR				LR	LR		
	comp=Z,4µm,19.0s						
MPU	**Maple Canyon**	**91.49**	**50**	*e*P	**P**	**09 12 15.9**	**+0.4**
	comp=Z,22nm,1.1s						
MPU				LR	LR		

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      comp=Z,4µm,18.0s
CTU   Camp Tracy        91.55  49 eP        P         09 12 16.0 +0.2
      comp=Z,24nm,1.1s
CTU                                LR        LR
      comp=Z,2µm,18.0s
319A  Douglas           91.58  59 eP        P         09 12 16.8 +0.8
      comp=Z,23nm,1.1s
319A                               LR        LR
      comp=Z,3µm,20.0s
Q16A  Castle Valley     91.60  51 eP        P         09 12 16.4 +0.3
      comp=Z,29nm,1.1s
Q16A                               LR        LR
      comp=Z,6µm,19.0s
X18A  Snowflake         91.65  55  PFAKE              09 12 30.0  +14
X18A                               LR        LR
      comp=Z,3µm,20.0s
TMUT  Trail Mountain    91.66  50 eP        P         09 12 17.1 +0.7
      comp=Z,22nm,1.1s
TMUT                               LR        LR
      comp=Z,5µm,19.0s
MCMT  McKenzie Canyo    91.68  45 eP        P         09 12 16.1  -0.3
JLU   Jordanelle        91.75  49 eP        P         09 12 17.3 +0.5
      comp=Z,24nm,1.1s
JLU                                LR        LR
      comp=Z,3µm,18.0s
TCUT  Toone Canyon      91.89  49 eP        P         09 12 17.5 +0.1
      comp=Z,27nm,0.8s
W18A  Petrified Fore    91.94  55 eP        P         09 12 18.2 +0.5
      comp=Z,18nm,1.0s
W18A                               LR        LR
      comp=Z,3µm,20.0s
W18A  Petrified Fore    91.94  55  P        P         09 12 18.2 +0.5
      baz=258
DLMT  Dillon            91.98  44 eP        P         09 12 18.0 +0.4
      comp=Z,43nm,1.0s
DLMT                               LR        LR
      comp=Z,4µm,20.0s
P17A  Butcher Ranch,    92.05  50 eP        P         09 12 18.6 +0.5
      comp=Z,62nm,2.0s
P17A                               LR        LR
      comp=Z,5µm,19.0s
SYO   Syowa Base        92.05 197⇑eP        P         09 12 15.6  -1.7
SYO   Syowa Base        92.05 197⇓iP        P         09 12 17.0  -0.3
SRU   San Rafael Swe    92.14  51 eP        P         09 12 19.1 +0.6
      comp=Z,9.1nm,1.0s
SRU                                LR        LR
      comp=Z,6µm,19.0s
SRU   San Rafael Swe    92.14  51 eP        P         09 12 19.1 +0.6
SRU                                pmax      pmax
      comp=Z,9.0nm,1.0s
SRU                                MLR       MLR
      comp=Z,6µm,19.0s
LATR  Latur             92.14 288 eP        P         09 12 17.7  -0.9
LATR                               IAMs_20  IAMs_20   09 59 39.4
      comp=Z,2µm,19.2s
LRM   Limekiln Ridge    92.18  44 eP        P         09 12 18.8 +0.2
BHPL  Bhopal            92.22 293 eP        P         09 12 18.1  -1.0
BHPL                               IAmb      IAmb     09 12 18.4
      comp=Z,5.3nm,0.5s
AHID  Auburn Hatcher    92.47  47  PFAKE              09 12 30.0  +10
AHID                               LR        LR
      comp=Z,2µm,20.0s
QLMT  Earthquake Lak    92.67  45 eP        P         09 12 21.7 +0.8
BOZ   Bozeman (W)       92.69  44 eP        P         09 12 21.3 +0.4
      comp=Z,30nm,1.1s
BOZ                                LR        LR
      comp=Z,5µm,19.0s
BOZ   Bozeman (W)       92.69  44  P        P         09 12 21.3 +0.4
      baz=258
FXWY  Fox Creek         92.70  46 eP        P         09 12 21.4 +0.3
      comp=Z,12nm,0.8s
REDW  Red Top Meadow    92.77  47 eP        P         09 12 21.8 +0.4
      comp=Z,37nm,1.5s
REDW                               LR        LR
      comp=Z,3µm,18.0s
HRY   Holter Researc    92.80  43 eP        P         09 12 21.7 +0.4
YHB   Horse Butte       92.82  45 eP        P         09 12 22.4 +0.9
      comp=Z,22nm,1.1s
YHB                                LR        LR
      comp=Z,6µm,18.0s
SNOW  Snow King Moun    92.86  46 eP        P         09 12 21.6  -0.2
      comp=Z,90nm,1.9s
SNOW                               LR        LR
      comp=Z,3µm,19.0s
MOOW  Moose Ponds       92.92  46 eP        P         09 12 22.3 +0.2
      comp=Z,36nm,1.8s
MOOW                               LR        LR
      comp=Z,3µm,20.0s
MK01  Makanchi Array    92.93 317 eP        P         09 12 21.7   0.0
MK31  Makanchi Array    92.94 317 eP        P         09 12 21.8   0.0
      comp=Z,33nm,1.0s
MK32  Makanchi Array    92.94 317 eP        P         09 12 21.6  -0.2
MKAR  Makanchi Array    92.94 317 eP        P         09 12 21.5  -0.3
      comp=Z,193nm,1.0s
MKAR                               PKKP      PKKPdf   09 29 30.6  -1.6
MKAR  Makanchi Array    92.94 317  P        P         09 12 21.6  -0.2
      comp=Z,19nm,0.8s,baz=98,slow=6.1,SNR=170
MKAR                               PKKP      PKKPdf   09 29 30.6  -1.6
      comp=Z,4.0nm,0.7s,baz=279,slow=2.7,SNR=34
MKAR                               LR        LR       09 56 54.8
      comp=Z,874nm,18.1s,baz=98,slow=37
DDI   Dehra Dun         92.95 300 eP        P         09 12 20.9  -1.4
DDI                                IAMs_20  IAMs_20   10 21 04.4
      comp=Z,1µm,12.6s
YMR   Madison River     92.96  45 eP        P         09 12 23.7 +1.5
      comp=Z,21nm,1.1s
YMR                                LR        LR
      comp=Z,5µm,18.0s
ZAA0  Zalesovo Array    92.98 324 eP        P         09 12 20.8  -0.9
      comp=Z,42nm,1.1s
ZAA0                               LR        LR
      comp=Z,2µm,19.0s
ZALV  Zalesovo Beam     92.98 324  P        P         09 12 20.8  -1.0
      comp=Z,23nm,1.0s,baz=108,slow=4.8,SNR=65
ZALV                               PKKP      PKKPdf   09 29 32.0  -0.3
      comp=Z,1.4nm,0.6s,baz=277,slow=3.1,SNR=5.0
ZALV                               LR        LR       09 51 58.4
      comp=Z,2µm,21.8s,baz=86,slow=34
ZAA1  Zalesovo Array    92.98 324 eP        P         09 12 20.8  -1.0
YPP   Pitchstone Pla    92.99  46  PFAKE              09 12 30.0 +7.5
YPP                                LR        LR
      comp=Z,4µm,18.0s
LOHW  Long Hollow       93.00  46 eP        P         09 12 22.7 +0.3
      comp=Z,14nm,1.3s
LOHW                               LR        LR
      comp=Z,3µm,18.0s
YFT   Old Faithful      93.00  45 eP        P         09 12 24.2 +1.7
      comp=Z,14nm,1.0s
YFT                                LR        LR
      comp=Z,6µm,20.0s
FLWY  Flagg Ranch       93.03  46 eP        P         09 12 23.1 +0.6
      comp=Z,14nm,0.9s
FLWY                               LR        LR
      comp=Z,3µm,20.0s
PV05  Paradox Valley    93.03  52 eP        P         09 12 24.6 +1.9
      comp=Z,55nm,1.9s
PV05                               LR        LR
      comp=Z,4µm,21.0s
121A  Cookes Peak, D    93.04  58  P        P         09 12 23.3 +0.5
      baz=259
YHH   Holmes Hill       93.06  45 eP        P         09 12 24.1 +1.3
      comp=Z,12nm,1.2s
YHH                                LR        LR
      comp=Z,6µm,18.0s
PV09  Paradox Valley    93.08  52 eP        P         09 12 24.3 +1.3
PV10  Paradox Valley    93.13  52 eP        P         09 12 25.2 +2.0
      comp=Z,19nm,0.9s
PV10                               LR        LR
      comp=Z,6µm,21.0s
PV14  Lion Creek, Pa    93.14  52 eP        P         09 12 23.2   0.0
      comp=Z,17nm,0.8s
PV14                               LR        LR
      comp=Z,7µm,22.0s
MAKZ  Makanchi          93.15 317 eP        P         09 12 22.7  -0.1
      comp=Z,65nm,1.1s
MAKZ                               LR        LR
      comp=Z,2µm,22.0s
MAKZ  Makanchi          93.15 317 eP        P         09 12 22.7  -0.1
MAKZ                               pmax      pmax
      comp=Z,65nm,1.1s
MAKZ                               MLR       MLR
      comp=Z,2µm,22.0s
PV19  Morning Glory     93.16  52 eP        P         09 12 23.5 +0.2
      comp=Z,14nm,0.9s
PV19                               LR        LR
      comp=Z,5µm,20.0s
PV23  Carpenter Ridg    93.17  52 eP        P         09 12 23.9 +0.5
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      comp=Z,25nm,0.8s
YNR   Norris Junctio    93.17  45 eP        P         09 12 25.9 +2.7
      comp=Z,21nm,1.3s
YNR                                LR        LR
      comp=Z,6µm,18.0s
PV17  East Wray Mesa    93.17  52 eP        P         09 12 24.6 +1.3
      comp=Z,12nm,0.9s
PV17                               LR        LR
      comp=Z,6µm,20.0s
H17A  Grant Village     93.18  46 eP        P         09 12 24.5 +1.3
      comp=Z,12nm,0.8s
H17A                               LR        LR
      comp=Z,5µm,19.0s
H17A  Grant Village     93.18  46  P        P         09 12 24.5 +1.3
      baz=258
PV20  West Nyswonger    93.18  52 eP        P         09 12 23.3   0.0
      comp=Z,14nm,0.9s
PV20                               LR        LR
      comp=Z,5µm,21.0s
PV16  Nyswonger Mesa    93.21  52 eP        P         09 12 23.3  -0.2
      comp=Z,62nm,2.0s
PV16                               LR        LR
      comp=Z,5µm,20.0s
PV21  Cone Mtn., Par    93.21  52 eP        P         09 12 22.8  -0.8
      comp=Z,44nm,1.8s
PV21                               LR        LR
      comp=Z,7µm,20.0s
PV04  Paradox Valley    93.24  52 eP        P         09 12 23.6   0.0
      comp=Z,17nm,0.8s
PV04                               LR        LR
      comp=Z,7µm,20.0s
PV11  David Mesa, Pa    93.24  52 eP        P         09 12 24.3 +0.6
      comp=Z,46nm,1.7s
PV11                               LR        LR
      comp=Z,6µm,19.0s
PV03  Paradox Valley    93.25  52 eP        P         09 12 24.1 +0.4
      comp=Z,26nm,1.7s
PV03                               LR        LR
      comp=Z,4µm,20.0s
PV13  Radium Mtn., P    93.26  52 eP        P         09 12 23.8   0.0
      comp=Z,11nm,1.2s
PV13                               LR        LR
      comp=Z,4µm,20.0s
PV12  Saucer Basin,     93.30  52 eP        P         09 12 24.6 +0.6
      comp=Z,16nm,0.8s
PV12                               LR        LR
      comp=Z,7µm,19.0s
MVCO  Mesa Verde        93.33  53 eP        P         09 12 24.7 +0.6
      comp=Z,43nm,1.8s
MVCO                               LR        LR
      comp=Z,3µm,18.0s
MVCO  Mesa Verde        93.33  53  P        P         09 12 24.5 +0.4
      baz=259
PV02  Paradox Valley    93.33  52  PFAKE              09 12 40.0  +16
PV02                               LR        LR
      comp=Z,5µm,22.0s
LKWY  Lake              93.33  45 eP        P         09 12 25.4 +1.4
      comp=Z,15nm,1.4s
LKWY                               LR        LR
      comp=Z,6µm,19.0s
LKWY  Lake              93.33  45 eP        P         09 12 25.4 +1.4
LKWY                               pmax      pmax
      comp=Z,15nm,1.4s
LKWY                               MLR       MLR
      comp=Z,6µm,19.0s
PV07  Paradox Valley    93.44  52 eP        P         09 12 25.9 +1.3
      comp=Z,12nm,0.9s
PV07                               LR        LR
      comp=Z,6µm,20.0s
PV01  Paradox Valley    93.45  52 eP        P         09 12 25.4 +0.7
      comp=Z,28nm,1.7s
PV01                               LR        LR
      comp=Z,3µm,19.0s
PV15  Paradox Valley    93.55  52  PFAKE              09 12 40.0  +15
PV15                               LR        LR
      comp=Z,5µm,21.0s
BW06  Boulder Array     93.58  47 eP        P         09 12 24.9  -0.3
BW06                               LR        LR
      comp=Z,2µm,19.0s
BW06  Boulder Array     93.58  47  P        P         09 12 24.8  -0.3
      baz=259
PD31  Pinedale Array    93.58  47 eP        P         09 12 24.8  -0.4
      comp=Z,12nm,1.3s
PDAR  Pinedale Array    93.58  47  P        P         09 12 24.7  -0.4
      comp=Z,5.6nm,0.8s,baz=250,slow=2.6,SNR=39
PDAR                               PP        PP       09 16 08.3  -1.8
      comp=Z,0.9nm,1.0s,baz=242,slow=5.8,SNR=4.0
PDAR                               PKKP      PKKPdf   09 29 29.2  -2.0
      comp=Z,0.5nm,0.7s,baz=90,slow=7.4,SNR=4.6
PDAR                               LR        LR       09 47 35.3
      comp=Z,2µm,21.8s,baz=268,slow=31
MNCI  Minicoy           93.71 278  PFAKE              09 12 40.0  +14
MNCI                               LR        LR
      comp=Z,2µm,19.0s
MNCY  Minicoy           93.73 278 eP        P         09 12 24.9  -1.3
SMLA  Simla             93.85 301 eP        P         09 12 26.7 +0.4
SMLA                               IAMs_20  IAMs_20   09 54 57.1
      comp=Z,1µm,19.3s
HPIG                    93.87  63  PFAKE              09 12 40.0  +13
HPIG                               LR        LR
      comp=Z,5µm,20.0s
Y22D  IRIS PASSCAL I    94.03  56  PFAKE              09 12 40.0  +13
Y22D                               LR        LR
      comp=Z,4µm,18.0s
O20A  White River Ci    94.06  50 eP        P         09 12 27.8 +0.4
      comp=Z,32nm,1.5s
O20A                               LR        LR
      comp=Z,5µm,20.0s
O20A  White River Ci    94.06  50  P        P         09 12 27.3   0.0
      baz=260
GCMT  Greycliff         94.08  44 eP        P         09 12 28.0 +0.7
NVS   Novosibirsk       94.09 325⇑iP        P         09 12 26.4  -0.4
NVS                                pmax      pmax
      comp=N,24nm,2.0s
NVS                                pmax      pmax
      comp=E,52nm,2.0s
NVS                                pmax      pmax
      comp=Z,92nm,2.0s
GOA   Goa               94.21 285 eP        P         09 12 27.8  -0.5
GOA                                IAMs_20  IAMs_20   09 59 56.1
      comp=Z,1µm,20.5s
RLMT  Red Lodge         94.23  45  PFAKE              09 12 40.0  +12
RLMT                               LR        LR
      comp=Z,4µm,18.0s
EGMT  Eagleton          94.44  42 eP        P         09 12 29.0 +0.2
      comp=Z,29nm,1.1s
EGMT  Eagleton          94.44  42  P        P         09 12 29.0 +0.2
      baz=259
ANMO  Albuquerque       94.56  55 eP        P         09 12 29.8   0.0
      comp=Z,6.8nm,1.1s
ANMO                               LR        LR
      comp=Z,2µm,19.0s
ANMO  Albuquerque       94.56  55ceP        P         09 12 29.5  -0.3
ANMO                               pmax      pmax
      comp=Z,6.0nm,1.0s
ANMO  Albuquerque       94.56  55  P        P         09 12 29.5  -0.3
      baz=260
POO   Poona             94.70 288 eP        P         09 12 29.1  -1.5
S22A  4UR Ranch, Cre    94.73  53 eP        P         09 12 31.4 +0.8
S22A                               LR        LR
      comp=Z,4µm,18.0s
S22A  4UR Ranch, Cre    94.73  53  P        P         09 12 31.1 +0.5
      baz=260
DHRM  DHARAMSHALA       94.77 302 eP        P         09 12 30.1  -0.8
DHRM                               IAmb      IAmb     09 12 35.6
      comp=Z,44nm,1.4s
YKA   Yellowknife Ar    94.80  27  P        P         09 12 28.5  -1.4
      comp=Z,3.8nm,0.7s,baz=256,slow=4.6,SNR=69
YKA                                PP        PP       09 16 14.0  -4.7
      comp=Z,0.9nm,0.9s,baz=255,slow=7.9,SNR=5.0
YKA                                PKKP      PKKPdf   09 29 27.1  -2.1
      comp=Z,0.4nm,0.7s,baz=84,slow=2.6,SNR=4.2
YKA                                LR        LR       09 52 12.8
      comp=Z,402nm,18.1s,baz=261,slow=34
YKB5  Yellowknife Ar    94.80  27 eP        P         09 12 27.9  -2.0
YKW3  Yellowknife Ar    94.81  27 eP        P         09 12 28.6  -1.4
      comp=Z,12nm,1.1s
PRZ   Przheval'sk       94.84 312 eP        P         09 12 31.7 +0.8
      comp=Z,43nm,1.3s
PRZ                                LR        LR
      comp=Z,2µm,20.0s
PRZ   Przheval'sk       94.84 312 eP        P         09 12 31.7 +0.8
PRZ                                pmax      pmax
      comp=Z,43nm,1.3s
PRZ                                MLR       MLR
      comp=Z,2µm,20.0s
SMCO  Snowmass          94.86  51 eP        P         09 12 32.7 +1.4
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      comp=Z,24nm,1.8s
SMCO                               LR        LR
      comp=Z,7µm,20.0s
MNTX  Cornudas Mount    94.91  59 eP        P         09 12 30.9  -0.3
      comp=Z,20nm,1.8s
MNTX                               LR        LR
      comp=Z,4µm,19.0s
MNTX  Cornudas Mount    94.91  59  P        P         09 12 31.2   0.0
      baz=261
RWWY  Rawlins           95.10  49  PFAKE              09 12 40.0 +7.8
RWWY                               LR        LR
      comp=Z,3µm,18.0s
TARG  Taragay, Kyrgy    95.15 311 eP        P         09 12 32.2  -0.4
      comp=Z,25nm,1.2s
NRIK  Noril'sk          95.59 340  P        P         09 12 32.6  -0.8
      comp=Z,9.3nm,0.8s,baz=117,slow=5.9,SNR=16
NRIK                               LR        LR       09 52 32.5
      comp=Z,3µm,21.9s,baz=106,slow=34
KDJ   Kajisay           95.67 312 eP        P         09 12 35.1 +0.4
      comp=Z,51nm,1.8s
KDJ   Kajisay           95.67 312  P        P         09 12 35.5 +0.8
K22A  Casper            95.76  48  PFAKE              09 12 50.0  +15
K22A                               LR        LR
      comp=Z,2µm,18.0s
K22A  Casper            95.76  48  P        P         09 12 35.0   0.0
      baz=261
SDCO  Great Sand Dun    95.77  53  PFAKE              09 12 50.0  +15
SDCO                               LR        LR
      comp=Z,3µm,18.0s
SDCO  Great Sand Dun    95.77  53  P        P         09 12 35.6 +0.2
      baz=261
N23A  Red Feather La    95.92  50  PFAKE              09 12 50.0  +14
N23A                               LR        LR
      comp=Z,4µm,18.0s
N23A  Red Feather La    95.92  50  P        P         09 12 36.3 +0.4
      baz=261
TX31  Lajitas Ar. Si    96.00  61 eP        P         09 12 36.6 +0.2
TXAR  Lajitas Array     96.00  61  P        P         09 12 36.4   0.0
      comp=Z,2.8nm,0.7s,baz=226,slow=5.6,SNR=28
TXAR                               PP        PP       09 16 25.0  -4.1
      comp=Z,0.5nm,0.9s,baz=246,slow=12,SNR=3.4
TXAR                               PKKP      PKKPbc   09 29 25.3 +0.3
      comp=Z,0.4nm,0.8s,baz=114,slow=5.7,SNR=3.7
TXAR                               LR        LR       09 49 44.0
      comp=Z,4µm,19.4s,baz=0.0,slow=32
ISCO  Idaho Springs     96.00  51  PFAKE              09 12 50.0  +14
ISCO                               LR        LR
      comp=Z,6µm,19.0s
ISCO  Idaho Springs     96.00  51  P        P         09 12 36.6 +0.2
      baz=261
AAA   Alma-Ata          96.03 313  P        P         09 12 36.2   0.0
AAA                                pmax      pmax
      comp=Z,200nm,5.1s
AAA                                MLR       MLR
      comp=Z,1µm,19.0s
KURK  Kurchatov         96.06 320 eP        P         09 12 34.9  -1.1
      comp=Z,56nm,1.5s
KURK                               PKKPbc    PKKPbc   09 29 23.7  -1.7
KURK                               LR        LR
      comp=Z,4µm,18.0s
KURK  Kurchatov         96.06 320 eP        P         09 12 34.9  -1.1
KURK                               pmax      pmax
      comp=Z,56nm,1.5s
KURK                               MLR       MLR
      comp=Z,4µm,18.0s
KURBB Kurchatov Arra    96.10 320  PKKPbc   PKKPbc    09 29 23.7  -1.6
      comp=Z,1.8nm,0.7s,baz=281,slow=3.0,SNR=8.9
KSH   Kashi             96.17 309  P        P         09 12 38.0 +1.0
KSH                                pP        sP       09 12 42.4  -0.3
KSH                                PP        PP       09 16 38.1 +7.9
KSH                                SKS       SKSac    09 23 14.0 +0.7
KSH                                S         ScS      09 23 57.8 +1.2
KSH                                sS        sS       09 24 03.9 +0.5
KSH                                SS        SS       09 30 34.3 +6.1
KSH                                pmax      pmax
      comp=Z,630nm,4.5s
KSH                                LR        LR
      comp=Z,510nm,7.4s
KSH                                LR        LR
      comp=Z,790nm,10.9s
KSH                                LR        LR
      comp=Z,2µm,17.9s
Q24A  Divide            96.23  52  PFAKE              09 12 50.0  +13
Q24A                               LR        LR
      comp=Z,5µm,20.0s
Q24A  Divide            96.23  52  P        P         09 12 37.6 +0.1
      baz=261
PMSA  Palmer Station    96.24 161  PFAKE              09 12 50.0  +13
PMSA                               LR        LR
      comp=Z,2µm,21.0s
PHWY  Pilot Hill        96.34  49  PFAKE              09 12 50.0  +12
PHWY                               LR        LR
      comp=Z,3µm,20.0s
T25A  Trinidad          96.54  54  PFAKE              09 12 50.0  +11
T25A                               LR        LR
      comp=Z,3µm,19.0s
T25A  Trinidad          96.54  54  P        P         09 12 38.5  -0.3
      baz=262
LAO   LASA Array        96.59  44 eP        P         09 12 39.1 +0.6
      comp=Z,40nm,1.4s
LAO   LASA Array        96.59  44  P        P         09 12 38.2  -0.4
      baz=262
NVL   N'lazarevskaya    96.81 189⇓iP        P         09 12 38.5  -0.5
NVL                               eS        SKSac     09 23 12.5  -2.7
NVL                                pmax      pmax
      comp=Z,26nm,1.3s
NVL                                MLR       MLR
      comp=Z,7µm,21.0s
MSTX  Muleshoe          97.42  57 eP        P         09 12 42.2  -0.5
MSTX                               LR        LR
      comp=Z,2µm,20.0s
MSTX  Muleshoe          97.42  57  P        P         09 12 41.7  -1.0
      baz=262
SNAA  Sanae             97.50 184  P        Pdif      09 12 42.3   0.0
SNAA  Sanae             97.50 184 eP        Pdif      09 12 42.2  -0.1
      comp=Z,45nm,0.9s
SNAA                               LR        LR
      comp=Z,6µm,19.0s
SNAA  Sanae             97.50 184 eP        Pdif      09 12 42.2  -0.1
SNAA                               pmax      pmax
      comp=Z,45nm,0.9s
SNAA                               MLR       MLR
      comp=Z,6µm,19.0s
FRU1  Bishkek           97.64 312  PFAKE              09 12 50.0 +6.5
FRU1                               LR        LR
      comp=Z,2µm,22.0s
FRU   Bishkek           97.65 312 eP        Pdif      09 12 43.5   0.0
FRU                               e                   09 12 52.0
FRU                               e                   09 16 41.0
FRU                               e                   09 23 21.0
AAK   Ala-Archa         97.71 312 eP        P         09 12 43.1  -0.8
      comp=Z,13nm,1.6s
AAK                                PKKPbc    PKKPbc   09 29 19.4  -1.5
AAK                                LR        LR
      comp=Z,2µm,18.0s
AAK   Ala-Archa         97.71 312 eP        P         09 12 43.1  -0.8
AAK                                pmax      pmax
      comp=Z,13nm,1.6s
AAK                                MLR       MLR
      comp=Z,2µm,18.0s
AAK   Ala-Archa         97.71 312  PKKPbc   PKKPbc    09 29 19.4  -1.5
      comp=Z,0.8nm,0.5s,baz=226,slow=3.2,SNR=6.3
RSSD  Black Hills       97.77  47  PFAKE              09 13 00.0  +16
RSSD                               LR        LR
      comp=Z,3µm,20.0s
RSSD  Black Hills       97.77  47  P        P         09 12 43.5  -0.7
      baz=263
DGMT  Dagmar            98.18  42  PFAKE              09 13 00.0  +14
DGMT                               LR        LR
      comp=Z,3µm,18.0s
DGMT  Dagmar            98.18  42  P        P         09 12 44.4  -1.3
      baz=263
KSCO  Kaye Shedlock'    98.18  52  PFAKE              09 13 00.0  +14
KSCO                               LR        LR
      comp=Z,4µm,21.0s
VNA3  Neumayer Olymp    98.24 182  P        P         09 12 45.0  -0.5
AMTX  Amarillo          98.43  56  PFAKE              09 13 00.0  +13
AMTX                               LR        LR
      comp=Z,3µm,19.0s
AMTX  Amarillo          98.43  56  Pdiff    P         09 12 45.9  -1.3
      baz=263
VNA2  Neumayer--Watz    98.48 182  P        P         09 12 46.2  -0.4
      baz=182,slow=3.5
UNM   Universidad Na    98.59  72  PFAKE              09 13 00.0  +12
UNM                                LR        LR
      comp=Z,4µm,22.0s
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ARSB	Arslanbob	98.67	310	*e*P	P	09 12 48.0	-0.3
VNA1	Neumayer--Stat	98.79	182	P	Pdif	09 12 48.0	+0.1
OGNE	Ogallala	98.86	50	PFAKE		09 13 00.0	+11
OGNE				LR	LR		
	comp=Z,4µm,18.0s						
LNIG	Linares	99.08	66	PFAKE		09 13 00.0	+10
LNIG				LR	LR		
	comp=Z,3µm,20.0s						
BHJ	Bhuj	99.28	292	*e*P	Pdif	09 12 49.8	-1.3
BHJ				IAmb	IAmb	09 12 57.1	
	comp=Z,195nm,2.1s						
JCT	Junction City	99.48	61	PFAKE		09 13 00.0	+8.1
JCT				LR	LR		
	comp=Z,6µm,19.0s						
JCT	Junction City	99.48	61	Pdiff	Pdif	09 12 50.4	-1.5
	baz=263						
833A	Chaparral WMA,	99.58	63	PFAKE		09 13 00.0	+7.7
833A				LR	LR		
	comp=Z,6µm,19.0s						
ABTX	Abilene, Hawle	99.86	59	PFAKE		09 13 00.0	+6.5
ABTX				LR	LR		
	comp=Z,5µm,19.0s						
ABTX	Abilene, Hawle	99.86	59	Pdiff	Pdif	09 12 52.6	-0.9
	baz=264						
FFC	Flin Flon	100.15	36	*e*Pdif	Pdif	09 12 53.4	-0.8
FFC				LR	LR		
	comp=Z,8µm,21.0s						
FFC	Flin Flon	100.15	36	*e*P	Pdif	09 12 53.4	-0.8
FFC				MLR	MLR		
	comp=Z,8µm,21.0s						
CBKS	Cedar Bluff	100.40	52	PFAKE		09 13 10.0	+14
CBKS				LR	LR		
	comp=Z,2µm,20.0s						
GO10	Punta Arenas	100.46	149	PFAKE		09 13 10.0	+14
GO10				LR	LR		
	comp=Z,4µm,18.0s						
GAR	Garm	100.47	308	PFAKE		09 13 10.0	+14
GAR				LR	LR		
	comp=Z,6µm,20.0s						
KK31	Karatay Array	100.67	312	*e*Pdif	Pdif	09 12 56.1	-0.8
KK31	Karatay Array	100.67	312	*e*P	Pdif	09 12 56.1	-0.8
KKAR	Karatay Array	100.67	312	*e*Pdif	Pdif	09 12 56.1	-0.8
KKAR	Karatay Array	100.67	312	*e*P	Pdif	09 12 56.1	-0.8
U32A	Winter Ranch,	100.76	55	PFAKE		09 13 10.0	+13
U32A				LR	LR		
	comp=Z,2µm,20.0s						
WMOK	Wichita Mounta	100.79	57	PFAKE		09 13 10.0	+12
WMOK				LR	LR		
	comp=Z,3µm,19.0s						
WMOK	Wichita Mounta	100.79	57	Pdiff	Pdif	09 12 57.2	-0.4
	baz=264						
GO09	Cerro Castillo	100.82	147	PFAKE		09 13 10.0	+13
GO09				LR	LR		
	comp=Z,2µm,18.0s						
KBL	Kabul	101.08	303	PFAKE		09 13 10.0	+11
KBL				LR	LR		
	comp=Z,2µm,21.0s						
LVIG	Laguna Verde	101.22	72	PFAKE		09 13 10.0	+10
LVIG				LR	LR		
	comp=Z,2µm,19.0s						
CHGR	Chuyangaron	101.34	307	PFAKE		09 13 10.0	+10
CHGR				LR	LR		
	comp=Z,6µm,21.0s						
435B	Jarrell	101.41	61	PFAKE		09 13 10.0	+10
435B				LR	LR		
	comp=Z,6µm,19.0s						
BRVK	Borovoye	101.44	322	*e*Pdif	Pdif	09 12 59.5	-0.5
BRVK				LR	LR		
	comp=Z,5µm,22.0s						
BRVK	Borovoye	101.44	322	*e*P	Pdif	09 12 59.5	-0.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WHTX	Lake Whitney,	101.63	59	PFAKE		09 13 10.0	+8.6
WHTX				LR	LR		
	comp=Z,4µm,20.0s						
BGNE	Belgrade	101.82	50	PFAKE		09 13 10.0	+7.9
BGNE				LR	LR		
	comp=Z,3µm,18.0s						
RES	Resolute Bay	102.77	16	PFAKE		09 13 20.0	+15
RES				LR	LR		
	comp=Z,4µm,20.0s						
HKT	Hockley	102.84	62	PFAKE		09 13 20.0	+13
HKT				LR	LR		
	comp=Z,5µm,20.0s						
KSU1	Kansas State U	102.86	52	PFAKE		09 13 20.0	+13
KSU1				LR	LR		
	comp=Z,4µm,19.0s						
ECSD	EROS Data Cent	103.08	47	PFAKE		09 13 20.0	+12
ECSD				LR	LR		
	comp=Z,3µm,21.0s						
TUL1	Leonard	103.32	56	PFAKE		09 13 20.0	+11
TUL1				LR	LR		
	comp=Z,2µm,20.0s						
X37A	Clayton	103.58	57	PFAKE		09 13 20.0	+10
X37A				LR	LR		
	comp=Z,3µm,20.0s						
AGMN	Agassiz Nation	103.71	43	PFAKE		09 13 20.0	+10
AGMN				LR	LR		
	comp=Z,2µm,19.0s						
ULM	Lac du Bonnet	103.72	41	PP	PP	09 17 26.5	-0.5
	comp=Z,1.8nm,0.5s,baz=322,slow=3.5,SNR=4.2						
NATX	Nacogdoches	103.99	60	PFAKE		09 13 20.0	+8.1
NATX				LR	LR		
	comp=Z,5µm,18.0s						
FCC	Fort Churchill	104.52	32	PFAKE		09 13 30.0	+16
FCC				LR	LR		
	comp=Z,4µm,20.0s						
HHAR	Hobbs	104.83	55	PFAKE		09 13 30.0	+14
HHAR				LR	LR		
	comp=Z,3µm,20.0s						
CCIG	Comitan	104.84	76	PFAKE		09 13 30.0	+14
CCIG				LR	LR		
	comp=Z,2µm,18.0s						
W39A	Magazine	104.91	56	PFAKE		09 13 30.0	+14
W39A				LR	LR		
	comp=Z,3µm,18.0s						
MIAR	Mount Ida	105.05	57	PFAKE		09 17 40.0	+8.7
MIAR				LR	LR		
	comp=Z,4µm,18.0s						
WLAR	White Oak Lake	105.40	58	PFAKE		09 17 40.0	+8.0
WLAR				LR	LR		
	comp=Z,2µm,18.0s						
SCIA	State Center	105.53	49	PFAKE		09 17 40.0	+8.0
SCIA				LR	LR		
	comp=Z,3µm,20.0s						
Z41A	Richland Creek	105.64	58	PFAKE		09 17 40.0	+7.6
Z41A				LR	LR		
	comp=Z,6µm,19.0s						
X40A	Basin Creek Fa	105.66	57	PFAKE		09 17 40.0	+7.6
X40A				LR	LR		
	comp=Z,3µm,19.0s						
SPMN	Marine on St.	105.82	46	PFAKE		09 17 40.0	+7.6
SPMN				LR	LR		
	comp=Z,4µm,22.0s						
UALR	University of	106.08	57	PFAKE		09 17 40.0	+6.8
UALR				LR	LR		
	comp=Z,4µm,20.0s						
WHAR	Wooly Hollow	106.14	56	PFAKE		09 17 40.0	+6.7
WHAR				LR	LR		
	comp=Z,4µm,21.0s						
W41B	Gary Mavity, V	106.17	56	PFAKE		09 17 50.0	+17
W41B				LR	LR		
	comp=Z,5µm,20.0s						
F38A	Pierce - Schro	106.46	45	PKiKP	PKiKP	09 17 32.5	-1.0
	baz=272						
K39A	Oelwein	106.52	49	PKiKP	PKiKP	09 17 32.4	-1.4
	baz=271						
CCAR	Cane Creek	106.52	58	PFAKE		09 17 50.0	+16
CCAR				LR	LR		
	comp=Z,3µm,20.0s						
EYMN	Ely	106.64	43	PFAKE		09 17 50.0	+16
EYMN				LR	LR		
	comp=Z,4µm,20.0s						
E38A	The Farm, Brul	106.66	44	PFAKE		09 17 50.0	+16
E38A				LR	LR		
	comp=Z,4µm,18.0s						
R41A	Rosebud	106.92	53	PKiKP	PKiKP	09 17 33.4	-1.3
	baz=270						
L40A	Anamosa	107.02	49	PFAKE		09 17 50.0	+15
L40A				LR	LR		
	comp=Z,4µm,22.0s						
CCM	Cathedral Cave	107.03	53	PFAKE		09 17 50.0	+15
CCM				LR	LR		
	comp=Z,3µm,20.0s						
T42A	Van Buren	107.14	54	PFAKE		09 17 50.0	+15
T42A				LR	LR		
	comp=Z,2µm,21.0s						
X43A	Marvell	107.28	57	PFAKE		09 17 50.0	+15
X43A				LR	LR		
	comp=Z,3µm,18.0s						
N41A	Harden Midland	107.32	51	PFAKE		09 17 50.0	+15
N41A				LR	LR		
	comp=Z,6µm,22.0s						
GO06	Curarrehue	107.44	137	PFAKE		09 17 50.0	+14
GO06				LR	LR		
	comp=Z,3µm,18.0s						
PLCA	Paso Flores	107.45	139	PP	PKiKP	09 17 52.6	+17
	comp=Z,1.5nm,0.9s,baz=241,slow=12,SNR=3.3						
HBAR	Harrisburg	107.48	56	PFAKE		09 17 50.0	+14
HBAR				LR	LR		
	comp=Z,4µm,19.0s						
VBMS	Vicksburg	107.53	60	PFAKE		09 17 50.0	+14
VBMS				LR	LR		
	comp=Z,4µm,18.0s						
EFI	East Falkland	107.54	153	PFAKE		09 17 50.0	+15
EFI				LR	LR		
	comp=Z,2µm,21.0s						
MYIG	Mrida	107.58	71	PFAKE		09 17 50.0	+14
MYIG				LR	LR		
	comp=Z,2µm,20.0s						
G40A	Rib Lake	107.66	46	PFAKE		09 17 50.0	+14
G40A				LR	LR		
	comp=Z,4µm,20.0s						
PBMO	Poplar Bluff	107.67	55	PFAKE		09 17 50.0	+14
PBMO				LR	LR		
	comp=Z,4µm,19.0s						
FVM	French Village	107.67	53	PFAKE		09 17 50.0	+14
FVM				LR	LR		
	comp=Z,2µm,20.0s						
JFWS	Jewell Farm	107.72	48	PFAKE		09 17 50.0	+14
JFWS				LR	LR		
	comp=Z,3µm,19.0s						
JFWS	Jewell Farm	107.72	48	PKiKP	PKiKP	09 17 36.2	+0.2
	baz=272						
P42A	Winchester	107.72	52	PFAKE		09 17 50.0	+14
P42A				LR	LR		
	comp=Z,5µm,19.0s						
T43A	Greenville	107.78	54	PKiKP	PKiKP	09 17 35.2	-1.1
	baz=270						
E40A	Wakefield	107.81	45	PKiKP	PKiKP	09 17 35.5	-0.6
	baz=273						
SLM	Saint Louis	107.82	53	PFAKE		09 17 50.0	+14
SLM				LR	LR		
	comp=Z,4µm,19.0s						
I41A	Arkdale	107.95	47	PFAKE		09 17 50.0	+14
I41A				LR	LR		
	comp=Z,3µm,20.0s						
GNAR	Gosnell	108.00	56	PFAKE		09 17 50.0	+13
GNAR				LR	LR		
	comp=Z,3µm,19.0s						
ARU	Arti	108.06	326	PFAKE		09 17 50.0	+14
ARU				LR	LR		
	comp=Z,3µm,20.0s						
MET	Memphis--Engin	108.06	56	PFAKE		09 17 50.0	+13
MET				LR	LR		
	comp=Z,4µm,18.0s						
H41A	Junction City	108.08	47	PFAKE		09 17 50.0	+13
H41A				LR	LR		
	comp=Z,4µm,20.0s						
L42A	Oliver, Polo	108.18	49	PKiKP	PKiKP	09 17 35.6	-1.3
	baz=272						
PARMO	Parma	108.22	55	PFAKE		09 17 50.0	+13
PARMO				LR	LR		
	comp=Z,3µm,20.0s						
TULEG	Thule	108.25	12	PFAKE		09 17 50.0	+14
TULEG				LR	LR		
	comp=Z,2µm,22.0s						
PVMO	Portageville	108.26	55	PFAKE		09 17 50.0	+13
PVMO				LR	LR		
	comp=Z,2µm,19.0s						
COWI	Conover	108.36	45	PFAKE		09 17 50.0	+13
COWI				LR	LR		
	comp=Z,3µm,19.0s						
F41A	Three Lakes	108.40	45	PFAKE		09 17 50.0	+13
F41A				LR	LR		
	comp=Z,4µm,21.0s						
F41A	Three Lakes	108.40	45	PKiKP	PKiKP	09 17 37.0	-0.2
	baz=274						
E41A	Kenton	108.45	45	PKiKP	PKiKP	09 17 36.4	-0.9
	baz=274						
OXF	Oxford	108.49	57	PFAKE		09 17 50.0	+12
OXF				LR	LR		
	comp=Z,3µm,20.0s						
HDIL	Hopedale	108.51	51	PFAKE		09 17 50.0	+12
HDIL				LR	LR		
	comp=Z,5µm,22.0s						
HALT	Halls	108.55	56	PFAKE		09 17 50.0	+12
HALT				LR	LR		
	comp=Z,4µm,20.0s						
SIUC	Southern Illin	108.63	54	PFAKE		09 17 50.0	+12
SIUC				LR	LR		
	comp=Z,3µm,18.0s						
I42A	Draeger Farm,	108.65	47	PFAKE		09 17 50.0	+12
I42A				LR	LR		
	comp=Z,3µm,21.0s						
D41A	Chassel	108.68	44	PFAKE		09 17 50.0	+12
D41A				LR	LR		
	comp=Z,3µm,21.0s						
Q44A	Meyer Farm, Va	108.77	53	PFAKE		09 17 50.0	+12
Q44A				LR	LR		
	comp=Z,4µm,19.0s						
H42A	Shiocton	108.89	47	PFAKE		09 17 50.0	+12
H42A				LR	LR		
	comp=Z,4µm,19.0s						
TEIG	Tepich	108.89	72	PFAKE		09 17 50.0	+11
TEIG				LR	LR		
	comp=Z,2µm,21.0s						
G42A	Mountain	108.91	46	PFAKE		09 17 50.0	+12
G42A				LR	LR		
	comp=Z,4µm,21.0s						
T45A	Paducah	109.10	54	PFAKE		09 17 50.0	+11
T45A				LR	LR		
	comp=Z,4µm,20.0s						
K43A	Burlington	109.14	48	PFAKE		09 17 50.0	+11
K43A				LR	LR		
	comp=Z,4µm,18.0s						
AKTO	Aktyubinsk	109.14	320	PKKPbc	PKKPbc	09 28 45.3	-1.5
	comp=Z,1.6nm,0.6s,baz=256,slow=2.5,SNR=7.6						
AKTO				PKKPab	PKKPab	09 28 56.1	-0.9
	comp=Z,2.2nm,0.7s,baz=254,slow=9.1,SNR=7.5						
TGUH	Tegucigalpa,Un	109.25	79	PFAKE		09 17 50.0	+10
TGUH				LR	LR		
	comp=Z,4µm,20.0s						
M44A	Midewin, Midew	109.42	50	PFAKE		09 17 50.0	+11
M44A				LR	LR		
	comp=Z,5µm,20.0s						
147A	Livingston	109.43	59	PFAKE		09 17 50.0	+11
147A				LR	LR		
	comp=Z,3µm,19.0s						
G43A	Wallace	109.43	46	PFAKE		09 17 50.0	+11
G43A				LR	LR		
	comp=Z,4µm,20.0s						
H43A	Windswept, Lux	109.43	47	PFAKE		09 17 50.0	+11
H43A				LR	LR		
	comp=Z,4µm,19.0s						
OLIL	Olney	109.49	53	PFAKE		09 17 50.0	+11
OLIL				LR	LR		
	comp=Z,3µm,19.0s						
PLAL	Pickwick Lake	109.59	57	PFAKE		09 17 50.0	+10
PLAL				LR	LR		
	comp=Z,2µm,20.0s						
P45A	Graceland, Par	109.73	52	PFAKE		09 17 50.0	+10
P45A				LR	LR		
	comp=Z,6µm,19.0s						
WVT	Waverly	109.77	55	PFAKE		09 17 50.0	+10
WVT				LR	LR		
	comp=Z,3µm,19.0s						
E43A	Lone Tree Farm	109.82	45	PFAKE		09 17 50.0	+10
E43A				LR	LR		
	comp=Z,3µm,18.0s						
USIN	University of	109.86	53	PFAKE		09 17 50.0	+10
USIN				LR	LR		
	comp=Z,4µm,21.0s						
ESTN	Estel	110.01	80	PFAKE		09 17 50.0	+8.8
ESTN				LR	LR		
	comp=Z,2µm,20.0s						
GEYT	Alibeck	110.01	306	PKKPab	PKKPab	09 28 53.6	0.0
	comp=Z,1.9nm,0.5s,baz=316,slow=6.2,SNR=4.1						
GYA0B	ALIBECK ARRAY	110.01	306	PFAKE		09 17 50.0	+9.5
GYA0B				LR	LR		
	comp=Z,2µm,22.0s						
SFIN	Lafayette	110.19	51	PFAKE		09 17 50.0	+9.3
SFIN				LR	LR		
	comp=Z,6µm,20.0s						
T47A	Sharon Grove	110.33	54	PFAKE		09 17 50.0	+8.9
T47A				LR	LR		
	comp=Z,3µm,18.0s						
X48A	Hartselle	110.44	57	PFAKE		09 17 50.0	+8.6
X48A				LR	LR		
	comp=Z,2µm,19.0s						
BRAL	Brewton	110.46	61	PFAKE		09 17 50.0	+8.5
BRAL				LR	LR		
	comp=Z,3µm,18.0s						
LRAL	Lakeview Retre	110.50	59	PFAKE		09 17 50.0	+8.5
LRAL				LR	LR		
	comp=Z,6µm,19.0s						
E44A	Grand Marais A	110.53	44	PFAKE		09 17 50.0	+8.8
E44A				LR	LR		
	comp=Z,3µm,21.0s						
V48A	Smith Brothers	110.60	56	PFAKE		09 17 50.0	+8.4
V48A				LR	LR		
	comp=Z,2µm,20.0s						
SPITS	Spitsbergen Ar	110.67	353	PKKPab	PKKPab	09 28 49.6	-0.2
	comp=Z,14nm,0.9s,baz=171,slow=12,SNR=3.7						
M46A	Old House Fiel	110.69	50	PFAKE		09 17 50.0	+8.4
M46A				LR	LR		
	comp=Z,4µm,20.0s						
BLO	Bloomington	110.70	52	PFAKE		09 17 50.0	+8.3
BLO				LR	LR		
	comp=Z,5µm,19.0s						
WCI	Wyandotte Cave	110.92	53	PFAKE		09 17 50.0	+7.8
WCI				LR	LR		
	comp=Z,4µm,19.0s						
WCI	Wyandotte Cave	110.92	53	PKiKP	PKiKP	09 17 41.2	-1.0
	baz=273						
Y49A	Blount Mountai	110.98	58	PFAKE		09 17 50.0	+7.6
Y49A				LR	LR		
	comp=Z,3µm,20.0s						
JTS	JuntasAbangare	111.04	83	PFAKE		09 17 50.0	+6.9
JTS				LR	LR		
	comp=Z,3µm,19.0s						
250A	Grady	111.13	60	PFAKE		09 17 50.0	+7.3
250A				LR	LR		
	comp=Z,2µm,18.0s						
PEL	Peldehue	111.18	132	PFAKE		09 17 50.0	+7.0
PEL				LR	LR		
	comp=Z,2µm,20.0s						
SWET	Sewanee	111.34	56	PFAKE		09 17 50.0	+6.9
SWET				LR	LR		
	comp=Z,3µm,21.0s						
Z50A	Ashland	111.40	58	PFAKE		09 17 50.0	+6.7
Z50A				LR	LR		
	comp=Z,4µm,18.0s						
G46A	Petoskey	111.41	45	PKiKP	PKiKP	09 17 42.7	-0.2
	baz=277						
U49A	Red Boiling Sp	111.42	55	PKiKP	PKiKP	09 17 42.3	-0.9
	baz=272						
451A	Vernon	111.58	61	PFAKE		09 18 00.0	+16
451A				LR	LR		
	comp=Z,3µm,19.0s						
T49A	Edmonton	111.58	54	PFAKE		09 18 00.0	+17
T49A				LR	LR		
	comp=Z,3µm,20.0s						
GLMI	Grayling	111.64	46	PFAKE		09 18 00.0	+17
GLMI				LR	LR		
	comp=Z,4µm,18.0s						
E46A	Sault Ste Mari	111.67	44	PKiKP	PKiKP	09 17 42.9	-0.4
	baz=277						
N48A	Decatur	111.73	50	PKiKP	PKiKP	09 17 43.0	-0.6
	baz=275						
S49A	Springfield	111.74	54	PKiKP	PKiKP	09 17 42.5	-1.3
	baz=273						
HDC	Heredia	111.82	83	PFAKE		09 18 00.0	+15
HDC				LR	LR		
	comp=Z,2µm,19.0s						
W50A	Signal Mountai	111.85	56	PFAKE		09 18 00.0	+16
W50A				LR	LR		
	comp=Z,3µm,21.0s						
W50A	Signal Mountai	111.85	56	PKiKP	PKiKP	09 17 43.0	-1.1
	baz=272						
M48A	Edgerton	111.91	50	PFAKE		09 18 00.0	+16
M48A				LR	LR		
	comp=Z,4µm,20.0s						
ESPN	Las Esperanzas	111.91	81	PFAKE		09 18 00.0	+15
ESPN				LR	LR		
	comp=Z,2µm,20.0s						
151A	Opelika	111.92	59	PKiKP	PKiKP	09 17 43.7	-0.6
	baz=271						
P49A	Miami Univ. Ec	112.07	52	PKiKP	PKiKP	09 17 43.1	-1.2
	baz=274						
L48A	N Adams	112.08	49	PKiKP	PKiKP	09 17 43.8	-0.5
	baz=276						
Y51A	Rockmart	112.10	58	PKiKP	PKiKP	09 17 43.9	-0.7
	baz=272						
U50A	Jamestown	112.17	55	PKiKP	PKiKP	09 17 43.6	-1.1
	baz=273						
X51A	Calhoun	112.25	57	PFAKE		09 18 00.0	+15
X51A				LR	LR		
	comp=Z,3µm,19.0s						
352A	Blakely	112.28	60	PFAKE		09 18 00.0	+15
352A				LR	LR		
	comp=Z,2µm,20.0s						
W51A	Cleveland	112.30	56	PKiKP	PKiKP	09 17 44.8	-0.1
	baz=273						
O49A	Covington	112.31	51	PFAKE		09 18 00.0	+15
O49A				LR	LR		
	comp=Z,5µm,19.0s						
E47A	Iron Bridge	112.36	44	PKiKP	PKiKP	09 17 44.3	-0.3
	baz=278						
N49A	Columbus Grove	112.36	50	PFAKE		09 18 00.0	+15
N49A				LR	LR		
	comp=Z,4µm,19.0s						
N49A	Columbus Grove	112.36	50	PKiKP	PKiKP	09 17 44.2	-0.6
	baz=275						
D47A	Chapleau	112.39	43	PKiKP	PKiKP	09 17 44.1	-0.6
	baz=279						
KIRV	Kirov	112.40	329	PKKPab	PKKPab	09 28 43.0	+0.7
	comp=Z,5.9nm,0.5s,baz=0.0,slow=4.0,SNR=4.1						
152A	Waverly Hall	112.43	59	PFAKE		09 18 00.0	+15
152A				LR	LR		
	comp=Z,5µm,19.0s						
152A	Waverly Hall	112.43	59	PKiKP	PKiKP	09 17 44.5	-0.7
	baz=272						
S50A	Richmond	112.45	54	PKiKP	PKiKP	09 17 44.7	-0.4
	baz=274						
M49A	Liberty Center	112.46	50	PKiKP	PKiKP	09 17 44.1	-0.9
	baz=276						
CPCT	Cooper Cave	112.48	56	PFAKE		09 18 00.0	+15
CPCT				LR	LR		
	comp=Z,3µm,19.0s						
GO04	Tololo Observa	112.51	129	PFAKE		09 18 00.0	+14
GO04				LR	LR		
	comp=Z,2µm,21.0s						
L49A	Milan	112.55	49	PKiKP	PKiKP	09 17 44.6	-0.6
	baz=276						
V51A	Loudon	112.60	56	PFAKE		09 18 00.0	+15
V51A				LR	LR		
	comp=Z,3µm,20.0s						
AAM	Ann Arbor	112.61	49	PFAKE		09 18 00.0	+15
AAM				LR	LR		
	comp=Z,4µm,19.0s						
Z52A	Williamson	112.67	58	PKiKP	PKiKP	09 17 44.6	-1.0
	baz=272						
Q50A	Georgetown	112.70	52	PKiKP	PKiKP	09 17 44.3	-1.3
	baz=275						
453A	Whigham	112.81	61	PFAKE		09 18 00.0	+14
453A				LR	LR		
	comp=Z,3µm,19.0s						
O50A	Cable	112.86	51	PKiKP	PKiKP	09 17 44.6	-1.2
	baz=275						
T51A	Gray	112.86	54	PKiKP	PKiKP	09 17 44.9	-1.0
	baz=274						
Y52A	Lilburn	112.94	58	PFAKE		09 18 00.0	+14
Y52A				LR	LR		
	comp=Z,3µm,20.0s						
253A	Americus	112.94	60	PFAKE		09 18 00.0	+14
253A				LR	LR		
	comp=Z,2µm,20.0s						
W52A	Murphy	112.99	56	PFAKE		09 18 00.0	+14
W52A				LR	LR		
	comp=Z,2µm,20.0s						
W52A	Murphy	112.99	56	PKiKP	PKiKP	09 17 45.4	-0.8
	baz=273						
X52A	Dahlonega	113.04	57	PKiKP	PKiKP	09 17 45.7	-0.7
	baz=273						
TKL	Tuckaleechee C	113.08	56	PFAKE		09 18 00.0	+14
TKL				LR	LR		

	comp=Z,4µm,19.0s						
S51A	Beattyville	113.09	54	PFAKE		09 18 00.0	+14
S51A				LR	LR		
	comp=Z,3µm,18.0s						
S51A	Beattyville	113.09	54	PKiKP	PKiKP	09 17 45.8	-0.6
	baz=274						
LCO	Las Campanas	113.13	128	PFAKE		09 18 00.0	+13
LCO				LR	LR		
	comp=Z,2µm,19.0s						
M50A	Fremont	113.17	50	PFAKE		09 18 00.0	+14
M50A				LR	LR		
	comp=Z,4µm,19.0s						
Q51A	Peebles	113.17	52	PFAKE		09 18 00.0	+14
Q51A				LR	LR		
	comp=Z,3µm,18.0s						
TZTN	Tazewell	113.21	55	PFAKE		09 18 00.0	+13
TZTN				LR	LR		
	comp=Z,4µm,19.0s						
V52A	Sevierville	113.22	56	PFAKE		09 18 00.0	+13
V52A				LR	LR		
	comp=Z,3µm,19.0s						
V52A	Sevierville	113.22	56	PKiKP	PKiKP	09 17 45.7	-0.9
	baz=274						
D48A	Paudash Townsh	113.25	43	PKiKP	PKiKP	09 17 45.0	-1.3
	baz=280						
L50A	Kingsville	113.27	49	PKiKP	PKiKP	09 17 45.9	-0.6
	baz=277						
ACSO	Alum Creek Sta	113.34	51	PFAKE		09 18 00.0	+13
ACSO				LR	LR		
	comp=Z,4µm,19.0s						
P51A	Williamsport	113.35	52	PFAKE		09 18 00.0	+13
P51A				LR	LR		
	comp=Z,6µm,20.0s						
TIGA	Tifton	113.42	60	PFAKE		09 18 00.0	+13
TIGA				LR	LR		
	comp=Z,2µm,19.0s						
GOGA	Godfrey	113.45	58	PFAKE		09 18 00.0	+13
GOGA				LR	LR		
	comp=Z,4µm,18.0s						
S52A	Salyersville	113.50	54	PKiKP	PKiKP	09 17 46.4	-0.7
	baz=275						
T52A	Hallie	113.62	54	PKiKP	PKiKP	09 17 46.2	-1.2
	baz=274						
N51A	Ashland	113.72	50	PFAKE		09 18 00.0	+13
N51A				LR	LR		
	comp=Z,4µm,20.0s						
154A	Montrose	113.79	59	PFAKE		09 18 00.0	+12
154A				LR	LR		
	comp=Z,4µm,19.0s						
DAG	Danmarks Havn	113.84	1	*i* P	PKKPab	09 28 36.0	+0.4
	comp=Z,14nm,1.1s						
V53A	Saluda	113.86	56	PFAKE		09 18 00.0	+12
V53A				LR	LR		
	comp=Z,3µm,19.0s						
T53A	Wise	113.99	54	PKiKP	PKiKP	09 17 47.2	-1.0
	baz=275						
555A	McAlpin	113.99	62	PFAKE		09 18 00.0	+12
555A				LR	LR		
	comp=Z,4µm,18.0s						
U53A	Fall Branch	114.00	55	PKiKP	PKiKP	09 17 47.0	-1.1
	baz=274						
K51A	Iona Station	114.14	48	PKiKP	PKPdf	09 17 47.4	-0.7
	baz=278						
GO03	Copiap	114.14	127	PFAKE		09 18 00.0	+11
GO03				LR	LR		
	comp=Z,2µm,20.0s						
ELFO	Elginfield	114.21	47	PKiKP	PKPdf	09 17 47.4	-0.8
	baz=278						
O52A	Adamsville	114.22	51	PFAKE		09 18 00.0	+12
O52A				LR	LR		
	comp=Z,3µm,20.0s						
O52A	Adamsville	114.22	51	PKiKP	PKPdf	09 17 47.5	-0.9
	baz=277						
NNA	Nana	114.29	108	PFAKE		09 18 00.0	+11
NNA				LR	LR		
	comp=Z,2µm,18.0s						
255A	Hazlehurst	114.35	60	PFAKE		09 18 00.0	+11
255A				LR	LR		
	comp=Z,3µm,19.0s						
656A	Willston	114.39	63	PFAKE		09 18 00.0	+11
656A				LR	LR		
	comp=Z,2µm,18.0s						
HODGE	Hodges	114.41	57	PFAKE		09 18 00.0	+11
HODGE				LR	LR		
	comp=Z,3µm,20.0s						
TRQA	Tornquist	114.44	140	PFAKE		09 18 00.0	+11
TRQA				LR	LR		
	comp=Z,3µm,18.0s						
P53A	Whipple	114.64	51	PFAKE		09 18 00.0	+11
P53A				LR	LR		
	comp=Z,6µm,19.0s						
KLBO	Killbear Provi	114.65	45	PKiKP	PKPdf	09 17 48.4	-0.6
	baz=280						
957A	Wimauma	114.68	64	PFAKE		09 18 00.0	+10
957A				LR	LR		
	comp=Z,2µm,19.0s						
O53A	New Philadelph	114.68	51	PKiKP	PKPdf	09 17 48.6	-0.7
	baz=277						
PAULI	Pauline	114.74	57	PFAKE		09 18 00.0	+10
PAULI				LR	LR		
	comp=Z,3µm,20.0s						
N53A	Lisbon	114.89	50	PKiKP	PKiKP	09 17 49.2	-0.5
	baz=278						
E51A	G1948 Merrick	114.92	44	PKiKP	PKiKP	09 17 49.1	-0.5
	baz=281						
M53A	WI Miller and	114.93	49	PKiKP	PKiKP	09 17 48.8	-0.9
	baz=278						
KMSC	Kings Mountain	115.11	56	PFAKE		09 18 00.0	+10
KMSC				LR	LR		
	comp=Z,4µm,19.0s						
Q54A	Coxs Mills	115.12	52	PKiKP	PKiKP	09 17 49.2	-1.0
	baz=277						
F52A	Sundridge	115.18	44	PKiKP	PKiKP	09 17 48.7	-1.4
	baz=281						
JSC	Jenkinsville	115.23	57	PFAKE		09 18 00.0	+10
JSC				LR	LR		
	comp=Z,3µm,20.0s						
ALLY	Alegheny Colle	115.30	49	PFAKE		09 18 00.0	+10
ALLY				LR	LR		
	comp=Z,4µm,19.0s						
O54A	Avella	115.33	51	PKiKP	PKiKP	09 17 50.2	-0.4
	baz=278						
ERPA	Erie	115.34	48	PKiKP	PKiKP	09 17 49.6	-0.9
	baz=279						
DWPF	Disney Wildern	115.38	64	PFAKE		09 18 00.0	+9.0
DWPF				LR	LR		
	comp=Z,2µm,18.0s						
658A	Bunnell	115.50	62	PFAKE		09 18 00.0	+8.9
658A				LR	LR		
	comp=Z,3µm,18.0s						
SADO	Sadowa	115.50	45	*e*PKPdf	PKPdf	09 17 50.6	-0.1
SADO				LR	LR		
	comp=Z,4µm,19.0s						
N54A	Moraine State	115.51	50	*e*PKPdf	PKPdf	09 17 51.0	+0.1
N54A				LR	LR		
	comp=Z,4µm,19.0s						
N54A	Moraine State	115.51	50	PKiKP	PKiKP	09 17 49.8	-1.1
	baz=278						
E52A	Mattawa	115.54	44	PKiKP	PKiKP	09 17 49.8	-0.9
	baz=282						
D52A	ZEK Kipawa Sen	115.56	43	PKiKP	PKiKP	09 17 49.1	-1.6
	baz=282						
257A	Skidaway Islan	115.58	60	*e*PKPdf	PKiKP	09 17 52.6	+1.4
257A				LR	LR		
	comp=Z,3µm,18.0s						
BLA	Blacksburg	115.65	54	*e*PKPdf	PKPdf	09 17 51.0	-0.3
BLA				LR	LR		
	comp=Z,3µm,20.0s						
BLA	Blacksburg	115.65	54	PKiKP	PKPdf	09 17 49.9	-1.4
	baz=276						
059A	Moore Haven	115.66	65	PFAKE		09 18 00.0	+8.5
059A				LR	LR		
	comp=Z,2µm,20.0s						
M54A	Oil Creek Stat	115.67	49	*e*PKPdf	PKiKP	09 17 49.6	-1.6
M54A				LR	LR		
	comp=Z,5µm,20.0s						
M54A	Oil Creek Stat	115.67	49	PKiKP	PKiKP	09 17 50.2	-1.0
	baz=279						
PB10	IPOC Station P	115.69	123	PFAKE		09 18 00.0	+8.3
PB10				LR	LR		
	comp=Z,2µm,19.0s						
GO02	Mina Guanaco	115.76	125	PFAKE		09 18 00.0	+7.8
GO02				LR	LR		
	comp=Z,3µm,20.0s						
R55A	Marlinton	115.76	53	PKiKP	PKPdf	09 17 50.7	-0.8
	baz=277						
G53A	Haliburton	115.80	45	PKiKP	PKiKP	09 17 50.6	-0.7
	baz=281						
OTAV	Otavalo	115.80	95	PFAKE		09 18 00.0	+7.2
OTAV				LR	LR		
	comp=Z,3µm,18.0s						
MCWV	Mont Chateau	115.80	51	PFAKE		09 18 00.0	+8.5
MCWV				LR	LR		
	comp=Z,3µm,18.0s						
ARA0	ARCESS Array S	115.83	345	*e*PKPdf	PKiKP	09 17 49.7	-0.9
ARCES	ARCESS Array B	115.83	345	*e*PKPdf	PKiKP	09 17 50.1	-0.5
ARCES				PKKPbc	PKKPbc	09 28 21.3	-3.6
ARCES	ARCESS Array B	115.83	345	PKP	PKiKP	09 17 49.7	-0.9
	comp=Z,6.6nm,0.6s,baz=59,slow=2.0,SNR=23						
ARCES				PKKPbc	PKKPbc	09 28 21.3	-3.6
	comp=Z,4.9nm,1.0s,baz=132,slow=1.8,SNR=9.0						
ARE0	ARCESS Array S	115.83	345	*e*PKPdf	PKiKP	09 17 50.3	-0.4
061Z	Ochoppi	115.88	66	PFAKE		09 18 00.0	+8.0
061Z				LR	LR		
	comp=Z,2µm,21.0s						
BCIP	Isla Barro Col	115.90	85	PFAKE		09 18 00.0	+7.7
BCIP				LR	LR		
	comp=Z,2µm,20.0s						
VLDQ	Val d'Or	115.94	42	*e*PKPdf	PKiKP	09 17 49.7	-1.7
D53A	Lac Vacive, Po	116.02	43	PKiKP	PKPdf	09 17 50.3	-1.4
	baz=283						
LSQQ	Lebel-sur-Quev	116.02	40	PKiKP	PKPdf	09 17 50.3	-1.3
	baz=284						
ALGO	Algonquin Park	116.02	44	PKiKP	PKPdf	09 17 50.9	-0.8
	baz=282						
O55A	Ligonier	116.14	50	PKiKP	PKPdf	09 17 51.1	-1.0
	baz=278						
KLMR	Klimovskoe	116.19	334	*e*PKIKP	PKiKP	09 17 49.9	-1.6
KLMR				*e*		09 18 59.6	
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLMR	Klimovskoe	116.19	334	*e*PKPdf	PKiKP	09 17 50.0	-1.6
KLMR				AMP		09 17 51.4	
	comp=Z,5.0nm,0.8s						
KLMR				*e*PP	PP	09 18 59.7	+3.0
KLMR				*e*PKKPbc	PKKPbc	09 28 17.7	-5.7
E53A	Dumoine, Ponti	116.19	43	PKiKP	PKPdf	09 17 51.1	-0.9
	baz=283						
NHSC	New Hope	116.22	58	PFAKE		09 18 00.0	+7.6
NHSC				LR	LR		
	comp=Z,4µm,18.0s						
M55A	Ridgway	116.35	49	PKiKP	PKPdf	09 17 51.7	-0.8
	baz=279						
060A	Indiantown	116.36	65	PFAKE		09 18 00.0	+7.1
060A				LR	LR		
	comp=Z,2µm,20.0s						
L55A	Hinsdale	116.47	48	PKiKP	PKPdf	09 17 51.7	-1.0
	baz=280						
E54A	Lac Daplat, Po	116.50	43	PKiKP	PKPdf	09 17 50.9	-1.7
	baz=283						
PB04	IPOC Station P	116.53	122	PFAKE		09 18 10.0	+16
PB04				LR	LR		
	comp=Z,2µm,20.0s						
PEMO	Pembroke	116.63	44	PKiKP	PKPdf	09 17 51.9	-0.9
	baz=283						
O56A	Blue Knob Stat	116.69	50	*e*PKPdf	PKPdf	09 17 52.6	-0.6
O56A				LR	LR		
	comp=Z,5µm,22.0s						
O56A	Blue Knob Stat	116.69	50	PKiKP	PKPdf	09 17 52.2	-1.0
	baz=279						
D54A	Lac Fusel, La	116.69	42	PKiKP	PKPdf	09 17 51.7	-1.2
	baz=284						
MMNY	Mt. Morris Dam	116.76	47	PFAKE		09 18 00.0	+6.8
MMNY				LR	LR		
	comp=Z,4µm,20.0s						
PLVO	Plevna	116.89	45	*e*PKPdf	PKPdf	09 17 52.9	-0.5
PLVO				LR	LR		
	comp=Z,3µm,18.0s						
H55A	Tweed	116.92	45	PKiKP	PKPdf	09 17 52.4	-1.0
	baz=282						
G55A	Calabogie	117.09	44	PKiKP	PKPdf	09 17 52.5	-1.3
	baz=283						
SSPA	Standing Stone	117.14	50	*e*PKPdf	PKPdf	09 17 53.0	-1.0
SSPA				LR	LR		
	comp=Z,4µm,22.0s						
SSPA	Standing Stone	117.14	50	PKiKP	PKPdf	09 17 53.2	-0.8
	baz=280						
CHGQ	Chibougamau	117.42	39	PKiKP	PKPdf	09 17 52.7	-1.6
	baz=287						
LVC	Limon Verde	117.44	122	*e*PKPdf	PKiKP	09 17 55.8	+0.2
LVC				LR	LR		
	comp=Z,2µm,20.0s						
LVC	Limon Verde	117.44	122	*e*PKIKP	PKiKP	09 17 55.8	+0.2
LVC				MLR	MLR		
	comp=Z,2µm,20.0s						
MAK	Makhachkala	117.47	313	*i* P	Pdif	09 14 08.3	-3.2
MAK				*e*		09 19 03.6	
MAK				*e*PPP	PPP	09 21 32.5	
MAK				*e*PS	PS	09 28 53.1	+1.9
H56A	Elgin	117.55	45	PKiKP	PKPdf	09 17 53.9	-0.7
	baz=283						
R58B	Mineral	117.56	53	*e*PKPdf	PKPdf	09 17 54.4	-0.5
R58B				LR	LR		
	comp=Z,5µm,20.0s						
PB01	IPOC Station P	117.63	120	PFAKE		09 18 10.0	+14
PB01				LR	LR		
	comp=Z,3µm,22.0s						
CNNC	Cliffs of the	117.90	56	PFAKE		09 18 10.0	+14
CNNC				LR	LR		
	comp=Z,4µm,19.0s						
CNNC	Cliffs of the	117.90	56	PKiKP	PKPdf	09 17 55.1	-0.5
	baz=277						
CBN	Corbin Frederi	117.92	52	PFAKE		09 18 10.0	+14
CBN				LR	LR		
	comp=Z,4µm,19.0s						
CBN	Corbin Frederi	117.92	52	PKiKP	PKPdf	09 17 55.0	-0.6
	baz=279						
POPC	Popayan, Colom	117.98	93	*e*P	PKPdf	09 17 55.4	-1.3
POPC	Popayan, Colom	117.98	93	*e*P	PKPdf	09 17 55.4	-1.3
PB11	IPOC Station P	118.02	119	*e*PKPdf	PKPdf	09 17 55.2	-1.3
PB11				LR	LR		
	comp=Z,3µm,22.0s						
PAGS	Pennsylvania G	118.08	50	*e*PKPdf	PKiKP	09 17 55.8	0.0
PAGS				LR	LR		
	comp=Z,4µm,19.0s						
SDMD	Soldier's Deli	118.14	51	PFAKE		09 18 10.0	+14
SDMD				LR	LR		
	comp=Z,2µm,18.0s						
ALFO	Alfred	118.25	44	PKiKP	PKPdf	09 17 55.0	-0.9
	baz=284						
BINY	Binghamton	118.25	48	PFAKE		09 18 10.0	+14
BINY				LR	LR		
	comp=Z,4µm,20.0s						
BINY	Binghamton	118.25	48	PKiKP	PKPdf	09 17 55.2	-1.0
	baz=282						
MNMC	Minye Minye	118.32	118	*e*PKPdf	PKPdf	09 17 56.8	-0.5
MNMC				LR	LR		
	comp=Z,2µm,22.0s						
MVL	Millersville	118.41	50	*e*PKPdf	PKPdf	09 17 55.5	-1.0
MVL				LR	LR		
	comp=Z,4µm,20.0s						
KSPA	Keystone Colle	118.54	48	*e*PKPdf	PKPdf	09 17 55.8	-0.8
KSPA				LR	LR		
	comp=Z,4µm,20.0s						
YOTC	Yotoco, Valle	118.56	91	*e*P	PKPdf	09 17 56.1	-1.6
YOTC	Yotoco, Valle	118.56	91	*e*P	PKPdf	09 17 56.1	-1.6
N59A	State Game Lan	118.67	49	*e*PKPdf	PKPdf	09 17 56.5	-0.5
N59A				LR	LR		
	comp=Z,3µm,20.0s						
N59A	State Game Lan	118.67	49	PKiKP	PKPdf	09 17 55.9	-1.0
	baz=281						
LONY	Lake Ozonia	118.71	45	PFAKE		09 18 10.0	+13
LONY				LR	LR		
	comp=Z,3µm,19.0s						
SFJD	Kangerlussuaq	118.78	15	PFAKE		09 18 10.0	+14
SFJD				LR	LR		
	comp=Z,4µm,19.0s						
MTDJ	Mount Denham	118.90	75	PFAKE		09 18 10.0	+12
MTDJ				LR	LR		
	comp=Z,1µm,20.0s						
VRH	Novokhopyorsk	119.00	323	*e*PKIKP	PKPdf	09 17 55.5	-1.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LUPA	Lehigh Univers	119.03	49	PFAKE		09 18 10.0	+12
LUPA				LR	LR		
	comp=Z,300nm,20.0s						
NCB	Newcomb	119.12	45	*e*PKPdf	PKPdf	09 17 57.0	-0.8
NCB				LR	LR		
	comp=Z,3µm,19.0s						
LATQ	La Tuque	119.17	41	PKiKP	PKPdf	09 17 56.6	-1.1
	baz=287						
FRNY	Flat Rock	119.34	44	*e*PKPdf	PKPdf	09 17 57.7	-0.4
FRNY				LR	LR		
	comp=Z,4µm,19.0s						
PTLC	Puerto Leguiza	119.36	96	*e*P	PKPdf	09 17 57.1	-2.0
PTLC	Puerto Leguiza	119.36	96	*e*P	PKPdf	09 17 57.1	-2.0
ODNJ	Ogdensburg	119.50	49	*e*PKPdf	PKPdf	09 17 57.7	-0.8
ODNJ				LR	LR		
	comp=Z,4µm,18.0s						
BRNJ	Basking Ridge	119.61	49	*e*PKPdf	PKiKP	09 17 58.7	-0.1
BRNJ				LR	LR		
	comp=Z,4µm,22.0s						
ACCN	Adirondack Com	119.65	46	PFAKE		09 18 10.0	+11
ACCN				LR	LR		
	comp=Z,4µm,18.0s						
HELC	Santa Helena	119.72	89	*e*P	PKPdf	09 17 59.3	-0.9
HELC	Santa Helena	119.72	89	*e*P	PKPdf	09 17 59.3	-0.9
TRY	Troy	119.81	47	*e*PKPdf	PKiKP	09 17 59.3	+0.2
SCHQ	Schefferville	119.90	32	PKP	PKPdf	09 17 58.0	-0.8
	comp=Z,4.0nm,0.7s,baz=319,slow=1.8,SNR=8.2						
SCHQ				PKKPbc	PKKPab	09 28 08.7	-0.8
	comp=Z,7.4nm,1.1s,baz=178,slow=11,SNR=4.0						
SCO	Scoresbysund	120.03	3	*e*PKPdf	PKPdf	09 17 58.2	-0.4
SCO	Scoresbysund	120.03	3	*e*PKIKP	PKPdf	09 17 58.2	-0.4
PAL	Palisades	120.03	49	*e*PKPdf	PKPdf	09 17 58.7	-0.8
PAL				LR	LR		
	comp=Z,4µm,18.0s						
PAL	Palisades	120.03	49	*e*PKIKP	PKPdf	09 17 58.7	-0.8
PAL				MLR	MLR		
	comp=Z,4µm,18.0s						
PAL	Palisades	120.03	49	PKiKP	PKPdf	09 17 59.0	-0.5
	baz=283						
VT1	Waterbury	120.05	45	*e*PKPdf	PKPdf	09 17 59.0	-0.5
LPSR	Galich'ya Gora	120.07	325	*e*PKIKP	PKPdf	09 17 58.4	-0.8
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
GNI	Garni	120.07	310	PFAKE		09 18 10.0	+10
GNI				LR	LR		
	comp=Z,1µm,20.0s						
GNI	Garni	120.07	310	*i* PKIKP	PKiKP	09 18 01.0	+1.0
ZEI	Tsey	120.09	313	*i* PKIKP	PKPdf	09 17 59.3	-0.6
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MOQ	Mont Orford	120.12	44	*e*PKPdf	PKPdf	09 17 59.0	-0.7
OBN	Obninsk	120.24	329	PFAKE		09 18 10.0	+10
OBN				LR	LR		
	comp=Z,2µm,19.0s						
OBN	Obninsk	120.24	329	⇓*i*PKIKP	PKPdf	09 17 59.0	-0.4
OBN				*e*		09 19 28.3	
OBN				*e*SS	SS	09 36 04.0	+12
OBN				pmax	pmax		
	comp=Z,23nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,21.0s						
VSR	Storozhevoye	120.48	324	*e*PKIKP	PKPdf	09 17 57.5	-2.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HNH	Hanover	120.54	45	*e*PKPdf	PKiKP	09 18 00.7	+0.1
KBZ	Khabaz	120.56	315	PKP	PKiKP	09 18 00.6	0.0
	comp=Z,2.9nm,1.0s,baz=57,slow=1.9,SNR=4.5						
KBZ				PKKPbc	PKKPab	09 28 06.5	-0.3
	comp=Z,1.6nm,0.7s,baz=233,slow=6.0,SNR=3.6						
ZARC	Zaragoza, Cauc	120.56	88	*e*P	PKPdf	09 17 59.8	-1.5
ZARC	Zaragoza, Cauc	120.56	88	*e*P	PKPdf	09 17 59.8	-1.5
KIV	Kislovodsk	120.64	315	PFAKE		09 18 10.0	+9.1
KIV				LR	LR		
	comp=Z,2µm,21.0s						
KIV	Kislovodsk	120.64	315	*i* PKIKP	PKPdf	09 18 00.7	-0.1
KIV				*e*		09 19 27.7	
KIV				*e*PS	SS	09 35 58.9	+1.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,23.0s						
LBNH	Lisbon	120.64	45	PKiKP	PKPdf	09 17 60.0	-0.7
	baz=286						
ROSC	El Rosal	120.69	91	*e*PKPdf	PKPdf	09 18 01.7	-0.4
ROSC				LR	LR		
	comp=Z,1µm,18.0s						
ROSC	El Rosal	120.69	91	PKP	PKPdf	09 18 01.3	-0.8
	comp=Z,3.9nm,0.5s,baz=332,slow=22,SNR=4.6						
LPAZ	La Paz	120.74	116	*e*PKPdf	PKPdf	09 18 01.9	-0.5
LPAZ				PKKPbc	PKKPbc	09 28 05.9	-0.8
LPAZ	La Paz	120.74	116	PKP	PKPdf	09 18 02.2	-0.2
	comp=Z,4.7nm,0.7s,baz=234,slow=2.7,SNR=17						
LPAZ				PKKPbc	PKKPbc	09 28 05.9	-0.8
	comp=Z,0.6nm,0.5s,baz=55,slow=12,SNR=2.1						
PTBC	PUERTO BERRIO,	120.82	89	*e*P	PKPdf	09 17 58.0	-3.9
PTBC	PUERTO BERRIO,	120.82	89	*e*P	PKPdf	09 17 58.0	-3.9
QUA2	Belchertown	120.86	47	*e*PKPdf	PKPdf	09 18 00.8	-0.3
CHIC	Chingaza	121.24	91	*e*P	PKPdf	09 18 01.2	-2.0
CHIC	Chingaza	121.24	91	*e*P	PKPdf	09 18 01.2	-2.0
FIA1	FINESS Array S	121.24	338	*e*PKPdf	PKPdf	09 18 00.5	-0.7
FIA1				*e*PKPdf	PKiKP	09 18 00.7	-0.6
FIA0	FINESS Array S	121.24	338	*e*PKPdf	PKPdf	09 18 00.4	-0.8
FIA0	FINESS Array S	121.24	338	*e*PKIKP	PKPdf	09 18 00.4	-0.8
FINES	FINESS Array B	121.24	338	PKP	PKPdf	09 18 00.4	-0.8
	comp=Z,10nm,0.9s,baz=90,slow=5.7,SNR=20						
FINES				PKKPbc	PKKPab	09 28 03.3	-0.1
	comp=Z,1.6nm,0.7s,baz=248,slow=3.1,SNR=4.9						
HRV	Adam Dziewonsk	121.37	46	*e*PKPdf	PKiKP	09 18 02.1	-0.1
HRV				LR	LR		
	comp=Z,3µm,19.0s						
HRV	Adam Dziewonsk	121.37	46	*e*PKIKP	PKiKP	09 18 02.1	-0.1
HRV				MLR	MLR		
	comp=Z,3µm,19.0s						
HRV	Adam Dziewonsk	121.37	46	PKiKP	PKPdf	09 18 01.4	-0.7
	baz=285						
BRYW	Bryant College	121.54	47	*e*PKPdf	PKPdf	09 18 02.3	-0.1
WES	Weston	121.57	47	*e*PKPdf	PKiKP	09 18 02.5	-0.1
WES				LR	LR		
	comp=Z,3µm,19.0s						
WES	Weston	121.57	47	*e*PKIKP	PKiKP	09 18 02.5	-0.1
WES				MLR	MLR		
	comp=Z,3µm,19.0s						
BCX	Boston College	121.69	47	*e*PKPdf	PKPdf	09 18 02.2	-0.5
BCA	Borcka	122.07	312	⇑*i*P	PKPdf	09 18 03.3	-0.2
RUSC	La Rusia	122.08	90	*e*P	PKPdf	09 18 03.0	-1.9
RUSC	La Rusia	122.08	90	*e*P	PKPdf	09 18 03.0	-1.9
BARC	Barichara	122.08	89	*e*P	PKPdf	09 18 01.8	-2.8
BARC	Barichara	122.08	89	*e*P	PKPdf	09 18 01.8	-2.8
WVL	Waterville	122.10	44	*e*PKPdf	PKPdf	09 18 02.7	-0.7
PKME	Peaks-Kenny Pk	122.13	43	*e*PKPdf	PKPdf	09 18 02.8	-0.6
PKME				LR	LR		
	comp=Z,3µm,19.0s						
PKME	Peaks-Kenny Pk	122.13	43	PKiKP	PKPdf	09 18 03.1	-0.3
	baz=289						
OCAC	Ocana	122.17	87	*e*P	PKPdf	09 18 03.7	-0.9
OCAC	Ocana	122.17	87	*e*P	PKPdf	09 18 03.7	-0.9
CODC	Agustn Codazz	122.25	85	*e*P	PKPdf	09 18 03.6	-0.9
CODC	Agustn Codazz	122.25	85	*e*P	PKPdf	09 18 03.6	-0.9
M65A	Busby, Falmout	122.28	47	PKiKP	PKPdf	09 18 03.4	-0.4
	baz=286						
DAMY	Dhamar	122.35	281	PFAKE		09 18 20.0	+15
DAMY				LR	LR		
	comp=Z,2µm,20.0s						
PQI	Presque Isle	122.49	41	*e*PKPdf	PKPdf	09 18 02.2	-1.9
PAMC	Pamplona, Colo	122.66	88	*e*P	PKPdf	09 18 05.2	-0.8
PAMC	Pamplona, Colo	122.66	88	*e*P	PKPdf	09 18 05.2	-0.8
SOC	Sochi	122.81	315	*i* PKIKP	PKPdf	09 18 00.7	-4.1
SOC				*e*		09 25 00.7	
SOC				*e*PS	PS	09 29 32.8	-6.2
SOC				*e*SS	SS	09 36 21.1	-4.2
SOC				*e*SSS	SSS	09 40 56.7	
SOC				MLR	MLR		
	comp=Z,1µm,19.0s						
VSU	Vasula	122.92	336	*i* PKIKP	PKPdf	09 18 02.5	-2.0
VSU	Vasula	122.92	336	*e*P	PKPdf	09 18 02.8	-1.7
VSU				IAmb	IAmb	09 18 05.3	
	comp=Z,43nm,0.9s						
BATG	Bathurst New B	123.51	40	PFAKE		09 18 20.0	+14
BATG				LR	LR		
	comp=Z,6µm,19.0s						
ATD	Arta Tunnel	123.62	277	PFAKE		09 18 20.0	+12
ATD				LR	LR		
	comp=Z,3µm,20.0s						
GGN	Saint George	123.81	42	*e*PKPdf	PKPdf	09 18 05.1	-1.5
ANN	Anapa	123.96	317	*i* PKIKP	PKiKP	09 18 07.3	+0.1
ANN				*e*		09 25 08.1	
ANN				pmax	pmax		
	comp=Z,74nm,1.7s						
ANN				MLR	MLR		
	comp=Z,2µm,22.0s						
CPUP	Villa Florida	124.61	132	*e*PKPdf	PKiKP	09 18 09.1	-0.1
CPUP	Villa Florida	124.61	132	PKP	PKPdf	09 18 08.7	-0.1
	comp=Z,8.2nm,0.8s,baz=318,slow=0.9,SNR=18						

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NRS   Narsarsuaq        124.75  18  ePKPdf   PKPdf   09 18 06.9 -1.0
NRS   Narsarsuaq        124.75  18  ePKIKP   PKPdf   09 18 06.9 -1.0
IZAR  Zarasai           124.83 333  eP       PKPdf   09 18 07.2 -1.1
IZAR                                 IAmb    IAmb    09 18 09.4
      comp=Z,8.4nm,0.8s
SDDR  Presa de Saban    124.84  74  ePKPdf   PKPdf   09 18 08.0 -1.5
SDDR                                 LR      LR
      comp=Z,3µm,19.0s
LMN   Caledonia Moun    124.86  41  ePKPdf   PKPdf   09 18 07.7 -1.0
LMN                                  LR      LR
      comp=Z,5µm,19.0s
IDID  Didziasalis       124.88 333  eP       PKPdf   09 18 07.5 -0.9
IDID                                 IAmb    IAmb    09 18 09.6
      comp=Z,9.9nm,0.9s
SDV   Santo Domingo     124.89  87  ePKPdf   PKPdf   09 18 08.9 -1.0
SDV                                  LR      LR
      comp=Z,2µm,20.0s
SDV   Santo Domingo     124.89  87  eP       PKPdf   09 18 08.2 -1.6
SDV                                 eP       PKiKP   09 18 09.1 -1.1
SDV   Santo Domingo     124.89  87  eP       PKPdf   09 18 08.2 -1.6
SDV                                 eP       PKiKP   09 18 09.1 -1.1
GRTK  Grand Turk        124.94  71   PFAKE           09 18 20.0 +10
GRTK                                 LR      LR
      comp=Z,2µm,19.0s
ISAL  Salakas           125.00 333  eP       PKPdf   09 18 07.9 -0.7
ISAL                                 IAmb    IAmb    09 18 09.9
      comp=Z,8.4nm,1.1s
IIGN  Ignalina          125.09 333  eP       PKPdf   09 18 08.0 -0.8
IIGN                                 IAmb    IAmb    09 18 10.1
      comp=Z,12nm,0.9s
NACGM Naroch            125.11 332  e        PKPdf   09 18 08.0 -0.8
NACGM                               eLQ      LQ      10 04 12.0
NACGM                               eLR      LR      10 08 00.0
BOSA  Boshof            125.13 224   PKIKP   PKPdf   09 18 09.0 -1.0
BOSA                                 pmax    pmax
      comp=Z,8.0nm,0.8s
BOSA  Boshof            125.13 224   PKP     PKPdf   09 18 08.9 -1.0
      comp=Z,8.3nm,0.8s,baz=156,slow=2.5,SNR=14
SUR   Sutherland        125.42 217   PFAKE           09 18 20.0 +9.1
SUR                                  LR      LR
      comp=Z,3µm,19.0s
NC303 NORSAR Array S    126.00 345  ePKPdf   PKPdf   09 18 10.2 -0.2
HAL   Halifax           126.13  42  ePKPdf   PKiKP   09 18 11.3 -0.2
HAL                                  LR      LR
      comp=Z,4µm,19.0s
SDD   Santo Domingo     126.14  75   PFAKE           09 18 20.0 +7.7
SDD                                  LR      LR
      comp=Z,3µm,20.0s
NB2   NORSAR Subarra    126.20 345   PKPdf   PKPdf   09 18 09.9 -0.9
      comp=Z,3.9nm,0.8s,baz=31,slow=1.9
NB200 NORSAR Array S    126.20 345  ePKPdf   PKPdf   09 18 09.9 -0.9
NOA   NORSAR Array B    126.20 345   PKP     PKPdf   09 18 09.9 -0.9
      comp=Z,4.6nm,0.8s,baz=33,slow=2.0,SNR=19
AKASG Malin Array Be    126.29 327   PKP     PKPdf   09 18 10.6 -0.6
      comp=Z,7.0nm,0.8s,baz=60,slow=2.1,SNR=13
AKBB  Malin Array Si    126.29 327  ePKPdf   PKPdf   09 18 10.9 -0.3
AKBB                                 LR      LR
      comp=Z,3µm,22.0s
KIEV  Kiev              126.31 327  ePKPdf   PKPdf   09 18 10.8 -0.5
KIEV                                 LR      LR
      comp=Z,3µm,22.0s
KIEV  Kiev              126.31 327⇓iP        PKPdf   09 18 10.7 -0.5
KIEV  Kiev              126.31 327  ePKIKP   PKPdf   09 18 10.8 -0.5
KIEV                                 MLR     MLR
      comp=Z,3µm,22.0s
NBO00 NORSAR Array S    126.32 345  ePKPdf   PKPdf   09 18 11.0  0.0
AK11  Malin Array Si    126.34 327  ePKPdf   PKPdf   09 18 10.5 -0.8
NC602 NORSAR Array S    126.37 344  ePKPdf   PKPdf   09 18 10.7 -0.4
NAO01 NORSAR Array S    126.45 345  ePKPdf   PKPdf   09 18 10.9 -0.3
KMBO  Kilima Mbogo      127.05 260  ePKPdf   PKPdf   09 18 13.3 -0.8
KMBO                                 LR      LR
      comp=Z,2µm,20.0s
KMBO  Kilima Mbogo      127.05 260  i PKIKP  PKiKP   09 18 15.0 +0.4
KMBO                                 pmax    pmax
      comp=Z,1.0nm,0.3s
KMBO  Kilima Mbogo      127.05 260   PKP     PKPdf   09 18 13.3 -0.8
      comp=Z,0.9nm,0.3s,baz=43,slow=8.5,SNR=3.8
LBTB  Lobatse           127.11 227  ePKPdf   PKPdf   09 18 13.6 -0.2
LBTB  Lobatse           127.11 227  ePKIKP   PKPdf   09 18 13.6 -0.2
GBN   Guysborough       127.15  40   PFAKE           09 18 20.0 +6.5
GBN                                  LR      LR
      comp=Z,5µm,20.0s
SUW   Suwalki           127.31 333  eP       PKPdf   09 18 12.5 -0.6
SUW   Suwalki           127.31 333   PFAKE           09 18 20.0 +6.4
SUW                                  LR      LR
      comp=Z,3µm,21.0s
SUW   Suwalki           127.31 333  ePKIKP   PKPdf   09 18 12.5 -0.6
FURI  Furi              127.44 273   PFAKE           09 18 30.0 +15
FURI                                 LR      LR
      comp=Z,2µm,20.0s
KONO  Kongsberg         127.81 345   PFAKE           09 18 30.0 +16
KONO                                 LR      LR
      comp=Z,2µm,20.0s
BR101 Keskin Array S    128.38 313  ePKPdf   PKPdf   09 18 15.3 -0.5
BRTR  Keskin Array B    128.38 313   PKP     PKPdf   09 18 15.3 -0.5
      comp=Z,6.0nm,1.0s,baz=129,slow=1.8,SNR=18
BRTR                                 PP      PP      09 20 18.4 -1.8
      comp=Z,4.0nm,1.1s,baz=61,slow=3.5,SNR=5.2
KIS   Kishinev          128.45 323  ePKP     PKiKP   09 18 25.0 +8.9
KIS   Kishinev          128.45 323  ePP      PP      09 20 20.0 -0.1
KIS                                 eSKP             09 21 36.0
KIS                                 eSKS     SKSdf   09 25 24.0 -2.6
KIS                                 eSKKS            09 28 30.0
KIS   Kishinev          128.45 323  ePS      PS      09 30 28.0 -0.2
KIS   Kishinev          128.45 323  ePPS     PPS     09 31 24.0
KIS                                 eLR      LR      10 06 24.0
      comp=Z,4µm,22.0s
KIS   Kishinev          128.45 323  ePKIKP   PKiKP   09 18 25.0 +8.9
KIS                                 e                09 20 20.0
KIS                                 e                09 25 24.0
KIS                                 ePS      PS      09 30 28.0 -0.2
KIS                                  MLR     MLR
      comp=Z,4µm,22.0s
MPR   Mayaguez          128.78  75   PFAKE           09 18 30.0 +12
MPR                                  LR      LR
      comp=Z,2µm,19.0s
ANTO  Ankara            128.94 313   PFAKE           09 18 30.0 +13
ANTO                                 LR      LR
      comp=Z,1µm,20.0s
ANTO  Ankara            128.94 313⇑iP        PKiKP   09 18 17.4  0.0
ANTO  Ankara            128.94 313   PKIKP   PKiKP   09 18 17.4  0.0
OBIP  Obispado Ponce    129.29  75  ePKPdf   PKPdf   09 18 16.1 -1.8
TLCR                    129.34 321⇑iP        PKPdf   09 18 16.7 -0.5
TLCR                    129.34 321   PKIKP   PKPdf   09 18 16.6 -0.6
EMPR  Esperanza - Ma    129.35  75   PFAKE           09 18 30.0 +11
EMPR                                 LR      LR
      comp=Z,2µm,21.0s
LVV   L'vov             129.53 328  ePKIKP   PKPdf   09 18 15.9 -1.6
LVV                                  MLR     MLR
      comp=Z,3µm,22.0s
SJG   San Juan          129.72  75  ePKPdf   PKPdf   09 18 16.8 -1.9
SJG                                  LR      LR
      comp=Z,1µm,20.0s
SJG   San Juan          129.72  75  eP       PKPdf   09 18 16.7 -1.9
SJG   San Juan          129.72  75  ePKIKP   PKPdf   09 18 16.8 -1.9
SJG                                  MLR     MLR
      comp=Z,1µm,20.0s
SJG   San Juan          129.72  75  eP       PKPdf   09 18 16.7 -1.9
CFR   Carcaliu          129.77 321⇑iP        PKPdf   09 18 18.3 +0.3
BEL   Belsk             129.83 332  eP       PKiKP   09 18 19.1 +0.3
BEL   Belsk             129.83 332  ePKIKP   PKiKP   09 18 19.1 +0.3
TIRR  Tirgusor          129.94 320   PFAKE           09 18 30.0 +11
TIRR                                 LR      LR
      comp=Z,2µm,18.0s
TIRR  Tirgusor          129.94 320⇑iP        PKiKP   09 18 18.8 -0.4
TIRR  Tirgusor          129.94 320   PKIKP   PKiKP   09 18 18.8 -0.4
CBYP  Canovanas         129.99  75   PFAKE           09 18 30.0 +10
CBYP                                 LR      LR
      comp=Z,2µm,20.0s
HUMP  Col San Antoni    130.00  75  ePKPdf   PKPdf   09 18 18.6 -0.7
HUMP                                 LR      LR
      comp=Z,1µm,19.0s
BIZ   Bicaz             130.06 324⇑iP        PKiKP   09 18 19.5 +0.1
TLB   Topalu            130.12 321⇑iP        PKPdf   09 18 19.0 +0.3
CSS   Mathiatis         130.15 307   PFAKE           09 18 30.0 +10
CSS                                  LR      LR
      comp=Z,2µm,22.0s
BUR08 Bucovina Ar. S    130.18 325  ePKPdf   PKiKP   09 18 20.0 +0.3
BUR04 Bucovina Ar. S    130.19 325  ePKPdf   PKiKP   09 18 20.3 +0.6
BURAR Bucovina Array    130.19 325⇑iP        PKiKP   09 18 19.7  0.0
BURAR Bucovina Array    130.19 325   PKIKP   PKiKP   09 18 19.6 -0.1
CVDA  Cernavoda         130.24 320⇑iP        PKiKP   09 18 19.4 -0.4
MTP   Monte Pirata      130.29  75   PFAKE           09 18 30.0 +9.4
MTP                                  LR      LR
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      comp=Z,1µm,22.0s
KWP   Kalwaria Pacla    130.33 329  eP       PKPdf   09 18 19.3 +0.3
KWP   Kalwaria Pacla    130.33 329   PFAKE           09 18 30.0 +10
KWP                                  LR      LR
      comp=Z,19µm,20.0s
KWP   Kalwaria Pacla    130.33 329  ePKIKP   PKPdf   09 18 19.3 +0.3
LSZ   Lusaka            130.34 239  eP       PKPdf   09 18 20.2  0.0
LSZ                                  LR      LR
      comp=Z,2µm,19.0s
LSZ   Lusaka            130.34 239  ePKIKP   PKPdf   09 18 20.2  0.0
LSZ                                  MLR     MLR
      comp=Z,2µm,19.0s
RGN   Rugen             130.90 339   PFAKE           09 18 30.0 +9.2
RGN                                  LR      LR
      comp=Z,3µm,20.0s
MLR   Muntele Rosu      130.93 323   PFAKE           09 18 30.0 +8.6
MLR                                  LR      LR
      comp=Z,2µm,20.0s
MLR   Muntele Rosu      130.93 323⇑iP        PKPdf   09 18 20.7 +0.2
DOPR  Dopca             131.00 323⇑iP        PKPdf   09 18 19.9 -0.5
CDVI  St. Croix         131.04  76  ePKPdf   PKPdf   09 18 21.0 -0.3
YLV   Yalova            131.07 315⇑iP        PKiKP   09 18 21.4 -0.3
YLV   Yalova            131.07 315   PKIKP   PKiKP   09 18 21.3 -0.4
UZH   Uzhgorod          131.16 328⇑iPKIKP    PKPdf   09 18 20.0 -0.6
TRPA  Tarpa             131.34 327⇑iP        PKiKP   09 18 21.4 -0.5
OJC   Ojcow             131.38 331  ePKPdf   PKPdf   09 18 20.2 -0.8
OJC   Ojcow             131.38 331  ePKIKP   PKPdf   09 18 20.2 -0.8
ABVI  Anegada Island    131.43  74   PFAKE           09 18 30.0 +7.1
ABVI                                 LR      LR
      comp=Z,2µm,20.0s
VOIR                    131.49 323⇑iP        PKPdf   09 18 21.8 +0.4
VOIR                    131.49 323   PKIKP   PKPdf   09 18 21.8 +0.4
NIE   Niedzica          131.67 330  eP       PKiKP   09 18 22.5 -0.1
NIE   Niedzica          131.67 330  ePKIKP   PKiKP   09 18 22.5 -0.1
ARR   Arges             131.78 323⇑iP        PKiKP   09 18 22.4 -0.6
HUMR  Humele            132.02 322⇑iP        PKiKP   09 18 23.0 -0.4
DRGR                    132.06 326⇑iP        PKPdf   09 18 21.7 -0.8
DRGR                    132.06 326   PKIKP   PKPdf   09 18 21.7 -0.8
LANS  Liptovska Anna    132.26 330  ePKIKP   PKiKP   09 18 24.0 +0.2
LANS  Liptovska Anna    132.26 330  ePKP     PKiKP   09 18 24.0 +0.2
KSP   Ksiaz             132.54 334  eP       PKPdf   09 18 23.4 +0.3
KSP   Ksiaz             132.54 334  ePKIKP   PKPdf   09 18 23.4 +0.3
SMRT  St. Maarten       132.65  75   PFAKE           09 18 40.0 +15
SMRT                                 LR      LR
      comp=Z,2µm,19.0s
MORC  Moravsky Berou    132.75 332   PFAKE           09 18 40.0 +15
MORC                                 LR      LR
      comp=Z,2µm,20.0s
MORC  Moravsky Berou    132.75 332⇑iP        PKPdf   09 18 22.9 -0.7
MORC  Moravsky Berou    132.75 332   PKIKP   PKPdf   09 18 22.9 -0.7
MORC  Moravsky Berou    132.75 332  ePKP     PKPdf   09 18 24.0 +0.4
SEUS  St. Eustatius     132.75  76   PFAKE           09 18 40.0 +14
SEUS                                 LR      LR
      comp=Z,2µm,19.0s
PSZ   Piszkesteto       132.85 329   PFAKE           09 18 40.0 +15
PSZ                                  LR      LR
      comp=Z,2µm,19.0s
DPC   Dobruska-Polom    132.89 333  ePKPDF   PKiKP   09 18 25.0  0.0
DPC                                  AMS     AMS     10 22 20.0
      comp=Z,3µm,17.4s
DPC   Dobruska-Polom    132.89 333  ePKIKP   PKiKP   09 18 25.0  0.0
DPC                                  MLR     MLR
      comp=Z,3µm,17.4s
UPC   Upice             132.91 334  ePKPDF   PKiKP   09 18 25.9 +0.9
UPC                                 ex       x       09 32 47.1
UPC                                  AMS     AMS     10 23 00.0
      comp=Z,3µm,20.2s
UPC   Upice             132.91 334  ePKIKP   PKiKP   09 18 25.9 +0.9
UPC                                 e                09 32 47.1
UPC                                  MLR     MLR
      comp=Z,3µm,20.2s
SIRR  Siria             132.95 326⇑iP        PKPdf   09 18 23.8 -0.3
VYHS  Vyhne             133.01 330  ePKIKP   PKPdf   09 18 24.1  0.0
VYHS  Vyhne             133.01 330  ePKP     PKPdf   09 18 24.1  0.0
ALN   Alexandroupoli    133.18 317  ePKPdf   PKPdf   09 18 24.7 +0.1
ALN                                  LR      LR
      comp=Z,800nm,19.0s
ALN   Alexandroupoli    133.18 317  ePKIKP   PKPdf   09 18 24.7 +0.1
ALN                                  MLR     MLR
      comp=Z,800nm,19.0s
JAVC  Velka Javorina    133.32 331  ePKP     PKiKP   09 18 26.3 +0.3
BZS   Buzias            133.37 325⇑iP        PKPdf   09 18 25.2 +0.3
MBAR  Mbarara           133.48 259   PFAKE           09 18 40.0 +13
MBAR                                 LR      LR
      comp=Z,2µm,20.0s
EZN   Ezine             133.49 316⇑iP        PKPdf   09 18 25.0 -0.2
VRAC  Vranov            133.51 332⇑iP        PKiKP   09 18 25.9 -0.4
VRAC  Vranov            133.51 332   PKIKP   PKiKP   09 18 25.9 -0.4
VRAC  Vranov            133.51 332  ePKP     PKiKP   09 18 25.7 -0.6
BRG   Berggiesshubel    133.52 335  ePKP     PKPdf   09 18 25.1  0.0
      comp=Z,13nm,1.0s
BRG                                  PP      PP      09 20 53.0 +0.5
BRG                                  PKS     PKSbc   09 21 55.0 +0.5
BRG                                  SS      SS      09 38 56.0 +19
      comp=N,1µm,16.9s
      comp=E,969nm,18.0s
      comp=Z,3µm,16.9s
BRG   Berggiesshubel    133.52 335  ePKIKP   PKPdf   09 18 25.0  0.0
BRG                                                  09 20 53.0
BRG                                  SS      SS      09 38 56.0 +19
BRG                                  pmax    pmax
      comp=Z,13nm,1.0s
BRG                                  MLR     MLR
      comp=N,1µm,16.9s
BRG                                  MLR     MLR
      comp=E,969nm,18.0s
BRG                                  MLR     MLR
      comp=Z,3µm,16.9s
PVCC  Panska Ves        133.52 335  ePKPDF   PKiKP   09 18 26.7 +0.5
PVCC                                 AMS     AMS     10 21 00.0
      comp=Z,3µm,19.4s
PVCC  Panska Ves        133.52 335  ePKIKP   PKiKP   09 18 26.7 +0.5
PVCC                                 MLR     MLR
      comp=Z,3µm,19.4s
CLL   Collm             133.56 336   PFAKE           09 18 40.0 +14
CLL                                  LR      LR
      comp=Z,3µm,19.0s
CLL   Collm             133.56 336  ePKPdf   PKPdf   09 18 25.0  0.0
      comp=Z,13nm,0.9s
CLL                                 ePP      PP      09 20 53.0 +0.3
CLL                                 ePKSbc   PKSbc   09 21 56.0 +1.3
CLL                                 ePSKS            09 31 00.0
CLL                                 ePPS     PPS     09 32 54.0
CLL                                 eSS      SS      09 38 54.0 +17
CLL                                 e                09 40 06.0
CLL                                 eSSS     SSS     09 43 24.0
CLL                                 e                09 44 36.0
CLL                                  Lm      MLR     10 21 00.0
      comp=N,2µm,19.4s
CLL                                  Lm      MLR     10 21 00.0
      comp=E,700nm,21.4s
CLL                                  Lm      MLR     10 21 00.0
      comp=Z,3µm,19.2s
CLL   Collm             133.56 336  ePKIKP   PKPdf   09 18 25.0  0.0
CLL                                  pmax    pmax
      comp=Z,13nm,0.9s
CLL                                  MLR     MLR
      comp=Z,3µm,19.2s
PTGA  Pitinga           133.57 101  ePKPdf   PKPdf   09 18 25.8 -0.4
PTGA                                 LR      LR
      comp=Z,2µm,18.0s
PTGA  Pitinga           133.57 101   PKP     PKPdf   09 18 25.4 -0.8
      comp=Z,11nm,0.9s,baz=253,slow=2.6,SNR=18
KRUC  Moravsky          133.78 332  ePKP     PKPdf   09 18 25.7 +0.2
MODS  Modra-Piesok      133.85 331  ePKIKP   PKiKP   09 18 26.7 -0.3
MODS  Modra-Piesok      133.85 331  ePKP     PKiKP   09 18 26.7 -0.3
GOPC  GO Pecny, Ondr    133.88 334  ePKPDF   PKiKP   09 18 26.9 -0.1
GOPC                                ex       x       09 32 34.9
GOPC                                 AMS     AMS     10 20 20.0
      comp=Z,3µm,20.8s
GOPC  GO Pecny, Ondr    133.88 334  ePKIKP   PKiKP   09 18 26.9 -0.1
GOPC                                 MLR     MLR
      comp=Z,3µm,20.8s
ANWB  Willy Bob         133.89  76   PFAKE           09 18 40.0 +12
ANWB                                 LR      LR
      comp=Z,2µm,20.0s
PRU   Pruhonice         133.93 334  ePKPDF   PKiKP   09 18 27.0 -0.1
PRU                                 ePP      PP      09 20 47.0 -8.2
PRU                                 ex       x       09 32 55.3
PRU                                  AMS     AMS     10 18 30.0
      comp=Z,3µm,19.9s
PRU   Pruhonice         133.93 334  ePKIKP   PKiKP   09 18 27.0 -0.1
PRU                                 e                09 32 55.3
PRU                                  MLR     MLR
```

```
      comp=Z,3µm,19.9s
TREC  Trest             134.03 333   AMS     AMS     10 17 20.0
      comp=Z,3µm,20.8s
VTS   Vitosha           134.12 321   PFAKE           09 18 40.0 +12
VTS                                  LR      LR
      comp=Z,2µm,20.0s
VTS   Vitosha           134.12 321⇑iP        PKPdf   09 18 25.7 -0.9
SVB   Belmont           134.41  82  ePKPdf   PKPdf   09 18 26.7 -1.0
ESK   Eskdalemuir       134.52 351  ePKPdf   PKPdf   09 18 27.2 +0.5
ESK   Eskdalemuir       134.52 351  i PKIKP  PKiKP   09 18 29.1 +1.0
FDF   Fort de France    134.54  80   PFAKE           09 18 40.0 +11
FDF                                  LR      LR
      comp=Z,2µm,18.0s
NKC   Novy Kostel       134.62 336  ePKPDF   PKiKP   09 18 28.8 +0.3
NKC                                 ePP      PP      09 20 57.4 -2.1
NKC                                  AMS     AMS     10 22 00.0
      comp=Z,3µm,20.3s
NKC   Novy Kostel       134.62 336  ePKIKP   PKiKP   09 18 28.8 +0.3
NKC                                 e                09 20 57.4
NKC                                  MLR     MLR
      comp=Z,3µm,20.3s
CONA  Conrad Observa    134.84 331  ePKPdf   PKPdf   09 18 27.3 -0.4
      comp=Z,11nm,0.9s
KHC   Kasperske Hory    134.99 334  ePKPdf   PKPdf   09 18 28.0 +0.1
KHC                                  LR      LR
      comp=Z,2µm,21.0s
KHC   Kasperske Hory    134.99 334  ePKPDF   PKPdf   09 18 27.8 -0.1
KHC                                 ePP      PP      09 21 00.0 -2.0
KHC                                  AMS     AMS     10 19 20.0
      comp=Z,3µm,17.8s
KHC   Kasperske Hory    134.99 334  ePKIKP   PKPdf   09 18 27.8 -0.1
KHC                                 e                09 21 00.0
KHC                                  MLR     MLR
      comp=Z,3µm,17.8s
GEC2  GERESS Array S    135.15 334   PFAKE           09 18 40.0 +10
GEC2                                 LR      LR
      comp=Z,3µm,19.0s
GERES GERESS Array B    135.15 334   PKP     PKPdf   09 18 28.2 -0.1
      comp=Z,7.6nm,0.9s,baz=48,slow=2.0,SNR=29
GEA0  GERESS Array S    135.16 334  ePKPdf   PKPdf   09 18 26.8 -1.4
DIVS  Divibare          135.21 324   PFAKE           09 18 40.0 +10
DIVS                                 LR      LR
      comp=Z,2µm,20.0s
ARSA  Arzberg           135.48 331  ePKPdf   PKPdf   09 18 28.2 -0.7
      comp=Z,4.3nm,0.8s
GRA1  Grafenberg Arr    135.54 336   PFAKE           09 18 40.0 +10
GRA1                                 LR      LR
      comp=Z,2µm,20.0s
GRFO  Grafenberg        135.54 336   PFAKE           09 18 40.0 +10
GRFO                                 LR      LR
      comp=Z,2µm,20.0s
MOA   Molln             135.64 332  ePKPdf   PKPdf   09 18 27.4 -1.7
      comp=Z,6.6nm,1.1s
LIT   Litokhoron        135.93 318  ePKPdf   PKPdf   09 18 30.1 +0.3
LIT                                  LR      LR
      comp=Z,1µm,21.0s
SOKA  Soboth            136.12 331  ePKPdf   PKPdf   09 18 30.2 +0.1
      comp=Z,7.6nm,0.9s
FNA   Florina           136.28 320  ePKPdf   PKPdf   09 18 29.6 -1.0
FNA                                  LR      LR
      comp=Z,2µm,22.0s
FNA   Florina           136.28 320  ePKIKP   PKPdf   09 18 29.6 -1.0
FNA                                  MLR     MLR
      comp=Z,2µm,22.0s
BLY   Banja Luka        136.35 327   PFAKE           09 18 40.0 +7.8
BLY                                  LR      LR
      comp=Z,2µm,18.0s
TSUM  Tsumeb            136.52 227   PFAKE           09 18 40.0 +6.5
TSUM                                 LR      LR
      comp=Z,4µm,20.0s
AGG   Agios Georgios    136.59 317  ePKPdf   PKiKP   09 18 32.2 -0.7
AGG                                  LR      LR
      comp=Z,2µm,20.0s
AGG   Agios Georgios    136.59 317  ePKIKP   PKiKP   09 18 32.2 -0.7
AGG                                  MLR     MLR
      comp=Z,2µm,20.0s
KBA   Koelnbreinsper    136.63 332  ePKPdf   PKPdf   09 18 30.7 -0.5
      comp=Z,9.9nm,1.0s
TTG   Podgorica         136.64 323   PFAKE           09 18 40.0 +7.2
TTG                                  LR      LR
      comp=Z,2µm,22.0s
MEM   Membach           136.66 341 ⇑PKiKP    PKPdf   09 18 31.4 +0.5
TIR   Tirane            136.91 321   PFAKE           09 18 40.0 +6.6
TIR                                  LR      LR
      comp=Z,3µm,22.0s
UCC   Uccle             137.00 342   PFAKE           09 18 40.0 +6.7
UCC                                  LR      LR
      comp=Z,2µm,20.0s
STU   Stuttgart         137.07 337   PFAKE           09 18 40.0 +6.5
STU                                  LR      LR
      comp=Z,2µm,20.0s
WATA  Walderalm         137.23 334  ePKPdf   PKPdf   09 18 31.4 -0.8
      comp=Z,12nm,0.9s
ABTA  Abfaltersbach     137.26 332  ePKPdf   PKPdf   09 18 31.2 -1.1
      comp=Z,17nm,0.9s
WLF   Walferdange       137.42 340   PFAKE           09 18 40.0 +5.8
WLF                                  LR      LR
      comp=Z,18µm,18.0s
WLF   Walferdange       137.42 340 ⇑PKiKP    PKPdf   09 18 32.9 +0.6
MOTA  Moosalm           137.43 334  ePKPdf   PKPdf   09 18 32.7 +0.1
      comp=Z,8.5nm,0.8s
TRI   Trieste           137.43 330   PFAKE           09 18 40.0 +5.7
TRI                                  LR      LR
      comp=Z,2µm,19.0s
RETA  Reutte            137.46 334  ePKiKP   PKPdf   09 18 32.9 +0.4
      comp=Z,12nm,1.5s
DOU   Dourbes           137.55 342 ⇑PKiKP    PKiKP   09 18 34.6 +0.2
BFO   Black Forest      137.76 337   PFAKE           09 18 40.0 +5.0
BFO                                  LR      LR
      comp=Z,2µm,20.0s
BFO   Black Forest      137.76 337  i PKIKP  PKiKP   09 18 35.3 +0.3
ITM   Ithomi            137.78 315   PFAKE           09 18 50.0 +15
ITM                                  LR      LR
      comp=Z,2µm,21.0s
BDFB  Brasilia          137.91 128   PFAKE           09 18 50.0 +14
BDFB                                 LR      LR
      comp=Z,2µm,18.0s
BDFB  Brasilia          137.91 128   PKhKP   PKPpre  09 18 25.8
      comp=Z,7.4nm,0.9s,baz=172,slow=4.4,SNR=9.5
BDFB                                 PKP     PKPdf   09 18 31.9 -2.4
      comp=Z,12nm,0.9s,baz=266,slow=2.0,SNR=9.9
DAVA  Damuels           137.99 335  ePKiKP   PKPdf   09 18 34.1 +0.5
      comp=Z,10nm,0.9s
ECH   Echery            138.30 338   PFAKE           09 18 50.0 +14
ECH                                  LR      LR
      comp=Z,2µm,20.0s
FUORN Ofenpass-Fuorn    138.35 334   PFAKE           09 18 50.0 +13
FUORN                                LR      LR
      comp=Z,4µm,20.0s
TUE   Stuetta           138.86 335   PFAKE           09 18 50.0 +12
TUE                                  LR      LR
      comp=Z,3µm,22.0s
SENIN Lac Senin/Sane    139.78 336   PFAKE           09 18 50.0 +11
SENIN                                LR      LR
      comp=Z,2µm,19.0s
AQU   L'Aquila          139.99 327   PFAKE           09 18 50.0 +10
AQU                                  LR      LR
      comp=Z,2µm,21.0s
CLF   Chambon-Foret     140.10 342   PFAKE           09 18 50.0 +10
CLF                                  LR      LR
      comp=Z,3µm,19.0s
TIP   Timpagrande       140.11 321   PFAKE           09 18 50.0 +10
TIP                                  LR      LR
      comp=Z,2µm,22.0s
VLC   Villacollemand    140.19 332   PFAKE           09 18 50.0 +10
VLC                                  LR      LR
      comp=Z,3µm,22.0s
BNI   Bardonecchia      141.10 336  ePKPdf   PKPdf   09 18 36.7 -2.7
BNI                                  LR      LR
      comp=Z,3µm,20.0s
BNI   Bardonecchia      141.10 336  ePKIKP   PKPdf   09 18 36.7 -2.7
BNI                                  MLR     MLR
      comp=Z,3µm,20.0s
CEL   Celeste           141.20 320   PFAKE           09 18 50.0 +7.6
CEL                                  LR      LR
      comp=Z,2µm,21.0s
SSB   Saint Sauveur     141.74 338   PFAKE           09 18 50.0 +6.8
SSB                                  LR      LR
      comp=Z,2µm,19.0s
MDP   Montagnes des     142.02  95   PKhKP   PKPpre  09 18 35.3
      comp=Z,9.4nm,0.9s,baz=274,slow=2.4,SNR=3.9
MDP                                  PKP     PKPdf   09 18 41.4 -0.3
      comp=Z,15nm,0.9s,baz=281,slow=2.7,SNR=5.8
CLTB  Caltabellotta     143.28 322   PFAKE           09 19 00.0 +13
CLTB                                 LR      LR
```

	comp=Z,2µm,20.0s						
KEST	**Kesra**	**146.84**	**323**	*e*PKPbc	**PKPbc**	**09 18 51.8**	**+0.4**
KEST				LR	LR		
	comp=Z,2µm,20.0s						
KEST	**Kesra**	**146.84**	**323**	PKPbc	**PKPbc**	**09 18 51.6**	**+0.3**
	comp=Z,69nm,0.8s,baz=255,slow=1.6,SNR=53						
PBRG	**Braganca**	**148.18**	**349**	*e*PKPab	**PKPab**	**09 18 58.4**	**+0.7**
PGAV	**Gavieira, Arco**	**148.29**	**351**	*e*LR	LR	10 17 12.2	
	comp=Z,2µm,18.0s						
POLO	**Lamas de Olo**	**148.79**	**350**	*e*PKPdf	**PKPbc**	**09 18 56.8**	**+0.3**
MVO	**Moncorvo**	**148.85**	**349**	*e*PKPdf	**PKPbc**	**09 18 56.4**	**-0.2**
MVO	**Moncorvo**	**148.85**	**349**	*e*LR	LR	10 18 33.5	
	comp=Z,2µm,18.0s						
PVRL	**Vila Real**	**148.87**	**350**	*e*PKPdf	**PKPbc**	**09 18 57.0**	**+0.4**
PTO	**Porto**	**149.15**	**351**	*e*PKPdf	**PKPbc**	**09 18 57.6**	**+0.4**
PVIS	**Viseu**	**149.44**	**350**	*e*PKPdf	**PKPbc**	**09 18 58.1**	**0.0**
ES19	**SONSECA Array**	**149.51**	**343**	*e*PKPdf	**PKPdf**	**09 18 52.8**	**-1.0**
ES19				*e*PKPbc	**PKPbc**	**09 18 58.0**	**-0.3**
ROSA	**Rosais**	**149.51**	**21**	*e*pPKPdf	pPKPdf	09 18 56.5	-1.6
ESDC	**Sonseca Array**	**149.55**	**344**	PKP	**PKPdf**	**09 18 53.4**	**-0.5**
	comp=Z,4.5nm,0.9s,baz=334,slow=3.4,SNR=4.9						
ESDC				PKPbc	**PKPbc**	**09 18 58.4**	**0.0**
	comp=Z,6.5nm,0.8s,baz=15,slow=2.6,SNR=11						
ESLA	**Sonseca Array**	**149.55**	**344**	*e*PKPbc	**PKPbc**	**09 18 58.5**	**+0.1**
ESLA				LR	LR		
	comp=Z,3µm,21.0s						
ATAF	**Djebel Tarf**	**149.55**	**329**	P	**PKPdf**	**09 18 55.0**	**+0.9**
MTE	**Manteigas**	**149.69**	**349**	*e*PKPdf	**PKPbc**	**09 18 59.1**	**+0.4**
MTE	**Manteigas**	**149.69**	**349**	*e*LR	LR	10 18 51.7	
	comp=Z,2µm,20.0s						
MTE	**Manteigas**	**149.69**	**349**	*e*PKPdf	**PKPdf**	**09 18 54.7**	**+0.6**
MTE				*e*PKPbc	**PKPbc**	**09 18 59.1**	**+0.4**
ADJB	**Djebel Djouab**	**149.75**	**330**	P	**PKiKP**	**09 19 00.0**	**-0.1**
PAB	**San Pablo**	**149.77**	**344**	*e*PKPdf	**PKPdf**	**09 18 54.0**	**-0.2**
PAB				*e*PKPbc	**sPKPdf**	**09 18 59.3**	**-0.7**
PCAS	**Casmilo, Conde**	**150.19**	**350**	*e*PKPdf	**PKPbc**	**09 18 59.9**	**0.0**
PCBR	**Castelo Branco**	**150.22**	**349**	*e*PKPdf	**PKPdf**	**09 18 55.0**	**+0.2**
PCBR	**Castelo Branco**	**150.22**	**349**	*e*PKPdf	**PKiKP**	**09 19 00.4**	**-0.4**
PMRV	**Marv??o**	**150.60**	**348**	*e*PKPdf	**PKiKP**	**09 19 01.2**	**-0.4**
PMRV	**Marv??o**	**150.60**	**348**	*e*LR	LR	10 18 27.9	
	comp=Z,3µm,18.0s						
PTOM	**Tomar**	**150.60**	**350**	*e*PKPdf	**PKiKP**	**09 19 01.1**	**-0.5**
PMTG	**Montargil**	**151.10**	**350**	*e*PKPdf	**PKPbc**	**09 19 01.9**	**-0.2**
PBEJ	**Beja**	**152.05**	**348**	*e*PKPdf	**PKiKP**	**09 19 05.2**	**+0.6**
PNCL	**Nicolau / Gran**	**152.09**	**350**	*e*PKPdf	**PKiKP**	**09 19 04.9**	**+0.2**
RCBR	**Riachuelo**	**153.28**	**127**	*e*PKPbc	**PKiKP**	**09 19 07.7**	**-0.2**
RCBR				LR	LR		
	comp=Z,3µm,18.0s						
RCBR	**Riachuelo**	**153.28**	**127**	*e*PKIKP	**PKiKP**	**09 19 07.7**	**-0.2**
RCBR				MLR	MLR		
	comp=Z,3µm,18.0s						
TAM	**Tamanrasset**	**157.22**	**305**	PFAKE		09 19 20.0	+14
TAM				LR	LR		
	comp=Z,2µm,19.0s						
TOA0	**Torodi Ar. Sit**	**163.78**	**280**	*e*PKPdf	**PKPdf**	**09 19 11.4**	**-1.3**
TOA0				*e*PKPdf	**PKPdf**	**09 19 11.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**163.78**	**280**	PKP	**PKPdf**	**09 19 11.4**	**-1.3**
	comp=Z,8.8nm,1.0s,baz=353,slow=3.1,SNR=31						
TORD				PKPab	**PKPab**	**09 20 03.9**	**-1.1**
	comp=Z,6.7nm,0.9s,baz=105,slow=5.7,SNR=6.8						
TORD				PP	**PP**	**09 23 52.9**	**+2.1**
	comp=Z,4.7nm,1.2s,baz=147,slow=3.5,SNR=3.8						
TOA1	**Torodi Ar. Sit**	**163.79**	**281**	*e*PKPdf	**PKPdf**	**09 19 11.4**	**-1.3**
TOA1				*e*PKPab	**PKPab**	**09 20 03.9**	**-1.1**
TOA1				*e*PP	**PP**	**09 23 52.9**	**+2.1**
KIC	**Kosan Boka**	**169.30**	**247**	*e*PKIKP	**PKPdf**	**09 19 16.1**	**-0.9**
	comp=Z,40nm,1.0s						
LIC	**Lamto**	**169.50**	**246**	*e*PKIKP	**PKPdf**	**09 19 16.0**	**-1.1**
	comp=Z,47nm,1.1s						
DBIC	**Dimbokro**	**169.52**	**249**	PKP	**PKPdf**	**09 19 16.2**	**-0.9**
	comp=Z,14nm,0.9s,baz=22,slow=0.5,SNR=10						
TIC	**Toumodi**	**169.66**	**248**	*e*PKIKP	**PKPdf**	**09 19 16.2**	**-1.1**

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*SOME **23** 09:06:23.3, 41°.65N×77°.75E, h15^{km}*
*KRNET **23** 09:06:23.1±0.1, 41°.70N×77°.76E, h17^{km}, mb2.3*
*NNC **23** 09:06:25.5±0.8, 41°.75N×77°.70E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=5.7km s-min=3.3km az=178.0*
ISC 23 09:06:23.3±1.1**, 41°.72N**±0°.04×**77°.72E**±0°.02**, h4**^{km}±9^{km}**, n46,** σ1^{s}.**31**/81**, 21C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**0.06**	**82**	⇑*i*P	**Pg**	**09 06 24.7**	**-0.4**
	baz=41						
TARG				⇑*i*S	**Sg**	**09 06 25.9**	**-0.4**
	baz=41						
KDJ	**Kajisay**	**0.57**	**315**	⇑*i*P	**Pg**	**09 06 35.2**	**+0.8**
	baz=16						
KDJ				⇑*i*S	**Sg**	**09 06 43.4**	**+1.5**
	baz=16						
ULHL	**Ulahol**	**1.22**	**296**	⇑*i*P	**Pb**	**09 06 46.9**	**-0.2**
	baz=96						
ULHL				⇑*i*S	**Sn**	**09 07 03.2**	**-1.3**
	baz=96						
NRN	**Naryn**	**1.32**	**258**	⇑*e*P	**Pg**	**09 06 48.9**	**+0.2**
	baz=59						
NRN				⇑*i*S	**Sg**	**09 07 07.3**	**+1.4**
	baz=59						
SATY	**Saty**	**1.43**	**21**	P	**Pg**	**09 06 51.1**	**+0.3**
	2.5nm,0.1s						
SATY				S	**Sg**	**09 07 10.3**	**+1.0**
	13nm,0.1s						
SATY	**Saty**	**1.43**	**21**	*e*P	**Pg**	**09 06 51.1**	**+0.3**
	1.0nm,0.1s						
SATY				*e*S	**Sg**	**09 07 10.3**	**+1.0**
	11nm,0.1s						
TNSS	**Tian-Shan**	**1.44**	**337**	P	**Pg**	**09 06 51.5**	**+0.6**
	2.5nm,0.2s						
TNSS				S	**Sg**	**09 07 10.9**	**+1.4**
	8.6nm,0.1s						
TNSS	**Tian-Shan**	**1.44**	**337**	*e*P	**Pg**	**09 06 51.5**	**+0.6**
	2.5nm,0.2s						
TNSS				*e*S	**Sg**	**09 07 10.9**	**+1.4**
	8.6nm,0.1s						
MDOK	**Medeo**	**1.52**	**341**	P	**Pb**	**09 06 51.3**	**-1.0**
	0.7nm,0.4s						
MDOK				S	**Sg**	**09 07 13.8**	**+1.4**
	4.6nm,0.6s						
MDOK	**Medeo**	**1.52**	**341**	Pg	**Pb**	**09 06 52.5**	**+0.3**
	1.9nm,0.3s						
MDOK				Lg	Lg	09 07 12.7	
	6.3nm,0.3s						
MDOK	**Medeo**	**1.52**	**341**	*e*P	**Pb**	**09 06 52.5**	**+0.3**
	1.7nm,0.3s						
MDOK				*e*S	**Sg**	**09 07 12.7**	**+0.3**
	4.8nm,0.5s						
BOOM	**Boomskoye usch**	**1.53**	**301**	⇑*i*P	**Pb**	**09 06 51.9**	**-0.5**
	baz=1.0						
BOOM				⇑*i*S	**Sg**	**09 07 13.1**	**+0.5**
	baz=1.0						
IZV	**Izvestkoviy**	**1.55**	**328**	P	**Pg**	**09 06 53.5**	**+0.4**
	2.7nm,0.2s						
IZV				S	**Sg**	**09 07 14.3**	**+1.1**
	13nm,0.2s						
IZV	**Izvestkoviy**	**1.55**	**328**	*e*P	**Pg**	**09 06 53.5**	**+0.4**
	2.7nm,0.2s						
IZV				*e*S	**Sg**	**09 07 14.3**	**+1.1**
	13nm,0.2s						
KOTS	**Kotyrbulak**	**1.58**	**344**	P	**Pb**	**09 06 53.3**	**+0.2**
	2.5nm,0.2s						
KOTS				S	**Sg**	**09 07 14.2**	**+0.1**
	13nm,0.2s						
KOTS	**Kotyrbulak**	**1.58**	**344**	*e*P	**Pb**	**09 06 53.3**	**+0.2**
	2.5nm,0.2s						
KOTS				*e*S	**Sg**	**09 07 14.2**	**+0.1**
	13nm,0.2s						
UZB	**Uzynbulak**	**1.72**	**34**	P	**Pg**	**09 06 56.6**	**+0.3**
	1.5nm,0.2s						
UZB				S	**Sg**	**09 07 20.0**	**+1.4**
	5.0nm,0.2s						
UZB	**Uzynbulak**	**1.72**	**34**	*e*P	**Pg**	**09 06 56.6**	**+0.3**
	0.5nm,0.2s						
UZB				*e*S	**Sg**	**09 07 20.0**	**+1.4**
	6.0nm,0.3s						
KURS	**Kuram**	**1.80**	**10**	P	**Pg**	**09 06 57.4**	**-0.4**
	1.7nm,0.2s						
KURS				S	**Sg**	**09 07 21.0**	**0.0**
	4.0nm,0.4s						
KURS	**Kuram**	**1.80**	**10**	*e*P	**Pg**	**09 06 57.4**	**-0.4**
	1.7nm,0.2s						
KURS				*e*S	**Sg**	**09 07 21.0**	**0.0**
	4.0nm,0.4s						
KST	**Kastek**	**1.86**	**316**	P	**Pg**	**09 06 58.8**	**-0.1**
	3.7nm,0.2s						
KST				S	**Sg**	**09 07 23.5**	**+0.5**
	7.1nm,0.3s						
KST	**Kastek**	**1.86**	**316**	*e*P	**Pg**	**09 06 58.8**	**-0.1**
	3.7nm,0.2s						
KST				*e*S	**Sg**	**09 07 23.5**	**+0.5**
	7.1nm,0.3s						
KZA	**Kyzart**	**1.88**	**282**	⇑*i*P	**Pb**	**09 06 58.4**	**-0.1**
	baz=82						
KZA				⇑*i*S	**Sg**	**09 07 24.0**	**+0.2**
	baz=82						
SHLS	**Shalkode**	**1.93**	**41**	Pg	**Pg**	**09 07 03.9**	**+3.7**
	7.1nm,0.2s						
SHLS				Lg	Lg	09 07 32.4	
	6.3nm,0.3s						
SHLS	**Shalkode**	**1.93**	**41**	*e*P	**Pg**	**09 07 04.0**	**+3.7**
	4.0nm,0.3s						
SHLS				*e*S	**Sg**	**09 07 32.4**	**+7.1**
	3.9nm,0.3s						
TKM2	**Tokmak 2**	**1.98**	**308**	⇑Pn	**Pb**	**09 07 00.6**	**+0.5**
	0.8nm,0.3s						
TKM2				⇓Sn	**Sg**	**09 07 27.2**	**+0.2**
	2.7nm,0.3s						
TKM2	**Tokmak 2**	**1.98**	**308**	⇑*i*P	**Pb**	**09 06 59.6**	**-0.5**
	baz=8.0						
TKM2				⇑*i*S	**Sb**	**09 07 26.1**	**+0.9**
	baz=8.0						
PDGK	**Podgornoye**	**2.07**	**39**	Pg	**Pg**	**09 07 02.6**	**-0.4**
	1.8nm,0.4s						
PDGK				Lg	Lg	09 07 30.1	
	3.0nm,0.4s						
PDGK	**Podgornoye**	**2.07**	**39**	⇑Pn	**Pg**	**09 07 02.0**	**-1.0**
	2.0nm,0.5s						
PDGK				⇑Sn	**Sg**	**09 07 30.4**	**+0.5**
	3.9nm,0.5s						
PDGK	**Podgornoye**	**2.07**	**39**	⇑*i*P	**Pb**	**09 07 00.2**	**-1.4**
	baz=37						
PDGK				⇑*i*S	**Sb**	**09 07 27.0**	**-0.7**
	baz=37						
KTBS	**Karatobe**	**2.13**	**339**	Pg	**Pg**	**09 07 03.6**	**-0.6**
	2.0nm,0.2s						
KTBS				Lg	Lg	09 07 32.2	
	15nm,0.2s						
KTBS	**Karatobe**	**2.13**	**339**	*e*P	**Pb**	**09 07 03.3**	**+0.7**
	2.0nm,0.2s						
KTBS				*e*S	**Sg**	**09 07 31.4**	**-0.4**
	15nm,0.2s						
CHKK	**Chushkaly**	**2.20**	**346**	Pg	**Pg**	**09 07 04.8**	**-0.7**
	2.6nm,0.2s						
CHKK				Lg	Lg	09 07 34.0	
	21nm,0.4s						
CHKK	**Chushkaly**	**2.20**	**346**	*e*P	**Pg**	**09 07 04.8**	**-0.7**
	2.6nm,0.2s						
CHKK				*e*S	**Sg**	**09 07 34.0**	**0.0**
	21nm,0.4s						
KBK	**Karagaybulak**	**2.26**	**295**	⇓*i*P	**Pb**	**09 07 03.4**	**-1.5**
	baz=96						
KBK				⇓*i*S	**Sb**	**09 07 32.8**	**-0.5**
	baz=96						
KUU	**Kurty**	**2.40**	**335**	Pg	**Pg**	**09 07 08.5**	**-0.8**
	1.8nm,0.2s						
KUU				Lg	Lg	09 07 40.1	
	5.2nm,0.4s						
KUU	**Kurty**	**2.40**	**335**	*e*P	**Pg**	**09 07 08.5**	**-0.8**
	0.8nm,0.1s						
KUU				*e*S	**Sg**	**09 07 40.1**	**-0.3**
	5.8nm,0.3s						
MNBS	**Baschi**	**2.41**	**12**	Pg	**Pg**	**09 07 08.7**	**-0.8**
	2.1nm,0.3s						
MNBS				Lg	Lg	09 07 40.4	
	11nm,0.4s						
MNBS	**Baschi**	**2.41**	**12**	*e*P	**Pg**	**09 07 08.7**	**-0.8**
	2.1nm,0.3s						
MNBS				*e*S	**Sg**	**09 07 40.4**	**-0.4**
	11nm,0.4s						
ARXS	**Arharly**	**2.49**	**2**	Pg	**Pg**	**09 07 10.3**	**-0.8**
	2.9nm,0.6s						
ARXS				Lg	Lg	09 07 43.5	
	15nm,0.4s						
ARXS	**Arharly**	**2.49**	**2**	*e*P	**Pg**	**09 07 10.3**	**-0.8**
	2.9nm,0.6s						
ARXS				*e*S	**Sg**	**09 07 43.5**	**+0.1**
	15nm,0.4s						
AAK	**Ala-Archa**	**2.57**	**292**	⇑Pg	**Pb**	**09 07 10.8**	**+0.8**
	0.6nm,0.5s						
AAK				⇑Lg	Lg	09 07 45.4	
	1.3nm,0.4s						
KTMS	**Ketmen**	**2.60**	**48**	Pg	**Pg**	**09 07 11.5**	**-1.6**
	1.4nm,0.2s						
KTMS				Lg	Lg	09 07 45.6	
	5.5nm,0.4s						
KTMS	**Ketmen**	**2.60**	**48**	*e*P	**Pg**	**09 07 11.6**	**-1.6**
	1.4nm,0.2s						
KTMS				*e*S	**Sg**	**09 07 45.6**	**-1.1**
	5.5nm,0.4s						
DJR	**Jarkent**	**3.02**	**29**	Pg	**Pb**	**09 07 18.7**	**+1.0**
	0.4nm,0.3s						
DJR				Lg	Lg	09 07 57.7	
	2.5nm,0.3s						
DJR	**Jarkent**	**3.02**	**29**	*e*P	**Pb**	**09 07 18.7**	**+1.0**
	0.2nm,0.2s						
DJR				*e*S	**Sg**	**09 07 57.7**	**-2.6**
	1.7nm,0.2s						

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*IDC **23** 09:17:30.5±2.1, 8°.92S×110°.70E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.6/52, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=82.7km s-min=21.0km az=54.0*
*ISCJB **23** 09:17:34.4±0.7, 9°.21S±0°.05×110°.42E±0°.06, h51^{km}, mb3.7/5, Error ellipse: s-maj=8.7km s-min=6.9km az=140.8*
*DJA **23** 09:17:34.3±0.7, 9°S±8°×11°0E±°, h10^{km}, M4.3/11, mb4.6/1, MLv4.2/11*
ISC 23 09:17:36.3±1.0**, 9°.14S**±0°.08×**110°.45E**±0°.07**, h51**^{km}**, n21,** σ1^{s}.**64**/20**, mb3.8**/5**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**1.18**	**37**	P	**Pn**	**09 17 55.4**	**-1.1**
PCJI				S	**Sn**	**09 18 11.4**	**-0.2**
UGM	**Wanagama**	**1.23**	**3**	P	**Pn**	**09 17 57.0**	**-0.1**
UGM				S	**Sn**	**09 18 11.9**	**-0.7**
WOJI	**Wonogiri, Jawa**	**1.38**	**20**	P	**Pn**	**09 18 01.1**	**+1.9**
PWJI	**Pagerwojo**	**1.74**	**50**	P	**Pn**	**09 18 03.5**	**-0.6**
NGJI	**Ngawi**	**2.03**	**30**	P	**Pn**	**09 18 12.0**	**+4.0**
NGJI				S	Sn	09 18 42.2	+10
SMRI	**Semarang**	**2.08**	**360**	P	**Pn**	**09 18 10.8**	**+2.0**
KPJI	**Karang Pucung**	**2.35**	**320**	P	**Pn**	**09 18 14.6**	**+2.2**
CMJI	**Cimerak**	**2.40**	**304**	P	**Pn**	**09 18 12.1**	**-1.0**
CISI	**Cisompet, Garu**	**3.05**	**301**	P	**Pn**	**09 18 21.7**	**-0.4**
JCJI	**Jatiwangi**	**3.41**	**320**	P	**Pn**	**09 18 24.9**	**-2.1**
JAGI	**Jajag, Banyuwa**	**3.72**	**80**	P	**Pn**	**09 18 33.2**	**+2.0**
PLAI	**Plampang**	**7.24**	**88**	P	**Pn**	**09 19 20.9**	**+1.3**
FITZ	**Fitzroy Crossi**	**17.22**	**123**	P	**Pn**	**09 21 31.4**	**-2.0**
	0.2nm,0.3s,baz=314,slow=8.0,SNR=1.1						
WRA	**Warramunga Arr**	**25.45**	**118**	P	**P**	**09 22 59.7**	**-0.1**
	1.2nm,0.8s,baz=292,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.67**	**126**	P	**P**	**09 23 10.7**	**0.0**
	1.0nm,0.6s,baz=306,slow=9.5,SNR=17						
STKA	**Stephens Creek**	**36.68**	**133**	P	**P**	**09 24 38.6**	**+0.2**
	2.3nm,0.8s,baz=301,slow=12,SNR=4.2						
H08S2	**Diego Garcia H**	**37.57**	**269**	T	T	10 04 43.6	
	baz=97						
H08S3	**Diego Garcia H**	**37.58**	**269**	T	T	10 04 51.0	
	baz=97,SNR=5.1						
H08S1	**Diego Carcia H**	**37.59**	**269**	T	T	10 05 14.4	
	baz=97						
USRK	**Ussuriysk Ar.**	**56.57**	**18**	P	**P**	**09 27 13.3**	**-0.4**
	0.8nm,0.7s,baz=214,slow=4.8,SNR=1.9						
MKAR	**Makanchi Array**	**61.09**	**338**	P	**P**	**09 27 45.3**	**+0.2**
	0.3nm,0.4s,baz=152,slow=7.7,SNR=9.3						

MEX 23 09:24:49.2±0.8**, 17°.59N**×**101°.08W, h26**^{km}±16^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.37**	**273**	*e*P	Pb	09 24 55.6	-1.8
ZIIG				*e*S	Sb	09 25 01.6	-1.2
CAIG	**El Cayaco**	**0.94**	**125**	*e*P	Pn	09 25 04.0	-2.8
CAIG				*e*S	Sb	09 25 15.9	-3.2
ARIG	**Puente Sto Nin**	**0.98**	**45**	*e*P	Pn	09 25 04.4	-2.9
ARIG				*e*S	Sb	09 25 16.4	-3.7
MEIG	**Mezcala**	**1.43**	**76**	*e*P	Pn	09 25 10.7	-2.9
MEIG				*i* S	Sn	09 25 28.4	-3.2
PLIG	**Platanillo**	**1.70**	**62**	*e*P	Pn	09 25 14.9	-2.4
PLIG				*e*S	Sn	09 25 34.8	-3.5

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*DDA **23** 09:35:27.3, 36°.91N×29°.32E, h7^{km}±2^{km}, ML2.2*
*ISK **23** 09:35:29.8, 36°.84N×29°.09E, h17^{km}, ML2.5/3*
ISC 23 09:35:27.4±1.3**, 36°.91N**±0°.04×**29°.34E**±0°.06**, h7**^{km}±12^{km}**, n7,** σ1^{s}.**10**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.34**	**218**	PG	**Pb**	**09 35 34.8**	**-1.0**
FETY				SG	**Sg**	**09 35 38.6**	**+0.1**
FETY	**Fethiye**	**0.34**	**218**	*i* P	**Pg**	**09 35 34.5**	**+0.5**
FETY				*i* S	**Sb**	**09 35 40.2**	**-1.2**
GOLH	**Golhisar**	**0.37**	**28**	*i* P	**Pg**	**09 35 35.3**	**+0.6**
GOLH				*i* S	**Sb**	**09 35 41.3**	**-1.2**
GOLH				IAML_P			
	comp=Z,1µm,0.2s						
TURN	**Turunc**	**0.59**	**267**	PG	**Pn**	**09 35 43.5**	**+1.2**
TURN				SG	**Sn**	**09 35 53.5**	**+1.3**
TAVA	**DENIZLI_Tavas**	**0.66**	**329**	*i* P	**Pb**	**09 35 40.6**	**-0.7**
TAVA				*i* S	**Sb**	**09 35 49.7**	**-0.9**
TAVA				IAML_P			
	comp=Z,408nm,0.2s						
AKAS	**Kas**	**0.70**	**163**	PG	**Pn**	**09 35 44.5**	**+0.6**
YER	**Yerkesik**	**0.88**	**285**	PG	**Pg**	**09 35 44.0**	**-0.3**

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*ISCJB **23** 09:36:51.0±0.3, 10°.68S±0°.04×165°.21E±0°.06, h10^{km}, mb4.6/26, Error ellipse: s-maj=8.5km s-min=6.3km az=165.8*
*IDC **23** 09:36:51.2±0.8, 10°.58S×165°.19E, h0^{km}, mb4.1/12, mb1 4.3/13, mb1mx4.1/35, mbtmp4.1/13, ML4.9/1, MS4.1/1, Ms1 4.1/1, ms1mx3.4/38, Error ellipse: s-maj=30.6km s-min=17.6km az=132.0*
*NEIC **23** 09:36:52.5±0.3, 10°.54S×165°.19E, h10^{km}, mb4.5/12, Error ellipse: s-maj=7.5km s-min=6.4km az=92.0*
ISC 23 09:36:52.1±0.5**, 10°.57S**±0°.07×**165°.35E**±0°.07**, h10**^{km}**, n54,** σ1^{s}.**69**/54**, mb4.5**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.44**	**282**	*e*P	**Pn**	**09 38 14.0**	**+0.6**
HNR				*e*S	**Sn**	**09 39 17.0**	**+0.9**
HNR	**Honiara**	**5.44**	**282**	*e*Pn	**Pn**	**09 38 10.8**	**-2.6**
HNR				*e*Sn	**Sn**	**09 39 19.1**	**+3.0**
HNR				*e*Sn	**Sn**	**09 39 20.8**	**+4.7**
HNR	**Honiara**	**5.44**	**282**	Pn	**Pn**	**09 38 16.4**	**+3.1**
	108nm,0.3s,baz=166,slow=11,SNR=16						
HNR				Sn	**Sn**	**09 39 19.1**	**+3.0**
	52nm,0.3s,baz=181,slow=17,SNR=4.0						
MARNC	**Mare, Loyalty**	**11.15**	**167**	*e*Pn	**Pn**	**09 39 33.1**	**+1.4**
DZM	**Mont Dzumac**	**11.48**	**175**	Pn	**Pn**	**09 39 37.5**	**+1.1**
	7.4nm,0.3s,baz=5.4,slow=5.7,SNR=101						
DZM				Sn	**Sn**	**09 41 43.3**	**-1.6**
	0.8nm,0.3s,baz=295,slow=19,SNR=3.8						
DZM				LR	LR	09 43 08.0	
	comp=Z,1µm,19.6s,baz=29,slow=33						
OUENC	**Ouen Island, N**	**11.87**	**173**	*e*Pn	**Pn**	**09 39 43.6**	**+2.1**
PINNC	**Pines Island,**	**12.14**	**171**	*e*Pn	**Pn**	**09 39 47.2**	**+2.0**
MANU	**Manus Island**	**19.77**	**294**	*e*P	**Pn**	**09 41 22.2**	**-1.9**
	128nm,1.4s						
EIDS	**Eidsvold**	**19.99**	**221**	*e*P	**Pn**	**09 41 25.2**	**-1.4**
	19nm,0.9s						
CTA	**Charters Tower**	**20.68**	**241**	P	Pn	09 41 33.1	-1.8
	7.9nm,0.9s,baz=68,slow=13,SNR=5.9						
CTAO	**Charters Tower**	**20.68**	**241**	*e*P	**P**	**09 41 32.2**	**-0.4**
	33nm,1.5s						
COEN	**Coen**	**21.93**	**259**	*e*P	**P**	**09 41 45.9**	**-0.1**
	20nm,1.4s						
KNTN	**Kanton**	**24.04**	**73**	*e*P	**P**	**09 42 07.8**	**+0.2**
	280nm,1.6s						
H11S2	**WAKE ISLAND Hy**	**28.91**	**3**	T	T	10 13 10.4	
	baz=183,slow=76,SNR=58						
H11S3	**WAKE ISLAND Hy**	**28.91**	**3**	T	T	10 13 29.1	
	baz=183,slow=76,SNR=47						
H11S1	**WAKE ISLAND Hy**	**28.93**	**3**	T	T	10 13 24.0	
	baz=183,slow=76,SNR=52						
H11N1	**WAKE ISLAND Hy**	**30.13**	**3**	T	T	10 14 52.7	
	baz=181						
H11N3	**WAKE ISLAND Hy**	**30.14**	**3**	T	T	10 14 55.6	
	baz=181,slow=74						
H11N2	**WAKE ISLAND Hy**	**30.15**	**3**	T	T	10 14 59.1	
	baz=181,slow=74						
BKZ	**Black Stump Fm**	**30.16**	**163**	*e*P	**P**	**09 43 01.4**	**-1.1**
	13nm,0.8s						
STKA	**Stephens Creek**	**30.52**	**222**	*e*P	**P**	**09 43 05.3**	**-0.4**
	2.3nm,1.3s						
STKA	**Stephens Creek**	**30.52**	**222**	P	**P**	**09 43 06.3**	**+0.5**
	4.7nm,0.8s,baz=32,slow=10,SNR=12						
WR1	**Warramunga Arr**	**31.29**	**249**	*e*P	**P**	**09 43 09.9**	**-2.7**
	8.4nm,1.1s						
WRA	**Warramunga Arr**	**31.29**	**249**	P	**P**	**09 43 09.9**	**-2.7**
	2.4nm,0.9s,baz=81,slow=9.3,SNR=9.9						
SNZO	**South Karori**	**31.71**	**167**	*e*P	**P**	**09 43 16.4**	**+0.3**
	32nm,1.0s						
AS01	**Alice Springs**	**32.62**	**242**	*e*P	**P**	**09 43 24.3**	**-0.1**
AS31	**Alice Springs**	**32.66**	**242**	*e*P	**P**	**09 43 22.5**	**-2.2**
	3.0nm,1.6s						
AS31				*e*PcP	**PcP**	**09 46 10.1**	**-0.7**
ASAR	**Alice Springs**	**32.66**	**242**	P	**P**	**09 43 22.9**	**-1.8**
	1.7nm,0.6s,baz=65,slow=10,SNR=28						
ASAR				PcP	**PcP**	**09 46 10.1**	**-0.7**
	0.5nm,0.7s,baz=52,slow=1.8,SNR=5.2						
ANA2	**Anatahan**	**33.05**	**324**	*e*P	**P**	**09 43 23.9**	**-4.3**
	903nm,0.2s						
DCZ	**Deep Cove**	**34.80**	**178**	*e*P	**P**	**09 43 43.0**	**0.0**
	32nm,1.2s						
BBOO	**Buckleboo**	**34.87**	**226**	*e*P	**P**	**09 43 43.1**	**-0.7**
	17nm,0.6s						
CM31	**Chiang Mai Arr**	**71.57**	**294**	*e*P	**P**	**09 48 15.5**	**+1.4**
	8.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**71.57**	**294**	P	**P**	**09 48 15.5**	**+1.4**
	1.9nm,0.6s,baz=118,slow=4.6,SNR=7.4						
ULN	**Ulaanbaatar**	**77.69**	**324**	*e*P	**P**	**09 48 49.4**	**+0.1**
	5.4nm,1.0s						
SONA0	**Songino Array**	**78.06**	**324**	*e*P	**P**	**09 48 52.4**	**+1.2**
SONM	**Songino Array**	**78.06**	**324**	P	**P**	**09 48 52.4**	**+1.2**
	1.3nm,0.7s,baz=132,slow=6.2,SNR=9.3						
QSPA	**South Pole Qui**	**79.43**	**180**	*e*P	**P**	**09 48 59.2**	**+0.7**
	9.9nm,1.0s						
ILAR	**Eielson Array**	**83.19**	**19**	P	**P**	**09 49 18.8**	**+0.5**
	0.9nm,0.7s,baz=237,slow=4.9,SNR=14						
ILB	**Eielson Array**	**83.19**	**19**	*e*P	**P**	**09 49 17.5**	**-0.7**
	5.8nm,1.3s						
BEKR	**Beckworth**	**84.92**	**48**	*e*P	**P**	**09 49 29.1**	**+1.2**
	12nm,0.6s						
MAW	**Mawson**	**85.01**	**202**	*e*P	**P**	**09 49 27.7**	**+0.1**
	31nm,1.6s						
MAW	**Mawson**	**85.01**	**202**	P	**P**	**09 49 27.7**	**+0.1**
	17nm,0.8s,baz=192,slow=8.1,SNR=3.5						
NV01	**Mina Array Sit**	**86.02**	**50**	*e*P	**P**	**09 49 34.6**	**+1.1**
NVAR	**Mina Array Bea**	**86.02**	**50**	P	**P**	**09 49 34.6**	**+1.1**
	0.7nm,0.8s,baz=229,slow=6.8,SNR=3.4						
MK01	**Makanchi Array**	**92.90**	**317**	*e*P	**P**	**09 50 05.7**	**+0.1**
MK31	**Makanchi Array**	**92.91**	**317**	*e*P	**P**	**09 50 05.5**	**-0.1**
	2.3nm,1.0s						
MK32	**Makanchi Array**	**92.91**	**317**	*e*P	**P**	**09 50 05.6**	**0.0**
MKAR	**Makanchi Array**	**92.91**	**317**	P	**P**	**09 50 05.6**	**0.0**
	1.1nm,0.8s,baz=93,slow=6.5,SNR=12						
ZALV	**Zalesovo Beam**	**92.95**	**324**	*e*P	**P**	**09 50 05.1**	**-0.4**
ZALV	**Zalesovo Beam**	**92.95**	**324**	P	**P**	**09 50 04.7**	**-0.8**
	1.3nm,0.9s,baz=113,slow=3.4,SNR=4.5						
ZAA1	**Zalesovo Array**	**92.95**	**324**	*e*P	**P**	**09 50 04.7**	**-0.8**
YKA	**Yellowknife Ar**	**94.73**	**27**	P	**P**	**09 50 13.5**	**0.0**
	0.1nm,0.5s,baz=257,slow=5.0,SNR=5.0						
YKB5	**Yellowknife Ar**	**94.73**	**27**	*e*P	**P**	**09 50 11.5**	**-2.0**
TXAR	**Lajitas Array**	**95.94**	**61**	P	**P**	**09 50 22.5**	**+2.6**
	0.4nm,1.0s,baz=292,slow=4.8,SNR=2.5						

IDC 23 09:43:29.6±3.6**, 18°.81S**×**167°.67E, h0**^{km}**, mb3.9**/4**, mb1 4.0**/5**, mb1mx3.7**/35**, mbtmp3.8**/5**, ML2.5**/1**, Error ellipse: s-maj=75.7km s-min=32.1km az=98.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.44**	**199**	Pn	Pn	09 44 22.6	-2.0
	0.4nm,0.3s,baz=113,slow=12,SNR=18						
DZM				Sn	Sn	09 45 08.9	+2.8
	1.1nm,0.3s,baz=331,slow=22,SNR=1.7						
WRA	**Warramunga Arr**	**31.43**	**262**	P	P	09 49 51.2	-1.7
	0.4nm,0.7s,baz=87,slow=8.5,SNR=2.5						
ASAR	**Alice Springs**	**31.79**	**255**	P	P	09 49 56.7	+0.6

	1.9nm,1.0s,baz=82,slow=8.9,SNR=12						
FITZ	**Fitzroy Crossi**	**39.80**	**264**	P	P	09 51 05.6	+0.8
	3.7nm,0.8s,baz=90,slow=9.1,SNR=2.2						
SONM	**Songino Array**	**85.99**	**324**	P	P	09 56 12.3	+0.3
	0.6nm,0.7s,baz=148,slow=8.4,SNR=4.2						

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*NNC **23** 09:44:00.7±0.2, 42.°91N×71.°06E, h0^{km}, mb2.4, mpv2.2, Error ellipse: s-maj=5.9km s-min=0.8km az=23.0, Suspected Mining explosion.*
*ISCJB **23** 09:44:01.7±0.3, 42.°91N±0.°05×71.°02E±0.°03, h0^{km}, Error ellipse: s-maj=7.7km s-min=1.8km az=25.2*
*SOME **23** 09:44:01.2, 42.°85N×71.°07E, h10^{km}*
*KRNET **23** 09:44:03.7±0.1, 42.°87N×71.°26E, h15^{km}, mb2.3*
ISC 23 09:44:01.1±0.8**, 42.°88N**±0.°05×**71.°02E**±0.°03**, h0^{km}, n26, σ1^{s}30**/49**, 26C-18D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZA	**Taraz**	**0.23**	**87**	*e*P	**Pg**	**09 44 07.0**	**+1.6**
	63nm,0.1s						
DZA				*e*S	Sg	09 44 18.7	+10
	275nm,0.1s						
KK06	**Karatay Array**	**0.42**	**300**	⇑P	**Pg**	**09 44 09.5**	**+0.3**
KK06				⇓S	**Sg**	**09 44 15.2**	**+0.5**
KK02	**Karatay Array**	**0.44**	**301**	⇓P	**Pg**	**09 44 09.8**	**+0.3**
KK02				⇑S	**Sg**	**09 44 15.7**	**+0.6**
KK05	**Karatay Array**	**0.44**	**303**	⇑P	**Pg**	**09 44 09.7**	**+0.2**
KK05				⇓S	**Sg**	**09 44 15.6**	**+0.5**
KK07	**Karatay Array**	**0.44**	**299**	⇑P	**Pg**	**09 44 09.7**	**+0.3**
KK07				⇑S	**Sg**	**09 44 15.5**	**+0.4**
KK31	**Karatay Array**	**0.44**	**301**	⇓P	**Pg**	**09 44 09.8**	**+0.4**
	2.6nm,0.6s,baz=117,slow=20,SNR=47						
KK31				⇓S	**Sg**	**09 44 15.7**	**+0.6**
	8.3nm,0.3s,baz=119,slow=32,SNR=18						
KK01	**Karatay Array**	**0.44**	**301**	⇑P	**Pg**	**09 44 09.9**	**+0.4**
KK01				⇑S	**Sg**	**09 44 15.8**	**+0.5**
KK03	**Karatay Array**	**0.44**	**300**	⇑P	**Pg**	**09 44 09.8**	**+0.3**
KK03				⇑S	**Sg**	**09 44 15.8**	**+0.5**
KK04	**Karatay Array**	**0.44**	**301**	⇑P	**Pg**	**09 44 09.8**	**+0.2**
KK04				⇓S	**Sg**	**09 44 15.9**	**+0.6**
KK08	**Karatay Array**	**0.45**	**300**	⇑P	**Pg**	**09 44 10.0**	**+0.3**
KK08				⇑S	**Sg**	**09 44 16.0**	**+0.4**
KK09	**Karatay Array**	**0.45**	**302**	⇑P	**Pg**	**09 44 10.0**	**+0.2**
KK09				⇑S	**Sg**	**09 44 16.0**	**+0.4**
MNAS	**Manas**	**1.16**	**109**	⇓P	**Pg**	**09 44 22.8**	**-0.4**
	0.8nm,0.5s						
MNAS				⇑S	**Sg**	**09 44 37.8**	**-0.5**
	2.4nm,0.4s						
MNAS	**Manas**	**1.16**	**109**	⇓*i*P	**Pg**	**09 44 22.9**	**-0.4**
	baz=12						
MNAS				⇓*i*S	**Sg**	**09 44 36.7**	**-1.6**
	baz=12						
ARK	**Arkit**	**1.29**	**147**	⇑*i*P	**Pn**	**09 44 27.4**	**+1.0**
	baz=54						
ARK				⇑*i*S	**Sb**	**09 44 43.2**	**-0.1**
	baz=54						
MRKS	**Merke**	**1.63**	**94**	*e*P	**Pn**	**09 44 28.9**	**-2.2**
	2.0nm,0.3s						
MRKS				*e*S	**Sg**	**09 44 56.1**	**+2.9**
	4.4nm,0.5s						
MRKS	**Merke**	**1.63**	**94**	*e*P	**Pg**	**09 44 31.7**	**-0.5**
	1.8nm,0.3s						
MRKS				*e*S	**Sg**	**09 44 56.1**	**+2.9**
	4.4nm,0.5s						
EKS2	**Erkin-Say**	**2.04**	**95**	⇑*i*P	**Pb**	**09 44 38.3**	**-0.8**
	baz=96						
EKS2				⇑*i*S	**Sb**	**09 45 03.9**	**-1.1**
	baz=96						
AML	**Almayashu**	**2.11**	**110**	⇓*i*P	**Pb**	**09 44 39.8**	**-0.7**
	baz=12						
AML				⇓*i*S	**Sb**	**09 45 06.0**	**-1.4**
	baz=12						
ARSB	**Arslanbob**	**2.13**	**136**	⇑*i*P	**Pb**	**09 44 40.6**	**0.0**
	baz=40						
ARSB				⇑*i*S	**Sb**	**09 45 07.4**	**-0.3**
	baz=40						
AAK	**Ala-Archa**	**2.57**	**94**	Pg	**Pb**	**09 44 47.8**	**-0.3**
	1.1nm,0.5s						
AAK				Lg	Lg	09 45 21.9	
	2.7nm,0.5s						
AAK	**Ala-Archa**	**2.57**	**94**	⇓*i*P	**Pb**	**09 44 46.1**	**-2.0**
	baz=95						
AAK				⇓*i*S	**Sn**	**09 45 17.0**	**+0.9**
	baz=95						
USP	**Ospenovka**	**2.58**	**80**	⇓*e*P	**Pb**	**09 44 45.9**	**-2.3**
	baz=79						
USP				⇓*i*S	**Sn**	**09 45 17.4**	**+1.3**
	baz=79						
ARLS	**Aral**	**2.65**	**112**	⇓*i*P	**Pn**	**09 44 46.9**	**+1.7**
	baz=13						
ARLS				⇓*i*S	**Sn**	**09 45 18.9**	**+0.8**
	baz=13						
UCH	**Uchtor**	**2.66**	**103**	⇑*i*P	**Pb**	**09 44 47.7**	**-2.1**
	baz=4.0						
UCH				⇑*i*S	**Sn**	**09 45 20.0**	**+1.2**
	baz=4.0						
TKM2	**Tokmak 2**	**3.36**	**88**	⇑Pg	**Pb**	**09 45 00.8**	**-0.9**
	1.4nm,0.7s						
TKM2				⇓Lg	Lg	09 45 45.3	
	1.2nm,0.6s						
SFK	**Sufi-Kurgan**	**3.42**	**146**	⇑*i*P	**Pb**	**09 44 59.2**	**-3.4**
	baz=49						
SFK				⇑*i*S	**Sn**	**09 45 39.9**	**+2.7**
	baz=49						

IDC 23 10:08:32.2±1.8**, 0.°68N**×**129.°99E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/39**, mbtmp3.3**/3**, Error ellipse: s-maj=86.7km s-min=26.5km az=65.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.00**	**140**	Pn	Pn	10 09 05.9	-1.4
	1.3nm,0.3s,baz=287,slow=19,SNR=2.3						
SIJI				Sn	Sn	10 09 29.0	-4.1
	1.2nm,0.3s,baz=109,slow=24,SNR=1.9						
WRA	**Warramunga Arr**	**20.93**	**168**	P	P	10 13 17.1	+0.3
	0.3nm,0.4s,baz=347,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**24.50**	**171**	P	P	10 13 54.0	+0.6
	0.3nm,0.8s,baz=347,slow=7.2,SNR=1.6						
ZALV	**Zalesovo Beam**	**64.77**	**332**	P	P	10 19 12.5	0.0
	0.3nm,0.3s,baz=133,slow=8.5,SNR=1.8						

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*NEIC **23** 10:12:56.7±0.0, 13.°87N×92.°84W, h64^{km}, MD4.0(MEX), After MEX.*
MEX 23 10:12:56.7±0.5**, 13.°86N**×**92.°84W, h64^{km}**±114^{km}**, MD4.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.18**	**28**	*e*Pn	Pn	10 13 15.8	-1.4
THIG		**1.18**	**28**	*e*P	Pn	10 13 15.8	-1.4
PCIG		**1.87**	**349**	*e*Pn	Pn	10 13 25.4	-1.1
PCIG				*e*Sn	Sn	10 13 46.7	-2.3
PCIG		**1.87**	**349**	*e*P	Pn	10 13 25.4	-1.1
PCIG				*i* S	Sn	10 13 46.7	-2.3
CCIG	**Comitan**	**2.50**	**16**	*e*Pn	Pn	10 13 34.3	-0.9
CCIG	**Comitan**	**2.50**	**16**	*e*P	Pn	10 13 34.3	-0.9
061Z	**Ochoppi**	**16.37**	**41**	*e*Pn	Pn	10 16 43.2	+0.8
957A	**Wimauma**	**16.92**	**34**	*e*Pn	P	10 16 50.2	-0.2
BEKR	**Beckworth**	**35.42**	**322**	*e*P	P	10 19 42.8	-4.1

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*NEIC **23** 10:13:15.9±0.3, 19.°66S×173.°01W, h10^{km}, mb4.7/23, Error ellipse: s-maj=12.0km s-min=6.9km az=160.0*
*ISCJB **23** 10:13:16.6±0.3, 19.°67S±0.°07×173.°05W±0.°05, h26^{km}, mb4.6/34, Error ellipse: s-maj=10.0km s-min=6.3km az=155.2*
*IDC **23** 10:13:16.1±0.8, 19.°57S×173.°38W, h0^{km}, mb4.2/13, mb1 4.4/14, mb1mx4.3/29, mbtmp4.2/14, ML4.4/1, Error ellipse: s-maj=31.8km s-min=16.3km az=134.0*
ISC 23 10:13:18.5±0.4**, 19.°65S**±0.°10×**172.°99W**±0.°06**, h26^{km}, n64, σ1^{s}80**/66**, mb4.7**/34**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**2.94**	**79**	*e*Pn	**Pn**	**10 14 02.2**	**-1.4**
NIUE				*e*Sn	**Sn**	**10 14 35.4**	**-2.7**
RAO	**Raoul Island**	**10.56**	**204**	*e*Pn	**Pn**	**10 15 49.1**	**+0.9**
RAR	**Rarotonga**	**12.48**	**99**	*e*Pn	**Pn**	**10 16 13.4**	**-1.1**
RAR	**Rarotonga**	**12.48**	**99**	Pn	Pn	10 16 13.0	-1.6
	3.4nm,0.3s,baz=302,slow=21,SNR=7.2						
MARNC	**Mare, Loyalty**	**17.87**	**261**	*e*Pn	**P**	**10 17 24.6**	**-1.3**
	178nm,1.3s						
PINNC	**Pines Island,**	**18.49**	**257**	*e*P	**Pn**	**10 17 33.3**	**+0.4**
	120nm,1.4s						
OUENC	**Ouen Island, N**	**19.03**	**258**	*e*P	**Pn**	**10 17 38.9**	**-0.7**
	29nm,1.2s						
DZM	**Mont Dzumac**	**19.38**	**259**	*e*P	**Pn**	**10 17 42.5**	**-1.3**
	15nm,0.8s						
DZM	**Mont Dzumac**	**19.38**	**259**	P	**P**	**10 17 39.6**	**-2.9**
	1.1nm,0.3s,baz=91,slow=22,SNR=9.7						
ONTNC	**Ouen Toro**	**19.38**	**259**	*e*P	**P**	**10 17 41.3**	**-1.2**
	56nm,1.1s						
URZ	**Urewera**	**20.45**	**203**	*e*P	**P**	**10 17 55.9**	**+2.0**
	41nm,1.5s						
URZ	**Urewera**	**20.45**	**203**	P	**P**	**10 17 55.9**	**+2.0**
	11nm,0.8s,baz=339,slow=3.1,SNR=6.5						
HIZ	**Hauiti**	**21.55**	**207**	*e*P	**P**	**10 18 08.3**	**+2.4**
	88nm,1.4s						
PPT	**Papeete**	**22.28**	**89**	*e*P	**P**	**10 18 13.1**	**-0.8**
PPTF	**Pamatai, Papee**	**22.29**	**89**	*e*P	**P**	**10 18 12.6**	**-1.4**
	104nm,1.3s						
THZ	**Tophouse**	**25.09**	**205**	*e*P	P	10 18 49.2	+8.1
	12nm,0.7s						
KHZ	**Kahutara**	**25.40**	**204**	*e*P	**P**	**10 18 45.6**	**+1.9**
	22nm,1.1s						
LTZ	**Lake Taylor**	**26.20**	**205**	*e*P	**P**	**10 18 55.0**	**+3.9**
	27nm,0.9s						
OXZ	**Oxford**	**26.75**	**205**	*e*P	**P**	**10 18 55.5**	**-0.5**
	17nm,0.6s						
RPZ	**Rata Peaks**	**27.47**	**206**	P	**P**	**10 19 03.7**	**+1.2**
	8.6nm,1.0s,baz=39,slow=17,SNR=1.9						
FOZ	**Fox Glacier**	**27.85**	**207**	*e*P	**P**	**10 19 10.9**	**+5.2**
	28nm,1.1s						
WKZ	**Wanaka**	**29.23**	**207**	*e*P	P	10 19 23.8	+5.7
	37nm,1.3s						
WHZ	**Wether Hill Ro**	**30.53**	**207**	*e*P	**P**	**10 19 30.8**	**+1.1**
	17nm,1.3s						
EIDS	**Eidsvold**	**33.61**	**254**	*e*P	**P**	**10 19 56.3**	**-0.6**
	15nm,1.5s						
ARMA	**Armidale**	**33.68**	**244**	*e*P	**P**	**10 19 57.1**	**-0.5**
	40nm,1.3s						
KWAJ	**Kwajalein Atol**	**34.12**	**324**	*e*P	**P**	**10 20 00.2**	**-1.2**
	170nm,0.8s						
CTAO	**Charters Tower**	**38.27**	**262**	*e*P	**P**	**10 20 34.5**	**-2.5**
	11nm,0.8s						
COEN	**Coen**	**42.26**	**271**	*e*P	**P**	**10 21 07.5**	**-2.5**
	10nm,0.8s						
STKA	**Stephens Creek**	**42.40**	**244**	P	**P**	**10 21 09.8**	**-1.2**
	2.9nm,0.6s,baz=98,slow=10,SNR=14						
AS01	**Alice Springs**	**49.26**	**255**	*e*P	**P**	**10 22 03.5**	**-1.8**
AS31	**Alice Springs**	**49.30**	**255**	*e*P	**P**	**10 22 03.6**	**-2.1**
	6.2nm,1.3s						
AS31				*e*PcP	**PcP**	**10 23 29.8**	**+1.5**
ASAR	**Alice Springs**	**49.30**	**255**	P	**P**	**10 22 03.9**	**-1.8**
	12nm,0.9s,baz=98,slow=8.1,SNR=105						
ASAR				PcP	**PcP**	**10 23 29.8**	**+1.5**
	1.2nm,0.7s,baz=104,slow=4.6,SNR=3.4						
WB2	**Warramunga Arr**	**49.38**	**260**	*e*P	**P**	**10 22 03.8**	**-2.5**
WR1	**Warramunga Arr**	**49.39**	**260**	*e*P	**P**	**10 22 03.6**	**-2.7**
	6.8nm,0.8s						
WR1				*e*PcP	**PcP**	**10 23 28.6**	**0.0**
WRA	**Warramunga Arr**	**49.39**	**260**	P	**P**	**10 22 03.6**	**-2.7**
	3.7nm,0.5s,baz=97,slow=7.8,SNR=77						
WRA				PcP	**PcP**	**10 23 28.6**	**0.0**
	0.6nm,0.6s,baz=91,slow=3.3,SNR=2.3						
FITZ	**Fitzroy Crossi**	**57.81**	**261**	*e*P	**P**	**10 23 06.8**	**-1.3**
	25nm,1.5s						
FITZ	**Fitzroy Crossi**	**57.81**	**261**	P	**P**	**10 23 07.1**	**-1.0**
	5.6nm,0.6s,baz=89,slow=4.3,SNR=22						
MJAR	**Matsushiro Arr**	**72.44**	**321**	P	**P**	**10 24 42.9**	**+0.2**
	3.1nm,1.1s,baz=163,slow=6.4,SNR=4.5						
MAJO	**Matsushiro**	**72.44**	**321**	*e*P	**P**	**10 24 42.9**	**+0.2**
PETK	**Petropavlovsk-**	**76.78**	**342**	P	**P**	**10 25 08.9**	**+1.5**
	1.2nm,0.5s,baz=120,slow=9.6,SNR=7.3						
PEA1	**Petropavlovsk-**	**76.78**	**342**	*e*P	**P**	**10 25 08.9**	**+1.5**
KSRS	**Korea Array**	**79.46**	**316**	P	**P**	**10 25 24.5**	**+1.8**
	1.8nm,0.8s,baz=130,slow=7.2,SNR=5.2						
KS15	**Wonju Array Si**	**79.48**	**316**	*e*P	**P**	**10 25 22.0**	**-0.8**
	24nm,1.3s						
KSAR	**Wonju Array Be**	**79.48**	**316**	P	**P**	**10 25 24.5**	**+1.6**
BMO	**Blue Mountains**	**81.78**	**36**	*e*P	**P**	**10 25 34.8**	**-0.3**
	6.3nm,0.8s						
TXAR	**Lajitas Array**	**82.66**	**55**	P	**P**	**10 25 43.3**	**+3.3**
	0.7nm,1.0s,baz=212,slow=5.0,SNR=4.2						
PD31	**Pinedale Array**	**85.16**	**41**	*e*P	**P**	**10 25 53.8**	**+1.0**
	3.1nm,1.4s						
PDAR	**Pinedale Array**	**85.16**	**41**	P	**P**	**10 25 53.8**	**+1.0**
	0.3nm,0.7s,baz=219,slow=6.9,SNR=2.7						
WRH	**Wood River Hil**	**86.03**	**11**	*e*P	**P**	**10 25 58.3**	**+2.1**
	14nm,1.4s						
ILAR	**Eielson Array**	**86.52**	**11**	P	**P**	**10 26 00.5**	**+1.8**
	1.1nm,0.7s,baz=225,slow=6.1,SNR=28						
ILB	**Eielson Array**	**86.52**	**11**	*e*P	**P**	**10 26 00.1**	**+1.4**
	2.0nm,0.9s						
YKA	**Yellowknife Ar**	**93.82**	**23**	P	**P**	**10 26 33.9**	**+1.0**
	0.2nm,0.7s,baz=223,slow=4.4,SNR=5.7						
YKB5	**Yellowknife Ar**	**93.82**	**23**	*e*P	**P**	**10 26 33.9**	**+1.0**
CM01	**Chiang Mai Arr**	**94.28**	**288**	*e*P	**P**	**10 26 35.0**	**-1.1**
CM31	**Chiang Mai Arr**	**94.31**	**288**	*e*P	**P**	**10 26 38.9**	**+2.6**
	16nm,1.5s						
CMAR	**Chiang Mai Arr**	**94.31**	**288**	P	**P**	**10 26 38.8**	**+2.6**
	0.6nm,0.5s,baz=103,slow=3.1,SNR=5.5						
250A	**Grady**	**97.49**	**59**	*e*P	**P**	**10 26 49.3**	**-1.1**
	19nm,0.6s						
PRZ	**Przheval'sk**	**116.58**	**308**	*e*PKPdf	**PKPdf**	**10 31 59.4**	**-1.2**
AKASG	**Malin Array Be**	**144.37**	**336**	PKP	**PKPdf**	**10 32 51.7**	**-0.5**
	0.7nm,0.5s,baz=43,slow=4.5,SNR=4.1						
AKBB	**Malin Array Si**	**144.37**	**336**	*e*PKPdf	**PKPdf**	**10 32 51.7**	**-0.5**
BR101	**Keskin Array S**	**149.60**	**317**	*e*PKPbc	**PKiKP**	**10 33 07.7**	**+0.6**
BRTR	**Keskin Array B**	**149.61**	**317**	PKPbc	**PKiKP**	**10 33 07.7**	**+0.6**
	1.4nm,0.7s,baz=148,slow=3.5,SNR=7.0						
GEC2	**GERESS Array S**	**150.38**	**351**	*e*PKPbc	**PKiKP**	**10 33 09.9**	**+1.5**
GERES	**GERESS Array B**	**150.38**	**351**	PKPbc	**PKiKP**	**10 33 09.9**	**+1.5**
	0.4nm,0.6s,baz=30,slow=4.7,SNR=3.2						

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*SOME **23** 10:31:03.3, 41.°78N×82.°02E, h20^{km}*
*NNC **23** 10:31:07.3±1.7, 42.°14N×81.°99E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=13.1km s-min=7.5km az=153.0*
ISC 23 10:31:05.9±2.4**, 42.°0N**±0.°1×**82.°00E**±0.°08**, h14^{km}, n21, σ1^{s}75**/27**, 7C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.91**	**321**	Pg	**Pb**	**10 31 40.7**	**+0.1**
	113nm,0.1s						
KTMS				Lg	Lg	10 32 07.6	
	322nm,0.3s						
KTMS	**Ketmen**	**1.91**	**321**	*e*P	**Pb**	**10 31 40.7**	**+0.1**
	113nm,0.1s						
KTMS				*e*S	**Sg**	**10 32 07.6**	**+0.2**
	322nm,0.3s						
PDGK	**Podgornoye**	**2.29**	**307**	Pg	**Pb**	**10 31 47.5**	**+0.3**
	15nm,0.3s						
PDGK				Lg	Lg	10 32 18.5	
	140nm,0.5s						
PDGK	**Podgornoye**	**2.29**	**307**	⇑Pn	**Pb**	**10 31 46.9**	**-0.3**
	14nm,0.4s						
PDGK				⇓Lg	Lg	10 32 18.2	
	241nm,0.6s						
UZB	**Uzynbulak**	**2.49**	**299**	Pg	**Pb**	**10 31 51.2**	**+0.6**
	16nm,0.2s						
UZB				Lg	Lg	10 32 25.4	
	111nm,0.4s						
UZB	**Uzynbulak**	**2.49**	**299**	*e*P	**Pb**	**10 31 51.2**	**+0.6**
	16nm,0.2s						
UZB				*e*S	**Sg**	**10 32 25.4**	**-0.7**
	111nm,0.4s						
DJR	**Jarkent**	**2.86**	**326**	Pg	**Pb**	**10 31 55.8**	**-1.0**
	4.3nm,0.2s						
DJR				Lg	Lg	10 32 31.3	
	22nm,0.2s						
SATY	**Saty**	**2.87**	**294**	Pg	**Pb**	**10 31 58.7**	**+1.7**
	21nm,0.2s						
SATY				Lg	Lg	10 32 38.5	
	76nm,0.2s						
SATY	**Saty**	**2.87**	**294**	*e*P	**Pb**	**10 31 58.7**	**+1.7**
	21nm,0.2s						
SATY				*e*S	**Sg**	**10 32 38.5**	**+0.4**
	76nm,0.2s						
MDOK	**Medeo**	**3.84**	**290**	Pg	**Pb**	**10 32 15.2**	**+1.5**
	5.2nm,0.5s						
MDOK				Lg	Lg	10 33 04.0	
MDOK	**Medeo**	**3.84**	**290**	Pg	**Pb**	**10 32 14.9**	**+1.2**
	6.6nm,0.4s						
MDOK				Lg	Lg	10 33 05.7	
	19nm,0.5s						
MDOK	**Medeo**	**3.84**	**290**	*e*P	**Pb**	**10 32 13.2**	**-0.4**
	1.5nm,0.2s						
MDOK				*e*S	**Sb**	**10 33 03.4**	**+3.3**
	19nm,0.5s						
KUU	**Kurty**	**4.58**	**297**	Pg	**Pb**	**10 32 28.4**	**+2.3**
	2.3nm,0.5s						
KUU				Lg	Lg	10 33 30.9	
	18nm,0.3s						
KUU	**Kurty**	**4.58**	**297**	*e*P	**Pb**	**10 32 29.0**	**+2.9**
	3.0nm,0.6s						
KUU				*e*S	**Sg**	**10 33 30.9**	**-2.0**
	23nm,0.6s						
KST	**Kastek**	**4.59**	**286**	Pg	**Pb**	**10 32 25.0**	**-1.3**
	9.2nm,0.6s						
KST				Lg	Lg	10 33 25.2	
	19nm,1.3s						
MK31	**Makanchi Array**	**4.83**	**2**	⇓Pn	**Pn**	**10 32 18.9**	**+0.7**
	0.7nm,0.3s,baz=189,slow=12,SNR=61						
MK31				⇑Pg	**Pb**	**10 32 31.0**	**+0.7**
	1.4nm,0.5s,baz=183,slow=14,SNR=5.0						
MK31				⇑Sn	**Sn**	**10 33 15.2**	**+1.3**
	0.7nm,0.3s,baz=186,slow=26,SNR=5.5						
MK31				⇓Lg	Lg	10 33 32.6	
	2.2nm,0.4s,baz=187,slow=29,SNR=4.0						
TKM2	**Tokmak 2**	**4.83**	**283**	⇑Pg	**Pb**	**10 32 33.7**	**+3.2**
	1.9nm,0.6s						
TKM2				⇓Lg	Lg	10 33 41.3	
	8.6nm,0.5s						
MAKZ	**Makanchi**	**4.84**	**360**	⇑Pn	**Pn**	**10 32 18.7**	**+0.4**
	3.6nm,0.5s						
MAKZ				⇑Sn	**Sn**	**10 33 14.7**	**+0.5**
	2.8nm,0.3s						
MAKZ				⇑Lg	Lg	10 33 31.5	
	3.6nm,0.5s						
AAK	**Ala-Archa**	**5.60**	**279**	Pg	**Pg**	**10 32 49.1**	**-4.1**
	1.9nm,0.7s						
AAK				Lg	Lg	10 34 04.2	
	4.7nm,0.6s						
KURBB	**Kurchatov Arra**	**8.98**	**346**	⇓Lg	Lg	10 35 45.3	
	7.0nm,0.7s						
KURK	**Kurchatov**	**9.05**	**346**	⇓Lg	Lg	10 35 44.1	
	6.2nm,1.2s						

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*ISCJB **23** 10:47:57.5±0.6, 2.°09S±0.°06×136.°57E±0.°05, h10^{km}, mb3.3/2, MS3.4/1, Error ellipse: s-maj=10.4km s-min=5.2km az=33.4*
*DJA **23** 10:47:57.6±0.6, 2°S±5°×13°7E±°, h10^{km}, M4.1/4, MLv4.1/4*
*IDC **23** 10:47:58.7±1.5, 2.°14S×136.°72E, h0^{km}, mb3.2/2, mb1 3.5/4, mb1mx3.3/45, mbtmp3.3/4, ML3.2/2, MS3.6/1, Ms1 3.6/1, ms1mx2.9/17, Error ellipse: s-maj=32.4km s-min=27.1km az=54.0*
ISC 23 10:47:59.1±0.9**, 2.°03S**±0.°08×**136.°57E**±0.°05**, h10^{km}, n9, σ1^{s}16**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**0.36**	**296**	P	**Pg**	**10 48 05.8**	**-0.5**
SRPI				S	**Sg**	**10 48 10.6**	**-0.5**
BAKI	**Biak**	**0.95**	**331**	P	**Pg**	**10 48 16.0**	**-1.4**
BAKI				S	**Sg**	**10 48 30.2**	**+0.4**
GENI	**Genyem**	**3.64**	**99**	P	**Pn**	**10 48 55.9**	**+0.3**
JAY	**Jayapura**	**4.16**	**97**	P	Pn	10 49 00.1	-2.7
JAY	**Jayapura**	**4.16**	**97**	Pn	**Pn**	**10 49 01.7**	**-1.1**
	1.8nm,0.3s,baz=228,slow=12,SNR=6.8						
JAY				Sn	**Sn**	**10 49 51.4**	**-0.2**
	0.7nm,0.3s,baz=30,slow=13,SNR=1.4						
FAKI	**Fak Fak**	**4.40**	**258**	P	**Pn**	**10 49 05.7**	**-0.4**
WRA	**Warramunga Arr**	**17.94**	**187**	P	**Pn**	**10 52 08.5**	**-0.3**
	0.1nm,0.3s,baz=11,slow=12,SNR=4.8						
WRA				S	Sn	10 55 14.8	-14
	0.1nm,0.3s,baz=12,slow=24,SNR=3.4						
ASAR	**Alice Springs**	**21.66**	**187**	P	**P**	**10 52 49.5**	**-0.5**
	0.5nm,0.5s,baz=11,slow=11,SNR=7.9						
ASAR				LR	LR	11 01 13.1	
	comp=Z,147nm,20.1s,baz=270,slow=37						
MKAR	**Makanchi Array**	**67.95**	**323**	P	**P**	**10 59 00.8**	**+2.5**
	0.3nm,0.8s,baz=109,slow=5.8,SNR=3.1						

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*NEIC **23** 10:49:30.2±0.0, 16.°07S×72.°65W, h10^{km}, mb4.1/6, After ARE.*
*ISCJB **23** 10:49:36.4±0.5, 16.°23S±0.°04×72.°05W±0.°09, h114^{km}, mb3.8/1, Error ellipse: s-maj=13.4km s-min=4.7km az=160.5*
*IDC **23** 10:49:37.9±2.0, 15.°78S×71.°53W, h61^{km}±20^{km}, mb3.5/6, mb1 3.8/11, mb1mx3.6/38, mbtmp3.8/11, Error ellipse: s-maj=29.2km s-min=14.6km az=61.0*
ISC 23 10:49:40.2±0.6**, 16.°17S**±0.°06×**71.°84W**±0.°09**, h114^{km}, n33, σ3^{s}00**/37**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.57**	**92**	*e*Pn	**Pn**	**10 50 32.6**	**-1.8**
LPAZ	**La Paz**	**3.57**	**92**	P	**Pn**	**10 50 31.3**	**-3.1**
	0.2nm,0.3s,baz=275,slow=11,SNR=5.7						
LPAZ				S	Sn	10 51 04.9	-11
	0.7nm,0.3s,baz=268,slow=7.0,SNR=4.1						
LPAZ				Lg	Lg	10 51 27.4	
	0.4nm,0.3s,baz=203,slow=20,SNR=1.8						
MNMC	**Minye Minye**	**3.64**	**144**	*e*Pn	**Pn**	**10 50 33.0**	**-2.0**
PB11	**IPOC Station P**	**4.13**	**150**	*e*Pn	**Pn**	**10 50 38.6**	**-2.9**
PB11				*e*Sn	**Sn**	**10 51 28.3**	**-0.8**
PB01	**IPOC Station P**	**5.33**	**156**	*e*Pn	**Pn**	**10 50 54.6**	**-3.1**
PB01				*e*Sn	**Sn**	**10 51 57.3**	**-0.7**
PB04	**IPOC Station P**	**6.33**	**166**	*e*Pn	**Pn**	**10 51 06.7**	**-4.5**
PB04				*e*Sn	**Sn**	**10 52 21.7**	**-0.6**
NNA	**Nana**	**6.39**	**310**	P	**Pn**	**10 51 10.7**	**-1.3**
	1.7nm,0.3s,baz=99,slow=12,SNR=2.4						
NNA				S	**Sn**	**10 52 29.5**	**+6.0**
	0.9nm,0.3s,baz=39,slow=18,SNR=1.5						
LVC	**Limon Verde**	**6.97**	**157**	*e*Pn	**Pn**	**10 51 18.0**	**-2.1**
LVC	**Limon Verde**	**6.97**	**157**	P	**Pn**	**10 51 20.4**	**+0.3**
	1.8nm,0.3s,baz=332,slow=8.3,SNR=23						
LVC				S	**Sn**	**10 52 43.2**	**+5.1**
	0.9nm,0.3s,baz=123,slow=18,SNR=3.5						
PB10	**IPOC Station P**	**7.40**	**171**	*e*Pn	**Pn**	**10 51 21.9**	**-3.7**
PB10				*e*Sn	**Sn**	**10 52 45.7**	**-2.3**
GO02	**Mina Guanaco**	**9.19**	**167**	*e*Pn	**Pn**	**10 51 46.9**	**-3.1**
SIV	**San Ignacio**	**10.35**	**90**	P	Pn	10 51 59.7	-5.9
	0.1nm,0.3s,baz=287,slow=16,SNR=4.5						
SIV				S	Sn	10 53 47.6	-12
	0.1nm,0.3s,baz=205,slow=23,SNR=1.0						
ATAH	**Atahualpa**	**11.04**	**324**	P	**Pn**	**10 52 11.3**	**-3.8**
	0.2nm,0.3s,baz=122,slow=10,SNR=3.0						
GO03	**Copiap**	**11.46**	**173**	*e*Pn	**Pn**	**10 52 15.9**	**-4.5**
LCO	**Las Campanas**	**12.82**	**175**	*e*Pn	**Pn**	**10 52 34.2**	**-4.3**
GO04	**Tololo Observa**	**13.97**	**176**	*e*P	**P**	**10 52 59.9**	**+2.2**
CPUP	**Villa Florida**	**16.87**	**129**	P	**P**	**10 53 30.2**	**+0.6**
	0.2nm,0.3s,baz=292,slow=19,SNR=2.2						
OTAV	**Otavalo**	**17.56**	**338**	*e*Pn	**P**	**10 53 33.2**	**-4.6**
	21nm,1.9s						
PTGA	**Pitinga**	**19.30**	**38**	*e*P	**Pn**	**10 53 58.2**	**-0.4**
	8.1nm,1.3s						
ROSC	**El Rosal**	**21.02**	**353**	*e*P	**P**	**10 54 11.6**	**-3.7**
	5.1nm,1.0s						
GO06	**Curarrehue**	**23.33**	**179**	*e*P	**P**	**10 54 38.4**	**+0.1**
	27nm,1.7s						
PLCA	**Paso Flores**	**24.50**	**178**	P	**P**	**10 54 54.6**	**+5.8**
	5.3nm,1.0s,baz=2.9,slow=10.0,SNR=5.2						
SDV	**Santo Domingo**	**24.93**	**3**	*e*P	**P**	**10 54 51.7**	**-1.4**
	7.6nm,1.1s						
SDV	**Santo Domingo**	**24.93**	**3**	P	**P**	**10 54 51.4**	**-1.7**
	1.3nm,0.3s,baz=195,slow=12,SNR=3.0						
BOAB	**BOACO BROADBAN**	**31.55**	**334**	*e*P	**P**	**10 55 49.8**	**-2.1**
	10nm,1.4s						
TXAR	**Lajitas Array**	**54.69**	**326**	P	**P**	**10 59 00.2**	**+2.5**
	0.2nm,0.6s,baz=141,slow=6.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**78.30**	**73**	P	**P**	**11 01 30.3**	**+2.0**
	0.4nm,0.7s,baz=254,slow=5.4,SNR=3.0						
YKA	**Yellowknife Ar**	**85.27**	**342**	P	**P**	**11 02 05.7**	**+2.0**
	0.4nm,0.7s,baz=135,slow=5.3,SNR=6.1						
BORG	**Borgarnes**	**89.31**	**19**	P	**P**	**11 02 24.7**	**+1.6**
	18nm,0.8s,baz=248,slow=5.4,SNR=2.8						
ILAR	**Eielson Array**	**98.27**	**335**	P	Pdif	11 03 06.6	+2.3
	0.3nm,0.9s,baz=161,slow=5.7,SNR=3.2						
KURBB	**Kurchatov Arra**	**138.20**	**28**	PKP	**PKiKP**	**11 08 54.4**	**+0.6**
	0.3nm,0.4s,baz=336,slow=2.0,SNR=3.2						
MKAR	**Makanchi Array**	**142.67**	**30**	PKP	**PKiKP**	**11 09 03.6**	**+0.4**
	0.1nm,0.6s,baz=299,slow=3.0,SNR=2.4						
SONM	**Songino Array**	**148.39**	**2**	PKPbc	**PKPab**	**11 09 16.0**	**-0.9**
	0.5nm,0.4s,baz=327,slow=1.4,SNR=3.4						

ISCJB ***23*** *10:50:45.5±0.9, 10°.9S±0°.1×165°.92E±0°.09, h10^{km}, mb3.7/9, Error ellipse: s-maj=16.3km s-min=11.8km az=32.4*

IDC ***23*** *10:50:45.9±1.5, 10°.71S×165°.84E, h0^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.8/39, mbtmp3.8/10, ML4.4/1, Error ellipse: s-maj=43.9km s-min=20.9km az=118.0*

ISC 23 10:50:46.8±1.0**, 10°.87S**±0°.09×**166°.0E**±0°.1**, h10^{km}, n18, σ1^{s}.54**/13**, mb3.7**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.11	283	ePn	Pn	10 52 21.0	+3.8
HNR				eS	Sn	10 53 26.0	-1.1
HNR	Honiara	6.11	283	Pn	Pn	10 52 19.2	+2.0
	42nm,0.3s,baz=146,slow=5.4,SNR=14						
HNR				Sn	Sn	10 53 27.9	+0.8
	1.0nm,0.3s,baz=336,slow=5.5,SNR=1.8						
DZM	Mont Dzumac	11.14	178	Pn	Pn	10 53 28.1	+1.7
	2.7nm,0.3s,baz=348,slow=11,SNR=22						
DZM				Sn	Sn	10 55 28.2	-3.0
	0.2nm,0.3s,baz=353,slow=20,SNR=0.9						
CTA	Charters Tower	21.08	242	P	P	10 55 33.6	+2.1
	2.3nm,0.7s,baz=62,slow=16,SNR=4.8						
H11S2	WAKE ISLAND Hy	29.18	1	T	T	11 27 09.5	
	baz=181,slow=76,SNR=44						
H11S3	WAKE ISLAND Hy	29.19	1	T	T	11 27 09.8	
	baz=181,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	29.20	1	T	T	11 27 10.9	
	baz=181,slow=76,SNR=33						
H11N1	WAKE ISLAND Hy	30.41	2	T	T	11 28 40.8	
	baz=182,slow=76,SNR=23						
H11N3	WAKE ISLAND Hy	30.41	2	T	T	11 28 41.1	
	baz=182,slow=76,SNR=29						
H11N2	WAKE ISLAND Hy	30.42	2	T	T	11 28 42.4	
	baz=182,slow=76,SNR=22						
STKA	Stephens Creek	30.72	223	P	P	10 57 02.1	0.0
	0.4nm,0.5s,baz=65,slow=14,SNR=2.3						
WRA	Warramunga Arr	31.75	250	P	P	10 57 11.6	+0.1
	1.8nm,0.7s,baz=81,slow=9.2,SNR=11						
ASAR	Alice Springs	33.07	243	P	P	10 57 22.8	-0.2
	0.3nm,0.6s,baz=70,slow=9.8,SNR=6.8						
FITZ	Fitzroy Crossi	39.64	255	P	P	10 58 19.4	+0.2
	1.4nm,0.6s,baz=82,slow=7.3,SNR=3.6						
KSRS	Korea Array	59.86	325	P	P	11 00 50.9	-1.9
	0.9nm,0.8s,baz=131,slow=8.1,SNR=4.5						
SONM	Songino Array	78.66	324	P	P	11 02 48.7	-0.5
	0.2nm,0.4s,baz=111,slow=3.2,SNR=3.6						
ILAR	Eielson Array	83.28	18	P	P	11 03 14.6	+1.2
	0.2nm,0.5s,baz=232,slow=5.6,SNR=2.5						
MKAR	Makanchi Array	93.55	317	P	P	11 04 02.9	-0.3
	0.5nm,1.1s,baz=109,slow=3.5,SNR=2.4						

IDC 23 11:01:59.1±57.0**, 19°.88S**×**176°.39W, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/34**, mbtmp3.7**/3**, Error ellipse: s-maj=1056.0km s-min=193.9km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.42	244	P	P	11 09 29.2	-1.8
	0.6nm,0.3s,baz=84,slow=10,SNR=1.8						
ASAR	Alice Springs	46.13	256	P	P	11 10 27.2	+1.5
	0.4nm,0.4s,baz=85,slow=8.3,SNR=12						
WRA	Warramunga Arr	46.19	261	P	P	11 10 25.2	-0.9
	1.0nm,1.2s,baz=95,slow=7.2,SNR=4.9						

SOME ***23*** *11:03:01.5, 44°.25N×74°.62E*

NNC ***23*** *11:03:02.1±0.5, 44°.24N×74°.61E, h0^{km}, mb3.2, mpv3.1, Error ellipse: s-maj=3.8km s-min=3.6km az=32.0, Suspected Mining explosion.*

ISC 23 11:03:01.8±0.8**, 44°.24N**±0°.03×**74°.62E**±0°.03**, h0^{km}, n30, σ0^{s}.64**/44**, 4C-6D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGDS	Sogindy	0.79	179	P	Pg	11 03 16.9	-0.1
	33nm,0.1s						
SGDS				S	Sg	11 03 27.2	0.0
	9.6nm,0.1s						
BTLS	Baital	0.90	333	P	Pg	11 03 18.3	-0.7
	5.2nm,0.1s						
BTLS				S	Sg	11 03 30.4	-0.3
	2.2nm,0.3s						
USP	Ospenovka	0.98	185	P	Pg	11 03 20.2	-0.4
	SNR=71						
CHMS	Chumysh	1.25	175	P	Pg	11 03 25.4	-0.3
	SNR=10						
KUU	Kurty	1.29	105	P	Pg	11 03 26.4	-0.2
	9.9nm,0.2s						
KUU				S	Sb	11 03 43.9	-0.3
	28nm,0.2s						
DGS	Degeres	1.30	140	P	Pg	11 03 25.2	-1.6
	9.6nm,0.2s						
DGS				S	Sg	11 03 42.7	-1.0
	30nm,0.3s						
TKM2	Tokmak 2	1.50	151	P	Pb	11 03 31.6	+0.9
	SNR=16						
TKM2	Tokmak 2	1.50	151	⇑P	Pn	11 03 29.4	-0.8
	3.7nm,0.3s						
TKM2				⇓S	Sb	11 03 50.3	-0.1
	4.1nm,0.3s						
KST	Kastek	1.55	140	P	Pn	11 03 30.9	+0.1
	13nm,0.3s						
KST				S	Sg	11 03 51.4	-0.2
	12nm,0.3s						
KTBS	Karatobe	1.58	109	P	Pb	11 03 31.6	-0.4
	9.4nm,0.2s						
KTBS				S	Sg	11 03 53.3	+0.6
	15nm,0.3s						
KBK	Karagaybulak	1.60	171	P	Pb	11 03 32.2	-0.2
	SNR=20						
AAK	Ala-Archa	1.61	183	P	Pn	11 03 32.0	+0.4
	SNR=13						
AAK	Ala-Archa	1.61	183	P	Pn	11 03 31.4	-0.2
	4.6nm,0.5s						
AAK				S	Sb	11 03 53.4	0.0
	4.1nm,0.3s						
EKS2	Erkin-Say	1.69	201	P	Pn	11 03 33.3	+0.5
	SNR=61						
CHKK	Chushkaly	1.75	102	P	Pb	11 03 34.7	-0.2
	5.7nm,0.2s						
CHKK				S	Sg	11 03 58.6	+0.4
	30nm,0.3s						
IZV	Izvestkoviy	1.89	129	P	Pb	11 03 37.0	-0.2
	6.2nm,0.1s						
IZV				S	Sg	11 04 02.8	+0.4
	5.5nm,0.2s						
UCH	Uchtor	2.02	182	P	Pb	11 03 39.2	-0.4
	SNR=7.1						
MDOK	Medeo	2.07	121	Pn	Pn	11 03 39.0	+1.0
	1.3nm,0.4s						
MDOK				Sn	Sb	11 04 06.8	+0.1
	2.8nm,0.6s						
MDOK	Medeo	2.07	121	Pg	Pb	11 03 39.4	-1.0
	3.7nm,0.3s						
MDOK				Lg	Lg	11 04 07.4	
	5.5nm,0.5s						
KOTS	Kotyrbulak	2.07	118	Pg	Pb	11 03 40.6	+0.2
	5.8nm,0.4s						
KOTS				Lg	Lg	11 04 08.5	
	7.9nm,0.3s						
TNSS	Tian-Shan	2.08	125	Pg	Pb	11 03 40.2	-0.5
	6.9nm,0.2s						
TNSS				Lg	Lg	11 04 08.4	
	7.2nm,0.4s						
KZA	Kyzart	2.21	168	P	Pb	11 03 43.1	+0.1
	SNR=8.5						
AML	Almayashu	2.22	198	P	Pb	11 03 42.4	-0.6
	SNR=22						
ARXS	Arharly	2.31	90	Pg	Pb	11 03 43.5	-0.9
	3.9nm,0.3s						
ARXS				Lg	Lg	11 04 13.9	
	7.4nm,0.3s						
ULHL	Ulahol	2.32	149	P	Pb	11 03 44.1	-0.6
	SNR=16						
MNAS	Manas	2.33	222	⇓Pn	Pn	11 03 42.5	+0.9
	0.8nm,0.5s						
MNAS				⇓Sn	Sn	11 04 12.5	+1.4
	2.1nm,0.3s						
SATY	Saty	2.99	112	Pg	Pb	11 03 56.0	-0.2
	3.5nm,0.4s						
SATY				Lg	Lg	11 04 35.8	
	7.8nm,0.2s						
KK31	Karatay Array	3.19	250	⇑Pn	Pb	11 03 58.7	-0.7
	0.6nm,0.3s,baz=67,slow=13,SNR=9.1						
KK31				⇑Lg	Lg	11 04 44.2	
	1.1nm,0.4s,baz=62,slow=36,SNR=4.4						
MAKZ	Makanchi	5.77	61	⇓Pn	Pn	11 04 29.5	+0.7
	0.4nm,0.3s						
MAKZ				⇓Sn	Sn	11 05 36.3	+0.6
	0.3nm,0.4s						
MK31	Makanchi Array	5.96	62	⇓Pn	Pn	11 04 32.4	+1.0
	0.2nm,0.3s,baz=257,slow=14,SNR=16						
MK31				⇑Sn	Sn	11 05 40.5	+0.1
	0.3nm,0.7s,baz=27,slow=32,SNR=5.7						

BJI ***23*** *11:09:14.7, 9°.03S×127°.75E, h35^{km}, mB5.8/68, mb5.3/82, Ms5.5/90, Ms7 5.4/84*

MOS ***23*** *11:09:18.3±1.1, 8°.32S×127°.35E, h21^{km}, mb5.9/70, MS5.4/44, Error ellipse: s-maj=8.7km s-min=4.8km az=115.7*

IDC ***23*** *11:09:18.5±1.4, 8°.31S×127°.41E, h8^{km}±7^{km}, mb5.3/25, mb1 5.3/26, mb1mx5.2/28, mbtmp5.3/26, ML3.9/1, MS5.3/32, Ms1 5.3/32, ms1mx5.2/43, Error ellipse: s-maj=15.4km s-min=9.8km az=64.0*

NEIC ***23*** *11:09:19.3±0.1, 8°.47S×127°.47E, h20^{km}, mb5.7/124, MS5.7/255, MW5.6, MW5.9, Error ellipse: s-maj=3.8km s-min=2.8km az=47.0, Moment Tensor Solution. s48 Moment tensor: Scale 10^{17}Nm; M_{rr}1.97; $M_{\theta\theta}$-1.31; $M_{\phi\phi}$-0.66; $M_{r\theta}$1.65; $M_{\theta\phi}$-1.51; $M_{\phi r}$1.71; Best double couple: $M_0$3.30000×10^{17} NP1:ϕ_s240.00000°, δ22.00000°, λ104.00000°. NP2:ϕ_s45.00000°, δ68.00000°, λ84.00000°. Principal axes: T 3.0100, Plg66.0000°, Azm305.0000°; N 0.5300, Plg5.0000°, Azm47.0000°; P -3.5400, Plg23.0000°, Azm139.0000°;*

NEIC Felt [IV] at Dili. Felt [III] on Kisar, Indonesia. Felt on Cox Peninsula, Australia.

NEIC ***23*** *11:09:21.0±0.0, 8°.62S×127°.61E, h25^{km}, Moment Tensor Solution. s51 Moment tensor: Scale 10^{17}Nm; M_{rr}5.01; $M_{\theta\theta}$-3.73; $M_{\phi\phi}$-1.28; $M_{r\theta}$5.19; $M_{\theta\phi}$-1.64; $M_{\phi r}$3.33; Best double couple: $M_0$7.80000×10^{17} NP1:ϕ_s59.00000°, δ71.00000°, λ87.00000°. NP2:ϕ_s247.00000°, δ19.00000°, λ98.00000°. Principal axes: T 8.0400, Plg63.0000°, Azm324.0000°; N -0.4800, Plg2.0000°, Azm59.0000°; P -7.5600, Plg26.0000°, Azm150.0000°;*

ISCJB ***23*** *11:09:22.6±0.3, 8°.55S±0°.02×127°.51E±0°.02, h64^{km}±3^{km}, mb5.6/220 Error ellipse: s-maj=3.3km s-min=2.9km az=141.5*

GCMT ***23*** *11:09:23.3±0.1, 8°.70S±0°.01×127°.50E±0°.01, h28^{km}, MW5.8/124, Moment Tensor Solution. s121, c249; s124, c320; Duration: 1^{s}.9 Moment tensor: Scale 10^{17} Nm; M_{rr}4.47±.06; $M_{\theta\theta}$-3.88±.04; $M_{\phi\phi}$-0.58±.05; $M_{r\theta}$3.48±.09; $M_{\theta\phi}$-2.03±.03; $M_{\phi r}$0.76±.09; Best double couple: $M_0$5.86900×10^{17} NP1:ϕ_s73.00000°, δ64.00000°, λ98.00000°. NP2:ϕ_s235.00000°, δ27.00000°, λ75.00000°. Principal axes: T 5.7300, Plg70.0000°, Azm359.0000°; N 0.2800, Plg7.0000°, Azm249.0000°; P -6.0080, Plg18.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

DJA ***23*** *11:09:23.8±0.3, 9°S±2°×12°7E±°, h34^{km}±3^{km}, M5.9/89, mb5.9/89, mB6.2/74, MLv6.2/14, Mw(mB)5.9/74, Mwp5.9/20*

KLM ***23*** *11:09:24.4, 8°.63S×127°.48E, h26^{km}, mb5.9*

ISC 23 11:09:21.9±0.4**, 8°.60S**±0°.03×**127°.45E**±0°.03**, h34^{km}**±1^{km}**, h34^{km}:pP-P, n1354, σ1^{s}.92**/1307**, mb5.6**/219**, MS5.6**/313**, 59C-19D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.35	250	ePn	Pn	11 10 12.6	+0.7
SOEI				eSn	Sn	11 10 48.2	-2.3
SOEI	Soe	3.35	250	P	Pn	11 10 15.0	+3.1
SAUI	Saumlaki	3.86	81	ePn	Pn	11 10 18.4	-0.5
SAUI	Saumlaki	3.86	81	P	Pb	11 10 23.7	-5.6
BATI	Baumata	4.06	246	P	Pn	11 10 25.6	+3.9
BATI	Baumata	4.06	246	Pn	Pn	11 10 25.0	+3.3
	255nm,0.3s,baz=83,slow=2.2,SNR=85						
BATI				Sn	Sn	11 11 14.7	+6.5
	3μm,0.3s,baz=65,slow=18,SNR=13						
BNDI	Bandanaira	4.72	31	P	Pn	11 10 32.3	+1.5
MMRI	Maumere	5.15	269	ePn	Pn	11 10 35.9	-0.7
MMRI				eSn	Sn	11 11 36.7	+1.7
MMRI	Maumere	5.15	269	P	Pn	11 10 40.7	+4.0
NLAI	Namlea	5.33	356	P	Pn	11 10 41.8	+2.7
MTN	Manton Dam	5.56	140	P	Pn	11 10 42.0	-0.3
	baz=5.6						
MTN	Manton Dam	5.56	140	ePn	Pn	11 10 41.5	-0.8
MTN				eSn	Sn	11 11 46.1	+1.0
EDFI	Ende, Flores	5.70	268	P	Pn	11 10 47.1	+2.9
BBSI	Bau Bau	5.74	302	P	Pn	11 10 49.8	+5.0
KDU	Kakadu	6.40	130	P	Pn	11 10 53.7	0.0
	baz=6.5,SNR=124						
KDI	Kendari	6.65	314	P	Pn	11 11 00.7	+3.4
SANI	Sanana	6.66	347	P	Pn	11 11 00.5	+3.1
BASI	Baing, Sumba	6.97	256	P	Pn	11 11 04.2	+2.6
WSI	Waingapu	7.14	261	P	Pn	11 11 06.8	+2.8
KNRA	Kununurra	7.16	170	P	Pn	11 11 04.2	0.0
	baz=7.3,SNR=228						
FAKI	Fak Fak	7.39	41	ePn	Pn	11 11 07.7	+0.3
FAKI				eSn	Sn	11 12 30.4	+0.3
FAKI	Fak Fak	7.39	41	P	Pn	11 11 08.8	+1.4
BKSI	Bulukumba	7.97	294	P	Pn	11 11 19.0	+3.7
BNSI	Bone	8.40	299	P	Pn	11 11 24.6	+3.3
SIJI	Sorong	8.56	27	Pn	Pn	11 11 26.1	+2.6
	34nm,0.3s,baz=198,slow=8.6,SNR=63						
SIJI				Sn	Sn	11 13 02.2	+3.1
	4.1nm,0.3s,baz=49,slow=23,SNR=1.1						
SIJI				LR	LR	11 15 17.0	
	comp=Z,21μm,21.8s,baz=206,slow=43						
SWI	Sorong	8.57	26	P	Pn	11 11 27.1	+3.5
LUWI	Luwuk	8.83	328	ePn	Pn	11 11 30.2	+3.0
LUWI	Luwuk	8.83	328	P	Pn	11 11 31.9	+4.7
SPSI	Sidrap Palu	8.91	301	P	Pn	11 11 32.1	+3.8
TNTI	Ternate	9.30	359	ePn	Pn	11 11 36.8	+3.1
TNTI	Ternate	9.30	359	P	Pn	11 11 39.0	+5.3
TTSI	Tana Toraja	9.38	306	P	Pn	11 11 38.8	+4.1
PLAI	Plampang	9.56	268	P	Pn	11 11 38.8	+1.5
APSI	Ampana	9.57	323	P	Pn	11 11 41.0	+3.6
FITZ	Fitzroy Crossi	9.61	190	P	Pn	11 11 37.2	-0.7
	baz=9.7,SNR=536						
FITZ	Fitzroy Crossi	9.61	190	ePn	Pn	11 11 36.8	-1.0
FITZ				eSn	Sn	11 13 19.2	-5.5
FITZ	Fitzroy Crossi	9.61	190	Pn	Pn	11 11 36.4	-1.5
	23nm,0.3s,baz=29,slow=12,SNR=214						
FITZ				Sn	Sn	11 13 16.3	-8.3
	63nm,0.3s,baz=59,slow=16,SNR=4.0						
FITZ				Lg	Lg	11 14 40.9	
	baz=145,slow=23,SNR=1.2						
FITZ				LR	LR	11 16 24.1	
	comp=Z,42μm,18.2s,baz=7.0,slow=43						
RKPI	Ransiki, Papua	9.72	44	P	Pn	11 11 40.0	+0.7
KMSI	Cibinong	9.74	339	P	Pn	11 11 44.5	+4.8
MRSI	Marisa	10.55	328	P	Pn	11 11 54.5	+3.7
PCI	Palu	10.76	315	P	Pn	11 11 59.6	+5.9
SRPI	Serui, Papua	11.01	53	P	Pn	11 12 06.6	+10
BAKI	Biak	11.33	50	P	Pn	11 12 02.7	+1.2
MPSI	Mapaga	11.63	319	P	Pn	11 12 09.3	+3.7
	433nm,1.0s,5μm24μm						
SRBI	Singaraja	12.12	272	P	P	11 12 22.8	-1.7
SGSI	Sangihe	12.35	351	P	Pn	11 12 19.9	+4.5
KBKI	Kotabaru	12.39	294	P	Pn	11 12 17.1	+1.1
	38nm,1.7s,1μm						
BKB	Balikpapan	12.79	304	P	P	11 12 28.1	-3.8
SMKI	Samarinda	13.02	308	P	P	11 12 34.5	-0.1
WRAB	Tennant Creek	13.10	150	ePn	Pn	11 12 22.6	-3.0
WRAB				eSn	Sn	11 14 43.5	-6.8
WRAB	Tennant Creek	13.10	150	eP	Pn	11 12 22.7	-3.0
WR1	Warramunga Arr	13.10	150	ePn	Pn	11 12 23.2	-2.6
WR1				eSn	Sn	11 14 42.6	-7.8
WRA	Warramunga Arr	13.10	150	Pn	Pn	11 12 23.2	-2.6
	10nm,0.3s,baz=329,slow=14,SNR=159						
WRA				Sn	Sn	11 14 42.6	-7.8
	23nm,0.3s,baz=330,slow=22,SNR=13						
WRA				Lg	Lg	11 16 17.1	
	baz=330,slow=26,SNR=2.6						
WRA				LR	LR	11 18 04.4	
	comp=Z,21μm,20.9s,baz=335,slow=39						
WRA				PKPPKP	P'P'df	11 49 21.5	-18
	baz=149,slow=1.1,SNR=4.5						
WB2	Warramunga Arr	13.11	150	ePn	Pn	11 12 22.6	-3.2
WB2				eSn	Sn	11 14 43.1	-7.4
JAGI	Jajag, Banyuwa	13.15	270	ePn	Pn	11 12 25.0	-1.4
JAGI				eSn	Sn	11 14 44.9	-6.7
JAGI	Jajag, Banyuwa	13.15	270	P	Pn	11 12 27.7	+1.3
KMMI	Kalianget	13.45	276	P	Pn	11 12 32.9	+2.5
GENI	Genyem	13.99	65	P	Pn	11 12 37.7	-0.1
JAY	Jayapura	14.51	66	P	Pn	11 12 44.1	-0.8
JAY	Jayapura	14.51	66	Pn	Pn	11 12 42.2	-2.7
	0.5nm,0.3s,baz=308,slow=6.3,SNR=5.8						
JAY				Sn	S	11 15 37.5	-5.8
	0.4nm,0.3s,baz=241,slow=22,SNR=2.1						
MBWA	Marble Bar	14.54	210	ePn	Pn	11 12 43.3	-2.0
MTKI	Muara Teweh, K	14.63	301	P	P	11 12 50.6	-1.9
	409nm,1.1s,10μm18μm						
DDMP	Don Marcelino,	14.71	353	eP	P	11 12 53.2	-0.1
SKMP	Bagumbayan, Su	15.29	349	eP	Pn	11 12 56.5	+1.1
MATI	Mati	15.48	356	eP	Pn	11 12 58.6	+0.7
PWJI	Pagerwojo	15.49	271	P	Pn	11 12 59.9	+1.9
	318nm,1.1s,4μm						
DAV	Davao City (W)	15.67	353	ePn	Pn	11 12 58.2	-2.1
	1μm,1.4s						
DAV	Davao City (W)	15.67	353	⇑iP	Pn	11 13 01.6	+1.3
DAV	Davao City (W)	15.67	353	Pn	P	11 13 01.8	-2.2
	50nm,0.3s,baz=354,slow=7.8,SNR=1.4						
DAV				LR	LR	11 19 42.0	
	comp=Z,16μm,20.7s,baz=198,slow=40						
KCP	Kidapawan	15.68	351	⇑eP	Pn	11 13 01.6	+1.1
DMPH	Davao City--Mi	15.69	353	⇑eP	P	11 13 07.7	+3.4
NGJI	Ngawi	15.88	273	P	P	11 13 07.0	+0.7
TSM	Tawau	15.97	323	P	P	11 13 07.6	+0.2
PCJI	Pacitan	16.10	270	P	Pn	11 13 02.0	-3.8
AS31	Alice Springs	16.21	158	ePn	Pn	11 13 03.6	-3.6
	121nm,0.8s						
AS31				eSn	Sn	11 16 04.7	-1.4
ASAR	Alice Springs	16.21	158	P	Pn	11 13 06.0	-1.3
ASAR	Alice Springs	16.21	158	Pn	Pn	11 13 05.9	-1.3
	2.8nm,0.3s,baz=327,slow=10.0,SNR=129						
ASAR				Sn	Sn	11 15 58.8	-7.3
	7.4nm,0.3s,baz=331,slow=16,SNR=1.9						
ASAR				Lg	Lg	11 18 00.5	
	baz=343,slow=31,SNR=2.4						
ASAR				LR	LR	11 20 09.9	
	comp=Z,29μm,18.5s,baz=336,slow=40						
ASAR				P3KP		11 48 59.0	
	baz=170,slow=0.6,SNR=4.6						
AS01	Alice Springs	16.23	158	ePn	Pn	11 13 03.7	-3.8
COEN	Coen	16.31	110	P	Pn	11 13 05.7	-2.8
	baz=16,SNR=194						
COEN	Coen	16.31	110	ePn	Pn	11 13 05.4	-3.2
	417nm,1.3s						
WRKA	Warakurna	16.37	177	P	Pn	11 13 06.1	-3.1
	baz=16,SNR=435						
WOJI	Wonogiri, Jawa	16.37	271	P	Pn	11 13 09.2	-0.1
BUKP	Musuan	16.54	352	eP	P	11 13 13.8	+0.2
QIS	Mount Isa	16.71	137	P	Pn	11 13 10.6	-3.0
	baz=17,SNR=63						
PBKI	Pangkalan Bun	16.75	290	P	P	11 13 16.0	0.0
UGM	Wanagama	16.77	271	ePn	Pn	11 13 12.3	-1.9
	698nm,1.3s						
UGM	Wanagama	16.77	271	P	P	11 13 16.3	+0.1
PAGZ	Pagadian	16.83	346	eP	P	11 13 16.2	-0.6
SMRI	Semarang	16.92	274	ePn	Pn	11 13 15.7	-0.5
	585nm,1.2s						
SMRI	Semarang	16.92	274	P	P	11 13 30.4	+12
IPIL	Ipil	16.98	343	eP	P	11 13 19.2	+0.6
SDKM	Sandakan	17.45	324	P	P	11 13 26.6	+2.8
BUTP	Butuan	17.54	354	eP	P	11 13 24.4	-0.3
DCPH	Dipolog City	17.55	346	⇑eP	P	11 13 29.1	+4.4
KKM	Kota Kinabalu	18.36	322	ePn	P	11 13 33.3	-0.6
	704nm,1.0s						
KKM	Kota Kinabalu	18.36	322	P	Pn	11 13 36.3	+2.3
KPJI	Karang Pucung	18.38	273	P	Pn	11 13 35.6	+1.3
BTM	Bintulu	18.51	309	P	Pn	11 13 38.9	+3.1
KDM	Kudat	18.69	325	P	Pn	11 13 40.3	+2.3
SBUM	Sibu	18.73	305	eP	P	11 13 37.0	-0.9
	228nm,0.9s						
MSLP	Maasin	18.78	352	eP	Pn	11 13 40.7	+1.6
CMJI	Cimerak	18.82	271	P	Pn	11 13 40.3	+0.7
	385nm,0.9s,6μm						
GIRL	Giralia	18.87	221	P	Pn	11 13 40.0	-0.1
	baz=19,SNR=15						
GIRL	Giralia	18.87	221	eP	P	11 13 39.3	-0.1
	3μm,1.4s						
MTSU	Mount Surprise	18.94	122	P	P	11 13 39.1	-1.0
	baz=19						
LLP	Lapu-Lapu	19.11	349	eP	Pn	11 13 45.0	+2.0
LLP				eS	S	11 17 26.3	+9.4
JCJI	Jatiwangi	19.13	275	P	Pn	11 13 54.8	+12
CISI	Cisompet, Garu	19.47	272	eP	P	11 13 45.2	-0.9
	483nm,0.6s						
CISI	Cisompet, Garu	19.47	272	P	Pn	11 13 48.2	+0.8
	735nm,0.6s,9μm						
GUIM	Jordan	19.70	346	eP	P	11 13 47.5	-0.9
OCLP	Ormoc	19.72	352	eP	Pn	11 13 53.1	+2.8
BATP	Bataraza	19.77	331	eP	P	11 13 49.7	+0.4
PLP	Palo	19.78	353	⇑eP	Pn	11 13 51.2	+0.2
KSM	Kuching	19.80	300	eP	P	11 13 49.0	-0.6
	498nm,0.9s						
MEEK	Meekatharra	19.81	204	P	Pn	11 13 51.0	-0.3
	baz=20,SNR=116						
JAP	San Jose, Anti	19.98	344	⇓eP	Pn	11 13 56.3	+2.9
CBJI	Citeko	20.54	275	P	P	11 13 57.9	+0.3
	945nm,0.9s,12μm						
RCP	Roxas	20.56	347	⇑eP	Pn	11 14 02.4	+2.2
DBJI	Dramaga	20.62	274	P	Pn	11 14 00.5	-0.4
	325nm,1.0s						
SKJI	Sukabumi	20.76	273	P	Pn	11 14 17.5	+15
MANU	Manus Island	20.86	73	eP	P	11 14 00.9	-0.2
	440nm,1.0s						
CNP	Catarman	21.15	352	eP	P	11 14 02.5	-1.6
CTA	Charters Tower	21.48	124	P	P	11 14 09.9	+2.2
	170nm,1.1s,baz=302,slow=12,SNR=85						
CTA				S	Sn	11 18 08.9	-4.4
	43nm,1.1s,baz=59,slow=17,SNR=1.5						
CTA				Lg	Lg	11 20 40.8	
	74nm,1.0s,baz=221,slow=22,SNR=3.1						
CTAO	Charters Tower	21.48	124	eP	P	11 14 08.0	+0.3
	595nm,1.5s						
CTAO				LR	LR		
	comp=Z,17μm,18.0s						
CTAO	Charters Tower	21.48	124	eP	P	11 14 08.0	+0.3
CTAO				pmax	pmax		
	comp=Z,595nm,1.5s						
CTAO				MLR	MLR		
	comp=Z,17μm,18.0s						
OTRP	Odiongan	21.51	345	eP	P	11 14 11.5	+3.5
XMIS	Christmas Isla	21.58	263	eP	P	11 14 07.9	-1.0
	comp=Z,748nm,0.9s						
SJMP	San Jose	21.84	343	eP	P	11 14 14.4	+2.8
FORT	Forrest	22.08	179	P	P	11 14 16.6	+2.5
	baz=22,SNR=49						
FORT	Forrest	22.08	179	eP	P	11 14 14.7	+0.6
	comp=Z,715nm,0.9s						
PPBI	Pangkal Pinang	22.15	286	P	P	11 14 18.1	+3.1
	comp=Z,175nm,1.1s,comp=Z,11μm						
AUQP	San Andres	22.29	348	eP	P	11 14 07.5	-8.9
BOAC	Boac	22.61	346	eP	P	11 14 19.8	0.0
KASI	Kota Agung	22.98	276	P	P	11 14 28.0	+4.2
	comp=Z,269nm,1.0s,comp=Z,3μm						
MORW	Morawa	23.02	206	P	P	11 14 24.8	+0.7
	baz=23,SNR=58						
MORW	Morawa	23.02	206	eP	P	11 14 23.7	-0.3
	comp=Z,617nm,1.1s						
PMBI	Palembang	23.25	283	P	P	11 14 36.7	+10
TGY	Tagaytay City	23.46	344	P	P	11 14 26.3	-2.2
	comp=Z,497nm,0.8s,baz=164,slow=3.3,SNR=8.5						
TGY				S	Sn	11 18 58.7	-2.1
	comp=Z,162nm,0.4s,baz=214,slow=9.8,SNR=1.3						
MDSI	Maura Dua	23.47	279	P	P	11 14 31.3	+2.6
	comp=Z,70nm,1.1s,comp=Z,2μm						
LWLI	Liwa	23.49	277	P	P	11 14 46.6	+18
POLP	Polilio Island	23.81	347	eP	P	11 14 31.5	-0.3
BLDU	Ballidu	24.10	203	P	P	11 14 35.7	+1.2
	baz=24,SNR=216						
DSRI	Dabo	24.16	288	P	P	11 14 36.6	+1.4
	comp=Z,621nm,1.1s,comp=Z,19μm						
LHSI	Lahat	24.25	280	P	P	11 14 37.9	+2.0
	comp=Z,165nm,1.0s,comp=Z,3μm						
KLBR	Kellerberrin	24.60	200	P	P	11 14 40.3	+1.3
	baz=25,SNR=39						
MNAI	Manna	24.69	278	PFAKE		11 14 50.0	+10
MNAI				LR	LR		
	comp=Z,17μm,18.0s						
TPRI	Tanjung Pinang	24.72	291	P	P	11 14 44.5	+4.2
	comp=Z,175nm,1.0s						
RABL	Rabaul	24.94	81	PFAKE		11 14 50.0	+7.7

RABL				LR	LR		
	comp=Z,8µm,22.0s						
BBOO	Buckleboo	25.38	163	P	P	11 14 47.6	+1.5
	baz=26,SNR=119						
BBOO	Buckleboo	25.38	163	eP	P	11 14 46.3	+0.2
	comp=Z,534nm,1.2s						
SMPP	San Manuel, Pa	25.48	345	eP	P	11 14 46.7	-0.4
MUN	Mundaring	25.50	203	P	P	11 14 49.1	+1.9
	baz=26,SNR=30						
MASI	Maura Aman, Be	25.65	281	P	P	11 15 08.4	+20
MYKOM	Kota Tinggi	25.69	293	eP	P	11 14 47.7	-1.3
	comp=Z,194nm,1.1s						
MYKOM				LR	LR		
	comp=Z,23µm,20.0s						
MYKOM	Kota Tinggi	25.69	293	P	P	11 14 50.5	+1.4
CAUP	Cauayan	25.98	348	eP	P	11 14 57.2	+5.7
NWAO	Narrogin (SRO)	25.99	200	P	P	11 14 53.0	+1.3
	baz=26,SNR=110						
NWAO	Narrogin (SRO)	25.99	200	eP	P	11 14 52.6	+1.0
	comp=Z,191nm,0.6s						
NWAO				eS	S	11 19 38.5	+18
NWAO	Narrogin (SRO)	25.99	200	eP	P	11 14 52.6	+1.0
NWAO				pmax	pmax		
	comp=Z,191nm,0.6s						
NWAO	Narrogin (SRO)	25.99	200	P	P	11 14 54.9	+3.2
	SNR=8.4						
NWAO	Narrogin (SRO)	25.99	200	P	P	11 14 53.0	+1.3
	comp=Z,161nm,0.6s,baz=258,slow=7.7,SNR=74						
NWAO				S	S	11 19 38.5	+18
	comp=Z,270nm,1.0s,baz=199,slow=4.1,SNR=5.3						
NWAO				LR	LR	11 26 40.1	
	comp=Z,18µm,18.3s,baz=244,slow=40						
KGM	Kluang	26.26	293	P	P	11 14 56.6	+2.4
STKA	Stephens Creek	26.64	152	P	P	11 14 58.9	+1.4
	baz=27,SNR=80						
STKA	Stephens Creek	26.64	152	eP	P	11 14 58.2	+0.7
	comp=Z,59nm,1.1s						
STKA				S	S	11 19 34.9	+4.5
STKA	Stephens Creek	26.64	152	eP	P	11 14 58.2	+0.7
STKA				S	S	11 19 34.9	+4.5
STKA				pmax	pmax		
	comp=Z,59nm,1.1s						
STKA	Stephens Creek	26.64	152	P	P	11 14 58.8	+1.4
	comp=Z,205nm,1.0s,baz=322,slow=9.4,SNR=192						
STKA				S	S	11 19 34.9	+4.5
	comp=Z,21nm,0.6s,baz=308,slow=15,SNR=1.4						
STKA				Lg	Lg	11 23 45.9	
	comp=Z,34nm,0.9s,baz=33,slow=19,SNR=1.3						
STKA				LR	LR	11 26 31.8	
	comp=Z,8µm,21.2s,baz=321,slow=38						
KRJI	Kerinci	26.65	283	P	P	11 14 59.8	+1.9
HTT	Hallett	26.89	158	P	P	11 15 01.6	+1.8
	baz=27,SNR=68						
RMQ	Roma	26.93	134	P	P	11 15 02.6	+2.4
	baz=27,SNR=16						
APYP	Conner	26.99	347	eP	P	11 14 59.3	-1.4
SDSI	Sungai Dareh	27.01	285	P	P	11 15 06.9	+5.9
	comp=Z,160nm,1.2s,comp=Z,4µm						
RKGY	Rocky Gully	27.62	199	P	P	11 15 09.3	+3.1
	baz=28,SNR=26						
BKNI	Bangkinang	27.77	287	eP	P	11 15 06.8	-1.0
	comp=Z,303nm,1.1s						
BKNI				LR	LR		
	comp=Z,29µm,20.0s						
BKNI	Bangkinang	27.77	287	P	P	11 15 07.5	-0.3
KTGM	Kuala Trenggan	27.91	299	P	P	11 15 11.5	+2.4
PDSI	Padang	27.94	284	P	P	11 15 11.0	+1.6
	comp=Z,57nm,1.3s						
EIDS	Eidsvold	28.01	129	P	P	11 15 12.4	+2.6
	baz=28,SNR=4.0						
EIDS	Eidsvold	28.01	129	eP	P	11 15 10.2	+0.4
	comp=Z,46nm,1.2s						
EIDS				LR	LR		
	comp=Z,17µm,18.0s						
FRIM	Kepong	28.30	293	P	P	11 15 14.6	+2.0
SISI	Saibi	29.14	283	P	P	11 15 39.0	+19
MNSI	Mandailing Nat	29.30	287	P	P	11 15 20.3	-1.1
IPM	Ipoh	29.38	295	eP	P	11 15 20.7	-1.4
	comp=Z,105nm,1.1s						
IPM				LR	LR		
	comp=Z,11µm,22.0s						
KULM	Kulim	30.07	296	eP	P	11 15 27.1	-1.2
	comp=Z,163nm,1.3s						
KULM				LR	LR		
	comp=Z,11µm,22.0s						
COCO	West Island	30.31	261	PFAKE		11 15 40.0	+10
COCO				LR	LR		
	comp=Z,9µm,21.0s						
PSI	Prapat	30.61	290	eP	P	11 15 31.3	-1.9
	comp=Z,283nm,1.1s						
PSI				LR	LR		
	comp=Z,30µm,20.0s						
PSI	Prapat	30.61	290	eP	P	11 15 31.3	-1.9
PSI				pmax	pmax		
	comp=Z,283nm,1.1s						
PSI				MLR	MLR		
	comp=Z,30µm,20.0s						
PSI	Prapat	30.61	290	P	P	11 15 31.8	-1.5
	comp=Z,32nm,0.8s,baz=179,slow=3.1,SNR=40						
ANA2	Anatahan	30.67	36	PFAKE		11 15 40.0	+6.5
ANA2				LR	LR		
	comp=Z,5µm,20.0s						
ARPS	Mount Arapiles	30.95	157	P	P	11 15 38.5	+2.8
	baz=31,SNR=71						
SKLT	Songkhla	30.99	300	P	P	11 15 39.1	+2.7
	comp=Z,121nm,1.1s,comp=Z,2µm						
TSI	Tuntungan	31.21	291	P	P	11 15 41.8	+3.5
	comp=Z,327nm,1.3s						
ARMA	Armidale	31.34	137	P	P	11 15 43.5	+4.0
	baz=32,SNR=3.9						
ARMA	Armidale	31.34	137	eP	P	11 15 38.6	-0.8
	comp=Z,144nm,1.5s						
ARMA				LR	LR		
	comp=Z,46µm,18.0s						
TWG	Pinlang	31.84	349	PFAKE		11 15 50.0	+6.3
TWG				LR	LR		
	comp=Z,17µm,21.0s						
KCSI	Kotacane, Aceh	31.95	291	P	P	11 15 43.2	-1.7
	comp=Z,90nm,0.7s,comp=Z,2µm						
YNG	Young	32.02	146	P	P	11 15 47.7	+2.4
	baz=32,SNR=19						
HNR	Honiara	32.10	94	P	P	11 15 50.0	+3.8
HNR	Honiara	32.10	94	P	P	11 15 46.1	-0.1
	comp=Z,82nm,0.8s,baz=161,slow=4.2,SNR=4.7						
TRTT	Trang	32.12	300	P	P	11 15 48.7	+2.4
	comp=Z,29nm,1.2s,comp=Z,823nm						
TPUB	Ta-pu	32.39	348	eP	P	11 15 46.5	-2.1
	comp=Z,104nm,0.9s						
TPUB				LR	LR		
	comp=Z,7µm,21.0s						
TPTI		32.40	290	P	P	11 15 47.2	-1.6
	comp=Z,101nm,1.1s,comp=Z,2µm						
QIZ	Qiongzhong	32.48	328	P	P	11 15 48.8	-0.6
QIZ				pP	pP	11 15 57.5	-1.7
QIZ				PP	PP	11 17 04.0	+0.8
QIZ				S	S	11 21 07.8	+5.6
QIZ				sS	sS	11 21 22.4	+5.0
QIZ				pmax	pmax		
	comp=Z,31nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,750nm,10.4s						
QIZ				LR	LR		
	comp=Z,3µm,16.2s						
QIZ				LR	LR		
	comp=Z,3µm,24.0s						
QIZ				LR	LR		
	comp=Z,4µm,23.5s						
QIZ	Qiongzhong	32.48	328	eP	P	11 15 46.7	-2.7
	comp=Z,93nm,1.1s						
QIZ				LR	LR		
	comp=Z,4µm,21.0s						
SSLB	Suanglung	32.80	349	eP	P	11 15 50.2	-2.0
	comp=Z,52nm,0.9s						
SSLB				LR	LR		
	comp=Z,4µm,20.0s						
MGCD	Mangrove Creek	32.83	142	P	P	11 15 56.5	+4.2
	baz=33,SNR=5.3						
SNSI	Sinabang, Aceh	32.90	288	P	P	11 15 53.3	+0.1
	comp=Z,653nm,1.1s,comp=Z,7µm						
CAN	Canberra	33.11	147	PFAKE		11 16 10.0	+15
CAN				LR	LR		
	comp=Z,10µm,18.0s						
CNB	Canberra Magne	33.31	146	P	P	11 16 00.1	+3.5
	baz=34,SNR=9.6						
PKDT	Phuket	33.32	299	P	P	11 15 58.6	+1.8
	comp=Z,29nm,1.2s,comp=Z,2µm						
LHMI	Lhok Sumawe	33.37	293	eP	P	11 15 55.3	-2.0
	comp=Z,308nm,1.1s						
LHMI				LR	LR		
	comp=Z,16µm,21.0s						
LHMI	Lhok Sumawe	33.37	293	P	P	11 16 09.6	+12
MLSI	Meulaboh, Aceh	33.49	291	P	P	11 15 56.9	-1.4
	comp=Z,472nm,1.1s,comp=Z,5µm						
YHNB	Yeheng	33.59	350	PFAKE		11 16 10.0	+11
YHNB				LR	LR		
	comp=Z,6µm,22.0s						
SRAK	Srakaew	33.77	311	P	P	11 15 56.7	-4.0
	comp=Z,146nm,0.9s,comp=Z,2µm						
TATO	Taipei	33.87	350	PFAKE		11 16 10.0	+8.6
TATO				LR	LR		
	comp=Z,4µm,22.0s						
PATY	Pattaya	33.98	309	P	P	11 16 03.1	+0.6
	comp=Z,29nm,0.8s,comp=Z,3µm						
GZH	Guangzhou	34.38	337	P	P	11 16 09.3	+3.4
GZH				PP	PP	11 17 25.6	+1.3
GZH				S	S	11 21 37.6	+6.0
GZH				LR	LR		
	comp=Z,5µm,18.9s						
GZH				LR	LR		
	comp=Z,3µm,17.2s						
SKNT	Sakolnakorn	34.41	318	P	P	11 16 06.0	-0.3
	comp=Z,38nm,0.8s,comp=Z,947nm						
QZH	Quanzhou	34.44	346	P	P	11 16 03.6	-2.7
QZH				LR	LR		
	comp=Z,3µm,17.9s						
QZH				LR	LR		
	comp=Z,2µm,12.2s						
QZH				LR	LR		
	comp=Z,3µm,19.4s						
PHET	Kaeng Krachan	34.93	307	P	P	11 16 11.2	+0.4
	comp=Z,37nm,1.0s,comp=Z,288nm						
JOW	Kunigami	35.23	1	eP	P	11 16 10.3	-2.8
	comp=Z,78nm,0.8s						
PBKT	Sadao Pong	36.22	314	eP	P	11 16 19.8	-2.0
	comp=Z,65nm,1.1s						
PBKT	Sadao Pong	36.22	314	P	P	11 16 21.2	-0.6
	comp=Z,76nm,1.1s,comp=Z,2µm						
LHI	Lord Howe Isla	37.21	132	PFAKE		11 16 40.0	+10
LHI				LR	LR		
	comp=Z,8µm,21.0s						
UTTA	Uttaradit	37.29	315	P	P	11 16 30.6	-0.4
	comp=Z,49nm,1.1s,comp=Z,401nm						
UMPA	Umpang Tak	37.52	311	P	P	11 16 31.8	-1.2
JCJ	Chichijima	38.25	21	LR	LR	11 29 54.8	
	comp=Z,3µm,21.1s,baz=190,slow=32						
TAU	Tasmania Unive	38.37	156	PFAKE		11 16 50.0	+10
TAU				LR	LR		
	comp=Z,15µm,18.0s						
LAMP	Lampang	38.46	315	P	P	11 16 41.1	+0.2
	comp=Z,64nm,1.1s,comp=Z,559nm						
CM01	Chiang Mai Arr	38.87	314	eP	P	11 16 42.5	-1.9
CM01				eS	S	11 22 42.8	+2.5
CM31	Chiang Mai Arr	38.91	314	eP	P	11 16 43.3	-1.3
CM31	Chiang Mai Arr	38.91	314	P	P	11 16 44.5	-0.1
	SNR=71						
CMAR	Chiang Mai Arr	38.91	314	P	P	11 16 44.4	-0.3
	comp=Z,87nm,0.9s,baz=144,slow=6.9,SNR=232						
CMAR				PcP	PcP	11 18 55.4	+0.3
	comp=Z,6.6nm,0.7s,baz=161,slow=2.9,SNR=2.8						
CMAR				ScP	ScP	11 22 43.6	+2.6
	comp=Z,3.8nm,0.9s,baz=162,slow=2.6,SNR=4.8						
CMAR				LR	LR	11 35 31.9	
	comp=Z,7µm,19.3s,baz=156,slow=41						
CMAR				PKPPKP	P'P'df	11 49 17.6	-0.9
	comp=Z,0.5nm,0.3s,baz=309,slow=2.7,SNR=4.8						
CMMT	Chiang Mai	39.14	314	P	P	11 16 46.0	-0.5
	comp=Z,210nm,1.1s,comp=Z,3µm						
CHTO	Chiang Mai	39.14	314	eP	P	11 16 45.0	-1.6
	comp=Z,310nm,1.2s						
CHTO				LR	LR		
	comp=Z,6µm,21.0s						
CHTO	Chiang Mai	39.14	314	eP	P	11 16 45.0	-1.6
CHTO				pmax	pmax		
	comp=Z,310nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,6µm,21.0s						
CHTO	Chiang Mai	39.14	314	P	P	11 16 46.5	0.0
	SNR=72						
CHTO				P	P	11 16 46.5	0.0
	SNR=72						
CHTO	Chiang Mai	39.14	314	P	P	11 16 46.2	-0.4
	comp=Z,943nm,1.1s,comp=Z,14µm						
DZM	Mont Dzumac	39.79	114	eP	P	11 16 54.3	+2.2
	comp=Z,139nm,1.1s						
DZM				eS	S	11 23 04.0	+10
	comp=Z,5µm,29.6s						
DZM				eLR	LR	11 27 56.7	
	comp=Z,13µm,22.8s						
DZM	Mont Dzumac	39.79	114	eP	P	11 16 50.9	-1.2
	comp=Z,43nm,0.9s						
DZM				eS	S	11 22 56.9	+2.6
DZM				LR	LR		
	comp=Z,13µm,19.0s						
DZM	Mont Dzumac	39.79	114	P	P	11 16 53.9	+1.8
	comp=Z,26nm,1.0s,baz=294,slow=11,SNR=6.2						
DZM				S	S	11 22 56.9	+2.6
	comp=Z,7.3nm,1.1s,baz=185,slow=7.0,SNR=1.8						
ONTNC	Ouen Toro	39.85	115	eP	P	11 16 52.2	-0.3
	comp=Z,120nm,1.2s						
ONTNC				LR	LR		
	comp=Z,14µm,19.0s						
SSE	Sheshan	39.92	352	P	P	11 16 53.9	+1.1
SSE				pP	sP	11 17 04.3	-2.1
SSE				PP	PP	11 18 30.8	+5.7
SSE				S	S	11 22 57.3	+1.7
SSE				pmax	pmax		
	comp=Z,18nm,0.8s						
SSE				pmax	pmax		
	comp=Z,480nm,6.2s						
SSE				LR	LR		
	comp=Z,1µm,18.6s						
SSE	Sheshan	39.92	352	PFAKE		11 17 00.0	+7.2
SSE				LR	LR		
	comp=Z,3µm,20.0s						
GYA	Guiyang	40.27	331	⇑iP	P	11 16 55.3	-0.7
GYA				pP	sP	11 17 07.4	-2.2
GYA				sP	pP	11 17 11.8	+5.8
GYA				ScP	ScP	11 22 45.0	-1.2
GYA				S	S	11 23 01.8	+0.5
GYA				sS	sS	11 23 19.3	+1.9
GYA				SS	SS	11 25 55.8	-4.9
GYA				pmax	pmax		
	comp=Z,110nm,1.1s						
GYA				pmax	pmax		
	comp=Z,680nm,7.4s						
GYA				LR	LR		
	comp=Z,2µm,18.3s						
GYA				LR	LR		
	comp=Z,2µm,21.4s						
GYA				LR	LR		
	comp=Z,3µm,18.3s						
PINNC	Pines Island,	40.82	115	PFAKE		11 17 10.0	+10
PINNC				LR	LR		
	comp=Z,12µm,20.0s						
WHN	Wuhan	40.90	343	⇓P	P	11 17 00.8	-0.1
WHN				LR	LR		
	comp=Z,5µm,15.0s						
WHN				LR	LR		
	comp=Z,2µm,17.6s						
WHN				LR	LR		
	comp=Z,8µm,25.2s						
MARNC	Mare, Loyalty	41.10	113	eP	P	11 17 01.4	-1.3
MARNC				LR	LR		
	comp=Z,8µm,20.0s						
NJ2	Nanjing	41.24	349	eP	P	11 17 03.1	-0.6
NJ2				pP	pP	11 17 12.0	-1.6
NJ2				sP	sP	11 17 16.3	-1.1
NJ2				PP	PnPn	11 18 45.5	+1.4
NJ2				S	S	11 23 17.1	+1.7
NJ2				sS	sS	11 23 31.0	-0.1
NJ2				pmax	pmax		
	comp=Z,95nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,850nm,5.9s						
NJ2				LR	LR		
	comp=Z,2µm,18.6s						
NJ2				LR	LR		
	comp=Z,2µm,24.2s						
NJ2				LR	LR		
	comp=Z,4µm,19.1s						
KMI	Kunming	41.26	325	P	P	11 17 04.3	0.0
KMI				pP	pP	11 17 14.5	+0.2
KMI				sP	sP	11 17 20.3	+2.4
KMI				PP	PnPn	11 18 47.8	+3.1
KMI				S	S	11 23 13.3	-3.1
KMI				sS	sS	11 23 32.8	+0.9
KMI				pmax	pmax		
	comp=Z,100nm,1.3s						
KMI				pmax	pmax		
	comp=Z,930nm,4.2s						
KMI				LR	LR		
	comp=Z,2µm,22.2s						
KMI				LR	LR		
	comp=Z,3µm,21.4s						
KMI				LR	LR		
	comp=Z,4µm,25.6s						
KMI	Kunming	41.26	325	eP	P	11 17 04.7	+0.4
	comp=Z,252nm,1.3s						
KMI				LR	LR		
	comp=Z,3µm,21.0s						
KMI	Kunming	41.26	325	eP	P	11 17 04.7	+0.4
KMI				pmax	pmax		
	comp=Z,252nm,1.3s						
KMI				MLR	MLR		
	comp=Z,3µm,21.0s						
JNU	Nakatsue	41.61	4	eP	P	11 17 04.5	-2.3
	comp=Z,32nm,0.9s						
JNU	Nakatsue	41.61	4	P	P	11 17 04.6	-2.3
	comp=Z,20nm,1.1s,baz=84,slow=14,SNR=2.9						
JNU				LR	LR	11 35 54.4	
	comp=Z,5µm,18.2s,baz=168,slow=39						
ENH	Enshi	42.32	337	eP	P	11 17 11.2	-1.4
	comp=Z,60nm,0.8s						
ENH				LR	LR		
	comp=Z,6µm,20.0s						
JHJ2	Mitsune	43.11	15	PFAKE		11 17 30.0	+11
JHJ2				LR	LR		
	comp=Z,7µm,21.0s						
INU	Inuyama	44.63	11	PFAKE		11 17 40.0	+8.9
INU				LR	LR		
	comp=Z,6µm,20.0s						
TJN	Taejon	44.73	360	ceP	P	11 17 30.3	-1.6
CD2	Chengdu	45.38	331	⇑P	P	11 17 36.0	-1.2
CD2				pP	pP	11 17 46.3	-1.0
CD2				sP	sP	11 17 50.6	-0.3
CD2				PP	PP	11 19 24.1	+0.2
CD2				S	S	11 24 15.9	-0.2
CD2				pmax	pmax		
	comp=Z,240nm,0.7s						
CD2				pmax	pmax		
	comp=Z,2µm,6.1s						
CD2				LR	LR		
	comp=Z,8µm,17.2s						
CD2				LR	LR		
	comp=Z,10µm,18.6s						
CD2				LR	LR		
	comp=Z,8µm,16.7s						
TIA	Tai'an	45.61	348	P	P	11 17 36.5	-2.5
TIA				pP	sP	11 17 50.0	-2.7
TIA				PP	PP	11 19 27.8	+1.5
TIA				S	S	11 24 14.1	-5.2
TIA				pmax	pmax		
	comp=Z,11nm,1.1s						
TIA				pmax	pmax		
	comp=Z,260nm,3.6s						
TIA				LR	LR		
	comp=Z,1µm,18.1s						
TIA				LR	LR		
	comp=Z,680nm,17.2s						
TIA				LR	LR		
	comp=Z,1µm,18.4s						
KS15	Wonju Array Si	45.80	0	eP	P	11 17 39.4	-0.9
KSAR	Wonju Array Be	45.80	0	P	P	11 17 38.6	-1.7
KSAR				PcP	PcP	11 19 17.9	+0.3
KSAR	Wonju Array Be	45.80	0	P	P	11 17 38.6	-1.7
KSAR						11 19 17.9	
KSRS	Korea Array	45.81	1	P	P	11 17 38.6	-1.8
	comp=Z,33nm,1.1s,baz=181,slow=8.8,SNR=30						
KSRS				PcP	PcP	11 19 17.9	+0.3
	comp=Z,25nm,0.9s,baz=191,slow=3.6,SNR=9.0						
KSRS				ScP	ScP	11 23 09.0	+0.9
	comp=Z,3.6nm,0.9s,baz=171,slow=5.0,SNR=5.3						
KSRS				LR	LR	11 34 54.2	
	comp=Z,2µm,22.0s,baz=166,slow=34						
KS01	Wonju Array Si	45.83	0	eP	P	11 17 39.1	-1.6
XAN	Xi'an	45.90	338	P	P	11 17 39.0	-2.3
XAN				pP	pP	11 17 48.9	-2.5
XAN				sP	sP	11 17 53.0	-2.0
XAN				PP	PP	11 19 27.1	-2.3
XAN				ScS	ScS	11 27 32.8	-2.0
XAN				pmax	pmax		
	comp=Z,23nm,1.1s						
XAN				pmax	pmax		
	comp=Z,730nm,7.1s						
XAN				LR	LR		
	comp=Z,3µm,19.0s						
XAN				LR	LR		
	comp=Z,2µm,17.4s						
XAN				LR	LR		
	comp=Z,4µm,16.8s						
XAN	Xi'an	45.90	338	eP	P	11 17 38.9	-2.4
	comp=Z,80nm,1.0s						
XAN				LR	LR		
	comp=Z,5µm,18.0s						
MAJO	Matsushiro	46.02	12	eP	P	11 17 40.0	-2.2
	comp=Z,22nm,0.9s						
MAJO	Matsushiro	46.02	12	eP	P	11 17 40.0	-2.2
MAJO				pmax	pmax		
	comp=Z,22nm,0.9s						
MAT	Matsushiro	46.02	12	P	P	11 17 39.5	-2.7
MAT				S	S	11 24 30.8	+5.6
MJAR	Matsushiro Arr	46.02	12	P	P	11 17 38.6	-3.6
	comp=Z,5.2nm,0.9s,baz=197,slow=9.1,SNR=16						
MJAR				PcP	PcP	11 19 18.8	+0.4
	comp=Z,13nm,0.9s,baz=205,slow=5.4,SNR=3.2						
MJAR				ScP	ScP	11 23 10.7	+1.5
	comp=Z,5.6nm,1.0s,baz=204,slow=5.3,SNR=4.9						
MJAR				LR	LR	11 35 40.4	
	comp=Z,4µm,20.8s,baz=210,slow=35						
BRDH	Bariadhala	46.86	312	LR	LR	11 39 30.6	
	comp=Z,4µm,21.7s,baz=152,slow=39						
DL2	Dalian	47.57	354	⇑iP	P	11 17 52.3	-1.9
DL2				pP	pP	11 18 01.8	-2.4
DL2				PP	PP	11 19 41.0	-5.1
DL2				S	S	11 24 42.9	-4.2
DL2				pmax	pmax		
	comp=Z,53nm,0.9s						
DL2				pmax	pmax		
	comp=Z,540nm,4.0s						
DL2				LR	LR		
	comp=Z,2µm,21.3s						
DL2				LR	LR		
	comp=Z,2µm,22.5s						
DL2				LR	LR		
	comp=Z,3µm,18.7s						
SHL	Shillong	48.48	315	eP	P	11 17 59.3	-2.5
	comp=Z,118nm,1.0s						
SHL				LR	LR		
	comp=Z,4µm,21.0s						
SHL	Shillong	48.48	315	eP	P	11 17 59.3	-2.5
SHL				pmax	pmax		
	comp=Z,118nm,1.0s						
SHL				MLR	MLR		
	comp=Z,4µm,21.0s						
PALK	Pallekele	49.19	287	eP	P	11 18 05.6	-1.6
	comp=Z,53nm,0.9s						
PALK				LR	LR		
	comp=Z,16µm,20.0s						
PALK	Pallekele	49.19	287	i P	P	11 18 06.2	-1.1
	SNR=6.8						
PALK	Pallekele	49.19	287	eP	P	11 18 05.6	-1.6
PALK				pmax	pmax		
	comp=Z,53nm,0.9s						
PALK				MLR	MLR		
	comp=Z,16µm,20.0s						
PALK	Pallekele	49.19	287	P	P	11 18 07.1	-0.2
	SNR=6.3						
PALK				P	P	11 18 07.1	-0.2
	SNR=6.3						
BJT	Baijiatuau	49.48	349	eP	P	11 18 06.7	-2.2
	comp=Z,58nm,1.0s						
BJT	Baijiatuau	49.48	349	eP	P	11 18 06.7	-2.2
BJT				pmax	pmax		
	comp=Z,58nm,1.0s						
BJI	Beijing	49.50	349	⇑iP	P	11 18 07.1	-2.0
BJI				S	S	11 25 16.5	+2.1
BJI				pmax	pmax		
	comp=Z,29nm,1.2s						
BJI				LR	LR		

	comp=Z,830nm,21.8s						
LZH	**Lanzhou**	**49.69**	**335**	⇑P	**P**	**11 18 10.3**	**-0.5**
LZH				pP	pP	11 18 19.8	-1.2
LZH				sP	sP	11 18 24.3	-0.2
LZH				PP	**PP**	**11 20 06.0**	**+0.3**
LZH				S	**S**	**11 25 14.4**	**-3.1**
LZH				sS	sS	11 25 31.9	-1.4
LZH				SS	**SS**	**11 28 47.4**	**-3.0**
LZH				pmax	pmax		
	comp=Z,110nm,1.2s						
LZH				pmax	pmax		
	comp=Z,1µm,6.0s						
LZH				LR	LR		
	comp=Z,5µm,14.6s						
LZH				LR	LR		
	comp=Z,5µm,15.2s						
LZH				LR	LR		
	comp=Z,5µm,18.4s						
MSVF	**Nonsavu**	**49.97**	**106**	*e*P	**P**	**11 18 12.4**	**-0.8**
	comp=Z,96nm,1.3s						
MSVF	**Nonsavu**	**49.97**	**106**	*e*P	**P**	**11 18 12.4**	**-0.8**
MSVF				pmax	pmax		
	comp=Z,96nm,1.3s						
DCZ	**Deep Cove**	**50.14**	**144**	*e*P	**P**	**11 18 14.0**	**0.0**
	comp=Z,111nm,1.6s						
SNY	**Shenyang**	**50.30**	**356**	⇓P	**P**	**11 18 14.3**	**-0.8**
SNY				PP	**PP**	**11 20 10.1**	**-0.8**
SNY				S	**S**	**11 25 26.4**	**+1.0**
SNY				pmax	pmax		
	comp=Z,32nm,1.1s						
SNY				pmax	pmax		
	comp=Z,990nm,5.7s						
SNY				LR	LR		
	comp=Z,3µm,17.7s						
SNY				LR	LR		
	comp=Z,2µm,18.9s						
SNY				LR	LR		
	comp=Z,6µm,20.2s						
MLZ	**Mavora Lakes**	**50.65**	**144**	*e*P	**P**	**11 18 18.5**	**+0.7**
	comp=Z,115nm,1.6s						
MLZ				LR	LR		
	comp=Z,8µm,20.0s						
FOZ	**Fox Glacier**	**50.71**	**141**	PFAKE		11 18 30.0	+12
FOZ				LR	LR		
	comp=Z,14µm,20.0s						
WHZ	**Wether Hill Ro**	**50.84**	**144**	*e*P	**P**	**11 18 19.7**	**+0.4**
	comp=Z,60nm,1.0s						
WHZ				LR	LR		
	comp=Z,9µm,18.0s						
WKZ	**Wanaka**	**50.89**	**143**	PFAKE		11 18 30.0	+10
WKZ				LR	LR		
	comp=Z,7µm,20.0s						
HHC	**Hu-ho-hao-te**	**51.33**	**345**	*e*P	**P**	**11 18 21.6**	**-1.5**
HHC				pP	pP	11 18 31.6	-1.7
HHC				sP	sP	11 18 34.9	-2.0
HHC				S	**S**	**11 25 35.6**	**-4.5**
HHC				pmax	pmax		
	comp=Z,13nm,1.3s						
HHC				pmax	pmax		
	comp=Z,670nm,5.4s						
HHC				LR	LR		
	comp=Z,2µm,17.9s						
HHC				LR	LR		
	comp=Z,1µm,18.1s						
HHC				LR	LR		
	comp=Z,2µm,16.4s						
LBZ	**Lake Benmore**	**51.37**	**141**	*e*P	**P**	**11 18 23.7**	**+0.4**
	comp=Z,92nm,1.3s						
LBZ				LR	LR		
	comp=Z,17µm,20.0s						
BTO	**Baotou**	**51.53**	**343**	*e*P	**P**	**11 18 20.0**	**-4.5**
BTO				S	**S**	**11 25 49.4**	**+6.6**
RPZ	**Rata Peaks**	**51.58**	**140**	*e*P	**P**	**11 18 25.8**	**+1.0**
	comp=Z,113nm,1.0s						
RPZ				LR	LR		
	comp=Z,21µm,20.0s						
RPZ	**Rata Peaks**	**51.58**	**140**	P	**P**	**11 18 27.0**	**+2.2**
	comp=Z,72nm,0.9s,baz=323,slow=2.1,SNR=21						
VLA	**Vladivostok**	**51.62**	**4**	*i* P	**P**	**11 18 23.6**	**-1.4**
VLA				pmax	pmax		
	comp=Z,33nm,1.1s						
LSA	**Lhasa**	**51.66**	**319**	P	**P**	**11 18 25.8**	**-0.4**
LSA				S	**S**	**11 25 53.3**	**+7.5**
LSA				pmax	pmax		
	comp=Z,36nm,2.3s						
LSA				LR	LR		
	comp=Z,1µm,20.9s						
LSA				LR	LR		
	comp=Z,4µm,46.4s						
LSA				LR	LR		
	comp=Z,4µm,18.6s						
LSA	**Lhasa**	**51.66**	**319**	*e*P	**P**	**11 18 24.9**	**-1.3**
	comp=Z,70nm,0.8s						
LSA				LR	LR		
	comp=Z,4µm,21.0s						
LSA	**Lhasa**	**51.66**	**319**	P	**P**	**11 18 25.8**	**-0.4**
LSA	**Lhasa**	**51.66**	**319**	*e*P	**P**	**11 18 24.9**	**-1.3**
LSA				pmax	pmax		
	comp=Z,70nm,0.8s						
LSA				MLR	MLR		
	comp=Z,4µm,21.0s						
THZ	**Tophouse**	**51.87**	**137**	*e*P	**P**	**11 18 28.0**	**+0.9**
	comp=Z,85nm,1.0s						
THZ				LR	LR		
	comp=Z,13µm,18.0s						
LTZ	**Lake Taylor**	**51.91**	**139**	*e*P	**P**	**11 18 27.8**	**+0.5**
	comp=Z,59nm,1.2s						
LTZ				LR	LR		
	comp=Z,13µm,18.0s						
ODZ	**Otahua Downs**	**51.99**	**142**	PFAKE		11 18 40.0	+12
ODZ				LR	LR		
	comp=Z,8µm,20.0s						
OXZ	**Oxford**	**52.02**	**139**	*e*P	**P**	**11 18 28.6**	**+0.6**
	comp=Z,40nm,0.7s						
OXZ				LR	LR		
	comp=Z,16µm,19.0s						
CN2	**Changchun**	**52.18**	**358**	*e*P	**P**	**11 18 29.8**	**+0.6**
CN2				*e*pP	pP	11 18 39.8	+0.5
CN2				*e*PP	**PP**	**11 20 29.5**	**+1.6**
CN2				*e*S	**S**	**11 25 52.3**	**+0.9**
CN2				*e*SS	**SS**	**11 29 33.3**	**+3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,3µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,3µm,20.0s						
MCQ	**Macquarie Isla**	**52.24**	**157**	PFAKE		11 18 40.0	+11
MCQ				LR	LR		
	comp=Z,8µm,19.0s						
ERM	**Erimo**	**52.38**	**15**	PFAKE		11 18 40.0	+9.3
ERM				LR	LR		
	comp=Z,4µm,20.0s						
ODAN	**Odare**	**52.45**	**314**	*e*P	**P**	**11 18 30.8**	**-1.0**
CRLZ	**Canterbury Las**	**52.51**	**139**	*e*P	**P**	**11 18 31.6**	**-0.1**
	comp=Z,155nm,1.4s						
KHZ	**Kahutara**	**52.58**	**138**	*e*P	**P**	**11 18 32.5**	**+0.2**
	comp=Z,80nm,0.9s						
KHZ				LR	LR		
	comp=Z,15µm,19.0s						
MQZ	**McQueen’s Vall**	**52.59**	**140**	*e*P	**P**	**11 18 32.5**	**+0.2**
	comp=Z,170nm,1.6s						
MQZ				LR	LR		
	comp=Z,11µm,18.0s						
USA0B	**Ussuriysk Arra**	**52.71**	**4**	*e*P	**P**	**11 18 32.1**	**-0.9**
USRK	**Ussuriysk Ar.**	**52.71**	**4**	P	**P**	**11 18 31.8**	**-1.3**
	comp=Z,15nm,0.8s,baz=187,slow=6.4,SNR=20						
USRK				ScP	**ScP**	**11 23 38.6**	**+1.2**
	comp=Z,6.6nm,1.0s,baz=204,slow=3.2,SNR=3.5						
USRK				LR	LR	11 41 23.9	
	comp=Z,3µm,18.9s,baz=165,slow=37						
SNZO	**South Karori**	**52.90**	**136**	PFAKE		11 18 50.0	+15
SNZO				LR	LR		
	comp=Z,13µm,18.0s						
MDJ	**Mudanjiang**	**53.00**	**2**	P	**P**	**11 18 36.3**	**+1.1**
MDJ				pP	pP	11 18 39.8	-5.6
MDJ				S	**S**	**11 26 05.0**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,47nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,510nm,3.2s						
MDJ				LR	LR		
	comp=Z,3µm,20.6s						
MDJ				LR	LR		
	comp=Z,1µm,15.9s						
MDJ				LR	LR		
	comp=Z,4µm,20.8s						
MDJ	**Mudanjiang**	**53.00**	**2**	*e*P	**P**	**11 18 34.4**	**-0.8**
	comp=Z,63nm,1.0s						
MDJ				LR	LR		
	comp=Z,4µm,22.0s						
RAMN	**Ramite**	**53.07**	**313**	*e*P	**P**	**11 18 35.7**	**-0.7**
	comp=Z,262nm,0.6s						
BKZ	**Black Stump Fm**	**53.32**	**133**	*e*P	**P**	**11 18 37.8**	**-0.1**
	comp=Z,34nm,0.9s						
BKZ				LR	LR		
	comp=Z,8µm,18.0s						
URZ	**Urewera**	**53.45**	**132**	*e*P	**P**	**11 18 39.1**	**+0.3**
	comp=Z,114nm,1.6s						
URZ				LR	LR		
	comp=Z,7µm,20.0s						
BFZ	**Birch Farm**	**53.71**	**135**	PFAKE		11 18 50.0	+9.3
BFZ				LR	LR		
	comp=Z,35µm,18.0s						
JIRN	**Jiri**	**53.78**	**314**	*e*P	**P**	**11 18 40.7**	**-1.1**
	comp=Z,240nm,0.9s						
TEY	**Ternei**	**54.02**	**8**	⇑*e*P	**P**	**11 18 43.1**	**+0.4**
TEY				*e*		11 26 26.8	
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
TEY				pmax	pmax		
	comp=Z,60nm,1.0s						
GUN	**Gumba**	**54.15**	**314**	*e*P	**P**	**11 18 43.2**	**-1.3**
	comp=Z,200nm,0.8s						
GTA	**Gaotai**	**54.21**	**334**	⇑P	**P**	**11 18 43.5**	**-0.9**
GTA				pP	pP	11 18 53.3	-1.4
GTA				sP	sP	11 18 57.6	-0.6
GTA				PP	**PP**	**11 20 45.9**	**-0.6**
GTA				S	**S**	**11 26 19.0**	**-0.4**
GTA				sS	sS	11 26 38.0	+2.5
GTA				pmax	pmax		
	comp=Z,96nm,1.0s						
GTA				pmax	pmax		
	comp=Z,680nm,5.9s						
GTA				LR	LR		
	comp=Z,2µm,21.6s						
GTA				LR	LR		
	comp=Z,2µm,23.2s						
GTA				LR	LR		
	comp=Z,3µm,23.5s						
ASAJ	**Asahikawa**	**54.23**	**13**	LR	LR	11 41 04.4	
	comp=Z,5µm,21.5s,baz=208,slow=35						
PKI	**Pulchoki**	**54.29**	**313**	*e*P	**P**	**11 18 43.9**	**-1.6**
	comp=Z,100nm,0.7s						
PKIN	**Phulchoki**	**54.31**	**313**	*e*P	**P**	**11 18 43.9**	**-1.6**
	comp=Z,62nm,0.5s						
DGAR	**Diego Garcia**	**54.44**	**267**	*e*P	**P**	**11 18 45.9**	**-0.4**
	comp=Z,638nm,1.3s						
DGAR				LR	LR		
	comp=Z,5µm,19.0s						
DGAR	**Diego Garcia**	**54.44**	**267**	*e*P	**P**	**11 18 45.9**	**-0.4**
DGAR				pmax	pmax		
	comp=Z,638nm,1.3s						
DGAR				MLR	MLR		
	comp=Z,5µm,19.0s						
DGAR	**Diego Garcia**	**54.44**	**267**	P	**P**	**11 18 48.7**	**+2.3**
	SNR=12						
DGAR				P	**P**	**11 18 48.7**	**+2.3**
	SNR=12						
KKN	**Kakani**	**54.51**	**313**	*e*P	**P**	**11 18 45.7**	**-1.2**
	comp=Z,195nm,1.1s						
DMN	**Daman**	**54.54**	**313**	*e*P	**P**	**11 18 45.9**	**-1.2**
	comp=Z,318nm,1.3s						
HYB	**Hyderabad**	**54.79**	**298**	*i* P	**P**	**11 18 46.5**	**-2.4**
	comp=Z,80nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**54.98**	**16**	*c i*P	P	11 18 42.1	-7.6
YUK				*e*		11 19 50.3	
YUK				*e*		11 20 49.5	
YUK				*i* PPP	PPP	11 22 00.2	
YUK				*e*S	**S**	**11 26 20.7**	**-8.6**
YUK				pmax	pmax		
	comp=Z,97nm,1.9s						
YUK				pmax	pmax		
	comp=Z,110nm,1.2s						
YUK				pmax	pmax		
	comp=N,88nm,1.0s						
YUK				pmax	pmax		
	comp=E,18nm,0.7s						
RAO	**Raoul Island**	**55.08**	**120**	PFAKE		11 19 00.0	+9.2
RAO				LR	LR		
	comp=Z,7µm,20.0s						
KOLN	**Koldanda**	**55.73**	**312**	*e*P	**P**	**11 18 54.5**	**-1.2**
	comp=Z,264nm,0.9s						
DANN	**Dangsing**	**55.94**	**313**	*e*P	**P**	**11 18 55.9**	**-1.4**
	comp=Z,263nm,0.9s						
PYUN	**Piuthan**	**56.36**	**312**	*e*P	**P**	**11 18 59.0**	**-1.2**
	comp=Z,365nm,1.0s						
KUR	**Kuril'sk**	**56.65**	**17**	P	**P**	**11 19 03.7**	**+2.1**
KUR				*e*S	S	11 27 11.2	+20
KUR				pmax	pmax		
	comp=Z,98nm,1.3s						
KUR				MLR	MLR		
	comp=Z,1µm,18.0s						
KUR				MLR	MLR		
	comp=N,1µm,20.0s						
MNCI	**Minicoy**	**56.73**	**286**	*e*P	**P**	**11 19 04.6**	**+1.8**
	comp=N,496nm,1.4s						
MNCI				LR	LR		
	comp=Z,7µm,20.0s						
YSS	**Yuzh-Sakhalins**	**56.96**	**12**	*e*P	**P**	**11 19 03.3**	**-0.5**
	comp=Z,18nm,0.8s						
YSS				LR	LR		
	comp=Z,1µm,21.0s						
YSS	**Yuzh-Sakhalins**	**56.96**	**12**	*e*P	**P**	**11 19 02.8**	**-1.0**
YSS				*e*		11 19 08.9	
YSS				*e*		11 21 16.2	
YSS				*e*S	**S**	**11 26 49.1**	**-6.4**
YSS				*e*PS	**S**	**11 27 00.2**	**+4.7**
YSS				MLR	MLR		
	comp=E,500nm,17.0s						
KLR	**Kul'dur**	**57.70**	**3**	*i* P	**P**	**11 19 07.7**	**-1.3**
KLR	**Kul'dur**	**57.70**	**3**	LR	LR	11 44 38.5	
	comp=E,2µm,19.7s,baz=166,slow=37						
CASY	**Casey**	**58.77**	**188**	*e*P	**P**	**11 19 17.4**	**+1.2**
	comp=E,66nm,1.1s						
CASY				LR	LR		
	comp=Z,6µm,20.0s						
ULN	**Ulaanbaatar**	**59.04**	**344**	*e*P	**P**	**11 19 17.2**	**-1.4**
	comp=Z,81nm,1.0s						
ULN				LR	LR		
	comp=Z,3µm,19.0s						
ULN	**Ulaanbaatar**	**59.04**	**344**	*e*P	**P**	**11 19 17.3**	**-1.4**
ULN				pmax	pmax		
	comp=Z,81nm,1.0s						
ULN				MLR	MLR		
	comp=Z,3µm,19.0s						
ULN	**Ulaanbaatar**	**59.04**	**344**	P	**P**	**11 19 18.1**	**-0.5**
	SNR=35						
ULN				P	**P**	**11 19 18.1**	**-0.5**
	SNR=35						
SONA0	**Songino Array**	**59.20**	**344**	*e*P	**P**	**11 19 18.6**	**-1.1**
SONM	**Songino Array**	**59.20**	**344**	P	**P**	**11 19 18.6**	**-1.1**
	comp=Z,44nm,1.0s,baz=164,slow=5.4,SNR=93						
SONM				LR	LR	11 47 45.5	
	comp=Z,2µm,19.0s,baz=180,slow=39						
SONA1	**Songino Array**	**59.21**	**344**	*e*P	**P**	**11 19 18.2**	**-1.5**
GRNR	**Gornyy**	**59.63**	**7**	*e*P	**P**	**11 19 21.9**	**-0.5**
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
TYV	**Tymovskoe**	**60.66**	**11**	*e*P	**P**	**11 19 28.8**	**-0.7**
TYV				*e*S	**S**	**11 27 45.0**	**+1.4**
TYV				pmax	pmax		
	comp=Z,700nm,4.3s						
TYV				pmax	pmax		
	comp=Z,19nm,0.9s						
TYV				smax	smax		
	comp=E,400nm,6.6s						
ZEA	**Zeya**	**62.09**	**360**	*e*P	**P**	**11 19 39.0**	**-0.1**
ZEA				*e*S	S	11 27 52.0	-10
ZEA				pmax	pmax		
	comp=Z,100nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,800nm,9.0s						
ZEA				smax	smax		
	comp=E,1µm,17.0s						
ZEA				smax	smax		
	comp=N,1µm,16.0s						
ZAK	**Zakamensk**	**62.38**	**343**	*e*P	**P**	**11 19 40.0**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,22nm,1.0s						
PAF	**Port-aux-Franc**	**62.46**	**218**	PFAKE		11 19 50.0	+8.3
PAF				LR	LR		
	comp=Z,3µm,20.0s						
NKL	**Nikolayevsk**	**62.53**	**9**	*e*P	**P**	**11 19 41.0**	**-1.0**
NKL				*e*		11 28 05.0	
NKL				pmax	pmax		
	comp=Z,51nm,1.2s						
NKL				pmax	pmax		
	comp=Z,1µm,12.0s						
NKL				MLR	MLR		
	comp=Z,1µm,17.0s						
WMQ	**Urumqi**	**63.39**	**329**	⇑*i*P	**P**	**11 19 46.8**	**-1.3**
WMQ				pP	sP	11 19 59.4	-2.5
WMQ				sP	pP	11 20 07.4	+8.8
WMQ				PP	**PP**	**11 22 07.8**	**-0.1**
WMQ				S	**S**	**11 28 12.3**	**-6.2**
WMQ				SS	**SS**	**11 32 22.5**	**-3.5**
WMQ				pmax	pmax		
	comp=Z,89nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,2µm,5.1s						
WMQ				LR	LR		
	comp=Z,5µm,21.1s						
WMQ				LR	LR		
	comp=Z,6µm,23.1s						
WMQ				LR	LR		
	comp=Z,4µm,28.7s						
WMQ	**Urumqi**	**63.39**	**329**	*e*P	**P**	**11 19 47.3**	**-0.8**
	comp=Z,64nm,1.0s						
WMQ				LR	LR		
	comp=Z,3µm,21.0s						
WMQ	**Urumqi**	**63.39**	**329**	*e*P	**P**	**11 19 47.3**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,64nm,1.0s						
WMQ				MLR	MLR		
	comp=Z,3µm,21.0s						
TLY	**Talaya**	**63.44**	**344**	PFAKE		11 20 00.0	+12
TLY				LR	LR		
	comp=Z,2µm,19.0s						
TLY	**Talaya**	**63.44**	**344**	*c i*P	**P**	**11 19 47.5**	**-0.6**
TLY				*e*		11 20 21.8	
TLY				*e*		11 22 02.5	
TLY				*e*S	**S**	**11 28 17.9**	**-0.8**
TLY				pmax	pmax		
	comp=Z,111nm,1.9s						
TLY	**Talaya**	**63.44**	**344**	P	**P**	**11 19 47.6**	**-0.5**
	SNR=11						
TLY				P	**P**	**11 19 47.6**	**-0.5**
	SNR=11						
IRK	**Irkutsk**	**63.77**	**344**	*e*P	P	11 19 41.7	-8.6
IRK				*e*		11 28 26.4	
IRK				pmax	pmax		
	comp=Z,148nm,2.7s						
SKR	**Severo-Kuril’s**	**64.06**	**20**	*e*P	P	11 19 45.1	-7.1
SKR				*e*		11 22 13.5	
SKR				*e*S	**S**	**11 28 24.1**	**-2.2**
SKR				pmax	pmax		
	comp=Z,1µm,4.4s						
SKR				pmax	pmax		
	comp=Z,400nm,4.2s						
SKR				MLR	MLR		
	comp=Z,2µm,21.0s						
MOY	**Mondy**	**64.20**	**342**	*e*P	**P**	**11 19 52.5**	**-0.8**
MOY				pmax	pmax		
	comp=Z,135nm,2.2s						
KNGR	**Kungurtug, Tuv**	**64.43**	**339**	*i* P	**P**	**11 19 53.3**	**-1.5**
NIL	**Nilore**	**66.38**	**312**	*e*P	**P**	**11 20 06.3**	**-1.4**
	comp=Z,47nm,1.0s						
NIL				LR	LR		
	comp=Z,2µm,22.0s						
NIL	**Nilore**	**66.38**	**312**	*e*P	**P**	**11 20 06.3**	**-1.4**
NIL				pmax	pmax		
	comp=Z,47nm,1.0s						
NIL				MLR	MLR		
	comp=Z,2µm,22.0s						
PEA0B	**Petropavlovsk-**	**66.64**	**19**	*e*P	**P**	**11 20 08.2**	**-0.7**
	comp=Z,61nm,1.0s						
PEA0B				LR	LR		
	comp=Z,2µm,21.0s						
PETK	**Petropavlovsk-**	**66.64**	**19**	P	**P**	**11 20 08.0**	**-0.8**
	comp=Z,17nm,0.8s,baz=188,slow=6.1,SNR=40						
PETK				LR	LR	11 44 35.8	
	comp=Z,2µm,21.9s,baz=208,slow=32						
PEA1	**Petropavlovsk-**	**66.64**	**19**	*e*P	**P**	**11 20 08.0**	**-0.9**
PET	**Petropavlovsk**	**66.88**	**20**	*e*P	**P**	**11 20 10.0**	**-0.4**
	comp=Z,71nm,1.2s						
PET	**Petropavlovsk**	**66.88**	**20**	*e*P	**P**	**11 20 09.5**	**-0.9**
PET				*e*		11 22 39.6	
PET				*e*S	**S**	**11 28 56.3**	**-4.4**
PET				*e*SS	**SS**	**11 33 16.3**	**-3.4**
PET				pmax	pmax		
	comp=Z,600nm,13.4s						
PET				pmax	pmax		
	comp=Z,58nm,1.3s						
PET				pmax	pmax		
	comp=Z,700nm,14.5s						
PET				MLR	MLR		
	comp=Z,1µm,15.0s						
PET				MLR	MLR		
	comp=Z,2µm,18.0s						
BOD	**Bodaibo**	**67.09**	**352**	*e*P	**P**	**11 20 10.3**	**-1.3**
BOD				*e*		11 29 03.7	
BOD				pmax	pmax		
	comp=Z,60nm,1.4s						
SHLS	**Shalkode**	**67.47**	**324**	*ce*P	**P**	**11 20 10.9**	**-3.6**
SHLS				*i* S	**S**	**11 29 03.9**	**-4.6**
SHLS				pmax	pmax		
	comp=Z,569nm,1.4s						
SHLS				smax	smax		
	comp=N,464nm,3.8s						
SHLS				MLR	MLR		
	comp=Z,368nm,17.0s						
SHLS	**Shalkode**	**67.47**	**324**	⇑*e*P	**P**	**11 20 11.0**	**-3.6**
	comp=Z,569nm,1.4s						
SHLS				⇓*i*S	**S**	**11 29 04.0**	**-4.6**
	comp=Z,464nm,3.8s						
SHLS				*e*LR	LR	11 49 20.9	
	comp=Z,368nm,16.7s						
KSH	**Kashi**	**67.52**	**319**	P	**P**	**11 20 14.5**	**-0.4**
KSH				pP	sP	11 20 27.3	-1.6
KSH				PP	**PP**	**11 22 47.4**	**+3.2**
KSH				S	**S**	**11 29 04.4**	**-4.9**
KSH				sS	sS	11 29 27.5	+1.6
KSH				SS	**SS**	**11 33 32.4**	**+1.9**
KSH				pmax	pmax		
	comp=Z,150nm,0.9s						
KSH				LR	LR		
	comp=Z,2µm,15.1s						
KSH				LR	LR		
	comp=Z,1µm,11.2s						
KSH				LR	LR		
	comp=Z,6µm,19.2s						
TARG	**Taragay, Kyrgy**	**67.61**	**322**	*e*P	**P**	**11 20 14.9**	**-0.9**
	comp=Z,57nm,0.9s						
TARG				LR	LR		
	comp=Z,2µm,18.0s						
PRZ	**Przheval'sk**	**67.69**	**323**	*e*P	**P**	**11 20 15.4**	**-0.7**
	comp=Z,115nm,1.1s						
PRZ				LR	LR		
	comp=Z,3µm,22.0s						
PRZ	**Przheval'sk**	**67.69**	**323**	*e*P	**P**	**11 20 15.4**	**-0.7**
PRZ				pmax	pmax		
	comp=Z,115nm,1.1s						
PRZ				MLR	MLR		
	comp=Z,3µm,22.0s						
UZB	**Uzynbulak**	**67.72**	**324**	*c i*P	**P**	**11 20 14.0**	**-2.1**
UZB				*i* S	**S**	**11 29 08.7**	**-2.9**
UZB				pmax	pmax		
	comp=Z,645nm,1.3s						
UZB				smax	smax		
	comp=E,215nm,2.4s						
UZB	**Uzynbulak**	**67.72**	**324**	⇑*i*P	**P**	**11 20 14.0**	**-2.1**
	comp=E,645nm,1.3s						
UZB				⇑*i*S	**S**	**11 29 08.7**	**-2.9**
	comp=E,215nm,2.4s						
UZB				*e*LR	LR	11 50 50.3	
	comp=E,578nm,18.4s						
DGZ	**Jazzator, Alta**	**67.74**	**333**	*c i*P	**P**	**11 20 14.6**	**-1.5**
DGZ				pmax	pmax		
	comp=Z,21nm,1.1s						
SATY	**Saty**	**68.03**	**323**	*c i*P	**P**	**11 20 16.1**	**-2.0**
SATY				*i* S	**S**	**11 29 13.3**	**-1.9**
SATY				smax	smax		
	comp=E,600nm,3.4s						
SATY	**Saty**	**68.03**	**323**	⇑*i*P	**P**	**11 20 16.1**	**-2.0**

	comp=E,2µm,1.1s						
SATY				⇑iS	S	11 29 13.4	-1.9
	comp=E,600nm,3.4s						
ZHN	**Zhinishke**	68.08	323	c iP	P	11 20 16.0	-2.4
ZHN				pmax	pmax		
	comp=Z,466nm,1.0s						
ZHN	**Zhinishke**	68.08	323	⇑iP	P	11 20 16.0	-2.4
	comp=Z,466nm,1.0s						
MK01	**Makanchi Array**	68.19	328	eP	P	11 20 17.5	-1.4
MK31	**Makanchi Array**	68.21	328	eP	P	11 20 17.9	-1.1
	comp=Z,85nm,1.2s						
MK31	**Makanchi Array**	68.21	328	P	P	11 20 17.6	-1.4
MK31				pmax	pmax		
	comp=Z,119nm,1.3s						
MK32	**Makanchi Array**	68.21	328	eP	P	11 20 17.8	-1.2
MKAR	**Makanchi Array**	68.21	328	eP	P	11 20 17.9	-1.1
	comp=Z,276nm,0.8s						
MKAR	**Makanchi Array**	68.21	328	P	P	11 20 17.8	-1.2
	comp=Z,38nm,0.8s,baz=126,slow=6.6,SNR=65						
MKAR				LR	LR	11 51 20.8	
	comp=Z,3µm,20.0s,baz=138,slow=37						
KDJ	**Kajisay**	68.22	322	eP	P	11 20 18.6	-0.8
	comp=Z,60nm,1.0s						
KDJ				LR	LR		
	comp=Z,4µm,22.0s						
KDJ	**Kajisay**	68.22	322	eP	P	11 20 18.6	-0.8
KDJ				pmax	pmax		
	comp=Z,60nm,1.0s						
KDJ				MLR	MLR		
	comp=Z,4µm,22.0s						
MRIV	**Mauritius Mete**	68.32	252	eP	P	11 20 22.4	+2.1
	comp=Z,102nm,1.1s						
MAKZ	**Makanchi**	68.38	328	eP	P	11 20 18.7	-1.4
	comp=Z,89nm,1.3s						
MAKZ				LR	LR		
	comp=Z,3µm,20.0s						
MAKZ	**Makanchi**	68.38	328	eP	P	11 20 18.7	-1.4
MAKZ				pmax	pmax		
	comp=Z,89nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,3µm,20.0s						
NRN	**Naryn**	68.56	321	eP	P	11 20 20.3	-1.4
	comp=Z,44nm,1.0s						
NRN	**Naryn**	68.56	321	eP	P	11 20 20.3	-1.4
NRN				pmax	pmax		
	comp=Z,44nm,1.0s						
TNSS	**Tian-Shan**	68.89	323	eP	P	11 20 22.4	-1.4
TNSS	**Tian-Shan**	68.89	323	eP	P	11 20 22.5	-1.4
	comp=Z,784nm,1.0s						
MDOK	**Medeo**	68.90	323	eP	P	11 20 22.4	-1.1
MDOK				iS	S	11 29 23.2	-2.4
MDOK				pmax	pmax		
	comp=Z,436nm,1.3s						
MDOK				smax	smax		
	comp=E,759nm,6.2s						
MDOK				MLR	MLR		
	comp=Z,774nm,21.0s						
MDOK	**Medeo**	68.90	323	eP	P	11 20 22.4	-1.1
	comp=Z,436nm,1.3s						
MDOK				⇓iS	S	11 29 23.2	-2.4
	comp=Z,759nm,6.2s						
MDOK				eLR	LR	11 53 33.6	
	comp=Z,774nm,21.2s						
AAA	**Alma-Ata**	69.00	323	eP	P	11 20 23.3	-0.8
AAA				iS	S	11 29 25.0	-1.7
AAA				pmax	pmax		
	comp=Z,276nm,1.2s						
AAA				smax	smax		
	comp=E,625nm,3.2s						
AAA				MLR	MLR		
	comp=Z,303nm,22.0s						
AAA	**Alma-Ata**	69.00	323	eP	P	11 20 23.4	-0.8
	comp=Z,276nm,1.2s						
AAA				⇑iS	S	11 29 25.0	-1.7
	comp=Z,625nm,3.2s						
AAA				eLR	LR	11 51 42.7	
	comp=Z,303nm,22.0s						
TDK	**Taldyqorghan**	69.19	325	ceP	P	11 20 23.9	-1.2
TDK				iS	S	11 29 26.0	-2.7
TDK				smax	smax		
	comp=N,1µm,3.2s						
TDK				MLR	MLR		
	comp=Z,2µm,24.0s						
TDK	**Taldyqorghan**	69.19	325	⇑eP	P	11 20 23.9	-1.2
	comp=Z,1µm,1.2s						
TDK				⇑iS	S	11 29 26.0	-2.7
	comp=Z,1µm,3.2s						
TDK				eLR	LR	11 50 49.1	
	comp=Z,2µm,24.1s						
CHKK	**Chushkaly**	69.33	323	⇓iP	P	11 20 24.0	-2.0
CHKK				iS	S	11 29 26.9	-3.6
CHKK				pmax	pmax		
	comp=Z,377nm,0.9s						
CHKK				smax	smax		
	comp=E,387nm,3.8s						
CHKK	**Chushkaly**	69.33	323	⇓iP	P	11 20 24.0	-2.0
	comp=E,377nm,0.9s						
CHKK				⇓iS	S	11 29 26.9	-3.6
	comp=E,387nm,3.8s						
KZA	**Kyzart**	69.38	321	P	P	11 20 26.5	-0.4
	SNR=35						
TKM2	**Tokmak 2**	69.64	322	P	P	11 20 27.9	-0.3
	SNR=13						
KUU	**Kurty**	69.74	323	ceP	P	11 20 26.6	-1.9
KUU				iS	S	11 29 32.7	-2.5
KUU				smax	smax		
	comp=N,304nm,4.4s						
KUU				MLR	MLR		
	comp=Z,399nm,21.0s						
KUU	**Kurty**	69.74	323	⇑eP	P	11 20 26.7	-1.9
	comp=Z,1µm,1.0s						
KUU				⇓iS	S	11 29 32.8	-2.5
	comp=Z,304nm,4.4s						
KUU				eLR	LR	11 53 18.6	
	comp=Z,399nm,21.1s						
KBL	**Kabul**	69.89	312	eP	P	11 20 28.5	-1.4
	comp=Z,39nm,0.9s						
KBL				LR	LR		
	comp=Z,2µm,21.0s						
KBL	**Kabul**	69.89	312	eP	P	11 20 28.5	-1.4
KBL				pmax	pmax		
	comp=Z,39nm,0.9s						
KBL				MLR	MLR		
	comp=Z,2µm,21.0s						
KBK	**Karagaybulak**	69.89	321	P	P	11 20 29.3	-0.4
	SNR=14						
UCH	**Uchtor**	69.92	321	P	P	11 20 30.0	-0.3
	SNR=44						
AAK	**Ala-Archa**	70.16	321	P	P	11 20 31.0	-0.4
	SNR=28						
AAK	**Ala-Archa**	70.16	321	PFAKE		11 20 40.0	+8.7
AAK				LR	LR		
	comp=Z,2µm,22.0s						
AAK	**Ala-Archa**	70.16	321	iP	P	11 20 30.4	-0.9
	SNR=31						
AAK	**Ala-Archa**	70.16	321	P	P	11 20 30.7	-0.6
AAK				pmax	pmax		
	comp=Z,99nm,1.1s						
AAK	**Ala-Archa**	70.16	321	P	P	11 20 31.2	-0.2
	SNR=27						
AAK				P	P	11 20 31.2	-0.2
	SNR=27						
FRU1	**Bishkek**	70.17	321	PFAKE		11 20 40.0	+8.7
FRU1				LR	LR		
	comp=Z,2µm,21.0s						
FRU	**Bishkek**	70.19	321	⇑iP	P	11 20 29.5	-1.9
FRU				i		11 20 51.0	
FRU				eS	S	11 29 39.5	-1.1
FRU				pmax	pmax		
	comp=Z,360nm,2.8s						
CHMS	**Chumysh**	70.20	322	P	P	11 20 30.9	-0.6
	SNR=9.6						
AML	**Almayashu**	70.39	320	P	P	11 20 32.5	-0.6
	SNR=60						
ARSB	**Arslanbob**	70.41	319	eP	P	11 20 31.4	-1.5
	comp=Z,136nm,1.1s						
YAK	**Yakutsk**	70.43	1	eP	P	11 20 31.7	-0.6
YAK				e*PP	pP	11 20 43.1	+0.3
YAK				e		11 20 56.4	
YAK				e		11 23 05.3	
YAK				ePPP	PPP	11 24 50.6	
YAK				eS	S	11 29 42.0	-0.5
YAK				e*SS	sS	11 30 01.6	+2.3
YAK				e		11 30 29.8	
YAK				pmax	pmax		
	comp=Z,239nm,0.8s						
YAK				pmax	pmax		
	comp=N,93nm,1.0s						
YAK				pmax	pmax		
	comp=E,12nm,0.7s						
YAK				pmax	pmax		
	comp=Z,225nm,2.7s						
YAK				pmax	pmax		
	comp=N,298nm,2.0s						
YAK				pmax	pmax		
	comp=E,164nm,2.0s						
YAK				smax	smax		
	comp=N,426nm,2.0s						
YAK				smax	smax		
	comp=E,360nm,1.6s						
MA2	**Magadan**	70.47	12	eP	P	11 20 31.5	-1.1
	comp=E,44nm,1.1s						
MA2	**Magadan**	70.47	12	ceP	P	11 20 30.8	-1.8
MA2				pmax	pmax		
	comp=Z,29nm,1.3s						
MA2	**Magadan**	70.47	12	LR	LR	11 50 45.8	
	comp=Z,979nm,19.6s,baz=196,slow=35						
USP	**Ospenovka**	70.50	322	P	P	11 20 32.6	-0.7
	SNR=28						
EKS2	**Erkin-Say**	70.62	321	P	P	11 20 33.6	-0.5
	SNR=41						
GAR	**Garm**	71.03	316	eP	P	11 20 34.9	-1.8
	comp=Z,119nm,1.0s						
GAR				LR	LR		
	comp=Z,6µm,22.0s						
GAR	**Garm**	71.03	316	eP	P	11 20 34.9	-1.8
GAR				pmax	pmax		
	comp=Z,119nm,1.0s						
GAR				MLR	MLR		
	comp=Z,6µm,22.0s						
VNDA	**Vanda**	71.19	173	eP	P	11 20 37.9	+1.1
	comp=Z,53nm,1.2s						
VNDA	**Vanda**	71.19	173	eP	P	11 20 37.9	+1.1
VNDA				pmax	pmax		
	comp=Z,53nm,1.2s						
VNDA	**Vanda**	71.19	173	P	P	11 20 38.9	+2.0
	comp=Z,9.0nm,0.9s,baz=332,slow=6.4,SNR=16						
VNDA				LR	LR	11 51 02.7	
	comp=Z,5µm,19.4s,baz=346,slow=35						
SEM	**Semipalatinsk**	71.59	330	d iP	P	11 20 36.5	-3.4
SEM				eS	S	11 29 51.0	-5.9
SEM				pmax	pmax		
	comp=Z,258nm,1.3s						
SEM				smax	smax		
	comp=E,641nm,6.2s						
SEM				MLR	MLR		
	comp=Z,813nm,24.0s						
SEM	**Semipalatinsk**	71.59	330	⇓iP	P	11 20 36.6	-3.4
	comp=Z,258nm,1.3s						
SEM				⇑eS	S	11 29 51.1	-5.9
	comp=Z,641nm,6.2s						
SEM				eLR	LR	11 55 32.3	
	comp=Z,813nm,23.8s						
CHGR	**Chuyangaron**	71.66	315	eP	P	11 20 38.9	-1.6
	comp=Z,285nm,1.5s						
CHGR				LR	LR		
	comp=Z,4µm,19.0s						
BTLS	**Baital**	71.74	323	ceP	P	11 20 38.1	-2.6
BTLS				eS	S	11 29 56.8	-1.6
BTLS				pmax	pmax		
	comp=Z,479nm,1.4s						
BTLS				smax	smax		
	comp=E,146nm,6.5s						
BTLS	**Baital**	71.74	323	⇑eP	P	11 20 38.2	-2.6
	comp=E,479nm,1.4s						
BTLS				eS	S	11 29 56.9	-1.6
	comp=E,146nm,6.5s						
BTLS				eLR	LR	11 54 28.2	
	comp=E,697nm,22.9s						
ZAA0	**Zalesovo Array**	71.92	335	eP	P	11 20 39.5	-2.0
	comp=E,64nm,0.8s						
ZAA0				LR	LR		
	comp=Z,2µm,20.0s						
ZALV	**Zalesovo Beam**	71.92	335	P	P	11 20 39.5	-2.1
	comp=Z,49nm,0.7s,baz=129,slow=4.0,SNR=95						
ZALV				PKPPKP	P'P'df	11 48 31.3	+2.5
	comp=Z,0.3nm,0.2s,baz=320,slow=3.9,SNR=4.0						
ZAA1	**Zalesovo Array**	71.92	335	eP	P	11 20 39.5	-2.1
SBA	**Scott Base**	72.11	172	PFAKE		11 20 50.0	+7.6
SBA				LR	LR		
	comp=Z,7µm,19.0s						
MAW	**Mawson**	72.55	201	eP	P	11 20 45.6	+0.5
	comp=Z,39nm,1.4s						
MAW				LR	LR		
	comp=Z,900nm,20.0s						
MAW	**Mawson**	72.55	201	eP	P	11 20 45.7	+0.5
MAW				pmax	pmax		
	comp=Z,39nm,1.4s						
MAW				MLR	MLR		
	comp=Z,900nm,20.0s						
MAW	**Mawson**	72.55	201	P	P	11 20 47.4	+2.3
	comp=Z,7.9nm,0.5s,baz=10,slow=7.1,SNR=2.0						
MAW				LR	LR	11 50 49.3	
	comp=Z,4µm,19.7s,baz=58,slow=34						
KURK	**Kurchatov**	72.59	330	eP	P	11 20 43.9	-1.7
	comp=Z,286nm,1.4s						
KURK				LR	LR		
	comp=Z,3µm,20.0s						
KURK	**Kurchatov**	72.59	330	ceP	P	11 20 44.7	-0.9
KURK				pmax	pmax		
	comp=Z,198nm,1.3s						
KURK	**Kurchatov**	72.59	330	P	P	11 20 44.6	-0.9
	SNR=59						
KURK				P	P	11 20 44.6	-0.9
	SNR=59						
IUG	**Iuzhnay**	72.74	319	c iP	P	11 20 44.5	-2.3
IUG				pmax	pmax		
	comp=Z,930nm,1.3s						
IUG	**Iuzhnay**	72.74	319	⇑iP	P	11 20 44.6	-2.3
	comp=Z,930nm,1.3s						
IUG				eLR	LR	11 55 35.3	
	comp=Z,1µm,20.0s						
KK31	**Karatay Array**	72.90	320	eP	P	11 20 46.2	-1.5
KK31	**Karatay Array**	72.90	320	iP	P	11 20 46.0	-1.7
KK31				pmax	pmax		
	comp=Z,44nm,1.2s						
KKAR	**Karatay Array**	72.90	320	eP	P	11 20 46.3	-1.4
KKAR	**Karatay Array**	72.90	320	eP	P	11 20 46.3	-1.4
NVS	**Novosibirsk**	73.21	335	⇑iP	P	11 20 47.5	-1.7
NVS				eS	S	11 30 10.6	-4.2
NVS				pmax	pmax		
	comp=N,83nm,1.7s						
NVS				pmax	pmax		
	comp=E,90nm,1.7s						
NVS				pmax	pmax		
	comp=Z,169nm,1.7s						
NVS				smax	smax		
	comp=N,30nm,2.0s						
NVS				smax	smax		
	comp=E,54nm,2.0s						
SEY	**Seymchan**	73.85	12	ceP	P	11 20 51.6	-1.2
MHTO	**MHTO**	74.27	295	P	P	11 20 57.0	+0.8
	SNR=7.2						
MHTO				P	P	11 20 57.0	+0.8
	SNR=7.2						
WSAR	**Wadi Sarin**	74.31	297	LR	LR	11 53 33.7	
	comp=E,5µm,20.9s,baz=138,slow=36						
BIDO	**Bidbid**	74.83	297	P	P	11 21 01.0	+1.6
	SNR=8.4						
BIDO				P	P	11 21 01.0	+1.6
	SNR=8.4						
DMTO	**DMTO**	76.20	291	P	P	11 21 08.5	+1.1
	SNR=8.5						
DMTO				P	P	11 21 08.5	+1.1
	SNR=8.5						
SOHO	**SOHO**	76.41	297	P	P	11 21 09.0	+0.7
	SNR=16						
SOHO				P	P	11 21 09.0	+0.7
	SNR=16						
HATD	**Hatta, Dubai**	76.95	298	iP	P	11 21 10.5	-1.0
	SNR=7.3						
ASHO	**Ashiyiah**	76.97	298	iP	P	11 21 10.6	-1.0
	SNR=16						
ASHO	**Ashiyiah**	76.97	298	P	P	11 21 12.7	+1.1
	SNR=10.0						
ASHO				P	P	11 21 12.7	+1.1
	SNR=10.0						
MSFE	**Esma-Masafi**	77.07	298	iP	P	11 21 11.0	-1.2
	SNR=13						
ALNE	**Al Ain**	77.07	297	P	P	11 21 10.9	-1.2
SHME	**Shamm**	77.28	299	iP	P	11 21 12.6	-0.7
	SNR=8.1						
WHFO	**Wadi Hawf**	77.34	291	P	P	11 21 16.0	+2.2
	SNR=6.2						
FAQ	**Al Faqa, Dubai**	77.40	298	iP	P	11 21 13.1	-0.9
	SNR=12						
NAZ	**Nazwa, Dubai**	77.40	298	P	P	11 21 15.4	+1.5
BVA0	**Borovoye Array**	78.08	329	iP	P	11 21 15.6	-1.6
BVA0				pmax	pmax		
	comp=Z,128nm,1.2s						
BRVK	**Borovoye**	78.16	329	eP	P	11 21 15.9	-1.7
	comp=Z,99nm,0.9s						
BRVK				LR	LR		
	comp=Z,2µm,21.0s						
BRVK	**Borovoye**	78.16	329	eP	P	11 21 15.9	-1.7
BRVK				pmax	pmax		
	comp=Z,99nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,2µm,21.0s						
BRVK	**Borovoye**	78.16	329	P	P	11 21 16.7	-0.9
	SNR=54						
BRVK				P	P	11 21 16.7	-0.9
	SNR=54						
GEYT	**Alibeck**	79.33	311	P	P	11 21 23.1	-1.3
	comp=Z,39nm,1.1s,baz=151,slow=3.4,SNR=21						
GEYT				LR	LR	12 04 05.5	
	comp=Z,2µm,18.8s,baz=90,slow=42						
GYA0B	**ALIBECK ARRAY**	79.33	311	eP	P	11 21 23.2	-1.2
	comp=Z,79nm,1.3s						
GYA0B				LR	LR		
	comp=Z,2µm,21.0s						
TBI	**Tubuai**	80.34	112	eS	S	11 31 40.9	+6.9
	comp=Z,2µm,28.0s						
TBI	**Tubuai**	80.34	112	eLQ	LQ	11 43 22.3	
	comp=Z,3µm,33.2s						
TBI				eLR	LR	11 46 49.2	
	comp=Z,4µm,25.2s						
PAE	**Paea**	80.78	107	eP	P	11 21 38.1	+5.5
	comp=Z,11nm,0.9s						
PPT2	**Papeete2**	80.80	106	eP	P	11 21 38.4	+5.6
	comp=Z,109nm,1.1s						
PPT2	**Papeete2**	80.80	106	eS	S	11 31 46.2	+7.1
	comp=Z,2µm,26.5s						
PPT2	**Papeete2**	80.80	106	eLQ	LQ	11 43 33.3	
	comp=Z,6µm,32.8s						
PPT2				eLR	LR	11 47 02.2	
	comp=Z,4µm,23.2s						
PPT	**Papeete**	80.80	106	P	P	11 21 34.0	+1.2
	comp=Z,23nm,0.9s,baz=270,slow=20,SNR=1.9						
PPT				LR	LR	11 54 23.6	
	comp=Z,1µm,21.6s,baz=262,slow=33						
KKO	**Keanakako`i**	81.00	69	PFAKE		11 21 40.0	+6.1
KKO				LR	LR		
	comp=Z,4µm,20.0s						
SBLHI	**Steaming Bluff**	81.00	69	PFAKE		11 21 40.0	+6.1
SBLHI				LR	LR		
	comp=Z,4µm,20.0s						
BYL	**Byron's Ledge**	81.01	69	PFAKE		11 21 40.0	+6.1
BYL				LR	LR		
	comp=Z,3µm,20.0s						
TIAR	**Tiarei**	81.02	106	eP	P	11 21 39.2	+5.3
	comp=Z,31nm,1.1s						
TVO	**Taravao**	81.08	107	eP	P	11 21 39.5	+5.2
	comp=Z,64nm,1.5s						
JCUZ	**Jacuzzi**	81.15	69	PFAKE		11 21 50.0	+15
JCUZ				LR	LR		
	comp=Z,3µm,19.0s						
BILL	**Bilibino**	81.24	14	eP	P	11 21 33.8	-0.2
	comp=Z,13nm,1.0s						
BILL				LR	LR		
	comp=Z,2µm,21.0s						
BILL	**Bilibino**	81.24	14	⇓eP	P	11 21 32.9	-1.1
BILL				e		11 24 34.6	
BILL				ePPP	PPP	11 26 28.2	
BILL				pmax	pmax		
	comp=Z,17nm,1.4s						
BILL				MLR	MLR		
	comp=Z,2µm,20.0s						
SYO	**Syowa Base**	81.27	201	⇑eP	P	11 21 34.8	+0.6
SYO	**Syowa Base**	81.27	201	⇓iPcP	PcP	11 21 38.0	-2.3
SYO	**Syowa Base**	81.27	201	⇑ipP	pP	11 21 46.0	+1.4
QSPA	**South Pole Qui**	81.39	180	eP	P	11 21 36.0	+0.8
	comp=Z,65nm,0.9s						
QSPA				LR	LR		
	comp=Z,7µm,18.0s						
AB31	**Akbulak array**	82.20	322	P	P	11 21 37.6	-1.8
AB31				pmax	pmax		
	comp=Z,32nm,0.9s						
ABKAR	**Akbulak array**	82.20	322	eP	P	11 21 37.7	-1.7
	comp=Z,38nm,0.9s						
NRIK	**Noril'sk**	82.50	347	P	P	11 21 39.9	-0.7
	comp=Z,43nm,0.9s,baz=134,slow=5.0,SNR=33						
NRIK				LR	LR	12 02 55.0	
	comp=Z,2µm,19.2s,baz=151,slow=39						
PMOR	**Pomariorio Ree**	82.69	104	eP	P	11 21 47.9	+5.2
	comp=Z,163nm,1.3s						
AKTO	**Aktyubinsk**	83.80	323	P	P	11 21 45.9	-1.8
AKTO				pmax	pmax		
	comp=Z,94nm,1.2s						
SVE	**Sverdlovsk**	84.83	330	d iP	P	11 21 51.5	-1.3
SVE				eS	S	11 32 11.4	-7.1
SVE				e		11 37 56.2	
SVE				pmax	pmax		
	comp=Z,153nm,1.4s						
GAMB	**Gambell**	85.35	23	eP	P	11 21 54.5	-0.7
	comp=Z,65nm,1.1s						
GAMB				LR	LR		
	comp=Z,700nm,18.0s						
DAMY	**Dhamar**	85.49	285	PFAKE		11 22 10.0	+13
DAMY				LR	LR		
	comp=Z,3µm,20.0s						
ARU	**Arti**	85.73	329	eP	P	11 21 55.8	-1.5
	comp=Z,155nm,1.2s						
ARU	**Arti**	85.73	329	c iP	P	11 21 56.0	-1.3
ARU				*PP	pP	11 22 04.8	-3.0
ARU						11 25 13.9	
ARU				PPP	PPP	11 27 05.3	
ARU				S	S	11 32 17.6	-10
ARU				SS	SS	11 38 09.3	+4.6
ARU				pmax	pmax		
	comp=Z,145nm,1.2s						
RAYN	**Ar Rayn**	86.09	294	eP	P	11 21 58.8	-1.1
	comp=Z,52nm,1.1s						
RAYN				LR	LR		
	comp=Z,5µm,22.0s						
RAYN	**Ar Rayn**	86.09	294	iP	P	11 21 59.3	-0.6
	SNR=7.3						
RAYN	**Ar Rayn**	86.09	294	eP	P	11 21 58.8	-1.1
RAYN				pmax	pmax		
	comp=Z,52nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,5µm,22.0s						
ATD	**Arta Tunnel**	86.46	282	PFAKE		11 22 10.0	+8.1
ATD				LR	LR		
	comp=Z,2µm,21.0s						
ATD	**Arta Tunnel**	86.46	282	LR	LR	11 57 30.6	
	comp=Z,2µm,21.0s,baz=98,slow=34						
ANM	**Nome**	88.18	23	eP	P	11 22 07.8	-1.2
	comp=Z,23nm,1.4s						
ANM	**Nome**	88.18	23	eP	P	11 22 07.8	-1.2
ANM				pmax	pmax		
	comp=Z,23nm,1.4s						
GROC	**Groznyy**	89.79	314	iP	P	11 22 14.9	-2.2
GROC				e		11 25 47.9	
GROC				eS	SKSac	11 32 42.5	-2.8
GROC				pmax	pmax		
	comp=Z,54nm,1.1s						
GNI	**Garni**	89.95	311	PFAKE		11 22 30.0	+12
GNI				LR	LR		
	comp=Z,2µm,22.0s						
GNI	**Garni**	89.95	311	iP	P	11 22 14.6	-3.5
GNI				pmax	pmax		
	comp=Z,24nm,1.0s						
KMBO	**Kilima Mbogo**	90.03	269	eP	P	11 22 19.1	0.0
	comp=Z,65nm,1.4s						
KMBO				LR	LR		
	comp=Z,2µm,22.0s						
KMBO	**Kilima Mbogo**	90.03	269	P	P	11 22 21.5	+2.3
KMBO	**Kilima Mbogo**	90.03	269	P	P	11 22 21.5	+2.3
	SNR=21						
KMBO				P	P	11 22 21.5	+2.3
	SNR=21						
KMBO	**Kilima Mbogo**	90.03	269	P	P	11 22 19.9	+0.7
	comp=Z,3.4nm,0.5s,baz=102,slow=5.4,SNR=17						
KMBO				LR	LR	12 01 18.9	
	comp=Z,623nm,19.1s,baz=97,slow=35						
NVL	**N'lazarevskaya**	90.09	197	eP	P	11 22 25.6	+7.6
NVL				eS	SKSac	11 32 45.7	-0.4
NVL				pmax	pmax		
	comp=Z,15nm,1.0s						

FURI	**Furi**	90.11	279	PFAKE		11 22 30.0	+10
FURI				LR	LR		
	comp=Z,4µm,20.0s						
TBLG	**Delisi**	90.26	312	*e*P	P	11 22 18.1	-1.3
	comp=Z,76nm,1.5s						
TBLG	**Delisi**	90.26	312	*e*P	P	11 22 18.1	-1.3
TBLG				pmax	pmax		
	comp=Z,76nm,1.5s						
RDOG	**Red Dog Mine**	90.47	21	*e*P	P	11 22 18.5	-1.3
	comp=Z,97nm,1.5s						
TAOE	**Nuku Hiva Isla**	91.05	99	*e*S	S	11 33 23.8	+4.1
	comp=Z,908nm,28.3s						
TAOE	**Nuku Hiva Isla**	91.05	99	*e*LR	LR	11 51 50.6	
	comp=Z,2µm,21.2s						
ZEI	**Tsey**	91.07	313	*e*P	P	11 22 21.5	-1.8
ZEI				pmax	pmax		
	comp=Z,19nm,1.0s						
NCK	**Nalchik**	91.42	314	*i* P	P	11 22 23.3	-1.4
NCK				pmax	pmax		
	comp=Z,21nm,1.1s						
KBZ	**Khabaz**	91.96	314	P	P	11 22 27.5	+0.4
	comp=Z,9.7nm,1.1s,baz=272,slow=1.3,SNR=7.6						
KBZ				LR	LR	12 10 43.2	
	comp=Z,740nm,20.9s,baz=96,slow=40						
NEY	**Neytrino**	92.00	313	*i* P	P	11 22 25.7	-1.9
NEY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GOF	**Gofitskoye**	92.09	315	*e*P	P	11 22 26.4	-1.3
GOF				pmax	pmax		
	comp=Z,30nm,0.9s						
KIV	**Kislovodsk**	92.15	314	PFAKE		11 22 40.0	+12
KIV				LR	LR		
	comp=Z,700nm,20.0s						
KIV	**Kislovodsk**	92.15	314	*e*P	P	11 22 26.6	-1.6
KIV				*e*		11 32 56.5	
KIV				*e*SS	SS	11 39 38.6	-0.2
KIV				pmax	pmax		
	comp=Z,82nm,4.4s						
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,678nm,20.0s						
PPLA	**Purkeypile**	93.22	27	*e*P	P	11 22 31.9	-0.8
PPLA				LR	LR		
	comp=Z,2µm,22.0s						
IM3	**Indian Mountai**	93.26	24	*e*P	P	11 22 31.1	-1.5
CAST	**Castle Rocks**	93.38	26	*e*P	P	11 22 32.1	-1.2
	comp=Z,12nm,1.0s						
CAST				LR	LR		
	comp=Z,2µm,19.0s						
SNAA	**Sanae**	93.52	194	P	P	11 22 37.2	+3.2
SNAA	**Sanae**	93.52	194	*e*P	P	11 22 35.0	+1.0
	comp=Z,70nm,1.3s						
SNAA				LR	LR		
	comp=Z,7µm,20.0s						
SNAA	**Sanae**	93.52	194	*e*P	P	11 22 35.0	+1.0
SNAA				pmax	pmax		
	comp=Z,70nm,1.3s						
SNAA				MLR	MLR		
	comp=Z,7µm,20.0s						
SNAA	**Sanae**	93.52	194	PKKPbc	PKKPbc	11 39 39.2	-3.3
	comp=Z,1.6nm,0.9s,baz=304,slow=8.9,SNR=5.6						
SUA	**Susitna One**	93.59	28	*e*P	P	11 22 33.1	-1.3
	comp=Z,32nm,0.9s						
PRGR	**Permogore**	93.63	332	*e*P	P	11 22 31.6	-2.8
PRGR				pmax	pmax		
	comp=Z,26nm,1.5s						
VRH	**Novokhopyorsk**	93.96	321	*e*P	P	11 22 33.8	-2.4
VRH				pmax	pmax		
	comp=Z,40nm,1.5s						
RC01	**Rabbit Creek A**	93.99	29	*e*P	P	11 22 34.4	-1.8
	comp=Z,47nm,1.4s						
TRF	**Thorofare Moun**	94.17	27	*e*P	P	11 22 35.6	-1.6
	comp=Z,41nm,1.5s						
SOC	**Sochi**	94.22	313	*e*P	P	11 22 33.8	-3.8
SOC				*e*PPP	PPP	11 28 34.4	
SOC				*e*S	SKSac	11 33 06.3	-3.9
SOC				*e*SS	SS	11 40 03.4	-4.8
SOC				*e*SSS	SSS	11 43 49.6	
MLY	**Manley**	94.28	25	*e*P	P	11 22 36.4	-1.0
	comp=Z,16nm,1.0s						
PMR	**Palmer**	94.37	28	*e*P	P	11 22 35.8	-2.0
	comp=Z,27nm,1.1s						
PMR	**Palmer**	94.37	28	*e*P	P	11 22 35.8	-2.0
PMR				pmax	pmax		
	comp=Z,27nm,1.1s						
KNK	**Knik Glacier**	94.66	29	*e*P	P	11 22 37.6	-1.6
	comp=Z,87nm,1.3s						
SML	**Sawmill**	94.78	28	*e*P	P	11 22 38.4	-1.5
	comp=Z,56nm,1.0s						
RND	**Reindeer**	94.80	27	*e*P	P	11 22 38.0	-1.9
	comp=Z,45nm,1.0s						
RND	**Reindeer**	94.80	27	*e*P	P	11 22 38.0	-1.9
RND				pmax	pmax		
	comp=Z,45nm,1.0s						
MCK	**McKinley**	94.82	26	*e*P	P	11 22 38.1	-1.8
	comp=Z,84nm,1.5s						
MCK				LR	LR		
	comp=Z,2µm,22.0s						
MCK	**McKinley**	94.82	26	*e*P	P	11 22 38.1	-1.8
MCK				pmax	pmax		
	comp=Z,84nm,1.5s						
MCK				MLR	MLR		
	comp=Z,2µm,22.0s						
SCM	**Sheep Creek Mo**	95.26	28	*e*P	P	11 22 40.8	-1.2
	comp=Z,73nm,1.3s						
SCM	**Sheep Creek Mo**	95.26	28	*e*P	P	11 22 40.8	-1.2
SCM				pmax	pmax		
	comp=Z,73nm,1.3s						
WRH	**Wood River Hil**	95.30	26	*e*P	P	11 22 40.0	-2.0
	comp=Z,25nm,1.1s						
MDM	**Murphy Dome**	95.32	25	*e*P	P	11 22 41.0	-1.2
	comp=Z,23nm,1.5s						
TOLK	**Toolik Lake Re**	95.39	21	*e*P	P	11 22 41.2	-1.3
	comp=Z,33nm,1.2s						
TOLK	**Toolik Lake Re**	95.39	21	P	P	11 22 40.9	-1.5
	baz=260						
VNA3	**Neumayer Olymp**	95.39	193	P	P	11 22 51.1	+8.7
DHY	**Denali Highway**	95.41	27	*e*P	P	11 22 41.0	-1.8
COLA	**College**	95.47	25	*i* P	P	11 22 41.9	-0.9
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VNA1	**Neumayer--Stat**	95.51	194	P	P	11 22 51.3	+8.4
VSR	**Storozhevoye**	95.55	321	*e*P	P	11 22 40.1	-3.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HDA	**Harding Lake**	95.79	26	*e*P	P	11 22 41.9	-2.4
	comp=Z,21nm,1.1s						
HDA	**Harding Lake**	95.79	26	P	P	11 22 43.1	-1.2
	baz=262						
LPSR	**Galich'ya Gora**	95.86	322	*e*P	P	11 22 42.4	-2.4
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
ILAR	**Eielson Array**	95.86	25	P	P	11 22 40.9	-3.7
	comp=Z,7.2nm,1.0s,baz=267,slow=3.9,SNR=30						
ILAR				PKKP	PKKPdf	11 39 37.1	+0.1
	comp=Z,1.2nm,0.9s,baz=26,slow=1.7,SNR=7.6						
ILAR				LR	LR	11 59 15.1	
	comp=Z,715nm,21.8s,baz=274,slow=31						
ILB	**Eielson Array**	95.86	25	*e*P	P	11 22 41.8	-2.8
	comp=Z,17nm,1.3s						
IL1	**Eielson Array**	95.86	25	*e*P	P	11 22 41.1	-3.5
DIV	**Divide**	95.90	29	*e*P	P	11 22 43.5	-1.4
	comp=Z,80nm,1.5s						
PAX	**Paxson**	96.26	27	*e*P	P	11 22 45.2	-1.4
	comp=Z,40nm,1.2s						
PAX	**Paxson**	96.26	27	*e*P	P	11 22 45.2	-1.4
PAX				pmax	pmax		
	comp=Z,40nm,1.2s						
KLMR	**Klimovskoe**	96.43	331	*e*P	P	11 22 43.8	-3.4
KLMR				*e*		11 26 38.4	
KLMR				pmax	pmax		
	comp=Z,33nm,1.4s						
KLMR	**Klimovskoe**	96.43	331	*e*P	P	11 22 43.9	-3.3
KLMR				AMP		11 22 48.6	
	comp=Z,33nm,1.4s						
KLMR				*e*PP	PP	11 26 38.5	-2.9
BOSA	**Boshof**	96.48	240	P	P	11 22 49.6	+1.1
	comp=Z,9.4nm,0.8s,baz=122,slow=4.5,SNR=12						
BOSA				LR	LR	12 00 43.2	
	comp=Z,2µm,21.7s,baz=96,slow=32						
MBAR	**Mbarara**	96.55	268	PFAKE		11 23 00.0	+11
MBAR				LR	LR		
	comp=Z,2µm,21.0s						
LSZ	**Lusaka**	96.59	254	*e*P	P	11 22 47.8	-1.4
	comp=Z,50nm,1.3s						
LSZ				LR	LR		
	comp=Z,2µm,19.0s						
LSZ	**Lusaka**	96.59	254	*e*P	P	11 22 47.8	-1.4
LSZ				pmax	pmax		
	comp=Z,50nm,1.3s						
LSZ				MLR	MLR		
	comp=Z,2µm,19.0s						
LSZ	**Lusaka**	96.59	254	P	P	11 22 51.0	+1.8
	SNR=9.7						
LSZ				P	P	11 22 51.0	+1.8
	SNR=9.7						
RIDG	**Independ'e Rid**	96.63	27	*e*P	P	11 22 46.9	-1.3
	comp=Z,50nm,1.5s						
FYU	**Fort Yukon**	96.75	24	*e*P	P	11 22 47.4	-1.2
	comp=Z,33nm,1.0s						
MOS	**Moscow**	96.93	325	*e*P	P	11 22 46.5	-3.1
MOS				*e*		11 26 42.0	
DOT	**Dot Lake**	96.96	27	*e*P	P	11 22 48.3	-1.4
	comp=Z,13nm,1.0s						
SCRK	**Sand Creek**	97.03	26	*e*P	P	11 22 48.8	-1.3
	comp=Z,13nm,1.2s						
SNOP	**Sinop**	97.34	311	PFAKE		11 23 00.0	+8.1
SNOP				LR	LR		
	comp=Z,1µm,22.0s						
TMCR	**Tamitsa**	97.41	334	*e*P	P	11 22 48.6	-3.0
TMCR				pmax	pmax		
	comp=Z,31nm,1.3s						
OBN	**Obninsk**	97.48	325	PFAKE		11 23 00.0	+7.8
OBN				LR	LR		
	comp=Z,2µm,22.0s						
OBN	**Obninsk**	97.48	325	*de*P	P	11 22 50.1	-2.0
OBN				*e*		11 26 47.3	
OBN				*e*PPP	PPP	11 28 48.7	
OBN				*i* S	SKSac	11 33 19.1	-7.7
OBN				pmax	pmax		
	comp=Z,36nm,1.1s						
OBN				MLR	MLR		
	comp=Z,1µm,20.0s						
CSS	**Mathiatis**	98.22	304	PFAKE		11 23 10.0	+14
CSS				LR	LR		
	comp=Z,2µm,18.0s						
EGAK	**Eagle**	98.31	26	*e*P	P	11 22 54.9	-0.8
	comp=Z,17nm,1.3s						
BR101	**Keskin Array S**	98.35	309	*e*P	P	11 22 53.6	-3.0
BR101				*e*PP	PP	11 26 55.2	-1.7
BR131	**Keskin Array S**	98.35	309	*e*P	P	11 22 55.2	-1.5
	comp=Z,6.8nm,1.1s						
BRTR	**Keskin Array B**	98.35	309	*i* P	Pdif	11 22 57.5	+0.8
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	98.35	309	P	P	11 22 53.6	-3.0
	comp=Z,2.8nm,0.8s,baz=120,slow=4.1,SNR=11						
BRTR				PP	PP	11 26 55.2	-1.7
	comp=Z,1.8nm,0.9s,baz=99,slow=8.9,SNR=4.3						
BRTR				LR	LR	12 16 12.7	
	comp=Z,784nm,18.1s,baz=100,slow=41						
ANTO	**Ankara**	99.01	309	PFAKE		11 23 10.0	+10
ANTO				LR	LR		
	comp=Z,1µm,21.0s						
DAWY	**Dawson**	99.05	26	*e*P	Pdif	11 22 58.2	-0.9
	comp=Z,14nm,1.0s						
APA	**Apatity**	99.43	337	⇓*i*P	Pdif	11 22 50.8	-10
APA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
EPYK	**Eagle Plains**	100.16	24	*e*Pdif	Pdif	11 23 03.1	-0.9
	comp=Z,31nm,1.4s						
EPYK	**Eagle Plains**	100.16	24	P	Pdif	11 23 02.5	-1.5
	baz=272						
ISP	**Isparta**	100.67	307	PFAKE		11 23 20.0	+13
ISP				LR	LR		
	comp=Z,1µm,20.0s						
INK	**Inuvik**	101.28	22	*e*Pdif	Pdif	11 23 07.7	-1.1
INK	**Inuvik**	101.28	22	*e*P	Pdif	11 23 07.7	-1.1
AKASG	**Malin Array Be**	101.80	320	P	Pdif	11 23 09.5	-2.0
	comp=Z,2.4nm,0.7s,baz=77,slow=4.4,SNR=12						
AKASG				PP	PP	11 27 28.3	+5.7
	comp=Z,8.6nm,1.0s,baz=78,slow=6.3,SNR=6.3						
AKBB	**Malin Array Si**	101.80	320	*e*Pdif	Pdif	11 23 09.9	-1.6
AKBB				LR	LR		
	comp=Z,1µm,21.0s						
AKBB	**Malin Array Si**	101.80	320	*e*P	Pdif	11 23 09.9	-1.6
AKBB				MLR	MLR		
	comp=Z,1µm,21.0s						
KIEV	**Kiev**	101.81	320	PFAKE		11 23 20.0	+8.4
KIEV				LR	LR		
	comp=Z,1µm,22.0s						
KIEV	**Kiev**	101.81	320	*i* P	Pdif	11 23 10.7	-0.9
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARA0	**ARCESS Array S**	102.18	339	*e*Pdif	Pdif	11 23 11.9	-0.9
ARCES	**ARCESS Array B**	102.18	339	P	Pdif	11 23 11.9	-0.9
	comp=Z,2.9nm,0.7s,baz=72,slow=5.2,SNR=5.5						
ARCES				PP	PP	11 27 26.1	+1.2
	comp=Z,2.8nm,0.9s,baz=81,slow=5.7,SNR=4.4						
ARCES				PKiKP	PKiKP	11 27 33.9	-0.9
	comp=Z,12nm,1.1s,baz=96,slow=0.9,SNR=5.8						
ARCES				PKKPbc	PKKPbc	11 39 17.9	-0.7
	comp=Z,6.3nm,1.1s,baz=298,slow=2.6,SNR=5.7						
FIA0	**FINESS Array S**	102.94	331	*e*Pdif	Pdif	11 23 14.4	-1.9
FIA0	**FINESS Array S**	102.94	331	*e*P	Pdif	11 23 14.4	-1.9
FINES	**FINESS Array B**	102.94	331	*i* P	Pdif	11 23 18.2	+1.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	102.94	331	P	Pdif	11 23 14.4	-1.9
	comp=Z,1.5nm,0.9s,baz=72,slow=6.2,SNR=3.9						
FINES				PKiKP	PKiKP	11 27 36.4	0.0
	comp=Z,2.5nm,0.6s,baz=110,slow=2.8,SNR=7.9						
PLOR	**Plostina**	103.63	315	⇑*i*P	PKiKP	11 27 47.8	+10
BIZ	**Bicaz**	103.97	316	⇑*i*P	PKiKP	11 27 51.6	+13
MLR	**Muntele Rosu**	104.14	315	PFAKE		11 23 30.0	+7.7
MLR				LR	LR		
	comp=Z,1µm,21.0s						
MLR	**Muntele Rosu**	104.14	315	⇑*i*P	PKiKP	11 27 37.6	-1.6
ALN	**Alexandroupoli**	104.19	310	PFAKE		11 23 30.0	+7.6
ALN				LR	LR		
	comp=Z,800nm,21.0s						
DOPR	**Dopca**	104.51	315	⇑*i*P	PKiKP	11 28 06.7	+27
BURAR	**Bucovina Array**	104.54	317	⇑*i*P	PKiKP	11 27 45.5	+5.6
BUR04	**Bucovina Ar. S**	104.55	317	*e*Pdif	Pdif	11 23 23.0	-1.0
VOIR		104.77	315	⇓*i*P	PKiKP	11 27 45.9	+5.6
IDI	**Anoyia**	105.15	304	PFAKE		11 27 50.0	+8.7
IDI				LR	LR		
	comp=Z,2µm,22.0s						
SUW	**Suwalki**	105.29	324	PFAKE		11 27 50.0	+9.1
SUW				LR	LR		
	comp=Z,2µm,22.0s						
TSUM	**Tsumeb**	105.61	247	PFAKE		11 27 50.0	+7.3
TSUM				LR	LR		
	comp=Z,2µm,20.0s						
VTS	**Vitosha**	106.22	312	PFAKE		11 27 50.0	+6.8
VTS				LR	LR		
	comp=Z,1µm,22.0s						
PMSA	**Palmer Station**	106.33	175	PFAKE		11 27 50.0	+7.4
PMSA				LR	LR		
	comp=Z,4µm,19.0s						
GZR	**Gura Zlata**	106.37	315	⇑*i*P	PKiKP	11 28 04.3	+21
LIT	**Litokhoron**	106.92	309	PFAKE		11 28 00.0	+16
LIT				LR	LR		
	comp=Z,700nm,20.0s						
AGG	**Agios Georgios**	107.10	308	PFAKE		11 28 00.0	+15
AGG				LR	LR		
	comp=Z,1µm,19.0s						
BZS	**Buzias**	107.16	315	⇑*i*P	PKiKP	11 27 45.5	+0.9
ITM	**Ithomi**	107.50	306	PFAKE		11 28 00.0	+14
ITM				LR	LR		
	comp=Z,1µm,20.0s						
FNA	**Florina**	107.73	310	PFAKE		11 28 00.0	+14
FNA				LR	LR		
	comp=Z,900nm,20.0s						
PSZ	**Piszkesteto**	108.09	318	PFAKE		11 28 00.0	+14
PSZ				LR	LR		
	comp=Z,2µm,20.0s						
VYHS	**Vyhne**	108.71	318	*e*PKP	PKiKP	11 27 51.7	+4.2
TIR	**Tirane**	108.82	311	PFAKE		11 28 00.0	+12
TIR				LR	LR		
	comp=Z,2µm,21.0s						
TTG	**Podgorica**	109.17	312	PFAKE		11 28 00.0	+12
TTG				LR	LR		
	comp=Z,1µm,21.0s						
MORC	**Moravsky Berou**	109.35	320	PFAKE		11 28 00.0	+11
MORC				LR	LR		
	comp=Z,2µm,22.0s						
MORC	**Moravsky Berou**	109.35	320	⇓*i*P	PKiKP	11 27 50.6	+1.9
DAG	**Danmarks Havn**	109.48	352	*i* P	Pdif	11 23 43.7	-1.5
	comp=Z,12nm,1.0s						
DAG	**Danmarks Havn**	109.48	352	*i* P	Pdif	11 23 43.7	-1.5
DAG				pmax	pmax		
	comp=Z,12nm,1.0s						
RES	**Resolute Bay**	109.72	11	*e*Pdif	Pdif	11 23 46.0	-0.2
RES	**Resolute Bay**	109.72	11	*e*P	Pdif	11 23 46.0	-0.2
KRLC	**Kraliky**	109.78	320	*e*PKP	PKiKP	11 27 54.3	+4.8
B05A	**Bryant**	109.96	42	P	PKiKP	11 27 50.3	+0.5
	baz=280						
DPC	**Dobruska-Polom**	110.02	321	*e*PKP	PKiKP	11 27 51.8	+1.9
DPC				*e*PS	PS	11 37 52.5	-0.4
DPC				AMS	AMS	12 17 20.0	
	comp=Z,2µm,21.4s						
NB2	**NORSAR Subarra**	110.03	332	PKPdf	PKiKP	11 27 49.4	-0.2
	comp=Z,1.6nm,0.9s,baz=68,slow=1.9						
NB200	**NORSAR Array S**	110.03	332	*e*Pdif	Pdif	11 23 46.8	-1.2
NOA	**NORSAR Array B**	110.03	332	Pdiff	Pdif	11 23 46.8	-1.2
	comp=Z,0.8nm,0.8s,baz=71,slow=4.4,SNR=3.2						
NOA				PKiKP	PKiKP	11 27 49.2	-0.4
	comp=Z,2.2nm,0.9s,baz=262,slow=3.2,SNR=6.6						
NOA				SKP		11 31 22.7	
	comp=Z,2.2nm,0.9s,baz=46,slow=3.2,SNR=5.7						
UPC	**Upice**	110.18	321	*e*PS	PS	11 37 52.5	-1.9
UPC				AMS	AMS	12 18 50.0	
	comp=Z,2µm,22.0s						
YKA	**Yellowknife Ar**	110.28	26	Pdiff	Pdif	11 23 48.1	-0.9
	comp=Z,0.2nm,0.6s,baz=293,slow=4.6,SNR=4.0						
YKA				PKiKP	PKiKP	11 27 50.7	+0.7
	comp=Z,1.0nm,0.4s,baz=281,slow=2.1,SNR=18						
YKA				PKKPbc	PKKPbc	11 38 53.1	-0.2
	comp=Z,0.7nm,0.6s,baz=112,slow=3.6,SNR=9.0						
BLY	**Banja Luka**	110.38	315	PFAKE		11 28 00.0	+9.3
BLY				LR	LR		
	comp=Z,1µm,19.0s						
N02D	**Trinity Center**	110.56	50	P	PKiKP	11 27 52.4	+1.1
	baz=277						
L04D	**Klamath Falls**	110.71	48	P	PKiKP	11 27 52.4	+0.8
	baz=277						
MCCM	**Marconi Confer**	110.72	53	PFAKE		11 28 00.0	+8.5
MCCM				LR	LR		
	comp=Z,2µm,18.0s						
TREC	**Trest**	110.75	320	AMS	AMS	12 28 10.0	
	comp=Z,1µm,20.2s						
GOPC	**GO Pecny, Ondr**	111.08	320	*e*PKP	PKiKP	11 27 52.9	+1.0
GOPC				*e*PS	PS	11 38 04.1	+1.5
GOPC				AMS	AMS	12 18 40.0	
	comp=Z,1µm,18.6s						
GOPC	**GO Pecny, Ondr**	111.08	320	*e*PKIKP	PKiKP	11 27 52.9	+1.0
GOPC				*e*PS	PS	11 38 04.1	+1.5
GOPC				MLR	MLR		
	comp=Z,1µm,18.6s						
PVCC	**Panska Ves**	111.08	321	AMS	AMS	12 18 00.0	
	comp=Z,1µm,21.0s						
I05D	**Terrebonne, OR**	111.11	46	P	PKiKP	11 27 53.0	+0.8
	baz=279						
PRU	**Pruhonice**	111.21	320	*e*PKP	PKiKP	11 27 52.9	+0.8
PRU				*e*PS	PS	11 38 03.6	-0.2
PRU				AMS	AMS	12 17 50.0	
	comp=Z,2µm,21.8s						
PRU	**Pruhonice**	111.21	320	*e*PKIKP	PKiKP	11 27 52.9	+0.8
PRU				*e*PS	PKKPbc	11 38 03.6	-46
PRU				MLR	MLR		
	comp=Z,2µm,21.8s						
KONO	**Kongsberg**	111.25	331	PFAKE		11 28 00.0	+8.1
KONO				LR	LR		
	comp=Z,1µm,20.0s						
J05D	**Fort Rock, OR**	111.34	47	P	PKiKP	11 27 54.4	+1.6
	baz=279						
BRG	**Berggiesshubel**	111.39	321	*e*PDIFF	PKiKP	11 27 52.7	+0.3
	comp=Z,4.8nm,0.9s						
BRG				SKS		11 38 15.0	
	comp=N,2µm,23.9s						
	comp=E,1µm,24.1s						
	comp=Z,2µm,16.7s						
BRG	**Berggiesshubel**	111.39	321	*e*PKIKP	PKiKP	11 27 52.7	+0.3
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG				MLR	MLR		
	comp=N,2µm,23.9s						
BRG				MLR	MLR		
	comp=E,1µm,24.1s						
BRG				MLR	MLR		
	comp=Z,2µm,16.7s						
TIP	**Timpagrande**	111.41	309	PFAKE		11 28 00.0	+7.1
TIP				LR	LR		
	comp=Z,1µm,20.0s						
CLL	**Collm**	111.87	322	*e*PKiKP	PKiKP	11 27 53.0	-0.3
	comp=Z,7.0nm,0.9s						
CLL				*e*PP	PP	11 28 42.0	+5.6
CLL				*e*SKSac	SKSac	11 34 30.0	-2.6
CLL				*e*PS	PS	11 38 06.0	-3.8
CLL				*e*PPS	PPS	11 39 22.0	
CLL				*e*		11 40 04.0	
CLL				*e*SS	SS	11 44 00.0	-11
CLL				*e*		11 45 00.0	
CLL				*e*SSS	SSS	11 48 12.0	
CLL				*e*		11 49 12.0	
CLL				*e*		11 49 42.0	
CLL				LmV		12 22 00.0	
	comp=Z,1µm,19.9s						
CLL	**Collm**	111.87	322	*e*PKIKP	PKiKP	11 27 53.0	-0.3
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,1µm,19.9s						
SAO	**San Andreas Ge**	111.99	54	PFAKE		11 28 10.0	+16
SAO				LR	LR		
	comp=Z,2µm,21.0s						
GEC2	**GERESS Array S**	112.00	319	PFAKE		11 28 00.0	+6.2
GEC2				LR	LR		
	comp=Z,2µm,21.0s						
GERES	**GERESS Array B**	112.00	319	PKiKP	PKiKP	11 27 53.9	+0.1
	comp=Z,3.0nm,0.6s,baz=82,slow=1.3,SNR=23						
GERES				SKP		11 31 24.9	
	comp=Z,1.6nm,0.9s,baz=58,slow=2.4,SNR=4.2						
GERES				PKKPab	PKKPab	11 38 59.0	+4.4
	comp=Z,0.2nm,0.4s,baz=235,slow=4.7,SNR=4.1						
KHC	**Kasperske Hory**	112.01	320	*e*PKP	PKiKP	11 27 55.1	+1.4
KHC				*e*PS	PS	11 38 15.7	+4.4
KHC				AMS	AMS	12 24 30.0	
	comp=Z,1µm,19.7s						
KHC	**Kasperske Hory**	112.01	320	*e*PKIKP	PKiKP	11 27 55.1	+1.4
KHC				MLR	MLR		
	comp=Z,1µm,19.7s						
NKC	**Novy Kostel**	112.47	321	*e*PKP	PKiKP	11 27 56.0	+1.5
NKC				AMS	AMS	12 19 40.0	
	comp=Z,2µm,20.4s						
NKC	**Novy Kostel**	112.47	321	*e*PKIKP	PKiKP	11 27 56.0	+1.5
NKC				MLR	MLR		
	comp=Z,2µm,20.4s						
PAGB	**Antelope Grade**	113.06	55	PFAKE		11 28 10.0	+14
PAGB				LR	LR		
	comp=Z,3µm,19.0s						
NEW	**Newport**	113.22	41	P	PKiKP	11 27 57.5	+1.4
	baz=284						
ABTA	**Abfaltersbach**	113.23	317	*e*PKiKP	PKiKP	11 27 56.8	+0.6
	comp=Z,5.8nm,0.9s						
SMMC	**Simmler**	113.31	55	P	PKiKP	11 27 58.4	+1.8
	baz=276						
GRA1	**Grafenberg Arr**	113.37	321	PFAKE		11 28 10.0	+14
GRA1				LR	LR		
	comp=Z,2µm,21.0s						
GRFO	**Grafenberg**	113.37	321	PFAKE		11 28 10.0	+14
GRFO				LR	LR		
	comp=Z,2µm,20.0s						
AQU	**L'Aquila**	113.47	312	PFAKE		11 28 10.0	+13
AQU				LR	LR		
	comp=Z,1µm,22.0s						
PKM	**Mcpherson Peak**	113.50	56	P	PKiKP	11 27 58.7	+1.5
	baz=276						
WDD	**Wied Dalam**	113.55	305	PFAKE		11 28 10.0	+13
WDD				LR	LR		
	comp=Z,2µm,21.0s						
SBC	**Santa Barbara**	113.63	56	P	PKiKP	11 27 58.7	+1.5
	baz=276						
WATA	**Walderalm**	113.72	318	*i* PKiKP	PKiKP	11 27 58.0	+0.8
	comp=Z,6.0nm,0.6s						
VES	**Vestal, Richgr**	113.99	55	P	PKiKP	11 27 59.0	+1.2
	baz=277						
SQTA	**Sankt Quirin**	114.00	318	*e*PKiKP	PKiKP	11 27 58.4	+0.7
	comp=Z,1.9nm,0.6s						
MOTA	**Moosalm**	114.03	318	*i* PKiKP	PKPdf	11 27 57.7	-0.1
	comp=Z,6.1nm,0.7s						
RETA	**Reutte**	114.22	318	*e*PKiKP	PKiKP	11 27 58.6	+0.5
	comp=Z,3.6nm,0.6s						
NVAR	**Mina Array Bea**	114.26	52	PKP	PKiKP	11 27 59.7	+1.1
	comp=Z,5.0nm,0.8s,baz=246,slow=2.0,SNR=20						

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NVAR                                 PKKPbc   PKKPbc   11 38 42.0 +2.4
      comp=Z,1.2nm,0.8s,baz=122,slow=2.4,SNR=3.7
ARVC  Arvin             114.28  55  P        PKiKP    11 28 00.2 +1.7
      baz=277
FETA  Feichten          114.36 318 ePKiKP    PKPdf    11 27 58.3 -0.2
      comp=Z,6.6nm,0.9s
OSI   Osito Audit: C    114.42  56  PFAKE             11 28 10.0  +11
OSI                                 LR       LR
      comp=Z,2µm,19.0s
ISA   Isabella, Lake    114.50  55  P        PKiKP    11 28 00.6 +1.6
      baz=277
TIN   Tinemaha, Big     114.51  53  P        PKiKP    11 28 00.5 +1.5
      baz=278
CWC   Cottonwood Cre    114.72  54  P        PKiKP    11 28 01.3 +1.9
      baz=278
FUORN Ofenpass-Fuorn    114.77 318  PFAKE             11 28 10.0  +11
FUORN                               LR       LR
      comp=Z,1µm,22.0s
CIS   Catalina Islan    114.81  57  P        PKiKP    11 28 01.1 +1.5
      baz=276
DAVA  Damuels           114.86 318 i PKiKP   PKPdf    11 28 00.1 +0.7
      comp=Z,11nm,0.8s
STU   Stuttgart         114.90 320  PFAKE             11 28 10.0  +11
STU                                 LR       LR
      comp=Z,2µm,21.0s
EDW2  Edwards Air Fo    114.99  56  P        PKiKP    11 28 01.5 +1.6
      baz=277
DAC   Darwin (Calif)    115.13  54  PFAKE             11 28 10.0  +10
DAC                                 LR       LR
      comp=Z,2µm,20.0s
LRMC  Laurel Mtn Rad    115.16  55  P        PKPdf    11 28 01.2 +0.9
      baz=278
GRAC  Grapevine Rang    115.21  53  P        PKPdf    11 28 02.0 +1.8
      baz=279
MPMC  Manual Prospec    115.24  54  P        PKPdf    11 28 02.1 +1.6
      baz=278
VLC   Villacollemand    115.27 315  PFAKE             11 28 10.0  +10
VLC                                 LR       LR
      comp=Z,2µm,20.0s
BFSC  Mount Baldy Ra    115.34  56  P        PKiKP    11 28 02.0 +1.3
      baz=277
USHA  Ushuaia           115.42 170  PKP      PKPdf    11 28 01.9 +1.9
      comp=Z,5.1nm,0.7s,baz=204,slow=2.3,SNR=3.5
TUE   Stuetta           115.42 318  PFAKE             11 28 10.0 +9.4
TUE                                 LR       LR
      comp=Z,2µm,19.0s
BFO   Black Forest      115.58 320c iPKIKP   PKPdf    11 28 01.9 +1.3
MSO   Missoula          115.66  42 ePKPdf    PKPdf    11 28 01.1 +0.2
MSO   Missoula          115.66  42  P        PKPdf    11 28 02.5 +1.6
      baz=286
FURC  Furnace Creek,    115.68  54  P        PKiKP    11 28 02.7 +1.7
      baz=279
MURC  Murrieta          115.80  57  P        PKiKP    11 28 03.2 +1.7
      baz=277
GSC   Goldstone, Bar    115.90  55  PFAKE             11 28 10.0 +8.3
GSC                                 LR       LR
      comp=Z,3µm,18.0s
GSC   Goldstone, Bar    115.90  55  P        PKiKP    11 28 03.4 +1.7
      baz=278
BBRC  Big Bear Solar    115.94  56  P        PKiKP    11 28 03.0 +1.0
      baz=278
109C  Camp Elliot, M    115.96  58  P        PKiKP    11 28 03.0 +1.3
      baz=277
CPE   Camp Elliot       115.96  58  PFAKE             11 28 10.0 +8.3
CPE                                 LR       LR
      comp=Z,2µm,21.0s
TPNV  Topopah Spring    116.10  53  P        PKiKP    11 28 03.7 +1.6
      baz=279
HLID  Hailey            116.17  46 ePKPdf    PKiKP    11 28 02.5 +0.5
HLID  Hailey            116.17  46  P        PKiKP    11 28 03.8 +1.8
      baz=284
ELK   Elko              116.19  49 ePKPdf    PKiKP    11 28 02.8 +0.5
ELK   Elko              116.19  49 ePKIKP    PKiKP    11 28 02.8 +0.5
SHOC  Shoshone, Teco    116.24  54  P        PKiKP    11 28 03.9 +1.7
      baz=279
MEM   Membach           116.30 323 ⇓PKiKP    PKiKP    11 28 03.0 +1.2
HEC   Hector,Ludlow     116.35  55  P        PKiKP    11 28 04.1 +1.6
      baz=278
BAR   Barrett           116.35  58  PFAKE             11 28 10.0 +7.5
BAR                                 LR       LR
      comp=Z,2µm,20.0s
R11A  Troy Canyon, C    116.38  51 ePKPdf    PKiKP    11 28 03.4 +0.7
R11A  Troy Canyon, C    116.38  51  P        PKiKP    11 28 03.9 +1.3
      baz=280,SNR=15
PFO   Pinyon Flats O    116.41  57 ePKPdf    PKiKP    11 28 03.4 +0.7
PFO                                 LR       LR
      comp=Z,2µm,20.0s
PFO   Pinyon Flats O    116.41  57 ePKIKP    PKiKP    11 28 03.4 +0.7
PFO                                 MLR      MLR
      comp=Z,2µm,20.0s
PFO   Pinyon Flats O    116.41  57  P        PKiKP    11 28 04.3 +1.6
      baz=278
XPFO  Pion Flat         116.41  57 ePKPdf    PKiKP    11 28 03.0 +0.2
XPFO                                LR       LR
      comp=Z,2µm,20.0s
BEBN  Eben Emael        116.44 323 ⇑PKiKP    PKPdf    11 28 01.0 -1.0
GO10  Punta Arenas      116.50 168  PFAKE             11 28 10.0 +7.7
GO10                                LR       LR
      comp=Z,4µm,19.0s
WLF   Walferdange       116.53 322 ⇑PKiKP    PKiKP    11 28 05.7 +3.4
MONP2 Monument Peak     116.53  58  P        PKiKP    11 28 04.4 +1.2
      baz=277,SNR=11
TUQ   Turquoise Moun    116.59  55  P        PKiKP    11 28 04.7 +1.6
      baz=279
BELC  Belle Mtn. Jos    116.74  56  P        PKiKP    11 28 05.0 +1.6
      baz=278,SNR=22
BCLA  Clavier           116.79 323 ⇑PKiKP    PKiKP    11 28 04.3 +1.5
IKP   In-Ko-Pah, Jac    116.82  58  P        PKiKP    11 28 04.7 +1.2
      baz=277,SNR=7.7
GMRC  Granite Mounta    116.90  55  P        PKiKP    11 28 05.4 +1.7
      baz=279,SNR=21
DLMT  Dillon            116.96  43 ePKPdf    PKiKP    11 28 04.0 +0.5
SHPR  Sheep Range       117.03  53  PFAKE             11 28 10.0 +6.1
SHPR                                LR       LR
      comp=Z,2µm,19.0s
SWSC  Sam W. Stewart    117.04  57  P        PKiKP    11 28 05.7 +1.9
      baz=278,SNR=6.1
UCC   Uccle             117.22 323  PFAKE             11 28 10.0 +6.4
UCC                                 LR       LR
      comp=Z,2µm,22.0s
BC3   Big Chuckawall    117.23  57  P        PKiKP    11 28 06.2 +1.8
      baz=278,SNR=16
LDFC  Landfair          117.31  55  PFAKE             11 28 20.0  +16
LDFC                                LR       LR
      comp=Z,2µm,20.0s
DOU   Dourbes           117.33 322 ⇑PKiKP    PKiKP    11 28 05.5 +1.7
IRM   Iron Mountain     117.42  56  P        PKiKP    11 28 06.2 +1.6
      baz=279,SNR=12
BOZ   Bozeman (W)       117.55  43  PFAKE             11 28 20.0  +15
BOZ                                 LR       LR
      comp=Z,1µm,18.0s
BOZ   Bozeman (W)       117.55  43  P        PKiKP    11 28 05.7 +1.1
      baz=287
PSUT  Pine Spring       117.68  51 ePKPdf    PKiKP    11 28 05.8 +0.6
KEST  Kesra             117.73 306  PFAKE             11 28 20.0  +15
KEST                                LR       LR
      comp=Z,2µm,20.0s
HVU   Hansel Valley     117.77  47 ePKPdf    PKPdf    11 28 05.0 -0.1
HVU   Hansel Valley     117.77  47 ePKIKP    PKPdf    11 28 05.1 -0.1
BGU   Big Grassy Mou    117.78  48  PFAKE             11 28 20.0  +15
BGU                                 LR       LR
      comp=Z,1µm,20.0s
GLA   Glamis            117.84  57  PFAKE             11 28 20.0  +15
GLA                                 LR       LR
      comp=Z,2µm,20.0s
GLA   Glamis            117.84  57  P        PKiKP    11 28 07.1 +1.7
      baz=278
GO09  Cerro Castillo    117.97 166  PFAKE             11 28 20.0  +15
GO09                                LR       LR
      comp=Z,2µm,18.0s
Y12C  Blythe            117.99  56  PFAKE             11 28 20.0  +14
Y12C                                LR       LR
      comp=Z,2µm,19.0s
Y12C  Blythe            117.99  56  P        PKiKP    11 28 07.1 +1.5
      baz=279,SNR=9.5
EGMT  Eagleton          118.01  40 ePKPdf    PKiKP    11 28 05.6 +0.2
EGMT  Eagleton          118.01  40  P        PKiKP    11 28 06.6 +1.2
      baz=290
DUG   Dugway, Tooele    118.11  49 ePKPdf    PKiKP    11 28 06.0 +0.1
DUG   Dugway, Tooele    118.11  49 ePKIKP    PKiKP    11 28 06.0 +0.1
DUG   Dugway, Tooele    118.11  49  P        PKiKP    11 28 07.6 +1.7
      baz=283
PDMCI Parker Dam,Lak    118.22  56  P        PKiKP    11 28 08.1 +2.0
      baz=279
LCMT  Little Creek M    118.45  53  PFAKE             11 28 20.0  +13
LCMT                                LR       LR
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      comp=Z,1µm,20.0s
FXWY  Fox Creek         118.52  45 ePKPdf    PKiKP    11 28 06.7  0.0
H17A  Grant Village     118.61  44  P        PKiKP    11 28 08.8 +1.9
      baz=287
MOOW  Moose Ponds       118.69  45 ePKPdf    PKiKP    11 28 07.2 +0.2
Y14A  Wickenburg        119.20  56  PFAKE             11 28 20.0  +12
Y14A                                LR       LR
      comp=Z,2µm,21.0s
RLMT  Red Lodge         119.28  43  P        PKiKP    11 28 09.9 +1.8
      baz=289
U15A  North Rim         119.32  53  PFAKE             11 28 20.0  +11
U15A                                LR       LR
      comp=Z,1µm,19.0s
FFC   Flin Flon         119.61  30 ePKPdf    PKiKP    11 28 08.2 +0.1
FFC   Flin Flon         119.61  30 ePKIKP    PKiKP    11 28 08.2 +0.1
214A  Organ Pipe Nat    119.68  58  P        PKiKP    11 28 10.5 +1.4
      baz=279
EFI   East Falkland     119.79 176  PFAKE             11 28 20.0  +11
EFI                                 LR       LR
      comp=Z,2µm,19.0s
BW06  Boulder Array     119.80  45 ePKPdf    PKPdf    11 28 08.9 -0.3
BW06  Boulder Array     119.80  45  P        PKiKP    11 28 10.5 +1.3
      baz=287
PD31  Pinedale Array    119.80  45 ePKPdf    PKPdf    11 28 08.7 -0.5
PDAR  Pinedale Array    119.80  45 ePKPdf    PKPdf    11 28 08.7 -0.5
PDAR  Pinedale Array    119.80  45  PKP      PKiKP    11 28 09.9 +0.7
      comp=Z,8.2nm,0.8s,baz=262,slow=0.2,SNR=45
PDAR                                PKKPbc   PKKPab   11 38 24.5 +4.0
      comp=Z,1.1nm,0.7s,baz=102,slow=4.8,SNR=7.0
SRU   San Rafael Swe    120.09  50 ePKPdf    PKPdf    11 28 09.3 -0.4
SRU   San Rafael Swe    120.09  50 ePKIKP    PKPdf    11 28 09.3 -0.4
WUAZ  Wupatki           120.23  54  PFAKE             11 28 20.0  +10
WUAZ                                LR       LR
      comp=Z,2µm,20.0s
WUAZ  Wupatki           120.23  54  P        PKiKP    11 28 11.6 +1.4
      baz=282
X16A  Lo Mia Camp, P    120.39  55  PFAKE             11 28 20.0 +9.4
X16A                                LR       LR
      comp=Z,2µm,20.0s
LAO   LASA Array        120.73  40 ePKPdf    PKPdf    11 28 09.7 -0.9
LAO   LASA Array        120.73  40  P        PKiKP    11 28 12.0 +1.3
      baz=292
SRIG  Santa Rosalia     120.78  63  PFAKE             11 28 20.0 +8.7
SRIG                                LR       LR
      comp=Z,1µm,19.0s
FCC   Fort Churchill    120.83  24 ePKPdf    PKPdf    11 28 09.7 -0.5
FCC   Fort Churchill    120.83  24 ePKIKP    PKPdf    11 28 09.7 -0.5
DGMT  Dagmar            121.28  38  P        PKiKP    11 28 12.8 +1.2
      baz=295
TUC   Tucson            121.32  57  PFAKE             11 28 20.0 +7.7
TUC                                 LR       LR
      comp=Z,2µm,18.0s
TUC   Tucson            121.32  57  P        PKiKP    11 28 13.6 +1.3
      baz=280
O20A  White River Ci    121.51  48  P        PKiKP    11 28 13.7 +1.1
      baz=287
IDGL  Inch Island, C    121.56 331 eP        PKiKP    11 28 12.3 +0.4
X18A  Snowflake         121.58  55 ePKPdf    PKiKP    11 28 13.9 +1.0
X18A                                LR       LR
      comp=Z,2µm,21.0s
W18A  Petrified Fore    121.63  54  PFAKE             11 28 20.0 +7.0
W18A                                LR       LR
      comp=Z,3µm,18.0s
W18A  Petrified Fore    121.63  54  P        PKiKP    11 28 13.5 +0.5
      baz=283
RWWY  Rawlins           121.79  46 ePKPdf    PKPdf    11 28 12.8 -0.3
K22A  Casper            121.96  45 ePKPdf    PKPdf    11 28 12.6 -0.6
K22A  Casper            121.96  45  P        PKiKP    11 28 13.9 +0.5
      baz=290
MVCO  Mesa Verde        122.11  51  P        PKiKP    11 28 14.4 +0.5
      baz=285
TAM   Tamanrasset       122.67 291  PFAKE             11 28 30.0  +15
TAM                                 LR       LR
      comp=Z,2µm,20.0s
319A  Douglas           122.75  58  PFAKE             11 28 30.0  +15
319A                                LR       LR
      comp=Z,1µm,20.0s
N23A  Red Feather La    122.95  46  P        PKiKP    11 28 16.0 +0.4
      baz=289
RSSD  Black Hills       123.13  42 ePKPdf    PKPdf    11 28 15.1 -0.4
RSSD  Black Hills       123.13  42 ePKIKP    PKPdf    11 28 15.1 -0.4
RSSD  Black Hills       123.13  42  P        PKPdf    11 28 15.5  0.0
      baz=293
S22A  4UR Ranch, Cre    123.24  50  P        PKiKP    11 28 17.6 +1.3
      baz=286
IGLA  Glengowla, Co     123.41 331 eP        PKPdf    11 28 12.7 -2.7
ISCO  Idaho Springs     123.54  48  P        PKiKP    11 28 17.4 +0.7
      baz=289,SNR=12
121A  Cookes Peak, D    123.77  57  P        PKiKP    11 28 17.9 +0.7
      baz=282
Y22D  IRIS PASSCAL I    124.12  55  PFAKE             11 28 30.0  +12
Y22D                                LR       LR
      comp=Z,2µm,20.0s
Y22D  IRIS PASSCAL I    124.12  55  P        PKiKP    11 28 18.8 +0.9
      baz=284
Q24A  Divide            124.14  48  P        PKiKP    11 28 19.1 +1.1
      baz=288
SDCO  Great Sand Dun    124.25  50  P        PKiKP    11 28 19.4 +1.2
      baz=287
ANMO  Albuquerque       124.28  53 ePKPdf    PKPdf    11 28 17.5 -0.5
ANMO  Albuquerque       124.28  53 i PKIKP   PKPdf    11 28 17.7 -0.2
ANMO  Albuquerque       124.28  53  P        PKiKP    11 28 18.9 +0.7
      baz=285
MDND  Maddock           124.30  37  P        PKiKP    11 28 19.0 +1.4
      baz=299
ULM   Lac du Bonnet     125.15  33  PKP      PKPdf    11 28 18.6 -0.2
      comp=Z,10nm,0.8s,baz=307,slow=3.6,SNR=15
T25A  Trinidad          125.26  50  P        PKiKP    11 28 21.4 +1.3
      baz=288
OGNE  Ogallala          125.70  45  PFAKE             11 28 30.0 +9.3
OGNE                                LR       LR
      comp=Z,900nm,20.0s
OGNE  Ogallala          125.70  45  P        PKiKP    11 28 22.1 +1.4
      baz=292
MNTX  Cornudas Mount    125.94  57 ePKPdf    PKPdf    11 28 20.2 -0.7
MNTX                                LR       LR
      comp=Z,2µm,18.0s
MNTX  Cornudas Mount    125.94  57  P        PKiKP    11 28 22.5 +1.1
      baz=283
KSCO  Kaye Shedlock’    125.98  48 ePKPdf    PKPdf    11 28 20.4 -0.6
KSCO                                LR       LR
      comp=Z,2µm,21.0s
KSCO  Kaye Shedlock’    125.98  48  P        PKiKP    11 28 22.2 +0.8
      baz=291
AGMN  Agassiz Nation    126.23  35 ePKPdf    PKiKP    11 28 22.1 +0.6
AGMN  Agassiz Nation    126.23  35  P        PKiKP    11 28 21.4  0.0
      baz=303
SUSD  Miller            126.30  40  P        PKiKP    11 28 22.1 +0.3
      baz=297
TOC2  Torodi Ar. Sit    126.59 280  PFAKE             11 28 30.0 +6.9
TOC2                                LR       LR
      comp=Z,2µm,19.0s
TOC3  Torodi Ar. Sit    126.59 280  PFAKE             11 28 30.0 +6.9
TOC3                                LR       LR
      comp=Z,2µm,20.0s
TOB2  Torodi Ar. Sit    126.60 280  PFAKE             11 28 30.0 +6.9
TOB2                                LR       LR
      comp=Z,2µm,20.0s
TOB3  Torodi Ar. Sit    126.61 280  PFAKE             11 28 30.0 +6.9
TOB3                                LR       LR
      comp=Z,2µm,20.0s
TOC1  Torodi Ar. Sit    126.61 280  PFAKE             11 28 30.0 +6.9
TOC1                                LR       LR
      comp=Z,3µm,20.0s
TOC4  Torodi Ar. Sit    126.61 280  PFAKE             11 28 30.0 +6.9
TOC4                                LR       LR
      comp=Z,2µm,20.0s
TOA0  Torodi Ar. Sit    126.61 280 ePKPdf    PKPdf    11 28 22.1 -0.6
TOA0                                LR       LR
      comp=Z,2µm,20.0s
TOA0  Torodi Ar. Sit    126.61 280  P        PKiKP    11 28 23.4 +0.3
      SNR=8.4
TORD  Torodi Ar. Bea    126.61 280  PKP      PKPdf    11 28 22.7 +0.1
      comp=Z,25nm,1.0s,baz=5.2,slow=1.6,SNR=49
TOA3  Torodi Ar. Sit    126.62 280  PFAKE             11 28 30.0 +6.9
TOA3                                LR       LR
      comp=Z,2µm,20.0s
TOA1  Torodi Ar. Sit    126.62 280 ePKPdf    PKPdf    11 28 22.7 +0.1
TOA1                                LR       LR
      comp=Z,2µm,20.0s
TOB4  Torodi Ar. Sit    126.63 280  PFAKE             11 28 30.0 +6.8
TOB4                                LR       LR
      comp=Z,2µm,20.0s
TOB5  Torodi Ar. Sit    126.63 280  PFAKE             11 28 30.0 +6.8
TOB5                                LR       LR
      comp=Z,2µm,20.0s
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TOC7  Torodi Ar. Sit    126.63 280  PFAKE             11 28 30.0 +6.8
TOC7                                LR       LR
      comp=Z,2µm,20.0s
TOC5  Torodi Ar. Sit    126.63 280  PFAKE             11 28 30.0 +6.8
TOC5                                LR       LR
      comp=Z,2µm,20.0s
HPIG                    126.64  63 ePKPdf    PKPdf    11 28 22.4 -0.3
HPIG                                LR       LR
      comp=Z,1µm,20.0s
ES19  SONSECA Array     126.76 314 ePKPdf    PKPdf    11 28 22.2 -0.2
ESDC  Sonseca Array     126.82 314  PKP      PKiKP    11 28 23.2 +0.3
      comp=Z,3.5nm,0.8s,baz=17,slow=3.4,SNR=10
MSTX  Muleshoe          127.47  54 ePKPdf    PKPdf    11 28 23.5 -0.5
MSTX                                LR       LR
      comp=Z,2µm,18.0s
MSTX  Muleshoe          127.47  54  P        PKiKP    11 28 24.4 -0.1
      baz=287
TX31  Lajitas Ar. Si    127.91  59 ePKPdf    PKPdf    11 28 24.8 -0.2
TXAR  Lajitas Array     127.91  59  PKP      PKiKP    11 28 26.1 +0.6
      comp=Z,9.4nm,1.0s,baz=248,slow=1.3,SNR=30
AMTX  Amarillo          128.06  52  PFAKE             11 28 40.0  +14
AMTX                                LR       LR
      comp=Z,2µm,18.0s
AMTX  Amarillo          128.06  52  P        PKiKP    11 28 26.3 +0.6
      baz=288
ECSD  EROS Data Cent    128.12  40  P        PKiKP    11 28 25.5 +0.1
      baz=299
CBKS  Cedar Bluff       128.15  47  PFAKE             11 28 40.0  +14
CBKS                                LR       LR
      comp=Z,2µm,20.0s
PLCA  Paso Flores       128.19 163  PKP      PKiKP    11 28 26.6 +0.8
      comp=Z,10nm,0.8s,baz=280,slow=1.5,SNR=17
BGNE  Belgrade          128.19  43 ePKPdf    PKPdf    11 28 25.1 +0.1
BGNE  Belgrade          128.19  43  P        PKPdf    11 28 25.2 +0.2
      baz=296
POLO  Lamas de Olo      128.78 317 ePKPdf    PKiKP    11 28 26.8 -0.1
EYMN  Ely               128.83  33  PFAKE             11 28 40.0  +13
EYMN                                LR       LR
      comp=Z,2µm,22.0s
GO06  Curarrehue        128.96 161  PFAKE             11 28 40.0  +13
GO06                                LR       LR
      comp=Z,2µm,18.0s
MTE   Manteigas         129.04 316 ePKPdf    PKiKP    11 28 28.1 +0.7
PCBR  Castelo Branco    129.23 315 ePKPdf    PKiKP    11 28 29.4 +1.7
F37A  Hinrichs Farm,    129.50  36  P        PKPdf    11 28 27.6 +0.3
      baz=305
E38A  The Farm, Brul    129.60  34  P        PKPdf    11 28 27.4  0.0
      baz=306
MDT   Midelt            129.63 306  PKP      PKPdf    11 28 28.4 +0.3
      comp=Z,15nm,0.8s,baz=256,slow=9.3,SNR=5.5
SPMN  Marine on St.     129.68  36  P        PKiKP    11 28 28.5  0.0
      baz=304
F38A  Pierce - Schro    129.79  35  P        PKiKP    11 28 28.4 -0.2
      baz=306
C40A  Isle Royale Na    130.09  32  P        PKPdf    11 28 28.6 +0.2
      baz=310
KSU1  Kansas State U    130.26  45  PFAKE             11 28 40.0  +10
KSU1                                LR       LR
      comp=Z,1µm,20.0s
KSU1  Kansas State U    130.26  45  P        PKiKP    11 28 29.5 -0.3
      baz=296
G38A  Ridgeland         130.26  36  P        PKiKP    11 28 29.4 -0.2
      baz=305
E39A  Mellen            130.29  34  P        PKPdf    11 28 29.0 +0.2
      baz=307
H38A  Maiden Rock       130.29  37  P        PKPdf    11 28 29.0 +0.1
      baz=304
F39A  Loretta           130.36  35  P        PKiKP    11 28 31.0 +1.2
      baz=306
WMOK  Wichita Mounta    130.36  51  P        PKiKP    11 28 30.1  0.0
      baz=291
ABTX  Abilene, Hawle    130.38  54 ePKPdf    PKPdf    11 28 29.6 +0.2
ABTX  Abilene, Hawle    130.38  54  P        PKPdf    11 28 29.6 +0.2
      baz=288
G39A  Holcombe          130.59  35  P        PKiKP    11 28 30.0 -0.3
      baz=306
F40A  Park Falls        130.80  34  P        PKiKP    11 28 30.3 -0.4
      baz=307
H39A  Augusta           130.87  36  P        PKPdf    11 28 30.1 +0.1
      baz=305
JCT   Junction City     130.88  57  PFAKE             11 28 40.0 +8.6
JCT                                 LR       LR
      comp=Z,1µm,19.0s
JCT   Junction City     130.88  57  P        PKPdf    11 28 30.8 +0.4
      baz=286
E41A  Kenton            131.10  33  P        PKiKP    11 28 31.0 -0.3
      baz=309
G40A  Rib Lake          131.15  35  P        PKiKP    11 28 32.0 +0.5
      baz=307
I39A  Houston           131.20  37 ePKPdf    PKPdf    11 28 30.5 -0.1
I39A  Houston           131.20  37  P        PKiKP    11 28 31.5 -0.1
      baz=304
SCIA  State Center      131.20  40  PFAKE             11 28 40.0 +8.4
SCIA                                LR       LR
      comp=Z,1µm,18.0s
J39A  Decorah           131.38  38  P        PKPdf    11 28 31.3 +0.3
      baz=304
H40A  Chili             131.43  36  P        PKPdf    11 28 30.9 -0.1
      baz=306
F41A  Three Lakes       131.48  34  P        PKPdf    11 28 31.2 +0.1
      baz=308
K39A  Oelwein           131.62  39  P        PKiKP    11 28 32.9 +0.4
      baz=303
833A  Chaparral WMA,    131.79  60  PFAKE             11 28 40.0 +6.8
833A                                LR       LR
      comp=Z,2µm,20.0s
833A  Chaparral WMA,    131.79  60  P        PKPdf    11 28 32.2  0.0
      baz=285
L39A  Vinton            131.86  39  P        PKiKP    11 28 32.4 -0.5
      baz=303
J40A  Soldiers Grove    131.93  37  P        PKiKP    11 28 32.9 -0.2
      baz=305
F42A  Maple Grove Fa    132.00  33  P        PKiKP    11 28 33.1  0.0
      baz=309
K40A  Colesburg         132.08  38  P        PKiKP    11 28 33.2 -0.2
      baz=304
M39A  Webster           132.09  40  P        PKiKP    11 28 33.0 -0.4
      baz=302
KOWA  Kowa              132.16 282  PFAKE             11 28 40.0 +5.7
KOWA                                LR       LR
      comp=Z,2µm,20.0s
G42A  Mountain          132.16  34  P        PKPdf    11 28 32.1 -0.2
      baz=309
TUL1  Leonard           132.19  49  P        PKPdf    11 28 33.0 +0.3
      baz=294
E43A  Lone Tree Farm    132.20  32  P        PKPdf    11 28 32.9 +0.5
      baz=311
WHTX  Lake Whitney,     132.33  54  P        PKiKP    11 28 33.7 -0.4
      baz=289
L40A  Anamosa           132.38  39 ePKPdf    PKPdf    11 28 32.9  0.0
L40A  Anamosa           132.38  39  P        PKPdf    11 28 32.7 -0.2
      baz=303
J41A  Loganville        132.38  37  P        PKPdf    11 28 33.3 +0.4
      baz=306
SCHQ  Schefferville     132.50  11  PKP      PKPdf    11 28 32.8 +0.1
      comp=Z,3.1nm,0.4s,baz=306,slow=2.8,SNR=12
SCHQ                                SKPbc    SKPbc    11 31 57.7 +0.5
      comp=Z,14nm,0.9s,baz=350,slow=3.6,SNR=8.3
SCHQ                                SKP               11 32 09.0
      comp=Z,8.7nm,0.8s,baz=99,slow=3.1,SNR=3.5
JFWS  Jewell Farm       132.50  38  P        PKPdf    11 28 33.3 +0.2
      baz=305
LNIG  Linares           132.50  64 ePKPdf    PKPdf    11 28 34.0 +0.3
LNIG                                LR       LR
      comp=Z,1µm,20.0s
M40A  Post Highland     132.55  40  P        PKPdf    11 28 33.7 +0.5
      baz=303
KIC   Kosan Boka        132.57 271 ePKP1     PKiKP    11 28 35.5 +0.3
      comp=Z,90nm,1.0s
DBIC  Dimbokro          132.71 271 ePKPdf    PKPdf    11 28 34.3  0.0
DBIC  Dimbokro          132.71 271 ePKIKP    PKPdf    11 28 34.3  0.0
DBIC  Dimbokro          132.71 271  PKP      PKPdf    11 28 34.4 +0.1
      comp=Z,22nm,0.7s,baz=87,slow=2.7,SNR=26
DBIC                                SKPbc    SKPbc    11 32 00.3 +1.1
      comp=Z,27nm,1.0s,baz=104,slow=4.3,SNR=11
I42A  Draeger Farm,     132.71  36  PFAKE             11 28 40.0 +5.4
I42A                                LR       LR
      comp=Z,2µm,18.0s
I42A  Draeger Farm,     132.71  36  P        PKiKP    11 28 34.4 -0.2
      baz=307
TRQA  Tornquist         132.76 170  PFAKE             11 28 50.0  +15
TRQA                                LR       LR
      comp=Z,2µm,20.0s
L41A  Preston           132.82  39  P        PKPdf    11 28 34.2 +0.5
      baz=304
LIC   Lamto             132.84 271 ePKP1     PKiKP    11 28 36.2 +0.5
      comp=Z,117nm,0.9s
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TIC	Toumodi	132.87	271	*e*PKP1	PKiKP	11 28 35.8	0.0
E45A	Wooded Hills,	133.15	31	P	PKPdf	11 28 34.2	0.0
	baz=313						
N41A	Harden Midland	133.35	40	P	PKiKP	11 28 36.2	+0.3
	baz=303						
D46A	Sault St. Mari	133.35	30	P	PKPdf	11 28 34.8	+0.2
	baz=315						
L42A	Oliver, Polo	133.37	38	P	PKPdf	11 28 35.2	+0.5
	baz=305						
HHAR	Hobbs	133.39	47	*e*PKPdf	PKPdf	11 28 34.6	-0.4
F45A	CMU Biological	133.43	32	P	PKPdf	11 28 35.0	+0.2
	baz=312						
E46A	Sault Ste Mari	133.58	30	P	PKPdf	11 28 35.6	+0.6
	baz=314						
UNM	Universidad Na	133.64	72	PFAKE		11 28 50.0	+12
UNM				LR	LR		
	comp=Z,1µm,19.0s						
O41A	Passleys Farm,	133.65	41	P	PKiKP	11 28 36.2	-0.4
	baz=302						
D47A	Chapleau	133.68	29	P	PKiKP	11 28 36.0	-0.5
	baz=316						
P41A	Barry, Barry	133.76	42	P	PKPdf	11 28 35.5	0.0
	baz=302						
G45A	Suttons Bay	133.79	32	P	PKPdf	11 28 35.3	-0.2
	baz=312						
MATQ	Matagami	133.94	22	P	PKiKP	11 28 36.6	-0.3
	baz=324						
W39A	Magazine	133.97	49	*e*PKPdf	PKPdf	11 28 35.4	-0.7
W39A				LR	LR		
	comp=Z,2µm,21.0s						
W39A	Magazine	133.97	49	P	PKPdf	11 28 36.3	+0.2
	baz=295						
Q41A	Truxton	134.02	43	P	PKPdf	11 28 36.3	+0.3
	baz=301,SNR=7.6						
E47A	Iron Bridge	134.03	29	P	PKiKP	11 28 36.8	-0.3
	baz=316						
M43A	Waltham Townsh	134.13	38	P	PKPdf	11 28 35.7	-0.5
	baz=305						
U40A	Yellville	134.14	47	P	PKPdf	11 28 36.5	+0.1
	baz=297						
D48A	Paudash Townsh	134.20	28	P	PKPdf	11 28 36.4	+0.2
	baz=318						
R41A	Rosebud	134.25	44	P	PKPdf	11 28 36.9	+0.4
	baz=300,SNR=17						
P42A	Winchester	134.28	41	PFAKE		11 28 50.0	+12
P42A				LR	LR		
	comp=Z,1µm,18.0s						
P42A	Winchester	134.28	41	P	PKPdf	11 28 36.6	+0.1
	baz=302						
HKT	Hockley	134.31	56	PFAKE		11 28 50.0	+12
HKT				LR	LR		
	comp=Z,2µm,20.0s						
S41A	Jillco Farms,	134.35	45	P	PKiKP	11 28 37.5	-0.6
	baz=299						
MIAR	Mount Ida	134.40	49	PFAKE		11 28 50.0	+12
MIAR				LR	LR		
	comp=Z,2µm,21.0s						
MIAR	Mount Ida	134.40	49	P	PKiKP	11 28 37.8	-0.5
	baz=295						
HDIL	Hopedale	134.42	40	P	PKPdf	11 28 37.2	+0.4
	baz=304						
CCM	Cathedral Cave	134.46	44	*e*PKPdf	PKPdf	11 28 36.7	-0.2
CCM	Cathedral Cave	134.46	44	*e*PKIKP	PKPdf	11 28 36.7	-0.2
CCM	Cathedral Cave	134.46	44	P	PKPdf	11 28 37.5	+0.6
	baz=300						
GLMI	Grayling	134.48	32	P	PKiKP	11 28 37.7	-0.5
	baz=313						
Q42A	Golden Eagle	134.51	42	P	PKPdf	11 28 37.5	+0.5
	baz=302						
E48A	Lockeyer	134.54	29	P	PKPdf	11 28 37.1	+0.3
	baz=317						
T41A	Mountain View	134.60	45	P	PKPdf	11 28 37.2	0.0
	baz=299						
G47A	Hillman	134.64	31	P	PKPdf	11 28 37.6	+0.6
	baz=314						
R42A	Luebbering	134.66	43	P	PKPdf	11 28 37.3	0.0
	baz=301,SNR=7.0						
M44A	Midewin, Midew	134.72	38	PFAKE		11 28 50.0	+11
M44A				LR	LR		
	comp=Z,1µm,18.0s						
LSQQ	Lebel-sur-Quev	134.76	23	P	PKiKP	11 28 37.9	-0.7
	baz=325						
P43A	Skaggs, Pawnee	134.78	41	P	PKPdf	11 28 37.8	+0.3
	baz=303						
U41A	Viola	134.82	46	P	PKPdf	11 28 37.7	+0.1
	baz=298						
H47A	Mio	134.85	32	P	PKPdf	11 28 37.6	+0.1
	baz=313						
S42A	Caledonia	134.91	44	P	PKPdf	11 28 38.5	+0.7
	baz=300						
CHGQ	Chibougamau	134.97	20	P	PKPdf	11 28 37.6	+0.1
	baz=329						
X40A	Basin Creek Fa	134.98	49	PFAKE		11 28 50.0	+11
X40A				LR	LR		
	comp=Z,2µm,19.0s						
X40A	Basin Creek Fa	134.98	49	P	PKPdf	11 28 38.5	+0.5
	baz=296						
Q43A	New Douglas	135.04	42	P	PKiKP	11 28 39.5	0.0
	baz=302						
PEL	Peldehue	135.05	158	PFAKE		11 28 50.0	+10
PEL				LR	LR		
	comp=Z,2µm,18.0s						
T42A	Van Buren	135.07	45	*e*PKPdf	PKPdf	11 28 38.0	-0.1
T42A				LR	LR		
	comp=Z,1µm,18.0s						
T42A	Van Buren	135.07	45	P	PKiKP	11 28 39.6	0.0
	baz=300						
ROC1	El Roble	135.07	158	*e*PKPdf	PKPdf	11 28 37.3	-1.3
W41B	Gary Mavity, V	135.11	48	*e*PKPdf	PKPdf	11 28 37.5	-0.7
W41B	Gary Mavity, V	135.11	48	P	PKPdf	11 28 38.4	+0.2
	baz=297						
O44A	Mansfield	135.17	40	P	PKPdf	11 28 38.3	+0.2
	baz=305						
E50A	Wahnapitae	135.25	28	P	PKPdf	11 28 38.8	+0.6
	baz=319						
U42A	Revenden	135.30	46	P	PKPdf	11 28 39.0	+0.4
	baz=299						
VLDQ	Val d'Or	135.34	24	*e*PKPdf	PKPdf	11 28 37.2	-1.0
D51A	Lot 18 Range I	135.35	26	P	PKPdf	11 28 38.7	+0.4
	baz=321						
I48A	Sherman Twp	135.40	32	P	PKPdf	11 28 38.8	+0.4
	baz=313						
J47A	Sunmer	135.43	34	P	PKPdf	11 28 38.9	+0.3
	baz=311						
P44A	Sand Creek, Wi	135.46	41	P	PKPdf	11 28 38.9	+0.1
	baz=304						
S43A	Fulton Ridge,	135.51	44	P	PKPdf	11 28 38.7	-0.2
	baz=301						
Q44A	Meyer Farm, Va	135.51	41	P	PKPdf	11 28 39.1	+0.3
	baz=303						
T43A	Greenville	135.61	44	P	PKPdf	11 28 38.5	-0.6
	baz=300						
PBMO	Poplar Bluff	135.66	45	*e*PKPdf	PKPdf	11 28 39.0	-0.2
K47A	Vermontville	135.71	35	P	PKPdf	11 28 38.8	-0.3
	baz=311						
E51A	G1948 Merrick	135.73	27	P	PKPdf	11 28 38.4	-0.7
	baz=320						
R44A	Waltonville	135.82	42	P	PKPdf	11 28 39.8	+0.3
	baz=303						
D52A	ZEK Kipawa Sen	135.85	25	P	PKPdf	11 28 39.6	+0.4
	baz=322						
U43A	Rector	135.88	45	P	PKiKP	11 28 40.6	-0.6
	baz=300						
SFIN	Lafayette	135.89	38	P	PKiKP	11 28 40.6	-0.6
	baz=306						
J48A	Bridge Port	135.96	33	P	PKiKP	11 28 41.5	+0.3
	baz=313						
P45A	Graceland, Par	135.99	40	PFAKE		11 28 50.0	+8.6
P45A				LR	LR		
	comp=Z,2µm,21.0s						
P45A	Graceland, Par	135.99	40	P	PKPdf	11 28 40.3	+0.6
	baz=305						
F51A	Arnstein	136.00	28	P	PKPdf	11 28 40.1	+0.6
	baz=319						
S44A	Carbondale	136.00	43	P	PKPdf	11 28 40.4	+0.6
	baz=302						
I49A	Point Hope	136.02	32	P	PKPdf	11 28 40.2	+0.6
	baz=314						
V43A	Jonesboro	136.06	46	P	PKPdf	11 28 40.5	+0.5
	baz=299						
D53A	Lac Vacive, Po	136.07	25	P	PKiKP	11 28 40.5	-0.8
	baz=323						
Q45A	Warren Harvey,	136.08	41	P	PKiKP	11 28 41.0	-0.5
	baz=304						
T44A	Benton	136.09	44	P	PKPdf	11 28 40.2	+0.2
	baz=301						
K48A	Perry	136.11	34	P	PKPdf	11 28 40.3	+0.4
	baz=312						
PARMO	Parma	136.19	45	PFAKE		11 28 50.0	+8.2
PARMO				LR	LR		
	comp=Z,1µm,21.0s						
J49A	Marlette	136.26	32	P	PKPdf	11 28 40.7	+0.6
	baz=314						
P46A	Rosedale	136.27	39	P	PKPdf	11 28 40.4	+0.1
	baz=306						
E52A	Mattawa	136.29	26	P	PKiKP	11 28 41.2	-0.6
	baz=321						
R45A	Skylar, Fairfi	136.33	42	P	PKPdf	11 28 41.2	+0.8
	baz=304						
GNAR	Gosnell	136.35	46	PFAKE		11 28 50.0	+7.8
GNAR				LR	LR		
	comp=Z,1µm,19.0s						
F52A	Sundridge	136.37	27	P	PKPdf	11 28 40.9	+0.6
	baz=320						
D54A	Lac Fusel, La	136.44	24	P	PKPdf	11 28 40.8	+0.5
	baz=324						
N47A	Urbana	136.44	37	P	PKPdf	11 28 41.0	+0.5
	baz=308						
S45A	Carrier Mills	136.46	43	P	PKPdf	11 28 40.6	0.0
	baz=303,SNR=6.0						
L48A	N Adams	136.50	35	P	PKPdf	11 28 41.3	+0.7
	baz=311						
Q46A	CEJHS Indians,	136.52	40	P	PKPdf	11 28 41.2	+0.5
	baz=305						
O47A	Sheridan	136.54	38	P	PKPdf	11 28 41.1	+0.3
	baz=307						
BUKO	Buck Lake	136.60	28	P	PKPdf	11 28 41.4	+0.7
	baz=320						
M48A	Edgerton	136.63	36	PFAKE		11 28 50.0	+7.4
M48A				LR	LR		
	comp=Z,2µm,20.0s						
E53A	Dumoine, Ponti	136.64	25	P	PKiKP	11 28 41.8	-0.7
	baz=322						
Y43A	Makayla and Ka	136.65	49	P	PKPdf	11 28 41.7	+0.6
	baz=297						
L49A	Milan	136.76	34	P	PKPdf	11 28 41.7	+0.6
	baz=312						
T45A	Paducah	136.77	44	PFAKE		11 28 50.0	+7.0
T45A				LR	LR		
	comp=Z,2µm,19.0s						
E54A	Lac Daplat, Po	136.80	25	P	PKPdf	11 28 41.4	+0.3
	baz=323						
ALGO	Algonquin Park	136.81	26	P	PKPdf	11 28 40.7	-0.3
	baz=322						
MET	Memphis--Engin	136.82	47	PFAKE		11 28 50.0	+6.8
MET				LR	LR		
	comp=Z,2µm,21.0s						
N48A	Decatur	136.85	37	P	PKPdf	11 28 41.6	+0.3
	baz=309						
P47A	Martinsville	136.94	39	P	PKPdf	11 28 41.7	+0.2
	baz=307						
I51A	Listowel	137.04	30	P	PKPdf	11 28 42.2	+0.6
	baz=316						
O48A	Farmland	137.15	37	P	PKiKP	11 28 42.8	-1.0
	baz=309						
Q47A	Bedord North L	137.16	40	P	PKiKP	11 28 42.8	-1.0
	baz=306						
G53A	Haliburton	137.20	27	P	PKPdf	11 28 42.6	+0.7
	baz=320						
T46A	Princeton	137.26	43	P	PKPdf	11 28 43.0	+0.8
	baz=303,SNR=7.1						
N49A	Columbus Grove	137.30	36	P	PKiKP	11 28 43.3	-0.7
	baz=310						
ELFO	Elginfield	137.33	31	P	PKPdf	11 28 42.6	+0.5
	baz=316						
L50A	Kingsville	137.33	34	P	PKPdf	11 28 42.3	+0.1
	baz=313						
W45A	Hickory Valley	137.34	46	P	PKPdf	11 28 42.5	+0.1
	baz=300						
PEMO	Pembroke	137.37	26	P	PKPdf	11 28 42.6	+0.5
	baz=323						
U46A	Springville	137.43	44	P	PKPdf	11 28 42.4	-0.1
	baz=302,SNR=7.0						
R47A	Wooly Knot Far	137.47	41	P	PKPdf	11 28 43.0	+0.5
	baz=305						
P48A	Milroy	137.47	38	P	PKPdf	11 28 43.2	+0.8
	baz=308						
BANO	Bancroft	137.59	27	P	PKPdf	11 28 42.6	+0.1
	baz=321						
Q48A	North Vernon	137.60	39	P	PKPdf	11 28 42.5	-0.3
	baz=307						
F55A	Otter Lake	137.62	25	P	PKPdf	11 28 42.7	+0.1
	baz=324						
M50A	Fremont	137.63	35	P	PKPdf	11 28 43.3	+0.6
	baz=312						
S47A	Hartford	137.64	42	P	PKiKP	11 28 43.8	-1.0
	baz=304						
GO04	Tololo Observa	137.65	156	PFAKE		11 29 00.0	+15
GO04				LR	LR		
	comp=Z,2µm,18.0s						
WCI	Wyandotte Cave	137.66	41	PFAKE		11 28 50.0	+5.2
WCI				LR	LR		
	comp=Z,2µm,21.0s						
WCI	Wyandotte Cave	137.66	41	P	PKiKP	11 28 44.8	0.0
	baz=306						
ACTO	Acton	137.66	30	P	PKPdf	11 28 43.1	+0.4
	baz=318						
O49A	Covington	137.68	37	*e*PKPdf	PKPdf	11 28 41.5	-1.3
O49A	Covington	137.68	37	P	PKPdf	11 28 43.6	+0.7
	baz=310						
LATQ	La Tuque	137.69	20	P	PKPdf	11 28 43.5	+0.9
	baz=330						
VBMS	Vicksburg	137.70	51	PFAKE		11 28 50.0	+5.0
VBMS				LR	LR		
	comp=Z,2µm,21.0s						
J52A	Paris	137.72	31	P	PKPdf	11 28 43.4	+0.5
	baz=317						
V46A	Holladay	137.76	45	P	PKPdf	11 28 43.1	0.0
	baz=301,SNR=5.5						
WVT	Waverly	137.79	44	*e*PKPdf	PKPdf	11 28 42.0	-1.1
WVT				LR	LR		
	comp=Z,1µm,19.0s						
WVT	Waverly	137.79	44	*e*PKIKP	PKPdf	11 28 42.1	-1.1
WVT				MLR	MLR		
	comp=Z,1µm,19.0s						
WVT	Waverly	137.79	44	P	PKPdf	11 28 44.1	+0.9
	baz=302						
T47A	Sharon Grove	137.82	43	*e*PKPdf	PKPdf	11 28 42.2	-1.0
T47A	Sharon Grove	137.82	43	P	PKPdf	11 28 43.9	+0.7
	baz=304						
W46A	Michie	137.92	46	P	PKPdf	11 28 43.6	+0.1
	baz=300						
K52A	Tillsonburg	137.93	31	P	PKPdf	11 28 43.4	+0.1
	baz=316						
G55A	Calabogie	137.94	26	P	PKPdf	11 28 43.7	+0.5
	baz=323						
CMIG	Matias Romero	137.95	74	PKP	PKPdf	11 28 43.7	-0.2
	baz=315,slow=5.7						
CMIG				SKPbc	SKiKP	11 32 18.9	-0.8
	comp=Z,6.5nm,1.1s,baz=297,slow=4.5,SNR=4.5						
PLVO	Plevna	137.95	26	P	PKPdf	11 28 43.7	+0.5
	baz=322						
N50A	Nevada	137.99	35	P	PKPdf	11 28 43.7	+0.3
	baz=311						
U47A	Clarksville	138.00	43	P	PKPdf	11 28 43.6	0.0
	baz=303						
DELO	Deloro Mine	138.12	27	P	PKPdf	11 28 43.9	+0.4
	baz=321						
O50A	Cable	138.13	36	P	PKPdf	11 28 43.1	-0.6
	baz=310						
TYNO	Tyneside	138.13	30	P	PKPdf	11 28 43.3	-0.3
	baz=317						
V47A	Nunnelly	138.16	44	P	PKPdf	11 28 43.3	-0.6
	baz=302,SNR=6.1						
PLAL	Pickwick Lake	138.21	46	*e*PKPdf	PKPdf	11 28 43.0	-1.0
T48A	Bowling Green	138.23	42	P	PKPdf	11 28 44.5	+0.6
	baz=304						
ORIO	Orleans, Innes	138.28	24	P	PKPdf	11 28 44.2	+0.4
	baz=325						
H55A	Tweed	138.29	27	P	PKPdf	11 28 43.9	0.0
	baz=322						
N51A	Ashland	138.33	35	*e*PKPdf	PKPdf	11 28 43.3	-0.7
N51A	Ashland	138.33	35	P	PKPdf	11 28 44.0	-0.1
	baz=312						
R49A	Shelbyville	138.33	40	P	PKPdf	11 28 44.0	-0.1
	baz=307						
P50A	Jamestown	138.37	37	P	PKPdf	11 28 45.0	+0.8
	baz=310						
ALFO	Alfred	138.39	24	P	PKPdf	11 28 44.5	+0.5
	baz=326						
W47A	Westpoint	138.41	45	P	PKPdf	11 28 44.7	+0.3
	baz=301						
ACSO	Alum Creek Sta	138.44	36	P	PKPdf	11 28 44.9	+0.6
	baz=311						
U48A	Cassie Pea, Po	138.47	43	P	PKPdf	11 28 44.9	+0.4
	baz=304						
M52A	Chesterland	138.47	33	P	PKPdf	11 28 44.7	+0.4
	baz=314						
S49A	Springfield	138.56	40	P	PKPdf	11 28 44.2	-0.3
	baz=306						
X47A	Russelville	138.60	46	P	PKPdf	11 28 44.6	-0.1
	baz=300						
V48A	Smith Brothers	138.69	44	P	PKiKP	11 28 46.1	-0.9
	baz=303						
O51A	Pataskala	138.72	36	P	PKiKP	11 28 45.9	-1.0
	baz=312						
L53A	Girard	138.76	32	P	PKiKP	11 28 46.5	-0.5
	baz=316						
MEDO	Medina	138.77	29	P	PKPdf	11 28 45.8	+1.0
	baz=319						
N52A	McGinn’s Farm,	138.79	34	P	PKPdf	11 28 45.7	+0.8
	baz=313						
T49A	Edmonton	138.80	41	*e*PKPdf	PKPdf	11 28 42.2	-2.8
T49A				LR	LR		
	comp=Z,2µm,19.0s						
T49A	Edmonton	138.80	41	P	PKPdf	11 28 45.9	+0.9
	baz=305						
R50A	Paris	138.87	39	P	PKiKP	11 28 47.0	-0.3
	baz=308						
P51A	Williamsport	138.89	37	P	PKiKP	11 28 46.1	-1.1
	baz=310						
W48A	Pulaski	138.93	45	P	PKPdf	11 28 45.6	+0.3
	baz=302						
U49A	Red Boiling Sp	138.97	42	P	PKPdf	11 28 45.9	+0.6
	baz=305						
J55A	Hilton	139.00	28	P	PKPdf	11 28 45.7	+0.6
	baz=320						
Q51A	Peebles	139.01	37	P	PKPdf	11 28 45.5	+0.1
	baz=310						
ALLY	Alegheny Colle	139.04	32	PFAKE		11 29 00.0	+12
ALLY				LR	LR		
	comp=Z,1µm,19.0s						
O52A	Adamsville	139.18	35	P	PKPdf	11 28 45.8	+0.1
	baz=312						
S50A	Richmond	139.19	40	P	PKPdf	11 28 46.3	+0.6
	baz=307						
147A	Livingston	139.19	49	PFAKE		11 29 00.0	+12
147A				LR	LR		
	comp=Z,2µm,20.0s						
X48A	Hartselle	139.21	46	*e*PKPdf	PKPdf	11 28 43.4	-2.4
X48A				LR	LR		
	comp=Z,1µm,21.0s						
X48A	Hartselle	139.21	46	P	PKPdf	11 28 45.8	-0.1
	baz=301						
N53A	Lisbon	139.26	33	P	PKPdf	11 28 45.9	+0.1
	baz=314						
T50A	Nancy	139.30	41	P	PKPdf	11 28 46.1	+0.2
	baz=306						
V49A	McMinnville	139.31	43	P	PKPdf	11 28 46.3	+0.3
	baz=304						
R51A	Hillsboro	139.32	38	P	PKPdf	11 28 45.7	-0.2
	baz=309						
P52A	Corning	139.33	36	P	PKPdf	11 28 46.1	+0.2
	baz=312						
LONY	Lake Ozonia	139.34	24	P	PKPdf	11 28 46.3	+0.5
	baz=325						
M54A	Oil Creek Stat	139.39	32	*e*PKPdf	PKPdf	11 28 44.1	-1.9
M54A	Oil Creek Stat	139.39	32	P	PKPdf	11 28 46.1	+0.1
	baz=316						
Y48A	Jasper	139.40	47	P	PKPdf	11 28 46.1	-0.1
	baz=301						
W49A	Belvidere	139.41	44	P	PKPdf	11 28 45.9	-0.3
	baz=303						
O53A	New Philadelph	139.44	34	P	PKPdf	11 28 46.2	+0.1
	baz=313						
L55A	Hinsdale	139.52	30	P	PKPdf	11 28 45.6	-0.6
	baz=318						
N54A	Moraine State	139.61	33	P	PKPdf	11 28 46.5	+0.2
	baz=316						
U50A	Jamestown	139.65	42	P	PKPdf	11 28 46.5	-0.1
	baz=306						
X49A	Woodville	139.69	45	P	PKPdf	11 28 46.7	+0.1
	baz=302						
Q52A	Bidwell	139.69	37	P	PKPdf	11 28 46.7	+0.1
	baz=311						
S51A	Beattyville	139.72	39	*e*PKPdf	PKPdf	11 28 45.3	-1.4
S51A	Beattyville	139.72	39	P	PKPdf	11 28 46.2	-0.5
	baz=308						
P53A	Whipple	139.85	35	*e*PKPdf	PKiKP	11 28 48.4	-0.9
P53A	Whipple	139.85	35	P	PKPdf	11 28 47.1	+0.2
	baz=312						
R52A	Catlettsburg	139.87	38	P	PKPdf	11 28 47.7	+0.8
	baz=310						
V50A	Pikevile	139.90	43	P	PKPdf	11 28 47.1	0.0
	baz=304						
O54A	Avella	139.95	34	P	PKPdf	11 28 47.1	+0.1
	baz=314						
LRAL	Lakeview Retre	139.96	48	*e*PKPdf	PKPdf	11 28 46.0	-1.2
LRAL				LR	LR		
	comp=Z,2µm,19.0s						
LRAL	Lakeview Retre	139.96	48	P	PKPdf	11 28 48.0	+0.8
	baz=300						
Y49A	Blount Mountai	139.97	46	P	PKPdf	11 28 47.7	+0.5
	baz=301						
W50A	Signal Mountai	140.02	44	*e*PKPdf	PKPdf	11 28 45.7	-1.6
W50A	Signal Mountai	140.02	44	P	PKPdf	11 28 47.9	+0.6
	baz=304						
NCB	Newcomb	140.02	25	*e*PKPdf	PKPdf	11 28 45.4	-1.7
GO03	Copiap	140.16	155	PFAKE		11 29 00.0	+10
GO03				LR	LR		
	comp=Z,2µm,20.0s						
Z49A	Columbiana	140.22	47	P	PKPdf	11 28 47.8	+0.1
	baz=300						
149A	Jones	140.32	48	P	PKPdf	11 28 46.5	-1.4
	baz=300						
V51A	Loudon	140.32	42	PFAKE		11 29 00.0	+10
V51A				LR	LR		
	comp=Z,2µm,22.0s						
249A	Camden	140.38	49	P	PKPdf	11 28 48.8	+0.8
	baz=299						
CPCT	Cooper Cave	140.41	43	PFAKE		11 29 00.0	+9.5
CPCT				LR	LR		
	comp=Z,1µm,21.0s						
W51A	Cleveland	140.42	43	P	PKPdf	11 28 47.9	-0.1
	baz=304						
Y50A	Piedmont	140.43	46	P	PKPdf	11 28 48.9	+0.8
	baz=302						
O55A	Ligonier	140.51	33	P	PKiKP	11 28 49.5	-1.1
	baz=316						
Q54A	Coxs Mills	140.51	36	P	PKPdf	11 28 48.9	+0.9
	baz=313						
S53A	Williamson	140.60	38	P	PKPdf	11 28 49.1	+0.8
	baz=310						
349A	Repton	140.62	50	P	PKPdf	11 28 48.6	+0.1
	baz=298						
Z50A	Ashland	140.63	47	*e*PKPdf	PKPdf	11 28 47.0	-1.5
Z50A				LR	LR		
	comp=Z,2µm,20.0s						
Z50A	Ashland	140.63	47	P	PKPdf	11 28 48.8	+0.3
	baz=301						
CCIG	Comitan	140.65	75	PFAKE		11 29 00.0	+8.3
CCIG				LR	LR		
	comp=Z,1µm,21.0s						
BINY	Binghamton	140.68	28	*e*PKPdf	PKPdf	11 28 46.3	-2.0
BINY	Binghamton	140.68	28	P	PKPdf	11 28 49.0	+0.7
	baz=322						
X51A	Calhoun	140.68	44	P	PKPdf	11 28 48.4	-0.1
	baz=304						
P55A	Reedsville	140.72	34	P	PKPdf	11 28 48.4	-0.1
	baz=314						
T53A	Wise	140.79	39	P	PKPdf	11 28 49.7	+1.0
	baz=309						
V52A	Sevierville	140.80	42	P	PKPdf	11 28 49.8	+1.2
	baz=306						
BRAL	Brewton	140.81	50	P	PKPdf	11 28 49.8	+1.0
	baz=298						
O56A	Blue Knob Stat	140.86	32	P	PKPdf	11 28 49.3	+0.6
	baz=317						
150A	Eclectic	140.88	48	P	PKPdf	11 28 49.9	+1.0
	baz=300						
Q55A	Buckhannon	140.93	35	P	PKPdf	11 28 50.2	+1.3
	baz=314						
250A	Grady	141.01	49	PFAKE		11 29 00.0	+8.1
250A				LR	LR		
	comp=Z,2µm,19.0s						
W52A	Murphy	141.02	43	P	PKPdf	11 28 49.8	+0.6
	baz=305						
Z51A	Franklin	141.13	46	P	PKPdf	11 28 49.9	+0.5
	baz=302						
U53A	Fall Branch	141.15	40	P	PKPdf	11 28 50.6	+1.2
	baz=308						
X52A	Dahlonega	141.32	43	P	PKPdf	11 28 50.2	+0.5
	baz=305						

T54A	Tazewell	141.34	38	P	PKPdf	11 28 50.4	+0.7
	baz=310						
V53A	Saluda	141.41	41	P	PKPdf	11 28 49.8	-0.1
	baz=307						
151A	Opelika	141.43	47	P	PKPdf	11 28 50.2	+0.3
	baz=301						
S55A	Lewisburg	141.52	37	P	PKPdf	11 28 50.5	+0.5
	baz=312						
Y52A	Lilburn	141.62	44	P	PKPdf	11 28 50.8	+0.5
	baz=304,SNR=7.8						
Z52A	Williamson	141.74	46	P	PKPdf	11 28 51.4	+1.0
	baz=303						
X53A	Estanollee	141.78	43	P	PKPdf	11 28 50.7	+0.3
	baz=305						
152A	Waverly Hall	141.80	47	PFAKE		11 29 00.0	+6.6
152A				LR	LR		
	comp=Z,2µm,21.0s						
152A	Waverly Hall	141.80	47	P	PKPdf	11 28 50.5	0.0
	baz=302						
BLA	Blacksburg	141.94	37	*e*PKPdf	PKPdf	11 28 49.5	-1.2
BLA	Blacksburg	141.94	37	*e*PKIKP	PKPdf	11 28 49.5	-1.2
BLA	Blacksburg	141.94	37	P	PKPdf	11 28 51.4	+0.6
	baz=312						
Y53A	Monroe	141.95	44	P	PKPdf	11 28 51.5	+0.7
	baz=304						
451A	Vernon	142.06	50	P	PKPdf	11 28 52.3	+1.2
	baz=299						
MYIG	Mrida	142.10	67	PFAKE		11 29 00.0	+5.6
MYIG				LR	LR		
	comp=Z,900nm,21.0s						
W54A	Cherokee Point	142.18	41	P	PKPdf	11 28 51.4	+0.2
	baz=307						
Z53A	Monticello	142.28	45	P	PKPdf	11 28 52.0	+0.6
	baz=304						
GOGA	Godfrey	142.28	45	*e*PKPdf	PKPdf	11 28 49.7	-1.7
GOGA	Godfrey	142.28	45	*e*PKIKP	PKPdf	11 28 49.7	-1.7
GOGA	Godfrey	142.28	45	P	PKPdf	11 28 51.7	+0.3
	baz=304						
HRV	Adam Dziewonsk	142.31	23	PFAKE		11 29 00.0	+5.8
HRV				LR	LR		
	comp=Z,1µm,18.0s						
APG	El Apazote	142.38	77	PKhKP	PKPpre	11 28 49.6	
	comp=Z,50nm,1.1s,baz=289,slow=5.0,SNR=18						
APG				SKP		11 32 28.2	
	comp=Z,7.3nm,0.8s,baz=326,slow=18,SNR=2.2						
WES	Weston	142.51	23	*e*PKPdf	PKPdf	11 28 50.0	-1.5
WES				LR	LR		
	comp=Z,1µm,19.0s						
WES	Weston	142.51	23	*e*PKIKP	PKPdf	11 28 50.0	-1.5
WES				MLR	MLR		
	comp=Z,1µm,19.0s						
253A	Americus	142.54	47	*e*PKPdf	PKPdf	11 28 53.0	+1.1
253A				LR	LR		
	comp=Z,2µm,19.0s						
253A	Americus	142.54	47	P	PKPdf	11 28 52.7	+0.8
	baz=302						
Y54A	Tignall	142.56	43	P	PKPdf	11 28 52.6	+0.8
	baz=306						
GO02	Mina Guanaco	142.56	154	*e*PKPdf	PKPdf	11 28 50.8	-1.8
GO02				LR	LR		
	comp=Z,2µm,20.0s						
PAL	Palisades	142.57	27	P	PKPdf	11 28 52.3	+0.7
	baz=324						
552A	Lynn Haven	142.63	51	P	PKiKP	11 28 53.8	-1.4
	baz=298						
HODGE	Hodges	142.63	43	*e*PKPdf	PKPdf	11 28 50.4	-1.6
KMSC	Kings Mountain	142.69	41	P	PKPdf	11 28 53.3	+1.2
	baz=308						
353A	Camilla	142.84	48	P	PKiKP	11 28 54.1	-1.5
	baz=301						
X55A	Gracelyn & Ava	142.91	42	P	PKiKP	11 28 54.0	-1.6
	baz=307						
154A	Montrose	142.97	45	*e*PKPdf	PKPdf	11 28 51.6	-1.0
154A				LR	LR		
	comp=Z,2µm,22.0s						
453A	Whigham	143.02	49	P	PKiKP	11 28 54.5	-1.5
	baz=300						
TIGA	Tifton	143.25	47	*e*PKPdf	PKPdf	11 28 51.8	-1.4
553A	Crawfordville	143.26	50	P	PKPdf	11 28 54.0	+0.8
	baz=299						
JSC	Jenkinsville	143.27	42	*e*PKPdf	PKPbc	11 28 51.5	+1.3
JSC	Jenkinsville	143.27	42	*e*PKIKP	PKPbc	11 28 51.5	+1.4
X56A	White Oak	143.29	41	P	PKPdf	11 28 54.4	+1.2
	baz=308						
Z55A	Blythe	143.31	44	P	PKPdf	11 28 53.9	+0.7
	baz=306						
155A	Kite	143.42	45	P	PKPdf	11 28 54.3	+0.8
	baz=304						
454A	Quitman	143.60	49	P	PKPdf	11 28 54.5	+0.7
	baz=301						
TEIG	Tepich	143.60	68	*e*PKPdf	PKPbc	11 28 52.0	+0.5
TEIG				LR	LR		
	comp=Z,800nm,19.0s						
255A	Hazlehurst	143.80	46	*e*PKPdf	PKPbc	11 28 52.8	+1.1
255A				LR	LR		
	comp=Z,2µm,20.0s						
255A	Hazlehurst	143.80	46	P	PKPdf	11 28 53.8	-0.3
	baz=304						
355A	Pearson	143.84	47	P	PKPdf	11 28 54.0	-0.2
	baz=302						
554A	Perry	143.88	49	P	PKPdf	11 28 54.2	-0.1
	baz=300						
455A	Stateville	144.03	48	P	PKPdf	11 28 54.5	0.0
	baz=302						
156A	Sylvania	144.07	44	P	PKPdf	11 28 54.2	-0.3
	baz=306						
256A	Glennville	144.18	45	P	PKPdf	11 28 55.2	+0.4
	baz=304						
X58A	Rowland	144.34	40	P	PKPdf	11 28 54.9	0.0
	baz=310						
356A	Blackshear	144.37	46	P	PKPdf	11 28 55.3	+0.2
	baz=303						
555A	McAlpin	144.39	49	*e*PKPdf	PKPbc	11 28 54.1	+0.4
555A	McAlpin	144.39	49	P	PKPdf	11 28 55.5	+0.3
	baz=301,SNR=5.9						
NHSC	New Hope	144.70	42	P	PKPdf	11 28 55.5	-0.1
	baz=308						
PB04	IPOC Station P	144.75	151	PFAKE		11 29 10.0	+10
PB04				LR	LR		
	comp=Z,2µm,19.0s						
456A	Hilliard	144.77	47	P	PKPdf	11 28 55.6	-0.2
	baz=303						
CNNC	Cliffs of the	144.78	37	*e*PKPdf	PKPdf	11 28 55.4	-0.3
CNNC	Cliffs of the	144.78	37	P	PKPdf	11 28 55.6	-0.1
	baz=313						
357A	Townsend	144.78	46	P	PKPdf	11 28 56.1	+0.3
	baz=304						
257A	Skidaway Islan	144.79	45	P	PKPdf	11 28 55.4	-0.4
	baz=305						
556A	Lake Butler	144.87	49	P	PKPdf	11 28 55.6	-0.4
	baz=301,SNR=11						
CPUP	Villa Florida	144.97	173	*e*PKPbc	PKPdf	11 28 56.4	0.0
CPUP	Villa Florida	144.97	173	*e*PKIKP	PKPdf	11 28 56.4	0.0
CPUP	Villa Florida	144.97	173	PKPbc	PKPdf	11 28 57.3	+1.0
	comp=Z,19nm,0.7s,baz=189,slow=2.7,SNR=42						
LVC	Limon Verde	145.09	153	*e*PKPbc	PKPdf	11 28 58.8	+1.7
LVC				LR	LR		
	comp=Z,1µm,19.0s						
LVC	Limon Verde	145.09	153	*e*PKIKP	PKPdf	11 28 58.8	+1.7
LVC				MLR	MLR		
	comp=Z,1µm,19.0s						
LVC	Limon Verde	145.09	153	PKPbc	PKPdf	11 28 58.8	+1.7
	comp=Z,28nm,0.7s,baz=238,slow=2.5,SNR=22						
LVC				SKP		11 32 35.3	
	comp=Z,15nm,1.1s,baz=221,slow=6.4,SNR=4.6						
656A	Willston	145.10	50	P	PKPdf	11 28 56.2	-0.2
	baz=300,SNR=14						
557A	Orange Park	145.36	48	P	PKPdf	11 28 57.2	+0.3
	baz=302,SNR=11						
657A	Interlachen	145.49	49	P	PKPab	11 28 57.6	+0.2
	baz=302,SNR=7.6						
TGUH	Tegucigalpa,Un	145.55	78	PFAKE		11 29 10.0	+8.4
TGUH				LR	LR		
	comp=Z,800nm,20.0s						
757A	Oxford	145.66	50	P	PKPab	11 28 58.1	+0.1
	baz=300,SNR=8.7						
857A	Zephyrhills	145.88	51	P	PKPab	11 28 58.8	0.0
	baz=300,SNR=14						
658A	Bunnell	146.03	49	P	PKPab	11 28 59.4	0.0
	baz=302						
PB01	IPOC Station P	146.17	151	PFAKE		11 29 10.0	+7.1
PB01				LR	LR		
	comp=Z,2µm,20.0s						
758A	Lake Helen	146.31	49	P	PKPab	11 29 00.1	-0.4
	baz=302						
ESTN	Estel	146.50	79	PFAKE		11 29 10.0	+6.3
ESTN				LR	LR		
	comp=Z,400nm,19.0s						
ESTN	Estel	146.50	79	*e*P	PKPab	11 29 01.5	-0.3
DWPF	Disney Wildern	146.56	51	P	PKPbc	11 29 00.3	-0.1
	baz=300						
858A	St. Cloud	146.57	51	P	PKPab	11 29 00.9	-0.6
	baz=300,SNR=7.1						
958A	Wauchula	146.57	52	P	PKPbc	11 29 00.8	+0.3
	baz=299,SNR=14						
058A	Arcadia	146.78	53	P	PKPab	11 29 01.7	-0.6
	baz=298,SNR=12						
MATN	Matagalpa	146.95	80	*e*P	PKPbc	11 29 02.5	+0.5
859A	Kempfer Cattle	147.00	50	P	PKPbc	11 29 02.3	+0.6
	baz=301,SNR=8.5						
PB11	IPOC Station P	147.17	149	*e*PKPdf	PKPdf	11 29 01.3	+0.9
PB11				LR	LR		
	comp=Z,2µm,19.0s						
BOAB	BOACO BROADBAN	147.23	80	PFAKE		11 29 10.0	+4.9
BOAB				LR	LR		
	comp=Z,2µm,20.0s						
959A	Okeechobee	147.28	51	P	PKPbc	11 29 02.7	+0.1
	baz=300,SNR=9.2						
059A	Moore Haven	147.34	52	P	PKPbc	11 29 03.5	+0.7
	baz=299						
059Z	Ave Maria	147.40	54	P	PKPab	11 29 03.8	-1.0
	baz=298,SNR=14						
BUEV	Buena Vista	147.55	83	*e*P	PKPab	11 29 05.0	-0.9
GB1A	Borinquen Arri	147.56	83	*e*P	PKiKP	11 29 06.6	+0.7
GPS2	Hotel Rincn d	147.60	83	*e*P	PKPbc	11 29 03.8	-0.1
PLVR	Palo Verde	147.61	84	*e*P	PKPbc	11 29 03.6	-0.4
MNMC	Minye Minye	147.73	149	*e*PKPdf	PKPdf	11 29 02.2	+0.7
MNMC				LR	LR		
	comp=Z,1µm,20.0s						
ACON	Acoyapa	147.74	81	*e*P	PKPdf	11 29 02.0	+0.7
CUI	Cuipilapa	147.79	84	*e*P	PKPbc	11 29 05.2	+0.8
JTS	JuntasAbangare	148.00	84	*e*PKPdf	PKPdf	11 29 01.5	-0.3
JTS				LR	LR		
	comp=Z,1µm,21.0s						
JTS	JuntasAbangare	148.00	84	*e*PKIKP	PKPdf	11 29 01.5	-0.3
JTS				MLR	MLR		
	comp=Z,1µm,21.0s						
JTS	JuntasAbangare	148.00	84	PKPbc	PKPbc	11 29 04.9	0.0
	comp=Z,114nm,1.0s,baz=17,slow=3.7,SNR=33						
JTS				SKPbc	SKiKP	11 32 43.7	+3.1
	comp=Z,4.4nm,0.8s,baz=37,slow=18,SNR=1.9						
061Z	Ochoppi	148.05	54	P	PKPbc	11 29 04.9	+0.2
	baz=298						
060Z	West Palm Beac	148.07	53	P	PKPbc	11 29 05.5	+0.7
	baz=299						
ARE1	Arenal 1	148.23	84	*e*P	PKPdf	11 29 03.1	+0.9
CEDE	Laguna Cedeo	148.24	84	*e*P	PKPbc	11 29 06.3	+0.7
NNA	Nana	148.36	130	*e*PKPdf	PKPdf	11 29 02.5	+0.1
NNA				*e*PKPbc	PKPbc	11 29 05.7	-0.1
NNA				LR	LR		
	comp=Z,2µm,18.0s						
NNA	Nana	148.36	130	*e*PKIKP	PKPdf	11 29 02.5	+0.1
NNA				*e*		11 29 05.7	
NNA				MLR	MLR		
	comp=Z,2µm,18.0s						
NNA	Nana	148.36	130	PKPbc	PKPbc	11 29 05.7	-0.1
	comp=Z,41nm,0.8s,baz=248,slow=5.9,SNR=9.7						
ESPN	Las Esperanzas	148.58	81	*e*PKPbc	PKPbc	11 29 06.9	+0.5
ESPN				LR	LR		
	comp=Z,900nm,19.0s						
ESPN	Las Esperanzas	148.58	81	*e*P	PKPdf	11 29 03.4	+0.8
HDC	Heredia	148.83	85	PFAKE		11 29 10.0	-1.1
HDC				LR	LR		
	comp=Z,1µm,21.0s						
HDC	Heredia	148.83	85	*e*P	PKPdf	11 29 03.2	0.0
LCR2	La Lucha 2	148.93	85	*e*P	PKPbc	11 29 07.0	-0.6
ATAH	Atahualpa	149.87	120	PKPbc	PKiKP	11 29 10.8	-0.4
	comp=Z,8.0nm,0.8s,baz=287,slow=6.8,SNR=7.9						
EDSV	San Vito	149.93	87	*e*P	PKPab	11 29 13.7	-1.9
BRU2	Volcan	150.21	87	*e*P	PKPdf	11 29 05.0	-0.5
LPAZ	La Paz	150.86	148	*e*PKPdf	PKPdf	11 29 06.9	-0.2
LPAZ				PKPbc	PKiKP	11 29 13.8	+0.5
LPAZ	La Paz	150.86	148	*e*PKIKP	PKPdf	11 29 06.9	-0.2
LPAZ						11 29 13.9	
LPAZ	La Paz	150.86	148	PKPbc	PKiKP	11 29 13.8	+0.5
	comp=Z,16nm,0.8s,baz=305,slow=0.9,SNR=13						
AZU	Azuero	152.55	90	*e*P	PKPdf	11 29 11.3	+2.4
AZU	Azuero	152.55	90	*e*P	PKPdf	11 29 11.3	+2.4
OTAV	Otavalo	152.90	107	*e*pPKPdf	PKPbc	11 29 14.7	-2.5
OTAV				LR	LR		
	comp=Z,700nm,21.0s						
OTAV	Otavalo	152.90	107	*e*P	PKPdf	11 29 13.4	+3.4
OTAV	Otavalo	152.90	107	*e*P	PKPdf	11 29 13.4	+3.4
BCIP	Isla Barro Col	153.04	87	PFAKE		11 29 20.0	+2.9
BCIP				LR	LR		
	comp=Z,2µm,20.0s						
BCIP	Isla Barro Col	153.04	87	*e*P	PKPdf	11 29 12.2	+2.6
BCIP	Isla Barro Col	153.04	87	*e*P	PKPdf	11 29 12.2	+2.6
CTUMA	Tumaco, Batall	153.08	103	*e*P	PKPab	11 29 26.0	-2.5
CTUMA	Tumaco, Batall	153.08	103	*e*P	PKPab	11 29 26.0	-2.5
CMBC	Cumbal	153.71	105	*e*P	PKPbc	11 29 15.3	-3.7
CMBC	Cumbal	153.71	105	*e*P	PKPbc	11 29 15.3	-3.7
MTDJ	Mount Denham	153.91	66	*e*P	PKPdf	11 29 13.1	+2.2
MTDJ	Mount Denham	153.91	66	*e*P	PKPdf	11 29 13.1	+2.2
GRGC	Isla de Gorgon	153.93	101	*e*P	PKPdf	11 29 14.0	+3.1
GRGC	Isla de Gorgon	153.93	101	*e*P	PKPdf	11 29 14.0	+3.1
BDFB	Brasilia	155.50	191	*e*PKPdf	PKPdf	11 29 14.5	+1.3
BDFB				LR	LR		
	comp=Z,2µm,21.0s						
BDFB	Brasilia	155.50	191	*e*PKIKP	PKPdf	11 29 14.5	+1.3
BDFB				MLR	MLR		
	comp=Z,2µm,21.0s						
BDFB	Brasilia	155.50	191	PKP	PKPdf	11 29 14.5	+1.3
	comp=Z,5.0nm,0.8s,baz=157,slow=7.8,SNR=4.9						
FLOC	Florencia	155.97	106	*e*P	PKPdf	11 29 15.1	+1.4
FLOC	Florencia	155.97	106	*e*P	PKPdf	11 29 15.1	+1.4
ANIL	Santa Ana	156.94	99	*e*P	PKPdf	11 29 16.9	+1.6
ANIL	Santa Ana	156.94	99	*e*P	PKPdf	11 29 16.9	+1.6
ROSC	El Rosal	158.06	98	PKP	PKPdf	11 29 16.6	-0.3
	comp=Z,4.0nm,0.4s,baz=128,slow=6.4,SNR=5.2						
RCBR	Riachuelo	158.07	230	PFAKE		11 29 30.0	+14
RCBR				LR	LR		
	comp=Z,2µm,19.0s						
CTAB	Cerro Tablazo,	158.21	98	*e*P	PKPdf	11 29 15.3	-1.9
CTAB	Cerro Tablazo,	158.21	98	*e*P	PKPdf	11 29 15.3	-1.9
CVER	Cruz Verde, Cu	158.24	99	*e*P	PKPdf	11 29 15.7	-1.5
CVER	Cruz Verde, Cu	158.24	99	*e*P	PKPdf	11 29 15.7	-1.5
CTAU	Tausa, Cundina	158.40	98	*e*P	PKPdf	11 29 16.2	-1.2
CTAU	Tausa, Cundina	158.40	98	*e*P	PKPdf	11 29 16.2	-1.2
CHIC	Chingaza	158.60	99	*e*P	PKPdf	11 29 18.9	+1.4
CHIC	Chingaza	158.60	99	*e*P	PKPdf	11 29 18.9	+1.4
BRRC	Barranca, Sant	158.99	93	*e*P	PKPdf	11 29 18.9	+1.4
BRRC	Barranca, Sant	158.99	93	*e*P	PKPdf	11 29 18.9	+1.4
SDDR	Presa de Saban	159.10	58	PFAKE		11 29 30.0	+12
SDDR				LR	LR		
	comp=Z,2µm,21.0s						
OCAC	Ocana	159.45	89	*e*P	PKPdf	11 29 19.7	+1.5
OCAC	Ocana	159.45	89	*e*P	PKPdf	11 29 19.7	+1.5
BARC	Barichara	159.45	94	*e*P	PKPdf	11 29 18.8	+0.4
BARC	Barichara	159.45	94	*e*P	PKPdf	11 29 18.8	+0.4
PAMC	Pamplona, Colo	160.01	92	*e*P	PKPdf	11 29 20.2	+0.9
PAMC	Pamplona, Colo	160.01	92	*e*P	PKPdf	11 29 20.2	+0.9
SDV	Santo Domingo	162.12	88	*e*PKPdf	PKPdf	11 29 20.6	-0.5
SDV	Santo Domingo	162.12	88	PKP	PKPdf	11 29 21.9	+0.8
	comp=Z,29nm,1.1s,baz=237,slow=0.8,SNR=16						
SJG	San Juan	163.75	53	PKP	PKPdf	11 29 21.6	-0.7
	comp=Z,8.9nm,0.4s,baz=301,slow=14,SNR=2.5						
SJG				PKPab	PKPab	11 30 15.0	+0.5
	comp=Z,27nm,0.7s,baz=334,slow=19,SNR=3.1						
HUMP	Col San Antoni	163.97	52	*e*PKPdf	PKPdf	11 29 22.8	+0.3
PTGA	Pitinga	168.15	141	*e*PKPdf	PKPdf	11 29 26.1	+0.1
PTGA	Pitinga	168.15	141	PKP	PKPdf	11 29 27.2	+1.1
	comp=Z,12nm,1.1s,baz=312,slow=4.1,SNR=10						
PTGA				PKPab	PKPab	11 30 36.5	+2.6
	comp=Z,2.5nm,0.7s,baz=332,slow=23,SNR=1.7						
FDF	Fort de France	169.60	53	*e*PKPdf	PKPdf	11 29 27.0	+0.1
FDF	Fort de France	169.60	53	*e*PKIKP	PKPdf	11 29 27.0	+0.1

NEIC ***23*** *11:13:27.6±0.2, 8°.36S×127°.41E, h10^{km}, mb4.8/34, Error ellipse: s-maj=6.7km s-min=4.5km az=55.0*
ISCJB ***23*** *11:13:29.0±0.3, 8°.37S±0°.04×127°.44E±0°.05, h33^{km}, mb4.7/42, Error ellipse: s-maj=7.7km s-min=5.3km az=147.4*
IDC ***23*** *11:13:33.1±2.3, 8°.35S×127°.30E, h49^{km}±21^{km}, mb4.3/13, mb1 4.5/16, mb1mx4.4/32, mbtmp4.7/16, ML4.8/3, Error ellipse: s-maj=22.0km s-min=12.0km az=59.0*
ISC 23 11:13:31.2±0.4**, 8°.36S**±0°.06×**127°.46E**±0°.06**, h35^{km}, n83, σ1^{s}.08**/83**, mb4.8**/42**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	3.45	246	*e*Pn	Pn	11 14 21.8	-0.8
BATI	Baumata	4.17	244	P	Pn	11 14 33.6	+1.1
	57nm,0.3s,baz=149,slow=18,SNR=1.0						
BATI				S	Sn	11 15 24.4	+4.3
	232nm,0.3s,baz=344,slow=22,SNR=2.6						
MTN	Manton Dam	5.74	141	*e*Pn	Pn	11 14 53.5	-0.4
FAKI	Fak Fak	7.20	42	*e*Pn	Pn	11 15 15.3	+1.2
SIJI	Sorong	8.35	27	P	Pn	11 15 33.7	+3.8
	5.8nm,0.3s,baz=241,slow=22,SNR=1.7						
SIJI				S	Sn	11 17 12.8	+10
	2.3nm,0.3s,baz=33,slow=22,SNR=1.4						
FITZ	Fitzroy Crossi	9.84	190	S	Sn	11 17 27.7	-12
	39nm,0.3s,baz=202,slow=17,SNR=6.6						
WRA	Warramunga Arr	13.30	151	S	Sn	11 18 48.7	-16
	baz=335,slow=21,SNR=2.3						
ASAR	Alice Springs	16.43	159	P	P	11 17 22.1	+0.4
	5.4nm,0.3s,baz=326,slow=11,SNR=3.2						
KKM	Kota Kinabalu	18.18	322	*e*Pn	P	11 17 42.0	+0.9
	58nm,0.9s						
SBUM	Sibu	18.61	305	*e*P	Pn	11 17 48.2	+2.0
	31nm,0.8s						
KSM	Kuching	19.69	299	*e*P	Pn	11 17 58.9	-0.5
	36nm,0.7s						
MANU	Manus Island	20.78	74	*e*P	P	11 18 10.4	+0.8
	90nm,1.1s						
CTA	Charters Tower	21.60	125	P	P	11 18 20.8	+2.5
	24nm,0.6s,baz=309,slow=14,SNR=3.2						
CTAO	Charters Tower	21.60	125	*e*P	P	11 18 19.8	+1.5
	108nm,1.0s						
MORW	Morawa	23.24	206	*e*P	P	11 18 34.5	-1.0
	268nm,0.8s						
BBOO	Buckleboo	25.61	163	*e*P	P	11 18 56.5	-0.8
	102nm,1.1s						
STKA	Stephens Creek	26.84	153	*e*P	P	11 19 07.7	-0.9
	13nm,0.8s						
STKA	Stephens Creek	26.84	153	P	P	11 19 07.8	-0.7
	66nm,0.9s,baz=328,slow=10,SNR=5.8						
KULM	Kulim	29.98	296	*e*P	P	11 19 35.8	-0.9
	14nm,1.0s						
PSI	Prapat	30.54	290	*e*P	P	11 19 41.9	0.0
	17nm,1.0s						
TPUB	Ta-pu	32.16	348	*e*P	P	11 19 55.4	-0.5
	32nm,1.0s						
CM31	Chiang Mai Arr	38.75	314	*e*P	P	11 20 52.4	-0.2
	18nm,1.1s						
CMAR	Chiang Mai Arr	38.75	314	P	P	11 20 52.0	-0.6
	5.6nm,0.6s,baz=142,slow=7.0,SNR=7.2						
CHTO	Chiang Mai	38.99	314	*e*P	P	11 20 54.5	0.0
	11nm,0.8s						
DZM	Mont Dzumac	39.88	114	P	P	11 21 03.1	+1.0
	6.9nm,1.0s,baz=254,slow=7.6,SNR=2.3						
KSAR	Wonju Array Be	45.56	0	P	P	11 21 48.2	+0.5
KSRS	Korea Array	45.57	1	P	P	11 21 48.2	+0.4
	1.6nm,0.6s,baz=181,slow=8.9,SNR=4.2						
XAN	Xi'an	45.69	338	*e*P	P	11 21 47.9	-1.0
	9.5nm,0.9s						
MAJO	Matsushiro	45.79	12	*e*P	P	11 21 49.8	+0.2
MJAR	Matsushiro Arr	45.79	12	P	P	11 21 49.8	+0.2
	1.8nm,0.7s,baz=195,slow=9.8,SNR=4.4						
MJB9	Matsu-Tunnel	45.79	12	*e*P	P	11 21 49.9	+0.2
	3.0nm,0.8s						
OUZ	Omahuta	49.88	129	*e*P	P	11 22 22.2	+0.8
	26nm,1.2s						
FOZ	Fox Glacier	50.88	141	*e*P	P	11 22 28.6	-0.2
	7.0nm,0.6s						
WHZ	Wether Hill Ro	51.03	144	*e*P	P	11 22 29.4	-0.6
	12nm,0.7s						
LSA	Lhasa	51.49	319	*e*P	P	11 22 33.6	-0.6
	7.7nm,0.6s						
LBZ	Lake Benmore	51.55	142	*e*P	P	11 22 33.3	-0.5
	11nm,1.0s						
RPZ	Rata Peaks	51.75	140	P	P	11 22 36.0	+0.7
	14nm,0.5s,baz=314,slow=2.0,SNR=11						
THZ	Tophouse	52.03	137	*e*P	P	11 22 37.7	+0.1
	23nm,0.7s						
ODZ	Otahua Downs	52.17	142	*e*P	P	11 22 38.4	-0.1
	7.7nm,1.0s						
USRK	Ussuriysk Ar.	52.47	4	P	P	11 22 40.1	-0.4
	3.0nm,0.7s,baz=188,slow=7.1,SNR=5.4						
KHZ	Kahutara	52.75	138	*e*P	P	11 22 42.3	-0.4
	19nm,0.7s						
BKZ	Black Stump Fm	53.48	133	*e*P	P	11 22 47.7	-0.6
	16nm,1.2s						
ULN	Ulaanbaatar	58.82	344	*e*P	P	11 23 26.3	-0.1
	7.1nm,0.9s						
SONA0	Songino Array	58.97	344	*e*P	P	11 23 27.1	-0.2
SONM	Songino Array	58.97	344	P	P	11 23 27.1	-0.2
	1.6nm,0.4s,baz=166,slow=8.4,SNR=5.8						
SONA1	Songino Array	58.98	344	*e*P	P	11 23 26.8	-0.7
PEA0B	Petropavlovsk-	66.41	19	*e*P	P	11 24 17.5	+0.9
	9.3nm,0.8s						
PETK	Petropavlovsk-	66.41	19	P	P	11 24 17.6	+0.9
	3.1nm,0.7s,baz=182,slow=4.0,SNR=4.4						
PEA1	Petropavlovsk-	66.41	19	*e*P	P	11 24 17.6	+0.9
MK31	Makanchi Array	68.01	328	*e*P	P	11 24 25.9	-1.1
	5.7nm,1.0s						
MK32	Makanchi Array	68.01	328	*e*P	P	11 24 26.6	-0.5
MKAR	Makanchi Array	68.01	328	*e*P	P	11 24 26.2	-0.8
	29nm,0.6s						
MKAR	Makanchi Array	68.01	328	P	P	11 24 26.6	-0.5
	3.4nm,0.5s,baz=115,slow=8.5,SNR=6.9						
VNDA	Vanda	71.42	173	*e*P	P	11 24 47.6	+0.1
	10nm,1.1s						
ZAA0	Zalesovo Array	71.71	335	*e*P	P	11 24 48.3	-1.2
	8.4nm,0.6s						
ZALV	Zalesovo Beam	71.71	335	P	P	11 24 48.6	-0.9
	8.7nm,0.5s,baz=148,slow=5.3,SNR=14						
ZAA1	Zalesovo Array	71.72	335	*e*P	P	11 24 48.6	-1.0
KURK	Kurchatov	72.39	330	*e*P	P	11 24 53.2	-0.5
	12nm,1.0s						
BRVK	Borovoye	77.96	329	*e*P	P	11 25 25.1	-0.6
	6.6nm,0.9s						
GEYT	Alibeck	79.19	311	P	P	11 25 31.7	-1.2
	1.4nm,0.4s,baz=112,slow=3.9,SNR=3.1						
QSPA	South Pole Qui	81.63	180	*e*P	P	11 25 44.9	-0.7
	13nm,1.1s						
ABKAR	Akbulak array	82.02	322	*e*P	P	11 25 47.1	-0.6
	5.5nm,1.1s						
GAMB	Gambell	85.13	23	*e*P	P	11 26 03.6	+0.2
	3.5nm,0.8s						
ANM	Nome	87.96	23	*e*P	P	11 26 17.6	+0.3
	3.9nm,1.2s						
AKASG	Malin Array Be	101.63	320	P	Pdif	11 27 19.1	-0.9
	0.5nm,0.4s,baz=78,slow=5.7,SNR=3.4						
FINES	FINESS Array B	102.74	331	PKiKP	PKiKP	11 31 45.5	+0.3
	1.6nm,0.9s,baz=48,slow=2.1,SNR=3.4						
GERES	GERESS Array B	111.82	319	PKiKP	PKiKP	11 32 02.3	-0.4
	1.0nm,0.6s,baz=72,slow=2.1,SNR=4.8						
DAVOX	Davos/Dischmat	114.82	318	PKP	PKiKP	11 32 08.1	-0.6
	1.0nm,0.3s,baz=108,slow=6.4,SNR=3.8						
PDAR	Pinedale Array	119.63	45	PKP	PKiKP	11 32 18.9	+0.7
	1.2nm,0.8s,baz=212,slow=0.9,SNR=3.7						
ULM	Lac du Bonnet	124.94	33	PKP	PKPdf	11 32 27.5	-0.2
	2.0nm,0.4s,baz=304,slow=3.7,SNR=6.3						
TORD	Torodi Ar. Bea	126.59	280	PKP	PKPdf	11 32 30.8	-1.0
	1.5nm,0.9s,baz=19,slow=2.9,SNR=4.5						
TXAR	Lajitas Array	127.78	59	PKP	PKiKP	11 32 34.6	+0.1
	0.9nm,0.6s,baz=217,slow=2.0,SNR=5.7						
PLCA	Paso Flores	128.41	163	*e*PKPdf	PKiKP	11 32 35.3	-0.2
PLCA	Paso Flores	128.41	163	PKP	PKiKP	11 32 36.0	+0.6
	1.7nm,0.7s,baz=41,slow=5.7,SNR=3.1						
SCHQ	Schefferville	132.26	11	PKP	PKiKP	11 32 42.6	0.0
	5.4nm,0.9s,baz=270,slow=3.0,SNR=2.5						
SCHQ				SKPbc	SKPbc	11 36 01.6	-4.0
	3.9nm,0.9s,baz=324,slow=6.1,SNR=3.1						
DBIC	Dimbokro	132.72	271	SKPab	SKPbc	11 36 08.7	+0.3
	7.1nm,0.8s,baz=59,slow=3.6,SNR=5.7						
CMIG	Matias Romero	137.87	74	PKP	PKiKP	11 32 54.1	-1.0
	2.7nm,0.7s,baz=225,slow=2.9,SNR=3.2						
CPUP	Villa Florida	145.21	172	PKPbc	PKPdf	11 33 06.2	+0.2
	11nm,0.6s,baz=216,slow=1.7,SNR=12						
JTS	JuntasAbangare	147.96	84	PKPbc	PKPbc	11 33 14.2	+0.2
	8.7nm,0.6s,baz=72,slow=14,SNR=7.0						
ATAH	Atahualpa	149.98	120	PKPbc	PKiKP	11 33 20.6	+0.1
	9.1nm,0.9s,baz=243,slow=2.3,SNR=4.3						
LPAZ	La Paz	151.06	148	PKPbc	PKiKP	11 33 22.7	-0.2
	5.8nm,0.5s,baz=49,slow=4.7,SNR=9.6						
SDV	Santo Domingo	162.10	87	PKPab	PKPab	11 34 17.1	0.0
	3.5nm,0.8s,baz=302,slow=13,SNR=2.5						
PTGA	Pitinga	168.32	140	PKPab	PKPab	11 34 43.1	-0.8
	1.2nm,0.2s,baz=233,slow=5.1,SNR=2.5						

HLW ***23*** *11:20:43.7, 29°.88N×36°.75E, h10^{km}±11^{km}, Ml3.6*
ISCJB ***23*** *11:20:46.7±1.5, 29°.92N±0°.08×36°.2E±0°.1, h3^{km}, Error*

ellipse: s-maj=18.6km s-min=6.5km az=31.7
*JSO **23** 11:20:50.0±0.9, 30°N±7°×3°6E±°, h10^{km}, M2.9/12, Mjma3.0/12, ML2.5/7, MLv3.0/12*
ISC 23 11:20:46.1±1.7, **29°.94N**±0°.07×**36°.18E**±0°.10, **h3**^{km}, **n15**, σ**0^{s}94**/16, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSNJ	Maan	0.53	307	P	Pb	11 20 57.3	-0.9
JDRJ	Daraweish	0.91	331	P	Pb	11 21 03.4	-1.2
HRFI	Mount Harif	1.00	276	P	Pb	11 21 05.8	-0.3
AQBJ	Aqaba	1.00	258	P	Pb	11 21 06.0	-0.2
EIL	Elat	1.10	256	P	Pn	11 21 08.5	0.0
SWQJ	Swaqa	1.31	355	P	Pn	11 21 13.0	+1.6
LISJ	El Lisan	1.43	335	P	Pb	11 21 13.1	-0.3
HBST	Basata	1.45	241	P	Pn	11 21 13.4	+0.1
	baz=250						
HBST				AMP		11 21 00.0	
	baz=250						
HBST				S	Sn	11 21 34.9	+2.1
	baz=250						
GHAJ	Ghor Haditha	1.46	339	P	Pn	11 21 13.3	-0.1
NUB		1.61	236	P	Pn	11 21 15.7	+0.1
	baz=245						
WALJ	Wala	1.65	349	P	Pg	11 21 17.5	-0.3
KZIT	Kziot	1.82	303	P	Pg	11 21 20.4	-0.6
ASF	Jabal al Asfar	2.31	15	P	Pb	11 21 27.8	-0.7
RSH		2.35	296	P	Pn	11 21 26.5	+0.8
	baz=294						
HKAT	Jabal Katrina	2.38	234	P	Pn	11 21 25.4	-0.8
	baz=242						

IDC 23 11:21:31.8±2.6, **10°.86N**×**87°.19W**, **h0**^{km}, **mb3.3**/2, **mb1 3.7**/3, **mb1mx3.5**/42, **mbtmp3.3**/3, **ML3.5**/1, **Error ellipse: s-maj=90.1km s-min=14.1km az=25.0**, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	JuntasAbangare	2.27	104	Pn	Pn	11 22 10.2	-0.5
	12nm,0.3s,baz=13,slow=8.4,SNR=58						
JTS				Pg	Pb	11 22 13.9	+0.1
	12nm,0.3s,baz=11,slow=12,SNR=31						
JTS				Lg	Lg	11 22 44.0	
	8.9nm,0.3s,baz=86,slow=22,SNR=12						
TXAR	Lajitas Array	23.97	322	P	P	11 26 48.6	+0.4
	0.9nm,0.7s,baz=135,slow=10,SNR=13						
YKA	Yellowknife Ar	55.20	345	P	P	11 31 06.0	-0.2
	0.3nm,0.8s,baz=142,slow=6.7,SNR=4.2						
WRA	Warramunga Arr	139.05	252	PKP	PKPdf	11 41 02.1	+0.7
	0.4nm,0.9s,baz=109,slow=1.4,SNR=2.7						
CMAR	Chiang Mai Arr	150.25	348	PKPbc	PKPbc	11 41 24.9	-1.0
	0.3nm,0.3s,baz=326,slow=3.4,SNR=5.7						

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*IDC **23** 11:27:11.2±0.4, 35°.30N×141°.14E, h0^{km}, mb4.3/32, mb1 4.5/38, mb1mx4.4/62, mbtmp4.3/38, ML3.5/5, Error ellipse: s-maj=13.7km s-min=10.8km az=97.0*
*ISCJB **23** 11:27:13.0±0.6, 35°.27N±0°.02×141°.28E±0°.03, h28^{km}±4^{km}, mb4.5/84, MS5.0/2, Error ellipse: s-maj=4.6km s-min=3.9km az=4.1*
*JMA **23** 11:27:13.9±0.1, 35°.33N×141°.28E, h30^{km}±2^{km}, M4.5*
*BJI **23** 11:27:13.0, 35°.10N×141°.09E, h29^{km}, mB5.2/18, mb4.5/40, Ms4.9/7, Ms7 4.8/7*
*MOS **23** 11:27:14.9±1.0, 35°.56N×141°.20E, h29^{km}, mb4.7/44, Error ellipse: s-maj=8.9km s-min=5.4km az=114.4*
*NEIC **23** 11:27:15.9±0.2, 35°.26N×141°.17E, h35^{km}, mb4.7/45, Error ellipse: s-maj=4.3km s-min=3.7km az=107.0*
ISC 23 11:27:12.8±1.4, **35°.30N**±0°.03×**141°.31E**±0°.04, **h14**^{km}±8^{km}, **n220**, σ**1^{s}50**/243, **mb4.6**/89, **4C-9D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.55	318	⇑P	Pb	11 27 24.3	+0.1
CHOJ				eS	Sb	11 27 31.2	-0.7
BSO1	Boso 1	0.70	203	⇓P	Pb	11 27 27.2	+0.8
JSMT	Sammumatsuo	0.78	296	P	Pb	11 27 28.5	+0.3
BSO3	Boso 3	0.82	233	⇓P	Pb	11 27 29.1	+0.4
KTR	Katsuura	0.83	260	⇓P	Pb	11 27 29.0	+0.1
BSO4	Boso 4	0.85	249	⇓P	Pb	11 27 29.7	+0.4
JCN	Nagara	0.91	278	⇓P	Pn	11 27 30.9	-0.3
JKUC	kamogawauchiur	0.92	262	P	Pg	11 27 30.2	-0.4
JIHU	Itakohorinouch	0.92	317	P	Pb	11 27 30.5	-0.1
TATJ	Tateyama 2	1.19	258	⇓P	Pn	11 27 34.7	-0.3
TATJ				S	Sb	11 27 49.6	-0.8
JHYU	Hitachinakayam	1.20	331	P	Pb	11 27 34.3	-1.0
JYT	Yasato	1.30	316	P	Pn	11 27 35.8	-0.7
JYT				S	Sb	11 27 51.6	-1.9
JHO	Hitachi	1.44	336	P	Pn	11 27 37.5	-1.0
JIM2	Oshima 3	1.65	250	⇓P	Pn	11 27 39.6	-1.7
JIM2				S	Sn	11 27 58.4	-3.9
JHJ2	Mitsune	2.50	210	ePn	Pn	11 27 53.0	-0.1
JHJ	Hachijo jima 2	2.51	211	Pn	Pn	11 27 52.5	-0.7
	84nm,0.3s,baz=323,slow=23,SNR=44						
JHJ				Sn	Sn	11 28 25.2	+1.6
	402nm,0.3s,baz=207,slow=23,SNR=11						
MJAR	Matsushiro Arr	2.81	297	Pn	Pn	11 27 58.1	+0.8
	2.7nm,0.3s,baz=268,slow=6.7,SNR=94						
MJAR				Sn	Sn	11 28 31.1	+0.2
	3.4nm,0.3s,baz=150,slow=15,SNR=5.9						
MAJO	Matsushiro	2.81	297	ePn	Pn	11 27 58.0	+0.7
MAJO				eSn	Sn	11 28 31.1	+0.1
MAJO	Matsushiro	2.81	297	eP	Pn	11 27 58.0	+0.7
MAJO				e		11 28 31.1	
MAT	Matsushiro	2.81	297	P	Pn	11 27 58.4	+1.1
MAT				eS	Sn	11 28 33.1	+2.1
MJB9	Matsu-Tunnel	2.81	297	ePn	Pn	11 27 57.8	+0.4
INU	Inuyama	3.51	272	ePn	Pn	11 28 06.5	-0.4
ERM	Erimo	6.86	12	ePn	Pn	11 28 52.6	-0.4
ERM				eSn	Sn	11 30 11.5	+0.7
ERM	Erimo	6.86	12	eP	Pn	11 28 52.6	-0.4
ERM				e		11 30 11.5	
CBIJ	Chichi jima	8.21	175	ePn	Pn	11 29 11.5	0.0
CBIJ				eSn	Sn	11 30 36.1	-8.0
JCJ	Chichijima	8.21	175	Pn	Pn	11 29 11.5	0.0
	53nm,0.3s,baz=264,slow=20,SNR=59						
JCJ				Sn	Sn	11 30 36.1	-8.0
	39nm,0.3s,baz=283,slow=21,SNR=8.8						
ASAJ	Asahikawa	8.87	6	Pn	Pn	11 29 18.6	-1.9
	4.2nm,0.3s,baz=224,slow=9.2,SNR=28						
ASAJ				Sn	Sn	11 30 55.1	-5.0
	1.0nm,0.3s,baz=188,slow=26,SNR=1.3						
JNU	Nakatsue	8.91	259	ePn	Pn	11 29 21.5	+0.4
JNU	Nakatsue	8.91	259	Pn	Pn	11 29 19.1	-2.0
	0.1nm,0.3s,baz=61,slow=11,SNR=1.8						
YUK	Yuzh-Kuril'sk	9.40	21	eP	Pn	11 29 25.1	-2.7
YUK				i S	Sn	11 31 03.6	-10
YUK				pmax	pmax		
	comp=Z,71nm,0.4s						
SHO	Shikotan	9.56	25	eP	Pn	11 29 27.5	-2.5
SHO				eS	Sn	11 31 08.0	-9.2
SHO				pmax	pmax		
	comp=Z,21nm,0.4s						
KSRS	Korea Array	11.01	285	Pn	Pn	11 29 52.2	+2.4
	comp=Z,0.2nm,0.3s,baz=93,slow=14,SNR=11						
KS15	Wonju Array Si	11.04	285	ePn	Pn	11 29 51.4	+1.2
KUR	Kuril'sk	11.11	25	P	Pn	11 29 50.6	-0.6
KUR				eS	Sn	11 31 47.7	-7.5
KUR				pmax	pmax		
	comp=Z,16nm,0.4s						
KUR				pmax	pmax		
	comp=E,17nm,0.5s						
KUR				smax	smax		
	comp=N,29nm,0.7s						
KUR				MLR	MLR		
	comp=Z,937nm,21.0s						
USRK	Ussuriysk Ar.	11.42	324	Pn	Pn	11 29 55.0	-0.4
	comp=Z,0.4nm,0.3s,baz=137,slow=12,SNR=9.8						
YSS	Yuzh-Sakhalins	11.70	5	ePn	Pn	11 29 58.5	-0.7
YSS	Yuzh-Sakhalins	11.70	5	⇑eP	Pn	11 29 57.7	-1.5
YSS				e		11 32 04.6	
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
KLR	Kul'dur	15.60	336	i P	Pn	11 30 50.9	-1.3
KLR	Kul'dur	15.60	336	Pn	Pn	11 30 50.3	-1.9
	comp=Z,0.3nm,0.3s,baz=141,slow=14,SNR=5.2						
NKL	Nikolayevsk	17.86	359	eP	Pn	11 31 19.0	-1.6
NJ2	Nanjing	18.96	267	eP	P	11 31 33.0	-0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BJI	Beijing	20.43	291	⇓eP	P	11 31 49.0	-0.5
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJT	Baijiatuau	20.43	291	eP	P	11 31 48.5	-1.1
	comp=Z,20nm,1.2s						
BJT	Baijiatuau	20.43	291	eP	P	11 31 48.5	-1.1
BJT				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA	Zeya	20.92	336	eP	P	11 31 55.1	+0.4
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
YULB	Yu-li	21.05	241	eP	P	11 31 53.6	-2.8
	comp=Z,19nm,1.1s						
PEA0B	Petropavlovsk-	21.24	28	eP	P	11 31 59.9	+1.6
	comp=Z,26nm,1.3s						
PETK	Petropavlovsk-	21.24	28	P	P	11 31 57.8	-0.5
	comp=Z,2.3nm,0.8s,baz=230,slow=11,SNR=3.1						
PEA1	Petropavlovsk-	21.25	28	eP	P	11 31 57.8	-0.5
TPUB	Ta-pu	21.59	242	eP	P	11 31 59.8	-2.5
	comp=Z,69nm,1.4s						
HHC	Hu-ho-hao-te	24.00	292	eP	P	11 32 24.0	-3.1
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
MA2	Magadan	25.07	11	eP	P	11 32 37.2	+0.7
	comp=Z,8.2nm,0.7s						
MA2	Magadan	25.07	11	P	P	11 32 37.8	+1.2
	comp=Z,7.2nm,0.7s,baz=186,slow=9.1,SNR=13						
XAN	Xi'an	26.61	277	P	P	11 32 49.3	-1.5
XAN				pP	sP	11 32 59.0	+2.5
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN	Xi'an	26.61	277	eP	P	11 32 49.8	-1.0
	comp=Z,13nm,1.3s						
XAN	Xi'an	26.61	277	eP	P	11 32 49.8	-1.0
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
H11N2	WAKE ISLAND Hy	27.37	118	T	T	12 02 00.8	
	baz=310,slow=75,SNR=144						
H11N1	WAKE ISLAND Hy	27.38	118	T	T	12 02 01.3	
	baz=310,slow=75,SNR=141						
H11N3	WAKE ISLAND Hy	27.39	118	T	T	12 02 02.2	
	baz=310,slow=75,SNR=109						
H11S1	WAKE ISLAND Hy	28.03	120	T	T	12 02 30.4	
	baz=312,slow=76,SNR=461						
H11S3	WAKE ISLAND Hy	28.03	120	T	T	12 02 30.4	
	baz=312,slow=76,SNR=397						
H11S2	WAKE ISLAND Hy	28.04	120	T	T	12 02 33.9	
	baz=312,slow=76,SNR=222						
ULN	Ulaanbaatar	28.30	307	i P	P	11 33 06.9	+1.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONA1	Songino Array	28.72	307	eP	P	11 33 09.3	-0.4
SONA0	Songino Array	28.72	307	eP	P	11 33 10.2	+0.5
SONA0				ePcP	PcP	11 36 20.3	+0.6
SONM	Songino Array	28.72	307	P	P	11 33 10.2	+0.5
	comp=Z,1.4nm,0.5s,baz=106,slow=8.6,SNR=9.4						
SONM				PcP	PcP	11 36 20.3	+0.6
	comp=Z,0.6nm,0.7s,baz=122,slow=2.4,SNR=4.1						
BOD	Bodaibo	28.97	330	eP	P	11 33 11.5	-0.1
BOD				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TLY	Talaya	31.43	313	eP	P	11 33 37.5	+4.0
TLY				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CD2	Chengdu	31.63	273	eP	P	11 33 33.5	-2.0
GTA	Gaotai	33.03	290	eP	P	11 33 49.6	+1.8
GTA				pP	sP	11 33 56.9	+3.4
GTA				sP	pP	11 34 00.3	+8.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KMI	Kunming	34.65	264	P	P	11 34 02.8	+0.7
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BILL	Bilibino	35.72	16	⇑eP	P	11 34 10.5	0.0
BILL				e		11 35 27.8	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,2µm,23.0s						
FAKI	Fak Fak	38.95	194	eP	P	11 34 37.8	-0.7
	comp=Z,16nm,0.8s						
CMAR	Chiang Mai Arr	41.00	257	eP	P	11 34 58.6	+3.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	41.00	257	P	P	11 34 55.2	-0.4
	comp=Z,0.6nm,0.3s,baz=46,slow=7.8,SNR=4.7						
DGZ	Jazzator, Alta	41.36	307	i P	P	11 34 58.8	+0.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WMQ	Urumqi	41.57	299	P	P	11 35 01.5	+1.4
WMQ				pP	sP	11 35 09.5	+3.9
WMQ				sP	pP	11 35 13.9	+10
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.5s						
WMQ	Urumqi	41.57	299	eP	P	11 34 59.7	-0.4
	comp=Z,5.9nm,0.6s						
WMQ	Urumqi	41.57	299	eP	P	11 34 59.7	-0.4
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LSA	Lhasa	42.31	277	eP	P	11 35 05.3	-1.5
	comp=Z,4.0nm,1.0s						
LSA	Lhasa	42.31	277	eP	P	11 35 05.3	-1.5
LSA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZAA0	Zalesovo Array	43.04	314	eP	P	11 35 11.4	-0.3
	comp=Z,6.3nm,1.0s						
ZAA1	Zalesovo Array	43.04	314	eP	P	11 35 11.9	+0.1
ZALV	Zalesovo Beam	43.04	314	eP	P	11 35 11.4	-0.4
ZALV	Zalesovo Beam	43.04	314	P	P	11 35 11.9	+0.1
	comp=Z,3.9nm,0.6s,baz=94,slow=6.7,SNR=20						
ZALV				PcP	PcP	11 37 01.5	-0.3
	comp=Z,1.1nm,0.7s,baz=95,slow=6.1,SNR=2.6						
NVS	Novosibirsk	43.99	315	eP	P	11 35 19.4	-0.1
KSM	Kuching	44.31	227	eP	P	11 35 21.3	-1.1
	comp=Z,29nm,1.6s						
NRIK	Noril'sk	44.81	336	P	P	11 35 26.0	+0.1
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NRIK	Noril'sk	44.81	336	P	P	11 35 25.9	+0.1
	comp=Z,4.9nm,0.6s,baz=122,slow=11,SNR=3.7						
MK01	Makanchi Array	44.98	304	eP	P	11 35 26.9	-0.7
MK31	Makanchi Array	44.99	304	eP	P	11 35 27.0	-0.6
MK31	Makanchi Array	44.99	304	eP	P	11 35 27.0	-0.6
MK32	Makanchi Array	44.99	304	eP	P	11 35 27.6	0.0
MKAR	Makanchi Array	44.99	304	eP	P	11 35 27.0	-0.6
	comp=Z,34nm,0.6s						
MKAR	Makanchi Array	44.99	304	eP	P	11 35 27.0	-0.6
MKAR				pmax	pmax		
	comp=Z,34nm,0.6s						
MKAR	Makanchi Array	44.99	304	P	P	11 35 27.6	0.0
	comp=Z,4.7nm,0.6s,baz=90,slow=9.5,SNR=44						
MKAR				PcP	PcP	11 37 09.0	+0.4
	comp=Z,0.4nm,0.6s,baz=90,slow=3.2,SNR=1.7						
MAKZ	Makanchi	45.20	304	eP	P	11 35 28.7	-0.6
	comp=Z,4.8nm,0.8s						
MAKZ	Makanchi	45.20	304	eP	P	11 35 28.7	-0.6
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	46.95	309	eP	P	11 35 42.7	-0.3
	comp=Z,10nm,0.8s						
KURK	Kurchatov	46.95	309	P	P	11 35 43.1	+0.1
KURK						11 37 15.2	
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KURBB	Kurchatov Arra	47.02	309	P	P	11 35 43.1	-0.4
	comp=Z,4.0nm,0.5s,baz=84,slow=7.9,SNR=3.9						
KURBB				PcP	PcP	11 37 15.2	-0.3
	comp=Z,0.3nm,0.4s,baz=78,slow=5.9,SNR=2.0						
RAMN	Ramite	47.07	276	eP	P	11 35 43.5	-1.0
	comp=Z,18nm,0.7s						
JIRN	Jiri	47.11	277	eP	P	11 35 44.4	-0.6
	comp=Z,11nm,0.4s						
GUN	Gumba	47.27	277	eP	P	11 35 45.4	-0.8
PDGK	Podgornoye	47.53	299	P	P	11 35 47.7	-0.1
PDGK				pmax	pmax		
	comp=Z,11nm,0.8s						
PKI	Pulchoki	47.78	277	eP	P	11 35 49.0	-1.2
	comp=Z,4.1nm,0.4s						
PKIN	Phulchoki	47.79	277	eP	P	11 35 49.0	-1.2
KDAK	Kodiak Island	48.46	41	eP	P	11 35 56.0	+1.4
	comp=Z,62nm,1.4s						
KDAK	Kodiak Island	48.46	41	eP	P	11 35 56.0	+1.4
KDAK				pmax	pmax		
	comp=Z,62nm,1.4s						
KDAK	Kodiak Island	48.46	41	P	P	11 35 55.9	+1.4
	comp=Z,24nm,1.1s,baz=246,slow=10.0,SNR=2.8						
DANN	Dangsing	48.81	279	eP	P	11 35 57.6	-0.4
	comp=Z,57nm,0.8s						
MTN	Manton Dam	48.84	193	eP	P	11 35 57.4	-0.5
	comp=Z,32nm,1.3s						
COEN	Coen	49.01	178	eP	P	11 35 59.7	+0.5
	comp=Z,16nm,1.0s						
TARG	Taragay, Kyrgy	49.11	298	eP	P	11 35 59.9	-0.5
	comp=Z,9.5nm,0.8s						
BRLK	Bradley Lake	49.27	38	eP	P	11 36 02.6	+1.8
	comp=Z,54nm,1.6s						
PYUN	Piuthan	49.53	279	eP	P	11 36 03.4	-0.1
	comp=Z,41nm,0.9s						
TOLK	Toolik Lake Re	50.06	27	eP	P	11 36 08.7	+2.0
	comp=Z,5.2nm,1.1s						
MDM	Murphy Dome	50.44	31	eP	P	11 36 11.5	+1.9
	comp=Z,6.0nm,0.8s						
ILAR	Eielson Array	51.01	32	P	P	11 36 15.2	+1.4
	comp=Z,1.4nm,0.7s,baz=262,slow=5.8,SNR=14						
ILAR				PcP	PcP	11 37 29.7	0.0
	comp=Z,0.6nm,0.6s,baz=272,slow=4.1,SNR=2.8						
ILB	Eielson Array	51.01	32	eP	P	11 36 14.9	+1.0
	comp=Z,7.6nm,1.3s						
IL1	Eielson Array	51.01	32	eP	P	11 36 14.9	+1.0
KSH	Kashi	51.05	295	P	P	11 36 19.3	+4.5
KSH				pP	sP	11 36 28.3	+7.9
KSH				PP	PP	11 38 16.8	+5.6
KSH				S	S	11 43 33.4	+1.5
KSH				sS	sS	11 43 48.8	+10
KSH				SS	SS	11 47 08.1	+1.4
KSH				pmax	pmax		
	comp=Z,370nm,4.3s						
KSH				LR	LR		
	comp=Z,360nm,5.1s						
KSH				LR	LR		
	comp=Z,310nm,5.3s						
KSH				LR	LR		
	comp=Z,330nm,7.5s						
AAK	Ala-Archa	51.26	300	i P	P	11 36 15.4	-0.9
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OTUK	Ortayu	51.39	307	P	P	11 36 17.1	+0.1
OTUK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BVAR	Borovoye Array	51.69	313	P	P	11 36 19.1	0.0
	comp=Z,1.9nm,0.7s,baz=97,slow=7.6,SNR=9.7						
BVAR				PcP	PcP	11 37 32.5	0.0
	comp=Z,0.8nm,0.6s,baz=80,slow=6.2,SNR=2.0						
BRVK	Borovoye	51.75	313	eP	P	11 36 19.4	-0.2
	comp=Z,5.5nm,1.1s						
BRVK	Borovoye	51.75	313	eP	P	11 36 19.4	-0.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SCRK	Sand Creek	52.31	33	eP	P	11 36 24.4	+0.6
	comp=Z,18nm,1.6s						
ARSB	Arslanbob	52.70	298	eP	P	11 36 26.8	-0.3
	comp=Z,5.7nm,0.9s						
MNAS	Manas	52.71	300	P	P	11 36 27.5	+0.4
MNAS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KK31	Karatay Array	53.94	301	eP	P	11 36 35.4	-0.6
KK31	Karatay Array	53.94	301	eP	P	11 36 35.4	-0.6
KKAR	Karatay Array	53.94	301	eP	P	11 36 35.4	-0.6
KKAR	Karatay Array	53.94	301	eP	P	11 36 35.4	-0.6
NIL	Nilore	55.09	289	eP	P	11 36 43.8	-0.7
	comp=Z,9.2nm,0.8s						
NIL	Nilore	55.09	289	eP	P	11 36 43.8	-0.7
NIL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FITZ	Fitzroy Crossi	55.14	198	eP	P	11 36 44.2	-0.6
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	55.32	188	eP	P	11 36 45.2	-0.9
	comp=Z,30nm,1.3s						
WRAB	Tennant Creek	55.32	188	eP	P	11 36 45.2	-0.9
WRAB				pmax	pmax		
	comp=Z,30nm,1.3s						
WB2	Warramunga Arr	55.33	188	eP	P	11 36 45.5	-0.6
WR1	Warramunga Arr	55.33	188	eP	P	11 36 45.9	-0.3
	comp=Z,42nm,1.3s						
WR1				ePcP	PcP	11 37 47.5	+0.8
WRA	Warramunga Arr	55.33	188	i P	P	11 36 45.9	-0.3
WRA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
WRA	Warramunga Arr	55.33	188	P	P	11 36 45.9	-0.3
	comp=Z,10nm,0.8s,baz=23,slow=7.2,SNR=97						
WRA				PcP	PcP	11 37 47.5	+0.8
	comp=Z,1.2nm,0.5s,baz=2.3,slow=4.3,SNR=2.3						
GAR	Garm	55.38	296	eP	P	11 36 46.0	-0.6
	comp=Z,16nm,1.4s						
GAR	Garm	55.38	296	eP	P	11 36 46.0	-0.6
GAR				pmax	pmax		
	comp=Z,16nm,1.4s						
INK	Inuvik	55.97	27	eP	P	11 36 51.1	+0.9
	comp=Z,6.4nm,1.4s						
INK	Inuvik	55.97	27	eP	P	11 36 51.1	+0.9
INK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
INK	Inuvik	55.97	27	P	P	11 36 51.4	+1.2
	comp=Z,1.7nm,0.8s,baz=278,slow=4.3,SNR=4.3						
CHGR	Chuyangaron	56.35	296	eP	P	11 36 52.9	-0.6
	comp=Z,16nm,0.7s						
ARU	Arti	57.61	319	eP	P	11 37 02.1	0.0
	comp=Z,9.8nm,0.8s						
ARU	Arti	57.61	319	d iP	P	11 37 02.4	+0.3
ARU						11 39 07.4	
ARU				S	S	11 45 00.4	+0.9
ARU				SS	SS	11 48 43.3	-5.8
ARU				pmax	pmax		
	comp=Z,14nm,0.9s						
ABKAR	Akbulak array	59.00	311	eP	P	11 37 11.6	-0.2
	comp=Z,11nm,1.5s						
AS01	Alice Springs	59.05	188	eP	P	11 37 12.1	-0.3
AS01				ePcP	PcP	11 38 02.5	+1.3
AS31	Alice Springs	59.06	188	eP	P	11 37 12.2	-0.3
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	59.06	188	P	P	11 37 12.6	+0.1
	comp=Z,2.0nm,0.6s,baz=15,slow=10.0,SNR=29						
ASAR				PcP	PcP	11 38 02.5	+1.3
	comp=Z,0.9nm,0.5s,baz=0.0,slow=4.6,SNR=3.0						
AKTO	Aktyubinsk	59.78	313	P	P	11 37 16.8	-0.5
	comp=Z,1.5nm,0.5s,baz=76,slow=13,SNR=5.7						
EIDS	Eidsvold	61.04	170	eP	P	11 37 26.4	+0.4
	comp=Z,23nm,1.6s						
KIRV	Kirov	61.59	323	P	P	11 37 29.2	-0.1
	comp=Z,7.7nm,0.6s,baz=78,slow=3.2,SNR=3.5						
RES	Resolute Bay	64.30	14	eP	P	11 37 47.9	+0.7
	comp=Z,3.0nm,0.7s						
RES	Resolute Bay	64.30	14	eP	P	11 37 47.9	+0.7
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	Yellowknife Ar	65.35	30	P	P	11 37 55.1	+0.9
	comp=Z,0.6nm,0.8s,baz=300,slow=6.4,SNR=7.4						
ARA0	ARCESS Array S	65.59	340	eP	P	11 37 56.0	+0.3
ARCES	ARCESS Array B	65.59	340	P	P	11 37 56.0	+0.3
	comp=Z,7.1nm,1.0s,baz=63,slow=8.5,SNR=2.8						
STKA	Stephens Creek	66.82	180	eP	P	11 38 03.9	0.0
	comp=Z,0.6nm,0.9s						
STKA	Stephens Creek	66.82	180	eP	P	11 38 05.9	+2.0
STKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
STKA	Stephens Creek	66.82	180	P	P	11 38 04.4	+0.5
	comp=Z,1.2nm,0.6s,baz=345,slow=7.0,SNR=4.3						
DAG	Danmarks Havn	67.50	355	i P	P	11 38 08.4	+0.7
DAG	Danmarks Havn	67.50	355	i P	P	11 38 08.4	+0.7
BBOO	Buckleboo	67.93	185	eP	P	11 38 10.6	-0.3
	comp=Z,25nm,1.4s						
OBN	Obninsk	69.44	324	⇑eP	P	11 38 19.8	-0.4
OBN				e		11 38 46.1	
OBN				e		11 40 53.1	
OBN				ePPP	PPP	11 42 29.8	
OBN				eS	S	11 47 13.9	-13
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,2µm,21.0s						
FIA1	FINESS Array S	70.31	333	eP	P	11 38 25.6	+0.2
FIA0	FINESS Array S	70.31	333	eP	P	11 38 24.8	-0.7
FIA0	FINESS Array S	70.31	333	eP	P	11 38 24.8	-0.7
FINES	FINESS Array B	70.31	333	eP	P	11 38 25.5	0.0
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	FINESS Array B	70.31	333	P	P	11 38 24.8	-0.7
	comp=Z,4.8nm,0.8s,baz=90,slow=7.6,SNR=13						
KBZ	Khabaz	71.97	311	P	P	11 38 35.3	-0.6
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						

KBZ	Khabaz	71.97	311	P	P	11 38 35.3	-0.6
	comp=Z,2.4nm,0.9s,baz=6.1,slow=4.6,SNR=4.3						
KIV	Kislovodsk	71.98	311	eP	P	11 38 36.8	+0.7
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
SUMG	Summit	72.42	360	i P	P	11 38 39.1	+0.5
SUMG	Summit	72.42	360	i P	P	11 38 39.1	+0.5
CMB	Columbia Colle	74.95	54	eP	P	11 38 54.7	+1.1
	comp=Z,6.7nm,1.3s						
CMB	Columbia Colle	74.95	54	eP	P	11 38 54.7	+1.1
CMB				pmax	pmax		
	comp=Z,7.0nm,1.3s						
AKASG	Malin Array Be	75.62	323	P	P	11 38 57.0	-0.1
	comp=Z,1.7nm,0.5s,baz=47,slow=6.3,SNR=8.6						
AKBB	Malin Array Si	75.62	323	eP	P	11 38 57.1	0.0
	comp=Z,9.7nm,1.3s						
AKBB	Malin Array Si	75.62	323	eP	P	11 38 57.1	0.0
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HFS	Hagfors	75.64	336	P	P	11 38 57.6	+0.6
	comp=Z,3.1nm,0.8s,baz=46,slow=4.3,SNR=6.4						
NB2	NORSAR Subarra	75.75	337	P	P	11 38 57.8	0.0
	comp=Z,6.3nm,1.0s,baz=40,slow=5.9						
NB200	NORSAR Array S	75.75	337	eP	P	11 38 57.9	+0.1
NOA	NORSAR Array B	75.75	337	P	P	11 38 57.9	+0.1
	comp=Z,3.1nm,0.8s,baz=39,slow=5.7,SNR=14						
NVAR	Mina Array Bea	76.10	53	P	P	11 39 02.7	+2.3
	comp=Z,1.6nm,0.6s,baz=296,slow=4.9,SNR=9.2						
PD31	Pinedale Array	78.95	45	eP	P	11 39 16.8	+0.6
	comp=Z,2.5nm,1.0s						
PDAR	Pinedale Array	78.95	45	P	P	11 39 17.8	+1.5
	comp=Z,1.3nm,0.6s,baz=266,slow=2.5,SNR=5.9						
BR101	Keskin Array S	79.94	312	eP	P	11 39 22.0	+0.4
BRTR	Keskin Array B	79.94	312	eP	P	11 39 22.4	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	79.94	312	P	P	11 39 22.0	+0.4
	comp=Z,1.1nm,0.8s,baz=113,slow=2.8,SNR=4.9						
XPFO	Pion Flat	80.08	56	eP	P	11 39 23.5	+1.0
	comp=Z,8.4nm,1.3s						
KNB	Kanab	80.46	51	eP	P	11 39 25.5	+1.0
	comp=Z,6.8nm,1.1s						
KNB	Kanab	80.46	51	eP	P	11 39 25.5	+1.0
KNB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MLR	Muntele Rosu	80.66	320	P	P	11 39 26.5	+1.2
	comp=Z,2.1nm,0.5s,baz=160,slow=2.8,SNR=3.8						
RAYN	Ar Rayn	81.24	292	eP	P	11 39 28.2	-0.5
	comp=Z,3.0nm,0.8s						
RAYN	Ar Rayn	81.24	292	eP	P	11 39 28.2	-0.5
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VYHS	Vyhne	82.11	325	eP	P	11 39 32.8	0.0
VYHS	Vyhne	82.11	325	eP	P	11 39 32.8	0.0
CLL	Collm	82.56	330	i P	P	11 39 35.0	-0.1
	comp=Z,12nm,1.3s						
CLL	Collm	82.56	330	i P	P	11 39 35.0	-0.1
CLL				pmax	pmax		
	comp=Z,12nm,1.3s						
KHC	Kasperske Hory	83.98	329	eP	P	11 39 43.0	+0.5
KHC	Kasperske Hory	83.98	329	eP	P	11 39 43.0	+0.5
GERES	GERESS Array B	84.14	328	eP	P	11 39 44.0	+0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	GERESS Array B	84.14	328	P	P	11 39 43.4	-0.1
	comp=Z,1.3nm,0.9s,baz=38,slow=6.8,SNR=5.3						
GEA0	GERESS Array S	84.15	328	eP	P	11 39 43.2	-0.3
BFO	Black Forest	86.78	331	i P	P	11 39 57.8	+1.3
SCHQ	Schefferville	87.03	16	eP	P	11 39 58.4	+0.8
	comp=Z,30nm,1.5s						
SCHQ	Schefferville	87.03	16	P	P	11 39 58.5	+0.9
	comp=Z,4.0nm,0.9s,baz=290,slow=11,SNR=4.0						
IDI	Anoyia	88.11	313	P	P	11 40 04.0	+0.7
	comp=Z,6.1nm,0.7s,baz=190,slow=13,SNR=2.4						
TX31	Lajitas Ar. Si	91.25	52	eP	P	11 40 18.8	+0.7
TXAR	Lajitas Array	91.25	52	P	P	11 40 20.3	+2.2
	comp=Z,1.0nm,0.8s,baz=303,slow=4.0,SNR=7.8						
TOA1	Torodi Ar. Sit	118.48	314	ePKPdf	PKPdf	11 46 00.1	-0.5
TORD	Torodi Ar. Bea	118.49	314	PKP	PKPdf	11 46 00.1	-0.5
	comp=Z,3.4nm,1.4s,baz=44,slow=0.6,SNR=4.2						
LPAZ	La Paz	147.62	62	PKPbc	PKPbc	11 46 59.2	+1.2
	comp=Z,2.9nm,0.7s,baz=352,slow=3.9,SNR=9.2						
LVC	Limon Verde	150.81	73	PKPbc	PKPbc	11 47 05.9	+0.3
	comp=Z,1.2nm,0.5s,baz=180,slow=1.0,SNR=2.4						

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*ISCJB **23** 11:32:32.4±0.6, 31°.89N±0°.04×131°.08E±0°.05, h11^{km}±6^{km}, mb3.0/1, Error ellipse: s-maj=6.7km s-min=6.5km az=167.2*

*JMA **23** 11:32:32.8, 31°.88N×131°.08E, h9^{km}±1^{km}, M3.6*

JMA Felt III J1.

*IDC **23** 11:32:33.9±3.3, 31°.95N×130°.62E, h0^{km}, mb3.0/1, mb1 3.4/3, mb1mx3.1/63, mbtmp3.3/3, ML2.6/2, Error ellipse: s-maj=33.7km s-min=24.6km az=114.0*

ISC 23 11:32:31.9±1.0**, 31°.81N**±0°.05×**131°.10E**±0°.05**, h9**^{km}±8^{km}**, n10,** σ1^{s}.**37**/13**, 3C-2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTZ	Takazaki	0.09	355	⇑P	Pg	11 32 34.4	+0.1
JTZ				S	Sg	11 32 35.7	-0.3
JNAR	Kushima--Naru	0.32	152	⇑P	Pb	11 32 40.5	+0.7
JNAR				S	Sb	11 32 46.2	+1.2
JZO	Okuchi	0.54	308	⇑P	Pg	11 32 42.3	-0.1
JZO				S	Sg	11 32 48.9	-0.6
JTSN	Tsuno	0.56	38	⇓P	Pg	11 32 42.4	-0.4
JTSN				S	Sg	11 32 49.7	-0.4
JSU	Suzuyama	0.62	241	⇓P	Pn	11 32 45.5	-1.5
JNU	Nakatsue	1.32	352	Pg	Pb	11 32 56.2	-0.8
	43nm,0.3s,baz=197,slow=9.2,SNR=796						
JNU				Lg	Lg	11 33 13.0	
	71nm,0.3s,baz=35,slow=12,SNR=7.4						
KSRS	Korea Array	6.21	336	Pg	Pb	11 34 23.6	+3.4
	0.1nm,0.3s,baz=153,slow=17,SNR=2.5						
KSRS				Lg	Lg	11 35 41.3	
	0.1nm,0.3s,baz=155,slow=33,SNR=2.2						
MJAR	Matsushiro Arr	7.55	49	Pn	Pn	11 34 28.4	+6.2
	0.0nm,0.3s,baz=244,slow=14,SNR=4.0						
KLR	Kul'dur	17.41	1	P	P	11 36 36.0	-0.3
	0.0nm,0.3s,baz=171,slow=11,SNR=1.6						
SONM	Songino Array	24.67	318	P	P	11 37 53.1	-0.1
	0.3nm,0.6s,baz=139,slow=8.9,SNR=1.5						

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*IDC **23** 11:39:42.4±0.7, 1°.36N×97°.04E, h0^{km}, mb4.2/22, mb1 4.3/24, mb1mx4.1/65, mbtmp4.2/24, ML3.9/2, Error ellipse: s-maj=22.2km s-min=13.4km az=49.0*

*ISCJB **23** 11:39:44.6±0.3, 1°.35N±0°.04×97°.04E±0°.04, h28^{km}, mb4.4/54, MS5.2/1, Error ellipse: s-maj=7.4km s-min=4.2km az=139.7*

*KLM **23** 11:39:46.4, 1°.37N×96°.86E, h44^{km}, mb4.4*

*DJA **23** 11:39:46.3±2.3, 1°N±5°×9°7E±1°3, h75^{km}±71^{km}, M4.1/6, MLv4.1/6*

*NEIC **23** 11:39:47.5±0.2, 1°.40N×97°.13E, h35^{km}, mb4.5/31, Error ellipse: s-maj=5.3km s-min=3.0km az=50.0*

ISC 23 11:39:46.6±0.5**, 1°.35N**±0°.05×**97°.06E**±0°.07**, h28**^{km}**, n121,** σ**0^{s}.92**/117**, mb4.5**/54**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	1.28	325	P	Pn	11 40 07.7	-0.9
PBSI	Pulau Batu	1.86	139	P	Pn	11 40 17.3	+0.7
TPTI		1.90	4	P	Pn	11 40 15.7	-1.4
KCSI	Kotacane, Aceh	2.27	18	P	Pn	11 40 22.2	0.0
PSI	Prapat	2.35	52	ePn	Pn	11 40 22.2	-1.3
PSI	Prapat	2.35	52	Pn	Pn	11 40 23.3	-0.2
	6.9nm,0.3s,baz=181,slow=2.5,SNR=27						
PSI				Lg	Lg	11 41 02.6	
	17nm,0.3s,baz=0.1,slow=20,SNR=5.6						
MNSI	Mandailing Nat	2.58	102	P	Pn	11 40 27.5	+1.0
SISI	Saibi	3.35	143	P	Pn	11 40 37.7	+0.6
LHMI	Lhok Sumawe	3.85	358	ePn	Pn	11 40 45.0	+1.0
BKNI	Bangkinang	4.11	104	ePn	Pn	11 40 48.5	+0.9
FRIM	Kepong	4.93	68	P	Pn	11 41 00.8	+1.9
IPM	Ipoh	5.03	52	ePn	Pn	11 41 00.0	-0.3
KULM	Kulim	5.30	42	ePn	Pn	11 41 02.9	-1.1
KULM	Kulim	5.30	42	P	Pn	11 41 05.0	+1.0
KGM	Kluang	6.29	84	P	Pn	11 41 19.1	+1.5
SKLT	Songkhla	6.78	31	P	Pb	11 41 37.5	-6.3
MYKOM	Kota Tinggi	6.80	86	ePn	Pn	11 41 23.6	-1.0
MYKOM	Kota Tinggi	6.80	86	P	Pn	11 41 26.3	+1.7
MNAI	Manna	8.18	134	ePn	Pn	11 41 43.5	-0.1
MNAI				eSn	Sn	11 43 11.8	-3.4
UTHA	Uthaitani	14.31	9	P	P	11 43 16.9	+2.6
SBUM	Sibu	15.19	86	P	Pn	11 43 20.8	+1.4
CHAI	Chaiyaphum	15.25	18	P	P	11 43 27.1	+2.3
UTTA	Uttaradit	16.65	12	P	P	11 43 41.6	+1.4
	2.0nm,0.8s						
CM01	Chiang Mai Arr	17.06	6	ePn	Pn	11 43 42.0	-1.3
CM31	Chiang Mai Arr	17.10	6	ePn	Pn	11 43 43.0	-0.8
	7.9nm,0.7s						
CMAR	Chiang Mai Arr	17.10	6	P	Pn	11 43 42.6	-1.1
	0.5nm,0.3s,baz=200,slow=11,SNR=19						
LAMP	Lampang	17.25	8	P	P	11 43 48.9	+2.0
	3.2nm,1.0s						
CHTO	Chiang Mai	17.45	6	ePn	Pn	11 43 46.2	-1.9
	9.7nm,1.4s						
CHTO	Chiang Mai	17.45	6	P	P	11 43 50.1	+1.0
	38nm,1.1s						
CMMT	Chiang Mai	17.45	6	P	P	11 43 50.0	+0.9
	2.1nm,0.7s						
KKM	Kota Kinabalu	19.67	76	eP	P	11 44 12.4	-1.3
	25nm,1.0s						
KDM	Kudat	20.48	74	P	P	11 44 21.9	-0.4
KMI	Kunming	24.26	13	P	P	11 45 03.1	+1.4
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
KMI				pmax	pmax		
	comp=Z,560nm,14.1s						
SHL	Shillong	24.58	349	eP	P	11 45 03.7	-1.0
	comp=Z,37nm,1.0s						
SHL	Shillong	24.58	349	eP	P	11 45 05.5	+0.9
H08S2	Diego Garcia H	26.08	250	T	T	12 12 22.0	
	baz=71,slow=75,SNR=534						
H08S3	Diego Garcia H	26.09	250	T	T	12 12 18.6	
	baz=71,slow=75,SNR=1122						
H08S1	Diego Carcia H	26.10	250	T	T	12 12 26.6	
	baz=71,slow=75,SNR=404						
CD2	Chengdu	30.07	12	eP	P	11 45 54.5	+0.8
ENH	Enshi	31.09	21	eP	P	11 46 01.4	-1.2
	comp=Z,17nm,0.8s						
FITZ	Fitzroy Crossi	34.13	126	eP	P	11 46 28.7	-0.6
	comp=Z,22nm,1.5s						
FITZ	Fitzroy Crossi	34.13	126	P	P	11 46 28.9	-0.5
	comp=Z,4.3nm,1.0s,baz=308,slow=12,SNR=2.3						
XAN	Xi'an	34.36	18	P	P	11 46 30.4	-0.8
XAN				pP	sP	11 46 40.5	-2.1
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
XAN	Xi'an	34.36	18	eP	P	11 46 29.7	-1.5
	comp=Z,13nm,0.8s						
NJ2	Nanjing	36.81	32	eP	P	11 46 51.5	-0.7
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GTA	Gaotai	37.96	3	eP	P	11 47 02.3	+0.2
GTA				pP	pP	11 47 07.1	-3.1
GTA				sP	sP	11 47 09.8	-3.7
GTA				PcP	PcP	11 49 19.5	+1.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
H01W3	Cape Leeuwin H	39.44	158	T	T	12 28 54.1	
	baz=334,slow=76,SNR=4.5						
H01W2	Cape Leeuwin H	39.45	158	T	T	12 28 55.2	
	baz=334,slow=76,SNR=6.1						
H01W1	Cape Leeuwin H	39.46	158	T	T	12 28 56.4	
	baz=334,slow=76,SNR=6.5						
HHC	Hu-ho-hao-te	41.45	17	eP	P	11 47 29.5	-1.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJT	Baijiatuau	42.23	22	eP	P	11 47 36.5	-0.8
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	42.24	122	P	P	11 47 37.2	-0.5
	comp=Z,1.4nm,0.6s,baz=301,slow=9.1,SNR=17						
WR1	Warramunga Arr	42.24	122	eP	P	11 47 37.2	-0.5
	comp=Z,3.6nm,0.8s						
WRAB	Tennant Creek	42.24	122	eP	P	11 47 37.1	-0.6
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	42.25	122	eP	P	11 47 37.1	-0.7
	comp=Z,13nm,1.4s						
BJI	Beijing	42.25	22	P	P	11 47 38.6	+1.2
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH	Kashi	42.57	336	P	P	11 47 42.0	+1.7
KSH				pP	sP	11 47 51.3	-0.6
KSH				pmax	pmax		
	comp=Z,640nm,7.0s						
WMQ	Urumqi	43.10	350	eP	P	11 47 45.5	+1.1
WMQ				LR	LR		
	comp=N,2μm,17.3s						
WMQ				LR	LR		
	comp=E,1μm,15.5s						
WMQ				LR	LR		
	comp=Z,2μm,20.7s						
ASAR	Alice Springs	43.60	127	P	P	11 47 49.1	+0.4
	comp=Z,1.3nm,0.9s,baz=307,slow=7.1,SNR=6.3						
AS01	Alice Springs	43.64	127	eP	P	11 47 48.4	-0.6
TARG	Taragay, Kyrgy	43.78	339	eP	P	11 47 49.9	-0.4
	comp=Z,4.3nm,0.8s						
NRN	Naryn	44.19	337	eP	P	11 47 53.4	-0.2
	comp=Z,2.8nm,0.6s						
KDJ	Kajisay	44.35	339	eP	P	11 47 54.6	0.0
	comp=Z,5.3nm,0.9s						
GAR	Garm	44.73	330	eP	P	11 47 57.2	-0.5
	comp=Z,4.0nm,0.9s						
CHGR	Chuyangaron	45.06	329	eP	P	11 47 59.8	-0.5
	comp=Z,7.4nm,0.8s						
ARSB	Arslanbob	45.34	334	eP	P	11 48 02.3	-0.2
	comp=Z,12nm,0.4s						
KS15	Wonju Array Si	45.77	35	eP	P	11 48 05.0	-0.7
	comp=Z,24nm,1.4s						
KS01	Wonju Array Si	45.80	35	eP	P	11 48 04.6	-1.4
KSRS	Korea Array	45.80	35	P	P	11 48 06.0	0.0
	comp=Z,6.2nm,0.9s,baz=224,slow=9.4,SNR=14						
SONA0	Songino Array	47.00	9	eP	P	11 48 15.9	+0.4
SONA0				ePcP	PcP	11 49 47.4	-0.1
SONM	Songino Array	47.00	9	P	P	11 48 15.9	+0.4
	comp=Z,4.8nm,0.8s,baz=191,slow=8.9,SNR=33						
SONM				PcP	PcP	11 49 47.4	-0.1
	comp=Z,1.1nm,0.9s,baz=183,slow=4.9,SNR=2.2						
SONA1	Songino Array	47.02	9	eP	P	11 48 15.3	-0.3
MK01	Makanchi Array	47.03	346	eP	P	11 48 15.5	0.0
MK31	Makanchi Array	47.06	346	eP	P	11 48 15.9	+0.1
MK32	Makanchi Array	47.06	346	eP	P	11 48 16.4	+0.6
MKAR	Makanchi Array	47.06	346	eP	P	11 48 15.9	+0.1
	comp=Z,27nm,0.6s						
MKAR	Makanchi Array	47.06	346	P	P	11 48 16.4	+0.6
	comp=Z,2.9nm,0.5s,baz=158,slow=9.1,SNR=54						
ULN	Ulaanbaatar	47.13	9	eP	P	11 48 15.7	-0.8
	comp=Z,3.9nm,1.0s						
MAKZ	Makanchi	47.15	346	eP	P	11 48 16.3	-0.2
	comp=Z,3.3nm,0.7s						
KKAR	Karatay Array	47.86	334	eP	P	11 48 21.6	-0.4
	comp=Z,2.4nm,1.1s						
BBOO	Buckleboo	50.09	136	eP	P	11 48 39.1	-0.2
	comp=Z,28nm,1.6s						
TLY	Talaya	50.45	5	eP	P	11 48 41.4	-0.3
	comp=Z,3.0nm,0.8s						
HIA	Hailar	51.54	19	eP	P	11 48 49.8	-0.2
	comp=Z,9.3nm,1.1s						
KURBB	Kurchatov Arra	51.55	345	P	P	11 48 50.5	+0.6
	comp=Z,2.3nm,0.7s,baz=167,slow=7.1,SNR=9.6						
KURK	Kurchatov	51.61	345	eP	P	11 48 50.3	-0.1
	comp=Z,4.6nm,0.9s						
MAJO	Matsushiro	51.67	42	eP	P	11 48 51.2	0.0
MJAR	Matsushiro Arr	51.67	42	P	P	11 48 51.2	0.0
	comp=Z,1.1nm,0.8s,baz=325,slow=34,SNR=2.4						
USRK	Ussuriysk Ar.	52.71	31	P	P	11 48 59.2	+0.5
	comp=Z,14nm,0.9s,baz=151,slow=3.3,SNR=18						
ZAA0	Zalesovo Array	53.38	351	eP	P	11 49 03.4	-0.1
	comp=Z,5.2nm,0.7s						
ZALV	Zalesovo Beam	53.38	351	eP	P	11 49 03.6	+0.1
ZALV	Zalesovo Beam	53.38	351	P	P	11 49 03.9	+0.4
	comp=Z,4.7nm,0.5s,baz=181,slow=6.6,SNR=23						
ZAA1	Zalesovo Array	53.39	351	eP	P	11 49 03.9	+0.4
STKA	Stephens Creek	53.56	132	eP	P	11 49 05.0	-0.3
	comp=Z,1.9nm,1.3s						
STKA	Stephens Creek	53.56	132	P	P	11 49 06.2	+0.9
	comp=Z,2.3nm,0.8s,baz=320,slow=12,SNR=4.3						
BVAR	Borovoye Array	56.06	341	P	P	11 49 22.7	-0.2
	comp=Z,1.7nm,0.7s,baz=147,slow=8.5,SNR=10						
BRVK	Borovoye	56.12	341	eP	P	11 49 23.3	-0.1
	comp=Z,2.6nm,0.8s						
ABKAR	Akbulak array	57.31	332	eP	P	11 49 31.6	-0.3
EIDS	Eidsvold	58.58	121	eP	P	11 49 41.1	-0.2
	comp=Z,14nm,1.4s						
AKTO	Aktyubinsk	59.03	332	P	P	11 49 43.5	-0.4
	comp=Z,0.6nm,0.3s,baz=145,slow=2.0,SNR=4.3						
KBZ	Khabaz	63.86	319	P	P	11 50 16.5	-0.2
	comp=Z,1.3nm,0.7s,baz=120,slow=8.1,SNR=3.0						
KIRV	Kirov	68.11	335	P	P	11 50 43.8	+0.1
	comp=Z,5.3nm,0.6s,baz=214,slow=7.3,SNR=2.5						
NRIK	Noril'sk	68.17	356	P	P	11 50 43.6	-0.3
	comp=Z,3.6nm,0.5s,baz=151,slow=5.1,SNR=3.6						
BRTR	Keskin Array B	68.90	312	P	P	11 50 49.7	+0.4
	comp=Z,0.3nm,0.6s,baz=122,slow=5.4,SNR=2.7						
BR101	Keskin Array S	68.90	312	eP	P	11 50 49.7	+0.4
MA2	Magadan	71.26	26	eP	P	11 51 03.0	-0.1
	comp=Z,6.0nm,0.8s						
MA2	Magadan	71.26	26	P	P	11 51 03.0	-0.1
	comp=Z,3.8nm,0.6s,baz=216,slow=6.3,SNR=8.7						
PETK	Petropavlovsk-	71.69	34	P	P	11 51 05.8	0.0
	comp=Z,2.2nm,0.8s,baz=255,slow=4.3,SNR=3.5						
PEA1	Petropavlovsk-	71.69	34	eP	P	11 51 05.8	0.0
FIA1	FINESS Array S	79.80	333	eP	P	11 51 51.8	-0.3
	comp=Z,16nm,1.4s						
FIA0	FINESS Array S	79.80	333	eP	P	11 51 52.1	+0.1
FINES	FINESS Array B	79.80	333	P	P	11 51 52.1	+0.1
	comp=Z,1.3nm,0.8s,baz=103,slow=4.3,SNR=6.3						
CRLZ	Canterbury Las	80.50	134	eP	P	11 51 55.7	-0.6
	comp=Z,68nm,1.5s						
MQZ	McQueen’s Vall	80.55	135	eP	P	11 51 56.0	-0.5
	comp=Z,59nm,1.5s						
ARA0	ARCESS Array S	82.34	340	eP	P	11 52 05.9	+0.4
ARCES	ARCESS Array B	82.34	340	P	P	11 52 05.9	+0.4
	comp=Z,4.6nm,0.9s,baz=79,slow=6.3,SNR=6.2						
CLL	Collm	85.22	321	eP	P	11 52 20.0	-0.6
NB2	NORSAR Subarra	86.80	331	P	P	11 52 28.0	-0.2
	comp=Z,0.9nm,0.8s,baz=94,slow=4.8						
NB200	NORSAR Array S	86.80	331	eP	P	11 52 28.1	-0.2
NOA	NORSAR Array B	86.80	331	P	P	11 52 28.1	-0.2
	comp=Z,0.7nm,1.0s,baz=93,slow=5.0,SNR=4.1						
TXAR	Lajitas Array	143.61	31	PKP	PKPbc	11 59 17.6	+0.5
	comp=Z,0.2nm,0.6s,baz=48,slow=1.3,SNR=3.3						
CPUP	Villa Florida	145.02	223	PKPbc	PKPdf	11 59 22.9	+0.8
	comp=Z,1.1nm,0.5s,baz=117,slow=2.3,SNR=2.6						

IDC 23 11:41:47.5±2.1**, 9°.55S**×**120°.55E, h0**^{km}**, mb3.5**/1**, mb1 3.5**/4**, mb1mx3.3**/51**, mbtmp3.3**/4**, ML3.0**/1**, Error ellipse: s-maj=180.1km s-min=28.1km az=55.0, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.83	150	Pn	Pn	11 44 09.3	-0.9
	0.1nm,0.3s,baz=330,slow=8.1,SNR=1.6						
FITZ				Sn	Sn	11 45 49.2	-12
	0.1nm,0.3s,baz=273,slow=18,SNR=2.2						
WRA	Warramunga Arr	16.86	129	Pn	Pn	11 45 42.9	-2.1
	baz=303,slow=14,SNR=2.2						
ASAR	Alice Springs	18.97	139	P	Pn	11 46 12.6	+1.4
	baz=316,slow=12,SNR=1.8						
MKAR	Makanchi Array	65.64	332	P	P	11 52 33.4	-0.1
	0.5nm,0.8s,baz=148,slow=6.0,SNR=3.4						

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*NEIC **23** 11:44:22.9±0.0, 18°.17N×99°.37W, h38^{km}, MD4.1(MEX), After MEX.*

MEX 23 11:44:22.9±0.9**, 18°.13N**×**99°.40W, h54**^{km}±5^{km}**, MD4.1, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIG	Platanillo	0.28	340	ePn	Pn	11 44 30.7	-1.7
PLIG				eSn	Sn	11 44 37.4	-1.7
PLIG	Platanillo	0.28	340	i P	Pn	11 44 30.7	-1.7
PLIG				i S	Sn	11 44 37.4	-1.7
MEIG	Mezcala	0.29	226	ePn	Pn	11 44 30.6	-1.8
MEIG				eSn	Sn	11 44 37.6	-1.6
MEIG	Mezcala	0.29	226	eP	Pn	11 44 30.6	-1.8
MEIG				i S	Sn	11 44 37.6	-1.6
YAIG	Yautepec	0.80	23	ePn	Pn	11 44 36.4	-1.8
YAIG				eSn	Sn	11 44 47.1	-2.3
YAIG	Yautepec	0.80	23	i P	Pn	11 44 36.4	-1.8
YAIG				eS	Sn	11 44 47.1	-2.3
MAVM	Malinalco, Edo	0.83	354	eP	Pn	11 44 36.8	-1.9
MAVM				i S	Sn	11 44 47.6	-2.6
MAVM	Malinalco, Edo	0.83	354	eP	Pn	11 44 36.8	-1.9
MAVM				i S	Sn	11 44 47.6	-2.6
ARIG	Puente Sto Nin	0.91	280	eP	Pn	11 44 38.4	-1.2
ARIG				eS	Sn	11 44 50.5	-1.4
ARIG	Puente Sto Nin	0.91	280	eP	Pn	11 44 38.4	-1.2
ARIG				eS	Sn	11 44 50.5	-1.4
AMVM	AMECAMECA	1.16	30	eP	Pn	11 44 41.0	-2.1
AMVM				eS	Sn	11 44 55.9	-2.1
PPM	Popocatepetl	1.19	38	ePn	Pn	11 44 42.3	-1.5
PPM	Popocatepetl	1.19	38	eP	Pn	11 44 42.3	-1.5
UNM	Universidad Na	1.21	10	ePn	Pn	11 44 42.9	-1.0
UNM				eSn	Sn	11 44 58.9	-0.5
UNM	Universidad Na	1.21	10	eP	Pn	11 44 42.9	-1.0
PBVM	Pinon	1.34	13	ePn	Pn	11 44 44.0	-1.3
PBVM	Pinon	1.34	13	eP	Pn	11 44 44.0	-1.3
CAIG	El Cayaco	1.36	218	ePn	Pn	11 44 43.1	-2.4
CAIG				eSn	Sn	11 45 00.4	-2.1
CAIG	El Cayaco	1.36	218	eP	Pn	11 44 43.1	-2.4
CAIG				i S	Sn	11 45 00.4	-2.1
AZVM	Cuida Lopez Ma	1.45	4	eP	Pn	11 44 45.2	-1.9
AZVM				eS	Sn	11 45 02.8	-2.4
TPIG	Tehuac#an	1.96	81	ePn	Pn	11 44 53.0	-0.9
TPIG				eSn	Sn	11 45 15.5	-1.9
TPIG	Tehuac#an	1.96	81	eP	Pn	11 44 53.0	-0.9
TPIG				eS	Sn	11 45 15.5	-1.9
ZIIG	Zihuatanejo	2.03	256	ePn	Pn	11 44 53.2	-1.6
ZIIG				eSn	Sn	11 45 17.0	-2.0
ZIIG	Zihuatanejo	2.03	256	eP	Pn	11 44 53.2	-1.6
ZIIG				eS	Sn	11 45 17.0	-2.0
DEIG	Demacu	2.19	9	ePn	Pn	11 44 55.2	-1.9
DEIG	Demacu	2.19	9	i P	Pn	11 44 55.2	-1.9
MOIG	Morelia	2.29	313	ePn	Pn	11 44 59.1	+0.6
LVIG	Laguna Verde	3.24	60	ePn	Pn	11 45 12.8	+1.6
CCIG	Comitan	7.18	104	ePn	Pn	11 46 06.7	+1.2

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*IDC **23** 11:51:34.6±7.5, 14°.91S×177°.47W, h329^{km}±71^{km}, mb3.4/13, mb1 3.6/13, mb1mx3.5/33, mbtmp4.0/13, Error ellipse: s-maj=42.8km s-min=18.5km az=143.0*

*ISCJB **23** 11:51:37.4±1.0, 15°.0S±0°.3×177°.6W±0°.2, h372^{km}, mb3.5/13, Error ellipse: s-maj=41.1km s-min=14.2km az=149.7*

ISC 23 11:51:38.6±1.0**, 15°.0S**±0°.3×**177°.5W**±0°.2**, h372**^{km}**, n18,** σ**0^{s}.82**/20**, mb3.5**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.85	238	P	P	11 58 45.8	0.0
	0.4nm,0.3s,baz=76,slow=8.3,SNR=2.2						
JAY	Jayapura	43.03	283	P	P	11 59 03.0	-0.5
	13nm,1.0s,baz=112,slow=16,SNR=2.5						
WRA	Warramunga Arr	46.09	257	P	P	11 59 25.9	-1.4
	0.7nm,0.7s,baz=92,slow=6.5,SNR=3.8						
WRA				PcP	PcP	12 00 57.9	+1.2
	0.6nm,0.7s,baz=89,slow=3.5,SNR=4.1						
ASAR	Alice Springs	46.48	252	P	P	11 59 30.9	+0.5
	4.4nm,0.5s,baz=84,slow=8.5,SNR=43						
ASAR				PcP	PcP	12 00 59.2	+1.1
	0.5nm,0.5s,baz=104,slow=3.9,SNR=5.0						
FITZ	Fitzroy Crossi	54.42	258	P	P	12 00 29.1	0.0
	2.4nm,1.0s,baz=106,slow=6.3,SNR=0.8						
PETK	Petropavlovsk-	71.09	344	P	P	12 02 17.8	+0.5
	2.3nm,0.7s,baz=113,slow=11,SNR=4.7						
NVAR	Mina Array Bea	76.72	44	P	P	12 02 50.4	+0.2
	0.5nm,0.5s,baz=234,slow=4.3,SNR=4.5						
ILAR	Eielson Array	82.85	13	P	P	12 03 21.7	-0.2
	1.6nm,0.6s,baz=222,slow=5.7,SNR=20						
TXAR	Lajitas Array	83.70	58	P	P	12 03 27.8	+0.7
	0.8nm,0.7s,baz=225,slow=3.6,SNR=9.9						
PDAR	Pinedale Array	84.64	43	P	P	12 03 30.8	-0.8
	0.6nm,0.9s,baz=204,slow=3.3,SNR=3.8						
CMAR	Chiang Mai Arr	88.73	289	P	P	12 03 53.0	+1.5
	0.8nm,0.4s,baz=94,slow=3.6,SNR=3.3						
YKA	Yellowknife Ar	91.32	24	P	P	12 04 01.8	-0.6
	0.1nm,0.4s,baz=231,slow=4.3,SNR=4.0						
SONM	Songino Array	91.92	319	P	P	12 04 05.9	+0.2
	0.3nm,0.8s,baz=116,slow=3.4,SNR=1.9						
MKAR	Makanchi Array	107.72	315	PKiKP	PKiKP	12 09 21.9	-0.2
	0.1nm,0.4s,baz=64,slow=3.4,SNR=3.2						
ARCES	ARCESS Array B	123.59	351	PKP	PKiKP	12 09 51.8	-0.3
	4.7nm,0.9s,baz=6.3,slow=12,SNR=3.6						
NOA	NORSAR Array B	133.57	354	PKP	PKiKP	12 10 12.2	-0.2
	0.2nm,0.5s,baz=15,slow=4.1,SNR=2.1						
BRTR	Keskin Array B	143.27	318	PKP	PKPdf	12 10 28.2	-1.3
	1.8nm,0.8s,baz=169,slow=1.3,SNR=8.4						
GERES	GERESS Array B	144.99	347	PKP	PKPab	12 10 32.5	-0.3
	0.9nm,0.7s,baz=15,slow=5.5,SNR=7.7						

*DDA **23** 11:53:49.4, 36°.02N×27°.94E, h54^{km}±2^{km}, ML3.4*
*ISCJB **23** 11:53:50.7±0.5, 36°.01N±0°.03×28°.02E±0°.04, h50^{km}±8^{km}, Error ellipse: s-maj=6.1km s-min=4.5km az=139.0*
*ATH **23** 11:53:50.9, 36°.13N×27°.85E, h40^{km}±4^{km}, ML2.6/2, Error ellipse: s-maj=7.7km s-min=1.3km az=121.0*
*ISK **23** 11:53:50.2, 35°.99N×28°.00E, h44^{km}±1^{km}, ML2.9/15*
*THE **23** 11:53:52.1, 36°.04N×28°.03E, h42^{km}±3^{km}, ML2.6/2, Error ellipse: s-maj=4.2km s-min=0.9km az=102.0*
ISC 23 11:53:51.2±1.3, **36°.03N**±0°.04×**28°.04E**±0°.04, **h45**^{km}±7^{km}, **n37, σ0^{s}.98**/55, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.20	21	PG	Pn	11 53 58.7	-0.3
ARG				SG	Sn	11 54 04.7	+0.2
ARG	Arkhangelos	0.20	21	P	Pn	11 53 58.8	-0.2
ARG				S	Sn	11 54 04.8	+0.2
ARG				AML	AML	11 54 05.1	
	comp=N,1860µm,0.5s						
ARG				AML	AML	11 54 07.1	
	comp=E,1970µm,0.2s						
ARG	Arkhangelos	0.20	21	P	Pn	11 53 58.9	-0.2
ARG				S	Sn	11 54 05.0	+0.5
MRSB	Marmaris-Mugla	0.70	11	PG	Pn	11 54 04.9	+0.1
MRSB				SG	Sn	11 54 15.6	+1.1
DATC	Datca-Mugla	0.79	337	PG	Pn	11 54 05.9	-0.1
DATC				SG	Sn	11 54 17.5	+0.8
KARP	Karpathos	0.86	236	PG	Pn	11 54 06.2	-0.8
KARP	Karpathos	0.86	236	P	Pn	11 54 07.1	0.0
KARP				S	Sn	11 54 18.4	0.0
KARP				AML	AML	11 54 20.7	
	comp=E,1066µm,0.3s						
KARP				AML	AML	11 54 21.0	
	comp=N,1241µm,0.3s						
KARP	Karpathos	0.86	236	P	Pn	11 54 07.2	+0.2
KARP				S	Sn	11 54 18.6	+0.1
TURN	Turunc	0.96	28	PG	Pn	11 54 05.8	-2.5
TURN				SG	Sn	11 54 17.3	-3.4
TURN	Turunc	0.96	28	*i* P	Pn	11 54 06.0	-2.2
TURN				*i* S	Sn	11 54 18.0	-2.7
FETY	Fethiye	1.04	54	PN	Pn	11 54 09.8	+0.4
YER	Yerkesik	1.12	10	PN	Pn	11 54 10.7	+0.1
BDRM	Kayabasi	1.14	335	*i* P	Pn	11 54 11.0	+0.2
BDRM				*i* S	Sn	11 54 25.9	+0.7
BDRM				IAML_P			
	comp=Z,3µm,0.1s						
BODT	Bodrum	1.18	331	PN	Pn	11 54 11.1	-0.3
BODT	Bodrum	1.18	331	P	Pn	11 54 11.1	-0.3
BODT				S	Sn	11 54 26.6	+0.2
YKAV	Yalikavak-Bodr	1.25	331	PN	Pn	11 54 11.7	-0.6
MLSB	Milas	1.28	351	PN	Pn	11 54 12.9	+0.2
AKAS	Kas	1.28	81	PN	Pn	11 54 12.5	-0.4
AKAS	Kas	1.28	81	*i* P	Pn	11 54 12.8	0.0
AKAS				*i* S	Sn	11 54 29.4	+0.4
AKAS				IAML_P			
	comp=Z,7µm,0.1s						
TAVA	DENIZLI_Tavas	1.59	26	*i* P	Pn	11 54 17.7	+0.6
TAVA				IAML_P			
	comp=Z,565nm,0.1s						
AYDN	Tasoluk	1.63	356	*i* P	Pn	11 54 18.4	+0.8
AYDN				*i* S	Sn	11 54 39.0	+1.5
AYDN				IAML_P			
	comp=Z,943nm,0.2s						
ELL	Elmali	1.67	64	PN	Pn	11 54 18.6	+0.4
GOLH	Golhisar	1.72	45	*i* P	Pn	11 54 20.2	+1.4
GOLH				IAML_P			
	comp=Z,1µm,0.2s						
ZKR	Zakros	1.74	239	P	Pn	11 54 19.5	+0.5
ZKR	Zakros	1.74	239	P	Pn	11 54 20.0	+1.0
GCAM	G?zelcaml?	1.79	339	PN	Pn	11 54 19.2	-0.4
GCAM	G?zelcaml?	1.79	339	*i* P	Pn	11 54 19.3	-0.3
GCAM				*i* S	Sn	11 54 42.5	+1.4
GCAM				IAML_P			
	comp=Z,1µm,0.1s						
AYDB	Zeytinkoy-Aydi	1.92	357	PN	Pn	11 54 21.8	+0.3
KORT	Korkueli	2.10	62	PN	Pn	11 54 24.9	+0.9
NPS	Neapolis	2.12	249	P	Pn	11 54 24.2	0.0
NPS				S	Sn	11 54 48.9	-0.4
DGB	zmir	2.22	336	*i* P	Pn	11 54 25.1	-0.4
DGB				*i* S	Sn	11 54 51.7	0.0
DGB				IAML_P			
	comp=Z,505nm,0.1s						
LAST	Lasithi	2.26	248	P	Pn	11 54 25.8	-0.3
LAST				S	Sn	11 54 51.6	-1.3
LAST	Lasithi	2.26	248	P	Pn	11 54 26.2	0.0
LAST				S	Sn	11 54 52.7	-0.2
APE	Apeiranthos	2.27	298	PN	Pn	11 54 25.8	-0.5
APE	Apeiranthos	2.27	298	P	Pn	11 54 25.3	-0.9
KULA	Kula-Manisa	2.53	11	PN	Pn	11 54 30.8	+0.9
URLA	Izmir	2.59	334	PN	Pn	11 54 30.3	-0.4

UCR 23 12:02:21.3±1.1, **12°.35N**×**87°.95W**, **h52**^{km}±50^{km}, **MD3.4, ML3.8, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.93	7	*e*P	Pn	12 02 38.7	+0.4
CRIN	San Cristobal	0.95	68	*e*P	Pn	12 02 39.2	+0.7
TEL3	Telica 3	1.10	78	*e*P	Pn	12 02 40.4	-0.1
VSM	San Miguel	1.12	344	*e*P	Pn	12 02 41.3	+0.4
TELN	Telica	1.12	77	*e*P	Pn	12 02 40.7	-0.1
PACA	Pacayal	1.17	342	*e*P	Pn	12 02 41.7	+0.1
PACA				*e*S	Sn	12 02 57.2	+0.6
PACA				IAML		12 03 02.7	
	comp=Z,2µm,0.2s						
CNGN	Cerro Negro	1.23	83	*e*P	Pn	12 02 42.1	-0.2
TECA	Tecapa	1.26	335	*e*P	Pn	12 02 43.5	+0.7
COPN	Copaltepe	1.34	97	*e*P	Pn	12 02 43.6	-0.1
MOMN	Momotombo	1.38	87	*e*P	Pn	12 02 43.9	-0.4
LFRS	El Faro	1.67	320	*e*P	Pn	12 02 48.2	-0.1
LFRS				*e*S	Sn	12 03 08.5	-0.1
MGAN	Managua	1.68	97	*e*P	Pn	12 02 44.4	-3.9
MGAN				*e*S	Sn	12 03 09.0	+0.4
ESTN	Estel	1.71	64	*e*P	Pn	12 02 49.5	+0.6
LFU	La Fuente	1.80	321	*e*P	Pn	12 02 50.3	+0.4
MATN	Matagalpa	2.06	73	*e*P	Pn	12 02 53.2	-0.4
SBLS	San Blas	2.20	312	*e*P	Pn	12 02 56.3	+0.6

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*AZER **23** 12:08:15.8±0.0, 39°.17N×48°.38E, h35^{km}, ml3.2/26, Error ellipse: s-maj=0.9km s-min=0.4km az=291.0*
*TEH **23** 12:08:16.2, 39°.23N×48°.59E, h28^{km}, ML3.5*
*ISCJB **23** 12:08:17.1±0.4, 39°.18N±0°.02×48°.52E±0°.05, h46^{km}±7^{km}, Error ellipse: s-maj=6.2km s-min=3.5km az=171.1*
ISC 23 12:08:17.2±0.9, **39°.23N**±0°.02×**48°.53E**±0°.03, **h32**^{km}±8^{km}, **n58, σ1^{s}.18**/83, **20C-31D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLBA	Clilabad	0.10	277	*e*Pg	Pn	12 08 23.2	+0.5
GLBA	Clilabad	0.10	277	⇓P	Pn	12 08 23.2	+0.5
	SNR=160						
GLBA				⇑S	Sb	12 08 28.4	+1.8
LKRN	Lenkeran, Azer	0.56	159	*e*Pg	Pb	12 08 27.5	-1.1
LKRN	Lenkeran, Azer	0.56	159	⇓P	Pb	12 08 27.6	-1.1
	SNR=33						
LKRN				⇓S	Sb	12 08 36.2	-0.2
LRK	Lerik	0.60	194	*e*Pg	Pb	12 08 28.5	-1.0
LRK	Lerik	0.60	194	⇑P	Pb	12 08 28.8	-0.8
	SNR=393						
LRK				⇓S	Sb	12 08 38.4	+0.5
SAAT	Saatly	0.64	353	*e*Pg	Pn	12 08 30.2	+0.2
SAAT	Saatly	0.64	353	⇓P	Pn	12 08 30.2	+0.2
SAAT				⇑S	Sn	12 08 41.4	+2.3
ASTR	Astara	0.70	163	*e*Pg	Pb	12 08 29.5	-1.5
ASTR	Astara	0.70	163	⇓P	Pb	12 08 29.5	-1.5
	SNR=140						
ASTR				⇓S	Sb	12 08 39.9	-0.5
ALIB	Äli-Bayra	0.82	27	*e*Pg	Pn	12 08 33.1	+0.6
ALIB	Äli-Bayra	0.82	27	⇑P	Pn	12 08 33.1	+0.6
ALIB				⇓S	Sn	12 08 47.3	+3.8
KDMR	Kurdemir	1.17	347	*e*Pg	Pn	12 08 37.3	-0.1
KDMR	Kurdemir	1.17	347	⇓P	Pn	12 08 37.3	-0.1
KDMR				⇑S	Sb	12 08 54.0	+0.2
ZRD	Zardab	1.23	328	*e*Pg	Pb	12 08 38.6	-1.3
ZRD	Zardab	1.23	328	⇑P	Pb	12 08 38.6	-1.3
	SNR=3.6						
ZRD				⇓S	Sb	12 08 56.0	+0.5
GBS	Qobustan	1.34	14	*e*Pg	Pb	12 08 40.4	-1.4
GBS	Qobustan	1.34	14	⇓Pn	Pb	12 08 40.5	-1.4
	SNR=13						
GBS				⇑Sn	Sb	12 09 01.2	+2.5
BRDA	Brd	1.46	315	*e*Pn	Pn	12 08 42.1	+0.7
BRDA	Brd	1.46	315	⇓Pg	Pb	12 08 42.6	-1.2
	SNR=8.2						
BRDA				⇑Sn	Sb	12 09 01.6	-0.4
IHRS	Heris	1.47	232	*e*Pn	Pn	12 08 42.6	+0.8
IHRS				IAMB	IAmb	12 09 05.0	
	comp=Z,7µm,0.2s						
ISRB	Sarab	1.56	206	*e*Pn	Pb	12 08 44.8	-0.7
ISRB				IAMB	IAmb	12 09 07.7	
	comp=N,3µm,0.2s						
PQL	Pirkuli	1.56	2	*e*Pn	Pn	12 08 42.6	-0.3
PQL	Pirkuli	1.56	2	⇓Pn	Pn	12 08 43.1	+0.2
	SNR=70						
PQL				⇓Sn	Sb	12 09 05.4	+0.4
IML	Ismayilli	1.58	351	*e*Pn	Pb	12 08 44.0	-1.9
IML	Ismayilli	1.58	351	⇓Pn	Pb	12 08 44.0	-1.9
IML				⇑Sn	Sb	12 09 06.0	+0.5
QBL	Gabala	1.79	343	*e*Pn	Pn	12 08 46.2	+0.2
QBL	Gabala	1.79	343	⇓Pn	Pn	12 08 46.2	+0.2
QBL				⇓Sn	Sb	12 09 09.2	-2.4
SIZA	Siyzn	1.87	9	*e*Pn	Pb	12 08 49.7	-1.0
SIZA	Siyzn	1.87	9	⇓Pn	Pn	12 08 47.5	+0.5
SIZA				⇓Sn	Sb	12 09 15.2	+1.5
MNGR	Mingechevir, A	1.90	325	*e*Pn	Pn	12 08 47.6	+0.2
MNGR	Mingechevir, A	1.90	325	⇑Pn	Pn	12 08 47.7	+0.2
MNGR				⇓Sn	Sn	12 09 11.2	+1.0
XNQ	Khinaliq	1.96	351	*e*Pn	Pn	12 08 48.2	-0.3
XNQ	Khinaliq	1.96	351	⇑Pn	Pn	12 08 48.3	-0.3
	SNR=6.6						
XNQ				⇑Sn	Sb	12 09 14.5	-2.1
ORD	Ordubad	1.99	262	*e*Pn	Pn	12 08 49.1	+0.3
ORD	Ordubad	1.99	262	⇓Pn	Pn	12 08 49.6	+0.8
ORD				⇑Sg	Sb	12 09 17.0	-0.3
IBST	Bostanabad	2.00	221	*e*Pn	Pn	12 08 49.3	+0.3
IBST				IAMB	IAmb	12 09 21.5	
	comp=Z,685nm,0.2s						
ITBZ	Tabriz	2.11	243	*e*Pn	Pn	12 08 52.1	+1.6
ITBZ				IAMB	IAmb	12 08 53.0	
	comp=Z,598nm,0.2s						
QUBA	Quba, Azerbaij	2.12	359	⇓Sg	Sb	12 09 25.0	+4.0
GANJ	Ganja	2.21	311	*e*Pn	Pn	12 08 51.6	-0.1
GANJ	Ganja	2.21	311	⇑Pn	Pn	12 08 51.0	-0.7
	SNR=4.1						
GANJ				⇓Sn	Sn	12 09 18.3	+0.3
SEKA	Sheki	2.22	333	*e*Pn	Pn	12 08 51.8	-0.1
SEKA	Sheki	2.22	333	⇑Pn	Pn	12 08 51.8	-0.1
	SNR=9.2						
SEKA				⇑Sn	Sn	12 09 19.5	+1.1
IMRD	Marand	2.26	258	*e*Pn	Pn	12 08 54.2	+1.6
IMRD				IAMB	IAmb	12 09 29.3	
	comp=Z,2µm,0.2s						
QSAR	Qusar	2.29	355	*e*Pn	Pn	12 08 53.1	+0.3
QSAR	Qusar	2.29	355	⇓Pn	Pn	12 08 53.2	+0.3
	SNR=8.1						
QSAR				⇓Sn	Sb	12 09 23.1	-2.7
SBZ	Shahbuz	2.31	275	*e*Pn	Pn	12 08 53.5	+0.3
SBZ	Shahbuz	2.31	275	⇓Pn	Pn	12 08 53.5	+0.3
SBZ				⇑Sg	Sb	12 09 26.5	0.0
NAX	Nakhchivan	2.35	270	*e*Pn	Pn	12 08 54.2	+0.4
NAX	Nakhchivan	2.35	270	⇓Pn	Pn	12 08 54.2	+0.4
NAX				⇑Sg	Sb	12 09 28.3	+0.6
GDB	GEDABAY	2.60	306	*e*Pn	Pn	12 08 57.7	+0.5
GDB	GEDABAY	2.60	306	⇓Pn	Pn	12 08 57.6	+0.5
	SNR=22						
GDB				⇓Sn	Sn	12 09 28.2	+0.4
ZKTA	Zakatala	2.81	329	*e*Pn	Pn	12 09 00.4	+0.4
ZKTA	Zakatala	2.81	329	⇑Pn	Pn	12 09 00.4	+0.4
ZKTA				⇓Sn	Sn	12 09 33.5	+0.7
QZX	Qazax, Azerbai	3.03	308	*e*Pn	Pn	12 09 03.1	+0.1
QZX	Qazax, Azerbai	3.03	308	⇓Pn	Pn	12 09 01.8	-1.2
QZX				⇑Sn	Sn	12 09 37.5	-0.7
IPRN	Peran	4.25	133	*e*Pn	Pn	12 09 19.0	-0.8
IPRN				IAMB	IAmb	12 10 07.2	
	comp=Z,5µm,0.1s						
ISHM	Shahmirzad	5.10	131	*e*Pn	Pn	12 09 30.8	-0.9
ISHM				IAMB	IAmb	12 10 29.2	
	comp=Z,2µm,0.2s						

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*ISCJB **23** 12:11:31.8±0.7, 8°.68S±0°.06×127°.93E±0°.07, h33^{km}, mb3.8/5, Error ellipse: s-maj=10.9km s-min=7.2km az=149.0*
*IDC **23** 12:11:39.2±2.1, 8°.92S×127°.76E, h96^{km}±24^{km}, mb3.5/5, mb1 3.7/10, mb1mx3.5/34, mbtmp3.9/10, Error ellipse: s-maj=20.3km s-min=16.4km az=34.0*
ISC 23 12:11:34.3±0.8, **8°.68S**±0°.07×**127°.93E**±0°.10, **h35**^{km}, **n10, σ1^{s}.66**/13, **mb3.8**/5, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.47	250	P	Pn	12 12 41.3	+1.6
	9.3nm,0.3s,baz=98,slow=0.6,SNR=9.0						
BATI				S	Sn	12 13 31.4	+0.7
	22nm,0.3s,baz=83,slow=22,SNR=6.7						
SIJI	Sorong	8.44	23	P	Pn	12 13 42.2	+8.0
	2.7nm,0.3s,baz=176,slow=23,SNR=6.3						
FITZ	Fitzroy Crossi	9.63	193	P	Pn	12 13 50.6	+0.2
	2.2nm,0.3s,baz=23,slow=11,SNR=33						
FITZ				S	Sn	12 15 34.9	-2.5
	3.3nm,0.3s,baz=30,slow=16,SNR=5.6						
WRA	Warramunga Arr	12.80	152	P	Pn	12 14 36.0	+2.1
	0.7nm,0.3s,baz=324,slow=14,SNR=46						
WRA				S	Sn	12 16 55.6	+0.3
	1.5nm,0.3s,baz=334,slow=22,SNR=8.1						
ASAR	Alice Springs	15.96	160	P	Pn	12 15 17.3	+0.9
	0.2nm,0.3s,baz=331,slow=11,SNR=16						
ASAR				S	Sn	12 18 11.2	-1.2
	0.1nm,0.3s,baz=329,slow=28,SNR=2.6						
CMAR	Chiang Mai Arr	39.31	313	P	P	12 18 58.7	-1.6
	0.4nm,0.3s,baz=143,slow=7.6,SNR=4.1						
SONM	Songino Array	59.41	343	P	P	12 21 32.9	-0.5
	0.3nm,0.4s,baz=176,slow=9.0,SNR=3.8						
PETK	Petropavlovsk-	66.56	19	P	P	12 22 22.6	+1.9
	1.9nm,0.8s,baz=202,slow=3.1,SNR=1.7						
MKAR	Makanchi Array	68.53	328	P	P	12 22 32.2	-1.1
	0.4nm,0.5s,baz=125,slow=7.2,SNR=10						
ZALV	Zalesovo Beam	72.20	335	P	P	12 22 53.5	-2.0
	0.9nm,0.5s,baz=133,slow=6.5,SNR=5.8						

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*ISCJB **23** 12:15:12.9±0.8, 40°.38N±0°.04×42°.40E±0°.07, h7^{km}±6^{km}, Error ellipse: s-maj=8.7km s-min=5.8km az=14.3*
*DDA **23** 12:15:12.8, 40°.40N×42°.32E, h7^{km}±3^{km}, ML2.8*
*ISK **23** 12:15:12.1, 40°.38N×42°.44E, h5^{km}, ML2.2/5*
ISC 23 12:15:13.0±1.1, **40°.40N**±0°.03×**42°.33E**±0°.05, **h10**^{km}±8^{km}, **n14, σ0^{s}.51**/22, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SENK	Senkaya-Erzuru	0.17	5	PG	Pg	12 15 16.6	-0.2
SENK				SG	Sg	12 15 19.9	+0.4
HOMI	Horasan	0.48	223	*i* P	Pb	12 15 23.3	-0.3
HOMI				IAML_P			
	comp=Z,3µm,0.1s						
KOPR	Koprukoy-ERZUR	0.55	222	PG	Pg	12 15 23.9	+0.2
KOPR				SG	Sb	12 15 32.6	-0.1
DDEM	Demirkent	0.66	318	*i* P	Pb	12 15 26.8	0.0
DDEM				*i* S	Sn	12 15 38.1	-0.9
DDEM				IAML_P			
	comp=Z,3µm,0.2s						
DAGI	Agillar	0.75	335	*i* P	Pg	12 15 27.6	+0.1
DAGI				*i* S	Sb	12 15 38.5	0.0
DAGI				IAML_P			
	comp=Z,3µm,0.2s						
DBAD	Bademkaya	0.79	322	*i* P	Pg	12 15 28.0	-0.2
DBAD				*i* S	Sn	12 15 41.9	-0.2
DBAD				IAML_P			
	comp=Z,1µm,0.1s						
DIGO	Kars	0.80	88	*i* P	Pg	12 15 28.3	-0.2
DIGO				IAML_P			
	comp=Z,2µm,0.1s						
ARTV	Artvin	0.84	339	*i* P	Pg	12 15 29.1	-0.3
ARTV				*i* S	Sb	12 15 42.1	+0.7
ARTV				IAML_P			
	comp=Z,1µm,0.1s						
DBOC	Borcka	1.07	332	*i* P	Pg	12 15 33.7	0.0
DBOC				*i* S	Sg	12 15 47.8	+0.2
DBOC				IAML_P			
	comp=Z,1µm,0.1s						
EPOS	Posof	1.15	15	*i* P	Pn	12 15 35.1	-0.1
EPOS				*i* S	Sn	12 15 52.5	+1.4
BCA	Borcka	1.18	333	PN	Pb	12 15 34.7	-0.7
BATM	Batumi	1.30	338	PN	Pg	12 15 38.1	+0.1
CHOM	Cayeli-Rize	1.38	301	PN	Pg	12 15 39.6	0.0
BAYT	Aydıntepe-Bayb	1.67	271	PN	Pb	12 15 44.2	+0.2

IDC 23 12:16:28.7±7.4, **16°.08S**×**176°.49W**, **h0**^{km}, **mb3.6**/3, **mb1 3.9**/3, **mb1mx3.6**/31, **mbtmp3.6**/3, **Error ellipse: s-maj=326.9km s-min=35.1km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.79	258	P	P	12 24 59.9	-0.5
	0.1nm,0.3s,baz=95,slow=7.7,SNR=5.0						
ASAR	Alice Springs	47.07	253	P	P	12 25 02.9	+0.3
	0.6nm,0.4s,baz=85,slow=8.3,SNR=13						
ILAR	Eielson Array	83.72	12	P	P	12 28 59.0	0.0
	0.4nm,0.8s,baz=226,slow=5.8,SNR=3.9						

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*IDC **23** 12:30:51.9±1.2, 10°.87S×164°.62E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.7/43, mbtmp3.9/7, ML4.2/2, Error ellipse: s-maj=32.9km s-min=26.7km az=151.0*
*ISCJB **23** 12:30:55.1±1.1, 11°.0S±0°.1×164°.6E±0°.1, h29^{km}, mb3.7/5, Error ellipse: s-maj=21.8km s-min=11.3km az=34.6*
ISC 23 12:30:56.4±1.1, **10°.9S**±0°.1×**164°.7E**±0°.1, **h29**^{km}, **n9, σ1^{s}.03**/12, **mb3.9**/5, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.85	287	*e*P	Pn	12 32 07.0	-0.5
HNR				*e*S	Sn	12 33 04.0	+1.2
HNR	Honiara	4.85	287	Pn	Pn	12 32 07.1	-0.4
	32nm,0.3s,baz=111,slow=3.1,SNR=15						
HNR				Sn	Sn	12 33 04.2	+1.5
	15nm,0.3s,baz=180,slow=20,SNR=3.6						
DZM	Mont Dzumac	11.25	171	Pn	Pn	12 33 36.5	+1.2
	0.4nm,0.3s,baz=330,slow=9.4,SNR=26						
WRA	Warramunga Arr	30.53	249	P	P	12 37 06.8	-0.7
	0.4nm,0.7s,baz=81,slow=8.9,SNR=3.7						
ASAR	Alice Springs	31.91	242	P	P	12 37 18.7	-0.9
	0.1nm,0.3s,baz=63,slow=9.3,SNR=2.7						
ASAR				PcP	PcP	12 40 08.9	-1.0
	0.3nm,0.9s,baz=86,slow=2.6,SNR=3.1						
FITZ	Fitzroy Crossi	38.38	255	P	P	12 38 15.2	-0.2
	4.6nm,1.0s,baz=61,slow=19,SNR=3.8						
ILAR	Eielson Array	83.71	19	P	P	12 43 23.2	+1.0
	0.6nm,0.6s,baz=228,slow=5.1,SNR=4.2						
MKAR	Makanchi Array	92.68	317	P	P	12 44 05.8	+0.1
	0.4nm,0.7s,baz=86,slow=5.5,SNR=3.8						
ARCES	ARCESS Array B	115.92	345	PKP	PKiKP	12 49 34.9	-1.0
	6.0nm,1.0s,baz=45,slow=1.4,SNR=7.0						

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*ISCJB **23** 12:33:22.7±1.1, 57°.5S±0°.2×25°.2W±0°.6, h35^{km}, mb3.7/2, Error ellipse: s-maj=48.9km s-min=14.4km az=156.8*
*IDC **23** 12:33:22.3±3.6, 56°.85S×25°.40W, h0^{km}, mb3.7/2, mb1 3.9/2, mb1mx3.7/18, mbtmp3.7/2, Error ellipse: s-maj=130.4km s-min=58.0km az=169.0*
ISC 23 12:33:24.9±1.1, **57°.5S**±0°.2×**25°.2W**±0°.3, **h35**^{km}, **n8, σ1^{s}.10**/8, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.01	158	P	Pn	12 36 53.9	-0.1
VNA3	Neumayer Olymp	15.22	161	P	Pn	12 36 56.1	-0.8
VNA2	Neumayer--Watz	15.40	158	P	Pn	12 36 59.3	+0.1
	baz=319,slow=16						
SNAA	Sanae	16.94	156	P	Pn	12 37 18.7	-0.1
LPAZ	La Paz	52.11	304	P	P	12 42 31.4	-0.8
	0.7nm,0.5s,baz=135,slow=7.1,SNR=2.5						
TORD	Torodi Ar. Bea	73.86	27	P	P	12 44 55.3	-0.6
	0.7nm,1.1s,baz=190,slow=6.7,SNR=3.6						
YKA	Yellowknife Ar	138.00	316	PKP	PKiKP	12 52 48.3	+2.0
	0.1nm,0.6s,baz=120,slow=2.1,SNR=1.8						
ILAR	Eielson Array	151.90	309	PKPbc	PKiKP	12 53 15.3	+0.6
	0.3nm,0.6s,baz=123,slow=3.2,SNR=4.2						

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*SOME **23** 12:38:32.7, 41°.85N×72°.60E, h5^{km}*
*KRNET **23** 12:38:32.1±0.1, 41°.81N×72°.57E, h17^{km}, mb2.4*
*NNC **23** 12:38:33.2±0.7, 41°.85N×72°.55E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=7.0km s-min=3.8km az=72.0*
*KNET **23** 12:38:33.8±0.8, 41°.87N×72°.67E, h0^{km}, ml2.1, Error ellipse: s-maj=7.3km s-min=5.4km az=4.0*
ISC 23 12:38:32.1±1.1, **41°.81N**±0°.02×**72°.57E**±0°.03, **h8**^{km}±12^{km}, **n38, σ0^{s}.84**/62, **26C-20D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.46	269	⇑*i*P	Pg	12 38 40.5	-0.5
	baz=66						
ARK				⇑*i*S	Sg	12 38 46.6	-0.4
	baz=66						
ARSB	Arslanbob	0.57	147	⇑*i*P	Pg	12 38 43.1	-0.1
	baz=47						
ARSB				⇑*i*S	Sg	12 38 51.1	+0.3
	baz=47						
MNAS	Manas	0.68	356	⇑P	Pg	12 38 45.3	0.0
	1.8nm,0.3s						
MNAS				⇑S	Sg	12 38 54.5	+0.4
	2.9nm,0.3s						
MNAS	Manas	0.68	356	P	Pg	12 38 45.5	+0.2
	11nm,0.1s						
MNAS				S	Sg	12 38 55.0	+0.8
	23nm,0.1s						
MNAS	Manas	0.68	356	⇑*i*P	Pg	12 38 45.3	0.0
	baz=56						
MNAS				⇑*i*S	Sg	12 38 54.8	+0.6
	baz=56						
AML	Almayashu	0.90	69	⇑P	Pg	12 38 49.6	+0.1
	14nm,0.2s,SNR=42						
AML				⇓S	Sb	12 39 01.8	-0.5
	23nm,0.2s						
AML	Almayashu	0.90	69	⇓*i*P	Pg	12 38 49.5	+0.1
	baz=69						
AML				⇓*i*S	Sb	12 39 01.9	-0.5
	baz=69						
MRKS	Merke	1.05	27	P	Pg	12 38 52.3	-0.1
	7.7nm,0.1s						
MRKS				S	Sb	12 39 06.2	-0.4
	19nm,0.3s						
MRKS	Merke	1.05	27	*e*P	Pg	12 38 52.2	-0.2
	7.7nm,0.1s						
MRKS				⇑*i*S	Sb	12 39 06.2	-0.4
	18nm,0.3s						
EKS2	Erkin-Say	1.24	46	⇓P	Pb	12 38 55.6	-0.1
	1.9nm,0.2s,SNR=9.4						
EKS2	Erkin-Say	1.24	46	⇓*i*P	Pb	12 38 55.4	-0.4
	baz=46						
EKS2				⇓*i*S	Sg	12 39 11.9	0.0
	baz=46						
ARLS	Aral	1.31	87	⇑*e*P	Pn	12 38 56.8	0.0
	baz=87						
ARLS				⇑*i*S	Sg	12 39 14.2	-0.1
	baz=87						
UCH	Uchtor	1.51	73	⇓P	Pb	12 39 00.5	-0.1
	3.4nm,0.2s,SNR=12						
UCH	Uchtor	1.51	73	⇓*e*P	Pn	12 39 00.2	+0.4
	baz=73						
UCH				⇓*i*S	Sg	12 39 20.5	-0.1
	baz=73						
AAK	Ala-Archa	1.65	59	⇓P	Pb	12 39 03.1	+0.3
	2.8nm,0.2s						
AAK	Ala-Archa	1.65	59	⇓Pn	Pb	12 39 03.2	+0.3
	2.3nm,0.6s						
AAK				⇑Sn	Sg	12 39 28.5	+3.3
	2.0nm,0.3s						
AAK	Ala-Archa	1.65	59	⇑*i*P	Pb	12 39 02.5	-0.4
	baz=59						
AAK				⇑*i*S	Sg	12 39 24.4	-0.8
	baz=59						
SFK	Sufi-Kurgan	1.93	158	⇓Pn	Pb	12 39 07.7	+0.1
	1.2nm,0.4s						
SFK				⇑Sn	Sg	12 39 33.8	-0.3
	4.8nm,0.3s						
SFK	Sufi-Kurgan	1.93	158	Pg	Pb	12 39 08.0	+0.4
	2.7nm,0.2s						
SFK				Lg	Lg	12 39 33.7	
	8.6nm,0.2s						
SFK	Sufi-Kurgan	1.93	158	⇓*i*P	Pb	12 39 07.7	+0.1
	baz=58						

SFK				⇓iS	Sb	12 39 33.1	+1.2
	baz=58						
KBK	Karagaybulak	1.96	64	⇓P	Pg	12 39 09.6	-0.1
	3.7nm,0.2s						
KBK	Karagaybulak	1.96	64	⇑iP	Pb	12 39 07.8	-0.3
	baz=64						
KBK				⇑iS	Sb	12 39 33.5	+0.8
	baz=64						
KK31	Karatay Array	2.00	311	⇓Pn	Pb	12 39 08.7	0.0
	0.9nm,0.3s,baz=127,slow=16,SNR=18						
KK31				⇑Sn	Sg	12 39 36.0	-0.3
	2.4nm,0.3s,baz=130,slow=25,SNR=8.7						
CHMS	Chumysh	2.01	53	⇑iP	Pb	12 39 08.6	-0.2
	baz=53						
CHMS				⇑iS	Sb	12 39 34.9	+1.0
	baz=53						
KZA	Kyzart	2.02	81	⇑P	Pg	12 39 10.2	-0.6
	4.5nm,0.2s,SNR=11						
KZA	Kyzart	2.02	81	⇑iP	Pb	12 39 08.7	-0.5
	baz=82						
KZA				⇑iS	Sb	12 39 35.1	+0.5
	baz=82						
USP	Ospenovka	2.04	44	⇓P	Pb	12 39 09.6	+0.2
	1.7nm,0.1s,SNR=8.4						
USP	Ospenovka	2.04	44	⇓iP	Pb	12 39 09.2	-0.2
	baz=44						
USP				⇓iS	Sb	12 39 35.1	+0.2
	baz=44						
TKM2	Tokmak 2	2.50	63	⇓P	Pb	12 39 17.7	+0.4
	3.7nm,0.3s,SNR=5.2						
TKM2	Tokmak 2	2.50	63	Pn	Pb	12 39 18.2	+0.8
	3.4nm,0.8s						
TKM2				Lg	Lg	12 39 52.2	
	10nm,0.7s						
TKM2	Tokmak 2	2.50	63	⇑iP	Pb	12 39 15.5	-1.9
	baz=63						
TKM2				⇑iS	Sb	12 39 46.7	-1.7
	baz=63						
DGS	Degeres	2.77	58	Pg	Pb	12 39 21.9	+0.1
	1.9nm,0.4s						
DGS				Lg	Lg	12 39 58.3	
	7.4nm,0.5s						
DGS	Degeres	2.77	58	eP	Pb	12 39 21.6	-0.2
	1.9nm,0.4s						
DGS				eS	Sb	12 39 56.3	+0.4
	7.4nm,0.5s						
KST	Kastek	2.80	63	Pg	Pg	12 39 24.9	-0.8
KST				Lg	Lg	12 40 01.3	
	12nm,0.4s						
KUU	Kurty	3.47	52	Pg	Pb	12 39 33.7	0.0
	1.1nm,0.8s						
KUU				Lg	Lg	12 40 16.3	
	4.2nm,0.5s						
KUU	Kurty	3.47	52	eP	Pb	12 39 34.4	+0.7
	1.1nm,0.8s						
KUU				eS	Sb	12 40 18.2	+2.2
	4.2nm,0.5s						
CHKK	Chushkaly	3.84	56	Pg	Pg	12 39 43.8	-1.8
	1.1nm,0.3s						
CHKK				Lg	Lg	12 40 33.6	
	2.5nm,0.4s						
ARXS	Arharly	4.54	56	Pg	Pg	12 39 57.0	-2.1
	1.2nm,0.5s						
ARXS				Lg	Lg	12 40 55.7	
	3.2nm,0.5s						

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*DDA **23** 12:43:20.9, 41°.36N×41°.63E, h4km, ML2.8*
*TIF **23** 12:43:20.7, 41°.38N×41°.67E, h5km*
ISC 23 12:43:20.7±1.5, **41°.36N**±0°.05×**41°.6E**±0°.1, **h9**km±10km, **n6**, σ**0s.83**/9, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBOC	Borcka	0.04	112	i P	Pg	12 43 22.2	-0.2
DBOC				IAML_P			
	comp=Z,51µm,0.1s						
BATM	Batumi	0.25	12	P	Pg	12 43 25.8	+0.1
BATM				S	Sg	12 43 29.9	+0.7
ARTV	Artvin	0.29	127	i P	Pb	12 43 27.6	-0.5
ARTV				IAML_P			
	comp=Z,7µm,0.1s						
DBAD	Bademkaya	0.34	171	i P	Pb	12 43 28.5	-0.5
DBAD				i S	Sb	12 43 33.6	-1.1
DBAD				IAML_P			
	comp=Z,4µm,0.1s						
DAGI	Agillar	0.36	142	i P	Pg	12 43 28.6	+0.9
DDEM	Demirkent	0.48	168	i P	Pb	12 43 31.9	+0.6
DDEM				i S	Sb	12 43 38.2	-0.2
DDEM				IAML_P			
	comp=Z,3µm,0.1s						

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*IDC **23** 12:51:33.7±1.2, 10°.70S×165°.40E, h0km, mb3.8/8, mb1 4.1/10, mb1mx3.9/40, mbtmp4.0/10, ML4.4/2, MS3.6/2, Ms1 3.6/2, ms1mx3.1/35, Error ellipse: s-maj=33.3km s-min=22.2km az=139.0*
*NEIC **23** 12:51:35.3±0.3, 10°.63S×165°.38E, h10km, mb4.5/10, Error ellipse: s-maj=9.0km s-min=5.9km az=78.0*
*ISCJB **23** 12:51:36.5±0.4, 10°.76S±0°.04×165°.38E±0°.06, h31km, mb4.2/17, MS4.1/1, Error ellipse: s-maj=9.3km s-min=5.7km az=156.5*
ISC 23 12:51:38.2±0.7, **10°.68S**±0°.07×**165°.45E**±0°.09, **h31**km, **n40**, σ**1s.12**/38, **mb4.3**/17, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.56	282	ePn	Pn	12 52 58.3	-0.5
HNR				eSn	Sn	12 54 03.3	+1.6
HNR	Honiara	5.56	282	Pn	Pn	12 52 57.6	-1.2
	18nm,0.3s,baz=188,slow=0.2,SNR=9.5						
HNR				Sn	Sn	12 54 03.3	+1.6
	8.3nm,0.3s,baz=229,slow=18,SNR=1.6						
HNR				LR	LR	12 54 52.7	
	comp=Z,240nm,19.8s,baz=164,slow=36						
MARNC	Mare, Loyalty	11.03	167	ePn	Pn	12 54 14.0	+0.2
DZM	Mont Dzumac	11.37	175	ePn	Pn	12 54 18.4	-0.2
DZM				eSn	Sn	12 56 23.3	-1.5
DZM	Mont Dzumac	11.37	175	Pn	Pn	12 54 18.8	+0.1
	1.8nm,0.3s,baz=306,slow=12,SNR=41						
DZM				Sn	Sn	12 56 22.4	-2.3
	0.1nm,0.3s,baz=128,slow=17,SNR=2.4						
OUENC	Ouen Island, N	11.75	174	ePn	Pn	12 54 25.2	+1.5
OUENC				eSn	Sn	12 56 36.7	+2.8
PINNC	Pines Island,	12.02	171	ePn	Pn	12 54 27.5	0.0
CTA	Charters Tower	20.72	241	P	P	12 56 17.2	+1.0
	11nm,1.1s,baz=68,slow=16,SNR=2.6						
H11S2	WAKE ISLAND Hy	29.01	2	T	T	13 28 06.4	
	baz=184,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	29.01	2	T	T	13 28 01.7	
	baz=184,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.02	2	T	T	13 28 11.3	
	baz=184,slow=76,SNR=16						
BKZ	Black Stump Fm	30.03	163	eP	P	12 57 45.1	+0.6
	50nm,1.5s						
H11N1	WAKE ISLAND Hy	30.23	3	T	T	13 29 35.9	
	baz=182,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.24	3	T	T	13 29 38.9	
	baz=182,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.25	3	T	T	13 29 37.2	
	baz=182,slow=76,SNR=15						
WRAB	Tennant Creek	31.33	249	eP	P	12 57 55.3	-0.8
	8.7nm,1.4s						
WR1	Warramunga Arr	31.34	249	eP	P	12 57 54.0	-2.2
	6.9nm,1.1s						
WRA	Warramunga Arr	31.34	249	P	P	12 57 54.0	-2.2
	0.5nm,0.9s,baz=80,slow=9.4,SNR=3.6						
BFZ	Birch Farm	31.37	164	eP	P	12 57 57.1	+0.9
	37nm,1.2s						
ASAR	Alice Springs	32.70	243	P	P	12 58 07.2	-1.0
	0.7nm,1.0s,baz=65,slow=10,SNR=7.3						
FOZ	Fox Glacier	32.95	174	eP	P	12 58 10.7	+0.8
	18nm,1.2s						
BBOO	Buckleboo	34.87	226	eP	P	12 58 26.5	-0.3
	3.7nm,0.8s						
CM01	Chiang Mai Arr	71.67	293	eP	P	13 02 57.4	-0.2
CM31	Chiang Mai Arr	71.70	294	eP	P	13 02 57.8	+0.1
	5.4nm,1.1s						
CMAR	Chiang Mai Arr	71.70	294	P	P	13 02 58.2	+0.4
	1.2nm,1.0s,baz=116,slow=4.1,SNR=5.0						
ULN	Ulaanbaatar	77.83	324	eP	P	13 03 32.5	-0.3
	3.1nm,0.9s						
SONA0	Songino Array	78.20	324	eP	P	13 03 36.0	+1.2
SONM	Songino Array	78.20	324	P	P	13 03 36.0	+1.2
	1.0nm,0.9s,baz=126,slow=7.3,SNR=6.1						
SONA1	Songino Array	78.20	324	eP	P	13 03 34.8	0.0
RSO	Redoubt South	78.27	20	eP	P	13 03 34.8	-0.2
QSPA	South Pole Qui	79.33	180	eP	P	13 03 40.8	0.0
	3.3nm,1.0s						
RPN	Rapa Nui	80.99	116	LR	LR	13 30 09.6	
	comp=Z,102nm,21.7s,baz=47,slow=29						
SCM	Sheep Creek Mo	81.10	21	eP	P	13 03 50.1	-0.1
	47nm,1.6s						
IL1	Eielson Array	83.26	19	eP	P	13 04 02.0	+0.7
ILAR	Eielson Array	83.26	19	P	P	13 04 02.5	+1.1
	0.8nm,0.8s,baz=243,slow=4.9,SNR=11						
ILB	Eielson Array	83.26	19	eP	P	13 04 01.9	+0.5
	5.8nm,1.6s						
MK32	Makanchi Array	93.06	317	eP	P	13 04 48.6	-0.3
MKAR	Makanchi Array	93.06	317	P	P	13 04 48.6	-0.3
	0.4nm,0.8s,baz=98,slow=5.1,SNR=5.0						
YKA	Yellowknife Ar	94.78	27	P	P	13 04 55.9	-0.5
	0.3nm,0.9s,baz=261,slow=4.7,SNR=5.1						
YKB5	Yellowknife Ar	94.78	27	eP	P	13 04 56.1	-0.3

MEX 23 13:07:37.8±0.6, **18°.09N**×**98°.47W**, **h51**km±7km, **MD3.8**, **Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAIG	Yautepec	0.95	323	eP	Pn	13 07 53.6	-1.5
YAIG				i S	Sn	13 08 06.0	-1.8
PPM	Popocatepetl	0.98	351	eP	Pn	13 07 53.3	-2.5
PPM				eS	Sn	13 08 07.4	-1.6
PLIG	Platanillo	1.03	287	eP	Pn	13 07 54.6	-1.5
PLIG				i S	Sn	13 08 08.0	-1.5
TPIG	Tehuac#an	1.10	73	i P	Pn	13 07 52.4	-4.6
ARIG	Puente Sto Nin	1.80	276	eP	Pn	13 08 04.5	-2.0
ARIG				i S	Sn	13 08 26.1	-2.0

IDC 23 13:12:17.3±1.7, **1°.91N**×**127°.98E**, **h0**km, **mb3.4**/3, **mb1 3.5**/3, **mb1mx3.3**/47, **mbtmp3.4**/3, **Error ellipse: s-maj=123.2km s-min=27.3km az=69.0**, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.59	164	P	P	13 17 19.3	-0.3
	0.2nm,0.4s,baz=344,slow=10,SNR=6.6						
SONM	Songino Array	49.42	341	P	P	13 21 09.3	+0.2
	0.3nm,0.5s,baz=155,slow=9.1,SNR=4.3						
MKAR	Makanchi Array	59.76	325	P	P	13 22 24.1	-0.1
	0.5nm,0.4s,baz=117,slow=8.5,SNR=21						

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*ISCJB **23** 13:16:28.7±0.7, 23°.96N±0°.02×122°.84E±0°.02, h4km±5km, Error ellipse: s-maj=3.9km s-min=2.6km az=174.4*
*TAP **23** 13:16:29.9, 24°.03N×122°.87E, h23km±1km, ML2.6, D*
*JMA **23** 13:16:30.1±0.2, 24°.02N×122°.84E, h19km±4km, M2.7*
ISC 23 13:16:29.0±1.2, **23°.96N**±0°.03×**122°.85E**±0°.02, **h12**km±10km, **n51**, σ**0s.68**/101, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.50	10	P	Pg	13 16 38.9	+0.1
JYNG				S	Sg	13 16 45.1	-0.4
YOJ	Yonaguni jima	0.53	16	eP	Pb	13 16 39.5	-0.7
	baz=14						
YOJ				eS	Sg	13 16 46.2	-0.1
	baz=14						
YOJ	Yonaguni jima	0.53	16	P	Pb	13 16 39.4	-0.7
YOJ				eS	Sg	13 16 45.8	-0.5
HATJ	Hateruma jima	0.88	83	P	Pb	13 16 46.5	+0.3
HATJ				eS	Sn	13 16 59.4	-0.4
EOS1	EOS1	0.88	312	eP	Pb	13 16 46.6	+0.4
	baz=319						
EOS1				eS	Sb	13 16 58.4	+0.5
	baz=319						
IRIF	Iriomote-Funau	0.89	65	P	Pb	13 16 46.3	0.0
IRIF				eS	Sg	13 16 58.7	+0.9
JKRS	Kuro-shima	1.10	75	P	Pb	13 16 50.4	+0.5
JKRS				S	Sn	13 17 04.6	-0.6
NANB	Nanao	1.11	295	eP	Pn	13 16 49.9	-0.4
	baz=304						
NANB				eS	Sn	13 17 05.4	-0.1
	baz=304						
ENA	Nanau	1.11	295	P	Pn	13 16 49.9	-0.4
	baz=304						
ENA				S	Sb	13 17 04.1	-0.6
	baz=304						
TWC	Suao	1.12	306	P	Pn	13 16 50.2	-0.2
	baz=302						
TWC				S	Sb	13 17 03.6	-1.1
	baz=302						
NACB	Ninganchiao	1.17	281	eP	Pn	13 16 50.6	-0.4
	baz=261						
NACB				eS	Sb	13 17 06.5	+0.4
	baz=261						
JIJ	Ishigaki jima	1.25	71	P	Pn	13 16 52.2	0.0
JIJ				S	Sn	13 17 09.0	0.0
ETLH	Xiulin Townshi	1.27	282	eP	Pn	13 16 52.9	+0.3
	baz=264						
ETLH				eS	Sb	13 17 10.4	+1.1
	baz=264						
TWE	Neicheng	1.32	306	P	Pb	13 16 53.9	+0.2
	baz=302						
TWE				S	Sn	13 17 09.9	-0.7
	baz=302						
ENTT	Nioudou	1.35	300	P	Pn	13 16 54.2	+0.6
	baz=297						
ENTT				eS	Sb	13 17 11.7	+0.2
	baz=297						
SLBB	Yuanshan	1.36	306	P	Pb	13 16 54.9	+0.5
	baz=315						
SLBB				eS	Sb	13 17 12.1	+0.4
	baz=315						
TIPB	Shuangxi	1.38	318	P	Pn	13 16 54.2	+0.2
	baz=315						
TIPB				S	Sn	13 17 11.2	-0.9
	baz=315						
NDT	Datong Townshi	1.38	298	eP	Pb	13 16 54.9	+0.2
	baz=295						
NDT				S	Sb	13 17 13.2	+0.9
	baz=295						
HGSD	Ruisui	1.38	251	eP	Pn	13 16 53.7	-0.4
	baz=249						
HGSD				eS	Sn	13 17 11.8	-0.4
	baz=249						
NNSB	Datong	1.42	290	eP	Pn	13 16 55.2	+0.6
	baz=287						
NNSB				eS	Sb	13 17 13.9	+0.4
	baz=287						
NNS	Nan Shan	1.43	290	eP	Pn	13 16 55.6	+0.8
	baz=287						
NNS				eS	Sb	13 17 14.1	+0.2
	baz=287						
WHF	Hehuan Shan	1.46	278	P	Pn	13 16 55.8	+0.3
	baz=275						
WHF				eS	Sn	13 17 14.8	0.0
	baz=275						
EHY	Hungye	1.47	253	eP	Pn	13 16 54.7	-0.5
	baz=250						
EHY				eS	Sn	13 17 13.7	-0.6
	baz=250						
JISG	Ishigakijimahi	1.48	64	P	Pn	13 16 55.2	-0.1
JISG				S	Sb	13 17 15.0	0.0
NWLT	Wulai	1.48	304	eP	Pb	13 16 56.3	0.0
	baz=316						
NWLT				eS	Sb	13 17 14.9	-0.1
	baz=316						
NWF	Wu-fen Shan	1.48	319	eP	Pn	13 16 55.4	0.0
	baz=316						
NWF				S	Sn	13 17 13.9	-0.8
	baz=316						
WFSB	Wu-fen Shan	1.48	319	eP	Pn	13 16 55.0	-0.3
	baz=316						
WFSB				eS	Sn	13 17 14.0	-0.5
	baz=316						
YHNB	Yeheng	1.52	298	eP	Pb	13 16 57.2	0.0
	baz=296						
YHNB				eS	Sb	13 17 16.9	+0.5
	baz=296						
YULB	Yu-li	1.53	249	eP	Pn	13 16 55.8	-0.3
	baz=234						
YULB				eS	Sn	13 17 15.5	-0.4
	baz=234						
OWD	Renai	1.53	270	eP	Pn	13 16 56.1	-0.1
	baz=268						
OWD				eS	Sn	13 17 15.6	-0.4
	baz=268						
CHGB	Renai	1.53	274	eP	Pn	13 16 56.5	+0.1
	baz=272						
CHGB				eS	Sn	13 17 16.4	+0.1
	baz=272						
NSK	Sanguang	1.54	298	eP	Pn	13 16 57.2	+0.9
	baz=296						
NSK				eS	Sb	13 17 17.1	+0.2
	baz=296						
TWF1	Yuli	1.54	247	eP	Pn	13 16 55.9	-0.3
	baz=233						
TWF1				eS	Sn	13 17 16.4	+0.1
	baz=233						
TWT	Tachien	1.56	281	eP	Pb	13 16 57.8	0.0
	baz=265						
TWT				eS	Sb	13 17 18.2	+0.6
	baz=265						
VWDT	VWDT	1.58	263	eP	Pn	13 16 56.8	+0.1
	baz=261						
VWDT				eS	Sn	13 17 17.0	0.0
	baz=261						
FULB	Fuli	1.61	242	P	Pn	13 16 57.0	-0.2
	baz=228						
FULB				S	Sn	13 17 17.3	-0.6
	baz=228						
SSLB	Suanglung	1.74	265	eP	Pn	13 16 59.5	+0.5
	baz=263						
SSLB				eS	Sn	13 17 21.8	+0.6
	baz=263						
WHP	Taichung City	1.77	281	eP	Pb	13 17 01.0	-0.4
	baz=266						
WHP				eS	Sb	13 17 23.1	-0.4
	baz=266						
SMLT	Sun Moon Lake	1.78	268	eP	Pn	13 17 00.5	+0.9
	baz=266						
SMLT				eS	Sn	13 17 22.9	+0.6
	baz=266						
NSTT	Nanjuang	1.81	292	eP	Pb	13 17 01.9	-0.2
	baz=289						
TYC	Yuchr	1.82	269	eP	Pb	13 17 01.9	-0.3
	baz=267						
TYC				eS	Sb	13 17 25.4	+0.4
	baz=267						
ELDTW	Lidau	1.84	246	P	Pn	13 17 00.2	-0.3
	baz=244						
ELDTW				S	Sn	13 17 21.9	-1.9
	baz=244						
WHYT	Xinyi Township	1.84	262	eP	Pb	13 17 02.3	-0.3
	baz=248						
WHYT				eS	Sb	13 17 25.2	-0.5
	baz=248						
WJS	Zhushan	1.94	267	eP	Pb	13 17 04.0	-0.3
	baz=265						
WJS				eS	Sb	13 17 29.5	+0.9
	baz=265						
CHN5	Tsauling	2.02	260	eP	Pb	13 17 04.9	-0.7
	baz=247						
CHN5				eS	Sb	13 17 30.2	-0.6
	baz=247						
STYT	Tauyuan	2.08	248	eP	Pn	13 17 04.5	+0.8
	baz=237						
STYT				eS	Sn	13 17 30.4	+1.0
	baz=237						
TPUB	Ta-pu	2.14	253	eP	Pn	13 17 06.3	+1.9
	baz=243						
TPUB				eS	Sn	13 17 32.4	+1.5
	baz=243						
CHN4	Tsaushan	2.15	254	eP	Pn	13 17 06.7	+2.0
	baz=242						
CHN4				eS	Sb	13 17 33.9	-0.6
	baz=242						
WTP	Ta-pu	2.17	251	eP	Pb	13 17 07.2	-0.9
	baz=242						
WTP				eS	Sb	13 17 34.1	-0.9
	baz=242						
SGST	Jiashian	2.25	248	eP	Pb	13 17 08.6	-1.0
	baz=235						
SGST				eS	Sn	13 17 35.8	+2.0
	baz=235						
CHN1	Nanshi	2.26	251	eP	Pb	13 17 09.3	-0.4
	baz=249						
CHN1				eS	Sb	13 17 36.6	-1.1
	baz=249						

IGQ 23 13:17:52.8±0.5, **3°S**±4°×**7°9W**±°, **h12**km, **MLv3.9**, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	Cochancay	0.36	20	P	Pg	13 17 57.3	-2.8
COHC				S	Sg	13 18 03.3	-1.7
MILO	Milagro-Astudi	0.56	341	P	Pb	13 18 04.3	-0.3
MILO				S	Sn	13 18 16.3	+0.5
MORR	Playas El Morr	0.97	280	P	Pg	13 18 11.0	-0.7
MORR				S	Sn	13 18 27.9	+1.8
GONZ	Gonzanam	1.42	181	P	Pn	13 18 14.4	-4.5
IGUA	Igualata	1.50	29	P	Pn	13 18 17.8	-2.4
BMAS	Trigal station	1.58	35	P	Pn	13 18 18.6	-2.4
ARRY	Arrayan	1.59	35	P	Pn	13 18 18.4	-2.8
PAT1	Patacocha	1.60	36	P	Pn	13 18 19.1	-2.3
BPAT	Tungurahua Vol	1.60	36	P	Pn	13 18 18.6	-2.8
BPAT				S	Sn	13 18 42.6	+0.3
BIL2	Estacion Bilba	1.60	33	P	Pn	13 18 20.6	-0.7
BBIL	Ulba Tungurahu	1.62	33	P	Pn	13 18 19.5	-2.0
RETU	Refugio	1.64	35	P	Pn	13 18 20.0	-1.9
JUI6	Juive	1.65	33	P	Pn	13 18 19.9	-2.0
MCRA	Macar, Loja	1.65	200	P	Pn	13 18 17.9	-3.9
MCRA				S	Sn	13 18 38.1	-4.9
POND	Pondoa	1.66	34	P	Pn	13 18 20.1	-2.0
BULB	Ulba Tungurahu	1.67	35	P	Pn	13 18 20.6	-1.7
RUN5	Runtun	1.68	34	P	Pn	13 18 20.5	-1.9
BRUN	Tungurahua Vol	1.68	35	P	Pn	13 18 20.5	-1.9
SALI	Salinas	1.73	291	P	Pn	13 18 22.3	-0.4
SAGO	Sagoatoa	1.79	23	P	Pn	13 18 23.4	-0.7
SAGO				S	Sb	13 18 49.0	+0.4
PUYO	Puyo, Santa Ro	1.88	46	P	Pn	13 18 24.8	-0.1
PUYO				S	Sn	13 18 49.6	+0.9
PIS1	Pisayambo	2.00	30	P	Pn	13 18 26.4	-0.6
PISA	Pisayambo	2.00	30	P	Pn	13 18 26.5	-0.5
ILLI	Illinizas Sur	2.18	17	P	Pn	13 18 29.5	+0.1
PAST	Pastocalle	2.23	19	P	Pb	13 18 33.2	-0.1
BMOR	Cotopaxi Volca	2.26	24	P	Pn	13 18 31.4	+0.9
BNAS	Cotopaxi Volca	2.31	23	P	Pn	13 18 31.8	+0.6
BREF	Cotopaxi Volca	2.32	24	P	Pb	13 18 33.9	-1.2
NAS2	Nasa	2.33	23	P	Pb	13 18 33.5	-1.6
BTAM	Cotopaxi Volca	2.33	25	P	Pn	13 18 32.6	+1.0
BVC2	Cotopaxi Volca	2.34	24	P	Pn	13 18 33.0	+1.3
VC1	Cotopaxi 1	2.36	24	P	Pn	13 18 33.4	+1.5
COV1	Cotopaxi Volc	2.37	26	P	Pn	13 18 32.9	+0.8
ARDO	Archidona, Ten	2.39	41	P	Pn	13 18 32.9	+0.9
ARDO				S	Sb	13 19 04.3	-1.2
PITA	Cotopaxi Volc	2.43	23	P	Pn	13 18 34.6	+1.9
ANTG	Antisana-Guama	2.55	26	P	Pn	13 18 36.3	+1.7
ANTS	Antisana-Sarah	2.59	28	P	Pn	13 18 37.2	+2.0
ANTI	Antisana	2.64	27	P	Pb	13 18 38.4	-2.1
GGPC	Guagua Pichinc	2.73	17	P	Pn	13 18 38.8	+1.8
PINO	Pino	2.74	16	P	Pn	13 18 39.4	+2.1
YANA	Yana	2.79	17	P	Pn	13 18 40.1	+2.3
GOLV	Golondrinas	3.01	5	P	Pn	13 18 39.2	-1.2
PAC1	Pacto, Paraso	3.11	11	P	Pn	13 18 43.7	+1.8
CUIC	Cuicocha-Domo	3.25	18	P	Pb	13 18 47.5	-3.3

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*ISCJB **23** 13:23:21.2±0.2, 61°.74N±0°.02×149°.73W±0°.05, h66km±3km, mb3.7/18, Error ellipse: s-maj=4.2km s-min=3.6km az=44.4*
*IDC **23** 13:23:21.2±1.2, 61°.75N×149°.92W, h49km±12km, mb3.5/18, mb1 3.7/22, mb1mx3.6/58, mbtmp3.8/22, ML3.5/5, MS4.0/1, Ms1 4.0/1, ms1mx2.9/42, Error ellipse: s-maj=14.0km s-min=8.9km az=108.0*
*NEIC **23** 13:23:23.2±0.0, 61°.74N×149°.76W, h37km, ML3.7(AEIC), After AEIC.*
NEIC Felt at Anchorage, Chugiak, Eagle River and Willow.
ISC 23 13:23:21.6±0.8, **61°.72N**±0°.03×**149°.73W**±0°.03, **h53**km±7km, **n87**, σ**1s.18**/100, **mb3.9**/18, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMR	Palmer	0.31	115	P	Pn	13 23 30.5	-0.5
PMR				S	Sn	13 23 38.0	+0.1
GHO	Glory Hole Cre	0.39	82	P	Pn	13 23 31.8	-0.1
GHO				S	Sn	13 23 39.1	-0.2
SUA	Susitna One	0.55	242	P	Pn	13 23 33.8	+0.1
RC01	Rabbit Creek A	0.64	180	P	Pn	13 23 34.8	+0.1
RC01				S	Sn	13 23 45.1	+1.0
SML	Sawmill	0.67	82	P	Pn	13 23 34.8	-0.3

SML				S	Sn	13 23 45.6	+0.7
KNK	Knik Glacier	0.69	117	P	Pn	13 23 35.4	+0.2
KNK				S	Sn	13 23 46.4	+1.2
PTE	Portage	0.93	158	P	Pn	13 23 39.4	+1.1
PWL	Port Wells	1.10	142	P	Pn	13 23 41.1	+0.4
PWL				S	Sn	13 23 56.6	+1.8
SCM	Sheep Creek Mo	1.15	83	P	Pn	13 23 41.9	+0.5
SCM				S	Sn	13 23 58.1	+2.1
SLKM	Skilak Lake	1.24	191	P	Pn	13 23 43.1	+0.5
HUR	Hurricane	1.26	2	P	Pn	13 23 43.5	+0.6
SPWE	Spurr West	1.43	253	P	Pn	13 23 46.7	+1.5
GLI	Glacier Island	1.53	123	P	Pn	13 23 47.1	+0.6
SEW	Seward	1.63	175	P	Pn	13 23 48.3	+0.5
PPLA	Purkeypile	1.64	317	P	Pn	13 23 49.2	+1.0
JPK	Jack Peak	1.65	113	P	Pn	13 23 49.0	+0.8
RND	Reindeer	1.74	13	P	Pn	13 23 50.1	+0.8
DHY	Denali Highway	1.75	38	P	Pn	13 23 50.3	+0.8
TRF	Thorofare Moun	1.75	352	P	Pn	13 23 50.5	+0.9
KLU	Klutina	1.83	96	P	Pn	13 23 51.4	+0.7
RDJH	Redoubt Jeurge	1.88	234	P	Pn	13 23 52.9	+1.6
RDWB	Redoubt West	1.96	232	P	Pn	13 23 53.7	+1.3
RED	Redoubt Volcan	1.98	230	P	Pn	13 23 53.9	+1.3
DIV	Divide	1.99	106	P	Pn	13 23 53.5	+0.6
PS11	TAPS Pump St11	2.05	78	P	Pn	13 23 55.3	+1.8
BRLK	Bradley Lake	2.05	197	P	Pn	13 23 54.5	+0.9
MCK	McKinley	2.05	10	P	Pn	13 23 55.3	+1.7
HIN	Hinchinbrook I	2.06	129	P	Pn	13 23 54.8	+1.1
HARP	HAARP	2.26	70	P	Pn	13 23 58.5	+2.1
EYAK	Cordova Ski Ar	2.26	120	P	Pn	13 23 57.4	+1.0
PAX	Paxson	2.35	56	P	Pn	13 23 59.4	+1.7
IVE	Iliamna Volcan	2.35	225	P	Pn	13 23 59.4	+1.7
ILW	Iliamna West	2.36	226	P	Pn	13 23 59.7	+1.8
ILS	Iliamna Low So	2.41	224	P	Pn	13 24 00.4	+1.8
CHUM	Lake Minchumin	2.47	332	P	Pn	13 24 00.3	+1.0
WRH	Wood River Hil	2.86	14	P	Pn	13 24 05.7	+1.1
NEA	Nenana	2.88	6	P	Pn	13 24 06.2	+1.3
SVW2	Sparrevohn	2.88	260	P	Pn	13 24 05.9	+0.9
HDA	Harding Lake	2.98	24	P	Pn	13 24 07.7	+1.5
PS08	TAPS Pump Stn8	3.12	24	P	Pn	13 24 09.8	+1.6
TT01	Tatalina	3.17	295	P	Pn	13 24 09.4	+0.6
MCARA	McCarthy VSAT	3.23	93	P	Pn	13 24 11.4	+1.7
DOT	Dot Lake	3.25	51	P	Pn	13 24 12.1	+2.2
COLA	College	3.27	14	P	Pn	13 24 11.4	+1.1
ILAR	Eielson Array	3.32	22	P	Pn	13 24 12.1	+1.2
	14nm,0.3s,baz=204,slow=14,SNR=181						
ILAR				S	Sn	13 24 49.3	+0.3
	13nm,0.3s,baz=201,slow=22,SNR=12						
MLY	Manley	3.35	353	P	Pn	13 24 12.2	+0.8
SCRK	Sand Creek	3.47	47	P	Pn	13 24 14.1	+1.0
PTPK	Patty Peak	3.53	96	P	Pn	13 24 15.4	+1.4
BALM	Baldy	3.62	98	P	Pn	13 24 15.9	+0.7
KIAG	Kiagna River	3.64	99	P	Pn	13 24 16.3	+0.8
BCA3	Beaver Creek A	3.93	67	P	Pn	13 24 21.0	+1.6
CTGM	Chitina Glacie	4.12	97	P	Pn	13 24 23.3	+1.4
PS06	TAPS Pump Stn6	4.15	360	P	Pn	13 24 24.1	+1.9
KDAK	Kodiak Island	4.21	201	P	Pn	13 24 23.1	0.0
	4.0nm,0.3s,baz=60,slow=4.8,SNR=62						
KDAK				S	Sn	13 25 09.5	-1.3
	6.1nm,0.3s,baz=111,slow=4.7,SNR=3.5						
YUK2	White River	4.22	85	P	Pn	13 24 24.6	+1.2
BVCY	Beaver Creek	4.23	77	P	Pn	13 24 25.7	+2.2
PRP	Porcupine Dome	4.25	24	P	Pn	13 24 25.3	+1.6
YUK3	Moose Creek	4.41	85	P	Pn	13 24 27.1	+1.1
GCSA	Galena City Sc	4.43	316	P	Pn	13 24 27.7	+1.6
IM3	Indian Mountai	4.63	339	P	Pn	13 24 29.8	+0.9
EGAK	Eagle	4.94	48	P	Pn	13 24 34.3	+1.3
DAWY	Dawson	5.28	59	P	Pn	13 24 39.2	+1.4
INK	Inuvik	9.49	39	P	Pn	13 25 37.1	+1.8
	0.7nm,0.3s,baz=233,slow=16,SNR=35						
INK				S	Sn	13 27 21.6	+1.3
	0.5nm,0.3s,baz=136,slow=7.0,SNR=5.5						
DLBC	Dease Lake	10.37	100	P	Pn	13 25 48.2	+0.8
	0.1nm,0.3s,baz=306,slow=8.7,SNR=3.9						
YKA	Yellowknife Ar	16.33	72	P	Pn	13 27 05.8	-1.1
	0.1nm,0.3s,baz=290,slow=13,SNR=3.8						
YKA				PcP	PcP	13 31 56.3	-0.6
	0.0nm,0.3s,baz=276,slow=1.2,SNR=5.4						
RES	Resolute Bay	22.98	34	P	P	13 28 20.0	-1.1
	0.5nm,0.6s,baz=266,slow=15,SNR=2.1						
SEY	Seymchan	26.14	298	P	P	13 28 49.3	-0.9
	0.4nm,0.4s,baz=61,slow=23,SNR=5.8						
NVAR	Mina Array Bea	30.29	126	P	P	13 29 29.7	+2.0
	0.5nm,0.4s,baz=294,slow=6.8,SNR=4.5						
PDAR	Pinedale Array	30.36	110	P	P	13 29 29.7	+1.4
	0.3nm,0.6s,baz=319,slow=4.0,SNR=4.0						
PDAR				PcP	PcP	13 32 26.8	-0.2
	0.3nm,0.5s,baz=306,slow=3.9,SNR=3.9						
FRB	Frobisher Bay	34.91	50	LR	LR	13 45 38.4	
	comp=Z,232nm,19.9s,baz=172,slow=38						
TXAR	Lajitas Array	44.18	116	P	P	13 31 25.6	+0.5
	0.5nm,1.0s,baz=303,slow=4.2,SNR=3.3						
TXAR				PcP	PP	13 33 09.2	+0.6
	0.6nm,0.9s,baz=186,slow=1.8,SNR=4.3						
ARCES	ARCESS Array B	48.98	2	P	P	13 32 03.4	+1.4
	15nm,1.2s,baz=330,slow=8.4,SNR=1.5						
ARCES				PcP	PcP	13 33 25.0	-0.1
	4.7nm,1.0s,baz=352,slow=4.0,SNR=5.8						
KSRS	Korea Array	54.34	284	P	P	13 32 42.8	+0.5
	1.2nm,0.8s,baz=30,slow=6.7,SNR=5.1						
KSAR	Wonju Array Be	54.37	284	P	P	13 32 42.8	+0.3
SONM	Songino Array	55.05	307	P	P	13 32 48.6	+1.0
	1.5nm,0.8s,baz=34,slow=7.5,SNR=11						
NOA	NORSAR Array B	56.69	11	P	P	13 32 58.8	-0.2
	0.3nm,0.7s,baz=349,slow=7.3,SNR=2.1						
ZALV	Zalesovo Beam	56.91	325	P	P	13 32 59.8	-0.7
	0.6nm,0.3s,baz=33,slow=6.8,SNR=3.3						
FINES	FINESS Array B	57.11	2	P	P	13 33 00.9	-1.0
	1.3nm,0.8s,baz=8.9,slow=9.8,SNR=2.9						
EKA	Eskdalemuir Ar	60.36	21	P	P	13 33 23.9	-0.5
	0.5nm,0.6s,baz=337,slow=4.8,SNR=5.4						
KURK	Kurchatov	61.47	327	P	P	13 33 31.1	-0.9
KURBB	Kurchatov Arra	61.58	327	P	P	13 33 31.2	-1.6
	0.7nm,0.7s,baz=29,slow=7.0,SNR=4.4						
MKAR	Makanchi Array	64.05	323	P	P	13 33 48.4	-1.0
	0.7nm,0.5s,baz=43,slow=6.4,SNR=20						
AKTO	Aktyubinsk	66.01	341	P	P	13 34 01.7	-0.2
	1.0nm,0.4s,baz=44,slow=10,SNR=5.4						
AKASG	Malin Array Be	67.92	1	P	P	13 34 13.6	-0.5
	0.4nm,0.3s,baz=359,slow=6.2,SNR=3.1						
BRTR	Keskin Array B	78.86	357	P	P	13 35 17.2	-1.6
	1.5nm,0.9s,baz=338,slow=3.1,SNR=5.5						
CMAR	Chiang Mai Arr	83.55	297	P	P	13 35 43.1	-0.7
	1.2nm,0.8s,baz=19,slow=3.8,SNR=10						
BOSA	Boshof	146.72	8	PKPbc	PKPab	13 42 57.3	-1.0
	2.2nm,0.9s,baz=333,slow=2.3,SNR=3.2						

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*HEL **23** 13:25:30.5±0.4,62°.77N×32°.79E,h0^{km},ML2.2,Explosion*
*MOS **23** 13:25:30.5,62°.83N×32°.90E,M2.1,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*IDC **23** 13:25:32.1±2.5,62°.83N×32°.85E,h0^{km},mb1 3.2/4, mb1mx2.9/43,mbtmp3.1/4,ML2.4/4,Error ellipse: s-maj=25.9km s-min=10.5km az=121.0*
ISC 23 13:25:29.4±1.8,**62°.84N**±0°.05×**32°.54E**±0°.09,**h0^{km},n16,** σ**2^{s}07**/26,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOF	Joensuu	0.57	278	PG	Pb	13 25 43.5	+1.3
JOF				SG	Sb	13 25 52.0	+1.2
SUF	Sumiainen	2.94	270	PB	Pb	13 26 22.8	+0.2
	baz=90						
SUF				MSG		13 27 00.4	
	comp=Z,4.5nm,0.2s						
SUF				SB	Sg	13 27 01.9	-1.8
KAF	Kangasniemi	2.99	259	PB	Pb	13 26 22.9	-0.5
	baz=72						
KAF				MSG		13 27 01.2	
	comp=Z,7.8nm,0.2s						
KAF				SB	Sb	13 27 01.4	+1.0
VJF	Virojoki	3.32	228	PN	Pn	13 26 24.3	+1.9
	baz=47						
VJF				SN	Sn	13 27 04.0	+1.6
FIA0	FINESS Array S	3.34	248	PB	Pb	13 26 28.4	-1.1
FIA0				SB	Sb	13 27 10.8	+0.2
FINES	FINESS Array B	3.34	248	Pn	Pn	13 26 25.9	+3.1
	comp=Z,1.0nm,0.3s,baz=64,slow=13,SNR=35						
FINES				Sn	Sb	13 27 10.3	-0.3
	comp=Z,2.0nm,0.3s,baz=63,slow=27,SNR=21						
FINES				Lg	Lg	13 27 20.5	
	comp=Z,1.9nm,0.3s,baz=64,slow=28,SNR=7.4						
KU6	Riekki	3.40	341	PN	Pn	13 26 25.1	+1.6
MSF	Maaselka	3.44	335	PN	Pn	13 26 26.2	+2.1
KEF	Keuruu	3.62	263	PB	Pb	13 26 34.0	-0.2
OUL	Oulu	3.69	310	PB	Pb	13 26 32.9	-2.5
OUL				SG	Sg	13 27 31.6	+3.7
OUF	Merijarvi	3.81	297	PG	Pg	13 26 42.1	-0.2
OUF				SG	Sg	13 27 34.1	+2.5
PVF	Pernaja	3.93	237	SG	Sg	13 27 33.0	-2.5
VAF	Ylistaro	4.51	277	SG	Sg	13 27 52.8	-1.4
ARCES	ARCESS Array B	7.29	340	Pn	Pn	13 27 17.2	+0.3
	comp=Z,0.1nm,0.3s,baz=150,slow=14,SNR=6.0						
ARCES				Sn	Sn	13 28 37.6	-2.7
	comp=Z,0.1nm,0.3s,baz=144,slow=24,SNR=2.9						
ARCES				Lg	Lg	13 29 22.8	
	comp=Z,0.5nm,0.3s,baz=150,slow=26,SNR=5.4						
HFS	Hagfors	9.40	262	Pn	Pn	13 27 47.9	+2.0
	comp=Z,0.1nm,0.3s,baz=71,slow=14,SNR=5.6						
HFS				Sn	Sn	13 29 28.0	-4.3
	comp=Z,0.1nm,0.3s,baz=68,slow=27,SNR=3.5						
HFS				Lg	Lg	13 30 24.2	
	comp=Z,0.4nm,0.3s,baz=73,slow=29,SNR=6.7						
NOA	NORSAR Array B	10.20	269	Pn	Pn	13 27 58.3	+1.5
	comp=Z,0.0nm,0.3s,baz=72,slow=10,SNR=3.0						
NOA				Lg	Lg	13 30 43.0	
	comp=Z,0.0nm,0.3s,baz=224,slow=27,SNR=1.4						

ISC 23 14:03:02.4±2.2,**49°.9N**±0°.1×**18°.50E**±0°.08,**h11^{km},n5,** σ**0^{s}31**/9,**Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	Moravsky Berou	0.62	264	*e*PG	Pg	14 03 14.7	+0.2
MORC				*e*SG	Sg	14 03 22.8	+0.1
LANS	Liptovska Anna	0.94	137	*e*PG	Pn	14 03 21.7	0.0
VRAC	Vranov	1.35	247	*e*PG	Pb	14 03 27.6	-0.2
VRAC				*e*SG	Sg	14 03 46.3	+0.4
VYHS	Vyhne	1.37	171	*e*PN	Pn	14 03 27.7	+0.2
VYHS				*e*SN	Sg	14 03 46.7	+0.1
KRUC	Moravsky	1.58	241	*e*PG	Pb	14 03 31.1	-0.6
KRUC				*e*SG	Sg	14 03 53.1	-0.1

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*ISCJB **23** 14:04:47.7±0.5,67°.60N±0°.04×142°.2E±0°.1,h10^{km}, mb3.6/6,MS3.6/1,Error ellipse: s-maj=8.2km s-min=5.7km az=7.9*
*MOS **23** 14:04:47.8±1.1,67°.63N×142°.32E,h11^{km},mb3.9/4,Error ellipse: s-maj=36.0km s-min=10.4km az=94.4*
*IDC **23** 14:04:48.0±1.1,67°.72N×142°.27E,h0^{km},mb3.7/6, mb1 3.8/9,mb1mx3.5/39,mbtmp3.6/9,ML3.8/2,MS3.7/1, Ms1 3.7/1,ms1mx2.7/47,Error ellipse: s-maj=26.4km s-min=20.2km az=26.0*
*YARS **23** 14:04:49.5±0.1,67°.620N±0°.003×142°.49E±0°.01, h9^{km}±4^{km}*
ISC 23 14:04:48.5±0.6,**67°.60N**±0°.03×**142°.26E**±0°.04,**h10^{km},n20,** σ**2^{s}06**/30,**mb3.5**/6,**Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.20	161	*e*P	Pb	14 05 10.9	-0.3
MOMR				*e*S	Sb	14 05 26.5	-0.2
MOMR	Moma	1.20	161	*e*P	Pb	14 05 10.9	-0.3
MOMR				*e*S	Sb	14 05 26.5	-0.2
YBGR	Belaya Gora	1.75	56	*e*P	Pb	14 05 19.5	-1.2
YBGR				*e*S	Sn	14 05 41.0	-0.2
YBGR	Belaya Gora	1.75	56	*e*P	Pb	14 05 19.5	-1.2
YBGR				*e*S	Sn	14 05 41.0	-0.2
DEPR	Deputatskiy	2.00	335	*e*P	Pb	14 05 23.8	-1.1
DEPR				*e*S	Sg	14 05 52.0	-0.7
DEPR	Deputatskiy	2.00	335	*e*P	Pb	14 05 23.8	-1.1
DEPR				*e*P	Pg	14 05 25.6	-1.2
DEPR				*e*S	Sg	14 05 52.0	-0.7
ATKR	Artyk	3.63	160	*e*S	Sg	14 06 41.3	-3.6
SEY	Seymchan	6.32	133	Pn	Pn	14 06 22.6	+1.0
	0.2nm,0.3s,baz=316,slow=16,SNR=3.7						
SEY				Lg	Lg	14 08 01.9	
	0.6nm,0.3s,baz=306,slow=19,SNR=4.3						
YAK	Yakutsk	7.73	230	*e*S	Sn	14 08 08.0	-0.4
YAK				*e*S	Sg	14 08 51.3	-5.0
USMR	Ust'-Maya	7.96	209	*e*P	Pn	14 06 48.2	+4.2
USMR				*e*S	Sn	14 08 15.0	+1.1
USMR	Ust'-Maya	7.96	209	*e*P	Pn	14 06 48.2	+4.2
USMR				*e*P	Pg	14 07 14.8	-5.8
USMR				*e*S	Sn	14 08 15.0	+1.1
USMR				*e*S	Sg	14 08 58.9	-4.6
MA2	Magadan	8.89	151	Pn	Pn	14 06 59.6	+2.7
	0.2nm,0.3s,baz=0.0,slow=20,SNR=1.7						
MA2				Lg	Lg	14 09 28.0	
	0.6nm,0.3s,baz=72,slow=20,SNR=2.9						
PETK	Petropavlovsk-	16.33	145	Pn	Pn	14 08 38.1	+0.4
	0.0nm,0.3s,baz=319,slow=15,SNR=2.4						
ILAR	Eielson Array	27.33	62	P	P	14 10 33.1	+0.1
	0.5nm,0.6s,baz=301,slow=8.9,SNR=5.5						
KDAK	Kodiak Island	29.98	77	LR	LR	14 24 33.7	
	comp=Z,155nm,21.2s,baz=288,slow=40						
ARCES	ARCESS Array B	36.49	328	P	P	14 11 53.2	0.0
	3.4nm,1.0s,baz=22,slow=9.7,SNR=5.4						
MKAR	Makanchi Array	36.59	266	P	P	14 11 55.0	+0.7
	0.4nm,0.6s,baz=26,slow=5.9,SNR=5.8						
YKA	Yellowknife Ar	38.96	46	P	P	14 12 14.4	+0.3
	0.5nm,0.7s,baz=322,slow=7.9,SNR=9.3						
FINES	FINESS Array B	43.22	321	P	P	14 12 49.8	+0.7
	0.8nm,0.8s,baz=39,slow=9.8,SNR=1.6						
PDAR	Pinedale Array	57.53	56	P	P	14 14 38.3	+0.4
	0.6nm,0.7s,baz=325,slow=2.5,SNR=5.1						

IDC 23 14:20:41.6±3.9,**9°.25S**×**127°.58E,h0^{km},mb3.8**/1, **mb1 3.7**/5,**mb1mx3.4**/36,**mbtmp3.6**/5,**ML3.2**/4,**Error ellipse: s-maj=53.6km s-min=27.2km az=17.0,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.98	256	Pn	Pn	14 21 43.5	-0.4
	1.1nm,0.3s,baz=90,slow=6.1,SNR=3.5						
BATI				Sn	Sn	14 22 32.1	+0.8
	2.7nm,0.3s,baz=342,slow=20,SNR=3.0						
FITZ	Fitzroy Crossi	9.00	192	Pn	Pn	14 22 53.6	+0.8
	0.3nm,0.3s,baz=16,slow=14,SNR=10						
FITZ				Sn	Sn	14 24 36.4	+1.4
	0.2nm,0.3s,baz=15,slow=20,SNR=3.6						
WRA	Warramunga Arr	12.48	149	Pn	Pn	14 23 40.0	-0.6
	0.2nm,0.3s,baz=322,slow=14,SNR=11						
WRA				Sn	Sn	14 26 00.2	-0.3
	0.1nm,0.3s,baz=329,slow=22,SNR=4.8						
ASAR	Alice Springs	15.56	158	Pn	Pn	14 24 23.2	+0.7
	0.1nm,0.3s,baz=333,slow=12,SNR=8.9						
ASAR				Sn	Sn	14 27 15.9	+0.2
	0.0nm,0.3s,baz=323,slow=15,SNR=2.7						
STKA	Stephens Creek	26.00	152	P	P	14 26 16.4	+0.1
	1.1nm,0.7s,baz=323,slow=17,SNR=3.2						

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*SJA **23** 14:22:43.4±0.5,34°.28S×73°.34W,h49^{km}±12^{km},ML3.3, MW3.6*
*GUC **23** 14:22:53.6±0.6,34°.00S×72°.39W,h34^{km}±3^{km},ML3.2*
ISC 23 14:22:53.8±5.0,**34°.2S**±0°.1×**72°.5W**±0°.2,**h40^{km}**±21^{km}**,n15,** σ**2^{s}22**/21,**1C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.43	117	*e*P	Pn	14 23 03.6	0.0
CHPI				*e*S	Sn	14 23 10.4	0.0
ROC1	El Roble	1.72	45	*e*P	Pn	14 23 19.8	-1.7
ROC1				*e*S	Sn	14 23 49.5	+7.2
ROCH	El Roble	1.72	45⇑	*e*P	Pn	14 23 19.5	-2.0
ROCH				*e*S	Sn	14 23 39.5	-2.9
ROCH				IAML		14 23 46.5	
	comp=N,508nm,0.5s						
CLCH	Cerro Calan	1.79	64	*e*P	Pn	14 23 21.4	-0.9
CLCH				IAML		14 23 52.0	
	comp=E,527nm,0.6s						
PEL	Peldehue	1.82	55	*e*P	Pn	14 23 21.4	-1.3
PEL				*e*S	Sn	14 23 42.9	-1.6
LMEL	Las Melosas	1.91	80	*e*P	Pn	14 23 23.8	-0.3
LMEL				*e*S	Sn	14 23 46.8	-0.2
LMEL				IAML		14 23 54.2	
	comp=N,402nm,0.2s						
FCH	Farellones	2.01	65	*e*P	Pn	14 23 24.4	-1.1
FCH				*e*S	Sn	14 23 48.3	-1.3
FCH				IAML		14 23 56.4	
	comp=N,281nm,0.5s						
AUSP	Uspallata	3.25	54	*e*P	Pn	14 23 44.0	+1.5
RTLS	Leoncito	3.58	49	*e*P	Pn	14 23 48.6	+1.5
RTLS				*e*S	Sn	14 24 36.9	+8.6
RTLS				IAML		14 24 44.0	
	comp=Z,35nm,0.6s						
RTCV	Cerro Valdivia	4.04	56	*e*P	Pn	14 23 54.8	+1.7
ACCO	Cerro Coronel	4.61	40	*e*P	Pn	14 24 01.6	+0.3
AMOG	MOGNA	4.67	47	*e*P	Pn	14 24 02.0	+0.1
ACDV	Cuesta del Vie	4.92	36	*e*P	Pn	14 24 05.0	-0.3
AGUA	GUANDACOL	5.79	37	*e*P	Pn	14 24 16.5	-0.8
APLL	PUNTA DE LOS L	6.30	55	*e*P	Pn	14 24 24.9	+0.7

IDC 23 14:26:26.6±12.0,**16°.45S**×**178°.66W,h0^{km},mb3.6**/3, **mb1 3.8**/3,**mb1mx3.5**/42,**mbtmp3.6**/3,**Error ellipse: s-maj=389.2km s-min=57.4km az=130.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.68	258	P	P	14 34 41.7	+0.1
	0.3nm,0.8s,baz=92,slow=7.4,SNR=3.2						
ASAR	Alice Springs	44.97	253	P	P	14 34 43.6	-0.4
	1.2nm,0.6s,baz=87,slow=7.7,SNR=20						
SONM	Songino Array	92.30	319	P	P	14 39 38.8	0.0
	0.2nm,0.5s,baz=116,slow=5.2,SNR=2.3						

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*IDC **23** 14:31:01.2±0.4,11°.70S×165°.11E,h0^{km},mb5.3/34, mb1 5.4/37,mb1mx5.3/48,mbtmp5.3/37,ML5.4/3,MS5.0/26, Ms1 5.0/26,ms1mx4.9/31,Error ellipse: s-maj=12.5km s-min=10.6km az=94.0*
*ISCJB **23** 14:31:03.2±0.1,11°.74S±0°.02×164°.99E±0°.02,h18^{km}, mb5.4/234,MS5.2/171,Error ellipse: s-maj=3.3km s-min=2.8km az=159.8*
*BJI **23** 14:31:03.2,11°.30S×165°.12E,h12^{km},mB6.0/56,mb5.4/82, Ms5.3/68,Ms7 5.0/61*
*NEIC **23** 14:31:03.6±0.1,11°.69S×165°.02E,h10^{km},mb5.6/168, MS5.3/119,MW5.6,MW5.6,Error ellipse: s-maj=3.3km s-min=2.7km az=105.0,Moment Tensor Solution. s29 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.18; $M_{\theta\theta}$0.64; $M_{\phi\phi}$2.53; $M_{r\theta}$-0.79; $M_{\theta\phi}$-0.78; $M_{\phi r}$1.25; Best double couple: $M_0$3.40000×10^{17} NP1:ϕ_s344.00000°,δ32.00000°, λ-82.00000°. NP2:ϕ_s155.00000°,δ58.00000°, λ-95.00000°. Principal axes: T 3.1400, Plg13.0000°, Azm249.0000°; N 0.3900, Plg4.0000°, Azm158.0000°; P -3.5300, Plg76.0000°, Azm50.0000°;*
*MOS **23** 14:31:05.5±0.9,11°.64S×164°.94E,h32^{km},mb5.6/70, MS5.1/20 Error ellipse: s-maj=7.6km s-min=6.1km az=110.5*
*NEIC **23** 14:31:05.0±0.0,11°.92S×165°.04E,h13^{km},Moment Tensor Solution. s30 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.65; $M_{\theta\theta}$1.60; $M_{\phi\phi}$2.05; $M_{r\theta}$0.64; $M_{\theta\phi}$-1.73; $M_{\phi r}$-0.13; Best double couple: $M_0$3.70000×10^{17} NP1:ϕ_s313.00000°, δ49.00000°,λ-97.00000°. NP2:ϕ_s145.00000°,δ41.00000°, λ-81.00000°. Principal axes: T 3.6000, Plg4.0000°, Azm48.0000°; N 0.1200, Plg5.0000°, Azm317.0000°; P -3.7200, Plg82.0000°, Azm172.0000°;*
*GCMT **23** 14:31:06.6±0.1,11°.84S±0°.01×165°.04E±0°.01,h12^{km}, MW5.7/134,Moment Tensor Solution. s120,c219; s134,c397; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M_{rr}-4.33±.04; $M_{\theta\theta}$2.16±.04; $M_{\phi\phi}$2.18±.04; $M_{r\theta}$-1.40±.10; $M_{\theta\phi}$-2.44±.03; $M_{\phi r}$0.27±.11; Best double couple: $M_0$4.69700×10^{17} NP1:ϕ_s125.00000°,δ53.00000°, λ-103.00000°. NP2:ϕ_s325.00000°,δ39.00000°, λ-74.00000°. Principal axes: T 4.7650, Plg7.0000°, Azm224.0000°; N -0.1270, Plg10.0000°, Azm133.0000°; P -4.6280, Plg77.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 23 14:31:03.4±0.8,**11°.72S**±0°.04×**165°.08E**±0°.04,**h12^{km}**±4^{km}**, n740,**σ**1^{s}48**/726,**mb5.5**/240,**MS5.2**/171,**22C-15D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.53	294	*i* P	Pn	14 32 27.0	+1.3
HNR				*i* S	Sn	14 33 29.0	-0.2
HNR	Honiara	5.53	294	*e*Pn	Pn	14 32 26.8	+1.2
HNR				*e*Sn	Sn	14 33 30.0	+0.7
HNR	Honiara	5.53	294	Pn	Pn	14 32 26.9	+1.3
	580nm,0.3s,baz=145,slow=6.8,SNR=191						
HNR				Sn	Sn	14 33 29.2	0.0
	383nm,0.3s,baz=1.5,slow=23,SNR=8.0						
HNR				LR	LR	14 34 26.3	
	comp=Z,22µm,19.6s,baz=132,slow=37						
MARNC	Mare, Loyalty	10.11	164	*e*Pn	Pn	14 33 28.1	-0.4
MARNC				*e*Sn	Sn	14 35 17.0	-5.0
DZM	Mont Dzumac	10.38	173	*e*Pn	Pn	14 33 32.7	+0.5
	128nm,0.2s						
DZM				*e*LR	LR	14 35 56.8	
	comp=Z,26µm,27.5s						
DZM	Mont Dzumac	10.38	173	*e*Pn	Pn	14 33 32.8	+0.5
DZM				*e*Sn	Sn	14 35 26.7	-1.9
DZM	Mont Dzumac	10.38	173	Pn	Pn	14 33 32.5	+0.2
	25nm,0.3s,baz=310,slow=12,SNR=262						
DZM				Sn	Sn	14 35 23.3	-5.3
	0.9nm,0.3s,baz=162,slow=20,SNR=2.2						
DZM				LR	LR	14 37 15.7	
	comp=Z,17µm,18.0s,baz=7.5,slow=36						
OUENC	Ouen Island, N	10.77	171	*e*Pn	Pn	14 33 38.4	+0.8
OUENC				*e*Sn	Sn	14 35 35.5	-2.7
PINNC	Pines Island,	11.07	169	*e*Pn	Pn	14 33 42.2	+0.6
PINNC				*e*Sn	Sn	14 35 41.5	-3.9
MSVF	Nonsavu	13.90	117	*e*P	Pn	14 34 24.4	+4.0
	262nm,1.1s						
MSVF	Nonsavu	13.90	117	*e*P	Pn	14 34 24.4	+4.0
MSVF				pmax	pmax		
	comp=Z,262nm,1.1s						
TARA	Tarawa	15.15	31	*e*Pn	Pn	14 34 35.7	-1.7
	comp=Z,260nm,0.9s						
TARA				*e*Sn	Sn	14 37 19.0	-6.2
EIDS	Eidsvold	18.96	222	P	Pn	14 35 26.9	+1.6
	baz=19,SNR=31						
EIDS	Eidsvold	18.96	222	*e*P	Pn	14 35 27.0	+1.7
	comp=Z,97nm,0.8s						
CTA	Charters Tower	19.91	243	P	Pn	14 35 36.5	-0.2
	comp=Z,3.3nm,0.3s,baz=74,slow=12,SNR=96						
CTA				LR	LR	14 42 00.3	
	comp=Z,9µm,20.5s,baz=62,slow=33						
CTAO	Charters Tower	19.91	243	*e*P	Pn	14 35 37.0	+0.2
	comp=Z,340nm,1.2s						
CTAO	Charters Tower	19.91	243	*e*P	Pn	14 35 37.0	+0.2
CTAO				pmax	pmax		
	comp=Z,340nm,1.2s						
MANU	Manus Island	20.02	297	*e*P	P	14 35 36.7	+0.3
	comp=Z,521nm,0.8s						
MTSU	Mount Surprise	21.04	250	P	P	14 35 48.9	+1.5
	baz=21,SNR=42						
RMQ	Roma	21.26	224	P	P	14 35 51.5	+1.8
	baz=21,SNR=76						
COEN	Coen	21.47	262	P	P	14 35 52.6	+0.5
	baz=22,SNR=27						
COEN	Coen	21.47	262	*e*P	P	14 35 53.6	+1.6
	comp=Z,221nm,1.0s						
ARMA	Armidale	22.40	212	P	P	14 36 03.5	+1.5
	baz=23,SNR=11						
ARMA	Armidale	22.40	212	*e*P	P	14 36 03.5	+1.5
	comp=Z,124nm,0.8s						
OUZ	Omahuta	24.64	163	*e*P	P	14 36 25.7	+1.8
	comp=Z,78nm,0.9s						
OUZ				*e*PcP	PcP	14 40 02.8	+1.3
MGCD	Mangrove Creek	24.93	209	P	P	14 36 28.1	+1.6
	baz=25,SNR=14						
RIV	Riverview	25.42	208	P	P	14 36 32.9	+2.0
	baz=26,SNR=5.7						
JAY	Jayapura	25.83	289	P	P	14 36 33.7	-1.3
	comp=Z,34nm,0.8s,baz=112,slow=5.4,SNR=6.6						
QIS	Mount Isa	25.97	247	P	P	14 36 36.4	+0.2
	baz=26,SNR=70						
GENI	Genyem	26.30	288	P	P	14 36 39.2	0.0
YNG	Young	27.14	211	P	P	14 36 47.3	+0.8
	baz=27,SNR=5.3						
CNB	Canberra Magne	27.48	209	P	P	14 36 50.8	+1.2
	baz=28,SNR=9.1						
HIZ	Hauiti	28.07	164	*e*P	P	14 36 58.4	+3.5
	comp=Z,224nm,1.4s						
URZ	Urewera	28.53	160	*e*P	P	14 37 00.4	+1.4
	comp=Z,95nm,1.2s						
URZ	Urewera	28.53	160	P	P	14 36 59.1	+0.2

	comp=Z,54nm,1.0s,baz=342,slow=0.9,SNR=28						
URZ				LR	LR	14 47 10.0	
	comp=Z,5µm,18.4s,baz=348,slow=34						
MILA	**Mila**	**29.01**	**207**	P	**P**	**14 37 04.3**	**+1.0**
	baz=29,SNR=5.0						
BKZ	**Black Stump Fm**	**29.16**	**162**	*e*P	**P**	**14 37 05.9**	**+1.3**
	comp=Z,88nm,1.0s						
STKA	**Stephens Creek**	**29.50**	**223**	P	**P**	**14 37 08.1**	**+0.4**
	baz=30,SNR=36						
STKA	**Stephens Creek**	**29.50**	**223**	*e*P	**P**	**14 37 08.4**	**+0.7**
	comp=Z,6.3nm,0.9s						
STKA				PcP	**PcP**	**14 40 12.8**	**-0.3**
STKA	**Stephens Creek**	**29.50**	**223**	P	**P**	**14 37 07.9**	**+0.2**
	comp=Z,19nm,0.7s,baz=42,slow=9.2,SNR=48						
STKA				PcP	**PcP**	**14 40 12.8**	**-0.3**
	comp=Z,8.5nm,0.9s,baz=48,slow=5.2,SNR=2.9						
STKA				LR	LR	14 47 54.8	
	comp=Z,9µm,20.9s,baz=46,slow=34						
H11S2	**WAKE ISLAND Hy**	**30.06**	**3**	T	T	15 08 46.9	
	baz=184,slow=76,SNR=85						
H11S3	**WAKE ISLAND Hy**	**30.06**	**3**	T	T	15 08 48.3	
	baz=184,slow=76,SNR=101						
H11S1	**WAKE ISLAND Hy**	**30.08**	**3**	T	T	15 08 49.4	
	baz=184,slow=76,SNR=94						
BFZ	**Birch Farm**	**30.48**	**163**	*e*P	**P**	**14 37 16.9**	**+0.7**
	comp=Z,122nm,0.9s						
WRAB	**Tennant Creek**	**30.63**	**251**	*e*P	**P**	**14 37 17.5**	**-0.3**
	comp=Z,307nm,1.3s						
WRAB				LR	LR		
	comp=Z,5µm,21.0s						
WRAB	**Tennant Creek**	**30.63**	**251**	*d i*P	**P**	**14 37 17.0**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,183nm,1.2s						
WB2	**Warramunga Arr**	**30.63**	**251**	*e*P	**P**	**14 37 17.7**	**-0.2**
WB2				*e*PcP	**PcP**	**14 40 16.7**	**+0.5**
WRA	**Warramunga Arr**	**30.64**	**251**	P	**P**	**14 37 17.5**	**-0.4**
	comp=Z,88nm,0.7s,baz=81,slow=8.8,SNR=206						
WRA				PcP	**PcP**	**14 40 15.4**	**-0.9**
	comp=Z,7.1nm,0.8s,baz=84,slow=2.8,SNR=6.8						
WRA				S	**S**	**14 42 16.6**	**-3.8**
	comp=Z,1.9nm,1.0s,baz=76,slow=17,SNR=3.4						
WRA				LR	LR	14 48 12.0	
	comp=Z,5µm,21.1s,baz=75,slow=34						
SNZO	**South Karori**	**30.67**	**166**	*e*P	**P**	**14 37 19.7**	**+1.9**
	comp=Z,98nm,1.0s						
SNZO				LR	LR		
	comp=Z,3µm,19.0s						
THZ	**Tophouse**	**30.70**	**168**	*e*P	**P**	**14 37 19.4**	**+1.2**
	comp=Z,59nm,0.9s						
WAKE	**Wake Island**	**30.84**	**3**	PFAKE		14 37 30.0	+10
WAKE				LR	LR		
	comp=Z,4µm,19.0s						
H11N1	**WAKE ISLAND Hy**	**31.29**	**3**	T	T	15 10 19.2	
	baz=182,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**31.29**	**3**	T	T	15 10 22.0	
	baz=182,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**31.30**	**3**	T	T	15 10 23.2	
	baz=182,slow=76,SNR=17						
KHZ	**Kahutara**	**31.46**	**168**	*e*P	**P**	**14 37 26.0**	**+1.2**
	comp=Z,50nm,1.0s						
LTZ	**Lake Taylor**	**31.57**	**170**	*e*P	**P**	**14 37 26.1**	**+0.2**
	comp=Z,58nm,0.7s						
AS01	**Alice Springs**	**31.87**	**244**	*e*P	**P**	**14 37 27.6**	**-1.2**
AS01				*e*PcP	**PcP**	**14 40 20.1**	**+0.5**
KDU	**Kakadu**	**31.87**	**265**	P	**P**	**14 37 27.9**	**-0.9**
	baz=32,SNR=12						
AS31	**Alice Springs**	**31.91**	**244**	*e*P	**P**	**14 37 28.3**	**-0.8**
	comp=Z,12nm,0.7s						
AS31				*e*PcP	**PcP**	**14 40 19.9**	**+0.3**
ASAR	**Alice Springs**	**31.91**	**244**	P	**P**	**14 37 28.2**	**-0.8**
	comp=Z,39nm,0.9s,baz=76,slow=9.2,SNR=220						
ASAR				PcP	**PcP**	**14 40 19.6**	**-0.1**
	comp=Z,9.4nm,0.7s,baz=70,slow=2.5,SNR=9.5						
ASAR				LR	LR	14 49 06.9	
	comp=Z,6µm,20.9s,baz=81,slow=34						
FOZ	**Fox Glacier**	**31.96**	**173**	*e*P	**P**	**14 37 29.8**	**+0.6**
	comp=Z,53nm,0.8s						
OXZ	**Oxford**	**32.06**	**170**	*e*P	**P**	**14 37 30.8**	**+0.6**
	comp=Z,84nm,1.0s						
GUMO	**Guam**	**32.15**	**321**	P	**P**	**14 37 29.7**	**-1.5**
	comp=Z,92nm,0.6s,baz=161,slow=12,SNR=5.1						
GUMO				LR	LR	14 49 27.7	
	comp=Z,2µm,20.2s,baz=152,slow=34						
HTT	**Hallett**	**32.24**	**224**	P	**P**	**14 37 32.1**	**+0.2**
	baz=32,SNR=46						
RPZ	**Rata Peaks**	**32.30**	**172**	*e*P	**P**	**14 37 32.8**	**+0.6**
	comp=Z,70nm,0.8s						
RPZ	**Rata Peaks**	**32.30**	**172**	P	**P**	**14 37 31.9**	**-0.3**
	comp=Z,58nm,0.7s,baz=295,slow=1.8,SNR=43						
RPZ				LR	LR	14 48 53.4	
	comp=Z,5µm,20.7s,baz=348,slow=33						
CRLZ	**Canterbury Las**	**32.41**	**170**	*e*P	**P**	**14 37 34.6**	**+1.5**
	comp=Z,60nm,1.0s						
LBZ	**Lake Benmore**	**32.85**	**173**	*e*P	**P**	**14 37 37.2**	**+0.2**
	comp=Z,30nm,0.8s						
WKZ	**Wanaka**	**33.17**	**175**	*e*P	**P**	**14 37 39.9**	**+0.1**
	comp=Z,69nm,1.1s						
MTN	**Manton Dam**	**33.17**	**264**	P	**P**	**14 37 40.1**	**-0.1**
	baz=33,SNR=4.2						
MTN	**Manton Dam**	**33.17**	**264**	*e*P	**P**	**14 37 39.8**	**-0.4**
	comp=Z,43nm,1.1s						
SAUI	**Saumlaki**	**33.47**	**273**	P	**P**	**14 37 43.8**	**+1.0**
MLZ	**Mavora Lakes**	**33.63**	**176**	*e*P	**P**	**14 37 43.9**	**0.0**
	comp=Z,29nm,0.9s						
DCZ	**Deep Cove**	**33.68**	**177**	*e*P	**P**	**14 37 45.0**	**+0.9**
	comp=Z,46nm,1.0s						
BBOO	**Buckleboo**	**33.89**	**227**	P	**P**	**14 37 46.1**	**-0.2**
	baz=34,SNR=18						
BBOO	**Buckleboo**	**33.89**	**227**	*e*P	**P**	**14 37 46.1**	**-0.2**
	comp=Z,40nm,0.6s						
WHZ	**Wether Hill Ro**	**34.15**	**176**	*e*P	**P**	**14 37 47.6**	**-0.7**
	comp=Z,19nm,0.8s						
TAU	**Tasmania Unive**	**34.69**	**203**	PFAKE		14 38 10.0	+17
TAU				LR	LR		
	comp=Z,2µm,20.0s						
RAR	**Rarotonga**	**34.93**	**110**	LR	LR	14 49 17.1	
	comp=Z,2µm,21.2s,baz=276,slow=31						
SIJI	**Sorong**	**35.24**	**285**	P	**P**	**14 37 57.0**	**-1.1**
	comp=Z,34nm,0.9s,baz=80,slow=8.8,SNR=6.5						
SIJI				LR	LR	14 53 37.9	
	comp=Z,4µm,18.9s,baz=121,slow=38						
KNRA	**Kununurra**	**35.47**	**259**	P	**P**	**14 38 00.0**	**-0.1**
	baz=36,SNR=20						
BNDI	**Bandanaira**	**35.52**	**279**	P	**P**	**14 38 00.4**	**-0.1**
WRKA	**Warakurna**	**37.20**	**244**	P	**P**	**14 38 14.1**	**-0.8**
	baz=37,SNR=80						
JOHN	**Johnston Islan**	**37.81**	**42**	PFAKE		14 38 30.0	+10
JOHN				LR	LR		
	comp=Z,644nm,22.0s						
FITZ	**Fitzroy Crossi**	**38.58**	**256**	P	**P**	**14 38 26.5**	**0.0**
	baz=39,SNR=51						
FITZ	**Fitzroy Crossi**	**38.58**	**256**	*e*P	**P**	**14 38 26.7**	**+0.1**
	comp=Z,89nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.58**	**256**	P	**P**	**14 38 26.1**	**-0.4**
	comp=Z,62nm,0.7s,baz=98,slow=6.4,SNR=66						
FORT	**Forrest**	**39.12**	**235**	P	**P**	**14 38 31.2**	**+0.3**
	baz=39,SNR=27						
FORT	**Forrest**	**39.12**	**235**	*e*P	**P**	**14 38 31.3**	**+0.3**
	comp=Z,113nm,0.9s						
SANI	**Sanana**	**39.92**	**281**	P	**P**	**14 38 37.8**	**-0.1**
SOEI	**Soe**	**40.12**	**269**	P	**P**	**14 38 44.2**	**+4.6**
BATI	**Baumata**	**40.66**	**268**	LR	LR	14 56 10.0	
	comp=Z,3µm,19.7s,baz=114,slow=37						
KMSI	**Cibinong**	**42.60**	**284**	P	**P**	**14 39 01.3**	**+1.4**
EDFI	**Ende, Flores**	**42.77**	**270**	P	**P**	**14 39 00.9**	**-0.5**
MIDW	**Midway**	**43.18**	**23**	PFAKE		14 39 20.0	+16
MIDW				LR	LR		
	comp=Z,7µm,20.0s						
LUWI	**Luwuk**	**43.29**	**281**	P	**P**	**14 39 06.2**	**+0.7**
DAV	**Davao City (W)**	**43.50**	**293**	LR	LR	14 54 11.6	
	comp=Z,703nm,21.9s,baz=88,slow=32						
KCP	**Kidapawan**	**43.91**	**293**	⇑*e*P	**P**	**14 39 10.9**	**+0.4**
PPT	**Papeete**	**44.18**	**103**	LR	LR	14 53 04.7	
	comp=Z,2µm,19.8s,baz=274,slow=30						
PPT2	**Papeete2**	**44.18**	**103**	*e*S	**S**	**14 45 51.6**	**+5.6**
	comp=Z,1µm,28.2s						
PPT2				*e*LQ	LQ	14 49 43.9	
	comp=Z,11µm,26.8s						
PPT2				*e*LR	LR	14 51 35.0	
	comp=Z,7µm,25.5s,baz=280						
MBWA	**Marble Bar**	**44.36**	**252**	*e*P	**P**	**14 39 13.6**	**-0.5**
	comp=Z,368nm,0.8s						
MBWA				LR	LR		
	comp=Z,2µm,19.0s						
APSI	**Ampana**	**44.41**	**281**	P	**P**	**14 39 13.9**	**-0.5**
CBIJ	**Chichi jima**	**44.52**	**330**	P	**P**	**14 39 14.5**	**-0.6**
JCJ	**Chichijima**	**44.52**	**330**	P	**P**	**14 39 14.5**	**-0.6**
	comp=Z,85nm,0.7s,baz=306,slow=14,SNR=5.1						
TBI	**Tubuai**	**44.69**	**111**	*e*S	**S**	**14 45 57.4**	**+4.1**
	comp=Z,750nm,28.2s						
TBI				*e*LQ	LQ	14 49 57.5	
	comp=Z,5µm,29.8s						
TBI				*e*LR	LR	14 51 51.6	
	comp=Z,4µm,30.2s,baz=289						
BNSI	**Bone**	**45.07**	**275**	P	**P**	**14 39 20.0**	**+0.3**
KAPI	**Kappang**	**45.29**	**275**	PFAKE		14 39 30.0	+8.5
KAPI				LR	LR		
	comp=Z,1µm,22.0s						
MSLP	**Maasin**	**45.48**	**297**	*e*P	**P**	**14 39 23.6**	**+0.6**
MEEK	**Meekatharra**	**46.06**	**244**	P	**P**	**14 39 28.0**	**+0.5**
	baz=46,SNR=29						
KLBR	**Kellerberrin**	**47.80**	**238**	P	**P**	**14 39 40.6**	**-0.4**
	baz=48,SNR=12						
BLDU	**Ballidu**	**48.45**	**239**	P	**P**	**14 39 46.1**	**0.0**
	baz=48,SNR=13						
NWAO	**Narrogin (SRO)**	**48.55**	**236**	P	**P**	**14 39 46.9**	**+0.2**
	baz=49,SNR=14						
NWAO	**Narrogin (SRO)**	**48.55**	**236**	*e*P	**P**	**14 39 46.9**	**+0.2**
	comp=Z,68nm,1.0s						
NWAO				*e*PcP	**PcP**	**14 41 12.0**	**-0.6**
NWAO				LR	LR		
	comp=Z,10µm,19.0s						
NWAO	**Narrogin (SRO)**	**48.55**	**236**	*e*P	**P**	**14 39 46.9**	**+0.2**
NWAO				*e*		14 41 12.0	
NWAO				pmax	pmax		
	comp=Z,68nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,10µm,19.0s						
NWAO	**Narrogin (SRO)**	**48.55**	**236**	P	**P**	**14 39 46.0**	**-0.8**
	comp=Z,40nm,0.8s,baz=314,slow=6.1,SNR=17						
MORW	**Morawa**	**48.73**	**242**	P	**P**	**14 39 48.4**	**+0.3**
	baz=49,SNR=25						
MORW	**Morawa**	**48.73**	**242**	*e*P	**P**	**14 39 48.5**	**+0.3**
	comp=Z,68nm,0.8s						
KIP	**Kipapa**	**48.97**	**48**	*ce*P	**P**	**14 39 51.0**	**+0.9**
KIP				pmax	pmax		
	comp=Z,106nm,1.7s						
MUN	**Mundaring**	**49.17**	**238**	P	**P**	**14 39 51.6**	**+0.1**
	baz=49,SNR=6.5						
RKGY	**Rocky Gully**	**49.19**	**234**	P	**P**	**14 39 52.7**	**+1.0**
	baz=49,SNR=6.8						
TSM	**Tawau**	**49.57**	**286**	P	**P**	**14 39 55.1**	**+0.3**
POHA	**Pohakuloa**	**49.83**	**51**	PFAKE		14 40 10.0	+13
POHA				LR	LR		
	comp=Z,5µm,20.0s						
POLP	**Polilio Island**	**50.17**	**301**	*e*P	**P**	**14 40 00.3**	**+1.0**
JAGI	**Jajag, Banyuwa**	**50.19**	**269**	*e*P	**P**	**14 39 59.0**	**-0.6**
	comp=Z,76nm,1.0s						
SDKM	**Sandakan**	**50.65**	**287**	P	**P**	**14 40 03.0**	**-0.2**
TGY	**Tagaytay City**	**50.72**	**299**	LR	LR	15 00 25.0	
	comp=Z,806nm,21.6s,baz=114,slow=35						
BATP	**Bataraza**	**51.23**	**291**	*e*P	**P**	**14 40 08.3**	**+0.9**
CAUP	**Cauayan**	**51.37**	**303**	*e*P	**P**	**14 40 10.8**	**+2.4**
KDM	**Kudat**	**51.43**	**289**	P	**P**	**14 40 09.2**	**+0.3**
KKM	**Kota Kinabalu**	**51.71**	**287**	*e*P	**P**	**14 40 11.6**	**+0.5**
	comp=Z,281nm,0.9s						
KKM	**Kota Kinabalu**	**51.71**	**287**	P	**P**	**14 40 11.2**	**+0.1**
APYP	**Conner**	**52.31**	**304**	*e*P	**P**	**14 40 16.2**	**+0.9**
JOW	**Kunigami**	**52.40**	**317**	P	**P**	**14 40 15.8**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=116,slow=14,SNR=5.8						
BTM	**Bintulu**	**53.77**	**283**	P	**P**	**14 40 26.9**	**+0.6**
INU	**Inuyama**	**53.82**	**332**	*e*P	**P**	**14 40 26.2**	**0.0**
	comp=Z,61nm,1.1s						
TAOE	**Nuku Hiva Isla**	**53.90**	**92**	*e*S	**S**	**14 48 05.3**	**+2.3**
	comp=Z,1µm,26.7s						
TAOE				*e*LR	LR	14 55 56.8	
	comp=Z,3µm,23.2s						
MJAR	**Matsushiro Arr**	**54.27**	**333**	P	**P**	**14 40 28.9**	**-0.6**
	comp=Z,32nm,1.0s,baz=177,slow=8.1,SNR=48						
MAJO	**Matsushiro**	**54.27**	**333**	P	**P**	**14 40 26.2**	**-3.3**
	comp=Z,336nm,0.6s						
MAJO				LR	LR		
	comp=Z,989nm,20.0s						
MAJO	**Matsushiro**	**54.27**	**333**	P	**P**	**14 40 26.2**	**-3.3**
MAJO				MLR	MLR		
	comp=Z,989nm,20.0s						
MAT	**Matsushiro**	**54.27**	**333**	P	**P**	**14 40 28.9**	**-0.6**
MAT				*e*S	**S**	**14 48 10.2**	**+3.2**
MJB9	**Matsu-Tunnel**	**54.27**	**333**	*e*P	**P**	**14 40 29.2**	**-0.3**
	comp=Z,52nm,0.9s						
SBUM	**Sibu**	**54.39**	**282**	P	**P**	**14 40 31.8**	**+1.0**
JNU	**Nakatsue**	**55.25**	**325**	*e*P	**P**	**14 40 37.1**	**+0.4**
	comp=Z,69nm,0.9s						
JNU				*e*PcP	**PcP**	**14 41 34.0**	**-3.6**
JNU	**Nakatsue**	**55.25**	**325**	P	**P**	**14 40 36.6**	**-0.1**
	comp=Z,62nm,0.9s,baz=81,slow=0.9,SNR=29						
NACB	**Ninganchiao**	**55.47**	**310**	*e*P	**P**	**14 40 39.8**	**+1.4**
	comp=Z,56nm,0.9s						
TPUB	**Ta-pu**	**55.70**	**309**	*e*P	**P**	**14 40 40.0**	**-0.2**
	comp=Z,127nm,1.2s						
YHNB	**Yeheng**	**55.91**	**311**	*e*P	**P**	**14 40 42.4**	**+0.7**
	comp=Z,92nm,1.1s						
KSM	**Kuching**	**55.97**	**280**	*e*P	**P**	**14 40 42.7**	**+0.5**
	comp=Z,93nm,0.9s						
KSM	**Kuching**	**55.97**	**280**	P	**P**	**14 40 43.0**	**+0.8**
TATO	**Taipei**	**56.01**	**311**	PFAKE		14 40 50.0	+7.8
TATO				LR	LR		
	comp=Z,1µm,20.0s						
ERM	**Erimo**	**57.14**	**341**	PFAKE		14 41 00.0	+10
ERM				LR	LR		
	comp=Z,642nm,22.0s						
ERM	**Erimo**	**57.14**	**341**	*i* P	**P**	**14 40 51.5**	**+1.5**
ERM				pmax	pmax		
	comp=Z,13nm,0.6s						
QZH	**Quanzhou**	**58.16**	**309**	⇑*i*P	**P**	**14 41 00.6**	**+3.1**
QZH				S	**S**	**14 49 03.6**	**+4.6**
QZH				pmax	pmax		
	comp=Z,670nm,6.3s						
YUK	**Yuzh-Kuril'sk**	**58.18**	**344**	*c i*P	**P**	**14 40 57.9**	**+0.7**
KUR	**Kuril'sk**	**58.78**	**346**	*c i*P	**P**	**14 41 03.0**	**+1.6**
KUR				*e*		14 43 12.6	
KUR				S	**S**	**14 49 08.3**	**+1.9**
KUR				*e*SS	**SS**	**14 52 56.9**	**-3.2**
KUR				pmax	pmax		
	comp=Z,129nm,1.1s						
ASAJ	**Asahikawa**	**59.21**	**341**	P	**P**	**14 41 04.8**	**+0.3**
	comp=Z,48nm,0.7s,baz=204,slow=8.1,SNR=35						
TJN	**Taejon**	**59.59**	**325**	*ce*P	**P**	**14 41 07.5**	**+0.3**
SSE	**Sheshan**	**59.88**	**317**	P	**P**	**14 41 09.4**	**+0.1**
SSE				S	**S**	**14 49 22.6**	**+1.4**
SSE				pmax	pmax		
	comp=Z,29nm,1.0s						
SSE				pmax	pmax		
	comp=Z,440nm,5.2s						
SSE				LR	LR		
	comp=Z,290nm,15.7s						
SSE				LR	LR		
	comp=Z,260nm,14.3s						
SSE	**Sheshan**	**59.88**	**317**	*e*P	**P**	**14 41 09.9**	**+0.6**
	comp=Z,137nm,0.8s						
SSE				LR	LR		
	comp=Z,709nm,20.0s						
KSRS	**Korea Array**	**60.06**	**326**	P	**P**	**14 41 10.8**	**+0.4**
	comp=Z,9.4nm,0.6s,baz=142,slow=6.6,SNR=37						
KS15	**Wonju Array Si**	**60.08**	**326**	*e*P	**P**	**14 41 11.4**	**+0.9**
KSAR	**Wonju Array Be**	**60.08**	**326**	P	**P**	**14 41 10.8**	**+0.3**
KSAR	**Wonju Array Be**	**60.08**	**326**	P	**P**	**14 41 10.9**	**+0.3**
KS01	**Wonju Array Si**	**60.10**	**326**	*e*P	**P**	**14 41 10.2**	**-0.4**
GZH	**Guangzhou**	**61.32**	**305**	P	**P**	**14 41 20.1**	**+0.8**
YSS	**Yuzh-Sakhalins**	**61.73**	**343**	*e*P	**P**	**14 41 22.4**	**+0.8**
	comp=Z,77nm,1.0s						
YSS				LR	LR		
	comp=Z,589nm,19.0s						
YSS	**Yuzh-Sakhalins**	**61.73**	**343**	⇓*i*P	**P**	**14 41 22.1**	**+0.6**
YSS				*e**SP	**pwP**	**14 41 30.4**	**+0.3**
YSS				*e*S	**S**	**14 49 44.8**	**+0.6**
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				pmax	pmax		
	comp=Z,700nm,4.0s						
YSS				MLR	MLR		
	comp=Z,900nm,17.0s						
NJ2	**Nanjing**	**62.04**	**316**	⇓P	**P**	**14 41 24.8**	**+0.8**
NJ2				S	**S**	**14 49 51.1**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,79nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,1µm,5.4s						
NJ2				LR	LR		
	comp=Z,700nm,23.2s						
NJ2				LR	LR		
	comp=Z,670nm,24.6s						
TEY	**Ternei**	**62.09**	**338**	⇓*e*P	**P**	**14 41 23.7**	**-0.3**
TEY				*e*		14 41 34.1	
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
MYKOM	**Kota Tinggi**	**62.29**	**278**	P	**P**	**14 41 26.7**	**+0.7**
MSHR	**Mys Shultsa**	**62.34**	**332**	*i* P	**P**	**14 41 26.5**	**+0.8**
QIZ	**Qiongzhong**	**62.42**	**299**	P	**P**	**14 41 27.8**	**+1.0**
QIZ				S	**S**	**14 49 58.4**	**+4.4**
QIZ				pmax	pmax		
	comp=N,47nm,1.1s						
QIZ				pmax	pmax		
	comp=N,990nm,6.1s						
QIZ				LR	LR		
	comp=N,760nm,18.1s						
QIZ				LR	LR		
	comp=N,550nm,14.2s						
QIZ				LR	LR		
	comp=N,1µm,23.5s						
QIZ	**Qiongzhong**	**62.42**	**299**	PFAKE		14 41 40.0	+13
QIZ				LR	LR		
	comp=Z,89nm,19.0s						
VLA	**Vladivostok**	**62.44**	**333**	*i* P	**P**	**14 41 27.1**	**+0.7**
VLA				pmax	pmax		
	comp=Z,31nm,1.1s						
SKR	**Severo-Kuril's**	**62.63**	**354**	*e*P	**P**	**14 41 27.0**	**-0.5**
SKR				*e*		14 41 39.7	
SKR				*e*S	**S**	**14 49 57.8**	**+2.5**
SKR				pmax	pmax		
	comp=Z,500nm,4.9s						
SKR				pmax	pmax		
	comp=Z,900nm,3.9s						
SKR				MLR	MLR		
	comp=Z,2µm,17.0s						
SKR				MLR	MLR		
	comp=Z,1µm,16.0s						
KGM	**Kluang**	**62.86**	**278**	P	**P**	**14 41 30.9**	**+1.0**
USRK	**Ussuriysk Ar.**	**63.26**	**334**	P	**P**	**14 41 32.6**	**+0.8**
	comp=Z,25nm,0.6s,baz=133,slow=5.3,SNR=79						
USRK				LR	LR	15 11 47.7	
	comp=Z,284nm,18.1s,baz=130,slow=39						
USA0B	**Ussuriysk Arra**	**63.26**	**334**	*e*P	**P**	**14 41 32.8**	**+0.9**
	comp=Z,28nm,0.8s						
KTGM	**Kuala Trenggan**	**63.89**	**282**	P	**P**	**14 41 37.6**	**+0.9**
WHN	**Wuhan**	**64.35**	**312**	⇓P	**P**	**14 41 39.8**	**+0.4**
WHN				S	**S**	**14 50 10.1**	**-7.6**
WHN				LR	LR		
	comp=Z,1µm,13.2s						
WHN				LR	LR		
	comp=Z,3µm,20.0s						
WHN				LR	LR		
	comp=Z,2µm,12.6s						
DL2	**Dalian**	**64.62**	**324**	⇓*i*P	**P**	**14 41 41.3**	**+0.3**
DL2				*e*S	**S**	**14 50 20.0**	**-0.7**
DL2				pmax	pmax		
	comp=Z,45nm,0.7s						
DL2				pmax	pmax		
	comp=Z,860nm,3.9s						
DL2				LR	LR		
	comp=Z,570nm,19.5s						
DL2				LR	LR		
	comp=Z,510nm,19.0s						
DL2				LR	LR		
	comp=Z,1µm,26.8s						
MDJ	**Mudanjiang**	**64.64**	**333**	P	**P**	**14 41 42.3**	**+1.3**
MDJ				PP	**PP**	**14 44 00.0**	**-3.4**
MDJ				S	**S**	**14 50 24.6**	**+3.9**
MDJ				SS	**SS**	**14 54 32.3**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,37nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,1µm,4.4s						
MDJ				LR	LR		
	comp=Z,710nm,11.6s						
MDJ				LR	LR		
	comp=Z,980nm,17.7s						
MDJ				LR	LR		
	comp=Z,1µm,17.8s						
MDJ	**Mudanjiang**	**64.64**	**333**	*e*P	**P**	**14 41 41.8**	**+0.8**
	comp=Z,46nm,1.0s						
MDJ				LR	LR		
	comp=Z,800nm,21.0s						
PET	**Petropavlovsk**	**64.72**	**356**	PFAKE		14 41 50.0	+8.8
PET				LR	LR		
	comp=Z,1µm,20.0s						
PET	**Petropavlovsk**	**64.72**	**356**	*e*P	**P**	**14 41 40.2**	**-1.0**
PET				*e*S	**S**	**14 50 16.0**	**-5.3**
PET				*e*SS	**SS**	**14 54 29.0**	**-3.7**
PET				pmax	pmax		
	comp=Z,800nm,16.6s						
PET				pmax	pmax		
	comp=Z,45nm,1.3s						
FRIM	**Kepong**	**64.80**	**279**	P	**P**	**14 41 43.6**	**+0.9**
PETK	**Petropavlovsk-**	**64.88**	**355**	*e*P	**P**	**14 41 42.5**	**+0.2**
PETK	**Petropavlovsk-**	**64.88**	**355**	P	**P**	**14 41 42.0**	**-0.3**
	comp=Z,11nm,0.8s,baz=167,slow=5.1,SNR=13						
PETK				LR	LR	15 04 34.0	
	comp=Z,871nm,21.9s,baz=171,slow=31						
TYV	**Tymovskoe**	**65.31**	**345**	*e*P	**P**	**14 41 44.8**	**-0.4**
TYV				pmax	pmax		
	comp=Z,17nm,1.6s						
TYV				pmax	pmax		
	comp=Z,800nm,5.3s						
TYV				MLR	MLR		
	comp=Z,900nm,16.0s						
CASY	**Casey**	**65.52**	**201**	PFAKE		14 42 00.0	+14
CASY				LR	LR		
	comp=Z,321nm,20.0s						
SNY	**Shenyang**	**65.53**	**327**	⇑P	**P**	**14 41 47.9**	**+1.1**
SNY				pmax	pmax		
	comp=Z,17nm,0.9s						
SNY				pmax	pmax		
	comp=Z,950nm,5.7s						
SNY				LR	LR		
	comp=Z,980nm,15.1s						
SNY				LR	LR		
	comp=Z,890nm,14.5s						
SNY				LR	LR		
	comp=Z,940nm,19.8s						
TIA	**Tai'an**	**65.68**	**319**	P	**P**	**14 41 47.8**	**-0.1**
TIA				pmax	pmax		
	comp=Z,13nm,1.0s						
IPM	**Ipoh**	**65.69**	**280**	*e*P	**P**	**14 41 48.7**	**+0.2**
	comp=Z,236nm,1.4s						
IPM	**Ipoh**	**65.69**	**280**	P	**P**	**14 41 49.4**	**+0.9**
VNDA	**Vanda**	**65.81**	**181**	P	**P**	**14 41 47.9**	**-0.3**
	comp=Z,6.6nm,0.9s,baz=1.2,slow=8.1,SNR=7.6						
VNDA				LR	LR	15 06 30.1	
	comp=Z,1µm,20.5s,baz=344,slow=32						
CN2	**Changchun**	**65.98**	**330**	*e*P	**P**	**14 41 49.3**	**-0.4**
CN2				*e*pP	sP	14 41 53.8	+0.9
CN2				*e*PP	**PP**	**14 44 17.3**	**+2.1**
CN2				*e*S	**S**	**14 50 36.3**	**-0.9**
CN2				*e*SS	**SS**	**14 54 53.3**	**+0.4**
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,790nm,18.0s						
CN2				LR	LR		
	comp=Z,660nm,18.0s						
CN2				LR	LR		
	comp=Z,610nm,19.0s						
SBA	**Scott Base**	**66.13**	**180**	PFAKE		14 42 00.0	+10
SBA				LR	LR		
	comp=Z,905nm,19.0s						
KULM	**Kulim**	**66.26**	**281**	*e*P	**P**	**14 41 52.5**	**+0.3**
	comp=Z,117nm,1.3s						
KULM	**Kulim**	**66.26**	**281**	P	**P**	**14 41 52.7**	**+0.6**
SKNT	**Sakolnakorn**	**66.77**	**294**	P	**P**	**14 41 56.5**	**+1.2**
	comp=Z,45nm,1.1s,comp=Z,860nm						
GRNR	**Gornyy**	**67.05**	**341**	*e*P	**P**	**14 41 57.0**	**+0.6**
GRNR				pmax	pmax		
	comp=Z,29nm,1.0s						
KLR	**Kul'dur**	**67.41**	**337**	*d i*P	**P**	**14 41 59.1**	**+0.4**
KLR	**Kul'dur**	**67.41**	**337**	P	**P**	**14 41 58.9**	**+0.2**
	comp=Z,17nm,0.6s,baz=144,slow=5.2,SNR=46						
SRAK	**Srakaew**	**67.51**	**291**	P	**P**	**14 41 59.6**	**-0.4**
	comp=Z,38nm,1.2s,comp=Z,866nm						
ENH	**Enshi**	**67.81**	**310**	*e*P	**P**	**14 42 01.2**	**-0.5**
	comp=Z,91nm,0.9s						
ENH				LR	LR		
	comp=Z,583nm,21.0s						
TRTT	**Trang**	**67.86**	**283**	P	**P**	**14 42 05.6**	**+3.3**
	comp=Z,23nm,2.2s,comp=Z,945nm						

NKL	**Nikolayevsk**	**67.91**	**344**	*e*P	**P**	**14 42 02.5**	**+0.8**
NKL				pmax	pmax		
	comp=Z,1µm,6.0s						
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
CHAI	**Chaiyaphum**	**68.19**	**292**	P	**P**	**14 42 05.2**	**+0.9**
	comp=Z,9.4nm,0.9s,comp=Z,117nm						
PATY	**Pattaya**	**68.25**	**289**	P	**P**	**14 42 06.9**	**+2.3**
	comp=Z,27nm,0.9s,comp=Z,2µm						
GYA	**Guiyang**	**68.26**	**305**	⇑*i*P	**P**	**14 42 04.5**	**-0.2**
GYA				pP	pwP	14 42 13.0	-0.2
GYA				PP	**PP**	**14 44 40.8**	**+5.3**
GYA				S	**S**	**14 51 06.6**	**+1.0**
GYA				SKS	**SKiKP**	**14 52 00.9**	**+1.0**
GYA				SS	**SS**	**14 55 31.0**	**+2.0**
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,150nm,5.9s						
GYA				LR	LR		
	comp=Z,630nm,18.8s						
GYA				LR	LR		
	comp=Z,680nm,18.4s						
GYA				LR	LR		
	comp=Z,650nm,18.6s						
BJT	**Baijiatuau**	**68.58**	**322**	*e*P	**P**	**14 42 06.9**	**+0.6**
	comp=Z,48nm,1.1s						
BJT				LR	LR		
	comp=Z,866nm,20.0s						
BJT	**Baijiatuau**	**68.58**	**322**	*e*P	**P**	**14 42 06.9**	**+0.6**
BJT				pmax	pmax		
	comp=Z,48nm,1.1s						
BJT				MLR	MLR		
	comp=Z,866nm,20.0s						
BJI	**Beijing**	**68.59**	**322**	⇓*i*P	**P**	**14 42 07.0**	**+0.7**
BJI				S	**S**	**14 51 12.6**	**+3.8**
BJI				pmax	pmax		
	comp=Z,37nm,1.3s						
BJI				LR	LR		
	comp=Z,890nm,22.6s						
BJI				LR	LR		
	comp=Z,600nm,19.4s						
PBKT	**Sadao Pong**	**69.33**	**293**	*e*P	**P**	**14 42 12.8**	**+1.5**
	comp=Z,41nm,1.0s						
PHET	**Kaeng Krachan**	**69.39**	**289**	P	**P**	**14 42 14.3**	**+2.5**
	comp=Z,8.3nm,0.8s,comp=Z,147nm						
TIY	**Taiyuan**	**69.61**	**318**	*e*P	**P**	**14 42 13.8**	**+1.0**
TIY				S	**S**	**14 51 17.6**	**-3.5**
XAN	**Xi'an**	**70.09**	**313**	P	**P**	**14 42 16.4**	**+0.6**
XAN				pP	pwP	14 42 22.6	-1.8
XAN				sP	sP	14 42 25.4	+6.4
XAN				PP	**PP**	**14 44 49.8**	**-1.4**
XAN				S	**S**	**14 51 24.1**	**-2.8**
XAN				sS	sS	14 51 34.4	+3.7
XAN				ScS	**SKiKP**	**14 52 08.6**	**+6.4**
XAN				SS	**SS**	**14 55 51.1**	**-5.9**
XAN				pmax	pmax		
	comp=Z,51nm,1.0s						
XAN				pmax	pmax		
	comp=Z,1µm,3.5s						
XAN				LR	LR		
	comp=Z,470nm,22.2s						
XAN				LR	LR		
	comp=Z,400nm,19.5s						
XAN				LR	LR		
	comp=Z,590nm,24.4s						
XAN	**Xi'an**	**70.09**	**313**	*e*P	**P**	**14 42 16.4**	**+0.6**
	comp=Z,65nm,0.8s						
XAN	**Xi'an**	**70.09**	**313**	*e*P	**P**	**14 42 16.4**	**+0.6**
XAN				pmax	pmax		
	comp=Z,65nm,0.8s						
UTTA	**Uttaradit**	**70.10**	**294**	P	**P**	**14 42 17.5**	**+1.4**
	comp=Z,7.7nm,0.9s,comp=Z,66nm						
NANT	**Nan**	**70.33**	**295**	P	**P**	**14 42 18.6**	**+1.1**
	comp=Z,14nm,1.0s,comp=Z,117nm						
UTHA	**Uthaitani**	**70.39**	**291**	P	**P**	**14 42 19.5**	**+1.6**
	comp=Z,11nm,0.9s,comp=Z,121nm						
SUKH	**Sukhothai**	**70.84**	**293**	P	**P**	**14 42 22.4**	**+1.8**
	comp=Z,10nm,0.8s						
KMI	**Kunming**	**70.91**	**302**	P	**P**	**14 42 23.4**	**+2.2**
KMI				pP	pwP	14 42 29.4	-0.4
KMI				sP	sP	14 42 31.9	+7.4
KMI				PP	**PP**	**14 44 58.4**	**-0.2**
KMI				S	**S**	**14 51 34.0**	**-3.2**
KMI				sS	sS	14 51 44.8	+3.8
KMI				pmax	pmax		
	comp=Z,52nm,1.2s						
KMI				pmax	pmax		
	comp=Z,1µm,3.9s						
KMI				LR	LR		
	comp=Z,540nm,13.9s						
KMI				LR	LR		
	comp=Z,750nm,14.1s						
KMI				LR	LR		
	comp=Z,760nm,15.4s						
UMPA	**Umpang Tak**	**71.12**	**292**	P	**P**	**14 42 24.3**	**+1.9**
	comp=Z,9.1nm,1.1s						
LAMP	**Lampang**	**71.19**	**294**	P	**P**	**14 42 24.4**	**+1.7**
	comp=Z,14nm,0.9s,comp=Z,117nm						
CMAR	**Chiang Mai Arr**	**71.78**	**294**	P	**P**	**14 42 27.6**	**+1.3**
	comp=Z,20nm,0.9s,baz=120,slow=4.6,SNR=91						
CMAR				PKPPKP		15 10 17.1	
	comp=Z,1.7nm,1.1s,baz=288,slow=3.7,SNR=6.5						
CMMT	**Chiang Mai**	**71.89**	**294**	P	**P**	**14 42 28.0**	**+1.0**
	comp=Z,34nm,1.2s,comp=Z,1µm						
CHTO	**Chiang Mai**	**71.90**	**294**	*e*P	**P**	**14 42 28.0**	**+0.9**
	comp=Z,51nm,1.3s						
CHTO				LR	LR		
	comp=Z,572nm,21.0s						
CHTO	**Chiang Mai**	**71.90**	**294**	P	**P**	**14 42 28.1**	**+1.1**
	comp=Z,154nm,1.2s,comp=Z,5µm						
HHC	**Hu-ho-hao-te**	**71.92**	**320**	*e*P	**P**	**14 42 27.9**	**+1.0**
HHC				pP	pwP	14 42 32.6	-2.8
HHC				sP	sP	14 42 34.9	+4.8
HHC				S	**S**	**14 51 48.1**	**+0.1**
HHC				sS	sS	14 51 56.0	+4.1
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,1µm,6.6s						
HHC				LR	LR		
	comp=Z,870nm,15.6s						
HHC				LR	LR		
	comp=Z,600nm,13.8s						
HHC				LR	LR		
	comp=Z,1µm,15.6s						
MA2	**Magadan**	**71.98**	**352**	*e*P	**P**	**14 42 25.9**	**-0.8**
	comp=Z,20nm,1.3s						
MA2				LR	LR		
	comp=Z,1µm,21.0s						
MA2	**Magadan**	**71.98**	**352**	*ce*P	**P**	**14 42 26.4**	**-0.3**
MA2				pmax	pmax		
	comp=Z,16nm,1.3s						
MA2	**Magadan**	**71.98**	**352**	P	**P**	**14 42 25.7**	**-1.0**
	comp=Z,4.4nm,0.6s,baz=158,slow=5.9,SNR=9.5						
CD2	**Chengdu**	**72.49**	**308**	⇓P	**P**	**14 42 31.3**	**+0.9**
CD2				pP	pwP	14 42 37.6	-1.4
CD2				sP	sP	14 42 40.0	+6.4
CD2				PP	**PP**	**14 45 12.6**	**+0.8**
CD2				S	**S**	**14 51 55.8**	**+1.0**
CD2				SS	**SS**	**14 56 35.8**	**+1.9**
CD2				pmax	pmax		
	comp=Z,130nm,0.8s						
CD2				LR	LR		
	comp=Z,1µm,17.2s						
CD2				LR	LR		
	comp=Z,1µm,17.2s						
CD2				LR	LR		
	comp=Z,1µm,13.7s						
HIA	**Hailar**	**72.63**	**331**	*e*P	**P**	**14 42 31.5**	**+0.7**
	comp=Z,66nm,1.2s						
HIA				LR	LR		
	comp=Z,703nm,20.0s						
HIA	**Hailar**	**72.63**	**331**	*e*P	**P**	**14 42 31.5**	**+0.7**
HIA				pmax	pmax		
	comp=Z,66nm,1.2s						
HIA				MLR	MLR		
	comp=Z,703nm,20.0s						
ZEA	**Zeya**	**72.71**	**338**	*e*P	**P**	**14 42 32.1**	**+1.0**
ZEA				*e*S	**S**	**14 51 56.0**	**-0.2**
ZEA				pmax	pmax		
	comp=N,56nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,1µm,6.0s						
ZEA				pmax	pmax		
	comp=E,400nm,8.0s						
ZEA				pmax	pmax		
	comp=N,500nm,5.0s						
ZEA				smax	smax		
	comp=E,600nm,13.0s						
BTO	**Baotou**	**72.77**	**319**	*e*P	**P**	**14 42 32.4**	**+0.5**
CMBY	**CAMPBELL BAY**	**73.16**	**281**	*e*P	P	14 42 29.0	-5.7
LZH	**Lanzhou**	**74.72**	**313**	*e*P	**P**	**14 42 45.3**	**+1.7**
LZH				sP	PcP	14 42 55.4	-2.3
LZH				PP	**PP**	**14 45 33.0**	**+2.1**
LZH				S	**S**	**14 52 18.3**	**-1.8**
LZH				sS	sS	14 52 29.8	+5.8
LZH				pmax	pmax		
	comp=E,120nm,1.1s						
LZH				pmax	pmax		
	comp=E,2µm,4.9s						
LZH				LR	LR		
	comp=E,670nm,13.6s						
LZH				LR	LR		
	comp=E,1µm,15.2s						
LZH				LR	LR		
	comp=E,1µm,18.4s						
SEY	**Seymchan**	**75.07**	**354**	*ce*P	**P**	**14 42 45.1**	**+0.4**
SEY	**Seymchan**	**75.07**	**354**	P	**P**	**14 42 44.4**	**-0.3**
	comp=E,19nm,1.1s,baz=154,slow=5.8,SNR=27						
PBA	**Port Blair**	**75.48**	**285**	*e*P	P	14 42 43.0	-5.1
GAMB	**Gambell**	**77.34**	**10**	*e*P	**P**	**14 42 58.1**	**+0.4**
	comp=E,61nm,1.3s						
CIT	**Chita**	**77.41**	**330**	*e*P	**P**	**14 42 58.3**	**-0.1**
CIT				*e*		14 43 10.4	
CIT				*e*		14 43 13.8	
CIT				pmax	pmax		
	comp=Z,147nm,2.9s						
KDAK	**Kodiak Island**	**77.44**	**22**	PFAKE		14 43 10.0	+12
KDAK				LR	LR		
	comp=Z,720nm,21.0s						
QSPA	**South Pole Qui**	**78.29**	**180**	*e*P	**P**	**14 43 03.2**	**0.0**
	comp=Z,344nm,0.8s						
QSPA				LR	LR		
	comp=Z,1µm,19.0s						
ULN	**Ulaanbaatar**	**78.46**	**324**	*e*P	**P**	**14 43 05.4**	**+0.9**
	comp=Z,40nm,0.8s						
ULN				LR	LR		
	comp=Z,593nm,22.0s						
ULN	**Ulaanbaatar**	**78.46**	**324**	*ce*P	**P**	**14 43 05.2**	**+0.7**
ULN				pmax	pmax		
	comp=Z,61nm,1.3s						
YAK	**Yakutsk**	**78.55**	**344**	*d i*P	**P**	**14 43 04.3**	**-0.1**
YAK				pmax	pmax		
	comp=Z,121nm,0.8s						
YAK				pmax	pmax		
	comp=N,37nm,0.9s						
YAK				pmax	pmax		
	comp=E,32nm,1.0s						
SONM	**Songino Array**	**78.82**	**324**	P	**P**	**14 43 06.8**	**+0.3**
	comp=E,12nm,0.7s,baz=131,slow=5.8,SNR=73						
SONM				PKKPbc	**PKKPbc**	**15 02 00.6**	**-2.2**
	comp=E,0.7nm,0.6s,baz=209,slow=2.6,SNR=3.6						
SONA1	**Songino Array**	**78.82**	**324**	*e*P	**P**	**14 43 07.2**	**+0.8**
SVW2	**Sparrevohn**	**78.95**	**18**	*e*P	**P**	**14 43 07.0**	**+0.3**
	comp=E,80nm,1.3s						
GTA	**Gaotai**	**79.05**	**314**	⇓P	**P**	**14 43 09.4**	**+1.5**
GTA				pP	PcP	14 43 16.4	0.0
GTA				sP	pwP	14 43 20.1	+3.6
GTA				PP	**PP**	**14 46 06.6**	**-0.6**
GTA				S	**S**	**14 53 06.8**	**-0.4**
GTA				sS	SKSac	14 53 19.3	-4.6
GTA				pmax	pmax		
	comp=E,46nm,1.1s						
GTA				pmax	pmax		
	comp=E,1µm,5.1s						
GTA				LR	LR		
	comp=E,350nm,19.7s						
GTA				LR	LR		
	comp=E,460nm,19.4s						
GTA				LR	LR		
	comp=E,540nm,19.7s						
ANM	**Nome**	**79.28**	**13**	*e*P	**P**	**14 43 09.5**	**+1.1**
	comp=E,72nm,1.5s						
ANM	**Nome**	**79.28**	**13**	*e*P	**P**	**14 43 09.5**	**+1.1**
ANM				pmax	pmax		
	comp=Z,72nm,1.5s						
BRLK	**Bradley Lake**	**79.50**	**21**	*e*P	**P**	**14 43 10.7**	**+1.0**
	comp=Z,39nm,0.9s						
BILL	**Bilibino**	**79.55**	**0**	*e*P	**P**	**14 43 09.8**	**0.0**
	comp=Z,50nm,0.9s						
BILL				LR	LR		
	comp=Z,693nm,19.0s						
BILL	**Bilibino**	**79.55**	**0**	*d i*P	**P**	**14 43 09.8**	**0.0**
BILL				*e*		14 43 20.9	
BILL				*e*		14 46 14.0	
BILL				*e*PPP	PPP	14 47 59.5	
BILL				*i* S	S	14 52 59.8	-11
BILL				pmax	pmax		
	comp=Z,79nm,1.3s						
BILL				MLR	MLR		
	comp=Z,425nm,18.0s						
SHL	**Shillong**	**80.26**	**299**	*e*P	**P**	**14 43 15.4**	**+0.7**
	comp=Z,23nm,0.8s						
SHL	**Shillong**	**80.26**	**299**	*e*P	**P**	**14 43 15.5**	**+0.7**
SHL				pmax	pmax		
	comp=Z,23nm,0.8s						
SHL	**Shillong**	**80.26**	**299**	*e*P	**P**	**14 43 13.0**	**-1.8**
SUA	**Susitna One**	**80.78**	**20**	*e*P	**P**	**14 43 17.2**	**+0.5**
	comp=Z,57nm,1.2s						
RC01	**Rabbit Creek A**	**80.85**	**20**	*e*P	**P**	**14 43 17.8**	**+0.8**
	comp=Z,26nm,1.0s						
BOD	**Bodaibo**	**80.86**	**335**	*e*P	**P**	**14 43 16.4**	**-0.6**
BOD				pmax	pmax		
	comp=Z,21nm,2.3s						
PMR	**Palmer**	**81.41**	**20**	*e*P	**P**	**14 43 20.6**	**+0.8**
	comp=Z,16nm,0.8s						
PMR	**Palmer**	**81.41**	**20**	*e*P	**P**	**14 43 20.7**	**+0.8**
PMR				pmax	pmax		
	comp=Z,17nm,0.8s						
KNK	**Knik Glacier**	**81.52**	**21**	*e*P	**P**	**14 43 21.6**	**+1.1**
	comp=Z,41nm,1.0s						
GHO	**Glory Hole Cre**	**81.61**	**20**	*e*P	**P**	**14 43 22.3**	**+1.3**
	comp=Z,55nm,1.2s						
CAST	**Castle Rocks**	**81.79**	**18**	*e*P	**P**	**14 43 22.9**	**+1.0**
	comp=Z,84nm,1.3s						
SML	**Sawmill**	**81.83**	**20**	*e*P	**P**	**14 43 23.3**	**+1.1**
	comp=Z,120nm,1.5s						
SML	**Sawmill**	**81.83**	**20**	*e*P	**P**	**14 43 23.3**	**+1.1**
SML				pmax	pmax		
	comp=Z,120nm,1.5s						
ZAK	**Zakamensk**	**81.88**	**325**	*e*P	**P**	**14 43 22.4**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s						
EYAK	**Cordova Ski Ar**	**81.89**	**22**	*e*P	**P**	**14 43 23.5**	**+1.1**
	comp=Z,71nm,1.0s						
LSA	**Lhasa**	**82.16**	**302**	P	**P**	**14 43 26.4**	**+1.2**
LSA				pmax	pmax		
	comp=Z,16nm,1.0s						
LSA	**Lhasa**	**82.16**	**302**	*e*P	**P**	**14 43 26.5**	**+1.3**
	comp=Z,29nm,1.3s						
LSA				LR	LR		
	comp=Z,433nm,21.0s						
SCM	**Sheep Creek Mo**	**82.20**	**21**	*e*P	**P**	**14 43 23.7**	**-0.4**
	comp=Z,134nm,1.3s						
SCM	**Sheep Creek Mo**	**82.20**	**21**	*e*P	**P**	**14 43 23.7**	**-0.4**
SCM				pmax	pmax		
	comp=Z,134nm,1.3s						
IRK	**Irkutsk**	**82.26**	**327**	*e*P	**P**	**14 43 20.8**	**-3.8**
IRK				pmax	pmax		
	comp=Z,120nm,4.2s						
DIV	**Divide**	**82.27**	**22**	*e*P	**P**	**14 43 25.0**	**+0.4**
	comp=Z,74nm,1.0s						
HMT	**Hamilton**	**82.31**	**23**	*e*P	**P**	**14 43 25.5**	**+0.8**
	comp=Z,44nm,0.8s						
TLY	**Talaya**	**82.32**	**327**	*e*P	**P**	**14 43 25.1**	**+0.1**
	comp=Z,37nm,0.9s						
TLY				LR	LR		
	comp=Z,287nm,21.0s						
TLY	**Talaya**	**82.32**	**327**	*e*P	**P**	**14 43 24.9**	**-0.1**
TLY				*e*		14 46 31.7	
TLY				*e*S	**S**	**14 53 43.0**	**+2.4**
TLY				*e*SS	**SS**	**14 59 05.3**	**+3.9**
TLY				pmax	pmax		
	comp=Z,126nm,2.4s						
TRF	**Thorofare Moun**	**82.36**	**19**	*e*P	**P**	**14 43 26.2**	**+1.1**
	comp=Z,16nm,0.7s						
KLU	**Klutina**	**82.46**	**21**	*e*P	**P**	**14 43 25.7**	**+0.1**
	comp=Z,48nm,1.0s						
RND	**Reindeer**	**82.78**	**19**	*e*P	**P**	**14 43 27.0**	**-0.2**
	comp=Z,97nm,1.4s						
RND	**Reindeer**	**82.78**	**19**	*e*P	**P**	**14 43 27.0**	**-0.2**
RND				pmax	pmax		
	comp=Z,97nm,1.4s						
RDOG	**Red Dog Mine**	**82.81**	**12**	*e*P	**P**	**14 43 27.2**	**0.0**
	comp=Z,33nm,1.0s						
MCK	**McKinley**	**82.99**	**19**	*e*P	**P**	**14 43 27.8**	**-0.4**
	comp=Z,107nm,1.3s						
MCK	**McKinley**	**82.99**	**19**	*e*P	**P**	**14 43 27.8**	**-0.4**
MCK				pmax	pmax		
	comp=Z,107nm,1.3s						
DHY	**Denali Highway**	**83.03**	**20**	*e*P	**P**	**14 43 29.6**	**+1.0**
	comp=Z,50nm,1.4s						
IM3	**Indian Mountai**	**83.25**	**16**	*e*P	**P**	**14 43 29.8**	**+0.3**
HARP	**HAARP**	**83.34**	**21**	*e*P	**P**	**14 43 30.7**	**+0.7**
	comp=Z,32nm,0.8s						
MLY	**Manley**	**83.37**	**17**	*e*P	**P**	**14 43 30.3**	**+0.1**
	comp=Z,56nm,1.4s						
BALM	**Baldy**	**83.49**	**23**	*e*P	**P**	**14 43 31.5**	**+0.5**
	comp=Z,80nm,1.2s						
BALM	**Baldy**	**83.49**	**23**	*e*P	**P**	**14 43 31.5**	**+0.5**
BALM				pmax	pmax		
	comp=Z,81nm,1.2s						
KMRM	**Mail Ridge**	**83.59**	**47**	*e*P	**P**	**14 43 33.9**	**+2.0**
	comp=Z,44nm,0.9s						
PAX	**Paxson**	**83.60**	**20**	*e*P	**P**	**14 43 31.8**	**+0.3**
	comp=Z,14nm,1.2s						
PAX	**Paxson**	**83.60**	**20**	*e*P	**P**	**14 43 31.8**	**+0.3**
PAX				pmax	pmax		
	comp=Z,14nm,1.2s						
MOY	**Mondy**	**83.76**	**326**	*e*P	**P**	**14 43 32.3**	**-0.2**
MOY				pmax	pmax		
	comp=Z,168nm,4.0s						
WRH	**Wood River Hil**	**83.77**	**19**	*e*P	**P**	**14 43 31.8**	**-0.4**
	comp=Z,29nm,0.8s						
MAW	**Mawson**	**83.86**	**202**	LR	LR	15 17 59.1	
	comp=Z,726nm,18.3s,baz=108,slow=34						
SAO	**San Andreas Ge**	**84.06**	**51**	*e*P	**P**	**14 43 35.8**	**+1.5**
	comp=Z,22nm,0.8s						
MDM	**Murphy Dome**	**84.07**	**18**	*e*P	**P**	**14 43 33.9**	**+0.1**
	comp=Z,31nm,0.9s						
HDA	**Harding Lake**	**84.09**	**19**	*e*P	**P**	**14 43 34.0**	**+0.2**
	comp=Z,48nm,0.8s						
HDA	**Harding Lake**	**84.09**	**19**	P	**P**	**14 43 33.2**	**-0.6**
	baz=227						
TCOL	**CIGO, UAF Yank**	**84.12**	**18**	P	**P**	**14 43 33.0**	**-0.9**
	baz=226						
COLA	**College**	**84.13**	**18**	*e*P	**P**	**14 43 32.7**	**-1.2**
	comp=Z,37nm,0.8s						
COLA				LR	LR		
	comp=Z,2µm,21.0s						
COLA	**College**	**84.13**	**18**	*e*P	**P**	**14 43 32.7**	**-1.2**
COLA				pmax	pmax		
	comp=Z,37nm,0.8s						
COLA				MLR	MLR		
	comp=Z,2µm,21.0s						
BWNR	**Bhubaneshwar**	**84.17**	**292**	*e*x	**P**	**14 43 31.8**	**-3.4**
BWNR				IAmb	IAmb	14 43 32.3	
	comp=Z,46nm,0.9s						
O02D	**Mt. Diablo Mer**	**84.23**	**47**	P	**P**	**14 43 36.4**	**+1.2**
	baz=250,SNR=10						
RIDG	**Independ'e Rid**	**84.33**	**20**	*e*P	**P**	**14 43 35.3**	**+0.2**
	comp=Z,122nm,1.1s						
IL1	**Eielson Array**	**84.36**	**19**	*e*P	**P**	**14 43 35.7**	**+0.6**
ILAR	**Eielson Array**	**84.36**	**19**	P	**P**	**14 43 34.2**	**-0.9**
	comp=Z,13nm,0.6s,baz=236,slow=5.0,SNR=247						
ILAR				PKKP	**PKKPdf**	**15 01 44.8**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=4.0,slow=2.0,SNR=4.8						
ILAR				LR	LR	15 14 46.5	
	comp=Z,1µm,21.4s,baz=234,slow=31						
ILB	**Eielson Array**	**84.36**	**19**	*e*P	**P**	**14 43 35.5**	**+0.3**
L02E	**Cave Junction**	**84.36**	**45**	P	**P**	**14 43 35.7**	**0.0**
	baz=249						
POKR	**Poker Plat Res**	**84.42**	**18**	P	**P**	**14 43 34.3**	**-1.2**
	baz=226						
SNCC	**San Nicolas Is**	**84.45**	**55**	P	**P**	**14 43 36.5**	**+0.2**
	baz=252						
ODAN	**Odare**	**84.50**	**299**	*e*P	**P**	**14 43 37.7**	**+0.7**
	comp=Z,152nm,0.8s						
K02D	**Willamette Mer**	**84.51**	**45**	P	**P**	**14 43 37.2**	**+0.6**
	baz=249						
DOT	**Dot Lake**	**84.53**	**20**	*e*P	**P**	**14 43 36.8**	**+0.7**
	comp=Z,135nm,1.2s						
N02D	**Trinity Center**	**84.57**	**46**	P	**P**	**14 43 38.3**	**+1.4**
	baz=250,SNR=10.0						
M02C	**Callahan**	**84.61**	**46**	P	**P**	**14 43 38.5**	**+1.4**
	baz=249,SNR=5.9						
SMMC	**Simmler**	**84.71**	**52**	P	**P**	**14 43 38.6**	**+0.9**
	baz=252						
PKM	**Mcpherson Peak**	**84.72**	**53**	P	**P**	**14 43 39.0**	**+1.0**
	baz=252						
SCRK	**Sand Creek**	**84.77**	**20**	*e*P	**P**	**14 43 37.7**	**+0.3**
	comp=Z,87nm,1.1s						
YBH	**Yreka Blue Hor**	**84.83**	**46**	*e*P	**P**	**14 43 39.5**	**+1.3**
	comp=Z,104nm,1.5s						
YBH	**Yreka Blue Hor**	**84.83**	**46**	P	**P**	**14 43 37.8**	**-0.4**
	comp=Z,21nm,1.1s,baz=123,slow=17,SNR=16						
ORV	**Oroville**	**84.95**	**48**	*e*P	**P**	**14 43 39.5**	**+0.8**
	comp=Z,16nm,0.9s						
ORV	**Oroville**	**84.95**	**48**	*e*P	**P**	**14 43 39.5**	**+0.8**
ORV				pmax	pmax		
	comp=Z,16nm,0.9s						
HUMO	**Hull Mountain**	**84.97**	**45**	*e*P	**P**	**14 43 40.0**	**+1.2**
	comp=Z,29nm,0.9s						
O03E	**Paynes Creek**	**84.98**	**47**	P	**P**	**14 43 39.1**	**+0.1**
	baz=250,SNR=17						
BOK	**Bokaro**	**84.99**	**295**	*e*P	**P**	**14 43 38.3**	**-1.0**
BOK				IAmb	IAmb	14 43 42.4	
	comp=Z,19nm,0.2s						
I03D	**Drain, OR**	**85.09**	**44**	P	**P**	**14 43 40.2**	**+0.9**
	baz=249						
AFDM	**Forest Hills D**	**85.14**	**49**	*e*P	**P**	**14 43 40.3**	**+0.6**
	comp=Z,48nm,1.2s						
RAMN	**Ramite**	**85.20**	**299**	*e*P	**P**	**14 43 41.1**	**+0.5**
	comp=Z,35nm,0.7s						
KNGR	**Kungurtug, Tuv**	**85.26**	**324**	*d i*P	**P**	**14 43 39.6**	**-0.6**
HYT	**Haines Junctio**	**85.27**	**24**	*e*P	**P**	**14 43 40.7**	**+0.7**
	comp=Z,28nm,0.9s						
CMB	**Columbia Colle**	**85.27**	**50**	*e*P	**P**	**14 43 40.6**	**+0.1**
	comp=Z,19nm,0.8s						
CMB	**Columbia Colle**	**85.27**	**50**	*e*P	**P**	**14 43 40.6**	**+0.1**
CMB				pmax	pmax		
	comp=Z,19nm,0.8s						
L04D	**Klamath Falls**	**85.28**	**45**	P	**P**	**14 43 40.9**	**+0.4**
	baz=250						
PRP	**Porcupine Dome**	**85.29**	**19**	*e*P	**P**	**14 43 39.8**	**-0.2**
	comp=Z,20nm,1.3s						
CIS	**Catalina Islan**	**85.38**	**55**	P	**P**	**14 43 41.1**	**0.0**
	baz=253						
M04C	**Macdoel**	**85.46**	**46**	P	**P**	**14 43 41.8**	**+0.4**
	baz=250,SNR=7.5						
OSI	**Osito Audit: C**	**85.49**	**53**	P	**P**	**14 43 40.6**	**-1.0**
	baz=253						
VOG	**Valley Oaks Go**	**85.50**	**52**	P	**P**	**14 43 41.5**	**0.0**
	baz=252						
ARVC	**Arvin**	**85.56**	**53**	P	**P**	**14 43 41.7**	**-0.2**
	baz=252						
VES	**Vestal, Richgr**	**85.58**	**52**	P	**P**	**14 43 42.2**	**+0.3**
	baz=252,SNR=8.8						
G03D	**McMinnville, O**	**85.69**	**42**	P	**P**	**14 43 43.2**	**+0.9**
	baz=249						
JIRN	**Jiri**	**85.74**	**299**	*e*P	**P**	**14 43 43.9**	**+0.5**
	comp=Z,137nm,1.1s						
J04D	**Umpqua Nationa**	**85.77**	**44**	P	**P**	**14 43 43.1**	**+0.1**
	baz=250						
H04D	**Lebanon**	**85.80**	**43**	P	**P**	**14 43 43.3**	**+0.4**
	baz=249						
K04D	**Chiloquin, OR**	**85.81**	**45**	P	**P**	**14 43 43.3**	**+0.2**
	baz=250						
BEKR	**Beckworth**	**85.88**	**48**	*e*P	**P**	**14 43 44.5**	**+0.9**
	comp=Z,50nm,1.3s						
MWC	**Mount Wilson**	**85.90**	**54**	*e*P	**P**	**14 43 44.5**	**+0.6**
	comp=Z,52nm,1.0s						
MWC	**Mount Wilson**	**85.90**	**54**	*e*P	**P**	**14 43 44.5**	**+0.6**
MWC				pmax	pmax		
	comp=Z,52nm,1.0s						
PALK	**Pallekele**	**85.99**	**278**	*i* P	**P**	**14 43 46.5**	**+2.0**
ISA	**Isabella, Lake**	**86.00**	**53**	P	**P**	**14 43 44.4**	**+0.2**
	baz=253,SNR=7.1						
GUN	**Gumba**	**86.07**	**299**	*e*P	**P**	**14 43 45.4**	**+0.4**
	comp=Z,67nm,0.9s						
NLWA	**Neilton Lookou**	**86.10**	**40**	PFAKE		14 44 00.0	+16
NLWA				LR	LR		
	comp=Z,3µm,20.0s						
MDPB	**Devils Postpil**	**86.13**	**50**	*e*P	**P**	**14 43 46.0**	**+1.0**
	comp=Z,32nm,0.8s						
WAKR	**Walker**	**86.13**	**50**	*e*P	**P**	**14 43 46.1**	**+1.2**
	comp=Z,96nm,1.5s						

EDW2	Edwards Air Fo	86.14	53	P	P	14 43 45.4	+0.6
	baz=253,SNR=12						
BFSC	Mount Baldy Ra	86.22	54	P	P	14 43 45.4	0.0
	baz=253,SNR=14						
EGAK	Eagle	86.23	20	eP	P	14 43 45.0	+0.4
	comp=Z,128nm,1.4s						
EGAK				LR	LR		
	comp=Z,2µm,21.0s						
109C	Camp Elliot, M	86.28	56	P	P	14 43 45.8	+0.2
	baz=254						
TOLK	Toolik Lake Re	86.31	15	eP	P	14 43 46.1	+1.3
	comp=Z,48nm,1.4s						
TOLK	Toolik Lake Re	86.31	15	P	P	14 43 45.8	+0.9
	baz=224						
MLAC	Mammoth, Mammo	86.31	51	P	P	14 43 46.2	+0.3
	baz=252						
PKI	Pulchoki	86.39	299	eP	P	14 43 46.7	+0.1
	comp=Z,74nm,0.9s						
J05D	Fort Rock, OR	86.39	45	P	P	14 43 46.5	+0.5
	baz=250						
PKIN	Phulchoki	86.40	299	eP	P	14 43 46.5	-0.1
	comp=Z,74nm,1.1s						
MURC	Murrieta	86.41	55	P	P	14 43 46.4	+0.2
	baz=254,SNR=5.8						
DAWY	Dawson	86.42	21	eP	P	14 43 45.9	+0.4
	comp=Z,26nm,0.9s						
YERR	Yerington	86.43	49	eP	P	14 43 43.7	-2.6
	comp=Z,42nm,1.4s						
CWC	Cottonwood Cre	86.53	52	P	P	14 43 46.9	0.0
	baz=253						
PAHR	Pah Rah Range	86.54	48	eP	P	14 43 46.2	-0.6
	comp=Z,33nm,1.1s						
KKN	Kakani	86.55	299	eP	P	14 43 47.5	+0.3
	comp=Z,73nm,1.1s						
LRMC	Laurel Mtn Rad	86.56	53	P	P	14 43 47.2	+0.1
	baz=253						
BAR	Barrett	86.57	56	eP	P	14 43 47.6	+0.6
	comp=Z,24nm,1.1s						
TIN	Tinemaha, Big	86.60	51	P	P	14 43 47.2	+0.1
	baz=253						
E04D	Cinebar	86.63	41	P	P	14 43 47.2	+0.4
	baz=249						
D03D	Eldon	86.65	40	P	P	14 43 48.6	+1.6
	baz=249						
DMN	Daman	86.66	299	eP	P	14 43 48.3	+0.5
	comp=Z,171nm,1.1s						
I05D	Terrebonne, OR	86.67	44	P	P	14 43 48.6	+1.3
	baz=250						
D04E	Lakebay	86.72	41	P	P	14 43 47.9	+0.6
	baz=249						
PINE	Pine Mountain	86.76	44	eP	P	14 43 49.1	+1.2
	comp=Z,39nm,1.0s						
BBRC	Big Bear Solar	86.82	54	P	P	14 43 47.6	-0.8
	baz=254						
MONP2	Monument Peak	86.83	56	P	P	14 43 49.1	+0.6
	baz=254,SNR=18						
DAC	Darwin (Calif)	86.86	52	eP	P	14 43 49.5	+1.0
	comp=Z,52nm,1.4s						
DAC	Darwin (Calif)	86.86	52	eP	P	14 43 49.5	+1.0
DAC				pmax	pmax		
	comp=Z,53nm,1.4s						
MPMC	Manual Prospec	86.88	52	P	P	14 43 48.8	+0.2
	baz=253,SNR=18						
RRX	Edison Barstow	86.93	54	P	P	14 43 48.8	+0.1
	baz=254						
NV01	Mina Array Sit	86.96	50	eP	P	14 43 48.6	-0.4
NVAR	Mina Array Bea	86.96	50	P	P	14 43 49.3	+0.3
	comp=Z,17nm,0.9s,baz=233,slow=6.9,SNR=30						
NVAR				LR	LR	15 16 19.2	
	comp=Z,3µm,19.6s,baz=267,slow=31						
G05D	Wamic, OR	86.99	43	P	P	14 43 49.4	+0.7
	baz=250						
PFO	Pinyon Flats O	87.00	55	eP	P	14 43 49.7	+0.5
	comp=Z,53nm,1.5s						
PFO				LR	LR		
	comp=Z,2µm,20.0s						
PFO	Pinyon Flats O	87.00	55	eP	P	14 43 49.7	+0.5
PFO				pmax	pmax		
	comp=Z,53nm,1.5s						
PFO				MLR	MLR		
	comp=Z,2µm,20.0s						
PFO	Pinyon Flats O	87.00	55	P	P	14 43 49.4	+0.2
	baz=254,SNR=9.0						
PFO	Pinyon Flats O	87.00	55	P	P	14 43 49.5	+0.3
	comp=Z,9.4nm,0.8s,baz=276,slow=3.4,SNR=11						
XPFO	Pion Flat	87.01	55	eP	P	14 43 49.7	+0.5
	comp=Z,57nm,1.5s						
IKP	In-Ko-Pah, Jac	87.02	56	P	P	14 43 49.1	-0.1
	baz=254,SNR=7.3						
NV11	Mina Array Sit	87.07	50	eP	P	14 43 50.4	+0.9
	comp=Z,6.4nm,1.5s						
F05D	White Salmon	87.12	42	P	P	14 43 49.2	-0.1
	baz=250						
GSC	Goldstone, Bar	87.20	53	eP	P	14 43 50.9	+0.8
	comp=Z,37nm,1.4s						
GSC	Goldstone, Bar	87.20	53	eP	P	14 43 50.9	+0.8
GSC				pmax	pmax		
	comp=Z,37nm,1.4s						
GSC	Goldstone, Bar	87.20	53	P	P	14 43 49.5	-0.5
	baz=254,SNR=11						
GRAC	Grapevine Rang	87.25	52	P	P	14 43 49.6	-0.6
	baz=253						
KVN	Kaiserville	87.29	49	eP	P	14 43 51.5	+0.9
KVN	Kaiserville	87.29	49	eP	P	14 43 51.5	+0.9
A04D	Lummi Island	87.31	39	P	P	14 43 50.1	0.0
	baz=249						
SWSC	Sam W. Stewart	87.35	56	P	P	14 43 50.9	+0.2
	baz=254,SNR=8.9						
HEC	Hector,Ludlow	87.44	54	P	P	14 43 51.3	0.0
	baz=254,SNR=18						
BELC	Belle Mtn. Jos	87.48	55	P	P	14 43 51.9	+0.4
	baz=254,SNR=17						
FURC	Furnace Creek,	87.48	52	P	P	14 43 51.8	+0.6
	baz=254,SNR=8.2						
B05A	Bryant	87.53	40	P	P	14 43 51.6	+0.4
	baz=250						
MDRS	Chennai	87.67	284	eP	P	14 43 49.4	-3.3
SHOC	Shoshone, Teco	87.78	53	P	P	14 43 52.9	+0.1
	baz=254,SNR=6.0						
BC3	Big Chuckawall	87.82	55	P	P	14 43 53.4	+0.3
	baz=254,SNR=13						
I07A	Izee	87.83	44	eP	P	14 43 54.0	+1.1
	comp=Z,37nm,1.0s						
WVOR	Wild Horse Val	87.92	46	PFAKE		14 44 10.0	+17
WVOR				LR	LR		
	comp=Z,2µm,19.0s						
TUQ	Turquoise Moun	87.93	53	P	P	14 43 53.2	-0.4
	baz=254						
GMRC	Granite Mounta	87.96	54	P	P	14 43 54.0	+0.2
	baz=254,SNR=25						
KOLN	Koldanda	87.99	299	eP	P	14 43 53.7	-0.5
	comp=Z,40nm,0.8s						
DANN	Dangsing	87.99	299	eP	P	14 43 53.7	-0.6
	comp=Z,68nm,0.7s						
LTY	Liberty	88.09	41	eP	P	14 43 54.6	+0.5
	comp=Z,63nm,1.4s						
TPNV	Topopah Spring	88.09	52	P	P	14 43 54.7	+0.3
	baz=254,SNR=6.0						
C06D	Leavenworth	88.17	40	P	P	14 43 54.8	+0.5
	baz=250						
GLA	Glamis	88.17	56	eP	P	14 43 56.4	+1.7
	comp=Z,37nm,0.8s						
GLA	Glamis	88.17	56	eP	P	14 43 56.4	+1.7
GLA				pmax	pmax		
	comp=Z,37nm,0.8s						
GLA	Glamis	88.17	56	P	P	14 43 55.7	+1.0
	baz=255,SNR=14						
IRM	Iron Mountain	88.20	55	P	P	14 43 55.0	+0.1
	baz=255,SNR=30						
J08A	Circle Bar Ran	88.32	45	eP	P	14 43 56.2	+1.0
	comp=Z,71nm,1.4s						
BMN	Battle Mountai	88.34	48	eP	P	14 43 56.6	+1.1
	comp=Z,17nm,1.4s						
BMN	Battle Mountai	88.34	48	eP	P	14 43 56.6	+1.1
BMN				pmax	pmax		
	comp=Z,17nm,1.4s						
HAWA	Hanford	88.55	42	eP	P	14 43 57.1	+1.0
	comp=Z,66nm,1.3s						
HAWA				LR	LR		
	comp=Z,2µm,20.0s						
G08A	Pilot Rock	88.58	43	eP	P	14 43 57.2	+0.8
	comp=Z,55nm,1.2s						
Y12C	Blythe	88.60	55	eP	P	14 43 57.7	+1.0
	comp=Z,37nm,0.8s						
Y12C	Blythe	88.60	55	P	P	14 43 56.7	+0.1
	baz=255,SNR=14						
EPYK	Eagle Plains	88.66	20	eP	P	14 43 56.4	+0.1
	comp=Z,70nm,1.3s						
EPYK	Eagle Plains	88.66	20	P	P	14 43 56.2	-0.1
	baz=236						
NEE2	Needles Airpor	88.78	54	P	P	14 43 57.8	+0.3
	baz=255,SNR=6.6						
R11A	Troy Canyon, C	88.98	51	eP	P	14 43 59.2	+0.6
	comp=Z,54nm,1.5s						
R11A	Troy Canyon, C	88.98	51	P	P	14 43 58.4	-0.2
	baz=254,SNR=33						
PDMCI	Parker Dam,Lak	89.04	55	P	P	14 43 59.3	+0.5
	baz=255,SNR=13						
WMQ	Urumqi	89.10	315⇓	iP	P	14 43 58.8	-0.1
WMQ				pP	sP	14 44 03.3	+1.1
WMQ				sP	pwP	14 44 08.0	+0.5
WMQ				PP	PP	14 47 27.1	-2.1
WMQ				S	S	14 54 41.3	-6.4
WMQ				sS	ScS	14 54 58.4	+5.6
WMQ				pmax	pmax		
	comp=Z,37nm,1.5s						
WMQ				LR	LR		
	comp=Z,1µm,26.5s						
WMQ				LR	LR		
	comp=Z,800nm,18.7s						
WMQ				LR	LR		
	comp=Z,1µm,26.5s						
W13A	Hualapai Mount	89.45	54	eP	P	14 44 01.4	+0.5
	comp=Z,60nm,1.4s						
214A	Organ Pipe Nat	89.54	57	P	P	14 44 01.7	+0.5
	baz=256,SNR=15						
BMO	Blue Mountains	89.57	44	PFAKE		14 44 10.0	+8.9
BMO				LR	LR		
	comp=Z,3µm,22.0s						
Y14A	Wickenburg	89.87	55	eP	P	14 44 03.1	+0.4
	comp=Z,35nm,1.4s						
TRD	Trivandrum	89.88	279	eP	P	14 44 00.2	-2.9
F10A	Beach Ranch, E	89.95	43	eP	P	14 44 02.9	0.0
	comp=Z,38nm,1.1s						
JBP	Jabalpur	90.11	294	eP	P	14 44 02.8	-1.1
JBP				ex	x	14 46 10.7	
HYB	Hyderabad	90.19	288	i P	P	14 44 04.5	0.0
HYB				eScS	S	14 55 00.0	+1.2
HYB	Hyderabad	90.19	288	eP	P	14 44 02.6	-1.9
HYB				IAmb	IAmb	14 44 06.2	
	comp=Z,135nm,2.5s						
PSUT	Pine Spring	90.34	51	eP	P	14 44 06.0	+1.0
	comp=Z,16nm,0.7s						
CCUT	Cedar City	90.47	52	eP	P	14 44 07.2	+1.5
	comp=Z,72nm,1.5s						
NGP	Nagpur	90.52	291	eP	P	14 44 04.1	-1.8
NGP				IAmb	IAmb	14 44 07.2	
	comp=Z,13nm,0.7s						
NEW	Newport	90.68	41	eP	P	14 44 06.3	+0.2
	comp=Z,41nm,1.3s						
NEW				LR	LR		
	comp=Z,2µm,19.0s						
NEW	Newport	90.68	41	P	P	14 44 06.9	+0.7
	baz=253						
SZCU	Shurtz Canyon	90.69	52	eP	P	14 44 08.2	+1.5
	comp=Z,56nm,1.4s						
INK	Inuvik	90.75	19	eP	P	14 44 06.2	+0.3
	comp=Z,24nm,1.4s						
INK	Inuvik	90.75	19	eP	P	14 44 06.2	+0.3
INK				pmax	pmax		
	comp=Z,24nm,1.4s						
INK	Inuvik	90.75	19	P	P	14 44 04.9	-1.0
	comp=Z,9.7nm,1.2s,baz=219,slow=5.1,SNR=9.2						
KNB	Kanab	90.76	52	eP	P	14 44 08.6	+1.6
	comp=Z,83nm,1.5s						
KNB	Kanab	90.76	52	eP	P	14 44 08.6	+1.6
KNB				pmax	pmax		
	comp=Z,83nm,1.5s						
SYO	Syowa Base	90.95	197⇑	eP	P	14 44 05.8	-1.2
SYO	Syowa Base	90.95	197⇑	ePcP	P	14 44 07.2	+0.2
DGZ	Jazzator, Alta	91.00	321	i P	P	14 44 07.2	-0.5
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
U15A	North Rim	91.03	53	eP	P	14 44 09.6	+1.2
	comp=Z,34nm,0.9s						
DGAR	Diego Garcia	91.07	262	PFAKE		14 44 20.0	+11
DGAR				LR	LR		
	comp=Z,610nm,20.0s						
HLID	Hailey	91.21	46	eP	P	14 44 10.1	+1.2
	comp=Z,51nm,1.4s						
HLID				LR	LR		
	comp=Z,1µm,19.0s						
HLID	Hailey	91.21	46	P	P	14 44 09.8	+0.8
	baz=255						
X16A	Lo Mia Camp, P	91.24	55	eP	P	14 44 10.4	+1.2
	comp=Z,20nm,0.9s						
TUC	Tucson	91.30	57	eP	P	14 44 10.7	+1.3
	comp=Z,13nm,0.8s						
TUC				LR	LR		
	comp=Z,3µm,19.0s						
TUC	Tucson	91.30	57	P	P	14 44 09.8	+0.4
	baz=257						
DUG	Dugway, Tooele	91.53	49	eP	P	14 44 10.5	+0.1
	comp=Z,36nm,1.3s						
DUG				LR	LR		
	comp=Z,2µm,20.0s						
DUG	Dugway, Tooele	91.53	49	eP	P	14 44 10.5	+0.1
DUG				pmax	pmax		
	comp=Z,36nm,1.3s						
DUG				MLR	MLR		
	comp=Z,2µm,20.0s						
DUG	Dugway, Tooele	91.53	49	P	P	14 44 10.7	+0.3
	baz=256						
WUAZ	Wupatki	91.54	54	eP	P	14 44 11.7	+1.1
	comp=Z,66nm,1.5s						
WUAZ				LR	LR		
	comp=Z,2µm,20.0s						
WUAZ	Wupatki	91.54	54	P	P	14 44 10.8	+0.1
	baz=257						
BGU	Big Grassy Mou	91.55	49	eP	P	14 44 12.1	+1.6
	comp=Z,16nm,1.0s						
MSO	Missoula	92.37	43	eP	P	14 44 13.9	-0.2
	comp=Z,13nm,1.3s						
MSO	Missoula	92.37	43	P	P	14 44 14.5	+0.4
	baz=256						
BHPL	Bhopal	92.42	293	eP	P	14 44 12.9	-1.9
BHPL				IAmb	IAmb	14 44 15.4	
	comp=Z,5.8nm,0.4s						
Q16A	Castle Valley	92.47	51	eP	P	14 44 16.5	+1.7
	comp=Z,14nm,1.1s						
TMUT	Trail Mountain	92.53	51	eP	P	14 44 16.7	+1.4
	comp=Z,7.2nm,0.8s						
JLU	Jordanelle	92.64	49	eP	P	14 44 16.8	+1.1
	comp=Z,13nm,1.0s						
W18A	Petrified Fore	92.76	55	P	P	14 44 16.8	+0.5
	baz=258						
P17A	Butcher Ranch,	92.92	50	eP	P	14 44 16.3	-0.6
	comp=Z,34nm,1.5s						
SRU	San Rafael Swe	93.00	51	eP	P	14 44 18.2	+0.9
	comp=Z,19nm,1.4s						
SRU	San Rafael Swe	93.00	51	eP	P	14 44 18.2	+0.9
SRU				pmax	pmax		
	comp=Z,19nm,1.4s						
DDI	Dehra Dun	93.29	300	eP	P	14 44 15.9	-2.7
AHID	Auburn Hatcher	93.38	47	PFAKE		14 44 30.0	+11
AHID				LR	LR		
	comp=Z,2µm,20.0s						
MK01	Makanchi Array	93.55	317	eP	P	14 44 19.5	0.0
MK31	Makanchi Array	93.56	317	eP	P	14 44 19.6	+0.1
MK31	Makanchi Array	93.56	317	eP	P	14 44 19.6	+0.1
MKAR	Makanchi Array	93.56	317	eP	P	14 44 19.6	+0.1
	comp=Z,98nm,0.8s						
MKAR				PP	PP	14 48 00.8	-3.5
MKAR				PKKP	PKKPdf	15 01 23.9	-2.0
MKAR	Makanchi Array	93.56	317	eP	P	14 44 19.6	+0.1
MKAR						14 48 00.8	
MKAR				pmax	pmax		
	comp=Z,98nm,0.8s						
MKAR	Makanchi Array	93.56	317	P	P	14 44 19.6	+0.1
	comp=Z,18nm,0.8s,baz=96,slow=5.9,SNR=93						
MKAR				PP	PP	14 48 00.8	-3.5
	comp=Z,3.7nm,1.0s,baz=102,slow=12,SNR=4.4						
MKAR				PKKP	PKKPdf	15 01 23.9	-2.0
	comp=Z,1.3nm,0.7s,baz=284,slow=3.4,SNR=10						
MKAR				LR	LR	15 29 24.4	
	comp=Z,145nm,19.0s,baz=89,slow=37						
FXWY	Fox Creek	93.62	46	eP	P	14 44 20.8	+0.7
	comp=Z,10nm,0.9s						
BOZ	Bozeman (W)	93.63	44	eP	P	14 44 21.0	+1.0
	comp=Z,59nm,1.4s						
BOZ				LR	LR		
	comp=Z,2µm,20.0s						
BOZ	Bozeman (W)	93.63	44	P	P	14 44 20.4	+0.3
	baz=257						
MNCY	Minicoy	93.64	278	eP	P	14 44 19.1	-1.4
REDW	Red Top Meadow	93.69	47	eP	P	14 44 21.1	+0.7
	comp=Z,33nm,1.4s						
ZAA0	Zalesovo Array	93.72	324	eP	P	14 44 20.2	+0.3
	comp=Z,14nm,0.9s						
ZALV	Zalesovo Beam	93.72	324	eP	P	14 44 19.7	-0.2
ZALV				PKKP	PKKPdf	15 01 23.5	-2.3
ZALV	Zalesovo Beam	93.72	324	P	P	14 44 18.8	-1.2
	comp=Z,12nm,0.9s,baz=108,slow=4.8,SNR=33						
ZALV				PKKP	PKKPdf	15 01 23.5	-2.3
	comp=Z,0.7nm,0.5s,baz=315,slow=3.2,SNR=3.6						
ZALV				LR	LR	15 24 12.5	
	comp=Z,193nm,21.9s,baz=71,slow=34						
HRY	Holter Researc	93.75	43	eP	P	14 44 21.4	+1.0
MAKZ	Makanchi	93.78	317	eP	P	14 44 20.4	-0.1
	comp=Z,26nm,1.0s						
MAKZ	Makanchi	93.78	317	eP	P	14 44 20.4	-0.1
MAKZ				pmax	pmax		
	comp=Z,27nm,1.0s						
121A	Cookes Peak, D	93.82	58	P	P	14 44 21.9	+0.7
	baz=259						
MOOW	Moose Ponds	93.84	46	eP	P	14 44 21.9	+0.8
	comp=Z,12nm,1.3s						
LOHW	Long Hollow	93.92	46	eP	P	14 44 22.1	+0.7
	comp=Z,22nm,1.4s						
PV09	Paradox Valley	93.94	52	eP	P	14 44 23.3	+1.5
PV14	Lion Creek, Pa	94.00	52	eP	P	14 44 23.3	+1.3
	comp=Z,12nm,0.7s						
PV23	Carpenter Ridg	94.02	52	eP	P	14 44 23.5	+1.4
	comp=Z,26nm,0.7s						
H17A	Grant Village	94.10	46	P	P	14 44 23.2	+0.9
	baz=258						
MVCO	Mesa Verde	94.17	53	eP	P	14 44 23.0	+0.2
	comp=Z,6.1nm,0.8s						
MVCO				LR	LR		
	comp=Z,1µm,20.0s						
MVCO	Mesa Verde	94.17	53	P	P	14 44 23.4	+0.6
	baz=259						
SMLA	Simla	94.20	301	eP	P	14 44 22.1	-0.6
SMLA				IAmb	IAmb	14 44 23.1	
	comp=Z,17nm,1.1s						
GOA	Goa	94.25	285	eP	P	14 44 21.8	-1.5
LKWY	Lake	94.26	46	PFAKE		14 44 30.0	+6.9
LKWY				LR	LR		
	comp=Z,3µm,20.0s						
BW06	Boulder Array	94.49	47	PFAKE		14 44 40.0	+16
BW06				LR	LR		
	comp=Z,1µm,20.0s						
BW06	Boulder Array	94.49	47	P	P	14 44 24.7	+0.6
	baz=258						
PDAR	Pinedale Array	94.49	47	eP	P	14 44 25.7	+1.6
PDAR				PKKP	PKKPdf	15 01 21.6	-2.9
PDAR	Pinedale Array	94.49	47	P	P	14 44 23.4	-0.8
	comp=Z,12nm,1.2s,baz=252,slow=2.8,SNR=24						
PDAR				PKKP	PKKPdf	15 01 21.6	-2.9
	comp=Z,0.4nm,0.6s,baz=101,slow=2.9,SNR=4.3						
PDAR				LR	LR	15 19 48.2	
	comp=Z,1µm,22.0s,baz=254,slow=31						
POO	Poona	94.80	288	eP	P	14 44 24.0	-1.8
NVS	Novosibirsk	94.83	325	eP	P	14 44 25.1	+0.1
NVS				pmax	pmax		
	comp=N,7.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,11nm,1.6s						
NVS				pmax	pmax		
	comp=Z,26nm,1.6s						
O20A	White River Ci	94.94	50	P	P	14 44 26.9	+0.7
	baz=259						
DHRM	DHARAMSHALA	95.13	302	eP	P	14 44 25.7	-1.6
RLMT	Red Lodge	95.16	45	PFAKE		14 44 40.0	+13
RLMT				LR	LR		
	comp=Z,3µm,22.0s						
RLMT	Red Lodge	95.16	45	P	P	14 44 27.6	+0.5
	baz=259						
PMSA	Palmer Station	95.30	161	PFAKE		14 44 40.0	+13
PMSA				LR	LR		
	comp=Z,551nm,20.0s						
ANMO	Albuquerque	95.37	56	eP	P	14 44 28.3	0.0
	comp=Z,3.4nm,0.8s						
ANMO				LR	LR		
	comp=Z,1µm,20.0s						
ANMO	Albuquerque	95.37	56	ceP	P	14 44 28.3	0.0
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ANMO	Albuquerque	95.37	56	P	P	14 44 28.9	+0.6
	baz=260						
EGMT	Eagleton	95.41	42	eP	P	14 44 27.8	-0.2
	comp=Z,32nm,1.1s						
EGMT				LR	LR		
	comp=Z,1µm,19.0s						
EGMT	Eagleton	95.41	42	P	P	14 44 29.0	+1.0
	baz=259						
S22A	4UR Ranch, Cre	95.58	53	P	P	14 44 29.4	+0.1
	baz=260						
MNTX	Cornudas Mount	95.67	59	eP	P	14 44 29.1	-0.4
	comp=Z,4.5nm,0.8s						
MNTX				LR	LR		
	comp=Z,3µm,21.0s						
MNTX	Cornudas Mount	95.67	59	P	P	14 44 30.3	+0.8
	baz=260						
NVL	N'lazarevskaya	95.71	189	eP	P	14 44 28.5	-0.3
NVL				eS	SKSac	14 54 59.5	-5.2
NVL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NVL				MLR	MLR		
	comp=Z,976nm,17.0s						
YKA	Yellowknife Ar	95.87	27	P	P	14 44 28.2	-1.4
	comp=Z,9.3nm,0.8s,baz=255,slow=4.6,SNR=89						
YKA				PKiKP	PKiKP	14 49 09.8	+1.0
	comp=Z,0.2nm,0.6s,baz=245,slow=1.3,SNR=4.7						
YKA				PKKPbc	PKKPbc	15 01 17.2	-4.0
	comp=Z,0.2nm,0.7s,baz=77,slow=2.6,SNR=5.1						
YKA				PKKP	PKKPdf	15 01 23.7	+1.5
	comp=Z,0.2nm,0.6s,baz=75,slow=2.2,SNR=5.4						
YKB5	Yellowknife Ar	95.87	27	eP	P	14 44 27.9	-1.7
SNAA	Sanae	96.41	184	P	P	14 44 31.4	-0.8
SNAA	Sanae	96.41	184	eP	P	14 44 31.1	-1.0
	comp=Z,11nm,0.8s						
SNAA	Sanae	96.41	184	eP	P	14 44 31.1	-1.0
SNAA				pmax	pmax		
	comp=Z,11nm,0.8s						
NRIK	Noril'sk	96.52	340	P	P	14 44 30.4	-2.1
	comp=Z,4.3nm,0.9s,baz=120,slow=4.7,SNR=5.8						
NRIK				LR	LR	15 30 00.7	
	comp=Z,373nm,18.9s,baz=100,slow=37						
SDCO	Great Sand Dun	96.61	53	PFAKE		14 44 50.0	+16
SDCO				LR	LR		
	comp=Z,1µm,19.0s						
SDCO	Great Sand Dun	96.61	53	P	P	14 44 34.2	+0.2
	baz=260						
K22A	Casper	96.66	48	P	P	14 44 34.1	+0.1
	baz=260						
KSH	Kashi	96.66	309	P	P	14 44 37.1	+3.1
KSH				pP	pwP	14 44 43.1	+0.5
KSH				PP	PP	14 48 31.3	+2.5
KSH				SKS	SKSac	14 55 12.4	+1.3
KSH				S	ScS	14 55 55.9	-0.1
KSH				SS	SS	15 02 35.4	+5.1
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KSH				LR	LR		
	comp=Z,350nm,5.8s						
KSH				LR	LR		
	comp=Z,300nm,5.7s						
KSH				LR	LR		
	comp=Z,650nm,8.7s						
TX31	Lajitas Ar. Si	96.72	62	eP	P	14 44 35.0	+0.5
TXAR	Lajitas Array	96.72	62	P	P	14 44 34.1	-0.3
	comp=Z,2.1nm,0.7s,baz=223,slow=6.1,SNR=4.8						
TXAR				PP	PP	14 48 29.1	-0.3
	comp=Z,0.1nm,0.5s,baz=254,slow=9.2,SNR=3.7						
TXAR				PKKP	PKKPbc	15 01 18.0	+0.2
	comp=Z,0.5nm,0.7s,baz=112,slow=3.3,SNR=5.5						
TXAR				LR	LR	15 20 31.6	
	comp=Z,2µm,20.5s,baz=0.0,slow=31						
KURK	Kurchatov	96.74	320	eP	P	14 44 32.5	-1.3
	comp=Z,5.8nm,1.0s						
KURK				LR	LR		
	comp=Z,1µm,20.0s						
KURK	Kurchatov	96.74	320	ceP	P	14 44 32.8	-1.0
KURK				pmax	pmax		
	comp=Z,17nm,2.1s						
ISCO	Idaho Springs	96.87	51	PFAKE		14 44 50.0	+15
ISCO				LR	LR		
	comp=Z,4µm,22.0s						
VNA3	Neumayer Olymp	97.16	182	P	P	14 44 35.4	0.0
T25A	Trinidad	97.37	54	P	Pdif	14 44 37.5	0.0
	baz=261						

VNA2	Neumayer--Watz	97.39	182	P	P	14 44 35.4	-1.1
	baz=150,slow=4.3						
LAO	LASA Array	97.53	44	PFAKE		14 44 50.0	+12
LAO				LR	LR		
	comp=Z,2µm,22.0s						
LAO	LASA Array	97.53	44	P	Pdif	14 44 38.2	+0.5
	baz=261						
VNA1	Neumayer--Stat	97.70	182	P	P	14 44 37.6	-0.3
NIL	Nilore	97.89	303	PFAKE		14 44 50.0	+10
NIL				LR	LR		
	comp=Z,302nm,22.0s						
MSTX	Muleshoe	98.21	57	P	Pdif	14 44 41.3	+0.2
	baz=262						
AAK	Ala-Archa	98.25	312	*e*P	P	14 44 39.3	-1.8
	comp=Z,14nm,1.6s						
AAK				LR	LR		
	comp=Z,371nm,20.0s						
AAK	Ala-Archa	98.25	312	*e*P	P	14 44 39.3	-1.8
AAK				pmax	pmax		
	comp=Z,13nm,1.6s						
AAK				MLR	MLR		
	comp=Z,371nm,20.0s						
KSCO	Kaye Shedlock'	99.04	52	Pdiff	Pdif	14 44 44.1	-0.6
	baz=262						
DGMT	Dagmar	99.14	42	PFAKE		14 45 00.0	+15
DGMT				LR	LR		
	comp=Z,1µm,21.0s						
DGMT	Dagmar	99.14	42	Pdiff	Pdif	14 44 44.7	-0.1
	baz=263						
AMTX	Amarillo	99.23	56	Pdiff	Pdif	14 44 45.0	-0.6
	baz=262						
BHJ	Bhuj	99.46	292	*e*P	Pdif	14 44 44.0	-2.7
JCT	Junction City	100.21	61	PFAKE		14 45 00.0	+10
JCT				LR	LR		
	comp=Z,3µm,20.0s						
FFC	Flin Flon	101.16	36	PFAKE		14 45 10.0	+16
FFC				LR	LR		
	comp=Z,3µm,21.0s						
FFC	Flin Flon	101.16	36	*ce*P	Pdif	14 44 53.8	+0.2
CBKS	Cedar Bluff	101.25	52	PFAKE		14 45 10.0	+16
CBKS				LR	LR		
	comp=Z,2µm,19.0s						
KVTX	Kingsville	101.49	64	PFAKE		14 45 10.0	+14
KVTX				LR	LR		
	comp=Z,1µm,21.0s						
WMOK	Wichita Mounta	101.58	57	PFAKE		14 45 10.0	+14
WMOK				LR	LR		
	comp=Z,2µm,22.0s						
BRVK	Borovoye	102.14	322	PFAKE		14 45 10.0	+12
BRVK				LR	LR		
	comp=Z,262nm,20.0s						
KSU1	Kansas State U	103.71	52	PFAKE		14 45 20.0	+15
KSU1				LR	LR		
	comp=Z,2µm,20.0s						
ECSD	EROS Data Cent	103.98	48	PFAKE		14 45 20.0	+14
ECSD				LR	LR		
	comp=Z,1µm,20.0s						
AGMN	Agassiz Nation	104.67	43	PFAKE		14 45 20.0	+11
AGMN				LR	LR		
	comp=Z,1µm,21.0s						
NATX	Nacogdoches	104.73	60	PFAKE		14 45 20.0	+10
NATX				LR	LR		
	comp=Z,2µm,21.0s						
MIAR	Mount Ida	105.84	57	PFAKE		14 49 40.0	+12
MIAR				LR	LR		
	comp=Z,3µm,22.0s						
SCIA	State Center	106.42	50	PFAKE		14 49 40.0	+12
SCIA				LR	LR		
	comp=Z,3µm,19.0s						
EFI	East Falkland	106.69	154	PFAKE		14 49 40.0	+11
EFI				LR	LR		
	comp=Z,355nm,19.0s						
EYMN	Ely	107.60	43	PFAKE		14 49 40.0	+10
EYMN				LR	LR		
	comp=Z,2µm,20.0s						
JFWS	Jewell Farm	108.61	49	PFAKE		14 49 40.0	+7.5
JFWS				LR	LR		
	comp=Z,1µm,19.0s						
ARU	Arti	108.81	326	PFAKE		14 49 40.0	+7.6
ARU				LR	LR		
	comp=Z,277nm,20.0s						
COWI	Conover	109.29	45	PFAKE		14 49 50.0	+16
COWI				LR	LR		
	comp=Z,2µm,22.0s						
HDIL	Hopedale	109.38	51	PFAKE		14 49 50.0	+16
HDIL				LR	LR		
	comp=Z,3µm,22.0s						
GEYT	Alibeck	110.45	306	PKiKP	PKiKP	14 49 35.8	-0.4
	comp=Z,3.0nm,1.0s,baz=132,slow=2.1,SNR=3.9						
BRAL	Brewton	111.20	61	PFAKE		14 49 50.0	+12
BRAL				LR	LR		
	comp=Z,2µm,21.0s						
JTS	JuntasAbangare	111.41	83	PFAKE		14 49 50.0	+11
JTS				LR	LR		
	comp=Z,500nm,20.0s						
KBS	Kingsbay	111.53	355	PFAKE		14 49 50.0	+13
KBS				LR	LR		
	comp=Z,484nm,19.0s						
ABPO	Ambohimpanom	111.56	244	PFAKE		14 49 50.0	+11
ABPO				LR	LR		
	comp=Z,568nm,22.0s						
GLMI	Grayling	112.56	46	PFAKE		14 49 50.0	+10
GLMI				LR	LR		
	comp=Z,2µm,22.0s						
LCO	Las Campanas	112.65	128	PFAKE		14 49 50.0	+9.0
LCO				LR	LR		
	comp=Z,600nm,21.0s						
AAM	Ann Arbor	113.51	49	PFAKE		14 49 50.0	+8.2
AAM				LR	LR		
	comp=Z,3µm,19.0s						
TRQA	Tornquist	113.76	141	PFAKE		14 49 50.0	+7.5
TRQA				LR	LR		
	comp=Z,344nm,19.0s						
NNA	Nana	114.17	109	PFAKE		14 50 00.0	+16
NNA				LR	LR		
	comp=Z,534nm,22.0s						
ACSO	Alum Creek Sta	114.20	51	PFAKE		14 50 00.0	+17
ACSO				LR	LR		
	comp=Z,2µm,20.0s						
GOGA	Godfrey	114.22	59	PFAKE		14 50 00.0	+17
GOGA				LR	LR		
	comp=Z,2µm,20.0s						
OTAV	Otavalo	115.94	95	PFAKE		14 50 00.0	+12
OTAV				LR	LR		
	comp=Z,504nm,20.0s						
BCIP	Isla Barro Col	116.23	85	PFAKE		14 50 00.0	+12
BCIP				LR	LR		
	comp=Z,523nm,21.0s						
BLA	Blacksburg	116.47	54	PFAKE		14 50 00.0	+12
BLA				LR	LR		
	comp=Z,2µm,20.0s						
ARCES	ARCESS Array B	116.81	345	PKP	PKPdf	14 49 46.4	-1.0
	comp=Z,3.0nm,0.6s,baz=74,slow=2.6,SNR=18						
NHSC	New Hope	116.99	59	PFAKE		14 50 00.0	+11
NHSC				LR	LR		
	comp=Z,2µm,20.0s						
KLMR	Klimovskoe	117.05	333	*e*PKIKP	PKPdf	14 49 46.7	-1.2
KLMR				pmax	pmax		
	comp=Z,14nm,1.5s						
KLMR	Klimovskoe	117.05	333	*e*PKPdf	PKPdf	14 49 46.8	-1.2
KLMR				AMP		14 49 51.7	
	comp=Z,14nm,1.6s						
LVC	Limon Verde	117.06	123	PFAKE		14 50 00.0	+10
LVC				LR	LR		
	comp=Z,814nm,20.0s						
MNMC	Minye Minye	118.02	119	*e*PKPdf	PKiKP	14 49 51.6	+0.1
CNNC	Cliffs of the	118.70	56	PFAKE		14 50 00.0	+8.0
CNNC				LR	LR		
	comp=Z,2µm,21.0s						
CBN	Corbin Frederi	118.76	53	PFAKE		14 50 00.0	+8.0
CBN				LR	LR		
	comp=Z,3µm,20.0s						
BINY	Binghamton	119.16	48	PFAKE		14 50 00.0	+7.3
BINY				LR	LR		
	comp=Z,1µm,20.0s						
MTDJ	Mount Denham	119.40	76	PFAKE		14 50 10.0	+16
MTDJ				LR	LR		
	comp=Z,740nm,20.0s						
LONY	Lake Ozonia	119.64	45	PFAKE		14 50 10.0	+16
LONY				LR	LR		
	comp=Z,1µm,21.0s						
VRH	Novokhopyorsk	119.71	323	*e*PKIKP	PKPdf	14 49 52.6	-0.8
VRH				*e*		14 51 15.0	
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SFJD	Kangerlussuaq	119.88	15	PFAKE		14 50 10.0	+17
SFJD				LR	LR		
	comp=Z,2µm,20.0s						
LPAZ	La Paz	120.47	117	*e*PKPdf	PKPdf	14 49 56.5	-0.1
LPAZ				PKKPbc	PKKPbc	14 59 59.8	-2.6
LPAZ	La Paz	120.47	117	PKP	PKPdf	14 49 56.0	-0.7
	comp=Z,5.0nm,0.7s,baz=243,slow=2.0,SNR=16						
LPAZ				PKKPbc	PKKPbc	14 59 59.8	-2.6
	comp=Z,1.7nm,0.6s,baz=8.4,slow=0.5,SNR=4.9						
GNI	Garni	120.58	310	PFAKE		14 50 10.0	+14
GNI				LR	LR		
	comp=Z,506nm,22.0s						
GNI	Garni	120.58	310	*c i*PKIKP	PKiKP	14 49 57.2	+1.4
GNI				pmax	pmax		
	comp=Z,88nm,1.3s						
ZEI	Tsey	120.65	313	*i* PKIKP	PKiKP	14 49 58.6	+2.7
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LPSR	Galich'ya Gora	120.82	325	*e*PKIKP	PKPdf	14 49 54.9	-0.6
LPSR				*e*		14 51 19.2	
LPSR				pmax	pmax		
	comp=Z,20nm,1.6s						
SCHQ	Schefferville	120.94	32	PKP	PKPdf	14 49 55.0	-0.7
	comp=Z,3.8nm,0.6s,baz=275,slow=3.2,SNR=6.2						
OBN	Obninsk	121.03	328	PFAKE		14 50 10.0	+14
OBN				LR	LR		
	comp=Z,202nm,20.0s						
OBN	Obninsk	121.03	328	⇑*e*PKIKP	PKPdf	14 49 53.4	-2.4
OBN				*e*		14 51 27.8	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	Khabaz	121.14	314	PKP	PKPdf	14 49 56.1	-0.3
	comp=Z,2.1nm,0.9s,baz=127,slow=5.1,SNR=3.5						
VSR	Storozhevoye	121.21	323	*e*PKIKP	PKPdf	14 49 53.8	-2.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.8s						
KIV	Kislovodsk	121.23	315	PFAKE		14 50 10.0	+13
KIV				LR	LR		
	comp=Z,421nm,21.0s						
KIV	Kislovodsk	121.23	315	*i* PKIKP	PKPdf	14 49 56.1	-0.6
KIV				*e*		14 51 26.0	
KIV				*e*PS	PS	15 01 18.3	-1.6
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,349nm,23.0s						
RAYN	Ar Rayn	121.59	290	PFAKE		14 50 10.0	+12
RAYN				LR	LR		
	comp=Z,359nm,19.0s						
GTBY	Guantanamo Bay	121.77	74	PFAKE		14 50 10.0	+12
GTBY				LR	LR		
	comp=Z,750nm,22.0s						
FIA1	FINESS Array S	122.15	338	*e*PKPdf	PKiKP	14 49 58.3	+0.4
FINES	FINESS Array B	122.15	338	PKP	PKPdf	14 49 57.2	-0.6
	comp=Z,3.9nm,0.8s,baz=39,slow=3.2,SNR=16						
PKME	Peaks-Kenny Pk	123.08	43	PFAKE		14 50 10.0	+10
PKME				LR	LR		
	comp=Z,2µm,20.0s						
SOC	Sochi	123.40	315	*i* PKIKP	PKPdf	14 49 56.7	-4.0
SOC				*e*		14 56 59.2	
SOC				*e*SS	SS	15 08 30.5	+2.4
SOC				*e*SSS	SSS	15 12 54.7	
SOC				MLR	MLR		
	comp=Z,280nm,17.0s						
PQI	Presque Isle	123.46	41	*e*PKPdf	PKPdf	14 49 59.9	-0.9
VSU	Vasula	123.80	335	*c i*PKIKP	PKiKP	14 50 02.6	+1.3
VSU				pmax	pmax		
	comp=Z,151nm,2.5s						
VSU	Vasula	123.80	335	*e*P	PKPdf	14 50 00.7	-0.3
CPUP	Villa Florida	124.06	133	*e*PKPdf	PKiKP	14 50 03.2	+0.4
CPUP	Villa Florida	124.06	133	PKP	PKPdf	14 50 02.1	-0.5
	comp=Z,10nm,0.9s,baz=263,slow=3.5,SNR=13						
BOSA	Boshof	124.18	223	*e*PKPdf	PKiKP	14 50 03.4	+0.2
BOSA				PKKPbc	PKKPbc	14 59 46.4	-1.5
BOSA	Boshof	124.18	223	PKP	PKPdf	14 50 03.0	+0.1
	comp=Z,7.9nm,0.6s,baz=132,slow=2.0,SNR=20						
BOSA				PKKPbc	PKKPbc	14 59 46.4	-1.5
	comp=Z,4.0nm,1.0s,baz=212,slow=8.8,SNR=4.0						
SUR	Sutherland	124.41	217	PFAKE		14 50 20.0	+16
SUR				LR	LR		
	comp=Z,2µm,22.0s						
SDV	Santo Domingo	125.19	87	PFAKE		14 50 20.0	+14
SDV				LR	LR		
	comp=Z,290nm,20.0s						
SDDR	Presa de Saban	125.35	75	PFAKE		14 50 20.0	+14
SDDR				LR	LR		
	comp=Z,877nm,20.0s						
GRTK	Grand Turk	125.51	72	PFAKE		14 50 20.0	+14
GRTK				LR	LR		
	comp=Z,801nm,20.0s						
LMN	Caledonia Moun	125.83	41	*e*PKPdf	PKPdf	14 50 05.1	-0.2
ISAL	Salakas	125.85	333	*e*P	PKPdf	14 50 04.0	-1.0
IIGN	Ignalina	125.94	332	*e*P	PKPdf	14 50 05.4	+0.2
LBTB	Lobatse	126.20	227	*e*PKPdf	PKiKP	14 50 07.2	-0.1
KMBO	Kilima Mbogo	126.62	260	PKP	PKPdf	14 50 07.8	-0.3
KMBO				LR	LR		
	comp=Z,961nm,22.0s						
KMBO	Kilima Mbogo	126.62	260	*i* PKIKP	PKPdf	14 50 08.1	0.0
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	Kilima Mbogo	126.62	260	PKP	PKPdf	14 50 07.8	-0.3
	comp=Z,1.2nm,0.3s,baz=199,slow=3.0,SNR=3.6						
AKASG	Malin Array Be	127.06	326	PKP	PKPdf	14 50 06.7	-0.8
	comp=Z,4.7nm,0.9s,baz=61,slow=2.2,SNR=12						
KIEV	Kiev	127.07	326	PFAKE		14 50 20.0	+12
KIEV				LR	LR		
	comp=Z,574nm,22.0s						
NB2	NORSAR Subarra	127.17	344	PKPdf	PKPdf	14 50 06.9	-0.6
	comp=Z,1.5nm,0.7s,baz=34,slow=1.9						
NOA	NORSAR Array B	127.17	344	PKP	PKPdf	14 50 07.0	-0.5
	comp=Z,2.2nm,0.7s,baz=37,slow=2.1,SNR=14						
BRTR	Keskin Array B	128.93	312	PKP	PKPdf	14 50 10.9	-0.7
	comp=Z,2.5nm,0.7s,baz=132,slow=2.7,SNR=14						
BRTR				PP	PP	14 52 15.2	-3.5
	comp=Z,4.1nm,1.1s,baz=108,slow=4.7,SNR=5.1						
ANTO	Ankara	129.49	312	PFAKE		14 50 20.0	+6.6
ANTO				LR	LR		
	comp=Z,384nm,21.0s						
LSZ	Lusaka	129.59	239	PFAKE		14 50 30.0	+16
LSZ				LR	LR		
	comp=Z,1µm,20.0s						
SJG	San Juan	130.22	76	PFAKE		14 50 30.0	+15
SJG				LR	LR		
	comp=Z,696nm,22.0s						
BUR04	Bucovina Ar. S	130.93	325	*e*PKPdf	PKiKP	14 50 17.6	+1.6
NIE	Niedzica	132.48	329	*e*P	PKiKP	14 50 18.8	-0.2
NIE	Niedzica	132.48	329	*e*PKIKP	PKiKP	14 50 18.8	-0.2
MORC	Moravsky Berou	133.58	331	*e*PKP	PKiKP	14 50 20.7	-0.6
PTGA	Pitinga	133.58	102	*e*PKPdf	PKPdf	14 50 21.2	+0.2
PTGA				LR	LR		
	comp=Z,11µm,19.0s						
DPC	Dobruska-Polom	133.74	333	*e*PKPDF	PKiKP	14 50 22.1	+0.5
DPC				AMS	AMS	15 53 10.0	
	comp=Z,600nm,21.5s						
DPC	Dobruska-Polom	133.74	333	*e*PKIKP	PKiKP	14 50 22.1	+0.5
DPC				MLR	MLR		
	comp=Z,600nm,21.5s						
UPC	Upice	133.77	333	AMS	AMS	15 49 20.0	
	comp=Z,600nm,19.8s						
VYHS	Vyhne	133.81	329	*e*PKIKP	PKiKP	14 50 22.0	+0.3
VYHS	Vyhne	133.81	329	*e*PKP	PKiKP	14 50 22.0	+0.3
VYHS				*e*PP	PP	14 52 33.8	-16
GRGR	Grenville	134.32	84	PFAKE		14 50 30.0	+6.3
GRGR				LR	LR		
	comp=Z,521nm,20.0s						
VRAC	Vranov	134.35	331	*e*PKP	PKiKP	14 50 22.6	-0.2
ANWB	Willy Bob	134.38	77	PFAKE		14 50 30.0	+6.3
ANWB				LR	LR		
	comp=Z,867nm,22.0s						
PVCC	Panska Ves	134.38	334	AMS	AMS	15 48 50.0	
	comp=Z,1µm,22.7s						
BRG	Berggiesshubel	134.39	335	*e*PKP	PKPdf	14 50 21.9	+0.5
	comp=Z,18nm,1.4s						
BRG				PP	PP	14 52 54.0	+1.1
BRG	Berggiesshubel	134.39	335	*e*PKIKP	PKPdf	14 50 21.9	+0.5
BRG						14 52 54.0	
BRG				pmax	pmax		
	comp=Z,18nm,1.4s						
CLL	Collm	134.45	336	*e*PKPdf	PKPdf	14 50 22.0	+0.5
CLL				*e*PP	PP	14 52 58.0	+4.8
CLL				*e*PKSbc	PKSbc	14 53 55.0	+2.6
CLL				*e*PS	PS	15 03 06.0	-8.4
CLL				*e*PPS	PPS	15 04 54.0	
CLL				*e*SS	SS	15 10 42.0	-1.2
CLL				*e*		15 13 06.0	
CLL				*e*SSS	SSS	15 15 42.0	
CLL				LV		15 58 00.0	
	comp=Z,500nm,19.1s						
CLL	Collm	134.45	336	*e*PKIKP	PKPdf	14 50 22.0	+0.5
CLL				MLR	MLR		
	comp=Z,500nm,19.1s						
KRUC	Moravsky	134.62	331	*e*PKP	PKPdf	14 50 22.5	+0.6
GOPC	GO Pecny, Ondr	134.74	333	AMS	AMS	15 49 20.0	
	comp=Z,800nm,21.0s						
PRU	Pruhonice	134.79	333	*e*PKPDF	PKiKP	14 50 23.8	+0.2
PRU				AMS	AMS	15 45 40.0	
	comp=Z,800nm,26.5s						
PRU	Pruhonice	134.79	333	*e*PKIKP	PKiKP	14 50 23.8	+0.2
PRU				MLR	MLR		
	comp=Z,800nm,26.5s						
TREC	Trest	134.87	332	AMS	AMS	15 55 00.0	
	comp=Z,800nm,23.8s						
TSUM	Tsumeb	135.61	227	PFAKE		14 50 40.0	+14
TSUM				LR	LR		
	comp=Z,2µm,22.0s						
CONA	Conrad Observa	135.66	330	*e*PKPdf	PKPdf	14 50 23.4	-0.6
	comp=Z,8.1nm,1.1s						
KHC	Kasperske Hory	135.85	333	*e*PKPDF	PKPdf	14 50 24.5	+0.2
KHC				AMS	AMS	15 45 40.0	
	comp=Z,900nm,20.5s						
KHC	Kasperske Hory	135.85	333	*e*PKIKP	PKPdf	14 50 24.5	+0.2
KHC				MLR	MLR		
	comp=Z,900nm,20.5s						
GERES	GERESS Array B	136.01	333	PKhKP	PKPpre	14 50 12.8	
	comp=Z,0.5nm,0.7s,baz=106,slow=2.9,SNR=4.5						
GERES				PKP	PKPdf	14 50 23.9	-0.8
	comp=Z,4.1nm,1.1s,baz=45,slow=0.3,SNR=12						
ARSA	Arzberg	136.30	330	*e*PKPdf	PKPdf	14 50 24.6	-0.6
	comp=Z,7.7nm,2.0s						
MOA	Molln	136.48	332	*e*PKPdf	PKPdf	14 50 24.3	-1.2
	comp=Z,6.5nm,1.7s						
SOKA	Soboth	136.94	330	*e*PKPdf	PKPdf	14 50 26.3	-0.1
	comp=Z,9.9nm,1.2s						
BDFB	Brasilia	137.43	129	PKP	PKPdf	14 50 27.2	-1.0
	comp=Z,8.3nm,0.7s,baz=2.5,slow=5.3,SNR=8.2						
MEM	Membach	137.59	340	⇓PKiKP	PKiKP	14 50 29.6	+0.3
MYKA	Terra Mystica	137.65	331	*e*PKPdf	PKPdf	14 50 27.4	-0.4
	comp=Z,4.4nm,0.8s						
ABTA	Abfaltersbach	138.10	332	*e*PKPdf	PKPdf	14 50 26.5	-2.0
	comp=Z,18nm,1.5s						
WLF	Walferdange	138.35	339	⇑PKiKP	PKiKP	14 50 33.5	+2.5
DOU	Dourbes	138.50	341	⇑PKiKP	PKiKP	14 50 31.5	+0.3
BFO	Black Forest	138.66	336	PFAKE		14 50 40.0	+8.4
BFO				LR	LR		
	comp=Z,22nm,22.0s						
BFO	Black Forest	138.66	336	*c i*PKIKP	PKiKP	14 50 31.3	-0.3
FETA	Feichten	138.70	333	PKPdf	PKPdf	14 50 30.1	+0.4
	comp=Z,11nm,1.0s						
DAVA	Damuels	138.86	334	*e*PKPdf	PKPdf	14 50 30.3	+0.2
	comp=Z,8.8nm,0.8s						
CLTB	Caltabellotta	143.97	320	*e*PKPdf	PKPbc	14 50 38.0	+0.8
KEST	Kesra	147.54	321	*e*PKPbc	PKPab	14 50 49.2	-1.0
KEST	Kesra	147.54	321	PKPbc	PKPbc	14 50 48.0	-0.2
	comp=Z,46nm,0.9s,baz=112,slow=1.2,SNR=23						
PBRG	Braganca	149.18	348	*e*PKPdf	PKPab	14 50 56.0	-0.5
PGAV	Gavieira, Arco	149.31	350	*e*PKPab	PKPab	14 50 57.1	0.0
PGAV	Gavieira, Arco	149.31	350	*e*LQ	LQ	15 49 36.0	
PGAV				A	A	16 04 50.1	
	comp=Z,801nm,18.0s						
POLO	Lamas de Olo	149.80	349	*e*PKPdf	PKiKP	14 50 54.5	-0.3
MVO	Moncorvo	149.86	348	*e*PKPdf	PKPbc	14 50 53.9	-0.1
MVO	Moncorvo	149.86	348	*e*LQ	LQ	15 47 56.6	
MVO				A	A	15 58 18.7	
	comp=Z,773nm,20.0s						
PVRL	Vila Real	149.88	349	*e*PKPdf	PKiKP	14 50 54.5	-0.4
PVIS	Viseu	150.46	349	*e*PKPdf	PKiKP	14 50 56.2	+0.1
ES19	SONSECA Array	150.47	343	*e*PKPbc	PKiKP	14 50 56.2	0.0
ESDC	Sonseca Array	150.51	343	PKPbc	PKPbc	14 50 55.6	+0.1
	comp=Z,8.9nm,0.8s,baz=8.4,slow=3.4,SNR=19						
ESLA	Sonseca Array	150.51	343	*e*PKPbc	PKiKP	14 50 56.3	0.0
MTE	Manteigas	150.70	348	*e*PKPdf	PKiKP	14 50 57.1	+0.4
MTE	Manteigas	150.70	348	*e*LR	LR	15 49 34.5	
	comp=Z,622nm,20.0s						
SHEL	Horse Pasture	151.04	198	PFAKE		14 51 00.0	+2.0
SHEL				LR	LR		
	comp=Z,357nm,19.0s						
PCAS	Casmilo, Conde	151.21	350	*e*PKPdf	PKiKP	14 50 58.7	+1.0
PCBR	Castelo Branco	151.22	348	*e*PKPdf	PKPbc	14 50 57.1	0.0
PMRV	Marv??o	151.60	348	*e*PKPdf	PKiKP	14 50 58.6	+0.1
PMRV	Marv??o	151.60	348	*e*LR	LR	15 50 46.0	
	comp=Z,656nm,20.0s						
PTOM	Tomar	151.62	349	*e*PKPdf	PKiKP	14 50 58.8	+0.3
PMTG	Montargil	152.12	349	*e*PKPdf	PKPbc	14 50 59.3	+0.1
PBEJ	Beja	153.05	348	*e*PKPdf	PKiKP	14 51 02.1	+0.6
PNCL	Nicolau / Gran	153.10	349	*e*PKPdf	PKPdf	14 50 57.4	+3.3
PBDV	Barranco-do-Ve	153.82	347	*e*PKPdf	PKiKP	14 51 04.1	+0.9
TOA0	Torodi Ar. Sit	163.71	277	*e*PKPdf	PKPdf	14 51 07.5	+0.1
TOA0				*e*PKPdf	PKPdf	14 51 07.9	+0.5
TORD	Torodi Ar. Bea	163.71	277	PKP	PKPdf	14 51 06.5	-0.9
	comp=Z,8.7nm,1.2s,baz=141,slow=1.6,SNR=16						
TORD				PKPab	PKPab	14 51 59.7	+0.2
	comp=Z,6.0nm,0.9s,baz=115,slow=6.0,SNR=7.2						
KIC	Kosan Boka	168.62	243	*e*PKP1	PKPab	14 52 21.4	+0.2
	comp=Z,78nm,1.7s						
LIC	Lamto	168.81	242	*e*PKP1	PKPab	14 52 22.0	0.0
	comp=Z,153nm,2.1s						
DBIC	Dimbokro	168.87	244	PKP	PKPdf	14 51 10.6	-0.9
	comp=Z,4.5nm,0.9s,baz=18,slow=3.2,SNR=2.2						
DBIC				PKPab	PKPab	14 52 22.6	+0.3
	comp=Z,2.6nm,0.6s,baz=111,slow=1.9,SNR=5.3						
TIC	Toumodi	169.00	244	*e*PKP1	PKPab	14 52 22.8	-0.1
SACV	Santiago Islan	170.95	68	PFAKE		14 51 20.0	+7.3
SACV				LR	LR		
	comp=Z,1µm,19.0s						

IDC 23 14:39:59.0±5.3**,11°.79S**×**165°.20E,h0^{km},mb3.8**/3**,mb1 4.1**/3**,mb1mx3.6**/39**,mbtmp3.8**/3**,Error ellipse: s-maj=271.4km s-min=34.5km az=140.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.73	251	P	P	14 46 16.0	-0.1
	1.0nm,0.7s,baz=82,slow=8.8,SNR=3.9						
ASAR	Alice Springs	31.98	244	P	P	14 46 27.2	0.0
	0.9nm,0.8s,baz=71,slow=9.4,SNR=4.7						
ILAR	Eielson Array	84.38	19	P	P	14 52 32.9	0.0
	0.5nm,0.6s,baz=234,slow=5.5,SNR=4.8						

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*NIED **23** 14:40:00,35°.30N×141°.30E,h32^{km},Mw4.6 Best double couple: M$_0$9.29000×10^{15} NP1:ϕ_s281.00000°,δ54.00000°, λ167.00000°. NP2:ϕ_s19.00000°,δ80.00000°,λ36.00000°.*

*IDC **23** 14:40:11.0±0.5,35°.22N×141°.06E,h0^{km},mb4.3/25, mb1 4.4/32,mb1mx4.3/51,mbtmp4.3/32,ML3.7/4,MS3.8/5, Ms1 3.9/5,ms1mx3.5/45,Error ellipse: s-maj=14.1km s-min=11.0km az=96.0*

*ISCJB **23** 14:40:12.1±0.6,35°.25N±0°.03×141°.33E±0°.04,h23^{km}±4^{km}, mb4.6/73,MS5.4/1,Error ellipse: s-maj=5.1km s-min=4.3km az=5.1*

*BJI **23** 14:40:12.0,35°.11N×141°.11E,h26^{km},mB5.1/30,mb4.8/49, Ms4.5/21,Ms7 4.3/22*

*NEIC **23** 14:40:13.4±2.5,35°.22N×141°.10E,h16^{km}±15^{km},mb4.8/25, Error ellipse: s-maj=7.2km s-min=5.9km az=107.0*

NEIC Recorded [1 JMA] in Chiba and Ibaraki.

*JMA **23** 14:40:14.1±0.1,35°.29N×141°.22E,h34^{km}±2^{km},M4.6*

JMA Felt I J1.

*MOS **23** 14:40:14.1±1.3,35°.36N×141°.16E,h33^{km},mb4.9/30,Error ellipse: s-maj=8.8km s-min=5.6km az=109.3*

ISC 23 14:40:14.0±0.6**,35°.17N**±0°.03×**141°.25E**±0°.04**,h23**^{km}±4^{km}**, n181,**σ**1^s.63**/202**,mb4.8**/81**,9C-1D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.56	204	P	Pn	14 40 26.7	+0.6
CHOJ	Chosi	0.62	329	⇓P	Pb	14 40 24.6	-1.6
CHOJ				*e*S	Sb	14 40 31.4	-3.1
BSO3	Boso 3	0.71	239	⇑P	Pn	14 40 28.3	-0.1
KTR	Katsuura	0.77	268	⇑P	Pb	14 40 28.3	-0.4
KTR				*e*S	Sb	14 40 38.0	-0.7
BSO4	Boso 4	0.77	257	⇑P	Pb	14 40 28.9	+0.2
BSO4				*e*X		14 40 38.5	
I30JP	ISUMI INFRASON	0.78	280	Pn	Pb	14 40 28.9	0.0
	baz=109,slow=20,SNR=0.9						
I30JP				Sn	Sn	14 40 40.4	-0.2

	baz=132,slow=469						
JSMT	Sammumatsuo	0.81	306	P	Pb	14 40 28.6	-0.8
JSMT				*e*S	Sb	14 40 38.6	-1.3
JCN	Nagara	0.90	286	⇑P	Pb	14 40 30.4	-0.5
JCN				*e*S	Sb	14 40 42.7	+0.3
JYT	Yasato	1.36	321	P	Pn	14 40 35.7	-1.9
JIM2	Oshima 3	1.56	254	⇑P	Pn	14 40 38.8	-1.6
JIM2				*e*S	Sn	14 40 56.8	-3.1
JOD2	Odawara 2	1.77	274	⇑P	Pn	14 40 41.7	-1.6
JHJ2	Mitsune	2.38	211	*e*Pn	Pn	14 40 51.6	+0.1
JHJ	Hachijo jima 2	2.38	211	Pn	Pn	14 40 52.6	+1.0
	72nm,0.3s,baz=336,slow=22,SNR=23						
JHJ				Sn	Sb	14 41 23.7	-1.5
	258nm,0.3s,baz=46,slow=22,SNR=9.1						
JHJ				LR	LR	14 41 38.3	
	comp=Z,416nm,18.9s,baz=63,slow=37						
MJAR	Matsushiro Arr	2.83	300	Pn	Pn	14 40 56.6	-1.1
	5.6nm,0.3s,baz=306,slow=18,SNR=74						
MJAR				Sn	Sn	14 41 31.6	+0.5
	3.5nm,0.3s,baz=154,slow=12,SNR=8.4						
MJAR				LR	LR	14 42 01.7	
	comp=Z,1µm,19.0s,baz=120,slow=42						
MAJO	Matsushiro	2.83	300	*e*Pn	Pn	14 40 59.1	+1.3
MAJO	Matsushiro	2.83	300	*i* P	Pn	14 40 58.2	+0.4
MJB9	Matsu-Tunnel	2.83	300	*e*Pn	Pn	14 40 59.3	+1.5
INU	Inuyama	3.47	274	*e*Pn	Pn	14 41 06.5	-0.1
ERM	Erimo	6.99	12	*e*Pn	Pn	14 41 53.6	-1.4
ERM	Erimo	6.99	12	*e*P	Pn	14 41 53.6	-1.4
CBIJ	Chichi jima	8.09	174	Pn	Pn	14 42 10.3	+0.2
CBIJ				Sn	Sn	14 43 36.9	-3.9
JCJ	Chichijima	8.09	174	Pn	Pn	14 42 10.3	+0.2
	18nm,0.3s,baz=72,slow=22,SNR=9.6						
JCJ				Sn	Sn	14 43 36.9	-3.9
	7.3nm,0.3s,baz=270,slow=20,SNR=3.2						
JNU	Nakatsue	8.84	260	Pn	Pn	14 42 17.9	-2.4
	0.2nm,0.3s,baz=81,slow=8.5,SNR=1.9						
ASAJ	Asahikawa	8.99	6	Pn	Pn	14 42 20.1	-2.3
	3.5nm,0.3s,baz=152,slow=32,SNR=15						
ASAJ				Sn	Sn	14 43 58.7	-4.2
	1.0nm,0.3s,baz=78,slow=20,SNR=1.9						
YUK	Yuzh-Kuril'sk	9.54	20	P	Pn	14 42 27.7	-2.1
YUK				pmax	pmax		
	comp=Z,58nm,0.3s						
YUK				pmax	pmax		
	comp=E,5.0nm,0.1s						
YUK				MLR	MLR		
	comp=Z,524nm,15.0s						
YUK				MLR	MLR		
	comp=N,659nm,16.0s						
SHO	Shikotan	9.69	25	*e*P	Pn	14 42 30.2	-1.8
SHO				pmax	pmax		
	comp=N,12nm,0.4s						
SHO				pmax	pmax		
	comp=Z,16nm,0.4s						
SHO				pmax	pmax		
	comp=E,8.0nm,0.2s						
KSRS	Korea Array	10.99	286	Pn	Pn	14 42 49.2	-0.6
	baz=94,slow=15,SNR=1.9						
KSRS				LR	LR	14 47 13.8	
	comp=E,1µm,19.0s,baz=110,slow=39						
KSAR	Wonju Array Be	11.02	286	Pn	Pn	14 42 49.2	-1.0
KSAR	Wonju Array Be	11.02	286	P	Pn	14 42 49.2	-1.0
KUR	Kuril'sk	11.24	25	*e*P	Pn	14 42 53.0	-0.2
KUR				*e*S	Sn	14 44 47.8	-10
KUR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KUR				pmax	pmax		
	comp=N,8.0nm,0.2s						
KUR				pmax	pmax		
	comp=E,25nm,0.3s						
USRK	Ussuriysk Ar.	11.49	324	Pn	Pn	14 42 56.0	-0.6
	comp=E,0.3nm,0.3s,baz=174,slow=14,SNR=2.6						
USRK				LR	LR	14 46 23.0	
	comp=E,327nm,21.8s,baz=109,slow=33						
YSS	Yuzh-Sakhalins	11.82	5	*e*Pn	Pn	14 42 59.3	-1.8
YSS	Yuzh-Sakhalins	11.82	5	*e*P	Pn	14 42 58.8	-2.3
YSS				*e*S	Sn	14 45 10.2	-2.1
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
CN2	Changchun	14.92	310	*e*P	P	14 43 47.3	-1.5
CN2				*e*PP	PnPn	14 43 59.4	+8.0
CN2				*e*S	Sn	14 46 31.4	+3.5
CN2				*e*SS	S	14 46 48.6	+3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,550nm,15.0s						
CN2				LR	LR		
	comp=Z,580nm,15.0s						
CN2				LR	LR		
	comp=Z,460nm,16.0s						
DL2	Dalian	16.11	289	P	P	14 44 01.4	-0.6
DL2				*e*S	Sn	14 47 00.6	+3.9
DL2				pmax	pmax		
	comp=Z,47nm,1.0s						
DL2				pmax	pmax		
	comp=Z,360nm,4.6s						
DL2				LR	LR		
	comp=Z,530nm,16.1s						
DL2				LR	LR		
	comp=Z,1µm,15.8s						
DL2				LR	LR		
	comp=Z,1µm,16.6s						
NJ2	Nanjing	18.91	267	*e*P	P	14 44 31.8	-1.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
BJI	Beijing	20.43	291	⇑*e*P	P	14 44 47.5	-2.0
BJI				pmax	pmax		
	comp=Z,19nm,0.9s						
BJT	Baijiatuau	20.43	291	*e*P	P	14 44 45.7	-3.9
	comp=Z,24nm,0.7s						
BJT	Baijiatuau	20.43	291	*e*P	P	14 44 45.7	-3.9
BJT				pmax	pmax		
	comp=Z,24nm,0.7s						
PETK	Petropavlovsk-	21.38	28	P	P	14 44 58.8	-0.9
	comp=Z,2.9nm,0.7s,baz=193,slow=11,SNR=2.7						
HHC	Hu-ho-hao-te	24.00	293	*e*P	P	14 45 23.5	-3.5
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
MA2	Magadan	25.20	11	*e*P	P	14 45 37.8	+0.3
	comp=Z,16nm,0.9s						
MA2	Magadan	25.20	11	*i* P	P	14 45 36.8	-0.8
MA2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MA2	Magadan	25.20	11	P	P	14 45 37.7	+0.1
	comp=Z,7.9nm,0.7s,baz=191,slow=8.9,SNR=11						
XAN	Xi'an	26.58	277	P	P	14 45 48.8	-1.6
XAN				pP	pP	14 45 56.6	-0.3
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN	Xi'an	26.58	277	*e*P	P	14 45 48.5	-1.9
	comp=Z,19nm,1.2s						
XAN	Xi'an	26.58	277	*e*P	P	14 45 48.5	-1.9
XAN				pmax	pmax		
	comp=Z,19nm,1.2s						
ENH	Enshi	27.10	269	*e*P	P	14 45 52.0	-3.2
	comp=Z,17nm,0.8s						
H11N2	WAKE ISLAND Hy	27.36	117	T	T	15 14 59.6	
	baz=310,slow=75,SNR=89						
H11N1	WAKE ISLAND Hy	27.36	118	T	T	15 14 58.3	
	baz=310,slow=75,SNR=105						
H11N3	WAKE ISLAND Hy	27.37	117	T	T	15 14 59.1	
	baz=310,slow=75,SNR=94						
YAK	Yakutsk	27.86	348	*e*P	P	14 46 01.2	-0.3
YAK				*e**PP	sP	14 46 11.6	+1.1
YAK				*e*		14 46 45.5	
YAK				*e*PPP	PPP	14 46 57.4	
YAK				*e*S	S	14 50 42.0	-1.2
YAK				*e**SS	sS	14 50 57.0	+2.5
YAK				*e*SS	SnSn	14 51 56.8	-0.4
YAK				pmax	pmax		
	comp=Z,73nm,0.6s						
YAK				pmax	pmax		
	comp=N,74nm,1.0s						
YAK				pmax	pmax		
	comp=E,17nm,0.9s						
YAK				pmax	pmax		
	comp=Z,267nm,2.2s						
YAK				pmax	pmax		
	comp=N,283nm,2.3s						
YAK				pmax	pmax		
	comp=E,228nm,2.3s						
YAK				smax	smax		
	comp=N,515nm,3.0s						
YAK				smax	smax		
	comp=E,263nm,3.4s						
H11S1	WAKE ISLAND Hy	28.00	120	T	T	15 15 41.7	
	baz=312,slow=75,SNR=911						
H11S3	WAKE ISLAND Hy	28.00	120	T	T	15 15 41.9	
	baz=312,slow=75,SNR=643						
H11S2	WAKE ISLAND Hy	28.02	120	T	T	15 15 48.0	
	baz=312,slow=75,SNR=539						
ULN	Ulaanbaatar	28.33	307	*i* P	P	14 46 06.7	+0.6
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	28.76	307	P	P	14 46 08.3	-1.5
	comp=Z,1.5nm,0.4s,baz=107,slow=9.4,SNR=9.0						
BOD	Bodaibo	29.05	330	*e*P	P	14 46 11.3	-0.9
BOD				pmax	pmax		
	comp=Z,15nm,1.5s						
LZH	Lanzhou	30.30	283	*e*P	P	14 46 23.0	-0.7
LZH				pP	pP	14 46 31.5	+1.3
LZH				sP	sP	14 46 35.8	+2.9
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
CD2	Chengdu	31.59	273	*e*P	P	14 46 32.5	-2.5
GTA	Gaotai	33.03	290	*e*P	P	14 46 49.0	+1.4
GTA				pP	pP	14 46 55.3	+1.2
GTA				sP	sP	14 46 58.3	+1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KMI	Kunming	34.59	264	P	P	14 47 01.3	-0.2
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,320nm,4.6s						
SIJI	Sorong	37.05	197	P	P	14 47 22.2	-0.1
	comp=Z,6.3nm,0.5s,baz=354,slow=20,SNR=6.9						
PBKT	Sadao Pong	40.37	253	*e*P	P	14 47 48.3	-1.8
	comp=Z,9.2nm,0.9s						
CMAR	Chiang Mai Arr	40.93	257	P	P	14 47 53.0	-1.8
	comp=Z,1.4nm,0.8s,baz=48,slow=7.7,SNR=6.4						
DGZ	Jazzator, Alta	41.40	308*c*	*i*P	P	14 47 59.2	+0.7
DGZ				pmax	pmax		
	comp=Z,22nm,1.0s						
WMQ	Urumqi	41.59	299	P	P	14 48 01.0	+0.9
WMQ				sP	pwP	14 48 10.8	+1.6
WMQ				PP	PP	14 49 33.0	-3.2
WMQ				S	S	14 54 16.3	+1.4
WMQ				pmax	pmax		
	comp=Z,34nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.6s						
WMQ				LR	LR		
	comp=Z,430nm,35.1s						
WMQ				LR	LR		
	comp=Z,580nm,39.3s						
WMQ				LR	LR		
	comp=Z,470nm,20.1s						
ZAA0	Zalesovo Array	43.09	314	*e*P	P	14 48 11.0	-1.0
	comp=Z,7.5nm,0.8s						
ZALV	Zalesovo Beam	43.09	314	*e*P	P	14 48 10.9	-1.1
ZALV				PcP	PcP	14 50 01.7	+0.1
ZALV	Zalesovo Beam	43.09	314	P	P	14 48 11.5	-0.5
	comp=Z,4.3nm,0.4s,baz=102,slow=7.2,SNR=17						
ZALV				PcP	PcP	14 50 01.7	+0.1
	comp=Z,1.6nm,0.7s,baz=99,slow=3.2,SNR=2.7						
ANM	Nome	43.26	30	*e*P	P	14 48 16.3	+3.1
	comp=Z,6.9nm,1.2s						
ANM	Nome	43.26	30	*e*P	P	14 48 16.3	+3.1
ANM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NVS	Novosibirsk	44.05	315	*e*P	P	14 48 19.7	0.0
NVS				pmax	pmax		
	comp=N,3.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,11nm,0.9s						
NRIK	Noril'sk	44.91	336	P	P	14 48 26.1	-0.3
	comp=Z,4.5nm,0.7s,baz=121,slow=5.8,SNR=6.0						
MK01	Makanchi Array	45.02	304	*e*P	P	14 48 26.6	-1.1
MK31	Makanchi Array	45.02	304	*e*P	P	14 48 26.7	-1.0
MK31	Makanchi Array	45.02	304	*i* P	P	14 48 26.9	-0.8
MK31				pmax	pmax		
	comp=Z,11nm,0.9s						
MKAR	Makanchi Array	45.02	304	*e*P	P	14 48 26.8	-0.8
	comp=Z,49nm,0.8s						
MKAR	Makanchi Array	45.02	304	*e*P	P	14 48 26.8	-0.8
MKAR				pmax	pmax		
	comp=Z,49nm,0.8s						
MKAR	Makanchi Array	45.02	304	P	P	14 48 27.0	-0.7
	comp=Z,5.4nm,0.7s,baz=86,slow=8.6,SNR=19						
MAKZ	Makanchi	45.23	304	*e*P	P	14 48 29.2	-0.2
	comp=Z,9.3nm,0.9s						
MAKZ	Makanchi	45.23	304	*e*P	P	14 48 29.2	-0.2
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ODAN	Odare	46.43	275	*e*P	P	14 48 38.9	-0.4
KURK	Kurchatov	46.99	309*c*	*i*P	P	14 48 42.5	-0.6
KURK				pmax	pmax		
	comp=Z,43nm,0.9s						
RAMN	Ramite	47.03	276	*e*P	P	14 48 43.8	-0.3
	comp=Z,31nm,0.7s						
JIRN	Jiri	47.08	277	*e*P	P	14 48 45.0	+0.4
	comp=Z,28nm,0.5s						
GUN	Gumba	47.24	277	*e*P	P	14 48 45.9	+0.2
	comp=Z,46nm,1.0s						
PKI	Pulchoki	47.75	277	*e*P	P	14 48 49.5	-0.3
KKN	Kakani	47.77	277	*e*P	P	14 48 49.7	-0.1
	comp=Z,14nm,0.7s						
DMN	Daman	47.98	277	*e*P	P	14 48 51.3	-0.2
KDAK	Kodiak Island	48.58	41	P	P	14 48 56.4	+1.2
	comp=Z,8.4nm,0.8s,baz=240,slow=14,SNR=5.3						
DANN	Dangsing	48.78	279	*e*P	P	14 48 58.2	+0.6
	comp=Z,79nm,0.7s						
KOLN	Koldanda	49.14	278	*e*P	P	14 49 00.6	+0.3
	comp=Z,62nm,1.5s						
PYUN	Piuthan	49.50	279	*e*P	P	14 49 03.5	+0.4
	comp=Z,61nm,0.8s						
JAGI	Jajag, Banyuwa	50.39	216	*e*P	P	14 49 05.1	-4.5
	comp=Z,91nm,0.9s						
TKM2	Tokmak 2	50.42	300	P	P	14 49 10.6	+0.8
	SNR=15						
KBK	Karagaybulak	50.95	300	P	P	14 49 14.7	+0.9
	SNR=16						
KSH	Kashi	51.07	295	P	P	14 49 18.3	+3.6
KSH				pP	sP	14 49 26.1	+2.0
KSH				PP	PP	14 51 13.8	+2.6
KSH				S	S	14 56 31.1	+0.2
KSH				sS	sS	14 56 46.6	+4.7
KSH				SS	SS	15 00 09.0	+3.1
KSH				pmax	pmax		
	comp=Z,14nm,0.9s						
KSH				pmax	pmax		
	comp=Z,250nm,4.4s						
KSH				LR	LR		
	comp=Z,250nm,4.5s						
KSH				LR	LR		
	comp=Z,300nm,6.1s						
KSH				LR	LR		
	comp=Z,370nm,6.8s						
USP	Ospenovka	51.11	300	P	P	14 49 15.3	+0.4
	SNR=6.0						
ILAR	Eielson Array	51.14	32	P	P	14 49 15.3	+0.6
	comp=Z,0.7nm,0.6s,baz=265,slow=5.7,SNR=7.9						
AAK	Ala-Archa	51.28	300	P	P	14 49 19.9	+3.7
	SNR=5.5						
AAK	Ala-Archa	51.28	300	*e*P	P	14 49 16.4	+0.1
	comp=Z,7.9nm,0.8s						
AAK	Ala-Archa	51.28	300	P	P	14 49 14.6	-1.6
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
UCH	Uchtor	51.37	299	P	P	14 49 18.4	+1.1
	SNR=5.4						
BVA0	Borovoye Array	51.74	313	*i* P	P	14 49 19.4	0.0
BVA0				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BRVK	Borovoye	51.80	313	*e*P	P	14 49 18.6	-1.2
	comp=Z,7.4nm,0.9s						
BRVK	Borovoye	51.80	313	*e*P	P	14 49 18.6	-1.2
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AML	Almayashu	51.98	299	P	P	14 49 22.7	+0.9
	SNR=14						
ARSB	Arslanbob	52.72	298	*e*P	P	14 49 27.3	+0.3
	comp=Z,12nm,0.9s						
MNAS	Manas	52.73	300	*i* P	P	14 49 26.2	-0.9
MNAS				pmax	pmax		
	comp=Z,12nm,0.9s						
KK31	Karatay Array	53.96	301	*e*P	P	14 49 36.2	+0.3
KK31	Karatay Array	53.96	301	*e*P	P	14 49 35.8	-0.1
KK31				pmax	pmax		
	comp=Z,13nm,1.1s						
KKAR	Karatay Array	53.96	301	*e*P	P	14 49 36.2	+0.3
KKAR	Karatay Array	53.96	301	*e*P	P	14 49 36.2	+0.3
WRAB	Tennant Creek	55.19	188	*e*P	P	14 49 45.9	+0.9
	comp=Z,25nm,0.8s						
WB2	Warramunga Arr	55.20	188	*e*P	P	14 49 45.8	+0.8
	comp=Z,25nm,0.8s						
WRA	Warramunga Arr	55.20	188	P	P	14 49 45.4	+0.4
	comp=Z,27nm,0.8s,baz=4.6,slow=7.7,SNR=81						
GAR	Garm	55.40	297	*e*P	P	14 49 46.6	+0.1
	comp=Z,27nm,1.3s						
GAR	Garm	55.40	297	*e*P	P	14 49 46.6	+0.1
GAR				pmax	pmax		
	comp=Z,27nm,1.3s						
INK	Inuvik	56.10	27	P	P	14 49 52.6	+1.7
	comp=Z,1.3nm,0.7s,baz=215,slow=4.1,SNR=4.2						
CHGR	Chuyangaron	56.36	297	*e*P	P	14 49 53.5	+0.1
	comp=Z,34nm,0.8s						
SVE	Sverdlovsk	56.47	319	*e*P	P	14 49 54.3	+0.6
SVE				pmax	pmax		
	comp=Z,12nm,0.9s						
ARU	Arti	57.68	319	*e*P	P	14 50 01.7	-0.6
	comp=Z,19nm,1.1s						
ARU	Arti	57.68	319	*i* P	P	14 50 01.9	-0.4
ARU				pmax	pmax		
	comp=Z,16nm,1.0s						
HYB	Hyderabad	58.04	270	*i* P	P	14 50 05.5	0.0
AS01	Alice Springs	58.92	188	*e*P	P	14 50 12.7	+1.4
AS31	Alice Springs	58.93	188	*e*P	P	14 50 12.8	+1.5
	comp=Z,2.6nm,0.8s						
ASAR	Alice Springs	58.93	188	P	P	14 50 11.8	+0.5
	comp=Z,5.2nm,0.7s,baz=14,slow=11,SNR=44						
AB31	Akbulak array	59.05	311	P	P	14 50 11.1	-0.9
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKTO	Aktyubinsk	59.83	313	P	P	14 50 17.4	0.0
AKTO				pmax	pmax		
	comp=Z,11nm,1.4s						
RES	Resolute Bay	64.43	14	*e*P	P	14 50 47.9	+0.1
	comp=Z,5.1nm,0.9s						
RES	Resolute Bay	64.43	14	*e*P	P	14 50 47.9	+0.1
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GEYT	Alibeck	64.63	300	P	P	14 50 50.3	+0.5
	comp=Z,4.9nm,0.9s,baz=35,slow=5.4,SNR=7.2						
KLMR	Klimovskoe	65.26	328	*e*P	P	14 50 52.3	-1.1
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s						
KLMR	Klimovskoe	65.26	328	*e*P	P	14 50 52.3	-1.1
KLMR				AMP		14 51 07.2	
	comp=Z,15nm,1.2s						
YKA	Yellowknife Ar	65.48	30	P	P	14 50 55.8	+0.9
	comp=Z,0.4nm,0.8s,baz=298,slow=6.4,SNR=3.9						
ARCES	ARCESS Array B	65.69	340	P	P	14 50 56.2	0.0
	comp=Z,2.5nm,0.7s,baz=62,slow=9.4,SNR=2.7						
STKA	Stephens Creek	66.70	180	P	P	14 51 04.3	+1.4
	comp=Z,2.0nm,0.9s,baz=19,slow=4.6,SNR=3.4						
FINES	FINESS Array B	70.40	333	*e*P	P	14 51 25.7	-0.1
FINES	FINESS Array B	70.40	333	P	P	14 51 25.4	-0.3
	comp=Z,1.8nm,0.4s,baz=55,slow=6.8,SNR=14						
KBZ	Khabaz	72.02	311	P	P	14 51 35.6	-0.3
	comp=Z,4.6nm,0.8s,baz=360,slow=8.1,SNR=4.2						
KIV	Kislovodsk	72.03	311	*e*P	P	14 51 34.1	-2.0
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
RAO	Raoul Island	74.76	144	P	P	14 51 53.9	+1.9
	comp=Z,256nm,0.3s,baz=242,slow=23,SNR=3.8						
AKASG	Malin Array Be	75.69	323	*i* P	P	14 51 57.0	-0.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	75.69	323	P	P	14 51 56.6	-0.7
	comp=Z,2.4nm,0.5s,baz=47,slow=6.2,SNR=13						
AKBB	Malin Array Si	75.69	323	*e*P	P	14 51 55.9	-1.4
	comp=Z,6.0nm,0.6s						
AKBB	Malin Array Si	75.69	323	*e*P	P	14 51 55.9	-1.4
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KIEV	Kiev	75.70	323	*e*P	P	14 51 56.1	-1.2
	comp=Z,5.5nm,0.6s						
KIEV	Kiev	75.70	323	*e*P	P	14 51 56.2	-1.2
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NC204	NORSAR Array S	75.81	338	*e*P	P	14 51 58.4	+0.5
NB2	NORSAR Subarra	75.85	337	P	P	14 51 58.0	-0.1
	comp=Z,0.8nm,0.5s,baz=40,slow=6.2						
NOA	NORSAR Array B	75.85	337	P	P	14 51 57.9	-0.1
	comp=Z,2.0nm,0.7s,baz=40,slow=5.7,SNR=12						
NVAR	Mina Array Bea	76.21	53	P	P	14 52 03.0	+2.2
	comp=Z,1.9nm,0.6s,baz=309,slow=6.7,SNR=5.0						
PDAR	Pinedale Array	79.07	45	*e*P	P	14 52 18.0	+1.3
PDAR	Pinedale Array	79.07	45	P	P	14 52 18.0	+1.3
	comp=Z,1.0nm,0.6s,baz=274,slow=1.9,SNR=11						
BRTR	Keskin Array B	79.99	312	*i* P	P	14 52 19.2	-2.4
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SRU	San Rafael Swe	80.74	48	*e*P	P	14 52 28.2	+2.5
	comp=Z,3.9nm,0.7s						
SRU	San Rafael Swe	80.74	48	*e*P	P	14 52 28.2	+2.5
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ULM	Lac du Bonnet	81.13	33	LR	LR	15 27 34.5	
	comp=Z,392nm,22.0s,baz=272,slow=35						
DPC	Dobruska-Polom	81.96	328	*e*P	P	14 52 32.7	+0.9
DPC	Dobruska-Polom	81.96	328	*e*P	P	14 52 32.7	+0.9
UPC	Upice	81.98	328	*e*P	P	14 52 33.1	+1.2
UPC	Upice	81.98	328	*e*P	P	14 52 33.1	+1.2
PV14	Lion Creek, Pa	82.11	48	*e*P	P	14 52 33.5	+0.4
	comp=Z,7.5nm,0.9s						
PVCC	Panska Ves	82.58	329	*e*P	P	14 52 36.2	+1.2
PVCC	Panska Ves	82.58	329	*e*P	P	14 52 36.2	+1.2
CLL	Collm	82.64	330	*e*P	P	14 52 35.5	+0.1
	comp=Z,7.0nm,0.7s						
CLL	Collm	82.64	330	*i* P	P	14 52 35.4	+0.1
	comp=Z,8.0nm,0.8s						
CLL				*i* sP	pP	14 52 42.9	+0.6
CLL	Collm	82.64	330	*i* P	P	14 52 35.4	+0.1
CLL				*i*		14 52 42.9	
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CONA	Conrad Observa	83.96	327	*i* PcP	P	14 52 42.9	+0.6
	comp=Z,9.3nm,1.2s						
KHC	Kasperske Hory	84.06	328	*e*P	P	14 52 43.3	+0.6
KHC	Kasperske Hory	84.06	328	*e*P	P	14 52 43.3	+0.6
GERES	GERESS Array B	84.22	328	P	P	14 52 43.5	-0.1
	comp=Z,1.4nm,0.7s,baz=35,slow=4.9,SNR=5.9						
ARSA	Arzberg	84.61	326	*e*P	P	14 52 45.2	-0.3
	comp=Z,9.9nm,1.4s						
SOKA	Soboth	85.27	326	*e*P	P	14 52 48.9	0.0
	comp=Z,6.5nm,0.9s						
KBA	Koelnbreinsper	85.72	327	*e*P	P	14 52 50.5	-0.8
	comp=Z,8.1nm,1.2s						
SCHQ	Schefferville	87.16	16	P	P	14 52 59.1	+1.1
	comp=Z,2.3nm,0.7s,baz=304,slow=3.6,SNR=3.9						
SCHQ				LR	LR	15 35 22.0	
	comp=Z,2µm,21.4s,baz=302,slow=38						
TXAR	Lajitas Array	91.36	52	P	P	14 53 20.3	+1.9
	comp=Z,0.7nm,0.7s,baz=302,slow=3.3,SNR=8.9						
TORD	Torodi Ar. Bea	118.54	314	PKiKP	PKPdf	14 58 59.5	-0.9
	comp=Z,0.2nm,0.4s,baz=47,slow=2.4,SNR=3.2						
LCO	Las Campanas	152.32	86	*e*PKPbc	PKiKP	15 00 10.1	+1.4
LCO	Las Campanas	152.32	86	*e*PKIKP	PKiKP	15 00 10.1	+1.4

IDC 23 14:40:48.2±1.4, 11.°68S×165.°19E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/40, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=48.4km s-min=28.0km az=126.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.40	174	Pn	Pn	14 43 19.0	+0.1
	1.0nm,0.3s,baz=330,slow=20,SNR=3.2						
WRA	Warramunga Arr	30.76	251	P	P	14 47 05.5	-0.1
	1.3nm,0.8s,baz=80,slow=8.6,SNR=4.9						
ASAR	Alice Springs	32.02	244	P	P	14 47 16.8	0.0
	0.9nm,0.8s,baz=71,slow=9.7,SNR=4.6						
SONM	Songino Array	78.85	324	P	P	14 52 53.7	+0.3
	0.4nm,0.7s,baz=123,slow=5.3,SNR=2.6						
ILAR	Eielson Array	84.28	19	P	P	14 53 21.9	+0.3
	0.6nm,0.7s,baz=239,slow=5.0,SNR=6.0						
MKAR	Makanchi Array	93.61	317	P	P	14 54 06.2	-0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.3nm,0.8s,baz=84,slow=6.4,SNR=2.0						
YKA	Yellowknife Ar	95.78	27	P	P	14 54 15.3	-0.7
	0.2nm,0.7s,baz=264,slow=4.8,SNR=2.2						

NNC 23 14:43:58.3±5.1, 37°.05N×70°.64E, h0^{km}, mb3.8, mpv3.4, 4C-4D, Error ellipse: s-maj=40.7km s-min=35.7km az=143.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.72	36	⇑P	Pn	14 44 56.4	-0.8
	6.6nm,0.3s						
SFK				⇑S	Sn	14 45 44.4	+2.6
	4.4nm,0.4s						
KSH	Kashi	4.87	58	Pn	Pn	14 45 02.6	-10
KSH				Sn	Sn	14 45 52.9	-17
KSH				smax	smax		
	comp=N,19nm,0.4s						
KSH				smax	smax		
	comp=E,25nm,0.3s						
MNAS	Manas	5.62	14	⇓P	Pn	14 45 25.2	+2.0
	comp=E,1.3nm,0.3s						
MNAS				⇓S	Sn	14 46 28.5	-0.1
	comp=E,2.2nm,0.4s						
KK31	Karatay Array	6.05	359	⇑P	Pn	14 45 29.4	+0.3
	comp=E,0.4nm,0.3s,baz=177,slow=12,SNR=29						
KK31				⇓S	Sn	14 46 41.3	+2.3
	comp=E,1.2nm,0.3s,baz=185,slow=23,SNR=7.9						
AAK	Ala-Archa	6.32	27	⇓P	Pn	14 45 31.7	-1.3
	comp=E,2.2nm,0.5s						
AAK				⇑S	Sn	14 46 44.1	-1.8
	comp=E,2.4nm,0.6s						

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*IDC **23** 14:45:44.7±0.6, 11°.75S×165°.23E, h0^{km}, mb4.7/19, mb1 4.9/21, mb1mx4.7/39, mbtmp4.7/21, ML4.7/2, MS4.0/1, Ms1 4.0/1, ms1mx3.1/36, Error ellipse: s-maj=19.3km s-min=14.4km az=124.0*

*NEIC **23** 14:45:46.7±0.2, 11°.71S×165°.15E, h10^{km}, mb5.0/33, Error ellipse: s-maj=5.8km s-min=4.4km az=111.0*

*BJI **23** 14:45:47.0, 11°.10S×165°.59E, h15^{km}, mB5.3/25, mb4.9/41, Ms5.1/8, Ms7 4.8/9*

*ISCJB **23** 14:45:48.7±0.2, 11°.82S±0°.04×165°.03E±0°.04, h33^{km}, mb4.8/57, Error ellipse: s-maj=5.6km s-min=5.0km az=167.3*

ISC 23 14:45:50.5±0.4, 11°.81S±0°.06×165°.09E±0°.07, h35^{km}, n130, σ0ˢ.99/142, mb4.9/57, 2D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.58	295	*e*P	Pn	14 47 11.0	0.0
HNR				*e*S	Sn	14 48 10.0	-4.0
HNR	Honiara	5.58	295	*e*Pn	Pn	14 47 11.1	+0.1
HNR				Sn	Sn	14 48 13.4	-0.6
HNR	Honiara	5.58	295	Pn	Pn	14 47 10.7	-0.3
	33nm,0.3s,baz=147,slow=6.5,SNR=16						
HNR				Sn	Sn	14 48 13.4	-0.6
	45nm,0.3s,baz=341,slow=23,SNR=6.2						
MARNC	Mare, Loyalty	10.02	164	*e*Pn	Pn	14 48 12.1	+0.1
DZM	Mont Dzumac	10.29	173	Pn	Pn	14 48 15.8	+0.1
	4.9nm,0.3s,baz=144,slow=23,SNR=37						
DZM				Sn	Sn	14 50 06.8	-3.2
	baz=342,slow=20,SNR=1.3						
DZM				LR	LR	14 51 38.2	
	comp=Z,789nm,18.9s,baz=9.5,slow=34						
OUENC	Ouen Island, N	10.68	171	*e*Pn	Pn	14 48 21.1	0.0
PINNC	Pines Island,	10.98	168	*e*Pn	Pn	14 48 24.8	-0.3
EIDS	Eidsvold	18.90	223	*e*P	Pn	14 50 09.8	+0.8
	13nm,1.1s						
CTA	Charters Tower	19.88	243	P	Pn	14 50 20.6	-0.1
	23nm,0.8s,baz=73,slow=12,SNR=20						
CTAO	Charters Tower	19.88	243	*e*P	Pn	14 50 20.2	-0.6
	31nm,0.9s						
MANU	Manus Island	20.07	298	*e*P	P	14 50 18.9	-2.1
	50nm,1.0s						
COEN	Coen	21.47	262	*e*P	P	14 50 37.5	+1.3
	19nm,1.0s						
ARMA	Armidale	22.33	212	*e*P	P	14 50 46.8	+1.3
	55nm,1.0s						
BKZ	Black Stump Fm	29.07	162	*e*P	P	14 51 49.4	+1.7
	6.3nm,0.7s						
STKA	Stephens Creek	29.45	224	*e*P	P	14 51 52.3	+1.2
	2.1nm,0.9s						
STKA	Stephens Creek	29.45	224	P	P	14 51 51.9	+0.8
	6.4nm,0.8s,baz=22,slow=9.5,SNR=7.2						
WRAB	Tennant Creek	30.61	251	*e*P	P	14 52 01.8	+0.3
	13nm,0.9s						
WB2	Warramunga Arr	30.61	251	*e*P	P	14 52 01.4	-0.1
WRA	Warramunga Arr	30.62	251	P	P	14 52 01.6	-0.1
	11nm,0.7s,baz=81,slow=9.2,SNR=22						
WRA				PcP	PcP	14 55 00.3	+0.7
	1.3nm,0.8s,baz=78,slow=3.1,SNR=6.1						
AS01	Alice Springs	31.84	244	*e*P	P	14 52 12.1	-0.3
AS31	Alice Springs	31.88	244	*e*P	P	14 52 12.0	-0.7
	3.4nm,0.7s						
ASAR	Alice Springs	31.88	244	P	P	14 52 12.2	-0.6
	9.7nm,0.8s,baz=74,slow=9.3,SNR=29						
ASAR				PcP	PcP	14 55 03.4	+0.4
	1.0nm,0.9s,baz=63,slow=2.7,SNR=4.2						
RPZ	Rata Peaks	32.21	172	P	P	14 52 14.4	-0.9
	10nm,0.7s,baz=60,slow=20,SNR=3.3						
BBOO	Buckleboo	33.84	227	*e*P	P	14 52 29.9	+0.2
	8.0nm,0.8s						
FITZ	Fitzroy Crossi	38.56	256	*e*P	P	14 53 10.6	+0.3
	14nm,0.9s						
FITZ	Fitzroy Crossi	38.56	256	P	P	14 53 10.4	+0.2
	8.7nm,0.7s,baz=125,slow=6.8,SNR=10						
MJAR	Matsushiro Arr	54.35	333	P	P	14 55 12.3	-1.5
	6.5nm,0.8s,baz=171,slow=8.6,SNR=18						
MAT	Matsushiro	54.35	333	P	P	14 55 12.6	-1.2
KSRS	Korea Array	60.14	326	P	P	14 55 54.5	-0.1
	3.4nm,0.9s,baz=140,slow=7.6,SNR=7.6						
KSAR	Wonju Array Be	60.16	326	P	P	14 55 54.5	-0.3
YSS	Yuzh-Sakhalins	61.82	343	*e*P	P	14 56 04.9	-0.9
	31nm,1.1s						
NJ2	Nanjing	62.11	316	*e*P	P	14 56 10.0	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USA0B	Ussuriysk Arra	63.34	334	*e*P	P	14 56 16.9	+0.8
	20nm,0.9s						
USRK	Ussuriysk Ar.	63.34	334	P	P	14 56 16.1	0.0
	8.7nm,0.7s,baz=136,slow=5.7,SNR=18						
PETK	Petropavlovsk-	64.96	355	P	P	14 56 26.0	-0.6
	7.4nm,0.8s,baz=141,slow=9.6,SNR=8.9						
CN2	Changchun	66.06	330	*e*P	P	14 56 33.0	-0.9
CN2				*e*PP	PP	14 59 01.0	+1.2
CN2				*e*S	S	15 05 19.9	+0.3
CN2				*e*SS	SS	15 09 37.3	+1.4
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,360nm,15.0s						
CN2				LR	LR		
	comp=E,360nm,15.0s						
CN2				LR	LR		
	comp=Z,380nm,19.0s						
ENH	Enshi	67.88	310	*e*P	P	14 56 44.9	-0.8
	8.8nm,0.8s						
BJI	Beijing	68.67	322	⇓*e*P	P	14 56 50.8	+0.4
BJI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN	Xi'an	70.16	313	P	P	14 57 00.1	+0.2
XAN				pP	pP	14 57 06.3	-2.9
XAN				sP	sP	14 57 09.3	-3.4
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
KMI	Kunming	70.97	302	P	P	14 57 08.0	+2.8
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,220nm,5.1s						
CMAR	Chiang Mai Arr	71.83	294	P	P	14 57 11.3	+1.1
	3.6nm,1.0s,baz=122,slow=4.4,SNR=20						
CHTO	Chiang Mai	71.95	294	P	P	14 57 14.4	+3.5
	20nm,1.8s						
HHC	Hu-ho-hao-te	72.00	320	*e*P	P	14 57 12.1	+1.2
HHC				pmax	pmax		
	comp=Z,21nm,0.7s						
CD2	Chengdu	72.55	308	*e*P	P	14 57 15.0	+0.6
LZH	Lanzhou	74.79	313	*e*P	P	14 57 29.5	+1.9
LZH				pP	pP	14 57 34.3	-2.7
LZH				sP	sP	14 57 37.1	-3.4
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LZH				LR	LR		
	comp=Z,620nm,15.2s						
GAMB	Gambell	77.43	10	*e*P	P	14 57 42.0	+0.3
	11nm,0.9s						
QSPA	South Pole Qui	78.20	180	*e*P	P	14 57 46.7	+0.4
ULN	Ulaanbaatar	78.54	324	*e*P	P	14 57 48.5	0.0
	11nm,0.9s						
SONM	Songino Array	78.90	324	P	P	14 57 50.9	+0.5
	3.0nm,0.8s,baz=138,slow=6.6,SNR=18						
SONA1	Songino Array	78.90	324	*e*P	P	14 57 50.8	+0.4
GTA	Gaotai	79.12	314	⇓P	P	14 57 53.0	+1.2
GTA				pP	pP	14 58 01.9	+0.6
GTA				sP	sP	14 58 05.6	+0.8
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA				pmax	pmax		
	comp=Z,120nm,4.6s						
GTA				LR	LR		
	comp=N,130nm,16.5s						
GTA				LR	LR		
	comp=E,340nm,17.1s						
GTA				LR	LR		
	comp=Z,430nm,17.1s						
BILL	Bilibino	79.64	0	*e*P	P	14 57 53.3	-0.6
	28nm,1.0s						
TRF	Thorofare Moun	82.44	19	*e*P	P	14 58 09.2	+0.2
	14nm,1.1s						
KLU	Klutina	82.54	21	*e*P	P	14 58 08.9	-0.7
	14nm,1.0s						
RND	Reindeer	82.86	19	*e*P	P	14 58 11.0	-0.1
	17nm,1.1s						
IM3	Indian Mountai	83.33	16	*e*P	P	14 58 13.3	-0.1
HARP	HAARP	83.42	21	*e*P	P	14 58 13.8	-0.2
	23nm,1.2s						
BALM	Baldy	83.56	23	*e*P	P	14 58 14.4	-0.5
	12nm,0.7s						
WRH	Wood River Hil	83.85	19	*e*P	P	14 58 14.7	-1.4
	11nm,0.8s						
MDM	Murphy Dome	84.15	18	*e*P	P	14 58 16.7	-1.0
	12nm,0.8s						
HDA	Harding Lake	84.17	19	*e*P	P	14 58 17.0	-0.7
	23nm,0.7s						
HDA	Harding Lake	84.17	19	P	P	14 58 18.0	+0.3
	baz=227						
TCOL	CIGO, UAF Yank	84.20	18	P	P	14 58 17.2	-0.7
	baz=226						
ILAR	Eielson Array	84.44	19	P	P	14 58 17.8	-1.3
	7.8nm,0.7s,baz=237,slow=5.2,SNR=129						
ILB	Eielson Array	84.44	19	*e*P	P	14 58 18.1	-0.9
POKR	Poker Plat Res	84.50	18	P	P	14 58 18.6	-0.8
	baz=226						
DOT	Dot Lake	84.61	20	*e*P	P	14 58 20.3	+0.3
	24nm,0.9s						
N02D	Trinity Center	84.62	46	P	P	14 58 20.8	+0.1
	baz=249						
M02C	Callahan	84.66	46	P	P	14 58 21.5	+0.6
	baz=249						
O03E	Paynes Creek	85.03	47	P	P	14 58 22.9	+0.2
	baz=250						
AFDM	Forest Hills D	85.19	49	*e*P	P	14 58 22.9	-0.6
	16nm,1.0s						
CMB	Columbia Colle	85.32	50	*e*P	P	14 58 23.5	-0.8
	9.5nm,0.9s						
M04C	Macdoel	85.51	46	P	P	14 58 25.6	+0.4
	baz=250						
EDW2	Edwards Air Fo	86.19	53	P	P	14 58 28.5	-0.1
	baz=253						
BFSC	Mount Baldy Ra	86.27	54	P	P	14 58 28.9	-0.2
	baz=253						
EGAK	Eagle	86.31	20	*e*P	P	14 58 28.5	+0.1
	17nm,0.8s						
J05D	Fort Rock, OR	86.44	45	P	P	14 58 30.4	+0.6
	baz=250						
MURC	Murrieta	86.45	55	P	P	14 58 29.9	0.0
	baz=253						
CWC	Cottonwood Cre	86.58	52	P	P	14 58 30.8	+0.1
	baz=253						
MONP2	Monument Peak	86.88	56	P	P	14 58 32.2	0.0
	baz=254						
MPMC	Manual Prospec	86.93	52	P	P	14 58 32.5	+0.1
	baz=253						
NVAR	Mina Array Bea	87.00	50	P	P	14 58 32.3	-0.4
	9.0nm,0.9s,baz=236,slow=7.0,SNR=12						
PFO	Pinyon Flats O	87.05	55	P	P	14 58 32.9	0.0
	baz=254						
TPFO	Pinon Flats	87.05	55	P	P	14 58 32.9	0.0
	baz=254						
IKP	In-Ko-Pah, Jac	87.06	56	P	P	14 58 33.2	+0.2
	baz=254						
NV11	Mina Array Sit	87.12	50	*e*P	P	14 58 32.5	-0.7
	1.0nm,1.0s						
GSC	Goldstone, Bar	87.24	53	P	P	14 58 33.9	+0.1
	baz=254						
GRAC	Grapevine Rang	87.29	52	P	P	14 58 34.5	+0.5
	baz=253						
SWSC	Sam W. Stewart	87.39	56	P	P	14 58 34.5	0.0
	baz=254						
HEC	Hector,Ludlow	87.48	54	P	P	14 58 34.8	-0.2
	baz=254						
BELC	Belle Mtn. Jos	87.52	55	P	P	14 58 35.2	-0.1
	baz=254						
FURC	Furnace Creek,	87.53	52	P	P	14 58 35.3	+0.3
	baz=254						
BC3	Big Chuckawall	87.86	55	P	P	14 58 37.2	+0.4
	baz=254						
I07A	Izee	87.89	44	*e*P	P	14 58 37.0	+0.3
	7.4nm,0.9s						
GMRC	Granite Mounta	88.00	54	P	P	14 58 37.4	-0.1
	baz=254						
TPNV	Topopah Spring	88.14	52	P	P	14 58 38.0	-0.1
	baz=254						
GLA	Glamis	88.21	56	P	P	14 58 39.0	+0.5
	baz=255						
IRM	Iron Mountain	88.25	55	P	P	14 58 38.7	+0.1
	baz=255						
BMN	Battle Mountai	88.39	48	*e*P	P	14 58 41.4	+2.1
	7.0nm,1.1s						
Y12C	Blythe	88.64	55	P	P	14 58 40.9	+0.6
	baz=255						
EPYK	Eagle Plains	88.74	20	P	P	14 58 39.9	-0.3
	baz=236						
R11A	Troy Canyon, C	89.03	51	*e*P	P	14 58 42.5	+0.1
	4.4nm,1.1s						
R11A	Troy Canyon, C	89.03	51	P	P	14 58 42.5	+0.1
	baz=254						
PDMCI	Parker Dam,Lak	89.09	55	P	P	14 58 43.0	+0.5
	baz=255						
WMQ	Urumqi	89.17	315	P	P	14 58 43.3	+0.5
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,360nm,4.9s						
WMQ				LR	LR		
	comp=N,710nm,21.3s						
WMQ				LR	LR		
	comp=E,840nm,23.1s						
WMQ				LR	LR		
	comp=Z,1μm,23.1s						
214A	Organ Pipe Nat	89.58	57	P	P	14 58 45.3	+0.4
	baz=256						
LCMT	Little Creek M	90.47	52	*e*P	P	14 58 49.8	+0.7
	11nm,1.0s						
HLID	Hailey	91.27	46	P	P	14 58 53.2	+0.6
	baz=255						
TUC	Tucson	91.34	57	P	P	14 58 53.5	+0.4
	baz=257						
WUAZ	Wupatki	91.59	54	P	P	14 58 54.5	+0.1
	baz=257						
MK01	Makanchi Array	93.62	317	*e*P	P	14 59 03.3	0.0
MK31	Makanchi Array	93.63	317	*e*P	P	14 59 03.8	+0.4
MKAR	Makanchi Array	93.63	317	P	P	14 59 03.2	-0.2
	3.5nm,0.8s,baz=101,slow=6.1,SNR=29						
MKAR				PKiKP	PKiKP	15 03 52.3	+3.4
	0.4nm,0.6s,baz=118,slow=7.2,SNR=6.0						
BOZ	Bozeman (W)	93.69	44	P	P	14 59 04.2	+0.4
	baz=257						
ZALV	Zalesovo Beam	93.79	324	P	P	14 59 02.7	-1.2
	2.7nm,0.8s,baz=108,slow=4.8,SNR=10						
121A	Cookes Peak, D	93.86	58	P	P	14 59 05.7	+0.7
	baz=259						
H17A	Grant Village	94.16	46	P	P	14 59 07.4	+1.4
	baz=258						
BW06	Boulder Array	94.54	47	P	P	14 59 07.7	-0.2
	baz=258						
PDAR	Pinedale Array	94.54	47	P	P	14 59 06.2	-1.6
	1.3nm,0.9s,baz=253,slow=2.5,SNR=6.6						
S22A	4UR Ranch, Cre	95.62	53	P	P	14 59 13.6	+0.6
	baz=260						
MNTX	Cornudas Mount	95.71	59	P	P	14 59 13.2	0.0
	baz=260						
YKA	Yellowknife Ar	95.94	27	P	P	14 59 11.5	-1.9
	2.9nm,0.8s,baz=256,slow=4.6,SNR=45						
TX31	Lajitas Ar. Si	96.76	62	*e*P	P	14 59 16.4	-1.7
TXAR	Lajitas Array	96.76	62	P	P	14 59 17.8	-0.4
	1.0nm,0.7s,baz=260,slow=5.0,SNR=12						
ARCES	ARCESS Array B	116.90	345	PKP	PKPdf	15 04 30.2	-0.7
	2.0nm,0.9s,baz=48,slow=1.3,SNR=5.1						
NOA	NORSAR Array B	127.26	344	PKP	PKPdf	15 04 50.6	-0.4
	0.6nm,0.7s,baz=35,slow=2.0,SNR=3.5						
BRTR	Keskin Array B	129.00	312	PKP	PKPdf	15 04 53.7	-1.5
	0.3nm,0.4s,baz=63,slow=6.6,SNR=3.4						
KEST	Kesra	147.62	321	PKPbc	PKPbc	15 05 32.1	+0.3
	11nm,0.9s,baz=343,slow=1.4,SNR=5.5						
ESDC	Sonseca Array	150.60	343	PKPbc	PKPbc	15 05 39.0	-0.1
	2.2nm,0.9s,baz=38,slow=2.3,SNR=6.9						
ESDC				PKPab	PKPab	15 05 46.2	+0.3
	1.0nm,0.6s,baz=12,slow=3.9,SNR=6.6						
TORD	Torodi Ar. Bea	163.73	276	PKP	PKPdf	15 05 50.5	-0.3
	0.6nm,0.8s,baz=352,slow=2.2,SNR=3.6						
TORD				PKPab	PKPab	15 06 41.6	-1.5
	0.6nm,0.8s,baz=123,slow=7.1,SNR=2.9						

IDC 23 14:53:07.7±1.5, 2°.55N×121°.96E, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.4/38, mbtmp3.6/4, MS4.1/1, Ms1 4.1/1, ms1mx3.3/35, Error ellipse: s-maj=101.5km s-min=26.8km az=68.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.83	170	LR	LR	15 05 52.3	
	comp=Z,569nm,20.4s,baz=48,slow=37						
WRA	Warramunga Arr	25.44	152	P	P	14 58 36.3	-1.1
	0.3nm,0.6s,baz=335,slow=10,SNR=5.1						
ASAR	Alice Springs	28.53	157	P	P	14 59 06.0	+0.7
	3.5nm,1.4s,baz=338,slow=8.7,SNR=5.0						
MKAR	Makanchi Array	55.91	328	P	P	15 02 46.3	-1.2
	0.4nm,0.9s,baz=129,slow=8.2,SNR=1.7						
ILAR	Eielson Array	88.21	25	P	P	15 06 02.0	+1.5
	0.4nm,0.8s,baz=250,slow=4.8,SNR=3.5						

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*IDC **23** 15:09:42.6±1.0, 10°.69S×165°.52E, h0^{km}, mb3.9/10, mb1 4.1/12, mb1mx3.9/39, mbtmp4.1/12, ML4.6/2, Error ellipse: s-maj=24.6km s-min=18.3km az=68.0*

*NEIC **23** 15:09:44.5±0.8, 10°.68S×165°.54E, h10^{km}, mb4.0/1, Error ellipse: s-maj=16.8km s-min=12.7km az=59.0*

*ISCJB **23** 15:09:45.7±0.8, 10°.79S±0°.07×165°.51E±0°.09, h31^{km}, mb3.9/10, Error ellipse: s-maj=14.1km s-min=7.8km az=142.2*

ISC 23 15:09:47.4±0.9, 10°.70S±0°.09×165°.6E±0°.1, h31^{km}, n21, σ1ˢ.18/19, mb3.9/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.69	282	*e*P	Pn	15 11 09.0	-0.8
HNR				*e*S	Sn	15 12 15.0	+1.0
HNR	Honiara	5.69	282	Pn	Pn	15 11 09.3	-0.4
	16nm,0.3s,baz=139,slow=1.1,SNR=23						
HNR				Sn	Sn	15 12 15.8	+1.8
	14nm,0.3s,baz=18,slow=20,SNR=2.2						
DZM	Mont Dzumac	11.34	176	Pn	Pn	15 12 27.8	+0.4
	3.9nm,0.3s,baz=329,slow=13,SNR=38						
DZM				Sn	Sn	15 14 33.8	+0.7
	0.7nm,0.3s,baz=187,slow=16,SNR=3.9						
CTA	Charters Tower	20.82	241	P	P	15 14 26.5	0.0
	5.4nm,0.9s,baz=74,slow=13,SNR=4.2						
CTAO	Charters Tower	20.82	241	P	P	15 14 28.0	+1.5
H11S2	WAKE ISLAND Hy	29.03	2	T	T	15 45 48.6	
	baz=181,slow=76,SNR=114						
H11S3	WAKE ISLAND Hy	29.03	2	T	T	15 45 47.6	
	baz=181,slow=76,SNR=62						
H11S1	WAKE ISLAND Hy	29.04	2	T	T	15 45 50.4	
	baz=181,slow=76,SNR=52						
URZ	Urewera	29.32	161	P	P	15 15 47.8	+0.5
	6.7nm,0.9s,baz=113,slow=7.7,SNR=2.7						
H11N1	WAKE ISLAND Hy	30.25	2	T	T	15 47 20.3	
	baz=182,slow=76,SNR=108						
H11N3	WAKE ISLAND Hy	30.25	2	T	T	15 47 18.2	
	baz=182,slow=76,SNR=96						
H11N2	WAKE ISLAND Hy	30.27	2	T	T	15 47 19.1	
	baz=182,slow=76,SNR=64						
STKA	Stephens Creek	30.58	223	P	P	15 15 58.5	0.0
	1.4nm,0.6s,baz=108,slow=2.4,SNR=3.4						
WRAB	Tennant Creek	31.44	249	*e*P	P	15 16 05.0	-1.2
	1.0nm,0.5s						
WRA	Warramunga Arr	31.45	249	P	P	15 16 05.3	-1.0
	0.8nm,0.8s,baz=79,slow=8.8,SNR=4.9						
ASAR	Alice Springs	32.80	243	P	P	15 16 16.6	-1.6
	1.1nm,0.9s,baz=66,slow=10.0,SNR=11						
ASAR				PcP	PcP	15 19 01.2	-1.8
	0.3nm,0.8s,baz=70,slow=4.0,SNR=3.2						
RPZ	Rata Peaks	33.23	173	P	P	15 16 21.0	-0.6
	9.8nm,0.9s,baz=9.6,slow=19,SNR=3.6						
CMAR	Chiang Mai Arr	71.82	293	P	P	15 21 07.2	-0.4
	0.3nm,0.6s,baz=137,slow=5.7,SNR=3.1						
SONM	Songino Array	78.29	324	P	P	15 21 43.4	-1.1
	0.3nm,0.8s,baz=126,slow=9.1,SNR=2.5						
ILAR	Eielson Array	83.24	19	P	P	15 22 11.6	+1.2
	1.0nm,0.9s,baz=232,slow=4.9,SNR=4.3						
MKAR	Makanchi Array	93.16	317	P	P	15 23 00.3	+1.7
	0.4nm,0.9s,baz=101,slow=7.5,SNR=2.8						

IDC 23 15:14:55.1±1.8, 11°.70S×165°.10E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.6/40, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=51.5km s-min=32.6km az=129.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.39	173	Pn	Pn	15 17 25.3	-0.3
	0.9nm,0.3s,baz=298,slow=18,SNR=7.2						
WRA	Warramunga Arr	30.66	251	P	P	15 21 12.0	+0.3
	1.1nm,0.9s,baz=78,slow=9.2,SNR=4.7						
ASAR	Alice Springs	31.93	244	P	P	15 21 22.5	-0.3
	0.7nm,0.9s,baz=72,slow=8.9,SNR=5.1						
ILAR	Eielson Array	84.33	19	P	P	15 27 28.8	0.0
	0.3nm,0.6s,baz=235,slow=4.6,SNR=5.8						

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*IDC **23** 15:16:35.4±1.2, 11°.78S×165°.28E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx4.0/41, mbtmp4.0/10, ML4.2/2, Error ellipse: s-maj=35.8km s-min=21.1km az=128.0*

*ISCJB **23** 15:16:39.1±0.8, 11°.84S±0°.10×165°.10E±0°.10, h33^{km}, mb3.9/7, Error ellipse: s-maj=16.3km s-min=11.0km az=41.3*

ISC 23 15:16:40.9±0.9, 11°.8S±0°.1×165°.2E±0°.1, h35^{km}, n10, σ0ˢ.71/11, mb3.9/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.65	294	Pn	Pn	15 18 03.5	+1.1
	8.9nm,0.3s,baz=140,slow=6.1,SNR=4.8						
HNR				Sn	Sn	15 19 04.9	-1.1
	1.3nm,0.3s,baz=15,slow=19,SNR=2.7						
DZM	Mont Dzumac	10.29	173	Pn	Pn	15 19 06.3	+0.1
	1.2nm,0.3s,baz=314,slow=13,SNR=9.6						
CTA	Charters Tower	19.95	243	P	Pn	15 21 11.6	-0.4
	6.7nm,0.9s,baz=59,slow=13,SNR=5.2						
STKA	Stephens Creek	29.51	224	P	P	15 22 42.0	0.0
	0.9nm,0.5s,baz=66,slow=8.6,SNR=2.8						
WRA	Warramunga Arr	30.70	251	P	P	15 22 52.6	-0.1
	5.2nm,0.9s,baz=80,slow=9.3,SNR=16						
ASAR	Alice Springs	31.95	244	P	P	15 23 03.5	-0.3
	2.5nm,0.7s,baz=68,slow=9.9,SNR=20						
SONM	Songino Array	78.94	324	P	P	15 28 41.6	+0.6
	0.4nm,0.8s,baz=143,slow=4.3,SNR=3.2						
ILAR	Eielson Array	84.40	19	P	P	15 29 09.3	0.0
	0.7nm,0.6s,baz=238,slow=5.4,SNR=14						
MKAR	Makanchi Array	93.68	317	P	P	15 29 54.1	+0.2
	0.4nm,0.8s,baz=111,slow=5.3,SNR=4.1						
YKA	Yellowknife Ar	95.90	27	P	P	15 30 02.7	-0.9
	0.3nm,0.9s,baz=249,slow=5.0,SNR=3.4						

IDC 23 15:25:11.1±1.7, 11°.69S×165°.04E, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.5/32, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=50.9km s-min=32.0km az=128.0, Santa

Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.41	173	Pn	Pn	15 27 41.9	+0.1
	0.3nm,0.3s,baz=289,slow=20,SNR=11						
WRA	Warramunga Arr	30.61	251	P	P	15 31 27.1	-0.1
	0.5nm,0.6s,baz=82,slow=8.9,SNR=4.8						
ASAR	Alice Springs	31.88	244	P	P	15 31 38.4	0.0
	0.4nm,0.7s,baz=74,slow=10,SNR=4.1						
ILAR	Eielson Array	84.34	19	P	P	15 37 44.8	0.0
	0.3nm,0.6s,baz=236,slow=5.7,SNR=6.8						

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*IDC **23** 15:30:51.7±1.2, 36°.70N×5°.68E, h0^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.2/37, mbtmp3.2/5, ML4.0/1, Error ellipse: s-maj=26.8km s-min=17.2km az=21.0*
*CRAAG **23** 15:30:51.9, 36°.84N×5°.23E, Ml3.6*
*MDD **23** 15:30:54.4±0.5, 36°.76N×5°.15E, h0^{km}, mb4.3/11, Error ellipse: s-maj=9.9km s-min=4.5km az=55.0, PRXIMO*
*LDG **23** 15:30:55.7±0.2, 36°.68N×5°.22E, h25^{km}, Ml3.4/9, Error ellipse: s-maj=5.5km s-min=4.2km az=50.0*
ISC 23 15:30:53.3±0.7, **36°.84N**±0°.04×**5°.26E**±0°.04, **h10**^{km}, **n61**, σ**2^{s}.50**/81, **mb3.3**/4, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.58	121	P	Pb	15 31 05.9	+0.3
DFRA	Djebel Bou Aff	0.58	121	Pg	Pb	15 31 05.9	+0.3
SET	Setif	0.65	170	P	Pg	15 31 05.0	-0.9
SET	Setif	0.65	170	Pg	Pg	15 31 05.0	-0.9
CKHR	Kef el Ahmar	0.85	166	P	Pg	15 31 09.0	-0.7
CKHR	Kef el Ahmar	0.85	166	Pg	Pg	15 31 09.0	-0.7
CASM	Ain Smara	1.15	120	P	Pg	15 31 17.2	+1.8
CASM	Ain Smara	1.15	120	Pg	Pg	15 31 17.2	+1.8
CTEI	Djebel Teioual	1.21	130	P	Pn	15 31 16.4	0.0
CTEI	Djebel Teioual	1.21	130	Pg	Pn	15 31 16.4	0.0
CAEH	'Ain El Ouahch	1.28	92	P	Pg	15 31 20.2	+2.4
CAEH	'Ain El Ouahch	1.28	92	Pg	Pg	15 31 20.2	+2.4
CMAH	Djebel Manchou	1.75	97	P	Pg	15 31 28.2	+1.4
CMAH	Djebel Manchou	1.75	97	Pn	Pg	15 31 28.2	+1.4
ABSA	Djebel Ababsia	1.87	107	P	Pg	15 31 31.2	+2.0
CABS	Djebel Ababsia	1.87	107	Pn	Pg	15 31 31.2	+2.0
KEST	Kesra	3.48	107	Pg	Pn	15 31 49.0	+1.4
	2.2nm,0.3s,baz=232,slow=4.0,SNR=19						
KEST				Lg	Lg	15 32 29.6	
	6.4nm,0.3s,baz=309,slow=6.3,SNR=8.2						
ETOS	Mallorca	3.50	327	Pn	Pn	15 31 50.0	+2.2
	24nm,0.4s,SNR=9.9						
ETOS				Sn	Sn	15 32 29.6	+0.3
	5.6nm,0.3s,SNR=7.9						
EMUR	La Murta	5.28	283	Pn	Pn	15 32 15.1	+2.9
	3.9nm,0.5s,SNR=7.9						
CFON	Fontmartina	5.38	337	Pn	Pn	15 32 16.2	+2.5
	3.5nm,0.2s,SNR=7.9						
CFON				Sn	Sn	15 33 14.6	-1.2
	6.5nm,0.3s,SNR=7.9						
EPOB	Poblet	5.55	325	Pn	Pn	15 32 17.8	+1.7
	2.1nm,0.2s,SNR=8.6						
EPOB				Sn	Sn	15 33 17.0	-3.1
	1.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.69	290	Pn	Pn	15 32 23.2	+5.3
	5.5nm,0.3s,SNR=9.3						
EMIR	Miracle	5.83	331	Pn	Pn	15 32 23.4	+3.5
	10nm,0.4s,SNR=6.7						
EMIR				Sn	Sn	15 33 27.8	+1.0
	17nm,0.7s,SNR=7.9						
SJAF	Saint Jean de	5.92	343	Sn	Sn	15 33 28.6	-0.5
	2.1nm,0.4s,SNR=7.9						
CLLI	Llivia	6.17	337	Pn	Pn	15 32 28.5	+3.9
	3.2nm,0.4s,SNR=7.9						
CLLI				Sn	Sn	15 33 37.3	+2.0
	1.2nm,0.3s,SNR=7.9						
CSOR	Sort	6.38	331	Pn	Pn	15 32 30.5	+3.1
	2.4nm,0.2s,SNR=7.9						
PGF	Pioggiola	6.38	26	*e*Pn	Pn	15 32 28.4	+0.9
PGF				*e*Sn	Sn	15 33 35.6	-4.9
	13nm,0.4s						
PGF	Pioggiola	6.38	26	Pn	Pn	15 32 28.4	+0.9
PGF				Sn	Sn	15 33 35.6	-4.9
	6.6nm,0.4s						
EBER	Berja	6.54	273	Pn	Pn	15 32 31.3	+1.6
	16nm,0.8s,SNR=7.9						
LMR	La Mourre	6.55	8	*e*Pn	Pn	15 32 29.7	0.0
LMR				*e*Sn	Sn	15 33 40.8	-3.7
	5.8nm,0.2s						
LMR	La Mourre	6.55	8	Pn	Pn	15 32 29.7	0.0
LMR				Sn	Sn	15 33 40.8	-3.7
	2.9nm,0.2s						
EQES	Quesada	6.71	281	Pn	Pn	15 32 35.5	+3.5
	9.6nm,0.7s,SNR=9.1						
EQES				Sn	Sn	15 33 50.1	+1.5
	2.4nm,0.4s,SNR=7.9						
FRF	La Foret Royal	6.79	9	*e*Pn	Pn	15 32 33.9	+0.9
FRF				*e*Sn	Sn	15 33 46.4	-4.0
	5.2nm,0.2s						
FRF	La Foret Royal	6.79	9	Pn	Pn	15 32 33.9	+0.9
FRF				Sn	Sn	15 33 46.4	-4.0
	2.6nm,0.2s						
MTLF	Montolieu	6.90	341	*e*Pn	Pn	15 32 35.8	+1.4
MTLF				*e*Sn	Sn	15 33 49.6	-3.4
	1.0nm,0.2s						
MTLF	Montolieu	6.90	341	Pn	Pn	15 32 35.8	+1.4
MTLF				Sn	Sn	15 33 49.6	-3.4
	0.5nm,0.2s						
SMRF	Simiane la Rot	7.13	2	*e*Pn	Pn	15 32 38.8	+1.1
SMRF	Simiane la Rot	7.13	2	Pn	Pn	15 32 38.8	+1.1
SBF	Sospel	7.21	13	*e*Pn	Pn	15 32 39.8	+1.1
SBF				*e*Sn	Sn	15 33 56.1	-4.5
	9.0nm,0.2s						
SBF	Sospel	7.21	13	Pn	Pn	15 32 39.8	+1.1
SBF				Sn	Sn	15 33 56.1	-4.5
	4.5nm,0.2s						
EPF	Esparros	7.24	330	*e*Pn	Pn	15 32 40.3	+1.0
EPF	Esparros	7.24	330	Pn	Pn	15 32 40.3	+1.0
LASF	Ste Croix	7.30	352	*e*Pn	Pn	15 32 41.1	+1.0
LASF				*e*Sn	Sn	15 33 59.0	-4.0
	0.7nm,0.3s						
LASF	Ste Croix	7.30	352	Pn	Pn	15 32 41.1	+1.0
LASF				Sn	Sn	15 33 59.0	-4.0
	0.3nm,0.3s						
ETSF	Etsaut	7.52	325	*e*Pn	Pn	15 32 43.6	+0.5
ETSF	Etsaut	7.52	325	Pn	Pn	15 32 43.6	+0.5
ESDC	Sonseca Array	7.79	294	Pn	Pn	15 32 51.1	+4.3
	0.6nm,0.3s,baz=110,slow=13,SNR=4.9						
IELO	Elcoad	7.80	322	Pn	Pn	15 32 49.8	+2.8
	1.7nm,0.3s,SNR=7.9						
MBDF	Montbardon	7.96	8	*e*Pn	Pn	15 32 50.4	+1.2
MBDF				*e*Sn	Sn	15 34 14.4	-4.9
	0.9nm,0.3s						
MBDF	Montbardon	7.96	8	Pn	Pn	15 32 50.4	+1.2
MBDF				Sn	Sn	15 34 14.4	-4.9
	0.4nm,0.3s						
SJPF	Ste Jean	8.00	324	*e*Pn	Pn	15 32 50.1	+0.5
SJPF	Ste Jean	8.00	324	Pn	Pn	15 32 50.1	+0.5
VIVF	Saint-Julien-l	8.02	357	*e*Pn	Pn	15 32 50.3	+0.4
VIVF				*e*Sn	Sn	15 34 15.6	-5.0
	1.6nm,0.2s						
VIVF	Saint-Julien-l	8.02	357	Pn	Pn	15 32 50.3	+0.4
VIVF				Sn	Sn	15 34 15.6	-5.0
	0.8nm,0.2s						
PAB	San Pablo	8.03	293	Pn	Pn	15 32 55.0	+4.9
	1.0nm,0.4s,SNR=7.9						
ORIF	Oris-en-Rattie	8.08	3	*e*Pn	Pn	15 32 51.0	+0.2
ORIF	Oris-en-Rattie	8.08	3	Pn	Pn	15 32 51.0	+0.2
AKASG	Malin Array Be	22.04	43	P	P	15 35 44.9	-3.0
	0.5nm,0.5s,baz=241,slow=10,SNR=3.1						
TORD	Torodi Ar. Bea	23.81	189	P	P	15 36 05.4	-1.1
	0.2nm,0.5s,baz=17,slow=10,SNR=2.6						
MKAR	Makanchi Array	56.12	54	P	P	15 40 33.4	+0.6
	0.3nm,0.6s,baz=279,slow=6.7,SNR=5.1						
YKA	Yellowknife Ar	69.92	335	P	P	15 42 05.5	+1.3
	0.2nm,0.7s,baz=52,slow=6.5,SNR=3.0						

IDC 23 15:40:51.8±3.1, **32°.75S**×**178°.31W**, **h0**^{km}, **mb3.4**/2, **mb1 3.7**/3, **mb1mx3.6**/30, **mbtmp3.5**/3, **ML3.4**/1, **Error ellipse: s-maj=74.7km s-min=46.0km az=121.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.64	213	Pn	Pn	15 42 30.1	-0.6
	0.8nm,0.3s,baz=266,slow=5.5,SNR=9.7						
URZ				Sn	Sn	15 43 40.6	-6.5
	0.6nm,0.3s,baz=127,slow=20,SNR=4.5						
ASAR	Alice Springs	42.77	270	P	P	15 48 51.5	+0.1
	0.3nm,0.6s,baz=112,slow=7.8,SNR=5.9						
WRA	Warramunga Arr	43.97	275	P	P	15 49 00.8	-0.2
	0.6nm,0.7s,baz=115,slow=7.9,SNR=6.6						
FINES	FINESS Array B	147.24	338	PKPbc	PKPbc	16 00 35.6	-0.8
	1.8nm,1.0s,baz=24,slow=5.2,SNR=5.2						

IDC 23 15:59:25.1±1.9, **7°.49S**×**122°.66E**, **h0**^{km}, **mb3.4**/1, **mb1 3.6**/3, **mb1mx3.3**/33, **mbtmp3.4**/3, **ML2.7**/2, **Error ellipse: s-maj=301.6km s-min=28.4km az=56.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.78	139	Pn	Pn	16 03 20.3	-1.4
	0.0nm,0.3s,baz=312,slow=13,SNR=3.9						
ASAR	Alice Springs	19.37	147	P	Pn	16 03 53.3	-0.3
	0.0nm,0.3s,baz=324,slow=13,SNR=8.8						
MKAR	Makanchi Array	64.85	331	P	P	16 10 05.9	0.0
	0.3nm,0.7s,baz=138,slow=7.6,SNR=2.8						

IDC 23 16:01:19.4±1.8, **46°.95N**×**153°.33E**, **h0**^{km}, **mb3.5**/3, **mb1 3.7**/4, **mb1mx3.3**/45, **mbtmp3.4**/4, **ML1.8**/1, **Error ellipse: s-maj=127.0km s-min=26.4km az=121.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.77	23	Pn	Pn	16 03 00.3	+0.3
	0.1nm,0.3s,baz=177,slow=14,SNR=3.3						
H11N2	WAKE ISLAND Hy	29.33	153	T	T	16 38 57.2	
	baz=340,slow=76,SNR=22						
H11N1	WAKE ISLAND Hy	29.35	153	T	T	16 39 04.0	
	baz=340,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	29.35	153	T	T	16 39 01.1	
	baz=340,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	30.42	154	T	T	16 40 16.7	
	baz=341,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	30.43	154	T	T	16 40 18.3	
	baz=341,slow=76,SNR=20						
H11S2	WAKE ISLAND Hy	30.44	154	T	T	16 40 18.1	
	baz=341,slow=76,SNR=15						
WRA	Warramunga Arr	68.75	199	P	P	16 12 24.4	-0.6
	0.2nm,0.5s,baz=9.6,slow=6.7,SNR=3.2						
ASAR	Alice Springs	72.45	199	P	P	16 12 48.3	+0.8
	0.3nm,0.7s,baz=11,slow=5.4,SNR=6.6						
TXAR	Lajitas Array	77.26	61	P	P	16 13 15.6	-0.1
	0.4nm,0.5s,baz=294,slow=5.0,SNR=7.0						

IDC 23 16:29:51.3±2.0, **3°.35N**×**126°.32E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.4**/35, **mbtmp3.6**/4, **Error ellipse: s-maj=177.6km s-min=25.6km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.46	162	P	P	16 35 11.4	-0.8
	1.6nm,0.8s,baz=342,slow=10,SNR=18						
ASAR	Alice Springs	27.86	165	P	P	16 35 42.6	-0.3
	0.2nm,0.6s,baz=343,slow=7.2,SNR=8.3						
STKA	Stephens Creek	37.93	159	P	P	16 37 11.7	+1.1
	1.1nm,0.4s,baz=332,slow=12,SNR=5.9						
MKAR	Makanchi Array	57.63	326	P	P	16 39 43.1	-0.3
	0.2nm,0.5s,baz=132,slow=7.5,SNR=4.6						

IDC 23 16:31:23.6±1.5, **11°.71S**×**165°.00E**, **h0**^{km}, **mb3.7**/5, **mb1 3.9**/6, **mb1mx3.7**/34, **mbtmp3.8**/6, **ML3.3**/1, **Error ellipse: s-maj=46.4km s-min=28.2km az=117.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.40	173	Pn	Pn	16 33 54.3	0.0
	0.3nm,0.3s,baz=297,slow=21,SNR=9.7						
H11S2	WAKE ISLAND Hy	30.05	3	T	T	17 09 07.9	
	baz=186						
H11S3	WAKE ISLAND Hy	30.06	3	T	T	17 09 09.0	
	baz=186						
H11S1	WAKE ISLAND Hy	30.07	3	T	T	17 09 09.7	
	baz=186						
WRA	Warramunga Arr	30.57	251	P	P	16 37 39.2	-0.2
	1.2nm,0.8s,baz=80,slow=8.9,SNR=5.9						
ASAR	Alice Springs	31.84	244	P	P	16 37 50.1	-0.5
	0.3nm,0.9s,baz=71,slow=9.2,SNR=6.1						
SONM	Songino Array	78.77	324	P	P	16 43 29.4	+1.0
	0.4nm,0.8s,baz=131,slow=6.5,SNR=3.0						
ILAR	Eielson Array	84.37	19	P	P	16 43 56.8	-0.7
	0.6nm,0.8s,baz=231,slow=6.1,SNR=3.6						
MKAR	Makanchi Array	93.50	317	P	P	16 44 41.3	-0.1
	0.3nm,0.7s,baz=112,slow=7.1,SNR=3.5						

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*NEIC **23** 16:34:22.9±0.0, 17°.07N×99°.99W, h31^{km}, MD4.0(MEX), After MEX.*
MEX 23 16:34:23.0±0.8, **17°.07N**×**99°.99W**, **h31**^{km}±7^{km}, **MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	Acapulco	0.22	154	*e*P	Pb	16 34 28.0	-1.6
ACP2				*i* S	Sb	16 34 33.1	-0.9
CAIG	El Cayaco	0.27	265	*e*P	Pb	16 34 28.3	-1.9
CAIG				*e*S	Sb	16 34 33.4	-1.6
CAIG	El Cayaco	0.27	265	*e*P	Pb	16 34 28.3	-1.9
CAIG				*e*S	Sb	16 34 33.4	-1.6
MEIG	Mezcala	0.92	22	*e*P	Pn	16 34 37.0	-2.9
MEIG				*i* S	Sn	16 34 49.2	-2.9
MEIG	Mezcala	0.92	22	*e*P	Pn	16 34 37.0	-2.9
MEIG				*i* S	Sn	16 34 49.2	-2.9
ARIG	Puente Sto Nin	1.25	344	*e*P	Pn	16 34 42.2	-2.2
ARIG				*i* S	Sn	16 34 58.2	-2.0
ARIG	Puente Sto Nin	1.25	344	*e*P	Pn	16 34 42.2	-2.2
ARIG				*i* S	Sn	16 34 58.2	-2.0
PLIG	Platanillo	1.39	19	*e*P	Pn	16 34 45.0	-1.4
PLIG				*e*S	Sn	16 35 00.5	-3.2
PLIG	Platanillo	1.39	19	*e*P	Pn	16 34 45.0	-1.4
PLIG				*e*S	Sn	16 35 00.5	-3.2
ZIIG	Zihuatanejo	1.51	291	*e*P	Pn	16 34 46.3	-1.6
ZIIG				*e*S	Sn	16 35 04.2	-2.3
ZIIG	Zihuatanejo	1.51	291	*e*P	Pn	16 34 46.3	-1.6
ZIIG				*e*S	Sn	16 35 04.2	-2.3
YAIG	Yautepec	1.98	26	*e*P	Pn	16 34 52.4	-2.2
YAIG	Yautepec	1.98	26	*e*P	Pn	16 34 52.4	-2.2
PPM	Popocatepetl	2.37	33	*e*P	Pn	16 34 58.4	-1.8
PPM	Popocatepetl	2.37	33	*e*P	Pn	16 34 58.4	-1.8

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*DDA **23** 16:45:47.7, 38°.94N×43°.55E, h16^{km}, ML2.5*
*ISK **23** 16:45:47.4, 38°.92N×43°.53E, h18^{km}±1^{km}, ML2.0/3*
*ISCJB **23** 16:45:48.6±0.7, 38°.93N±0°.04×43°.56E±0°.06, h12^{km}±5^{km}, Error ellipse: s-maj=7.6km s-min=6.1km az=26.2*
ISC 23 16:45:47.6±0.9, **38°.95N**±0°.05×**43°.53E**±0°.04, **h17**^{km}±6^{km}, **n9**, σ**0^{s}.56**/16, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.05	37	*i* P	Pg	16 45 51.0	0.0
VMUR				*i* S	Sg	16 45 53.4	0.0
VMUR				IAML_P			
	comp=Z,5µm,0.1s						
ERCV	ERCIS-VAN	0.17	296	PG	Pg	16 45 52.3	+0.1
ERCV				SG	Sb	16 45 56.1	+0.6
CLDR	Caldiran	0.36	57	PG	Pb	16 45 55.5	-0.1
CLDR				SG	Sb	16 46 01.6	+0.5
CLDR	Caldiran	0.36	57	*i* P	Pb	16 45 55.6	-0.1
CLDR				*i* S	Sb	16 46 01.3	+0.2
CLDR				IAML_P			
	comp=Z,1µm,0.1s						
TVAN	Van	0.43	193	*i* P	Pb	16 45 56.6	-0.2
TVAN				*i* S	Sb	16 46 04.3	+1.2
TVAN				IAML_P			
	comp=Z,1µm,0.1s						
ADCV	BITLIS_Adilcev	0.65	258	*i* P	Pn	16 46 01.6	-0.5
ADCV				*i* S	Sn	16 46 11.8	-0.2
ADCV				IAML_P			
	comp=Z,526nm,0.1s						
TUTA	Tutak	0.72	309	*i* P	Pn	16 46 02.9	-0.3
TUTA				*i* S	Sn	16 46 13.3	-0.7
TUTA				IAML_P			
	comp=Z,692nm,0.2s						
AGRB	Hanur-Agry	0.75	326	PG	Pg	16 46 03.1	+0.7
AKDM	Akdamar-Van	0.75	215	PG	Pb	16 46 02.1	-0.3

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*ISCJB **23** 16:49:20.8±0.5, 52°.3N±0°.1×176°.14W±0°.08, h200^{km}, mb3.5/9, Error ellipse: s-maj=15.1km s-min=7.0km az=174.8*
*IDC **23** 16:49:24.0±1.1, 52°.49N×176°.30W, h200^{km}±9^{km}, mb3.3/9, mb1 3.5/11, mb1mx3.2/48, mbtmp3.8/11, MS3.1/1, Ms1 3.1/1, ms1mx2.6/31, Error ellipse: s-maj=21.0km s-min=10.1km az=169.0*
*NEIC **23** 16:49:23.6±0.0, 53°.24N×176°.57W, h56^{km}, ML3.7(AEIC), After AEIC.*
ISC 23 16:49:22.4±0.7, **52°.3N**±0°.1×**176°.15W**±0°.07, **h200**^{km}, **n23**, σ**2^{s}.23**/27, **mb3.6**/9, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.29	152	P	Pn	16 49 46.0	-3.0
GSIG				S	Sn	16 50 03.8	-5.6
ADK	Adak	0.49	223	P	Pn	16 49 46.6	-2.9
ADK				S	Sn	16 50 05.4	-5.0
KIWB	Kanaga Island	0.73	238	P	Pn	16 49 48.0	-2.6
KOWE	Korovin West	1.17	83	P	Pn	16 49 51.2	-2.2
KOFP	Korovin Flat P	1.26	88	P	Pn	16 49 52.1	-2.1
KOFP				S	Sn	16 50 15.6	-3.1
MREP	Makushin Rep't	5.88	71	P	Pn	16 50 47.7	-0.4
MSW	Makushin Switc	5.89	70	P	Pn	16 50 48.7	+0.6
UNV	Unalaska Valle	6.03	71	P	Pn	16 50 50.1	+0.1
KDAK	Kodiak Island	14.57	58	P	Pn	16 52 36.2	-2.8
	4.1nm,0.3s,baz=267,slow=5.4,SNR=58						
KDAK				S	S	16 55 08.1	-13
	0.1nm,0.3s,baz=305,slow=18,SNR=2.1						
PETK	Petropavlovsk-	15.86	283	P	Pn	16 52 54.6	-0.2
	0.1nm,0.3s,baz=72,slow=15,SNR=3.4						
BILL	Bilibino	17.97	338	*e*P	P	16 53 17.0	-0.5
ILAR	Eielson Array	19.53	39	P	P	16 53 33.2	-1.2
	0.3nm,0.3s,baz=238,slow=10,SNR=25						
SEY	Seymchan	19.75	315	P	P	16 53 36.9	+0.2
	0.2nm,0.3s,baz=106,slow=11,SNR=8.3						
MA2	Magadan	19.77	305	P	P	16 53 36.8	-0.2
	0.2nm,0.3s,baz=63,slow=7.9,SNR=5.7						
INK	Inuvik	25.80	35	P	P	16 54 35.8	+1.3
	0.7nm,0.3s,baz=241,slow=7.6,SNR=11						
ASAJ	Asahikawa	28.36	270	P	P	16 54 58.3	+0.7
	3.7nm,0.8s,baz=150,slow=20,SNR=2.7						
ASAJ				LR	LR	17 08 15.0	
	comp=Z,36nm,18.8s,baz=240,slow=40						
YKA	Yellowknife Ar	33.43	48	P	P	16 55 42.3	+0.5
	1.3nm,0.6s,baz=283,slow=8.3,SNR=19						
YKA				pP	pwP	16 56 25.0	-1.5
	0.3nm,0.8s,baz=282,slow=9.9,SNR=2.4						
MJAR	Matsushiro Arr	35.54	262	P	P	16 56 01.8	+1.6
	2.5nm,0.7s,baz=45,slow=5.8,SNR=9.1						
PDAR	Pinedale Array	44.48	75	P	P	16 57 15.7	+1.8
	1.3nm,0.5s,baz=313,slow=3.1,SNR=17						
PDAR				pP	pP	16 57 56.7	+0.2
	0.2nm,0.5s,baz=279,slow=6.2,SNR=1.4						
TXAR	Lajitas Array	56.91	84	P	P	16 58 49.0	+2.4
	0.8nm,0.7s,baz=302,slow=5.6,SNR=11						
MKAR	Makanchi Array	60.77	310	P	P	16 59 11.2	-1.6
	0.1nm,0.5s,baz=45,slow=7.9,SNR=3.2						
MKAR				pP	pP	16 59 58.6	+1.2
	0.2nm,0.6s,baz=43,slow=6.8,SNR=2.0						
WRA	Warramunga Arr	83.79	226	P	P	17 01 30.2	+1.1
	0.1nm,0.4s,baz=32,slow=5.7,SNR=5.5						
ASAR	Alice Springs	87.25	225	P	P	17 01 48.7	+2.6
	0.5nm,0.7s,baz=27,slow=5.0,SNR=8.4						

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*TIF **23** 16:53:26.9, 40°.36N×42°.28E, h14^{km}±1^{km}*
*ISK **23** 16:53:27.9, 40°.41N×42°.29E, h5^{km}, ML3.4/11*
*NSSP **23** 16:53:27.3, 40°.48N×42°.33E, h10^{km}, Ms3.2*
*DDA **23** 16:53:28.3, 40°.41N×42°.33E, h8^{km}±1^{km}, ML3.5*
ISC 23 16:53:28.5±0.9, **40°.40N**±0°.02×**42°.32E**±0°.02, **h11**^{km}±7^{km}, **n60**, σ**1^{s}.24**/78, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SENK	Senkaya-Erzuru	0.16	8	PG	Pg	16 53 32.2	-0.1
SENK				SG	Sg	16 53 34.8	-0.1
HOMI	Horasan	0.48	222	*i* P	Pb	16 53 38.2	-1.0
HOMI				IAML_P			
	comp=Z,22µm,0.1s						
KOPR	Koprukoy-ERZUR	0.55	221	PG	Pb	16 53 39.5	-0.7
KOPR				SG	Sb	16 53 48.2	0.0
DDEM	Demirkent	0.65	318	*i* P	Pb	16 53 41.6	-0.5
DDEM				IAML_P			
	comp=Z,36µm,0.2s						
DAGI	Agillar	0.74	335	*i* P	Pb	16 53 43.6	+0.1
DAGI				*i* S	Sn	16 53 54.7	-1.7
DAGI				IAML_P			
	comp=Z,54µm,0.3s						
DBAD	Bademkaya	0.78	322	*i* P	Pb	16 53 43.8	-0.3
DBAD				IAML_P			
	comp=Z,13µm,0.2s						
DIGO	Kars	0.80	89	*i* P	Pb	16 53 44.0	-0.7
DIGO				IAML_P			
	comp=Z,35µm,0.2s						
ARTV	Artvin	0.84	339	*i* P	Pb	16 53 45.0	-0.2
ARTV				*i* S	Sb	16 53 56.9	+0.3
ARTV				IAML_P			
	comp=N,13µm,0.2s						
ARTV				IAML_P			
	comp=Z,25µm,0.2s						
AGRB	Hanur-Agry	0.97	148	PG	Pb	16 53 47.1	-0.4
EAK	Akyaka	1.02	73	*i* P	Pb	16 53 47.6	-0.6
EAK				IAML_P			
	comp=Z,30µm,0.2s						
DBOC	Borcka	1.06	332	*i* P	Pb	16 53 48.7	-0.4
DBOC				*i* S	Sn	16 54 03.8	-0.5
DBOC				IAML_P			
	comp=Z,24µm,0.3s						
TUTA	Tutak	1.07	159	*i* P	Pn	16 53 49.3	-0.4
TUTA				*i* S	Sn	16 54 04.7	0.0
TUTA				IAML_P			
	comp=N,11µm,0.6s						
TUTA				IAML_P			
	comp=Z,30µm,0.3s						
EPOS	Posof	1.14	15	*i* P	Pn	16 53 50.5	-0.2
EPOS				*i* S	Sn	16 54 07.8	+1.4
BCA	Borcka	1.17	333	PN	Pb	16 53 50.1	-0.7
GMRZ	Gyumri	1.22	70	*e*P	Pg	16 53 55.0	+3.0
GMRZ				*e*S	Sn	16 54 13.0	+4.8
MLAZ	Malazgirt-MUS	1.27	172	PN	Pg	16 53 52.8	-0.2
BATM	Batumi	1.29	339	PN	Pg	16 53 53.4	+0.1
BGD	Bogdanovka	1.29	48	P	Pg	16 53 53.6	+0.1
BGD				S	Sn	16 54 12.0	+1.8
BGD	Bogdanovka	1.29	48	P	Pg	16 53 53.6	+0.1
BGD				S	Sn	16 54 12.0	+1.8
ECAT	Cat-ERZURUM	1.31	233	*i* P	Pg	16 53 54.0	+0.3
DYDN	Diyadin	1.36	129	*i* P	Pg	16 53 54.4	-0.2
DYDN				*i* S	Sg	16 54 14.9	+2.7
DYDN				IAML_P			
	comp=Z,7µm,0.4s						
CHOM	Cayeli-Rize	1.37	301	PN	Pg	16 53 54.9	0.0
CHAY	Cayeli-Rize	1.39	300	PN	Pg	16 53 55.1	-0.2
VRTB	Varto-Mus	1.41	209	PN	Pg	16 53 56.0	+0.4
VRTB	Varto-Mus	1.41	209	*i* P	Pg	16 53 55.0	-0.6
VRTB				IAML_P			
	comp=Z,11µm,0.6s						
IGDI	IGDIR	1.45	111	*i* P	Pg	16 53 56.0	-0.4
IGDI				*i* S	Sg	16 54 15.2	+0.1
IGDI				IAML_P			
	comp=Z,2µm,0.3s						
KOPT	Kop Dagi	1.45	255	*i* P	Pg	16 53 57.1	+0.7
KOPT				*i* S	Sg	16 54 19.8	+4.5
KOPT				IAML_P			
	comp=Z,679nm,0.3s						
TASB	TASBURUN-IGDIR	1.53	105	PN	Pg	16 53 57.9	+0.1
BAYB	BAYBURT	1.59	265	*i* P	Pg	16 53 58.6	-0.4
BAYB				IAML_P			
	comp=Z,4µm,0.3s						
ADCV	BITLIS_Adilcev	1.62	169	*i* P	Pg	16 53 59.6	-0.1
ADCV				IAML_P			
	comp=Z,1µm,0.3s						
BAYT	Aydıntepe-Bayb	1.67	270	PN	Pb	16 53 59.0	-0.4
STEZ	Stepenevan	1.69	69	*e*P	Pn	16 53 56.0	-2.1
STEZ				*e*S	Sn	16 54 19.0	-0.8
CLDR	Caldiran	1.76	135	PN	Pg	16 54 01.4	-0.9
CLDR	Caldiran	1.76	135	*i* P	Pg	16 54 02.2	0.0
CLDR				*i* S	Sg	16 54 26.2	+1.1
CLDR				IAML_P			
	comp=Z,2µm,0.4s						

TRLG	Trialeti	1.76	49	P	Pb	16 54 00.5	-0.5
KZRT	Kazreti	1.85	57	P	Pb	16 54 01.6	-0.9
GURO	Guroymak-BITLI	1.86	187	PN	Pb	16 54 02.4	-0.3
GNI	Garni	1.87	97	PN	Pb	16 54 02.8	0.0
GNI	Garni	1.87	97	*i* P	Pb	16 54 02.2	-0.6
GNI				*i* S	Sg	16 54 27.3	-1.3
BNGB	Bingl	1.90	222	PN	Pb	16 54 02.6	-0.6
MACK	Trabzon	2.02	286	*i* P	Pg	16 54 06.5	-0.7
MACK				IAML_P			
	comp=Z,8µm,0.2s						
KTUT	Trabzon	2.03	288	PN	Pb	16 54 04.2	-1.2
TVAN	Van	2.05	156	*i* P	Pg	16 54 07.5	-0.4
TVAN				IAML_P			
	comp=Z,1µm,0.3s						
AKDM	Akdamar-Van	2.13	166	PN	Pb	16 54 06.5	-0.8
ERZN	Erzincan	2.16	249	PN	Pb	16 54 06.3	-1.4
GEVA	Gevas	2.17	164	*i* P	Pg	16 54 10.0	-0.1
GEVA				IAML_P			
	comp=Z,956nm,0.1s						
TBLG	Delisi	2.26	53	PN	Pb	16 54 08.3	-1.0
TBLG	Delisi	2.26	53	P	Pb	16 54 09.7	+0.3
TBLG				S	Sg	16 54 39.6	-1.4
TBLG	Delisi	2.26	53	*i* P	Pb	16 54 09.1	-0.2
TBLG				*i* S	Sb	16 54 37.2	-0.1
BTNK	Botanikuri	2.27	55	P	Pb	16 54 08.4	-1.1
BTNK	Botanikuri	2.27	55	*i* P	Pb	16 54 08.5	-1.0
KELT	Kelkit	2.36	265	*i* P	Pb	16 54 12.0	+0.8
KELT				IAML_P			
	comp=Z,991nm,0.6s						
SRTM	Siirt_Merkez	2.43	187	*i* P	Pb	16 54 12.0	-0.3
SRTM				IAML_P			
	comp=Z,298nm,0.4s						
HANI	Diyarbakir_Han	2.48	217	*i* P	Pb	16 54 11.8	-1.5
HANI				IAML_P			
	comp=Z,186nm,0.3s						
TNCL	Tunceli-Merkez	2.50	240	*i* P	Pg	16 54 16.8	+0.3
TNCL				IAML_P			
	comp=Z,136nm,0.3s						
GUDG	Gudauri	2.62	37	P	Pb	16 54 14.8	-0.9
SUSE	Susehri	3.16	268	*i* P	Pg	16 54 27.8	-1.2
KEMA	Kemaliye	3.16	250	*i* P	Pb	16 54 25.4	+0.6
KEMA				IAML_P			
	comp=Z,166nm,0.2s						
CUZAR	Zara_SIVAS	3.53	263	*i* P	Pg	16 54 33.5	-2.6
ERBA	Erbaa	4.25	276	*i* P	Pb	16 54 45.2	+1.9

*IDC **23** 16:58:56.1±1.4, 9°.39S×124°.20E, h0km, mb3.7/2, mb1 3.7/5, mb1mx3.5/38, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=34.2km s-min=16.9km az=100.0*

ISC 23 16:59:03.5±1.2**, 10°.0S**±0°.1×**123°.8E**±0°.2**, h66km, n6, σ1ˢ30**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.29	213	Pg	Pn	16 59 14.8	+0.6
	235nm,0.3s,baz=257,slow=1.9,SNR=356						
FITZ	Fitzroy Crossi	8.28	168	Pn	Pn	17 01 02.1	+1.2
	0.3nm,0.3s,baz=349,slow=12,SNR=12						
FITZ				Sn	Sn	17 02 31.0	-1.9
	1.3nm,0.3s,baz=162,slow=18,SNR=9.9						
WRA	Warramunga Arr	14.19	136	Pn	Pn	17 02 22.2	+0.9
	0.2nm,0.3s,baz=301,slow=14,SNR=13						
WRA				Sn	Sn	17 04 56.1	-1.3
	0.4nm,0.3s,baz=302,slow=24,SNR=9.3						
ASAR	Alice Springs	16.68	146	Pn	P	17 02 55.5	+1.0
	0.2nm,0.3s,baz=319,slow=12,SNR=17						
ASAR				Sn	Sn	17 05 57.6	-0.2
	0.1nm,0.3s,baz=310,slow=20,SNR=6.5						
MKAR	Makanchi Array	67.56	330	P	P	17 09 52.5	-0.4
	0.4nm,0.5s,baz=134,slow=7.6,SNR=12						
ZALV	Zalesovo Beam	71.71	337	P	P	17 10 17.3	-1.0
	0.3nm,0.4s,baz=129,slow=4.6,SNR=1.9						

MAN 23 16:59:52.2, 9°.50N×126°.38E, h13km, mb4.0, ML2.8, MS2.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.91	235	*e*P	Pg	17 00 09.3	-0.6
BUTP				*e*S	Sn	17 00 24.9	+1.0
BUKP	Musuan	2.07	219	*e*P	Pn	17 00 26.2	-0.5
BUKP				*e*S	Sg	17 01 04.2	+5.4
BESP	Borongan	2.29	336	*e*P	Pn	17 00 30.5	+0.8
OCLP	Ormoc	2.33	312	*e*P	Pb	17 00 33.4	-0.6

*ISCJB **23** 17:02:40.3±1.3, 16°.5S±0°.2×172°.7W±0°.2, h17km, mb5.0/15, Error ellipse: s-maj=43.2km s-min=13.3km az=39.9*

*IDC **23** 17:02:40.9±24.0, 17°.18S×172°.68W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/40, mbtmp4.2/4, Error ellipse: s-maj=462.6km s-min=167.1km az=72.0*

*NEIC **23** 17:02:53.8±6.4, 16°.79S×172°.36W, h141km±67km, mb4.9/10, Error ellipse: s-maj=39.5km s-min=11.3km az=132.0*

ISC 23 17:02:41.0±1.5**, 16°.7S**±0°.3×**172°.4W**±0°.3**, h17km, n19, σ1ˢ16**/19**, mb5.0**/15**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUZ	Omahuta	22.30	211	*e*P	P	17 07 39.7	+2.0
	66nm,1.5s						
JOHN	Johnston Islan	33.32	5	*e*P	P	17 09 19.2	+1.1
	434nm,1.3s						
CTA	Charters Tower	39.32	259	P	P	17 10 09.3	-0.3
	1.6nm,0.4s,baz=93,slow=12,SNR=6.6						
CTAO	Charters Tower	39.32	259	*e*P	P	17 10 09.3	-0.3
	23nm,1.4s						
KHU	Kahuku	39.33	25	*e*P	P	17 10 09.4	-0.4
	341nm,1.5s						
COEN	Coen	42.87	267	*e*P	P	17 10 41.2	+2.3
	68nm,1.9s						
STKA	Stephens Creek	44.26	241	*e*P	P	17 10 49.3	-0.5
	5.0nm,1.9s						
STKA	Stephens Creek	44.26	241	P	P	17 10 49.6	-0.2
	1.0nm,0.5s,baz=85,slow=10,SNR=3.0						
BBOO	Buckleboo	49.02	241	*e*P	P	17 11 26.1	-1.0
	58nm,1.8s						
WC3	Warramunga Arr	50.47	258	*e*P	P	17 11 37.6	-0.8
	37nm,1.8s						
WB2	Warramunga Arr	50.49	258	*e*P	P	17 11 37.5	-1.1
	37nm,1.6s						
WRAB	Tennant Creek	50.50	258	*e*P	P	17 11 37.4	-1.2
	40nm,2.0s						
WR1	Warramunga Arr	50.51	258	*e*P	P	17 11 37.9	-0.7
	37nm,1.8s						
WRA	Warramunga Arr	50.51	258	P	P	17 11 37.9	-0.7
	1.5nm,0.3s,baz=98,slow=7.2,SNR=90						
AS01	Alice Springs	50.60	253	*e*P	P	17 11 38.3	-1.1
AS31	Alice Springs	50.65	253	*e*P	P	17 11 38.7	-1.0
	3.7nm,1.7s						
ASAR	Alice Springs	50.65	253	P	P	17 11 38.6	-1.1
	2.3nm,0.5s,baz=90,slow=7.7,SNR=98						
HMT	Hamilton	80.04	14	*e*P	P	17 14 49.2	-0.1
	74nm,0.9s						
CLL	Collm	145.19	354	*e*PKPbc	PKPbc	17 22 16.0	-1.1

*MOS **23** 17:04:42.7±0.9, 51°.50N×178°.09W, h53km, mb5.1/100, Error ellipse: s-maj=5.9km s-min=4.6km az=87.9*

*AEIC **23** 17:04:42.7±0.0, 51°.24N×177°.91W, h37km*

*IDC **23** 17:04:43.8±1.9, 51°.44N×178°.10W, h49km±17km, mb4.3/35, mb1 4.4/38, mb1mx4.4/51, mbtmp4.6/38, ML4.7/2, MS3.7/19, Ms1 3.7/19, ms1mx3.5/44, Error ellipse: s-maj=13.4km s-min=8.3km az=164.0*

*ISCJB **23** 17:04:43.7±0.5, 51°.50N±0°.03×178°.05W±0°.02, h63km±3km, mb5.1/483, Error ellipse: s-maj=4.7km s-min=2.1km az=0.4*

*BJI **23** 17:04:43.6, 51°.78N×178°.35W, h57km, mB5.1/38, mb5.0/59, Ms4.9/17, Ms7 4.6/9*

*NEIC **23** 17:04:45.2±0.3, 51°.49N×178°.12W, h62km±3km, mb5.1/292, ML4.7(AEIC), Error ellipse: s-maj=3.2km s-min=1.6km az=180.0*

ISC 23 17:04:44.1±0.7**, 51°.38N**±0°.05×**178°.04W**±0°.03**, h53km**±5km**, n1264, σ0ˢ89**/1316**, mb5.1**/497**, MS3.8**/23**, 37C-5D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	Kanaga Island	0.73	49	*e*Pn	Pn	17 04 57.5	-0.9
ADK	Adak	0.98	59	*e*Pn	Pn	17 05 00.8	-0.9
ADK				*e*Sn	Sn	17 05 13.5	-1.2
ADK	Adak	0.98	59	*e*P	Pn	17 05 00.8	-0.9
ADK				*e*		17 05 13.5	
SMY	Shemya	5.03	289	*e*Pn	Pn	17 05 55.6	-1.4
SMY	Shemya	5.03	289	*e*P	Pn	17 05 55.6	-1.4
NIKH	Nikolski High	5.88	71	*e*Pn	Pn	17 06 09.0	+0.4
NIKH				*e*Sn	Sn	17 07 13.1	-1.4
MSW	Makushin Switc	7.31	65	*e*Pn	Pn	17 06 29.2	+1.1
SPIA	Saint Paul Isl	7.38	35	*e*Pn	Pn	17 06 30.6	+1.4
SPIA				*e*Sn	Sn	17 07 55.0	+3.7
UNV	Unalaska Valle	7.45	66	*e*Pn	Pn	17 06 29.8	-0.2
AKMO	Akutan Morgan	7.79	65	*e*Pn	Pn	17 06 36.8	+2.0
ZRO	Akutan Zero	7.81	65	*e*Pn	Pn	17 06 36.7	+1.7
AKUT	Akutan	7.94	65	*e*Pn	Pn	17 06 38.2	+1.4
FALS	False Pass	9.46	63	*e*Pn	Pn	17 06 57.6	+0.1
SDPT	Sand Point	11.22	62	*e*Pn	Pn	17 07 21.3	-0.2
GAMB	Gambell	12.88	13	*e*Pn	Pn	17 07 46.8	+2.7
PET	Petropavlovsk	14.37	286	*e*Pn	Pn	17 08 03.9	-0.5
PET	Petropavlovsk	14.37	286	*e*P	Pn	17 08 03.9	-0.5
ANM	Nome	14.78	22	*e*Pn	Pn	17 08 11.4	+1.7
ANM	Nome	14.78	22	*e*P	Pn	17 08 11.4	+1.7
SII	Sitkinak Islan	14.93	60	*e*Pn	Pn	17 08 08.6	-3.1
PEA0B	Petropavlovsk-	14.94	286	*e*Pn	Pn	17 08 12.0	+0.1
PEA1	Petropavlovsk-	14.94	286	*e*Pn	Pn	17 08 12.8	+0.9
PETK	Petropavlovsk-	14.94	286	*e*Pn	Pn	17 08 12.7	+0.8
PETK	Petropavlovsk-	14.94	286	P	Pn	17 08 12.8	+0.9
	0.6nm,0.3s,baz=93,slow=19,SNR=10						
PETK				LR	LR	17 13 38.9	
	comp=Z,382nm,21.9s,baz=88,slow=36						
OHAK	Old Harbor	15.54	58	*e*Pn	Pn	17 08 15.0	-4.5
	107nm,0.6s						
SVW2	Sparrevohn	15.74	43	*e*Pn	Pn	17 08 22.5	+0.4
	44nm,1.0s						
KDAK	Kodiak Island	16.03	57	*e*Pn	Pn	17 08 22.1	-3.6
	70nm,0.4s						
KDAK	Kodiak Island	16.03	57	P	Pn	17 08 22.3	-3.4
	8.1nm,0.3s,baz=254,slow=7.0,SNR=46						
RSO	Redoubt South	16.73	47	*e*Pn	P	17 08 37.0	+0.6
HOM	Homer	16.99	51	*e*Pn	Pn	17 08 38.7	+0.9
	538nm,1.0s						
BRLK	Bradley Lake	17.39	51	*e*Pn	Pn	17 08 41.9	-0.9
	194nm,1.7s						
PPLA	Purkeypile	18.01	40	*e*P	Pn	17 08 51.3	+0.9
	57nm,0.8s						
SUA	Susitna One	18.02	45	*e*P	P	17 08 49.8	-0.6
	21nm,0.8s						
SEW	Seward	18.18	50	*e*P	P	17 08 50.7	-1.4
	215nm,1.8s						
RDOG	Red Dog Mine	18.28	18	*e*P	Pn	17 08 55.0	+1.4
	12nm,0.6s						
CAST	Castle Rocks	18.30	39	*e*P	P	17 08 52.6	-0.8
	33nm,0.8s						
RC01	Rabbit Creek A	18.34	47	*e*P	Pn	17 08 55.6	+1.3
	75nm,1.6s						
BILL	Bilibino	18.38	341	*e*P	P	17 08 55.0	+0.8
	38nm,0.5s						
BILL	Bilibino	18.38	341	*c i*P	Pn	17 08 55.8	+1.1
BILL				pmax	pmax		
	comp=Z,47nm,1.0s						
BILL				MLR	MLR		
	comp=Z,340nm,22.0s						
PMR	Palmer	18.79	46	*e*P	P	17 08 57.6	-1.1
	comp=Z,17nm,0.8s						
PMR	Palmer	18.79	46	*e*P	P	17 08 57.6	-1.1
PMR				pmax	pmax		
	comp=Z,17nm,0.8s						
GHO	Glory Hole Cre	18.94	45	*e*P	P	17 09 00.1	-0.4
	comp=Z,20nm,0.7s						
TRF	Thorofare Moun	19.03	40	*e*P	P	17 09 01.5	0.0
	comp=Z,52nm,0.9s						
KNK	Knik Glacier	19.03	47	*e*P	P	17 08 56.8	-4.7
	comp=Z,45nm,1.0s						
IM3	Indian Mountai	19.13	31	*e*P	P	17 09 03.5	+1.0
SML	Sawmill	19.22	46	*e*P	Pn	17 09 04.8	0.0
	comp=Z,44nm,0.8s						
SML	Sawmill	19.22	46	*e*P	Pn	17 09 04.9	0.0
SML				pmax	pmax		
	comp=Z,44nm,0.8s						
MA2	Magadan	19.33	307	*e*P	P	17 09 06.0	+1.4
	comp=Z,7.4nm,0.8s						
MA2	Magadan	19.33	307	*ce*P	P	17 09 05.9	+1.2
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MA2	Magadan	19.33	307	P	P	17 09 05.9	+1.2
	comp=Z,0.4nm,0.3s,baz=98,slow=11,SNR=9.6						
MA2				LR	LR	17 16 11.6	
	comp=Z,286nm,18.7s,baz=96,slow=36						
GLI	Glacier Island	19.51	49	*e*P	P	17 09 04.8	-1.9
	comp=Z,118nm,1.4s						
MID	Middleton Isla	19.56	53	*e*P	P	17 09 07.2	+0.1
	comp=Z,342nm,1.2s						
SEY	Seymchan	19.56	318	P	P	17 09 07.9	+0.8
	comp=Z,0.5nm,0.3s,baz=188,slow=1.6,SNR=14						
SEY				PcP	PcP	17 13 25.4	+0.4
	comp=Z,0.2nm,0.3s,baz=179,slow=3.2,SNR=4.1						
RND	Reindeer	19.59	41	*e*P	P	17 09 07.0	-0.6
	comp=Z,51nm,0.5s						
RND	Reindeer	19.59	41	*e*P	P	17 09 07.0	-0.6
RND				pmax	pmax		
	comp=Z,51nm,0.5s						
MLY	Manley	19.62	35	*e*P	P	17 09 08.2	+0.3
	comp=Z,40nm,0.8s						
SCM	Sheep Creek Mo	19.68	46	*e*P	P	17 09 08.1	-0.5
	comp=Z,55nm,0.6s						
SCM	Sheep Creek Mo	19.68	46	*e*P	P	17 09 08.1	-0.5
SCM				pmax	pmax		
	comp=Z,55nm,0.6s						
BWN	Browne	19.68	38	*e*P	P	17 09 08.8	+0.3
	comp=Z,75nm,0.8s						
MCK	McKinley	19.69	40	*e*P	P	17 09 08.4	-0.3
	comp=Z,31nm,0.6s						
MCK	McKinley	19.69	40	*e*P	P	17 09 08.4	-0.3
MCK				pmax	pmax		
	comp=Z,31nm,0.6s						
EYAK	Cordova Ski Ar	20.07	50	*e*P	P	17 09 12.0	-0.8
	comp=Z,124nm,1.6s						
DHY	Denali Highway	20.08	43	*e*P	P	17 09 12.6	-0.4
	comp=Z,146nm,0.6s						
DIV	Divide	20.20	49	*e*P	P	17 09 15.9	+1.7
	comp=Z,28nm,0.6s						
KLU	Klutina	20.22	48	*e*P	P	17 09 15.1	+0.6
	comp=Z,34nm,0.5s						
KLU				*e*S	S	17 12 54.2	-4.0
WRH	Wood River Hil	20.35	38	*e*P	P	17 09 14.8	-0.9
	comp=Z,13nm,0.8s						
MDM	Murphy Dome	20.51	37	*e*P	P	17 09 17.9	+0.4
	comp=Z,43nm,0.8s						
TCOL	CIGO, UAF Yank	20.61	38	P	P	17 09 19.2	+0.7
	baz=244,SNR=11						
COLA	College	20.62	38	*e*P	P	17 09 19.9	+1.3
	comp=Z,30nm,0.4s						
COLA	College	20.62	38	*e*P	P	17 09 19.9	+1.3
COLA				pmax	pmax		
	comp=Z,30nm,0.4s						
HMT	Hamilton	20.75	51	*e*P	Pn	17 09 22.6	-0.4
	comp=Z,396nm,2.0s						
HDA	Harding Lake	20.77	39	*e*P	P	17 09 19.0	-1.3
	comp=Z,22nm,0.7s						
HDA	Harding Lake	20.77	39	P	P	17 09 21.1	+0.8
	baz=246,SNR=18						
HARP	HAARP	20.82	45	*e*P	P	17 09 20.7	-0.2
	comp=Z,70nm,0.5s						
PAX	Paxson	20.86	44	*e*P	P	17 09 20.6	-0.7
	comp=Z,21nm,0.6s						
PAX	Paxson	20.86	44	*e*P	P	17 09 20.7	-0.7
PAX				pmax	pmax		
	comp=Z,21nm,0.6s						
POKR	Poker Plat Res	20.89	37	P	P	17 09 22.1	+0.6
	baz=244,SNR=13						
IL1	Eielson Array	20.95	38	*e*P	P	17 09 20.9	-1.3
ILAR	Eielson Array	20.95	38	P	P	17 09 21.2	-0.9
	comp=Z,8.2nm,0.7s,baz=240,slow=9.7,SNR=54						
ILAR				PcP	PcP	17 13 27.0	-0.6
	comp=Z,1.9nm,0.6s,baz=277,slow=3.0,SNR=8.6						
ILAR				ScP	ScP	17 17 00.0	+0.5
	comp=Z,0.9nm,0.9s,baz=262,slow=2.9,SNR=8.8						
ILAR				LR	LR	17 17 40.2	
	comp=Z,154nm,18.4s,baz=240,slow=37						
ILB	Eielson Array	20.95	38	*e*P	P	17 09 20.6	-1.6
	comp=Z,26nm,1.0s						
COLD	Coldfoot	21.01	30	*e*P	P	17 09 24.2	+1.3
	comp=Z,13nm,0.9s						
CRQM	Cirque	21.37	50	*e*P	P	17 09 26.7	-0.3
	comp=Z,167nm,2.0s						
RIDG	Independ'e Rid	21.38	42	*e*P	P	17 09 26.2	-0.6
	comp=Z,36nm,0.6s						
DOT	Dot Lake	21.68	42	*e*P	P	17 09 29.0	-1.0
	comp=Z,34nm,0.6s						
PRP	Porcupine Dome	21.79	37	*e*P	P	17 09 30.5	-0.8
	comp=Z,19nm,0.6s						
BALM	Baldy	21.81	50	*e*P	P	17 09 30.6	-0.9
	comp=Z,78nm,2.0s						
BALM	Baldy	21.81	50	*e*P	P	17 09 30.6	-0.9
BALM				pmax	pmax		
	comp=Z,78nm,2.0s						
SCRK	Sand Creek	21.82	42	*e*P	P	17 09 30.1	-1.5
	comp=Z,21nm,0.7s						
TOLK	Toolik Lake Re	22.04	28	*e*P	P	17 09 34.1	+0.2
	comp=Z,57nm,1.4s						
TOLK	Toolik Lake Re	22.04	28	P	P	17 09 34.4	+0.5
	baz=233,SNR=29						
FYU	Fort Yukon	22.35	35	*e*P	P	17 09 36.8	-0.4
	comp=Z,19nm,0.8s						
EGAK	Eagle	23.24	41	*e*P	P	17 09 45.2	-1.1
	comp=Z,38nm,0.6s						
KUR	Kuril'sk	23.34	268	*i* P	P	17 09 47.7	+0.2
DAWY	Dawson	23.78	43	*e*P	P	17 09 50.6	-0.9
	comp=Z,21nm,0.8s						
HYT	Haines Junctio	24.12	51	*e*P	P	17 09 53.1	-1.6
	comp=Z,34nm,1.7s						
TYV	Tymovskoe	24.48	284	*e*P	P	17 09 58.4	+0.5
TYV				pmax	pmax		
	comp=Z,14nm,0.7s						
TYV				pmax	pmax		
	comp=Z,400nm,4.9s						
NKL	Nikolayevsk	25.08	290	*e*P	P	17 10 02.8	-0.5
YUK	Yuzh-Kuril'sk	25.18	267	*i* P	P	17 10 03.2	-1.1
WHY	Whitehorse	25.40	52	*e*P	P	17 10 05.2	-1.1
	comp=Z,65nm,2.0s						
JIS	Juneau Island	25.69	57	*e*P	P	17 10 08.4	-0.4
	comp=Z,51nm,1.5s						
YSS	Yuzh-Sakhalins	25.79	276	*e*P	P	17 10 10.3	+0.4
	comp=Z,39nm,0.9s						
YSS	Yuzh-Sakhalins	25.79	276	⇓*i*P	P	17 10 10.8	+1.0
YSS				*e*		17 10 21.7	
YSS				*e*		17 10 29.0	
YSS				*e*S	S	17 14 37.2	+2.0
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
CRAG	Craig	26.71	63	*e*P	P	17 10 19.1	+1.0
	comp=Z,236nm,1.5s						
ASAJ	Asahikawa	27.18	270	P	P	17 10 22.6	+0.2
	comp=Z,18nm,0.8s,baz=300,slow=31,SNR=14						
ASAJ				LR	LR	17 19 34.7	
	comp=Z,98nm,21.6s,baz=79,slow=33						
INK	Inuvik	27.19	35	*e*P	P	17 10 21.5	-0.7
	comp=Z,5.5nm,0.8s						
INK				*e*PcP	PcP	17 13 41.1	+0.1
INK	Inuvik	27.19	35	*e*P	P	17 10 21.5	-0.7
INK				*e*		17 13 41.1	
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	Inuvik	27.19	35	P	P	17 10 21.6	-0.5
	comp=Z,3.7nm,0.4s,baz=228,slow=7.9,SNR=39						
INK				PcP	PcP	17 13 41.2	+0.3
	comp=Z,5.4nm,0.5s,baz=287,slow=3.0,SNR=17						
DIB	Dawson Inlet,	27.57	68	*e*P	P	17 10 26.2	+0.4
	comp=Z,340nm,1.9s						
ERM	Erimo	27.92	266	*e*P	P	17 10 29.8	+0.8
	comp=Z,32nm,1.0s						
ERM	Erimo	27.92	266	*e*P	P	17 10 29.8	+0.8
ERM				pmax	pmax		
	comp=Z,32nm,1.0s						
DLBC	Dease Lake	27.96	56	*e*P	P	17 10 28.8	-0.5
	comp=Z,43nm,1.9s						
DLBC	Dease Lake	27.96	56	P	P	17 10 28.8	-0.5
	comp=Z,2.4nm,0.7s,baz=278,slow=10,SNR=4.5						
BBB	Bella Bella	30.41	69	*e*P	P	17 10 52.3	+1.3
	comp=Z,316nm,1.6s						
KLR	Kul'dur	31.64	286	*d i*P	P	17 11 00.3	-1.5
ZEA	Zeya	32.65	296	*e*P	P	17 11 09.8	-0.9
ZEA				pmax	pmax		
	comp=Z,11nm,0.9s						
H11N2	WAKE ISLAND Hy	33.74	206	T	T	17 47 08.5	
	baz=17,slow=76,SNR=927						
H11N3	WAKE ISLAND Hy	33.75	206	T	T	17 47 11.4	
	baz=17,slow=76,SNR=827						
H11N1	WAKE ISLAND Hy	33.76	206	T	T	17 47 11.2	
	baz=17,slow=76,SNR=888						
USA0B	Ussuriysk Arra	33.76	278	*e*P	P	17 11 19.9	-0.5
	comp=Z,14nm,0.7s						
USRK	Ussuriysk Ar.	33.76	278	P	P	17 11 19.9	-0.6
	comp=Z,14nm,0.6s,baz=56,slow=9.4,SNR=42						
USRK				LR	LR	17 26 24.8	
	comp=Z,59nm,20.1s,baz=25,slow=39						
MJAR	Matsushiro Arr	34.25	262	P	P	17 11 24.8	-0.1
	comp=Z,5.0nm,0.7s,baz=49,slow=6.1,SNR=14						
MJAR				LR	LR	17 24 02.5	
	comp=Z,111nm,20.7s,baz=25,slow=34						
MAJO	Matsushiro	34.25	262	*e*P	P	17 11 24.3	-0.5
	comp=Z,84nm,1.9s						
MAJO	Matsushiro	34.25	262	*e*P	P	17 11 24.3	-0.5
MAJO				pmax	pmax		
	comp=Z,84nm,1.9s						
MAT	Matsushiro	34.25	262	P	P	17 11 24.3	-0.5
MJB9	Matsu-Tunnel	34.25	262	*e*P	P	17 11 24.8	0.0
	comp=Z,83nm,1.9s						
PGC	Sidney	34.51	73	*e*P	P	17 11 28.4	+1.5
	comp=Z,102nm,1.6s						
LLLB	Lillooet	34.62	69	*e*P	P	17 11 29.1	+1.2
	comp=Z,22nm,0.6s						
NLWA	Neilton Lookou	34.81	75	*e*P	P	17 11 29.6	0.0
	comp=Z,167nm,1.7s						
YKW3	Yellowknife Ar	34.87	46	*e*P	P	17 11 29.1	-0.7
	comp=Z,9.0nm,0.7s						
YKA	Yellowknife Ar	34.89	47	P	P	17 11 29.1	-0.8
	comp=Z,5.3nm,0.7s,baz=283,slow=7.7,SNR=77						
YKA				PcP	PcP	17 14 02.1	+0.6
	comp=Z,2.1nm,0.4s,baz=284,slow=3.1,SNR=21						
YKA				ScP	ScP	17 17 43.2	+1.0
	comp=Z,0.4nm,0.6s,baz=292,slow=3.3,SNR=4.6						
YKA				LR	LR	17 27 25.0	
	comp=Z,22nm,18.1s,baz=250,slow=39						
YKB5	Yellowknife Ar	34.89	47	*e*P	P	17 11 29.2	-0.7
YKB5				*e*PcP	PcP	17 14 02.1	+0.6
H11S1	WAKE ISLAND Hy	34.95	206	T	T	17 48 42.2	
	baz=17,slow=76,SNR=1275						
H11S2	WAKE ISLAND Hy	34.97	206	T	T	17 48 36.6	
	baz=17,slow=76,SNR=627						
H11S3	WAKE ISLAND Hy	34.97	206	T	T	17 48 43.5	
	baz=17,slow=76,SNR=750						
HLK	Haleakala	35.00	143	*e*P	P	17 11 31.7	+0.1
	comp=Z,680nm,1.7s						
MDJ	Mudanjiang	35.04	280	P	P	17 11 30.8	-0.7
MDJ				pmax	pmax		
	comp=Z,16nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,190nm,3.5s						
MDJ	Mudanjiang	35.04	280	*e*P	P	17 11 30.4	-1.0
	comp=Z,51nm,1.7s						
MSHR	Mys Shultsa	35.12	276	*i* P	P	17 11 31.7	-0.5
D03D	Eldon	35.22	74	P	P	17 11 34.8	+1.8
	baz=297						
JOHN	Johnston Islan	35.23	166	*e*P	P	17 11 34.2	+0.9
	comp=Z,361nm,1.2s						
B05A	Bryant	35.49	72	P	P	17 11 36.8	+1.5
	baz=297,SNR=6.5						
JHJ2	Mitsune	35.54	256	*e*P	P	17 11 36.3	+0.4
	comp=Z,1µm,1.6s						
B06A	Marblemount	35.74	72	*e*P	P	17 11 37.2	-0.2
	comp=Z,42nm,1.5s						
F04D	Rainier, OR	35.95	76	P	P	17 11 41.2	+1.9
	baz=299						
E04D	Cinebar	35.99	75	P	P	17 11 41.6	+2.0
	baz=299						
LON	Longmire	36.36	75	*e*P	P	17 11 44.0	+1.2
	comp=Z,18nm,1.1s						
LON	Longmire	36.36	75	*e*P	P	17 11 44.0	+1.2
LON				pmax	pmax		
	comp=Z,18nm,1.1s						
COR	Corvallis	36.52	79	*e*P	P	17 11 46.4	+2.3
	comp=Z,878nm,1.9s						
COR	Corvallis	36.52	79	*e*P	P	17 11 46.4	+2.3
KEBM	Edson Butte	36.78	82	*e*P	P	17 11 48.4	+1.9
	comp=Z,303nm,1.5s						
H04D	Lebanon	36.90	78	P	P	17 11 49.1	+1.8
	baz=301						
I03D	Drain, OR	36.95	80	P	P	17 11 49.2	+1.4
	baz=302						
F05D	White Salmon	36.99	76	P	P	17 11 49.1	+0.9
	baz=300						
B08A	Colville Reser	37.09	71	*e*P	P	17 11 49.8	+0.8
H04A	Detroit Lake	37.15	78	*e*P	P	17 11 51.1	+1.5

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      comp=Z,45nm,0.8s
K02D  Willamette Mer  37.29  82  P      P      17 11 52.2 +1.4
      baz=303
G05D  Wamic, OR       37.40  77  P      P      17 11 53.1 +1.4
      baz=301
I04A  Tendick Farm,   37.48  79  P      P      17 11 53.8 +1.4
      baz=302,SNR=5.0
L02E  Cave Junction   37.62  82  P      P      17 11 55.4 +1.8
      baz=304
E07A  Sunnyside       37.63  74  eP     P      17 11 55.1 +1.5
      comp=Z,9.0nm,0.6s
HUMO  Hull Mountain   37.77  81  eP     P      17 11 56.4 +1.6
      comp=Z,84nm,1.8s
I05D  Terrebonne, OR  37.85  78  P      P      17 11 57.2 +1.7
      baz=302
HAWA  Hanford         37.91  74  eP     P      17 11 57.0 +1.1
      comp=Z,19nm,0.7s
F07A  Phinny Hill Vi  37.91  75  eP     P      17 11 56.7 +0.7
      comp=Z,22nm,0.6s
D08A  Wollman Farm,   37.95  73  eP     P      17 11 56.9 +0.7
      comp=Z,17nm,0.6s
J04D  Umpqua Nationa  37.96  80  P      P      17 11 58.4 +1.8
      baz=303
C09A  Chrisman Ranch  37.98  71  eP     P      17 11 57.1 +0.6
      comp=Z,25nm,0.6s
CN2   Changchun       38.01 281  eP     P      17 11 54.5 -2.3
CN2                              ePP    PP     17 13 25.5 +1.2
CN2                              eS     S      17 17 40.5 -4.6
E08A  Dider Farm, El  38.14  73  eP     P      17 11 58.7 +0.8
      comp=Z,10nm,0.8s
KHMM  Horse Mountain  38.26  84  eP     P      17 12 01.2 +2.1
      comp=Z,143nm,1.9s
BOD   Bodaibo         38.35 307  eP     P      17 11 57.3 -2.2
BOD                               pmax  pmax
      comp=Z,5.0nm,2.3s
PINE  Pine Mountain   38.38  78  eP     P      17 12 00.9 +0.8
      comp=Z,36nm,1.3s
L04D  Klamath Falls   38.39  81  P      P      17 12 01.9 +1.7
      baz=304
YBH   Yreka Blue Hor  38.41  82  eP     P      17 12 02.5 +2.2
      comp=Z,12nm,0.8s
YBH   Yreka Blue Hor  38.41  82  P      P      17 12 02.1 +1.8
      comp=Z,8.8nm,0.7s,baz=332,slow=6.3,SNR=21
NEW   Newport         38.44  70  eP     P      17 12 01.0 +0.6
      comp=Z,46nm,0.6s
NEW   Newport         38.44  70  eP     P      17 12 01.0 +0.6
NEW                               pmax  pmax
      comp=Z,46nm,0.6s
NEW   Newport         38.44  70  P      P      17 12 01.0 +0.6
      baz=298,SNR=40
NEW   Newport         38.44  70  P      P      17 12 01.0 +0.6
      comp=Z,42nm,0.6s,baz=299,slow=7.2,SNR=96
J05D  Fort Rock, OR   38.47  79  P      P      17 12 02.7 +1.8
      baz=303,SNR=7.0
M02C  Callahan        38.51  83  P      P      17 12 02.9 +1.8
      baz=305
CBIJ  Chichi jima     38.51 246  eP     P      17 12 01.3 +0.1
JCJ   Chichijima      38.51 246  P      P      17 12 01.3 +0.1
      comp=Z,37nm,0.4s,baz=51,slow=14,SNR=4.2
KMRM  Mail Ridge      38.65  85  eP     P      17 12 04.2 +1.9
      comp=Z,162nm,2.0s
E09A  Wood Farm, Sta  38.68  73  eP     P      17 12 03.1 +0.7
      comp=Z,44nm,1.5s
G08A  Pilot Rock      38.81  75  eP     P      17 12 04.2 +0.6
      comp=Z,11nm,1.0s
N02D  Trinity Center  38.84  83  P      P      17 12 05.5 +1.6
      baz=305
M04C  Macdoel         38.92  82  P      P      17 12 06.1 +1.5
      baz=304,SNR=9.0
KCPM  Cahto Peak      39.04  86  eP     P      17 12 06.4 +0.8
      comp=Z,124nm,1.6s
I07A  Izee            39.11  77  eP     P      17 12 07.3 +1.1
      comp=Z,21nm,0.7s
WDC   Whiskeytown Da  39.17  84  eP     P      17 12 07.9 +1.4
      comp=Z,8.7nm,0.9s
WDC   Whiskeytown Da  39.17  84  eP     P      17 12 07.9 +1.4
WDC                               pmax  pmax
      comp=Z,9.0nm,0.9s
O02D  Mt. Diablo Mer  39.25  84  P      P      17 12 09.0 +1.7
      baz=306
F10A  Beach Ranch, E  39.50  73  eP     P      17 12 09.8 +0.4
      comp=Z,32nm,1.6s
RES   Resolute Bay    39.54  24  eP     P      17 12 09.5 +0.3
      comp=Z,7.4nm,1.5s
RES                              ePcP   PcP    17 14 15.7 +0.2
RES   Resolute Bay    39.54  24  eP     P      17 12 09.5 +0.3
RES                              e             17 14 15.7
RES                               pmax  pmax
      comp=Z,7.0nm,1.5s
RES   Resolute Bay    39.54  24  P      P      17 12 09.1 -0.1
      comp=Z,1.2nm,0.5s,baz=328,slow=10,SNR=7.5
RES                               PcP   PcP    17 14 15.9 +0.4
      comp=Z,3.6nm,0.6s,baz=36,slow=2.7,SNR=13
HOPS  Hopland Field   39.77  86  eP     P      17 12 15.8 +4.2
      comp=Z,96nm,1.4s
O03E  Paynes Creek    39.79  83  P      P      17 12 12.6 +0.8
      baz=306
MOD   Modoc Plateau   39.81  80  eP     P      17 12 13.0 +1.0
      comp=Z,17nm,0.7s
BMO   Blue Mountains  40.04  75  eP     P      17 12 14.3 +0.4
BMO   Blue Mountains  40.04  75  eP     P      17 12 14.3 +0.4
KSRS  Korea Array     40.11 271  P      P      17 12 14.8 +0.4
      comp=Z,4.6nm,0.7s,baz=56,slow=7.9,SNR=18
KS01  Wonju Array Si  40.12 271  eP     P      17 12 14.3 -0.1
J08A  Circle Bar Ran  40.13  77  eP     P      17 12 15.8 +1.1
      comp=Z,18nm,0.6s
KS15  Wonju Array Si  40.14 271  eP     P      17 12 14.8 +0.2
ORV   Oroville        40.41  84  eP     P      17 12 17.4 +0.5
      comp=Z,35nm,2.0s
ORV   Oroville        40.41  84  eP     P      17 12 17.4 +0.5
ORV                               pmax  pmax
      comp=Z,35nm,2.0s
WVOR  Wild Horse Val  40.54  79  eP     P      17 12 18.9 +0.9
      comp=Z,27nm,0.8s
WVOR  Wild Horse Val  40.54  79  eP     P      17 12 18.9 +0.9
WVOR                              pmax  pmax
      comp=Z,27nm,0.8s
BEKR  Beckworth       40.94  83  eP     P      17 12 22.6 +1.1
      comp=Z,11nm,0.6s
MSO   Missoula        41.02  70  eP     P      17 12 22.0 +0.1
      comp=Z,28nm,0.6s
MSO   Missoula        41.02  70  P      P      17 12 22.4 +0.5
      baz=301,SNR=15
RUBR  Rubicon Trail   41.55  84  eP     P      17 12 26.5  0.0
      comp=Z,34nm,0.7s
PAHR  Pah Rah Range   41.64  83  eP     P      17 12 28.4 +1.3
      comp=Z,12nm,0.7s
VCNR  Virginia City   41.72  83  eP     P      17 12 29.4 +1.5
      comp=Z,8.7nm,0.8s
PNTR  Pine Nut        41.88  83  eP     P      17 12 30.5 +1.3
      comp=Z,28nm,0.6s
CMB   Columbia Colle  42.02  85  eP     P      17 12 31.1 +1.0
      comp=Z,20nm,1.8s
CMB   Columbia Colle  42.02  85  eP     P      17 12 31.2 +1.0
CMB                               pmax  pmax
      comp=Z,20nm,1.8s
SAO   San Andreas Ge  42.15  88  eP     P      17 12 33.6 +2.5
      comp=Z,48nm,1.7s
SAO   San Andreas Ge  42.15  88  eP     P      17 12 33.6 +2.5
SAO                               pmax  pmax
      comp=Z,48nm,1.7s
YERR  Yerington       42.16  83  eP     P      17 12 32.0 +0.5
      comp=Z,9.8nm,0.8s
HRY   Holter Researc  42.32  69  eP     P      17 12 33.1 +0.5
WAKR  Walker          42.33  84  eP     P      17 12 34.2 +1.4
      comp=Z,8.8nm,0.8s
LRM   Limekiln Ridge  42.43  71  eP     P      17 12 32.6 -1.0
HLID  Hailey          42.48  75  eP     P      17 12 34.7 +0.7
      comp=Z,17nm,0.9s
HLID  Hailey          42.48  75  P      P      17 12 34.9 +0.8
      baz=304,SNR=19
BMN   Battle Mountai  42.55  80  eP     P      17 12 35.5 +0.9
      comp=Z,9.6nm,0.7s
BMN   Battle Mountai  42.55  80  eP     P      17 12 35.5 +0.9
BMN                               pmax  pmax
      comp=Z,10.0nm,0.7s
DLMT  Dillon          42.59  71  eP     P      17 12 35.8 +1.0
      comp=Z,5.0nm,0.6s
MCMT  McKenzie Canyo  42.73  72  eP     P      17 12 36.5 +0.5
KVN   Kaiserville     42.83  82  eP     P      17 12 37.9 +1.0
      comp=Z,12nm,1.2s
KVN   Kaiserville     42.83  82  eP     P      17 12 37.9 +1.0
KVN                               pmax  pmax
      comp=Z,12nm,1.2s
EGMT  Eagleton        42.84  67  eP     P      17 12 36.4 -0.3
      comp=Z,28nm,0.9s
EGMT  Eagleton        42.84  67  P      P      17 12 36.6 -0.2
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      baz=301,SNR=15
BOZ   Bozeman (W)     43.03  71  eP     P      17 12 38.5 +0.1
      comp=Z,20nm,0.6s
BOZ   Bozeman (W)     43.03  71  eP     P      17 12 38.5 +0.1
BOZ                               pmax  pmax
      comp=Z,20nm,0.6s
BOZ   Bozeman (W)     43.03  71  P      P      17 12 38.7 +0.3
      baz=303,SNR=32
NV01  Mina Array Sit  43.08  83  eP     P      17 12 39.6 +0.6
NVAR  Mina Array Bea  43.08  83  P      P      17 12 40.0 +1.0
      comp=Z,4.3nm,0.6s,baz=292,slow=7.5,SNR=16
NVAR                              PcP   PcP    17 14 28.7 +0.7
      comp=Z,2.4nm,0.8s,baz=273,slow=3.5,SNR=3.8
OMMB  Old Mammoth Mi  43.15  85  eP     P      17 12 40.7 +1.1
      comp=Z,6.2nm,1.1s
NV11  Mina Array Sit  43.17  83  eP     P      17 12 40.6 +1.0
      comp=Z,0.4nm,0.8s
PAGB  Antelope Grade  43.55  88  eP     P      17 12 43.7 +1.2
      comp=Z,28nm,1.5s
QLMT  Earthquake Lak  43.57  71  eP     P      17 12 44.0 +1.2
ELK   Elko            43.59  79  eP     P      17 12 43.8 +0.7
      comp=Z,18nm,0.8s
YHB   Horse Butte     43.75  71  eP     P      17 12 44.9 +0.6
      comp=Z,32nm,1.0s
FFC   Flin Flon       43.76  54  eP     P      17 12 42.6 -1.3
      comp=Z,8.8nm,1.4s
FFC                              ePcP   PcP    17 14 29.6 -0.1
FFC   Flin Flon       43.76  54  eP     P      17 12 42.6 -1.3
FFC                              e             17 14 29.6
FFC                               pmax  pmax
      comp=Z,9.0nm,1.4s
YMR   Madison River   43.94  71  eP     P      17 12 46.5 +0.8
      comp=Z,22nm,1.0s
YHH   Holmes Hill     43.94  71  eP     P      17 12 46.1 +0.3
      comp=Z,25nm,0.6s
TIN   Tinemaha, Big   43.98  85  P      P      17 12 47.0 +1.0
      baz=309
KWAJ  Kwajalein Atol  44.06 201  eP     P      17 12 48.4 +1.7
      comp=Z,613nm,1.3s
KWAJ  Kwajalein Atol  44.06 201  eP     P      17 12 48.4 +1.7
YNR   Norris Junctio  44.08  71  eP     P      17 12 48.1 +1.1
      comp=Z,25nm,0.9s
GCMT  Greycliff       44.08  69  eP     P      17 12 48.0 +1.1
YFT   Old Faithful    44.13  71  eP     P      17 12 49.1 +1.7
      comp=Z,14nm,0.8s
VES   Vestal, Richgr  44.21  87  P      P      17 12 48.0 +0.3
      baz=310
YPP   Pitchstone Pla  44.25  72  eP     P      17 12 49.2 +0.8
      comp=Z,29nm,1.9s
H17A  Grant Village   44.32  71  eP     P      17 12 50.7 +1.8
      comp=Z,23nm,0.6s
H17A  Grant Village   44.32  71  P      P      17 12 50.6 +1.7
      baz=304,SNR=24
LKWY  Lake            44.33  71  eP     P      17 12 50.8 +1.8
      comp=Z,13nm,0.8s
FLWY  Flagg Ranch     44.42  72  eP     P      17 12 51.0 +1.3
      comp=Z,18nm,0.6s
CWC   Cottonwood Cre  44.45  85  P      P      17 12 50.6 +0.7
      baz=310
FXWY  Fox Creek       44.48  73  eP     P      17 12 51.6 +1.4
      comp=Z,8.1nm,1.4s
HVU   Hansel Valley   44.49  76  eP     P      17 12 50.6 +0.5
      comp=Z,21nm,0.7s
HVU   Hansel Valley   44.49  76  eP     P      17 12 50.7 +0.5
HVU                               pmax  pmax
      comp=Z,21nm,0.7s
GRAC  Grapevine Rang  44.55  84  P      P      17 12 51.7 +1.1
      baz=309
MOOW  Moose Ponds     44.58  72  eP     P      17 12 51.9 +0.9
      comp=Z,17nm,1.8s
NRIK  Noril'sk        44.65 330  LR     LR     17 34 51.3
      comp=Z,79nm,18.3s,baz=50,slow=40
RLMT  Red Lodge       44.69  70  eP     P      17 12 52.1 +0.4
      comp=Z,45nm,1.1s
RLMT  Red Lodge       44.69  70  P      P      17 12 52.6 +0.8
      baz=304,SNR=30
ISA   Isabella, Lake  44.70  87  eP     P      17 12 52.1 +0.3
      comp=Z,9.3nm,1.1s
ISA   Isabella, Lake  44.70  87  eP     P      17 12 52.1 +0.3
ISA                               pmax  pmax
      comp=Z,9.0nm,1.1s
ISA   Isabella, Lake  44.70  87  P      P      17 12 52.3 +0.5
      baz=310
REDW  Red Top Meadow  44.74  73  eP     P      17 12 53.0 +0.8
      comp=Z,10nm,1.3s
SNOW  Snow King Moun  44.74  73  eP     P      17 12 53.5 +1.3
      comp=Z,14nm,1.4s
LOHW  Long Hollow     44.74  72  eP     P      17 12 53.1 +0.9
R11A  Troy Canyon, C  44.82  82  eP     P      17 12 53.2 +0.4
      comp=Z,6.9nm,0.7s
R11A                             ePcP   PcP    17 14 34.6 +0.7
R11A  Troy Canyon, C  44.82  82  P      P      17 12 53.3 +0.4
      baz=308,SNR=12
TULEG Thule           44.83  18  eP     P      17 12 51.9 -0.2
TULEG                            ePcP   PcP    17 14 32.5 -0.6
BGU   Big Grassy Mou  44.84  77  eP     P      17 12 53.6 +0.7
      comp=Z,24nm,1.4s
DAC   Darwin (Calif)  44.86  85  eP     P      17 12 54.4 +1.2
      comp=Z,4.1nm,0.8s
DAC   Darwin (Calif)  44.86  85  eP     P      17 12 54.4 +1.2
DAC                               pmax  pmax
      comp=Z,4.0nm,0.8s
AHID  Auburn Hatcher  44.93  74  eP     P      17 12 54.1 +0.4
      comp=Z,6.2nm,0.6s
MPMC  Manual Prospec  45.06  85  P      P      17 12 55.3 +0.4
      baz=310,SNR=5.3
FURC  Furnace Creek,  45.20  84  P      P      17 12 56.5 +0.9
      baz=310
TPNV  Topopah Spring  45.28  84  eP     P      17 12 56.9 +0.4
      comp=Z,18nm,0.8s
TPNV  Topopah Spring  45.28  84  eP     P      17 12 56.9 +0.4
TPNV                              pmax  pmax
      comp=Z,18nm,0.8s
TPNV  Topopah Spring  45.28  84  P      P      17 12 57.2 +0.7
      baz=309,SNR=10
LRMC  Laurel Mtn Rad  45.31  86  P      P      17 12 56.5 -0.3
      baz=310
HWUT  Hardware Ranch  45.33  75  eP     P      17 12 57.1 +0.3
      comp=Z,7.4nm,1.0s
DUG   Dugway, Tooele  45.41  78  eP     P      17 12 58.4 +0.9
      comp=Z,24nm,0.7s
DUG   Dugway, Tooele  45.41  78  P      P      17 12 58.3 +0.9
      baz=307,SNR=30
EDW2  Edwards Air Fo  45.50  87  P      P      17 12 58.7 +0.5
      baz=311
LAO   LASA Array      45.59  66  eP     P      17 12 59.2 +0.5
      comp=Z,37nm,0.6s
LAO   LASA Array      45.59  66  P      P      17 12 59.2 +0.5
      baz=304,SNR=13
FCC   Fort Churchill  45.62  46  eP     P      17 12 57.7 -0.9
      comp=Z,7.1nm,0.7s
FCC                              ePcP   PcP    17 14 35.7 -0.3
FCC   Fort Churchill  45.62  46  eP     P      17 12 57.7 -0.9
FCC                              e             17 14 35.7
FCC                               pmax  pmax
      comp=Z,7.0nm,0.7s
TCUT  Toone Canyon    45.71  76  eP     P      17 13 01.4 +1.5
      comp=Z,26nm,0.7s
CTU   Camp Tracy      45.76  76  eP     P      17 13 01.0 +0.7
      comp=Z,12nm,0.8s
DGMT  Dagmar          45.76  63  P      P      17 12 59.8 -0.2
      baz=303
PSUT  Pine Spring     45.78  80  eP     P      17 13 01.2 +0.7
      comp=Z,10nm,0.8s
BJI   Beijing         45.84 283⇓eP     P      17 13 01.1 +0.5
BJI                               S     S      17 19 37.9 -2.7
BJI                               pmax  pmax
      comp=Z,11nm,0.6s
PASC  Pasadena Art C  45.85  88  eP     P      17 13 02.5 +1.7
      comp=Z,9.9nm,0.9s
BJT   Baijiatuau      45.85 283  eP     P      17 13 01.7 +0.9
      comp=Z,11nm,0.7s
BJT   Baijiatuau      45.85 283  eP     P      17 13 01.7 +0.9
BJT                               pmax  pmax
      comp=Z,11nm,0.7s
BW06  Boulder Array   45.86  73  eP     P      17 13 01.6 +0.6
      comp=Z,14nm,0.7s
BW06  Boulder Array   45.86  73  P      P      17 13 01.5 +0.4
      baz=306,SNR=29
PD31  Pinedale Array  45.86  73  eP     P      17 13 01.7 +0.6
      comp=Z,22nm,1.1s
PDAR  Pinedale Array  45.86  73  P      P      17 13 01.5 +0.4
      comp=Z,11nm,0.5s,baz=309,slow=2.8,SNR=175
PDAR                              LR    LR     17 31 32.9
      comp=Z,110nm,21.3s,baz=316,slow=35
MWC   Mount Wilson    45.89  88  eP     P      17 13 03.7 +2.3
      comp=Z,15nm,1.3s
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SHOC  Shoshone, Teco  45.92  85  P      P      17 13 01.8 +0.4
      baz=310
GSC   Goldstone, Bar  45.98  86  eP     P      17 13 02.8 +0.9
      comp=Z,10nm,0.9s
GSC   Goldstone, Bar  45.98  86  eP     P      17 13 02.8 +0.9
GSC                               pmax  pmax
      comp=Z,10.0nm,0.9s
GSC   Goldstone, Bar  45.98  86  P      P      17 13 02.3 +0.4
      baz=310,SNR=8.1
JLU   Jordanelle      45.99  76  eP     P      17 13 03.3 +1.1
      comp=Z,17nm,0.9s
NLU   North Lily Min  46.00  77  eP     P      17 13 02.9 +0.7
      comp=Z,18nm,0.8s
BFSC  Mount Baldy Ra  46.13  87  P      P      17 13 03.4 +0.2
      baz=311
CIS   Catalina Islan  46.21  89  P      P      17 13 03.4 -0.3
      baz=312
SHPR  Sheep Range     46.23  83  eP     P      17 13 04.7 +0.7
      comp=Z,2.8nm,0.8s
MPU   Maple Canyon    46.24  77  eP     P      17 13 05.1 +1.1
      comp=Z,19nm,0.6s
TLY   Talaya          46.46 303  eP     P      17 13 06.2 +0.8
      comp=Z,4.3nm,0.9s
TLY   Talaya          46.46 303  eP     P      17 13 06.2 +0.8
TLY                               pmax  pmax
      comp=Z,4.0nm,0.9s
TCRU  Three Creeks R  46.60  79  eP     P      17 13 08.5 +1.6
      comp=Z,25nm,0.4s
ULN   Ulaanbaatar     46.68 297  eP     P      17 13 07.8 +0.4
      comp=Z,4.6nm,0.7s
ULN   Ulaanbaatar     46.68 297  eP     P      17 13 07.8 +0.4
ULN                               pmax  pmax
      comp=Z,5.0nm,0.7s
CCUT  Cedar City      46.69  81  eP     P      17 13 08.5 +0.8
      comp=Z,40nm,1.8s
MSU   Marysvale       46.82  79  eP     P      17 13 09.5 +0.8
MSU   Marysvale       46.82  79  eP     P      17 13 09.5 +0.8
SZCU  Shurtz Canyon   46.83  81  eP     P      17 13 10.3 +1.5
      comp=Z,26nm,0.8s
TMUT  Trail Mountain  46.93  78  eP     P      17 13 10.4 +0.7
      comp=Z,29nm,1.0s
GMRC  Granite Mounta  47.03  85  P      P      17 13 10.6 +0.4
      baz=311,SNR=5.1
SONA1 Songino Array   47.06 297  eP     P      17 13 10.5 +0.3
SONA0 Songino Array   47.07 297  eP     P      17 13 11.0 +0.6
SONA0                            ePcP   PcP    17 14 41.9 +0.4
SONA0                            eScP   ScP    17 18 32.8 +2.1
SONM  Songino Array   47.07 297  P      P      17 13 11.0 +0.6
      comp=Z,1.7nm,0.3s,baz=52,slow=9.3,SNR=31
SONM                              PcP   PcP    17 14 41.9 +0.4
      comp=Z,1.4nm,0.4s,baz=98,slow=1.9,SNR=11
SONM                              ScP   ScP    17 18 32.8 +2.1
      comp=Z,1.0nm,0.8s,baz=86,slow=2.8,SNR=4.5
LCMT  Little Creek M  47.10  81  eP     P      17 13 11.7 +1.0
      comp=Z,11nm,0.9s
LCMT                             ePcP   PcP    17 14 43.1 +1.2
MTPU  Mount Pierson   47.11  80  eP     P      17 13 12.3 +1.2
      comp=Z,11nm,0.9s
P17A  Butcher Ranch,  47.11  77  eP     P      17 13 11.6 +0.7
      comp=Z,30nm,0.6s
LDFC  Landfair        47.18  85  eP     P      17 13 11.8 +0.4
      comp=Z,23nm,0.4s
Q16A  Castle Valley   47.19  78  eP     P      17 13 12.5 +1.0
      comp=Z,20nm,0.6s
PFO   Pinyon Flats O  47.29  87  P      P      17 13 12.3  0.0
      baz=312
P18A  Preston Nutter  47.32  77  eP     P      17 13 13.5 +0.8
KNB   Kanab           47.36  81  eP     P      17 13 13.9 +1.0
      comp=Z,9.3nm,0.8s
KNB   Kanab           47.36  81  eP     P      17 13 13.9 +1.0
KNB                               pmax  pmax
      comp=Z,9.0nm,0.8s
PKCU  Pink Cliffs     47.41  80  eP     P      17 13 13.8 +0.4
      comp=Z,23nm,1.2s
SRU   San Rafael Swe  47.47  77  eP     P      17 13 14.2 +0.6
      comp=Z,34nm,0.6s
SRU   San Rafael Swe  47.47  77  eP     P      17 13 14.2 +0.6
SRU                               pmax  pmax
      comp=Z,34nm,0.6s
K22A  Casper          47.73  71  eP     P      17 13 15.5 -0.1
      comp=Z,17nm,0.6s
K22A  Casper          47.73  71  P      P      17 13 15.6  0.0
      baz=307,SNR=8.4
IRM   Iron Mountain   47.76  86  P      P      17 13 16.2 +0.4
      baz=311
BAR   Barrett         47.78  88  eP     P      17 13 16.3 +0.3
      comp=Z,28nm,1.8s
MONP2 Monument Peak   47.80  88  P      P      17 13 16.6 +0.3
      baz=312
BC3   Big Chuckawall  47.90  86  P      P      17 13 16.7 -0.2
      baz=312
RWWY  Rawlins         47.90  72  eP     P      17 13 17.6 +0.6
      comp=Z,50nm,1.4s
W13A  Hualapai Mount  47.93  84  eP     P      17 13 17.5 +0.2
      comp=Z,5.6nm,0.8s
U15A  North Rim       48.06  81  eP     P      17 13 19.2 +0.8
      comp=Z,19nm,0.9s
HHC   Hu-ho-hao-te    48.14 286  eP     P      17 13 19.4 +0.6
HHC                               pmax  pmax
      comp=Z,16nm,0.8s
SWSC  Sam W. Stewart  48.15  87  P      P      17 13 19.1 +0.3
      baz=312
IKP   In-Ko-Pah, Jac  48.15  88  P      P      17 13 19.2 +0.3
      baz=312
O20A  White River Ci  48.22  75  eP     P      17 13 19.5  0.0
      comp=Z,52nm,0.6s
O20A  White River Ci  48.22  75  P      P      17 13 19.8 +0.3
      baz=308,SNR=28
PDMCI Parker Dam,Lak  48.29  85  P      P      17 13 20.2 +0.4
      baz=311
RSSD  Black Hills     48.32  68  eP     P      17 13 19.8 -0.4
      comp=Z,14nm,0.6s
RSSD                             ePcP   PcP    17 14 46.5 +0.3
RSSD  Black Hills     48.32  68  eP     P      17 13 19.8 -0.4
RSSD                             e             17 14 46.5
RSSD                              pmax  pmax
      comp=Z,14nm,0.6s
RSSD  Black Hills     48.32  68  P      P      17 13 20.1 -0.1
      baz=306
Y12C  Blythe          48.41  86  eP     P      17 13 21.3 +0.5
      comp=Z,7.7nm,0.9s
Y12C  Blythe          48.41  86  P      P      17 13 21.2 +0.5
      baz=312
MDND  Maddock         48.66  62  eP     P      17 13 23.0 +0.5
      comp=Z,47nm,0.8s
GLA   Glamis          48.69  87  eP     P      17 13 22.9 -0.1
      comp=Z,5.8nm,0.6s
GLA   Glamis          48.69  87  eP     P      17 13 22.9 -0.1
GLA                               pmax  pmax
      comp=Z,6.0nm,0.6s
GLA   Glamis          48.69  87  P      P      17 13 23.5 +0.5
      baz=312
PV09  Paradox Valley  48.70  77  eP     P      17 13 23.5 +0.2
PV21  Cone Mtn., Par  48.76  77  eP     P      17 13 23.5 -0.2
      comp=Z,22nm,0.6s
PV23  Carpenter Ridg  48.80  77  eP     P      17 13 24.4 +0.3
      comp=Z,31nm,0.7s
PV10  Paradox Valley  48.83  77  eP     P      17 13 24.9 +0.6
      comp=Z,38nm,0.7s
PV14  Lion Creek, Pa  48.84  77  eP     P      17 13 24.4 +0.1
      comp=Z,26nm,0.6s
PV20  West Nyswonger  48.90  77  eP     P      17 13 25.0 +0.3
      comp=Z,30nm,0.7s
PV04  Paradox Valley  48.90  77  eP     P      17 13 24.8  0.0
      comp=Z,45nm,0.7s
PV19  Morning Glory   48.91  77  eP     P      17 13 24.5 -0.3
      comp=Z,24nm,0.7s
PV17  East Wray Mesa  48.94  77  eP     P      17 13 25.1  0.0
      comp=Z,61nm,0.6s
PV16  Nyswonger Mesa  48.95  77  eP     P      17 13 25.0 -0.2
      comp=Z,36nm,0.6s
PV11  David Mesa, Pa  48.98  77  eP     P      17 13 25.6 +0.3
      comp=Z,75nm,0.5s
PV05  Paradox Valley  48.98  77  eP     P      17 13 25.9 +0.5
      comp=Z,18nm,0.7s
PV12  Saucer Basin,   49.01  77  eP     P      17 13 25.6  0.0
      comp=Z,34nm,0.7s
PV03  Paradox Valley  49.02  77  eP     P      17 13 25.8 +0.1
      comp=Z,34nm,0.7s
PV07  Paradox Valley  49.03  77  eP     P      17 13 26.0 +0.3
      comp=Z,24nm,0.5s
PV13  Radium Mtn., P  49.10  77  eP     P      17 13 26.6 +0.2
      comp=Z,92nm,0.6s
PV02  Paradox Valley  49.12  77  eP     P      17 13 26.7 +0.2
      comp=Z,64nm,0.7s
N23A  Red Feather La  49.14  73  eP     P      17 13 27.2 +0.6
      comp=Z,22nm,1.1s
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N23A	Red Feather La	49.14	73	P	P	17 13 27.2	+0.6
	baz=308,SNR=9.2						
PHWY	Pilot Hill	49.18	72	*e*P	P	17 13 26.5	-0.4
	comp=Z,41nm,1.9s						
PV15	Paradox Valley	49.19	77	*e*P	P	17 13 27.3	+0.2
	comp=Z,26nm,0.6s						
BTO	Baotou	49.22	287	*e*P	P	17 13 27.5	+0.5
WUAZ	Wupatki	49.22	82	*e*P	P	17 13 27.8	+0.7
	comp=Z,13nm,0.8s						
WUAZ	Wupatki	49.22	82	P	P	17 13 27.8	+0.7
	baz=311,SNR=9.1						
Y14A	Wickenburg	49.24	84	*e*P	P	17 13 27.0	-0.1
	comp=Z,4.4nm,0.8s						
PV01	Paradox Valley	49.27	77	*e*P	P	17 13 27.4	-0.2
	comp=Z,42nm,0.7s						
NJ2	Nanjing	49.28	272	*e*P	P	17 13 27.8	+0.4
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ULM	Lac du Bonnet	49.28	57	*e*P	P	17 13 26.1	-1.1
	comp=Z,31nm,1.8s						
ULM	Lac du Bonnet	49.28	57	*e*P	P	17 13 26.1	-1.1
ULM				pmax	pmax		
	comp=Z,31nm,1.8s						
ULM	Lac du Bonnet	49.28	57	P	P	17 13 26.1	-1.1
	comp=Z,3.3nm,0.5s,baz=314,slow=7.8,SNR=11						
ULM				LR	LR	17 34 08.1	
	comp=Z,158nm,19.7s,baz=247,slow=36						
113A	Mohawk Valley,	49.54	86	*e*P	P	17 13 29.1	-0.3
	comp=Z,4.6nm,0.8s						
SMCO	Snowmass	49.59	75	*e*P	P	17 13 30.2	0.0
	comp=Z,9.1nm,0.6s						
KBS	Kingsbay	49.82	357	*e*P	P	17 13 31.0	+0.1
	comp=Z,63nm,1.4s						
KBS				*e*PcP	PcP	17 14 51.2	+0.4
KBS	Kingsbay	49.82	357	*e*P	P	17 13 31.0	+0.1
KBS				*e*		17 14 51.2	
KBS				pmax	pmax		
	comp=Z,63nm,1.4s						
X16A	Lo Mia Camp, P	49.90	83	*e*P	P	17 13 33.1	+0.7
	comp=Z,5.2nm,0.9s						
MVCO	Mesa Verde	49.90	78	*e*P	P	17 13 32.1	-0.3
	comp=Z,19nm,1.1s						
MVCO	Mesa Verde	49.90	78	P	P	17 13 32.6	+0.2
	baz=310,SNR=12						
ISCO	Idaho Springs	50.02	73	*e*P	P	17 13 34.5	+1.2
ISCO	Idaho Springs	50.02	73	*e*P	P	17 13 34.5	+1.2
ISCO	Idaho Springs	50.02	73	P	P	17 13 34.1	+0.7
	baz=309,SNR=11						
KNGR	Kungurtug, Tuv	50.26	304	*i* P	P	17 13 35.3	+0.5
SPA0	Spitsbergen Ar	50.40	356	*e*P	P	17 13 34.4	-0.9
SPA0				*e*PcP	PcP	17 14 52.9	-0.1
SPITS	Spitsbergen Ar	50.40	356	P	P	17 13 34.5	-0.9
	comp=Z,4.9nm,0.4s,baz=51,slow=6.6,SNR=42						
SPITS				PcP	PcP	17 14 52.6	-0.4
	comp=Z,2.6nm,0.5s,baz=64,slow=3.4,SNR=6.7						
AGMN	Agassiz Nation	50.43	59	*e*P	P	17 13 35.7	-0.3
	comp=Z,12nm,1.3s						
AGMN	Agassiz Nation	50.43	59	P	P	17 13 35.4	-0.6
	baz=307						
W18A	Petrified Fore	50.49	81	*e*P	P	17 13 37.5	+0.7
	comp=Z,12nm,0.8s						
W18A	Petrified Fore	50.49	81	P	P	17 13 37.6	+0.7
	baz=311						
S22A	4UR Ranch, Cre	50.58	76	*e*P	P	17 13 38.4	+0.8
	comp=Z,9.8nm,0.7s						
S22A	4UR Ranch, Cre	50.58	76	P	P	17 13 38.6	+1.0
	baz=310,SNR=22						
214A	Organ Pipe Nat	50.68	86	P	P	17 13 38.6	+0.4
	baz=313						
X18A	Snowflake	50.75	82	*e*P	P	17 13 39.4	+0.6
	comp=Z,8.6nm,0.8s						
Q24A	Divide	50.82	74	*e*P	P	17 13 39.6	+0.2
	comp=Z,8.3nm,0.7s						
Q24A	Divide	50.82	74	P	P	17 13 39.9	+0.5
	baz=310,SNR=5.8						
SUSD	Miller	51.04	65	P	P	17 13 40.6	0.0
	baz=308						
SDCO	Great Sand Dun	51.39	75	*e*P	P	17 13 44.2	+0.5
	comp=Z,10nm,0.8s						
SDCO	Great Sand Dun	51.39	75	P	P	17 13 44.2	+0.5
	baz=310,SNR=19						
OGNE	Ogallala	51.43	70	*e*P	P	17 13 44.1	+0.4
	comp=Z,48nm,1.1s						
TUC	Tucson	51.71	84	*e*P	P	17 13 45.8	-0.1
	comp=Z,6.7nm,0.8s						
TUC	Tucson	51.71	84	*e*P	P	17 13 45.8	-0.1
TUC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TUC	Tucson	51.71	84	P	P	17 13 46.5	+0.7
	baz=313						
YOJ	Yonaguni jima	52.01	262	*e*P	P	17 13 49.0	+0.9
	comp=Z,475nm,1.7s						
YOJ	Yonaguni jima	52.01	262	*e*P	P	17 13 49.0	+0.9
KSCO	Kaye Shedlock’	52.30	72	*e*P	P	17 13 51.1	+0.8
	comp=Z,28nm,1.0s						
KSCO	Kaye Shedlock’	52.30	72	P	P	17 13 51.0	+0.8
	baz=310						
T25A	Trinidad	52.44	75	*e*P	P	17 13 52.1	+0.7
	comp=Z,29nm,0.9s						
T25A	Trinidad	52.44	75	P	P	17 13 52.3	+0.9
	baz=311,SNR=17						
LAZ	Ladron	52.57	80	*e*P	P	17 13 53.6	+1.2
ANMO	Albuquerque	52.63	79	*e*P	P	17 13 53.1	+0.2
	comp=Z,6.1nm,0.9s						
ANMO	Albuquerque	52.63	79	*ce*P	P	17 13 53.2	+0.4
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANMO	Albuquerque	52.63	79	P	P	17 13 53.0	+0.2
	baz=312						
ECSD	EROS Data Cent	52.81	64	*e*P	P	17 13 52.8	-1.0
	comp=Z,7.7nm,0.6s						
ECSD	EROS Data Cent	52.81	64	P	P	17 13 52.6	-1.2
	baz=309,SNR=7.0						
LENM	Lemitar	52.83	80	*e*P	P	17 13 55.1	+0.8
LPM	Los Pinos Moun	52.94	79	*e*P	P	17 13 55.8	+0.7
EYMN	Ely	52.97	57	*e*P	P	17 13 54.0	-0.9
	comp=Z,8.0nm,0.7s						
EYMN				*e*PcP	PcP	17 15 04.9	+1.9
EYMN	Ely	52.97	57	P	P	17 13 54.7	-0.2
	baz=309						
BNM	Barren Site	53.05	80	*e*P	P	17 13 56.7	+0.7
NACB	Ninganchiao	53.10	263	*e*P	P	17 13 55.2	-1.0
	comp=Z,62nm,1.3s						
SUMG	Summit	53.18	14	*e*P	P	17 13 55.9	-0.7
	comp=Z,21nm,1.7s						
SUMG				*e*PcP	PcP	17 15 04.2	+0.3
SUMG	Summit	53.18	14	*e*P	P	17 13 55.9	-0.7
SUMG				*e*		17 15 04.2	
SUMG				pmax	pmax		
	comp=Z,21nm,1.7s						
319A	Douglas	53.28	84	*e*P	P	17 13 57.4	-0.2
	comp=Z,9.9nm,1.3s						
BGNE	Belgrade	53.40	67	*e*P	P	17 13 58.0	-0.2
	comp=Z,59nm,0.6s						
BGNE	Belgrade	53.40	67	P	P	17 13 57.7	-0.5
	baz=310,SNR=6.8						
121A	Cookes Peak, D	53.42	82	P	P	17 13 59.0	+0.3
	baz=313,SNR=7.4						
ILULI	Ilulissat	53.60	21	*e*P	P	17 13 59.3	+0.2
	comp=Z,103nm,1.9s						
ILULI	Ilulissat	53.60	21	*e*P	P	17 13 59.3	+0.2
ILULI				pmax	pmax		
	comp=Z,103nm,1.9s						
F37A	Hinrichs Farm,	53.76	60	P	P	17 14 00.5	-0.2
	baz=310						
E38A	The Farm, Brul	53.78	59	*e*P	P	17 13 59.4	-1.4
	comp=Z,16nm,0.6s						
E38A	The Farm, Brul	53.78	59	P	P	17 13 59.9	-1.0
	baz=309						
SSLB	Suanglung	53.78	263	*e*P	P	17 14 00.0	-1.2
	comp=Z,114nm,1.9s						
SPMN	Marine on St.	53.98	61	P	P	17 14 01.8	-0.6
	baz=310						
F38A	Pierce - Schro	54.02	59	P	P	17 14 02.7	+0.1
	baz=310,SNR=12						
XAN	Xi'an	54.12	281	P	P	17 14 02.9	-0.6
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,160nm,4.1s						
XAN	Xi'an	54.12	281	*e*P	P	17 14 03.0	-0.6
	comp=Z,5.5nm,0.6s						
XAN	Xi'an	54.12	281	*e*P	P	17 14 03.0	-0.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CBKS	Cedar Bluff	54.15	71	*e*P	P	17 14 04.1	+0.4
	comp=Z,32nm,0.7s						
CBKS	Cedar Bluff	54.15	71	*e*P	P	17 14 04.1	+0.4
CBKS				pmax	pmax		
	comp=Z,32nm,0.7s						
CBKS	Cedar Bluff	54.15	71	P	P	17 14 04.0	+0.2
	baz=311,SNR=6.2						
KNTN	Kanton	54.22	172	*e*P	P	17 14 05.0	+0.7
	comp=Z,246nm,1.6s						
TPUB	Ta-pu	54.34	263	*e*P	P	17 14 04.9	-0.4
	comp=Z,257nm,1.9s						
ZAA1	Zalesovo Array	54.37	314	*e*P	P	17 14 05.0	0.0
ZAA1				*e*PcP	PcP	17 15 08.7	+0.5
ZAA0	Zalesovo Array	54.37	314	*e*P	P	17 14 05.9	+0.9
ZAA0				*e*PcP	PcP	17 15 08.3	+0.1
ZALV	Zalesovo Beam	54.37	314	*e*P	P	17 14 05.5	+0.5
ZALV				*e*PcP	PcP	17 15 08.6	+0.4
ZALV	Zalesovo Beam	54.37	314	P	P	17 14 05.0	-0.1
	comp=Z,1.3nm,0.4s,baz=57,slow=5.8,SNR=8.5						
ZALV				PcP	PcP	17 15 08.7	+0.4
	comp=Z,4.5nm,0.5s,baz=32,slow=3.7,SNR=22						
ZALV				LR	LR	17 38 01.0	
	comp=Z,67nm,19.7s,baz=70,slow=37						
E39A	Mellen	54.46	58	P	P	17 14 04.7	-1.1
	baz=310						
G38A	Ridgeland	54.53	60	P	P	17 14 05.8	-0.5
	baz=310,SNR=6.7						
F39A	Loretta	54.56	59	P	P	17 14 06.0	-0.6
	baz=310,SNR=5.9						
H38A	Maiden Rock	54.61	61	P	P	17 14 07.0	0.0
	baz=310						
E40A	Wakefield	54.76	58	P	P	17 14 07.5	-0.5
	baz=310						
G39A	Holcombe	54.83	60	P	P	17 14 07.8	-0.7
	baz=310,SNR=6.5						
F40A	Park Falls	54.98	58	P	P	17 14 09.0	-0.6
	baz=310						
D41A	Chassel	55.07	56	*e*P	P	17 14 10.5	+0.3
	comp=Z,87nm,1.4s						
H39A	Augusta	55.16	60	P	P	17 14 10.3	-0.6
	baz=311						
E41A	Kenton	55.24	57	P	P	17 14 10.9	-0.5
	baz=310						
G40A	Rib Lake	55.36	59	*e*P	P	17 14 12.3	-0.1
	comp=Z,20nm,1.3s						
G40A	Rib Lake	55.36	59	P	P	17 14 11.8	-0.5
	baz=311						
COWI	Conover	55.39	58	*e*P	P	17 14 12.0	-0.5
	comp=Z,19nm,1.2s						
SFJD	Kangerlussuaq	55.47	22	*e*P	P	17 14 12.0	-0.7
	comp=Z,65nm,1.7s						
SFJD	Kangerlussuaq	55.47	22	*e*P	P	17 14 12.0	-0.7
SFJD				pmax	pmax		
	comp=Z,65nm,1.7s						
MNTX	Cornudas Mount	55.48	81	*e*P	P	17 14 13.9	+0.4
	comp=Z,12nm,0.8s						
MNTX	Cornudas Mount	55.48	81	P	P	17 14 13.8	+0.4
	baz=314,SNR=23						
MSTX	Muleshoe	55.54	77	*e*P	P	17 14 14.1	+0.2
	comp=Z,13nm,0.8s						
MSTX	Muleshoe	55.54	77	P	P	17 14 13.7	-0.3
	baz=313,SNR=10						
I39A	Houston	55.56	61	*e*P	P	17 14 13.1	-0.7
	comp=Z,16nm,0.8s						
I39A	Houston	55.56	61	P	P	17 14 13.4	-0.4
	baz=311						
AMTX	Amarillo	55.59	76	*e*P	P	17 14 14.3	0.0
	comp=Z,15nm,0.6s						
AMTX	Amarillo	55.59	76	P	P	17 14 14.3	0.0
	baz=313						
F41A	Three Lakes	55.64	58	*e*P	P	17 14 14.4	0.0
	comp=Z,21nm,0.6s						
F41A	Three Lakes	55.64	58	P	P	17 14 14.0	-0.3
	baz=311,SNR=7.6						
H40A	Chili	55.68	60	P	P	17 14 14.5	-0.1
	baz=311						
GDL2	Guadalupe Moun	55.77	80	*e*P	P	17 14 14.3	-1.3
KSU1	Kansas State U	55.80	68	*e*P	P	17 14 15.1	-0.4
	comp=Z,38nm,0.8s						
KSU1	Kansas State U	55.80	68	P	P	17 14 15.1	-0.4
	baz=312,SNR=6.4						
J39A	Decorah	55.80	62	P	P	17 14 14.4	-1.1
	baz=311,SNR=7.6						
E42A	Champion	55.82	57	P	P	17 14 15.2	-0.4
	baz=311						
LZH	Lanzhou	55.84	287	*e*P	P	17 14 17.3	+1.2
LZH				pP	pP	17 14 33.5	+3.1
LZH				sP	sP	17 14 40.3	+3.8
LZH				pmax	pmax		
	comp=Z,31nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.3s						
LZH				LR	LR		
	comp=Z,460nm,11.9s						
LZH				LR	LR		
	comp=Z,370nm,14.1s						
LZH				LR	LR		
	comp=Z,410nm,14.6s						
SCIA	State Center	55.89	64	*e*P	P	17 14 15.5	-0.7
	comp=Z,18nm,0.6s						
SCIA	State Center	55.89	64	P	P	17 14 16.1	-0.1
	baz=311						
DGZ	Jazzator, Alta	55.91	309	*i* P	P	17 14 16.9	+0.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GTA	Gaotai	56.00	292	P	P	17 14 17.3	+0.1
GTA				pmax	pmax		
	comp=Z,31nm,0.7s						
GTA				pmax	pmax		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=Z,120nm,19.0s						
GTA				LR	LR		
	comp=Z,120nm,17.5s						
CLNB	Carlsbad	56.02	79	*e*P	P	17 14 17.5	+0.1
I40A	Norwalk	56.03	61	P	P	17 14 16.5	-0.7
	baz=311						
H41A	Junction City	56.08	59	P	P	17 14 17.1	-0.4
	baz=311						
K39A	Oelwein	56.11	62	P	P	17 14 16.8	-1.0
	baz=311						
F42A	Maple Grove Fa	56.14	57	P	P	17 14 18.0	0.0
	baz=311						
U32A	Winter Ranch,	56.20	72	*e*P	P	17 14 18.1	-0.4
	comp=Z,33nm,0.7s						
J40A	Soldiers Grove	56.29	61	P	P	17 14 18.4	-0.7
	baz=311						
G42A	Mountain	56.33	58	*e*P	P	17 14 19.0	-0.2
	comp=Z,14nm,0.6s						
G42A	Mountain	56.33	58	P	P	17 14 19.0	-0.2
	baz=311						
I41A	Arkdale	56.33	60	*e*P	P	17 14 19.6	+0.3
	comp=Z,68nm,1.9s						
I41A	Arkdale	56.33	60	P	P	17 14 18.9	-0.3
	baz=311						
E43A	Lone Tree Farm	56.33	56	*e*P	P	17 14 18.9	-0.3
	comp=Z,42nm,0.6s						
E43A	Lone Tree Farm	56.33	56	P	P	17 14 19.2	0.0
	baz=311,SNR=7.2						
ENH	Enshi	56.35	278	*e*P	P	17 14 18.8	-0.9
	comp=Z,53nm,1.9s						
L39A	Vinton	56.43	63	P	P	17 14 19.1	-0.9
	baz=312,SNR=5.7						
K40A	Colesburg	56.53	62	P	P	17 14 19.8	-1.0
	baz=312						
F43A	Flat Rock, Esc	56.60	57	P	P	17 14 20.6	-0.6
	baz=312,SNR=6.5						
G43A	Wallace	56.71	58	*e*P	P	17 14 21.5	-0.4
	comp=Z,29nm,1.2s						
G43A	Wallace	56.71	58	P	P	17 14 21.6	-0.4
	baz=312						
J41A	Loganville	56.71	61	P	P	17 14 21.2	-0.8
	baz=312						
E44A	Grand Marais A	56.73	55	*e*P	P	17 14 22.1	+0.1
	comp=Z,123nm,1.8s						
E44A	Grand Marais A	56.73	55	P	P	17 14 22.4	+0.4
	baz=312						
H42A	Shiocton	56.75	59	*e*P	P	17 14 21.9	-0.3
	comp=Z,44nm,1.4s						
H42A	Shiocton	56.75	59	P	P	17 14 21.8	-0.5
	baz=312						
M39A	Webster	56.76	64	P	P	17 14 21.7	-0.7
	baz=312,SNR=8.9						
JFWS	Jewell Farm	56.88	61	*e*P	P	17 14 22.1	-1.1
	comp=Z,51nm,1.8s						
JFWS	Jewell Farm	56.88	61	*e*P	P	17 14 22.1	-1.1
JFWS				pmax	pmax		
	comp=Z,51nm,1.8s						
JFWS	Jewell Farm	56.88	61	P	P	17 14 22.1	-1.1
	baz=312						
F44A	Big Bay de Noc	56.90	56	P	P	17 14 23.1	-0.2
	baz=312						
L40A	Anamosa	56.91	63	*e*P	P	17 14 22.4	-1.0
	comp=Z,52nm,1.8s						
L40A	Anamosa	56.91	63	P	P	17 14 22.5	-1.0
	baz=312						
I42A	Draeger Farm,	56.96	60	*e*P	P	17 14 23.4	-0.3
	comp=Z,55nm,1.5s						
K41A	Shullsburg	57.05	62	P	P	17 14 23.5	-0.9
	baz=312,SNR=8.0						
M40A	Post Highland	57.18	63	P	P	17 14 24.8	-0.6
	baz=312						
H43A	Windswept, Lux	57.19	58	*e*P	P	17 14 25.0	-0.3
	comp=Z,79nm,1.4s						
H43A	Windswept, Lux	57.19	58	P	P	17 14 24.6	-0.7
	baz=312						
SCO	Scoresbysund	57.22	9	*e*P	P	17 14 25.4	+0.2
	comp=Z,103nm,2.0s						
SCO	Scoresbysund	57.22	9	*e*P	P	17 14 25.4	+0.2
SCO				pmax	pmax		
	comp=Z,103nm,2.0s						
J42A	Columbus	57.23	60	P	P	17 14 25.2	-0.4
	baz=312						
L41A	Preston	57.30	62	P	P	17 14 24.9	-1.2
	baz=312,SNR=5.5						
I43A	Langenfeld Bro	57.38	59	P	P	17 14 26.1	-0.6
	baz=312						
WMOK	Wichita Mounta	57.44	74	*e*P	P	17 14 27.1	-0.2
	comp=Z,11nm,0.8s						
WMOK	Wichita Mounta	57.44	74	*e*P	P	17 14 27.1	-0.2
WMOK				pmax	pmax		
	comp=Z,11nm,0.8s						
WMOK	Wichita Mounta	57.44	74	P	P	17 14 27.5	+0.2
	baz=313,SNR=13						
K42A	Prairie Point,	57.46	61	P	P	17 14 26.9	-0.4
	baz=312						
D46A	Sault St. Mari	57.52	54	P	P	17 14 27.6	0.0
	baz=312						
F45A	CMU Biological	57.56	56	P	P	17 14 27.8	-0.2
	baz=312						
E46A	Sault Ste Mari	57.73	55	P	P	17 14 29.1	0.0
	baz=312						
M41A	Milan	57.74	63	P	P	17 14 28.6	-0.7
	baz=312						
L42A	Oliver, Polo	57.81	62	*e*P	P	17 14 28.5	-1.3
	comp=Z,16nm,0.9s						
L42A	Oliver, Polo	57.81	62	P	P	17 14 29.0	-0.7
	baz=312						
F46A	Macinaw City C	57.90	56	P	P	17 14 30.2	-0.1
	baz=313						
N41A	Harden Midland	58.02	64	*e*P	P	17 14 30.5	-0.7
	comp=Z,32nm,1.1s						
N41A				*e*PcP	PcP	17 15 19.8	-2.9
N41A	Harden Midland	58.02	64	P	P	17 14 30.9	-0.3
	baz=313						
G46A	Petoskey	58.15	56	P	P	17 14 31.7	-0.4
	baz=313,SNR=5.6						
ARA0	ARCESS Array S	58.17	350	*e*P	P	17 14 31.2	-0.7
ARA0				*e*PcP	PcP	17 15 22.8	0.0
ARCES	ARCESS Array B	58.17	350	*e*P	P	17 14 30.8	-1.1
ARCES	ARCESS Array B	58.17	350	P	P	17 14 31.2	-0.7
	comp=Z,3.6nm,0.4s,baz=26,slow=6.8,SNR=49						
ARCES				PcP	PcP	17 15 22.8	0.0
	comp=Z,5.2nm,0.6s,baz=1.4,slow=4.9,SNR=5.9						
TX31	Lajitas Ar. Si	58.18	82	*e*P	P	17 14 32.3	-0.4
	comp=Z,14nm,1.3s						
TXAR	Lajitas Array	58.19	82	P	P	17 14 32.8	+0.1
	comp=Z,3.0nm,0.6s,baz=303,slow=4.9,SNR=46						
TXAR				LR	LR	17 38 32.5	
	comp=Z,49nm,18.2s,baz=0.0,slow=35						
E47A	Iron Bridge	58.20	54	P	P	17 14 32.4	0.0
	baz=313						
ABTX	Abilene, Hawle	58.37	76	*e*P	P	17 14 33.7	-0.1
	comp=Z,12nm,0.8s						
ABTX	Abilene, Hawle	58.37	76	P	P	17 14 33.9	+0.1
	baz=314,SNR=7.6						
N42A	Yates City	58.40	63	P	P	17 14 33.5	-0.3
	baz=313						
O41A	Passleys Farm,	58.40	64	P	P	17 14 33.2	-0.7
	baz=313,SNR=11						
TUL1	Leonard	58.42	71	*e*P	P	17 14 33.8	-0.4
	comp=Z,23nm,0.7s						
TUL1	Leonard	58.42	71	P	P	17 14 33.7	-0.5
	baz=314,SNR=9.4						
D48A	Paudash Townsh	58.45	53	P	P	17 14 33.7	-0.4
	baz=313						
H46A	Fife Lake	58.50	57	P	P	17 14 34.5	-0.1
	baz=313						
LVZ	Lovozero	58.55	346	*e*P	P	17 14 33.7	-0.9
	comp=Z,163nm,2.0s						
LVZ	Lovozero	58.55	346	*e*P	P	17 14 33.7	-0.9
LVZ				pmax	pmax		
	comp=Z,163nm,2.0s						
M43A	Waltham Townsh	58.58	62	P	P	17 14 34.6	-0.6
	baz=313						
P41A	Barry, Barry	58.60	65	P	P	17 14 34.5	-0.8
	baz=313,SNR=6.6						
D49A	Beulah Townshi	58.60	52	P	P	17 14 34.6	-0.6
	baz=313						
GLMI	Grayling	58.61	56	*e*P	P	17 14 35.3	0.0
	comp=Z,32nm,0.5s						
L44A	Lake County Fo	58.65	60	P	P	17 14 35.3	-0.3
	baz=313						
MATQ	Matagami	58.68	48	P	P	17 14 34.8	-0.9
	baz=314						
I46A	Reed City	58.78	58	P	P	17 14 36.7	+0.2
	baz=313						
F48A	Evansville	58.96	54	P	P	17 14 37.6	-0.1
	baz=314						
H47A	Mio	58.98	56	P	P	17 14 37.7	-0.2
	baz=313						
HDIL	Hopedale	58.99	63	*e*P	P	17 14 37.6	-0.4
	comp=Z,34nm,0.7s						
HDIL	Hopedale	58.99	63	P	P	17 14 37.4	-0.7
	baz=313,SNR=6.2						
Q41A	Truxton	58.99	65	P	P	17 14 37.2	-0.8
	baz=313,SNR=14						
P42A	Winchester	59.07	64	*e*P	P	17 14 37.9	-0.7
	comp=Z,30nm,1.2s						
P42A	Winchester	59.07	64	P	P	17 14 37.8	-0.7
	baz=313,SNR=5.6						
J46A	Howard City	59.08	58	P	P	17 14 37.9	-0.7
	baz=313						
M44A	Midewin, Midew	59.12	61	*e*P	P	17 14 38.9	0.0
	comp=Z,44nm,1.2s						
M44A	Midewin, Midew	59.12	61	P	P	17 14 38.4	-0.5
	baz=313						
O43A	Sugar Creek Fa	59.17	63	P	P	17 14 38.9	-0.3
	baz=313						
HHAR	Hobbs	59.26	69	*e*P	P	17 14 39.1	-0.8
	comp=Z,24nm,0.5s						
KURK	Kurchatov	59.36	314	*e*P	P	17 14 39.2	-1.2
KURK				*e*PcP	PcP	17 15 27.4	-0.4
KURK	Kurchatov	59.36	314	*ce*P	P	17 14 39.9	-0.5
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
R41A	Rosebud	59.36	66	P	P	17 14 39.6	-1.0
	baz=314,SNR=17						
Q42A	Golden Eagle	59.42	65	P	P	17 14 40.7	-0.3
	baz=314,SNR=20						
CD2	Chengdu	59.44	282	*e*P	P	17 14 40.0	-1.3
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
K46A	Dorr	59.46	59	P	P	17 14 40.6	-0.6
	baz=314						
N44A	Piper City	59.47	62	P	P	17 14 40.8	-0.6
	baz=314						
LSQQ	Lebel-sur-Quev	59.48	49	P	P	17 14 40.0	-1.3
	baz=315						
P43A	Skaggs, Pawnee	59.49	64	P	P	17 14 40.8	-0.7
	baz=314,SNR=9.1						
E50A	Wahnapitae	59.49	53	P	P	17 14 40.9	-0.5
	baz=314						
I48A	Sherman Twp	59.53	56	P	P	17 14 41.2	-0.4
	baz=314						
J47A	Sunmer	59.59	58	P	P	17 14 42.0	-0.1
	baz=314						
CCM	Cathedral Cave	59.60	66	*e*P	P	17 14 41.1	-1.2
	comp=Z,14nm,0.8s						
CCM				*e*PcP	PcP	17 15 28.4	-0.6
CCM	Cathedral Cave	59.60	66	*e*P	P	17 14 41.1	-1.2
CCM				*e*		17 15 28.4	
CCM				pmax	pmax		
	comp=Z,14nm,0.8s						
CCM	Cathedral Cave	59.60	66	P	P	17 14 41.6	-0.7
	baz=314						
S41A	Jillco Farms,	59.64	67	P	P	17 14 41.2	-1.3
	baz=314,SNR=41						

R42A	Luebbering	59.71	66	P	P	17 14 41.9	-1.1
	baz=314,SNR=10						
SCHQ	Schefferville	59.71	39	*e*P	P	17 14 41.9	-0.9
	comp=Z,47nm,1.9s						
SCHQ	Schefferville	59.71	39	P	P	17 14 41.8	-0.9
	comp=Z,2.7nm,0.9s,baz=283,slow=5.9,SNR=3.8						
O44A	Mansfield	59.73	63	P	P	17 14 42.5	-0.6
	baz=314						
WMQ	Urumqi	59.74	303	P	P	17 14 42.8	-0.4
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,500nm,5.5s						
WMQ				LR	LR		
	comp=Z,140nm,28.3s						
WMQ				LR	LR		
	comp=Z,170nm,21.1s						
WMQ	Urumqi	59.74	303	*e*P	P	17 14 42.5	-0.7
WMQ				*e*PcP	PcP	17 15 29.7	+0.1
WMQ	Urumqi	59.74	303	*e*P	P	17 14 42.5	-0.7
WMQ				*e*		17 15 29.7	
JCT	Junction City	59.77	78	*e*P	P	17 14 43.0	-0.5
	comp=Z,11nm,0.6s						
JCT	Junction City	59.77	78	*e*P	P	17 14 43.0	-0.5
JCT				pmax	pmax		
	comp=Z,11nm,0.6s						
JCT	Junction City	59.77	78	P	P	17 14 42.9	-0.7
	baz=315						
N45A	Kentland	59.78	61	P	P	17 14 43.4	0.0
	baz=314						
U40A	Yellville	59.84	68	P	P	17 14 42.9	-1.0
	baz=314,SNR=33						
Q43A	New Douglas	59.87	64	P	P	17 14 43.6	-0.5
	baz=314,SNR=7.7						
K47A	Vermontville	59.89	58	P	P	17 14 44.4	+0.2
	baz=314						
VLDQ	Val d'Or	59.92	50	*e*P	P	17 14 41.4	-2.9
	comp=Z,32nm,1.8s						
VLDQ				*e*PcP	PcP	17 15 29.1	-1.0
TOBO	Tobermory, Bru	59.93	54	P	P	17 14 44.5	+0.1
	baz=314						
T41A	Mountain View	60.00	67	P	P	17 14 43.7	-1.4
	baz=314,SNR=9.8						
M46A	Old House Fiel	60.03	60	*e*P	P	17 14 45.6	+0.4
	comp=Z,18nm,0.7s						
M46A	Old House Fiel	60.03	60	P	P	17 14 45.1	-0.1
	baz=314						
E51A	G1948 Merrick	60.04	52	P	P	17 14 44.4	-0.7
	baz=315						
S42A	Caledonia	60.06	66	P	P	17 14 44.3	-1.1
	baz=314,SNR=24						
O45A	Potomac	60.08	62	P	P	17 14 45.3	-0.1
	baz=314,SNR=9.9						
CHGQ	Chibougamau	60.08	46	P	P	17 14 44.3	-1.1
	baz=316						
W39A	Magazine	60.10	70	*e*P	P	17 14 45.3	-0.5
	comp=Z,15nm,0.6s						
W39A	Magazine	60.10	70	P	P	17 14 45.3	-0.5
	baz=314,SNR=9.3						
P44A	Sand Creek, Wi	60.12	63	P	P	17 14 45.6	-0.2
	baz=314,SNR=12						
FVM	French Village	60.12	66	*e*P	P	17 14 45.1	-0.8
	comp=Z,19nm,0.6s						
WHTX	Lake Whitney,	60.14	75	*e*P	P	17 14 45.7	-0.3
	comp=Z,21nm,0.6s						
WHTX	Lake Whitney,	60.14	75	P	P	17 14 45.1	-0.9
	baz=315,SNR=6.9						
N46A	Monticello	60.17	61	P	P	17 14 45.8	-0.4
	baz=314						
R43A	Red Bud	60.20	65	P	P	17 14 45.6	-0.8
	baz=314,SNR=8.7						
L47A	Sherwood	60.26	59	P	P	17 14 46.0	-0.7
	baz=314						
K48A	Perry	60.26	58	P	P	17 14 46.6	-0.1
	baz=314						
Q44A	Meyer Farm, Va	60.28	64	*e*P	P	17 14 46.2	-0.7
	comp=Z,35nm,1.0s						
Q44A	Meyer Farm, Va	60.28	64	P	P	17 14 46.4	-0.5
	baz=314,SNR=7.1						
SFIN	Lafayette	60.33	62	*e*P	P	17 14 47.0	-0.3
	comp=Z,44nm,0.8s						
SFIN	Lafayette	60.33	62	P	P	17 14 46.7	-0.5
	baz=314,SNR=12						
J49A	Marlette	60.39	57	P	P	17 14 47.8	+0.2
	baz=314						
U41A	Viola	60.40	68	P	P	17 14 46.5	-1.2
	baz=314,SNR=14						
T42A	Van Buren	60.40	67	*e*P	P	17 14 46.0	-1.8
	comp=Z,18nm,0.5s						
T42A	Van Buren	60.40	67	P	P	17 14 46.1	-1.6
	baz=314,SNR=12						
MK31	Makanchi Array	60.40	309	*e*P	P	17 14 45.4	-2.3
	comp=Z,1.7nm,0.8s						
MK31	Makanchi Array	60.40	309	*e*P	P	17 14 45.4	-2.3
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	Makanchi Array	60.40	309	*e*P	P	17 14 45.6	-2.0
MK32				*e*PcP	PcP	17 15 32.0	-0.1
MKAR	Makanchi Array	60.40	309	*e*P	P	17 14 45.0	-2.7
	comp=Z,18nm,0.6s						
MKAR	Makanchi Array	60.40	309	P	P	17 14 45.6	-2.0
	comp=Z,2.0nm,0.4s,baz=43,slow=6.8,SNR=73						
MKAR				PcP	PcP	17 15 32.0	-0.1
	comp=Z,0.9nm,0.4s,baz=60,slow=7.4,SNR=4.2						
MK01	Makanchi Array	60.41	309	*e*P	P	17 14 45.2	-2.5
M47A	Cromwell	60.46	60	P	P	17 14 47.7	-0.4
	baz=314						
KLBO	Killbear Provi	60.50	53	P	P	17 14 48.2	-0.1
	baz=315						
BMRO	Meriville Lake	60.52	55	P	P	17 14 48.5	0.0
	baz=315						
MAKZ	Makanchi	60.54	309	*e*P	P	17 14 47.2	-1.4
	comp=Z,2.7nm,0.5s						
MAKZ	Makanchi	60.54	309	*e*P	P	17 14 47.2	-1.4
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
P45A	Graceland, Par	60.56	63	*e*P	P	17 14 48.8	0.0
	comp=Z,98nm,1.9s						
P45A	Graceland, Par	60.56	63	P	P	17 14 48.5	-0.3
	baz=314						
S43A	Fulton Ridge,	60.61	66	P	P	17 14 48.4	-0.7
	baz=314,SNR=17						
E52A	Mattawa	60.62	52	P	P	17 14 48.3	-0.8
	baz=315						
K49A	Clarkson	60.63	57	P	P	17 14 49.2	0.0
	baz=314,SNR=6.2						
F52A	Sundridge	60.64	53	P	P	17 14 48.8	-0.5
	baz=315						
BRCO	Bruce Peninsul	60.66	55	P	P	17 14 48.8	-0.5
	baz=315						
MIAR	Mount Ida	60.68	70	*e*P	P	17 14 49.5	-0.1
	comp=Z,22nm,0.7s						
MIAR	Mount Ida	60.68	70	*e*P	P	17 14 49.5	-0.1
MIAR				pmax	pmax		
	comp=Z,22nm,0.7s						
MIAR	Mount Ida	60.68	70	P	P	17 14 49.7	0.0
	baz=315,SNR=20						
L48A	N Adams	60.69	59	P	P	17 14 49.4	-0.2
	baz=314,SNR=6.6						
R44A	Waltonville	60.70	65	P	P	17 14 49.1	-0.7
	baz=314,SNR=5.3						
BASO	Ashfield	60.70	55	P	P	17 14 50.1	+0.4
	baz=315						
N47A	Urbana	60.75	60	P	P	17 14 49.6	-0.5
	baz=314						
Q45A	Warren Harvey,	60.77	63	P	P	17 14 50.1	-0.2
	baz=314,SNR=15						
U42A	Revenden	60.78	67	P	P	17 14 48.9	-1.5
	baz=314,SNR=6.8						
GYA	Guiyang	60.79	277	P	P	17 14 50.1	-0.6
GYA				pP	pP	17 15 08.3	+3.4
GYA				PP	PP	17 17 08.0	+3.1
GYA				S	S	17 23 01.9	-2.2
GYA				SS	SS	17 27 01.6	-1.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.6s						
GYA				LR	LR		
	comp=Z,530nm,18.8s						
GYA				LR	LR		
	comp=Z,480nm,18.4s						
GYA				LR	LR		
	comp=Z,550nm,18.6s						
P46A	Rosedale	60.80	62	P	P	17 14 50.0	-0.5
	baz=314,SNR=5.6						
T43A	Greenville	60.82	66	P	P	17 14 49.9	-0.8
	baz=314,SNR=52						
IVI	Ivigtut	60.83	25	*e*P	P	17 14 49.8	-0.4
	comp=Z,200nm,1.9s						
BUKO	Buck Lake	60.85	53	P	P	17 14 50.3	-0.4
	baz=315						
AAM	Ann Arbor	60.86	58	*e*P	P	17 14 50.3	-0.4
	comp=Z,29nm,0.5s						
AAM	Ann Arbor	60.86	58	*e*P	P	17 14 50.3	-0.4
AAM				pmax	pmax		
	comp=Z,29nm,0.5s						
AAM	Ann Arbor	60.86	58	P	P	17 14 51.0	+0.2
	baz=315						
M48A	Edgerton	60.86	59	*e*P	P	17 14 50.9	+0.1
	comp=Z,43nm,0.7s						
M48A	Edgerton	60.86	59	P	P	17 14 50.2	-0.6
	baz=314						
435B	Jarrell	60.91	76	*e*P	P	17 14 51.5	+0.2
	comp=Z,14nm,0.8s						
WHAR	Wooly Hollow	60.91	69	*e*P	P	17 14 50.5	-0.8
	comp=Z,12nm,0.6s						
OLIL	Olney	60.92	64	*e*P	P	17 14 51.0	-0.3
	comp=Z,53nm,0.8s						
L49A	Milan	60.93	58	P	P	17 14 51.3	0.0
	baz=315,SNR=5.7						
O47A	Sheridan	60.94	61	P	P	17 14 50.6	-0.7
	baz=314,SNR=12						
PBMO	Poplar Bluff	60.95	67	*e*P	P	17 14 50.4	-1.1
	comp=Z,29nm,0.8s						
D54A	Lac Fusel, La	60.98	50	P	P	17 14 50.9	-0.7
	baz=316						
S44A	Carbondale	60.99	65	P	P	17 14 51.0	-0.7
	baz=314						
SIUC	Southern Illin	60.99	65	*e*P	P	17 14 51.2	-0.6
	comp=Z,22nm,0.8s						
W41B	Gary Mavity, V	61.02	69	*e*P	P	17 14 51.2	-0.8
	comp=Z,13nm,0.5s						
W41B	Gary Mavity, V	61.02	69	P	P	17 14 51.4	-0.6
	baz=315,SNR=10						
E53A	Dumoine, Ponti	61.04	51	P	P	17 14 51.0	-1.0
	baz=315						
R45A	Skylar, Fairfi	61.12	64	P	P	17 14 52.2	-0.4
	baz=315,SNR=7.3						
N48A	Decatur	61.13	60	P	P	17 14 51.8	-0.9
	baz=315,SNR=6.3						
X40A	Basin Creek Fa	61.15	70	*e*P	P	17 14 52.4	-0.5
	comp=Z,8.9nm,0.6s						
X40A	Basin Creek Fa	61.15	70	P	P	17 14 52.4	-0.5
	baz=315,SNR=8.6						
BVA0	Borovoye Array	61.19	320	*e*P	P	17 14 52.3	-0.6
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BRVK	Borovoye	61.21	320	*e*P	P	17 14 52.6	-0.4
BRVK				*e*PcP	PcP	17 15 35.0	-0.2
BRVK	Borovoye	61.21	320	*i* P	P	17 14 52.9	-0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
T44A	Benton	61.22	66	P	P	17 14 52.3	-1.0
	baz=315,SNR=6.6						
E54A	Lac Daplat, Po	61.24	51	P	P	17 14 52.5	-0.7
	baz=316						
UALR	University of	61.24	69	*e*P	P	17 14 53.0	-0.5
	comp=Z,10.0nm,0.8s						
M49A	Liberty Center	61.27	59	P	P	17 14 53.3	-0.3
	baz=315,SNR=5.2						
S45A	Carrier Mills	61.38	65	P	P	17 14 54.2	-0.2
	baz=315						
P47A	Martinsville	61.41	62	P	P	17 14 54.0	-0.6
	baz=315,SNR=22						
PARMO	Parma	61.42	66	*e*P	P	17 14 54.7	0.0
	comp=Z,62nm,0.7s						
G53A	Haliburton	61.46	53	P	P	17 14 54.2	-0.6
	baz=316						
O48A	Farmland	61.48	60	P	P	17 14 54.1	-0.9
	baz=315,SNR=11						
L50A	Kingsville	61.49	58	P	P	17 14 55.2	+0.1
	baz=315						
BLO	Bloomington	61.49	62	*e*P	P	17 14 54.8	-0.3
	comp=Z,28nm,0.6s						
BLO	Bloomington	61.49	62	*e*P	P	17 14 54.8	-0.3
BLO				pmax	pmax		
	comp=Z,28nm,0.6s						
833A	Chaparral WMA,	61.54	79	P	P	17 14 55.4	-0.2
	baz=316						
N49A	Columbus Grove	61.54	59	*e*P	P	17 14 54.6	-0.8
	comp=Z,30nm,0.8s						
N49A	Columbus Grove	61.54	59	P	P	17 14 54.8	-0.6
	baz=315,SNR=7.5						
WLAR	White Oak Lake	61.55	71	*e*P	P	17 14 55.6	0.0
	comp=Z,36nm,0.5s						
U44A	Portageville	61.57	66	P	P	17 14 55.7	+0.1
	baz=315						
R46A	Gibon Southern	61.61	64	P	P	17 14 55.8	-0.2
	baz=315						
HBAR	Harrisburg	61.68	68	*e*P	P	17 14 56.1	-0.3
	comp=Z,42nm,0.6s						
USIN	University of	61.70	64	*e*P	P	17 14 56.2	-0.3
	comp=Z,78nm,0.8s						
Q47A	Bedord North L	61.71	62	P	P	17 14 56.2	-0.4
	baz=315,SNR=12						
PEMO	Pembroke	61.75	51	P	P	17 14 55.6	-1.2
	baz=316						
GNAR	Gosnell	61.76	67	*e*P	P	17 14 57.5	+0.6
	comp=Z,67nm,1.4s						
T45A	Paducah	61.81	65	*e*P	P	17 14 56.6	-0.7
	comp=Z,46nm,0.6s						
T45A	Paducah	61.81	65	P	P	17 14 56.9	-0.3
	baz=315						
M50A	Fremont	61.81	58	*e*P	P	17 14 57.5	+0.2
	comp=Z,16nm,0.7s						
M50A	Fremont	61.81	58	P	P	17 14 57.2	-0.1
	baz=315						
S46A	Don Dixon Farm	61.87	64	P	P	17 14 57.6	0.0
	baz=315						
BANO	Bancroft	61.88	52	P	P	17 14 57.2	-0.5
	baz=316						
P48A	Milroy	61.89	61	P	P	17 14 57.1	-0.7
	baz=315,SNR=16						
O49A	Covington	61.98	60	*e*P	P	17 14 58.3	0.0
	comp=Z,87nm,2.0s						
O49A	Covington	61.98	60	P	P	17 14 57.9	-0.5
	baz=315						
NATX	Nacogdoches	61.98	73	*e*P	P	17 14 58.7	+0.2
	comp=Z,17nm,0.5s						
F55A	Otter Lake	62.07	51	P	P	17 14 58.0	-1.0
	baz=316						
Q48A	North Vernon	62.10	62	P	P	17 14 58.7	-0.5
	baz=315,SNR=5.6						
R47A	Wooly Knot Far	62.10	63	P	P	17 14 58.9	-0.4
	baz=315,SNR=7.0						
UTMT	University of	62.16	66	*e*P	P	17 14 59.7	+0.1
	comp=Z,82nm,0.5s						
HALT	Halls	62.19	67	*e*P	P	17 14 59.7	-0.1
	comp=Z,73nm,0.6s						
N50A	Nevada	62.20	59	P	P	17 14 59.9	0.0
	baz=315,SNR=12						
U45A	Rockin P Farm,	62.21	66	P	P	17 15 00.0	0.0
	baz=315						
T46A	Princeton	62.22	65	P	P	17 15 00.1	0.0
	baz=315,SNR=6.9						
P49A	Miami Univ. Ec	62.23	61	P	P	17 14 59.5	-0.6
	baz=315,SNR=11						
X43A	Marvell	62.28	69	*e*P	P	17 15 00.3	-0.2
	comp=Z,27nm,0.6s						
X43A	Marvell	62.28	69	P	P	17 15 00.2	-0.2
	baz=315						
WCI	Wyandotte Cave	62.28	63	*e*P	P	17 15 00.1	-0.3
	comp=Z,34nm,0.8s						
WCI	Wyandotte Cave	62.28	63	*e*P	P	17 15 00.1	-0.3
WCI				pmax	pmax		
	comp=Z,34nm,0.8s						
WCI	Wyandotte Cave	62.28	63	P	P	17 15 00.1	-0.3
	baz=315						
PLVO	Plevna	62.29	52	*e*P	P	17 15 00.2	-0.2
	comp=Z,72nm,1.9s						
PLVO	Plevna	62.29	52	P	P	17 14 59.9	-0.5
	baz=316						
DRWO	Darlington Wes	62.30	54	P	P	17 15 00.3	-0.2
	baz=316						
G55A	Calabogie	62.31	51	P	P	17 14 59.7	-0.8
	baz=316						
DRCO	St. Marys Ceme	62.31	54	P	P	17 15 00.8	+0.3
	baz=316						
M51A	Elyria	62.32	58	P	P	17 15 00.2	-0.4
	baz=316						
O50A	Cable	62.39	60	P	P	17 15 00.9	-0.3
	baz=315,SNR=15						
R48A	Northridge Ran	62.39	62	P	P	17 15 01.5	+0.3
	baz=315						
DELO	Deloro Mine	62.40	53	P	P	17 15 01.1	0.0
	baz=316						
S47A	Hartford	62.40	64	P	P	17 15 01.2	0.0
	baz=315,SNR=6.0						
WLVO	Wesleyville	62.43	53	P	P	17 15 01.4	+0.1
	baz=316						
Q49A	Aurora	62.51	61	P	P	17 15 01.4	-0.6
	baz=315						
N51A	Ashland	62.51	58	*e*P	P	17 15 01.9	-0.1
	comp=Z,29nm,0.9s						
N51A	Ashland	62.51	58	P	P	17 15 01.5	-0.5
	baz=316,SNR=5.9						
V45A	Humboldt	62.53	66	P	P	17 15 02.4	+0.3
	baz=315						
U46A	Springville	62.54	65	P	P	17 15 02.5	+0.4
	baz=315						
HKT	Hockley	62.56	76	*e*P	P	17 15 03.0	+0.8
	comp=Z,6.1nm,0.8s						
HKT	Hockley	62.56	76	*e*P	P	17 15 03.1	+0.8
HKT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
H55A	Tweed	62.59	52	P	P	17 15 02.0	-0.3
	baz=316						
M52A	Chesterland	62.61	57	P	P	17 15 02.4	-0.2
	baz=316						
LATQ	La Tuque	62.64	48	P	P	17 15 01.9	-0.8
	baz=317						
TRQ	Mont Tremblant	62.65	49	*e*P	P	17 15 01.0	-1.9
ACSO	Alum Creek Sta	62.68	59	*e*P	P	17 15 03.0	-0.1
	comp=Z,17nm,0.8s						
ACSO	Alum Creek Sta	62.68	59	P	P	17 15 03.0	-0.1
	baz=316						
P50A	Jamestown	62.68	60	P	P	17 15 03.0	-0.1
	baz=316,SNR=19						
T47A	Sharon Grove	62.70	64	*e*P	P	17 15 03.0	-0.3
	comp=Z,42nm,0.7s						
T47A	Sharon Grove	62.70	64	P	P	17 15 03.3	0.0
	baz=315,SNR=16						
W45A	Hickory Valley	62.81	67	P	P	17 15 04.0	0.0
	baz=316						
S48A	Wiedeman Farm,	62.82	63	P	P	17 15 03.9	-0.1
	baz=316,SNR=9.1						
ARU	Arti	62.85	329	*e*P	P	17 15 03.3	-0.7
	comp=Z,7.7nm,0.8s						
ARU	Arti	62.85	329*c*	*i*P	P	17 15 03.4	-0.5
ARU				*PP	pP	17 15 18.5	+0.1
ARU						17 15 40.2	
ARU						17 17 18.6	
ARU				S	S	17 23 31.3	+2.3
ARU				SS	SS	17 27 34.6	+0.9
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
R49A	Shelbyville	62.86	62	P	P	17 15 04.0	-0.3
	baz=316						
L53A	Girard	62.89	56	P	P	17 15 04.7	+0.3
	baz=316						
WVT	Waverly	62.90	65	*e*P	P	17 15 04.3	-0.3
	comp=Z,18nm,1.0s						
WVT	Waverly	62.90	65	*e*P	P	17 15 04.3	-0.3
WVT				pmax	pmax		
	comp=Z,19nm,1.0s						
WVT	Waverly	62.90	65	P	P	17 15 04.7	+0.1
	baz=316						
ERPA	Erie	62.91	56	*e*P	P	17 15 04.2	-0.3
	comp=Z,13nm,0.8s						
O51A	Pataskala	62.94	59	P	P	17 15 04.6	-0.2
	baz=316,SNR=9.8						
MEDO	Medina	62.95	54	P	P	17 15 05.0	+0.2
	baz=316						
N52A	McGinn's Farm,	62.95	58	P	P	17 15 05.3	+0.4
	baz=316						
V46A	Holladay	62.97	66	P	P	17 15 04.9	-0.1
	baz=316,SNR=9.0						
U47A	Clarksville	62.98	65	P	P	17 15 05.0	-0.1
	baz=316,SNR=6.3						
H56A	Elgin	63.01	52	P	P	17 15 05.3	+0.1
	baz=317						
T48A	Bowling Green	63.02	64	P	P	17 15 05.4	0.0
	baz=316,SNR=7.3						
M53A	WI Miller and	63.04	57	P	P	17 15 05.7	+0.2
	baz=316,SNR=5.5						
Q50A	Georgetown	63.12	61	P	P	17 15 06.1	+0.1
	baz=316,SNR=12						
OXF	Oxford	63.14	68	*e*P	P	17 15 05.8	-0.4
	comp=Z,39nm,0.6s						
OXF	Oxford	63.14	68	*e*P	P	17 15 05.8	-0.4
OXF				pmax	pmax		
	comp=Z,39nm,0.6s						
OXF	Oxford	63.14	68	P	P	17 15 06.0	-0.2
	baz=316,SNR=7.7						
S49A	Springfield	63.16	62	P	P	17 15 06.1	-0.1
	baz=316,SNR=13						
ALLY	Alegheny Colle	63.17	56	*e*P	P	17 15 06.9	+0.6
	comp=Z,22nm,0.8s						
P51A	Williamsport	63.17	60	*e*P	P	17 15 06.4	+0.1
	comp=Z,17nm,0.6s						
P51A	Williamsport	63.17	60	P	P	17 15 05.9	-0.4
	baz=316						
J55A	Hilton	63.20	54	P	P	17 15 06.3	-0.2
	baz=316						
V47A	Nunnelly	63.29	65	P	P	17 15 06.8	-0.4
	baz=316,SNR=8.2						
W46A	Michie	63.29	67	P	P	17 15 06.7	-0.5
	baz=316						
R50A	Paris	63.33	62	P	P	17 15 07.6	+0.2
	baz=316,SNR=13						
Q51A	Peebles	63.34	60	*e*P	P	17 15 07.8	+0.3
	comp=Z,40nm,0.8s						
Q51A	Peebles	63.34	60	P	P	17 15 07.7	+0.2
	baz=316,SNR=12						
U48A	Cassie Pea, Po	63.36	64	P	P	17 15 07.8	+0.2
	baz=316,SNR=17						
O52A	Adamsville	63.37	59	*e*P	P	17 15 07.7	+0.1
	comp=Z,54nm,0.9s						
O52A	Adamsville	63.37	59	P	P	17 15 07.8	+0.1
	baz=316,SNR=14						
K55A	Perry	63.46	54	P	P	17 15 07.9	-0.3
	baz=317						
T49A	Edmonton	63.50	63	*e*P	P	17 15 08.2	-0.4
	comp=Z,22nm,0.6s						
T49A	Edmonton	63.50	63	P	P	17 15 08.6	0.0
	baz=316,SNR=14						
M54A	Oil Creek Stat	63.52	56	*e*P	P	17 15 08.9	+0.3
	comp=Z,74nm,1.9s						
M54A	Oil Creek Stat	63.52	56	P	P	17 15 08.2	-0.4
	baz=316						
MMNY	Mt. Morris Dam	63.54	54	*e*P	P	17 15 08.7	0.0
	comp=Z,51nm,1.6s						
P52A	Corning	63.56	59	P	P	17 15 08.4	-0.5
	baz=316						
PLAL	Pickwick Lake	63.57	66	*e*P	P	17 15 08.4	-0.6
	comp=Z,20nm,0.6s						
X46A	Booneville	63.58	67	P	P	17 15 08.4	-0.7
	baz=316,SNR=6.3						
O53A	New Philadelph	63.61	58	P	P	17 15 09.0	-0.2
	baz=316						
W47A	Westpoint	63.66	66	P	P	17 15 09.6	0.0
	baz=316,SNR=13						
S50A	Richmond	63.72	62	P	P	17 15 10.0	0.0
	baz=316,SNR=7.9						
R51A	Hillsboro	63.73	61	P	P	17 15 10.4	+0.4
	baz=316,SNR=32						
N54A	Moraine State	63.74	57	*e*P	P	17 15 09.6	-0.6
	comp=Z,60nm,1.5s						
N54A	Moraine State	63.74	57	P	P	17 15 09.8	-0.3
	baz=316,SNR=5.6						
V48A	Smith Brothers	63.75	65	*e*P	P	17 15 09.8	-0.4
	comp=Z,20nm,0.9s						
V48A	Smith Brothers	63.75	65	P	P	17 15 10.0	-0.2
	baz=316,SNR=7.1						
U49A	Red Boiling Sp	63.79	64	P	P	17 15 10.4	0.0
	baz=316,SNR=10						
T50A	Nancy	63.95	63	P	P	17 15 11.7	+0.2
	baz=316,SNR=19						
OTUK	Ortayu	63.96	316	P	P	17 15 09.1	-2.4
OTUK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
Q52A	Bidwell	63.97	60	P	P	17 15 11.4	-0.2
	baz=316						
M55A	Ridgway	64.01	56	P	P	17 15 11.8	-0.1
	baz=317						
X47A	Russelville	64.03	67	P	P	17 15 11.4	-0.7
	baz=316,SNR=6.0						
P53A	Whipple	64.06	59	*e*P	P	17 15 12.1	-0.1
	comp=Z,61nm,1.5s						
P53A	Whipple	64.06	59	P	P	17 15 12.4	+0.2
	baz=316						
JAY	Jayapura	64.10	227	LR	LR	17 38 31.2	

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      comp=Z,104nm,21.0s,baz=37,slow=32
W48A  Pulaski            64.12  66  P      P      17 15 12.3 -0.3
      baz=316,SNR=16
VBMS  Vicksburg          64.13  70 eP      P      17 15 13.2 +0.5
      comp=Z,34nm,0.9s
VBMS  Vicksburg          64.13  70  P      P      17 15 13.1 +0.4
      baz=316
KLMR  Klimovskoe         64.13 341 eP      P      17 15 11.5 -0.8
KLMR                                pmax   pmax
      comp=Z,16nm,1.5s
KLMR  Klimovskoe         64.13 341 eP      P      17 15 11.5 -0.8
KLMR                                AMP           17 15 19.6
      comp=Z,16nm,1.6s
KMI   Kunming            64.19 278  P      P      17 15 14.4 +0.9
KMI                                 pP     pP     17 15 30.0 +2.2
KMI                                 sP     sP     17 15 37.0 +3.3
KMI                                 pmax   pmax
      comp=Z,21nm,0.5s
KMI                                 pmax   pmax
      comp=Z,130nm,4.2s
145A  Houston Renfro     64.20  70  P      P      17 15 13.1  0.0
      baz=316
S51A  Beattyville        64.20  62 eP      P      17 15 13.0 -0.1
      comp=Z,26nm,0.7s
S51A  Beattyville        64.20  62  P      P      17 15 13.1  0.0
      baz=316,SNR=7.1
R52A  Catlettsburg       64.22  60  P      P      17 15 13.0 -0.2
      baz=316,SNR=5.0
V49A  McMinnville        64.25  64  P      P      17 15 13.3 -0.2
      baz=316,SNR=12
U50A  Jamestown          64.38  63  P      P      17 15 14.4  0.0
      baz=316,SNR=12
N55A  Marion Center      64.40  56  P      P      17 15 14.3 -0.2
      baz=317
MOQ   Mont Orford        64.42  49 eP      P      17 15 13.3 -1.2
S52A  Salyersville       64.45  61  P      P      17 15 14.9 +0.1
      baz=316
NCB   Newcomb            64.46  51 eP      P      17 15 15.7 +0.9
      comp=Z,34nm,1.8s
T51A  Gray               64.49  62  P      P      17 15 15.0  0.0
      baz=316,SNR=12
W49A  Belvidere          64.51  65  P      P      17 15 14.9 -0.3
      baz=316,SNR=8.2
X48A  Hartselle          64.55  66 eP      P      17 15 14.5 -0.9
      comp=Z,18nm,0.6s
X48A  Hartselle          64.55  66  P      P      17 15 14.7 -0.7
      baz=316,SNR=8.1
R53A  Hurricane          64.60  60  P      P      17 15 16.1 +0.4
      baz=317,SNR=6.4
SWET  Sewanee            64.63  65 eP      P      17 15 15.5 -0.6
      comp=Z,22nm,0.8s
Q54A  Coxs Mills         64.73  59  P      P      17 15 16.4 -0.1
      baz=317
MCWV  Mont Chateau       64.76  58 eP      P      17 15 17.2 +0.4
MCWV                               ePcP    PcP    17 15 50.6 +0.6
V50A  Pikevile           64.77  64  P      P      17 15 16.7 -0.2
      baz=316,SNR=11
Y48A  Jasper             64.86  67  P      P      17 15 16.7 -0.8
      baz=316,SNR=7.1
U51A  La Follette        64.87  63  P      P      17 15 17.7 +0.1
      baz=317,SNR=11
P55A  Reedsville         64.88  58  P      P      17 15 17.3 -0.3
      baz=317
BINY  Binghamton         64.90  53 eP      P      17 15 17.5 -0.2
      comp=Z,70nm,1.8s
X49A  Woodville          64.91  66  P      P      17 15 17.5 -0.3
      baz=316,SNR=16
T52A  Hallie             64.92  62  P      P      17 15 18.4 +0.6
      baz=317,SNR=5.5
S53A  Williamson         64.97  61  P      P      17 15 18.3 +0.1
      baz=317
O56A  Blue Knob Stat     64.99  56 eP      P      17 15 16.9 -1.4
      comp=Z,76nm,1.9s
W50A  Signal Mountai     64.99  65 eP      P      17 15 18.5 +0.1
      comp=Z,37nm,0.8s
W50A  Signal Mountai     64.99  65  P      P      17 15 18.4  0.0
      baz=317,SNR=14
TZTN  Tazewell           65.01  62 eP      P      17 15 18.7 +0.3
      comp=Z,22nm,0.8s
TZTN  Tazewell           65.01  62  P      P      17 15 18.8 +0.3
      baz=317,SNR=5.4
SSPA  Standing Stone     65.08  56 eP      P      17 15 19.1 +0.3
      comp=Z,38nm,1.7s
SSPA  Standing Stone     65.08  56  P      P      17 15 18.9 +0.1
      baz=317
V51A  Loudon             65.10  63 eP      P      17 15 18.6 -0.4
      comp=Z,24nm,0.6s
V51A  Loudon             65.10  63  P      P      17 15 18.9 -0.1
      baz=317,SNR=8.4
147A  Livingston         65.12  68 eP      P      17 15 19.4 +0.2
      comp=Z,25nm,0.6s
147A  Livingston         65.12  68  P      P      17 15 19.1  0.0
      baz=317
Q55A  Buckhannon         65.12  58  P      P      17 15 19.3 +0.1
      baz=317
ACCN  Adirondack Com     65.17  51 eP      P      17 15 19.2 -0.1
      comp=Z,40nm,1.8s
U52A  Thorn Hill         65.22  62  P      P      17 15 20.1 +0.3
      baz=317,SNR=6.1
R54A  Victor             65.22  59  P      P      17 15 20.1 +0.2
      baz=317,SNR=5.3
T53A  Wise               65.25  61  P      P      17 15 20.7 +0.6
      baz=317,SNR=7.8
CPCT  Cooper Cave        65.26  64 eP      P      17 15 19.8 -0.3
      comp=Z,58nm,1.5s
W51A  Cleveland          65.33  64  P      P      17 15 20.4 -0.1
      baz=317,SNR=11
X50B  Fort Payne         65.33  65  P      P      17 15 20.2 -0.4
      baz=317,SNR=17
Y49A  Blount Mountai     65.34  66 eP      P      17 15 19.8 -0.8
      comp=Z,15nm,0.7s
Y49A  Blount Mountai     65.34  66  P      P      17 15 20.1 -0.5
      baz=317
PQI   Presque Isle       65.34  45 eP      P      17 15 20.0 -0.4
      comp=Z,57nm,1.8s
KSPA  Keystone Colle     65.48  54 eP      P      17 15 21.7 +0.3
      comp=Z,32nm,1.5s
V52A  Sevierville        65.49  63 eP      P      17 15 21.7 +0.1
      comp=Z,44nm,1.0s
V52A  Sevierville        65.49  63  P      P      17 15 21.7 +0.1
      baz=317,SNR=7.9
TKL   Tuckaleechee C     65.53  63 eP      P      17 15 21.9 +0.2
      comp=Z,40nm,0.9s
TKL   Tuckaleechee C     65.53  63 eP      P      17 15 22.0 +0.2
TKL                                 pmax   pmax
      comp=Z,40nm,0.9s
LRAL  Lakeview Retre     65.59  67 eP      P      17 15 21.6 -0.6
      comp=Z,14nm,0.8s
LRAL  Lakeview Retre     65.59  67  P      P      17 15 21.5 -0.8
      baz=317,SNR=7.8
R55A  Marlinton          65.62  59  P      P      17 15 22.7 +0.2
      baz=317
U53A  Fall Branch        65.68  62  P      P      17 15 23.1 +0.2
      baz=317,SNR=8.5
Y50A  Piedmont           65.70  66  P      P      17 15 22.5 -0.4
      baz=317,SNR=12
X51A  Calhoun            65.71  65 eP      P      17 15 23.6 +0.6
      comp=Z,38nm,0.9s
X51A  Calhoun            65.71  65  P      P      17 15 23.4 +0.4
      baz=317
T54A  Tazewell           65.72  61  P      P      17 15 23.8 +0.6
      baz=317,SNR=11
BATG  Bathurst New B     65.73  44 eP      P      17 15 22.0 -1.0
      comp=Z,51nm,1.8s
Z49A  Columbiana         65.75  67  P      P      17 15 22.7 -0.5
      baz=317,SNR=11
S55A  Lewisburg          65.79  59  P      P      17 15 23.3 -0.2
      baz=317
PKME  Peaks-Kenny Pk     65.83  47 eP      P      17 15 23.2 -0.4
      comp=Z,62nm,1.8s
W52A  Murphy             65.85  64 eP      P      17 15 23.9  0.0
      comp=Z,63nm,1.3s
W52A  Murphy             65.85  64  P      P      17 15 23.9  0.0
      baz=317,SNR=7.9
FIA1  FINESS Array S     65.88 348 eP      P      17 15 21.7 -1.9
      comp=Z,46nm,1.8s
FIA0  FINESS Array S     65.88 348 eP      P      17 15 22.2 -1.4
FIA0  FINESS Array S     65.88 348 eP      P      17 15 22.2 -1.4
FINES FINESS Array B     65.88 348 i P     P      17 15 22.7 -0.9
FINES                               pmax   pmax
      comp=Z,2.0nm,0.4s
FINES FINESS Array B     65.88 348  P      P      17 15 22.2 -1.4
      comp=Z,2.2nm,0.4s,baz=24,slow=5.6,SNR=33
N59A  State Game Lan     65.95  54 eP      P      17 15 24.3 -0.2
      comp=Z,10nm,0.6s
N59A  State Game Lan     65.95  54  P      P      17 15 23.9 -0.6
      baz=318
PAGS  Pennsylvania G     65.98  55 eP      P      17 15 24.8 +0.2
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      comp=Z,23nm,1.2s
149A  Jones              66.03  67  P      P      17 15 24.7 -0.3
      baz=317,SNR=20
Z50A  Ashland            66.05  66 eP      P      17 15 24.6 -0.7
      comp=Z,46nm,0.6s
Z50A  Ashland            66.05  66  P      P      17 15 24.8 -0.5
      baz=317,SNR=21
V53A  Saluda             66.06  63 eP      P      17 15 25.9 +0.6
      comp=Z,25nm,0.6s
V53A  Saluda             66.06  63  P      P      17 15 25.7 +0.4
      baz=317,SNR=11
Y51A  Rockmart           66.08  65  P      P      17 15 24.6 -0.7
      baz=317,SNR=9.3
W53A  Cullowhee          66.22  63  P      P      17 15 26.5 +0.1
      baz=317,SNR=9.3
X52A  Dahlonega          66.23  64  P      P      17 15 26.4  0.0
      baz=317,SNR=12
BLA   Blacksburg         66.24  60 eP      P      17 15 26.6 +0.2
      comp=Z,30nm,1.1s
BLA   Blacksburg         66.24  60 eP      P      17 15 26.6 +0.2
BLA                                 pmax   pmax
      comp=Z,30nm,1.1s
BLA   Blacksburg         66.24  60  P      P      17 15 26.2 -0.3
      baz=318
249A  Camden             66.29  68  P      P      17 15 26.6 -0.1
      baz=317,SNR=6.6
KDJ   Kajisay            66.30 308 eP      P      17 15 27.9 +1.0
      comp=Z,12nm,0.9s
LUPA  Lehigh Univers     66.39  54 eP      P      17 15 27.1 -0.1
      comp=Z,0.9nm,0.7s
ODNJ  Ogdensburg         66.42  53 eP      P      17 15 27.1 -0.3
      comp=Z,24nm,1.4s
Z51A  Franklin           66.44  66  P      P      17 15 26.9 -0.8
      baz=317,SNR=7.5
150A  Eclectic           66.47  67  P      P      17 15 27.4 -0.5
      baz=317,SNR=7.6
SDMD  Soldier's Deli     66.52  56 eP      P      17 15 28.8 +0.7
      comp=Z,14nm,1.3s
X53A  Estanollee         66.63  64  P      P      17 15 29.1 +0.2
      baz=317,SNR=10
Y52A  Lilburn            66.67  65 eP      P      17 15 29.1 -0.1
      comp=Z,30nm,0.8s
Y52A  Lilburn            66.67  65  P      P      17 15 29.0 -0.1
      baz=317,SNR=8.4
349A  Repton             66.70  69  P      P      17 15 29.7 +0.3
      baz=317
MOIG  Morelia            66.72  87 eP      P      17 15 30.1 +0.1
BRNJ  Basking Ridge      66.74  54 eP      P      17 15 29.3 -0.2
      comp=Z,74nm,1.6s
250A  Grady              66.78  68 eP      P      17 15 29.6 -0.2
      comp=Z,73nm,0.6s
250A  Grady              66.78  68  P      P      17 15 29.8 -0.1
      baz=317,SNR=18
PAL   Palisades          66.83  53 eP      P      17 15 29.9 -0.1
      comp=Z,15nm,0.9s
PAL   Palisades          66.83  53 eP      P      17 15 29.9 -0.1
PAL                                 pmax   pmax
      comp=Z,15nm,0.9s
W54A  Cherokee Point     66.83  63  P      P      17 15 30.5 +0.4
      baz=318,SNR=9.5
BRAL  Brewton            66.92  69 eP      P      17 15 30.0 -0.8
      comp=Z,54nm,0.9s
BRAL  Brewton            66.92  69  P      P      17 15 31.1 +0.3
      baz=317
151A  Opelika            66.93  67  P      P      17 15 30.0 -0.8
      baz=317,SNR=6.5
Y53A  Monroe             66.95  64  P      P      17 15 30.8 -0.1
      baz=318,SNR=11
CPNY  Central Park       66.96  53 eP      P      17 15 30.6 -0.2
      comp=Z,59nm,1.6s
Z52A  Williamson         66.96  65  P      P      17 15 30.6 -0.5
      baz=317,SNR=10.0
R58B  Mineral            67.05  58 eP      P      17 15 31.7 +0.2
      comp=Z,41nm,1.5s
GGN   Saint George       67.06  46 eP      P      17 15 30.6 -0.8
      comp=Z,94nm,2.0s
WES   Weston             67.06  50 eP      P      17 15 31.6 +0.1
      comp=Z,34nm,1.4s
WES   Weston             67.06  50 eP      P      17 15 31.6 +0.1
WES                                 pmax   pmax
      comp=Z,34nm,1.4s
YLE   Yale               67.08  52 eP      P      17 15 31.3 -0.3
      comp=Z,82nm,1.5s
EMMW  East Machias       67.09  46 eP      P      17 15 31.5 -0.2
      comp=Z,91nm,1.9s
X54A  Belton             67.12  63  P      P      17 15 32.5 +0.5
      baz=318,SNR=15
449A  Pace               67.12  69  P      P      17 15 32.3 +0.2
      baz=317
350A  Dozier             67.15  68  P      P      17 15 32.4 +0.2
      baz=317
152A  Waverly Hall       67.17  66 eP      P      17 15 31.2 -1.1
      comp=Z,150nm,0.1s
251A  Midway             67.20  67  P      P      17 15 32.0 -0.5
      baz=318
AAK   Ala-Archa          67.22 310 eP      P      17 15 32.0 -0.8
      comp=Z,7.0nm,1.4s
AAK   Ala-Archa          67.22 310 eP      P      17 15 32.0 -0.8
AAK                                 pmax   pmax
      comp=Z,7.0nm,1.4s
PAULI Pauline            67.23  62 eP      P      17 15 32.8 +0.1
      comp=Z,35nm,1.1s
KMSC  Kings Mountain     67.26  62 eP      P      17 15 33.1 +0.2
      comp=Z,77nm,1.0s
KMSC  Kings Mountain     67.26  62  P      P      17 15 33.1 +0.2
      baz=318,SNR=21
BRYW  Bryant College     67.31  51 eP      P      17 15 32.9 -0.2
      comp=Z,26nm,1.1s
GOGA  Godfrey            67.34  65 eP      P      17 15 33.0 -0.4
      comp=Z,24nm,0.7s
GOGA  Godfrey            67.34  65 eP      P      17 15 33.0 -0.4
GOGA                                pmax   pmax
      comp=Z,24nm,0.7s
GOGA  Godfrey            67.34  65  P      P      17 15 33.0 -0.4
      baz=318,SNR=11
Z53A  Monticello         67.38  65  P      P      17 15 33.3 -0.4
      baz=318
LMN   Caledonia Moun     67.39  44 eP      P      17 15 33.0 -0.5
      comp=Z,35nm,1.5s
NRN   Naryn              67.41 308 eP      P      17 15 33.9 -0.3
      comp=Z,4.7nm,1.1s
HODGE Hodges             67.42  63 eP      P      17 15 34.0 +0.1
      comp=Z,48nm,0.8s
Y54A  Tignall            67.45  64  P      P      17 15 34.1  0.0
      baz=318,SNR=18
NC204 NORSAR Array S     67.47 355 eP      P      17 15 33.4 -0.5
      comp=Z,24nm,1.5s
NC303 NORSAR Array S     67.49 355 eP      P      17 15 33.6 -0.3
NC405 NORSAR Array S     67.58 355 eP      P      17 15 34.5  0.0
      comp=Z,61nm,1.9s
X55A  Gracelyn & Ava     67.59  63  P      P      17 15 35.2 +0.2
      baz=318,SNR=16
252A  Lumpkin            67.66  67  P      P      17 15 35.0 -0.4
      baz=318
DRLN  Deer Lake          67.66  38 eP      P      17 15 34.4 -0.8
      comp=Z,193nm,2.0s
NB201 NORSAR Array S     67.67 355 eP      P      17 15 33.9 -1.1
      comp=Z,44nm,1.8s
351A  Pinckard           67.68  68  P      P      17 15 35.4 -0.2
      baz=318,SNR=7.0
NB2   NORSAR Subarra     67.68 355  P      P      17 15 34.5 -0.7
      comp=Z,1.5nm,0.5s,baz=8.4,slow=6.9
NB200 NORSAR Array S     67.68 355 eP      P      17 15 34.6 -0.5
NB200                              ePcP    PcP    17 16 01.4 -0.4
NOA   NORSAR Array B     67.68 355  P      P      17 15 34.6 -0.5
      comp=Z,1.4nm,0.5s,baz=43,slow=16,SNR=36
NOA                                 PcP    PcP    17 16 01.4 -0.4
      comp=Z,1.3nm,0.5s,baz=359,slow=3.2,SNR=5.2
NOA                                 LR     LR     17 46 18.1
      comp=Z,25nm,19.5s,baz=345,slow=37
153A  Fort Valley        67.69  65  P      P      17 15 35.0 -0.6
      baz=318,SNR=7.5
NBO00 NORSAR Array S     67.72 355 eP      P      17 15 34.9 -0.4
Z54A  Sparta             67.82  64  P      P      17 15 36.1 -0.3
      baz=318,SNR=16
Y55A  Saluda             67.86  63  P      P      17 15 36.9 +0.3
      baz=318,SNR=7.9
LSA   Lhasa              67.89 290  P      P      17 15 39.0 +1.6
LSA                                 pmax   pmax
      comp=Z,41nm,0.6s
LSA   Lhasa              67.89 290 eP      P      17 15 39.1 +1.6
      comp=Z,48nm,0.6s
NAO01 NORSAR Array S     67.90 355 eP      P      17 15 36.7 +0.3
X56A  White Oak          67.91  62  P      P      17 15 37.3 +0.4
      baz=318,SNR=12
352A  Blakely            67.92  67 eP      P      17 15 36.7 -0.4
      comp=Z,175nm,1.8s
352A  Blakely            67.92  67  P      P      17 15 37.1  0.0
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      baz=318
JSC   Jenkinsville       67.94  63 eP      P      17 15 37.7 +0.5
      comp=Z,40nm,0.6s
JSC   Jenkinsville       67.94  63 eP      P      17 15 37.7 +0.5
JSC                                 pmax   pmax
      comp=Z,40nm,0.6s
NC602 NORSAR Array S     67.97 355 eP      P      17 15 36.8 -0.1
154A  Montrose           68.13  65 eP      P      17 15 38.1 -0.2
      comp=Z,70nm,1.0s
154A  Montrose           68.13  65  P      P      17 15 38.2 -0.2
      baz=318
AB31  Akbulak array      68.22 323 eP      P      17 15 37.9 -0.8
AB31                                pmax   pmax
      comp=Z,1.0nm,0.3s
ABKAR Akbulak array      68.22 323 eP      P      17 15 37.8 -0.9
ABKAR                              ePcP    PcP    17 16 03.2 -0.9
Z55A  Blythe             68.23  64  P      P      17 15 39.4 +0.4
      baz=318,SNR=6.5
353A  Camilla            68.43  67  P      P      17 15 40.3 +0.1
      baz=318
X57A  Johnson Farm,      68.45  62  P      P      17 15 40.6 +0.2
      baz=318
155A  Kite               68.49  65  P      P      17 15 40.9 +0.3
      baz=318
254A  Abbeville          68.52  66  P      P      17 15 40.6 -0.2
      baz=318
FAKI  Fak Fak            68.57 235 eP      P      17 15 40.6 -0.6
      comp=Z,58nm,1.2s
VSU   Vasula             68.66 346ceP      P      17 15 40.1 -1.1
VSU                                 pmax   pmax
      comp=Z,43nm,1.3s
KK31  Karatay Array      68.73 313 eP      P      17 15 40.8 -1.2
      comp=Z,3.4nm,0.7s
KK31  Karatay Array      68.73 313 eP      P      17 15 40.8 -1.2
KK31                                pmax   pmax
      comp=Z,3.0nm,0.7s
KKAR  Karatay Array      68.73 313 eP      P      17 15 40.5 -1.5
      comp=Z,3.4nm,0.7s
KKAR  Karatay Array      68.73 313 eP      P      17 15 40.5 -1.5
KKAR                                pmax   pmax
      comp=Z,3.0nm,0.7s
453A  Whigham            68.74  67 eP      P      17 15 42.8 +0.6
      comp=Z,191nm,1.8s
X58A  Rowland            68.80  61  P      P      17 15 43.0 +0.5
      baz=319
HAL   Halifax            68.87  44 eP      P      17 15 42.2 -0.6
      comp=Z,80nm,1.6s
HAL   Halifax            68.87  44 eP      P      17 15 42.2 -0.6
HAL                                 pmax   pmax
      comp=Z,80nm,1.6s
KSH   Kashi              68.88 307  P      P      17 15 45.8 +2.7
KSH                                 pP     pP     17 16 00.0 +2.1
KSH                                 PP     PP     17 18 22.4 +7.2
KSH                                 S      S      17 24 44.5 +1.4
KSH                                 sS     sS     17 25 12.4 +4.5
KSH                                 SS     SS     17 29 13.1 +4.9
KSH                                 pmax   pmax
      comp=Z,13nm,0.6s
KSH                                 pmax   pmax
      comp=Z,290nm,5.2s
KSH                                 LR     LR
      comp=Z,160nm,5.6s
KSH                                 LR     LR
      comp=Z,150nm,4.9s
KSH                                 LR     LR
      comp=Z,450nm,5.2s
ARSB  Arslanbob          68.95 310 eP      P      17 15 43.3 -0.3
255A  Hazlehurst         69.00  65 eP      P      17 15 44.0 +0.3
      comp=Z,369nm,2.0s
255A  Hazlehurst         69.00  65  P      P      17 15 44.2 +0.4
      baz=318
156A  Sylvania           69.01  64  P      P      17 15 44.5 +0.7
      baz=318
553A  Crawfordville      69.16  68  P      P      17 15 45.3 +0.5
      baz=318
X59A  McDuffie Farm,     69.19  61  P      P      17 15 45.0 +0.1
      baz=319
355A  Pearson            69.22  66  P      P      17 15 45.1 -0.1
      baz=318
256A  Glennville         69.29  65  P      P      17 15 45.7 +0.1
      baz=318
NHSC  New Hope           69.41  63 eP      P      17 15 47.0 +0.7
      comp=Z,124nm,1.0s
NHSC  New Hope           69.41  63  P      P      17 15 47.0 +0.7
      baz=319
455A  Stateville         69.56  66  P      P      17 15 47.3  0.0
      baz=318
356A  Blackshear         69.64  65  P      P      17 15 47.9 +0.2
      baz=319
OBN   Obninsk            70.03 340⇑eP      P      17 15 49.7 -0.1
OBN                                e              17 16 11.2
OBN                                e              17 18 23.2
OBN                                eSS     SS     17 29 24.3 -0.5
OBN                                 pmax   pmax
      comp=Z,32nm,2.5s
OBN                                 MLR    MLR
      comp=Z,79nm,16.0s
555A  McAlpin            70.06  67 eP      P      17 15 50.5 +0.2
      comp=Z,220nm,1.8s
555A  McAlpin            70.06  67  P      P      17 15 50.6 +0.2
      baz=319
456A  Hilliard           70.15  66 eP      P      17 15 52.1 +1.2
      comp=Z,99nm,0.6s
655A  Horseshoe Beac     70.35  67  P      P      17 15 52.1  0.0
      baz=319
556A  Lake Butler        70.47  66  P      P      17 15 53.3 +0.4
      baz=319
SHL   Shillong           70.50 287 eP      P      17 15 52.9 -0.5
      comp=Z,78nm,1.3s
SHL   Shillong           70.50 287 eP      P      17 15 52.9 -0.5
SHL                                 pmax   pmax
      comp=Z,78nm,1.3s
SHL   Shillong           70.50 287 eP      P      17 15 55.0 +1.6
557A  Orange Park        70.85  66  P      P      17 15 55.8 +0.7
      baz=319
UTTA  Uttaradit          71.01 275  P      P      17 15 56.2 -0.1
657A  Interlachen        71.09  66  P      P      17 15 57.2 +0.6
      baz=319
CHTO  Chiang Mai         71.22 277 eP      P      17 15 57.4 -0.2
      comp=Z,18nm,1.8s
CHTO  Chiang Mai         71.22 277 eP      P      17 15 57.4 -0.2
CHTO                                pmax   pmax
      comp=Z,18nm,1.8s
757A  Oxford             71.46  67  P      P      17 15 59.6 +0.7
      baz=319
CM31  Chiang Mai Arr     71.48 276 eP      P      17 15 59.0 -0.2
      comp=Z,30nm,1.8s
CMAR  Chiang Mai Arr     71.48 276  P      P      17 15 58.9 -0.3
      comp=Z,3.2nm,0.8s,baz=27,slow=6.9,SNR=27
CMAR                                LR     LR     17 51 29.2
      comp=Z,26nm,18.4s,baz=205,slow=39
CM01  Chiang Mai Arr     71.50 276 eP      P      17 15 58.8 -0.4
LPSR  Galich'ya Gora     71.81 337 eP      P      17 15 58.9 -1.7
LPSR                                pmax   pmax
      comp=Z,10.0nm,1.6s
857A  Zephyrhills        71.87  67  P      P      17 16 01.9 +0.5
      baz=319
758A  Lake Helen         71.94  66  P      P      17 16 02.2 +0.5
      baz=319
GAR   Garm               72.04 310 eP      P      17 16 01.7 -0.7
      comp=Z,9.1nm,0.5s
GAR   Garm               72.04 310 eP      P      17 16 01.7 -0.7
GAR                                 pmax   pmax
      comp=Z,9.0nm,0.5s
ODAN  Odare              72.20 291 eP      P      17 16 04.1 +0.4
GUN   Gumba              72.29 293 eP      P      17 16 05.3 +0.9
      comp=Z,375nm,0.5s
JIRN  Jiri               72.30 292 eP      P      17 16 05.5 +1.1
      comp=Z,358nm,0.6s
VRH   Novokhopyorsk      72.38 335 eP      P      17 16 02.3 -1.7
VRH                                 pmax   pmax
      comp=Z,40nm,1.6s
858A  St. Cloud          72.42  67  P      P      17 16 04.7  0.0
      baz=320
DWPF  Disney Wildern     72.45  67 eP      P      17 16 05.3 +0.5
      comp=Z,53nm,0.7s
DWPF  Disney Wildern     72.45  67  P      P      17 16 05.4 +0.6
      baz=320
RAMN  Ramite             72.60 291 eP      P      17 16 06.7 +0.6
      comp=Z,235nm,0.6s
KKN   Kakani             72.73 293 eP      P      17 16 07.6 +0.8
      comp=Z,100nm,0.5s
859A  Kempfer Cattle     72.80  67  P      P      17 16 07.8 +1.0
      baz=320
PKI   Pulchoki           72.82 293 eP      P      17 16 07.9 +0.4
      comp=Z,92nm,0.7s
PKIN  Phulchoki          72.82 293 eP      P      17 16 07.7 +0.3
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	comp=Z,65nm,0.6s						
CHGR	**Chuyangaron**	**72.86**	**311**	*e*P	**P**	**17 16 06.2**	**-1.1**
	comp=Z,13nm,1.0s						
DMN	**Daman**	**72.97**	**293**	*e*P	**P**	**17 16 08.9**	**+0.6**
VSR	**Storozhevoye**	**73.03**	**337**	*i* P	**P**	**17 16 06.6**	**-1.3**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
058A	**Arcadia**	**73.03**	**68**	P	**P**	**17 16 08.9**	**+0.7**
	baz=320						
PPT	**Papeete**	**73.04**	**152**	LR	LR	17 42 27.7	
	comp=Z,97nm,20.2s,baz=128,slow=31						
DANN	**Dangsing**	**73.18**	**294**	*e*P	**P**	**17 16 10.3**	**+0.8**
	comp=Z,153nm,0.8s						
959A	**Okeechobee**	**73.21**	**67**	P	**P**	**17 16 10.4**	**+1.1**
	baz=320						
UMPA	**Umpang Tak**	**73.23**	**275**	P	**P**	**17 16 11.5**	**+1.9**
UTHA	**Uthaitani**	**73.36**	**274**	P	**P**	**17 16 11.2**	**+0.9**
059A	**Moore Haven**	**73.48**	**68**	*e*P	**P**	**17 16 11.0**	**+0.1**
	comp=Z,319nm,1.8s						
059A	**Moore Haven**	**73.48**	**68**	P	**P**	**17 16 11.6**	**+0.7**
	baz=320						
SUW	**Suwalki**	**73.48**	**347**	*e*P	**P**	**17 16 09.1**	**-1.4**
	comp=Z,18nm,0.8s						
SUW	**Suwalki**	**73.48**	**347**	*e*P	**P**	**17 16 09.1**	**-1.4**
SUW				pmax	pmax		
	comp=Z,18nm,0.8s						
MARNC	**Mare, Loyalty**	**73.57**	**194**	*e*P	**P**	**17 16 12.2**	**+0.9**
	comp=Z,558nm,1.8s						
ESK	**Eskdalemuir**	**73.58**	**3**	*e*P	**P**	**17 16 11.6**	**+0.5**
	comp=Z,104nm,2.0s						
ESK	**Eskdalemuir**	**73.58**	**3**	*e*P	**P**	**17 16 11.6**	**+0.5**
ESK				pmax	pmax		
	comp=Z,105nm,2.0s						
KOLN	**Koldanda**	**73.71**	**294**	*e*P	**P**	**17 16 13.0**	**+0.4**
	comp=Z,61nm,0.8s						
PYUN	**Piuthan**	**73.81**	**295**	*e*P	**P**	**17 16 13.4**	**+0.3**
	comp=Z,85nm,0.8s						
060A	**Indiantown**	**73.88**	**67**	*e*P	**P**	**17 16 13.5**	**+0.2**
	comp=Z,226nm,1.3s						
DZM	**Mont Dzumac**	**74.39**	**195**	*e*P	**P**	**17 16 17.8**	**+1.6**
	comp=Z,38nm,1.5s						
061Z	**Ochoppi**	**74.46**	**68**	*e*P	**P**	**17 16 17.7**	**+1.0**
	comp=Z,171nm,1.1s						
NIL	**Nilore**	**74.80**	**305**	*e*P	**P**	**17 16 18.9**	**+0.4**
	comp=Z,12nm,0.6s						
NIL	**Nilore**	**74.80**	**305**	*e*P	**P**	**17 16 19.0**	**+0.4**
NIL				pmax	pmax		
	comp=Z,11nm,0.6s						
DSB	**Dublin**	**75.51**	**5**	*e*P	**P**	**17 16 22.5**	**+0.3**
	comp=Z,36nm,1.1s						
SBUM	**Sibu**	**75.53**	**255**	*e*P	**P**	**17 16 23.2**	**+0.3**
	comp=Z,68nm,2.0s						
AKASG	**Malin Array Be**	**75.69**	**343**	P	**P**	**17 16 22.8**	**-0.5**
	comp=Z,3.8nm,0.3s,baz=20,slow=5.8,SNR=31						
AKASG				LR	LR	17 53 01.3	
	comp=Z,39nm,20.2s,baz=340,slow=38						
AKBB	**Malin Array Si**	**75.69**	**343**	*e*P	**P**	**17 16 22.5**	**-0.9**
	comp=Z,16nm,1.2s						
KIEV	**Kiev**	**75.70**	**343**	*e*P	**P**	**17 16 22.3**	**-1.1**
	comp=Z,8.8nm,0.5s						
KIEV	**Kiev**	**75.70**	**343**	⇑*i*P	**P**	**17 16 22.6**	**-0.8**
KIEV	**Kiev**	**75.70**	**343**	*e*P	**P**	**17 16 22.3**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AK11	**Malin Array Si**	**75.72**	**343**	*e*P	**P**	**17 16 22.4**	**-1.1**
KBL	**Kabul**	**76.21**	**308**	*e*P	**P**	**17 16 25.6**	**-1.3**
	comp=Z,7.2nm,0.9s						
KBL	**Kabul**	**76.21**	**308**	*e*P	**P**	**17 16 25.6**	**-1.3**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CLL	**Collm**	**77.26**	**353**	*e*P	**P**	**17 16 31.9**	**-0.3**
	comp=Z,22nm,1.8s						
CLL	**Collm**	**77.26**	**353**	*e*P	**P**	**17 16 32.0**	**-0.2**
CLL	**Collm**	**77.26**	**353**	*e*P	**P**	**17 16 31.9**	**-0.3**
CLL				pmax	pmax		
	comp=Z,22nm,1.8s						
BRG	**Berggiesshubel**	**77.61**	**352**	*e*P	**P**	**17 16 34.0**	**-0.2**
	comp=Z,2.7nm,0.9s						
BRG	**Berggiesshubel**	**77.61**	**352**	*e*P	**P**	**17 16 34.0**	**-0.2**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OJC	**Ojcow**	**77.64**	**348**	*e*P	**P**	**17 16 33.4**	**-1.0**
	comp=Z,16nm,1.3s						
OJC	**Ojcow**	**77.64**	**348**	*e*P	**P**	**17 16 33.4**	**-1.0**
OJC				pmax	pmax		
	comp=Z,16nm,1.3s						
MTN	**Manton Dam**	**77.64**	**231**	*e*P	**P**	**17 16 34.9**	**+0.1**
	comp=Z,65nm,1.8s						
CTA	**Charters Tower**	**77.75**	**214**	P	**P**	**17 16 35.1**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=71,slow=4.8,SNR=3.7						
UPC	**Upice**	**77.79**	**351**	*e*P	**P**	**17 16 35.3**	**+0.1**
UPC	**Upice**	**77.79**	**351**	*e*P	**P**	**17 16 35.3**	**+0.1**
KWP	**Kalwaria Pacla**	**77.82**	**346**	*e*P	**P**	**17 16 35.9**	**+0.5**
KWP	**Kalwaria Pacla**	**77.82**	**346**	*e*P	**P**	**17 16 35.3**	**-0.1**
	comp=Z,305nm,0.5s						
KWP	**Kalwaria Pacla**	**77.82**	**346**	*e*P	**P**	**17 16 35.9**	**+0.5**
DPC	**Dobruska-Polom**	**77.91**	**351**	*e*P	**P**	**17 16 36.0**	**0.0**
DPC	**Dobruska-Polom**	**77.91**	**351**	*e*P	**P**	**17 16 36.0**	**0.0**
KRLC	**Kraliky**	**78.13**	**350**	*e*P	**P**	**17 16 37.1**	**-0.1**
KRLC	**Kraliky**	**78.13**	**350**	*e*P	**P**	**17 16 37.1**	**-0.1**
GEYT	**Alibeck**	**78.40**	**318**	P	**P**	**17 16 38.9**	**0.0**
	comp=Z,4.1nm,0.8s,baz=35,slow=5.4,SNR=8.3						
GEYT				LR	LR	17 54 16.0	
	comp=Z,101nm,20.9s,baz=30,slow=38						
GYA0B	**ALIBECK ARRAY**	**78.40**	**318**	*e*P	**P**	**17 16 38.6**	**-0.2**
	comp=Z,7.1nm,0.9s						
GOPC	**GO Pecny, Ondr**	**78.49**	**352**	*e*P	**P**	**17 16 38.8**	**-0.3**
GOPC	**GO Pecny, Ondr**	**78.49**	**352**	*e*P	**P**	**17 16 38.8**	**-0.3**
KIV	**Kislovodsk**	**78.69**	**331**	*e*P	**P**	**17 16 39.6**	**-0.8**
	comp=Z,9.7nm,0.8s						
KIV	**Kislovodsk**	**78.69**	**331**	⇑*i*P	**P**	**17 16 40.4**	**-0.1**
KIV	**Kislovodsk**	**78.69**	**331**	*e*P	**P**	**17 16 40.2**	**-0.3**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,78nm,18.0s						
LANS	**Liptovska Anna**	**78.73**	**348**	*e*P	**P**	**17 16 41.5**	**+1.0**
LANS	**Liptovska Anna**	**78.73**	**348**	*e*P	**P**	**17 16 41.5**	**+1.0**
NCK	**Nalchik**	**78.83**	**330**	*i* P	**P**	**17 16 40.5**	**-0.6**
NCK				pmax	pmax		
	comp=Z,18nm,0.9s						
KBZ	**Khabaz**	**78.84**	**331**	P	**P**	**17 16 41.2**	**+0.2**
	comp=Z,6.8nm,0.8s,baz=55,slow=2.6,SNR=17						
KBZ				LR	LR	17 55 48.7	
	comp=Z,85nm,19.9s,baz=14,slow=39						
VRAC	**Vranov**	**78.91**	**350**	⇑*i*P	**P**	**17 16 41.8**	**+0.3**
GRA1	**Grafenberg Arr**	**78.99**	**354**	*e*P	**P**	**17 16 42.3**	**+0.4**
	comp=Z,57nm,2.0s						
GRF	**Grafenberg Arr**	**78.99**	**354**	*e*P	**P**	**17 16 42.3**	**+0.4**
GRF				pmax	pmax		
	comp=Z,57nm,2.0s						
GRFO	**Grafenberg**	**79.00**	**354**	*e*P	**P**	**17 16 42.3**	**+0.4**
	comp=Z,53nm,2.0s						
GRFO	**Grafenberg**	**79.00**	**354**	*e*P	**P**	**17 16 42.3**	**+0.4**
GRFO				pmax	pmax		
	comp=Z,53nm,2.0s						
TRPA	**Tarpa**	**79.31**	**346**	⇑*i*P	**P**	**17 16 43.8**	**+0.2**
FSCY	**Frank Sound, G**	**79.31**	**73**	*e*P	**P**	**17 16 44.1**	**+0.1**
	comp=Z,325nm,1.5s						
NEY	**Neytrino**	**79.33**	**331**	*i* P	**P**	**17 16 44.5**	**+0.5**
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BUR08	**Bucovina Ar. S**	**79.36**	**344**	*e*P	**P**	**17 16 43.9**	**-0.1**
	comp=Z,9.5nm,0.8s						
KHC	**Kasperske Hory**	**79.37**	**352**	*e*P	**P**	**17 16 44.7**	**+0.7**
	comp=Z,9.5nm,1.8s						
KHC	**Kasperske Hory**	**79.37**	**352**	*e*P	**P**	**17 16 44.3**	**+0.3**
KHC	**Kasperske Hory**	**79.37**	**352**	*e*P	**P**	**17 16 44.7**	**+0.7**
KHC				pmax	pmax		
	comp=Z,10.0nm,1.8s						
BUR04	**Bucovina Ar. S**	**79.38**	**344**	*e*P	**P**	**17 16 43.8**	**-0.4**
ZEI	**Tsey**	**79.38**	**330**	*e*P	**P**	**17 16 43.4**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,13nm,0.6s						
BURAR	**Bucovina Array**	**79.38**	**344**	⇑*i*P	**P**	**17 16 44.2**	**0.0**
PRAR	**RASCA**	**79.45**	**343**	⇑*i*P	**P**	**17 16 44.2**	**-0.2**
VYHS	**Vyhne**	**79.46**	**349**	*e*P	**P**	**17 16 44.7**	**+0.3**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.3s						
VYHS	**Vyhne**	**79.46**	**349**	*e*P	**P**	**17 16 44.7**	**+0.3**
ZKTA	**Zakatala**	**79.53**	**328**	P	**P**	**17 16 44.8**	**-0.2**
GEC2	**GERESS Array S**	**79.65**	**352**	*e*P	**P**	**17 16 45.5**	**-0.1**
	comp=Z,17nm,1.8s						
GEC2	**GERESS Array S**	**79.65**	**352**	*e*P	**P**	**17 16 45.5**	**-0.1**
GEC2				pmax	pmax		
	comp=Z,17nm,1.8s						
GERES	**GERESS Array B**	**79.65**	**352**	P	**P**	**17 16 45.3**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=28,slow=6.0,SNR=17						
GEA0	**GERESS Array S**	**79.66**	**352**	*e*P	**P**	**17 16 44.9**	**-0.8**
SEKA	**Sheki**	**79.72**	**327**	P	**P**	**17 16 45.9**	**-0.2**
BIZ	**Bicaz**	**79.88**	**343**	⇑*i*P	**P**	**17 16 46.7**	**0.0**
PSZ	**Piszkesteto**	**79.89**	**348**	*e*P	**P**	**17 16 47.3**	**+0.5**
	comp=Z,34nm,2.0s						
PSZ	**Piszkesteto**	**79.89**	**348**	*e*P	**P**	**17 16 47.3**	**+0.5**
PSZ				pmax	pmax		
	comp=Z,34nm,2.0s						
LEOM	**Leova**	**79.93**	**342**	⇑*i*P	**P**	**17 16 47.6**	**+0.6**
LEOM	**Leova**	**79.93**	**342**	P	**P**	**17 16 47.5**	**+0.6**
ARCR	**ARCALIA**	**80.04**	**345**	⇑*i*P	**P**	**17 16 48.5**	**+0.9**
TBLG	**Delisi**	**80.07**	**329**	*e*P	**P**	**17 16 48.1**	**+0.2**
	comp=Z,36nm,1.1s						
TBLG	**Delisi**	**80.07**	**329**	*e*P	**P**	**17 16 48.1**	**+0.2**
TBLG				pmax	pmax		
	comp=Z,36nm,1.1s						
MNGR	**Mingechevir, A**	**80.14**	**327**	P	**P**	**17 16 48.5**	**+0.3**
TESR	**Tescani**	**80.19**	**343**	⇑*i*P	**P**	**17 16 48.0**	**-0.4**
BIR	**Birlad**	**80.25**	**342**	⇑*i*P	**P**	**17 16 48.9**	**+0.2**
CONA	**Conrad Observa**	**80.35**	**351**	*e*P	**P**	**17 16 49.9**	**+0.5**
	comp=Z,3.6nm,0.7s						
PBA	**Port Blair**	**80.51**	**277**	*e*P	P	17 16 50.8	+0.2
	comp=Z,85nm,1.1s						
BFO	**Black Forest**	**80.52**	**356**	*ce*P	**P**	**17 16 51.8**	**+1.6**
GANJ	**Ganja**	**80.52**	**327**	P	**P**	**17 16 50.3**	**0.0**
DRGR		**80.59**	**346**	⇑*i*P	**P**	**17 16 50.4**	**-0.2**
DRGR		**80.59**	**346**	P	**P**	**17 16 50.3**	**-0.3**
VRI	**Vrincioaia**	**80.80**	**343**	⇑*i*P	**P**	**17 16 51.9**	**+0.2**
VRI	**Vrincioaia**	**80.80**	**343**	P	**P**	**17 16 51.1**	**-0.6**
PLOR	**Plostina**	**80.83**	**343**	⇑*i*P	**P**	**17 16 52.7**	**+0.8**
PLOR	**Plostina**	**80.83**	**343**	P	**P**	**17 16 52.6**	**+0.7**
ODBI	**Odobesti**	**80.84**	**342**	⇑*i*P	**P**	**17 16 52.3**	**+0.4**
TLCR		**81.05**	**341**	⇓*i*P	**P**	**17 16 53.2**	**+0.2**
TLCR		**81.05**	**341**	P	**P**	**17 16 53.1**	**+0.1**
ARSA	**Arzberg**	**81.06**	**351**	*e*PcP	**P**	**17 16 54.2**	**+1.1**
	comp=Z,6.1nm,1.1s						
EIDS	**Eidsvold**	**81.11**	**208**	*e*P	**P**	**17 16 53.5**	**+0.1**
	comp=Z,32nm,1.7s						
CFR	**Carcaliu**	**81.19**	**342**	⇑*i*P	**P**	**17 16 54.0**	**+0.2**
MLR	**Muntele Rosu**	**81.31**	**343**	*e*P	**P**	**17 16 54.7**	**+0.1**
	comp=Z,16nm,1.0s						
MLR	**Muntele Rosu**	**81.31**	**343**	⇑*i*P	**P**	**17 16 55.4**	**+0.8**
MLR	**Muntele Rosu**	**81.31**	**343**	*e*P	**P**	**17 16 54.7**	**+0.1**
MLR				pmax	pmax		
	comp=Z,16nm,1.0s						
WATA	**Walderalm**	**81.31**	**353**	*i* P	**P**	**17 16 55.2**	**+0.6**
	comp=Z,2.5nm,0.4s						
MOTA	**Moosalm**	**81.34**	**354**	*i* P	**P**	**17 16 55.2**	**+0.4**
	comp=Z,2.8nm,0.5s						
KBA	**Koelnbreinsper**	**81.43**	**352**	*i* P	**P**	**17 16 55.6**	**+0.3**
	comp=Z,9.1nm,0.5s						
SQTA	**Sankt Quirin**	**81.46**	**354**	*i* PcP	**P**	**17 16 56.2**	**+0.9**
	comp=Z,5.4nm,1.0s						
GNI	**Garni**	**81.49**	**328**	*e*P	**P**	**17 16 55.4**	**-0.3**
	comp=Z,21nm,1.4s						
GNI	**Garni**	**81.49**	**328**	*e*P	**P**	**17 16 55.4**	**-0.3**
GNI				pmax	pmax		
	comp=Z,21nm,1.4s						
VOIR		**81.52**	**344**	⇑*i*P	**P**	**17 16 56.0**	**+0.4**
ARR	**Arges**	**81.66**	**344**	⇑*i*P	**P**	**17 16 56.9**	**+0.5**
SOKA	**Soboth**	**81.67**	**351**	*e*PcP	**P**	**17 16 57.5**	**+1.0**
	comp=Z,7.7nm,0.6s						
FETA	**Feichten**	**81.69**	**354**	*e*PcP	**P**	**17 16 57.4**	**+0.8**
	comp=Z,8.3nm,1.1s						
MTUR	**Matau**	**81.72**	**344**	⇑*i*P	**P**	**17 16 56.5**	**-0.2**
SECR		**81.72**	**343**	⇑*i*P	**P**	**17 16 57.0**	**+0.4**
TLB	**Topalu**	**81.78**	**341**	⇑*i*P	**P**	**17 16 57.0**	**+0.1**
ABTA	**Abfaltersbach**	**81.83**	**353**	*i* P	**P**	**17 16 57.7**	**+0.5**
	comp=Z,8.2nm,1.2s						
MYKA	**Terra Mystica**	**81.85**	**352**	*i* P	**P**	**17 16 57.8**	**+0.4**
	comp=Z,6.1nm,1.0s						
OBKA	**Obir**	**81.89**	**351**	*i* P	**P**	**17 16 57.3**	**-0.3**
	comp=Z,6.4nm,0.6s						
BZS	**Buzias**	**81.90**	**346**	⇑*i*P	**P**	**17 16 57.2**	**-0.3**
SSF	**Saint Saulge**	**81.93**	**359**	*e*P	**P**	**17 16 59.2**	**+1.5**
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GZR	**Gura Zlata**	**81.94**	**345**	⇑*i*P	**P**	**17 16 58.3**	**+0.5**
WR1	**Warramunga Arr**	**82.35**	**225**	*e*P	**P**	**17 16 58.9**	**-1.2**
	comp=Z,22nm,1.4s						
WR1				*e*PKKPbc	**PKKPbc**	**17 35 26.9**	**+1.2**
WRA	**Warramunga Arr**	**82.35**	**225**	P	**P**	**17 16 58.9**	**-1.2**
	comp=Z,1.5nm,0.4s,baz=32,slow=5.8,SNR=25						
WRA				PKKPbc	**PKKPbc**	**17 35 26.9**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=233,slow=2.0,SNR=4.1						
MFF	**Saint Martin d**	**82.38**	**1**	*e*P	**P**	**17 17 00.4**	**+0.4**
MFF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HUMR	**Humele**	**82.41**	**344**	⇑*i*P	**P**	**17 16 59.3**	**-0.9**
HERR	**Herculane**	**82.50**	**345**	⇓*i*P	**P**	**17 17 00.3**	**-0.3**
PUNG	**Punghina**	**83.00**	**345**	⇑*i*P	**P**	**17 17 03.3**	**0.0**
BLY	**Banja Luka**	**83.35**	**349**	*e*P	**P**	**17 17 04.8**	**-0.3**
	comp=Z,48nm,1.6s						
PSI	**Prapat**	**83.47**	**266**	*e*P	**P**	**17 17 05.6**	**-0.7**
	comp=Z,10nm,0.7s						
PSI	**Prapat**	**83.47**	**266**	P	**P**	**17 17 06.0**	**-0.2**
	comp=Z,10nm,0.7s,baz=359,slow=3.5,SNR=7.3						
DIVS	**Divibare**	**83.62**	**347**	*e*P	**P**	**17 17 06.5**	**-0.1**
	comp=Z,13nm,1.0s						
ILGA	**Ilgaz**	**83.87**	**336**	*e*P	**P**	**17 17 07.9**	**-0.2**
	comp=Z,12nm,1.1s						
LFF	**La Frestale**	**84.05**	**1**	*e*P	**P**	**17 17 08.5**	**-0.2**
LFF				pmax	pmax		
	comp=Z,15nm,0.6s						
CAF	**Calviac**	**84.07**	**360**	*e*P	**P**	**17 17 09.0**	**+0.2**
CAF				pmax	pmax		
	comp=Z,45nm,1.6s						
VTS	**Vitosha**	**84.60**	**344**	*e*P	**P**	**17 17 10.9**	**-0.8**
	comp=Z,8.9nm,0.8s						
VTS	**Vitosha**	**84.60**	**344**	⇑*i*P	**P**	**17 17 11.4**	**-0.3**
VTS	**Vitosha**	**84.60**	**344**	*e*P	**P**	**17 17 10.9**	**-0.8**
VTS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HYB	**Hyderabad**	**84.66**	**291**	*i* P	**P**	**17 17 12.0**	**-0.2**
	comp=Z,31nm,0.8s						
BR101	**Keskin Array S**	**85.14**	**336**	*e*P	**P**	**17 17 14.4**	**0.0**
BR131	**Keskin Array S**	**85.14**	**336**	*e*P	**P**	**17 17 13.8**	**-0.6**
	comp=Z,11nm,0.8s						
BRTR	**Keskin Array B**	**85.14**	**336**	P	**P**	**17 17 14.4**	**0.0**
	comp=Z,9.2nm,0.8s,baz=54,slow=2.8,SNR=59						
PDG	**Podgorica**	**85.36**	**347**	⇑*i*P	**P**	**17 17 14.9**	**-0.4**
AS01	**Alice Springs**	**85.79**	**223**	*e*P	**P**	**17 17 16.9**	**-0.6**
AS31	**Alice Springs**	**85.81**	**223**	*e*P	**P**	**17 17 16.9**	**-0.8**
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**85.81**	**223**	P	**P**	**17 17 17.2**	**-0.4**
	comp=Z,4.5nm,0.8s,baz=24,slow=5.5,SNR=96						
ASAR				PKKPbc	**PKKPbc**	**17 35 19.1**	**+1.4**
	comp=Z,0.3nm,0.9s,baz=205,slow=2.3,SNR=3.8						
POO	**Poona**	**86.48**	**295**	⇑*i*P	**P**	**17 17 18.0**	**-3.3**
	comp=Z,7.0nm,1.0s						
FNA	**Florina**	**86.66**	**345**	*e*P	**P**	**17 17 21.2**	**-0.6**
	comp=Z,7.7nm,0.7s						
FNA	**Florina**	**86.66**	**345**	*e*P	**P**	**17 17 21.2**	**-0.6**
FNA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PVRL	**Vila Real**	**87.34**	**7**	*e*P	**P**	**17 17 24.9**	**-0.2**
	comp=Z,48nm,1.9s						
MVO	**Moncorvo**	**87.50**	**7**	*e*P	**P**	**17 17 25.3**	**-0.6**
PCBR	**Castelo Branco**	**88.78**	**7**	*e*P	**P**	**17 17 31.2**	**-0.7**
	comp=Z,34nm,1.5s						
ES19	**SONSECA Array**	**89.15**	**5**	*e*P	**P**	**17 17 32.2**	**-1.5**
ESDC	**Sonseca Array**	**89.17**	**5**	P	**P**	**17 17 33.0**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=346,slow=4.1,SNR=19						
MTP	**Monte Pirata**	**89.28**	**62**	*e*P	**P**	**17 17 34.8**	**+0.3**
	comp=Z,21nm,0.7s						
URZ	**Urewera**	**89.37**	**184**	P	**P**	**17 17 33.9**	**-0.4**
	comp=Z,4.7nm,0.8s,baz=30,slow=20,SNR=2.9						
STKA	**Stephens Creek**	**90.19**	**213**	*e*P	**P**	**17 17 38.2**	**-0.1**
	comp=Z,1.2nm,0.8s						
STKA	**Stephens Creek**	**90.19**	**213**	P	**P**	**17 17 38.5**	**+0.3**
	comp=Z,5.7nm,0.7s,baz=4.7,slow=6.4,SNR=16						
RAYN	**Ar Rayn**	**96.18**	**321**	*e*P	**P**	**17 18 05.1**	**-1.3**
	comp=Z,4.4nm,0.8s						
RAYN	**Ar Rayn**	**96.18**	**321**	*e*P	**P**	**17 18 05.1**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TOA1	**Torodi Ar. Sit**	**115.74**	**0**	*e*PKPdf	**PKiKP**	**17 23 19.3**	**-1.4**
TOA0	**Torodi Ar. Sit**	**115.74**	**0**	*e*PKPdf	**PKiKP**	**17 23 19.0**	**-1.7**
TORD	**Torodi Ar. Bea**	**115.74**	**0**	PKP	**PKiKP**	**17 23 19.3**	**-1.4**
	comp=Z,1.3nm,0.5s,baz=349,slow=2.8,SNR=24						
DBIC	**Dimbokro**	**121.88**	**8**	*e*PKPdf	**PKPdf**	**17 23 31.7**	**-0.8**
DBIC	**Dimbokro**	**121.88**	**8**	PKP	**PKPdf**	**17 23 32.0**	**-0.4**
	comp=Z,7.0nm,0.4s,baz=355,slow=2.4,SNR=36						
TSUM	**Tsumeb**	**145.60**	**333**	*e*PKPdf	**PKPbc**	**17 24 16.4**	**-0.4**
LBTB	**Lobatse**	**148.06**	**317**	*e*PKPbc	**PKPbc**	**17 24 23.8**	**+0.2**
LBTB	**Lobatse**	**148.06**	**317**	*e*PKP2	**PKPbc**	**17 24 23.8**	**+0.2**
BOSA	**Boshof**	**151.32**	**314**	*e*PKPbc	**PKPbc**	**17 24 31.3**	**-0.3**
BOSA	**Boshof**	**151.32**	**314**	PKPbc	**PKiKP**	**17 24 31.9**	**-0.2**
	comp=Z,11nm,0.5s,baz=26,slow=2.1,SNR=48						

ISCJB ***23*** *17:11:05.7±0.5, 32°.54N±0°.06×131°.26E±0°.06, h119^{km}±4^{km}, mb3.3/5, Error ellipse: s-maj=11.7km s-min=6.2km az=144.9*

IDC ***23*** *17:11:06.5±0.8, 32°.57N×131°.15E, h111^{km}±5^{km}, mb3.0/5, mb1 3.3/7, mb1mx3.1/41, mbtmp3.5/7, Error ellipse: s-maj=19.8km s-min=17.2km az=58.0*

JMA ***23*** *17:11:07.2±0.1, 32°.60N×131°.23E, h111^{km}±1^{km}, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s40.00000°, δ60.00000°, λ38.00000°. NP2: ϕ_s289.00000°, δ58.00000°, λ143.00000°. Principal axes: T Plg47.0000°, Azm255.0000°; N Plg43.0000°, Azm73.0000°; P Plg1.0000°, Azm164.0000°;*

JMA Felt I J1.

ISC 23 17:11:06.6±0.8, 32°.54N±0°.06×131°.25E±0°.05, h113^{km}±6^{km}, n14, σ1§12/22, mb3.3/5, 4C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKIT	**Kitakata**	**0.19**	**65**	⇑P	**Pn**	**17 11 23.0**	**+0.7**
JKIT				S	**Sn**	**17 11 34.6**	**+0.5**
JTZ	**Takazaki**	**0.66**	**192**	⇓P	**Pn**	**17 11 25.8**	**+0.9**
JTZ				S	**Sn**	**17 11 39.6**	**+1.0**
JNU	**Nakatsue**	**0.66**	**332**	P	**Pn**	**17 11 25.4**	**+0.4**
	64nm,0.3s,baz=186,slow=18,SNR=2753						
JNU				S	**Sn**	**17 11 38.9**	**+0.2**
	158nm,0.3s,baz=280,slow=21,SNR=97						
JTO	**Tosashimizu**	**1.35**	**76**	⇑P	**Pn**	**17 11 31.1**	**-0.6**
JTO				S	**Sn**	**17 11 49.3**	**-1.5**
JNA	**Nagahama**	**1.44**	**45**	⇑P	**Pn**	**17 11 32.3**	**-0.6**
JNA				S	**Sn**	**17 11 51.3**	**-1.6**
JSJ	**Shimokoshiki**	**1.56**	**237**	⇑P	**Pn**	**17 11 34.5**	**+0.2**
JSJ				S	**Sn**	**17 11 54.9**	**-0.5**
KSRS	**Korea Array**	**5.61**	**332**	P	**Pn**	**17 12 28.7**	**+1.1**
	2.4nm,0.3s,baz=149,slow=14,SNR=35						
MAT	**Matsushiro**	**6.99**	**53**	P	**Pn**	**17 12 48.0**	**+1.7**
MAT				S	**Sn**	**17 14 05.4**	**+1.1**
MJAR	**Matsushiro Arr**	**6.99**	**53**	P	**Pn**	**17 12 48.1**	**+1.8**
	0.6nm,0.3s,baz=243,slow=15,SNR=44						
MJAR				S	**Sn**	**17 14 06.2**	**+1.9**
	0.3nm,0.3s,baz=277,slow=1.0,SNR=11						
SONM	**Songino Array**	**24.22**	**316**	P	**P**	**17 16 12.8**	**0.0**
	0.7nm,0.7s,baz=125,slow=9.9,SNR=3.2						
MKAR	**Makanchi Array**	**39.64**	**306**	P	**P**	**17 18 26.6**	**-0.7**
	0.2nm,0.5s,baz=84,slow=7.4,SNR=2.9						
WRA	**Warramunga Arr**	**52.27**	**176**	P	**P**	**17 20 06.6**	**+0.2**
	0.3nm,0.9s,baz=355,slow=7.8,SNR=3.6						
ASAR	**Alice Springs**	**55.95**	**177**	P	**P**	**17 20 33.5**	**+0.4**
	0.3nm,0.7s,baz=356,slow=7.2,SNR=4.0						
FINES	**FINESS Array B**	**68.70**	**330**	P	**P**	**17 21 56.4**	**-1.2**
	0.4nm,0.3s,baz=72,slow=6.4,SNR=6.7						

MEX 23 17:16:29.1±0.3, 14°.36N×91°.85W, h77^{km}±27^{km}, MD3.8, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.88**	**316**	*e*P	Pn	17 16 57.9	-1.4
PCIG				*e*S	Sn	17 17 20.8	-1.6
CCIG	**Comitan**	**1.93**	**352**	*e*P	Pn	17 16 54.8	-5.4

KRSC 23 17:18:38.2±0.5, 54°.39N×160°.64E, h91^{km}±7^{km}, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.66**	**75**	*e*P	Pn	17 18 55.7	+1.4
MKZ				*e*S	Sn	17 19 08.2	+1.9
KZV	**Kizimen**	**0.75**	**345**	*e*P	Pn	17 18 56.4	+1.0
KZV				*e*S	Sn	17 19 09.3	+1.0
KII	**Karymskiy**	**0.79**	**244**	*e*P	Pn	17 18 56.7	+1.0
TUMD	**Tumrok D**	**0.83**	**350**	*e*P	Pn	17 18 56.5	+0.5
TUMD				*e*S	Sn	17 19 09.6	+0.2
TUMR	**Tumrok**	**0.94**	**342**	*e*P	Pn	17 18 58.7	+1.4
TUMR				*e*S	Sn	17 19 13.5	+1.8
SPN	**Mys Shipunski**	**1.35**	**196**	*e*P	Pn	17 19 02.8	+0.8
SPN				*e*S	Sn	17 19 20.8	+0.8
NLC	**Nalytchevo**	**1.44**	**213**	*e*P	Pn	17 19 05.0	+1.8
NLC				*e*S	Sn	17 19 23.9	+1.8
SDLR	**Sedlovina**	**1.53**	**224**	*e*P	Pn	17 19 06.0	+1.6
SDLR				*e*S	Sn	17 19 26.1	+1.9
KRX	**Arik**	**1.57**	**230**	*e*P	Pn	17 19 06.9	+2.0
KRX				*e*S	Sn	17 19 27.6	+2.4
SMAR	**Somma**	**1.57**	**225**	*e*P	Pn	17 19 06.8	+1.8
SMAR				*e*S	Sn	17 19 27.9	+2.5
AVH	**Avacha**	**1.60**	**226**	*e*P	Pn	17 19 07.2	+2.0
UGLR	**Uglovaya**	**1.60**	**223**	*e*P	Pn	17 19 07.0	+1.7
KOK	**Koryaka**	**1.62**	**228**	*e*P	Pn	17 19 07.5	+2.0
ZLN	**Zelenaya**	**1.63**	**3**	*e*P	Pn	17 19 07.5	+1.8
GNL	**Ganaly**	**1.74**	**247**	*e*P	Pn	17 19 08.3	+1.2
DALK	**Dalny**	**1.77**	**220**	*e*P	Pn	17 19 08.8	+1.5
DALK				*e*S	Sn	17 19 31.6	+2.2
PET	**Petropavlovsk**	**1.81**	**222**	*e*P	Pn	17 19 09.4	+1.5
PET				*e*S	Sn	17 19 32.5	+2.1
KRMR	**Karymshinskiy**	**2.17**	**225**	*e*P	Pn	17 19 13.7	+1.2
KBTR	**Krutoberegovo**	**2.21**	**33**	*e*P	Pn	17 19 15.3	+2.3
SMKR	**Semkarok**	**2.25**	**12**	*e*P	Pn	17 19 15.4	+1.7
SRKR	**Sorokina**	**2.29**	**7**	*e*P	Pn	17 19 15.9	+1.7
RUS	**Russkaya**	**2.34**	**214**	*e*P	Pn	17 19 15.8	+1.0
RUS				*e*S	Sn	17 19 43.4	+0.5
MTVR	**Mutnovka**	**2.41**	**219**	*e*P	Pn	17 19 18.0	+2.1
KDTR	**Khodutka, Kamc**	**3.01**	**212**	*e*P	Pn	17 19 24.6	+0.8

IDC 23 17:20:57.1±3.6, 14°.29S×168°.29E, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.6/39, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=80.0km s-min=39.8km az=100.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.94**	**192**	Pn	Pn	17 22 54.3	+0.4
	0.6nm,0.3s,baz=71,slow=9.7,SNR=11						
WRA	**Warramunga Arr**	**32.89**	**255**	P	P	17 27 33.6	+0.4
	0.4nm,0.9s,baz=84,slow=7.5,SNR=4.5						
ASAR	**Alice Springs**	**33.75**	**249**	P	P	17 27 40.2	-0.5
	1.4nm,0.5s,baz=80,slow=8.9,SNR=46						
SONM	**Songino Array**	**82.73**	**323**	P	P	17 33 23.1	0.0
	1.3nm,1.2s,baz=135,slow=4.5,SNR=4.0						

IDC 23 17:28:46.6±1.4, 11°.71S×165°.22E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/38, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=47.2km s-min=28.3km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.37**	**174**	Pn	Pn	17 31 17.1	+0.4
	0.6nm,0.3s,baz=102,slow=22,SNR=12						
H11S2	**WAKE ISLAND Hy**	**30.05**	**3**	T	T	18 06 44.8	
	baz=178						
H11S3	**WAKE ISLAND Hy**	**30.05**	**3**	T	T	18 06 44.3	
	baz=178						
H11S1	**WAKE ISLAND Hy**	**30.06**	**3**	T	T	18 06 47.3	
	baz=178						
WRA	**Warramunga Arr**	**30.77**	**251**	P	P	17 35 03.7	-0.4
	0.8nm,1.0s,baz=80,slow=9.3,SNR=3.4						
H11N1	**WAKE ISLAND Hy**	**31.27**	**3**	T	T	18 08 16.9	
	baz=190						
H11N3	**WAKE ISLAND Hy**	**31.27**	**3**	T	T	18 08 12.8	
	baz=190						
H11N2	**WAKE ISLAND Hy**	**31.29**	**3**	T	T	18 08 15.9	
	baz=190						
ASAR	**Alice Springs**	**32.04**	**244**	P	P	17 35 15.1	-0.1
	0.2nm,0.8s,baz=71,slow=8.9,SNR=3.6						
SONM	**Songino Array**	**78.90**	**324**	P	P	17 40 52.9	+0.9
	0.2nm,0.4s,baz=146,slow=6.4,SNR=2.1						
ILAR	**Eielson Array**	**84.30**	**19**	P	P	17 41 20.4	+0.4
	0.6nm,0.6s,baz=237,slow=5.5,SNR=7.0						
YKA	**Yellowknife Ar**	**95.80**	**27**	P	P	17 42 13.1	-1.4
	0.2nm,0.8s,baz=261,slow=4.1,SNR=3.8						

IDC 23 17:29:34.5±1.7**,11°.70S**×**165°.05E,h0^{km},mb3.4**/3**,mb1 3.8**/4**,mb1mx3.5**/39**,mbtmp3.6**/4**,ML3.3**/1**,Error ellipse: s-maj=50.7km s-min=31.1km az=129.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.40	173	Pn	Pn	17 32 05.0	-0.2
	0.2nm,0.3s,baz=320,slow=17,SNR=2.5						
WRA	Warramunga Arr	30.62	251	P	P	17 35 51.2	+0.6
	0.4nm,0.8s,baz=80,slow=9.3,SNR=2.6						
ASAR	Alice Springs	31.89	244	P	P	17 36 01.3	-0.6
	0.3nm,0.8s,baz=72,slow=9.3,SNR=3.6						
ILAR	Eielson Array	84.34	19	P	P	17 42 08.2	0.0
	0.4nm,0.8s,baz=232,slow=5.6,SNR=4.4						

IDC ***23*** *17:30:25.3±4.4,19°.93S×177°.77W,h461^{km}±48^{km},mb3.4/12,mb1 3.6/13,mb1mx3.3/35,mbtmp4.2/13,Error ellipse: s-maj=22.2km s-min=20.1km az=153.0*
ISCJB ***23*** *17:30:32.7±0.7,20°.3S±0°.2×178°.0W±0°.1,h569^{km},mb3.8/13,Error ellipse: s-maj=22.8km s-min=14.9km az=143.9*
ISC 23 17:30:34.6±0.8**,20°.1S**±0°.2×**178°.0W**±0°.1**,h569^{km},n18,σ1^{s}.44**/19**,mb3.7**/13**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	18.63	192	P	P	17 34 13.6	-3.6
	1.7nm,0.3s,baz=276,slow=2.7,SNR=15						
CTA	Charters Tower	33.57	264	P	P	17 36 27.9	-0.7
	3.2nm,0.7s,baz=91,slow=10.0,SNR=6.4						
JAY	Jayapura	43.94	288	P	P	17 37 52.3	0.0
	6.6nm,0.8s,baz=140,slow=4.0,SNR=5.2						
ASAR	Alice Springs	44.66	256	P	P	17 37 57.2	-0.5
	0.5nm,0.7s,baz=85,slow=8.4,SNR=15						
ASAR				PcP	PcP	17 39 29.0	+1.0
	0.7nm,0.8s,baz=107,slow=3.7,SNR=7.2						
WRA	Warramunga Arr	44.70	262	P	P	17 37 57.2	-0.8
	0.5nm,0.3s,baz=96,slow=7.5,SNR=44						
WRA				PcP	PcP	17 39 29.2	+1.1
	0.3nm,0.7s,baz=97,slow=5.5,SNR=2.7						
MJAR	Matsushiro Arr	69.88	324	P	P	17 40 48.7	-0.4
	1.5nm,0.9s,baz=166,slow=6.3,SNR=4.8						
PETK	Petropavlovsk-	75.86	345	P	P	17 41 22.3	-0.5
	3.9nm,0.9s,baz=132,slow=5.9,SNR=6.4						
NVAR	Mina Array Bea	80.68	43	P	P	17 41 48.9	-0.4
	0.6nm,0.5s,baz=230,slow=7.0,SNR=2.6						
MAW	Mawson	81.99	200	P	P	17 41 58.4	+3.2
	50nm,1.1s,baz=140,slow=7.2,SNR=3.7						
SEY	Seymchan	85.96	347	P	P	17 42 14.3	-0.3
	1.8nm,0.7s,baz=159,slow=3.6,SNR=9.1						
TXAR	Lajitas Array	86.79	57	P	P	17 42 19.8	+0.3
	1.0nm,0.7s,baz=217,slow=5.9,SNR=13						
ILAR	Eielson Array	87.88	13	P	P	17 42 22.6	-1.0
	0.7nm,0.5s,baz=222,slow=5.6,SNR=6.8						
PDAR	Pinedale Array	88.62	43	P	P	17 42 27.8	-0.2
	1.4nm,0.8s,baz=186,slow=3.0,SNR=9.5						
CMAR	Chiang Mai Arr	90.00	290	P	P	17 42 36.7	+2.1
	0.9nm,0.9s,baz=107,slow=2.5,SNR=6.7						
ARCES	ARCESS Array B	128.50	350	PKP	PKPdf	17 48 36.3	-0.3
	2.4nm,0.7s,baz=96,slow=4.6,SNR=4.1						
AKASG	Malin Array Be	142.65	331	PKhKP	PKPpre	17 49 00.3	
	0.6nm,0.3s,baz=41,slow=4.1,SNR=8.7						
BRTR	Keskin Array B	146.57	313	PKPbc	PKPbc	17 49 13.7	+0.5
	0.9nm,0.7s,baz=130,slow=3.1,SNR=6.2						
GERES	GERESS Array B	149.79	345	PKPbc	PKiKP	17 49 21.7	+0.1
	2.2nm,0.8s,baz=34,slow=3.4,SNR=15						

ISCJB ***23*** *17:40:22.4±0.4,41°.03N±0°.03×140°.45E±0°.07,h141^{km}±3^{km},mb3.5/6,Error ellipse: s-maj=8.5km s-min=5.5km az=179.5*
IDC ***23*** *17:40:23.6±1.4,41°.04N×140°.56E,h146^{km}±14^{km},mb3.3/6,mb1 3.4/8,mb1mx3.1/46,mbtmp3.6/8,Error ellipse: s-maj=21.0km s-min=13.9km az=117.0*
JMA ***23*** *17:40:23.6±0.1,41°.03N×140°.43E,h134^{km}±1^{km},M2.9*
ISC 23 17:40:23.2±0.8**,41°.02N**±0°.04×**140°.44E**±0°.06**,h138^{km}**±5^{km}**,n24,σ0^{s}.60**/37**,mb3.6**/6**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSI2	Shiura 2	0.05	335	P	Pn	17 40 41.9	+0.1
JSI2				*e*S	Sn	17 40 55.5	-0.5
JHHS	Hirosakihyakuz	0.37	189	P	Pn	17 40 42.9	+0.2
JHHS				*e*S	Sn	17 40 57.7	+0.4
JSR	Shiriuchi	0.51	358	P	Pn	17 40 43.3	0.0
JSR				*e*S	Sn	17 40 57.9	-0.7
JTM	Tenmabayashi	0.53	115	P	Pn	17 40 43.6	+0.2
JTM				*e*S	Sn	17 40 58.6	-0.1
JIW	Iwasaki	0.53	218	P	Pn	17 40 43.7	+0.2
JIW				*e*S	Sn	17 40 58.8	0.0
JOT	Ohata	0.59	51	P	Pn	17 40 44.0	+0.3
JAH	Hinai	0.84	170	P	Pn	17 40 45.8	+0.3
JAH				*e*S	Sn	17 41 02.9	+0.5
JKB	Kayabe	0.98	27	P	Pn	17 40 47.1	+0.4
JKB				*e*S	Sn	17 41 04.6	0.0
JANG	Nango	1.04	128	P	Pn	17 40 47.0	-0.3
JANG				*e*S	Sn	17 41 05.1	-0.4
JYM2	Yakumo 2	1.10	357	P	Pn	17 40 48.1	+0.3
JYM2				*e*S	Sn	17 41 06.7	+0.1
JOSM	Okushiri--Mats	1.29	326	P	Pn	17 40 49.5	-0.1
JOSM				*e*S	Sn	17 41 09.3	-0.5
JOM	Ohasama	1.67	157	P	Pn	17 40 53.7	-0.2
JOM				*e*S	Sn	17 41 17.3	+0.1
JYK	Kaneyama	2.10	182	P	Pn	17 40 59.2	+0.4
JMK	Ichinoseki	2.15	163	P	Pn	17 40 59.2	-0.2
JNBK	Urakawa-nobuka	2.15	53	P	Pn	17 40 59.7	+0.3
JNBK				*e*S	Sn	17 41 27.4	+0.2
ASAJ	Asahikawa	3.49	27	P	Pn	17 41 17.0	+0.7
	1.1nm,0.3s,baz=291,slow=22,SNR=9.4						
ASAJ				S	Sn	17 41 56.9	-0.7
	1.1nm,0.3s,baz=288,slow=19,SNR=4.5						
MJAR	Matsushiro Arr	4.79	202	P	Pn	17 41 35.6	+1.9
	0.1nm,0.3s,baz=3.3,slow=14,SNR=6.0						
USRK	Ussuriysk Ar.	7.00	300	P	Pn	17 42 05.0	+1.9
	0.4nm,0.3s,baz=106,slow=15,SNR=7.6						
ZALV	Zalesovo Beam	38.75	309	P	P	17 47 33.6	-0.1
	0.7nm,0.6s,baz=79,slow=9.2,SNR=4.0						
MKAR	Makanchi Array	41.46	298	P	P	17 47 56.2	-0.1
	1.3nm,0.8s,baz=83,slow=10,SNR=13						
CMAR	Chiang Mai Arr	41.95	250	P	P	17 48 01.1	+0.6
	0.3nm,0.5s,baz=68,slow=7.9,SNR=3.5						
WRA	Warramunga Arr	60.91	187	P	P	17 50 20.6	-0.7
	0.6nm,0.8s,baz=4.2,slow=6.7,SNR=10						
FINES	FINESS Array B	64.95	331	P	P	17 50 47.3	-0.3
	3.4nm,1.1s,baz=38,slow=9.8,SNR=6.0						
PDAR	Pinedale Array	75.42	46	P	P	17 51 52.0	0.0
	0.2nm,0.5s,baz=4.1,slow=1.3,SNR=5.1						

IDC 23 17:45:14.7±2.1**,47°.49N**×**152°.29E,h0^{km},mb3.5**/5**,mb1 3.9**/5**,mb1mx3.4**/50**,mbtmp3.5**/5**,Error ellipse: s-maj=179.9km s-min=21.0km az=122.0,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11N2	WAKE ISLAND Hy	30.14	152	T	T	18 22 55.9	
	baz=340,slow=76,SNR=83						
H11N1	WAKE ISLAND Hy	30.15	152	T	T	18 22 54.5	
	baz=340,slow=76,SNR=4.7						
H11N3	WAKE ISLAND Hy	30.15	152	T	T	18 22 54.7	
	baz=340,slow=76,SNR=4.9						
H11S1	WAKE ISLAND Hy	31.22	153	T	T	18 24 19.5	
	baz=341,slow=76,SNR=76						
H11S3	WAKE ISLAND Hy	31.23	153	T	T	18 24 22.1	
	baz=341,slow=76,SNR=89						
H11S2	WAKE ISLAND Hy	31.24	153	T	T	18 24 20.8	
	baz=341,slow=76,SNR=56						
ILAR	Eielson Array	36.33	39	P	P	17 52 20.1	+0.4
	0.5nm,0.9s,baz=249,slow=7.6,SNR=3.7						
YKA	Yellowknife Ar	50.67	37	P	P	17 54 14.6	-0.7
	0.2nm,0.7s,baz=296,slow=7.0,SNR=3.5						
WRA	Warramunga Arr	69.03	198	P	P	17 56 21.3	-0.7
	0.5nm,0.9s,baz=15,slow=6.6,SNR=3.2						
ASAR	Alice Springs	72.73	198	P	P	17 56 45.1	+0.7
	0.4nm,0.4s,baz=12,slow=5.6,SNR=13						
TXAR	Lajitas Array	77.62	60	P	P	17 57 13.0	+0.1
	0.7nm,0.5s,baz=290,slow=4.2,SNR=11						

IDC 23 17:46:00.5±2.1**,8°.09S**×**122°.09E,h0^{km},mb3.4**/2**,mb1 3.5**/4**,mb1mx3.3**/38**,mbtmp3.3**/4**,ML2.9**/2**,Error ellipse: s-maj=179.0km s-min=26.7km az=58.0,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.72	136	Pn	Pn	17 49 54.3	-2.1
	0.0nm,0.3s,baz=313,slow=12,SNR=3.2						
ASAR	Alice Springs	19.19	145	P	Pn	17 50 27.2	+0.3
	0.1nm,0.3s,baz=324,slow=12,SNR=6.9						
SONM	Songino Array	57.39	348	P	P	17 55 51.4	+0.5
	0.6nm,1.0s,baz=165,slow=6.0,SNR=4.3						
MKAR	Makanchi Array	65.10	331	P	P	17 56 42.6	-0.4
	0.2nm,0.6s,baz=133,slow=7.3,SNR=2.5						

MEX 23 17:51:29.8±0.5**,16°.38N**×**98°.39W,h1^{km},MD3.7,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.25	88	*i* P	Pg	17 51 34.0	-0.7
PNIG				*i* S	Sg	17 51 38.3	+0.4

ISCJB ***23*** *18:27:29.6±0.3,17°.66S±0°.03×69°.40W±0°.04,h166^{km}±3^{km},mb4.4/25,Error ellipse: s-maj=6.0km s-min=5.0km az=3.2*
NEIC ***23*** *18:27:31.3±0.3,17°.71S×69°.33W,mb4.7/15,Error ellipse: s-maj=11.0km s-min=6.3km az=87.0*
VAO ***23*** *18:27:31.5±0.5,17°.59S×69°.41W,h174^{km}±5^{km},mb4.5*
GUC ***23*** *18:27:31.5±0.3,17°.77S×69°.70W,h169^{km}±3^{km},ML4.3*
IDC ***23*** *18:27:33.0±0.7,17°.49S×69°.19W,h172^{km}±5^{km},mb3.8/14,mb1 4.0/16,mb1mx3.9/30,mbtmp4.4/16,MS3.0/1,Ms1 3.0/1,ms1mx2.4/25,Error ellipse: s-maj=11.8km s-min=11.3km az=27.0*
ISC 23 18:27:30.3±0.5**,17°.65S**±0°.04×**69°.38W**±0°.05**,h160^{km}**±4^{km}**,h161^{km}:pP-P,n102,σ1^{s}.55**/128**,mb4.5**/25**,5C-1D,Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	1.32	223⇑	*e*P	Pn	18 27 58.7	-0.3
PB12				*e*S	Sn	18 28 19.4	-1.7
PB12				IAML		18 28 20.7	
	comp=N,8μm,0.2s						
MNMC	Minye Minye	1.49	188	*e*Pn	Pn	18 28 02.1	+1.2
MNMC				*e*Sn	Sn	18 28 25.7	+1.2
MNMC	Minye Minye	1.49	188⇑	*e*P	Pn	18 28 02.0	+1.1
MNMC				*e*S	Sn	18 28 25.0	+0.5
MNMC				IAML		18 28 32.3	
	comp=N,4μm,0.3s						
LPAZ	La Paz	1.81	42	*e*Pn	Pn	18 28 06.5	+1.9
LPAZ				*e*Sn	Sn	18 28 31.7	+0.8
LPAZ	La Paz	1.81	42	P	Pn	18 28 06.5	+1.9
	comp=N,471nm,0.3s,baz=273,slow=2.7,SNR=7721						
LPAZ				S	Sn	18 28 31.1	+0.2
	comp=N,24nm,0.3s,baz=39,slow=19,SNR=2.8						
LPAZ	La Paz	1.81	42	*e*P	Pn	18 28 06.7	+2.1
PSGC	Pisagua	2.06	200⇑	*e*P	Pn	18 28 06.6	-0.3
PSGC				*e*S	Sn	18 28 33.2	-2.0
PSGC				IAML		18 28 34.4	
	comp=N,2μm,0.4s						
PB11	IPOC Station P	2.12	187	*e*Pn	Pn	18 28 08.1	+0.4
PB11				*e*Sn	Sn	18 28 36.4	-0.2
PB11	IPOC Station P	2.12	187⇓	*i*P	Pn	18 28 08.2	+0.6
PB11				*e*S	Sn	18 28 36.3	-0.2
PB11				IAML		18 28 39.6	
	comp=N,2μm,0.3s						
PB08	IPOC Station P	2.49	175⇑	*e*P	Pn	18 28 13.9	+1.6
PB08				*e*S	Sn	18 28 46.1	+1.4
PB08				IAML		18 28 51.2	
	comp=E,695nm,0.5s						
PB01	IPOC Station P	3.38	182	*e*Pn	Pn	18 28 23.6	+0.5
PB01				*e*Sn	Sn	18 29 00.9	-3.2
PB01	IPOC Station P	3.38	182⇑	*e*P	Pn	18 28 23.8	+0.8
PB01				*e*S	Sn	18 29 02.4	-1.7
PB04	IPOC Station P	4.72	189	*e*Pn	Pn	18 28 39.9	-0.6
PB04				*e*Sn	Sn	18 29 30.4	-4.8
LVC	Limon Verde	4.96	175	*e*Pn	Pn	18 28 45.0	+1.3
LVC				*e*Sn	Sn	18 29 38.0	-3.1
LVC				*e*Sn	Sn	18 29 39.8	-1.3
LVC	Limon Verde	4.96	175	P	Pn	18 28 45.0	+1.3
	comp=E,13nm,0.3s,baz=27,slow=7.7,SNR=179						
LVC				S	Sn	18 29 39.8	-1.3
	comp=E,32nm,0.3s,baz=258,slow=12,SNR=20						
LVC	Limon Verde	4.96	175	*e*P	Pn	18 28 44.9	+1.1
PB10	IPOC Station P	5.94	190	*e*Pn	Pn	18 28 54.9	-1.5
PB10				*e*Sn	Sn	18 29 51.8	-12
GO02	Mina Guanaco	7.48	181	*e*Pn	Pn	18 29 15.9	-1.2
GO02				*e*Sn	Sn	18 30 29.0	-12
SIV	San Ignacio	8.13	80	P	Pn	18 29 23.8	-1.7
	comp=E,7.4nm,0.3s,baz=167,slow=0.2,SNR=81						
SIV				S	Sn	18 30 53.1	-3.2
	comp=E,4.0nm,0.3s,baz=350,slow=21,SNR=7.6						
NNA	Nana	9.14	307	P	Pn	18 29 37.2	-1.8
	comp=E,21nm,0.3s,baz=139,slow=12,SNR=50						
NNA				S	Sn	18 31 09.3	-11
	comp=E,1.5nm,0.3s,baz=45,slow=20,SNR=2.5						
GO03	Copiap	9.93	184	*e*Pn	Pn	18 29 46.8	-2.6
GO03				*e*Sn	Sn	18 31 27.8	-12
LCO	Las Campanas	11.38	186	*e*Pn	Pn	18 30 06.1	-2.4
LCO				*e*Sn	Sn	18 32 10.5	-4.1
LCO	Las Campanas	11.38	186	*e*P	Pn	18 30 10.6	+2.1
GO04	Tololo Observa	12.54	186	*e*Pn	Pn	18 30 21.8	-1.7
SALV	Santo Antonio	13.23	84	*e*P	Pn	18 30 31.8	-0.4
AQDB	Aquidauana	13.24	104	*e*P	Pn	18 30 32.6	+0.3
CPUP	Villa Florida	14.12	130	*e*Pn	Pn	18 30 43.0	-0.3
CPUP	Villa Florida	14.12	130	P	Pn	18 30 42.1	-1.3
	comp=E,0.4nm,0.3s,baz=311,slow=11,SNR=6.2						
CPUP				LR	LR	18 37 00.1	
	comp=E,56nm,20.0s,baz=260,slow=40						
CPUP	Villa Florida	14.12	130	*e*P	Pn	18 30 43.8	+0.4
ROC1	El Roble	15.34	185	*e*Pn	P	18 31 00.6	+0.8
	comp=E,10nm,0.6s						
TRCB	Terra Rica	16.53	111	*e*P	Pn	18 31 14.4	+1.2
PTGB	Pitanga	17.61	116	*e*P	Pn	18 31 25.9	-0.2
ITRB	Iturama	18.14	99	*e*P	Pn	18 31 31.9	-0.5
ITAB	Concordia	18.57	124	*e*P	Pn	18 31 36.7	-0.5
PTGA	Pitinga	19.19	30	*e*P	P	18 31 41.2	-0.7
	comp=E,28nm,0.3s						
PTGA				*e*Pn	Pn	18 31 42.5	-2.2
PTGA				S	S	18 35 05.6	-5.4
PTGA	Pitinga	19.19	30	P	P	18 31 41.6	-0.3
	comp=E,8.2nm,0.3s,baz=210,slow=15,SNR=75						
PTGA				S	S	18 35 05.6	-5.4
	comp=E,0.2nm,0.3s,baz=336,slow=19,SNR=2.7						
PTGA	Pitinga	19.19	30	*e*P	P	18 31 41.5	-0.5
CPSB	Cacapava Do Su	19.30	134	*e*P	P	18 31 44.1	+1.1
FRTB	Fartura	19.41	110	*e*P	Pn	18 31 46.3	-0.9
OTAV	Otavalo	19.89	332	*e*P	P	18 31 47.9	-2.0
	comp=E,5.2nm,1.2s						
OTAV	Otavalo	19.89	332	*e*P	P	18 31 48.4	-1.5
BB19B	Bebedouro	19.97	103	*e*P	P	18 31 50.3	-0.1
PLTB	Pedras Altas	20.04	137	*e*P	P	18 31 51.6	+0.6
IPMB	Ipameri, GO	20.16	94	*e*P	P	18 31 52.5	0.0
CNLB	Canela	20.55	128	*e*P	P	18 31 56.7	+0.2
BDFB	Brasilia	20.57	88	P	P	18 31 56.9	0.0
	comp=E,17nm,0.4s,baz=261,slow=7.0,SNR=38						
PEXB	Peixe	21.10	78	*e*P	P	18 32 03.2	+0.7
TRQA	Tornquist	21.35	164	*e*P	P	18 32 06.0	+1.1
	comp=E,62nm,1.8s						
TER01	Tubaro-SC	21.52	124	*e*P	P	18 32 05.5	-1.3
PMNB	Patos De Minas	21.83	96	*e*P	P	18 32 09.4	-0.8
GO06	Curarrehue	21.94	184	*e*P	P	18 32 12.8	+1.7
	comp=E,13nm,0.9s						
PLCA	Paso Flores	23.03	182	*e*P	P	18 32 23.2	+1.8
	comp=E,18nm,1.3s						
PLCA	Paso Flores	23.03	182	P	P	18 32 23.6	+2.1
	comp=E,5.4nm,0.9s,baz=357,slow=13,SNR=6.7						
PLCA	Paso Flores	23.03	182	*e*P	P	18 32 21.6	+0.2
JANB	Januaria	24.19	88	*e*P	P	18 32 32.5	+0.2
MCI6	Montes Claros	24.36	92	*e*P	P	18 32 34.7	+0.9
MCI9	Montes Claros	24.37	92	*e*P	P	18 32 33.9	+0.1
MCI7	Montes Claros	24.43	92	*e*P	P	18 32 34.6	+0.2
RIB01	Linhares ES	27.53	98	*e*P	P	18 33 02.7	+0.4
MDP	Montagnes des	28.00	38	P	P	18 33 06.7	+0.3
	comp=E,9.1nm,0.7s,baz=188,slow=6.7,SNR=5.1						
APG	El Apazote	38.53	326	P	P	18 34 39.4	+1.6
	comp=E,2.1nm,0.6s,baz=304,slow=2.4,SNR=5.3						
TEIG	Tepich	41.95	333	*e*P	P	18 35 05.8	+0.2
	comp=E,113nm,1.8s						
CMIG	Matias Romero	42.68	323	P	P	18 35 12.8	+1.3
	comp=E,3.2nm,0.6s,baz=125,slow=4.2,SNR=8.9						
LNIG	Linares	51.45	324	*e*P	P	18 36 20.1	+0.7
	comp=E,44nm,1.9s						
GOGA	Godfrey	52.52	345	*e*P	P	18 36 22.4	-4.6
	comp=E,29nm,1.5s						
WHTX	Lake Whitney,	56.22	331	*e*P	P	18 36 55.0	+1.3
	comp=E,8.5nm,0.6s						
WVT	Waverly	56.26	342	*e*S	S	18 44 31.2	-0.1
TX31	Lajitas Ar. Si	57.24	324	*e*P	P	18 37 01.5	+0.3
TXAR	Lajitas Array	57.24	324	P	P	18 37 01.7	+0.5
	comp=E,0.3nm,0.5s,baz=154,slow=8.8,SNR=6.9						
BGNE	Belgrade	64.52	336	*e*P	P	18 37 50.4	+0.4
	comp=E,39nm,0.4s						
SDCO	Great Sand Dun	64.72	329	*e*P	P	18 37 52.9	+1.1
	comp=E,2.2nm,0.8s						
SNAA	Sanae	66.05	161	*e*P	P	18 38 01.3	+1.7
	comp=E,17nm,1.6s						
SNAA	Sanae	66.05	161	P	P	18 38 01.2	+1.7
	comp=E,1.7nm,0.6s,baz=258,slow=6.7,SNR=10.0						
LIC	Lamto	67.80	75	*e*P	P	18 38 11.8	+0.3
	comp=E,38nm,0.8s						
TIC	Toumodi	67.96	75	*e*P	P	18 38 12.8	+0.2
KIC	Kosan Boka	68.12	75	*e*P	P	18 38 14.0	+0.5
	comp=E,50nm,0.7s						
DBIC	Dimbokro	68.12	75	*e*P	P	18 38 14.3	+0.8
	comp=E,26nm,0.6s						
DBIC	Dimbokro	68.12	75	P	P	18 38 14.2	+0.7
	comp=E,24nm,0.6s,baz=229,slow=6.2,SNR=39						
PDAR	Pinedale Array	70.57	330	P	P	18 38 28.9	+0.7
	comp=E,0.4nm,0.7s,baz=110,slow=7.8,SNR=3.6						
ULM	Lac du Bonnet	71.53	342	P	P	18 38 33.4	-0.1
	comp=E,3.9nm,0.5s,baz=151,slow=7.2,SNR=12						
NVAR	Mina Array Bea	72.20	322	P	P	18 38 39.6	+1.5
	comp=E,0.8nm,0.7s,baz=132,slow=6.2,SNR=3.6						
YERR	Yerington	73.12	321	*e*P	P	18 38 44.5	+1.0
	comp=E,9.3nm,1.0s						
TOA1	Torodi Ar. Sit	76.52	71	*e*P	P	18 39 02.5	-0.8
TOA1				*e*pP	pP	18 39 43.9	0.0
TOA0	Torodi Ar. Sit	76.52	71	*e*P	P	18 39 02.5	-0.8
TORD	Torodi Ar. Bea	76.52	71	P	P	18 39 02.5	-0.8
	comp=E,8.9nm,0.6s,baz=267,slow=5.2,SNR=56						
TORD				pP	pP	18 39 43.9	0.0
	comp=E,1.7nm,0.8s,baz=254,slow=5.2,SNR=1.7						
VNDA	Vanda	80.55	190	*e*P	P	18 39 27.6	+3.4
VNDA	Vanda	80.55	190	P	P	18 39 28.2	+4.0
	comp=E,2.3nm,0.8s,baz=127,slow=5.1,SNR=3.0						
ESDC	Sonseca Array	83.42	45	P	P	18 39 39.3	-0.6
	comp=E,0.2nm,0.5s,baz=241,slow=3.9,SNR=3.2						
YKA	Yellowknife Ar	87.42	341	P	P	18 39 60.0	+0.9
	comp=E,1.7nm,0.7s,baz=135,slow=4.9,SNR=28						
YKA				pP	pP	18 40 42.2	+1.5
	comp=E,1.1nm,0.8s,baz=134,slow=4.7,SNR=4.7						
YKB5	Yellowknife Ar	87.42	341	*e*P	P	18 39 60.0	+0.9
ASAR	Alice Springs	133.06	210	PKP	PKiKP	18 46 28.7	-0.1
	comp=E,0.7nm,0.8s,baz=136,slow=2.0,SNR=10						
ASAR				SKPbc	SKPbc	18 49 40.6	-0.1
	comp=E,0.4nm,0.9s,baz=142,slow=5.6,SNR=4.2						
WR1	Warramunga Arr	135.98	213	*e*PKPdf	PKiKP	18 46 34.7	-0.1
WRA	Warramunga Arr	135.98	213	PKP	PKiKP	18 46 34.7	-0.1
	comp=E,1.0nm,0.5s,baz=146,slow=1.9,SNR=8.9						
ZAA1	Zalesovo Array	138.63	23	*e*PKPdf	PKiKP	18 46 38.1	-0.9
ZAA1				*e*SKPbc	SKPbc	18 49 56.7	0.0
ZALV	Zalesovo Beam	138.63	23	PKP	PKiKP	18 46 38.2	-0.9
	comp=E,0.4nm,0.4s,baz=321,slow=1.9,SNR=3.5						
ZALV				SKPbc	SKPbc	18 49 56.7	0.0
	comp=E,1.6nm,0.8s,baz=290,slow=4.3,SNR=8.1						
MK32	Makanchi Array	142.71	33	*e*PKPpre	PKPpre	18 46 41.6	
MK32				*e*SKPbc	SKPbc	18 50 07.0	-0.6
MKAR	Makanchi Array	142.71	33	PKhKP	PKPpre	18 46 41.6	
	comp=E,0.4nm,0.7s,baz=320,slow=3.6,SNR=5.2						
MKAR				SKPbc	SKPbc	18 50 07.0	-0.6
	comp=E,0.5nm,0.8s,baz=325,slow=2.4,SNR=6.0						
USRK	Ussuriysk Ar.	147.99	330	PKPbc	PKiKP	18 46 58.5	-0.1
	comp=E,2.1nm,0.7s,baz=37,slow=1.9,SNR=5.2						
MJAR	Matsushiro Arr	149.22	313	PKPbc	PKiKP	18 47 01.7	+0.3
	comp=E,1.0nm,0.4s,baz=66,slow=0.8,SNR=9.5						
MAJO	Matsushiro	149.22	313	*e*PKPbc	PKiKP	18 47 01.7	+0.3
SONA0	Songino Array	149.69	6	*e*PKPbc	PKiKP	18 47 02.6	+0.4
SONA0				*e*pPKPab	pPKPbc	18 47 47.0	+2.1
SONM	Songino Array	149.69	6	PKPbc	PKiKP	18 47 02.6	+0.4
	comp=E,0.3nm,0.4s,baz=305,slow=2.9,SNR=4.5						
SONM				pPKPbc	pPKPbc	18 47 47.0	+2.1
	comp=E,1.0nm,0.7s,baz=320,slow=1.6,SNR=4.9						

JMA ***23*** *18:29:59.9±0.1,24°.53N×122°.81E,h91^{km}±1^{km},M1.6*
TAP ***23*** *18:29:59.3,24°.65N×122°.86E,h90^{km},ML2.6,C*
ISCJB ***23*** *18:30:00.2±0.6,24°.59N±0°.04×122°.84E±0°.02,h87^{km}±5^{km},Error ellipse: s-maj=7.4km s-min=3.2km az=173.3*
ISC 23 18:30:01.3±1.5**,24°.56N**±0°.06×**122°.83E**±0°.03**,h81^{km}**±8^{km}**,n47,σ0^{s}.85**/84**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.15	135	P	Pn	18 30 12.9	-0.1
JYNG				S	Sn	18 30 22.6	+1.0
YOJ	Yonaguni jima	0.20	120	P	Pn	18 30 12.7	-0.4
	baz=150						
YOJ				S	Sn	18 30 22.6	+0.7
	baz=150						
YOJ	Yonaguni jima	0.20	120	P	Pn	18 30 13.0	-0.1
YOJ				*e*S	Sn	18 30 22.9	+1.0
EOS1	EOS1	0.64	269	P	Pn	18 30 15.8	-0.5
	baz=254						
EOS1				*e*S	Sn	18 30 27.9	+0.5
	baz=254						
IRIF	Iriomote-Funau	0.85	105	P	Pn	18 30 18.3	-0.3
IRIF				S	Sn	18 30 32.1	+0.5
TWC	Suao	0.89	273	*e*P	Pn	18 30 17.9	-1.1
	baz=266						
TWC				*e*S	Sn	18 30 32.5	+0.1
	baz=266						
NANB	Nanao	0.99	263	*e*P	Pn	18 30 19.7	-0.5
	baz=251						
NANB				*e*S	Sn	18 30 34.5	+0.1
	baz=251						
ENA	Nanau	1.00	263	P	Pn	18 30 19.7	-0.6
	baz=251						
ENA				*e*S	Sn	18 30 34.7	+0.2
	baz=251						
TIPB	Shuangxi	1.00	294	*e*P	Pn	18 30 19.2	-1.1
	baz=285						
TWE	Neicheng	1.07	279	P	Pn	18 30 20.3	-0.8
	baz=276						
TWE				*e*S	Sn	18 30 35.9	-0.1
	baz=276						
JKRS	Kuro-shima	1.13	106	P	Pn	18 30 21.9	0.0
JKRS				*e*S	Sn	18 30 38.4	+1.1
ENTT	Nioudou	1.15	274	*e*P	Pn	18 30 22.1	0.0
	baz=265						
NACB	Ninganchiao	1.19	251	P	Pn	18 30 21.8	-0.8
	baz=238						
NACB				*e*S	Sn	18 30 38.1	-0.6
	baz=238						
NDT	Datong Townshi	1.20	272	*e*P	Pn	18 30 22.7	-0.1
	baz=263						
TWA	Mucha	1.20	291	*e*P	Pn	18 30 21.9	-0.9
	baz=277						
JIJ	Ishigaki jima	1.22	99	P	Pn	18 30 22.4	-0.6
JIJ				S	Sn	18 30 38.9	-0.4
NWLT	Wulai	1.22	280	*e*P	Pn	18 30 22.7	-0.4
	baz=282						
ETLH	Xiulin Townshi	1.27	254	*e*P	Pn	18 30 23.1	-0.7
	baz=243						
YM01	YM01	1.28	297	*e*P	Pn	18 30 23.1	-0.7
	baz=292						
NNSB	Datong	1.32	265	*e*P	Pn	18 30 23.9	-0.6
	baz=252						
YHNB	Yeheng	1.32	275	*e*P	Pn	18 30 24.1	-0.3
	baz=262						
YHNB				*e*S	Sn	18 30 42.2	+0.4
	baz=262						
NNS	Nan Shan	1.33	265	P	Pn	18 30 23.9	-0.7
	baz=253						
NSK	Sanguang	1.34	275	P	Pn	18 30 24.4	-0.2
	baz=262						
NSK				*e*S	Sn	18 30 43.1	+0.9
	baz=262						
JISG	Ishigakijimahi	1.35	89	P	Pn	18 30 24.0	-0.7
JISG				S	Sn	18 30 41.9	-0.5
WHF	Hehuan Shan	1.48	254	*e*P	Pn	18 30 26.0	-0.8
	baz=250						
WHF				*e*S	Sn	18 30 45.7	-0.3
	baz=250						
EGFH	Guangfu	1.56	235	P	Pn	18 30 26.3	-1.0
	baz=228						
EGFH				*e*S	Sn	18 30 45.9	-1.1
	baz=228						
CHGB	Renai	1.59	252	*e*P	Pn	18 30 27.7	-0.2
	baz=240						

CHGB	baz=240			S	Sn	18 30 47.6	-0.5
OWD	**Renai** baz=238	1.62	249	*e*P	Pn	18 30 27.6	-0.7
OWD	baz=238			*e*S	Sn	18 30 47.4	-1.4
HGSD	**Ruisui** baz=223	1.67	231	*e*P	Pn	18 30 28.1	-0.7
HGSD	baz=223			*e*S	Sn	18 30 49.2	-0.4
JTJ	**Tarama**	1.71	87	*e*S	Sn	18 30 50.8	+0.2
EHY	**Hungye** baz=229	1.73	233	P	Pn	18 30 28.1	-1.6
EHY	baz=229			S	Sn	18 30 50.1	-1.0
VWDT	**VWDT** baz=239	1.73	243	*e*P	Pn	18 30 29.4	-0.3
VWDT	baz=239			S	Sn	18 30 50.6	-0.6
WHP	**Taichung City** baz=252	1.74	261	P	Pn	18 30 30.0	+0.2
WHP	baz=252			*e*S	Sn	18 30 52.0	+0.6
YULB	**Yu-li** baz=236	1.82	231	*e*P	Pn	18 30 29.8	-1.0
YULB	baz=236			*e*S	Sn	18 30 52.6	-0.6
TWF1	**Yuli** baz=235	1.84	230	*e*P	Pn	18 30 29.7	-1.5
TWF1	baz=235			*e*S	Sn	18 30 53.3	-0.5
SSLB	**Suanglung** baz=238	1.87	246	*e*P	Pn	18 30 31.0	-0.6
SSLB	baz=238			*e*S	Sn	18 30 54.3	-0.3
SMLT	**Sun Moon Lake** baz=241	1.88	249	*e*P	Pn	18 30 31.9	+0.2
SMLT	baz=241			*e*S	Sn	18 30 56.3	+1.4
TYC	**Yuchr** baz=241	1.91	250	*e*P	Pn	18 30 32.1	+0.1
TYC	baz=241			*e*S	Sn	18 30 56.5	+1.2
FULB	**Fuli** baz=217	1.95	226	*e*P	Pn	18 30 31.2	-1.4
FULB	baz=217			*e*S	Sn	18 30 55.8	-0.6
WHYT	**Xinyi Township** baz=238	2.00	245	*e*P	Pn	18 30 33.8	+0.6
WHYT	baz=238			*e*S	Sn	18 30 58.9	+1.4
WJS	**Zhushan** baz=238	2.05	249	*e*P	Pn	18 30 34.4	+0.5
WJS	baz=238			*e*S	Sn	18 30 60.0	+1.2
ELDTW	**Lidau** baz=223	2.15	231	P	Pn	18 30 34.5	-0.7
ELDTW	baz=223			S	Sn	18 30 60.0	-1.2
CHN5	**Tsauling** baz=234	2.18	244	*e*P	Pn	18 30 36.3	+0.6
CHN5	baz=234			*e*S	Sn	18 31 03.3	+1.3
TPUB	**Ta-pu** baz=228	2.37	238	*e*P	Pn	18 30 38.7	+0.6
TPUB	baz=228			*e*S	Sn	18 31 07.5	+1.2
WTP	**Ta-pu** baz=234	2.41	238	*e*P	Pn	18 30 39.8	+1.1
WTP	baz=234			*e*S	Sn	18 31 09.1	+1.7
TWK	**Hsinying** baz=235	2.50	239	*e*P	Pn	18 30 40.5	+0.6
TWK	baz=235			*e*S	Sn	18 31 11.2	+1.7
SLGT	**Liugui** baz=221	2.53	232	*e*P	Pn	18 30 41.3	+0.9
SLGT	baz=221			*e*S	Sn	18 31 12.2	+1.9

IDC 23 18:33:06.2±1.9**, 7°.17S×123°.39E, h0^{km}, mb3.4**/1**, mb1 3.4**/3**, mb1mx3.3**/24**, mbtmp3.3**/3**, ML2.7**/2**, Error ellipse: s-maj=202.9km s-min=30.2km az=58.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.0nm,0.3s,baz=316,slow=13,SNR=2.8	16.55	141	Pn	P	18 37 01.4	-1.1
ASAR	**Alice Springs** 0.0nm,0.3s,baz=321,slow=10,SNR=8.4	19.26	150	P	P	18 37 31.7	-0.7
MKAR	**Makanchi Array** 0.3nm,0.8s,baz=137,slow=8.0,SNR=3.8	64.94	330	P	P	18 43 47.7	0.0

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*ISCJB **23** 18:58:18.0±0.8, 6°.11S±0°.06×127°.49E±0°.10, h404^{km}, mb3.1/2, Error ellipse: s-maj=13.7km s-min=7.7km az=21.6*

*IDC **23** 18:58:18.2±1.1, 6°.11S×127°.46E, h412^{km}±14^{km}, mb2.8/2, mb1 3.3/7, mb1mx3.0/35, mbtmp4.1/7, Error ellipse: s-maj=19.3km s-min=11.7km az=93.0*

ISC 23 18:58:18.5±0.9**, 6°.13S**±0°.08×**127°.5E**±0°.1**, h404^{km}, n7, σ1^{s}.36**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata** 3.6nm,0.3s,baz=79,slow=5.2,SNR=6.0	5.56	223	P	**P**	**18 59 47.8**	**+1.4**
BATI	2.6nm,0.3s,baz=338,slow=5.4,SNR=2.7			S	**S**	**19 00 57.0**	**-1.3**
SIJI	**Sorong** 9.9nm,0.3s,baz=253,slow=19,SNR=42	6.43	36	P	**P**	**18 59 57.4**	**+1.7**
SIJI	2.1nm,0.3s,baz=236,slow=23,SNR=6.9			S	**S**	**19 01 13.8**	**-1.7**
FITZ	**Fitzroy Crossi** 0.7nm,0.3s,baz=20,slow=9.7,SNR=32	12.04	189	P	**P**	**19 00 59.4**	**+0.9**
WRA	**Warramunga Arr** 1.9nm,0.3s,baz=330,slow=11,SNR=134	15.26	155	P	**P**	**19 01 34.1**	**+0.4**
WRA	0.4nm,0.3s,baz=328,slow=20,SNR=14			S	**S**	**19 04 13.9**	**-1.2**
ASAR	**Alice Springs** 1.4nm,0.3s,baz=347,slow=12,SNR=71	18.50	161	P	**P**	**19 02 08.4**	**+0.2**
ASAR	0.2nm,0.3s,baz=345,slow=19,SNR=8.7			S	**S**	**19 05 16.4**	**-1.0**
STKA	**Stephens Creek** 0.9nm,0.4s,baz=326,slow=12,SNR=6.6	28.81	155	P	**P**	**19 03 41.6**	**+0.1**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=123,slow=7.6,SNR=3.8	66.16	328	P	**P**	**19 08 22.9**	**-1.3**

MEX 23 19:00:40.7±0.3**, 13°.91N×91°.92W, h43^{km}**±104^{km}**, MD3.8, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.05	342	*i* P	Pn	19 00 57.8	-1.2
PCIG		2.19	325	*e*P	Pn	19 01 13.1	-1.4
PCIG				*e*S	Sn	19 01 38.0	-2.4
CCIG	**Comitan**	2.37	355	*e*P	Pn	19 01 13.7	-3.6

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*ISCJB **23** 19:08:50.1±0.7, 21°.90N±0°.07×143°.3E±0°.2, h250^{km}, mb3.6/15, Error ellipse: s-maj=23.9km s-min=9.9km az=173.5*

*IDC **23** 19:08:55.0±2.2, 21°.95N×143°.14E, h281^{km}±21^{km}, mb3.3/15, mb1 3.5/18, mb1mx3.3/38, mbtmp4.0/18, Error ellipse: s-maj=22.0km s-min=12.3km az=88.0*

ISC 23 19:08:52.1±0.9**, 21°.89N**±0°.10×**143°.2E**±0°.2**, h250^{km}, n26, σ1^{s}.27**/20**, mb3.5**/15**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima** 7.0nm,0.3s,baz=324,slow=19,SNR=3.3	5.26	350	P	**Pn**	**19 10 13.0**	**+2.0**
JCJ	17nm,0.3s,baz=250,slow=21,SNR=7.3			S	**S**	**19 11 12.6**	**-1.5**
MJAR	**Matsushiro Arr** 0.3nm,0.3s,baz=167,slow=10,SNR=22	15.22	345	P	**P**	**19 12 13.3**	**-1.1**
MAT	**Matsushiro**	15.22	345	P	**P**	**19 12 13.5**	**-0.9**
JNU	**Nakatsue** 1.0nm,0.3s,baz=151,slow=2.9,SNR=9.4	15.61	318	P	**Pn**	**19 12 20.7**	**+1.1**
KSRS	**Korea Array** 3.8nm,0.6s,baz=145,slow=8.7,SNR=23	20.35	323	P	**P**	**19 13 10.3**	**+0.4**
ASAJ	**Asahikawa** 3.4nm,0.3s,baz=73,slow=19,SNR=4.4	22.17	359	P	**P**	**19 13 30.8**	**+3.3**
H11N1	**WAKE ISLAND Hy** baz=282,slow=75,SNR=5.6	22.28	91	T	T	19 37 59.2	
H11N2	**WAKE ISLAND Hy** baz=282,slow=75,SNR=2.7	22.28	91	T	T	19 37 60.0	
H11N3	**WAKE ISLAND Hy** baz=282,slow=75,SNR=3.1	22.30	91	T	T	19 38 02.4	
H11S3	**WAKE ISLAND Hy** baz=284,slow=75,SNR=11	22.32	94	T	T	19 38 06.0	
H11S1	**WAKE ISLAND Hy** baz=284,slow=75,SNR=9.6	22.33	94	T	T	19 38 06.7	
H11S2	**WAKE ISLAND Hy** baz=284,slow=75,SNR=9.7	22.34	94	T	T	19 38 07.4	
KLR	**Kul'dur** 1.4nm,0.4s,baz=159,slow=4.7,SNR=8.4	28.75	344	P	**P**	**19 14 26.7**	**+0.1**
SONM	**Songino Array** 0.8nm,0.4s,baz=128,slow=7.4,SNR=23	39.18	320	P	**P**	**19 15 55.9**	**-0.3**
SEY	**Seymchan** 0.6nm,0.4s,baz=171,slow=19,SNR=6.6	41.49	6	P	**P**	**19 16 14.8**	**+0.1**
WRA	**Warramunga Arr** 0.9nm,0.5s,baz=8.9,slow=7.7,SNR=18	42.46	192	P	**P**	**19 16 23.6**	**+0.7**
ASAR	**Alice Springs** 0.3nm,0.4s,baz=15,slow=10,SNR=6.4	46.17	192	P	**P**	**19 16 52.2**	**0.0**
ZALV	**Zalesovo Beam** 2.0nm,0.5s,baz=109,slow=7.3,SNR=8.3	54.05	322	P	**P**	**19 17 50.3**	**-0.5**
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=92,slow=8.2,SNR=6.3	54.56	313	P	**P**	**19 17 54.0**	**-0.6**
ILAR	**Eielson Array** 0.4nm,0.7s,baz=266,slow=5.5,SNR=6.5	61.87	27	P	**P**	**19 18 44.4**	**-0.4**
YKA	**Yellowknife Ar** 0.6nm,0.5s,baz=292,slow=5.8,SNR=13	76.29	28	P	**P**	**19 20 12.8**	**-0.3**
ARCES	**ARCESS Array B** 4.0nm,0.9s,baz=22,slow=3.9,SNR=8.3	78.73	341	P	**P**	**19 20 26.0**	**-0.5**
KBZ	**Khabaz** 1.1nm,0.7s,baz=0.0,slow=0.0,SNR=3.5	82.23	314	P	**P**	**19 20 45.5**	**-0.1**
FINES	**FINESS Array B** 2.4nm,0.5s,baz=70,slow=5.4,SNR=34	83.00	334	P	**P**	**19 20 47.8**	**-1.4**
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=74,slow=6.9,SNR=3.4	87.34	324	P	P	19 21 08.4	-2.4
NOA	**NORSAR Array B** 0.5nm,0.8s,baz=44,slow=4.8,SNR=2.8	88.76	339	P	**P**	**19 21 15.5**	**-1.9**

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*KRNET **23** 19:08:56.8±0.1, 42°.04N×77°.23E, h23^{km}, mb2.4*

*SOME **23** 19:08:57.2, 42°.02N×77°.22E, h15^{km}*

*NNC **23** 19:08:57.8±0.6, 42°.13N×77°.22E, h0^{km}, mb2.2, mpv2.4, Error ellipse: s-maj=4.0km s-min=2.5km az=178.0*

ISC 23 19:08:57.3±1.0**, 42°.04N**±0°.04×**77°.23E**±0°.02**, h18^{km}**±3^{km}**, n41, σ0^{s}.66**/80**, 14C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay** baz=41	0.10	338	⇓*i*P	**Pg**	**19 09 01.6**	**+0.4**
KDJ	baz=41			⇓*i*S	**Sg**	**19 09 04.6**	**+0.7**
TARG	**Taragay, Kyrgy** baz=26	0.53	125	⇑*i*P	**Pg**	**19 09 07.3**	**-0.7**
TARG	baz=26			⇑*i*S	**Sg**	**19 09 14.3**	**-0.9**
TNSS	**Tian-Shan** 6.3nm,0.1s	1.02	348	P	**Pb**	**19 09 15.7**	**-0.9**
TNSS	3.1nm,0.2s			S	**Sb**	**19 09 29.4**	**-0.5**
TNSS	**Tian-Shan** baz=48	1.02	348	*e*P	**Pb**	**19 09 15.7**	**-0.9**
TNSS	baz=48			*e*S	**Sb**	**19 09 29.1**	**-0.8**
TNSS	**Tian-Shan** 6.3nm,0.1s	1.02	348	*e*P	**Pb**	**19 09 15.7**	**-0.9**
TNSS	2.7nm,0.3s			*e*S	**Sb**	**19 09 29.1**	**-0.8**
BOOM	**Boomskoye usch** baz=96	1.06	296	⇑*i*P	**Pb**	**19 09 16.5**	**-0.7**
BOOM	baz=96			⇑*i*S	**Sg**	**19 09 31.1**	**-0.7**
IZV	**Izvestkoviy** 2.2nm,0.2s	1.10	336	P	**Pb**	**19 09 16.9**	**-0.9**
IZV	5.0nm,0.1s			S	**Sb**	**19 09 32.1**	**+0.2**
IZV	**Izvestkoviy** baz=35	1.10	336	*e*P	**Pb**	**19 09 17.0**	**-0.8**
IZV	baz=35			*e*S	**Sb**	**19 09 31.3**	**-0.6**
IZV	**Izvestkoviy** 2.2nm,0.2s	1.10	336	*e*P	**Pb**	**19 09 17.0**	**-0.8**
IZV	5.0nm,0.1s			*e*S	**Sb**	**19 09 31.3**	**-0.6**
NRN	**Naryn** baz=37	1.10	237	⇑*i*P	**Pb**	**19 09 17.5**	**-0.4**
NRN	baz=37			⇑*i*S	**Sg**	**19 09 32.6**	**-0.5**
MDOK	**Medeo** 0.8nm,0.4s	1.13	353	⇓P	**Pb**	**19 09 17.6**	**-0.8**
MDOK	1.4nm,0.4s			⇓S	**Sb**	**19 09 31.8**	**-1.1**
KOTS	**Kotyrbulak** 2.9nm,0.2s	1.20	356	P	**Pn**	**19 09 18.9**	**-0.4**
KOTS	3.8nm,0.2s			S	**Sb**	**19 09 34.9**	**+0.1**
KOTS	**Kotyrbulak** baz=56	1.20	356	*e*P	**Pn**	**19 09 18.7**	**-0.6**
KOTS	baz=56			*e*S	**Sb**	**19 09 34.0**	**-0.8**
KOTS	**Kotyrbulak** 2.9nm,0.2s	1.20	356	*e*P	**Pn**	**19 09 18.7**	**-0.6**
KOTS	7.2nm,0.2s			*e*S	**Sb**	**19 09 33.9**	**-0.8**
MTBS	**Maitube** 1.6nm,0.1s	1.24	332	P	**Pn**	**19 09 19.9**	**+0.1**
MTBS	4.7nm,0.2s			S	**Sb**	**19 09 36.2**	**+0.2**
MTBS	**Maitube** baz=32	1.24	332	*e*P	**Pn**	**19 09 19.9**	**+0.1**
MTBS	baz=32			*e*S	**Sb**	**19 09 36.2**	**+0.2**
MTBS	**Maitube** 1.6nm,0.1s	1.24	332	*e*P	**Pn**	**19 09 19.9**	**+0.1**
MTBS	4.7nm,0.2s			*e*S	**Sb**	**19 09 36.2**	**+0.2**
SATY	**Saty** 1.2nm,0.3s	1.34	40	P	**Pn**	**19 09 21.4**	**+0.2**
SATY	5.8nm,0.2s			S	**Sn**	**19 09 38.9**	**+0.2**
SATY	**Saty** 1.2nm,0.3s	1.34	40	*e*P	**Pn**	**19 09 21.4**	**+0.2**
SATY	5.8nm,0.2s			*e*S	**Sn**	**19 09 38.9**	**+0.2**
KST	**Kastek** 4.6nm,1.4s	1.37	317	P	**Pn**	**19 09 21.8**	**+0.1**
KST	5.1nm,0.5s			S	**Sb**	**19 09 40.2**	**+0.5**
KST	**Kastek** baz=17	1.37	317	*e*P	**Pn**	**19 09 21.7**	**+0.1**
KST	baz=17			*e*S	**Sn**	**19 09 39.5**	**+0.1**
KST	**Kastek** 1.4nm,0.1s	1.37	317	*e*P	**Pn**	**19 09 21.7**	**+0.1**
KST	3.5nm,0.3s			*e*S	**Sn**	**19 09 39.6**	**+0.1**
KZA	**Kyzart** baz=72	1.48	272	⇑*i*P	**Pb**	**19 09 24.0**	**-0.4**
KZA	baz=72			⇑*i*S	**Sb**	**19 09 43.5**	**+0.5**
TKM2	**Tokmak 2** 0.4nm,0.6s	1.50	307	⇓P	**Pn**	**19 09 23.6**	**+0.2**
TKM2	1.5nm,0.3s			⇓S	**Sg**	**19 09 44.4**	**-1.3**
TKM2	**Tokmak 2** baz=6.0	1.50	307	⇑*i*P	**Pn**	**19 09 24.1**	**+0.7**
TKM2	baz=6.0			⇑*i*S	**Sb**	**19 09 44.0**	**+0.6**
DGS	**Degeres** 0.6nm,0.3s	1.61	319	P	**Pb**	**19 09 26.1**	**-0.5**
DGS	2.1nm,0.2s			S	**Sn**	**19 09 46.1**	**+0.7**
DGS	**Degeres** baz=19	1.61	319	*e*P	**Pn**	**19 09 25.7**	**+0.7**
DGS	baz=19			*e*S	**Sn**	**19 09 46.1**	**+0.7**
DGS	**Degeres** 0.7nm,0.5s	1.61	319	*e*P	**Pn**	**19 09 25.7**	**+0.7**
DGS	2.7nm,0.2s			*e*S	**Sn**	**19 09 46.1**	**+0.7**
KTBS	**Karatobe** 0.4nm,0.1s	1.72	347	P	**Pb**	**19 09 28.3**	**-0.1**
KTBS	6.5nm,0.3s			S	**Sb**	**19 09 50.8**	**+1.1**
KTBS	**Karatobe** baz=42	1.72	347	*e*P	**Pb**	**19 09 28.3**	**-0.1**
KTBS	baz=42			*e*S	**Sb**	**19 09 50.8**	**+1.1**
KTBS	**Karatobe** 0.4nm,0.1s	1.72	347	*e*P	**Pb**	**19 09 28.3**	**-0.1**
KTBS	6.5nm,0.3s			*e*S	**Sb**	**19 09 50.8**	**+1.1**
UZB	**Uzynbulak** 0.6nm,0.2s	1.73	49	P	**Pb**	**19 09 28.6**	**0.0**
UZB	2.0nm,0.2s			S	**Sb**	**19 09 50.0**	**+0.1**
UZB	**Uzynbulak** baz=50	1.73	49	*e*P	**Pn**	**19 09 27.7**	**+1.2**
UZB	baz=50			*e*S	**Sb**	**19 09 50.0**	**+0.1**
UZB	**Uzynbulak** 0.2nm,0.1s	1.73	49	*e*P	**Pn**	**19 09 27.7**	**+1.2**
UZB	1.9nm,0.2s			*e*S	**Sb**	**19 09 50.0**	**+0.1**
CHKK	**Chushkaly** 0.6nm,0.1s	1.82	354	P	**Pb**	**19 09 29.9**	**-0.2**
CHKK	7.0nm,0.2s			S	**Sb**	**19 09 53.7**	**+1.0**
CHKK	**Chushkaly** baz=55	1.82	354	*e*P	**Pb**	**19 09 29.9**	**-0.2**
CHKK	baz=55			*e*S	**Sb**	**19 09 53.7**	**+1.0**
CHKK	**Chushkaly** 0.6nm,0.1s	1.82	354	*e*P	**Pb**	**19 09 29.9**	**-0.2**
CHKK	7.0nm,0.2s			*e*S	**Sb**	**19 09 53.7**	**+1.0**
PDGK	**Podgornoye** 0.5nm,0.7s	2.11	51	⇑Pn	**Pb**	**19 09 35.3**	**+0.2**
PDGK	1.5nm,0.7s			⇑Sn	**Sb**	**19 10 01.2**	**+0.3**
AAK	**Ala-Archa** 0.4nm,0.6s	2.12	287	⇑Pg	**Pb**	**19 09 35.9**	**+0.8**
AAK	0.4nm,0.3s			⇑Lg	Lg	19 10 03.8	
ARXS	**Arharly** 0.8nm,0.3s	2.22	11	Pg	**Pb**	**19 09 36.1**	**-0.8**
ARXS	2.6nm,0.4s			Lg	Lg	19 10 05.0	
ARXS	**Arharly** 0.8nm,0.3s	2.22	11	*e*P	**Pb**	**19 09 36.7**	**-0.2**
ARXS	1.8nm,0.2s			*e*S	**Sb**	**19 10 05.0**	**+1.0**

IDC 23 19:10:16.1±2.1**, 1°.04N×126°.94E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/28**, mbtmp3.2**/3**, Error ellipse: s-maj=174.7km s-min=25.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=340,slow=11,SNR=11	22.08	161	P	P	19 15 12.4	-0.6
ASAR	**Alice Springs** 0.3nm,0.7s,baz=345,slow=12,SNR=6.2	25.48	165	P	P	19 15 46.7	+0.5
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=126,slow=7.4,SNR=4.0	59.88	326	P	P	19 20 23.8	-0.1

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*SOME **23** 19:14:33.5, 44°.03N×78°.65E, h20^{km}*

NNC 23 19:14:33.6±0.3**, 43°.97N×78°.63E, h15^{km}, mpv2.4, Error ellipse: s-maj=2.3km s-min=1.9km az=59.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNBS	**Baschi** 3.7nm,0.0s	0.19	304	P	Pg	19 14 37.8	-0.5
MNBS	11nm,0.1s			S	Sg	19 14 40.8	-0.6
MNBS	**Baschi** 3.7nm,0.0s	0.19	304	*e*P	Pg	19 14 37.8	-0.5
MNBS	11nm,0.1s			*e*S	Sg	19 14 40.8	-0.6
CHKK	**Chushkaly** 0.3nm,0.1s	1.19	265	P	Pn	19 14 55.4	-0.4
CHKK	0.9nm,0.2s			S	Sn	19 15 11.5	-0.2
CHKK	**Chushkaly** 0.3nm,0.1s	1.19	265	*e*P	Pn	19 14 55.4	-0.4
CHKK	0.9nm,0.2s			*e*S	Sb	19 15 11.2	0.0

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*IDC **23** 19:25:45.3±4.5, 26°.50S×71°.29E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.6/48, mbtmp3.9/6, MS3.5/8, Ms1 3.5/8, ms1mx3.3/28, Error ellipse: s-maj=129.7km s-min=32.1km az=51.0*

*ISCJB **23** 19:25:46.4±0.8, 26°.3S±0°.1×71°.6E±0°.2, h10^{km}, mb4.0/16, MS3.5/8, Error ellipse: s-maj=24.8km s-min=15.3km az=148.0*

*NEIC **23** 19:25:48.3±0.6, 26°.29S×71°.66E, h10^{km}, mb4.2/11, Error ellipse: s-maj=19.4km s-min=13.2km az=66.0*

ISC 23 19:25:48.2±1.1**, 26°.3S**±0°.2×**71°.7E**±0°.2**, h10^{km}, n37, σ0^{s}.70**/24**, mb4.1**/16**, MS3.5**/8**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H** baz=183,slow=76,SNR=18	18.57	3	T	T	19 49 07.4	
H08S2	**Diego Garcia H** baz=183,slow=76,SNR=24	18.57	3	T	T	19 49 06.2	
H08S3	**Diego Garcia H** baz=183,slow=76,SNR=26	18.59	3	T	T	19 49 09.7	
H01W2	**Cape Leeuwin H** baz=272,slow=75,SNR=6.1	37.33	114	T	T	20 12 32.4	
H01W3	**Cape Leeuwin H** baz=272,slow=75,SNR=5.9	37.33	114	T	T	20 12 34.0	
H01W1	**Cape Leeuwin H** baz=272,slow=75,SNR=6.7	37.35	114	T	T	20 12 35.2	
PSI	**Prapat** comp=Z,86nm,19.0s,baz=265,slow=30	39.15	46	LR	LR	19 45 38.6	
BOSA	**Boshof** comp=Z,51nm,19.7s,baz=156,slow=31	41.04	256	LR	LR	19 46 43.4	
MAW	**Mawson** comp=Z,203nm,18.0s,baz=3.0,slow=33	41.67	185	LR	LR	19 48 15.1	
MYKOM	**Kota Tinggi** 13nm,1.1s	41.80	53	*e*P	**P**	**19 33 36.5**	**-1.7**
CM01	**Chiang Mai Arr**	51.77	34	*e*P	**P**	**19 34 56.8**	**+0.5**
CMAR	**Chiang Mai Arr** 1.5nm,1.0s,baz=222,slow=7.6,SNR=7.5	51.80	34	P	**P**	**19 34 57.7**	**+1.3**
CMAR	comp=Z,28nm,19.7s,baz=194,slow=32			LR	LR	19 53 05.9	
ASAR	**Alice Springs** 1.8nm,1.0s,baz=250,slow=6.4,SNR=7.7	56.01	102	P	**P**	**19 35 27.7**	**+0.3**
AS01	**Alice Springs**	56.05	102	*e*P	**P**	**19 35 27.6**	**-0.1**
WR1	**Warramunga Arr** 3.2nm,1.0s	57.53	98	*e*P	**P**	**19 35 39.4**	**+1.2**
WRA	**Warramunga Arr** 1.7nm,0.9s,baz=254,slow=7.3,SNR=6.6	57.53	98	P	**P**	**19 35 39.4**	**+1.2**
LSA	**Lhasa** 0.9nm,0.5s	58.74	20	*e*P	**P**	**19 35 47.0**	**+0.1**
STKA	**Stephens Creek** comp=Z,30nm,22.0s,baz=9.7,slow=32	60.43	113	LR	LR	19 58 04.7	
QSPA	**South Pole Qui** 1.2nm,1.1s	63.83	180	*e*P	**P**	**19 36 20.4**	**-0.2**
GEYT	**Alibeck** comp=Z,36nm,20.9s,baz=355,slow=32	65.14	348	LR	LR	20 00 26.5	
KKAR	**Karatay Array** 2.5nm,1.0s	69.07	359	*e*P	**P**	**19 36 54.5**	**+0.4**
MAKZ	**Makanchi** 1.6nm,1.0s	73.36	7	*e*P	**P**	**19 37 20.4**	**+0.4**
MK01	**Makanchi Array**	73.36	8	*e*P	**P**	**19 37 20.2**	**+0.1**
MK31	**Makanchi Array** 2.5nm,1.0s	73.39	8	*e*P	**P**	**19 37 20.3**	**+0.1**
MK32	**Makanchi Array**	73.39	8	*e*P	**P**	**19 37 20.6**	**+0.4**
MKAR	**Makanchi Array** 8.8nm,0.7s	73.39	8	*e*P	**P**	**19 37 20.3**	**+0.1**
MKAR	**Makanchi Array** 0.8nm,0.6s,baz=196,slow=6.4,SNR=9.7	73.39	8	P	**P**	**19 37 20.6**	**+0.4**
IDI	**Anoyia** 1.7nm,0.6s	75.55	322	*e*P	**P**	**19 37 33.0**	**-0.1**
KURK	**Kurchatov** 2.3nm,0.9s	76.93	5	*e*P	**P**	**19 37 39.5**	**-1.0**
TORD	**Torodi Ar. Bea** comp=Z,24nm,20.3s,baz=345,slow=34	78.46	291	LR	LR	20 10 01.1	
SONA0	**Songino Array**	80.14	23	*e*P	**P**	**19 37 58.2**	**-0.3**
SONM	**Songino Array** 0.5nm,0.9s,baz=185,slow=7.2,SNR=2.2	80.14	23	P	**P**	**19 37 58.2**	**-0.3**
ZAA0	**Zalesovo Array** 1.9nm,0.8s	80.73	8	*e*P	**P**	**19 38 01.2**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	80.73	8	*e*P	P	19 38 00.8	-0.5
ZALV	Zalesovo Beam	80.73	8	P	P	19 38 01.7	+0.5
	0.7nm,0.6s,baz=201,slow=5.6,SNR=4.0						
ZAA1	Zalesovo Array	80.73	8	*e*P	P	19 38 01.7	+0.4
KSRS	Korea Array	82.55	42	LR	LR	20 13 45.4	
	comp=Z,23nm,18.4s,baz=189,slow=35						

IDC ***23*** *19:44:34.7±1.1, 38°.46N×144°.89E, h0km, mb3.5/5, mb1 3.8/8, mb1mx3.5/35, mbtmp3.7/8, ML3.4/3, MS3.3/1, Ms1 3.3/1, ms1mx2.3/35, Error ellipse: s-maj=30.6km s-min=19.9km az=99.0*

ISCJB ***23*** *19:44:38.6±0.7, 38°.71N±0°.04×144°.48E±0°.05, h29km, mb3.5/5, MS3.3/1, Error ellipse: s-maj=6.3km s-min=4.2km az=43.6*

JMA ***23*** *19:44:40.4±0.2, 38°.66N×144°.40E, h46km, M3.9*

ISC 23 19:44:39.3±1.0**, 38°.66N**±0°.05×**144°.59E**±0°.07**, h29km, n32, σ1ˢ50**/51**, mb3.5**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.32	281	P	Pn	19 45 15.4	-0.1
OFUJ				S	Sn	19 45 41.5	-1.5
MIYJ	Miyakonagasawa	2.34	294	P	Pn	19 45 15.7	-0.1
MIYJ				S	Sn	19 45 41.6	-2.0
JKMT	Kesennumamotoy	2.44	274	P	Pn	19 45 16.9	-0.3
JKMT				S	Sn	19 45 43.6	-2.5
JIKH	Ishinomakikobu	2.48	263	P	Pn	19 45 17.1	-0.6
JIKH				S	Sn	19 45 44.1	-2.8
JMK	Ichinoseki	2.65	277	P	Pn	19 45 20.2	+0.1
JMK				*e*S	Sn	19 45 49.5	-1.7
JOM	Ohasama	2.69	289	P	Pn	19 45 20.8	+0.1
JOM				S	Sn	19 45 51.2	-1.1
JANG	Nango	2.93	307	P	Pn	19 45 23.3	-0.6
JANG				S	Sn	19 45 56.6	-1.5
JOU	Okura	3.09	266	P	Pn	19 45 26.2	0.0
JOU				S	Sn	19 46 00.6	-1.6
JRG	Rokugo	3.17	285	P	Pn	19 45 27.8	+0.6
JRG				S	Sn	19 46 04.0	0.0
JYK	Kaneyama	3.31	276	P	Pn	19 45 29.6	+0.4
JYK				S	Sn	19 46 06.3	-1.4
JAH	Hinai	3.42	298	P	Pn	19 45 31.3	+0.6
JAH				*e*S	Sn	19 46 09.4	-0.8
JTM	Tenmabayashi	3.45	309	P	Pn	19 45 30.9	-0.1
JTM				*e*S	Sn	19 46 08.5	-2.4
JFT	Otama	3.54	253	P	Pn	19 45 32.6	+0.2
JFT				S	Sn	19 46 11.2	-2.1
JOT	Ohata	3.84	316	P	Pn	19 45 36.8	+0.3
JOT				S	Sn	19 46 18.1	-2.5
JNBK	Urakawa-nobuka	3.88	339	P	Pn	19 45 37.2	+0.3
JNBK				S	Sn	19 46 19.9	-1.6
JCH	Churui	4.06	347	P	Pn	19 45 39.3	-0.1
JKB	Kayabe	4.22	321	P	Pn	19 45 42.2	+0.6
NEM2	Nemuro 2	4.78	10	P	Pn	19 45 47.4	-1.9
JOSM	Okushiri--Mats	5.19	313	P	Pn	19 45 55.4	+0.4
JRY	Ryogami san	5.24	242	P	Pn	19 45 55.2	-0.6
JRY				S	Sn	19 46 51.7	-3.6
JTKR	Abashiri--Toko	5.33	355	P	Pn	19 45 56.4	-0.5
MJAR	Matsushiro Arr	5.49	249	Pn	Pn	19 45 59.9	+0.7
	0.5nm,0.3s,baz=50,slow=9.9,SNR=56						
MJAR				Sn	Sn	19 47 01.8	+0.5
	0.2nm,0.3s,baz=28,slow=32,SNR=5.0						
MAT	Matsushiro	5.49	249	P	Pn	19 46 00.3	+1.1
MAT				*e*S	Sn	19 47 01.2	-0.1
JHR	Hokuryu	5.52	338	P	Pn	19 46 01.1	+1.6
JHR				S	Sn	19 47 01.5	-0.4
ASAJ	Asahikawa	5.65	345	Pn	Pn	19 46 02.1	+0.7
	3.3nm,0.3s,baz=193,slow=16,SNR=4.0						
ASAJ				Sn	Sn	19 47 01.6	-3.6
	3.0nm,0.3s,baz=324,slow=19,SNR=3.9						
USRK	Ussuriysk Ar.	10.95	304	Pn	Pn	19 47 16.5	+2.5
	0.4nm,0.3s,baz=100,slow=15,SNR=7.4						
SEY	Seymchan	24.76	9	P	P	19 49 59.8	+1.7
	1.8nm,0.7s,baz=178,slow=4.9,SNR=8.1						
SONM	Songino Array	29.04	301	P	P	19 50 39.6	+2.7
	0.4nm,0.8s,baz=96,slow=9.1,SNR=3.9						
ZALV	Zalesovo Beam	42.71	311	LR	LR	20 12 37.5	
	comp=Z,38nm,19.2s,baz=70,slow=39						
WRA	Warramunga Arr	59.08	191	P	P	19 54 35.5	-1.5
	0.6nm,0.5s,baz=9.2,slow=7.0,SNR=8.4						
YKA	Yellowknife Ar	61.13	31	P	P	19 54 50.5	0.0
	0.1nm,0.6s,baz=301,slow=6.4,SNR=3.7						
ASAR	Alice Springs	62.80	191	P	P	19 55 01.1	-1.1
	0.3nm,0.7s,baz=11,slow=8.3,SNR=4.7						

IDC ***23*** *20:06:09.2±2.8, 43°.28N×105°.01W, h0km, mb2.6/1, mb1 3.2/3, mb1mx3.0/43, mbtmp3.0/3, ML1.6/1, MS3.1/1, Ms1 3.0/1, ms1mx2.6/4, Error ellipse: s-maj=53.7km s-min=10.5km az=154.0*

ISCJB ***23*** *20:06:12.7±0.5, 43°.57N±0°.05×105°.19W±0°.06, h0km, Error ellipse: s-maj=7.2km s-min=5.7km az=41.5*

NEIC ***23*** *20:06:14.0±0.7, 43°.57N×105°.14W, h0km, ML3.2, Error ellipse: s-maj=9.7km s-min=8.4km az=34.0, Suspected Mining explosion.*

NEIC 85 km [53 miles] E of Midwest.

ISC 23 20:06:12.1±0.9**, 43°.65N**±0°.05×**105°.10W**±0°.06**, h0km, n37, σ1ˢ43**/34**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.90	58	*e*Pg	Pn	20 06 32.6	+0.3
K22A	Casper	1.44	227	*e*Pg	Pn	20 06 38.0	-1.6
PHWY	Pilot Hill	2.36	187	*e*Pn	Pn	20 06 52.5	+0.2
RWWY	Rawlins	2.50	219	*e*Pn	Pn	20 06 54.2	0.0
N23A	Red Feather La	2.82	193	*e*Pn	Pn	20 06 59.1	+0.5
LAO	LASA Array	3.15	346	*e*Pn	Pb	20 07 08.4	-0.5
RLMT	Red Lodge	3.33	298	*e*Pn	Pn	20 07 06.5	+0.9
BW06	Boulder Array	3.38	256	*e*Pn	Pn	20 07 06.5	+0.2
PD31	Pinedale Array	3.38	256	*e*Pn	Pn	20 07 06.4	+0.1
PDAR	Pinedale Array	3.38	256	*e*Pn	Pn	20 07 07.0	+0.7
PDAR	Pinedale Array	3.38	256	Pn	Pn	20 07 06.8	+0.5
	2.3nm,0.3s,baz=86,slow=14,SNR=28						
PDAR				Lg	Lg	20 07 53.6	
	4.1nm,0.3s,baz=97,slow=33,SNR=8.7						
OGNE	Ogallala	3.53	139	*e*Pb	Pg	20 07 19.5	-0.2
ISCO	Idaho Springs	3.86	186	*e*Pn	Pn	20 07 15.4	+2.4
LKWY	Lake	3.93	285	*e*Pn	Pb	20 07 21.3	-1.1
LOHW	Long Hollow	4.00	271	*e*Pn	Pn	20 07 15.8	+1.0
H17A	Grant Village	4.02	283	*e*Pn	Pn	20 07 14.8	-0.4
FLWY	Flagg Ranch	4.08	278	*e*Pn	Pn	20 07 17.8	+1.9
MOOW	Moose Ponds	4.10	273	*e*Pn	Pn	20 07 17.7	+1.5
SNOW	Snow King Moun	4.12	269	*e*Pn	Pn	20 07 18.2	+1.7
YPP	Pitchstone Pla	4.17	281	*e*Pn	Pn	20 07 19.0	+1.8
O20A	White River Ci	4.22	215	*e*Pn	Pn	20 07 19.4	+1.5
YHH	Holmes Hill	4.29	287	*e*Pn	Pn	20 07 20.5	+1.6
FXWY	Fox Creek	4.30	272	*e*Pn	Pn	20 07 20.4	+1.3
AHID	Auburn Hatcher	4.48	261	*e*Pn	Pn	20 07 26.4	+5.0
YHB	Horse Butte	4.52	286	*e*Pn	Pn	20 07 23.9	+1.9
Q24A	Divide	4.68	181	*e*Pn	Pn	20 07 24.3	0.0
KSCO	Kaye Shedlock’	4.99	157	*e*Pn	Pn	20 07 29.3	+0.9
BOZ	Bozeman (W)	5.05	295	*e*Pn	Pn	20 07 30.3	+1.0
HWUT	Hardware Ranch	5.19	249	*e*Pn	Pn	20 07 31.7	+0.6
TCUT	Toone Canyon	5.31	244	*e*Pn	Pn	20 07 32.2	-0.7
EGMT	Eagleton	5.46	325	*e*Pn	Pn	20 07 25.6	-9.1
BGNE	Belgrade	5.60	111	*e*Pn	Pn	20 07 40.7	+4.0
PV13	Radium Mtn., P	6.16	208	*e*Pn	Pn	20 07 44.6	+0.1
T25A	Trinidad	6.52	175	*e*Pn	Pn	20 07 48.3	-1.1
I10CA	LAC DU BONNET	9.02	40	*i*		21 02 50.0	
	baz=221,slow=314,SNR=3.3						
ULM	Lac du Bonnet	9.13	40	Pn	Pn	20 08 22.4	-2.6
	0.1nm,0.3s,baz=232,slow=14,SNR=1.7						
ULM				Lg	Lg	20 10 57.9	
	0.3nm,0.3s,baz=292,slow=19,SNR=2.7						
ULM				LR	LR	20 11 26.4	
	comp=Z,102nm,19.7s,baz=280,slow=34						
YKA	Yellowknife Ar	19.68	347	P	Pn	20 10 44.7	+0.8
	0.1nm,0.5s,baz=159,slow=13,SNR=5.6						

ARE ***23*** *20:08:17.0±0.0, 15°.79S×71°.85W, h20km*

NEIC ***23*** *20:08:24.4±0.6, 16°.01S×71°.67W, h61km±6km, mb4.4/7, ML4.7(ARE), Error ellipse: s-maj=8.2km s-min=5.7km az=67.0*

NEIC Felt [III] at Maca and [II] at Madrigal and Huambo.

ISCJB ***23*** *20:08:25.4±0.4, 16°.08S±0°.04×71°.67W±0°.08, h100km, mb4.1/11, Error ellipse: s-maj=11.6km s-min=4.4km az=166.6*

IDC ***23*** *20:08:27.0±2.3, 15°.62S×71°.52W, h72km±20km, mb3.8/8, mb1 3.9/12, mb1mx3.8/34, mbtmp4.1/12, MS3.6/12, Ms1 3.6/12, ms1mx3.4/31, Error ellipse: s-maj=23.6km s-min=16.5km az=37.0*

ISC 23 20:08:26.9±0.6**, 16°.03S**±0°.06×**71°.69W**±0°.09**, h100km, n44, σ1ˢ78**/44**, mb4.1**/11**, Southern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.43	95	*e*Pn	Pn	20 09 16.6	-2.3
LPAZ	La Paz	3.43	95	P	Pn	20 09 19.2	+0.2
	1.2nm,0.3s,baz=275,slow=9.2,SNR=22						
MNMC	Minye Minye	3.67	147	*e*Pn	Pn	20 09 19.9	-2.0
PB11	IPOC Station P	4.19	153	*e*Pn	Pn	20 09 26.6	-2.2
PB01	IPOC Station P	5.41	158	*e*Pn	Pn	20 09 42.8	-2.4
NNA	Nana	6.41	308	*e*Pn	Pn	20 09 56.8	-2.1
NNA	Nana	6.41	308	P	Pn	20 09 56.9	-2.0
	2.2nm,0.3s,baz=174,slow=11,SNR=6.1						
NNA				LR	LR	20 12 36.1	
	comp=Z,471nm,20.5s,baz=146,slow=40						
PB04	IPOC Station P	6.44	167	*e*Pn	Pn	20 09 56.4	-2.9
PB04				*e*Sn	Sn	20 11 09.8	-1.7
LVC	Limon Verde	7.05	159	*e*Pn	Pn	20 10 06.1	-1.7
LVC				*e*Sn	Sn	20 11 26.4	-0.3
LVC	Limon Verde	7.05	159	P	Pn	20 10 07.2	-0.6
	6.9nm,0.3s,baz=336,slow=9.7,SNR=42						
LVC				S	Sn	20 11 29.3	+2.6
	2.5nm,0.3s,baz=140,slow=8.5,SNR=3.5						
LVC				LR	LR	20 13 17.0	
	comp=Z,525nm,21.7s,baz=322,slow=39						
PB10	IPOC Station P	7.52	172	*e*Pn	Pn	20 10 10.8	-3.1
PB10				*e*Sn	Sn	20 11 37.8	+0.2
GO02	Mina Guanaco	9.30	168	*e*Pn	Pn	20 10 35.6	-2.7
GO02				*e*Sn	Sn	20 12 21.6	+0.4
SIV	San Ignacio	10.21	91	P	Pn	20 10 47.5	-3.1
	0.7nm,0.3s,baz=300,slow=9.4,SNR=18						
SIV				LR	LR	20 14 40.1	
	comp=Z,168nm,19.7s,baz=286,slow=37						
ATAH	Atahualpa	11.01	323	LR	LR	20 15 27.4	
	comp=Z,988nm,20.4s,baz=164,slow=39						
GO03	Copiap	11.59	174	*e*Pn	Pn	20 11 07.2	-2.0
GO03				*e*Sn	Sn	20 13 16.9	+0.3
CPUP	Villa Florida	16.85	130	LR	LR	20 20 27.3	
	comp=Z,207nm,18.7s,baz=324,slow=42						
OTAV	Otavalo	17.49	337	*e*Pn	Pn	20 12 24.4	-0.6
	11nm,1.4s						
PTGA	Pitinga	19.10	38	*e*P	Pn	20 12 41.9	-2.0
	19nm,1.4s						
PTGA	Pitinga	19.10	38	P	P	20 12 39.0	-2.9
	0.2nm,0.3s,baz=217,slow=12,SNR=6.9						
ROSC	El Rosal	20.90	353	LR	LR	20 21 20.7	
	comp=Z,324nm,18.2s,baz=223,slow=38						
BDFB	Brasilia	22.78	92	P	P	20 13 22.9	+1.6
	1.3nm,0.4s,baz=293,slow=12,SNR=3.4						
BDFB				LR	LR	20 22 00.1	
	comp=Z,128nm,18.2s,baz=264,slow=36						
TRQA	Tornquist	23.55	161	*e*P	P	20 13 29.4	+1.1
	26nm,1.4s						
PLCA	Paso Flores	24.64	178	*e*P	P	20 13 39.4	+1.3
	19nm,1.0s						
PLCA	Paso Flores	24.64	178	P	P	20 13 44.1	+6.0
	12nm,1.0s,baz=18,slow=10,SNR=9.2						
PLCA				LR	LR	20 24 52.1	
	comp=Z,56nm,18.3s,baz=15,slow=39						
SDV	Santo Domingo	24.78	2	*e*P	P	20 13 40.3	+0.5
	6.9nm,0.8s						
SDV	Santo Domingo	24.78	2	P	P	20 13 38.8	-0.9
	2.2nm,0.4s,baz=223,slow=9.7,SNR=4.9						
TXAR	Lajitas Array	54.66	325	P	P	20 17 45.6	-0.1
	0.7nm,0.7s,baz=149,slow=7.0,SNR=7.2						
TXAR				LR	LR	20 39 40.2	
	comp=Z,47nm,18.1s,baz=0.0,slow=34						
TX31	Lajitas Ar. Si	54.66	325	*e*P	P	20 17 47.2	+1.4
ABTX	Abilene, Hawle	55.28	331	*e*P	P	20 17 51.8	+1.7
	14nm,1.3s						
SDCO	Great Sand Dun	62.22	330	*e*P	P	20 18 40.6	+2.2
	6.0nm,1.0s						
PDAR	Pinedale Array	68.08	331	P	P	20 19 18.6	+2.5
	0.4nm,0.7s,baz=134,slow=3.9,SNR=3.9						
DBIC	Dimbokro	69.87	77	P	P	20 19 28.4	+0.8
	2.8nm,0.7s,baz=233,slow=6.3,SNR=4.8						
DBIC				LR	LR	20 48 52.6	
	comp=Z,40nm,18.9s,baz=243,slow=35						
TOA0	Torodi Ar. Sit	78.12	73	*e*P	P	20 20 16.4	+0.8
TORD	Torodi Ar. Bea	78.12	73	P	P	20 20 16.9	+1.3
	1.3nm,0.6s,baz=254,slow=4.3,SNR=9.0						
TORD				LR	LR	20 51 55.1	
	comp=Z,55nm,22.0s,baz=300,slow=34						
YKA	Yellowknife Ar	85.19	342	P	P	20 20 52.9	+1.3
	1.3nm,0.7s,baz=135,slow=5.3,SNR=15						
BOSA	Boshof	88.37	119	LR	LR	20 59 17.1	
	comp=Z,46nm,18.5s,baz=237,slow=34						
WRA	Warramunga Arr	136.04	216	PKP	PKiKP	20 27 41.2	+2.3
	1.1nm,0.8s,baz=159,slow=2.0,SNR=3.9						
ZALV	Zalesovo Beam	137.96	21	*e*PKPdf	PKiKP	20 27 42.6	+0.9
ZALV	Zalesovo Beam	137.96	21	PKP	PKiKP	20 27 41.8	+0.1
	0.8nm,0.6s,baz=270,slow=1.4,SNR=2.4						
MKAR	Makanchi Array	142.48	30	PKP	PKiKP	20 27 49.9	-1.4
	0.7nm,0.8s,baz=290,slow=1.6,SNR=6.7						
MJAR	Matsushiro Arr	146.51	313	PKPbc	PKiKP	20 28 00.6	+0.8
	5.2nm,0.9s,baz=175,slow=0.8,SNR=7.4						
SONM	Songino Array	148.25	2	PKPbc	PKPab	20 28 05.0	+0.2
	2.1nm,0.8s,baz=52,slow=1.9,SNR=17						
KSRS	Korea Array	152.50	325	PKPbc	PKiKP	20 28 14.0	+1.9
	1.0nm,0.8s,baz=0.4,slow=3.3,SNR=2.5						
KSAR	Wonju Array Be	152.53	325	PKPbc	PKiKP	20 28 14.0	+1.8

IDC ***23*** *20:19:01.9±1.1, 11°.65S×165°.12E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/38, mbtmp3.7/7, ML3.5/1, Error ellipse: s-maj=43.9km s-min=24.9km az=138.0*

ISCJB ***23*** *20:19:05.3±0.8, 11°.8S±0°.1×165°.1E±0°.2, h34km, mb3.7/6, Error ellipse: s-maj=25.4km s-min=18.4km az=17.9*

ISC 23 20:19:07.0±0.9**, 11°.7S**±0°.1×**165°.1E**±0°.2**, h34km, n7, σ0ˢ77**/7**, mb3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.39	173	Pn	Pn	20 21 34.0	+0.3
	0.4nm,0.3s,baz=346,slow=8.0,SNR=14						
WRA	Warramunga Arr	30.69	251	P	P	20 25 18.8	-0.1
	0.9nm,0.7s,baz=82,slow=9.0,SNR=7.5						
ASAR	Alice Springs	31.96	244	P	P	20 25 29.4	-0.6
	0.6nm,0.7s,baz=68,slow=9.0,SNR=6.4						
ILAR	Eielson Array	84.33	19	P	P	20 31 36.1	+0.9
	0.3nm,0.6s,baz=238,slow=5.2,SNR=6.3						
MKAR	Makanchi Array	93.58	317	P	P	20 32 20.2	+0.5
	0.2nm,0.7s,baz=103,slow=5.2,SNR=2.5						
YKA	Yellowknife Ar	95.83	27	P	P	20 32 28.9	-0.7
	0.2nm,0.9s,baz=266,slow=4.9,SNR=2.7						
TXAR	Lajitas Array	96.67	62	P	P	20 32 33.8	-0.6
	0.7nm,1.1s,baz=232,slow=4.4,SNR=3.4						

IDC 23 20:26:37.6±29.0**, 21°.92S**×**173°.23W, h0km, mb4.0**/4**, mb1 4.1**/4**, mb1mx3.8**/33**, mbtmp4.0**/4**, Error ellipse: s-maj=533.0km s-min=171.1km az=75.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.79	265	P	P	20 33 55.9	0.0
	4.3nm,0.7s,baz=93,slow=11,SNR=10						
STKA	Stephens Creek	41.24	246	P	P	20 34 24.2	-0.3
	1.0nm,0.7s,baz=83,slow=8.1,SNR=3.1						
ASAR	Alice Springs	48.54	257	P	P	20 35 22.9	0.0
	0.6nm,0.5s,baz=93,slow=7.2,SNR=6.7						
WRA	Warramunga Arr	48.81	262	P	P	20 35 24.8	-0.2
	0.7nm,0.5s,baz=102,slow=8.2,SNR=25						

ISK ***23*** *20:35:58.8, 36°.37N×28°.99E, h21km, ML3.4/29*

ATH ***23*** *20:35:58.5, 36°.38N×29°.02E, h40km±1km, ML3.0/3, Error ellipse: s-maj=2.6km s-min=0.9km az=162.0*

DDA ***23*** *20:35:58.2, 36°.39N×29°.00E, h37km, ML3.6*

THE ***23*** *20:36:00.1, 36°.40N×29°.10E, h21km, ML3.1/1, Error ellipse: s-maj=1.5km s-min=0.6km az=347.0*

NIC ***23*** *20:36:00.5±0.2, 36°.19N×29°.22E, h17km, ML3.2*

HLW ***23*** *20:36:13.2, 35°.19N×28°.95E, h25km±31km, Md3.8, Ml3.6*

ISC 23 20:35:58.5±1.1**, 36°.36N**±0°.02×**29°.05E**±0°.02**, h17km**±8km**, n101, σ0ˢ93**/125**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.28	5	PG	Pb	20 36 05.5	+0.5
FETY				SG	Sb	20 36 10.6	+1.1
FETY	Fethiye	0.28	5	P	Pb	20 36 05.6	+0.5
FETY				S	Sb	20 36 10.4	+0.9
FETY	Fethiye	0.28	5	*i* P	Pb	20 36 06.3	+1.2
FETY				*i* S	Sn	20 36 11.9	-1.8
FETY				IAML_P			
	comp=Z,45µm,0.1s						
AKAS	Kas	0.47	105	PG	Pb	20 36 09.9	+1.6
AKAS				SG	Sn	20 36 17.8	-0.6
AKAS	Kas	0.47	105	*i* P	Pn	20 36 10.6	+0.1
AKAS				*i* S	Sn	20 36 18.0	-0.4
AKAS				IAML_P			
	comp=Z,27µm,0.2s						
KSL	Kastellorizon	0.48	116	P	Pb	20 36 09.9	+1.5
KSL				S	Sn	20 36 18.1	-0.4
KSL				AML	AML	20 36 19.0	
	comp=N,1602µm,0.6s						
KSL				AML	AML	20 36 19.4	
	comp=E,7362µm,0.5s						
TURN	Turunc	0.63	325	PG	Pn	20 36 13.5	+0.9
TURN	Turunc	0.63	325	*i* P	Pn	20 36 14.0	+1.4
TURN				*i* S	Sn	20 36 24.1	+1.9
TURN				IAML_P			
	comp=Z,41µm,0.1s						
ARG	Arkhangelos	0.76	260	PG	Pb	20 36 13.6	+0.4
ARG	Arkhangelos	0.76	260	P	Pg	20 36 13.5	+0.2
ARG				S	Sb	20 36 25.1	+1.8
ARG				AML	AML	20 36 27.0	
	comp=N,854µm,0.4s						
ARG				AML	AML	20 36 27.3	
	comp=E,1669µm,0.3s						
MRSB	Marmaris-Mugla	0.78	298	PG	Pg	20 36 13.6	0.0
ELL	Elmali	0.79	60	PG	Pn	20 36 14.8	-0.2
GOLH	Golhisar	0.97	25	*i* P	Pn	20 36 17.8	+0.4
GOLH				*i* S	Sn	20 36 31.6	+0.8
GOLH				IAML_P			
	comp=Z,11µm,0.2s						
YER	Yerkesik	0.99	322	PG	Pb	20 36 17.3	+0.1
YER	Yerkesik	0.99	322	P	Pb	20 36 16.9	-0.3
YER				S	Sg	20 36 30.2	-0.5
AKUM	Antalya-Kumluc	1.04	92	*i* P	Pn	20 36 19.1	+0.8
TAVA	DENIZLI_Tavas	1.11	354	*i* P	Pb	20 36 19.2	-0.1
TAVA				*i* S	Sn	20 36 34.4	+0.1
TAVA				IAML_P			
	comp=Z,15µm,0.2s						
DATC	Datca-Mugla	1.19	290	PN	Pn	20 36 20.1	-0.2
KORT	Korkueli	1.23	58	PN	Pg	20 36 22.0	-0.2
KORT	Korkueli	1.23	58	*i* P	Pg	20 36 22.2	0.0
KORT				*i* S	Sg	20 36 38.2	0.0
KORT				IAML_P			
	comp=Z,6µm,0.3s						
KEMT	Kemer-ANTALYA	1.24	78	PN	Pg	20 36 22.2	-0.2
MLSB	Milas	1.39	313	PN	Pb	20 36 23.9	0.0
DENT	Denizli	1.39	359	PN	Pn	20 36 23.3	+0.1
ANTB	Antalya	1.40	67	PN	Pb	20 36 24.7	+0.6
BDRM	Kayabasi	1.47	299	*i* P	Pn	20 36 24.7	+0.5
BDRM				*i* S	Sb	20 36 44.0	+0.2
BDRM				IAML_P			
	comp=Z,2µm,0.2s						
BRDR	BURDUR-Merkez	1.56	31	*i* P	Pb	20 36 26.7	-0.3
BRDR				*i* S	Sg	20 36 47.9	-1.0
BRDR				IAML_P			
	comp=Z,3µm,0.2s						
BODT	Bodrum	1.56	297	PN	Pn	20 36 25.3	-0.2
BODT	Bodrum	1.56	297	P	Pn	20 36 25.0	-0.5
BODT				S	Sn	20 36 44.9	-0.5
NISR	Nisiros	1.57	280	P	Pn	20 36 25.2	-0.3
AYDN	Tasoluk	1.60	325	*i* P	Pb	20 36 27.8	+0.2
AYDN				*i* S	Sn	20 36 46.9	+0.4
AYDN				IAML_P			
	comp=Z,10µm,0.1s						
YKAV	Yalikavak-Bodr	1.61	299	PN	Pn	20 36 26.1	-0.1
BCK	Bucak	1.65	48	PN	Pn	20 36 27.7	+0.9
KARP	Karpathos	1.73	243	PN	Pn	20 36 28.1	+0.2
KARP	Karpathos	1.73	243	P	Pn	20 36 28.0	+0.2
KARP				S	Sn	20 36 49.5	0.0
DIDI	Didim-Aydin	1.77	306	PN	Pn	20 36 28.4	+0.1
AYDB	Zeytinkoy-Aydi	1.84	330	PN	Pn	20 36 29.3	-0.1
ISP	Isparta	1.88	38	PN	Pn	20 36 30.8	+0.9
ISP	Isparta	1.88	38	P	Pn	20 36 30.5	+0.6
ISP	Isparta	1.88	38	P	Pn	20 36 29.5	-0.4
ISP				S	Sn	20 36 50.5	-2.7
GCAM	G?zelcaml?	1.98	313	PN	Pn	20 36 31.3	+0.2
GCAM	G?zelcaml?	1.98	313	*i* P	Pn	20 36 31.6	+0.4
GCAM				IAML_P			
	comp=Z,7µm,0.1s						
KHL	Karahalli	2.00	11	PN	Pn	20 36 32.2	+0.7
KHAL	Karahalli	2.04	10	*i* P	Pn	20 36 32.1	-0.1
KHAL				IAML_P			
	comp=Z,104nm,0.1s						
KZIL	AFYON_Kizioren	2.09	24	*i* P	Pn	20 36 32.7	-0.1
KZIL				IAML_P			
	comp=Z,261nm,0.1s						
KEPZ	Antalya-Kepez	2.12	74	*i* P	Pn	20 36 35.0	+1.8
KEPZ				IAML_P			
	comp=Z,840nm,0.2s						
BAGO	Egridir - ISPA	2.14	40	*i* P	Pn	20 36 33.6	+0.1
MANT	Manisa	2.17	350	*i* P	Pn	20 36 33.8	-0.2
MANT				IAML_P			
	comp=Z,854nm,0.2s						
KULA	Kula-Manisa	2.17	352	PN	Pn	20 36 32.8	-1.2
KULA	Kula-Manisa	2.17	352	P	Pn	20 36 33.2	-0.8
KULA				S	Sn	20 36 58.9	-1.7
USAK	Uak-Merkez	2.35	359	*i* P	Pn	20 36 36.2	-0.2
USAK				IAML_P			
	comp=Z,681nm,0.2s						
ALAN	Alanya-ANTALYA	2.41	84	PN	Pn	20 36 37.9	+0.8
DGB	zmir	2.42	315	*i* P	Pn	20 36 36.8	-0.4
DGB				*i* S	Sn	20 37 05.1	-1.4
DGB				IAML_P			
	comp=Z,2µm,0.1s						
SHUT	Suhut-Afyon	2.50	28	PN	Pn	20 36 39.5	+1.1
BLCB	Balcova	2.58	322	PN	Pn	20 36 39.7	+0.3
AMGA	Amorgos Island	2.58	281	P	Pn	20 36 38.6	-1.0
ZKR	Zakros	2.62	243	PN	Pn	20 36 40.6	+0.6
ZKR	Zakros	2.62	243	P	Pn	20 36 40.6	+0.6
ANAF	Anafi Island	2.65	271	P	Pn	20 36 39.8	-0.6
ANAF	Anafi Island	2.65	271	P	Pn	20 36 39.9	-0.5
ANAF				S	Sn	20 37 12.5	+0.4
STIA	Sitia Lasithi	2.67	245	P	Pn	20 36 41.5	+0.8
DEMI	Demirci	2.69	354	*i* P	Pn	20 36 40.0	-1.1
DEMI				IAML_P			
	comp=Z,825nm,0.3s						
AKHS	Akhisar	2.70	339	*i* P	Pn	20 36 40.8	-0.3
AKHS				IAML_P			
	comp=Z,1µm,0.1s						
DOGA	KONYA_Doganhis	2.72	49	*i* P	Pn	20 36 43.4	+1.9
DOGA				IAML_P			
	comp=Z,631nm,0.2s						
GDZ	Gediz	2.75	7	*i* P	Pn	20 36 41.5	-0.4
GDZ				IAML_P			
	comp=Z,299nm,0.3s						
ZEY	zmir	2.77	314	*i* P	Pn	20 36 42.3	+0.3
ZEY				IAML_P			
	comp=Z,1µm,0.1s						
URLA	Izmir	2.80	316	PN	Pn	20 36 42.9	+0.4
URLA	Izmir	2.80	316	*i* P	Pn	20 36 43.1	+0.6
URLA				IAML_P			
	comp=Z,466nm,0.1s						
SANT	Santorini	2.90	271	PN	Pn	20 36 43.1	-0.8
SANT	Santorini	2.90	271	P	Pn	20 36 43.1	-0.8
APE	Apeiranthos	2.92	285	PN	Pn	20 36 44.8	+0.7
APE	Apeiranthos	2.92	285	P	Pn	20 36 43.2	-0.9
NPS	Neapolis	3.00	250	P	Pn	20 36 44.7	-0.5
PPCY	Paphos	3.06	118	P	Pn	20 36 44.5	-1.5
	baz=297						
KONT	Konya--Tatoy	3.08	58	PN	Pn	20 36 48.2	+1.8
KONT	Konya--Tatoy	3.08	58	*i* P	Pn	20 36 48.4	+2.0
KONT				IAML_P			
	comp=Z,243nm,0.1s						
TVSB	Tavsanli	3.10	6	PN	Pn	20 36 45.9	-0.9
ALFC	Alefka	3.12	112	P	Pn	20 36 45.8	-1.2
	baz=291						
ALFC				S	Sn	20 37 21.3	-2.6
CHOS	Chios island	3.13	311	PN	Pn	20 36 47.9	+0.8
CHOS	Chios island	3.13	311	P	Pn	20 36 47.1	+0.1
CHOS				S	Sn	20 37 22.7	-1.4
CHOS				AML	AML	20 37 27.4	
	comp=E,236µm,0.4s						
CHOS				AML	AML	20 37 27.5	
	comp=N,210µm,0.4s						
CHOS	Chios island	3.13	311	P	Pn	20 36 47.2	+0.1
CHOS				S	Sn	20 37 22.7	-1.4
LAST	Lasithi	3.14	249	P	Pn	20 36 47.0	-0.2
STEP	BALIKESIR_Sava	3.19	341	*i* P	Pn	20 36 46.1	-1.8

STEP				IAML_P			
	comp=Z,705nm,0.1s						
KDHN	Kadinhani	3.26	48	*i* P	Pn	20 36 50.4	+1.5
KDHN				IAML_P			
	comp=Z,93nm,0.2s						
DURS	Dursunbey	3.27	352	*i* P	Pn	20 36 48.4	-0.7
DURS				IAML_P			
	comp=Z,241nm,0.2s						
LEF	Lefka	3.36	110	*i* P	Pn	20 36 49.2	-0.9
SZAC	Souni	3.51	116	P	Pn	20 36 51.5	-0.8
	baz=296						
MAMC	Mammari	3.59	108	P	Pn	20 36 52.5	-0.8
	baz=288						
PRK	Paraskevi	3.63	323	P	Pn	20 36 54.4	+0.6
GULN	MERSIN_Gulnar	3.63	91	*i* P	Pn	20 36 55.2	+1.2
GULN				IAML_P			
	comp=Z,207nm,0.1s						
BORA	Eskisehir	3.69	17	*i* P	Pn	20 36 55.3	+0.6
BORA				IAML_P			
	comp=Z,263nm,0.1s						
CSS	Mathiatis	3.75	111	P	Pn	20 36 54.6	-1.0
	baz=291						
CSS				S	Sn	20 37 37.0	-2.4
SIGR	SIGRI	3.81	319	P	Pn	20 36 56.7	+0.4
BAYC	CANAKKALE_Bayr	3.91	330	*i* P	Pn	20 36 58.6	+0.8
BAYC				IAML_P			
	comp=Z,265nm,0.1s						
VAM	Vamos	4.05	258	P	Pn	20 36 59.4	-0.3
IMMV	Iera Moni Meta	4.21	259	P	Pn	20 37 01.6	-0.3
GVD	Gavdhos	4.32	251	P	Pn	20 37 03.7	+0.3
SKY	Skiros Island	4.37	306	P	Pn	20 37 04.7	+0.7
LIA	Limnos Island	4.67	320	P	Pn	20 37 08.8	+0.7
VLI	Veliai	4.94	276	P	Pn	20 37 11.9	0.0
SMTH	Samothraki Isl	4.95	327	P	Pn	20 37 12.4	+0.4
HNAT	Natroun	6.83	168	AMP		20 38 00.0	
	baz=165						

*ATH **23** 20:40:27.8, 36°.43N×29°.04E, h43^{km}±2^{km}, ML2.4/2, Error ellipse: s-maj=3.5km s-min=1.2km az=174.0*

*DDA **23** 20:40:28.1, 36°.40N×28°.99E, h30^{km}±1^{km}, ML3.1*

*ISK **23** 20:40:28.5, 36°.37N×28°.99E, h21^{km}, ML3.1/20*

*ISCJB **23** 20:40:29.3±0.4, 36°.36N±0°.03×28°.99E±0°.02, h29^{km}±3^{km}, Error ellipse: s-maj=4.3km s-min=3.0km az=173.9*

*THE **23** 20:40:29.7, 36°.39N×29°.04E, h20^{km}±1^{km}, ML2.6/1, Error ellipse: s-maj=2.3km s-min=0.5km az=100.0*

ISC 23 20:40:29.2±1.1, **36°.38N**±0°.03×**29°.03E**±0°.02, **h33**^{km}±3^{km}, **n60**, σ**1^{s}14**/85, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.26	10	PG	Pb	20 40 35.3	-1.2
FETY				SG	Sn	20 40 40.4	-0.4
FETY	Fethiye	0.26	10	*i* P	Pb	20 40 35.5	-1.0
FETY				*i* S	Sn	20 40 40.8	0.0
FETY				IAML_P			
	comp=Z,16µm,0.2s						
AKAS	Kas	0.49	107	PG	Pn	20 40 39.4	-0.6
AKAS				SG	Sn	20 40 47.3	-0.1
AKAS	Kas	0.49	107	*i* P	Pn	20 40 39.9	-0.1
AKAS				*i* S	Sn	20 40 47.6	+0.2
AKAS				IAML_P			
	comp=Z,11µm,0.3s						
KSL	Kastellorizon	0.50	117	P	Pn	20 40 39.8	-0.3
KSL				S	Sn	20 40 47.7	+0.1
KSL				AML	AML	20 40 48.9	
	comp=N,615µm,0.4s						
KSL				AML	AML	20 40 49.0	
	comp=E,2394µm,0.5s						
TURN	Turunc	0.60	325	PG	Pn	20 40 43.2	+1.9
TURN	Turunc	0.60	325	*i* P	Pn	20 40 43.8	+2.5
TURN				*i* S	Sn	20 40 53.1	+3.2
ARG	Arkhangelos	0.75	258	PG	Pb	20 40 43.3	-0.5
ARG	Arkhangelos	0.75	258	P	Pn	20 40 43.1	-0.4
ARG				S	Sn	20 40 55.1	+1.5
ARG				AML	AML	20 40 57.8	
	comp=E,374µm,0.3s						
ARG				AML	AML	20 40 59.3	
	comp=N,264µm,0.2s						
MRSB	Marmaris-Mugla	0.75	297	PG	Pb	20 40 43.4	-0.5
ELL	Elmali	0.80	62	PG	Pb	20 40 45.2	+0.4
GOLH	Golhisar	0.95	26	*i* P	Pb	20 40 47.4	0.0
GOLH				*i* S	Sb	20 41 01.5	+1.8
GOLH				IAML_P			
	comp=Z,3µm,0.2s						
YER	Yerkesik	0.96	322	PG	Pb	20 40 47.1	-0.4
YER	Yerkesik	0.96	322	P	Pb	20 40 46.7	-0.8
YER				S	Sb	20 40 59.7	-0.2
AKUM	Antalya-Kumluc	1.06	93	*i* P	Pb	20 40 49.4	+0.4
AKUM				*i* S	Sb	20 41 04.0	+1.3
TAVA	DENIZLI_Tavas	1.09	355	*i* P	Pb	20 40 49.3	-0.2
TAVA				IAML_P			
	comp=Z,4µm,0.1s						
DATC	Datca-Mugla	1.17	289	PN	Pb	20 40 49.9	-0.9
KORT	Korkueli	1.23	59	PN	Pb	20 40 51.7	-0.3
KORT	Korkueli	1.23	59	*i* P	Pb	20 40 52.4	+0.4
KORT				*i* S	Sb	20 41 08.6	+1.0
KORT				IAML_P			
	comp=Z,2µm,0.3s						
KEMT	Kemer-ANTALYA	1.25	79	PN	Pb	20 40 51.8	-0.4
MLSB	Milas	1.36	313	PN	Pb	20 40 52.9	-1.2
DENT	Denizli	1.37	0	PN	Pb	20 40 53.2	-1.1
ANTB	Antalya	1.41	68	PN	Pb	20 40 53.9	-0.9
BDRM	Kayabasi	1.45	299	*i* P	Pb	20 40 54.6	-0.9
BDRM				*i* S	Sb	20 41 13.0	-0.6
BDRM				IAML_P			
	comp=Z,2µm,0.2s						
BODT	Bodrum	1.54	297	PN	Pn	20 40 55.0	+0.7
BODT	Bodrum	1.54	297	P	Pn	20 40 54.8	+0.5
BODT				S	Sn	20 41 13.6	+0.4
BRDR	BURDUR-Merkez	1.55	32	*i* P	Pb	20 40 56.5	-0.8
BRDR				*i* S	Sb	20 41 17.2	+0.5
BRDR				IAML_P			
	comp=Z,1µm,0.2s						
AYDN	Tasoluk	1.57	325	*i* P	Pb	20 40 57.0	-0.7
AYDN				*i* S	Sb	20 41 17.5	+0.2
AYDN				IAML_P			
	comp=Z,2µm,0.2s						
YKAV	Yalikavak-Bodr	1.59	298	PN	Pb	20 40 55.9	-2.0
KARP	Karpathos	1.73	242	PN	Pn	20 40 57.7	+0.8
KARP	Karpathos	1.73	242	P	Pn	20 40 57.8	+0.8
KARP				S	Sn	20 41 18.0	+0.1
AYDB	Zeytinkoy-Aydi	1.81	330	PN	Pb	20 40 59.3	-2.5
GCAM	G?zelcaml?	1.95	313	PN	Pb	20 41 01.3	-2.7
GCAM	G?zelcaml?	1.95	313	*i* P	Pn	20 41 01.0	+1.1
GCAM				*i* S	Sb	20 41 26.3	-1.6
GCAM				IAML_P			
	comp=Z,1µm,0.1s						
KHAL	Karahalli	2.02	10	*i* P	Pn	20 41 01.6	+0.5
KHAL				IAML_P			
	comp=Z,127nm,0.1s						
KZIL	AFYON_Kizioren	2.07	25	*i* P	Pn	20 41 01.3	-0.4
KZIL				IAML_P			
	comp=Z,124nm,0.2s						
BAGO	Egridir - ISPA	2.13	41	*i* P	Pb	20 41 04.4	-2.9
KEPZ	Antalya-Kepez	2.13	75	*i* P	Pb	20 41 05.7	-1.5
KEPZ				IAML_P			
	comp=Z,296nm,0.2s						
MANT	Manisa	2.14	350	*i* P	Pn	20 41 03.0	+0.2
MANT				*i* S	Sn	20 41 27.8	-0.5
MANT				IAML_P			
	comp=Z,293nm,0.2s						
KULA	Kula-Manisa	2.15	352	PN	Pn	20 41 02.6	-0.2
KULA	Kula-Manisa	2.15	352	P	Pn	20 41 02.9	+0.1
KULA				S	Sn	20 41 28.7	+0.3
USAK	Uak-Merkez	2.33	360	*i* P	Pn	20 41 05.5	+0.2
USAK				IAML_P			
	comp=Z,260nm,0.1s						
DGB	zmir	2.39	315	*i* P	Pn	20 41 07.6	+1.6
DGB				*i* S	Sn	20 41 35.9	+1.7
DGB				IAML_P			
	comp=Z,500nm,0.1s						
SHUT	Suhut-Afyon	2.48	29	PN	Pn	20 41 07.9	+0.5
BLCB	Balcova	2.55	322	PN	Pn	20 41 09.8	+1.6
AMGA	Amorgos Island	2.56	281	P	Pn	20 41 07.7	-0.7
ZKR	Zakros	2.61	242	P	Pn	20 41 10.3	+1.2
ANAF	Anafi Island	2.63	270	P	Pn	20 41 09.6	+0.3
ANAF	Anafi Island	2.63	270	P	Pn	20 41 09.4	+0.1
ANAF				S	Sn	20 41 40.7	+0.6
STIA	Sitia Lasithi	2.66	245	P	Pn	20 41 10.7	+0.9
STIA				S	Sn	20 41 42.9	+2.0
AKHS	Akhisar	2.67	339	*i* P	Pn	20 41 10.4	+0.5
AKHS				IAML_P			
	comp=Z,451nm,0.2s						
ZEY	zmir	2.74	313	*i* P	Pn	20 41 12.2	+1.5
ZEY				IAML_P			
	comp=Z,935nm,0.1s						
URLA	Izmir	2.77	316	PN	Pn	20 41 12.9	+1.7
URLA	Izmir	2.77	316	*i* P	Pn	20 41 13.2	+2.0
URLA				IAML_P			
	comp=Z,215nm,0.1s						
APE	Apeiranthos	2.89	285	P	Pn	20 41 12.7	-0.3
NPS	Neapolis	2.99	249	P	Pn	20 41 14.6	+0.3
NPS				S	Sn	20 41 49.4	+0.4
CHOS	Chios island	3.10	311	P	Pn	20 41 16.6	+0.8
CHOS				S	Sn	20 41 50.4	-1.4
CHOS	Chios island	3.10	311	P	Pn	20 41 16.8	+0.9
CHOS				S	Sn	20 41 50.9	-0.9
LAST	Lasithi	3.13	248	P	Pn	20 41 16.6	+0.3
CSS	Mathiatis	3.78	111	P	Pn	20 41 24.9	-0.2

MEX 23 20:48:36.2±0.6, **17°.11N**×**100°.74W**, **h20**^{km}±5^{km}, **MD3.8**, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.46	98	*i* P	Pb	20 48 44.1	-1.5
CAIG				*e*S	Sb	20 48 49.7	-2.3
ZIIG	Zihuatanejo	0.85	305	*e*P	Pb	20 48 49.4	-2.9
ZIIG				*e*S	Sb	20 49 00.2	-2.9
ACP2	Acapulco	0.85	106	*i* P	Pb	20 48 50.4	-1.9
ACP2				*i* S	Sb	20 49 00.3	-3.1
ARIG	Puente Sto Nin	1.22	18	*e*P	Pn	20 48 54.9	-3.2
ARIG				*e*S	Sb	20 49 09.4	-4.6
MEIG	Mezcala	1.34	53	*e*P	Pn	20 48 57.1	-2.8
MEIG				*e*S	Sn	20 49 12.2	-4.9
PLIG	Platanillo	1.73	43	*e*P	Pn	20 49 02.1	-3.2
PLIG				*e*S	Sn	20 49 23.2	-3.8

*IDC **23** 20:52:36.0±5.5, 19°.89S×177°.58W, h529^{km}±60^{km}, mb3.2/8, mb1 3.5/8, mb1mx3.2/36, mbtmp4.1/8, Error ellipse: s-maj=32.9km s-min=26.0km az=11.0*

*ISCJB **23** 20:52:36.7±1.0, 19°.9S±0°.2×177°.6W±0°.2, h550^{km}, mb3.7/8, Error ellipse: s-maj=27.3km s-min=19.0km az=40.7*

ISC 23 20:52:37.3±0.9, **19°.9S**±0°.2×**177°.6W**±0°.2, **h550**^{km}, **n13**, σ**1^{s}34**/14, **mb3.7**/8, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	18.84	193	P	P	20 56 21.7	-0.9
	2.5nm,0.3s,baz=242,slow=3.4,SNR=13						
CTA	Charters Tower	33.96	263	P	P	20 58 36.1	+0.5
	6.0nm,0.4s,baz=90,slow=11,SNR=22						
STKA	Stephens Creek	38.41	244	P	P	20 59 12.9	+0.8
	1.1nm,0.7s,baz=107,slow=12,SNR=4.0						
ASAR	Alice Springs	45.05	256	P	P	21 00 04.0	-0.6
	4.4nm,0.7s,baz=85,slow=7.9,SNR=72						
ASAR				PcP	PcP	21 01 34.0	+0.2
	0.5nm,0.5s,baz=110,slow=4.1,SNR=5.6						
WRA	Warramunga Arr	45.09	261	P	P	21 00 04.7	-0.3
	1.5nm,0.3s,baz=97,slow=7.6,SNR=90						
MJAR	Matsushiro Arr	70.00	323	P	P	21 02 53.6	-0.4
	1.7nm,0.6s,baz=162,slow=5.7,SNR=7.3						
TXAR	Lajitas Array	86.40	57	P	P	21 04 24.4	+2.4
	0.2nm,0.6s,baz=224,slow=8.6,SNR=3.2						
ILAR	Eielson Array	87.67	13	P	P	21 04 25.6	-1.4
	0.2nm,0.4s,baz=218,slow=5.6,SNR=5.3						
CMAR	Chiang Mai Arr	90.32	289	P	P	21 04 42.2	+1.8
	0.7nm,0.8s,baz=128,slow=3.4,SNR=5.3						
ARCES	ARCESS Array B	128.44	350	PKP	PKiKP	21 10 40.8	-1.0
	3.9nm,0.9s,baz=1.9,slow=2.7,SNR=4.1						
FINES	FINESS Array B	135.34	344	PKP	PKiKP	21 10 55.0	-1.0
	1.5nm,1.0s,baz=57,slow=7.0,SNR=3.4						
BRTR	Keskin Array B	146.76	313	PKPbc	PKiKP	21 11 18.1	-2.2
	0.6nm,0.5s,baz=143,slow=4.0,SNR=7.7						
GERES	GERESS Array B	149.76	345	PKPbc	PKiKP	21 11 25.8	-0.3
	0.9nm,0.6s,baz=52,slow=2.2,SNR=7.5						

*MOS **23** 20:58:23.8±1.1, 8°.34S×127°.21E, h18^{km}, mb5.1/46, MS4.3/15, Error ellipse: s-maj=13.3km s-min=6.4km az=112.9*

*NEIC **23** 20:58:23.3±0.1, 8°.44S×127°.36E, h10^{km}, mb5.1/59, Error ellipse: s-maj=3.8km s-min=3.3km az=52.0*

NEIC Felt at Dili.

*BJI **23** 20:58:25.3, 8°.54S×127°.50E, h43^{km}, mB5.2/42, mb4.8/60, Ms4.7/39, Ms7 4.4/41*

*ISCJB **23** 20:58:26.5±0.4, 8°.70S±0°.02×127°.58E±0°.02, h62^{km}±3^{km}, mb4.9/86, Error ellipse: s-maj=3.9km s-min=3.5km az=142.1*

*DJA **23** 20:58:28.2±0.3, 9°S±2°×12°8E±°, h70^{km}±5^{km}, M5.0/35, mB5.5/26, mb5.3/35, MLv5.3/13, Mw(mB)4.9/26*

*GCMT **23** 20:58:28.3±0.2, 8°.67S±0°.01×127°.55E±0°.02, h27^{km}, MW5.1/74, Moment Tensor Solution. s69,c107; s74,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.14±.18; $M_{\theta\theta}$-4.05±.12; $M_{\phi\phi}$-1.09±.14; $M_{r\theta}$2.66±.21; $M_{\theta\phi}$-2.22±.09; $M_{\phi r}$0.76±.28; Best double couple: $M_0$5.88100×10^{16} NP1:ϕ_s68.00000°, δ59.00000°, λ96.00000°. NP2:ϕ_s236.00000°, δ32.00000°, λ80.00000°. Principal axes: T 5.8580, Plg75.0000°, Azm355.0000°; N 0.0450, Plg5.0000°, Azm244.0000°; P -5.9030, Plg14.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **23** 20:58:28.6, 8°.87S×127°.59E, h52^{km}, mb5.3*

*IDC **23** 20:58:29.0±1.7, 8°.37S×127°.33E, h44^{km}±15^{km}, mb4.5/18, mb1 4.6/21, mb1mx4.5/32, mbtmp4.8/21, ML4.9/3, MS4.4/22, Ms1 4.4/22, ms1mx4.3/35, Error ellipse: s-maj=13.8km s-min=10.3km az=101.0*

ISC 23 20:58:27.7±0.6, **8°.59S**±0°.03×**127°.49E**±0°.04, **h43**^{km}±5^{km}, **n537**, σ**1^{s}60**/556, **mb5.0**/96, **MS4.5**/32, **17C-2D**, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	3.38	250	*e*Pn	Pn	20 59 17.7	-0.5
SOEI	Soe	3.38	250	P	Pn	20 59 19.8	+1.7
SAUI	Saumlaki	3.82	81	*e*Pn	Pn	20 59 22.4	-1.7
SAUI				*e*Sn	Sn	21 00 06.4	-1.3
BATI	Baumata	4.10	247	P	Pn	20 59 29.4	+1.5
BATI	Baumata	4.10	247	P	Pn	20 59 29.3	+1.4
	38nm,0.3s,baz=79,slow=3.3,SNR=62						
BATI				S	Sn	21 00 16.1	+1.4
	66nm,0.3s,baz=279,slow=3.9,SNR=3.9						
BNDI	Bandanaira	4.70	31	P	Pn	20 59 38.1	+2.0
MMRI	Maumere	5.19	269	*e*Pn	Pn	20 59 39.6	-3.3
MMRI	Maumere	5.19	269	P	Pn	20 59 44.7	+1.8
	834nm,1.1s,9µm2.4nm						
NLAI	Namlea	5.33	356	P	Pn	20 59 48.0	+3.2
	231nm,0.6s,1.1nm						
MTN	Manton Dam	5.54	140	P	Pn	20 59 46.9	-0.8
	baz=5.4,SNR=155						
MTN	Manton Dam	5.54	140	*e*Pn	Pn	20 59 48.0	+0.4
MTN				*e*Sn	Sn	21 00 50.1	0.0
EDFI	Ende, Flores	5.73	268	P	Pn	20 59 53.2	+2.8
	221nm,1.2s,3µm0.7nm						
BBSI	Bau Bau	5.77	302	P	Pn	20 59 54.7	+3.8
	112nm,1.0s,3µm0.4nm						
KDU	Kakadu	6.37	130	P	Pn	20 59 59.3	+0.3
	baz=6.2,SNR=240						
SANI	Sanana	6.67	347	P	Pn	21 00 07.2	+4.0
	97nm,1.1s,3µm0.6nm						
KDI	Kendari	6.68	313	P	Pn	21 00 06.6	+3.3
	120nm,0.9s,3µm0.5nm						
BASI	Baing, Sumba	7.01	256	P	Pn	21 00 08.8	+1.0
	524nm,0.9s,6µm2.4nm						
KNRA	Kununurra	7.15	170	P	Pn	21 00 09.2	-0.6
	baz=7.0,SNR=202						
FAKI	Fak Fak	7.36	40	*e*Pn	Pn	21 00 10.6	-2.1
FAKI	Fak Fak	7.36	40	P	Pn	21 00 13.7	+1.0
	301nm,0.9s,3µm1.1nm						
BKSI	Bulukumba	8.00	293	P	Pn	21 00 23.8	+2.4
	170nm,1.1s,2µm						
BNSI	Bone	8.43	299	P	Pn	21 00 31.0	+3.6
	295nm,1.0s,3µm						
SIJI	Sorong	8.54	26	P	Pn	21 00 30.4	+1.4
	17nm,0.3s,baz=199,slow=6.6,SNR=40						
SIJI				S	Sn	21 02 04.1	0.0
	2.7nm,0.3s,baz=3.2,slow=18,SNR=1.4						
SIJI				LR	LR	21 04 21.2	
	comp=Z,2µm,21.6s,baz=240,slow=42						
SWI	Sorong	8.55	26	P	Pn	21 00 31.8	+2.9
	290nm,0.7s,4µm						
LUWI	Luwuk	8.85	328	*e*Pn	Pn	21 00 29.1	-4.0
LUWI	Luwuk	8.85	328	P	Pn	21 00 36.3	+3.2
	354nm,1.2s,7µm						
SPSI	Sidrap Palu	8.94	300	P	Pn	21 00 37.2	+2.8
TNTI	Ternate	9.30	359	*e*Pn	Pn	21 00 37.5	-1.8
TNTI	Ternate	9.30	359	P	Pn	21 00 44.4	+5.1
	150nm,1.4s,2µm						
TTSI	Tana Toraja	9.41	305	P	Pn	21 00 45.9	+5.1
	123nm,0.9s,2µm						
APSI	Ampana	9.59	322	P	Pn	21 00 46.8	+3.5
	185nm,1.0s,1µm						
PLAI	Plampang	9.60	268	P	Pn	21 00 43.8	+0.4
	170nm,0.8s,2µm						
FITZ	Fitzroy Crossi	9.62	191	P	Pn	21 00 42.0	-1.6
	baz=9.5,SNR=156						
FITZ	Fitzroy Crossi	9.62	191	*e*Pn	Pn	21 00 42.6	-1.0
FITZ				*e*Sn	Sn	21 02 23.2	-7.2
FITZ	Fitzroy Crossi	9.62	191	P	Pn	21 00 42.5	-1.2
	8.0nm,0.3s,baz=10.0,slow=9.8,SNR=106						
FITZ				S	Sn	21 02 20.0	-10
	9.6nm,0.3s,baz=89,slow=12,SNR=6.7						
FITZ				LR	LR	21 05 28.3	
	comp=Z,4µm,18.2s,baz=10,slow=43						
RKPI	Ransiki, Papua	9.69	44	P	Pn	21 00 45.4	+0.8
	633nm,0.7s,5µm						
KMSI	Cibinong	9.75	339	P	Pn	21 00 48.5	+3.0
	482nm,1.1s,7µm						
MRSI	Marisa	10.57	328	P	Pn	21 01 01.3	+4.6
	82nm,1.0s,1µm						
PCI	Palu	10.79	315	P	Pn	21 01 03.2	+3.5
	221nm,1.2s,2µm						
SRPI	Serui, Papua	10.98	53	P	Pn	21 01 03.0	+0.8
	140nm,0.6s						
BAKI	Biak	11.30	50	P	Pn	21 01 07.6	+0.9
	399nm,0.9s,3µm						
MPSI	Mapaga	11.66	319	P	Pn	21 01 14.5	+3.0
	48nm,0.8s,826nm						
WRAB	Tennant Creek	13.09	150	*e*Pn	Pn	21 01 27.5	-3.5
WRAB	Tennant Creek	13.09	150	*ce*P	Pn	21 01 30.5	-0.6
WRAB				pmax	pmax		
	comp=Z,83nm,1.0s						
WR1	Warramunga Arr	13.09	150	*e*Pn	Pn	21 01 26.8	-4.3
WR1				*e*Sn	Sn	21 03 46.2	-9.1
WRA	Warramunga Arr	13.09	150	P	Pn	21 01 26.8	-4.3
	comp=Z,5.0nm,0.3s,baz=327,slow=14,SNR=97						
WRA				S	Sn	21 03 46.2	-9.1
	comp=Z,9.8nm,0.3s,baz=331,slow=22,SNR=11						
WRA				LR	LR	21 07 08.5	
	comp=Z,2µm,20.6s,baz=330,slow=39						
WB2	Warramunga Arr	13.09	150	*e*Pn	Pn	21 01 27.5	-3.6
WC3	Warramunga Arr	13.12	150	P	Pn	21 01 28.2	-3.3
	baz=13						
JAGI	Jajag, Banyuwa	13.19	270	*e*Pn	Pn	21 01 29.3	-3.2
GENI	Genyem	13.95	65	P	Pn	21 01 42.6	-0.3
	comp=Z,180nm,0.9s,comp=Z,3µm						
JAY	Jayapura	14.47	66	P	Pn	21 01 49.7	-0.2
	comp=Z,421nm,1.0s						
JAY	Jayapura	14.47	66	P	Pn	21 01 46.6	-3.3
	comp=Z,0.3nm,0.3s,baz=199,slow=7.2,SNR=2.1						
MBWA	Marble Bar	14.56	210	*e*Pn	Pn	21 01 48.6	-2.5
MTKI	Muara Teweh, K	14.66	301	P	P	21 01 59.9	+2.0
SKMP	Bagumbayan, Su	15.30	349	*e*P	Pn	21 02 02.0	+1.2
MATI	Mati	15.48	355	*e*P	Pn	21 02 02.5	-0.7
PWJI	Pagerwojo	15.53	271	P	Pn	21 02 04.0	+0.2
	comp=Z,54nm,0.9s						
DAV	Davao City (W)	15.67	353	P	Pn	21 02 05.4	-0.2
	comp=Z,7.5nm,0.3s,baz=264,slow=10,SNR=1.5						
KCP	Kidapawan	15.68	351	⇓*i*P	P	21 02 10.0	+0.7
AS31	Alice Springs	16.20	158	*e*Pn	Pn	21 02 08.8	-3.5
	comp=Z,26nm,0.6s						
AS31				*e*Sn	Sn	21 05 04.5	-6.6
ASAR	Alice Springs	16.20	158	P	Pn	21 02 09.0	-3.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR				MLR	MLR		
	comp=Z,3µm,19.6s						
ASAR	Alice Springs	16.20	158	P	Pn	21 02 09.0	-3.4
	comp=Z,1.0nm,0.3s,baz=333,slow=9.2,SNR=50						
ASAR				S	Sn	21 05 01.8	-9.4
	comp=Z,1.7nm,0.3s,baz=326,slow=20,SNR=4.6						
ASAR				LR	LR	21 09 04.8	
	comp=Z,3µm,19.6s,baz=335,slow=39						
ASPA	Alice Springs	16.20	158	P	Pn	21 02 08.8	-3.6
	baz=16						
COEN	Coen	16.28	111	P	Pn	21 02 11.2	-2.3
	baz=16,SNR=79						
COEN	Coen	16.28	111	*e*Pn	Pn	21 02 11.1	-2.3
	comp=Z,69nm,0.8s						
WRKA	Warakurna	16.37	177	P	Pn	21 02 11.7	-2.8
	baz=16,SNR=45						
BUKP	Musuan	16.54	352	*e*P	P	21 02 20.7	+1.9
QIS	Mount Isa	16.69	137	P	Pn	21 02 16.0	-2.6
	baz=16,SNR=25						
UGM	Wanagama	16.80	271	*e*Pn	Pn	21 02 17.0	-3.1
	comp=Z,228nm,1.3s						
PAGZ	Pagadian	16.84	346	*e*P	P	21 02 23.4	+1.3
SDKM	Sandakan	17.47	324	P	P	21 02 32.9	+3.7
BUTP	Butuan	17.54	354	*e*P	P	21 02 32.3	+2.4
KKM	Kota Kinabalu	18.38	322	*e*Pn	P	21 02 35.0	-4.2
	comp=Z,137nm,1.1s						
KKM	Kota Kinabalu	18.38	322	P	Pn	21 02 42.6	+3.1
KPJI	Karang Pucung	18.42	273	P	P	21 02 39.4	-0.2
	comp=Z,59nm,0.9s						
BTM	Bintulu	18.53	309	P	Pn	21 02 43.9	+2.6
SBUM	Sibu	18.76	305	*e*P	P	21 02 39.8	-3.5
	comp=Z,74nm,1.1s						
SBUM	Sibu	18.76	305	P	Pn	21 02 47.0	+2.9
MSLP	Maasin	18.79	352	*e*P	Pn	21 02 44.8	+0.4
GIRL	Giralia	18.90	221	*e*P	P	21 02 42.5	-2.3
	comp=Z,385nm,1.4s						
MTSU	Mount Surprise	18.91	122	P	P	21 02 44.8	-0.1
	baz=19,SNR=42						
CISI	Cisompet, Garu	19.50	272	*e*P	P	21 02 49.8	-1.8
	comp=Z,94nm,0.7s						
CISI	Cisompet, Garu	19.50	272	P	P	21 02 52.1	+0.6
	comp=Z,143nm,0.6s						
MEEK	Meekatharra	19.82	204	P	P	21 02 56.4	+1.6
	baz=20,SNR=25						
KSM	Kuching	19.83	299	*e*P	P	21 02 53.7	-1.3
	comp=Z,99nm,0.9s						
KSM	Kuching	19.83	299	P	Pn	21 02 57.1	+0.3
CBJI	Citeko	20.57	275	P	P	21 03 00.9	-2.2
	comp=Z,198nm,0.8s						
DBJI	Dramaga	20.66	274	P	Pn	21 03 12.3	+5.7
MANU	Manus Island	20.82	73	*e*P	P	21 03 05.7	-0.1
	comp=Z,251nm,1.1s						
CTA	Charters Tower	21.45	124	P	P	21 03 15.8	+3.3
	comp=Z,69nm,1.0s,baz=295,slow=11,SNR=21						
CTA				S	S	21 07 05.9	-2.4
	comp=Z,11nm,1.0s,baz=245,slow=17,SNR=2.0						
CTAO	Charters Tower	21.45	124	*e*P	P	21 03 13.5	+1.0
	comp=Z,92nm,1.0s						
CTAO	Charters Tower	21.45	124	*e*P	P	21 03 13.5	+1.0
CTAO				pmax	pmax		
	comp=Z,92nm,1.0s						
SJMP	San Jose	21.85	343	*e*P	P	21 03 18.2	+1.4
FORT	Forrest	22.08	179	P	P	21 03 21.1	+1.9
	baz=22,SNR=20						
FORT	Forrest	22.08	179	*e*P	P	21 03 21.1	+1.9
	comp=Z,123nm,0.8s						
PPBI	Pangkal Pinang	22.19	286	P	P	21 03 25.2	+4.8
MORW	Morawa	23.04	206	P	P	21 03 30.0	+0.8
	baz=23,SNR=11						
MORW	Morawa	23.04	206	*e*P	P	21 03 29.2	-0.1
	comp=Z,82nm,1.1s						
TGY	Tagaytay City	23.46	344	P	P	21 03 32.7	-0.9
	comp=Z,86nm,0.3s,baz=192,slow=9.3,SNR=2.8						
BLDU	Ballidu	24.11	203	P	P	21 03 41.0	+1.4
	baz=24,SNR=27						
KLBR	Kellerberrin	24.61	200	P	P	21 03 45.9	+1.8
	baz=25,SNR=18						
BBOO	Buckleboo	25.37	163	P	P	21 03 53.0	+2.0
	baz=25,SNR=36						
BBOO	Buckleboo	25.37	163	*e*P	P	21 03 52.6	+1.7
	comp=Z,70nm,1.0s						
MUN	Mundaring	25.52	203	P	P	21 03 54.2	+1.9
	baz=26,SNR=5.7						
MYKOM	Kota Tinggi	25.72	293	*e*P	P	21 03 51.6	-2.7
	comp=Z,32nm,1.0s						
NWAO	Narrogin (SRO)	26.01	200	P	P	21 03 58.3	+1.7
	baz=26,SNR=16						
NWAO	Narrogin (SRO)	26.01	200	*e*P	P	21 03 57.6	+0.9
	comp=Z,35nm,0.8s						
NWAO				*e*S	S	21 08 41.5	+17
NWAO	Narrogin (SRO)	26.01	200	*e*P	P	21 03 57.6	+0.9

NWAO				pmax	pmax		
	comp=Z,35nm,0.8s						
NWAO	**Narrogin (SRO)**	**26.01**	**200**	P	**P**	**21 03 58.4**	**+1.7**
	comp=Z,28nm,0.7s,baz=258,slow=8.9,SNR=11						
NWAO				S	S	21 08 41.5	+17
	comp=Z,24nm,0.9s,baz=39,slow=18,SNR=2.8						
STKA	**Stephens Creek**	**26.62**	**152**	P	**P**	**21 04 04.2**	**+1.9**
	baz=26,SNR=17						
STKA	**Stephens Creek**	**26.62**	**152**	*e*P	**P**	**21 04 04.3**	**+2.0**
	comp=Z,8.5nm,0.8s						
STKA	**Stephens Creek**	**26.62**	**152**	*e*P	**P**	**21 04 04.3**	**+2.0**
STKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STKA	**Stephens Creek**	**26.62**	**152**	P	**P**	**21 04 04.3**	**+2.0**
	comp=Z,26nm,0.9s,baz=323,slow=10,SNR=29						
STKA				LR	LR	21 17 14.5	
	comp=Z,915nm,18.8s,baz=326,slow=42						
HTT	**Hallett**	**26.88**	**158**	P	**P**	**21 04 06.9**	**+2.3**
	baz=27,SNR=13						
IPM	**Ipoh**	**29.41**	**295**	P	**P**	**21 04 31.5**	**+4.2**
PSI	**Prapat**	**30.65**	**290**	*e*P	**P**	**21 04 35.5**	**-2.9**
	comp=Z,50nm,1.3s						
PSI	**Prapat**	**30.65**	**290**	*e*P	**P**	**21 04 35.6**	**-2.9**
PSI				pmax	pmax		
	comp=Z,50nm,1.3s						
PSI	**Prapat**	**30.65**	**290**	P	**P**	**21 04 37.3**	**-1.2**
	comp=Z,9.9nm,0.8s,baz=179,slow=7.4,SNR=5.2						
PSI				LR	LR	21 17 50.7	
	comp=Z,3µm,19.4s,baz=91,slow=38						
ARPS	**Mount Arapiles**	**30.93**	**157**	P	**P**	**21 04 43.5**	**+3.0**
	baz=31,SNR=21						
TPUB	**Ta-pu**	**32.40**	**348**	*e*P	**P**	**21 04 51.3**	**-2.3**
	comp=Z,134nm,1.6s						
QIZ	**Qiongzhong**	**32.50**	**328**	P	**P**	**21 04 55.3**	**+0.8**
QIZ				S	**S**	**21 10 13.6**	**+6.9**
QIZ				LR	LR		
	comp=Z,480nm,17.6s						
SSLB	**Suanglung**	**32.81**	**349**	*e*P	**P**	**21 04 55.4**	**-1.8**
	comp=Z,39nm,1.4s						
SNSI	**Sinabang, Aceh**	**32.93**	**288**	P	P	21 05 03.9	+5.5
MLSI	**Meulaboh, Aceh**	**33.52**	**291**	P	**P**	**21 05 05.2**	**+1.6**
SKNT	**Sakolnakorn**	**34.43**	**318**	P	**P**	**21 05 14.6**	**+3.2**
	comp=Z,9.6nm,1.8s						
PHET	**Kaeng Krachan**	**34.96**	**307**	P	P	21 05 28.8	+13
CHAI	**Chaiyaphum**	**35.07**	**314**	P	**P**	**21 05 17.3**	**+0.4**
UTHA	**Uthaitani**	**36.71**	**311**	P	**P**	**21 05 31.1**	**+0.2**
UTTA	**Uttaradit**	**37.32**	**315**	P	**P**	**21 05 36.3**	**+0.2**
UMPA	**Umpang Tak**	**37.55**	**311**	P	**P**	**21 05 37.4**	**-0.7**
SUKH	**Sukhothai**	**37.80**	**313**	P	**P**	**21 05 41.1**	**+0.9**
LAMP	**Lampang**	**38.49**	**315**	P	**P**	**21 05 46.5**	**+0.5**
CM01	**Chiang Mai Arr**	**38.90**	**314**	*e*P	**P**	**21 05 48.7**	**-0.8**
CM31	**Chiang Mai Arr**	**38.93**	**314**	*e*P	**P**	**21 05 48.7**	**-1.0**
	comp=Z,32nm,1.0s						
CMAR	**Chiang Mai Arr**	**38.93**	**314**	P	**P**	**21 05 49.5**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,16nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,781nm,19.2s						
CMAR	**Chiang Mai Arr**	**38.93**	**314**	P	**P**	**21 05 49.5**	**-0.2**
	comp=Z,17nm,0.9s,baz=144,slow=7.0,SNR=95						
CMAR				LR	LR	21 24 37.2	
	comp=Z,781nm,19.2s,baz=159,slow=41						
CMMT	**Chiang Mai**	**39.16**	**314**	P	**P**	**21 05 51.5**	**-0.1**
CHTO	**Chiang Mai**	**39.17**	**314**	*e*P	**P**	**21 05 51.0**	**-0.7**
	comp=Z,32nm,1.0s						
CHTO	**Chiang Mai**	**39.17**	**314**	*e*P	**P**	**21 05 51.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,33nm,1.0s						
CHTO	**Chiang Mai**	**39.17**	**314**	P	**P**	**21 05 51.6**	**-0.1**
DZM	**Mont Dzumac**	**39.76**	**114**	*e*S	**S**	**21 11 59.4**	**+1.4**
	comp=Z,623nm,31.7s						
DZM				*e*LR	LR	21 16 54.0	
	comp=Z,1µm,21.5s						
DZM	**Mont Dzumac**	**39.76**	**114**	LR	LR	21 22 50.4	
	comp=Z,1µm,19.2s,baz=245,slow=36						
GYA	**Guiyang**	**40.28**	**330**	⇑*i*P	**P**	**21 06 00.5**	**-0.5**
GYA				pP	pP	21 06 15.3	+2.6
GYA				PP	**PnPn**	**21 07 40.0**	**+1.7**
GYA				PcP	**PcP**	**21 08 05.3**	**+1.1**
GYA				S	**S**	**21 12 08.4**	**+2.6**
GYA				pmax	pmax		
	comp=Z,20nm,1.1s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
WHN	**Wuhan**	**40.91**	**343**	⇑P	**P**	**21 06 05.6**	**-0.3**
WHN				S	**S**	**21 12 11.0**	**-3.6**
WHN				LR	LR		
	comp=Z,880nm,20.0s						
NJ2	**Nanjing**	**41.25**	**349**	*e*P	**P**	**21 06 08.6**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KMI	**Kunming**	**41.28**	**325**	P	**P**	**21 06 10.8**	**+1.4**
KMI				pP	pP	21 06 22.3	+1.3
KMI				sP	sP	21 06 29.6	+3.6
KMI				PP	**PnPn**	**21 07 51.5**	**+1.4**
KMI				S	**S**	**21 12 21.1**	**+0.2**
KMI				sS	sS	21 12 40.8	+0.8
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI				pmax	pmax		
	comp=Z,210nm,4.7s						
KMI				LR	LR		
	comp=Z,380nm,13.2s						
KMI				LR	LR		
	comp=Z,370nm,12.1s						
KMI				LR	LR		
	comp=Z,430nm,17.6s						
ENH	**Enshi**	**42.34**	**337**	*e*P	**P**	**21 06 16.7**	**-1.0**
	comp=Z,18nm,0.9s						
CD2	**Chengdu**	**45.39**	**331**	P	**P**	**21 06 41.8**	**-0.4**
CD2				pP	pP	21 06 54.0	-0.1
CD2				S	**S**	**21 13 21.3**	**+0.7**
CD2				sS	sS	21 13 38.9	-1.0
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
CD2				pmax	pmax		
	comp=Z,430nm,4.9s						
CD2				LR	LR		
	comp=Z,820nm,13.7s						
CD2				LR	LR		
	comp=Z,1µm,14.2s						
CD2				LR	LR		
	comp=Z,940nm,15.2s						
KS15	**Wonju Array Si**	**45.79**	**0**	*e*P	**P**	**21 06 44.2**	**-1.0**
	comp=Z,28nm,1.3s						
KSRS	**Korea Array**	**45.81**	**0**	P	**P**	**21 06 43.1**	**-2.2**
	comp=Z,3.8nm,0.8s,baz=177,slow=9.7,SNR=7.6						
KSRS				PcP	**PcP**	**21 08 22.8**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=206,slow=3.0,SNR=8.5						
KSRS				LR	LR	21 27 55.8	
	comp=Z,146nm,20.8s,baz=168,slow=39						
KS01	**Wonju Array Si**	**45.83**	**0**	*e*P	**P**	**21 06 43.7**	**-1.7**
KS01				*e*PcP	**PcP**	**21 08 22.7**	**+0.4**
XAN	**Xi'an**	**45.91**	**338**	P	**P**	**21 06 44.4**	**-1.9**
XAN				pP	pP	21 06 56.6	-1.6
XAN				sP	sP	21 07 02.3	-0.9
XAN				PP	**PP**	**21 08 37.1**	**+2.5**
XAN				ScS	ScS	21 16 30.0	-8.8
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN				pmax	pmax		
	comp=Z,120nm,3.7s						
XAN				LR	LR		
	comp=Z,390nm,17.6s						
XAN				LR	LR		
	comp=Z,250nm,16.8s						
XAN				LR	LR		
	comp=Z,470nm,15.2s						
XAN	**Xi'an**	**45.91**	**338**	*e*P	**P**	**21 06 44.4**	**-1.9**
	comp=Z,13nm,0.7s						
XAN	**Xi'an**	**45.91**	**338**	*e*P	**P**	**21 06 44.4**	**-1.9**
XAN				pmax	pmax		
	comp=Z,13nm,0.7s						
MAJO	**Matsushiro**	**46.01**	**12**	*e*P	**P**	**21 06 44.7**	**-2.3**
MAJO	**Matsushiro**	**46.01**	**12**	*e*P	**P**	**21 06 44.7**	**-2.3**
MJAR	**Matsushiro Arr**	**46.01**	**12**	P	**P**	**21 06 44.7**	**-2.2**
	comp=Z,1.9nm,0.6s,baz=199,slow=9.9,SNR=4.7						
SHL	**Shillong**	**48.51**	**315**	*e*P	**P**	**21 07 05.0**	**-1.8**
	comp=Z,21nm,1.1s						
SHL	**Shillong**	**48.51**	**315**	*e*P	**P**	**21 07 05.0**	**-1.8**
SHL				pmax	pmax		
	comp=Z,21nm,1.1s						
BJT	**Baijiatuau**	**49.49**	**349**	*e*P	**P**	**21 07 11.6**	**-2.2**
	comp=Z,9.1nm,1.0s						
BJT	**Baijiatuau**	**49.49**	**349**	*e*P	**P**	**21 07 11.6**	**-2.2**
BJT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BJI	**Beijing**	**49.51**	**349**	⇓*e*P	**P**	**21 07 13.1**	**-0.8**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LZH	**Lanzhou**	**49.70**	**335**	*e*P	**P**	**21 07 15.6**	**-0.2**
LZH				pP	pP	21 07 29.9	+2.2
LZH				sP	sP	21 07 35.5	+2.8
LZH				S	**S**	**21 14 25.8**	**+3.9**
LZH				pmax	pmax		
	comp=Z,45nm,1.3s						
LZH				pmax	pmax		
	comp=Z,240nm,4.8s						
LZH				LR	LR		
	comp=Z,640nm,13.0s						
LZH				LR	LR		
	comp=Z,650nm,13.6s						
LZH				LR	LR		
	comp=Z,740nm,13.6s						
HHC	**Hu-ho-hao-te**	**51.34**	**345**	*e*P	**P**	**21 07 30.6**	**+2.6**
HHC				S	**S**	**21 14 46.6**	**+2.3**
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,6.2s						
HHC				LR	LR		
	comp=Z,370nm,15.6s						
HHC				LR	LR		
	comp=Z,220nm,17.3s						
HHC				LR	LR		
	comp=Z,240nm,16.4s						
RPZ	**Rata Peaks**	**51.55**	**140**	*e*P	**P**	**21 07 31.6**	**+2.1**
	comp=Z,29nm,1.1s						
LSA	**Lhasa**	**51.69**	**319**	P	**P**	**21 07 31.0**	**-0.2**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LSA	**Lhasa**	**51.69**	**319**	*e*P	**P**	**21 07 30.5**	**-0.7**
	comp=Z,11nm,0.8s						
LSA	**Lhasa**	**51.69**	**319**	*e*P	**P**	**21 07 30.5**	**-0.7**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
THZ	**Tophouse**	**51.84**	**137**	*e*P	**P**	**21 07 34.7**	**+2.9**
	comp=Z,30nm,1.2s						
CN2	**Changchun**	**52.18**	**358**	*e*P	**P**	**21 07 32.3**	**-1.7**
CN2				*e*pP	pP	21 07 44.8	-1.1
CN2				*e*PP	**PP**	**21 09 32.3**	**-0.5**
CN2				*e*S	**S**	**21 14 53.3**	**-2.2**
CN2				*e*SS	**SS**	**21 18 29.9**	**-3.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.7s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,340nm,19.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
CN2				LR	LR		
	comp=Z,320nm,19.0s						
USRK	**Ussuriysk Ar.**	**52.70**	**4**	P	**P**	**21 07 36.7**	**-1.2**
	comp=Z,3.4nm,0.6s,baz=185,slow=6.4,SNR=12						
USRK				LR	LR	21 30 38.2	
	comp=Z,294nm,18.9s,baz=165,slow=37						
RAMN	**Ramite**	**53.10**	**313**	*e*P	**P**	**21 07 40.8**	**-0.7**
	comp=Z,57nm,0.6s						
URZ	**Urewera**	**53.43**	**132**	LR	LR	21 30 33.1	
	comp=Z,338nm,18.0s,baz=298,slow=36						
JIRN	**Jiri**	**53.81**	**314**	*e*P	**P**	**21 07 45.7**	**-1.1**
	comp=Z,45nm,1.0s						
GUN	**Gumba**	**54.18**	**314**	*e*P	**P**	**21 07 48.4**	**-1.1**
	comp=Z,32nm,0.6s						
GTA	**Gaotai**	**54.22**	**334**	⇑P	**P**	**21 07 48.9**	**-0.4**
GTA				S	**S**	**21 15 24.8**	**+1.0**
GTA				sS	pS	21 15 37.0	-0.3
GTA				pmax	pmax		
	comp=Z,18nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,5.2s						
GTA				LR	LR		
	comp=Z,200nm,18.4s						
GTA				LR	LR		
	comp=Z,300nm,19.4s						
GTA				LR	LR		
	comp=Z,420nm,17.8s						
PKI	**Pulchoki**	**54.32**	**313**	*e*P	**P**	**21 07 49.3**	**-1.2**
	comp=Z,32nm,0.5s						
PKIN	**Phulchoki**	**54.33**	**313**	*e*P	**P**	**21 07 49.2**	**-1.3**
	comp=Z,12nm,0.6s						
DGAR	**Diego Garcia**	**54.47**	**267**	*e*P	**P**	**21 07 51.5**	**0.0**
	comp=Z,83nm,0.8s						
DGAR	**Diego Garcia**	**54.47**	**267**	*e*P	**P**	**21 07 51.5**	**0.0**
DGAR				pmax	pmax		
	comp=Z,83nm,0.8s						
KKN	**Kakani**	**54.54**	**313**	*e*P	**P**	**21 07 51.0**	**-1.0**
	comp=Z,42nm,1.0s						
DMN	**Daman**	**54.56**	**313**	*e*P	**P**	**21 07 51.3**	**-0.9**
	comp=Z,42nm,0.9s						
HYB	**Hyderabad**	**54.83**	**298**	*i* P	**P**	**21 07 52.5**	**-1.5**
KOLN	**Koldanda**	**55.75**	**312**	*e*P	**P**	**21 07 59.9**	**-0.8**
	comp=Z,68nm,0.8s						
DANN	**Dangsing**	**55.96**	**313**	*e*P	**P**	**21 08 01.1**	**-1.2**
	comp=Z,54nm,0.8s						
H08N1	**Diego Carcia H**	**56.00**	**268**	P	**P**	**21 08 01.9**	**-0.2**
	baz=140,slow=4.0,SNR=5.5						
H08N2	**Diego Garcia H**	**56.02**	**268**	P	**P**	**21 08 02.0**	**-0.2**
	baz=140,slow=4.0,SNR=6.9						
H08N3	**Diego Garcia H**	**56.02**	**268**	P	**P**	**21 08 02.1**	**-0.2**
	baz=140,slow=4.0,SNR=4.9						
PYUN	**Piuthan**	**56.38**	**312**	*e*P	**P**	**21 08 04.4**	**-0.8**
	comp=Z,76nm,0.9s						
YSS	**Yuzh-Sakhalins**	**56.95**	**12**	*e*P	**P**	**21 08 09.9**	**+1.4**
YSS				*e*		21 09 05.0	
ULN	**Ulaanbaatar**	**59.05**	**344**	*e*P	**P**	**21 08 22.7**	**-0.8**
	comp=Z,10nm,0.8s						
ULN	**Ulaanbaatar**	**59.05**	**344**	*ce*P	**P**	**21 08 23.5**	**0.0**
ULN				pmax	pmax		
	comp=Z,14nm,1.0s						
SONA0	**Songino Array**	**59.20**	**344**	*e*P	**P**	**21 08 24.1**	**-0.4**
SONM	**Songino Array**	**59.20**	**344**	P	**P**	**21 08 24.1**	**-0.4**
	comp=Z,8.7nm,0.9s,baz=167,slow=6.4,SNR=45						
SONM				LR	LR	21 36 50.5	
	comp=Z,217nm,18.7s,baz=178,slow=39						
SONA1	**Songino Array**	**59.21**	**344**	*e*P	**P**	**21 08 23.9**	**-0.7**
ZEA	**Zeya**	**62.09**	**360**	*e*P	**P**	**21 08 43.6**	**-0.3**
ZEA				*e*		21 09 19.0	
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZAK	**Zakamensk**	**62.39**	**343**	*e*P	**P**	**21 08 45.1**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NKL	**Nikolayevsk**	**62.52**	**9**	*e*P	**P**	**21 08 47.0**	**+0.3**
WMQ	**Urumqi**	**63.41**	**329**	P	**P**	**21 08 52.9**	**-0.1**
WMQ				pP	pP	21 09 07.8	+2.5
WMQ				sP	sP	21 09 10.3	+0.2
WMQ				S	**S**	**21 17 25.8**	**+3.0**
WMQ				pmax	pmax		
	comp=Z,23nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.9s						
WMQ				LR	LR		
	comp=Z,490nm,25.5s						
WMQ				LR	LR		
	comp=Z,470nm,23.9s						
WMQ				LR	LR		
	comp=Z,370nm,27.1s						
WMQ	**Urumqi**	**63.41**	**329**	*e*P	**P**	**21 08 51.8**	**-1.2**
	comp=Z,8.9nm,0.7s						
WMQ	**Urumqi**	**63.41**	**329**	*e*P	**P**	**21 08 51.8**	**-1.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TLY	**Talaya**	**63.45**	**344**	*i* P	**P**	**21 08 53.6**	**+0.6**
MOY	**Mondy**	**64.21**	**342**	*e*P	**P**	**21 08 58.0**	**-0.1**
NIL	**Nilore**	**66.41**	**312**	*e*P	**P**	**21 09 11.5**	**-1.2**
	comp=Z,8.1nm,0.8s						
NIL	**Nilore**	**66.41**	**312**	*e*P	**P**	**21 09 11.5**	**-1.2**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PEA0B	**Petropavlovsk-**	**66.62**	**19**	*e*P	**P**	**21 09 13.1**	**-0.5**
	comp=Z,26nm,1.4s						
PETK	**Petropavlovsk-**	**66.62**	**19**	P	**P**	**21 09 14.6**	**+1.1**
	comp=Z,2.9nm,0.6s,baz=192,slow=8.7,SNR=5.2						
PETK				LR	LR	21 33 39.8	
	comp=Z,146nm,21.6s,baz=211,slow=32						
PEA1	**Petropavlovsk-**	**66.62**	**19**	*e*P	**P**	**21 09 14.6**	**+1.0**
BOD	**Bodaibo**	**67.09**	**352**	*e*P	**P**	**21 09 17.0**	**+0.6**
BOD				pmax	pmax		
	comp=Z,14nm,1.1s						
KSH	**Kashi**	**67.54**	**319**	P	**P**	**21 09 20.0**	**+0.1**
KSH				pP	sP	21 09 35.0	-2.2
KSH				PcP	**PcP**	**21 09 46.0**	**-0.9**
KSH				PP	**PP**	**21 11 53.8**	**+4.5**
KSH				S	**S**	**21 18 10.8**	**-2.8**
KSH				sS	sS	21 18 37.1	+3.0
KSH				pmax	pmax		
	comp=Z,36nm,1.1s						
KSH				pmax	pmax		
	comp=Z,190nm,3.7s						
KSH				LR	LR		
	comp=Z,240nm,5.1s						
KSH				LR	LR		
	comp=Z,230nm,5.7s						
KSH				LR	LR		
	comp=Z,240nm,5.9s						
DGZ	**Jazzator, Alta**	**67.75**	**333**	*i* P	**P**	**21 09 20.8**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK01	**Makanchi Array**	**68.20**	**328**	*e*P	**P**	**21 09 22.8**	**-0.9**
MK31	**Makanchi Array**	**68.23**	**328**	*e*P	**P**	**21 09 23.2**	**-0.7**
	comp=Z,9.7nm,1.0s						
MK31	**Makanchi Array**	**68.23**	**328**	*e*P	**P**	**21 09 23.2**	**-0.7**
MK31				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK32	**Makanchi Array**	**68.23**	**328**	*e*P	**P**	**21 09 23.2**	**-0.6**
MKAR	**Makanchi Array**	**68.23**	**328**	*e*P	**P**	**21 09 22.9**	**-1.0**
	comp=Z,63nm,1.1s						
MKAR	**Makanchi Array**	**68.23**	**328**	*e*P	**P**	**21 09 22.9**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,63nm,1.1s						
MKAR	**Makanchi Array**	**68.23**	**328**	P	**P**	**21 09 23.2**	**-0.6**
	comp=Z,7.9nm,0.8s,baz=130,slow=7.8,SNR=58						
MKAR				LR	LR	21 40 26.2	
	comp=Z,236nm,20.2s,baz=136,slow=37						
MAKZ	**Makanchi**	**68.40**	**328**	*e*P	**P**	**21 09 24.1**	**-0.9**
	comp=Z,10nm,1.0s						
MAKZ	**Makanchi**	**68.40**	**328**	*e*P	**P**	**21 09 24.1**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NRN	**Naryn**	**68.58**	**321**	*e*P	**P**	**21 09 24.5**	**-2.1**
	comp=Z,6.0nm,0.9s						
NRN	**Naryn**	**68.58**	**321**	*e*P	**P**	**21 09 24.5**	**-2.1**
NRN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TKM2	**Tokmak 2**	**69.66**	**322**	P	**P**	**21 09 32.8**	**-0.3**
	SNR=8.4						
KBK	**Karagaybulak**	**69.91**	**321**	P	**P**	**21 09 35.1**	**+0.5**
	SNR=5.1						
KBL	**Kabul**	**69.91**	**311**	*e*P	**P**	**21 09 33.6**	**-1.3**
	comp=Z,6.1nm,0.8s						
KBL	**Kabul**	**69.91**	**311**	*e*P	**P**	**21 09 33.6**	**-1.3**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
UCH	**Uchtor**	**69.94**	**321**	P	**P**	**21 09 35.6**	**+0.4**
	SNR=7.9						
RER	**Riviere de l'E**	**69.97**	**251**	*e*P	**P**	**21 09 35.7**	**+0.3**
	comp=Z,100nm,0.9s						
AAK	**Ala-Archa**	**70.18**	**321**	P	**P**	**21 09 36.8**	**+0.5**
	SNR=11						
AAK	**Ala-Archa**	**70.18**	**321**	*e*P	**P**	**21 09 34.9**	**-1.4**
	comp=Z,11nm,0.9s						
AAK	**Ala-Archa**	**70.18**	**321**	*ce*P	**P**	**21 09 37.0**	**+0.7**
AAK				pmax	pmax		
	comp=Z,15nm,1.3s						
AML	**Almayashu**	**70.41**	**320**	P	**P**	**21 09 38.3**	**+0.3**
	SNR=8.2						
YAK	**Yakutsk**	**70.43**	**1**	*e*P	**P**	**21 09 36.1**	**-1.0**
YAK				*e**PP	**PcP**	**21 09 56.5**	**-1.8**
YAK				*e*PPP	PPP	21 13 51.4	
YAK				*e*S	**S**	**21 18 44.5**	**-2.0**
YAK				*e**SS	**SKiKP**	**21 19 19.0**	**+0.9**
YAK				*e*		21 19 32.7	
YAK				*e*SS	**SS**	**21 23 14.2**	**-4.2**
YAK				pmax	pmax		
	comp=Z,39nm,0.7s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,10.0nm,0.9s						
YAK				smax	smax		
	comp=N,301nm,2.6s						
YAK				smax	smax		
	comp=E,208nm,2.6s						
ARSB	**Arslanbob**	**70.44**	**319**	*e*P	**P**	**21 09 37.3**	**-0.6**
	comp=E,19nm,0.9s						
MA2	**Magadan**	**70.45**	**12**	*ce*P	**P**	**21 09 38.7**	**+1.4**
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USP	**Ospenovka**	**70.52**	**322**	P	**P**	**21 09 36.1**	**-2.1**
	SNR=8.9						
EKS2	**Erkin-Say**	**70.64**	**321**	P	**P**	**21 09 39.6**	**+0.6**
	SNR=7.6						
GAR	**Garm**	**71.05**	**316**	*e*P	**P**	**21 09 40.4**	**-1.2**
	comp=Z,19nm,0.9s						
GAR	**Garm**	**71.05**	**316**	*e*P	**P**	**21 09 40.4**	**-1.2**
GAR				pmax	pmax		
	comp=Z,19nm,0.9s						
VNDA	**Vanda**	**71.19**	**173**	*e*P	**P**	**21 09 43.3**	**+1.7**
VNDA	**Vanda**	**71.19**	**173**	P	**P**	**21 09 43.6**	**+1.9**
	comp=Z,2.0nm,0.6s,baz=17,slow=4.6,SNR=7.1						
VNDA				LR	LR	21 40 06.6	
	comp=Z,450nm,19.5s,baz=342,slow=35						
BTK	**Batken**	**71.22**	**317**	*e*P	**P**	**21 09 42.3**	**-0.3**
	comp=Z,5.4nm,0.8s						
BTK	**Batken**	**71.22**	**317**	*e*P	**P**	**21 09 42.3**	**-0.3**
BTK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHGR	**Chuyangaron**	**71.69**	**315**	*e*P	**P**	**21 09 44.5**	**-0.9**
	comp=Z,21nm,1.0s						
ZAA0	**Zalesovo Array**	**71.94**	**335**	*e*P	**P**	**21 09 45.0**	**-1.5**
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	**71.94**	**335**	*e*P	**P**	**21 09 44.7**	**-1.7**
ZALV	**Zalesovo Beam**	**71.94**	**335**	P	**P**	**21 09 45.0**	**-1.4**
	comp=Z,14nm,0.7s,baz=132,slow=4.8,SNR=68						
ZAA1	**Zalesovo Array**	**71.94**	**335**	*e*P	**P**	**21 09 45.0**	**-1.4**
MAW	**Mawson**	**72.57**	**201**	LR	LR	21 39 53.4	
	comp=Z,396nm,19.7s,baz=50,slow=34						
KURK	**Kurchatov**	**72.60**	**330**	*e*P	**P**	**21 09 49.5**	**-1.0**
	comp=Z,27nm,0.9s						
KURK	**Kurchatov**	**72.60**	**330**	*ce*P	**P**	**21 09 50.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,41nm,1.3s						
KK31	**Karatay Array**	**72.92**	**320**	*e*P	**P**	**21 09 51.5**	**-1.1**
	comp=Z,10nm,1.4s						
KK31	**Karatay Array**	**72.92**	**320**	*e*P	**P**	**21 09 51.5**	**-1.1**
KK31				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KKAR	**Karatay Array**	**72.92**	**320**	*e*P	**P**	**21 09 51.4**	**-1.2**
	comp=Z,10nm,1.4s						
KKAR	**Karatay Array**	**72.92**	**320**	*e*P	**P**	**21 09 51.4**	**-1.2**
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
NVS	**Novosibirsk**	**73.22**	**335**	*e*P	**P**	**21 09 53.0**	**-1.0**
NVS				pmax	pmax		
	comp=N,12nm,1.3s						
NVS				pmax	pmax		
	comp=E,12nm,1.3s						
NVS				pmax	pmax		
	comp=Z,18nm,1.3s						
SEY	**Seymchan**	**73.84**	**12**	*ce*P	**P**	**21 09 58.0**	**+0.5**
BRVK	**Borovoye**	**78.17**	**329**	*e*P	**P**	**21 10 21.7**	**-0.7**
	comp=Z,26nm,1.0s						
BRVK	**Borovoye**	**78.17**	**329**	*ce*P	**P**	**21 10 22.1**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,36nm,1.3s						
GEYT	**Alibeck**	**79.36**	**311**	P	**P**	**21 10 28.9**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=121,slow=5.5,SNR=11						
GEYT				LR	LR	21 53 19.9	
	comp=Z,199nm,18.0s,baz=70,slow=42						
GYA0B	**ALIBECK ARRAY**	**79.36**	**311**	*e*P	**P**	**21 10 28.4**	**-1.0**
	comp=Z,6.6nm,0.9s						
TBI	**Tubuai**	**80.30**	**112**	*e*LR	LR	21 35 41.8	
	comp=Z,407nm,25.2s						
PPT2	**Papeete2**	**80.76**	**106**	*e*LR	LR	21 35 53.2	
	comp=Z,406nm,23.0s						
BILL	**Bilibino**	**81.23**	**14**	⇑*e*P	**P**	**21 10 40.5**	**+1.8**
BILL				*e*		21 10 48.8	
BILL				*e*		21 13 41.3	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,212nm,19.0s						
SYO	**Syowa Base**	**81.28**	**201**	⇑*e*P	**P**	**21 10 40.0**	**+1.0**
SYO	**Syowa Base**	**81.28**	**201**	⇑*e*PcP	**PcP**	**21 10 44.2**	**-0.9**
QSPA	**South Pole Qui**	**81.39**	**180**	*e*P	**P**	**21 10 41.5**	**+1.6**
	comp=Z,18nm,1.1s						

ABKAR	Akbulak array	82.22	322	*e*P	P	21 10 43.4	-0.9
	comp=Z,5.5nm,0.8s						
NRIK	Noril'sk	82.51	347	P	P	21 10 44.8	-0.6
	comp=Z,5.9nm,0.6s,baz=145,slow=5.5,SNR=7.5						
NRIK				LR	LR	21 52 09.3	
	comp=Z,221nm,19.1s,baz=164,slow=39						
SVE	Sverdlovsk	84.85	330	*e*P	P	21 10 56.7	-0.9
SVE				pmax	pmax		
	comp=Z,33nm,1.4s						
GAMB	Gambell	85.34	23	*e*P	P	21 10 59.2	-0.7
	comp=Z,10.0nm,0.9s						
ARU	Arti	85.75	329	*e*P	P	21 11 01.0	-1.2
	comp=Z,24nm,1.2s						
ARU	Arti	85.75	329*c*	*i*P	P	21 11 01.2	-0.9
ARU						21 14 17.2	
ARU				S	S	21 21 23.4	-8.1
ARU				SS	SS	21 27 07.1	-2.0
ARU				pmax	pmax		
	comp=Z,22nm,1.2s						
ARU				MLR	MLR		
	comp=Z,217nm,17.0s						
RAYN	Ar Rayn	86.12	294	*e*P	P	21 11 03.0	-1.7
	comp=Z,9.0nm,1.1s						
RAYN	Ar Rayn	86.12	294	*e*P	P	21 11 03.1	-1.7
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KMBO	Kilima Mbogo	90.07	269	P	P	21 11 23.4	-0.7
	comp=Z,1.2nm,0.7s,baz=50,slow=18,SNR=3.2						
RDOG	Red Dog Mine	90.46	21	*e*P	P	21 11 23.4	-1.0
	comp=Z,8.6nm,1.0s						
KBZ	Khabaz	91.98	314	LR	LR	22 02 46.7	
	comp=Z,59nm,18.1s,baz=81,slow=42						
KIV	Kislovodsk	92.17	314	*e*P	P	21 11 32.5	-0.5
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,83nm,20.0s						
SNAA	Sanae	93.54	194	*e*P	P	21 11 39.8	+1.0
	comp=Z,14nm,1.3s						
SNAA	Sanae	93.54	194	*e*P	P	21 11 39.8	+1.0
SNAA				pmax	pmax		
	comp=Z,14nm,1.3s						
TOLK	Toolik Lake Re	95.37	21	P	P	21 11 47.0	-0.1
	baz=260						
ILAR	Eielson Array	95.84	25	P	P	21 11 46.2	-3.0
	comp=Z,1.7nm,1.1s,baz=270,slow=3.6,SNR=5.4						
ILAR				LR	LR	21 49 07.0	
	comp=Z,161nm,21.1s,baz=254,slow=32						
BOSA	Boshof	96.52	240	LR	LR	21 49 48.3	
	comp=Z,238nm,21.4s,baz=62,slow=32						
LSZ	Lusaka	96.62	254	*e*P	P	21 11 54.3	+0.2
	comp=Z,9.6nm,0.9s						
LSZ	Lusaka	96.62	254	*e*P	P	21 11 54.3	+0.2
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	97.50	325⇑	*e*P	P	21 11 55.7	-1.2
OBN				*e*		21 15 53.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,168nm,19.0s						
BR101	Keskin Array S	98.38	309	*e*P	P	21 11 59.4	-2.2
BRTR	Keskin Array B	98.38	309	P	P	21 11 59.4	-2.2
	comp=Z,0.7nm,0.8s,baz=91,slow=5.8,SNR=4.3						
BRTR				LR	LR	22 05 17.4	
	comp=Z,91nm,18.3s,baz=100,slow=41						
ARA0	ARCESS Array S	102.19	339	*e*Pdif	Pdif	21 12 17.0	-0.6
ARCES	ARCESS Array B	102.19	339	P	Pdif	21 12 17.0	-0.6
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	102.19	339	P	Pdif	21 12 17.0	-0.6
	comp=Z,5.7nm,1.1s,baz=88,slow=6.6,SNR=3.7						
CLL	Collm	111.89	322	*e*PS	PS	21 27 12.0	-2.9
CLL				*e*PPS	PPS	21 28 24.0	
CLL				*e*SS	SS	21 33 18.0	+2.8
CLL				*e*		21 39 00.0	
CLL				LmV		22 18 00.0	
	comp=Z,100nm,19.7s						
NVAR	Mina Array Bea	114.23	52	PKP	PKiKP	21 17 05.0	+1.8
	comp=Z,1.8nm,0.8s,baz=224,slow=3.6,SNR=7.4						
CWC	Cottonwood Cre	114.68	54	P	PKiKP	21 17 05.2	+1.1
	baz=278						
MPMC	Manual Prospec	115.21	54	P	PKPdf	21 17 06.0	+0.8
	baz=278						
MSO	Missoula	115.64	42	P	PKPdf	21 17 06.4	+0.9
	baz=286						
GSC	Goldstone, Bar	115.86	55	P	PKiKP	21 17 07.6	+1.3
	baz=278						
HLID	Hailey	116.14	46	*e*PKPdf	PKiKP	21 17 08.0	+1.3
HLID	Hailey	116.14	46	P	PKiKP	21 17 08.4	+1.7
	baz=284,SNR=10						
SHOC	Shoshone, Teco	116.21	54	P	PKiKP	21 17 09.3	+2.4
	baz=279						
R11A	Troy Canyon, C	116.35	51	P	PKiKP	21 17 09.3	+2.0
	baz=281						
MONP2	Monument Peak	116.50	58	P	PKiKP	21 17 09.5	+1.7
	baz=277						
BELC	Belle Mtn. Jos	116.70	56	P	PKiKP	21 17 10.2	+2.2
	baz=278						
GMRC	Granite Mounta	116.87	55	P	PKiKP	21 17 10.9	+2.5
	baz=279						
MCMT	McKenzie Canyo	116.91	44	*e*PKPdf	PKPdf	21 17 08.6	+0.4
BC3	Big Chuckawall	117.20	57	P	PKiKP	21 17 10.5	+1.5
	baz=278						
IRM	Iron Mountain	117.38	56	P	PKiKP	21 17 10.5	+1.3
	baz=279						
BOZ	Bozeman (W)	117.52	43	P	PKiKP	21 17 10.5	+1.3
	baz=287						
HVU	Hansel Valley	117.74	47	*e*PKPdf	PKiKP	21 17 10.9	+1.1
HVU	Hansel Valley	117.74	47	*e*PKIKP	PKiKP	21 17 10.9	+1.1
FXWY	Fox Creek	118.49	45	*e*PKPdf	PKiKP	21 17 12.4	+1.0
H17A	Grant Village	118.59	44	P	PKiKP	21 17 13.4	+1.9
	baz=287						
MOOW	Moose Ponds	118.66	45	*e*PKPdf	PKiKP	21 17 12.5	+0.8
REDW	Red Top Meadow	118.69	45	*e*PKPdf	PKiKP	21 17 12.7	+0.9
SNOW	Snow King Moun	118.73	45	*e*PKPdf	PKiKP	21 17 12.7	+0.9
LOHW	Long Hollow	118.80	45	*e*PKPdf	PKPdf	21 17 12.2	+0.3
MSU	Marysvale	118.94	51	*e*PKPdf	PKiKP	21 17 13.1	+0.7
MSU	Marysvale	118.94	51	*e*PKIKP	PKiKP	21 17 13.1	+0.7
RLMT	Red Lodge	119.25	43	P	PKiKP	21 17 14.3	+1.6
	baz=289						
U15A	North Rim	119.29	53	*e*PKPdf	PKPdf	21 17 13.0	-0.1
TMUT	Trail Mountain	119.49	50	*e*PKPdf	PKPdf	21 17 13.3	-0.2
FFC	Flin Flon	119.59	30*c*	*i*PKIKP	PKiKP	21 17 14.9	+2.1
214A	Organ Pipe Nat	119.65	58	P	PKiKP	21 17 15.4	+1.7
	baz=279						
BW06	Boulder Array	119.77	45	*e*PKPdf	PKPdf	21 17 14.0	+0.2
BW06	Boulder Array	119.77	45	P	PKiKP	21 17 14.9	+1.0
	baz=287,SNR=5.2						
PD31	Pinedale Array	119.77	45	*e*PKPdf	PKPdf	21 17 13.6	-0.2
PDAR	Pinedale Array	119.77	45	*e*PKPdf	PKiKP	21 17 14.3	+0.5
PDAR	Pinedale Array	119.77	45	PKP	PKiKP	21 17 15.1	+1.2
	comp=Z,2.6nm,0.7s,baz=247,slow=0.6,SNR=27						
P17A	Butcher Ranch,	119.80	49	*e*PKPdf	PKiKP	21 17 15.1	+1.2
SRU	San Rafael Swe	120.06	50	*e*PKPdf	PKiKP	21 17 15.2	+0.7
SRU	San Rafael Swe	120.06	50	*e*PKIKP	PKiKP	21 17 15.2	+0.7
WUAZ	Wupatki	120.20	54	P	PKiKP	21 17 16.4	+1.6
	baz=282						
LAO	LASA Array	120.70	40	P	PKiKP	21 17 17.2	+1.9
	baz=292						
DGMT	Dagmar	121.25	38	P	PKiKP	21 17 18.2	+1.9
	baz=295						
PV09	Paradox Valley	121.26	50	*e*PKPdf	PKiKP	21 17 17.9	+0.9
TUC	Tucson	121.29	57	*e*PKPdf	PKiKP	21 17 18.0	+1.1
TUC	Tucson	121.29	57	*e*PKIKP	PKiKP	21 17 18.0	+1.1
TUC	Tucson	121.29	57	P	PKiKP	21 17 18.6	+1.7
	baz=280						
PV19	Morning Glory	121.42	50	*e*PKPdf	PKiKP	21 17 18.2	+1.0
O20A	White River Ci	121.48	48	P	PKiKP	21 17 19.1	+1.8
	baz=287						
PV02	Paradox Valley	121.64	50	*e*PKPdf	PKiKP	21 17 18.8	+1.1
K22A	Casper	121.93	45	*e*PKPdf	PKiKP	21 17 18.8	+0.7
K22A	Casper	121.93	45	P	PKiKP	21 17 19.1	+1.1
	baz=290						
MVCO	Mesa Verde	122.08	51	*e*PKPdf	PKPdf	21 17 18.5	+0.1
MVCO	Mesa Verde	122.08	51	P	PKiKP	21 17 19.6	+1.1
	baz=285						
SMCO	Snowmass	122.69	49	*e*PKPdf	PKPdf	21 17 19.9	+0.2
N23A	Red Feather La	122.92	46	P	PKiKP	21 17 21.4	+1.3
	baz=289						
RSSD	Black Hills	123.10	42	*e*PKPdf	PKiKP	21 17 20.7	+0.3
RSSD	Black Hills	123.10	42	*e*PKIKP	PKiKP	21 17 20.7	+0.3
RSSD	Black Hills	123.10	42	P	PKiKP	21 17 21.7	+1.3
	baz=293						
S22A	4UR Ranch, Cre	123.21	50	P	PKiKP	21 17 22.6	+1.7
	baz=286						
ISCO	Idaho Springs	123.51	48	*e*PKPdf	PKiKP	21 17 22.2	+0.8
ISCO	Idaho Springs	123.51	48	*e*PKIKP	PKiKP	21 17 22.2	+0.8
ISCO	Idaho Springs	123.51	48	P	PKiKP	21 17 22.9	+1.5
	baz=289						
LENM	Lemitar	124.03	54	*e*PKPdf	PKiKP	21 17 23.4	+0.9
SDCO	Great Sand Dun	124.22	50	*e*PKPdf	PKiKP	21 17 23.4	+0.6
SDCO	Great Sand Dun	124.22	50	P	PKiKP	21 17 24.1	+1.2
	baz=288,SNR=8.9						
ANMO	Albuquerque	124.25	53	*e*PKPdf	PKiKP	21 17 23.9	+1.1
ANMO	Albuquerque	124.25	53*c*	*i*PKIKP	PKPdf	21 17 23.0	+0.4
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ANMO	Albuquerque	124.25	53	P	PKiKP	21 17 24.2	+1.4
	baz=285						
BNM	Barren Site	124.31	54	*e*PKPdf	PKiKP	21 17 24.4	+1.4
ULM	Lac du Bonnet	125.12	33	PKP	PKPdf	21 17 23.8	+0.3
	comp=Z,2.6nm,0.7s,baz=284,slow=4.0,SNR=6.5						
T25A	Trinidad	125.23	50	*e*PKPdf	PKiKP	21 17 25.1	+0.3
T25A	Trinidad	125.23	50	P	PKiKP	21 17 26.3	+1.5
	baz=288,SNR=6.1						
MNTX	Cornudas Mount	125.91	57	*e*PKPdf	PKiKP	21 17 26.7	+0.7
MNTX	Cornudas Mount	125.91	57	P	PKiKP	21 17 27.7	+1.7
	baz=284,SNR=9.2						
TOA0	Torodi Ar. Sit	126.65	280	*e*PKPdf	PKPdf	21 17 27.0	-0.4
TOA0				*e*PKPdf	PKiKP	21 17 27.4	-0.5
TORD	Torodi Ar. Bea	126.65	280	PKP	PKPdf	21 17 27.2	-0.2
	comp=Z,4.6nm,0.8s,baz=15,slow=4.3,SNR=24						
TOA1	Torodi Ar. Sit	126.66	280	*e*PKPdf	PKPdf	21 17 27.2	-0.2
ESDC	Sonseca Array	126.84	314	PKP	PKPdf	21 17 27.9	+0.7
	comp=Z,0.7nm,0.7s,baz=24,slow=2.5,SNR=4.2						
TX31	Lajitas Ar. Si	127.88	59	*e*PKPdf	PKPdf	21 17 29.9	+0.4
TX31				*e*PKPdf	PKiKP	21 17 30.3	+0.2
TXAR	Lajitas Array	127.88	59	PKP	PKiKP	21 17 31.6	+1.5
	comp=Z,1.5nm,0.8s,baz=245,slow=1.9,SNR=13						
ECSD	EROS Data Cent	128.10	40	*e*PKPdf	PKPdf	21 17 29.9	+0.5
ECSD	EROS Data Cent	128.10	40	P	PKiKP	21 17 31.0	+1.0
	baz=299						
CBKS	Cedar Bluff	128.12	47	P	PKiKP	21 17 31.0	+0.7
	baz=293						
BGNE	Belgrade	128.16	43	P	PKiKP	21 17 31.3	+1.0
	baz=296						
PLCA	Paso Flores	128.18	163	PKP	PKiKP	21 17 32.4	+2.0
	comp=Z,4.3nm,0.7s,baz=251,slow=2.4,SNR=10						
EYMN	Ely	128.81	33	P	PKiKP	21 17 32.2	+0.9
	baz=307						
E38A	The Farm, Brul	129.57	34	P	PKiKP	21 17 33.2	+0.3
	baz=306						
F38A	Pierce - Schro	129.77	35	P	PKiKP	21 17 33.8	+0.5
	baz=306						
C40A	Isle Royale Na	130.06	32	P	PKiKP	21 17 34.0	+0.2
	baz=310						
KSU1	Kansas State U	130.23	45	P	PKiKP	21 17 35.4	+1.0
	baz=296						
E39A	Mellen	130.26	34	P	PKiKP	21 17 34.8	+0.5
	baz=307						
H38A	Maiden Rock	130.26	37	P	PKiKP	21 17 35.4	+1.1
	baz=304						
WMOK	Wichita Mounta	130.33	51	P	PKiKP	21 17 35.5	+0.7
	baz=291						
F39A	Loretta	130.34	35	P	PKiKP	21 17 35.5	+1.1
	baz=307						
ABTX	Abilene, Hawle	130.34	54	P	PKiKP	21 17 35.7	+0.8
	baz=288						
G39A	Holcombe	130.56	35	P	PKiKP	21 17 35.9	+1.0
	baz=306						
E40A	Wakefield	130.58	34	P	PKiKP	21 17 35.4	+0.5
	baz=308						
F40A	Park Falls	130.78	34	P	PKiKP	21 17 35.9	+0.5
	baz=308						
JCT	Junction City	130.84	57	*e*PKPdf	PKPdf	21 17 35.5	+0.4
JCT	Junction City	130.84	57	*e*PKIKP	PKPdf	21 17 35.5	+0.4
E41A	Kenton	131.08	33	P	PKiKP	21 17 36.7	+0.8
	baz=309						
I39A	Houston	131.18	37	*e*PKPdf	PKPdf	21 17 35.0	-0.2
I39A	Houston	131.18	37	P	PKiKP	21 17 36.3	+0.1
	baz=305						
J39A	Decorah	131.35	38	P	PKiKP	21 17 37.0	+0.4
	baz=304						
F41A	Three Lakes	131.45	34	P	PKiKP	21 17 37.1	+0.4
	baz=308						
K39A	Oelwein	131.59	39	P	PKiKP	21 17 37.3	+0.3
	baz=303						
E42A	Champion	131.66	32	P	PKiKP	21 17 37.1	0.0
	baz=310						
H41A	Junction City	131.83	35	P	PKiKP	21 17 37.7	+0.3
	baz=307						
J41A	Loganville	132.35	37	P	PKPdf	21 17 38.4	+0.9
	baz=306						
DBIC	Dimbokro	132.75	271	PKP	PKiKP	21 17 40.5	+0.3
	comp=Z,7.6nm,0.7s,baz=35,slow=0.3,SNR=8.5						
L43A	Garden Prairie	133.80	37	P	PKiKP	21 17 42.0	+0.5
	baz=306						
MATQ	Matagami	133.92	22	P	PKiKP	21 17 41.7	+0.1
	baz=325						
W39A	Magazine	133.94	49	P	PKiKP	21 17 42.2	+0.2
	baz=295						
Q41A	Truxton	133.99	43	P	PKiKP	21 17 42.7	+0.7
	baz=301						
E47A	Iron Bridge	134.00	29	P	PKiKP	21 17 41.9	+0.1
	baz=316						
U40A	Yellville	134.11	47	P	PKiKP	21 17 42.6	+0.3
	baz=297						
R41A	Rosebud	134.22	44	P	PKiKP	21 17 42.8	+0.3
	baz=300						
P42A	Winchester	134.25	41	*e*PKPdf	PKPdf	21 17 42.0	+0.8
S41A	Jillco Farms,	134.32	45	P	PKiKP	21 17 42.9	+0.1
	baz=299						
MIAR	Mount Ida	134.37	49	P	PKiKP	21 17 43.1	+0.2
	baz=295						
HDIL	Hopedale	134.40	40	P	PKiKP	21 17 42.6	-0.2
	baz=304						
CCM	Cathedral Cave	134.44	44	*e*PKPdf	PKPdf	21 17 42.1	+0.5
CCM	Cathedral Cave	134.44	44	*e*PKIKP	PKPdf	21 17 42.1	+0.5
CCM	Cathedral Cave	134.44	44	P	PKiKP	21 17 43.2	+0.3
	baz=300						
Q42A	Golden Eagle	134.48	42	P	PKiKP	21 17 43.1	+0.1
	baz=302						
E48A	Lockeyer	134.52	29	P	PKiKP	21 17 43.2	+0.3
	baz=317						
T41A	Mountain View	134.57	45	P	PKiKP	21 17 43.3	0.0
	baz=299						
R42A	Luebbering	134.63	43	P	PKiKP	21 17 43.4	0.0
	baz=301						
LSQQ	Lebel-sur-Quev	134.74	23	P	PKiKP	21 17 43.1	-0.1
	baz=325						
P43A	Skaggs, Pawnee	134.76	41	P	PKiKP	21 17 43.8	+0.3
	baz=303						
U41A	Viola	134.79	46	P	PKiKP	21 17 44.1	+0.4
	baz=298						
S42A	Caledonia	134.89	44	P	PKiKP	21 17 44.2	+0.3
	baz=300						
T42A	Van Buren	135.04	45	P	PKiKP	21 17 44.5	+0.3
	baz=300						
E50A	Wahnapitae	135.23	28	P	PKiKP	21 17 44.4	+0.1
	baz=319						
U42A	Revenden	135.27	46	P	PKiKP	21 17 45.0	+0.3
	baz=299						
P44A	Sand Creek, Wi	135.43	41	P	PKiKP	21 17 45.2	+0.2
	baz=304						
S43A	Fulton Ridge,	135.48	44	P	PKiKP	21 17 45.7	+0.6
	baz=301						
Q44A	Meyer Farm, Va	135.49	41	P	PKiKP	21 17 45.6	+0.6
	baz=303						
T43A	Greenville	135.58	44	P	PKiKP	21 17 45.5	+0.2
	baz=300						
PBMO	Poplar Bluff	135.63	45	*e*PKPdf	PKPdf	21 17 44.1	+0.3
F51A	Arnstein	135.98	28	P	PKPdf	21 17 45.2	+1.0
	baz=319						
Q45A	Warren Harvey,	136.05	41	P	PKiKP	21 17 46.3	+0.1
	baz=304						
T44A	Benton	136.06	44	P	PKiKP	21 17 46.2	0.0
	baz=301						
J49A	Marlette	136.24	32	P	PKiKP	21 17 46.1	-0.3
	baz=314						
N47A	Urbana	136.41	37	P	PKPdf	21 17 46.1	+1.0
	baz=309						
L48A	N Adams	136.47	35	P	PKiKP	21 17 46.8	-0.2
	baz=311						
ALGO	Algonquin Park	136.79	26	P	PKiKP	21 17 47.3	-0.2
	baz=322						
Q47A	Bedord North L	137.13	40	P	PKiKP	21 17 47.9	-0.5
	baz=306						
T46A	Princeton	137.24	43	P	PKiKP	21 17 48.5	-0.2
	baz=303						
N49A	Columbus Grove	137.28	36	P	PKiKP	21 17 48.6	0.0
	baz=310						
R47A	Wooly Knot Far	137.44	41	P	PKiKP	21 17 48.8	-0.2
	baz=306						
P48A	Milroy	137.45	38	P	PKiKP	21 17 49.0	-0.1
	baz=308						
Q48A	North Vernon	137.58	39	P	PKiKP	21 17 49.3	0.0
	baz=307						
WCI	Wyandotte Cave	137.63	41	*e*PKPdf	PKPdf	21 17 47.6	+0.1
WCI	Wyandotte Cave	137.63	41	*e*PKIKP	PKPdf	21 17 47.6	+0.1
WCI	Wyandotte Cave	137.63	41	P	PKiKP	21 17 50.0	+0.5
	baz=306						
O49A	Covington	137.66	37	P	PKiKP	21 17 49.6	+0.1
	baz=310						
V46A	Holladay	137.74	45	P	PKPdf	21 17 48.8	+1.1
	baz=302						
WVT	Waverly	137.76	44	P	PKPdf	21 17 49.1	+1.3
	baz=302						
N50A	Nevada	137.97	35	P	PKiKP	21 17 49.5	-0.5
	baz=312						
S48A	Wiedeman Farm,	138.11	41	P	PKiKP	21 17 50.1	-0.4
	baz=306						
V47A	Nunnelly	138.14	44	P	PKiKP	21 17 50.1	-0.4
	baz=302						
WLVO	Wesleyville	138.20	28	P	PKiKP	21 17 50.5	+0.1
	baz=320						
N51A	Ashland	138.31	35	P	PKiKP	21 17 50.3	-0.5
	baz=313						
ALFO	Alfred	138.37	24	P	PKPdf	21 17 49.9	+1.3
	baz=326						
U48A	Cassie Pea, Po	138.44	43	P	PKiKP	21 17 50.8	-0.4
	baz=304						
X47A	Russelville	138.57	46	P	PKPdf	21 17 50.1	+0.8
	baz=301						
O51A	Pataskala	138.69	36	P	PKPdf	21 17 50.4	+1.0
	baz=312						
N52A	McGinn’s Farm,	138.76	34	P	PKPdf	21 17 51.0	+1.5
	baz=313						
P51A	Williamsport	138.86	37	P	PKPdf	21 17 51.1	+1.3
	baz=311						
W48A	Pulaski	138.91	45	P	PKPdf	21 17 51.2	+1.2
	baz=302						
O52A	Adamsville	139.15	35	P	PKiKP	21 17 52.3	-0.3
	baz=313						
S50A	Richmond	139.16	40	P	PKiKP	21 17 52.3	-0.3
	baz=307						
147A	Livingston	139.16	49	P	PKiKP	21 17 52.6	-0.1
	baz=298						
X48A	Hartselle	139.18	46	P	PKiKP	21 17 52.3	-0.5
	baz=301						
T50A	Nancy	139.27	41	P	PKiKP	21 17 52.4	-0.4
	baz=306						
V49A	McMinnville	139.28	43	P	PKPdf	21 17 52.1	+1.5
	baz=304						
R51A	Hillsboro	139.29	39	P	PKiKP	21 17 52.4	-0.4
	baz=309						
P52A	Corning	139.30	36	P	PKPdf	21 17 51.5	+1.0
	baz=312						
M54A	Oil Creek Stat	139.37	32	P	PKiKP	21 17 52.3	-0.6
	baz=316						
Y48A	Jasper	139.37	47	P	PKiKP	21 17 52.8	-0.3
	baz=301						
W49A	Belvidere	139.38	44	P	PKiKP	21 17 52.8	-0.3
	baz=303						
O53A	New Philadelph	139.41	34	P	PKiKP	21 17 52.5	-0.5
	baz=314						
L55A	Hinsdale	139.50	30	P	PKiKP	21 17 52.7	-0.5
	baz=319						
N54A	Moraine State	139.59	33	P	PKiKP	21 17 52.8	-0.6
	baz=316						
U50A	Jamestown	139.62	42	P	PKiKP	21 17 52.9	-0.7
	baz=306						
X49A	Woodville	139.66	45	P	PKPdf	21 17 52.9	+1.6
	baz=302						
Q52A	Bidwell	139.67	37	P	PKiKP	21 17 52.9	-0.7
	baz=311						
S51A	Beattyville	139.69	39	P	PKiKP	21 17 53.0	-0.7
	baz=308						
T51A	Gray	139.88	40	P	PKiKP	21 17 53.4	-0.7
	baz=307						
O54A	Avella	139.92	34	P	PKPdf	21 17 53.3	+1.6
	baz=314						
LRAL	Lakeview Retre	139.93	48	P	PKPdf	21 17 53.4	+1.5
	baz=300						
Y49A	Blount Mountai	139.94	46	P	PKPdf	21 17 53.3	+1.4
	baz=301						
W50A	Signal Mountai	139.99	44	P	PKiKP	21 17 53.7	-0.7
	baz=304						
X50B	Fort Payne	140.16	45	P	PKiKP	21 17 54.0	-0.8
	baz=303						
Z49A	Columbiana	140.19	47	P	PKPdf	21 17 54.0	+1.7
	baz=301						
W51A	Cleveland	140.39	43	P	PKiKP	21 17 54.4	-0.8
	baz=305						
Q54A	Coxs Mills	140.49	36	P	PKiKP	21 17 54.4	-0.8
	baz=313						
Z50A	Ashland	140.60	47	P	PKPdf	21 17 54.8	+1.7
	baz=301						
BINY	Binghamton	140.66	28	P	PKiKP	21 17 54.7	-0.9
	baz=322						
T53A	Wise	140.76	39	P	PKPdf	21 17 55.1	+1.7
	baz=309						
TKL	Tuckaleechee C	140.76	42	*e*PKPdf	PKPdf	21 17 53.5	+0.2
TKL	Tuckaleechee C	140.76	42	*e*PKIKP	PKPdf	21 17 53.5	+0.2
V52A	Sevierville	140.77	42	P	PKiKP	21 17 55.2	-0.8
	baz=307						
150A	Eclectic	140.85	48	P	PKPdf	21 17 55.3	+1.7
	baz=301						
Q55A	Buckhannon	140.91	35	P	PKPdf	21 17 55.0	+1.4
	baz=314						
250A	Grady	140.98	49	P	PKPdf	21 17 55.5	+1.7
	baz=300						
251A	Midway	141.56	48	P	PKPdf	21 17 56.7	+1.8
	baz=301						
Y52A	Lilburn	141.59	44	P	PKiKP	21 17 57.0	-0.7
	baz=304						
Z52A	Williamson	141.71	46	P	PKiKP	21 17 57.3	-0.6
	baz=303						
152A	Waverly Hall	141.77	47	P	PKiKP	21 17 57.5	-0.6
	baz=302						
BLA	Blacksburg	141.91	37	P	PKiKP	21 17 57.5	-0.8
	baz=312						
555A	McAlpin	144.36	49	P	PKiKP	21 18 02.3	-1.1
	baz=301						
PB04	IPOC Station P	144.74	151	*e*PKPdf	PKPdf	21 18 02.2	+1.2
556A	Lake Butler	144.84	49	P	PKPdf	21 18 02.0	+1.4
	baz=302						
CPUP	Villa Florida	144.97	172	PKPbc	PKPdf	21 18 02.9	+1.9
	comp=Z,30nm,1.0s,baz=188,slow=3.4,SNR=47						
656A	Willston	145.07	50	*e*PKPbc	PKPdf	21 18 02.5	+1.4
656A	Willston	145.07	50	P	PKPdf	21 18 02.8	+1.7
	baz=301						
457A	Yulee	145.14	47	P	PKPdf	21 18 03.4	+2.3
	baz=303						
557A	Orange Park	145.33	48	P	PKPdf	21 18 03.4	+1.9
	baz=302						
657A	Interlachen	145.46	49	P	PKPab	21 18 03.9	+1.9
	baz=302						
757A	Oxford	145.63	50	P	PKPab	21 18 04.4	+1.7
	baz=301						
857A	Zephyrhills	145.84	51	P	PKPab	21 18 05.2	+1.7
	baz=300						
PB01	IPOC Station P	146.15	151	*e*PKPdf	PKPab	21 18 05.4	+0.5
758A	Lake Helen	146.28	49	P	PKPab	21 18 06.3	+1.2
	baz=302						
DWPF	Disney Wildern	146.53	51	P	PKPab	21 18 06.8	+0.7
	baz=300						
858A	St. Cloud	146.54	51	P	PKPab	21 18 06.7	+0.6
	baz=301						
958A	Wauchula	146.54	52	P	PKPab	21 18 06.8	+0.7
	baz=299						
058A	Arcadia	146.75	53	P	PKPab	21 18 07.3	+0.3
	baz=298						
859A	Kempfer Cattle	146.97	50	P	PKPab	21 18 07.7	-0.1
	baz=301						
PB11	IPOC Station P	147.15	149	*e*PKPdf	PKPdf	21 18 06.6	+1.5
959A	Okeechobee	147.25	51	P	PKPbc	21 18 08.1	+1.0
	baz=300						
059Z	Ave Maria	147.37	54	P	PKPab	21 18 09.0	-0.4
	baz=298						
MNMC	Minye Minye	147.71	149	*e*PKPdf	PKPdf	21 18 08.1	+1.9
060A	Indiantown	147.89	52	P	PKiKP	21 18 10.3	-0.5
	baz=300						
JTS	JuntasAbangare	147.96	84	*e*PKPdf	PKPdf	21 18 06.8	+0.3
JTS	JuntasAbangare	147.96	84	PKPbc	PKiKP	21 18 11.9	+0.6
	comp=Z,6.1nm,0.3s,baz=314,slow=3.5,SNR=6.3						
NNA	Nana	148.33	130	*e*PKPdf	PKPdf	21 18 06.8	-0.2
NNA	Nana	148.33	130	*e*PKHKP	PKPpre	21 18 06.9	
ESPN	Las Esperanzas	148.54	81	*e*PKPdf	PKPdf	21 18 06.9	-0.4
LPAZ	La Paz	150.84	148	*e*PKPdf	PKPdf	21 18 12.2	+0.5
LPAZ	La Paz	150.84	148	PKPbc	PKiKP	21 18 20.2	+2.2

	comp=Z,19nm,0.8s,baz=154,slow=2.3,SNR=50						
BDFB	Brasilia	155.51	191	PKP	PKPdf	21 18 19.6	+1.7
	comp=Z,1.6nm,0.4s,baz=164,slow=8.9,SNR=3.7						
SDV	Santo Domingo	162.09	88	PKP	PKPdf	21 18 26.5	+0.8
	comp=Z,2.3nm,0.7s,baz=278,slow=9.8,SNR=3.5						

IDC 23 21:05:33.2±1.2**, 15°.94S**×**72°.28W, h0**^{km}**, mb3.6**/3**, mb1 3.9**/5**, mb1mx3.7**/28**, mbtmp3.6**/5**, ML3.2**/2**, MS3.3**/3**, Ms1 3.3**/3**, ms1mx2.8**/34**, Error ellipse: s-maj=48.1km s-min=24.2km az=61.0, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.01	95	Pn	Pn	21 06 37.4	+0.9
	0.5nm,0.3s,baz=277,slow=16,SNR=9.6						
NNA	Nana	5.92	311	LR	LR	21 09 32.6	
	comp=Z,82nm,20.0s,baz=126,slow=40						
LVC	Limon Verde	7.36	155	Pn	Pn	21 07 21.1	-1.2
	1.0nm,0.3s,baz=354,slow=8.4,SNR=11						
LVC				Sn	Sn	21 08 43.7	-3.1
	0.2nm,0.3s,baz=219,slow=6.5,SNR=2.5						
LVC				LR	LR	21 10 19.3	
	comp=Z,98nm,19.6s,baz=334,slow=39						
SIV	San Ignacio	10.78	92	Pn	Pn	21 08 04.1	-5.0
	0.2nm,0.3s,baz=290,slow=15,SNR=4.4						
PLCA	Paso Flores	24.75	177	P	P	21 10 57.2	+0.6
	4.8nm,1.0s,baz=65,slow=4.9,SNR=3.0						
TXAR	Lajitas Array	54.26	326	P	P	21 15 01.8	+0.4
	0.2nm,0.8s,baz=156,slow=4.6,SNR=2.8						
BBB	Bella Bella	83.25	329	LR	LR	21 55 54.6	
	comp=Z,85nm,18.4s,baz=265,slow=36						
YKA	Yellowknife Ar	84.92	342	P	P	21 18 09.4	-0.4
	0.4nm,0.8s,baz=136,slow=4.9,SNR=6.3						
SONM	Songino Array	148.18	2	PKPbc	PKPbc	21 25 20.1	-1.3
	0.5nm,0.7s,baz=344,slow=1.7,SNR=5.7						

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*SJA **23** 21:07:22.4±0.6, 34°.52S×73°.46W, h47^{km}±8^{km}, ML3.6, MW3.7*

*GUC **23** 21:07:37.3±0.5, 34°.02S×72°.29W, h35^{km}±2^{km}, ML3.1*

ISC 23 21:07:36.4±2.8**, 34°.01S**±0°.06×**72°.2W**±0°.1**, h3**^{km}±16^{km}**, n16, σ0**^{s}**.97**/24**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPI	Pichilemu	0.42	156	*e*P	Pb	21 07 46.4	-0.1
CHPI				*e*S	Sb	21 07 53.2	0.0
ROC1	El Roble	1.44	45	*e*P	Pn	21 08 03.4	-0.2
ROCH	El Roble	1.44	45	*e*P	Pn	21 08 02.3	-1.2
ROCH				*e*S	Sg	21 08 22.0	-0.7
ROCH				IAML		21 08 29.4	
	comp=N,385nm,0.4s						
CLCH	Cerro Calan	1.52	67	*e*P	Pn	21 08 04.1	-0.5
CLCH				*e*S	Sn	21 08 24.6	-0.4
CLCH				IAML		21 08 34.9	
	comp=E,382nm,0.3s						
PEL	Peldehue	1.54	56	*e*P	Pn	21 08 04.1	-0.7
PEL				*e*S	Sn	21 08 25.9	+0.6
PEL				IAML		21 08 34.5	
	comp=E,373nm,0.4s						
LMEL	Las Melosas	1.68	85	*e*P	Pn	21 08 06.5	-0.3
LMEL				*e*S	Sn	21 08 28.3	-0.7
LMEL				IAML		21 08 36.0	
	comp=N,357nm,0.4s						
FCH	Farellones	1.74	68	*e*P	Pn	21 08 07.3	-0.5
FCH				*e*S	Sn	21 08 30.2	-0.5
FCH				IAML		21 08 32.2	
	comp=N,274nm,0.2s						
AUSP	Uspallata	2.96	54	*e*P	Pn	21 08 26.3	+1.7
AUSP				*e*S	Sg	21 09 13.4	+1.8
RTLS	Leoncito	3.30	49	*e*P	Pn	21 08 30.7	+1.5
RTLS				*e*S	Sg	21 09 21.0	-1.3
RTLS				IAML		21 09 26.8	
	comp=Z,38nm,0.4s						
RTCV	Cerro Valdivia	3.76	56	*e*P	Pn	21 08 35.8	+0.5
RTLL	Cerro Villicun	4.13	51	*e*P	Pn	21 08 41.5	+1.0
RTLL				IAML		21 09 51.8	
	comp=E,44nm,0.5s						
ACCO	Cerro Coronel	4.33	39	*e*P	Pn	21 08 44.2	+0.8
AMOG	MOGNA	4.39	47	*e*P	Pn	21 08 44.4	+0.5
ACAN	Cantantal	4.56	69	*e*P	Pn	21 08 47.5	+1.3
AGUA	GUANDACOL	5.51	36	*e*P	Pn	21 08 58.9	-0.5
APLL	PUNTA DE LOS L	6.02	55	*e*P	Pn	21 09 07.0	+0.7

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*IDC **23** 21:18:23.9±1.5, 11°.85S×165°.26E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.6/50, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=47.0km s-min=26.6km az=128.0*

*ISCJB **23** 21:18:26.9±1.3, 12°.2S±0°.1×165°.3E±0°.2, h33^{km}, mb3.6/4, Error ellipse: s-maj=27.4km s-min=21.0km az=1.6*

ISC 23 21:18:28.8±1.3**, 12°.1S**±0°.2×**165°.4E**±0°.2**, h35**^{km}**, n6, σ0**^{s}**.33**/6**, mb3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.02	174	Pn	Pn	21 20 50.5	+0.1
	0.4nm,0.3s,baz=331,slow=18,SNR=13						
CTA	Charters Tower	20.02	244	P	P	21 22 58.9	+0.1
	3.3nm,0.8s,baz=78,slow=12,SNR=3.1						
WRA	Warramunga Arr	30.80	251	P	P	21 24 41.6	+0.1
	0.7nm,0.8s,baz=78,slow=9.6,SNR=3.1						
ASAR	Alice Springs	32.02	244	P	P	21 24 51.8	-0.5
	0.5nm,0.7s,baz=72,slow=9.3,SNR=4.5						
ILAR	Eielson Array	84.58	19	P	P	21 30 57.9	-0.2
	0.5nm,0.6s,baz=253,slow=5.1,SNR=15						
MKAR	Makanchi Array	94.00	317	P	P	21 31 43.5	+0.2
	0.2nm,0.7s,baz=97,slow=6.5,SNR=2.8						

IGQ 23 21:19:27.0±0.3**, 3°S**±3°×**8°0W**±°**, h3**^{km}**, MLv3.9, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORR	Playas El Morr	0.46	276	P	Pb	21 19 38.9	+1.2
MORR				S	Sb	21 19 49.1	+4.2
MILO	Milagro-Astudi	0.52	39	P	Pb	21 19 38.9	+0.1
MILO				S	Sn	21 19 49.2	-1.6
COHC	Cochancay	0.67	71	P	Pg	21 19 40.4	+0.5
COHC				S	Sb	21 19 51.7	+0.7
SALI	Salinas	1.21	294	P	Pg	21 19 46.5	-3.8
GONZ	Gonzanam	1.62	162	P	Pn	21 19 56.9	+0.1
MCRA	Macar, Loja	1.67	182	P	Pn	21 19 54.4	-2.9
MCRA				S	Sn	21 20 16.1	-3.2
IGUA	Igualata	1.72	46	P	Pn	21 19 54.1	-4.3
BMAS	Trigal station	1.83	50	P	Pn	21 19 55.7	-4.1
BIL2	Estacion Bilba	1.84	49	P	Pn	21 19 56.8	-3.1
ARRY	Arrayan	1.85	51	P	Pn	21 19 56.1	-3.9
BBIL	Ulba Tungurahu	1.86	49	P	Pn	21 19 56.8	-3.3
PAT1	Patacocha	1.86	51	P	Pn	21 19 56.5	-3.8
BPAT	Tungurahua Vol	1.87	51	P	Pn	21 19 56.6	-3.8
JUI6	Juive	1.89	48	P	Pn	21 19 56.8	-3.7
RETU	Refugio	1.89	50	P	Pn	21 19 57.0	-3.7
POND	Pondoa	1.91	49	P	Pn	21 19 57.1	-3.7
POND				S	Sn	21 20 20.2	-5.3
BULB	Ulba Tungurahu	1.93	50	P	Pn	21 19 57.5	-3.6
RUN5	Runtun	1.93	49	P	Pn	21 19 57.5	-3.6
BRUN	Tungurahua Vol	1.94	50	P	Pn	21 19 57.5	-3.7
BRUN				S	Sn	21 20 20.7	-5.6
SAGO	Sagoatoa	1.95	39	P	Pn	21 19 58.0	-3.6
PIS1	Pisayambo	2.20	43	P	Pn	21 20 02.4	-2.6
PISA	Pisayambo	2.21	43	P	Pn	21 20 02.4	-2.6
ILLI	Illinizas Sur	2.27	31	P	Pn	21 20 01.6	-4.4
PAST	Pastocalle	2.34	32	P	Pn	21 20 03.0	-3.9
BMOR	Cotopaxi Volca	2.41	36	P	Pn	21 20 03.6	-4.3
BNAS	Cotopaxi Volca	2.44	35	P	Pn	21 20 05.1	-3.3
BREF	Cotopaxi Volca	2.47	36	P	Pn	21 20 05.3	-3.5
NAS2	Nasa	2.47	35	P	Pn	21 20 06.3	-2.4
BTAM	Cotopaxi Volca	2.49	37	P	Pn	21 20 05.5	-3.5
BVC2	Cotopaxi Volca	2.50	36	P	Pn	21 20 05.6	-3.5
VC1	Cotopaxi 1	2.51	36	P	Pn	21 20 06.1	-3.2
COV1	Cotopaxi Volc	2.53	37	P	Pn	21 20 05.6	-4.1
PITA	Cotopaxi Volc	2.56	35	P	Pn	21 20 06.8	-3.1
NINA	Atacazo Ninahu	2.61	29	P	Pn	21 20 06.9	-3.7
ARDO	Archidona, Ten	2.68	51	P	Pn	21 20 07.4	-3.7
ANTM	Antisana-La Mi	2.71	38	P	Pn	21 20 08.3	-3.7
ANTG	Antisana-Guama	2.71	37	P	Pn	21 20 09.0	-3.1
ANTS	Antisana-Sarah	2.77	38	P	Pn	21 20 09.1	-3.8
GGPC	Guagua Pichinc	2.80	27	P	Pn	21 20 09.3	-4.1
GGPC				S	Sn	21 20 41.6	-6.4
ANTI	Antisana	2.81	38	P	Pn	21 20 11.8	-1.7
PINO	Pino	2.82	27	P	Pn	21 20 10.1	-3.5
YANA	Yana	2.87	27	P	Pn	21 20 10.3	-3.8
GOLV	Golondrinas	2.97	15	P	Pn	21 20 09.9	-5.3
PAC1	Pacto, Paraso	3.13	20	P	Pn	21 20 12.2	-5.3
PAC1				S	Sn	21 20 45.9	-10
CUSE	Cuicocha Este	3.32	27	P	Pn	21 20 16.2	-4.2
CUIC	Cuicocha-Domo	3.34	27	P	Pn	21 20 16.2	-4.4
IMBA	Imbabura, San	3.39	30	P	Pn	21 20 18.0	-3.3
CONE	Cono NE Rev Vo	3.43	41	P	Pn	21 20 17.5	-4.2
URCU	Urcuqui	3.51	28	P	Pn	21 20 24.8	+1.9

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*ISCJB **23** 21:24:06.5±1.1, 10°.1S±0°.1×161°.0E±0°.1, h67^{km}, mb3.1/4, Error ellipse: s-maj=24.7km s-min=11.0km az=135.7*

*IDC **23** 21:24:07.0±2.8, 10°.07S×161°.04E, h58^{km}±22^{km}, mb3.1/4, mb1 3.5/5, mb1mx3.3/43, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=28.9km s-min=21.5km az=61.0*

ISC 23 21:24:07.9±1.2**, 10°.1S**±0°.2×**160°.9E**±0°.2**, h67**^{km}**, n7, σ1**^{s}**.34**/9**, mb3.2**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.15	302	*i* P	Pn	21 24 26.0	-2.1
HNR				*i* S	Sn	21 24 44.0	+0.8
HNR	Honiara	1.15	302	P	Pn	21 24 26.8	-1.3
	67nm,0.3s,baz=152,slow=3.8,SNR=25						
HNR				S	Sn	21 24 44.3	+1.1
	186nm,0.3s,baz=348,slow=22,SNR=13						
DZM	Mont Dzumac	13.07	157	P	Pn	21 27 10.4	-0.3
	0.2nm,0.3s,baz=133,slow=19,SNR=3.3						
WRA	Warramunga Arr	27.46	246	P	P	21 29 49.4	+1.5
	0.2nm,0.5s,baz=76,slow=9.4,SNR=4.3						
ASAR	Alice Springs	29.12	239	P	P	21 30 02.9	+0.3
	0.5nm,1.0s,baz=64,slow=10,SNR=3.9						
SONM	Songino Array	75.12	325	P	P	21 35 43.1	+0.1
	0.5nm,1.0s,baz=121,slow=5.7,SNR=3.6						
ILAR	Eielson Array	84.14	20	P	P	21 36 31.9	+0.7
	0.3nm,0.8s,baz=244,slow=5.4,SNR=2.9						

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*PGC **23** 21:29:11.2±0.8, 48°.83N×128°.64W, h10^{km}, MLSn3.0/22, Mw3.6/22, 202km west of Tofino, Bc Vancouver Island, Canada Region*

*IDC **23** 21:29:16.8±1.4, 49°.25N×128°.19W, h0^{km}, mb3.4/4, mb1 3.5/7, mb1mx3.4/34, mbtmp3.3/7, ML2.9/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/36, Error ellipse: s-maj=30.2km s-min=16.2km az=76.0*

ISC 23 21:29:10.2±2.3**, 48°.87N**±0°.05×**128°.60W**±0°.08**, h6**^{km}±21^{km}**, n47, σ1**^{s}**.83**/54**, mb3.5**/4**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	0.98	200	Pn	Pg	21 29 27.7	-1.3
NC89	ODP889	1.17	99	Pn	Pn	21 29 32.3	-0.6
NC27	ODP1027	1.24	153	Pn	Pn	21 29 31.6	-2.1
EDB	Eliza Dome	1.39	43	Pn	Pn	21 29 34.9	-1.3
EDB				Sn	Sn	21 29 51.4	-3.4
BPBC	Brooks Peninsu	1.40	22	Pn	Pn	21 29 35.2	-1.0
NCBC	Barkley Canyon	1.67	104	Sn	Sn	21 29 59.8	-1.7
PACB	Port Alice, BC	1.73	24	Pn	Pn	21 29 39.6	-1.1
PACB				Sn	Sn	21 29 59.7	-3.3
MAYB	Maynard	1.79	31	Pn	Pn	21 29 40.6	-1.2
TOFB	Tofino	1.79	80	Pn	Pn	21 29 40.6	-1.0
TOFB				Sn	Sn	21 30 02.0	-2.7
HOLB	Holberg	1.80	9	Pn	Pn	21 29 41.2	-0.6
WOSB	Woss	1.85	45	Pn	Pn	21 29 41.4	-1.1
GDR	Gold River	1.91	60	Pn	Pn	21 29 42.5	-0.7
PHC	Port Hardy	1.99	22	Pn	Pn	21 29 43.7	-0.5
TLCB	Telegraph Cove	2.03	34	Pn	Pn	21 29 45.0	+0.2
TLCB				Sn	Sn	21 30 08.2	-2.3
BTB	Buttle Lake	2.11	72	Pn	Pn	21 29 45.1	-0.9
NCRB	Newcastle Ridg	2.26	46	Pn	Pn	21 29 48.3	+0.2
B928	Bamfield	2.29	90	Sn	Sn	21 30 13.8	-3.0
CBB	Campbell River	2.41	60	Pn	Pn	21 29 50.3	+0.2
CBB				Sn	Sn	21 30 17.9	-2.0
B927	Port Alberni	2.52	81	Pn	Pn	21 29 50.9	-0.6
MGB	Mount Grey	2.58	86	Pn	Pn	21 29 51.6	-0.9
MGB				Sn	Sn	21 30 21.3	-2.9
TXB	Texada	2.85	72	Pn	Pn	21 29 56.6	+0.4
YOUB	Youbou, Lake C	2.86	88	Pn	Pn	21 29 56.4	0.0
YOUB				Sn	Sn	21 30 30.4	-0.8
GHNB	Nanoose	2.90	80	Pn	Pn	21 29 57.9	+1.1
GHNB				Sn	Sn	21 30 30.1	-1.9
NLLB	Nanaimo Lost L	3.05	82	Pn	Pn	21 30 00.5	+1.5
NLLB				Sn	Sn	21 30 33.9	-1.8
LZB	Mount Lazard	3.17	93	Pn	Pn	21 30 00.4	-0.3
SHB	Sechelt	3.18	75	Pn	Pn	21 30 01.5	+0.7
SHB				Sn	Sn	21 30 37.3	-1.8
BBB	Bella Bella	3.33	5	Pn	Pn	21 30 03.0	+0.2
BBB				Sn	Sn	21 30 40.9	-1.7
BBB	Bella Bella	3.33	5	Pn	Pn	21 30 03.0	+0.2
	6.7nm,0.3s,baz=197,slow=4.0,SNR=56						
BBB				Sn	Sn	21 30 40.3	-2.3
	8.3nm,0.3s,baz=301,slow=21,SNR=15						
VGZ	Gonzales	3.53	95	Sn	Sn	21 30 43.8	-3.6
SNB	Saturna Island	3.59	89	Pn	Pn	21 30 07.3	+1.0
SNB				Sn	Sn	21 30 47.9	-1.0
HDW	Hoodsport	3.90	106	Pn	Pn	21 30 12.3	+1.6
WSLR	Whistler	3.91	69	Pn	Pn	21 30 12.9	+2.1
VDB	Vedder Mountai	4.28	85	Pn	Pn	21 30 16.5	+0.6
LLLB	Lillooet	4.69	66	Pn	Pn	21 30 23.0	+1.5
GPW	Glacier Peak	5.02	96	Pn	Pn	21 30 27.3	+1.1
LON	Longmire	5.04	112	Pn	Pn	21 30 28.8	+2.5
LON				Sn	Sn	21 31 22.2	-2.7
PNT	Penticton	5.92	82	Pn	Pn	21 30 38.8	+0.5
NEW	Newport	7.64	90	LR	LR	21 34 13.8	
	comp=Z,157nm,19.9s,baz=257,slow=40						
YKA	Yellowknife Ar	15.71	24	Pn	Pn	21 32 51.0	-0.8
	0.0nm,0.3s,baz=206,slow=13,SNR=3.3						
ILAR	Eielson Array	18.70	335	P	Pn	21 33 33.4	+4.2
	0.0nm,0.3s,baz=131,slow=11,SNR=2.8						
ULM	Lac du Bonnet	21.18	74	P	P	21 33 59.4	+3.3
	1.7nm,0.5s,baz=302,slow=10,SNR=6.0						
TXAR	Lajitas Array	27.27	127	P	P	21 35 02.5	+7.2
	0.4nm,0.9s,baz=328,slow=9.6,SNR=3.2						
H11N2	WAKE ISLAND Hy	58.68	264	T	T	22 42 43.6	
	baz=44,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	58.69	264	T	T	22 42 41.2	
	baz=44,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	58.70	264	T	T	22 42 44.8	
	baz=44,slow=75,SNR=11						
SONM	Songino Array	72.56	325	P	P	21 40 44.7	+6.8
	0.4nm,0.8s,baz=46,slow=4.8,SNR=3.4						
MKAR	Makanchi Array	81.00	339	P	P	21 41 32.8	+7.3
	0.2nm,0.6s,baz=41,slow=4.6,SNR=2.4						

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*ISCJB **23** 21:29:15.7±0.6, 59°.09S±0°.08×26°.3W±0°.2, h116^{km}, mb4.3/11, Error ellipse: s-maj=14.8km s-min=10.1km az=152.1*

*IDC **23** 21:29:18.2±4.4, 59°.07S×26°.43W, h126^{km}±40^{km}, mb4.1/11, mb1 4.1/12, mb1mx3.9/22, mbtmp4.5/12, MS3.4/1, Ms1 3.4/1, ms1mx2.7/28, Error ellipse: s-maj=16.5km s-min=15.2km az=161.0*

*NEIC **23** 21:29:18.4±2.8, 59°.11S×26°.38W, h132^{km}±25^{km}, mb4.4/1, Error ellipse: s-maj=14.4km s-min=12.5km az=196.0*

ISC 23 21:29:16.9±0.6**, 59°.1S**±0°.1×**26°.4W**±0°.1**, h116**^{km}**, n29, σ0**^{s}**.62**/24**, mb4.3**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.82	154	P	Pn	21 32 26.5	-0.9
VNA1				S	Sn	21 34 46.5	-13
VNA3	Neumayer Olymp	13.98	157	P	Pn	21 32 28.5	-1.0
VNA3				S	Sn	21 34 46.8	-17
VNA2	Neumayer--Watz	14.22	154	P	Pn	21 32 32.1	-0.5
	baz=310,slow=15						
VNA2				S	Sn	21 34 54.4	-15
	baz=309,slow=23						
SNAA	Sanae	15.79	152	P	Pn	21 32 53.0	+0.6
SNAA				S	Sn	21 35 31.4	-16
SNAA	Sanae	15.79	152	P	Pn	21 32 52.0	-0.5
	3.7nm,0.3s,baz=2.6,slow=7.6,SNR=157						
SNAA				S	Sn	21 35 28.6	-19
	0.4nm,0.3s,baz=217,slow=18,SNR=5.1						
PMSA	Palmer Station	18.39	236	LR	LR	21 39 10.4	
	comp=Z,118nm,19.6s,baz=148,slow=32						
USHA	Ushuaia	23.03	262	P	P	21 34 11.4	-0.2
	11nm,0.7s,baz=118,slow=12,SNR=13						
QSPA	South Pole Qui	31.14	180	*e*P	P	21 35 24.8	+0.6
	3.8nm,0.5s						
QSPA	South Pole Qui	31.14	180	P	P	21 35 24.9	+0.6
	6.1nm,0.6s,baz=212,slow=2.2,SNR=51						
PLCA	Paso Flores	33.07	284	P	P	21 35 41.2	0.0
	4.4nm,0.8s,baz=161,slow=9.2,SNR=9.4						
SUR	Sutherland	41.12	71	P	P	21 36 50.5	+1.0
	5.3nm,0.9s,baz=209,slow=13,SNR=5.3						
VNDA	Vanda	43.54	183	P	P	21 37 09.6	+1.3
	5.3nm,0.8s,baz=185,slow=5.4,SNR=8.5						
BOSA	Boshof	46.39	72	P	P	21 37 31.8	+0.2
	4.8nm,0.6s,baz=210,slow=6.7,SNR=16						
H10S2	ASCENSION HYDR	50.82	15	T	T	22 32 32.6	
	baz=188,slow=75,SNR=8.9						
H10S3	ASCENSION HYDR	50.83	15	T	T	22 32 32.9	
	baz=188,slow=75,SNR=8.3						
H10S1	ASCENSION HYDR	50.84	15	T	T	22 32 33.9	
	baz=188,slow=75,SNR=11						
LPAZ	La Paz	52.52	306	P	P	21 38 19.1	+0.4
	1.2nm,0.5s,baz=149,slow=4.7,SNR=4.8						
DBIC	Dimbokro	67.79	23	P	P	21 40 02.4	+0.4
	3.3nm,0.8s,baz=144,slow=8.7,SNR=4.0						
TORD	Torodi Ar. Bea	75.52	28	P	P	21 40 47.7	-0.6
	1.3nm,0.6s,baz=189,slow=7.2,SNR=8.2						
STKA	Stephens Creek	88.81	170	P	P	21 41 57.2	-0.3
	1.1nm,0.3s,baz=149,slow=9.9,SNR=5.3						
ASAR	Alice Springs	95.94	162	P	P	21 42 30.1	-0.5
	1.6nm,0.7s,baz=182,slow=4.0,SNR=23						
CMAR	Chiang Mai Arr	123.55	112	PKP	PKPdf	21 47 59.9	-0.4
	0.5nm,0.5s,baz=247,slow=3.7,SNR=4.8						
FINES	FINESS Array B	126.87	28	PKP	PKPdf	21 48 05.2	-0.1
	0.8nm,0.7s,baz=222,slow=3.7,SNR=3.9						
ARCES	ARCESS Array B	133.61	22	PKP	PKPdf	21 48 17.8	-0.1
	2.9nm,1.0s,baz=206,slow=3.7,SNR=6.2						
YKA	Yellowknife Ar	138.70	315	PKP	PKPdf	21 48 27.0	-0.4
	0.6nm,0.6s,baz=127,slow=2.5,SNR=11						
ZALV	Zalesovo Beam	143.24	67	PKhKP	PKPpre	21 48 32.5	
	0.6nm,0.5s,baz=246,slow=1.8,SNR=4.6						
INK	Inuvik	148.40	317	PKPbc	PKPbc	21 48 47.2	-0.7
	1.0nm,0.6s,baz=32,slow=3.3,SNR=6.3						
SONM	Songino Array	150.35	91	PKPbc	PKPbc	21 48 53.7	+0.1
	1.7nm,1.0s,baz=214,slow=3.3,SNR=9.7						
ILAR	Eielson Array	152.40	307	PKPbc	PKPbc	21 48 57.1	-0.5
	0.7nm,0.6s,baz=298,slow=1.6,SNR=15						

MEX 23 21:40:50.1±0.4**, 14°.25N**×**92°.58W, h62**^{km}±78^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.57	337	*e*P	Pn	21 41 14.2	-1.6
PCIG				*e*S	Sn	21 41 33.5	-1.7
CCIG	Comitan	2.06	12	*e*P	Pn	21 41 19.2	-3.5

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*TIR **23** 21:52:48.1, 40°.16N×19°.73E, h7^{km}, Md2.6/3*

ISC 23 21:52:47.7±3.0**, 40°.16N**±0°.06×**19°.7E**±0°.2**, h9**^{km}**, n4, σ0**^{s}**.58**/7**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.28	60	*i* PG	Pb	21 52 54.5	-0.4
TPE				*i* SG	Sg	21 52 57.9	+0.7
SRN	Sarande	0.36	139	*i* PG	Pb	21 52 56.0	-0.3
SRN				*i* SG	Sb	21 53 01.6	-0.5
IGT	Igoumenitsa	0.80	141	*i* PG	Pb	21 53 04.1	+0.5
IGT				*i* SG	Sn	21 53 16.8	-0.2
OHR	Ohrid	1.27	41	*e*Pn	Pn	21 53 11.8	+0.1

IDC 23 21:56:38.1±1.6**, 10°.92S**×**165°.62E, h0**^{km}**, mb3.6**/3**, mb1 4.0**/5**, mb1mx3.7**/35**, mbtmp3.9**/5**, ML4.0**/2**, MS3.7**/3**, Ms1 3.6**/3**, ms1mx3.0**/34**, Error ellipse: s-maj=41.7km s-min=29.3km az=134.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.77	284	Pn	Pn	21 58 05.9	+0.7
	8.5nm,0.3s,baz=191,slow=10,SNR=3.4						
HNR				LR	LR	22 00 22.1	
	comp=Z,382nm,18.7s,baz=124,slow=39						
DZM	Mont Dzumac	11.12	176	Pn	Pn	21 59 19.6	+0.9
	0.6nm,0.3s,baz=347,slow=6.3,SNR=9.0						
CTA	Charters Tower	20.75	242	P	Pn	22 01 26.4	+3.4
	6.8nm,1.0s,baz=81,slow=7.2,SNR=4.4						
STKA	Stephens Creek	30.45	223	LR	LR	22 14 16.9	
	comp=Z,77nm,18.9s,baz=23,slow=35						
WRA	Warramunga Arr	31.41	250	P	P	22 03 01.5	+0.2
	0.4nm,0.8s,baz=84,slow=9.9,SNR=3.3						
ASAR	Alice Springs	32.74	243	P	P	22 03 12.4	-0.6
	0.8nm,0.6s,baz=65,slow=10,SNR=17						
ILAR	Eielson Array	83.43	19	P	P	22 09 07.1	-0.1
	0.5nm,0.6s,baz=240,slow=5.1,SNR=10						
BBB	Bella Bella	84.55	34	LR	LR	22 41 30.1	
	comp=Z,91nm,19.3s,baz=178,slow=32						

IDC 23 21:58:29.4±12.0**, 23°.92S**×**179°.19W, h550**^{km}±113^{km}**, mb3.1**/5**, mb1 3.2**/6**, mb1mx3.0**/35**, mbtmp4.1**/6**, Error ellipse: s-maj=206.8km s-min=41.6km az=59.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.64	192	P	P	22 01 34.3	-0.7
	0.8nm,0.3s,baz=305,slow=5.8,SNR=3.9						
URZ				S	S	22 04 00.3	-7.6
	0.1nm,0.3s,baz=315,slow=13,SNR=2.1						
RPZ	Rata Peaks	21.31	200	P	P	22 02 37.3	+0.1
	4.3nm,0.6s,baz=171,slow=4.4,SNR=4.1						
CTA	Charters Tower	32.22	270	P	P	22 04 13.4	+0.4
	2.1nm,0.4s,baz=93,slow=12,SNR=4.0						
STKA	Stephens Creek	35.41	248	P	P	22 04 39.4	-0.2
	0.9nm,0.5s,baz=117,slow=6.8,SNR=2.7						
ASAR	Alice Springs	42.77	260	P	P	22 05 38.9	-0.3
	0.4nm,0.3s,baz=99,slow=7.3,SNR=14						
WRA	Warramunga Arr	43.15	266	P	P	22 05 41.7	-0.4
	0.7nm,0.3s,baz=103,slow=8.3,SNR=45						

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*ISCJB **23** 22:00:44.3±0.3, 19°.93S±0°.03×69°.97W±0°.06, h68^{km}±3^{km}, mb4.1/14, Error ellipse: s-maj=9.7km s-min=4.7km az=173.2*

*NEIC **23** 22:00:44.0±0.0, 19°.95S×70°.02W, h53^{km}, mb4.4/5, ML4.5(GUC), After GUC.*

NEIC Felt [IV] at Alto Hospicio, Iquique and Pica; [III] at Camina, La Tirana and Pisagua; [II] at Pozo Almonte.

*GUC **23** 22:00:44.6±0.7, 19°.95S×70°.02W, h53^{km}±4^{km}, ML4.5*

*IDC **23** 22:00:47.2±2.2, 19°.85S×69°.68W, h77^{km}±22^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.8/32, mbtmp4.2/13, MS2.9/1, Ms1 2.9/1, ms1mx2.6/27, Error ellipse: s-maj=21.9km s-min=14.7km az=107.0*

ISC 23 22:00:44.7±0.8**, 19°.93S**±0°.03×**69°.98W**±0°.07**, h58**^{km}±6^{km}**, n60, σ1**^{s}**.26**/60**, mb4.4**/14**, 7C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.35	62	*e*Pn	Pn	22 00 55.6	+0.3
PB11				*e*Sn	Sn	22 01 03.3	+0.4
PB11	IPOC Station P	0.35	62⇑	*e*P	Pn	22 00 55.6	+0.3
PB11				*e*S	Sn	22 01 03.5	+0.7
PB11				IAML		22 01 04.2	
	comp=E,83µm,0.3s						
PSGC	Pisagua	0.35	338⇑	*e*P	Pn	22 00 55.1	-0.1
PSGC				*e*S	Sn	22 01 02.0	-0.8
PSGC				IAML		22 01 02.7	
	comp=N,32µm,0.4s						
PB08	IPOC Station P	0.81	105⇑	*e*P	Pn	22 01 01.5	+0.9
PB08				*e*S	Sn	22 01 14.0	+1.8
PB08				IAML		22 01 15.1	
	comp=N,23µm,0.4s						
MNMC	Minye Minye	0.87	25	*e*Pn	Pn	22 01 02.3	+0.9
MNMC				*e*Sn	Sn	22 01 14.8	+1.3
MNMC	Minye Minye	0.87	25⇑	*e*P	Pn	22 01 02.1	+0.8
MNMC				*e*S	Sn	22 01 15.1	+1.6
MNMC				IAML		22 01 15.9	
	comp=E,70µm,0.2s						
PB01	IPOC Station P	1.20	157	*e*Pn	Pn	22 01 05.8	+0.3
PB01	IPOC Station P	1.20	157⇑	*e*P	Pn	22 01 05.9	+0.3
PB01				*e*S	Sn	22 01 21.5	+0.6
PB01				IAML		22 01 22.0	
	comp=E,11µm,0.2s						
PB12	IPOC Station P	1.35	346⇑	*e*P	Pn	22 01 07.9	+0.5
PB12				*e*S	Sn	22 01 25.2	+0.8
PB12				IAML		22 01 27.7	
	comp=N,10µm,0.6s						
PB02	IPOC Station P	1.39	177⇑	*e*P	Pn	22 01 08.2	+0.3

PB02				eS	Sn	22 01 25.5	+0.1
PB02				IAML		22 01 32.3	
	comp=E,15µm,0.1s						
PB04	IPOC Station P	2.40	184	ePn	Pn	22 01 22.6	+0.8
LVC	Limon Verde	2.85	160	P	Pn	22 01 30.4	+2.3
	comp=E,92nm,0.3s,baz=21,slow=7.1,SNR=488						
LVC				S	Sn	22 02 04.6	+3.2
	comp=E,136nm,0.3s,baz=121,slow=19,SNR=14						
LVC				LR	LR	22 02 37.0	
	comp=E,233nm,21.8s,baz=4.5,slow=39						
PB10	IPOC Station P	3.61	188	ePn	Pn	22 01 37.5	-0.6
LPAZ	La Paz	4.03	26	P	Pn	22 01 49.0	+4.6
	comp=E,11nm,0.3s,baz=203,slow=5.5,SNR=131						
GO02	Mina Guanaco	5.22	176	ePn	Pn	22 02 00.3	-0.3
GO03	Copiap	7.63	182	ePn	Pn	22 02 32.7	-0.7
SIV	San Ignacio	9.34	67	P	Pn	22 02 56.9	+0.1
	comp=E,2.8nm,0.3s,baz=270,slow=9.9,SNR=70						
PLCA	Paso Flores	20.74	181	eP	Pn	22 05 22.9	-0.7
	comp=E,7.2nm,0.8s						
PLCA	Paso Flores	20.74	181	P	Pn	22 05 22.9	-0.7
	comp=E,2.0nm,0.8s,baz=19,slow=9.8,SNR=5.4						
BDFB	Brasilia	21.34	82	eP	P	22 05 25.4	-2.0
BDFB	Brasilia	21.34	82	P	P	22 05 24.7	-2.6
	comp=E,1.1nm,0.4s,baz=191,slow=10,SNR=2.9						
PTGA	Pitinga	21.45	28	eP	P	22 05 27.1	-1.2
PTGA	Pitinga	21.45	28	P	P	22 05 26.9	-1.4
	comp=E,6.4nm,0.4s,baz=200,slow=16,SNR=15						
OTAV	Otavalo	21.69	337	eP	P	22 05 32.9	+1.6
	comp=E,3.3nm,0.9s						
MDP	Montagnes des	30.16	36	P	P	22 06 48.9	-0.6
	comp=E,8.0nm,0.7s,baz=222,slow=14,SNR=4.1						
BANI	BANI	38.08	359	eP	P	22 07 59.7	+1.6
BANI				eS	S	22 13 48.0	+1.0
MIAR	Mount Ida	58.64	337	eP	P	22 10 37.0	+1.1
	comp=E,38nm,2.0s						
TXAR	Lajitas Array	58.77	326	P	P	22 10 37.0	-0.1
	comp=E,0.3nm,0.7s,baz=154,slow=6.9,SNR=4.1						
TX31	Lajitas Ar. Si	58.77	326	eP	P	22 10 37.5	+0.4
PV23	Carpenter Ridg	68.65	328	eP	P	22 11 43.2	+0.9
	comp=E,21nm,1.7s						
DBIC	Dimbokro	69.27	74	eP	P	22 11 44.9	-1.3
	comp=E,31nm,1.5s						
DBIC	Dimbokro	69.27	74	P	P	22 11 45.5	-0.8
	comp=E,1.7nm,0.4s,baz=204,slow=5.6,SNR=4.2						
PDAR	Pinedale Array	72.25	330	eP	P	22 12 03.5	-0.6
PDAR	Pinedale Array	72.25	330	P	P	22 12 04.9	+0.8
	comp=E,0.4nm,0.7s,baz=123,slow=5.5,SNR=3.7						
ULM	Lac du Bonnet	73.52	343	P	P	22 12 10.9	-0.2
	comp=E,1.4nm,0.5s,baz=160,slow=6.6,SNR=6.2						
NV01	Mina Array Sit	73.64	322	eP	P	22 12 13.7	+1.4
NVAR	Mina Array Bea	73.64	322	P	P	22 12 13.7	+1.3
	comp=E,0.5nm,0.6s,baz=158,slow=7.5,SNR=2.5						
KVN	Kaiserville	73.95	323	eP	P	22 12 15.6	+1.5
	comp=E,7.1nm,1.5s						
TOA0	Torodi Ar. Sit	77.79	71	eP	P	22 12 35.3	-0.9
TOA1	Torodi Ar. Sit	77.79	71	eP	P	22 12 33.8	-2.4
TORD	Torodi Ar. Bea	77.79	71	P	P	22 12 33.8	-2.4
	comp=E,2.5nm,0.5s,baz=258,slow=5.6,SNR=37						
YKA	Yellowknife Ar	89.38	341	P	P	22 13 35.0	+0.6
	comp=E,3.5nm,0.7s,baz=134,slow=4.7,SNR=103						
YKB5	Yellowknife Ar	89.38	341	eP	P	22 13 34.9	+0.4
H11S2	WAKE ISLAND Hy	126.67	279	T	T	00 39 06.4	
	baz=102,slow=75,SNR=363						
H11S1	WAKE ISLAND Hy	126.68	279	T	T	00 39 01.4	
	baz=102,slow=75,SNR=393						
H11S3	WAKE ISLAND Hy	126.69	279	T	T	00 39 02.0	
	baz=102,slow=75,SNR=335						
H11N3	WAKE ISLAND Hy	126.71	280	T	T	00 39 04.4	
	baz=100,slow=74,SNR=249						
H11N2	WAKE ISLAND Hy	126.72	280	T	T	00 39 05.4	
	baz=100,slow=74,SNR=294						
H11N1	WAKE ISLAND Hy	126.73	280	T	T	00 39 06.0	
	baz=100,slow=74,SNR=160						
ASAR	Alice Springs	130.81	209	PKP	PKPdf	22 19 50.6	+0.3
	comp=E,0.3nm,0.5s,baz=98,slow=1.7,SNR=7.7						
WR1	Warramunga Arr	133.76	212	ePKPdf	PKPdf	22 19 56.1	+0.2
WRA	Warramunga Arr	133.76	212	PKP	PKPdf	22 19 56.1	+0.2
	comp=E,0.3nm,0.4s,baz=148,slow=1.7,SNR=12						
ZAA1	Zalesovo Array	140.94	24	ePKPdf	PKPdf	22 20 05.5	-2.5
ZALV	Zalesovo Beam	140.94	24	PKP	PKPdf	22 20 05.5	-2.5
	comp=E,1.2nm,0.6s,baz=15,slow=6.0,SNR=3.7						
MK32	Makanchi Array	144.92	34	ePKPdf	PKPbc	22 20 15.5	+0.9
MKAR	Makanchi Array	144.92	34	PKP	PKPbc	22 20 15.5	+0.9
	comp=E,4.0nm,0.7s,baz=316,slow=3.3,SNR=50						
USRK	Ussuriysk Ar.	149.65	328	PKPbc	PKPbc	22 20 27.9	+0.1
	comp=E,4.2nm,0.7s,baz=95,slow=4.4,SNR=7.3						
MJAR	Matsushiro Arr	150.30	310	PKPbc	PKPbc	22 20 30.3	+0.5
	comp=E,1.7nm,0.6s,baz=96,slow=1.5,SNR=4.8						
MAJO	Matsushiro	150.31	310	ePKPbc	PKPbc	22 20 30.3	+0.5
SONM	Songino Array	152.01	5	PKPbc	PKiKP	22 20 34.6	+0.8
	comp=E,1.9nm,0.6s,baz=307,slow=1.3,SNR=10						

MEX 23 22:01:29.3±0.6**, 13°.82N×91°.90W, h16**^{km}±411^{km}**, MD4.0, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		2.27	326	eP	Pn	22 02 03.0	-3.2
PCIG				i S	Sn	22 02 27.8	-6.0
CCIG	Comitan	2.46	355	eP	Pn	22 02 10.8	+1.8

DDA ***23*** *22:17:05.6, 41°.25N×44°.04E, h7^{km}±3^{km}, ML2.7*
ISK ***23*** *22:17:06.5, 41°.32N×44°.05E, h17^{km}±1^{km}, ML2.3/7*
NORS ***23*** *22:17:06.8±0.0, 41°.43N×43°.98E, h4^{km}, MPVA3.1*
MOS ***23*** *22:17:06.8±0.0, 41°.43N×43°.98E, h4^{km}, MPVA3.1*
TIF ***23*** *22:17:06.3, 41°.31N×44°.06E, h14^{km}±2^{km}*
ISC 23 22:17:06.8±0.9**, 41°.31N**±0°.02×**44°.02E**±0°.02**, h14**^{km}±7^{km}**, n31, σ1^{s}17**/53**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRLG	Trialeti	0.23	15	P	Pg	22 17 11.6	-0.4
TRLG				S	Sg	22 17 15.3	-0.2
KZRT	Kazreti	0.29	76	P	Pg	22 17 12.5	-0.4
KZRT				S	Sg	22 17 16.8	-0.3
BGD	Bogdanovka	0.32	261	P	Pg	22 17 13.7	+0.1
BGD				S	Sg	22 17 18.5	+0.3
TBLG	Delisi	0.68	52	PG	Pb	22 17 19.7	-0.7
TBLG				SG	Sb	22 17 29.8	+0.1
TBLG	Delisi	0.68	52	P	Pb	22 17 19.8	-0.6
TBLG				S	Sb	22 17 29.8	+0.1
TBLG	Delisi	0.68	52	i P	Pb	22 17 20.6	+0.2
TBLG				i S	Sn	22 17 30.7	-1.8
TBLG				IAML_P			
	comp=Z,2µm,0.1s						
BTNK	Botanikuri	0.69	57	P	Pg	22 17 19.8	-0.5
BTNK				S	Sb	22 17 29.9	-0.1
BTNK	Botanikuri	0.69	57	i P	Pb	22 17 20.4	-0.2
BTNK				i S	Sb	22 17 30.0	-0.1
BTNK				IAML_P			
	comp=Z,4µm,0.1s						
EAK	Akyaka	0.70	207	i P	Pg	22 17 19.6	-0.9
EAK				IAML_P			
	comp=Z,1µm,0.2s						
EPOS	Posof	0.99	281	i P	Pb	22 17 25.2	-0.6
DIGO	Kars	1.02	209	i P	Pb	22 17 25.6	-0.9
DIGO				i S	Sb	22 17 38.8	-1.1
DIGO				IAML_P			
	comp=Z,4µm,0.1s						
GNI	Garni	1.28	155	PN	Pb	22 17 30.5	-0.3
TASB	TASBURUN-IGDIR	1.34	173	PN	Pn	22 17 30.5	-0.6
IGDI	IGDIR	1.45	178	i P	Pn	22 17 32.4	-0.1
IGDI				i S	Sn	22 17 51.4	0.0
IGDI				IAML_P			
	comp=Z,102nm,0.3s						
SENK	Senkaya-Erzuru	1.47	240	PN	Pn	22 17 33.4	+0.3
LACR	Lac	1.53	8	i Pg	Pg	22 17 35.2	-0.9
LACR				eSg	Sg	22 17 56.9	+1.0
DDFL	Dedoflistskaro	1.58	85	P	Pg	22 17 37.3	+0.1
DDFL				S	Sg	22 18 03.4	+5.6
ARTV	Artvin	1.58	266	i P	Pb	22 17 35.9	-0.1
ARTV				i S	Sn	22 17 55.8	+0.7
ARTV				IAML_P			
	comp=Z,2µm,0.1s						
DAGI	Agillar	1.61	262	i P	Pb	22 17 36.9	+0.5
DAGI				IAML_P			
	comp=Z,232nm,0.3s						
DIGR	Digorskoe uzhe	1.62	348	ePg	Pb	22 17 36.9	+0.3
DIGR				eSg	Sg	22 17 59.6	+0.6
DDEM	Demirkent	1.77	257	i P	Pb	22 17 38.9	-0.2
DDEM				i S	Sg	22 18 03.6	0.0
DDEM				IAML_P			
	comp=Z,255nm,0.1s						
KORR	Kora	1.77	1	ePg	Pg	22 17 40.0	-0.8
KORR				eSg	Sg	22 18 04.9	+1.1
DBAD	Bademkaya	1.78	261	i P	Pb	22 17 40.1	+0.8
DBAD				i S	Sb	22 18 02.8	+1.3
DBAD				IAML_P			
	comp=Z,554nm,0.1s						
BCA	Borcka	1.81	275	PN	Pn	22 17 37.8	+0.2
KMGR	Komgaron	1.85	20	ePg	Pg	22 17 42.1	-0.2
KMGR				eSg	Sg	22 18 08.2	+1.9
ARNR	Ardon	1.88	6	ePg	Pg	22 17 43.2	+0.4
ARNR				eSg	Sg	22 18 09.5	+2.4
AGRB	Hanur-Agry	1.91	205	PN	Pn	22 17 39.5	+0.5
LSNR	Lesken	1.97	356	ePg	Pg	22 17 43.4	-1.2
LSNR				eSg	Sg	22 18 10.7	+0.6
KOPR	Koprukoy-ERZUR	2.11	232	PN	Pn	22 17 42.6	+0.7
BTLR	Botlikh	2.12	50	ePg	Pg	22 17 46.0	-1.5
BTLR				eSg	Sg	22 18 13.9	-1.1
NEY	Neytrino	2.16	334	ePg	Pg	22 17 47.4	-0.8
NEY				eSg	Sg	22 18 14.7	-1.6

IDC 23 22:19:51.2±4.0**, 5°.79S×150°.74E, h158**^{km}±33^{km}**, mb3.2**/8**, mb1 3.3**/8**, mb1mx3.2**/41**, mbtmp3.6**/8**, Error ellipse: s-maj=53.0km s-min=13.8km az=115.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.27	227	P	P	22 24 23.5	-1.7
	0.4nm,0.4s,baz=48,slow=11,SNR=3.8						
ASAR	Alice Springs	24.05	221	P	P	22 24 53.6	+1.6
	0.3nm,0.3s,baz=55,slow=8.8,SNR=8.4						
ASAR				S	S	22 28 59.0	+1.0
	0.8nm,0.6s,baz=44,slow=14,SNR=6.8						
KSRS	Korea Array	48.00	335	P	P	22 28 14.6	+0.5
	0.6nm,0.6s,baz=149,slow=9.8,SNR=4.0						
PETK	Petropavlovsk-	58.97	5	P	P	22 29 34.3	+0.4
	0.9nm,0.6s,baz=168,slow=7.4,SNR=3.9						
SONM	Songino Array	66.08	329	P	P	22 30 22.3	+0.9
	0.4nm,0.4s,baz=143,slow=5.9,SNR=5.8						
MKAR	Makanchi Array	79.73	320	P	P	22 31 41.0	-0.6
	0.1nm,0.4s,baz=97,slow=8.0,SNR=3.4						
ZALV	Zalesovo Beam	80.84	327	P	P	22 31 46.4	-0.8
	0.3nm,0.3s,baz=141,slow=5.2,SNR=2.8						
ILAR	Eielson Array	83.84	22	P	P	22 32 02.2	-0.5
	0.3nm,0.5s,baz=242,slow=5.2,SNR=5.9						
TORD	Torodi Ar. Bea	148.63	286	PKPbc	PKPbc	22 39 19.8	-0.8
	0.1nm,0.3s,baz=63,slow=2.3,SNR=5.9						

IDC ***23*** *22:28:37.0±0.8, 35°.74N×90°.53W, h0^{km}, mb3.7/4, mb1 4.0/9, mb1mx3.6/53, mbtmp3.8/9, ML3.8/5, Error ellipse: s-maj=12.5km s-min=8.1km az=176.0*
NEIC ***23*** *22:28:38.0±0.0, 35°.63N×90°.56W, h14^{km}, MN3.9, MW3.7, Moment Tensor Solution.   s10   Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.29; M$_{\theta\theta}$3.37; M$_{\phi\phi}$-3.65; M$_{r\theta}$-0.89; M$_{\theta\phi}$-0.82; M$_{\phi r}$-0.42;   Best double couple: M$_0$3.80000×10^{14} NP1: φ$_s$322.00000°, δ75.00000°, λ5.00000°.   NP2:φ$_s$231.00000°, δ85.00000°, λ165.00000°.   Principal axes: T 3.6700, Plg14.0000°, Azm186.0000°; N 0.1500, Plg74.0000°, Azm34.0000°; P -3.8200, Plg7.0000°, Azm277.0000°; After CERI.*
NEIC   Felt [IV] at Bay, Harrisburg, Marked Tree and Trumann; [III] at Jonesboro and Tyronza; [II] at Lake City, Lepanto and Monette. Felt [II] at Memphis, Tennessee. Felt in much of northeastern Arkansas and in parts of Mississippi, Missouri and Tennessee.
ANF ***23*** *22:28:38.5±0.1, 35°.63N×90°.55W, h11^{km}, ML4.8/122 Error ellipse: s-maj=0.7km s-min=0.7km az=80.0*
CERI ***23*** *22:28:38.0, 35°.63N×90°.56W, h14^{km}, mbLg3.9(NEIC), MW3.7(USGS)*
ISC 23 22:28:37.9±1.0**, 35°.64N**±0°.02×**90°.58W**±0°.02**, h17**^{km}±7^{km}**, n426, σ1^{s}59**/455**, Arkansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
V43A	Jonesboro	0.15	10	P	Pb	22 28 42.7	+0.4
	baz=181						
GNAR	Gosnell	0.56	54	ePg	Pb	22 28 49.7	+0.5
GNAR				eSg	Sg	22 28 55.9	-0.8
V44A	Blytheville	0.59	71	P	Pb	22 28 49.6	-0.1
	baz=249						
V44A				S	Sb	22 28 57.9	+0.2
	baz=249						
U43A	Rector	0.74	11	P	Pb	22 28 52.6	+0.1
	baz=189						
U43A				S	Sb	22 29 02.5	+0.2
	baz=189						
W44A	Shelby Farms P	0.80	128	P	Pb	22 28 53.0	-0.3
	baz=309,SNR=26						
W44A				S	Sb	22 29 03.6	-0.2
	baz=309						
W42A	Bald Knob	0.85	245	P	Pn	22 28 55.2	+0.2
	baz=66,SNR=255						
W42A				S	Sn	22 29 07.2	0.0
	baz=66						
U42A	Revenden	0.89	323	P	Pb	22 28 55.4	+0.4
	baz=142						
U42A				S	Sb	22 29 07.3	+0.8
	baz=142						
HALT	Halls	1.04	74	ePg	Pb	22 28 57.5	0.0
U44A	Portageville	1.13	40	P	Pg	22 28 59.1	-0.6
	baz=219,SNR=70						
U44A				S	Sn	22 29 14.5	+0.6
	baz=219						
X43A	Marvell	1.14	193	ePg	Pg	22 28 59.6	-0.4
X43A	Marvell	1.14	193	P	Pg	22 28 59.7	-0.4
	baz=14,SNR=276						
X43A				S	Sn	22 29 15.7	+1.3
	baz=14						
PBMO	Poplar Bluff	1.15	6	ePg	Pg	22 28 59.6	-0.5
PBMO				eSg	Sn	22 29 15.3	+0.8
U44B	Burton Farm, H	1.22	54	P	Pg	22 29 00.9	-0.6
	baz=234,SNR=205						
U44B				S	Sn	22 29 17.7	+1.5
	baz=234						
PARMO	Parma	1.22	33	ePg	Pg	22 29 00.8	-0.8
PARMO				eSn	Sb	22 29 16.5	+0.5
W45A	Hickory Valley	1.23	112	P	Pn	22 29 00.4	0.0
	baz=293,SNR=63						
W45A				S	Sn	22 29 17.1	+0.5
	baz=293						
U41A	Viola	1.30	303	P	Pg	22 29 02.6	-0.3
	baz=123,SNR=1000						
U41A				S	Sg	22 29 20.5	+0.6
	baz=123						
V45A	Humboldt	1.32	85	P	Pb	22 29 01.9	-0.3
	baz=265,SNR=69						
V45A				S	Sg	22 29 19.6	-1.1
	baz=265						
WHAR	Wooly Hollow	1.44	257	ePn	Pg	22 29 04.8	-0.8
WHAR				eSn	Sb	22 29 22.7	+0.5
W41B	Gary Mavity, V	1.44	252	ePn	Pb	22 29 04.8	+0.6
W41B				eSn	Sg	22 29 24.1	-0.3
W41B	Gary Mavity, V	1.44	252	P	Pb	22 29 04.8	+0.6
	baz=72,SNR=1000						
W41B				S	Sg	22 29 24.1	-0.3
	baz=72						
T42A	Van Buren	1.45	344	ePn	Pg	22 29 05.2	-0.7
T42A				eSn	Sg	22 29 23.8	-1.0
T42A	Van Buren	1.45	344	P	Pg	22 29 05.2	-0.7
	baz=162,SNR=1000						
T42A				S	Sg	22 29 24.4	-0.4
	baz=162						
T43A	Greenville	1.46	9	P	Pb	22 29 05.0	+0.3
	baz=188,SNR=1000						
T43A				S	Sg	22 29 24.6	-0.6
	baz=188						
OXF	Oxford	1.48	139	ePn	Pn	22 29 04.2	+0.5
OXF				eSn	Sn	22 29 22.8	+0.2
OXF	Oxford	1.48	139	P	Pn	22 29 04.1	+0.5
	baz=320,SNR=83						
OXF				S	Sb	22 29 23.7	+0.4
	baz=320						
U45A	Rockin P Farm,	1.63	64	P	Pb	22 29 07.0	-0.6
	baz=244,SNR=107						
U45A				Sb	Sg	22 29 29.8	-0.9
	baz=244						
T44A	Benton	1.65	29	P	Pb	22 29 07.4	-0.5
	baz=208,SNR=44						
T44A				S	Sb	22 29 29.2	+0.8
	baz=208						
UALR	University of	1.68	240	ePn	Pb	22 29 08.2	-0.2
UALR				eSn	Sn	22 29 28.9	+1.2
T41A	Mountain View	1.70	326	P	Pb	22 29 09.3	+0.6
	baz=145,SNR=502						
Y43A	Makayla and Ka	1.74	190	P	Pb	22 29 09.2	-0.2
	baz=10						
W46A	Michie	1.87	105	P	Pn	22 29 09.9	+0.8
	baz=286,SNR=161						
X46A	Booneville	1.96	123	P	Pn	22 29 11.2	+0.9
	baz=304						
S43A	Fulton Ridge,	1.97	12	P	Pn	22 29 12.1	+1.6
	baz=191,SNR=1000						
CCAR	Cane Creek	1.98	210	ePn	Pb	22 29 13.3	-0.1
CCAR				eSn	Sn	22 29 36.8	+1.9
U40A	Yellville	1.98	292	P	Pb	22 29 13.0	-0.5
	baz=111,SNR=1000						
V46A	Holladay	2.01	85	P	Pn	22 29 11.7	+0.7
	baz=266,SNR=218						
U46A	Springville	2.08	69	P	Pn	22 29 12.6	+0.7
	baz=250,SNR=70						
T45A	Paducah	2.08	48	ePn	Pn	22 29 13.2	+1.2
T45A				eSn	Sn	22 29 36.8	-0.7
T45A	Paducah	2.08	48	P	Pn	22 29 13.0	+1.0
	baz=228,SNR=14						
S42A	Caledonia	2.14	355	P	Pb	22 29 14.8	-1.4
	baz=175,SNR=967						
PLAL	Pickwick Lake	2.15	107	ePn	Pn	22 29 13.8	+0.9
PLAL				eSn	Sn	22 29 40.0	+0.8
S41A	Jillco Farms,	2.16	335	P	Pb	22 29 15.7	-0.9
	baz=154,SNR=367						
X40A	Basin Creek Fa	2.18	239	ePn	Pb	22 29 15.5	-1.3
X40A				eSn	Sn	22 29 41.5	+1.6
X40A	Basin Creek Fa	2.18	239	P	Pn	22 29 14.8	+1.5
	baz=58						
WVT	Waverly	2.29	77	ePn	Pn	22 29 15.7	+0.9
WVT				eSn	Sn	22 29 41.9	-0.6
WVT	Waverly	2.29	77	P	Pn	22 29 15.6	+0.9
	baz=258						
WVT				Sb	Sb	22 29 48.2	+1.6
	baz=258						
S44A	Carbondale	2.31	27	P	Pn	22 29 16.6	+1.4
	baz=207,SNR=226						
SIUC	Southern Illin	2.34	27	ePn	Pn	22 29 17.0	+1.4
SIUC				eSn	Sn	22 29 45.3	+1.3
FVM	French Village	2.35	3	ePn	Pn	22 29 17.6	+1.9
W47A	Westpoint	2.47	98	P	Pn	22 29 18.0	+0.7
	baz=280,SNR=100						
CCM	Cathedral Cave	2.47	348	ePn	Pn	22 29 19.9	+2.5
CCM	Cathedral Cave	2.47	348	P	Pn	22 29 19.2	+1.8
	baz=167						
V47A	Nunnelly	2.50	85	P	Pn	22 29 18.2	+0.5
	baz=266,SNR=240						
X47A	Russelville	2.50	116	P	Pn	22 29 18.5	+0.8
	baz=297,SNR=710						
T46A	Princeton	2.58	56	P	Pn	22 29 20.0	+1.1
	baz=237,SNR=21						
S45A	Carrier Mills	2.59	38	P	Pn	22 29 20.2	+1.2
	baz=218						
R42A	Luebbering	2.65	356	P	Pn	22 29 21.2	+1.5
	baz=176,SNR=182						
W39A	Magazine	2.66	261	ePn	Pn	22 29 22.3	+2.4
W39A	Magazine	2.66	261	P	Pn	22 29 22.0	+2.1
	baz=80						
R43A	Red Bud	2.69	11	P	Pn	22 29 22.0	+1.7
	baz=191,SNR=358						
MIAR	Mount Ida	2.69	247	ePn	Pn	22 29 22.5	+2.2
MIAR	Mount Ida	2.69	247	P	Pn	22 29 22.3	+1.9
	baz=66,SNR=131						
R41A	Rosebud	2.73	347	P	Pn	22 29 23.1	+2.1
	baz=166,SNR=446						
U47A	Clarksville	2.78	72	P	Pn	22 29 22.7	+1.0
	baz=254,SNR=108						
HHAR	Hobbs	2.80	284	ePn	Pn	22 29 24.2	+2.2
WLAR	White Oak Lake	2.85	228	ePn	Pn	22 29 25.1	+2.5
R44A	Waltonville	2.87	24	P	Pn	22 29 24.4	+1.6
	baz=204,SNR=199						
Z41A	Richland Creek	3.00	218	P	Pn	22 29 26.4	+1.7
	baz=38						
W48A	Pulaski	3.02	98	P	Pn	22 29 25.8	+0.9
	baz=280,SNR=174						
V48A	Smith Brothers	3.06	87	ePn	Pn	22 29 26.7	+1.2
V48A	Smith Brothers	3.06	87	P	Pn	22 29 26.4	+1.0
	baz=269,SNR=58						
145A	Houston Renfro	3.07	170	P	Pn	22 29 26.9	+1.2
	baz=350						
S46A	Don Dixon Farm	3.08	48	P	Pn	22 29 26.9	+1.2
	baz=229,SNR=13						
T47A	Sharon Grove	3.11	63	ePn	Pn	22 29 27.9	+1.7
T47A	Sharon Grove	3.11	63	P	Pn	22 29 27.5	+1.4
	baz=245,SNR=32						
X48A	Hartselle	3.13	111	ePn	Pn	22 29 27.6	+1.2
X48A	Hartselle	3.13	111	P	Pn	22 29 27.3	+0.8
	baz=293,SNR=110						
R45A	Skylar, Fairfi	3.23	34	P	Pn	22 29 29.4	+1.6
	baz=215,SNR=11						
Q42A	Golden Eagle	3.27	1	P	Pn	22 29 30.2	+1.9
	baz=180						
Y48A	Jasper	3.29	121	P	Pn	22 29 29.8	+1.2
	baz=303						
USIN	University of	3.30	44	ePn	Pn	22 29 30.5	+1.8
Q41A	Truxton	3.35	351	P	Pn	22 29 31.4	+1.9
	baz=170,SNR=55						
Q43A	New Douglas	3.37	12	P	Pn	22 29 31.5	+1.7
	baz=192,SNR=35						
U48A	Cassie Pea, Po	3.38	74	P	Pn	22 29 31.1	+1.1
	baz=256						
VBMS	Vicksburg	3.41	179	P	Pn	22 29 31.5	+1.2
	baz=360						
Q44A	Meyer Farm, Va	3.49	20	ePn	Pn	22 29 33.5	+2.2
Q44A	Meyer Farm, Va	3.49	20	P	Pn	22 29 33.4	+2.0
	baz=201,SNR=63						
147A	Livingston	3.52	146	ePn	Pn	22 29 33.7	+1.9
147A	Livingston	3.52	146	P	Pn	22 29 33.1	+1.3
	baz=328						
R46A	Gibon Southern	3.56	43	P	Pn	22 29 33.5	+1.2
	baz=224						
S47A	Hartford	3.56	56	P	Pn	22 29 33.4	+1.1
	baz=237						
W49A	Belvidere	3.56	97	P	Pn	22 29 33.9	+1.6
	baz=280						
X49A	Woodville	3.66	107	P	Pn	22 29 34.7	+1.0
	baz=289,SNR=32						
OLIL	Olney	3.67	32	ePn	Pn	22 29 35.6	+1.7
T48A	Bowling Green	3.68	65	P	Pn	22 29 35.4	+1.4
	baz=247,SNR=19						
Q45A	Warren Harvey,	3.78	30	P	Pn	22 29 36.9	+1.5
	baz=211						
V49A	McMinnville	3.81	87	P	Pn	22 29 36.9	+1.1
	baz=269,SNR=46						
SWET	Sewanee	3.82	95	ePn	Pn	22 29 37.9	+1.9
Y49A	Blount Mountai	3.86	116	ePn	Pn	22 29 37.9	+1.4
Y49A	Blount Mountai	3.86	116	P	Pn	22 29 37.5	+0.9
	baz=299,SNR=226						
LRAL	Lakeview Retre	3.94	130	ePn	Pn	22 29 38.9	+1.3
LRAL	Lakeview Retre	3.94	130	P	Pn	22 29 38.6	+1.0
	baz=312						
P42A	Winchester	3.95	3	ePn	Pn	22 29 40.1	+2.5
P42A	Winchester	3.95	3	P	Pn	22 29 39.6	+1.9
	baz=182,SNR=32						
U49A	Red Boiling Sp	3.98	76	P	Pn	22 29 39.2	+1.0
	baz=258,SNR=29						
P41A	Barry, Barry	4.05	355	P	Pn	22 29 41.4	+2.3
	baz=174,SNR=38						
P43A	Skaggs, Pawnee	4.08	12	P	Pn	22 29 41.5	+2.0
	baz=192,SNR=66						
P44A	Sand Creek, Wi	4.13	22	P	Pn	22 29 41.8	+1.7
	baz=202						
Z49A	Columbiana	4.14	125	P	Pn	22 29 41.3	+1.0
	baz=307						
S48A	Wiedeman Farm,	4.16	60	P	Pn	22 29 42.2	+1.6
	baz=242						
R47A	Wooly Knot Far	4.19	50	P	Pn	22 29 42.3	+1.3
	baz=232,SNR=17						
X50B	Fort Payne	4.21	105	P	Pn	22 29 42.1	+0.8
	baz=288,SNR=24						
Q46A	CEJHS Indians,	4.24	36	P	Pn	22 29 43.3	+1.6
	baz=218						
TUL1	Leonard	4.25	275	ePn	Pn	22 29 43.6	+1.8
TUL1	Leonard	4.25	275	P	Pn	22 29 43.5	+1.6
	baz=92,SNR=31						
WCI	Wyandotte Cave	4.30	52	ePn	Pn	22 29 43.9	+1.4
WCI	Wyandotte Cave	4.30	52	P	Pn	22 29 43.5	+1.0
	baz=234						
W50A	Signal Mountai	4.32	94	ePn	Pn	22 29 45.7	+2.8
W50A	Signal Mountai	4.32	94	P	Pn	22 29 44.1	+1.2
	baz=277						
T49A	Edmonton	4.33	69	ePn	Pn	22 29 46.3	+3.4

T49A	Edmonton	4.33	69	P	Pn	22 29 44.5	+1.6
	baz=251						
Y50A	Piedmont	4.35	112	P	Pn	22 29 44.1	+0.9
	baz=295						
149A	Jones	4.36	133	P	Pn	22 29 43.9	+0.5
	baz=315						
V50A	Pikevile	4.46	88	P	Pn	22 29 45.9	+1.1
	baz=271,SNR=33						
O41A	Passleys Farm,	4.48	357	P	Pn	22 29 46.8	+1.8
	baz=177						
P45A	Graceland, Par	4.49	29	*e*Pn	Pn	22 29 46.9	+1.7
P45A	Graceland, Par	4.49	29	P	Pn	22 29 46.3	+1.1
	baz=210						
Z50A	Ashland	4.52	120	*e*Pn	Pn	22 29 46.9	+1.3
Z50A	Ashland	4.52	120	P	Pn	22 29 46.4	+0.8
	baz=303,SNR=22						
O42A	Bath	4.57	5	P	Pn	22 29 48.2	+2.0
	baz=185						
249A	Camden	4.65	141	P	Pn	22 29 48.4	+1.1
	baz=323						
R48A	Northridge Ran	4.67	52	P	Pn	22 29 48.8	+1.2
	baz=235						
Q47A	Bedord North L	4.67	44	P	Pn	22 29 49.1	+1.5
	baz=226						
U50A	Jamestown	4.71	79	P	Pn	22 29 49.6	+1.3
	baz=262						
O43A	Sugar Creek Fa	4.75	12	P	Pn	22 29 50.6	+1.9
	baz=192						
S49A	Springfield	4.76	62	P	Pn	22 29 49.9	+1.1
	baz=244						
W51A	Cleveland	4.78	94	P	Pn	22 29 50.2	+1.1
	baz=277						
BLO	Bloomington	4.78	41	*e*Pn	Pn	22 29 51.6	+2.4
P46A	Rosedale	4.79	33	P	Pn	22 29 50.8	+1.6
	baz=215						
O44A	Mansfield	4.81	20	P	Pn	22 29 51.1	+1.6
	baz=201						
X51A	Calhoun	4.81	101	*e*Pn	Pn	22 29 51.0	+1.5
X51A	Calhoun	4.81	101	P	Pn	22 29 50.4	+0.9
	baz=284						
T50A	Nancy	4.83	72	P	Pn	22 29 51.2	+1.3
	baz=255						
150A	Eclectic	4.84	127	P	Pn	22 29 51.4	+1.5
	baz=310						
Y51A	Rockmart	4.86	109	P	Pn	22 29 51.1	+0.9
	baz=292						
CPCT	Cooper Cave	4.94	90	*e*Pn	Pn	22 29 53.4	+2.1
HDIL	Hopedale	5.01	11	*e*Pn	Pn	22 29 56.0	+3.7
HDIL	Hopedale	5.01	11	P	Pn	22 29 53.5	+1.2
	baz=192						
Z51A	Franklin	5.03	116	P	Pn	22 29 53.8	+1.3
	baz=299						
N41A	Harden Midland	5.07	358	*e*Pn	Pn	22 29 54.6	+1.5
N41A	Harden Midland	5.07	358	P	Pn	22 29 54.4	+1.3
	baz=177,SNR=24						
V51A	Loudon	5.07	86	*e*Pn	Pn	22 29 55.1	+2.0
V51A	Loudon	5.07	86	P	Pn	22 29 54.7	+1.6
	baz=270						
Q48A	North Vernon	5.07	48	P	Pn	22 29 54.4	+1.3
	baz=231						
R49A	Shelbyville	5.08	57	P	Pn	22 29 54.7	+1.5
	baz=240,SNR=20						
250A	Grady	5.12	134	*e*Pn	Pn	22 29 59.7	+5.9
250A	Grady	5.12	134	P	Pn	22 29 54.9	+1.2
	baz=317						
349A	Repton	5.12	146	P	Pn	22 29 54.5	+0.6
	baz=328						
O45A	Potomac	5.13	25	P	Pn	22 29 55.3	+1.4
	baz=207						
P47A	Martinsville	5.15	40	P	Pn	22 29 55.3	+1.1
	baz=223,SNR=27						
NATX	Nacogdoches	5.15	223	*e*Pn	Pn	22 29 58.8	+4.5
NATX	Nacogdoches	5.15	223	P	Pn	22 29 56.0	+1.8
	baz=40						
N42A	Yates City	5.20	5	P	Pn	22 29 57.2	+2.4
	baz=185						
448A	Bay Minette	5.21	153	P	Pn	22 29 56.3	+1.2
	baz=335						
N40A	Mertquake, Sal	5.30	352	P	Pn	22 29 58.0	+1.8
	baz=171						
BRAL	Brewton	5.34	146	*e*Pb	Pb	22 30 14.1	+3.3
BRAL	Brewton	5.34	146	P	Pn	22 29 58.2	+1.4
	baz=328						
151A	Opelika	5.35	124	P	Pn	22 29 58.5	+1.6
	baz=307						
S50A	Richmond	5.37	66	P	Pn	22 29 59.4	+2.2
	baz=249						
U51A	La Follette	5.37	80	P	Pn	22 29 59.3	+2.0
	baz=264						
N43A	Stutzman Famil	5.41	11	P	Pn	22 29 59.5	+1.8
	baz=192						
W52A	Murphy	5.46	94	*e*Pn	Pn	22 29 59.7	+1.2
W52A	Murphy	5.46	94	P	Pn	22 29 59.6	+1.2
	baz=278						
SFIN	Lafayette	5.47	29	*e*Pb	Pb	22 30 12.4	-0.6
SFIN	Lafayette	5.47	29	P	Pn	22 30 00.4	+1.7
	baz=211						
350A	Dozier	5.50	139	P	Pn	22 30 00.1	+1.1
	baz=321						
N44A	Piper City	5.50	20	P	Pn	22 30 00.6	+1.6
	baz=201						
T51A	Gray	5.52	74	P	Pn	22 30 00.1	+0.8
	baz=258,SNR=11						
TKL	Tuckaleechee C	5.54	88	*e*Pn	Pn	22 30 01.4	+1.8
TKL				Sn	Sn	22 31 02.5	-0.3
TKL	Tuckaleechee C	5.54	88	Pn	Pn	22 30 01.0	+1.4
	3.3nm,0.3s,baz=266,slow=11,SNR=35						
TKL				Sn	Sn	22 31 02.5	-0.3
	8.0nm,0.3s,baz=260,slow=12,SNR=2.9						
TKL				Lg	Lg	22 31 24.4	
	9.2nm,0.3s,baz=104,slow=12,SNR=3.7						
251A	Midway	5.57	128	P	Pn	22 30 01.1	+1.2
	baz=311						
X52A	Dahlonega	5.57	99	P	Pn	22 30 01.1	+1.1
	baz=282						
P48A	Milroy	5.60	45	P	Pn	22 30 01.7	+1.4
	baz=228						
449A	Pace	5.62	149	P	Pn	22 30 01.5	+0.8
	baz=331						
Q49A	Aurora	5.64	52	P	Pn	22 30 02.0	+1.1
	baz=235						
Z52A	Williamson	5.65	114	P	Pn	22 30 02.1	+1.1
	baz=297						
Y52A	Lilburn	5.65	106	*e*Pn	Pn	22 30 02.2	+1.1
Y52A	Lilburn	5.65	106	P	Pn	22 30 01.8	+0.7
	baz=290						
R50A	Paris	5.66	60	P	Pn	22 30 02.7	+1.5
	baz=244						
V52A	Sevierville	5.68	86	*e*Pn	Pn	22 30 03.4	+1.8
V52A	Sevierville	5.68	86	P	Pn	22 30 02.7	+1.2
	baz=270,SNR=26						
152A	Waverly Hall	5.69	120	*e*Pn	Pn	22 30 04.0	+2.4
M41A	Milan	5.73	0	P	Pn	22 30 04.0	+1.8
	baz=180,SNR=11						
O47A	Sheridan	5.76	36	P	Pn	22 30 02.9	+0.3
	baz=218						
TZTN	Tazewell	5.76	79	P	Pn	22 30 04.2	+1.5
	baz=263						
M40A	Post Highland	5.81	353	P	Pn	22 30 04.3	+1.1
	baz=172						
M42A	Sheffield	5.84	6	P	Pn	22 30 05.7	+2.0
	baz=186						
KSU1	Kansas State U	5.92	308	*e*Pn	Pn	22 30 07.3	+2.5
KSU1	Kansas State U	5.92	308	P	Pn	22 30 06.6	+1.9
	baz=124						
M43A	Waltham Townsh	5.93	12	P	Pn	22 30 06.1	+1.3
	baz=193						
S51A	Beattyville	5.96	68	P	Pn	22 30 06.7	+1.3
	baz=252						
M39A	Webster	5.96	348	P	Pn	22 30 07.0	+1.6
	baz=167						
Y53A	Monroe	6.03	105	P	Pn	22 30 07.6	+1.3
	baz=289						
N46A	Monticello	6.06	29	P	Pn	22 30 07.6	+0.9
	baz=211						
P49A	Miami Univ. Ec	6.07	48	P	Pn	22 30 07.4	+0.6
	baz=232,SNR=15						
252A	Lumpkin	6.07	125	P	Pn	22 30 08.1	+1.2
	baz=308						
W53A	Cullowhee	6.07	92	P	Pn	22 30 08.1	+1.1
	baz=276						
X53A	Estanollee	6.07	99	P	Pn	22 30 08.0	+1.1
	baz=283						
M44A	Midewin, Midew	6.08	18	*e*Pn	Pn	22 30 11.8	+4.9
M44A	Midewin, Midew	6.08	18	P	Pn	22 30 08.3	+1.4
	baz=200						
Q50A	Georgetown	6.16	57	P	Pn	22 30 09.5	+1.5
	baz=240						
R51A	Hillsboro	6.20	63	P	Pn	22 30 10.5	+1.9
	baz=246,SNR=16						
Z53A	Monticello	6.25	110	P	Pn	22 30 10.5	+1.3
	baz=294						
GOGA	Godfrey	6.28	109	*e*Pn	Pn	22 30 17.1	+7.5
	25nm,0.5s						
GOGA	Godfrey	6.28	109	P	Pn	22 30 10.4	+0.7
	baz=293						
352A	Blakely	6.28	130	P	Pn	22 30 10.5	+0.8
	baz=313						
O48A	Farmland	6.29	41	P	Pn	22 30 10.3	+0.3
	baz=224						
T52A	Hallie	6.30	74	P	Pn	22 30 11.3	+1.3
	baz=259						
V53A	Saluda	6.32	87	*e*Pn	Pn	22 30 12.0	+1.6
V53A	Saluda	6.32	87	P	Pn	22 30 11.6	+1.3
	baz=272,SNR=23						
L42A	Oliver, Polo	6.40	6	*e*Pn	Pn	22 30 15.3	+4.0
L42A	Oliver, Polo	6.40	6	P	Pn	22 30 12.3	+1.0
	baz=186						
L41A	Preston	6.43	1	P	Pn	22 30 13.7	+1.9
	baz=180,SNR=9.0						
L40A	Anamosa	6.44	356	*e*Pn	Pn	22 30 13.3	+1.5
L40A	Anamosa	6.44	356	P	Pn	22 30 13.4	+1.5
	baz=175						
N47A	Urbana	6.49	35	P	Pn	22 30 12.5	-0.1
	baz=218						
U53A	Fall Branch	6.53	81	P	Pn	22 30 13.7	+0.5
	baz=266						
L39A	Vinton	6.57	351	P	Pn	22 30 15.0	+1.3
	baz=170						
SCIA	State Center	6.59	343	*e*Pn	Pn	22 30 16.7	+2.7
SCIA	State Center	6.59	343	P	Pn	22 30 15.6	+1.6
	baz=161						
T53A	Wise	6.63	76	P	Pn	22 30 15.2	+0.5
	baz=260						
Q51A	Peebles	6.68	57	*e*Pn	Pn	22 30 20.7	+5.5
P50A	Jamestown	6.68	52	P	Pn	22 30 15.9	+0.6
	baz=235						
O49A	Covington	6.71	46	*e*Pb	Pb	22 30 36.4	+2.3
WMOK	Wichita Mounta	6.78	265	*e*Pn	Pn	22 30 18.6	+2.0
WMOK	Wichita Mounta	6.78	265	P	Pn	22 30 17.8	+1.2
	baz=80						
WHTX	Lake Whitney,	6.78	240	*e*Pn	Pn	22 30 17.7	+1.1
WHTX	Lake Whitney,	6.78	240	P	Pn	22 30 17.6	+1.0
	baz=56						
N48A	Decatur	6.80	38	P	Pn	22 30 16.3	-0.6
	baz=221						
X54A	Belton	6.81	97	P	Pn	22 30 18.1	+1.0
	baz=282						
W54A	Cherokee Point	6.88	92	P	Pn	22 30 19.2	+1.3
	baz=277						
154A	Montrose	6.89	114	*e*Pb	Pb	22 30 40.8	+3.7
K41A	Shullsburg	6.96	2	P	Pn	22 30 20.7	+1.6
	baz=182						
V54A	Nebo	7.02	86	P	Pn	22 30 20.8	+0.8
	baz=271						
K40A	Colesburg	7.07	357	P	Pn	22 30 22.9	+2.4
	baz=176						
453A	Whigham	7.09	131	*e*Pb	Pb	22 30 43.4	+2.9
S53A	Williamson	7.09	71	P	Pn	22 30 21.9	+1.0
	baz=256						
P51A	Williamsport	7.10	55	*e*Pb	Pb	22 30 42.5	+1.9
O50A	Cable	7.11	49	P	Pn	22 30 21.6	+0.5
	baz=233						
K39A	Oelwein	7.13	352	P	Pn	22 30 22.5	+1.1
	baz=171						
L46A	Eue Claire	7.19	26	P	Pn	22 30 23.2	+1.0
	baz=209						
K42A	Prairie Point,	7.20	7	P	Pn	22 30 23.7	+1.4
	baz=188						
PAULI	Pauline	7.22	94	*e*Pn	Pn	22 30 24.8	+2.2
K43A	Burlington	7.27	13	*e*Pb	Pb	22 30 45.8	+2.2
JFWS	Jewell Farm	7.27	2	*e*Pn	Pn	22 30 25.4	+2.1
JFWS	Jewell Farm	7.27	2	P	Pn	22 30 24.9	+1.6
	baz=182						
N49A	Columbus Grove	7.29	42	*e*Pn	Pn	22 30 26.6	+3.0
N49A	Columbus Grove	7.29	42	P	Pn	22 30 25.3	+1.7
	baz=225						
155A	Kite	7.37	112	P	Pn	22 30 24.6	0.0
	baz=296						
T54A	Tazewell	7.40	76	P	Pn	22 30 25.9	+0.7
	baz=261						
Q52A	Bidwell	7.41	61	P	Pn	22 30 26.9	+1.7
	baz=246						
M48A	Edgerton	7.43	36	P	Pn	22 30 27.6	+2.2
	baz=220						
X55A	Gracelyn & Ava	7.43	96	P	Pn	22 30 26.7	+1.3
	baz=282						
KMSC	Kings Mountain	7.57	91	*e*Pn	Pn	22 30 28.2	+0.8
KMSC	Kings Mountain	7.57	91	P	Pn	22 30 28.2	+0.8
	baz=276						
435B	Jarrell	7.61	232	*e*Pn	Pn	22 30 33.3	+5.3
435B	Jarrell	7.61	232	P	Pn	22 30 29.0	+1.0
	baz=49						
V55A	Taylorsville	7.62	86	P	Pn	22 30 29.1	+1.0
	baz=271						
255A	Hazlehurst	7.69	116	P	Pn	22 30 28.7	-0.4
	baz=301						
J41A	Loganville	7.73	3	P	Pn	22 30 31.7	+2.0
	baz=183						
J39A	Decorah	7.74	354	P	Pn	22 30 30.9	+1.2
	baz=173						
355A	Pearson	7.74	121	P	Pn	22 30 30.1	+0.3
	baz=306						
O51A	Pataskala	7.75	52	P	Pn	22 30 31.2	+1.4
	baz=237						
J40A	Soldiers Grove	7.75	359	P	Pn	22 30 31.2	+1.3
	baz=179						
J42A	Columbus	7.75	8	P	Pn	22 30 31.8	+1.9
	baz=189						
U55A	TA2, Sparta	7.77	81	P	Pn	22 30 30.6	+0.4
	baz=266						
N50A	Nevada	7.78	47	P	Pn	22 30 31.3	+1.1
	baz=231						
M49A	Liberty Center	7.79	40	P	Pn	22 30 32.3	+1.9
	baz=223						
P52A	Corning	7.80	57	P	Pn	22 30 31.8	+1.2
	baz=242						
X56A	White Oak	7.91	96	P	Pn	22 30 33.8	+1.7
	baz=281						
J43A	Natural Harves	7.91	12	P	Pn	22 30 33.7	+1.6
	baz=193						
L48A	N Adams	7.92	35	P	Pn	22 30 32.8	+0.6
	baz=219						
CBKS	Cedar Bluff	7.96	296	*e*Pn	Pn	22 30 34.1	+1.2
CBKS	Cedar Bluff	7.96	296	P	Pn	22 30 33.9	+1.0
	baz=111						
R54A	Victor	8.09	69	P	Pn	22 30 35.1	+0.5
	baz=254						
ABTX	Abilene, Hawle	8.09	251	*e*Pn	Pn	22 30 38.8	+4.2
ABTX	Abilene, Hawle	8.09	251	P	Pn	22 30 35.8	+1.1
	baz=66						
O52A	Adamsville	8.23	54	*e*Pb	Pb	22 31 05.6	+5.6
O52A	Adamsville	8.23	54	P	Pn	22 30 36.5	0.0
	baz=240						
I39A	Houston	8.24	355	*e*Pn	Pn	22 30 39.4	+2.8
I39A	Houston	8.24	355	P	Pn	22 30 37.6	+1.0
	baz=174						
I40A	Norwalk	8.24	360	P	Pn	22 30 37.4	+0.8
	baz=180						
P53A	Whipple	8.25	59	*e*Pn	Pn	22 30 39.2	+2.5
P53A	Whipple	8.25	59	P	Pn	22 30 37.6	+0.9
	baz=245						
N51A	Ashland	8.33	48	P	Pn	22 30 38.4	+0.6
	baz=233						
BLA	Blacksburg	8.34	76	P	Pn	22 30 38.3	+0.3
	baz=262						
I42A	Draeger Farm,	8.34	8	*e*Pn	Pn	22 30 41.2	+3.2
I42A	Draeger Farm,	8.34	8	P	Pn	22 30 40.2	+2.2
	baz=189						
L49A	Milan	8.36	37	P	Pn	22 30 40.0	+1.7
	baz=221						
I41A	Arkdale	8.43	3	*e*Pn	Pn	22 30 42.5	+3.3
I41A	Arkdale	8.43	3	P	Pn	22 30 40.5	+1.3
	baz=184						
I43A	Langenfeld Bro	8.45	12	P	Pn	22 30 40.5	+1.1
	baz=193						
Q54A	Coxs Mills	8.45	64	P	Pn	22 30 41.0	+1.5
	baz=250						
AAM	Ann Arbor	8.56	37	*e*Pn	Pn	22 30 42.8	+1.9
AAM	Ann Arbor	8.56	37	P	Pn	22 30 42.9	+1.9
	baz=221						
X57A	Johnson Farm,	8.68	95	P	Pn	22 30 43.0	+0.4
	baz=281						
N52A	McGinn’s Farm,	8.70	51	P	Pn	22 30 43.3	+0.4
	baz=236						
O53A	New Philadelph	8.71	55	P	Pn	22 30 43.9	+0.8
	baz=241						
K48A	Perry	8.73	33	P	Pn	22 30 43.7	+0.3
	baz=217						
257A	Skidaway Islan	8.75	112	P	Pn	22 30 45.0	+1.5
	baz=297						
R55A	Marlinton	8.78	69	P	Pn	22 30 46.4	+2.4
	baz=256						
J47A	Sunmer	8.80	29	P	Pn	22 30 45.5	+1.3
	baz=212						
L50A	Kingsville	8.81	41	P	Pn	22 30 45.9	+1.5
	baz=226						
H40A	Chili	8.98	1	P	Pn	22 30 48.4	+1.7
	baz=181						
H42A	Shiocton	9.00	9	P	Pn	22 30 49.1	+2.1
	baz=190						
K49A	Clarkson	9.02	36	P	Pn	22 30 48.0	+0.6
	baz=220						
H39A	Augusta	9.05	357	P	Pn	22 30 48.1	+0.4
	baz=176						
H43A	Windswept, Lux	9.08	13	P	Pn	22 30 49.8	+1.7
	baz=194						
AMTX	Amarillo	9.11	268	*e*Pn	Pn	22 30 50.5	+1.8
AMTX	Amarillo	9.11	268	P	Pn	22 30 49.8	+1.1
	baz=82						
H38A	Maiden Rock	9.12	352	P	Pn	22 30 50.7	+2.0
	baz=171						
I46A	Reed City	9.18	24	P	Pn	22 30 49.0	-0.5
	baz=207						
N53A	Lisbon	9.24	53	P	Pn	22 30 51.6	+1.3
	baz=239						
O54A	Avella	9.25	58	P	Pn	22 30 50.9	+0.4
	baz=244						
X58A	Rowland	9.27	93	P	Pn	22 30 51.4	+0.6
	baz=280						
JCT	Junction City	9.29	239	*e*Pn	Pn	22 30 55.0	+3.9
JCT	Junction City	9.29	239	P	Pn	22 30 51.6	+0.5
	baz=54						
M52A	Chesterland	9.32	48	P	Pn	22 30 52.1	+0.7
	baz=234						
ECSD	EROS Data Cent	9.33	332	*e*Pn	Pn	22 30 53.5	+1.9
ECSD	EROS Data Cent	9.33	332	P	Pn	22 30 52.8	+1.3
	baz=148						
P55A	Reedsville	9.37	62	P	Pn	22 30 52.5	+0.4
	baz=249						
G38A	Ridgeland	9.57	355	P	Pn	22 30 56.6	+1.7
	baz=174						
I47A	Gladwin	9.58	27	P	Pn	22 30 55.1	+0.1
	baz=211						
J49A	Marlette	9.62	34	P	Pn	22 30 56.3	+0.8
	baz=219						
G40A	Rib Lake	9.63	2	*e*Pn	Pn	22 30 58.5	+2.9
G40A	Rib Lake	9.63	2	P	Pn	22 30 57.1	+1.4
	baz=182						
G39A	Holcombe	9.65	358	P	Pn	22 30 57.7	+1.8
	baz=177						
M53A	WI Miller and	9.68	50	P	Pn	22 30 57.2	+0.9
	baz=236						
G42A	Mountain	9.73	9	*e*Pn	Pn	22 30 59.8	+2.7
G42A	Mountain	9.73	9	P	Pn	22 30 57.9	+0.8
	baz=190						
H46A	Fife Lake	9.80	23	P	Pn	22 30 59.3	+1.4
	baz=206						
757A	Oxford	9.82	130	P	Pn	22 30 58.6	+0.4
	baz=315						
G43A	Wallace	9.86	12	*e*Pn	Pn	22 30 59.3	+0.5
G43A	Wallace	9.86	12	P	Pn	22 30 59.1	+0.3
	baz=194						
X59A	McDuffie Farm,	9.87	93	P	Pn	22 31 00.6	+1.7
	baz=280						
N54A	Moraine State	9.87	54	P	Pn	22 31 00.6	+1.6
	baz=241						
O55A	Ligonier	10.01	60	P	Pn	22 31 02.3	+1.5
	baz=246						
G45A	Suttons Bay	10.11	20	P	Pn	22 31 03.7	+1.5
	baz=203						
F41A	Three Lakes	10.15	6	*e*Pn	Pn	22 31 03.7	+0.9
F41A	Three Lakes	10.15	6	P	Pn	22 31 03.7	+0.9
	baz=187						
MSTX	Muleshoe	10.16	264	*e*Pn	Pn	22 31 07.8	+4.6
MSTX	Muleshoe	10.16	264	P	Pn	22 31 03.3	+0.1
	baz=77						
KSCO	Kaye Shedlock’	10.17	293	*e*Pn	Pn	22 31 04.3	+1.1
KSCO	Kaye Shedlock’	10.17	293	P	Pn	22 31 03.2	0.0
	baz=106						
H47A	Mio	10.19	27	P	Pn	22 31 03.3	0.0
	baz=210						
GLMI	Grayling	10.24	25	P	Pn	22 31 04.3	+0.3
	baz=208						
F39A	Loretta	10.27	359	P	Pn	22 31 06.2	+1.8
	baz=178						
F40A	Park Falls	10.28	2	P	Pn	22 31 06.5	+1.9
	baz=182,SNR=11						
M54A	Oil Creek Stat	10.36	52	P	Pn	22 31 07.1	+1.4
	baz=239						
F38A	Pierce - Schro	10.36	355	P	Pn	22 31 07.5	+1.8
	baz=174						
ELFO	Elginfield	10.40	41	P	Pn	22 31 06.6	+0.4
	baz=226						
OGNE	Ogallala	10.44	304	P	Pn	22 31 07.8	+0.9
	baz=117						
833A	Chaparral WMA,	10.45	228	P	Pn	22 31 08.4	+1.6
	baz=44						
R58B	Mineral	10.45	73	P	Pn	22 31 07.9	+1.1
	baz=261						
N55A	Marion Center	10.46	57	P	Pn	22 31 08.5	+1.4
	baz=244						
F43A	Flat Rock, Esc	10.51	13	P	Pn	22 31 08.0	+0.4
	baz=195						
COWI	Conover	10.51	6	*e*Pn	Pn	22 31 11.7	+3.9
O56A	Blue Knob Stat	10.55	60	P	Pn	22 31 09.1	+0.8
	baz=248						
G46A	Petoskey	10.60	22	P	Pn	22 31 08.6	-0.3
	baz=206						
E39A	Mellen	10.73	0	P	Pn	22 31 12.2	+1.5
	baz=180						
F45A	CMU Biological	10.74	19	P	Pn	22 31 11.8	+0.9
	baz=202						
F44A	Big Bay de Noc	10.79	16	P	Pn	22 31 11.8	+0.2
	baz=198						
BASO	Ashfield	10.81	37	P	Pn	22 31 12.9	+1.1
	baz=222						
E40A	Wakefield	10.81	3	P	Pn	22 31 13.3	+1.5
	baz=183						
G47A	Hillman	10.81	26	P	Pn	22 31 10.7	-1.1
	baz=210						
E41A	Kenton	10.89	6	P	Pn	22 31 14.5	+1.7
	baz=187						
E42A	Champion	10.97	10	P	Pn	22 31 13.9	-0.1
	baz=191						
E38A	The Farm, Brul	10.98	356	*e*Pn	Pn	22 31 16.1	+1.9
E38A	The Farm, Brul	10.98	356	P	Pn	22 31 14.3	+0.1
	baz=176						
E43A	Lone Tree Farm	11.06	13	*e*Pn	Pn	22 31 14.7	-0.5
E43A	Lone Tree Farm	11.06	13	P	Pn	22 31 14.6	-0.7
	baz=195						
E45A	Wooded Hills,	11.46	19	P	Pn	22 31 20.7	0.0
	baz=202						
E44A	Grand Marais A	11.52	16	*e*Pn	Pn	22 31 25.5	+4.0
E46A	Sault Ste Mari	11.71	22	P	Pn	22 31 24.8	+0.6
	baz=206						
Q24A	Divide	12.07	290	P	Pn	22 31 28.8	-0.6
	baz=102						
SDCO	Great Sand Dun	12.16	284	*e*Pn	Pn	22 31 31.2	+0.6
SDCO	Great Sand Dun	12.16	284	P	Pn	22 31 31.2	+0.6
	baz=96						
D46A	Sault St. Mari	12.27	22	P	Pn	22 31 31.6	-0.2
	baz=206						
C40A	Isle Royale Na	12.31	5	P	Pn	22 31 33.8	+1.5
	baz=185						
EYMN	Ely	12.32	357	*e*Pn	Pn	22 31 32.3	-0.1
EYMN	Ely	12.32	357	P	Pn	22 31 31.5	-1.0
	baz=176						
KLBO	Killbear Provi	12.50	36	P	Pn	22 31 33.7	-1.1
	baz=222						
E48A	Lockeyer	12.55	28	P	Pn	22 31 33.4	-2.2
	baz=213						
ISCO	Idaho Springs	12.61	294	*e*Pn	Pn	22 31 36.4	-0.3
ISCO	Idaho Springs	12.61	294	P	Pn	22 31 36.1	-0.6
	baz=105						
SADO	Sadowa	12.62	40	Pn	Pn	22 31 33.6	-3.0
	0.7nm,0.3s,baz=261,slow=14,SNR=5.3						
SADO				Sn	Sn	22 33 49.7	-7.0
	0.7nm,0.3s,baz=272,slow=20,SNR=3.3						
SADO				Lg	Lg	22 35 02.3	
	1.1nm,0.3s,baz=272,slow=5.1,SNR=2.2						
TX31	Lajitas Ar. Si	12.71	244	*e*Pn	Pn	22 31 37.4	-0.5

TXAR	Lajitas Array	12.71	244	Pn	Pn	22 31 37.2	-0.7
	0.2nm,0.3s,baz=61,slow=11,SNR=11						
TXAR				Sn	Sn	22 33 53.3	-5.7
	0.3nm,0.3s,baz=43,slow=14,SNR=3.7						
MNTX	Cornudas Mount	12.94	257	*e*Pn	Pn	22 31 40.7	-0.3
MNTX	Cornudas Mount	12.94	257	P	Pn	22 31 40.4	-0.6
	baz=68						
ANMO	Albuquerque	12.99	272	Lg	Lg	22 35 29.0	
	0.4nm,0.3s,baz=306,slow=19,SNR=4.3						
F51A	Arnstein	13.06	35	P	Pn	22 31 40.5	-2.1
	baz=222						
BINY	Binghamton	13.11	56	P	Pn	22 31 42.8	-0.4
	baz=245						
G53A	Haliburton	13.13	40	P	Pn	22 31 41.5	-2.1
	baz=228						
N23A	Red Feather La	13.16	298	*e*Pn	Pn	22 31 44.5	+0.3
N23A	Red Feather La	13.16	298	P	Pn	22 31 43.9	-0.3
	baz=109						
S22A	4UR Ranch, Cre	13.21	284	P	Pn	22 31 45.5	+0.5
	baz=94						
AGMN	Agassiz Nation	13.24	344	P	Pn	22 31 45.4	+0.4
	baz=161						
E52A	Mattawa	13.92	37	P	Pn	22 31 53.2	-1.1
	baz=224						
MDND	Maddock	13.92	334	*e*Pn	Pn	22 31 55.0	+0.6
MDND	Maddock	13.92	334	P	Pn	22 31 54.4	0.0
	baz=148						
ALGO	Algonquin Park	13.99	39	P	Pn	22 31 52.7	-2.6
	baz=227						
E53A	Dumoine, Ponti	14.48	38	P	Pn	22 31 59.0	-2.9
	baz=226						
E54A	Lac Daplat, Po	14.76	39	P	Pn	22 32 02.7	-3.1
	baz=228						
D53A	Lac Vacive, Po	14.95	36	P	Pn	22 32 05.6	-2.7
	baz=224						
ULM	Lac du Bonnet	15.11	347	*e*Pn	Pn	22 32 10.0	-0.4
ULM	Lac du Bonnet	15.11	347	Pn	Pn	22 32 06.2	-4.1
	1.0nm,0.3s,baz=170,slow=12,SNR=13						
ULM				Sn	Sn	22 34 44.1	-13
	0.5nm,0.3s,baz=168,slow=20,SNR=2.4						
ULM				Lg	Lg	22 36 22.4	
	0.3nm,0.3s,baz=290,slow=15,SNR=1.7						
TRQ	Mont Tremblant	16.05	44	*e*Pn	Pn	22 32 22.7	0.0
PDAR	Pinedale Array	16.33	302	Pn	Pn	22 32 25.7	-0.8
	0.2nm,0.3s,baz=105,slow=13,SNR=5.3						
PDAR				Sn	Sn	22 35 23.1	-4.3
	0.1nm,0.3s,baz=87,slow=19,SNR=2.5						
PDAR				Lg	Lg	22 37 02.9	
	0.2nm,0.3s,baz=97,slow=16,SNR=2.6						
MATQ	Matagami	16.98	30	P	Pn	22 32 31.3	-3.2
	baz=218						
GCMT	Greycliff	17.63	311	*e*Pn	Pn	22 32 43.2	+0.4
APG	El Apazote	20.55	180	P	Pn	22 33 19.2	+1.1
	7.6nm,0.8s,baz=345,slow=17,SNR=11						
FCC	Fort Churchill	23.25	355	*e*P	P	22 33 49.8	+5.7
YKA	Yellowknife Ar	30.78	338	P	P	22 34 53.5	+1.4
	0.1nm,0.4s,baz=142,slow=9.2,SNR=3.1						
ILAR	Eielson Array	44.13	329	P	P	22 36 47.2	+2.1
	0.6nm,0.8s,baz=94,slow=7.2,SNR=3.7						
FINES	FINESS Array B	70.54	27	P	P	22 39 51.6	+0.1
	1.2nm,1.0s,baz=302,slow=8.1,SNR=2.3						

IDC 23 22:43:50.6±2.4, 2°.01N×127°.19E, h0^{km}, mb3.0/3, mb1 3.3/3, mb1mx3.1/36, mbtmp3.0/3, Error ellipse: s-maj=180.1km s-min=29.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.92	163	P	P	22 48 55.6	-0.8
	0.3nm,0.4s,baz=341,slow=12,SNR=2.2						
ASAR	Alice Springs	26.35	166	P	P	22 49 29.6	+1.0
	0.5nm,1.0s,baz=347,slow=13,SNR=1.9						
MKAR	Makanchi Array	59.22	326	P	P	22 53 53.5	-0.3
	0.1nm,0.6s,baz=128,slow=6.2,SNR=1.3						

DJA 23 23:07:16.7±0.8, 9°S±4°×11°0E±°, h11^{km}±5^{km}, M4.2/10, MLv4.2/10, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	1.34	36	P	Pn	23 07 39.5	-1.8
PCJI				S	Sb	23 07 57.2	-1.8
UGM	Wanagama	1.38	6	P	Pn	23 07 40.8	-1.1
UGM				S	Sn	23 08 00.5	+0.4
WOJI	Wonogiri, Jawa	1.54	20	P	Pn	23 07 43.7	-0.4
WOJI				S	Sn	23 08 03.9	-0.1
PWJI	Pagerwojo	1.88	48	P	Pn	23 07 47.9	-0.9
PWJI				S	Sn	23 08 09.8	-2.8
NGJI	Ngawi	2.18	29	P	Pb	23 07 55.5	-0.8
NGJI				S	Sn	23 08 21.0	+1.0
SMRI	Semarang	2.23	1	P	Pn	23 07 54.5	+0.9
SMRI				S	Sn	23 08 21.6	+0.5
KPJI	Karang Pucung	2.42	323	P	Pn	23 07 56.1	-0.2
KPJI				S	Sn	23 08 27.4	+1.5
CMJI	Cimerak	2.44	308	P	Pn	23 07 55.9	-0.5
CMJI				S	Sn	23 08 24.4	-1.8
CISI	Cisompet, Garu	3.08	304	P	Pn	23 08 04.7	-0.6
CISI				S	Sn	23 08 42.3	+0.1
JAGI	Jajag, Banyuwa	3.81	78	P	Pn	23 08 16.5	+1.2
JAGI				S	Sn	23 09 00.7	+0.6

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*IDC **23** 23:12:28.8±1.1, 38°.67N×55°.50E, h0^{km}, mb3.7/10, mb1 3.9/17, mb1mx3.7/52, mbtmp3.9/17, ML3.5/5, MS3.2/9, Ms1 3.3/9, ms1mx3.0/53, Error ellipse: s-maj=22.2km s-min=8.5km az=7.0*

*NNC **23** 23:12:28.6±3.4, 39°.18N×55°.61E, h0^{km}, mb4.5, mpv4.5, Error ellipse: s-maj=36.6km s-min=16.3km az=65.0*

*ISCJB **23** 23:12:30.8±0.2, 39°.01N±0°.02×55°.63E±0°.02, h10^{km}, mb3.9/13, MS3.4/7, Error ellipse: s-maj=3.6km s-min=2.3km az=34.4*

*THR **23** 23:12:31.4, 39°.07N×55°.76E, h27^{km}, ML4.3*

*TEH **23** 23:12:32.4, 38°.95N×55°.73E, h20^{km}, ML4.3*

*MOS **23** 23:12:34.6±1.3, 39°.01N×55°.52E, h33^{km}, mb4.1/13, Error ellipse: s-maj=8.4km s-min=5.3km az=41.7*

*AZER **23** 23:12:40.9±0.7, 38°.92N×55°.04E, h197^{km}±13^{km}, ml4.4/12, Error ellipse: s-maj=9.3km s-min=8.4km az=6.0*

ISC 23 23:12:32.3±0.5, 39°.04N±0°.04×55°.69E±0°.04, h10^{km}, n195, σ2^{s}.26/223, mb4.0/13, MS3.3/7, 57C-31D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	1.42	167	*e*Pg	Pb	23 12 57.3	-1.5
MRVT	Maraveh tapeh	1.42	167	*e*Pg	Pb	23 12 57.3	-1.5
GEYT	Alibeck	2.21	119	Pn	Pn	23 13 07.5	-1.5
	14nm,0.3s,baz=302,slow=16,SNR=95						
GEYT				Lg	Lg	23 13 38.8	
	48nm,0.3s,baz=305,slow=21,SNR=11						
GYA0B	ALIBECK ARRAY	2.21	119	⇓Pn	Pn	23 13 08.2	-0.8
	227nm,0.7s						
GYA0B				⇑Lg	Lg	23 13 41.7	
	3μm,0.9s						
IEMG	Emamgholi	2.84	124	*e*Pn	Pn	23 13 16.9	-1.1
IEMG				IAMB	IAmb	23 14 09.8	
	comp=Z,12μm,0.8s						
SBZV	Sabzevar	3.06	150	*e*Pn	Pn	23 13 20.1	-0.8
SBZV				IAMB	IAmb	23 14 14.4	
	comp=Z,0.0nm,1.5s						
SHRO	Shahrood	3.06	175	*e*Pn	Pn	23 13 20.3	-0.5
SHRO	Shahrood	3.06	175	*e*Pn	Pn	23 13 20.2	-0.5
IKRD	Kardeh	3.18	134	*e*Pn	Pb	23 13 29.4	+0.4
IKRD				IAMB	IAmb	23 14 58.1	
	comp=Z,4μm,0.8s						
IAKL	Akhelmad	3.44	134	*e*Pn	Pn	23 13 26.1	-0.1
IAKL				IAMB	IAmb	23 14 35.0	
	comp=Z,4μm,0.7s						
IPAY	Payeh	3.68	134	*e*Pn	Pn	23 13 28.8	-0.7
IPAY				IAMB	IAmb	23 14 41.4	
	comp=Z,3μm,1.0s						
IALA	Alasht	3.74	219	*e*Pn	Pn	23 13 29.8	-0.5
IALA				IAMB	IAmb	23 14 16.1	
	comp=Z,8μm,0.3s						
ISHM	Shahmirzad	3.75	211	*e*Pn	Pn	23 13 30.6	+0.1
ISHM				IAMB	IAmb	23 14 21.2	
	comp=Z,11μm,0.4s						
IANJ	Anjilo	3.84	202	*e*Pn	Pn	23 13 31.8	+0.2
IANJ				IAMB	IAmb	23 14 22.2	
	comp=Z,3μm,0.4s						
IPRN	Peran	3.86	225	*e*Pn	Pn	23 13 31.7	-0.1
IPRN				IAMB	IAmb	23 14 21.4	
	comp=Z,9μm,0.5s						
IMYA	Miami	4.42	126	*e*Pn	Pn	23 13 39.1	-0.4
IMYA				IAMB	IAmb	23 15 22.4	
	comp=Z,3μm,0.7s						
GALA	Gala	4.48	289	*e*Pn	Pn	23 13 42.6	+2.5
GALA	Gala	4.48	289	⇑P	Pn	23 13 42.7	+2.5
GALA				⇓S	Sn	23 14 32.3	0.0
IDMV	Damavand	4.52	221	*e*Pn	Pn	23 13 42.0	+0.9
IDMV				IAMB	IAmb	23 14 09.9	
	comp=Z,1μm,0.6s						
NDR	Nardaran	4.65	291	*e*Pn	Pn	23 13 44.9	+2.4
NDR	Nardaran	4.65	291	⇓P	Pn	23 13 44.9	+2.4
NDR				⇑S	Sn	23 14 36.4	-0.2
GOBA	Gobu	4.79	288	*e*Pn	Pn	23 13 46.9	+2.5
GOBA	Gobu	4.79	288	⇑P	Pn	23 13 46.9	+2.5
GOBA				⇑S	Sn	23 14 39.2	-0.7
CHTH	Charan	4.79	231	*e*Pn	Pn	23 13 45.0	+0.3
CHTH	Charan	4.79	231	*e*Pn	Pn	23 13 45.0	+0.3
JRKH	Jarkhoshk	4.85	129	*e*Pn	Pn	23 13 44.3	-1.1
JRKH				IAMB	IAmb	23 15 19.4	
	comp=Z,0.0nm,1.4s						
THKV	Tehran--Karaj	4.94	232	*e*Pn	Pn	23 13 47.0	+0.3
THKV	Tehran--Karaj	4.94	232	*e*AML	AML	23 14 46.9	
	comp=N,180nm,0.4s						
THKV	Tehran--Karaj	4.94	232	*e*Pn	Pn	23 13 47.0	+0.3
TNSJ	Nastanj	5.12	171	*e*Pn	Pn	23 13 49.1	-0.1
ALIB	Äli-Bayra	5.25	282	⇑S	Sn	23 14 48.7	-2.6
LKRN	Lenkeran, Azer	5.40	269	P	Pn	23 13 53.2	+0.4
LKRN	Lenkeran, Azer	5.40	269	*e*Pn	Pn	23 13 53.2	+0.4
LKRN	Lenkeran, Azer	5.40	269	⇑P	Pn	23 13 53.3	+0.4
	SNR=6.1						
LKRN				⇑S	Sn	23 14 51.2	-3.9
GBS	Qobustan	5.41	288	*e*Pn	Pn	23 13 55.1	+2.1
GBS	Qobustan	5.41	288	⇓P	Pn	23 13 55.2	+2.1
	SNR=3.6						
GBS				⇓S	Sn	23 14 53.4	-1.9
ASTR	Astara	5.41	267	*e*Pn	Pn	23 13 52.9	0.0
ASTR	Astara	5.41	267	⇑P	Pn	23 13 53.0	0.0
	SNR=10						
ASTR				⇓S	Sn	23 14 51.4	-3.9
ISFB	Sefidab	5.44	212	*e*Pn	Pn	23 13 53.1	-0.4
ISFB				IAMB	IAmb	23 14 21.5	
	comp=Z,342nm,0.5s						
TABS	Tabas	5.50	167	*e*Pn	Pn	23 13 54.0	-0.4
TABS	Tabas	5.50	167	*e*Pn	Pn	23 13 54.0	-0.4
TKDS	Koohdasht(Taba	5.54	168	*e*Pn	Pn	23 13 54.9	0.0
SIZA	Siyzn	5.59	293	*e*Pn	Pn	23 13 57.2	+1.7
SIZA	Siyzn	5.59	293	⇓P	Pn	23 13 57.2	+1.7
	SNR=5.0						
SIZA				⇓S	Sn	23 14 58.2	-1.7
GLBA	Clilabad	5.68	274	*e*Pn	Pn	23 13 57.7	+1.1
GLBA	Clilabad	5.68	274	⇑P	Pn	23 13 57.8	+1.1
	SNR=8.8						
GLBA				⇑S	Sn	23 14 58.2	-3.7
SAAT	Saatly	5.68	281	*e*Pn	Pn	23 13 59.4	+2.7
SAAT	Saatly	5.68	281	⇑P	Pn	23 13 59.4	+2.7
SAAT				⇑S	Sn	23 15 00.4	-1.6
PQL	Pirkuli	5.73	290	*e*Pn	Pn	23 13 58.8	+1.3
PQL	Pirkuli	5.73	290	⇑P	Pn	23 13 58.9	+1.3
	SNR=15						
PQL				⇓S	Sn	23 15 00.9	-2.4
LRK	Lerik	5.75	268	*e*Pn	Pn	23 13 57.6	-0.2
LRK	Lerik	5.75	268	⇓P	Pn	23 13 57.6	-0.2
	SNR=30						
LRK				⇑S	Sn	23 14 59.2	-4.7
KRSH	Karshahi	5.81	211	*e*Pn	Pn	23 13 58.3	-0.4
KRSH				IAMB	IAmb	23 15 24.1	
	comp=Z,0.0nm,1.2s						
KDMR	Kurdemir	5.94	285	*e*Pn	Pn	23 14 02.2	+2.0
KDMR	Kurdemir	5.94	285	⇑P	Pn	23 14 02.2	+2.0
KDMR				⇓S	Sn	23 15 05.4	-2.9
QUBA	Quba, Azerbaij	5.97	295	⇓P	Pn	23 14 01.9	+1.1
	SNR=3.5						
QUBA				⇑S	Sn	23 15 07.3	-1.9
ZNJK	Zanjan	6.03	249	*e*Pn	Pn	23 14 02.0	+0.3
ZNJK	Zanjan	6.03	249	*e*Pn	Pn	23 14 02.0	+0.3
IML	Ismayilli	6.03	289	*e*Pn	Pn	23 14 03.2	+1.6
IML	Ismayilli	6.03	289	⇑P	Pn	23 14 03.2	+1.6
	SNR=8.4						
IML				⇓S	Sn	23 15 08.1	-2.6
ANAR	Anarak	6.05	196	*e*Pn	Pn	23 14 01.0	-1.0
TPRV	Parvadeh(Tabas	6.06	172	*e*Pn	Pn	23 14 01.8	-0.2
QUB	Quba	6.08	295	*e*Pn	Pn	23 14 01.9	-0.3
XNQ	Khinaliq	6.17	293	*e*Pn	Pn	23 14 04.6	+1.1
XNQ	Khinaliq	6.17	293	⇑P	Pn	23 14 04.7	+1.1
	SNR=12						
XNQ				⇓S	Sn	23 15 11.5	-2.7
QSAR	Qusar	6.19	296	*e*Pn	Pn	23 14 04.5	+0.8
QSAR	Qusar	6.19	296	⇓P	Pn	23 14 04.6	+0.8
QSAR				⇓S	Sn	23 15 12.4	-2.3
ZRD	Zardab	6.30	284	*e*Pn	Pn	23 14 06.7	+1.6
ZRD	Zardab	6.30	284	⇑P	Pn	23 14 06.8	+1.6
ZRD				⇓S	Sn	23 15 13.4	-3.8
QBL	Gabala	6.32	290	*e*Pn	Pn	23 14 06.9	+1.3
QBL	Gabala	6.32	290	⇓P	Pn	23 14 06.9	+1.3
	SNR=13						
SHRT	Shahrakht	6.54	144	*e*Pn	Pn	23 14 08.0	-0.6
SHRT	Shahrakht	6.54	144	*e*Pn	Pn	23 14 08.0	-0.6
AKT	Akhty	6.56	294	*i* P	Pn	23 14 09.8	+1.0
AKT	Akhty	6.56	294	*e*Pn	Pn	23 14 09.8	+1.0
ITEG	Tejag	6.62	157	IAMB	IAmb	23 14 22.0	
	comp=Z,466nm,0.4s						
ITEG				*e*Pn	Pn	23 14 09.6	-0.1
BRDA	Brd	6.68	283	⇑S	Sn	23 15 21.9	-4.6
YZKH	Yazd	6.70	188	*e*Pn	Pn	23 14 10.8	0.0
YZKH	Yazd	6.70	188	*e*Pn	Pn	23 14 10.8	0.0
IZEF	Zefreh	6.71	205	*e*Pn	Pn	23 14 10.9	-0.2
IZEF				IAMB	IAmb	23 14 58.0	
	comp=Z,137nm,0.6s						
MNGR	Mingechevir, A	6.84	287	P	Pn	23 14 13.5	+1.0
MNGR	Mingechevir, A	6.84	287	*e*Pn	Pn	23 14 13.5	+1.0
MNGR	Mingechevir, A	6.84	287	⇓P	Pn	23 14 13.6	+1.0
MNGR				⇑S	Sn	23 15 26.5	-3.9
SEKA	Sheki	6.86	291	P	Pn	23 14 12.6	-0.3
SEKA	Sheki	6.86	291	*e*Pn	Pn	23 14 12.6	-0.3
SEKA	Sheki	6.86	291	⇑P	Pn	23 14 12.7	-0.3
	SNR=21						
SEKA				⇑S	Sn	23 15 25.6	-5.4
ICHK	Chekchek	6.86	189	*e*Pn	Pn	23 14 12.9	-0.3
ICHK				IAMB	IAmb	23 14 18.6	
	comp=Z,506nm,0.4s						
ISAD	Sadrabad	7.30	194	*e*Pn	Pn	23 14 18.4	-0.8
MAK	Makhachkala	7.32	305	*e*P	Pn	23 14 21.7	+2.5
MAK				*e*S	Sn	23 15 46.2	+3.9
MAK				pmax	pmax		
	comp=Z,138nm,0.8s						
MAK				MLR	MLR		
	comp=Z,282nm,15.0s						
GANJ	Ganja	7.38	285	P	Pn	23 14 20.3	+0.2
GANJ	Ganja	7.38	285	*e*Pn	Pn	23 14 20.3	+0.2
GANJ	Ganja	7.38	285	⇓P	Pn	23 14 20.4	+0.2
	SNR=6.7						
GANJ				⇓S	Sn	23 15 38.9	-5.1
ZKTA	Zakatala	7.39	293	P	Pn	23 14 19.9	-0.4
ZKTA	Zakatala	7.39	293	*e*Pn	Pn	23 14 19.9	-0.4
ZKTA	Zakatala	7.39	293	⇓P	Pn	23 14 19.9	-0.4
	SNR=23						
ZKTA				⇑S	Sn	23 15 40.1	-4.1
IPIR	Pirpir	7.44	213	*e*Pn	Pn	23 14 24.0	+2.8
IPIR				IAMB	IAmb	23 15 02.7	
	comp=Z,128nm,0.5s						
ORD	Ordubad	7.55	272	*e*Pn	Pn	23 14 21.1	-1.4
ORD	Ordubad	7.55	272	⇑P	Pn	23 14 21.1	-1.4
ORD				⇑S	Sn	23 15 42.0	-6.2
IRAM	Ramesheh	7.71	201	*e*Pn	Pn	23 14 24.8	+0.1
IRAM				IAMB	IAmb	23 14 30.7	
	comp=Z,176nm,0.4s						
GDB	GEDABAY	7.82	286	*e*Pn	Pn	23 14 25.8	-0.5
GDB	GEDABAY	7.82	286	P	Pn	23 14 25.8	-0.5
	SNR=9.8						
GDB				⇓S	Sn	23 15 49.1	-5.9
SBZ	Shahbuz	7.88	276	*e*Pn	Pn	23 14 25.7	-1.2
SBZ	Shahbuz	7.88	276	⇓P	Pn	23 14 25.8	-1.2
NAX	Nakhchivan	7.93	274	P	Pn	23 14 26.1	-1.5
NAX	Nakhchivan	7.93	274	*e*Pn	Pn	23 14 26.1	-1.5
NAX	Nakhchivan	7.93	274	⇑P	Pn	23 14 26.1	-1.5
QZX	Qazax, Azerbai	8.17	288	*e*Pn	Pn	23 14 30.1	-0.7
QZX	Qazax, Azerbai	8.17	288	P	Pn	23 14 30.2	-0.7
	SNR=12						
GNI	Garni	8.53	281	*e*Pn	Pn	23 14 37.3	+1.4
GNI	Garni	8.53	281	Pn	Pn	23 14 34.1	-1.8
	comp=Z,0.1nm,0.3s,baz=180,slow=1.0,SNR=2.6						
GNI				Sn	Sn	23 16 10.5	-1.7
	comp=Z,0.7nm,0.3s,baz=324,slow=18,SNR=2.4						
GROC	Groznyy	8.54	302	*e*P	Pn	23 14 35.7	-0.3
GROC				*e*S	Sn	23 16 11.1	-1.3
GROC				pmax	pmax		
	comp=Z,47nm,1.0s						
GROC				smax	smax		
	comp=E,103nm,1.0s						
TBLG	Delisi	8.78	291	P	Pn	23 14 39.8	+0.5
TBLG	Delisi	8.78	291	*e*P	Pn	23 14 39.7	+0.5
GUDG	Gudauri	9.17	295	P	Pn	23 14 48.6	+3.8
TRLG	Trialeti	9.20	289	P	Pn	23 14 48.8	+3.7
ZEI	Tsey	9.67	297	*e*P	Pn	23 14 53.3	+1.6
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NCK	Nalchik	10.13	300	*i* P	Pn	23 14 59.0	+1.3
NCK	Nalchik	10.13	300	*e*Pn	Pn	23 14 59.1	+1.3
NEY	Neytrino	10.64	297	*i* P	Pn	23 15 07.0	+2.1
NEY	Neytrino	10.64	297	*e*Pn	Pn	23 15 07.0	+2.1
AB31	Akbulak array	10.66	15	⇓Pn	Pn	23 15 03.8	-1.1
	comp=Z,2.6nm,0.5s,baz=202,slow=14						
AB31				⇑Sn	Sn	23 16 59.1	-5.1
	comp=Z,13nm,0.6s,baz=206,slow=22						
AB31	Akbulak array	10.66	15	P	Pn	23 15 03.8	-1.1
AB31				SN	Sn	23 16 59.8	-4.4
KBZ	Khabaz	10.69	300	Pn	Pn	23 15 03.5	-1.9
	comp=Z,0.4nm,0.3s,baz=112,slow=2.2,SNR=16						
KBZ				Sn	Sn	23 16 57.0	-8.0
	comp=Z,0.4nm,0.3s,baz=221,slow=14,SNR=2.6						
KVAR	Kislovodsk Arr	10.91	301	Pn	Pn	23 15 06.8	-1.7
	baz=90,slow=20,SNR=11						
KVAR				Sn	Sn	23 17 00.8	-10
	baz=180,slow=18,SNR=3.2						
KIV	Kislovodsk	10.91	301	*e*P	Pn	23 15 08.1	-0.5
KIV				*e*S	Sn	23 17 10.0	-0.7
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,18nm,9.0s						
GOF	Gofitskoye	11.15	307	*e*P	Pn	23 15 28.1	+16
GOF				pmax	pmax		
	comp=Z,20nm,0.7s						
AKTO	Aktyubinsk	11.51	7	⇓Pn	Pn	23 15 13.5	-3.1
	comp=Z,11nm,0.8s						
AKTO				⇑Sn	Sn	23 17 19.1	-6.0
	comp=Z,24nm,1.0s						
AKTO	Aktyubinsk	11.51	7	Pn	Pn	23 15 17.4	+0.8
	comp=Z,0.7nm,0.3s,baz=178,slow=16,SNR=16						
AKTO				Sn	Sn	23 17 16.5	-8.6
	baz=311,slow=14,SNR=2.9						
AKTO				Lg	Lg	23 18 54.4	
	comp=Z,0.1nm,0.3s,baz=99,slow=16,SNR=1.2						
KK31	Karatay Array	11.90	65	⇑Pn	Pn	23 15 19.2	-2.8
	comp=Z,6.6nm,0.9s						
KK31				⇑Sn	Sn	23 17 34.3	-0.4
	comp=Z,2.9nm,0.6s						
KK31	Karatay Array	11.90	65	P	Pn	23 15 19.2	-2.8
KK31				SN	Sn	23 17 34.3	-0.4
MNAS	Manas	13.20	70	⇑Pn	Pn	23 15 37.6	-2.3
	comp=Z,3.5nm,0.7s						
MNAS				⇓Sn	Sn	23 18 05.5	-1.3
	comp=Z,5.1nm,0.9s						
MNAS	Manas	13.20	70	P	Pn	23 15 37.6	-2.3
MNAS				SN	Sn	23 18 05.5	-1.3
SFK	Sufi-Kurgan	13.79	80	⇓Pn	Pn	23 15 46.3	-1.7
	comp=Z,5.8nm,0.8s						
SFK				⇓Sn	Sn	23 18 21.6	+0.4
	comp=Z,3.2nm,0.9s						
SFK	Sufi-Kurgan	13.79	80	P	Pn	23 15 46.3	-1.7
SFK				SN	Sn	23 18 21.6	+0.4
AAK	Ala-Archa	14.68	70	Pn	Pn	23 15 57.6	-2.5
	comp=Z,1.2nm,0.3s,baz=227,slow=3.5,SNR=34						
AAK				Sn	Sn	23 18 32.6	-10
	comp=Z,0.1nm,0.3s,baz=202,slow=18,SNR=1.9						
AAK				Lg	Lg	23 20 21.3	
	comp=Z,0.1nm,0.3s,baz=42,slow=19,SNR=2.1						
AAK				LR	LR	23 22 54.0	
	comp=Z,85nm,18.4s,baz=264,slow=42						
WSAR	Wadi Sarin	15.95	170	LR	LR	23 23 30.4	
	comp=Z,33nm,18.8s,baz=342,slow=42						
VSR	Storozhevoye	16.81	322	*e*P	Pn	23 16 28.9	+1.4
VSR				pmax	pmax		
	comp=Z,30nm,1.2s						
BRTR	Keskin Array B	17.06	279	Pn	Pn	23 16 31.5	+0.5
	comp=Z,0.0nm,0.3s,baz=92,slow=14,SNR=9.8						
BRVK	Borovoye	17.24	31	*i* P	P	23 16 36.6	+2.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BVAR	Borovoye Array	17.26	31	P	Pn	23 16 32.9	-0.4
	comp=Z,0.3nm,0.3s,baz=212,slow=10,SNR=7.1						
ARU	Arti	17.50	5	*d i*P	P	23 16 39.2	+1.8
ARU				S	S	23 19 58.1	-1.0
ARU				pmax	pmax		
	comp=Z,17nm,1.1s						
LPSR	Galich'ya Gora	17.84	325	*e*P	P	23 16 42.5	+1.4
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
SVE	Sverdlovsk	18.09	9	*e*P	P	23 16 46.4	+2.5
SVE				*e*S	Sn	23 19 57.0	-8.2
KURBB	Kurchatov Arra	19.82	47	P	P	23 17 04.0	+1.2
	comp=Z,2.4nm,0.8s,baz=245,slow=11,SNR=8.2						
KURK	Kurchatov	19.91	47	*i* P	Pn	23 17 05.7	+0.1
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIRV	Kirov	19.97	350	P	P	23 17 05.0	+0.5
	comp=Z,4.6nm,0.6s,baz=181,slow=4.3,SNR=2.5						
KIRV				LR	LR	23 26 13.0	
	comp=Z,86nm,18.1s,baz=200,slow=40						
YLV	Yalova	20.25	283	⇑*i*P	Pn	23 17 10.8	+1.1
YLV	Yalova	20.25	283	⇑P	Pn	23 17 10.8	+1.1
OBN	Obninsk	20.58	328	⇑*e*P	Pn	23 17 14.1	+0.8
OBN				*e*		23 17 31.3	
OBN				*e*S	S	23 20 56.2	-4.7
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,60nm,15.0s						
OBN	Obninsk	20.58	328	P	P	23 17 12.0	+1.0
	comp=Z,1.6nm,0.5s,baz=318,slow=19,SNR=1.8						
OBN				LR	LR	23 25 29.8	
	comp=Z,16nm,21.7s,baz=352,slow=38						
MOS	Moscow	20.59	330	*e*P	P	23 17 11.9	+0.7
MOS				*e*S	S	23 20 57.9	-3.4
MOS				pmax	pmax		
	comp=Z,31nm,0.9s						
TLCR		20.81	296	⇑*i*P	P	23 17 14.7	+1.1
TLCR		20.81	296	⇑P	P	23 17 14.7	+1.1
MKAR	Makanchi Array	20.89	60	P	P	23 17 15.8	+1.2
	comp=Z,6.3nm,1.0s,baz=247,slow=9.7,SNR=40						
CFR	Carcaliu	21.28	296	⇑*i*P	P	23 17 18.0	-0.7
CFR	Carcaliu	21.28	296	⇑P	P	23 17 18.0	-0.7
TLB	Topalu	21.28	294	⇑*i*P	P	23 17 19.5	+0.7
TLB	Topalu	21.28	294	⇑P	P	23 17 19.5	+0.7
AKASG	Malin Array Be	21.95	311	*e*P	P	23 17 26.8	+0.9
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	Malin Array Be	21.95	311	P	P	23 17 26.2	+0.3
	comp=Z,6.1nm,0.7s,baz=109,slow=10,SNR=16						
KIEV	Kiev	21.96	311	⇑*i*P	P	23 17 26.8	+0.8
KIEV	Kiev	21.96	311	*i* P	P	23 17 26.9	+0.9
KIEV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MLR	Muntele Rosu	22.85	296	⇑*i*P	P	23 17 39.4	+3.7
MLR	Muntele Rosu	22.85	296	P	P	23 17 38.7	+3.0
	comp=Z,3.2nm,0.8s,baz=164,slow=19,SNR=3.7						
BIZ	Bicaz	22.93	300	⇑*i*P	P	23 17 40.8	+4.4
VOIR		23.47	296	⇑*i*P	P	23 17 44.5	+2.5
VOIR		23.47	296	⇑P	P	23 17 44.5	+2.5
BURAR	Bucovina Array	23.64	301	⇑*i*P	P	23 17 45.5	+1.8
BURAR	Bucovina Array	23.64	301	⇑P	P	23 17 45.5	+1.8
ARR	Arges	23.76	296	⇑*i*P	P	23 17 51.2	+6.4
KLMR	Klimovskoe	24.05	340	*e*P	P	23 17 53.3	+6.0
KLMR				pmax	pmax		
	comp=Z,22nm,1.5s						
KLMR	Klimovskoe	24.05	340	*e*P	P	23 17 53.3	+6.0
KLMR				AMP		23 18 08.5	
	comp=Z,22nm,1.5s						
ARCR	ARCALIA	24.14	300	⇓*i*P	P	23 17 53.4	+5.1
VTS	Vitosha	24.73	289	⇑*i*P	P	23 17 59.9	+6.0
VTS	Vitosha	24.73	289	⇑P	P	23 17 59.9	+6.0
ZALV	Zalesovo Beam	24.75	43	P	P	23 17 54.2	+0.4
	comp=Z,1.2nm,0.6s,baz=243,slow=9.8,SNR=7.0						
IDI	Anoyia	24.77	271	⇑*i*P	P	23 17 56.1	+1.9
IDI	Anoyia	24.77	271	P	P	23 17 56.0	+1.9
	comp=Z,4.4nm,0.4s,baz=102,slow=7.5,SNR=11						
DGZ	Jazzator, Alta	24.89	54	*i* P	P	23 17 56.8	+1.5
DGZ				pmax	pmax		

	comp=Z,2.0nm,0.9s						
DRGR		25.22	299	⇑iP	P	23 18 00.5	+2.3
DRGR		25.22	299	⇑P	P	23 18 00.5	+2.3
VYHS	Vyhne	28.00	302	eP	P	23 18 34.6	+11
VYHS	Vyhne	28.00	302	epP	P	23 18 34.6	+11
FINES	FINESS Array B	28.90	331	P	P	23 18 33.0	+2.1
	comp=Z,0.5nm,0.6s,baz=129,slow=7.6,SNR=3.9						
NRIK	Noril'sk	34.79	19	LR	LR	23 36 20.6	
	comp=Z,96nm,18.3s,baz=144,slow=41						
NB2	NORSAR Subarra	35.07	324	P	P	23 19 26.9	+1.8
	comp=Z,5.6nm,1.2s,baz=109,slow=8.6						
NOA	NORSAR Array B	35.07	324	P	P	23 19 27.0	+1.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,51nm,19.4s						
NOA	NORSAR Array B	35.07	324	P	P	23 19 27.0	+1.8
	comp=Z,0.8nm,0.8s,baz=109,slow=8.4,SNR=4.4						
NOA				LR	LR	23 35 00.7	
	comp=Z,51nm,19.4s,baz=105,slow=38						
KEST	Kesra	36.66	280	LR	LR	23 37 20.5	
	comp=Z,48nm,19.0s,baz=320,slow=41						
ULN	Ulaanbaatar	37.70	59	ceP	P	23 19 50.1	+2.1
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
EKA	Eskdalemuir Ar	41.84	313	P	P	23 20 23.3	+1.2
	comp=Z,0.7nm,0.5s,baz=104,slow=8.3,SNR=8.1						
CMAR	Chiang Mai Arr	42.63	106	LR	LR	23 39 29.0	
	comp=Z,39nm,18.4s,baz=4.5,slow=38						
BILL	Bilibino	61.43	24	⇑eP	P	23 22 50.1	+1.8
BILL				e		23 25 09.0	
BILL				eS	S	23 31 26.3	+17
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,81nm,15.0s						
YKA	Yellowknife Ar	78.51	355	P	P	23 24 33.1	-0.1
	comp=Z,0.2nm,0.6s,baz=12,slow=6.2,SNR=4.0						
BATI	Baumata	79.80	112	LR	LR	00 05 45.0	
	comp=Z,29nm,19.9s,baz=68,slow=40						

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*IDC **23** 23:23:06.4±1.1, 11°.56S×165°.02E, h0^{km}, mb3.9/5, mb1 4.1/6, mb1mx3.8/36, mbtmp3.8/6, ML3.4/1, MS3.9/1, Ms1 3.9/1, ms1mx2.7/35, Error ellipse: s-maj=46.5km s-min=24.4km az=138.0*

*ISCJB **23** 23:23:09.6±0.9, 11°.8S±0°.1×165°.1E±0°.2, h34^{km}, mb3.7/5, MS3.8/1, Error ellipse: s-maj=26.5km s-min=19.1km az=21.9*

ISC 23 23:23:11.2±1.0**, 11°.7S**±0°.1×**165°.1E**±0°.2**, h34**^{km}**, n7, **σ1^s**37**/6**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.37	173	Pn	Pn	23 25 37.5	-0.3
	0.3nm,0.3s,baz=24,slow=20,SNR=5.4						
WRA	Warramunga Arr	30.64	251	P	P	23 29 23.0	+0.3
	1.5nm,0.9s,baz=79,slow=9.0,SNR=8.2						
ASAR	Alice Springs	31.91	244	P	P	23 29 34.0	+0.1
	0.7nm,0.7s,baz=80,slow=8.7,SNR=7.7						
RAR	Rarotonga	34.93	110	LR	LR	23 40 44.4	
	comp=Z,170nm,19.2s,baz=310,slow=30						
ILAR	Eielson Array	84.36	19	P	P	23 35 39.6	0.0
	0.5nm,0.6s,baz=237,slow=5.2,SNR=11						
YKA	Yellowknife Ar	95.87	27	P	P	23 36 32.4	-1.7
	0.2nm,0.8s,baz=243,slow=4.1,SNR=4.1						
TXAR	Lajitas Array	96.73	62	P	P	23 36 40.5	+1.6
	0.2nm,0.5s,baz=218,slow=5.5,SNR=4.2						

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*ISCJB **23** 23:28:40.8±0.7, 11°.87S±0°.09×165°.1E±0°.1, h10^{km}, mb4.0/9, MS3.1/2, Error ellipse: s-maj=17.9km s-min=12.5km az=17.8*

*IDC **23** 23:28:40.9±0.9, 11°.67S×165°.08E, h0^{km}, mb4.1/9, mb1 4.3/11, mb1mx4.1/46, mbtmp4.0/11, ML4.0/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/34, Error ellipse: s-maj=38.1km s-min=19.2km az=136.0*

ISC 23 23:28:42.3±0.7**, 11°.81S**±0°.09×**165°.1E**±0°.1**, h10**^{km}**, n17, **σ1^s**14**/12**, mb4.0**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.28	173	Pn	Pn	23 31 11.6	+1.6
	1.5nm,0.3s,baz=335,slow=15,SNR=10						
DZM				Sn	Sn	23 33 03.2	-2.3
	0.2nm,0.3s,baz=19,slow=18,SNR=2.4						
CTA	Charters Tower	19.92	243	P	Pn	23 33 16.0	0.0
	0.3nm,0.3s,baz=93,slow=13,SNR=4.2						
STKA	Stephens Creek	29.48	224	P	P	23 34 47.4	+0.7
	1.2nm,0.7s,baz=9.4,slow=6.6,SNR=2.9						
STKA				LR	LR	23 45 56.1	
	comp=Z,71nm,19.2s,baz=26,slow=35						
H11S2	WAKE ISLAND Hy	30.15	3	T	T	00 06 26.5	
	baz=184,slow=76,SNR=6.0						
H11S3	WAKE ISLAND Hy	30.15	3	T	T	00 06 25.9	
	baz=184,slow=76,SNR=5.5						
H11S1	WAKE ISLAND Hy	30.16	3	T	T	00 06 27.4	
	baz=184,slow=76,SNR=3.8						
WRA	Warramunga Arr	30.66	251	P	P	23 34 57.1	-0.1
	1.9nm,0.6s,baz=79,slow=8.9,SNR=15						
WRA				LR	LR	23 47 04.4	
	comp=Z,26nm,19.4s,baz=105,slow=36						
H11N1	WAKE ISLAND Hy	31.37	3	T	T	00 07 59.8	
	baz=182,slow=76,SNR=3.4						
H11N3	WAKE ISLAND Hy	31.38	3	T	T	00 08 02.2	
	baz=182,slow=76,SNR=3.1						
H11N2	WAKE ISLAND Hy	31.39	3	T	T	00 08 01.0	
	baz=182,slow=76,SNR=5.3						
ASAR	Alice Springs	31.92	244	P	P	23 35 08.0	-0.4
	1.9nm,0.8s,baz=74,slow=8.4,SNR=16						
SONM	Songino Array	78.93	324	P	P	23 40 46.0	-0.2
	0.6nm,0.8s,baz=112,slow=4.2,SNR=4.3						
ILAR	Eielson Array	84.42	19	P	P	23 41 14.3	-0.4
	1.5nm,0.6s,baz=238,slow=5.3,SNR=34						
NVAR	Mina Array Bea	86.97	50	P	P	23 41 28.7	+0.4
	0.2nm,0.2s,baz=253,slow=10,SNR=3.6						
MKAR	Makanchi Array	93.67	317	P	P	23 41 59.0	-0.1
	0.6nm,0.8s,baz=100,slow=5.2,SNR=7.1						
YKA	Yellowknife Ar	95.92	27	P	P	23 42 07.7	-1.4
	0.6nm,0.8s,baz=254,slow=4.6,SNR=8.9						
TXAR	Lajitas Array	96.72	62	P	P	23 42 14.6	+1.0
	0.3nm,0.8s,baz=224,slow=3.5,SNR=3.8						

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*ISCJB **24** 00:02:36.1±1.1, 18°.6N±0°.1×145°.4E±0°.3, h300^{km}, mb3.3/9, Error ellipse: s-maj=43.0km s-min=16.5km az=176.5*

*IDC **24** 00:02:36.5±7.8, 18°.64N×145°.48E, h290^{km}±79^{km}, mb3.1/9, mb1 3.2/9, mb1mx3.0/45, mbtmp3.7/9, Error ellipse: s-maj=41.9km s-min=15.0km az=84.0*

ISC 24 00:02:37.4±1.3**, 18°.6N**±0°.1×**145°.4E**±0°.3**, h300**^{km}**, n9, **σ0^s**69**/9**, mb3.3**/9**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	24.23	324	P	P	00 07 27.5	-0.1
	0.8nm,0.6s,baz=138,slow=9.3,SNR=3.4						
KLR	Kul'dur	32.46	343	P	P	00 08 39.9	-0.3
	0.7nm,0.3s,baz=161,slow=12,SNR=4.6						
WRA	Warramunga Arr	39.85	196	P	P	00 09 42.8	+0.1
	0.6nm,0.6s,baz=20,slow=8.5,SNR=12						
ASAR	Alice Springs	43.52	195	P	P	00 10 12.1	-0.1
	0.3nm,0.4s,baz=20,slow=6.7,SNR=4.6						
MKAR	Makanchi Array	58.33	314	P	P	00 12 02.3	+0.6
	0.3nm,0.6s,baz=94,slow=8.2,SNR=3.2						
KURBB	Kurchatov Arra	61.21	318	P	P	00 12 21.3	+0.3
	0.4nm,0.3s,baz=94,slow=7.1,SNR=4.0						
YKA	Yellowknife Ar	78.17	28	P	P	00 14 03.8	+0.2
	0.2nm,0.7s,baz=277,slow=4.9,SNR=3.3						
ARCES	ARCESS Array B	82.48	342	P	P	00 14 27.0	+0.6
	3.2nm,0.9s,baz=72,slow=8.7,SNR=3.4						
FINES	FINESS Array B	86.84	335	P	P	00 14 46.8	-1.4
	0.9nm,0.6s,baz=46,slow=4.0,SNR=6.5						

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*IDC **24** 00:03:04.9±0.9, 19°.60N×120°.51E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.5/43, mbtmp3.7/7, Error ellipse: s-maj=70.7km s-min=17.5km az=66.0*

*ISCJB **24** 00:03:06.6±0.9, 19°.5N±0°.2×120°.4E±0°.4, h23^{km}, mb3.5/7, Error ellipse: s-maj=64.6km s-min=16.2km az=155.7*

ISC 24 00:03:08.4±1.1**, 19°.6N**±0°.2×**120°.5E**±0°.5**, h23**^{km}**, n7, **σ0^s**64**/7**, mb3.5**/7**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	30.42	341	P	P	00 09 19.6	+0.5
	0.2nm,0.6s,baz=164,slow=7.5,SNR=2.1						
MKAR	Makanchi Array	41.31	320	P	P	00 10 52.5	+0.3
	0.4nm,0.5s,baz=109,slow=8.8,SNR=7.4						
WRA	Warramunga Arr	41.56	160	P	P	00 10 54.1	-0.4
	1.9nm,0.9s,baz=336,slow=10,SNR=14						
ZALV	Zalesovo Beam	43.82	330	P	P	00 11 12.1	-0.4
	0.3nm,0.4s,baz=104,slow=6.1,SNR=2.9						
ASAR	Alice Springs	44.93	162	P	P	00 11 22.2	+0.5
	0.5nm,0.4s,baz=340,slow=6.9,SNR=14						
KURBB	Kurchatov Arra	45.30	323	P	P	00 11 23.4	-0.9
	1.0nm,0.2s,baz=119,slow=8.0,SNR=5.6						
YKA	Yellowknife Ar	87.45	22	P	P	00 15 53.7	0.0
	0.1nm,0.4s,baz=316,slow=4.7,SNR=3.7						

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*AEIC **24** 00:08:43.0±0.0, 60°.02N×138°.94W, h8^{km}*

*NEIC **24** 00:08:44.5±0.0, 59°.98N×138°.98W, h5^{km}, ML2.5(OTT), ML2.5(AEIC), After OTT.*

PGC 24 00:08:44.5±0.0**, 59°.98N**×**138°.98W, h5**^{km}**, ML2.5**/11**, 81km northeast of Yakutat, Ak Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNL	Peninsula	0.37	215	P	Pg	00 08 51.8	+0.1
PNL				S	Sg	00 08 57.2	+0.6
PNL	Peninsula	0.37	215	P	Pg	00 08 51.8	+0.1
PNL				S	Sg	00 08 57.2	+0.6
PCA	Pinnacle	0.66	281	ePg	Pg	00 08 56.4	-0.7
PCA				eSg	Sg	00 09 04.5	-1.1
PCA	Pinnacle	0.66	281	P	Pg	00 08 56.4	-0.6
PCA				S	Sg	00 09 05.5	-0.1
YUK7	Dusty Glacier	0.70	36	P	Pg	00 08 56.9	-0.9
YUK7				S	Sg	00 09 06.6	-0.3
YUK7	Dusty Glacier	0.70	36	P	Pg	00 08 56.9	-0.9
YUK7				S	Sg	00 09 06.6	-0.3
DHAK	Deception Hill	0.97	156	ePg	Pg	00 09 01.7	-1.4
DHAK				eSg	Sg	00 09 14.9	-0.7
YUK6	Outpost Mounta	1.02	17	P	Pg	00 09 02.8	-1.2
YUK6				S	Sg	00 09 16.1	-1.1
YUK6	Outpost Mounta	1.02	17	P	Pg	00 09 02.8	-1.2
YUK6				S	Sg	00 09 16.1	-1.1
HYT	Haines Junctio	1.12	40	P	Pg	00 09 04.4	-1.6
HYT				ePn	Pb	00 09 04.9	-1.5
HYT				eSg	Sg	00 09 16.4	-4.2
HYT				S	Sb	00 09 19.4	-1.9
HYT	Haines Junctio	1.12	40	P	Pg	00 09 04.4	-1.6
HYT				S	Sg	00 09 19.4	-1.1
YUK5	Granite Creek	1.28	25	P	Pg	00 09 07.4	-1.7
YUK5				S	Sg	00 09 24.5	-1.2
YUK5	Granite Creek	1.28	25	P	Pg	00 09 07.4	-1.7
YUK5				S	Sg	00 09 24.5	-1.2
YUK4	Talbot Arm	1.38	7	Pn	Pg	00 09 11.1	+0.1
YUK4				Sg	Sn	00 09 30.5	+1.1
YUK4	Talbot Arm	1.38	7	Pn	Pg	00 09 11.1	+0.1
YUK4				Sg	Sn	00 09 30.5	+1.1
PLBC	Pleasant Camp	1.42	110	Pn	Pn	00 09 09.2	-1.7
PLBC				Sg	Sb	00 09 28.3	-1.5
PLBC	Pleasant Camp	1.42	110	Pn	Pn	00 09 09.2	-1.7
PLBC				Sg	Sb	00 09 28.3	-1.5
CTGM	Chitina Glacie	1.53	311	Pg	Pn	00 09 11.3	-1.3
CTGM				Sg	Sn	00 09 31.4	-1.6
SKAG	Skagway	1.92	104	ePn	Pn	00 09 17.3	-0.5
SKAG				eSn	Sb	00 09 44.3	+0.2
YUK3	Moose Creek	1.95	339	Pn	Pn	00 09 18.4	0.0
YUK3				Sg	Sb	00 09 44.9	-0.3
YUK3	Moose Creek	1.95	339	Pn	Pn	00 09 18.4	0.0
YUK3				Sg	Sb	00 09 44.9	-0.3
BALM	Baldy	1.98	304	ePn	Pn	00 09 18.3	-0.4
BALM				eSn	Sb	00 09 45.2	-0.8
BALM	Baldy	1.98	304	Pn	Pn	00 09 17.6	-1.2
BALM				Sg	Sn	00 09 43.2	-0.7
YUK2	White River	2.03	334	Pn	Pn	00 09 19.4	-0.1
YUK2				Sg	Sb	00 09 47.9	+0.4
YUK2	White River	2.03	334	Pn	Pn	00 09 19.4	-0.1
YUK2				Sg	Sb	00 09 47.9	+0.4
WHY	Whitehorse	2.15	70	ePn	Pn	00 09 20.3	-0.8
WHY				Sg	Sb	00 09 51.5	+0.5
WHY	Whitehorse	2.15	70	Pn	Pn	00 09 20.1	-1.0
WHY				Sg	Sb	00 09 51.5	+0.5
BESE	Bessie Mountai	2.54	122	ePn	Pn	00 09 24.9	-1.5
BESE				Sg	Sb	00 10 02.5	+0.5
BESE	Bessie Mountai	2.54	122	Pn	Pn	00 09 25.2	-1.1
BESE				Sg	Sb	00 10 02.5	+0.5
BVCY	Beaver Creek	2.61	340	Pg	Pb	00 09 31.1	-0.7
BVCY				Sg	Sb	00 10 05.9	+1.8
BVCY	Beaver Creek	2.61	340	Pg	Pb	00 09 31.1	-0.7
BVCY				Sg	Sb	00 10 05.9	+1.8
HMT	Hamilton	2.67	280	ePn	Pn	00 09 26.0	-2.1
HMT				eSn	Sn	00 09 57.7	-3.1
JIS	Juneau Island	2.92	124	ePn	Pn	00 09 28.7	-2.7
JIS				eSn	Sn	00 10 04.3	-2.5
KLU	Klutina	3.73	297	ePn	Pn	00 09 41.7	-1.1
KLU				eSn	Sn	00 10 24.5	-2.7
DAWY	Dawson	4.11	357	ePn	Pn	00 09 45.6	-2.3
DAWY				eSn	Sn	00 10 31.7	-4.6
DAWY	Dawson	4.11	357	Pn	Pn	00 09 47.9	0.0
DAWY				Sg	Sb	00 10 51.1	+3.9
DLBC	Dease Lake	4.85	105	Sg	Sb	00 11 14.1	+5.6
EGAK	Eagle	4.93	349	ePn	Pn	00 10 00.0	+0.9
EGAK				ePg	Pb	00 10 14.2	+3.0

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*ATH **24** 00:11:34.9, 35°.25N×27°.67E, h18^{km}±2^{km}, ML3.0/4, Error ellipse: s-maj=3.9km s-min=1.2km az=328.0*

*ISK **24** 00:11:34.9, 35°.22N×27°.63E, h10^{km}, ML3.1/19*

*ISCJB **24** 00:11:36.3±0.8, 35°.29N±0°.04×27°.65E±0°.03, h12^{km}±5^{km}, Error ellipse: s-maj=6.4km s-min=3.2km az=158.8*

*DDA **24** 00:11:36.9, 35°.44N×27°.76E, h18^{km}±1^{km}, ML3.1*

*THE **24** 00:11:38.1, 35°.21N×27°.73E, h24^{km}±6^{km}, ML2.5/1, Error ellipse: s-maj=7.3km s-min=1.2km az=154.0*

ISC 24 00:11:35.9±1.4**, 35°.26N**±0°.05×**27°.66E**±0°.03**, h11**^{km}±10^{km}**, n72, **σ0^s**97**/85**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.50	305	PG	Pg	00 11 45.3	-0.4
KARP				SG	Sg	00 11 52.8	+0.5
KARP	Karpathos	0.50	305	P	Pg	00 11 44.9	-0.8
KARP				S	Sg	00 11 52.8	+0.5
KARP				AML	AML	00 11 55.1	
	comp=N,5790μm,0.2s						
KARP				AML	AML	00 11 55.4	
	comp=E,4821μm,0.3s						
ARG	Arkhangelos	1.03	22	PG	Pb	00 11 55.6	-0.1
ARG				SG	Sg	00 12 11.1	+2.0
ARG	Arkhangelos	1.03	22	P	Pb	00 11 54.8	-1.0
ARG				S	Sb	00 12 09.1	-0.1
ARG				AML	AML	00 12 15.0	
	comp=E,1153μm,0.3s						
ARG				AML	AML	00 12 16.5	
	comp=N,840μm,0.4s						
ZKR	Zakros	1.19	263	PN	Pn	00 11 57.5	-1.0
ZKR	Zakros	1.19	263	P	Pn	00 11 57.5	-1.0
ZKR				S	Sb	00 12 14.4	+0.5
ZKR				AML	AML	00 12 22.0	
	comp=N,628μm,0.7s						
ZKR				AML	AML	00 12 22.4	
	comp=E,1076μm,0.3s						
STIA	Sitia Lasithi	1.28	268	P	Pn	00 11 59.0	-0.8
STIA				S	Sn	00 12 17.3	+0.3
NISR	Nisiros	1.42	342	P	Pn	00 12 02.6	+1.0
DATC	Datca-Mugla	1.50	0	PN	Pn	00 12 02.9	+0.2
MRSB	Marmaris-Mugla	1.52	17	PN	Pn	00 12 03.4	+0.4
NPS	Neapolis	1.68	271	P	Pn	00 12 06.3	+1.1
TURN	Turunc	1.78	25	PN	Pn	00 12 04.4	-2.2
TURN	Turunc	1.78	25	iP	Pn	00 12 05.4	-1.2
TURN				iS	Sn	00 12 28.4	-0.9
TURN				IAML_P			
	comp=Z,3μm,0.3s						
LAST	Lasithi	1.79	268	P	Pn	00 12 07.6	+0.8
FETY	Fethiye	1.79	40	PN	Pn	00 12 07.2	+0.4
FETY	Fethiye	1.79	40	P	Pn	00 12 06.9	+0.1
FETY				S	Sn	00 12 27.4	-2.2
FETY	Fethiye	1.79	40	iP	Pb	00 12 07.9	-1.0
FETY				IAML_P			
	comp=Z,765nm,0.2s						
KSL	Kastellorizon	1.80	60	P	Pn	00 12 06.9	0.0
BDRM	Kayabasi	1.81	355	iP	Pn	00 12 08.3	+1.2
BDRM				iS	Sn	00 12 30.5	+0.5
BDRM				IAML_P			
	comp=Z,1μm,0.2s						
BODT	Bodrum	1.82	351	PN	Pn	00 12 07.3	0.0
BODT	Bodrum	1.82	351	P	Pn	00 12 07.2	0.0
BODT				S	Sn	00 12 30.0	-0.3
AKAS	Kas	1.86	58	PN	Pn	00 12 08.3	+0.5
AKAS	Kas	1.86	58	iP	Pn	00 12 08.3	+0.5
AKAS				iS	Sb	00 12 32.7	-0.5
AKAS				IAML_P			
	comp=Z,1μm,0.2s						
ANAF	Anafi Island	1.89	306	P	Pn	00 12 08.7	+0.6
ANAF				AML	AML	00 12 35.5	
	comp=E,1629μm,0.4s						
ANAF				AML	AML	00 12 36.2	
	comp=N,1389μm,0.4s						
ANAF	Anafi Island	1.89	306	P	Pn	00 12 07.8	-0.3
ANAF				S	Sn	00 12 31.9	+0.1
YER	Yerkesik	1.94	15	PN	Pn	00 12 09.4	+0.5
YER	Yerkesik	1.94	15	P	Pn	00 12 09.2	+0.3
MLSB	Milas	2.04	3	PN	Pn	00 12 10.7	+0.6
SANT	Santorini	2.10	302	PN	Pn	00 12 10.9	-0.2
SANT	Santorini	2.10	302	P	Pn	00 12 11.7	+0.6
AMGA	Amorgos Island	2.12	318	P	Pn	00 12 11.5	+0.2
THR6	Thira Island,	2.14	301	P	Pn	00 12 11.9	+0.4
THR2	Thira island,	2.16	304	P	Pn	00 12 12.3	+0.5
THR3	Thira Island,	2.17	303	P	Pn	00 12 11.9	0.0
IDI	Anoyia	2.27	272	P	Pn	00 12 14.2	+0.9
ELL	Elmali	2.35	50	PN	Pn	00 12 15.1	+0.5
AYDN	Tasoluk	2.40	4	iP	Pn	00 12 16.0	+0.8
AYDN				IAML_P			
	comp=Z,514nm,0.3s						
TAVA	DENIZLI_Tavas	2.42	24	iP	Pn	00 12 16.8	+1.2
AKUM	Antalya-Kumluc	2.43	63	iP	Pb	00 12 17.9	-1.7
GCAM	G?zelcaml?	2.46	352	iP	Pn	00 12 16.9	+1.0
GCAM				IAML_P			
	comp=Z,336nm,0.2s						
APE	Apeiranthos	2.50	317	PN	Pn	00 12 16.4	-0.1
APE	Apeiranthos	2.50	317	P	Pn	00 12 16.7	+0.2
GOLH	Golhisar	2.50	37	iP	Pn	00 12 18.2	+1.6
GOLH				IAML_P			
	comp=Z,600nm,0.2s						
AYDB	Zeytinkoy-Aydi	2.69	4	PN	Pn	00 12 19.9	+0.7
KORT	Korkueli	2.79	51	PN	Pn	00 12 21.6	+1.0
VAM	Vamos	2.83	274	P	Pn	00 12 22.1	+1.0
DGB	zmir	2.86	348	iP	Pn	00 12 21.4	0.0
DGB				IAML_P			
	comp=Z,268nm,0.2s						
GVD	Gavdhos	2.96	263	P	Pn	00 12 24.1	+1.3
IMMV	Iera Moni Meta	3.01	275	P	Pn	00 12 24.9	+1.3
BRDR	BURDUR-Merkez	3.11	38	iP	Pn	00 12 25.6	+0.7
BRDR				IAML_P			
	comp=Z,277nm,0.1s						
ZEY	zmir	3.12	343	iP	Pn	00 12 25.4	+0.5
ZEY				IAML_P			
	comp=Z,271nm,0.2s						
BLCB	Balcova	3.16	351	PN	Pn	00 12 26.5	+0.9
URLA	Izmir	3.21	345	PN	Pn	00 12 27.2	+0.9
URLA	Izmir	3.21	345	iP	Pn	00 12 27.4	+1.1
URLA				IAML_P			
	comp=Z,342nm,0.2s						
MANT	Manisa	3.31	12	iP	Pn	00 12 27.9	+0.1
MANT				IAML_P			
	comp=Z,80nm,0.1s						
KULA	Kula-Manisa	3.35	14	PN	Pn	00 12 28.5	+0.3
CHOS	Chios island	3.38	338	PN	Pn	00 12 29.5	+0.9
CHOS	Chios island	3.38	338	P	Pn	00 12 29.3	+0.7
CHOS				S	Sn	00 13 09.3	+0.6
KHAL	Karahalli	3.44	25	iP	Pn	00 12 30.6	+1.1
KHAL				IAML_P			
	comp=Z,98nm,0.1s						
KEPZ	Antalya-Kepez	3.59	62	iP	Pn	00 12 32.6	+1.0
KEPZ				IAML_P			
	comp=Z,255nm,0.2s						
AKHS	Akhisar	3.62	2	iP	Pn	00 12 31.4	-0.4
AKHS				IAML_P			
	comp=Z,198nm,0.3s						
USAK	Uak-Merkez	3.62	17	iP	Pn	00 12 32.5	+0.5
USAK				IAML_P			
	comp=Z,281nm,0.3s						
BAGO	Egridir - ISPA	3.71	42	iP	Pn	00 12 34.8	+1.5
BAGO				IAML_P			
	comp=Z,112nm,0.3s						
DEMI	Demirci	3.87	12	iP	Pn	00 12 36.0	+0.5
DEMI				IAML_P			
	comp=Z,174nm,0.3s						
VLI	Veliai	4.10	292	P	Pn	00 12 39.2	+0.7
DOGA	KONYA_Doganhis	4.30	47	iP	Pn	00 12 43.1	+1.8
DURS	Dursunbey	4.38	8	iP	Pn	00 12 42.6	+0.1
DURS				IAML_P			
	comp=Z,129nm,0.2s						
BALY	Balya	4.47	360	iP	Pn	00 12 44.2	+0.5
BALY				IAML_P			
	comp=Z,169nm,0.3s						
ERMK	Ermenek	4.48	71	iP	Pn	00 12 46.0	+2.0
BAYC	CANAKKALE_Bayr	4.56	349	iP	Pn	00 12 46.4	+1.5
BAYC				IAML_P			
	comp=Z,162nm,0.2s						
KONT	Konya--Tatoy	4.64	53	iP	Pn	00 12 48.5	+2.6
KONT				IAML_P			
	comp=Z,113nm,0.1s						
KDHN	Kadinhani	4.83	46	iP	Pn	00 12 50.4	+1.7
KDHN				IAML_P			
	comp=Z,78nm,0.3s						

IDC 24 00:26:55.7±7.1**, 49°.74S**×**124°.09E, h0**^{km}**, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.5**/21**, mbtmp3.5**/2**, MS3.3**/3**, Ms1 3.3**/3**, ms1mx2.9**/16**, Error ellipse: s-maj=493.1km s-min=67.7km az=98.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	16.53	330	T	T	00 47 14.7	
	baz=164,slow=76,SNR=8.5						
H01W2	Cape Leeuwin H	16.53	330	T	T	00 47 27.5	
	baz=164,slow=76,SNR=9.1						
H01W3	Cape Leeuwin H	16.54	330	T	T	00 47 34.3	
	baz=164,slow=76,SNR=7.8						
ASAR	Alice Springs	27.14	20	P	P	00 32 42.1	+1.6
	0.5nm,0.7s,baz=204,slow=7.7,SNR=6.0						
ASAR				LR	LR	00 43 17.8	
	comp=Z,44nm,19.0s,baz=210,slow=36						
WRA	Warramunga Arr	30.84	19	P	P	00 33 11.8	-1.7
	0.6nm,1.1s,baz=178,slow=10,SNR=3.0						
VNDA	Vanda	31.32	165	LR	LR	00 45 45.1	
	comp=Z,62nm,18.8s,baz=31,slow=36						
BATI	Baumata	39.41	359	LR	LR	00 50 29.8	
	comp=Z,41nm,18.1s,baz=91,slow=36						
YKA	Yellowknife Ar	146.15	45	PKPbc	PKPdf	00 46 35.8	+0.3
	0.3nm,0.5s,baz=271,slow=2.8,SNR=9.6						

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*ISCJB **24** 00:27:38.5±0.2, 24°.57N±0°.02×122°.83E±0°.01, h102^{km}±2^{km}, mb3.5/10, Error ellipse: s-maj=3.2km s-min=2.0km az=168.5*

*IDC **24** 00:27:38.0±3.6, 24°.67N×122°.86E, h92^{km}±34^{km}, mb3.4/11, mb1 3.5/12, mb1mx3.4/38, mbtmp3.7/12, MS2.6/1, Ms1 2.6/1, ms1mx2.2/26, Error ellipse: s-maj=25.0km s-min=15.2km az=71.0*

*TAP **24** 00:27:39.2, 24°.55N×122°.83E, h97^{km}, ML4.6, B*

*JMA **24** 00:27:39.1±0.1, 24°.54N×122°.80E, h98^{km}±1^{km}, M4.0*

ISC 24 00:27:38.8±0.7**, 24°.54N**±0°.03×**122°.82E**±0°.02**, h100**^{km}±5^{km}**, n151, **σ1^s**17**/248**, mb3.5**/10**, 37C-18D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.15	128	P	Pn	00 27 52.9	0.0
JYNG				S	Sn	00 28 03.1	-0.3
YOJ	Yonaguni jima	0.19	115	⇑P	Pn	00 27 53.1	+0.1
	baz=123						
YOJ				S	Sn	00 28 03.2	-0.4
	baz=123						
YOJ	Yonaguni jima	0.19	115	P	Pn	00 27 53.1	+0.1
YOJ				S	Sn	00 28 03.3	-0.4
EOS1	EOS1	0.63	271	⇑P	Pn	00 27 56.0	+0.4
	baz=264						
EOS1				eS	Sn	00 28 08.7	+0.5
	baz=264						
IRIF	Iriomote-Funau	0.86	104	P	Pn	00 27 58.0	+0.3
IRIF				S	Sn	00 28 11.6	-0.4
EGS		0.86	291	eP	Pn	00 27 58.7	+0.9
	baz=286						
TWC	Suao	0.89	275	⇑iP	Pn	00 27 58.1	+0.1

	baz=278						
TWC				S	Sn	00 28 11.1	-1.4
	baz=278						
TWB1	Santiao Chiao	0.89	302	⇓P	Pn	00 27 58.4	+0.3
	baz=295						
TWB1				eS	Sn	00 28 11.7	-0.8
	baz=295						
NTC	Toucheng	0.95	289	eP	Pn	00 27 59.5	+0.8
	baz=281						
NTC				eS	Sn	00 28 14.2	+0.5
	baz=281						
NANB	Nanao	0.98	264	⇑P	Pn	00 27 59.4	+0.4
	baz=257						
NANB				S	Sn	00 28 13.7	-0.6
	baz=257						
ENA	Nanau	0.99	264	P	Pn	00 27 59.5	+0.3
	baz=257						
ENA				eS	Sn	00 28 14.5	0.0
	baz=257						
ILA	Ilan	1.00	283	eP	Pn	00 27 59.7	+0.5
	baz=277						
TIPB	Shuangxi	1.00	296	⇓P	Pn	00 27 59.7	+0.5
	baz=290						
TIPB				S	Sn	00 28 13.6	-1.1
	baz=290						
HATJ	Hateruma jima	1.02	118	P	Pn	00 28 00.5	+1.0
HATJ				S	Sn	00 28 16.2	+1.1
TWE	Neicheng	1.06	280	P	Pn	00 28 00.6	+0.7
	baz=279						
NWF	Wu-fen Shan	1.08	299	⇓iP	Pn	00 28 01.1	+0.9
	baz=291						
NWF				eS	Sn	00 28 16.0	-0.4
	baz=291						
WFSB	Wu-fen Shan	1.08	299	⇓P	Pn	00 28 01.0	+0.8
	baz=291						
WFSB				eS	Sn	00 28 15.8	-0.5
	baz=291						
JKRS	Kuro-shima	1.13	105	P	Pn	00 28 01.3	+0.7
JKRS				S	Sn	00 28 17.4	+0.3
ENTT	Nioudou	1.14	275	⇓iP	Pn	00 28 01.9	+1.0
	baz=274						
NACB	Ninganchiao	1.18	252	⇑P	Pn	00 28 01.0	-0.2
	baz=244						
NACB				eS	Sn	00 28 16.4	-1.8
	baz=244						
NDT	Datong Townshi	1.19	273	⇑iP	Pn	00 28 02.5	+1.1
	baz=274						
NDT				eS	Sn	00 28 18.6	+0.1
	baz=274						
TWA	Mucha	1.20	291	⇓iP	Pn	00 28 02.3	+0.8
	baz=282						
TWA				S	Sn	00 28 18.1	-0.7
	baz=282						
TWD	Chiawan	1.21	248	⇑iP	Pn	00 28 01.4	-0.1
	baz=247						
TWD				eS	Sn	00 28 17.6	-1.2
	baz=247						
JIJ	Ishigaki jima	1.22	98	P	Pn	00 28 01.9	+0.2
JIJ				S	Sn	00 28 18.3	-0.7
NWLT	Wulai	1.22	281	eP	Pn	00 28 02.5	+0.8
	baz=280						
NWLT				eS	Sn	00 28 18.1	-1.0
	baz=280						
HWA	Hwalien	1.24	243	P	Pn	00 28 02.2	+0.2
	baz=242						
HWA				eS	Sn	00 28 19.2	-0.3
	baz=242						
NHDH	Xindian Distri	1.25	290	eP	Pn	00 28 02.7	+0.7
	baz=280						
NHDH				eS	Sn	00 28 19.1	-0.6
	baz=280						
ETLH	Xiulin Townshi	1.26	255	eP	Pn	00 28 02.6	+0.3
	baz=248						
ETLH				eS	Sn	00 28 19.2	-0.9
	baz=248						
PCYT	Pengchaiyu	1.28	328	P	Pn	00 28 03.5	+1.1
	baz=322						
ENLB	Shoufeng	1.28	240	⇑P	Pn	00 28 02.6	+0.2
	baz=235						
ENLB				eS	Sn	00 28 19.4	-0.9
	baz=235						
TATO	Taipei	1.28	290	eP	Pn	00 28 03.0	+0.6
	baz=279						
TATO				eS	Sn	00 28 19.2	-1.1
	baz=279						
YM01	YM01	1.28	298	⇓P	Pn	00 28 03.3	+0.8
	baz=290						
YM01				eS	Sn	00 28 20.4	-0.1
	baz=290						
YM08	YM08	1.29	300	eP	Pn	00 28 03.0	+0.4
	baz=299						
YM08				eS	Sn	00 28 19.7	-0.8
	baz=299						
YM11	YM11	1.29	299	⇓P	Pn	00 28 03.2	+0.6
	baz=290						
YM11				eS	Sn	00 28 20.8	+0.1
	baz=290						
YM05	YM05	1.30	299	P	Pn	00 28 03.1	+0.4
	baz=291						
YM05				eS	Sn	00 28 20.8	0.0
	baz=291						
NNSB	Datong	1.31	265	⇑P	Pn	00 28 03.3	+0.4
	baz=259						
YM04	YM04	1.31	298	P	Pn	00 28 03.5	+0.7
	baz=287						
YM04				eS	Sn	00 28 20.5	-0.6
	baz=287						
YHNB	Yeheng	1.32	276	⇑P	Pn	00 28 03.9	+0.9
	baz=274						
YHNB				eS	Sn	00 28 21.0	-0.3
	baz=274						
NNS	Nan Shan	1.32	266	eP	Pn	00 28 03.4	+0.3
	baz=259						
TWY	Chenhua	1.33	304	⇓P	Pn	00 28 04.1	+1.1
	baz=302						
TWY				eS	Sn	00 28 21.7	+0.5
	baz=302						
NSK	Sanguang	1.34	276	eP	Pn	00 28 04.0	+0.9
	baz=274						
NSK				eS	Sn	00 28 21.3	-0.3
	baz=274						
ANP	Anpu	1.34	299	eP	Pn	00 28 03.5	+0.3
	baz=288						
JISG	Ishigakijimahi	1.36	88	P	Pn	00 28 03.6	+0.2
JISG				S	Sn	00 28 21.2	-0.8
TWS1	Kuangyinshan	1.39	294	⇓iP	Pn	00 28 04.7	+1.0
	baz=286						
TWS1				eS	Sn	00 28 22.7	+0.1
	baz=286						
NTST	Danshui	1.39	297	eP	Pn	00 28 04.5	+0.8
	baz=288						
ESL	Shilin	1.46	240	⇑iP	Pn	00 28 04.3	-0.3
	baz=240						
WHF	Hehuan Shan	1.47	255	⇑iP	Pn	00 28 05.5	+0.3
	baz=260						
WHF				eS	Sn	00 28 24.2	-0.9
	baz=260						
TWT	Tachien	1.52	259	P	Pn	00 28 06.7	+1.1
	baz=258						
TWT				eS	Sn	00 28 25.8	0.0
	baz=258						
EGFH	Guangfu	1.54	236	⇑eP	Pn	00 28 05.5	0.0
	baz=233						
TDCB	Techi	1.54	260	⇑P	Pn	00 28 06.7	+1.0
	baz=255						
TDCB				eS	Sn	00 28 25.3	-0.9
	baz=255						
NCU	National Centr	1.54	286	eP	Pn	00 28 06.4	+0.8
	baz=285						
NCU				eS	Sn	00 28 27.1	+1.1
	baz=285						
NCUH	Zhongli	1.54	286	eP	Pn	00 28 05.9	+0.3
	baz=275						
NCUH				eS	Sn	00 28 27.1	+1.1
	baz=275						
CHGB	Renai	1.57	253	⇑P	Pn	00 28 06.9	+0.6
	baz=245						
CHGB				S	Sn	00 28 26.0	-1.0
	baz=245						
OWD	Renai	1.61	249	⇑eP	Pn	00 28 07.0	+0.4
	baz=243						
OWD				eS	Sn	00 28 26.0	-1.6
	baz=243						
LIOB	Emei	1.64	274	P	Pn	00 28 07.0	+0.1
	baz=272						
LIOB				eS	Sn	00 28 27.1	-1.2
	baz=272						
HGSD	Ruisui	1.65	231	⇑P	Pn	00 28 06.8	-0.1
	baz=228						
HGSD				eS	Sn	00 28 26.7	-1.6
	baz=228						
NSTT	Nanjuang	1.66	273	eP	Pn	00 28 08.1	+1.0
	baz=272						
NSTT				eS	Sn	00 28 28.6	+0.1
	baz=272						
SBCB	Hsinchu	1.69	279	⇓P	Pn	00 28 08.4	+1.0
	baz=277						
SBCB				eS	Sn	00 28 29.4	+0.3
	baz=277						
HSN	Hsinchu	1.70	279	eP	Pn	00 28 08.3	+0.7
	baz=279						
HSN				eS	Sn	00 28 29.4	-0.1
	baz=279						
EHY	Hungye	1.71	233	eP	Pn	00 28 07.3	-0.5
	baz=241						
JTJ	Tarama	1.72	86	P	Pn	00 28 08.4	+0.6
JTJ				eS	Sn	00 28 30.4	+0.6
VWDT	VWDT	1.72	243	⇑P	Pn	00 28 08.6	+0.8
	baz=236						
VWDT				eS	Sn	00 28 28.7	-1.2
	baz=236						
WHP	Taichung City	1.73	262	⇑eP	Pn	00 28 09.9	+1.9
	baz=257						
WHP				eS	Sn	00 28 31.1	+0.9
	baz=257						
YULB	Yu-li	1.80	231	⇑P	Pn	00 28 08.8	-0.1
	baz=240						
TWF1	Yuli	1.83	230	⇑iP	Pn	00 28 09.3	+0.1
	baz=238						
TWF1				eS	Sn	00 28 30.4	-2.0
	baz=238						
NMLH	Miaoli	1.85	270	eP	Pn	00 28 10.8	+1.3
	baz=269						
SSLB	Suanglung	1.86	247	⇑P	Pn	00 28 10.2	+0.6
	baz=245						
SSLB				eS	Sn	00 28 32.1	-1.1
	baz=245						
SMLT	Sun Moon Lake	1.87	250	⇑iP	Pn	00 28 10.8	+0.9
	baz=245						
SMLT				eS	Sn	00 28 34.9	+1.4
	baz=245						
TWQ1	Liyutan	1.87	264	eP	Pn	00 28 10.6	+0.8
	baz=263						
TWQ1				eS	Sn	00 28 33.4	-0.1
	baz=263						
NSY	Sanyi	1.88	267	eP	Pn	00 28 11.2	+1.4
	baz=265						
NSY				eS	Sn	00 28 34.1	+0.6
	baz=265						
TYC	Yuchr	1.90	251	⇑iP	Pn	00 28 11.2	+1.0
	baz=245						
TYC				eS	Sn	00 28 35.0	+1.0
	baz=245						
PTSB	Yuanli	1.93	268	⇑eP	Pn	00 28 11.6	+1.1
	baz=266						
PTSB				eS	Sn	00 28 34.7	0.0
	baz=266						
FULB	Fuli	1.93	227	⇑iP	Pn	00 28 10.4	-0.2
	baz=221						
FULB				eS	Sn	00 28 33.2	-1.6
	baz=221						
CHKT	Chengkung	1.96	223	⇑iP	Pn	00 28 10.3	-0.5
	baz=219						
CHKT				eS	Sn	00 28 32.9	-2.4
	baz=219						
WHYT	Xinyi Township	1.98	245	⇑P	Pn	00 28 12.4	+1.2
	baz=245						
WHYT				eS	Sn	00 28 35.9	-0.1
	baz=245						
TCU	Taichung	1.99	259	eP	Pn	00 28 12.6	+1.3
	baz=267						
TCU				eS	Sn	00 28 38.2	+2.0
	baz=267						
WDJ	Dajia District	2.00	265	eP	Pn	00 28 12.6	+1.3
	baz=264						
WJS	Zhushan	2.04	250	eP	Pn	00 28 13.8	+1.9
	baz=248						
WJS				eS	Sn	00 28 39.2	+2.0
	baz=248						
WNT	Mingjian	2.06	252	eP	Pn	00 28 13.4	+1.3
	baz=250						
WNT				eS	Sn	00 28 39.4	+1.7
	baz=250						
ALS	Alishan	2.11	241	⇑iP	Pn	00 28 14.3	+1.2
	baz=235						
ALS				eS	Sn	00 28 40.8	+1.5
	baz=235						
WCHH	Zhanghua	2.11	258	eP	Pn	00 28 13.8	+1.0
	baz=265						
ELDTW	Lidau	2.13	231	P	Pn	00 28 13.1	-0.1
	baz=227						
ELDTW				eS	Sn	00 28 37.9	-1.6
	baz=227						
JIRB	Irabujima	2.16	82	P	Pn	00 28 14.1	+0.6
JIRB				S	Sn	00 28 39.2	-0.8
CHN5	Tsauling	2.17	245	eP	Pn	00 28 15.3	+1.6
	baz=237						
CHN5				eS	Sn	00 28 42.1	+1.7
	baz=237						
WGK	Gukeng	2.23	248	eP	Pn	00 28 16.3	+1.9
	baz=246						
WGK				eS	Sn	00 28 43.6	+2.0
	baz=246						
JIKM	Ikemajima	2.24	80	P	Pn	00 28 15.4	+0.9
JIKM				S	Sn	00 28 42.4	+0.5
WDLH	Douliu	2.25	248	eP	Pn	00 28 15.8	+1.2
	baz=259						
JMJ	Miyako jima 2	2.27	83	eP	Pn	00 28 15.8	+1.0
	baz=84						
JMJ				eS	Sn	00 28 41.6	-0.9
	baz=84						
JMJ	Miyako jima 2	2.27	83	P	Pn	00 28 15.6	+0.7
JMJ				S	Sn	00 28 42.1	-0.4
STYT	Tauyuan	2.33	234	⇑iP	Pn	00 28 17.1	+1.3
	baz=229						
STYT				eS	Sn	00 28 44.7	+0.5
	baz=229						
RLNB	Erlin	2.34	254	eP	Pn	00 28 16.8	+1.0
	baz=252						
RLNB				eS	Sn	00 28 44.2	+0.1
	baz=252						
TWGBT	Beinan	2.34	223	⇑P	Pn	00 28 15.6	-0.3
	baz=229						
TWGBT				eS	Sn	00 28 42.0	-2.2
	baz=229						
TWG	Pinlang	2.34	223	⇑P	Pn	00 28 15.6	-0.4
	baz=230						
TTN	Taitung	2.35	221	eP	Pn	00 28 16.4	+0.5
	baz=217						
TPUB	Ta-pu	2.35	239	P	Pn	00 28 17.5	+1.5
	baz=231						
TPUB				S	Sn	00 28 46.3	+1.7
	baz=231						
CHN4	Tsaushan	2.36	240	P	Pn	00 28 17.7	+1.6
	baz=232						
CHN4				S	Sn	00 28 46.4	+1.8
	baz=232						
JOGS	Gusukube	2.37	84	P	Pn	00 28 17.1	+1.0
JOGS				eS	Sn	00 28 46.0	+1.2
CHN2	Minshiung	2.37	245	⇑P	Pn	00 28 18.6	+2.4
	baz=244						
CHN2				eS	Sn	00 28 47.8	+3.0
	baz=244						
WTP	Ta-pu	2.40	238	eP	Pn	00 28 18.8	+2.2
	baz=236						
WTP				eS	Sn	00 28 47.4	+1.8
	baz=236						
WTCT	Ta-ch'eng	2.41	254	eP	Pn	00 28 17.7	+0.9
	baz=252						
WTCT				eS	Sn	00 28 46.1	+0.2
	baz=252						
CHY	Chiayi	2.42	245	eP	Pn	00 28 18.3	+1.4
	baz=255						
CHY				eS	Sn	00 28 49.0	+2.8
	baz=255						
TWK	Hsinying	2.48	240	⇑P	Pn	00 28 19.1	+1.3
	baz=238						
TWK				eS	Sn	00 28 48.9	+1.2
	baz=238						
CHN1	Nanshi	2.49	238	eP	Pn	00 28 18.9	+1.0
	baz=246						
CHN1				eS	Sn	00 28 49.0	+1.1
	baz=246						
SNST	Tainan City	2.50	239	eP	Pn	00 28 19.2	+1.3
	baz=238						
SGST	Jiashian	2.51	235	P	Pn	00 28 19.9	+1.8
	baz=234						
SGST				eS	Sn	00 28 49.3	+1.1
	baz=234						
SLGT	Liugui	2.52	233	eP	Pn	00 28 20.2	+2.0
	baz=225						
SLGT				eS	Sn	00 28 50.1	+1.7
	baz=225						
WLGB	Puzi	2.54	246	eP	Pn	00 28 19.7	+1.3
	baz=245						
ECL	Taimali	2.58	222	eP	Pn	00 28 18.4	-0.6
	baz=221						
ECL				eS	Sn	00 28 47.6	-2.4
	baz=221						
CHN8	Yiju	2.67	244	eP	Pn	00 28 21.2	+1.1
	baz=242						
CHN8				eS	Sn	00 28 54.0	+2.1
	baz=242						
SSD	Sandimen	2.69	229	eP	Pn	00 28 22.0	+1.6
	baz=227						
SSD				eS	Sn	00 28 54.3	+1.9
	baz=227						
LAY	Lan-yu	2.75	205	⇑P	Pn	00 28 20.4	-0.9
	baz=206						
SCLT	Jiali	2.76	241	eP	Pn	00 28 22.8	+1.4
	baz=240						
MASBT	Mashibuluo	2.78	227	⇑eP	Pn	00 28 22.5	+0.9
	baz=223						
MASBT				eS	Sn	00 28 55.1	+0.6
	baz=223						
TWM1	Shoushan	2.78	233	eP	Pn	00 28 24.8	+3.1
	baz=232						
EAST	Anshuo	2.81	220	eP	Pn	00 28 21.8	-0.3
	baz=225						
SSPT	Xinbi	2.91	226	eP	Pn	00 28 25.3	+1.9
	baz=225						
PTTC	Pingtan	2.92	290	eP	Pn	00 28 23.6	+0.1
	baz=281						
SCZT	Fangliau	2.96	224	eP	Pn	00 28 25.4	+1.4
	baz=218						
SCZT				eS	Sn	00 28 60.0	+1.2
	baz=218						
MATB	Ma-tsu	3.05	302	eP	Pn	00 28 25.5	+0.2
	baz=301						
VWUC	VWUC	3.10	279	⇓eP	Pn	00 28 25.9	+0.1
	baz=278						
PNG	Penghu	3.14	253	eP	Pn	00 28 26.0	-0.4
	baz=250						
PNG				eS	Sn	00 29 01.0	-2.1
	baz=250						
PHUB	P'eng-hu	3.14	252	eP	Pn	00 28 26.3	-0.2
	baz=249						
PHUB				eS	Sn	00 29 00.7	-2.4
	baz=249						
WDGT	Dungji	3.16	247	⇑P	Pn	00 28 27.1	+0.4
	baz=245						
WDGT				eS	Sn	00 29 00.9	-2.7
	baz=245						
TWKBT	Hengchun	3.18	216	eP	Pn	00 28 27.7	+0.7
	baz=216						
TWK1	Hengchun	3.18	216	eP	Pn	00 28 27.7	+0.7
	baz=216						
XPSS	Dashiqiu	3.36	316	⇓eP	Pn	00 28 29.4	+0.1
	baz=305						
VCHM	Qimei	3.37	248	eP	Pn	00 28 30.0	+0.4
	baz=245						
VCHM				eS	Sn	00 29 07.5	-1.3
	baz=245						
PTMZ	Houxiangcun	3.40	279	⇓eP	Pn	00 28 30.1	+0.2
	baz=278						
LYJJ	Jianjiangzhen	3.41	307	⇓eP	Pn	00 28 30.2	+0.2
	baz=305						
MHZQ	Yeshan	3.76	295	eP	Pn	00 28 34.8	0.0
	baz=294						
QZH	Quanzhou	3.86	277	⇓iPn	Pn	00 28 36.3	+0.2
QZH				Sn	Sn	00 29 17.4	-3.2
QZH				smax	smax		
	comp=N,120nm,0.6s						
QZH				smax	smax		
	comp=E,70nm,0.3s						
KNM	Kinmen	4.00	269	eP	Pn	00 28 39.3	+1.4
	baz=268						
KNMB	Chin-men Tao	4.04	270	eP	Pn	00 28 38.6	+0.1
	baz=267						
KNMB				eS	Sn	00 29 21.8	-3.0
	baz=267						
AXDP	Jialang	4.42	276	⇓eP	Pn	00 28 44.1	+0.4
	baz=266						
ZPLA	Ao Xicun	4.67	264	eP	Pn	00 28 47.3	+0.3
	baz=260						
ZPLA				eS	Sn	00 29 36.8	-3.2
	baz=260						
JOW	Kunigami	5.42	64	⇓eP	Pn	00 28 56.1	-1.2
	baz=63						
JOW	Kunigami	5.42	64	P	Pn	00 28 56.3	-1.0
	comp=E,0.7nm,0.3s,baz=126,slow=15,SNR=16						
JOW				S	Sn	00 29 54.1	-4.3
	comp=E,1.6nm,0.3s,baz=91,slow=19,SNR=5.5						
JNU	Nakatsue	11.09	38	LR	LR	00 35 07.1	
	comp=E,35nm,20.2s,baz=7.5,slow=41						
KSRS	Korea Array	13.59	18	P	Pn	00 30 49.8	+2.5
	comp=E,4.6nm,0.3s,baz=199,slow=12,SNR=63						
USRK	Ussuriysk Ar.	20.99	19	P	P	00 32 13.5	-0.5
	comp=E,4.9nm,0.6s,baz=201,slow=8.5,SNR=15						
KLR	Kul'dur	25.62	14	P	P	00 32 58.8	0.0
	comp=E,1.2nm,0.6s,baz=205,slow=5.1,SNR=4.4						
SONM	Songino Array	26.65	335	P	P	00 33 08.1	-0.1
	comp=E,1.4nm,0.8s,baz=148,slow=9.7,SNR=12						
WMQ	Urumqi	34.50	313	eP	P	00 34 22.9	+5.6
MKAR	Makanchi Array	39.13	315	P	P	00 34 55.8	-0.7
	comp=E,0.2nm,0.4s,baz=103,slow=8.1,SNR=7.6						
ZALV	Zalesovo Beam	40.77	326	P	P	00 35 08.4	-1.5
	comp=E,0.3nm,0.3s,baz=126,slow=7.7,SNR=3.3						
WRA	Warramunga Arr	45.62	165	P	P	00 35 50.0	+0.8
	comp=E,1.6nm,0.7s,baz=347,slow=8.8,SNR=10						
ASAR	Alice Springs	49.11	167	P	P	00 36 17.5	+1.2
	comp=E,0.2nm,0.3s,baz=352,slow=6.3,SNR=7.8						
ILAR	Eielson Array	68.21	27	P	P	00 38 27.7	-0.6
	comp=E,0.1nm,0.6s,baz=255,slow=6.1,SNR=3.2						
FINES	FINESS Array B	71.89	330	P	P	00 38 49.7	-1.0
	comp=E,0.7nm,0.4s,baz=50,slow=6.0,SNR=15						
NOA	NORSAR Array B	78.60	333	P	P	00 39 28.5	-0.8
	comp=E,0.8nm,1.0s,baz=53,slow=4.6,SNR=2.6						
YKA	Yellowknife Ar	82.06	23	P	P	00 39 47.4	-0.3
	comp=E,0.5nm,0.6s,baz=307,slow=5.2,SNR=11						

TRN 24 00:38:20.3, 11°.01N×61°.99W, h115km, MD3.7, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.68	122	eP	Pn	00 38 39.0	0.0
TRN				eS	Sn	00 38 52.2	-0.9
TPP	Pointe-a-Pierr	0.86	142	eP	Pn	00 38 41.1	+0.4
TPP				eS	Sn	00 38 56.4	+0.4
TBH	Brigand Hill	1.04	120	eP	Pn	00 38 42.6	+0.2
TPR	Prospect	1.20	81	eP	Pn	00 38 44.0	0.0
GRHS	Sauteurs	1.26	16	eP	Pn	00 38 44.3	-0.3
GRHS				eS	Sn	00 39 02.8	-0.4
BOT	Bacolet	1.26	83	eP	Pn	00 38 44.7	0.0
GRSS	Sisters	1.33	16	eP	Pn	00 38 45.3	-0.2
GRSS				eS	Sn	00 39 04.6	-0.1
TOSP	Speyside	1.46	78	eP	Pn	00 38 46.5	-0.4
TOSP				eS	Sn	00 39 06.8	-0.3
FCV	Fort Charlotte	2.26	19	eS	Sn	00 39 24.4	-0.5
SVB	Belmont	2.36	18	eP	Pn	00 38 58.3	+0.1
SVB				eS	Sn	00 39 25.6	-1.7
SVCV	St. Vincent, C	2.40	20	eP	Pn	00 38 58.0	-0.6
SVV	Soufriere Volc	2.42	18	eS	Sn	00 39 28.1	-0.4
MCLT	Moule a Chique	2.87	21	eP	Pn	00 39 04.9	+0.1
MCLT				eS	Sn	00 39 37.4	-1.8
SLB	Belfond	2.95	18	eP	Pn	00 39 06.0	+0.1
SLB				eS	Sn	00 39 39.1	-1.9
BBGH	Gun Hill	3.19	48	eP	Pn	00 39 09.6	+0.7
FDF	Fort de France	3.79	12	eP	Pn	00 39 16.9	-0.2
DWS	Wesley	4.58	8	eP	Pn	00 39 27.0	-0.6
MDPV	Dominica, Penn	4.63	7	eP	Pn	00 39 28.4	+0.1
ANWB	Willy Bob	6.62	2	eP	Pn	00 39 55.7	+0.5
ANWB	Willy Bob	6.62	2	eS	Sn	00 41 04.8	-4.5

IDC 24 00:47:59.0±49.0, 6°.28S×105°.63E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/48, mbtmp3.6/3, Error ellipse: s-maj=860.0km s-min=208.0km az=137.0, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.01	119	P	P	00 54 18.3	-0.4
	0.3nm,0.8s,baz=289,slow=9.7,SNR=3.0						
ASAR	Alice Springs	32.21	125	P	P	00 54 29.6	+0.3
	0.3nm,0.3s,baz=298,slow=8.1,SNR=12						
STKA	Stephens Creek	42.13	132	P	P	00 55 53.3	0.0
	0.7nm,0.4s,baz=288,slow=7.2,SNR=3.9						

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*DDA **24** 00:49:11.7, 38°.97N×43°.55E, h16^{km}, ML2.5*
*ISK **24** 00:49:11.1, 38°.91N×43°.57E, h7^{km}, ML2.0/9*
*ISCJB **24** 00:49:12.3±0.7, 38°.95N±0°.03×43°.57E±0°.07, h9^{km}±4^{km}, Error ellipse: s-maj=9.0km s-min=4.7km az=178.1*
ISC 24 00:49:11.7±1.0**, 38°.94N**±0°.03×**43°.58E**±0°.05**, h16**^{km}±6^{km}**, n17, σ0^{s}.64**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.05	350	i P	Pg	00 49 15.2	+0.2
VMUR				i S	Sg	00 49 17.4	+0.3
ERCV	ERCIS-VAN	0.20	292	PG	Pg	00 49 15.9	-0.8
VANB	Van	0.38	204	PG	Pb	00 49 19.9	-0.2
VANB				SG	Sb	00 49 26.4	+0.6
TVAN	Van	0.44	198	i P	Pg	00 49 20.2	-0.4
TVAN				i S	Sb	00 49 28.4	+0.9
TVAN				IAML_P			
	comp=Z,2μm,0.1s						
ADCV	BITLIS_Adilcev	0.68	259	i P	Pb	00 49 25.2	-0.2
ADCV				i S	Sb	00 49 35.4	+0.8
ADCV				IAML_P			
	comp=Z,269nm,0.2s						
TUTA	Tutak	0.75	308	i P	Pg	00 49 26.1	-0.3
TUTA				i S	Sb	00 49 36.2	-0.5
TUTA				IAML_P			
	comp=Z,1μm,0.2s						
AKDM	Akdamar-Van	0.77	218	PG	Pg	00 49 25.6	-1.2
AGRB	Hanur-Agry	0.78	324	PG	Pb	00 49 26.9	-0.1
AGRB				SG	Sn	00 49 38.8	-0.9
MLAZ	Malazgirt-MUS	0.83	284	PG	Pb	00 49 27.5	-0.3
GURO	Guroymak-BITLI	1.27	253	PN	Pn	00 49 34.9	0.0
GNI	Garni	1.50	36	PN	Pb	00 49 39.2	-0.1
SRTM	Siirt_Merkez	1.61	234	i P	Pg	00 49 42.6	-0.1
VRTB	Varto-Mus	1.67	278	PN	Pb	00 49 41.6	-0.5
VRTB	Varto-Mus	1.67	278	i P	Pg	00 49 45.0	+1.1
VRTB				IAML_P			
	comp=Z,229nm,0.4s						
CUKT	Cukurca	1.69	179	PN	Pn	00 49 41.3	+0.6
SIRN	Sırnak	1.71	213	i P	Pg	00 49 44.2	-0.4
SIRN				IAML_P			
	comp=Z,172nm,0.3s						
ECAT	Cat-ERZURUM	2.13	289	i P	Pb	00 49 50.1	+0.1

IDC 24 00:55:59.0±3.7**, 18°.96S**×**168°.76E, h0**^{km}**, mb4.2**/6**, mb1 4.4**/7**, mb1mx4.0**/32**, mbtmp4.2**/7**, ML4.0**/1**, MS3.4**/10**, Ms1 3.4**/10**, ms1mx3.2**/31**, Error ellipse: s-maj=80.7km s-min=36.2km az=116.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.78	215	Pn	Pn	00 56 58.3	-0.4
	12nm,0.3s,baz=65,slow=12,SNR=319						
DZM				Sn	Sn	00 57 37.1	-6.8
	42nm,0.3s,baz=150,slow=22,SNR=13						
DZM				LR	LR	00 57 38.5	
	comp=Z,114nm,19.9s,baz=38,slow=26						
URZ	Urewera	20.56	161	LR	LR	01 06 57.8	
	comp=Z,93nm,20.4s,baz=336,slow=32						
CTA	Charters Tower	21.24	263	P	P	01 00 48.6	+1.7
	5.7nm,0.8s,baz=95,slow=13,SNR=6.3						
STKA	Stephens Creek	27.61	237	P	P	01 01 48.8	+0.5
	2.7nm,0.5s,baz=71,slow=9.3,SNR=9.8						
STKA				LR	LR	01 12 32.2	
	comp=Z,73nm,18.5s,baz=28,slow=36						
JAY	Jayapura	31.95	297	LR	LR	01 15 11.8	
	comp=Z,107nm,19.4s,baz=33,slow=36						
WRA	Warramunga Arr	32.44	262	P	P	01 02 29.4	-1.7
	1.7nm,1.0s,baz=92,slow=8.9,SNR=5.7						
WRA				LR	LR	01 15 10.8	
	comp=Z,54nm,18.4s,baz=55,slow=36						
ASAR	Alice Springs	32.75	256	P	P	01 02 33.5	-0.5
	5.1nm,0.8s,baz=82,slow=8.9,SNR=44						
ASAR				LR	LR	01 15 51.1	
	comp=Z,91nm,19.7s,baz=87,slow=36						
PPT	Papeete	39.53	95	LR	LR	01 17 21.6	
	comp=Z,220nm,18.3s,baz=345,slow=32						
GUMO	Guam	40.01	322	LR	LR	01 19 30.6	
	comp=Z,40nm,21.4s,baz=105,slow=35						
FITZ	Fitzroy Crossi	40.82	264	P	P	01 03 42.9	+0.2
	5.8nm,0.8s,baz=73,slow=9.5,SNR=3.9						
FITZ				LR	LR	01 20 20.2	
	comp=Z,70nm,18.4s,baz=96,slow=36						
MJAR	Matsushiro Arr	62.30	332	LR	LR	01 30 56.9	
	comp=Z,15nm,21.2s,baz=110,slow=34						
SONM	Songino Array	86.73	323	P	P	01 08 45.2	+0.2
	0.3nm,0.4s,baz=140,slow=2.3,SNR=3.6						

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*IDC **24** 00:57:15.8±0.9, 26°.12N×75°.80E, h0^{km}, mb3.5/12, mb1 3.7/13, mb1mx3.5/56, mbtmp3.6/13, ML3.5/1, Error ellipse: s-maj=26.7km s-min=17.4km az=50.0*
*ISCJB **24** 00:57:18.5±0.3, 26°.27N±0°.03×75°.92E±0°.03, h33^{km}, mb3.5/13, Error ellipse: s-maj=4.0km s-min=3.5km az=34.1*
*NDI **24** 00:57:20.0±2.3, 26°.20N×76°.06E, h10^{km}, ML4.1*
*NNC **24** 00:57:26.2±5.4, 27°.07N×75°.12E, h0^{km}, mb4.2, Error ellipse: s-maj=104.5km s-min=42.5km az=83.0*
*NEIC **24** 00:57:30.2±5.3, 27°.26N×75°.49E, h10^{km}, mb3.6/3, Error ellipse: s-maj=65.4km s-min=20.8km az=188.0*
NEIC Felt [II] at Jaipur. Also felt at Malpura.
ISC 24 00:57:20.3±0.5**, 26°.26N**±0°.04×**75°.89E**±0°.05**, h35**^{km}**, n55, σ3^{s}.26**/79**, mb3.5**/13**, 2C-6D, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHPL	Bhopal	3.31	155	eP	Pn	00 58 09.8	0.0
BHPL				eS	Sn	00 58 48.1	+0.1
BHPL				IAML		00 59 05.0	
	comp=N,446nm,0.2s						
BHPL				IAML		00 59 06.5	
	comp=E,656nm,0.3s						
DDI	Dehra Dun	4.47	25	eP	Pn	00 58 29.5	+3.8
DDI				eS	Sn	00 59 18.8	+2.2
DDI				IAML		00 59 49.8	
	comp=N,2μm,0.9s						
DDI				IAML		00 59 55.9	
	comp=E,881nm,1.4s						
JBP	Jabalpur	4.83	129	eP	Pn	00 58 30.6	0.0
JBP				eS	Sn	00 59 21.5	-3.8
SMLA	Simla	4.98	13	eP	Pn	00 58 34.1	+1.6
SMLA				eS	Sn	00 59 29.9	+1.0
SMLA				IAML		01 00 02.5	
SMLA				IAML		01 00 06.5	
	comp=E,622nm,0.7s						
NGP	Nagpur	5.85	150	eP	Pn	00 58 44.2	-0.5
NGP				eS	Sn	00 59 47.7	-2.9
NGP				IAML		01 00 27.2	
	comp=E,120nm,0.1s						
NGP				IAML		01 00 27.6	
	comp=N,139nm,0.5s						
DHRM	DHARAMSHALA	5.98	3	eP	Pn	00 58 48.2	+1.6
DHRM				eS	Sn	00 59 53.7	-0.2
DHRM				IAML		01 00 33.4	
	comp=E,718nm,0.4s						
DHRM				IAML		01 00 35.2	
	comp=N,499nm,0.4s						
BHJ	Bhuj	6.41	243	eP	Pn	00 58 56.5	+4.2
BHJ				eS	Sn	01 00 06.8	+2.5
BHJ				IAML		01 00 36.8	
	comp=N,145nm,0.2s						
BHJ				IAML		01 00 37.6	
	comp=E,170nm,0.8s						
PYUN	Piuthan	6.58	72	ePn	Pn	00 58 57.6	+2.8
PYUN				eSn	Sn	01 00 11.9	+3.1
	comp=E,225nm,0.3s						
KOLN	Koldanda	7.04	76	ePn	Pn	00 59 03.5	+2.4
KOLN				eSn	Sn	01 00 21.4	+1.4
	comp=E,246nm,0.3s						
DANN	Dangsing	7.30	72	ePn	Pn	00 59 06.7	+1.9
THW	Thamme Wali	7.45	332	P	Pn	00 59 06.0	-0.5
NIL	Nilore	7.71	343	ePn	Pn	00 59 06.8	-3.4
BOM	Bombay	7.86	202	ex	Sn	01 00 33.8	-6.2
BOM				ex	x	01 01 03.9	
POO	Poona	7.92	194	eS	Sn	01 00 36.5	-5.2
POO				IAML		01 01 21.4	
	comp=E,175nm,1.1s						
POO				IAML		01 01 25.2	
	comp=N,95nm,0.1s						
CEP	Cherat	8.29	336	P	Pn	00 59 18.1	-0.1
DMN	Daman	8.33	79	ePn	Pn	00 59 20.1	+1.2
KKN	Kakani	8.51	78	ePn	Pn	00 59 22.7	+1.4
KKN				eSn	Sn	01 00 56.7	+0.5
	comp=N,116nm,0.3s						
PKIN	Phulchoki	8.59	79	ePn	Pn	00 59 23.0	+0.6
PKIN				eSn	Sn	01 00 57.4	-0.8
	comp=N,113nm,0.2s						
PKI	Pulchoki	8.60	79	ePn	Pn	00 59 23.7	+1.1
PKI				eSn	Sn	01 00 58.4	-0.1
	comp=N,97nm,0.2s						
GUN	Gumba	9.05	77	ePn	Pn	00 59 30.1	+1.2
GUN				eSn	Sn	01 01 09.0	-0.8
	comp=N,195nm,0.3s						
HYB	Hyderabad	9.14	164	i P	Pn	00 59 31.0	+1.1
HYB				eS	Sn	01 01 09.0	-2.6
HYB	Hyderabad	9.14	164	eP	Pn	00 59 28.4	-1.5
HYB				eS	Sn	01 01 05.3	-6.3
JIRN	Jiri	9.29	79	ePn	Pn	00 59 32.2	0.0
JIRN				eSn	Sn	01 01 15.1	-0.6
	comp=N,235nm,0.3s						
BOK	Bokaro	9.39	103	eP	Pn	00 59 32.7	-0.5
BOK				ex	x	01 01 13.7	
BOK				IAML		01 02 20.0	
	comp=E,151nm,1.4s						
BOK				IAML		01 02 23.7	
RAMN	Ramite	9.61	84	ePn	Pn	00 59 36.3	-0.1
RAMN				eSn	Sn	01 01 21.1	-2.2
	comp=E,209nm,0.4s						
KBL	Kabul	10.15	326	ePn	Pn	00 59 43.0	-0.8
GOA	Goa	10.89	191	eP	Pn	00 59 54.8	+1.0
GOA				eS	Sn	01 01 47.4	-7.0
GAR	Garm	13.54	341	ePn	Pn	01 00 28.7	-1.3
CHGR	Chuyangaron	13.60	337	ePn	Pn	01 00 28.7	-2.1
SFK	Sufi-Kurgan	13.86	352	⇑P	Pn	01 00 33.8	-0.6
	comp=E,4.3nm,0.6s						
SFK				⇑S	Sn	01 02 59.7	-7.4
	comp=E,8.1nm,0.5s						
BTK	Batken	14.39	344	ePn	Pn	01 00 43.5	+1.9
NRN	Naryn	15.13	0	ePn	Pn	01 00 51.6	-0.2
ARSB	Arslanbob	15.21	352	ePn	Pn	01 00 52.2	-0.5
AAK	Ala-Archa	16.38	356	ePn	Pn	01 01 07.2	-0.5
	comp=E,3.2nm,1.0s						
AAK	Ala-Archa	16.38	356	⇓P	Pn	01 01 06.4	-1.3
	comp=E,5.3nm,1.5s						
AAK				⇓S	Sn	01 03 59.6	-8.7
	comp=E,7.0nm,1.4s						
AAK	Ala-Archa	16.38	356	Pn	Pn	01 01 07.6	-0.1
	comp=E,0.2nm,0.3s,baz=172,slow=5.2,SNR=8.4						
AAK				Sn	Sn	01 03 58.2	-10
	comp=E,0.1nm,0.3s,baz=247,slow=14,SNR=2.4						
MNAS	Manas	16.42	351	⇓P	Pn	01 01 05.2	-3.0
	comp=E,6.1nm,1.3s						
MNAS				⇓S	Sn	01 03 59.3	-10
	comp=E,3.0nm,0.6s						
KK31	Karatay Array	17.37	347	ePn	Pn	01 01 18.4	-1.5
KK31	Karatay Array	17.37	347	⇓P	Pn	01 01 17.9	-2.1
	comp=E,1.3nm,0.5s,baz=162,slow=13,SNR=3.8						
KK31				⇓S	Sn	01 04 23.5	-8.7
	comp=E,3.6nm,0.8s,baz=167,slow=24,SNR=5.1						
KKAR	Karatay Array	17.37	347	ePn	Pn	01 01 18.4	-1.6
MAKZ	Makanchi	21.07	12	eP	P	01 02 04.4	+3.0
	comp=E,1.2nm,0.6s						
MK01	Makanchi Array	21.09	12	eP	P	01 02 05.3	+3.6
MKAR	Makanchi Array	21.11	12	eP	P	01 02 05.6	+3.7
	comp=E,7.7nm,0.8s						
MKAR	Makanchi Array	21.11	12	P	P	01 02 03.5	+1.5
	comp=E,0.5nm,0.4s,baz=208,slow=12,SNR=11						
MKAR				S	S	01 05 51.6	-3.3
	comp=E,0.4nm,0.7s,baz=196,slow=25,SNR=4.0						
CMAR	Chiang Mai Arr	22.66	105	P	P	01 02 20.3	+1.5
	comp=E,0.6nm,0.4s,baz=294,slow=10,SNR=5.6						
KURBB	Kurchatov Arra	24.41	4	P	P	01 02 36.4	+1.0
	comp=E,0.3nm,0.6s,baz=205,slow=9.3,SNR=3.6						
ZALV	Zalesovo Beam	28.44	11	P	P	01 03 12.6	+0.9
	comp=E,0.4nm,0.4s,baz=180,slow=8.0,SNR=3.0						
SONM	Songino Array	32.17	40	P	P	01 03 47.6	+2.7
	comp=E,0.6nm,0.8s,baz=229,slow=7.0,SNR=4.8						
ARCES	ARCESS Array B	52.17	340	P	P	01 06 27.4	+0.4
	comp=E,1.0nm,0.6s,baz=111,slow=7.8,SNR=9.2						
GERES	GERESS Array B	52.62	313	P	P	01 06 33.5	+2.7
	comp=E,0.2nm,0.4s,baz=95,slow=6.7,SNR=3.7						
HFS	Hagfors	53.80	327	P	P	01 06 40.0	+0.7
	comp=E,1.9nm,0.9s,baz=89,slow=13,SNR=2.9						
TORD	Torodi Ar. Bea	70.26	275	P	P	01 08 31.0	+0.4
	comp=E,0.2nm,0.7s,baz=80,slow=7.2,SNR=2.4						
WRA	Warramunga Arr	72.97	123	P	P	01 08 47.3	+0.6
	comp=E,0.7nm,0.7s,baz=322,slow=5.9,SNR=17						
ASAR	Alice Springs	74.90	126	P	P	01 08 58.4	+0.4
	comp=E,0.9nm,0.7s,baz=306,slow=6.2,SNR=12						
YKA	Yellowknife Ar	91.16	5	P	P	01 10 24.1	+2.8
	comp=E,0.2nm,0.6s,baz=344,slow=4.8,SNR=4.6						

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*DDA **24** 01:04:33.2, 42°.50N×40°.90E, h5^{km}±3^{km}, ML3.9*
*AZER **24** 01:04:35.3±5.6, 41°.93N×40°.00E, h15^{km}, ml4.1/4, Error ellipse: s-maj=128.7km s-min=38.7km az=9.0*
*ISK **24** 01:04:37.4, 42°.39N×40°.89E, h8^{km}, ML3.8/14*
*MOS **24** 01:04:37.5±1.4, 42°.43N×40°.76E, h14^{km}, mb4.0/3, Error ellipse: s-maj=5.1km s-min=4.3km az=103.2*
*TIF **24** 01:04:37.1, 42°.37N×40°.88E, h25^{km}±1^{km}*
*ISCJB **24** 01:04:37.2±0.4, 42°.46N±0°.01×40°.84E±0°.01, h9^{km}±2^{km}, mb3.5/8, Error ellipse: s-maj=2.0km s-min=1.8km az=5.2*
*IDC **24** 01:04:37.1±0.6, 42°.64N×40°.80E, h0^{km}, mb3.4/7, mb1 3.6/12, mb1mx3.4/49, mbtmp3.5/12, ML3.6/4, Error ellipse: s-maj=12.8km s-min=7.4km az=166.0*
*NORS **24** 01:04:39.9±0.0, 42°.61N×41°.35E, h1^{km}, MPVA4.6*
ISC 24 01:04:37.8±0.8**, 42°.42N**±0°.02×**40°.90E**±0°.02**, h11**^{km}±5^{km}**, n213, σ1^{s}.62**/303**, mb3.5**/9**, 27C-6D, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	Batumi	1.00	144	PG	Pb	01 04 56.6	-0.6
BATM				SG	Sb	01 05 10.8	+0.3
BATM	Batumi	1.00	144	P	Pb	01 04 56.3	-0.9
BATM				S	Sb	01 05 10.0	-0.5
BATM	Batumi	1.00	144	⇑iP	Pb	01 04 56.4	-0.8
BATM	Batumi	1.00	144	S	Sb	01 05 10.7	+0.3
DOMR	Dombai	1.02	31	⇑ePG	Pb	01 04 56.2	-1.5
DOMR				eS	Sg	01 05 08.7	-2.2
DOMR	Dombai	1.02	31	i Pg	Pb	01 04 56.1	-1.6
DOMR				eSg	Sg	01 05 07.3	-3.6
BCA	Borcka	1.11	151	⇑iP	Pb	01 04 57.6	-1.4
BCA	Borcka	1.11	151	S	Sb	01 05 12.4	-1.1
ARXR	Arkhyz	1.18	13	i Pg	Pb	01 04 59.2	-1.1
ARXR				eSg	Sb	01 05 13.4	-2.3
DBOC	Borcka	1.21	152	i P	Pn	01 04 59.6	-1.2
DBOC				i S	Sb	01 05 15.7	-0.8
CHOM	Cayeli-Rize	1.32	185	PN	Pn	01 05 01.7	-0.6
CHAY	Cayeli-Rize	1.33	186	PN	Pn	01 05 02.3	-0.1
RPOR	Krasnaya Polya	1.36	340	⇑ePG	Pb	01 05 03.0	-0.4
RPOR				eS	Sg	01 05 21.9	+0.1
RPOR	Krasnaya Polya	1.36	340	i Pg	Pb	01 05 03.0	-0.4
RPOR				i Sg	Sg	01 05 21.9	+0.1
ARTV	Artvin	1.45	148	i P	Pn	01 05 03.8	-0.5
ARTV				i S	Sn	01 05 20.9	-2.5
ARTV				IAML_P			
	comp=Z,52μm,0.2s						
SOC	Sochi	1.46	324	⇑ePG	Pb	01 05 04.4	-0.5
SOC				eS	Sg	01 05 24.1	-0.5
SOC	Sochi	1.46	324	i Pg	Pb	01 05 04.5	-0.5
SOC				i Sg	Sg	01 05 25.0	+0.4
DBAD	Bademkaya	1.52	157	i P	Pn	01 05 04.7	-0.4
DBAD				i S	Sn	01 05 23.6	-1.3
DBAD				IAML_P			
	comp=Z,36μm,0.2s						
DAGI	Agillar	1.54	150	i P	Pn	01 05 04.4	-0.9
DAGI				i S	Sn	01 05 22.8	-2.5
DAGI				IAML_P			
	comp=Z,9μm,0.1s						
NEY	Neytrino	1.58	58	⇓iPN	Pn	01 05 05.2	-0.7
NEY	Neytrino	1.58	58	i Pg	Pn	01 05 05.1	-0.9
NEY				eSg	Sn	01 05 25.1	-1.4
EPOS	Posof	1.64	123	i P	Pn	01 05 07.0	+0.2
EPOS				i S	Sn	01 05 28.3	+0.4
KTUT	Trabzon	1.66	211	PN	Pn	01 05 06.6	-0.3
KTUT	Trabzon	1.66	211	⇑iP	Pn	01 05 06.2	-0.7
KTUT	Trabzon	1.66	211	S	Sn	01 05 28.1	-0.1
GUZR	Guzeripl'	1.68	340	i Pg	Pb	01 05 08.5	-0.3
GUZR				i Sg	Sb	01 05 30.0	0.0
MACK	Trabzon	1.70	210	i P	Pn	01 05 07.2	-0.3
MACK				IAML_P			
	comp=Z,22μm,0.2s						
SHA1	Shidzhatmaz	1.84	44	ePN	Pn	01 05 09.9	+0.2
SHA1	Shidzhatmaz	1.84	44	i Pg	Pn	01 05 09.9	+0.2
SHA1				ePg	Pn	01 05 09.9	+0.2
SHA1				i Sg	Sn	01 05 32.7	-0.4
SHA1				eSg	Sb	01 05 33.3	-1.6
LZRR	Lazarevskoye	1.88	324	i Pg	Pn	01 05 10.8	+0.9
LZRR				eSg	Sb	01 05 36.0	+0.2
KBZ	Khabaz	1.96	47	Pn	Pn	01 05 11.0	0.0
	comp=Z,21nm,0.3s,baz=203,slow=1.0,SNR=396						
KBZ				Sn	Sb	01 05 37.7	-0.4
	comp=Z,147nm,0.3s,baz=115,slow=19,SNR=7.7						
KBZ				LR	LR	01 06 12.2	
	comp=Z,79nm,21.0s,baz=240,slow=50						
KIV	Kislovodsk	2.02	40	PN	Pb	01 05 13.4	-1.2
KIV				SN	Sb	01 05 38.7	-1.1
KIV	Kislovodsk	2.02	40	⇑iP	Pn	01 05 12.1	+0.2
KIV	Kislovodsk	2.02	40	S	Sn	01 05 38.0	+0.8
KIV	Kislovodsk	2.02	40	⇑ePN	Pn	01 05 12.1	+0.2
KIV	Kislovodsk	2.02	40	ePg	Pn	01 05 12.0	+0.1
KIV				eSg	Sn	01 05 36.5	-0.7
KIV0	Kislovodsk Arr	2.02	40	ePg	Pn	01 05 12.0	0.0
KIV0				eSg	Sn	01 05 36.5	-0.8
KVAR	Kislovodsk Arr	2.02	40	LR	LR	01 06 12.9	
	comp=Z,210nm,21.0s,baz=86,slow=50						
DIGR	Digorskoe uzhe	2.03	75	ePN	Pn	01 05 12.3	0.0
DIGR	Digorskoe uzhe	2.03	75	ePg	Pn	01 05 12.3	0.0
DIGR				eSg	Sn	01 05 38.2	+0.4
BAYT	Aydıntepe-Bayb	2.10	196	PN	Pn	01 05 13.4	+0.3
BEYR	Belyy Ugol+	2.12	41	⇑ePN	Pn	01 05 13.8	+0.5
BEYR				eS	Sn	01 05 40.9	+1.2
BEYR	Belyy Ugol+	2.12	41	ePg	Pn	01 05 13.8	+0.5
BEYR				eSg	Sn	01 05 40.9	+1.2
SENK	Senkaya-Erzuru	2.15	149	PN	Pn	01 05 14.5	+0.7
BAYB	BAYBURT	2.21	193	i P	Pn	01 05 15.2	+0.5
BAYB				IAML_P			
	comp=Z,776nm,0.2s						
ZEI	Tsey	2.25	79	ePN	Pn	01 05 14.6	-0.6
ZEI				eS	Sn	01 05 44.0	+1.0
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ZEI				smax	smax		
	comp=N,721nm,0.4s						
ZEI				smax	smax		
	comp=E,747nm,0.4s						
NCK	Nalchik	2.25	60	ePN	Pb	01 05 18.6	+0.1
NCK				eS	Sb	01 05 46.8	+0.4
NCK	Nalchik	2.25	60	ePg	Pn	01 05 16.9	+1.8
NCK				eSg	Sn	01 05 44.6	+1.7
KBTC	Kuba-Taba	2.31	52	ePN	Pb	01 05 19.8	+0.3
KBTC				eS	Sb	01 05 50.0	+1.9
KBTC	Kuba-Taba	2.31	52	ePg	Pn	01 05 16.4	+0.5
KBTC				eSg	Sn	01 05 45.3	+1.0
LSNR	Lesken	2.32	67	ePN	Pb	01 05 18.3	-1.4
LSNR				eS	Sb	01 05 47.9	-0.4
LSNR	Lesken	2.32	67	ePg	Pn	01 05 16.3	+0.3
LSNR				eSg	Sn	01 05 46.3	+1.8
BGD	Bogdanovka	2.32	119	P	Pn	01 05 18.0	+1.8
BGD				S	Sb	01 05 48.6	+0.1
NVNR	Nevinnomyssk	2.33	19	ePn	Pn	01 05 17.3	+1.2
NVNR				eSn	Sb	01 05 46.1	-2.5
KOPT	Kop Dagi	2.42	187	i P	Pn	01 05 20.4	+2.9
KOPT				IAML_P			
	comp=Z,642nm,0.1s						
KORR	Kora	2.43	73	ePN	Pb	01 05 20.4	-1.1
KORR				eS	Sb	01 05 50.1	-1.3
KORR	Kora	2.43	73	ePn	Pn	01 05 19.9	+2.5
KORR				eSn	Sb	01 05 50.1	-1.3
HOMI	Horasan	2.49	162	i P	Pn	01 05 20.4	+1.9
HOMI				IAML_P			
	comp=Z,1μm,0.2s						
STDR	Stavd-Durt	2.51	67	ePN	Pb	01 05 22.4	-0.5
STDR				eS	Sb	01 05 52.7	-1.2
STDR	Stavd-Durt	2.51	67	ePn	Pn	01 05 19.2	+0.6
STDR				eSn	Sn	01 05 50.9	+1.6
KOPR	Koprukoy-ERZUR	2.53	163	PN	Pn	01 05 19.6	+0.6
LACR	Lac	2.54	80	ePN	Pn	01 05 20.6	+1.5
LACR				eS	Sb	01 05 53.2	-1.6
LACR	Lac	2.54	80	ePn	Pn	01 05 19.5	+0.4
LACR				eSn	Sn	01 05 49.7	-0.4
TRLG	Trialeti	2.54	109	P	Pn	01 05 20.2	+1.1
TRLG				S	Sb	01 05 54.1	-0.8
KELT	Kelkit	2.58	209	i P	Pn	01 05 20.9	+1.1
KELT				IAML_P			
	comp=Z,3μm,0.2s						
ARNR	Ardon	2.60	72	ePN	Pb	01 05 24.8	+0.3
ARNR				eS	Sb	01 05 57.8	+1.3
ARNR	Ardon	2.60	72	ePn	Pn	01 05 20.4	+0.5
ARNR				eSn	Sn	01 05 52.1	+0.5
GUDG	Gudauri	2.65	88	P	Pn	01 05 21.8	+1.1
GUDG				S	Sb	01 05 58.1	+0.1
EAK	Akyaka	2.67	130	i P	Pn	01 05 21.8	+0.9
EAK				IAML_P			
	comp=Z,902nm,0.4s						
ORDU	Ordu-Boztepe	2.69	239	i P	Pn	01 05 21.7	+0.6
ORDU				i S	Sn	01 05 52.2	-1.4
ORDU				IAML_P			
	comp=Z,1μm,0.3s						
DIGO	Kars	2.73	136	i P	Pn	01 05 23.5	+1.6
KZRT	Kazreti	2.81	110	P	Pn	01 05 24.6	+1.9
KZRT				S	Sb	01 06 02.2	-0.2
ECAT	Cat-ERZURUM	2.81	179	i P	Pn	01 05 24.6	+1.7
PRTR	Priterechnaya	2.81	61	ePn	Pn	01 05 24.8	+2.0
PRTR				eSn	Sn	01 05 57.8	+1.1
VLKR	Vladikavkaz	2.85	76	ePn	Pn	01 05 24.5	+1.2
VLKR				eSn	Sn	01 05 57.1	-0.6
EZC	Erzincan	2.91	204	PN	Pn	01 05 26.1	+1.9
KGUR	Krasnodar	2.94	333	ePn	Pn	01 05 27.0	+2.5
KGUR				eSn	Sn	01 06 00.0	+0.3
TBLG	Delisi	2.94	102	PN	Pn	01 05 26.2	+1.7
TBLG	Delisi	2.94	102	P	Pn	01 05 24.5	0.0
TBLG				S	Sb	01 06 05.2	-1.0
TBLG	Delisi	2.94	102	ePN	Pn	01 05 24.5	0.0
TBLG				eS	Sb	01 06 05.1	-1.0
TBLG	Delisi	2.94	102	i P	Pn	01 05 25.1	+0.6
TBLG				i S	Sb	01 06 05.9	-0.2
TBLG				IAML_P			
	comp=Z,332nm,0.1s						
TBLG	Delisi	2.94	102	ePn	Pn	01 05 24.5	0.0
TBLG				eSn	Sb	01 06 05.2	-1.0
ERZN	Erzincan	2.96	198	PN	Pn	01 05 26.2	+1.2
SEAG	Tbilisi Sea	2.98	101	P	Pn	01 05 25.6	+0.6
SEAG				S	Sb	01 06 07.2	0.0
KMGR	Komgaron	2.99	76	ePn	Pn	01 05 25.8	+0.5
KMGR				eSn	Sn	01 05 59.4	-1.7
BTNK	Botanikuri	2.99	103	P	Pn	01 05 26.2	+0.9
BTNK				S	Sb	01 06 08.2	+0.4
BTNK	Botanikuri	2.99	103	i P	Pn	01 05 27.0	+1.7
SUSE	Susehri	3.00	224	i P	Pn	01 05 26.9	+1.4
SUSE				i S	Sn	01 06 03.0	+1.5
SUSE				IAML_P			
	comp=Z,3μm,0.2s						
GOF	Gofitskoye	3.06	30	ePN	Pb	01 05 33.4	+1.1
GOF				eS	Sb	01 06 12.4	+2.7
GOF				pmax	pmax		
	comp=Z,60nm,0.5s						
GOF				smax	smax		
	comp=E,50nm,0.7s						
GOF	Gofitskoye	3.06	30	ePn	Pn	01 05 26.4	+0.2
GOF				eSn	Sn	01 06 00.3	-2.5
TRKR	Terskaya	3.10	64	ePn	Pn	01 05 29.5	+2.9
TRKR				eSn	Sn	01 06 02.8	-0.8
AGRB	Hanur-Agry	3.25	150	PN	Pn	01 05 30.3	+1.4
VRTB	Varto-Mus	3.28	172	PN	Pn	01 05 30.3	+1.0
VRTB	Varto-Mus	3.28	172	i P	Pn	01 05 31.6	+2.3
VRTB				IAML_P			
	comp=Z,189nm,0.3s						
ERBR	Yeremizino-Bor	3.31	355	ePN	Pn	01 05 30.3	+0.7
ERBR				eS	Sn	01 06 08.9	-0.1
ERBR	Yeremizino-Bor	3.31	355	ePn	Pn	01 05 30.3	+0.7
ERBR				eSn	Sn	01 06 08.8	-0.1
TUTA	Tutak	3.34	154	i P	Pn	01 05 32.7	+2.4
TUTA				IAML_P			
	comp=Z,655nm,0.2s						
RSDY	Resadiye-TOKAT	3.36	234	PN	Pn	01 05 31.8	+1.5
REFA	Refahiye_ERZN	3.42	209	i P	Pn	01 05 27.1	-4.2
REFA				i S	Sn	01 06 05.0	-6.9

REFA				IAML_P			
	comp=Z,955nm,0.2s						
BNGB	**Bingl**	**3.42**	**183**	PN	**Pn**	**01 05 32.3**	**+1.0**
CUZAR	**Zara_SIVAS**	**3.46**	**224**	*i* P	Pg	01 05 55.3	+11
ANN	**Anapa**	**3.47**	**315**	*e*PN	**Pn**	**01 05 34.7**	**+3.0**
ANN				*e*		01 06 16.6	
ANN				pmax	pmax		
	comp=Z,52nm,0.3s						
ANN				smax	smax		
	comp=N,154nm,0.3s						
ANN	**Anapa**	**3.47**	**315**	*e*Pn	**Pn**	**01 05 34.2**	**+2.5**
ANN				*e*Sn	**Sn**	**01 06 16.3**	**+3.5**
IGDI	**IGDIR**	**3.50**	**136**	*i* P	**Pb**	**01 05 40.6**	**+0.9**
TASB	**TASBURUN-IGDIR**	**3.50**	**133**	PN	**Pn**	**01 05 33.9**	**+1.6**
MLAZ	**Malazgirt-MUS**	**3.50**	**159**	PN	**Pn**	**01 05 33.4**	**+1.0**
BINT	**Bingol**	**3.55**	**185**	PN	**Pn**	**01 05 32.3**	**-0.7**
ERBA	**Erbaa**	**3.56**	**242**	*i* P	**Pn**	**01 05 34.5**	**+1.4**
ERBA				*i* S	**Sn**	**01 06 15.3**	**+0.1**
QZX	**Qazax, Azerbai**	**3.61**	**111**	⇓P	**Pn**	**01 05 37.8**	**+4.1**
	SNR=5.2						
QZX				⇑S	**Sb**	**01 06 25.6**	**+0.1**
KEMA	**Kemaliye**	**3.64**	**211**	*i* P	**Pn**	**01 05 36.7**	**+2.5**
GNI	**Garni**	**3.67**	**127**	PN	**Pn**	**01 05 36.4**	**+1.7**
GNI	**Garni**	**3.67**	**127**	Pn	**Pb**	**01 05 41.2**	**-1.7**
	comp=N,3.4nm,0.3s,baz=294,slow=7.3,SNR=15						
GNI				Sn	**Sb**	**01 06 29.6**	**+2.1**
	comp=N,14nm,0.3s,baz=34,slow=19,SNR=7.7						
GNI	**Garni**	**3.67**	**127**	*e*Pn	**Pn**	**01 05 35.4**	**+0.7**
GROC	**Groznyy**	**3.69**	**76**	*e*PN	**Pn**	**01 05 34.6**	**-0.1**
GROC				*e*S	**Sn**	**01 06 18.1**	**-0.1**
GROC				pmax	pmax		
	comp=Z,16nm,0.2s						
GROC				smax	smax		
	comp=N,105nm,1.3s						
GROC				smax	smax		
	comp=E,145nm,0.7s						
GROC				smax	smax		
	comp=E,271nm,0.8s						
GROC	**Groznyy**	**3.69**	**76**	*e*Pn	**Pn**	**01 05 35.0**	**+0.2**
GROC				*e*Sn	**Sn**	**01 06 18.0**	**-0.1**
SVSK	**Karacayir**	**3.86**	**231**	PN	**Pn**	**01 05 38.8**	**+1.7**
KVT	**Kavak**	**3.87**	**251**	PN	**Pn**	**01 05 38.7**	**+1.4**
DVE	**Vedeno**	**3.89**	**80**	*e*Pn	**Pn**	**01 05 38.1**	**+0.5**
DVE				*e*Sn	**Sn**	**01 06 24.0**	**+0.6**
TOKT	**Tokat**	**3.89**	**239**	PN	**Pn**	**01 05 39.3**	**+1.7**
TOKA	**Tokat**	**3.93**	**239**	*i* P	**Pn**	**01 05 39.3**	**+1.1**
TOKA				IAML_P			
	comp=Z,813nm,0.2s						
BTLR	**Botlikh**	**3.94**	**85**	*e*Pn	**Pn**	**01 05 40.1**	**+1.8**
BTLR				*e*Sn	**Sn**	**01 06 24.3**	**-0.3**
GURO	**Guroymak-BITLI**	**3.96**	**167**	PN	**Pn**	**01 05 40.3**	**+1.7**
VMUR	**Van-Muradiye**	**3.98**	**148**	*i* P	**Pb**	**01 05 46.4**	**-1.6**
GDB	**GEDABAY**	**4.01**	**113**	⇑P	**Pn**	**01 05 42.9**	**+3.5**
	SNR=6.7						
GDB				⇑S	**Sb**	**01 06 36.5**	**-0.8**
HANI	**Diyarbakir_Han**	**4.01**	**186**	*i* P	**Pn**	**01 05 41.8**	**+2.4**
HANI				IAML_P			
	comp=Z,156nm,0.3s						
CUKAN	**kangal_SIVAS**	**4.05**	**221**	*i* P	**Pn**	**01 05 42.9**	**+3.0**
HAVZ	**Havza**	**4.10**	**253**	*i* P	**Pn**	**01 05 42.4**	**+1.8**
HAVZ				*i* S	**Sn**	**01 06 28.5**	**-0.1**
HAVZ				IAML_P			
	comp=Z,3µm,0.2s						
ELZG	**Elazig**	**4.18**	**201**	*i* P	**Pn**	**01 05 44.5**	**+2.8**
ELZG				IAML_P			
	comp=Z,199nm,0.2s						
HEKM	**Malatya_Hekimh**	**4.18**	**213**	*i* P	**Pn**	**01 05 44.5**	**+2.7**
HEKM				IAML_P			
	comp=Z,322nm,0.3s						
SINO	**SINOP_Merkez**	**4.25**	**267**	*i* P	**Pn**	**01 05 43.3**	**+0.8**
SINO				*i* S	**Sn**	**01 06 31.4**	**-0.8**
SINO				IAML_P			
	comp=Z,5µm,0.2s						
SVAN	**Silvan-Diyarba**	**4.27**	**177**	PN	**Pn**	**01 05 44.6**	**+1.8**
SVAN	**Silvan-Diyarba**	**4.27**	**177**	*i* P	**Pn**	**01 05 45.8**	**+3.1**
SVAN				IAML_P			
	comp=Z,476nm,0.2s						
DIKM	**Dikmen**	**4.27**	**262**	⇓*i*P	**Pn**	**01 05 43.8**	**+1.0**
XNZR	**Khunzakh**	**4.29**	**86**	*e*Pn	**Pn**	**01 05 45.6**	**+2.3**
XNZR				*e*Sn	**Sn**	**01 06 33.1**	**-0.4**
ZKTA	**Zakatala**	**4.33**	**98**	PN	Pn	01 05 49.1	+5.5
ZKTA	**Zakatala**	**4.33**	**98**	⇓P	Pn	01 05 49.2	+5.5
	SNR=14						
ZKTA				⇑S	**Sb**	**01 06 47.5**	**+1.2**
AKDM	**Akdamar-Van**	**4.38**	**158**	PN	**Pn**	**01 05 46.3**	**+1.8**
DBC	**Dubki**	**4.41**	**80**	*e*Pn	**Pn**	**01 05 44.5**	**-0.3**
DBC				*e*Sn	**Sn**	**01 06 31.5**	**-4.7**
GANJ	**Ganja**	**4.44**	**112**	PN	**Pn**	**01 05 49.4**	**+4.3**
GANJ	**Ganja**	**4.44**	**112**	⇓P	**Pn**	**01 05 49.5**	**+4.3**
	SNR=7.5						
GANJ				⇑S	**Sb**	**01 06 48.6**	**-0.7**
SRTM	**Siirt_Merkez**	**4.49**	**170**	*i* P	**Pn**	**01 05 48.7**	**+2.8**
SRTM				IAML_P			
	comp=Z,659nm,0.3s						
GNBR	**Gunib**	**4.49**	**88**	*e*Pn	**Pn**	**01 05 48.4**	**+2.6**
GNBR				*e*Sn	**Sn**	**01 06 35.9**	**-2.2**
CUSAR	**Sarkisla-SIVAS**	**4.63**	**231**	*i* P	**Pn**	**01 05 49.9**	**+2.1**
FEO	**Feodosiya**	**4.77**	**305**	*e*PN	**Pn**	**01 05 51.1**	**+1.5**
FEO	**Feodosiya**	**4.77**	**305**	*e*Pn	**Pn**	**01 05 51.1**	**+1.5**
CTAK	**Corum_Osmancik**	**4.92**	**251**	*i* P	Pn	01 05 41.3	-11
SUDU	**Sudak**	**4.95**	**302**	*e*PN	**Pn**	**01 05 52.8**	**+0.8**
SUDU				*e*S	**Sn**	**01 06 49.2**	**0.0**
SUDU	**Sudak**	**4.95**	**302**	*e*Pn	**Pn**	**01 05 52.8**	**+0.8**
SUDU				*e*Sn	**Sn**	**01 06 49.2**	**0.0**
COAL	**Corum-Alaca**	**4.95**	**246**	*i* P	**Pn**	**01 05 54.7**	**+2.5**
COAL				IAML_P			
	comp=Z,83nm,0.3s						
SIRN	**Sırnak**	**5.05**	**166**	*i* P	**Pn**	**01 05 55.9**	**+2.3**
SIRN				IAML_P			
	comp=Z,76nm,0.2s						
BZK	**Bozkurt**	**5.15**	**267**	⇑*i*P	**Pn**	**01 05 55.2**	**+0.4**
BZK	**Bozkurt**	**5.15**	**267**	S	**Sn**	**01 06 55.8**	**+1.6**
ALU	**Alushta**	**5.24**	**298**	⇓*i*PN	**Pn**	**01 05 56.8**	**+0.8**
ALU				*i* S	**Sn**	**01 06 55.4**	**-1.0**
ALU	**Alushta**	**5.24**	**298**	*e*Pn	**Pn**	**01 05 56.8**	**+0.8**
ALU				*e*Sn	**Sn**	**01 06 55.4**	**-1.0**
YAL	**Yalta**	**5.33**	**295**	*e*PN	**Pn**	**01 05 58.9**	**+1.6**
YAL				*e*S	**Sn**	**01 06 58.3**	**-0.4**
YAL	**Yalta**	**5.33**	**295**	*e*Pn	**Pn**	**01 05 58.9**	**+1.6**
YAL				*e*Sn	**Sn**	**01 06 58.4**	**-0.3**
SIRC	**Yozgat**	**5.34**	**237**	*i* P	**Pn**	**01 06 00.1**	**+2.6**
SIM	**Simferopol'**	**5.53**	**300**	*e*P	**Pn**	**01 06 01.5**	**+1.4**
SIM				*e*S	**Sn**	**01 07 02.8**	**-0.9**
SIM	**Simferopol'**	**5.53**	**300**	*e*Pn	**Pn**	**01 06 01.5**	**+1.4**
SIM				*e*Sn	**Sn**	**01 07 02.8**	**-0.9**
ILGA	**Ilgaz**	**5.55**	**258**	*i* P	**Pn**	**01 06 03.0**	**+2.4**
ILGA				IAML_P			
	comp=Z,3µm,0.2s						
CDAG	**Cicekdag**	**5.67**	**243**	*i* P	**Pn**	**01 06 04.2**	**+2.0**
CDAG				IAML_P			
	comp=Z,130nm,0.1s						
SEV	**Sevastopol'**	**5.68**	**294**	*e*P	**Pn**	**01 06 02.2**	**+0.1**
SEV				*e*S	**Sn**	**01 07 05.4**	**-1.8**
SEV	**Sevastopol'**	**5.68**	**294**	*e*Pn	**Pn**	**01 06 02.2**	**+0.1**
SEV				*e*Sn	**Sn**	**01 07 05.4**	**-1.8**
DELI	**KIRIKKALE**	**5.79**	**248**	*i* P	**Pn**	**01 06 05.9**	**+2.0**
DELI				IAML_P			
	comp=Z,199nm,0.2s						
ELDT	**Eldivan**	**5.94**	**254**	*i* P	**Pn**	**01 06 08.8**	**+3.0**
ELDT				IAML_P			
	comp=Z,99nm,0.1s						
BRTR	**Keskin Array B**	**6.11**	**246**	Pn	**Pn**	**01 06 09.9**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=39,slow=10,SNR=40						
BRTR				Sn	**Sn**	**01 07 19.7**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=41,slow=17,SNR=5.7						
CMDR	**Camlidere-ANKA**	**6.62**	**256**	*i* P	**Pn**	**01 06 17.5**	**+2.4**
CMDR				IAML_P			
	comp=Z,273nm,0.2s						
VRH	**Novokhopyorsk**	**8.81**	**3**	*e*P	**Pn**	**01 06 48.6**	**+3.6**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VSR	**Storozhevoye**	**8.88**	**353**	*i* P	**Pn**	**01 06 49.0**	**+2.9**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR	**Storozhevoye**	**8.88**	**353**	*e*Pn	**Pn**	**01 06 49.0**	**+2.9**
TLCR		**9.17**	**292**	⇑*i*P	**Pn**	**01 06 49.0**	**-1.0**
TLCR		**9.17**	**292**	P	**Pn**	**01 06 48.9**	**-1.0**
TIRR	**Tirgusor**	**9.31**	**287**	⇑*i*P	**Pn**	**01 06 50.2**	**-1.8**
TIRR	**Tirgusor**	**9.31**	**287**	P	**Pn**	**01 06 50.2**	**-1.8**
TLB	**Topalu**	**9.60**	**287**	⇑*i*P	**Pn**	**01 06 54.4**	**-1.4**
CFR	**Carcaliu**	**9.63**	**291**	⇑*i*P	**Pn**	**01 06 56.3**	**-0.1**
ICOR	**Ion Corvin**	**9.71**	**285**	⇑*i*P	**Pn**	**01 06 56.8**	**-0.6**
LPSR	**Galich'ya Gora**	**10.28**	**353**	*e*P	**Pn**	**01 07 02.8**	**-2.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRI	**Vrincioaia**	**10.76**	**294**	⇑*i*P	**Pn**	**01 07 12.4**	**+0.7**
VRI	**Vrincioaia**	**10.76**	**294**	P	**Pn**	**01 07 12.4**	**+0.7**
TESR	**Tescani**	**10.98**	**297**	⇑*i*P	**Pn**	**01 07 13.9**	**-0.9**
MLR	**Muntele Rosu**	**11.21**	**291**	⇑*i*P	**Pn**	**01 07 17.5**	**-0.6**
MLR	**Muntele Rosu**	**11.21**	**291**	Pn	**Pn**	**01 07 17.7**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=348,slow=17,SNR=7.5						
MLR				Sn	**Sn**	**01 09 20.0**	**-3.5**
	comp=Z,0.9nm,0.3s,baz=339,slow=21,SNR=3.9						
BIZ	**Bicaz**	**11.46**	**298**	⇑*i*P	**Pn**	**01 07 21.4**	**0.0**
AKASG	**Malin Array Be**	**11.53**	**320**	Pn	**Pn**	**01 07 21.1**	**-1.3**
	comp=Z,2.2nm,0.3s,baz=137,slow=13,SNR=6.6						
AKASG				Sn	**Sn**	**01 09 23.9**	**-7.2**
	comp=Z,0.8nm,0.3s,baz=137,slow=24,SNR=3.8						
VOIR		**11.82**	**290**	⇑*i*P	**Pn**	**01 07 25.5**	**-0.9**
VOIR		**11.82**	**290**	P	**Pn**	**01 07 25.5**	**-0.9**
ARR	**Arges**	**12.10**	**290**	⇑*i*P	**Pn**	**01 07 29.2**	**-1.0**
BURAR	**Bucovina Array**	**12.25**	**300**	⇑*i*P	**Pn**	**01 07 31.0**	**-1.3**
BURAR	**Bucovina Array**	**12.25**	**300**	P	**Pn**	**01 07 31.0**	**-1.3**
OBN	**Obninsk**	**13.02**	**349**	*i* P	**Pn**	**01 07 43.0**	**+0.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GEYT	**Alibeck**	**13.90**	**103**	Pn	**Pn**	**01 07 57.7**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=289,slow=19,SNR=3.7						
AKTO	**Aktyubinsk**	**14.25**	**50**	Pn	**Pn**	**01 07 56.5**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=244,slow=13,SNR=1.9						
VYHS	**Vyhne**	**16.61**	**299**	*e*P	**P**	**01 08 31.8**	**-1.2**
VYHS	**Vyhne**	**16.61**	**299**	*e*P	**P**	**01 08 31.8**	**-1.2**
ARU	**Arti**	**18.05**	**33**	*i* P	**P**	**01 08 51.0**	**+2.2**
ARU				pmax	pmax		
	comp=Z,10.0nm,2.2s						
VSU	**Vasula**	**18.36**	**336**	*i* P	**P**	**01 08 54.6**	**+2.4**
VSU				pmax	pmax		
	comp=Z,17nm,1.0s						
GERES	**GERESS Array B**	**20.01**	**298**	P	**Pn**	**01 09 11.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=105,slow=7.2,SNR=3.1						
CLL	**Collm**	**20.94**	**305**	*e*P	**P**	**01 09 21.0**	**+0.5**
CLL				*e*(sP)	**sP**	**01 09 25.0**	**+0.4**
CLL	**Collm**	**20.94**	**305**	*e*P	**P**	**01 09 21.0**	**+0.5**
FINES	**FINESS Array B**	**21.04**	**340**	P	**P**	**01 09 19.7**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=152,slow=12,SNR=15						
KKAR	**Karatay Array**	**21.70**	**78**	*e*P	**P**	**01 09 29.7**	**+0.9**
BRVK	**Borovoye**	**22.29**	**51**	*i* P	**P**	**01 09 36.8**	**+1.9**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**22.34**	**51**	P	**P**	**01 09 37.0**	**+1.5**
BVAR	**Borovoye Array**	**22.34**	**51**	P	**P**	**01 09 37.0**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=243,slow=6.3,SNR=4.3						
HFS	**Hagfors**	**24.30**	**326**	P	**P**	**01 09 55.0**	**0.0**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HFS	**Hagfors**	**24.30**	**326**	P	**P**	**01 09 55.0**	**0.0**
	comp=Z,3.0nm,0.8s,baz=140,slow=12,SNR=8.4						
NB2	**NORSAR Subarra**	**25.82**	**326**	P	**P**	**01 10 10.2**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=126,slow=10						
NOA	**NORSAR Array B**	**25.82**	**326**	P	**P**	**01 10 09.4**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=127,slow=9.4,SNR=5.2						
KURBB	**Kurchatov Arra**	**26.92**	**59**	P	**P**	**01 10 18.1**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=274,slow=9.2,SNR=14						
KURK	**Kurchatov**	**26.98**	**59**	P	**P**	**01 10 18.1**	**-1.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**29.54**	**67**	P	**P**	**01 10 42.2**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=260,slow=8.6,SNR=2.2						
MKAR				PP	**PnPn**	**01 11 32.8**	**-3.7**
	comp=Z,0.1nm,0.5s,baz=276,slow=13,SNR=3.6						
YKA	**Yellowknife Ar**	**73.60**	**348**	P	**P**	**01 16 10.5**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=12,slow=5.7,SNR=2.9						

IDC 24 01:12:30.4±3.9**,5°.57S**×**147°.51E,h163**^{km}±33^{km}**,mb3.4**/3**, mb1 3.7**/4**,mb1mx3.2**/30**,mbtmp3.9**/4**,Error ellipse: s-maj=95.3km s-min=20.2km az=124.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.18**	**221**	P	P	01 16 41.5	-0.3
	1.0nm,0.3s,baz=50,slow=12,SNR=40						
WRA				S	S	01 20 05.0	-5.7
	0.0nm,0.3s,baz=43,slow=20,SNR=3.5						
ASAR	**Alice Springs**	**22.25**	**215**	P	P	01 17 14.4	+0.1
	2.2nm,0.4s,baz=48,slow=8.4,SNR=41						
ASAR				S	S	01 21 08.2	+0.9
	1.3nm,0.9s,baz=32,slow=22,SNR=7.3						
FITZ	**Fitzroy Crossi**	**24.72**	**238**	P	P	01 17 37.0	+0.1
	2.2nm,0.5s,baz=56,slow=12,SNR=12						
ILAR	**Eielson Array**	**84.89**	**23**	P	P	01 24 46.6	-0.1
	0.1nm,0.4s,baz=254,slow=5.2,SNR=4.5						

IDC 24 01:18:19.4±7.1**,8°.17S**×**121°.49E,h191**^{km}±32^{km}**,mb3.4**/1**, mb1 3.1**/5**,mb1mx2.9**/32**,mbtmp3.6**/5**,Error ellipse: s-maj=98.9km s-min=71.1km az=39.0,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.95**	**133**	P	Pn	01 19 07.9	-0.1
	16nm,0.3s,baz=124,slow=21,SNR=12						
BATI				S	Sn	01 19 46.4	+0.4
	17nm,0.3s,baz=131,slow=21,SNR=8.4						
FITZ	**Fitzroy Crossi**	**10.66**	**158**	P	Pn	01 20 47.5	+0.1
	0.2nm,0.3s,baz=358,slow=9.9,SNR=6.0						
FITZ				S	Sn	01 22 40.1	-6.1
	0.1nm,0.3s,baz=218,slow=18,SNR=3.2						
WRA	**Warramunga Arr**	**17.08**	**135**	P	P	01 22 05.3	-0.5
	0.2nm,0.3s,baz=313,slow=11,SNR=11						
WRA				S	S	01 25 07.9	-6.2
	0.2nm,0.3s,baz=293,slow=20,SNR=6.3						
ASAR	**Alice Springs**	**19.47**	**144**	P	P	01 22 32.2	+0.5
	0.1nm,0.3s,baz=315,slow=9.8,SNR=4.3						
STKA	**Stephens Creek**	**30.10**	**144**	P	P	01 24 11.0	-0.1
	0.5nm,0.3s,baz=345,slow=16,SNR=2.7						

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*ISCJB **24** 01:38:11.0±0.4,36°.99N±0°.03×54°.75E±0°.04,h10^{km},Error ellipse: s-maj=6.1km s-min=3.2km az=41.9*

*TEH **24** 01:38:13.0,36°.78N×54°.86E,h13^{km},ML3.3*

*THR **24** 01:38:15.4,36°.66N×54°.92E,h23^{km},ML3.3*

*AZER **24** 01:38:18.0±9.4,36°.58N×53°.96E,h10^{km},ml3.5/4,Error ellipse: s-maj=60.0km s-min=40.3km az=109.0*

ISC 24 01:38:12.5±0.9**,36°.86N**±0°.05×**54°.76E**±0°.03**,h10**^{km}**,n53, σ2**^{s}**20**/58**,8C-13D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**1.32**	**53**	*e*AML	AML	01 38 58.0	
	comp=N,519nm,0.2s						
SHRO	**Shahrood**	**1.33**	**131**	*e*Pn	**Pn**	**01 38 35.6**	**-1.6**
SHRO	**Shahrood**	**1.33**	**131**	*e*Pg	**Pn**	**01 38 35.6**	**-1.6**
IANJ	**Anjilo**	**1.55**	**206**	*e*Pn	**Pn**	**01 38 40.9**	**+0.5**
IANJ				IAMB	IAmb	01 39 02.7	
	comp=Z,3µm,0.3s						
ISHM	**Shahmirzad**	**1.59**	**229**	*e*Pn	**Pb**	**01 38 43.1**	**+1.0**
ISHM				IAMB	IAmb	01 39 09.2	
	comp=Z,7µm,0.4s						
IALA	**Alasht**	**1.76**	**244**	*e*Pn	**Pb**	**01 38 45.5**	**+0.5**
IALA				IAMB	IAmb	01 39 14.0	
	comp=Z,17µm,0.2s						
IPRN	**Peran**	**2.05**	**253**	*e*Pn	**Pn**	**01 38 49.0**	**+1.9**
IPRN				IAMB	IAmb	01 39 20.9	
	comp=Z,11µm,0.4s						
ILAS	**Lasjerd**	**2.08**	**225**	*e*Pn	**Pb**	**01 38 49.8**	**-0.6**
ILAS				IAMB	IAmb	01 39 21.2	
	comp=Z,2µm,0.4s						
BJRD	**Bojnurd**	**2.27**	**68**	*e*Pn	**Pb**	**01 38 53.1**	**-0.5**
BJRD	**Bojnurd**	**2.27**	**68**	*e*Pn	**Pb**	**01 38 53.1**	**-0.5**
SBZV	**Sabzevar**	**2.34**	**101**	*e*Pn	**Pn**	**01 38 51.7**	**+0.5**
SBZV				IAMB	IAmb	01 38 58.9	
	comp=Z,0.0nm,0.4s						
IDMV	**Damavand**	**2.55**	**241**	*e*Pn	**Pb**	**01 38 58.0**	**-0.6**
IDMV				IAMB	IAmb	01 39 01.5	
	comp=Z,1µm,0.2s						
IKRD	**Kardeh**	**3.01**	**91**	*e*Pn	**Pg**	**01 39 12.2**	**+2.0**
IKRD				IAMB	IAmb	01 39 24.8	
	comp=Z,285nm,0.3s						
IEMG	**Emamgholi**	**3.16**	**79**	IAMB	IAmb	01 39 11.5	
	comp=Z,914nm,0.4s						
IEMG				*e*Pn	**Pn**	**01 39 03.2**	**+0.7**
IAKL	**Akhelmad**	**3.22**	**93**	IAMB	IAmb	01 39 16.6	
	comp=Z,328nm,0.4s						
IAKL				*e*Pn	**Pn**	**01 39 03.6**	**+0.3**
ISFB	**Sefidab**	**3.24**	**220**	*e*Pn	**Pn**	**01 39 04.4**	**+0.9**
ISFB				IAMB	IAmb	01 40 00.0	
	comp=Z,341nm,0.2s						
TNSJ	**Nastanj**	**3.26**	**152**	*e*Pn	**Pb**	**01 39 10.5**	**0.0**
TNSJ				IAMB	IAmb	01 40 03.9	
	comp=Z,0.0nm,0.5s						
THKV	**Tehran--Karaj**	**3.27**	**254**	*e*Pn	**Pn**	**01 39 08.7**	**+4.7**
THKV	**Tehran--Karaj**	**3.27**	**254**	*e*Pn	**Pn**	**01 39 08.7**	**+4.7**
IMHD	**Mahdasht**	**3.51**	**252**	*e*Pn	**Pn**	**01 39 11.7**	**+4.5**
IMHD				IAMB	IAmb	01 39 24.8	
	comp=Z,510nm,0.4s						
KRSH	**Karshahi**	**3.60**	**217**	*e*Pn	**Pn**	**01 39 09.3**	**+0.8**
KRSH				IAMB	IAmb	01 40 16.4	
	comp=Z,0.0nm,0.6s						
TABS	**Tabas**	**3.74**	**148**	*e*Pn	**Pn**	**01 39 10.9**	**+0.5**
TABS	**Tabas**	**3.74**	**148**	*e*Pn	**Pn**	**01 39 10.9**	**+0.5**
TKDS	**Koohdasht(Taba**	**3.77**	**149**	*e*Pn	**Pn**	**01 39 11.2**	**+0.4**
TPRV	**Parvadeh(Tabas**	**4.14**	**157**	*e*Pn	**Pn**	**01 39 16.1**	**+0.3**
IRAZ	**Razeghan**	**4.17**	**251**	*e*Pn	**Pb**	**01 39 25.0**	**-1.1**
IRAZ				IAMB	IAmb	01 39 32.9	
	comp=Z,495nm,0.4s						
IMYA	**Miami**	**4.33**	**95**	*e*Pn	**Pn**	**01 39 19.3**	**+0.8**
IMYA				IAMB	IAmb	01 39 37.1	
	comp=Z,158nm,0.4s						
IKLH	**Kolahrood**	**4.39**	**217**	*e*Pn	**Pn**	**01 39 20.4**	**+0.9**
IKLH				IAMB	IAmb	01 40 42.1	
	comp=Z,260nm,0.9s						
IZEF	**Zefreh**	**4.43**	**208**	*e*Pn	**Pn**	**01 39 21.1**	**+1.0**
IZEF				IAMB	IAmb	01 40 44.0	
	comp=Z,138nm,0.4s						
YZKH	**Yazd**	**4.46**	**182**	*e*Pn	**Pn**	**01 39 21.1**	**+0.8**
YZKH	**Yazd**	**4.46**	**182**	*e*Pn	**Pn**	**01 39 21.1**	**+0.8**
JRKH	**Jarkhoshk**	**4.61**	**100**	*e*Pn	**Pn**	**01 39 22.6**	**+0.3**
ICHK	**Chekchek**	**4.62**	**184**	*e*Pn	**Pn**	**01 39 23.3**	**+0.8**
ICHK				IAMB	IAmb	01 39 25.9	
	comp=Z,255nm,0.2s						
IGAR	**Gharneh**	**4.98**	**208**	*e*Pn	**Pn**	**01 39 29.4**	**+1.9**
IGAR				IAMB	IAmb	01 39 30.8	
	comp=Z,257nm,0.4s						
ASTR	**Astara**	**5.03**	**291**	⇑P	**Pn**	**01 39 27.1**	**-0.8**
ASTR				⇑S	**Sn**	**01 40 20.4**	**-5.7**
LKRN	**Lenkeran, Azer**	**5.09**	**293**	⇓S	**Sn**	**01 40 23.4**	**-4.1**
ITEG	**Tejag**	**5.14**	**139**	*e*Pn	**Pn**	**01 39 30.3**	**+0.7**
ITEG				IAMB	IAmb	01 39 35.5	
	comp=Z,471nm,0.3s						
LRK	**Lerik**	**5.39**	**291**	⇓P	**Pn**	**01 39 31.8**	**-1.2**
LRK				⇓S	**Sn**	**01 40 30.1**	**-5.2**
IRAM	**Ramesheh**	**5.41**	**202**	*e*Pn	**Pn**	**01 39 35.4**	**+1.9**
IRAM				IAMB	IAmb	01 39 36.2	
	comp=Z,107nm,0.4s						
SHRT	**Shahrakht**	**5.54**	**124**	*e*Pn	**Pn**	**01 39 35.9**	**+0.8**
SHRT	**Shahrakht**	**5.54**	**124**	*e*Pn	**Pn**	**01 39 35.9**	**+0.8**
GLBA	**Clilabad**	**5.56**	**297**	⇓P	**Pn**	**01 39 34.5**	**-0.7**
GLBA				⇓S	**Sn**	**01 40 36.3**	**-2.9**
ATGJ	**Altiaghaj**	**6.05**	**313**	⇓S	**Sn**	**01 40 50.3**	**-1.1**
SIZA	**Siyzn**	**6.21**	**314**	⇑S	**Sn**	**01 40 57.8**	**+2.5**
QUBA	**Quba, Azerbaij**	**6.62**	**315**	⇓S	**Sn**	**01 41 04.8**	**-0.7**
XNQ	**Khinaliq**	**6.71**	**312**	⇓P	**Pn**	**01 39 51.7**	**+0.4**
XNQ				⇑S	**Sn**	**01 41 03.9**	**-4.0**
BRDA	**Brd**	**6.84**	**302**	⇓S	**Sn**	**01 41 09.4**	**-1.4**
QSAR	**Qusar**	**6.86**	**315**	⇑S	**Sn**	**01 41 10.7**	**-0.6**
SEKA	**Sheki**	**7.31**	**309**	⇓P	**Pn**	**01 40 01.2**	**+1.8**
SEKA				⇑S	**Sn**	**01 41 18.0**	**-4.5**
IMRD	**Marand**	**7.41**	**287**	IAMB	IAmb	01 40 06.7	
	comp=Z,103nm,0.4s						
IMRD				*e*Pn	**Pn**	**01 40 04.1**	**+3.3**
GANJ	**Ganja**	**7.60**	**302**	⇓S	Sn	01 41 23.5	-6.0
ZKTA	**Zakatala**	**7.91**	**310**	⇓P	**Pn**	**01 40 09.6**	**+2.0**
ZKTA				⇑S	**Sn**	**01 41 36.1**	**-1.0**
GDB	**GEDABAY**	**8.02**	**301**	⇓P	**Pn**	**01 40 08.7**	**-0.4**
GDB				⇑S	**Sn**	**01 41 35.9**	**-4.1**

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*ISCJB **24** 01:42:53.5±1.2,9°.3S±0°.2×124°.0E±0°.1,h74^{km},mb3.5/1, Error ellipse: s-maj=30.4km s-min=7.1km az=40.4*

*IDC **24** 01:42:54.7±5.3,9°.07S×124°.17E,h63^{km}±63^{km},mb3.4/1, mb1 3.7/4,mb1mx3.3/27,mbtmp3.7/4,ML3.6/3,Error ellipse: s-maj=59.6km s-min=32.0km az=28.0*

*DJA **24** 01:42:58.6±1.2,9°S±3°×12°4E±°,h22^{km}±14^{km},M3.1/6, MLv3.1/6*

ISC 24 01:42:55.5±1.2**,9°.13S**±0°.09×**123°.9E**±0°.1**,h74**^{km}**,n10, σ1**^{s}**75**/12**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.71**	**152**	P	**Pn**	**01 43 14.1**	**+3.1**
BATI	**Baumata**	**1.11**	**194**	P	**Pn**	**01 43 16.4**	**+0.8**
BATI				S	**Sn**	**01 43 31.8**	**+1.2**
BATI	**Baumata**	**1.11**	**194**	P	**Pn**	**01 43 16.5**	**+0.8**
	54nm,0.3s,baz=89,slow=1.4,SNR=48						
BATI				S	**Sn**	**01 43 31.8**	**+1.2**
	44nm,0.3s,baz=300,slow=20,SNR=22						
MMRI	**Maumere**	**1.75**	**286**	P	**Pn**	**01 43 25.0**	**+1.1**
MMRI				S	**Sn**	**01 43 44.9**	**-0.5**
EDFI	**Ende, Flores**	**2.25**	**279**	P	**Pn**	**01 43 31.0**	**+0.3**
PLAI	**Plampang**	**6.09**	**272**	P	Pn	01 44 06.9	-16
FITZ	**Fitzroy Crossi**	**9.07**	**170**	P	**Pn**	**01 45 01.6**	**-2.1**
	0.5nm,0.3s,baz=354,slow=11,SNR=7.4						
FITZ				S	Sn	01 46 33.3	-11
	1.3nm,0.3s,baz=118,slow=20,SNR=12						
WRA	**Warramunga Arr**	**14.72**	**138**	P	**Pn**	**01 46 17.2**	**-2.7**
	0.3nm,0.3s,baz=322,slow=14,SNR=8.8						
WRA				S	Sn	01 48 50.8	-11
	0.3nm,0.3s,baz=316,slow=26,SNR=6.4						
ASAR	**Alice Springs**	**17.32**	**148**	P	**P**	**01 46 53.2**	**+0.2**
	0.4nm,0.3s,baz=318,slow=12,SNR=22						
ASAR				S	Sn	01 49 54.8	-10
	0.2nm,0.3s,baz=309,slow=21,SNR=4.3						
MKAR	**Makanchi Array**	**66.89**	**330**	P	**P**	**01 53 40.6**	**+0.7**
	0.4nm,0.5s,baz=136,slow=7.3,SNR=15						

IDC 24 02:02:05.3±2.3**,9°.96S**×**118°.88E,h0**^{km}**,mb3.6**/3**, mb1 3.7**/6**,mb1mx3.5**/33**,mbtmp3.6**/6**,ML3.3**/3**,Error ellipse: s-maj=152.6km s-min=21.8km az=54.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.41**	**142**	Pn	Pn	02 04 35.5	-0.5
	0.3nm,0.3s,baz=325,slow=14,SNR=13						
FITZ				Sn	Sn	02 06 23.8	-10
	0.2nm,0.3s,baz=342,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	**17.92**	**125**	P	Pn	02 06 15.3	-0.8
	0.1nm,0.3s,baz=302,slow=13,SNR=5.1						
ASAR	**Alice Springs**	**19.79**	**135**	P	Pn	02 06 38.3	-0.5
	0.1nm,0.3s,baz=316,slow=11,SNR=13						
H08S2	**Diego Garcia H**	**45.87**	**269**	T	T	02 59 47.2	
	baz=96,slow=74,SNR=5.3						
H08S3	**Diego Garcia H**	**45.88**	**269**	T	T	02 59 45.0	
	baz=96,slow=74,SNR=6.0						
H08S1	**Diego Carcia H**	**45.89**	**269**	T	T	02 59 50.3	
	baz=96						
SONM	**Songino Array**	**58.59**	**350**	P	P	02 12 05.3	+1.2
	0.2nm,0.4s,baz=169,slow=7.2,SNR=3.5						
MKAR	**Makanchi Array**	**65.25**	**333**	P	P	02 12 48.5	-0.3
	0.3nm,0.7s,baz=152,slow=8.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**69.89**	**339**	P	P	02 13 17.0	-0.9
	0.6nm,0.5s,baz=166,slow=5.1,SNR=3.7						

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*ISK **24** 02:12:06.6,35°.86N×24°.34E,h28^{km},ML3.1/9*

*ISCJB **24** 02:12:07.6±0.3,35°.81N±0°.03×24°.36E±0°.02,h64^{km}±5^{km}, mb3.3/2,Error ellipse: s-maj=4.4km s-min=2.6km az=20.7*

*ATH **24** 02:12:07.2,35°.82N×24°.38E,h58^{km}±3^{km},ML2.9/15,Error ellipse: s-maj=3.4km s-min=0.7km az=192.0*

*IDC **24** 02:12:08.1±2.3,35°.38N×24°.56E,h79^{km}±16^{km},mb3.1/2, mb1 3.1/4,mb1mx2.8/55,mbtmp3.2/4,Error ellipse: s-maj=65.2km s-min=38.7km az=5.0*

*THE **24** 02:12:08.5,35°.81N×24°.34E,h57^{km}±3^{km},ML3.1/7,Error ellipse: s-maj=3.5km s-min=0.7km az=185.0*

ISC 24 02:12:08.0±1.0**,35°.82N**±0°.03×**24°.35E**±0°.03**,h61**^{km}±9^{km}**, n99,σ1**^{s}**29**/129**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHAN	**Chania**	**0.39**	**220**	P	**Pn**	**02 12 18.7**	**-0.3**
VAM	**Vamos**	**0.43**	**197**	P	**Pn**	**02 12 19.3**	**0.0**
VAM				S	**Sn**	**02 12 27.5**	**0.0**
VAM				AML	AML	02 12 27.9	
	comp=E,4078µm,0.3s						
VAM				AML	AML	02 12 28.8	
	comp=N,3232µm,0.3s						
IMMV	**Iera Moni Meta**	**0.47**	**221**	P	**Pn**	**02 12 19.6**	**-0.1**

IMMV				S	Sn	02 12 27.4	-0.7
IMMV				AML	AML	02 12 27.8	
	comp=E,1186µm,0.2s						
IMMV				AML	AML	02 12 29.4	
	comp=N,2148µm,0.2s						
PRNS	Prines Rethymn	0.47	165	P	Pn	02 12 19.9	+0.2
PRNS				S	Sn	02 12 28.6	+0.4
IDI	Anoyia	0.69	140	P	Pn	02 12 21.1	-1.1
IDI	Anoyia	0.69	140	P	Pn	02 12 21.7	-0.5
	comp=N,12nm,0.3s,baz=317,slow=13,SNR=559						
IDI				S	Sn	02 12 31.2	-1.4
	baz=32,slow=19						
IACM	Heraklion	0.78	131	P	Pn	02 12 23.4	+0.1
IACM				S	Sn	02 12 33.6	-0.8
KSTL	Kastelli Herak	0.78	131	P	Pn	02 12 26.2	+2.9
KSTL				S	Sn	02 12 39.1	+4.7
ANKY	Antikythira Is	0.86	274	P	Pn	02 12 24.4	+0.2
ANKY				S	Sn	02 12 37.1	+0.9
MHLO	Agia Marina, M	0.87	3	P	Pn	02 12 24.8	+0.3
MHLO				S	Sn	02 12 37.0	+0.4
MHLO				AML	AML	02 12 37.6	
	comp=N,1494µm,0.3s						
MHLO				AML	AML	02 12 38.6	
	comp=E,2131µm,0.2s						
MHLA	Plaka, Milos I	0.93	3	P	Pn	02 12 25.2	0.0
GVD	Gavdhos	1.00	193	P	Pn	02 12 27.0	+0.9
GVD				AML	AML	02 12 47.0	
	comp=E,1240µm,0.5s						
GVD				AML	AML	02 12 47.4	
	comp=N,1051µm,0.3s						
THR6	Thira Island,	1.00	57	P	Pn	02 12 26.8	+0.7
THR5	Thira Island,	1.00	53	P	Pn	02 12 26.4	+0.2
SAP3	Santorini-Thir	1.01	52	P	Pn	02 12 26.6	+0.3
SAP3				S	Sn	02 12 40.5	+0.7
THR3	Thira Island,	1.03	55	P	Pn	02 12 26.8	+0.3
SANT	Santorini	1.05	58	P	Pn	02 12 26.8	0.0
SANT				S	Sn	02 12 40.6	-0.2
SANT				AML	AML	02 12 42.4	
	comp=N,1386µm,0.2s						
SANT				AML	AML	02 12 42.5	
	comp=E,1640µm,0.3s						
SAP2K	Karterados	1.07	56	P	Pn	02 12 27.4	+0.5
SAP2K				S	Sn	02 12 41.6	+0.6
THR2	Thira island,	1.08	54	P	Pn	02 12 27.8	+0.7
THR8	Santorini-Mono	1.09	57	P	Pn	02 12 27.6	+0.4
LAST	Lasithi	1.13	125	P	Pn	02 12 28.1	+0.2
LAST				S	Sn	02 12 42.0	-0.6
LAST				AML	AML	02 12 42.9	
	comp=N,799µm,0.3s						
LAST				AML	AML	02 12 44.0	
	comp=E,475µm,0.3s						
KYTH	Kithira	1.15	293	P	Pn	02 12 28.1	0.0
KYTH				AML	AML	02 12 44.5	
	comp=N,607µm,0.2s						
KYTH				AML	AML	02 12 45.0	
	comp=E,690µm,0.2s						
NPS	Neapolis	1.17	118	P	Pn	02 12 28.0	-0.3
NPS				S	Sn	02 12 43.3	-0.1
NPS				AML	AML	02 12 45.8	
	comp=E,568µm,0.2s						
NPS				AML	AML	02 12 46.3	
	comp=N,865µm,0.3s						
KTHR	Kythira	1.18	292	P	Pn	02 12 28.1	-0.4
KTHR				S	Sn	02 12 43.5	-0.2
ANAF	Anafi Island	1.27	64	P	Pn	02 12 30.0	+0.3
ANAF				S	Sn	02 12 45.4	-0.4
ANAF				AML	AML	02 12 47.6	
	comp=E,1911µm,0.3s						
ANAF				AML	AML	02 12 48.2	
	comp=N,2424µm,0.3s						
ANAF	Anafi Island	1.27	64	P	Pn	02 12 30.0	+0.3
ANAF				S	Sn	02 12 45.8	-0.1
SERI	Serifos	1.35	5	P	Pn	02 12 31.1	+0.4
VLI	Veliai	1.46	309	P	Pn	02 12 32.0	-0.1
VLI				AML	AML	02 12 50.3	
	comp=E,716µm,0.2s						
VLI				AML	AML	02 12 50.8	
	comp=N,1074µm,0.2s						
STIA	Sitia Lasithi	1.54	113	P	Pn	02 12 33.6	+0.3
APE	Apeiranthos	1.57	37	PN	Pn	02 12 32.9	-0.8
APE				SN	Sn	02 12 51.9	-1.2
APE	Apeiranthos	1.57	37	P	Pn	02 12 33.5	-0.2
APE				S	Sn	02 12 52.8	-0.3
APE				AML	AML	02 12 54.5	
	comp=E,259µm,0.2s						
APE				AML	AML	02 12 55.8	
	comp=N,299µm,0.2s						
AMGA	Amorgos Island	1.60	50	P	Pn	02 12 34.3	+0.2
AMGA				S	Sn	02 12 53.7	-0.2
AMGA				AML	AML	02 12 54.2	
	comp=N,248µm,0.2s						
AMGA				AML	AML	02 12 55.8	
	comp=E,352µm,0.3s						
ZKR	Zakros	1.68	114	P	Pn	02 12 35.7	+0.6
KRND	KRANIDI	1.84	329	P	Pn	02 12 38.0	+0.6
KRND				AML	AML	02 13 01.8	
	comp=N,338µm,0.3s						
KRND				AML	AML	02 13 04.2	
	comp=E,251µm,0.2s						
KRND	KRANIDI	1.84	329	P	Pn	02 12 37.9	+0.6
KRND				S	Sn	02 12 59.9	+0.4
DID	Didima	1.91	332	P	Pn	02 12 38.5	+0.2
DID				S	Sn	02 13 01.9	+0.5
DID				AML	AML	02 13 03.2	
	comp=N,354µm,0.3s						
DID				AML	AML	02 13 05.5	
	comp=E,561µm,0.3s						
DID	Didima	1.91	332	P	Pn	02 12 38.5	+0.2
DID				S	Sn	02 13 01.8	+0.5
VLY	Voula,Athens	2.08	348	P	Pn	02 12 41.0	+0.4
ATHU	Athens Univers	2.19	348	P	Pn	02 12 42.9	+0.7
ATH	Athens Observa	2.21	347	P	Pn	02 12 43.0	+0.6
VLX	Vlachokerasia	2.22	315	P	Pn	02 12 43.5	+1.0
PTL	Penteli	2.26	350	P	Pn	02 12 43.9	+0.8
KARP	Karpathos	2.30	96	PN	Pn	02 12 43.9	+0.3
KARP				SN	Sn	02 13 10.9	0.0
KARP	Karpathos	2.30	96	P	Pn	02 12 43.5	-0.1
PYL	PYLOS	2.37	298	P	Pn	02 12 44.9	+0.4
ITM	Ithomi	2.38	306	P	Pn	02 12 45.7	+1.0
TRIP	Tripoli	2.39	316	P	Pn	02 12 45.5	+0.6
LOUT	Loutraki	2.43	333	P	Pn	02 12 45.7	+0.3
LTK	Loutraki	2.47	334	P	Pn	02 12 46.6	+0.7
LTK	Loutraki	2.47	334	P	Pn	02 12 46.3	+0.4
LTK				S	Sn	02 13 14.5	-0.4
VILL	Villia	2.49	341	P	Pn	02 12 46.6	+0.4
VILL				S	Sn	02 13 14.7	-0.7
VIL2	Platees	2.54	340	P	Pn	02 12 46.6	-0.3
VIL2				AML	AML	02 13 19.8	
	comp=N,157µm,0.3s						
VIL2				AML	AML	02 13 20.6	
	comp=E,238µm,0.4s						
EREA	Eretria	2.62	353	P	Pn	02 12 48.9	+0.9
GUR	Goura	2.66	323	P	Pn	02 12 49.2	+0.6
GUR	Goura	2.66	323	P	Pn	02 12 49.2	+0.6
GUR				S	Sn	02 13 20.5	+0.8
BODT	Bodrum	2.69	62	PN	Pn	02 12 49.2	+0.3
PROD	Prodromos	2.70	335	P	Pn	02 12 49.9	+0.8
AMT	Artemida-Makis	2.73	310	P	Pn	02 12 50.0	+0.6
BDRM	Kayabasi	2.79	63	*i* P	Pn	02 12 50.3	+0.1
BDRM				IAML_P			
	comp=Z,269nm,0.4s						
KLV	Kalavryta, Ach	2.84	322	P	Pn	02 12 51.8	+0.8
CHOS	Chios island	2.90	27	P	Pn	02 12 52.5	+0.6
TRAZ	Trapeza	2.91	325	P	Pn	02 12 52.8	+0.9
MRKA	Markates	2.95	348	P	Pn	02 12 53.3	+0.9
DSF	Desfina	2.97	331	P	Pn	02 12 53.8	+1.0
GCAM	G?zelcaml?	2.98	50	PN	Pn	02 12 53.4	+0.6
GCAM				SN	Sn	02 13 27.2	-0.2
GCAM	G?zelcaml?	2.98	50	*i* P	Pn	02 12 55.3	+2.5
GCAM				*i* S	Sn	02 13 28.3	+0.9
GCAM				IAML_P			
	comp=Z,78nm,0.1s						
DRO	Drossia	3.00	316	P	Pn	02 12 53.6	+0.4
DGB	zmir	3.02	42	*i* P	Pn	02 12 52.3	-1.0
DGB				IAML_P			
	comp=Z,47nm,0.1s						
ATAL	Atalanti	3.06	340	P	Pn	02 12 54.8	+0.8
LAKA	Lakka	3.08	323	P	Pn	02 12 55.1	+0.9
ARG	Arkhangelos	3.08	81	PN	Pn	02 12 55.0	+0.7
ARG	Arkhangelos	3.08	81	P	Pn	02 12 55.2	+1.0
URLA	Izmir	3.11	35	PN	Pn	02 12 54.8	+0.2
URLA	Izmir	3.11	35	*i* P	Pn	02 12 54.8	+0.2
URLA				IAML_P			
	comp=Z,222nm,0.2s						
MLSB	Milas	3.13	61	PN	Pn	02 12 55.4	+0.5
TRIZ	Trizonia	3.13	325	P	Pn	02 12 55.7	+0.8
SMIA	Simia	3.19	344	P	Pn	02 12 56.6	+0.8
RLS	Riolos of Patr	3.22	315	P	Pn	02 12 56.8	+0.7
EFP	Efpalio	3.26	324	P	Pn	02 12 57.8	+1.2
AYDN	Tasoluk	3.38	56	*i* P	Pn	02 12 57.8	-0.6
AYDN				IAML_P			
	comp=Z,65nm,0.2s						
YER	Yerkesik	3.43	66	PN	Pn	02 12 59.7	+0.6
AGG	Agios Georgios	3.58	334	P	Pn	02 13 02.4	+1.3
TURN	Turunc	3.59	72	PN	Pn	02 12 57.8	-3.4
TURN	Turunc	3.59	72	*i* P	Pn	02 12 58.5	-2.7
TURN				*i* S	Sn	02 13 36.4	-5.9
TURN				IAML_P			
	comp=Z,383nm,0.3s						
XOR	Xorichti	3.66	346	P	Pn	02 13 02.8	+0.6
FETY	Fethiye	3.91	77	PN	Pn	02 13 06.7	+1.1
FETY	Fethiye	3.91	77	*i* P	Pn	02 13 08.7	+3.1
FETY				IAML_P			
	comp=Z,229nm,0.1s						
TAVA	DENIZLI_Tavas	4.02	64	*i* P	Pn	02 13 09.9	+2.8
TAVA				IAML_P			
	comp=Z,77nm,0.2s						
AKAS	Kas	4.28	83	PN	Pn	02 13 12.0	+1.3
AKAS	Kas	4.28	83	*i* P	Pn	02 13 12.9	+2.2
AKAS				*i* S	Sn	02 14 00.6	+1.1
AKAS				IAML_P			
	comp=Z,567nm,0.1s						
GOLH	Golhisar	4.43	70	*i* P	Pn	02 13 16.3	+3.6
GOLH				IAML_P			
	comp=Z,125nm,0.1s						
ELL	Elmali	4.58	77	PN	Pn	02 13 16.4	+1.5
AKUM	Antalya-Kumluc	4.88	82	*i* P	Pn	02 13 20.1	+1.3
KORT	Korkueli	4.98	75	PN	Pn	02 13 21.9	+1.6
KORT	Korkueli	4.98	75	*i* P	Pn	02 13 24.9	+4.5
KORT				IAML_P			
	comp=Z,35nm,0.2s						
BRTR	Keskin Array B	8.32	59	P	Pn	02 14 09.3	+3.2
	comp=Z,0.1nm,0.3s,baz=238,slow=14,SNR=4.5						
GERES	GERESS Array B	15.20	332	P	P	02 15 42.8	+0.1
	comp=Z,0.1nm,0.3s,baz=153,slow=11,SNR=2.8						
KURBB	Kurchatov Arra	41.23	52	P	P	02 19 45.4	-1.4
	comp=Z,0.2nm,0.3s,baz=274,slow=8.2,SNR=3.7						
MKAR	Makanchi Array	43.97	57	P	P	02 20 08.1	-1.0
	comp=Z,0.2nm,0.3s,baz=270,slow=8.0,SNR=9.8						

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*ISCJB **24** 02:20:30.6±0.6, 3°.60N±0°.06×82°.66W±0°.04, h10^{km}, mb3.7/7, MS3.5/16, Error ellipse: s-maj=9.5km s-min=5.0km az=19.9*

*IDC **24** 02:20:30.0±1.3, 3°.64N×82°.77W, h0^{km}, mb3.7/7, mb1 4.1/10, mb1mx3.9/34, mbtmp3.9/10, ML2.8/2, MS3.5/22, Ms1 3.5/22, ms1mx3.4/46, Error ellipse: s-maj=52.7km s-min=21.3km az=53.0*

ISC 24 02:20:31.0±0.8, **3°.52N**±0°.07×**82°.76W**±0°.07, **h10**^{km}**, n60, σ1^{s}.99**/63, **mb4.0**/7, **MS3.5**/16, **2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMC	Tumaco	4.37	113	*e*P	Pn	02 21 37.0	-0.4
TUMC				*e*Pg	Pn	02 21 37.8	+0.4
TUMC				*e*S	Sn	02 22 26.2	-2.2
TUMC				*i*		02 22 38.2	
	comp=N,80nm,0.3s						
TUMC	Tumaco	4.37	113	*e*P	Pn	02 21 37.0	-0.4
TUMC				*e*Pg	Pn	02 21 37.8	+0.4
TUMC				*e*S	Sn	02 22 26.2	-2.2
TUMC				*i*		02 22 38.2	
	comp=N,80nm,0.3s						
GRGC	Isla de Gorgon	4.61	96	*e*P	Pn	02 21 40.8	-0.1
GRGC				*e*Pg	Pn	02 21 41.5	+0.7
GRGC				*e*S	Sn	02 22 31.1	-3.5
GRGC				*i* Sg	Sn	02 22 32.7	-1.8
GRGC				*i*		02 22 34.9	
	comp=N,230nm,0.2s						
GRGC	Isla de Gorgon	4.61	96	*e*P	Pn	02 21 40.8	-0.1
GRGC				*e*Pg	Pn	02 21 41.5	+0.7
GRGC				*e*S	Sn	02 22 31.1	-3.5
GRGC				*i* Sg	Sn	02 22 32.7	-1.8
GRGC				*i*		02 22 34.9	
	comp=N,230nm,0.2s						
AZU	Azuero	4.91	30	*e*P	Pn	02 21 45.1	+0.1
AZU	Azuero	4.91	30	*e*P	Pn	02 21 45.1	+0.1
MALC	Bahia Malaga	5.44	85	*e*	Pn	02 21 55.1	+2.9
MALC				*e*S	Sn	02 22 52.9	-1.9
MALC				*i*		02 23 01.7	
	comp=N,112nm,0.3s						
MALC	Bahia Malaga	5.44	85	*e*	Pn	02 21 55.1	+2.9
MALC				*e*S	Sn	02 22 52.9	-1.9
MALC				*i*		02 23 01.7	
	comp=N,112nm,0.3s						
GCUF	Volcan Galeras	5.87	113	*e*P	Pn	02 21 58.9	+0.3
GCUF				*e*Pg	Pn	02 22 00.1	+1.5
GCUF	Volcan Galeras	5.87	113	*e*P	Pn	02 21 58.9	+0.3
GCUF				*e*Pg	Pn	02 22 00.1	+1.5
SOTA	Rioblanco	6.30	102	*e*P	Pn	02 22 05.6	+1.2
SOTA				*e*S	Sn	02 23 13.6	-3.1
SOTA				*i*		02 23 21.7	
	comp=Z,113nm,0.6s						
SOTA	Rioblanco	6.30	102	*e*P	Pn	02 22 05.6	+1.2
SOTA				*e*S	Sn	02 23 13.6	-3.1
SOTA				*i*		02 23 21.7	
	comp=Z,113nm,0.6s						
UPA	Univ. de Panam	6.30	30	*e*P	Pn	02 22 05.1	+1.0
UPA	Univ. de Panam	6.30	30	*e*P	Pn	02 22 05.1	+1.0
YOTC	Yotoco, Valle	6.42	86	*e*P	Pn	02 22 06.8	+1.1
YOTC				*e*S	Sn	02 23 17.4	-1.9
YOTC				*i*		02 23 24.1	
	comp=E,22nm,0.6s						
YOTC	Yotoco, Valle	6.42	86	*e*P	Pn	02 22 06.8	+1.1
YOTC				*e*S	Sn	02 23 17.4	-1.9
YOTC				*i*		02 23 24.1	
	comp=E,22nm,0.6s						
PCON	Cinco Dias	6.46	100	*e*P	Pn	02 22 09.7	+2.9
PCON	Cinco Dias	6.46	100	*e*P	Pn	02 22 09.7	+2.9
PLMC	San Jos del P	6.61	78	*e*P	Pn	02 22 10.3	+2.0
PLMC				*i* Pg	Pn	02 22 11.7	+3.4
PLMC				*e*S	Sn	02 23 22.9	-0.9
PLMC				*i*		02 23 29.3	
	comp=N,245nm,0.2s						
PLMC	San Jos del P	6.61	78	*e*P	Pn	02 22 10.3	+2.0
PLMC				*i* Pg	Pn	02 22 11.7	+3.4
PLMC				*e*S	Sn	02 23 22.9	-0.9
PLMC				*i*		02 23 29.3	
	comp=N,245nm,0.2s						
MARP	Paez Belalcaza	6.83	95	*e*P	Pn	02 22 14.4	+2.9
MARP	Paez Belalcaza	6.83	95	*e*P	Pn	02 22 14.4	+2.9
UPD2	Meteti	6.87	43	*e*P	Pn	02 22 14.9	+3.0
UPD2	Meteti	6.87	43	*e*P	Pn	02 22 14.9	+3.0
JTS	JuntasAbangare	7.07	342	Pn	Pn	02 22 11.2	-3.5
	comp=N,11nm,0.3s,baz=146,slow=23,SNR=68						
FLOC	Florencia	7.36	105	*e*P	Pn	02 22 21.0	+2.4
FLOC	Florencia	7.36	105	*e*P	Pn	02 22 21.0	+2.4
HELC	Santa Helena	7.68	69	*e*P	Pn	02 22 25.8	+2.5
HELC				*e*S	Sn	02 23 49.9	-0.8
HELC				*i*		02 23 58.7	
	comp=N,8.1nm,0.5s						
HELC	Santa Helena	7.68	69	*e*P	Pn	02 22 25.8	+2.5
HELC				*e*S	Sn	02 23 49.9	-0.8
HELC				*i*		02 23 58.7	
	comp=N,8.1nm,0.5s						
ROSC	El Rosal	8.52	81	Pn	Pn	02 22 39.5	+4.6
	comp=N,2.1nm,0.3s,baz=0.2,slow=23,SNR=6.3						
ROSC				LR	LR	02 25 40.0	
	comp=N,92nm,20.2s,baz=31,slow=36						
PTBC	PUERTO BERRIO,	8.80	70	⇓*i*P	Pn	02 22 41.3	+2.9
PTBC	PUERTO BERRIO,	8.80	70	⇓*i*P	Pn	02 22 41.3	+2.9
CHIC	Chingaza	9.07	83	*e*P	Pn	02 22 46.9	+4.4
CHIC	Chingaza	9.07	83	*e*P	Pn	02 22 46.9	+4.4
ATAH	Atahualpa	11.44	158	LR	LR	02 27 31.2	
	comp=N,509nm,19.2s,baz=327,slow=36						
SDV	Santo Domingo	13.18	66	Pn	Pn	02 23 40.2	+1.7
	comp=N,0.2nm,0.3s,baz=260,slow=9.5,SNR=7.0						
SDV				LR	LR	02 28 49.5	
	comp=N,103nm,18.4s,baz=254,slow=38						
APG	El Apazote	13.71	327	LR	LR	02 28 11.7	
	comp=N,186nm,19.4s,baz=143,slow=34						
NNA	Nana	16.49	159	Pn	P	02 24 27.1	+1.8
	comp=N,1.3nm,0.3s,baz=348,slow=12,SNR=6.8						
NNA				LR	LR	02 30 22.5	
	comp=N,84nm,21.0s,baz=322,slow=36						
CMIG	Matias Romero	17.99	319	P	P	02 24 40.7	-1.1
	comp=N,0.1nm,0.3s,baz=137,slow=9.0,SNR=8.0						
CMIG				LR	LR	02 30 13.8	
	comp=N,149nm,20.2s,baz=152,slow=33						
SJG	San Juan	21.80	47	LR	LR	02 33 37.5	
	comp=N,86nm,19.8s,baz=270,slow=36						
PTGA	Pitinga	23.17	100	LR	LR	02 34 47.4	
	comp=N,139nm,19.4s,baz=284,slow=37						
LPAZ	La Paz	24.42	144	P	P	02 25 51.9	+1.1
	comp=N,4.5nm,0.9s,baz=332,slow=9.3,SNR=11						
LPAZ				LR	LR	02 36 40.0	
	comp=N,109nm,19.2s,baz=298,slow=40						
SIV	San Ignacio	28.91	133	LR	LR	02 39 19.0	
	comp=N,158nm,18.8s,baz=326,slow=39						
LVC	Limon Verde	29.28	153	LR	LR	02 38 40.1	
	comp=N,59nm,21.3s,baz=308,slow=37						
MDP	Montagnes des	30.07	86	LR	LR	02 39 09.2	
	comp=N,39nm,19.4s,baz=242,slow=37						
H06E1	SOCORRO T-PHAS	31.44	301	T	T	02 59 47.7	
	SNR=3.5						
TKL	Tuckaleechee C	32.00	358	LR	LR	02 40 50.2	
	comp=N,59nm,18.7s,baz=84,slow=38						
TXAR	Lajitas Array	32.45	324	P	P	02 27 02.2	+0.5
	comp=N,0.2nm,0.6s,baz=133,slow=9.1,SNR=2.9						
LPIG	La Paz	33.54	310	LR	LR	02 37 31.2	
	comp=N,48nm,20.9s,baz=182,slow=30						
CPUP	Villa Florida	38.55	142	LR	LR	02 44 52.7	
	comp=N,96nm,20.1s,baz=338,slow=38						
PDAR	Pinedale Array	45.79	332	P	P	02 28 53.3	+0.1
	comp=N,0.2nm,0.5s,baz=111,slow=4.9,SNR=3.2						
ELK	Elko	47.20	326	LR	LR	02 49 26.6	
	comp=N,56nm,18.2s,baz=172,slow=37						
NVAR	Mina Array Bea	47.50	322	P	P	02 29 06.9	+0.2
	comp=N,0.7nm,0.6s,baz=127,slow=8.5,SNR=4.8						
NVAR				LR	LR	02 47 20.1	
	comp=N,53nm,18.5s,baz=218,slow=34						
ULM	Lac du Bonnet	47.87	349	P	P	02 29 09.0	-0.1
	comp=N,1.7nm,0.7s,baz=157,slow=6.3,SNR=3.7						
YBH	Yreka Blue Hor	52.18	323	LR	LR	02 50 27.1	
	comp=N,62nm,19.8s,baz=168,slow=34						
NEW	Newport	53.42	332	LR	LR	02 53 13.7	
	comp=N,50nm,18.1s,baz=240,slow=37						
YKA	Yellowknife Ar	63.41	344	P	P	02 30 59.1	-1.4
	comp=N,0.9nm,0.9s,baz=138,slow=6.5,SNR=15						
PPT	Papeete	69.11	250	LR	LR	02 54 45.3	
	comp=N,165nm,20.1s,baz=19,slow=30						
ILAR	Eielson Array	76.01	337	P	P	02 32 19.0	+0.8
	comp=N,0.5nm,0.8s,baz=133,slow=4.6,SNR=4.2						
ILAR				LR	LR	03 08 45.0	
	comp=N,107nm,18.0s,baz=232,slow=38						
NOA	NORSAR Array B	88.88	29	LR	LR	03 09 16.8	
	comp=N,12nm,20.4s,baz=325,slow=33						

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*ISCJB **24** 02:36:02.1±0.4, 35°.40N±0°.03×139°.50E±0°.04, h29^{km}±3^{km}, mb3.4/3, Error ellipse: s-maj=5.0km s-min=4.7km az=171.1*

*JMA **24** 02:36:02.6±0.1, 35°.43N×139°.47E, h21^{km}±2^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s35.00000°, δ77.00000°, λ49.00000°. NP2: ϕ_s290.00000°, δ43.00000°, λ160.00000°. Principal axes: T Plg43.0000°, Azm266.0000°; N Plg40.0000°, Azm46.0000°; P Plg21.0000°, Azm155.0000°;*

JMA Felt II J1.

*IDC **24** 02:36:04.8±2.1, 35°.26N×139°.42E, h54^{km}±18^{km}, mb3.2/3, mb1 3.3/4, mb1mx3.0/42, mbtmp3.5/4, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/17 Error ellipse: s-maj=35.2km s-min=12.4km az=66.0*

ISC 24 02:36:02.2±0.9, **35°.40N**±0°.03×**139°.47E**±0°.04, **h30**^{km}±7^{km}, **n22, σ0^{s}.93**/29, **mb3.5**/3, **3C-3D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYO	Yokosk	0.24	138	⇑P	Pb	02 36 08.6	-0.2
JYO				S	Sb	02 36 14.4	+1.0
JOD2	Odawara 2	0.34	246	⇑P	Pb	02 36 09.8	-0.4
JOD2				S	Sn	02 36 15.8	-1.2
TOK	Tokyo	0.37	39	P	Pb	02 36 10.2	-0.4
TOK				S	Sb	02 36 15.8	-0.5
JHU	Hanno	0.47	341	⇓P	Pb	02 36 11.9	-0.4
JHU				S	Sb	02 36 18.9	-0.2
JFNN	Fujinakano	0.67	252	P	Pn	02 36 15.2	-0.5
JFNN				S	Sn	02 36 25.6	+0.4
JIM2	Oshima 3	0.68	183	S	Sn	02 36 24.5	-0.9
JYN	Shimob	0.76	278	⇑P	Pn	02 36 16.7	-0.3
JYN				S	Sn	02 36 27.8	+0.3
JRY	Ryogami san	0.77	323	⇓P	Pb	02 36 16.2	-0.9
JIZS	Izushimoda	0.84	216	⇓P	Pn	02 36 17.5	-0.4
JIZS				S	Sn	02 36 29.4	+0.2
JAG	Ashikaga	1.02	359	P	Pn	02 36 20.6	+0.1
BSO3	Boso 3	1.04	125	P	Pn	02 36 20.1	-0.4
BSO3				S	Sn	02 36 35.2	+1.3
SHZ3	Shizuoka 3	1.08	252	P	Pb	02 36 22.0	-0.4
SHZ3				S	Sn	02 36 37.7	+2.3
MJAR	Matsushiro Arr	1.53	318	P	Pb	02 36 29.2	-0.7
	9.7nm,0.3s,baz=146,slow=15,SNR=319						
MJAR				S	Sb	02 36 50.1	+1.2
	7.2nm,0.3s,baz=142,slow=27,SNR=16						
MAT	Matsushiro	1.53	318	P	Pb	02 36 29.4	-0.6
MAT				S	Sb	02 36 51.2	+2.2
JHJ	Hachijo jima 2	2.29	173	P	Pn	02 36 38.6	+0.7
	32nm,0.3s,baz=52,slow=18,SNR=5.3						
JCJ	Chichijima	8.60	164	LR	LR	02 41 04.9	
	comp=Z,102nm,21.6s,baz=120,slow=35						
H11N2	WAKE ISLAND Hy	28.76	116	T	T	03 11 39.6	
	baz=308,slow=75,SNR=5.8						
H11N1	WAKE ISLAND Hy	28.77	116	T	T	03 11 35.4	
	baz=308,slow=75,SNR=5.3						
H11N3	WAKE ISLAND Hy	28.78	116	T	T	03 11 24.3	
	baz=308,slow=75,SNR=5.7						
MKAR	Makanchi Array	43.67	303	P	P	02 44 04.4	+0.3
	0.2nm,0.5s,baz=85,slow=9.1,SNR=3.8						
WRA	Warramunga Arr	55.25	186	P	P	02 45 31.8	-0.9
	0.2nm,0.4s,baz=1.5,slow=7.6,SNR=8.6						
FINES	FINESS Array B	69.52	332	P	P	02 47 07.7	+0.2
	0.4nm,0.6s,baz=79,slow=7.2,SNR=5.1						

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*IDC **24** 02:46:38.7±2.3, 29°.88N×139°.08E, h395^{km}±26^{km}, mb2.9/9, mb1 3.0/11, mb1mx2.8/49, mbtmp3.7/11, Error ellipse: s-maj=29.6km s-min=12.2km az=87.0*

*ISCJB **24** 02:46:39.2±0.7, 29°.88N±0°.10×139°.1E±0°.3, h421^{km}, mb3.1/8, Error ellipse: s-maj=32.8km s-min=13.0km az=174.3*

ISC 24 02:46:40.7±0.9, **30°.0N**±0°.1×**139°.1E**±0°.3, **h421**^{km}**, n11, σ1^{s}.22**/11, **mb3.1**/8, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	6.59	354	P	P	02 48 17.9	-2.7
	0.2nm,0.3s,baz=174,slow=11,SNR=9.1						
USRK	Ussuriysk Ar.	15.27	340	P	P	02 49 55.5	+0.2
	0.2nm,0.3s,baz=166,slow=7.1,SNR=3.5						
KLR	Kul'dur	20.02	346	P	P	02 50 44.7	+0.9
	2.1nm,0.6s,baz=168,slow=7.1,SNR=9.2						
MKAR	Makanchi Array	46.54	308	P	P	02 54 29.0	+0.6
	0.3nm,0.7s,baz=99,slow=9.8,SNR=3.3						
WRA	Warramunga Arr	49.83	186	P	P	02 54 52.5	-1.0
	0.7nm,0.5s,baz=1.6,slow=7.8,SNR=17						
ASAR	Alice Springs	53.56	186	P	P	02 55 20.1	-0.4
	0.4nm,0.5s,baz=12,slow=9.8,SNR=9.0						
STKA	Stephens Creek	61.55	178	P	P	02 56 15.2	-0.1
	0.8nm,0.4s,baz=344,slow=14,SNR=3.2						
INK	Inuvik	61.58	25	P	P	02 56 16.2	+1.2
	0.3nm,0.4s,baz=272,slow=5.5,SNR=4.2						
YKA	Yellowknife Ar	70.92	28	P	P	02 57 14.0	+0.4
	0.1nm,0.4s,baz=307,slow=6.1,SNR=3.1						
FINES	FINESS Array B	74.15	333	P	P	02 57 32.8	+0.4
	0.5nm,0.4s,baz=57,slow=5.1,SNR=4.8						
BRTR	Keskin Array B	82.04	311	P	P	02 58 16.4	+0.6
	0.2nm,0.7s,baz=90,slow=5.2,SNR=4.5						

IDC 24 02:49:30.8±4.1, **10°.92S**×**165°.71E, h64**^{km}±37^{km}, **mb3.3**/3, **mb1 3.7**/5, **mb1mx3.3**/42, **mbtmp3.9**/5, **ML3.9**/2, **MS2.9**/1, **Ms1 2.9**/1, **ms1mx2.4**/20, **Error ellipse: s-maj=38.3km s-min=34.4km az=133.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.86	284	P	Pn	02 50 54.9	-0.2
	14nm,0.3s,baz=170,slow=2.8,SNR=4.7						
HNR				LR	LR	02 53 21.2	
	comp=Z,96nm,19.2s,baz=190,slow=39						

DZM	**Mont Dzumac**	**11.12**	**176**	P	Pn	02 52 07.2	+0.1
	0.2nm,0.3s,baz=348,slow=19,SNR=5.0						
H11S2	**WAKE ISLAND Hy**	**29.23**	**2**	T	T	03 25 49.6	
	baz=181,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.24**	**2**	T	T	03 25 52.5	
	baz=181,slow=76,SNR=9.3						
H11S1	**WAKE ISLAND Hy**	**29.25**	**2**	T	T	03 25 53.6	
	baz=181,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	03 27 23.7	
	baz=182,slow=76,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	03 27 24.8	
	baz=182,slow=76,SNR=6.6						
H11N2	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	03 27 23.6	
	baz=182,slow=76,SNR=5.4						
WRA	**Warramunga Arr**	**31.49**	**250**	P	P	02 55 47.0	+0.1
	0.3nm,0.7s,baz=82,slow=9.4,SNR=4.8						
ASAR	**Alice Springs**	**32.82**	**243**	P	P	02 55 58.4	-0.1
	0.5nm,0.7s,baz=67,slow=10,SNR=7.0						
ILAR	**Eielson Array**	**83.40**	**19**	P	P	03 01 50.8	0.0
	0.4nm,1.0s,baz=235,slow=5.1,SNR=5.6						

IDC 24 03:00:04.6±2.8**, 6°.04S×130°.36E, h116**^{km}±36^{km}**, mb3.1**/1**, mb1 3.3**/5**, mb1mx3.1**/33**, mbtmp3.6**/5**, Error ellipse: s-maj=68.7km s-min=21.2km az=88.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.22**	**10**	P	Pn	03 01 20.6	+0.1
	2.9nm,0.3s,baz=90,slow=24,SNR=15						
SIJI				S	Sn	03 02 15.9	-3.6
	3.4nm,0.3s,baz=204,slow=23,SNR=8.7						
FITZ	**Fitzroy Crossi**	**12.84**	**201**	P	Pn	03 03 02.3	-0.6
	0.3nm,0.3s,baz=40,slow=14,SNR=14						
WRA	**Warramunga Arr**	**14.35**	**165**	P	Pn	03 03 22.2	-0.3
	0.2nm,0.3s,baz=346,slow=11,SNR=14						
WRA				S	Sn	03 05 48.4	-13
	0.4nm,0.3s,baz=334,slow=22,SNR=7.6						
ASAR	**Alice Springs**	**17.85**	**169**	P	Pn	03 04 05.5	-0.2
	0.1nm,0.3s,baz=347,slow=9.5,SNR=12						
MKAR	**Makanchi Array**	**67.63**	**326**	P	P	03 10 49.0	-0.1
	0.2nm,0.4s,baz=111,slow=7.2,SNR=5.7						

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*IDC **24** 03:20:47.4±2.7, 24°.38S×179°.85E, h493^{km}±29^{km}, mb3.4/8, mb1 3.7/9, mb1mx3.4/29, mbtmp4.3/9, Error ellipse: s-maj=32.5km s-min=18.4km az=167.0*

*ISCJB **24** 03:20:48.7±0.8, 24°.45S±0°.09×179°.8E±0°.1, h517^{km}, mb3.8/8, Error ellipse: s-maj=16.6km s-min=12.4km az=11.7*

ISC 24 03:20:49.3±0.9**, 24°.6S**±0°.1×**179°.9E**±0°.1**, h517**^{km}**, n12,** σ**1^s.10**/15**, mb3.9**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.62**	**279**	P	**P**	**03 23 35.7**	**+1.2**
	0.6nm,0.3s,baz=81,slow=16,SNR=9.0						
URZ	**Urewera**	**13.85**	**189**	P	**P**	**03 23 47.6**	**+0.5**
	1.1nm,0.3s,baz=343,slow=4.7,SNR=6.7						
URZ				S	**S**	**03 26 12.8**	**-0.8**
	0.6nm,0.3s,baz=65,slow=24,SNR=10.0						
STKA	**Stephens Creek**	**34.40**	**249**	P	**P**	**03 26 53.6**	**+0.5**
	1.6nm,0.5s,baz=73,slow=12,SNR=5.8						
ASAR	**Alice Springs**	**41.85**	**261**	P	**P**	**03 27 53.5**	**-0.6**
	1.7nm,0.8s,baz=93,slow=6.8,SNR=33						
WRA	**Warramunga Arr**	**42.28**	**267**	P	**P**	**03 27 56.3**	**-1.2**
	5.0nm,0.6s,baz=99,slow=8.3,SNR=92						
WRA				ScP	**ScP**	**03 32 43.4**	**+2.6**
	1.7nm,0.9s,baz=99,slow=3.7,SNR=9.6						
FITZ	**Fitzroy Crossi**	**50.70**	**266**	P	**P**	**03 29 00.9**	**-0.3**
	3.9nm,0.6s,baz=104,slow=12,SNR=7.8						
SIJI	**Sorong**	**52.57**	**289**	P	**P**	**03 29 13.9**	**-1.0**
	12nm,0.6s,baz=91,slow=4.8,SNR=4.0						
NVAR	**Mina Array Bea**	**85.29**	**44**	P	**P**	**03 32 31.1**	**-0.6**
	0.5nm,0.6s,baz=224,slow=9.1,SNR=4.4						
TXAR	**Lajitas Array**	**90.85**	**58**	P	**P**	**03 32 58.2**	**+0.5**
	1.3nm,0.8s,baz=210,slow=6.6,SNR=13						
PDAR	**Pinedale Array**	**93.23**	**44**	P	**P**	**03 33 08.9**	**+0.3**
	0.3nm,0.6s,baz=269,slow=6.3,SNR=3.6						
BRTR	**Keskin Array B**	**147.91**	**306**	PKPbc	**PKPbc**	**03 39 35.5**	**-1.0**
	0.3nm,0.7s,baz=347,slow=3.3,SNR=3.5						
BRTR				PKPab	**PKPab**	**03 39 40.4**	**-0.6**
	0.7nm,0.6s,baz=101,slow=2.0,SNR=8.8						
TORD	**Torodi Ar. Bea**	**168.51**	**189**	PKPab	**PKPab**	**03 41 10.3**	**+0.2**
	0.5nm,0.9s,baz=158,slow=4.7,SNR=2.3						

IDC 24 03:34:09.5±2.1**, 2°.37N×128°.14E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/38**, mbtmp3.5**/3**, Error ellipse: s-maj=145.1km s-min=26.0km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.99**	**165**	P	P	03 39 14.6	-1.5
	0.7nm,0.6s,baz=344,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**26.48**	**168**	P	P	03 39 49.7	+1.0
	0.2nm,0.3s,baz=346,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**59.47**	**325**	P	P	03 44 14.6	+0.1
	0.3nm,0.4s,baz=117,slow=7.4,SNR=6.1						

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*ISCJB **24** 03:36:06.3±1.5, 21°.2S±0°.2×179°.0W±0°.2, h600^{km}, mb3.9/6, Error ellipse: s-maj=29.9km s-min=25.7km az=20.9*

*IDC **24** 03:36:08.6±6.5, 21°.31S×178°.97W, h618^{km}±77^{km}, mb3.2/6, mb1 3.4/7, mb1mx3.0/36, mbtmp4.3/7, Error ellipse: s-maj=53.9km s-min=29.8km az=23.0*

ISC 24 03:36:07.7±1.4**, 21°.3S**±0°.2×**179°.0W**±0°.2**, h600**^{km}**, n10,** σ**1^s.10**/9**, mb3.8**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.28**	**190**	P	**P**	**03 39 36.3**	**-0.2**
	2.2nm,0.3s,baz=249,slow=3.2,SNR=16						
CTA	**Charters Tower**	**32.51**	**266**	P	**P**	**03 41 51.0**	**+0.1**
	3.2nm,0.4s,baz=92,slow=10,SNR=11						
STKA	**Stephens Creek**	**36.63**	**245**	P	**P**	**03 42 25.1**	**0.0**
	0.6nm,0.3s,baz=76,slow=13,SNR=3.2						
ASAR	**Alice Springs**	**43.45**	**258**	P	**P**	**03 43 19.1**	**-0.5**
	3.2nm,0.6s,baz=96,slow=7.7,SNR=55						
WRA	**Warramunga Arr**	**43.59**	**263**	P	**P**	**03 43 19.6**	**-1.0**
	1.3nm,0.3s,baz=97,slow=7.8,SNR=85						
FITZ	**Fitzroy Crossi**	**52.02**	**263**	P	**P**	**03 44 23.7**	**+0.5**
	1.0nm,0.3s,baz=90,slow=8.1,SNR=6.3						
ILAR	**Eielson Array**	**89.26**	**13**	P	**P**	**03 47 60.0**	**-0.4**
	1.2nm,1.1s,baz=211,slow=5.5,SNR=5.5						
BVAR	**Borovoye Array**	**119.06**	**320**	PKP	**PKPdf**	**03 53 47.9**	**-1.1**
	0.3nm,0.3s,baz=111,slow=1.2,SNR=4.5						
AKASG	**Malin Array Be**	**143.22**	**330**	PKhKP	PKPpre	03 54 29.9	
	1.3nm,0.4s,baz=42,slow=4.2,SNR=11						
AKASG				PKP	PKPab	03 54 31.7	-0.8
	1.3nm,0.4s,baz=42,slow=4.0,SNR=11						
BRTR	**Keskin Array B**	**146.65**	**311**	PKPbc	**PKPdf**	**03 54 42.9**	**+2.1**
	0.4nm,0.7s,baz=121,slow=5.3,SNR=3.9						

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*IDC **24** 03:46:18.2±4.2, 21°.50S×70°.28W, h0^{km}, mb3.7/1, mb1 3.6/2, mb1mx3.3/17, mbtmp3.5/2, ML3.3/1, MS2.2/1, Ms1 2.3/1, ms1mx2.3/21, Error ellipse: s-maj=134.1km s-min=62.8km az=95.0*

*GUC **24** 03:46:22.2±0.7, 20°.75S×70°.66W, h34^{km}±3^{km}, ML3.7*

ISC 24 03:46:19.8±4.3**, 20°.82S**±0°.07×**70°.7W**±0°.1**, h13**^{km}±25^{km}**, n14,** σ**0^s.61**/13**, 4C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.91**	**123**	⇓*i*P	Pn	03 46 38.8	+0.4
PB02				*i* S	**Sn**	**03 46 51.0**	**-0.4**
PB02				IAML		03 46 53.6	
	comp=E,8μm,0.4s						
PB01	**IPOC Station P**	**1.16**	**101**	⇓*i*P	**Pn**	**03 46 42.5**	**+0.6**
PB01				*i* S	**Sn**	**03 46 57.4**	**-0.3**
PB01				IAML		03 46 58.6	
	comp=N,3μm,0.1s						
PB07	**IPOC Station P**	**1.19**	**140**	⇓*i*P	Pn	03 46 43.5	+1.3
PB07				*i* S	Sn	03 46 59.8	+1.4
PB07				IAML		03 47 02.6	
	comp=E,808nm,0.7s						
PSGC	**Pisagua**	**1.33**	**24**	⇑*i*P	**Pn**	**03 46 44.3**	**0.0**
PSGC				*e*S	**Sn**	**03 47 00.9**	**-1.0**
PSGC				IAML		03 47 03.8	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**1.44**	**43**	⇑*i*P	**Pn**	**03 46 46.3**	**+0.5**
PB11				*i* S	**Sn**	**03 47 04.8**	**+0.1**
PB11				IAML		03 47 08.7	
	comp=N,4μm,0.3s						
PB08	**IPOC Station P**	**1.61**	**65**	⇓*i*P	**Pb**	**03 46 49.1**	**-0.4**
PB08				*i* S	**Sb**	**03 47 09.9**	**0.0**
PB08				IAML		03 47 13.4	
	comp=E,2μm,0.7s						
PB09	**IPOC Station P**	**1.68**	**126**	⇑*i*P	Pg	03 46 51.7	-0.3
PB09				*i* S	Sg	03 47 13.9	0.0
PB09				IAML		03 47 24.9	
	comp=E,670nm,0.2s						
MNMC	**Minye Minye**	**1.98**	**32**	⇑*i*P	**Pn**	**03 46 54.0**	**+0.7**
MNMC				*i* S	**Sn**	**03 47 18.8**	**+0.7**
MNMC				IAML		03 47 22.5	
	comp=E,2μm,0.4s						
LPAZ	**La Paz**	**5.13**	**29**	Pn	Pn	03 47 42.9	+6.0
	comp=E,0.4nm,0.3s,baz=204,slow=7.0,SNR=9.8						
LPAZ				LR	LR	03 50 29.6	
	comp=E,22nm,19.6s,baz=293,slow=45						
TORD	**Torodi Ar. Bea**	**78.72**	**71**	P	**P**	**03 58 22.2**	**-0.3**
	comp=E,0.4nm,0.5s,baz=259,slow=4.6,SNR=9.3						
H11N3	**WAKE ISLAND Hy**	**126.19**	**280**	T	T	06 24 33.7	
	baz=104						
H11N2	**WAKE ISLAND Hy**	**126.21**	**280**	T	T	06 24 35.8	
	baz=104						
H11N1	**WAKE ISLAND Hy**	**126.21**	**280**	T	T	06 24 32.9	
	baz=104						
MKAR	**Makanchi Array**	**146.04**	**34**	PKPbc	**PKPab**	**04 06 00.3**	**+0.3**
	comp=E,0.3nm,0.6s,baz=312,slow=3.1,SNR=4.4						

IDC 24 03:52:07.8±20.0**, 18°.95N×145°.05E, h208**^{km}±195^{km}**, mb3.4**/6**, mb1 3.7**/6**, mb1mx3.2**/36**, mbtmp3.9**/6**, Error ellipse: s-maj=35.8km s-min=27.0km az=71.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.05**	**196**	P	P	03 59 23.0	0.0
	4.1nm,0.5s,baz=22,slow=9.1,SNR=78						
ASAR	**Alice Springs**	**43.73**	**195**	P	P	03 59 52.5	-0.3
	0.7nm,0.5s,baz=14,slow=7.6,SNR=15						
MKAR	**Makanchi Array**	**57.85**	**314**	P	P	04 01 38.0	+0.2
	0.1nm,0.4s,baz=105,slow=9.1,SNR=2.3						
ILAR	**Eielson Array**	**63.69**	**26**	P	P	04 02 16.6	-0.3
	0.4nm,0.7s,baz=256,slow=5.8,SNR=7.8						
YKA	**Yellowknife Ar**	**78.06**	**28**	P	P	04 03 43.6	+0.3
	0.4nm,0.6s,baz=289,slow=5.8,SNR=6.1						
NVAR	**Mina Array Bea**	**83.47**	**52**	P	P	04 04 13.1	+0.3
	0.7nm,0.5s,baz=267,slow=5.5,SNR=6.6						
FINES	**FINESS Array B**	**86.40**	**335**	P	P	04 04 26.1	-0.5
	0.5nm,0.7s,baz=79,slow=7.2,SNR=2.9						

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*IDC **24** 04:11:45.0±1.8, 53°.30N×158°.62E, h249^{km}±11^{km}, mb2.7/2, mb1 2.9/2, mb1mx2.5/35, mbtmp3.3/2, Error ellipse: s-maj=73.0km s-min=28.9km az=168.0*

*KRSC **24** 04:11:44.2±1.2, 54°.02N×158°.89E, h228^{km}±10^{km}, ML3.7*

*ISCJB **24** 04:11:45.2±0.6, 54°.02N±0°.05×158°.9E±0°.1, h225^{km}±5^{km}, mb2.8/2, Error ellipse: s-maj=14.0km s-min=4.7km az=30.4*

ISC 24 04:11:46.2±1.3**, 54°.04N**±0°.06×**158°.87E**±0°.08**, h221**^{km}±8^{km}**, n33,** σ**1^s.03**/51**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.34**	**90**	*e*P	**Pn**	**04 12 15.4**	**+0.1**
GNL	**Ganaly**	**0.65**	**238**	*e*P	**Pn**	**04 12 15.6**	**-0.8**
GNL				*e*S	**S**	**04 12 38.7**	**-1.2**
KRX	**Arik**	**0.69**	**191**	*e*P	**Pn**	**04 12 17.0**	**+0.3**
KOK	**Koryaka**	**0.76**	**191**	*e*P	**Pn**	**04 12 17.2**	**+0.3**
SDLR	**Sedlovina**	**0.76**	**179**	*e*P	**Pn**	**04 12 17.3**	**+0.3**
SDLR				*e*S	**S**	**04 12 41.1**	**+0.2**
SMAR	**Somma**	**0.78**	**183**	*e*P	**Pn**	**04 12 17.3**	**+0.1**
SMAR				*e*S	**S**	**04 12 41.7**	**+0.5**
AVH	**Avacha**	**0.78**	**186**	*e*P	**Pn**	**04 12 17.5**	**+0.5**
AVH				*e*S	**S**	**04 12 42.0**	**+1.0**
UGLR	**Uglovaya**	**0.83**	**182**	*e*P	**Pn**	**04 12 17.8**	**+0.5**
NLC	**Nalytchevo**	**0.91**	**162**	*e*S	**S**	**04 12 41.5**	**-0.5**
DALK	**Dalny**	**1.01**	**184**	*e*P	**Pn**	**04 12 18.2**	**0.0**
DALK				*e*S	**S**	**04 12 42.7**	**-0.3**
PET	**Petropavlovsk**	**1.02**	**187**	*e*P	**Pn**	**04 12 18.4**	**+0.1**
PET				*e*S	**S**	**04 12 43.3**	**+0.1**
PETK	**Petropavlovsk-**	**1.16**	**217**	P	**Pn**	**04 12 18.5**	**-0.7**
	6.7nm,0.3s,baz=74,slow=5.9,SNR=221						
PETK				S	**S**	**04 12 44.7**	**-0.2**
	0.7nm,0.3s,baz=38,slow=23,SNR=8.1						
SPN	**Mys Shipunski**	**1.17**	**143**	*e*P	**Pn**	**04 12 18.7**	**-0.5**
SPN				*e*S	**S**	**04 12 43.2**	**-1.6**
KRMR	**Karymshinskiy**	**1.29**	**200**	*e*P	**Pn**	**04 12 19.9**	**-0.2**
KRMR				*e*S	**S**	**04 12 46.4**	**0.0**
KZV	**Kizimen**	**1.36**	**37**	*e*P	**Pn**	**04 12 20.9**	**+0.2**
KZV				*e*S	**S**	**04 12 47.1**	**-0.6**
TUMR	**Tumrok**	**1.45**	**30**	*e*P	**Pn**	**04 12 21.9**	**+0.5**
TUMR				*e*S	**S**	**04 12 49.8**	**+0.9**
TUMD	**Tumrok D**	**1.47**	**37**	*e*P	**Pn**	**04 12 21.5**	**+0.1**
APC	**Apacha**	**1.51**	**223**	*e*P	**Pn**	**04 12 21.4**	**-0.4**
APC				*e*S	**S**	**04 12 49.0**	**-0.5**
MTVR	**Mutnovka**	**1.61**	**195**	*e*P	**Pn**	**04 12 23.3**	**+0.4**
MTVR				*e*S	**S**	**04 12 52.4**	**+1.1**
RUS	**Russkaya**	**1.62**	**188**	*e*P	**Pn**	**04 12 22.1**	**-0.7**
RUS				*e*S	**S**	**04 12 49.6**	**-1.5**
MKZ	**Mys Kozlova**	**1.76**	**72**	*e*P	**Pn**	**04 12 24.1**	**+0.2**
MKZ				*e*S	**S**	**04 12 51.5**	**-1.7**
ESO	**Esso**	**1.89**	**357**	*e*P	**Pn**	**04 12 23.8**	**-1.4**
KDTR	**Khodutka, Kamc**	**2.28**	**192**	*e*P	**Pn**	**04 12 28.1**	**-1.0**
KDTR				*e*S	**S**	**04 13 00.0**	**-2.4**
SRDR	**Sredinnyy**	**2.34**	**12**	*e*P	**Pn**	**04 12 28.6**	**-1.0**
PAU	**Pauzhetka**	**2.86**	**207**	*e*P	**Pn**	**04 12 35.2**	**-0.1**
BDR	**Baidarnaya**	**2.87**	**27**	*e*P	**Pn**	**04 12 35.8**	**+0.4**
SRKR	**Sorokina**	**2.93**	**26**	*e*P	**Pn**	**04 12 36.2**	**+0.1**
SRKR				S	**S**	**04 13 15.0**	**-0.2**
SMKR	**Semkarok**	**2.95**	**29**	*e*P	**Pn**	**04 12 37.3**	**+1.0**
KBG	**Krutoberegovo**	**3.13**	**43**	*e*P	**Pn**	**04 12 37.5**	**-0.7**
KBG				*e*S	**S**	**04 13 16.5**	**-2.5**
KBTR	**Krutoberegovo**	**3.14**	**45**	*e*P	**Pn**	**04 12 37.8**	**-0.6**
KBTR				*e*S	**S**	**04 13 16.6**	**-2.7**
SKR	**Severo-Kuril’s**	**3.76**	**208**	*e*S	**S**	**04 13 30.5**	**-2.0**
ILAR	**Eielson Array**	**28.68**	**46**	P	**P**	**04 17 24.0**	**+1.8**
	0.2nm,0.5s,baz=265,slow=9.4,SNR=4.8						
MKAR	**Makanchi Array**	**47.09**	**294**	P	P	04 19 53.0	-2.7
	0.2nm,0.6s,baz=55,slow=6.0,SNR=5.6						

IDC 24 04:26:02.9±9.0**, 6°.73S×127°.34E, h209**^{km}±93^{km}**, mb3.0**/1**, mb1 3.4**/4**, mb1mx2.9**/45**, mbtmp3.9**/4**, Error ellipse: s-maj=117.4km s-min=25.1km az=50.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.02**	**226**	P	Pn	04 27 17.9	+0.1
	80nm,0.3s,baz=42,slow=3.1,SNR=35						
BATI				S	S	04 28 08.5	-8.1
	24nm,0.3s,baz=281,slow=20,SNR=11						
FITZ	**Fitzroy Crossi**	**11.42**	**188**	P	Pn	04 28 40.8	+0.5
	0.1nm,0.3s,baz=2.6,slow=6.3,SNR=4.2						
WRA	**Warramunga Arr**	**14.79**	**153**	P	P	04 29 23.1	+0.1
	0.5nm,0.3s,baz=324,slow=13,SNR=37						
ASAR	**Alice Springs**	**17.98**	**160**	P	P	04 29 57.6	-0.5
	0.8nm,0.3s,baz=335,slow=11,SNR=53						
MKAR	**Makanchi Array**	**66.58**	**328**	P	P	04 36 30.7	0.0
	0.3nm,0.6s,baz=122,slow=7.5,SNR=4.0						

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*NIED **24** 04:26:00, 41°.00N×141°.70E, h77^{km}, Mw3.7 Best double couple: M$_0$3.54000×10^{14} NP1:φ$_s$319.00000°, δ77.00000°, λ7.00000°. NP2:φ$_s$228.00000°, δ83.00000°, λ167.00000°.*

*ISCJB **24** 04:26:16.5±0.5, 40°.98N±0°.03×141°.63E±0°.07, h79^{km}±3^{km}, mb3.7/7, Error ellipse: s-maj=9.0km s-min=4.5km az=7.6*

*JMA **24** 04:26:16.8±0.1, 40°.98N×141°.66E, h75^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: φ$_s$299.00000°, δ69.00000°, λ-24.00000°. NP2:φ$_s$38.00000°, δ68.00000°, λ-158.00000°. Principal axes: T Plg1.0000°, Azm349.0000°; N Plg59.0000°, Azm81.0000°; P Plg31.0000°, Azm258.0000°;*

JMA Felt I J1.

*IDC **24** 04:26:17.2±1.9, 40°.89N×141°.93E, h94^{km}±16^{km}, mb3.5/7, mb1 3.5/11, mb1mx3.2/56, mbtmp3.8/11 Error ellipse: s-maj=27.7km s-min=14.3km az=103.0*

ISC 24 04:26:17.1±0.9**, 40°.98N**±0°.03×**141°.67E**±0°.06**, h71**^{km}±6^{km}**, n34,** σ**1^s.41**/42**, mb3.8**/7**, 9C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JARK	**Aomorirokkasho**	**0.23**	**276**	P	**Pn**	**04 26 28.2**	**+0.3**
JARK				S	**Sn**	**04 26 36.3**	**+0.4**
JAHD	**Aomorihigashid**	**0.38**	**318**	⇑P	**Pn**	**04 26 29.2**	**+0.3**
JAHD				S	**Sn**	**04 26 38.2**	**+0.6**
JTM	**Tenmabayashi**	**0.50**	**247**	⇓P	**Pn**	**04 26 29.8**	**-0.1**
JTM				S	**Sn**	**04 26 39.3**	**-0.1**
JOT	**Ohata**	**0.62**	**310**	⇑P	**Pn**	**04 26 30.9**	**-0.2**
JOT				S	**Sn**	**04 26 41.7**	**+0.2**
JANG	**Nango**	**0.62**	**191**	⇑P	**Pn**	**04 26 30.8**	**-0.4**
JANG				S	**Sn**	**04 26 40.9**	**-0.7**
JKB	**Kayabe**	**1.02**	**332**	⇑P	**Pn**	**04 26 36.0**	**+0.1**
JKB				S	**Sn**	**04 26 50.2**	**+0.3**
JSR	**Shiriuchi**	**1.09**	**300**	P	**Pn**	**04 26 36.5**	**-0.2**
JSR				*e*S	**Sn**	**04 26 51.6**	**+0.2**
JAH	**Hinai**	**1.12**	**225**	⇑P	**Pn**	**04 26 37.3**	**+0.2**
JAH				S	**Sn**	**04 26 53.2**	**+1.2**
JIW	**Iwasaki**	**1.32**	**253**	P	**Pn**	**04 26 39.5**	**-0.2**
JYM2	**Yakumo 2**	**1.50**	**320**	⇑P	**Pn**	**04 26 42.3**	**+0.3**
JYM2				S	**Sn**	**04 27 01.1**	**+0.3**
JEM	**Erimo**	**1.52**	**47**	P	**Pn**	**04 26 42.9**	**+0.6**
JNBK	**Urakawa-nobuka**	**1.53**	**32**	P	**Pn**	**04 26 42.8**	**+0.4**
JOM	**Ohasama**	**1.54**	**191**	⇑P	**Pn**	**04 26 42.7**	**+0.2**
JOM				S	**Sn**	**04 27 01.9**	**+0.2**
JNB	**Noboribetsu**	**1.56**	**342**	⇑P	**Pn**	**04 26 42.5**	**-0.3**
JNB				S	**Sn**	**04 27 01.8**	**-0.4**
JIAM	**Iburiatsuma**	**1.65**	**6**	P	**Pn**	**04 26 44.8**	**+0.8**
JIAM				S	**Sn**	**04 27 06.2**	**+1.8**
JRG	**Rokugo**	**1.77**	**207**	⇑P	**Pn**	**04 26 46.4**	**+0.7**
ASAJ	**Asahikawa**	**3.21**	**12**	P	**Pn**	**04 27 05.8**	**+0.7**
	5.7nm,0.3s,baz=229,slow=9.8,SNR=27						
ASAJ				S	**Sn**	**04 27 44.9**	**+2.9**
	6.0nm,0.3s,baz=139,slow=33,SNR=3.9						
MAT	**Matsushiro**	**5.20**	**213**	P	**Pn**	**04 27 33.5**	**+1.3**
MAT				*e*S	**Sn**	**04 28 35.8**	**+5.0**
MJAR	**Matsushiro Arr**	**5.20**	**212**	P	**Pn**	**04 27 33.6**	**+1.4**
	0.3nm,0.3s,baz=22,slow=14,SNR=17						
USRK	**Ussuriysk Ar.**	**7.83**	**297**	P	**Pn**	**04 28 09.6**	**+1.4**
	0.5nm,0.3s,baz=101,slow=14,SNR=8.3						
KSRS	**Korea Array**	**11.23**	**256**	P	**Pn**	**04 28 58.4**	**+3.8**
	0.3nm,0.3s,baz=60,slow=15,SNR=4.3						
SONM	**Songino Array**	**25.95**	**297**	P	**P**	**04 31 42.6**	**-0.2**
	0.3nm,0.5s,baz=102,slow=8.9,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**30.18**	**127**	T	T	05 03 28.9	
	baz=318,slow=75,SNR=26						
H11N1	**WAKE ISLAND Hy**	**30.19**	**127**	T	T	05 03 30.8	
	baz=318,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**30.20**	**127**	T	T	05 03 30.2	
	baz=318,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hy**	**31.01**	**129**	T	T	05 04 32.5	
	baz=321,slow=76,SNR=9.3						
H11S3	**WAKE ISLAND Hy**	**31.01**	**129**	T	T	05 04 33.3	
	baz=321,slow=76,SNR=7.3						
H11S2	**WAKE ISLAND Hy**	**31.03**	**129**	T	T	05 04 53.3	
	baz=321,slow=76,SNR=9.0						
ZALV	**Zalesovo Beam**	**39.50**	**309**	P	**P**	**04 33 40.7**	**+0.3**
	2.3nm,0.5s,baz=89,slow=7.6,SNR=8.2						
MKAR	**Makanchi Array**	**42.30**	**299**	P	**P**	**04 34 02.5**	**-1.0**
	0.7nm,0.5s,baz=83,slow=10,SNR=18						
KURBB	**Kurchatov Arra**	**43.82**	**305**	P	**P**	**04 34 14.8**	**-0.9**
	1.9nm,0.4s,baz=79,slow=9.0,SNR=14						
BVAR	**Borovoye Array**	**48.13**	**310**	P	**P**	**04 34 49.1**	**-0.5**
	0.5nm,0.3s,baz=73,slow=9.1,SNR=6.1						
WRA	**Warramunga Arr**	**60.99**	**188**	P	**P**	**04 36 19.9**	**-3.1**
	0.2nm,0.7s,baz=2.6,slow=7.1,SNR=4.5						
FINES	**FINESS Array B**	**65.43**	**332**	P	**P**	**04 36 50.9**	**-1.0**
	0.7nm,0.6s,baz=60,slow=9.1,SNR=9.1						

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*ISCJB **24** 04:38:38.8±1.0, 35°.70N±0°.04×141°.05E±0°.08, h23^{km}±5^{km}, mb3.4/3, Error ellipse: s-maj=11.1km s-min=6.4km az=166.9*

*IDC **24** 04:38:39.5±1.4, 35°.30N×140°.63E, h0^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.3/37, mbtmp3.3/4, ML2.2/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/24, Error ellipse: s-maj=35.9km s-min=29.0km az=71.0*

*JMA **24** 04:38:39.8±0.2, 35°.67N×140°.98E, h16^{km}±1^{km}, M3.9*

JMA Felt II J1.

ISC 24 04:38:39.3±1.4**, 35°.69N**±0°.04×**141°.02E**±0°.07**, h16**^{km}±8^{km}**, n21,** σ**1^s.05**/20**, mb3.4**/3**, 3C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.13**	**275**	⇓P	**Pg**	**04 38 43.2**	**+0.1**
CHOJ				S	**Sb**	**04 38 45.3**	**-0.8**
JSMT	**Sammumatsuo**	**0.47**	**264**	P	**Pb**	**04 38 48.8**	**-0.4**
JSMT				S	**Sb**	**04 38 55.8**	**0.0**
JIHU	**Itakohorinouch**	**0.48**	**304**	P	**Pb**	**04 38 49.8**	**+0.3**
JIHU				S	**Sb**	**04 38 57.1**	**+0.8**
JCN	**Nagara**	**0.72**	**248**	⇑P	**Pg**	**04 38 53.7**	**+0.3**
JCN				S	**Sb**	**04 39 03.6**	**+0.5**
JYT	**Yasato**	**0.86**	**309**	⇑P	**Pb**	**04 38 55.2**	**-0.6**
JYT				S	**Sb**	**04 39 06.0**	**-1.0**
BSO4	**Boso 4**	**0.89**	**219**	P	**Pn**	**04 38 56.7**	**-0.4**
BSO3	**Boso 3**	**0.98**	**205**	⇑P	**Pb**	**04 38 57.5**	**-0.3**
JHO	**Hitachi**	**0.99**	**338**	P	**Pb**	**04 38 57.8**	**-0.2**
JHO				*e*S	**Sb**	**04 39 09.5**	**-1.3**
BSO1	**Boso 1**	**1.04**	**182**	P	**Pb**	**04 38 57.8**	**-0.7**
MJAR	**Matsushiro Arr**	**2.43**	**291**	Pn	**Pn**	**04 39 18.0**	**-0.4**
	0.6nm,0.3s,baz=111,slow=5.6,SNR=40						
MAT	**Matsushiro**	**2.43**	**291**	P	**Pn**	**04 39 18.4**	**0.0**
MAT				S	**Sn**	**04 39 45.7**	**-2.1**
JNU	**Nakatsue**	**8.76**	**256**	LR	LR	04 43 12.9	
	comp=Z,31nm,20.0s,baz=7.0,slow=33						
H11N2	**WAKE ISLAND Hy**	**27.77**	**118**	T	T	05 13 27.5	
	baz=310,slow=75,SNR=61						
H11N1	**WAKE ISLAND Hy**	**27.77**	**118**	T	T	05 13 26.2	
	baz=310,slow=75,SNR=58						
H11N3	**WAKE ISLAND Hy**	**27.79**	**118**	T	T	05 13 26.3	
	baz=310,slow=75,SNR=52						
H11S1	**WAKE ISLAND Hy**	**28.43**	**120**	T	T	05 14 13.3	
	baz=312,slow=75,SNR=275						
H11S3	**WAKE ISLAND Hy**	**28.43**	**120**	T	T	05 14 13.3	
	baz=312,slow=75,SNR=275						
H11S2	**WAKE ISLAND Hy**	**28.45**	**120**	T	T	05 14 16.0	
	baz=312,slow=75,SNR=149						
MKAR	**Makanchi Array**	**44.57**	**303**	P	**P**	**04 46 53.1**	**+2.7**
	0.3nm,0.7s,baz=100,slow=7.9,SNR=3.5						
ILAR	**Eielson Array**	**50.80**	**32**	P	P	04 47 44.7	+6.3
	0.4nm,0.9s,baz=272,slow=6.1,SNR=3.9						
WRA	**Warramunga Arr**	**55.69**	**188**	P	**P**	**04 48 14.5**	**-0.5**
	0.4nm,0.5s,baz=5.4,slow=7.7,SNR=8.0						

NNC 24 04:49:21.1±6.3**, 37°.13N×70°.68E, h0**^{km}**, mb3.5, mpv3.1, 4C-4D, Error ellipse: s-maj=49.0km s-min=41.0km az=163.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.63**	**37**	⇑Pn	Pn	04 50 18.2	-0.5
	2.3nm,0.3s						
SFK				⇑Sn	Sn	04 51 03.4	+1.0
	2.1nm,0.3s						
MNAS	**Manas**	**5.53**	**14**	⇑Pn	Pn	04 50 46.2	+1.4
	2.9nm,1.4s						
MNAS				⇓Sn	Sn	04 51 49.9	+0.8
	3.3nm,0.6s						
KK31	**Karatay Array**	**5.97**	**359**	⇓Pn	Pn	04 50 51.5	+0.8
	0.8nm,0.3s,baz=177,slow=12,SNR=29						
KK31				⇓Sn	Sn	04 52 02.7	+3.0
	0.7nm,0.4s,baz=186,slow=26,SNR=5.2						
AAK	**Ala-Archa**	**6.23**	**27**	⇑Pn	Pn	04 50 54.3	-0.1
	1.2nm,0.6s						
AAK				⇓Sn	Sn	04 52 05.7	-0.7
	2.3nm,0.5s						

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*NIED **24** 04:55:00, 37°.00N×140°.70E, h20^{km}, Mw4.3 Best double couple: M$_0$2.79000×10^{15} NP1:φ$_s$169.00000°, δ32.00000°, λ34.00000°. NP2:φ$_s$50.00000°, δ73.00000°, λ118.00000°.*

*JMA **24** 04:55:15.9, 36°.97N×140°.69E, h21^{km}±1^{km}, M4.5 Broadband fault plane solution: P waves. NP1: φ$_s$36.00000°, δ68.00000°, λ104.00000°. NP2: φ$_s$181.00000°, δ26.00000°, λ58.00000°. Principal axes: T Plg64.0000°, Azm329.0000°; N Plg13.0000°, Azm210.0000°; P Plg22.0000°, Azm115.0000°;*

JMA Felt III J1.

*ISCJB **24** 04:55:15.4±0.5, 37°.01N±0°.02×140°.71E±0°.03, h32^{km}±2^{km}, mb4.6/104, MS3.6/11 Error ellipse: s-maj=4.6km s-min=3.2km az=38.3*

1745

*MOS **24** 04:55:16.5±1.1, 37°.10N×140°.68E, h38km, mb4.8/58, Error ellipse: s-maj=7.4km s-min=4.7km az=101.4*

*BJI **24** 04:55:17.2, 36°.86N×140°.60E, h54km, mB4.9/23, mb4.5/39, Ms4.1/12, Ms7 3.9/12*

*IDC **24** 04:55:18.8±2.2, 37°.01N×140°.57E, h42km±19km, mb4.2/33, mb1 4.3/35, mb1mx4.2/58, mbtmp4.4/35, ML4.1/2, MS3.5/14, Ms1 3.5/14, ms1mx3.3/40, Error ellipse: s-maj=13.7km s-min=11.6km az=118.0*

*NEIC **24** 04:55:19.0±0.5, 37°.01N×140°.65E, h47km±3km, mb4.6/43, Error ellipse: s-maj=4.5km s-min=3.2km az=144.0*

NEIC Felt [IV] at Iwaki. Felt widely in eastern Honshu. Recorded [3 JMA] in Fukushima and Ibaraki.

ISC 24 04:55:16.4±0.6**, 36°.97N**±0°.04×**140°.75E**±0°.04**, h28**km±4km**, n301, σ1§17**/317**, mb4.7**/116**, MS3.6**/12**, 36C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.14**	**18**	⇑P	**Pn**	**04 55 20.4**	**-2.3**
ONAJ				S	**Sn**	**04 55 23.7**	**-1.7**
JFFD	**Fukushimafurud**	**0.19**	**308**	⇓P	**Pn**	**04 55 20.5**	**-2.9**
JFFD				S	**Sn**	**04 55 23.7**	**-2.5**
JHO	**Hitachi**	**0.39**	**201**	⇑P	**Pb**	**04 55 23.4**	**-1.5**
JHO				S	**Sb**	**04 55 28.6**	**-2.2**
JFK	**Kawauchi**	**0.41**	**15**	⇓P	**Pb**	**04 55 24.3**	**-0.9**
JFK				S	**Sn**	**04 55 30.5**	**-2.6**
JFT	**Otama**	**0.63**	**329**	⇓P	**Pn**	**04 55 28.1**	**-1.4**
JFT				S	**Sn**	**04 55 36.6**	**-2.1**
JSB	**Shiboa**	**0.66**	**270**	⇓P	**Pn**	**04 55 28.5**	**-1.4**
JSB				S	**Sn**	**04 55 37.7**	**-1.7**
JYT	**Yasato**	**0.87**	**211**	P	**Pn**	**04 55 31.5**	**-1.2**
JYT				S	**Sn**	**04 55 42.9**	**-1.5**
JMM	**Marumori**	**0.89**	**2**	⇑P	**Pn**	**04 55 32.2**	**-0.9**
JMM				S	**Sn**	**04 55 44.0**	**-1.0**
JFY	**Yanaizu**	**0.94**	**298**	⇓P	**Pn**	**04 55 32.7**	**-1.0**
JFY				S	**Sn**	**04 55 44.7**	**-1.5**
MJAR	**Matsushiro Arr**	**2.08**	**259**	P	**Pn**	**04 55 50.1**	**+0.7**
	9.2nm,0.3s,baz=82,slow=15,SNR=353						
MJAR				S	**Sb**	**04 56 16.6**	**-2.3**
	35nm,0.3s,baz=80,slow=28,SNR=14						
MJAR				LR	LR	04 56 33.6	
	comp=Z,420nm,18.9s,baz=95,slow=39						
MAJO	**Matsushiro**	**2.08**	**259**	*e*Pn	**Pn**	**04 55 50.5**	**+1.0**
MAJO	**Matsushiro**	**2.08**	**259**	*d i*P	**Pn**	**04 55 50.6**	**+1.1**
MAT	**Matsushiro**	**2.08**	**259**	P	**Pn**	**04 55 50.3**	**+0.8**
MAT				S	**Sb**	**04 56 17.4**	**-1.6**
MJB9	**Matsu-Tunnel**	**2.08**	**259**	*e*Pn	**Pn**	**04 55 50.5**	**+1.1**
INU	**Inuyama**	**3.42**	**243**	*e*Pn	**Pn**	**04 56 09.5**	**+1.6**
ERM	**Erimo**	**5.37**	**20**	*e*Pn	**Pn**	**04 56 34.8**	**+0.2**
ERM				*e*Sn	**Sn**	**04 57 35.9**	**+0.4**
ERM	**Erimo**	**5.37**	**20**	*e*P	**Pn**	**04 56 34.8**	**+0.2**
ERM				*e*		04 57 35.9	
ASAJ	**Asahikawa**	**7.27**	**11**	P	**Pn**	**04 57 01.1**	**+0.4**
	6.1nm,0.3s,baz=222,slow=11,SNR=35						
ASAJ				S	**Sn**	**04 58 24.7**	**+2.4**
	2.1nm,0.3s,baz=113,slow=33,SNR=4.1						
YUK	**Yuzh-Kuril'sk**	**8.06**	**27**	*e*P	**Pn**	**04 57 11.1**	**-0.3**
YUK				*e*S	**Sn**	**04 58 38.2**	**-3.3**
YUK				pmax	pmax		
	comp=Z,31nm,0.3s						
YUK				pmax	pmax		
	comp=E,34nm,0.2s						
SHO	**Shikotan**	**8.30**	**32**	*e*P	**Pn**	**04 57 13.1**	**-1.7**
SHO				*e*S	**Sn**	**04 58 41.2**	**-6.4**
SHO				pmax	pmax		
	comp=Z,10.0nm,0.3s						
SHO				pmax	pmax		
	comp=N,3.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,6.0nm,0.2s						
TEY	**Ternei**	**8.64**	**340**	⇑*e*P	Pn	04 57 25.1	+5.7
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY				pmax	pmax		
	comp=Z,30nm,0.9s						
JNU	**Nakatsue**	**8.96**	**247**	LR	LR	05 00 55.9	
	comp=Z,156nm,19.9s,baz=26,slow=38						
USA0B	**Ussuriysk Arra**	**9.82**	**320**	*e*Pn	**Pn**	**04 57 37.8**	**+2.2**
USRK	**Ussuriysk Ar.**	**9.82**	**320**	P	Pn	04 57 40.6	+5.0
	comp=Z,1.5nm,0.3s,baz=136,slow=12,SNR=19						
USRK				LR	LR	05 01 08.9	
	comp=Z,347nm,18.5s,baz=141,slow=36						
KUR	**Kuril'sk**	**9.84**	**31**	⇑*e*P	**Pn**	**04 57 34.8**	**-1.1**
KUR				*e*S	**Sn**	**04 59 20.4**	**-5.0**
KUR				pmax	pmax		
	comp=Z,36nm,0.5s						
KUR				pmax	pmax		
	comp=N,15nm,0.6s						
KUR				pmax	pmax		
	comp=E,13nm,0.6s						
KUR				smax	smax		
	comp=N,47nm,0.5s						
KUR				smax	smax		
	comp=E,38nm,0.6s						
YSS	**Yuzh-Sakhalins**	**10.08**	**8**	*e*Pn	**Pn**	**04 57 39.5**	**+0.4**
	comp=E,31nm,0.8s						
YSS	**Yuzh-Sakhalins**	**10.08**	**8**	⇓*e*P	**Pn**	**04 57 39.6**	**+0.4**
YSS				*e*S	**Sn**	**04 59 30.1**	**-1.2**
YSS				pmax	pmax		
	comp=N,30nm,0.6s						
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				MLR	MLR		
	comp=N,200nm,15.0s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
KSRS	**Korea Array**	**10.24**	**277**	P	Pn	04 57 46.9	+5.5
	comp=Z,0.2nm,0.3s,baz=90,slow=14,SNR=19						
KSRS				LR	LR	05 01 25.9	
	comp=Z,197nm,20.2s,baz=86,slow=36						
KS01	**Wonju Array Si**	**10.26**	**277**	*e*Pn	**Pn**	**04 57 45.2**	**+3.5**
KSAR	**Wonju Array Be**	**10.27**	**276**	P	Pn	04 57 46.9	+5.1
KSAR	**Wonju Array Be**	**10.27**	**276**	P	Pn	04 57 46.9	+5.1
MDJ	**Mudanjiang**	**11.38**	**316**	P	Pn	04 58 02.3	+5.3
MDJ				S	**Sn**	**05 00 04.1**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,13nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,81nm,3.0s						
MDJ				LR	LR		
	comp=Z,400nm,11.4s						
MDJ				LR	LR		
	comp=Z,570nm,9.8s						
MDJ				LR	LR		
	comp=Z,640nm,13.7s						
MDJ	**Mudanjiang**	**11.38**	**316**	*e*Pn	**Pn**	**04 57 58.2**	**+1.2**
	comp=Z,21nm,1.1s						
KLR	**Kul'dur**	**13.89**	**335**	P	**Pn**	**04 58 32.4**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=138,slow=17,SNR=5.5						
KLR				LR	LR	05 03 48.2	
	comp=Z,183nm,18.9s,baz=175,slow=37						
TYV	**Tymovskoe**	**13.95**	**5**	*e*P	**Pn**	**04 58 30.8**	**-1.3**
TYV				*e*S	**Sn**	**05 01 04.6**	**-1.3**
TYV				pmax	pmax		
	comp=Z,17nm,0.7s						
TYV				pmax	pmax		
	comp=Z,300nm,3.9s						
TYV				smax	smax		
	comp=E,200nm,5.1s						
TYV				MLR	MLR		
	comp=Z,700nm,14.0s						
GRNR	**Gornyy**	**14.13**	**349**	*e*P	**Pn**	**04 58 33.7**	**-0.9**
NJ2	**Nanjing**	**18.68**	**261**	*e*P	**Pn**	**04 59 32.8**	**0.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA	**Zeya**	**19.20**	**335**	*e*P	**P**	**04 59 35.0**	**-2.9**
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
BJI	**Beijing**	**19.45**	**287**	⇓*i*P	**P**	**04 59 40.5**	**-0.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJT	**Baijiatuau**	**19.46**	**287**	*e*P	**P**	**04 59 40.1**	**-0.7**
	comp=Z,6.0nm,0.6s						
BJT	**Baijiatuau**	**19.46**	**287**	*e*P	**P**	**04 59 40.1**	**-0.7**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YOJ	**Yonaguni jima**	**19.66**	**236**	*e*P	**P**	**04 59 44.1**	**+1.1**
	comp=Z,153nm,1.1s						
YOJ	**Yonaguni jima**	**19.66**	**236**	*e*P	**P**	**04 59 44.1**	**+1.1**
YOJ				pmax	pmax		
	comp=Z,153nm,1.1s						
MA2	**Magadan**	**23.53**	**13**	*e*P	**P**	**05 00 24.8**	**+0.9**
	comp=Z,18nm,0.7s						
MA2	**Magadan**	**23.53**	**13**	*ce*P	**P**	**05 00 23.4**	**-0.5**
MA2				pmax	pmax		
	comp=Z,19nm,0.7s						
MA2	**Magadan**	**23.53**	**13**	P	**P**	**05 00 24.6**	**+0.6**
	comp=Z,15nm,0.6s,baz=196,slow=8.3,SNR=17						
XAN	**Xi'an**	**26.01**	**273**	P	**P**	**05 00 47.0**	**0.0**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,140nm,4.0s						
YAK	**Yakutsk**	**26.02**	**348**	*e*P	**P**	**05 00 44.8**	**-1.9**
YAK				*e**PP	**pP**	**05 00 57.3**	**+2.3**
YAK				*e*		05 01 25.1	
YAK				*e*S	**S**	**05 05 11.2**	**-4.3**
YAK				*e**SS	**pS**	**05 05 27.4**	**+3.3**
YAK				pmax	pmax		
	comp=Z,126nm,0.9s						
YAK				pmax	pmax		
	comp=N,58nm,1.0s						
YAK				pmax	pmax		
	comp=E,41nm,1.1s						
YAK				pmax	pmax		
	comp=Z,45nm,0.6s						
YAK				pmax	pmax		
	comp=N,38nm,1.0s						
YAK				pmax	pmax		
	comp=E,26nm,0.8s						
YAK				smax	smax		
	comp=N,279nm,4.9s						
YAK				smax	smax		
	comp=E,886nm,5.3s						
ENH	**Enshi**	**26.79**	**265**	*e*P	**P**	**05 00 53.6**	**-0.5**
ULN	**Ulaanbaatar**	**26.95**	**304**	*e*P	**P**	**05 00 54.5**	**-1.0**
	comp=E,3.2nm,0.9s						
ULN	**Ulaanbaatar**	**26.95**	**304**	*ce*P	**P**	**05 00 54.9**	**-0.6**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SEY	**Seymchan**	**26.96**	**12**	*ce*P	**P**	**05 00 56.1**	**+0.9**
BOD	**Bodaibo**	**27.30**	**328**	*e*P	**P**	**05 00 56.7**	**-1.6**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SONA1	**Songino Array**	**27.37**	**304**	*e*P	**P**	**05 00 58.0**	**-1.3**
SONM	**Songino Array**	**27.38**	**304**	P	**P**	**05 00 58.9**	**-0.4**
	comp=Z,4.3nm,0.6s,baz=108,slow=8.2,SNR=35						
SONM				PcP	**PcP**	**05 04 18.5**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=125,slow=2.6,SNR=12						
SONM				LR	LR	05 12 16.0	
	comp=Z,82nm,18.5s,baz=56,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.58**	**120**	T	T	05 30 57.9	
	baz=312,slow=75,SNR=1460						
H11N1	**WAKE ISLAND Hy**	**28.59**	**120**	T	T	05 30 58.5	
	baz=312,slow=75,SNR=1848						
H11N3	**WAKE ISLAND Hy**	**28.60**	**120**	T	T	05 30 57.0	
	baz=312,slow=75,SNR=1502						
H11S1	**WAKE ISLAND Hy**	**29.28**	**122**	T	T	05 31 50.1	
	baz=314,slow=75,SNR=1295						
H11S3	**WAKE ISLAND Hy**	**29.28**	**122**	T	T	05 31 47.6	
	baz=314,slow=75,SNR=1677						
H11S2	**WAKE ISLAND Hy**	**29.30**	**122**	T	T	05 31 51.3	
	baz=314,slow=75,SNR=1666						
TLY	**Talaya**	**29.97**	**311**	*e*P	**P**	**05 01 20.9**	**-1.3**
	comp=Z,3.1nm,0.6s						
TLY	**Talaya**	**29.97**	**311**	*e*P	**P**	**05 01 20.8**	**-1.3**
TLY				pmax	pmax		
	comp=Z,19nm,2.0s						
TLY				MLR	MLR		
	comp=Z,320nm,12.0s						
CD2	**Chengdu**	**31.14**	**270**	*e*P	**P**	**05 01 31.0**	**-1.8**
GTA	**Gaotai**	**32.07**	**287**	*e*P	**P**	**05 01 39.8**	**-1.2**
GTA				PcP	**PcP**	**05 04 31.1**	**+1.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL	**Bilibino**	**34.24**	**17**	*e*P	**P**	**05 01 59.7**	**+0.3**
	comp=Z,5.8nm,0.9s						
BILL	**Bilibino**	**34.24**	**17**	*i* P	**P**	**05 01 58.3**	**-1.1**
BILL				*i*		05 04 35.4	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMI	**Kunming**	**34.42**	**261**	P	**P**	**05 02 02.5**	**+0.8**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,100nm,4.8s						
NIKH	**Nikolski High**	**38.22**	**49**	*e*P	**P**	**05 02 35.0**	**+1.5**
	comp=Z,385nm,0.6s						
DGZ	**Jazzator, Alta**	**39.99**	**306**	*d i*P	**P**	**05 02 49.5**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WMQ	**Urumqi**	**40.39**	**297**	P	**P**	**05 02 53.3**	**+1.4**
WMQ				sP	sP	05 03 14.6	+11
WMQ				pmax	pmax		
	comp=Z,31nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,3.7s						
WMQ				LR	LR		
	comp=Z,82nm,16.3s						
WMQ				LR	LR		
	comp=Z,79nm,22.1s						
WMQ				LR	LR		
	comp=Z,100nm,22.9s						
CHTO	**Chiang Mai**	**40.76**	**255**	*e*P	**P**	**05 02 55.0**	**-0.1**
	comp=Z,2.4nm,0.5s						
CHTO	**Chiang Mai**	**40.76**	**255**	*e*P	**P**	**05 02 55.0**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**40.96**	**255**	*i* P	**P**	**05 02 58.5**	**+1.7**
CMAR	**Chiang Mai Arr**	**40.96**	**255**	P	**P**	**05 02 56.4**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=42,slow=7.6,SNR=4.4						
CMAR				LR	LR	05 21 18.7	
	comp=Z,34nm,19.3s,baz=310,slow=38						
ZAA0	**Zalesovo Array**	**41.56**	**312**	*e*P	**P**	**05 03 00.7**	**-0.6**
	comp=Z,12nm,1.2s						
ZALV	**Zalesovo Beam**	**41.56**	**312**	P	**P**	**05 03 00.6**	**-0.7**
	comp=Z,4.6nm,0.6s,baz=92,slow=6.2,SNR=22						
ZALV				PcP	**PcP**	**05 04 58.1**	**-0.1**
	comp=Z,3.9nm,0.5s,baz=104,slow=2.4,SNR=8.9						
ZALV				LR	LR	05 20 48.9	
	comp=Z,59nm,18.7s,baz=66,slow=37						
NVS	**Novosibirsk**	**42.49**	**314**	⇓*i*P	**P**	**05 03 09.0**	**+0.1**
NVS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.1s						
NRIK	**Noril'sk**	**43.10**	**335**	P	**P**	**05 03 13.1**	**-0.5**
	comp=E,3.3nm,0.5s,baz=118,slow=7.5,SNR=5.2						
MK01	**Makanchi Array**	**43.69**	**302**	*e*P	**P**	**05 03 18.1**	**-0.6**
MK31	**Makanchi Array**	**43.70**	**302**	*e*P	**P**	**05 03 18.6**	**-0.2**
MK31	**Makanchi Array**	**43.70**	**302**	*i* P	**P**	**05 03 17.9**	**-0.9**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	**Makanchi Array**	**43.70**	**302**	*i* P	**P**	**05 03 18.8**	**0.0**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	**Makanchi Array**	**43.70**	**302**	P	**P**	**05 03 18.5**	**-0.3**
	comp=Z,4.6nm,0.6s,baz=88,slow=9.9,SNR=71						
MKAR				PcP	**PcP**	**05 05 05.5**	**0.0**
	comp=Z,1.2nm,0.7s,baz=61,slow=5.8,SNR=3.5						
MKAR				LR	LR	05 21 28.7	
	comp=Z,51nm,21.4s,baz=48,slow=36						
RDOG	**Red Dog Mine**	**43.80**	**27**	*e*P	**P**	**05 03 21.5**	**+2.2**
	comp=Z,7.7nm,0.8s						
MAKZ	**Makanchi**	**43.91**	**302**	*e*P	**P**	**05 03 20.5**	**0.0**
	comp=Z,5.2nm,0.9s						
MAKZ	**Makanchi**	**43.91**	**302**	*e*P	**P**	**05 03 20.5**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURK	**Kurchatov**	**45.55**	**308**	*e*P	**P**	**05 03 32.8**	**-0.7**
KURK	**Kurchatov**	**45.55**	**308**	*ce*P	**P**	**05 03 33.0**	**-0.4**
KURK				pmax	pmax		
	comp=Z,23nm,0.8s						
KURBB	**Kurchatov Arra**	**45.62**	**308**	P	**P**	**05 03 33.3**	**-0.7**
	comp=Z,12nm,0.6s,baz=84,slow=8.2,SNR=91						
PDGK	**Podgornoye**	**46.33**	**298**	P	**P**	**05 03 39.2**	**-0.7**
PDGK				pmax	pmax		
	comp=Z,16nm,1.1s						
RAMN	**Ramite**	**46.47**	**274**	*e*P	**P**	**05 03 41.0**	**-0.4**
	comp=Z,29nm,0.8s						
JIRN	**Jiri**	**46.49**	**275**	*e*P	**P**	**05 03 41.6**	**0.0**
GUN	**Gumba**	**46.63**	**275**	*e*P	**P**	**05 03 42.4**	**-0.3**
	comp=Z,15nm,0.7s						
KKN	**Kakani**	**47.16**	**276**	*e*P	**P**	**05 03 46.5**	**-0.2**
KDAK	**Kodiak Island**	**47.50**	**42**	*ce*P	**P**	**05 03 50.2**	**+1.6**
DANN	**Dangsing**	**48.13**	**277**	*e*P	**P**	**05 03 54.2**	**-0.1**
	comp=Z,42nm,0.8s						
KOLN	**Koldanda**	**48.51**	**276**	*e*Pn	**P**	**05 03 56.4**	**-0.7**
NRN	**Naryn**	**49.33**	**296**	*e*P	**P**	**05 04 04.0**	**+0.6**
	comp=Z,3.8nm,1.0s						
NRN	**Naryn**	**49.33**	**296**	*e*P	**P**	**05 04 04.0**	**+0.6**
NRN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HNR	**Honiara**	**49.56**	**155**	LR	LR	05 23 20.9	
	comp=Z,39nm,21.3s,baz=349,slow=34						
IL1	**Eielson Array**	**49.83**	**32**	*e*P	**P**	**05 04 07.0**	**+0.5**
ILAR	**Eielson Array**	**49.83**	**32**	P	**P**	**05 04 07.2**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=264,slow=5.4,SNR=21						
ILAR				PcP	**PcP**	**05 05 26.8**	**0.0**
	comp=Z,0.7nm,0.6s,baz=266,slow=3.4,SNR=4.7						
KSH	**Kashi**	**49.94**	**294**	P	**P**	**05 04 12.3**	**+4.4**
KSH				sP	sP	05 04 33.8	+14
KSH				PP	**PP**	**05 06 08.1**	**+5.4**
KSH				pmax	pmax		
	comp=Z,370nm,4.9s						
OTUK	**Ortayu**	**50.03**	**306**	P	**P**	**05 04 07.3**	**-1.0**
OTUK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AAK	**Ala-Archa**	**50.05**	**298**	*e*P	**P**	**05 04 08.3**	**-0.4**
	comp=Z,7.1nm,1.3s						
AAK	**Ala-Archa**	**50.05**	**298**	*ce*P	**P**	**05 04 08.9**	**+0.2**
AAK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
AAK	**Ala-Archa**	**50.05**	**298**	P	**P**	**05 04 08.5**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=51,slow=4.5,SNR=9.2						
AAK				LR	LR	05 26 33.9	
	comp=Z,128nm,18.4s,baz=47,slow=38						
BVA0	**Borovoye Array**	**50.22**	**312**	P	**P**	**05 04 09.1**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BVAR	**Borovoye Array**	**50.22**	**312**	P	**P**	**05 04 09.2**	**-0.4**
	comp=Z,4.6nm,0.6s,baz=78,slow=7.4,SNR=23						
BVAR				PcP	**PcP**	**05 05 28.5**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=72,slow=4.8,SNR=7.1						
BRVK	**Borovoye**	**50.27**	**312**	*e*P	**P**	**05 04 09.2**	**-0.8**
BRVK	**Borovoye**	**50.27**	**312**	*ce*P	**P**	**05 04 09.9**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MNAS	**Manas**	**51.49**	**299**	*i* P	**P**	**05 04 19.4**	**-0.1**
MNAS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SFK	**Sufi-Kurgan**	**51.58**	**295**	*i* P	**P**	**05 04 20.0**	**-0.3**
SFK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EGAK	**Eagle**	**52.27**	**32**	*e*P	**P**	**05 04 25.4**	**+0.6**
KK31	**Karatay Array**	**52.69**	**300**	*e*P	**P**	**05 04 27.8**	**-0.5**
KK31	**Karatay Array**	**52.69**	**300**	*i* P	**P**	**05 04 27.6**	**-0.7**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KKAR	**Karatay Array**	**52.69**	**300**	*e*P	**P**	**05 04 28.0**	**-0.3**
KKAR	**Karatay Array**	**52.69**	**300**	*e*P	**P**	**05 04 28.0**	**-0.3**
NIL	**Nilore**	**54.13**	**288**	*e*P	**P**	**05 04 39.0**	**0.0**
NIL	**Nilore**	**54.13**	**288**	*e*P	**P**	**05 04 39.0**	**0.0**
GAR	**Garm**	**54.24**	**295**	*e*P	**P**	**05 04 39.4**	**-0.4**
	comp=Z,24nm,1.3s						
GAR	**Garm**	**54.24**	**295**	*e*P	**P**	**05 04 39.4**	**-0.4**
GAR				pmax	pmax		
	comp=Z,24nm,1.3s						
SVE	**Sverdlovsk**	**54.84**	**319**	*e*P	**P**	**05 04 43.9**	**+0.2**
SVE				pmax	pmax		
	comp=Z,11nm,0.9s						
CHGR	**Chuyangaron**	**55.21**	**295**	*e*P	**P**	**05 04 46.4**	**-0.4**
	comp=Z,66nm,1.3s						
ARU	**Arti**	**56.05**	**318**	*e*P	**P**	**05 04 51.7**	**-0.7**
	comp=Z,15nm,1.0s						
ARU	**Arti**	**56.05**	**318**	*c i*P	**P**	**05 04 52.0**	**-0.5**
ARU						05 05 46.9	
ARU						05 06 55.9	
ARU				S	**S**	**05 12 39.4**	**+0.4**
ARU				pmax	pmax		
	comp=Z,18nm,1.1s						
WRAB	**Tennant Creek**	**56.92**	**187**	*e*P	**P**	**05 04 58.8**	**-0.2**
	comp=Z,4.0nm,0.5s						
WRAB	**Tennant Creek**	**56.92**	**187**	*e*P	**P**	**05 04 58.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WB2	**Warramunga Arr**	**56.93**	**187**	*e*P	**P**	**05 04 58.3**	**-0.7**
WRA	**Warramunga Arr**	**56.93**	**187**	P	**P**	**05 04 59.0**	**-0.1**
	comp=Z,6.7nm,0.6s,baz=4.5,slow=7.3,SNR=121						
AB31	**Akbulak array**	**57.57**	**310**	*e*P	**P**	**05 05 02.8**	**-0.5**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ABKAR	**Akbulak array**	**57.57**	**310**	*e*P	**P**	**05 05 02.8**	**-0.6**
AKTO	**Aktyubinsk**	**58.32**	**312**	P	**P**	**05 05 08.3**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=72,slow=11,SNR=8.0						
AS01	**Alice Springs**	**60.65**	**187**	*e*P	**P**	**05 05 24.8**	**-0.1**
AS31	**Alice Springs**	**60.66**	**187**	*e*P	**P**	**05 05 25.4**	**+0.5**
	comp=Z,5.4nm,1.5s						
ASAR	**Alice Springs**	**60.66**	**187**	P	**P**	**05 05 25.2**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=18,slow=8.2,SNR=31						
HSPB	**Hornsund (broa**	**61.39**	**348**	*e*P	**P**	**05 05 30.3**	**+1.0**
TMCR	**Tamitsa**	**62.54**	**331**	*e*P	**P**	**05 05 37.7**	**+0.6**
TMCR				pmax	pmax		
	comp=Z,11nm,1.0s						
RES	**Resolute Bay**	**62.79**	**14**	*e*P	**P**	**05 05 39.2**	**+0.6**
	comp=Z,3.6nm,0.6s						
RES	**Resolute Bay**	**62.79**	**14**	*e*P	**P**	**05 05 39.3**	**+0.6**
RES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GEYT	**Alibeck**	**63.40**	**299**	P	**P**	**05 05 43.2**	**-0.1**
	comp=Z,4.2nm,0.6s,baz=56,slow=3.7,SNR=9.7						
GEYT				LR	LR	05 35 05.1	
	comp=Z,38nm,18.6s,baz=325,slow=38						
GYA0B	**ALIBECK ARRAY**	**63.40**	**299**	*e*P	**P**	**05 05 43.4**	**0.0**
	comp=Z,7.7nm,1.0s						
KLMR	**Klimovskoe**	**63.52**	**328**	*e*P	**P**	**05 05 41.3**	**-2.4**
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KLMR	**Klimovskoe**	**63.52**	**328**	*e*P	**P**	**05 05 41.4**	**-2.3**
KLMR				AMP		05 05 44.0	
	comp=Z,6.0nm,0.7s						
DZM	**Mont Dzumac**	**63.53**	**153**	LR	LR	05 31 15.7	
	comp=Z,46nm,20.3s,baz=36,slow=34						
HAMF	**Hammerfest**	**63.70**	**341**	*e*P	**P**	**05 05 44.0**	**-0.8**
ARCES	**ARCESS Array B**	**63.86**	**339**	*e*P	**P**	**05 05 45.5**	**-0.4**
ARCES	**ARCESS Array B**	**63.86**	**339**	P	**P**	**05 05 46.0**	**+0.1**
	comp=Z,3.8nm,0.5s,baz=60,slow=7.9,SNR=28						
ARE0	**ARCESS Array S**	**63.86**	**339**	*e*P	**P**	**05 05 45.3**	**-0.6**
YKA	**Yellowknife Ar**	**64.13**	**30**	P	**P**	**05 05 48.1**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=301,slow=6.7,SNR=17						
KTK1	**Kautokeino**	**64.83**	**339**	*e*P	**P**	**05 05 52.4**	**+0.2**
TRO	**Tromso**	**65.60**	**341**	*e*P	**P**	**05 05 57.8**	**+0.7**
DAG	**Danmarks Havn**	**65.79**	**355**	⇑*i*P	**P**	**05 05 58.4**	**+0.1**
	comp=Z,10nm,0.7s						
DAG	**Danmarks Havn**	**65.79**	**355**	⇑*i*P	**P**	**05 05 58.4**	**+0.1**
DAG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VRH	**Novokhopyorsk**	**67.26**	**318**	*e*P	**P**	**05 06 05.8**	**-2.3**
VRH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STEI	**Steigen**	**67.75**	**341**	*e*P	**P**	**05 06 10.7**	**-0.1**
OBN	**Obninsk**	**67.82**	**323**	*i* P	**P**	**05 06 09.5**	**-2.0**
OBN				*i*		05 06 35.3	
OBN				*i*		05 08 39.2	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LPSR	**Galich'ya Gora**	**68.00**	**320**	*e*P	**P**	**05 06 11.8**	**-1.0**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LOF	**Lofoten**	**68.05**	**341**	*e*P	**P**	**05 06 11.7**	**-1.1**
STKA	**Stephens Creek**	**68.50**	**179**	P	**P**	**05 06 17.3**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=321,slow=12,SNR=5.1						
FIA1	**FINESS Array S**	**68.62**	**332**	*e*P	**P**	**05 06 16.1**	**-0.4**
FINES	**FINESS Array B**	**68.62**	**332**	*i* P	**P**	**05 06 16.3**	**-0.1**
FINES				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FINES	**FINESS Array B**	**68.62**	**332**	P	**P**	**05 06 16.1**	**-0.3**
	comp=Z,10nm,0.7s,baz=63,slow=8.8,SNR=35						
VSR	**Storozhevoye**	**68.62**	**319**	*e*P	**P**	**05 06 15.2**	**-1.5**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MOR8	**Moi Rana**	**69.23**	**340**	*e*P	**P**	**05 06 17.8**	**-2.5**
VSU	**Vasula**	**70.23**	**329**	*ce*P	**P**	**05 06 27.5**	**+1.0**
VSU				pmax	pmax		
	comp=Z,73nm,2.5s						
VSU	**Vasula**	**70.23**	**329**	*e*P	**P**	**05 06 26.4**	**0.0**
VSU				IAmb	IAmb	05 06 27.7	
	comp=Z,23nm,0.9s						
KBZ	**Khabaz**	**70.53**	**310**	P	**P**	**05 06 28.9**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=75,slow=9.3,SNR=6.9						
KIV	**Kislovodsk**	**70.54**	**311**	*e*P	**P**	**05 06 28.4**	**-0.4**
	comp=Z,19nm,1.0s						
KIV	**Kislovodsk**	**70.54**	**311**	⇑*i*P	**P**	**05 06 29.5**	**+0.7**

KIV	Kislovodsk	70.54	311	eP	P	05 06 28.4	-0.4
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
SUMG	Summit	70.74	360	eP	P	05 06 29.9	0.0
	comp=Z,9.3nm,0.9s						
SUMG	Summit	70.74	360	iP	P	05 06 30.9	+1.0
	comp=Z,18nm,0.8s						
SUMG	Summit	70.74	360	iP	P	05 06 30.9	+1.0
SUMG				pmax	pmax		
	comp=Z,18nm,0.8s						
NSS	Namsos	71.15	339	eP	P	05 06 32.1	+0.1
IDID	Didziasalis	72.23	327	eP	P	05 06 38.5	-0.1
IDID				IAmb	IAmb	05 06 40.0	
	comp=Z,4.2nm,0.6s						
ISAL	Salakas	72.34	327	eP	P	05 06 39.3	+0.1
ISAL				IAmb	IAmb	05 06 40.1	
	comp=Z,8.8nm,0.7s						
BMO	Blue Mountains	72.36	47	eP	P	05 06 40.3	+0.5
BMO	Blue Mountains	72.36	47	eP	P	05 06 40.3	+0.5
IIGN	Ignalina	72.44	327	eP	P	05 06 39.8	0.0
IIGN				IAmb	IAmb	05 06 41.3	
	comp=Z,6.7nm,0.9s						
NC405	NORSAR Array S	73.82	337	eP	P	05 06 47.7	-0.3
DOMB	Dombas	73.91	339	eP	P	05 06 48.3	-0.1
HFS	Hagfors	73.92	335	P	P	05 06 48.4	-0.2
	comp=Z,1.7nm,0.4s,baz=63,slow=6.8,SNR=22						
NC204	NORSAR Array S	73.99	337	eP	P	05 06 49.3	+0.3
NB201	NORSAR Array S	74.00	337	eP	P	05 06 48.1	-1.0
AKASG	Malin Array Be	74.02	322	iP	P	05 06 48.7	-0.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	74.02	322	P	P	05 06 48.8	-0.5
	comp=Z,4.4nm,0.6s,baz=48,slow=6.1,SNR=22						
AKBB	Malin Array Si	74.02	322	eP	P	05 06 49.0	-0.2
	comp=Z,7.5nm,0.8s						
KIEV	Kiev	74.03	322	eP	P	05 06 48.8	-0.4
	comp=Z,7.8nm,0.9s						
KIEV	Kiev	74.03	322	⇑iP	P	05 06 48.9	-0.4
KIEV	Kiev	74.03	322	iP	P	05 06 48.9	-0.4
KIEV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NB2	NORSAR Subarra	74.03	337	P	P	05 06 49.1	-0.1
	comp=Z,4.2nm,0.6s,baz=40,slow=6.2						
NOA	NORSAR Array B	74.03	337	P	P	05 06 49.1	-0.1
	comp=Z,3.2nm,0.6s,baz=39,slow=5.9,SNR=21						
NOA				LR	LR	05 42 22.1	
	comp=Z,56nm,18.2s,baz=10.0,slow=38						
FFC	Flin Flon	74.04	32	eP	P	05 06 49.7	+0.3
	comp=Z,3.3nm,0.8s						
FFC	Flin Flon	74.04	32	eP	P	05 06 49.7	+0.3
FFC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AK11	Malin Array Si	74.06	322	eP	P	05 06 48.6	-0.9
NC602	NORSAR Array S	74.17	337	eP	P	05 06 49.4	-0.5
FCC	Fort Churchill	74.29	26	eP	P	05 06 51.2	+0.5
	comp=Z,18nm,1.8s						
FCC	Fort Churchill	74.29	26	eP	P	05 06 51.2	+0.5
FCC				pmax	pmax		
	comp=Z,18nm,1.8s						
AKN	Aaknes	74.39	339	eP	P	05 06 51.6	+0.3
LRM	Limekiln Ridge	74.56	44	eP	P	05 06 50.7	-2.2
EGMT	Eagleton	74.67	41	eP	P	05 06 53.5	+0.3
	comp=Z,3.6nm,0.5s						
BOZ	Bozeman (W)	75.16	44	eP	P	05 06 56.9	+0.7
	comp=Z,2.1nm,0.7s						
BOZ	Bozeman (W)	75.16	44	eP	P	05 06 56.9	+0.7
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KVN	Kaiserville	75.22	52	eP	P	05 06 57.4	+0.7
	comp=Z,18nm,1.9s						
KVN	Kaiserville	75.22	52	eP	P	05 06 57.4	+0.7
KVN				pmax	pmax		
	comp=Z,18nm,1.9s						
NVAR	Mina Array Bea	75.45	53	P	P	05 07 00.0	+1.9
	comp=Z,2.0nm,0.8s,baz=288,slow=7.5,SNR=6.1						
KONO	Kongsberg	75.62	337	eP	P	05 06 58.4	0.0
SUE	Sulen	75.93	340	eP	P	05 07 00.0	0.0
BER	Bergen	76.32	339	eP	P	05 07 02.5	+0.2
H17A	Grant Village	76.49	44	eP	P	05 07 04.8	+0.8
	comp=Z,5.5nm,1.0s						
BLS5	Blasjo	76.77	338	eP	P	05 07 05.2	+0.2
R11A	Troy Canyon, C	77.22	52	eP	P	05 07 08.4	+0.4
	comp=Z,4.4nm,1.3s						
BUR08	Bucovina Ar. S	78.01	321	eP	P	05 07 12.2	-0.1
BUR04	Bucovina Ar. S	78.03	321	eP	P	05 07 12.2	-0.1
BURAR	Bucovina Array	78.03	321	⇑iP	P	05 07 12.6	+0.2
BURAR	Bucovina Array	78.03	321	P	P	05 07 12.5	+0.2
BIZ	Bicaz	78.03	320	⇑iP	P	05 07 12.5	+0.3
TESR	Tescani	78.04	320	⇑iP	P	05 07 11.3	-1.0
MWC	Mount Wilson	78.09	56	eP	P	05 07 12.0	-1.0
	comp=Z,30nm,0.8s						
MWC	Mount Wilson	78.09	56	eP	P	05 07 12.0	-1.0
MWC				pmax	pmax		
	comp=Z,30nm,0.8s						
PDAR	Pinedale Array	78.09	45	P	P	05 07 14.2	+1.3
	comp=Z,0.9nm,0.9s,baz=242,slow=3.2,SNR=7.0						
PLOR	Plostina	78.47	319	⇑iP	P	05 07 14.6	-0.2
BR131	Keskin Array S	78.49	311	eP	P	05 07 14.6	-0.5
BRTR	Keskin Array B	78.49	311	P	P	05 07 15.2	+0.1
	comp=Z,2.1nm,0.8s,baz=114,slow=4.5,SNR=12						
OJC	Ojcow	78.79	326	eP	P	05 07 16.0	-0.4
	comp=Z,10nm,1.1s						
OJC	Ojcow	78.79	326	eP	P	05 07 16.0	-0.4
OJC				pmax	pmax		
	comp=Z,11nm,1.1s						
ARCR	ARCALIA	78.82	321	⇑iP	P	05 07 17.4	+0.8
TRPA	Tarpa	78.99	323	⇑iP	P	05 07 17.9	+0.5
ICOR	Ion Corvin	79.01	317	⇑iP	P	05 07 17.4	-0.3
P17A	Butcher Ranch,	79.49	48	eP	P	05 07 21.2	+0.5
	comp=Z,13nm,1.6s						
VOIR		79.58	320	⇑iP	P	05 07 21.6	+0.7
DRGR		79.83	322	⇑iP	P	05 07 22.2	0.0
DRGR		79.83	322	P	P	05 07 22.1	-0.1
ULM	Lac du Bonnet	79.85	33	P	P	05 07 22.6	+0.5
	comp=Z,1.9nm,0.8s,baz=298,slow=4.5,SNR=3.5						
ARR	Arges	79.85	320	⇑iP	P	05 07 23.4	+1.1
SRU	San Rafael Swe	79.85	48	eP	P	05 07 22.9	+0.4
	comp=Z,3.4nm,0.8s						
SRU	San Rafael Swe	79.85	48	eP	P	05 07 23.0	+0.4
SRU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MORC	Moravsky Berou	80.11	327	eP	P	05 07 23.5	-0.1
	comp=Z,5.8nm,1.2s						
MORC	Moravsky Berou	80.11	327	⇑iP	P	05 07 23.9	+0.3
MORC	Moravsky Berou	80.11	327	eP	P	05 07 23.5	-0.1
MORC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RAYN	Ar Rayn	80.18	292	eP	P	05 07 23.8	-0.7
	comp=Z,2.4nm,0.5s						
RAYN	Ar Rayn	80.18	292	eP	P	05 07 23.8	-0.7
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DPC	Dobruska-Polom	80.22	328	eP	P	05 07 25.1	+0.9
HUMR	Humele	80.24	319	⇑iP	P	05 07 22.8	-1.5
UPC	Upice	80.24	328	eP	P	05 07 24.8	+0.6
UPC	Upice	80.24	328	eP	P	05 07 24.8	+0.6
VYHS	Vyhne	80.47	325	eP	P	05 07 26.0	+0.5
VYHS	Vyhne	80.47	325	eP	P	05 07 26.0	+0.5
BRG	Berggiesshubel	80.83	329	eP	P	05 07 27.5	+0.1
	comp=Z,7.3nm,1.2s						
BRG	Berggiesshubel	80.83	329	eP	P	05 07 27.5	+0.1
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VRAC	Vranov	80.88	327	⇑iP	P	05 07 27.8	+0.1
VRAC	Vranov	80.88	327	P	P	05 07 28.4	+0.7
	comp=Z,3.2nm,1.0s,baz=52,slow=7.3,SNR=5.0						
CLL	Collm	80.88	330	eP	P	05 07 27.8	+0.1
	comp=Z,6.6nm,0.9s						
CLL	Collm	80.88	330	iP	P	05 07 27.1	-0.5
	comp=Z,7.0nm,0.8s						
CLL				ePP	PP	05 10 31.0	-0.5
CLL	Collm	80.88	330	iP	P	05 07 27.1	-0.5
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GOPC	GO Pecny, Ondr	81.20	328	eP	P	05 07 30.3	+0.9
GOPC	GO Pecny, Ondr	81.20	328	eP	P	05 07 30.3	+0.9
PV14	Lion Creek, Pa	81.23	48	eP	P	05 07 30.3	+0.2
	comp=Z,8.5nm,1.1s						
PRU	Pruhonice	81.25	328	eP	P	05 07 30.4	+0.7
PRU	Pruhonice	81.25	328	eP	P	05 07 30.4	+0.7
PV17	East Wray Mesa	81.32	48	eP	P	05 07 31.0	+0.4
PV05	Paradox Valley	81.37	49	eP	P	05 07 31.4	+0.6
	comp=Z,26nm,1.5s						
PV01	Paradox Valley	81.65	48	eP	P	05 07 32.7	+0.4
	comp=Z,5.2nm,1.1s						
CONA	Conrad Observa	82.23	326	eP	P	05 07 35.6	+0.7
	comp=Z,1.5nm,0.6s						
KHC	Kasperske Hory	82.31	328	eP	P	05 07 35.9	+0.6
KHC	Kasperske Hory	82.31	328	eP	P	05 07 35.9	+0.6
GERES	GERESS Array B	82.48	328	P	P	05 07 36.2	-0.1
	comp=Z,1.9nm,0.4s,baz=38,slow=6.2,SNR=29						
GERES				LR	LR	05 45 37.3	
	comp=Z,30nm,18.4s,baz=344,slow=37						
GEA0	GERESS Array S	82.48	328	eP	P	05 07 35.9	-0.4
VTS	Vitosha	82.51	319	⇑iP	P	05 07 37.1	+0.5
GRFO	Grafenberg	82.85	330	eP	P	05 07 37.2	-0.9
	comp=Z,5.9nm,0.7s						
GRFO	Grafenberg	82.85	330	eP	P	05 07 37.2	-0.9
GRFO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MOA	Molln	83.00	327	ePcP	P	05 07 39.6	+0.7
	comp=Z,5.0nm,1.7s						
EKA	Eskdalemuir Ar	83.01	340	P	P	05 07 39.2	+0.5
	comp=Z,1.1nm,0.5s,baz=37,slow=5.1,SNR=8.3						
SOKA	Soboth	83.54	326	ePcP	P	05 07 42.1	+0.3
	comp=Z,2.2nm,0.5s						
SDCO	Great Sand Dun	83.72	47	eP	P	05 07 43.0	-0.2
EIL	Elat	83.96	303	P	P	05 07 44.4	+0.3
	comp=Z,2.8nm,0.7s,baz=33,slow=7.2,SNR=3.8						
KBA	Koelnbreinsper	83.99	327	eP	P	05 07 44.2	0.0
	comp=Z,4.1nm,0.9s						
WATA	Walderalm	84.55	328	ePcP	P	05 07 48.4	+1.4
	comp=Z,2.1nm,0.4s						
ABTA	Abfaltersbach	84.61	327	eP	P	05 07 45.7	-1.5
	comp=Z,9.1nm,1.7s						
RETA	Reutte	84.77	329	ePcP	P	05 07 48.4	+0.3
	comp=Z,9.7nm,1.5s						
ANMO	Albuquerque	85.03	49	eP	P	05 07 49.9	+0.2
	comp=Z,6.9nm,1.4s						
ANMO	Albuquerque	85.03	49	ceP	P	05 07 50.9	+1.2
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.7s						
APE	Apeiranthos	85.03	313	⇑iP	P	05 07 48.3	-1.2
BFO	Black Forest	85.09	330	ceP	P	05 07 50.1	+0.5
FETA	Feichten	85.16	328	ePcP	P	05 07 49.8	-0.3
	comp=Z,1.9nm,0.6s						
DAVA	Damuels	85.30	329	ePcP	P	05 07 50.6	-0.2
	comp=Z,9.1nm,1.0s						
SCHQ	Schefferville	85.54	16	P	P	05 07 52.4	+0.7
	comp=Z,2.5nm,0.7s,baz=3.3,slow=4.9,SNR=4.3						
ECH	Echery	85.64	331	eP	P	05 07 52.3	0.0
	comp=Z,9.7nm,1.1s						
ECH	Echery	85.64	331	eP	P	05 07 52.3	0.0
ECH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
IDI	Anoyia	86.64	312	⇑iP	P	05 07 56.6	-0.9
IDI	Anoyia	86.64	312	P	P	05 07 56.6	-0.9
	comp=Z,5.1nm,0.5s,baz=26,slow=10,SNR=9.5						
TX31	Lajitas Ar. Si	90.58	52	eP	P	05 08 16.6	+0.3
TXAR	Lajitas Array	90.58	52	P	P	05 08 17.8	+1.5
	comp=Z,0.9nm,0.6s,baz=299,slow=2.6,SNR=17						
SDV	Santo Domingo	125.71	39	ePKPdf	PKPdf	05 14 16.0	-0.1
LPAZ	La Paz	147.18	59	PKPbc	PKPbc	05 14 58.9	+0.8
	comp=Z,4.5nm,0.7s,baz=10,slow=6.9,SNR=13						
LVC	Limon Verde	150.69	69	ePKPbc	PKPbc	05 15 06.8	+0.2
LVC	Limon Verde	150.69	69	ePKIKP	PKPbc	05 15 06.8	+0.2
LCO	Las Campanas	152.55	82	ePKPbc	PKPbc	05 15 11.1	+0.5
LCO	Las Campanas	152.55	82	ePKIKP	PKPbc	05 15 11.1	+0.5

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*ISCJB **24** 05:07:29.5±0.2, 36°.47N±0°.02×70°.28E±0°.03, h223km±3km, mb4.0/38, Error ellipse: s-maj=4.2km s-min=2.9km az=160.7*

*NNC **24** 05:07:29.3±2.4, 36°.96N×69°.62E, h0km, mb4.7, mpv4.3, Error ellipse: s-maj=19.9km s-min=14.1km az=172.0*

*MOS **24** 05:07:30.2±0.9, 36°.46N×70°.31E, h232km, mb4.1/33, Error ellipse: s-maj=7.1km s-min=4.9km az=85.1*

*NEIC **24** 05:07:30.5±0.4, 36°.48N×70°.29E, h221km±4km, mb4.4/13, Error ellipse: s-maj=5.4km s-min=5.0km az=125.0*

*IDC **24** 05:07:31.9±0.9, 36°.45N×70°.26E, h236km±8km, mb3.6/24, mb1 3.7/29, mb1mx3.5/60, mbtmp4.2/29, Error ellipse: s-maj=10.9km s-min=8.5km az=174.0*

ISC 24 05:07:30.7±0.4, **36°.45N**±0°.04×**70°.20E**±0°.04, **h222**km±4km, **h222km:pP-P, n176, σ1s78**/209, **mb4.1**/40, **21C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.13	207	ePn	Pn	05 08 12.3	-0.2
KBL				eS	S	05 08 43.9	-1.0
KBL	Kabul	2.13	207	ePN	Pn	05 08 12.3	-0.2
KBL				eS	S	05 08 43.9	-1.0
CHGR	Chuyangaron	2.35	340	ePn	Pn	05 08 13.7	-0.8
CHGR				eS	S	05 08 45.3	-3.4
GAR	Garm	2.54	2	ePn	Pn	05 08 16.0	-0.5
GAR				eS	S	05 08 49.2	-3.3
GAR	Garm	2.54	2	ePN	Pn	05 08 16.0	-0.5
CEP	Cherat	2.97	151	P	Pn	05 08 21.9	+0.5
CEP				S	S	05 09 01.0	0.0
BTK	Batken	3.63	7	ePn	Pn	05 08 31.8	+2.9
BTK				eS	S	05 09 13.8	-0.8
BTK	Batken	3.63	7	PN	Pn	05 08 31.8	+2.9
BTK				S	S	05 09 13.8	-0.8
CHCP	Chirah Chowk	3.75	137	⇓P	Pn	05 08 31.1	+0.7
NIL	Nilore	3.75	137	ePn	Pn	05 08 31.2	+0.8
NIL				eSn	S	05 09 14.8	-2.4
NIL	Nilore	3.75	137	ePN	Pn	05 08 31.2	+0.8
NIL				e		05 09 14.8	
THW	Thamme Wali	3.87	160	⇓P	Pn	05 08 31.8	0.0
SFK	Sufi-Kurgan	4.40	35	⇓P	Pn	05 08 37.8	-0.6
	18nm,0.3s						
SFK				⇑S	S	05 09 28.9	-2.8
	188nm,0.5s						
SFK	Sufi-Kurgan	4.40	35	PN	Pn	05 08 37.8	-0.6
SFK				S	S	05 09 28.9	-2.8
SARP	Sargodha	4.96	155	P	Pn	05 08 44.7	-0.5
ARSB	Arslanbob	5.32	23	ePn	Pn	05 08 48.8	-1.0
ARSB				eS	S	05 09 49.8	-2.6
KSH	Kashi	5.49	54	P	Pn	05 08 46.6	-5.3
KSH				S	S	05 09 39.0	-17
KSH				smax	smax		
	comp=N,190nm,0.4s						
KSH				smax	smax		
	comp=E,200nm,0.4s						
AML	Almayashu	6.28	24	P	Pn	05 09 01.4	-0.8
	SNR=106						
MNAS	Manas	6.28	16	⇑P	Pn	05 09 01.0	-1.0
	26nm,0.6s						
MNAS				⇑S	S	05 10 10.0	-4.5
	104nm,0.6s						
MNAS	Manas	6.28	16	PN	Pn	05 09 00.9	-1.0
DHRM	DHARAMSHALA	6.56	128	eP	Pn	05 09 04.9	-0.8
DHRM				eS	S	05 10 17.6	-3.5
DHRM				IAML		05 10 20.4	
	comp=N,388nm,0.4s						
DHRM				IAML		05 10 20.4	
	comp=E,760nm,0.8s						
KK31	Karatay Array	6.64	2	ePn	Pn	05 09 05.4	-1.1
KK31	Karatay Array	6.64	2	⇑P	Pn	05 09 02.9	-3.5
	comp=E,15nm,0.6s,baz=188,slow=13,SNR=232						
KK31				⇑S	S	05 10 15.0	-7.8
	comp=E,76nm,0.6s,baz=188,slow=23						
KK31	Karatay Array	6.64	2	PN	Pn	05 09 05.0	-1.4
KKAR	Karatay Array	6.64	2	ePn	Pn	05 09 05.4	-1.0
KKAR				eS	S	05 10 18.5	-4.2
KKAR	Karatay Array	6.64	2	ePN	Pn	05 09 05.4	-1.0
UCH	Uchtor	6.66	29	P	Pn	05 09 06.5	-0.6
	SNR=41						
NRN	Naryn	6.72	40	ePn	Pn	05 09 05.7	-2.0
NRN	Naryn	6.72	40	ePN	Pn	05 09 05.7	-2.0
EKS2	Erkin-Say	6.79	23	P	Pn	05 09 08.0	-0.4
	SNR=37						
KZA	Kyzart	6.84	33	P	Pn	05 09 08.5	-0.9
	SNR=10						
AAK	Ala-Archa	7.01	27	P	Pn	05 09 10.8	-0.4
	SNR=29						
AAK	Ala-Archa	7.01	27	ePn	Pn	05 09 10.7	-0.5
AAK	Ala-Archa	7.01	27	⇑P	Pn	05 09 10.6	-0.6
	comp=E,19nm,0.6s						
AAK				S	S	05 10 28.3	-3.1
	comp=E,59nm,0.7s						
AAK	Ala-Archa	7.01	27	PN	Pn	05 09 10.6	-0.6
AAK				S	S	05 10 28.3	-3.1
AAK	Ala-Archa	7.01	27	P	Pn	05 09 10.9	-0.4
	comp=E,6.0nm,0.3s,baz=195,slow=5.8,SNR=82						
AAK				S	S	05 10 27.7	-3.7
	comp=E,4.7nm,0.3s,baz=342,slow=23,SNR=5.6						
KBK	Karagaybulak	7.20	29	P	Pn	05 09 13.3	-0.3
	SNR=18						
FRU1	Bishkek	7.21	27	ePn	Pn	05 09 13.5	-0.2
FRU1				eS	S	05 10 22.9	-13
FRU1	Bishkek	7.21	27	ePN	Pn	05 09 13.5	-0.2
CHMS	Chumysh	7.42	27	P	Pn	05 09 16.6	+0.3
	SNR=6.2						
ULHL	Ulahol	7.44	37	P	Pn	05 09 16.2	-0.6
	SNR=27						
USP	Ospenovka	7.56	25	P	Pn	05 09 18.0	-0.2
	SNR=27						
TKM2	Tokmak 2	7.68	31	P	Pn	05 09 19.4	-0.5
	SNR=7.3						
TKM2	Tokmak 2	7.68	31	P	Pn	05 09 18.9	-1.0
	comp=E,19nm,0.9s						
TKM2				⇑S	S	05 10 45.4	-1.8
	comp=E,31nm,0.9s						
TKM2	Tokmak 2	7.68	31	PN	Pn	05 09 18.9	-1.0
TKM2				S	S	05 10 45.4	-1.8
SMLA	Simla	7.86	131	eP	Pn	05 09 21.4	-0.7
SMLA				eS	S	05 10 46.5	-4.9
SMLA				IAML		05 10 49.2	
	comp=N,106nm,0.5s						
SMLA				IAML		05 10 49.9	
	comp=E,254nm,0.1s						
MDOK	Medeo	8.52	36	P	Pn	05 09 30.3	-0.4
	comp=E,7.0nm,0.6s						
MDOK				S	S	05 11 09.3	+2.3
	comp=E,8.9nm,0.6s						
PRZ	Przheval'sk	8.74	44	ePn	Pn	05 09 32.7	-0.8
PRZ	Przheval'sk	8.74	44	ePN	Pn	05 09 32.7	-0.8
DDI	Dehra Dun	8.97	131	eP	Pn	05 09 36.1	-0.4
DDI				eS	S	05 11 12.8	-4.8
DDI				IAML		05 11 16.0	
	comp=E,133nm,0.2s						
DDI				IAML		05 11 16.7	
	comp=N,138nm,0.3s						
GEYT	Alibeck	9.76	282	P	Pn	05 09 44.2	-2.3
	comp=N,4.4nm,0.3s,baz=106,slow=11,SNR=58						
GYA0B	ALIBECK ARRAY	9.76	282	ePn	Pn	05 09 44.5	-2.0
PDGK	Podgornoye	9.90	43	⇑P	P	05 09 51.4	-4.0
	comp=N,3.3nm,0.7s						
PDGK				⇓S	S	05 11 46.8	+7.4
	comp=N,28nm,1.3s						
PDGK	Podgornoye	9.90	43	P	P	05 09 51.4	-4.0
BHJ	Bhuj	13.16	182	eP	Pn	05 10 30.7	+1.2
MAKZ	Makanchi	13.57	37	ePn	Pn	05 10 33.6	-0.8
MAKZ	Makanchi	13.57	37	eP	Pn	05 10 33.6	-0.8
PYUN	Piuthan	13.64	124	eP	Pn	05 10 33.7	-2.0
	comp=N,73nm,0.3s						
MK01	Makanchi Array	13.70	37	ePn	Pn	05 10 34.6	-1.3
MK31	Makanchi Array	13.71	37	ePn	Pn	05 10 34.9	-1.2
MK31	Makanchi Array	13.71	37	eP	Pn	05 10 34.9	-1.2
MKAR	Makanchi Array	13.71	37	ePn	Pn	05 10 34.9	-1.2
MKAR	Makanchi Array	13.71	37	P	Pn	05 10 35.3	-0.8
	comp=N,0.6nm,0.3s,baz=215,slow=10,SNR=24						
DANN	Dangsing	14.01	121	eP	Pn	05 10 38.8	-1.4
	comp=N,82nm,0.3s						
KOLN	Koldanda	14.27	124	eP	Pn	05 10 42.0	-1.3
	comp=N,41nm,0.4s						
BHPL	Bhopal	14.57	153	eP	Pn	05 10 47.2	+0.3
BHPL				IAmb	IAmb	05 10 49.8	
	comp=Z,18nm,1.0s						
AB31	Akbulak array	14.82	333	⇑P	Pn	05 10 49.6	0.0
	comp=Z,25nm,0.8s,baz=151,slow=12,SNR=229						
AB31				⇓S	S	05 13 29.4	-4.0
	comp=Z,3.1nm,0.6s,baz=146,slow=21,SNR=3.7						
AB31	Akbulak array	14.82	333	P	Pn	05 10 49.6	0.0
AB31				S	S	05 13 29.4	-4.0
ABKAR	Akbulak array	14.82	333	ePn	Pn	05 10 48.1	-1.5
WMQ	Urumqi	15.25	56	eP	P	05 10 55.3	+0.4
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.7s						
KURBB	Kurchatov Arra	15.38	20	P	P	05 10 54.7	-1.4
	comp=Z,0.2nm,0.3s,baz=210,slow=11,SNR=21						
DMN	Daman	15.40	121	eP	P	05 10 56.2	-0.7
	comp=Z,47nm,0.4s						
KKN	Kakani	15.41	120	eP	P	05 10 56.0	-0.9
	comp=Z,62nm,0.4s						
KURK	Kurchatov	15.49	20	eP	P	05 10 56.1	-1.3
	comp=Z,4.9nm,1.0s						
KURK	Kurchatov	15.49	20	ceP	P	05 10 56.7	-0.6
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PKIN	Phulchoki	15.62	120	eP	P	05 10 58.6	-0.7
	comp=Z,57nm,0.4s						
PKI	Pulchoki	15.63	120	eP	P	05 10 58.8	-0.7
	comp=Z,53nm,0.4s						
GUN	Gumba	15.76	118	eP	P	05 11 00.3	-0.6
	comp=Z,75nm,0.6s						
JIRN	Jiri	16.13	118	eP	Pn	05 11 05.6	-0.3
	comp=Z,110nm,0.3s						
AKTO	Aktyubinsk	16.51	332	⇑P	Pn	05 11 11.2	+1.4
	comp=Z,20nm,0.7s						
AKTO				⇑S	S	05 14 11.4	+1.6
	comp=Z,16nm,1.1s						
AKTO	Aktyubinsk	16.51	332	P	Pn	05 11 11.2	+1.4
AKTO				S	S	05 14 11.4	+1.6
AKTO	Aktyubinsk	16.51	332	P	P	05 11 09.2	+0.7
	comp=Z,5.5nm,0.3s,baz=146,slow=10,SNR=51						
WSAR	Wadi Sarin	16.54	220	P	Pn	05 11 10.6	+0.1
	comp=Z,1.1nm,0.3s,baz=67,slow=6.8,SNR=10						
BRVK	Borovoye	16.60	0	eP	P	05 11 09.8	+0.3
	comp=Z,23nm,0.6s						
BRVK	Borovoye	16.60	0	ceP	Pn	05 11 10.2	-0.7
BRVK				pmax	pmax		
	comp=Z,26nm,0.8s						
RAMN	Ramite	16.85	120	eP	Pn	05 11 13.6	-0.7
	comp=Z,83nm,0.7s						
NGP	Nagpur	17.09	151	eP	P	05 11 16.1	+0.9
NGP				IAmb	IAmb	05 11 17.7	
	comp=Z,9.3nm,0.7s						
LKRN	Lenkeran, Azer	17.13	284	P	Pn	05 11 18.4	+1.2
ODAN	Odare	17.46	118	eP	Pn	05 11 22.0	+0.5
	comp=Z,93nm,0.7s						
DGZ	Jazzator, Alta	18.21	38	iP	P	05 11 27.4	+0.1
BOK	Bokaro	18.49	129	eP	P	05 11 31.0	+0.5
BOK				IAmb	IAmb	05 11 32.5	
	comp=Z,7.3nm,0.5s						
SEKA	Sheki	18.52	292	P	P	05 11 32.1	+1.4
MNGR	Mingechevir, A	18.56	290	P	P	05 11 33.0	+2.1
LSA	Lhasa	18.79	105	eP	P	05 11 33.9	-0.1
	comp=Z,9.7nm,0.8s						
LSA	Lhasa	18.79	105	eP	P	05 11 33.9	-0.1
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZKTA	Zakatala	19.01	293	P	P	05 11 37.1	+1.2
GANJ	Ganja	19.12	290	P	P	05 11 38.0	+0.9
ZAA0	Zalesovo Array	20.23	26	eP	P	05 11 48.5	-0.2
	comp=Z,5.5nm,0.7s						
ZALV	Zalesovo Beam	20.23	26	iP	P	05 11 48.7	0.0
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZALV	Zalesovo Beam	20.23	26	P	P	05 11 48.3	-0.4
	comp=Z,5.6nm,0.5s,baz=220,slow=11,SNR=31						
GNI	Garni	20.30	288	eP	P	05 11 51.5	+1.8
	comp=Z,15nm,0.9s						
GNI	Garni	20.30	288	ceP	P	05 11 51.6	+1.8
GNI				pmax	pmax		
	comp=Z,33nm,0.8s						
GNI	Garni	20.30	288	P	P	05 11 52.3	+2.5
	comp=Z,8.4nm,0.7s,baz=17,slow=12,SNR=7.0						
HYB	Hyderabad	20.35	157	iP	P	05 11 53.0	+2.5
HYB	Hyderabad	20.35	157	eP	P	05 11 50.4	0.0
HYB				IAmb	IAmb	05 11 53.5	
	comp=Z,4.9nm,0.6s						
TBLG	Delisi	20.42	293	eP	P	05 11 52.8	+1.8
	comp=Z,10nm,0.6s						
TBLG	Delisi	20.42	293	eP	P	05 11 52.8	+1.8
TBLG				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NVS	Novosibirsk	20.46	22	⇓iP	P	05 11 52.8	+1.7
NVS				eS	S	05 15 27.3	+0.2
NVS				pmax	pmax		
	comp=N,6.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NVS				smax	smax		
	comp=N,9.0nm,1.4s						
NVS				smax	smax		
	comp=E,7.0nm,1.5s						
BWNR	Bhubaneshwar	21.11	135	eP	P	05 11 55.7	-2.6
BWNR				IAmb	IAmb	05 12 00.7	

	comp=Z,5.3nm,0.5s						
ZEI	Tsey	21.18	295	eP	P	05 12 00.2	+1.1
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SVE	Sverdlovsk	21.37	345	eP	P	05 12 13.2	+13
SHL	Shillong	21.47	114	eP	P	05 12 01.9	-0.3
	comp=Z,19nm,0.8s						
SHL	Shillong	21.47	114	eP	P	05 12 01.1	-1.1
ARU	Arti	21.47	342	eP	P	05 12 01.9	+0.2
	comp=Z,5.5nm,0.6s						
ARU	Arti	21.47	342	c iP	P	05 12 02.0	+0.4
ARU				S	S	05 15 46.9	+2.4
ARU				pmax	pmax		
	comp=Z,10.0nm,1.5s						
NCK	Nalchik	21.51	297	i P	P	05 12 02.1	-0.1
NCK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	Khabaz	22.05	298	P	P	05 12 07.7	+0.4
	comp=Z,2.5nm,1.0s,baz=111,slow=8.5,SNR=5.1						
KIV	Kislovodsk	22.24	298	i P	P	05 12 10.2	+1.0
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA	Gaotai	23.50	74	⇓P	P	05 12 23.9	+3.2
GTA				pP	pP	05 13 08.3	+5.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RAYN	Ar Rayn	24.89	246	eP	P	05 12 33.5	+0.1
RAYN	Ar Rayn	24.89	246	eP	P	05 12 33.5	+0.1
MDRS	Chennai	24.98	156	eP	P	05 12 34.2	+0.1
MDRS				IAmb	IAmb	05 12 35.0	
	comp=Z,9.3nm,0.7s						
BR131	Keskin Array S	28.84	288	eP	P	05 13 09.1	+0.6
BRTR	Keskin Array B	28.84	288	P	P	05 13 09.4	+0.9
	comp=Z,1.0nm,0.6s,baz=96,slow=9.2,SNR=9.7						
BRTR				pP	pP	05 13 56.7	+3.6
	comp=Z,0.8nm,0.8s,baz=96,slow=8.8,SNR=4.0						
SONM	Songino Array	28.89	55	P	P	05 13 10.1	+1.3
	comp=Z,2.1nm,0.9s,baz=264,slow=10,SNR=15						
SONM				pP	pP	05 13 57.5	+2.7
	comp=Z,0.9nm,0.9s,baz=263,slow=10,SNR=3.5						
SONA1	Songino Array	28.90	55	eP	P	05 13 08.2	-0.8
ULN	Ulaanbaatar	29.33	56	eP	P	05 13 12.2	-0.6
	comp=Z,6.5nm,1.4s						
ULN	Ulaanbaatar	29.33	56	eP	P	05 13 12.2	-0.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ANTO	Ankara	29.47	288	eP	P	05 13 14.7	+0.7
	comp=Z,13nm,1.4s						
ANTO	Ankara	29.47	288	eP	P	05 13 14.7	+0.7
ANTO				pmax	pmax		
	comp=Z,13nm,1.4s						
OBN	Obninsk	29.56	320	i P	P	05 13 15.2	+0.8
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMI	Kunming	30.01	103	P	P	05 13 19.6	+0.5
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
KMI				pmax	pmax		
	comp=Z,140nm,5.4s						
CHTO	Chiang Mai	30.77	117	eP	P	05 13 24.0	-1.6
	comp=Z,14nm,1.8s						
CHTO	Chiang Mai	30.77	117	eP	P	05 13 24.0	-1.6
CHTO				pmax	pmax		
	comp=Z,15nm,1.8s						
CMAR	Chiang Mai Arr	31.00	118	c eP	P	05 13 28.2	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	31.00	118	P	P	05 13 27.7	+0.1
	comp=Z,1.1nm,0.8s,baz=295,slow=8.0,SNR=7.2						
CM01	Chiang Mai Arr	31.04	118	eP	P	05 13 27.1	-0.8
HHC	Hu-ho-hao-te	32.38	69	eP	P	05 13 39.0	-0.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.1s						
AKASG	Malin Array Be	32.47	309	c eP	P	05 13 40.4	+0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	32.47	309	P	P	05 13 40.0	-0.1
	comp=Z,1.5nm,0.7s,baz=80,slow=7.4,SNR=6.8						
KIEV	Kiev	32.48	309	i P	P	05 13 41.1	+1.0
KIEV				pmax	pmax		
	comp=Z,28nm,4.1s						
MLR	Muntele Rosu	34.24	299	⇑iP	P	05 13 57.7	+2.1
VSU	Vasula	35.82	322	i P	P	05 14 09.5	+0.8
VSU				pmax	pmax		
	comp=Z,20nm,1.7s						
FINES	FINESS Array B	37.16	326	P	P	05 14 20.2	+0.2
	comp=Z,2.6nm,0.6s,baz=104,slow=11,SNR=13						
FINES				PP	PP	05 15 50.7	+1.2
	comp=Z,1.3nm,0.5s,baz=113,slow=10,SNR=4.0						
VYHS	Vyhne	39.05	304	eP	P	05 14 43.2	+7.3
VYHS				e		05 16 42.6	
VYHS	Vyhne	39.05	304	eP	P	05 14 43.2	+7.3
VYHS				ePCP	PcP	05 16 42.6	+1.5
ARCES	ARCESS Array B	40.94	338	P	P	05 14 51.6	+0.5
	comp=Z,3.0nm,0.6s,baz=101,slow=6.5,SNR=11						
GERES	GERESS Array B	42.43	305	PP	PP	05 16 48.3	+1.7
	comp=Z,2.2nm,1.2s,baz=114,slow=6.0,SNR=4.0						
HFS	Hagfors	42.71	322	P	P	05 15 05.4	-0.1
	comp=Z,1.7nm,0.5s,baz=98,slow=11,SNR=16						
NB2	NORSAR Subarra	44.03	323	P	P	05 15 15.4	-0.7
	comp=Z,1.1nm,0.5s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.03	323	P	P	05 15 15.7	-0.4
	comp=Z,3.3nm,0.8s,baz=103,slow=7.3,SNR=13						
KSRS	Korea Array	45.50	71	P	P	05 15 28.0	+0.1
	comp=Z,1.1nm,0.7s,baz=272,slow=7.3,SNR=4.7						
KLR	Kul'dur	45.69	54	P	P	05 15 30.0	+0.7
KLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KLR	Kul'dur	45.69	54	P	P	05 15 30.0	+0.7
	comp=Z,2.3nm,0.7s,baz=268,slow=9.4,SNR=9.4						
KMBO	Kilima Mbogo	48.33	227	eP	P	05 15 49.5	-0.8
	comp=Z,4.5nm,0.6s						
KMBO	Kilima Mbogo	48.33	227	c eP	P	05 15 51.5	+1.2
KMBO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KMBO	Kilima Mbogo	48.33	227	P	P	05 15 51.3	+1.0
	comp=Z,5.8nm,0.7s,baz=37,slow=11,SNR=14						
EKA	Eskdalemuir Ar	51.87	316	P	P	05 16 15.5	-0.6
	comp=Z,1.0nm,0.6s,baz=74,slow=6.9,SNR=4.8						
ESK	Eskdalemuir	51.90	316	i P	P	05 16 21.3	+5.0
MA2	Magadan	54.80	38	c eP	P	05 16 39.4	+2.1
MA2				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SEY	Seymchan	54.81	34	P	P	05 16 38.2	+0.9
	comp=Z,0.4nm,0.3s,baz=159,slow=20,SNR=8.0						
PETK	Petropavlovsk-	60.45	44	P	P	05 17 16.1	-0.6
	comp=Z,1.2nm,0.6s,baz=270,slow=1.5,SNR=5.2						
TORD	Torodi Ar. Bea	65.07	268	P	P	05 17 44.5	-3.2
	comp=Z,1.6nm,0.6s,baz=55,slow=5.2,SNR=11						
INK	Inuvik	74.05	9	eP	P	05 18 42.0	+0.4
	comp=Z,9.0nm,1.0s						
INK				epP	pP	05 19 36.0	+1.3
INK	Inuvik	74.05	9	eP	P	05 18 42.0	+0.4
INK				e*PP	pP	05 19 36.0	+1.3
INK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DBIC	Dimbokro	74.05	267	P	P	05 18 41.5	-1.1
	comp=Z,2.6nm,0.7s,baz=335,slow=5.8,SNR=4.2						
ILAR	Eielson Array	75.00	16	P	P	05 18 46.6	-0.6
	comp=Z,1.4nm,0.7s,baz=297,slow=4.5,SNR=18						
BOSA	Boshof	77.30	220	P	P	05 19 00.5	-0.3
	comp=Z,1.9nm,0.4s,baz=18,slow=3.3,SNR=7.3						
YKA	Yellowknife Ar	81.32	2	P	P	05 19 21.6	-0.2
	comp=Z,3.1nm,0.7s,baz=349,slow=5.3,SNR=57						
YKA				pP	pP	05 20 16.2	+0.5
	comp=Z,2.4nm,0.8s,baz=348,slow=5.4,SNR=12						
SCHQ	Schefferville	81.88	337	P	P	05 19 24.9	-0.1
	comp=Z,2.7nm,0.8s,baz=58,slow=4.8,SNR=4.2						
WRA	Warramunga Arr	82.51	121	P	P	05 19 26.7	-2.0
	comp=Z,2.5nm,0.8s,baz=323,slow=4.7,SNR=21						
WRAB	Tennant Creek	82.52	121	eP	P	05 19 27.0	-1.7
WRAB				epP	pP	05 20 26.3	+2.7
WRAB	Tennant Creek	82.52	121	eP	P	05 19 27.0	-1.7
WRAB				e*PP	pP	05 20 26.3	+2.7
ASAR	Alice Springs	84.76	124	P	P	05 19 38.2	-1.9
	comp=Z,2.3nm,0.6s,baz=312,slow=4.9,SNR=30						
FFC	Flin Flon	88.94	355	c eP	P	05 20 00.7	+1.0
TRQA	Tornquist	142.24	253	ePKPdf	PKPdf	05 26 36.6	+0.2

IDC 24 05:12:28.2±2.7, 19°.79S×179°.65E, h0^{km}, mb4.1/4, mb1 4.4/4, mb1mx3.9/26, mbtmp4.1/4, Error ellipse: s-maj=269.7km s-min=33.6km az=162.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	31.36	264	P	P	05 18 58.4	+7.5
	9.5nm,0.3s,baz=97,slow=10,SNR=26						
WRA	Warramunga Arr	42.51	262	P	P	05 20 27.0	+1.2
	2.6nm,0.3s,baz=93,slow=8.5,SNR=89						
ASAR	Alice Springs	42.53	256	P	P	05 20 24.7	-1.2
	2.5nm,0.5s,baz=96,slow=7.3,SNR=44						
FITZ	Fitzroy Crossi	50.93	262	P	P	05 21 31.3	-0.4
	1.7nm,0.6s,baz=90,slow=11,SNR=4.9						
TXAR	Lajitas Array	88.55	58	P	P	05 25 23.3	0.0
	0.2nm,0.6s,baz=206,slow=5.4,SNR=3.8						

IDC 24 05:21:53.7±2.5, 9°.84S×119°.06E, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx3.4/31, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=192.6km s-min=26.2km az=52.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.40	143	Pn	Pn	05 24 23.3	-0.9
	0.2nm,0.3s,baz=322,slow=10,SNR=8.3						
FITZ				Sn	Sn	05 26 12.1	-9.4
	0.3nm,0.3s,baz=357,slow=22,SNR=6.3						
WRA	Warramunga Arr	17.84	126	P	Pn	05 26 03.9	+0.3
	0.0nm,0.3s,baz=299,slow=14,SNR=3.3						
ASAR	Alice Springs	19.75	136	P	P	05 26 26.1	+0.7
	0.0nm,0.3s,baz=315,slow=10,SNR=6.2						
MKAR	Makanchi Array	65.23	333	P	P	05 32 37.0	-0.1
	0.4nm,0.6s,baz=150,slow=6.7,SNR=4.3						

*ISK **24** 05:26:44.4, 42°.16N×28°.10E, h8^{km}, ML2.1/13*

*ISCJB **24** 05:26:45.1±0.8, 42°.16N±0°.06×28°.09E±0°.05, h10^{km}, Error ellipse: s-maj=9.1km s-min=4.6km az=27.3*

*DDA **24** 05:26:45.5, 42°.09N×28°.09E, h7^{km}±5^{km}, ML2.7*

*SOF **24** 05:26:46.6, 42°.20N×27°.91E, h3^{km}*

ISC 24 05:26:44.7±1.2, 42°.15N±0°.06×28°.12E±0°.04, h10^{km}, n22, σ0^{s}.92/26, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIRK	Kırklareli	0.85	245	i P	Pb	05 27 01.7	+0.2
KIRK				IAML_P			
	comp=Z,728nm,0.1s						
CTKS	Kestanelik-??a	0.96	162	PG	Pb	05 27 03.4	0.0
ELBA	Catalca	1.03	167	i P	Pn	05 27 05.8	+0.6
ELBA				IAML_P			
	comp=Z,2μm,0.1s						
EDRB	Edirne	1.07	254	PG	Pg	05 27 05.1	-0.2
BGKT	Bogazkoy	1.08	153	PN	Pn	05 27 06.1	+0.1
KLYT	Kilyos	1.13	142	PN	Pn	05 27 06.9	+0.3
KLYT				SN	Sn	05 27 22.8	+0.6
PRD	Provadia	1.18	333	P	Pn	05 27 06.8	-0.4
JMB	Yambol	1.18	286	P	Pb	05 27 07.5	+0.2
ISK	Istanbul-Kandi	1.29	147	PN	Pn	05 27 09.2	+0.4
KAVV	Kandilli-Istan	1.29	147	PN	Pb	05 27 09.3	+0.2
SBT4	Kumbag-Tekirda	1.39	199	PN	Pb	05 27 10.5	-0.2
BUY	Buyukada	1.50	150	i P	Pg	05 27 13.3	-0.1
BUY				i S	Sg	05 27 32.7	-0.2
BUY				IAML_P			
	comp=Z,547nm,0.1s						
SART	Tekirdag	1.62	206	i P	Pg	05 27 16.2	+0.4
SART				IAML_P			
	comp=Z,197nm,0.1s						
ARMT	Armutlu	1.68	160	PN	Pn	05 27 14.9	+0.7
EDC	Edincik	1.81	186	PN	Pn	05 27 16.8	+0.8
KRBG	Karabiga-Canak	1.86	200	PN	Pn	05 27 17.1	+0.5
KCTX	Karacabey (Bur	1.89	174	PN	Pn	05 27 17.9	+0.8
ERIK	Erikli-Kesan	1.91	220	PN	Pn	05 27 17.9	+0.6
ALN	Alexandroupoli	2.00	232	PN	Pn	05 27 18.9	+0.4
ALN				SN	Sb	05 27 44.3	-1.7
KDZ	Kurdzhali	2.08	257	PN	Pn	05 27 20.9	+1.2
RDO	Rodhopi	2.18	243	PN	Pn	05 27 21.3	+0.3
RDO				SN	Sn	05 27 48.7	+0.7
BALY	Balya	2.44	189	i P	Pn	05 27 21.5	-3.2

MAN 24 05:28:07.8, 10°.41N×126°.45E, h2^{km}, MS4.2, Philippine Islands region

*KRSC **24** 05:53:28.9±1.3, 54°.69N×162°.66E, h49^{km}±16^{km}, ML4.4*

*ISCJB **24** 05:53:30.4±0.6, 54°.71N±0°.02×162°.70E±0°.07, h54^{km}±5^{km}, mb3.9/15, Error ellipse: s-maj=6.8km s-min=2.9km az=17.6*

*MOS **24** 05:53:30.9±0.7, 54°.75N×162°.58E, h54^{km}, mb4.2/9, Error ellipse: s-maj=7.9km s-min=5.0km az=84.8*

*IDC **24** 05:53:33.6±3.6, 54°.96N×162°.14E, h56^{km}±35^{km}, mb3.6/14, mb1 3.8/15, mb1mx3.5/62, mbtmp3.9/15, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/34, Error ellipse: s-maj=29.6km s-min=18.5km az=172.0*

ISC 24 05:53:31.5±0.7, 54°.73N±0°.03×162°.65E±0°.05, h46^{km}±6^{km}, n98, σ1^{s}.22/157, mb4.0/15, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.56	252	eP	Pn	05 53 42.1	-1.1
MKZ				S	Sn	05 53 50.0	-1.6
MKZ	Mys Kozlova	0.56	252	PN	Pn	05 53 42.1	-1.1
MKZ				S	Sn	05 53 50.0	-1.6
TUMD	Tumrok D	1.38	291	eP	Pn	05 53 53.6	-0.7
TUMD				eS	Sn	05 54 10.4	-0.9
KZV	Kizimen	1.41	287	eP	Pn	05 53 54.2	-0.6
KZV				eS	Sn	05 54 11.6	-0.7
KZV	Kizimen	1.41	287	PN	Pn	05 53 54.2	-0.6
KZV				S	Sn	05 54 11.6	-0.7
KBTR	Krutoberegovo	1.48	4	eP	Pn	05 53 54.8	-0.9
KBTR				S	Sn	05 54 13.2	-0.6
KBTR	Krutoberegovo	1.48	4	PN	Pn	05 53 54.8	-0.9
KBTR				S	Sn	05 54 13.2	-0.6
KBG	Krutoberegovo	1.53	1	eP	Pn	05 53 55.4	-0.8
KBG				S	Sn	05 54 14.8	-0.1
KBG	Krutoberegovo	1.53	1	PN	Pn	05 53 55.4	-0.8
KBG				S	Sn	05 54 14.8	-0.1
TUMR	Tumrok	1.54	292	eP	Pn	05 53 56.5	-0.1
TUMR	Tumrok	1.54	292	PN	Pn	05 53 53.6	-3.0
TUMR				S	Sn	05 54 10.4	-5.1
BZGR	Bezymyannyi-Gr	1.64	318	eP	Pn	05 53 58.0	0.0
BZGR				eS	Sn	05 54 19.0	+1.0
BZGR	Bezymyannyi-Gr	1.64	318	PN	Pn	05 53 58.0	0.0
BZGR				S	Sn	05 54 19.0	+1.0
ZLN	Zelenaya	1.66	322	eP	Pn	05 53 58.4	+0.2
ZLN				eS	Sn	05 54 19.9	+1.5
ZLN	Zelenaya	1.66	322	PN	Pn	05 53 58.4	+0.2
ZLN				S	Sn	05 54 19.9	+1.5
KMNR	Kamenistaya	1.72	308	S	Sn	05 54 21.9	+2.1
BZMR	Bezymyannaya	1.72	315	eP	Pn	05 53 59.9	+0.8
BZMR				eS	Sn	05 54 21.6	+1.6
BZMR	Bezymyannaya	1.72	315	PN	Pn	05 53 59.9	+0.8
BZMR				S	Sn	05 54 21.6	+1.6
BZWR	Bezymyannyi-We	1.74	316	eP	Pn	05 53 59.9	+0.5
BZWR				eS	Sn	05 54 21.0	+0.6
BZWR	Bezymyannyi-We	1.74	316	PN	Pn	05 53 59.9	+0.5
BZWR				S	Sn	05 54 21.0	+0.6
LGNR	Loginova	1.75	321	eP	Pn	05 54 00.1	+0.5
LGNR				eS	Sn	05 54 22.0	+1.1
LGNR	Loginova	1.75	321	PN	Pn	05 54 00.1	+0.5
LGNR				S	Sn	05 54 22.0	+1.1
CIRR	Tsirk	1.76	323	eP	Pn	05 53 59.9	+0.3
CIRR				eS	Sn	05 54 22.9	+2.1
CIRR	Tsirk	1.76	323	PN	Pn	05 53 59.9	+0.3
CIRR				S	Sn	05 54 22.9	+2.1
KIRR	Kirishev	1.80	314	eP	Pn	05 54 00.6	+0.5
KIRR				eS	Sn	05 54 23.0	+1.2
KIRR	Kirishev	1.80	314	PN	Pn	05 54 00.6	+0.5
KIRR				S	Sn	05 54 23.0	+1.2
KPT	Kopyto	1.85	313	eP	Pn	05 54 00.9	0.0
KPT	Kopyto	1.85	313	PN	Pn	05 54 00.9	0.0
KLY	Klyuchi	1.95	325	eP	Pn	05 54 01.0	-1.0
KLY				eS	Sn	05 54 25.0	-0.2
KLY	Klyuchi	1.95	325	PN	Pn	05 54 01.0	-1.0
KLY				S	Sn	05 54 25.0	-0.2
SMKR	Semkarok	1.97	341	eP	Pn	05 54 02.6	+0.2
SMKR	Semkarok	1.97	341	PN	Pn	05 54 02.6	+0.2
KII	Karymskiy	2.00	251	eP	Pn	05 54 03.1	+0.3
KII	Karymskiy	2.00	251	PN	Pn	05 54 03.1	+0.3
BDR	Baidarnaya	2.01	337	eP	Pn	05 54 03.2	+0.2
BDR				eS	Sn	05 54 27.3	+0.3
BDR	Baidarnaya	2.01	337	PN	Pn	05 54 03.2	+0.2
BDR				S	Sn	05 54 27.3	+0.3
KOZ	Kozyrevsk	2.06	311	eP	Pn	05 54 03.9	+0.2
KOZ				eS	Sn	05 54 28.5	+0.3
KOZ	Kozyrevsk	2.06	311	PN	Pn	05 54 03.9	+0.2
KOZ				S	Sn	05 54 28.5	+0.3
SRKR	Sorokina	2.10	337	eP	Pn	05 54 04.4	+0.2
SRKR	Sorokina	2.10	337	PN	Pn	05 54 04.4	+0.2
SPN	Mys Shipunski	2.26	224	eP	Pn	05 54 05.4	-0.9
SPN				eS	Sn	05 54 31.1	-1.7
SPN	Mys Shipunski	2.26	224	PN	Pn	05 54 05.4	-0.9
SPN				S	Sn	05 54 31.1	-1.7
SRDR	Sredinnyy	2.30	315	eP	Pn	05 54 07.1	+0.2
SRDR	Sredinnyy	2.30	315	PN	Pn	05 54 07.1	+0.2
NLC	Nalytchevo	2.50	233	eP	Pn	05 54 09.5	-0.1
NLC				eS	Sn	05 54 38.5	-0.3
NLC	Nalytchevo	2.50	233	PN	Pn	05 54 09.5	-0.1
NLC				S	Sn	05 54 38.5	-0.3
ESO	Esso	2.55	300	eP	Pn	05 54 10.4	+0.1
ESO				eS	Sn	05 54 40.0	-0.1
ESO	Esso	2.55	300	PN	Pn	05 54 10.4	+0.1
ESO				S	Sn	05 54 40.0	-0.1
SDLR	Sedlovina	2.66	238	eP	Pn	05 54 12.7	+0.8
SDLR				eS	Sn	05 54 44.2	+1.3
SDLR	Sedlovina	2.66	238	PN	Pn	05 54 12.7	+0.8
SDLR				S	Sn	05 54 44.2	+1.3
SMAR	Somma	2.71	239	eP	Pn	05 54 13.4	+0.8
SMAR				eS	Sn	05 54 45.0	+0.8
SMAR	Somma	2.71	239	PN	Pn	05 54 13.4	+0.8
SMAR				S	Sn	05 54 45.0	+0.8
UGLR	Uglovaya	2.73	237	eP	Pn	05 54 13.7	+0.9
UGLR				eS	Sn	05 54 45.9	+1.3
UGLR	Uglovaya	2.73	237	PN	Pn	05 54 13.7	+0.9
UGLR				S	Sn	05 54 45.9	+1.3
KRX	Arik	2.73	241	eP	Pn	05 54 14.1	+1.2
KRX				eS	Sn	05 54 45.6	+0.9
KRX	Arik	2.73	241	PN	Pn	05 54 14.1	+1.2
KRX				S	Sn	05 54 45.6	+0.9
AVH	Avacha	2.73	239	eP	Pn	05 54 14.3	+1.4
AVH				eS	Sn	05 54 46.3	+1.5
AVH	Avacha	2.73	239	PN	Pn	05 54 14.3	+1.4
AVH				S	Sn	05 54 46.3	+1.5
KOK	Koryaka	2.77	240	eP	Pn	05 54 14.4	+1.0
KOK	Koryaka	2.77	240	PN	Pn	05 54 14.4	+1.0
DALK	Dalny	2.87	235	eP	Pn	05 54 15.0	+0.4
DALK				eS	Sn	05 54 47.5	-0.3
DALK	Dalny	2.87	235	PN	Pn	05 54 15.0	+0.4
DALK				S	Sn	05 54 47.5	-0.3
PET	Petropavlovsk	2.92	236	eP	Pn	05 54 16.0	+0.6
PET				eS	Sn	05 54 49.5	+0.3
PET	Petropavlovsk	2.92	236	ePN	Pn	05 54 15.9	+0.6
PET				eS	Sn	05 54 49.4	+0.3
PET				pmax	pmax		
	comp=Z,117nm,0.5s						
PET				smax	smax		
	comp=N,410nm,0.5s						
PET				smax	smax		
	comp=E,475nm,0.5s						
GNL	Ganaly	2.95	251	eP	Pn	05 54 16.9	+1.0
GNL	Ganaly	2.95	251	PN	Pn	05 54 16.9	+1.0
KRMR	Karymshinskiy	3.29	236	eP	Pn	05 54 21.4	+1.0
KRMR				eS	Sn	05 54 59.2	+1.0
KRMR	Karymshinskiy	3.29	236	PN	Pn	05 54 21.4	+1.0
KRMR				S	Sn	05 54 59.2	+1.0
PETK	Petropavlovsk-	3.35	243	P	Pn	05 54 22.2	+0.9
	comp=E,19nm,0.3s,baz=74,slow=19,SNR=225						
PETK				S	Sn	05 55 02.8	+3.1
	comp=E,18nm,0.3s,baz=207,slow=20,SNR=13						
RUS	Russkaya	3.37	229	eP	Pn	05 54 21.5	-0.1
RUS				eS	Sn	05 55 00.5	+0.2
RUS	Russkaya	3.37	229	PN	Pn	05 54 21.5	-0.1
RUS				S	Sn	05 55 00.5	+0.2
MTVR	Mutnovka	3.48	232	eP	Pn	05 54 23.7	+0.4
MTVR				eS	Sn	05 55 03.8	+0.5
MTVR	Mutnovka	3.48	232	PN	Pn	05 54 23.7	+0.4
MTVR				S	Sn	05 55 03.8	+0.5
APC	Apacha	3.72	243	eP	Pn	05 54 28.3	+1.9
APC				eS	Sn	05 55 12.3	+3.4
APC	Apacha	3.72	243	PN	Pn	05 54 28.3	+1.9
APC				S	Sn	05 55 12.3	+3.4
KDTR	Khodutka, Kamc	4.01	225	eP	Pn	05 54 30.2	-0.1
KDTR				eS	Sn	05 55 14.0	-2.0
KDTR	Khodutka, Kamc	4.01	225	PN	Pn	05 54 30.2	-0.1
KDTR				S	Sn	05 55 14.0	-2.0
SKR	Severo-Kuril’s	5.67	227	ePN	Pn	05 54 55.3	+2.2
KLR	Kul'dur	19.71	267	LR	LR	06 06 03.1	
	comp=E,40nm,19.4s,baz=292,slow=39						
ILAR	Eielson Array	26.59	48	P	P	05 59 06.0	+1.0
	comp=E,0.4nm,0.8s,baz=268,slow=9.0,SNR=3.7						
ILAR				pP	pP	05 59 17.8	+2.0
	comp=E,0.5nm,0.8s,baz=268,slow=7.8,SNR=3.5						
H11N2	WAKE ISLAND Hy	35.09	173	T	T	06 37 42.0	
	baz=355,slow=76,SNR=221						
H11N3	WAKE ISLAND Hy	35.11	173	T	T	06 37 42.8	
	baz=355,slow=76,SNR=201						
H11N1	WAKE ISLAND Hy	35.11	173	T	T	06 37 45.1	
	baz=355,slow=76,SNR=252						
YKA	Yellowknife Ar	40.93	45	P	P	06 01 10.2	+1.3
	comp=E,0.3nm,0.5s,baz=300,slow=8.3,SNR=5.9						
KURK	Kurchatov	48.15	302	P	P	06 02 04.9	-1.7
KURK				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KURBB	Kurchatov Arra	48.25	302	P	P	06 02 04.9	-2.5
	comp=Z,1.7nm,0.2s,baz=58,slow=7.4,SNR=6.6						
MKAR	Makanchi Array	48.80	296	P	P	06 02 08.9	-2.8
	comp=Z,0.5nm,0.6s,baz=55,slow=7.5,SNR=6.0						
BVAR	Borovoye Array	50.55	309	P	P	06 02 22.4	-2.5
	comp=Z,0.8nm,0.5s,baz=60,slow=7.2,SNR=6.9						
FINES	FINESS Array B	59.20	337	P	P	06 03 26.2	-1.0
	comp=Z,1.9nm,0.5s,baz=43,slow=8.7,SNR=28						
NB2	NORSAR Subarra	62.37	345	P	P	06 03 47.3	-1.6
	comp=Z,0.5nm,0.5s,baz=18,slow=6.9						
NOA	NORSAR Array B	62.37	345	P	P	06 03 47.6	-1.2
	comp=Z,0.8nm,0.6s,baz=19,slow=6.9,SNR=5.8						
AKASG	Malin Array Be	67.96	330	P	P	06 04 23.7	-1.4
	comp=Z,0.5nm,0.3s,baz=29,slow=6.1,SNR=5.1						
TXAR	Lajitas Array	68.62	69	P	P	06 04 32.1	+2.3
	comp=Z,0.5nm,0.6s,baz=294,slow=4.7,SNR=7.3						
TXAR				pP	sP	06 04 47.0	+0.5
	comp=Z,0.2nm,0.6s,baz=307,slow=5.3,SNR=3.2						
KBZ	Khabaz	69.36	318	P	P	06 04 33.8	-0.2
	comp=Z,2.2nm,0.8s,baz=70,slow=9.1,SNR=4.9						
GERES	GERESS Array B	73.54	339	P	P	06 04 58.9	-0.3
	comp=Z,0.4nm,0.6s,baz=28,slow=6.0,SNR=4.1						
BRTR	Keskin Array B	76.29	322	P	P	06 05 14.6	-0.7
	comp=Z,0.9nm,0.6s,baz=57,slow=4.4,SNR=6.5						
ASAR	Alice Springs	81.89	206	P	P	06 05 46.8	+1.0
	comp=Z,1.2nm,0.7s,baz=356,slow=5.0,SNR=4.0						
ESDC	Sonseca Array	85.26	350	P	P	06 06 03.4	+0.3
	comp=Z,0.6nm,0.6s,baz=4.0,slow=5.1,SNR=5.6						

*IDC **24** 05:58:01.8±1.2, 3°.27N×126°.55E, h0^{km}, mb4.4/6, mb1 4.6/6, mb1mx3.8/51, mbtmp4.4/6, MS3.1/1, Ms1 3.1/1, ms1mx2.4/33, Error ellipse: s-maj=93.2km s-min=19.0km az=69.0*

*ISCJB **24** 05:58:12.3±0.8, 2°.80N±0°.04×126°.46E±0°.09, h63^{km}, mb4.3/5, Error ellipse: s-maj=13.7km s-min=5.4km az=172.3*

*DJA **24** 05:58:16.6±0.4, 3°N±3°×12°6E±°, h122^{km}±4^{km}, M4.7/12, mb4.7/8, mB5.2/6, MLv4.7/12, Mw(mB)4.6/6, Mwp6.0/1*

ISC 24 05:58:12.9±0.9, 2°.74N±0°.06×126°.4E±0°.1, h63^{km}, n20, σ3^{s}.18/20, mb4.3/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.26	318	P	Pn	05 58 38.9	+4.4
SGSI				S	Sn	05 58 55.6	+4.9
KMSI	Cibinong	3.21	228	P	Pn	05 59 04.7	+3.7
SKMP	Bagumbayan, Su	4.17	334	eP	Pn	05 59 16.0	+1.8
SKMP				eS	Sn	06 00 00.5	-1.2
KCP	Kidapawan	4.43	343	i S	Sn	06 00 09.8	+1.8
SANI	Sanana	4.77	185	P	Pn	05 59 26.3	+4.0
MRSI	Marisa	4.97	243	P	Pn	05 59 26.9	+1.9
LUWI	Luwuk	5.20	224	P	Pn	05 59 31.1	+2.9
	297nm,0.8s,13μm						
BUKP	Musuan	5.27	346	eP	Pn	05 59 39.0	+10
BUKP				eS	Sn	06 00 29.7	+1.0
APSI	Ampana	5.95	233	P	Pn	05 59 41.2	+2.7
NLAI	Namlea	5.98	173	P	Pn	05 59 45.1	+6.2

MPSI	Mapaga	6.90	250	P	Pn	05 59 52.5	+1.1
KDI	Kendari	7.64	209	P	Pn	06 00 05.2	+3.6
	57nm,1.0s,2μm0.2nm						
PCJI	Pacitan	18.64	234	P	P	06 02 20.2	-5.6
FITZ	Fitzroy Crossi	20.72	182	P	P	06 02 48.9	+0.6
	4.1nm,0.3s,baz=353,slow=5.8,SNR=37						
WRA	Warramunga Arr	23.86	161	P	P	06 03 21.1	+0.4
	14nm,0.4s,baz=343,slow=10.0,SNR=113						
ASAR	Alice Springs	27.25	165	P	P	06 03 51.9	+0.5
	2.4nm,0.5s,baz=343,slow=7.2,SNR=63						
ASAR				PcP	PcP	06 07 08.1	-2.1
	0.8nm,0.6s,baz=343,slow=2.5,SNR=5.5						
STKA	Stephens Creek	37.34	158	P	P	06 05 20.6	+1.2
	7.8nm,0.7s,baz=333,slow=8.5,SNR=19						
BRDH	Bariadhala	39.07	303	LR	LR	06 22 00.2	
	comp=Z,31nm,21.6s,baz=56,slow=37						
MKAR	Makanchi Array	58.16	326	P	P	06 07 55.5	-4.9
	0.4nm,0.3s,baz=120,slow=7.6,SNR=20						
FINES	FINESS Array B	92.53	332	P	P	06 11 12.7	-4.4
	1.1nm,0.9s,baz=66,slow=6.5,SNR=4.3						

IDC 24 06:07:38.0±2.3**,6.°12S**×**152.°00E,h0**^{km}**,mb3.3**/3**,**
mb1 3.7/3**,mb1mx3.4**/37**,mbtmp3.3**/3**,Error ellipse:**
s-maj=161.1km s-min=30.7km az=128.0,New Britain
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.98	230	P	P	06 12 34.7	+0.8
	0.4nm,0.4s,baz=54,slow=9.9,SNR=5.1						
ASAR	Alice Springs	24.65	223	P	P	06 13 00.1	-0.5
	0.4nm,0.6s,baz=56,slow=9.4,SNR=10						
ILAR	Eielson Array	83.68	22	P	P	06 20 08.3	0.0
	0.3nm,0.6s,baz=243,slow=5.2,SNR=4.9						

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*ASRS **24** 06:10:14.6±5.6,46.°74N×82.°44E,h15^{km},Ms3.9/2*
*MOS **24** 06:10:29.4±1.1,47.°30N×82.°16E,h22^{km},mb4.0/6,Error ellipse: s-maj=10.2km s-min=6.3km az=82.5*
*SOME **24** 06:10:29.1,47.°28N×81.°70E,h0^{km}*
*ISCJB **24** 06:10:29.5±0.9,47.°37N±0.°03×82.°19E±0.°04,h19^{km}±8^{km}, mb3.6/12,Error ellipse: s-maj=5.1km s-min=5.1km az=36.0*
*NNC **24** 06:10:30.1±0.5,47.°30N×82.°18E,h0^{km},mb4.6,mpv4.3, Error ellipse: s-maj=4.0km s-min=2.4km az=74.0*
*BJI **24** 06:10:31.8,47.°34N×82.°13E,h19^{km},mb4.4/2,ML4.0/8*
*IDC **24** 06:10:31.2±1.0,47.°19N×82.°30E,h29^{km}±8^{km},mb3.4/12, mb1 3.6/17,mb1mx3.5/43,mbtmp3.6/17,ML3.5/5,Error ellipse: s-maj=14.0km s-min=10.0km az=56.0*
ISC 24 06:10:30.3±1.1**,47.°33N**±0.°03×**82.°23E**±0.°04**,h12**^{km}±7^{km}**,**
n73,σ**2.**^{s}**00**/95**,mb3.6**/12**,21C-12D,Kazakhstan-Xinjiang**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	0.54	176	⇓P	Pg	06 10 40.4	-0.4
	2μm,0.6s,baz=155,slow=16						
MK31				⇑S	Sg	06 10 46.8	-1.2
	2μm,0.3s,baz=3.2,slow=28,SNR=34						
MK31	Makanchi Array	0.54	176	PG	Pg	06 10 40.4	-0.4
MK31				S	Sg	06 10 46.8	-1.2
MKAR	Makanchi Array	0.54	176	Pg	Pg	06 10 39.9	-1.0
	750nm,0.3s,baz=1.8,slow=18						
MKAR				Lg	Lg	06 10 46.9	
	2μm,0.3s,baz=4.2,slow=30,SNR=137						
MAKZ	Makanchi	0.55	199	⇓P	Pg	06 10 40.3	-0.8
	135nm,0.3s						
MAKZ				⇓S	Sg	06 10 47.3	-1.2
	7μm,0.3s						
MAKZ	Makanchi	0.55	199	PG	Pg	06 10 40.3	-0.8
MAKZ				S	Sg	06 10 47.8	-0.6
ZSN	Zaisan	1.79	85	eP	Pn	06 11 03.5	+2.5
	69nm,0.4s						
ZSN				eS	Sb	06 11 28.3	+2.8
	474nm,0.4s						
KAPS	Kapalarasan	2.86	225	eP	Pn	06 11 17.4	+1.7
	88nm,0.5s						
KAPS				eS	Sn	06 11 52.5	+2.4
	163nm,0.5s						
SEM	Semipalatinsk	3.34	338	Pg	Pb	06 11 30.4	+0.7
	151nm,0.4s						
SEM				Lg	Lg	06 12 14.7	
	810nm,0.3s						
SEM	Semipalatinsk	3.34	338	eP	Pb	06 11 30.4	+0.7
	151nm,0.4s						
SEM				eS	Sb	06 12 14.6	+4.2
	810nm,0.3s						
DJR	Jarkent	3.45	211	Pg	Pb	06 11 31.0	-0.4
	15nm,0.3s						
DJR				Lg	Lg	06 12 14.9	
	142nm,0.6s						
DJR	Jarkent	3.45	211	eP	Pb	06 11 31.0	-0.4
	15nm,0.3s						
DJR				eS	Sb	06 12 14.9	+1.6
	142nm,0.6s						
TDK	Taldyqorghan	3.54	230	Pg	Pb	06 11 32.3	-0.4
	868nm,0.6s						
TDK				Lg	Lg	06 12 17.2	
	283nm,0.6s						
UKR	Ust'-Kan	3.97	24	ePg	Pn	06 11 35.7	+4.6
UKR				eSg	Sb	06 12 30.5	+2.2
UKR	Ust'-Kan	3.97	24	ePN	Pn	06 11 35.7	+4.6
UKR				e		06 12 30.5	
KURBB	Kurchatov Arra	4.10	325	⇓Pn	Pn	06 11 33.7	+1.1
	7.2nm,0.5s						
KURBB				⇓Pg	Pb	06 11 44.8	+2.5
	182nm,0.7s						
KURBB				⇑Lg	Lg	06 12 40.7	
	892nm,0.6s						
KURBB	Kurchatov Arra	4.10	325	Pn	Pn	06 11 33.5	+0.8
	1.2nm,0.3s,baz=140,slow=12,SNR=21						
KURBB				Lg	Lg	06 12 40.0	
	19nm,0.3s,baz=200,slow=24,SNR=16						
KURK	Kurchatov	4.14	326	c ePN	Pn	06 11 33.6	+0.4
DGZ	Jazzator, Alta	4.19	54	c iPN	Pn	06 11 38.0	+3.9
ARXS	Arharly	4.39	226	Pg	Pb	06 11 46.9	-0.4
	46nm,0.4s						
ARXS				Lg	Lg	06 12 42.3	
	436nm,0.6s						
PDGK	Podgornoye	4.45	207	⇑Pn	Pn	06 11 39.3	+1.6
	20nm,0.5s						
PDGK				⇑Lg	Lg	06 12 49.0	
	280nm,0.9s						
PDGK	Podgornoye	4.45	207	PN	Pn	06 11 39.3	+1.6
WMQ	Urumqi	5.20	131	ePn	Pn	06 11 50.3	+2.4
WMQ				Sn	Sn	06 12 50.8	+3.0
WMQ				smax	smax		
	comp=N,73nm,0.5s						
WMQ				smax	smax		
	comp=E,150nm,0.5s						
KNDC	Almaty	5.55	224	⇓Pn	Pn	06 11 53.7	+1.0
	35nm,0.6s						
KNDC				⇑Lg	Lg	06 13 24.6	
	130nm,0.7s						
MDOK	Medeo	5.55	223	⇑Pn	Pn	06 11 53.7	+0.9
	13nm,0.5s						
MDOK				⇓Lg	Lg	06 13 22.4	
	78nm,0.6s						
AAA	Alma-Ata	5.58	224	ePN	Pn	06 11 54.3	+1.2
AAA				pmax	pmax		
	comp=Z,29nm,0.3s						
TKM2	Tokmak 2	6.44	229	P	Pn	06 12 06.5	+1.4
	SNR=28						
TKM2	Tokmak 2	6.44	229	⇑Pn	Pn	06 12 06.0	+0.9
	comp=Z,17nm,0.7s						
TKM2				⇑Pg	Pb	06 12 25.6	+3.2
	comp=Z,19nm,0.6s						
TKM2				⇑Lg	Lg	06 13 52.2	
	comp=Z,28nm,0.6s						
TKM2	Tokmak 2	6.44	229	PN	Pn	06 12 06.0	+0.9
TKM2				PG	Pb	06 12 25.6	+3.2
ELT	Eltsovka	6.46	22	i Sg	Sg	06 13 53.7	-3.9
ULHL	Ulahol	6.64	222	P	Pn	06 12 10.5	+2.7
	SNR=32						
OTUK	Ortayu	6.73	281	⇑Pn	Pn	06 12 09.3	+0.4
	comp=Z,1.6nm,0.3s						
OTUK				⇓Lg	Lg	06 14 01.7	
	comp=Z,79nm,0.8s						
OTUK	Ortayu	6.73	281	PN	Pn	06 12 09.3	+0.4
USP	Ospenovka	6.80	236	P	Pn	06 12 10.4	+0.5
	SNR=23						
ZALV	Zalesovo Beam	6.82	13	Pn	Pn	06 12 11.3	+1.2
	comp=Z,2.7nm,0.3s,baz=196,slow=12,SNR=26						
ZALV				Sn	Sn	06 13 29.6	+2.0
	comp=Z,9.1nm,0.3s,baz=198,slow=26,SNR=8.2						
ZALV				Lg	Lg	06 14 01.6	
	comp=Z,7.7nm,0.3s,baz=203,slow=22,SNR=6.1						
CHMS	Chumysh	6.84	233	P	Pn	06 12 11.4	+1.1
	SNR=9.9						
KBK	Karagaybulak	6.97	230	P	Pn	06 12 14.2	+1.9
	SNR=8.4						
AAK	Ala-Archa	7.22	232	P	Pn	06 12 17.3	+1.5
	SNR=8.8						
AAK	Ala-Archa	7.22	232	⇑Pn	Pn	06 12 16.8	+1.1
	comp=Z,5.2nm,0.4s						
AAK				⇓Lg	Lg	06 14 17.2	
	comp=Z,33nm,0.7s						
AAK	Ala-Archa	7.22	232	PN	Pn	06 12 16.8	+1.1
AAK	Ala-Archa	7.22	232	Pn	Pn	06 12 15.1	-0.6
	comp=Z,3.4nm,0.3s,baz=82,slow=7.1,SNR=41						
AAK				Lg	Lg	06 14 11.8	
	comp=Z,1.9nm,0.3s,baz=266,slow=15,SNR=2.9						
KZA	Kyzart	7.24	226	P	Pn	06 12 20.1	+4.0
	SNR=10						
UCH	Uchtor	7.50	230	P	Pn	06 12 22.2	+2.4
	SNR=7.3						
NVS	Novosibirsk	7.54	4	ePg	Pb	06 12 43.0	+2.1
NVS				eSg	Sb	06 14 28.0	+17
NVS	Novosibirsk	7.54	4	eP	Pn	06 12 20.7	+0.7
NVS				e		06 13 44.9	
EKS2	Erkin-Say	7.60	235	P	Pn	06 12 21.8	+0.9
	SNR=8.7						
AML	Almayashu	8.00	233	P	Pn	06 12 29.3	+2.7
	SNR=8.0						
MNAS	Manas	8.43	238	⇑Pn	Pn	06 12 32.4	0.0
	comp=Z,3.0nm,0.7s						
MNAS				⇑Lg	Lg	06 14 55.4	
	comp=Z,28nm,0.9s						
MNAS	Manas	8.43	238	P	Pn	06 12 32.4	0.0
KK31	Karatay Array	9.29	247	⇑Pn	Pn	06 12 42.9	-1.1
	comp=Z,9.9nm,0.7s,baz=62,slow=13,SNR=102						
KK31				⇑Sn	Sn	06 14 30.3	+1.9
	comp=Z,6.9nm,0.5s						
KK31				⇓Lg	Lg	06 15 23.6	
	comp=Z,20nm,0.6s,baz=54,slow=30,SNR=5.8						
KK31	Karatay Array	9.29	247	P	Pn	06 12 42.9	-1.1
KK31				SN	Sn	06 14 30.3	+1.9
BVA0	Borovoye Array	9.49	311	⇓Pn	Pn	06 12 47.4	+0.7
	comp=Z,3.3nm,0.6s,baz=125,slow=14,SNR=28						
BVA0				⇑Sn	Sn	06 14 34.3	+1.1
	comp=Z,8.5nm,0.6s,baz=153,slow=72,SNR=4.0						
BVA0				⇑Lg	Lg	06 15 30.5	
	comp=Z,51nm,0.9s,baz=104,slow=26,SNR=5.7						
BVA0	Borovoye Array	9.49	311	P	Pn	06 12 47.4	+0.7
BVA0				SN	Sn	06 14 34.3	+1.1
BVAR	Borovoye Array	9.49	311	Pn	Pn	06 12 47.5	+0.8
	comp=Z,0.9nm,0.3s,baz=118,slow=12,SNR=18						
BVAR				Sn	Sn	06 14 29.5	-3.7
	comp=Z,3.2nm,0.3s,baz=101,slow=24,SNR=7.6						
BVAR				Lg	Lg	06 15 28.1	
	comp=Z,4.8nm,0.3s,baz=108,slow=27,SNR=8.0						
BRVK	Borovoye	9.56	311	⇑Pn	Pn	06 12 48.5	+0.9
	comp=Z,7.9nm,1.2s						
BRVK				⇑Sn	Sn	06 14 35.6	+0.6
	comp=Z,9.5nm,0.5s						
BRVK				⇓Lg	Lg	06 15 31.8	
	comp=Z,58nm,0.7s						
BRVK	Borovoye	9.56	311	P	Pn	06 12 48.5	+0.9
BRVK				SN	Sn	06 14 35.6	+0.6
GTA	Gaotai	15.02	115	eP	Pn	06 14 01.9	-0.4
GTA				pP	P	06 14 08.5	+0.7
GTA				sP	pP	06 14 11.8	+0.1
AKTO	Aktyubinsk	16.21	290	Pn	Pn	06 14 18.1	+0.5
	comp=Z,0.2nm,0.3s,baz=63,slow=16,SNR=3.4						
AKTO				Lg	Lg	06 19 04.5	
	baz=31,slow=19,SNR=2.8						
SONM	Songino Array	16.30	79	Pn	Pn	06 14 17.6	-1.3
	comp=Z,0.1nm,0.3s,baz=269,slow=12,SNR=2.4						
SONM				Lg	Lg	06 19 00.2	
	baz=271,slow=36,SNR=3.8						
ARU	Arti	17.14	311	P	P	06 14 35.5	+4.5
ARU				S	Sn	06 17 33.1	-6.6
GEYT	Alibeck	20.01	251	P	P	06 15 02.2	-0.6
	comp=Z,1.0nm,0.5s,baz=92,slow=7.4,SNR=2.1						
BOD	Bodaibo	21.77	49	eP	P	06 15 21.5	0.0
BOD				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKASG	Malin Array Be	34.31	296	P	P	06 17 14.9	-1.3
	comp=Z,0.1nm,0.2s,baz=63,slow=8.5,SNR=3.0						
FINES	FINESS Array B	34.42	315	P	P	06 17 16.2	-0.9
	comp=Z,1.1nm,0.7s,baz=95,slow=8.2,SNR=8.7						
ARCES	ARCESS Array B	35.17	329	P	P	06 17 22.4	-1.2
	comp=Z,2.7nm,0.9s,baz=84,slow=8.3,SNR=3.2						
BRTR	Keskin Array B	35.55	276	P	P	06 17 26.4	-0.9
	comp=Z,0.3nm,0.8s,baz=85,slow=7.5,SNR=3.0						
NB2	NORSAR Subarra	41.58	316	P	P	06 18 17.1	-0.4
	comp=Z,1.9nm,0.6s,baz=76,slow=8.6						
NOA	NORSAR Array B	41.58	316	P	P	06 18 16.7	-0.8
	comp=Z,0.5nm,0.5s,baz=75,slow=7.9,SNR=4.3						
ILAR	Eielson Array	61.87	22	P	P	06 20 46.5	-2.3
	comp=Z,0.2nm,0.6s,baz=317,slow=5.7,SNR=4.6						
YKA	Yellowknife Ar	69.70	8	P	P	06 21 39.1	-0.2
	comp=Z,0.6nm,0.8s,baz=344,slow=6.2,SNR=12						
TORD	Torodi Ar. Bea	74.06	272	P	P	06 22 04.4	-1.8
	comp=Z,0.2nm,0.4s,baz=42,slow=4.7,SNR=3.5						
WRA	Warramunga Arr	81.69	131	P	P	06 22 46.2	-2.2
	comp=Z,0.5nm,0.8s,baz=341,slow=5.3,SNR=3.9						
ASAR	Alice Springs	84.59	134	P	P	06 23 01.7	-1.7
	comp=Z,0.1nm,0.4s,baz=328,slow=5.2,SNR=3.9						
PDAR	Pinedale Array	89.68	9	P	P	06 23 27.6	-0.7
	comp=Z,0.2nm,0.6s,baz=4.3,slow=3.6,SNR=3.1						

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*ISCJB **24** 06:18:18.7±1.6,32.°50S±0.°07×70.°20W±0.°06, h112^{km}±13^{km},Error ellipse: s-maj=12.5km s-min=6.1km az=146.5*
*SJA **24** 06:18:18.1±0.6,32.°49S×70.°20W,h107^{km}±6^{km},ML2.6, MW3.3*
*GUC **24** 06:18:19.1±0.3,32.°35S×70.°06W,h81^{km}±13^{km},ML2.7*
ISC 24 06:18:19.6±3.2**,32.°48S**±0.°07×**70.°21W**±0.°07**,**
h104^{km}±26^{km}**,n12,**σ**0.**^{s}**46**/22**,2C,Chile-Argentina border**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUSP	Uspallata	0.74	70	i P	Pn	06 18 37.7	-0.4
PEL	Peldehue	0.77	211	⇑iP	Pn	06 18 37.6	-0.5
PEL				i S	Sn	06 18 51.6	-0.3
PEL				IAML		06 18 53.2	
	comp=E,236nm,0.2s						
ROCH	El Roble	0.83	234	⇑iP	Pn	06 18 38.7	-0.2
ROCH				i S	Sn	06 18 53.5	+0.2
ROCH				IAML		06 18 54.5	
	comp=E,498nm,0.3s						
ROC1	El Roble	0.84	234	i P	Pn	06 18 38.6	-0.3
ROC1				i S	Sn	06 18 53.6	+0.1
FCH	Farellones	0.84	185	eP	Pn	06 18 38.8	-0.3
FCH				i S	Sn	06 18 54.2	+0.5
FCH				IAML		06 18 55.5	
	comp=N,253nm,0.2s						
CLCH	Cerro Calan	0.95	197	i P	Pn	06 18 39.9	0.0
CLCH				i S	Sn	06 18 55.4	+0.3
CLCH				IAML		06 18 58.2	
	comp=E,225nm,0.2s						
RTLS	Leoncito	1.03	49	i P	Pn	06 18 41.0	+0.1
RTLS				IAML		06 18 41.3	
	comp=Z,66nm,0.2s						
RTLS				i S	Sn	06 18 58.2	+1.2
ARCO	CERRO ARCO	1.13	109	i P	Pn	06 18 41.6	-0.3
ARCO				i S	Sn	06 18 59.1	+0.3
ARCO				IAML		06 19 00.6	
	comp=Z,93nm,0.8s						
ASAL	Salagasta	1.16	96	i P	Pn	06 18 41.8	-0.4
ASAL				i S	Sn	06 18 58.8	-0.4
AAGR	Agrelo	1.31	118	i P	Pn	06 18 43.6	-0.2
LMEL	Las Melosas	1.36	180	eP	Pn	06 18 44.7	+0.2
LMEL				eS	Sn	06 19 04.1	+0.7
LMEL				IAML		06 19 09.3	
	comp=N,184nm,0.2s						
RTCV	Cerro Valdivia	1.54	67	i P	Pn	06 18 46.2	-0.4
RTCV				i S	Sn	06 19 07.1	0.0

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*ISCJB **24** 06:42:49.5±0.4,6.°86N±0.°03×73.°15W±0.°03,h160^{km}±3^{km}, mb3.4/5,Error ellipse: s-maj=5.7km s-min=3.9km az=19.1*
*IDC **24** 06:42:50.3±1.0,6.°84N×73.°05W,h156^{km}±33^{km},mb3.2/5, mb1 3.6/7,mb1mx3.2/32,mbtmp3.8/7,Error ellipse: s-maj=83.7km s-min=8.4km az=134.0*
*RSNC **24** 06:42:50.8±0.8,6.°81N×73.°15W,h154^{km}±4^{km},ML3.6, Mw3.8*
ISC 24 06:42:50.2±0.8**,6.°84N**±0.°03×**73.°14W**±0.°04**,h156**^{km}±6^{km}**,**
n36,σ**0.**^{s}**88**/56**,mb3.7**/5**,6C-5D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	189	eP	Pn	06 43 11.4	-0.3
BARC				eS	Sn	06 43 26.9	-1.3
BARC				i		06 43 29.3	
	comp=Z,1μm,0.3s						
BRRC	Barranca, Sant	0.62	295	⇑iP	Pn	06 43 13.3	+0.4
BRRC				eS	Sn	06 43 30.6	+0.3
BRRC				i		06 43 33.1	
	comp=Z,393nm,0.2s						
PAMC	Pamplona, Colo	0.66	42	eP	Pn	06 43 14.3	+0.5
PAMC				eS	Sn	06 43 31.5	-0.2
PAMC				i		06 43 33.7	
	comp=Z,487nm,0.2s						
RUSC	La Rusia	0.95	176	⇓iP	Pn	06 43 15.3	-0.5
RUSC				eS	Sn	06 43 34.3	-1.0
RUSC				i		06 43 37.2	
	comp=Z,353nm,0.3s						
PTBC	PUERTO BERRIO,	1.34	257	eP	Pn	06 43 18.1	-0.6
PTBC				eS	Sn	06 43 39.7	-0.8
PTBC				i		06 43 47.2	
	comp=Z,778nm,0.6s						
OCAC	Ocana	1.40	353	⇑eP	Pn	06 43 19.5	+0.1
OCAC				eS	Sn	06 43 42.2	+0.2
OCAC				i		06 43 47.3	
	comp=Z,585nm,0.4s						
TAMC	Tame, Arauca	1.40	107	⇑iP	Pn	06 43 19.6	+0.3
TAMC				eS	Sn	06 43 41.4	-0.3
TAMC				i		06 43 47.8	
	comp=Z,233nm,0.4s						
ZARC	Zaragoza, Cauc	1.82	291	eP	Pn	06 43 24.1	+0.4
ZARC				eS	Sn	06 43 49.6	+0.1
ZARC				i		06 43 56.0	
	comp=Z,509nm,0.5s						
CTAU	Tausa, Cundina	1.86	209	eP	Pn	06 43 26.1	+1.4
CTAB	Cerro Tablazo,	2.10	210	eP	Pn	06 43 28.7	+1.2
SMLC	San Martn de	2.15	335	eP	Pn	06 43 27.6	+0.1
SMLC				eS	Sn	06 43 56.5	+0.2
SMLC				i		06 44 00.1	
	comp=Z,410nm,0.1s						
CHIC	Chingaza	2.27	195	⇓eP	Pn	06 43 29.1	-0.3
CHIC				eS	Sn	06 43 58.4	-1.2
CHIC				i		06 44 07.8	
	comp=Z,158nm,0.6s						
ROSC	El Rosal	2.31	211	⇓eP	Pn	06 43 31.0	+1.2
ROSC				eS	Sn	06 43 60.0	-0.3
ROSC				i		06 44 09.4	
	comp=Z,532nm,0.5s						
ROSC	El Rosal	2.31	211	P	Pn	06 43 31.1	+1.2
	comp=Z,77nm,0.3s,baz=33,slow=11,SNR=123						
ROSC				S	Sn	06 44 01.3	+1.1
	comp=Z,26nm,0.3s,baz=92,slow=19,SNR=5.4						
HELC	Santa Helena	2.46	255	eP	Pn	06 43 31.0	-0.5
HELC				eS	Sn	06 44 03.7	+0.4
HELC				i		06 44 10.6	
	comp=Z,221nm,0.4s						
UREC	San Jos de Ur	2.54	291	eP	Pn	06 43 31.3	-0.9
UREC				eS	Sn	06 44 03.0	-1.5
UREC				i		06 44 12.4	
	comp=Z,215nm,0.2s						
VILC	Villavicencio,	2.77	191	⇑eP	Pn	06 43 34.5	-0.7
VILC				i		06 44 18.7	
	comp=Z,249nm,0.4s						
RREF	El Recreo	2.92	229	eP	Pn	06 43 36.6	-0.9
RREF				eS	Sn	06 44 13.9	-0.1
RREF				i		06 44 22.5	
	comp=Z,268nm,0.3s						
CODC	Agustn Codazz	3.09	354	eP	Pn	06 43 38.9	-0.1
CODC				eS	Sn	06 44 17.3	+0.5
CODC				i		06 44 26.9	
	comp=Z,67nm,0.3s						
SDV	Santo Domingo	3.21	51	P	Pn	06 43 40.7	0.0
	comp=Z,59nm,0.3s,baz=252,slow=5.9,SNR=810						
SDV				S	Sn	06 44 18.5	-1.3
	comp=Z,22nm,0.3s,baz=98,slow=22,SNR=12						
ANIL	Santa Ana	3.24	224	eP	Pn	06 43 42.1	+0.9
ANIL				eS	Sn	06 44 21.1	+0.4
ANIL				i		06 44 25.5	
	comp=Z,213nm,0.3s						
SJCC	San Jacinto, C	3.64	327	⇑eP	Pn	06 43 45.8	-0.3
SJCC				eS	Sn	06 44 27.0	-2.6
SJCC				i		06 44 32.9	
	comp=N,177nm,0.5s						
PLMC	San Jos del P	3.67	239	⇑eP	Pn	06 43 47.0	+0.5
PLMC				eS	Sn	06 44 28.6	-1.6
YOTC	Yotoco, Valle	4.27	228	⇓eP	Pn	06 43 54.1	-0.3
GUVC	San Jose del G	4.30	173	eP	Pn	06 43 53.6	-1.0
SMRC	Santa Marta, M	4.42	346	eP	Pn	06 43 56.5	+0.2
SMRC				i		06 44 51.1	
	comp=Z,72nm,0.4s						
PCON	Cinco Dias	5.54	216	eP	Pn	06 44 12.1	+0.7
POPC	Popayan, Colom	5.54	220	eP	Pn	06 44 10.9	-0.3
FLOC	Florencia	5.79	206	⇓eP	Pn	06 44 13.4	-0.9
FLOC				i		06 45 29.6	
	comp=Z,12nm,0.5s						
SOTA	Rioblanco	5.81	217	eP	Pn	06 44 16.6	+1.6
GCUF	Volcan Galeras	6.98	217	eP	Pn	06 44 29.2	-1.3
GCUF				i		06 45 54.4	
	comp=Z,6.4nm,0.5s						
TXAR	Lajitas Array	36.43	312	P	P	06 49 40.9	+0.7
	comp=Z,0.1nm,0.5s,baz=127,slow=10,SNR=3.7						
ULM	Lac du Bonnet	47.26	340	P	P	06 51 06.7	-0.9
	comp=Z,1.6nm,0.7s,baz=136,slow=7.0,SNR=4.8						
PDAR	Pinedale Array	48.05	324	P	P	06 51 15.0	+0.9
	comp=Z,0.3nm,0.5s,baz=123,slow=9.9,SNR=2.8						
SCHQ	Schefferville	48.12	5	P	P	06 51 14.7	+0.5
	comp=Z,1.5nm,0.5s,baz=181,slow=4.3,SNR=3.6						
YKA	Yellowknife Ar	63.24	340	P	P	06 53 01.6	-0.1
	comp=Z,0.7nm,0.6s,baz=133,slow=6.6,SNR=21						

IDC 24 06:43:09.0±2.0**,7.°94S**×**122.°34E,h0**^{km}**,mb3.2**/1**,**
mb1 3.4/3**,mb1mx3.2**/30**,mbtmp3.2**/3**,ML2.8**/2**,Error**
ellipse: s-maj=268.3km s-min=28.5km az=56.0,Flores
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.66	137	Pn	Pn	06 47 03.0	-1.1
	0.0nm,0.3s,baz=309,slow=15,SNR=3.5						
ASAR	Alice Springs	19.17	146	P	Pn	06 47 35.0	-0.2
	0.0nm,0.3s,baz=329,slow=13,SNR=9.3						
MKAR	Makanchi Array	65.09	331	P	P	06 53 51.4	0.0
	0.2nm,0.8s,baz=129,slow=8.4,SNR=2.1						

KRSC 24 07:24:51.3±2.1**,48.°14N**×**157.°65E,h17**^{km}±49^{km}**,ML3.9,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.73	339	S	Sn	07 26 07.8	+0.9
PAU	Pauzhetka	3.37	351	eS	Sn	07 26 26.4	+3.7
KDTR	Khodutka, Kamc	3.68	4	eP	Pn	07 25 51.0	+3.6
KDTR				eS	Sb	07 26 36.1	-4.0
RUS	Russkaya	4.33	7	eP	Pn	07 25 59.8	+3.5
RUS				S	Sn	07 26 51.6	+5.3
MTVR	Mutnovka	4.36	4	eS	Sn	07 26 52.7	+5.4
KRMR	Karymshinskiy	4.70	4	eP	Pn	07 26 05.4	+4.0
DALK	Dalny	4.95	8	eP	Pn	07 26 08.9	+4.2
UGLR	Uglovaya	5.13	8	eP	Pn	07 26 13.0	+5.6
AVH	Avacha	5.18	7	eP	Pn	07 26 11.2	+3.2
KOK	Koryaka	5.19	7	eP	Pn	07 26 13.7	+5.4
GNL	Ganaly	5.56	2	eP	Pn	07 26 18.6	+5.3

IDC 24 08:06:38.9±1.2**,29.°83S**×**75.°25E,h0**^{km}**,mb3.6**/5**,**
mb1 3.8/5**,mb1mx3.6**/32**,mbtmp3.6**/5**,MS3.4**/2**,Ms1 3.4**/2**,**
ms1mx2.9/27**,Error ellipse: s-maj=42.0km**
s-min=29.0km az=79.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	22.22	353	T	T	08 34 32.5	
	baz=174,slow=76,SNR=29						
H08S1	Diego Carcia H	22.22	353	T	T	08 34 32.8	
	baz=174,slow=76,SNR=16						
H08S3	Diego Garcia H	22.24	353	T	T	08 34 37.2	
	baz=174,slow=76,SNR=36						
BOSA	Boshof	43.37	259	LR	LR	08 28 51.5	

	comp=Z,44nm,18.1s,baz=186,slow=31						
ASAR	Alice Springs	52.27	98	P	P	08 15 52.1	-0.2
	0.5nm,0.5s,baz=251,slow=6.7,SNR=14						
WRA	Warramunga Arr	54.01	94	P	P	08 16 05.0	-0.1
	1.5nm,1.0s,baz=250,slow=7.4,SNR=5.4						
WRA				LR	LR	08 37 41.7	
	comp=Z,34nm,18.1s,baz=115,slow=34						
QSPA	South Pole Qui	60.31	180	P	P	08 16 49.2	-0.1
	0.5nm,0.5s,baz=278,slow=7.0,SNR=4.6						
MKAR	Makanchi Array	76.53	5	P	P	08 18 30.3	-0.3
	0.3nm,0.8s,baz=170,slow=4.4,SNR=3.5						
SONM	Songino Array	82.22	21	P	P	08 19 02.6	+0.9
	0.3nm,0.7s,baz=208,slow=4.9,SNR=3.5						
YKA	Yellowknife Ar	146.70	8	PKPbc	PKPdf	08 26 20.7	+0.5
	0.1nm,0.6s,baz=329,slow=3.5,SNR=5.5						

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*ISCJB **24** 08:14:50.3±0.8, 14°.48N±0°.07×93°.04W±0°.04, h51km, mb3.5/2, Error ellipse: s-maj=10.1km s-min=4.8km az=24.0*

*IDC **24** 08:14:50.0±3.0, 14°.73N×92°.89W, h0km, mb3.4/2, mb1 3.8/6, mb1mx3.5/35, mbtmp3.4/6, ML3.4/4, Error ellipse: s-maj=71.8km s-min=20.1km az=24.0*

*MEX **24** 08:14:51.1±0.4, 14°.36N×93°.04W, h20km±23km, MD4.0*

*NEIC **24** 08:14:51.1±0.0, 14°.36N×93°.04W, h20km, MD4.0(MEX), After MEX.*

ISC 24 08:14:52.4±1.2, **14°.47N**±0°.08×**93°.06W**±0°.05, **h51**km, **n23**, σ**1.s98**/33, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.88	60	ePg	Pn	08 15 05.7	-2.8
THIG				eSn	Sn	08 15 16.4	-4.0
THIG		0.88	60	eP	Pn	08 15 05.7	-2.8
THIG				i S	Sn	08 15 16.4	-4.0
PCIG		1.24	353	ePn	Pn	08 15 11.7	-1.7
PCIG				eSn	Sn	08 15 26.7	-2.3
PCIG		1.24	353	eP	Pn	08 15 11.7	-1.7
PCIG				eS	Sn	08 15 26.7	-2.3
CCIG	Comitan	2.01	26	ePn	Pn	08 15 25.2	+1.2
CCIG				eSn	Sn	08 15 52.4	+4.2
CCIG	Comitan	2.01	26	eP	Pn	08 15 25.2	+1.2
APG	El Apazote	2.56	78	Pn	Pn	08 15 30.5	-1.1
	8.7nm,0.3s,baz=265,slow=13,SNR=92						
APG				Sn	Sn	08 16 02.8	+1.0
	22nm,0.3s,baz=326,slow=16,SNR=13						
CMIG	Matias Romero	3.15	326	ePn	Pn	08 15 39.0	-0.5
CMIG				eSn	Sn	08 16 15.7	-0.1
CMIG	Matias Romero	3.15	326	eP	Pn	08 15 39.0	-0.5
CMIG				eS	Sn	08 16 15.7	-0.1
CMIG	Matias Romero	3.15	326	Pn	Pn	08 15 39.5	+0.1
	3.3nm,0.3s,baz=143,slow=12,SNR=60						
CMIG				Sn	Sn	08 16 14.6	-1.2
	5.1nm,0.3s,baz=90,slow=14,SNR=6.5						
HUIG	Huatulco	3.22	294	ePn	Pn	08 15 39.1	-1.4
HUIG				eSn	Sn	08 16 16.4	-1.2
HUIG	Huatulco	3.22	294	eP	Pn	08 15 39.1	-1.4
HUIG				i S	Sn	08 16 16.4	-1.2
TGUH	Tegucigalpa,Un	5.62	93	ePn	Pn	08 16 13.1	-0.3
ESTN	Estel	6.64	101	ePn	Pn	08 16 26.9	-0.6
TEIG	Tepich	7.32	38	ePn	Pn	08 16 36.0	-0.7
BOAB	BOACO BROADBAN	7.46	105	ePn	Pn	08 16 37.4	-1.3
JTS	JuntasAbangare	8.94	117	Pn	Pn	08 16 60.0	+1.0
	0.3nm,0.3s,baz=345,slow=20,SNR=2.3						
WBCY	West Bay, Gran	12.18	65	ePn	Pn	08 17 43.0	-0.2
059A	Moore Haven	16.68	40	ePn	Pn	08 18 41.3	-1.3
TXAR	Lajitas Array	17.75	328	Pn	P	08 18 59.4	+3.1
	0.1nm,0.3s,baz=142,slow=11,SNR=6.0						
TX31	Lajitas Ar. Si	17.75	328	ePn	P	08 18 58.4	+2.1
NVAR	Mina Array Bea	32.67	322	P	P	08 21 24.3	+4.3
	0.1nm,0.3s,baz=148,slow=8.6,SNR=2.6						
YKA	Yellowknife Ar	50.34	347	P	P	08 23 45.5	+1.6
	0.5nm,0.6s,baz=154,slow=7.3,SNR=12						

IDC 24 08:24:15.8±1.7, **6°.95S**×**123°.88E**, **h0**km, **mb3.3**/1, **mb1 3.4**/3, **mb1mx3.2**/31, **mbtmp3.2**/3, **ML2.9**/2, **Error ellipse: s-maj=215.1km s-min=28.6km az=59.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.42	143	Pn	Pn	08 28 07.5	-0.3
	0.0nm,0.3s,baz=316,slow=12,SNR=3.0						
ASAR	Alice Springs	19.20	151	P	P	08 28 41.8	+0.3
	0.1nm,0.3s,baz=328,slow=13,SNR=7.6						
MKAR	Makanchi Array	64.99	330	P	P	08 34 57.6	0.0
	0.3nm,0.8s,baz=117,slow=8.3,SNR=3.0						

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*IDC **24** 08:30:02.9±2.3, 37°.09N×140°.79E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/34, mbtmp3.2/4, ML2.3/1, Error ellipse: s-maj=42.4km s-min=28.3km az=45.0*

*ISCJB **24** 08:30:07.5±0.7, 36°.80N±0°.04×140°.66E±0°.06, h23km±5km, mb3.2/3, Error ellipse: s-maj=8.8km s-min=5.2km az=35.0*

*JMA **24** 08:30:08.6, 36°.83N×140°.55E, h10km±1km, M3.0*

JMA Felt I J1.

ISC 24 08:30:07.3±1.0, **36°.85N**±0°.04×**140°.66E**±0°.05, **h24**km±8km, **n19**, σ**1.s11**/21, **mb3.3**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.25	196	P	Pb	08 30 13.0	-0.5
JFFD	Fukushimafurud	0.25	343	P	Pn	08 30 14.0	-1.6
JFFD				S	Sb	08 30 17.7	-0.1
ONAJ	Iwakimizuishiy	0.28	24	P	Pn	08 30 15.3	-0.7
ONAJ				S	Sb	08 30 20.1	+1.6
JFK	Kawauchi	0.55	19	P	Pn	08 30 19.8	+0.1
JFK				S	Sn	08 30 27.7	-0.4
JSB	Shiboa	0.60	282	P	Pb	08 30 19.4	+0.2
JSB				S	Sb	08 30 26.8	-0.5
JFT	Otama	0.71	339	P	Pn	08 30 22.2	+0.2
JYT	Yasato	0.72	211	P	Pb	08 30 21.1	-0.1
JYT				S	Sb	08 30 29.8	-0.9
JAG	Ashikaga	1.05	247	P	Pn	08 30 26.2	-0.4
JAG				S	Sn	08 30 39.2	-1.4
MJAR	Matsushiro Arr	1.99	262	Pn	Pn	08 30 40.6	+1.1
	1.1nm,0.3s,baz=78,slow=14,SNR=75						
MJAR				Sn	Sn	08 31 05.8	+2.1
	1.3nm,0.3s,baz=69,slow=19,SNR=14						
MAT	Matsushiro	1.99	262	P	Pb	08 30 42.0	-0.8
MAT				S	Sn	08 31 05.0	+1.3
SONM	Songino Array	27.39	304	P	P	08 35 49.6	-1.3
	0.2nm,0.4s,baz=104,slow=10.0,SNR=3.4						
H11N2	WAKE ISLAND Hy	28.58	119	T	T	09 05 51.0	
	baz=312,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	28.59	120	T	T	09 05 52.8	
	baz=312,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	28.60	119	T	T	09 05 53.5	
	baz=312,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	29.27	122	T	T	09 06 41.6	
	baz=314,slow=75,SNR=38						
H11S3	WAKE ISLAND Hy	29.27	122	T	T	09 06 41.8	
	baz=314,slow=75,SNR=27						
H11S2	WAKE ISLAND Hy	29.29	122	T	T	09 06 43.3	
	baz=314,slow=75,SNR=19						
WRA	Warramunga Arr	56.80	187	P	P	08 39 50.0	+0.4
	0.2nm,0.6s,baz=5.0,slow=7.5,SNR=2.3						
ASAR	Alice Springs	60.52	187	P	P	08 40 17.0	+1.4
	0.1nm,0.4s,baz=3.6,slow=7.4,SNR=2.7						

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*MEX **24** 08:37:02.9±1.0, 14°.82N×93°.74W, h53km±109km, MD4.1*

*NEIC **24** 08:37:02.9±0.0, 14°.82N×93°.74W, h56km, MD4.1(MEX), After MEX.*

*IDC **24** 08:37:03.0±3.3, 15°.38N×93°.52W, h0km, mb3.2/2, mb1 3.5/6, mb1mx3.3/35, mbtmp3.2/6, ML3.1/4, MS2.4/2, Ms1 2.4/2, ms1mx2.3/16, Error ellipse: s-maj=93.6km s-min=18.9km az=33.0*

ISC 24 08:36:58.9±3.4, **14°.80N**±0°.07×**93°.80W**±0°.04, **h15**km±23km, **n24**, σ**2.s04**/35, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.06	32	ePn	Pn	08 37 19.6	+0.3
PCIG				eSn	Sb	08 37 32.3	-0.5
PCIG		1.06	32	eP	Pn	08 37 19.6	+0.3
PCIG				eS	Sb	08 37 32.3	-0.5
THIG		1.49	86	ePn	Pn	08 37 24.1	-1.2
THIG				eSn	Sn	08 37 42.4	-2.1
THIG		1.49	86	i P	Pn	08 37 24.1	-1.2
THIG				i S	Sn	08 37 42.4	-2.1
CCIG	Comitan	2.18	47	ePn	Pb	08 37 37.8	-0.4
CCIG				eSn	Sn	08 37 59.0	-2.8
CCIG				eSn	Sn	08 38 03.8	+2.1
CCIG	Comitan	2.18	47	eP	Pb	08 37 37.8	-0.4
CCIG				eS	Sn	08 37 59.0	-2.8
HUIG	Huatulco	2.42	294	ePn	Pn	08 37 38.7	+0.6
HUIG				eSn	Sn	08 38 03.8	-3.7
HUIG	Huatulco	2.42	294	eP	Pn	08 37 38.7	+0.6
HUIG				eS	Sn	08 38 03.8	-3.7
CMIG	Matias Romero	2.50	336	ePn	Pn	08 37 40.3	+1.1
CMIG				eSn	Sn	08 38 07.8	-1.8
CMIG	Matias Romero	2.50	336	eP	Pn	08 37 40.3	+1.1
CMIG				eS	Sn	08 38 07.8	-1.8
CMIG	Matias Romero	2.50	336	Pn	Pn	08 37 39.8	+0.6
	6.7nm,0.3s,baz=149,slow=11,SNR=96						
CMIG				Sn	Sn	08 38 07.1	-2.5
	18nm,0.3s,baz=114,slow=13,SNR=17						
APG	El Apazote	3.23	86	Pn	Pn	08 37 51.2	+1.7
	3.0nm,0.3s,baz=284,slow=13,SNR=24						
APG				Sn	Sn	08 38 30.6	+2.7
	4.0nm,0.3s,baz=300,slow=15,SNR=4.4						
APG				LR	LR	08 38 45.7	
	comp=Z,25nm,19.9s,baz=292,slow=34						
LVIG	Laguna Verde	5.50	333	ePn	Pn	08 38 20.9	+0.5
LVIG				eSn	Sn	08 39 20.8	-2.6
UNM	Universidad Na	6.83	312	ePn	Pn	08 38 39.1	+0.1
MYIG	Mrida	7.24	32	ePn	Pn	08 38 46.1	+1.8
JTS	JuntasAbangare	9.73	116	Pn	Pn	08 39 23.8	+5.3
	0.1nm,0.3s,baz=312,slow=14,SNR=2.1						
435B	Jarrell	16.28	348	ePn	Pn	08 40 47.2	0.0
TXAR	Lajitas Array	17.10	329	Pn	P	08 40 59.0	-0.4
	0.0nm,0.3s,baz=146,slow=9.8,SNR=2.3						
CPRX	Cap Rock	20.32	335	eP	P	08 41 34.2	-0.6
ROSC	El Rosal	21.58	115	eP	P	08 41 45.1	-3.6
BNM	Barren Site	22.48	331	eP	P	08 41 57.4	-0.8
TKL	Tuckaleechee C	22.64	22	LR	LR	08 51 38.7	
	comp=Z,32nm,20.9s,baz=346,slow=40						
YKA	Yellowknife Ar	49.86	348	P	P	08 45 53.5	+2.1
	0.1nm,0.5s,baz=154,slow=7.2,SNR=3.6						
ILAR	Eielson Array	61.42	337	P	P	08 47 18.8	+4.4
	0.2nm,0.6s,baz=114,slow=9.0,SNR=2.7						

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*ISCJB **24** 08:40:22.8±0.6, 39°.22N±0°.04×41°.94E±0°.04, h4km±9km, Error ellipse: s-maj=7.3km s-min=5.5km az=176.2*

*ISK **24** 08:40:22.7, 39°.22N×41°.96E, h8km, ML2.2/7*

*DDA **24** 08:40:24.0, 39°.23N×42°.03E, h7km±3km, ML2.9*

ISC 24 08:40:23.2±1.4, **39°.22N**±0°.04×**41°.98E**±0°.03, **h7**km±15km, **n14**, σ**0.s67**/19, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRTB	Varto-Mus	0.41	262	PG	Pg	08 40 30.8	-0.5
VRTB	Varto-Mus	0.41	262	i P	Pg	08 40 31.8	+0.5
VRTB				i S	Sb	08 40 40.6	+1.2
VRTB				IAML_P			
	comp=Z,3μm,0.2s						
MLAZ	Malazgirt-MUS	0.45	99	PG	Pg	08 40 32.5	+0.5
MLAZ				SG	Sb	08 40 39.2	-1.3
GURO	Guroymak-BITLI	0.67	176	PG	Pg	08 40 35.2	-0.9
TUTA	Tutak	0.67	74	i P	Pg	08 40 36.3	0.0
TUTA				i S	Sb	08 40 46.1	-0.9
TUTA				IAML_P			
	comp=Z,3μm,0.1s						
ADCV	BITLIS_Adilcev	0.71	125	i P	Pg	08 40 37.3	+0.4
ADCV				i S	Sb	08 40 48.5	+0.5
ADCV				IAML_P			
	comp=Z,288nm,0.2s						
KOPR	Koprukoy-ERZUR	0.78	353	PG	Pg	08 40 38.1	-0.2
HOMI	Horasan	0.83	356	i P	Pb	08 40 40.2	+0.1
HOMI				IAML_P			
	comp=Z,2μm,0.1s						
AGRB	Hanur-Agry	0.86	65	PG	Pg	08 40 39.7	-0.1
AGRB				SG	Sb	08 40 52.6	+0.2
BNGB	Bingl	1.04	258	PG	Pg	08 40 42.8	-0.3
YEDI	Yedisu-Bingol	1.14	282	PN	Pg	08 40 44.3	-0.7
AKDM	Akdamar-Van	1.18	138	PN	Pg	08 40 45.9	0.0
SVAN	Silvan-Diyarba	1.23	210	PN	Pb	08 40 46.7	0.0
MAZI	Mazidag	2.13	215	PN	Pn	08 40 59.5	+0.2

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*ISCJB **24** 08:59:56.1±0.6, 1°.12N±0°.02×79°.08W±0°.03, h17km±4km, mb4.2/31, Error ellipse: s-maj=4.7km s-min=2.7km az=7.7*

*RSNC **24** 08:59:56.1±1.0, 1°.00N×79°.20W, h32km±8km, ML3.8, Mw4.3*

*IGQ **24** 08:59:59.1±0.4, 1°N±3°×7°9W±°, h12km, M4.7/35, MLv4.7/35*

*NEIC **24** 09:00:00.5±0.4, 0°.98N×78°.46W, h10km, mb4.5/24, MD4.6(IGQ), Error ellipse: s-maj=11.0km s-min=7.1km az=73.0*

NEIC Felt at Apuela, Esmeraldas, Quito and San Lorenzo, Ecuador.

*IDC **24** 09:00:02.9±3.3, 1°.13N×78°.75W, h80km±28km, mb3.4/11, mb1 3.6/14, mb1mx3.6/32, mbtmp3.8/14, MS3.0/2, Ms1 3.0/2, ms1mx2.8/16, Error ellipse: s-maj=25.0km s-min=14.5km az=56.0*

ISC 24 08:59:55.5±1.2, **1°.04N**±0°.02×**79°.02W**±0°.03, **h15**km±8km, **n201**, σ**1.s36**/239, **mb4.3**/31, **8C-10D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAC1	Pacto, Paraso	0.80	163	P	Pb	09 00 11.2	-0.1
PAC1				S	Sb	09 00 22.1	+0.2
PAC1	Pacto, Paraso	0.80	163	P	Pb	09 00 11.2	-0.1
PAC1				S	Sb	09 00 22.1	+0.2
CTUM2	Tumaco	0.83	21	eP	Pn	09 00 12.1	-0.6
CTUM2				eS	Sn	09 00 25.0	+0.1
CTUM2				IAML		09 00 38.5	
	comp=Z,7μm,0.5s						
CTUM2	Tumaco	0.83	21	eP	Pn	09 00 12.1	-0.6
CTUM2				eS	Sn	09 00 25.0	+0.1
CTUM2				IAML		09 00 38.5	
	comp=Z,7μm,0.5s						
TUMC	Tumaco	0.84	21	⇑iP	Pn	09 00 12.2	-0.6
TUMC				ePg	Pb	09 00 13.3	+1.5
TUMC				eS	Sn	09 00 24.9	+0.1
TUMC				i		09 00 38.5	
	comp=Z,7μm,0.5s						
TUMC	Tumaco	0.84	21	⇑iP	Pn	09 00 12.2	-0.6
TUMC				ePg	Pb	09 00 13.3	+1.5
TUMC				eS	Sn	09 00 24.9	+0.1
TUMC				i		09 00 38.5	
	comp=Z,7μm,0.5s						
CUSE	Cuicocha Este	0.96	139	P	Pn	09 00 14.6	-0.3
CUSE				S	Sb	09 00 27.6	+0.8
CUSE	Cuicocha Este	0.96	139	P	Pn	09 00 14.6	-0.3
CUSE				S	Sb	09 00 27.6	+0.8
URCU	Urcuqui	0.97	128	P	Pn	09 00 15.5	+0.6
URCU				S	Sn	09 00 28.8	+0.1
URCU	Urcuqui	0.97	128	P	Pn	09 00 15.5	+0.6
URCU				S	Sn	09 00 28.8	+0.1
OTAV	Otavalo	0.98	144	⇑iP	Pb	09 00 14.4	0.0
OTAV				ePg	Pn	09 00 15.0	-0.1
OTAV				eS	Sn	09 00 29.6	+0.7
OTAV				i		09 00 30.8	
	comp=Z,2μm,0.3s						
OTAV	Otavalo	0.98	144	ePg	Pb	09 00 14.5	0.0
OTAV				ePn	Pn	09 00 22.4	+7.3
OTAV	Otavalo	0.98	144	P	Pn	09 00 14.7	-0.4
OTAV	Otavalo	0.98	144	⇑iP	Pb	09 00 14.4	0.0
OTAV				ePg	Pn	09 00 15.0	-0.1
OTAV				eS	Sn	09 00 29.6	+0.7
OTAV				i		09 00 30.8	
	comp=Z,2μm,0.3s						
OTAV	Otavalo	0.98	144	P	Pn	09 00 14.7	-0.4
CUIC	Cuicocha-Domo	0.98	138	P	Pn	09 00 15.0	-0.2
CUIC	Cuicocha-Domo	0.98	138	P	Pn	09 00 15.0	-0.2
CUSW	Cuicocha Oeste	1.00	138	P	Pn	09 00 15.3	-0.1
CUSW	Cuicocha Oeste	1.00	138	P	Pn	09 00 15.3	-0.1
IMBA	Imbabura, San	1.12	133	P	Pn	09 00 18.3	+1.2
IMBA				S	Sn	09 00 35.5	+3.1
IMBA	Imbabura, San	1.12	133	P	Pn	09 00 18.3	+1.2
IMBA				S	Sn	09 00 35.5	+3.1
YAHU	Yahuarcocha	1.16	125	P	Pn	09 00 18.7	+1.1
YAHU				S	Sn	09 00 35.5	+2.1
YAHU	Yahuarcocha	1.16	125	P	Pn	09 00 18.7	+1.1
YAHU				S	Sn	09 00 35.5	+2.1
CMBC	Cumbal	1.20	95	⇓eP	Pn	09 00 18.2	0.0
CMBC				i		09 00 37.8	
	comp=Z,788nm,0.4s						
CMBC	Cumbal	1.20	95	⇓eP	Pn	09 00 18.2	0.0
CMBC				i		09 00 37.8	
	comp=Z,788nm,0.4s						
TULM	Tulcn-Chalpat	1.27	104	P	Pg	09 00 20.8	+0.6
TULM	Tulcn-Chalpat	1.27	104	P	Pg	09 00 20.8	+0.6
GGPC	Guagua Pichinc	1.28	161	P	Pg	09 00 19.8	-0.5
GGPC				S	Sn	09 00 36.9	+0.3
GGPC	Guagua Pichinc	1.28	161	P	Pg	09 00 19.8	-0.5
GGPC				S	Sn	09 00 36.9	+0.3
ATUL	Tulcn	1.32	101	P	Pg	09 00 21.4	+0.3
ATUL	Tulcn	1.32	101	P	Pg	09 00 21.4	+0.3
MAG1	Magdalena	1.33	214	P	Pb	09 00 19.8	-0.5
MAG1	Magdalena	1.33	214	P	Pb	09 00 19.8	-0.5
CAYA	Cayambe	1.41	133	P	Pg	09 00 22.9	+0.2
CAYA				S	Sg	09 00 41.9	+0.8
CAYA	Cayambe	1.41	133	P	Pg	09 00 22.9	+0.2
CAYA				S	Sg	09 00 41.9	+0.8
NINA	Atacazo Ninahu	1.47	164	P	Pb	09 00 22.7	-0.3
NINA	Atacazo Ninahu	1.47	164	P	Pb	09 00 22.7	-0.3
GCUF	Volcan Galeras	1.69	84	⇓iP	Pb	09 00 26.0	-0.6
GCUF				i		09 00 54.6	
	comp=Z,599nm,0.3s						
GCUF	Volcan Galeras	1.69	84	⇓iP	Pb	09 00 26.0	-0.6
GCUF				i		09 00 54.6	
	comp=Z,599nm,0.3s						
PITA	Cotopaxi Volc	1.69	160	P	Pg	09 00 27.0	-1.1
PITA	Cotopaxi Volc	1.69	160	P	Pg	09 00 27.0	-1.1
ANTI	Antisana	1.71	150	P	Pg	09 00 27.4	-1.0
ANTI	Antisana	1.71	150	P	Pg	09 00 27.4	-1.0
ANTG	Antisana-Guama	1.71	153	P	Pb	09 00 27.1	0.0
ANTG				S	Sb	09 00 48.4	-0.1
ANTG	Antisana-Guama	1.71	153	P	Pb	09 00 27.1	0.0
ANTG				S	Sb	09 00 48.4	-0.1
ANTS	Antisana-Sarah	1.75	151	P	Pb	09 00 27.8	+0.2
ANTS				S	Sb	09 00 50.3	+0.7
ANTS	Antisana-Sarah	1.75	151	P	Pb	09 00 27.8	+0.2
ANTS				S	Sb	09 00 50.3	+0.7
ANTM	Antisana-La Mi	1.75	153	P	Pb	09 00 27.7	-0.1
ANTM				S	Sb	09 00 49.7	-0.1
ANTM	Antisana-La Mi	1.75	153	P	Pb	09 00 27.7	-0.1
ANTM				S	Sb	09 00 49.7	-0.1
NAS2	Nasa	1.76	162	P	Pg	09 00 28.3	-1.1
NAS2	Nasa	1.76	162	P	Pg	09 00 28.3	-1.1
PAST	Pastocalle	1.76	168	P	Pb	09 00 27.6	-0.2
PAST	Pastocalle	1.76	168	P	Pb	09 00 27.6	-0.2
ILLI	Illinizas Sur	1.76	170	P	Pb	09 00 27.2	-0.7
ILLI				S	Sb	09 00 49.9	-0.2
ILLI	Illinizas Sur	1.76	170	P	Pb	09 00 27.2	-0.7
ILLI				S	Sb	09 00 49.9	-0.2
CAMI	Rancho Maria	1.78	163	P	Pb	09 00 27.5	-0.6
CAMI	Rancho Maria	1.78	163	P	Pb	09 00 27.5	-0.6
VC1	Cotopaxi 1	1.78	160	P	Pb	09 00 28.4	+0.3
VC1	Cotopaxi 1	1.78	160	P	Pb	09 00 28.4	+0.3
CPAS2	Pasto	1.78	84	eP	Pg	09 00 28.9	-0.9
CPAS2				eS	Sb	09 00 50.8	+0.4
CPAS2				IAML		09 01 07.4	
	comp=Z,833nm,0.4s						
CPAS2	Pasto	1.78	84	eP	Pg	09 00 28.9	-0.9
CPAS2				eS	Sb	09 00 50.8	+0.4
CPAS2				IAML		09 01 07.4	
	comp=Z,833nm,0.4s						
BVC2	Cotopaxi Volca	1.79	160	P	Pg	09 00 28.8	-1.2
BVC2	Cotopaxi Volca	1.79	160	P	Pg	09 00 28.8	-1.2
BREF	Cotopaxi Volca	1.79	161	P	Pg	09 00 30.0	0.0
BREF	Cotopaxi Volca	1.79	161	P	Pg	09 00 30.0	0.0
REVS	Reventador Sur	1.80	129	P	Pn	09 00 21.3	-5.0
REVS	Reventador Sur	1.80	129	P	Pn	09 00 21.3	-5.0
BTAM	Cotopaxi Volca	1.81	160	P	Pg	09 00 29.2	-1.2
BTAM				S	Sg	09 00 53.0	-1.0
BTAM	Cotopaxi Volca	1.81	160	P	Pg	09 00 29.2	-1.2
BTAM				S	Sg	09 00 53.0	-1.0
COV1	Cotopaxi Volc	1.82	158	P	Pb	09 00 29.0	+0.1
COV1	Cotopaxi Volc	1.82	158	P	Pb	09 00 29.0	+0.1
BMOR	Cotopaxi Volca	1.84	162	P	Pb	09 00 29.4	+0.1
BMOR				S	Sg	09 00 53.7	-1.3
BMOR	Cotopaxi Volca	1.84	162	P	Pb	09 00 29.4	+0.1
BMOR				S	Sg	09 00 53.7	-1.3
AQUE	Quevedo	2.12	193	P	Pn	09 00 30.1	-0.4
AQUE	Quevedo	2.12	193	P	Pn	09 00 30.1	-0.4
GRGC	Isla de Gorgon	2.13	24	⇑eP	Pn	09 00 29.9	-0.7
GRGC				i		09 01 08.4	
	comp=Z,434nm,0.5s						
GRGC	Isla de Gorgon	2.13	24	⇑eP	Pn	09 00 29.9	-0.7
GRGC				i		09 01 08.4	
	comp=Z,434nm,0.5s						
CRUC	La Cruz	2.14	76	⇑iP	Pb	09 00 32.9	-1.3
CRUC				eS	Sn	09 00 58.8	+1.3
CRUC				i		09 01 10.3	
	comp=Z,588nm,0.6s						
CRUC	La Cruz	2.14	76	⇑iP	Pb	09 00 32.9	-1.3
CRUC				eS	Sn	09 00 58.8	+1.3
CRUC				i		09 01 10.3	
	comp=Z,588nm,0.6s						
PIS1	Pisayambo	2.18	163	P	Pb	09 00 35.1	+0.2
PIS1	Pisayambo	2.18	163	P	Pb	09 00 35.1	+0.2
PISA	Pisayambo	2.18	163	P	Pb	09 00 35.2	+0.3
PISA	Pisayambo	2.18	163	P	Pb	09 00 35.2	+0.3
SAGO	Sagoatoa	2.20	171	P	Pb	09 00 35.0	-0.4
SAGO	Sagoatoa	2.20	171	P	Pb	09 00 35.0	-0.4
ARDO	Archidona, Ten	2.36	149	P	Pb	09 00 37.0	-0.7
ARDO	Archidona, Ten	2.36	149	P	Pb	09 00 37.0	-0.7
JUI6	Juive	2.51	167	P	Pb	09 00 39.4	-1.0
JUI6	Juive	2.51	167	P	Pb	09 00 39.4	-1.0
POND	Pondoa	2.51	167	P	Pb	09 00 39.1	-1.4
POND	Pondoa	2.51	167	P	Pb	09 00 39.1	-1.4
RUN5	Runtun	2.51	166	P	Pb	09 00 39.7	-0.8
RUN5	Runtun	2.51	166	P	Pb	09 00 39.7	-0.8
BRUN	Tungurahua Vol	2.52	166	P	Pb	09 00 39.3	-1.4
BRUN	Tungurahua Vol	2.52	166	P	Pb	09 00 39.3	-1.4
BBIL	Ulba Tungurahu	2.53	168	P	Pb	09 00 40.3	-0.5
BBIL	Ulba Tungurahu	2.53	168	P	Pb	09 00 40.3	-0.5
BIL2	Estacion Bilba	2.53	168	P	Pb	09 00 39.8	-1.0
BIL2	Estacion Bilba	2.53	168	P	Pb	09 00 39.8	-1.0
BULB	Ulba Tungurahu	2.53	166	P	Pb	09 00 39.5	-1.5
BULB	Ulba Tungurahu	2.53	166	P	Pb	09 00 39.5	-1.5
RETU	Refugio	2.54	167	P	Pb	09 00 39.7	-1.4
RETU	Refugio	2.54	167	P	Pb	09 00 39.7	-1.4
IGUA	Igualata	2.54	171	P	Pb	09 00 40.1	-1.1
IGUA	Igualata	2.54	171	P	Pb	09 00 40.1	-1.1
BMAS	Trigal station	2.58	168	P	Pb	09 00 40.8	-0.9
BMAS	Trigal station	2.58	168	P	Pb	09 00 40.8	-0.9
ARRY	Arrayan	2.59	167	P	Pb	09 00 40.4	-1.5
ARRY	Arrayan	2.59	167	P	Pb	09 00 40.4	-1.5
BPAT	Tungurahua Vol	2.59	167	P	Pb	09 00 40.5	-1.5
BPAT	Tungurahua Vol	2.59	167	P	Pb	09 00 40.5	-1.5
PAT1	Patacocha	2.59	167	P	Pb	09 00 41.8	-0.2
PAT1	Patacocha	2.59	167	P	Pb	09 00 41.8	-0.2
SOTA	Rioblanco	2.65	66	⇓eP	Pn	09 00 40.2	+2.0
SOTA				eS	Sb	09 01 14.2	-1.4
SOTA				i		09 01 31.2	
	comp=Z,416nm,0.7s						
SOTA	Rioblanco	2.65	66	⇓eP	Pn	09 00 40.2	+2.0
SOTA				eS	Sb	09 01 14.2	-1.4
SOTA				i		09 01 31.2	
	comp=Z,416nm,0.7s						
PUYO	Puyo, Santa Ro	2.70	158	P	Pb	09 00 44.1	+0.4
PUYO	Puyo, Santa Ro	2.70	158	P	Pb	09 00 44.1	+0.4
POPC	Popayan, Colom	2.78	57	⇓eP	Pn	09 00 40.9	+1.2
POPC				eS	Sn	09 01 12.7	-0.5
POPC	Popayan, Colom	2.78	57	⇓eP	Pn	09 00 40.9	+1.2
POPC				eS	Sn	09 01 12.7	-0.5
PCON	Cinco Dias	2.92	64	eP	Pn	09 00 44.0	+2.0
PCON				eS	Sb	09 01 21.8	-1.7
PCON				i		09 01 29.9	
	comp=Z,262nm,0.6s						
PCON	Cinco Dias	2.92	64	eP	Pn	09 00 44.0	+2.0
PCON				eS	Sb	09 01 21.8	-1.7
PCON				i		09 01 29.9	
	comp=Z,262nm,0.6s						
MILO	Milagro-Astudi	3.34	189	P	Pn	09 00 45.9	-1.3
MILO	Milagro-Astudi	3.34	189	P	Pn	09 00 45.9	-1.3
MALC	Bahia Malaga	3.40	30	eP	Pn	09 00 48.4	+0.3
MALC				eS	Sn	09 01 27.9	-0.4
MALC				i		09 01 51.2	
	comp=Z,218nm,0.7s						
MALC	Bahia Malaga	3.40	30	eP	Pn	09 00 48.4	+0.3
MALC				eS	Sn	09 01 27.9	-0.4
MALC				i		09 01 51.2	
	comp=Z,218nm,0.7s						

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FLOC  Florencia            3.41  81 eP     Pn      09 00 50.7  +2.4
FLOC                                i              09 01 52.2
      comp=Z,149nm,0.8s
FLOC  Florencia            3.41  81 eP     Pn      09 00 50.7  +2.4
FLOC                                i              09 01 52.2
      comp=Z,149nm,0.8s
COHC  Cochancay            3.49 184  P     Pn      09 00 49.0  -0.3
COHC  Cochancay            3.49 184  P     Pn      09 00 49.0  -0.3
MARP  Paez Belalcaza       3.55  60 eP     Pn      09 00 52.6  +2.2
MARP                                eS     Sn      09 01 31.3  -1.0
MARP                                i              09 01 44.5
      comp=Z,61nm,0.6s
MARP  Paez Belalcaza       3.55  60 eP     Pn      09 00 52.6  +2.2
MARP                                eS     Sn      09 01 31.3  -1.0
MARP                                i              09 01 44.5
      comp=Z,61nm,0.6s
SALI  Salinas              3.76 212  P     Pn      09 00 53.4  +0.4
SALI  Salinas              3.76 212  P     Pn      09 00 53.4  +0.4
MORR  Playas El Morr       3.88 200  P     Pn      09 00 54.3  -0.4
MORR  Playas El Morr       3.88 200  P     Pn      09 00 54.3  -0.4
YOTC  Yotoco, Valle        3.96  42 eP     Pn      09 00 55.1  -0.9
YOTC                                eS     Sn      09 01 42.6  +0.3
YOTC  Yotoco, Valle        3.96  42 eP     Pn      09 00 55.1  -0.9
YOTC                                eS     Sn      09 01 42.6  +0.3
PTLC  Puerto Leguiza       4.31 101⇓eP     Pn      09 01 03.6  +3.0
PTLC                                eS     Sg      09 02 09.3  -4.8
PTLC  Puerto Leguiza       4.31 101⇓eP     Pn      09 01 03.6  +3.0
PTLC                                eS     Sg      09 02 09.3  -4.8
PLMC  San Jos del P        4.72  35 eP     Pn      09 01 06.7  +0.4
PLMC                                i              09 02 10.6
      comp=Z,179nm,0.2s
PLMC  San Jos del P        4.72  35 eP     Pn      09 01 06.7  +0.4
PLMC                                i              09 02 10.6
      comp=Z,179nm,0.2s
GONZ  Gonzanam             5.25 184  P     Pn      09 01 15.5  +1.5
RREF  El Recreo            5.31  44 eP     Pn      09 01 16.5  +1.6
RREF  El Recreo            5.31  44 eP     Pn      09 01 16.5  +1.6
MCRA  Macar, Loja          5.45 190  P     Pn      09 01 16.0  -0.4
MCRA  Macar, Loja          5.45 190  P     Pn      09 01 16.0  -0.4
ROSC  El Rosal             6.03  51 ePn    Pn      09 01 27.2  +2.6
ROSC  El Rosal             6.03  51  P     Pn      09 01 26.1  +1.5
      comp=Z,2.8nm,0.3s,baz=98,slow=11,SNR=21
ROSC                                 S     Sn      09 02 31.9  -1.6
      comp=Z,0.6nm,0.3s,baz=53,slow=20,SNR=2.2
ROSC                                 LR    LR      09 04 01.9
      comp=Z,224nm,20.1s,baz=183,slow=42
CHIC  Chingaza             6.38  56 eP     Pn      09 01 32.0  +2.7
CHIC  Chingaza             6.38  56 eP     Pn      09 01 32.0  +2.7
BCIP  Isla Barro Col       8.12 354 ePn    Pn      09 01 58.5  +5.5
ATAH  Atahualpa            8.14 176  P     Pn      09 01 53.7  +0.1
      comp=Z,1.2nm,0.3s,baz=17,slow=11,SNR=7.9
ATAH                                 S     Sn      09 03 25.6   0.0
      comp=Z,0.6nm,0.3s,baz=72,slow=20,SNR=1.8
JTS   JuntasAbangare      10.92 328 ePn    Pn      09 02 35.0  +3.5
JTS   JuntasAbangare      10.92 328  P     Pn      09 02 34.1  +2.7
      comp=Z,0.2nm,0.3s,baz=230,slow=19,SNR=5.8
SDV   Santo Domingo       11.43  47 ePn    Pn      09 02 38.9  +0.4
SDV   Santo Domingo       11.43  47  P     Pn      09 02 39.2  +0.7
      comp=Z,0.5nm,0.3s,baz=218,slow=11,SNR=8.9
NNA   Nana                13.12 171  LR    LR      09 08 08.7
      comp=Z,51nm,20.2s,baz=332,slow=37
PTGA  Pitinga             19.14  95 eP     Pn      09 04 19.1  -0.2
      comp=Z,6.7nm,0.9s
PTGA  Pitinga             19.14  95  P     P       09 04 17.7  -0.7
      comp=Z,1.1nm,0.3s,baz=277,slow=14,SNR=18
CCIG  Comitan             19.91 320 eP     Pn      09 04 35.7  +7.0
      comp=Z,5.7nm,1.1s
LPAZ  La Paz              20.30 148 eP     P       09 04 32.7  +1.0
      comp=Z,4.7nm,0.6s
LPAZ  La Paz              20.30 148  P     P       09 04 31.6   0.0
      comp=Z,4.7nm,0.6s,baz=327,slow=8.2,SNR=23
SJG   San Juan            21.16  36 eP     P       09 04 41.0  +0.7
      comp=Z,18nm,1.0s
CBYP  Canovanas           21.46  36 eP     P       09 04 44.4  +0.8
      comp=Z,31nm,1.1s
MNMC  Minye Minye         22.08 156 eP     P       09 04 52.9  +2.4
      comp=Z,9.6nm,0.8s
CMIG  Matias Romero       22.32 317  P     P       09 04 54.7  +1.9
      comp=Z,0.7nm,0.5s,baz=82,slow=7.1,SNR=3.3
PB11  IPOC Station P      22.62 157 eP     P       09 04 59.1  +3.0
LVC   Limon Verde         25.49 158  P     P       09 05 24.8  +1.1
      comp=Z,0.8nm,0.4s,baz=291,slow=14,SNR=2.0
LRAL  Lakeview Retre      32.70 348 eP     P       09 06 36.3  +8.8
      comp=Z,4.4nm,1.1s
CPCT  Cooper Cave         34.62 352 eP     P       09 06 44.3  +0.1
      comp=Z,6.8nm,1.1s
BDFB  Brasilia            34.83 120  P     P       09 06 44.5  -1.9
      comp=Z,1.2nm,0.6s,baz=298,slow=8.7,SNR=3.2
V48A  Smith Brothers      35.28 349 eP     P       09 06 50.1  +0.2
      comp=Z,6.3nm,0.8s
TXAR  Lajitas Array       36.65 322  P     P       09 07 04.4  +2.5
      comp=Z,0.1nm,0.3s,baz=138,slow=9.6,SNR=2.0
TXAR                                 PcP   PcP     09 09 24.2  -0.6
      comp=Z,0.5nm,0.7s,baz=146,slow=5.6,SNR=5.6
T25A  Trinidad            42.89 330 eP     P       09 08 02.3  +8.4
      comp=Z,3.9nm,0.7s
SDCO  Great Sand Dun      43.91 329 eP     P       09 08 05.3  +3.2
      comp=Z,4.9nm,0.9s
SMCO  Snowmass            45.75 329 eP     P       09 08 26.0  +9.0
      comp=Z,2.7nm,0.8s
PV13  Radium Mtn., P      45.97 327 eP     P       09 08 26.7  +8.2
      comp=Z,5.7nm,0.8s
PV03  Paradox Valley      46.05 327 eP     P       09 08 28.0  +8.9
      comp=Z,4.8nm,0.8s
PV12  Saucer Basin,       46.08 327 eP     P       09 08 28.5  +9.2
      comp=Z,6.7nm,0.8s
PV17  East Wray Mesa      46.13 327 eP     P       09 08 28.7  +8.9
      comp=Z,5.6nm,0.8s
GLA   Glamis              46.31 317 eP     P       09 08 32.5   +12
      comp=Z,13nm,0.9s
BATG  Bathurst New B      47.42  12 eP     P       09 08 29.8  +0.4
      comp=Z,12nm,1.2s
RSSD  Black Hills         48.32 336 eP     P       09 08 45.9  +9.3
      comp=Z,7.6nm,0.8s
PDAR  Pinedale Array      49.74 331  P     P       09 08 48.0  +0.3
      comp=Z,0.1nm,0.4s,baz=135,slow=8.8,SNR=2.4
ULM   Lac du Bonnet       51.09 346 eP     P       09 09 04.3  +6.9
      comp=Z,5.6nm,0.8s
ULM   Lac du Bonnet       51.09 346  P     P       09 08 54.2  -3.2
      comp=Z,2.1nm,0.7s,baz=166,slow=5.4,SNR=5.1
NV11  Mina Array Sit      51.67 321 eP     P       09 09 11.6  +9.5
      comp=Z,0.3nm,0.9s
NV01  Mina Array Sit      51.76 321 eP     P       09 09 12.3  +9.3
NVAR  Mina Array Bea      51.76 321  P     P       09 09 04.6  +1.6
      comp=Z,0.4nm,0.7s,baz=117,slow=9.3,SNR=2.7
BOZ   Bozeman (W)         52.83 332 eP     P       09 09 19.4  +8.7
      comp=Z,3.8nm,1.0s
SCHQ  Schefferville       54.54   9 eP     P       09 09 22.1  -0.8
      comp=Z,12nm,1.0s
SCHQ  Schefferville       54.54   9  P     P       09 09 21.5  -1.4
      comp=Z,4.5nm,0.7s,baz=213,slow=4.3,SNR=10.0
YKA   Yellowknife Ar      66.83 343  P     P       09 10 45.0  -1.5
      comp=Z,0.9nm,0.7s,baz=138,slow=6.0,SNR=27
SFJD  Kangerlussuaq       68.77  12 eP     P       09 11 05.3  +6.8
      comp=Z,8.6nm,0.9s
RES   Resolute Bay        74.16 356 eP     P       09 11 38.1  +7.0
      comp=Z,2.4nm,1.1s
ILAR  Eielson Array       79.77 336  P     P       09 12 01.2  -1.6
      comp=Z,0.4nm,0.8s,baz=145,slow=4.1,SNR=4.4
TORD  Torodi Ar. Bea      80.72  77  P     P       09 12 07.2  -1.8
      comp=Z,0.4nm,0.6s,baz=266,slow=5.3,SNR=2.8
KURBB Kurchatov Arra     125.08  17  PKP   PKPdf   09 18 54.0  -1.5
      comp=Z,0.5nm,0.7s,baz=347,slow=1.5,SNR=4.4
MKAR  Makanchi Array     129.62  17  PKP   PKPdf   09 19 01.9  -2.4
      comp=Z,0.4nm,0.8s,baz=342,slow=2.7,SNR=3.9
ASAR  Alice Springs      140.96 232  PKP   PKPdf   09 19 22.8  -3.3
      comp=Z,0.2nm,0.7s,baz=124,slow=4.2,SNR=3.4
WRA   Warramunga Arr     142.35 238  PKP   PKPdf   09 19 26.1  -2.5
      comp=Z,0.5nm,0.8s,baz=110,slow=2.4,SNR=4.5
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ISCJB ***24*** *09:15:36.0±0.4, 50°.25N±0°.03×18°.96E±0°.03, h0^{km}, Error ellipse: s-maj=4.7km s-min=2.2km az=20.8*

IPEC ***24*** *09:15:37.6±0.2, 50°.17N×19°.06E, h3^{km}±1^{km}, ML2.2/3, Error ellipse: s-maj=2.6km s-min=1.0km az=169.0*

PRU ***24*** *09:15:37.3±0.0, 50°.26N×18°.96E, h0^{km}*

IDC ***24*** *09:15:38.1±2.5, 50°.10N×19°.01E, h0^{km}, mb1 3.5/4, mb1mx3.1/47, mbtmp3.4/4, ML2.8/4, Error ellipse: s-maj=40.5km s-min=8.8km az=134.0*

ISC 24 09:15:37.0±0.7**, 50°.21N**±0°.03×**19°.03E**±0°.02**, h0^{km}, n40, σ1^{s}25**/62**, 5C-1D, Poland**

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Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op     ISC       h  m  s      ISC
CHZP  Chorzow              0.08 341 ePg    Pg      09 15 40.4  +1.9
CHZP                                eSg    Sg      09 15 42.0  +2.4
OJC   Ojcow                0.49  89 ePg    Pg      09 15 47.2  +0.8
OJC                                 eSg    Sg      09 15 54.0  +1.2
MORC  Moravsky Berou       1.06 246⇑iP     Pg      09 15 57.6  +0.4
MORC  Moravsky Berou       1.06 246  S     Sb      09 16 13.7  +1.1
MORC  Moravsky Berou       1.06 246 ePG    Pg      09 15 57.6  +0.4
MORC                                eSG    Sg      09 16 11.4  +0.5
MORC  Moravsky Berou       1.06 246 ePg    Pg      09 15 57.6  +0.4
      baz=68
MORC                                eSg    Sg      09 16 11.4  +0.5
      44nm,0.4s,baz=68
LANS  Liptovska Anna       1.10 165 ePG    Pg      09 15 59.0  +0.9
LANS                                eSG    Sb      09 16 14.2  +0.4
NIE   Niedzica             1.14 134 ePg    Pb      09 15 59.9  +0.3
NIE                                 eSg    Sb      09 16 15.5  +0.5
KRLC  Kraliky              1.46 265 ePG    Pn      09 16 04.1  -0.5
KRLC                                eSG    Sg      09 16 23.1  -0.6
      comp=Z,11nm,0.6s
VYHS  Vyhne                1.73 184 ePN    Pn      09 16 08.6  +0.3
VYHS                                eSN    Sn      09 16 31.4  +0.4
VYHS                                eLG    Lg      09 16 33.9
DPC   Dobruska-Polom       1.74 276 ePG    Pn      09 16 08.8  +0.2
DPC                                 eSG    Sb      09 16 32.5  +0.2
      comp=Z,29nm,0.6s
VRAC  Vranov               1.82 241⇑iP     Pn      09 16 10.2  +0.6
VRAC  Vranov               1.82 241  S     Sb      09 16 35.0  +0.4
VRAC  Vranov               1.82 241 ePN    Pn      09 16 10.2  +0.6
VRAC                                eSG    Sn      09 16 33.8  +0.4
VRAC  Vranov               1.82 241 ePn    Pn      09 16 10.2  +0.6
      baz=61
VRAC                                eSg    Sn      09 16 33.8  +0.4
      20nm,0.4s,baz=61
VRAC  Vranov               1.82 241  Pg    Pn      09 16 10.3  +0.7
      7.4nm,0.3s,baz=62,slow=15,SNR=37
VRAC                                 Lg    Lg      09 16 33.7
      5.9nm,0.3s,baz=135,slow=20,SNR=15
KSP   Ksiaz                1.86 291 ePb    Pn      09 16 10.6  +0.5
KSP                                 i Pg   Pg      09 16 12.9  +0.3
KSP                                 eSg    Sg      09 16 37.5  +0.8
UPC   Upice                1.96 280 ePG    Pn      09 16 12.0  +0.6
UPC                                 eSG    Sb      09 16 38.3  -0.1
      comp=Z,12nm,0.4s
SMOL  Smolenice            2.00 212 e      Pn      09 16 12.6  +0.6
SMOL  Smolenice            2.00 212 eSG    Sg      09 16 41.1  -0.1
KRUC  Moravsky             2.07 237 ePN    Pn      09 16 12.9   0.0
KRUC                                eSN    Sn      09 16 40.7  +1.3
KRUC  Moravsky             2.07 237 ePn    Pn      09 16 12.8  -0.1
      baz=56
KRUC                                eSn    Sn      09 16 40.6  +1.2
      9.1nm,0.3s,baz=56
PSZ   Piszkesteto          2.37 166⇑iP     Pn      09 16 18.0  +0.9
PSZ   Piszkesteto          2.37 166  S     Sb      09 16 49.9  -0.4
GOPC  GO Pecny, Ondr       2.75 265 ePN    Pn      09 16 22.0  -0.4
GOPC                                eSG    Sb      09 17 02.7  +1.4
      comp=Z,9.6nm,0.4s
PRU   Pruhonice            2.90 267 ePG    Pb      09 16 29.4  -0.2
PRU                                 eSG    Sg      09 17 08.5  -1.6
      comp=Z,7.5nm,0.4s
TRPA  Tarpa                3.10 131⇑iP     Pn      09 16 27.0  -0.2
BRG   Berggiesshubel       3.31 283  PG    Pg      09 16 39.1  -1.4
BRG                                  SG    Sg      09 17 24.3  +0.9
      8.5nm,0.7s
KHC   Kasperske Hory       3.71 255 ePN    Pn      09 16 35.2  -0.3
KHC                                 ePG    Pb      09 16 42.8  -0.5
KHC                                 eSG    Sb      09 17 32.6  +3.9
      comp=Z,11nm,0.8s
GERES GERESS Array B       3.73 251  Pn    Pn      09 16 36.8  +0.8
      0.3nm,0.3s,baz=64,slow=14,SNR=7.0
GERES                                Pg    Pb      09 16 45.7  +1.9
      0.6nm,0.3s,baz=64,slow=18,SNR=13
GERES                                Lg    Lg      09 17 34.0
      1.7nm,0.3s,baz=68,slow=30,SNR=8.6
CLL   Collm                3.98 288 ePn    Pn      09 16 42.0  +2.8
CLL                                 ePg    Pg      09 16 55.0  +1.7
CLL                                 eSg    Sg      09 17 45.0  +0.2
      comp=Z,8.0nm,0.6s
DRGR                       4.21 143⇑iP     Pn      09 16 42.4   0.0
DRGR                       4.21 143  S     Sn      09 17 34.0  +1.7
BURAR Bucovina Array       4.84 120⇓iP     Pn      09 16 51.7  +0.6
BURAR Bucovina Array       4.84 120  S     Sn      09 17 49.3  +1.5
AKASG Malin Array Be       6.53  82  Lg    Lg      09 19 00.0
      comp=Z,0.7nm,0.3s,baz=272,slow=26,SNR=4.7
DAVOX Davos/Dischmat       6.98 244  Lg    Lg      09 19 19.1
      comp=Z,0.1nm,0.3s,baz=5.3,slow=23,SNR=2.0
HFS   Hagfors             10.39 345  Pn    Pn      09 18 04.0  -3.1
      comp=Z,0.1nm,0.3s,baz=157,slow=16,SNR=5.5
FINES FINESS Array B      11.92  17  Pn    Pn      09 18 25.1  -3.0
      comp=Z,0.3nm,0.3s,baz=198,slow=12,SNR=11
ARCES ARCESS Array B      19.63   7  Pn    P       09 20 04.2  -2.6
      comp=Z,0.1nm,0.3s,baz=201,slow=12,SNR=4.3
```

IDC 24 09:16:08.0±2.5**, 9°.40S**×**119°.51E, h0^{km}, mb3.3**/2**, mb1 3.4**/4**, mb1mx3.3**/48**, mbtmp3.3**/4**, ML3.1**/2**, Error ellipse: s-maj=156.4km s-min=25.2km az=54.0, Sumba region**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op     ISC       h  m  s      ISC
WRA   Warramunga Arr      17.75 128  P     Pn      09 20 17.2  +0.4
      0.1nm,0.3s,baz=301,slow=13,SNR=2.8
ASAR  Alice Springs       19.77 138  P     P       09 20 39.8  -0.1
      0.1nm,0.3s,baz=317,slow=11,SNR=12
SONM  Songino Array       58.16 350  P     P       09 26 03.8   0.0
      0.1nm,0.3s,baz=165,slow=6.0,SNR=2.0
MKAR  Makanchi Array      65.04 333  P     P       09 26 50.1  -0.1
      0.1nm,0.5s,baz=150,slow=6.1,SNR=2.3
```

IDC ***24*** *09:18:49.0±0.8, 53°.47N×160°.66E, h0^{km}, mb3.5/11, mb1 3.8/13, mb1mx3.6/54, mbtmp3.6/13, ML3.3/2, Error ellipse: s-maj=24.6km s-min=14.3km az=146.0*

KRSC ***24*** *09:18:54.0±0.9, 53°.28N×160°.63E, h41^{km}±11^{km}, ML4.3*

MOS ***24*** *09:18:55.0±1.1, 53°.25N×160°.54E, h57^{km}, mb4.0/12, Error ellipse: s-maj=7.9km s-min=4.9km az=75.1*

ISC 24 09:18:52.0±0.7**, 53°.36N**±0°.04×**160°.71E**±0°.04**, h22^{km}**±6^{km}**, n104, σ1^{s}31**/146**, mb3.8**/14**, 7C-4D, Near east coast of Kamchatka Peninsula**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op     ISC       h  m  s      ISC
SPN   Mys Shipunski        0.49 238 eP     Pn      09 19 04.8  +1.2
SPN                                 eS     Sn      09 19 11.4   0.0
SPN   Mys Shipunski        0.49 238  PN    Pn      09 19 04.8  +1.2
SPN                                  S     Sn      09 19 11.4   0.0
NLC   Nalytchevo           0.84 258 eP     Pn      09 19 09.7  +1.3
NLC                                 eS     Sn      09 19 20.3  +0.2
NLC   Nalytchevo           0.84 258  PN    Pn      09 19 09.7  +1.3
NLC                                  S     Sn      09 19 20.3  +0.2
KII   Karymskiy            1.01 313 eP     Pn      09 19 12.6  +1.7
KII                                 eS     Sn      09 19 25.5  +1.0
KII   Karymskiy            1.01 313  PN    Pn      09 19 12.6  +1.7
KII                                  S     Sn      09 19 25.5  +1.0
SDLR  Sedlovina            1.10 267 eP     Pb      09 19 13.7  +1.4
SDLR                                eS     Sn      09 19 27.3  +0.7
SDLR  Sedlovina            1.10 267  PN    Pb      09 19 13.7  +1.4
SDLR                                 S     Sn      09 19 27.3  +0.7
UGLR  Uglovaya             1.14 263 eP     Pb      09 19 14.5  +1.4
UGLR                                eS     Sn      09 19 28.9  +1.2
UGLR  Uglovaya             1.14 263  PN    Pb      09 19 14.5  +1.4
UGLR                                 S     Sn      09 19 28.9  +1.2
SMAR  Somma                1.15 266 eP     Pb      09 19 14.4  +1.2
SMAR                                eS     Sn      09 19 28.9  +0.9
SMAR  Somma                1.15 266  PN    Pb      09 19 14.4  +1.2
SMAR                                 S     Sn      09 19 28.9  +0.9
AVH   Avacha               1.19 266 eP     Pb      09 19 15.2  +1.4
AVH                                 eS     Sn      09 19 29.7  +0.9
AVH   Avacha               1.19 266  PN    Pb      09 19 15.2  +1.4
AVH                                  S     Sn      09 19 29.7  +0.9
DALK  Dalny                1.22 255 eP     Pb      09 19 14.9  +0.6
DALK                                eS     Sb      09 19 29.1  -0.5
DALK  Dalny                1.22 255  PN    Pb      09 19 14.9  +0.6
DALK                                 S     Sb      09 19 29.1  -0.5
KRX   Arik                 1.23 271 eP     Pb      09 19 15.7  +1.0
KRX                                 eS     Sn      09 19 30.4  +0.3
KRX   Arik                 1.23 271  PN    Pb      09 19 15.7  +1.0
KRX                                  S     Sn      09 19 30.4  +0.3
KOK   Koryaka              1.24 268 eP     Pb      09 19 15.7  +0.9
KOK   Koryaka              1.24 268  PN    Pb      09 19 15.7  +0.9
PET   Petropavlovsk        1.28 256 eP     Pb      09 19 15.8  +0.4
PET                                 eS     Sn      09 19 31.0   0.0
PET   Petropavlovsk        1.28 256  PN    Pb      09 19 15.8  +0.4
PET                                  S     Sn      09 19 31.0   0.0
MKZ   Mys Kozlova          1.34  26 eP     Pb      09 19 17.9  +1.5
MKZ   Mys Kozlova          1.34  26  PN    Pb      09 19 17.9  +1.5
RUS   Russkaya             1.62 236 eP     Pn      09 19 20.2  +1.0
RUS                                 eS     Sn      09 19 38.3  -1.0
RUS   Russkaya             1.62 236  PN    Pn      09 19 20.2  +1.0
RUS                                  S     Sn      09 19 38.3  -1.0
KRMR  Karymshinskiy        1.64 252 eP     Pb      09 19 21.0  -0.5
KRMR                                eS     Sn      09 19 39.9   0.0
KRMR  Karymshinskiy        1.64 252  PN    Pb      09 19 21.0  -0.5
KRMR                                 S     Sn      09 19 39.9   0.0
GNL   Ganaly               1.69 283 eP     Pb      09 19 22.6  +0.3
GNL   Ganaly               1.69 283  PN    Pb      09 19 22.6  +0.3
MTVR  Mutnovka             1.76 241 eP     Pb      09 19 22.9  -0.8
MTVR                                eS     Sn      09 19 43.5  +0.4
MTVR  Mutnovka             1.76 241  PN    Pb      09 19 22.9  -0.8
MTVR                                 S     Sn      09 19 43.5  +0.4
KZV   Kizimen              1.77 352 eP     Pb      09 19 25.4  +1.5
KZV                                 eS     Sb      09 19 47.0  +1.2
KZV   Kizimen              1.77 352  PN    Pb      09 19 25.4  +1.5
KZV                                  S     Sb      09 19 47.0  +1.2
GRL   Gorelyy              1.79 244 eP     Pb      09 19 23.7  -0.4
GRL                                  S     Sn      09 19 44.6  +0.9
GRL   Gorelyy              1.79 244  PN    Pb      09 19 23.7  -0.4
GRL                                  S     Sn      09 19 44.6  +0.9
PETK  Petropavlovsk-       1.83 263  Pn    Pb      09 19 23.4  -1.2
      84nm,0.3s,baz=89,slow=20,SNR=2293
PETK                                 Sn    Sb      09 19 47.0   0.0
      45nm,0.3s,baz=79,slow=28,SNR=14
PETK                                 LR    LR      09 20 15.9
      comp=Z,131nm,18.1s,baz=114,slow=48
TUMD  Tumrok D             1.86 355 eP     Pb      09 19 25.6  +0.4
TUMD                                eS     Sb      09 19 48.0   0.0
TUMR  Tumrok               1.96 351 eP     Pb      09 19 28.1  +1.1
TUMR                                eS     Sb      09 19 52.9  +2.0
TUMR  Tumrok               1.96 351  PN    Pb      09 19 28.1  +1.1
TUMR                                 S     Sb      09 19 52.9  +2.0
APC   Apacha               2.18 260 eP     Pb      09 19 29.7  -1.0
APC                                 eS     Sb      09 19 56.3  -1.0
APC   Apacha               2.18 260  PN    Pb      09 19 29.7  -1.0
APC                                  S     Sb      09 19 56.3  -1.0
KDTR  Khodutka, Kamc       2.23 227 eP     Pn      09 19 29.5  +1.9
KDTR                                eS     Sn      09 19 55.8  +1.4
KDTR  Khodutka, Kamc       2.23 227  PN    Pn      09 19 29.5  +1.9
KDTR                                 S     Sn      09 19 55.8  +1.4
ZLN   Zelenaya             2.67   1 eP     Pb      09 19 39.2  +0.2
ZLN                                 eS     Sb      09 20 11.9  +0.6
ZLN   Zelenaya             2.67   1  PN    Pb      09 19 39.2  +0.2
ZLN                                  S     Sb      09 20 11.9  +0.6
LGNR  Loginova             2.73 360 eP     Pb      09 19 40.4  +0.2
LGNR                                eS     Sb      09 20 13.7  +0.3
LGNR  Loginova             2.73 360  PN    Pb      09 19 40.4  +0.2
LGNR                                 S     Sb      09 20 13.7  +0.3
KOZ   Kozyrevsk            2.75 350 eP     Pb      09 19 39.8  -0.6
KOZ   Kozyrevsk            2.75 350  PN    Pb      09 19 39.8  -0.6
CIRR  Tsirk                2.76   0 eS     Sb      09 20 13.5  -0.7
ESO   Esso                 2.82 336 eP     Pb      09 19 39.6  -2.1
ESO   Esso                 2.82 336  PN    Pb      09 19 39.6  -2.1
KLY   Klyuchi              2.96 359 eP     Pb      09 19 43.8  -0.2
KLY                                 eS     Sb      09 20 19.9  +0.2
KLY   Klyuchi              2.96 359  PN    Pb      09 19 43.8  -0.2
KLY                                  S     Sb      09 20 19.9  +0.2
SRDR  Sredinnyy            3.02 349 eP     Pb      09 19 43.9  -1.1
SRDR  Sredinnyy            3.02 349  PN    Pb      09 19 43.9  -1.1
PAU   Pauzhetka            3.05 233 eP     Pn      09 19 42.0  +3.2
PAU   Pauzhetka            3.05 233  PN    Pn      09 19 42.0  +3.2
KBTR  Krutoberegovo        3.11  22 eP     Pb      09 19 44.5  -2.0
KBTR  Krutoberegovo        3.11  22  PN    Pb      09 19 44.5  -2.0
BDR   Baidarnaya           3.23   5 eP     Pb      09 19 47.6  -1.0
BDR                                 eS     Sb      09 20 26.8  -0.7
BDR   Baidarnaya           3.23   5  PN    Pb      09 19 47.6  -1.0
BDR                                  S     Sb      09 20 26.8  -0.7
SMKR  Semkarok             3.26   7 eP     Pb      09 19 47.4  -1.7
SMKR  Semkarok             3.26   7  PN    Pb      09 19 47.4  -1.7
SRKR  Sorokina             3.31   4 eP     Pb      09 19 48.2  -1.8
SRKR                                eS     Sb      09 20 27.5  -2.4
SRKR  Sorokina             3.31   4  PN    Pb      09 19 48.2  -1.8
SRKR                                 S     Sb      09 20 27.5  -2.4
SKR   Severo-Kuril’s       3.90 228  P     Pn      09 19 53.0  +2.5
SKR   Severo-Kuril’s       3.90 228  PN    Pn      09 19 53.0  +2.5
ALID  Alaid                4.04 234  P     Pn      09 19 56.8  +4.2
MA2   Magadan              8.31 323⇑ePN    Pn      09 20 48.1  -2.9
KUR   Kuril'sk            11.66 231⇓ePN    Pn      09 21 37.3  +0.4
BILL  Bilibino            14.97   8 i P    Pn      09 22 21.1  -0.8
BILL                                 pmax  pmax
      comp=Z,1.0nm,1.1s
ASAJ  Asahikawa           15.07 239  Pn    Pn      09 22 23.1  -0.3
      comp=Z,0.3nm,0.3s,baz=184,slow=19,SNR=4.3
ERM   Erimo               16.33 233⇓eP     Pn      09 22 37.9  -1.8
KLR   Kul'dur             18.51 269  P     Pn      09 23 07.2  +0.5
      comp=Z,0.1nm,0.3s,baz=39,slow=13,SNR=3.2
USRK  Ussuriysk Ar.       20.90 256  P     P       09 23 33.3  +0.7
      comp=Z,0.8nm,0.7s,baz=148,slow=14,SNR=2.7
MJA0  Matsu Arr-Jizo      22.98 232 eP     P       09 23 56.4  +1.5
MJA0                                 pmax  pmax
      comp=Z,3.0nm,0.7s
MAJO  Matsushiro          23.00 232⇑eP     P       09 23 52.0  -3.1
MAJO                                 pmax  pmax
      comp=Z,13nm,1.3s
MJAR  Matsushiro Arr      23.00 232  P     P       09 23 55.5  +0.4
      comp=Z,3.4nm,0.7s,baz=11,slow=9.9,SNR=7.6
HIA   Hailar              25.67 278⇑eP     P       09 24 17.1  -2.9
HIA                                  pmax  pmax
      comp=Z,2.0nm,1.1s
COLA  College             27.95  45⇑eP     P       09 24 41.4  +1.1
COLA                                 pmax  pmax
      comp=Z,3.0nm,1.5s
ILAR  Eielson Array       28.37  46  P     P       09 24 43.4  -0.7
      comp=Z,0.5nm,1.0s,baz=263,slow=8.6,SNR=3.0
ULN   Ulaanbaatar         33.80 283⇑iP     P       09 25 30.5  -1.7
ULN                                  pmax  pmax
      comp=Z,1.0nm,0.7s
H11N2 WAKE ISLAND Hy      33.90 170  T     T       10 02 08.7
      baz=353,slow=76,SNR=26
H11N3 WAKE ISLAND Hy      33.92 169  T     T       10 02 07.8
      baz=353,slow=76,SNR=27
H11N1 WAKE ISLAND Hy      33.92 170  T     T       10 01 53.8
      baz=353,slow=76,SNR=24
TLY   Talaya              33.97 291⇑eP     P       09 25 32.4  -1.2
H11S1 WAKE ISLAND Hy      35.09 170  T     T       10 03 15.4
      baz=353,slow=74
H11S3 WAKE ISLAND Hy      35.10 170  T     T       10 03 14.0
      baz=353,slow=74
H11S2 WAKE ISLAND Hy      35.11 170  T     T       10 03 10.3
      baz=353
KNGR  Kungurtug, Tuv      37.89 292⇓eP     P       09 26 06.5  -0.7
YKA   Yellowknife Ar      42.72  43  P     P       09 26 47.7  +0.9
      comp=Z,0.2nm,0.5s,baz=298,slow=7.8,SNR=3.1
DGZ   Jazzator, Alta      43.88 296⇓eP     P       09 26 54.9  -1.7
KURK  Kurchatov           47.91 302⇑iP     P       09 27 27.1  -1.0
KURK                                 pmax  pmax
      comp=Z,2.0nm,1.0s
MKAR  Makanchi Array      48.37 296 eP     P       09 27 33.3  +1.5
MKAR  Makanchi Array      48.37 296  P     P       09 27 30.1  -1.8
      comp=Z,0.3nm,0.5s,baz=52,slow=7.3,SNR=7.0
FINES FINESS Array B      60.02 337 i P    P       09 28 56.5  +0.1
FINES                                pmax  pmax
      comp=Z,1.0nm,0.9s
FINES FINESS Array B      60.02 337  P     P       09 28 55.6  -0.8
      comp=Z,0.6nm,0.5s,baz=72,slow=13,SNR=4.7
NOA   NORSAR Array B      63.39 344  P     P       09 29 18.7  -0.4
      comp=Z,0.1nm,0.5s,baz=24,slow=6.9,SNR=2.4
TXAR  Lajitas Array       70.19  67  P     P       09 30 04.5  +1.4
      comp=Z,0.2nm,0.5s,baz=292,slow=5.6,SNR=4.3
WRA   Warramunga Arr      76.48 205  P     P       09 30 39.9  +0.1
      comp=Z,0.5nm,0.7s,baz=22,slow=6.4,SNR=3.3
ASAR  Alice Springs       80.15 205  P     P       09 31 01.1  +1.0
      comp=Z,0.6nm,0.6s,baz=15,slow=5.1,SNR=8.6
STKA  Stephens Creek      86.49 196  P     P       09 31 33.9  +1.4
      comp=Z,0.7nm,0.3s,baz=28,slow=4.6,SNR=4.4
```

IDC 24 09:20:21.6±2.1**, 17°.79S**×**177°.75W, h0^{km}, mb3.7**/4**, mb1 4.1**/4**, mb1mx3.7**/35**, mbtmp3.7**/4**, Error ellipse: s-maj=125.9km s-min=27.1km az=153.0, Fiji Islands region**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op     ISC       h  m  s      ISC
WRA   Warramunga Arr      45.27 259  P     P       09 28 41.0  -0.3
      0.5nm,0.5s,baz=96,slow=6.7,SNR=10
ASAR  Alice Springs       45.42 254  P     P       09 28 42.5   0.0
      2.8nm,0.4s,baz=90,slow=8.7,SNR=83
```

TXAR	**Lajitas Array** 0.2nm,0.7s,baz=243,slow=5.9,SNR=2.4	85.41	57	P	P	09 33 01.7	+0.3
ILAR	**Eielson Array** 0.3nm,0.7s,baz=216,slow=5.9,SNR=6.8	85.63	13	P	P	09 33 01.3	-0.3

---

*ISCJB **24** 09:22:08.1±0.6, 24°.17S±0°.04×67°.11W±0°.07, h192^{km}±7^{km}, mb3.5/7, Error ellipse: s-maj=10.9km s-min=5.8km az=176.0*

*IDC **24** 09:22:08.2±1.3, 24°.12S×66°.92W, h173^{km}±10^{km}, mb3.4/6, mb1 3.6/11, mb1mx3.5/27, mbtmp3.8/11, Error ellipse: s-maj=23.8km s-min=14.4km az=32.0*

*NEIC **24** 09:22:08.9±1.0, 24°.21S×67°.15W, h188^{km}±26^{km}, mb3.7/3, ML4.1(GUC), Error ellipse: s-maj=31.2km s-min=9.2km az=95.0*

*GUC **24** 09:22:09.8±0.6, 24°.17S×67°.58W, h222^{km}±11^{km}, ML4.1*

ISC 24 09:22:08.5±0.8, **24°.18S**±0°.05×**67°.06W**±0°.08, **h183**^{km}±9^{km}, **n39,** σ1^{s}.**21**/59, **mb3.7**/7, **10C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	2.31	312	*e*Pn	Pn	09 22 51.1	+1.4
LVC				*e*S	Sn	09 23 23.2	+1.7
LVC	**Limon Verde** 40nm,0.3s,baz=116,slow=6.8,SNR=526	2.31	312	P	Pn	09 22 51.1	+1.4
LVC	36nm,0.3s,baz=309,slow=16,SNR=13			S	Sn	09 23 20.8	-0.7
PB15	**IPOC Station P**	2.42	293	⇑*i*P	Pn	09 22 51.9	+1.2
PB15				*e*S	Sn	09 23 23.6	+0.2
GO02	**Mina Guanaco**	2.50	247	*e*Pn	Pn	09 22 52.5	+0.7
GO02				*e*S	Sn	09 23 25.4	0.0
GO02	**Mina Guanaco**	2.50	247	⇑*i*P	Pn	09 22 52.5	+0.7
GO02				*i* S	Sn	09 23 25.5	+0.2
PB06	**IPOC Station P**	2.74	302	⇑*i*P	Pn	09 22 55.5	+1.1
PB06				*e*S	Sn	09 23 29.8	-0.3
PB06	comp=E,399nm,0.1s			IAML		09 23 31.1	
PB14	**IPOC Station P**	3.08	261	*e*P	Pn	09 22 58.7	+0.1
PB14				*e*S	Sn	09 23 35.8	-1.9
PB14	comp=E,657nm,0.4s			IAML		09 23 38.0	
PB09	**IPOC Station P**	3.12	319	⇑*e*P	Pn	09 23 00.4	+1.5
PB09				*i* S	Sn	09 23 39.1	+0.9
PB09	comp=N,263nm,0.5s			IAML		09 23 40.3	
PB05	**IPOC Station P**	3.18	294	⇑*e*P	Pn	09 23 00.0	+0.4
PB05				*e*S	Sn	09 23 37.5	-1.9
PB05	comp=N,184nm,0.4s			IAML		09 23 40.2	
PB03	**IPOC Station P**	3.27	310	⇑*e*P	Pn	09 23 01.4	+0.7
PB03				*i* S	Sn	09 23 41.1	-0.4
PB03	comp=E,301nm,0.4s			IAML		09 23 42.9	
PB10	**IPOC Station P**	3.27	281	*e*Pn	Pn	09 23 00.9	+0.2
PB10				*e*S	Sn	09 23 39.8	-1.5
PB10	**IPOC Station P**	3.27	281	⇑*e*P	Pn	09 23 01.1	+0.5
PB10				*e*S	Sn	09 23 39.9	-1.5
PB10	comp=N,236nm,0.2s			IAML		09 23 44.1	
PB04	**IPOC Station P**	3.39	302	*e*Pn	Pn	09 23 02.8	+0.5
PB04				*e*S	Sn	09 23 43.0	-1.2
PB04	**IPOC Station P**	3.39	302	⇑*e*P	Pn	09 23 02.8	+0.5
PB04	comp=E,358nm,0.5s			IAML		09 23 46.9	
PB07	**IPOC Station P**	3.58	313	⇑*e*P	Pn	09 23 05.1	+0.5
PB07				*i* S	Sn	09 23 47.1	-1.3
PB01	**IPOC Station P**	3.85	324	*e*Pn	Pn	09 23 08.2	+0.2
PB01				*e*S	Sn	09 23 53.2	-1.2
PB01	**IPOC Station P**	3.85	324	*e*P	Pn	09 23 08.2	+0.2
PB01				*i* S	Sn	09 23 53.4	-1.1
PB02	**IPOC Station P**	3.87	317	⇑*e*P	Pn	09 23 08.3	0.0
PB02				*e*S	Sn	09 23 53.5	-1.5
PB11	**IPOC Station P**	5.02	331	*e*Pn	Pn	09 23 22.0	-1.0
PB11				*e*S	Sn	09 24 18.4	-3.1
MNMC	**Minye Minye**	5.55	334	*e*Pn	Pn	09 23 29.5	-0.6
MNMC				*e*S	Sn	09 24 31.7	-2.5
LCO	**Las Campanas**	5.81	213	*e*Pn	Pn	09 23 31.1	-2.2
GO04	**Tololo Observa**	6.83	208	*e*Pn	Pn	09 23 44.0	-2.7
LPAZ	**La Paz**	7.92	352	*e*Pn	Pn	09 24 02.3	+0.9
LPAZ	**La Paz** comp=E,1.0nm,0.3s,baz=156,slow=7.7,SNR=25	7.92	352	P	Pn	09 24 01.4	0.0
LPAZ	comp=E,0.2nm,0.3s,baz=357,slow=21,SNR=3.7			S	Sn	09 25 28.4	-2.4
CPUP	**Villa Florida** comp=E,0.1nm,0.3s,baz=287,slow=12,SNR=2.5	9.06	106	P	Pn	09 24 15.3	-0.5
TRQA	**Tornquist**	14.49	164	*e*Pn	P	09 25 27.0	+0.1
PLCA	**Paso Flores** comp=E,1.4nm,0.9s	16.76	189	*e*P	Pn	09 25 52.9	+0.1
PLCA	**Paso Flores** comp=E,0.1nm,0.3s,baz=56,slow=15,SNR=4.1	16.76	189	P	Pn	09 25 52.7	-0.2
BDFB	**Brasilia** comp=E,8.2nm,0.8s	19.80	68	*e*P	P	09 26 25.3	0.0
BDFB	**Brasilia** comp=E,0.9nm,0.3s,baz=240,slow=12,SNR=15	19.80	68	P	P	09 26 24.3	-1.0
PTGA	**Pitinga** comp=E,2.1nm,1.0s	24.30	17	*e*P	P	09 27 09.8	+0.4
TXAR	**Lajitas Array** comp=E,0.4nm,0.8s,baz=150,slow=6.1,SNR=4.4	63.80	325	P	P	09 32 22.6	+1.1
TORD	**Torodi Ar. Bea** comp=E,0.3nm,0.6s,baz=255,slow=5.7,SNR=6.2	76.68	69	P	P	09 33 38.6	-1.3
PDAR	**Pinedale Array** comp=E,0.3nm,0.7s,baz=100,slow=2.1,SNR=3.5	77.28	329	P	P	09 33 44.1	+1.2
ULM	**Lac du Bonnet** comp=E,1.2nm,0.5s,baz=122,slow=4.2,SNR=3.0	78.38	342	P	P	09 33 49.1	+0.6
BOSA	**Boshof** comp=E,1.0nm,0.4s,baz=237,slow=4.2,SNR=5.4	80.69	117	P	P	09 34 01.4	-0.4
YKA	**Yellowknife Ar** comp=E,0.3nm,0.5s,baz=129,slow=4.6,SNR=11	94.28	340	P	P	09 35 06.9	+0.4
ZALV	**Zalesovo Beam** comp=E,0.7nm,0.3s,baz=264,slow=6.7,SNR=2.5	143.58	28	PKP	PKPdf	09 41 22.2	+1.0
MKAR	**Makanchi Array** comp=E,0.3nm,0.4s,baz=331,slow=2.8,SNR=8.1	146.70	40	PKPbc	PKPab	09 41 29.6	-0.7

IDC 24 09:29:56.6±4.1, **1°.69N**×**97°.46E, h0**^{km}**, mb3.7**/4, **mb1 3.8**/4, **mb1mx3.4**/43, **mbtmp3.7**/4, **Error ellipse: s-maj=161.6km s-min=27.3km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H** baz=70,slow=76,SNR=196	26.58	249	T	T	10 02 35.6	
H08S3	**Diego Garcia H** baz=70,slow=76,SNR=455	26.58	249	T	T	10 02 38.1	
H08S1	**Diego Carcia H** baz=70,slow=76,SNR=133	26.59	249	T	T	10 02 33.8	
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=302,slow=9.1,SNR=3.4	42.08	123	P	P	09 37 50.5	-0.1
SONM	**Songino Array** 0.7nm,0.7s,baz=189,slow=9.2,SNR=5.7	46.61	8	P	P	09 38 26.9	+0.3
MKAR	**Makanchi Array** 0.9nm,0.6s,baz=155,slow=7.8,SNR=10	46.83	346	P	P	09 38 28.9	+0.6
ZALV	**Zalesovo Beam** 0.8nm,0.4s,baz=181,slow=5.9,SNR=3.0	53.12	351	P	P	09 39 14.7	-1.2

SJA 24 09:30:29.3±0.7, **31°.58S**×**69°.70W, h114**^{km}±3^{km}**, ML3.2, MW3.6, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	0.41	122	*e*P	Pn	09 30 47.2	+0.8
RTLS	comp=Z,1µm,0.4s			IAML		09 31 00.0	
AUSP	**Uspallata**	0.69	157	*e*P	Pn	09 30 49.3	+1.0
AUSP				*e*S	Sn	09 31 04.0	+1.4
ZON	**Zonda**	0.87	88	*e*P	Pn	09 30 50.3	+0.7
ZON				*e*S	Sn	09 31 05.8	+0.9
RTCV	**Cerro Valdivia**	1.03	106	*e*P	Pn	09 30 52.1	+1.0
RTCV				*e*S	Sn	09 31 08.7	+1.1
RTLL	**Cerro Villicun**	1.08	77	*e*P	Pn	09 30 52.3	+0.6
RTLL				*e*S	Sn	09 31 09.4	+0.9
RTLL	comp=E,419nm,0.5s			IAML		09 31 10.5	
ACCO	**Cerro Coronel**	1.13	29	*e*P	Pn	09 30 53.7	+1.1
ACCO				*e*S	Sn	09 31 11.9	+1.8
AMOG	**MOGNA**	1.22	58	*e*P	Pn	09 30 54.3	+1.1
ASAL	**Salagasta**	1.25	144	*e*P	Pn	09 30 54.8	+1.3
ASAL				*e*S	Sn	09 31 12.9	+1.1
CFA	**Coronel Fontan**	1.25	91	*e*P	Pn	09 30 54.3	+0.8
CFA				*e*S	Sn	09 31 12.8	+1.0
ARCO	**CERRO ARCO**	1.41	153	*e*P	Pn	09 30 56.7	+1.2
ARCO	comp=Z,198nm,0.2s			IAML		09 30 57.5	
ARCO				*e*S	Sn	09 31 16.7	+1.3
AROD	**Rodeo**	1.43	8	*e*P	Pn	09 30 58.2	+2.4
ACDV	**Cuesta del Vie**	1.50	20	*e*P	Pn	09 30 57.7	+1.2
AAGR	**Agrelo**	1.67	154	*e*P	Pn	09 30 59.7	+1.2
GO04	**Tololo Observa**	1.69	326	*e*P	Pn	09 31 00.1	+1.2
ROC1	**El Roble**	1.78	218	*e*P	Pn	09 31 00.4	+0.5
ACAN	**Cantantal**	2.25	109	*e*P	Pn	09 31 06.5	+0.9
AGUA	**GUANDACOL**	2.34	27	*e*P	Pn	09 31 09.1	+2.3
APLL	**PUNTA DE LOS L** comp=Z,28nm,0.5s	2.97	67	IAML		09 31 53.4	
ACLC	**CERRO LA CRUZ**	3.20	49	*e*P	Pn	09 31 19.6	+1.3
MRA	**San Martin**	3.49	105	*e*P	Pn	09 31 22.4	+0.5
MRA	comp=Z,38nm,0.5s			IAML		09 32 25.9	
TCA	**Tanti**	4.37	88	*e*P	Pn	09 31 34.3	+0.5
TCA	comp=Z,13nm,0.2s			IAML		09 31 34.7	
CYA	**Choya**	4.61	48	*e*P	Pn	09 31 36.7	-0.2

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*ISCJB **24** 09:37:52.9±1.0, 5°.5S±0°.1×147°.5E±0°.2, h170^{km}, mb3.7/7, Error ellipse: s-maj=24.6km s-min=14.5km az=8.6*

*IDC **24** 09:37:57.6±3.9, 5°.47S×147°.31E, h195^{km}±34^{km}, mb3.2/6, mb1 3.5/9, mb1mx3.3/32, mbtmp3.9/9, Error ellipse: s-maj=36.8km s-min=15.0km az=94.0*

ISC 24 09:37:54.7±1.0, **5°.4S**±0°.1×**147°.5E**±0°.2, **h170**^{km}**, n11,** σ1^{s}.**13**/11, **mb3.6**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura** 1.1nm,0.3s,baz=169,slow=7.2,SNR=7.5	7.35	293	P	Pn	09 39 39.9	+0.3
CTA	**Charters Tower** 0.6nm,0.3s,baz=5.5,slow=13,SNR=7.3	14.61	185	P	P	09 41 16.4	+1.2
WRA	**Warramunga Arr** 3.2nm,0.3s,baz=49,slow=12,SNR=89	19.26	220	P	P	09 42 06.4	0.0
ASAR	**Alice Springs** 5.6nm,0.6s,baz=49,slow=8.3,SNR=114	22.34	214	P	P	09 42 39.0	+0.3
FITZ	**Fitzroy Crossi** 17nm,0.5s,baz=51,slow=10,SNR=39	24.76	238	P	P	09 42 60.0	-0.9
STKA	**Stephens Creek** 0.6nm,0.4s,baz=358,slow=7.7,SNR=4.2	26.87	191	P	P	09 43 19.2	-0.5
KLR	**Kul'dur** 0.8nm,0.7s,baz=161,slow=7.9,SNR=2.1	56.15	348	P	P	09 47 17.8	+1.4
SONM	**Songino Array** 0.2nm,0.4s,baz=131,slow=4.4,SNR=2.9	64.15	331	P	P	09 48 11.6	+0.5
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=99,slow=9.2,SNR=4.5	77.37	320	P	P	09 49 30.0	-0.9
ILAR	**Eielson Array** 0.3nm,0.6s,baz=250,slow=4.9,SNR=7.0	84.79	23	P	P	09 50 09.2	-0.4
TORD	**Torodi Ar. Bea** 0.2nm,0.3s,baz=66,slow=3.1,SNR=5.1	145.41	285	PKPbc	PKPdf	09 57 11.3	-2.2

IDC 24 09:48:43.2±2.2, **8°.25S**×**121°.78E, h0**^{km}**, mb3.5**/1, **mb1 3.5**/3, **mb1mx3.3**/34, **mbtmp3.3**/3, **ML2.8**/2, **Error ellipse: s-maj=271.0km s-min=28.5km az=55.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.0nm,0.3s,baz=306,slow=14,SNR=2.6	16.82	135	Pn	Pn	09 52 38.6	-1.9
ASAR	**Alice Springs** 0.0nm,0.3s,baz=325,slow=12,SNR=8.3	19.24	144	P	Pn	09 53 10.4	+0.2
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=134,slow=8.3,SNR=5.2	65.08	331	P	P	09 59 25.6	-0.1

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*SOME **24** 09:57:01.6, 42°.57N×79°.63E, h10^{km}*

*KRNET **24** 09:57:01.6±0.1, 42°.60N×79°.61E, h18^{km}, mb2.5*

*NNC **24** 09:57:02.0±0.9, 42°.65N×79°.60E, h0^{km}, mb2.5, mpv2.6, Error ellipse: s-maj=5.4km s-min=3.0km az=138.0*

ISC 24 09:57:00.3±1.4, **42°.55N**±0°.04×**79°.65E**±0°.04, **h15**^{km}±10^{km}**, n46,** σ1^{s}.**11**/82, **15C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode** 2.8nm,0.1s	0.62	347	P	Pb	09 57 13.5	+0.5
SHLS	83nm,0.2s			S	Sb	09 57 22.2	+0.6
SHLS	**Shalkode** baz=19	0.62	347	*e*P	Pb	09 57 13.5	+0.5
SHLS	baz=19			*e*S	Sb	09 57 22.2	+0.6
SHLS	**Shalkode** 2.8nm,0.1s	0.62	347	*e*P	Pb	09 57 13.5	+0.5
SHLS	83nm,0.2s			*e*S	Sb	09 57 22.2	+0.6
UZB	**Uzynbulak** 5.6nm,0.1s	0.76	323	P	Pb	09 57 15.3	0.0
UZB	15nm,0.2s			S	Sg	09 57 25.1	0.0
UZB	**Uzynbulak** baz=22	0.76	323	*e*P	Pb	09 57 15.3	0.0
UZB	baz=22			*e*S	Sg	09 57 25.2	0.0
UZB	**Uzynbulak** 8.2nm,0.1s	0.76	323	*e*P	Pb	09 57 15.3	0.0
UZB	15nm,0.2s			*e*S	Sg	09 57 25.1	0.0
PDGK	**Podgornoye** 2.4nm,0.1s	0.79	352	P	Pb	09 57 15.6	-0.3
PDGK	2.6nm,0.1s			S	Sb	09 57 25.7	-0.7
PDGK	**Podgornoye** 3.1nm,0.4s	0.79	352	⇑P	Pb	09 57 15.2	-0.6
PDGK	2.3nm,0.4s			⇓S	Sb	09 57 24.7	-1.7
PDGK	**Podgornoye** baz=53	0.79	352	⇓*i*P	Pb	09 57 15.7	-0.1
PDGK	baz=53			⇓*i*S	Sg	09 57 26.2	0.0
PRZ	**Przheval'sk** baz=63	0.92	267	⇑*i*P	Pb	09 57 18.7	+0.6
PRZ	baz=63			⇑*i*S	Sg	09 57 31.0	+0.6
KTMS	**Ketmen** 4.2nm,0.1s	1.04	30	P	Pb	09 57 20.4	+0.3
KTMS	5.6nm,0.1s			S	Sg	09 57 34.1	+0.1
KTMS	**Ketmen** baz=31	1.04	30	*e*P	Pb	09 57 20.4	+0.3
KTMS	baz=31			*e*S	Sg	09 57 34.1	+0.1
KTMS	**Ketmen** 4.2nm,0.1s	1.04	30	*e*P	Pb	09 57 20.4	+0.3
KTMS	5.6nm,0.1s			*e*S	Sg	09 57 34.1	+0.1
SATY	**Saty** 3.0nm,0.1s	1.05	300	P	Pn	09 57 20.8	+0.2
SATY	25nm,0.1s			S	Sn	09 57 34.6	-0.4
SATY	**Saty** 1.7nm,0.2s	1.05	300	*e*P	Pn	09 57 20.8	+0.2
SATY	25nm,0.1s			*e*S	Sn	09 57 34.5	-0.4
KURS	**Kuram** 0.7nm,0.3s	1.44	311	P	Pb	09 57 27.3	+0.5
KURS	3.9nm,0.3s			S	Sg	09 57 45.7	-0.9
KURS	**Kuram** baz=10.0	1.44	311	*e*P	Pb	09 57 27.3	+0.5
KURS	baz=10.0			*e*S	Sg	09 57 45.8	-0.9
KURS	**Kuram** 0.7nm,0.3s	1.44	311	*e*P	Pb	09 57 27.3	+0.5
KURS	3.9nm,0.3s			*e*S	Sg	09 57 45.7	-0.9
MNBS	**Baschi** 7.0nm,0.3s	1.78	330	*e*P	Pb	09 57 33.4	+0.6
MNBS	4.1nm,0.2s			*e*S	Sg	09 57 56.3	-1.4
DJR	**Jarkent** 1.6nm,0.1s	1.79	3	P	Pb	09 57 33.7	+0.9
DJR	4.6nm,0.2s			S	Sg	09 57 56.7	-1.2
DJR	**Jarkent** 1.6nm,0.1s	1.79	3	*e*P	Pb	09 57 33.7	+0.9
DJR	4.6nm,0.2s			*e*S	Sg	09 57 56.7	-1.2
KDJ	**Kajisay** baz=56	1.88	258	⇓*i*P	Pb	09 57 36.1	+1.7
KDJ	baz=56			⇓*i*S	Sg	09 58 00.9	+0.2
KOTS	**Kotyrbulak** 3.3nm,0.2s	1.99	291	Pg	Pg	09 57 38.8	+0.3
KOTS	26nm,0.5s			Lg	Lg	09 58 05.4	
KOTS	**Kotyrbulak** 3.3nm,0.2s	1.99	291	*e*P	Pg	09 57 38.1	-0.4
KOTS	26nm,0.5s			*e*S	Sg	09 58 04.6	+0.4
MDOK	**Medeo** 1.1nm,0.6s	2.01	289	⇑Pg	Pn	09 57 35.1	+1.4
MDOK	8.4nm,0.6s			Lg	Lg	09 58 06.3	
MDOK	**Medeo** 1.2nm,0.2s	2.01	289	Pg	Pg	09 57 39.3	+0.5
MDOK	8.8nm,0.3s			Lg	Lg	09 58 06.4	
MDOK	**Medeo** 1.2nm,0.2s	2.01	289	*e*P	Pg	09 57 38.7	-0.2
MDOK	8.8nm,0.3s			*e*S	Sg	09 58 05.7	+0.7
TNSS	**Tian-Shan** 1.3nm,0.3s	2.05	285	Pg	Pb	09 57 38.3	+0.9
TNSS	4.2nm,0.2s			Lg	Lg	09 58 04.6	
TNSS	**Tian-Shan** baz=83	2.05	285	*e*P	Pg	09 57 39.2	-0.4
TNSS	baz=83			*e*S	Sg	09 58 06.1	-0.1
TNSS	**Tian-Shan** 0.9nm,0.1s	2.05	285	*e*P	Pg	09 57 39.2	-0.4
TNSS	4.2nm,0.2s			*e*S	Sg	09 58 06.1	-0.1
IZV	**Izvestkoviy** 1.7nm,0.2s	2.29	283	Pg	Pb	09 57 42.5	+1.2
IZV	8.6nm,0.3s			Lg	Lg	09 58 12.3	
IZV	**Izvestkoviy** 1.7nm,0.2s	2.29	283	*e*P	Pb	09 57 42.9	+1.5
IZV	8.6nm,0.3s			*e*S	Sg	09 58 12.3	-1.5
KTBS	**Karatobe** 0.4nm,0.2s	2.46	299	Pg	Pb	09 57 45.4	+1.1
KTBS	7.3nm,0.3s			Lg	Lg	09 58 16.8	
KTBS	**Karatobe** 0.4nm,0.2s	2.46	299	*e*P	Pb	09 57 45.4	+1.1
KTBS	7.3nm,0.3s			*e*S	Sg	09 58 16.8	-2.7
ULHL	**Ulahol** baz=63	2.54	264	⇑*i*P	Pb	09 57 45.8	+0.1
ULHL	baz=63			⇑*i*S	Sb	09 58 17.9	+1.1
BOOM	**Boomskoye usch** baz=69	2.74	270	⇑*i*P	Pb	09 57 48.8	-0.3
BOOM	baz=69			⇑*i*S	Sb	09 58 23.2	+0.6
KAPS	**Kapalarasan** 0.4nm,0.2s	2.75	356	Pg	Pb	09 57 50.4	+1.3
KAPS	2.7nm,0.3s			Lg	Lg	09 58 25.4	
KAPS	**Kapalarasan** 0.4nm,0.2s	2.75	356	*e*P	Pb	09 57 50.4	+1.3
KAPS	2.7nm,0.3s			*e*S	Sg	09 58 25.4	-3.2
KST	**Kastek** 0.8nm,0.1s	2.76	282	Pg	Pb	09 57 51.1	+1.8
KST	5.7nm,0.5s			Lg	Lg	09 58 26.6	
KST	**Kastek** 0.8nm,0.1s	2.76	282	*e*P	Pb	09 57 51.1	+1.8
KST	5.7nm,0.5s			*e*S	Sg	09 58 26.6	-2.2
KUU	**Kurty** 0.3nm,0.2s	2.77	300	Pg	Pb	09 57 50.7	+1.2
KUU	3.9nm,0.3s			Lg	Lg	09 58 25.8	
KUU	**Kurty** 0.3nm,0.2s	2.77	300	*e*P	Pb	09 57 50.5	+1.0
KUU	3.9nm,0.3s			*e*S	Sb	09 58 25.8	+2.6
NRN	**Naryn** baz=48	2.94	249	⇑*i*P	Pb	09 57 51.6	-0.9
NRN	baz=48			⇑*i*S	Sb	09 58 28.2	-0.1
TKM2	**Tokmak 2** 1.0nm,0.8s	3.01	279	⇓Pg	Pb	09 57 55.6	+1.9
TKM2	2.6nm,0.7s			⇑Lg	Lg	09 58 33.7	
TKM2	**Tokmak 2** baz=78	3.01	279	⇑*i*P	Pb	09 57 52.1	-1.6
TKM2	baz=78			⇑*i*S	Sb	09 58 28.9	-1.4
KZA	**Kyzart** baz=62	3.29	263	⇑*i*P	Pb	09 57 56.6	-2.1
KZA	baz=62			⇑*e*S	Sb	09 58 36.0	-2.7

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*WEL **24** 10:04:38.6±1.3, 31°S±6°×17°7W±2°2, h33^{km}, ML5.2/7*

*ISCJB **24** 10:04:41.8±0.4, 30°.97S±0°.03×178°.06W±0°.09, h46^{km}, mb4.5/23, MS3.5/3, Error ellipse: s-maj=11.2km s-min=3.5km az=16.9*

*IDC **24** 10:04:45.6±1.6, 30°.50S×178°.16W, h60^{km}±13^{km}, mb4.2/9, mb1 4.4/10, mb1mx4.1/24, mbtmp4.4/10, MS3.4/5, Ms1 3.4/5, ms1mx3.1/22, Error ellipse: s-maj=20.6km s-min=13.8km az=118.0*

*NEIC **24** 10:04:46.6±0.9, 30°.64S×178°.03W, h74^{km}±7^{km}, mb4.6/18, Error ellipse: s-maj=11.4km s-min=6.8km az=119.0*

ISC 24 10:04:43.6±0.4, **30°.79S**±0°.06×**178°.10W**±0°.10, **h46**^{km}**, n114,** σ1^{s}.**87**/124, **mb4.6**/23, **MS3.4**/3, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	1.53	6	P	Pn	10 05 06.1	-2.3
RAO	**Raoul Island** 235nm,0.3s,baz=225,slow=19,SNR=6.9	1.54	6	P	Pn	10 05 07.2	-1.4
RAO	528nm,0.3s,baz=189,slow=20,SNR=7.1			S	Sn	10 05 22.9	-4.6
RIZ	**Raoul Island**	1.55	6	P	Pn	10 05 06.8	-1.9
MXZ	**Matakaoa Point**	7.38	203	P	Pn	10 06 26.0	-2.6
MXZ				S	Sn	10 07 50.3	-0.7
WMGZ	**Waiomatatini S**	7.58	201	P	Pn	10 06 30.4	-1.0
WMGZ				S	Sn	10 07 54.7	-1.2
HAZ	**Te Kaha**	7.73	205	P	Pn	10 06 31.9	-1.7
HAZ				S	Sn	10 08 01.5	+1.7
PKGZ	**Pakihiroa**	7.75	203	P	Pn	10 06 31.2	-2.6
PKGZ				S	Sn	10 07 59.0	-1.2
PUZ	**Puketiti**	7.86	202	P	Pn	10 06 32.6	-2.7
PUZ				S	Sn	10 08 00.2	-2.6
RUGZ	**Raukumara Rang**	7.96	205	P	Pn	10 06 34.7	-2.1
RUGZ				S	Sn	10 08 05.7	+0.2
TWGZ	**Tauwhareparae**	8.04	203	P	Pn	10 06 35.3	-2.5
TWGZ				S	Sn	10 08 05.8	-1.7
WCZ	**Waipu Caves**	8.14	229	P	Pn	10 06 46.9	+7.9
OUZ	**Omahuta**	8.25	235	*e*Pn	Pn	10 06 47.5	+6.9
CNGZ	**Carnagh Statio**	8.25	201	P	Pn	10 06 38.1	-2.6
MWZ	**Matawai**	8.34	204	P	Pn	10 06 39.5	-2.3
MWZ				S	Sn	10 08 14.0	-0.7
URZ	**Urewera**	8.43	207	*e*Pn	Pn	10 06 42.2	-0.8
URZ				*e*Sn	Sn	10 08 16.6	-0.2
URZ	**Urewera** 1.0nm,0.3s,baz=354,slow=19,SNR=13	8.43	207	P	Pn	10 06 40.1	-3.0
URZ	3.8nm,0.3s,baz=94,slow=23,SNR=12			S	Sn	10 08 15.6	-1.2
URZ	**Urewera**	8.43	207	P	Pn	10 06 40.1	-3.0
URZ				S	Sn	10 08 13.8	-3.0
RIGZ	**Rimuhau**	8.60	202	P	Pn	10 06 42.1	-3.2
RIGZ				S	Sn	10 08 19.6	-1.3
MUGZ	**Murupara**	8.75	207	P	Pn	10 06 44.1	-3.4
MUGZ				S	Sn	10 08 23.0	-1.7
NMHZ	**Naumai**	9.28	205	P	Pn	10 06 51.6	-3.2
NMHZ				S	Sn	10 08 36.2	-1.5
BKZ	**Black Stump Fm**	9.45	206	*e*Pn	Pn	10 06 54.3	-2.8
HIZ	**Hauiti**	9.64	215	*e*Pn	Pn	10 07 04.7	+5.1
BFZ	**Birch Farm**	10.88	203	*e*Pn	Pn	10 07 15.7	-0.9
BFZ				*e*Sn	Sn	10 09 11.3	-5.6
THZ	**Tophouse**	13.12	211	*e*Pn	Pn	10 07 51.0	+3.7
THZ				*e*Sn	Sn	10 10 03.9	-7.8
KHZ	**Kahutara**	13.39	208	*e*Pn	Pn	10 07 53.0	+2.1
NIUE	**Niue**	13.81	34	*e*Pn	Pn	10 07 58.4	+1.6
OXZ	**Oxford**	14.76	209	*e*Pn	P	10 08 14.9	+0.4
MQZ	**McQueen’s Vall**	14.83	207	*e*Pn	P	10 08 16.4	+1.3

RPZ	**Rata Peaks**	**15.50**	**211**	*e*Pn	**P**	**10 08 23.3**	**+0.6**
	7.2nm,0.8s						
RPZ				*e*Sn	Sn	10 10 56.9	-13
RPZ	**Rata Peaks**	**15.50**	**211**	P	**P**	**10 08 24.4**	**+1.8**
	0.8nm,0.3s,baz=53,slow=2.2,SNR=5.0						
RPZ				S	Sn	10 10 56.9	-13
	0.6nm,0.3s,baz=49,slow=15,SNR=4.9						
RPZ				LR	LR	10 13 20.9	
	comp=Z,57nm,21.4s,baz=110,slow=33						
FOZ	**Fox Glacier**	**15.93**	**214**	*e*Pn	**P**	**10 08 28.6**	**+1.2**
	1.9nm,0.7s						
DZM	**Mont Dzumac**	**16.33**	**298**	*e*LR	LR	10 12 30.0	
	comp=Z,284nm,24.7s						
DZM	**Mont Dzumac**	**16.33**	**298**	LR	LR	10 13 42.7	
	comp=Z,188nm,18.4s,baz=158,slow=33						
ODZ	**Otahua Downs**	**16.74**	**209**	*e*P	**P**	**10 08 38.6**	**+2.2**
	8.5nm,1.1s						
MLZ	**Mavora Lakes**	**18.11**	**213**	*e*P	**Pn**	**10 08 52.7**	**+1.1**
	3.2nm,1.0s						
WHZ	**Wether Hill Ro**	**18.59**	**212**	*e*P	**P**	**10 08 55.2**	**-1.5**
ARMA	**Armidale**	**26.02**	**263**	*e*P	**P**	**10 10 16.3**	**+3.8**
	8.0nm,0.9s						
TBI	**Tubuai**	**26.51**	**81**	*e*T	T	10 37 48.2	
	28nm,0.4s						
EIDS	**Eidsvold**	**27.67**	**274**	*e*P	**P**	**10 10 30.3**	**+3.1**
	8.3nm,1.1s						
PAE	**Paea**	**29.01**	**70**	*e*T	T	10 41 02.4	
	9.8nm,0.3s						
PPT2	**Papeete2**	**29.05**	**70**	*e*LR	LR	10 17 41.3	
	comp=Z,136nm,28.2s						
PPT2	**Papeete2**	**29.05**	**70**	*e*T	T	10 41 06.4	
	5.7nm,0.3s						
TVO	**Taravao**	**29.22**	**70**	*e*T	T	10 41 16.4	
	1.9nm,0.3s						
VAH	**Vaihoa**	**31.90**	**68**	*e*T	T	10 44 39.4	
	34nm,0.3s						
CTAO	**Charters Tower**	**33.78**	**280**	*e*P	**P**	**10 11 23.2**	**+2.1**
	11nm,0.7s						
STKA	**Stephens Creek**	**34.30**	**258**	*e*P	**P**	**10 11 28.0**	**+2.3**
	6.6nm,0.9s						
STKA	**Stephens Creek**	**34.30**	**258**	P	**P**	**10 11 27.7**	**+2.0**
	27nm,0.8s,baz=89,slow=9.4,SNR=50						
STKA				LR	LR	10 23 54.5	
	comp=Z,68nm,18.7s,baz=27,slow=34						
BBOO	**Buckleboo**	**38.78**	**255**	*e*P	**P**	**10 12 04.5**	**+0.8**
	13nm,0.6s						
COEN	**Coen**	**39.30**	**286**	*e*P	**P**	**10 12 09.6**	**+1.4**
	9.3nm,1.0s						
AS01	**Alice Springs**	**42.96**	**267**	*e*P	**P**	**10 12 38.2**	**-0.1**
AS31	**Alice Springs**	**43.00**	**267**	*e*P	**P**	**10 12 39.0**	**+0.3**
	1.7nm,0.8s						
ASAR	**Alice Springs**	**43.00**	**267**	P	**P**	**10 12 38.9**	**+0.2**
	5.3nm,0.7s,baz=106,slow=7.3,SNR=41						
ASAR				PcP	**PcP**	**10 14 27.8**	**-0.7**
	0.6nm,0.8s,baz=121,slow=3.8,SNR=2.8						
ASAR				ScP	**ScP**	**10 18 13.6**	**-2.2**
	0.4nm,0.9s,baz=113,slow=4.3,SNR=2.6						
WB2	**Warramunga Arr**	**44.01**	**273**	*e*P	**P**	**10 12 47.0**	**+0.2**
	15nm,1.0s						
WRAB	**Tennant Creek**	**44.02**	**273**	*e*P	**P**	**10 12 47.0**	**+0.2**
	16nm,1.0s						
WR1	**Warramunga Arr**	**44.02**	**273**	*e*P	**P**	**10 12 47.1**	**+0.2**
	19nm,1.0s						
WR1				*e*PcP	**PP**	**10 14 30.4**	**+0.4**
WR1				*e*ScP	**ScP**	**10 18 18.8**	**-1.2**
WRA	**Warramunga Arr**	**44.02**	**273**	P	**P**	**10 12 47.1**	**+0.1**
	5.6nm,0.5s,baz=110,slow=8.0,SNR=80						
WRA				PcP	**PP**	**10 14 30.4**	**+0.4**
	1.0nm,0.9s,baz=119,slow=3.5,SNR=2.4						
WRA				ScP	**ScP**	**10 18 18.8**	**-1.2**
	0.1nm,0.5s,baz=100,slow=3.7,SNR=3.0						
WRA				LR	LR	10 30 09.1	
	comp=Z,56nm,18.8s,baz=105,slow=35						
FORT	**Forrest**	**45.86**	**256**	*e*P	**P**	**10 13 01.4**	**0.0**
	15nm,0.6s						
JAY	**Jayapura**	**48.00**	**298**	LR	LR	10 30 32.9	
	comp=Z,45nm,20.4s,baz=285,slow=32						
CASY	**Casey**	**54.75**	**208**	*e*P	**P**	**10 14 07.7**	**-0.4**
	20nm,1.0s						
MORW	**Morawa**	**56.33**	**254**	*e*P	**P**	**10 14 20.7**	**+0.6**
	3.1nm,0.8s						
QSPA	**South Pole Qui**	**59.32**	**180**	*e*P	**P**	**10 14 43.0**	**+2.4**
	20nm,1.0s						
QSPA	**South Pole Qui**	**59.32**	**180**	P	**P**	**10 14 43.1**	**+2.6**
	8.1nm,1.1s,baz=12,slow=1.3,SNR=20						
SNAA	**Sanae**	**77.77**	**178**	P	**P**	**10 16 36.0**	**+0.6**
SNAA	**Sanae**	**77.77**	**178**	*e*P	**P**	**10 16 36.3**	**+0.9**
	3.6nm,1.0s						
VNA3	**Neumayer Olymp**	**77.92**	**176**	P	**P**	**10 16 36.9**	**+0.7**
VNA2	**Neumayer--Watz**	**78.35**	**177**	P	**P**	**10 16 39.3**	**+0.7**
PLCA	**Paso Flores**	**82.30**	**133**	P	**P**	**10 17 02.1**	**+1.6**
	2.1nm,0.9s,baz=245,slow=13,SNR=3.2						
PEA0B	**Petropavlovsk-**	**86.17**	**346**	*e*P	**P**	**10 17 21.4**	**+2.0**
	13nm,1.0s						
PETK	**Petropavlovsk-**	**86.17**	**346**	*e*P	**P**	**10 17 18.8**	**-0.6**
PETK	**Petropavlovsk-**	**86.17**	**346**	P	**P**	**10 17 18.4**	**-1.0**
	3.7nm,0.6s,baz=122,slow=5.4,SNR=4.9						
PEA1	**Petropavlovsk-**	**86.17**	**346**	*e*P	**P**	**10 17 18.4**	**-1.0**
NVAR	**Mina Array Bea**	**88.59**	**43**	P	**P**	**10 17 32.2**	**+0.5**
	1.3nm,0.8s,baz=222,slow=9.5,SNR=6.1						
NVAR				pP	**pwP**	**10 17 48.1**	**-0.2**
	1.5nm,0.8s,baz=219,slow=8.2,SNR=5.4						
TXAR	**Lajitas Array**	**92.67**	**57**	P	**P**	**10 17 51.8**	**+1.0**
	1.0nm,1.1s,baz=197,slow=2.8,SNR=3.4						
PDAR	**Pinedale Array**	**96.48**	**44**	P	**P**	**10 18 08.6**	**+0.5**
	0.3nm,0.8s,baz=259,slow=7.0,SNR=2.7						
YKA	**Yellowknife Ar**	**105.83**	**26**	PKKPbc	PKKPbc	10 34 24.7	-1.8
	0.2nm,0.8s,baz=38,slow=3.0,SNR=4.4						
MK01	**Makanchi Array**	**117.94**	**310**	*e*PKPdf	**PKPdf**	**10 23 23.3**	**-1.6**
MK31	**Makanchi Array**	**117.96**	**310**	*e*PKPdf	**PKPdf**	**10 23 22.7**	**-2.1**
MK32	**Makanchi Array**	**117.96**	**310**	*e*PKPdf	**PKPdf**	**10 23 23.2**	**-1.7**
MKAR	**Makanchi Array**	**117.96**	**310**	PKP	**PKPdf**	**10 23 23.2**	**-1.7**
	0.5nm,0.7s,baz=79,slow=1.1,SNR=6.9						
KURK	**Kurchatov**	**121.25**	**314**	*e*PKPdf	**PKPdf**	**10 23 29.8**	**-1.3**
KURBB	**Kurchatov Arra**	**121.29**	**314**	PKP	**PKPdf**	**10 23 29.8**	**-1.3**
	1.3nm,0.6s,baz=115,slow=1.8,SNR=8.9						
AAK	**Ala-Archa**	**122.26**	**304**	PKP	**PKPdf**	**10 23 31.5**	**-2.0**
	0.7nm,0.5s,baz=120,slow=9.0,SNR=2.2						
KK31	**Karatay Array**	**125.22**	**303**	*e*PKPdf	**PKPdf**	**10 23 38.3**	**-0.6**
KKAR	**Karatay Array**	**125.22**	**303**	*e*PKPdf	**PKPdf**	**10 23 38.5**	**-0.5**
BATG	**Bathurst New B**	**126.37**	**52**	*e*PKPdf	**PKPdf**	**10 23 40.2**	**-0.8**
BVAR	**Borovoye Array**	**126.62**	**316**	PKP	**PKPdf**	**10 23 40.9**	**-0.4**
	1.5nm,0.7s,baz=123,slow=2.4,SNR=6.7						
AKTO	**Aktyubinsk**	**134.30**	**312**	PKP	**PKPdf**	**10 23 56.5**	**+0.5**
	1.0nm,0.5s,baz=96,slow=6.9,SNR=4.1						
ARA0	**ARCESS Array S**	**138.95**	**348**	*e*PKPpre	PKPpre	10 23 56.2	
ARCES	**ARCESS Array B**	**138.95**	**348**	PKPpre	PKPpre	10 23 56.2	
ARCES				*e*PKPdf	**PKiKP**	**10 24 06.2**	**-0.1**
ARCES	**ARCESS Array B**	**138.95**	**348**	PKhKP	PKPpre	10 23 56.3	
	7.3nm,1.0s,baz=28,slow=3.0,SNR=5.6						
ARCES				PKP	**PKiKP**	**10 24 05.7**	**-0.6**
	2.9nm,0.8s,baz=41,slow=2.9,SNR=6.7						
KBZ	**Khabaz**	**145.25**	**303**	PKPbc	**PKPbc**	**10 24 15.4**	**-0.3**
	1.3nm,0.5s,baz=123,slow=4.3,SNR=4.8						
FIA0	**FINESS Array S**	**145.48**	**340**	*e*PKPdf	**PKPdf**	**10 24 14.4**	**-1.3**
FINES	**FINESS Array B**	**145.48**	**340**	PKPbc	**PKPdf**	**10 24 14.4**	**-1.3**
	10nm,0.5s,baz=64,slow=3.7,SNR=116						
NC303	**NORSAR Array S**	**148.93**	**351**	*e*PKPbc	**PKPbc**	**10 24 24.9**	**-0.7**
NC405	**NORSAR Array S**	**148.99**	**351**	*e*PKPbc	**PKPbc**	**10 24 25.9**	**+0.1**
NB201	**NORSAR Array S**	**149.10**	**351**	*e*PKPbc	**PKPbc**	**10 24 25.5**	**-0.6**
NB2	**NORSAR Subarra**	**149.12**	**351**	PKP	**PKPbc**	**10 24 24.6**	**-1.6**
	comp=Z,1.4nm,0.6s,baz=15,slow=2.6						
NB200	**NORSAR Array S**	**149.12**	**351**	*e*PKPbc	**PKPbc**	**10 24 24.9**	**-1.2**
NOA	**NORSAR Array B**	**149.12**	**351**	PKPbc	**PKPbc**	**10 24 24.9**	**-1.2**
	comp=Z,2.1nm,0.6s,baz=15,slow=4.2,SNR=13						
NBO00	**NORSAR Array S**	**149.19**	**352**	*e*PKPbc	**PKPbc**	**10 24 25.9**	**-0.4**
NC602	**NORSAR Array S**	**149.37**	**351**	*e*PKPbc	**PKPbc**	**10 24 25.6**	**-1.1**
KONO	**Kongsberg**	**150.68**	**352**	*e*PKPbc	**PKPbc**	**10 24 29.4**	**-0.5**
MMAI	**Mount Meron Ar**	**151.53**	**283**	PKPbc	**PKPbc**	**10 24 32.9**	**0.0**
	comp=Z,2.9nm,0.5s,baz=82,slow=6.0,SNR=7.7						
AKASG	**Malin Array Be**	**151.56**	**322**	PKPbc	**PKPbc**	**10 24 31.0**	**-1.2**
	comp=Z,5.1nm,0.6s,baz=49,slow=2.9,SNR=16						
AKBB	**Malin Array Si**	**151.56**	**322**	*e*PKPbc	**PKPbc**	**10 24 31.1**	**-1.1**
KIEV	**Kiev**	**151.57**	**322**	*e*PKPbc	**PKPbc**	**10 24 30.9**	**-1.3**
AK11	**Malin Array Si**	**151.60**	**322**	*e*PKPbc	**PKPbc**	**10 24 31.2**	**-1.1**
BR101	**Keskin Array S**	**152.71**	**298**	*e*PKPbc	**PKPbc**	**10 24 34.5**	**-0.9**
BR131	**Keskin Array S**	**152.71**	**298**	*e*PKPbc	**PKPbc**	**10 24 34.7**	**-0.7**
BRTR	**Keskin Array B**	**152.71**	**298**	PKPbc	**PKPbc**	**10 24 34.5**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=142,slow=4.0,SNR=10.0						
CLL	**Collm**	**157.91**	**341**	*e*PKPab	**PKPab**	**10 25 10.0**	**+2.1**
GERES	**GERESS Array B**	**159.86**	**337**	PKPab	**PKPab**	**10 25 17.2**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=27,slow=2.4,SNR=2.6						
TORD	**Torodi Ar. Bea**	**162.44**	**179**	PKPab	**PKPab**	**10 25 28.2**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=180,slow=3.7,SNR=7.0						
TOA1	**Torodi Ar. Sit**	**162.44**	**179**	*e*PKPab	**PKPab**	**10 25 28.2**	**-0.2**

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*THR **24** 10:09:55.9, 27°.02N×53°.82E, h18^{km}, ML3.6*

*ISCJB **24** 10:09:58.5±0.8, 27°.19N±0°.07×53°.81E±0°.10, h19^{km}, Error ellipse: s-maj=14.9km s-min=5.4km az=142.1*

*TEH **24** 10:09:58.4, 27°.12N×53°.78E, h26^{km}, ML3.6*

ISC 24 10:09:59.0±1.8**, 27°.1N**±0°.1×**53°.75E**±0°.09**, h19**^{km}**, n26, σ1^{s}08**/27**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GHIR	**Ghir-Karzin**	**1.36**	**330**	*e*AML	AML	10 10 45.1	
	comp=E,846nm,0.5s						
GHIR				*e*Pg	**Pn**	**10 10 22.9**	**-0.3**
GHIR				*e*Sg	**Sg**	**10 10 42.6**	**-0.6**
GHIR				*e*AML	AML	10 10 46.5	
	comp=N,940nm,0.5s						
JHRM	**Jahrom**	**1.41**	**354**	*e*Pg	**Pb**	**10 10 24.8**	**0.0**
JHRM				IAMB	IAmb	10 10 46.8	
	comp=E,0.0nm,0.6s						
GENO	**Geno**	**2.17**	**81**	*e*Pn	**Pn**	**10 10 33.7**	**-0.6**
GENO				IAMB	IAmb	10 11 18.5	
	comp=Z,0.0nm,0.4s						
ISRV	**Sarvestan**	**2.34**	**346**	*e*Pn	**Pn**	**10 10 37.4**	**+0.6**
ISRV				IAMB	IAmb	10 11 38.3	
	comp=Z,4µm,1.0s						
SHME	**Shamm**	**2.38**	**115**	*e*Pn	**Pn**	**10 10 35.9**	**-1.1**
MSFE	**Esma-Masafi**	**2.77**	**128**	*e*Pn	**Pn**	**10 10 43.1**	**+0.7**
NIAN	**Nian**	**2.78**	**80**	*e*Pn	**Pn**	**10 10 41.9**	**-0.6**
NIAN				IAMB	IAmb	10 11 35.6	
	comp=Z,0.0nm,0.4s						
IPAR	**Pars**	**2.80**	**347**	*e*Pn	**Pn**	**10 10 43.7**	**+0.6**
IPAR				IAMB	IAmb	10 11 40.1	
	comp=Z,2µm,1.0s						
IKAZ	**Kazeroun**	**3.16**	**328**	*e*Pn	**Pn**	**10 10 47.3**	**-0.7**
IKAZ				IAMB	IAmb	10 11 46.0	
	comp=Z,2µm,0.4s						
ASHO	**Ashiyiah**	**3.18**	**139**	*e*Pn	**Pn**	**10 10 49.0**	**+1.0**
KRBR	**Kerman**	**3.91**	**42**	*e*Pn	**Pn**	**10 10 58.0**	**-0.3**
KRBR	**Kerman**	**3.91**	**42**	*e*Pn	**Pn**	**10 10 58.0**	**-0.3**
KLNJ	**Kolanjah**	**4.33**	**335**	*e*Pn	**Pn**	**10 11 03.8**	**-0.4**
IMEH	**Mehriz**	**4.34**	**10**	IAMB	IAmb	10 11 07.0	
	comp=Z,395nm,0.2s						
IMEH				*e*Pn	**Pn**	**10 11 04.9**	**+0.7**
HOQ	**Hoqain**	**4.75**	**137**	*e*Pn	**Pn**	**10 11 13.2**	**+3.5**
ISAD	**Sadrabad**	**4.80**	**359**	*e*Pn	**Pn**	**10 11 11.4**	**+0.9**
ISAD				IAMB	IAmb	10 11 13.9	
	comp=Z,743nm,0.3s						
IRAM	**Ramesheh**	**4.84**	**346**	*e*Pn	**Pn**	**10 11 10.2**	**-0.9**
IRAM				IAMB	IAmb	10 12 14.1	
	comp=Z,180nm,0.4s						
ICHK	**Chekchek**	**5.16**	**6**	*e*Pn	**Pn**	**10 11 15.7**	**+0.2**
ICHK				IAMB	IAmb	10 11 25.7	
	comp=Z,439nm,0.3s						
YZKH	**Yazd**	**5.33**	**8**	*e*Pn	**Pn**	**10 11 17.7**	**+0.1**
YZKH	**Yazd**	**5.33**	**8**	*e*Pn	**Pn**	**10 11 17.7**	**+0.1**
IZEF	**Zefreh**	**5.91**	**348**	*e*Pn	**Pn**	**10 11 24.0**	**-1.8**
IZEF				IAMB	IAmb	10 11 29.4	
	comp=Z,163nm,0.3s						
ANAR	**Anarak**	**6.07**	**360**	*e*Pn	**Pn**	**10 11 27.0**	**-0.9**
IKLH	**Kolahrood**	**6.48**	**344**	*e*Pn	**Pn**	**10 11 33.1**	**-0.5**
IKLH				IAMB	IAmb	10 11 45.6	
	comp=Z,91nm,0.2s						
KRSH	**Karshahi**	**6.99**	**349**	*e*Pn	**Pn**	**10 11 39.2**	**-1.3**
KHMZ	**Khomeyn**	**7.38**	**335**	*e*Pn	**Pn**	**10 11 47.0**	**+1.0**
KHMZ	**Khomeyn**	**7.38**	**335**	*e*P	**Pn**	**10 11 47.0**	**+1.0**

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*MAN **24** 10:23:16.9, 14°.96N×119°.85E, h23^{km}, MS3.9*

*ISCJB **24** 10:23:19.6±0.6, 14°.86N±0°.03×120°.00E±0°.05, h76^{km}±5^{km}, mb4.1/45, Error ellipse: s-maj=8.3km s-min=4.5km az=177.3*

*NEIC **24** 10:23:20.4±0.9, 14°.77N×120°.05E, h69^{km}±7^{km}, mb4.3/27, Error ellipse: s-maj=9.3km s-min=4.8km az=73.0*

NEIC Felt at Morong and Olongapo.

*IDC **24** 10:23:22.5±1.0, 14°.85N×120°.09E, h90^{km}±10^{km}, mb3.7/19, mb1 3.8/19, mb1mx3.7/42, mbtmp4.0/19, MS3.1/6, Ms1 3.1/6, ms1mx2.9/32, Error ellipse: s-maj=21.2km s-min=11.8km az=71.0*

ISC 24 10:23:19.6±0.8**, 14°.92N**±0°.04×**119°.90E**±0°.06**, h59**^{km}±7^{km}**, n93, σ1^{s}53**/100**, mb4.3**/45**, MS3.1**/6**, 4C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCZP	**Santa Cruz**	**0.85**	**1**	*e*P	Pn	10 23 31.9	-3.9
SCZP				*e*S	**Sn**	**10 23 42.7**	**-4.8**
TGY	**Tagaytay City**	**1.30**	**129**	P	**Pn**	**10 23 41.6**	**0.0**
	974nm,0.3s,baz=244,slow=0.7,SNR=44						
TGY				S	**Sn**	**10 24 00.1**	**+2.1**
	760nm,0.3s,baz=319,slow=11,SNR=6.2						
TGY				LR	LR	10 24 16.5	
	comp=Z,515nm,19.4s,baz=199,slow=49						
BOLP	**Bolinao**	**1.45**	**1**	*e*P	**Pn**	**10 23 40.6**	**-3.1**
BOLP				*e*S	**Sn**	**10 23 59.0**	**-2.7**
BALP	**Baler**	**1.81**	**63**	*e*P	**Pn**	**10 23 47.1**	**-1.5**
BALP				*e*S	**Sn**	**10 24 09.4**	**-1.1**
POLP	**Polilio Island**	**1.99**	**95**	*e*P	**Pn**	**10 23 50.7**	**-0.2**
POLP				*e*S	**Sn**	**10 24 14.8**	**+0.1**
BOAC	**Boac**	**2.38**	**127**	*e*P	**Pn**	**10 23 56.3**	**0.0**
GQP	**Guinayangan**	**2.67**	**112**	⇓*e*P	**Pn**	**10 23 59.8**	**-0.4**
GQP				*i* S	Sn	10 24 41.1	+10
SJMP	**San Jose**	**2.72**	**154**	*e*P	**Pn**	**10 24 01.1**	**+0.2**
SJMP				*e*S	**Sn**	**10 24 34.9**	**+2.2**
CAUP	**Cauayan**	**2.74**	**42**	*e*P	**Pn**	**10 24 00.9**	**-0.2**
CAUP				*e*S	Sn	10 24 45.8	+13
BUSP	**Coron**	**2.92**	**174**	*e*P	**Pn**	**10 24 03.8**	**+0.2**
BUSP				*e*S	**Sn**	**10 24 35.0**	**-2.5**
APYP	**Conner**	**3.20**	**24**	*e*P	**Pn**	**10 24 07.3**	**-0.2**
APYP				*e*S	**Sn**	**10 24 45.3**	**+0.9**
PALP	**Palanan**	**3.23**	**48**	*e*P	**Pn**	**10 24 09.5**	**+1.5**
PALP				*e*S	Sn	10 24 55.2	+10
OTRP	**Odiongan**	**3.28**	**141**	*e*P	**Pn**	**10 24 08.8**	**+0.2**
OTRP				*e*S	**Sn**	**10 24 47.3**	**+1.0**
ENPP	**El Nido**	**3.72**	**187**	*e*P	**Pn**	**10 24 14.0**	**-0.6**
PVCP	**Virac**	**4.33**	**107**	*e*P	**Pn**	**10 24 23.8**	**+0.8**
YULB	**Yu-li**	**8.53**	**9**	*e*Pn	**Pn**	**10 25 23.4**	**+2.9**
NACB	**Ninganchiao**	**9.34**	**10**	*e*Pn	**Pn**	**10 25 32.7**	**+1.1**
DAV	**Davao City (W)**	**9.59**	**144**	LR	LR	10 29 36.0	
	comp=Z,135nm,19.7s,baz=326,slow=40						
YHNB	**Yeheng**	**9.80**	**8**	*e*Pn	**Pn**	**10 25 41.4**	**+3.5**
KSM	**Kuching**	**16.38**	**216**	*e*Pn	**P**	**10 27 11.2**	**+3.5**
	8.4nm,1.0s						
KMI	**Kunming**	**19.03**	**305**	P	**Pn**	**10 27 41.9**	**+3.4**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,4.1s						
CMAR	**Chiang Mai Arr**	**20.37**	**283**	P	Pn	10 27 55.6	+1.4
	comp=Z,1.5nm,0.8s,baz=99,slow=9.1,SNR=12						
CMAR				pP	pwP	10 28 09.7	+2.0
	comp=Z,0.9nm,0.5s,baz=94,slow=8.2,SNR=5.0						
CMAR				LR	LR	10 35 46.1	
	comp=Z,46nm,19.2s,baz=82,slow=36						
KSRS	**Korea Array**	**23.55**	**16**	P	**P**	**10 28 24.7**	**0.0**
	comp=Z,0.9nm,0.8s,baz=200,slow=10,SNR=2.9						
KSRS				LR	LR	10 39 16.6	
	comp=Z,16nm,18.7s,baz=185,slow=40						
UGM	**Wanagama**	**24.52**	**203**	*e*P	**P**	**10 28 34.2**	**+0.4**
	comp=Z,77nm,1.1s						
HHC	**Hu-ho-hao-te**	**26.83**	**346**	*e*P	**P**	**10 28 58.8**	**+4.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,59nm,7.3s						
SONM	**Songino Array**	**34.67**	**344**	P	**P**	**10 30 03.2**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=171,slow=8.9,SNR=4.0						
SONM				LR	LR	10 43 51.6	
	comp=Z,48nm,19.6s,baz=135,slow=35						
SONA1	**Songino Array**	**34.68**	**344**	*e*P	**P**	**10 30 06.2**	**+2.4**
ASAJ	**Asahikawa**	**34.93**	**29**	P	**P**	**10 30 06.3**	**+0.5**
	comp=Z,2.8nm,0.4s,baz=210,slow=8.1,SNR=4.5						
KLR	**Kul'dur**	**35.57**	**13**	P	**P**	**10 30 10.5**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=211,slow=9.5,SNR=4.0						
COEN	**Coen**	**36.79**	**140**	*e*P	**P**	**10 30 19.5**	**-2.6**
	comp=Z,4.1nm,0.8s						
WRAB	**Tennant Creek**	**37.44**	**157**	*e*P	**P**	**10 30 25.0**	**-2.5**
	comp=Z,8.6nm,0.5s						
WRA	**Warramunga Arr**	**37.44**	**157**	P	**P**	**10 30 24.9**	**-2.7**
	comp=Z,8.8nm,0.7s,baz=336,slow=9.5,SNR=81						
WRA				PcP	**PcP**	**10 32 45.1**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=344,slow=3.6,SNR=2.5						
WB2	**Warramunga Arr**	**37.45**	**157**	*e*P	**P**	**10 30 25.0**	**-2.6**
	comp=Z,12nm,0.6s						
WC3	**Warramunga Arr**	**37.47**	**157**	*e*P	**P**	**10 30 25.3**	**-2.5**
	comp=Z,11nm,0.7s						
WMQ	**Urumqi**	**39.77**	**323**	*e*P	P	10 30 53.5	+6.6
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.1s						
WMQ				LR	LR		
	comp=N,78nm,23.9s						
WMQ				LR	LR		
	comp=E,92nm,18.7s						
WMQ				LR	LR		
	comp=Z,87nm,22.9s						
AS31	**Alice Springs**	**40.72**	**160**	*e*P	**P**	**10 30 52.8**	**-2.1**
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**40.72**	**160**	P	**P**	**10 30 52.9**	**-2.1**
	comp=Z,2.9nm,0.5s,baz=340,slow=7.1,SNR=68						
ASAR				PcP	**PcP**	**10 32 55.5**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=347,slow=3.3,SNR=3.2						
AS01	**Alice Springs**	**40.74**	**160**	*e*P	**P**	**10 30 52.9**	**-2.1**
CTAO	**Charters Tower**	**43.38**	**143**	*e*P	**P**	**10 31 15.4**	**-1.2**
	comp=Z,4.7nm,1.1s						
MK01	**Makanchi Array**	**44.57**	**323**	*e*P	**P**	**10 31 25.4**	**-0.5**
MK31	**Makanchi Array**	**44.59**	**323**	*e*P	**P**	**10 31 27.4**	**+1.3**
MKAR	**Makanchi Array**	**44.59**	**323**	*e*P	**P**	**10 31 27.4**	**+1.3**
	comp=Z,4.6nm,0.8s						
MKAR	**Makanchi Array**	**44.59**	**323**	P	**P**	**10 31 26.8**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=123,slow=9.4,SNR=5.7						
MKAR				pP	**pwP**	**10 31 44.6**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=122,slow=12,SNR=3.5						
MKAR				PcP	**PcP**	**10 33 07.9**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=131,slow=4.0,SNR=2.6						
HNR	**Honiara**	**46.49**	**119**	LR	LR	10 52 05.5	
	comp=Z,39nm,18.4s,baz=303,slow=37						
ZALV	**Zalesovo Beam**	**47.62**	**333**	P	**P**	**10 31 50.4**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=134,slow=6.2,SNR=3.5						
PETK	**Petropavlovsk-**	**48.35**	**30**	*e*P	**P**	**10 31 55.8**	**+0.5**
PETK	**Petropavlovsk-**	**48.35**	**30**	P	**P**	**10 31 54.1**	**-1.2**
	comp=Z,3.5nm,1.1s,baz=207,slow=2.9,SNR=4.1						
KURK	**Kurchatov**	**48.75**	**326**	*e*P	**P**	**10 31 59.2**	**+0.8**
	comp=Z,2.7nm,0.8s						
BBOO	**Buckleboo**	**49.92**	**162**	*e*P	**P**	**10 32 05.4**	**-2.1**
	comp=Z,4.7nm,1.0s						
KK31	**Karatay Array**	**50.57**	**314**	*e*P	**P**	**10 32 13.7**	**+1.2**
KKAR	**Karatay Array**	**50.57**	**314**	*e*P	**P**	**10 32 13.8**	**+1.3**
STKA	**Stephens Creek**	**50.97**	**156**	P	**P**	**10 32 13.3**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=333,slow=9.0,SNR=2.9						
BRVK	**Borovoye**	**54.40**	**326**	*e*P	**P**	**10 32 42.8**	**+2.2**
	comp=Z,1.2nm,0.8s						
NRIK	**Noril'sk**	**58.06**	**347**	P	**P**	**10 33 06.1**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=148,slow=9.5,SNR=3.3						
ABKAR	**Akbulak array**	**59.31**	**319**	*e*P	**P**	**10 33 16.1**	**+0.7**
OBN	**Obninsk**	**74.10**	**324**	LR	LR	11 08 44.4	
	comp=Z,8.3nm,18.3s,baz=322,slow=37						
BKZ	**Black Stump Fm**	**75.36**	**138**	*e*P	**P**	**10 34 55.6**	**-1.4**
	comp=Z,16nm,1.2s						
RC01	**Rabbit Creek A**	**77.25**	**30**	*e*P	**P**	**10 35 07.8**	**+0.4**
	comp=Z,12nm,1.2s						
MCK	**McKinley**	**77.27**	**27**	*e*P	**P**	**10 35 07.3**	**-0.2**
	comp=Z,5.6nm,1.1s						
RND	**Reindeer**	**77.35**	**27**	*e*P	**P**	**10 35 06.8**	**-1.3**
	comp=Z,1.4nm,1.1s						
MDM	**Murphy Dome**	**77.40**	**26**	*e*P	**P**	**10 35 08.8**	**+0.5**
	comp=Z,2.6nm,1.0s						
PMR	**Palmer**	**77.47**	**29**	*e*P	**P**	**10 35 07.8**	**-0.8**
	comp=Z,4.3nm,1.2s						
WRH	**Wood River Hil**	**77.53**	**26**	*e*P	**P**	**10 35 08.7**	**-0.2**
	comp=Z,0.8nm,0.7s						
ARCES	**ARCESS Array B**	**77.67**	**339**	P	**P**	**10 35 09.7**	**0.0**
	comp=Z,1.6nm,0.7s,baz=78,slow=6.3,SNR=11						
BRTR	**Keskin Array B**	**77.79**	**308**	P	**P**	**10 35 11.9**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=132,slow=3.7,SNR=4.2						
KNK	**Knik Glacier**	**77.82**	**29**	*e*P	**P**	**10 35 10.3**	**-0.3**
	comp=Z,4.3nm,1.0s						
IL1	**Eielson Array**	**78.00**	**26**	*e*P	**P**	**10 35 11.4**	**-0.2**
ILAR	**Eielson Array**	**78.00**	**26**	P	**P**	**10 35 10.5**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=261,slow=4.0,SNR=6.1						
HDA	**Harding Lake**	**78.03**	**26**	*e*P	**P**	**10 35 12.0**	**+0.3**
	comp=Z,0.3nm,0.6s						
DHY	**Denali Highway**	**78.06**	**28**	*e*P	**P**	**10 35 12.4**	**+0.3**
	comp=Z,5.1nm,1.1s						
SCM	**Sheep Creek Mo**	**78.29**	**29**	*e*P	**P**	**10 35 13.2**	**0.0**
	comp=Z,24nm,1.1s						
FINES	**FINESS Array B**	**78.84**	**331**	P	**P**	**10 35 16.3**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=51,slow=5.7,SNR=21						
AKASG	**Malin Array Be**	**79.03**	**320**	P	**P**	**10 35 17.3**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=69,slow=5.7,SNR=4.4						
SCRK	**Sand Creek**	**79.39**	**27**	*e*P	**P**	**10 35 19.0**	**-0.3**
	comp=Z,0.8nm,0.8s						
EGAK	**Eagle**	**80.40**	**25**	*e*P	**P**	**10 35 24.4**	**-0.2**
	comp=Z,2.3nm,0.7s						
CFR	**Carcaliu**	**80.80**	**314**	⇑*i*P	**P**	**10 35 26.7**	**-0.4**
DAWY	**Dawson**	**81.33**	**26**	*e*P	**P**	**10 35 29.8**	**+0.1**
	comp=Z,2.0nm,0.9s						
TESR	**Tescani**	**81.53**	**316**	⇑*i*P	**P**	**10 35 31.3**	**+0.3**
VRI	**Vrincioaia**	**81.62**	**315**	⇑*i*P	**P**	**10 35 32.5**	**+1.0**
BIZ	**Bicaz**	**81.80**	**316**	⇑*i*P	**P**	**10 35 31.1**	**-1.4**
BUR04	**Bucovina Ar. S**	**82.24**	**317**	*e*P	**P**	**10 35 35.7**	**+0.8**
MLR	**Muntele Rosu**	**82.24**	**315**	*e*P	**P**	**10 35 35.9**	**+1.0**
	comp=Z,3.6nm,0.7s						
MLR	**Muntele Rosu**	**82.24**	**315**	⇓*i*P	**P**	**10 35 36.0**	**+1.0**
BUR08	**Bucovina Ar. S**	**82.24**	**317**	*e*P	**P**	**10 35 35.8**	**+0.9**
NC405	**NORSAR Array S**	**85.57**	**332**	*e*P	**P**	**10 35 51.3**	**-0.2**
NC303	**NORSAR Array S**	**85.68**	**333**	*e*P	**P**	**10 35 51.8**	**-0.2**
NB2	**NORSAR Subarra**	**85.82**	**332**	P	**P**	**10 35 51.7**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=68,slow=5.1						
NOA	**NORSAR Array B**	**85.82**	**332**	P	**P**	**10 35 52.0**	**-0.7**
	comp=Z,3.7nm,0.9s,baz=68,slow=4.8,SNR=11						
NC204	**NORSAR Array S**	**85.93**	**333**	*e*P	**P**	**10 35 52.8**	**-0.5**
YKA	**Yellowknife Ar**	**91.95**	**22**	P	**P**	**10 36 21.2**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=311,slow=4.5,SNR=12						
HUMP	**Col San Antoni**	**146.66**	**10**	*e*PKPdf	**PKPbc**	**10 42 54.9**	**-0.8**
CDVI	**St. Croix**	**147.21**	**8**	*e*PKPdf	**PKPdf**	**10 42 55.7**	**+0.7**
SDV	**Santo Domingo**	**154.15**	**24**	*e*PKPbc	**PKPbc**	**10 43 14.0**	**-0.2**

IDC 24 10:37:06.6±2.7**, 19°.17S**×**177°.49W, h0**^{km}**, mb3.4**/3**, mb1 3.8**/3**, mb1mx3.5**/21**, mbtmp3.4**/3**, Error ellipse: s-maj=303.0km s-min=31.3km az=160.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.27**	**261**	P	P	10 45 25.4	-0.9
	0.2nm,0.5s,baz=98,slow=6.2,SNR=6.7						
ASAR	**Alice Springs**	**45.30**	**255**	P	P	10 45 26.9	+0.4
	0.8nm,0.6s,baz=88,slow=8.6,SNR=28						
TXAR	**Lajitas Array**	**85.94**	**57**	P	P	10 49 49.1	+0.1
	0.1nm,0.5s,baz=229,slow=6.9,SNR=2.5						

PGC 24 10:48:39.7±12.0**, 51°.05N**×**130°.62W, h10**^{km}**, MLSn2.9**/8**, Mw3.5**/8**, 212km Wsw of Bella Bella, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNB	**Barry Inlet**	**1.69**	**336**	Sn	Sn	10 49 27.0	-3.9
BBB	**Bella Bella**	**1.94**	**53**	Pn	Pn	10 49 10.4	-2.1
PHC	**Port Hardy**	**2.05**	**98**	Pn	Pn	10 49 12.8	-1.3
PHC				Sn	Sn	10 49 35.3	-4.3
PACB	**Port Alice, BC**	**2.08**	**106**	Pn	Pn	10 49 12.9	-1.6
PACB				Sn	Sn	10 49 37.1	-3.4
MAYB	**Maynard**	**2.28**	**105**	Pn	Pn	10 49 15.8	-1.7
WOSB	**Woss**	**2.73**	**107**	Pn	Pn	10 49 22.1	-1.5
WOSB				Sn	Sn	10 49 53.6	-3.0
NCRB	**Newcastle Ridg**	**2.97**	**101**	Pn	Pn	10 49 26.1	-0.9
GDR	**Gold River**	**3.20**	**112**	Pn	Pn	10 49 27.4	-2.4
CBB	**Campbell River**	**3.50**	**105**	Pn	Pn	10 49 32.8	-1.3
BTB	**Buttle Lake**	**3.63**	**114**	Pn	Pn	10 49 34.3	-1.8

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*ISCJB **24** 11:13:31.6±0.9, 32°.75N±0°.04×140°.72E±0°.09, h69^{km}±7^{km}, mb3.4/6, Error ellipse: s-maj=12.6km s-min=6.4km az=10.4*

*IDC **24** 11:13:32.6±2.1, 32°.60N×140°.52E, h56^{km}±15^{km}, mb3.2/6, mb1 3.4/7, mb1mx3.2/30, mbtmp3.5/7, Error ellipse: s-maj=33.7km s-min=16.6km az=84.0*

*JMA **24** 11:13:32.7±0.1, 32°.80N×140°.73E, h54^{km}, M3.7*

ISC 24 11:13:31.9±1.6**, 32°.73N**±0°.07×**140°.78E**±0°.10**, h54**^{km}±14^{km}**, n26, σ1^{s}29**/32**, mb3.5**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**0.89**	**293**	P	**Pn**	**11 13 48.4**	**+0.1**
JHCJ				S	**Sn**	**11 13 59.6**	**-0.7**

JHJ2	Mitsune	0.89	295	P	Pn	11 13 48.6	+0.3
JHJ2				S	Sn	11 14 00.5	+0.2
JAOM	Aogashimamukai	0.90	253	P	Pn	11 13 49.3	+1.0
JAOM				eS	Sn	11 14 01.2	+0.8
JHJ	Hachijo jima 2	0.92	295	P	Pn	11 13 48.6	0.0
	152nm,0.3s,baz=336,slow=20,SNR=26						
JHJ				S	Sn	11 13 60.0	-1.0
	364nm,0.3s,baz=306,slow=23,SNR=27						
JMKN	Mikurajimanish	1.53	320	P	Pn	11 13 57.2	+0.4
JMKN				S	Sn	11 14 14.7	-0.8
BSO1	Boso 1	1.93	5	P	Pn	11 14 02.1	+0.4
BSO1				eS	Sn	11 14 24.9	+0.4
BSO3	Boso 3	2.08	354	P	Pn	11 14 04.6	+0.5
BSO3				eS	Sn	11 14 28.9	+0.3
JIM2	Oshima 3	2.28	331	P	Pn	11 14 07.4	+0.3
JIM2				S	Sn	11 14 33.0	-1.0
JIZS	Izushimoda	2.54	322	P	Pn	11 14 11.6	+1.0
JIZS				S	Sn	11 14 40.6	+0.3
JOD2	Odawara 2	2.89	331	P	Pn	11 14 16.1	+0.7
JOD2				S	Sn	11 14 47.5	-1.5
MJAR	Matsushiro Arr	4.35	332	P	Pn	11 14 37.0	+1.5
	0.5nm,0.3s,baz=157,slow=11,SNR=23						
MJAR				S	Sn	11 15 26.0	+1.1
	0.4nm,0.3s,baz=274,slow=32,SNR=5.8						
MAT	Matsushiro	4.35	332	P	Pn	11 14 38.6	+3.1
MAT				S	Sn	11 15 25.6	+0.7
JNU	Nakatsue	8.33	275	P	Pn	11 15 32.5	+2.4
	0.4nm,0.3s,baz=103,slow=18,SNR=5.3						
ASAJ	Asahikawa	11.46	7	P	Pn	11 16 10.4	-2.3
	0.6nm,0.3s,baz=224,slow=9.1,SNR=9.2						
H11N2	WAKE ISLAND Hy	26.68	113	T	T	11 47 53.3	
	baz=305,slow=75,SNR=23						
H11N1	WAKE ISLAND Hy	26.69	113	T	T	11 47 53.3	
	baz=305,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	26.70	113	T	T	11 47 53.3	
	baz=305,slow=75,SNR=17						
H11S3	WAKE ISLAND Hy	27.23	115	T	T	11 48 36.0	
	baz=305,slow=75,SNR=4.5						
H11S1	WAKE ISLAND Hy	27.24	115	T	T	11 48 34.5	
	baz=305,slow=75,SNR=7.6						
H11S2	WAKE ISLAND Hy	27.25	115	T	T	11 48 36.0	
	baz=305,slow=75,SNR=2.8						
CMAR	Chiang Mai Arr	40.05	260	P	P	11 20 59.6	-2.5
	0.3nm,0.3s,baz=54,slow=6.8,SNR=2.7						
MKAR	Makanchi Array	46.08	306	P	P	11 21 49.9	-0.5
	0.3nm,0.5s,baz=90,slow=9.2,SNR=7.0						
WRA	Warramunga Arr	52.74	188	P	P	11 22 40.5	-0.9
	0.2nm,0.3s,baz=6.6,slow=7.7,SNR=6.7						
ILAR	Eielson Array	53.43	31	P	P	11 22 46.7	+0.8
	0.2nm,0.8s,baz=271,slow=8.0,SNR=3.5						
ASAR	Alice Springs	56.46	188	P	P	11 23 07.6	-0.7
	0.1nm,0.4s,baz=3.5,slow=7.2,SNR=6.8						
FINES	FINESS Array B	72.38	333	P	P	11 24 53.9	+2.0
	1.4nm,0.9s,baz=27,slow=9.4,SNR=3.4						

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*IDC **24** 11:27:41.9±1.2,5°.17S×132°.87E,h0^{km},mb3.8/4, mb1 4.3/11,mb1mx4.1/38,mbtmp4.3/11,ML4.2/6,Error ellipse: s-maj=31.8km s-min=21.2km az=85.0*

*NEIC **24** 11:27:43.9±3.7,5°.15S×132°.85E,h12^{km}±26^{km},mb4.2/3, Error ellipse: s-maj=11.0km s-min=7.4km az=77.0*

*ISCJB **24** 11:27:44.0±0.4,5°.21S±0°.03×132°.76E±0°.05,h33^{km}, mb4.0/7,Error ellipse: s-maj=7.4km s-min=4.2km az=176.3*

ISC 24 11:27:45.3±0.6,**5°.24S**±0°.05×**132°.85E**±0°.07,**h35**^{km}**,n28,** σ**3^{s}.40**/41,**mb4.2**/7,**Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.38	345	ePn	Pn	11 28 21.5	-0.3
FAKI				eSn	Sn	11 28 47.2	-2.6
SIJI	Sorong	4.62	340	Pn	Pn	11 28 51.6	-1.1
	4.2nm,0.3s,baz=143,slow=6.3,SNR=25						
SIJI				Sn	Sn	11 29 37.5	-7.6
	28nm,0.3s,baz=232,slow=22,SNR=16						
MTN	Manton Dam	7.75	193	ePn	Pn	11 29 39.8	+4.1
MTN				eSn	Sn	11 31 07.1	+4.9
JAY	Jayapura	8.29	71	Pn	Pn	11 29 43.8	+0.5
	0.7nm,0.3s,baz=203,slow=15,SNR=2.6						
SOEI	Soe	9.62	242	ePn	Pn	11 30 05.1	+3.6
SOEI				eSn	Sn	11 31 48.5	0.0
BATI	Baumata	10.35	241	Pn	Pn	11 30 13.1	+1.7
	3.1nm,0.3s,baz=54,slow=17,SNR=5.9						
BATI				Sn	Sn	11 32 05.7	-0.7
	2.5nm,0.3s,baz=33,slow=10,SNR=2.6						
COEN	Coen	13.37	131	ePn	Pn	11 30 55.2	+2.5
COEN				eSn	Sn	11 33 14.3	-5.8
DAV	Davao City (W)	14.21	329	Pn	Pn	11 31 04.3	0.0
	31nm,0.3s,baz=58,slow=8.0,SNR=2.5						
FITZ	Fitzroy Crossi	14.60	208	ePn	Pn	11 31 09.8	+0.4
FITZ				eSn	Sn	11 33 45.8	-4.3
FITZ	Fitzroy Crossi	14.60	208	Pn	Pn	11 31 10.3	+0.9
	4.2nm,0.3s,baz=27,slow=12,SNR=97						
FITZ				Sn	Sn	11 33 43.2	-6.9
	1.4nm,0.3s,baz=193,slow=18,SNR=7.3						
WRAB	Tennant Creek	14.68	174	ePn	Pn	11 31 12.6	+2.0
WRAB				eSn	Sn	11 33 46.8	-5.4
WR1	Warramunga Arr	14.69	174	ePn	Pn	11 31 11.5	+0.7
WR1				eSn	Sn	11 33 44.9	-7.5
WRA	Warramunga Arr	14.69	174	Pn	Pn	11 31 11.5	+0.7
	1.0nm,0.3s,baz=352,slow=14,SNR=48						
WRA				Sn	Sn	11 33 44.9	-7.5
	1.2nm,0.3s,baz=356,slow=23,SNR=7.8						
WB2	Warramunga Arr	14.69	174	ePn	Pn	11 31 12.7	+1.9
WB2				eSn	Sn	11 33 47.3	-5.1
AS31	Alice Springs	18.35	177	eP	P	11 31 58.2	+1.2
	1.8nm,0.5s						
AS31				eSn	Sn	11 35 16.9	-4.4
ASAR	Alice Springs	18.35	177	P	Pn	11 31 58.8	+1.5
	0.8nm,0.3s,baz=356,slow=13,SNR=48						
ASAR				S	Sn	11 35 15.2	-6.1
	0.4nm,0.3s,baz=0.0,slow=26,SNR=8.9						
AS01	Alice Springs	18.35	177	eP	Pn	11 32 00.0	+2.8
AS01				eSn	Sn	11 35 15.7	-5.7
KSM	Kuching	23.48	286	eP	P	11 32 50.7	-1.4
	10.0nm,1.1s						
FORT	Forrest	25.80	189	eP	P	11 33 17.5	+4.3
	11nm,0.8s						
CMAR	Chiang Mai Arr	40.88	306	P	P	11 35 26.5	+2.1
	0.5nm,0.5s,baz=137,slow=6.8,SNR=3.7						
HHC	Hu-ho-hao-te	49.84	339	eP	P	11 36 33.1	-2.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.5s						
SONA0	Songino Array	57.74	339	eP	P	11 37 34.6	+1.8
SONM	Songino Array	57.74	339	P	P	11 37 34.6	+1.8
	comp=Z,0.2nm,0.6s,baz=147,slow=8.6,SNR=2.3						
WMQ	Urumqi	63.52	325	eP	P	11 38 11.3	-1.0
MK32	Makanchi Array	68.36	325	eP	P	11 38 45.0	+1.7
MKAR	Makanchi Array	68.36	325	P	P	11 38 45.0	+1.7
	comp=Z,0.8nm,0.4s,baz=111,slow=8.2,SNR=19						
ZALV	Zalesovo Beam	71.30	332	P	P	11 39 02.3	+1.1
	comp=Z,0.6nm,0.3s,baz=114,slow=5.2,SNR=2.5						
ZAA1	Zalesovo Array	71.31	332	eP	P	11 39 02.3	+1.1

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*SOME **24** 11:28:06.5,42°.97N×77°.68E,h10^{km}*

*NNC **24** 11:28:06.2±0.9,43°.01N×77°.71E,h0^{km},mb1.9,mpv2.1, Error ellipse: s-maj=13.9km s-min=3.6km az=2.0*

ISC 24 11:28:06.0±1.5,**43°.0N**±0°.2×**77°.72E**±0°.02,**h5**^{km}±19^{km}**,n8,** σ**0^{s}.38**/16,**2C-4D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	0.52	77	P	Pg	11 28 16.1	+0.1
	1.7nm,0.1s						
SATY				S	Sg	11 28 23.2	+0.4
	16nm,0.1s						
SATY	Saty	0.52	77	eP	Pg	11 28 16.1	+0.1
	1.7nm,0.1s						
SATY				eS	Sg	11 28 23.2	+0.4
	16nm,0.1s						
MDOK	Medeo	0.53	294	⇓P	Pg	11 28 16.9	+0.6
	1.2nm,0.6s						
MDOK				⇑S	Sg	11 28 22.7	-0.6
	1.0nm,0.3s						
TNSS	Tian-Shan	0.57	279	eP	Pg	11 28 16.8	-0.2
	0.5nm,0.1s						
TNSS				eS	Sg	11 28 24.2	-0.3
	1.2nm,0.1s						
UZB	Uzynbulak	0.98	78	P	Pg	11 28 24.5	-0.3
	0.4nm,0.1s						
UZB				S	Sg	11 28 37.5	0.0
	1.4nm,0.1s						
UZB	Uzynbulak	0.98	78	eP	Pg	11 28 24.5	-0.3
	0.4nm,0.1s						
UZB				eS	Sg	11 28 37.5	0.0
	1.4nm,0.1s						
PDGK	Podgornoye	1.35	73	⇓P	Pn	11 28 31.8	+0.1
	1.8nm,0.9s						
PDGK				⇓S	Sg	11 28 49.0	-0.5
	0.7nm,0.7s						
TKM2	Tokmak 2	1.56	270	⇑P	Pg	11 28 36.1	+0.3
	0.9nm,0.8s						
TKM2				⇓S	Sg	11 28 56.0	-0.1
	1.1nm,0.3s						

JMA 24 11:29:26.0±0.2,**25°.99N**×**125°.28E,h117**^{km}**,M3.6, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	Ikemajima	1.06	182	P	Pn	11 29 48.9	+0.5
JIKM				S	Sn	11 30 05.4	+0.1
JIRB	Irabujima	1.16	185	P	Pn	11 29 49.6	+0.2
JIRB				S	Sn	11 30 06.5	-0.7
JMJ	Miyako jima 2	1.17	179	P	Pn	11 29 50.1	+0.6
JMJ				S	Sn	11 30 07.1	-0.2
JOGS	Gusukube	1.23	175	P	Pn	11 29 50.8	+0.6
JOGS				S	Sn	11 30 08.5	0.0
JKE	Kume jima 2	1.39	76	P	Pn	11 29 52.6	+0.6
JKE				S	Sn	11 30 12.1	+0.4
JTJ	Tarama	1.44	201	P	Pn	11 29 52.9	+0.3
JTJ				S	Sn	11 30 12.0	-0.7
JISG	Ishigakijimahi	1.65	212	P	Pn	11 29 55.4	+0.4
JISG				S	Sn	11 30 16.5	-0.6
JAGN	Aguni-jima	1.86	71	P	Pn	11 29 58.0	+0.5
JAGN				S	Sn	11 30 21.9	+0.3
JIJ	Ishigaki jima	1.92	213	P	Pn	11 29 58.1	-0.2
JIJ				S	Sn	11 30 21.0	-2.0
JKRS	Kuro-shima	2.09	214	P	Pn	11 30 00.3	-0.2
JKRS				S	Sn	11 30 26.2	-0.6
IRIF	Iriomote-Funau	2.17	221	P	Pn	11 30 01.4	0.0
IRIF				eS	Sn	11 30 27.4	-1.1
JJT3	Tamagusuku3	2.26	86	P	Pn	11 30 02.9	+0.4
JJT3				S	Sn	11 30 30.7	+0.1
HATJ	Hateruma jima	2.34	215	P	Pn	11 30 03.5	-0.2
HATJ				S	Sn	11 30 31.8	-0.8
JNTH	Nagotoyohara	2.52	77	P	Pn	11 30 05.7	-0.2
JNTH				S	Sn	11 30 34.8	-1.7
YOJ	Yonaguni jima	2.56	234	P	Pn	11 30 07.3	+0.9
YOJ				eS	Sn	11 30 38.4	+0.9
JYNG	Yonagunijimaku	2.61	235	P	Pn	11 30 08.3	+1.2
JYNG				eS	Sn	11 30 39.1	+0.4
JIH	Iheya	2.62	66	P	Pn	11 30 07.5	+0.3
JIH				S	Sn	11 30 37.6	-1.4
JOW	Kunigami	2.81	72	P	Pn	11 30 09.3	-0.4
JOW				S	Sn	11 30 41.3	-2.1
JYRO	Yoronjima	3.02	69	P	Pn	11 30 12.0	-0.5
JYRO				eS	Sn	11 30 45.5	-2.8
JOKE	Okinoerabujima	3.25	64	P	Pn	11 30 14.7	-0.7
JOKE				eS	Sn	11 30 51.2	-2.4
JTK	Tokunoshima	3.73	61	P	Pn	11 30 21.3	-0.6

IDC 24 11:40:56.3±9.5,**17°.27S**×**179°.18W,h620**^{km}±128^{km}**, mb2.8**/6,**mb1 3.1**/7,**mb1mx2.8**/48,**mbtmp3.9**/7,**Error ellipse: s-maj=92.2km s-min=41.3km az=160.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.36	248	P	P	11 43 58.5	+0.5
	0.3nm,0.3s,baz=97,slow=8.1,SNR=3.0						
DZM				S	S	11 46 27.8	+1.7
	0.2nm,0.3s,baz=109,slow=22,SNR=5.1						
STKA	Stephens Creek	38.30	240	P	P	11 47 25.4	-0.6
	1.1nm,0.7s,baz=80,slow=8.9,SNR=4.4						
STKA				S	S	11 52 45.6	+8.1
	0.6nm,0.4s,baz=325,slow=20,SNR=4.1						
WRA	Warramunga Arr	44.03	259	P	P	11 48 11.1	-0.1
	0.4nm,0.4s,baz=94,slow=7.0,SNR=17						
ASAR	Alice Springs	44.26	254	P	P	11 48 13.2	+0.3
	7.0nm,0.6s,baz=89,slow=8.2,SNR=22						
ILAR	Eielson Array	85.43	13	P	P	11 52 29.2	-0.1
	0.5nm,0.9s,baz=228,slow=5.6,SNR=6.4						
TXAR	Lajitas Array	86.28	58	P	P	11 52 34.8	+0.6
	0.2nm,0.7s,baz=210,slow=4.9,SNR=3.1						
PDAR	Pinedale Array	87.40	44	P	P	11 52 38.9	-0.5
	0.2nm,0.5s,baz=190,slow=4.6,SNR=3.2						

IDC 24 11:45:22.3±15.0,**5°.17S**×**151°.96E,h138**^{km}±188^{km}**, mb2.7**/3,**mb1 3.1**/4,**mb1mx2.9**/44,**mbtmp3.5**/4,**ML4.0**/1,**Error ellipse: s-maj=150.4km s-min=30.6km az=129.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	8.98	119	P	Pn	11 47 28.9	0.0
	1.7nm,0.3s,baz=323,slow=15,SNR=2.9						
WRA	Warramunga Arr	22.58	228	P	P	11 50 11.2	-0.1
	0.2nm,0.4s,baz=53,slow=9.7,SNR=4.6						
ASAR	Alice Springs	25.32	222	P	P	11 50 36.4	0.0
	0.3nm,0.9s,baz=55,slow=8.5,SNR=4.4						
MKAR	Makanchi Array	80.06	319	P	P	11 57 16.7	0.0
	0.1nm,0.4s,baz=97,slow=6.0,SNR=2.6						

MEX 24 11:45:24.1±0.4,**15°.34N**×**95°.81W,h26**^{km}±51^{km}**,MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.52	326	eP	Pb	11 45 32.8	-1.9
HUIG				eS	Sb	11 45 39.8	-2.0
VHO	Vista Hermosa	1.94	333	eS	Sn	11 46 16.1	-3.1
CMIG	Matias Romero	1.95	27	eP	Pn	11 45 53.8	-1.8
CMIG				eS	Sn	11 46 16.0	-3.3
PCIG		2.52	81	eP	Pn	11 46 00.8	-2.5

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*ISCJB **24** 11:51:52.2±0.8,35°.65N±0°.04×141°.11E±0°.08,h37^{km}±6^{km}, mb3.6/10,MS3.3/4,Error ellipse: s-maj=10.2km s-min=7.0km az=176.0*

*JMA **24** 11:51:53.1±0.2,35°.72N×141°.02E,h36^{km}±1^{km},M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s52.00000°,δ72.00000°,λ83.00000°. NP2:ϕ_s255.00000°, δ19.00000°,λ112.00000°. Principal axes: T Plg62.0000°, Azm311.0000°; N Plg7.0000°, Azm54.0000°; P Plg27.0000°, Azm148.0000°;*

JMA Felt I J1.

*IDC **24** 11:51:56.2±1.9,35°.57N×140°.98E,h56^{km}±16^{km},mb3.4/10, mb1 3.6/15,mb1mx3.4/48,mbtmp3.7/15,ML2.9/5,MS3.2/8, Ms1 3.2/8,ms1mx2.9/30 Error ellipse: s-maj=18.1km s-min=8.6km az=77.0*

ISC 24 11:51:53.7±1.1,**35°.66N**±0°.05×**141°.05E**±0°.08,**h31**^{km}±6^{km}**, n32,** σ**1^{s}.47**/30,**mb3.6**/10,**MS3.4**/4,**1C-3D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.16	287	⇑P	Pb	11 51 59.4	-0.3
CHOJ				S	Sb	11 52 03.6	-0.1
JSMT	Sammumatsuo	0.49	268	P	Pb	11 52 03.5	-0.5
JSMT				eS	Sn	11 52 11.3	-0.6
JIHU	Itakohorinouch	0.52	306	P	Pb	11 52 03.8	-0.8
JIHU				eS	Sn	11 52 11.7	-1.1
JCN	Nagara	0.73	251	⇓P	Pb	11 52 08.1	+0.2
JHYU	Hitachinakayam	0.78	331	P	Pn	11 52 06.9	-1.6
JHYU				eS	Sn	11 52 16.9	-2.2
JYT	Yasato	0.90	310	⇓P	Pn	11 52 08.2	-1.9
JHO	Hitachi	1.03	338	⇓P	Pn	11 52 10.2	-1.8
MJAR	Matsushiro Arr	2.46	292	P	Pn	11 52 31.7	0.0
	0.8nm,0.3s,baz=93,slow=12,SNR=40						
MJAR				S	Sn	11 53 02.7	+1.9
	0.8nm,0.3s,baz=327,slow=33,SNR=5.2						
MJAR				LR	LR	11 53 35.2	
	comp=Z,254nm,20.5s,baz=130,slow=41						
MAT	Matsushiro	2.46	292	P	Pn	11 52 32.0	+0.3
MAT				S	Sn	11 53 00.4	-0.4
JHJ	Hachijo jima 2	2.74	203	P	Pn	11 52 34.6	-0.9
	15nm,0.3s,baz=36,slow=10,SNR=2.0						
JHJ				S	Sn	11 53 08.1	+0.6
	47nm,0.3s,baz=91,slow=21,SNR=3.7						
ASAJ	Asahikawa	8.53	8	P	Pn	11 53 56.5	+1.5
	0.5nm,0.3s,baz=227,slow=23,SNR=6.8						
JNU	Nakatsue	8.78	256	LR	LR	11 57 41.7	
	comp=Z,249nm,19.1s,baz=57,slow=40						
KSRS	Korea Array	10.71	283	P	Pn	11 54 27.6	+2.7
	0.1nm,0.3s,baz=93,slow=14,SNR=3.3						
KSRS				LR	LR	11 58 34.1	
	comp=Z,97nm,21.4s,baz=92,slow=37						
USRK	Ussuriysk Ar.	11.00	324	P	Pn	11 54 32.4	+3.6
	0.1nm,0.3s,baz=137,slow=45,SNR=2.5						
KLR	Kul'dur	15.18	336	LR	LR	12 00 54.9	
	comp=Z,48nm,19.3s,baz=79,slow=35						
H11N2	WAKE ISLAND Hy	27.73	118	T	T	12 26 36.9	
	baz=310,slow=75,SNR=41						
H11N1	WAKE ISLAND Hy	27.74	118	T	T	12 26 37.2	
	baz=310,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	27.75	118	T	T	12 26 38.8	
	baz=310,slow=75,SNR=46						
SONM	Songino Array	28.33	306	P	P	11 57 45.9	+1.2
	0.4nm,0.7s,baz=103,slow=10,SNR=2.2						
H11S1	WAKE ISLAND Hy	28.39	120	T	T	12 27 31.7	
	baz=312,slow=75,SNR=53						
H11S3	WAKE ISLAND Hy	28.39	120	T	T	12 27 28.8	
	baz=312,slow=75,SNR=54						
H11S2	WAKE ISLAND Hy	28.41	120	T	T	12 27 33.7	
	baz=312,slow=75,SNR=47						
CMAR	Chiang Mai Arr	40.88	257	P	P	11 59 31.6	-1.4
	0.7nm,0.4s,baz=59,slow=3.5,SNR=4.2						
CMAR				LR	LR	12 16 52.1	
	comp=Z,24nm,19.0s,baz=120,slow=37						
ZALV	Zalesovo Beam	42.63	313	P	P	11 59 46.5	-0.4
	1.2nm,0.8s,baz=74,slow=6.2,SNR=3.3						
MKAR	Makanchi Array	44.61	303	P	P	12 00 02.4	-0.7
	1.1nm,0.9s,baz=88,slow=10,SNR=9.4						
MKAR				LR	LR	12 18 09.2	
	comp=Z,44nm,20.1s,baz=28,slow=35						
ILAR	Eielson Array	50.82	32	P	P	12 00 51.8	+0.9
	0.4nm,1.0s,baz=282,slow=5.4,SNR=3.2						
FITZ	Fitzroy Crossi	55.42	198	P	P	12 01 23.4	-1.8
	6.1nm,1.1s,baz=30,slow=8.1,SNR=2.1						
WRA	Warramunga Arr	55.66	188	P	P	12 01 25.7	-1.2
	1.2nm,0.9s,baz=4.3,slow=6.9,SNR=7.0						
ASAR	Alice Springs	59.39	188	P	P	12 01 52.6	-0.5
	0.2nm,0.7s,baz=14,slow=13,SNR=6.2						
YKA	Yellowknife Ar	65.15	30	P	P	12 02 32.4	+1.1
	0.1nm,0.6s,baz=255,slow=4.9,SNR=3.3						
AKASG	Malin Array Be	75.20	322	P	P	12 03 32.2	-0.8
	0.3nm,0.5s,baz=54,slow=5.5,SNR=3.0						
AKASG				LR	LR	12 38 29.9	
	comp=Z,24nm,19.7s,baz=0.0,slow=37						
NOA	NORSAR Array B	75.34	337	LR	LR	12 39 58.7	
	comp=Z,16nm,18.6s,baz=20,slow=38						

IDC 24 11:59:00.5±9.0,**31°.95S**×**179°.97W,h406**^{km}±89^{km}**, mb3.0**/3,**mb1 3.2**/3,**mb1mx3.0**/25,**mbtmp3.8**/3,**Error ellipse: s-maj=51.1km s-min=22.5km az=70.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	29.13	316	P	P	12 04 26.6	+0.3
	27nm,0.4s,baz=148,slow=6.1,SNR=2.9						
ASAR	Alice Springs	41.38	270	P	P	12 06 09.5	+0.2
	0.4nm,0.5s,baz=109,slow=7.5,SNR=9.1						
WRA	Warramunga Arr	42.51	275	P	P	12 06 17.8	-0.5
	0.8nm,0.5s,baz=112,slow=8.0,SNR=18						
QSPA	South Pole Qui	58.16	180	P	P	12 08 13.2	-0.1
	1.3nm,0.7s,baz=36,slow=1.1,SNR=7.5						
FINES	FINESS Array B	145.98	338	PKPbc	PKPdf	12 17 50.5	-0.5
	1.9nm,0.9s,baz=64,slow=3.2,SNR=6.7						
NOA	NORSAR Array B	149.99	349	PKPbc	PKiKP	12 18 03.8	+0.1
	0.2nm,0.6s,baz=17,slow=1.3,SNR=2.6						

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*WEL **24** 12:01:10.4±1.0,32°S±8°×17°7W±1°8,h33^{km},ML5.2/12*

*IDC **24** 12:01:10.9±1.3,30°.92S×178°.42W,h0^{km},mb4.2/3, mb1 4.4/3,mb1mx3.9/25,mbtmp4.2/3,MS3.1/1,Ms1 3.1/1, ms1mx2.6/29,Error ellipse: s-maj=42.3km s-min=33.1km az=46.0*

ISC 24 12:01:08.9±1.4,**32°.38S**±0°.10×**177°.4W**±0°.2,**h24**^{km}**,n25,** σ**1^{s}.20**/37,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.15	351	P	Pn	12 01 56.1	-0.8
MXZ	Matakaoa Point	6.28	213	P	Pn	12 02 38.6	-1.4
MXZ				S	Sn	12 03 51.2	+0.3
PKGZ	Pakihiroa	6.65	213	P	Pn	12 02 44.0	-1.2
PKGZ				S	Sn	12 03 59.7	-0.5
HAZ	Te Kaha	6.69	215	P	Pn	12 02 46.0	+0.5
HAZ				S	Sn	12 04 02.5	+1.6
PUZ	Puketiti	6.72	211	P	Pn	12 02 46.4	+0.4
PUZ				S	Sn	12 04 01.0	-0.9
RUGZ	Raukumara Rang	6.90	215	P	Pn	12 02 49.4	+0.8
RUGZ				S	Sn	12 04 07.0	+0.6
TWGZ	Tauwhareparae	6.93	212	P	Pn	12 02 48.8	-0.2
TWGZ				S	Sn	12 04 07.5	+0.5
CNGZ	Carnagh Statio	7.09	210	P	Pn	12 02 50.4	-0.6
CNGZ				S	Sn	12 04 13.1	+2.3
TKGZ	Te Karaka	7.21	212	P	Pn	12 02 54.4	+1.8
TKGZ				S	Sn	12 04 12.9	-0.8
MWZ	Matawai	7.27	214	P	Pn	12 02 53.6	0.0
MWZ				S	Sn	12 04 14.3	-1.0
RIGZ	Rimuhau	7.46	211	P	Pn	12 02 56.8	+0.6
RIGZ				S	Sn	12 04 20.6	+0.5
SNGZ	Shannon Statio	7.71	213	P	Pn	12 02 59.4	-0.3
RTZ	Ruatahuna	7.75	215	P	Pn	12 03 00.5	+0.2
RAHZ	Arahi	7.94	213	P	Pn	12 03 04.1	+1.3
RAHZ				S	Sn	12 04 31.3	-0.5
MTHZ	Maungataniwha	8.00	215	P	Pn	12 03 05.8	+2.1
MTHZ				S	Sn	12 04 32.2	-1.2
OUZ	Omahuta	8.05	247	P	Pn	12 03 06.2	+2.0
NMHZ	Naumai	8.21	214	P	Pn	12 03 07.5	+0.9
NMHZ				S	Sn	12 04 38.5	-0.2
BKZ	Black Stump Fm	8.42	215	P	Pn	12 03 09.8	+0.4
BKZ				S	Sn	12 04 41.6	-2.0
DZM	Mont Dzumac	17.67	301	LR	LR	12 10 10.7	
	comp=Z,57nm,18.5s,baz=162,slow=33						
ASAR	Alice Springs	43.59	269	P	P	12 09 09.6	-1.8
	1.1nm,0.6s,baz=107,slow=7.4,SNR=20						
WRA	Warramunga Arr	44.76	274	P	P	12 09 18.7	-1.9
	1.6nm,0.4s,baz=113,slow=7.9,SNR=37						
QSPA	South Pole Qui	57.74	180	P	P	12 11 13.6	+16
	5.8nm,0.9s,baz=0.0,slow=3.0,SNR=18						
MKAR	Makanchi Array	119.46	309	PKP	PKiKP	12 19 57.4	+1.3
	0.2nm,0.8s,baz=90,slow=2.9,SNR=2.5						
FINES	FINESS Array B	147.19	339	PKPbc	PKPbc	12 20 50.6	+1.4
	2.5nm,0.6s,baz=50,slow=3.9,SNR=8.2						
NOA	NORSAR Array B	150.78	351	PKPbc	PKiKP	12 21 00.2	+1.1
	0.7nm,0.8s,baz=12,slow=4.0,SNR=3.5						

IDC 24 12:06:57.8±2.2,**30°.97S**×**178°.54W,h0**^{km}**,mb3.5**/3, **mb1 3.6**/3,**mb1mx3.5**/28,**mbtmp3.5**/3,**Error ellipse: s-maj=63.1km s-min=37.4km az=45.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.62	268	P	P	12 14 55.1	-0.9
	0.5nm,1.0s,baz=107,slow=7.5,SNR=4.8						
WRA	Warramunga Arr	43.66	273	P	P	12 15 04.8	+0.4
	0.2nm,0.3s,baz=113,slow=8.0,SNR=9.5						
QSPA	South Pole Qui	59.15	180	P	P	12 16 59.9	-0.1
	0.3nm,0.5s,baz=108,slow=1.5,SNR=6.3						
FINES	FINESS Array B	145.51	339	PKPbc	PKPdf	12 26 36.6	-0.5
	0.9nm,0.8s,baz=355,slow=4.7,SNR=4.2						

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*IDC **24** 12:10:27.4±1.6,11°.52S×165°.00E,h0^{km},mb3.6/5, mb1 3.8/6,mb1mx3.6/32,mbtmp3.7/6,ML3.8/1,Error ellipse: s-maj=46.9km s-min=28.0km az=118.0*

*ISCJB **24** 12:10:30.3±1.1,11°.79S±0°.09×165°.1E±0°.2,h34^{km}, mb3.5/5,Error ellipse: s-maj=30.5km s-min=11.4km az=167.9*

ISC 24 12:10:32.2±1.2,**11°.7S**±0°.1×**165°.1E**±0°.2,**h34**^{km}**,n6,** σ**1^{s}.42**/7,**mb3.5**/5,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.43	173	Pn	Pn	12 13 01.2	+1.8
	0.7nm,0.3s,baz=314,slow=15,SNR=21						
DZM				Sn	Sn	12 14 53.3	-1.9
	0.1nm,0.3s,baz=173,slow=16,SNR=2.1						

WRA	**Warramunga Arr**	**30.65**	**251**	P	**P**	**12 16 43.7**	**-0.1**
	0.7nm,0.8s,baz=79,slow=9.6,SNR=3.8						
ASAR	**Alice Springs**	**31.92**	**244**	P	**P**	**12 16 54.5**	**-0.5**
	0.3nm,0.6s,baz=64,slow=10,SNR=8.1						
SONM	**Songino Array**	**78.78**	**324**	P	**P**	**12 22 32.3**	**+0.7**
	0.3nm,0.7s,baz=108,slow=4.7,SNR=2.7						
ILAR	**Eielson Array**	**84.31**	**19**	P	**P**	**12 22 59.5**	**-0.8**
	0.2nm,0.6s,baz=237,slow=5.1,SNR=6.7						
MKAR	**Makanchi Array**	**93.52**	**317**	P	**P**	**12 23 44.5**	**-0.2**
	0.3nm,0.7s,baz=100,slow=7.6,SNR=3.9						

GRAL ***24*** *12:43:24.4±0.5, 33°.72N×36°.81E, h15^{km}±435^{km}, MD3.2*
NSSC ***24*** *12:43:26.4±0.4, 33°.57N×36°.77E, h18^{km}±1^{km}, ML2.0*
ISC 24 12:43:21.5±3.5**, 33°.73N**±0°.08×**36°.9E**±0°.2**, h14^{km}, n7, σ0^{s}.77**/11**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOTH	**TOTAH**	**0.51**	**225**	*e*P	**Pn**	**12 43 34.3**	**-0.1**
QASN	**Qassioun**	**0.52**	**248**	*e*P	**Pn**	**12 43 35.4**	**+0.8**
QASN				*e*S	**Sb**	**12 43 41.0**	**+1.1**
QASN				AML	AML	12 43 43.5	
	comp=E,154nm,0.6s						
QASN				AML	AML	12 43 45.5	
	comp=N,377nm,0.5s						
BRBR	**Barbar**	**0.82**	**248**	*e*P	**Pn**	**12 43 39.5**	**+0.7**
BRBR				*e*S	**Sn**	**12 43 49.4**	**-1.4**
BRBR				AML	AML	12 43 55.5	
	comp=E,57nm,0.6s						
BRBR				AML	AML	12 43 55.6	
	comp=N,36nm,0.6s						
RCY	**Rachaya**	**0.88**	**255**	*e*P	**Pn**	**12 43 39.1**	**-0.5**
RCY				*e*S	**Sb**	**12 43 50.4**	**+0.1**
HWQ	**Hawqa**	**0.94**	**306**	*e*P	**Pn**	**12 43 40.5**	**+0.2**
HWQ				*e*S	**Sb**	**12 43 52.0**	**+0.1**
BHL	**Bhannes**	**1.02**	**280**	*e*P	**Pn**	**12 43 41.7**	**+0.3**
DQRL	**Deir Qamar**	**1.07**	**269**	*e*P	**Pn**	**12 43 42.3**	**+0.2**

NEIC ***24*** *13:01:55.0±0.1, 8°.39S×127°.43E, h10^{km}, mb5.1/50, Error ellipse: s-maj=5.5km s-min=3.9km az=59.0*
NEIC Felt [III] at Dili.
MOS ***24*** *13:01:54.4±1.2, 8°.28S×127°.31E, h15^{km}, mb5.1/33, Error ellipse: s-maj=12.2km s-min=6.6km az=112.0*
BJI ***24*** *13:01:56.4, 8°.63S×127°.25E, h37^{km}, mB5.2/35, mb4.8/50, Ms4.7/34, Ms7 4.5/37*
ISCJB ***24*** *13:02:00.2±0.4, 8°.52S±0°.02×127°.46E±0°.03, h71^{km}±4^{km}, mb4.7/88, Error ellipse: s-maj=4.5km s-min=3.8km az=163.1*
DJA ***24*** *13:02:00.3±0.2, 9°S±2°×12°8E±°, h40^{km}±3^{km}, M5.1/39, mB5.5/25, mb5.2/39, MLv5.5/13, Mw(mB)4.9/25*
IDC ***24*** *13:02:04.3±0.4, 8°.36S×127°.35E, h81^{km}±3^{km}, mb4.2/21, mb1 4.3/22, mb1mx4.2/33, mbtmp4.6/22, MS4.5/22, Ms1 4.5/22, ms1mx4.4/40, Error ellipse: s-maj=18.5km s-min=9.6km az=80.0*
GCMT ***24*** *13:02:12.0±0.3, 8°.61S±0°.02×127°.56E±0°.02, h29^{km}, MW5.0/69, Moment Tensor Solution. s36,c43; s69,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.21±.20; $M_{\theta\theta}$-2.82±.12; $M_{\phi\phi}$-0.38±.14; $M_{r\theta}$1.92±.17; $M_{\theta\phi}$-1.45±.08; $M_{\phi r}$0.52±.22; Best double couple: $M_0$3.90100×10^{16} NP1:ϕ_s70.00000°, δ60.00000°, λ96.00000°. NP2: ϕ_s239.00000°, δ30.00000°, λ80.00000°. Principal axes: T 3.7720, Plg74.0000°, Azm355.0000°; N 0.2600, Plg5.0000°, Azm248.0000°; P -4.0290, Plg15.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 24 13:02:03.0±0.3**, 8°.62S**±0°.03×**127°.41E**±0°.04**, h76^{km}**±2^{km}**, h77^{km}:pP-P, n462, σ2^{s}.00**/421**, mb4.9**/91**, 12C-7D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.31**	**250**	*e*Pn	**Pn**	**13 02 50.6**	**-1.9**
SOEI	**Soe**	**3.31**	**250**	*e*Pn	Pn	13 03 10.6	+18
SOEI	**Soe**	**3.31**	**250**	P	**Pn**	**13 02 50.4**	**-2.2**
SOEI				S	**Sn**	**13 03 29.6**	**-1.3**
SAUI	**Saumlaki**	**3.90**	**81**	*e*Pn	**Pn**	**13 02 58.3**	**-2.2**
SAUI	**Saumlaki**	**3.90**	**81**	*e*Pn	Pn	13 03 14.7	+14
SAUI	**Saumlaki**	**3.90**	**81**	P	**Pn**	**13 02 57.0**	**-3.5**
BATI	**Baumata**	**4.02**	**247**	P	**Pn**	**13 03 00.1**	**-2.1**
BATI	**Baumata**	**4.02**	**247**	P	**Pn**	**13 03 01.2**	**-1.0**
	58nm,0.3s,baz=65,slow=3.4,SNR=54						
BATI				S	**Sn**	**13 03 50.9**	**+2.7**
	434nm,0.3s,baz=115,slow=19,SNR=15						
BNDI	**Bandanaira**	**4.76**	**31**	P	**Pn**	**13 03 09.5**	**-2.8**
MMRI	**Maumere**	**5.12**	**269**	*e*Pn	**Pn**	**13 03 15.3**	**-1.8**
MMRI	**Maumere**	**5.12**	**269**	P	**Pn**	**13 03 15.9**	**-1.3**
	987nm,0.8s,11µm4.7nm						
NLAI	**Namlea**	**5.35**	**357**	P	**Pn**	**13 03 19.3**	**-1.1**
MTN	**Manton Dam**	**5.57**	**139**	P	**Pn**	**13 03 20.2**	**-3.0**
	baz=5.6,SNR=435						
MTN	**Manton Dam**	**5.57**	**139**	*e*Pn	**Pn**	**13 03 21.3**	**-1.9**
EDFI	**Ende, Flores**	**5.66**	**268**	P	**Pn**	**13 03 23.7**	**-1.0**
BBSI	**Bau Bau**	**5.72**	**303**	P	**Pn**	**13 03 25.8**	**+0.3**
KDU	**Kakadu**	**6.41**	**130**	P	**Pn**	**13 03 30.8**	**-4.0**
	baz=6.4,SNR=119						
SANI	**Sanana**	**6.68**	**348**	P	**Pn**	**13 03 38.4**	**-0.1**
	129nm,0.9s,2µm0.6nm						
KNRA	**Kununurra**	**7.14**	**169**	P	**Pn**	**13 03 41.2**	**-3.6**
	baz=7.2,SNR=200						
FAKI	**Fak Fak**	**7.43**	**41**	*e*Pn	**Pn**	**13 03 45.5**	**-3.2**
FAKI	**Fak Fak**	**7.43**	**41**	P	**Pn**	**13 03 45.6**	**-3.2**
BKSI	**Bulukumba**	**7.94**	**294**	P	**Pn**	**13 03 55.5**	**-0.3**
BNSI	**Bone**	**8.38**	**300**	P	**Pn**	**13 04 01.9**	**+0.1**
	398nm,0.9s,4µm1.5nm						
SIJI	**Sorong**	**8.60**	**27**	P	**Pn**	**13 04 03.4**	**-1.4**
	14nm,0.3s,baz=200,slow=9.4,SNR=31						
SIJI				S	**Sn**	**13 05 42.0**	**+1.7**
	baz=127,slow=20,SNR=1.7						
SIJI				LR	LR	13 08 04.0	
	comp=Z,3µm,21.4s,baz=170,slow=43						
SWI	**Sorong**	**8.60**	**27**	P	**Pn**	**13 04 04.3**	**-0.5**
LUWI	**Luwuk**	**8.83**	**328**	*e*Pn	**Pn**	**13 04 03.3**	**-4.6**
LUWI	**Luwuk**	**8.83**	**328**	*e*Pn	Pn	13 04 21.3	+13
LUWI	**Luwuk**	**8.83**	**328**	P	**Pn**	**13 04 07.2**	**-0.7**
SPSI	**Sidrap Palu**	**8.89**	**301**	P	**Pn**	**13 04 09.2**	**+0.4**
TTSI	**Tana Toraja**	**9.37**	**306**	P	**Pn**	**13 04 15.8**	**+0.6**
PLAI	**Plampang**	**9.53**	**268**	P	**Pn**	**13 04 15.4**	**-2.1**
APSI	**Ampana**	**9.57**	**323**	P	**Pn**	**13 04 17.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**9.58**	**190**	P	Pn	13 04 12.8	-5.3
	baz=9.7,SNR=148						
FITZ	**Fitzroy Crossi**	**9.58**	**190**	*e*Pn	**Pn**	**13 04 14.7**	**-3.5**
FITZ	**Fitzroy Crossi**	**9.58**	**190**	*e*Pn	Pn	13 04 36.3	+18
FITZ	**Fitzroy Crossi**	**9.58**	**190**	P	Pn	13 04 12.8	-5.3
	12nm,0.3s,baz=14,slow=9.0,SNR=123						
FITZ				S	**Sn**	**13 05 57.5**	**-6.7**
	32nm,0.3s,baz=105,slow=18,SNR=6.2						
FITZ				LR	LR	13 09 00.6	
	comp=Z,4µm,18.9s,baz=7.0,slow=42						
KMSI	**Cibinong**	**9.75**	**339**	P	**Pn**	**13 04 21.3**	**+0.8**
RKPI	**Ransiki, Papua**	**9.76**	**44**	P	**Pn**	**13 04 18.3**	**-2.2**
	376nm,0.8s,9µm						
MRSI	**Marisa**	**10.55**	**329**	P	**Pn**	**13 04 31.7**	**+0.3**
	66nm,1.2s,883nm						
PCI	**Palu**	**10.75**	**315**	P	**Pn**	**13 04 32.4**	**-1.8**
	238nm,1.1s,2µm						
BAKI	**Biak**	**11.37**	**50**	P	**Pn**	**13 04 40.0**	**-2.6**
	328nm,0.8s						
MPSI	**Mapaga**	**11.63**	**320**	P	**Pn**	**13 04 47.0**	**+0.9**
WRAB	**Tennant Creek**	**13.10**	**150**	*e*Pn	Pn	13 05 00.6	-5.4
WRAB	**Tennant Creek**	**13.10**	**150**	*e*P	Pn	13 05 00.6	-5.4
WR1	**Warramunga Arr**	**13.10**	**150**	*e*Pn	Pn	13 04 59.1	-7.0
WRA	**Warramunga Arr**	**13.10**	**150**	P	Pn	13 04 59.1	-7.0
	3.5nm,0.3s,baz=324,slow=14,SNR=72						
WRA				S	**Sn**	**13 07 24.5**	**-5.6**
	11nm,0.3s,baz=328,slow=22,SNR=6.7						
WRA				LR	LR	13 10 49.8	
	comp=Z,3µm,19.3s,baz=335,slow=39						
WB2	**Warramunga Arr**	**13.11**	**150**	*e*Pn	P	13 05 25.1	+12
JAGI	**Jajag, Banyuwa**	**13.12**	**270**	*e*Pn	Pn	13 05 01.1	-5.1
JAGI	**Jajag, Banyuwa**	**13.12**	**270**	*e*Pn	P	13 05 24.5	+11
WC3	**Warramunga Arr**	**13.13**	**150**	*e*Pn	**Pn**	**13 05 03.4**	**-3.0**
MBWA	**Marble Bar**	**14.51**	**210**	*e*Pn	**Pn**	**13 05 21.8**	**-2.7**
MBWA	**Marble Bar**	**14.51**	**210**	*e*Pn	P	13 05 42.4	+13
JAY	**Jayapura**	**14.55**	**66**	P	Pn	13 05 19.6	-5.4
	0.5nm,0.3s,baz=328,slow=6.2,SNR=3.3						
MTKI	**Muara Teweh, K**	**14.61**	**301**	P	**Pn**	**13 05 27.5**	**+1.6**
SKMP	**Bagumbayan, Su**	**15.31**	**349**	*e*P	**Pn**	**13 05 31.6**	**-3.2**
DAV	**Davao City (W)**	**15.69**	**353**	*e*Pn	P	13 05 53.0	+11
	571nm,1.5s						
KCP	**Kidapawan**	**15.70**	**351**	⇓*e*P	**Pn**	**13 05 39.2**	**-0.6**
AS31	**Alice Springs**	**16.20**	**158**	*e*Pn	**Pn**	**13 05 44.2**	**-1.8**
	41nm,0.6s						
AS31	**Alice Springs**	**16.20**	**158**	*e*Pn	P	13 06 03.7	+16
	41nm,0.6s						
ASAR	**Alice Springs**	**16.20**	**158**	P	**Pn**	**13 05 40.0**	**-6.0**
	1.1nm,0.3s,baz=325,slow=9.5,SNR=78						
ASAR				S	**Sn**	**13 08 44.2**	**-1.1**
	3.6nm,0.3s,baz=322,slow=16,SNR=4.5						
ASAR				LR	LR	13 12 56.0	
	comp=Z,3µm,18.6s,baz=338,slow=40						
AS01	**Alice Springs**	**16.22**	**158**	*e*Pn	**Pn**	**13 05 45.4**	**-0.9**
AS01	**Alice Springs**	**16.22**	**158**	*e*Pn	P	13 06 08.2	+20
COEN	**Coen**	**16.34**	**110**	P	**Pn**	**13 05 42.7**	**-5.1**
	baz=16,SNR=26						
COEN	**Coen**	**16.34**	**110**	*e*Pn	**Pn**	**13 05 41.4**	**-6.4**
	74nm,0.6s						
COEN	**Coen**	**16.34**	**110**	*e*Pn	P	13 06 03.8	+14
	64nm,0.7s						
WRKA	**Warakurna**	**16.35**	**177**	P	**Pn**	**13 05 43.2**	**-4.7**
	baz=16,SNR=165						
BUKP	**Musuan**	**16.55**	**352**	*e*P	**P**	**13 05 52.7**	**+0.9**
UGM	**Wanagama**	**16.73**	**271**	*e*Pn	**Pn**	**13 05 51.3**	**-1.4**
	671nm,1.6s						
PAGZ	**Pagadian**	**16.84**	**346**	*e*P	**Pn**	**13 05 54.5**	**+0.4**
BUTP	**Butuan**	**17.56**	**354**	*e*P	**Pn**	**13 06 02.4**	**-0.4**
KPJI	**Karang Pucung**	**18.35**	**273**	P	**Pn**	**13 06 13.4**	**+1.0**
KKM	**Kota Kinabalu**	**18.35**	**322**	*e*Pn	**P**	**13 06 06.8**	**-5.0**
	312nm,1.5s						
SBUM	**Sibu**	**18.72**	**305**	*e*P	**P**	**13 06 10.6**	**-5.1**
	50nm,0.9s						
MSLP	**Maasin**	**18.80**	**352**	*e*P	**P**	**13 06 16.8**	**+0.3**
GIRL	**Giralia**	**18.83**	**221**	*e*P	**P**	**13 06 14.2**	**-2.7**
	915nm,1.6s						
GIRL	**Giralia**	**18.83**	**221**	*e*P	Pn	13 06 41.2	+23
	915nm,1.6s						
MTSU	**Mount Surprise**	**18.95**	**122**	P	**P**	**13 06 16.2**	**-2.0**
	baz=19,SNR=30						
CISI	**Cisompet, Garu**	**19.43**	**272**	*e*P	**P**	**13 06 23.0**	**-0.5**
	108nm,0.6s						
CISI	**Cisompet, Garu**	**19.43**	**272**	*e*P	Pn	13 06 45.1	+20
	108nm,0.6s						
OCLP	**Ormoc**	**19.74**	**352**	*e*P	**Pn**	**13 06 30.8**	**+1.9**
MEEK	**Meekatharra**	**19.77**	**204**	P	**P**	**13 06 26.8**	**-0.3**
	baz=20,SNR=32						
KSM	**Kuching**	**19.78**	**300**	*e*P	**P**	**13 06 22.9**	**-4.3**
	72nm,0.8s						
KSM	**Kuching**	**19.78**	**300**	*e*P	Pn	13 06 49.2	+20
	72nm,0.8s						
CTA	**Charters Tower**	**21.49**	**124**	P	**P**	**13 06 47.1**	**+1.5**
CTA				pmax	pmax		
	comp=Z,66nm,1.0s						
CTA	**Charters Tower**	**21.49**	**124**	P	**P**	**13 06 46.8**	**+1.2**
	comp=Z,8.3nm,0.7s,baz=313,slow=13,SNR=15						
CTAO	**Charters Tower**	**21.49**	**124**	*e*P	**P**	**13 06 43.3**	**-2.3**
	comp=Z,127nm,1.3s						
CTAO	**Charters Tower**	**21.49**	**124**	P	**P**	**13 06 47.1**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,63nm,1.0s						
FORT	**Forrest**	**22.06**	**179**	P	**P**	**13 06 51.6**	**+0.1**
	baz=22,SNR=46						
FORT	**Forrest**	**22.06**	**179**	*e*P	**P**	**13 06 51.9**	**+0.4**
	comp=Z,175nm,0.7s						
MORW	**Morawa**	**22.98**	**206**	P	**P**	**13 07 00.8**	**-0.6**
	baz=23,SNR=9.8						
MORW	**Morawa**	**22.98**	**206**	*e*P	**P**	**13 07 00.9**	**-0.4**
	comp=Z,111nm,1.1s						
BLDU	**Ballidu**	**24.06**	**203**	P	**P**	**13 07 11.9**	**+0.7**
	baz=24,SNR=27						
KLBR	**Kellerberrin**	**24.56**	**200**	P	**P**	**13 07 16.4**	**+0.7**
	baz=25,SNR=11						
BBOO	**Buckleboo**	**25.37**	**163**	P	**P**	**13 07 24.0**	**+0.9**
	baz=26,SNR=9.1						
BBOO	**Buckleboo**	**25.37**	**163**	*e*P	**P**	**13 07 24.3**	**+1.2**
	comp=Z,55nm,0.8s						
BBOO	**Buckleboo**	**25.37**	**163**	*e*P	pP	13 07 46.2	+6.3
	comp=Z,55nm,0.8s						
MUN	**Mundaring**	**25.47**	**203**	P	**P**	**13 07 24.2**	**+0.2**
	baz=26,SNR=10						
MYKOM	**Kota Tinggi**	**25.66**	**293**	*e*P	**P**	**13 07 26.7**	**+0.7**
	comp=Z,66nm,1.5s						
NWAO	**Narrogin (SRO)**	**25.96**	**200**	P	**P**	**13 07 29.2**	**+0.8**
	baz=26,SNR=31						
NWAO	**Narrogin (SRO)**	**25.96**	**200**	*e*P	**P**	**13 07 29.0**	**+0.6**
	comp=Z,47nm,0.7s						
NWAO	**Narrogin (SRO)**	**25.96**	**200**	*e*P	**P**	**13 07 29.0**	**+0.6**
NWAO				pmax	pmax		
	comp=Z,47nm,0.7s						
NWAO	**Narrogin (SRO)**	**25.96**	**200**	P	**P**	**13 07 29.4**	**+0.9**
	comp=Z,41nm,0.7s,baz=261,slow=7.8,SNR=47						
NWAO				LR	LR	13 19 16.6	
	comp=Z,2µm,19.9s,baz=230,slow=39						
STKA	**Stephens Creek**	**26.64**	**152**	P	**P**	**13 07 35.4**	**+0.9**
	baz=27,SNR=4.4						
STKA	**Stephens Creek**	**26.64**	**152**	*e*P	**P**	**13 07 35.4**	**+0.9**
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**26.64**	**152**	*e*P	pP	13 07 57.1	+5.5
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**26.64**	**152**	*e*P	**P**	**13 07 35.4**	**+0.9**
STKA				pmax	pmax		
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**26.64**	**152**	P	**P**	**13 07 35.7**	**+1.2**
	comp=Z,29nm,0.8s,baz=325,slow=9.6,SNR=47						
STKA				pP	**pwP**	**13 07 56.6**	**+2.0**
	comp=Z,54nm,0.7s,baz=316,slow=9.2,SNR=12						
HTT	**Hallett**	**26.88**	**158**	P	**P**	**13 07 38.2**	**+1.4**
	baz=27,SNR=11						
RMQ	**Roma**	**26.94**	**134**	P	**P**	**13 07 38.9**	**+1.6**
	baz=27,SNR=4.3						
RKGY	**Rocky Gully**	**27.59**	**199**	P	**P**	**13 07 45.3**	**+2.3**
	baz=28,SNR=7.0						
MNSI	**Mandailing Nat**	**29.27**	**287**	P	**P**	**13 07 56.5**	**-1.8**
IPM	**Ipoh**	**29.36**	**295**	*e*P	**P**	**13 07 58.7**	**-0.3**
	comp=Z,11nm,0.8s						
KULM	**Kulim**	**30.05**	**296**	*e*P	**P**	**13 08 04.6**	**-0.5**
	comp=Z,83nm,1.8s						
KULM	**Kulim**	**30.05**	**296**	*e*P	pP	13 08 26.3	+3.2
	comp=Z,13nm,0.8s						
ARPS	**Mount Arapiles**	**30.94**	**157**	P	**P**	**13 08 14.7**	**+2.0**
	baz=31,SNR=13						
YNG	**Young**	**32.02**	**146**	P	**P**	**13 08 24.4**	**+2.1**
	baz=32,SNR=6.4						
YULB	**Yu-li**	**32.37**	**349**	*e*P	**P**	**13 08 22.6**	**-2.8**
	comp=Z,76nm,1.7s						
TPUB	**Ta-pu**	**32.41**	**348**	*e*P	**P**	**13 08 23.1**	**-2.6**
	comp=Z,106nm,1.6s						
QIZ	**Qiongzhong**	**32.48**	**328**	P	**P**	**13 08 25.3**	**-1.1**
QIZ				S	**S**	**13 13 38.8**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,22nm,1.0s						
QIZ				LR	LR		
	comp=Z,620nm,21.6s						
SSLB	**Suanglung**	**32.82**	**349**	*e*P	**P**	**13 08 26.9**	**-2.5**
	comp=Z,108nm,1.9s						
CHAI	**Chaiyaphum**	**35.04**	**314**	P	P	13 09 00.8	+12
PBKT	**Sadao Pong**	**36.21**	**314**	*e*P	**P**	**13 08 58.1**	**-0.5**
UTHA	**Uthaitani**	**36.67**	**311**	P	**P**	**13 09 02.8**	**+0.2**
	comp=Z,6.7nm,0.9s,comp=Z,86nm						
UMPA	**Umpang Tak**	**37.51**	**311**	P	**P**	**13 09 09.8**	**0.0**
	comp=Z,11nm,0.8s,comp=Z,262nm						
SUKH	**Sukhothai**	**37.77**	**313**	P	**P**	**13 09 12.7**	**+0.8**
	comp=Z,5.6nm,1.5s						
LAMP	**Lampang**	**38.45**	**315**	P	**P**	**13 09 18.3**	**+0.6**
	comp=Z,6.0nm,0.9s,comp=Z,91nm						
CM01	**Chiang Mai Arr**	**38.86**	**314**	*e*P	**P**	**13 09 19.6**	**-1.6**
CM31	**Chiang Mai Arr**	**38.90**	**314**	*e*P	**P**	**13 09 19.8**	**-1.7**
CMAR	**Chiang Mai Arr**	**38.90**	**314**	*ce*P	**P**	**13 09 20.3**	**-1.1**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**38.90**	**314**	P	**P**	**13 09 20.4**	**-1.0**
	comp=Z,9.2nm,0.8s,baz=141,slow=6.7,SNR=42						
CMAR				LR	LR	13 28 07.9	
	comp=Z,736nm,19.9s,baz=152,slow=40						
CMMT	**Chiang Mai**	**39.13**	**314**	P	**P**	**13 09 22.2**	**-1.2**
CHTO	**Chiang Mai**	**39.13**	**314**	*e*P	**P**	**13 09 21.5**	**-1.9**
	comp=Z,76nm,1.6s						
CHTO	**Chiang Mai**	**39.13**	**314**	*e*P	**P**	**13 09 21.5**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,76nm,1.6s						
CHTO	**Chiang Mai**	**39.13**	**314**	P	**P**	**13 09 22.3**	**-1.1**
DZM	**Mont Dzumac**	**39.81**	**114**	*e*S	**S**	**13 15 33.9**	**+5.6**
	comp=Z,437nm,26.5s						
DZM				*e*LR	LR	13 20 31.3	
	comp=Z,2µm,22.9s						
DZM	**Mont Dzumac**	**39.81**	**114**	*e*P	**P**	**13 09 29.4**	**+0.2**
	comp=Z,54nm,1.5s						
DZM	**Mont Dzumac**	**39.81**	**114**	LR	LR	13 26 33.2	
	comp=Z,2µm,19.5s,baz=276,slow=37						
GYA	**Guiyang**	**40.27**	**331**	P	**P**	**13 09 32.3**	**-0.6**
GYA				pP	pP	13 09 44.8	-5.7
GYA				PP	**PnPn**	**13 11 09.9**	**-1.4**
GYA				S	**S**	**13 15 35.5**	**+0.6**
GYA				sS	sS	13 15 56.0	-10
GYA				SS	**SS**	**13 18 32.8**	**-3.5**
GYA				pmax	pmax		
	comp=Z,20nm,1.2s						
GYA				pmax	pmax		
	comp=Z,150nm,4.0s						
GYA				LR	LR		
	comp=Z,550nm,18.0s						
GYA				LR	LR		
	comp=Z,510nm,17.5s						
GYA				LR	LR		
	comp=Z,510nm,17.0s						
WHN	**Wuhan**	**40.91**	**343**	⇓P	**P**	**13 09 35.8**	**-2.0**
WHN				LR	LR		
	comp=Z,940nm,19.1s						
NJ2	**Nanjing**	**41.26**	**349**	*e*P	**P**	**13 09 39.8**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KMI	**Kunming**	**41.26**	**325**	P	**P**	**13 09 42.5**	**+1.3**
KMI				pP	pP	13 09 52.5	-7.2
KMI				sP	sP	13 09 56.6	-12
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI				pmax	pmax		
	comp=Z,170nm,4.1s						
KMI				LR	LR		
	comp=Z,330nm,16.9s						
KMI				LR	LR		
	comp=Z,350nm,15.3s						
KMI				LR	LR		
	comp=Z,420nm,23.7s						
ENH	**Enshi**	**42.33**	**337**	*e*P	**P**	**13 09 47.7**	**-1.8**
	comp=Z,25nm,1.1s						
TJN	**Taejon**	**44.75**	**360**	⇑*e*P	**P**	**13 10 07.6**	**-1.3**
CD2	**Chengdu**	**45.38**	**331**	P	**P**	**13 10 13.3**	**-0.7**
CD2				PP	**PP**	**13 11 59.5**	**-2.2**
CD2				S	**S**	**13 16 54.5**	**+4.9**
CD2				sS	sS	13 17 06.5	-15
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,380nm,4.9s						
CD2				LR	LR		
	comp=Z,630nm,11.8s						
CD2				LR	LR		
	comp=Z,880nm,14.7s						
CD2				LR	LR		
	comp=Z,630nm,16.7s						
KS15	**Wonju Array Si**	**45.82**	**1**	*e*P	**P**	**13 10 16.0**	**-1.3**
	comp=Z,49nm,1.8s						
KSAR	**Wonju Array Be**	**45.82**	**1**	P	**P**	**13 10 16.1**	**-1.2**
KSRS	**Korea Array**	**45.83**	**1**	P	**P**	**13 10 16.1**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=178,slow=9.4,SNR=20						
KSRS				PcP	**PcP**	**13 11 54.1**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=179,slow=3.0,SNR=4.8						
KSRS				pPcP		13 12 16.1	
	comp=Z,4.9nm,0.9s,baz=189,slow=4.5,SNR=6.3						
KSRS				LR	LR	13 29 34.7	
	comp=Z,298nm,21.2s,baz=185,slow=36						
KS01	**Wonju Array Si**	**45.85**	**1**	*e*P	**P**	**13 10 16.2**	**-1.4**
XAN	**Xi'an**	**45.91**	**338**	P	**P**	**13 10 15.4**	**-2.7**
XAN				pP	pP	13 10 25.3	-11
XAN				sP	pwP	13 10 29.3	-10
XAN				PP	**PP**	**13 12 07.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,15nm,0.6s						
XAN				pmax	pmax		
	comp=Z,72nm,4.9s						
XAN				LR	LR		
	comp=Z,410nm,17.4s						
XAN				LR	LR		
	comp=Z,270nm,16.3s						
XAN				LR	LR		
	comp=Z,480nm,18.7s						
XAN	**Xi'an**	**45.91**	**338**	*e*P	**P**	**13 10 15.4**	**-2.7**
	comp=Z,15nm,0.8s						
XAN	**Xi'an**	**45.91**	**338**	*e*P	pP	13 10 37.1	+0.9
	comp=Z,15nm,0.8s						
XAN	**Xi'an**	**45.91**	**338**	*e*P	**P**	**13 10 15.4**	**-2.7**
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
MAJO	**Matsushiro**	**46.05**	**12**	*e*P	**P**	**13 10 16.8**	**-2.4**
MAJO	**Matsushiro**	**46.05**	**12**	*e*P	**P**	**13 10 16.8**	**-2.4**
MJAR	**Matsushiro Arr**	**46.05**	**12**	P	**P**	**13 10 16.8**	**-2.3**
	comp=Z,2.6nm,0.7s,baz=197,slow=9.9,SNR=7.2						
MJAR				LR	LR	13 28 27.7	
	comp=Z,508nm,20.8s,baz=195,slow=35						
SHL	**Shillong**	**48.48**	**315**	*e*P	**P**	**13 10 39.0**	**+0.6**
LZH	**Lanzhou**	**49.70**	**335**	*e*P	**P**	**13 10 46.8**	**-0.7**
LZH				pP	pP	13 10 55.1	-11
LZH				sP	sP	13 10 58.4	-17
LZH				*e*S	**S**	**13 17 51.4**	**+0.5**
LZH				sS	sS	13 18 09.1	-14
LZH				SS	**SS**	**13 21 15.8**	**-8.7**
LZH				pmax	pmax		
	comp=Z,41nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
LZH				LR	LR		
	comp=Z,790nm,14.4s						
LZH				LR	LR		
	comp=Z,930nm,14.1s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
WHZ	**Wether Hill Ro**	**50.84**	**144**	*e*P	**P**	**13 10 57.3**	**+1.3**
	comp=Z,14nm,0.8s						
HHC	**Hu-ho-hao-te**	**51.34**	**345**	*e*P	**P**	**13 11 03.0**	**+3.2**
HHC				pP	pP	13 11 11.6	-6.4
HHC				S	**S**	**13 18 19.3**	**+5.8**
HHC				ScS	**ScS**	**13 20 46.3**	**+3.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.0s						
HHC				LR	LR		
	comp=Z,300nm,16.7s						
HHC				LR	LR		
	comp=Z,250nm,15.1s						
HHC				LR	LR		
	comp=Z,350nm,18.2s						
RPZ	**Rata Peaks**	**51.58**	**140**	LR	LR	13 33 38.9	
	comp=Z,3µm,19.6s,baz=309,slow=37						
LSA	**Lhasa**	**51.66**	**319**	P	**P**	**13 11 02.3**	**-0.5**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**51.66**	**319**	*e*P	**P**	**13 11 01.7**	**-1.1**
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	**51.66**	**319**	*e*P	pP	13 11 22.9	+1.5
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	**51.66**	**319**	*e*P	**P**	**13 11 01.7**	**-1.1**
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
THZ	**Tophouse**	**51.87**	**137**	*e*P	**P**	**13 11 05.6**	**+1.8**
	comp=Z,22nm,0.7s						
THZ	**Tophouse**	**51.87**	**137**	*e*P	pP	13 11 27.0	+4.6
	comp=Z,22nm,0.7s						
KHZ	**Kahutara**	**52.59**	**138**	*e*P	pP	13 11 31.8	+4.3
	comp=Z,25nm,0.7s						
USRK	**Ussuriysk Ar.**	**52.73**	**4**	P	**P**	**13 11 09.3**	**-0.5**
	comp=Z,2.7nm,0.5s,baz=185,slow=6.9,SNR=15						
USRK				LR	LR	13 34 10.9	
	comp=Z,420nm,19.1s,baz=163,slow=37						
RAMN	**Ramite**	**53.06**	**313**	*e*P	**P**	**13 11 11.9**	**-1.1**
	comp=Z,94nm,0.6s						
BKZ	**Black Stump Fm**	**53.33**	**133**	*e*P	**P**	**13 11 16.2**	**+1.6**
	comp=Z,36nm,1.2s						
BKZ	**Black Stump Fm**	**53.33**	**133**	*e*P	pP	13 11 37.6	+4.3
	comp=Z,71nm,2.0s						
JIRN	**Jiri**	**53.77**	**314**	*e*P	**P**	**13 11 17.2**	**-1.1**
	comp=Z,286nm,1.3s						
GUN	**Gumba**	**54.14**	**314**	*e*P	**P**	**13 11 19.4**	**-1.6**
	comp=Z,59nm,0.8s						
GTA	**Gaotai**	**54.21**	**334**	⇑P	**P**	**13 11 19.4**	**-1.6**
GTA				pP	pP	13 11 28.5	-12
GTA				sP	sP	13 11 33.0	-16
GTA				S	**S**	**13 18 52.6**	**-0.1**
GTA				pmax	pmax		
	comp=Z,11nm,1.3s						
GTA				pmax	pmax		

	comp=Z,140nm,4.8s						
GTA				LR	LR		
	comp=Z,290nm,20.6s						
GTA				LR	LR		
	comp=Z,340nm,19.7s						
GTA				LR	LR		
	comp=Z,490nm,21.9s						
ASAJ	Asahikawa	54.26	13	P	P	13 11 19.8	-1.3
	comp=Z,3.9nm,0.9s,baz=67,slow=13,SNR=5.3						
PKI	Pulchoki	54.28	313	eP	P	13 11 20.9	-1.1
	comp=Z,19nm,0.5s						
PKIN	Phulchoki	54.30	313	eP	P	13 11 20.9	-1.1
	comp=Z,13nm,0.5s						
KKN	Kakani	54.51	313	eP	P	13 11 22.5	-1.0
	comp=Z,12nm,0.5s						
DMN	Daman	54.53	313	eP	P	13 11 22.9	-0.8
	comp=Z,57nm,1.2s						
HYB	Hyderabad	54.77	298	i P	P	13 11 24.0	-1.4
KOLN	Koldanda	55.72	312	eP	P	13 11 30.8	-1.4
	comp=Z,90nm,1.1s						
DANN	Dangsing	55.92	313	eP	P	13 11 32.2	-1.6
	comp=Z,31nm,0.7s						
PYUN	Piuthan	56.35	312	eP	P	13 11 36.0	-0.7
	comp=Z,93nm,1.1s						
KLR	Kul'dur	57.73	3	P	P	13 11 44.3	-1.4
	comp=Z,0.7nm,0.6s,baz=180,slow=12,SNR=3.0						
KLR				PcP	PcP	13 12 37.1	-0.7
	comp=Z,3.6nm,0.7s,baz=170,slow=5.0,SNR=7.3						
KLR				pPcP		13 12 58.4	
	comp=Z,2.7nm,0.8s,baz=349,slow=3.0,SNR=5.9						
KLR				LR	LR	13 37 35.7	
	comp=Z,219nm,19.8s,baz=172,slow=37						
ULN	Ulaanbaatar	59.06	344	eP	P	13 11 56.3	+1.1
	comp=Z,9.7nm,0.7s						
ULN	Ulaanbaatar	59.06	344	eP	pP	13 12 16.9	+2.3
	comp=Z,9.7nm,0.7s						
ULN	Ulaanbaatar	59.06	344c	iP	P	13 11 53.4	-1.8
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
SONA0	Songino Array	59.21	344	eP	P	13 11 54.6	-1.6
SONM	Songino Array	59.21	344	P	P	13 11 54.6	-1.6
	comp=Z,12nm,1.2s,baz=151,slow=5.0,SNR=17						
SONM				pP	pP	13 12 16.5	+0.9
	comp=Z,14nm,1.0s,baz=166,slow=6.1,SNR=8.7						
SONM				LR	LR	13 40 31.7	
	comp=Z,224nm,19.6s,baz=186,slow=39						
SONA1	Songino Array	59.22	344	eP	P	13 11 55.4	-0.9
SONA1	Songino Array	59.22	344	eP	pP	13 12 17.2	+1.6
ZAK	Zakamensk	62.39	343	eP	P	13 12 15.4	-2.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NKL	Nikolayevsk	62.56	9	eP	P	13 12 17.5	-1.1
WMQ	Urumqi	63.40	329	eP	P	13 12 24.3	-0.2
WMQ				sP	pP	13 12 43.3	-0.3
WMQ				PcP	PcP	13 13 00.4	-0.5
WMQ				S	S	13 20 59.5	+8.0
WMQ				pmax	pmax		
	comp=Z,22nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.3s						
WMQ				LR	LR		
	comp=Z,710nm,25.1s						
WMQ				LR	LR		
	comp=Z,300nm,29.9s						
WMQ				LR	LR		
	comp=Z,470nm,31.5s						
TLY	Talaya	63.45	344⇑	eP	P	13 12 23.5	-1.2
MOY	Mondy	64.21	342	eP	P	13 12 29.7	-0.1
MOY				pmax	pmax		
	comp=Z,29nm,1.5s						
KNGR	Kungurtug, Tuv	64.44	339⇓	eP	P	13 12 32.3	+1.0
NIL	Nilore	66.37	312	eP	P	13 12 43.9	-0.1
	comp=Z,9.6nm,0.8s						
NIL	Nilore	66.37	312	eP	P	13 12 43.9	-0.1
NIL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PETK	Petropavlovsk-	66.67	19	P	P	13 12 44.5	-1.0
	comp=Z,2.5nm,0.5s,baz=180,slow=5.5,SNR=13						
PETK				LR	LR	13 38 31.6	
	comp=Z,185nm,21.4s,baz=207,slow=33						
PEA1	Petropavlovsk-	66.67	19	eP	P	13 12 44.5	-1.0
BOD	Bodaibo	67.11	352	eP	P	13 12 47.1	-1.0
BOD				pmax	pmax		
	comp=Z,11nm,1.5s						
KSH	Kashi	67.52	319	P	P	13 12 51.5	+0.2
KSH				sP	pP	13 13 07.9	-3.4
KSH				PP	PP	13 15 25.8	+4.6
KSH				S	S	13 21 43.4	+1.3
KSH				sS	pS	13 22 06.8	+2.1
KSH				pmax	pmax		
	comp=Z,11nm,0.6s						
KSH				pmax	pmax		
	comp=Z,310nm,5.1s						
KSH				LR	LR		
	comp=Z,170nm,4.3s						
KSH				LR	LR		
	comp=Z,120nm,4.4s						
KSH				LR	LR		
	comp=Z,490nm,6.3s						
PDGK	Podgornoye	67.56	324	P	P	13 12 51.0	-0.5
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DGZ	Jazzator, Alta	67.74	333⇓	iP	P	13 12 51.3	-1.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MK01	Makanchi Array	68.19	328	eP	P	13 12 54.1	-1.2
MK01	Makanchi Array	68.19	328	eP	pP	13 13 14.0	-1.4
MK31	Makanchi Array	68.21	328	eP	P	13 12 53.9	-1.4
MK31	Makanchi Array	68.21	328	eP	pP	13 13 14.1	-1.3
	comp=Z,8.4nm,1.0s						
MK31	Makanchi Array	68.21	328	P	P	13 12 53.8	-1.6
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK32	Makanchi Array	68.21	328	eP	P	13 12 53.9	-1.5
MKAR	Makanchi Array	68.21	328	eP	P	13 12 53.9	-1.5
	comp=Z,40nm,0.8s						
MKAR	Makanchi Array	68.21	328	eP	pP	13 13 14.1	-1.3
	comp=Z,40nm,0.8s						
MKAR	Makanchi Array	68.21	328	eP	P	13 12 53.9	-1.5
MKAR				pmax	pmax		
	comp=Z,40nm,0.8s						
MKAR	Makanchi Array	68.21	328	P	P	13 12 53.9	-1.5
	comp=Z,3.4nm,0.5s,baz=125,slow=7.4,SNR=70						
MKAR				pP	pP	13 13 13.8	-1.6
	comp=Z,3.8nm,0.4s,baz=126,slow=7.8,SNR=5.9						
MKAR				LR	LR	13 44 07.6	
	comp=Z,340nm,20.3s,baz=137,slow=37						
KDJ	Kajisay	68.22	322	eP	P	13 12 54.2	-1.5
	comp=Z,7.6nm,0.8s						
KDJ	Kajisay	68.22	322	eP	P	13 12 54.3	-1.5
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAKZ	Makanchi	68.38	328	eP	P	13 12 54.6	-1.9
	comp=Z,8.8nm,1.1s						
MAKZ	Makanchi	68.38	328	eP	P	13 12 54.6	-1.9
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NRN	Naryn	68.56	321	eP	P	13 12 56.9	-1.1
	comp=Z,8.3nm,1.2s						
NRN	Naryn	68.56	321	eP	P	13 12 56.9	-1.1
NRN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AAK	Ala-Archa	70.15	321	eP	P	13 13 06.9	-0.8
	comp=Z,9.1nm,0.9s						
AAK	Ala-Archa	70.15	321⇓	eP	P	13 13 07.2	-0.5
AAK				pmax	pmax		
	comp=Z,13nm,2.5s						
ARSB	Arslanbob	70.41	319	eP	P	13 13 07.4	-1.8
	comp=Z,26nm,1.1s						
ARSB	Arslanbob	70.41	319	eP	pP	13 13 30.0	+0.7
	comp=Z,26nm,1.1s						
YAK	Yakutsk	70.45	1	eP	P	13 13 06.0	-2.8
YAK				e*PP	PcP	13 13 30.2	+0.5
YAK				e		13 15 43.9	
YAK				eS	S	13 22 14.9	-0.7
YAK				e*SS	SKiKP	13 22 45.1	-0.8
YAK				e		13 22 59.7	
YAK				eSSS	SSS	13 29 48.5	
YAK				pmax	pmax		
	comp=Z,75nm,1.1s						
YAK				pmax	pmax		
	comp=N,33nm,1.4s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,931nm,5.0s						
YAK				pmax	pmax		
	comp=N,502nm,5.2s						
YAK				pmax	pmax		
	comp=E,656nm,4.7s						
YAK				smax	smax		
	comp=N,594nm,4.8s						
YAK				smax	smax		
	comp=E,695nm,3.6s						
MA2	Magadan	70.49	12	eP	P	13 13 09.1	-0.1
	comp=E,6.5nm,0.8s						
MA2				ePcP	PcP	13 13 30.9	+0.9
MA2	Magadan	70.49	12	eP	pP	13 13 29.5	+0.7
	comp=E,6.5nm,0.8s						
MA2	Magadan	70.49	12	eP	P	13 13 09.1	-0.1
MA2				e		13 13 30.9	
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MA2	Magadan	70.49	12	P	P	13 13 08.7	-0.4
	comp=Z,1.9nm,0.4s,baz=189,slow=6.4,SNR=8.9						
GAR	Garm	71.02	316	eP	P	13 13 11.8	-1.1
	comp=Z,14nm,0.9s						
GAR	Garm	71.02	316	eP	P	13 13 11.9	-1.1
GAR				pmax	pmax		
	comp=Z,14nm,0.9s						
VNDA	Vanda	71.17	173	eP	P	13 13 14.8	+1.7
VNDA	Vanda	71.17	173	eP	P	13 13 14.8	+1.7
VNDA	Vanda	71.17	173	P	P	13 13 15.3	+2.2
	comp=Z,2.6nm,0.7s,baz=333,slow=7.3,SNR=9.1						
VNDA				LR	LR	13 43 29.6	
	comp=Z,632nm,20.2s,baz=348,slow=35						
MNAS	Manas	71.32	320	i P	P	13 13 14.3	-0.4
MNAS				pmax	pmax		
	comp=Z,12nm,1.1s						
ZAA0	Zalesovo Array	71.93	335	eP	P	13 13 15.9	-2.0
	comp=Z,13nm,0.6s						
ZAA0	Zalesovo Array	71.93	335	eP	pP	13 13 37.5	-0.6
	comp=Z,20nm,1.1s						
ZALV	Zalesovo Beam	71.93	335	eP	P	13 13 15.5	-2.4
ZALV	Zalesovo Beam	71.93	335	eP	pP	13 13 37.5	-0.6
ZALV	Zalesovo Beam	71.93	335	eP	P	13 13 15.5	-2.4
ZALV	Zalesovo Beam	71.93	335	P	P	13 13 16.0	-1.9
	comp=Z,14nm,0.6s,baz=139,slow=5.7,SNR=54						
ZALV				pP	pP	13 13 37.8	-0.3
	comp=Z,12nm,0.7s,baz=113,slow=3.9,SNR=6.4						
ZAA1	Zalesovo Array	71.93	335	eP	P	13 13 16.0	-2.0
ZAA1				ePcP	pP	13 13 37.8	-0.3
MAW	Mawson	72.52	201	eP	P	13 13 21.5	+0.2
	comp=Z,57nm,1.8s						
MAW	Mawson	72.52	201	eP	P	13 13 21.5	+0.2
MAW				pmax	pmax		
	comp=Z,57nm,1.8s						
MAW	Mawson	72.52	201	LR	LR	13 43 46.5	
	comp=Z,433nm,20.4s,baz=58,slow=34						
KURK	Kurchatov	72.59	330	eP	P	13 13 20.3	-1.6
	comp=Z,24nm,1.0s						
KURK				ePcP	PcP	13 13 38.0	-1.1
KURK	Kurchatov	72.59	330	eP	pP	13 13 42.2	+0.1
	comp=Z,24nm,1.0s						
KURK	Kurchatov	72.59	330	eP	P	13 13 20.3	-1.6
KURK				e		13 13 38.0	
KURK				pmax	pmax		
	comp=Z,24nm,1.0s						
KK31	Karatay Array	72.89	320	eP	P	13 13 22.6	-1.4
KK31	Karatay Array	72.89	320	i P	P	13 13 23.2	-0.8
KK31				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KKAR	Karatay Array	72.89	320	eP	P	13 13 22.6	-1.4
	comp=Z,9.5nm,1.3s						
KKAR	Karatay Array	72.89	320	eP	P	13 13 22.6	-1.4
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NVS	Novosibirsk	73.22	335⇑	iP	P	13 13 24.0	-1.5
NVS				i		13 13 45.6	
NVS				eS	S	13 22 46.9	-0.7
NVS				pmax	pmax		
	comp=Z,25nm,1.5s						
NVS				pmax	pmax		
	comp=N,19nm,1.8s						
NVS				pmax	pmax		
	comp=E,12nm,1.6s						
NVS				smax	smax		
	comp=N,11nm,2.3s						
NVS				smax	smax		
	comp=E,12nm,2.0s						
SEY	Seymchan	73.88	12⇑	iP	P	13 13 29.5	+0.2
SEY	Seymchan	73.88	12	P	P	13 13 29.1	-0.1
	comp=E,4.9nm,0.5s,baz=207,slow=4.4,SNR=86						
SEY				pP	pP	13 13 50.7	+1.4
	comp=E,6.5nm,0.6s,baz=181,slow=3.9,SNR=7.8						
OTUK	Ortayu	74.47	325	P	P	13 13 32.1	-1.0
OTUK				pmax	pmax		
	comp=Z,14nm,0.9s						
BVA0	Borovoye Array	78.08	329	P	P	13 13 52.1	-1.3
BVA0				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	78.16	329	eP	P	13 13 52.0	-1.8
	comp=Z,25nm,1.0s						
BRVK	Borovoye	78.16	329	eP	pP	13 14 14.5	+0.3
	comp=Z,25nm,1.0s						
BRVK	Borovoye	78.16	329	eP	P	13 13 52.0	-1.8
BRVK				pmax	pmax		
	comp=Z,25nm,1.0s						
GEYT	Alibeck	79.32	311	P	P	13 14 00.8	+0.1
	comp=Z,1.9nm,0.7s,baz=253,slow=1.5,SNR=4.1						
GEYT				LR	LR	13 56 51.2	
	comp=Z,241nm,18.8s,baz=140,slow=42						
TBI	Tubuai	80.36	112	eLR	LR	13 39 24.8	
	comp=Z,488nm,23.8s						
PPT2	Papeete2	80.82	106	eLR	LR	13 39 37.9	
	comp=Z,471nm,23.0s						
SYO	Syowa Base	81.23	201⇑	eP	P	13 14 11.0	+0.8
SYO	Syowa Base	81.23	201⇑	epP	P	13 14 14.7	+4.5
BILL	Bilibino	81.27	14⇑	eP	P	13 14 11.6	+1.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.6s						
QSPA	South Pole Qui	81.37	180	eP	P	13 14 12.6	+1.4
	comp=Z,13nm,0.9s						
AB31	Akbulak array	82.20	322	i P	P	13 14 14.2	-1.4
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ABKAR	Akbulak array	82.20	322	eP	P	13 14 13.8	-1.9
	comp=Z,18nm,1.5s						
ABKAR	Akbulak array	82.20	322	eP	pP	13 14 36.1	+0.2
	comp=Z,18nm,1.5s						
NRIK	Noril'sk	82.52	347	P	P	13 14 15.8	-1.0
	comp=Z,3.0nm,0.5s,baz=148,slow=5.4,SNR=7.1						
NRIK				LR	LR	13 55 42.2	
	comp=Z,251nm,19.7s,baz=169,slow=39						
AKTO	Aktyubinsk	83.80	323	P	P	13 14 22.7	-1.2
AKTO				pmax	pmax		
	comp=Z,12nm,1.0s						
SVE	Sverdlovsk	84.84	330	eP	P	13 14 26.5	-2.5
SVE				pmax	pmax		
	comp=Z,21nm,1.2s						
GAMB	Gambell	85.39	23	eP	P	13 14 31.6	+0.1
	comp=Z,11nm,1.0s						
GAMB	Gambell	85.39	23	eP	pP	13 14 52.7	+1.0
	comp=Z,11nm,1.0s						
ARU	Arti	85.73	329	eP	P	13 14 31.9	-1.5
	comp=Z,24nm,1.2s						
ARU	Arti	85.73	329	eP	pP	13 14 54.3	+0.2
	comp=Z,24nm,1.2s						
ARU	Arti	85.73	329c	iP	P	13 14 32.2	-1.3
ARU						13 17 47.5	
ARU				S	S	13 24 57.0	-2.8
ARU				SS	SS	13 30 42.7	+4.5
ARU				pmax	pmax		
	comp=Z,20nm,1.4s						
TAOE	Nuku Hiva Isla	91.08	99	eLR	LR	13 44 09.2	
	comp=Z,242nm,20.7s						
KBZ	Khabaz	91.95	314	LR	LR	14 03 29.1	
	comp=Z,81nm,21.6s,baz=79,slow=40						
SNAA	Sanae	93.49	194	P	P	13 15 12.8	+2.8
SNAA	Sanae	93.49	194⇓	eP	P	13 15 12.0	+2.0
RND	Reindeer	94.84	27	eP	pP	13 15 36.8	+0.2
	comp=Z,13nm,1.0s						
VNA2	Neumayer--Watz	95.08	194	P	P	13 15 20.2	+3.0
VNA3	Neumayer Olymp	95.36	193	P	P	13 15 23.7	+5.2
TOLK	Toolik Lake Re	95.42	21	eP	pP	13 15 40.5	+1.2
	comp=Z,27nm,1.7s						
TOLK	Toolik Lake Re	95.42	21	P	P	13 15 18.7	0.0
	baz=260						
TOLK				P	pP	13 15 40.7	+1.4
	baz=260						
COLA	College	95.50	25⇓	eP	P	13 15 18.3	-0.7
COLA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ILAR	Eielson Array	95.89	25	P	P	13 15 18.9	-2.0
	comp=Z,1.3nm,1.0s,baz=272,slow=4.2,SNR=14						
ILAR				pP	pP	13 15 40.8	-0.5
	comp=Z,1.4nm,0.9s,baz=267,slow=3.9,SNR=5.3						
ILAR				LR	LR	13 53 25.7	
	comp=Z,111nm,21.8s,baz=268,slow=32						
ILB	Eielson Array	95.89	25	eP	P	13 15 18.9	-2.0
	comp=Z,22nm,1.9s						
IL1	Eielson Array	95.90	25	eP	P	13 15 18.5	-2.4
BOSA	Boshof	96.44	240	P	P	13 15 26.4	+1.9
	comp=Z,2.4nm,0.9s,baz=101,slow=2.8,SNR=4.7						
LSZ	Lusaka	96.55	254	eP	P	13 15 27.2	+2.1
	comp=Z,10.0nm,1.4s						
LSZ	Lusaka	96.55	254	eP	P	13 15 27.2	+2.1
LSZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BR101	Keskin Array S	98.34	309	eP	P	13 15 30.6	-2.0
BRTR	Keskin Array B	98.34	309	P	P	13 15 30.6	-2.0
	comp=Z,0.5nm,0.6s,baz=128,slow=4.0,SNR=3.1						
BRTR				LR	LR	14 05 01.7	
	comp=Z,96nm,21.8s,baz=104,slow=38						
BR231	Keskin MP Arra	99.01	309	eP	Pdif	13 15 34.7	-1.0
AKASG	Malin Array Be	101.80	320	PKiKP	PKiKP	13 20 10.2	-0.2
	comp=Z,1.0nm,0.6s,baz=68,slow=2.6,SNR=5.1						
FIA0	FINESS Array S	102.94	331	ePdif	Pdif	13 15 50.7	-1.8
FIA0	FINESS Array S	102.94	331	eP	Pdif	13 15 50.7	-1.8
FINES	FINESS Array B	102.94	331	P	Pdif	13 15 50.7	-1.8
	comp=Z,1.1nm,0.8s,baz=48,slow=2.1,SNR=2.4						
FINES				PKiKP	PKiKP	13 20 13.2	+1.0
	comp=Z,1.3nm,0.8s,baz=174,slow=2.8,SNR=4.4						
YKA	Yellowknife Ar	110.32	26	PKiKP	PKiKP	13 20 26.4	+0.5
	comp=Z,0.3nm,0.5s,baz=291,slow=1.9,SNR=8.3						
YKB5	Yellowknife Ar	110.32	26	ePKiKP	PKiKP	13 20 26.6	+0.7
GOPC	GO Pecny, Ondr	111.07	320	AMS	AMS	14 12 10.0	
	comp=Z,300nm,20.6s						
PRU	Pruhonice	111.21	320	AMS	AMS	14 11 50.0	
	comp=Z,200nm,18.1s						
BRG	Berggiesshubel	111.39	321	ePDIFF	Pdif	13 16 34.4	+4.1
	comp=Z,22nm,2.0s						
BRG	Berggiesshubel	111.39	321	eP	Pdif	13 16 34.4	+4.1
BRG				pmax	pmax		
	comp=Z,22nm,2.0s						
CLL	Collm	111.86	322	ePdif	Pdif	13 16 31.0	-1.4
CLL				ePKiKP	PKiKP	13 20 28.0	-1.2
CLL				e		13 20 47.0	
CLL				ePP	PP	13 21 18.0	+5.0
CLL				ePPP	PPP	13 23 30.0	
CLL				ePS	PS	13 30 42.0	-4.9
CLL				ePPS	PPS	13 31 54.0	
CLL				eSS	SS	13 36 48.0	+4.1
CLL				e		13 42 12.0	
CLL				eSSSS		13 44 12.0	
CLL				LmV		14 11 00.0	
	comp=Z,200nm,21.5s						
CLL	Collm	111.86	322	eP	Pdif	13 16 31.0	-1.4
GEC2	GERESS Array S	111.99	319	ePKiKP	PKiKP	13 20 29.8	+0.1
GEC2	GERESS Array S	111.99	319	ePKIKP	PKiKP	13 20 29.8	+0.1
GERES	GERESS Array B	111.99	319	PKiKP	PKiKP	13 20 29.5	-0.2
	comp=Z,0.8nm,0.6s,baz=64,slow=2.4,SNR=10						
NVAR	Mina Array Bea	114.30	52	PKiKP	PKiKP	13 20 36.7	+2.2
	comp=Z,0.5nm,0.5s,baz=264,slow=1.8,SNR=3.3						
NV01	Mina Array Sit	114.30	52	ePKiKP	PKiKP	13 20 36.9	+2.4
CWC	Cottonwood Cre	114.76	54	P	PKiKP	13 20 37.7	+2.2
	baz=278						
HLID	Hailey	116.21	46	ePKPdf	PKiKP	13 20 39.9	+1.9
HLID	Hailey	116.21	46	ePKPdf	pPKPdf	13 21 01.6	+2.2
HLID	Hailey	116.21	46	P	PKiKP	13 20 40.2	+2.2
	baz=284						
HLID				P	pPKPdf	13 21 02.1	+2.7
	baz=284						
R11A	Troy Canyon, C	116.42	51	P	PKiKP	13 20 41.0	+2.4
	baz=280						
PFO	Pinyon Flats O	116.45	57	P	PKiKP	13 20 40.9	+2.2
	baz=278						
TPFO	Pinon Flats	116.45	57	P	PKiKP	13 20 40.7	+2.0
	baz=278						
GMRC	Granite Mounta	116.94	55	P	PKiKP	13 20 41.7	+2.1
	baz=279						
EGMT	Eagleton	118.05	40	P	PKiKP	13 20 42.8	+1.5
	baz=290						
DUG	Dugway, Tooele	118.15	49	ePKPdf	PKiKP	13 20 43.7	+1.9
DUG	Dugway, Tooele	118.15	49	ePKPdf	pPKPdf	13 21 05.3	+2.1
DUG	Dugway, Tooele	118.15	49	ePKIKP	PKiKP	13 20 43.7	+1.9
DUG	Dugway, Tooele	118.15	49	P	PKiKP	13 20 44.1	+2.3
	baz=283						
FXWY	Fox Creek	118.56	45	ePKPdf	PKiKP	13 20 44.5	+1.9
FXWY	Fox Creek	118.56	45	ePKPdf	pPKPdf	13 21 06.3	+2.3
REDW	Red Top Meadow	118.76	45	ePKPdf	PKiKP	13 20 44.9	+1.8
REDW	Red Top Meadow	118.76	45	ePKPdf	pPKPdf	13 21 06.5	+2.1
SNOW	Snow King Moun	118.80	45	ePKPdf	PKiKP	13 20 44.9	+1.8
SNOW	Snow King Moun	118.80	45	ePKPdf	pPKPdf	13 21 07.1	+2.6
LOHW	Long Hollow	118.86	45	ePKPdf	PKiKP	13 20 45.0	+1.8
LOHW	Long Hollow	118.86	45	ePKPdf	pPKPdf	13 21 06.9	+2.3
U15A	North Rim	119.36	53	ePKPdf	PKiKP	13 20 46.7	+2.2
U15A	North Rim	119.36	53	ePKPdf	pPKPdf	13 21 08.6	+2.7
PD31	Pinedale Array	119.84	45	ePKPdf	PKiKP	13 20 45.5	+0.3
PD31	Pinedale Array	119.84	45	ePKPdf	pPKPdf	13 21 07.7	+1.2
PDAR	Pinedale Array	119.84	45	ePKPdf	PKiKP	13 20 45.5	+0.3
PDAR	Pinedale Array	119.84	45	ePKPdf	pPKPdf	13 21 08.0	+1.5
PDAR	Pinedale Array	119.84	45	PKP	PKiKP	13 20 45.8	+0.6
	comp=Z,1.1nm,0.7s,baz=257,slow=1.4,SNR=12						
PDAR				pPKP	pPKPdf	13 21 08.1	+1.6
	comp=Z,1.5nm,0.7s,baz=47,slow=2.7,SNR=5.2						
P17A	Butcher Ranch,	119.87	49	ePKPdf	PKiKP	13 20 46.5	+1.2
P17A	Butcher Ranch,	119.87	49	ePKPdf	pPKPdf	13 21 08.6	+2.0
SRU	San Rafael Swe	120.13	50	ePKPdf	PKiKP	13 20 46.8	+1.0
SRU	San Rafael Swe	120.13	50	ePKPdf	pPKPdf	13 21 08.6	+1.5
SRU	San Rafael Swe	120.13	50	ePKIKP	PKiKP	13 20 46.8	+1.0
WUAZ	Wupatki	120.27	54	ePKPdf	pPKPdf	13 21 08.3	+0.8
WUAZ	Wupatki	120.27	54	P	PKiKP	13 20 48.0	+1.8
	baz=282						
LAO	LASA Array	120.77	40	P	PKiKP	13 20 49.2	+2.5
	baz=292						
PV09	Paradox Valley	121.33	50	ePKPdf	PKiKP	13 20 50.1	+1.7
PV09	Paradox Valley	121.33	50	ePKPdf	pPKPdf	13 21 11.0	+1.4
TUC	Tucson	121.36	57	P	PKiKP	13 20 50.2	+1.9
	baz=280						
PV23	Carpenter Ridg	121.44	50	ePKPdf	PKiKP	13 20 50.4	+1.9
PV23	Carpenter Ridg	121.44	50	ePKPdf	pPKPdf	13 21 12.6	+2.8
PV14	Lion Creek, Pa	121.45	50	ePKPdf	PKiKP	13 20 50.2	+1.7
PV14	Lion Creek, Pa	121.45	50	ePKPdf	pPKPdf	13 21 11.9	+2.1
PV05	Paradox Valley	121.47	51	ePKPdf	PKiKP	13 20 49.3	+0.8
PV05	Paradox Valley	121.47	51	ePKPdf	pPKPdf	13 21 11.7	+1.9
PV19	Morning Glory	121.50	50	ePKPdf	PKiKP	13 20 50.1	+1.6
PV19	Morning Glory	121.50	50	ePKPdf	pPKPdf	13 21 12.0	+2.2
PV20	West Nyswonger	121.50	50	ePKPdf	PKiKP	13 20 50.0	+1.5
PV20	West Nyswonger	121.50	50	ePKPdf	pPKPdf	13 21 11.1	+1.3
PV17	East Wray Mesa	121.52	50	ePKPdf	PKiKP	13 20 50.0	+1.4
PV17	East Wray Mesa	121.52	50	ePKPdf	pPKPdf	13 21 11.5	+1.6
PV04	Paradox Valley	121.53	50	ePKPdf	PKiKP	13 20 50.1	+1.5
PV04	Paradox Valley	121.53	50	ePKPdf	pPKPdf	13 21 11.6	+1.8
PV16	Nyswonger Mesa	121.55	50	ePKPdf	PKiKP	13 20 49.9	+1.3
PV16	Nyswonger Mesa	121.55	50	ePKPdf	pPKPdf	13 21 11.9	+2.0
O20A	White River Ci	121.55	48	ePKPdf	PKiKP	13 20 50.2	+1.6
O20A	White River Ci	121.55	48	ePKPdf	pPKPdf	13 21 11.3	+1.4
O20A	White River Ci	121.55	48	P	PKiKP	13 20 50.5	+1.9
	baz=287						
PV11	David Mesa, Pa	121.58	50	ePKPdf	PKiKP	13 20 49.7	+1.0
PV11	David Mesa, Pa	121.58	50	ePKPdf	pPKPdf	13 21 11.9	+2.0
PV03	Paradox Valley	121.61	50	ePKPdf	PKiKP	13 20 49.8	+1.1
PV03	Paradox Valley	121.61	50	ePKPdf	pPKPdf	13 21 11.8	+1.7
PV12	Saucer Basin,	121.63	50	ePKPdf	PKiKP	13 20 50.2	+1.4
PV12	Saucer Basin,	121.63	50	ePKPdf	pPKPdf	13 21 12.3	+2.2
PV13	Radium Mtn., P	121.66	50	ePKPdf	PKiKP	13 20 50.2	+1.3
PV13	Radium Mtn., P	121.66	50	ePKPdf	pPKPdf	13 21 11.9	+1.7
PV02	Paradox Valley	121.71	50	ePKPdf	PKiKP	13 20 50.7	+1.7
PV02	Paradox Valley	121.71	50	ePKPdf	pPKPdf	13 21 12.1	+1.8
PV01	Paradox Valley	121.86	50	ePKPdf	PKiKP	13 20 50.7	+1.4
PV01	Paradox Valley	121.86	50	ePKPdf	pPKPdf	13 21 12.5	+1.9
PV15	Paradox Valley	121.87	50	ePKPdf	PKiKP	13 20 50.9	+1.5
MVCO	Mesa Verde	122.15	51	P	PKiKP	13 20 52.1	+2.2
	baz=285						
MVCO				P	pPKPdf	13 21 13.6	+2.4
	baz=285						
RSSD	Black Hills	123.17	42	ePKPdf	PKiKP	13 20 52.4	+0.7
RSSD	Black Hills	123.17	42	ePKPdf	pPKPdf	13 21 14.0	+1.2
RSSD	Black Hills	123.17	42	ePKIKP	PKiKP	13 20 52.4	+0.7
RSSD	Black Hills	123.17	42	P	PKiKP	13 20 53.4	+1.7
	baz=293						
RSSD				P	pPKPdf	13 21 14.6	+1.7
	baz=293						
S22A	4UR Ranch, Cre	123.28	50	ePKPdf	PKiKP	13 20 52.4	+0.2
S22A	4UR Ranch, Cre	123.28	50	ePKPdf	pPKPdf	13 21 16.1	+2.7

S22A	4UR Ranch, Cre	123.28	50	P	PKiKP	13 20 54.5	+2.3
	baz=286						
121A	Cookes Peak, D	123.81	57	P	PKiKP	13 20 55.5	+2.3
	baz=282						
121A				P	pPKPdf	13 21 17.4	+2.9
	baz=283						
SDCO	Great Sand Dun	124.29	50	ePKPdf	PKiKP	13 20 54.6	+0.4
SDCO	Great Sand Dun	124.29	50	P	PKiKP	13 20 56.3	+2.1
	baz=288						
ANMO	Albuquerque	124.32	53	ePKPdf	PKiKP	13 20 55.8	+1.6
ANMO	Albuquerque	124.32	53	ePKPdf	pPKPdf	13 21 17.6	+2.3
ANMO	Albuquerque	124.32	53	⇑iPKIKP	PKiKP	13 20 56.4	+2.2
ANMO	Albuquerque	124.32	53	P	PKiKP	13 20 56.4	+2.2
	baz=285						
ULM	Lac du Bonnet	125.19	33	PKP	PKiKP	13 20 55.4	+0.3
	comp=Z,1.7nm,0.5s,baz=326,slow=2.2,SNR=5.7						
ULM				pPKP	pPKPdf	13 21 17.8	+1.6
	comp=Z,2.4nm,0.4s,baz=322,slow=3.2,SNR=4.9						
T25A	Trinidad	125.30	50	P	PKiKP	13 20 58.3	+2.2
	baz=288						
MNTX	Cornudas Mount	125.98	57	ePKPdf	PKiKP	13 20 58.5	+1.1
MNTX	Cornudas Mount	125.98	57	ePKPdf	pPKPdf	13 21 20.6	+2.2
MNTX	Cornudas Mount	125.98	57	P	PKiKP	13 20 59.4	+2.0
	baz=284						
MNTX				P	pPKPdf	13 21 21.4	+3.0
	baz=284						
TOA0	Torodi Ar. Sit	126.58	280	ePKPdf	PKPdf	13 20 58.5	0.0
TOA0	Torodi Ar. Sit	126.58	280	ePKPdf	pPKPdf	13 21 21.5	+1.6
TORD	Torodi Ar. Bea	126.58	280	PKP	PKiKP	13 20 60.0	+1.0
	comp=Z,1.4nm,0.8s,baz=97,slow=0.9,SNR=6.5						
TORD				pPKP	pPKPdf	13 21 22.2	+2.4
	comp=Z,3.8nm,0.9s,baz=24,slow=2.5,SNR=9.2						
TOA1	Torodi Ar. Sit	126.59	280	ePKPdf	PKiKP	13 20 60.0	+1.0
ESDC	Sonseca Array	126.81	314	PKP	PKiKP	13 20 59.2	+0.4
	comp=Z,0.3nm,0.5s,baz=8.4,slow=3.5,SNR=3.4						
ESDC				pPKP	pPKPdf	13 21 21.6	+1.9
	comp=Z,0.8nm,0.7s,baz=20,slow=2.9,SNR=2.8						
MSTX	Muleshoe	127.52	54	P	PKiKP	13 21 01.7	+1.3
	baz=287						
MSTX				P	pPKPdf	13 21 23.7	+2.3
	baz=287						
TX31	Lajitas Ar. Si	127.95	59	ePKPdf	pPKPdf	13 21 24.2	+1.8
TXAR	Lajitas Array	127.95	59	PKP	PKiKP	13 21 02.9	+1.4
	comp=Z,0.8nm,0.5s,baz=267,slow=1.7,SNR=14						
TXAR				pPKP	pPKPdf	13 21 24.9	+2.5
	comp=Z,0.9nm,0.5s,baz=173,slow=2.1,SNR=7.3						
PLCA	Paso Flores	128.18	163	ePKPdf	pPKPdf	13 21 26.1	+3.9
PLCA	Paso Flores	128.18	163	PKP	PKiKP	13 21 03.7	+2.1
	comp=Z,2.4nm,0.8s,baz=324,slow=2.2,SNR=8.3						
EYMN	Ely	128.87	33	P	pPKPdf	13 21 25.8	+2.4
	baz=307						
F38A	Pierce - Schro	129.83	35	P	pPKPdf	13 21 27.5	+2.3
	baz=306						
C40A	Isle Royale Na	130.12	32	P	pPKPdf	13 21 27.9	+2.3
	baz=310						
JCT	Junction City	130.92	57	ePKPdf	PKiKP	13 21 08.0	+0.7
JCT	Junction City	130.92	57	ePKPdf	pPKPdf	13 21 30.0	+2.2
JCT	Junction City	130.92	57	ePKIKP	PKiKP	13 21 08.0	+0.7
JCT	Junction City	130.92	57	P	PKiKP	13 21 08.2	+0.9
	baz=286						
JCT				P	pPKPdf	13 21 30.2	+2.4
	baz=286						
D41A	Chassel	130.97	32	P	pPKPdf	13 21 30.5	+3.2
	baz=310						
E41A	Kenton	131.14	33	P	pPKPdf	13 21 30.1	+2.4
	baz=309						
J41A	Loganville	132.42	37	P	pPKPdf	13 21 32.0	+1.8
	baz=306						
SCHQ	Schefferville	132.53	11	PKP	PKiKP	13 21 10.3	+0.5
	comp=Z,3.2nm,1.0s,baz=129,slow=0.2,SNR=5.2						
SCHQ				pPKP	pPKPdf	13 21 32.1	+2.1
	comp=Z,1.9nm,0.4s,baz=258,slow=4.5,SNR=3.0						
DBIC	Dimbokro	132.68	271	ePKPdf	PKiKP	13 21 11.3	+0.1
DBIC	Dimbokro	132.68	271	ePKIKP	PKiKP	13 21 11.3	+0.1
DBIC	Dimbokro	132.68	271	PKP	PKiKP	13 21 11.5	+0.2
	comp=Z,3.9nm,0.8s,baz=82,slow=2.0,SNR=5.8						
DBIC				pPKP	pPKPdf	13 21 33.1	+1.7
	comp=Z,6.9nm,0.9s,baz=40,slow=3.4,SNR=3.7						
R41A	Rosebud	134.29	44	P	PKiKP	13 21 14.7	+0.9
	baz=300						
R41A				P	pPKPdf	13 21 36.6	+2.8
	baz=300						
P42A	Winchester	134.32	41	P	PKiKP	13 21 14.2	+0.4
	baz=302						
P42A				P	pPKPdf	13 21 36.9	+3.0
	baz=302						
S41A	Jillco Farms,	134.39	45	P	PKiKP	13 21 13.9	-0.2
	baz=299						
CCM	Cathedral Cave	134.50	44	ePKPdf	PKiKP	13 21 13.8	-0.5
CCM	Cathedral Cave	134.50	44	ePKIKP	PKiKP	13 21 13.8	-0.5
CCM	Cathedral Cave	134.50	44	P	PKiKP	13 21 14.8	+0.5
	baz=300						
U41A	Viola	134.86	46	P	PKiKP	13 21 15.6	+0.5
	baz=298						
T42A	Van Buren	135.11	45	ePKPdf	pPKPdf	13 21 37.4	+1.9
T42A	Van Buren	135.11	45	P	PKiKP	13 21 17.1	+1.6
	baz=300						
T42A				P	pPKPdf	13 21 38.5	+3.0
	baz=300						
T44A	Benton	136.13	44	P	PKiKP	13 21 17.4	-0.2
	baz=301						
W47A	Westpoint	138.45	45	P	PKiKP	13 21 21.6	-0.8
	baz=302						
LRAL	Lakeview Retre	140.00	48	ePKPdf	PKPdf	13 21 23.9	+0.7
LRAL	Lakeview Retre	140.00	48	P	PKPdf	13 21 23.9	+0.7
	baz=300						
X58A	Rowland	144.37	40	P	PKPbc	13 21 30.1	+0.7
	baz=310						
PB04	IPOC Station P	144.75	151	ePKPdf	PKPdf	13 21 32.5	+0.3
PB04	IPOC Station P	144.75	151	ePKPdf	pPKPdf	13 21 54.6	+1.3
556A	Lake Butler	144.91	49	P	PKPdf	13 21 32.8	+0.9
	baz=302						
CPUP	Villa Florida	144.96	173	ePKPbc	PKPdf	13 21 33.8	+1.6
CPUP	Villa Florida	144.96	173	ePKIKP	PKPdf	13 21 33.8	+1.6
CPUP	Villa Florida	144.96	173	PKPbc	PKPdf	13 21 34.0	+1.8
	comp=Z,7.0nm,0.7s,baz=158,slow=2.0,SNR=21						
CPUP				pPKPbc	pPKPdf	13 21 55.9	+2.5
	comp=Z,8.6nm,0.7s,baz=155,slow=3.2,SNR=3.8						
LVC	Limon Verde	145.09	153	ePKPbc	PKPdf	13 21 34.5	+1.5
LVC	Limon Verde	145.09	153	ePKIKP	PKPdf	13 21 34.5	+1.5
656A	Willston	145.14	50	P	PKPdf	13 21 33.5	+1.1
	baz=301						
TGUH	Tegucigalpa,Un	145.59	78	ePKPdf	PKPdf	13 21 32.4	-1.1
857A	Zephyrhills	145.92	51	P	PKiKP	13 21 36.5	-1.3
	baz=300						
857A				P	pPKPab	13 21 57.6	+1.8
	baz=300						
058A	Arcadia	146.82	53	P	PKPab	13 21 38.8	+0.3
	baz=298						
MNMC	Minye Minye	147.73	149	ePKPbc	PKPbc	13 21 41.0	+0.7
LPAZ	La Paz	150.86	148	ePKPbc	PKiKP	13 21 50.8	+1.6
LPAZ	La Paz	150.86	148	ePKIKP	PKiKP	13 21 50.8	+1.6
LPAZ	La Paz	150.86	148	PKPbc	PKiKP	13 21 49.0	-0.2
	comp=Z,5.4nm,0.5s,baz=320,slow=2.7,SNR=18						
LPAZ				pPKPbc	sPKPdf	13 22 12.6	+0.6
	comp=Z,10nm,0.5s,baz=195,slow=4.8,SNR=4.5						
OTAV	Otavalo	152.92	107	ePKPbc	pPKPbc	13 22 16.0	+1.7
SDV	Santo Domingo	162.16	88	ePKPdf	PKPdf	13 21 58.7	+1.7

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*ISCJB **24** 13:02:29.5±0.4, 24°.85N±0°.02×122°.34E±0°.02, h5^{km}±3^{km},*
Error ellipse: s-maj=4.4km s-min=2.7km az=24.1
*JMA **24** 13:02:30.1±0.1, 24°.85N×122°.36E, h43^{km}±4^{km}, M2.1*
*TAP **24** 13:02:30.1, 24°.86N×122°.27E, h12^{km}, ML2.5, C*
ISC 24 13:02:29.5±1.0, **24°.84N**±0°.03×**122°.34E**±0°.02, **h18**^{km}±6^{km},
n51, σ0^{s}.50/85, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.34	213	P	Pb	13 02 37.4	+0.3
	baz=216						
EOS1				S	Sb	13 02 43.0	+0.7
	baz=216						
TWB1	Santiao Chiao	0.36	298	P	Pg	13 02 36.8	-0.2
	baz=300						
TWB1				S	Sg	13 02 41.2	-0.9
	baz=300						
TIPB	Shuangxi	0.48	286	eP	Pb	13 02 39.5	-0.1
	baz=285						
TIPB				eS	Sg	13 02 45.1	-0.8
	baz=285						
TWC	Suao	0.50	243	P	Pg	13 02 39.3	-0.3
	baz=238						
TWC				S	Sg	13 02 45.8	-0.5
	baz=238						
ILA	Ilan	0.54	262	eP	Pb	13 02 40.1	-0.4
	baz=249						
NWF	Wu-fen Shan	0.56	295	eP	Pg	13 02 41.5	+0.9
	baz=294						
NWF				eS	Sg	13 02 49.0	+0.8
	baz=294						
WFSB	Wu-fen Shan	0.56	295	eP	Pg	13 02 41.4	+0.8
	baz=294						
WFSB				eS	Sg	13 02 48.7	+0.6
	baz=294						
TWE	Neicheng	0.62	259	P	Pb	13 02 41.7	-0.2
	baz=249						
TWE				eS	Sg	13 02 50.3	+0.2
	baz=249						
SLBB	Yuanshan	0.64	263	eP	Pg	13 02 42.6	+0.4
	baz=250						
SLBB				eS	Sg	13 02 51.1	+0.2
	baz=250						
NANB	Nanao	0.67	233	P	Pb	13 02 42.6	-0.2
	baz=229						
NANB				eS	Sb	13 02 52.1	+0.4
	baz=229						
JYNG	Yonagunijimaku	0.68	125	P	Pg	13 02 43.1	+0.3
JYNG				eS	Sg	13 02 52.6	+0.8
ENA	Nanau	0.68	233	P	Pb	13 02 42.6	-0.2
	baz=229						
ENA				eS	Sb	13 02 52.3	+0.4
	baz=229						
TWA	Mucha	0.70	282	eP	Pg	13 02 43.5	+0.2
	baz=281						
YOJ	Yonaguni jima	0.72	121	eP	Pg	13 02 44.1	+0.4
	baz=120						
YOJ				eS	Sg	13 02 53.4	+0.2
	baz=120						
YOJ	Yonaguni jima	0.72	121	P	Pb	13 02 43.6	+0.1
YOJ				eS	Sb	13 02 53.2	+0.1
ENTT	Nioudou	0.73	254	eP	Pg	13 02 44.2	+0.3
	baz=251						
ENTT				eS	Sg	13 02 53.9	+0.4
	baz=251						
NHDH	Xindian Distri	0.75	280	eP	Pn	13 02 44.9	-0.3
	baz=278						
NHDH				eS	Sg	13 02 54.7	+0.6
	baz=278						
NWLT	Wulai	0.76	266	eP	Pg	13 02 44.8	+0.4
	baz=264						
NWLT				eS	Sb	13 02 54.1	-0.2
	baz=264						
YM01	YM01	0.76	294	eP	Pg	13 02 44.7	+0.2
	baz=293						
YM01				eS	Sg	13 02 54.7	+0.2
	baz=293						
YM08	YM08	0.76	297	eS	Sb	13 02 54.3	-0.1
	baz=297						
YM11	YM11	0.77	295	eS	Sg	13 02 55.4	+0.7
	baz=295						
YM05	YM05	0.77	295	eP	Pg	13 02 44.8	+0.2
	baz=294						
YM05				eS	Sg	13 02 55.3	+0.4
	baz=294						
TATO	Taipei	0.78	280	eP	Pg	13 02 45.0	+0.2
	baz=269						
TATO				eS	Sg	13 02 55.3	0.0
	baz=269						
NDT	Datong Townshi	0.79	253	eP	Pg	13 02 45.2	+0.3
	baz=250						
NDT				eS	Sb	13 02 55.3	+0.3
	baz=250						
TWY	Chenhua	0.80	303	eP	Pn	13 02 45.6	-0.3
	baz=303						
TWY				S	Sn	13 02 56.5	-0.8
	baz=303						
TWS1	Kuangyinshan	0.87	288	eS	Sn	13 02 58.6	-0.6
	baz=298						
YHNB	Yeheng	0.89	259	eP	Pg	13 02 46.9	0.0
	baz=257						
YHNB				eS	Sg	13 02 58.7	+0.1
	baz=257						
NSK	Sanguang	0.90	260	eP	Pg	13 02 47.0	-0.1
	baz=258						
NSK				eS	Sb	13 02 58.7	+0.2
	baz=258						
NACB	Ninganchiao	0.95	226	eP	Pb	13 02 47.4	0.0
	baz=224						
NACB				eS	Sb	13 02 59.3	-0.3
	baz=224						
NNSB	Datong	0.96	245	P	Pb	13 02 48.0	+0.2
	baz=234						
NNSB				eS	Sg	13 03 01.2	+0.4
	baz=234						
NNS	Nan Shan	0.96	246	eP	Pn	13 02 48.3	0.0
	baz=234						
NNS				eS	Sg	13 03 01.5	+0.6
	baz=234						
ETLH	Xiulin Townshi	1.00	231	eP	Pb	13 02 48.7	+0.3
	baz=229						
ETLH				eS	Sb	13 03 02.0	+0.7
	baz=229						
TWT	Tachien	1.21	241	eP	Pg	13 02 52.8	-0.1
	baz=234						
TWT				eS	Sg	13 03 09.1	+0.4
	baz=234						
LIOB	Emei	1.22	261	eP	Pn	13 02 51.1	-0.6
	baz=279						
TDCB	Techi	1.22	242	eP	Pb	13 02 52.8	+0.6
	baz=234						
TDCB				eS	Sn	13 03 08.7	+0.7
	baz=234						
NSTT	Nanjuang	1.23	261	eP	Pg	13 02 53.4	0.0
	baz=278						
NSTT				eS	Sg	13 03 10.2	+0.8
	baz=278						
ESL	Shilin	1.31	219	eP	Pg	13 02 54.7	-0.2
	baz=220						
CHGB	Renai	1.31	234	eP	Pb	13 02 54.4	+0.6
	baz=233						
CHGB				eS	Sb	13 03 11.1	+0.7
	baz=233						
IRIF	Iriomote-Funau	1.36	111	P	Pn	13 02 52.5	-1.2
OWD	Renai	1.38	231	eP	Pb	13 02 55.5	+0.6
	baz=230						
OWD				eS	Sb	13 03 12.4	+0.3
	baz=230						
WHP	Taichung City	1.38	247	eP	Pg	13 02 55.9	-0.3
	baz=246						
WHP				eS	Sg	13 03 13.8	-0.6
	baz=246						
VWDT	VWDT	1.54	226	eP	Pb	13 02 58.3	+0.9
	baz=226						
VWDT				eS	Sg	13 03 18.4	-0.7
	baz=226						
HGSD	Ruisui	1.58	212	eP	Pb	13 02 59.0	+0.8
	baz=200						
SSLB	Suanglung	1.64	231	eP	Pb	13 03 00.0	+0.8
	baz=232						
TYC	Yuchr	1.64	236	eP	Pg	13 03 00.6	-0.4
	baz=237						
JIJ	Ishigaki jima	1.71	106	P	Pn	13 02 58.0	-0.5
YULB	Yu-li	1.72	214	eP	Pb	13 03 00.3	-0.4
	baz=217						
WHYT	Xinyi Township	1.77	230	eP	Pg	13 03 02.8	-0.7
	baz=232						
CHN5	Tsauling	1.95	231	eP	Pb	13 03 05.4	+0.7
	baz=234						
TPUB	Ta-pu	2.19	226	eP	Pb	13 03 08.7	+0.2
	baz=213						
SLGT	Liugui	2.40	220	eP	Pb	13 03 11.8	-0.4
	baz=224						

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*ISCJB **24** 13:23:11.3±0.6, 25°.01S±0°.05×179°.7E±0°.1, h507^{km},*
mb3.8/9, Error ellipse: s-maj=13.3km s-min=6.7km az=0.8
*IDC **24** 13:23:12.8±3.6, 25°.11S×179°.72E, h521^{km}±41^{km}, mb3.5/9,*
mb1 3.7/12, mb1mx3.4/34, mbtmp4.4/12, Error ellipse:
s-maj=27.1km s-min=19.1km az=17.0
*WEL **24** 13:23:12.4±1.7, 25°S±12°×17°9W±4°4, h580^{km}±26^{km}*
ISC 24 13:23:12.1±0.7, **25°.06S**±0°.08×**179°.7E**±0°.1, **h507**^{km}, **n36,**
σ1^{s}.78/44, **mb3.9**/9, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.67	154	P	P	13 24 37.3	+0.9
GLKZ	Green Lake	4.69	154	P	P	13 24 37.4	+0.8
GLKZ				S	S	13 25 49.4	+3.7
OUZ	Omahuta	11.42	206	P	P	13 25 45.4	+1.2
KUZ	Kuaotunu	12.14	195	P	P	13 25 53.4	+1.5
DZM	Mont Dzumac	12.52	281	P	P	13 25 58.4	+2.2
	0.6nm,0.3s,baz=79,slow=15,SNR=6.2						
MXZ	Matakaoa Point	12.52	185	P	P	13 25 56.7	+0.8
MXZ				S	S	13 28 13.0	+2.0
PUZ	Puketiti	13.03	185	P	P	13 25 59.9	-1.4
PUZ				S	S	13 28 17.8	-3.1
URZ	Urewera	13.34	189	P	P	13 26 04.0	-0.6
	3.2nm,0.3s,baz=31,slow=1.6,SNR=26						
URZ				S	S	13 28 26.0	-0.8
	0.7nm,0.3s,baz=127,slow=20,SNR=6.8						
URZ	Urewera	13.34	189	P	P	13 26 04.0	-0.6
URZ				S	S	13 28 27.9	+1.1
BKZ	Black Stump Fm	14.32	190	P	P	13 26 13.7	-1.2
BKZ				S	S	13 28 40.1	-5.7
VRZ	Vera Road	14.63	195	P	P	13 26 21.6	+3.5
QRZ	Quartz Range	16.82	199	P	P	13 26 41.8	+1.0
PLWZ	Palliser	16.87	192	P	P	13 26 40.6	-0.8
PLWZ				S	S	13 29 30.7	-2.1
NNZ	Nelson	16.95	197	P	P	13 26 41.8	-0.3
TUWZ	Tuamarina	17.01	195	P	P	13 26 42.0	-0.7
THZ	Tophouse	17.59	197	P	P	13 26 47.4	-0.8
THZ				S	S	13 29 40.9	-3.7
DSZ	Denniston Nort	17.88	200	P	P	13 26 50.9	0.0
KHZ	Kahutara	18.04	195	P	P	13 26 51.7	-0.6
KHZ				S	S	13 29 48.4	-3.4
LTZ	Lake Taylor	18.70	197	P	P	13 26 58.3	-0.1
INZ	Inchbonnie	18.89	199	P	P	13 27 00.4	+0.4
OXZ	Oxford	19.27	197	P	P	13 27 04.3	+0.7
WVZ	Waitaha Valley	19.42	200	P	P	13 27 05.7	+0.9
RPZ	Rata Peaks	19.91	199	P	P	13 27 09.2	-0.1
	1.2nm,0.3s,baz=53,slow=2.8,SNR=9.9						
STKA	Stephens Creek	34.05	250	P	P	13 29 13.3	-0.3
	1.6nm,0.4s,baz=82,slow=9.6,SNR=8.0						
ASAR	Alice Springs	41.59	262	P	P	13 30 15.2	-0.3
	2.2nm,0.4s,baz=93,slow=7.2,SNR=119						
WRA	Warramunga Arr	42.07	268	P	P	13 30 18.6	-0.6
	8.1nm,0.4s,baz=99,slow=7.0,SNR=78						
SIJI	Sorong	52.55	290	P	P	13 31 37.3	-1.0
	30nm,0.9s,baz=87,slow=4.9,SNR=9.3						
KSRS	Korea Array	78.96	320	P	P	13 34 22.7	-0.1
	0.6nm,0.6s,baz=124,slow=5.9,SNR=3.5						
NVAR	Mina Array Bea	85.77	44	P	P	13 34 56.3	-1.4
	0.9nm,0.6s,baz=223,slow=8.8,SNR=5.0						
CMAR	Chiang Mai Arr	89.67	290	P	P	13 35 17.4	+1.3
	0.5nm,0.3s,baz=143,slow=4.0,SNR=6.3						
TXAR	Lajitas Array	91.27	58	P	P	13 35 23.1	-0.3
	0.8nm,0.8s,baz=209,slow=6.4,SNR=9.0						
PDAR	Pinedale Array	93.71	44	P	P	13 35 34.4	-0.1
	0.1nm,0.4s,baz=256,slow=5.9,SNR=2.6						
FINES	FINESS Array B	139.45	341	SKP	SKPdf	13 44 27.2	-0.1
	1.1nm,0.6s,baz=57,slow=5.1,SNR=5.5						
HFS	Hagfors	143.62	348	PKP	PKPab	13 41 44.7	-2.3
	1.1nm,0.4s,baz=89,slow=6.1,SNR=12						
AKASG	Malin Array Be	145.79	326	PKPbc	PKPbc	13 41 53.7	-0.2
	0.7nm,0.5s,baz=42,slow=4.4,SNR=6.3						
BRTR	Keskin Array B	148.04	306	PKPbc	PKPbc	13 41 58.9	-1.6
	0.3nm,0.5s,baz=142,slow=2.0,SNR=2.6						

IDC 24 13:26:10.2±3.4, **14°.91S**×**173°.84W**, **h0**^{km}, **mb3.8**/4,
mb1 4.2/4, **mb1mx3.7**/33, **mbtmp3.8**/4, **MS3.2**/1, **Ms1 3.2**/1,
ms1mx2.9/26, **Error ellipse: s-maj=187.7km**
s-min=29.0km az=146.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	WAKE ISLAND Hy	38.33	329	T	T	14 14 36.0	
	baz=149,slow=76,SNR=5.4						
H11S3	WAKE ISLAND Hy	38.34	329	T	T	14 14 53.4	
	baz=149,slow=76,SNR=6.1						
H11S1	WAKE ISLAND Hy	38.34	329	T	T	14 14 45.6	
	baz=149,slow=76,SNR=9.0						
H11N3	WAKE ISLAND Hy	39.28	331	T	T	14 16 01.7	
	baz=149,slow=76,SNR=5.4						
H11N1	WAKE ISLAND Hy	39.28	331	T	T	14 15 44.5	
	baz=149,slow=76,SNR=9.4						
H11N2	WAKE ISLAND Hy	39.29	331	T	T	14 15 58.2	
	baz=149,slow=76,SNR=6.1						
WRA	Warramunga Arr	49.55	256	P	P	13 35 03.2	0.0
	0.7nm,0.7s,baz=90,slow=7.6,SNR=7.2						
GUMO	Guam	49.72	303	LR	LR	13 53 30.6	
	comp=Z,25nm,18.6s,baz=97,slow=33						
ASAR	Alice Springs	49.87	252	P	P	13 35 05.5	-0.2
	2.5nm,0.7s,baz=86,slow=8.2,SNR=36						
ILAR	Eielson Array	82.05	11	P	P	13 38 31.9	-0.1
	0.5nm,1.0s,baz=230,slow=7.0,SNR=4.4						
PDAR	Pinedale Array	82.18	42	P	P	13 38 33.5	+0.1
	0.5nm,0.9s,baz=217,slow=4.3,SNR=3.8						

IDC 24 13:27:31.4±5.8, **39°.38N**×**110°.69E**, **h0**^{km}, **mb3.4**/3,
mb1 3.6/4, **mb1mx3.2**/59, **mbtmp3.5**/4, **ML2.8**/1, **Error**
ellipse: s-maj=123.1km s-min=29.0km az=84.0, Western
Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.00	341	Pn	Pn	13 29 42.8	+0.1
	0.1nm,0.3s,baz=154,slow=13,SNR=6.2						
SONM				Lg	Lg	13 32 11.4	
	0.1nm,0.3s,baz=162,slow=29,SNR=2.8						
MKAR	Makanchi Array	21.94	299	P	P	13 32 26.3	-0.2
	1.4nm,0.8s,baz=99,slow=12,SNR=16						
CMAR	Chiang Mai Arr	23.21	209	P	P	13 32 40.0	0.0
	1.0nm,0.7s,baz=11,slow=9.7,SNR=9.6						
KURBB	Kurchatov Arra	25.17	307	P	P	13 32 58.4	+0.1
	0.9nm,1.0s,baz=106,slow=10.0,SNR=3.5						

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*ISCJB **24** 13:46:27.5±0.7, 30°.19N±0°.05×138°.6E±0°.1, h350^{km},*
mb3.1/4, Error ellipse: s-maj=14.6km s-min=5.8km
az=164.5
*IDC **24** 13:46:29.3±1.5, 30°.25N×139°.02E, h370^{km}±27^{km}, mb3.0/4,*
mb1 3.0/8, mb1mx2.8/34, mbtmp3.8/8, Error ellipse:
s-maj=64.7km s-min=11.9km az=76.0
*JMA **24** 13:46:31.3±0.2, 30°.38N×139°.49E, h370^{km}, M3.6*
ISC 24 13:46:28.2±0.9, **30°.25N**±0°.07×**138°.8E**±0°.1, **h350**^{km}, **n15,**
σ2^{s}.16/19, **mb3.3**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	4.30	136	P	Pn	13 47 42.0	+1.6
CBIJ				eS	S	13 48 38.0	-0.6
JCJ	Chichijima	4.30	136	P	Pn	13 47 42.0	+1.6
	3.2nm,0.3s,baz=323,slow=20,SNR=4.9						
JCJ				S	S	13 48 39.6	+0.9
	33nm,0.3s,baz=269,slow=22,SNR=11						
BSO1	Boso 1	4.75	22	P	Pn	13 47 47.5	+3.1
JOD2	Odawara 2	5.00	2	P	Pn	13 47 51.6	+3.8
JHU	Hanno	5.60	4	eS	S	13 49 03.8	-0.3
JRY	Ryogami san	5.75	0	P	Pn	13 47 59.6	+3.5
JYT	Yasato	6.07	10	P	Pn	13 48 02.0	+2.4
JYT				eS	S	13 49 11.4	-2.4
MJAR	Matsushiro Arr	6.30	355	P	Pn	13 48 04.6	+2.3
	0.1nm,0.3s,baz=158,slow=5.1,SNR=9.8						
JFK	Kawauchi	7.30	13	P	Pn	13 48 15.7	+1.8
JFK				eS	S	13 49 37.5	-2.5
ASAJ	Asahikawa	14.16	11	P	Pn	13 49 34.4	-0.7
	0.4nm,0.3s,baz=226,slow=8.7,SNR=9.4						
KLR	Kul'dur	19.71	346	P	P	13 50 33.9	+0.9
	0.1nm,0.3s,baz=168,slow=16,SNR=3.6						
MKAR	Makanchi Array	46.22	307	P	P	13 54 18.9	-0.5
	0.1nm,0.3s,baz=93,slow=12,SNR=4.2						
WRA	Warramunga Arr	50.09	186	P	P	13 54 48.3	-0.6
	1.2nm,0.6s,baz=4.7,slow=7.9,SNR=18						
ASAR	Alice Springs	53.82	186	P	P	13 55 15.6	-0.6
	0.6nm,0.5s,baz=358,slow=5.6,SNR=32						
FINES	FINESS Array B	73.82	333	P	P	13 57 23.1	-1.7
	1.1nm,1.0s,baz=95,slow=4.7,SNR=4.8						

TAP 24 13:48:57.1, 23°.27N×120°.78E, h15^{km}**, ML1.1, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	Tauyuan	0.10	189	P	Pb	13 49 01.2	+0.3
	baz=184						
STYT				eS	Sb	13 49 03.7	+0.4
	baz=184						
TPUB	Ta-pu	0.14	284	eP	Pb	13 49 01.4	0.0
	baz=284						
TPUB				S	Sb	13 49 04.5	+0.2
	baz=284						
WTP	Ta-pu	0.15	262	eP	Pb	13 49 01.6	-0.1
	baz=260						
WTP				eS	Sb	13 49 04.7	+0.1
	baz=260						

CHN4	Tsaushan	0.19	297	eP	Pb	13 49 02.1	-0.1
	baz=297						
CHN4				eS	Sb	13 49 05.7	0.0
	baz=297						
ELDTW	Lidau	0.23	109	P	Pb	13 49 03.0	-0.1
	baz=108						
CHN1	Nanshi	0.24	251	eP	Pb	13 49 03.1	-0.1
	baz=250						
CHN1				eS	Sb	13 49 07.5	+0.3
	baz=250						
ALS	Alishan	0.24	6	eP	Pb	13 49 03.5	0.0
	baz=8.0						
SNST	Tainan City	0.26	260	eP	Pb	13 49 03.5	0.0
	baz=259						
SNST				eS	Sb	13 49 08.2	+0.5
	baz=259						
TWK	Hsinying	0.26	270	eP	Pb	13 49 03.3	-0.3
	baz=269						
TWK				eS	Sb	13 49 07.8	-0.1
	baz=269						
SLGT	Liugui	0.30	204	eP	Pb	13 49 04.3	+0.2
	baz=203						
SLGT				eS	Sb	13 49 09.3	+0.5
	baz=203						
CHN5	Tsauling	0.34	345	eP	Pb	13 49 05.2	+0.3
	baz=344						
WHYT	Xinyi Township	0.43	10	eP	Pb	13 49 06.6	+0.1
	baz=9.0						
TWF1	Yuli	0.49	80	eP	Pb	13 49 07.5	+0.2
	baz=80						
YULB	Yu-li	0.50	75	eP	Pg	13 49 07.2	+0.1
	baz=75						
CHN8	Yiju	0.53	279	eP	Pg	13 49 06.7	-0.9
	baz=279						
TWGBT	Beinan	0.53	148	eP	Pg	13 49 07.7	+0.2
	baz=147						

TAP 24 13:48:58.6, 23°.28N×120°.78E, h13km, ML1.5, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	Tauyuan	0.12	192	eP	Pb	13 49 02.6	-0.1
	baz=188						
STYT				S	Sb	13 49 05.2	-0.3
	baz=188						
TPUB	Ta-pu	0.14	279	P	Pb	13 49 02.9	-0.3
	baz=279						
TPUB				S	Sb	13 49 05.9	-0.3
	baz=279						
WTP	Ta-pu	0.16	259	eP	Pb	13 49 03.1	-0.3
	baz=257						
WTP				eS	Sb	13 49 06.4	-0.3
	baz=257						
CHN4	Tsaushan	0.19	293	eP	Pb	13 49 04.0	+0.1
	baz=293						
CHN4				eS	Sb	13 49 07.2	-0.3
	baz=293						
ELDTW	Lidau	0.23	112	eP	Pb	13 49 04.6	-0.2
	baz=111						
ELDTW				eS	Sb	13 49 08.6	-0.2
	baz=111						
ALS	Alishan	0.23	5	eP	Pb	13 49 04.5	-0.3
	baz=6.0						
ALS				eS	Sb	13 49 08.4	-0.6
	baz=6.0						
CHN1	Nanshi	0.25	249	eP	Pb	13 49 04.8	-0.2
	baz=248						
CHN1				eS	Sb	13 49 08.8	-0.5
	baz=248						
SGST	Jiashian	0.27	224	eP	Pb	13 49 05.0	-0.3
	baz=222						
SGST				eS	Sb	13 49 09.6	-0.1
	baz=222						
SNST	Tainan City	0.27	258	eP	Pb	13 49 05.1	-0.2
	baz=257						
SNST				eS	Sb	13 49 09.6	-0.2
	baz=257						
TWK	Hsinying	0.27	268	eP	Pb	13 49 04.9	-0.4
	baz=267						
TWK				eS	Sb	13 49 09.4	-0.5
	baz=267						
SLGT	Liugui	0.31	204	eP	Pb	13 49 06.2	+0.2
	baz=204						
SLGT				eS	Sb	13 49 11.1	+0.1
	baz=204						
CHN5	Tsauling	0.33	343	eP	Pb	13 49 06.1	-0.4
	baz=343						
CHN5				eS	Sb	13 49 11.6	-0.2
	baz=343						
CHN5	Tsauling	0.33	343	eS	Sb	13 49 11.1	-0.6
	baz=344						
WHYT	Xinyi Township	0.42	9	eP	Pb	13 49 08.2	+0.2
	baz=8.0						
WHYT				eS	Sb	13 49 13.6	-0.6
	baz=8.0						
WHYT	Xinyi Township	0.42	9	eS	Sg	13 49 13.4	+0.6
	baz=9.0						
FULB	Fuli	0.48	99	eP	Pb	13 49 09.2	+0.3
	baz=99						
TWF1	Yuli	0.48	81	eP	Pb	13 49 08.6	-0.3
	baz=81						
YULB	Yu-li	0.49	76	eP	Pb	13 49 08.7	-0.3
	baz=76						
YULB				eS	Sg	13 49 14.7	-0.1
	baz=76						
YULB	Yu-li	0.49	76	eS	Sg	13 49 14.6	-0.1
	baz=75						
TWG	Pinlang	0.53	150	eP	Pg	13 49 09.2	+0.3
	baz=149						
TWGBT	Beinan	0.53	149	eP	Pg	13 49 09.0	-0.1
	baz=149						
EHY	Hungye	0.55	65	eP	Pb	13 49 10.2	+0.2
	baz=65						
EHY				eS	Sb	13 49 17.3	-0.5
	baz=65						
VWDT	VWDT	0.58	35	eP	Pb	13 49 11.4	+0.9
	baz=34						

MEX 24 14:06:24.5±0.4, 14°.32N×92°.91W, h6km±86km, MD3.8,
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.85	47	eP	Pg	14 06 38.1	-2.8
THIG				i S	Sb	14 06 54.0	+0.6
PCIG		1.41	348	eP	Pn	14 06 47.0	-3.7
PCIG				eS	Sb	14 07 01.2	-8.2

ANF 24 14:13:21.2±0.3, 38°.03N×118°.04W, h7km±2km, ML3.6/13,
Error ellipse: s-maj=3.0km s-min=1.5km az=137.0
REN 24 14:13:21.2, 38°.03N×118°.06W, h11km, ML3.5
NEIC 24 14:13:21.2±0.0, 38°.03N×118°.06W, h11km, ML3.5(REN),
After REN.
ISC 24 14:13:20.3±1.2, 38°.04N±0°.02×118°.01W±0°.03, h2km±14km,
n67, σ0s.87/80, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NV11	Mina Array Sit	0.41	344	ePg	Pg	14 13 29.3	+1.1
NV11				eSg	Sg	14 13 34.4	+0.7
NV01	Mina Array Sit	0.46	330	ePg	Pg	14 13 29.1	0.0
NV01				eSg	Sg	14 13 36.2	+1.2
RYN	Ryan	0.71	326	ePg	Pg	14 13 34.4	+0.3
MLAC	Mammoth, Mammo	0.77	238	P	Pg	14 13 35.5	+0.4
	baz=57						
MDPB	Devils Postpil	0.93	245	ePg	Pg	14 13 38.1	-0.1
MDPB				eSg	Sg	14 13 49.7	-0.7
TIN	Tinemaha, Big	0.99	190	P	Pb	14 13 40.1	-0.2
	baz=7.7						
TIN				S	Sb	14 13 53.9	0.0
	baz=7.7						
KVN	Kaiserville	1.02	356	ePg	Pg	14 13 39.9	+0.1
KVN				eSg	Sg	14 13 53.3	+0.3
GRAC	Grapevine Rang	1.16	153	P	Pn	14 13 43.6	0.0
	baz=332						
WAKR	Walker	1.21	293	ePg	Pg	14 13 43.1	-0.5
YERR	Yerington	1.35	315	ePn	Pg	14 13 45.7	-0.5
CWC	Cottonwood Cre	1.59	182	P	Pn	14 13 50.2	+0.5
	baz=0.5						
CWC				S	Sb	14 14 11.4	+0.2
	baz=0.5						
PNTR	Pine Nut	1.63	311	ePn	Pn	14 13 50.1	-0.2
PNTR				eSn	Sg	14 14 13.1	+0.4
TPNV	Topopah Spring	1.77	127	P	Pn	14 13 52.8	+0.6
	baz=308						
DAC	Darwin (Calif)	1.79	169	ePn	Pn	14 13 52.3	-0.1
VCNR	Virginia City	1.79	315	ePn	Pb	14 13 53.4	-0.7
CMB	Columbia Colle	1.87	271	ePn	Pn	14 13 53.0	-0.5
R11A	Troy Canyon, C	1.94	80	ePn	Pn	14 13 54.5	0.0
R11A	Troy Canyon, C	1.94	80	P	Pn	14 13 54.6	+0.1
	baz=262						
R11A				Sb	Sg	14 14 23.9	+1.2
	baz=262						
RUBR	Rubicon Trail	1.96	302	ePn	Pn	14 13 55.8	+1.0
PAHR	Pah Rah Range	1.98	328	ePn	Pn	14 13 54.8	-0.3
MPMC	Manual Prospec	2.02	168	P	Pn	14 13 56.0	+0.4
	baz=347						
MPMC				Sb	Sg	14 14 25.5	+0.3
	baz=347						
VOG	Valley Oaks Go	2.03	213	Pb	Pb	14 13 58.2	+0.3
	baz=31						
VOG				Sb	Sg	14 14 25.2	-0.4
	baz=31						
VES	Vestal, Richgr	2.35	202	Pb	Pb	14 14 04.0	+0.6
	baz=20						
VES				Sb	Sg	14 14 34.8	-1.1
	baz=20						
ISA	Isabella, Lake	2.40	189	ePn	Pn	14 14 01.5	+0.9
ISA	Isabella, Lake	2.40	189	Pb	Pb	14 14 05.0	+0.8
	baz=7.8						
ISA				Sb	Sg	14 14 36.3	-1.0
	baz=7.8						
AFDM	Forest Hills D	2.49	292	ePn	Pn	14 14 02.2	+0.2
BEKR	Beckworth	2.59	316	ePn	Pn	14 14 03.4	0.0
SHPR	Sheep Range	2.74	123	ePn	Pn	14 14 06.2	+0.7
GSC	Goldstone, Bar	2.90	160	ePn	Pn	14 14 07.7	+0.1
GSC	Goldstone, Bar	2.90	160	P	Pn	14 14 08.1	+0.6
	baz=340						
PAGB	Antelope Grade	2.92	219	ePn	Pn	14 14 07.8	0.0
ARVC	Arvin	2.98	193	Pb	Pb	14 14 15.2	+1.1
	baz=12						
ARVC				Sb	Sg	14 14 54.0	-1.9
	baz=12						
SAO	San Andreas Ge	3.01	246	ePn	Pn	14 14 10.0	+0.9
TUQ	Turquoise Moun	3.09	146	P	Pn	14 14 10.8	+0.6
	baz=327						
ORV	Oroville	3.12	300	ePn	Pn	14 14 08.2	-2.3
PSUT	Pine Spring	3.31	80	ePn	Pn	14 14 13.0	-0.4
ELK	Elko	3.46	38	ePn	Pn	14 14 15.5	+0.1
CCUT	Cedar City	3.72	96	ePn	Pn	14 14 19.3	+0.3
MWC	Mount Wilson	3.80	181	ePn	Pn	14 14 19.8	-0.3
GDXM	Geysers	3.83	283	ePn	Pn	14 14 19.6	-0.9
PASC	Pasadena Art C	3.86	182	ePn	Pn	14 14 18.9	-1.8
SZCU	Shurtz Canyon	3.93	95	ePn	Pn	14 14 21.8	0.0
LCMT	Little Creek M	3.93	104	ePn	Pn	14 14 22.4	+0.6
KNB	Kanab	4.25	102	ePn	Pn	14 14 26.9	+0.6
WVOR	Wild Horse Val	4.42	354	ePn	Pn	14 14 29.6	+1.0
W13A	Hualapai Mount	4.43	130	ePn	Pn	14 14 29.5	+0.8
PKCU	Pink Cliffs	4.56	96	ePn	Pn	14 14 31.7	+1.1
DUG	Dugway, Tooele	4.58	60	ePn	Pn	14 14 31.1	+0.3
PFO	Pinyon Flats O	4.59	164	ePn	Pn	14 14 31.8	+0.9
XPFO	Pion Flat	4.59	164	ePn	Pn	14 14 31.4	+0.5
MTPU	Mount Pierson	4.60	88	ePn	Pn	14 14 32.2	+1.0
MSU	Marysvale	4.62	82	ePn	Pn	14 14 31.1	-0.2
BGU	Big Grassy Mou	4.82	52	ePn	Pn	14 14 32.3	-1.7
U15A	North Rim	4.84	108	ePn	Pn	14 14 35.5	+1.1
Y12C	Blythe	5.13	145	ePn	Pn	14 14 38.0	-0.1
BAR	Barrett	5.46	168	ePn	Pn	14 14 43.2	+0.6
HVU	Hansel Valley	5.50	45	ePg	Pg	14 15 02.9	-2.7
Y14A	Wickenburg	5.76	134	ePn	Pn	14 14 47.4	+0.5
WUAZ	Wupatki	5.89	113	ePn	Pn	14 14 49.7	+0.9
	7.3nm,0.6s						
TCUT	Toone Canyon	5.96	57	ePn	Pn	14 14 50.2	+0.4
HLID	Hailey	6.16	25	ePn	Pn	14 14 53.2	+0.8
PV16	Nyswonger Mesa	7.17	85	ePn	Pn	14 15 07.0	+0.6
PV03	Paradox Valley	7.23	85	ePn	Pn	14 15 07.7	+0.5
PV13	Radium Mtn., P	7.25	86	ePn	Pn	14 15 09.1	+1.5
PV12	Saucer Basin,	7.26	85	ePn	Pn	14 15 09.9	+2.3
FXWY	Fox Creek	7.70	41	ePn	Pn	14 15 14.4	+0.7
MOOW	Moose Ponds	7.93	42	ePn	Pn	14 15 16.5	-0.3

IDC 24 14:15:26.1±1.8, 0°.11S×125°.38E, h0km, mb3.1/3,
mb1 3.3/3, mb1mx3.1/35, mbtmp3.2/3, Error ellipse:
s-maj=195.2km s-min=24.8km az=64.0
ISCJB 24 14:15:29.8±0.7, 0°.26S±0°.08×125°.23E±0°.05, h49km,
mb3.1/3, Error ellipse: s-maj=11.1km s-min=7.5km
az=15.4
DJA 24 14:15:30.4±1.5, 0°S±3°×12°5E±°, h34km±29km, M3.7/7,
mb3.7/2, MLv3.7/7
ISC 24 14:15:31.6±1.1, 0°.24S±0°.07×125°.24E±0°.06, h49km, n11,
σ1s.21/13, mb2.8/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.50	303	P	Pn	14 15 55.1	-1.0
KMSI				S	Sn	14 16 14.3	-0.2
SANI	Sanana	1.95	157	P	Pn	14 16 01.3	-0.9
TNTI	Ternate	2.35	65	P	Pn	14 16 06.5	-1.3
LUWI	Luwuk	2.59	252	P	Pn	14 16 10.1	-1.0
LUWI				S	Sn	14 16 41.1	-0.3
MRSI	Marisa	3.38	282	P	Pn	14 16 21.1	-0.7
APSI	Ampana	3.65	259	P	Pn	14 16 24.7	-0.9
MPSI	Mapaga	5.37	276	P	Pn	14 16 48.5	-0.8
TTSI	Tana Toraja	6.09	243	P	Pn	14 16 58.1	-1.1
WRA	Warramunga Arr	21.51	156	P	P	14 20 16.2	-0.5
	0.3nm,0.7s,baz=334,slow=11,SNR=4.7						
ASAR	Alice Springs	24.76	161	P	P	14 20 51.2	+2.4
	0.2nm,0.6s,baz=348,slow=13,SNR=3.5						
MKAR	Makanchi Array	60.01	327	P	P	14 25 34.3	+1.0
	0.3nm,0.4s,baz=125,slow=8.1,SNR=12						

BJI 24 14:33:17.5, 10°.93N×91°.80E, h4km, mb4.5/33, mB5.0/20,
Ms4.1/7, Ms7 3.9/7
ISCJB 24 14:33:20.5±0.2, 10°.92N±0°.03×91°.92E±0°.03, h27km,
mb4.4/45, MS3.6/7, Error ellipse: s-maj=5.4km
s-min=3.8km az=44.1
NEIC 24 14:33:21.7±2.2, 11°.01N×92°.00E, h20km±14km, mb4.7/17,
Error ellipse: s-maj=6.6km s-min=4.5km az=58.0
IDC 24 14:33:22.2±0.7, 10°.95N×91°.99E, h25km±3km, mb4.1/24,
mb1 4.2/26, mb1mx4.0/53, mbtmp4.2/26, ML3.6/2, MS3.5/8,
Ms1 3.5/8, ms1mx3.1/53, Error ellipse: s-maj=18.3km
s-min=12.3km az=50.0
NDI 24 14:33:22.9±2.5, 11°.02N×91°.94E, h20km, mb4.7, ML4.7,
mb4.7(NEIC)
ISC 24 14:33:22.7±0.4, 11°.01N±0°.05×92°.01E±0°.05, h27km, n122,
σ1s.11/129, mb4.5/47, MS3.4/7, 9C, Andaman Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	0.97	48	ePn	Pb	14 33 40.8	0.0
PBA	Port Blair	0.97	48	eP	Pb	14 33 41.0	+0.2
PBA				eS	Sn	14 33 55.7	+2.3
PBA				IAML		14 33 57.8	
	comp=N,13μm,0.6s						
PBA				IAML		14 33 58.0	
	comp=E,14μm,0.8s						
CMBY	CAMPBELL BAY	4.40	154	eP	Pn	14 34 28.3	+0.5
CMBY				eS	Sn	14 35 18.4	+0.2
LHMI	Lhok Sumawe	7.54	139	ePn	Pn	14 35 11.9	+1.0
CM31	Chiang Mai Arr	9.99	41	ePn	Pn	14 35 43.6	-1.0
CMAR	Chiang Mai Arr	9.99	41	Pn	Pn	14 35 45.4	+0.8
	comp=E,0.1nm,0.3s,baz=237,slow=15,SNR=5.5						
CMAR				Sn	Sn	14 37 32.5	-3.5
	comp=E,0.1nm,0.3s,baz=236,slow=27,SNR=4.6						
CHTO	Chiang Mai	10.25	40	ePn	Pn	14 35 46.6	-1.6
KULM	Kulim	10.27	123	ePn	Pn	14 35 49.1	+0.7
PSI	Prapat	10.65	139	LR	LR	14 40 39.0	
	comp=E,125nm,21.6s,baz=78,slow=41						
VIS	Vishakhapatnam	10.73	309	i P	Pn	14 35 53.4	-1.4
VIS				i S	Sn	14 37 42.4	-12
VIS				ex	x	14 37 43.3	
	comp=E,327nm,0.7s						
VIS				ex	x	14 37 43.3	
	comp=N,323nm,0.6s						
BWNR	Bhubaneshwar	11.00	328	ex	Pn	14 35 50.7	-7.6
BWNR				IAmb	IAmb	14 35 51.3	
	comp=Z,305nm,0.2s						
IPM	Ipoh	11.04	125	ePn	Pn	14 35 58.9	0.0
MDRS	Chennai	11.69	281	eP	Pn	14 36 06.8	-1.1
MDRS				IAmb	IAmb	14 36 08.1	
	comp=Z,51nm,0.5s						
PALK	Pallekele	11.76	253	Pn	Pn	14 36 06.9	-2.0
	comp=Z,0.5nm,0.3s,baz=114,slow=12,SNR=4.5						
PALK				Sn	Sn	14 38 07.6	-12
	comp=Z,2.6nm,0.3s,baz=116,slow=4.2,SNR=7.3						
PALK				LR	LR	14 40 23.0	
	comp=Z,138nm,18.3s,baz=137,slow=36						
PALK				T	T	14 47 22.9	
	comp=Z,2.8nm,0.3s,baz=296,slow=13,SNR=6.1						
BOK	Bokaro	13.99	336	eP	Pn	14 36 40.3	+1.0
BOK				IAmb	IAmb	14 36 45.1	
	comp=Z,9.2nm,0.6s						
SHL	Shillong	14.48	360	ePn	Pn	14 36 44.0	-2.2
SHL	Shillong	14.48	360	eP	Pn	14 36 45.8	-0.4
SHL				IAmb	IAmb	14 36 53.6	
	comp=Z,11nm,1.1s						
HYB	Hyderabad	14.51	298	i P	P	14 36 52.5	-0.4
HYB				eS	Sn	14 39 24.0	-2.7
HYB	Hyderabad	14.51	298	eP	Pn	14 36 46.3	-0.2
HYB				IAmb	IAmb	14 36 54.5	
	comp=Z,13nm,0.6s						
MYKOM	Kota Tinggi	14.90	127	ePn	Pn	14 36 51.7	0.0
NGP	Nagpur	16.01	311	eP	Pn	14 37 05.6	-0.6
RAMN	Ramite	16.66	343	eP	Pn	14 37 15.0	+0.3
JBP	Jabalpur	16.67	318	eP	Pn	14 37 15.3	+0.8
JBP				eS	Sn	14 40 21.8	+2.8
KMI	Kunming	17.34	34	P	P	14 37 25.0	+0.6
KMI				sP	Pn	14 37 27.3	+4.1
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,4.8s						
KMI				LR	LR		
	comp=Z,190nm,5.4s						
KMI				LR	LR		
	comp=Z,220nm,5.1s						
KMI				LR	LR		
	comp=Z,140nm,7.5s						
JIRN	Jiri	17.45	343	eP	Pn	14 37 24.9	+0.3
	comp=Z,15nm,0.3s						
PKI	Pulchoki	17.61	340	eP	Pn	14 37 26.3	-0.3
	comp=Z,32nm,0.8s						
PKIN	Phulchoki	17.62	340	eP	Pn	14 37 26.0	-0.7
	comp=Z,18nm,0.4s						
DMN	Daman	17.75	340	eP	Pn	14 37 28.1	-0.1
	comp=Z,21nm,0.6s						
GUN	Gumba	17.77	342	eP	Pn	14 37 28.6	-0.1
	comp=Z,29nm,0.8s						
KKN	Kakani	17.85	340	eP	Pn	14 37 28.9	-0.6
	comp=Z,16nm,0.6s						
KOLN	Koldanda	18.45	336	eP	Pn	14 37 36.8	-0.1
	comp=Z,34nm,0.6s						
BHPL	Bhopal	18.48	313	eP	Pn	14 37 37.6	+0.6
BHPL				IAmb	IAmb	14 37 39.3	
	comp=Z,66nm,0.1s						
LSA	Lhasa	18.62	358	P	Pn	14 37 39.6	+0.5
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	18.62	358	eP	P	14 37 37.7	-1.0
	comp=Z,7.2nm,0.7s						
DANN	Dangsing	18.91	337	eP	Pn	14 37 42.1	-0.4
	comp=Z,18nm,0.4s						
PYUN	Piuthan	18.99	335	eP	P	14 37 43.0	+0.4
	comp=Z,30nm,0.6s						
POO	Poona	19.07	295	eP	P	14 37 43.6	+0.3
POO				IAmb	IAmb	14 37 44.5	
	comp=Z,22nm,0.3s						
GYA	Guiyang	20.68	40	P	P	14 38 01.5	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	Chengdu	22.61	27	eP	P	14 38 21.0	-0.5
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
DDI	Dehra Dun	23.19	328	eP	P	14 38 29.9	+2.4
SMLA	Simla	24.29	328	eP	P	14 38 37.9	-0.1
SMLA				IAmb	IAmb	14 38 40.1	
	comp=Z,14nm,0.7s						
ENH	Enshi	25.13	38	eP	P	14 38 44.9	-0.8
	comp=Z,17nm,0.7s						
DHRM	DHARAMSHALA	25.63	328	eP	P	14 38 49.8	-0.6
DHRM				IAmb	IAmb	14 39 00.5	
	comp=Z,34nm,1.5s						
H08S3	Diego Garcia H	26.84	227	T	T	15 07 01.9	
	baz=46,slow=75,SNR=250						
H08S2	Diego Garcia H	26.84	227	T	T	15 06 58.5	
	baz=46,slow=75,SNR=307						
H08S1	Diego Carcia H	26.86	227	T	T	15 07 10.4	
	baz=46,slow=75,SNR=238						
LZH	Lanzhou	27.17	21	eP	P	14 39 04.3	+0.1
LZH				pP	pP	14 39 08.3	-3.6
LZH				sP	sP	14 39 11.0	-4.2
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
XAN	Xi'an	27.66	31	P	P	14 39 13.1	+4.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,54nm,4.1s						
GTA	Gaotai	29.13	12	eP	P	14 39 23.0	+1.4
GTA				pP	pP	14 39 30.4	+1.1
GTA				sP	sP	14 39 33.6	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KSH	Kashi	31.77	336	P	P	14 39 44.3	-0.7
KSH				pP	pP	14 39 52.6	0.0
KSH				PP	PnPn	14 40 50.8	+1.2
KSH				S	S	14 44 52.3	-1.3
KSH				SS	SnSn	14 46 43.8	+1.9
KSH				ScS	ScS	14 50 18.4	+2.5
KSH				pmax	pmax		
	comp=Z,23nm,0.7s						
KSH				pmax	pmax		
	comp=Z,250nm,5.3s						
KSH				LR	LR		
	comp=Z,160nm,4.7s						
KSH				LR	LR		
	comp=Z,310nm,5.3s						
KSH				LR	LR		
	comp=Z,370nm,6.6s						
NJ2	Nanjing	32.43	46	eP	P	14 39 51.3	+0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WMQ	Urumqi	32.91	354	eP	P	14 39 56.3	+1.5
WMQ				pP	pP	14 40 02.4	0.0
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,330nm,4.5s						
WMQ				LR	LR		
	comp=Z,97nm,17.7s						
WMQ				LR	LR		
	comp=Z,180nm,22.1s						
WMQ				LR	LR		
	comp=Z,78nm,19.5s						
NRN	Naryn	33.42	338	eP	P	14 40 00.0	+0.4
	comp=Z,4.7nm,1.0s						
KDJ	Kajisay	33.61	340	eP	P	14 40 02.3	+1.2
	comp=Z,5.7nm,0.8s						
GAR	Garm	33.92	329	eP	P	14 40 03.4	-0.4
	comp=Z,25nm,1.4s						
CHGR	Chuyangaron	34.27	327	eP	P	14 40 05.9	-0.8
HHC	Hu-ho-hao-te	34.37	27	eP	P	14 40 09.9	+2.3
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,6.0s						
ARSB	Arslanbob	34.52	334	eP	P	14 40 09.8	+0.8
	comp=Z,19nm,0.7s						
KBK	Karagaybulak	34.87	338	P	P	14 40 13.8	+1.8
	SNR=5.5						
AML	Almayashu	34.90	336	P	P	14 40 13.8	+1.2
	SNR=14						
AAK	Ala-Archa	35.02	337	P	P	14 40 14.7	+1.4
	SNR=6.0						
AAK	Ala-Archa	35.02	337	eP	P	14 40 14.5	+1.2
	comp=Z,4.9nm,0.9s						
AAK	Ala-Archa	35.02	337	P	P	14 40 14.9	+1.6
	comp=Z,3.5nm,0.7s,baz=145,slow=6.6,SNR=16						
EKS2	Erkin-Say	35.32	336	P	P	14 40 17.6	+1.8
	SNR=8.1						
USP	Ospenovka	35.56	338	P	P	14 40 18.7	+0.9
	SNR=12						
MK01	Makanchi Array	36.58	349	eP	P	14 40 26.4	0.0
MK31	Makanchi Array	36.61	349	eP	P	14 40 26.7	0.0
MKAR	Makanchi Array	36.61	349	eP	P	14 40 26.7	+0.1
	comp=Z,38nm,0.7s						

MKAR				PcP	PcP	14 42 49.4	-0.1
MKAR	Makanchi Array	36.61	349	P	P	14 40 26.9	+0.2
	comp=Z,7.0nm,0.7s,baz=168,slow=8.2,SNR=84						
MKAR				PcP	PcP	14 42 49.4	-0.1
	comp=Z,0.4nm,0.6s,baz=203,slow=4.4,SNR=3.2						
MKAR				LR	LR	14 59 36.6	
	comp=Z,30nm,18.2s,baz=159,slow=43						
MAKZ	Makanchi	36.68	348	*e*P	P	14 40 27.2	-0.1
	comp=Z,5.2nm,0.6s						
KK31	Karatay Array	37.04	334	*e*P	P	14 40 30.7	+0.3
KKAR	Karatay Array	37.04	334	*e*P	P	14 40 30.8	+0.5
SONM	Songino Array	38.65	16	P	P	14 40 44.9	+0.8
	comp=Z,1.2nm,1.0s,baz=195,slow=8.7,SNR=4.5						
GEYT	Alibeck	40.48	317	P	P	14 41 00.8	+1.4
	comp=Z,5.4nm,0.7s,baz=133,slow=8.7,SNR=10						
GEYT				pP	pP	14 41 08.6	+1.4
	comp=Z,3.4nm,0.5s,baz=135,slow=8.0,SNR=6.0						
GEYT				LR	LR	14 59 11.3	
	comp=Z,36nm,18.8s,baz=200,slow=38						
GYA0B	ALIBECK ARRAY	40.48	317	*e*P	P	14 41 00.3	+0.9
	comp=Z,5.6nm,0.7s						
KURBB	Kurchatov Arra	41.03	347	P	P	14 41 04.2	+0.6
	comp=Z,4.3nm,0.8s,baz=164,slow=7.5,SNR=25						
KURK	Kurchatov	41.09	347	P	P	14 41 04.2	0.0
KSAR	Wonju Array Be	41.58	45	P	P	14 41 08.6	+0.2
KSRS	Korea Array	41.61	45	P	P	14 41 08.6	0.0
	comp=Z,0.4nm,0.4s,baz=237,slow=8.6,SNR=5.4						
KSRS				LR	LR	15 00 34.4	
	comp=Z,46nm,19.0s,baz=230,slow=39						
ZAA0	Zalesovo Array	43.21	354	*e*P	P	14 41 21.1	-0.3
	comp=Z,3.8nm,0.7s						
ZALV	Zalesovo Beam	43.21	354	*e*P	P	14 41 21.1	-0.2
ZALV	Zalesovo Beam	43.21	354	P	P	14 41 21.6	+0.3
	comp=Z,2.5nm,0.5s,baz=174,slow=8.3,SNR=14						
ZALV				LR	LR	15 02 51.2	
	comp=Z,34nm,18.9s,baz=60,slow=41						
FITZ	Fitzroy Crossi	44.03	131	P	P	14 41 27.6	-0.8
	comp=Z,11nm,0.8s,baz=324,slow=6.5,SNR=13						
BVAR	Borovoye Array	45.37	342	P	P	14 41 38.0	-0.7
	comp=Z,1.6nm,0.5s,baz=134,slow=8.5,SNR=11						
RAYN	Ar Rayn	45.93	292	*e*P	P	14 41 44.3	+0.6
	comp=Z,8.7nm,1.1s						
ABKAR	Akbulak array	46.49	331	*e*P	P	14 41 47.9	+0.3
KLR	Kul'dur	50.34	33	LR	LR	15 07 37.8	
	comp=Z,88nm,18.8s,baz=177,slow=41						
GNI	Garni	50.76	313	*e*P	P	14 42 21.6	+0.7
	comp=Z,11nm,0.9s						
GNI	Garni	50.76	313	P	P	14 42 19.5	-1.3
	comp=Z,9.5nm,0.8s,baz=32,slow=2.2,SNR=5.9						
WRA	Warramunga Arr	51.79	126	P	P	14 42 28.1	-0.5
	comp=Z,3.3nm,0.6s,baz=301,slow=9.9,SNR=93						
WRAB	Tennant Creek	51.79	126	*e*P	P	14 42 28.4	-0.2
	comp=Z,22nm,0.6s						
WB2	Warramunga Arr	51.80	126	*e*P	P	14 42 28.0	-0.6
KBZ	Khabaz	53.37	317	P	P	14 42 40.3	+0.4
	comp=Z,2.9nm,1.0s,baz=100,slow=9.5,SNR=4.3						
ASAR	Alice Springs	53.53	130	P	P	14 42 41.1	-0.3
	comp=Z,1.2nm,0.6s,baz=307,slow=6.7,SNR=41						
KIV	Kislovodsk	53.60	317	*e*P	P	14 42 42.0	+0.2
	comp=Z,11nm,0.9s						
BR131	Keskin Array S	58.81	310	*e*P	P	14 43 17.7	-1.4
BRTR	Keskin Array B	58.81	310	P	P	14 43 17.6	-1.5
	comp=Z,2.2nm,0.8s,baz=124,slow=8.2,SNR=14						
BRTR				pP	pP	14 43 26.1	-1.1
	comp=Z,2.0nm,0.7s,baz=127,slow=7.1,SNR=8.2						
AKASG	Malin Array Be	64.41	321	P	P	14 43 55.3	-1.2
	comp=Z,0.5nm,0.5s,baz=95,slow=5.0,SNR=6.0						
VRI	Vrincioaia	65.00	316⇑	*i*P	P	14 44 00.4	-0.1
MA2	Magadan	65.01	29	*e*P	P	14 43 59.6	-0.6
	comp=Z,14nm,0.8s						
PLOR	Plostina	65.05	316⇑	*i*P	P	14 44 01.0	+0.1
TESR	Tescani	65.17	316⇑	*i*P	P	14 44 01.1	-0.5
MLR	Muntele Rosu	65.48	315	*e*P	P	14 44 03.6	-0.2
	comp=Z,18nm,1.3s						
MLR	Muntele Rosu	65.48	315⇑	*i*P	P	14 44 02.6	-1.1
VOIR		66.09	315⇑	*i*P	P	14 44 05.9	-1.7
BURAR	Bucovina Array	66.33	317⇑	*i*P	P	14 44 09.4	+0.2
ARR	Arges	66.37	315⇑	*i*P	P	14 44 08.3	-1.1
HERR	Herculane	67.86	314⇑	*i*P	P	14 44 18.0	-0.8
DRGR		67.89	316⇑	*i*P	P	14 44 18.4	-0.7
FINES	FINESS Array B	68.98	332	P	P	14 44 25.4	0.0
	comp=Z,3.4nm,0.6s,baz=100,slow=7.0,SNR=14						
FINES				pP	pP	14 44 33.8	+0.2
	comp=Z,2.5nm,0.6s,baz=98,slow=7.9,SNR=5.0						
ARCES	ARCESS Array B	71.62	340	P	P	14 44 42.0	+0.4
	comp=Z,7.2nm,1.1s,baz=64,slow=9.5,SNR=5.4						
GERES	GERESS Array B	74.11	318	P	P	14 44 56.5	-0.3
	comp=Z,1.2nm,0.7s,baz=75,slow=5.8,SNR=10						
GERES				pP	pP	14 45 05.0	+0.1
	comp=Z,1.2nm,0.8s,baz=85,slow=5.8,SNR=5.7						
BOSA	Boshof	75.50	237	P	P	14 45 05.6	+0.4
	comp=Z,2.7nm,0.7s,baz=89,slow=8.3,SNR=6.7						
NB2	NORSAR Subarra	75.99	330	P	P	14 45 06.4	-0.9
	comp=Z,0.9nm,0.7s,baz=96,slow=5.3						
NOA	NORSAR Array B	75.99	330	P	P	14 45 06.6	-0.7
	comp=Z,1.5nm,0.8s,baz=92,slow=5.8,SNR=8.6						
NOA				pP	pP	14 45 15.1	-0.4
	comp=Z,0.9nm,0.6s,baz=94,slow=5.6,SNR=4.3						
ESDC	Sonseca Array	87.61	310	P	P	14 46 08.0	-0.9
	comp=Z,0.1nm,0.3s,baz=58,slow=4.8,SNR=3.9						
TORD	Torodi Ar. Bea	87.84	283	P	P	14 46 11.1	+0.6
	comp=Z,0.7nm,0.7s,baz=63,slow=5.0,SNR=4.8						
IM3	Indian Mountai	89.54	22	*e*P	P	14 46 17.9	+0.4
ILAR	Eielson Array	92.64	22	P	P	14 46 30.6	-1.2
	comp=Z,0.5nm,0.7s,baz=288,slow=4.6,SNR=7.8						
ILAR				pP	pP	14 46 38.2	-2.2
	comp=Z,0.6nm,0.7s,baz=307,slow=4.3,SNR=5.2						
KDAK	Kodiak Island	93.75	29	LR	LR	15 34 04.9	
	comp=Z,162nm,20.0s,baz=150,slow=39						
INK	Inuvik	94.57	15	P	P	14 46 40.6	0.0
	comp=Z,0.7nm,0.9s,baz=358,slow=2.5,SNR=3.2						
PLCA	Paso Flores	146.63	204	PKPbc	PKPbc	14 53 02.5	+0.1
	comp=Z,1.9nm,0.8s,baz=210,slow=1.0,SNR=4.3						

ISCJB **24** *14:36:08.2±0.2, 25°.12S±0°.02×177°.63W±0°.05, h176km,*
mb4.6/68, Error ellipse: s-maj=6.8km s-min=2.6km
az=15.8
IDC **24** *14:36:12.3±1.2, 24°.77S×177°.70W, h194km±11km,*
mb4.1/22, mb1 4.2/23, mb1mx4.1/52, mbtmp4.6/23, MS3.5/6,
Ms1 3.5/6, ms1mx3.2/42, Error ellipse: s-maj=13.4km
s-min=10.7km az=133.0
BJI **24** *14:36:14.9, 24°.55S×177°.27W, h234km, mB5.2/20,*
mb4.7/29
NEIC **24** *14:36:16.5±0.8, 24°.90S×177°.65W, h238km±7km, mb4.7/52,*
Error ellipse: s-maj=7.5km s-min=5.9km az=165.0
WEL **24** *14:36:19.5±1.0, 27°S±21°×17°4W±3°3, h267km±22km*
ISC 24 14:36:09.7±0.3**, 24°.93S**±0°.05×**177°.75W**±0°.07**, h176km,**
n296, σ2^{s}**14**/295**, mb4.7**/68**, 26C-11D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.30	182	P	Pn	14 37 21.1	+6.7
RIZ				S	Sn	14 38 14.2	+9.0
RAO	Raoul Island	4.30	182	*e*Pn	Pn	14 37 20.9	+6.5
RAO				S	Sn	14 38 13.2	+7.9
RAO	Raoul Island	4.30	182	P	Pn	14 37 20.5	+6.1
	386nm,0.3s,baz=65,slow=8.8,SNR=17						
RAO				S	Sn	14 38 13.2	+7.9
	593nm,0.3s,baz=61,slow=22,SNR=4.7						
GLKZ	Green Lake	4.32	182	P	Pn	14 37 21.1	+6.5
GLKZ				S	Sn	14 38 14.0	+8.4
MSVF	Nonsavu	8.16	331	*e*P	Pn	14 38 12.0	+6.7
NIUE	Niue	9.30	53	*e*Pn	Pn	14 38 19.6	-0.6
OUZ	Omahuta	12.69	214	*e*Pn	P	14 39 12.7	+4.3
MXZ	Matakaoa Point	13.03	194	P	Pn	14 39 07.7	-0.6
MXZ				S	Sn	14 41 22.7	-10
WMGZ	Waiomatatini S	13.26	193	P	Pn	14 39 10.0	-1.1
WMGZ				S	Sn	14 41 28.7	-10
HAZ	Te Kaha	13.34	196	P	Pn	14 39 10.0	-2.1
HAZ				S	Sn	14 41 34.2	-6.1
PKGZ	Pakihiroa	13.40	194	P	Pn	14 39 08.9	-4.1
PKGZ				S	Sn	14 41 32.8	-9.0
MARNC	Mare, Loyalty	13.52	282	*e*Pn	P	14 39 20.9	+3.2
PUZ	Puketiti	13.53	194	P	Pn	14 39 10.1	-4.5
PUZ				S	Sn	14 41 33.3	-12
RUGZ	Raukumara Rang	13.56	196	P	Pn	14 39 13.0	-2.0
RUGZ				S	Sn	14 41 37.5	-8.4
TWGZ	Tauwhareparae	13.69	194	P	Pn	14 39 16.2	-0.4
TWGZ				S	Sn	14 41 40.1	-8.9
PINNC	Pines Island,	13.75	277	*e*Pn	P	14 39 24.2	+3.9
OPRZ	Ohinepanea	13.76	199	P	P	14 39 21.5	+1.3
CNGZ	Carnagh Statio	13.94	193	P	Pn	14 39 18.2	-1.4
CNGZ				S	Sn	14 41 38.2	-17
MWZ	Matawai	13.95	196	P	Pn	14 39 16.3	-3.6
MWZ				S	Sn	14 41 44.1	-11
URZ	Urewera	13.99	197	*e*Pn	Pn	14 39 19.1	-1.2
URZ				S	Sn	14 41 49.3	-6.5
URZ	Urewera	13.99	197	P	Pn	14 39 17.9	-2.3
	2.5nm,0.3s,baz=273,slow=4.5,SNR=21						
URZ				S	Sn	14 41 49.3	-6.5
	11nm,0.3s,baz=89,slow=24,SNR=12						
URZ	Urewera	13.99	197	P	Pn	14 39 19.0	-1.2
URZ				S	Sn	14 41 48.1	-7.7
RIGZ	Rimuhau	14.25	194	P	Pn	14 39 20.9	-2.7
RIGZ				S	Sn	14 41 51.7	-10
MUGZ	Murupara	14.28	198	P	Pn	14 39 22.3	-1.7
MUGZ				S	Sn	14 41 54.7	-8.3
OUENC	Ouen Island, N	14.34	277	*e*Pn	P	14 39 31.4	+4.5
TLZ	Tolley Road	14.52	202	P	P	14 39 29.4	+0.7
TLZ	Tolley Road	14.52	202	P	P	14 40 23.7	+55
DZM	Mont Dzumac	14.78	278	*e*P	P	14 39 37.8	+6.0
	353nm,1.2s						
DZM	Mont Dzumac	14.78	278	*e*Pn	P	14 39 37.7	+5.9
DZM	Mont Dzumac	14.78	278	P	P	14 39 38.1	+6.3
	9.1nm,0.3s,baz=83,slow=18,SNR=56						
HIZ	Hauiti	14.92	203	*e*Pn	P	14 39 35.9	+2.8
	207nm,1.4s						
BKZ	Black Stump Fm	15.00	198	*e*Pn	Pn	14 39 32.1	-0.8
	73nm,1.8s						
FWVZ	Far West T-bar	15.36	200	P	Pn	14 39 36.8	-0.6
BHHZ	Black Hill Sta	15.42	198	P	Pn	14 39 35.9	-2.2
BHHZ				S	Sn	14 42 18.8	-12
MOVZ	Moawhango	15.44	199	P	Pn	14 39 37.1	-1.1
PKVZ	Pokaka	15.46	201	P	Pn	14 39 38.1	-0.3
VRZ	Vera Road	15.50	202	P	P	14 39 42.1	+2.6
PXZ	Pawanui	15.72	195	P	Pn	14 39 38.8	-2.8
KHEZ	Kahui Hut	15.92	204	P	P	14 39 49.7	+5.5
TSZ	Takapari Road	15.98	198	P	P	14 39 42.3	-2.6
PRHZ	Porangahau	16.00	196	P	P	14 39 42.6	-2.5
DVHZ	Dannevirke	16.15	197	P	P	14 39 43.9	-2.9
PRWZ	Pori Road	16.44	197	P	P	14 39 47.9	-2.0
BFZ	Birch Farm	16.49	196	*e*P	P	14 39 48.4	-2.0
BFZ	Birch Farm	16.49	196	P	P	14 39 47.8	-2.6
MRZ	Mangatainoka R	16.65	198	P	P	14 39 48.1	-4.1
MRZ				P	Pn	14 39 49.2	-3.6
TIWZ	Tintock	16.67	197	P	P	14 39 50.4	-2.1
HOWZ	Holdsworth Sta	16.89	198	P	P	14 39 52.3	-2.5
OGWZ	Otaki Gorge	16.91	199	P	P	14 39 52.1	-3.0
RAR	Rarotonga	16.95	81	*e*P	P	14 39 55.1	-0.5
	61nm,1.1s						
RAR	Rarotonga	16.95	81	P	P	14 39 55.5	-0.1
	1.4nm,0.3s,baz=180,slow=9.1,SNR=3.2						
TMWZ	Te Maipa	16.98	197	P	P	14 39 53.7	-2.2
KIW	Kapiti Island	17.03	199	P	P	14 39 54.5	-1.9
MTW	Mount Morrison	17.13	198	P	P	14 39 55.6	-1.9
CAW	Cannon Point	17.21	199	P	P	14 39 56.4	-1.9
CAW				P	Pn	14 39 57.2	-2.3
DUWZ	D'Urville Isla	17.29	202	P	P	14 39 56.5	-2.7
PAWZ	Paruwai Farm	17.36	197	P	P	14 39 58.6	-1.4
MSWZ	Moikau Station	17.44	198	P	P	14 39 59.2	-1.7
SNZO	South Karori	17.50	199	*e*P	P	14 40 01.1	-0.4
	74nm,1.1s						
TCW	Tory Channel	17.54	200	P	P	14 40 00.1	-1.8
PLWZ	Palliser	17.58	198	P	P	14 40 00.9	-1.6
QRZ	Quartz Range	17.81	205	P	P	14 40 04.9	0.0
NNZ	Nelson	17.84	202	P	P	14 40 03.1	-2.2
TUWZ	Tuamarina	17.85	201	P	P	14 40 02.5	-2.8
BSWZ	Blackbirch Sta	18.12	201	P	P	14 40 08.5	+0.2
THZ	Tophouse	18.49	203	*e*P	P	14 40 12.3	-0.1
	25nm,1.1s						
THZ	Tophouse	18.49	203	P	P	14 40 10.4	-2.0
KHZ	Kahutara	18.87	200	*e*P	P	14 40 15.9	-0.4
	26nm,1.1s						
KHZ	Kahutara	18.87	200	P	P	14 40 14.9	-1.5
DSZ	Denniston Nort	18.88	205	P	Pn	14 40 21.3	+2.1
LTZ	Lake Taylor	19.61	202	*e*P	P	14 40 24.2	-0.2
	16nm,0.9s						
LTZ	Lake Taylor	19.61	202	P	P	14 40 18.8	-5.7
AMCZ	Amberley	19.84	201	P	P	14 40 27.6	+0.8
INZ	Inchbonnie	19.86	204	P	P	14 40 26.0	-1.1
OXZ	Oxford	20.17	202	*e*P	P	14 40 28.8	-1.7
	34nm,0.5s						
OXZ	Oxford	20.17	202	P	P	14 40 30.4	-0.1
OKCZ	Okains Bay	20.20	200	P	P	14 40 30.3	-0.5
CRLZ	Canterbury Las	20.20	201	P	P	14 40 33.3	+2.6
MQZ	McQueen's Vall	20.31	200	P	P	14 40 31.8	0.0
WVZ	Waitaha Valley	20.42	205	P	P	14 40 33.7	+0.6
RPZ	Rata Peaks	20.86	203	*e*P	P	14 40 36.3	-1.5
	109nm,2.0s						
RPZ				S	S	14 44 14.2	-6.3
RPZ	Rata Peaks	20.86	203	P	P	14 40 39.7	+2.0
	10nm,0.4s,baz=192,slow=1.7,SNR=20						
RPZ				S	S	14 44 14.1	-6.3
	7.5nm,0.4s,baz=117,slow=23,SNR=13						
FOZ	Fox Glacier	21.17	206	*e*P	P	14 40 39.5	-1.5
	82nm,1.3s						
LBZ	Lake Benmore	21.75	204	*e*P	P	14 40 46.8	-0.4
	12nm,0.8s						
ODZ	Otahua Downs	22.16	202	*e*P	P	14 40 52.0	+0.8
	22nm,1.1s						
WKZ	Wanaka	22.57	205	*e*P	P	14 40 53.5	-1.6
	32nm,1.2s						
MLZ	Mavora Lakes	23.37	206	*e*P	P	14 41 02.5	+0.2
	47nm,1.4s						
DCZ	Deep Cove	23.84	207	*e*P	P	14 41 07.3	+0.7
	12nm,0.6s						
WHZ	Wether Hill Ro	23.87	205	*e*P	P	14 41 07.3	+0.4
	19nm,0.5s						
TBI	Tubuai	25.84	92	*e*S	S	14 45 17.4	-24
	167nm,35.8s						
TBI				*e*LQ	LQ	14 46 43.4	
	375nm,28.2s						
TBI				*e*LR	LR	14 47 46.5	
	comp=Z,116nm,25.0s						
TBI	Tubuai	25.84	92	*e*T	T	15 07 42.3	
	24nm,0.3s						
PAE	Paea	27.18	80	*e*T	T	15 08 17.0	
	10nm,0.3s						
PPT2	Papeete2	27.21	80	*e*LQ	LQ	14 47 18.6	
	1μm,26.5s						
PPT2				*e*LR	LR	14 48 32.0	
	comp=Z,159nm,23.5s						
PPT2	Papeete2	27.21	80	*e*T	T	15 08 19.4	
	6.4nm,0.3s						
PPT	Papeete	27.22	80	LR	LR	14 52 27.5	
	comp=Z,41nm,18.5s,baz=239,slow=36						
TVO	Taravao	27.44	81	*e*T	T	15 09 51.5	
	2.0nm,0.3s						
EIDS	Eidsvold	28.19	262	*e*P	P	14 41 48.1	+2.2
	39nm,1.5s						
CTAO	Charters Tower	33.54	271	*e*P	P	14 42 34.9	+1.9
	40nm,0.9s						
STKA	Stephens Creek	36.27	250	*e*P	P	14 42 58.2	+2.0
	8.0nm,1.9s						
STKA				PcP	PcP	14 45 17.6	+0.2
STKA	Stephens Creek	36.27	250	P	P	14 42 58.5	+2.3
	2.1nm,0.3s,baz=97,slow=9.6,SNR=24						
STKA				PcP	PcP	14 45 17.6	+0.2
	2.5nm,0.7s,baz=98,slow=7.1,SNR=3.6						
COEN	Coen	38.31	279	*e*P	P	14 43 15.2	+1.7
	38nm,1.2s						
AS01	Alice Springs	43.86	261	*e*P	P	14 43 59.8	+1.1
AS31	Alice Springs	43.90	261	*e*P	P	14 43 59.8	+0.7
	5.8nm,1.0s						
ASAR	Alice Springs	43.90	261	P	P	14 43 59.8	+0.7
	5.4nm,0.3s,baz=93,slow=6.9,SNR=131						
ASAR				PcP	PP	14 45 44.2	-0.8
	1.1nm,0.4s,baz=96,slow=3.2,SNR=4.6						
ASAR				ScP	ScP	14 49 14.6	-2.6
	1.4nm,1.0s,baz=115,slow=4.2,SNR=4.4						
ASAR				S	S	14 50 10.4	-6.9
	0.8nm,0.9s,baz=94,slow=14,SNR=4.4						
ASAR				LR	LR	15 00 22.1	
	comp=Z,90nm,20.8s,baz=91,slow=33						
WB2	Warramunga Arr	44.38	266	*e*P	P	14 44 02.9	0.0
WRAB	Tennant Creek	44.38	266	*e*P	P	14 44 03.2	+0.3
	22nm,0.6s						
WRA	Warramunga Arr	44.39	266	P	P	14 44 03.2	+0.2
	20nm,0.5s,baz=104,slow=8.0,SNR=87						
WRA				PcP	PcP	14 45 44.5	+0.7
	3.4nm,0.8s,baz=101,slow=3.7,SNR=6.1						
WRA				ScP	ScP	14 49 17.8	-1.4
	1.8nm,1.0s,baz=99,slow=3.8,SNR=5.0						
WRA				S	S	14 50 18.0	-6.5
	5.5nm,1.0s,baz=100,slow=14,SNR=11						
MTN	Manton Dam	49.58	274	*e*P	P	14 44 43.6	+0.3
	31nm,1.5s						
FITZ	Fitzroy Crossi	52.80	266	*e*P	P	14 45 08.5	+1.4
	22nm,0.8s						
FITZ	Fitzroy Crossi	52.80	266	P	P	14 45 08.8	+1.7
	11nm,0.5s,baz=95,slow=6.1,SNR=39						
GUMO	Guam	52.88	312	*e*P	P	14 45 07.7	0.0
VNDA	Vanda	53.54	185	P	P	14 45 14.8	+3.1
	2.5nm,0.7s,baz=14,slow=7.1,SNR=6.7						
SIJI	Sorong	54.71	288	P	P	14 45 21.4	+0.3
	24nm,0.7s,baz=119,slow=5.0,SNR=16						
QSPA	South Pole Qui	65.16	180	*e*P	P	14 46 33.7	+2.1
	26nm,1.1s						
MPSI	Mapaga	65.24	283	P	P	14 46 32.2	-0.6
MJAR	Matsushiro Arr	73.92	324	P	P	14 47 25.1	-0.4
	1.9nm,0.8s,baz=170,slow=6.0,SNR=5.5						
MJAR				LR	LR	15 14 22.5	
	comp=Z,25nm,21.8s,baz=15,slow=31						
KSM	Kuching	74.30	279	*e*P	P	14 47 28.6	+0.4
	15nm,0.7s						
JNU	Nakatsue	75.67	317	P	P	14 47 36.5	+1.0
	5.6nm,0.9s,baz=0.0,slow=1.0,SNR=4.1						
MDSI	Maura Dua	77.32	271	P	P	14 47 46.2	+0.9
ASAJ	Asahikawa	77.72	332	P	P	14 47 47.4	+0.6
	8.8nm,0.9s,baz=315,slow=1.4						
KSRS	Korea Array	80.36	319	P	P	14 48 01.8	+0.5
	1.4nm,0.8s,baz=131,slow=5.1,SNR=5.2						
KSRS				LR	LR	15 22 25.0	
	comp=Z,11nm,18.9s,baz=240,slow=34						
KSAR	Wonju Array Be	80.38	319	P	P	14 48 01.8	+0.4
PEA0B	Petropavlovsk-	80.60	345	*e*P	P	14 48 02.0	-0.2
	29nm,0.7s						
PETK	Petropavlovsk-	80.60	345	*e*P	P	14 48 01.8	-0.4
PETK	Petropavlovsk-	80.60	345	P	P	14 48 02.0	-0.1
	21nm,0.6s,baz=187,slow=6.0,SNR=67						
USRK	Ussuriysk Ar.	82.75	326	P	P	14 48 14.7	+1.0
	2.9nm,0.8s,baz=125,slow=5.2,SNR=6.8						
NJ2	Nanjing	82.89	310	*e*P	P	14 48 15.3	+0.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
SNAA	Sanae	83.59	178	P	P	14 48 18.9	+1.1
YBH	Yreka Blue Hor	83.60	38	P	P	14 48 18.3	0.0
	1.6nm,0.5s,baz=141,slow=6.0,SNR=12						
MNSI	Mandailing Nat	83.69	274	P	P	14 48 20.3	+1.1
PNTR	Pine Nut	83.71	42	*e*P	P	14 48 17.8	-1.2
	15nm,1.2s						
VNA3	Neumayer Olymp	83.72	176	P	P	14 48 19.4	+1.0
BEKR	Beckworth	83.75	41	*e*P	P	14 48 18.5	-0.7
	5.2nm,1.0s						
YERR	Yerington	83.86	42	*e*P	P	14 48 19.2	-0.5
	23nm,1.6s						
NV01	Mina Array Sit	84.09	43	*e*P	P	14 48 20.2	-0.7
NVAR	Mina Array Bea	84.09	43	P	P	14 48 21.1	+0.2
	2.1nm,0.6s,baz=224,slow=7.9,SNR=12						
VNA2	Neumayer--Watz	84.17	177	P	P	14 48 22.1	+1.4
	baz=175,slow=4.2						
NV11	Mina Array Sit	84.18	43	*e*P	P	14 48 20.8	-0.5
	1.2nm,1.8s						
PAHR	Pah Rah Range	84.22	41	*e*P	P	14 48 21.4	-0.2
	13nm,1.5s						
VNA1	Neumayer--Stat	84.39	176	P	P	14 48 21.0	-0.7
KVN	Kaiserville	84.59	42	*e*P	P	14 48 23.0	-0.5
	21nm,1.9s						
SHPR	Sheep Range	84.92	46	*e*P	P	14 48 25.5	+0.4
	13nm,1.5s						
PSI	Prapat	85.13	275	LR	LR	15 28 03.7	
	comp=Z,51nm,19.1s,baz=258,slow=37						
TUC	Tucson	85.53	51	*e*P	P	14 48 28.4	+0.2
	6.0nm,1.0s						
CN2	Changchun	85.94	323	*e*P	P	14 48 29.8	+0.1
KLR	Kul'dur	86.45	330	P	P	14 48 32.6	+0.6
	3.1nm,0.7s,baz=155,slow=3.5,SNR=10						
U15A	North Rim	86.77	47	*e*P	P	14 48 34.5	+0.1
	4.2nm,0.7s						
X18A	Snowflake	87.32	50	*e*P	P	14 48 36.8	-0.1
	17nm,1.8s						
ELK	Elko	87.37	42	P	P	14 48 36.5	-0.6
	0.8nm,0.5s,baz=280,slow=11,SNR=3.7						
MTPU	Mount Pierson	87.75	46	*e*P	P	14 48 39.4	+0.3
	27nm,2.0s						
G08A	Pilot Rock	87.98	37	*e*P	P	14 48 39.5	-0.2
	17nm,1.6s						
MA2	Magadan	88.10	345	*e*P	P	14 48 39.2	-0.6
	18nm,0.9s						
MA2	Magadan	88.10	345	P	P	14 48 39.5	-0.2
	15nm,0.8s,baz=144,slow=5.4,SNR=33						
MA2				LR	LR	15 25 37.8	
	comp=Z,28nm,18.6s,baz=118,slow=34						
ENH	Enshi	88.72	304	*e*P	P	14 48 44.0	+0.6
	43nm,1.5s						
TMUT	Trail Mountain	89.08	45	*e*P	P	14 48 45.4	+0.1
	13nm,0.9s						
MNTX	Cornudas Mount	89.13	54	*e*P	P	14 48 45.0	-0.3
	22nm,1.9s						
BJI	Beijing	89.20	315	*e*P	P	14 48 47.3	+2.0
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TXAR	Lajitas Array	89.25	57	P	P	14 48 46.5	+0.4
	0.7nm,0.7s,baz=216,slow=7.1,SNR=8.2						
F10A	Beach Ranch, E	89.36	37	*e*P	P	14 48 44.7	-1.4
	43nm,1.9s						
HLID	Hailey	89.52	41	*e*P	P	14 48 46.9	-0.2
	6.6nm,1.4s						
WRAK	Wrangell Islan	89.67	23	*e*P	P	14 48 46.5	-0.7
B08A	Colville Reser	89.72	35	*e*P	P	14 48 46.7	-1.0
	22nm,1.8s						
C09A	Chrisman Ranch	89.93	36	*e*P	P	14 48 48.1	-0.5
	14nm,1.3s						
TCUT	Toone Canyon	89.96	44	*e*P	P	14 48 48.9	-0.3
	52nm,1.9s						
SEY	Seymchan	90.72	347	P	P	14 48 51.3	-0.6
	5.8nm,0.9s,baz=136,slow=4.8,SNR=17						
XAN	Xi'an	91.00	307	P	P	14 48 56.9	+2.9
XAN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,130nm,4.1s						
XAN	Xi'an	91.00	307	*e*P	P	14 48 54.6	+0.7
	7.1nm,0.8s						
S22A	4UR Ranch, Cre	91.16	49	*e*P	P	14 48 55.3	+0.4
	18nm,2.0s						
MCMT	McKenzie Canyo	91.17	40	*e*P	P	14 48 54.7	-0.1
KMI	Kunming	91.56	297	P	P	14 48 58.6	+1.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,4.8s						
CM01	Chiang Mai Arr	91.78	289	*e*P	P	14 48 58.7	+0.8
CM31	Chiang Mai Arr	91.81	289	*e*P	P	14 48 59.3	+1.3
CMAR	Chiang Mai Arr	91.81	289	P	P	14 49 00.1	+2.1
	3.1nm,0.8s,baz=140,slow=3.3,SNR=27						
CMAR				PP	PP	14 52 39.4	-0.4
	0.4nm,0.7s,baz=140,slow=6.2,SNR=5.5						
CMMT	Chiang Mai	91.96	290	P	P	14 49 00.5	+1.8
	8.4nm,1.0s						
CHTO	Chiang Mai	91.96	290	*e*P	P	14 48 59.4	+0.7
	5.8nm,0.8s						
CHTO	Chiang Mai	91.96	290	P	P	14 49 00.6	+1.9
	38nm,1.0s						
PD31	Pinedale Array	92.02	43	*e*P	P	14 48 57.7	-1.0
PDAR	Pinedale Array	92.02	43	*e*P	P	14 48 57.8	-1.0
PDAR	Pinedale Array	92.02	43	P	P	14 48 58.1	-0.6
	1.0nm,0.6s,baz=198,slow=3.8,SNR=15						
BOZ	Bozeman (W)	92.32	40	*e*P	P	14 49 00.1	+0.1
	20nm,1.8s						
HHC	Hu-ho-hao-te	92.60	314	*e*P	P	14 49 02.1	+0.8
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,4.8s						
BILL	Bilibino	93.45	354	*e*P	P	14 49 04.1	-0.3
	2.6nm,0.6s						
LZH	Lanzhou	95.63	307	*e*P	P	14 49 16.8	+1.4
LZH				pP	sP	14 50 12.6	-4.3
LZH				sP	pwP	14 50 36.3	+35
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
YKA	Yellowknife Ar	100.42	25	P	Pdif	14 49 34.7	-1.3
	0.1nm,0.4s,baz=240,slow=4.6,SNR=3.1						
WMQ	Urumqi	109.97	310	*e*PKP	PKiKP	14 54 19.3	-0.8
WMQ				LR	LR		
	comp=N,170nm,21.1s						
WMQ				LR	LR		
	comp=E,87nm,25.7s						
WMQ				LR	LR		
	comp=Z,74nm,20.7s						
ZALV	Zalesovo Beam	114.05	320	PKiKP	PKPdf	14 54 26.0	-1.4
	0.5nm,0.3s,baz=94,slow=1.5,SNR=3.7						
MKAR	Makanchi Array	114.36	312	PKP	PKPdf	14 54 27.2	-1.1
	0.7nm,0.6s,baz=72,slow=1.6,SNR=12						

KURK	Kurchatov	117.37	316	PKP	PKPdf	14 54 32.7	-1.2
KURBB	Kurchatov Arra	117.41	316	PKP	PKPdf	14 54 32.7	-1.3
	0.9nm,0.6s,baz=108,slow=1.8,SNR=9.3						
AAK	Ala-Archa	119.16	306	PKP	PKPdf	14 54 37.2	-0.7
	0.7nm,0.7s,baz=305,slow=15,SNR=5.2						
KK31	Karatay Array	122.12	307	*e*PKPdf	PKPdf	14 54 42.4	-1.0
KKAR	Karatay Array	122.12	307	*e*PKPdf	PKPdf	14 54 42.2	-1.1
GEYT	Alibeck	131.26	299	PKP	PKiKP	14 55 01.9	0.0
	2.3nm,0.8s,baz=151,slow=3.3,SNR=5.3						
GEYT				SKPbc	SKPbc	14 58 05.7	-3.9
	2.4nm,0.8s,baz=96,slow=7.7,SNR=5.7						
ARCES	ARCESS Array B	133.30	349	PKP	PKPdf	14 55 02.5	-1.3
	2.1nm,0.5s,baz=176,slow=1.9,SNR=18						
ARCES				SKP		14 58 21.9	
	3.0nm,0.8s,baz=42,slow=2.8,SNR=4.0						
FINES	FINESS Array B	140.06	342	PKhKP	PKPpre	14 55 07.3	
	0.6nm,0.4s,baz=18,slow=3.0,SNR=8.7						
FINES				PKP	PKPdf	14 55 15.3	-1.2
	1.7nm,0.6s,baz=44,slow=3.5,SNR=5.4						
FINES				SKPab	SKPab	14 58 44.2	-3.5
	1.2nm,0.9s,baz=76,slow=5.9,SNR=3.7						
AKDM	Akdamar-Van	143.13	301	*e*P	PKPab	14 55 19.7	+0.7
NB2	NORSAR Subarra	143.39	353	PKP	PKPab	14 55 18.8	-0.3
	comp=Z,2.2nm,0.6s,baz=14,slow=4.1						
NOA	NORSAR Array B	143.39	353	PKhKP	PKPpre	14 55 18.7	
	comp=Z,1.2nm,0.6s,baz=47,slow=2.1,SNR=12						
BCA	Borcka	143.52	307	*e*P	PKPab	14 55 19.7	-0.5
BCA	Borcka	143.52	307	⇑*i*P	PKPab	14 55 19.9	-0.3
VRTB	Varto-Mus	144.16	303	*e*P	PKPdf	14 55 25.1	+0.3
SVAN	Silvan-Diyarba	144.55	301	*e*P	PKPab	14 55 22.8	-1.5
IDID	Didziasalis	144.72	336	*e*P	PKPab	14 55 23.9	-0.4
IDID				IAmb	IAmb	14 55 25.4	
	comp=Z,8.7nm,1.1s						
ISAL	Salakas	144.75	337	*e*P	PKPbc	14 55 24.5	+0.1
ISAL				IAmb	IAmb	14 55 25.6	
	comp=Z,12nm,1.0s						
BNGB	Bingl	144.78	303	*e*P	PKPab	14 55 24.9	-0.3
BAYT	Aydıntepe-Bayb	144.87	305	*e*P	PKPbc	14 55 24.9	-0.6
IIGN	Ignalina	144.88	336	*e*P	PKPbc	14 55 24.5	-0.3
IIGN				IAmb	IAmb	14 55 25.1	
	comp=Z,9.0nm,0.7s						
MAZI	Mazidag	145.25	300	*e*P	PKPdf	14 55 25.1	-1.6
PBUR	Paburg	145.78	340	*e*P	PKiKP	14 55 32.1	+1.2
PBUR				IAmb	IAmb	14 55 33.4	
	comp=Z,107nm,0.7s						
AKASG	Malin Array Be	146.94	328	PKPbc	PKPbc	14 55 30.1	-1.0
	comp=Z,15nm,0.7s,baz=45,slow=4.0,SNR=34						
KIEV	Kiev	146.95	328	*e*PKPbc	PKPdf	14 55 30.0	+1.1
KIEV	Kiev	146.95	328	⇑*i*P	PKPbc	14 55 30.2	-0.9
SUW	Suwalki	147.03	337	*e*PKP	PKPab	14 55 33.3	+0.1
DARE	Darende-Malaty	147.31	303	*e*P	PKPbc	14 55 32.6	-0.1
SVSK	Karacayir	147.32	306	*e*P	PKPbc	14 55 32.9	+0.4
BSD	Bornholm Skovb	148.44	346	*i* P	PKPbc	14 55 33.7	-1.2
SAIM	ADANA	148.53	303	*i* P	PKPbc	14 55 36.1	+0.2
SAIM				IAML_P			
	comp=Z,100nm,0.1s						
YOZ	Yozgat	148.64	306	*e*P	PKPbc	14 55 35.5	-0.7
YAHY	KAYSERI_Yahyal	149.05	303	*i* P	PKPbc	14 55 37.4	+0.2
YAHY				IAML_P			
	comp=Z,176nm,0.4s						
YURE	YUREGIR	149.15	301	*e*P	PKPbc	14 55 37.6	+0.2
YURE	YUREGIR	149.15	301	*i* P	PKiKP	14 55 38.5	0.0
BEL	Belsk	149.64	337	*e*PKP	PKPbc	14 55 38.1	+0.1
GULE	Gulek	149.71	302	*i* P	PKiKP	14 55 39.8	-0.1
GULE				*i* S		14 55 44.7	
GULE				IAML_P			
	comp=Z,2µm,0.7s						
BRTR	Keskin Array B	149.84	307	PKPbc	PKPbc	14 55 38.4	-0.8
	comp=Z,2.2nm,0.6s,baz=135,slow=4.2,SNR=14						
KERG	Konya-Eregli	150.17	302	*i* P	PKPbc	14 55 39.7	-0.4
AFSR	Afar-Bala (An	150.34	307	*e*P	PKPbc	14 55 39.1	-1.2
KIZK	Mersin	150.40	300	*i* P	PKiKP	14 55 41.1	0.0
ANTO	Ankara	150.40	308	*e*PKPbc	PKPbc	14 55 40.2	-0.2
ANTO	Ankara	150.40	308	⇑*i*P	PKPbc	14 55 39.1	-1.3
KULU	Kulu	150.53	306	*e*P	PKPbc	14 55 39.4	-1.4
TLCR		150.54	320	⇑*i*P	PKPdf	14 55 36.9	+2.0
PRAR	RASCA	150.62	326	⇑*i*P	PKiKP	14 55 41.0	-0.2
KEBE	Keben-Mersin	150.74	301	*e*P	PKiKP	14 55 43.5	+1.6
CHBY	Cihanbeyli	150.76	305	*e*P	PKPbc	14 55 38.8	-2.6
IKL	Isikli	150.81	300	*e*P	PKPbc	14 55 39.4	-2.0
AKKU	Akkuyu-Mersin	150.94	300	*e*P	PKPbc	14 55 40.1	-1.6
CFR	Carcaliu	150.94	321	⇑*i*P	PKPbc	14 55 41.2	-0.2
TESR	Tescani	150.95	324	⇑*i*P	PKPbc	14 55 41.0	-0.4
TEVE	Tevekalti-Mers	150.95	301	*e*P	PKPbc	14 55 40.1	-1.7
BUR04	Bucovina Ar. S	150.96	327	*e*PKPbc	PKPbc	14 55 41.0	-0.6
BURAR	Bucovina Array	150.96	327	⇓*i*P	PKPbc	14 55 41.3	-0.2
BIZ	Bicaz	150.96	325	⇑*i*P	PKiKP	14 55 41.9	0.0
BERE	Bereket-Mersin	151.15	301	P	PKPbc	14 55 42.4	0.0
TIRR	Tirgusor	151.18	319	⇓*i*P	PKPdf	14 55 30.6	-5.3
TEKE	Tekeli-Mersin	151.28	300	P	PKPbc	14 55 42.0	-0.5
VRI	Vrincioaia	151.32	323	⇓*i*P	PKPbc	14 55 41.3	-1.0
OJC	Ojcow	151.33	336	*e*PKP	PKPbc	14 55 41.7	-0.5
TLB	Topalu	151.33	320	⇑*i*P	PKPbc	14 55 41.2	-1.1
PLOR	Plostina	151.37	323	⇑*i*P	PKiKP	14 55 44.5	+1.6
CSS	Mathiatis	151.38	298	*e*P	PKPbc	14 55 41.4	-1.4
LEF	Lefka	151.70	298	⇑*i*P	PKiKP	14 55 43.8	0.0
ARCR	ARCALIA	151.75	327	⇑*i*P	PKiKP	14 55 46.0	+2.4
NIE	Niedzica	151.79	335	*e*PKP	PKiKP	14 55 43.5	-0.1
TRPA	Tarpa	151.85	331	⇑*i*P	PKPdf	14 55 31.7	-5.1
KSP	Ksiaz	151.96	341	*e*PKP	PKPbc	14 55 43.7	+0.1
MLR	Muntele Rosu	151.98	323	⇑*i*P	PKPbc	14 55 41.5	-2.5
SILT	Sile	152.07	312	⇓*i*P	PKPdf	14 55 40.3	+3.0
LANS	Liptovska Anna	152.33	335	*e*PKP	PKiKP	14 55 45.2	+0.5
UPC	Upice	152.34	341	⇑*e*PKP	PKPbc	14 55 44.4	0.0
UPC				*e*PKPAB	PKPab	14 55 50.9	-4.2
CJR	Cluj-Napoca	152.38	327	⇑*i*P	PKPbc	14 55 42.3	-2.4
DPC	Dobruska-Polom	152.38	340	⇑*e*PKP	PKPbc	14 55 44.1	-0.5
DPC				*e*x	x	14 55 51.1	
CLL	Collm	152.40	345	⇓*i*PKPbc	PKPbc	14 55 44.2	-0.3
	comp=Z,9.0nm,0.7s						
CLL				⇓*i*PKPab	PKPab	14 55 55.7	+0.4
	comp=Z,8.0nm,0.7s						
CLL	Collm	152.40	345	*i* PKPbc	PKPab	14 55 51.1	-4.2
	comp=Z,18nm,0.9s						
KRLC	Kraliky	152.48	340	⇑*e*PKP	PKiKP	14 55 45.0	0.0
MORC	Moravsky Berou	152.49	338	⇑*i*P	PKPbc	14 55 44.3	-0.5
VOIR		152.50	324	⇑*i*P	PKPbc	14 55 44.3	-0.7
BRG	Berggiesshubel	152.58	344	*i* PKP	PKPbc	14 55 44.4	-0.5
	comp=Z,93nm,0.7s						
BRG	Berggiesshubel	152.58	344	*i* PKP	PKPab	14 55 51.4	-4.7
	comp=Z,11nm,0.7s						
BRG	Berggiesshubel	152.58	344	*i* PKP	PKPab	14 55 56.5	+0.5
	comp=Z,16nm,1.3s						
BRG				*e*pPKP	pPKPab	14 56 39.6	-0.3
	comp=Z,2.9nm,1.0s						
BRG				*e*SKP		14 59 01.9	
	comp=Z,1.8nm,0.9s						
PVCC	Panska Ves	152.73	343	⇑*e*PKP	PKiKP	14 55 45.6	+0.1
PVCC				*e*x	x	14 55 51.8	
PVCC				*e*PKPAB	PKPab	14 55 57.5	+0.8
DRGR		152.76	328	⇑*i*P	PKPbc	14 55 45.1	-0.5
ARR	Arges	152.77	324	⇑*i*P	PKPbc	14 55 45.3	-0.3
VYHS	Vyhne	153.10	335	*e*PKP	PKPbc	14 55 45.9	-0.3
VYHS				*e*		14 55 58.8	
PSZ	Piszkesteto	153.15	333	⇓*i*P	PKPab	14 55 54.2	-4.5
VRAC	Vranov	153.21	339	⇓*i*P	PKiKP	14 55 49.5	+3.0
PHSR	Pinarhisar	153.24	315	⇓*i*P	PKPab	14 55 59.7	+0.5
SMOL	Smolenice	153.61	337	*e*PKP	PKPab	14 56 01.6	+1.1
GZR	Gura Zlata	153.71	326	⇓*i*P	PKPdf	14 55 42.9	+3.2
BZS	Buzias	154.13	328	⇓*i*P	PKPbc	14 55 45.8	-2.7
HERR	Herculane	154.25	326	⇑*i*P	PKPbc	14 55 45.6	-3.1
KHC	Kasperske Hory	154.27	343	⇑*e*PKP	PKPbc	14 55 48.4	-0.3
KHC				*e*x	x	14 55 55.1	
KHC				*e*PKPAB	PKPab	14 56 03.7	+0.4
GERES	GERESS Array B	154.50	342	PKP	PKPdf	14 55 39.7	-1.1
	comp=Z,0.2nm,0.6s,baz=207,slow=1.5,SNR=3.6						
GERES				PKPbc	PKPbc	14 55 49.0	-0.3
	comp=Z,0.8nm,0.7s,baz=45,slow=4.0,SNR=5.0						
GERES				PKPab	PKPab	14 56 04.7	+0.3
	comp=Z,2.4nm,1.0s,baz=38,slow=5.2,SNR=7.8						
CONA	Conrad Observa	154.65	338	*e*PKPab	PKPab	14 56 06.4	+1.4
	comp=Z,9.4nm,1.0s						
MOA	Molln	155.23	340	*e*PKPab	PKPab	14 56 08.7	+1.2
	comp=Z,9.2nm,1.2s						
VTS	Vitosha	155.31	321	⇑*i*P	PKPdf	14 55 54.4	+12
ARSA	Arzberg	155.35	338	*e*PKPab	PKPab	14 56 08.9	+0.9
	comp=Z,3.5nm,0.9s						
WATA	Walderalm	156.44	344	*e*PKPab	PKPab	14 56 14.3	+1.5
	comp=Z,2.4nm,0.6s						
WTTA	Wattenberg	156.50	344	*e*PKPab	PKPab	14 56 14.1	+1.0
	comp=Z,9.3nm,0.7s						
RETA	Reutte	156.50	345	*e*PKPab	PKPab	14 56 13.8	+0.8
	comp=Z,6.2nm,1.0s						
MOTA	Moosalm	156.55	345	*e*PKPab	PKPab	14 56 12.9	-0.4
	comp=Z,4.3nm,0.8s						
ABTA	Abfaltersbach	156.74	342	*e*PKPab	PKPab	14 56 13.5	-0.5
	comp=Z,3.8nm,0.7s						
DAVA	Damuels	156.88	347	*e*PKPab	PKPab	14 56 14.2	-0.5
	comp=Z,4.4nm,0.7s						
FETA	Feichten	156.94	345	*e*PKPab	PKPab	14 56 15.8	+0.8
	comp=Z,6.5nm,1.4s						
ESDC	Sonseca Array	164.40	18	PKPab	PKPab	14 56 47.2	-0.4
	comp=Z,0.7nm,0.6s,baz=331,slow=4.4,SNR=3.2						
KEST	Kesra	167.62	332	PKPab	PKPab	14 57 01.8	-0.2
	comp=Z,4.3nm,0.9s,baz=174,slow=3.7,SNR=4.0						
TORD	Torodi Ar. Bea	168.26	177	PKPab	PKPab	14 57 05.7	+0.6
	comp=Z,0.5nm,0.6s,baz=230,slow=1.4,SNR=4.5						

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*IDC **24** 14:38:31.8±3.7, 18°.79S×70°.32W, h20^{km}±23^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/36, mbtmp4.0/8, ML4.2/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/34, Error ellipse: s-maj=27.6km s-min=21.7km az=82.0*

*ISCJB **24** 14:38:37.1±0.5, 19°.12S±0°.03×70°.30W±0°.08, h89^{km}±4^{km}, mb3.8/5, Error ellipse: s-maj=12.4km s-min=4.9km az=171.3*

*GUC **24** 14:38:37.6±0.8, 19°.12S×70°.18W, h85^{km}±4^{km}, ML3.9*

*NEIC **24** 14:38:37.0±0.0, 19°.12S×70°.20W, h86^{km}, mb4.3/1, ML3.9(GUC), After GUC.*

ISC 24 14:38:37.6±0.8**, 19°.12S**±0°.04×**70°.22W**±0°.08**, h84**^{km}±6^{km}**, n40,** σ1^{s}**43**/44**, mb3.9**/5**, 9C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.48	169	⇑*e*P	Pn	14 38 52.2	+0.5
PSGC				*e*S	Sn	14 39 03.2	+1.0
PSGC				IAML		14 39 05.2	
	comp=E,10µm,0.3s						
PB12	IPOC Station P	0.52	349	⇑*e*P	Pn	14 38 52.4	+0.5
PB12				*e*S	Sn	14 39 03.4	+0.8
PB12				IAML		14 39 05.0	
	comp=E,8µm,0.2s						
MNMC	Minye Minye	0.59	91	*e*Pn	Pn	14 38 52.9	+0.1
MNMC				*e*Sn	Sn	14 39 04.1	0.0
MNMC	Minye Minye	0.59	91	⇑*e*P	Pn	14 38 53.0	+0.2
MNMC				*e*S	Sn	14 39 04.4	+0.2
MNMC				*i*		14 39 04.4	
ARCH	Arica	0.63	353	⇓*i*P	Pn	14 38 53.6	+0.7
ARCH				*i* S	Sn	14 39 04.7	+0.4
ARCH				IAML		14 39 07.7	
	comp=N,7µm,0.4s						
ARCH				IAML		14 39 08.6	
	comp=E,8µm,0.3s						
PB11	IPOC Station P	0.83	140	*e*Pn	Pn	14 38 55.8	+0.7
PB11	IPOC Station P	0.83	140	⇑*e*P	Pn	14 38 55.6	+0.5
PB11				*e*S	Sn	14 39 09.1	+1.0
PB08	IPOC Station P	1.43	135	⇑*e*P	Pn	14 39 03.5	+1.0
PB08				⇑*e*S	Sn	14 39 22.6	+1.3
PB08				IAML		14 39 23.1	
	comp=N,3µm,0.7s						
PB01	IPOC Station P	2.03	160	*e*Pn	Pn	14 39 10.8	+0.7
PB01	IPOC Station P	2.03	160	⇑*e*P	Pn	14 39 11.0	+0.9
PB01				*e*S	Sn	14 39 35.3	+0.4
PB01				IAML		14 39 36.2	
	comp=N,894nm,0.3s						
PB02	IPOC Station P	2.21	172	⇑*e*P	Pn	14 39 13.2	+0.7
PB02				*e*S	Sn	14 39 40.6	+1.5
PB02				IAML		14 39 42.3	
	comp=N,1µm,0.3s						
PB07	IPOC Station P	2.61	173	⇑*e*P	Pn	14 39 18.8	+0.9
PB07				*e*S	Sn	14 39 50.2	+1.3
PB07				IAML		14 39 52.0	
	comp=N,497nm,0.7s						
PB09	IPOC Station P	2.81	161	⇓*i*P	Pn	14 39 22.2	+1.5
PB03	IPOC Station P	2.94	172	⇓*i*P	Pn	14 39 23.4	+1.0
PB04	IPOC Station P	3.20	179	*e*Pn	Pn	14 39 24.8	-1.0
LPAZ	La Paz	3.45	36	*e*Pn	Pn	14 39 31.1	+1.4
LPAZ	La Paz	3.45	36	Pg	Pn	14 39 31.2	+1.5
	comp=N,2.2nm,0.3s,baz=268,slow=3.6,SNR=65						
LVC	Limon Verde	3.68	161	Pn	Pn	14 39 34.2	+1.6
	comp=N,16nm,0.3s,baz=341,slow=9.2,SNR=138						
LVC				Pg		14 39 44.4	
	comp=N,20nm,0.3s,baz=336,slow=8.3,SNR=21						
LVC				Sn	Sn	14 40 15.5	+0.5
	comp=N,36nm,0.3s,baz=330,slow=8.8,SNR=31						
LVC				Lg	Lg	14 40 33.6	
	comp=N,20nm,0.3s,baz=238,slow=22,SNR=6.7						
PB10	IPOC Station P	4.38	184	*e*Pn	Pn	14 39 41.6	-0.1
GO02	Mina Guanaco	6.04	175	*e*Pn	Pn	14 40 03.9	-0.8
SIV	San Ignacio	9.27	72	Pn	Pn	14 40 45.4	-3.1
	comp=N,2.5nm,0.3s,baz=272,slow=12,SNR=36						
LCO	Las Campanas	9.85	182	*e*Pn	Pn	14 40 53.5	-3.1
GO04	Tololo Observa	11.02	183	*e*Pn	Pn	14 41 09.6	-2.9
CPUP	Villa Florida	13.88	123	LR	LR	14 47 12.4	
	comp=N,98nm,20.6s,baz=30,slow=37						
PTGA	Pitinga	20.86	30	*e*P	P	14 43 10.0	-3.0
	comp=N,25nm,1.7s						
PTGA	Pitinga	20.86	30	P	P	14 43 10.1	-2.8
	comp=N,4.0nm,0.6s,baz=208,slow=13,SNR=9.9						
BDFB	Brasilia	21.47	84	P	P	14 43 19.9	+0.4
	comp=N,2.6nm,0.5s,baz=265,slow=13,SNR=7.4						
TXAR	Lajitas Array	57.98	325	P	P	14 48 22.4	+0.7
	comp=N,0.1nm,0.5s,baz=147,slow=7.2,SNR=2.8						
ULM	Lac du Bonnet	72.69	343	P	P	14 49 55.4	-0.8
	comp=N,1.1nm,0.5s,baz=140,slow=5.2,SNR=5.1						
TOA1	Torodi Ar. Sit	77.74	71	*e*P	P	14 50 28.2	+2.2
TORD	Torodi Ar. Bea	77.74	71	P	P	14 50 28.2	+2.2
	comp=N,1.0nm,0.6s,baz=262,slow=5.2,SNR=6.2						
YKA	Yellowknife Ar	88.55	341	P	P	14 51 20.5	0.0
	comp=N,1.3nm,0.5s,baz=134,slow=4.8,SNR=18						
H11S2	WAKE ISLAND Hy	126.32	279	T	T	17 16 42.2	
	baz=100,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	126.33	279	T	T	17 16 42.8	
	baz=100,slow=75,SNR=35						
H11S3	WAKE ISLAND Hy	126.34	279	T	T	17 16 43.6	
	baz=100,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	126.34	281	T	T	17 16 53.6	
	baz=100,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy	126.36	281	T	T	17 16 54.7	
	baz=100,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	126.36	281	T	T	17 16 47.2	
	baz=100,slow=75,SNR=16						
SONA0	Songino Array	151.23	5	*e*PKPbc	PKPbc	14 58 21.9	+0.4
SONM	Songino Array	151.23	5	PKPbc	PKPbc	14 58 21.9	+0.4
	comp=N,1.0nm,0.7s,baz=313,slow=0.9,SNR=4.7						

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*IDC **24** 14:46:22.5±1.1, 61°.07N×152°.69W, h99^{km}±12^{km}, mb3.7/17, mb1 3.8/22, mb1mx3.6/58, mbtmp4.1/22, MS3.3/1, Ms1 3.3/1, ms1mx2.4/52, Error ellipse: s-maj=13.1km s-min=9.4km az=111.0*

*ISCJB **24** 14:46:23.5±0.2, 61°.01N±0°.02×152°.46W±0°.04, h131^{km}±2^{km}, mb3.8/17, Error ellipse: s-maj=4.1km s-min=3.0km az=44.7*

*NEIC **24** 14:46:25.5±0.0, 60°.99N×152°.45W, h124^{km}, ML3.9(AEIC), After AEIC.*

ISC 24 14:46:25.1±0.6**, 61°.00N**±0°.03×**152°.48W**±0°.03**, h128**^{km}±5^{km}**, n121,** σ1^{s}**17**/143**, mb4.0**/17**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKL	Chakachamna La	0.21	19	P	Pn	14 46 42.3	-0.5
CKL				S	Sn	14 46 55.5	-0.7
SPWE	Spurr West	0.28	352	P	Pn	14 46 42.5	-0.4
SPCP	Crater Peak Br	0.31	31	P	Pn	14 46 42.6	-0.6
SPCP				S	Sn	14 46 56.3	-0.6
RDJH	Redoubt Jeurge	0.44	201	P	Pn	14 46 43.0	-0.7
RDJH				S	Sn	14 46 56.7	-1.0
RDN	Redoubt North	0.51	196	P	Pn	14 46 43.3	-0.8
RDWB	Redoubt West	0.54	199	P	Pn	14 46 43.5	-0.8
RDWB				S	Sn	14 46 57.7	-1.1
SUA	Susitna One	0.96	60	P	Pn	14 46 47.2	-0.2
SUA				S	Sn	14 47 03.9	-0.6
INE	Iliamna NE	0.99	197	P	Pn	14 46 47.0	-0.8
INE				S	Sn	14 47 03.8	-1.2
ILW	Iliamna West	1.00	199	P	Pn	14 46 47.2	-0.7
IVE	Iliamna Volcan	1.02	195	P	Pn	14 46 47.3	-0.8
ILS	Iliamna Low So	1.09	196	P	Pn	14 46 48.1	-0.6
SLKM	Skilak Lake	1.21	113	P	Pn	14 46 49.0	-0.9
RC01	Rabbit Creek A	1.34	85	P	Pn	14 46 50.8	-0.4
RC01				S	Sn	14 47 10.6	-0.4
HOM	Homer	1.41	162	P	Pn	14 46 51.9	0.0
HOM				S	Sn	14 47 12.4	+0.1
BRLK	Bradley Lake	1.47	147	P	Pn	14 46 51.8	-0.9
SVW2	Sparrevohn	1.51	275	P	Pn	14 46 51.8	-1.3
SVW2				S	Sn	14 47 12.3	-2.1
AUL	Augustine Lava	1.69	197	P	Pn	14 46 55.0	-0.2
PTE	Portage	1.69	93	P	Pn	14 46 54.0	-1.1
AUW	Augustine West	1.71	197	P	Pn	14 46 54.9	-0.5
PMR	Palmer	1.72	68	P	Pn	14 46 54.3	-1.1
PMR				S	Sn	14 47 16.4	-2.4
SEW	Seward	1.75	120	P	Pn	14 46 54.7	-1.1
SEW				S	Sn	14 47 16.8	-2.4
GHO	Glory Hole Cre	1.88	64	P	Pn	14 46 56.5	-1.0
GHO				S	Sn	14 47 20.6	-1.7
PPLA	Purkeypile	1.91	4	P	Pn	14 46 57.8	-0.1
PPLA				S	Sn	14 47 22.7	-0.3
KNK	Knik Glacier	1.99	76	P	Pn	14 46 57.7	-1.0
PWL	Port Wells	2.03	92	P	Pn	14 46 57.8	-1.4
PWL				S	Sn	14 47 23.7	-1.6
SML	Sawmill	2.15	66	P	Pn	14 46 59.6	-1.2
FONW	Fourpeaked Sta	2.29	199	P	Pn	14 47 01.8	-0.7
HUR	Hurricane	2.40	33	P	Pn	14 47 03.0	-0.7
CAST	Castle Rocks	2.44	4	P	Pn	14 47 03.7	-0.6
TT01	Tatalina	2.54	320	P	Pn	14 47 05.0	-0.6
SCM	Sheep Creek Mo	2.61	69	P	Pn	14 47 05.5	-1.1
GLI	Glacier Island	2.63	90	P	Pn	14 47 04.6	-2.1
TRF	Thorofare Moun	2.66	22	P	Pn	14 47 06.7	-0.7
KAHG	Katmai Hook Gl	2.72	203	P	Pn	14 47 07.7	-0.3
JPK	Jack Peak	2.86	86	P	Pn	14 47 08.2	-1.6
CHUM	Lake Minchumin	2.89	1	P	Pn	14 47 09.6	-0.5
RND	Reindeer	2.95	34	P	Pn	14 47 10.1	-0.9
HIN	Hinchinbrook I	3.00	99	P	Pn	14 47 09.8	-1.8
KAKN	Katmai Knife C	3.01	207	P	Pn	14 47 11.3	-0.5
DHY	Denali Highway	3.18	47	P	Pn	14 47 13.4	-0.7
ANCK	Angle Creek	3.20	210	P	Pn	14 47 14.1	-0.2
MCK	McKinley	3.20	30	P	Pn	14 47 13.5	-0.7
KLU	Klutina	3.21	78	P	Pn	14 47 13.1	-1.2
KDAK	Kodiak Island	3.23	181	*e*Pn	Pn	14 47 12.2	-2.4
KDAK				S	Sn	14 47 49.4	-3.2
KDAK	Kodiak Island	3.23	181	P	Pn	14 47 12.5	-2.0
	7.6nm,0.3s,baz=42,slow=4.8,SNR=175						
KDAK				S	Sn	14 47 49.4	-3.2
	8.4nm,0.3s,baz=343,slow=9.9,SNR=5.1						
CNTC	Contact Creek	3.24	214	P	Pn	14 47 14.6	-0.3
DIV	Divide	3.26	85	P	Pn	14 47 13.6	-1.4
CAHL	Cahill	3.29	207	P	Pn	14 47 15.4	0.0
EYAK	Cordova Ski Ar	3.33	95	P	Pn	14 47 14.0	-1.9
KJL	Kejulik	3.35	209	P	Pn	14 47 16.4	+0.3
BWN	Browne	3.48	22	P	Pn	14 47 17.0	-0.7
PS11	TAPS Pump St11	3.52	69	P	Pn	14 47 18.4	+0.1
HARP	HAARP	3.76	65	P	Pn	14 47 21.6	+0.1
OHAK	Old Harbor	3.81	187	P	Pn	14 47 19.7	-2.5
PLK1	Peulik 1	3.84	215	P	Pn	14 47 22.7	+0.2
PLK3	Peulik 3	3.85	212	P	Pn	14 47 23.0	+0.3
PAX	Paxson	3.85	56	P	Pn	14 47 22.6	-0.2
NEA	Nenana	3.92	22	P	Pn	14 47 22.1	-1.4
PS10	TAPS Pump St10	3.97	49	P	Pn	14 47 24.8	+0.4
WRH	Wood River Hil	4.03	28	P	Pn	14 47 23.6	-1.4
HMT	Hamilton	4.10	96	P	Pn	14 47 24.1	-1.9
MLY	Manley	4.12	10	P	Pn	14 47 24.9	-1.4
GCSA	Galena City Sc	4.26	334	P	Pn	14 47 27.9	-0.2
HDA	Harding Lake	4.26	34	P	Pn	14 47 27.1	-1.1
PS08	TAPS Pump Stn8	4.40	34	P	Pn	14 47 29.1	-0.9
MDM	Murphy Dome	4.42	24	P	Pn	14 47 28.9	-1.4
COLA	College	4.42	27	P	Pn	14 47 29.2	-1.0
RIDG	Independ'e Rid	4.50	49	P	Pn	14 47 31.5	+0.2
SII	Sitkinak Islan	4.54	192	P	Pn	14 47 29.3	-2.6
ILAR	Eielson Array	4.57	32	P	Pn	14 47 30.9	-1.4
	32nm,0.3s,baz=217,slow=13,SNR=432						
ILAR				S	Sn	14 48 19.9	-4.5
	30nm,0.3s,baz=143,slow=18,SNR=12						
MCARA	McCarthy VSAT	4.59	81	P	Pn	14 47 32.1	-0.5
DOT	Dot Lake	4.74	52	P	Pn	14 47 34.0	-0.5
BALM	Baldy	4.93	85	P	Pn	14 47 36.0	-1.2
KIAG	Kiagna River	4.93	86	P	Pn	14 47 36.2	-1.1
SCRK	Sand Creek	4.94	49	P	Pn	14 47 36.5	-0.8
PS06	TAPS Pump Stn6	5.03	13	P	Pn	14 47 37.2	-1.1
IM3	Indian Mountai	5.04	354	P	Pn	14 47 37.6	-0.8
BCA3	Beaver Creek A	5.44	63	P	Pn	14 47 43.8	-0.2
PRP	Porcupine Dome	5.51	32	P	Pn	14 47 44.5	-0.5
YUK2	White River	5.65	77	P	Pn	14 47 46.9	+0.1
BVCY	Beaver Creek	5.71	71	P	Pn	14 47 48.0	+0.5
YUK3	Moose Creek	5.83	77	P	Pn	14 47 49.1	-0.2
SAMH	Samovar Hills	5.84	93	P	Pn	14 47 50.2	+0.9
PS05	TAPS Pump Stn5	5.89	7	P	Pn	14 47 49.1	-0.8
VNSS	Veniaminof 8	6.01	220	P	Pn	14 47 51.8	0.0
PCA	Pinnacle	6.10	93	P	Pn	14 47 51.6	-1.3
COLD	Coldfoot	6.33	8	P	Pn	14 47 54.6	-1.2
EGAK	Eagle	6.41	49	*e*Pn	Pn	14 47 55.8	-1.1
FYU	Fort Yukon	6.44	27	P	Pn	14 47 56.1	-1.2
PNL	Peninsula	6.63	96	P	Pn	14 47 59.6	-0.4
DAWY	Dawson	6.79	57	P	Pn	14 48 01.7	-0.4
YUK6	Outpost Mounta	6.87	84	P	Pn	14 48 03.2	-0.2
ANM	Nome	6.91	307	P	Pn	14 48 03.0	-0.6
YUK7	Dusty Glacier	7.04	88	P	Pn	14 48 05.9	+0.2
BM3	Burnt Mountain	7.29	25	P	Pn	14 48 07.1	-1.8
DHAK	Deception Hill	7.39	99	P	Pn	14 48 10.3	+0.1
TOLK	Toolik Lake Re	7.77	8	P	Pn	14 48 15.3	+0.1
INK	Inuvik	10.89	40	*e*Pn	Pn	14 48 56.2	-0.8
	13nm,0.8s						
INK	Inuvik	10.89	40	P	Pn	14 48 56.1	-1.0
	1.3nm,0.3s,baz=224,slow=10,SNR=63						
DLBC	Dease Lake	11.60	93	P	Pn	14 49 07.2	+0.6
	0.2nm,0.3s,baz=284,slow=8.2,SNR=5.8						
YKA	Yellowknife Ar	17.82	69	P	Pn	14 50 24.8	+0.1
	0.4nm,0.3s,baz=280,slow=11,SNR=26						
YKA				PcP	PcP	14 54 53.7	0.0
	0.1nm,0.3s,baz=289,slow=1.2,SNR=4.9						
YKA				ScP	ScP	14 58 17.1	+0.5
	0.1nm,0.3s,baz=287,slow=2.4,SNR=11						
RES	Resolute Bay	24.32	33	P	P	14 51 30.6	+0.4
	0.8nm,0.6s,baz=261,slow=11,SNR=8.0						
MA2	Magadan	27.42	292	P	P	14 51 58.5	+0.2
	0.8nm,0.4s,baz=59,slow=9.3,SNR=4.8						
PETK	Petropavlovsk-	27.60	276	P	P	14 51 59.5	-0.4
	2.7nm,0.8s,baz=88,slow=13,SNR=4.1						
PDAR	Pinedale Array	31.40	106	P	P	14 52 36.8	+2.8
	0.2nm,0.5s,baz=305,slow=3.2,SNR=2.9						
PDAR				LR	LR	15 07 10.3	
	comp=Z,53nm,19.9s,baz=92,slow=40						
KLR	Kul'dur	42.44	290	P	P	14 54 05.9	-0.9
	1.5nm,0.6s,baz=72,slow=13,SNR=5.3						
NRIK	Noril'sk	43.11	333	P	P	14 54 11.9	0.0
	1.9nm,0.3s,baz=149,slow=5.7,SNR=4.4						
TXAR	Lajitas Array	45.10	112	P	P	14 54 31.2	+2.8
	0.3nm,0.7s,baz=340,slow=5.1,SNR=3.5						
KSRS	Korea Array	53.22	282	P	P	14 55 30.6	+0.7
	1.7nm,0.8s,baz=35,slow=6.2,SNR=7.2						
KSAR	Wonju Array Be	53.24	282	P	P	14 55 30.6	+0.5
SONM	Songino Array	54.41	306	P	P	14 55 39.6	+1.0
	3.4nm,0.7s,baz=36,slow=7.6,SNR=19						
SONM				PcP	PcP	14 56 40.3	-0.4
	0.6nm,0.6s,baz=64,slow=3.4,SNR=3.8						
ZALV	Zalesovo Beam	56.72	323	P	P	14 55 53.9	-0.9
	4.0nm,0.6s,baz=27,slow=6.3,SNR=14						
NOA	NORSAR Array B	57.64	9	P	P	14 56 00.7	-0.6
	0.8nm,0.7s,baz=350,slow=6.9,SNR=3.3						
FINES	FINESS Array B	57.88	1	P	P	14 56 02.4	-0.4
	1.6nm,0.7s,baz=357,slow=7.0,SNR=2.7						
KURK	Kurchatov	61.34	326	P	P	14 56 27.0	+0.3
KURK				PcP	PcP	14 57 08.1	+0.3
KURBB	Kurchatov Arra	61.45	326	P	P	14 56 27.0	-0.4
	2.3nm,0.5s,baz=28,slow=6.7,SNR=16						
KURBB				PcP	PcP	14 57 08.1	-0.1
	0.1nm,0.2s,baz=27,slow=4.4,SNR=4.7						
MKAR	Makanchi Array	63.81	321	P	P	14 56 42.1	-1.0
	0.9nm,0.5s,baz=40,slow=6.4,SNR=13						
AKASG	Malin Array Be	68.64	359	P	P	14 57 12.9	-1.0
	0.9nm,0.4s,baz=4.1,slow=6.3,SNR=5.2						
AAK	Ala-Archa	69.88	325	P	P	14 57 22.0	+0.1
	2.2nm,0.5s,baz=79,slow=3.8,SNR=11						
KBZ	Khabaz	74.88	349	P	P	14 57 51.2	0.0
	2.0nm,0.8s,baz=349,slow=6.9,SNR=4.3						
QSPA	South Pole Qui	150.80	180	*e*PKPbc	PKPbc	15 06 00.3	-0.3

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*MOS **24** 14:51:16.8±1.0, 7°.43S×128°.52E, h123^{km}, mb4.6/48, Error ellipse: s-maj=12.2km s-min=5.8km az=114.2*

*BJI **24** 14:51:16.5, 7°.83S×128°.81E, h153^{km}, mB4.9/26, mb4.9/46*

*DJA **24** 14:51:20.5±0.2, 8°S±3°×12°9E±°, h158^{km}±7^{km}, M5.2/20, mB5.6/12, mb5.0/20, MLv5.3/13, Mw(mB)5.1/12*

*NEIC **24** 14:51:20.5±0.4, 7°.42S×128°.62E, h144^{km}±3^{km}, mb4.7/34, Error ellipse: s-maj=4.3km s-min=3.3km az=48.0*

*IDC **24** 14:51:20.5±1.4, 7°.41S×128°.60E, h140^{km}±13^{km}, mb4.2/22,*

mb1 4.2/25, mb1mx4.1/40, mbtmp4.6/25, Error ellipse: s-maj=11.4km s-min=8.0km az=87.0

ISCJB ***24*** *14:51:20.0±0.3, 7°.50S±0°.02×128°.68E±0°.03, h157^{km}±3^{km}, mb4.5/79, Error ellipse: s-maj=4.6km s-min=3.8km az=151.7*

ISC 24 14:51:19.9±0.6**, 7°.53S**±0°.04×**128°.63E**±0°.04**, h140**^{km}±5^{km}**, n239,** σ1^{s}.**59**/256**, mb4.7**/79**, 15C-3D, Banda Sea**

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Code  Station Name        Δ°   AZ°     Phase ID          Time     Res
                                      Op      ISC        h  m  s    ISC
SAUI  Saumlaki           2.68 100   ePn     Pn         14 52 04.7 +1.8
SAUI  Saumlaki           2.68 100    P      Pn         14 52 03.1 +0.3
SAUI                                 S      Sn         14 52 35.5 -0.4
BNDI  Bandanaira         3.24  23    P      Pn         14 52 12.3 +2.3
NLAI  Namlea             4.52 340    P      Pn         14 52 30.3 +3.5
SOEI  Soe                4.85 243   ePn     Pn         14 52 33.4 +2.1
SOEI  Soe                4.85 243    P      Pn         14 52 33.9 +2.6
BATI  Baumata            5.59 241    P      Pn         14 52 43.6 +2.6
BATI  Baumata            5.59 241    P      Pn         14 52 43.4 +2.3
      911nm,0.3s,baz=113,slow=4.1,SNR=592
BATI                                 S      Sn         14 53 45.3 +0.9
      177nm,0.3s,baz=18,slow=20,SNR=3.4
FAKI  Fak Fak            5.82  38   ePn     Pn         14 52 43.1 -1.1
FAKI  Fak Fak            5.82  38    P      Pn         14 52 43.8 -0.4
      242nm,0.7s,4µm0.9nm
MTN   Manton Dam         5.83 155    P      Pn         14 52 44.6 +0.4
      baz=6.0,SNR=277
MTN   Manton Dam         5.83 155   ePn     Pn         14 52 44.6 +0.4
SANI  Sanana             6.04 334    P      Pn         14 52 50.6 +3.5
BBSI  Bau Bau            6.36 288    P      Pn         14 52 54.9 +3.6
KDU   Kakadu             6.37 144    P      Pn         14 52 51.8 +0.3
      baz=6.5,SNR=441
MMRI  Maumere            6.43 260   ePn     Pn         14 52 52.9 +0.6
MMRI  Maumere            6.43 260    P      Pn         14 52 54.3 +2.0
EDFI  Ende, Flores       6.98 259    P      Pn         14 53 01.6 +1.8
SIJI  Sorong             7.11  22    P      Pn         14 53 01.6 +0.1
      19nm,0.3s,baz=171,slow=2.4,SNR=60
SIJI                                 S      Sn         14 54 17.8 -3.3
      13nm,0.3s,baz=87,slow=23,SNR=8.4
KNRA  Kununurra          8.10 179    P      Pn         14 53 14.5 -0.2
      baz=8.3,SNR=151
RKPI  Ransiki, Papua     8.14  43    P      Pn         14 53 14.8 -0.4
      825nm,0.7s,14µm4.1nm
BASI  Baing, Sumba       8.40 251    P      Pn         14 53 18.6 -0.1
      656nm,0.8s,13µm
BKSI  Bulukumba          8.74 284    P      Pn         14 53 25.9 +2.7
BNSI  Bone               9.03 290    P      Pn         14 53 30.7 +3.5
SPSI  Sidrap Palu        9.50 291    P      Pn         14 53 35.8 +2.3
BAKI  Biak               9.75  50    P      Pn         14 53 37.5 +0.7
      688nm,0.6s,7µm
TTSI  Tana Toraja        9.84 296    P      Pn         14 53 41.5 +3.5
MRSI  Marisa            10.38 320    P      Pn         14 53 48.1 +2.9
PLAI  Plampang          10.82 262    P      Pn         14 53 51.8 +0.7
FITZ  Fitzroy Crossi    10.91 195    P      Pn         14 53 50.0 -2.1
      baz=11,SNR=107
FITZ  Fitzroy Crossi    10.91 195    P      Pn         14 53 50.0 -2.1
      9.7nm,0.3s,baz=30,slow=11,SNR=81
FITZ                                 S      Sn         14 55 45.5 -7.1
      17nm,0.3s,baz=313,slow=21,SNR=7.9
PCI   Palu              10.96 306    P      Pn         14 54 01.8 +8.9
GENI  Genyem            12.49  67    P      Pn         14 54 13.4 +0.5
      68nm,0.6s
JAY   Jayapura          13.01  68    P      Pn         14 54 20.9 +1.1
      1.5nm,0.3s,baz=200,slow=8.8,SNR=6.3
WRAB  Tennant Creek     13.52 156   ePn     Pn         14 54 24.1 -2.1
WRAB  Tennant Creek     13.52 156   eP      Pn         14 54 24.1 -2.1
WRA   Warramunga Arr    13.53 156    P      Pn         14 54 24.2 -2.0
      2.9nm,0.3s,baz=338,slow=10,SNR=145
WRA                                  S      Sn         14 56 45.0  -11
      8.7nm,0.3s,baz=324,slow=23,SNR=10
WB2   Warramunga Arr    13.53 156   ePn     Pn         14 54 24.2 -2.1
JAGI  Jajag, Banyuwa    14.37 265   ePn     Pn         14 54 36.2 -0.8
COEN  Coen              15.64 115    P      Pn         14 54 52.1 -0.8
      baz=16,SNR=41
COEN  Coen              15.64 115   ePn     Pn         14 54 52.7 -0.2
      26nm,0.8s
AS31  Alice Springs     16.83 163   eP      Pn         14 55 08.4 +1.1
      11nm,1.1s
ASAR  Alice Springs     16.83 163    P      Pn         14 55 09.1 +1.8
      1.8nm,0.3s,baz=336,slow=9.5,SNR=257
ASAR                                 S      S          14 58 06.8 -8.4
      2.5nm,0.3s,baz=328,slow=18,SNR=5.4
AS01  Alice Springs     16.84 163   eP      Pn         14 55 08.0 +0.5
WRKA  Warakurna         17.42 181    P      Pn         14 55 15.3 +0.9
      baz=18,SNR=125
UGM   Wanagama          17.95 268   eP      P          14 55 18.8 -0.7
      1µm,1.8s
KKM   Kota Kinabalu     18.31 317   eP      P          14 55 23.1 -0.4
      34nm,0.9s
MTSU  Mount Surprise    18.56 126    P      Pn         14 55 28.2 +0.3
      baz=19,SNR=22
SBUM  Sibu              19.14 301   eP      P          14 55 32.8 +0.3
      58nm,1.2s
KSM   Kuching           20.35 295   eP      P          14 55 45.5 +0.1
      66nm,0.8s
CTA   Charters Tower    21.15 128    P      P          14 55 56.8 +2.7
      4.0nm,0.8s,baz=293,slow=12,SNR=8.0
CTAO  Charters Tower    21.15 128   eP      P          14 55 55.4 +1.4
      24nm,1.6s
CTAO  Charters Tower    21.15 128   eP      P          14 55 55.4 +1.4
CTAO                                 pmax   pmax
      comp=Z,24nm,1.6s
FORT  Forrest           23.14 181    P      P          14 56 15.3 +1.5
      baz=23,SNR=36
FORT  Forrest           23.14 181   eP      P          14 56 14.9 +1.1
      comp=Z,46nm,0.6s
MORW  Morawa            24.50 207    P      P          14 56 27.8 +1.7
      baz=25,SNR=20
BLDU  Ballidu           25.54 204    P      P          14 56 36.7 +1.0
      baz=26,SNR=16
KLBR  Kellerberrin      26.01 202    P      P          14 56 41.3 +1.5
      baz=26,SNR=13
BBOO  Buckleboo         26.09 166    P      P          14 56 41.7 +1.2
      baz=26,SNR=37
BBOO  Buckleboo         26.09 166   eP      P          14 56 41.5 +1.0
      comp=Z,30nm,0.7s
MUN   Mundaring         26.94 204    P      P          14 56 48.9 +0.7
      baz=27,SNR=9.2
STKA  Stephens Creek    27.07 155    P      P          14 56 50.6 +1.2
      baz=27,SNR=25
STKA  Stephens Creek    27.07 155   eP      P          14 56 50.2 +0.9
      comp=Z,2.2nm,0.7s
STKA                                 PcP    PcP        15 00 07.4 +0.4
STKA  Stephens Creek    27.07 155    P      P          14 56 50.6 +1.2
      comp=Z,9.1nm,0.6s,baz=330,slow=9.6,SNR=28
STKA                                 PcP    PcP        15 00 07.4 +0.4
      comp=Z,2.9nm,0.4s,baz=348,slow=5.0,SNR=3.9
NWAO  Narrogin (SRO)    27.40 201    P      P          14 56 53.5 +1.2
      baz=28,SNR=24
NWAO  Narrogin (SRO)    27.40 201    P      P          14 56 53.4 +1.1
      comp=Z,11nm,0.3s,baz=281,slow=8.1,SNR=31
HTT   Hallett           27.48 161    P      P          14 56 54.6 +1.5
      baz=28,SNR=11
RKGY  Rocky Gully       29.01 200    P      P          14 57 09.4 +2.8
      baz=29,SNR=23
PSI   Prapat            31.37 288    P      P          14 57 27.2 -0.5
      comp=Z,7.9nm,0.7s,baz=179,slow=5.7,SNR=4.1
ARPS  Mount Arapiles    31.50 159    P      P          14 57 30.6 +2.1
      baz=32,SNR=45
YNG   Young             32.28 148    P      P          14 57 37.5 +2.1
      baz=32,SNR=5.6
SKNT  Sakolnakorn       34.45 315    P      P          14 57 55.4 +1.0
      comp=Z,15nm,1.8s
CHAI  Chaiyaphum        35.19 312    P      P          14 58 01.5 +0.8
      comp=Z,7.4nm,0.7s,comp=Z,81nm
UTHA  Uthaitani         36.91 308    P      P          14 58 16.2 +0.8
      comp=Z,6.3nm,0.7s,comp=Z,61nm
UTTA  Uttaradit         37.41 312    P      P          14 58 20.5 +0.9
      comp=Z,6.9nm,0.8s,comp=Z,66nm
SUKH  Sukhothai         37.93 311    P      P          14 58 25.3 +1.4
      comp=Z,6.2nm,0.8s
LAMP  Lampang           38.58 312    P      P          14 58 30.6 +1.2
      comp=Z,6.6nm,0.7s
CM01  Chiang Mai Arr    39.01 312   eP      P          14 58 32.0 -1.0
CM01                                ePcP    PcP        15 00 41.2 +0.6
CMAR  Chiang Mai Arr    39.05 312    P      P          14 58 34.1 +0.8
      comp=Z,5.2nm,0.7s,baz=141,slow=6.6,SNR=47
CMAR                                 PcP    PcP        15 00 42.2 +1.5
      comp=Z,2.2nm,0.6s,baz=164,slow=2.6,SNR=13
DZM   Mont Dzumac       39.17 116    P      P          14 58 36.2 +1.7
      comp=Z,5.4nm,0.9s,baz=214,slow=15,SNR=2.5
CMMT  Chiang Mai        39.27 312    P      P          14 58 35.8 +0.7
      comp=Z,13nm,1.1s
CHTO  Chiang Mai        39.27 312   eP      P          14 58 35.2 +0.1
      comp=Z,8.5nm,0.7s
CHTO  Chiang Mai        39.27 312   eP      P          14 58 35.2 +0.1
CHTO                                 pmax   pmax
      comp=Z,9.0nm,0.7s
CHTO  Chiang Mai        39.27 312    P      P          14 58 35.9 +0.8
      comp=Z,57nm,1.1s
GYA   Guiyang           39.95 329⇑iP     P          14 58 41.3 +0.5
GYA                                  pP     pP         14 59 13.0 +2.6
GYA                                  PcP    PcP        15 00 44.1 +0.6
GYA                                  S      S          15 04 38.3 +2.5
GYA                                  sS     sS         15 05 33.8 +6.0
GYA                                  SS     SS         15 07 32.4 -6.2
GYA                                  pmax   pmax
      comp=Z,20nm,0.6s
GYA                                  pmax   pmax
      comp=Z,80nm,4.3s
GYA                                  LR     LR
      comp=Z,410nm,16.9s
GYA                                  LR     LR
      comp=Z,390nm,17.1s
GYA                                  LR     LR
      comp=Z,340nm,17.3s
WHN   Wuhan             40.26 341  ⇓P     P          14 58 43.8 +0.7
NJ2   Nanjing           40.45 347   eP      P          14 58 44.9 +0.3
NJ2                                  pmax   pmax
      comp=Z,10.0nm,0.5s
KMI   Kunming           41.10 323    P      P          14 58 51.8 +1.4
KMI                                  pmax   pmax
      comp=Z,21nm,0.5s
KMI                                  pmax   pmax
      comp=Z,130nm,4.3s
ENH   Enshi             41.84 335   eP      P          14 58 55.2 -0.9
      comp=Z,23nm,0.5s
TJN   Taejon            43.69 359⇑eP     P          14 59 09.9 -0.9
KSAR  Wonju Array Be    44.74 359    P      P          14 59 19.6 +0.5
KSAR                                 PcP    PcP        15 00 59.0 -0.1
MAJO  Matsushiro        44.75  11⇑eP     P          14 59 18.8 -0.5
MAJO                                 pmax   pmax
      comp=Z,24nm,1.4s
MJAR  Matsushiro Arr    44.75  11    P      P          14 59 17.8 -1.6
      comp=Z,3.9nm,0.7s,baz=193,slow=10.0,SNR=11
KSRS  Korea Array       44.75 359    P      P          14 59 19.6 +0.4
      comp=Z,2.8nm,0.8s,baz=178,slow=9.3,SNR=18
KSRS                                 PcP    PcP        15 00 59.0 -0.1
      comp=Z,0.6nm,0.5s,baz=183,slow=2.8,SNR=4.4
KS01  Wonju Array Si    44.77 359   eP      P          14 59 19.0 -0.4
CD2   Chengdu           45.04 329   eP      P          14 59 22.8 +1.0
XAN   Xi'an             45.37 337    P      P          14 59 23.1 -1.2
XAN                                  pmax   pmax
      comp=Z,40nm,0.7s
XAN                                  pmax   pmax
      comp=Z,100nm,4.6s
XAN   Xi'an             45.37 337   eP      P          14 59 22.6 -1.7
      comp=Z,29nm,0.8s
XAN   Xi'an             45.37 337   eP      P          14 59 22.6 -1.7
XAN                                  pmax   pmax
      comp=Z,29nm,0.8s
SHL   Shillong          48.57 314   eP      P          14 59 48.2 -1.3
      comp=Z,12nm,0.6s
SHL   Shillong          48.57 314   eP      P          14 59 48.2 -1.3
SHL                                  pmax   pmax
      comp=Z,12nm,0.6s
BJT   Baijiatuau        48.69 347   eP      P          14 59 48.5 -1.4
      comp=Z,12nm,0.7s
BJT   Baijiatuau        48.69 347   eP      P          14 59 48.5 -1.4
BJT                                  pmax   pmax
      comp=Z,12nm,0.7s
BJI   Beijing           48.71 347⇑iP     P          14 59 49.4 -0.6
BJI                                  pmax   pmax
      comp=Z,12nm,0.7s
MSVF  Nonsavu           49.15 107⇑eP     P          14 59 55.7 +1.8
MSVF                                 pmax   pmax
      comp=Z,15nm,1.0s
LZH   Lanzhou           49.25 333   eP      P          14 59 55.0 +0.6
LZH                                  pP     pP         15 00 27.8 +2.4
LZH                                  sP     sP         15 00 43.8 +3.2
LZH                                  pmax   pmax
      comp=Z,26nm,1.1s
HHC   Hu-ho-hao-te      50.64 343   eP      P          15 00 07.8 +3.0
HHC                                  pmax   pmax
      comp=Z,9.0nm,1.0s
HHC                                  pmax   pmax
      comp=Z,120nm,5.7s
USRK  Ussuriysk Ar.     51.57   3    P      P          15 00 10.9 -0.6
      comp=Z,3.5nm,0.5s,baz=187,slow=7.0,SNR=26
LSA   Lhasa             51.65 318   eP      P          15 00 13.0  0.0
      comp=Z,10nm,0.6s
LSA   Lhasa             51.65 318   eP      P          15 00 13.0  0.0
LSA                                  pmax   pmax
      comp=Z,11nm,0.6s
RPZ   Rata Peaks        51.66 141    P      P          15 00 14.1 +1.8
      comp=Z,5.9nm,0.4s,baz=230,slow=3.2,SNR=12
ASAJ  Asahikawa         52.93  13    P      P          15 00 21.4 -0.2
      comp=Z,3.3nm,0.4s,baz=230,slow=11,SNR=22
RAMN  Ramite            53.22 312   eP      P          15 00 24.5 +0.1
      comp=Z,84nm,0.6s
GTA   Gaotai            53.79 332  ⇑P     P          15 00 28.5 +0.3
GTA                                  PcP    PcP        15 01 35.5 +3.2
GTA                                  pmax   pmax
      comp=Z,20nm,0.9s
JIRN  Jiri              53.92 312   eP      P          15 00 29.5 -0.1
      comp=Z,24nm,0.3s
GUN   Gumba             54.29 312   eP      P          15 00 31.9 -0.3
      comp=Z,88nm,0.7s
PKI   Pulchoki          54.45 312   eP      P          15 00 32.7 -0.7
      comp=Z,34nm,0.5s
PKIN  Phulchoki         54.46 312   eP      P          15 00 32.6 -0.8
      comp=Z,23nm,0.5s
KKN   Kakani            54.66 312   eP      P          15 00 34.4 -0.4
      comp=Z,27nm,0.5s
DMN   Daman             54.69 312   eP      P          15 00 34.7 -0.4
      comp=Z,13nm,0.3s
GKN   Gorkha            55.26 312   eP      P          15 00 38.5 -0.5
      comp=Z,0.4nm,0.3s
YSS   Yuzh-Sakhalins    55.67  12   eP      P          15 00 41.5 +0.1
YSS                                  pmax   pmax
      comp=Z,5.0nm,0.4s
KOLN  Koldanda          55.90 311   eP      P          15 00 43.5 -0.2
      comp=Z,48nm,0.7s
DANN  Dangsing          56.09 311   eP      P          15 00 44.7 -0.4
      comp=Z,23nm,0.6s
PYUN  Piuthan           56.54 311   eP      P          15 00 47.8 -0.4
      comp=Z,59nm,0.7s
KLR   Kul'dur           56.58   2    P      P          15 00 47.4 -0.4
      comp=Z,1.2nm,0.6s,baz=295,slow=3.8,SNR=4.5
ULN   Ulaanbaatar       58.36 343   eP      P          15 00 59.9 -0.5
      comp=Z,6.3nm,0.7s
ULN   Ulaanbaatar       58.36 343d iP      P          15 01 00.0 -0.5
ULN                                i *PP    pP         15 01 30.5 -2.1
ULN                                  pmax   pmax
      comp=Z,7.0nm,1.0s
SONM  Songino Array     58.52 343    P      P          15 01 01.7 +0.2
      comp=Z,7.3nm,0.7s,baz=161,slow=7.0,SNR=31
SONA1 Songino Array     58.53 343   eP      P          15 01 01.1 -0.5
ZAK   Zakamensk         61.73 342   eP      P          15 01 23.0 -0.3
ZAK                                  pmax   pmax
      comp=Z,2.0nm,0.7s
TLY   Talaya            62.76 343   eP      P          15 01 30.1  0.0
      comp=Z,4.3nm,0.7s
TLY   Talaya            62.76 343   eP      P          15 01 30.5 +0.4
TLY                                  pmax   pmax
      comp=Z,5.0nm,0.5s
WMQ   Urumqi            63.10 328   eP      P          15 01 33.4 +0.8
WMQ                                  pmax   pmax
      comp=Z,52nm,0.9s
WMQ                                  pmax   pmax
      comp=Z,170nm,4.5s
WMQ                                  LR     LR
      comp=Z,100nm,22.5s
WMQ                                  LR     LR
      comp=Z,82nm,25.1s
WMQ                                  LR     LR
      comp=Z,51nm,18.5s
WMQ   Urumqi            63.10 328   eP      P          15 01 32.7 +0.1
      comp=Z,20nm,0.9s
WMQ   Urumqi            63.10 328   eP      P          15 01 32.7 +0.1
WMQ                                  pmax   pmax
      comp=Z,20nm,0.9s
MOY   Mondy             63.56 341   eP      P          15 01 36.1 +0.6
PETK  Petropavlovsk-    65.25  19    P      P          15 01 46.6 +0.3
      comp=Z,5.3nm,0.5s,baz=183,slow=5.0,SNR=38
DGZ   Jazzator, Alta    67.33 332c iP      P          15 01 59.8  0.0
DGZ                                  pmax   pmax
      comp=Z,5.0nm,1.1s
PDGK  Podgornoye        67.40 323    P      P          15 01 59.6 -0.8
PDGK                                 pmax   pmax
      comp=Z,9.0nm,0.7s
KSH   Kashi             67.50 318    P      P          15 02 01.6 +0.5
KSH                                  pP     pwP        15 02 39.4 +1.0
KSH                                  S      S          15 10 37.6 -8.8
KSH                                  sS     ScS        15 11 47.8 +1.5
KSH                                  SS     SS         15 15 14.8 +5.0
KSH                                  pmax   pmax
      comp=Z,13nm,0.9s
KSH                                  pmax   pmax
      comp=Z,410nm,4.7s
KSH                                  LR     LR
      comp=Z,140nm,4.6s
KSH                                  LR     LR
      comp=Z,100nm,4.4s
KSH                                  LR     LR
      comp=Z,200nm,9.0s
MK01  Makanchi Array    67.91 328   eP      P          15 02 03.3 -0.1
MK31  Makanchi Array    67.93 328   eP      P          15 02 03.5  0.0
MK31  Makanchi Array    67.93 328   eP      P          15 02 03.7 +0.2
MK31                                 pmax   pmax
      comp=Z,13nm,0.7s
MKAR  Makanchi Array    67.93 328   eP      P          15 02 03.5  0.0
      comp=Z,94nm,0.6s
MKAR  Makanchi Array    67.93 328    P      P          15 02 04.0 +0.5
MKAR                                 pmax   pmax
      comp=Z,13nm,0.5s
MKAR  Makanchi Array    67.93 328    P      P          15 02 04.0 +0.5
      comp=Z,13nm,0.5s,baz=120,slow=7.8,SNR=314
MAKZ  Makanchi          68.11 327   eP      P          15 02 04.4 -0.2
      comp=Z,29nm,1.4s
MAKZ  Makanchi          68.11 327   eP      P          15 02 04.4 -0.2
MAKZ                                 pmax   pmax
      comp=Z,29nm,1.4s
KDJ   Kajisay           68.12 321   eP      P          15 02 06.4 +1.4
      comp=Z,7.5nm,0.8s
KDJ   Kajisay           68.12 321   eP      P          15 02 06.4 +1.4
KDJ                                  pmax   pmax
      comp=Z,8.0nm,0.8s
NRN   Naryn             68.49 320   eP      P          15 02 07.0 -0.5
      comp=Z,8.0nm,1.3s
NRN   Naryn             68.49 320   eP      P          15 02 07.0 -0.5
NRN                                  pmax   pmax
      comp=Z,8.0nm,1.3s
MA2   Magadan           69.18  12   eP      P          15 02 10.8 -0.1
      comp=Z,5.2nm,0.9s
MA2   Magadan           69.18  12⇑iP     P          15 02 10.9 -0.1
MA2                                  pmax   pmax
      comp=Z,9.0nm,1.7s
MA2   Magadan           69.18  12    P      P          15 02 11.3 +0.4
      comp=Z,3.8nm,0.7s,baz=176,slow=7.5,SNR=8.6
SFK   Sufi-Kurgan       69.39 318    P      P          15 02 12.6 -0.4
SFK                                  pmax   pmax
      comp=Z,4.0nm,0.6s
TKM2  Tokmak 2          69.53 321    P      P          15 02 14.0 +0.2
      SNR=8.2
KBK   Karagaybulak      69.80 321    P      P          15 02 15.9 +0.6
      SNR=5.4
UCH   Uchtor            69.85 320    P      P          15 02 16.9 +0.9
      SNR=6.8
AAK   Ala-Archa         70.08 320    P      P          15 02 17.9 +0.9
      SNR=12
AAK   Ala-Archa         70.08 320   eP      P          15 02 17.2 +0.2
      comp=Z,20nm,1.2s
AAK   Ala-Archa         70.08 320c iP      P          15 02 17.6 +0.6
AAK                                  pmax   pmax
      comp=Z,26nm,1.7s
AML   Almayashu         70.32 320    P      P          15 02 19.7 +0.8
      SNR=13
ARSB  Arslanbob         70.38 319   eP      P          15 02 19.0 +0.2
      comp=Z,12nm,0.9s
USP   Ospenovka         70.40 321    P      P          15 02 19.3 +0.5
      SNR=25
EKS2  Erkin-Say         70.54 320    P      P          15 02 20.8 +0.9
      SNR=20
GAR   Garm              71.08 315   eP      P          15 02 22.6 -0.5
      comp=Z,8.3nm,0.7s
GAR   Garm              71.08 315   eP      P          15 02 22.6 -0.5
GAR                                  pmax   pmax
      comp=Z,8.0nm,0.7s
MNAS  Manas             71.27 320    P      P          15 02 24.7 +0.5
MNAS                                 pmax   pmax
      comp=Z,18nm,1.1s
ZAA0  Zalesovo Array    71.46 334   eP      P          15 02 23.8 -1.1
      comp=Z,10.0nm,0.9s
ZALV  Zalesovo Beam     71.46 334   eP      P          15 02 23.7 -1.2
ZALV  Zalesovo Beam     71.46 334    P      P          15 02 24.1 -0.9
      comp=Z,8.2nm,0.5s,baz=128,slow=4.9,SNR=37
CHGR  Chuyangaron       71.74 315   eP      P          15 02 26.2 -0.9
      comp=Z,47nm,1.6s
VNDA  Vanda             72.09 173    P      P          15 02 29.3 +0.9
      comp=Z,3.3nm,0.7s,baz=321,slow=6.6,SNR=14
KURK  Kurchatov         72.27 329   eP      P          15 02 29.3 -0.5
      comp=Z,33nm,1.3s
KURK  Kurchatov         72.27 329c iP      P          15 02 29.6 -0.2
KURK                               i *PP    pP         15 03 03.5 +0.2
KURK                                 pmax   pmax
      comp=Z,27nm,1.3s
SEY   Seymchan          72.57  11    P      P          15 02 31.4 +0.1
      comp=Z,8.2nm,0.5s,baz=211,slow=5.4,SNR=74
NVS   Novosibirsk       72.75 334⇓iP     P          15 02 32.1 -0.4
NVS                                e                   15 03 17.2
NVS                                  pmax   pmax
      comp=Z,10.0nm,0.9s
NVS                                  pmax   pmax
      comp=N,5.0nm,1.0s
NVS                                  pmax   pmax
      comp=E,7.0nm,1.0s
KK31  Karatay Array     72.85 319   eP      P          15 02 33.0 -0.5
KK31  Karatay Array     72.85 319   i P     P          15 02 33.5  0.0
KK31                                 pmax   pmax
      comp=Z,19nm,1.2s
KKAR  Karatay Array     72.85 319   eP      P          15 02 33.0 -0.5
KKAR  Karatay Array     72.85 319   eP      P          15 02 33.0 -0.5
MAW   Mawson            73.97 201   eP      P          15 02 39.9 +0.4
      comp=Z,22nm,1.1s
MAW   Mawson            73.97 201   eP      P          15 02 39.9 +0.4
MAW                                  pmax   pmax
      comp=Z,22nm,1.1s
OTUK  Ortayu            74.28 325    P      P          15 02 42.2 +0.5
OTUK                                 pmax   pmax
      comp=Z,36nm,0.6s
BVA0  Borovoye Array    77.79 328   i P     P          15 03 00.9 -0.6
BVA0                                 pmax   pmax
      comp=Z,9.0nm,0.8s
BRVK  Borovoye          77.86 328   eP      P          15 03 01.3 -0.5
      comp=Z,8.9nm,0.9s
BRVK  Borovoye          77.86 328c iP      P          15 03 01.6 -0.2
BRVK                                 pmax   pmax
      comp=Z,9.0nm,1.0s
GEYT  Alibeck           79.52 311    P      P          15 03 11.6 +0.2
      comp=Z,0.9nm,0.3s,baz=191,slow=6.0,SNR=4.3
NRIK  Noril'sk          81.74 346    P      P          15 03 22.2 -0.2
      comp=Z,4.4nm,0.6s,baz=112,slow=4.8,SNR=6.8
AB31  Akbulak array     82.08 322   i P     P          15 03 24.2 -0.4
AB31                                 pmax   pmax
      comp=Z,2.0nm,0.4s
ABKAR Akbulak array     82.08 322   eP      P          15 03 23.6 -1.0
QSPA  South Pole Qui    82.45 180   eP      P          15 03 26.8 +0.3
      comp=Z,10.0nm,0.6s
SYO   Syowa Base        82.68 201⇑eP     P          15 03 27.6 +0.2
SYO   Syowa Base        82.68 201⇑ePcP   PcP        15 03 30.4 -1.6
AKTO  Aktyubinsk        83.66 323    P      P          15 03 31.1 -1.7
AKTO                                 pmax   pmax
      comp=Z,5.0nm,0.9s
GAMB  Gambell           83.92  23   eP      P          15 03 33.8  0.0
      comp=Z,5.5nm,0.8s
ARU   Arti              85.44 328   eP      P          15 03 40.1 -1.4
      comp=Z,20nm,1.5s
ARU   Arti              85.44 328⇑iP     P          15 03 40.5 -1.0
ARU                                  pmax   pmax
      comp=Z,9.0nm,1.0s
KBZ   Khabaz            92.07 314    P      P          15 04 13.3 +0.1
KBZ                                  pmax   pmax
      comp=Z,1.0nm,0.8s
KBZ   Khabaz            92.07 314    P      P          15 04 13.2 +0.1
      comp=Z,1.8nm,0.8s,baz=51,slow=5.4,SNR=4.6
TRF   Thorofare Moun    92.70  26   eP      P          15 04 15.2 -0.7
      comp=Z,29nm,1.7s
ILAR  Eielson Array     94.40  25    P      P          15 04 21.1 -2.3
      comp=Z,0.7nm,0.8s,baz=236,slow=5.2,SNR=9.8
SNAA  Sanae             94.84 194    P      P          15 04 27.1 +1.5
SNAA  Sanae             94.84 194⇑eP     P          15 04 25.2 -0.3
VNA2  Neumayer--Watz    96.41 193    P      P          15 04 34.0 +1.4
INK   Inuvik            99.85  22    PKKPbc PKKPbc     15 21 07.2 -3.3
      comp=Z,0.5nm,0.4s,baz=69,slow=2.2,SNR=4.3
ARCES ARCESS Array B   101.59 340    P      Pdif       15 04 55.7 -0.1
      comp=Z,2.6nm,0.7s,baz=76,slow=7.5,SNR=5.6
ARCES                                PKKPbc PKKPbc     15 21 02.1 -3.5
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	comp=Z,2.2nm,0.7s,baz=247,slow=1.9,SNR=5.9						
FINES	FINESS Array B	102.57	331	PKiKP	PKiKP	15 09 20.6	0.0
	comp=Z,0.4nm,0.4s,baz=108,slow=4.4,SNR=5.8						
YKA	Yellowknife Ar	108.81	26	PKiKP	PKiKP	15 09 31.8	-0.3
	comp=Z,0.2nm,0.4s,baz=298,slow=1.8,SNR=7.0						
YKA				PKKPbc	PKKPbc	15 20 40.0	-3.4
	comp=Z,0.2nm,0.4s,baz=113,slow=3.7,SNR=4.4						
GERES	GERESS Array B	111.95	320	PKiKP	PKiKP	15 09 38.6	0.0
	comp=Z,1.2nm,0.6s,baz=57,slow=2.3,SNR=14						
WTTA	Wattenberg	113.69	318	ePKiKP	PKiKP	15 09 41.9	-0.2
	comp=Z,9.0nm,0.6s						
WATA	Walderalm	113.71	319	ePKiKP	PKiKP	15 09 42.3	+0.2
	comp=Z,1.9nm,0.5s						
SQTA	Sankt Quirin	113.98	319	ePKiKP	PKiKP	15 09 43.2	+0.7
	comp=Z,3.4nm,0.9s						
MOTA	Moosalm	114.02	319	ePKiKP	PKPdf	15 09 42.5	-0.2
	comp=Z,2.0nm,0.5s						
FETA	Feichten	114.35	318	ePKiKP	PKPdf	15 09 43.2	-0.2
	comp=Z,0.7nm,0.5s						
DAVA	Damuels	114.83	319	ePKiKP	PKPdf	15 09 44.5	+0.2
	comp=Z,3.2nm,0.4s						
LCMT	Little Creek M	116.88	52	ePdif	Pdif	15 06 04.3	-0.4
PDAR	Pinedale Array	118.22	45	PKP	PKiKP	15 09 51.2	+0.2
	comp=Z,0.4nm,0.7s,baz=11,slow=1.5,SNR=4.7						
PDAR				PKKPab	PKKPab	15 20 13.5	+0.5
	comp=Z,0.4nm,0.8s,baz=167,slow=4.5,SNR=3.9						
TXAR	Lajitas Array	126.36	59	PKP	PKiKP	15 10 07.7	+0.4
	comp=Z,0.4nm,0.6s,baz=195,slow=2.8,SNR=7.3						
ESDC	Sonseca Array	126.92	315	PKP	PKPdf	15 10 07.3	-0.2
	comp=Z,0.2nm,0.5s,baz=8.5,slow=2.6,SNR=3.0						
TOA0	Torodi Ar. Sit	127.58	281	ePKPdf	PKPdf	15 10 08.6	-0.8
TORD	Torodi Ar. Bea	127.58	281	PKP	PKPdf	15 10 09.2	-0.2
	comp=Z,1.3nm,0.7s,baz=60,slow=3.4,SNR=9.1						
PLCA	Paso Flores	128.83	161	PKP	PKPdf	15 10 11.1	-0.2
	comp=Z,2.6nm,0.7s,baz=7.9,slow=2.2,SNR=7.2						
JCT	Junction City	129.31	57	ePKPdf	PKPdf	15 10 12.2	-0.2
JCT	Junction City	129.31	57	ePKIKP	PKPdf	15 10 12.2	-0.2
SCHQ	Schefferville	131.22	12	PKP	PKPdf	15 10 15.1	-0.2
	comp=Z,1.6nm,0.6s,baz=261,slow=19,SNR=3.6						
GO02	Mina Guanaco	142.98	152	ePKPdf	PKPdf	15 10 35.6	-2.6
PB10	IPOC Station P	143.90	149	ePKPdf	PKPbc	15 10 38.5	+1.0
PB04	IPOC Station P	145.08	149	ePKPbc	PKPdf	15 10 42.3	+0.5
LVC	Limon Verde	145.47	151	ePKPdf	PKPab	15 10 43.5	+0.3
CPUP	Villa Florida	145.85	170	ePKPdf	PKPbc	15 10 43.5	0.0
CPUP	Villa Florida	145.85	170	PKPbc	PKPbc	15 10 43.7	+0.2
	comp=Z,8.2nm,0.8s,baz=138,slow=3.0,SNR=14						
PB11	IPOC Station P	147.45	147	ePKPdf	PKPdf	15 10 46.9	+1.1
MNMC	Minye Minye	147.99	146	ePKPdf	PKPdf	15 10 48.2	+1.3
NNA	Nana	148.10	127	PKPdf	PKPdf	15 10 46.7	-0.1
NNA	Nana	148.10	127	i PKP2	PKiKP	15 10 52.0	+0.1
LPAZ	La Paz	151.10	145	PKP	PKPdf	15 10 53.3	+1.0
	comp=Z,1.9nm,0.8s,baz=76,slow=6.3,SNR=4.2						
LPAZ				PKPbc	PKiKP	15 10 59.4	+0.7
	comp=Z,6.4nm,0.4s,baz=27,slow=2.4,SNR=56						

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*NEIC **24** 14:58:30.9±1.0, 25.°88S×176.°76W, h67km±9km, mb4.4/5, Error ellipse: s-maj=16.0km s-min=10.2km az=130.0*

*IDC **24** 14:58:34.7±4.4, 25.°63S×177.°08W, h78km±37km, mb4.1/11, mb1 4.2/12, mb1mx3.9/43, mbtmp4.4/12, Error ellipse: s-maj=31.8km s-min=24.4km az=54.0*

ISC 24 14:58:35.1±0.7, **25.°67S**±0.°07×**176.°8W**±0.°1, **h100**km, **n37**, σ**1.s53**/38, **mb4.4**/13, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	3.70	195	ePn	Pn	14 59 23.5	-6.7
RAO				eSn	Sn	15 00 11.5	-1.4
RAO	Raoul Island	3.70	195	P	Pn	14 59 29.7	-0.5
	187nm,0.3s,baz=206,slow=22,SNR=7.3						
RAO				S	Sn	15 00 11.5	-1.4
	210nm,0.3s,baz=67,slow=23,SNR=7.6						
NIUE	Niue	9.14	46	ePn	Pn	15 00 41.9	-2.3
MSVF	Nonsavu	9.23	328	ePn	Pn	15 00 43.3	-2.2
URZ	Urewera	13.56	201	eP	P	15 01 48.1	-0.7
URZ				eSn	Sn	15 03 57.7	-15
URZ	Urewera	13.56	201	S	Sn	15 03 57.7	-15
	2.3nm,0.3s,baz=272,slow=23,SNR=11						
THZ	Tophouse	18.16	205	eP	P	15 02 32.0	-7.7
	66nm,1.8s						
KHZ	Kahutara	18.49	203	eP	P	15 02 39.8	-3.4
	30nm,1.3s						
EIDS	Eidsvold	28.94	264	eP	P	15 04 24.9	-0.1
	13nm,1.0s						
CTA	Charters Tower	34.40	272	P	P	15 05 12.8	-0.2
	4.1nm,0.6s,baz=94,slow=14,SNR=5.3						
STKA	Stephens Creek	36.81	250	eP	P	15 05 33.1	-0.3
	8.0nm,1.9s						
STKA	Stephens Creek	36.81	250	P	P	15 05 34.6	+1.1
	5.2nm,1.0s,baz=114,slow=15,SNR=4.7						
AS01	Alice Springs	44.58	262	eP	P	15 06 36.5	-1.1
AS31	Alice Springs	44.62	262	eP	P	15 06 36.6	-1.2
	1.8nm,0.6s						
ASAR	Alice Springs	44.63	262	P	P	15 06 37.3	-0.6
	5.9nm,0.9s,baz=90,slow=7.1,SNR=24						
ASAR				PcP	PcP	15 08 19.0	-0.1
	0.8nm,0.8s,baz=117,slow=4.1,SNR=4.4						
WB2	Warramunga Arr	45.18	267	eP	P	15 06 40.9	-1.4
WR1	Warramunga Arr	45.19	267	eP	P	15 06 41.3	-1.1
WR1				ePcP	PcP	15 08 21.9	+0.8
WRA	Warramunga Arr	45.19	267	P	P	15 06 41.3	-1.1
	3.9nm,0.6s,baz=99,slow=7.4,SNR=23						
WRA				PcP	PcP	15 08 21.9	+0.8
	1.5nm,1.0s,baz=104,slow=4.1,SNR=5.1						
VNDA	Vanda	52.89	186	eP	P	15 07 42.2	+2.0
VNDA	Vanda	52.89	186	P	P	15 07 44.0	+3.7
	2.5nm,1.1s,baz=23,slow=7.1,SNR=4.4						
SIJI	Sorong	55.74	288	P	P	15 08 01.6	-0.3
	7.6nm,0.7s,baz=85,slow=10.0,SNR=5.4						
ASAJ	Asahikawa	78.77	331	P	P	15 10 29.6	+3.0
	6.4nm,0.8s,baz=283,slow=11,SNR=4.2						
KSRS	Korea Array	81.47	319	P	P	15 10 42.5	+1.2
	0.9nm,0.6s,baz=119,slow=5.2,SNR=5.3						
KSAR	Wonju Array Be	81.49	319	P	P	15 10 42.5	+1.1
USRK	Ussuriysk Ar.	83.84	326	P	P	15 10 55.4	+2.1
	3.2nm,0.9s,baz=87,slow=5.2,SNR=6.0						
KLR	Kul'dur	87.51	329	P	P	15 11 13.6	+2.2
	1.2nm,0.8s,baz=53,slow=5.2,SNR=4.1						
CMAR	Chiang Mai Arr	92.85	289	P	P	15 11 38.8	+1.7
	0.3nm,0.3s,baz=139,slow=2.4,SNR=6.8						
MK32	Makanchi Array	115.48	312	ePKPdf	PKPdf	15 17 05.0	-0.1
MKAR	Makanchi Array	115.48	312	PKP	PKPdf	15 17 05.0	-0.1
	0.2nm,0.5s,baz=125,slow=1.2,SNR=2.4						
NB2	NORSAR Subarra	144.22	353	PKP	PKPbc	15 17 57.5	+0.3
	comp=Z,0.4nm,0.6s,baz=11,slow=3.5						
NB200	NORSAR Array S	144.22	353	ePKPdf	PKPbc	15 17 57.8	+0.6
NOA	NORSAR Array B	144.22	353	PKP	PKPbc	15 17 57.8	+0.6
	comp=Z,0.6nm,0.7s,baz=17,slow=2.4,SNR=4.9						
AKASG	Malin Array Be	148.01	328	PKPbc	PKPbc	15 18 08.6	0.0
	comp=Z,2.3nm,0.8s,baz=48,slow=4.3,SNR=9.2						
AKBB	Malin Array Si	148.01	328	ePKPbc	PKPbc	15 18 08.3	-0.3
BR101	Keskin Array S	150.96	306	ePKPbc	PKiKP	15 18 16.7	-0.3
BR101				ePKPab	PKPab	15 18 25.1	+0.9
BR131	Keskin Array S	150.96	306	ePKPab	PKPab	15 18 22.8	-1.4
BRTR	Keskin Array B	150.96	306	PKPbc	PKiKP	15 18 16.7	-0.3
	comp=Z,0.7nm,0.8s,baz=133,slow=5.4,SNR=4.3						
BRTR				PKPab	PKPab	15 18 25.1	+0.9
	comp=Z,3.1nm,0.8s,baz=95,slow=4.0,SNR=15						

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*NIED **24** 15:03:00, 44.°00N×147.°80E, h83km, Mw3.9 Best double couple: M₀9.12000×10¹⁴ NP1:φs174.00000°, δ25.00000°, λ9.00000°. NP2:φs76.00000°, δ86.00000°, λ114.00000°.*

*MOS **24** 15:03:12.8±1.2, 44.°14N×147.°93E, h104km, mb4.1/14, Error ellipse: s-maj=9.2km s-min=7.5km az=74.7*

MOS Felt (II) at Yuzhno-Kuril'sk.

*ISCJB **24** 15:03:13.6±0.5, 44.°18N±0.°05×147.°77E±0.°07, h104km±4km, mb3.9/26, Error ellipse: s-maj=9.7km s-min=5.2km az=42.0*

*IDC **24** 15:03:14.4±2.5, 44.°38N×147.°66E, h90km±22km, mb3.7/20, mb1 3.9/25, mb1mx3.6/56, mbtmp4.0/25, Error ellipse: s-maj=29.0km s-min=12.2km az=169.0*

*JMA **24** 15:03:15.5±0.2, 44.°00N×147.°77E, h88km, M4.3*

JMA Felt I J1.

*SKHL **24** 15:03:15.8±0.2, 44.°26N×147.°65E, h101km±4km, mb4.4/6, msh5.4/6*

SKHL Felt (II) at Yushno-Kuril'sk.

ISC 24 15:03:13.3±0.8, **44.°12N**±0.°05×**147.°90E**±0.°06, **h89**km±6km, **n92**, σ**1.s66**/110, **mb4.0**/26, **7C-8D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	0.81	253	i P	Pn	15 03 32.4	+1.6
SHO				AMB	AMB	15 03 34.5	
	20nm,0.2s						
SHO				AMB	AMB	15 03 34.5	
	50nm,0.2s						
SHO				AMB	AMB	15 03 34.5	
	120nm,0.2s						
SHO				i S	Sn	15 03 45.0	+1.0
SHO				A	A	15 03 45.0	
	860nm,0.3s						
SHO				A	A	15 03 45.0	
	460nm,0.3s						
SHO	Shikotan	0.81	253	c iPN	Pn	15 03 32.2	+1.4
SHO				i S	Sn	15 03 44.9	+1.0
SHO				pmax	pmax		
	comp=N,165nm,0.1s						
SHO				pmax	pmax		
	comp=E,452nm,0.1s						
SHO				pmax	pmax		
	comp=Z,1µm,0.1s						
SHO				smax	smax		
	comp=N,9µm,0.2s						
SHO				smax	smax		
	comp=E,3µm,0.3s						
KUR	Kuril'sk	1.12	359	i P	Pn	15 03 35.4	+1.2
KUR				AMB	AMB	15 03 35.6	
	comp=E,230nm,0.2s						
KUR				AMB	AMB	15 03 35.6	
	comp=E,150nm,0.2s						
KUR				AMB	AMB	15 03 35.6	
	comp=E,140nm,0.2s						
KUR				i S	Sn	15 03 50.0	0.0
KUR				A	A	15 03 51.1	
	comp=E,520nm,0.3s						
KUR				A	A	15 03 51.1	
	comp=E,300nm,0.3s						
KUR	Kuril'sk	1.12	359	d iPN	Pn	15 03 35.4	+1.2
KUR				i S	Sn	15 03 50.7	+0.7
KUR				pmax	pmax		
	comp=N,247nm,0.2s						
KUR				pmax	pmax		
	comp=Z,1µm,0.2s						
KUR				pmax	pmax		
	comp=E,153nm,0.3s						
KUR				smax	smax		
	comp=E,3µm,0.3s						
KUR				smax	smax		
	comp=N,2µm,0.4s						
YUK	Yuzh-Kuril'sk	1.47	268	i P	Pn	15 03 39.7	+1.1
YUK				AMB	AMB	15 03 40.5	
	comp=N,40nm,0.3s						
YUK				AMB	AMB	15 03 40.5	
	comp=N,90nm,0.3s						
YUK				i S	Sn	15 03 57.5	-0.3
YUK				A	A	15 03 59.0	
	comp=N,610nm,0.3s						
YUK				A	A	15 03 59.0	
	comp=N,310nm,0.3s						
YUK	Yuzh-Kuril'sk	1.47	268	d iPN	Pn	15 03 39.7	+1.1
YUK				i S	Sn	15 03 57.8	0.0
YUK				pmax	pmax		
	comp=Z,933nm,0.2s						
YUK				smax	smax		
	comp=E,1µm,0.1s						
YUK				smax	smax		
	comp=N,3µm,0.2s						
LAGR	Lagunnoye	1.53	268	i P	Pn	15 03 40.5	+1.2
LAGR				i S	Sn	15 03 58.0	-0.9
LAGR				A	A	15 04 01.0	
	comp=N,490nm,0.2s						
LAGR				A	A	15 04 01.0	
	comp=N,210nm,0.2s						
LAGR	Lagunnoye	1.53	268	⇑ iPN	Pn	15 03 41.0	+1.7
LAGR				i S	Sn	15 03 58.9	0.0
LAGR				smax	smax		
	comp=N,5µm,0.2s						
LAGR				smax	smax		
	comp=E,2µm,0.2s						
GRPR	Tuman	1.54	266	i P	Pn	15 03 40.0	+0.5
GRPR				AMB	AMB	15 03 44.0	
	comp=E,20nm,0.2s						
GRPR				AMB	AMB	15 03 44.0	
	comp=E,70nm,0.2s						
GRPR				AMB	AMB	15 03 44.0	
	comp=E,80nm,0.2s						
GRPR				i S	Sn	15 03 58.0	-1.3
GRPR				A	A	15 04 00.0	
	comp=E,420nm,0.3s						
GRPR				A	A	15 04 00.0	
	comp=E,400nm,0.3s						
GRPR	Tuman	1.54	266	⇓ iPN	Pn	15 03 40.5	+1.0
GRPR				i S	Sn	15 03 58.8	-0.5
GRPR				pmax	pmax		
	comp=Z,326nm,0.2s						
GRPR				pmax	pmax		
	comp=N,150nm,0.1s						
GRPR				pmax	pmax		
	comp=E,72nm,0.1s						
GRPR				smax	smax		
	comp=N,4µm,0.3s						
GRPR				smax	smax		
	comp=E,4µm,0.2s						
NEM2	Nemuro 2	1.74	245	P	Pn	15 03 42.7	+0.8
NEM2				eS	Sn	15 04 03.0	-0.8
GLVR	Golovnino	1.76	258	i P	Pn	15 03 43.5	+1.2
GLVR				i S	Sn	15 04 04.5	+0.1
GLVR				A	A	15 04 09.0	
	comp=E,340nm,0.2s						
GLVR				A	A	15 04 09.0	
	comp=E,480nm,0.2s						
GLVR	Golovnino	1.76	258	d iPN	Pn	15 03 43.7	+1.4
GLVR				i S	Sn	15 04 05.0	+0.6
GLVR				smax	smax		
	comp=N,3µm,0.2s						
GLVR				smax	smax		
	comp=E,5µm,0.2s						
JRA	Rausu	2.01	266	P	Pn	15 03 47.1	+1.5
JRA				eS	Sn	15 04 10.6	+0.4
JKHN	Kushirohamanak	2.24	244	P	Pn	15 03 49.7	+1.1
JKHN				eS	Sn	15 04 15.3	-0.4
JNK	Nakash	2.36	258	P	Pn	15 03 51.4	+1.2
JNK				eS	Sn	15 04 18.8	+0.3
JAK	Akkeshi	2.59	245	P	Pn	15 03 53.8	+0.6
JAK				eS	Sn	15 04 23.2	-0.6
JTKR	Abashiri--Toko	2.88	268	P	Pn	15 03 58.5	+1.4
JAR	Ashorobuto	3.11	256	P	Pn	15 04 01.9	+1.7
JCH	Churui	3.63	247	P	Pn	15 04 08.1	+0.8
JCH				eS	Sn	15 04 47.8	-1.3
JKK2	Kamakawa 2	3.73	268	P	Pn	15 04 10.1	+1.5
JKA	Kamikawa-asahi	3.82	272	eP	Pn	15 04 11.6	+1.8
ASAJ	Asahikawa	3.82	272	P	Pn	15 04 11.6	+1.7
	comp=E,6.2nm,0.3s,baz=35,slow=13,SNR=67						
JSE	Soyaes	3.90	284	P	Pn	15 04 11.8	+1.0
JFR	Furan	3.97	258	P	Pn	15 04 13.9	+2.0
ERM	Erimo	4.06	241	eP	Pn	15 04 15.7	+2.6
ERM	Erimo	4.06	241	dePN	Pn	15 04 15.7	+2.6
JNBK	Urakawa-nobuka	4.19	246	P	Pn	15 04 15.3	+0.5
JNBK				eS	Sn	15 05 01.0	-1.6
JWK2	Keihoku	4.45	288	P	Pn	15 04 20.7	+2.5
YSS	Yuzh-Sakhalins	4.60	310	eP	Pn	15 04 21.0	+0.7
YSS				AMB	AMB	15 04 22.0	
	comp=E,20nm,0.6s						
YSS				eS	Sn	15 05 09.7	-2.7
YSS				A	A	15 05 11.4	
	comp=E,10.0nm,0.5s						
YSS	Yuzh-Sakhalins	4.60	310	⇓ ePN	Pn	15 04 20.6	+0.3
YSS				eS	Sn	15 05 10.9	-1.5
YSS				pmax	pmax		
	comp=Z,40nm,0.3s						
YSS				smax	smax		
	comp=N,10.0nm,0.7s						
JKB	Kayabe	5.51	249	P	Pn	15 04 33.4	+0.7
JKB				eS	Sn	15 05 31.0	-3.7
JOT	Ohata	5.74	244	P	Pn	15 04 35.7	-0.2
JOT				eS	Sn	15 05 35.1	-5.2
UGL	Uglegorsk	6.39	323	eP	Pn	15 04 44.9	+0.3
UGL				AMB	AMB	15 04 46.1	
	comp=N,20nm,1.0s						
TYV	Tymovskoe	7.63	334	eP	Pn	15 05 02.2	+0.7
TYV	Tymovskoe	7.63	334	ePN	Pn	15 05 12.2	+11
TYV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MAJO	Matsushiro	10.58	228	⇑ ePN	Pn	15 05 41.6	-0.2
MJAR	Matsushiro Arr	10.58	228	P	Pn	15 05 41.9	+0.1
	comp=Z,0.0nm,0.3s,baz=32,slow=17,SNR=4.7						
PETK	Petropavlovsk-	11.08	32	P	Pn	15 05 46.5	-2.1
	comp=Z,0.5nm,0.3s,baz=194,slow=11,SNR=15						
USRK	Ussuriysk Ar.	11.44	276	P	Pn	15 05 53.5	+0.1
	comp=Z,0.2nm,0.3s,baz=75,slow=17,SNR=4.6						
KLR	Kul'dur	12.21	300	⇑ ePN	Pn	15 06 06.4	+2.6
MA2	Magadan	15.58	5	eP	Pn	15 06 46.4	-1.1
MA2	Magadan	15.58	5	P	Pn	15 06 46.9	-0.6
	comp=Z,0.3nm,0.3s,baz=170,slow=6.7,SNR=11						
TJN	Taejon	17.45	251	⇑ eP	Pn	15 07 12.1	+1.3
SEY	Seymchan	19.03	6	⇑ eP	P	15 07 28.2	+0.4
SEY	Seymchan	19.03	6	P	P	15 07 26.0	-1.9
	comp=Z,0.3nm,0.3s,baz=180,slow=7.1,SNR=9.5						
YAK	Yakutsk	20.88	336	eP	P	15 07 42.1	-5.8
YAK				pmax	pmax		
	comp=Z,72nm,0.8s						
YAK				pmax	pmax		
	comp=N,16nm,1.3s						
YAK				pmax	pmax		
	comp=E,14nm,1.3s						
BILL	Bilibino	25.86	16	eP	P	15 08 37.0	+0.9
BILL	Bilibino	25.86	16	i P	P	15 08 35.7	-0.4
BILL				i		15 09 07.3	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ULN	Ulaanbaatar	28.39	292	eP	P	15 08 59.7	+0.5
ULN	Ulaanbaatar	28.39	292	⇓ eP	P	15 08 59.7	+0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SONM	Songino Array	28.83	292	P	P	15 09 02.3	-0.7
	comp=Z,0.2nm,0.5s,baz=91,slow=8.8,SNR=1.9						
H11N2	WAKE ISLAND Hy	29.03	141	T	T	15 40 09.5	
	baz=330,slow=75,SNR=94						
H11N1	WAKE ISLAND Hy	29.04	141	T	T	15 40 10.5	
	baz=330,slow=75,SNR=80						
H11N3	WAKE ISLAND Hy	29.05	141	T	T	15 40 10.8	
	baz=330,slow=75,SNR=81						
H11S1	WAKE ISLAND Hy	30.02	142	T	T	15 41 20.3	
	baz=332,slow=76,SNR=207						
H11S3	WAKE ISLAND Hy	30.02	142	T	T	15 41 24.5	
	baz=332,slow=76,SNR=148						
H11S2	WAKE ISLAND Hy	30.03	142	T	T	15 41 25.5	
	baz=332,slow=76,SNR=127						
KDAK	Kodiak Island	38.60	48	P	P	15 10 27.5	+0.3
	comp=Z,11nm,0.7s,baz=286,slow=2.3,SNR=12						
COLA	College	40.45	36	eP	P	15 10 43.5	+1.0
COLA	College	40.45	36	⇓ iP	P	15 10 43.5	+1.0
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ILAR	Eielson Array	40.87	36	P	P	15 10 46.4	+0.4
	comp=Z,1.0nm,0.6s,baz=269,slow=8.2,SNR=16						
MKAR	Makanchi Array	44.90	298	P	P	15 11 17.9	-0.9
	comp=Z,0.9nm,0.6s,baz=77,slow=8.7,SNR=12						
KURK	Kurchatov	45.78	304	P	P	15 11 25.2	-0.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	Inuvik	45.81	31	P	P	15 11 26.3	+0.7
	comp=Z,2.7nm,0.3s,baz=297,slow=9.1,SNR=56						
KURBB	Kurchatov Arra	45.86	304	P	P	15 11 25.1	-1.1
	comp=Z,0.8nm,0.4s,baz=75,slow=8.4,SNR=6.3						
BVAR	Borovoye Array	49.69	309	P	P	15 11 55.5	-0.3
	comp=Z,0.2nm,0.3s,baz=62,slow=10,SNR=3.7						
BRVK	Borovoye	49.74	309	eP	P	15 11 55.6	-0.6
BRVK	Borovoye	49.74	309	⇑ eP	P	15 11 55.6	-0.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
DLBC	Dease Lake	50.04	43	P	P	15 12 00.4	+1.9
	comp=Z,2.0nm,0.9s,baz=196,slow=5.9,SNR=4.9						
ARU	Arti	54.45	317	eP	P	15 12 33.5	+2.5
ARU	Arti	54.45	317	P	P	15 12 33.5	+2.5
ARU						15 13 33.1	
ARU						15 14 34.8	
ARU				S	S	15 20 08.2	+5.6
ARU				SS	SS	15 23 51.1	+5.7
RES	Resolute Bay	54.46	17	P	P	15 12 29.8	-1.0
	comp=Z,2.4nm,0.5s,baz=330,slow=7.6,SNR=29						
YKA	Yellowknife Ar	55.19	34	P	P	15 12 36.6	+0.3
	comp=Z,1.4nm,0.7s,baz=298,slow=6.8,SNR=19						
ARCES	ARCESS Array B	59.09	340	P	P	15 13 01.8	-1.9
	comp=Z,2.1nm,0.6s,baz=44,slow=7.1,SNR=15						
FINES	FINESS Array B	64.79	333	P	P	15 13 39.6	-2.3
	comp=Z,2.2nm,0.5s,baz=43,slow=7.8,SNR=21						
NVAR	Mina Array Bea	66.92	58	P	P	15 13 58.0	+1.7
	comp=Z,0.9nm,0.7s,baz=294,slow=6.8,SNR=5.1						
PDAR	Pinedale Array	69.26	50	P	P	15 14 11.2	+0.4
	comp=Z,0.3nm,0.5s,baz=329,slow=1.7,SNR=4.7						
NB2	NORSAR Subarra	69.46	339	P	P	15 14 09.8	-1.7
	comp=Z,0.3nm,0.4s,baz=30,slow=6.5						
NOA	NORSAR Array B	69.46	339	P	P	15 14 10.3	-1.2
	comp=Z,0.3nm,0.4s,baz=32,slow=6.6,SNR=11						
KIV	Kislovodsk	69.92	312	eP	P	15 14 15.6	+0.9
KIV	Kislovodsk	69.92	312	eP	P	15 14 15.6	+0.9
KIV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	69.96	312	P	P	15 14 15.1	+0.3
	comp=Z,2.0nm,0.8s,baz=67,slow=6.0,SNR=5.3						
AKASG	Malin Array Be	71.61	324	P	P	15 14 23.5	-1.2
	comp=Z,1.1nm,0.5s,baz=38,slow=6.2,SNR=9.4						
SCHQ	Schefferville	77.09	20	P	P	15 14 56.3	-0.2
	comp=Z,2.3nm,0.9s,baz=319,slow=9.3,SNR=3.5						
CLL	Collm	77.24	333	eP	P	15 14 56.0	-1.3
CLL	Collm	77.24	333	eP	P	15 14 56.0	-1.3
KHC	Kasperske Hory	78.90	331	eP	P	15 15 06.0	-0.6
KHC	Kasperske Hory	78.90	331	eP	P	15 15 06.0	-0.6
KHC	Kasperske Hory	78.90	331	eP	P	15 15 06.0	-0.6
GERES	GERESS Array B	79.10	331	P	P	15 15 06.7	-1.1
	comp=Z,0.5nm,0.5s,baz=36,slow=5.7,SNR=5.2						
TXAR	Lajitas Array	81.99	57	P	P	15 15 24.2	+0.6
	comp=Z,0.9nm,0.6s,baz=299,slow=4.1,SNR=14						

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*NEIC **24** 15:12:30.8±0.0, 55.°50N×135.°03W, h16km, ML3.5(AEIC), ML3.8(OTT), After AEIC.*

PGC 24 15:12:29.8±0.0, **55.°38N**×**134.°98W**, **h1**km, **ML3.8**/12, **187km Sse of Sitka, Ak Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRAG	Craig	1.06	84	P	Pg	15 12 50.4	+0.4
CRAG				S	Sb	15 13 04.9	-0.3
SIT	Sitka	1.69	353	P	Pn	15 12 57.7	-2.7
WRAK	Wrangell Islan	1.81	54	P	Pn	15 13 01.0	-1.0
WRAK				S	Sn	15 13 23.0	-2.6
NDB	Naden	1.85	140	P	Pn	15 13 02.2	-0.4
NDB	Naden	1.85	140	Pn	Pn	15 13 02.1	-0.6
MASB	Masset	2.19	127	Pn	Pn	15 13 07.4	+0.2
DIB	Dawson Inlet,	2.63	145	Pn	Pn	15 13 12.6	-0.7
DIB				Sn	Sn	15 13 44.5	-1.2
MOBC	Moresby Island	2.85	141	Pn	Pn	15 13 15.5	-0.9
MOBC				Sn	Sn	15 13 50.8	-0.5
JIS	Juneau Island	2.92	6	P	Pn	15 13 15.6	-1.7
RUBB	Prince Rupert	2.93	109	Pn	Pn	15 13 16.5	-0.8
RUBB				Sn	Sn	15 13 50.9	-2.2
HG1B	Mitchell Dam	2.97	145	Pn	Pn	15 13 17.4	-0.4
BESE	Bessie Mountai	3.21	1	P	Pn	15 13 19.3	-2.0
BESE	Bessie Mountai	3.21	1	Pn	Pn	15 13 19.8	-1.5
BESE				Sg	Sb	15 14 08.4	+1.2
BNB	Barry Inlet	3.39	145	Pn	Pn	15 13 22.5	-1.4
BNB				Sg	Sb	15 14 15.1	+2.7
HG3B	Hotspring	3.50	142	Pn	Pn	15 13 23.8	-1.4
HG3B				Sn	Sn	15 14 04.5	-2.7
HG4B	Hotspring	3.82	143	Pn	Pn	15 13 28.7	-0.9
HG4B				Sg	Sg	15 14 28.9	-3.4
DLBC	Dease Lake	4.09	39	P	Pn	15 13 33.1	-0.4
DLBC	Dease Lake	4.09	39	Pn	Pn	15 13 33.2	-0.3
DLBC				Sn	Sn	15 14 18.1	-3.9
DLBC				Sg	Sb	15 14 36.4	+3.8
DHAK	Deception Hill	4.12	336	P	Pn	15 13 32.4	-1.4
PLBC	Pleasant Camp	4.16	350	Pn	Pn	15 13 32.9	-1.3
PLBC				Sg	Sg	15 14 39.5	-3.6
PNL	Peninsula	4.92	333	P	Pn	15 13 43.2	-1.6
PNL	Peninsula	4.92	333	Pn	Pn	15 13 43.3	-1.4
BBB	Bella Bella	5.18	125	Pn	Pn	15 13 47.4	-0.9
BBB				Sn	Sn	15 14 45.2	-3.4
WHY	Whitehorse	5.30	1	P	Pn	15 13 49.2	-0.8
WHY	Whitehorse	5.30	1	Pn	Pn	15 13 49.5	-0.5
WHY				Sg	Sg	15 15 13.7	-6.0
YUK7	Dusty Glacier	5.43	343	Pn	Pn	15 13 51.3	-0.6
YUK7				Sn	Sn	15 14 51.1	-4.1
PCA	Pinnacle	5.51	331	P	Pn	15 13 52.4	-0.6
PCA	Pinnacle	5.51	331	Pn	Pn	15 13 52.3	-0.6
PCA				Sn	Sn	15 14 52.7	-4.2
HYT	Haines Junctio	5.62	347	P	Pn	15 13 54.7	+0.2
HYT	Haines Junctio	5.62	347	Pn	Pn	15 13 53.8	-0.7
HYT				Sg	Sg	15 15 24.1	-6.0

SAMH	Samovar Hills	5.69	329	P	Pn	15 13 55.0	-0.4
YUK6	Outpost Mounta	5.86	344	Pn	Pn	15 13 56.3	-1.5
YUK5	Granite Creek	5.97	346	Pn	Pn	15 13 45.2	-14
FSB	Fort Saint Jam	6.21	94	Sg	Sg	15 15 43.8	-5.1
YUK4	Talbot Arm	6.29	344	Pn	Pn	15 14 03.5	-0.2
PHC	Port Hardy	6.52	133	Pn	Pn	15 14 03.2	-3.6
PHC				Sn	Sn	15 15 17.8	-3.9
CTGM	Chitina Glacie	6.53	332	Pn	Pn	15 14 06.8	-0.1
CTGM				Sn	Sn	15 15 17.1	-5.1
PACB	Port Alice, BC	6.71	135	Sn	Sn	15 15 20.3	-5.9
BALM	Baldy	6.88	329	Pn	Pn	15 14 10.9	-0.8
YUK3	Moose Creek	7.02	338	Pn	Pn	15 14 13.1	-0.7
YUK2	White River	7.12	337	Pn	Pn	15 14 14.0	-1.0
BVCY	Beaver Creek	7.68	339	Pn	Pn	15 14 21.1	-1.5

IDC 24 15:12:54.7±1.6**,16°.72S**×**178°.14W,h0^{km},mb3.9**/5**, mb1 4.2**/5**,mb1mx3.7**/43**,mbtmp3.9**/5**,Error ellipse: s-maj=147.5km s-min=23.9km az=153.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.44	240	P	P	15 20 27.2	+0.5
	1.8nm,0.8s,baz=90,slow=7.5,SNR=7.6						
WRA	Warramunga Arr	45.11	258	P	P	15 21 12.7	-0.5
	0.5nm,0.5s,baz=96,slow=6.9,SNR=19						
ASAR	Alice Springs	45.37	253	P	P	15 21 14.8	-0.4
	5.4nm,0.6s,baz=88,slow=8.2,SNR=160						
TXAR	Lajitas Array	85.14	58	P	P	15 25 33.6	+0.4
	0.3nm,0.7s,baz=209,slow=5.5,SNR=4.0						
PDAR	Pinedale Array	86.32	43	P	P	15 25 38.7	-0.2
	0.2nm,0.5s,baz=355,slow=1.0,SNR=3.2						

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*IDC **24** 15:16:38.0±1.0,29°.80N×94°.55E,h0^{km},mb3.5/8, mb1 3.7/9,mb1mx3.4/52,mbtmp3.5/9,ML3.3/1,Error ellipse: s-maj=54.4km s-min=17.9km az=56.0*

*BJI **24** 15:16:39.5,29°.96N×94°.75E,h24^{km},mb4.0/9*

*ISCJB **24** 15:16:40.7±0.5,29°.92N±0°.05×94°.80E±0°.06,h33^{km}, mb3.8/12,Error ellipse: s-maj=8.1km s-min=6.9km az=23.0*

*NEIC **24** 15:16:42.4±1.1,29°.95N×94°.95E,h35^{km},mb4.0/7,Error ellipse: s-maj=21.8km s-min=9.5km az=92.0*

ISC 24 15:16:42.7±0.7**,30°.05N**±0°.08×**94°.84E**±0°.09**,h35^{km},n38, σ1^{s}25**/33**,mb3.8**/12**,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	3.22	265	Pg	Pn	15 17 34.8	+3.5
LSA				Sg	Sn	15 18 18.1	+9.4
LSA	Lhasa	3.22	265	ePn	Pn	15 17 33.9	+2.6
SHL	Shillong	5.17	211	ePn	Pn	15 17 56.8	-1.0
RAMN	Ramite	7.88	249	eP	Pn	15 18 36.1	+1.0
	16nm,0.4s						
JIRN	Jiri	7.95	255	eP	Pn	15 18 37.5	+1.4
	25nm,0.4s						
GUN	Gumba	8.13	257	eP	Pn	15 18 39.4	+0.8
	22nm,0.5s						
KMI	Kunming	8.55	123	P	Pn	15 18 43.4	-0.9
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
PKI	Pulchoki	8.63	256	eP	Pn	15 18 45.1	-0.4
	12nm,0.4s						
PKIN	Phulchoki	8.64	256	eP	Pn	15 18 44.8	-0.7
	12nm,0.3s						
KKN	Kakani	8.67	257	eP	Pn	15 18 45.8	-0.1
	14nm,0.5s						
DMN	Daman	8.88	257	eP	Pn	15 18 48.3	-0.4
	6.6nm,0.4s						
DANN	Dangsing	9.83	263	eP	Pn	15 18 59.2	-2.6
	18nm,0.6s						
KOLN	Koldanda	10.11	260	eP	Pn	15 19 04.1	-1.5
	13nm,0.5s						
GTA	Gaotai	10.20	22	eP	Pn	15 19 06.0	-0.7
GTA				pP		15 19 11.3	
GTA				sP		15 19 14.3	
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
PYUN	Piuthan	10.55	262	eP	Pn	15 19 09.5	-2.1
	17nm,0.7s						
WMQ	Urumqi	14.88	339	eP	P	15 20 12.5	-3.3
WMQ				pP	Pn	15 20 22.9	+12
PBA	Port Blair	18.40	187	eP	Pn	15 20 53.8	-1.4
	249nm,1.6s						
MK01	Makanchi Array	19.33	333	eP	Pn	15 21 06.7	+0.5
MK31	Makanchi Array	19.36	333	eP	Pn	15 21 07.3	+0.8
MKAR	Makanchi Array	19.36	333	eP	Pn	15 21 07.3	+0.8
	6.3nm,0.6s						
MKAR	Makanchi Array	19.36	333	P	Pn	15 21 06.4	-0.1
	0.1nm,0.3s,baz=138,slow=13,SNR=7.6						
MAKZ	Makanchi	19.49	333	eP	Pn	15 21 07.1	-1.0
	1.9nm,0.9s						
SONM	Songino Array	19.87	23	P	Pn	15 21 14.8	+2.1
	0.3nm,0.3s,baz=210,slow=11,SNR=4.0						
AAK	Ala-Archa	20.59	313	eP	Pn	15 21 20.2	-1.0
	3.9nm,1.0s						
AAK	Ala-Archa	20.59	313	P	Pn	15 21 21.2	0.0
	3.1nm,0.9s,baz=91,slow=6.4,SNR=7.5						
GAR	Garm	22.04	300	eP	P	15 21 34.1	-0.3
	13nm,1.4s						
KBL	Kabul	22.24	288	eP	P	15 21 36.7	0.0
	8.6nm,0.9s						
CHGR	Chuyangaron	22.82	299	eP	P	15 21 42.9	+0.2
	10.0nm,0.8s						
KURBB	Kurchatov Arra	23.92	334	P	P	15 21 53.3	+0.1
	1.2nm,0.8s,baz=146,slow=11,SNR=9.2						
KURK	Kurchatov	23.96	334	eP	P	15 21 53.9	+0.3
	5.1nm,1.4s						
BVAR	Borovoye Array	29.10	329	P	P	15 22 41.2	+1.4
	0.8nm,0.8s,baz=134,slow=8.5,SNR=4.9						
BRVK	Borovoye	29.16	329	eP	P	15 22 41.8	+1.3
	1.9nm,0.7s						
ABKAR	Akbulak array	32.62	316	eP	P	15 23 12.1	+1.1
FINES	FINESS Array B	54.00	326	P	P	15 26 04.4	+1.4
	1.1nm,0.7s,baz=90,slow=9.5,SNR=5.8						
NOA	NORSAR Array B	61.18	326	P	P	15 26 54.1	+0.5
	0.4nm,0.7s,baz=81,slow=6.6,SNR=3.2						
GERES	GERESS Array B	62.47	313	P	P	15 27 03.4	+0.9
	0.3nm,0.5s,baz=43,slow=7.3,SNR=3.1						
WRA	Warramunga Arr	62.58	138	P	P	15 27 03.8	+0.3
	0.5nm,0.8s,baz=322,slow=8.3,SNR=4.9						
ASAR	Alice Springs	65.27	140	P	P	15 27 21.6	+0.5
	0.4nm,0.8s,baz=324,slow=6.3,SNR=9.7						

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*IDC **24** 15:23:08.8±1.7,1°.35N×125°.67E,h0^{km},mb3.9/4, mb1 4.1/4,mb1mx3.5/42,mbtmp3.9/4,Error ellipse: s-maj=167.4km s-min=22.8km az=64.0*

*ISCJB **24** 15:23:16.7±0.6,1°.18N±0°.07×125°.65E±0°.04,h84^{km}, mb3.8/4,Error ellipse: s-maj=10.5km s-min=6.3km az=0.9*

*DJA **24** 15:23:16.8±0.8,1°N±4°×12°6E±°,h24^{km}±8^{km},M3.9/13, mb3.6/4,MLv4.0/13*

ISC 24 15:23:18.2±1.0**,1°.18N**±0°.09×**125°.68E**±0°.05**,h84^{km},n15, σ1^{s}24**/17**,mb3.8**/4**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.74	104	P	Pn	15 23 45.2	-1.6
TNTI				S	Sn	15 24 07.1	-1.4
KMSI	Cibinong	1.80	250	P	Pn	15 23 46.0	-1.6
KMSI				S	Sn	15 24 08.2	-1.8
SGSI	Sangihe	2.49	357	P	Pn	15 23 56.6	-0.2
SANI	Sanana	3.23	174	P	Pn	15 24 05.2	-1.6
LUWI	Luwuk	3.65	233	P	Pn	15 24 11.2	-1.3
MRSI	Marisa	3.80	259	P	Pn	15 24 14.0	-0.5
APSI	Ampana	4.53	243	P	Pn	15 24 24.4	-0.1
NLAI	Namlea	4.62	162	P	Pn	15 24 25.6	-0.1
MPSI	Mapaga	5.84	262	P	Pn	15 24 41.9	-0.4
TTSI	Tana Toraja	7.21	234	P	Pn	15 25 00.4	-0.6
SPSI	Sidrap Palu	7.81	229	P	Pn	15 25 08.6	-0.6
WRA	Warramunga Arr	22.65	158	P	P	15 28 13.4	+0.8
	4.2nm,0.6s,baz=337,slow=11,SNR=39						
ASAR	Alice Springs	25.96	163	P	P	15 28 45.0	+1.8
	0.7nm,0.3s,baz=345,slow=12,SNR=29						
STKA	Stephens Creek	36.18	157	P	P	15 30 14.2	+1.4
	0.9nm,0.3s,baz=335,slow=11,SNR=9.2						
MKAR	Makanchi Array	59.06	327	P	P	15 33 09.8	+0.1
	0.2nm,0.3s,baz=121,slow=8.2,SNR=7.7						

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*ISCJB **24** 15:24:34.6±1.5,43°.36N±0°.09×146°.90E±0°.10, h40^{km}±27^{km},Error ellipse: s-maj=17.7km s-min=7.0km az=142.7*

*JMA **24** 15:24:34.6±0.3,43°.28N×146°.87E,h40^{km}±3^{km},M2.6*

*SKHL **24** 15:24:35.8±0.6,43°.36N×146°.87E,h30^{km}±5^{km},mb3.5/3*

ISC 24 15:24:34.5±2.4**,43°.4N**±0°.1×**146°.90E**±0°.09**,h27^{km}**±14^{km}**, n8,σ0^{s}66**/14**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.52	355	iP	Pn	15 24 45.7	-0.3
SHO				AMB	AMB	15 24 46.1	
	50nm,0.2s						
SHO				AMB	AMB	15 24 46.1	
	20nm,0.2s						
SHO				AMB	AMB	15 24 46.1	
	10.0nm,0.2s						
SHO				iS	Sb	15 24 53.3	+1.1
SHO				A	A	15 24 53.7	
	890nm,0.4s						
SHO				A	A	15 24 53.7	
	1μm,0.4s						
NEM2	Nemuro 2	0.84	271	P	Pb	15 24 50.0	-0.4
NEM2				eS	Sb	15 25 01.0	-0.3
YUK	Yuzh-Kuril'sk	1.01	313	iP	Pn	15 24 52.7	-0.1
YUK				AMB	AMB	15 24 54.0	
	40nm,0.1s						
YUK				AMB	AMB	15 24 54.0	
	20nm,0.1s						
YUK				iS	Sb	15 25 05.8	-0.4
YUK				A	A	15 25 06.5	
	90nm,0.1s						
YUK				A	A	15 25 06.5	
	260nm,0.1s						
JRA	Rausu	1.41	295	eS	Sn	15 25 16.3	+0.3
JAK	Akkeshi	1.65	258	P	Pn	15 25 01.5	-0.1
JAK				eS	Sn	15 25 21.4	-0.4
KUR	Kuril'sk	2.00	20	eP	Pn	15 25 07.0	+0.5
KUR				AMB	AMB	15 25 07.8	
	4.0nm,0.2s						
KUR				AMB	AMB	15 25 07.8	
	6.0nm,0.2s						
KUR				AMB	AMB	15 25 07.8	
	10.0nm,0.2s						
KUR				eS	Sn	15 25 29.9	-0.7
KUR				A	A	15 25 33.8	
	40nm,0.1s						
KUR				A	A	15 25 33.8	
	20nm,0.1s						
JTKR	Abashiri--Toko	2.25	287	P	Pn	15 25 10.7	+0.8
JAR	Ashorobuto	2.28	270	P	Pn	15 25 11.1	+0.8
JAR				eS	Sn	15 25 38.0	+0.5

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*IDC **24** 15:29:12.9±1.1,2°.82N×91°.29E,h0^{km},mb3.9/7, mb1 4.1/10,mb1mx3.8/45,mbtmp4.0/10,ML3.9/3,MS3.2/7, Ms1 3.3/7,ms1mx3.0/36,Error ellipse: s-maj=37.7km s-min=18.7km az=44.0*

*NEIC **24** 15:29:13.8±3.3,2°.85N×91°.28E,h8^{km}±20^{km},mb4.3/8, Error ellipse: s-maj=12.2km s-min=6.4km az=215.0*

*ISCJB **24** 15:29:15.6±0.5,2°.81N±0°.06×91°.39E±0°.04,h33^{km}, mb4.1/17,MS3.4/4,Error ellipse: s-maj=9.7km s-min=4.8km az=25.6*

*DJA **24** 15:29:15.7±1.8,3°N±6°×9°1E±°,h20^{km}±18^{km},M4.9/14, mB5.5/5,mb4.9/14,MLv5.0/7,Mw(mB)4.9/5*

ISC 24 15:29:18.2±0.7**,2°.83N**±0°.09×**91°.37E**±0°.07**,h35^{km},n68, σ2^{s}00**/60**,mb4.1**/22**,MS3.3**/4**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	4.73	56	P	Pn	15 30 26.9	-0.2
SNSI	Sinabang, Aceh	4.97	95	P	Pn	15 30 29.4	-1.0
MLSI	Meulaboh, Aceh	5.23	74	S	Sn	15 31 34.5	+1.4
LHMI	Lhok Sumawe	6.06	67	ePn	Pn	15 30 46.3	+1.0
LHMI	Lhok Sumawe	6.06	67	P	Pn	15 30 44.5	-0.8
KCSI	Kotacane, Aceh	6.43	84	P	Pn	15 30 50.1	-0.4
TSI	Tuntungan	7.22	85	P	Pn	15 31 01.4	+0.1
	190nm,0.8s						
PBSI	Pulau Batu	7.48	112	P	Pn	15 31 05.0	+0.1
PSI	Prapat	7.55	90	Pn	Pn	15 31 06.2	+0.3
	2.1nm,0.3s,baz=359,slow=1.4,SNR=8.0						
PSI				Sn	Sn	15 32 29.9	-0.6
	2.2nm,0.3s,baz=180,slow=9.1,SNR=3.8						
MNSI	Mandailing Nat	8.46	104	P	Pn	15 31 17.7	-0.6
PKDT	Phuket	8.57	54	P	Pn	15 31 20.6	+0.8
	40nm,1.0s,0.1nm						
SISI	Saibi	8.76	118	P	Pn	15 31 23.0	+0.6
KULM	Kulim	9.58	75	ePn	Pn	15 31 32.6	-1.1
PPI	Padang Panjang	9.60	110	P	Pn	15 31 33.9	-0.1
TRTT	Trang	9.67	59	P	Pn	15 31 36.5	+1.6
	11nm,0.6s						
IPM	Ipoh	9.78	80	ePn	Pn	15 31 36.4	-0.1
PDSI	Padang	9.82	112	P	Pn	15 31 37.1	0.0
KRJI	Kerinci	11.21	116	P	Pn	15 31 56.5	+0.3
PALK	Pallekele	11.50	293	ePn	Pn	15 31 57.5	-2.6
PALK				Sn	Sn	15 33 55.2	-12
PALK	Pallekele	11.50	293	Pn	Pn	15 31 58.4	-1.7
	1.2nm,0.3s,baz=116,slow=14,SNR=34						
PALK				Sn	Sn	15 33 55.2	-12
	4.5nm,0.3s,baz=117,slow=8.2,SNR=15						
PALK				LR	LR	15 35 56.9	
	comp=Z,125nm,18.6s,baz=117,slow=35						
MYKOM	Kota Tinggi	12.52	94	ePn	Pn	15 32 12.5	-1.4
UTHA	Uthaitani	14.95	32	P	P	15 32 53.9	+1.7
	2.7nm,0.9s						
UMPA	Umpang Tak	15.20	29	P	P	15 33 02.2	+7.2
SUKH	Sukhothai	16.67	29	P	P	15 33 13.1	+1.8
	2.7nm,1.0s						
CM31	Chiang Mai Arr	17.21	25	ePn	Pn	15 33 13.5	-2.6
	3.3nm,0.6s						
CMAR	Chiang Mai Arr	17.21	25	Pn	Pn	15 33 14.8	-1.3
	0.1nm,0.3s,baz=216,slow=12,SNR=8.6						
CMAR				LR	LR	15 39 34.8	
	comp=Z,32nm,19.4s,baz=209,slow=36						
KSM	Kuching	18.98	94	eP	P	15 33 36.3	-0.5
BRDH	Bariadhala	19.73	1	LR	LR	15 42 55.3	
	comp=Z,109nm,18.1s,baz=194,slow=42						
H08S2	Diego Garcia H	21.51	241	T	T	15 56 12.3	
	baz=61,slow=75,SNR=20						
H08S3	Diego Garcia H	21.51	241	T	T	15 56 14.1	
	baz=61,slow=75,SNR=25						
H08S1	Diego Carcia H	21.53	241	T	T	15 56 16.8	
	baz=61,slow=75,SNR=9.7						
SHL	Shillong	22.61	1	eP	P	15 34 11.0	-5.2
SHL				eP	PcP	15 38 00.0	-8.7
JIRN	Jiri	25.18	349	eP	P	15 34 42.6	+1.7
	48nm,0.9s						
PKI	Pulchoki	25.25	348	eP	P	15 34 47.9	+6.4
	4.9nm,0.4s						
PKIN	Phulchoki	25.26	348	eP	P	15 34 47.6	+6.0
DMN	Daman	25.36	347	eP	P	15 34 47.8	+5.4
GUN	Gumba	25.48	349	eP	P	15 34 44.0	+0.3
	29nm,1.0s						
PYUN	Piuthan	26.37	343	eP	P	15 35 00.1	+8.6
	23nm,1.1s						
DANN	Dangsing	26.39	345	eP	P	15 34 55.2	+3.3
	14nm,0.7s						
LSA	Lhasa	26.73	360	eP	P	15 34 54.6	-0.4
	7.6nm,0.6s						
GTA	Gaotai	37.21	11	eP	P	15 36 27.3	+0.9
GTA				pP	pP	15 36 34.6	-0.8
GTA				sP	sP	15 36 38.3	-0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
HHC	Hu-ho-hao-te	42.01	23	eP	P	15 37 05.1	-1.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,3.7s						
KK31	Karatay Array	44.19	338	eP	P	15 37 23.4	-0.5
	comp=Z,2.2nm,0.7s						
KKAR	Karatay Array	44.19	338	eP	P	15 37 23.4	-0.5
	comp=Z,2.2nm,0.7s						
MK01	Makanchi Array	44.47	351	eP	P	15 37 24.8	-1.2
MK31	Makanchi Array	44.50	351	eP	P	15 37 25.5	-0.8
	comp=Z,1.6nm,0.8s						
MK32	Makanchi Array	44.50	351	eP	P	15 37 25.8	-0.4
MKAR	Makanchi Array	44.50	351	eP	P	15 37 25.2	-1.0
	comp=Z,11nm,0.6s						
MKAR	Makanchi Array	44.50	351	P	P	15 37 25.8	-0.4
	comp=Z,1.1nm,0.9s,baz=166,slow=8.6,SNR=8.4						
GEYT	Alibeck	46.33	323	P	P	15 37 45.9	+4.9
	comp=Z,1.3nm,0.6s,baz=152,slow=9.8,SNR=4.6						
SONA0	Songino Array	46.67	14	eP	P	15 37 44.1	+0.5
SONM	Songino Array	46.67	14	P	P	15 37 44.1	+0.5
	comp=Z,1.8nm,0.5s,baz=193,slow=8.6,SNR=11						
WRA	Warramunga Arr	47.87	120	P	P	15 37 53.5	+0.4
	comp=Z,1.6nm,0.8s,baz=297,slow=8.6,SNR=12						
WR1	Warramunga Arr	47.87	120	eP	P	15 37 53.5	+0.4
	comp=Z,43nm,1.8s						
KSRS	Korea Array	48.08	40	LR	LR	16 02 11.5	
	comp=Z,31nm,18.6s,baz=79,slow=41						
ASAR	Alice Springs	49.07	125	P	P	15 38 02.2	-0.2
	comp=Z,1.1nm,1.0s,baz=305,slow=5.5,SNR=3.5						
ZALV	Zalesovo Beam	51.24	355	eP	P	15 38 16.1	-2.2
ZALV	Zalesovo Beam	51.24	355	P	P	15 38 17.8	-0.4
	comp=Z,0.7nm,0.5s,baz=190,slow=7.4,SNR=3.7						
ZALV				LR	LR	16 01 57.0	
	comp=Z,45nm,19.4s,baz=61,slow=38						
ZAA1	Zalesovo Array	51.24	355	eP	P	15 38 17.8	-0.5
ABKAR	Akbulak array	53.45	335	eP	P	15 38 33.2	-1.5
	comp=Z,4.6nm,1.2s						
BR101	Keskin Array S	63.73	313	eP	P	15 39 50.4	+3.5
BRTR	Keskin Array B	63.73	313	P	P	15 39 50.4	+3.5
	comp=Z,0.2nm,0.4s,baz=122,slow=7.1,SNR=3.0						
BRTR				LR	LR	16 10 22.9	
	comp=Z,21nm,18.2s,baz=104,slow=39						
FIA0	FINESS Array S	75.90	333	eP	P	15 41 00.3	-0.7
FINES	FINESS Array B	75.90	333	P	P	15 41 00.3	-0.7
	comp=Z,1.2nm,0.8s,baz=179,slow=7.0,SNR=3.1						
GEA0	GERESS Array S	79.76	319	eP	P	15 41 21.7	-1.2
GERES	GERESS Array B	79.76	319	P	P	15 41 23.6	+0.7
	comp=Z,1.0nm,0.8s,baz=104,slow=5.6,SNR=7.8						
NOA	NORSAR Array B	82.76	331	LR	LR	16 20 45.9	
	comp=Z,11nm,19.1s,baz=325,slow=37						
TXAR	Lajitas Array	144.92	23	PKP	PKPdf	15 48 52.2	-0.4
	comp=Z,0.5nm,0.9s,baz=242,slow=2.7,SNR=4.3						

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*IDC **24** 15:32:39.0±1.2,52°.71N×132°.18W,h0^{km},mb3.8/4, mb1 3.8/8,mb1mx3.5/43,mbtmp3.6/8,ML3.3/4,MS2.9/1, Ms1 2.9/1,ms1mx2.3/49,Error ellipse: s-maj=18.9km s-min=6.6km az=45.0*

*PGC **24** 15:32:40.2±1.2,52°.74N×132°.27W,h24^{km},ML3.9/19, 64km southwest of Sandspit, Bc Haida Gwaii Region*

ISC 24 15:32:40.2±1.1**,52°.73N**±0°.04×**132°.14W**±0°.05**,h12^{km}**±7^{km}**, n44,σ2^{s}01**/61**,mb3.8**/4**,Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HG1B	Mitchell Dam	0.21	1	P	Pb	15 32 45.6	-0.4
HG1B				S	Sb	15 32 49.4	+1.6
BNB	Barry Inlet	0.28	122	P	Pb	15 32 47.9	+0.7
BNB				S	Sb	15 32 53.0	+1.1
MOBC	Moresby Island	0.43	14	P	Pg	15 32 49.4	+0.6
MOBC				S	Sg	15 32 56.2	+1.6
HG3B	Hotspring	0.45	109	P	Pb	15 32 50.5	+0.5
HG3B				S	Sb	15 32 57.7	+1.0
DIB	Dawson Inlet,	0.52	337	P	Pg	15 32 49.9	-0.5
DIB				S	Sg	15 32 56.5	-0.8
H02S1	DAWSON INLET T	0.52	337	Pg	Pg	15 32 49.9	-0.5
H02S1				Lg	Lg	15 32 56.6	
HG4B	Hotspring	0.72	127	P	Pb	15 32 54.6	-0.1
HG4B				S	Sn	15 33 05.3	-1.9
MASB	Masset	1.29	3	P	Pn	15 33 03.5	-0.6
NDB	Naden	1.32	339	P	Pn	15 33 02.5	-2.0
NDB				S	Sb	15 33 19.6	-2.4
RUBB	Prince Rupert	1.96	34	Pn	Pn	15 33 12.6	-0.6
RUBB				Sn	Sn	15 33 35.4	-2.3
RUBB				Sg	Sb	15 33 41.9	+1.7
BBB	Bella Bella	2.52	101	Pn	Pn	15 33 20.3	-0.6
BBB				Sn	Sn	15 33 49.9	-1.7
BBB	Bella Bella	2.52	101	Pn	Pn	15 33 20.3	-0.6
	4.3nm,0.3s,baz=286,slow=7.6,SNR=27						
BBB				Pg	Pb	15 33 25.3	0.0
	17nm,0.3s,baz=300,slow=16,SNR=40						
BBB				Sn	Sn	15 33 49.9	-1.7
	25nm,0.3s,baz=316,slow=12,SNR=5.2						
BBB				Lg	Lg	15 33 59.0	
	148nm,0.3s,baz=195,slow=23,SNR=19						
BCBC	Bella Coola	3.31	94	Pn	Pn	15 33 33.1	+1.4
BCBC				Sn	Sn	15 34 10.1	-0.8
PHC	Port Hardy	3.56	123	Pn	Pn	15 33 34.0	-1.2
PHC				Sn	Sn	15 34 13.8	-3.3
PACB	Port Alice, BC	3.69	127	Pn	Pn	15 33 36.4	-0.7
PACB				Sn	Sn	15 34 19.2	-1.3
BPBC	Brooks Peninsu	3.75	132	Pn	Pn	15 33 36.1	-1.8
MAYB	Maynard	3.87	125	Pn	Pn	15 33 38.2	-1.5
MAYB				Sn	Sn	15 34 22.7	-2.5
TLCB	Telegraph Cove	3.96	121	Pn	Pn	15 33 39.1	-1.6
TLCB				Sn	Sn	15 34 23.4	-3.6
WOSB	Woss	4.33	124	Pn	Pn	15 33 45.4	-0.5
WOSB				Sn	Sn	15 34 34.2	-2.0
NCRB	Newcastle Ridg	4.45	119	Pn	Pn	15 33 46.9	-0.7
NCRB				Sn	Sn	15 34 38.0	-1.4
GDR	Gold River	4.84	125	Pn	Pn	15 33 52.6	-0.2
FSB	Fort Saint Jam	4.97	66	Pn	Pn	15 33 56.1	+1.5
FSB				Sg	Sg	15 35 15.9	-3.8
CBB	Campbell River	5.03	120	Pn	Pn	15 33 56.0	+0.6
CBB				Sn	Sn	15 34 49.9	-3.4
TXB	Texada	5.71	119	Pn	Pn	15 34 05.0	+0.2
DLBC	Dease Lake	5.85	11	Pn	Pn	15 34 05.9	-0.9
DLBC				Sg	Sg	15 35 41.9	-5.9
DLBC	Dease Lake	5.85	11	Pn	Pn	15 34 06.8	+0.1
	0.9nm,0.3s,baz=186,slow=20,SNR=7.1						
DLBC				Sn	Sn	15 35 16.7	+3.0
	1.4nm,0.3s,baz=296,slow=22,SNR=3.0						
DLBC				Lg	Lg	15 35 38.6	
	1.8nm,0.3s,baz=315,slow=14,SNR=4.1						
MGB	Mount Grey	6.01	125	Pn	Pn	15 34 08.9	-0.2
SHB	Sechelt	6.07	118	Pn	Pn	15 34 09.1	-0.7
YOUB	Youbou, Lake C	6.29	124	Pn	Pn	15 34 14.7	+1.9
BMBC	Bull Mountain	6.72	56	Pn	Pn	15 34 20.5	+1.7
BMBC				Sg	Sg	15 36 10.0	-5.8
YBH	Yreka Blue Hor	12.71	146	LR	LR	15 40 00.1	
	comp=Z,57nm,20.1s,baz=319,slow=35						
YKA	Yellowknife Ar	13.52	37	Pn	Pn	15 35 50.8	-0.7
	0.1nm,0.3s,baz=226,slow=12,SNR=17						
NVAR	Mina Array Bea	17.22	141	P	P	15 36 42.5	+0.3
	0.1nm,0.3s,baz=333,slow=16,SNR=2.7						
PDAR	Pinedale Array	18.09	114	P	P	15 36 56.4	+4.6
	0.0nm,0.3s,baz=313,slow=11,SNR=3.7						
TXAR	Lajitas Array	31.38	127	P	P	15 39 03.4	+2.5
	0.5nm,0.6s,baz=328,slow=6.8,SNR=7.4						
H11N2	WAKE ISLAND Hy	57.01	259	T	T	16 44 24.4	
	baz=39,slow=76,SNR=615						
H11N3	WAKE ISLAND Hy	57.02	259	T	T	16 44 22.7	
	baz=39,slow=76,SNR=602						
H11N1	WAKE ISLAND Hy	57.03	259	T	T	16 44 23.9	
	baz=39,slow=76,SNR=456						
H11S1	WAKE ISLAND Hy	58.07	258	T	T	16 45 43.4	
	baz=39,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	58.08	258	T	T	16 45 35.1	
	baz=39,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	58.09	258	T	T	16 45 38.0	
	baz=39,slow=76,SNR=11						
ZALV	Zalesovo Beam	69.33	338	P	P	15 43 47.4	+0.3
	1.1nm,0.6s,baz=8.2,slow=7.3,SNR=4.6						
GERES	GERESS Array B	74.72	23	P	P	15 44 20.4	+0.8
	0.4nm,0.7s,baz=340,slow=5.3,SNR=3.0						
MKAR	Makanchi Array	76.58	336	P	P	15 44 30.2	0.0
	0.9nm,0.8s,baz=31,slow=5.1,SNR=8.4						

IDC 24 15:48:48.3±2.4**,8°.29S**×**130°.90E,h0^{km},mb3.6**/1**, mb1 3.5**/4**,mb1mx3.3**/27**,mbtmp3.3**/4**,ML3.0**/3**,MS2.6**/1**, Ms1 2.6**/1**,ms1mx2.3**/20**,Error ellipse: s-maj=89.5km s-min=29.4km az=79.0,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.01	207	Pn	Pn	15 51 27.6	+0.5
	0.1nm,0.3s,baz=34,slow=11,SNR=8.5						
FITZ				Sn	Sn	15 53 23.8	-7.2
	0.2nm,0.3s,baz=122,slow=19,SNR=4.2						
FITZ				LR	LR	15 55 15.8	
	comp=Z,33nm,20.5s,baz=345,slow=35						
WRA	Warramunga Arr	12.05	164	Pn	Pn	15 51 41.3	-0.2
	0.1nm,0.3s,baz=339,slow=14,SNR=6.8						
WRA				Sn	Sn	15 53 49.5	-7.2
	0.2nm,0.3s,baz=334,slow=25,SNR=5.8						
ASAR	Alice Springs	15.56	170	Pn	Pn	15 52 28.8	-0.4
	0.1nm,0.3s,baz=352,slow=13,SNR=8.3						
MKAR	Makanchi Array	69.79	327	P	P	16 00 00.5	0.0
	0.3nm,0.5s,baz=141,slow=7.4,SNR=5.0						

IDC 24 15:56:04.4±1.6**,1°.75N**×**126°.68E,h0^{km},mb3.5**/4**, mb1 3.7**/4**,mb1mx3.4**/36**,mbtmp3.6**/4**,Error ellipse:**

s-maj=164.6km s-min=20.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.83	161	P	P	16 01 09.1	-0.3
	1.7nm,0.6s,baz=340,slow=11,SNR=21						
ASAR	Alice Springs	26.23	165	P	P	16 01 41.5	+0.1
	0.3nm,0.3s,baz=345,slow=6.9,SNR=16						
ASAR				PcP	PcP	16 05 08.3	-0.1
	0.8nm,1.2s,baz=350,slow=2.3,SNR=4.8						
MKAR	Makanchi Array	59.15	326	P	P	16 06 07.2	+0.1
	0.2nm,0.4s,baz=125,slow=7.8,SNR=6.4						
KURBB	Kurchatov Arra	63.37	328	P	P	16 06 35.3	-0.2
	0.3nm,0.3s,baz=128,slow=6.7,SNR=4.3						

SOME ***24*** *16:09:44.1, 42°.48N×79°.62E, h0km*
KRNET ***24*** *16:09:46.0±0.1, 42°.57N×79°.58E, h14km, mb2.3*
NNC ***24*** *16:09:47.0±1.1, 42°.62N×79°.56E, h0km, mb2.9, mpv2.4, Error ellipse: s-maj=7.0km s-min=3.6km az=135.0*
ISC 24 16:09:45.7±1.6**, 42°.55N**±0°.05×**79°.59E**±0°.05**, h13**km±10km**, n25,** σ**0s.77**/46**, 8C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.61	352	eP	Pb	16 09 58.1	-0.3
	baz=20						
SHLS				eS	Sb	16 10 08.1	+1.0
	baz=20						
SHLS	Shalkode	0.61	352	eP	Pb	16 09 58.1	-0.3
	3.1nm,0.1s						
SHLS				eS	Sb	16 10 08.0	+1.0
	19nm,0.2s						
UZB	Uzynbulak	0.73	325	eP	Pg	16 09 59.5	-0.4
	baz=25						
UZB				eS	Sb	16 10 10.4	+0.1
	baz=25						
UZB	Uzynbulak	0.73	325	eP	Pg	16 09 59.5	-0.4
	1.1nm,0.1s						
UZB				eS	Sb	16 10 10.3	+0.1
	6.6nm,0.1s						
PDGK	Podgornoye	0.78	355	⇑P	Pb	16 10 01.6	+0.3
	1.3nm,1.0s						
PDGK				⇑S	Sg	16 10 10.8	-0.4
	0.8nm,0.3s						
PDGK	Podgornoye	0.78	355	⇓iP	Pg	16 10 00.7	-0.2
	baz=55						
PDGK				⇓iS	Sg	16 10 11.0	-0.2
	baz=55						
PRZ	Przheval'sk	0.88	266	⇓iP	Pg	16 10 02.8	+0.1
	baz=65						
PRZ				⇓iS	Sb	16 10 15.1	+0.4
	baz=65						
SATY	Saty	1.01	301	P	Pb	16 10 04.4	-0.7
	1.3nm,0.3s						
SATY				S	Sn	16 10 19.4	-0.4
	3.8nm,0.1s						
SATY	Saty	1.01	301	eP	Pb	16 10 04.4	-0.7
	1.3nm,0.3s						
SATY				eS	Sn	16 10 19.1	-0.7
	3.8nm,0.1s						
KTMS	Ketmen	1.06	32	P	Pb	16 10 05.8	-0.2
	1.2nm,0.1s						
KTMS				S	Sn	16 10 21.3	+0.2
	2.4nm,0.1s						
KTMS	Ketmen	1.06	32	eP	Pb	16 10 05.8	-0.2
	baz=32						
KTMS				eS	Sn	16 10 21.3	+0.2
	baz=32						
KTMS	Ketmen	1.06	32	eP	Pb	16 10 05.8	-0.2
	1.2nm,0.1s						
KTMS				eS	Sn	16 10 21.3	+0.2
	2.4nm,0.1s						
KDJ	Kajisay	1.83	258	⇓iP	Pb	16 10 20.2	+1.0
	baz=57						
KDJ				⇓iS	Sg	16 10 45.0	+0.4
	baz=57						
KOTS	Kotyrbulak	1.94	291	Pg	Pb	16 10 21.8	+0.7
	1.5nm,0.3s						
KOTS				Lg	Lg	16 10 48.9	
	2.6nm,0.2s						
KOTS	Kotyrbulak	1.94	291	eP	Pb	16 10 21.8	+0.7
	baz=91						
KOTS				eS	Sg	16 10 48.9	+0.7
	baz=91						
KOTS	Kotyrbulak	1.94	291	eP	Pb	16 10 21.8	+0.7
	1.5nm,0.3s						
KOTS				eS	Sg	16 10 48.9	+0.7
	2.6nm,0.2s						
MDOK	Medeo	1.96	289	⇓Pg	Pb	16 10 21.5	+0.1
	3.3nm,1.4s						
MDOK				⇓Lg	Lg	16 10 47.7	
	0.8nm,0.5s						
TNSS	Tian-Shan	2.00	285	Pg	Pb	16 10 22.9	+0.7
	1.6nm,0.4s						
TNSS				Lg	Lg	16 10 50.8	
	2.2nm,0.3s						
TNSS	Tian-Shan	2.00	285	eP	Pb	16 10 22.9	+0.7
	baz=85						
TNSS				eS	Sg	16 10 50.8	+0.7
	baz=85						
TNSS	Tian-Shan	2.00	285	eP	Pb	16 10 22.9	+0.7
	1.6nm,0.4s						
TNSS				eS	Sg	16 10 50.8	+0.7
	2.2nm,0.3s						
ULHL	Ulahol	2.50	264	⇑iP	Pb	16 10 30.7	+0.2
	baz=64						
ULHL				⇑iS	Sb	16 11 02.0	+0.8
	baz=64						
BOOM	Boomskoye usch	2.70	270	⇓iP	Pb	16 10 32.9	-1.0
	baz=70						
BOOM				⇓iS	Sb	16 11 06.5	-0.5
	baz=70						
NRN	Naryn	2.90	249	⇓iP	Pb	16 10 36.4	-1.0
	baz=48						
NRN				⇓iS	Sb	16 11 12.9	0.0
	baz=48						
TKM2	Tokmak 2	2.96	279	⇑Pg	Pb	16 10 39.9	+1.4
	3.0nm,1.2s						
TKM2				⇑Lg	Lg	16 11 17.7	
	2.9nm,1.3s						
TKM2	Tokmak 2	2.96	279	⇑iP	Pb	16 10 36.4	-2.1
	baz=78						
TKM2				⇑iS	Sb	16 11 12.5	-2.2
	baz=78						

NEIC ***24*** *16:40:22.2±0.4, 31°.24S×68°.48W, h94km±4km, mb4.7/2, Error ellipse: s-maj=7.3km s-min=4.5km az=84.0*
IDC ***24*** *16:40:22.4±2.2, 31°.25S×68°.50W, h94km±19km, mb3.9/12, mb1 4.0/16, mb1mx3.8/36, mbtmp4.2/16, Error ellipse: s-maj=21.4km s-min=13.0km az=79.0*
ISCJB ***24*** *16:40:23.3±0.3, 31°.27S±0°.03×68°.62W±0°.05, h118km±2km, mb4.4/17, Error ellipse: s-maj=7.2km s-min=5.2km az=175.8*
SJA ***24*** *16:40:24.2±0.6, 31°.29S×68°.65W, h104km±2km, ML4.3, MW4.1*
ISC 24 16:40:23.4±0.5**, 31°.24S**±0°.05×**68°.66W**±0°.05**, h107**km±4km**, n72,** σ**1s.58**/90**, mb4.2**/17**, 1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLL	Cerro Villicun	0.18	120	eP	Pn	16 40 39.6	+1.1
RTLL				IAML		16 40 39.8	
	comp=Z,9µm,0.3s						
RTLL				eS	Sn	16 40 50.5	+0.7
AMOG	MOGNA	0.33	26	eP	Pn	16 40 40.8	+1.7
AMOG				eS	Sn	16 40 52.1	+1.3
CFA	Coronel Fontan	0.52	135	eP	Pn	16 40 41.2	+1.1
CFA				eS	Sn	16 40 53.1	+0.5
RTCV	Cerro Valdivia	0.63	171	⇓eP	Pn	16 40 42.0	+1.0
ACCO	Cerro Coronel	0.73	332	eP	Pn	16 40 44.2	+2.0
RTLS	Leoncito	0.78	224	eP	Pn	16 40 43.9	+1.3
RTLS				eS	Sn	16 40 58.6	+1.7
RTLS				IAML		16 40 59.5	
	comp=Z,4µm,0.4s						
ACDV	Cuesta del Vie	1.14	339	eP	Pn	16 40 48.1	+2.1
ACDV				eS	Sn	16 41 06.3	+3.3
ACDV				IAML		16 41 07.2	
	comp=Z,2µm,0.4s						
AUSP	Uspallata	1.16	212	eP	Pn	16 40 47.8	+1.4
ASAL	Salagasta	1.36	186	eP	Pn	16 40 49.7	+1.3
ARCO	CERRO ARCO	1.61	188	eP	Pn	16 40 52.7	+1.1
ARCO				eS	Sn	16 41 13.7	+0.7
ARCO				IAML		16 41 16.9	
	comp=Z,4µm,0.4s						
ACAN	Cantantal	1.62	130	eP	Pn	16 40 53.2	+1.6
ACAN				eS	Sn	16 41 14.2	+1.2
AAGR	Agrelo	1.85	184	eP	Pn	16 40 55.6	+1.2
APLL	PUNTA DE LOS L	2.02	66	eP	Pn	16 40 58.2	+1.7
APLL				eS	Sn	16 41 23.9	+2.1
APLL				IAML		16 41 24.1	
	comp=Z,784nm,0.2s						
GO04	Tololo Observa	2.13	299	ePn	Pn	16 40 59.3	+1.2
AVIZ	Vizcacheras	2.23	177	eP	Pn	16 41 00.4	+1.1
PEL	Peldehue	2.56	222	ePn	Pn	16 41 03.6	+0.1
ROC1	El Roble	2.65	228	ePn	Pn	16 41 04.7	-0.1
LCO	Las Campanas	2.84	321	ePn	Pn	16 41 08.5	+1.1
GO02	Mina Guanaco	6.11	352	ePn	Pn	16 41 51.0	-0.5
LVC	Limon Verde	8.60	358	P	Pn	16 42 24.3	-1.0
	comp=Z,8.2nm,0.3s,baz=180,slow=11,SNR=56						
LVC				S	Sn	16 43 57.7	-3.0
	comp=Z,1.1nm,0.3s,baz=94,slow=22,SNR=2.0						
GO06	Curarrehue	8.64	195	ePn	Pn	16 42 22.7	-2.8
TRQA	Tornquist	8.75	143	ePn	Pn	16 42 25.7	-1.3
PB04	IPOC Station P	8.97	351	ePn	Pn	16 42 26.7	-3.5
PLCA	Paso Flores	9.60	189	ePn	Pn	16 42 37.1	-1.4
PLCA	Paso Flores	9.60	189	P	Pn	16 42 37.3	-1.3
	comp=Z,0.9nm,0.3s,baz=17,slow=11,SNR=29						
PB01	IPOC Station P	10.18	356	ePn	Pn	16 42 43.3	-3.3
CPUP	Villa Florida	11.07	67	ePn	Pn	16 42 55.5	-3.1
CPUP	Villa Florida	11.07	67	P	Pn	16 42 55.8	-2.8
	comp=Z,0.4nm,0.3s,baz=248,slow=14,SNR=5.6						
PB11	IPOC Station P	11.46	355	ePn	Pn	16 42 59.2	-4.8
MNMC	Minye Minye	12.09	356	ePn	Pn	16 43 08.0	-4.3
LPAZ	La Paz	14.89	2	ePn	Pn	16 43 45.2	-3.9
LPAZ	La Paz	14.89	2	P	Pn	16 43 49.3	+0.3
	comp=Z,0.4nm,0.3s,baz=170,slow=7.1,SNR=21						
GO09	Cerro Castillo	20.20	187	eP	P	16 44 50.1	+0.6
	comp=Z,15nm,1.0s						
USHA	Ushuaia	23.58	180	P	P	16 45 24.8	+0.6
	comp=Z,6.7nm,0.8s,baz=358,slow=7.7,SNR=7.7						
APG	El Apazote	50.52	332	P	P	16 49 12.5	+1.4
	comp=Z,3.2nm,0.7s,baz=82,slow=8.1,SNR=4.1						
SNAA	Sanae	53.09	159	P	P	16 49 29.6	+0.3
	comp=Z,1.2nm,0.8s,baz=264,slow=10,SNR=5.0						
QSPA	South Pole Qui	58.99	180	eP	P	16 50 12.2	+0.7
	comp=Z,29nm,1.7s						
QSPA	South Pole Qui	58.99	180	P	P	16 50 12.3	+0.7
	comp=Z,2.8nm,0.7s,baz=160,slow=2.1,SNR=15						
LPIG	La Paz	67.95	319	P	P	16 51 12.3	+1.5
	comp=Z,19nm,0.3s,baz=356,slow=5.8,SNR=3.9						
TXAR	Lajitas Array	68.83	328	P	P	16 51 17.4	+1.0
	comp=Z,0.8nm,0.6s,baz=150,slow=8.4,SNR=14						
TX31	Lajitas Ar. Si	68.83	328	eP	P	16 51 17.6	+1.2
PBMO	Poplar Bluff	70.67	342	eP	P	16 51 28.0	+0.7
	comp=Z,36nm,1.0s						
DBIC	Dimbokro	71.58	70	P	P	16 51 33.5	+0.2
	comp=Z,3.6nm,0.8s,baz=228,slow=8.1,SNR=3.6						
MSTX	Muleshoe	72.40	331	eP	P	16 51 38.6	+0.7
	comp=Z,44nm,0.8s						
BOSA	Boshof	78.79	117	P	P	16 52 14.8	+0.1
	comp=Z,2.3nm,0.9s,baz=208,slow=10,SNR=3.5						
ECSD	EROS Data Cent	78.87	340	eP	P	16 52 14.9	+0.5
	comp=Z,35nm,1.3s						
TOA0	Torodi Ar. Sit	80.57	68	eP	P	16 52 24.2	-0.1
TORD	Torodi Ar. Bea	80.57	68	P	P	16 52 23.4	-0.9
	comp=Z,4.9nm,0.8s,baz=271,slow=5.2,SNR=22						
PDAR	Pinedale Array	82.67	331	P	P	16 52 35.7	+0.7
	comp=Z,0.6nm,0.7s,baz=132,slow=6.0,SNR=7.0						
NVAR	Mina Array Bea	83.33	323	P	P	16 52 39.5	+1.0
	comp=Z,1.4nm,0.9s,baz=144,slow=5.2,SNR=5.1						
ULM	Lac du Bonnet	84.64	343	P	P	16 52 45.2	+0.6
	comp=Z,2.5nm,0.8s,baz=122,slow=6.2,SNR=3.9						
HLID	Hailey	85.41	329	eP	P	16 52 49.7	+0.9
	comp=Z,30nm,0.9s						
SCHQ	Schefferville	85.73	1	P	P	16 52 49.8	-0.1
	comp=Z,2.4nm,0.9s,baz=238,slow=9.5,SNR=3.5						
YKA	Yellowknife Ar	100.40	340	P	Pdif	16 53 57.7	+0.2
	comp=Z,0.2nm,0.7s,baz=135,slow=6.0,SNR=4.0						
ASAR	Alice Springs	121.28	204	PKP	PKPdf	16 59 03.4	-1.0
	comp=Z,0.6nm,0.7s,baz=136,slow=2.0,SNR=5.6						
WRA	Warramunga Arr	124.53	206	PKP	PKPdf	16 59 10.2	-0.5
	comp=Z,1.0nm,0.6s,baz=166,slow=1.6,SNR=13						
CHGR	Chuyangaron	144.88	66	ePKPdf	PKPdf	16 59 47.4	-0.5
GAR	Garm	145.79	65	ePKPdf	PKPab	16 59 50.2	-0.6
AAK	Ala-Archa	148.66	58	ePKPbc	PKiKP	16 59 59.0	-0.4
NRN	Naryn	149.95	60	ePKPbc	PKiKP	17 00 02.0	-0.4
KSH	Kashi	150.15	64	PKPbc	PKiKP	17 00 02.6	0.0
KSH				sPKP		17 00 32.9	
KSH				PP	PP	17 03 35.8	-2.2
ZAA0	Zalesovo Array	150.38	32	ePKPbc	PKiKP	17 00 02.1	-0.2
ZALV	Zalesovo Beam	150.38	32	ePKPbc	PKPbc	17 00 01.9	+0.2
ZALV				pPKPbc	pPKPdf	17 00 28.3	+2.3
ZALV	Zalesovo Beam	150.38	32	PKPbc	PKiKP	17 00 02.3	-0.1
	comp=Z,4.7nm,0.4s,baz=309,slow=3.3,SNR=24						
ZALV				pPKPbc	pPKPdf	17 00 28.3	+2.3
	comp=Z,2.9nm,0.6s,baz=328,slow=3.1,SNR=2.4						
MAKZ	Makanchi	152.60	47	ePKPbc	PKiKP	17 00 07.1	-0.2
MK31	Makanchi Array	152.80	47	ePKPbc	PKiKP	17 00 07.5	-0.2
MK31				ePKPab	PKPab	17 00 19.2	+0.3
MKAR	Makanchi Array	152.80	47	ePKPbc	PKiKP	17 00 07.5	-0.2
MKAR				ePKPab	PKPab	17 00 19.1	+0.2
MKAR				pPKPbc	pPKPbc	17 00 34.7	-2.3
MKAR	Makanchi Array	152.80	47	PKPbc	PKiKP	17 00 07.9	+0.2
	comp=Z,1.9nm,0.7s,baz=309,slow=1.8,SNR=18						
MKAR				PKPab	PKPab	17 00 19.4	+0.5
	comp=Z,1.8nm,0.6s,baz=287,slow=3.1,SNR=16						
MKAR				pPKPbc	pPKPbc	17 00 34.7	-2.3
	comp=Z,1.1nm,0.7s,baz=305,slow=1.8,SNR=4.3						
MK01	Makanchi Array	152.82	47	ePKPbc	PKiKP	17 00 07.7	0.0
MK01				ePKPab	PKPab	17 00 19.3	+0.3
SONM	Songino Array	163.00	11	PKPab	PKPab	17 01 03.4	+0.4
	comp=Z,0.4nm,0.5s,baz=350,slow=5.9,SNR=3.0						
CMAR	Chiang Mai Arr	163.03	136	PKP	PKPdf	17 00 14.5	+0.9
	comp=Z,0.4nm,0.3s,baz=297,slow=0.3,SNR=4.1						
LZH	Lanzhou	172.10	50	ePKP	PKPdf	17 00 20.9	+1.1
LZH				pPKP	pPKPdf	17 00 46.1	-3.5
LZH				sPKP		17 00 57.8	
LZH				PKP	PKPab	17 01 47.9	+4.2

ISCJB ***24*** *16:42:39.1±0.4, 7°.65S±0°.04×127°.96E±0°.04, h142km, mb3.6/5, Error ellipse: s-maj=7.2km s-min=4.6km az=43.7*
DJA ***24*** *16:42:39.8±1.4, 8°S±4°×12°8E±°, h15km±12km, M4.9/13, mB5.5/3, mb4.9/7, MLv4.8/13, Mw(mB)5.0/3*
IDC ***24*** *16:42:41.3±1.5, 7°.52S×127°.81E, h155km±16km, mb3.4/5, mb1 3.7/8, mb1mx3.5/32, mbtmp4.2/8, Error ellipse: s-maj=16.4km s-min=12.5km az=107.0*
ISC 24 16:42:39.9±0.7**, 7°.65S**±0°.06×**127°.95E**±0°.07**, h142**km**, n23,** σ**2s.21**/27**, mb3.7**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	3.34	96	P	Pn	16 43 34.2	+2.9
BNDI	Bandanaira	3.66	32	P	Pn	16 43 35.4	-0.1
SOEI	Soe	4.20	240	P	Pn	16 43 44.1	+1.5
SOEI				S	Sn	16 44 32.4	+1.0
BATI	Baumata	4.94	239	P	Pn	16 43 54.4	+2.0
BATI	Baumata	4.94	239	P	Pn	16 43 54.4	+2.0
	71nm,0.3s,baz=122,slow=2.9,SNR=78						
BATI				S	Sn	16 44 49.8	+1.0
	71nm,0.3s,baz=86,slow=5.2,SNR=17						
MMRI	Maumere	5.74	260	P	Pn	16 44 03.4	+0.4
FAKI	Fak Fak	6.36	43	P	Pn	16 44 11.5	+0.2
SIJI	Sorong	7.50	26	P	Pn	16 44 27.6	+0.9
	12nm,0.3s,baz=200,slow=11,SNR=48						
SIJI				S	Sn	16 45 51.5	+1.0
	1.1nm,0.3s,baz=252,slow=20,SNR=2.8						
SWI	Sorong	7.50	26	P	Pn	16 44 27.9	+1.2
BASI	Baing, Sumba	7.71	250	P	Pn	16 44 31.0	+1.5
WSI	Waingapu	7.82	255	P	Pn	16 44 30.9	-0.1
BKSI	Bulukumba	8.11	286	P	Pn	16 44 34.8	0.0
RKPI	Ransiki, Papua	8.70	46	P	Pn	16 44 42.5	-0.2
PLAI	Plampang	10.13	263	P	Pn	16 45 00.7	-1.1
FITZ	Fitzroy Crossi	10.63	192	P	Pn	16 45 07.2	-1.1
	1.9nm,0.3s,baz=16,slow=7.1,SNR=44						
FITZ				S	Sn	16 46 58.5	-7.3
	4.4nm,0.3s,baz=62,slow=14,SNR=9.4						
WRA	Warramunga Arr	13.71	154	P	Pn	16 45 47.4	-1.0
	1.2nm,0.3s,baz=320,slow=14,SNR=49						
WRA				S	Sn	16 48 09.3	-11
	3.3nm,0.3s,baz=331,slow=22,SNR=15						
ASAR	Alice Springs	16.93	161	P	Pn	16 46 30.2	+1.9
	2.2nm,0.3s,baz=340,slow=11,SNR=286						
ASAR				S	S	16 49 28.7	-8.5
	1.2nm,0.3s,baz=319,slow=18,SNR=8.7						
CTA	Charters Tower	21.62	127	P	P	16 47 20.9	+2.0
	1.3nm,0.6s,baz=280,slow=11,SNR=2.7						
STKA	Stephens Creek	27.26	154	P	P	16 48 12.3	+1.4
	1.7nm,0.6s,baz=320,slow=9.0,SNR=6.4						
KSRS	Korea Array	44.86	360	P	P	16 50 39.3	-0.7
	1.3nm,0.6s,baz=178,slow=9.4,SNR=12						
MKAR	Makanchi Array	67.67	328	P	P	16 53 20.2	-1.4
	0.4nm,0.5s,baz=119,slow=7.8,SNR=12						
ZALV	Zalesovo Beam	71.28	335	P	P	16 53 42.7	-0.9
	0.5nm,0.3s,baz=139,slow=5.6,SNR=3.2						
LPAZ	La Paz	151.39	146	PKPab	PKPab	17 02 28.6	+1.5
	0.9nm,0.6s,baz=273,slow=3.7,SNR=4.8						

NEIC ***24*** *16:43:38.0±0.3, 24°.13S×66°.86W, h166km±2km, mb4.9/215, Error ellipse: s-maj=4.8km s-min=2.8km az=68.0*
IGQ ***24*** *16:43:37.3±2.8, 24°S±14°×6°7W±2°5, h47km*
ISCJB ***24*** *16:43:37.9±0.2, 24°.05S±0°.02×66°.90W±0°.03, h180km±2km, mb4.8/229, Error ellipse: s-maj=4.7km s-min=2.9km az=41.8*
MOS ***24*** *16:43:38.3±1.2, 24°.14S×66°.97W, h179km, mb4.9/49, Error ellipse: s-maj=11.1km s-min=6.0km az=110.0*
SJA ***24*** *16:43:38.6, 24°.19S×67°.14W, h203km, ML4.1, MW4.8*
IDC ***24*** *16:43:38.9±0.8, 24°.12S×66°.85W, h172km±6km, mb4.3/23, mb1 4.5/29, mb1mx4.4/40, mbtmp4.9/29, Error ellipse: s-maj=11.1km s-min=7.5km az=56.0*
GUC ***24*** *16:43:40.6±0.4, 24°.25S×67°.42W, h192km±16km, ML5.2*
VAO ***24*** *16:43:40.0±0.3, 24°.13S×66°.92W, h186km±4km, mb5.0*
GCMT ***24*** *16:43:44.0±0.3, 24°.25S±0°.02×67°.09W±0°.03, h191km±3km, MW5.0/77, Moment Tensor Solution. s19,c23; s77,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.50±.15; $M_{\theta\theta}$-1.26±.16; $M_{\phi\phi}$3.76±.20; $M_{r\theta}$0.90±.10; $M_{\theta\phi}$0.20±.18; $M_{\phi r}$-2.76±.15; Best double couple: $M_0$4.33600×10^{16} NP1:ϕ_s344.00000°,δ68.00000°,λ-109.00000°. NP2: ϕ_s207.00000°,δ29.00000°,λ-51.00000°. Principal axes: T 4.8060, Plg21.0000°, Azm89.0000°; N -0.9400, Plg18.0000°, Azm352.0000°; P -3.8660, Plg62.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 24 16:43:39.4±0.5**, 24°.16S**±0°.03×**67°.07W**±0°.04**, h182**km±4km**, n965,** σ**1s.21**/996**, mb4.8**/229**, 11C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.53	112	eP	Pn	16 44 13.7	+1.8
SLA				eS	Sn	16 44 40.2	+3.0
SLA				IAML		16 44 40.3	
	comp=Z,1µm,0.7s						
LVC	Limon Verde	2.29	312	ePn	Pn	16 44 21.0	+0.9
LVC				eSn	Sn	16 44 52.0	+0.2
LVC	Limon Verde	2.29	312	eP	Pn	16 44 21.1	+0.9
LVC				eS	Sn	16 44 52.5	+0.8
LVC	Limon Verde	2.29	312	eP	Pn	16 44 21.0	+0.9
LVC				e		16 44 52.0	
LVC	Limon Verde	2.29	312	P	Pn	16 44 21.4	+1.3
	comp=Z,380nm,0.3s,baz=168,slow=7.4,SNR=480						
LVC				S	Sn	16 44 52.2	+0.4
	comp=Z,2µm,0.3s,baz=274,slow=19,SNR=72						
LVC	Limon Verde	2.29	312	P	Pn	16 44 21.1	+0.9
LVC				P		16 44 21.2	
LVC	Limon Verde	2.29	312	eP	Pn	16 44 21.1	+0.9
PB15	IPOC Station P	2.40	293	eP	Pn	16 44 21.9	+0.7
PB15				eS	Sn	16 44 53.6	0.0
PB15	IPOC Station P	2.40	293	⇑eP	Pn	16 44 21.9	+0.7
PB15				eS	Sn	16 44 53.1	-0.6
PB15	IPOC Station P	2.40	293	P	Pn	16 44 21.9	+0.7
YJA	Yavi	2.44	36	eP	Pn	16 44 23.9	+2.0
YJA				eS	Sn	16 44 58.6	+3.7
GO02	Mina Guanaco	2.50	246	ePn	Pn	16 44 22.8	+0.3
GO02				eSn	Sn	16 44 55.9	-0.1
GO02	Mina Guanaco	2.50	246	eP	Pn	16 44 23.0	+0.5
GO02				eS	Sn	16 44 55.5	-0.6
PB06	IPOC Station P	2.71	302	⇑eP	Pn	16 44 25.6	+0.7
PB06				eS	Sn	16 44 59.7	-0.5
PB06				IAML		16 45 02.1	
	comp=E,14µm,0.3s						
PB06	IPOC Station P	2.71	302	P	Pn	16 44 25.6	+0.7
PB14	IPOC Station P	3.08	261	⇑eP	Pn	16 44 28.8	-0.6
PB14				eS	Sn	16 45 05.7	-2.6
PB14				IAML		16 45 14.6	
	comp=E,3µm,0.5s						
PB14	IPOC Station P	3.08	261	P	Pn	16 44 28.7	-0.6
PB09	IPOC Station P	3.09	319	eP	Pn	16 44 30.3	+1.0
PB09				eS	Sn	16 45 08.1	-0.2
PB05	IPOC Station P	3.16	294	eP	Pn	16 44 30.4	+0.3
PB05				eS	Sn	16 45 08.9	-0.8
PB05	IPOC Station P	3.16	294	⇑eP	Pn	16 44 30.5	+0.3
PB05				eS	Sn	16 45 07.2	-2.5
PB05				IAML		16 45 11.7	
	comp=E,4µm,0.2s						
PB05	IPOC Station P	3.16	294	P	Pn	16 44 29.8	-0.3
PB03	IPOC Station P	3.24	310	P	Pn	16 44 31.2	0.0
PB10	IPOC Station P	3.26	281	ePn	Pn	16 44 31.1	-0.1
PB10	IPOC Station P	3.26	281	⇑eP	Pn	16 44 31.2	-0.1
PB10				eS	Sn	16 45 09.4	-2.3
PB10				IAML		16 45 15.5	
	comp=E,3µm,0.5s						
PB10	IPOC Station P	3.26	281	P	Pn	16 44 31.1	-0.1
PB04	IPOC Station P	3.37	302	ePn	Pn	16 44 32.6	-0.2
PB04	IPOC Station P	3.37	302	P	Pn	16 44 32.5	-0.2
PB07	IPOC Station P	3.55	312	⇑eP	Pn	16 44 35.1	0.0
PB07				eS	Sn	16 45 16.1	-2.4
PB07	IPOC Station P	3.55	312	P	Pn	16 44 35.0	0.0
PB01	IPOC Station P	3.82	324	ePn	Pn	16 44 37.9	-0.5
PB01	IPOC Station P	3.82	324	P	Pn	16 44 37.9	-0.5
PB02	IPOC Station P	3.84	317	P	Pn	16 44 38.5	-0.3
CYA	Choya	4.42	165	eP	Pn	16 44 46.4	+0.5
CYA				IAML		16 44 47.6	
	comp=Z,98nm,0.5s						
CYA				eS	Sn	16 45 36.5	-1.6
PB08	IPOC Station P	4.44	334	P	Pn	16 44 46.7	+0.1
PB11	IPOC Station P	4.99	331	ePn	Pn	16 44 52.0	-1.4
PB11	IPOC Station P	4.99	331	P	Pn	16 44 51.5	-1.9
PSGC	Pisagua	5.35	327	⇑eP	Pn	16 44 56.2	-1.9
PSGC				eS	Sn	16 45 55.7	-4.3
PSGC	Pisagua	5.35	327	P	Pn	16 44 55.9	-2.1
MNMC	Minye Minye	5.53	334	ePn	Pn	16 44 59.4	-1.1
MNMC	Minye Minye	5.53	334	P	Pn	16 44 59.6	-1.0
LCO	Las Campanas	5.83	213	ePn	Pn	16 45 01.9	-2.5
LCO	Las Campanas	5.83	213	eP	Pn	16 45 01.9	-2.5
LCO	Las Campanas	5.83	213	eP	Pn	16 45 07.8	+3.4
APLL	PUNTA DE LOS L	6.23	176	eP	Pn	16 45 08.4	-1.0
PB12	IPOC Station P	6.30	331	P	Pn	16 45 08.2	-2.2
GO04	Tololo Observa	6.85	208	ePn	Pn	16 45 15.3	-2.5
LPAZ	La Paz	7.89	353	P	Pn	16 45 32.1	+0.3
	comp=Z,48nm,0.3s,baz=155,slow=7.8,SNR=186						
LPAZ				S	Sn	16 46 59.8	-1.1
	comp=Z,4.4nm,0.3s,baz=320,slow=17,SNR=4.1						
LPAZ	La Paz	7.89	353	eP	Pn	16 45 32.3	+0.4
CPUP	Villa Florida	9.08	106	ePn	Pn	16 45 45.2	-1.6
CPUP	Villa Florida	9.08	106	P	Pn	16 45 44.7	-2.1
	comp=Z,0.9nm,0.3s,baz=291,slow=11,SNR=22						
CPUP	Villa Florida	9.08	106	eP	Pn	16 45 45.9	-0.9
ROC1	El Roble	9.45	201	ePn	Pn	16 45 49.5	-2.4
PEL	Peldehue	9.50	199	ePn	Pn	16 45 52.2	-0.2
PEL	Peldehue	9.50	199	eP	Pn	16 45 52.2	-0.2
AQDB	Aquidauana	11.14	73	eP	Pn	16 46 12.0	-1.8
TRCB	Terra Rica	13.32	87	eP	Pn	16 46 40.6	-1.0
SALV	Santo Antonio	13.47	55	eP	Pn	16 46 41.8	-1.8
CPSB	Cacapava Do Su	13.62	120	eP	Pn	16 46 44.5	-0.7
PTGB	Pitanga	13.68	95	eP	Pn	16 46 46.7	+0.5
ITAB	Concordia	13.81	106	eP	Pn	16 46 46.5	-1.1
PLTB	Pedras Altas	14.10	125	eP	Pn	16 46 48.2	-3.1
C2SB	Chapadao do Su	14.29	71	eP	Pn	16 46 54.0	+0.3
TRQA	Tornquist	14.52	164	ePn	Pn	16 46 54.8	-1.7
TRQA	Tornquist	14.52	164	eP	Pn	16 46 54.8	-1.7
TRQA	Tornquist	14.52	164	P	P	16 46 58.3	+0.2
TRQA	Tornquist	14.52	164	eP	Pn	16 46 54.2	-2.2
NNA	Nana	15.25	321	ePn	Pn	16 47 04.8	-0.8
	comp=Z,16nm,0.7s						
NNA	Nana	15.25	321	P	P	16 47 07.2	+0.8
	comp=Z,1.6nm,0.3s,baz=91,slow=6.3,SNR=10						
NNA	Nana	15.25	321	P	P	16 47 08.8	+2.5
CNLB	Canela	15.37	113	eP	Pn	16 47 05.7	-1.3
GO06	Curarrehue	15.83	193	ePn	Pn	16 47 11.6	-0.9
	comp=Z,172nm,1.0s						
FRTB	Fartura	16.05	91	eP	Pn	16 47 15.4	+0.1
ITRB	Iturama	16.12	77	eP	P	16 47 15.6	-0.3
TIJ01	Guaruva-PR	16.45	98	eP	P	16 47 19.2	-0.5

TER01	Tubaro-SC	16.66	109	eP	P	16 47 21.3	-0.4
PLCA	Paso Flores	16.79	189	eP	P	16 47 23.0	-0.1
	comp=Z,50nm,0.8s						
PLCA				ScP	ScP	16 55 19.6	+1.1
PLCA	Paso Flores	16.79	189	P	P	16 47 23.4	+0.2
	comp=Z,0.9nm,0.3s,baz=34,slow=12,SNR=13						
PLCA				ScP	ScP	16 55 19.6	+1.1
	comp=Z,0.1nm,0.3s,baz=45,slow=1.4,SNR=4.4						
PLCA	Paso Flores	16.79	189	eP	Pn	16 47 23.6	-0.4
BB19B	Bebedouro	17.39	83	eP	P	16 47 28.2	-1.7
IPMB	Ipameri, GO	18.63	74	eP	P	16 47 42.8	-0.6
BDFB	Brasilia	19.80	68	eP	P	16 47 54.9	-1.2
	comp=Z,423nm,0.9s						
BDFB	Brasilia	19.80	68	eP	P	16 47 54.9	-1.2
BDFB				pmax	pmax		
	comp=Z,423nm,0.9s						
BDFB	Brasilia	19.80	68	P	P	16 47 55.4	-0.8
	comp=Z,6.8nm,0.3s,baz=244,slow=10,SNR=241						
PMNB	Patos De Minas	20.00	78	eP	P	16 47 56.5	-1.8
ATAH	Atahualpa	20.11	325	P	P	16 48 01.8	+2.0
	comp=Z,5.2nm,0.6s,baz=163,slow=17,SNR=5.4						
ESAR	Angra dos Reis	20.77	91	eP	P	16 48 04.8	-1.5
BSCB	Bom Sucesso	20.82	86	eP	P	16 48 05.6	-1.4
MCI6	Montes Claros	22.89	76	eP	P	16 48 25.6	-1.9
MCI8	Montes Claros	22.92	75	eP	P	16 48 25.4	-2.5
GONZ	Gonzanam	23.09	327	P	P	16 48 32.8	+3.0
JANB	Januaria	23.24	71	eP	P	16 48 29.3	-1.4
MCRA	Macar, Loja	23.26	326	P	P	16 48 31.2	+0.3
CAM01	Campos-RJ	23.50	89	eP	P	16 48 31.8	-1.1
PTGA	Pitinga	24.28	17	eP	P	16 48 38.8	-1.3
	comp=Z,18nm,1.3s						
PTGA				S	S	16 52 43.5	-2.2
PTGA	Pitinga	24.28	17	P	P	16 48 39.3	-0.8
	comp=Z,8.0nm,0.3s,baz=53,slow=6.3,SNR=16						
PTGA				S	S	16 52 43.5	-2.2
	comp=Z,6.9nm,0.8s,baz=299,slow=19,SNR=5.1						
PTGA	Pitinga	24.28	17	eP	P	16 48 39.3	-0.8
COHC	Cochancay	24.57	330	P	P	16 48 45.6	+2.8
ALF01	Guarapari-ES	24.60	87	eP	P	16 48 41.8	-1.1
SJMB	Sao Joao De Ma	24.68	82	eP	P	16 48 41.6	-2.1
MILO	Milagro-Astudi	24.88	329	P	P	16 48 51.5	+6.0
PUYO	Puyo, Santa Ro	24.90	333	P	P	16 48 57.9	+12
MORR	Playas El Morr	24.94	327	P	P	16 48 49.4	+3.3
BSFB	Barra de Sao F	24.95	83	eP	P	16 48 44.6	-1.5
RIB01	Linhares ES	25.22	84	eP	P	16 48 47.1	-1.6
ARDO	Archidona, Ten	25.26	334	P	P	16 48 52.7	+3.6
BTAM	Cotopaxi Volca	25.80	333	P	P	16 49 05.2	+11
ANTI	Antisana	25.90	334	P	P	16 49 04.5	+9.1
OTAV	Otavalo	26.64	334	eP	P	16 48 59.3	-2.6
	comp=Z,10nm,1.3s						
OTAV	Otavalo	26.64	334	eP	P	16 48 59.3	-2.6
OTAV				pmax	pmax		
	comp=Z,11nm,1.3s						
OTAV	Otavalo	26.64	334	P	P	16 49 05.6	+3.7
OTAV	Otavalo	26.64	334	eP	P	16 49 01.9	0.0
FLOC	Florencia	26.91	341	eP	P	16 49 04.8	+1.0
FLOC	Florencia	26.91	341	eP	P	16 49 04.8	+1.0
GCUF	Volcan Galeras	27.13	337	eP	P	16 49 12.3	+6.0
GCUF	Volcan Galeras	27.13	337	eP	P	16 49 12.3	+6.0
GO09	Cerro Castillo	27.37	187	eP	P	16 49 07.8	+0.2
	comp=Z,37nm,1.3s						
SOTA	Rioblanco	27.73	339	eP	P	16 49 13.8	+2.1
SOTA	Rioblanco	27.73	339	eP	P	16 49 13.8	+2.1
PCON	Cinco Dias	27.84	340	eP	P	16 49 15.8	+3.1
PCON	Cinco Dias	27.84	340	eP	P	16 49 15.8	+3.1
POPC	Popayan, Colom	28.13	339	eP	P	16 49 16.4	+1.5
POPC	Popayan, Colom	28.13	339	eP	P	16 49 16.4	+1.5
MARP	Paez Belalcaza	28.20	341	eP	P	16 49 16.4	+0.9
MARP	Paez Belalcaza	28.20	341	eP	P	16 49 16.4	+0.9
EFI	East Falkland	28.33	168c	iP	P	16 49 13.6	-2.4
EFI				pmax	pmax		
	comp=Z,33nm,1.0s						
GO10	Punta Arenas	29.11	185	eP	P	16 49 23.0	+0.1
	comp=Z,107nm,0.9s						
CHIC	Chingaza	29.34	346	eP	P	16 49 25.2	-0.6
CHIC	Chingaza	29.34	346	eP	P	16 49 25.2	-0.6
YOTC	Yotoco, Valle	29.39	341	eP	P	16 49 26.1	+0.2
YOTC	Yotoco, Valle	29.39	341	eP	P	16 49 26.1	+0.2
RREF	El Recreo	29.99	343	eP	P	16 49 33.5	+1.8
RREF	El Recreo	29.99	343	eP	P	16 49 33.5	+1.8
PLMC	San Jos del P	30.25	342	eP	P	16 49 33.2	-0.2
PLMC	San Jos del P	30.25	342	eP	P	16 49 33.2	-0.2
RUSC	La Rusia	30.44	348	eP	P	16 49 35.2	-0.4
RUSC	La Rusia	30.44	348	eP	P	16 49 35.2	-0.4
NORC	Norcasia	30.50	345	eP	P	16 49 34.6	-1.0
NORC	Norcasia	30.50	345	eP	P	16 49 34.6	-1.0
USHA	Ushuaia	30.66	182	P	P	16 49 36.7	+0.2
	comp=Z,8.5nm,0.7s,baz=12,slow=5.4,SNR=11						
HELC	Santa Helena	31.27	344	eP	P	16 49 41.7	-1.0
HELC	Santa Helena	31.27	344	eP	P	16 49 41.7	-1.0
PTBC	PUERTO BERRIO,	31.35	346	eP	P	16 49 40.2	-2.8
PTBC	PUERTO BERRIO,	31.35	346	eP	P	16 49 40.2	-2.8
MDP	Montagnes des	32.30	28	P	P	16 49 49.8	-1.5
	comp=Z,8.9nm,0.5s,baz=193,slow=16,SNR=14						
ZARC	Zaragoza, Cauc	32.36	345	eP	P	16 49 49.5	-2.4
ZARC	Zaragoza, Cauc	32.36	345	eP	P	16 49 49.5	-2.4
SDV	Santo Domingo	33.02	354	eP	P	16 49 56.6	-1.2
	comp=Z,9.9nm,0.7s						
SDV	Santo Domingo	33.02	354	eP	P	16 49 56.5	-1.4
SDV	Santo Domingo	33.02	354	eP	P	16 49 56.5	-1.4
SDV	Santo Domingo	33.02	354	P	P	16 49 57.3	-0.5
	comp=Z,2.9nm,0.3s,baz=194,slow=8.5,SNR=7.2						
SDV	Santo Domingo	33.02	354	P	P	16 49 57.5	-0.3
SDV	Santo Domingo	33.02	354	eP	P	16 49 56.4	-1.4
NBLI	Livramento-PB	33.33	65	eP	P	16 49 59.4	-1.1
NBPA	Parau_RN	34.11	62	eP	P	16 50 06.5	-0.5
RCBR	Riachuelo	35.05	64	eP	P	16 50 14.3	-0.9
	comp=Z,71nm,1.0s						
RCBR	Riachuelo	35.05	64	eP	P	16 50 14.3	-0.9
RCBR				pmax	pmax		
	comp=Z,71nm,1.0s						
RCBR	Riachuelo	35.05	64	eP	P	16 50 15.3	+0.1
SMRC	Santa Marta, M	35.79	348	eP	P	16 50 17.3	-4.1
SMRC	Santa Marta, M	35.79	348	eP	P	16 50 17.3	-4.1
RPN	Rapa Nui	38.09	256	i P	P	16 50 43.9	+3.2
JTS	JuntasAbangare	38.44	331	eP	P	16 50 46.0	+2.4
	comp=Z,36nm,1.1s						
JTS	JuntasAbangare	38.44	331	eP	P	16 50 46.1	+2.4
JTS				pmax	pmax		
	comp=Z,36nm,1.1s						
JTS	JuntasAbangare	38.44	331	P	P	16 50 45.8	+2.1
	comp=Z,11nm,0.6s,baz=297,slow=1.8,SNR=11						
JTS	JuntasAbangare	38.44	331	P	P	16 50 46.8	+3.1
PMSA	Palmer Station	40.66	178	eP	P	16 51 03.0	+1.6
ESTN	Estel	41.56	331	P	P	16 51 12.8	+3.4
OBIP	Obispado Ponce	41.95	1	eP	P	16 51 09.0	-3.4
	comp=Z,33nm,0.6s						
TGUH	Tegucigalpa,Un	42.80	330	eP	P	16 51 19.7	+0.3
	comp=Z,48nm,0.8s						
TGUH	Tegucigalpa,Un	42.80	330	P	P	16 51 21.5	+2.1
APG	El Apazote	45.13	327	P	P	16 51 39.5	+1.3
	comp=Z,23nm,0.7s,baz=159,slow=4.3,SNR=32						
CCIG	Comitan	47.06	326	eP	P	16 51 52.2	-0.9
	comp=Z,24nm,1.1s						
CMIG	Matias Romero	49.17	324	P	P	16 52 10.4	+1.3
	comp=Z,7.5nm,0.8s,baz=131,slow=5.7,SNR=11						
061Z	Ochoppi	51.50	344	P	P	16 52 27.4	+1.0
	baz=164						
059Z	Ave Maria	52.09	344	P	P	16 52 31.7	+1.0
	baz=163						
060A	Indiantown	52.49	345	P	P	16 52 34.9	+1.2
	baz=164						
059A	Moore Haven	52.61	344	P	P	16 52 34.7	+0.1
	baz=164						
058A	Arcadia	52.87	343	P	P	16 52 37.3	+0.8
	baz=163						
959A	Okeechobee	53.08	345	P	P	16 52 38.7	+0.7
	baz=164						
859A	Kempfer Cattle	53.60	345	P	P	16 52 42.9	+1.1
	baz=164						
655A	Horseshoe Beac	55.58	343	P	P	16 52 57.6	+1.6
	baz=162						
557A	Orange Park	55.67	345	P	P	16 52 58.1	+1.4
	baz=164						
556A	Lake Butler	55.83	344	P	P	16 52 59.0	+1.2
	baz=163						
555A	McAlpin	56.08	343	P	P	16 53 00.3	+0.7
	baz=162						
554A	Perry	56.24	343	P	P	16 53 01.2	+0.5
	baz=162						
454A	Quitman	56.82	343	P	P	16 53 05.4	+0.5
	baz=162						
356A	Blackshear	57.02	345	P	P	16 53 06.8	+0.6
	baz=163						
VNA3	Neumayer Olymp	57.02	161	P	P	16 53 06.7	+0.8
453A	Whigham	57.14	342	P	P	16 53 07.5	+0.4
	baz=161						
355A	Pearson	57.22	344	P	P	16 53 08.2	+0.7
	baz=163						
VNA1	Neumayer--Stat	57.22	160	P	P	16 53 08.3	+1.1
452A	Marianna	57.38	341	P	P	16 53 09.7	+0.9
	baz=160						
257A	Skidaway Islan	57.39	346	P	P	16 53 10.8	+2.1
	baz=165						
TIGA	Tifton	57.50	343	P	P	16 53 09.8	+0.2
	baz=162						
353A	Camilla	57.58	343	P	P	16 53 10.3	+0.2
	baz=161						
256A	Glennville	57.59	345	P	P	16 53 10.9	+0.7
	baz=164						
VNA2	Neumayer--Watz	57.59	160	P	P	16 53 10.5	+0.7
	baz=288,slow=7.8						
255A	Hazlehurst	57.68	344	P	P	16 53 11.1	+0.3
	baz=163						
254A	Abbeville	57.90	344	P	P	16 53 12.6	+0.2
	baz=162						
352A	Blakely	57.90	342	eP	P	16 53 12.3	0.0
	comp=Z,32nm,0.8s						
352A	Blakely	57.90	342	P	P	16 53 12.6	+0.2
	baz=161						
351A	Pinckard	57.91	341	P	P	16 53 12.9	+0.5
	baz=160						
LNIG	Linares	57.99	325	eP	P	16 53 13.2	+0.1
	comp=Z,18nm,1.1s						
LNIG				ePcP	PcP	16 54 04.0	+0.9
156A	Sylvania	58.15	346	P	P	16 53 14.9	+0.9
	baz=164						
448A	Bay Minette	58.29	339	P	P	16 53 15.3	+0.3
	baz=158						
NHSC	New Hope	58.30	347	eP	P	16 53 16.0	+0.9
	comp=Z,209nm,1.4s						
NHSC	New Hope	58.30	347	P	P	16 53 16.4	+1.3
	baz=166						
252A	Lumpkin	58.34	342	P	P	16 53 16.0	+0.6
	baz=161						
155A	Kite	58.34	345	P	P	16 53 16.3	+0.9
	baz=163						
349A	Repton	58.46	340	P	P	16 53 16.5	+0.3
	baz=158						
154A	Montrose	58.49	344	P	P	16 53 16.7	+0.2
	baz=163						
251A	Midway	58.62	342	P	P	16 53 17.1	-0.2
	baz=160,SNR=9.4						
153A	Fort Valley	58.71	343	P	P	16 53 17.9	0.0
	baz=162						
250A	Grady	58.76	341	eP	P	16 53 17.2	-1.1
	comp=Z,54nm,1.4s						
250A	Grady	58.76	341	P	P	16 53 18.2	-0.1
	baz=159						
Z55A	Blythe	58.84	345	P	P	16 53 19.3	+0.5
	baz=164						
152A	Waverly Hall	58.96	343	P	P	16 53 19.7	0.0
	baz=161						
151A	Opelika	59.00	342	P	P	16 53 19.8	-0.2
	baz=160						
249A	Camden	59.02	340	P	P	16 53 20.2	+0.1
	baz=158,SNR=5.8						
Z54A	Sparta	59.02	345	P	P	16 53 20.3	+0.3
	baz=163						
SNAA	Sanae	59.22	161	P	P	16 53 21.6	+0.4
SNAA	Sanae	59.22	161	eP	P	16 53 21.4	+0.2
	comp=Z,48nm,1.4s						
SNAA	Sanae	59.22	161	eP	P	16 53 21.4	+0.2
SNAA				pmax	pmax		
	comp=Z,48nm,1.4s						
SNAA	Sanae	59.22	161	P	P	16 53 21.6	+0.4
	comp=Z,20nm,0.9s,baz=281,slow=7.3,SNR=48						
Z53A	Monticello	59.24	344	P	P	16 53 21.4	-0.2
	baz=162						
150A	Eclectic	59.27	341	P	P	16 53 21.7	-0.1
	baz=160						
GOGA	Godfrey	59.34	344	eP	P	16 53 22.0	-0.3
	comp=Z,13nm,0.8s						
GOGA	Godfrey	59.34	344	eP	P	16 53 22.0	-0.3
GOGA				pmax	pmax		
	comp=Z,13nm,0.8s						
GOGA	Godfrey	59.34	344	P	P	16 53 22.3	0.0
	baz=162,SNR=5.1						
Z52A	Williamson	59.38	343	P	P	16 53 22.5	-0.1
	baz=161,SNR=5.3						
X59A	McDuffie Farm,	59.42	349	P	P	16 53 22.9	+0.1
	baz=168						
Y55A	Saluda	59.46	346	P	P	16 53 23.5	+0.4
	baz=164,SNR=5.9						
149A	Jones	59.49	341	P	P	16 53 23.1	-0.2
	baz=159						
X58A	Rowland	59.54	348	P	P	16 53 24.1	+0.6
	baz=167						
Y54A	Tignall	59.58	345	P	P	16 53 24.2	+0.3
	baz=163,SNR=5.6						
X57A	Johnson Farm,	59.60	348	P	P	16 53 24.6	+0.6
	baz=166						
JSC	Jenkinsville	59.66	346	eP	P	16 53 24.8	+0.4
	comp=Z,23nm,0.7s						
JSC	Jenkinsville	59.66	346	eP	P	16 53 24.8	+0.4
JSC				pmax	pmax		
	comp=Z,23nm,0.7s						
Z51A	Franklin	59.70	342	P	P	16 53 24.8	0.0
	baz=161						
Y53A	Monroe	59.79	344	P	P	16 53 25.4	+0.1
	baz=162,SNR=6.5						
X56A	White Oak	59.81	347	P	P	16 53 26.2	+0.7
	baz=165,SNR=11						
Z50A	Ashland	59.85	342	eP	P	16 53 25.6	-0.2
	comp=Z,29nm,0.9s						
Z50A	Ashland	59.85	342	P	P	16 53 25.7	-0.2
	baz=160,SNR=12						
Y52A	Lilburn	59.92	344	eP	P	16 53 25.9	-0.3
	comp=Z,21nm,0.8s						
Y52A	Lilburn	59.92	344	P	P	16 53 26.2	0.0
	baz=162,SNR=5.3						
X55A	Gracelyn & Ava	59.92	346	P	P	16 53 26.9	+0.7
	baz=164,SNR=8.0						
LRAL	Lakeview Retre	59.96	341	eP	P	16 53 26.2	-0.3
	comp=Z,17nm,1.0s						
LRAL	Lakeview Retre	59.96	341	P	P	16 53 26.3	-0.2
	baz=159,SNR=5.1						
Z49A	Columbiana	59.97	341	P	P	16 53 26.4	-0.2
	baz=159,SNR=6.2						
147A	Livingston	60.03	339	P	P	16 53 27.5	+0.5
	baz=158						
X54A	Belton	60.16	345	P	P	16 53 28.5	+0.6
	baz=164,SNR=6.5						
Y51A	Rockmart	60.22	343	P	P	16 53 28.1	-0.2
	baz=161,SNR=9.3						
PAULI	Pauline	60.30	346	eP	P	16 53 29.3	+0.6
	comp=Z,79nm,1.7s						
X53A	Estanollee	60.34	345	P	P	16 53 29.3	+0.2
	baz=163						
Y50A	Piedmont	60.40	342	P	P	16 53 29.3	-0.1
	baz=160,SNR=5.3						
HKT	Hockley	60.47	331	eP	P	16 53 30.9	+0.9
	comp=Z,12nm,1.1s						
HKT	Hockley	60.47	331	eP	P	16 53 30.9	+0.9
HKT				pmax	pmax		
	comp=Z,12nm,1.1s						
KMSC	Kings Mountain	60.51	347	eP	P	16 53 30.6	+0.4
	comp=Z,18nm,0.9s						
KMSC	Kings Mountain	60.51	347	P	P	16 53 30.8	+0.6
	baz=165,SNR=6.0						
145A	Houston Renfro	60.51	338	P	P	16 53 30.7	+0.4
	baz=156						
Y49A	Blount Mountai	60.56	342	eP	P	16 53 30.4	-0.2
	comp=Z,19nm,1.0s						
Y49A	Blount Mountai	60.56	342	P	P	16 53 30.4	-0.2
	baz=160						
X52A	Dahlonega	60.58	344	P	P	16 53 30.7	-0.1
	baz=162,SNR=5.7						
W54A	Cherokee Point	60.64	346	P	P	16 53 31.9	+0.9
	baz=164,SNR=7.7						
833A	Chaparral WMA,	60.76	327	eP	P	16 53 32.7	+0.7
	comp=Z,57nm,0.8s						
833A	Chaparral WMA,	60.76	327	P	P	16 53 33.1	+1.1
	baz=146,SNR=12						
X51A	Calhoun	60.79	343	eP	P	16 53 32.3	+0.1
	comp=Z,52nm,0.8s						
X51A	Calhoun	60.79	343	P	P	16 53 32.3	+0.1
	baz=161,SNR=8.9						
Y48A	Jasper	60.83	341	P	P	16 53 32.1	-0.3
	baz=159						
X50B	Fort Payne	60.91	342	P	P	16 53 32.6	-0.4
	baz=160						
W53A	Cullowhee	60.94	345	P	P	16 53 33.4	+0.1
	baz=163,SNR=6.1						
W52A	Murphy	61.06	344	P	P	16 53 34.2	+0.2
	baz=162						
X49A	Woodville	61.15	342	P	P	16 53 34.4	-0.1
	baz=160						
X48A	Hartselle	61.30	341	eP	P	16 53 35.4	-0.1
	comp=Z,33nm,0.9s						
X48A	Hartselle	61.30	341	P	P	16 53 35.6	+0.1
	baz=159,SNR=8.9						
W51A	Cleveland	61.33	344	P	P	16 53 36.0	+0.2
	baz=161,SNR=6.5						
V53A	Saluda	61.34	345	eP	P	16 53 35.8	-0.1
	comp=Z,14nm,0.9s						
V53A	Saluda	61.34	345	P	P	16 53 36.2	+0.3
	baz=163,SNR=5.9						
W50A	Signal Mountai	61.51	343	eP	P	16 53 37.1	+0.1
	comp=Z,31nm,0.9s						
W50A	Signal Mountai	61.51	343	P	P	16 53 37.2	+0.1
	baz=161,SNR=6.7						
CPCT	Cooper Cave	61.54	344	eP	P	16 53 37.1	0.0
	comp=Z,13nm,0.7s						
NATX	Nacogdoches	61.55	333	eP	P	16 53 38.3	+1.0
	comp=Z,43nm,0.6s						
NATX	Nacogdoches	61.55	333	P	P	16 53 38.6	+1.3
	baz=151						
TKL	Tuckaleechee C	61.55	345	eP	P	16 53 37.0	-0.2
	comp=Z,21nm,1.0s						
TKL	Tuckaleechee C	61.55	345	eP	P	16 53 37.0	-0.2
TKL				pmax	pmax		
	comp=Z,21nm,1.0s						
X47A	Russelville	61.60	341	P	P	16 53 37.1	-0.4
	baz=158,SNR=9.2						
V52A	Sevierville	61.69	345	eP	P	16 53 37.7	-0.4
	comp=Z,16nm,0.6s						
V52A	Sevierville	61.69	345	P	P	16 53 38.0	-0.1
	baz=163,SNR=6.9						
SWET	Sewanee	61.70	343	eP	P	16 53 38.0	-0.3
	comp=Z,32nm,0.8s						
W49A	Belvidere	61.70	342	P	P	16 53 38.0	-0.2
	baz=160						
V51A	Loudon	61.84	344	P	P	16 53 39.0	-0.1
	baz=162						
X46A	Booneville	61.86	340	P	P	16 53 38.9	-0.4
	baz=158						
V50A	Pikevile	61.90	343	P	P	16 53 39.7	+0.1
	baz=161,SNR=14						
W48A	Pulaski	61.91	342	P	P	16 53 39.5	0.0
	baz=159,SNR=13						
U53A	Fall Branch	61.95	346	P	P	16 53 39.7	-0.2
	baz=164						
435B	Jarrell	61.97	330	P	P	16 53 40.6	+0.5
	baz=148						
OXF	Oxford	62.08	339	eP	P	16 53 40.1	-0.7
	comp=Z,44nm,1.0s						
OXF	Oxford	62.08	339	eP	P	16 53 40.1	-0.7
OXF				pmax	pmax		
	comp=Z,44nm,1.0s						
OXF	Oxford	62.08	339	P	P	16 53 40.1	-0.7
	baz=157						
PLAL	Pickwick Lake	62.10	341	eP	P	16 53 40.4	-0.5
	comp=Z,14nm,0.8s						
U52A	Thorn Hill	62.16	345	P	P	16 53 40.9	-0.4
	baz=163						
W47A	Westpoint	62.20	341	P	P	16 53 41.3	-0.3
	baz=159,SNR=8.1						
V49A	McMinnville	62.20	343	P	P	16 53 41.3	-0.2
	baz=160,SNR=12						
U51A	La Follette	62.30	345	P	P	16 53 41.8	-0.4
	baz=162						
BLA	Blacksburg	62.32	348	P	P	16 53 42.7	+0.3
	baz=166						
W46A	Michie	62.33	340	P	P	16 53 41.7	-0.7
	baz=158						
TZTN	Tazewell	62.35	345	P	P	16 53 42.2	-0.3
	baz=163						
T54A	Tazewell	62.41	347	P	P	16 53 43.2	+0.2
	baz=165						
V48A	Smith Brothers	62.44	342	eP	P	16 53 42.9	-0.2
	comp=Z,22nm,0.7s						
V48A	Smith Brothers	62.44	342	P	P	16 53 43.0	-0.1
	baz=160,SNR=11						
T53A	Wise	62.53	346	P	P	16 53 43.8	-0.1
	baz=164						
U50A	Jamestown	62.54	344	P	P	16 53 43.6	-0.3
	baz=162						
X43A	Marvell	62.58	338	eP	P	16 53 44.4	+0.4
	comp=Z,43nm,0.9s						
X43A	Marvell	62.58	338	P	P	16 53 44.6	+0.6
	baz=155						
W45A	Hickory Valley	62.60	340	P	P	16 53 43.9	-0.4
	baz=157,SNR=5.5						
WLAR	White Oak Lake	62.64	336	eP	P	16 53 45.7	+1.2
	comp=Z,66nm,0.7s						
V47A	Nunnelly	62.72	341	P	P	16 53 44.4	-0.6
	baz=159,SNR=7.7						
JCT	Junction City	62.74	328	eP	P	16 53 46.1	+0.8
	comp=Z,32nm,0.8s						
JCT	Junction City	62.74	328	eP	P	16 53 46.1	+0.8
JCT				pmax	pmax		
	comp=Z,32nm,0.8s						
JCT	Junction City	62.74	328	P	P	16 53 46.1	+0.8
	baz=146,SNR=12						
T51A	Gray	62.84	345	P	P	16 53 45.2	-0.6
	baz=162						
V46A	Holladay	62.87	341	P	P	16 53 45.1	-0.9
	baz=158						
U49A	Red Boiling Sp	62.88	343	P	P	16 53 45.7	-0.3
	baz=161,SNR=5.5						
S55A	Lewisburg	62.88	348	P	P	16 53 47.0	+0.9
	baz=166,SNR=7.3						
WHTX	Lake Whitney,	62.94	331	eP	P	16 53 47.3	+0.8
	comp=Z,20nm,0.6s						
WHTX	Lake Whitney,	62.94	331	P	P	16 53 47.0	+0.5
	baz=149						
V45A	Humboldt	63.07	340	P	P	16 53 46.8	-0.5
	baz=157						
U48A	Cassie Pea, Po	63.08	342	P	P	16 53 46.9	-0.4
	baz=160,SNR=5.6						
WVT	Waverly	63.09	341	eP	P	16 53 46.9	-0.5
	comp=Z,37nm,0.7s						
WVT	Waverly	63.09	341	eP	P	16 53 46.9	-0.5
WVT				pmax	pmax		
	comp=Z,37nm,0.7s						
WVT	Waverly	63.09	341	P	P	16 53 47.0	-0.5
	baz=159						
T50A	Nancy	63.11	344	P	P	16 53 47.2	-0.4
	baz=162,SNR=6.2						
S53A	Williamson	63.12	347	P	P	16 53 47.4	-0.2
	baz=164						
U47A	Clarksville	63.22	342	P	P	16 53 48.1	-0.2
	baz=159,SNR=15						
X40A	Basin Creek Fa	63.25	336	P	P	16 53 49.1	+0.6
	baz=154						
R55A	Marlinton	63.30	349	P	P	16 53 50.0	+1.1
	baz=166						
S52A	Salyersville	63.32	346	P	P	16 53 48.6	-0.3
	baz=164						
T49A	Edmonton	63.37	344	eP	P	16 53 48.9	-0.4
T49A	Edmonton	63.37	344	P	P	16 53 48.9	-0.4
	baz=161,SNR=12						
R54A	Victor	63.37	348	P	P	16 53 49.6	+0.4
	baz=166,SNR=5.5						
S51A	Beattyville	63.40	345	P	P	16 53 49.3	-0.2
	baz=163						
U46A	Springville	63.41	341	P	P	16 53 49.1	-0.4
	baz=158,SNR=7.1						
U45A	Rockin P Farm,	63.57	341	P	P	16 53 50.3	-0.2
	baz=158						
MIAR	Mount Ida	63.57	336	eP	P	16 53 51.0	+0.4
	comp=Z,35nm,1.2s						
MIAR	Mount Ida	63.57	336	eP	P	16 53 51.0	+0.4
MIAR				pmax	pmax		
	comp=Z,35nm,1.2s						
MIAR	Mount Ida	63.57	336	P	P	16 53 50.9	+0.3
	baz=153,SNR=9.7						
T48A	Bowling Green	63.60	343	P	P	16 53 50.3	-0.5
	baz=160						
S50A	Richmond	63.63	345	P	P	16 53 50.9	-0.1
	baz=162						
W41B	Gary Mavity, V	63.65	337	eP	P	16 53 51.0	-0.1
	comp=Z,29nm,1.6s						
W41B	Gary Mavity, V	63.65	337	P	P	16 53 51.2	+0.1
	baz=154						
T47A	Sharon Grove	63.68	342	eP	P	16 53 50.7	-0.6
	comp=Z,40nm,0.9s						
T47A	Sharon Grove	63.68	342	P	P	16 53 50.9	-0.4
	baz=159,SNR=15						

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R53A  Hurricane        63.71 347  P      P       16 53 51.5 +0.1
      baz=165
U44B  Burton Farm, H   63.74 340  P      P       16 53 51.5 -0.2
      baz=157
NVL   N'lazarevskaya   63.76 159  eP     P       16 53 51.5 +0.1
NVL                               pmax   pmax
      comp=Z,23nm,0.9s
TXAR  Lajitas Array    63.77 325  P      P       16 53 53.2 +1.0
      comp=Z,5.0nm,0.8s,baz=153,slow=8.4,SNR=40
TX31  Lajitas Ar. Si   63.77 325  eP     P       16 53 52.4 +0.2
WHAR  Wooly Hollow     63.77 337  eP     P       16 53 51.8 -0.1
      comp=Z,18nm,1.2s
R52A  Catlettsburg     63.86 346  P      P       16 53 52.0 -0.4
      baz=164
S49A  Springfield      63.95 344  P      P       16 53 52.3 -0.7
      baz=161
T46A  Princeton        63.96 342  P      P       16 53 52.8 -0.3
      baz=159,SNR=8.2
Q55A  Buckhannon       63.99 349  P      P       16 53 54.5 +1.2
      baz=167,SNR=5.1
U44A  Portageville     64.00 340  P      P       16 53 54.4 +1.0
      baz=157
S48A  Wiedeman Farm,   64.03 343  P      P       16 53 52.6 -0.9
      baz=161,SNR=8.5
R51A  Hillsboro        64.03 346  P      P       16 53 53.4 -0.1
      baz=163,SNR=6.3
Q54A  Coxs Mills       64.12 348  P      P       16 53 54.2 +0.1
      baz=166
PARMO Parma            64.17 340  eP     P       16 53 54.6 +0.2
      comp=Z,97nm,0.8s
R50A  Paris            64.19 345  P      P       16 53 54.3 -0.2
      baz=162
S47A  Hartford         64.19 343  P      P       16 53 53.7 -0.9
      baz=160,SNR=12
W39A  Magazine         64.23 336  eP     P       16 53 55.7 +0.9
      comp=Z,23nm,0.8s
W39A  Magazine         64.23 336  P      P       16 53 55.8 +0.9
      baz=153,SNR=12
U42A  Revenden         64.37 338  P      P       16 53 55.5 -0.2
      baz=155,SNR=7.4
Q52A  Bidwell          64.38 347  P      P       16 53 55.7 -0.1
      baz=164
R49A  Shelbyville      64.40 344  P      P       16 53 55.6 -0.3
      baz=162
P55A  Reedsville       64.44 349  P      P       16 53 57.1 +0.9
      baz=167
ABTX  Abilene, Hawle   64.45 330  eP     P       16 53 56.6 +0.1
      comp=Z,17nm,0.8s
ABTX  Abilene, Hawle   64.45 330  P      P       16 53 57.0 +0.5
      baz=147,SNR=5.5
PBMO  Poplar Bluff     64.49 339  eP     P       16 53 56.4 -0.1
      comp=Z,36nm,1.0s
S46A  Don Dixon Farm   64.50 342  P      P       16 53 55.7 -0.9
      baz=159
T44A  Benton           64.51 340  P      P       16 53 56.3 -0.4
      baz=157,SNR=7.3
U41A  Viola            64.59 338  P      P       16 53 56.8 -0.4
      baz=155,SNR=9.7
MCWV  Mont Chateau     64.59 349  P      P       16 53 58.0 +0.8
      baz=167
WCI   Wyandotte Cave   64.63 343  eP     P       16 53 56.6 -0.8
      comp=Z,35nm,0.6s
WCI   Wyandotte Cave   64.63 343  eP     P       16 53 56.6 -0.8
WCI                               pmax   pmax
      comp=Z,35nm,0.6s
WCI   Wyandotte Cave   64.63 343  P      P       16 53 56.7 -0.7
      baz=160
Q50A  Georgetown       64.64 345  P      P       16 53 57.0 -0.5
      baz=163
P54A  Burton           64.65 349  P      P       16 53 58.2 +0.7
      baz=166
Q51A  Peebles          64.67 346  P      P       16 53 57.4 -0.3
      baz=163
R48A  Northridge Ran   64.68 344  P      P       16 53 57.5 -0.3
      baz=161
P53A  Whipple          64.71 348  eP     P       16 53 57.3 -0.6
      comp=Z,34nm,1.0s
P53A  Whipple          64.71 348  P      P       16 53 58.5 +0.6
      baz=165
T43A  Greenville       64.72 340  P      P       16 53 58.0  0.0
      baz=156,SNR=13
S45A  Carrier Mills    64.75 341  P      P       16 53 57.9 -0.3
      baz=158
R47A  Wooly Knot Far   64.75 343  P      P       16 53 57.4 -0.8
      baz=160,SNR=5.2
U40A  Yellville        64.93 337  P      P       16 53 59.3 -0.1
      baz=154,SNR=9.2
T42A  Van Buren        64.94 339  eP     P       16 53 58.9 -0.5
      comp=Z,10nm,1.0s
T42A  Van Buren        64.94 339  P      P       16 53 59.0 -0.5
      baz=156
S44A  Carbondale       64.96 341  P      P       16 53 59.1 -0.4
      baz=158
P52A  Corning          65.00 347  P      P       16 53 59.7 -0.1
      baz=165,SNR=5.8
Q49A  Aurora           65.01 345  P      P       16 53 59.5 -0.4
      baz=162,SNR=5.2
O55A  Ligonier         65.04 350  P      P       16 54 00.9 +0.9
      baz=168
P51A  Williamsport     65.05 346  eP     P       16 53 59.9 -0.2
      comp=Z,44nm,1.4s
P51A  Williamsport     65.05 346  P      P       16 53 59.7 -0.4
      baz=164
S43A  Fulton Ridge,    65.10 340  P      P       16 54 00.1 -0.4
      baz=157,SNR=12
Q48A  North Vernon     65.14 344  P      P       16 54 00.1 -0.7
      baz=161,SNR=11
T41A  Mountain View    65.17 338  P      P       16 54 00.9 -0.1
      baz=155,SNR=7.8
O54A  Avella           65.20 349  P      P       16 54 01.4 +0.3
      baz=166
R45A  Skylar, Fairfi   65.23 342  P      P       16 54 00.4 -0.9
      baz=158,SNR=8.3
SSPA  Standing Stone   65.24 351  P      P       16 54 01.9 +0.6
      baz=169
HHAR  Hobbs            65.25 336  eP     P       16 54 01.5  0.0
      comp=Z,16nm,0.9s
Q47A  Bedord North L   65.33 343  P      P       16 54 01.0 -0.9
      baz=160,SNR=7.6
P50A  Jamestown        65.33 346  P      P       16 54 01.5 -0.4
      baz=163
O52A  Adamsville       65.41 348  P      P       16 54 02.6 +0.2
      baz=165
O53A  New Philadelph   65.42 348  P      P       16 54 02.5  0.0
      baz=166
R44A  Waltonville      65.42 341  P      P       16 54 01.8 -0.8
      baz=158
P49A  Miami Univ. Ec   65.47 345  P      P       16 54 02.2 -0.6
      baz=162
S42A  Caledonia        65.51 339  P      P       16 54 02.7 -0.4
      baz=156,SNR=11
N55A  Marion Center    65.55 350  P      P       16 54 04.2 +0.8
      baz=168
P48A  Milroy           65.57 344  P      P       16 54 02.6 -0.8
      baz=161,SNR=6.3
BLO   Bloomington      65.57 343  eP     P       16 54 02.9 -0.6
      comp=Z,27nm,0.6s
BLO   Bloomington      65.57 343  eP     P       16 54 02.9 -0.6
BLO                               pmax   pmax
      comp=Z,27nm,0.6s
FVM   French Village   65.59 340  eP     P       16 54 03.4 -0.3
      comp=Z,48nm,1.3s
FVM   French Village   65.59 340  eP     P       16 54 03.4 -0.3
FVM                               pmax   pmax
      comp=Z,48nm,1.3s
O51A  Pataskala        65.59 347  P      P       16 54 03.4 -0.2
      baz=164,SNR=5.5
TUL1  Leonard          65.63 335  eP     P       16 54 04.2 +0.3
      comp=Z,14nm,0.8s
TUL1  Leonard          65.63 335  P      P       16 54 04.2 +0.3
      baz=151,SNR=5.9
S41A  Jillco Farms,    65.66 339  P      P       16 54 04.1  0.0
      baz=155,SNR=16
R43A  Red Bud          65.71 340  P      P       16 54 04.5 +0.2
      baz=157
ACSO  Alum Creek Sta   65.75 347  eP     P       16 54 04.3 -0.3
      comp=Z,32nm,1.0s
ACSO  Alum Creek Sta   65.75 347  P      P       16 54 04.6  0.0
      baz=164,SNR=5.9
Q45A  Warren Harvey,   65.76 342  P      P       16 54 03.8 -0.8
      baz=159
O50A  Cable            65.81 346  P      P       16 54 04.6 -0.4
      baz=163
P47A  Martinsville     65.81 344  P      P       16 54 04.1 -0.8
      baz=161,SNR=8.0
WMOK  Wichita Mounta   65.85 332  eP     P       16 54 05.3  0.0
      comp=Z,4.6nm,0.7s
WMOK  Wichita Mounta   65.85 332  eP     P       16 54 05.4  0.0
WMOK                              pmax   pmax
      comp=Z,5.0nm,0.7s
WMOK  Wichita Mounta   65.85 332  P      P       16 54 05.3  0.0
      baz=148,SNR=6.6
N53A  Lisbon           65.89 349  P      P       16 54 05.8 +0.4
      baz=166
N54A  Moraine State    65.89 349  eP     P       16 54 06.1 +0.6
      comp=Z,131nm,1.8s
N54A  Moraine State    65.89 349  P      P       16 54 06.3 +0.8
      baz=167
CCM   Cathedral Cave   65.92 339  eP     P       16 54 05.5 -0.2
      comp=Z,28nm,0.8s
CCM   Cathedral Cave   65.92 339  eP     P       16 54 05.5 -0.2
CCM                               pmax   pmax
      comp=Z,28nm,0.8s
CCM   Cathedral Cave   65.92 339  P      P       16 54 05.7 -0.1
      baz=156
R42A  Luebbering       65.98 340  P      P       16 54 06.1  0.0
      baz=156,SNR=10
O49A  Covington        66.00 346  eP     P       16 54 05.7 -0.6
      comp=Z,28nm,1.1s
O49A  Covington        66.00 346  P      P       16 54 05.9 -0.3
      baz=163
Q44A  Meyer Farm, Va   66.01 341  P      P       16 54 05.5 -0.8
      baz=158
QSPA  South Pole Qui   66.05 180  eP     P       16 54 07.2 +0.8
      comp=Z,118nm,0.9s
QSPA  South Pole Qui   66.05 180  P      P       16 54 07.4 +1.0
      comp=Z,25nm,0.8s,baz=158,slow=1.3,SNR=45
N52A  McGinn’s Farm,   66.05 348  P      P       16 54 06.4 -0.1
      baz=165
P46A  Rosedale         66.17 343  P      P       16 54 06.4 -0.9
      baz=160
R41A  Rosebud          66.18 339  P      P       16 54 07.3 -0.1
      baz=156,SNR=16
M55A  Ridgway          66.19 350  P      P       16 54 07.9 +0.5
      baz=168
P45A  Graceland, Par   66.23 343  eP     P       16 54 06.6 -1.0
      comp=Z,22nm,0.8s
P45A  Graceland, Par   66.23 343  P      P       16 54 06.7 -1.0
      baz=159,SNR=5.0
Q43A  New Douglas      66.25 341  P      P       16 54 07.2 -0.6
      baz=157
O48A  Farmland         66.26 345  P      P       16 54 07.3 -0.6
      baz=162,SNR=6.8
N51A  Ashland          66.29 347  P      P       16 54 07.7 -0.3
      baz=165
N50A  Nevada           66.30 347  P      P       16 54 07.7 -0.4
      baz=164
M54A  Oil Creek Stat   66.37 350  eP     P       16 54 08.5 -0.1
      comp=Z,116nm,1.9s
M54A  Oil Creek Stat   66.37 350  P      P       16 54 09.0 +0.5
      baz=167
P44A  Sand Creek, Wi   66.42 342  P      P       16 54 08.1 -0.8
      baz=158
M53A  WI Miller and    66.47 349  P      P       16 54 09.7 +0.6
      baz=166
Q42A  Golden Eagle     66.47 340  P      P       16 54 09.0 -0.3
      baz=156,SNR=7.1
O47A  Sheridan         66.49 344  P      P       16 54 08.6 -0.7
      baz=161,SNR=7.1
BINY  Binghamton       66.53 353  P      P       16 54 10.7 +1.1
      baz=171
MNTX  Cornudas Mount   66.54 325  eP     P       16 54 09.3 -0.5
      comp=Z,16nm,0.9s
MNTX  Cornudas Mount   66.54 325  P      P       16 54 10.1 +0.2
      baz=142,SNR=18
M51A  Elyria           66.65 348  P      P       16 54 10.4 +0.1
      baz=165
N49A  Columbus Grove   66.67 346  eP     P       16 54 10.1 -0.3
      comp=Z,22nm,0.6s
N49A  Columbus Grove   66.67 346  P      P       16 54 10.2 -0.3
      baz=163,SNR=8.8
Q41A  Truxton          66.73 340  P      P       16 54 10.6 -0.3
      baz=156,SNR=8.1
N48A  Decatur          66.80 345  P      P       16 54 10.6 -0.6
      baz=162
L55A  Hinsdale         66.84 351  P      P       16 54 12.3 +0.7
      baz=168
P43A  Skaggs, Pawnee   66.84 341  P      P       16 54 11.0 -0.5
      baz=158
SFIN  Lafayette        66.86 343  eP     P       16 54 10.5 -1.2
      comp=Z,17nm,0.6s
SFIN  Lafayette        66.86 343  P      P       16 54 10.6 -1.0
      baz=160,SNR=5.8
M50A  Fremont          66.89 347  P      P       16 54 11.5 -0.3
      baz=164
L53A  Girard           66.90 349  P      P       16 54 12.0 +0.1
      baz=167
O45A  Potomac          66.90 343  P      P       16 54 11.0 -0.9
      baz=159,SNR=11
N47A  Urbana           66.98 345  P      P       16 54 11.6 -0.8
      baz=161
ERPA  Erie             67.01 350  P      P       16 54 13.1 +0.5
      baz=167
O44A  Mansfield        67.02 342  P      P       16 54 11.8 -0.9
      baz=159
P42A  Winchester       67.03 341  eP     P       16 54 12.1 -0.6
      comp=Z,21nm,1.1s
P42A  Winchester       67.03 341  P      P       16 54 12.2 -0.6
      baz=157
MSTX  Muleshoe         67.04 328  eP     P       16 54 13.2 +0.1
      comp=Z,44nm,0.8s
MSTX  Muleshoe         67.04 328  P      P       16 54 13.7 +0.7
      baz=145,SNR=24
M49A  Liberty Center   67.15 346  P      P       16 54 13.0 -0.5
      baz=163,SNR=6.2
N46A  Monticello       67.25 344  P      P       16 54 13.4 -0.7
      baz=160,SNR=5.5
AMTX  Amarillo         67.27 330  eP     P       16 54 14.8 +0.3
      comp=Z,30nm,1.4s
AMTX  Amarillo         67.27 330  P      P       16 54 14.9 +0.3
      baz=146
K55A  Perry            67.32 351  P      P       16 54 14.9 +0.3
      baz=169
P41A  Barry, Barry     67.34 340  P      P       16 54 14.3 -0.4
      baz=156,SNR=7.4
U32A  Winter Ranch,    67.34 332  eP     P       16 54 14.7 -0.1
      comp=Z,22nm,0.6s
O43A  Sugar Creek Fa   67.38 342  P      P       16 54 14.1 -0.8
      baz=158
N45A  Kentland         67.41 343  P      P       16 54 14.3 -0.8
      baz=160
M47A  Cromwell         67.42 345  P      P       16 54 14.6 -0.5
      baz=162,SNR=5.4
O42A  Bath             67.52 341  P      P       16 54 15.0 -0.8
      baz=157
N44A  Piper City       67.52 343  P      P       16 54 14.7 -1.1
      baz=159
LIC   Lamto            67.55  72  eP     P       16 54 15.2 -1.4
      comp=Z,99nm,1.9s
HDIL  Hopedale         67.62 342  eP     P       16 54 15.9 -0.6
      comp=Z,26nm,0.6s
HDIL  Hopedale         67.62 342  P      P       16 54 15.8 -0.6
      baz=158,SNR=7.0
M46A  Old House Fiel   67.64 344  P      P       16 54 15.7 -0.8
      baz=161
O41A  Passleys Farm,   67.69 340  P      P       16 54 16.0 -0.9
      baz=156,SNR=5.3
L48A  N Adams          67.70 346  P      P       16 54 16.3 -0.7
      baz=163,SNR=6.5
L49A  Milan            67.72 347  P      P       16 54 16.9 -0.1
      baz=163
TIC   Toumodi          67.76  71  eP     P       16 54 16.6 -1.3
K52A  Tillsonburg      67.78 349  P      P       16 54 17.5 +0.1
      baz=166
KIC   Kosan Boka       67.86  72  eP     P       16 54 17.2 -1.3
      comp=Z,111nm,1.7s
L47A  Sherwood         67.91 345  P      P       16 54 17.4 -0.8
      baz=162,SNR=5.1
DBIC  Dimbokro         67.91  72  P      P       16 54 17.9 -1.0
      comp=Z,4.1nm,0.4s,baz=226,slow=2.8,SNR=12
DBIC                              PP     PP      16 56 48.2 -3.0
      comp=Z,5.6nm,0.9s,baz=254,slow=8.5,SNR=3.0
DBIC  Dimbokro         67.91  72  eP     P       16 54 20.8 +2.0
N43A  Stutzman Famil   67.94 342  P      P       16 54 18.0 -0.4
      baz=158,SNR=18
TYNO  Tyneside         67.95 350  P      P       16 54 18.6 +0.2
      baz=167
M44A  Midewin, Midew   68.05 343  P      P       16 54 18.4 -0.7
      baz=159
N42A  Yates City       68.09 341  P      P       16 54 18.9 -0.4
      baz=157,SNR=8.0
J52A  Paris            68.19 349  P      P       16 54 20.3 +0.4
      baz=167
L46A  Eue Claire       68.20 345  P      P       16 54 19.2 -0.7
      baz=161
N41A  Harden Midland   68.22 341  eP     P       16 54 19.7 -0.4
      comp=Z,36nm,0.8s
N41A  Harden Midland   68.22 341  P      P       16 54 19.8 -0.3
      baz=156
M43A  Waltham Townsh   68.34 342  P      P       16 54 20.5 -0.4
      baz=158,SNR=9.4
319A  Douglas          68.42 322  eP     P       16 54 23.3 +1.6
      comp=Z,30nm,0.6s
K48A  Perry            68.46 347  P      P       16 54 21.1 -0.5
      baz=163,SNR=7.1
121A  Cookes Peak, D   68.47 324  P      P       16 54 24.2 +2.1
      baz=140,SNR=12
DRWO  Darlington Wes   68.53 351  P      P       16 54 21.7 -0.3
      baz=168
DRCO  St. Marys Ceme   68.53 351  P      P       16 54 22.0  0.0
      baz=168
M42A  Sheffield        68.59 342  P      P       16 54 21.6 -0.8
      baz=158
N40A  Mertquake, Sal   68.60 340  P      P       16 54 22.0 -0.5
      baz=156,SNR=7.0
I53A  Kortright Cn E   68.61 350  P      P       16 54 22.2 -0.3
      baz=168
PKRO  Pickering        68.67 351  P      P       16 54 23.2 +0.3
      baz=168
K46A  Dorr             68.71 345  P      P       16 54 22.2 -1.0
      baz=162
KSU1  Kansas State U   68.73 336  eP     P       16 54 22.7 -0.7
      comp=Z,14nm,0.6s
KSU1  Kansas State U   68.73 336  P      P       16 54 23.5 +0.1
      baz=151
M41A  Milan            68.74 341  P      P       16 54 22.8 -0.6
      baz=157,SNR=8.2
L44A  Lake County Fo   68.76 344  P      P       16 54 22.8 -0.6
      baz=160
J49A  Marlette         68.79 347  P      P       16 54 23.1 -0.6
      baz=164
I51A  Listowel         68.83 349  P      P       16 54 24.2 +0.3
      baz=166
J48A  Bridge Port      68.86 347  P      P       16 54 23.2 -0.8
      baz=164
I52A  Shelburne        68.95 350  P      P       16 54 25.0 +0.4
      baz=167
L43A  Garden Prairie   68.98 343  P      P       16 54 24.7 -0.1
      baz=159,SNR=15
DELO  Deloro Mine      69.02 352  P      P       16 54 25.0  0.0
      baz=170
J47A  Sunmer           69.02 346  P      P       16 54 24.7 -0.3
      baz=162
M40A  Post Highland    69.06 341  P      P       16 54 25.0 -0.3
      baz=156,SNR=14
L42A  Oliver, Polo     69.07 342  eP     P       16 54 24.9 -0.5
      comp=Z,20nm,0.7s
L42A  Oliver, Polo     69.07 342  P      P       16 54 25.0 -0.5
      baz=158
BNM   Barren Site      69.11 326  eP     P       16 54 27.1 +1.0
BWLO  Walkerton        69.15 349  P      P       16 54 26.2 +0.4
      baz=166
LENM  Lemitar          69.30 325  eP     P       16 54 28.2 +1.0
J46A  Howard City      69.31 346  P      P       16 54 26.9  0.0
      baz=162
BRCO  Bruce Peninsul   69.33 349  P      P       16 54 27.1 +0.2
      baz=166
M39A  Webster          69.33 340  P      P       16 54 26.5 -0.5
      baz=155
K43A  Burlington       69.36 343  eP     P       16 54 26.9 -0.3
      comp=Z,54nm,0.7s
K43A  Burlington       69.36 343  P      P       16 54 26.9 -0.3
      baz=159,SNR=5.3
L41A  Preston          69.37 342  P      P       16 54 26.7 -0.5
      baz=157,SNR=9.7
PLVO  Plevna           69.46 352  P      P       16 54 28.0 +0.2
      baz=170
LAZ   Ladron           69.57 325  eP     P       16 54 30.2 +1.3
L40A  Anamosa          69.57 341  eP     P       16 54 28.4 -0.1
      comp=Z,35nm,0.8s
L40A  Anamosa          69.57 341  P      P       16 54 28.2 -0.2
      baz=156,SNR=10.0
BMRO  Meriville Lake   69.63 349  P      P       16 54 28.7  0.0
      baz=166
ANMO  Albuquerque      69.64 326  eP     P       16 54 30.6 +1.3
      comp=Z,20nm,0.9s
ANMO  Albuquerque      69.64 326d iP     P       16 54 30.7 +1.4
ANMO                             i *PP   pP      16 55 15.0 +1.0
ANMO                              pmax   pmax
      comp=Z,24nm,1.0s
ANMO  Albuquerque      69.64 326  P      P       16 54 30.9 +1.6
      baz=142
I48A  Sherman Twp      69.70 347  P      P       16 54 29.1 -0.1
      baz=164
K42A  Prairie Point,   69.70 343  P      P       16 54 29.2 -0.1
      baz=158,SNR=13
I47A  Gladwin          69.70 347  P      P       16 54 28.8 -0.4
      baz=163
CBKS  Cedar Bluff      69.71 333  eP     P       16 54 30.4 +0.9
      comp=Z,44nm,0.8s
CBKS  Cedar Bluff      69.71 333  eP     P       16 54 30.4 +0.9
CBKS                              pmax   pmax
      comp=Z,44nm,0.8s
CBKS  Cedar Bluff      69.71 333  P      P       16 54 30.7 +1.2
      baz=148,SNR=11
G53A  Haliburton       69.75 351  P      P       16 54 30.1 +0.6
      baz=169
K41A  Shullsburg       69.81 342  P      P       16 54 29.9  0.0
      baz=157,SNR=14
I46A  Reed City        69.83 346  P      P       16 54 29.2 -0.8
      baz=162
L39A  Vinton           69.86 340  P      P       16 54 30.1 -0.2
      baz=156,SNR=11
TUC   Tucson           69.97 321  eP     P       16 54 32.1 +0.9
      comp=Z,19nm,1.1s
TUC   Tucson           69.97 321  P      P       16 54 32.8 +1.6
      baz=138
J43A  Natural Harves   70.01 344  P      P       16 54 31.1 -0.1
      baz=159,SNR=9.9
SCIA  State Center     70.05 340  eP     P       16 54 31.3 -0.1
      comp=Z,22nm,0.9s
SCIA  State Center     70.05 340  P      P       16 54 31.4 +0.1
      baz=154
JFWS  Jewell Farm      70.07 342  eP     P       16 54 31.4 -0.1
      comp=Z,50nm,0.6s
JFWS  Jewell Farm      70.07 342  eP     P       16 54 31.4 -0.1
JFWS                              pmax   pmax
      comp=Z,50nm,0.6s
JFWS  Jewell Farm      70.07 342  P      P       16 54 31.6 +0.1
      baz=157,SNR=15
H48A  Harrisville      70.12 348  P      P       16 54 31.4 -0.4
      baz=164
K40A  Colesburg        70.13 341  P      P       16 54 31.6 -0.3
      baz=156,SNR=11
J42A  Columbus         70.14 343  P      P       16 54 31.9 -0.1
      baz=158
KLBO  Killbear Provi   70.21 350  P      P       16 54 32.3 +0.1
      baz=167
TOBO  Tobermory, Bru   70.30 349  P      P       16 54 32.7 -0.1
      baz=166
H46A  Fife Lake        70.35 346  P      P       16 54 32.8 -0.4
      baz=162,SNR=5.5
K39A  Oelwein          70.36 341  P      P       16 54 33.1 -0.2
      baz=156,SNR=13
T25A  Trinidad         70.39 329  eP     P       16 54 35.5 +1.6
      comp=Z,16nm,0.8s
T25A  Trinidad         70.39 329  P      P       16 54 35.6 +1.8
      baz=144,SNR=17
I43A  Langenfeld Bro   70.42 344  P      P       16 54 33.5 -0.1
      baz=160,SNR=5.2
J41A  Loganville       70.43 342  P      P       16 54 33.6  0.0
      baz=158,SNR=9.8
ALGO  Algonquin Park   70.49 352  P      P       16 54 34.3 +0.4
      baz=169
GLMI  Grayling         70.50 347  P      P       16 54 34.0  0.0
      baz=163
F52A  Sundridge        70.50 351  P      P       16 54 34.2 +0.2
      baz=168
I42A  Draeger Farm,    70.62 343  eP     P       16 54 34.6 -0.2
      comp=Z,36nm,0.4s
I42A  Draeger Farm,    70.62 343  P      P       16 54 35.1 +0.3
      baz=159,SNR=6.5
J40A  Soldiers Grove   70.66 342  P      P       16 54 35.1  0.0
      baz=157,SNR=9.5
E54A  Lac Daplat, Po   70.85 353  P      P       16 54 36.4 +0.2
      baz=170
E53A  Dumoine, Ponti   70.85 352  P      P       16 54 36.4 +0.2
      baz=170
H43A  Windswept, Lux   70.87 344  P      P       16 54 36.4 +0.1
      baz=160
214A  Organ Pipe Nat   70.88 320  P      P       16 54 38.8 +2.1
      baz=136
J39A  Decorah          70.88 341  P      P       16 54 36.1 -0.3
      baz=156,SNR=9.8
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F49A  Sandfield          70.91 349  P    P    16 54 36.2 -0.2
      baz=165
G46A  Petoskey           71.02 347  P    P    16 54 36.9 -0.2
      baz=163
I41A  Arkdale            71.03 343 eP    P    16 54 37.3  0.0
      comp=Z,17nm,0.8s
I41A  Arkdale            71.03 343  P    P    16 54 37.1 -0.2
      baz=158
F48A  Evansville         71.07 349  P    P    16 54 37.4 -0.1
      baz=165
I40A  Norwalk            71.08 342  P    P    16 54 37.4 -0.2
      baz=157,SNR=6.7
H42A  Shiocton           71.10 344  P    P    16 54 37.6 -0.1
      baz=159
KSCO  Kaye Shedlock’     71.11 331 eP    P    16 54 39.5 +1.5
      comp=Z,26nm,0.8s
KSCO  Kaye Shedlock’     71.11 331  P    P    16 54 39.6 +1.6
      baz=146
X18A  Snowflake          71.16 324 eP    P    16 54 40.4 +1.9
      comp=Z,14nm,1.0s
E51A  G1948 Merrick      71.25 351  P    P    16 54 38.7 +0.1
      baz=168
I39A  Houston            71.30 342 eP    P    16 54 38.6 -0.3
      comp=Z,17nm,0.8s
I39A  Houston            71.30 342  P    P    16 54 38.9 -0.1
      baz=156,SNR=9.4
BGNE  Belgrade           71.32 336 eP    P    16 54 39.8 +0.7
      comp=Z,137nm,0.8s
BGNE  Belgrade           71.32 336  P    P    16 54 39.9 +0.8
      baz=150,SNR=21
E50A  Wahnapitae         71.33 350  P    P    16 54 39.3 +0.3
      baz=167
SDCO  Great Sand Dun     71.39 329 eP    P    16 54 41.3 +1.4
      comp=Z,17nm,1.0s
SDCO  Great Sand Dun     71.39 329  P    P    16 54 41.8 +1.8
      baz=143,SNR=24
LATQ  La Tuque           71.39 356  P    P    16 54 39.9 +0.6
      baz=174
F46A  Macinaw City C     71.43 347  P    P    16 54 39.6  0.0
      baz=163
W18A  Petrified Fore     71.48 324 eP    P    16 54 42.2 +1.7
      comp=Z,26nm,1.0s
W18A  Petrified Fore     71.48 324  P    P    16 54 42.3 +1.9
      baz=139,SNR=8.6
H41A  Junction City      71.49 343 eP    P    16 54 40.0  0.0
      comp=Z,15nm,0.8s
H41A  Junction City      71.49 343  P    P    16 54 39.9 -0.2
      baz=158
D54A  Lac Fusel, La      71.50 353  P    P    16 54 40.0  0.0
      baz=171
F45A  CMU Biological     71.50 346  P    P    16 54 40.0 -0.1
      baz=162,SNR=5.8
D52A  ZEK Kipawa Sen     71.54 352  P    P    16 54 40.7 +0.5
      baz=169
D53A  Lac Vacive, Po     71.55 352  P    P    16 54 40.6 +0.2
      baz=170
G43A  Wallace            71.59 345  P    P    16 54 40.6  0.0
      baz=160
E48A  Lockeyer           71.62 349  P    P    16 54 41.2 +0.5
      baz=165,SNR=5.4
H40A  Chili              71.69 343  P    P    16 54 41.3 +0.1
      baz=158,SNR=9.1
G42A  Mountain           71.76 344  P    P    16 54 41.5 -0.1
      baz=159
D51A  Lot 18 Range I     71.78 351  P    P    16 54 42.4 +0.7
      baz=168
E47A  Iron Bridge        71.80 348  P    P    16 54 42.0 +0.2
      baz=164,SNR=8.8
X16A  Lo Mia Camp, P     71.89 323 eP    P    16 54 44.9 +2.0
      comp=Z,21nm,1.1s
E46A  Sault Ste Mari     71.91 348  P    P    16 54 42.3 -0.2
      baz=163,SNR=10
D50A  G1974 Best Tow     71.92 351  P    P    16 54 42.8 +0.3
      baz=168
G41A  Antigo             71.92 344  P    P    16 54 42.7 +0.1
      baz=159
F44A  Big Bay de Noc     71.98 346  P    P    16 54 42.7 -0.1
      baz=161
H39A  Augusta            71.99 342  P    P    16 54 42.9 -0.1
      baz=157
F43A  Flat Rock, Esc     72.01 345  P    P    16 54 43.0 -0.1
      baz=161,SNR=6.6
S22A  4UR Ranch, Cre     72.03 328 eP    P    16 54 45.2 +1.4
      comp=Z,7.1nm,0.9s
S22A  4UR Ranch, Cre     72.03 328  P    P    16 54 45.3 +1.6
      baz=142,SNR=10
E45A  Wooded Hills,      72.07 347  P    P    16 54 43.9 +0.4
      baz=162
Q24A  Divide             72.20 330  P    P    16 54 46.5 +1.7
      baz=144,SNR=12
D48A  Paudash Townsh     72.23 349  P    P    16 54 44.2 -0.2
      baz=166
G40A  Rib Lake           72.24 343 eP    P    16 54 44.6 +0.1
      comp=Z,6.5nm,0.6s
G40A  Rib Lake           72.24 343  P    P    16 54 44.5 +0.1
      baz=158
H38A  Maiden Rock        72.27 341  P    P    16 54 44.7  0.0
      baz=156,SNR=5.2
D47A  Chapleau           72.34 349  P    P    16 54 44.9 -0.2
      baz=164
D46A  Sault St. Mari     72.36 348  P    P    16 54 44.9 -0.2
      baz=164
F41A  Three Lakes        72.39 344 eP    P    16 54 45.7 +0.3
      comp=Z,27nm,0.7s
F41A  Three Lakes        72.39 344  P    P    16 54 45.8 +0.4
      baz=159,SNR=10.0
Y14A  Wickenburg         72.42 321 eP    P    16 54 47.2 +1.3
      comp=Z,10.0nm,0.6s
MVCO  Mesa Verde         72.44 326 eP    P    16 54 47.6 +1.4
      comp=Z,20nm,0.9s
MVCO  Mesa Verde         72.44 326  P    P    16 54 47.9 +1.8
      baz=141,SNR=17
OGNE  Ogallala           72.46 333  P    P    16 54 47.2 +1.2
      baz=147
E44A  Grand Marais A     72.48 346  P    P    16 54 46.2 +0.4
      baz=162
E43A  Lone Tree Farm     72.49 346 eP    P    16 54 46.1 +0.2
      comp=Z,20nm,0.7s
E43A  Lone Tree Farm     72.49 346  P    P    16 54 45.9  0.0
      baz=161
G39A  Holcombe           72.52 342  P    P    16 54 45.9 -0.2
      baz=157,SNR=7.4
G38A  Ridgeland          72.60 342  P    P    16 54 46.4 -0.2
      baz=156,SNR=5.3
WUAZ  Wupatki            72.67 323 eP    P    16 54 49.6 +2.2
      comp=Z,23nm,0.9s
WUAZ  Wupatki            72.67 323  P    P    16 54 49.6 +2.2
      baz=138,SNR=10
COWI  Conover            72.74 344 eP    P    16 54 47.7 +0.2
      comp=Z,8.8nm,0.7s
E42A  Champion           72.75 345  P    P    16 54 47.8 +0.3
      baz=160
ECSD  EROS Data Cent     72.80 338 eP    P    16 54 47.5 -0.4
      comp=Z,35nm,1.3s
ECSD  EROS Data Cent     72.80 338  P    P    16 54 48.3 +0.4
      baz=152,SNR=15
F40A  Park Falls         72.82 343  P    P    16 54 48.4 +0.5
      baz=158,SNR=16
GLA   Glamis             72.85 319  P    P    16 54 50.2 +1.7
      baz=135
F39A  Loretta            73.03 343  P    P    16 54 49.4 +0.2
      baz=157,SNR=7.0
E41A  Kenton             73.03 344  P    P    16 54 49.2  0.0
      baz=159
ISCO  Idaho Springs      73.09 330 eP    P    16 54 51.0 +1.0
      comp=Z,14nm,1.0s
ISCO  Idaho Springs      73.09 330 eP    P    16 54 51.0 +1.0
ISCO                                pmax pmax
      comp=Z,14nm,1.0s
ISCO  Idaho Springs      73.09 330  P    P    16 54 51.7 +1.7
      baz=143,SNR=13
Y12C  Blythe             73.17 320  P    P    16 54 52.4 +2.1
      baz=135
PV01  Paradox Valley     73.19 327 eP    P    16 54 51.9 +1.4
      comp=Z,11nm,0.9s
SMCO  Snowmass           73.23 329 eP    P    16 54 52.4 +1.4
      comp=Z,13nm,0.8s
E40A  Wakefield          73.25 344  P    P    16 54 51.1 +0.6
      baz=158,SNR=18
PV15  Paradox Valley     73.30 327 eP    P    16 54 53.0 +1.7
      comp=Z,23nm,1.0s
PV02  Paradox Valley     73.33 327 eP    P    16 54 53.0 +1.6
      comp=Z,20nm,1.3s
F37A  Hinrichs Farm,     73.33 342  P    P    16 54 51.2 +0.3
      baz=156,SNR=9.4
F38A  Pierce - Schro     73.33 342  P    P    16 54 51.3 +0.4
      baz=156,SNR=7.3
PV13  Radium Mtn., P     73.33 327 eP    P    16 54 53.0 +1.6
      comp=Z,18nm,1.0s
IKP   In-Ko-Pah, Jac     73.34 318  P    P    16 54 53.5 +2.1
      baz=134
E39A  Mellen             73.36 343  P    P    16 54 51.5 +0.5
      baz=158,SNR=12
LSQQ  Lebel-sur-Quev     73.42 353  P    P    16 54 51.3  0.0
      baz=170
PV03  Paradox Valley     73.42 327 eP    P    16 54 53.4 +1.5
      comp=Z,18nm,1.4s
PV12  Saucer Basin,      73.44 327 eP    P    16 54 53.6 +1.5
      comp=Z,11nm,0.9s
PV07  Paradox Valley     73.46 327 eP    P    16 54 53.5 +1.4
      comp=Z,12nm,0.9s
PV11  David Mesa, Pa     73.47 327 eP    P    16 54 53.4 +1.3
      comp=Z,17nm,1.2s
PV17  East Wray Mesa     73.50 327 eP    P    16 54 53.5 +1.2
      comp=Z,9.3nm,0.9s
D41A  Chassel            73.50 345 eP    P    16 54 52.4 +0.6
      comp=Z,62nm,0.8s
D41A  Chassel            73.50 345  P    P    16 54 52.7 +0.8
      baz=159,SNR=8.5
PV16  Nyswonger Mesa     73.50 327 eP    P    16 54 53.7 +1.3
      comp=Z,6.2nm,1.0s
PV19  Morning Glory      73.53 327 eP    P    16 54 53.8 +1.3
PV04  Paradox Valley     73.56 327 eP    P    16 54 54.0 +1.3
      comp=Z,8.3nm,0.9s
BC3   Big Chuckawall     73.65 319  P    P    16 54 55.2 +2.0
      baz=135,SNR=7.2
PV23  Carpenter Ridg     73.65 327 eP    P    16 54 54.5 +1.2
      comp=Z,13nm,1.0s
MONP2 Monument Peak      73.70 318  P    P    16 54 55.6 +2.0
      baz=134
BAR   Barrett            73.71 318 eP    P    16 54 55.1 +1.7
      comp=Z,17nm,0.9s
PV21  Cone Mtn., Par     73.72 327 eP    P    16 54 55.2 +1.6
      comp=Z,13nm,1.1s
PV09  Paradox Valley     73.75 327 eP    P    16 54 55.6 +1.7
IRM   Iron Mountain      73.82 320  P    P    16 54 56.0 +1.9
      baz=135
E38A  The Farm, Brul     73.84 343 eP    P    16 54 53.8  0.0
      comp=Z,18nm,0.9s
E38A  The Farm, Brul     73.84 343  P    P    16 54 53.8  0.0
      baz=157,SNR=7.7
U15A  North Rim          73.84 323 eP    P    16 54 56.5 +2.1
      comp=Z,19nm,0.8s
N23A  Red Feather La     74.11 330 eP    P    16 54 57.4 +1.4
      comp=Z,17nm,0.9s
N23A  Red Feather La     74.11 330  P    P    16 54 57.6 +1.7
      baz=143,SNR=9.7
XPFO  Pion Flat          74.22 319 eP    P    16 54 58.7 +2.2
      comp=Z,18nm,0.9s
PFO   Pinyon Flats O     74.22 319 eP    P    16 54 58.7 +2.2
      comp=Z,16nm,0.9s
PFO   Pinyon Flats O     74.22 319 eP    P    16 54 58.7 +2.2
PFO                                 pmax pmax
      comp=Z,16nm,0.9s
PFO   Pinyon Flats O     74.22 319  P    P    16 54 58.5 +2.0
      baz=134,SNR=5.2
PHWY  Pilot Hill         74.22 331 eP    P    16 54 57.8 +1.2
      comp=Z,36nm,1.1s
VNDA  Vanda              74.54 190  P    P    16 54 58.7 +1.1
      comp=Z,7.5nm,1.0s,baz=130,slow=4.2,SNR=7.1
KNB   Kanab              74.56 323 eP    P    16 55 00.8 +2.3
      comp=Z,50nm,1.0s
KNB   Kanab              74.56 323 eP    P    16 55 00.8 +2.3
KNB                                 pmax pmax
      comp=Z,50nm,1.0s
GMRC  Granite Mounta     74.56 320  P    P    16 55 00.7 +2.2
      baz=135,SNR=17
O20A  White River Ci     74.58 328 eP    P    16 55 00.2 +1.7
      comp=Z,29nm,0.9s
O20A  White River Ci     74.58 328  P    P    16 55 00.5 +2.0
      baz=141,SNR=15
MURC  Murrieta           74.66 318  P    P    16 55 01.1 +2.2
      baz=133
SRU   San Rafael Swe     74.92 326 eP    P    16 55 02.1 +1.6
      comp=Z,22nm,0.7s
SRU   San Rafael Swe     74.92 326 eP    P    16 55 02.1 +1.6
SRU                                 pmax pmax
      comp=Z,22nm,0.7s
MTPU  Mount Pierson      74.98 325 eP    P    16 55 02.9 +1.9
      comp=Z,12nm,0.8s
HEC   Hector,Ludlow      74.99 320  P    P    16 55 03.3 +2.4
      baz=134,SNR=8.2
EYMN  Ely                75.05 343 eP    P    16 55 00.5 -0.3
EYMN  Ely                75.05 343  P    P    16 55 00.8  0.0
      baz=157,SNR=9.1
Q16A  Castle Valley      75.10 326 eP    P    16 55 02.8 +1.2
      comp=Z,51nm,1.7s
CCUT  Cedar City         75.25 324 eP    P    16 55 04.7 +2.2
      comp=Z,31nm,0.8s
P17A  Butcher Ranch,     75.30 326 eP    P    16 55 03.9 +1.2
      comp=Z,22nm,1.0s
MSU   Marysvale          75.32 325 eP    P    16 55 04.7 +1.8
MSU   Marysvale          75.32 325 eP    P    16 55 04.7 +1.8
RWWY  Rawlins            75.32 330 eP    P    16 55 03.0 +0.2
      comp=Z,20nm,0.9s
TMUT  Trail Mountain     75.41 326 eP    P    16 55 04.3 +0.9
      comp=Z,37nm,1.9s
RRX   Edison Barstow     75.41 319  P    P    16 55 05.4 +2.2
      baz=134
SHPR  Sheep Range        75.49 322 eP    P    16 55 05.5 +1.7
      comp=Z,18nm,1.1s
GSC   Goldstone, Bar     75.60 320 eP    P    16 55 05.7 +1.4
      comp=Z,43nm,1.5s
GSC   Goldstone, Bar     75.60 320 eP    P    16 55 05.7 +1.4
GSC                                 pmax pmax
      comp=Z,43nm,1.5s
GSC   Goldstone, Bar     75.60 320  P    P    16 55 06.5 +2.1
      baz=134,SNR=5.4
K22A  Casper             75.78 331 eP    P    16 55 06.9 +1.6
      comp=Z,20nm,1.1s
K22A  Casper             75.78 331  P    P    16 55 06.8 +1.5
      baz=143
SUR   Sutherland         75.79 119  P    P    16 55 05.9 +0.1
      comp=Z,3.6nm,0.5s,baz=202,slow=8.9,SNR=6.9
EDW2  Edwards Air Fo     76.01 319  P    P    16 55 08.0 +1.3
      baz=133
PSUT  Pine Spring        76.23 324 eP    P    16 55 09.8 +1.8
      comp=Z,18nm,0.8s
NLU   North Lily Min     76.34 326 eP    P    16 55 10.4 +1.8
      comp=Z,25nm,1.5s
TPNV  Topopah Spring     76.42 321  P    P    16 55 11.3 +2.2
      baz=135
FURC  Furnace Creek,     76.44 321  P    P    16 55 11.1 +2.2
      baz=134
JLU   Jordanelle         76.51 327 eP    P    16 55 10.8 +1.2
      comp=Z,46nm,1.5s
MPMC  Manual Prospec     76.52 320  P    P    16 55 11.1 +1.5
      baz=134
AGMN  Agassiz Nation     76.61 341 eP    P    16 55 09.8 +0.2
      comp=Z,16nm,0.9s
AGMN  Agassiz Nation     76.61 341  P    P    16 55 10.0 +0.4
      baz=153,SNR=16
TOA0  Torodi Ar. Sit     76.68  69 eP    P    16 55 09.3 -1.5
TORD  Torodi Ar. Bea     76.68  69  P    P    16 55 09.3 -1.4
      comp=Z,18nm,1.0s,baz=272,slow=5.6,SNR=36
CTU   Camp Tracy         76.73 327 eP    P    16 55 10.8  0.0
      comp=Z,4.4nm,0.9s
DAC   Darwin (Calif)     76.73 320 eP    P    16 55 11.0 +0.1
      comp=Z,17nm,0.9s
DAC   Darwin (Calif)     76.73 320 eP    P    16 55 11.0 +0.1
DAC                                 pmax pmax
      comp=Z,17nm,0.9s
SBC   Santa Barbara      76.76 318  P    P    16 55 12.0 +1.2
      baz=132
ISA   Isabella, Lake     76.83 319 eP    P    16 55 12.8 +1.5
      comp=Z,18nm,0.9s
ISA   Isabella, Lake     76.83 319 eP    P    16 55 12.8 +1.5
ISA                                 pmax pmax
      comp=Z,18nm,0.9s
ISA   Isabella, Lake     76.83 319  P    P    16 55 13.5 +2.2
      baz=133,SNR=9.7
TCUT  Toone Canyon       76.88 327 eP    P    16 55 12.9 +1.3
      comp=Z,11nm,0.9s
DUG   Dugway, Tooele     76.90 326 eP    P    16 55 13.0 +1.4
      comp=Z,20nm,1.1s
DUG   Dugway, Tooele     76.90 326 eP    P    16 55 13.0 +1.4
DUG                                 pmax pmax
      comp=Z,20nm,1.1s
DUG   Dugway, Tooele     76.90 326  P    P    16 55 13.6 +1.9
      baz=138,SNR=11
R11A  Troy Canyon, C     77.04 323 eP    P    16 55 14.2 +1.7
      comp=Z,25nm,1.4s
R11A  Troy Canyon, C     77.04 323  P    P    16 55 14.7 +2.2
      baz=135,SNR=19
PKM   Mcpherson Peak     77.12 318  P    P    16 55 15.2 +2.2
      baz=132,SNR=6.8
CWC   Cottonwood Cre     77.13 320  P    P    16 55 15.2 +2.2
      baz=133
BW06  Boulder Array      77.25 329 eP    P    16 55 13.9 +0.3
      comp=Z,4.3nm,0.7s
BW06  Boulder Array      77.25 329  P    P    16 55 14.8 +1.1
      baz=141,SNR=7.4
PD31  Pinedale Array     77.25 329 eP    P    16 55 13.7 +0.1
PDAR  Pinedale Array     77.25 329 eP    P    16 55 14.2 +0.5
PDAR  Pinedale Array     77.25 329  P    P    16 55 14.8 +1.1
      comp=Z,3.5nm,0.6s,baz=129,slow=7.4,SNR=36
VES   Vestal, Richgr     77.32 319  P    P    16 55 15.8 +2.0
      baz=132,SNR=8.1
MDND  Maddock            77.41 338 eP    P    16 55 15.0 +0.9
      comp=Z,78nm,0.8s
MDND  Maddock            77.41 338  P    P    16 55 15.5 +1.3
      baz=150,SNR=6.1
BGU   Big Grassy Mou     77.55 326 eP    P    16 55 16.4 +1.1
      comp=Z,20nm,1.3s
TSUM  Tsumeb             77.67 106 eP    P    16 55 15.6 -0.9
      comp=Z,9.7nm,0.9s
AHID  Auburn Hatcher     77.98 328 eP    P    16 55 18.6 +1.0
      comp=Z,31nm,0.9s
HVU   Hansel Valley      78.06 327 eP    P    16 55 19.2 +1.2
      comp=Z,11nm,0.8s
HVU   Hansel Valley      78.06 327 eP    P    16 55 19.2 +1.2
HVU                                 pmax pmax
      comp=Z,11nm,0.8s
REDW  Red Top Meadow     78.31 329 eP    P    16 55 20.6 +1.1
      comp=Z,12nm,0.8s
SNOW  Snow King Moun     78.34 329 eP    P    16 55 20.0 +0.3
      comp=Z,14nm,0.9s
ULM   Lac du Bonnet      78.36 342 eP    P    16 55 19.4 +0.2
      comp=Z,19nm,0.6s
ULM   Lac du Bonnet      78.36 342  P    P    16 55 19.8 +0.5
      comp=Z,18nm,0.6s,baz=153,slow=6.3,SNR=40
MLAC  Mammoth, Mammo78.38 320  P    P    16 55 22.1 +2.1
      baz=133
LOHW  Long Hollow        78.39 329 eP    P    16 55 21.0 +1.1
      comp=Z,9.9nm,0.6s
OMMB  Old Mammoth Mi     78.47 320 eP    P    16 55 21.9 +1.3
      comp=Z,20nm,0.8s
MOOW  Moose Ponds        78.56 329 eP    P    16 55 22.0 +1.1
      comp=Z,5.8nm,0.8s
ELK   Elko               78.56 325 eP    P    16 55 22.0 +1.1
      comp=Z,14nm,0.9s
ELK   Elko               78.56 325 eP    P    16 55 22.0 +1.1
ELK                                 pmax pmax
      comp=Z,14nm,0.9s
FXWY  Fox Creek          78.61 329 eP    P    16 55 22.2 +1.1
      comp=Z,4.9nm,0.8s
NV01  Mina Array Sit     78.62 321 eP    P    16 55 22.3 +1.1
NVAR  Mina Array Bea     78.62 321  P    P    16 55 23.0 +1.7
      comp=Z,4.6nm,0.7s,baz=156,slow=6.4,SNR=26
SCHQ  Schefferville      78.66   0  P    P    16 55 21.2 +0.4
      comp=Z,2.8nm,0.4s,baz=218,slow=4.9,SNR=20
FLWY  Flagg Ranch        78.79 330 eP    P    16 55 22.8 +0.7
      comp=Z,18nm,0.9s
RYN   Ryan               78.88 321 eP    P    16 55 23.5 +0.9
      comp=Z,9.8nm,1.0s
LAO   LASA Array         78.90 334 eP    P    16 55 23.6 +1.2
      comp=Z,24nm,1.0s
LAO   LASA Array         78.90 334  P    P    16 55 23.7 +1.3
      baz=144
KVN   Kaiserville        78.93 322 eP    P    16 55 24.1 +1.2
      comp=Z,21nm,0.8s
KVN   Kaiserville        78.93 322 eP    P    16 55 24.1 +1.2
KVN                                 pmax pmax
      comp=Z,21nm,0.8s
RLMT  Red Lodge          78.95 331 eP    P    16 55 24.2 +1.3
      comp=Z,12nm,0.6s
RLMT  Red Lodge          78.95 331  P    P    16 55 24.4 +1.5
      baz=141,SNR=12
H17A  Grant Village      78.98 330 eP    P    16 55 25.1 +1.9
      comp=Z,6.0nm,0.8s
H17A  Grant Village      78.98 330  P    P    16 55 25.5 +2.4
      baz=140
LKWY  Lake               79.03 330 eP    P    16 55 25.9 +2.5
      comp=Z,8.5nm,0.8s
LKWY  Lake               79.03 330 eP    P    16 55 25.9 +2.5
LKWY                                pmax pmax
      comp=Z,8.0nm,0.8s
YFT   Old Faithful       79.14 330 eP    P    16 55 25.8 +1.8
      comp=Z,7.2nm,0.8s
YNR   Norris Junctio     79.27 330 eP    P    16 55 26.6 +1.9
      comp=Z,6.8nm,1.0s
WAKR  Walker             79.32 321 eP    P    16 55 27.0 +1.9
      comp=Z,11nm,0.9s
YHH   Holmes Hill        79.40 330 eP    P    16 55 27.3 +1.8
      comp=Z,21nm,0.8s
YHB   Horse Butte        79.53 330 eP    P    16 55 27.1 +1.0
      comp=Z,15nm,0.8s
YERR  Yerington          79.53 321 eP    P    16 55 27.4 +1.2
      comp=Z,15nm,0.8s
DGMT  Dagmar             79.58 336 eP    P    16 55 26.8 +0.8
      comp=Z,53nm,0.9s
DGMT  Dagmar             79.58 336  P    P    16 55 27.5 +1.5
      baz=146,SNR=9.9
QLMT  Earthquake Lak     79.70 330 eP    P    16 55 27.8 +0.8
PNTR  Pine Nut           79.81 321 eP    P    16 55 29.1 +1.4
      comp=Z,29nm,0.8s
VCNR  Virginia City      79.98 321 eP    P    16 55 28.9 +0.3
      comp=Z,15nm,1.1s
PAHR  Pah Rah Range      80.11 322 eP    P    16 55 30.7 +1.5
      comp=Z,30nm,0.9s
HLID  Hailey             80.19 327 eP    P    16 55 31.1 +1.5
      comp=Z,30nm,0.9s
HLID  Hailey             80.19 327  P    P    16 55 31.8 +2.2
      baz=137,SNR=45
MCMT  McKenzie Canyo     80.36 329 eP    P    16 55 32.3 +1.7
BOZ   Bozeman (W)        80.38 330 eP    P    16 55 31.8 +1.3
      comp=Z,5.0nm,0.9s
BOZ   Bozeman (W)        80.38 330 eP    P    16 55 31.8 +1.3
BOZ                                 pmax pmax
      comp=Z,5.0nm,0.9s
BOZ   Bozeman (W)        80.38 330  P    P    16 55 31.9 +1.3
      baz=139,SNR=7.5
AFDM  Forest Hills D     80.51 320 eP    P    16 55 31.7 +0.5
      comp=Z,16nm,1.2s
DLMT  Dillon             80.64 329 eP    P    16 55 32.7 +0.8
      comp=Z,26nm,1.4s
BOSA  Boshof             80.72 117 eP    P    16 55 32.1 -0.7
      comp=Z,8.6nm,0.8s
BOSA  Boshof             80.72 117 eP    P    16 55 32.1 -0.7
BOSA                                pmax pmax
      comp=Z,9.0nm,0.8s
BOSA  Boshof             80.72 117  P    P    16 55 32.6 -0.2
      comp=Z,7.1nm,0.7s,baz=258,slow=3.5,SNR=19
BOSA  Boshof             80.72 117 eP    P    16 55 33.4 +0.5
BEKR  Beckworth          80.77 321 eP    P    16 55 32.9 +0.1
      comp=Z,10nm,0.9s
LRM   Limekiln Ridge     80.92 330 eP    P    16 55 35.1 +1.6
ORV   Oroville           81.22 320 eP    P    16 55 36.1 +1.2
      comp=Z,22nm,1.1s
ORV   Oroville           81.22 320 eP    P    16 55 36.1 +1.2
ORV                                 pmax pmax
      comp=Z,22nm,1.1s
HRY   Holter Researc     81.31 331 eP    P    16 55 36.3 +0.9
EGMT  Eagleton           81.42 333 eP    P    16 55 36.5 +0.6
      comp=Z,21nm,0.9s
EGMT  Eagleton           81.42 333  P    P    16 55 36.8 +0.9
      baz=141,SNR=8.9
O03E  Paynes Creek       81.88 321  P    P    16 55 39.1 +0.6
      baz=131
MOD   Modoc Plateau      82.10 323 eP    P    16 55 41.0 +1.3
      comp=Z,13nm,1.0s
J08A  Circle Bar Ran     82.11 325 eP    P    16 55 41.0 +1.4
      comp=Z,21nm,0.8s
MSO   Missoula           82.36 330 eP    P    16 55 42.3 +1.4
      comp=Z,6.0nm,0.8s
MSO   Missoula           82.36 330  P    P    16 55 42.5 +1.6
      baz=138,SNR=6.6
LBTB  Lobatse            82.38 114 eP    P    16 55 41.3 -0.3
      comp=Z,6.9nm,0.6s
LBTB  Lobatse            82.38 114 eP    P    16 55 41.3 -0.3
LBTB                                pmax pmax
      comp=Z,7.0nm,0.6s
LBTB  Lobatse            82.38 114  P    P    16 55 41.4 -0.3
      comp=Z,5.5nm,0.6s,baz=240,slow=6.8,SNR=17
WDC   Whiskeytown Da     82.49 321 eP    P    16 55 41.4 -0.1
      comp=Z,8.2nm,0.8s
WDC   Whiskeytown Da     82.49 321 eP    P    16 55 41.4 -0.1
WDC                                 pmax pmax
      comp=Z,8.0nm,0.8s
BMO   Blue Mountains     82.56 327 eP    P    16 55 42.9 +1.0
      comp=Z,43nm,1.8s
BMO   Blue Mountains     82.56 327 eP    P    16 55 42.9 +1.0
BMO                                 pmax pmax
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	comp=Z,43nm,1.8s						
N02D	**Trinity Center**	82.84	321	P	P	16 55 44.2	+0.7
	baz=130						
M04C	**Macdoel**	82.88	322	P	P	16 55 45.0	+1.3
	baz=131						
I07A	**Izee**	83.15	325	*e*P	P	16 55 46.3	+1.3
	comp=Z,6.6nm,0.9s						
F10A	**Beach Ranch, E**	83.31	327	*e*P	P	16 55 46.8	+1.0
	comp=Z,13nm,0.7s						
YBH	**Yreka Blue Hor**	83.34	322	*e*P	P	16 55 45.8	-0.2
	comp=Z,20nm,1.6s						
YBH	**Yreka Blue Hor**	83.34	322	*e*P	P	16 55 45.8	-0.2
YBH				pmax	pmax		
	comp=Z,20nm,1.6s						
K04D	**Chiloquin, OR**	83.39	323	P	P	16 55 47.3	+1.1
	baz=131						
L04D	**Klamath Falls**	83.43	322	P	P	16 55 48.0	+1.5
	baz=131						
J05D	**Fort Rock, OR**	83.54	323	P	P	16 55 48.6	+1.5
	baz=132,SNR=7.0						
G08A	**Pilot Rock**	83.70	326	*e*P	P	16 55 48.7	+0.9
	comp=Z,26nm,1.7s						
PINE	**Pine Mountain**	83.72	324	*e*P	P	16 55 49.2	+1.2
	comp=Z,25nm,0.8s						
J04D	**Umpqua Nationa**	83.99	323	P	P	16 55 50.7	+1.3
	baz=131						
FFC	**Flin Flon**	84.08	341	*e*P	P	16 55 49.7	+0.4
	comp=Z,16nm,1.3s						
FFC	**Flin Flon**	84.08	341	*e*P	P	16 55 49.7	+0.4
FFC				pmax	pmax		
	comp=Z,16nm,1.3s						
L02E	**Cave Junction**	84.12	321	P	P	16 55 51.1	+1.2
	baz=130						
I05D	**Terrebonne, OR**	84.30	324	P	P	16 55 52.6	+1.8
	baz=132						
K02D	**Willamette Mer**	84.50	322	P	P	16 55 53.4	+1.5
	baz=130						
TAM	**Tamanrasset**	84.52	62	*e*P	P	16 55 52.3	-0.2
	comp=Z,6.1nm,0.9s						
TAM	**Tamanrasset**	84.52	62	*e*P	P	16 55 52.3	-0.2
TAM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HAWA	**Hanford**	84.75	327	*e*P	P	16 55 54.0	+1.1
	comp=Z,17nm,1.0s						
NEW	**Newport**	84.89	329	*e*P	P	16 55 54.1	+0.5
	comp=Z,19nm,1.6s						
NEW	**Newport**	84.89	329	*e*P	P	16 55 54.1	+0.5
NEW				pmax	pmax		
	comp=Z,19nm,1.6s						
NEW	**Newport**	84.89	329	P	P	16 55 54.8	+1.2
	baz=135						
G05D	**Wamic, OR**	84.89	325	P	P	16 55 55.6	+2.0
	baz=132						
D08A	**Wollman Farm,**	84.91	327	*e*P	P	16 55 54.6	+0.9
	comp=Z,9.4nm,0.6s						
J01E	**Myrtle Point**	84.95	322	P	P	16 55 55.8	+1.9
	baz=130						
I03D	**Drain, OR**	84.97	323	P	P	16 55 55.3	+1.3
	baz=130						
C09A	**Chrisman Ranch**	85.11	328	*e*P	P	16 55 55.4	+0.7
	comp=Z,29nm,0.8s						
F05D	**White Salmon**	85.39	325	P	P	16 55 57.4	+1.2
	baz=132						
I02D	**Swisshome**	85.51	323	P	P	16 55 58.2	+1.5
	baz=130						
FCC	**Fort Churchill**	85.60	346	*e*P	P	16 55 57.3	+0.6
	comp=Z,27nm,0.7s						
FCC	**Fort Churchill**	85.60	346	*e*P	P	16 55 57.3	+0.6
FCC				pmax	pmax		
	comp=Z,27nm,0.7s						
G03D	**McMinnville, O**	85.91	324	P	P	16 56 00.0	+1.4
	baz=130						
LTY	**Liberty**	85.91	327	*e*P	P	16 55 59.5	+0.7
	comp=Z,10nm,0.8s						
B08A	**Colville Reser**	86.01	328	*e*P	P	16 55 59.2	+0.1
	comp=Z,21nm,1.4s						
ESDC	**Sonseca Array**	86.55	44	P	P	16 56 02.3	+0.3
	comp=Z,2.7nm,0.7s,baz=246,slow=4.7,SNR=10						
ES19	**SONSECA Array**	86.61	44	*e*P	P	16 56 01.8	-0.5
B06A	**Marblemount**	87.17	327	*e*P	P	16 56 03.9	-0.7
	comp=Z,21nm,0.8s						
B05A	**Bryant**	87.30	327	P	P	16 56 05.9	+0.6
	baz=131						
D03D	**Eldon**	87.33	326	P	P	16 56 07.0	+1.6
	baz=131						
LSZ	**Lusaka**	88.52	106	*e*P	P	16 56 12.9	+0.8
	comp=Z,18nm,1.0s						
LSZ	**Lusaka**	88.52	106	*e*P	P	16 56 12.9	+0.8
LSZ				pmax	pmax		
	comp=Z,18nm,1.0s						
YKA	**Yellowknife Ar**	94.25	340	P	P	16 56 38.0	+0.8
	comp=Z,5.4nm,0.6s,baz=130,slow=4.5,SNR=132						
YKB5	**Yellowknife Ar**	94.25	340	*e*P	P	16 56 37.7	+0.4
ILAR	**Eielson Array**	107.37	334	PP	PP	17 02 06.5	+0.7
	comp=Z,0.9nm,1.0s,baz=104,slow=6.7,SNR=5.9						
POKR	**Poker Plat Res**	107.70	334	P	PKiKP	17 01 44.9	+0.7
	baz=109						
TOLK	**Toolik Lake Re**	109.57	337	P	PKiKP	17 01 48.4	+0.8
	baz=106						
AKASG	**Malin Array Be**	112.19	43	PKiKP	PKiKP	17 01 52.5	-0.6
	comp=Z,0.7nm,0.6s,baz=260,slow=2.3,SNR=5.3						
AKASG				PKKPab	PKKPab	17 12 53.3	+1.3
	comp=Z,1.1nm,0.8s,baz=70,slow=3.7,SNR=5.4						
BRTR	**Keskin Array B**	112.95	55	PKKPab	PKKPab	17 12 50.3	+0.8
	comp=Z,0.9nm,0.8s,baz=57,slow=5.0,SNR=5.4						
ANN	**Anapa**	116.65	50	*i* P	Pdif	16 58 17.1	-0.6
ANN				pmax	pmax		
	comp=Z,54nm,1.2s						
KIV	**Kislovodsk**	120.29	52	*e*PKIKP	PKPdf	17 02 08.9	0.0
KBZ	**Khabaz**	120.42	52	PKP	PKiKP	17 02 09.3	+0.2
	comp=Z,2.7nm,1.0s,baz=164,slow=2.9,SNR=4.4						
GNI	**Garni**	121.43	57	⇓*i*PKIKP	PKPdf	17 02 11.2	-0.2
BILL	**Bilibino**	125.61	338	*i* PKIKP	PKiKP	17 02 18.9	+0.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AS01	**Alice Springs**	128.27	205	*e*PKPdf	PKPdf	17 02 24.6	-0.3
AS31	**Alice Springs**	128.29	205	*e*PKPdf	PKPdf	17 02 24.7	-0.2
ASAR	**Alice Springs**	128.29	205	PKIKP	PKPdf	17 02 25.0	0.0
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ASAR	**Alice Springs**	128.29	205	PKP	PKPdf	17 02 24.9	0.0
	comp=Z,5.6nm,0.7s,baz=138,slow=2.0,SNR=54						
ASAR				SKPbc	SKPbc	17 05 27.3	
	comp=Z,0.6nm,0.8s,baz=139,slow=3.3,SNR=4.9						
ARU	**Arti**	129.34	36	*i* PKIKP	PKiKP	17 02 27.0	+0.5
ARU						17 04 39.2	
ARU				SS	SS	17 21 48.5	+4.6
WB2	**Warramunga Arr**	131.45	207	*e*PKPdf	PKPdf	17 02 30.6	-0.4
WRA	**Warramunga Arr**	131.46	207	PKP	PKPdf	17 02 31.4	+0.4
	comp=Z,5.0nm,0.8s,baz=154,slow=1.8,SNR=41						
WRA				SKPbc	SKPbc	17 05 39.0	-0.3
	comp=Z,3.9nm,0.9s,baz=153,slow=3.6,SNR=19						
WRAB	**Tennant Creek**	131.46	207	⇑*i*PKIKP	PKPdf	17 02 30.0	-1.0
GEYT	**Alibeck**	131.71	60	SKPbc	SKPab	17 05 40.5	+0.1
	comp=Z,3.8nm,0.9s,baz=278,slow=4.2,SNR=6.5						
ABKAR	**Akbulak array**	131.89	45	*e*PKPdf	PKiKP	17 02 31.6	-0.3
SEY	**Seymchan**	133.20	337	PKP	PKiKP	17 02 33.9	-0.2
	comp=Z,4.1nm,0.7s,baz=94,slow=3.9,SNR=28						
SEY				SKPbc	SKPbc	17 05 44.1	+0.2
	comp=Z,1.3nm,0.7s,baz=98,slow=4.0,SNR=5.6						
PETK	**Petropavlovsk-**	135.70	323	PKhKP	PKPpre	17 02 29.4	
	comp=Z,0.6nm,0.6s,baz=155,slow=0.4,SNR=4.1						
PETK				PKP	PKiKP	17 02 38.6	-0.9
	comp=Z,3.2nm,0.8s,baz=109,slow=2.5,SNR=7.3						
PETK				SKPbc	SKPbc	17 05 53.0	+0.7
	comp=Z,3.1nm,1.0s,baz=180,slow=0.3,SNR=3.7						
MA2	**Magadan**	135.84	333	PKP	PKPdf	17 02 38.4	+0.5
	comp=Z,0.8nm,0.3s,baz=214,slow=3.6,SNR=3.4						
BRVK	**Borovoye**	136.88	37	⇓*i*PKIKP	PKiKP	17 02 41.5	-0.4
YAK	**Yakutsk**	140.47	348	*e*P	Pdif	16 59 52.2	-11
YAK				pmax	pmax		
	comp=Z,38nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
NVS	**Novosibirsk**	142.27	28	*e*PKIKP	PKPdf	17 02 51.0	+1.3
KURK	**Kurchatov**	142.54	36	*e*PKPpre	PKPpre	17 02 47.8	
KURK	**Kurchatov**	142.54	36	⇑*i*PKIKP	PKPdf	17 02 51.8	+1.4
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	143.38	50	⇓*e*PKIKP	PKPbc	17 02 50.7	+0.6
ZAA0	**Zalesovo Array**	143.56	28	*e*PKPpre	PKPpre	17 02 49.5	
ZALV	**Zalesovo Beam**	143.56	28	*e*PKPpre	PKPpre	17 02 49.7	
ZALV				SKPbc	SKiKP	17 06 14.4	-0.1
ZALV	**Zalesovo Beam**	143.56	28	PKP	PKPbc	17 02 50.6	+0.7
	comp=Z,7.8nm,0.5s,baz=300,slow=4.4,SNR=32						
ZALV				SKPbc	SKiKP	17 06 14.4	-0.1
	comp=Z,3.7nm,0.9s,baz=298,slow=3.2,SNR=7.4						
NKL	**Nikolayevsk**	144.27	331	*i* PKIKP	PKPdf	17 02 53.0	-0.3
NKL				pmax	pmax		
	comp=Z,66nm,0.9s						
SOEI	**Soe**	144.52	200	*e*PKPdf	PKPdf	17 02 55.1	0.0
KUR	**Kuril'sk**	144.79	315	⇑*e*PKIKP	PKPbc	17 02 53.4	-0.5
NRN	**Naryn**	144.82	52	*e*PKPbc	PKPdf	17 02 55.1	0.0
NRN	**Naryn**	144.82	52	*e*PKIKP	PKPdf	17 02 55.1	0.0
KSH	**Kashi**	145.34	55	PKPbc	PKPab	17 02 56.4	0.0
KSH				sPKP		17 03 46.9	
KSH				PP	PP	17 05 59.5	-18
KSH				SKS	SKSdf	17 09 45.8	-2.1
KSH				SKKS	SKKSac	17 12 49.8	-1.9
PRZ	**Przheval'sk**	146.15	49	*e*PKPdf	PKPab	17 02 59.3	-0.2
BOD	**Bodaibo**	146.36	359	*e*PKIKP	PKPdf	17 02 57.2	+0.4
BOD				pmax	pmax		
	comp=Z,19nm,1.1s						
MAKZ	**Makanchi**	146.49	40	*e*PKPdf	PKPdf	17 02 57.8	+0.4
MAKZ	**Makanchi**	146.49	40	*e*PKIKP	PKPdf	17 02 57.8	+0.4
MK31	**Makanchi Array**	146.68	40	*e*PKPdf	PKPdf	17 02 58.2	+0.6
MK31	**Makanchi Array**	146.68	40	*e*PKIKP	PKPdf	17 02 58.3	+0.6
MKAR	**Makanchi Array**	146.68	40	*e*PKPdf	PKPdf	17 02 58.4	+0.6
MKAR	**Makanchi Array**	146.68	40	PKPbc	PKPbc	17 02 58.9	-0.8
	comp=Z,16nm,0.8s,baz=312,slow=1.5,SNR=80						
MK01	**Makanchi Array**	146.70	40	*e*PKPdf	PKPdf	17 02 58.3	+0.6
YSS	**Yuzh-Sakhalins**	147.07	321	*e*PKPdf	PKPdf	17 02 59.3	+1.0
YSS				*e*PKPbc	PKPbc	17 03 01.5	+0.8
YSS	**Yuzh-Sakhalins**	147.07	321	*e*PKP2	PKPbc	17 03 00.0	-0.7
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
HYB	**Hyderabad**	147.23	95	*i* PKP	PKPbc	17 03 02.5	+0.5
DGZ	**Jazzator, Alta**	147.65	31	⇓*e*PKIKP	PKPdf	17 03 00.1	+0.7
GRNR	**Gornyy**	147.82	332	*e*PKP2	PKiKP	17 03 03.8	-0.6
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
ZEA	**Zeya**	148.56	344	*e*PKP2	PKPbc	17 03 04.8	+0.4
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ASAJ	**Asahikawa**	148.65	317	PKPbc	PKiKP	17 03 05.7	-0.6
	comp=Z,18nm,0.8s,baz=243,slow=0.4,SNR=7.7						
KLR	**Kul'dur**	150.94	334	PKPbc	PKiKP	17 03 10.9	+0.1
	comp=Z,15nm,0.8s,baz=54,slow=2.7,SNR=3.8						
MOY	**Mondy**	151.04	15	*e*PKIKP	PKiKP	17 03 12.1	+0.9
MOY				pmax	pmax		
	comp=Z,16nm,1.4s						
WMQ	**Urumqi**	151.50	40	*e*PKPbc	PKiKP	17 03 12.6	+0.2
TLY	**Talaya**	151.61	12	*e*PKIKP	PKPdf	17 03 07.2	+1.8
TLY				pmax	pmax		
	comp=Z,14nm,1.5s						
USRK	**Ussuriysk Ar.**	154.65	327	PKPbc	PKiKP	17 03 19.4	+0.8
	comp=Z,4.0nm,0.9s,baz=48,slow=2.8,SNR=4.1						
MJAR	**Matsushiro Arr**	155.02	305	PKPbc	PKPbc	17 03 20.5	
	comp=Z,1.2nm,0.7s,baz=60,slow=28,SNR=4.2						
MJAR				PKPab	PKPab	17 03 37.0	+0.9
	comp=Z,12nm,0.9s,baz=127,slow=0.8,SNR=15						
MAJO	**Matsushiro**	155.02	305	*e*PKPab	PKPab	17 03 37.1	+1.0
MJB9	**Matsu-Tunnel**	155.02	306	*e*PKPab	PKPab	17 03 37.2	+1.1
SONM	**Songino Array**	155.80	11	PKP	PKPdf	17 03 11.6	-0.1
	comp=Z,1.2nm,0.8s,baz=219,slow=0.9,SNR=5.3						
SONM				PKPbc	PKPbc	17 03 21.9	
	comp=Z,1.5nm,0.8s,baz=341,slow=0.8,SNR=4.4						
SONM				PKPab	PKPab	17 03 39.3	+0.1
	comp=Z,1.8nm,0.6s,baz=324,slow=4.2,SNR=6.5						
KSRS	**Korea Array**	161.55	319	PKPab	PKPab	17 04 05.6	+1.4
	comp=Z,2.1nm,0.8s,baz=40,slow=4.7,SNR=10						
KS01	**Wonju Array Si**	161.56	320	*e*PKPdf	PKPdf	17 03 17.8	-0.8
KS01				*e*PKPab	PKPab	17 04 05.2	+0.9
KSAR	**Wonju Array Be**	161.58	319	PKPab	PKPab	17 04 05.7	+1.2
LZH	**Lanzhou**	165.75	31	*e*PKP	PKPdf	17 03 19.9	-2.9
LZH				pPKP	pPKPdf	17 04 00.4	-11
LZH				sPKP		17 04 17.5	
LZH				PKP	PKPab	17 04 19.6	-3.4
CM01	**Chiang Mai Arr**	165.78	111	*e*PKPdf	PKPdf	17 03 23.1	0.0
CM01				*e*PKPab	PKPab	17 04 23.7	+0.1
CMAR	**Chiang Mai Arr**	165.79	111	PKP	PKPdf	17 03 23.6	+0.5
	comp=Z,0.7nm,0.8s,baz=240,slow=3.4,SNR=5.9						
CMAR				PKPab	PKPab	17 04 23.8	+0.3
	comp=Z,2.6nm,0.8s,baz=255,slow=4.8,SNR=13						
CHTO	**Chiang Mai**	165.94	110	*e*PKPdf	PKPdf	17 03 23.1	-0.1
CHTO				*e*PKPab	PKPab	17 04 23.8	-0.4
CHTO	**Chiang Mai**	165.94	110	*e*PKIKP	PKPdf	17 03 23.1	-0.1
CHTO				*e*		17 04 23.8	

GCMT 24 16:45:09.0±0.4**, 40°.38S**±0°.02×**77°.80E**±0°.03**, h19**km±2km**,** **MW4.9**/66**, Moment Tensor Solution. s20,c24; s66,c86; Duration: 0 Moment tensor: Scale** 10¹⁶**Nm;** Mrr-0.61±.15; Mθθ-1.45±.12; Mφφ2.06±.13; Mrθ0.39±.28; Mθφ-1.33±.11; Mφr1.14±.28; **Best double couple:** M0 2.52400×10¹⁶ **NP1:**φs203.00000°**,**δ83.00000°**,** λ-31.00000°. **NP2:**φs297.00000°**,**δ59.00000°**,** λ-172.00000°. **Principal axes:** T 2.7860**,** Plg16.0000°**,** Azm254.0000°**;** N -0.5270**,** Plg58.0000°**,** Azm12.0000°**;** P -2.2630**,** Plg27.0000°**,** Azm156.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Mid-Indian Ridge**

DJA 24 16:46:05.1±1.5**, 9°S**±7°×**11°5E**±°**, h15**km±10km**, M4.4**/12**, mb5.6**/1**, mB5.5**/1**, MLv3.9**/12**, Mw(mB)5.0**/1**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	**Denpasar**	0.81	0	P	Pb	16 46 21.1	+0.2
DNP				S	Sb	16 46 32.4	+0.8
SRBI	**Singaraja**	1.40	0	P	Pn	16 46 30.1	0.0
JAGI	**Jajag, Banyuwa**	1.46	314	P	Pn	16 46 30.8	-0.1
PLAI	**Plampang**	2.62	76	P	Pn	16 46 47.0	+0.1
KMMI	**Kalianget**	2.72	333	P	Pn	16 46 48.7	+0.4
PWJI	**Pagerwojo**	3.67	293	P	Pn	16 47 00.2	-1.1
PCJI	**Pacitan**	4.19	288	P	Pn	16 47 08.4	-0.1
MMRI	**Maumere**	6.99	84	P	Pn	16 47 47.2	+0.1

MOS ***24*** *17:04:48.8±0.9, 42°.86N×46°.34E, h83km, mb3.8/1, Error ellipse: s-maj=10.5km s-min=5.8km az=31.5*
DRS ***24*** *17:04:48.5±0.0, 42°.96N×45°.40E, h31km*
NORS ***24*** *17:04:48.9±0.0, 42°.73N×46°.26E, h86km±1km, MPVA3.3*
MOS ***24*** *17:04:48.7±0.0, 42°.81N×46°.30E, h86km±1km, MPVA3.8*
ISCJB ***24*** *17:04:49.0±0.4, 42°.87N±0°.03×46°.33E±0°.03, h93km±3km, Error ellipse: s-maj=5.0km s-min=2.7km az=23.2*
ISC 24 17:04:49.9±0.9**, 42°.85N**±0°.03×**46°.33E**±0°.02**, h89**km±5km**, n85, σ1°.05**/159**, 12C-10D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVE	**Vedeno**	0.18	305	*i* P	Pn	17 05 02.2	-0.5
DVE				*e*S	Sn	17 05 10.9	-1.4
DVE				pmax	pmax		
	comp=Z,216nm,0.1s						
DVE	**Vedeno**	0.18	305	*i* Pg	Pn	17 05 02.3	-0.4
DVE				*e*Sg	Sn	17 05 12.2	0.0
BTLR	**Botlikh**	0.20	203	⇑*i*P	Pn	17 05 02.2	-0.6
BTLR				*e*S	Sn	17 05 11.8	-0.6
BTLR	**Botlikh**	0.20	203	*i* Pg	Pn	17 05 02.2	-0.6
BTLR				*e*Sg	Sn	17 05 11.8	-0.6
DLMR	**Dylym**	0.31	45	*e*P	Pn	17 05 02.7	-0.5
DLMR				*e*S	Sn	17 05 13.0	-0.1
DLMR				pmax	pmax		
	comp=Z,86nm,0.1s						
DLMR	**Dylym**	0.31	45	*e*Pg	Pn	17 05 02.7	-0.5
DLMR				*e*Sg	Sn	17 05 13.0	-0.1
UNCR	**Uncukul**	0.37	112	*e*P	Pn	17 05 02.8	-0.8
UNCR				*e*S	Sn	17 05 12.8	-1.0
UNCR				pmax	pmax		
	comp=Z,127nm,0.1s						
UNCR	**Uncukul**	0.37	112	*e*Pg	Pn	17 05 02.8	-0.8
UNCR				*e*Sg	Sn	17 05 12.8	-1.0
XNZR	**Khunzakh**	0.41	138	*e*P	Pn	17 05 03.6	-0.5
XNZR				*e*S	Sn	17 05 14.3	-0.3
XNZR	**Khunzakh**	0.41	138	*i* Pg	Pn	17 05 03.8	-0.3
XNZR				*e*Sg	Sn	17 05 14.7	+0.1
KRNR	**Karanay**	0.42	93	⇑*i*P	Pn	17 05 03.0	-1.0
KRNR				*e*S	Sn	17 05 13.4	-1.2
KRNR				pmax	pmax		
	comp=Z,36nm,0.2s						
KRNR	**Karanay**	0.42	93	*i* Pg	Pn	17 05 03.0	-1.0
KRNR				*e*Sg	Sn	17 05 13.4	-1.2
GROC	**Groznyy**	0.53	312	⇑*i*P	Pn	17 05 05.3	+0.6
GROC				*e*S	Sn	17 05 17.6	+1.9
GROC	**Groznyy**	0.53	312	*i* Pg	Pn	17 05 05.3	+0.6
GROC				*e*Sg	Sn	17 05 17.6	+1.9
ARKR	**Arakani**	0.55	117	*e*P	Pn	17 05 04.3	-0.6
ARKR				*e*S	Sn	17 05 16.0	-0.1
ARKR	**Arakani**	0.55	117	*e*Pg	Pn	17 05 04.3	-0.6
ARKR				*e*Sg	Sn	17 05 16.0	-0.1
BUJR	**Buynaksk**	0.57	92	*e*P	Pn	17 05 06.0	+0.9
BUJR				*i* S	Sn	17 05 17.0	+0.6
BUJR				pmax	pmax		
	comp=Z,57nm,0.1s						
BUJR	**Buynaksk**	0.57	92	*e*Pg	Pn	17 05 06.0	+0.9
BUJR				*i* Sg	Sn	17 05 17.0	+0.6
GNBR	**Gunib**	0.66	134	⇑*e*P	Pn	17 05 05.6	-0.3
GNBR				*e*		17 05 18.2	
GNBR				pmax	pmax		
	comp=Z,156nm,0.1s						
GNBR				smax	smax		
	comp=N,608nm,0.2s						
GNBR	**Gunib**	0.66	134	*e*Pg	Pn	17 05 05.6	-0.3
GNBR				*e*Sg	Sn	17 05 17.5	-0.4
MAK	**Makhachkala**	0.87	82	⇑*i*P	Pn	17 05 05.8	-2.1
MAK				*e*		17 05 18.1	
MAK				pmax	pmax		
	comp=Z,98nm,0.3s						
MAK				smax	smax		
	comp=E,341nm,0.6s						
MAK				smax	smax		
	comp=E,397nm,0.5s						
MAK	**Makhachkala**	0.87	82	*e*Pg	Pn	17 05 05.9	-2.1
MAK				*e*Sg	Sn	17 05 23.1	+1.5
KMKR	**Kumukh**	0.92	141	⇑*i*P	Pn	17 05 08.0	-0.8
KMKR				*e*S	Sn	17 05 22.5	-0.4
KMKR				pmax	pmax		
	comp=Z,77nm,0.1s						
KMKR	**Kumukh**	0.92	141	*i* Pg	Pn	17 05 08.0	-0.8
KMKR				*e*Sg	Sn	17 05 22.5	-0.4
KMGR	**Komgaron**	1.10	281	*e*Pg	Pn	17 05 11.1	+0.5
URKR	**Urkarakh**	1.18	125	⇑*e*P	Pn	17 05 12.2	+0.5
URKR				*e*		17 05 29.1	
URKR	**Urkarakh**	1.18	125	*e*Pg	Pn	17 05 11.8	+0.1
URKR				*e*Sg	Sn	17 05 28.1	0.0
VLKR	**Vladikavkaz**	1.23	280	*e*P	Pn	17 05 12.5	+0.3
VLKR				*e*S	Sn	17 05 29.1	0.0
VLKR	**Vladikavkaz**	1.23	280	*e*Pg	Pn	17 05 12.5	+0.3
VLKR				*e*Sg	Sn	17 05 29.1	0.0
BTKR	**Batakoyurt**	1.41	292	⇑*i*P	Pn	17 05 15.1	+0.6
BTKR				*e*S	Sn	17 05 35.2	+2.2
BTKR	**Batakoyurt**	1.41	292	*i* Pg	Pn	17 05 15.1	+0.6
BTKR				*e*Sg	Sn	17 05 35.2	+2.2
GUDG	**Gudauri**	1.42	255	P	Pn	17 05 16.1	+1.3
GUDG				S	Sn	17 05 36.3	+2.7
TRKR	**Terskaya**	1.46	307	⇓*i*P	Pn	17 05 15.3	+0.3
TRKR				*i* S	Sn	17 05 35.5	+1.5
TRKR	**Terskaya**	1.46	307	*i* Pg	Pn	17 05 15.3	+0.3
TRKR				*i* Sg	Sn	17 05 35.5	+1.5
LACR	**Lac**	1.50	270	⇓*i*P	Pn	17 05 15.0	-0.6
LACR				*e*S	Sn	17 05 34.6	-0.5
LACR	**Lac**	1.50	270	*i* Pg	Pn	17 05 15.0	-0.6
LACR				*e*Sg	Sn	17 05 34.6	-0.5
ARNR	**Ardon**	1.54	283	⇑*i*P	Pn	17 05 16.4	+0.3
ARNR				*e*S	Sn	17 05 36.6	+0.8
ARNR	**Ardon**	1.54	283	*i* Pg	Pn	17 05 16.4	+0.3
ARNR				*e*Sg	Sn	17 05 36.6	+0.8
TBLG	**Delisi**	1.63	227	P	Pn	17 05 17.3	+0.1
TBLG				S	Sn	17 05 37.8	-0.1
TBLG	**Delisi**	1.63	227	*e*P	Pn	17 05 17.3	+0.1
TBLG				*e*S	Sn	17 05 37.8	-0.1
TBLG	**Delisi**	1.63	227	*e*Pg	Pn	17 05 17.3	+0.1
TBLG				*e*Sg	Sn	17 05 37.8	-0.1
BTNK	**Botanikuri**	1.63	225	P	Pn	17 05 17.0	-0.2
BTNK				S	Sn	17 05 38.5	+0.5
KORR	**Kora**	1.68	279	⇓*i*P	Pn	17 05 17.7	-0.2
KORR				*e*S	Sn	17 05 40.4	+1.3
KORR	**Kora**	1.68	279	*i* Pg	Pn	17 05 17.7	-0.2
KORR				*e*Sg	Sn	17 05 40.4	+1.3
DRN	**Derbent**	1.69	118	*e*P	Pn	17 05 19.0	+1.1
DRN				*e*S	Sn	17 05 40.2	+0.9
DRN				pmax	pmax		
	comp=Z,48nm,0.9s						
DRN	**Derbent**	1.69	118	*e*Pg	Pn	17 05 19.1	+1.1
DRN				*e*Sg	Sn	17 05 40.3	+0.9
AKT	**Akhty**	1.72	142	*e*P	Pn	17 05 18.5	0.0
AKT				*e*S	Sn	17 05 39.3	-0.9
AKT				pmax	pmax		
	comp=Z,16nm,0.2s						
AKT	**Akhty**	1.72	142	*e*Pg	Pn	17 05 18.6	0.0
AKT				*e*Sg	Sn	17 05 39.3	-0.9
STDR	**Stavd-Durt**	1.74	288	⇓*i*P	Pn	17 05 19.0	+0.4
STDR				*e*S	Sn	17 05 41.5	+1.0
STDR	**Stavd-Durt**	1.74	288	*i* Pg	Pn	17 05 19.0	+0.4
STDR				*e*Sg	Sn	17 05 41.5	+1.0
PRTR	**Priterechnaya**	1.75	302	⇑*i*P	Pn	17 05 19.5	+0.8
PRTR				*e*S	Sn	17 05 42.3	+1.7
PRTR	**Priterechnaya**	1.75	302	*i* Pg	Pn	17 05 19.5	+0.8
PRTR				*e*Sg	Sn	17 05 42.3	+1.7
ZEI	**Tsey**	1.79	269	⇑*i*P	Pn	17 05 18.5	-1.0
ZEI				*e*S	Sn	17 05 41.5	-0.4
ZEI	**Tsey**	1.79	269	*i* Pg	Pn	17 05 18.5	-1.0
ZEI				*e*Sg	Sn	17 05 41.5	-0.4
KSMR	**Kasumkent**	1.83	132	*e*P	Pn	17 05 20.0	+0.2
KSMR				*e*S	Sn	17 05 43.0	+0.4
KSMR	**Kasumkent**	1.83	132	*e*Pg	Pn	17 05 20.0	+0.2
KSMR				*e*Sg	Sn	17 05 43.0	+0.4
LSNR	**Lesken**	1.89	284	⇓*i*P	Pn	17 05 20.4	-0.1
LSNR				*e*S	Sn	17 05 44.7	+0.8
LSNR	**Lesken**	1.89	284	*i* Pg	Pn	17 05 20.4	-0.1
LSNR				*e*Sg	Sn	17 05 44.7	+0.8
DIGR	**Digorskoe uzhe**	2.02	272	⇓*i*P	Pn	17 05 21.5	-1.0
DIGR				*e*S	Sn	17 05 46.6	-0.8
DIGR	**Digorskoe uzhe**	2.02	272	*i* Pg	Pn	17 05 21.5	-1.0
DIGR				*e*Sg	Sn	17 05 46.6	-0.8
KZRT	**Kazreti**	2.05	225	P	Pn	17 05 22.2	-0.6
KZRT				S	Sn	17 05 46.5	-1.4
NCK	**Nalchik**	2.10	289	*e*P	Pn	17 05 23.4	0.0
NCK				*e*S	Sn	17 05 49.4	+0.4
NCK	**Nalchik**	2.10	289	*e*Pg	Pn	17 05 23.4	0.0
NCK				*e*Sg	Sn	17 05 49.4	+0.4
TRLG	**Trialeti**	2.11	232	P	Pn	17 05 23.4	-0.3
TRLG				S	Sn	17 05 48.7	-0.7
KBTC	**Kuba-Taba**	2.34	295	⇓*e*P	Pn	17 05 26.0	-0.5
KBTC				*e*S	Sn	17 05 53.4	-1.3
KBTC	**Kuba-Taba**	2.34	295	*e*Pn	Pn	17 05 26.1	-0.5
KBTC				*e*Sn	Sn	17 05 54.3	-0.4
NEY	**Neytrino**	2.68	280	⇑*e*P	Pn	17 05 30.6	-0.6
NEY				*e*S	Sn	17 06 00.3	-2.6
NEY	**Neytrino**	2.68	280	*e*Pn	Pn	17 05 30.5	-0.6
NEY				*e*Sn	Sn	17 06 01.3	-1.6
BEYR	**Belyy Ugol+**	2.81	296	⇓*e*P	Pn	17 05 31.8	-1.1
BEYR				*e*S	Sn	17 06 03.6	-2.3
SHA1	**Shidzhatmaz**	2.83	290	⇓*e*P	Pn	17 05 32.1	-1.2
SHA1				*e*S	Sn	17 06 03.9	-2.6
SHA1	**Shidzhatmaz**	2.83	290	*i* Pn	Pn	17 05 32.0	-1.2
SHA1				*e*Sn	Sn	17 06 04.2	-2.4
KIV0	**Kislovodsk Arr**	2.87	294	*e*Pn	Pn	17 05 32.6	-1.1
KIV0				*e*Sn	Sn	17 06 05.2	-2.3
KIV	**Kislovodsk**	2.88	294	⇓*e*P	Pn	17 05 32.6	-1.2
KIV				*e*S	Sn	17 06 04.8	-2.8
KIV	**Kislovodsk**	2.88	294	*e*Pn	Pn	17 05 32.5	-1.2
KIV				*e*Sn	Sn	17 06 05.6	-2.0
GNI	**Garni**	2.95	204	*e*P	Pn	17 05 34.6	-0.3
ALER	**Alexandrovskoy**	3.13	309	*e*Pn	Pn	17 05 36.8	-0.3
ALER				*e*Sn	Sn	17 06 12.1	-1.4
GOF	**Gofitskoye**	3.24	314	*e*P	Pn	17 05 37.7	-0.9
GOF				*e*S	Sn	17 06 14.7	-1.5
GOF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GOF				smax	smax		
	comp=E,60nm,0.6s						
GOF	**Gofitskoye**	3.24	314	*e*Pn	Pn	17 05 38.1	-0.5
GOF				*e*Sn	Sn	17 06 15.1	-1.1
DAGI	**Agillar**	3.74	243	*i* P	Pn	17 05 46.8	+1.3
DAGI				IAML_P			
	comp=Z,200nm,0.4s						
DBAD	**Bademkaya**	3.91	244	*i* P	Pn	17 05 49.5	+1.7
DBAD				IAML_P			
	comp=Z,256nm,0.2s						
DDEM	**Demirkent**	3.94	242	*i* P	Pn	17 05 49.1	+0.9
DDEM				IAML_P			

	comp=Z,199nm,0.3s						
GUZR	Guzeripl'	4.67	286	*e*Pn	Pn	17 05 58.9	+0.9
GUZR				*e*Sn	Sn	17 06 48.4	-2.6
BRVK	Borovoye	18.93	49	*e*P	Pn	17 09 06.8	+1.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	20.65	81	*e*P	P	17 09 22.5	0.0
FINES	FINESS Array B	22.21	334	*i* P	P	17 09 38.0	-0.7

IDC 24 17:18:13.5±1.9**, 10°.06S**×**118°.66E, h0^{km}, mb3.2**/1**, mb1 3.5**/5**, mb1mx3.3**/41**, mbtmp3.4**/5**, ML3.1**/4**, Error ellipse: s-maj=74.4km s-min=23.5km az=45.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.93	92	Pn	Pn	17 19 29.4	+0.4
	1.0nm,0.3s,baz=288,slow=19,SNR=3.5						
BATI				Sn	Sn	17 20 23.7	-3.1
	1.2nm,0.3s,baz=233,slow=20,SNR=3.1						
FITZ	Fitzroy Crossi	10.48	141	Pn	Pn	17 20 44.8	-0.3
	0.1nm,0.3s,baz=332,slow=14,SNR=6.3						
FITZ				Sn	Sn	17 22 34.1	-9.2
	0.1nm,0.3s,baz=246,slow=20,SNR=2.4						
WRA	Warramunga Arr	18.04	125	P	Pn	17 22 25.8	-0.1
	0.1nm,0.3s,baz=302,slow=12,SNR=4.6						
ASAR	Alice Springs	19.87	135	P	P	17 22 46.6	0.0
	0.1nm,0.3s,baz=315,slow=10,SNR=10						
MKAR	Makanchi Array	65.24	333	P	P	17 28 56.9	0.0
	0.2nm,0.8s,baz=139,slow=8.2,SNR=2.4						

IDC 24 17:24:20.1±2.1**, 8°.11S**×**121°.95E, h0^{km}, mb3.4**/1**, mb1 3.5**/3**, mb1mx3.2**/48**, mbtmp3.3**/3**, ML2.8**/2**, Error ellipse: s-maj=244.9km s-min=29.9km az=55.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.80	136	Pn	Pn	17 28 16.9	-0.1
	0.0nm,0.3s,baz=311,slow=15,SNR=3.9						
ASAR	Alice Springs	19.25	145	P	P	17 28 46.6	+0.3
	0.1nm,0.3s,baz=319,slow=11,SNR=7.2						
MKAR	Makanchi Array	65.04	331	P	P	17 35 02.2	-0.1
	0.2nm,0.7s,baz=139,slow=6.6,SNR=4.3						

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*ISCJB **24** 17:28:10.3±1.0, 10°.40N±0°.04×126°.52E±0°.08, h55^{km}±10^{km}, mb3.8/17, MS3.1/5, Error ellipse: s-maj=14.0km s-min=6.1km az=168.5*

*IDC **24** 17:28:21.4±1.7, 10°.29N×126°.42E, h147^{km}±17^{km}, mb3.5/18, mb1 3.6/19, mb1mx3.4/56, mbtmp4.0/19, MS3.2/6, Ms1 3.2/6, ms1mx2.9/29, Error ellipse: s-maj=23.8km s-min=10.5km az=82.0*

ISC 24 17:28:11.8±1.5**, 10°.41N**±0°.04×**126°.49E**±0°.09**, h52**^{km}±14^{km}**, n38, σ2^{s}.12**/43**, mb3.8**/17**, MS3.3**/5**, 3C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.16	238	⇓*i*P	Pn	17 28 29.6	-2.2
SCPH				*i* S	Sn	17 28 43.3	-3.3
BESP	Borongan	1.57	319	*e*P	Pn	17 28 35.9	-1.4
BESP				*e*S	Sn	17 28 59.7	+3.1
MSLP	Maasin	1.62	261	*e*P	Pn	17 28 36.7	-1.4
PLP	Palo	1.66	297	⇑*e*P	Pn	17 28 37.4	-1.2
PLP				*e*S	Sn	17 28 59.5	+0.7
BUTP	Butuan	1.66	211	*e*P	Pn	17 28 36.4	-2.2
BUTP				*e*S	Sn	17 29 02.3	+3.5
OCLP	Ormoc	1.95	289	*e*P	Pn	17 28 42.8	+0.2
BIPH	Bislig	2.21	183	⇑*i*P	Pn	17 28 46.2	+0.1
BIPH				*i* S	Sn	17 29 08.9	-3.4
LLP	Lapu-Lapu	2.48	268	*e*P	Pn	17 28 45.7	-4.1
LLP				*e*S	Sn	17 29 24.1	+5.2
CNP	Catarman	2.75	320	*e*P	Pn	17 28 53.0	-0.5
CNP				*e*S	Sn	17 29 25.2	-0.3
BUKP	Musuan	2.88	209	*e*P	Pn	17 28 54.9	-0.4
DAV	Davao City (W)	3.43	195	P	Pn	17 29 13.1	+10
	14nm,0.3s,baz=130,slow=3.6,SNR=4.9						
DAV				S	Sn	17 29 52.8	+10
	26nm,0.3s,baz=78,slow=20,SNR=3.0						
DAV				LR	LR	17 30 20.6	
	comp=Z,406nm,20.8s,baz=45,slow=36						
MATI	Mati	3.44	184	*e*P	Pn	17 29 16.1	+13
DCPH	Dipolog City	3.58	240	⇑*e*P	Pn	17 29 02.3	-2.6
DCPH				*e*S	Sn	17 29 48.0	+2.0
KCP	Kidapawan	3.65	202	⇓*e*P	Pn	17 29 09.2	+3.3
KCP				*i* S	Sn	17 29 52.9	+5.2
GUIM	Jordan	3.84	274	*e*P	Pn	17 29 08.6	+0.1
RCP	Roxas	3.85	288	⇓*e*P	Pn	17 29 08.7	+0.1
PAGZ	Pagadian	3.98	231	*e*P	Pn	17 29 12.1	+1.7
SKMP	Bagumbayan, Su	4.31	207	*e*P	Pn	17 29 23.0	+8.1
BATI	Baumata	20.67	188	P	P	17 32 48.5	+1.0
	37nm,0.8s,baz=108,slow=6.4,SNR=2.6						
JNU	Nakatsue	22.97	9	P	P	17 33 13.8	+1.8
	3.9nm,0.8s,baz=180,slow=12,SNR=3.0						
KSRS	Korea Array	26.96	3	P	P	17 33 49.8	+1.3
	1.4nm,0.9s,baz=171,slow=9.5,SNR=4.3						
KSRS				LR	LR	17 46 51.4	
	comp=Z,50nm,18.1s,baz=175,slow=41						
CMAR	Chiang Mai Arr	27.82	290	P	P	17 33 56.9	+0.4
	1.0nm,0.8s,baz=101,slow=6.4,SNR=8.2						
CMAR				LR	LR	17 47 13.6	
	comp=Z,16nm,18.4s,baz=155,slow=41						
FITZ	Fitzroy Crossi	28.34	182	P	P	17 34 01.2	+0.2
	2.4nm,0.6s,baz=356,slow=9.6,SNR=5.4						
WRA	Warramunga Arr	31.13	166	P	P	17 34 25.4	-0.4
	0.4nm,0.8s,baz=349,slow=9.0,SNR=3.5						
USRK	Ussuriysk Ar.	34.01	7	P	P	17 34 51.9	+1.3
	1.1nm,0.9s,baz=174,slow=9.2,SNR=4.5						
ASAR	Alice Springs	34.63	168	P	P	17 34 55.1	-1.2
	0.2nm,0.3s,baz=352,slow=7.2,SNR=10						
KLR	Kul'dur	38.95	5	P	P	17 35 33.7	+1.0
	0.8nm,0.7s,baz=180,slow=12,SNR=3.7						
SONM	Songino Array	40.97	339	P	P	17 35 50.1	+0.4
	0.7nm,1.0s,baz=168,slow=8.8,SNR=3.2						
NWAO	Narrogin (SRO)	43.98	191	P	P	17 36 12.2	-2.0
	4.3nm,0.8s,baz=300,slow=8.1,SNR=2.8						
PALK	Pallekele	45.32	270	LR	LR	17 57 01.7	
	comp=Z,33nm,18.6s,baz=104,slow=38						
PETK	Petropavlovsk-	49.43	24	LR	LR	17 57 09.7	
	comp=Z,33nm,20.7s,baz=150,slow=35						
MKAR	Makanchi Array	52.05	323	P	P	17 37 16.4	0.0
	0.6nm,0.4s,baz=116,slow=7.5,SNR=18						
MKAR				PcP	PcP	17 38 26.2	-1.8
	0.9nm,0.6s,baz=106,slow=4.4,SNR=4.8						
ZALV	Zalesovo Beam	54.61	331	P	P	17 37 35.0	0.0
	1.1nm,0.4s,baz=111,slow=6.3,SNR=7.7						
KURBB	Kurchatov Arra	56.08	325	P	P	17 37 44.9	-0.8
	1.2nm,0.5s,baz=125,slow=6.7,SNR=5.9						
ILAR	Eielson Array	79.23	26	P	P	17 40 11.1	-0.1
	0.2nm,0.8s,baz=234,slow=4.7,SNR=3.3						
ILAR				LR	LR	18 16 46.4	
	comp=Z,14nm,19.3s,baz=176,slow=37						
ARCES	ARCESS Array B	84.14	340	P	P	17 40 36.5	-0.5
	4.1nm,0.9s,baz=74,slow=6.7,SNR=11						
FINES	FINESS Array B	85.87	332	P	P	17 40 45.6	-0.3
	0.8nm,0.4s,baz=53,slow=4.7,SNR=9.3						
YKA	Yellowknife Ar	93.55	24	P	P	17 41 21.6	-0.4
	0.2nm,0.6s,baz=301,slow=4.9,SNR=2.7						

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*ISCJB **24** 17:36:07.0±0.7, 14°.75S±0°.06×128°.76E±0°.08, h10^{km}, mb3.4/2, Error ellipse: s-maj=10.9km s-min=8.4km az=172.4*

*IDC **24** 17:36:08.2±1.2, 14°.73S×128°.63E, h0^{km}, mb3.5/3, mb1 3.9/8, mb1mx3.6/44, mbtmp3.8/8, ML3.7/5, Error ellipse: s-maj=20.0km s-min=15.3km az=79.0*

ISC 24 17:36:08.8±0.8**, 14°.69S**±0°.06×**128°.78E**±0°.07**, h10**^{km}**, n8, σ2^{s}.14**/13**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	4.54	221	Pn	Pn	17 37 18.6	+1.0
	4.0nm,0.3s,baz=40,slow=13,SNR=412						
FITZ				Pg	Pb	17 37 27.7	-0.9
	3.7nm,0.3s,baz=49,slow=15,SNR=12						
FITZ				Sn	Sn	17 38 08.1	-2.3
	25nm,0.3s,baz=194,slow=12,SNR=10						
FITZ				Lg	Lg	17 38 27.5	
	46nm,0.3s,baz=184,slow=16,SNR=14						
BATI	Baumata	6.70	311	Pn	Pn	17 37 47.9	+0.6
	3.2nm,0.3s,baz=104,slow=2.6,SNR=4.1						
BATI				Sn	Sn	17 39 00.4	-3.3
	4.9nm,0.3s,baz=175,slow=9.6,SNR=4.1						
WRA	Warramunga Arr	7.45	135	Pn	Pn	17 37 57.9	+0.3
	0.5nm,0.3s,baz=314,slow=13,SNR=21						
WRA				Sn	Sn	17 39 18.6	-3.6
	6.3nm,0.3s,baz=309,slow=24,SNR=8.6						
WRA				Lg	Lg	17 40 07.2	
	6.6nm,0.3s,baz=310,slow=27,SNR=9.5						
ASAR	Alice Springs	10.16	152	Pn	Pn	17 38 36.5	+1.7
	1.4nm,0.3s,baz=322,slow=11,SNR=53						
ASAR				Sn	Sn	17 40 26.4	-2.5
	3.5nm,0.3s,baz=320,slow=21,SNR=12						
ASAR				Lg	Lg	17 41 33.4	
	2.5nm,0.3s,baz=332,slow=30,SNR=9.5						
SIJI	Sorong	13.95	10	Pn	Pn	17 39 26.7	0.0
	0.2nm,0.3s,baz=177,slow=16,SNR=2.3						
STKA	Stephens Creek	20.73	148	P	P	17 40 51.8	+2.2
	1.8nm,0.5s,baz=332,slow=8.5,SNR=9.5						
STKA				S	S	17 44 31.3	-10
	2.0nm,0.6s,baz=351,slow=17,SNR=3.4						
SONM	Songino Array	65.38	344	P	P	17 46 52.4	+0.9
	0.2nm,0.3s,baz=166,slow=7.4,SNR=3.8						
MKAR	Makanchi Array	74.06	329	P	P	17 47 45.6	+0.6
	0.2nm,0.7s,baz=128,slow=6.1,SNR=3.0						

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*NNC **24** 17:37:56.9±1.9, 37°.02N×70°.78E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=15.0km s-min=13.1km az=139.0*

ISC 24 17:37:49.3±2.2**, 36°.30N**±0°.10×**70°.8E**±0°.2**, h100**^{km}**, n11, σ2^{s}.02**/15**, 4C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.27	29	⇑Pn	Pn	17 38 55.4	+3.1
	2.4nm,0.3s						
SFK				⇑Sn	Sn	17 39 40.9	-0.2
	14nm,0.3s						
MNAS	Manas	6.32	11	⇑Pn	Pn	17 39 21.5	+1.5
	1.5nm,0.5s						
MNAS				⇑Sn	Sn	17 40 28.2	-2.6
	7.6nm,0.5s						
KK31	Karatay Array	6.80	358	⇓Pn	Pn	17 39 28.6	+2.1
	2.3nm,0.3s,baz=180,slow=14,SNR=183						
KK31				⇓Sn	Sn	17 40 40.0	-2.4
	1.4nm,0.3s,baz=187,slow=24,SNR=8.4						
AAK	Ala-Archa	6.94	23	⇓Pn	Pn	17 39 30.4	+2.0
	1.5nm,0.7s						
AAK				Sn	Sn	17 40 44.0	-2.0
	8.8nm,0.7s						
PYUN	Piuthan	13.14	125	*e*P	Pn	17 40 51.2	-1.0
	6.1nm,0.5s						
DANN	Dangsing	13.50	122	*e*P	Pn	17 40 56.8	-0.2
	4.1nm,0.4s						
DMN	Daman	14.88	122	*e*P	Pn	17 41 14.0	-0.8
	13nm,1.1s						
PKIN	Phulchoki	15.11	121	*e*P	Pn	17 41 17.0	-0.6
	2.7nm,0.4s						
PKI	Pulchoki	15.12	121	*e*P	Pn	17 41 17.1	-0.7
	7.4nm,0.8s						
JIRN	Jiri	15.61	119	*e*P	Pn	17 41 24.1	0.0
	8.3nm,0.4s						
RAMN	Ramite	16.33	120	*e*P	Pn	17 41 29.8	-3.1
	4.3nm,0.5s						

IDC 24 17:57:08.4±1.7**, 7°.10S**×**123°.58E, h0^{km}, mb3.1**/1**, mb1 3.4**/3**, mb1mx3.2**/33**, mbtmp3.2**/3**, ML2.7**/2**, Error ellipse: s-maj=213.9km s-min=28.5km az=58.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.49	142	Pn	Pn	18 01 01.3	+0.1
	0.0nm,0.3s,baz=315,slow=13,SNR=2.9						
ASAR	Alice Springs	19.22	150	P	P	18 01 34.4	+0.1
	0.0nm,0.3s,baz=325,slow=12,SNR=8.5						
MKAR	Makanchi Array	64.97	330	P	P	18 07 50.1	0.0
	0.2nm,0.7s,baz=133,slow=6.1,SNR=2.2						

IDC 24 18:00:50.7±2.8**, 8°.50S**×**127°.50E, h0^{km}, mb3.6**/1**, mb1 3.6**/4**, mb1mx3.4**/31**, mbtmp3.4**/4**, ML3.0**/3**, Error ellipse: s-maj=93.0km s-min=28.0km az=64.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.71	191	Pn	Pn	18 03 12.0	+0.2
	0.1nm,0.3s,baz=4.1,slow=14,SNR=5.5						
FITZ				Sn	Sn	18 04 56.1	-5.5
	0.3nm,0.3s,baz=289,slow=9.8,SNR=3.9						
WRA	Warramunga Arr	13.16	151	Pn	Pn	18 03 59.1	+0.1
	0.1nm,0.3s,baz=325,slow=13,SNR=7.7						
WRA				Sn	Sn	18 06 18.5	-7.8
	0.1nm,0.3s,baz=333,slow=23,SNR=4.9						
ASAR	Alice Springs	16.28	159	Pn	Pn	18 04 40.5	-0.4
	0.0nm,0.3s,baz=332,slow=12,SNR=3.5						
ASAR				Sn	Sn	18 07 38.6	-3.7
	0.0nm,0.3s,baz=313,slow=22,SNR=3.3						
CMAR	Chiang Mai Arr	38.88	314	P	P	18 08 18.1	-0.1
	0.3nm,0.4s,baz=123,slow=7.6,SNR=4.2						

NNC 24 18:06:56.7±3.4**, 37°.47N**×**71°.07E, h0^{km}, mb3.7, mpv3.3, 5C-2D, Error ellipse: s-maj=25.9km s-min=21.4km az=166.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.18	36	⇑Pn	Pn	18 07 47.8	-0.4
	4.7nm,0.4s						
SFK				⇑Sn	Sn	18 08 28.9	+2.0
	6.4nm,0.3s						
MNAS	Manas	5.13	12	⇑Pn	Pn	18 08 15.2	+0.3
	1.4nm,0.4s						
MNAS				⇓Sn	Sn	18 09 15.5	+0.5
	6.1nm,0.5s						
KK31	Karatay Array	5.65	356	Pn	Pn	18 08 23.4	+1.5
	0.6nm,0.2s,baz=184,slow=12,SNR=24						
KK31				⇓Sn	Sn	18 09 29.2	+1.8
	0.6nm,0.2s,baz=176,slow=24						
AAK	Ala-Archa	5.79	26	⇑Pn	Pn	18 08 22.9	-1.1
	2.9nm,0.4s						
AAK				⇑Sn	Sn	18 09 30.5	-0.8
	4.8nm,0.9s						

MEX 24 18:14:51.1±0.4**, 14°.80N**×**93°.25W, h20**^{km}±785^{km}**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.91	2	*e*P	Pb	18 15 05.3	-2.8
PCIG				*e*S	Sb	18 15 16.2	-3.5
CCIG	Comitan	1.82	36	*e*P	Pn	18 15 17.5	-4.0

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*ATH **24** 18:20:43.7, 37°.60N×26°.55E, h19^{km}±3^{km}, ML2.4/4, Error ellipse: s-maj=5.9km s-min=1.4km az=279.0*

*ISCJB **24** 18:20:44.1±0.6, 37°.61N±0°.03×26°.56E±0°.05, h9^{km}±7^{km}, Error ellipse: s-maj=6.3km s-min=4.6km az=171.7*

*ISK **24** 18:20:44.2, 37°.61N×26°.58E, h5^{km}, ML2.5/10*

ISC 24 18:20:44.0±1.2**, 37°.60N**±0°.03×**26°.56E**±0°.03**, h10**^{km}±13^{km}**, n19, σ0^{s}.32**/24**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.54	79	PG	Pb	18 20 55.2	-0.4
GMLD	Gumuldur	0.55	30	PG	Pg	18 20 54.9	+0.2
URLA	Izmir	0.76	2	PG	Pb	18 20 59.3	0.0
URLA				SG	Sb	18 21 10.0	+0.2
BODT	Bodrum	0.80	132	PG	Pb	18 20 59.9	-0.1
BODT				SG	Sb	18 21 11.4	+0.5
BLCB	Balcova	0.87	26	PG	Pb	18 21 01.2	0.0
CHOS	Chios island	0.88	333	PG	Pb	18 21 01.5	+0.1
CHOS	Chios island	0.88	333	P	Pg	18 21 00.7	-0.3
CHOS				S	Sg	18 21 12.6	0.0
CHOS				AML	AML	18 21 16.9	
	comp=E,250µm,0.5s						
CHOS				AML	AML	18 21 16.9	
	comp=N,285µm,0.6s						
AMGA	Amorgos Island	0.93	215	P	Pg	18 21 01.9	0.0
AMGA				S	Sg	18 21 14.0	0.0
AMGA				AML	AML	18 21 17.6	
	comp=E,552µm,0.3s						
AMGA				AML	AML	18 21 18.8	
	comp=N,624µm,0.2s						
APE	Apeiranthos	0.98	238	PG	Pn	18 21 03.6	-0.2
APE	Apeiranthos	0.98	238	P	Pg	18 21 02.8	0.0
APE				S	Sg	18 21 15.5	0.0
APE				AML	AML	18 21 18.6	
	comp=E,158µm,0.2s						
APE				AML	AML	18 21 19.8	
	comp=N,212µm,0.2s						
AYDB	Zeytinkoy-Aydi	1.11	71	PN	Pn	18 21 05.7	0.0
ANAF	Anafi Island	1.39	207	P	Pb	18 21 10.0	-0.1
ANAF				AML	AML	18 21 36.2	
	comp=E,775µm,0.3s						
ANAF				AML	AML	18 21 36.4	
	comp=N,930µm,0.3s						
YER	Yerkesik	1.45	108	PN	Pg	18 21 12.1	+0.4
THR2	Thira island,	1.46	218	P	Pg	18 21 11.9	0.0
THR3	Thira Island,	1.51	218	P	Pg	18 21 12.8	-0.1
SANT	Santorini	1.51	216	P	Pn	18 21 11.0	-0.1
SIGR	SIGRI	1.70	341	P	Pn	18 21 13.8	+0.1
TURN	Turunc	1.78	113	PN	Pn	18 21 13.7	-1.1
KARP	Karpathos	2.10	167	P	Pn	18 21 19.6	+0.4

IDC 24 18:26:56.2±1.4**, 28°.49N**×**95°.19E, h0^{km}, mb3.1**/6**, mb1 3.3**/6**, mb1mx3.2**/60**, mbtmp3.2**/6**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.5**/17**, Error ellipse: s-maj=68.8km s-min=18.8km az=64.0, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	20.89	335	P	P	18 31 40.3	+0.3
	0.3nm,0.7s,baz=142,slow=11,SNR=4.6						
SONM	Songino Array	21.19	21	P	P	18 31 43.5	+0.1
	0.4nm,0.6s,baz=198,slow=9.1,SNR=2.6						
KURBB	Kurchatov Arra	25.45	335	P	P	18 32 25.7	0.0
	0.1nm,0.4s,baz=137,slow=11,SNR=3.2						
ZALV	Zalesovo Beam	26.55	346	P	P	18 32 35.4	-0.3
	0.4nm,0.6s,baz=162,slow=11,SNR=2.9						
JNU	Nakatsue	30.91	72	LR	LR	18 45 53.4	
	comp=Z,42nm,18.5s,baz=358,slow=37						
GUMO	Guam	48.35	97	LR	LR	18 53 22.0	
	comp=Z,71nm,21.3s,baz=263,slow=33						
WRA	Warramunga Arr	61.23	137	P	P	18 37 13.2	-0.1
	0.2nm,0.5s,baz=322,slow=8.3,SNR=13						
ASAR	Alice Springs	63.87	140	P	P	18 37 30.9	0.0
	0.3nm,0.6s,baz=324,slow=7.2,SNR=6.3						

IDC 24 18:36:03.8±1.9**, 3°.65N**×**127°.67E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/42**, mbtmp3.5**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.4**/22**, Error ellipse: s-maj=155.4km s-min=27.3km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	14.33	196	LR	LR	18 46 03.6	
	comp=Z,126nm,19.4s,baz=272,slow=42						
WRA	Warramunga Arr	24.34	165	P	P	18 41 23.5	0.0
	0.3nm,0.3s,baz=344,slow=10,SNR=9.1						
ASAR	Alice Springs	27.82	168	P	P	18 41 55.1	+0.1
	0.3nm,0.5s,baz=354,slow=7.5,SNR=15						
ZALV	Zalesovo Beam	61.09	333	P	P	18 46 19.4	-0.1
	0.6nm,0.5s,baz=129,slow=5.7,SNR=3.8						

IDC 24 18:40:15.1±42.0**, 16°.65S**×**173°.77W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/31**, mbtmp3.9**/3**, Error ellipse: s-maj=813.4km s-min=166.3km az=80.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.11	241	P	P	18 48 17.7	+0.4
	1.7nm,0.9s,baz=83,slow=8.1,SNR=3.9						
WRA	Warramunga Arr	49.22	258	P	P	18 49 05.3	-0.4
	0.2nm,0.4s,baz=96,slow=6.9,SNR=11						
ASAR	Alice Springs	49.40	253	P	P	18 49 06.7	-0.3
	2.2nm,0.6s,baz=89,slow=8.5,SNR=55						

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*SOME **24** 18:47:48.4, 42°.53N×79°.63E, h5^{km}*

*KRNET **24** 18:47:49.3±0.1, 42°.61N×79°.63E, h15^{km}, mb2.4*

*NNC **24** 18:47:49.6±1.1, 42°.63N×79°.63E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=6.3km s-min=4.0km az=140.0*

ISC 24 18:47:48.2±1.7**, 42°.56N**±0°.05×**79°.65E**±0°.05**, h17**^{km}±10^{km}**, n26, σ0^{s}.75**/50**, 11C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.61	347	P	Pb	18 48 01.0	+0.5
	5.0nm,0.1s						
SHLS				S	Sb	18 48 10.1	+1.1
	24nm,0.2s						
SHLS	Shalkode	0.61	347	*e*P	Pb	18 48 01.1	+0.5
	baz=18						
SHLS				*e*S	Sb	18 48 10.2	+1.1
	baz=18						
SHLS	Shalkode	0.61	347	*e*P	Pb	18 48 01.1	+0.5
	5.0nm,0.1s						
SHLS				*e*S	Sb	18 48 10.1	+1.1
	24nm,0.2s						
UZB	Uzynbulak	0.75	322	P	Pg	18 48 02.8	-0.1
	2.8nm,0.1s						
UZB				S	Sb	18 48 12.9	+0.1
	3.1nm,0.2s						
UZB	Uzynbulak	0.75	322	*e*P	Pg	18 48 02.8	-0.1
	baz=20						
UZB				*e*S	Sb	18 48 13.0	+0.1
	baz=20						
UZB	Uzynbulak	0.75	322	*e*P	Pg	18 48 02.8	-0.1
	2.8nm,0.1s						
UZB				*e*S	Sb	18 48 12.9	+0.1
	3.1nm,0.2s						
PDGK	Podgornoye	0.78	351	P	Pg	18 48 03.2	-0.4
	0.5nm,0.1s						
PDGK				S	Sb	18 48 13.7	-0.1
	0.6nm,0.1s						
PDGK	Podgornoye	0.78	351	⇓P	Pg	18 48 02.9	-0.5
	1.1nm,0.5s						
PDGK				⇑S	Sg	18 48 13.2	-0.7
	3.0nm,0.9s						
PDGK	Podgornoye	0.78	351	⇓*i*P	Pg	18 48 03.0	-0.5
	baz=51						
PDGK				⇓*i*S	Sb	18 48 13.5	-0.3
	baz=51						
PRZ	Przheval'sk	0.93	266	⇓*i*P	Pg	18 48 07.1	+0.8
	baz=62						
PRZ				⇓*i*S	Sg	18 48 19.8	+1.3
	baz=62						
KTMS	Ketmen	1.03	30	P	Pb	18 48 07.7	+0.1
	1.8nm,0.1s						
KTMS				S	Sn	18 48 22.1	0.0
	3.7nm,0.2s						
KTMS	Ketmen	1.03	30	*e*P	Pb	18 48 07.7	+0.1
	baz=31						
KTMS				*e*S	Sn	18 48 22.1	0.0
	baz=31						
KTMS	Ketmen	1.03	30	*e*P	Pb	18 48 07.7	+0.1
	1.8nm,0.1s						
KTMS				*e*S	Sn	18 48 22.1	0.0
	3.7nm,0.2s						
SATY	Saty	1.04	299	P	Pb	18 48 07.8	-0.1
	1.6nm,0.2s						
SATY				S	Sb	18 48 21.7	+0.4
	5.9nm,0.2s						
SATY	Saty	1.04	299	*e*P	Pb	18 48 07.8	-0.1
	1.6nm,0.2s						
SATY				*e*S	Sb	18 48 21.7	+0.4
	5.9nm,0.2s						
DJR	Jarkent	1.78	3	P	Pb	18 48 21.2	+0.8
	0.3nm,0.1s						
DJR				S	Sg	18 48 44.7	-0.8
	1.1nm,0.2s						
DJR	Jarkent	1.78	3	*e*P	Pb	18 48 21.2	+0.8
	0.3nm,0.1s						
DJR				*e*S	Sg	18 48 44.7	-0.8
	1.1nm,0.2s						
KDJ	Kajisay	1.88	258	⇑*i*P	Pb	18 48 23.8	+1.6
	baz=56						
KDJ				⇑*i*S	Sg	18 48 49.3	+0.5
	baz=56						
KOTS	Kotyrbulak	1.98	291	Pg	Pg	18 48 26.2	-0.1
	1.7nm,0.4s						
KOTS				Lg	Lg	18 48 53.2	
	7.7nm,0.7s						
KOTS	Kotyrbulak	1.98	291	*e*P	Pg	18 48 25.8	-0.5
	baz=89						
KOTS				*e*S	Sg	18 48 52.9	+0.8

	baz=89						
KOTS	**Kotyrbulak**	1.98	291	*e*P	Pg	18 48 25.8	-0.5
	1.7nm,0.4s						
KOTS				*e*S	Sg	18 48 52.9	+0.8
	7.7nm,0.7s						
MDOK	**Medeo**	2.01	288	⇓Pg	Pg	18 48 27.0	+0.2
	2.0nm,0.9s						
MDOK				Lg	Lg	18 48 53.3	
	2.8nm,0.7s						
ULHL	**Ulahol**	2.54	264	⇑*e*P	Pb	18 48 33.3	-0.2
	baz=63						
ULHL				⇑*i*S	Sb	18 49 04.8	+0.2
	baz=63						
BOOM	**Boomskoye usch**	2.74	270	⇑*i*P	Pb	18 48 36.2	-0.7
	baz=69						
BOOM				⇑*i*S	Sb	18 49 09.8	-0.5
	baz=69						
NRN	**Naryn**	2.94	249	⇑*i*P	Pb	18 48 39.4	-1.0
	baz=48						
NRN				⇑*i*S	Sb	18 49 15.5	-0.7
	baz=48						
TKM2	**Tokmak 2**	3.01	278	⇑*i*P	Pb	18 48 39.4	-2.0
	baz=77						
TKM2				⇑*i*S	Sb	18 49 16.0	-1.9
	baz=77						

MEX 24 18:51:24.0±0.5**, 13.°86N**×**92.°89W, h16**^{km}±165^{km}**, MD4.1, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.86	350	*e*P	Pn	18 51 51.8	-3.5
PCIG				*e*S	Sn	18 52 13.6	-4.9
CCIG	**Comitan**	2.52	17	*e*P	Pn	18 52 04.3	-0.1
CCIG				*e*S	Sn	18 52 32.5	-2.4

MEX 24 18:58:18.8±0.3**, 15.°96N**×**96.°02W, h44**^{km}±4^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	0.21	205	*e*P	Pn	18 58 25.1	-1.4
HUIG				*e*S	Sn	18 58 30.1	-1.9
VHO	**Vista Hermosa**	1.30	328	*e*P	Pn	18 58 39.1	-1.7
VHO				*e*S	Sn	18 58 54.9	-2.2
CMIG	**Matias Romero**	1.57	44	*e*P	Pn	18 58 42.5	-1.6
CMIG				*e*S	Sn	18 59 01.3	-2.0

GUC 24 19:08:08.0±0.4**, 34.°96S**×**74.°03W, h29**^{km}±3^{km}**, ML3.7, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHPI	**Pichilemu**	1.77	72	*e*S	Sn	19 08 59.2	+1.1
CCHI	**Chillan**	2.29	136	*e*P	Pn	19 08 44.6	+0.8
CCHI				*e*S	Sn	19 09 12.2	+1.2
CCHI				IAML		19 09 16.4	
	comp=N,268nm,0.5s						
ROCH	**El Roble**	3.20	53	*e*P	Pn	19 08 56.9	+0.3
ROCH				*e*S	Sn	19 09 35.4	+1.5
ROCH				IAML		19 09 40.8	
	comp=E,86nm,0.2s						
CLCH	**Cerro Calan**	3.29	63	*e*P	Pn	19 08 58.7	+1.0
CLCH				IAML		19 09 41.2	
	comp=N,183nm,0.3s						
PEL	**Peldehue**	3.31	58	*e*P	Pn	19 08 58.8	+0.8
PEL				*e*S	Sn	19 09 37.4	+0.9
PEL				IAML		19 09 38.8	
	comp=E,133nm,0.3s						
LMEL	**Las Melosas**	3.35	72	*e*P	Pn	19 08 59.8	+1.2
LMEL				*e*S	Sn	19 09 39.0	+1.4
LMEL				IAML		19 09 44.8	
	comp=N,201nm,0.2s						
FCH	**Farellones**	3.50	63	*e*P	Pn	19 09 01.8	+0.9
FCH				*e*S	Sn	19 09 42.2	+0.7
FCH				IAML		19 09 44.0	
	comp=N,199nm,0.3s						

IDC 24 19:12:35.1±3.0**, 8.°03S**×**119.°95E, h192**^{km}±23^{km}**, mb2.5**/2**, mb1 2.8**/4**, mb1mx2.6**/38**, mbtmp3.2**/4**, Error ellipse: s-maj=92.1km s-min=14.6km az=47.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	4.26	121	P	Pn	19 13 40.8	+0.9
	4.5nm,0.3s,baz=275,slow=12,SNR=8.7						
BATI				S	Sn	19 14 30.6	-0.2
	4.9nm,0.3s,baz=304,slow=18,SNR=4.7						
FITZ	**Fitzroy Crossi**	11.44	152	S	Sn	19 17 15.8	-4.7
	0.1nm,0.3s,baz=227,slow=18,SNR=3.6						
WRA	**Warramunga Arr**	18.29	132	P	P	19 16 34.9	+0.2
	0.1nm,0.3s,baz=304,slow=12,SNR=5.5						
WRA				S	S	19 19 54.6	+0.7
	0.1nm,0.3s,baz=307,slow=22,SNR=5.0						
ASAR	**Alice Springs**	20.51	141	P	P	19 16 58.7	+0.1
	0.2nm,0.3s,baz=317,slow=9.3,SNR=5.5						
MKAR	**Makanchi Array**	64.03	332	P	P	19 22 48.1	-0.1
	0.1nm,0.5s,baz=160,slow=7.7,SNR=3.9						

IDC 24 19:18:15.2±3.3**, 6.°21S**×**153.°98E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/29**, mbtmp3.5**/3**, Error ellipse: s-maj=112.1km s-min=34.8km az=114.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	23.46	233	P	P	19 23 27.4	+0.8
	1.0nm,0.7s,baz=59,slow=10,SNR=11						
ASAR	**Alice Springs**	25.96	226	P	P	19 23 49.5	-0.2
	0.3nm,0.6s,baz=57,slow=9.0,SNR=6.4						
MKAR	**Makanchi Array**	82.15	319	P	P	19 30 38.5	+0.5
	0.3nm,0.7s,baz=97,slow=5.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	151.84	286	PKPbc	PKPbc	19 38 11.7	-1.4
	0.5nm,0.7s,baz=80,slow=2.7,SNR=3.4						

ISK ***24*** *19:26:12.8, 37.°60N×26.°52E, h10*^{km}*, ML3.5/18*

ISCJB ***24*** *19:26:13.5±0.5, 37.°62N±0.°02×26.°54E±0.°03, h8*^{km}*±4*^{km}*, Error ellipse: s-maj=3.5km s-min=3.0km az=7.9*

DDA ***24*** *19:26:13.1, 37.°64N×26.°58E, h36*^{km}*±1*^{km}*, ML3.4*

ATH ***24*** *19:26:13.8, 37.°64N×26.°53E, h33*^{km}*±9*^{km}*, ML3.4/3, Error ellipse: s-maj=9.4km s-min=1.5km az=71.0*

THE ***24*** *19:26:13.8, 37.°61N×26.°55E, h3*^{km}*±3*^{km}*, ML3.4/2, Error ellipse: s-maj=3.2km s-min=1.1km az=22.0*

ISC 24 19:26:13.0±1.1**, 37.°61N**±0.°02×**26.°54E**±0.°02**, h10**^{km}±10^{km}**, n63, σ0.**^{s}**74**/80**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGB	**zmir**	0.52	32	*i* P	Pb	19 26 23.8	-0.4
DGB				IAML_P			
	comp=Z,81μm,0.1s						
GMLD	**Gumuldur**	0.56	33	PG	Pb	19 26 24.4	-0.4
GMLD				SG	Sb	19 26 32.7	-0.1
GCAM	**G?zelcaml?**	0.56	81	PG	Pg	19 26 24.3	+0.4
GCAM				SG	Sb	19 26 33.7	+0.7
GCAM	**G?zelcaml?**	0.56	81	*i* P	Pb	19 26 24.5	-0.4
GCAM				IAML_P			
	comp=Z,22μm,0.2s						
ZEY	**zmir**	0.63	358	*i* P	Pb	19 26 25.9	-0.2
ZEY				*i* S	Sb	19 26 35.1	+0.1
ZEY				IAML_P			
	comp=Z,55μm,0.1s						
URLA	**Izmir**	0.75	4	PG	Pg	19 26 27.8	+0.3
URLA				SG	Sb	19 26 39.1	+0.6
URLA	**Izmir**	0.75	4	*i* P	Pb	19 26 28.3	+0.1
URLA				*i* S	Sn	19 26 40.3	-0.9
URLA				IAML_P			
	comp=Z,5μm,0.1s						
BODT	**Bodrum**	0.82	131	P	Pb	19 26 29.5	+0.1
BODT				S	Sb	19 26 41.4	+0.8
CHOS	**Chios island**	0.86	334	PG	Pb	19 26 30.1	-0.1
CHOS				SG	Sb	19 26 42.1	+0.3
CHOS	**Chios island**	0.86	334	P	Pb	19 26 30.3	+0.2
CHOS				S	Sn	19 26 42.9	-1.1
CHOS				AML	AML	19 26 43.6	
	comp=E,4885μm,1.0s						
CHOS				AML	AML	19 26 44.1	
	comp=N,4284μm,0.5s						
CHOS	**Chios island**	0.86	334	P	Pb	19 26 30.3	+0.2
BDRM	**Kayabasi**	0.91	127	*i* P	Pb	19 26 31.1	+0.3
BDRM				IAML_P			
	comp=Z,8μm,0.2s						
AMGA	**Amorgos Island**	0.93	214	P	Pn	19 26 31.7	-0.5
AMGA				S	Sn	19 26 45.8	+0.3
AMGA				AML	AML	19 26 47.7	
	comp=E,10376μm,0.4s						
AMGA				AML	AML	19 26 48.7	
	comp=N,11626μm,0.2s						
AMGA	**Amorgos Island**	0.93	214	P	Pn	19 26 31.5	-0.7
AMGA				S	Sn	19 26 45.9	+0.3
APE	**Apeiranthos**	0.97	236	PG	Pb	19 26 31.7	-0.2
APE	**Apeiranthos**	0.97	236	P	Pn	19 26 32.5	-0.2
APE				S	Sn	19 26 45.8	-0.7
APE				AML	AML	19 26 49.5	
	comp=N,2663μm,0.3s						
APE				AML	AML	19 26 52.1	
	comp=E,1729μm,0.3s						
APE	**Apeiranthos**	0.97	236	P	Pn	19 26 32.5	-0.2
APE				S	Sn	19 26 46.0	-0.5
MLSB	**Milas**	1.04	107	PG	Pb	19 26 33.1	0.0
AYDN	**Tasoluk**	1.07	87	*i* P	Pb	19 26 33.7	+0.1
AYDN				*i* S	Sg	19 26 47.1	-0.3
AYDN				IAML_P			
	comp=Z,9μm,0.2s						
NISR	**Nisiros**	1.10	154	P	Pn	19 26 35.8	+1.3
NISR				S	Sn	19 26 51.0	+1.2
FOCM	**Foa**	1.11	8	PN	Pb	19 26 34.2	-0.1
AYDB	**Zeytinkoy-Aydi**	1.12	72	PN	Pn	19 26 35.3	+0.3
ANAF	**Anafi Island**	1.39	206	P	Pg	19 26 39.7	0.0
ANAF	**Anafi Island**	1.39	206	P	Pg	19 26 39.2	-0.5
ANAF				S	Sg	19 26 58.6	+0.8
YER	**Yerkesik**	1.47	108	PN	Pn	19 26 39.8	+0.2
YER	**Yerkesik**	1.47	108	P	Pn	19 26 39.4	-0.2
THR7	**Fira-Santorini**	1.48	217	P	Pg	19 26 41.4	0.0
THR7				S	Sg	19 27 00.4	-0.2
THR3	**Thira Island,**	1.50	218	P	Pg	19 26 41.4	-0.4
SANT	**Santorini**	1.51	215	PN	Pb	19 26 40.8	-0.3
SANT	**Santorini**	1.51	215	P	Pn	19 26 40.1	0.0
THR6	**Thira Island,**	1.55	216	P	Pn	19 26 40.3	-0.3
AKHS	**Akhisar**	1.62	38	*i* P	Pn	19 26 41.4	-0.3
AKHS				IAML_P			
	comp=Z,3μm,0.4s						
PRK	**Paraskevi**	1.65	353	P	Pn	19 26 42.3	+0.3
SIGR	**SIGRI**	1.69	342	PN	Pn	19 26 42.8	+0.3
SIGR	**SIGRI**	1.69	342	P	Pn	19 26 41.9	-0.7
AYVA	**Ayvalik**	1.70	4	*i* P	Pg	19 26 45.4	-0.2
AYVA				IAML_P			
	comp=Z,2μm,0.4s						
TURN	**Turunc**	1.81	113	*i* P	Pn	19 26 41.9	-2.2
TURN				IAML_P			
	comp=Z,1μm,0.1s						
MANT	**Manisa**	1.82	61	*i* P	Pg	19 26 48.4	+0.4
MANT				IAML_P			
	comp=Z,735nm,0.1s						
ARG	**Arkhangelos**	1.89	137	PN	Pn	19 26 45.5	+0.2
ARG	**Arkhangelos**	1.89	137	P	Pn	19 26 45.3	0.0
TAVA	**DENIZLI_Tavas**	1.90	94	*i* P	Pn	19 26 46.2	+0.7
STEP	**BALIKESIR_Sava**	1.99	27	*i* P	Pn	19 26 46.3	-0.5
STEP				*i* S	Sb	19 27 14.3	0.0
STEP				IAML_P			
	comp=Z,567nm,0.1s						
KARP	**Karpathos**	2.12	166	P	Pn	19 26 48.8	+0.3
BAYC	**CANAKKALE_Bayr**	2.13	0	*i* P	Pn	19 26 48.3	-0.3
BAYC				IAML_P			
	comp=Z,770nm,0.2s						
PTL	**Penteli**	2.16	283	P	Pn	19 26 49.7	+0.6
EZN	**Ezine**	2.22	356	PN	Pn	19 26 50.8	+0.9
DEMI	**Demirci**	2.23	49	*i* P	Pg	19 26 54.8	-1.0
DEMI				IAML_P			
	comp=Z,2μm,0.5s						
USAK	**Uak-Merkez**	2.25	60	*i* P	Pn	19 26 51.3	+1.0
FETY	**Fethiye**	2.26	115	PN	Pn	19 26 51.7	+1.3
FETY	**Fethiye**	2.26	115	P	Pn	19 26 51.5	+1.1
FETY	**Fethiye**	2.26	115	*i* P	Pb	19 26 52.3	-1.5
FETY				IAML_P			
	comp=Z,1μm,0.2s						
BOZC	**Bozcaada**	2.26	351	PN	Pn	19 26 51.4	+1.0
BOZC	**Bozcaada**	2.26	351	*i* P	Pn	19 26 51.0	+0.5
BOZC				IAML_P			
	comp=Z,516nm,0.1s						
STIA	**Sitia Lasithi**	2.43	189	P	Pn	19 26 53.0	+0.2
GOLH	**Golhisar**	2.44	98	*i* P	Pb	19 26 55.0	-2.0
GOLH				IAML_P			
	comp=Z,325nm,0.3s						
KHAL	**Karahalli**	2.46	71	*i* P	Pn	19 26 53.0	-0.2
DURS	**Dursunbey**	2.50	37	*i* P	Pn	19 26 53.4	-0.4
DURS				IAML_P			
	comp=Z,291nm,0.1s						
LPK	**Lapseki**	2.77	4	PN	Pn	19 26 57.8	+0.4
KNL	**Balıkesir**	2.77	16	*i* P	Pn	19 26 57.9	+0.5
KNL				IAML_P			
	comp=Z,362nm,0.3s						
KZIL	**AFYON_Kizioren**	2.92	76	*i* P	Pn	19 27 00.5	+0.8
SMTH	**Samothraki Isl**	2.96	345	P	Pn	19 27 00.1	0.0
ENEZ	**Enez**	3.14	355	PN	Pn	19 27 04.5	+2.0
ALN	**Alexandroupoli**	3.31	354	PN	Pn	19 27 06.9	+2.1

NNC ***24*** *19:41:09.6±0.9, 42.°59N×79.°66E, h0*^{km}*, mb2.9, mpv2.5, Error ellipse: s-maj=5.4km s-min=3.5km az=138.0*

SOME ***24*** *19:41:10.1, 42.°55N×79.°68E, h15*^{km}

KRNET ***24*** *19:41:11.0±0.1, 42.°62N×79.°68E, h20*^{km}*, mb2.3*

ISC 24 19:41:09.1±1.5**, 42.°55N**±0.°05×**79.°69E**±0.°04**, h15**^{km}±11^{km}**, n22, σ0.**^{s}**75**/42**, 11C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	0.63	345	P	Pb	19 41 22.0	+0.2
	15nm,0.1s						
SHLS				S	Sb	19 41 31.1	+0.5
	11nm,0.2s						
SHLS	**Shalkode**	0.63	345	*e*P	Pb	19 41 22.0	+0.2
	baz=15						
SHLS				*e*S	Sb	19 41 30.8	+0.3
	baz=15						
SHLS	**Shalkode**	0.63	345	*e*P	Pb	19 41 22.0	+0.2
	15nm,0.1s						
SHLS				*e*S	Sb	19 41 30.8	+0.3
	11nm,0.2s						
UZB	**Uzynbulak**	0.77	321	P	Pg	19 41 23.9	-0.2
	0.6nm,0.2s						
UZB				S	Sg	19 41 34.4	0.0
	5.7nm,0.2s						
UZB	**Uzynbulak**	0.77	321	*e*P	Pg	19 41 24.1	0.0
	baz=18						
UZB				*e*S	Sg	19 41 34.3	0.0
	baz=18						
UZB	**Uzynbulak**	0.77	321	*e*P	Pg	19 41 24.1	0.0
	0.6nm,0.2s						
UZB				*e*S	Sg	19 41 34.3	-0.1
	5.7nm,0.2s						
PDGK	**Podgornoye**	0.79	350	P	Pg	19 41 24.3	-0.2
	0.3nm,0.1s						
PDGK				S	Sg	19 41 34.8	-0.1
	0.9nm,0.2s						
PDGK	**Podgornoye**	0.79	350	⇓P	Pg	19 41 24.1	-0.4
	3.7nm,1.3s						
PDGK				⇑S	Sg	19 41 34.6	-0.3
	3.2nm,0.9s						
PDGK	**Podgornoye**	0.79	350	⇓*i*P	Pg	19 41 24.3	-0.2
	baz=49						
PDGK				⇓*i*S	Sg	19 41 34.9	-0.1
	baz=49						
PRZ	**Przheval'sk**	0.95	266	⇓*i*P	Pg	19 41 28.7	+1.2
	baz=62						
PRZ				⇓*i*S	Sn	19 41 42.0	+0.4
	baz=62						
KTMS	**Ketmen**	1.02	28	P	Pb	19 41 28.8	+0.3
	1.2nm,0.1s						
KTMS				S	Sg	19 41 42.1	-0.1
	1.5nm,0.2s						
KTMS	**Ketmen**	1.02	28	*e*P	Pb	19 41 28.8	+0.3
	baz=30						
KTMS				*e*S	Sg	19 41 42.1	-0.1
	baz=30						
KTMS	**Ketmen**	1.02	28	*e*P	Pb	19 41 28.8	+0.3
	1.2nm,0.1s						
KTMS				*e*S	Sg	19 41 42.1	-0.1
	1.5nm,0.2s						
SATY	**Saty**	1.07	299	P	Pb	19 41 29.9	+0.5
	2.7nm,0.2s						
SATY				S	Sg	19 41 44.0	+0.2
	4.0nm,0.2s						
SATY	**Saty**	1.07	299	*e*P	Pb	19 41 29.9	+0.5
	2.7nm,0.2s						
SATY				*e*S	Sg	19 41 44.0	+0.2
	4.0nm,0.2s						
KDJ	**Kajisay**	1.91	258	⇑*i*P	Pb	19 41 45.2	+1.6
	baz=56						
KDJ				⇑*i*S	Sg	19 42 11.0	+0.6
	baz=56						
MDOK	**Medeo**	2.04	288	⇑Pg	Pb	19 41 45.5	-0.3
	2.4nm,0.9s						
MDOK				⇑Lg	Lg	19 42 14.1	
	4.9nm,1.0s						
ULHL	**Ulahol**	2.57	264	⇓*i*P	Pb	19 41 54.3	-0.7
	baz=63						
ULHL				⇓*i*S	Sb	19 42 27.1	+0.6
	baz=63						
BOOM	**Boomskoye usch**	2.77	270	⇓*i*P	Pb	19 41 57.5	-0.9
	baz=69						
BOOM				⇓*i*S	Sb	19 42 31.3	-0.9
	baz=69						
NRN	**Naryn**	2.97	249	⇑*i*P	Pb	19 42 00.2	-1.6
	baz=48						
NRN				⇑*i*S	Sb	19 42 37.3	-0.7
	baz=48						
TKM2	**Tokmak 2**	3.04	278	⇑Pg	Pb	19 42 04.4	+1.4
	4.7nm,1.4s						
TKM2				⇑Lg	Lg	19 42 42.9	
	4.7nm,1.4s						
TKM2	**Tokmak 2**	3.04	278	⇑*i*P	Pb	19 42 00.8	-2.1
	baz=77						
TKM2				⇑*i*S	Sb	19 42 38.2	-1.7
	baz=77						

ISCJB ***24*** *19:44:35.4±0.4, 5.°32N±0.°03×73.°73W±0.°03, h161*^{km}*±3*^{km}*, mb3.3/5, Error ellipse: s-maj=5.9km s-min=4.0km az=16.6*

IDC ***24*** *19:44:36.2±0.6, 5.°28N×73.°65W, h156*^{km}*±4*^{km}*, mb3.1/5, mb1 3.5/6, mb1mx3.1/27, mbtmp3.7/6, MS2.8/1, Ms1 2.8/1, ms1mx2.3/18, Error ellipse: s-maj=19.5km s-min=11.5km az=121.0*

RSNC ***24*** *19:44:37.6±1.0, 5.°28N×73.°74W, h145*^{km}*±6*^{km}*, ML3.6, Mw3.7*

ISC 24 19:44:36.5±0.7**, 5.°32N**±0.°03×**73.°74W**±0.°04**, h156**^{km}±5^{km}**, n34, σ1.**^{s}**18**/55**, mb3.4**/5**, 8C-6D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHIC	**Chingaza**	0.68	179	⇓*i*P	Pn	19 44 59.6	-0.5
CHIC				*e*S	Sn	19 45 16.0	-2.2
CHIC				*i*		19 45 19.8	
	comp=Z,804nm,0.4s						
ROSC	**El Rosal**	0.74	231	⇓*i*P	Pn	19 45 01.4	+0.9
ROSC				*e*S	Sn	19 45 19.3	+0.6
ROSC				*i* L	L	19 45 21.8	
	comp=Z,842nm,0.3s						
ROSC	**El Rosal**	0.74	231	P	Pn	19 45 01.4	+0.9
	comp=Z,55nm,0.3s,baz=108,slow=13,SNR=121						
ROSC				S	Sn	19 45 19.6	+0.9
	comp=Z,206nm,0.3s,baz=17,slow=19,SNR=50						
RUSC	**La Rusia**	0.87	49	⇓*i*P	Pn	19 45 01.8	+0.4
RUSC				*e*S	Sn	19 45 20.1	-0.4
RUSC				*i*		19 45 22.9	
	comp=Z,376nm,0.3s						
VILC	**Villavicencio,**	1.20	178	⇓*i*P	Pn	19 45 03.0	-0.9
VILC				*e*S	Sn	19 45 23.0	-1.8
VILC				*i*		19 45 25.0	
	comp=Z,2μm,0.4s						
BARC	**Barichara**	1.38	24	*e*P	Pn	19 45 05.7	0.0
BARC				*e*S	Sn	19 45 26.9	-1.2
BARC				*i*		19 45 32.8	
	comp=Z,1μm,0.4s						
PTBC	**PUERTO BERRIO,**	1.41	330	⇑*i*P	Pn	19 45 05.2	-0.5
PTBC				*e*S	Sn	19 45 27.0	-1.1
PTBC				*i*		19 45 30.1	
	comp=Z,629nm,0.2s						
RREF	**El Recreo**	1.65	256	*e*P	Pn	19 45 08.6	-0.2
RREF				*e*S	Sn	19 45 32.9	-0.6
RREF				*i*		19 45 36.8	
	comp=Z,187nm,0.3s						
BRRC	**Barranca, Sant**	1.78	1	⇑*e*P	Pn	19 45 10.2	+0.6
BRRC				*e*S	Sn	19 45 35.8	+0.7
BRRC				*i*		19 45 41.2	
	comp=Z,450nm,0.3s						
ANIL	**Santa Ana**	1.85	244	⇓*i*P	Pn	19 45 10.6	0.0
ANIL				*e*S	Sn	19 45 36.0	-0.7
ANIL				*i*		19 45 39.4	
	comp=Z,135nm,0.4s						
HELC	**Santa Helena**	1.98	296	⇑*i*P	Pn	19 45 12.5	+0.3
HELC				*e*S	Sn	19 45 39.3	-0.2
HELC				*i*		19 45 45.6	
	comp=Z,211nm,0.5s						
TAMC	**Tame, Arauca**	2.24	60	⇓*i*P	Pn	19 45 15.4	+0.5
TAMC				*e*S	Sn	19 45 43.4	-1.0
TAMC				*i*		19 45 53.8	
	comp=Z,122nm,0.2s						
PAMC	**Pamplona, Colo**	2.26	27	*e*P	Pn	19 45 16.9	+1.3
PAMC				*e*S	Sn	19 45 45.1	-0.6
PAMC				*i*		19 45 48.7	
	comp=Z,202nm,0.4s						
ZARC	**Zaragoza, Cauc**	2.43	333	⇑*i*P	Pn	19 45 16.0	-1.1
ZARC				*e*S	Sn	19 45 47.8	-0.7
ZARC				*i*		19 45 54.6	
	comp=Z,405nm,0.2s						
YOTC	**Yotoco, Valle**	2.91	243	*e*P	Pn	19 45 22.9	-0.3
OCAC	**Ocana**	2.93	8	⇑*i*P	Pn	19 45 24.0	+0.5
OCAC				*e*S	Sn	19 45 59.8	-0.1
OCAC				*i*		19 46 08.7	
	comp=Z,363nm,0.4s						
GUVC	**San Jose del G**	2.97	158	*e*P	Pn	19 45 22.5	-1.3
GUVC				*e*S	Sn	19 45 58.2	-2.3
GUVC				*i*		19 46 02.6	
	comp=Z,308nm,0.2s						
UREC	**San Jos de Ur**	3.00	324	*e*P	Pn	19 45 22.8	-1.4
UREC				*e*S	Sn	19 45 59.0	-2.2
SMLC	**San Martn de**	3.48	355	⇑*i*P	Pn	19 45 29.1	-1.1
SMLC				*e*S	Sn	19 46 11.6	-0.4
PCON	**Cinco Dias**	3.98	222	*e*P	Pn	19 45 37.4	+0.1
POPC	**Popayan, Colom**	4.02	227	*e*P	Pn	19 45 37.6	+0.1
SOTA	**Rioblanco**	4.26	222	*e*P	Pn	19 45 41.8	+0.9
CODC	**Agustn Codazz**	4.60	4	⇑*i*P	Pn	19 45 44.3	-0.5
CODC				*e*S	Sn	19 46 37.7	-0.3
CODC				*i*		19 46 52.1	
	comp=Z,41nm,0.4s						
SDV	**Santo Domingo**	4.70	41	P	Pn	19 45 46.3	-0.1
	comp=Z,8.6nm,0.3s,baz=218,slow=7.4,SNR=41						
SDV				S	Sn	19 46 39.6	-1.2
	comp=Z,12nm,0.3s,baz=54,slow=20,SNR=18						
SJCC	**San Jacinto, C**	4.77	343	⇑*e*P	Pn	19 45 45.1	-2.0
SJCC				*e*S	Sn	19 46 38.4	-3.8
ATAH	**Atahualpa**	13.21	201	LR	LR	19 54 07.4	
	comp=Z,44nm,21.1s,baz=21,slow=43						
SIV	**San Ignacio**	24.61	150	P	P	19 49 42.1	-0.5
	comp=Z,0.6nm,0.5s,baz=305,slow=8.9,SNR=3.8						
TXAR	**Lajitas Array**	37.02	314	PcP	PcP	19 53 49.4	+0.2
	comp=Z,0.4nm,0.7s,baz=134,slow=5.4,SNR=3.5						
PLCA	**Paso Flores**	45.92	177	P	P	19 52 42.8	-0.9
	comp=Z,2.2nm,1.1s,baz=16,slow=7.4,SNR=3.1						
NVAR	**Mina Array Bea**	52.11	316	P	P	19 53 31.5	+0.4
	comp=Z,0.2nm,0.5s,baz=119,slow=7.3,SNR=2.8						
NVAR				PcP	PcP	19 54 41.1	+0.2
	comp=Z,0.3nm,0.5s,baz=142,slow=4.5,SNR=3.1						
YKA	**Yellowknife Ar**	64.46	340	P	P	19 54 56.3	+0.3
	comp=Z,0.4nm,0.6s,baz=136,slow=6.4,SNR=11						
ILAR	**Eielson Array**	78.06	335	P	P	19 56 17.9	+0.2
	comp=Z,0.2nm,0.5s,baz=93,slow=4.7,SNR=4.2						
ASAR	**Alice Springs**	147.72	233	PKPbc	PKPdf	20 04 02.2	+1.5
	comp=Z,0.2nm,0.3s,baz=124,slow=3.3,SNR=6.0						
WRA	**Warramunga Arr**	149.06	239	PKPbc	PKPdf	20 04 06.2	+3.2
	comp=Z,0.3nm,0.3s,baz=107,slow=3.1,SNR=25						

JMA ***24*** *19:45:38.8±0.1, 33.°50N×137.°03E, h392*^{km}*, M3.5*

ISCJB ***24*** *19:45:41.2±0.7, 33.°9N±0.°1×137.°3E±0.°2, h400*^{km}*, mb3.0/4, Error ellipse: s-maj=22.9km s-min=10.0km az=37.8*

IDC ***24*** *19:45:41.7±1.9, 33.°74N×136.°88E, h372*^{km}*±35*^{km}*, mb2.9/4, mb1 3.0/5, mb1mx2.7/31, mbtmp3.5/5, Error ellipse: s-maj=83.4km s-min=19.7km az=70.0*

ISC 24 19:45:40.0±2.8**, 33.°7N**±0.°4×**137.°2E**±0.°2**, h400**^{km}**, n13, σ2.**^{s}**65**/14**, mb3.1**/4**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKN2	**Miekihoku**	0.95	307	P	Pn	19 46 29.1	-1.8
JNY	**Yasuok**	1.77	18	P	Pn	19 46 34.5	-0.1

JAI	Aioi	2.29	274	P	Pn	19 46 35.0	-2.8
JRY	Ryogami san	2.73	30	P	Pn	19 46 42.0	+1.0
JHU	Hanno	2.78	38	P	Pn	19 46 42.4	+1.1
MJAR	Matsushiro Arr	2.99	16	P	Pn	19 46 42.7	-0.3
	0.1nm,0.3s,baz=194,slow=10.0,SNR=9.6						
JAG	Ashikaga	3.32	33	P	Pn	19 46 45.5	-0.3
JAG				*e*S	S	19 47 35.6	-3.5
JHO	Hitachi	4.03	42	P	Pn	19 46 52.7	+0.4
JHO				*e*S	S	19 47 47.2	-3.8
JFK	Kawauchi	4.76	38	P	Pn	19 46 59.9	+0.5
JFK				*e*S	S	19 47 59.2	-4.9
MKAR	Makanchi Array	43.08	305	P	P	19 53 04.4	+1.9
	0.1nm,0.5s,baz=88,slow=9.1,SNR=3.8						
WRA	Warramunga Arr	53.38	183	P	P	19 54 25.2	+4.9
	0.4nm,0.3s,baz=0.3,slow=7.6,SNR=21						
ASAR	Alice Springs	57.10	184	P	P	19 54 50.4	+3.9
	0.6nm,0.9s,baz=332,slow=12,SNR=5.4						
FINES	FINESS Array B	70.15	332	P	P	19 56 13.2	+3.0
	3.0nm,1.1s,baz=38,slow=9.3,SNR=3.3						

IDC ***24*** *20:15:12.9±1.5, 10°.80S×164°.51E, h0^{km}, mb3.4/4, mb1 3.8/6, mb1mx3.6/25, mbtmp3.7/6, ML4.3/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/12, Error ellipse: s-maj=33.8km s-min=28.5km az=143.0*

ISCJB ***24*** *20:15:15.4±1.1, 11°.01S±0°.09×164°.5E±0°.1, h29^{km}, mb3.4/4, Error ellipse: s-maj=18.9km s-min=8.5km az=141.7*

ISC 24 20:15:17.1±1.3, **10°.9S**±0°.1×**164°.6E**±0°.1, **h29**^{km}, **n6, σ0^{s}.82**/8, **mb3.5**/4, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.78	287	Pn	Pn	20 16 26.6	-0.5
	20nm,0.3s,baz=171,slow=13,SNR=5.0						
HNR				Sn	Sn	20 17 22.6	+1.1
	2.2nm,0.3s,baz=180,slow=18,SNR=2.4						
DZM	Mont Dzumac	11.25	171	Pn	Pn	20 17 57.1	+0.9
	1.2nm,0.3s,baz=328,slow=19,SNR=9.0						
DZM				Sn	Sn	20 20 00.3	-0.7
	0.4nm,0.3s,baz=180,slow=20,SNR=3.2						
DZM				LR	LR	20 21 30.8	
	comp=Z,71nm,19.1s,baz=86,slow=33						
WRA	Warramunga Arr	30.45	249	P	P	20 21 26.9	-0.6
	0.4nm,0.8s,baz=78,slow=9.0,SNR=2.6						
ASAR	Alice Springs	31.82	242	P	P	20 21 39.4	-0.2
	0.2nm,0.6s,baz=64,slow=9.9,SNR=3.6						
ILAR	Eielson Array	83.75	19	P	P	20 27 43.3	+0.2
	0.3nm,0.5s,baz=243,slow=4.9,SNR=8.4						
MKAR	Makanchi Array	92.63	317	P	P	20 28 25.9	-0.3
	0.2nm,0.6s,baz=90,slow=5.8,SNR=2.8						

IDC 24 20:17:24.8±4.6, **10°.94S**×**165°.73E, h0**^{km}, **mb3.5**/3, **mb1 3.8**/3, **mb1mx3.4**/24, **mbtmp3.5**/3, **Error ellipse: s-maj=239.4km s-min=32.1km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.50	250	P	P	20 23 48.9	+0.1
	1.4nm,0.9s,baz=81,slow=8.8,SNR=4.8						
ASAR	Alice Springs	32.83	243	P	P	20 24 00.1	-0.2
	0.2nm,0.7s,baz=64,slow=10,SNR=3.2						
ILAR	Eielson Array	83.41	19	P	P	20 29 53.7	0.0
	0.3nm,0.8s,baz=234,slow=5.5,SNR=3.9						

ISCJB ***24*** *20:20:13.2±0.6, 37°.61N±0°.02×26°.55E±0°.04, h2^{km}±7^{km}, Error ellipse: s-maj=5.2km s-min=4.1km az=162.5*

DDA ***24*** *20:20:13.3, 37°.66N×26°.60E, h7^{km}±5^{km}, ML2.5*

ISK ***24*** *20:20:13.6, 37°.64N×26°.60E, h5^{km}, ML2.4/12*

ATH ***24*** *20:20:14.0, 37°.61N×26°.51E, h12^{km}±4^{km}, ML2.3/3, Error ellipse: s-maj=6.2km s-min=1.2km az=272.0*

ISC 24 20:20:13.3±1.2, **37°.61N**±0°.02×**26°.58E**±0°.03, **h10**^{km}±13^{km}, **n29, σ0^{s}.55**/38, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGB	zmir	0.51	29	*i* P	Pb	20 20 24.0	-0.3
GCAM	G?zelcaml?	0.53	80	PG	Pg	20 20 23.8	+0.2
GCAM				SG	Sb	20 20 31.9	-0.5
GCAM	G?zelcaml?	0.53	80	*i* P	Pb	20 20 24.3	-0.4
GCAM				*i* S	Sb	20 20 32.4	0.0
GCAM				IAML_P			
	comp=Z,2μm,0.1s						
ZEY	zmir	0.63	355	*i* P	Pg	20 20 25.7	+0.1
URLA	Izmir	0.75	1	PG	Pg	20 20 28.1	+0.3
URLA				SG	Sb	20 20 39.4	+0.5
URLA	Izmir	0.75	1	*i* P	Pg	20 20 27.7	-0.1
URLA				*i* S	Sb	20 20 38.2	-0.7
URLA				IAML_P			
	comp=Z,3μm,0.2s						
BODT	Bodrum	0.80	133	PG	Pb	20 20 29.5	+0.2
BODT				SG	Sb	20 20 41.3	+1.1
BLCB	Balcova	0.86	25	PG	Pg	20 20 29.8	0.0
BLCB				SG	Sb	20 20 41.4	-0.5
BDRM	Kayabasi	0.88	128	*i* P	Pg	20 20 30.3	+0.1
BDRM				IAML_P			
	comp=Z,368nm,0.1s						
CHOS	Chios island	0.88	332	PG	Pb	20 20 30.7	-0.1
CHOS				SG	Sb	20 20 42.8	+0.2
CHOS	Chios island	0.88	332	P	Pg	20 20 29.9	-0.3
CHOS				S	Sb	20 20 42.4	-0.3
CHOS				AML	AML	20 20 43.1	
	comp=E,362μm,0.3s						
CHOS				AML	AML	20 20 44.2	
	comp=N,305μm,0.4s						
AMGA	Amorgos Island	0.95	215	P	Pg	20 20 31.3	-0.2
AMGA				S	Sb	20 20 44.6	+0.2
AMGA				AML	AML	20 20 46.8	
	comp=E,866μm,0.4s						
AMGA				AML	AML	20 20 47.9	
	comp=N,627μm,0.2s						
APE	Apeiranthos	0.99	238	P	Pg	20 20 32.0	-0.3
APE				S	Sg	20 20 45.2	-0.1
APE				AML	AML	20 20 48.1	
	comp=E,212μm,0.1s						
APE				AML	AML	20 20 50.6	
	comp=N,271μm,0.2s						
MLSB	Milas	1.00	108	PG	Pb	20 20 33.3	+0.5
AYDN	Tasoluk	1.03	87	*i* P	Pg	20 20 33.1	-0.1
AYDN				IAML_P			
	comp=Z,976nm,0.1s						
AYDB	Zeytinkoy-Aydi	1.09	72	PG	Pb	20 20 34.6	+0.2
ANAF	Anafi Island	1.41	208	P	Pb	20 20 39.9	+0.3
SANT	Santorini	1.52	216	PN	Pg	20 20 42.6	+0.1
AKHS	Akhisar	1.60	37	*i* P	Pn	20 20 41.9	+0.2
AKHS				IAML_P			
	comp=Z,283nm,0.2s						
PRK	Paraskevi	1.65	352	P	Pg	20 20 45.4	+0.4
SIGR	SIGRI	1.70	341	PN	Pb	20 20 44.8	+0.2
SIGR	SIGRI	1.70	341	P	Pb	20 20 45.2	+0.5
TURN	Turunc	1.77	114	PN	Pn	20 20 42.9	-1.2
TURN	Turunc	1.77	114	*i* P	Pn	20 20 34.5	-10
MANT	Manisa	1.79	60	*i* P	Pg	20 20 48.7	+1.0
MANT				IAML_P			
	comp=Z,335nm,0.2s						
KULA	Kula-Manisa	1.88	61	PN	Pb	20 20 47.1	-0.6
STEP	BALIKESIR_Sava	1.98	27	*i* P	Pb	20 20 49.5	0.0
STEP				IAML_P			
	comp=Z,58nm,0.3s						
BAYC	CANAKKALE_Bayr	2.13	359	*i* P	Pn	20 20 48.0	-1.0
BAYC				IAML_P			
	comp=Z,35nm,0.1s						
EZN	Ezine	2.22	355	PN	Pn	20 20 51.8	+1.6

IDC 24 20:38:32.6±6.5, **50°.13N**×**113°.93W, h0**^{km}, **mb1 3.5**/1, **mb1mx3.0**/36, **mbtmp3.1**/1, **ML2.9**/1, **Error ellipse: s-maj=96.4km s-min=48.5km az=65.0, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I56US	NEWPORT INFRAS	2.81	229	*i*		20 57 40.0	
	baz=45,slow=330,SNR=0.7						
I10CA	LAC DU BONNET	11.49	83	*i*		21 53 45.9	
	baz=273,slow=331,SNR=2.7						
YKA	Yellowknife Ar	12.40	359	Pn	Pn	20 41 26.0	-4.1
	0.1nm,0.3s,baz=180,slow=13,SNR=4.6						
YKA				Lg	Lg	20 44 56.9	
	0.0nm,0.3s,baz=173,slow=27,SNR=3.1						

IDC 24 20:43:46.9±1.9, **0°.38S**×**132°.66E, h0**^{km}, **mb3.4**/2, **mb1 3.6**/4, **mb1mx3.3**/35, **mbtmp3.4**/4, **ML3.3**/2, **Error ellipse: s-maj=30.2km s-min=26.1km az=57.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	1.48	251	Pn	Pn	20 44 14.6	-0.1
	27nm,0.3s,baz=47,slow=18,SNR=134						
SIJI				Sn	Sn	20 44 35.6	+0.8
	36nm,0.3s,baz=138,slow=20,SNR=19						
FITZ	Fitzroy Crossi	18.91	201	P	P	20 48 09.3	0.0
	0.1nm,0.3s,baz=16,slow=13,SNR=3.1						
WRA	Warramunga Arr	19.52	175	P	P	20 48 16.1	+0.1
	0.1nm,0.3s,baz=355,slow=11,SNR=5.4						
ASAR	Alice Springs	23.18	177	P	P	20 48 55.5	+0.1
	0.7nm,0.5s,baz=358,slow=10,SNR=12						
MKAR	Makanchi Array	64.31	324	P	P	20 54 24.3	0.0
	0.3nm,0.7s,baz=128,slow=8.8,SNR=4.2						

WEL ***24*** *20:54:03.0±0.9, 32°S±4°×17°7W±1°4, h33^{km}, ML6.3/18*

BJI ***24*** *20:54:02.3, 32°.20S×178°.10W, h10^{km}, mB5.9/51, mb5.3/44, Ms5.5/58, Ms7 5.3/54*

ISCJB ***24*** *20:54:03.6±0.1, 32°.22S±0°.02×178°.10W±0°.04, h15^{km}, mb5.2/68, MS5.4/185, Error ellipse: s-maj=5.0km s-min=1.9km az=30.0*

IDC ***24*** *20:54:03.0±0.3, 32°.07S×178°.08W, h0^{km}, mb5.0/21, mb1 5.1/24, mb1mx5.1/28, mbtmp5.0/24, ML4.6/3, MS5.3/28, Ms1 5.3/28, ms1mx5.2/35, Error ellipse: s-maj=13.6km s-min=11.9km az=167.0*

NEIC ***24*** *20:54:04.1±0.2, 32°.34S×178°.05W, h10^{km}, mb5.4/24, MS5.5/128, MW5.5, Error ellipse: s-maj=8.6km s-min=4.9km az=125.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{17}Nm; M_{rr}1.42; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-1.08; $M_{r\theta}$1.54; $M_{\theta\phi}$-0.55; $M_{\phi r}$0.24; Best double couple: $M_0$2.10000×10^{17} NP1:ϕ_s192.00000°, δ30.00000°, λ45.00000°. NP2:ϕ_s61.00000°, δ70.00000°, λ112.00000°. Principal axes: T 2.3100, Plg60.0000°, Azm2.0000°; N -0.5600, Plg20.0000°, Azm233.0000°; P -1.7500, Plg22.0000°, Azm135.0000°;*

MOS ***24*** *20:54:06.0±1.1, 31°.96S×178°.15W, h23^{km}, mb5.6/28, MS5.4/26 Error ellipse: s-maj=12.5km s-min=8.7km az=107.9*

GCMT ***24*** *20:54:09.1±0.1, 32°.13S±0°.01×177°.81W±0°.01, h17^{km}, MW5.7/131, Moment Tensor Solution. s116,c213; s131,c326; Duration: 1^{s}.7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.96±.04; $M_{\theta\theta}$-0.44±.03; $M_{\phi\phi}$-2.52±.03; $M_{r\theta}$0.89±.10; $M_{\theta\phi}$-1.30±.03; $M_{\phi r}$2.85±.11; Best double couple: $M_0$4.27100×10^{17} NP1:ϕ_s20.00000°, δ67.00000°, λ85.00000°. NP2:ϕ_s212.00000°, δ23.00000°, λ102.00000°. Principal axes: T 4.1950, Plg67.0000°, Azm281.0000°; N 0.1480, Plg5.0000°, Azm22.0000°; P -4.3460, Plg22.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 24 20:54:06.1±0.5, **32°.17S**±0°.04×**177°.95W**±0°.05, **h19**^{km}±1^{km}, **h20**^{km}**:pP-P, n852, σ1^{s}.71**/775, **mb5.3**/66, **MS5.5**/185, **44C-21D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.90	0	P	Pn	20 54 47.4	-3.8
GLKZ				S	Sn	20 55 22.5	-2.9
RAO	Raoul Island	2.91	1	Pn	Pn	20 54 48.3	-3.0
	393nm,0.3s,baz=83,slow=12,SNR=9.2						
RAO				Sn	Sn	20 55 24.8	-0.8
	895nm,0.3s,baz=127,slow=20,SNR=3.8						
RAO				LR	LR	20 55 46.7	
	comp=Z,17μm,18.7s,baz=138,slow=37						
RIZ	Raoul Island	2.91	0	P	Pn	20 54 47.7	-3.7
RIZ				S	Sn	20 55 24.2	-1.6
MXZ	Matakaoa Point	6.20	209	*e*Pn	Pn	20 55 33.0	-3.5
MXZ	Matakaoa Point	6.20	209	P	Pn	20 55 33.0	-3.5
MXZ				S	Sn	20 56 46.1	-0.7
WMGZ	Waiomatatini S	6.38	207	P	Pn	20 55 38.4	-0.6
WMGZ				S	Sn	20 56 51.0	-0.2
PKGZ	Pakihiroa	6.57	209	P	Pn	20 55 38.2	-3.5
PKGZ				S	Sn	20 56 54.7	-1.4
HAZ	Te Kaha	6.58	211	P	Pn	20 55 39.8	-1.9
HAZ				S	Sn	20 56 57.0	+0.7
PUZ	Puketiti	6.66	207	P	Pn	20 55 39.2	-3.7
PUZ				S	Sn	20 56 56.8	-1.4
RUGZ	Raukumara Rang	6.80	211	P	Pn	20 55 43.4	-1.6
RUGZ				S	Sn	20 57 01.2	-0.8
GRZ	Great Barrier	6.81	232	P	Pn	20 55 48.0	+3.1
TWGZ	Tauwhareparae	6.86	208	P	Pn	20 55 42.7	-2.9
TWGZ				S	Sn	20 57 02.7	-0.4
KUZ	Kuaotunu	6.94	227	P	Pn	20 55 48.5	+1.8
MYRZ	Mayor Island	6.99	222	P	Pn	20 55 47.9	+0.5
WHRZ	Whale Island	7.04	215	P	Pn	20 55 48.1	0.0
WHRZ				S	Sn	20 57 08.0	+0.4
CNGZ	Carnagh Statio	7.04	205	P	Pn	20 55 45.1	-3.0
CNGZ				S	Sn	20 57 07.1	-0.5
TKGZ	Te Karaka	7.14	208	P	Pn	20 55 47.5	-1.9
MWZ	Matawai	7.18	210	P	Pn	20 55 47.6	-2.4
URZ	Urewera	7.30	212	*e*Pn	Pn	20 55 49.9	-1.7
URZ				Sn	Sn	20 57 11.7	-2.2
URZ	Urewera	7.30	212	Pn	Pn	20 55 50.4	-1.2
	24nm,0.3s,baz=42,slow=4.1,SNR=68						
URZ				Sn	Sn	20 57 11.7	-2.2
	120nm,0.3s,baz=134,slow=8.0,SNR=9.3						
EDRZ	Edgecumbe	7.35	215	P	Pn	20 55 54.8	+2.5
EDRZ				S	Sn	20 57 15.8	+0.5
OMRZ	Omania	7.53	217	P	Pn	20 55 53.1	-1.7
KMRZ	Kaimai	7.56	220	P	Pn	20 55 57.3	+2.0
MUGZ	Murupara	7.63	213	P	Pn	20 55 54.3	-1.9
SNGZ	Shannon Statio	7.64	209	P	Pn	20 55 53.5	-2.8
SNGZ				S	Sn	20 57 21.0	-1.2
RTZ	Ruatahuna	7.65	211	P	Pn	20 55 55.3	-1.2
OUZ	Omahuta	7.68	244	*e*Pn	Pn	20 56 00.9	+4.1
KNZ	Kokohu	7.71	206	P	Pn	20 55 54.6	-2.6
MHGZ	Mahia Peninsul	7.74	205	P	Pn	20 55 53.3	-4.4
RAHZ	Arahi	7.86	210	P	Pn	20 55 58.4	-0.8
RAHZ				P	Pn	20 55 58.4	-0.8
RAHZ				P	Pn	20 55 58.5	-0.8
MTHZ	Maungataniwha	7.91	211	P	Pn	20 55 59.3	-0.7
WHHZ	Waihua	7.93	208	P	Pn	20 55 59.8	-0.5
NMHZ	Naumai	8.12	210	P	Pn	20 56 01.9	-1.1
ARHZ	Aropaoanui	8.19	209	P	Pn	20 56 01.9	-1.9
BKZ	Black Stump Fm	8.32	211	*e*Pn	Pn	20 56 02.7	-2.9
BKZ	Black Stump Fm	8.32	211	P	Pn	20 56 05.2	-0.4
RATZ	Rangitukua	8.42	216	P	Pn	20 56 08.1	+1.1
MCHZ	McNeill Hill	8.46	209	P	Pn	20 56 06.7	-0.9
CKHZ	Cape Kidnapper	8.49	207	P	Pn	20 56 05.5	-2.5
KATZ	Kakaramea	8.54	216	P	Pn	20 56 11.1	+2.3
KWHZ	Kaweka Forest	8.56	211	P	Pn	20 56 05.3	-3.7
HIZ	Hauiti	8.64	221	*e*Pn	Pn	20 56 09.5	-0.5
KRVZ	Karewarewa	8.66	215	P	Pn	20 56 10.9	+0.5
WTVZ	West Tongariro	8.70	215	P	Pn	20 56 09.9	-1.1
NGZ	Ngauruhoe	8.74	215	P	Pn	20 56 12.2	+0.7
TWVZ	Taurewa	8.74	216	P	Pn	20 56 12.2	+0.8
BHHZ	Black Hill Sta	8.77	212	P	Pn	20 56 11.2	-0.8
TUVZ	Tukino	8.79	214	P	Pn	20 56 11.0	-1.2
TUVZ				P		20 56 13.3	
COVZ	Chateau Observ	8.79	215	P	Pn	20 56 12.2	0.0
FWVZ	Far West T-bar	8.83	215	P	Pn	20 56 11.7	-1.0
MOVZ	Moawhango	8.85	214	P	Pn	20 56 12.7	-0.3
TRVZ	Turoa	8.86	215	P	Pn	20 56 13.8	+0.5
PRHZ	Porangahau	9.19	207	P	Pn	20 56 13.4	-4.2
TSZ	Takapari Road	9.29	210	P	Pn	20 56 18.1	-0.8
DVHZ	Dannevirke	9.40	209	P	Pn	20 56 17.4	-3.1
BFZ	Birch Farm	9.70	207	*e*Pn	Pn	20 56 18.1	-6.4
PRWZ	Pori Road	9.70	209	P	Pn	20 56 20.0	-4.5
TIWZ	Tintock	9.92	208	P	Pn	20 56 23.7	-3.9
HOWZ	Holdsworth Sta	10.17	209	P	Pn	20 56 27.1	-3.9
TMWZ	Te Maipa	10.20	207	P	Pn	20 56 26.8	-4.6
OGWZ	Otaki Gorge	10.25	211	P	Pn	20 56 28.1	-4.0
MTW	Mount Morrison	10.40	209	P	Pn	20 56 29.5	-4.6
TRWZ	Traveller	10.53	207	P	Pn	20 56 31.2	-4.6
MSWZ	Moikau Station	10.72	209	P	Pn	20 56 34.2	-4.2
DUWZ	D'Urville Isla	10.81	215	P	Pn	20 56 37.7	-2.1
SNZO	South Karori	10.86	211	*e*Pn	Pn	20 56 36.8	-3.6
NNZ	Nelson	11.40	215	P	Pn	20 56 49.0	+1.2
THZ	Tophouse	12.04	215	*e*Pn	Pn	20 56 53.7	-3.0
THZ	Tophouse	12.04	215	P	Pn	20 56 58.0	+1.3
KHZ	Kahutara	12.26	211	*e*Pn	Pn	20 56 55.9	-3.7
LTZ	Lake Taylor	13.13	213	*e*Pn	Pn	20 57 07.6	-3.8
AMCZ	Amberley	13.26	211	P	Pn	20 57 11.6	-1.6
OXZ	Oxford	13.66	213	*e*Pn	Pn	20 57 14.1	-4.5
RPZ	Rata Peaks	14.41	214	*e*Pn	Pn	20 57 23.2	-5.8
RPZ				Sn	Sn	20 59 52.9	-15
RPZ	Rata Peaks	14.41	214	Pn	Pn	20 57 23.5	-5.5
	4.7nm,0.3s,baz=78,slow=0.8,SNR=18						
RPZ				Sn	Sn	20 59 52.9	-15
	8.3nm,0.3s,baz=131,slow=23,SNR=11						
MSVF	Nonsavu	14.82	345	*ce*P	Pn	20 57 33.5	-1.2
FOZ	Fox Glacier	14.88	217	*e*Pn	Pn	20 57 30.7	-4.6
NIUE	Niue	14.90	31	P	Pn	20 57 29.9	-5.8
	baz=15,SNR=3.2						
NIUE				S	Sn	21 00 02.0	-18
	baz=15						
WKZ	Wanaka	16.22	215	*e*Pn	Pn	20 57 46.9	-5.8
	21nm,1.0s						
DZM	Mont Dzumac	17.13	302	*e*P	P	20 58 06.0	-0.2
	436nm,1.4s						
DZM	Mont Dzumac	17.13	302	Pn	P	20 58 05.8	-0.3
	0.5nm,0.3s,baz=114,slow=13,SNR=12						
DZM				LR	LR	21 03 37.1	
	comp=Z,37μm,18.1s,baz=116,slow=34						
WHZ	Wether Hill Ro	17.51	214	*e*Pn	Pn	20 58 04.7	-4.3
	27nm,0.6s						
DCZ	Deep Cove	17.60	217	*e*Pn	Pn	20 58 05.5	-4.5
	21nm,1.3s						
RAR	Rarotonga	19.53	61	P	Pn	20 58 34.0	+0.2
RAR	Rarotonga	19.53	61	P	Pn	20 58 33.9	+0.2
	1.9nm,0.3s,baz=224,slow=13,SNR=4.3						
RAR				S	S	21 01 55.1	-17
	1.2nm,0.3s,baz=92,slow=18,SNR=3.4						
RAR				LR	LR	21 07 02.4	
	comp=Z,3μm,18.4s,baz=226,slow=40						
ARMA	Armidale	26.02	266	P	P	20 59 37.0	-1.0
	baz=26,SNR=15						
MGCD	Mangrove Creek	26.02	259	P	P	20 59 37.3	-0.6
	baz=26,SNR=20						
TBI	Tubuai	26.63	78	*e*LQ	LQ	21 04 53.6	
	11μm,25.5s						
TBI				*e*LR	LR	21 06 20.0	
	comp=Z,7μm,32.0s,baz=245						
TBI	Tubuai	26.63	78	*e*T	T	21 27 04.6	
	27nm,0.3s						
CNB	Canberra Magne	27.30	254	P	P	20 59 48.6	-0.9
	baz=27,SNR=6.2						
MILA	Mila	27.43	251	P	P	20 59 50.1	-0.5
	baz=27,SNR=4.8						
EIDS	Eidsvold	27.92	276	P	P	20 59 54.6	-0.5
	baz=28,SNR=12						
EIDS	Eidsvold	27.92	276	*e*P	P	20 59 55.9	+0.9
	50nm,0.9s						
YNG	Young	28.16	256	P	P	20 59 56.2	-1.0
	baz=28,SNR=9.8						
TAU	Tasmania Unive	29.36	239	PFAKE		21 00 20.0	+12
TAU				LR	LR		
	comp=Z,9μm,19.0s						
MOO	Moorlands	29.38	240	P	P	21 00 08.3	+0.3
	baz=29,SNR=3.9						
PAE	Paea	29.39	67	*e*T	T	21 30 32.0	
	comp=Z,8.7nm,0.3s						
PPT2	Papeete2	29.43	67	*e*LQ	LQ	21 06 08.3	
	comp=Z,6μm,22.2s						
PPT2				*e*LR	LR	21 07 48.4	
	comp=Z,4μm,22.8s,baz=236						
PPT2	Papeete2	29.43	67	*e*T	T	21 30 39.4	
	comp=Z,11nm,0.4s						
PPT	Papeete	29.45	67	LR	LR	21 11 13.8	
	comp=Z,3μm,18.5s,baz=243,slow=35						
RMQ	Roma	29.50	272	P	P	21 00 08.8	-0.3
	baz=29,SNR=21						
TIAR	Tiarei	29.63	67	*e*P	P	21 00 15.5	+5.1
	comp=Z,25nm,0.9s						
TOO	Toolangi	30.35	250	P	P	21 00 16.7	+0.1
	baz=30,SNR=3.6						
HNR	Honiara	30.51	313	PFAKE		21 00 30.0	+12
HNR				LR	LR		
	comp=Z,6μm,19.0s						
VAH	Vaihoa	32.32	66	*e*T	T	21 34 18.3	
	comp=Z,18nm,0.2s						
ARPS	Mount Arapiles	33.30	251	P	P	21 00 42.9	+0.4
	baz=33,SNR=16						
STKA	Stephens Creek	34.16	259	P	P	21 00 50.2	+0.1
	baz=34,SNR=16						
STKA	Stephens Creek	34.16	259	*e*P	P	21 00 49.9	-0.1
	comp=Z,6.0nm,0.9s						
STKA	Stephens Creek	34.16	259	P	P	21 00 49.7	-0.4
STKA				pmax	pmax		
	comp=Z,20nm,0.8s						
STKA				MLR	MLR		
	comp=Z,10μm,18.1s						
STKA	Stephens Creek	34.16	259	P	P	21 00 49.6	-0.4
	comp=Z,20nm,0.8s,baz=97,slow=10.0,SNR=29						
STKA				LR	LR	21 14 16.7	
	comp=Z,10μm,18.1s,baz=96,slow=36						
CTA	Charters Tower	34.16	282	P	P	21 00 50.3	+0.1
	comp=Z,63nm,0.8s,baz=114,slow=10,SNR=29						
CTAO	Charters Tower	34.16	282	*e*P	P	21 00 50.7	+0.5
	comp=Z,79nm,0.9s						
CTAO				LR	LR		
	comp=Z,9μm,20.0s						
CTAO	Charters Tower	34.16	282	*e*P	P	21 00 50.7	+0.5
CTAO				pmax	pmax		
	comp=Z,79nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,9μm,20.0s						
TARA	Tarawa	34.44	344	PFAKE		21 01 10.0	+17
TARA				LR	LR		
	comp=Z,578nm,19.0s						
HTT	Hallett	36.09	256	P	P	21 01 06.5	-0.2
	baz=36,SNR=18						
MTSU	Mount Surprise	36.71	283	P	P	21 01 12.6	+0.5
	baz=37,SNR=107						
BBOO	Buckleboo	38.56	256	P	P	21 01 26.3	-1.4
	baz=38,SNR=14						
BBOO	Buckleboo	38.56	256	*e*P	P	21 01 26.6	-1.1
	comp=Z,61nm,0.8s						
COEN	Coen	39.83	288	P	P	21 01 38.1	-0.2
	baz=40,SNR=23						
COEN	Coen	39.83	288	*e*P	P	21 01 38.8	+0.5
	comp=Z,54nm,0.8s						
TAOE	Nuku Hiva Isla	41.99	65	*e*S	S	21 08 17.8	+3.4
	comp=Z,1μm,25.1s						
TAOE				*e*LQ	LQ	21 11 35.0	
	comp=Z,5μm,27.2s						
TAOE				*e*LR	LR	21 13 21.5	
	comp=Z,2μm,23.8s,baz=238						
PTCN	Pitcairn Islan	42.32	93	PFAKE		21 02 10.0	+11
PTCN				LR	LR		
	comp=Z,5μm,19.0s						
AS01	Alice Springs	43.05	269	*e*P	P	21 02 03.7	-1.1
AS31	Alice Springs	43.09	269	*e*P	P	21 02 04.3	-0.8
	comp=Z,15nm,0.8s						
ASAR	Alice Springs	43.09	269	P	P	21 02 04.1	-1.0
	comp=Z,26nm,0.6s,baz=105,slow=7.5,SNR=104						
ASAR				S	S	21 08 31.7	+1.3
	comp=Z,6.3nm,0.9s,baz=116,slow=14,SNR=7.7						
ASAR				LR	LR	21 20 04.5	
	comp=Z,6μm,18.1s,baz=114,slow=36						
WB2	Warramunga Arr	44.23	274	*e*P	P	21 02 13.2	-1.1
WRAB	Tennant Creek	44.23	274	*e*P	P	21 02 12.9	-1.4
	comp=Z,91nm,1.1s						
WRAB				LR	LR		
	comp=Z,7μm,19.0s						
WRAB	Tennant Creek	44.23	274	*e*P	P	21 02 12.9	-1.4
WRAB				pmax	pmax		
	comp=Z,91nm,1.1s						
WRAB				MLR	MLR		
	comp=Z,7μm,19.0s						
WRA	Warramunga Arr	44.24	274	P	P	21 02 13.1	-1.3
	comp=Z,38nm,0.6s,baz=114,slow=7.9,SNR=277						
WRA				ScP	ScP	21 07 52.2	+2.5
	comp=Z,2.4nm,1.0s,baz=101,slow=3.5,SNR=5.7						
WRA				S	S	21 08 43.8	-3.3
	comp=Z,2.2nm,1.0s,baz=112,slow=14,SNR=2.8						
WRA				LR	LR	21 19 56.1	
	comp=Z,7μm,18.2s,baz=105,slow=35						
FORT	Forrest	45.66	257	P	P	21 02 23.6	-2.0
	baz=46,SNR=12						
FORT	Forrest	45.66	257	*e*P	P	21 02 23.6	-2.0
SBA	Scott Base	46.28	184	PFAKE		21 02 40.0	+10
SBA				LR	LR		
	comp=Z,3μm,20.0s						
VNDA	Vanda	46.35	186	P	P	21 02 31.4	+1.0
	comp=Z,3.0nm,0.7s,baz=354,slow=6.9,SNR=6.5						
VNDA				LR	LR	21 18 34.4	

	comp=Z,3µm,20.6s,baz=18,slow=32						
WRKA	**Warakurna**	**47.33**	**264**	P	**P**	**21 02 36.4**	**-2.3**
	baz=47,SNR=26						
JAY	**Jayapura**	**48.76**	**299**	P	**P**	**21 02 48.8**	**-1.2**
	comp=Z,31nm,1.0s,baz=231,slow=10,SNR=4.4						
JAY				LR	LR	21 23 23.1	
	comp=Z,2µm,18.1s,baz=140,slow=36						
JOHN	**Johnston Islan**	**49.29**	**11**	PFAKE		21 03 10.0	+16
JOHN				LR	LR		
	comp=Z,281nm,20.0s						
KDU	**Kakadu**	**49.29**	**281**	P	**P**	**21 02 53.4**	**-0.5**
	baz=49,SNR=24						
MTN	**Manton Dam**	**50.32**	**280**	P	**P**	**21 03 01.4**	**-0.4**
	baz=50,SNR=7.1						
MTN	**Manton Dam**	**50.32**	**280**	*e*P	**P**	**21 03 02.2**	**+0.4**
	comp=Z,50nm,0.8s						
KNRA	**Kununurra**	**50.90**	**276**	P	**P**	**21 03 06.3**	**+0.1**
	baz=51,SNR=19						
FITZ	**Fitzroy Crossi**	**52.42**	**271**	P	**P**	**21 03 16.2**	**-1.4**
	baz=52,SNR=20						
FITZ	**Fitzroy Crossi**	**52.42**	**271**	*e*P	**P**	**21 03 16.3**	**-1.2**
	comp=Z,55nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.42**	**271**	P	**P**	**21 03 16.0**	**-1.5**
	comp=Z,28nm,0.8s,baz=147,slow=6.1,SNR=22						
FITZ				LR	LR	21 25 13.8	
	comp=Z,9µm,18.7s,baz=108,slow=36						
WAKE	**Wake Island**	**53.24**	**342**	PFAKE		21 03 40.0	+17
WAKE				LR	LR		
	comp=Z,5µm,19.0s						
CASY	**Casey**	**53.61**	**208**	*e*P	**P**	**21 03 26.5**	**+0.9**
	comp=Z,90nm,0.8s						
CASY				LR	LR		
	comp=Z,381nm,20.0s						
NWAO	**Narrogin (SRO)**	**53.83**	**251**	P	**P**	**21 03 25.9**	**-1.9**
	baz=54,SNR=6.0						
NWAO	**Narrogin (SRO)**	**53.83**	**251**	P	**P**	**21 03 25.5**	**-2.3**
	comp=Z,9.3nm,0.8s,baz=209,slow=3.9,SNR=6.6						
NWAO				LR	LR	21 24 01.6	
	comp=Z,2µm,21.2s,baz=322,slow=34						
KLBR	**Kellerberrin**	**53.84**	**252**	P	**P**	**21 03 25.6**	**-2.2**
	baz=54,SNR=17						
MEEK	**Meekatharra**	**54.85**	**258**	P	**P**	**21 03 34.6**	**-0.7**
	baz=55,SNR=7.5						
MUN	**Mundaring**	**54.96**	**251**	P	**P**	**21 03 35.8**	**-0.2**
	baz=55,SNR=4.6						
POHA	**Pohakuloa**	**55.92**	**26**	PFAKE		21 04 00.0	+17
POHA				LR	LR		
	comp=Z,3µm,19.0s						
MORW	**Morawa**	**56.09**	**255**	P	**P**	**21 03 41.7**	**-2.5**
	baz=56,SNR=4.8						
SIJI	**Sorong**	**57.04**	**293**	P	**P**	**21 03 50.2**	**-0.8**
	comp=Z,34nm,0.9s,baz=57,slow=8.8,SNR=8.8						
GUMO	**Guam**	**57.77**	**316**	LR	LR	21 27 17.5	
	comp=Z,2µm,19.1s,baz=95,slow=35						
BATI	**Baumata**	**57.94**	**278**	LR	LR	21 28 47.0	
	comp=Z,9µm,20.3s,baz=128,slow=36						
QSPA	**South Pole Qui**	**57.95**	**180**	P	**P**	**21 03 58.2**	**+1.3**
QSPA				LR	LR		
	comp=Z,5µm,19.0s						
QSPA	**South Pole Qui**	**57.95**	**180**	P	**P**	**21 03 58.2**	**+1.3**
	comp=Z,28nm,0.9s,baz=41,slow=1.2,SNR=37						
RPN	**Rapa Nui**	**58.94**	**104**	PFAKE		21 04 20.0	+16
RPN				LR	LR		
	comp=Z,2µm,20.0s						
MIDW	**Midway**	**60.05**	**1**	PFAKE		21 04 20.0	+8.4
MIDW				LR	LR		
	comp=Z,3µm,19.0s						
KAPI	**Kappang**	**63.98**	**281**	PFAKE		21 04 50.0	+12
KAPI				LR	LR		
	comp=Z,4µm,20.0s						
DAV	**Davao City (W)**	**66.41**	**295**	PFAKE		21 05 10.0	+16
DAV				LR	LR		
	comp=Z,1µm,20.0s						
PWJI	**Pagerwojo**	**69.07**	**274**	P	**P**	**21 05 12.9**	**+1.9**
JCJ	**Chichijima**	**70.11**	**323**	LR	LR	21 31 10.3	
	comp=Z,1µm,21.2s,baz=140,slow=32						
PMSA	**Palmer Station**	**70.64**	**155**	PFAKE		21 05 30.0	+10
PMSA				LR	LR		
	comp=Z,3µm,19.0s						
MAW	**Mawson**	**70.67**	**201**	P	**P**	**21 05 23.7**	**+3.7**
	comp=Z,23nm,0.8s,baz=115,slow=7.9,SNR=3.1						
MAW				LR	LR	21 37 45.6	
	comp=Z,4µm,18.2s,baz=113,slow=37						
KKM	**Kota Kinabalu**	**73.15**	**289**	*e*P	**P**	**21 05 34.5**	**-1.4**
	comp=Z,26nm,0.8s						
SNAA	**Sanae**	**76.39**	**178**	P	**P**	**21 05 54.3**	**+0.6**
SNAA	**Sanae**	**76.39**	**178**	*e*P	**P**	**21 05 54.5**	**+0.8**
	comp=Z,61nm,1.1s						
SNAA	**Sanae**	**76.39**	**178**	*e*P	**P**	**21 05 54.5**	**+0.8**
SNAA				pmax	pmax		
	comp=Z,61nm,1.1s						
VNA3	**Neumayer Olymp**	**76.54**	**176**	P	**P**	**21 05 54.8**	**+0.3**
VNA2	**Neumayer--Watz**	**76.98**	**177**	P	**P**	**21 05 57.6**	**+0.7**
	baz=172,slow=5.3						
NVL	**N'lazarevskaya**	**77.12**	**183**	⇓ *i*P	P	21 06 05.6	+7.9
NVL				*i* S	**S**	**21 15 47.0**	**+1.7**
NVL				*e*SSS	SSS	21 24 00.6	
NVL				pmax	pmax		
	comp=Z,20nm,0.9s						
NVL				MLR	MLR		
	comp=Z,3µm,17.0s						
VNA1	**Neumayer--Stat**	**77.21**	**176**	P	**P**	**21 05 59.1**	**+0.9**
MDSI	**Maura Dua**	**77.36**	**273**	P	P	21 05 55.0	-5.0
MJAR	**Matsushiro Arr**	**79.72**	**325**	P	**P**	**21 06 11.9**	**-0.5**
	comp=Z,8.5nm,0.9s,baz=172,slow=5.3,SNR=12						
MAJO	**Matsushiro**	**79.72**	**325**	PFAKE		21 06 20.0	+7.5
MAJO				LR	LR		
	comp=Z,1µm,21.0s						
MAJO	**Matsushiro**	**79.72**	**325**	⇑ *e*P	**P**	**21 06 11.4**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,57nm,2.3s						
SSLB	**Suanglung**	**80.62**	**306**	*e*P	**P**	**21 06 16.8**	**-0.8**
	comp=Z,18nm,0.9s						
JNU	**Nakatsue**	**80.91**	**319**	LR	LR	21 37 19.8	
	comp=Z,993nm,21.0s,baz=137,slow=32						
KRJI	**Kerinci**	**80.92**	**273**	P	**P**	**21 06 17.3**	**-2.4**
TATO	**Taipei**	**81.04**	**307**	PFAKE		21 06 30.0	+10
TATO				LR	LR		
	comp=Z,588nm,19.0s						
PLCA	**Paso Flores**	**81.27**	**133**	*e*P	**P**	**21 06 22.1**	**+1.0**
	comp=Z,18nm,1.1s						
PLCA	**Paso Flores**	**81.27**	**133**	P	**P**	**21 06 22.0**	**+0.9**
	comp=Z,42nm,1.4s,baz=230,slow=4.9,SNR=8.1						
PLCA				LR	LR	21 35 51.6	
	comp=Z,2µm,19.1s,baz=260,slow=31						
EFI	**East Falkland**	**81.29**	**147**	PFAKE		21 06 30.0	+9.2
EFI				LR	LR		
	comp=Z,852nm,20.0s						
EFI	**East Falkland**	**81.29**	**147**	⇑ *e*P	**P**	**21 06 20.8**	**0.0**
EFI				pmax	pmax		
	comp=Z,36nm,1.0s						
ERM	**Erimo**	**82.03**	**332**	PFAKE		21 06 40.0	+15
ERM				LR	LR		
	comp=Z,1µm,20.0s						
ERM	**Erimo**	**82.03**	**332**	⇑ *i*P	**P**	**21 06 23.0**	**-1.6**
ERM				pmax	pmax		
	comp=Z,28nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**82.72**	**335**	*c i*P	**P**	**21 06 28.3**	**+0.1**
YUK				*e*PPP	PPP	21 11 25.7	
YUK				*e*S	**S**	**21 16 51.1**	**+6.3**
QZH	**Quanzhou**	**83.00**	**305**	⇑ *i*P	**P**	**21 06 27.6**	**-2.5**
QZH				S	**S**	**21 16 52.0**	**+3.5**
QZH				pmax	pmax		
	comp=Z,470nm,5.1s						
QZH				LR	LR		
	comp=Z,650nm,15.5s						
QZH				LR	LR		
	comp=Z,640nm,17.8s						
KUR	**Kuril'sk**	**83.06**	**336**	*e*P	**P**	**21 06 32.8**	**+2.9**
KUR				*e*S	**S**	**21 16 51.1**	**+2.9**
ADK	**Adak**	**83.70**	**1**	PFAKE		21 06 40.0	+7.0
ADK				LR	LR		
	comp=Z,2µm,19.0s						
TJN	**Taejon**	**85.25**	**319**	⇑ *e*P	**P**	**21 06 42.1**	**+0.8**
SSE	**Sheshan**	**85.30**	**311**	P	**P**	**21 06 42.5**	**+0.8**
SSE				S	**S**	**21 17 12.1**	**+0.8**
SSE				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SSE				pmax	pmax		
	comp=Z,210nm,6.6s						
SSE				LR	LR		
	comp=Z,310nm,20.2s						
SSE				LR	LR		
	comp=Z,320nm,19.5s						
SSE	**Sheshan**	**85.30**	**311**	PFAKE		21 06 50.0	+8.3
SSE				LR	LR		
	comp=Z,783nm,21.0s						
GZH	**Guangzhou**	**85.58**	**301**	*e*P	**P**	**21 06 46.3**	**+3.0**
SKR	**Severo-Kuril's**	**85.62**	**344**	*e*P	**P**	**21 06 39.2**	**-3.5**
SKR				*e*S	**S**	**21 17 05.7**	**-7.8**
SKR				pmax	pmax		
	comp=Z,800nm,16.4s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
PSI	**Prapat**	**85.66**	**276**	LR	LR	21 46 56.4	
	comp=Z,2µm,18.7s,baz=91,slow=37						
SCZ2	**Santa Cruz Isl**	**85.68**	**45**	P	**P**	**21 06 44.2**	**+0.6**
	baz=226						
KSRS	**Korea Array**	**85.72**	**320**	P	**P**	**21 06 43.4**	**-0.2**
	comp=Z,5.2nm,0.8s,baz=143,slow=5.9,SNR=18						
KSRS				LR	LR	21 40 00.5	
	comp=Z,673nm,21.8s,baz=124,slow=32						
KSAR	**Wonju Array Be**	**85.73**	**320**	P	**P**	**21 06 43.4**	**-0.3**
KSAR	**Wonju Array Be**	**85.73**	**320**	P	**P**	**21 06 43.4**	**-0.3**
KS01	**Wonju Array Si**	**85.75**	**320**	*e*P	**P**	**21 06 45.3**	**+1.5**
QIZ	**Qiongzhong**	**85.79**	**295**	P	**P**	**21 06 45.1**	**+0.7**
QIZ				S	**S**	**21 17 19.9**	**+3.3**
QIZ				SS	**SS**	**21 22 56.3**	**+2.1**
QIZ				LR	LR		
	comp=Z,640nm,15.7s						
QIZ				LR	LR		
	comp=Z,680nm,15.2s						
QIZ				LR	LR		
	comp=Z,960nm,33.3s						
QIZ	**Qiongzhong**	**85.79**	**295**	PFAKE		21 07 00.0	+16
QIZ				LR	LR		
	comp=Z,110nm,21.0s						
SBC	**Santa Barbara**	**85.94**	**45**	P	**P**	**21 06 45.6**	**+0.8**
	baz=226						
CIS	**Catalina Islan**	**86.02**	**46**	P	**P**	**21 06 45.4**	**+0.1**
	baz=227						
PKM	**Mcpherson Peak**	**86.19**	**44**	P	**P**	**21 06 46.9**	**+0.6**
	baz=226						
FMP	**Fort Macarthur**	**86.31**	**46**	P	**P**	**21 06 47.2**	**+0.6**
	baz=227						
YSS	**Yuzh-Sakhalins**	**86.35**	**334**	PFAKE		21 07 00.0	+14
YSS				LR	LR		
	comp=Z,999nm,19.0s						
YSS	**Yuzh-Sakhalins**	**86.35**	**334**	α *e*P	**P**	**21 06 46.6**	**+0.1**
YSS				*e**SP	**pP**	**21 06 50.6**	**-0.5**
YSS				*e*		21 10 10.5	
YSS				*e*S	**S**	**21 17 19.0**	**-1.9**
YSS				*e*PPS	PPS	21 18 22.4	
YSS				*e*SS	**SS**	**21 22 57.3**	**-4.3**
YSS				pmax	pmax		
	comp=Z,60nm,0.6s						
YSS				pmax	pmax		
	comp=N,20nm,0.4s						
YSS				smax	smax		
	comp=N,300nm,8.6s						
YSS				smax	smax		
	comp=E,300nm,14.8s						
YSS				MLR	MLR		
	comp=E,500nm,17.0s						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s						
SMMC	**Simmler**	**86.38**	**44**	P	**P**	**21 06 46.8**	**-0.2**
	baz=226						
109C	**Camp Elliot, M**	**86.48**	**47**	P	**P**	**21 06 47.8**	**+0.3**
	baz=228						
DECC	**Green Verdugo**	**86.65**	**46**	P	**P**	**21 06 48.1**	**-0.2**
	baz=227						
OSI	**Osito Audit: C**	**86.66**	**45**	P	**P**	**21 06 48.4**	**0.0**
	baz=227						
MURC	**Murrieta**	**86.90**	**47**	P	**P**	**21 06 50.2**	**+0.6**
	baz=228						
MONP2	**Monument Peak**	**86.91**	**48**	P	**P**	**21 06 50.0**	**+0.1**
	baz=228						
ARVC	**Arvin**	**86.94**	**45**	P	**P**	**21 06 50.2**	**+0.5**
	baz=227						
IKP	**In-Ko-Pah, Jac**	**86.95**	**48**	P	**P**	**21 06 50.3**	**+0.4**
	baz=228						
BFSC	**Mount Baldy Ra**	**87.05**	**46**	P	**P**	**21 06 50.7**	**+0.3**
	baz=227						
TEY	**Ternei**	**87.24**	**330**	⇑ *e*P	**P**	**21 06 50.3**	**-0.5**
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
PET	**Petropavlovsk**	**87.25**	**346**	PFAKE		21 07 00.0	+9.3
PET				LR	LR		
	comp=Z,2µm,20.0s						
PET	**Petropavlovsk**	**87.25**	**346**	*e*P	**P**	**21 06 50.9**	**+0.2**
PET				*e*		21 17 13.6	
PET				*e*S	**S**	**21 17 27.7**	**-1.6**
PET				pmax	pmax		
	comp=Z,400nm,13.3s						
EDW2	**Edwards Air Fo**	**87.28**	**45**	P	**P**	**21 06 51.6**	**+0.2**
	baz=227,SNR=12						
VES	**Vestal, Richgr**	**87.28**	**44**	P	**P**	**21 06 51.1**	**-0.3**
	baz=226,SNR=13						
SWSC	**Sam W. Stewart**	**87.34**	**48**	P	**P**	**21 06 51.7**	**+0.1**
	baz=228						
PFO	**Pinyon Flats O**	**87.37**	**47**	PFAKE		21 07 00.0	+8.0
PFO				LR	LR		
	comp=Z,2µm,20.0s						
PFO	**Pinyon Flats O**	**87.37**	**47**	*i* P	**P**	**21 06 54.6**	**+2.6**
PFO	**Pinyon Flats O**	**87.37**	**47**	P	**P**	**21 06 51.9**	**-0.1**
	baz=228						
NJ2	**Nanjing**	**87.43**	**311**	*e*P	**P**	**21 06 54.1**	**+2.0**
NJ2				S	**S**	**21 17 31.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,630nm,8.0s						
NJ2				LR	LR		
	comp=Z,690nm,14.6s						
NJ2				LR	LR		
	comp=Z,600nm,18.4s						
NJ2				LR	LR		
	comp=Z,1µm,21.7s						
VOG	**Valley Oaks Go**	**87.44**	**44**	P	**P**	**21 06 52.0**	**0.0**
	baz=226						
BBRC	**Big Bear Solar**	**87.52**	**46**	P	**P**	**21 06 52.7**	**-0.1**
	baz=228						
ISA	**Isabella, Lake**	**87.52**	**45**	P	**P**	**21 06 53.1**	**+0.5**
	baz=227,SNR=24						
PEA0B	**Petropavlovsk-**	**87.53**	**346**	*e*P	**P**	**21 06 51.4**	**-0.7**
	comp=Z,110nm,1.3s						
PETK	**Petropavlovsk-**	**87.53**	**346**	*e*P	**P**	**21 06 52.1**	**0.0**
PETK	**Petropavlovsk-**	**87.53**	**346**	P	**P**	**21 06 51.8**	**-0.3**
	comp=Z,25nm,0.9s,baz=140,slow=7.2,SNR=20						
PETK				LR	LR	21 43 30.4	
	comp=Z,930nm,19.1s,baz=169,slow=34						
HOPE	**Hope Point**	**87.69**	**159**	PFAKE		21 07 00.0	+6.8
HOPE				LR	LR		
	comp=Z,2µm,19.0s						
MSHR	**Mys Shultsa**	**87.83**	**325**	⇓ *e*P	**P**	**21 06 51.7**	**-2.1**
LRMC	**Laurel Mtn Rad**	**87.87**	**45**	P	**P**	**21 06 55.1**	**+0.7**
	baz=227,SNR=12						
RRX	**Edison Barstow**	**87.88**	**46**	P	**P**	**21 06 54.3**	**+0.1**
	baz=228						
BELC	**Belle Mtn. Jos**	**87.91**	**47**	P	**P**	**21 06 54.8**	**+0.2**
	baz=228						
LCO	**Las Campanas**	**87.97**	**123**	PFAKE		21 07 10.0	+15
LCO				LR	LR		
	comp=Z,2µm,19.0s						
BC3	**Big Chuckawall**	**88.03**	**48**	P	**P**	**21 06 56.0**	**+0.9**
	baz=229,SNR=11						
GLA	**Glamis**	**88.03**	**49**	P	**P**	**21 06 55.4**	**+0.4**
	baz=229						
CMB	**Columbia Colle**	**88.04**	**42**	*e*P	**P**	**21 06 54.0**	**-1.0**
	comp=Z,48nm,1.5s						
CMB	**Columbia Colle**	**88.04**	**42**	*e*P	**P**	**21 06 54.0**	**-1.0**
CMB				pmax	pmax		
	comp=Z,48nm,1.5s						
TRQA	**Tornquist**	**88.16**	**135**	PFAKE		21 07 10.0	+14
TRQA				LR	LR		
	comp=Z,1µm,19.0s						
O02D	**Mt. Diablo Mer**	**88.24**	**39**	P	**P**	**21 06 56.8**	**+0.9**
	baz=224,SNR=9.7						
HEC	**Hector,Ludlow**	**88.25**	**46**	P	**P**	**21 06 56.3**	**+0.2**
	baz=228,SNR=11						
GSC	**Goldstone, Bar**	**88.28**	**46**	P	**P**	**21 06 56.9**	**+0.7**
	baz=228,SNR=16						
CWC	**Cottonwood Cre**	**88.28**	**44**	P	**P**	**21 06 56.6**	**+0.3**
	baz=227						
MPMC	**Manual Prospec**	**88.38**	**45**	P	**P**	**21 06 57.1**	**+0.3**
	baz=227,SNR=19						
IRM	**Iron Mountain**	**88.55**	**48**	P	**P**	**21 06 58.4**	**+0.9**
	baz=229,SNR=17						
214A	**Organ Pipe Nat**	**88.62**	**50**	P	**P**	**21 06 58.0**	**+0.1**
	baz=230						
GMRC	**Granite Mounta**	**88.64**	**47**	P	**P**	**21 06 58.7**	**+0.7**
	baz=228,SNR=17						
MLAC	**Mammoth, Mammo**	**88.65**	**43**	P	**P**	**21 06 58.5**	**+0.3**
	baz=227						
USRK	**Ussuriysk Ar.**	**88.66**	**327**	P	**P**	**21 06 57.3**	**-0.3**
	comp=Z,26nm,1.0s,baz=132,slow=3.3,SNR=25						
USRK				LR	LR	21 46 21.3	
	comp=Z,731nm,18.0s,baz=136,slow=36						
Y12C	**Blythe**	**88.67**	**48**	P	**P**	**21 06 58.7**	**+0.7**
	baz=229						
O03E	**Paynes Creek**	**88.85**	**39**	P	**P**	**21 06 58.5**	**-0.3**
	baz=225,SNR=6.2						
N02D	**Trinity Center**	**88.85**	**38**	P	**P**	**21 06 59.4**	**+0.6**
	baz=224,SNR=9.0						
TUQ	**Turquoise Moun**	**88.91**	**46**	P	**P**	**21 06 59.5**	**+0.2**
	baz=228						
SHOC	**Shoshone, Teco**	**89.00**	**46**	P	**P**	**21 06 59.6**	**+0.1**
	baz=228						
FURC	**Furnace Creek,**	**89.03**	**45**	P	**P**	**21 06 59.8**	**+0.3**
	baz=228						
M02C	**Callahan**	**89.08**	**38**	P	**P**	**21 06 59.9**	**+0.1**
	baz=224						
GRAC	**Grapevine Rang**	**89.08**	**44**	P	**P**	**21 07 00.3**	**+0.4**
	baz=227						
SKNT	**Sakolnakorn**	**89.20**	**291**	P	**P**	**21 07 04.7**	**+3.8**
PNTR	**Pine Nut**	**89.22**	**41**	*e*P	**P**	**21 07 00.5**	**-0.2**
	comp=Z,50nm,1.1s						
L02E	**Cave Junction**	**89.24**	**37**	P	**P**	**21 07 00.5**	**0.0**
	baz=223						
PDMCI	**Parker Dam,Lak**	**89.27**	**48**	P	**P**	**21 07 01.0**	**+0.1**
	baz=229						
NEE2	**Needles Airpor**	**89.28**	**47**	P	**P**	**21 07 01.8**	**+0.9**
	baz=229						
NV01	**Mina Array Sit**	**89.50**	**43**	*e*P	**P**	**21 07 02.1**	**0.0**
NVAR	**Mina Array Bea**	**89.50**	**43**	P	**P**	**21 07 02.6**	**+0.5**
	comp=Z,9.9nm,0.9s,baz=223,slow=7.0,SNR=27						
NVAR				PKKPbc	**PKKPbc**	**21 24 37.1**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=134,slow=2.6,SNR=2.8						
NVAR				LR	LR	21 42 17.5	
	comp=Z,3µm,18.7s,baz=218,slow=32						
K02D	**Willamette Mer**	**89.60**	**37**	P	**P**	**21 07 02.2**	**-0.1**
	baz=223						
TYV	**Tymovskoe**	**89.69**	**336**	*e*P	**P**	**21 07 02.3**	**0.0**
TYV				*e*S	**S**	**21 17 56.9**	**+4.4**
TYV				pmax	pmax		
	comp=Z,400nm,5.1s						
TYV				pmax	pmax		
	comp=Z,46nm,1.0s						
TYV				smax	smax		
	comp=N,800nm,6.5s						
TPNV	**Topopah Spring**	**89.71**	**45**	P	**P**	**21 07 03.3**	**+0.2**
	baz=228						
J01E	**Myrtle Point**	**89.80**	**36**	P	**P**	**21 07 02.7**	**-0.4**
	baz=223						
M04C	**Macdoel**	**89.89**	**38**	P	**P**	**21 07 03.0**	**-0.7**
	baz=225						
L04D	**Klamath Falls**	**89.95**	**38**	P	**P**	**21 07 04.2**	**+0.2**
	baz=224						
MDJ	**Mudanjiang**	**90.10**	**326**	P	**P**	**21 07 04.4**	**0.0**
MDJ				pP	pP	21 07 07.6	-1.5
MDJ				sP	sP	21 07 09.3	-1.4
MDJ				sS	sS	21 18 10.3	+6.1
MDJ				pmax	pmax		
	comp=N,30nm,1.4s						
MDJ				pmax	pmax		
	comp=N,610nm,7.7s						
MDJ				LR	LR		
	comp=N,780nm,11.7s						
MDJ				LR	LR		
	comp=N,540nm,11.3s						
MDJ				LR	LR		
	comp=N,490nm,11.1s						
MDJ	**Mudanjiang**	**90.10**	**326**	PFAKE		21 07 20.0	+16
MDJ				LR	LR		
	comp=Z,1µm,19.0s						
TUC	**Tucson**	**90.18**	**51**	PFAKE		21 07 20.0	+15
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	**90.18**	**51**	P	**P**	**21 07 05.0**	**-0.2**
	baz=231						
DL2	**Dalian**	**90.28**	**317**	P	**P**	**21 07 08.6**	**+3.2**
DL2				SKS	**SKSac**	**21 17 37.6**	**+2.2**
DL2				pmax	pmax		
	comp=Z,41nm,2.0s						
DL2				pmax	pmax		
	comp=Z,470nm,5.4s						
DL2				LR	LR		
	comp=Z,560nm,15.4s						
DL2				LR	LR		
	comp=Z,780nm,17.8s						
DL2				LR	LR		
	comp=Z,900nm,17.4s						
I03D	**Drain, OR**	**90.48**	**36**	P	**P**	**21 07 06.2**	**0.0**
	baz=224						
K04D	**Chiloquin, OR**	**90.53**	**38**	P	**P**	**21 07 06.7**	**+0.1**
	baz=225						
I02D	**Swisshome**	**90.53**	**36**	P	**P**	**21 07 06.3**	**-0.1**
	baz=223						
J04D	**Umpqua Nationa**	**90.78**	**37**	P	**P**	**21 07 07.6**	**-0.4**
	baz=224						
I04A	**Tendick Farm,**	**91.02**	**37**	P	**P**	**21 07 08.6**	**-0.3**
	baz=224						
R11A	**Troy Canyon, C**	**91.03**	**44**	P	**P**	**21 07 08.7**	**-0.5**
	baz=228						
TIA	**Tai'an**	**91.20**	**313**	P	**P**	**21 07 09.3**	**-0.5**
TIA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TIA				pmax	pmax		
	comp=Z,260nm,8.4s						
TIA				LR	LR		
	comp=Z,250nm,19.6s						
TIA				LR	LR		
	comp=Z,330nm,21.6s						
TIA				LR	LR		
	comp=Z,380nm,21.2s						
J05D	**Fort Rock, OR**	**91.26**	**38**	P	**P**	**21 07 09.7**	**-0.4**
	baz=225						
H04D	**Lebanon**	**91.38**	**36**	P	**P**	**21 07 10.2**	**-0.2**
	baz=224						
CN2	**Changchun**	**91.57**	**323**	*e*P	**P**	**21 07 09.1**	**-2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,370nm,8.0s						
CN2				LR	LR		
	comp=Z,670nm,20.0s						
CN2				LR	LR		
	comp=Z,750nm,20.0s						
CN2				LR	LR		
	comp=Z,790nm,20.0s						
G03D	**McMinnville, O**	**91.62**	**35**	P	**P**	**21 07 11.4**	**0.0**
	baz=224						
PINE	**Pine Mountain**	**91.77**	**37**	*e*P	**P**	**21 07 13.3**	**+0.8**
	comp=Z,70nm,1.4s						
U15A	**North Rim**	**91.79**	**47**	*e*P	**P**	**21 07 14.4**	**+1.5**
	comp=Z,28nm,1.1s						
WUAZ	**Wupatki**	**91.80**	**48**	PFAKE		21 07 20.0	+7.2
WUAZ				LR	LR		
	comp=Z,1µm,20.0s						
WUAZ	**Wupatki**	**91.80**	**48**	P	**P**	**21 07 12.2**	**-0.6**
	baz=231						
KNB	**Kanab**	**91.84**	**47**	*e*P	**P**	**21 07 14.3**	**+1.4**
	comp=Z,26nm,1.1s						
KNB	**Kanab**	**91.84**	**47**	*e*P	**P**	**21 07 14.3**	**+1.4**
KNB				pmax	pmax		
	comp=Z,26nm,1.1s						
GRNR	**Gornyy**	**91.88**	**333**	*e*P	**P**	**21 07 12.2**	**-0.3**
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
I05D	**Terrebonne, OR**	**91.95**	**37**	P	**P**	**21 07 13.1**	**-0.1**
	baz=225						
WVOR	**Wild Horse Val**	**92.05**	**40**	PFAKE		21 07 30.0	+16
WVOR				LR	LR		
	comp=Z,4µm,19.0s						
KDAK	**Kodiak Island**	**92.11**	**13**	PFAKE		21 07 30.0	+17
KDAK				LR	LR		
	comp=Z,712nm,20.0s						
PSUT	**Pine Spring**	**92.18**	**45**	*e*P	**P**	**21 07 15.5**	**+0.9**
	comp=Z,2.9nm,0.7s						
NKL	**Nikolayevsk**	**92.27**	**337**	*e*P	**P**	**21 07 13.0**	**-1.2**
NKL				*e*		21 17 44.0	
NKL				pmax	pmax		
	comp=Z,600nm,10.0s						
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						

F04D	**Rainier, OR**	**92.37**	**35**	P	**P**	**21 07 15.2**	**+0.3**
	baz=224						
GYA	**Guiyang**	**92.47**	**300**	P	**P**	**21 07 17.4**	**+1.4**
GYA				PP	**PP**	**21 11 00.0**	**+2.4**
GYA				S	**S**	**21 18 20.3**	**+1.1**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.3s						
GYA				LR	LR		
	comp=Z,530nm,17.1s						
GYA				LR	LR		
	comp=Z,510nm,20.8s						
GYA				LR	LR		
	comp=Z,560nm,19.3s						
KLR	**Kul'dur**	**92.58**	**330***c*	*i*P	**P**	**21 07 14.9**	**-0.9**
G05D	**Wamic, OR**	**92.60**	**36**	P	**P**	**21 07 16.3**	**+0.2**
	baz=225						
ENH	**Enshi**	**92.63**	**304**	PFAKE		21 07 30.0	+13
ENH				LR	LR		
	comp=Z,724nm,19.0s						
I07A	**Izee**	**92.72**	**38**	*e*P	**P**	**21 07 17.3**	**+0.5**
	comp=Z,26nm,1.3s						
NNA	**Nana**	**92.89**	**106**	PFAKE		21 07 30.0	+12
NNA				LR	LR		
	comp=Z,1µm,19.0s						
NLWA	**Neilton Lookou**	**92.91**	**33**	PFAKE		21 07 30.0	+13
NLWA				LR	LR		
	comp=Z,2µm,19.0s						
LVC	**Limon Verde**	**93.04**	**119**	PFAKE		21 07 30.0	+11
LVC				LR	LR		
	comp=Z,2µm,19.0s						
TXAR	**Lajitas Array**	**93.30**	**57**	P	**P**	**21 07 20.4**	**+0.6**
	comp=Z,4.0nm,1.1s,baz=207,slow=5.3,SNR=9.8						
TXAR				LR	LR	21 42 32.3	
	comp=Z,952nm,19.3s,baz=0.0,slow=31						
MNTX	**Cornudas Mount**	**93.47**	**55**	PFAKE		21 07 30.0	+10
MNTX				LR	LR		
	comp=Z,947nm,19.0s						
DUG	**Dugway, Tooele**	**93.87**	**44**	PFAKE		21 07 30.0	+7.8
DUG				LR	LR		
	comp=Z,2µm,19.0s						
DUG	**Dugway, Tooele**	**93.87**	**44**	P	**P**	**21 07 22.6**	**+0.4**
	baz=230						
CMAR	**Chiang Mai Arr**	**94.02**	**289**	P	**P**	**21 07 22.9**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=139,slow=3.9,SNR=4.1						
CMAR				PP	**PP**	**21 11 07.5**	**-2.3**
	comp=Z,1.6nm,0.8s,baz=128,slow=5.6,SNR=4.6						
CMAR				LR	LR	21 52 08.7	
	comp=Z,337nm,19.0s,baz=120,slow=37						
BJT	**Baijiatuau**	**94.20**	**315**	PFAKE		21 07 30.0	+6.5
BJT				LR	LR		
	comp=Z,2µm,20.0s						
CMMT	**Chiang Mai**	**94.21**	**289**	P	**P**	**21 07 27.7**	**+3.6**
BJI	**Beijing**	**94.21**	**315**	P	**P**	**21 07 25.5**	**+1.9**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJI				LR	LR		
	comp=Z,800nm,18.8s						
BJI				LR	LR		
	comp=Z,930nm,18.6s						
CHTO	**Chiang Mai**	**94.21**	**289**	PFAKE		21 07 30.0	+5.9
CHTO				LR	LR		
	comp=Z,731nm,20.0s						
CHTO	**Chiang Mai**	**94.21**	**289**	P	**P**	**21 07 27.8**	**+3.7**
	comp=Z,24nm,2.5s						
HAWA	**Hanford**	**94.30**	**36**	PFAKE		21 07 40.0	+16
HAWA				LR	LR		
	comp=Z,3µm,20.0s						
BMO	**Blue Mountains**	**94.40**	**38**	PFAKE		21 07 40.0	+16
BMO				LR	LR		
	comp=Z,3µm,19.0s						
ANMO	**Albuquerque**	**94.64**	**51**	PFAKE		21 07 40.0	+14
ANMO				LR	LR		
	comp=Z,1µm,20.0s						
ANMO	**Albuquerque**	**94.64**	**51**⇓	*e*P	**P**	**21 07 26.3**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,18nm,1.6s						
ANMO	**Albuquerque**	**94.64**	**51**	P	**P**	**21 07 26.0**	**0.0**
	baz=234						
KMI	**Kunming**	**94.66**	**297**	P	**P**	**21 07 26.3**	**0.0**
KMI				pP	sP	21 07 33.9	+1.3
KMI				sP	pwP	21 07 37.4	-0.9
KMI				PP	**PP**	**21 11 15.8**	**+0.9**
KMI				SKS	**SKSac**	**21 18 00.8**	**-0.3**
KMI				S	**S**	**21 18 35.9**	**-2.9**
KMI				sS	sS	21 18 49.0	+2.6
KMI				SS	**SS**	**21 24 59.1**	**-3.8**
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI				pmax	pmax		
	comp=Z,150nm,4.4s						
KMI				LR	LR		
	comp=Z,370nm,15.5s						
KMI				LR	LR		
	comp=Z,640nm,19.6s						
KMI				LR	LR		
	comp=Z,600nm,21.0s						
MVCO	**Mesa Verde**	**94.67**	**49**	PFAKE		21 07 40.0	+14
MVCO				LR	LR		
	comp=Z,2µm,20.0s						
MA2	**Magadan**	**95.00**	**345**	PFAKE		21 07 40.0	+13
MA2				LR	LR		
	comp=Z,1µm,22.0s						
MA2	**Magadan**	**95.00**	**345**⇑	*e*P	**P**	**21 07 24.8**	**-1.9**
MA2				pmax	pmax		
	comp=Z,14nm,0.9s						
HLID	**Hailey**	**95.11**	**41**	PFAKE		21 07 40.0	+12
HLID				LR	LR		
	comp=Z,2µm,19.0s						
HLID	**Hailey**	**95.11**	**41**	P	**P**	**21 07 28.0**	**+0.2**
	baz=230						
XAN	**Xi'an**	**95.21**	**307**	P	**P**	**21 07 31.6**	**+3.2**
XAN				pP	sP	21 07 35.9	+1.2
XAN				sP	pwP	21 07 38.3	-2.1
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,290nm,8.5s						
XAN				LR	LR		
	comp=Z,500nm,16.7s						
XAN				LR	LR		
	comp=Z,470nm,15.7s						
XAN				LR	LR		
	comp=Z,780nm,16.6s						
HWUT	**Hardware Ranch**	**95.49**	**44**	PFAKE		21 07 40.0	+10
HWUT				LR	LR		
	comp=Z,2µm,19.0s						
S22A	**4UR Ranch, Cre**	**96.05**	**49**	P	**P**	**21 07 32.3**	**-0.2**
	baz=234						
WRAK	**Wrangell Islan**	**96.36**	**24**	PFAKE		21 07 40.0	+7.1
WRAK				LR	LR		
	comp=Z,1µm,19.0s						
AHID	**Auburn Hatcher**	**96.48**	**43**	PFAKE		21 07 50.0	+16
AHID				LR	LR		
	comp=Z,3µm,19.0s						
KVTX	**Kingsville**	**96.53**	**62**	PFAKE		21 07 50.0	+16
KVTX				LR	LR		
	comp=Z,961nm,19.0s						
JCT	**Junction City**	**96.72**	**58**	PFAKE		21 07 50.0	+15
JCT				LR	LR		
	comp=Z,2µm,19.0s						
NEW	**Newport**	**96.77**	**36**	PFAKE		21 07 50.0	+15
NEW				LR	LR		
	comp=Z,3µm,20.0s						
NEW	**Newport**	**96.77**	**36**	P	**P**	**21 07 35.2**	**+0.1**
	baz=228						
SDCO	**Great Sand Dun**	**96.90**	**50**	PFAKE		21 07 50.0	+14
SDCO				LR	LR		
	comp=Z,1µm,20.0s						
SDCO	**Great Sand Dun**	**96.90**	**50**	P	**P**	**21 07 36.2**	**-0.1**
	baz=234						
REDW	**Red Top Meadow**	**96.99**	**43**	*e*P	**P**	**21 07 35.7**	**-0.8**
	comp=Z,5.6nm,1.1s						
CD2	**Chengdu**	**97.06**	**302**	P	**P**	**21 07 36.8**	**-0.1**
CD2				pP	pP	21 07 40.3	-1.2
CD2				PP	**PP**	**21 11 37.1**	**+3.8**
CD2				S	**S**	**21 19 00.3**	**+1.3**
CD2				sS	sS	21 19 05.5	-1.2
CD2				SS	**SS**	**21 25 29.4**	**-7.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,570nm,6.4s						
CD2				LR	LR		
	comp=Z,2µm,17.7s						
CD2				LR	LR		
	comp=Z,2µm,15.2s						
CD2				LR	LR		
	comp=Z,2µm,16.7s						
T25A	**Trinidad**	**97.26**	**51**	P	**P**	**21 07 38.0**	**+0.2**
	baz=235						
LPAZ	**La Paz**	**97.38**	**114**	P	Pdif	21 07 40.1	+0.6
	comp=Z,1.1nm,0.7s,baz=178,slow=3.7,SNR=6.1						
LPAZ				LR	LR	21 45 05.2	
	comp=Z,637nm,19.1s,baz=224,slow=31						
BW06	**Boulder Array**	**97.38**	**44**	PFAKE		21 07 50.0	+12
BW06				LR	LR		
	comp=Z,2µm,20.0s						
BW06	**Boulder Array**	**97.38**	**44**	P	**P**	**21 07 38.1**	**-0.2**
	baz=232						
PDAR	**Pinedale Array**	**97.38**	**44**	P	**P**	**21 07 38.0**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=216,slow=4.5,SNR=4.5						
PDAR				PKKPbc	**PKKPbc**	**21 24 16.0**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=72,slow=5.1,SNR=6.9						
PDAR				LR	LR	21 45 54.3	
	comp=Z,2µm,19.3s,baz=240,slow=32						
HHC	**Hu-ho-hao-te**	**97.49**	**314**	*e*P	Pdif	21 07 39.6	+0.9
HHC				pP	sP	21 07 44.8	-0.1
HHC				PP	**PP**	**21 11 40.6**	**+4.1**
HHC				SKS	**SKSac**	**21 18 16.3**	**+1.3**
HHC				S	**ScS**	**21 19 03.5**	**+0.9**
HHC				sS	sS	21 19 13.3	+3.3
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,320nm,6.6s						
HHC				LR	LR		
	comp=Z,530nm,19.4s						
HHC				LR	LR		
	comp=Z,430nm,18.8s						
HHC				LR	LR		
	comp=Z,690nm,16.3s						
SEY	**Seymchan**	**97.70**	**347**⇑	*e*P	**P**	**21 07 37.7**	**-1.2**
ZEA	**Zeya**	**97.81**	**331**	*e*P	**P**	**21 07 37.8**	**-1.8**
ZEA				*e*S	**SKSac**	**21 18 20.0**	**+4.3**
ZEA				*e*		21 20 34.0	
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
ZEA				smax	smax		
	comp=N,500nm,10.0s						
ZEA				smax	smax		
	comp=E,500nm,10.0s						
JTS	**JuntasAbangare**	**97.91**	**83**	PFAKE		21 07 50.0	+8.9
JTS				LR	LR		
	comp=Z,1µm,19.0s						
BOZ	**Bozeman (W)**	**97.94**	**40**	PFAKE		21 07 50.0	+9.3
BOZ				LR	LR		
	comp=Z,2µm,19.0s						
LKWY	**Lake**	**97.99**	**42**	PFAKE		21 07 50.0	+8.9
LKWY				LR	LR		
	comp=Z,4µm,19.0s						
ISCO	**Idaho Springs**	**98.02**	**48**	PFAKE		21 07 50.0	+8.6
ISCO				LR	LR		
	comp=Z,2µm,19.0s						
OTAV	**Otavalo**	**98.17**	**95**	PFAKE		21 07 50.0	+7.1
OTAV				LR	LR		
	comp=Z,525nm,20.0s						
HIA	**Hailar**	**98.17**	**324**	PFAKE		21 07 50.0	+8.5
HIA				LR	LR		
	comp=Z,1µm,19.0s						
CPUP	**Villa Florida**	**98.85**	**129**	PKKPbc	PKKPbc	21 24 10.3	-1.2
	comp=Z,1.6nm,0.8s,baz=40,slow=7.2,SNR=3.7						
CPUP				LR	LR	21 49 16.7	
	comp=Z,791nm,18.1s,baz=222,slow=34						
RLMT	**Red Lodge**	**98.97**	**42**	PFAKE		21 08 00.0	+15
RLMT				LR	LR		
	comp=Z,2µm,19.0s						
COLA	**College**	**99.55**	**13**	PFAKE		21 08 00.0	+13
COLA				LR	LR		
	comp=Z,1µm,20.0s						
COLA	**College**	**99.55**	**13**⇑	*e*P	**Pdif**	**21 07 48.0**	**+0.9**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ILAR	**Eielson Array**	**99.63**	**13**	P	**Pdif**	**21 07 47.0**	**-0.6**
ILAR						21 11 50.0	
ILAR	**Eielson Array**	**99.63**	**13**	P	**Pdif**	**21 07 47.0**	**-0.6**
	comp=Z,1.1nm,1.0s,baz=220,slow=4.8,SNR=4.5						
ILAR				PP	**PP**	**21 11 49.9**	**-2.2**
	comp=Z,0.9nm,1.1s,baz=217,slow=5.9,SNR=3.6						
ILAR				PKiKP	**PKiKP**	**21 12 16.4**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=268,slow=2.1,SNR=2.7						
ILAR				PKKPbc	**PKKPbc**	**21 24 10.5**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=2.3,slow=4.5,SNR=3.5						
ILAR				LR	LR	21 54 13.1	
	comp=Z,373nm,18.1s,baz=212,slow=36						
WMOK	**Wichita Mounta**	**99.75**	**55**	PFAKE		21 08 00.0	+11
WMOK				LR	LR		
	comp=Z,931nm,20.0s						
LZH	**Lanzhou**	**99.81**	**306**	*e*P	**Pdif**	**21 07 46.1**	**-3.1**
LZH				pP	pP	21 07 50.9	-3.0
LZH				sP	sP	21 07 54.0	-1.5
LZH				PP	**PP**	**21 11 52.8**	**-1.6**
LZH				SKS	**SKSac**	**21 18 26.9**	**-0.1**
LZH				*e*S	**ScS**	**21 19 17.3**	**-5.0**
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,69nm,4.6s						
LZH				LR	LR		
	comp=Z,440nm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,16.6s						
LZH				LR	LR		
	comp=Z,1µm,18.3s						
EGMT	**Eagleton**	**100.44**	**39**	PFAKE		21 08 00.0	+8.4
EGMT				LR	LR		
	comp=Z,4µm,19.0s						
BILL	**Bilibino**	**100.60**	**354**	PFAKE		21 08 00.0	+8.3
BILL				LR	LR		
	comp=Z,2µm,21.0s						
BILL	**Bilibino**	**100.60**	**354**	*i* P	**Pdif**	**21 07 50.7**	**-1.0**
BILL				*i*		21 12 01.9	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,929nm,19.0s						
EGAK	**Eagle**	**100.82**	**15**	PFAKE		21 08 00.0	+7.2
EGAK				LR	LR		
	comp=Z,1µm,20.0s						
OGNE	**Ogallala**	**100.93**	**48**	PFAKE		21 08 10.0	+16
OGNE				LR	LR		
	comp=Z,2µm,19.0s						
NATX	**Nacogdoches**	**101.13**	**60**	PFAKE		21 08 10.0	+15
NATX				LR	LR		
	comp=Z,1µm,20.0s						
CBKS	**Cedar Bluff**	**101.27**	**51**	PFAKE		21 08 10.0	+14
CBKS				LR	LR		
	comp=Z,2µm,19.0s						
LAO	**LASA Array**	**101.61**	**42**	PFAKE		21 08 10.0	+13
LAO				LR	LR		
	comp=Z,2µm,19.0s						
BCIP	**Isla Barro Col**	**101.65**	**86**	PFAKE		21 08 10.0	+12
BCIP				LR	LR		
	comp=Z,2µm,19.0s						
DGAR	**Diego Garcia**	**102.37**	**253**	PFAKE		21 08 10.0	+9.0
DGAR				LR	LR		
	comp=Z,870nm,20.0s						
MIAR	**Mount Ida**	**103.32**	**58**	PFAKE		21 08 20.0	+15
MIAR				LR	LR		
	comp=Z,1µm,20.0s						
KSU1	**Kansas State U**	**103.50**	**52**	PFAKE		21 08 20.0	+15
KSU1				LR	LR		
	comp=Z,2µm,19.0s						
DGMT	**Dagmar**	**103.74**	**41**	PFAKE		21 08 20.0	+14
DGMT				LR	LR		
	comp=Z,1µm,20.0s						
ULN	**Ulaanbaatar**	**104.12**	**318**	PFAKE		21 08 20.0	+12
ULN				LR	LR		
	comp=Z,696nm,20.0s						
SONM	**Songino Array**	**104.48**	**318**	Pdiff	**Pdif**	**21 08 09.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=108,slow=4.7,SNR=2.0						
SONM				PKiKP	**PKiKP**	**21 12 25.7**	**0.0**
	comp=Z,0.4nm,0.5s,baz=172,slow=3.0,SNR=3.8						
SONM				PKKPbc	**PKKPbc**	**21 23 56.2**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=264,slow=4.1,SNR=2.8						
INK	**Inuvik**	**105.47**	**16**	PKiKP	**PKiKP**	**21 12 27.2**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=229,slow=3.1,SNR=2.5						
ECSD	**EROS Data Cent**	**105.81**	**48**	PFAKE		21 12 40.0	+12
ECSD				LR	LR		
	comp=Z,2µm,19.0s						
LSA	**Lhasa**	**105.83**	**295**	PFAKE		21 12 40.0	+11
LSA				LR	LR		
	comp=Z,481nm,20.0s						
BRAL	**Brewton**	**106.51**	**63**	PFAKE		21 12 40.0	+10
BRAL				LR	LR		
	comp=Z,713nm,20.0s						
YKA	**Yellowknife Ar**	**107.01**	**26**	Pdiff	**Pdif**	**21 08 21.6**	**+1.3**
	comp=Z,0.2nm,0.8s,baz=262,slow=3.6,SNR=2.9						
YKA				PKiKP	**PKiKP**	**21 12 29.6**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=261,slow=1.6,SNR=3.1						
YKA				PKKPbc	**PKKPbc**	**21 23 44.6**	**-4.3**
	comp=Z,1.2nm,0.8s,baz=43,slow=3.2,SNR=8.1						
SCIA	**State Center**	**107.12**	**51**	PFAKE		21 12 40.0	+9.4
SCIA				LR	LR		
	comp=Z,2µm,19.0s						
TLY	**Talaya**	**107.97**	**320**	PFAKE		21 12 40.0	+8.1
TLY				LR	LR		
	comp=Z,380nm,19.0s						
MTDJ	**Mount Denham**	**108.08**	**80**	PFAKE		21 12 40.0	+6.8
MTDJ				LR	LR		
	comp=Z,2µm,20.0s						
FFC	**Flin Flon**	**108.20**	**36**	PFAKE		21 12 40.0	+7.8
FFC				LR	LR		
	comp=Z,2µm,20.0s						
AGMN	**Agassiz Nation**	**108.45**	**44**	PFAKE		21 12 40.0	+7.1
AGMN				LR	LR		
	comp=Z,2µm,20.0s						
JIRN	**Jiri**	**108.75**	**291**	*e*P	**PKiKP**	**21 12 35.7**	**+1.1**
	comp=Z,19nm,1.0s						
GUN	**Gumba**	**109.11**	**291**	*e*P	**PKiKP**	**21 12 36.2**	**+1.0**
HDIL	**Hopedale**	**109.15**	**54**	PFAKE		21 12 50.0	+16
HDIL				LR	LR		
	comp=Z,1µm,20.0s						
SDV	**Santo Domingo**	**109.31**	**92**	PFAKE		21 12 50.0	+14
SDV				LR	LR		
	comp=Z,1µm,19.0s						
PKI	**Pulchoki**	**109.33**	**291**	*e*P	**PKiKP**	**21 12 36.6**	**+1.0**
	comp=Z,7.4nm,0.7s						
PKIN	**Phulchoki**	**109.34**	**291**	*e*P	**PKiKP**	**21 12 37.1**	**+1.5**
	comp=Z,33nm,1.7s						
KKN	**Kakani**	**109.53**	**291**	*e*P	**PKiKP**	**21 12 36.5**	**+0.6**
	comp=Z,14nm,0.9s						
JFWS	**Jewell Farm**	**109.54**	**51**	PFAKE		21 12 50.0	+15
JFWS				LR	LR		
	comp=Z,2µm,19.0s						
DMN	**Daman**	**109.59**	**291**	*e*P	**PKiKP**	**21 12 36.6**	**+0.6**
	comp=Z,28nm,1.1s						
GOGA	**Godfrey**	**110.23**	**63**	PFAKE		21 12 50.0	+13
GOGA				LR	LR		
	comp=Z,1µm,19.0s						
K43A	**Burlington**	**110.72**	**52**	P	**PKiKP**	**21 12 37.4**	**+0.1**
	baz=245						
KOLN	**Koldanda**	**110.86**	**290**	*e*P	**PKiKP**	**21 12 37.3**	**-1.0**
	comp=Z,8.8nm,0.8s						
GTBY	**Guantanamo Bay**	**110.90**	**79**	PFAKE		21 12 50.0	+12
GTBY				LR	LR		
	comp=Z,723nm,19.0s						
EYMN	**Ely**	**110.91**	**46**	PFAKE		21 12 50.0	+12
EYMN				LR	LR		
	comp=Z,2µm,19.0s						
DANN	**Dangsing**	**110.98**	**291**	*e*P	**PKiKP**	**21 12 37.2**	**-1.5**
	comp=Z,7.3nm,0.5s						
PYUN	**Piuthan**	**111.49**	**290**	*e*P	**PKiKP**	**21 12 38.4**	**-1.1**
	comp=Z,14nm,0.9s						
COWI	**Conover**	**111.61**	**48**	PFAKE		21 12 50.0	+11
COWI				LR	LR		
	comp=Z,2µm,19.0s						
E41A	**Kenton**	**111.87**	**48**	P	**PKiKP**	**21 12 39.6**	**+0.2**
	baz=246						
NHSC	**New Hope**	**112.60**	**64**	PFAKE		21 12 50.0	+8.8
NHSC				LR	LR		
	comp=Z,901nm,20.0s						
PTGA	**Pitinga**	**113.03**	**106**	PFAKE		21 12 50.0	+7.3
PTGA				LR	LR		
	comp=Z,13µm,20.0s						
ABPO	**Ambohimpanom**	**113.20**	**227**	PFAKE		21 12 50.0	+6.9
ABPO				LR	LR		
	comp=Z,540nm,19.0s						
ACSO	**Alum Creek Sta**	**113.39**	**56**	PFAKE		21 12 50.0	+7.5
ACSO				LR	LR		
	comp=Z,2µm,20.0s						
SUR	**Sutherland**	**113.40**	**197**	PFAKE		21 12 50.0	+6.8
SUR				LR	LR		
	comp=Z,3µm,19.0s						
SDDR	**Presa de Saban**	**113.67**	**82**	PFAKE		21 13 00.0	+16
SDDR				LR	LR		
	comp=Z,599nm,21.0s						
AAM	**Ann Arbor**	**113.72**	**54**	PFAKE		21 12 50.0	+6.9
AAM				LR	LR		
	comp=Z,1µm,19.0s						
GLMI	**Grayling**	**114.03**	**51**	PFAKE		21 13 00.0	+16
GLMI				LR	LR		
	comp=Z,2µm,19.0s						
BLA	**Blacksburg**	**114.06**	**60**	PFAKE		21 13 00.0	+16
BLA				LR	LR		
	comp=Z,1µm,19.0s						
WMQ	**Urumqi**	**114.34**	**308**	*e*PKP	PKPdf	21 12 44.1	-0.2
WMQ				LR	LR		
	comp=Z,770nm,16.7s						
WMQ				LR	LR		
	comp=Z,710nm,20.1s						
WMQ				LR	LR		
	comp=Z,920nm,25.1s						
GRTK	**Grand Turk**	**114.94**	**79**	PFAKE		21 13 00.0	+14
GRTK				LR	LR		
	comp=Z,875nm,19.0s						
CNNC	**Cliffs of the**	**115.19**	**63**	PFAKE		21 13 00.0	+14
CNNC				LR	LR		
	comp=Z,1µm,19.0s						
BOSA	**Boshof**	**115.65**	**203**	PKP	**PKPdf**	**21 12 47.8**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=178,slow=3.2,SNR=3.2						
J52A	**Paris**	**116.25**	**54**	P	**PKPdf**	**21 12 47.7**	**-0.2**
	baz=250						
DGZ	**Jazzator, Alta**	**116.57**	**314***d*	*i*PKIKP	**PKPdf**	**21 12 46.1**	**-2.4**
CBN	**Corbin Frederi**	**116.68**	**60**	PFAKE		21 13 00.0	+11
CBN				LR	LR		
	comp=Z,2µm,19.0s						
M55A	**Ridgway**	**116.82**	**56**	P	**PKPdf**	**21 12 48.9**	**-0.2**
	baz=250						
SSPA	**Standing Stone**	**117.16**	**57**	P	**PKiKP**	**21 12 50.0**	**+0.3**
	baz=250						
L55A	**Hinsdale**	**117.30**	**56**	P	**PKiKP**	**21 12 50.4**	**+0.4**
	baz=250						
SJG	**San Juan**	**117.59**	**85**	PFAKE		21 13 00.0	+8.8
SJG				LR	LR		
	comp=Z,564nm,21.0s						
GRGR	**Grenville**	**118.56**	**93**	PFAKE		21 13 00.0	+6.8
GRGR				LR	LR		
	comp=Z,705nm,19.0s						
LBTB	**Lobatse**	**118.86**	**204**	PKP	**PKiKP**	**21 12 54.6**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=190,slow=6.1,SNR=3.0						
RES	**Resolute Bay**	**118.92**	**18**	PKP	**PKPdf**	**21 12 51.2**	**-0.9**
	comp=Z,3.7nm,1.0s,baz=291,slow=1.8,SNR=12						
MK01	**Makanchi Array**	**118.92**	**309**	*e*PKPdf	**PKPdf**	**21 12 51.3**	**-1.7**
MKAR	**Makanchi Array**	**118.93**	**309**	PKP	**PKPdf**	**21 12 51.9**	**-1.1**
	comp=Z,4.6nm,0.9s,baz=109,slow=0.6,SNR=22						
MKAR				PKKPbc	**PKKPbc**	**21 23 08.0**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=316,slow=3.3,SNR=4.3						
BINY	**Binghamton**	**119.03**	**56**	PFAKE		21 13 00.0	+6.6
BINY				LR	LR		
	comp=Z,2µm,19.0s						
MAKZ	**Makanchi**	**119.14**	**309**	*e*PKPdf	**PKPdf**	**21 12 52.1**	**-1.3**
MAKZ	**Makanchi**	**119.14**	**309**	*e*PKIKP	**PKPdf**	**21 12 52.1**	**-1.3**
PEMO	**Pembroke**	**119.22**	**52**	P	**PKPdf**	**21 12 53.4**	**-0.1**
	baz=253						
D53A	**Lac Vacive, Po**	**119.33**	**50**	P	**PKPdf**	**21 12 53.7**	**0.0**
	baz=253						
ZALV	**Zalesovo Beam**	**119.37**	**318**	PKP	**PKPdf**	**21 12 52.1**	**-1.4**
	comp=Z,2.2nm,0.7s,baz=138,slow=2.4,SNR=8.5						
NVS	**Novosibirsk**	**120.49**	**318**	*i* PKIKP	**PKPdf**	**21 12 54.4**	**-1.2**
NVS				pmax	pmax		
	comp=Z,26nm,1.9s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,11nm,1.5s						
LONY	**Lake Ozonia**	**120.72**	**54**	PFAKE		21 13 10.0	+13
LONY				LR	LR		
	comp=Z,2µm,19.0s						
BBGH	**Gun Hill**	**120.83**	**94**	PFAKE		21 13 10.0	+12
BBGH				LR	LR		
	comp=Z,1µm,19.0s						
KSH	**Kashi**	**121.16**	**300**	PKP	**PKPdf**	**21 12 57.8**	**+0.1**
KSH				PP	**PP**	**21 14 28.3**	**-0.1**
KSH				SKS	**SKSdf**	**21 20 02.1**	**-6.6**
KSH				SKKS	**SKKSac**	**21 21 18.3**	**-8.3**
KSH				SS	**SS**	**21 30 57.4**	**-3.7**

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KSH                                  AMB      AMB
      comp=Z,530nm,5.4s
KSH                                  LR       LR
      comp=Z,100nm,6.1s
KSH                                  LR       LR
      comp=Z,100nm,4.2s
KSH                                  LR       LR
      comp=Z,240nm,7.5s
NRIK  Noril'sk          121.26 336   PKP      PKiKP    21 12 57.4 +0.5
      comp=Z,4.0nm,0.5s,baz=114,slow=2.1,SNR=4.6
NIL   Nilore            121.35 292   PFAKE             21 13 10.0  +12
NIL                                  LR       LR
      comp=Z,438nm,19.0s
MATP  Matopo            121.89 209   PKP      PKPdf    21 12 59.0 -0.8
      comp=Z,6.0nm,1.1s,baz=210,slow=1.1,SNR=7.8
KURK  Kurchatov         122.29 313   PKP      PKPdf    21 12 58.2 -1.1
KURK                                 LR       LR
      comp=Z,1µm,20.0s
KURK  Kurchatov         122.29 313d iPKIKP    PKPdf    21 12 57.3 -2.0
KURK                                 pmax     pmax
      comp=Z,11nm,0.8s
KURK  Kurchatov         122.29 313   PKPdf    PKiKP    21 13 02.8 +3.3
      SNR=9.9
KURBB Kurchatov Arra    122.33 313   PKP      PKPdf    21 12 58.2 -1.1
      comp=Z,8.2nm,0.7s,baz=108,slow=2.0,SNR=30
TKM2  Tokmak 2          122.41 303   P        PKPdf    21 12 59.3 -0.8
      SNR=9.0
KZA   Kyzart            122.43 302   P        PKPdf    21 13 00.2 -0.2
      SNR=8.0
UCH   Uchtor            123.00 302   P        PKPdf    21 13 01.5  0.0
      SNR=12
CHMS  Chumysh           123.03 303   P        PKPdf    21 12 59.9 -1.1
      SNR=11
AAK   Ala-Archa         123.12 303   PKP      PKPdf    21 13 00.7 -0.6
AAK                                  LR       LR
      comp=Z,915nm,20.0s
AAK   Ala-Archa         123.12 303c iPKIKP    PKPdf    21 13 00.0 -1.4
AAK                                  pmax     pmax
      comp=Z,16nm,1.3s
AAK   Ala-Archa         123.12 303   PKP      PKPdf    21 13 00.7 -0.6
      comp=Z,14nm,1.1s,baz=177,slow=3.9,SNR=14
USP   Ospenovka         123.28 304   P        PKPdf    21 13 00.9 -0.6
      SNR=7.5
AML   Almayashu         123.56 302   P        PKPdf    21 13 02.2 -0.3
      SNR=14
EKS2  Erkin-Say         123.64 303   P        PKPdf    21 13 02.0 -0.3
      SNR=8.4
TULEG Thule             125.46  16  ePKPdf    PKPdf    21 13 03.0 -1.6
LSZ   Lusaka            126.59 212   PKP      PKiKP    21 13 09.2  0.0
LSZ                                  LR       LR
      comp=Z,2µm,20.0s
LSZ   Lusaka            126.59 212   PKP      PKiKP    21 13 09.2  0.0
      comp=Z,4.0nm,0.8s,baz=82,slow=1.1,SNR=8.8
TSUM  Tsumeb            126.80 198   PKP      PKPdf    21 13 09.5 +0.4
TSUM                                 LR       LR
      comp=Z,3µm,19.0s
TSUM  Tsumeb            126.80 198   PKP      PKPdf    21 13 09.5 +0.4
      comp=Z,2.8nm,0.8s,baz=117,slow=2.3,SNR=4.3
FRB   Frobisher Bay     126.86  32   PKP      PKPdf    21 13 07.5 -0.1
      comp=Z,3.9nm,0.9s,baz=321,slow=0.6
SCHQ  Schefferville     127.51  43  ePKPdf    PKPdf    21 13 09.3 +0.1
SCHQ  Schefferville     127.51  43   PKP      PKPdf    21 13 08.8 -0.3
      comp=Z,9.2nm,1.1s,baz=144,slow=0.2,SNR=4.7
BVAR  Borovoye Array    127.69 315   PKP      PKPdf    21 13 09.1 -0.4
      comp=Z,3.7nm,0.5s,baz=122,slow=1.9,SNR=21
RCBR  Riachuelo         127.72 129   PFAKE             21 13 20.0 +8.5
RCBR                                 LR       LR
      comp=Z,32µm,21.0s
BRVK  Borovoye          127.76 315   PFAKE             21 13 20.0  +10
BRVK                                 LR       LR
      comp=Z,507nm,20.0s
BRVK  Borovoye          127.76 315d iPKIKP    PKPdf    21 13 09.3 -0.4
BRVK  Borovoye          127.76 315   PKPdf    PKPdf    21 13 09.3 -0.4
      SNR=9.8
MHTO  MHTO              129.26 272   PKPdf    PKPdf    21 13 14.0 +0.5
      SNR=5.9
SHEL  Horse Pasture     131.57 170   PFAKE             21 13 30.0  +11
SHEL                                 LR       LR
      comp=Z,667nm,20.0s
KBS   Kingsbay          132.95 357   PFAKE             21 13 30.0  +10
KBS                                  LR       LR
      comp=Z,613nm,20.0s
KBS   Kingsbay          132.95 357  ePKPdf    PKPdf    21 13 19.5 +0.6
KMBO  Kilima Mbogo      133.04 232   PKP      PKPdf    21 13 21.9 +0.6
KMBO                                 SKPbc    SKPab    21 16 50.2 +0.4
KMBO                                 LR       LR
      comp=Z,1µm,20.0s
KMBO  Kilima Mbogo      133.04 232   PKPdf    PKiKP    21 13 24.7 +2.3
      SNR=5.7
KMBO  Kilima Mbogo      133.04 232   PKP      PKPdf    21 13 21.9 +0.6
      comp=Z,2.7nm,1.0s,baz=152,slow=3.6,SNR=7.3
KMBO                                 SKPbc    SKPab    21 16 50.2 +0.4
      comp=Z,5.6nm,0.8s,baz=100,slow=2.8,SNR=12
SVE   Sverdlovsk        133.28 320  ePKIKP    PKiKP    21 13 22.3 +1.1
SVE                                  pmax     pmax
      comp=Z,32nm,1.9s
SFJD  Kangerlussuaq     133.58  26   PFAKE             21 13 30.0 +8.5
SFJD                                 LR       LR
      comp=Z,1µm,19.0s
DAG   Danmarks Havn     134.29   7 i P        PKPdf    21 13 20.5 -0.9
DAG   Danmarks Havn     134.29   7  ePKIKP    PKPdf    21 13 20.5 -0.9
GEYT  Alibeck           134.32 293   PKP      PKPdf    21 13 22.0 -0.6
      comp=Z,5.8nm,1.0s,baz=264,slow=2.8,SNR=11
GEYT                                 SKPbc    SKPbc    21 16 52.5 +1.2
      comp=Z,3.9nm,0.9s,baz=220,slow=3.7,SNR=6.2
SUMG  Summit            134.39  16 i P        PKiKP    21 13 24.0 +0.4
SUMG  Summit            134.39  16  ePKIKP    PKiKP    21 13 24.0 +0.4
ARU   Arti              134.47 320   PFAKE             21 13 30.0 +6.3
ARU                                  LR       LR
      comp=Z,597nm,20.0s
ARU   Arti              134.47 320 i PKIKP    PKPdf    21 13 21.4 -0.9
ARU                                                    21 15 54.1
ARU                                  PPP      PPP      21 18 47.3
ARU                                  SS       SS       21 33 49.3 +4.3
HSPB  Hornsund (broa    134.65 356  ePKPdf    PKPdf    21 13 22.8 +0.7
AKTO  Aktyubinsk        135.31 311   PKhKP    PKPpre   21 13 15.4
      comp=Z,1.1nm,0.7s,baz=6.4,slow=1.5,SNR=5.1
AKTO                                 PKP      PKPdf    21 13 24.1  0.0
      comp=Z,5.4nm,0.8s,baz=40,slow=3.0,SNR=5.6
AKTO                                 SKPbc    SKPbc    21 16 55.1 +1.2
      comp=Z,3.2nm,0.9s,baz=18,slow=19,SNR=6.4
MBAR  Mbarara           137.60 225   PFAKE             21 13 40.0 +8.4
MBAR                                 LR       LR
      comp=Z,584nm,19.0s
KIRV  Kirov             138.78 324   PKP      PKPdf    21 13 30.4 +0.3
      comp=Z,16nm,0.6s,baz=156,slow=1.3,SNR=4.9
PRGR  Permogore         139.37 330  ePKIKP    PKiKP    21 13 33.7 +0.3
PRGR                                 pmax     pmax
      comp=Z,14nm,0.8s
SCO   Scoresbysund      139.41  12 i P        PKiKP    21 13 38.7 +5.4
SCO   Scoresbysund      139.41  12  ePKIKP    PKiKP    21 13 38.7 +5.4
LVZ   Lovozero          139.54 342   PFAKE             21 13 40.0 +6.3
LVZ                                  LR       LR
      comp=Z,830nm,21.0s
HAMF  Hammerfest        139.68 349  ePdif     Pdif     21 10 46.0 +0.5
HAMF                                ePKPdf    PKPdf    21 13 32.0 +0.5
KEV   Kevo              139.85 347   PFAKE             21 13 40.0 +5.8
KEV                                  LR       LR
      comp=Z,2µm,21.0s
ARCES ARCESS Array B    140.32 347   PKhKP    PKPpre   21 13 26.2
      comp=Z,2.5nm,0.6s,baz=72,slow=2.1,SNR=16
ARCES                                SKPbc    SKPbc    21 17 09.4 +1.5
      comp=Z,2.3nm,0.8s,baz=48,slow=1.3,SNR=2.6
ARE0  ARCESS Array S    140.32 347  ePKPdf    PKPdf    21 13 29.4 -3.3
RAYN  Ar Rayn           140.84 269   PFAKE             21 13 50.0  +12
RAYN                                 LR       LR
      comp=Z,776nm,20.0s
KTK1  Kautokeino        141.18 348  ePKPdf    PKPdf    21 13 33.5 -0.8
TRO   Tromso            141.30 351  ePKPdf    PKPdf    21 13 34.8 +0.4
KLMR  Klimovskoe        142.33 331  ePKHKP    PKPpre   21 13 31.0
KLMR                                 pmax     pmax
      comp=Z,36nm,1.1s
KLMR  Klimovskoe        142.33 331  ePKPdf    PKPpre   21 13 31.0
KLMR                                 AMP               21 13 42.6
      comp=Z,36nm,1.1s
KLMR                                eSKP               21 17 21.8
MAK   Makhachkala       142.80 300 i P        Pdif     21 10 54.2 -5.8
MAK                                i                   21 13 36.3
MAK                                 e                  21 16 44.6
MAK                                 e                  21 20 46.4
MAK                                 eSS       SS       21 35 15.3 -8.9
MAK                                 eSSS      SSS      21 40 40.0
MAK                                  pmax     pmax
      comp=Z,230nm,1.3s
STEI  Steigen           143.38 352  epPKPdf   PKiKP    21 13 41.7 +0.2
LOF   Lofoten           143.38 353  ePKPdf    PKPdf    21 13 38.6 +0.4
GROC  Groznyy           144.04 301  ePKIKP    PKPab    21 13 37.3 -0.3
GROC                                e                  21 16 50.9
GROC                                 pmax     pmax
      comp=Z,32nm,0.9s
TBLG  Delisi            144.88 298  eP        PKPab    21 13 40.0 -0.8
TBLG  Delisi            144.88 298  eP        PKPab    21 13 40.0 -0.8
TBLG  Delisi            144.88 298  ePKPdf    PKPbc    21 13 41.2 +0.3
TBLG  Delisi            144.88 298  ePKIKP    PKPbc    21 13 41.2 +0.3
GNI   Garni             144.90 295  eP        PKPab    21 13 40.0 -1.1
GNI   Garni             144.90 295  eP        PKPab    21 13 40.0 -1.1
GNI   Garni             144.90 295   PKP      PKPab    21 13 40.9 -0.2
GNI                                  LR       LR
      comp=Z,691nm,20.0s
GNI   Garni             144.90 295   PKIKP    PKPab    21 13 40.9 -0.2
GNI                                  MLR      MLR
      comp=Z,691nm,20.0s
GNI   Garni             144.90 295   PKPbc    PKPab    21 13 41.3 +0.1
      SNR=11
GNI   Garni             144.90 295   PKP      PKPab    21 13 40.9 -0.2
      comp=Z,10nm,1.0s,baz=178,slow=1.1,SNR=11
KONS  Konsvik           145.00 352  ePKPdf    PKPdf    21 13 41.5 +0.5
MOR8  Moi Rana          145.15 351  ePKPbc    PKPbc    21 13 40.1 -0.9
TASB  TASBURUN-IGDIR    145.28 295  eP        PKPbc    21 13 42.2 -0.1
TASB  TASBURUN-IGDIR    145.28 295  eP        PKPbc    21 13 42.2 -0.1
VRH   Novokhopyorsk     145.34 315  ePKP2     PKPbc    21 13 40.6 -1.4
VRH                                  pmax     pmax
      comp=Z,60nm,0.7s
IGDI  IGDIR             145.40 295 i P        PKPbc    21 13 42.7 +0.1
IGDI                                 IAML_P
      comp=Z,356nm,0.7s
ZEI   Tsey              145.45 300 i PKP2     PKPdf    21 13 40.3 -2.6
ZEI                                  pmax     pmax
      comp=Z,32nm,0.7s
CLDR  Caldiran          145.51 294 i P        PKPdf    21 13 42.8 -0.3
CLDR  Caldiran          145.51 294 i P        PKPdf    21 13 42.8 -0.3
NCK   Nalchik           145.62 301⇑iPKIKP     PKPdf    21 13 42.3 -0.6
CUKT  Cukurca           145.67 290  eP        PKPdf    21 13 42.5 -0.8
CUKT  Cukurca           145.67 290  eP        PKPdf    21 13 42.5 -0.8
CUKT  Cukurca           145.67 290 i P        PKPdf    21 13 42.5 -0.8
CUKT                                 IAML_P
      comp=Z,637nm,0.4s
DYDN  Diyadin           145.70 294 i P        PKPab    21 13 44.6 +0.4
DYDN                                 IAML_P
      comp=Z,169nm,0.4s
EAK   Akyaka            145.76 296 i P        PKPab    21 13 44.7 +0.4
VMUR  Van-Muradiye      145.78 293 i P        PKPab    21 13 44.9 +0.5
VMUR                                 IAML_P
      comp=Z,116nm,0.6s
MOS   Moscow            145.80 324  ePKP2     PKPdf    21 13 41.0 -1.7
MOS                                  pmax     pmax
      comp=Z,298nm,1.1s
GOF   Gofitskoye        145.84 304⇑iPKIKP     PKPdf    21 13 42.9 -0.3
GOF                                  pmax     pmax
      comp=Z,120nm,1.1s
TVAN  Van               145.90 292 i P        PKPab    21 13 46.3 +1.4
TVAN                                 IAML_P
      comp=Z,790nm,0.8s
VANB  Van               145.91 293  eP        PKPdf    21 13 43.6 -0.1
VANB  Van               145.91 293  eP        PKPdf    21 13 43.6 -0.1
KBZ   Khabaz            146.10 302   PKPbc    PKPdf    21 13 44.0 +0.4
      comp=Z,47nm,0.9s,baz=218,slow=2.6,SNR=22
GEVA  Gevas             146.16 292 i P        PKPbc    21 13 45.7 +0.5
GEVA                                 IAML_P
      comp=Z,859nm,0.3s
AKDM  Akdamar-Van       146.22 292  eP        PKPdf    21 13 44.0 -0.3
AKDM  Akdamar-Van       146.22 292  eP        PKPdf    21 13 44.0 -0.3
KVAR  Kislovodsk Arr    146.23 302   PKPbc    PKPdf    21 13 44.5 +0.5
      comp=Z,17nm,1.1s,baz=114,slow=19,SNR=9.0
KIV   Kislovodsk        146.23 302  ePKPdf    PKPdf    21 13 44.0 -0.1
KIV                                  LR       LR
      comp=Z,979nm,20.0s
KIV   Kislovodsk        146.23 302⇑iP         PKPdf    21 13 43.8 -0.2
KIV   Kislovodsk        146.23 302 ⇑PKP2      PKPdf    21 13 43.9 -0.1
KIV   Kislovodsk        146.23 302   PKPdf    PKPdf    21 13 44.2 +0.2
      SNR=13
AGRB  Hanur-Agry        146.24 294 i P        PKPbc    21 13 45.3 -0.1
AGRB  Hanur-Agry        146.24 294 i P        PKPbc    21 13 45.3 -0.1
NEY   Neytrino          146.28 301ceePKP2     PKPbc    21 13 45.1 -0.3
TUTA  Tutak             146.38 294 i P        PKPdf    21 13 45.1 +0.5
TUTA                                 IAML_P
      comp=Z,540nm,1.2s
EPOS  Posof             146.40 298 i P        PKPdf    21 13 45.3 +0.8
ADCV  BITLIS_Adilcev    146.44 293 i P        PKPbc    21 13 46.5 +0.5
ADCV                                 IAML_P
      comp=Z,40nm,0.2s
LPSR  Galich'ya Gora    146.48 318  ePKP2     PKPdf    21 13 44.2 +0.2
LPSR                                 pmax     pmax
      comp=Z,220nm,0.8s
LPSR                                 MLR      MLR
      comp=Z,1µm,20.0s
MLAZ  Malazgirt-MUS     146.58 294  eP        PKPab    21 13 47.4 -0.1
MLAZ  Malazgirt-MUS     146.58 294  eP        PKPab    21 13 47.4 -0.1
PUL   Pulkovo           146.62 334ceePKP2     PKPdf    21 13 44.2 +0.2
OBN   Obninsk           146.63 324  ePKPdf    PKPdf    21 13 44.3 +0.2
OBN                                  LR       LR
      comp=Z,481nm,21.0s
OBN   Obninsk           146.63 324⇑iP         PKPdf    21 13 44.8 +0.7
OBN   Obninsk           146.63 324c iPKP2     PKPdf    21 13 44.5 +0.4
OBN                                i SS       SS       21 36 09.1 +2.3
OBN                                  pmax     pmax
      comp=Z,137nm,1.3s
OBN                                  MLR      MLR
      comp=Z,550nm,19.0s
OBN   Obninsk           146.63 324   PKPbc    PKPdf    21 13 44.8 +0.7
      comp=Z,31nm,0.9s,baz=73,slow=2.0,SNR=31
VORR  Voronezh          146.67 317⇓iPKHKP     PKPpre   21 13 41.0
VORR                                 pmax     pmax
      comp=Z,400nm,1.6s
SENK  Senkaya-Erzuru    146.72 296  eP        PKPbc    21 13 46.8  0.0
SENK  Senkaya-Erzuru    146.72 296  eP        PKPbc    21 13 46.8  0.0
FIA1  FINESS Array S    146.81 339  ePKPdf    PKPdf    21 13 44.8 +0.5
FINES FINESS Array B    146.81 339   PKPbc    PKPdf    21 13 44.9 +0.7
      comp=Z,35nm,0.7s,baz=49,slow=3.6,SNR=158
VSR   Storozhevoye      146.85 316  ePKP2     PKPdf    21 13 45.3 +0.6
VSR                                  pmax     pmax
      comp=Z,170nm,1.0s
GURO  Guroymak-BITLI    146.97 292  eP        PKPdf    21 13 44.9 -0.6
GURO  Guroymak-BITLI    146.97 292  eP        PKPdf    21 13 44.9 -0.6
ARTV  Artvin            147.02 297 i P        PKPbc    21 13 47.5 -0.2
ARTV                                 IAML_P
      comp=Z,89nm,0.1s
DAGI  Agillar           147.03 297 i P        PKPbc    21 13 47.1 -0.4
DAGI                                 IAML_P
      comp=Z,171nm,0.5s
NSS   Namsos            147.03 352  ePKPdf    PKPdf    21 13 44.6 +0.1
NSS                                 epPKPbc   sPKPdf   21 13 50.4 -0.6
SRTM  Siirt_Merkez      147.04 291 i P        PKPbc    21 13 47.5 -0.2
HOMI  Horasan           147.07 295 i P        PKPbc    21 13 48.3 +0.5
HOMI                                 IAML_P
      comp=Z,554nm,0.3s
KOPR  Koprukoy-ERZUR    147.11 295  eP        PKPbc    21 13 47.7 -0.2
KOPR  Koprukoy-ERZUR    147.11 295  eP        PKPbc    21 13 47.7 -0.2
BATM  Batumi            147.17 298  eP        PKPdf    21 13 45.9 +0.4
BATM  Batumi            147.17 298  eP        PKPdf    21 13 45.9 +0.4
BATM  Batumi            147.17 298⇑iP         PKPdf    21 13 46.7 +1.2
DBAD  Bademkaya         147.20 297 i P        PKPbc    21 13 48.4 +0.3
DBAD                                 IAML_P
      comp=Z,362nm,0.7s
BCA   Borcka            147.23 298  eP        PKPdf    21 13 46.8 +1.1
BCA   Borcka            147.23 298  eP        PKPdf    21 13 46.8 +1.1
BCA   Borcka            147.23 298⇑iP         PKPbc    21 13 47.4 -0.6
VRTB  Varto-Mus         147.43 294  eP        PKPbc    21 13 49.3 +0.5
VRTB  Varto-Mus         147.43 294  eP        PKPbc    21 13 49.3 +0.5
VRTB  Varto-Mus         147.43 294 i P        PKPab    21 13 50.4 -0.4
VRTB                                 IAML_P
      comp=Z,78nm,0.3s
SVAN  Silvan-Diyarba    147.62 292  eP        PKPbc    21 13 49.0 -0.2
SVAN  Silvan-Diyarba    147.62 292  eP        PKPbc    21 13 49.0 -0.2
SVAN  Silvan-Diyarba    147.62 292 i P        PKPbc    21 13 49.6 +0.4
SVAN                                 IAML_P
      comp=Z,160nm,0.1s
ECAT  Cat-ERZURUM       147.80 294 i P        PKPbc    21 13 51.0 +1.1
CHOM  Cayeli-Rize       147.90 297  eP        PKPbc    21 13 49.6 -0.2
CHOM  Cayeli-Rize       147.90 297  eP        PKPbc    21 13 49.6 -0.2
BNGB  Bingl             148.03 293  eP        PKPdf    21 13 47.2  0.0
BNGB  Bingl             148.03 293  eP        PKPdf    21 13 47.2  0.0
YEDI  Yedisu-Bingol     148.13 294  eP        PKPbc    21 13 50.8 +0.1
YEDI  Yedisu-Bingol     148.13 294  eP        PKPbc    21 13 50.8 +0.1
KOPT  Kop Dagi          148.15 295 i P        PKiKP    21 13 52.0 -0.6
KOPT                                 IAML_P
      comp=Z,564nm,0.5s
MAZI  Mazidag           148.19 290  eP        PKPdf    21 13 48.7 +1.2
MAZI  Mazidag           148.19 290  eP        PKPdf    21 13 48.7 +1.2
HANI  Diyarbakir_Han    148.25 292 i P        PKPbc    21 13 50.3 -0.6
HANI                                 IAML_P
      comp=Z,486nm,0.8s
BAYB  BAYBURT           148.33 296 i P        PKPbc    21 13 52.0 +0.8
BAYB                                 IAML_P
      comp=Z,983nm,1.1s
SOC   Sochi             148.41 302 i PKP2     PKPbc    21 13 50.8 -0.3
SOC                                 e                  21 17 17.4
SOC                                 eSSS      SSS      21 42 02.0
SOC                                  pmax     pmax
      comp=Z,38nm,0.7s
TBLU  Trondheim         148.47 353  ePKPdf    PKPdf    21 13 46.4 -0.6
KTUT  Trabzon           148.66 297  eP        PKPdf    21 13 49.9 +1.9
KTUT  Trabzon           148.66 297  eP        PKPdf    21 13 49.9 +1.9
KTUT  Trabzon           148.66 297⇑iP         PKPdf    21 13 49.5 +1.5
EUZM  Uzumlu            148.78 295 i P        PKPbc    21 13 52.5 +0.2
EUZM                                 IAML_P
      comp=Z,81nm,0.2s
VSU   Vasula            148.85 335  eP        PKPbc    21 13 51.8 +0.2
VSU                                  IAmb     IAmb     21 14 06.2
      comp=Z,308nm,0.8s
TNCL  Tunceli-Merkez    148.92 293 i P        PKiKP    21 13 55.6 +1.6
TNCL                                 IAML_P
      comp=Z,174nm,0.6s
KELT  Kelkit            149.10 296 i P        PKPbc    21 13 53.0 -0.2
KELT                                 IAML_P
      comp=Z,2µm,1.0s
SANL  SANLIURFA_Merk    149.34 290 i P        PKPbc    21 13 53.7  0.0
SANL                                 IAML_P
      comp=Z,1µm,0.7s
ELZG  Elazig            149.36 292 i P        PKPbc    21 13 54.0 +0.2
ELZG                                 IAML_P
      comp=Z,1µm,0.4s
MOL   Molde             149.38 355  epPKPdf   PKPbc    21 13 52.2 -0.7
URFA  Urfa              149.49 290  eP        PKPdf    21 13 52.0 +2.4
URFA  Urfa              149.49 290  eP        PKPdf    21 13 52.0 +2.4
REFA  Refahiye_ERZN     149.51 294 i P        PKPbc    21 13 54.9 +0.7
SURC  SANLIURFA_SURC    149.64 289 i P        PKPbc    21 13 54.0 -0.4
SURC                                 IAML_P
      comp=Z,388nm,0.6s
KEMA  Kemaliye          149.73 294 i P        PKiKP    21 13 55.7 +0.1
KEMA                                 IAML_P
      comp=Z,1µm,0.9s
DOMB  Dombas            149.77 353  epPKPdf   PKPbc    21 13 53.1 -0.8
AKN   Aaknes            149.81 355  ePKPbc    PKPbc    21 13 53.6 -0.4
ANN   Anapa             149.81 305 i PKHKP    PKPpre   21 13 53.3
ANN                                  pmax     pmax
      comp=Z,115nm,0.8s
ANN                                  MLR      MLR
      comp=N,518nm,21.0s
ANN                                  MLR      MLR
      comp=Z,652nm,21.0s
SUSE  Susehri           149.90 296 i P        PKPbc    21 13 54.9 -0.3
SUSE                                 IAML_P
      comp=Z,415nm,0.9s
ORDU  Ordu-Boztepe      150.10 297 i P        PKPbc    21 13 55.4  0.0
ORDU                                 IAML_P
      comp=Z,603nm,0.4s
HEKM  Malatya_Hekimh    150.16 293 i P        PKPbc    21 13 55.5 -0.3
HEKM                                 IAML_P
      comp=Z,20nm,0.3s
CUZAR Zara_SIVAS        150.25 295 i P        PKiKP    21 13 56.9 +0.2
GZT   Gaziantep         150.49 290 i P        PKPbc    21 13 56.3 -0.3
GZT                                  IAML_P
      comp=Z,522nm,0.7s
FOO   Floro             150.49 357  epPKPdf   pPKPdf   21 13 54.1 -1.0
NB2   NORSAR Subarra    150.50 351   PKPdf    PKPbc    21 13 54.3 -1.4
      comp=Z,85nm,1.7s,baz=16,slow=1.7
NB2   NORSAR Subarra    150.50 351   PKPdf    PKPbc    21 13 54.3 -1.4
      baz=16,slow=1.7
NOA   NORSAR Array B    150.50 351   PKPbc    PKPbc    21 13 54.8 -0.9
      comp=Z,6.4nm,0.6s,baz=15,slow=4.1,SNR=32
CUKAN kangal_SIVAS      150.52 294 i P        PKPbc    21 13 57.1 +0.5
DARE  Darende-Malaty    150.54 292  eP        PKPbc    21 13 56.8 +0.2
DARE  Darende-Malaty    150.54 292  eP        PKPbc    21 13 56.8 +0.2
RSDY  Resadiye-TOKAT    150.56 296  eP        PKPbc    21 13 55.7 -0.8
RSDY  Resadiye-TOKAT    150.56 296  eP        PKPbc    21 13 55.7 -0.8
NC602 NORSAR Array S    150.75 350  epPKPdf   pPKPdf   21 13 54.5 -1.0
GAZ   Gaziantep         150.76 290  eP        PKPbc    21 13 57.2  0.0
GAZ   Gaziantep         150.76 290  eP        PKPbc    21 13 57.2  0.0
SVSK  Karacayir         150.84 295  eP        PKPbc    21 13 57.6 +0.5
SVSK  Karacayir         150.84 295  eP        PKPbc    21 13 57.6 +0.5
HYA   Hoyanger          150.87 356  ePKPdf    PKPdf    21 13 50.9 +0.1
KUZU  Kuzuini           150.87 289 i P        PKPbc    21 13 57.6 +0.2
KUZU                                 IAML_P
      comp=Z,88nm,0.1s
ERBA  Erbaa             150.96 297 i P        PKPbc    21 13 57.2 -0.3
ERBA                                 IAML_P
      comp=Z,678nm,0.9s
HFS   Hagfors           150.98 348   PKPbc    PKPbc    21 13 56.6 -0.3
      comp=Z,20nm,0.7s,baz=103,slow=3.3,SNR=35
SLIT  Slitere, Latvi    151.01 337  eP        PKPbc    21 13 55.1 -1.8
SLIT                                 IAmb     IAmb     21 14 05.3
      comp=Z,212nm,1.0s
KMRS  Kahramanmaras     151.01 290 i P        PKPbc    21 13 57.3 -0.4
KMRS  Kahramanmaras     151.01 290 i P        PKPbc    21 13 57.3 -0.4
SACV  Santiago Islan    151.03 120   PFAKE             21 14 00.0 +1.1
SACV                                 LR       LR
      comp=Z,351nm,19.0s
SUE   Sulen             151.05 357  ePKPbc    PKiKP    21 13 57.8 +0.3
IDID  Didziasalis       151.07 330  eP        PKPbc    21 13 56.6 -0.6
IDID                                 IAmb     IAmb     21 14 08.7
      comp=Z,50nm,1.0s
CUALT Altinyayla-SIV    151.08 294 i P        PKPbc    21 13 57.2 -0.7
MICGM Minsk             151.12 328  e         PKPdf    21 13 52.0 +0.6
MICGM                               eLR       LR       22 21 34.0
MNK   Minsk             151.12 328  ePKIKP    PKPdf    21 13 52.0 +0.6
ISAL  Salakas           151.15 331  eP        PKPbc    21 13 56.8 -0.6
ISAL                                 IAmb     IAmb     21 14 06.3
      comp=Z,32nm,1.0s
TOKT  Tokat             151.16 296  eP        PKPbc    21 13 57.7 -0.3
TOKT  Tokat             151.16 296  eP        PKPbc    21 13 57.7 -0.3
IIGN  Ignalina          151.26 331  eP        PKPbc    21 13 57.1 -0.5
IIGN                                 IAmb     IAmb     21 14 06.6
      comp=Z,56nm,1.1s
NACGM Naroch            151.33 330  eP        PKPbc    21 13 57.0 -0.8
NACGM                                PM                21 14 05.0
      comp=Z,0.4nm,1.0s
NACGM                               eLQ       LQ       22 28 04.0
NACGM                               eLR       LR       22 30 50.0
KVT   Kavak             151.45 298  eP        PKPbc    21 13 58.7 +0.1
KVT   Kavak             151.45 298  eP        PKPbc    21 13 58.7 +0.1
ANDN  Andirin           151.46 290 i P        PKPbc    21 13 59.1 +0.3
ANDN                                 IAML_P
      comp=Z,2µm,0.9s
CUSAR Sarkisla-SIVAS    151.46 294 i P        PKiKP    21 13 59.4 +0.1
TAHT  Tahtakopru-Hat    151.57 288  eP        PKPbc    21 13 59.1 +0.1
TAHT  Tahtakopru-Hat    151.57 288  eP        PKPbc    21 13 59.1 +0.1
ASK   Askoy             151.60 357  epPKPbc   PKiKP    21 14 00.8 +2.2
YAYL  Yayladag          151.62 287 i P        PKPbc    21 13 58.8 -0.5
OSL   Oslo              151.63 351  e         PKiKP    21 13 58.7  0.0
RCY   Rachaya           151.65 282  eP        PKPbc    21 13 59.4  0.0
SAIM  ADANA             151.66 291 i P        PKPbc    21 13 59.1 -0.2
SAIM                                 IAML_P
      comp=Z,80nm,0.1s
BER   Bergen            151.69 357  ePKPbc    PKPbc    21 13 58.3 -0.1
QRWL  Qaraoun           151.78 282  eP        PKPbc    21 13 59.2 -0.4
BHL   Bhannes           151.85 283  eP        PKPbc    21 13 59.7 -0.2
KOZT  Kozan             151.87 290  eP        PKPbc    21 13 59.5 -0.1
KOZT  Kozan             151.87 290  eP        PKPbc    21 13 59.5 -0.1
DQRL  Deir Qamar        151.90 282  eP        PKPbc    21 14 00.1 +0.2
CEYT  Ceyhan            151.93 289  eP        PKPbc    21 13 59.8  0.0
CEYT  Ceyhan            151.93 289  eP        PKPbc    21 13 59.8  0.0
SNOP  Sinop             151.94 300  eP        PKPbc    21 13 56.6 -3.0
SNOP  Sinop             151.94 300  eP        PKPbc    21 13 56.6 -3.0
DIKM  Dikmen            151.96 299  eP        PKPbc    21 13 59.1 -0.6
DIKM  Dikmen            151.96 299  eP        PKPbc    21 13 59.1 -0.6
YURE  YUREGIR           152.03 289 i P        PKiKP    21 14 00.7 +0.3
KONO  Kongsberg         152.05 352  ePKPbc    PKiKP    21 14 00.1 +0.5
KONO  Kongsberg         152.05 352  ePKPbc    PKPbc    21 13 58.8 -0.5
SIM   Simferopol'       152.06 306c iPKIKP    PKPbc    21 13 58.2 -1.6
SIM                                 e                  21 17 43.0
SIM                                  pmax     pmax
      comp=Z,41nm,1.0s
SIM                                  pmax     pmax
      comp=Z,340nm,16.3s
ODD1  Odda              152.08 355  ePKPbc    PKPbc    21 13 59.1 -0.3
YOZ   Yozgat            152.16 295   P        PKPbc    21 13 59.8 -0.6
YOZ   Yozgat            152.16 295   P        PKPbc    21 13 59.8 -0.6
YAHY  KAYSERI_Yahyal    152.22 292 i P        PKiKP    21 14 01.0 +0.1
YAHY                                 IAML_P
      comp=Z,478nm,1.0s
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SIRC	Yozgat	152.31	294	*i* P	PKPbc	21 13 60.0	-0.8
COAL	Corum-Alaca	152.35	296	*i* P	PKPbc	21 14 00.9	+0.2
COAL				IAML_P			
	comp=Z,259nm,1.1s						
PBUR	Paburg	152.40	336	*e*P	PKiKP	21 14 00.7	+0.2
PBUR				IAmb	IAmb	21 14 11.4	
	comp=Z,146nm,0.8s						
CTAK	Corum_Osmancik	152.45	297	*i* P	PKPdf	21 13 47.6	-6.6
CTAK				IAML_P			
	comp=Z,197nm,0.7s						
KARA	Karaisali	152.49	290	P	PKPbc	21 13 59.7	-1.3
KARA	Karaisali	152.49	290	P	PKPbc	21 13 59.7	-1.3
BLS5	Blasjo	152.58	355	*e*pPKPdf	pPKPdf	21 13 57.7	-0.7
AVNS	Nevsehir-Avano	152.59	293	*i* P	PKPbc	21 14 00.1	-1.2
AVNS				IAML_P			
	comp=Z,926nm,0.7s						
AKASG	Malin Array Be	152.71	321	PKP	PKPdf	21 13 53.8	-0.2
	comp=Z,0.2nm,0.3s,baz=58,slow=1.3,SNR=6.8						
AKASG				PKPbc	sPKPdf	21 14 00.4	+0.1
	comp=Z,18nm,0.8s,baz=51,slow=2.0,SNR=33						
KIEV	Kiev	152.72	321	*e*PKPbc	PKPbc	21 13 59.9	-1.1
KIEV				LR	LR		
	comp=Z,755nm,21.0s						
BZK	Bozkurt	152.83	300	*e*P	PKPdf	21 13 54.8	+0.4
BZK	Bozkurt	152.83	300	*e*P	PKPdf	21 13 54.8	+0.4
KMY	Karmoy	152.87	356	*e*PKPbc	PKPbc	21 14 00.8	-0.3
MERS	Mersin	152.91	289	*e*P	PKPdf	21 13 57.2	+2.4
MERS	Mersin	152.91	289	*e*P	PKPdf	21 13 57.2	+2.4
EREN	Erenkoy	153.18	286	*e*P	PKPdf	21 13 57.8	+2.7
EREN	Erenkoy	153.18	286	*e*P	PKPdf	21 13 57.8	+2.7
ILGA	Ilgaz	153.20	298	*e*PKPbc	PKPbc	21 14 02.9	+0.2
ILGA	Ilgaz	153.20	298	*i* P	PKPbc	21 14 02.4	-0.4
ILGA				IAML_P			
	comp=Z,679nm,0.3s						
KIZK	Mersin	153.22	288	*e*P	PKPdf	21 13 56.9	+1.7
KIZK	Mersin	153.22	288	*e*P	PKPdf	21 13 56.9	+1.7
LIC	Lamto	153.35	164	*e*PKIKP	PKPbc	21 14 03.1	-0.5
	comp=Z,84nm,0.9s						
BR131	Keskin Array S	153.44	295	PKPdf	PKPbc	21 14 02.4	-0.9
	SNR=19						
BRTR	Keskin Array B	153.44	295	PKP	PKPdf	21 13 54.8	-0.8
	comp=Z,1.2nm,1.0s,baz=64,slow=2.9,SNR=6.8						
BRTR				PKPbc	PKPbc	21 14 02.6	-0.6
	comp=Z,16nm,1.0s,baz=133,slow=1.9,SNR=36						
SUW	Suwalki	153.46	332	*e*PKPbc	PKPbc	21 14 02.3	-0.2
HOMB	Homborsund	153.53	352	*e*PKPdf	PKPdf	21 13 54.5	-0.4
KIC	Kosan Boka	153.55	165	*e*PKIKP	PKPbc	21 14 03.5	-0.6
	comp=Z,26nm,0.2s						
KEBE	Keben-Mersin	153.57	288	*e*P	PKPdf	21 13 55.7	-0.1
KEBE	Keben-Mersin	153.57	288	*e*P	PKPdf	21 13 55.7	-0.1
SERE	Sereflikochisa	153.57	294	*e*P	PKPbc	21 14 03.3	-0.2
SERE	Sereflikochisa	153.57	294	*e*P	PKPbc	21 14 03.3	-0.2
IKL	Isikli	153.59	288	*e*P	PKPbc	21 14 02.7	-0.8
IKL	Isikli	153.59	288	*e*P	PKPbc	21 14 02.7	-0.8
SNART	Snartemo	153.59	354	*e*PKPbc	PKPbc	21 14 02.8	+0.1
SULT	Sultanhani-AKS	153.67	292	*e*P	PKPdf	21 13 59.6	+3.7
SULT	Sultanhani-AKS	153.67	292	*e*P	PKPdf	21 13 59.6	+3.7
AKKU	Akkuyu-Mersin	153.70	287	*e*P	PKPbc	21 14 02.8	-0.9
AKKU	Akkuyu-Mersin	153.70	287	*e*P	PKPbc	21 14 02.8	-0.9
TIC	Toumodi	153.76	164	*e*PKIKP	PKPbc	21 14 03.1	-1.4
DBIC	Dimbokro	153.82	164	PKP	PKPdf	21 13 56.7	0.0
DBIC				*e*PKPbc	PKiKP	21 14 05.9	+1.2
DBIC				PKPab	PKPab	21 14 17.2	-0.2
DBIC	Dimbokro	153.82	164	PKIKP	PKPdf	21 13 56.7	0.0
DBIC				*e*		21 14 05.9	
DBIC						21 14 17.2	
DBIC	Dimbokro	153.82	164	PKP	PKPdf	21 13 56.7	0.0
	comp=Z,1.6nm,0.6s,baz=225,slow=5.7,SNR=2.0						
DBIC				PKPbc	PKiKP	21 14 05.3	+0.6
	comp=Z,8.1nm,0.9s,baz=17,slow=1.3,SNR=4.8						
DBIC				PKPab	PKPab	21 14 17.2	-0.2
	comp=Z,12nm,0.7s,baz=174,slow=3.0,SNR=6.3						
CSS	Mathiatis	153.84	285	*e*P	PKPbc	21 14 03.7	-0.4
CSS	Mathiatis	153.84	285	*e*P	PKPbc	21 14 03.7	-0.4
CSS	Mathiatis	153.84	285	*e*PKPbc	PKPbc	21 14 03.2	-0.9
AFSR	Afar-Bala (An	153.91	295	*e*P	PKPbc	21 14 01.8	-2.4
AFSR	Afar-Bala (An	153.91	295	*e*P	PKPbc	21 14 01.8	-2.4
BERE	Bereket-Mersin	153.96	288	*e*P	PKPdf	21 13 58.5	+2.0
BERE	Bereket-Mersin	153.96	288	*e*P	PKPdf	21 13 58.5	+2.0
TEKE	Tekeli-Mersin	154.05	287	*e*P	PKPbc	21 14 03.5	-1.0
TEKE	Tekeli-Mersin	154.05	287	*e*P	PKPbc	21 14 03.5	-1.0
ANTO	Ankara	154.07	296	*e*P	PKiKP	21 14 05.9	+1.3
ANTO	Ankara	154.07	296	*e*P	PKiKP	21 14 05.9	+1.3
ANTO	Ankara	154.07	296	*e*PKPbc	PKPbc	21 14 01.4	-3.1
ANTO				LR	LR		
	comp=Z,772nm,19.0s						
ANTO	Ankara	154.07	296	PKPdf	PKPbc	21 14 04.3	-0.2
	SNR=12						
LEF	Lefka	154.21	285	*i* P	PKPbc	21 14 02.4	-2.4
LEF	Lefka	154.21	285	*i* P	PKPbc	21 14 02.4	-2.4
LEF	Lefka	154.21	285	⇑*i*P	PKPbc	21 14 04.6	-0.2
LADK	Ladik-KONYA	154.57	292	*e*P	PKPbc	21 14 01.8	-3.9
LADK	Ladik-KONYA	154.57	292	*e*P	PKPbc	21 14 01.8	-3.9
KIS	Kishinev	154.77	314	*e*PKP	PKiKP	21 14 06.0	+0.4
KIS				LRM	MLR	22 24 02.0	
	comp=Z,400nm,24.0s						
KIS	Kishinev	154.77	314	*e*PKIKP	PKiKP	21 14 06.0	+0.4
KIS				*e*		21 14 15.0	
KIS				*e*		21 17 52.0	
KIS				MLR	MLR		
	comp=Z,400nm,24.0s						
MUD	Monsted U'grnd	155.22	351	*i* P	PKPdf	21 14 05.0	+7.7
	comp=Z,980nm,16.0s						
MUD	Monsted U'grnd	155.22	351	*e*PKIKP	PKPdf	21 14 05.0	+7.7
MUD				MLR	MLR		
	comp=Z,980nm,16.0s						
LEOM	Leova	155.35	313	⇑*i*P	PKPab	21 14 11.5	-12
LVV	L'vov	155.94	324	*e*PKP2	PKPab	21 14 26.2	+0.6
TLB	Topalu	156.26	309	⇑*i*P	PKPdf	21 14 08.1	+9.0
TLB	Topalu	156.26	309	⇑PKIKP	PKPdf	21 14 08.1	+9.0
TESR	Tescani	156.31	314	⇑*i*P	PKPab	21 14 14.9	-12
PETR	Petresti	156.32	312	⇑*i*P	PKPab	21 14 27.3	-0.1
EKA	Eskdalemuir Ar	156.55	7	PKP	PKPdf	21 13 58.2	-0.9
	comp=Z,3.5nm,1.1s,baz=328,slow=2.5,SNR=3.0						
EKA				PKPbc	sPKPdf	21 14 09.6	+4.1
	comp=Z,2.7nm,1.0s,baz=289,slow=2.2,SNR=3.2						
EKA				PKPab	PKPab	21 14 28.2	+0.2
	comp=Z,8.1nm,1.1s,baz=329,slow=2.9,SNR=6.4						
ESK	Eskdalemuir	156.56	8	PFAKE		21 14 10.0	+11
ESK				LR	LR		
	comp=Z,1µm,19.0s						
VRI	Vrincioaia	156.57	313	⇓*i*P	PKPab	21 14 28.8	+0.3
VRI	Vrincioaia	156.57	313	⇓PKP2	PKPab	21 14 28.8	+0.3
BURAR	Bucovina Array	156.59	318	⇓*i*P	PKPdf	21 14 11.0	+11
BURAR	Bucovina Array	156.59	318	⇓PKIKP	PKPdf	21 14 11.0	+11
PLOR	Plostina	156.62	313	⇑*i*P	PKPab	21 14 28.3	-0.5
PLOR	Plostina	156.62	313	⇑PKP2	PKPab	21 14 28.3	-0.5
MLR	Muntele Rosu	157.23	313	PKP	PKPdf	21 14 00.2	-0.3
MLR				*e*PKPdif	sPKPdf	21 14 11.2	+4.3
MLR	Muntele Rosu	157.23	313	⇑*i*P	PKPdf	21 14 11.2	+11
MLR	Muntele Rosu	157.23	313	PKIKP	PKPdf	21 14 00.2	-0.3
MLR				*e*		21 14 11.2	
MLR	Muntele Rosu	157.23	313	PKP	PKPdf	21 14 00.2	-0.3
	comp=Z,1.6nm,0.8s,baz=187,slow=3.3,SNR=2.1						
UZH	Uzhgorod	157.57	323	*i* PKIKP	PKPdf	21 14 08.0	+7.4
UZH				*e*		21 18 17.2	
UZH				*e*		21 21 08.8	
UZH				*e*PPP	PPP	21 21 58.2	
TRPA	Tarpa	157.76	322	⇑*i*P	PKPdf	21 14 09.8	+8.9
CJR	Cluj-Napoca	158.01	318	⇑*i*P	PKPdf	21 14 06.7	+5.3
CJR	Cluj-Napoca	158.01	318	⇑PKIKP	PKPdf	21 14 06.7	+5.3
HUMR	Humele	158.28	311	⇓*i*P	PKPab	21 14 36.7	+0.8
DRGR		158.47	319	⇑*i*P	PKPdf	21 14 06.4	+4.5
DRGR		158.47	319	⇑PKIKP	PKPdf	21 14 06.4	+4.5
LANS	Liptovska Anna	158.59	327	*e*PKP2	PKPab	21 14 36.9	-0.2
LANS	Liptovska Anna	158.59	327	*e*PKP	PKPab	21 14 36.8	-0.3
MORC	Moravsky Berou	158.95	331	⇓*i*P	PKPab	21 14 37.3	-1.4
MORC	Moravsky Berou	158.95	331	⇓PKP2	PKPab	21 14 37.3	-1.4
MORC	Moravsky Berou	158.95	331	*e*PKP	PKPab	21 14 36.9	-1.8
UPC	Upice	158.96	335	*e*PKPAB	PKPab	21 14 37.9	-0.7
UPC				AMS	AMS	22 26 00.0	
	comp=Z,1µm,22.4s						
UPC	Upice	158.96	335	*e*PKP2	PKPab	21 14 37.9	-0.7
UPC				MLR	MLR		
	comp=Z,1µm,22.4s						
DPC	Dobruska-Polom	158.97	334	*e*PKPAB	PKPab	21 14 38.3	-0.4
DPC				AMS	AMS	22 26 30.0	
	comp=Z,800nm,17.1s						
KRLC	Kraliky	159.02	333	*e*PKPAB	PKPab	21 14 38.1	-0.8
KRLC	Kraliky	159.02	333	*e*PKP2	PKPab	21 14 38.1	-0.8
PSZ	Piszkesteto	159.25	324	⇓*i*P	PKPdf	21 14 11.9	+9.1
PSZ	Piszkesteto	159.25	324	*e*P	PKPab	21 14 41.1	+1.0
PSZ	Piszkesteto	159.25	324	⇓PKIKP	PKPdf	21 14 11.9	+9.1
CLL	Collm	159.25	340	*e*PKPdf	PKPdf	21 14 03.0	+0.4
CLL				*e*PKPdiff	sPKPdf	21 14 20.0	+11
CLL				⇓*i*PKPab	PKPab	21 14 38.6	-1.2
	comp=Z,43nm,1.1s						
CLL				*i* pPKPab	pPKPab	21 14 42.1	-2.3
CLL				*e*PP	PP	21 18 19.0	-1.5
CLL				*e*		21 21 48.0	
CLL				*e*(PSKS)		21 28 36.0	
CLL				*e*PPS	PPS	21 31 37.0	
CLL				*e*SS	SS	21 38 30.0	+5.7
CLL				*e*SSS	SSS	21 44 48.0	
CLL				*e*SSSS		21 48 48.0	
CLL				Lm	MLR	22 28 00.0	
	comp=N,800nm,20.4s						
CLL				Lm	MLR	22 28 00.0	
	comp=E,300nm,20.2s						
CLL				Lm	MLR	22 28 00.0	
	comp=Z,1µm,20.9s						
CLL	Collm	159.25	340	*e*PKIKP	PKPdf	21 14 03.0	+0.4
CLL				*e*		21 18 19.0	
CLL				MLR	MLR		
	comp=Z,1µm,20.9s						
VYHS	Vyhne	159.35	327	*e*PKIKP	PKPdf	21 14 07.4	+4.6
VYHS				*e*		21 14 39.5	
VYHS	Vyhne	159.35	327	*e*PKP	PKPdf	21 14 07.4	+4.6
VYHS				*e*		21 14 39.5	
BRG	Berggiesshubel	159.35	338	*e*PKP	PKPdf	21 13 47.1	-16
	comp=Z,23nm,1.9s						
BRG				*e*		21 14 20.4	
	comp=Z,17nm,1.4s						
BRG				*e*		21 14 38.9	
	comp=Z,35nm,1.1s						
BRG				PP	PP	21 18 04.0	-17
BRG				*i*		21 25 04.0	
BRG				SS	SS	21 38 13.0	-12
	comp=N,404nm,18.5s						
	comp=E,416nm,13.8s						
	comp=Z,603nm,18.3s						
BRG	Berggiesshubel	159.35	338	*e*PKIKP	PKPdf	21 13 47.1	-16
BRG				*e*		21 14 38.9	
BRG				pmax	pmax		
	comp=Z,23nm,1.9s						
BRG				MLR	MLR		
	comp=N,404nm,18.5s						
BRG				MLR	MLR		
	comp=E,416nm,13.8s						
BRG				MLR	MLR		
	comp=Z,603nm,18.3s						
PVCC	Panska Ves	159.44	337	*e*PKPAB	PKPab	21 14 40.6	-0.1
PVCC				AMS	AMS	22 28 50.0	
	comp=Z,800nm,22.3s						
PVCC	Panska Ves	159.44	337	*e*PKP2	PKPab	21 14 40.6	-0.1
PVCC				MLR	MLR		
	comp=Z,800nm,22.3s						
JAVC	Velka Javorina	159.60	329	*e*PKP	PKPab	21 14 40.2	-1.3
VRAC	Vranov	159.70	332	⇑*i*P	PKPab	21 14 40.3	-1.6
VRAC	Vranov	159.70	332	*e*PKP	PKPab	21 14 40.5	-1.4
VRAC	Vranov	159.70	332	PKPab	PKPab	21 14 41.1	-0.8
	comp=Z,13nm,0.9s,baz=55,slow=4.3,SNR=12						
GOPC	GO Pecny, Ondr	159.89	336	*e*PKPAB	PKPab	21 14 41.8	-0.9
GOPC				AMS	AMS	22 26 00.0	
	comp=Z,1µm,21.8s						
GOPC	GO Pecny, Ondr	159.89	336	*e*PKP2	PKPab	21 14 41.8	-0.9
GOPC				MLR	MLR		
	comp=Z,1µm,21.8s						
PRU	Pruhonice	159.91	336	*e*PKPAB	PKPab	21 14 43.3	+0.6
PRU				AMS	AMS	22 30 30.0	
	comp=Z,1µm,18.5s						
PRU	Pruhonice	159.91	336	*e*PKP2	PKPab	21 14 43.3	+0.6
PRU				MLR	MLR		
	comp=Z,1µm,18.5s						
SMOL	Smolenice	159.97	329	*e*PKP2	PKPab	21 14 42.8	-0.3
SMOL	Smolenice	159.97	329	*e*PKP	PKPab	21 14 42.8	-0.3
KRUC	Moravsky	159.97	332	*e*PKP	PKPab	21 14 41.0	-2.1
TREC	Trest	160.14	333	*e*PKPAB	PKPab	21 14 44.8	+1.0
TREC				AMS	AMS	22 30 10.0	
	comp=Z,800nm,19.7s						
TREC	Trest	160.14	333	*e*PKP2	PKPab	21 14 44.8	+1.0
TREC				MLR	MLR		
	comp=Z,800nm,19.7s						
IDI	Anoyia	160.76	286	PKP	PKPdf	21 14 05.3	+0.4
	comp=Z,10nm,1.1s,baz=333,slow=4.1,SNR=2.3						
KHC	Kasperske Hory	160.97	336	*e*PKPDF	PKPdf	21 14 07.4	+2.7
KHC				*e*x	x	21 14 28.5	
KHC				*e*PKPAB	PKPab	21 14 46.7	-0.7
KHC				*e*x	x	21 14 55.5	
KHC				AMS	AMS	22 30 30.0	
	comp=Z,600nm,18.4s						
KHC	Kasperske Hory	160.97	336	*e*PKIKP	PKPdf	21 14 07.4	+2.7
KHC				*e*		21 14 46.7	
KHC				MLR	MLR		
	comp=Z,600nm,18.4s						
SOP	Sopron	160.97	329	*e*P	PKPab	21 14 45.0	-2.4
TORD	Torodi Ar. Bea	161.06	179	PKP	PKPdf	21 14 05.6	-0.2
	comp=Z,2.7nm,1.0s,baz=193,slow=1.9,SNR=9.4						
TORD				PKPab	PKPab	21 14 48.7	+0.1
	comp=Z,4.3nm,0.9s,baz=178,slow=4.0,SNR=4.4						
CONA	Conrad Observa	161.09	330	*e*PKPab	PKPab	21 14 47.7	-0.4
	comp=Z,40nm,1.9s						
GERES	GERESS Array B	161.17	336	PKP	PKPdf	21 14 04.4	-0.5
	comp=Z,0.5nm,0.7s,baz=56,slow=2.4,SNR=5.4						
GERES				PKPab	PKPab	21 14 47.1	-1.3
	comp=Z,6.6nm,0.8s,baz=30,slow=3.7,SNR=16						
MEM	Membach	161.34	352	⇓PKP	PKPab	21 14 47.5	-1.4
MEM				⇓pPKP	pPKPab	21 14 51.4	-2.2
BCLA	Clavier	161.60	353	⇑PKP	PKPab	21 14 50.6	+0.6
ARSA	Arzberg	161.76	330	PKPab	PKPab	21 14 51.3	+0.4
	comp=Z,13nm,1.1s						
MOA	Molln	161.79	333	*e*PKPab	PKPab	21 14 50.1	-0.9
	comp=Z,19nm,1.2s						
DOU	Dourbes	161.99	355	⇑PKP	PKPab	21 14 49.2	-2.6
DOU				⇓pPKP	pPKPab	21 14 55.1	-1.2
WLF	Walferdange	162.25	351	⇓PKP	PKPab	21 14 53.0	0.0
PERS	Pernice	162.41	329	*i* P	PKPab	21 14 53.1	-0.8
SOKA	Soboth	162.41	329	*e*PKPab	PKPab	21 14 53.6	-0.4
	comp=Z,22nm,1.3s,SNR=4.5						
KBA	Koelnbreinsper	162.78	333	*e*PKPab	PKPab	21 14 56.2	+0.6
	comp=Z,9.2nm,0.8s						
MYKA	Terra Mystica	163.03	332	*e*PKPab	PKPab	21 14 56.9	+0.3
	comp=Z,23nm,1.3s						
BFO	Black Forest	163.17	345	PFAKE		21 14 20.0	+13
BFO				LR	LR		
	comp=Z,41nm,20.0s						
VISS	Visnje	163.17	328	*i* P	PKPab	21 14 56.8	-0.3
WATA	Walderalm	163.20	337	PKPab	PKPab	21 14 58.1	+0.8
	comp=Z,7.7nm,0.7s,SNR=4.2						
BOJS	Bojanci	163.21	326	*e*P	PKPab	21 14 55.8	-1.5
RETA	Reutte	163.32	339	*e*PKPab	PKPab	21 14 57.2	-0.6
	comp=Z,33nm,1.3s						
MOTA	Moosalm	163.34	338	*e*PKPab	PKPab	21 14 57.6	-0.4
	comp=Z,23nm,1.0s						
ABTA	Abfaltersbach	163.37	334	*e*PKPab	PKPab	21 14 58.1	0.0
	comp=Z,16nm,1.2s,SNR=6.2						
SQTA	Sankt Quirin	163.42	338	*e*PKPab	PKPab	21 14 58.0	-0.3
	comp=Z,22nm,1.3s						
JAVS	Javornik	163.45	329	*i* P	PKPab	21 14 56.5	-2.0
FETA	Feichten	163.75	338	*e*PKPab	PKPab	21 14 59.7	-0.1
	comp=Z,22nm,1.6s						
DAVA	Damuels	163.76	341	*e*PKPab	PKPab	21 14 59.6	-0.2
	comp=Z,29nm,1.3s						
DAVOX	Davos/Dischmat	164.22	340	PKPab	PKPab	21 15 00.9	-1.0
	comp=Z,20nm,0.9s,baz=354,slow=4.6,SNR=17						
PAB	San Pablo	170.99	33	PFAKE		21 14 20.0	+7.0
PAB				LR	LR		
	comp=Z,1µm,19.0s						
ESDC	Sonseca Array	171.06	31	PKP	PKPdf	21 14 13.0	0.0
	comp=Z,0.7nm,0.8s,baz=318,slow=2.0,SNR=4.2						
ESDC				PKPab	PKPab	21 15 31.9	-0.3
	comp=Z,1.2nm,0.7s,baz=321,slow=4.4,SNR=3.8						
MDT	Midelt	174.34	82	PKP	PKPdf	21 14 12.9	-1.7
	comp=Z,5.6nm,0.9s,baz=266,slow=7.6,SNR=6.4						

ISCJB ***24*** *21:10:16.2±0.7, 2°.9N±0°.2×122°.4E±0°.2, h552^{km}, mb3.7/5, Error ellipse: s-maj=35.2km s-min=9.4km az=139.8*

IDC ***24*** *21:10:17.2±1.7, 2°.99N×122°.51E, h550^{km}±20^{km}, mb3.0/5, mb1 3.2/6, mb1mx2.7/60, mbtmp4.1/6, Error ellipse: s-maj=55.3km s-min=14.4km az=64.0*

ISC 24 21:10:17.3±0.9**, 3°.0N**±0°.2×**122°.5E**±0°.2**, h552^{km}, n13, σ0^s.46**/15**, mb4.0**/12**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	9.58	113	P	P	21 12 31.2	+0.1
	2.9nm,0.3s,baz=334,slow=18,SNR=9.1						
FITZ	Fitzroy Crossi	21.19	172	P	P	21 14 23.8	-0.2
	6.4nm,1.1s,baz=339,slow=7.7,SNR=7.9						
WRA	Warramunga Arr	25.59	153	P	P	21 15 02.4	-0.9
	1.4nm,0.5s,baz=336,slow=9.6,SNR=33						
WRA				ScP	ScP	21 21 02.4	-0.7
	0.6nm,1.1s,baz=337,slow=3.3,SNR=3.9						
ASAR	Alice Springs	28.74	158	P	P	21 15 30.8	-0.1
	0.8nm,0.5s,baz=335,slow=7.3,SNR=14						
ASAR				ScP	ScP	21 21 12.7	-0.1
	0.3nm,0.5s,baz=350,slow=2.8,SNR=5.9						
STKA	Stephens Creek	39.15	154	P	P	21 16 58.4	+0.5
	1.0nm,0.4s,baz=335,slow=8.9,SNR=4.7						
JIRN	Jiri	42.45	309	*e*P	P	21 17 24.7	0.0
	7.5nm,0.5s						
GUN	Gumba	42.81	309	*e*P	P	21 17 27.7	+0.2
	12nm,0.7s						
PKI	Pulchoki	43.02	308	*e*P	P	21 17 28.9	-0.2
	2.4nm,0.5s						
PKIN	Phulchoki	43.03	308	*e*P	P	21 17 28.5	-0.7
	1.8nm,0.4s						
KOLN	Koldanda	44.53	308	*e*P	P	21 17 41.1	+0.4
	7.8nm,0.7s						
DANN	Dangsing	44.67	308	*e*P	P	21 17 41.9	0.0
	12nm,0.7s						
PYUN	Piuthan	45.16	308	*e*P	P	21 17 46.0	+0.4
	17nm,0.8s						
MKAR	Makanchi Array	55.82	328	P	P	21 19 02.7	0.0
	0.7nm,0.3s,baz=128,slow=7.8,SNR=24						

ISCJB ***24*** *21:19:41.9±1.1, 11°.0S±0°.1×164°.5E±0°.1, h29^{km}, mb3.9/3, Error ellipse: s-maj=21.0km s-min=11.4km az=34.5*

IDC ***24*** *21:19:46.7±3.8, 10°.98S×164°.38E, h59^{km}±33^{km}, mb3.6/3, mb1 4.0/6, mb1mx3.5/44, mbtmp4.1/6, ML4.3/3, Error ellipse: s-maj=32.6km s-min=22.4km az=48.0*

ISC 24 21:19:43.6±1.3**, 10°.9S**±0°.1×**164°.5E**±0°.1**, h29^{km}, n9, σ1^s.58**/7**, mb3.9**/3**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.69	288	P	Pn	21 20 53.1	+0.6
	40nm,0.3s,baz=151,slow=5.7,SNR=5.8						
HNR				S	Sn	21 21 47.5	+1.5
	14nm,0.3s,baz=184,slow=18,SNR=2.3						
DZM	Mont Dzumac	11.27	171	P	Pn	21 22 24.3	+1.5
	1.5nm,0.3s,baz=311,slow=20,SNR=10						
CTA	Charters Tower	19.78	240	P	Pn	21 24 12.5	-0.8
	0.4nm,0.3s,baz=52,slow=11,SNR=10						
H11S2	WAKE ISLAND Hy	29.28	4	T	T	21 56 08.7	
	baz=183						
H11S3	WAKE ISLAND Hy	29.29	4	T	T	21 56 12.6	
	baz=183						
H11S1	WAKE ISLAND Hy	29.30	4	T	T	21 56 28.3	
	baz=183						
ASAR	Alice Springs	31.75	242	P	P	21 26 03.4	-2.1
	0.7nm,0.6s,baz=62,slow=10.0,SNR=14						
ILAR	Eielson Array	83.77	19	P	P	21 32 09.8	+0.1
	0.8nm,0.9s,baz=239,slow=5.1,SNR=6.4						
MKAR	Makanchi Array	92.56	317	P	P	21 32 52.1	-0.2
	0.5nm,0.8s,baz=91,slow=4.5,SNR=3.9						

IDC 24 21:20:52.9±1.6**, 5°.71S**×**151°.09E, h0^{km}, mb3.8**/5**, mb1 4.1**/5**, mb1mx3.6**/39**, mbtmp3.8**/5**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx3.5**/28**, Error ellipse: s-maj=106.1km s-min=23.3km az=131.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.58	228	P	P	21 25 44.1	-0.4
	2.1nm,0.9s,baz=53,slow=10,SNR=7.0						
ASAR	Alice Springs	24.35	221	P	P	21 26 12.5	-0.3
	1.8nm,0.7s,baz=56,slow=9.3,SNR=15						
FITZ	Fitzroy Crossi	27.73	241	P	P	21 26 44.0	+0.5
	2.1nm,0.8s,baz=48,slow=10,SNR=2.6						
URZ	Urewera	40.10	148	LR	LR	21 43 31.0	
	comp=Z,242nm,18.9s,baz=218,slow=34						
ILAR	Eielson Array	83.64	22	P	P	21 33 22.9	-0.1
	0.7nm,0.8s,baz=247,slow=5.1,SNR=6.5						
YKA	Yellowknife Ar	97.01	28	P	P	21 34 26.1	-0.3
	0.1nm,0.6s,baz=277,slow=4.9,SNR=3.3						
TORD	Torodi Ar. Bea	148.95	286	PKPbc	PKPbc	21 40 43.8	-0.2
	0.7nm,0.8s,baz=69,slow=2.7,SNR=4.1						

IDC 24 21:22:47.8±2.0**, 7°.84S**×**122°.38E, h0^{km}, mb3.4**/1**, mb1 3.6**/3**, mb1mx3.3**/42**, mbtmp3.4**/3**, ML3.2**/1**, Error ellipse: s-maj=282.2km s-min=28.8km az=56.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.71	137	Pn	Pn	21 26 42.6	-0.9
	baz=311,slow=14,SNR=2.1						
ASAR	Alice Springs	19.24	146	P	Pn	21 27 14.3	-0.3
	0.1nm,0.3s,baz=328,slow=12,SNR=5.7						
MKAR	Makanchi Array	65.01	331	P	P	21 33 29.7	0.0
	0.3nm,0.7s,baz=130,slow=7.3,SNR=2.8						

IDC ***24*** *21:24:04.9±1.2, 38°.96N×142°.69E, h0^{km}, mb3.7/4, mb1 3.8/6, mb1mx3.5/44, mbtmp3.7/6, ML2.8/2, Error ellipse: s-maj=37.7km s-min=19.0km az=99.0*

ISCJB ***24*** *21:24:07.5±1.4, 39°.12N±0°.03×142°.45E±0°.06, h11^{km}±8^{km}, mb3.7/4, Error ellipse: s-maj=8.2km s-min=4.7km az=21.7*

JMA ***24*** *21:24:08.7±0.1, 39°.12N×142°.43E, h30^{km}±1^{km}, M3.4*

ISC 24 21:24:07.7±2.0**, 39°.13N**±0°.04×**142°.38E**±0°.07**, h9^{km}**±12^{km}**, n23, σ1^s.67**/30**, mb3.8**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.55	265	P	Pn	21 24 20.5	-1.3
OFUJ				S	Sb	21 24 28.5	+0.8
MIYJ	Miyakonagasawa	0.62	316	P	Pb	21 24 21.2	+0.4
MIYJ				S	Sb	21 24 29.6	-0.1
JKMT	Kesennumamotoy	0.77	246	P	Pb	21 24 23.5	+0.2
JKMT				S	Sb	21 24 34.2	+0.3
JTH	Tanohata	0.90	334	P	Pg	21 24 25.4	+0.3
JTH				S	Sb	21 24 38.2	+0.5
JOM	Ohasama	0.91	293	P	Pn	21 24 26.3	-0.4
JOM				S	Sb	21 24 38.6	+0.6
JMK	Ichinoseki	0.92	259	P	Pn	21 24 26.1	-0.7
JMK				S	Sb	21 24 38.4	+0.3
JIO	Ouri	1.05	231	P	Pb	21 24 27.1	-0.9
JIO				S	Sb	21 24 40.4	-1.4
JKZ	Kuzumaki	1.18	317	P	Pn	21 24 30.2	-0.3
JKZ				S	Sb	21 24 45.6	-0.1
JRG	Rokugo	1.38	282	P	Pg	21 24 34.2	0.0
JRG				S	Sn	21 24 51.1	-0.5
JANG	Nango	1.41	332	P	Pn	21 24 33.3	-0.3
JANG				*e*S	Sn	21 24 51.5	-0.9
MAT	Matsushiro	4.19	233	P	Pn	21 25 14.0	+2.2
MAT				S	Sn	21 26 05.4	+4.5
MJAR	Matsushiro Arr	4.19	233	Pn	Pn	21 25 13.4	+1.6
	0.4nm,0.3s,baz=37,slow=12,SNR=20						
MJAR				Sn	Sn	21 26 04.7	+3.8
	baz=73,slow=21,SNR=2.3						
ASAJ	Asahikawa	4.99	2	Pn	Pn	21 25 24.5	+1.8
	0.3nm,0.3s,baz=202,slow=11,SNR=3.1						
ASAJ				Sn	Sn	21 26 23.1	+2.6
	0.1nm,0.3s,baz=240,slow=20,SNR=2.3						
SEY	Seymchan	24.59	11	P	P	21 29 28.3	+0.5
	0.9nm,0.5s,baz=154,slow=6.7,SNR=4.7						
H11N2	WAKE ISLAND Hy	28.65	125	T	T	22 00 27.6	
	baz=317,slow=75,SNR=34						
H11N1	WAKE ISLAND Hy	28.66	125	T	T	22 00 25.8	
	baz=317,slow=75,SNR=24						
H11N3	WAKE ISLAND Hy	28.67	125	T	T	22 00 27.3	
	baz=317,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	29.44	127	T	T	22 01 28.5	
	baz=318,slow=76,SNR=3.5						
H11S3	WAKE ISLAND Hy	29.44	127	T	T	22 01 28.4	
	baz=318,slow=76,SNR=5.2						
H11S2	WAKE ISLAND Hy	29.45	127	T	T	22 01 26.4	
	baz=318,slow=76,SNR=5.3						
MKAR	Makanchi Array	43.69	300	P	P	21 32 12.5	-0.4
	0.4nm,0.6s,baz=83,slow=9.6,SNR=5.6						
WRA	Warramunga Arr	59.24	189	P	P	21 34 06.5	-2.9
	0.9nm,0.6s,baz=6.0,slow=7.0,SNR=14						
ASAR	Alice Springs	62.97	189	P	P	21 34 32.6	-2.1
	1.0nm,1.0s,baz=6.2,slow=5.6,SNR=6.2						

IDC 24 21:30:27.0±6.2,31°.42S×178°.39W,h0km,mb3.4/2,mb1 3.7/2,mb1mx3.6/31,mbtmp3.4/2,Error ellipse: s-maj=250.9km s-min=62.5km az=156.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	42.73	268	P	P	21 38 25.7	-0.4
	0.2nm,0.6s,baz=104,slow=7.8,SNR=3.3						
WRA	**Warramunga Arr**	43.81	273	P	P	21 38 35.2	+0.3
	0.5nm,0.5s,baz=115,slow=7.9,SNR=5.0						
FINES	**FINESS Array B**	145.98	339	PKPbc	PKPdf	21 50 06.9	-0.2
	0.3nm,0.5s,baz=18,slow=3.2,SNR=3.4						

IDC 24 21:30:31.2±1.0,5°.89S×151°.39E,h0km,mb3.9/7,mb1 4.1/7,mb1mx3.8/35,mbtmp3.9/7,Error ellipse: s-maj=46.7km s-min=20.3km az=122.0

ISCJB 24 21:30:36.1±1.1,5°.9S±0°.2×151°.2E±0°.3,h41km,mb3.7/7,Error ellipse: s-maj=47.8km s-min=17.6km az=31.5

ISC 24 21:30:37.3±1.0,5°.9S±0°.2×151°.3E±0°.3,h41km,n9,σ1s.00/9,mb3.8/7,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	21.60	228	P	P	21 35 23.0	-0.9
	2.0nm,0.8s,baz=54,slow=11,SNR=16						
ASAR	**Alice Springs**	24.33	222	P	P	21 35 51.3	-0.2
	2.6nm,0.7s,baz=53,slow=9.3,SNR=29						
STKA	**Stephens Creek**	27.37	198	P	P	21 36 20.0	+1.2
	0.7nm,0.3s,baz=25,slow=17,SNR=2.0						
FITZ	**Fitzroy Crossi**	27.83	242	P	P	21 36 22.8	-0.3
	2.9nm,0.8s,baz=61,slow=10,SNR=4.2						
MKAR	**Makanchi Array**	80.22	319	P	P	21 42 44.7	+1.0
	0.2nm,0.7s,baz=111,slow=6.3,SNR=2.5						
ILAR	**Eielson Array**	83.76	22	P	P	21 43 00.6	-1.3
	0.9nm,0.6s,baz=250,slow=5.1,SNR=18						
YKA	**Yellowknife Ar**	97.11	28	P	P	21 44 05.8	+0.9
	0.2nm,0.7s,baz=269,slow=4.5,SNR=4.9						
TORD	**Torodi Ar. Bea**	149.23	286	PKPbc	PKPbc	21 50 22.2	-0.4
	1.0nm,0.8s,baz=27,slow=2.7,SNR=7.2						
BDFB	**Brasilia**	151.25	138	PKPbc	PKPbc	21 50 27.0	-0.6
	1.7nm,0.6s,baz=217,slow=5.1,SNR=3.6						

MEX 24 21:38:23.0±0.6,16°.18N×98°.32W,h2km,MD3.9,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.28	42	*i* P	Pg	21 38 27.7	-0.8
PNIG				*e*S	Sg	21 38 32.4	+0.2
VHO	**Vista Hermosa**	1.77	60	*e*P	Pn	21 38 51.1	-3.7
VHO				*e*S	Sn	21 39 13.2	-4.8
CAIG	**El Cayaco**	2.05	295	*e*P	Pn	21 38 55.2	-3.4
CAIG				*e*S	Sn	21 39 19.7	-5.1

IDC 24 21:42:47.2±2.4,17°.59S×173°.47W,h0km,mb3.8/5,mb1 4.2/5,mb1mx3.9/28,mbtmp3.8/5,MS4.6/1,Ms1 4.6/1,ms1mx3.3/34,Error ellipse: s-maj=146.3km s-min=23.7km az=148.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	12.30	199	LR	LR	21 49 13.6	
	comp=Z,3µm,19.3s,baz=136,slow=31						
WRA	**Warramunga Arr**	49.31	259	P	P	21 51 37.9	-0.6
	0.6nm,0.5s,baz=97,slow=6.9,SNR=21						
ASAR	**Alice Springs**	49.40	254	P	P	21 51 38.6	-0.5
	2.3nm,0.6s,baz=89,slow=8.6,SNR=36						
ASAR				PcP	PcP	21 53 02.0	+0.3
	0.9nm,0.9s,baz=102,slow=4.2,SNR=3.6						
NVAR	**Mina Array Bea**	76.00	42	P	P	21 54 36.7	0.0
	0.7nm,0.7s,baz=230,slow=8.3,SNR=4.7						
PDAR	**Pinedale Array**	83.94	42	P	P	21 55 18.7	-0.9
	0.5nm,0.6s,baz=209,slow=3.7,SNR=5.9						
ILAR	**Eielson Array**	84.60	11	P	P	21 55 21.6	-0.5
	0.4nm,0.7s,baz=230,slow=6.6,SNR=7.0						
BRTR	**Keskin Array B**	147.78	319	PKPbc	PKPbc	22 02 34.9	+0.3
	0.8nm,0.6s,baz=136,slow=2.6,SNR=6.4						
GERES	**GERESS Array B**	148.29	351	PKPbc	PKPbc	22 02 36.0	+0.4
	0.2nm,0.4s,baz=17,slow=1.4,SNR=5.0						

IDC 24 21:43:19.9±2.1,8°.22S×121°.97E,h0km,mb3.2/1,mb1 3.3/3,mb1mx3.2/33,mbtmp3.1/3,ML2.8/2,Error ellipse: s-maj=281.2km s-min=28.6km az=55.0,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	16.71	136	Pn	Pn	21 47 13.8	-1.8
	0.0nm,0.3s,baz=307,slow=14,SNR=3.0						
ASAR	**Alice Springs**	19.15	145	P	Pn	21 47 46.0	+0.2
	0.0nm,0.3s,baz=324,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	65.15	331	P	P	21 54 02.7	0.0
	0.2nm,0.7s,baz=126,slow=7.3,SNR=2.5						

IDC 24 21:45:14.4±5.8,31°.12S×178°.28W,h0km,mb3.6/2,mb1 3.9/2,mb1mx3.6/25,mbtmp3.6/2,MS3.7/1,Ms1 3.7/1,ms1mx3.3/21,Error ellipse: s-maj=231.6km s-min=56.8km az=156.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	**Papeete**	29.32	69	LR	LR	22 00 42.5	
	comp=Z,154nm,19.5s,baz=302,slow=32						
ASAR	**Alice Springs**	42.84	268	P	P	21 53 15.0	+0.5
	0.2nm,0.4s,baz=108,slow=6.8,SNR=2.7						
WRA	**Warramunga Arr**	43.89	273	P	P	21 53 22.3	-0.7
	0.8nm,0.4s,baz=114,slow=7.7,SNR=17						
FINES	**FINESS Array B**	145.74	339	PKPbc	PKPdf	22 04 53.8	-0.4
	2.3nm,1.0s,baz=54,slow=3.6,SNR=6.4						

SJA 24 21:50:05.1±0.5,32°.59S×71°.59W,h12km±11km,ML2.7,MW3.8

GUC 24 21:50:07.4±0.6,32°.57S×71°.32W,h32km±4km,ML2.8

ISC 24 21:50:04.1±2.8,32°.67S±0°.08×71°.7W±0°.2,h11km±15km,n13,σ1s.30/20,1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	0.67	117	*i* P	Pg	21 50 17.6	+0.4
ROC1				*i* S	Sb	21 50 26.9	-0.7
ROCH	**El Roble**	0.68	117	⇓*i*P	Pb	21 50 18.5	+0.4
ROCH				*e*S	Sb	21 50 26.7	-0.8
ROCH				IAML		21 50 27.8	
	comp=E,737nm,0.2s						
PEL	**Peldehue**	1.00	119	*e*P	Pg	21 50 23.0	-0.3
PEL				*e*S	Sb	21 50 35.6	-1.0
PEL				IAML		21 50 36.8	
	comp=E,1µm,0.3s						
CLCH	**Cerro Calan**	1.23	126	*e*P	Pg	21 50 27.4	-0.5
CLCH				*e*S	Sb	21 50 42.9	-0.6
CLCH				IAML		21 50 49.1	
	comp=N,390nm,0.4s						
FCH	**Farellones**	1.38	119	*e*P	Pg	21 50 29.1	-1.5
FCH				*e*S	Sb	21 50 46.2	-1.6
FCH				IAML		21 50 47.2	
	comp=E,342nm,0.1s						
CMCH	**Combarbala**	1.61	23	*e*P	Pn	21 50 33.0	+0.3
CMCH				*e*S	Sn	21 50 52.3	-1.3
LMEL	**Las Melosas**	1.74	133	*e*P	Pn	21 50 35.5	+1.1
LMEL				*e*S	Sb	21 50 57.1	-1.0
LMEL				IAML		21 51 01.3	
	comp=N,354nm,0.3s						
AUSP	**Uspallata**	2.03	78	*i* P	Pn	21 50 39.9	+1.3
RTLS	**Leoncito**	2.24	68	*i* P	Pn	21 50 43.2	+1.8
RTLS				IAML		21 51 18.5	
	comp=Z,46nm,0.5s						
ARCO	**CERRO ARCO**	2.36	95	*i* P	Pn	21 50 44.8	+1.7
ARCO				IAML		21 50 56.7	
	comp=Z,49nm,0.3s						
RTCV	**Cerro Valdivia**	2.82	74	*i* P	Pn	21 50 50.8	+1.6
RTLL	**Cerro Villicun**	3.07	65	*i* P	Pn	21 50 54.0	+1.3
AMOG	**MOGNA**	3.25	59	*i* P	Pn	21 50 56.8	+1.7

IDC 24 21:59:23.2±3.0,19°.36N×66°.12W,h0km,mb3.3/3,mb1 3.7/3,mb1mx3.4/30,mbtmp3.3/3,Error ellipse: s-maj=97.0km s-min=22.6km az=76.0

ISCJB 24 21:59:29.3±0.4,18°.22N±0°.05×65°.79W±0°.02,h129km±3km,mb3.1/3,Error ellipse: s-maj=9.2km s-min=3.2km az=14.3

NEIC 24 21:59:31.6±0.0,18°.40N×65°.83W,h116km,MD3.3(RSPR),After RSPR.

RSPR 24 21:59:31.6,18°.40N×65°.83W,h116km,MD3.3/13

ISC 24 21:59:30.3±0.8,18°.39N±0°.07×65°.79W±0°.03,h124km±5km,n75,σ1s.57/99,mb3.4/3,29C-4D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	0.14	208	⇑*e*P	Pn	21 59 47.3	0.0
CBYP	**Canovanas**	0.14	208	⇑*e*P	Pn	21 59 47.4	0.0
CBYP				*e*S	Sn	21 59 59.4	-0.8
CBYP	**Canovanas**	0.14	208	⇑*e*P	Pn	21 59 47.3	0.0
CBYP				*e*S	Sn	21 59 59.4	-0.8
HUMP	**Col San Antoni**	0.26	193	⇑*e*P	Pn	21 59 47.7	+0.1
HUMP	**Col San Antoni**	0.26	193	*e*S	Sn	22 00 00.0	-0.5
HUMP	**Col San Antoni**	0.26	193	⇑*e*P	Pn	21 59 47.7	+0.1
HUMP				*e*S	Sn	21 59 59.8	-0.7
HUMP	**Col San Antoni**	0.26	193	⇑*e*P	Pn	21 59 47.7	+0.1
HUMP				*e*S	Sn	21 59 59.8	-0.7
HUMP				*e*S		22 00 00.0	
MTP	**Monte Pirata**	0.37	142	⇓*e*P	Pn	21 59 48.2	+0.2
MTP	**Monte Pirata**	0.37	142	*e*S	Sn	22 00 01.3	0.0
MTP	**Monte Pirata**	0.37	142	⇓*e*P	Pn	21 59 48.2	+0.2
MTP				*e*S	Sn	22 00 01.3	0.0
SJG	**San Juan**	0.44	231	⇑*e*P	Pn	21 59 48.0	-0.3
SJG	**San Juan**	0.44	231	*e*S	Sn	22 00 01.2	-0.7
SJG	**San Juan**	0.44	231	⇑*e*P	Pn	21 59 48.0	-0.3
SJG				*e*S	Sn	22 00 01.2	-0.7
SJG	**San Juan**	0.44	231	Pn	Pn	21 59 48.0	-0.3
	62nm,0.3s,baz=86,slow=16,SNR=64						
SJG				Sn	Sn	22 00 00.8	-1.1
	189nm,0.3s,baz=308,slow=19,SNR=56						
CUPR	**Culebra, Puert**	0.49	100	⇑*e*P	Pn	21 59 48.6	0.0
CUPR	**Culebra, Puert**	0.49	100	*e*S	Sn	22 00 02.3	0.0
CUPR	**Culebra, Puert**	0.49	100	⇑*e*P	Pn	21 59 48.6	0.0
CUPR				*e*S	Sn	22 00 02.3	0.0
EMPR	**Esperanza - Ma**	0.71	277	⇑*e*P	Pn	21 59 50.2	+0.1
EMPR	**Esperanza - Ma**	0.71	277	*e*S	Sn	22 00 04.4	-0.6
EMPR	**Esperanza - Ma**	0.71	277	⇑*e*P	Pn	21 59 50.2	+0.1
EMPR				*e*S	Sn	22 00 04.4	-0.6
STVI	**Saint Thomas**	0.80	93	⇑*e*P	Pn	21 59 51.5	+0.7
STVI				*e*S	Sn	22 00 07.1	+0.9
STVI	**Saint Thomas**	0.80	93	⇑*e*P	Pn	21 59 51.5	+0.7
STVI	**Saint Thomas**	0.80	93	*e*S	Sn	22 00 06.9	+0.6
STVI	**Saint Thomas**	0.80	93	⇑*e*P	Pn	21 59 51.5	+0.7
STVI				*e*S	Sn	22 00 06.9	+0.6
STVI				*e*S		22 00 07.1	
CELP	**Cerrillos**	0.81	247	⇑*i*P	Pn	21 59 50.9	-0.1
CELP				*e*S	Sn	22 00 05.8	-0.7
CELP	**Cerrillos**	0.81	247	*i* Pu	Pn	21 59 50.9	-0.1
CELP				*e*S	Sn	22 00 05.8	-0.7
OBIP	**Obispado Ponce**	0.85	246	⇑*e*P	Pn	21 59 50.9	-0.3
OBIP	**Obispado Ponce**	0.85	246	⇑*e*P	Pn	21 59 50.9	-0.3
GBPR	**Guanica, Bosqu**	1.11	248	⇑*e*P	Pn	21 59 53.9	+0.1
GBPR	**Guanica, Bosqu**	1.11	248	⇑*e*P	Pn	21 59 53.9	+0.1
TBVI	**Tortola**	1.11	89	⇑*e*P	Pn	21 59 54.3	+0.5
TBVI				*e*S	Sn	22 00 12.1	+0.6
TBVI	**Tortola**	1.11	89	⇑*e*P	Pn	21 59 54.3	+0.5
TBVI				*e*S	Sn	22 00 12.1	+0.6
LSP	**Las Mesas**	1.25	260	⇑*e*P	Pn	21 59 55.2	0.0
LSP	**Las Mesas**	1.25	260	*e*S	Sn	22 00 13.8	-0.3
LSP	**Las Mesas**	1.25	260	⇑*e*P	Pn	21 59 55.2	0.0
LSP				*e*S	Sn	22 00 13.8	-0.3
AGPR	**Aguadilla, PR**	1.26	274	⇓*e*P	Pn	21 59 55.1	-0.2
AGPR	**Aguadilla, PR**	1.26	274	*e*S	Sn	22 00 13.5	-0.7
AGPR	**Aguadilla, PR**	1.26	274	⇓*e*P	Pn	21 59 55.1	-0.2
AGPR				*e*S	Sn	22 00 13.5	-0.7
MPR	**Mayaguez**	1.29	262	⇑*e*P	Pn	21 59 55.6	0.0
MPR	**Mayaguez**	1.29	262	⇑*e*P	Pn	21 59 55.6	0.0
ABVI	**Anegada Island**	1.42	76	⇑*e*P	Pn	21 59 58.0	+1.0
ABVI				*e*S	Sn	22 00 18.9	+1.4
ABV	**Anegada**	1.42	76	⇑*e*P	Pn	21 59 58.0	+1.0
ABV	**Anegada**	1.42	76	*e*S	Sn	22 00 18.9	+1.4
SMRT	**St. Maarten**	2.60	97	*e*P	Pn	22 00 11.0	-0.6
SMRT				*e*S	Sn	22 00 40.7	-2.6
SEUS	**St. Eustatius**	2.82	108	*e*S	Sn	22 00 48.3	+0.1
NEV	**Hard Times**	3.31	112	*e*P	Pn	22 00 21.8	+0.9
NEV				*e*S	Sn	22 00 59.7	-0.1
DR12	**Loma Pena Alta**	3.43	277	⇑*e*P	Pn	22 00 23.0	+0.6
DR12	**Loma Pena Alta**	3.43	277	⇑*e*P	Pn	22 00 23.0	+0.6
MLYT	**Lee's Yard**	3.81	115	*e*P	Pn	22 00 27.7	+0.2
MLYT				*e*S	Sn	22 01 08.5	-3.3
ANWB	**Willy Bob**	3.88	100	*e*P	Pn	22 00 26.2	-2.1
ANWB				*e*S	Sn	22 01 07.8	-5.4
BPA	**Boggy Peak**	3.98	109	*e*P	Pn	22 00 28.9	-0.8
BPA				*e*S	Sn	22 01 11.8	-3.9
TBG	**Guadaloupe-3**	4.70	122	*e*P	Pn	22 00 39.1	-0.2
TBG	**Guadaloupe-3**	4.70	122	*e*S	Sn	22 01 29.8	-3.1
MGG	**Marie-Galante**	4.93	119	*e*P	Pn	22 00 42.8	+0.4
MGG	**Marie-Galante**	4.93	119	*e*S	Sn	22 01 35.6	-3.0
MDPV	**Dominica, Penn**	5.00	123	*e*P	Pn	22 00 44.1	+0.8
MDPV	**Dominica, Penn**	5.00	123	*e*S	Sn	22 01 36.9	-3.3
MDPO	**Dominica; Chan**	5.01	123	*e*P	Pn	22 00 43.5	+0.1
MDPO	**Dominica; Chan**	5.01	123	*e*S	Sn	22 01 37.0	-3.3
BBL	**Barber's Block**	5.02	124	*e*P	Pn	22 00 43.6	0.0
BBL	**Barber's Block**	5.02	124	*e*S	Sn	22 01 38.4	-2.3
DWS	**Wesley**	5.12	123	*e*P	Pn	22 00 45.0	0.0
DWS	**Wesley**	5.12	123	*e*S	Sn	22 01 40.6	-2.5
SDDR	**Presa de Saban**	5.24	277	*e*Pn	Pn	22 00 46.9	+0.3
	24nm,0.4s						
SDDR				*e*Sn	Sn	22 01 44.9	-1.2
DLPL	**La Plaine**	5.31	124	*e*P	Pn	22 00 47.2	-0.3
DLPL	**La Plaine**	5.31	124	*e*S	Sn	22 01 43.8	-3.8
FDF	**Fort de France**	5.75	129	*e*P	Pn	22 00 52.7	-0.7
FDF	**Fort de France**	5.75	129	*e*S	Sn	22 01 54.9	-3.3
MCLT	**Moule a Chique**	6.59	134	*e*P	Pn	22 01 06.1	+1.3
MCLT	**Moule a Chique**	6.59	134	*e*S	Sn	22 02 25.4	+6.9
SVB	**Belmont**	6.71	139	*e*P	Pn	22 01 08.5	+2.1
SVB	**Belmont**	6.71	139	*e*S	Sn	22 02 25.0	+3.6
TXAR	**Lajitas Array**	36.17	295	P	P	22 06 21.5	+0.4
	0.4nm,0.5s,baz=104,slow=11,SNR=3.8						
PDAR	**Pinedale Array**	44.18	313	P	P	22 07 27.4	+0.2
	0.1nm,0.4s,baz=108,slow=12,SNR=3.9						
YKA	**Yellowknife Ar**	55.38	335	P	P	22 08 51.3	+0.1
	0.2nm,0.5s,baz=113,slow=7.3,SNR=4.1						

ISCJB 24 22:00:44.3±0.5,22°.68N±0°.02×122°.03E±0°.02,h15km±3km,Error ellipse: s-maj=3.3km s-min=2.7km az=35.8

JMA 24 22:00:45.2±0.1,22°.69N×121°.99E,h31km,M3.1

TAP 24 22:00:46.4,22°.65N×121°.93E,h39km,ML3.0,D

ISC 24 22:00:45.2±1.2,22°.66N±0°.03×121°.97E±0°.03,h25km±12km,n72,σ0s.82/135,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	0.71	308	*i* P	Pb	22 00 58.9	-0.1
	baz=315						
CHKT				S	Sb	22 01 07.8	-0.6
	baz=315						
LAY	**Lan-yu**	0.73	213	P	Pb	22 00 58.9	-0.4
	baz=209						
LAY				S	Sb	22 01 08.2	-0.6
	baz=209						
FULB	**Fuli**	0.83	311	*i* P	Pn	22 01 00.5	-0.7
	baz=313						
FULB				S	Sb	22 01 11.4	-0.4
	baz=313						
TWGBT	**Beinan**	0.84	281	*e*P	Pn	22 01 01.0	-0.4
	baz=288						
TWGBT				*e*S	Sb	22 01 11.3	-0.8
	baz=288						
TWG	**Pinlang**	0.85	281	P	Pn	22 01 01.1	-0.4
	baz=288						
TWG				S	Sb	22 01 12.0	-0.3
	baz=288						
TWF1	**Yuli**	0.93	318	P	Pn	22 01 02.2	-0.5
	baz=329						
TWF1				S	Sn	22 01 14.1	-1.2
	baz=329						
ECL	**Taimali**	0.94	267	P	Pn	22 01 02.5	-0.3
	baz=278						
ECL				S	Sn	22 01 13.9	-1.5
	baz=278						
YULB	**Yu-li**	0.96	320	*e*P	Pn	22 01 02.8	-0.3
	baz=330						
YULB				*e*S	Sn	22 01 15.2	-0.8
	baz=330						
HGSD	**Ruisui**	0.97	329	*e*P	Pn	22 01 02.5	-0.8
	baz=337						
HGSD				*e*S	Sn	22 01 14.5	-1.8
	baz=337						
ELDTW	**Lidau**	1.03	301	*i* P	Pn	22 01 03.7	-0.5
	baz=303						
ELDTW				S	Sn	22 01 16.1	-1.7
	baz=303						
EHY	**Hungye**	1.04	325	P	Pn	22 01 04.3	+0.2
	baz=327						
EHY				*e*S	Sn	22 01 17.2	-0.7
	baz=327						
TAW	**Tawu**	1.04	254	*e*P	Pb	22 01 04.7	+0.1
	baz=264						
TAW				*e*S	Sb	22 01 18.0	+0.3
	baz=264						
EAST	**Anshuo**	1.07	256	P	Pn	22 01 04.9	+0.2
	baz=264						
EAST				S	Sn	22 01 18.3	-0.5
	baz=264						
EGFH	**Guangfu**	1.13	334	*e*P	Pn	22 01 05.5	+0.1
	baz=342						
EGFH				*e*S	Sb	22 01 20.3	0.0
	baz=342						
STYT	**Tauyuan**	1.23	294	P	Pn	22 01 07.3	+0.5
	baz=301						
STYT				*e*S	Sn	22 01 22.3	-0.4
	baz=301						
MASBT	**Mashibuluo**	1.24	268	*e*P	Pn	22 01 07.0	+0.1
	baz=264						
MASBT				*e*S	Sn	22 01 22.1	-0.7
	baz=264						
SSD	**Sandimen**	1.24	274	*e*P	Pn	22 01 07.3	+0.3
	baz=279						
SSD				*e*S	Sn	22 01 20.8	-2.1
	baz=279						
TSEB	**Hengchuen, Pin**	1.25	233	*e*S	Sb	22 01 24.8	+1.1
	baz=233						
ESL	**Shilin**	1.26	337	P	Pn	22 01 06.9	-0.3
	baz=347						
ESL				S	Sn	22 01 21.9	-1.3
	baz=347						
SLGT	**Liugui**	1.27	286	*e*P	Pb	22 01 08.1	-0.4
	baz=287						
SLGT				*e*S	Sb	22 01 24.4	0.0
	baz=287						
SCZT	**Fangliau**	1.28	258	*e*P	Pb	22 01 09.2	+0.5
	baz=257						
SCZT				*e*S	Sn	22 01 23.8	-0.1
	baz=257						
ENLB	**Shoufeng**	1.29	345	*e*S	Sb	22 01 25.0	+0.1
	baz=347						
TWKBT	**Hengchun**	1.29	237	*e*P	Pb	22 01 08.6	-0.2
	baz=227						
TWKBT				*e*S	Sn	22 01 23.9	-0.1
	baz=227						
TWK1	**Hengchun**	1.29	237	*e*P	Pb	22 01 09.0	+0.1
	baz=227						
TWK1				S	Sn	22 01 23.3	-0.8
	baz=227						
HEN	**Hengchun**	1.31	241	*e*P	Pb	22 01 08.7	-0.5
	baz=233						
HEN				*e*S	Sn	22 01 24.6	0.0
	baz=233						
VWDT	**VWDT**	1.33	325	*e*P	Pn	22 01 08.9	+0.7
	baz=334						
VWDT				*e*S	Sn	22 01 24.1	-1.0
	baz=334						
SGST	**Jiashian**	1.35	289	*i* P	Pb	22 01 10.4	+0.5
	baz=294						
SGST				*e*S	Sb	22 01 26.4	-0.3
	baz=294						
SGLT	**Jiouru**	1.37	273	*e*S	Sn	22 01 25.7	-0.4
	baz=266						
WTP	**Ta-pu**	1.38	295	P	Pb	22 01 10.5	0.0
	baz=305						
WTP				S	Sb	22 01 28.9	+1.1
	baz=305						
TPUB	**Ta-pu**	1.40	298	*e*P	Pb	22 01 10.8	+0.2
	baz=307						
TPUB				*e*S	Sb	22 01 28.9	+0.9
	baz=307						
CHN1	**Nanshi**	1.43	292	P	Pb	22 01 11.8	+0.5
	baz=297						
CHN1				*e*S	Sb	22 01 30.2	+1.1
	baz=297						
TWD	**Chiawan**	1.46	346	*e*P	Pn	22 01 10.9	+0.9
	baz=348						
TWD				*e*S	Sn	22 01 26.3	-1.9
	baz=348						
WHYT	**Xinyi Township**	1.46	315	*e*P	Pb	22 01 11.4	-0.4
	baz=323						
WHYT				*e*S	Sb	22 01 30.0	+0.1
	baz=323						
SSLB	**Suanglung**	1.47	320	*e*P	Pn	22 01 10.3	+0.2
	baz=328						
SSLB				*e*S	Sn	22 01 28.7	+0.2
	baz=328						
SNST	**Tainan City**	1.47	293	P	Pb	22 01 12.5	+0.5
	baz=301						
SNST				*e*S	Sb	22 01 31.6	+1.4
	baz=301						
OWD	**Renai**	1.49	331	*e*P	Pn	22 01 11.0	+0.5
	baz=340						
OWD				*e*S	Sn	22 01 28.1	-1.1
	baz=340						
TWK	**Hsinying**	1.50	294	P	Pb	22 01 12.7	+0.3
	baz=296						
TWK				S	Sb	22 01 32.2	+1.2
	baz=296						
SNJT	**Kaohsiung City**	1.52	274	*e*P	Pb	22 01 11.9	-0.7
	baz=275						
SNJT				*e*S	Sn	22 01 29.9	+0.3
	baz=275						
CHN5	**Tsauling**	1.52	308	P	Pb	22 01 12.9	+0.2
	baz=310						
CHN5				*e*S	Sb	22 01 31.8	+0.2
	baz=310						
NACB	**Ninganchiao**	1.55	347	*e*P	Pn	22 01 11.0	-0.2
	baz=357						
NACB				*e*S	Sn	22 01 29.4	-1.2
	baz=357						
SMLT	**Sun Moon Lake**	1.57	321	*e*P	Pb	22 01 13.1	-0.6
	baz=328						
SMLT				*e*S	Sb	22 01 32.4	-0.8
	baz=328						
CHGB	**Renai**	1.58	332	*e*P	Pn	22 01 12.2	+0.4
	baz=342						
CHGB				*e*S	Sn	22 01 30.9	-0.7
	baz=342						
TYC	**Yuchr**	1.61	321	*e*P	Pb	22 01 13.5	-0.8
	baz=327						
TYC				*e*S	Sb	22 01 33.7	-0.5
	baz=327						
WHF	**Hehuan Shan**	1.62	336	*e*P	Pn	22 01 13.0	+0.5
	baz=349						
WHF				S	Sn	22 01 32.2	-0.6
	baz=349						
CHY	**Chiayi**	1.66	301	*e*P	Pb	22 01 15.2	+0.2
	baz=302						
CHY				*e*S	Sb	22 01 36.0	+0.5
	baz=302						
WDLH	**Douliu**	1.67	308	*e*P	Pb	22 01 16.4	+1.0
	baz=310						
WDLH				*e*S	Sb	22 01 37.4	+1.4
	baz=310						
WNT	**Mingjian**	1.70	316	*e*P	Pb	22 01 16.1	+0.4
	baz=318						
WNT				*e*S	Sb	22 01 38.0	+1.3
	baz=318						
TWT	**Tachien**	1.75	335	*e*S	Sn	22 01 35.0	-0.7
	baz=346						
TDCB	**Techi**	1.76	335	*e*P	Pn	22 01 15.0	+0.8
	baz=346						
TDCB				*e*S	Sn	22 01 35.5	-0.4
	baz=346						
NANB	**Nanao**	1.78	353	*e*P	Pn	22 01 14.6	+0.3
	baz=355						
NANB				*e*S	Sn	22 01 35.0	-1.1
	baz=355						
ENA	**Nanau**	1.78	353	*e*S	Sn	22 01 35.2	-0.9
	baz=2.0						
NNSB	**Datong**	1.85	343	*e*P	Pn	22 01 14.4	-1.0
	baz=345						
NNSB				*e*S	Sn	22 01 36.5	-1.5
	baz=345						
NNS	**Nan Shan**	1.86	343	*e*S	Sn	22 01 37.8	-0.5
	baz=345						
WHP	**Taichung City**	1.87	330	*e*P	Pb	22 01 19.2	+0.4
	baz=338						
WHP				*e*S	Sb	22 01 43.5	+1.7
	baz=338						

EOS1	EOS1 baz=6.0	1.89	4	eP	Pn	22 01 16.6	+0.7
EOS1	baz=6.0			eS	Sn	22 01 39.4	+0.5
TWC	Suao baz=358	1.95	357	eP	Pn	22 01 17.7	+1.0
TWC	baz=358			eS	Sn	22 01 39.6	-0.8
JYNG	Yonagunijimaku	2.00	26	P	Pn	22 01 18.0	+0.7
JYNG				S	Sn	22 01 40.8	-0.7
ENTT	Nioudou baz=351	2.01	349	eP	Pn	22 01 18.4	+0.8
ENTT	baz=351			eS	Sn	22 01 41.9	0.0
TWQ1	Liyutan baz=340	2.01	327	eP	Pb	22 01 20.5	-0.7
TWQ1	baz=340			eS	Sb	22 01 45.8	0.0
NSY	Sanyi baz=340	2.08	328	eP	Pb	22 01 21.4	-0.8
NSY	baz=340			eS	Sb	22 01 46.5	-1.2
TWE	Neicheng baz=354	2.08	352	eP	Pn	22 01 19.4	+1.0
YHNB	Yeheng baz=356	2.08	345	eP	Pn	22 01 19.8	+1.3
YHNB	baz=356			eS	Sn	22 01 43.0	-0.6
LIOB	Emei baz=344	2.17	336	eP	Pn	22 01 21.1	+1.4
LIOB	baz=344			eS	Sn	22 01 46.3	+0.5
HATJ	Hateruma jima	2.19	50	P	Pn	22 01 20.5	+0.6
TIPB	Shuangxi baz=6.0	2.31	357	eP	Pn	22 01 23.5	+1.8
TIPB	baz=6.0			eS	Sn	22 01 50.2	+0.9
IRIF	Iriomote-Funau	2.32	44	P	Pn	22 01 22.7	+0.9
IRIF				S	Sn	22 01 49.5	0.0
PNG	Penghu baz=283	2.41	293	eP	Pn	22 01 24.4	+1.5
PNG	baz=283			eS	Sn	22 01 52.1	+0.6
JKRS	Kuro-shima	2.44	49	P	Pn	22 01 24.4	+0.9
JKRS				eS	Sn	22 01 51.5	-1.1
JIJ	Ishigaki jima	2.62	49	P	Pn	22 01 26.2	+0.3
JIJ				eS	Sn	22 01 55.3	-1.6
JISG	Ishigakijimahi	2.88	48	P	Pn	22 01 29.6	+0.1
JISG				eS	Sn	22 02 01.5	-1.8
JTJ	Tarama	3.19	51	P	Pn	22 01 34.5	+0.8
JTJ				S	Sn	22 02 10.5	-0.4
JIRB	Irabujima	3.64	53	P	Pn	22 01 40.6	+0.6

IDC 24 22:07:49.5±6.1,**30°.65S**×**178°.75W,h0**^{km}**,mb3.5**/2, **mb1 3.7**/2,**mb1mx3.6**/24,**mbtmp3.5**/2,**Error ellipse: s-maj=241.6km s-min=58.0km az=155.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs 0.2nm,0.4s,baz=102,slow=8.6,SNR=3.2	42.45	268	P	P	22 15 46.3	-0.1
WRA	Warramunga Arr 0.3nm,0.4s,baz=114,slow=7.9,SNR=11	43.46	273	P	P	22 15 54.5	-0.1
FINES	FINESS Array B 1.5nm,1.0s,baz=29,slow=3.2,SNR=5.6	145.15	339	PKPbc	PKPbc	22 27 26.9	-0.9

IDC 24 22:12:42.6±3.1,**31°.95S**×**177°.95W,h0**^{km}**,mb3.6**/2, **mb1 3.8**/3,**mb1mx3.7**/24,**mbtmp3.6**/3,**ML3.2**/1,**Error ellipse: s-maj=73.2km s-min=45.9km az=121.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera 0.4nm,0.3s,baz=25,slow=19,SNR=2.0	7.48	211	Pn	Pn	22 14 32.0	-1.0
URZ	0.8nm,0.3s,baz=198,slow=20,SNR=2.7			Sn	Sn	22 15 50.9	-7.6
ASAR	Alice Springs 0.7nm,0.8s,baz=106,slow=7.8,SNR=5.7	43.09	269	P	P	22 20 44.9	+0.3
WRA	Warramunga Arr 0.5nm,0.5s,baz=113,slow=7.7,SNR=13	44.22	274	P	P	22 20 53.5	-0.2
FINES	FINESS Array B 1.5nm,0.9s,baz=29,slow=4.4,SNR=5.9	146.61	339	PKPbc	PKPdf	22 32 24.5	+0.7

IDC 24 22:39:12.6±2.6,**6°.85N**×**123°.88E,h602**^{km}±32^{km}**,mb2.9**/5, **mb1 3.1**/5,**mb1mx2.5**/54,**mbtmp4.0**/5,**Error ellipse: s-maj=70.8km s-min=12.6km az=60.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr 0.4nm,0.3s,baz=120,slow=8.4,SNR=4.6	26.88	298	P	P	22 44 07.3	0.0
WRA	Warramunga Arr 1.1nm,0.5s,baz=336,slow=9.9,SNR=33	28.55	159	P	P	22 44 21.3	-0.5
WRA	0.4nm,0.8s,baz=343,slow=2.7,SNR=3.0			ScP	ScP	22 49 57.7	-0.6
ASAR	Alice Springs 1.0nm,0.3s,baz=342,slow=6.8,SNR=18	31.88	162	P	P	22 44 50.6	+0.4
MKAR	Makanchi Array 0.8nm,0.4s,baz=114,slow=8.4,SNR=19	53.39	325	P	P	22 47 37.4	+0.2
KURBB	Kurchatov Arra 1.0nm,0.7s,baz=130,slow=6.3,SNR=12	57.59	328	P	P	22 48 05.8	-0.3

IDC ***24*** *22:44:12.9±6.9, 23°.18S×179°.96W, h439^{km}±80^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.1/47, mbtmp4.2/4, Error ellipse: s-maj=55.1km s-min=37.1km az=171.0*

ISCJB ***24*** *22:44:19.1±1.9, 23°.6S±0°.1×180°.0W±0°.4, h543^{km}, mb3.6/3, Error ellipse: s-maj=43.4km s-min=15.3km az=174.1*

ISC 24 22:44:19.5±1.6,**23°.8S**±0°.1×**179°.9W**±0°.3,**h543**^{km}**,n6,** σ**1**^{s}**.05**/7,**mb3.6**/3,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera 1.6nm,0.3s,baz=343,slow=20,SNR=4.2	14.69	189	P	P	22 47 26.8	+1.1
URZ	0.4nm,0.3s,baz=210,slow=20,SNR=2.1			S	S	22 49 57.8	-1.5
ASAR	Alice Springs 1.1nm,0.5s,baz=97,slow=7.3,SNR=9.9	42.19	260	P	P	22 51 25.8	+0.6
WRA	Warramunga Arr 1.3nm,0.3s,baz=102,slow=8.4,SNR=38	42.55	266	P	P	22 51 27.8	-0.2
PETK	Petropavlovsk- 1.1nm,0.6s,baz=140,slow=5.0,SNR=3.0	78.99	346	P	P	22 55 26.6	-0.3
AKASG	Malin Array Be 1.1nm,0.6s,baz=46,slow=3.5,SNR=5.1	144.92	327	PKP	PKPdf	23 02 54.8	+0.1
BRTR	Keskin Array B 0.5nm,0.5s,baz=74,slow=2.4,SNR=4.5	147.59	307	PKPbc	PKPab	23 03 06.8	-0.6

IDC 24 22:44:37.3±2.9,**32°.20S**×**178°.13W,h0**^{km}**,mb3.8**/2, **mb1 4.0**/3,**mb1mx3.7**/42,**mbtmp3.8**/3,**ML3.2**/1,**Error ellipse: s-maj=67.7km s-min=35.7km az=116.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera 0.4nm,0.3s,baz=35,slow=18,SNR=2.4	7.18	211	Pn	Pn	22 46 23.3	-0.3
URZ	0.7nm,0.3s,baz=73,slow=18,SNR=3.8			Sn	Sn	22 47 44.5	-1.5
ASAR	Alice Springs 0.7nm,0.7s,baz=103,slow=7.7,SNR=3.6	42.93	269	P	P	22 52 38.0	-0.1
WRA	Warramunga Arr 1.1nm,0.5s,baz=113,slow=7.9,SNR=15	44.08	274	P	P	22 52 47.6	+0.2
FINES	FINESS Array B 1.3nm,0.5s,baz=40,slow=3.4,SNR=9.5	146.79	339	PKPbc	PKPdf	23 04 19.6	+0.8

ISCJB ***24*** *22:52:01.7±0.4, 1°.97N±0°.06×98°.93E±0°.08, h150^{km}, mb3.8/8, Error ellipse: s-maj=13.4km s-min=5.8km az=150.1*

IDC ***24*** *22:52:01.5±1.1, 1°.96N×99°.07E, h131^{km}±4^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.5/43, mbtmp4.1/10, Error ellipse: s-maj=33.3km s-min=16.4km az=47.0*

DJA ***24*** *22:52:03.1±0.4, 2°N±3°×9°9E±°, h122^{km}±6^{km}, M4.0/15, mb4.3/1, MLv3.9/15*

ISC 24 22:52:03.1±0.7,**2°.00N**±0°.06×**98°.96E**±0°.08,**h150**^{km}**,n24,** σ**1**^{s}**.61**/26,**mb3.8**/8,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat 42nm,0.3s,baz=360,slow=9.5,SNR=137	0.79	357	P	Pn	22 52 23.4	-3.0
PSI	12nm,0.3s,baz=360,slow=18,SNR=22			S	Sn	22 52 39.3	-4.9
MNSI	Mandailing Nat	1.35	153	P	Pn	22 52 29.3	-1.8
TSI	Tuntungan	1.54	345	P	Pn	22 52 32.3	-0.8
KCSI	Kotacane, Aceh	1.92	322	P	Pn	22 52 35.8	-1.5
PBSI	Pulau Batu	2.15	198	P	Pn	22 52 37.9	-2.1
BKNI	Bangkinang	2.66	129	P	Pn	22 52 45.5	-0.7
SNSI	Sinabang, Aceh	2.66	279	P	Pn	22 52 45.3	-0.9
PPI	Padang Panjang	2.83	150	P	Pn	22 52 47.6	-0.8
PDSI	Padang	3.26	153	P	Pn	22 52 53.1	-0.7
SISI	Saibi	3.31	178	P	Pn	22 52 53.2	-1.2
MLSI	Meulaboh, Aceh	3.40	311	P	Pn	22 52 54.6	-1.0
LHMI	Lhok Sumawe	3.78	328	P	Pn	22 53 00.0	-0.5
KRJI	Kerinci	4.77	148	P	Pn	22 53 13.3	-0.3
BSI	Banda Aceh	5.04	314	P	Pn	22 53 15.2	-1.9
CMAR	Chiang Mai Arr 0.9nm,0.3s,baz=189,slow=11,SNR=11	16.35	360	P	P	22 55 45.6	+1.3
PALK	Pallekele 0.6nm,0.3s,baz=114,slow=8.6,SNR=5.9	18.93	287	P	Pn	22 56 15.5	+0.5
WRA	Warramunga Arr 1.9nm,0.4s,baz=302,slow=9.1,SNR=49	40.99	124	P	P	22 59 30.8	-0.9
WRA	0.3nm,0.8s,baz=315,slow=2.5,SNR=4.0			PcP	PcP	23 01 29.5	+0.5
SONM	Songino Array 0.5nm,0.4s,baz=190,slow=9.9,SNR=5.3	46.11	7	P	P	23 00 13.1	+0.9
MKAR	Makanchi Array 1.1nm,0.4s,baz=156,slow=8.7,SNR=32	46.92	344	P	P	23 00 19.6	+1.1
GEYT	Alibeck 1.1nm,0.5s,baz=116,slow=9.8,SNR=3.0	51.75	319	P	P	23 00 56.4	+1.1
ZALV	Zalesovo Beam 1.4nm,0.4s,baz=166,slow=6.6,SNR=8.7	53.07	350	P	P	23 01 05.6	+0.9
BRTR	Keskin Array B 0.8nm,0.7s,baz=129,slow=7.9,SNR=7.9	69.89	312	P	P	23 02 58.2	+0.1
FINES	FINESS Array B 0.5nm,0.3s,baz=110,slow=5.0,SNR=9.4	80.11	332	P	P	23 03 56.8	+0.7
ARCES	ARCESS Array B 2.4nm,0.9s,baz=102,slow=6.5,SNR=3.3	82.38	340	P	P	23 04 08.2	+0.3

IDC 24 22:53:48.9±3.3,**32°.26S**×**178°.19W,h0**^{km}**,mb3.6**/2, **mb1 3.8**/3,**mb1mx3.7**/27,**mbtmp3.6**/3,**ML3.1**/1,**Error ellipse: s-maj=73.7km s-min=36.9km az=113.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera 0.3nm,0.3s,baz=18,slow=20,SNR=2.4	7.11	211	Pn	Pn	22 55 33.0	-1.1
URZ	2.2nm,0.3s,baz=53,slow=20,SNR=14			Sn	Sn	22 56 55.8	+0.1
ASAR	Alice Springs 0.4nm,0.6s,baz=105,slow=7.4,SNR=3.2	42.88	269	P	P	23 01 49.6	+0.3
WRA	Warramunga Arr 0.3nm,0.3s,baz=112,slow=8.0,SNR=8.6	44.04	274	P	P	23 01 58.5	-0.1
FINES	FINESS Array B 0.5nm,0.6s,baz=45,slow=3.2,SNR=4.0	146.83	339	PKPbc	PKPbc	23 13 31.4	-0.9

IDC 24 23:12:01.3±2.2,**32°.29S**×**178°.11W,h0**^{km}**,mb3.9**/2, **mb1 4.1**/3,**mb1mx3.8**/22,**mbtmp3.9**/3,**ML3.7**/1,**MS3.9**/1, **Ms1 3.9**/1,**ms1mx2.8**/38,**Error ellipse: s-maj=60.3km s-min=33.6km az=124.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera 1.3nm,0.3s,baz=41,slow=11,SNR=5.5	7.12	212	Pn	Pn	23 13 45.5	-1.2
URZ	2.8nm,0.3s,baz=75,slow=21,SNR=7.9			Sn	Sn	23 15 08.6	+0.2
ASAR	Alice Springs 0.6nm,0.6s,baz=108,slow=7.4,SNR=7.4	42.95	269	P	P	23 20 02.6	+0.4
WRA	Warramunga Arr 1.1nm,0.4s,baz=112,slow=8.0,SNR=22	44.10	274	P	P	23 20 11.3	-0.3
QSPA	South Pole Qui comp=Z,98nm,20.9s,baz=224,slow=32	57.83	180	LR	LR	23 42 40.1	
MKAR	Makanchi Array 0.2nm,0.9s,baz=90,slow=2.0,SNR=2.5	118.90	309	PKP	PKiKP	23 30 51.9	+0.3
FINES	FINESS Array B 1.3nm,0.6s,baz=29,slow=4.4,SNR=13	146.87	339	PKPbc	PKPdf	23 31 43.5	+0.6

KRNET ***24*** *23:22:01.7±0.1, 42°.50N×79°.65E, h8^{km}, mb2.4*

SOME ***24*** *23:22:02.6, 42°.53N×79°.67E, h10^{km}*

NNC ***24*** *23:22:02.7±1.1, 42°.59N×79°.63E, h0^{km}, mb2.6, mpv2.6, Error ellipse: s-maj=6.9km s-min=3.9km az=137.0*

ISC 24 23:22:03.0±1.1,**42°.55N**±0°.05×**79°.66E**±0°.04,**h10**^{km}**,n43,** σ**1**^{s}**.05**/78,**17C-4D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode 30nm,0.1s	0.62	347	P	Pg	23 22 15.2	0.0
SHLS	57nm,0.2s			S	Sb	23 22 24.5	-0.5
SHLS	Shalkode baz=14	0.62	347	eP	Pg	23 22 15.2	0.0
SHLS	baz=14			eS	Sb	23 22 24.5	-0.5
SHLS	Shalkode 30nm,0.1s	0.62	347	eP	Pg	23 22 15.2	0.0
SHLS	57nm,0.2s			eS	Sb	23 22 24.5	-0.5
UZB	Uzynbulak 3.2nm,0.1s	0.76	322	P	Pg	23 22 16.6	-1.1
UZB	9.6nm,0.2s			S	Sg	23 22 26.8	-0.8
UZB	Uzynbulak baz=24	0.76	322	eP	Pg	23 22 16.6	-1.1
UZB	baz=24			eS	Sg	23 22 26.8	-0.8
UZB	Uzynbulak 3.2nm,0.1s	0.76	322	eP	Pg	23 22 16.6	-1.1
UZB	9.6nm,0.2s			eS	Sg	23 22 26.8	-0.8
PDGK	Podgornoye 4.6nm,0.1s	0.79	351	P	Pg	23 22 17.2	-1.1
PDGK	3.0nm,0.2s			S	Sg	23 22 27.8	-0.7
PDGK	Podgornoye 1.3nm,0.2s	0.79	351	⇑P	Pg	23 22 16.9	-1.3
PDGK	2.0nm,0.3s			⇑S	Sg	23 22 27.6	-1.0
PDGK	Podgornoye baz=52	0.79	351	⇓iP	Pg	23 22 17.2	-1.1
PDGK	baz=52			⇓iS	Sg	23 22 27.9	-0.7
PRZ	Przheval'sk baz=69	0.93	266	⇑iP	Pg	23 22 18.7	-2.3
PRZ	baz=69			⇑iS	Sg	23 22 31.1	-2.0
KTMS	Ketmen 1.2nm,0.1s	1.03	29	P	Pg	23 22 21.8	-1.1
KTMS	6.1nm,0.2s			S	Sg	23 22 35.6	-0.7
KTMS	Ketmen baz=28	1.03	29	eP	Pg	23 22 21.8	-1.1
KTMS	baz=28			eS	Sg	23 22 35.7	-0.7
KTMS	Ketmen 1.2nm,0.1s	1.03	29	eP	Pg	23 22 21.8	-1.1
KTMS	6.1nm,0.2s			eS	Sg	23 22 35.6	-0.7
SATY	Saty 3.9nm,0.6s	1.05	299	P	Pg	23 22 21.9	-1.4
SATY	8.5nm,0.2s			S	Sg	23 22 35.7	-1.2
SATY	Saty 3.9nm,0.6s	1.05	299	eP	Pg	23 22 21.9	-1.4
SATY	8.5nm,0.2s			eS	Sg	23 22 35.7	-1.2
MNBS	Baschi 0.9nm,0.2s	1.78	329	P	Pb	23 22 34.9	-1.0
MNBS	9.5nm,0.1s			S	Sb	23 22 58.1	-0.2
MNBS	Baschi baz=31	1.78	329	eP	Pb	23 22 34.9	-1.0
MNBS	baz=31			eS	Sb	23 22 58.1	-0.2
MNBS	Baschi 0.9nm,0.2s	1.78	329	eP	Pb	23 22 34.9	-1.0
MNBS	9.5nm,0.1s			eS	Sb	23 22 58.1	-0.2
DJR	Jarkent 0.5nm,0.2s	1.79	3	P	Pb	23 22 34.9	-0.9
DJR	3.4nm,0.2s			S	Sb	23 22 58.8	+0.5
DJR	Jarkent 0.5nm,0.2s	1.79	3	eP	Pb	23 22 34.9	-0.9
DJR	3.4nm,0.2s			eS	Sb	23 22 58.5	+0.1
KDJ	Kajisay baz=59	1.88	258	⇑iP	Pb	23 22 36.2	-1.4
KDJ	baz=59			⇑iS	Sb	23 23 00.6	-0.7
KOTS	Kotyrbulak 1.0nm,0.1s	1.99	291	Pg	Pg	23 22 40.2	-1.0
KOTS	3.5nm,0.3s			Lg	Lg	23 23 07.7	
KOTS	Kotyrbulak baz=92	1.99	291	eP	Pb	23 22 39.5	+0.1
KOTS	baz=92			eS	Sg	23 23 06.0	-1.0
KOTS	Kotyrbulak 1.0nm,0.1s	1.99	291	eP	Pb	23 22 39.5	+0.1
KOTS	3.5nm,0.3s			eS	Sg	23 23 06.1	-1.0
MDOK	Medeo 3.7nm,1.3s	2.01	289	⇑Pg	Pb	23 22 38.2	-1.7
MDOK	5.5nm,1.1s			Lg	Lg	23 23 06.0	
TNSS	Tian-Shan 0.6nm,0.1s	2.05	285	Pg	Pb	23 22 40.0	-0.6
TNSS	2.3nm,0.3s			Lg	Lg	23 23 06.9	
TNSS	Tian-Shan baz=86	2.05	285	eP	Pb	23 22 40.0	-0.6
TNSS	baz=86			eS	Sb	23 23 06.9	+0.5
TNSS	Tian-Shan 0.6nm,0.1s	2.05	285	eP	Pb	23 22 40.0	-0.6
TNSS	2.3nm,0.3s			eS	Sb	23 23 06.9	+0.5
ARXS	Arharly 0.5nm,0.3s	2.13	322	Pg	Pb	23 22 41.0	-0.8
ARXS	2.9nm,0.2s			Lg	Lg	23 23 08.5	
ARXS	Arharly 0.5nm,0.3s	2.13	322	eP	Pb	23 22 41.0	-0.8
ARXS	2.9nm,0.2s			eS	Sb	23 23 08.6	+0.2
IZV	Izvestkoviy 1.1nm,0.2s	2.29	283	Pg	Pb	23 22 44.0	-0.6
IZV	3.4nm,0.2s			Lg	Lg	23 23 13.7	
IZV	Izvestkoviy baz=84	2.29	283	eP	Pb	23 22 44.0	-0.6
IZV	baz=84			eS	Sb	23 23 13.7	+0.6
IZV	Izvestkoviy 1.1nm,0.2s	2.29	283	eP	Pb	23 22 44.0	-0.6
IZV	3.4nm,0.2s			eS	Sb	23 23 13.7	+0.6
KTBS	Karatobe 0.6nm,0.2s	2.47	299	Pg	Pb	23 22 47.2	-0.3
KTBS	5.9nm,0.2s			Lg	Lg	23 23 19.2	
KTBS	Karatobe baz=99	2.47	299	eP	Pb	23 22 47.2	-0.3
KTBS	baz=99			eS	Sb	23 23 19.2	+1.2
KTBS	Karatobe 0.6nm,0.2s	2.47	299	eP	Pb	23 22 47.2	-0.3
KTBS	5.9nm,0.2s			eS	Sb	23 23 19.2	+1.2
ULHL	Ulahol baz=65	2.55	264	⇑iP	Pn	23 22 45.6	+1.0
ULHL	baz=65			⇑iS	Sn	23 23 17.5	+1.7
BOOM	Boomskoye usch baz=71	2.75	270	⇑iP	Pn	23 22 48.5	+1.2
BOOM	baz=71			⇑iS	Sn	23 23 22.7	+2.0
DGS	Degeres 0.5nm,0.2s	2.94	285	Pg	Pb	23 22 54.9	-0.6
DGS	3.7nm,0.6s			Lg	Lg	23 23 32.0	
NRN	Naryn baz=50	2.94	249	⇑iP	Pn	23 22 51.8	+1.6
NRN	baz=50			⇑iS	Sn	23 23 28.0	+2.3
TKM2	Tokmak 2 4.2nm,1.4s	3.02	278	⇑Pg	Pb	23 22 56.0	-0.9
TKM2	3.4nm,1.3s			⇑Lg	Lg	23 23 35.5	
TKM2	Tokmak 2 baz=79	3.02	278	⇑eP	Pn	23 22 52.4	+1.4
TKM2	baz=79			⇑iS	Sn	23 23 29.2	+1.9
KZA	Kyzart baz=64	3.30	263	⇓iP	Pn	23 22 56.5	+1.4
KZA	baz=64			⇓iS	Sn	23 23 36.3	+1.6

IDC 24 23:23:01.9±1.9,**7°.66S**×**122°.56E,h0**^{km}**,mb3.2**/1, **mb1 3.4**/3,**mb1mx3.3**/34,**mbtmp3.2**/3,**ML3.0**/2,**MS3.7**/1, **Ms1 3.7**/1,**ms1mx2.8**/18,**Error ellipse: s-maj=288.9km s-min=28.7km az=56.0,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.0nm,0.3s,baz=310,slow=14,SNR=2.8	16.72	138	Pn	Pn	23 26 55.9	-1.8
ASAR	Alice Springs 0.1nm,0.3s,baz=327,slow=12,SNR=6.4	19.28	147	P	Pn	23 27 29.4	+0.1
HNR	Honiara comp=Z,101nm,18.8s,baz=45,slow=42	37.00	95	LR	LR	23 49 07.4	
MKAR	Makanchi Array 0.1nm,0.5s,baz=131,slow=7.9,SNR=2.9	64.95	331	P	P	23 33 43.4	0.0

IDC ***24*** *23:31:14.7±0.9, 32°.24S×177°.97W, h0^{km}, mb4.5/9, mb1 4.6/11, mb1mx4.3/44, mbtmp4.5/11, ML4.4/2, MS3.8/5, Ms1 3.8/5, ms1mx3.3/37, Error ellipse: s-maj=31.4km s-min=20.5km az=144.0*

ISCJB ***24*** *23:31:15.5±0.6, 32°.23S±0°.04×178°.1W±0°.1, h20^{km}, mb4.5/11, MS3.7/4, Error ellipse: s-maj=18.4km s-min=2.9km az=16.3*

WEL ***24*** *23:31:15.7±1.0, 32°S±5°×17°8W±1°6, h33^{km}, ML5.2/13*

NEIC ***24*** *23:31:16.1±0.5, 32°.26S×177°.96W, h10^{km}, mb4.6/3, Error ellipse: s-maj=16.8km s-min=10.5km az=124.0*

ISC 24 23:31:18.3±0.7,**32°.16S**±0°.06×**178°.2W**±0°.1,**h20**^{km}**,n57,** σ**1**^{s}**.57**/66,**mb4.5**/11,**MS3.7**/4,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.90	4	P	Pn	23 32 01.1	-2.2
GLKZ				S	Sn	23 32 36.8	-0.8
RAO	Raoul Island 124nm,0.3s,baz=266,slow=19,SNR=4.8	2.91	4	Pn	Pn	23 32 01.9	-1.5
RAO	302nm,0.3s,baz=96,slow=19,SNR=4.5			Sn	Sn	23 32 37.0	-0.8
RIZ	Raoul Island	2.92	4	P	Pn	23 32 01.9	-1.6
RIZ				S	Sn	23 32 37.3	-0.6
MXZ	Matakaoa Point	6.12	207	P	Pn	23 32 46.1	-1.4
MXZ				S	Sn	23 33 57.9	+1.0
WMGZ	Waiomatatini S	6.31	206	P	Pn	23 32 48.4	-1.7
WMGZ				S	Sn	23 34 01.9	+0.4
PKGZ	Pakihiroa	6.49	207	P	Pn	23 32 50.3	-2.4
PKGZ				S	Sn	23 34 04.5	-1.8
HAZ	Te Kaha	6.50	210	P	Pn	23 32 52.5	-0.3
HAZ				S	Sn	23 34 07.9	+1.6
PUZ	Puketiti	6.59	206	P	Pn	23 32 51.2	-2.7
PUZ				S	Sn	23 34 08.6	+0.1
RUGZ	Raukumara Rang	6.72	209	P	Pn	23 32 54.2	-1.7
RUGZ				S	Sn	23 34 12.7	+0.7
TWGZ	Tauwhareparae	6.78	207	P	Pn	23 32 57.2	+0.5
TWGZ				S	Sn	23 34 13.5	+0.1
CNGZ	Carnagh Statio	6.97	204	P	Pn	23 32 56.3	-2.9
TKGZ	Te Karaka	7.06	206	P	Pn	23 32 59.4	-1.0
TKGZ				S	Sn	23 34 19.3	-0.8
MWZ	Matawai	7.10	209	P	Pn	23 32 58.0	-3.0
MWZ				S	Sn	23 34 19.2	-1.9
URZ	Urewera 2.2nm,0.3s,baz=28,slow=16,SNR=8.6	7.21	211	Pn	Pn	23 32 59.9	-2.6
URZ	3.8nm,0.3s,baz=15,slow=20,SNR=8.9			Sn	Sn	23 34 21.4	-2.4
URZ	Urewera	7.21	211	P	Pn	23 33 00.4	-2.0

URZ				S	Sn	23 34 21.6	-2.2
RIGZ	Rimuhau	7.33	206	P	Pn	23 33 01.7	-2.4
RIGZ				S	Sn	23 34 25.5	-1.2
OUZ	Omahuta	7.52	244	P	Pn	23 33 12.4	+5.6
SNGZ	Shannon Statio	7.56	208	P	Pn	23 33 05.8	-1.5
SNGZ				S	Sn	23 34 31.6	-0.7
RTZ	Ruatahuna	7.56	210	P	Pn	23 33 07.0	-0.4
BKZ	Black Stump Fm	8.23	210	P	Pn	23 33 15.6	-0.9
RPZ	Rata Peaks	14.32	213	Pn	Pn	23 34 34.9	-4.9
	0.5nm,0.3s,baz=52,slow=18,SNR=3.3						
FOZ	Fox Glacier	14.78	216	P	Pn	23 34 41.4	-4.7
FOZ				S	Sn	23 37 14.4	-15
DZM	Mont Dzumac	16.98	302	*e*LR	LR	23 38 47.9	
	comp=Z,793nm,25.0s						
DZM	Mont Dzumac	16.98	302	LR	LR	23 40 39.1	
	comp=Z,626nm,18.1s,baz=88,slow=33						
TBI	Tubuai	26.80	78	*e*LR	LR	23 43 25.2	
	comp=Z,179nm,35.8s						
PPT2	Papeete2	29.59	67	*e*LR	LR	23 44 36.2	
	comp=Z,106nm,25.5s						
PPT	Papeete	29.61	67	LR	LR	23 49 18.0	
	comp=Z,65nm,18.4s,baz=219,slow=37						
STKA	Stephens Creek	33.99	260	P	P	23 38 03.0	+2.3
	2.9nm,0.6s,baz=92,slow=8.5,SNR=6.7						
STKA				LR	LR	23 50 59.4	
	comp=Z,142nm,18.7s,baz=194,slow=35						
CTA	Charters Tower	33.99	282	P	P	23 38 03.1	+2.3
	7.0nm,0.6s,baz=112,slow=10,SNR=12						
CTAO	Charters Tower	33.99	282	*e*P	P	23 38 02.0	+1.2
	23nm,1.2s						
ASAR	Alice Springs	42.91	269	P	P	23 39 15.8	0.0
	3.8nm,0.8s,baz=106,slow=7.3,SNR=18						
WRAB	Tennant Creek	44.06	274	*e*P	P	23 39 25.6	+0.6
	4.0nm,1.0s						
WRA	Warramunga Arr	44.06	274	P	P	23 39 25.2	+0.2
	4.6nm,0.3s,baz=112,slow=8.0,SNR=103						
WRA				LR	LR	23 56 15.9	
	comp=Z,71nm,18.6s,baz=60,slow=34						
FITZ	Fitzroy Crossi	52.25	271	P	P	23 40 28.4	+0.1
	3.8nm,0.8s,baz=130,slow=7.3,SNR=3.3						
FITZ				LR	LR	00 02 04.4	
	comp=Z,202nm,18.7s,baz=110,slow=35						
QSPA	South Pole Qui	57.95	180	*e*P	P	23 41 10.7	+1.7
	4.5nm,0.6s						
SNAA	Sanae	76.40	178	P	P	23 43 06.9	+1.1
VNA3	Neumayer Olymp	76.56	176	P	P	23 43 08.1	+1.4
VNA2	Neumayer--Watz	76.99	177	P	P	23 43 11.3	+2.2
	baz=196,slow=4.5						
PETK	Petropavlovsk-	87.48	346	P	P	23 44 04.4	+0.4
	3.5nm,0.8s,baz=120,slow=6.9,SNR=4.6						
USRK	Ussuriysk Ar.	88.56	327	P	P	23 44 10.5	+1.2
	1.6nm,0.6s,baz=104,slow=8.0,SNR=4.7						
NVAR	Mina Array Bea	89.62	43	P	P	23 44 15.2	+0.5
	1.4nm,0.9s,baz=213,slow=5.9,SNR=5.8						
KLR	Kul'dur	92.49	330	P	P	23 44 28.2	+0.7
	2.1nm,0.9s,baz=182,slow=1.6,SNR=4.2						
MKAR	Makanchi Array	118.80	309	PKP	PKiKP	23 50 04.0	-0.9
	0.6nm,0.8s,baz=80,slow=2.0,SNR=7.4						
ZALV	Zalesovo Beam	119.25	318	PKP	PKiKP	23 50 05.5	+0.1
	0.5nm,0.4s,baz=45,slow=2.2,SNR=3.0						
KURK	Kurchatov	122.16	313	*e*PKPdf	PKiKP	23 50 10.9	-0.3
KURK				PKP	PKiKP	23 50 10.9	-0.3
KURBB	Kurchatov Arra	122.20	313	PKP	PKiKP	23 50 10.9	-0.4
	0.7nm,0.3s,baz=94,slow=2.0,SNR=7.8						
AAK	Ala-Archa	122.97	303	PKP	PKiKP	23 50 12.8	-0.6
	0.7nm,0.5s,baz=156,slow=3.5,SNR=2.2						
ARCES	ARCESS Array B	140.28	347	PKhKP	PKPpre	23 50 38.2	
	2.1nm,0.8s,baz=11,slow=1.8,SNR=5.1						
KBZ	Khabaz	145.96	302	PKPbc	PKiKP	23 50 57.2	-2.4
	2.5nm,0.9s,baz=154,slow=2.2,SNR=5.5						
FINES	FINESS Array B	146.75	339	PKPbc	PKPbc	23 50 57.4	-0.6
	3.7nm,0.4s,baz=53,slow=3.9,SNR=67						
NB2	NORSAR Subarra	150.47	351	PKP	PKiKP	23 51 07.5	-1.0
	comp=Z,8.9nm,1.1s,baz=21,slow=2.9						
NOA	NORSAR Array B	150.47	351	PKPbc	PKiKP	23 51 07.0	-1.4
	comp=Z,0.7nm,0.6s,baz=14,slow=4.3,SNR=7.3						
AKASG	Malin Array Be	152.60	321	PKPbc	PKiKP	23 51 12.6	-0.5
	comp=Z,1.0nm,0.5s,baz=54,slow=2.3,SNR=6.6						
BRTR	Keskin Array B	153.28	295	PKPbc	PKiKP	23 51 14.6	-0.6
	comp=Z,1.9nm,0.8s,baz=140,slow=4.3,SNR=11						
CLL	Collm	159.18	340	*e*PKPab	PKPab	23 51 51.0	-0.6
TORD	Torodi Ar. Bea	161.07	180	PKPab	PKPab	23 52 00.6	0.0
	comp=Z,0.5nm,0.5s,baz=174,slow=5.1,SNR=5.8						
GERES	GERESS Array B	161.09	335	PKPab	PKPab	23 52 00.0	-0.1
	comp=Z,0.5nm,0.7s,baz=30,slow=6.1,SNR=5.1						

IDC ***24*** *23:32:45.7±1.0, 32°.09S×177°.96W, h0^{km}, mb4.3/8, mb1 4.5/8, mb1mx4.1/42, mbtmp4.3/8, MS3.6/1, Ms1 3.6/1, ms1mx3.0/34, Error ellipse: s-maj=44.3km s-min=24.3km az=163.0*

ISCJB ***24*** *23:32:47.0±1.1, 32°.28S±0°.07×178°.0W±0°.2, h24^{km}, mb4.3/8, Error ellipse: s-maj=27.8km s-min=4.7km az=18.3*

WEL ***24*** *23:32:47.9±0.7, 32°S±5°×17°8W±1°1, h83^{km}±20^{km}*

ISC 24 23:32:49.0±0.9, 32°.22S±0°.08×178°.1W±0°.2, h24^{km}, n42, σ2^{s}.70/40, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.96	3	P	Pn	23 33 32.4	-2.1
GLKZ				S	Sn	23 34 06.1	-3.0
RIZ	Raoul Island	2.97	3	P	Pn	23 33 32.0	-2.7
MXZ	Matakaoa Point	6.09	208	S	Sn	23 35 27.0	+0.6
HAZ	Te Kaha	6.47	210	S	Sn	23 35 39.4	+3.7
PUZ	Puketiti	6.55	206	S	Sn	23 35 38.7	+0.9
TWGZ	Tauwhareparae	6.75	207	S	Sn	23 35 44.0	+1.3
MWZ	Matawai	7.06	209	S	Sn	23 35 51.9	+1.4
URZ	Urewera	7.18	212	Sn	Sn	23 35 52.8	-0.5
	1.9nm,0.3s,baz=90,slow=20,SNR=3.6						
URZ	Urewera	7.18	212	S	Sn	23 35 52.4	-0.9
RIGZ	Rimuhau	7.29	206	S	Sn	23 35 56.8	+0.7
SNGZ	Shannon Statio	7.52	208	S	Sn	23 36 02.6	+0.9
PXZ	Pawanui	8.79	206	P	Pn	23 34 55.7	+1.1
PXZ				S	Sn	23 36 30.4	-2.4
BFZ	Birch Farm	9.59	207	S	Sn	23 36 47.2	-5.2
MRZ	Mangatainoka R	9.83	209	S	Sn	23 36 52.9	-5.6
KIW	Kapiti Island	10.28	211	S	Sn	23 37 03.4	-6.2
TCW	Tory Channel	10.85	212	S	Sn	23 37 16.5	-6.8
CTZ	Chatham Island	11.55	175	S	Sn	23 37 28.1	-13
THZ	Tophouse	11.92	214	S	Sn	23 37 43.0	-6.7
KHZ	Kahutara	12.15	211	S	Sn	23 37 43.5	-12
MQZ	McQueen's Vall	13.57	210	S	Sn	23 38 17.9	-12
WVZ	Waitaha Valley	13.96	216	P	P	23 36 11.0	-2.1
RPZ	Rata Peaks	14.29	214	LR	LR	23 42 21.3	
	comp=Z,263nm,20.6s,baz=24,slow=40						
RPZ	Rata Peaks	14.29	214	P	P	23 36 14.1	-2.7
FOZ	Fox Glacier	14.76	217	P	Pn	23 36 18.1	+1.9
FOZ				S	Sn	23 38 46.4	-12
LBZ	Lake Benmore	15.21	214	P	Pn	23 36 21.7	-0.5
STKA	Stephens Creek	34.02	260	P	P	23 39 33.7	+2.6
	1.8nm,0.4s,baz=74,slow=9.6,SNR=4.5						
CTA	Charters Tower	34.04	282	P	P	23 39 33.7	+2.3
	4.8nm,0.6s,baz=108,slow=9.8,SNR=5.7						
ASAR	Alice Springs	42.95	269	P	P	23 40 47.2	+0.8
	2.5nm,0.8s,baz=108,slow=7.7,SNR=3.6						
WRA	Warramunga Arr	44.10	274	P	P	23 40 56.2	+0.5
	2.9nm,0.4s,baz=114,slow=7.9,SNR=7.0						
FITZ	Fitzroy Crossi	52.29	271	P	P	23 41 59.8	+1.0
	4.6nm,1.1s,baz=106,slow=7.4,SNR=2.7						
PETK	Petropavlovsk-	87.55	346	P	P	23 45 34.4	-0.1
	2.2nm,0.6s,baz=152,slow=6.5,SNR=3.5						
NVAR	Mina Array Bea	89.64	43	P	P	23 45 46.0	+1.1
	0.4nm,0.6s,baz=223,slow=6.9,SNR=3.5						
KLR	Kul'dur	92.56	330	P	P	23 45 58.6	+0.6
	0.9nm,0.7s,baz=58,slow=9.5,SNR=3.3						
MKAR	Makanchi Array	118.86	309	PKP	PKPdf	23 51 34.8	-0.3
	0.2nm,0.6s,baz=95,slow=1.7,SNR=2.6						
KURBB	Kurchatov Arra	122.27	313	PKP	PKPdf	23 51 41.2	-0.3
	0.6nm,0.2s,baz=110,slow=1.9,SNR=4.5						
ARCES	ARCESS Array B	140.34	347	PKhKP	PKPpre	23 52 09.0	
	2.7nm,0.8s,baz=83,slow=2.8,SNR=2.4						
FINES	FINESS Array B	146.81	339	PKPbc	PKPbc	23 52 28.4	0.0
	3.1nm,0.5s,baz=35,slow=3.8,SNR=7.0						
NOA	NORSAR Array B	150.53	351	PKPbc	PKPbc	23 52 37.8	-0.3
	0.5nm,0.5s,baz=17,slow=4.1,SNR=3.3						
AKASG	Malin Array Be	152.67	321	PKPbc	PKiKP	23 52 43.7	+0.3
	0.4nm,0.4s,baz=69,slow=2.0,SNR=3.8						
BRTR	Keskin Array B	153.34	295	PKPbc	PKPbc	23 52 45.4	+0.1
	0.6nm,0.6s,baz=90,slow=1.3,SNR=3.3						
BRTR				PKPab	PKPab	23 52 57.2	-0.2
	1.1nm,0.7s,baz=121,slow=4.5,SNR=4.2						
TORD	Torodi Ar. Bea	161.01	179	PKPab	PKPab	23 53 31.8	+1.2
	0.6nm,0.6s,baz=172,slow=3.9,SNR=4.1						
GERES	GERESS Array B	161.16	335	PKPab	PKPab	23 53 30.8	+0.2
	0.3nm,0.6s,baz=320,slow=6.0,SNR=3.7						

MEX 24 23:46:35.2±0.5, 16°.11N×98°.23W, h2^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.30	20	*i* P	Pg	23 46 40.3	-0.6
PNIG				*i* S	Sg	23 46 45.2	+0.4

KRNET ***25*** *00:03:13.7±0.1, 39°.21N×71°.78E, mb3.1*

NNC ***25*** *00:03:16.0±3.6, 39°.23N×71°.65E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=27.3km s-min=15.0km az=6.0*

ISC 25 00:03:13.4±2.1, 39°.2N±0°.1×71°.77E±0°.05, h10^{km}, n27, σ3^{s}.51/42, 20C-14D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.29	5	⇑*i*P	Pg	00 03 19.0	-0.5
	baz=5.0						
DRK				⇑*i*S	Sg	00 03 23.3	-0.3
	baz=5.0						
BTK	Batken	1.14	320	⇑*i*P	Pn	00 03 35.6	+0.1
	baz=19						
BTK				⇑*i*S	Sn	00 03 50.9	-0.4
	baz=19						
ARSB	Arslanbob	2.33	23	⇑*i*P	Pb	00 03 54.9	-0.7
	baz=23						
ARSB				⇑*i*S	Sb	00 04 25.7	+1.2
	baz=23						
ARK	Arkit	2.61	3	⇓*e*P	Pb	00 03 59.1	-1.3
	baz=3.0						
ARK				⇓*i*S	Sb	00 04 31.9	-0.7
	baz=3.0						
IUG	Iuzhnay	3.24	337	Pg	Pb	00 04 09.8	-1.3
	27nm,0.3s						
IUG				Lg	Lg	00 04 51.2	
	49nm,0.5s						
AML	Almayashu	3.29	26	P	Pb	00 04 08.7	-3.4
	SNR=12						
AML	Almayashu	3.29	26	⇑*e*P	Pb	00 04 09.0	-3.1
	baz=26						
AML				⇑*i*S	Sb	00 04 49.6	-2.7
	baz=26						
ARLS	Aral	3.31	35	⇑*i*P	Pb	00 04 08.9	-3.4
	baz=35						
ARLS				⇑*i*S	Sb	00 04 48.9	-3.7
	baz=35						
UCH	Uchtor	3.69	34	P	Pb	00 04 15.4	-3.5
	SNR=7.3						
UCH	Uchtor	3.69	34	⇓*e*P	Pn	00 04 14.8	+3.9
	baz=34						
UCH				⇓*i*S	Sb	00 04 59.2	-4.6
	baz=34						
MRKS	Merke	3.72	17	Pg	Pb	00 04 17.1	-2.3
	5.6nm,0.3s						
MRKS				Lg	Lg	00 05 04.1	
	6.5nm,0.4s						
EKS2	Erkin-Say	3.79	23	⇓*i*P	Pn	00 04 15.8	+3.8
	baz=23						
EKS2				⇓*i*S	Sn	00 05 00.8	+4.0
	baz=23						
KZA	Kyzart	3.92	41	P	Pb	00 04 20.5	-2.4
	SNR=5.9						
KZA	Kyzart	3.92	41	⇓*e*P	Pb	00 04 18.5	-4.4
	baz=42						
KZA				⇓*i*S	Sb	00 05 05.5	-5.0
	baz=42						
AAK	Ala-Archa	4.02	30	⇑Pn	Pb	00 04 20.8	-3.6
	5.8nm,0.6s						
AAK				⇑Sn	Sb	00 05 09.3	-3.9
	9.4nm,0.7s						
KK31	Karatay Array	4.03	347	⇓Pn	Pn	00 04 19.5	+4.3
	1.3nm,0.3s,baz=173,slow=12,SNR=22						
KK31				⇓Pg	Pg	00 04 29.4	-1.2
	1.6nm,0.3s,baz=164,slow=15,SNR=11						
KK31				⇑Sn	Sb	00 05 08.7	-4.5
	3.3nm,0.4s,baz=164,slow=21,SNR=4.2						
KK31				⇓Lg	Lg	00 05 21.1	
	21nm,0.8s						
KBK	Karagaybulak	4.22	34	P	Pb	00 04 24.4	-3.5
	SNR=7.3						
KBK	Karagaybulak	4.22	34	⇑*i*P	Pn	00 04 22.3	+4.3
	baz=34						
KBK				⇑*i*S	Sn	00 05 12.5	+5.1
	baz=34						
CHMS	Chumysh	4.43	30	P	Pb	00 04 26.1	-5.2
	SNR=6.7						
USP	Ospenovka	4.57	26	P	Pn	00 04 27.4	+4.8
	SNR=8.0						
USP	Ospenovka	4.57	26	⇑*i*P	Pn	00 04 26.7	+4.1
	baz=26						
USP				⇑*i*S	Sn	00 05 19.8	+4.0
	baz=26						
TKM2	Tokmak 2	4.72	37	⇓Pn	Pn	00 04 29.6	+4.7
	1.6nm,0.5s						
TKM2				⇓Pg	Pg	00 04 42.8	-1.1
	3.7nm,0.9s						
TKM2				⇑Sn	Sb	00 05 27.2	-6.2
	3.1nm,0.8s						
TKM2				⇑Lg	Lg	00 05 48.4	
	6.0nm,0.9s						
DGS	Degeres	5.05	35	Pg	Pb	00 04 44.6	+2.6
	5.5nm,0.6s						
DGS				Lg	Lg	00 05 52.4	
	4.7nm,0.8s						
TNSS	Tian-Shan	5.49	44	Pg	Pg	00 04 54.0	-4.5
	4.6nm,0.3s						
TNSS				Lg	Lg	00 06 09.2	
	3.8nm,0.4s						
MDOK	Medeo	5.63	43	⇑Pg	Pg	00 04 58.7	-2.4
	5.1nm,1.2s						
MDOK				⇓Lg	Lg	00 06 16.2	
	4.8nm,0.7s						
KUU	Kurty	5.82	35	Pg	Pb	00 04 58.4	+3.4
	1.9nm,0.1s						
KUU				Lg	Lg	00 06 17.6	
	3.9nm,0.4s						
AB31	Akbulak array	13.14	324	P	Pn	00 06 20.9	+0.8
	0.1nm,0.3s,baz=142,slow=14,SNR=8.1						

IDC 25 00:05:40.8±1.7, 8°.35S×127°.71E, h0^{km}, mb3.6/2, mb1 3.8/6, mb1mx3.5/37, mbtmp3.6/6, ML3.5/4, Error ellipse: s-maj=44.2km s-min=26.0km az=64.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.40	245	Pn	Pn	00 06 51.2	+2.2
	3.2nm,0.3s,baz=84,slow=9.2,SNR=2.8						
BATI				Sn	Sn	00 07 38.7	-2.4
	20nm,0.3s,baz=223,slow=24,SNR=7.8						
FITZ	Fitzroy Crossi	9.90	192	Pn	Pn	00 08 02.8	-1.8
	0.5nm,0.3s,baz=20,slow=14,SNR=13						
FITZ				Sn	Sn	00 09 44.1	-12
	1.3nm,0.3s,baz=280,slow=21,SNR=7.6						
WRA	Warramunga Arr	13.19	152	Pn	Pn	00 08 47.6	-2.0
	0.3nm,0.3s,baz=321,slow=14,SNR=12						
WRA				Sn	Sn	00 11 10.0	-7.3
	0.4nm,0.3s,baz=336,slow=22,SNR=6.6						
ASAR	Alice Springs	16.35	159	Pn	Pn	00 09 31.7	-0.2
	0.1nm,0.3s,baz=332,slow=11,SNR=5.7						
ASAR				Sn	Sn	00 12 25.0	-9.2
	0.1nm,0.3s,baz=320,slow=19,SNR=3.3						
STKA	Stephens Creek	26.74	153	P	P	00 11 23.5	+1.3
	0.9nm,0.4s,baz=333,slow=7.0,SNR=3.2						
MKAR	Makanchi Array	68.13	328	P	P	00 16 42.3	-0.5
	0.1nm,0.5s,baz=133,slow=7.6,SNR=4.2						

WEL ***25*** *00:07:38.9±1.1, 32°S±5°×17°8W±1°9, h33^{km}, ML5.4/13*

IDC ***25*** *00:07:38.6±0.7, 32°.10S×178°.05W, h0^{km}, mb4.7/11, mb1 4.7/15, mb1mx4.4/46, mbtmp4.6/15, ML3.5/3, MS4.1/1, Ms1 4.1/1, ms1mx3.5/28, Error ellipse: s-maj=20.6km s-min=16.8km az=128.0*

ISCJB ***25*** *00:07:39.5±0.4, 32°.20S±0°.03×178°.14W±0°.09, h24^{km}, mb4.7/13, MS4.4/2, Error ellipse: s-maj=11.9km s-min=2.9km az=17.1*

NEIC ***25*** *00:07:39.7±0.4, 32°.21S×178°.05W, h10^{km}, mb4.7/2, Error ellipse: s-maj=12.2km s-min=8.7km az=124.0*

GCMT ***25*** *00:07:42.7±0.5, 32°.28S±0°.04×177°.63W±0°.04, h21^{km}±2^{km}, MW5.0/51, Moment Tensor Solution. s28,c37; s51,c68; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.26±.24; M$_{\theta\theta}$-0.02±.17; M$_{\phi\phi}$-2.24±.15; M$_{r\theta}$2.42±.42; M$_{\theta\phi}$-1.14±.12; M$_{\phi r}$2.30±.32; Best double couple: M$_0$4.18300×10^{16} NP1:φ$_s$42.00000°, δ73.00000°, λ104.00000°. NP2: φ$_s$182.00000°, δ22.00000°, λ52.00000°. Principal axes: T 4.1160, Plg60.0000°, Azm332.0000°; N 0.1300, Plg13.0000°, Azm218.0000°; P -4.2490, Plg26.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 00:07:41.7±0.5, 32°.14S±0°.06×178°.1W±0°.1, h24^{km}, n122, σ1^{s}.64/126, mb4.7/13, 2C-3D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.87	3	P	Pn	00 08 24.4	-1.5
GLKZ				S	Sn	00 08 58.1	-1.6
RAO	Raoul Island	2.88	3	Pn	Pn	00 08 24.8	-1.3
	192nm,0.3s,baz=57,slow=20,SNR=7.8						
RAO				Sn	Sn	00 08 59.6	-0.3
	292nm,0.3s,baz=114,slow=20,SNR=3.8						
RIZ	Raoul Island	2.88	3	P	Pn	00 08 24.7	-1.5
RIZ				S	Sn	00 09 00.1	0.0
MXZ	Matakaoa Point	6.18	208	P	Pn	00 09 09.2	-2.2
MXZ	Matakaoa Point	6.18	208	P	Pn	00 09 09.2	-2.2
MXZ				S	Sn	00 10 19.8	-1.4
WMGZ	Waiomatatini S	6.36	206	P	Pn	00 09 12.1	-1.8
WMGZ	Waiomatatini S	6.36	206	P	Pn	00 09 12.1	-1.8
WMGZ				S	Sn	00 10 25.0	-0.7
PKGZ	Pakihiroa	6.55	208	P	Pn	00 09 14.6	-2.0
PKGZ	Pakihiroa	6.55	208	P	Pn	00 09 14.6	-2.0
PKGZ				S	Sn	00 10 28.7	-1.8
HAZ	Te Kaha	6.56	210	P	Pn	00 09 17.2	+0.6
HAZ	Te Kaha	6.56	210	P	Pn	00 09 17.2	+0.6
HAZ				S	Sn	00 10 30.7	+0.1
PUZ	Puketiti	6.64	206	P	Pn	00 09 14.7	-3.1
PUZ	Puketiti	6.64	206	P	Pn	00 09 14.7	-3.1
PUZ				S	Sn	00 10 30.7	-2.0
RUGZ	Raukumara Rang	6.78	210	P	Pn	00 09 18.4	-1.4
RUGZ	Raukumara Rang	6.78	210	P	Pn	00 09 18.4	-1.4
RUGZ				S	Sn	00 10 35.0	-1.2
TWGZ	Tauwhareparae	6.84	207	P	Pn	00 09 18.6	-1.9
TWGZ	Tauwhareparae	6.84	207	P	Pn	00 09 18.6	-1.9
TWGZ				S	Sn	00 10 37.6	0.0
CNGZ	Carnagh Statio	7.02	205	P	Pn	00 09 20.1	-2.9
CNGZ	Carnagh Statio	7.02	205	P	Pn	00 09 20.1	-2.9
CNGZ				S	Sn	00 10 43.9	+1.8
TKGZ	Te Karaka	7.12	207	S	Sn	00 10 43.0	-1.4
MWZ	Matawai	7.15	209	P	Pn	00 09 22.7	-2.2
MWZ	Matawai	7.15	209	P	Pn	00 09 22.7	-2.2
URZ	Urewera	7.27	211	Pn	Pn	00 09 24.5	-1.8
	2.3nm,0.3s,baz=265,slow=3.6,SNR=12						
URZ				Sn	Sn	00 10 46.5	-1.6
	10nm,0.3s,baz=99,slow=23,SNR=11						
URZ	Urewera	7.27	211	P	Pn	00 09 24.6	-1.8
URZ	Urewera	7.27	211	P	Pn	00 09 24.6	-1.8
WCZ	Waipu Caves	7.34	237	P	Pn	00 09 32.5	+5.1
RTZ	Ruatahuna	7.62	211	P	Pn	00 09 30.5	-0.8
TOZ	Tahuroa Road	7.68	222	P	Pn	00 09 34.0	+2.0
BKZ	Black Stump Fm	8.29	211	P	Pn	00 09 39.7	-0.7
NGZ	Ngauruhoe	8.70	214	P	Pn	00 09 46.0	-0.2
BFZ	Birch Farm	9.68	207	P	Pn	00 09 52.8	-6.6
MRZ	Mangatainoka R	9.92	209	P	Pn	00 09 57.4	-5.4
KIW	Kapiti Island	10.37	211	P	Pn	00 10 06.0	-2.9
MTW	Mount Morrison	10.37	208	P	Pn	00 10 03.7	-5.3
RPZ	Rata Peaks	14.38	213	Pn	Pn	00 11 00.2	-3.5
	1.0nm,0.3s,baz=304,slow=1.3,SNR=7.5						
RPZ				Sn	Sn	00 13 28.4	-14
	1.4nm,0.3s,baz=318,slow=23,SNR=7.1						
DZM	Mont Dzumac	17.02	302	P	Pn	00 11 38.1	-0.2
	0.1nm,0.3s,baz=103,slow=19,SNR=1.7						
RAR	Rarotonga	19.61	61	P	Pn	00 12 08.8	-1.1
	0.8nm,0.3s,baz=203,slow=13,SNR=3.5						
CTA	Charters Tower	34.05	282	P	P	00 14 25.6	+1.4
	16nm,0.8s,baz=100,slow=11,SNR=16						
CTAO	Charters Tower	34.05	282	*e*P	P	00 14 26.2	+2.0
	58nm,0.9s						
STKA	Stephens Creek	34.06	259	P	P	00 14 25.8	+1.6
	6.2nm,0.7s,baz=93,slow=9.3,SNR=17						
ASAR	Alice Springs	42.98	269	P	P	00 15 39.7	+0.5
	3.3nm,0.5s,baz=108,slow=7.7,SNR=27						
WRAB	Tennant Creek	44.12	274	*e*P	P	00 15 48.6	+0.2
	1.9nm,0.8s						
WRA	Warramunga Arr	44.12	274	P	P	00 15 49.1	+0.7
	5.5nm,0.4s,baz=111,slow=8.1,SNR=46						
FITZ	Fitzroy Crossi	52.31	271	P	P	00 16 51.3	-0.4
	5.6nm,0.8s,baz=188,slow=9.1,SNR=6.0						
QSPA	South Pole Qui	57.98	180	P	P	00 17 33.8	+1.7
	6.6nm,0.8s,baz=18,slow=1.3,SNR=21						
RPN	Rapa Nui	59.06	104	LR	LR	00 37 06.1	
	comp=Z,156nm,20.4s,baz=278,slow=30						
SNAA	Sanae	76.43	178	P	P	00 19 29.6	+0.7
VNA3	Neumayer Olymp	76.58	176	P	P	00 19 30.5	+0.8
VNA2	Neumayer--Watz	77.02	177	P	P	00 19 33.1	+1.0
	baz=178,slow=4.9						
VNA1	Neumayer--Stat	77.25	177	P	P	00 19 34.1	+0.8
ASAJ	Asahikawa	83.94	333	P	P	00 20 11.3	+1.8
	5.8nm,0.8s,baz=117,slow=6.8,SNR=4.0						
PETK	Petropavlovsk-	87.47	346	P	P	00 20 27.7	+0.9
	4.9nm,0.7s,baz=150,slow=7.8,SNR=8.2						
USRK	Ussuriysk Ar.	88.57	327	P	P	00 20 33.8	+1.6
	3.4nm,0.8s,baz=100,slow=6.1,SNR=6.7						
NVAR	Mina Array Bea	89.56	43	P	P	00 20 38.7	+1.4
	2.6nm,0.8s,baz=221,slow=7.5,SNR=18						
KLR	Kul'dur	92.50	330	P	P	00 20 51.3	+0.9
	3.2nm,0.8s,baz=108,slow=1.6,SNR=13						
HHC	Hu-ho-hao-te	97.39	314	*e*P	P	00 21 08.8	-4.3
HHC	Hu-ho-hao-te	97.39	314	S	S	00 32 29.5	-6.4
HHC	Hu-ho-hao-te	97.39	314	SS	SS	00 38 50.5	-25
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,62nm,4.1s						
HHC				LR	LR		
	comp=N,95nm,11.2s						
HHC				LR	LR		
	comp=E,170nm,12.1s						
HHC				LR	LR		
	comp=Z,78nm,13.8s						
MKAR	Makanchi Array	118.83	309	PKP	PKiKP	00 26 27.6	-0.1
	comp=Z,0.9nm,0.7s,baz=64,slow=2.8,SNR=12						
ZALV	Zalesovo Beam	119.27	318	PKP	PKPdf	00 26 27.5	-0.7
	comp=Z,0.6nm,0.5s,baz=101,slow=3.0,SNR=3.6						
KURK	Kurchatov	122.19	313	*e*PKPdf	PKPdf	00 26 33.4	-0.6
AAK	Ala-Archa	123.01	303	*e*PKPdf	PKiKP	00 26 36.8	+0.5
GEYT	Alibeck	134.21	294	PKP	PKiKP	00 26 58.8	+0.1
	comp=Z,1.6nm,0.7s,baz=193,slow=6.1,SNR=5.3						
GNI	Garni	144.78	295	*e*PKPdf	PKPdf	00 27 16.9	+0.2
KBZ	Khabaz	145.99	302	PKPbc	PKPab	00 27 19.5	-0.3
	comp=Z,6.9nm,0.9s,baz=170,slow=2.9,SNR=16						
KIV	Kislovodsk	146.12	302	*e*PKPbc	PKPbc	00 27 19.8	0.0
OBN	Obninsk	146.54	324	*e*PKPbc	PKPab	00 27 20.8	-0.7
OBN	Obninsk	146.54	324	⇑*i*P	PKPab	00 27 21.2	-0.3
FINES	FINESS Array B	146.74	339	PKPbc	PKPab	00 27 21.2	-0.9
	comp=Z,16nm,0.7s,baz=64,slow=4.4,SNR=41						
HOMI	Horasan	146.96	295	*i* P	PKPbc	00 27 22.7	+0.2
DBAD	Bademkaya	147.09	297	*i* P	PKPab	00 27 23.9	-0.3
ECAT	Cat-ERZURUM	147.68	294	*i* P	PKPab	00 27 26.9	+0.1
KTUT	Trabzon	148.54	297	⇓*i*P	PKPbc	00 27 26.7	+0.3
MACK	Trabzon	148.55	297	*i* P	PKiKP	00 27 27.7	-0.3
EUZM	Uzumlu	148.66	295	*i* P	PKPab	00 27 29.7	-0.9
VSU	Vasula	148.77	335	*e*P	PKPbc	00 27 26.7	+0.3
VSU				IAmb	IAmb	00 27 31.4	
	comp=Z,62nm,1.0s						
TNCL	Tunceli-Merkez	148.80	294	*i* P	PKPab	00 27 31.5	+0.3
KELT	Kelkit	148.99	296	*i* P	PKiKP	00 27 30.1	+1.0
ELZG	Elazig	149.25	292	*i* P	PKiKP	00 27 30.9	+1.1
REFA	Refahiye_ERZN	149.40	294	*i* P	PKiKP	00 27 30.7	+0.8
KEMA	Kemaliye	149.61	294	*i* P	PKiKP	00 27 31.3	+1.0
SUSE	Susehri	149.79	296	*i* P	PKiKP	00 27 31.7	+1.0
CUZAR	Zara_SIVAS	150.14	295	*i* P	PKiKP	00 27 32.4	+0.9
CUKAN	kangal_SIVAS	150.41	294	*i* P	PKiKP	00 27 33.8	+1.7
NB2	NORSAR Subarra	150.45	351	PKP	PKPbc	00 27 30.4	-0.1
	comp=Z,5.9nm,1.0s,baz=16,slow=4.3						
NOA	NORSAR Array B	150.45	351	PKPbc	PKPbc	00 27 29.8	-0.7
	comp=Z,2.0nm,0.7s,baz=15,slow=4.2,SNR=18						
ERBA	Erbaa	150.85	297	*i* P	PKiKP	00 27 34.2	+1.4
IZAR	Zarasai	150.89	331	*e*P	PKiKP	00 27 31.9	-0.4
IZAR				IAmb	IAmb	00 27 34.8	
	comp=Z,5.9nm,0.9s						
CUALT	Altinyayla-SIV	150.96	294	*i* P	PKiKP	00 27 32.9	-0.3
IDID	Didziasalis	150.99	330	*e*P	PKiKP	00 27 32.2	-0.3
IDID				IAmb	IAmb	00 27 36.0	

	comp=Z,6.7nm,1.0s						
ISAL	Salakas	151.07	331	eP	PKiKP	00 27 33.1	+0.4
ISAL				IAmb	IAmb	00 27 34.4	
	comp=Z,5.7nm,1.0s						
IIGN	Ignalina	151.18	331	eP	PKiKP	00 27 32.8	-0.1
IIGN				IAmb	IAmb	00 27 35.5	
	comp=Z,6.6nm,1.0s						
CUSAR	Sarkisla-SIVAS	151.35	294	iP	PKPbc	00 27 31.6	-1.9
AKASG	Malin Array Be	152.62	321	PKPbc	PKPbc	00 27 35.6	-0.2
	comp=Z,4.9nm,0.8s,baz=59,slow=2.3,SNR=16						
KIEV	Kiev	152.63	321	⇓iP	PKiKP	00 27 36.8	+0.8
BRTR	Keskin Array B	153.32	295	PKPbc	PKiKP	00 27 38.4	+0.3
	comp=Z,3.1nm,0.9s,baz=125,slow=3.6,SNR=19						
LIC	Lamto	153.42	164	eP	PKPab	00 27 52.6	+1.9
	comp=Z,71nm,1.4s						
KIC	Kosan Boka	153.61	165	eP	PKPab	00 27 52.5	+1.0
	comp=Z,35nm,1.1s						
TIC	Toumodi	153.82	164	eP	PKPab	00 27 54.8	+2.4
BEL	Belsk	155.96	330	ePKP	PKPab	00 28 10.6	+10
GKP	Gorka Klasztor	156.16	337	ePKP	PKPab	00 28 08.8	+7.5
BURAR	Bucovina Array	156.49	318	⇑iP	PKPab	00 28 04.3	+1.1
KWP	Kalwaria Pacla	156.62	324	ePKP	PKPab	00 28 05.0	+1.5
OJC	Ojcow	157.57	329	ePKP	PKPab	00 27 55.7	-12
NIE	Niedzica	157.92	327	ePKP	PKPab	00 28 10.4	+1.3
DRGR		158.37	319	⇓iP	PKPab	00 28 12.2	+0.9
KSP	Ksiaz	158.50	335	ePKP	PKPab	00 28 12.3	+0.7
CLL	Collm	159.18	340	iPKPab	PKPab	00 28 14.4	0.0
	comp=Z,10.0nm,0.9s						
BRG	Berggiesshubel	159.28	338	ePKP	PKPab	00 28 15.2	+0.3
	comp=Z,7.7nm,1.0s						
CONA	Conrad Observa	161.00	330	PKPab	PKPab	00 28 23.1	+0.5
	comp=Z,4.7nm,0.8s						
GERES	GERESS Array B	161.09	335	PKPab	PKPab	00 28 22.6	-0.4
	comp=Z,1.4nm,0.8s,baz=19,slow=5.7,SNR=11						
TORD	Torodi Ar. Bea	161.10	179	PKPab	PKPab	00 28 23.7	+0.1
	comp=Z,1.5nm,0.6s,baz=176,slow=4.4,SNR=8.9						
ARSA	Arzberg	161.67	329	ePKPab	PKPab	00 28 26.8	+1.3
	comp=Z,3.5nm,0.9s						
MOA	Molln	161.71	333	iPKPab	PKPab	00 28 26.1	+0.4
	comp=Z,3.9nm,1.1s						
KBA	Koelnbreinsper	162.70	333	iPKPab	PKPab	00 28 30.2	0.0
	comp=Z,4.4nm,0.9s						
WATA	Walderalm	163.12	337	iPKPab	PKPab	00 28 32.9	+0.9
	comp=Z,2.5nm,0.5s						
RETA	Reutte	163.25	339	iPKPab	PKPab	00 28 33.1	+0.6
	comp=Z,7.1nm,1.0s						
MOTA	Moosalm	163.27	338	iPKPab	PKPab	00 28 33.5	+0.9
	comp=Z,4.4nm,0.8s						
ABTA	Abfaltersbach	163.29	334	iPKPab	PKPab	00 28 32.8	+0.1
	comp=Z,5.5nm,1.1s						
SQTA	Sankt Quirin	163.34	337	iPKPab	PKPab	00 28 34.1	+1.2
	comp=Z,6.1nm,1.1s						
FETA	Feichten	163.67	338	iPKPab	PKPab	00 28 35.4	+1.0
	comp=Z,5.4nm,1.0s						
DAVA	Damuels	163.69	340	iPKPab	PKPab	00 28 35.1	+0.6
	comp=Z,5.9nm,0.9s						

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*IDC **25** 00:13:44.4±0.4, 32°.05S×178°.04W, h0^{km}, mb4.9/25, mb1 4.9/28, mb1mx4.8/51, mbtmp4.8/28, ML4.9/2, MS4.7/23, Ms1 4.7/23, ms1mx4.6/27, Error ellipse: s-maj=15.0km s-min=12.7km az=156.0*

*GCMT **25** 00:13:45.2±0.4, 32°.07S±0°.02×177°.67W±0°.03, h21^{km}±1^{km}, MW5.1/64, Moment Tensor Solution. s42,c50; s64,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.82±.26; $M_{\theta\theta}$2.83±.18; $M_{\phi\phi}$0.99±.15; $M_{r\theta}$2.01±.30; $M_{\theta\phi}$1.64±.10; $M_{\phi r}$2.52±.31; Best double couple: $M_0$4.98300×10^{16} NP1:ϕ_s227.00000°,δ65.00000°,λ-101.00000°. NP2: ϕ_s71.00000°,δ27.00000°,λ-68.00000°. Principal axes: T 4.8660, Plg20.0000°, Azm325.0000°; N 0.2330, Plg10.0000°, Azm231.0000°; P -5.1000, Plg68.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*WEL **25** 00:13:45.8±0.7, 32°S±5°×17°8W±1°3, h33^{km}, ML5.8/18*

*NEIC **25** 00:13:46.2±0.2, 32°.39S×178°.14W, h10^{km}, mb5.2/70, MS5.1/60, Error ellipse: s-maj=8.1km s-min=4.1km az=136.0*

*ISCJB **25** 00:13:48.7±0.1, 32°.38S±0°.02×178°.19W±0°.04, h35^{km}, mb5.1/96, MS5.0/90, Error ellipse: s-maj=5.9km s-min=1.9km az=31.3*

*MOS **25** 00:13:49.6±2.6, 32°.02S×178°.03W, h33^{km}, mb5.4/27, MS5.0/14, Error ellipse: s-maj=13.2km s-min=9.7km az=94.3*

*BJI **25** 00:13:49.7, 31°.86S×177°.71W, h43^{km}, mB5.6/21, mb5.3/25, Ms5.2/14, Ms7 4.9/16*

ISC 25 00:13:49.4±0.5**, 32°.32S**±0°.04×**177°.89W**±0°.06**, h31**^{km}±3^{km}**, h32**^{km}**:pP-P, n558,** σ1^{s}.70/525**, mb5.2**/95**, MS5.0**/92**, 26C-9D,**
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.04	359	P	Pn	00 14 29.5	-5.9
GLKZ				S	Sn	00 15 03.3	-7.4
RAO	Raoul Island	3.06	360	Pn	Pn	00 14 29.1	-6.4
	314nm,0.3s,baz=116,slow=10.0,SNR=14						
RAO				Sn	Sn	00 15 05.8	-5.2
	499nm,0.3s,baz=260,slow=19,SNR=5.5						
RIZ	Raoul Island	3.06	359	P	Pn	00 14 29.6	-6.0
RIZ				S	Sn	00 15 06.6	-4.6
MXZ	Matakaoa Point	6.09	210	P	Pn	00 15 15.4	-1.9
MXZ				S	Sn	00 16 26.6	+0.7
WMGZ	Waiomatatini S	6.27	208	P	Pn	00 15 19.2	-0.5
WMGZ				S	Sn	00 16 32.1	+1.9
PKGZ	Pakihiroa	6.47	210	P	Pn	00 15 19.7	-2.8
PKGZ				S	Sn	00 16 34.0	-1.2
HAZ	Te Kaha	6.49	212	P	Pn	00 15 21.1	-1.5
HAZ				S	Sn	00 16 37.4	+1.9
PUZ	Puketiti	6.55	208	P	Pn	00 15 20.4	-3.2
PUZ				S	Sn	00 16 37.2	0.0
RUGZ	Raukumara Rang	6.70	212	P	Pn	00 15 23.9	-1.9
TWGZ	Tauwhareparae	6.75	209	P	Pn	00 15 23.0	-3.4
CNGZ	Carnagh Statio	6.93	206	P	Pn	00 15 25.3	-3.5
WHRZ	Whale Island	6.95	216	P	Pn	00 15 29.6	+0.6
WHRZ				S	Sn	00 16 48.8	+1.8
TKGZ	Te Karaka	7.03	208	P	Pn	00 15 28.1	-2.0
TKGZ				S	Sn	00 16 48.2	-0.8
MWZ	Matawai	7.08	211	P	Pn	00 15 27.5	-3.3
MWZ				S	Sn	00 16 49.5	-0.6
OPRZ	Ohinepanea	7.15	218	P	Pn	00 15 32.1	+0.4
OPRZ				S	Sn	00 16 53.7	+1.7
URZ	Urewera	7.20	213	ePn	Pn	00 15 30.3	-2.2
URZ				eSn	Sn	00 16 49.4	-3.8
URZ	Urewera	7.20	213	Pn	Pn	00 15 31.3	-1.1
	13nm,0.3s,baz=330,slow=8.8,SNR=20						
URZ				Sn	Sn	00 16 53.4	+0.2
	29nm,0.3s,baz=243,slow=9.5,SNR=13						
URZ	Urewera	7.20	213	P	Pn	00 15 30.2	-2.2
URZ				S	Sn	00 16 52.6	-0.6
RIGZ	Rimuhau	7.29	208	P	Pn	00 15 30.0	-3.8
RIGZ				S	Sn	00 16 54.3	-1.3
PRGZ	Paritu Road	7.44	206	P	Pn	00 15 32.8	-2.9
PRGZ				S	Sn	00 16 56.7	-2.3
SNGZ	Shannon Statio	7.53	210	P	Pn	00 15 35.9	-1.1
SNGZ				S	Sn	00 17 00.7	-0.6
MUGZ	Murupara	7.54	214	P	Pn	00 15 36.2	-0.9
MUGZ				S	Sn	00 16 59.6	-1.9
RTZ	Ruatahuna	7.55	212	P	Pn	00 15 34.7	-2.7
RTZ				S	Sn	00 17 00.3	-1.6
MHGZ	Mahia Peninsul	7.63	205	P	Pn	00 15 34.7	-3.7
MHGZ				S	Sn	00 17 01.1	-2.6
OUZ	Omahuta	7.66	245	ePn	Pn	00 15 41.1	+2.3
RAHZ	Arahi	7.75	210	P	Pn	00 15 41.9	+1.8
RAHZ				S	Sn	00 17 05.4	-1.3
MTHZ	Maungataniwha	7.81	212	P	Pn	00 15 39.8	-1.0
MTHZ				S	Sn	00 17 07.5	-0.6
WHHZ	Waihua	7.83	209	P	Pn	00 15 39.7	-1.3
WHHZ				S	Sn	00 17 07.5	-1.0
ARHZ	Aropaoanui	8.08	210	P	Pn	00 15 43.0	-1.5
ARHZ				S	Sn	00 17 13.0	-1.8
BKZ	Black Stump Fm	8.22	212	ePn	Pn	00 15 46.0	-0.5
BKZ				eSn	Sn	00 17 16.1	-2.2
BKZ	Black Stump Fm	8.22	212	P	Pn	00 15 45.7	-0.8
BKZ				S	Sn	00 17 16.0	-2.2
MCHZ	McNeill Hill	8.36	210	P	Pn	00 15 47.7	-0.6
KWHZ	Kaweka Forest	8.46	211	P	Pn	00 15 46.8	-3.0
HIZ	Hauiti	8.56	222	ePn	Pn	00 15 49.4	-1.7
HIZ	Hauiti	8.56	222	P	Pn	00 15 54.7	+3.6
KAHZ	Kahuranaki	8.58	208	P	Pn	00 15 48.4	-3.1
WTVZ	West Tongariro	8.61	216	P	Pn	00 15 54.0	+2.1
NGZ	Ngauruhoe	8.65	216	P	Pn	00 15 51.7	-0.8
BHHZ	Black Hill Sta	8.68	213	P	Pn	00 15 52.6	-0.1
FWVZ	Far West T-bar	8.73	216	P	Pn	00 15 53.3	-0.4
MOVZ	Moawhango	8.76	214	P	Pn	00 15 51.8	-2.0
PNHZ	Pukenui	8.96	211	P	Pn	00 15 53.2	-3.4
DVHZ	Dannevirke	9.30	209	P	Pn	00 15 59.7	-1.5
BFZ	Birch Farm	9.59	208	ePn	Pn	00 16 01.8	-3.4
BFZ				eSn	Sn	00 17 47.6	-4.3
PRWZ	Pori Road	9.59	209	P	Pn	00 16 02.2	-3.0
HOWZ	Holdsworth Sta	10.07	210	P	Pn	00 16 07.3	-4.5
MTW	Mount Morrison	10.29	209	P	Pn	00 16 10.1	-4.7
KIW	Kapiti Island	10.30	212	P	Pn	00 16 10.9	-4.1
SNZO	South Karori	10.76	211	eSn	Sn	00 18 13.8	-6.6
THZ	Tophouse	11.95	215	ePn	Pn	00 16 36.2	-1.3
THZ				eSn	Sn	00 18 42.5	-7.3
THZ	Tophouse	11.95	215	P	Pn	00 16 36.2	-1.3
KHZ	Kahutara	12.16	212	ePn	Pn	00 16 37.0	-3.4
KHZ				eSn	Sn	00 18 46.6	-8.2
LTZ	Lake Taylor	13.03	214	eSn	Sn	00 19 06.4	-10
INZ	Inchbonnie	13.39	216	P	Pn	00 16 54.9	-2.3
OXZ	Oxford	13.56	213	ePn	Pn	00 16 54.9	-4.6
OXZ				eSn	Sn	00 19 15.4	-14
WVZ	Waitaha Valley	14.00	217	P	Pn	00 17 02.5	-3.0
WVZ				P	P	00 17 05.7	-7.3
RPZ	Rata Peaks	14.32	214	ePn	Pn	00 17 03.0	-6.8
RPZ				eSn	Sn	00 19 38.3	-9.2
RPZ	Rata Peaks	14.32	214	Pn	Pn	00 17 03.9	-6.0
	3.3nm,0.3s,baz=35,slow=2.8,SNR=9.4						
RPZ				Sn	Sn	00 19 33.7	-14
	3.3nm,0.3s,baz=329,slow=22,SNR=9.8						
RPZ				LR	LR	00 22 54.8	
	comp=Z,4µm,20.3s,baz=44,slow=38						
RPZ	Rata Peaks	14.32	214	P	Pn	00 17 07.6	-2.3
FOZ	Fox Glacier	14.80	217	ePn	Pn	00 17 10.7	-5.6
MSVF	Nonsavu	14.98	345	ePn	Pn	00 17 17.2	-1.7
	116nm,1.2s						
MSVF	Nonsavu	14.98	345	eP	Pn	00 17 17.3	-1.7
MSVF				pmax	pmax		
	comp=Z,116nm,1.2s						
TUZ	Tuapeka	16.68	212	P	Pn	00 17 40.8	+0.1
MLZ	Mavora Lakes	16.96	216	ePn	Pn	00 17 45.9	+1.8
	comp=Z,28nm,1.3s						
DZM	Mont Dzumac	17.25	302	eP	P	00 17 50.7	+1.3
	comp=Z,202nm,1.2s						
DZM				eLR	LR	00 21 54.2	
	comp=Z,5µm,22.2s						
DZM	Mont Dzumac	17.25	302	ePn	P	00 17 51.3	+1.9
	comp=Z,118nm,1.4s						
DZM	Mont Dzumac	17.25	302	Pn	P	00 17 50.2	+0.8
	comp=Z,0.9nm,0.3s,baz=133,slow=12,SNR=8.1						
DZM				LR	LR	00 23 30.9	
	comp=Z,9µm,18.3s,baz=98,slow=34						
RAR	Rarotonga	19.56	60	P	P	00 18 12.0	-2.7
RAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RAR				MLR	MLR		
	comp=Z,1µm,18.0s						
RAR	Rarotonga	19.56	60	P	P	00 18 12.0	-2.7
	comp=Z,1.0nm,0.3s,baz=265,slow=11,SNR=2.8						
RAR				LR	LR	00 26 32.7	
	comp=Z,1µm,18.0s,baz=242,slow=39						
MGCD	Mangrove Creek	26.04	260	P	P	00 19 19.4	-0.5
	baz=27,SNR=6.1						
ARMA	Armidale	26.06	266	P	P	00 19 20.1	-0.1
	baz=27,SNR=3.8						
ARMA	Armidale	26.06	266	eP	P	00 19 17.1	-3.0
ARMA				epP	pP	00 19 26.2	-1.4
TBI	Tubuai	26.61	78	eLQ	LQ	00 24 38.4	
	comp=Z,1µm,24.2s						
TBI				eLR	LR	00 25 51.4	
	comp=Z,1µm,23.5s,baz=242						
TBI	Tubuai	26.61	78	eT	T	00 46 45.6	
	comp=Z,12nm,0.3s						
EIDS	Eidsvold	27.98	276	P	P	00 19 38.4	+1.0
	baz=29,SNR=5.2						
EIDS	Eidsvold	27.98	276	eP	P	00 19 38.8	+1.4
	comp=Z,20nm,1.0s						
PAE	Paea	29.40	67	eT	T	00 50 10.8	
	comp=Z,2.2nm,0.2s						
PPT2	Papeete2	29.45	67	eLQ	LQ	00 25 42.0	
	comp=Z,933nm,23.0s						
PPT2				eLR	LR	00 27 14.5	
	comp=Z,1µm,24.5s,baz=228						
PPT2	Papeete2	29.45	67	eT	T	00 50 13.2	
	comp=Z,3.0nm,0.3s						
PPT	Papeete	29.46	67	LR	LR	00 30 43.6	
	comp=Z,901nm,18.4s,baz=220,slow=35						
RMQ	Roma	29.56	273	P	P	00 19 53.7	+2.3
	baz=30,SNR=9.5						
HNR	Honiara	30.65	313	LR	LR	00 31 05.0	
	comp=Z,2µm,18.8s,baz=172,slow=34						
CMSA	Cobar Meteorol	30.83	262	P	P	00 20 03.3	+0.8
	baz=31,SNR=9.2						
VAH	Vaihoa	32.34	65	eT	T	00 53 49.6	
	comp=Z,10.0nm,0.2s						
ARPS	Mount Arapiles	33.30	251	P	P	00 20 22.6	-1.6
	baz=34,SNR=4.8						
STKA	Stephens Creek	34.18	260	P	P	00 20 33.4	+1.4
	baz=35,SNR=13						
STKA	Stephens Creek	34.18	260	eP	P	00 20 33.0	+1.0
	comp=Z,3.0nm,0.8s						
STKA	Stephens Creek	34.18	260	P	P	00 20 32.0	0.0
	comp=Z,13nm,0.8s,baz=96,slow=10,SNR=20						
STKA				LR	LR	00 33 52.8	
	comp=Z,2µm,18.0s,baz=94,slow=35						
CTA	Charters Tower	34.24	282	P	P	00 20 31.3	-1.3
	comp=Z,56nm,0.9s,baz=110,slow=10,SNR=40						
CTA				LR	LR	00 33 28.8	
	comp=Z,2µm,18.3s,baz=127,slow=35						
CTAO	Charters Tower	34.24	282	eP	P	00 20 32.6	0.0
	comp=Z,56nm,0.8s						
CTAO				LR	LR		
	comp=Z,3µm,19.0s						
CTAO	Charters Tower	34.24	282	eP	P	00 20 32.6	0.0
CTAO				pmax	pmax		
	comp=Z,56nm,0.8s						
CTAO				MLR	MLR		
	comp=Z,3µm,19.0s						
HTT	Hallett	36.10	256	P	P	00 20 47.6	-1.0
	baz=37,SNR=9.9						
MTSU	Mount Surprise	36.79	283	P	P	00 20 54.0	-0.5
	baz=38,SNR=24						
BBOO	Buckleboo	38.58	256	P	P	00 21 09.0	-0.4
	baz=39,SNR=10						
BBOO	Buckleboo	38.58	256	eP	P	00 21 07.2	-2.3
	comp=Z,34nm,0.9s						
QIS	Mount Isa	39.59	276	P	P	00 21 18.8	+0.8
	baz=40,SNR=6.5						
COEN	Coen	39.92	288	P	P	00 21 20.6	-0.2
	baz=41,SNR=8.9						
COEN	Coen	39.92	288	eP	P	00 21 21.7	+0.9
	comp=Z,20nm,0.9s						
TAOE	Nuku Hiva Isla	42.01	65	eLR	LR	00 33 00.4	
	comp=Z,692nm,24.6s						
AS01	Alice Springs	43.10	269	eP	P	00 21 43.7	-3.1
AS31	Alice Springs	43.13	269	eP	P	00 21 46.5	-0.7
	comp=Z,5.3nm,0.8s						
ASAR	Alice Springs	43.13	269	P	P	00 21 45.9	-1.3
	comp=Z,20nm,1.0s,baz=116,slow=7.9,SNR=48						
ASAR				S	S	00 28 09.9	-1.8
	comp=Z,0.9nm,0.8s,baz=120,slow=14,SNR=3.4						
ASAR				LR	LR	00 39 31.5	
	comp=Z,1µm,18.6s,baz=114,slow=36						
WB2	Warramunga Arr	44.29	274	eP	P	00 21 54.6	-1.9
WRAB	Tennant Creek	44.29	274	eP	P	00 21 55.6	-0.8
	comp=Z,94nm,1.4s						
WRA	Warramunga Arr	44.30	274	P	P	00 21 54.0	-2.5
	comp=Z,14nm,0.4s,baz=113,slow=7.9,SNR=84						
WRA				S	S	00 28 28.8	+0.1
	comp=Z,0.7nm,0.8s,baz=111,slow=15,SNR=3.7						
WRA				LR	LR	00 39 49.4	
	comp=Z,2µm,18.1s,baz=105,slow=35						
FORT	Forrest	45.68	257	P	P	00 22 05.7	-1.6
	baz=46,SNR=21						
FORT	Forrest	45.68	257	eP	P	00 22 06.0	-1.3
	comp=Z,73nm,0.8s						
VNDA	Vanda	46.20	186	eP	P	00 22 09.8	-1.1
	comp=Z,16nm,1.4s						
VNDA	Vanda	46.20	186	eP	P	00 22 09.8	-1.1
VNDA				pmax	pmax		
	comp=Z,16nm,1.4s						
VNDA	Vanda	46.20	186	P	P	00 22 13.7	+2.8
	comp=Z,2.5nm,0.8s,baz=355,slow=6.3,SNR=4.4						
WRKA	Warakurna	47.36	264	P	P	00 22 18.6	-2.1
	baz=48,SNR=20						
JAY	Jayapura	48.88	299	LR	LR	00 41 42.8	
	comp=Z,451nm,18.6s,baz=160,slow=34						
KDU	Kakadu	49.37	282	P	P	00 22 34.7	-1.5
	baz=50,SNR=7.9						
MTN	Manton Dam	50.40	280	P	P	00 22 42.5	-1.5
	baz=51,SNR=5.4						
MTN	Manton Dam	50.40	280	eP	P	00 22 42.7	-1.3
	comp=Z,14nm,0.8s						
FITZ	Fitzroy Crossi	52.48	271	P	P	00 22 58.9	-0.6
	baz=53,SNR=4.9						
FITZ	Fitzroy Crossi	52.48	271	eP	P	00 22 59.5	0.0
	comp=Z,48nm,1.4s						
FITZ	Fitzroy Crossi	52.48	271	P	P	00 22 58.1	-1.4
	comp=Z,17nm,1.0s,baz=152,slow=9.5,SNR=6.2						
CASY	Casey	53.50	209	eP	P	00 23 06.9	+0.5
	comp=Z,24nm,0.8s						
CASY				LR	LR		
	comp=Z,209nm,19.0s						
KLBR	Kellerberrin	53.84	252	P	P	00 23 07.6	-1.9
	baz=54,SNR=8.0						
MEEK	Meekatharra	54.87	258	P	P	00 23 15.2	-1.9
	baz=55,SNR=3.5						
FAKI	Fak Fak	55.11	291	eP	P	00 23 18.1	-0.8
	comp=Z,37nm,1.1s						
SIJI	Sorong	57.14	293	P	P	00 23 31.7	-1.7
	comp=Z,7.6nm,0.5s,baz=153,slow=14,SNR=4.0						
QSPA	South Pole Qui	57.80	180	P	P	00 23 40.3	+2.8
	comp=Z,8.4nm,0.6s,baz=62,slow=1.9,SNR=35						
KAPI	Kappang	64.06	281	PFAKE		00 24 30.0	+9.4
KAPI				LR	LR		
	comp=Z,947nm,19.0s						
JCJ	Chichijima	70.26	323	LR	LR	00 50 55.0	
	comp=Z,357nm,18.7s,baz=120,slow=32						
MAW	Mawson	70.55	201	LR	LR	00 56 10.4	
	comp=Z,663nm,18.1s,baz=117,slow=36						
GO09	Cerro Castillo	74.25	141	eP	P	00 25 26.4	+3.1
	comp=Z,48nm,1.5s						
SNAA	Sanae	76.24	178	P	P	00 25 35.9	+1.4
SNAA	Sanae	76.24	178	eP	P	00 25 36.3	+1.9
	comp=Z,62nm,1.3s						
SNAA	Sanae	76.24	178	eP	P	00 25 36.3	+1.9
SNAA				pmax	pmax		
	comp=Z,62nm,1.3s						
VNA3	Neumayer Olymp	76.39	176	P	P	00 25 36.4	+1.2
VNA2	Neumayer--Watz	76.83	177	P	P	00 25 39.5	+1.8
	baz=172,slow=2.5						
NVL	N'lazarevskaya	76.97	183	eP	P	00 25 50.3	+12
NVL				eS	S	00 35 25.2	+1.0
NVL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NVL				MLR	MLR		
	comp=Z,461nm,17.0s						
VNA1	Neumayer--Stat	77.06	176	P	P	00 25 40.8	+1.9
MJAR	Matsushiro Arr	79.87	325	P	P	00 25 52.9	-1.9
	comp=Z,10nm,1.1s,baz=169,slow=5.9,SNR=6.5						
MJAR				LR	LR	00 55 28.4	
	comp=Z,172nm,21.7s,baz=180,slow=32						
PLCA	Paso Flores	81.14	133	P	P	00 26 01.6	-0.3
	comp=Z,1.5nm,0.8s,baz=273,slow=8.6,SNR=3.1						
PLCA				LR	LR	00 55 08.6	
	comp=Z,442nm,19.4s,baz=261,slow=30						
KUR	Kuril'sk	83.22	336	eP	P	00 26 20.5	+8.3
KUR				eS	S	00 36 32.8	+2.7
ADK	Adak	83.85	1	PFAKE		00 26 30.0	+15
ADK				LR	LR		
	comp=Z,990nm,19.0s						
ASAJ	Asahikawa	84.18	333	P	P	00 26 14.4	-2.8
	comp=Z,15nm,0.9s,baz=153,slow=6.8,SNR=3.8						
KSRS	Korea Array	85.86	320	P	P	00 26 24.7	-1.2
	comp=Z,2.4nm,0.8s,baz=123,slow=6.4,SNR=6.3						
KSRS				LR	LR	00 59 56.3	
	comp=Z,202nm,21.1s,baz=126,slow=32						
KSAR	Wonju Array Be	85.88	320	P	P	00 26 24.7	-1.2
KSAR	Wonju Array Be	85.88	320	P	P	00 26 24.7	-1.2
KS01	Wonju Array Si	85.90	320	eP	P	00 26 25.8	-0.2
PKM	Mcpherson Peak	86.26	44	P	P	00 26 28.9	+0.7
	baz=226						
YSS	Yuzh-Sakhalins	86.51	334	eP	P	00 26 28.0	-0.8
	comp=Z,60nm,1.2s						
YSS	Yuzh-Sakhalins	86.51	334	⇓eP	P	00 26 29.0	+0.2
YSS				eS	S	00 37 02.2	-0.5
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=E,300nm,17.0s						
PAGB	Antelope Grade	86.59	44	eP	P	00 26 31.8	+2.2
OSI	Osito Audit: C	86.73	45	P	P	00 26 30.9	+0.6
	baz=227						
MURC	Murrieta	86.97	47	P	P	00 26 32.2	+0.7
	baz=228						
MONP2	Monument Peak	86.98	48	P	P	00 26 32.3	+0.6
	baz=228						
ARVC	Arvin	87.01	45	P	P	00 26 32.4	+0.8
	baz=227						
IKP	In-Ko-Pah, Jac	87.01	48	P	P	00 26 32.6	+0.8
	baz=228						
BFSC	Mount Baldy Ra	87.11	46	P	P	00 26 32.7	+0.4
	baz=227,SNR=5.9						
EDW2	Edwards Air Fo	87.35	45	P	P	00 26 34.0	+0.7
	baz=227,SNR=6.9						
VES	Vestal, Richgr	87.35	44	P	P	00 26 33.8	+0.6
	baz=226,SNR=7.7						
TEY	Ternei	87.39	330	⇓eP	P	00 26 31.9	-1.2
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
SWSC	Sam W. Stewart	87.40	48	P	P	00 26 34.3	+0.8
	baz=228						
PFO	Pinyon Flats O	87.43	47	eP	P	00 26 35.8	+1.9
	comp=Z,23nm,1.3s						
PFO				LR	LR		
	comp=Z,1µm,20.0s						
PFO	Pinyon Flats O	87.43	47	P	P	00 26 34.7	+0.8
	baz=228						
PFO	Pinyon Flats O	87.43	47	P	P	00 26 34.8	+1.0
	comp=Z,6.6nm,0.9s,baz=248,slow=3.5,SNR=5.8						
XPFO	Pion Flat	87.43	47	eP	P	00 26 35.8	+2.0
	comp=Z,26nm,1.4s						
NJ2	Nanjing	87.56	311	eP	P	00 26 34.0	-0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
ISA	Isabella, Lake	87.59	45	eP	P	00 26 35.7	+1.2
	comp=Z,30nm,1.1s						
ISA	Isabella, Lake	87.59	45	eP	P	00 26 35.7	+1.2
ISA				pmax	pmax		
	comp=Z,30nm,1.1s						
ISA	Isabella, Lake	87.59	45	P	P	00 26 35.5	+1.1
	baz=227,SNR=17						
PEA0B	Petropavlovsk-	87.69	346	eP	P	00 26 34.9	+0.5
	comp=Z,100nm,1.5s						
PETK	Petropavlovsk-	87.69	346	eP	P	00 26 34.4	0.0
PETK	Petropavlovsk-	87.69	346	P	P	00 26 34.2	-0.2
	comp=Z,18nm,1.0s,baz=111,slow=8.1,SNR=11						
PETK				LR	LR	01 03 08.4	
	comp=Z,439nm,18.4s,baz=148,slow=34						
LRMC	Laurel Mtn Rad	87.94	45	P	P	00 26 37.2	+1.0
	baz=227						
BELC	Belle Mtn. Jos	87.98	47	P	P	00 26 37.7	+1.3
	baz=228						
GLA	Glamis	88.09	49	P	P	00 26 38.1	+1.2
	baz=229						
BC3	Big Chuckawall	88.09	48	P	P	00 26 38.2	+1.2
	baz=229,SNR=6.1						
CMB	Columbia Colle	88.12	42	eP	P	00 26 37.8	+0.9
	comp=Z,15nm,1.1s						
CMB	Columbia Colle	88.12	42	eP	P	00 26 37.8	+0.9
CMB				pmax	pmax		
	comp=Z,15nm,1.1s						
HEC	Hector,Ludlow	88.32	46	P	P	00 26 38.8	+0.9
	baz=228,SNR=12						
O02D	Mt. Diablo Mer	88.32	39	P	P	00 26 39.4	+1.5
	baz=224,SNR=6.4						
GSC	Goldstone, Bar	88.35	46	eP	P	00 26 39.9	+1.8
	comp=Z,27nm,1.1s						
GSC	Goldstone, Bar	88.35	46	P	P	00 26 39.1	+1.0
	baz=228,SNR=11						
CWC	Cottonwood Cre	88.35	44	P	P	00 26 39.1	+0.9
	baz=227						
AFDM	Forest Hills D	88.43	41	eP	P	00 26 39.4	+1.1
	comp=Z,16nm,1.3s						
MPMC	Manual Prospec	88.44	45	P	P	00 26 39.7	+1.0
	baz=227,SNR=13						
DAC	Darwin (Calif)	88.53	45	eP	P	00 26 40.8	+1.7
	comp=Z,7.8nm,1.1s						
ORV	Oroville	88.57	40	eP	P	00 26 39.8	+0.9
	comp=Z,12nm,1.3s						
ORV	Oroville	88.57	40	eP	P	00 26 39.8	+0.9
ORV				pmax	pmax		

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       comp=Z,12nm,1.3s
113A   Mohawk Valley,     88.58  49 eP       P        00 26 41.2 +2.1
       comp=Z,5.8nm,0.9s
MDPB   Devils Postpil     88.59  43 eP       P        00 26 41.6 +2.2
       comp=Z,12nm,1.2s
IRM    Iron Mountain      88.61  48 P        P        00 26 40.5 +1.2
       baz=229,SNR=15
OMMB   Old Mammoth Mi     88.62  43 eP       P        00 26 41.1 +1.5
       comp=Z,18nm,1.4s
GMRC   Granite Mounta     88.70  47 P        P        00 26 41.2 +1.3
       baz=228,SNR=6.2
MLAC   Mammoth, Mammo     88.72  43 P        P        00 26 40.9 +0.9
       baz=227
Y12C   Blythe             88.73  48 eP       P        00 26 42.2 +2.4
       comp=Z,22nm,1.2s
Y12C   Blythe             88.73  48 P        P        00 26 41.0 +1.1
       baz=229
WDC    Whiskeytown Da     88.74  39 eP       P        00 26 40.6 +0.9
       comp=Z,16nm,1.1s
WDC    Whiskeytown Da     88.74  39 eP       P        00 26 40.6 +0.9
WDC                                 pmax     pmax
       comp=Z,17nm,1.1s
USA0B  Ussuriysk Arra     88.81 326 eP       P        00 26 40.5 +0.6
       comp=Z,37nm,1.2s
USRK   Ussuriysk Ar.      88.81 326 P        P        00 26 39.8  -0.1
       comp=Z,12nm,0.9s,baz=134,slow=5.5,SNR=16
USRK                                LR       LR       01 03 07.0
       comp=Z,246nm,19.2s,baz=132,slow=34
O03E   Paynes Creek       88.93  39 P        P        00 26 41.9 +1.2
       baz=225,SNR=5.7
N02D   Trinity Center     88.94  38 P        P        00 26 41.9 +1.2
       baz=224,SNR=6.2
WAKR   Walker             88.98  42 eP       P        00 26 42.5 +1.3
       comp=Z,37nm,1.4s
SHOC   Shoshone, Teco     89.07  46 P        P        00 26 42.7 +1.3
       baz=228
FURC   Furnace Creek,     89.09  45 P        P        00 26 43.0 +1.6
       baz=228
GRAC   Grapevine Rang     89.15  44 P        P        00 26 43.0 +1.2
       baz=228
M02C   Callahan           89.16  38 P        P        00 26 42.9 +1.2
       baz=224
PNTR   Pine Nut           89.30  41 eP       P        00 26 43.6 +1.0
       comp=Z,25nm,1.1s
PDMCI  Parker Dam,Lak     89.34  48 P        P        00 26 44.0 +1.4
       baz=229
NEE2   Needles Airpor     89.34  47 P        P        00 26 44.1 +1.4
       baz=229
VCNR   Virginia City      89.41  41 eP       P        00 26 44.5 +1.3
       comp=Z,15nm,1.3s
BEKR   Beckworth          89.42  40 eP       P        00 26 44.1 +1.0
       comp=Z,7.7nm,1.0s
YERR   Yerington          89.43  42 eP       P        00 26 44.1 +0.9
       comp=Z,18nm,1.2s
YERR                                epP      sP       00 26 55.2 +0.8
YBH    Yreka Blue Hor     89.48  38 eP       P        00 26 44.7 +1.5
       comp=Z,10nm,1.1s
YBH    Yreka Blue Hor     89.48  38 eP       P        00 26 44.7 +1.5
YBH                                 pmax     pmax
       comp=Z,11nm,1.1s
YBH    Yreka Blue Hor     89.48  38 P        P        00 26 43.4 +0.1
       comp=Z,9.1nm,1.1s,baz=106,slow=1.9,SNR=5.3
NV01   Mina Array Sit     89.58  43 eP       P        00 26 44.2 +0.2
NVAR   Mina Array Bea     89.58  43 P        P        00 26 43.9  -0.1
       comp=Z,12nm,1.0s,baz=220,slow=8.0,SNR=34
NVAR                                LR       LR       00 58 31.4
       comp=Z,242nm,19.8s,baz=216,slow=30
RYN    Ryan               89.59  42 eP       P        00 26 45.2 +1.3
       comp=Z,20nm,1.4s
NV11   Mina Array Sit     89.67  43 eP       P        00 26 45.5 +1.3
       comp=Z,1.3nm,1.3s
TPNV   Topopah Spring     89.78  45 P        P        00 26 46.0 +1.1
       baz=228
Y14A   Wickenburg         89.82  49 eP       P        00 26 46.6 +1.6
       comp=Z,21nm,1.1s
PAHR   Pah Rah Range      89.84  41 eP       P        00 26 46.0 +0.9
       comp=Z,15nm,1.3s
M04C   Macdoel            89.97  38 P        P        00 26 47.3 +1.7
       baz=225
W13A   Hualapai Mount     90.01  47 eP       P        00 26 48.2 +2.1
       comp=Z,18nm,1.1s
L04D   Klamath Falls      90.04  38 P        P        00 26 47.4 +1.5
       baz=224
KVN    Kaiserville        90.12  42 eP       P        00 26 47.6 +1.1
       comp=Z,13nm,1.1s
KVN    Kaiserville        90.12  42 eP       P        00 26 47.6 +1.1
KVN                                 pmax     pmax
       comp=Z,13nm,1.1s
SHPR   Sheep Range        90.14  46 eP       P        00 26 48.7 +2.1
       comp=Z,22nm,1.4s
TUC    Tucson             90.23  51 eP       P        00 26 49.4 +2.4
       comp=Z,26nm,1.4s
TUC    Tucson             90.23  51 eP       P        00 26 49.4 +2.4
TUC                                 pmax     pmax
       comp=Z,27nm,1.4s
TUC    Tucson             90.23  51 P        P        00 26 48.4 +1.4
       baz=231
MDJ    Mudanjiang         90.25 325 P        P        00 26 46.8 +0.1
MDJ                                 pmax     pmax
       comp=Z,24nm,1.0s
MDJ                                 pmax     pmax
       comp=Z,130nm,3.5s
I03D   Drain, OR          90.57  36 P        P        00 26 50.0 +1.8
       baz=224
K04D   Chiloquin, OR      90.61  38 P        P        00 26 49.6 +1.0
       baz=225
MOD    Modoc Plateau      90.87  39 eP       P        00 26 50.6 +0.8
       comp=Z,12nm,1.1s
J04D   Umpqua Nationa     90.87  37 P        P        00 26 51.0 +1.2
       baz=224
R11A   Troy Canyon, C     91.11  44 eP       P        00 26 52.2 +1.2
       comp=Z,2.1nm,0.9s
R11A   Troy Canyon, C     91.11  44 P        P        00 26 52.0 +1.0
       baz=229
I04A   Tendick Farm,      91.11  37 P        P        00 26 51.3 +0.6
       baz=224
X16A   Lo Mia Camp, P     91.12  49 eP       P        00 26 53.0 +1.8
       comp=Z,20nm,1.1s
J05D   Fort Rock, OR      91.35  38 P        P        00 26 52.8 +0.8
       baz=225
H04D   Lebanon            91.47  36 P        P        00 26 52.9 +0.6
       baz=224
G03D   McMinnville, O     91.71  35 P        P        00 26 54.4 +1.0
       baz=224
CN2    Changchun          91.72 323 eP       P        00 26 53.5   0.0
CN2                                 pmax     pmax
       comp=Z,20nm,1.0s
U15A   North Rim          91.86  47 eP       P        00 26 56.3 +1.6
       comp=Z,12nm,0.9s
WUAZ   Wupatki            91.86  48 P        P        00 26 56.1 +1.5
       baz=231
PINE   Pine Mountain      91.86  37 eP       P        00 26 55.6 +1.1
       comp=Z,40nm,1.3s
H04A   Detroit Lake       91.86  36 eP       P        00 26 55.1 +0.9
       comp=Z,12nm,1.0s
CCUT   Cedar City         91.92  46 eP       P        00 26 57.0 +2.1
       comp=Z,9.7nm,1.2s
GRNR   Gornyy             92.03 333 eP       P        00 26 54.8   0.0
GRNR                                pmax     pmax
       comp=Z,21nm,1.0s
I05D   Terrebonne, OR     92.04  37 P        P        00 26 56.0 +0.9
       baz=225
SZCU   Shurtz Canyon      92.11  46 eP       P        00 26 57.9 +2.1
       comp=Z,19nm,1.5s
WVOR   Wild Horse Val     92.13  40 eP       P        00 26 56.8 +1.1
       comp=Z,17nm,1.4s
WVOR   Wild Horse Val     92.13  40 eP       P        00 26 56.8 +1.1
WVOR                                pmax     pmax
       comp=Z,17nm,1.4s
X18A   Snowflake          92.16  50 eP       P        00 26 58.2 +2.1
       comp=Z,17nm,1.3s
X18A                                epP      sP       00 27 08.8 +1.6
PSUT   Pine Spring        92.25  45 eP       P        00 26 58.0 +1.6
121A   Cookes Peak, D     92.37  53 P        P        00 26 57.8 +0.8
       baz=233
NKL    Nikolayevsk        92.43 336 eP       P        00 26 56.0  -0.5
NKL                                 pmax     pmax
       comp=Z,22nm,1.0s
NKL                                 MLR      MLR
       comp=Z,1µm,18.0s
GYA    Guiyang            92.58 300 P        P        00 26 56.9  -1.2
GYA                                 sP       pwP      00 27 15.6 +2.0
GYA                                 PP       PP       00 30 43.3 +3.1
GYA                                 SKS      SKSac    00 37 28.0  -1.6
GYA                                 S        SKKSac   00 37 53.5 +6.0
GYA                                 SS       SS       00 44 14.8 +1.2
GYA                                 pmax     pmax
       comp=Z,20nm,1.0s
GYA                                 pmax     pmax
       comp=Z,120nm,5.4s
GYA                                 LR       LR
       comp=Z,480nm,19.1s
GYA                                 LR       LR
       comp=Z,410nm,18.7s
GYA                                 LR       LR
       comp=Z,440nm,18.4s
W18A   Petrified Fore     92.66  50 P        P        00 26 59.5 +1.2
       baz=232
G05D   Wamic, OR          92.69  36 P        P        00 26 59.4 +1.4
       baz=225
KLR    Kul'dur            92.73 330 P        P        00 26 57.3  -0.7
       comp=Z,10.0nm,1.0s,baz=101,slow=4.3,SNR=14
ENH    Enshi              92.76 304 PFAKE             00 27 10.0  +11
ENH                                 LR       LR
       comp=Z,281nm,22.0s
I07A   Izee               92.81  38 eP       P        00 26 59.5 +0.8
       comp=Z,15nm,1.3s
NNA    Nana               92.81 106 PFAKE             00 27 10.0  +11
NNA                                 LR       LR
       comp=Z,296nm,19.0s
J08A   Circle Bar Ran     92.85  39 eP       P        00 27 00.1 +1.1
       comp=Z,14nm,1.1s
ELK    Elko               92.89  43 eP       P        00 27 00.4 +1.1
       comp=Z,8.4nm,1.2s
ELK    Elko               92.89  43 eP       P        00 27 00.4 +1.1
ELK                                 pmax     pmax
       comp=Z,8.0nm,1.2s
ELK    Elko               92.89  43 P        P        00 26 59.2  -0.1
       comp=Z,3.7nm,1.0s,baz=213,slow=4.0,SNR=7.8
LVC    Limon Verde        92.93 119 eP       P        00 26 57.1  -3.2
       comp=Z,8.4nm,0.7s
LVC    Limon Verde        92.93 119 eP       P        00 26 57.1  -3.2
LVC                                 pmax     pmax
       comp=Z,8.0nm,0.7s
MTPU   Mount Pierson      92.95  46 eP       P        00 27 02.0 +2.2
       comp=Z,12nm,1.2s
TX31   Lajitas Ar. Si     93.34  57 eP       P        00 27 02.5 +1.0
TX31                                epP      sP       00 27 13.6 +1.3
TXAR   Lajitas Array      93.34  57 P        P        00 27 01.1  -0.5
       comp=Z,3.0nm,1.1s,baz=216,slow=6.2,SNR=8.8
TXAR                                LR       LR       01 01 41.6
       comp=Z,459nm,19.5s,baz=0.0,slow=31
MNTX   Cornudas Mount     93.51  55 PFAKE             00 27 10.0 +7.9
MNTX                                LR       LR
       comp=Z,461nm,19.0s
G08A   Pilot Rock         93.92  37 eP       P        00 27 04.9 +1.1
       comp=Z,11nm,1.1s
LNIG   Linares            93.92  63 eP       P        00 27 04.2 +0.1
       comp=Z,20nm,1.5s
DUG    Dugway, Tooele     93.94  44 PFAKE             00 27 20.0  +16
DUG                                 LR       LR
       comp=Z,713nm,20.0s
DUG    Dugway, Tooele     93.94  44 P        P        00 27 05.0 +1.0
       baz=230
CHTO   Chiang Mai         94.31 289 PFAKE             00 27 20.0  +14
CHTO                                LR       LR
       comp=Z,213nm,20.0s
TMUT   Trail Mountain     94.33  46 eP       P        00 27 07.9 +1.8
       comp=Z,7.7nm,1.1s
BJT    Baijiatuau         94.34 315 PFAKE             00 27 20.0  +14
BJT                                 LR       LR
       comp=Z,425nm,20.0s
HAWA   Hanford            94.39  36 PFAKE             00 27 20.0  +14
HAWA                                LR       LR
       comp=Z,835nm,20.0s
BMO    Blue Mountains     94.48  38 PFAKE             00 27 20.0  +14
BMO                                 LR       LR
       comp=Z,617nm,20.0s
SRU    San Rafael Swe     94.63  46 eP       P        00 27 08.6 +1.3
       comp=Z,8.4nm,1.2s
ANMO   Albuquerque        94.70  51 eP       P        00 27 08.8 +1.1
       comp=Z,3.1nm,1.0s
ANMO                                LR       LR
       comp=Z,667nm,20.0s
ANMO   Albuquerque        94.70  51 P        P        00 27 08.6 +0.8
       baz=234
ANMO   Albuquerque        94.70  51 P        P        00 27 07.1  -0.6
       comp=Z,2.2nm,1.0s,baz=296,slow=8.0,SNR=3.5
KMI    Kunming            94.77 297 P        P        00 27 06.8  -1.5
KMI                                 pmax     pmax
       comp=Z,10.0nm,0.7s
KMI                                 LR       LR
       comp=Z,250nm,13.7s
KMI                                 LR       LR
       comp=Z,170nm,8.1s
KMI                                 LR       LR
       comp=Z,250nm,13.1s
MA2    Magadan            95.16 345 eP       P        00 27 08.4  -0.6
       comp=Z,16nm,1.4s
MA2    Magadan            95.16 345 eP       P        00 27 08.4  -0.6
MA2                                 pmax     pmax
       comp=Z,16nm,1.4s
MA2    Magadan            95.16 345 P        P        00 27 06.5  -2.4
       comp=Z,4.0nm,0.8s,baz=136,slow=7.9,SNR=3.7
HLID   Hailey             95.19  41 eP       P        00 27 10.2 +0.5
       comp=Z,5.2nm,1.0s
HLID                                LR       LR
       comp=Z,471nm,20.0s
HLID   Hailey             95.19  41 P        P        00 27 10.7 +1.0
       baz=230
F10A   Beach Ranch, E     95.28  38 eP       P        00 27 10.1 +0.1
       comp=Z,12nm,1.3s
S22A   4UR Ranch, Cre     96.11  49 P        P        00 27 15.1 +0.9
       baz=234
AHID   Auburn Hatcher     96.56  43 PFAKE             00 27 30.0  +14
AHID                                LR       LR
       comp=Z,553nm,20.0s
JCT    Junction City      96.75  58 PFAKE             00 27 30.0  +13
JCT                                 LR       LR
       comp=Z,615nm,19.0s
SDCO   Great Sand Dun     96.96  50 eP       P        00 27 21.9 +3.8
       comp=Z,10.0nm,0.9s
SDCO                                LR       LR
       comp=Z,416nm,20.0s
CD2    Chengdu            97.18 302 eP       P        00 27 19.0   0.0
LPAZ   La Paz             97.27 114 LR       LR       01 04 32.3
       comp=Z,144nm,19.1s,baz=226,slow=31
BW06   Boulder Array      97.45  44 PFAKE             00 27 30.0  +10
BW06                                LR       LR
       comp=Z,727nm,19.0s
BW06   Boulder Array      97.45  44 P        P        00 27 20.6 +0.5
       baz=232
PDAR   Pinedale Array     97.45  44 P        P        00 27 19.6  -0.5
       comp=Z,0.6nm,0.7s,baz=197,slow=4.6,SNR=6.5
PDAR                                PP       PP       00 31 18.6 +0.7
       comp=Z,0.1nm,0.4s,baz=210,slow=1.2,SNR=3.7
PDAR                                LR       LR       01 03 24.8
       comp=Z,197nm,19.5s,baz=251,slow=31
MSO    Missoula           97.55  38 P        Pdif     00 27 21.8 +1.4
       baz=230
HHC    Hu-ho-hao-te       97.63 314 eP       Pdif     00 27 22.9 +2.0
HHC                                 SKS      SKSac    00 37 55.3  -0.6
HHC                                 S        S        00 38 43.8   0.0
HHC                                 pmax     pmax
       comp=Z,8.0nm,0.8s
HHC                                 pmax     pmax
       comp=Z,110nm,4.4s
HHC                                 LR       LR
       comp=Z,210nm,12.1s
HHC                                 LR       LR
       comp=Z,150nm,12.1s
HHC                                 LR       LR
       comp=Z,800nm,15.6s
SEY    Seymchan           97.86 347 P        P        00 27 20.4  -0.7
       comp=Z,7.9nm,1.1s,baz=148,slow=4.6,SNR=13
H17A   Grant Village      97.86  42 P        Pdif     00 27 23.8 +1.8
       baz=232
JTS    JuntasAbangare     97.88  83 PFAKE             00 27 30.0 +7.5
JTS                                 LR       LR
       comp=Z,249nm,19.0s
BOZ    Bozeman (W)        98.02  40 PFAKE             00 27 30.0 +7.5
BOZ                                 LR       LR
       comp=Z,591nm,19.0s
LKWY   Lake               98.07  42 PFAKE             00 27 40.0  +17
LKWY                                LR       LR
       comp=Z,1µm,19.0s
ISCO   Idaho Springs      98.08  48 PFAKE             00 27 40.0  +17
ISCO                                LR       LR
       comp=Z,653nm,20.0s
HIA    Hailar             98.32 324 PFAKE             00 27 30.0 +6.4
HIA                                 LR       LR
       comp=Z,330nm,20.0s
PAX    Paxson             98.44  14 epP      pP       00 27 40.1 +8.1
CPUP   Villa Florida      98.72 129 LR       LR       01 07 46.6
       comp=Z,123nm,18.1s,baz=228,slow=33
RLMT   Red Lodge          99.05  42 PFAKE             00 27 40.0  +13
RLMT                                LR       LR
       comp=Z,748nm,21.0s
COLA   College            99.68  13 PFAKE             00 27 40.0  +11
COLA                                LR       LR
       comp=Z,518nm,19.0s
ILAR   Eielson Array      99.77  13 P        Pdif     00 27 29.4  -0.2
       comp=Z,0.6nm,0.9s,baz=230,slow=5.4,SNR=3.6
ILAR                                LR       LR       01 10 41.0
       comp=Z,176nm,18.1s,baz=204,slow=34
LZH    Lanzhou            99.94 306 eP       Pdif     00 27 34.3 +3.0
LZH                                 pP       pwP      00 27 46.3  -0.5
LZH                                 sP       sP       00 27 50.3 +7.7
LZH                                 eS       S        00 39 02.4  -1.3
LZH                                 sS       sS       00 39 25.8 +8.3
LZH                                 SS       SS       00 45 56.3  -1.3
LZH                                 pmax     pmax
       comp=Z,13nm,1.0s
LZH                                 pmax     pmax
       comp=Z,70nm,5.4s
EGMT   Eagleton          100.52  39 PFAKE             00 27 50.0  +16
EGMT                                LR       LR
       comp=Z,600nm,21.0s
BILL   Bilibino          100.75 354 PFAKE             00 27 50.0  +16
BILL                                LR       LR
       comp=Z,247nm,20.0s
EGAK   Eagle             100.95  15 PFAKE             00 27 50.0  +15
EGAK                                LR       LR
       comp=Z,693nm,20.0s
CBKS   Cedar Bluff       101.32  51 PFAKE             00 27 50.0  +13
CBKS                                LR       LR
       comp=Z,577nm,19.0s
BCIP   Isla Barro Col    101.61  86 PFAKE             00 27 50.0  +11
BCIP                                LR       LR
       comp=Z,564nm,20.0s
DGMT   Dagmar            103.82  41 PFAKE             00 28 00.0  +12
DGMT                                LR       LR
       comp=Z,538nm,19.0s
ECSD   EROS Data Cent    105.87  48 PFAKE             00 32 20.0  +10
ECSD                                LR       LR
       comp=Z,738nm,20.0s
YKA    Yellowknife Ar    107.12  26 PKiKP    PKiKP    00 32 11.1  -0.3
       comp=Z,0.1nm,0.4s,baz=259,slow=1.8,SNR=3.8
YKA                                 PKKPbc   PKKPbc   00 43 27.2  -2.8
       comp=Z,0.5nm,0.7s,baz=38,slow=2.9,SNR=5.8
FFC    Flin Flon         108.29  36 PFAKE             00 32 30.0  +16
FFC                                 LR       LR
       comp=Z,472nm,20.0s
AGMN   Agassiz Nation    108.52  44 PFAKE             00 32 30.0  +16
AGMN                                LR       LR
       comp=Z,663nm,19.0s
JFWS   Jewell Farm       109.59  51 PFAKE             00 32 30.0  +13
JFWS                                LR       LR
       comp=Z,418nm,19.0s
GOGA   Godfrey           110.25  63 PFAKE             00 32 30.0  +12
GOGA                                LR       LR
       comp=Z,434nm,19.0s
EYMN   Ely               110.98  46 PFAKE             00 32 30.0  +11
EYMN                                LR       LR
       comp=Z,639nm,19.0s
COWI   Conover           111.67  48 PFAKE             00 32 30.0 +9.5
COWI                                LR       LR
       comp=Z,683nm,20.0s
NHSC   New Hope          112.62  64 PFAKE             00 32 30.0 +7.3
NHSC                                LR       LR
       comp=Z,404nm,19.0s
ABPO   Ambohimpanom      113.14 227 PFAKE             00 32 40.0  +16
ABPO                                LR       LR
       comp=Z,284nm,19.0s
ACSO   Alum Creek Sta    113.44  56 PFAKE             00 32 40.0  +16
ACSO                                LR       LR
       comp=Z,769nm,20.0s
AAM    Ann Arbor         113.77  54 PFAKE             00 32 40.0  +15
AAM                                 LR       LR
       comp=Z,394nm,19.0s
BLA    Blacksburg        114.09  60 PFAKE             00 32 40.0  +15
BLA                                 LR       LR
       comp=Z,644nm,19.0s
WMQ    Urumqi            114.47 308 ePKP     PKPdf    00 32 25.9  -0.1
WMQ                                 LR       LR
       comp=Z,210nm,15.9s
WMQ                                 LR       LR
       comp=Z,150nm,22.7s
WMQ                                 LR       LR
       comp=Z,210nm,23.9s
CNNC   Cliffs of the     115.21  63 PFAKE             00 32 40.0  +12
CNNC                                LR       LR
       comp=Z,658nm,20.0s
CBN    Corbin Frederi    116.71  60 PFAKE             00 32 40.0  +10
CBN                                 LR       LR
       comp=Z,954nm,19.0s
GRGR   Grenville         118.50  93 PFAKE             00 32 50.0  +15
GRGR                                LR       LR
       comp=Z,254nm,21.0s
MKAR   Makanchi Array    119.06 309 PKP      PKPdf    00 32 33.3  -1.4
       comp=Z,2.4nm,0.9s,baz=118,slow=0.8,SNR=14
MKAR                                PKKPbc   PKKPab   00 42 51.8 +2.6
       comp=Z,0.6nm,1.0s,baz=45,slow=1.9,SNR=3.9
MAKZ   Makanchi          119.28 309 ePKPdf   PKPdf    00 32 34.7  -0.4
ZALV   Zalesovo Beam     119.52 318 PKP      PKPdf    00 32 34.2  -1.0
       comp=Z,0.8nm,0.5s,baz=165,slow=2.9,SNR=4.5
NVS    Novosibirsk       120.64 318 ePKIKP   PKPdf    00 32 36.4  -1.0
KSH    Kashi             121.28 300 PKP      PKiKP    00 32 40.9 +1.4
KSH                                 sPKP              00 32 54.8
KSH                                 PP       PP       00 34 18.4 +7.6
KSH                                 SKS      SKSdf    00 39 43.0  -6.1
KSH                                 SKKS     SKKSac   00 41 03.1  -4.5
KSH                                 SS       SS       00 50 46.8 +3.7
KSH                                 AMB      AMB
       comp=Z,240nm,5.3s
KSH                                 LR       LR
       comp=Z,150nm,5.3s
KSH                                 LR       LR
       comp=Z,150nm,4.6s
KSH                                 LR       LR
       comp=Z,320nm,5.9s
NRIK   Noril'sk          121.42 336 PKP      PKPdf    00 32 38.0  -0.5
       comp=Z,1.0nm,0.3s,baz=0.0,slow=4.0,SNR=2.2
NIL    Nilore            121.45 292 PFAKE             00 32 50.0  +10
NIL                                 LR       LR
       comp=Z,168nm,21.0s
KURK   Kurchatov         122.43 313 ePKPdf   PKPdf    00 32 40.2  -0.8
KURK                                LR       LR
       comp=Z,452nm,19.0s
KURK   Kurchatov         122.43 313 ePKIKP   PKPdf    00 32 40.2  -0.8
KURK                                MLR      MLR
       comp=Z,452nm,19.0s
UCH    Uchtor            123.12 302 P        PKPdf    00 32 43.7 +0.4
       SNR=6.2
CHMS   Chumysh           123.15 303 P        PKPdf    00 32 42.8 +0.1
       SNR=5.2
AAK    Ala-Archa         123.24 303 ePKPdf   PKPdf    00 32 43.5 +0.4
AAK                                 LR       LR
       comp=Z,262nm,20.0s
AAK    Ala-Archa         123.24 303 ePKIKP   PKPdf    00 32 43.5 +0.4
AAK                                 MLR      MLR
       comp=Z,262nm,20.0s
USP    Ospenovka         123.40 303 P        PKPdf    00 32 43.2   0.0
       SNR=5.5
AML    Almayashu         123.68 302 P        PKPdf    00 32 45.0 +0.8
       SNR=6.5
EKS2   Erkin-Say         123.76 303 P        PKPdf    00 32 43.8  -0.2
       SNR=5.4
BRVK   Borovoye          127.89 315 PFAKE             00 33 00.0 +8.0
BRVK                                LR       LR
       comp=Z,127nm,19.0s
GEYT   Alibeck           134.43 293 PKP      PKPdf    00 33 03.8  -0.5
       comp=Z,6.4nm,1.0s,baz=284,slow=0.6,SNR=9.1
ARU    Arti              134.62 319 PFAKE             00 33 20.0  +15
ARU                                 LR       LR
       comp=Z,171nm,19.0s
ARU    Arti              134.62 319 i PKIKP  PKPdf    00 33 05.3 +1.3
ARU                                 SS       SS       00 53 57.1  +30
ASCN   Ascension         137.00 156 PFAKE             00 33 20.0 +8.4
ASCN                                LR       LR
       comp=Z,29µm,21.0s
MBAR   Mbarara           137.53 225 PFAKE             00 33 20.0 +7.1
MBAR                                LR       LR
       comp=Z,470nm,19.0s
LVZ    Lovozero          139.69 342 PFAKE             00 33 30.0  +15
LVZ                                 LR       LR
       comp=Z,225nm,19.0s
ARCES  ARCESS Array B    140.48 347 PKHKP    PKPpre   00 33 07.8
ARCES                                                 00 33 13.9
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ARCES                                 pmax     pmax
       comp=Z,5.0nm,1.0s
ARCES                                 pmax     pmax
       comp=Z,5.0nm,0.9s
ARCES  ARCESS Array B    140.48 347   PKhKP    PKPpre  00 33 07.8
       comp=Z,5.1nm,1.0s,baz=358,slow=3.6,SNR=7.1
ARCES                                 PKP      PKPdf   00 33 13.9  -0.6
       comp=Z,5.1nm,0.9s,baz=32,slow=2.2,SNR=7.5
RAYN   Ar Rayn           140.89 268   PFAKE            00 33 30.0  +11
RAYN                                  LR       LR
       comp=Z,338nm,20.0s
GROC   Groznyy           144.16 300  ePKIKP    PKPab   00 33 20.2 +0.7
GROC                                 e                 00 36 35.7
GROC                                  pmax     pmax
       comp=Z,22nm,1.2s
TBLG   Delisi            145.00 298  eP        PKPbc   00 33 23.3 +0.6
GNI    Garni             145.00 295  eP        PKPbc   00 33 23.9 +0.9
GNI    Garni             145.00 295   PFAKE            00 33 40.0  +13
GNI                                   LR       LR
       comp=Z,364nm,21.0s
TASB   TASBURUN-IGDIR    145.39 295  eP        PKPdf   00 33 24.8 +0.7
VRH    Novokhopyorsk     145.48 315  ePKIKP    PKPdf   00 33 23.2  -0.6
VRH                                   pmax     pmax
       comp=Z,20nm,0.9s
ZEI    Tsey              145.57 300  i PKP2    PKPdf   00 33 22.7  -1.8
ZEI                                   pmax     pmax
       comp=Z,39nm,1.1s
CLDR   Caldiran          145.62 293  eP        PKPdf   00 33 25.8 +1.0
CUKT   Cukurca           145.76 290  eP        PKPdf   00 33 25.5 +0.6
MOS    Moscow            145.95 324  ePKIKP    PKPdf   00 33 24.1  -0.3
MOS                                   pmax     pmax
       comp=Z,300nm,1.3s
MOS                                   pmax     pmax
       comp=Z,224nm,1.2s
MOS                                   pmax     pmax
       comp=N,82nm,1.1s
MOS                                   pmax     pmax
       comp=E,40nm,1.1s
GOF    Gofitskoye        145.97 304⇑iPKP2      PKPdf   00 33 26.0 +1.1
GOF                                   pmax     pmax
       comp=Z,120nm,1.0s
VANB   Van               146.01 292  eP        PKiKP   00 33 39.5  +10
ERCV   ERCIS-VAN         146.07 293  i P       PKiKP   00 33 34.0 +4.3
KBZ    Khabaz            146.22 302   PKPbc    PKPdf   00 33 26.3 +1.0
       comp=Z,33nm,1.0s,baz=132,slow=1.1,SNR=39
AKDM   Akdamar-Van       146.32 292  eP        PKPbc   00 33 27.9 +0.7
AGRB   Hanur-Agry        146.34 294  eP        PKPbc   00 33 28.2 +1.0
KIV    Kislovodsk        146.35 302   PFAKE            00 33 40.0  +10
KIV                                   LR       LR
       comp=Z,197nm,20.0s
KIV    Kislovodsk        146.35 302⇑iP         PKPdf   00 33 26.9 +1.2
KIV    Kislovodsk        146.35 302 ⇑PKP2      PKPdf   00 33 26.9 +1.2
LPSR   Galich'ya Gora    146.62 318  ePKP2     PKPdf   00 33 26.7 +1.0
LPSR                                  pmax     pmax
       comp=Z,160nm,1.0s
MLAZ   Malazgirt-MUS     146.68 293  eP        PKPbc   00 33 29.0 +0.8
OBN    Obninsk           146.78 324   PFAKE            00 33 40.0  +10
OBN                                   LR       LR
       comp=Z,113nm,20.0s
OBN    Obninsk           146.78 324⇑iP         PKPdf   00 33 27.3 +1.5
OBN    Obninsk           146.78 324⇑iPKP2      PKPbc   00 33 27.9 +0.2
OBN                                   pmax     pmax
       comp=Z,103nm,1.1s
VORR   Voronezh          146.81 317   PKIKP    PKPdf   00 33 25.0  -1.0
VORR                                  pmax     pmax
       comp=Z,250nm,0.8s
SENK   Senkaya-Erzuru    146.83 296  eP        PKPbc   00 33 29.6 +1.0
FINES  FINESS Array B    146.97 339   PKPbc    PKPdf   00 33 26.6 +0.6
       comp=Z,26nm,0.7s,baz=43,slow=3.8,SNR=93
VSR    Storozhevoye      147.00 316  ePKP2     PKPdf   00 33 27.8 +1.4
VSR                                   pmax     pmax
       comp=Z,130nm,1.2s
GURO   Guroymak-BITLI    147.07 292  eP        PKPdf   00 33 28.9 +1.8
DAGI   Agillar           147.14 297  i P       PKPab   00 33 31.3 +0.2
DAGI                                  IAML_P
       comp=Z,145nm,0.7s
HOMI   Horasan           147.18 295  i P       PKPdf   00 33 28.8 +1.4
HOMI                                  IAML_P
       comp=Z,3.5nm,0.1s
BATM   Batumi            147.28 298⇑iP         PKPbc   00 33 29.5  -0.1
DBAD   Bademkaya         147.31 297  i P       PKPbc   00 33 31.3 +1.5
DBAD                                  IAML_P
       comp=Z,622nm,0.7s
DBOC   Borcka            147.32 297  i P       PKPdf   00 33 28.8 +1.4
DBOC                                  IAML_P
       comp=Z,379nm,0.2s
BCA    Borcka            147.34 298  eP        PKPbc   00 33 30.5 +0.7
BCA    Borcka            147.34 298⇓iP         PKPbc   00 33 30.1 +0.3
VRTB   Varto-Mus         147.53 293  eP        PKPbc   00 33 32.3 +1.7
SVAN   Silvan-Diyarba    147.72 291  eP        PKPbc   00 33 31.9 +1.0
ECAT   Cat-ERZURUM       147.90 294  i P       PKPbc   00 33 32.8 +1.2
CHOM   Cayeli-Rize       148.01 297  eP        PKPbc   00 33 32.4 +0.8
BNGB   Bingl             148.14 293  eP        PKPbc   00 33 33.4 +1.3
YEDI   Yedisu-Bingol     148.24 294  eP        PKPbc   00 33 33.7 +1.3
KOPT   Kop Dagi          148.26 295  i P       PKiKP   00 33 34.6 +0.3
KOPT                                  IAML_P
       comp=Z,542nm,0.6s
HANI   Diyarbakir_Han    148.35 292  i P       PKPbc   00 33 33.6 +0.9
HANI                                  IAML_P
       comp=Z,42nm,0.2s
BAYB   BAYBURT           148.44 295  i P       PKPbc   00 33 33.4 +0.4
BAYB                                  IAML_P
       comp=Z,1μm,1.1s
BAYT   Aydıntepe-Bayb    148.52 296  eP        PKPbc   00 33 34.7 +1.5
KTUT   Trabzon           148.77 297  eP        PKPbc   00 33 34.4 +0.9
MACK   Trabzon           148.77 297  i P       PKPbc   00 33 34.1 +0.5
MACK                                  IAML_P
       comp=Z,224nm,0.2s
EUZM   Uzumlu            148.89 294  i P       PKiKP   00 33 35.8 +0.4
EUZM                                  IAML_P
       comp=Z,571nm,0.3s
VSU    Vasula            149.00 335  eP        PKPdf   00 33 31.8 +2.4
VSU                                   IAmb     IAmb    00 33 38.3
       comp=Z,186nm,1.0s
TNCL   Tunceli-Merkez    149.02 293  i P       PKiKP   00 33 37.8 +2.1
TNCL                                  IAML_P
       comp=Z,198nm,0.7s
KELT   Kelkit            149.21 295  i P       PKPbc   00 33 35.5 +0.6
KELT                                  IAML_P
       comp=Z,879nm,1.1s
ELZG   Elazig            149.47 292  i P       PKPbc   00 33 37.0 +1.4
ELZG                                  IAML_P
       comp=Z,713nm,0.6s
URFA   Urfa              149.58 290  eP        PKPbc   00 33 36.9 +1.1
REFA   Refahiye_ERZN     149.62 294  i P       PKPbc   00 33 37.2 +1.3
REFA                                  IAML_P
       comp=Z,1μm,0.6s
KEMA   Kemaliye          149.83 294  i P       PKiKP   00 33 37.8 +0.5
KEMA                                  IAML_P
       comp=Z,754nm,1.0s
SUSE   Susehri           150.01 296  i P       PKPbc   00 33 37.5 +0.7
SUSE                                  IAML_P
       comp=Z,750nm,1.0s
ORDU   Ordu-Boztepe      150.21 297  i P       PKPbc   00 33 37.0  -0.1
ORDU                                  IAML_P
       comp=Z,41nm,0.2s
HEKM   Malatya_Hekimh    150.26 293  i P       PKiKP   00 33 39.6 +1.2
HEKM                                  IAML_P
       comp=Z,360nm,0.4s
AKCD   Akcadag           150.30 292  i P       PKPbc   00 33 38.3 +0.7
AKCD                                  IAML_P
       comp=Z,804nm,1.1s
CUZAR  Zara_SIVAS        150.36 295  i P       PKPbc   00 33 38.6 +0.9
CUKAN  kangal_SIVAS      150.63 294  i P       PKiKP   00 33 39.6 +0.6
DARE   Darende-Malaty    150.64 292   P        PKiKP   00 33 39.7 +0.7
NB2    NORSAR Subarra150.65 351       PKP      PKPdf   00 33 35.6 +3.5
       comp=Z,1.8nm,0.6s,baz=17,slow=2.6
NOA    NORSAR Array B 150.65 351      PKPbc    PKPbc   00 33 36.4  -1.2
       comp=Z,1.6nm,0.8s,baz=21,slow=4.5,SNR=17
RSDY   Resadiye-TOKAT 150.66 296     eP        PKiKP   00 33 39.6 +0.7
GAZ    Gaziantep         150.86 289  eP        PKPbc   00 33 39.9 +1.0
SVSK   Karacayir         150.95 295  eP        PKiKP   00 33 40.3 +0.9
ERBA   Erbaa             151.07 297  i P       PKPbc   00 33 39.6 +0.4
ERBA                                  IAML_P
       comp=Z,548nm,0.6s
KMRS   Kahramanmaras     151.11 290  i P       PKPab   00 33 51.0 +3.8
IZAR   Zarasai           151.13 331  eP        PKPbc   00 33 38.6  -0.1
IZAR                                  IAmb     IAmb    00 33 48.0
       comp=Z,36nm,1.2s
CUALT  Altinyayla-SIV    151.18 294  i P       PKPbc   00 33 39.0  -0.7
IDID   Didziasalis       151.23 330  eP        PKPbc   00 33 38.9  -0.1
IDID                                  IAmb     IAmb    00 33 41.9
       comp=Z,11nm,0.8s
ISAL   Salakas           151.30 331  eP        PKPbc   00 33 39.5 +0.4
ISAL                                  IAmb     IAmb    00 33 41.0
       comp=Z,9.3nm,0.9s
IIGN   Ignalina          151.42 331  eP        PKPbc   00 33 39.3  -0.2
IIGN                                  IAmb     IAmb    00 33 41.4
       comp=Z,11nm,0.8s
NACGM  Naroch            151.49 330  e         PKPbc   00 33 39.0  -0.6
KVT    Kavak             151.56 298  eP        PKiKP   00 33 41.6 +0.8
TAHT   Tahtakopru-Hat    151.66 288  i P       PKPbc   00 33 41.7 +1.0
KOZT   Kozan             151.97 290  eP        PKPbc   00 33 42.1 +0.8
CEYT   Ceyhan            152.03 289  eP        PKPbc   00 33 41.3  -0.1
SNOP   Sinop             152.05 300  eP        PKPdf   00 33 38.2 +3.5
YURE   YUREGIR           152.12 289  eP        PKiKP   00 33 42.8 +0.8
SIM    Simferopol'       152.19 306c iPKIKP    PKPbc   00 33 41.0  -0.6
SIM                                   pmax     pmax
       comp=Z,48nm,1.1s
YOZ    Yozgat            152.26 295  eP        PKPbc   00 33 42.5 +0.4
KRTS   Karatas           152.32 288  eP        PKPdf   00 33 39.0 +3.7
AKASG  Malin Array Be    152.86 321   PKPbc    PKPbc   00 33 40.6  -2.2
       comp=Z,11nm,0.9s,baz=55,slow=2.7,SNR=23
KIEV   Kiev              152.87 321⇓iP         PKPbc   00 33 43.0 +0.1
KIEV   Kiev              152.87 321 ⇓PKIKP     PKPbc   00 33 43.0 +0.1
LIC    Lamto             153.20 164  ePKP2     PKPbc   00 33 45.1 +0.4
       comp=Z,45nm,0.7s
EREN   Erenkoy           153.27 286  eP        PKPbc   00 33 45.2 +1.0
KIZK   Mersin            153.31 288  eP        PKPbc   00 33 44.7 +0.4
KIC    Kosan Boka        153.40 165  ePKP2     PKiKP   00 33 46.1 +0.8
       comp=Z,38nm,1.1s
BRTR   Keskin Array B    153.55 295   PKP      PKPdf   00 33 37.7 +0.5
       comp=Z,0.6nm,1.0s,baz=132,slow=2.1,SNR=4.3
BRTR                                  PKPbc    pPKPdf  00 33 43.5  -2.1
       comp=Z,7.3nm,1.0s,baz=134,slow=3.6,SNR=26
BRTR                                  PKPab    sPKPbc  00 33 56.4 +0.2
       comp=Z,5.6nm,0.8s,baz=117,slow=5.0,SNR=11
TIC    Toumodi           153.61 164  ePKP2     PKPbc   00 33 46.5 +0.8
SUW    Suwalki           153.61 331  ePKP      PKPab   00 33 56.0  -1.0
SUW    Suwalki           153.61 331  ePKP2     PKPab   00 33 56.0  -1.0
DBIC   Dimbokro          153.67 164   PKPbc    PKPbc   00 33 45.4  -0.3
       comp=Z,8.8nm,1.2s,baz=140,slow=7.1,SNR=3.8
DBIC                                  PKPab    PKPab   00 33 58.8 +0.5
       comp=Z,5.1nm,0.8s,baz=118,slow=2.1,SNR=4.9
IKL    Isikli            153.68 287  eP        PKPbc   00 33 45.3 +0.2
AKKU   Akkuyu-Mersin     153.79 287  eP        PKPab   00 34 00.9 +2.5
CSS    Mathiatis         153.93 284  eP        PKiKP   00 33 46.8 +1.0
AFSR   Afar-Bala (An     154.01 295  eP        PKPbc   00 33 44.1  -1.8
BERE   Bereket-Mersin    154.06 288  eP        PKiKP   00 33 47.1 +0.9
ANTO   Ankara            154.18 296   PFAKE            00 33 50.0 +3.8
ANTO                                  LR       LR
       comp=Z,189nm,19.0s
ANTO   Ankara            154.18 296⇑iP         PKPbc   00 33 46.2  0.0
ANTO   Ankara            154.18 296 ⇑PKIKP     PKPbc   00 33 46.2  0.0
CHBY   Cihanbeyli        154.24 293  eP        PKiKP   00 33 49.0 +2.6
LEF    Lefka             154.30 285   P        PKPdf   00 33 27.0  -11
LADK   Ladik-KONYA       154.68 292  eP        PKPab   00 33 58.4  -3.9
BEL    Belsk             156.20 331  ePKP      PKPab   00 34 08.0  -0.1
BEL    Belsk             156.20 331  ePKP2     PKPab   00 34 08.0  -0.1
GKP    Gorka Klasztor    156.39 337  ePKP      PKPab   00 34 08.6  -0.3
GKP    Gorka Klasztor    156.39 337  ePKP2     PKPab   00 34 08.6  -0.3
PETR   Petresti          156.45 312⇓iP         PKPab   00 34 10.9 +1.4
ESK    Eskdalemuir       156.70   8   PFAKE            00 33 50.0 +9.2
ESK                                   LR       LR
       comp=Z,549nm,19.0s
VRI    Vrincioaia        156.70 313⇑iP         PKPab   00 34 10.1  -0.5
VRI    Vrincioaia        156.70 313 ⇑PKP2      PKPab   00 34 10.1  -0.5
BURAR  Bucovina Array    156.74 318⇑iP         PKPab   00 34 10.5  -0.3
BURAR  Bucovina Array    156.74 318 ⇑PKP2      PKPab   00 34 10.5  -0.3
PLOR   Plostina          156.76 313⇑iP         PKPab   00 34 11.4 +0.5
PLOR   Plostina          156.76 313 ⇑PKP2      PKPab   00 34 11.4 +0.5
KWP    Kalwaria Pacla    156.87 324  ePKP      PKPab   00 34 10.6  -0.5
KWP    Kalwaria Pacla    156.87 324  ePKP2     PKPab   00 34 10.6  -0.5
MLR    Muntele Rosu      157.36 312⇑iP         PKPab   00 34 14.8 +1.2
MLR    Muntele Rosu      157.36 312 ⇑PKP2      PKPab   00 34 14.8 +1.2
DOPR   Dopca             157.48 314⇑iP         PKPdf   00 33 49.2 +7.1
UZH    Uzhgorod          157.72 323⇑iPKP2      PKPab   00 34 15.0 +0.2
OJC    Ojcow             157.81 329  ePKP      PKPab   00 34 14.4  -0.8
OJC    Ojcow             157.81 329  ePKP2     PKPab   00 34 14.4  -0.8
TRPA   Tarpa             157.91 322⇑iP         PKPab   00 34 15.2  -0.4
NIE    Niedzica          158.16 327  ePKP      PKPab   00 34 16.3  -0.5
NIE    Niedzica          158.16 327  ePKP2     PKPab   00 34 16.3  -0.5
ARR    Arges             158.24 313⇓iP         PKPab   00 34 17.9 +0.6
DRGR                     158.61 318⇑iP         PKPab   00 34 18.5  -0.4
DRGR                     158.61 318 ⇑PKP2      PKPab   00 34 18.5  -0.4
KSP    Ksiaz             158.73 335  ePKP      PKPab   00 34 18.8  -0.3
KSP    Ksiaz             158.73 335  ePKP2     PKPab   00 34 18.8  -0.3
LANS   Liptovska Anna    158.74 327  ePKP2     PKPab   00 34 19.3  0.0
LANS   Liptovska Anna    158.74 327  eP        PKPab   00 34 19.3  0.0
MORC   Moravsky Berou    159.10 331⇑iP         PKPab   00 34 20.0  -0.8
MORC   Moravsky Berou    159.10 331 ⇑PKP2      PKPab   00 34 20.0  -0.8
MORC   Moravsky Berou    159.10 331  ePKP      PKPab   00 34 20.3  -0.5
UPC    Upice             159.11 335  ePKPAB    PKPab   00 34 20.7  -0.1
UPC                                   AMS      AMS     01 46 30.0
       comp=Z,300nm,19.2s
UPC    Upice             159.11 335  ePKP2     PKPab   00 34 20.7  -0.1
UPC                                   MLR      MLR
       comp=Z,300nm,19.2s
DPC    Dobruska-Polom 159.12 334     ePKPAB    PKPab   00 34 20.9  0.0
DPC                                   AMS      AMS     01 59 00.0
       comp=Z,300nm,17.8s
DPC    Dobruska-Polom 159.12 334     ePKP2     PKPab   00 34 20.9  0.0
DPC                                   MLR      MLR
       comp=Z,300nm,17.8s
PSZ    Piszkesteto       159.39 324⇓iP         PKPab   00 34 22.3 +0.1
PSZ    Piszkesteto       159.39 324  ePKPab    PKPab   00 34 21.0  -1.2
PSZ    Piszkesteto       159.39 324 ⇓PKP2      PKPab   00 34 22.3 +0.1
CLL    Collm             159.40 340  i PKPab   PKPab   00 34 21.0  -1.0
       comp=Z,25nm,1.1s
CLL                                  eSS       SS      00 58 12.0 +5.7
CLL                                  eSSS      SSS     01 04 54.0
CLL                                   Lm       MLR     01 52 00.0
       comp=N,200nm,18.5s
CLL                                   Lm       MLR     01 52 00.0
       comp=E,100nm,19.8s
CLL                                   Lm       MLR     01 52 00.0
       comp=Z,200nm,18.6s
CLL    Collm             159.40 340  i PKP2    PKPab   00 34 21.0  -1.0
CLL                                   pmax     pmax
       comp=Z,25nm,1.1s
VYHS   Vyhne             159.50 327  ePKP2     PKPab   00 34 22.4  -0.2
VYHS                                  pmax     pmax
       comp=Z,13nm,1.1s
VYHS   Vyhne             159.50 327  eP        PKPab   00 34 22.4  -0.2
BRG    Berggiesshubel    159.50 338  ePKP      PKPab   00 34 17.8  -4.7
       comp=Z,5.6nm,1.3s
BRG    Berggiesshubel    159.50 338  i PKP     PKPab   00 34 22.1  -0.4
       comp=Z,21nm,1.1s
       comp=N,230nm,15.4s
       comp=E,152nm,19.2s
       comp=Z,405nm,21.8s
BRG    Berggiesshubel    159.50 338  ePKP2     PKPab   00 34 17.8  -4.7
BRG                                   pmax     pmax
       comp=Z,6.0nm,1.3s
BRG                                   MLR      MLR
       comp=N,230nm,15.4s
BRG                                   MLR      MLR
       comp=E,152nm,19.2s
BRG                                   MLR      MLR
       comp=Z,405nm,21.8s
PVCC   Panska Ves        159.60 337  ePKPAB    PKPab   00 34 23.3 +0.4
PVCC                                  AMS      AMS     01 52 50.0
       comp=Z,300nm,18.2s
PVCC   Panska Ves        159.60 337  ePKP2     PKPab   00 34 23.3 +0.4
PVCC                                  MLR      MLR
       comp=Z,300nm,18.2s
JAVC   Velka Javorina    159.75 329  ePKP      PKPab   00 34 24.1 +0.4
VRAC   Vranov            159.85 332⇑iP         PKPab   00 34 23.7  -0.4
VRAC   Vranov            159.85 332 ⇑PKP2      PKPab   00 34 23.7  -0.4
VRAC   Vranov            159.85 332  ePKP      PKPab   00 34 23.7  -0.4
GOPC   GO Pecny, Ondr    160.04 335  ePKPAB    PKPab   00 34 24.6  -0.3
GOPC                                  AMS      AMS     01 51 10.0
       comp=Z,400nm,23.1s
GOPC   GO Pecny, Ondr    160.04 335  ePKP2     PKPab   00 34 24.6  -0.3
GOPC                                  MLR      MLR
       comp=Z,400nm,23.1s
PRU    Pruhonice         160.07 336   AMS      AMS     01 47 00.0
       comp=Z,300nm,16.9s
SMOL   Smolenice         160.12 329  ePKP2     PKPab   00 34 25.2  0.0
SMOL   Smolenice         160.12 329  eP        PKPab   00 34 25.2  0.0
KRUC   Moravsky          160.13 331  ePKP      PKPab   00 34 24.9  -0.3
TREC   Trest             160.30 333  ePKPAB    PKPab   00 34 25.9  -0.1
TREC                                  AMS      AMS     01 56 10.0
       comp=Z,300nm,25.2s
TREC   Trest             160.30 333  ePKP2     PKPab   00 34 25.9  -0.1
TREC                                  MLR      MLR
       comp=Z,300nm,25.2s
ZST    Bratislava        160.50 329  ePKP2     PKPab   00 34 26.1  -0.8
ZST    Bratislava        160.50 329  eP        PKPab   00 34 26.1  -0.8
TORD   Torodi Ar. Bea    160.92 179   PKP      PKPdf   00 33 46.6  -0.4
       comp=Z,1.4nm,1.1s,baz=264,slow=2.7,SNR=4.4
TORD                                  PKPab    PKPab   00 34 29.9 +0.5
       comp=Z,6.2nm,1.0s,baz=186,slow=2.7,SNR=14
KHC    Kasperske Hory    161.13 336  ePKPAB    PKPab   00 34 28.9  -0.7
KHC                                   AMS      AMS     01 54 10.0
       comp=Z,400nm,16.0s
KHC    Kasperske Hory    161.13 336  ePKP2     PKPab   00 34 28.9  -0.7
KHC                                   MLR      MLR
       comp=Z,400nm,16.0s
SOP    Sopron            161.13 329  ePKPab    PKPab   00 34 27.1  -2.5
CONA   Conrad Observa    161.24 330  i PKPab   PKPab   00 34 30.4 +0.1
       comp=Z,18nm,1.4s,SNR=6.0
GERES  GERESS Array B 161.33 336      PKPab    PKPab   00 34 29.4  -1.2
       comp=Z,4.8nm,1.0s,baz=42,slow=4.2,SNR=16
ARSA   Arzberg           161.91 329  i PKPab   PKPab   00 34 32.5  -0.6
       comp=Z,11nm,1.2s
MOA    Molln             161.95 333  i PKPab   PKPab   00 34 32.8  -0.4
       comp=Z,9.7nm,1.2s
SOKA   Soboth            162.57 329  i PKPab   PKPab   00 34 35.1  -1.0
       comp=Z,15nm,1.1s
OBKA   Obir              162.91 330  i PKPab   PKPab   00 34 36.2  -1.4
       comp=Z,6.1nm,1.0s
KBA    Koelnbreinsper    162.94 333  ePKPab    PKPab   00 34 37.4  -0.4
       comp=Z,5.7nm,1.0s
MYKA   Terra Mystica     163.19 332  i PKPab   PKPab   00 34 37.5  -1.3
       comp=Z,5.1nm,0.7s
BFO    Black Forest      163.33 345   PFAKE            00 34 00.0  +11
BFO                                   LR       LR
       comp=Z,13nm,19.0s
WATA   Walderalm         163.35 337  i PKPab   PKPab   00 34 38.9  -0.7
       comp=Z,5.0nm,0.8s
RETA   Reutte            163.48 339  i PKPab   PKPab   00 34 39.7  -0.3
       comp=Z,27nm,1.2s,SNR=7.3
MOTA   Moosalm           163.50 338  i PKPab   PKPab   00 34 40.1  -0.1
       comp=Z,22nm,1.1s,SNR=11
ABTA   Abfaltersbach     163.53 334  i PKPab   PKPab   00 34 39.5  -0.8
       comp=Z,15nm,1.0s
SQTA   Sankt Quirin      163.57 338  i PKPab   PKPab   00 34 40.2  -0.3
       comp=Z,21nm,1.3s,SNR=7.1
FETA   Feichten          163.90 338  i PKPab   PKPab   00 34 41.9  -0.1
       comp=Z,16nm,1.1s
DAVA   Damuels           163.91 341  i PKPab   PKPab   00 34 41.8  -0.3
       comp=Z,21nm,1.1s,SNR=5.6
ESDC   Sonseca Array     171.16  32   PKP      PKPdf   00 33 55.5 +1.0
       comp=Z,0.1nm,0.3s,baz=309,slow=4.3,SNR=2.5
ESDC                                  PKPab    PKPab   00 35 12.6  -1.6
       comp=Z,0.9nm,0.7s,baz=287,slow=3.5,SNR=4.5
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*IDC **25** 00:17:13.7±0.7, 32.°09S×178.°00W, h0^{km}, mb4.4/9, mb1 4.6/11, mb1mx4.3/50, mbtmp4.4/11, ML4.4/2, Error ellipse: s-maj=24.0km s-min=18.8km az=119.0*

*ISCJB **25** 00:17:15.7±0.7, 32.°17S±0.°06×178.°1W±0.°1, h24^{km}, mb4.4/10, Error ellipse: s-maj=16.5km s-min=6.9km az=18.4*

*NEIC **25** 00:17:15.1±0.3, 32.°05S×177.°96W, h10^{km}, mb4.7/2, Error ellipse: s-maj=10.6km s-min=9.4km az=126.0*

ISC 25 00:17:17.2±0.7**, 32.°13S**±0.°08×**178.°0W**±0.°1**, h24^{km}, n27, σ0.^{s}88**/30**, mb4.5**/9**, South of Kermadec Islands**

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op       ISC      h  m  s   ISC
RAO    Raoul Island        2.87   2   Pn       Pn      00 17 59.5  -2.0
       115nm,0.3s,baz=102,slow=20,SNR=5.9
RAO                                   Sn       Sn      00 18 35.8 +0.5
       108nm,0.3s,baz=287,slow=19,SNR=2.5
URZ    Urewera             7.29 212   Pn       Pn      00 19 00.5  -1.5
       2.5nm,0.3s,baz=27,slow=6.8,SNR=2.2
URZ                                   Sn       Sn      00 20 22.9  -1.1
       14nm,0.3s,baz=197,slow=17,SNR=5.9
CTA    Charters Tower     34.08 282   P        P       00 24 00.1 +0.1
       5.7nm,0.9s,baz=119,slow=12,SNR=2.5
CTAO   Charters Tower     34.08 282  eP        P       00 24 00.7 +0.8
       34nm,1.5s
STKA   Stephens Creek     34.09 259   P        P       00 24 01.1 +1.2
       2.5nm,0.6s,baz=124,slow=8.1,SNR=3.2
ASAR   Alice Springs      43.01 269   P        P       00 25 15.5 +0.6
       3.8nm,0.8s,baz=105,slow=7.4,SNR=5.5
WRAB   Tennant Creek      44.15 274  eP        P       00 25 24.8 +0.7
       7.3nm,1.2s
WRA    Warramunga Arr     44.15 274   P        P       00 25 24.5 +0.4
       7.2nm,1.0s,baz=112,slow=8.0,SNR=6.2
FITZ   Fitzroy Crossi     52.34 271   P        P       00 26 27.6 +0.2
       4.1nm,0.8s,baz=162,slow=6.4,SNR=2.9
CASY   Casey              53.60 208  eP        P       00 26 36.4 +0.5
QSPA   South Pole Qui     57.98 180   P        P       00 27 08.9 +1.3
       5.3nm,0.8s,baz=19,slow=6.5,SNR=3.9
PETK   Petropavlovsk-     87.48 346   P        P       00 30 02.0  -0.3
       4.8nm,0.9s,baz=153,slow=10.0,SNR=3.8
TRQA   Tornquist          88.24 135  eP        P       00 30 06.9 +0.3
NVAR   Mina Array Bea     89.53  43   P        P       00 30 14.0 +1.4
       2.9nm,1.1s,baz=227,slow=7.2,SNR=4.6
PDAR   Pinedale Array     97.41  44   P        Pdif    00 30 47.8  -1.1
       0.2nm,0.4s,baz=235,slow=3.2,SNR=3.4
MKAR   Makanchi Array    118.85 309   PKP      PKiKP   00 36 03.2  -0.1
       0.5nm,0.8s,baz=98,slow=2.9,SNR=3.6
ZALV   Zalesovo Beam     119.29 318   PKP      PKiKP   00 36 03.1  -0.7
       0.2nm,0.3s,baz=149,slow=3.0,SNR=2.6
KMBO   Kilima Mbogo      133.00 232   PKP      PKiKP   00 36 31.7  -1.1
       1.5nm,0.8s,baz=151,slow=6.8,SNR=7.3
GEYT   Alibeck           134.24 294   PKP      PKiKP   00 36 34.4 +0.1
       2.2nm,0.8s,baz=114,slow=6.6,SNR=4.3
KBZ    Khabaz            146.02 302   PKPbc    PKPab   00 36 55.7 +0.4
       3.4nm,1.0s,baz=117,slow=6.8,SNR=4.3
FINES  FINESS Array B    146.75 339   PKPbc    PKPab   00 36 56.7  -0.8
       5.0nm,0.6s,baz=57,slow=3.8,SNR=8.0
NB2    NORSAR Subarra150.45 351       PKP      PKiKP   00 37 06.4  -0.3
       comp=Z,1.0nm,0.7s,baz=16,slow=2.6
NOA    NORSAR Array B 150.45 351      PKPbc    PKiKP   00 37 06.5  -0.3
       comp=Z,1.2nm,0.7s,baz=14,slow=4.1,SNR=4.8
AKASG  Malin Array Be    152.63 321   PKPbc    PKiKP   00 37 11.1  -0.4
       comp=Z,2.1nm,0.8s,baz=56,slow=2.7,SNR=4.3
AKASG                                 PKPab    PKPab   00 37 23.4 +1.4
       comp=Z,0.5nm,0.4s,baz=56,slow=2.8,SNR=4.4
BRTR   Keskin Array B    153.35 295   PKPbc    PKiKP   00 37 13.5  -0.1
       comp=Z,1.2nm,0.8s,baz=145,slow=4.2,SNR=4.9
BRTR                                  PKPab    PKPab   00 37 25.8 +0.2
       comp=Z,1.2nm,0.9s,baz=124,slow=3.8,SNR=4.5
TORD   Torodi Ar. Bea    161.10 179   PKPab    PKPab   00 37 58.4  -0.7
       comp=Z,2.2nm,1.1s,baz=172,slow=1.6,SNR=3.6
GERES  GERESS Array B 161.11 335      PKPab    PKPab   00 37 57.8  -0.7
       comp=Z,0.5nm,0.7s,baz=80,slow=2.4,SNR=3.0
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*IDC **25** 00:23:03.0±1.1, 32.°22S×177.°99W, h0^{km}, mb4.1/4, mb1 4.3/5, mb1mx4.0/40, mbtmp4.1/5, ML3.7/1, Error ellipse: s-maj=38.3km s-min=28.9km az=155.0*

ISC 25 00:23:06.7±1.2**, 32.°3S**±0.°1×**178.°0W**±0.°2**, h24^{km}, n13, σ0.^{s}65**/15**, mb4.1**/4**, South of Kermadec Islands**

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op       ISC      h  m  s   ISC
URZ    Urewera             7.15 212   Pn       Pn      00 24 50.2 +0.4
       1.2nm,0.3s,baz=306,slow=3.8,SNR=3.6
URZ                                   Sn       Sn      00 26 09.4  -0.8
       3.9nm,0.3s,baz=236,slow=20,SNR=7.0
STKA   Stephens Creek     34.08 260   P        P       00 29 50.3 +1.0
       1.8nm,0.7s,baz=130,slow=12,SNR=3.8
CTA    Charters Tower     34.13 282   P        P       00 29 49.3  -0.6
       5.0nm,0.9s,baz=108,slow=9.6,SNR=2.7
ASAR   Alice Springs      43.03 269   P        P       00 31 04.5  -0.1
       1.5nm,0.8s,baz=114,slow=8.1,SNR=7.5
WRA    Warramunga Arr     44.19 274   P        P       00 31 13.9  0.0
       1.4nm,0.4s,baz=113,slow=7.9,SNR=27
MKAR   Makanchi Array    118.97 309   PKP      PKPdf   00 41 51.6  -1.4
       0.3nm,0.8s,baz=73,slow=2.0,SNR=3.3
FINES  FINESS Array B    146.92 339   PKPbc    PKPbc   00 42 46.5 +0.3
       3.3nm,0.7s,baz=46,slow=3.8,SNR=19
NB2    NORSAR Subarra150.62 351       PKP      PKPbc   00 42 55.9  0.0
       comp=Z,1.3nm,0.8s,baz=15,slow=4.3
NOA    NORSAR Array B 150.62 351      PKPbc    PKPbc   00 42 55.6  -0.3
       comp=Z,0.8nm,0.9s,baz=148,slow=2.5,SNR=3.9
AKASG  Malin Array Be    152.78 320   PKPbc    PKPbc   00 43 00.8  -0.3
       comp=Z,0.1nm,0.3s,baz=45,slow=1.9,SNR=3.8
BRTR   Keskin Array B    153.44 295   PKPbc    PKiKP   00 43 04.0 +0.7
       comp=Z,0.7nm,0.8s,baz=143,slow=4.3,SNR=4.5
BRTR                                  PKPab    PKPab   00 43 15.7 +0.3
       comp=Z,0.4nm,0.5s,baz=160,slow=1.7,SNR=3.7
TORD   Torodi Ar. Bea    160.93 179   PKPab    PKPab   00 43 48.1 +0.3
       comp=Z,1.1nm,1.1s,baz=182,slow=3.6,SNR=2.9
GERES  GERESS Array B 161.27 335      PKPab    PKPab   00 43 48.7  -0.1
       comp=Z,0.3nm,0.6s,baz=52,slow=5.4,SNR=2.9
```

WEL 25 00:33:03.4±, **39°.3S**±0°.8×**17°7E**±°, **h23km**±2km, **ML3.5**/13, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHHZ	Waihua	0.21	328	P	Pb	00 33 08.8	-0.1
WHHZ				S	Sb	00 33 14.0	+1.4
ARHZ	Aropaoanui	0.29	268	P	Pb	00 33 10.3	+0.1
ARHZ				S	Sb	00 33 16.3	+1.5
KNZ	Kokohu	0.33	45	P	Pb	00 33 11.1	+0.5
RAHZ	Arahi	0.40	326	P	Pb	00 33 12.1	+0.2
RAHZ				S	Sn	00 33 19.4	-1.3
MHGZ	Mahia Peninsul	0.43	77	P	Pb	00 33 13.2	+0.9
CKHZ	Cape Kidnapper	0.47	209	P	Pb	00 33 13.7	+0.7
CKHZ				S	Sn	00 33 22.5	+0.2
NMHZ	Naumai	0.47	289	P	Pb	00 33 13.3	+0.2
NMHZ				S	Sn	00 33 21.1	-1.3
SNGZ	Shannon Statio	0.47	357	P	Pb	00 33 13.4	+0.3
SNGZ				S	Sn	00 33 21.5	-0.9
PRGZ	Paritu Road	0.52	50	P	Pn	00 33 14.9	-0.6
MCHZ	McNeill Hill	0.56	250	P	Pn	00 33 15.4	-0.6
MTHZ	Maungataniwha	0.58	314	P	Pb	00 33 14.6	-0.2
MTHZ				P	Pn	00 33 14.7	-1.6
RIGZ	Rimuhau	0.62	29	P	Pb	00 33 16.1	+0.4
RIGZ				P	Pn	00 33 16.1	-0.8
KAHZ	Kahuranaki	0.66	215	P	Pb	00 33 16.8	+0.5
BKZ	Black Stump Fm	0.69	277	P	Pb	00 33 16.7	-0.1
RTZ	Ruatahuna	0.71	334	P	Pb	00 33 16.9	-0.2
RTZ				P	Pb	00 33 16.8	-0.2
KWHZ	Kaweka Forest	0.76	257	P	Pb	00 33 18.3	+0.4
KWHZ				P	Pn	00 33 18.4	-0.3
RAGZ	Rawiri	0.76	3	P	Pb	00 33 18.0	+0.1
MRHZ	Matea Rd	0.85	299	P	Pb	00 33 19.4	-0.2
TKGZ	Te Karaka	0.89	25	P	Pb	00 33 19.7	-0.5
MUGZ	Murupara	0.91	329	P	Pb	00 33 20.1	-0.3
MWZ	Matawai	0.93	8	P	Pb	00 33 20.5	-0.3
CNGZ	Carnagh Statio	1.01	41	P	Pn	00 33 21.6	-0.5
URZ	Urewera	1.01	348	P	Pn	00 33 21.6	-0.6
BHHZ	Black Hill Sta	1.04	256	P	Pn	00 33 21.9	-0.8
ALRZ	Allen Road	1.06	310	P	Pn	00 33 22.9	+0.1
HATZ	Hinemaiaia	1.06	290	P	Pn	00 33 22.9	0.0
PNHZ	Pukenui	1.12	234	P	Pn	00 33 23.2	-0.5
RRRZ	Republican Roa	1.13	323	P	Pn	00 33 23.4	-0.5
TWGZ	Tauwhareparae	1.18	24	P	Pn	00 33 23.8	-0.7
RITZ	Rihia Road	1.21	283	P	Pb	00 33 25.7	+0.1
TARZ	Mount Tarawera	1.22	326	P	Pn	00 33 25.0	-0.2
MOVZ	Moawhango	1.27	263	P	Pn	00 33 25.8	0.0
RUGZ	Raukumara Rang	1.31	11	P	Pn	00 33 25.6	-0.8
KATZ	Kakaramea	1.33	281	P	Pn	00 33 26.9	+0.1
TUVZ	Tukino	1.33	269	P	Pn	00 33 27.3	+0.5
KRVZ	Karewarewa	1.35	276	P	Pn	00 33 27.4	+0.3
TSZ	Takapari Road	1.35	233	P	Pn	00 33 25.4	-1.6
NGZ	Ngauruhoe	1.38	273	P	Pn	00 33 27.9	+0.5
WHVZ	Whangaehu Hut	1.39	268	P	Pn	00 33 27.9	+0.4
WTVZ	West Tongariro	1.39	275	P	Pn	00 33 28.0	+0.4
DVHZ	Dannevirke	1.40	221	P	Pn	00 33 26.0	-1.6
FWVZ	Far West T-bar	1.41	269	P	Pn	00 33 27.5	-0.4
TRVZ	Turoa	1.42	268	P	Pn	00 33 28.3	+0.3
OPRZ	Ohinepanea	1.55	335	P	Pn	00 33 28.6	-1.0
WMGZ	Waiomatatini S	1.65	30	P	Pn	00 33 29.8	-1.1
BFZ	Birch Farm	1.67	211	P	Pn	00 33 28.8	-2.5
MRZ	Mangatainoka R	1.97	224	P	Pn	00 33 33.4	-2.0
HOWZ	Holdsworth Sta	2.17	220	P	Pn	00 33 35.8	-2.5

IDC 25 00:36:31.3±3.4, **31°.41S**×**178°.19W**, **h0km**, **mb3.7**/2, **mb1 4.0**/2, **mb1mx3.7**/26, **mbtmp3.7**/2, **Error ellipse: s-maj=206.1km s-min=42.5km az=165.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.91	268	P	P	00 44 31.3	-0.6
	0.2nm,0.4s,baz=104,slow=7.7,SNR=4.2						
WRA	Warramunga Arr	43.99	273	P	P	00 44 40.8	+0.2
	0.8nm,0.3s,baz=112,slow=8.0,SNR=27						
KURBB	Kurchatov Arra	121.67	313	PKP	PKPdf	00 55 25.5	-1.1
	0.3nm,0.7s,baz=91,slow=2.6,SNR=2.6						
BVAR	Borovoye Array	127.01	315	PKP	PKiKP	00 55 37.2	-0.1
	0.2nm,0.4s,baz=76,slow=0.6,SNR=3.4						
FINES	FINESS Array B	146.04	339	PKPbc	PKPdf	00 56 11.7	+0.2
	0.8nm,0.4s,baz=47,slow=4.5,SNR=15						

IDC 25 00:48:19.9±4.7, **29°.84S**×**178°.74W**, **h0km**, **mb3.9**/3, **mb1 4.1**/3, **mb1mx3.8**/18, **mbtmp3.8**/3, **Error ellipse: s-maj=215.0km s-min=67.7km az=162.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.50	267	P	P	00 56 16.6	-0.6
	0.2nm,0.4s,baz=110,slow=8.8,SNR=4.3						
WRA	Warramunga Arr	43.44	272	P	P	00 56 25.5	+0.6
	0.4nm,0.3s,baz=112,slow=7.9,SNR=16						
CMAR	Chiang Mai Arr	92.61	290	P	P	01 01 33.0	-0.8
	0.8nm,0.4s,baz=102,slow=3.8,SNR=3.2						
FINES	FINESS Array B	144.40	340	PKP	PKPdf	01 07 57.5	+0.1
	1.1nm,0.7s,baz=21,slow=1.9,SNR=5.0						

IDC ***25*** *00:54:15.3±1.8, 31°.26N×85°.96E, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.3/50, mbtmp3.4/7, ML3.5/2, Error ellipse: s-maj=94.1km s-min=19.7km az=63.0*

ISCJB ***25*** *00:54:18.2±1.5, 31°.3N±0°.2×86°.0E±0°.5, h33km, mb3.5/5, Error ellipse: s-maj=67.7km s-min=12.6km az=152.3*

ISC 25 00:54:20.8±1.6, **31°.4N**±0°.3×**86°.2E**±0°.5, **h35km**, **n8**, **$\sigma 0^{s}.67$**/8, **mb3.5**/5, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.68	350	Pn	Pn	00 57 58.5	-0.5
	0.0nm,0.3s,baz=172,slow=12,SNR=3.1						
CMAR	Chiang Mai Arr	17.30	135	P	Pn	00 58 19.0	-0.6
	0.2nm,0.3s,baz=324,slow=13,SNR=2.4						
KURBB	Kurchatov Arra	20.05	346	P	P	00 58 50.8	+0.1
	0.6nm,0.7s,baz=160,slow=11,SNR=4.8						
ZALV	Zalesovo Beam	22.58	358	P	P	00 59 17.9	0.0
	0.4nm,0.4s,baz=190,slow=7.5,SNR=3.7						
NOA	NORSAR Array B	55.89	325	P	P	01 03 54.4	-0.4
	0.8nm,0.8s,baz=86,slow=7.1,SNR=3.3						
WRA	Warramunga Arr	68.84	131	P	P	01 05 21.5	-0.4
	0.6nm,1.0s,baz=325,slow=6.2,SNR=4.8						
ASAR	Alice Springs	71.30	134	P	P	01 05 37.8	+0.8
	0.2nm,0.4s,baz=327,slow=6.6,SNR=2.9						
YKA	Yellowknife Ar	84.98	10	P	P	01 06 52.8	+0.8
	0.3nm,0.8s,baz=334,slow=4.7,SNR=6.4						

ISCJB ***25*** *01:01:40.7±0.2, 45°.329N±0°.010×7°.51E±0°.02, h8km±1km, mb3.3/5, Error ellipse: s-maj=1.9km s-min=1.5km az=33.6*

STR ***25*** *01:01:41.9±0.5, 45°N±2°×°±°, h0km, M3.6/6, MLv3.6/6, MLv3.6/6*

VIE ***25*** *01:01:41.5±0.3, 45°.40N×7°.44E, h5km±2km, mb2.9/16, ml3.2/16, ms3.2/2, Error ellipse: s-maj=5.8km s-min=2.4km az=140.0*

ROM ***25*** *01:01:41.8±0.1, 45°.342N±0°.006×7°.44E±0°.01, h16km±2km, ML3.3/42*

LDG ***25*** *01:01:42.4±0.1, 45°.34N×7°.43E, h8km, Md3.5/3, Ml3.6/48, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0*

ZUR ***25*** *01:01:42.2, 45°.33N×7°.49E, h17km±3km, MLh3.5/16, Error ellipse: s-maj=5.9km s-min=1.1km az=178.0*

GEN ***25*** *01:01:42.1, 45°.35N×7°.46E, h11km±2km, Ml3.3*

PRU ***25*** *01:01:42.8±0.0, 45°.13N×7°.45E, h30km*

BNS ***25*** *01:01:45.3±0.3, 45°.43N×7°.81E, h10km, ML3.1*

BGR ***25*** *01:01:45.1±0.7, 45°.39N×7°.56E, h10km, ML3.8/3, Error ellipse: s-maj=13.3km s-min=6.7km az=91.0*

IDC ***25*** *01:01:45.5±1.6, 45°.36N×7°.45E, h47km±15km, mb3.0/6, mb1 3.4/14, mb1mx3.2/50, mbtmp3.4/14, ML4.2/3, Error ellipse: s-maj=23.8km s-min=13.2km az=135.0*

ISC 25 01:01:42.0±0.8, **45°.35N**±0°.01×**7°.45E**±0°.01, **h18km**±3km, **n227**, **$\sigma 2^{s}.06$**/340, **mb3.3**/5, **7C-9D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSP	Reno Superiore	0.24	213	P	Pg	01 01 47.3	-0.3
RSP				S	Sg	01 01 50.7	-0.8
RSP	Reno Superiore	0.24	213	⇑Pg	Pg	01 01 47.3	-0.3
RSP	Reno Superiore	0.24	213	P	Pg	01 01 47.2	-0.3
RSP				S	Sg	01 01 50.6	-0.8
LSD	Lago del Serru	0.25	297	P	Pg	01 01 47.7	-0.2
LSD				S	Sg	01 01 51.0	-0.9
LSD	Lago del Serru	0.25	297	⇑Pg	Pg	01 01 47.7	-0.2
LSD	Lago del Serru	0.25	297	P	Pg	01 01 47.7	-0.2
LSD				S	Sg	01 01 51.0	-0.9
LSD				AML	AML		
	comp=E,28250µm,0.5s						
LSD				AML	AML		
	comp=N,39250µm,0.2s						
LSD				AML	AML		
	comp=E,28250µm,0.5s						
LSD				AML	AML		
	comp=N,39250µm,0.2s						
LSD				AML	AML		
	comp=E,28250µm,0.5s						
LSD				AML	AML		
	comp=N,39250µm,0.2s						
LSD				AML	AML		
	comp=N,39250µm,0.2s						
LSD				AML	AML		
	comp=E,28250µm,0.5s						
TRAV	Traversella	0.27	51	P	Pg	01 01 47.7	-0.4
TRAV				S	Sg	01 01 51.1	-1.2
TRAV	Traversella	0.27	51	⇓Pg	Pg	01 01 47.7	-0.4
TRAV	Traversella	0.27	51	P	Pg	01 01 47.7	-0.4
TRAV				S	Sg	01 01 51.1	-1.2
TRAV				AML	AML		
	comp=E,35200µm,0.1s						
TRAV				AML	AML		
	comp=N,34550µm,0.3s						
TRAV				AML	AML		
	comp=E,35200µm,0.1s						
TRAV				AML	AML		
	comp=N,34550µm,0.3s						
TRAV				AML	AML		
	comp=E,35200µm,0.1s						
TRAV				AML	AML		
	comp=N,34550µm,0.3s						
TRAV				AML	AML		
	comp=N,34550µm,0.3s						
TRAV				AML	AML		
	comp=E,35200µm,0.1s						
MONC	Moncucco Torin	0.43	129	⇓Pg	Pb	01 01 52.3	+1.1
MONC	Moncucco Torin	0.43	129	P	Pb	01 01 52.3	+1.1
MONC				AML	AML		
	comp=E,14100µm,0.4s						
MONC				AML	AML		
	comp=N,14250µm,0.5s						
MONC				AML	AML		
	comp=E,14100µm,0.4s						
MONC				AML	AML		
	comp=N,14250µm,0.5s						
MONC				AML	AML		
	comp=E,14100µm,0.4s						
MONC				AML	AML		
	comp=N,14250µm,0.5s						
MRGE	Morge	0.50	327	⇓Pg	Pg	01 01 52.3	+0.1
MRGE	Morge	0.50	327	P	Pg	01 01 52.4	+0.1
MRGE				S	Sg	01 01 58.6	-0.5
MRGE				AML	AML		
	comp=E,6380µm,0.3s						
MRGE				AML	AML		
	comp=N,6750µm,1.2s						
MRGE				AML	AML		
	comp=E,6380µm,0.3s						
MRGE				AML	AML		
	comp=N,6750µm,1.2s						
MRGE				AML	AML		
	comp=N,6750µm,1.2s						
MRGE				AML	AML		
	comp=E,6380µm,0.3s						
LPG	La Plagne	0.51	287	*e*Pg	Pg	01 01 52.5	0.0
LPG				*e*Sg	Sg	01 01 59.3	-0.2
	comp=E,5µm,0.3s,SNR=1.0						
BHB	Bricherasio	0.52	195	P	Pg	01 01 52.2	-0.2
BHB				S	Sg	01 01 59.0	-0.5
BHB	Bricherasio	0.52	195	P	Pg	01 01 52.3	-0.2
BHB				S	Sg	01 01 59.0	-0.5
BHB				AML	AML		
	comp=E,5170µm,1.2s						
BHB				AML	AML		
	comp=N,4455µm,0.6s						
BHB				AML	AML		
	comp=E,5170µm,1.2s						
BHB				AML	AML		
	comp=N,4455µm,0.6s						
BHB				AML	AML		
	comp=N,4455µm,0.6s						
BHB				AML	AML		
	comp=E,5170µm,1.2s						
LPL	La Plagne	0.53	289	*e*Pg	Pg	01 01 52.8	0.0
LPL				*e*Sg	Sg	01 01 59.8	-0.2
	comp=E,2µm,0.2s						
REMY	Saint-Rhmy-en	0.53	338	P	Pg	01 01 52.9	+0.1
REMY				S	Sg	01 01 59.6	-0.5
REMY	Saint-Rhmy-en	0.53	338	P	Pg	01 01 52.9	+0.1
REMY				S	Sg	01 01 59.4	-0.7
REMY				AML	AML		
	comp=E,6525µm,1.2s						
REMY				AML	AML		
	comp=N,6130µm,0.6s						
REMY				AML	AML		
	comp=E,6525µm,1.2s						
REMY				AML	AML		
	comp=N,6130µm,0.6s						
REMY				AML	AML		
	comp=E,6525µm,1.2s						
REMY				AML	AML		
	comp=N,6125µm,0.6s						
REMY				AML	AML		
	comp=E,6525µm,1.2s						
REMY				AML	AML		
	comp=N,6125µm,0.6s						
SATI	Passo dei Sala	0.61	29	P	Pg	01 01 53.6	-0.6
SATI				S	Sg	01 02 01.5	-0.9
SATI	Passo dei Sala	0.61	29	⇓Pg	Pg	01 01 53.5	-0.7
SATI	Passo dei Sala	0.61	29	P	Pg	01 01 53.8	-0.4
SATI				AML	AML		
	comp=E,4030µm,1.4s						
SATI				AML	AML		
	comp=N,3115µm,0.8s						
SATI				AML	AML		
	comp=E,4030µm,1.4s						
SATI				AML	AML		
	comp=N,3115µm,0.8s						
SATI				AML	AML		
	comp=E,4030µm,1.4s						
SATI				AML	AML		
	comp=N,3115µm,0.8s						
SATI				AML	AML		
	comp=N,3115µm,0.8s						
SATI				AML	AML		
	comp=E,4030µm,1.4s						
BNI	Bardonecchia	0.62	242	⇓Pg	Pg	01 01 54.1	-0.2
BNI	Bardonecchia	0.62	242	P	Pg	01 01 54.1	-0.2
BNI				S	Sg	01 02 02.5	-0.1
BNI				AML	AML		
	comp=E,1825µm,0.6s						
BNI				AML	AML		
	comp=N,2495µm,0.9s						
BNI				AML	AML		
	comp=E,2335µm,0.6s						
BNI				AML	AML		
	comp=N,3060µm,0.9s						
BNI				AML	AML		
	comp=E,1825µm,0.6s						
BNI				AML	AML		
	comp=N,2495µm,0.9s						
BNI				AML	AML		
	comp=E,2335µm,0.6s						
BNI				AML	AML		
	comp=N,3060µm,0.9s						
BNI				AML	AML		
	comp=N,3060µm,0.9s						
BNI				AML	AML		
	comp=N,2495µm,0.9s						
BNI				AML	AML		
	comp=E,2335µm,0.6s						
BNI				AML	AML		
	comp=E,1825µm,0.6s						
RRL	Rocca Remolon	0.63	228	P	Pg	01 01 54.6	0.0
RRL				S	Sg	01 02 02.8	-0.1
RRL	Rocca Remolon	0.63	228	P	Pg	01 01 54.6	0.0
RRL				S	Sg	01 02 02.9	-0.1
RRL				AML	AML		
	comp=E,4025µm,0.7s						
RRL				AML	AML		
	comp=N,3770µm,0.4s						
RRL				AML	AML		
	comp=E,4025µm,0.7s						
RRL				AML	AML		
	comp=N,3770µm,0.4s						
RRL				AML	AML		
	comp=E,4025µm,0.7s						
RRL				AML	AML		
	comp=N,3770µm,0.4s						
RRL				AML	AML		
	comp=N,3770µm,0.4s						
RRL				AML	AML		
	comp=E,4025µm,0.7s						
RSL	Roselend	0.67	301	Pg	Pg	01 01 55.7	+0.4
RSL	Roselend	0.67	301	⇓Pg	Pg	01 01 55.4	+0.1
DIX	Grande Dixence	0.73	358	⇑Pg	Pg	01 01 55.9	-0.6
DIX	Grande Dixence	0.73	358	P	Pg	01 01 56.0	-0.6
DIX				S	Sg	01 02 05.4	-0.9
DIX				AML	AML		
	comp=E,1820µm,1.4s						
DIX				AML	AML		
	comp=N,1485µm,0.3s						
DIX				AML	AML		
	comp=E,1820µm,1.3s						
DIX				AML	AML		
	comp=N,1485µm,0.3s						
DIX				AML	AML		
	comp=E,1820µm,1.3s						
DIX				AML	AML		
	comp=N,1485µm,0.3s						
DIX				AML	AML		
	comp=N,1485µm,0.3s						
DIX				AML	AML		
	comp=E,1820µm,1.3s						
MBDF	Montbardon	0.78	218	*e*Pg	Pg	01 01 57.2	-0.1
	SNR=1.0						
MBDF				*e*Sg	Sg	01 02 07.7	-0.1
	comp=E,2µm,0.4s,SNR=1.0						
MMK	Mattmark	0.79	27	⇓Pg	Pg	01 01 57.0	-0.6
MMK	Mattmark	0.79	27	P	Pg	01 01 57.0	-0.6
MMK				AML	AML		
	comp=E,2550µm,0.6s						
MMK				AML	AML		
	comp=N,3470µm,0.8s						
MMK				AML	AML		
	comp=E,2550µm,0.6s						
MMK				AML	AML		
	comp=N,3470µm,0.8s						
MMK				AML	AML		
	comp=E,2550µm,0.6s						
MMK				AML	AML		
	comp=N,3470µm,0.8s						
MMK				AML	AML		
	comp=E,2550µm,0.6s						
MMK				AML	AML		
	comp=N,3470µm,0.8s						
ROTM	Rocchetta Tana	0.81	127	P	Pb	01 01 58.6	+1.2
ROTM	Rocchetta Tana	0.81	127	P	Pb	01 01 58.7	+1.2
ROTM				AML	AML		
	comp=E,5100µm,0.5s						
ROTM				AML	AML		
	comp=N,7430µm,0.4s						
ROTM				AML	AML		
	comp=E,5100µm,0.5s						
ROTM				AML	AML		
	comp=N,7430µm,0.4s						
ROTM				AML	AML		
	comp=N,7430µm,0.4s						
ROTM				AML	AML		
	comp=E,5100µm,0.5s						
DOI	San Damiano	0.85	190	⇓Pg	Pg	01 01 57.0	-1.6
DOI	San Damiano	0.85	190	P	Pg	01 01 57.0	-1.6
DOI				AML	AML		
	comp=E,3685µm,0.4s						
DOI				AML	AML		
	comp=N,3410µm,0.9s						
DOI				AML	AML		
	comp=E,3685µm,0.4s						
DOI				AML	AML		
	comp=N,3410µm,0.9s						
DOI				AML	AML		
	comp=N,3410µm,0.9s						
DOI				AML	AML		
	comp=E,3685µm,0.4s						
PZZ	Stroppo	0.87	196	P	Pg	01 01 57.5	-1.5
PZZ	Stroppo	0.87	196	P	Pg	01 01 57.5	-1.5
PZZ				AML	AML		
	comp=E,4745µm,0.4s						
PZZ				AML	AML		
	comp=N,3970µm,0.3s						
PZZ				AML	AML		
	comp=E,4745µm,0.4s						
PZZ				AML	AML		
	comp=N,3970µm,0.3s						
PZZ				AML	AML		
	comp=N,3970µm,0.3s						
PZZ				AML	AML		
	comp=E,4745µm,0.4s						
VANNI	Vissoie, Val d	0.87	7	⇑Pg	Pg	01 01 58.3	-0.7
EMBD	Embd, Matterta	0.91	17	⇑Pn	Pg	01 01 59.1	-0.7
GRYON	Gryon	0.94	346	⇑Pn	Pg	01 02 00.0	-0.2
GDM	Grand'Maison	0.95	262	Pg	Pg	01 02 01.0	+0.5
GDM				Pg	Pb	01 02 01.1	+1.1
SURF	Saint Ours	0.97	208	Pg	Pg	01 02 00.4	-0.6
SURF				Sg	Sg	01 02 13.1	-0.8
SIMPL	Simplonpass	0.98	24	⇓Pn	Pg	01 02 00.4	-0.7
SENIN	Lac Senin/Sane	1.02	354	⇑Pn	Pg	01 02 01.3	-0.6
LKBD2	Leukerbad 2	1.04	8	Pn	Pg	01 02 01.4	-0.8
VARE	Varese	1.06	60	P	Pb	01 02 01.2	-0.7
VARE				AML	AML		
	comp=E,828µm,0.7s						
VARE				AML	AML		
	comp=N,1485µm,0.8s						
VARE				AML	AML		
	comp=E,828µm,0.7s						
VARE				AML	AML		
	comp=N,1485µm,0.8s						
VARE				AML	AML		
	comp=N,1485µm,0.8s						
VARE				AML	AML		
	comp=E,828µm,0.7s						
OGAG	Argentiere	1.10	216	Pg	Pb	01 01 58.8	-3.7
OGAG				Sg	Sb	01 02 10.1	-6.5
STV	Sant Anna di V	1.10	185	P	Pb	01 02 00.8	-1.8
STV	Sant Anna di V	1.10	185	P	Pb	01 02 00.9	-1.6
STV				AML	AML		
	comp=E,348µm,0.6s						
STV				AML	AML		
	comp=N,308µm,0.5s						
STV				AML	AML		
	comp=E,348µm,0.6s						
STV				AML	AML		
	comp=N,308µm,0.5s						
STV				AML	AML		
	comp=E,348µm,0.6s						
STV				AML	AML		
	comp=N,308µm,0.5s						
ENR	Entracque	1.12	181	P	Pb	01 02 01.1	-1.7
ENR	Entracque	1.12	181	P	Pb	01 02 01.3	-1.6
ENR				AML	AML		
	comp=E,616µm,0.8s						
ENR				AML	AML		
	comp=N,689µm,0.6s						
ENR				AML	AML		
	comp=E,616µm,0.8s						
ENR				AML	AML		
	comp=N,689µm,0.6s						
ENR				AML	AML		
	comp=E,616µm,0.8s						
ENR				AML	AML		
	comp=N,689µm,0.6s						
PCP	Piancastagn	1.12	136	P	Pb	01 02 03.0	+0.1
PCP	Piancastagn	1.12	136	P	Pb	01 02 02.8	-0.1
PCP				AML	AML		
	comp=E,610µm,0.7s						
PCP				AML	AML		
	comp=N,504µm,0.5s						
PCP				AML	AML		
	comp=E,610µm,0.7s						
PCP				AML	AML		
	comp=N,504µm,0.5s						
PCP				AML	AML		
	comp=E,610µm,0.7s						
PCP				AML	AML		
	comp=N,504µm,0.5s						
GBOS	Grotte di Boss	1.14	166	P	Pb	01 02 02.6	-0.5

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OG02  Monnetier-Morn   1.18 314  Pg   Pg   01 02 05.3 +0.5
ORIF  Oris-en-Rattie   1.19 250 ePg   Pn   01 02 04.8 +1.0
      baz=67,SNR=1.0
ORIF                            eSg   Sb   01 02 20.3 +1.2
      comp=N,693nm,0.2s
ORIF  Oris-en-Rattie   1.19 250  Pg   Pb   01 02 05.2 +1.1
ORIF                             Sn   Sg   01 02 21.0 +0.5
ORIF  Oris-en-Rattie   1.19 250  P    Pn   01 02 04.8 +1.0
ORIF                             AML  AML
      comp=E,1850µm,0.6s
ORIF                             AML  AML
      comp=N,2550µm,1.3s
ORIF                             AML  AML
      comp=N,2550µm,1.3s
ORIF                             AML  AML
      comp=E,1850µm,0.6s
ISO   Isola            1.20 194  Pg   Pn   01 02 02.7  -1.1
QLNO  Quiliano         1.21 148  P    Pn   01 02 04.2 +0.3
QLNO                             AML  AML
      comp=E,520µm,1.5s
QLNO                             AML  AML
      comp=N,828µm,0.6s
QLNO                             AML  AML
      comp=E,520µm,1.5s
QLNO                             AML  AML
      comp=N,828µm,0.6s
QLNO                             AML  AML
      comp=E,520µm,1.5s
QLNO                             AML  AML
      comp=N,828µm,0.6s
GRN   Grenoble         1.21 266  Pg   Pg   01 02 06.2 +0.9
MUGIO Muggio           1.26  62  P    Pn   01 02 04.1  -0.6
MUGIO                            S    Sb   01 02 21.5 +0.4
MUGIO                            AML  AML
      comp=E,610µm,0.5s
MUGIO                            AML  AML
      comp=N,822µm,0.8s
MUGIO                            AML  AML
      comp=E,610µm,0.5s
MUGIO                            AML  AML
      comp=N,822µm,0.8s
MUGIO                            AML  AML
      comp=N,822µm,0.8s
MUGIO                            AML  AML
      comp=E,610µm,0.5s
OGSM  Saint Maurice    1.26 283  Pg   Pg   01 02 06.9 +0.6
OGSM                             Sn   Sg   01 02 23.7 +0.9
RORO  Rocca Rossa      1.31 160  P    Pn   01 02 05.5 +0.2
RORO                             AML  AML
      comp=E,632µm,0.7s
RORO                             AML  AML
      comp=N,555µm,0.3s
RORO                             AML  AML
      comp=N,555µm,0.3s
RORO                             AML  AML
      comp=E,632µm,0.7s
FINB  Finale Ligure    1.32 152  P    Pn   01 02 06.1 +0.5
FINB                             AML  AML
      comp=E,542µm,0.5s
FINB                             AML  AML
      comp=N,790µm,0.3s
FINB                             AML  AML
      comp=E,542µm,0.5s
FINB                             AML  AML
      comp=N,790µm,0.3s
FINB                             AML  AML
      comp=N,790µm,0.3s
FINB                             AML  AML
      comp=E,542µm,0.5s
SAOF  Saorge           1.36 177  Pn   Pn   01 02 05.4  -0.7
SAOF  Saorge           1.36 177  P    Pn   01 02 05.4  -0.7
SAOF                             AML  AML
      comp=E,551µm,0.4s
SAOF                             AML  AML
      comp=N,532µm,0.3s
SAOF                             AML  AML
      comp=E,551µm,0.4s
SAOF                             AML  AML
      comp=N,532µm,0.3s
SAOF                             AML  AML
      comp=E,551µm,0.4s
SAOF                             AML  AML
      comp=N,532µm,0.3s
FUSIO Fusio            1.40  37  AML  AML
      comp=E,714µm,0.5s
FUSIO                            AML  AML
      comp=N,776µm,0.4s
GIMEL St. Georges /    1.45 326  P    Pg   01 02 10.3 +0.4
GIMEL                            AML  AML
      comp=E,524µm,1.3s
GIMEL                            AML  AML
      comp=N,392µm,1.6s
GIMEL                            AML  AML
      comp=E,524µm,1.3s
GIMEL                            AML  AML
      comp=N,392µm,1.6s
IMI   Imperia          1.47 167  P    Pn   01 02 07.9 +0.3
IMI                              AML  AML
      comp=E,770µm,0.5s
IMI                              AML  AML
      comp=N,998µm,0.6s
IMI                              AML  AML
      comp=E,770µm,0.5s
IMI                              AML  AML
      comp=N,998µm,0.6s
IMI                              AML  AML
      comp=E,770µm,0.5s
IMI                              AML  AML
      comp=N,998µm,0.6s
SBF   Sospel           1.48 180 ePn   Pn   01 02 07.3  -0.5
      SNR=1.0
SBF                             eSg   Sb   01 02 29.0 +1.5
      comp=N,437nm,0.3s
OG35  Corcelles        1.49 299  Pg   Pg   01 02 11.3 +0.6
OG35                             Sn   Sg   01 02 30.3 +0.1
GORR  Gorreto          1.50 119  P    Pn   01 02 09.2 +1.2
GORR                             AML  AML
      comp=E,1955µm,0.4s
GORR                             AML  AML
      comp=N,2230µm,0.4s
GORR                             AML  AML
      comp=E,1955µm,0.4s
GORR                             AML  AML
      comp=N,2230µm,0.4s
GORR                             AML  AML
      comp=E,1955µm,0.4s
GORR                             AML  AML
      comp=N,2230µm,0.4s
NEGI  Seborga          1.51 173  P    Pn   01 02 08.3 +0.1
NEGI                             AML  AML
      comp=E,568µm,1.6s
NEGI                             AML  AML
      comp=N,578µm,0.3s
NEGI                             AML  AML
      comp=E,568µm,1.6s
NEGI                             AML  AML
      comp=N,578µm,0.3s
NEGI                             AML  AML
      comp=N,578µm,0.3s
NEGI                             AML  AML
      comp=E,568µm,1.6s
ESCA  l'Escarene       1.52 182  Pn   Pn   01 02 07.7  -0.5
BOB   Bobbio (Coli)    1.53 112  P    Pn   01 02 10.0 +1.5
BOB                              AML  AML
      comp=E,627µm,0.8s
BOB                              AML  AML
      comp=N,890µm,0.7s
BOB                              AML  AML
      comp=E,612µm,0.8s
BOB                              AML  AML
      comp=N,856µm,0.6s
BOB                              AML  AML
      comp=E,627µm,0.8s
BOB                              AML  AML
      comp=N,890µm,0.7s
BOB                              AML  AML
      comp=E,611µm,0.8s
BOB                              AML  AML
      comp=N,856µm,0.6s
BOB                              AML  AML
      comp=N,890µm,0.7s
BOB                              AML  AML
      comp=N,856µm,0.6s
BOB                              AML  AML
      comp=E,627µm,0.8s
BOB                              AML  AML
      comp=E,611µm,0.8s
CABF  La Chapelle      1.58 324 ePg   Pb   01 02 12.1 +1.3
      SNR=1.0
CABF                            eSg   Sb   01 02 32.4 +2.0
      comp=E,96nm,0.2s
REVF  Revere           1.61 182  Pg   Pn   01 02 11.0 +1.5
REVF                             Sg   Sb   01 02 32.1 +1.0
CALF  Calern           1.64 193  Pg   Pn   01 02 11.0 +1.0
BNALP Bannalp          1.67  24  AML  AML
      comp=E,1154µm,0.5s
BNALP                            AML  AML
      comp=E,1154µm,0.5s
BNALP                            AML  AML
      comp=N,948µm,1.0s
BNALP                            AML  AML
      comp=N,948µm,1.0s
OG26  St.-Nazaire-De   1.71 244  Pg   Pg   01 02 15.7 +0.9
MSSA  Maissana         1.80 124  P    Pn   01 02 13.4 +1.3
MSSA                             AML  AML
      comp=E,545µm,0.7s
MSSA                             AML  AML
      comp=N,520µm,1.5s
MSSA                             AML  AML
      comp=N,520µm,1.5s
MSSA                             AML  AML
      comp=E,545µm,0.7s
FRF   La Foret Royal   1.88 198 eP    Pn   01 02 15.0 +1.9
FRF   La Foret Royal   1.88 198 ePg   Pb   01 02 17.1 +1.4
      SNR=1.0
FRF                             eSg   Sb   01 02 41.3 +2.5
      comp=E,158nm,0.2s
SMRF  Simiane la Rot   1.91 225 ePg   Pb   01 02 17.6 +1.2
      SNR=1.0
SMRF                            eSg   Sb   01 02 42.5 +2.6
      comp=E,163nm,0.3s
BSTF  la Bastide-des   1.95 222  Pg   Pb   01 02 18.9 +1.9
RUSF  Rustrel          1.98 226  Pg   Pb   01 02 18.8 +1.3
BALST Balsthal         2.00   5 ePn   Pb   01 02 17.6  -0.2
VIVF  Saint-Julien-l   2.03 257 eP    Pn   01 02 17.1 +1.8
VIVF  Saint-Julien-l   2.03 257 ePg   Pg   01 02 20.7  -0.2
VIVF                            eSn   Sn   01 02 38.8  -1.3
VIVF                            eSg   Sg   01 02 46.3  -0.9
      comp=E,155nm,0.3s,SNR=1.0
SSB   Saint Sauveur    2.05 269  Pn   Pn   01 02 17.6 +2.0
SSB                              Sg   Sg   01 02 49.1 +1.1
LMR   La Mourre        2.12 199 eP    Pn   01 02 18.0 +1.5
      SNR=1.0
LMR   La Mourre        2.12 199 ePg   Pb   01 02 21.5 +1.6
LMR                             eSn   Sn   01 02 41.0  -1.4
LMR                             eSg   Sg   01 02 49.0  -1.2
      comp=E,81nm,0.3s
PLONS Plons/SG         2.17  38 ePn   Pn   01 02 18.3 +1.0
PLONS Plons/SG         2.17  38  P    Pn   01 02 18.7 +1.4
PLONS                            AML  AML
      comp=E,473µm,0.8s
PLONS                            AML  AML
      comp=N,553µm,1.6s
PLONS                            AML  AML
      comp=E,473µm,0.8s
PLONS                            AML  AML
      comp=N,553µm,1.6s
DAVOX Davos/Dischmat   2.22  49  P    Pn   01 02 19.1 +1.0
      comp=N,3.1nm,0.3s,baz=239,slow=6.8,SNR=42
DAVOX                            S    Sn   01 02 47.8 +2.7
      comp=N,8.8nm,0.3s,baz=225,slow=7.1,SNR=5.0
SULZ  Cheisacher       2.23  12 ePn   Pn   01 02 20.5 +2.4
SULZ                            eSg   Sg   01 02 53.2  -0.5
EQUI  Equi             2.26 121  P    Pn   01 02 19.2 +0.7
EQUI                             AML  AML
      comp=E,149µm,1.0s
EQUI                             AML  AML
      comp=N,250µm,0.5s
EQUI                             AML  AML
      comp=N,250µm,0.5s
EQUI                             AML  AML
      comp=E,149µm,1.0s
MABI  Malga Bissina    2.26  71  P    Pn   01 02 18.3  -0.4
MABI                             AML  AML
      comp=E,367µm,0.8s
MABI                             AML  AML
      comp=N,282µm,0.7s
MABI                             AML  AML
      comp=N,282µm,0.7s
MABI                             AML  AML
      comp=E,367µm,0.8s
WILA  Wila             2.30  25 ePn   Pn   01 02 22.0 +2.9
WILA                            eSg   Sg   01 02 56.4 +0.3
HINF  Hinteralfeld     2.51 351 eP    Pn   01 02 24.2 +2.3
      SNR=1.0
HINF  Hinteralfeld     2.51 351 ePg   Pg   01 02 30.5 +0.4
HINF                            eSn   Sn   01 02 50.0  -2.0
      comp=E,116nm,0.4s,SNR=1.0
HINF                            eSg   Sg   01 03 00.9  -1.7
      comp=E,154nm,0.5s
MOSI  Grossmontoni     2.51  58  AML  AML
      comp=N,770µm,0.7s
MOSI                             AML  AML
      comp=E,900µm,0.9s
MOSI                             AML  AML
      comp=E,900µm,0.9s
MOSI                             AML  AML
      comp=N,770µm,0.7s
SLE   Schleitheim      2.52  16 ePn   Pn   01 02 24.1 +2.0
DAVA  Damuels          2.57  40 ePn   Pn   01 02 24.4 +1.5
      comp=N,1.8nm,0.1s,SNR=27
DAVA                            ePg   Pg   01 02 30.0  -1.3
      comp=N,32nm,0.4s,SNR=9.0
DAVA                            eSn   Sn   01 02 55.8 +2.1
      comp=N,28nm,0.3s
DAVA  Damuels          2.57  40 ePn   Pn   01 02 25.4 +2.5
KIZ   Kirchzarten      2.63   7  Pn   Pn   01 02 25.3 +1.8
POPM  Popiglio         2.69 118  AML  AML
      comp=E,202µm,0.9s
POPM                             AML  AML
      comp=N,162µm,0.6s
POPM                             AML  AML
      comp=E,202µm,0.9s
POPM                             AML  AML
      comp=N,162µm,0.6s
HAU   Haudompre        2.77 345 eP    Pn   01 02 27.6 +2.2
      SNR=1.0
HAU   Haudompre        2.77 345 ePg   Pg   01 02 34.0  -1.0
HAU                             eSn   Sn   01 02 56.4  -2.0
HAU                             eSg   Sg   01 03 08.9  -2.0
      comp=N,77nm,0.4s
FETA  Feichten         2.83  53 ePn   Pn   01 02 27.6 +1.2
      comp=N,0.4nm,0.1s,SNR=9.0
FETA                             Sn   Sn   01 03 02.2 +2.1
      comp=N,20nm,0.5s
SMF   Signal de Mont   2.83 299 eP    Pn   01 02 29.0 +2.7
      SNR=1.0
SMF                             eSg   Sg   01 03 11.3  -1.6
      comp=N,135nm,0.3s
LASF  Ste Croix        2.86 245 eP    Pn   01 02 29.7 +3.0
      SNR=1.0
LASF                            eSn   Sn   01 02 58.6  -2.0
      comp=N,44nm,0.3s,SNR=1.0
LASF                            eS    Sb   01 03 04.3  -2.8
KOSI  Kohlern          2.96  66  AML  AML
      comp=E,264µm,1.2s
KOSI                             AML  AML
      comp=N,220µm,0.8s
KOSI                             AML  AML
      comp=E,264µm,1.2s
KOSI                             AML  AML
      comp=N,220µm,0.8s
LBL   Lubilhac         2.97 269  Pn   Pn   01 02 31.2 +2.9
LBL                              Sg   Sg   01 03 20.6 +3.2
UBR   Ueberruh         2.97  37 ePn   Pn   01 02 29.9 +1.6
PGF   Pioggiola        3.01 158 ePn   Pn   01 02 28.2  -0.7
      SNR=1.0
PGF                             eSn   Sn   01 03 01.6  -3.0
      comp=N,42nm,0.7s,SNR=1.0
BFO   Black Forest     3.05  11 ePn   Pn   01 02 30.9 +1.6
CDF   Champ du Feu     3.07 358 eP    Pn   01 02 31.5 +1.8
      SNR=1.0
CDF                             eSn   Sn   01 03 03.5  -2.5
CDF                             eSg   Sg   01 03 18.9  -1.7
      comp=N,114nm,0.5s
AGO   Saint Agoulin    3.11 285  Pn   Pn   01 02 32.8 +2.7
AGO                              Sg   Sg   01 03 24.9 +3.1
RETA  Reutte           3.14  46 i Pn  Pn   01 02 31.8 +1.2
      comp=N,0.9nm,0.1s,SNR=11
RETA                            eSn   Sn   01 03 11.5 +3.9
      comp=N,5.4nm,0.3s
LOR   Lormes           3.14 309 eP    Pn   01 02 33.3 +2.7
      baz=129,SNR=1.0
LOR   Lormes           3.14 309 ePg   Pg   01 02 40.9  -1.3
      baz=131
LOR                             eSn   Sn   01 03 05.5  -2.2
      comp=N,126nm,0.4s,baz=122,SNR=1.0
LOR                             eSg   Sg   01 03 21.1  -1.9
      comp=N,117nm,0.4s,baz=133
PYM   Petit Puy Mans   3.15 279  Pn   Pn   01 02 33.4 +2.7
PYM                              Sg   Sg   01 03 25.7 +2.7
ROSI  Rosskopf         3.18  59  AML  AML
      comp=E,251µm,0.5s
ROSI                             AML  AML
      comp=E,251µm,0.5s
ROSI                             AML  AML
      comp=N,297µm,0.7s
ROSI                             AML  AML
      comp=N,297µm,0.7s
AVF   Avril sur Loir   3.20 298 eP    Pn   01 02 34.0 +2.7
      SNR=1.0
AVF                             eSg   Sg   01 03 22.7  -1.9
      comp=N,44nm,0.2s
SQTA  Sankt Quirin     3.21  53 i Pn  Pn   01 02 32.1 +0.4
      comp=N,0.4nm,0.1s,SNR=12
SQTA                            i Sn  Sn   01 03 11.6 +2.1
      comp=N,12nm,0.4s
MOTA  Moosalm          3.23  50 i Pn  Pn   01 02 33.2 +1.4
      comp=N,0.6nm,0.1s,SNR=14
MOTA                            eSn   Sn   01 03 11.8 +1.9
      comp=N,13nm,0.3s
SSF   Saint Saulge     3.23 303 eP    Pn   01 02 34.7 +2.9
      SNR=1.0
SSF                             eSn   Sn   01 03 07.7  -2.1
SSF                             eSg   Sg   01 03 23.5  -2.2
      comp=N,85nm,0.4s
SFTF  Sexfontaines     3.31 331 eP    Pn   01 02 35.7 +2.9
      baz=150
SFTF  Sexfontaines     3.31 331 ePg   Pg   01 02 43.6  -1.7
      baz=151
SFTF                            eSn   Sn   01 03 09.1  -2.5
      baz=144
SFTF                            eSg   Sg   01 03 26.2  -1.9
      comp=N,66nm,0.3s,baz=135
PAGF  Fort de Pagny    3.42 340 eP    Pn   01 02 37.0 +2.6
      baz=160
PAGF                            eSg   Sg   01 03 30.2  -1.6
      comp=N,438nm,0.8s,baz=159
BGF   Bois d'Agland    3.43 292 eP    Pn   01 02 37.4 +2.9
      SNR=1.0
BGF                             eSn   Sn   01 03 11.9  -2.8
BGF                             eSg   Sg   01 03 29.7  -2.5
      comp=N,105nm,0.3s
ASQU  Asqua            3.47 115  AML  AML
      comp=E,57µm,1.6s
ASQU                             AML  AML
      comp=E,57µm,1.6s
ASQU                             AML  AML
      comp=N,68µm,1.2s
ASQU                             AML  AML
      comp=N,68µm,1.2s
WTTA  Wattenberg       3.48  55 i Pn  Pn   01 02 36.2 +0.8
      comp=N,0.2nm,0.1s
WTTA                            eSn   Sn   01 03 17.4 +1.2
      comp=N,17nm,0.4s
WATA  Walderalm        3.48  54 i Pn  Pn   01 02 35.4   0.0
      comp=N,0.9nm,0.2s
MEZF  Maizieres J’vi   3.56 333 eP    Pn   01 02 39.2 +2.9
      baz=153,SNR=1.0
MEZF  Maizieres J’vi   3.56 333 ePg   Pg   01 02 48.6  -1.6
      baz=154
MEZF                            eSn   Sn   01 03 15.3  -2.5
      comp=N,86nm,0.6s,SNR=1.0
MEZF                            eSg   Sg   01 03 33.9  -2.3
      comp=N,52nm,0.4s,baz=150
RISI  Rein             3.59  62  AML  AML
      comp=N,292µm,0.5s
RISI                             AML  AML
      comp=E,178µm,0.5s
RISI                             AML  AML
      comp=N,292µm,0.5s
RISI                             AML  AML
      comp=E,178µm,0.5s
STU   Stuttgart        3.63  19 eSg   Sg   01 03 38.4  -0.1
TCF   Toulx Ste Croi   3.78 286 eP    Pn   01 02 42.2 +2.8
      SNR=1.0
TCF                             eSn   Sn   01 03 20.8  -2.6
TCF                             eSg   Sg   01 03 41.0  -2.4
      comp=E,44nm,0.3s
ABTA  Abfaltersbach    3.79  67 i Pn  Pn   01 02 41.3 +1.7
      comp=E,2.4nm,0.3s,SNR=4.4
ABTA                            eSn   Sn   01 03 25.6 +1.8
      comp=E,5.6nm,0.4s
CAF   Calviac          3.83 266 eP    Pn   01 02 42.9 +2.8
      SNR=1.0
CAF                             eSn   Sn   01 03 21.8  -2.9
      comp=E,25nm,0.4s
CAF                             eSg   Sg   01 03 42.8  -2.2
      comp=E,22nm,0.3s
HYF   Humbligny        3.85 302 eP    Pn   01 02 43.4 +3.1
HYF                             eS    Sn   01 03 28.1 +3.1
HYF                             eSg   Sg   01 03 43.4  -2.1
RJF   Les Rejaudoux    4.18 272 eP    Pn   01 02 47.9 +3.0
      SNR=1.0
RJF                             eSn   Sn   01 03 30.4  -2.9
RJF                             eSg   Sg   01 03 53.9  -2.4
      comp=E,43nm,0.4s
MTLF  Montolieu        4.25 244 eP    Pn   01 02 49.1 +3.3
      SNR=1.0
MTLF                            eSn   Sn   01 03 31.7  -3.3
      comp=E,15nm,0.3s,SNR=1.0
WLF   Walferdange      4.41 349  P    Pn   01 02 51.5 +3.5
WLF   Walferdange      4.41 349  S    Sg   01 04 03.0  -0.5
KBA   Koelnbreinsper   4.45  65 ePn   Pn   01 02 49.7 +1.1
      comp=E,0.2nm,0.1s,SNR=8.9
KBA                             eSn   Sn   01 03 42.7 +2.8
      comp=E,4.9nm,0.5s
KBA   Koelnbreinsper   4.45  65 ePn   Pn   01 02 49.7 +1.1
MYKA  Terra Mystica    4.50  71 ePn   Pn   01 02 49.7 +0.3
      comp=E,1.5nm,0.3s
LFF   La Frestale      4.76 267 eP    Pn   01 02 55.9 +3.1
      SNR=1.0
LFF   La Frestale      4.76 267 ePg   Pg   01 03 10.2  -3.0
LFF                             eSn   Sn   01 03 44.1  -3.4
LFF                             eSg   Sg   01 04 11.7  -3.1
      comp=E,27nm,0.4s,SNR=1.0
BGG   Burgeitz         4.86 359 ePn   Pn   01 02 56.3 +2.1
TNS   Taunus Mts       4.93   7 ePn   Pn   01 02 56.7 +1.5
HILG  Hillesheim       4.98 354 ePn   Pn   01 02 58.1 +2.3
GIVF  Givet            5.08 341 eP    Pn   01 03 00.5 +3.4
      SNR=1.0
GIVF                            eSn   Sn   01 03 51.7  -3.6
GIVF                            eSg   Sg   01 04 24.6  -0.3
      comp=E,3.5nm,0.2s
OBKA  Obir             5.09  74 i Pn  Pn   01 02 57.6 +0.2
      comp=E,0.5nm,0.2s
OBKA                            eSn   Sn   01 03 56.4 +0.7
      comp=E,6.1nm,0.5s
BHOU  Houvegnez        5.10 350  P    Pn   01 03 00.1 +2.5
DOU   Dourbes          5.13 339  P    Pn   01 02 59.8 +1.9
DOU                              x    x    01 03 01.0
DOU                              S    Sn   01 03 56.9 +0.4
BAIF  Baives           5.20 336 eP    Pn   01 03 01.7 +2.9
      SNR=1.0
BAIF                            eSg   Sg   01 04 25.0  -3.7
      comp=E,4.4nm,0.4s
STB   Steinbach        5.27 356 ePn   Pn   01 03 01.9 +2.2
STB                             eSn   Sn   01 04 00.0 +0.1
      comp=E,10nm,0.6s
BCLA  Clavier          5.28 345  P    Pn   01 03 03.1 +3.2
BCLA                             x    x    01 03 05.1
BMRD  Maredsous        5.28 341  P    Pn   01 03 03.1 +3.2
BMRD                             S    Sn   01 04 02.1 +2.0
BGES  Gesves           5.29 343  P    Pn   01 03 03.5 +3.5
BGES                             x    x    01 03 05.2
WET   Wettzell         5.30  42 ePn   Pn   01 03 00.4 +0.1
MOA   Molln            5.32  60 i Pn  Pn   01 03 01.7 +1.1
      comp=E,0.4nm,0.1s
MOA                             eSn   Sn   01 04 02.6 +1.1
      comp=E,2.1nm,0.3s
MOA   Molln            5.32  60 ePn   Pn   01 03 02.0 +1.5
NVLJ  Novalja          5.33  96 i Pn  Pn   01 02 59.9  -0.6
NVLJ                             Sn   Sn   01 03 58.0  -3.4
MEM   Membach          5.36 350  P    Pn   01 03 04.1 +3.1
MEM                              x    x    01 03 04.3
MEM                              S    Sn   01 04 01.4  -0.6
KLL   Kalltalsperre    5.36 352 ePn   Pn   01 03 03.3 +2.3
DREG  Dreilaegerbach   5.38 352 ePn   Pn   01 03 03.8 +2.5
BSTI  Sart Tilman      5.39 347  P    Pn   01 03 05.1 +3.6
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BLCH	La Chartreuse	5.44	347	P	Pn	01 03 05.7	+3.6
MFF	Saint Martin d SNR=1.0	5.44	286	*e*P	Pn	01 03 05.6	+3.5
MFF				*e*Sn	Sn	01 04 00.9	-3.3
MFF	comp=E,18nm,0.4s			*e*Sg	Sg	01 04 32.9	-3.6
SOKA	Soboth comp=E,0.2nm,0.3s	5.45	73	*e*Pn	Pn	01 03 02.6	+0.3
ROTZ	Rotzenmuhle	5.47	34	*e*Pn	Pn	01 03 02.9	+0.3
GEC2	GERESS Array S	5.52	48	*e*Pn	Pn	01 03 03.5	+0.2
GERES	GERESS Array B comp=E,1.9nm,0.3s,baz=230,slow=12,SNR=52	5.52	48	P	Pn	01 03 03.6	+0.3
GERES	comp=E,1.3nm,0.3s,baz=236,slow=23,SNR=4.1			S	Sn	01 04 06.0	-0.4
BBOU	Bougnies	5.57	336	P	Pn	01 03 08.1	+4.3
BEBN	Eben Emael	5.58	348	P	Pn	01 03 07.7	+3.7
EPF	Esparros	5.61	248	*e*P	Pn	01 03 07.9	+3.4
EPF	comp=E,2.4nm,0.3s			*e*Sn	Sn	01 04 04.3	-4.2
KHC	Kasperske Hory	5.63	46	*e*PN	Pn	01 03 06.6	+1.8
KHC				*e*SN	Sn	01 04 09.4	+0.3
HOBG	Hohbusch	5.64	359	*e*Pn	Pn	01 03 06.9	+2.0
BRQR	Ronquire	5.69	339	P	Pn	01 03 11.2	+5.7
BSKQ	Steenkerk	5.77	338	P	Pn	01 03 12.2	+5.6
BSKQ				S	Sn	01 04 13.6	+1.4
ARSA	Arzberg comp=E,1.8nm,0.4s	5.91	68	*i* Pn	Pn	01 03 08.5	-0.1
NKC	Novy Kostel	5.94	33	*e*PN	Pn	01 03 10.3	+1.3
UDBI	Udbina	5.96	95	*i* Pn	Pn	01 03 10.1	+0.8
MOX	Moxa	5.99	26	*e*Pn	Pn	01 03 12.2	+2.4
LDF	La Druitiere SNR=1.0	6.11	305	*e*P	Pn	01 03 14.3	+2.9
LDF	comp=E,11nm,0.5s,SNR=1.0			*e*Sn	Sn	01 04 16.5	-4.3
LDF	comp=E,13nm,0.5s			*e*Sg	Sg	01 04 54.1	-4.0
ETSF	Etsaut	6.26	250	*e*P	Pn	01 03 16.9	+3.4
ETSF	comp=E,2.9nm,0.3s			*e*Sn	Sn	01 04 20.1	-4.5
CONA	Conrad Observa comp=E,0.6nm,0.4s	6.34	63	*i* Pn	Pn	01 03 14.9	+0.3
CONA	comp=E,2.2nm,0.4s			*e*Sn	Sn	01 04 26.3	-0.2
FLN	La Foliniere baz=126,SNR=1.0	6.41	305	*e*P	Pn	01 03 18.1	+2.7
FLN	baz=129			*e*Sn	Sn	01 04 23.5	-4.5
FLN	comp=E,13nm,0.4s,baz=127			*e*Sg	Sg	01 05 02.8	-4.6
GRR	Gorron SNR=1.0	6.46	301	*e*P	Pn	01 03 18.8	+2.7
GRR	comp=E,21nm,0.4s,SNR=1.0			*e*Sn	Sn	01 04 24.6	-4.6
GRR	comp=E,9.2nm,0.3s			*e*Sg	Sg	01 05 04.5	-4.5
SJPF	Ste Jean SNR=1.0	6.62	253	*e*P	Pn	01 03 21.5	+3.2
SJPF	comp=E,2.5nm,0.4s			*e*Sn	Sn	01 04 32.3	-1.0
PRU	Pruhonice	6.67	43	*e*SN	Sn	01 04 33.2	-1.3
TREC	Trest	6.74	51	*e*PN	Pn	01 03 20.3	+0.3
TREC				*e*SN	Sn	01 04 34.5	-1.8
GOPC	GO Pecny, Ondr	6.74	45	*e*PN	Pn	01 03 21.2	+1.2
GOPC				*e*SN	Sn	01 04 35.2	-1.1
CLL	Collm	7.02	30	*e*Pn	Pn	01 03 34.0	+10
CLL				*e*Pg	Pg	01 03 57.0	+0.7
CLL				*e*Sn	Sn	01 04 36.0	-7.1
CLL				*e*		01 04 59.0	
CLL				*e*Sg	Sg	01 05 24.0	-3.0
CLL	comp=Z,21nm,1.0s			*e*Sgmax		01 05 30.0	
BRG	Berggiesshubel	7.03	36	PN	Pn	01 03 24.9	+1.0
BRG				*e*		01 03 54.8	
BRG	Berggiesshubel comp=Z,14nm,1.1s	7.03	36	SG	Sg	01 05 27.1	-0.4
KRUC	Moravsky	7.14	55	*e*PN	Pn	01 03 25.0	-0.4
KRUC				*e*SN	Sn	01 04 46.7	+0.7
VRAC	Vranov baz=45,slow=4.3,SNR=2.1	7.37	54	P	Pn	01 03 28.6	0.0
VRAC	comp=Z,1.3nm,0.3s,baz=234,slow=1.9,SNR=6.1			S	Sn	01 04 48.4	-3.4
SGMF	Saint Gilles SNR=1.0	7.46	297	*e*P	Pn	01 03 32.6	+2.8
SGMF	comp=Z,2.8nm,0.3s			*e*Sn	Sn	01 04 48.4	-5.4
SMOL	Smolenice	7.53	62	*e*PN	Pn	01 03 34.9	+4.1
UPC	Upice	7.73	45	*e*PN	Pn	01 03 34.0	+0.5
UPC				*e*SN	Sn	01 04 59.6	-0.9
QUIF	Quistinic SNR=1.0	7.75	293	*e*P	Pn	01 03 35.9	+2.2
QUIF	comp=Z,1.9nm,0.2s			*e*Sn	Sn	01 04 55.3	-5.6
DPC	Dobruska-Polom	7.79	47	*e*PN	Pn	01 03 35.8	+1.4
DPC				*e*SN	Sn	01 05 00.2	-1.9
KRLC	Kraliky	7.87	50	*e*PN	Pn	01 03 36.5	+0.9
ROSF	Rostrenen SNR=1.0	7.94	296	*e*P	Pn	01 03 40.2	+3.8
ROSF	comp=Z,5.4nm,0.3s			*e*Sn	Sn	01 05 00.0	-5.6
MORC	Moravsky Berou	8.14	53	*e*PN	Pn	01 03 38.9	-0.3
MORC				*e*SN	Sn	01 05 11.5	+0.8
VYHS	Vyhne	8.41	64	*e*PN	Pn	01 03 44.8	+1.9
KEST	Kesra comp=Z,0.1nm,0.3s,baz=288,slow=3.2,SNR=3.5	9.71	171	P	Pn	01 04 02.3	+1.4
ESDC	Sonseca Array comp=Z,0.8nm,0.3s,baz=50,slow=14,SNR=17	10.15	240	P	Pn	01 04 09.7	+2.9
EKA	Eskdalemuir Ar baz=141,slow=14,SNR=24	12.06	330	P	Pn	01 04 34.4	+1.5
EKA	baz=146,slow=24,SNR=3.4			S	Sn	01 06 38.8	-8.0
NOA	NORSAR Array B comp=Z,0.0nm,0.3s,baz=194,slow=13,SNR=3.0	15.88	7	P	Pn	01 05 25.7	+1.3
FINES	FINESS Array B baz=8.3,slow=29,SNR=2.8	19.46	27	P	P	01 06 08.1	+0.7
BRTR	Keskin Array B comp=Z,0.6nm,0.8s,baz=305,slow=10,SNR=3.2	20.06	97	P	P	01 06 15.9	+1.7
BRTR	comp=Z,0.2nm,0.3s,baz=332,slow=0.9,SNR=5.5			PcP	PcP	01 10 26.2	-3.2
TORD	Torodi Ar. Bea comp=Z,0.6nm,0.9s,baz=16,slow=6.2,SNR=2.8	32.46	190	P	P	01 08 11.5	+0.3
BVAR	Borovoye Array comp=Z,0.4nm,0.6s,baz=295,slow=7.5,SNR=3.4	40.64	56	P	P	01 09 21.1	+0.4
KURBB	Kurchatov Arra comp=Z,0.2nm,0.7s,baz=301,slow=9.3,SNR=2.5	46.20	57	P	P	01 10 05.6	+0.1
MKAR	Makanchi Array comp=Z,0.2nm,0.4s,baz=308,slow=5.3,SNR=6.6	50.07	60	P	P	01 10 34.4	-1.1
YKA	Yellowknife Ar comp=Z,0.1nm,0.6s,baz=44,slow=6.8,SNR=2.9	62.99	334	P	P	01 12 06.8	-0.3
WRA	Warramunga Arr comp=Z,0.8nm,1.0s,baz=288,slow=1.2,SNR=3.0	129.69	78	PKP	PKPdf	01 20 51.6	+1.4

ISK ***25*** *01:08:53.7, 39°.72N×25°.63E, h5^{km}, ML2.3/11*
ISCJB ***25*** *01:08:54.3±0.5, 39°.74N±0°.03×25°.61E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=3.7km az=33.1*
DDA ***25*** *01:08:54.6, 39°.72N×25°.73E, h7^{km}±5^{km}, ML2.5*
ATH ***25*** *01:08:54.2, 39°.75N×25°.63E, h24^{km}±2^{km}, ML2.1/3, Error ellipse: s-maj=2.8km s-min=1.2km az=241.0*
ISC 25 01:08:54.5±1.0**, 39°.73N**±0°.02×**25°.62E**±0°.02**, h10**^{km}±10^{km}**, n31, σ0^{s}.50**/42**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.35	72	PG	Pg	01 09 01.1	-0.4
BOZC				SG	Sg	01 09 06.5	+0.3
BOZC	Bozcaada	0.35	72	*i* P	Pg	01 09 01.2	-0.2
BOZC	comp=Z,2µm,0.1s			IAML_P			
LIA	Limnos Island	0.38	297	P	Pg	01 09 01.9	0.0
LIA				S	Sg	01 09 07.7	+0.8
LIA	comp=E,620µm,0.4s			AML	AML	01 09 12.6	
LIA	comp=N,378µm,0.4s			AML	AML	01 09 15.6	
EFSA	Agios Efstrati	0.52	249	P	Pb	01 09 05.5	-0.2
SIGR	SIGRI	0.55	160	PG	Pg	01 09 04.9	-0.2
SIGR				SG	Sg	01 09 12.7	+0.3
SIGR	SIGRI	0.55	160	P	Pg	01 09 04.9	-0.2
SIGR				S	Sb	01 09 13.1	-1.0
SIGR	comp=E,398µm,0.5s			AML	AML	01 09 13.6	
SIGR	comp=N,420µm,0.5s			AML	AML	01 09 13.6	
EZN	Ezine	0.55	80	PG	Pg	01 09 04.6	-0.6
EZN				SG	Sg	01 09 12.9	+0.4
PRK	Paraskevi	0.70	134	P	Pb	01 09 08.7	0.0
PRK				S	Sb	01 09 18.5	+0.1
PRK	comp=N,315µm,0.9s			AML	AML	01 09 20.7	
PRK	comp=E,339µm,0.9s			AML	AML	01 09 21.9	
BAYC	CANAKKALE_Bayr	0.72	89	*i* P	Pb	01 09 08.4	-0.6
BAYC	comp=Z,669nm,0.1s			IAML_P			
SMTH	Samothraki Isl	0.74	355	P	Pg	01 09 08.6	-0.2
SMTH				S	Sb	01 09 19.2	-0.5
AYVA	Ayvalik	0.93	117	*i* P	Pn	01 09 13.2	-0.4
AYVA	comp=Z,154nm,0.1s			IAML_P			
GELI	Tayfur-Gelibol	0.94	44	PG	Pg	01 09 12.1	-0.4
GELI				SG	Sb	01 09 25.8	+0.6
ENEZ	Enez	1.08	22	PN	Pb	01 09 15.6	+0.3
LPK	Lapseki	1.09	53	PN	Pg	01 09 15.0	-0.3
THAS	Thassos island	1.11	322	P	Pg	01 09 15.6	-0.2
ERIK	Erikli-Kesan	1.16	36	PN	Pg	01 09 16.1	-0.7
ALN	Alexandroupoli	1.21	16	PN	Pg	01 09 16.8	-0.9
ALN	Alexandroupoli	1.21	16	P	Pg	01 09 17.0	-0.7
KESN	Edirne-Kesan	1.36	36	*i* P	Pn	01 09 19.9	0.0
KESN				*i* S	Sn	01 09 38.7	+0.6
KESN	comp=Z,117nm,0.1s			IAML_P			
CHOS	Chios island	1.39	166	PN	Pn	01 09 20.1	+0.2
CHOS	Chios island	1.39	166	P	Pg	01 09 21.0	-0.1
OUR	Ouranopolis	1.39	296	PN	Pb	01 09 20.5	-0.1
RDO	Rodhopi	1.42	358	PN	Pn	01 09 19.7	-0.5
RDO	Rodhopi	1.42	358	P	Pn	01 09 19.9	-0.4
KRBG	Karabiga-Canak	1.45	62	PN	Pn	01 09 21.1	+0.4
KAVA	Kavala	1.52	327	P	Pn	01 09 21.2	-0.5
BALY	Balya	1.54	89	*i* P	Pn	01 09 22.5	+0.5
BALY				*i* S	Sb	01 09 42.9	+0.1
BALY	comp=Z,271nm,0.2s			IAML_P			
KNL	Balıkesir	1.56	69	*i* P	Pb	01 09 23.5	+0.1
KNL				*i* S	Sg	01 09 44.3	-0.4
KNL	comp=Z,300nm,0.4s			IAML_P			
STEP	BALIKESIR_Sava	1.66	102	*i* P	Pn	01 09 23.9	+0.2
EDRB	Edirne	2.28	22	PN	Pn	01 09 33.1	+0.9
ARMT	Armutlu	2.62	70	PN	Pn	01 09 37.8	+0.9

ISCJB ***25*** *01:22:18.5±1.0, 11°.06S±0°.08×166°.05E±0°.10, h10^{km}, mb3.9/5, Error ellipse: s-maj=16.4km s-min=8.8km az=142.0*
IDC ***25*** *01:22:18.6±1.3, 10°.87S×166°.04E, h0^{km}, mb3.9/5, mb1 4.1/7, mb1mx3.8/36, mbtmp4.1/7, ML4.4/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/33, Error ellipse: s-maj=28.9km s-min=26.8km az=79.0*
ISC 25 01:22:20.2±1.2**, 10°.9S**±0°.1×**166°.1E**±0°.1**, h10**^{km}**, n13, σ1^{s}.63**/9**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 17nm,0.3s,baz=134,slow=2.5,SNR=4.5	6.25	283	Pn	Pn	01 23 52.0	-0.5
HNR	6.4nm,0.3s,baz=207,slow=16,SNR=2.0			Sn	Sn	01 25 05.4	+1.4
HNR	comp=Z,250nm,18.2s,baz=35,slow=39			LR	LR	01 26 18.0	
DZM	Mont Dzumac 1.4nm,0.3s,baz=322,slow=19,SNR=9.4	11.08	178	Pn	Pn	01 25 01.1	+2.2
DZM	0.1nm,0.3s,baz=270,slow=20,SNR=2.3			Sn	Sn	01 27 00.8	-2.2
H11S2	WAKE ISLAND Hy baz=182,slow=76	29.24	1	T	T	01 58 46.8	
H11S3	WAKE ISLAND Hy baz=182,slow=76	29.25	1	T	T	01 58 47.1	
H11S1	WAKE ISLAND Hy baz=182,slow=76	29.26	1	T	T	01 58 48.1	
H11N1	WAKE ISLAND Hy baz=183,slow=76	30.46	1	T	T	02 00 18.1	
H11N3	WAKE ISLAND Hy baz=183,slow=76	30.47	1	T	T	02 00 18.5	
H11N2	WAKE ISLAND Hy baz=183,slow=76	30.48	1	T	T	02 00 19.3	
WRA	Warramunga Arr 1.6nm,0.9s,baz=81,slow=9.2,SNR=6.0	31.86	250	P	P	01 28 45.6	-0.1
RPZ	Rata Peaks 7.5nm,0.9s,baz=183,slow=5.2,SNR=4.2	32.94	173	P	P	01 28 55.4	+0.5
ASAR	Alice Springs 0.4nm,0.4s,baz=78,slow=9.8,SNR=5.4	33.16	243	P	P	01 28 55.8	-1.3
ILAR	Eielson Array 0.3nm,0.8s,baz=238,slow=5.9,SNR=3.1	83.29	18	P	P	01 34 47.2	+0.4
MKAR	Makanchi Array 0.2nm,0.7s,baz=90,slow=4.3,SNR=2.7	93.68	317	P	P	01 35 35.9	-1.3

ISCJB ***25*** *01:24:37.1±1.7, 13°.10N±0°.07×125°.4E±0°.1, h10^{km}, mb3.4/1, Error ellipse: s-maj=17.5km s-min=10.2km az=179.0*
MAN ***25*** *01:24:41.0, 13°.00N×125°.13E, h19^{km}, mb4.2, ML3.1, MS2.8*
ISC 25 01:24:38.6±1.9**, 13°.01N**±0°.07×**125°.3E**±0°.1**, h10**^{km}**, n5, σ2^{s}.30**/8**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.80	232	*e*P	Pb	01 24 54.4	-0.2
CNP				*e*S	Sn	01 25 05.8	-2.1
PVCP	Virac	1.27	298	*e*P	Pb	01 25 00.2	-2.3
PVCP				*e*S	Sn	01 25 23.3	+3.8
PLP	Palo	1.86	190⇓	*e*P	Pn	01 25 11.1	+0.5
PLP				*e*S	Sn	01 25 35.1	+1.0
RCP	Roxas	2.89	240⇑	*e*P	Pn	01 25 25.6	+0.9
MKAR	Makanchi Array 0.3nm,0.8s,baz=110,slow=8.3,SNR=3.6	49.30	322	P	P	01 33 27.7	-0.2

IDC 25 01:32:30.6±1.7**, 6°.82S**×**124°.05E, h0**^{km}**, mb3.4**/1**, mb1 3.4**/3**, mb1mx3.2**/34**, mbtmp3.2**/3**, ML2.6**/2**, Error ellipse: s-maj=217.2km s-min=28.6km az=59.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.0nm,0.3s,baz=318,slow=12,SNR=2.6	16.43	144	Pn	Pn	01 36 22.7	0.0
ASAR	Alice Springs 0.1nm,0.3s,baz=320,slow=9.5,SNR=3.9	19.24	152	P	P	01 36 56.7	0.0
MKAR	Makanchi Array 0.3nm,0.7s,baz=131,slow=7.7,SNR=3.2	64.97	330	P	P	01 43 12.3	0.0

ISCJB ***25*** *01:51:13.4±0.6, 19°.01N±0°.05×145°.3E±0°.2, h214^{km}, mb3.5/12, Error ellipse: s-maj=22.4km s-min=6.9km az=172.2*
IDC ***25*** *01:51:17.5±2.0, 18°.98N×145°.25E, h242^{km}±20^{km}, mb3.3/12, mb1 3.5/15, mb1mx3.3/60, mbtmp4.0/15, Error ellipse: s-maj=23.1km s-min=10.3km az=81.0*
ISC 25 01:51:14.9±0.6**, 19°.05N**±0°.06×**145°.3E**±0°.2**, h214**^{km}**, n15, σ1^{s}.24**/17**, mb3.6**/12**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam 16nm,0.3s,baz=327,slow=14,SNR=8.3	5.44	184	P	Pn	01 52 37.7	+2.4
GUMO	14nm,0.3s,baz=29,slow=19,SNR=3.2			S	S	01 53 37.9	-0.9
JCJ	Chichijima 7.5nm,0.3s,baz=68,slow=16,SNR=2.4	8.51	341	P	Pn	01 53 17.1	+2.5
JCJ	6.1nm,0.3s,baz=355,slow=6.2,SNR=2.8			S	S	01 54 49.4	-1.2
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=170,slow=9.7,SNR=3.8	18.51	342	P	Pn	01 55 17.8	-0.3
WRA	Warramunga Arr 5.4nm,0.6s,baz=16,slow=8.9,SNR=75	40.21	196	P	P	01 58 30.4	-0.4
SONM	Songino Array 0.3nm,0.6s,baz=120,slow=8.1,SNR=3.2	42.63	321	P	P	01 58 49.7	-0.7
ASAR	Alice Springs 1.0nm,0.4s,baz=16,slow=7.1,SNR=15	43.88	195	P	P	01 58 59.8	-0.6
DZM	Mont Dzumac 5.2nm,0.6s,baz=332,slow=15,SNR=6.0	45.80	152	P	P	01 59 14.6	-1.0
STKA	Stephens Creek 0.7nm,0.3s,baz=297,slow=2.3,SNR=3.1	50.76	184	P	P	01 59 52.9	-0.3
MKAR	Makanchi Array 0.4nm,0.6s,baz=88,slow=8.9,SNR=6.6	57.94	314	P	P	02 00 44.0	-0.9
KURBB	Kurchatov Arra 0.5nm,0.4s,baz=93,slow=7.3,SNR=3.9	60.80	318	P	P	02 01 05.0	+0.6
ILAR	Eielson Array 0.9nm,1.2s,baz=260,slow=4.6,SNR=5.1	63.51	26	P	P	02 01 21.8	-0.2
BVAR	Borovoye Array 1.0nm,0.4s,baz=100,slow=7.0,SNR=12	65.96	320	P	P	02 01 38.5	+0.4
YKA	Yellowknife Ar 0.2nm,0.5s,baz=289,slow=5.6,SNR=5.1	77.86	28	P	P	02 02 49.3	+0.7
NVAR	Mina Array Bea 0.6nm,0.6s,baz=264,slow=5.8,SNR=5.1	83.23	52	P	P	02 03 18.0	+0.2
FINES	FINESS Array B 1.4nm,0.9s,baz=58,slow=5.0,SNR=5.3	86.41	335	P	P	02 03 31.0	-1.9

IDC ***25*** *01:52:40.7±1.1, 14°.15N×92°.78W, h0^{km}, mb3.8/6, mb1 4.0/10, mb1mx3.7/43, mbtmp3.7/10, ML3.1/4, Error ellipse: s-maj=32.7km s-min=15.6km az=45.0*
ISCJB ***25*** *01:52:44.0±0.7, 14°.16N±0°.06×92°.89W±0°.05, h37^{km}, mb3.9/6, Error ellipse: s-maj=8.5km s-min=6.2km az=15.8*
MEX ***25*** *01:52:46.2±0.4, 14°.20N×92°.81W, h62^{km}±28^{km}, MD4.0*
NEIC ***25*** *01:52:46.2±0.0, 14°.20N×92°.81W, h62^{km}, MD4.0(MEX), After MEX.*
ISC 25 01:52:45.3±0.8**, 14°.13N**±0°.07×**92°.81W**±0°.06**, h37**^{km}**, n24, σ1^{s}.69**/33**, mb3.9**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.93	34	*e*P	Pn	01 53 01.3	-0.5
THIG				*i* S	Sn	01 53 13.2	-0.8
THIG		0.93	34	*e*P	Pn	01 53 01.3	-0.5
THIG				*i* S	Sn	01 53 13.2	-0.8
PCIG		1.61	346	*e*P	Pn	01 53 10.2	-0.9
PCIG				*i* S	Sn	01 53 29.4	-1.3
PCIG		1.61	346	*e*P	Pn	01 53 10.2	-0.9
PCIG				*i* S	Sn	01 53 29.4	-1.3
APG	El Apazote 4.3nm,0.3s,baz=232,slow=6.5,SNR=88	2.43	69	Pn	Pn	01 53 21.6	-1.1
APG	7.6nm,0.3s,baz=200,slow=20,SNR=4.0			Sn	Sn	01 53 54.0	+2.8
CMIG	Matias Romero	3.56	326	Pn	Pn	01 53 38.1	+0.2
CMIG				*e*S	Sn	01 54 17.0	-1.7
CMIG	Matias Romero	3.56	326	*e*P	Pn	01 53 36.7	-1.2
CMIG				*e*S	Sn	01 54 17.0	-1.7
CMIG	Matias Romero 1.1nm,0.3s,baz=131,slow=9.5,SNR=13	3.56	326	Pn	Pn	01 53 38.1	+0.2
CMIG	3.6nm,0.3s,baz=103,slow=5.1,SNR=4.6			Sn	Sn	01 54 22.2	+3.5
HUIG	Huatulco	3.58	297	*e*P	Pn	01 53 38.1	-0.1
HUIG	Huatulco	3.58	297	*e*P	Pn	01 53 38.1	-0.1
VHO	Vista Hermosa	4.78	308	*e*P	Pn	01 53 55.0	+0.1
VHO	Vista Hermosa	4.78	308	*e*P	Pn	01 53 55.0	+0.1
PNIG	Pinotepa	5.60	294	*i* P	Pn	01 54 05.8	-0.3
PNIG	Pinotepa	5.60	294	*i* P	Pn	01 54 05.8	-0.3
JTS	JuntasAbangare	8.58	116	*e*Pn	Pn	01 54 49.4	+2.5
JTS				*e*Sn	Sn	01 56 17.1	-5.5
JTS	JuntasAbangare 0.1nm,0.3s,baz=354,slow=9.2,SNR=2.9	8.58	116	Pn	Pn	01 54 44.6	-2.4
TXAR	Lajitas Array 0.0nm,0.3s,baz=150,slow=4.2,SNR=3.0	18.16	328	P	Pn	01 56 52.9	-1.8
NVAR	Mina Array Bea 1.0nm,0.7s,baz=134,slow=9.1,SNR=9.2	33.08	322	P	P	01 59 19.3	+1.5
LPAZ	La Paz 0.9nm,0.3s,baz=339,slow=8.2,SNR=9.3	38.84	140	P	P	02 00 09.0	+1.3
YKA	Yellowknife Ar 1.4nm,0.8s,baz=150,slow=7.3,SNR=19	50.72	347	P	P	02 01 42.0	+1.0
CPUP	Villa Florida 2.8nm,1.1s,baz=213,slow=20,SNR=2.8	52.99	139	P	P	02 01 59.0	+0.5
INK	Inuvik 0.7nm,0.8s,baz=97,slow=9.2,SNR=3.8	60.09	344	P	P	02 02 48.9	+0.5
ILAR	Eielson Array 0.4nm,0.9s,baz=151,slow=6.2,SNR=4.5	62.41	337	P	P	02 03 04.5	+0.3
CMAR	Chiang Mai Arr 0.6nm,0.3s,baz=345,slow=5.3,SNR=5.5	145.61	340	PKPbc	PKPdf	02 12 20.7	+0.1

ISN ***25*** *01:58:53.1±0.9, 33°.46N×47°.54E, h7^{km}±4^{km}, ML3.5*
ISCJB ***25*** *01:58:54.6±0.2, 33°.43N±0°.02×47°.39E±0°.02, h14^{km}, mb3.8/23, Error ellipse: s-maj=3.3km s-min=2.8km az=13.6*
THR ***25*** *01:58:56.7, 33°.46N×47°.43E, h17^{km}, ML3.5*
TEH ***25*** *01:58:56.2, 33°.51N×47°.49E, h10^{km}, ML3.5*
AZER ***25*** *01:58:59.7±3.8, 33°.58N×47°.75E, h10^{km}, ml3.4/3, Error ellipse: s-maj=86.6km s-min=38.7km az=91.0*
IDC ***25*** *01:58:59.8±2.2, 33°.36N×47°.31E, h62^{km}±21^{km}, mb3.4/14, mb1 3.5/22, mb1mx3.4/64, mbtmp3.6/22, Error ellipse: s-maj=21.3km s-min=14.4km az=177.0*
ISC 25 01:58:55.2±0.5**, 33°.43N**±0°.03×**47°.46E**±0°.03**, h14**^{km}**, n87, σ1^{s}.69**/96**, mb4.0**/23**, 14C-2D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman comp=Z,0.0nm,0.2s	0.34	74	IAMB	IAmb	01 59 07.9	
IKFM				*e*Pg	Pg	01 59 02.0	-0.1
IDOB	Doab comp=Z,0.0nm,0.3s	0.70	59	IAMB	IAmb	01 59 25.3	
IDOB				*e*Pg	Pg	01 59 08.3	-0.6
IKOM	Komasi comp=Z,0.0nm,0.4s	0.74	3	IAMB	IAmb	01 59 21.1	
IKOM				*e*Pg	Pg	01 59 09.4	-0.3
KCHF	Cheshme Sefid,	0.91	338	*e*Pg	Pb	01 59 12.0	-0.9
KCHF	comp=Z,0.0nm,0.5s			IAMB	IAmb	01 59 25.9	
IBZA	Bozab	1.09	18	*e*Pg	Pb	01 59 15.4	-0.6
IBZA	comp=Z,0.0nm,0.2s			IAMB	IAmb	01 59 19.4	
IGHG	Ghaleghazi	1.16	321	*e*Pg	Pn	01 59 16.6	-0.7
IGHG	comp=Z,15µm,0.2s			IAMB	IAmb	01 59 20.1	
IVIS	Veis	1.20	335	*e*Pg	Pn	01 59 17.9	+0.2
IVIS	comp=Z,12µm,0.3s			IAMB	IAmb	01 59 41.2	
HSAM	Samen	1.23	50	*e*Pg	Pn	01 59 17.7	-0.6
IBDR	Badra	1.32	256	*e*Pg	Pb	01 59 20.0	+0.3
IBDR				*e*Sg	Sg	01 59 39.0	+1.3
ILIN	Lien	1.54	345	*e*Pn	Pg	01 59 24.4	-0.4
ILIN	comp=Z,9µm,0.4s			IAMB	IAmb	01 59 53.0	
SNGE	Sanandaj	1.66	357	*e*Pg	Pg	01 59 26.7	-0.4
SNGE	Sanandaj comp=N,855nm,0.4s	1.66	357	*e*AML	AML	01 59 54.2	
SNGE	comp=E,555nm,0.6s			*e*AML	AML	01 59 57.1	
SNGE	Sanandaj	1.66	357	*e*Pg	Pg	01 59 26.7	-0.4
SHGR	Shooshtar-Gavs	1.74	139	*e*Pn	Pg	01 59 28.5	-0.1
SHGR	Shooshtar-Gavs comp=N,442nm,0.2s	1.74	139	*e*AML	AML	01 59 54.9	
SHGR	comp=E,395nm,0.6s			*e*AML	AML	02 00 06.8	
SHGR	Shooshtar-Gavs	1.74	139	*e*Pn	Pg	01 59 28.5	-0.1
SHGR				*e*Sg	Sg	01 59 52.6	+1.5
HSRG	Sareghieh	1.93	20	*e*Pn	Pg	01 59 31.2	-1.1
HSRG	comp=Z,0.0nm,0.9s			IAMB	IAmb	02 00 02.4	
HAGD	Aghdareh	1.97	45	*e*Pn	Pb	01 59 31.5	+0.5
HAGD	comp=Z,0.0nm,0.6s			IAMB	IAmb	02 00 01.0	
KHMZ	Khomeyn	2.11	81	*e*Pn	Pb	01 59 33.5	+0.1
KHMZ	Khomeyn	2.11	81	*e*Pn	Pb	01 59 33.5	+0.1
ASAO	Ashtian	2.41	62	*e*Pn	Pb	01 59 37.7	-0.8
ASAO	Ashtian	2.41	62	*e*Pn	Pb	01 59 37.7	-0.8
BHD	Baghdad	2.58	267	*e*Pn	Pn	01 59 38.0	+1.5
BHD				*e*Sn	Sb	02 00 11.0	-1.8
NSR	Nassriya	2.66	205	*e*Pn	Pn	01 59 39.0	+1.4
NSR				*e*Sn	Sn	02 00 11.0	+1.4
IRAZ	Razeghan	2.84	45	*e*Pn	Pb	01 59 43.8	-2.0
IRAZ	comp=Z,3µm,0.4s			IAMB	IAmb	01 59 50.9	
IPIR	Pirpir	2.98	104	*e*Pn	Pn	01 59 44.6	+2.3
IPIR	comp=Z,1µm,0.6s			IAMB	IAmb	02 00 34.9	
ZNGN	Zangian	3.15	114	*e*Pn	Pn	01 59 46.4	+1.8
ZNGN	comp=Z,0.0nm,0.7s			IAMB	IAmb	02 00 48.8	
ROKH	ROKH	3.20	109	*e*Pn	Pn	01 59 47.5	+2.2
ROKH	comp=Z,0.0nm,0.9s			IAMB	IAmb	02 00 52.0	
IKRK	Kirkuk	3.24	308	*e*Pn	Pn	01 59 47.0	+1.4
IKRK				*e*Sn	Sn	02 00 26.0	+2.0
GHVR	GHOM	3.36	71	*e*Pn	Pn	01 59 50.2	+2.9
GHVR	GHOM	3.36	71	*e*Pn	Pn	01 59 50.2	+2.9
IKLH	Kolahrood	3.45	91	*e*Pn	Pb	01 59 52.0	-4.3
IKLH	comp=Z,887nm,0.7s			IAMB	IAmb	02 00 59.8	

IHSB	**Hasanabad**	**3.74**	**57**	*e*Pn	**Pn**	**01 59 55.6**	**+3.0**
IHSB				IAMB	IAmb	02 00 11.9	
	comp=Z,0.0nm,0.6s						
KRSH	**Karshahi**	**3.94**	**81**	*e*Pn	**Pn**	**01 59 57.5**	**+2.1**
KRSH				IAMB	IAmb	02 01 10.2	
	comp=Z,0.0nm,0.7s						
IGAR	**Gharneh**	**3.99**	**104**	*e*Pn	**Pn**	**01 59 58.5**	**+2.3**
IGAR				IAMB	IAmb	02 00 00.1	
	comp=Z,315nm,0.4s						
ISFB	**Sefidab**	**4.08**	**76**	*e*Pn	**Pn**	**01 59 59.0**	**+1.7**
ISFB				IAMB	IAmb	02 01 06.9	
	comp=Z,286nm,0.5s						
IZEF	**Zefreh**	**4.12**	**96**	*e*Pn	**Pn**	**01 59 59.8**	**+1.8**
IZEF				IAMB	IAmb	02 01 23.5	
	comp=Z,335nm,1.0s						
IBST	**Bostanabad**	**4.29**	**354**	IAMB	IAmb	02 00 03.0	
	comp=Z,253nm,0.2s						
IBST				*e*Pn	**Pn**	**02 00 02.2**	**+2.0**
IDMV	**Damavand**	**4.34**	**59**	IAMB	IAmb	02 00 04.4	
	comp=Z,453nm,0.2s						
IDMV				*e*Pn	**Pn**	**02 00 03.3**	**+2.2**
ISRB	**Sarab**	**4.39**	**2**	IAMB	IAmb	02 00 20.8	
	comp=Z,341nm,0.5s						
ISRB				*e*Pn	**Pn**	**02 00 04.9**	**+3.3**
IRAM	**Ramesheh**	**4.46**	**110**	IAMB	IAmb	02 00 06.5	
	comp=Z,238nm,0.3s						
IRAM				*e*Pn	**Pn**	**02 00 03.7**	**+1.1**
MSL	**Mosul**	**4.64**	**311**	*e*Pn	**Pn**	**02 00 06.0**	**+1.1**
MSL				*e*Sn	**Sn**	**02 01 00.0**	**+1.5**
ITBZ	**Tabriz**	**4.91**	**348**	*e*Pn	**Pn**	**02 00 11.0**	**+2.3**
ITBZ				IAMB	IAmb	02 01 09.7	
	comp=Z,231nm,0.1s						
ASTR	**Astara**	**5.23**	**12**	⇑P	**Pn**	**02 00 14.5**	**+1.5**
ASTR				⇑S	**Sn**	**02 01 14.7**	**+1.6**
LRK	**Lerik**	**5.25**	**8**	⇓P	**Pn**	**02 00 15.5**	**+2.0**
LRK				⇑S	**Sn**	**02 01 16.2**	**+2.4**
LKRN	**Lenkeran, Azer**	**5.38**	**11**	⇑P	**Pn**	**02 00 17.2**	**+2.2**
LKRN				⇑S	**Sn**	**02 01 19.5**	**+2.9**
ISAD	**Sadrabad**	**5.47**	**104**	*e*Pn	**Pn**	**02 00 17.5**	**+1.0**
ISAD				IAMB	IAmb	02 00 31.7	
	comp=Z,90nm,0.4s						
ORD	**Ordubad**	**5.61**	**348**	⇑P	**Pn**	**02 00 22.5**	**+4.2**
ORD				⇑S	**Sn**	**02 01 26.3**	**+3.6**
GLBA	**Clilabad**	**5.85**	**7**	⇑P	**Pn**	**02 00 24.7**	**+3.2**
GLBA				⇓S	**Sn**	**02 01 29.7**	**+1.4**
RTB	**Rutbah**	**6.00**	**268**	*e*Pn	**Pn**	**02 00 25.0**	**+1.3**
RTB				*e*Sn	**Sn**	**02 01 33.5**	**+1.3**
GNI	**Garni**	**7.05**	**343**	P	**Pn**	**02 00 42.7**	**+4.6**
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=2.6						
ASF	**Jabal al Asfar**	**8.98**	**265**	P	**Pn**	**02 01 04.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=112,slow=19,SNR=3.5						
MMAI	**Mount Meron Ar**	**10.11**	**271**	P	**Pn**	**02 01 19.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=75,slow=14,SNR=2.3						
EIL	**Elat**	**11.31**	**254**	P	**Pn**	**02 01 35.1**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=74,slow=15,SNR=2.9						
BRTR	**Keskin Array B**	**12.75**	**303**	P	**Pn**	**02 01 59.1**	**+2.9**
	comp=Z,0.0nm,0.3s,baz=98,slow=11,SNR=3.2						
WSAR	**Wadi Sarin**	**14.13**	**133**	P	**Pn**	**02 02 16.4**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=0.0,slow=10,SNR=4.4						
AKTO	**Aktyubinsk**	**18.69**	**21**	P	**Pn**	**02 03 13.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=201,slow=8.6,SNR=2.9						
IDI	**Anoyia**	**18.72**	**282**	P	**P**	**02 03 12.0**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=75,slow=13,SNR=2.5						
MLR	**Muntele Rosu**	**20.45**	**312**	⇑*i*P	Pn	02 03 37.0	+2.6
TESR	**Tescani**	**20.54**	**316**	⇑*i*P	**P**	**02 03 33.8**	**+0.7**
VOIR		**20.98**	**311**	⇑*i*P	**P**	**02 03 39.7**	**+1.7**
BIZ	**Bicaz**	**21.08**	**316**	⇑*i*P	**P**	**02 03 39.4**	**+0.4**
AKASG	**Malin Array Be**	**21.83**	**328**	P	**P**	**02 03 45.3**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=140,slow=9.3,SNR=3.6						
BURAR	**Bucovina Array**	**21.95**	**317**	⇑*i*P	**P**	**02 03 49.4**	**+0.9**
DRGR		**23.04**	**313**	⇑*i*P	**P**	**02 04 00.0**	**0.0**
BVAR	**Borovoye Array**	**25.55**	**33**	P	**P**	**02 04 23.7**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=227,slow=8.5,SNR=12						
KURBB	**Kurchatov Arra**	**28.48**	**44**	P	**P**	**02 04 50.6**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=248,slow=9.1,SNR=4.6						
MOA	**Molln**	**28.76**	**310**	*e*P	**P**	**02 04 52.9**	**+0.6**
	comp=Z,3.3nm,1.1s						
KBA	**Koelnbreinsper**	**29.13**	**308**	*e*P	**P**	**02 04 56.6**	**+0.8**
	comp=Z,2.1nm,0.7s						
GERES	**GERESS Array B**	**29.43**	**312**	P	**P**	**02 04 57.7**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=100,slow=8.1,SNR=3.9						
MKAR	**Makanchi Array**	**29.54**	**53**	P	**P**	**02 05 00.0**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=249,slow=10,SNR=7.9						
ABTA	**Abfaltersbach**	**29.60**	**307**	*e*P	**P**	**02 05 00.4**	**+0.5**
	comp=Z,8.1nm,1.3s						
WATA	**Walderalm**	**30.36**	**308**	*e*P	**P**	**02 05 07.0**	**+0.3**
	comp=Z,1.5nm,0.5s						
SQTA	**Sankt Quirin**	**30.58**	**308**	*e*P	**P**	**02 05 08.7**	**+0.2**
	comp=Z,4.6nm,0.6s						
MOTA	**Moosalm**	**30.68**	**308**	*e*P	**P**	**02 05 09.3**	**-0.1**
	comp=Z,1.0nm,0.3s						
FETA	**Feichten**	**30.85**	**307**	*e*P	**P**	**02 05 11.4**	**+0.4**
	comp=Z,4.6nm,0.9s						
RETA	**Reutte**	**30.94**	**308**	*e*P	**P**	**02 05 11.4**	**-0.2**
	comp=Z,3.4nm,0.9s						
FINES	**FINESS Array B**	**31.23**	**340**	P	**P**	**02 05 13.5**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=144,slow=9.8,SNR=8.9						
DAVA	**Damuels**	**31.48**	**307**	*e*P	**P**	**02 05 16.4**	**-0.1**
	comp=Z,4.0nm,0.6s						
ZALV	**Zalesovo Beam**	**33.37**	**41**	P	**P**	**02 05 32.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=261,slow=8.8,SNR=3.9						
HFS	**Hagfors**	**34.65**	**331**	P	**P**	**02 05 43.2**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=120,slow=8.8,SNR=12						
NOA	**NORSAR Array B**	**36.17**	**331**	P	**P**	**02 05 55.9**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=118,slow=7.2,SNR=2.9						
TORD	**Torodi Ar. Bea**	**46.19**	**255**	P	**P**	**02 07 19.1**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=31,slow=6.3,SNR=4.6						
CMAR	**Chiang Mai Arr**	**48.18**	**95**	P	**P**	**02 07 35.2**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=291,slow=7.7,SNR=3.8						
SCHQ	**Schefferville**	**75.63**	**327**	P	**P**	**02 10 37.3**	**-2.3**
	comp=Z,3.2nm,1.1s,baz=11,slow=5.2,SNR=3.1						
INK	**Inuvik**	**78.57**	**0**	P	**P**	**02 10 54.4**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=281,slow=5.2,SNR=2.5						
YKA	**Yellowknife Ar**	**83.32**	**352**	P	**P**	**02 11 19.2**	**-2.0**
	comp=Z,0.1nm,0.4s,baz=18,slow=5.5,SNR=3.7						

NNC 25 02:00:28.4±3.4**, 36°.99N×70°.06E, h0^{km}, mb3.6, mpv3.3, 3C-4D, Error ellipse: s-maj=27.3km s-min=24.5km az=147.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**4.05**	**41**	⇓P	Pn	02 01 32.4	+0.5
	2.3nm,0.5s						
SFK				⇓S	Sn	02 02 22.1	+1.9
	6.7nm,0.3s						
MNAS	**Manas**	**5.81**	**18**	⇓P	Pn	02 01 56.0	+0.1
	2.4nm,0.7s						
MNAS				⇑S	Sn	02 03 03.8	+0.5
	2.5nm,0.7s						
KK31	**Karatay Array**	**6.12**	**3**	P	Pn	02 02 00.7	+0.6
	0.9nm,0.5s,baz=184,slow=11,SNR=26						
KK31				⇓S	Sn	02 03 12.8	+2.0
	0.4nm,0.5s,baz=255,slow=11,SNR=6.1						
AAK	**Ala-Archa**	**6.60**	**30**	⇑P	Pn	02 02 04.7	-2.0
	1.4nm,0.4s						
AAK				⇑S	Sn	02 03 22.5	-0.2
	3.8nm,0.8s						

*IDC **25** 02:19:50.8±0.8, 53°.57N×35°.09W, h0^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.5/49, mbtmp3.6/10, ML2.2/1, MS3.4/14, Ms1 3.4/14, ms1mx3.2/35, Error ellipse: s-maj=26.4km s-min=17.4km az=20.0*

*ISCJB **25** 02:19:51.3±0.7, 53°.5N±0°.1×35°.3W±0°.1, h12^{km}, mb3.5/9, MS3.4/10, Error ellipse: s-maj=21.8km s-min=11.5km az=9.8*

ISC 25 02:19:52.6±0.7**, 53°.5N**±0°.2×**35°.2W**±0°.1**, h12^{km}, n24, σ1^{s}.41**/14**, mb3.7**/9**, MS3.4**/10**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**13.30**	**27**	LR	LR	02 26 23.3	
	comp=Z,169nm,18.6s,baz=199,slow=30						
SFJD	**Kangerlussuaq**	**15.46**	**337**	LR	LR	02 28 22.5	
	comp=Z,36nm,18.3s,baz=112,slow=33						
SCHQ	**Schefferville**	**18.46**	**287**	P	**P**	**02 24 07.3**	**-0.7**
	0.1nm,0.3s,baz=100,slow=11,SNR=3.1						
SCHQ				LR	LR	02 29 57.5	
	comp=Z,83nm,20.8s,baz=32,slow=33						
EKA	**Eskdalemuir Ar**	**18.67**	**71**	P	**Pn**	**02 24 13.1**	**+2.5**
	baz=279,slow=11,SNR=2.9						
FRB	**Frobisher Bay**	**19.89**	**314**	LR	LR	02 30 08.2	
	comp=Z,149nm,20.0s,baz=355,slow=31						
JMIC	**Jan Mayen**	**21.16**	**24**	LR	LR	02 30 14.2	
	comp=Z,119nm,19.5s,baz=246,slow=30						
ESDC	**Sonseca Array**	**25.32**	**110**	P	**P**	**02 25 19.0**	**0.0**
	1.3nm,0.8s,baz=312,slow=8.4,SNR=6.9						
NOA	**NORSAR Array B**	**25.73**	**54**	P	**P**	**02 25 21.8**	**-0.7**
	0.5nm,0.8s,baz=276,slow=9.9,SNR=3.3						
NOA				LR	LR	02 34 28.1	
	comp=Z,74nm,18.2s,baz=275,slow=34						
HFS	**Hagfors**	**27.04**	**56**	LR	LR	02 34 57.4	
	comp=Z,107nm,18.5s,baz=262,slow=34						
SADO	**Sadowa**	**29.60**	**271**	LR	LR	02 36 55.2	
	comp=Z,180nm,18.2s,baz=114,slow=34						
GERES	**GERESS Array B**	**30.54**	**79**	LR	LR	02 37 54.6	
	comp=Z,101nm,18.0s,baz=288,slow=36						
FINES	**FINESS Array B**	**32.74**	**51**	LR	LR	02 37 46.8	
	comp=Z,92nm,21.9s,baz=288,slow=33						
ULM	**Lac du Bonnet**	**36.59**	**290**	LR	LR	02 40 40.8	
	comp=Z,84nm,18.1s,baz=90,slow=34						
TKL	**Tuckaleechee C**	**38.04**	**262**	LR	LR	02 41 01.5	
	comp=Z,127nm,20.4s,baz=1.5,slow=33						
AKASG	**Malin Array Be**	**38.49**	**67**	LR	LR	02 42 54.0	
	comp=Z,32nm,18.8s,baz=105,slow=36						
YKA	**Yellowknife Ar**	**40.40**	**315**	P	**P**	**02 27 29.1**	**-0.9**
	0.2nm,0.5s,baz=64,slow=9.3,SNR=5.1						
YKA				PcP	**PcP**	**02 29 31.4**	**-1.4**
	0.2nm,0.7s,baz=58,slow=3.4,SNR=4.4						
BRTR	**Keskin Array B**	**47.43**	**78**	P	**P**	**02 28 27.3**	**+0.4**
	0.6nm,0.8s,baz=297,slow=8.2,SNR=4.3						
PDAR	**Pinedale Array**	**48.58**	**289**	P	**P**	**02 28 38.3**	**+2.3**
	0.5nm,0.5s,baz=55,slow=8.4,SNR=8.9						
TORD	**Torodi Ar. Bea**	**49.73**	**130**	P	**P**	**02 28 43.4**	**-1.3**
	2.1nm,1.0s,baz=334,slow=9.6,SNR=7.4						
TORD				LR	LR	02 47 53.1	
	comp=Z,28nm,18.6s,baz=345,slow=34						
ILAR	**Eielson Array**	**50.94**	**329**	P	**P**	**02 28 53.6**	**+0.4**
	0.3nm,0.9s,baz=57,slow=6.6,SNR=4.1						
SONM	**Songino Array**	**73.91**	**26**	P	**P**	**02 31 27.0**	**-0.3**
	0.7nm,0.9s,baz=338,slow=11,SNR=4.2						
LPAZ	**La Paz**	**75.04**	**213**	P	**P**	**02 31 35.8**	**+1.2**
	0.3nm,0.5s,baz=18,slow=3.9,SNR=2.6						
WRA	**Warramunga Arr**	**145.55**	**18**	PKPbc	**PKPdf**	**02 39 29.3**	**-1.3**
	0.6nm,0.9s,baz=349,slow=3.4,SNR=3.0						
ASAR	**Alice Springs**	**149.09**	**20**	PKPbc	**PKPbc**	**02 39 39.3**	**-1.3**
	0.3nm,0.4s,baz=352,slow=2.5,SNR=4.8						

IDC 25 02:21:17.4±1.1**, 53°.61N**×**34°.94W, h0^{km}, mb3.6**/8**, mb1 3.7**/8**, mb1mx3.5**/48**, mbtmp3.6**/8**, Error ellipse: s-maj=43.2km s-min=19.0km az=16.0, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**25.18**	**111**	P	P	02 26 44.5	+0.1
	0.8nm,0.8s,baz=320,slow=9.3,SNR=4.9						
FINES	**FINESS Array B**	**32.53**	**51**	P	P	02 27 49.7	+0.2
	1.2nm,0.8s,baz=277,slow=12,SNR=2.0						
ULM	**Lac du Bonnet**	**36.72**	**290**	P	P	02 28 26.4	+0.6
	1.6nm,0.8s,baz=80,slow=6.1,SNR=2.3						
AKASG	**Malin Array Be**	**38.28**	**67**	P	P	02 28 38.6	-0.5
	0.1nm,0.3s,baz=296,slow=8.0,SNR=1.9						
YKA	**Yellowknife Ar**	**40.45**	**315**	P	P	02 28 54.9	-2.1
	0.2nm,0.7s,baz=63,slow=9.7,SNR=2.8						
BRTR	**Keskin Array B**	**47.23**	**78**	P	P	02 29 52.9	+0.9
	0.8nm,0.8s,baz=326,slow=6.8,SNR=4.2						
PDAR	**Pinedale Array**	**48.72**	**289**	P	P	02 30 04.5	+0.9
	0.4nm,0.6s,baz=62,slow=9.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**49.66**	**130**	P	P	02 30 09.8	-1.0
	1.1nm,0.8s,baz=338,slow=9.4,SNR=4.5						

IDC 25 02:21:53.0±4.6**, 4°.83S**×**148°.15E, h0^{km}, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.5**/36**, mbtmp3.8**/3**, Error ellipse: s-maj=153.9km s-min=48.3km az=112.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.16**	**221**	P	P	02 26 29.1	0.0
	1.3nm,0.3s,baz=45,slow=12,SNR=32						
ASAR	**Alice Springs**	**23.22**	**215**	P	P	02 27 02.1	+0.1
	0.6nm,0.4s,baz=48,slow=9.2,SNR=9.9						
FITZ	**Fitzroy Crossi**	**25.65**	**237**	P	P	02 27 24.6	-0.1
	5.7nm,1.1s,baz=36,slow=8.7,SNR=8.0						
TORD	**Torodi Ar. Bea**	**145.88**	**286**	PKPbc	PKPdf	02 41 34.7	-0.3
	0.4nm,0.8s,baz=90,slow=2.4,SNR=5.1						

IDC 25 02:24:38.4±1.9**, 39°.39N**×**110°.65E, h0^{km}, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.3**/52**, mbtmp3.4**/4**, ML2.8**/1**, Error ellipse: s-maj=43.8km s-min=25.0km az=92.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**8.99**	**341**	Pn	Pn	02 26 49.5	0.0
	0.1nm,0.3s,baz=156,slow=13,SNR=16						
SONM				Sn	Sn	02 28 41.7	+10
	0.1nm,0.3s,baz=168,slow=18,SNR=3.0						
SONM				Lg	Lg	02 29 23.8	
	0.1nm,0.3s,baz=160,slow=31,SNR=5.2						
MKAR	**Makanchi Array**	**21.91**	**299**	P	P	02 29 33.2	+0.1
	0.8nm,0.8s,baz=94,slow=12,SNR=7.8						
CMAR	**Chiang Mai Arr**	**23.19**	**209**	P	P	02 29 46.8	-0.1
	0.8nm,0.4s,baz=13,slow=9.8,SNR=5.9						
YKA	**Yellowknife Ar**	**72.15**	**20**	P	P	02 36 04.5	0.0
	0.1nm,0.8s,baz=325,slow=5.7,SNR=4.2						

*NEIC **25** 02:25:34.6±0.0, 17°.29N×100°.12W, h46^{km}, MD4.0(MEX), After MEX.*

MEX 25 02:25:34.6±0.4**, 17°.29N**×**100°.12W, h46^{km}**±6^{km}**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.28**	**211**	*i* P	Pn	02 25 41.5	-1.7
CAIG				*e*S	Sn	02 25 47.6	-1.7
CAIG	**El Cayaco**	**0.28**	**211**	*i* P	Pn	02 25 41.5	-1.7
CAIG				*e*S	Sn	02 25 47.6	-1.7
ACP2	**Acapulco**	**0.47**	**152**	*e*P	Pn	02 25 44.0	-1.3
ACP2				*e*S	Sn	02 25 51.2	-1.7
MEIG	**Mezcala**	**0.79**	**37**	*e*P	Pn	02 25 48.1	-1.4
MEIG				*e*S	Sn	02 25 57.9	-2.4
MEIG	**Mezcala**	**0.79**	**37**	*e*P	Pn	02 25 48.1	-1.4
MEIG				*e*S	Sn	02 25 57.9	-2.4
ARIG	**Puente Sto Nin**	**1.01**	**347**	*e*P	Pn	02 25 50.7	-1.7
ARIG				*e*S	Sn	02 26 03.2	-2.3
ARIG	**Puente Sto Nin**	**1.01**	**347**	*e*P	Pn	02 25 50.7	-1.7
ARIG				*e*S	Sn	02 26 03.2	-2.3
PLIG	**Platanillo**	**1.24**	**28**	*e*P	Pn	02 25 54.0	-1.7
PLIG				*e*S	Sn	02 26 09.2	-2.1
PLIG	**Platanillo**	**1.24**	**28**	*e*P	Pn	02 25 54.0	-1.7
PLIG				*e*S	Sn	02 26 09.2	-2.1
ZIIG	**Zihuatanejo**	**1.32**	**284**	*e*P	Pn	02 25 55.1	-1.6
ZIIG	**Zihuatanejo**	**1.32**	**284**	*e*P	Pn	02 25 55.1	-1.6
PNIG	**Pinotepa**	**2.10**	**115**	*e*P	Pn	02 26 05.9	-1.5
PNIG				*e*S	Sn	02 26 29.5	-2.8
PNIG	**Pinotepa**	**2.10**	**115**	*e*P	Pn	02 26 05.9	-1.5
PNIG				*e*S	Sn	02 26 29.5	-2.8
UNM	**Universidad Na**	**2.21**	**24**	*e*Pn	Pn	02 26 05.8	-3.4

*IDC **25** 02:28:23.4±1.3, 30°.74N×78°.34E, h0^{km}, mb3.6/8, mb1 3.6/11, mb1mx3.4/54, mbtmp3.5/11, ML3.3/3, Error ellipse: s-maj=31.9km s-min=26.7km az=64.0*

*NDI **25** 02:28:24.5±1.9, 30°.91N×78°.40E, h10^{km}, ML3.2*

*ISCJB **25** 02:28:25.8±0.7, 30°.89N±0°.04×78°.39E±0°.04, h22^{km}±6^{km}, mb3.5/8, Error ellipse: s-maj=6.7km s-min=5.8km az=143.2*

ISC 25 02:28:26.4±1.3**, 30°.84N**±0°.04×**78°.37E**±0°.05**, h25^{km}**±11^{km}**, n20, σ2^{s}.83**/28**, mb3.6**/8**, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**0.58**	**208**	*e*P	**Pb**	**02 28 37.7**	**-0.3**
DDI				*e*S	**Sb**	**02 28 45.8**	**-0.1**
JOSI	**Joshimath**	**1.06**	**105**	*e*P	**Pn**	**02 28 45.5**	**-0.4**
JOSI				*e*S	**Sb**	**02 28 59.8**	**+0.1**
JOSI				IAML		02 29 02.2	
	comp=E,276nm,0.3s						
JOSI				IAML		02 29 02.8	
	comp=N,273nm,0.0s						
SMLA	**Simla**	**1.07**	**286**	*e*P	**Pn**	**02 28 45.8**	**0.0**
SMLA				*e*S	**Sn**	**02 28 60.0**	**0.0**
SMLA				IAML		02 29 01.6	
	comp=N,833nm,0.5s						
SMLA				IAML		02 29 02.7	
	comp=E,823nm,0.5s						
KALG	**Kalgarh**	**1.37**	**166**	*e*P	**Pn**	**02 28 49.8**	**0.0**
KALG				*e*S	**Sb**	**02 29 10.7**	**+2.4**
DHRM	**DHARAMSHALA**	**2.26**	**309**	*e*P	**Pn**	**02 29 01.4**	**-1.1**
DHRM				*e*S	**Sb**	**02 29 32.9**	**-1.5**
DHRM				IAML		02 29 40.1	
	comp=N,182nm,0.3s						
DHRM				IAML		02 29 40.5	
	comp=E,275nm,0.3s						
NDI	**New Delhi**	**2.37**	**205**	*e*P	**Pn**	**02 29 05.5**	**+1.8**
NDI				*e*S	**Sb**	**02 29 35.0**	**-2.2**
BHPL	**Bhopal**	**7.61**	**187**	*e*S	**Sn**	**02 31 38.3**	**-3.0**
JBP	**Jabalpur**	**7.77**	**169**	*e*P	**Pn**	**02 30 18.4**	**+0.4**
JBP				*e*S	**Sn**	**02 31 42.2**	**-3.0**
NGP	**Nagpur**	**9.66**	**176**	*e*S	**Sn**	**02 32 24.7**	**-7.0**
AAK	**Ala-Archa**	**12.18**	**346**	Pn	**Pn**	**02 31 20.5**	**+2.0**
	comp=E,0.2nm,0.3s,baz=158,slow=19,SNR=2.7						
MKAR	**Makanchi Array**	**16.22**	**10**	Pn	**Pn**	**02 32 12.4**	**-0.1**
	comp=E,0.1nm,0.3s,baz=194,slow=13,SNR=4.4						
MKAR				Sn	**Sn**	**02 35 02.4**	**-9.3**
	comp=E,0.1nm,0.3s,baz=194,slow=22,SNR=3.5						
KURBB	**Kurchatov Arra**	**19.77**	**0**	P	**Pn**	**02 32 55.7**	**-0.3**
	comp=E,0.1nm,0.3s,baz=191,slow=10,SNR=5.5						
ZALV	**Zalesovo Beam**	**23.56**	**10**	P	**P**	**02 33 35.2**	**+0.5**
	comp=E,0.3nm,0.3s,baz=181,slow=9.8,SNR=2.7						
SONM	**Songino Array**	**27.32**	**44**	P	**P**	**02 34 11.4**	**+2.2**
	comp=E,0.2nm,0.4s,baz=218,slow=9.1,SNR=1.9						
FINES	**FINESS Array B**	**45.57**	**328**	P	**P**	**02 36 45.8**	**+1.9**
	comp=E,0.4nm,0.4s,baz=123,slow=7.0,SNR=4.2						
ARCES	**ARCESS Array B**	**48.69**	**338**	P	**P**	**02 37 10.0**	**+1.8**
	comp=E,4.1nm,1.1s,baz=123,slow=9.9,SNR=3.5						
HFS	**Hagfors**	**51.27**	**325**	P	**P**	**02 37 28.8**	**+0.9**
	comp=E,0.7nm,0.4s,baz=99,slow=9.2,SNR=7.3						
TORD	**Torodi Ar. Bea**	**72.04**	**275**	P	**P**	**02 39 49.6**	**+0.9**
	comp=E,0.4nm,0.7s,baz=39,slow=4.7,SNR=4.2						
WRA	**Warramunga Arr**	**73.74**	**126**	P	**P**	**02 39 59.7**	**+1.1**
	comp=E,0.5nm,0.9s,baz=321,slow=6.0,SNR=3.8						
YKA	**Yellowknife Ar**	**86.41**	**6**	P	**P**	**02 41 07.0**	**+0.7**
	comp=E,0.1nm,0.5s,baz=338,slow=4.7,SNR=3.9						

IDC 25 02:33:53.0±2.4**, 8°.60S**×**121°.38E, h0^{km}, mb3.4**/2**, mb1 3.5**/4**, mb1mx3.4**/37**, mbtmp3.4**/4**, ML2.8**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.5**/21**, Error ellipse: s-maj=178.0km s-min=27.8km az=57.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.86**	**133**	Pn	Pn	02 37 48.9	-1.7
	0.0nm,0.3s,baz=306,slow=14,SNR=3.6						
ASAR	**Alice Springs**	**19.19**	**143**	P	Pn	02 38 19.6	+0.3
	0.1nm,0.3s,baz=319,slow=11,SNR=6.2						
PALK	**Pallekele**	**43.50**	**290**	LR	LR	03 01 05.1	
	comp=Z,35nm,18.4s,baz=289,slow=38						
SONM	**Songino Array**	**57.73**	**348**	P	P	02 43 46.1	+0.3
	0.3nm,0.6s,baz=158,slow=4.2,SNR=1.8						
MKAR	**Makanchi Array**	**65.20**	**331**	P	P	02 44 35.7	-0.4
	0.3nm,0.6s,baz=135,slow=7.9,SNR=4.0						

*IDC **25** 02:37:09.0±4.6, 5°.65S×146°.46E, h96^{km}±41^{km}, mb3.9/13, mb1 4.1/16, mb1mx4.0/30, mbtmp4.2/16, MS3.3/8, Ms1 3.3/8, ms1mx3.0/39, Error ellipse: s-maj=24.7km s-min=13.4km az=99.0*

*NEIC **25** 02:37:09.3±1.4, 5°.68S×146°.64E, h105^{km}±14^{km}, mb4.2/7, Error ellipse: s-maj=14.2km s-min=7.9km az=119.0*

ISC 25 02:37:11.1±0.5**, 5°.70S**±0°.08×**146°.7E**±0°.1**, h123^{km}, n49, σ1^{s}.26**/45**, mb4.2**/17**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**5.65**	**75**	*e*Pn	**Pn**	**02 38 30.3**	**-2.7**
JAY	**Jayapura**	**6.76**	**298**	LR	LR	02 41 22.4	
	comp=Z,192nm,21.1s,baz=170,slow=39						
CTA	**Charters Tower**	**14.31**	**182**	P	**Pn**	**02 40 28.2**	**0.0**
	0.6nm,0.3s,baz=357,slow=13,SNR=8.1						
CTAO	**Charters Tower**	**14.31**	**182**	*e*Pn	**Pn**	**02 40 28.2**	**0.0**
SIJI	**Sorong**	**16.13**	**287**	P	**Pn**	**02 40 46.8**	**-4.2**
	1.5nm,0.3s,baz=75,slow=5.7,SNR=5.0						
WRAB	**Tennant Creek**	**18.55**	**219**	*e*Pn	**P**	**02 41 17.9**	**-0.6**
	9.4nm,0.8s						
WB2	**Warramunga Arr**	**18.56**	**219**	*e*P	**P**	**02 41 17.5**	**-1.1**
	14nm,1.0s						
WRA	**Warramunga Arr**	**18.57**	**219**	P	**P**	**02 41 16.8**	**-2.0**
	0.4nm,0.3s,baz=40,slow=10,SNR=17						
WRA				S	**S**	**02 44 44.1**	**-0.2**
	0.1nm,0.3s,baz=42,slow=21,SNR=2.8						
WRA				LR	LR	02 50 01.2	
	comp=Z,80nm,19.5s,baz=30,slow=42						
GUMO	**Guam**	**19.25**	**355**	LR	LR	02 47 49.3	
	comp=Z,33nm,20.5s,baz=47,slow=33						
AS01	**Alice Springs**	**21.67**	**213**	*e*P	**P**	**02 41 53.0**	**+0.8**
AS31	**Alice Springs**	**21.70**	**213**	*e*P	**P**	**02 41 53.9**	**+1.5**
	1.9nm,0.7s						
ASAR	**Alice Springs**	**21.70**	**213**	P	**P**	**02 41 51.0**	**-1.4**
	2.0nm,0.6s,baz=45,slow=8.2,SNR=21						
ASAR				PcP	**PcP**	**02 45 51.0**	**+2.2**
	2.2nm,0.8s,baz=39,slow=3.2,SNR=9.6						
ASAR				LR	LR	02 51 11.9	
	comp=Z,183nm,20.6s,baz=50,slow=39						
FITZ	**Fitzroy Crossi**	**23.97**	**237**	P	**P**	**02 42 13.0**	**-1.4**
	12nm,0.8s,baz=69,slow=7.8,SNR=22						
FITZ				LR	LR	02 52 33.2	
	comp=Z,98nm,19.9s,baz=57,slow=39						
STKA	**Stephens Creek**	**26.48**	**190**	P	**P**	**02 42 37.8**	**+0.8**
	0.4nm,0.3s,baz=335,slow=14,SNR=2.3						
STKA				LR	LR	02 52 43.0	
	comp=Z,111nm,20.0s,baz=22,slow=35						
KSRS	**Korea Array**	**46.36**	**339**	P	**P**	**02 45 25.3**	**+0.3**
	1.3nm,0.5s,baz=160,slow=9.4,SNR=4.7						
KSRS				LR	LR	03 02 05.2	
	comp=Z,29nm,21.6s,baz=140,slow=32						
KSAR	**Wonju Array Be**	**46.37**	**339**	P	**P**	**02 45 25.3**	**+0.3**
USRK	**Ussuriysk Ar.**	**51.41**	**346**	P	**P**	**02 46 03.1**	**-0.3**
	2.3nm,0.7s,baz=176,slow=7.3,SNR=5.9						
CM01	**Chiang Mai Arr**	**52.81**	**298**	*e*P	**P**	**02 46 14.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**52.84**	**298**	P	**P**	**02 46 14.2**	**-0.3**
	2.3nm,0.6s,baz=127,slow=5.8,SNR=11						
HHC	**Hu-ho-hao-te**	**56.42**	**328**	*e*P	**P**	**02 46 41.9**	**+1.8**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
PETK	**Petropavlovsk-**	**59.32**	**8**	P	**P**	**02 47 01.1**	**+1.2**
	comp=Z,3.3nm,1.0s,baz=180,slow=9.3,SNR=3.6						
GTA	**Gaotai**	**62.31**	**320**	*e*P	**P**	**02 47 21.6**	**+0.9**
GTA				pP	pP	02 47 25.6	-24
GTA				sP	PcP	02 47 28.8	-31
GTA				PcP	PP	02 48 55.0	-44
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	**Ulaanbaatar**	**63.70**	**331**	*e*P	**P**	**02 47 30.6**	**+0.9**
	comp=Z,3.7nm,0.9s						
SONM	**Songino Array**	**63.99**	**331**	P	**P**	**02 47 32.4**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=152,slow=6.7,SNR=10						
SONA1	**Songino Array**	**64.00**	**331**	*e*P	**P**	**02 47 32.5**	**+0.8**
WMQ	**Urumqi**	**72.36**	**319**	*e*P	**P**	**02 48 25.4**	**+1.5**
MK01	**Makanchi Array**	**77.06**	**321**	*e*P	**P**	**02 48 50.5**	**-0.3**
MK31	**Makanchi Array**	**77.07**	**321**	*e*P	**P**	**02 48 50.9**	**0.0**
MKAR	**Makanchi Array**	**77.07**	**321**	*e*P	**P**	**02 48 50.9**	**0.0**
	comp=Z,8.5nm,1.0s						
MKAR	**Makanchi Array**	**77.07**	**321**	P	**P**	**02 48 50.3**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=106,slow=6.9,SNR=14						
MAKZ	**Makanchi**	**77.28**	**320**	*e*P	**P**	**02 48 52.1**	**0.0**
	comp=Z,1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**78.59**	**328**	*e*P	**P**	**02 48 58.1**	**-1.0**
ZALV	**Zalesovo Beam**	**78.59**	**328**	P	**P**	**02 48 58.0**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=102,slow=4.3,SNR=6.6						
QSPA	**South Pole Qui**	**84.27**	**180**	*e*P	**P**	**02 49 29.3**	**+0.3**
ILAR	**Eielson Array**	**85.33**	**23**	P	**P**	**02 49 34.2**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=253,slow=4.7,SNR=29						
ILB	**Eielson Array**	**85.33**	**23**	*e*P	**P**	**02 49 34.5**	**+0.4**
IL1	**Eielson Array**	**85.33**	**23**	*e*P	**P**	**02 49 33.7**	**-0.4**
EPYK	**Eagle Plains**	**89.84**	**23**	*e*P	**P**	**02 49 56.3**	**+0.5**
	comp=Z,3.7nm,0.9s						
NVAR	**Mina Array Bea**	**97.42**	**52**	P	Pdif	02 50 33.9	+2.4
	comp=Z,0.5nm,0.7s,baz=269,slow=3.6,SNR=4.7						
KIRV	**Kirov**	**98.63**	**328**	LR	LR	03 34 56.2	
	comp=Z,23nm,19.5s,baz=254,slow=35						
YKA	**Yellowknife Ar**	**99.05**	**28**	P	**Pdif**	**02 50 38.8**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=270,slow=4.6,SNR=5.6						
PLCA	**Paso Flores**	**122.54**	**147**	PKP	**PKiKP**	**02 55 54.4**	**+1.6**
	comp=Z,2.6nm,1.0s,baz=243,slow=5.8,SNR=4.6						
LPAZ	**La Paz**	**139.21**	**123**	PKhKP	PKPpre	02 56 18.5	
	comp=Z,0.6nm,0.5s,baz=198,slow=3.2,SNR=3.4						
CPUP	**Villa Florida**	**140.55**	**145**	PKhKP	PKPpre	02 56 24.7	

	comp=Z,0.9nm,0.7s,baz=310,slow=7.9,SNR=2.4						
TOA0	**Torodi Ar. Sit**	144.72	285	*e*PKPdf	PKPab	02 56 32.8	-0.8
TORD	**Torodi Ar. Bea** comp=Z,1.9nm,0.9s,baz=50,slow=5.0,SNR=9.8	144.72	285	PKP	PKPab	02 56 32.7	-0.9
DBIC	**Dimbokro** comp=Z,4.6nm,0.9s,baz=168,slow=6.7,SNR=3.5	151.70	273	PKPbc	PKPbc	02 56 52.2	-0.1
BDFB	**Brasilia**	154.28	146	*e*PKPbc	PKPbc	02 56 56.4	-1.6
BDFB	**Brasilia** comp=Z,7.2nm,0.8s,baz=213,slow=3.2,SNR=12	154.28	146	PKPbc	PKiKP	02 56 59.6	+1.5

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*KRNET **25** 02:37:13.8±0.1, 43°.00N×74°.91E, h20^{km}, mb2.6*
*NNC **25** 02:37:13.6±0.2, 42°.99N×74°.93E, h0^{km}, mb3.0, mpv3.1, Error ellipse: s-maj=2.6km s-min=1.0km az=158.0*
*KNET **25** 02:37:13.3±0.2, 43°.00N×74°.91E, h18^{km}±1^{km}, ml1.6, Error ellipse: s-maj=2.6km s-min=1.4km az=176.0*
*SOME **25** 02:37:14.4, 43°.00N×74°.93E, h10^{km}*
ISC 25 02:37:13.7±0.8, **43°.02N**±0°.02×**74°.89E**±0°.01, **h17**^{km}±5^{km}, **n71**, σ**0^{s}.89**/135, **37C-36D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMS	**Chumysh** 44nm,0.1s,SNR=95	0.10	261	⇑P	Pg	02 37 17.4	0.0
CHMS	118nm,0.1s			⇑S	Sg	02 37 19.8	0.0
CHMS	**Chumysh** baz=72	0.10	261	⇑*i*P	Pg	02 37 17.4	0.0
CHMS	baz=72			⇑*i*S	Sg	02 37 19.7	-0.1
KBK	**Karagaybulak** 103nm,0.1s,SNR=21	0.36	173	⇓P	Pg	02 37 21.3	0.0
KBK	521nm,0.2s			⇑S	Sg	02 37 26.4	-0.1
KBK	**Karagaybulak** baz=75	0.36	173	⇓*i*P	Pg	02 37 21.2	-0.1
KBK	baz=75			⇓*i*S	Sg	02 37 25.9	-0.6
USP	**Ospenovka** 21nm,0.1s,SNR=92	0.38	311	⇓P	Pg	02 37 21.0	-0.7
USP	48nm,0.1s			⇓S	Sb	02 37 27.8	+0.1
USP	**Ospenovka** baz=12	0.38	311	⇓*i*P	Pb	02 37 22.0	-0.1
USP	baz=12			⇓*i*S	Sb	02 37 27.6	-0.1
SGDS	**Sogindy** 34nm,0.1s	0.48	336	P	Pb	02 37 23.7	0.0
SGDS	36nm,0.0s			S	Sb	02 37 30.3	-0.2
AAK	**Ala-Archa** 7.8nm,0.1s,SNR=8.7	0.48	218	⇑P	Pg	02 37 23.3	-0.2
AAK	56nm,0.2s			⇑S	Sg	02 37 29.9	0.0
AAK	**Ala-Archa** 1.8nm,0.2s	0.48	218	⇓P	Pg	02 37 23.2	-0.2
AAK	24nm,0.3s			⇓S	Sg	02 37 29.6	-0.3
AAK	**Ala-Archa** baz=21	0.48	218	⇑*i*P	Pg	02 37 23.2	-0.2
AAK	baz=21			⇑*i*S	Sg	02 37 29.5	-0.4
TKM2	**Tokmak 2** 9.5nm,0.1s,SNR=136	0.53	100	⇓P	Pg	02 37 23.6	-0.7
TKM2	45nm,0.1s			⇑S	Sg	02 37 30.8	-0.6
TKM2	**Tokmak 2** 3.2nm,0.4s	0.53	100	⇑P	Pg	02 37 23.5	-0.7
TKM2	12nm,0.3s			⇑S	Sg	02 37 30.3	-1.0
TKM2	**Tokmak 2** baz=98	0.53	100	⇓*i*P	Pg	02 37 23.6	-0.7
TKM2	baz=98			⇓*i*S	Sg	02 37 30.4	-1.0
DGS	**Degeres** 5.6nm,0.1s	0.68	70	P	Pg	02 37 25.5	-1.7
DGS	20nm,0.2s			S	Sg	02 37 33.4	-2.9
DGS	**Degeres** 5.6nm,0.1s	0.68	70	*e*P	Pg	02 37 25.4	-1.7
DGS	20nm,0.2s			*e*S	Sg	02 37 33.6	-2.7
KST	**Kastek** 4.5nm,0.1s	0.79	88	P	Pb	02 37 28.9	-0.1
KST	17nm,0.3s			S	Sb	02 37 39.3	-0.1
KST	**Kastek** baz=86	0.79	88	⇑*i*P	Pb	02 37 28.9	-0.1
KST	baz=86			⇑*i*S	Sb	02 37 39.3	-0.1
KST	**Kastek** 4.5nm,0.1s	0.79	88	⇑*i*P	Pb	02 37 28.9	-0.1
KST	17nm,0.3s			⇑*i*S	Sb	02 37 39.3	-0.1
UCH	**Uchtor** 4.7nm,0.1s,SNR=23	0.83	200	⇓P	Pb	02 37 29.6	-0.5
UCH	**Uchtor** baz=1.0	0.83	200	⇑*i*P	Pb	02 37 29.5	-0.5
UCH	baz=1.0			⇑*i*S	Sb	02 37 40.2	-0.9
EKS2	**Erkin-Say** 1.9nm,0.1s,SNR=17	0.89	247	⇑P	Pb	02 37 31.0	+0.2
EKS2	5.0nm,0.1s			⇓S	Sg	02 37 43.4	+0.5
EKS2	**Erkin-Say** baz=49	0.89	247	⇑*i*P	Pb	02 37 31.0	+0.2
EKS2	baz=49			⇑*i*S	Sg	02 37 43.1	+0.2
BOOM	**Boomskoye usch** baz=23	0.93	124	⇑*i*P	Pb	02 37 30.7	-0.8
BOOM	baz=23			⇑*i*S	Sb	02 37 43.0	-0.7
KZA	**Kyzart** 4.2nm,0.1s,SNR=26	0.97	164	⇓P	Pb	02 37 32.1	-0.2
KZA	20nm,0.2s			⇑S	Sb	02 37 45.3	+0.3
KZA	**Kyzart** baz=65	0.97	164	⇓*i*P	Pb	02 37 31.9	-0.4
KZA	baz=65			⇓*i*S	Sb	02 37 44.5	-0.5
MTBS	**Maitube** 2.4nm,0.1s	1.13	84	P	Pn	02 37 34.2	-0.6
MTBS	7.5nm,0.1s			S	Sb	02 37 48.5	-0.8
MTBS	**Maitube** baz=83	1.13	84	*e*P	Pn	02 37 34.2	-0.6
MTBS	baz=83			*e*S	Sb	02 37 48.5	-0.8
MTBS	**Maitube** 2.4nm,0.1s	1.13	84	*e*P	Pn	02 37 34.2	-0.6
MTBS	7.5nm,0.1s			*e*S	Sb	02 37 48.5	-0.8
ARLS	**Aral** baz=1.0	1.23	200	⇓*i*P	Pn	02 37 35.8	-0.4
ARLS	baz=1.0			⇓*i*S	Sb	02 37 52.5	+0.4
AML	**Almayashu** 4.2nm,0.3s,SNR=8.1	1.25	225	⇑P	Pb	02 37 37.4	+0.3
AML	14nm,0.5s			⇑S	Sn	02 37 53.8	+0.4
AML	**Almayashu** baz=27	1.25	225	⇓*i*P	Pn	02 37 37.2	+0.5
AML	baz=27			⇓*i*S	Sb	02 37 53.6	+0.6
MRKS	**Merke** 3.0nm,0.2s	1.25	258	P	Pb	02 37 37.1	+0.2
MRKS	6.8nm,0.1s			S	Sn	02 37 53.3	+0.3
MRKS	**Merke** baz=59	1.25	258	*e*P	Pb	02 37 37.1	+0.2
MRKS	baz=59			*e*S	Sn	02 37 53.3	+0.3
MRKS	**Merke** 3.0nm,0.2s	1.25	258	*e*P	Pb	02 37 37.1	+0.2
MRKS	6.8nm,0.1s			*e*S	Sn	02 37 53.3	+0.3
ULHL	**Ulahol** 2.6nm,0.1s,SNR=22	1.26	127	⇑P	Pn	02 37 36.6	-0.1
ULHL	20nm,0.3s			⇓S	Sb	02 37 53.4	+0.3
ULHL	**Ulahol** baz=27	1.26	127	⇑*i*P	Pn	02 37 36.6	-0.1
ULHL	baz=27			⇑*i*S	Sb	02 37 52.8	-0.3
IZV	**Izvestkoviy** 5.0nm,0.1s	1.26	88	P	Pb	02 37 37.5	+0.4
IZV	13nm,0.2s			S	Sn	02 37 54.0	+0.6
IZV	**Izvestkoviy** baz=88	1.26	88	*e*P	Pb	02 37 37.5	+0.4
IZV	baz=88			*e*S	Sn	02 37 54.0	+0.6
IZV	**Izvestkoviy** 5.0nm,0.1s	1.26	88	*e*P	Pb	02 37 37.5	+0.4
IZV	13nm,0.2s			*e*S	Sn	02 37 54.0	+0.6
KUU	**Kurty** 3.5nm,0.2s	1.37	50	P	Pb	02 37 39.4	+0.5
KUU	9.7nm,0.2s			S	Sb	02 37 57.1	+1.0
KUU	**Kurty** baz=49	1.37	50	⇓*i*P	Pb	02 37 39.4	+0.5
KUU	baz=49			⇓*i*S	Sb	02 37 57.1	+1.0
KUU	**Kurty** 3.5nm,0.2s	1.37	50	⇓*i*P	Pb	02 37 39.4	+0.5
KUU	9.7nm,0.2s			⇓*i*S	Sb	02 37 57.1	+1.0
KTBS	**Karatobe** 3.9nm,0.1s	1.48	61	P	Pb	02 37 41.2	+0.4
KTBS	22nm,0.2s			S	Sb	02 38 00.4	+1.1
KTBS	**Karatobe** 3.9nm,0.1s	1.48	61	*e*P	Pb	02 37 41.2	+0.4
KTBS	22nm,0.2s			*e*S	Sb	02 38 00.4	+1.1
TNSS	**Tian-Shan** 3.3nm,0.3s	1.51	88	P	Pb	02 37 42.0	+0.6
TNSS	12nm,0.5s			S	Sg	02 38 02.1	-0.4
TNSS	**Tian-Shan** baz=88	1.51	88	*e*P	Pb	02 37 42.0	+0.6
TNSS	baz=88			⇓*i*S	Sg	02 38 02.1	-0.4
TNSS	**Tian-Shan** 3.3nm,0.3s	1.51	88	*e*P	Pb	02 37 42.0	+0.6
TNSS	12nm,0.5s			⇓*i*S	Sg	02 38 02.1	-0.4
MDOK	**Medeo** 2.3nm,0.4s	1.59	84	⇑P	Pb	02 37 42.3	-0.3
MDOK	12nm,0.8s			⇓S	Sb	02 38 03.6	+1.1
MDOK	**Medeo** 2.4nm,0.1s	1.59	84	Pg	Pb	02 37 43.2	+0.6
MDOK	8.3nm,0.3s			Lg	Lg	02 38 03.9	
MDOK	**Medeo** baz=83	1.59	84	*e*P	Pb	02 37 43.2	+0.6
MDOK	baz=83			*e*S	Sb	02 38 03.9	+1.5
MDOK	**Medeo** 2.4nm,0.1s	1.59	84	*e*P	Pb	02 37 43.2	+0.6
MDOK	8.3nm,0.3s			*e*S	Sb	02 38 03.9	+1.5
KOTS	**Kotyrbulak** 3.1nm,0.1s	1.64	82	P	Pb	02 37 44.5	+0.9
KOTS	44nm,0.3s			S	Sg	02 38 06.1	-0.5
KOTS	**Kotyrbulak** baz=81	1.64	82	*e*P	Pb	02 37 44.5	+0.9
KOTS	baz=81			*e*S	Sg	02 38 06.1	-0.5
KOTS	**Kotyrbulak** 3.1nm,0.1s	1.64	82	*e*P	Pb	02 37 44.5	+0.9
KOTS	44nm,0.3s			*e*S	Sg	02 38 06.1	-0.5
CHKK	**Chushkaly** 4.7nm,0.2s	1.74	60	P	Pb	02 37 45.5	+0.3
CHKK	28nm,0.2s			S	Sb	02 38 07.9	+1.1
CHKK	**Chushkaly** baz=60	1.74	60	*e*P	Pb	02 37 45.5	+0.3
CHKK	baz=60			*e*S	Sb	02 38 07.9	+1.1
CHKK	**Chushkaly** 4.7nm,0.2s	1.74	60	*e*P	Pb	02 37 45.5	+0.3
CHKK	28nm,0.2s			*e*S	Sb	02 38 07.9	+1.1
NRN	**Naryn** baz=53	1.78	152	⇓*e*P	Pn	02 37 45.6	+1.6
NRN	baz=53			⇓*i*S	Sb	02 38 09.1	+0.9
MNAS	**Manas** 62μm,0.0s	1.84	254	⇑Pn	Pb	02 37 47.6	+0.7
MNAS	0.7nm,0.2s			⇓Sn	Sg	02 38 12.4	-0.5
MNAS	**Manas** 0.4nm,0.2s	1.84	254	P	Pb	02 37 47.9	+1.0
MNAS	1.9nm,0.1s			S	Sg	02 38 11.8	-1.1
MNAS	**Manas** baz=55	1.84	254	⇑*i*P	Pb	02 37 47.0	+0.1
MNAS	baz=55			⇑*i*S	Sb	02 38 10.9	+1.3
KDJ	**Kajisay** baz=16	1.91	117	⇓*i*P	Pn	02 37 46.9	+1.3
KDJ	baz=16			⇓*i*S	Sb	02 38 11.4	-0.3
ARSB	**Arslanbob** baz=21	2.21	221	⇑*i*P	Pb	02 37 52.0	-1.2
ARSB	baz=21			⇑*i*S	Sb	02 38 19.5	-0.8
KURS	**Kuram** 1.1nm,0.4s	2.44	78	Pg	Pb	02 37 57.8	+0.6
KURS	2.2nm,0.7s			Lg	Lg	02 38 28.9	
KURS	**Kuram** 1.1nm,0.4s	2.44	78	*e*P	Pb	02 37 57.8	+0.6
KURS	2.2nm,0.7s			*e*S	Sb	02 38 28.9	+1.9
ARXS	**Arharly** 2.2nm,0.2s	2.44	60	Pg	Pb	02 37 57.9	+0.6
ARXS	8.3nm,0.3s			Lg	Lg	02 38 29.2	
ARXS	**Arharly** 2.2nm,0.2s	2.44	60	*e*P	Pb	02 37 57.9	+0.6
ARXS	8.3nm,0.3s			*e*S	Sb	02 38 29.2	+2.2
SATY	**Saty** 1.7nm,0.1s	2.58	88	Pg	Pb	02 38 00.1	+0.6
SATY	7.3nm,0.2s			Lg	Lg	02 38 33.0	
SATY	**Saty** 1.7nm,0.1s	2.58	88	*e*P	Pb	02 38 00.1	+0.6
SATY	7.3nm,0.2s			*e*S	Sb	02 38 33.0	+2.1
KK31	**Karatay Array** 0.5nm,0.7s,baz=96,slow=15,SNR=7.6	3.21	273	⇑Pn	Pb	02 38 06.9	-3.4
KK31	0.4nm,0.3s,baz=93,slow=29,SNR=7.4			⇓Lg	Lg	02 38 56.2	
PDGK	**Podgornoye** 2.5nm,1.1s	3.38	83	⇑Pg	Pb	02 38 15.9	+2.8
PDGK	2.2nm,0.7s			⇓Lg	Lg	02 39 00.2	

NNC 25 02:41:06.8±2.7, **36°.89N×70°.62E, h0^{km}, mb3.6, mpv3.3, 4C-4D, Error ellipse: s-maj=23.4km s-min=19.0km az=140.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 3.0nm,0.4s	3.86	35	⇓P	Pn	02 42 07.9	+0.3
SFK	1.4nm,0.2s			⇓S	Sn	02 42 55.8	+2.0
MNAS	**Manas** 1.9nm,0.7s	5.78	14	⇑P	Pn	02 42 34.5	+0.5
MNAS	3.3nm,0.6s			⇑S	Sn	02 43 41.3	+0.3
KK31	**Karatay Array** 0.8nm,0.2s,baz=175,slow=12,SNR=96	6.21	359	P	Pn	02 42 41.2	+1.5
KK31	0.8nm,0.4s,baz=189,slow=25,SNR=5.9			S	Sn	02 43 53.2	+1.8
AAK	**Ala-Archa** 1.6nm,0.4s	6.47	26	⇓P	Pn	02 42 42.6	-0.9
AAK	3.1nm,0.9s			⇑S	Sn	02 43 58.1	-0.1
TKM2	**Tokmak 2** 0.8nm,0.5s	7.14	31	⇑P	Pn	02 42 51.2	-1.5
AB31	**Akbulak array** 0.2nm,0.3s,baz=3.9,slow=28,SNR=12	14.60	331	⇓P	Pn	02 44 33.5	-1.1

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*ISCJB **25** 02:52:11.5±1.1, 4°.0N±0°.3×127°.0E±0°.4, h100^{km}, mb3.8/4, Error ellipse: s-maj=63.9km s-min=8.4km az=142.8*
*IDC **25** 02:52:13.7±5.5, 4°.12N×127°.47E, h102^{km}±61^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.3/39, mbtmp4.0/5, Error ellipse: s-maj=138.2km s-min=24.5km az=68.0*
ISC 25 02:52:13.8±1.0, **3°.9N**±0°.3×**127°.0E**±0°.4, **h100**^{km}, **n7**, σ**2^{s}.16**/7, **mb3.8**/4, **1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	3.57	316	*e*P	Pn	02 53 04.6	-2.7
SKMP				*e*S	Sn	02 53 45.7	-2.9
KCP	**Kidapawan**	3.62	328	⇓*e*P	Pn	02 53 09.6	+1.6
SIJI	**Sorong** 6.7nm,0.3s,baz=326,slow=18,SNR=8.1	6.38	138	P	Pn	02 53 43.6	-1.7
WRA	**Warramunga Arr** 4.3nm,0.6s,baz=345,slow=9.7,SNR=40	24.79	163	P	P	02 57 25.1	-1.5
ASAR	**Alice Springs** 0.5nm,0.3s,baz=340,slow=11,SNR=7.6	28.24	167	P	P	02 57 59.0	+1.3
STKA	**Stephens Creek** 1.4nm,0.4s,baz=339,slow=9.7,SNR=6.6	38.21	160	P	P	02 59 24.9	+0.9
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=116,slow=8.2,SNR=4.4	57.56	325	P	P	03 01 53.4	+0.3

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*NSSP **25** 02:53:16.0, 38°.53N×45°.30E, h10^{km}, Ms3.0*
*ISK **25** 02:53:18.1, 38°.64N×45°.19E, h5^{km}, ML2.4/6*
*DDA **25** 02:53:25.4, 39°.31N×42°.77E, h9^{km}±1^{km}, ML2.0*
ISC 25 02:53:16.6±2.1, **38°.58N**±0°.06×**45°.3E**±0°.1, **h15**^{km}, **n14**, σ**1^{s}.20**/17, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	**Caldiran**	1.25	297	PN	Pn	02 53 40.1	+0.3
CLDR				SN	Sn	02 53 57.0	+0.5
CLDR	**Caldiran**	1.25	297	*i* P	Pg	02 53 40.8	0.0
CLDR	comp=Z,496nm,0.1s			IAML_P			
VMUR	**Van-Muradiye**	1.45	287	*i* P	Pn	02 53 41.0	-1.4
VMUR	comp=Z,0.5nm,0.2s			IAML_P			
VANB	**Van**	1.53	271	PN	Pb	02 53 45.2	+0.4
DYDN	**Diyadin**	1.61	307	*i* P	Pg	02 53 48.5	+0.8
IGDI	**IGDIR**	1.62	323	*i* P	Pg	02 53 48.1	+0.3
GNI	**Garni**	1.64	344	PN	Pg	02 53 48.1	-0.1
GNI	**Garni**	1.64	344	*i* P	Pg	02 53 48.5	+0.3
GNI				*i* S	Sg	02 54 11.3	+1.8
TASB	**TASBURUN-IGDIR**	1.65	329	PN	Pb	02 53 47.5	+0.8
TASB				SN	Sg	02 54 09.5	-0.2
GEVA	**Gevas**	1.81	262	*i* P	Pn	02 53 45.0	-2.5
AKDM	**Akdamar-Van**	1.87	263	PN	Pb	02 53 51.3	+0.7
CUKT	**Cukurca**	1.91	227	PN	Pb	02 53 52.6	+1.4
AGRB	**Hanur-Agry**	2.08	299	PN	Pb	02 53 53.8	-0.5
EAK	**Akyaka**	2.50	328	*i* P	Pn	02 53 54.8	-2.1
EAK	comp=Z,31nm,0.2s			IAML_P			

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*IDC **25** 02:59:31.4±0.7, 15°.44S×176°.22W, h0^{km}, mb4.6/18, mb1 4.8/18, mb1mx4.6/34, mbtmp4.6/18, MS4.9/22, Ms1 4.9/22, ms1mx4.7/31, Error ellipse: s-maj=29.2km s-min=14.6km az=147.0*
*NEIC **25** 02:59:35.7±0.3, 15°.36S×176°.52W, h10^{km}, mb5.2/171, MS5.1/116, MW5.3, Error ellipse: s-maj=13.3km s-min=6.1km az=150.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M_{rr}0.73; $M_{\theta\theta}$0.53; $M_{\phi\phi}$-1.26; $M_{r\theta}$-0.51; $M_{\theta\phi}$0.58; $M_{\phi r}$0.07; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s310.00000°, δ64.00000°, λ40.00000°. NP2:ϕ_s199.00000°, δ54.00000°, λ147.00000°. Principal axes: T 1.1900, Plg46.0000°, Azm168.0000°; N 0.2600, Plg43.0000°, Azm337.0000°; P -1.4500, Plg6.0000°, Azm72.0000°;*
*MOS **25** 02:59:36.9±1.5, 15°.40S×176°.48W, h33^{km}, mb5.2/35, MS5.1/15 Error ellipse: s-maj=10.7km s-min=8.1km az=45.3*
*GCMT **25** 02:59:37.7±0.1, 15°.24S±0°.01×175°.99W±0°.01, h12^{km}, MW5.4/130, Moment Tensor Solution. s99,c177; s130,c255; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.07±.02; $M_{\theta\theta}$1.09±.02; $M_{\phi\phi}$-1.02±.02; $M_{r\theta}$0.01±.05; $M_{\theta\phi}$1.44±.02; $M_{\phi r}$-0.31±.05; Best double couple: $M_0$1.81300×10^{17} NP1:ϕ_s18.00000°, δ86.00000°, λ-171.00000°. NP2:ϕ_s288.00000°, δ81.00000°, λ-4.00000°. Principal axes: T 1.8290, Plg4.0000°, Azm153.0000°; N -0.0370, Plg80.0000°, Azm41.0000°; P -1.7960, Plg9.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*ISCJB **25** 02:59:37.7±0.2, 15°.46S±0°.06×176°.50W±0°.04, h33^{km}, mb5.0/195, MS5.1/150 Error ellipse: s-maj=8.8km s-min=3.9km az=151.2*
*BJI **25** 02:59:41.5, 15°.40S×176°.50W, h60^{km}, mB5.3/21, mb4.7/27, Ms5.3/16, Ms7 5.1/17*
ISC 25 02:59:39.0±0.3, **15°.34S**±0°.07×**176°.35W**±0°.06, **h35**^{km}, **n559**, σ**1^{s}.81**/441, **mb5.1**/195, **MS5.1**/150, **28C-10D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	5.87	245	*e*Pn	Pn	03 01 04.8	+1.1
MSVF	**Nonsavu**	5.87	245	⇓*i*P	Pn	03 01 04.4	+0.7
NIUE	**Niue** baz=6.8,SNR=8.9	7.18	122	P	Pn	03 01 12.7	-8.9
RAO	**Raoul Island** comp=Z,7μm,21.3s,baz=10,slow=34	13.92	186	LR	LR	03 07 21.7	
MARNC	**Mare, Loyalty** 563nm,1.0s	16.02	245	*e*Pn	P	03 03 26.0	+1.1
RAR	**Rarotonga** 0.9nm,0.3s,baz=70,slow=6.0,SNR=4.0	16.79	113	Pn	P	03 03 34.0	+0.6
PINNC	**Pines Island,** 291nm,1.1s	16.93	242	*e*Pn	P	03 03 40.0	+5.0
DZM	**Mont Dzumac** 476nm,1.6s	17.61	245	*e*P	P	03 03 45.8	+3.2
DZM	5μm,25.4s			*e*LQ	LQ	03 07 12.0	
DZM	comp=Z,14μm,25.2s			*e*LR	LR	03 07 55.5	
DZM	**Mont Dzumac** 338nm,1.5s	17.61	245	*e*Pn	P	03 03 46.3	+3.7
DZM	**Mont Dzumac** 0.8nm,0.3s,baz=73,slow=20,SNR=14	17.61	245	P	P	03 03 43.5	+0.9
DZM	comp=Z,9μm,18.9s,baz=74,slow=34			LR	LR	03 09 28.5	
URZ	**Urewera** 59nm,1.2s	23.55	193	*e*P	P	03 04 46.4	+0.2
URZ	**Urewera** comp=Z,6μm,20.2s,baz=32,slow=34	23.55	193	LR	LR	03 12 39.0	
HNR	**Honiara**	23.87	281	PFAKE		03 05 00.0	+11
HNR	comp=Z,3μm,21.0s			LR	LR		
PAE	**Paea** comp=Z,2.4nm,0.3s	25.77	99	*e*T	T	03 31 25.0	
PPT	**Papeete** comp=Z,894nm,20.9s,baz=268,slow=30	25.77	99	LR	LR	03 12 22.1	
PPT2	**Papeete2** comp=Z,341nm,27.4s	25.77	99	*e*S	S	03 09 28.6	-5.4
PPT2	comp=Z,12μm,25.8s			*e*LQ	LQ	03 10 08.3	
PPT2	comp=Z,4μm,25.8s			*e*LR	LR	03 11 17.8	
PPT2	**Papeete2** comp=Z,6.6nm,0.4s	25.77	99	*e*T	T	03 31 26.4	
TIAR	**Tiarei** comp=Z,2.3nm,0.2s	25.99	99	*e*T	T	03 31 41.4	
TVO	**Taravao** comp=Z,2.0nm,0.3s	26.08	99	*e*T	T	03 31 41.0	
TBI	**Tubuai** comp=Z,10μm,28.2s	26.56	112	*e*LQ	LQ	03 10 32.9	
TBI	comp=Z,851nm,23.0s			*e*LR	LR	03 11 55.2	
TBI	**Tubuai** comp=Z,22nm,0.3s	26.56	112	*e*T	T	03 32 27.7	
SNZO	**South Karori**	27.02	195	PFAKE		03 05 30.0	+12
SNZO	comp=Z,4μm,22.0s			LR	LR		
PMOR	**Pomariorio Ree** comp=Z,147nm,1.2s	27.46	93	*e*P	P	03 05 21.7	-0.4
PMOR	**Pomariorio Ree** comp=Z,5.9nm,0.3s	27.46	93	*e*T	T	03 33 31.9	
VAH	**Vaihoa** comp=Z,118nm,1.4s	27.70	94	*e*P	P	03 05 23.6	-0.6
FOZ	**Fox Glacier** comp=Z,67nm,1.9s	30.48	200	*e*P	P	03 05 52.8	+4.2
ARMA	**Armidale**	32.95	237	P	P	03 06 09.3	-1.4

	baz=33,SNR=9.2						
ARMA	Armidale	32.95	237	eP	P	03 06 11.2	+0.5
	comp=Z,41nm,1.0s						
RMQ	Roma	34.32	245	P	P	03 06 22.9	+0.4
	baz=35,SNR=6.7						
CTA	Charters Tower	35.88	257	P	P	03 06 33.9	-2.1
	comp=Z,18nm,1.0s,baz=91,slow=11,SNR=15						
CTA				LR	LR	03 19 21.4	
	comp=Z,2µm,21.3s,baz=80,slow=33						
CTAO	Charters Tower	35.88	257	eP	P	03 06 35.7	-0.3
	comp=Z,20nm,1.0s						
CTAO				ePP	PnPn	03 07 55.6	-1.3
CTAO				LR	LR		
	comp=Z,3µm,20.0s						
CTAO	Charters Tower	35.88	257	eP	P	03 06 35.7	-0.3
CTAO				e		03 07 55.7	
CTAO				pmax	pmax		
	comp=Z,19nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,3µm,20.0s						
TAOE	Nuku Hiva Isla	35.95	84	eT	T	03 44 06.3	
	comp=Z,22nm,0.2s						
CNB	Canberra Magne	36.56	231	P	P	03 06 40.0	-1.7
	baz=37,SNR=4.8						
MTSU	Mount Surprise	37.72	260	P	P	03 06 50.6	-1.1
	baz=38,SNR=19						
CMSA	Cobar Meteorol	38.15	238	P	P	03 06 53.1	-2.1
	baz=38,SNR=36						
WAKE	Wake Island	38.25	334	PFAKE		03 07 10.0	+14
WAKE				LR	LR		
	comp=Z,3µm,19.0s						
H11N3	WAKE ISLAND Hy	38.53	334	T	T	03 48 05.0	
	baz=152,slow=77,SNR=20						
H11N1	WAKE ISLAND Hy	38.53	334	T	T	03 48 18.8	
	baz=152,slow=77,SNR=69						
H11N2	WAKE ISLAND Hy	38.55	334	T	T	03 48 05.4	
	baz=152,slow=77,SNR=28						
COEN	Coen	39.14	267	P	P	03 07 02.7	-1.0
	baz=40,SNR=6.7						
COEN	Coen	39.14	267	eP	P	03 07 04.0	+0.3
	comp=Z,36nm,0.9s						
TOO	Toolangi	40.32	229	P	P	03 07 13.4	+0.2
	baz=40,SNR=6.6						
TOO	Toolangi	40.32	229	eP	P	03 07 14.2	+1.0
	comp=Z,55nm,1.2s						
TOO	Toolangi	40.32	229	eP	P	03 07 14.2	+1.0
TOO				pmax	pmax		
	comp=Z,55nm,1.2s						
TAU	Tasmania Unive	41.46	221	PFAKE		03 07 30.0	+7.5
TAU				LR	LR		
	comp=Z,2µm,19.0s						
STKA	Stephens Creek	41.61	239	P	P	03 07 22.2	-1.7
	baz=42,SNR=23						
STKA	Stephens Creek	41.61	239	eP	P	03 07 22.2	-1.7
	comp=Z,9.5nm,1.1s						
STKA	Stephens Creek	41.61	239	P	P	03 07 21.6	-2.3
	comp=Z,33nm,1.0s,baz=64,slow=6.9,SNR=18						
STKA				LR	LR	03 24 15.3	
	comp=Z,2µm,18.0s,baz=76,slow=36						
QIS	Mount Isa	42.12	256	P	P	03 07 29.1	+0.9
	baz=42,SNR=3.6						
ARPS	Mount Arapiles	42.76	232	P	P	03 07 33.2	0.0
	baz=43,SNR=6.8						
HTT	Hallett	44.16	238	P	P	03 07 42.4	-2.2
	baz=44,SNR=11						
BBOO	Buckleboo	46.39	239	P	P	03 08 01.6	-0.7
	baz=47,SNR=6.2						
BBOO	Buckleboo	46.39	239	eP	P	03 08 02.9	+0.6
	comp=Z,65nm,1.5s						
WB2	Warramunga Arr	47.07	257	eP	P	03 08 07.2	-0.6
WRAB	Tennant Creek	47.07	257	eP	P	03 08 06.2	-1.6
	comp=Z,34nm,1.4s						
WRAB				LR	LR		
	comp=Z,2µm,21.0s						
WRAB	Tennant Creek	47.07	257⇓	iP	P	03 08 06.7	-1.1
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WRA	Warramunga Arr	47.08	257	P	P	03 08 05.3	-2.6
	comp=Z,5.2nm,0.9s,baz=82,slow=6.8,SNR=26						
WRA				LR	LR	03 25 33.3	
	comp=Z,2µm,21.5s,baz=100,slow=33						
AS01	Alice Springs	47.38	252	eP	P	03 08 08.6	-1.5
AS31	Alice Springs	47.42	252	eP	P	03 08 09.6	-1.0
	comp=Z,5.5nm,0.8s						
ASAR	Alice Springs	47.42	252	P	P	03 08 08.0	-2.5
ASAR	Alice Springs	47.42	252	P	P	03 08 08.0	-2.5
	comp=Z,14nm,0.7s,baz=86,slow=8.2,SNR=46						
ASAR				LR	LR	03 26 17.7	
	comp=Z,3µm,21.1s,baz=90,slow=34						
KDU	Kakadu	49.63	266	P	P	03 08 27.2	-0.4
	baz=50,SNR=8.1						
MTN	Manton Dam	50.90	266	P	P	03 08 38.1	+1.0
	baz=51,SNR=4.5						
MTN	Manton Dam	50.90	266	eP	P	03 08 37.5	+0.3
	comp=Z,41nm,1.0s						
WRKA	Warakurna	52.54	250	P	P	03 08 47.0	-2.3
	baz=53,SNR=40						
KNRA	Kununurra	52.76	262	P	P	03 08 52.4	+1.4
	baz=53,SNR=5.9						
FORT	Forrest	52.90	243	eP	P	03 08 50.9	-1.0
	comp=Z,53nm,1.3s						
SIJI	Sorong	53.64	280	P	P	03 08 54.8	-2.8
	comp=Z,3.6nm,0.3s,baz=252,slow=20,SNR=1.9						
FITZ	Fitzroy Crossi	55.43	258	P	P	03 09 09.9	-0.6
	baz=56,SNR=5.6						
FITZ	Fitzroy Crossi	55.43	258	P	P	03 09 09.1	-1.5
	comp=Z,15nm,0.9s,baz=130,slow=3.5,SNR=9.3						
SOEI	Soe	58.08	268	eP	P	03 09 33.4	+3.8
	comp=Z,146nm,1.2s						
DAV	Davao City (W)	61.68	287	PFAKE		03 10 10.0	+16
DAV				LR	LR		
	comp=Z,389nm,20.0s						
KLBR	Kellerberrin	61.75	242	P	P	03 09 53.8	-0.6
	baz=62,SNR=7.5						
NWAO	Narrogin (SRO)	62.16	241	PFAKE		03 10 10.0	+13
NWAO				LR	LR		
	comp=Z,2µm,20.0s						
SBA	Scott Base	63.10	184	PFAKE		03 10 20.0	+17
SBA				LR	LR		
	comp=Z,1µm,22.0s						
VNDA	Vanda	63.16	185	P	P	03 10 01.0	-2.0
VNDA	Vanda	63.16	185	P	P	03 10 01.0	-2.0
	comp=Z,13nm,1.2s,baz=26,slow=8.1,SNR=4.1						
VNDA				LR	LR	03 31 54.3	
	comp=Z,498nm,21.9s,baz=25,slow=31						
KAPI	Kappang	63.53	272	PFAKE		03 10 20.0	+14
KAPI				LR	LR		
	comp=Z,429nm,21.0s						
ADK	Adak	66.94	360	PFAKE		03 10 40.0	+12
ADK				LR	LR		
	comp=Z,1µm,19.0s						
MJAR	Matsushiro Arr	67.08	321	P	P	03 10 28.4	-0.7
	comp=Z,1.1nm,0.6s,baz=166,slow=8.0,SNR=4.5						
MJAR				LR	LR	03 34 11.3	
	comp=Z,508nm,21.9s,baz=135,slow=31						
MAJO	Matsushiro	67.09	321	PFAKE		03 10 40.0	+11
MAJO				LR	LR		
	comp=Z,2µm,20.0s						
ERM	Erimo	68.19	329	PFAKE		03 10 50.0	+14
ERM				LR	LR		
	comp=Z,697nm,21.0s						
CASY	Casey	69.28	204	PFAKE		03 10 50.0	+7.7
CASY				LR	LR		
	comp=Z,133nm,21.0s						
SKR	Severo-Kuril's	70.03	342⇓	eP	P	03 10 48.8	+1.7
PET	Petropavlovsk	71.41	344	PFAKE		03 11 10.0	+15
PET				LR	LR		
	comp=Z,936nm,21.0s						
PET	Petropavlovsk	71.41	344	eP	P	03 10 56.6	+1.2
PET				eS	S	03 20 11.0	-0.1
PET				eSS	SS	03 24 45.2	-1.4
PET				pmax	pmax		
	comp=Z,100nm,13.8s						
PETK	Petropavlovsk-	71.74	344	eP	P	03 10 57.4	0.0
PETK	Petropavlovsk-	71.74	344	P	P	03 10 55.9	-1.6
	comp=Z,5.6nm,0.8s,baz=101,slow=7.7,SNR=4.8						
PETK				LR	LR	03 36 01.9	
	comp=Z,1µm,21.9s,baz=152,slow=30						
YSS	Yuzh-Sakhalins	72.05	332	eP	P	03 10 59.7	+0.3
	comp=Z,5.9nm,0.4s						
YSS				LR	LR		
	comp=Z,475nm,20.0s						
YSS	Yuzh-Sakhalins	72.05	332	eP	P	03 11 00.2	+0.8
YSS				e		03 11 11.4	
YSS				e*SP	PcP	03 11 22.7	+5.0
YSS				e		03 13 44.5	
YSS				ePS	S	03 20 18.8	+0.1
YSS				ePPS	PPS	03 20 41.4	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=E,300nm,17.0s						
YSS				MLR	MLR		
	comp=Z,600nm,17.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
TATO	Taipei	72.63	303	PFAKE		03 11 20.0	+17
TATO				LR	LR		
	comp=Z,757nm,20.0s						
KMRM	Mail Ridge	73.79	39	eP	P	03 11 15.1	+5.0
	comp=Z,44nm,1.0s						
ARVC	Arvin	74.09	46	P	P	03 11 14.1	+2.3
	baz=238						
KSRS	Korea Array	74.14	317	P	P	03 11 12.7	+0.7
	comp=Z,2.4nm,0.9s,baz=133,slow=8.8,SNR=6.8						
KSRS				LR	LR	03 40 32.9	
	comp=Z,484nm,19.5s,baz=126,slow=33						
KSAR	Wonju Array Be	74.16	317	P	P	03 11 12.7	+0.6
KSAR	Wonju Array Be	74.16	317	P	P	03 11 12.7	+0.6
KS01	Wonju Array Si	74.17	317	eP	P	03 11 17.0	+4.8
VES	Vestal, Richgr	74.30	45	P	P	03 11 15.1	+2.1
	baz=237						
O02D	Mt. Diablo Mer	74.33	40	P	P	03 11 14.6	+1.4
	baz=234						
MURC	Murrieta	74.45	48	P	P	03 11 16.1	+2.1
	baz=239						
EDW2	Edwards Air Fo	74.55	47	P	P	03 11 16.7	+2.2
	baz=238						
ISA	Isabella, Lake	74.62	46	eP	P	03 11 17.6	+2.6
	comp=Z,20nm,1.4s						
ISA				ePcP	PcP	03 11 30.3	+1.1
ISA	Isabella, Lake	74.62	46	P	P	03 11 16.8	+1.8
	baz=238						
CMB	Columbia Colle	74.63	43	eP	P	03 11 16.6	+1.7
	comp=Z,16nm,1.2s						
CMB	Columbia Colle	74.63	43	eP	P	03 11 16.6	+1.7
CMB				pmax	pmax		
	comp=Z,16nm,1.2s						
MONP2	Monument Peak	74.66	49	P	P	03 11 17.5	+2.1
	baz=240						
QSPA	South Pole Qui	74.70	180	eP	P	03 11 13.2	-1.8
	comp=Z,161nm,1.3s						
QSPA				LR	LR		
	comp=Z,836nm,22.0s						
WDC	Whiskeytown Da	74.72	40	eP	P	03 11 16.7	+1.4
	comp=Z,30nm,1.4s						
WDC	Whiskeytown Da	74.72	40	eP	P	03 11 16.7	+1.4
WDC				pmax	pmax		
	comp=Z,30nm,1.4s						
AFDM	Forest Hills D	74.76	42	eP	P	03 11 14.8	-0.9
	comp=Z,19nm,1.2s						
IKP	In-Ko-Pah, Jac	74.76	49	P	P	03 11 18.4	+2.5
	baz=240						
ORV	Oroville	74.77	41	eP	P	03 11 17.8	+2.2
	comp=Z,17nm,1.3s						
N02D	Trinity Center	74.85	39	P	P	03 11 18.8	+2.6
	baz=234						
PFO	Pinyon Flats O	74.99	48	PFAKE		03 11 30.0	+13
PFO				LR	LR		
	comp=Z,1µm,19.0s						
PFO	Pinyon Flats O	74.99	48	P	P	03 11 19.6	+2.4
	baz=240						
M02C	Callahan	75.01	39	P	P	03 11 19.9	+2.8
	baz=233						
MSHR	Mys Shultsa	75.12	323⇑	iP	P	03 11 17.7	+0.1
MDPB	Devils Postpil	75.27	44	eP	P	03 11 18.2	-0.7
	comp=Z,17nm,1.2s						
YBH	Yreka Blue Hor	75.30	39	eP	P	03 11 17.6	-1.1
	comp=Z,23nm,1.1s						
YBH	Yreka Blue Hor	75.30	39	eP	P	03 11 17.6	-1.1
YBH				pmax	pmax		
	comp=Z,23nm,1.1s						
CWC	Cottonwood Cre	75.31	45	P	P	03 11 21.4	+2.3
	baz=238						
OMMB	Old Mammoth Mi	75.31	44	eP	P	03 11 21.7	+2.5
	comp=Z,24nm,1.4s						
WAKR	Walker	75.51	43	eP	P	03 11 19.3	-0.9
	comp=Z,30nm,1.3s						
MPMC	Manual Prospec	75.51	46	P	P	03 11 22.1	+1.8
	baz=238						
DAC	Darwin (Calif)	75.55	46	eP	P	03 11 22.9	+2.4
	comp=Z,18nm,1.4s						
DAC	Darwin (Calif)	75.55	46	eP	P	03 11 22.9	+2.4
DAC				pmax	pmax		
	comp=Z,18nm,1.4s						
USRK	Ussuriysk Ar.	75.65	324	P	P	03 11 23.4	+2.8
	comp=Z,1.7nm,0.9s,baz=116,slow=8.7,SNR=5.2						
USRK				LR	LR	03 38 41.3	
	comp=Z,2µm,22.0s,baz=122,slow=31						
SSE	Sheshan	75.67	308	PFAKE		03 11 30.0	+9.1
SSE				LR	LR		
	comp=Z,403nm,19.0s						
BEKR	Beckworth	75.67	41	eP	P	03 11 23.5	+2.4
	comp=Z,23nm,1.1s						
HUMO	Hull Mountain	75.68	38	eP	P	03 11 24.5	+3.7
	comp=Z,32nm,1.3s						
PNTR	Pine Nut	75.73	42	eP	P	03 11 20.9	-0.6
	comp=Z,41nm,1.2s						
VCNR	Virginia City	75.81	42	eP	P	03 11 23.1	+1.3
	comp=Z,28nm,1.2s						
L04D	Klamath Falls	75.83	38	P	P	03 11 23.9	+2.0
	baz=234						
M04C	Macdoel	75.86	39	P	P	03 11 21.9	-0.1
	baz=234						
GLA	Glamis	75.90	50	eP	P	03 11 26.0	+3.7
	comp=Z,24nm,1.1s						
GLA	Glamis	75.90	50	P	P	03 11 24.6	+2.3
	baz=241						
YERR	Yerington	75.90	42	eP	P	03 11 21.2	-1.2
	comp=Z,47nm,1.5s						
GRAC	Grapevine Rang	76.09	45	P	P	03 11 25.5	+2.1
	baz=238						
GMRC	Granite Mounta	76.15	48	P	P	03 11 25.6	+1.8
	baz=240						
FURC	Furnace Creek,	76.16	46	P	P	03 11 25.8	+2.1
	baz=239						
RYN	Ryan	76.18	43	eP	P	03 11 21.8	-2.1
	comp=Z,29nm,1.3s						
PAHR	Pah Rah Range	76.21	42	eP	P	03 11 23.4	-0.7
	comp=Z,31nm,1.3s						
IRM	Iron Mountain	76.21	48	P	P	03 11 26.5	+2.4
	baz=240						
NV01	Mina Array Sit	76.22	43	eP	P	03 11 22.6	-1.6
NVAR	Mina Array Bea	76.22	43	P	P	03 11 21.9	-2.4
	comp=Z,12nm,1.0s,baz=229,slow=6.7,SNR=18						
NVAR				LR	LR	03 37 12.1	
	comp=Z,428nm,21.1s,baz=218,slow=30						
NV11	Mina Array Sit	76.31	43	eP	P	03 11 23.7	-1.1
	comp=Z,2.6nm,1.3s						
Y12C	Blythe	76.46	49	eP	P	03 11 28.3	+2.8
	comp=Z,14nm,1.1s						
Y12C	Blythe	76.46	49	P	P	03 11 27.5	+2.1
	baz=241						
113A	Mohawk Valley,	76.55	50	eP	P	03 11 28.2	+2.3
	comp=Z,37nm,1.4s						
KVN	Kaiserville	76.68	43	eP	P	03 11 25.6	-1.2
	comp=Z,23nm,1.2s						
KVN	Kaiserville	76.68	43	eP	P	03 11 25.7	-1.2
KVN				pmax	pmax		
	comp=Z,23nm,1.2s						
LDFC	Landfair	76.69	48	eP	P	03 11 29.6	+2.7
	comp=Z,34nm,1.2s						
I04A	Tendick Farm,	76.71	37	P	P	03 11 29.5	+2.8
	baz=233						
TPNV	Topopah Spring	76.83	46	P	P	03 11 29.6	+2.0
	baz=239						
MOD	Modoc Plateau	76.86	39	eP	P	03 11 29.6	+1.8
	comp=Z,22nm,1.1s						
214A	Organ Pipe Nat	76.88	51	P	P	03 11 30.6	+2.7
	baz=242						
PDMCI	Parker Dam,Lak	77.00	49	P	P	03 11 30.1	+1.6
	baz=241						
J05D	Fort Rock, OR	77.10	38	P	P	03 11 31.8	+2.7
	baz=234						
MDJ	Mudanjiang	77.26	324	PFAKE		03 11 40.0	+10
MDJ				LR	LR		
	comp=Z,975nm,20.0s						
SHPR	Sheep Range	77.36	46	eP	P	03 11 32.8	+2.1
	comp=Z,41nm,1.9s						
H04A	Detroit Lake	77.37	36	eP	P	03 11 33.0	+2.7
	comp=Z,48nm,1.4s						
PINE	Pine Mountain	77.56	38	eP	P	03 11 30.6	-1.1
	comp=Z,46nm,1.1s						
W13A	Hualapai Mount	77.57	48	eP	P	03 11 31.0	-1.0
	comp=Z,15nm,1.3s						
Y14A	Wickenburg	77.66	50	eP	P	03 11 30.4	-1.9
	comp=Z,19nm,1.2s						
NJ2	Nanjing	77.87	308	eP	P	03 11 34.1	+0.7
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
R11A	Troy Canyon, C	77.99	45	eP	P	03 11 35.1	+0.9
	comp=Z,15nm,1.4s						
R11A	Troy Canyon, C	77.99	45	P	P	03 11 35.1	+0.9
	baz=239						
NLWA	Neilton Lookou	78.09	33	PFAKE		03 11 50.0	+16
NLWA				LR	LR		
	comp=Z,744nm,20.0s						
WVOR	Wild Horse Val	78.18	40	eP	P	03 11 34.4	-0.7
	comp=Z,28nm,1.2s						
WVOR				LR	LR		
	comp=Z,1µm,20.0s						
WVOR	Wild Horse Val	78.18	40	eP	P	03 11 34.4	-0.7
WVOR				pmax	pmax		
	comp=Z,28nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,1µm,20.0s						
E04D	Cinebar	78.28	35	P	P	03 11 38.7	+3.4
	baz=233						
F05D	White Salmon	78.50	36	P	P	03 11 37.7	+1.1
	baz=234						
TUC	Tucson	78.58	52	eP	P	03 11 38.4	+1.0
	comp=Z,37nm,1.3s						
TUC				LR	LR		
	comp=Z,2µm,21.0s						
TUC	Tucson	78.58	52	eP	P	03 11 38.4	+1.0
TUC				pmax	pmax		
	comp=Z,37nm,1.3s						
TUC				MLR	MLR		
	comp=Z,2µm,21.0s						
TUC	Tucson	78.58	52	P	P	03 11 39.8	+2.4
	baz=244						
I07A	Izee	78.58	38	eP	P	03 11 39.9	+2.6
	comp=Z,31nm,1.4s						
J08A	Circle Bar Ran	78.79	39	eP	P	03 11 37.7	-0.7
	comp=Z,30nm,1.3s						
KLR	Kul'dur	78.94	328⇑	iP	P	03 11 38.9	0.0
GAMB	Gambell	78.95	2	eP	P	03 11 37.4	-1.2
	comp=Z,34nm,1.6s						
X16A	Lo Mia Camp, P	79.03	50	eP	P	03 11 38.5	-1.5
	comp=Z,22nm,1.1s						
RC01	Rabbit Creek A	79.08	13	eP	P	03 11 40.5	+1.1
	comp=Z,28nm,1.2s						
CCUT	Cedar City	79.12	46	eP	P	03 11 43.5	+2.9
	comp=Z,12nm,1.2s						
KNB	Kanab	79.25	47	eP	P	03 11 40.8	-0.3
	comp=Z,57nm,1.7s						
KNB	Kanab	79.25	47	eP	P	03 11 40.8	-0.3
KNB				pmax	pmax		
	comp=Z,57nm,1.7s						
PSUT	Pine Spring	79.26	45	eP	P	03 11 42.5	+1.3
	comp=Z,28nm,1.6s						
MA2	Magadan	79.28	344	eP	P	03 11 38.8	-1.7
MA2				LR	LR		
	comp=Z,1µm,20.0s						
MA2	Magadan	79.28	344⇑	eP	P	03 11 41.3	+0.8
MA2				pmax	pmax		
	comp=Z,6.0nm,1.3s						
319A	Douglas	79.32	53	eP	P	03 11 43.0	+1.5
SZCU	Shurtz Canyon	79.34	46	eP	P	03 11 44.6	+3.0
	comp=Z,30nm,1.6s						
U15A	North Rim	79.34	48	eP	P	03 11 41.5	-0.3
	comp=Z,21nm,1.3s						
ELK	Elko	79.44	43	eP	P	03 11 40.9	-1.3
	comp=Z,16nm,1.1s						
ELK	Elko	79.44	43	eP	P	03 11 40.9	-1.3
ELK				pmax	pmax		
	comp=Z,16nm,1.1s						
WUAZ	Wupatki	79.58	49	eP	P	03 11 44.4	+1.4
	comp=Z,18nm,1.1s						
WUAZ				LR	LR		
	comp=Z,946nm,21.0s						
WUAZ	Wupatki	79.58	49	P	P	03 11 45.5	+2.5
	baz=243						
G08A	Pilot Rock	79.58	37	eP	P	03 11 42.1	-0.6
	comp=Z,24nm,1.1s						
LTY	Liberty	79.74	35	eP	P	03 11 46.2	+2.7
	comp=Z,41nm,1.7s						
E07A	Sunnyside	79.79	36	eP	P	03 11 45.7	+2.0
	comp=Z,24nm,1.3s						
HAWA	Hanford	79.88	36	eP	P	03 11 46.0	+1.8
	comp=Z,29nm,1.4s						
HAWA				LR	LR		
	comp=Z,1µm,20.0s						
DIV	Divide	80.02	15	eP	P	03 11 46.4	+1.8
	comp=Z,32nm,1.1s						
ANM	Nome	80.10	5	eP	P	03 11 47.9	+3.0
	comp=Z,16nm,1.5s						
ANM	Nome	80.10	5	eP	P	03 11 47.9	+3.0
ANM				pmax	pmax		
	comp=Z,16nm,1.5s						
MTPU	Mount Pierson	80.18	46	eP	P	03 11 48.8	+2.4
	comp=Z,45nm,1.9s						
X18A	Snowflake	80.18	50	eP	P	03 11 45.5	-0.8
	comp=Z,17nm,1.1s						
E08A	Dider Farm, El	80.20	36	eP	P	03 11 47.7	+1.8
	comp=Z,28nm,1.3s						
QIZ	Qiongzhong	80.25	293	P	P	03 11 47.3	+0.6
QIZ				S	S	03 21 47.8	-2.2
QIZ				LR	LR		
	comp=Z,660nm,18.6s						
QIZ	Qiongzhong	80.25	293	PFAKE		03 12 00.0	+13
QIZ				LR	LR		
	comp=Z,105nm,21.0s						
BMO	Blue Mountains	80.32	38	eP	P	03 11 48.1	+1.5
	comp=Z,24nm,1.4s						
BMO				LR	LR		
	comp=Z,1µm,19.0s						
BMO	Blue Mountains	80.32	38	eP	P	03 11 48.1	+1.5
BMO				pmax	pmax		
	comp=Z,24nm,1.4s						
BMO				MLR	MLR		
	comp=Z,1µm,19.0s						
MSU	Marysvale	80.40	46	eP	P	03 11 49.9	+2.4
W18A	Petrified Fore	80.60	50	eP	P	03 11 51.5	+3.0
	comp=Z,13nm,1.1s						
D08A	Wollman Farm,	80.60	36	eP	P	03 11 50.4	+2.3
	comp=Z,41nm,1.4s						
CAST	Castle Rocks	80.74	11	eP	P	03 11 49.0	+0.7
	comp=Z,13nm,1.4s						
E09A	Wood Farm, Sta	80.74	36	eP	P	03 11 50.2	+1.4
	comp=Z,32nm,1.5s						
DUG	Dugway, Tooele	80.78	44	eP	P	03 11 48.8	-0.5
	comp=Z,19nm,1.3s						
DUG				LR	LR		
	comp=Z,531nm,20.0s						
DUG	Dugway, Tooele	80.78	44	eP	P	03 11 48.8	-0.5
DUG				pmax	pmax		
	comp=Z,19nm,1.3s						
DUG				MLR	MLR		
	comp=Z,531nm,20.0s						
DUG	Dugway, Tooele	80.78	44	P	P	03 11 48.9	-0.3
	baz=241						
121A	Cookes Peak, D	80.96	53	P	P	03 11 49.4	-1.1
	baz=245						
F10A	Beach Ranch, E	80.97	37	eP	P	03 11 50.1	0.0
	comp=Z,32nm,1.3s						
BGU	Big Grassy Mou	80.99	43	eP	P	03 11 52.9	+2.4
	comp=Z,37nm,2.0s						
TRF	Thorofare Moun	81.10	12	eP	P	03 11 50.4	-0.1
	comp=Z,124nm,2.0s						
LLLB	Lillooet	81.11	32	eP	P	03 11 54.1	+3.5
	comp=Z,47nm,1.7s						
B08A	Colville Reser	81.12	34	eP	P	03 11 52.1	+1.4
	comp=Z,22nm,1.4s						
NLU	North Lily Min	81.16	44	eP	P	03 11 56.4	+5.0
	comp=Z,15nm,1.5s						
Q16A	Castle Valley	81.29	46	eP	P	03 11 57.4	+5.3
	comp=Z,53nm,1.8s						
RND	Reindeer	81.35	12	eP	P	03 11 49.7	-2.0
	comp=Z,37nm,1.2s						
RND	Reindeer	81.35	12	eP	P	03 11 49.7	-2.0
RND				pmax	pmax		
	comp=Z,37nm,1.2s						
C09A	Chrisman Ranch	81.39	35	eP	P	03 11 55.0	+2.8
	comp=Z,24nm,1.4s						
HLID	Hailey	81.41	40	eP	P	03 11 50.6	-2.0
	comp=Z,19nm,1.1s						
HLID				LR	LR		
	comp=Z,639nm,19.0s						
HLID	Hailey	81.41	40	P	P	03 11 51.5	-1.1
	baz=240						
TMUT	Trail Mountain	81.44	45	eP	P	03 11 54.3	+1.2

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                comp=Z,15nm,1.0s
MPU    Maple Canyon      81.49  45  eP      P       03 11 55.5 +2.4
                comp=Z,15nm,1.4s
HVU    Hansel Valley     81.57  43  eP      P       03 11 54.1 +0.6
                comp=Z,42nm,1.7s
HVU    Hansel Valley     81.57  43  eP      P       03 11 54.1 +0.6
HVU                                 pmax    pmax
                comp=Z,42nm,1.7s
MCK    McKinley          81.62  12  eP      P       03 11 53.0 -0.1
                comp=Z,17nm,1.0s
MCK    McKinley          81.62  12  eP      P       03 11 53.0 -0.1
MCK                                 pmax    pmax
                comp=Z,17nm,1.0s
PAX    Paxson            81.69  14  eP      P       03 11 55.8 +2.3
                comp=Z,33nm,1.7s
PAX    Paxson            81.69  14  eP      P       03 11 55.8 +2.3
PAX                                 pmax    pmax
                comp=Z,33nm,1.7s
CTU    Camp Tracy        81.73  44  eP      P       03 11 56.0 +1.6
                comp=Z,15nm,1.1s
SEY    Seymchan          81.75 346⇑eP      P       03 11 52.0 -1.7
SRU    San Rafael Swe    81.83  46  eP      P       03 11 56.8 +1.8
                comp=Z,23nm,1.4s
SRU    San Rafael Swe    81.83  46  eP      P       03 11 56.8 +1.8
SRU                                 pmax    pmax
                comp=Z,23nm,1.4s
P17A   Butcher Ranch,    81.84  45  eP      P       03 11 57.7 +2.7
                comp=Z,36nm,1.6s
JLU    Jordanelle        81.89  44  eP      P       03 11 56.9 +1.6
                comp=Z,41nm,1.7s
HYT    Haines Junctio    82.01  18  eP      P       03 11 58.6 +3.3
                comp=Z,20nm,1.3s
MENT   Mentasta          82.08  14  eP      P       03 11 58.0 +2.5
                comp=Z,15nm,1.1s
TCUT   Toone Canyon      82.16  44  eP      P       03 11 56.0 -0.7
                comp=Z,113nm,1.5s
LAZ    Ladron            82.23  51  eP      P       03 11 59.6 +2.4
LENM   Lemitar           82.25  52  eP      P       03 12 00.2 +2.9
NEW    Newport           82.29  35  eP      P       03 11 57.8 +0.8
                comp=Z,18nm,1.4s
NEW                                 LR      LR
                comp=Z,845nm,20.0s
NEW    Newport           82.29  35  P       P       03 11 56.9  0.0
                baz=237
PV05   Paradox Valley    82.36  47  eP      P       03 11 58.3 +0.5
MVCO   Mesa Verde        82.41  48  PFAKE           03 12 10.0  +12
MVCO                                LR      LR
                comp=Z,1µm,21.0s
WRH    Wood River Hil    82.45  12  eP      P       03 11 57.6 +0.2
                comp=Z,26nm,1.2s
MLY    Manley            82.46  11  eP      P       03 11 58.5 +1.1
                comp=Z,37nm,1.7s
MNTX   Cornudas Mount    82.49  54  eP      P       03 11 59.5 +1.1
                comp=Z,36nm,1.4s
MNTX                                LR      LR
                comp=Z,1µm,19.0s
MNTX   Cornudas Mount    82.49  54  P       P       03 11 57.6 -0.8
                baz=247
RIDG   Independ'e Rid    82.50  14  eP      P       03 11 59.7 +2.0
                comp=Z,17nm,1.1s
BNM    Barren Site       82.51  52  eP      P       03 12 01.1 +2.4
PV09   Paradox Valley    82.52  47  eP      P       03 12 01.4 +2.7
PV14   Lion Creek, Pa    82.54  47  eP      P       03 12 00.2 +1.5
                comp=Z,20nm,0.7s
PV17   East Wray Mesa    82.55  47  eP      P       03 12 01.1 +2.3
                comp=Z,16nm,1.1s
PV20   West Nyswonger    82.57  47  eP      P       03 12 01.8 +3.0
                comp=Z,18nm,1.2s
PV23   Carpenter Ridg    82.59  47  eP      P       03 12 01.1 +2.0
                comp=Z,43nm,1.4s
PV16   Nyswonger Mesa    82.59  47  eP      P       03 12 01.6 +2.6
                comp=Z,16nm,1.2s
PV13   Radium Mtn., P    82.59  47  eP      P       03 12 00.8 +1.8
                comp=Z,24nm,1.3s
PV03   Paradox Valley    82.62  47  eP      P       03 12 01.0 +1.9
                comp=Z,13nm,1.1s
PV11   David Mesa, Pa    82.62  47  eP      P       03 12 00.9 +1.7
                comp=Z,19nm,1.1s
HDA    Harding Lake      82.63  12  eP      P       03 11 57.9 -0.4
PV02   Paradox Valley    82.67  47  eP      P       03 12 01.9 +2.5
                comp=Z,20nm,1.3s
PV12   Saucer Basin,     82.68  47  eP      P       03 12 01.9 +2.5
                comp=Z,18nm,1.0s
WHY    Whitehorse        82.69  19  eP      P       03 12 02.0 +3.2
                comp=Z,45nm,1.8s
PV01   Paradox Valley    82.76  47  eP      P       03 11 58.5 -1.4
                comp=Z,22nm,1.2s
IM3    Indian Mountai    82.84   9  eP      P       03 12 00.6 +1.2
PV07   Paradox Valley    82.84  47  eP      P       03 12 02.7 +2.4
                comp=Z,20nm,1.2s
TCOL   CIGO, UAF Yank    82.86  12  P       P       03 11 58.8 -0.6
                baz=208
COLA   College           82.86  12  eP      P       03 11 58.4 -1.0
                comp=Z,17nm,0.9s
COLA                                LR      LR
                comp=Z,618nm,21.0s
COLA   College           82.86  12⇑eP      P       03 12 00.1 +0.7
COLA                                pmax    pmax
                comp=Z,11nm,1.1s
MDM    Murphy Dome       82.86  12  eP      P       03 12 00.6 +1.1
                comp=Z,69nm,1.8s
SCRK   Sand Creek        82.90  14  eP      P       03 12 00.1 +0.2
                comp=Z,11nm,1.0s
PV15   Paradox Valley    82.91  47  eP      P       03 12 03.1 +2.4
                comp=Z,19nm,1.0s
TX31   Lajitas Ar. Si    82.96  57  eP      P       03 11 59.8 -1.2
TXAR   Lajitas Array     82.96  57  P       P       03 11 59.0 -2.0
                comp=Z,12nm,1.1s,baz=225,slow=6.7,SNR=26
TXAR                                LR      LR      03 41 21.9
                comp=Z,1µm,19.9s,baz=0.0,slow=30
ANMO   Albuquerque       82.96  51  eP      P       03 12 01.2 +0.3
                comp=Z,27nm,1.1s
ANMO                                LR      LR
                comp=Z,947nm,20.0s
ANMO   Albuquerque       82.96  51⇑eP      P       03 12 00.4 -0.6
ANMO                                pmax    pmax
                comp=Z,20nm,1.3s
ANMO   Albuquerque       82.96  51  P       P       03 12 00.0 -0.9
                baz=246
ILAR   Eielson Array     82.96  12  P       P       03 11 57.5 -2.6
                comp=Z,2.4nm,0.9s,baz=229,slow=6.2,SNR=15
ILAR                                LR      LR      03 42 41.3
                comp=Z,242nm,21.6s,baz=214,slow=31
ILB    Eielson Array     82.96  12  eP      P       03 12 00.5 +0.5
IL1    Eielson Array     82.96  12  eP      P       03 11 59.9 -0.1
MCMT   McKenzie Canyo    83.02  40  eP      P       03 12 01.8 +0.7
AHID   Auburn Hatcher    83.13  42  PFAKE           03 12 10.0 +8.3
AHID                                LR      LR
                comp=Z,441nm,22.0s
POKR   Poker Plat Res    83.16  12  P       P       03 12 00.4 -0.6
                baz=208
MSO    Missoula          83.36  38  eP      P       03 12 02.8 +0.2
                comp=Z,28nm,1.4s
MSO    Missoula          83.36  38  P       P       03 12 02.0 -0.7
                baz=239
BJT    Baijiatuau        83.37 314  PFAKE           03 12 10.0 +7.3
BJT                                 LR      LR
                comp=Z,775nm,22.0s
DLMT   Dillon            83.44  40  eP      P       03 12 02.1 -1.1
                comp=Z,31nm,1.3s
TPAW   Teton Pass        83.57  42  eP      P       03 12 05.0 +0.9
                comp=Z,39nm,1.3s
FXWY   Fox Creek         83.59  42  eP      P       03 12 04.0  0.0
                comp=Z,14nm,1.1s
SNOW   Snow King Moun    83.68  42  eP      P       03 12 06.5 +2.0
                comp=Z,37nm,1.2s
MOOW   Moose Ponds       83.82  42  eP      P       03 12 04.5 -0.7
                comp=Z,16nm,1.3s
S22A   4UR Ranch, Cre    83.84  48  eP      P       03 12 04.7 -0.8
                comp=Z,20nm,1.1s
S22A   4UR Ranch, Cre    83.84  48  P       P       03 12 04.4 -1.2
                baz=245
LOHW   Long Hollow       83.85  42  eP      P       03 12 06.7 +1.3
                comp=Z,18nm,1.3s
O20A   White River Ci    83.86  46  eP      P       03 12 07.2 +1.7
                comp=Z,21nm,1.1s
O20A   White River Ci    83.86  46  P       P       03 12 03.8 -1.6
                baz=244
PRP    Porcupine Dome    83.90  12  eP      P       03 12 06.4 +1.4
                comp=Z,74nm,1.9s
QLMT   Earthquake Lak    83.90  40  eP      P       03 12 08.0 +2.4
FLWY   Flagg Ranch       84.01  41  eP      P       03 12 07.2 +1.1
                comp=Z,47nm,1.3s
YHB    Horse Butte       84.01  41  eP      P       03 12 07.6 +1.4
                comp=Z,32nm,1.1s
YPP    Pitchstone Pla    84.03  41  eP      P       03 12 10.2 +3.8
                comp=Z,42nm,1.9s
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DAWY   Dawson            84.09  15  eP      P       03 12 06.0 +0.1
                comp=Z,23nm,1.3s
YFT    Old Faithful      84.09  41  eP      P       03 12 10.6 +3.9
                comp=Z,38nm,1.5s
BILL   Bilibino          84.10 354  eP      P       03 12 06.0 +0.2
                comp=Z,6.5nm,0.9s
BILL                                LR      LR
                comp=Z,1µm,19.0s
BILL   Bilibino          84.10 354⇓iP      P       03 12 06.6 +0.8
BILL                                eS      S       03 22 26.8 -0.8
BILL                                i SS    SS      03 27 55.1 -2.2
BILL                                pmax    pmax
                comp=Z,5.0nm,1.1s
BILL                                MLR     MLR
                comp=Z,359nm,19.0s
YMR    Madison River     84.11  41  eP      P       03 12 08.8 +2.1
                comp=Z,46nm,1.4s
BW06   Boulder Array     84.14  43  eP      P       03 12 05.4 -1.5
                comp=Z,16nm,1.1s
BW06                                LR      LR
                comp=Z,598nm,20.0s
BW06   Boulder Array     84.14  43  P       P       03 12 05.5 -1.5
                baz=243
PDAR   Pinedale Array    84.14  43  P       P       03 12 03.8 -3.1
                comp=Z,3.1nm,0.9s,baz=203,slow=3.3,SNR=13
PDAR                                LR      LR      03 42 03.7
                comp=Z,247nm,20.8s,baz=254,slow=30
BOZ    Bozeman (W)       84.14  40  eP      P       03 12 07.7 +0.9
                comp=Z,29nm,1.4s
BOZ                                 LR      LR
                comp=Z,1µm,19.0s
BOZ    Bozeman (W)       84.14  40  eP      P       03 12 07.7 +0.9
BOZ                                 pmax    pmax
                comp=Z,29nm,1.4s
BOZ                                 MLR     MLR
                comp=Z,1µm,19.0s
BOZ    Bozeman (W)       84.14  40  P       P       03 12 07.3 +0.6
                baz=241
H17A   Grant Village     84.23  41  eP      P       03 12 09.3 +2.0
                comp=Z,17nm,1.1s
EGAK   Eagle             84.24  14  eP      P       03 12 07.8 +1.2
                comp=Z,17nm,1.1s
EGAK                                LR      LR
                comp=Z,451nm,22.0s
YHH    Holmes Hill       84.24  41  eP      P       03 12 09.4 +1.9
                comp=Z,43nm,1.7s
YNR    Norris Junctio    84.32  41  eP      P       03 12 12.1 +4.4
                comp=Z,44nm,1.5s
SMCO   Snowmass          84.34  47  eP      P       03 12 07.0 -1.2
                comp=Z,26nm,1.2s
LKWY   Lake              84.42  41  eP      P       03 12 08.2 -0.1
                comp=Z,26nm,1.1s
LKWY                                LR      LR
                comp=Z,1µm,20.0s
LKWY   Lake              84.42  41  eP      P       03 12 08.2 -0.1
LKWY                                pmax    pmax
                comp=Z,26nm,1.1s
LKWY                                MLR     MLR
                comp=Z,1µm,20.0s
ENH    Enshi             84.49 303  PFAKE           03 12 20.0  +11
ENH                                 LR      LR
                comp=Z,526nm,21.0s
COLD   Coldfoot          84.55  10  eP      P       03 12 10.7 +2.6
                comp=Z,15nm,1.2s
SDCO   Great Sand Dun    84.80  49  eP      P       03 12 13.2 +2.7
                comp=Z,12nm,1.3s
SDCO                                LR      LR
                comp=Z,887nm,20.0s
SDCO   Great Sand Dun    84.80  49  P       P       03 12 10.7 +0.3
                baz=246
LNIG   Linares           84.91  63  eP      P       03 12 12.0 +1.1
                comp=Z,18nm,1.3s
RWWY   Rawlins           85.23  45  eP      P       03 12 12.9 +0.5
                comp=Z,23nm,1.1s
PMSA   Palmer Station    85.38 157  PFAKE           03 12 20.0 +7.5
PMSA                                LR      LR
                comp=Z,1µm,22.0s
MSTX   Muleshoe          85.39  53  eP      P       03 12 15.2 +2.0
                comp=Z,53nm,1.7s
RLMT   Red Lodge         85.39  41  eP      P       03 12 13.8 +0.7
                comp=Z,24nm,1.3s
RLMT                                LR      LR
                comp=Z,690nm,22.0s
RLMT   Red Lodge         85.39  41  P       P       03 12 11.9 -1.2
                baz=243
HIA    Hailar            85.45 324  PFAKE           03 12 20.0 +7.0
HIA                                 LR      LR
                comp=Z,2µm,22.0s
ISCO   Idaho Springs     85.55  47  eP      P       03 12 17.0 +2.8
                comp=Z,20nm,1.8s
ISCO                                LR      LR
                comp=Z,812nm,19.0s
ISCO   Idaho Springs     85.55  47  eP      P       03 12 17.0 +2.8
ISCO                                pmax    pmax
                comp=Z,20nm,1.8s
ISCO                                MLR     MLR
                comp=Z,812nm,19.0s
N23A   Red Feather La    85.77  46  eP      P       03 12 16.9 +1.7
                comp=Z,19nm,1.3s
TOLK   Toolik Lake Re    85.93  10  eP      P       03 12 15.5 +0.4
                comp=Z,5.6nm,0.8s
K22A   Casper            86.10  44  eP      P       03 12 22.0 +5.4
                comp=Z,12nm,1.2s
PHWY   Pilot Hill        86.27  46  eP      P       03 12 22.8 +5.1
                comp=Z,20nm,1.5s
XAN    Xi'an             86.30 307  P       P       03 12 23.3 +5.7
XAN                                 pmax    pmax
                comp=Z,4.0nm,0.7s
XAN                                 pmax    pmax
                comp=Z,120nm,3.7s
EGMT   Eagleton          86.42  38  eP      P       03 12 20.4 +2.4
                comp=Z,57nm,1.8s
EGMT                                LR      LR
                comp=Z,779nm,20.0s
JCT    Junction City     86.50  57  eP      P       03 12 19.9 +1.2
                comp=Z,12nm,0.9s
JCT                                 LR      LR
                comp=Z,875nm,20.0s
JCT    Junction City     86.50  57  eP      P       03 12 19.9 +1.2
JCT                                 pmax    pmax
                comp=Z,12nm,0.9s
JCT                                 MLR     MLR
                comp=Z,875nm,20.0s
EPYK   Eagle Plains      86.62  15  eP      P       03 12 20.1 +1.6
                comp=Z,43nm,1.8s
HHC    Hu-ho-hao-te      86.91 314  eP      P       03 12 21.9 +1.3
HHC                                 S       S       03 22 51.0 -5.6
HHC                                 sS      sS      03 23 18.8 +4.8
HHC                                 pmax    pmax
                comp=Z,6.0nm,1.0s
HHC                                 pmax    pmax
                comp=Z,130nm,4.5s
HHC                                 LR      LR
                comp=Z,310nm,11.2s
HHC                                 LR      LR
                comp=Z,230nm,10.4s
HHC                                 LR      LR
                comp=Z,540nm,11.2s
MAW    Mawson            86.93 199  LR      LR      03 49 12.9
                comp=Z,746nm,18.6s,baz=114,slow=34
KVTX   Kingsville        87.11  61  PFAKE           03 12 30.0 +8.3
KVTX                                LR      LR
                comp=Z,759nm,19.0s
ABTX   Abilene, Hawle    87.36  55  eP      P       03 12 26.2 +3.4
                comp=Z,33nm,1.5s
ABTX   Abilene, Hawle    87.36  55  P       P       03 12 22.7 -0.2
                baz=250
LAO    LASA Array        87.99  40  eP      P       03 12 25.8 +0.2
                comp=Z,25nm,1.1s
LAO                                 LR      LR
                comp=Z,615nm,19.0s
RSSD   Black Hills       88.36  43  eP      P       03 12 28.8 +1.2
                comp=Z,9.8nm,1.1s
RSSD   Black Hills       88.36  43  eP      P       03 12 28.8 +1.2
RSSD                                pmax    pmax
                comp=Z,10.0nm,1.1s
RSSD   Black Hills       88.36  43  P       P       03 12 28.4 +0.8
                baz=247
KMI    Kunming           88.44 296  P       P       03 12 30.6 +2.2
KMI                                 pmax    pmax
                comp=Z,9.0nm,0.5s
KMI                                 LR      LR
                comp=Z,390nm,17.9s
KMI                                 LR      LR
                comp=Z,390nm,20.4s
KMI                                 LR      LR
                comp=Z,750nm,21.6s
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OGNE   Ogallala          88.52  47  PFAKE           03 12 40.0  +12
OGNE                                LR      LR
                comp=Z,587nm,20.0s
WMOK   Wichita Mounta    88.75  54  PFAKE           03 12 40.0  +11
WMOK                                LR      LR
                comp=Z,1µm,20.0s
INK    Inuvik            88.91  15  eP      P       03 12 30.4 +1.1
                comp=Z,2.6nm,1.0s
INK    Inuvik            88.91  15  eP      P       03 12 30.4 +1.1
INK                                 pmax    pmax
                comp=Z,3.0nm,1.0s
INK    Inuvik            88.91  15  P       P       03 12 27.7 -1.6
                comp=Z,2.8nm,1.1s,baz=275,slow=1.8,SNR=4.4
CD2    Chengdu           89.36 302  eP      P       03 12 33.5 +1.1
CD2                                 S       S       03 23 18.9 -1.3
CD2                                 pmax    pmax
                comp=Z,10.0nm,0.5s
CD2                                 pmax    pmax
                comp=Z,120nm,5.2s
CD2                                 LR      LR
                comp=Z,830nm,13.7s
CD2                                 LR      LR
                comp=Z,820nm,16.7s
CD2                                 LR      LR
                comp=Z,1µm,20.1s
CBKS   Cedar Bluff       89.41  49  PFAKE           03 12 40.0 +7.6
CBKS                                LR      LR
                comp=Z,751nm,19.0s
CMAR   Chiang Mai Arr    89.90 289  P       P       03 12 35.4 +0.3
                comp=Z,1.9nm,0.3s,baz=160,slow=8.3,SNR=6.2
CMAR                                LR      LR      03 49 04.6
                comp=Z,373nm,21.1s,baz=105,slow=33
DGMT   Dagmar            89.97  39  eP      P       03 12 36.7 +1.9
                comp=Z,42nm,1.4s
DGMT                                LR      LR
                comp=Z,1µm,20.0s
DGMT   Dagmar            89.97  39  P       P       03 12 36.5 +1.7
                baz=247
CHTO   Chiang Mai        89.99 289  PFAKE           03 12 50.0  +14
CHTO                                LR      LR
                comp=Z,486nm,20.0s
LZH    Lanzhou           90.91 307  eP      P       03 12 42.8 +3.2
LZH                                 pP      sP      03 12 58.3 +4.4
LZH                                 sP      pwP     03 13 06.3  +14
LZH                                 pmax    pmax
                comp=Z,24nm,1.0s
LZH                                 pmax    pmax
                comp=Z,90nm,4.6s
LZH                                 LR      LR
                comp=Z,650nm,12.5s
LZH                                 LR      LR
                comp=Z,910nm,14.6s
LZH                                 LR      LR
                comp=Z,1µm,16.3s
NATX   Nacogdoches       91.09  57  PFAKE           03 12 50.0  +10
NATX                                LR      LR
                comp=Z,1µm,20.0s
YKA    Yellowknife Ar    91.19  24  P       P       03 12 37.5 -2.6
                comp=Z,2.5nm,1.1s,baz=245,slow=4.7,SNR=4.1
YKA                                 LR      LR      03 45 32.7
                comp=Z,53nm,21.5s,baz=237,slow=30
YKB5   Yellowknife Ar    91.19  24  eP      P       03 12 40.8 +0.8
PLCA   Paso Flores       91.65 133  LR      LR      03 45 50.3
                comp=Z,562nm,20.6s,baz=264,slow=30
KSU1   Kansas State U    91.80  50  PFAKE           03 13 00.0  +16
KSU1                                LR      LR
                comp=Z,846nm,19.0s
ULN    Ulaanbaatar       92.50 319  PFAKE           03 13 00.0  +13
ULN                                 LR      LR
                comp=Z,437nm,22.0s
ULN    Ulaanbaatar       92.50 319⇑iP      P       03 12 46.5 -0.3
ULN                                 pmax    pmax
                comp=Z,2.0nm,1.0s
MIAR   Mount Ida         92.77  55  PFAKE           03 13 00.0  +12
MIAR                                LR      LR
                comp=Z,1µm,20.0s
SONA1  Songino Array     92.91 319  eP      P       03 12 49.6 +1.0
SONM   Songino Array     92.91 319  P       P       03 12 46.2 -2.4
                comp=Z,0.8nm,1.0s,baz=123,slow=10,SNR=3.5
SONM                                LR      LR      03 50 10.6
                comp=Z,338nm,22.0s,baz=106,slow=33
SNAA   Sanae             93.09 178  P       P       03 12 46.0 -3.0
SNAA   Sanae             93.09 178⇑eP      P       03 12 47.3 -1.7
VNA3   Neumayer Olymp    93.15 176  P       P       03 12 52.4 +3.2
ECSD   EROS Data Cent    93.24  46  eP      P       03 12 50.6 +0.5
                comp=Z,20nm,1.7s
ECSD                                LR      LR
                comp=Z,989nm,20.0s
ECSD   EROS Data Cent    93.24  46  P       P       03 12 50.6 +0.5
                baz=252
VNA2   Neumayer--Watz    93.62 176  P       P       03 12 49.0 -2.4
FFC    Flin Flon         93.64  34  PFAKE           03 13 00.0 +8.4
FFC                                 LR      LR
                comp=Z,675nm,20.0s
W41B   Gary Mavity, V    93.99  55  P       P       03 12 55.1 +1.4
                baz=254
JTS    JuntasAbangare    94.01  80  PFAKE           03 13 10.0  +16
JTS                                 LR      LR
                comp=Z,1µm,20.0s
U41A   Viola             94.56  54  P       P       03 12 57.4 +1.1
                baz=254
T41A   Mountain View     94.87  53  P       P       03 12 57.4 -0.4
                baz=255
GTA    Gaotai            94.93 309  eP      P       03 13 06.0 +7.9
GTA                                 pP      sP      03 13 20.5 +8.2
GTA                                 sP      pwP     03 13 25.9  +15
GTA                                 pmax    pmax
                comp=Z,2.0nm,1.2s
GTA                                 pmax    pmax
                comp=Z,74nm,4.9s
GTA                                 LR      LR
                comp=N,220nm,19.0s
GTA                                 LR      LR
                comp=E,640nm,22.2s
GTA                                 LR      LR
                comp=Z,1µm,22.9s
S41A   Jillco Farms,     95.03  53  P       P       03 12 59.2 +0.7
                baz=255
SCIA   State Center      95.10  48  PFAKE           03 13 10.0  +11
SCIA                                LR      LR
                comp=Z,1µm,20.0s
AGMN   Agassiz Nation    95.12  41  PFAKE           03 13 10.0  +11
AGMN                                LR      LR
                comp=Z,744nm,20.0s
T42A   Van Buren         95.39  53  P       P       03 13 00.3 +0.3
                baz=255
R41A   Rosebud           95.49  52  P       P       03 13 00.6 +0.1
                baz=255
CCM    Cathedral Cave    95.53  52  eP      P       03 13 01.3 +0.6
                comp=Z,16nm,1.4s
CCM    Cathedral Cave    95.53  52  eP      P       03 13 01.3 +0.6
CCM                                 pmax    pmax
                comp=Z,16nm,1.4s
ULM    Lac du Bonnet     95.69  40  LR      LR      03 50 35.7
                comp=Z,882nm,19.6s,baz=260,slow=32
M39A   Webster           95.74  49  P       P       03 13 02.7 +1.2
                baz=255
Q41A   Truxton           95.78  51  P       P       03 13 03.3 +1.5
                baz=255
LCO    Las Campanas      95.81 122  PFAKE           03 13 10.0 +7.4
LCO                                 LR      LR
                comp=Z,456nm,21.0s
TLY    Talaya            95.82 322  PFAKE           03 13 10.0 +8.3
TLY                                 LR      LR
                comp=Z,387nm,20.0s
NNA    Nana              95.84 104  PFAKE           03 13 20.0  +17
NNA                                 LR      LR
                comp=Z,211nm,22.0s
P41A   Barry, Barry      96.09  51  P       P       03 13 03.2 +0.1
                baz=255
O41A   Passleys Farm,    96.33  50  P       P       03 13 05.4 +1.1
                baz=255
J39A   Decorah           96.55  47  P       P       03 13 05.9 +0.7
                baz=255
L40A   Anamosa           96.58  48  eP      P       03 13 06.8 +1.4
                comp=Z,11nm,1.0s
L40A   Anamosa           96.58  48  P       P       03 13 06.2 +0.9
                baz=255
P42A   Winchester        96.60  51  eP      P       03 13 07.2 +1.7
                comp=Z,27nm,1.3s
P42A   Winchester        96.60  51  P       P       03 13 06.7 +1.2
                baz=256
G38A   Ridgeland         96.91  45  P       P       03 13 07.6 +0.8
                baz=255
F38A   Pierce - Schro    97.10  44  P       P       03 13 07.6  0.0
                baz=256
N42A   Yates City        97.14  50  P       Pdif    03 13 08.6 +0.7
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	baz=256						
H39A	Augusta	97.19	46	P	Pdif	03 13 09.1	+1.0
	baz=256						
BRAL	Brewton	97.20	60	PFAKE		03 13 20.0	+12
BRAL				LR	LR		
	comp=Z,476nm,20.0s						
JFWS	Jewell Farm	97.48	48	PFAKE		03 13 20.0	+11
JFWS				LR	LR		
	comp=Z,1µm,21.0s						
JFWS	Jewell Farm	97.48	48	P	Pdif	03 13 10.9	+1.4
	baz=256						
HDIL	Hopedale	97.62	50	PFAKE		03 13 20.0	+10
HDIL				LR	LR		
	comp=Z,952nm,22.0s						
OTAV	Otavalo	97.69	92	PFAKE		03 13 20.0	+8.3
OTAV				LR	LR		
	comp=Z,408nm,21.0s						
F39A	Loretta	97.74	45	P	Pdif	03 13 11.3	+0.8
	baz=256						
J41A	Loganville	97.76	47	P	Pdif	03 13 11.9	+1.2
	baz=256						
H40A	Chili	97.79	46	P	Pdif	03 13 11.3	+0.5
	baz=256						
EYMN	Ely	97.84	43	PFAKE		03 13 20.0	+9.0
EYMN				LR	LR		
	comp=Z,835nm,22.0s						
K42A	Prairie Point,	98.09	48	P	Pdif	03 13 12.9	+0.7
	baz=257						
BCIP	Isla Barro Col	98.61	83	PFAKE		03 13 30.0	+15
BCIP				LR	LR		
	comp=Z,524nm,20.0s						
COWI	Conover	98.99	45	PFAKE		03 13 30.0	+14
COWI				LR	LR		
	comp=Z,697nm,19.0s						
LSA	Lhasa	99.56	298	PFAKE		03 13 30.0	+10
LSA				LR	LR		
	comp=Z,333nm,22.0s						
LVC	Limon Verde	99.60	117	PFAKE		03 13 30.0	+10
LVC				LR	LR		
	comp=Z,488nm,20.0s						
GOGA	Godfrey	100.64	58	PFAKE		03 13 40.0	+16
GOGA				LR	LR		
	comp=Z,880nm,20.0s						
GLMI	Grayling	101.86	47	PFAKE		03 13 40.0	+11
GLMI				LR	LR		
	comp=Z,1µm,19.0s						
AAM	Ann Arbor	102.12	49	PFAKE		03 13 40.0	+10
AAM				LR	LR		
	comp=Z,992nm,20.0s						
ACSO	Alum Creek Sta	102.27	51	PFAKE		03 13 40.0	+9.1
ACSO				LR	LR		
	comp=Z,2µm,20.0s						
MTDJ	Mount Denham	102.85	74	PFAKE		03 13 50.0	+16
MTDJ				LR	LR		
	comp=Z,546nm,20.0s						
NHSC	New Hope	103.30	59	PFAKE		03 13 50.0	+14
NHSC				LR	LR		
	comp=Z,884nm,19.0s						
BLA	Blacksburg	103.76	55	PFAKE		03 13 50.0	+12
BLA				LR	LR		
	comp=Z,1µm,20.0s						
GTBY	Guantanamo Bay	105.43	73	PFAKE		03 18 10.0	+11
GTBY				LR	LR		
	comp=Z,472nm,19.0s						
CNNC	Cliffs of the	105.50	57	PFAKE		03 18 10.0	+11
CNNC				LR	LR		
	comp=Z,901nm,20.0s						
CBN	Corbin Frederi	106.29	54	PFAKE		03 18 10.0	+10
CBN				LR	LR		
	comp=Z,1µm,19.0s						
SDV	Santo Domingo	107.38	85	PFAKE		03 18 20.0	+17
SDV				LR	LR		
	comp=Z,393nm,19.0s						
BINY	Binghamton	107.75	50	PFAKE		03 18 20.0	+17
BINY				LR	LR		
	comp=Z,1µm,19.0s						
DGAR	Diego Garcia	108.19	257	PFAKE		03 18 20.0	+16
DGAR				LR	LR		
	comp=Z,465nm,20.0s						
MKAR	Makanchi Array	108.75	315	PKiKP	PKiKP	03 18 03.9	-0.7
	comp=Z,0.3nm,0.6s,baz=54,slow=2.8,SNR=4.4						
SDDR	Presa de Saban	108.80	75	PFAKE		03 18 20.0	+15
SDDR				LR	LR		
	comp=Z,1µm,20.0s						
KURK	Kurchatov	111.22	319	PFAKE		03 18 20.0	+11
KURK				LR	LR		
	comp=Z,1µm,20.0s						
KSH	Kashi	113.15	307	PKP	PKiKP	03 18 18.4	+5.1
KSH				PP	PP	03 19 07.5	+4.1
KSH				SKS	SKSdf	03 25 22.5	-0.5
KSH				SKKS	SKKSac	03 26 02.1	-0.8
KSH	Kashi	113.15	307	SS	SS	03 34 53.6	+7.4
KSH				AMB	AMB		
	comp=Z,280nm,5.4s						
KSH				LR	LR		
	comp=N,150nm,4.5s						
KSH				LR	LR		
	comp=E,140nm,4.9s						
KSH				LR	LR		
	comp=Z,410nm,5.3s						
SJG	San Juan	113.46	77	PFAKE		03 18 30.0	+16
SJG				LR	LR		
	comp=Z,521nm,20.0s						
AAK	Ala-Archa	114.27	310	PFAKE		03 18 30.0	+15
AAK				LR	LR		
	comp=Z,360nm,20.0s						
NIL	Nilore	115.18	300	PFAKE		03 18 30.0	+13
NIL				LR	LR		
	comp=Z,139nm,20.0s						
PTGA	Pitinga	115.18	98	PFAKE		03 18 30.0	+12
PTGA				LR	LR		
	comp=Z,13µm,20.0s						
BRVK	Borovoye	116.14	322	PFAKE		03 18 30.0	+12
BRVK				LR	LR		
	comp=Z,430nm,22.0s						
BRVK	Borovoye	116.14	322	⇓iPKIKP	PKiKP	03 18 19.4	+1.0
KBS	Kingsbay	116.26	358	PFAKE		03 18 30.0	+12
KBS				LR	LR		
	comp=Z,471nm,20.0s						
SFJD	Kangerlussuaq	117.59	21	PFAKE		03 18 30.0	+9.2
SFJD				LR	LR		
	comp=Z,351nm,19.0s						
ARU	Arti	121.78	328	PFAKE		03 18 40.0	+11
ARU				LR	LR		
	comp=Z,581nm,20.0s						
KEV	Kevo	123.69	350	PFAKE		03 18 40.0	+7.3
KEV				LR	LR		
	comp=Z,926nm,22.0s						
LVZ	Lovozero	123.80	346	PFAKE		03 18 40.0	+7.0
LVZ				LR	LR		
	comp=Z,355nm,19.0s						
ARCES	ARCESS Array B	124.13	351	PKP	PKiKP	03 18 36.7	+3.1
	comp=Z,8.6nm,1.0s,baz=3.6,slow=2.9,SNR=4.1						
ABPO	Ambohimpanom	125.18	233	PFAKE		03 18 50.0	+13
ABPO				LR	LR		
	comp=Z,375nm,22.0s						
GEYT	Alibeck	127.18	306	PKP	PKPdf	03 18 38.6	-1.5
	comp=Z,0.9nm,0.2s,baz=65,slow=6.8,SNR=3.3						
KLMR	Klimovskoe	127.73	339	ePKIKP	PKPdf	03 18 39.3	-1.1
KLMR				pmax	pmax		
	comp=Z,13nm,1.1s						
KLMR	Klimovskoe	127.73	339	ePKPdf	PKPdf	03 18 39.3	-1.1
KLMR				AMP		03 18 46.7	
	comp=Z,13nm,1.1s						
FINES	FINESS Array B	131.23	346	PKP	PKPdf	03 18 45.1	-1.9
	comp=Z,2.9nm,1.0s,baz=59,slow=5.7,SNR=3.3						
OBN	Obninsk	132.88	335	PFAKE		03 19 00.0	+8.6
OBN				LR	LR		
	comp=Z,370nm,21.0s						
OBN	Obninsk	132.88	335	ePKIKP	PKPdf	03 18 50.6	+0.3
OBN				e		03 21 16.1	
OBN				e		03 25 52.7	
OBN				ePS	PS	03 31 32.9	-0.4
OBN				eSS	SS	03 39 00.4	+6.2
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VSR	Storozhevoye	134.29	329	⇑iPKIKP	PKiKP	03 18 53.9	-0.6
RCBR	Riachuelo	135.53	115	PFAKE		03 19 10.0	+12
RCBR				LR	LR		
	comp=Z,25µm,21.0s						
KIV	Kislovodsk	136.31	319	PFAKE		03 19 10.0	+11
KIV				LR	LR		
	comp=Z,324nm,20.0s						
GNI	Garni	136.56	313	PFAKE		03 19 10.0	+10
GNI				LR	LR		
	comp=Z,536nm,22.0s						
AKASG	Malin Array Be	139.14	335	PKP	PKPdf	03 18 58.6	-3.5
	comp=Z,0.1nm,0.3s,baz=42,slow=2.7,SNR=3.6						
KIEV	Kiev	139.15	335	PFAKE		03 19 10.0	+5.6
KIEV				LR	LR		
	comp=Z,350nm,19.0s						
ESK	Eskdalemuir	139.75	6	PFAKE		03 19 20.0	+15
ESK				LR	LR		
	comp=Z,436nm,21.0s						
RAYN	Ar Rayn	139.81	288	PFAKE		03 19 20.0	+13
RAYN				LR	LR		
	comp=Z,371nm,20.0s						
LSZ	Lusaka	141.10	220	PFAKE		03 19 20.0	+10
LSZ				LR	LR		
	comp=Z,587nm,19.0s						
KMBO	Kilima Mbogo	142.97	247	PKP	PKPdf	03 19 08.5	-2.0
KMBO				LR	LR		
	comp=Z,399nm,20.0s						
KMBO	Kilima Mbogo	142.97	247	PKP	PKPdf	03 19 08.5	-2.0
	comp=Z,1.2nm,0.7s,baz=188,slow=4.2,SNR=4.6						
TSUM	Tsumeb	143.04	202	PFAKE		03 19 20.0	+6.5
TSUM				LR	LR		
	comp=Z,609nm,21.0s						
CLL	Collm	143.34	350	ePKPpre	PKPpre	03 19 07.0	
	comp=Z,4.0nm,1.1s						
CLL				i PKiKP	PKiKP	03 19 13.9	+1.0
	comp=Z,7.0nm,1.1s						
CLL				e		03 19 28.0	
CLL				ePP	PP	03 22 21.0	+1.0
CLL				ePPPP		03 27 36.0	
CLL				e		03 28 53.0	
CLL				eSS	SS	03 40 58.0	+0.7
CLL				e		03 41 45.0	
CLL				eSSS	SSS	03 46 25.0	
CLL				LmV		04 22 00.0	
	comp=Z,400nm,20.9s						
CLL	Collm	143.34	350	ePKIKP	PKPbc	03 19 07.0	+0.3
CLL				i		03 19 13.9	
CLL				eSS	SS	03 40 58.0	+0.7
CLL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CLL				MLR	MLR		
	comp=Z,400nm,20.9s						
BIZ	Bicaz	143.36	334	⇑iP	PKPab	03 19 04.9	-1.0
UZH	Uzhgorod	143.43	339	ePKIKP	PKiKP	03 19 12.7	-0.5
UZH				i		03 19 18.0	
UZH				e		03 19 24.0	
UPC	Upice	143.52	347	AMS	AMS	04 21 20.0	
	comp=Z,700nm,22.2s						
BRG	Berggiesshubel	143.59	349	ePKP	PKiKP	03 19 13.9	+0.4
	comp=Z,7.1nm,1.3s						
BRG	Berggiesshubel	143.59	349	ePKIKP	PKiKP	03 19 13.9	+0.4
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DPC	Dobruska-Polom	143.60	346	ePKP	PKPbc	03 19 07.2	-0.4
DPC	Dobruska-Polom	143.60	346	ePKIKP	PKPbc	03 19 07.2	-0.4
MORC	Moravsky Berou	143.84	345	ePKP	PKiKP	03 19 14.2	+0.1
BRTR	Keskin Array B	144.27	319	PKP	PKPab	03 19 08.0	-1.8
	comp=Z,6.5nm,0.8s,baz=71,slow=1.9,SNR=20						
PRU	Pruhonice	144.32	348	AMS	AMS	04 19 40.0	
	comp=Z,700nm,25.2s						
GOPC	GO Pecny, Ondr	144.34	348	AMS	AMS	04 19 40.0	
	comp=Z,500nm,19.9s						
VRAC	Vranov	144.51	345	⇓iP	PKPab	03 19 08.7	-1.4
VRAC	Vranov	144.51	345	⇓PKIKP	PKPab	03 19 08.7	-1.4
VRAC	Vranov	144.51	345	ePKP	PKiKP	03 19 16.3	+0.9
MLR	Muntele Rosu	144.56	333	⇑iP	PKPdf	03 19 12.6	+0.4
MLR	Muntele Rosu	144.56	333	⇑PKIKP	PKPdf	03 19 12.6	+0.4
MLR	Muntele Rosu	144.56	333	PKP	PKPab	03 19 08.9	-1.7
	comp=Z,3.7nm,0.8s,baz=197,slow=6.6,SNR=2.7						
JAVC	Velka Javorina	144.65	344	ePKP	PKiKP	03 19 17.8	+2.0
VYHS	Vyhne	144.65	342	ePKIKP	PKPab	03 19 08.7	-2.0
VYHS				e		03 19 17.0	
VYHS	Vyhne	144.65	342	ePKP	PKPab	03 19 08.7	-2.0
VYHS				e		03 19 17.0	
ANTO	Ankara	144.72	320	ePKPdf	PKPdf	03 19 12.4	-0.2
ANTO				LR	LR		
	comp=Z,282nm,21.0s						
TREC	Trest	144.78	347	AMS	AMS	04 22 40.0	
	comp=Z,700nm,22.3s						
KRUC	Moravsky	144.78	345	ePKP	PKiKP	03 19 16.9	+0.9
DRGR		144.84	337	⇑iP	PKPab	03 19 08.6	-2.9
DRGR		144.84	337	⇑PKIKP	PKPab	03 19 08.6	-2.9
PSZ	Piszkesteto	144.84	341	⇑iP	PKiKP	03 19 17.4	+1.1
PSZ	Piszkesteto	144.84	341	⇑PKIKP	PKiKP	03 19 17.4	+1.1
BCLA	Clavier	144.98	358	⇑PKP	PKPab	03 19 08.4	-3.4
VOIR		145.00	333	⇑iP	PKPab	03 19 08.8	-3.4
VOIR		145.00	333	⇑PKIKP	PKPab	03 19 08.8	-3.4
GRFO	Grafenberg	145.19	351	ePKPdf	PKPbc	03 19 10.2	-2.3
GRFO	Grafenberg	145.19	351	ePKP2	PKPbc	03 19 10.2	-2.3
ARR	Arges	145.23	334	⇓iP	PKPbc	03 19 11.8	-1.1
DOU	Dourbes	145.33	359	⇓PKP	PKPdf	03 19 14.5	+1.4
DOU				⇑pPKP	sPKPbc	03 19 27.4	-0.1
KHC	Kasperske Hory	145.33	349	ePKP	PKPbc	03 19 10.8	-2.3
KHC				epPKP	PKiKP	03 19 18.4	+1.2
KHC				AMS	AMS	04 20 10.0	
	comp=Z,800nm,25.1s						
KHC	Kasperske Hory	145.33	349	ePKP2	PKPbc	03 19 10.8	-2.3
KHC				MLR	MLR		
	comp=Z,800nm,25.1s						
ZST	Bratislava	145.41	344	ePKIKP	PKPab	03 19 13.7	+0.3
ZST				e		03 19 18.1	
ZST	Bratislava	145.41	344	ePKP	PKPab	03 19 13.7	+0.3
ZST				e		03 19 18.1	
ASF	Jabal al Asfar	145.44	305	PKPbc	PKPbc	03 19 13.6	-0.5
	comp=Z,1.2nm,0.6s,baz=59,slow=5.9,SNR=1.8						
GERES	GERESS Array B	145.58	348	PKIKP	PKPdf	03 19 11.0	-2.8
GERES	GERESS Array B	145.58	348	PKPbc	PKPdf	03 19 10.9	-2.8
	comp=Z,1.6nm,0.7s,baz=35,slow=4.9,SNR=7.6						
WLF	Walferdange	145.71	357	⇑PKP	PKPbc	03 19 14.2	+0.1
WLF				⇑pPKP	sPKPab	03 19 31.4	+2.6
CONA	Conrad Observa	145.97	345	ePKPdf	PKPdf	03 19 14.0	-0.4
	comp=Z,6.5nm,0.9s						
GZR	Gura Zlata	145.98	336	⇑iP	PKPdf	03 19 11.4	-3.1
GZR	Gura Zlata	145.98	336	⇑PKHKP	PKPpre	03 19 11.4	
BZS	Buzias	146.24	337	⇑iP	PKPdf	03 19 12.8	-2.0
BZS	Buzias	146.24	337	⇑PKIKP	PKPdf	03 19 12.8	-2.0
MMAI	Mount Meron Ar	146.29	307	PKPbc	PKPdf	03 19 15.8	+0.4
	comp=Z,12nm,1.0s,baz=116,slow=3.4,SNR=14						
MOA	Molln	146.41	347	ePKPbc	PKPbc	03 19 16.1	-0.3
	comp=Z,8.7nm,1.0s						
ARSA	Arzberg	146.68	345	eP	PKiKP	03 19 19.5	-0.5
	comp=Z,11nm,1.5s						
BFO	Black Forest	146.88	354	ePKPdf	PKPdf	03 19 16.7	+0.8
BFO				LR	LR		
	comp=Z,18nm,20.0s						
BFO	Black Forest	146.88	354	ePKP2	PKPdf	03 19 16.7	+0.8
LEF	Lefka	147.21	312	⇓iP	PKPdf	03 19 17.8	+1.0
SOKA	Soboth	147.34	345	ePKPdf	PKPdf	03 19 16.8	+0.1
	comp=Z,2.2nm,0.9s						
KBA	Koelnbreinsper	147.34	348	ePKPdf	PKPdf	03 19 16.7	-0.2
	comp=Z,4.7nm,0.9s						
RETA	Reutte	147.41	351	pPKPdf	PKPbc	03 19 20.1	+0.8
	comp=Z,13nm,1.2s						
WATA	Walderalm	147.42	350	epPKPbc	PKiKP	03 19 22.0	+0.4
	comp=Z,4.8nm,0.8s						
WTTA	Wattenberg	147.48	350	ePKPdf	PKPdf	03 19 16.7	-0.5
	comp=Z,3.0nm,0.7s						
MOTA	Moosalm	147.49	351	ePKiKP	PKiKP	03 19 21.8	0.0
	comp=Z,16nm,1.2s						
SQTA	Sankt Quirin	147.59	350	ePKPab	PKiKP	03 19 21.6	-0.4
	comp=Z,16nm,1.3s						
OBKA	Obir	147.61	346	ePKPdf	PKPdf	03 19 17.9	+0.7
	comp=Z,5.9nm,0.9s						
MYKA	Terra Mystica	147.70	347	ePKPdf	PKPdf	03 19 18.0	+0.6
	comp=Z,13nm,0.9s						
DAVA	Damuels	147.73	352	ePKiKP	PKPab	03 19 22.5	-0.2
	comp=Z,12nm,1.1s						
ABTA	Abfaltersbach	147.82	349	PKPbc	PKPbc	03 19 19.4	-1.1
	comp=Z,18nm,1.2s						
FETA	Feichten	147.87	351	ePKPdf	PKPdf	03 19 18.1	+0.3
	comp=Z,16nm,1.4s						
VTS	Vitosha	148.03	332	⇑iP	PKPbc	03 19 20.7	-0.6
VTS	Vitosha	148.03	332	⇑PKP2	PKPbc	03 19 20.7	-0.6
MBAR	Mbarara	148.89	242	PFAKE		03 19 30.0	+1.7
MBAR				LR	LR		
	comp=Z,2µm,22.0s						
PGAV	Gavieira, Arco	151.54	19	eLR	LR	04 19 11.8	
	comp=Z,516nm,20.0s						
POLO	Lamas de Olo	152.23	19	ePKPdf	PKiKP	03 19 32.7	+1.0
MVO	Moncorvo	152.65	18	ePKPdf	PKiKP	03 19 33.2	+0.6
MVO	Moncorvo	152.65	18	eLR	LR	04 19 10.9	
	comp=Z,440nm,18.0s						
PCAS	Casmilo, Conde	153.19	21	ePKPdf	PKiKP	03 19 34.0	+0.4
MTE	Manteigas	153.19	19	eLR	LR	04 17 42.6	
	comp=Z,335nm,18.0s						
PMRV	Marv??o	154.12	20	eLR	LR	04 20 07.1	
	comp=Z,287nm,18.0s						
PAB	San Pablo	154.89	15	PFAKE		03 19 40.0	+2.7
PAB				LR	LR		
	comp=Z,590nm,19.0s						

MAN 25 03:24:01.2, 10°.28N×125°.03E, h36^{km}, mb3.7, ML2.4, MS1.9, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	Maasin	0.22	231	eP	Pn	03 24 09.9	+0.3
MSLP				eS	Sn	03 24 16.5	-0.9
SCPH	Surigao	0.66	138	eP	Pn	03 24 15.1	+0.9
PLP	Palo	0.89	357	⇓eP	Pn	03 24 17.8	+0.6
PLP				eS	Sn	03 24 29.9	+1.0

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*IDC **25** 03:28:35.8±0.5, 7°.49N×35°.99W, h0^{km}, mb4.0/28, mb1 4.1/28, mb1mx4.1/37, mbtmp4.0/28, ML4.8/1, MS3.8/6, Ms1 3.8/6, ms1mx3.4/43, Error ellipse: s-maj=17.1km s-min=11.3km az=145.0*

*ISCJB **25** 03:28:36.4±0.3, 7°.45N±0°.06×35°.94W±0°.05, h15^{km}, mb4.2/51, MS3.9/5, Error ellipse: s-maj=9.8km s-min=6.4km az=145.5*

*NEIC **25** 03:28:37.3±0.2, 7°.45N×35°.95W, h10^{km}, mb4.3/15, Error ellipse: s-maj=7.1km s-min=5.2km az=145.0*

ISC 25 03:28:37.6±0.4, 7°.36N±0°.07×35°.89W±0°.08, h15^{km}, n82, σ1^{s}.59/72, mb4.3/52, MS4.0/5, 3C-3D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	13.10	180	Pn	Pn	03 31 45.4	+2.0
RCBR				eSn	Sn	03 34 02.9	-6.2
RCBR	Riachuelo	13.10	180	Pn	Pn	03 31 45.4	+2.0
	4.9nm,0.3s,baz=260,slow=0.2,SNR=32						
SACV	Santiago Islan	14.22	57	ePn	Pn	03 31 53.9	-4.7
SACV				eSn	Sn	03 34 15.3	-21
MDP	Montagnes des	16.80	263	LR	LR	03 37 50.2	
	comp=Z,143nm,18.5s,baz=98,slow=33						
PTGA	Pitinga	25.33	252	P	P	03 34 03.9	-0.3
	1.0nm,0.3s,baz=319,slow=20,SNR=4.6						
PTGA				LR	LR	03 43 15.0	
	comp=Z,77nm,18.5s,baz=54,slow=35						
H05S1	Guadeloupe/Mar	25.46	288	T	T	04 00 09.6	
	SNR=6.1						
BDFB	Brasilia	25.82	208	P	P	03 34 10.3	+1.7
	3.3nm,0.7s,baz=48,slow=11,SNR=4.8						
H10N3	ASCENSION HYDR	26.13	125	T	T	04 01 51.5	
	baz=305,slow=75,SNR=13						
H10N2	ASCENSION HYDR	26.14	125	T	T	04 01 51.8	
	baz=305,slow=75,SNR=14						
H10N1	ASCENSION HYDR	26.15	125	T	T	04 01 53.1	
	baz=305,slow=75,SNR=13						
H10S3	ASCENSION HYDR	26.65	127	T	T	04 02 29.8	
	baz=307,slow=74,SNR=11						
H10S1	ASCENSION HYDR	26.66	127	T	T	04 02 30.2	
	baz=307,slow=74,SNR=11						
H10S2	ASCENSION HYDR	26.67	127	T	T	04 02 31.2	
	baz=307,slow=74,SNR=12						
ABVI	Anegada Island	29.87	295	eP	P	03 34 41.4	-3.4
	80nm,0.9s						
DBIC	Dimbokro	30.81	89	P	P	03 34 55.6	+2.4
	2.5nm,0.8s,baz=201,slow=8.6,SNR=2.8						
SJG	San Juan	31.33	293	P	P	03 34 57.5	-0.3
	11nm,0.8s,baz=258,slow=5.6,SNR=3.8						
TOA1	Torodi Ar. Sit	37.40	78	eP	P	03 35 50.2	-0.2
TOA0	Torodi Ar. Sit	37.40	78	eP	P	03 35 50.5	+0.1
TORD	Torodi Ar. Bea	37.40	78	P	P	03 35 50.2	-0.2
	1.5nm,0.9s,baz=258,slow=8.0,SNR=12						
TORD				LR	LR	03 50 45.3	
	comp=Z,77nm,18.3s,baz=315,slow=36						
ROSC	El Rosal	38.28	268	P	P	03 35 58.4	0.0
	2.5nm,0.6s,baz=229,slow=19,SNR=3.4						
ROSC				LR	LR	03 50 23.8	
	comp=Z,394nm,21.8s,baz=256,slow=34						
MDT	Midelt	38.51	45	P	P	03 36 01.0	+1.3
	1.7nm,0.7s,baz=229,slow=9.3,SNR=3.5						
CPUP	Villa Florida	39.43	211	P	P	03 36 07.9	+0.6
	1.9nm,0.9s,baz=39,slow=6.5,SNR=3.6						
LPAZ	La Paz	39.63	233	P	P	03 36 10.2	+0.4
	10nm,0.8s,baz=57,slow=5.2,SNR=42						
MNMC	Minye Minye	42.38	231	eP	P	03 36 31.0	-1.1
	5.9nm,0.9s						
ESDC	Sonseca Array	43.06	37	P	P	03 36 37.8	+0.7
	0.6nm,0.8s,baz=248,slow=7.8,SNR=4.1						
LVC	Limon Verde	43.96	227	P	P	03 36 44.9	0.0
	1.6nm,0.7s,baz=356,slow=12,SNR=3.0						
GO02	Mina Guanaco	46.06	224	eP	P	03 37 02.1	+0.5
SCHQ	Schefferville	53.41	338	P	P	03 37 56.5	-0.2
	7.5nm,0.7s,baz=146,slow=5.2,SNR=17						
EKA	Eskdalemuir Ar	54.46	22	P	P	03 38 03.7	-0.7
	1.4nm,0.9s,baz=217,slow=11,SNR=3.1						
DAVOX	Davos/Dischmat	55.39	37	P	P	03 38 11.9	+0.3
	2.9nm,0.7s,baz=236,slow=8.5,SNR=5.8						
DAVA	Damuels	55.65	36	P	P	03 38 14.4	+1.1
	9.5nm,0.9s						
FETA	Feichten	56.02	37	eP	P	03 38 16.7	+0.7
	7.2nm,1.3s						
RETA	Reutte	56.27	36	eP	P	03 38 18.3	+0.6
	7.0nm,1.4s						
MOTA	Moosalm	56.40	37	eP	P	03 38 19.7	+1.0
	1.5nm,0.7s						
SQTA	Sankt Quirin	56.40	37	eP	P	03 38 19.0	+0.3
	3.5nm,0.7s						
WTTA	Wattenberg	56.67	37	P	P	03 38 21.5	+0.8
	1.7nm,0.5s						
KBA	Koelnbreinsper	57.62	38	P	P	03 38 28.2	+0.8
	5.3nm,1.0s						
OBKA	Obir	58.10	39	epP	P	03 38 32.5	+1.8
	12nm,1.6s						
SOKA	Soboth	58.48	39	P	P	03 38 34.3	+1.0
	7.8nm,1.2s						
MOA	Molln	58.52	37	P	P	03 38 34.2	+0.7
	9.0nm,1.9s						
GERES	GERESS Array B	58.65	36	P	P	03 38 35.3	+0.9
	0.3nm,0.6s,baz=256,slow=5.4,SNR=3.9						
WLAR	White Oak Lake	58.80	305	eP	P	03 38 37.5	+1.9
	12nm,1.0s						
DRGR		63.41	41	⇓iP	P	03 39 08.5	+1.7
NB2	NORSAR Subarra	63.91	23	P	P	03 39 10.4	+0.6
	comp=Z,0.8nm,0.9s,baz=234,slow=6.9						
NB200	NORSAR Array S	63.91	23	eP	P	03 39 10.7	+0.9
NOA	NORSAR Array B	63.91	23	P	P	03 39 10.7	+0.9
	comp=Z,1.5nm,0.9s,baz=237,slow=6.5,SNR=4.0						
ARR	Arges	64.26	43	⇓iP	P	03 39 14.5	+2.1
HFS	Hagfors	64.40	25	P	P	03 39 12.7	-0.3
	comp=Z,3.6nm,1.1s,baz=183,slow=12,SNR=5.4						
VOIR		64.56	43	⇑iP	P	03 39 18.8	+4.4
MLR	Muntele Rosu	65.18	43	⇓iP	P	03 39 20.4	+1.9
BURAR	Bucovina Array	65.29	41	⇑iP	P	03 39 26.2	+7.0
ULM	Lac du Bonnet	65.41	322	P	P	03 39 18.4	-1.3
	comp=Z,1.7nm,0.7s,baz=96,slow=6.2,SNR=4.6						
VRI	Vrincioaia	65.81	43	⇑iP	P	03 39 20.5	-1.9
TXAR	Lajitas Array	67.07	299	P	P	03 39 30.3	-0.7
	comp=Z,0.3nm,0.6s,baz=111,slow=6.7,SNR=3.7						
FCC	Fort Churchill	67.60	331	eP	P	03 39 32.5	-1.0
	comp=Z,2.2nm,0.7s						
AKASG	Malin Array Be	68.67	38	P	P	03 39 40.1	-0.4
	comp=Z,0.4nm,0.4s,baz=259,slow=5.3,SNR=6.2						
AKBB	Malin Array Si	68.67	38	eP	P	03 39 40.1	-0.4
	comp=Z,2.6nm,0.9s						
BOSA	Boshof	68.89	124	P	P	03 39 43.7	+1.3
	comp=Z,3.0nm,1.0s,baz=300,slow=4.5,SNR=3.0						
SDCO	Great Sand Dun	69.42	307	eP	P	03 39 46.2	+0.4
	comp=Z,7.2nm,0.8s						
BR101	Keskin Array S	69.60	50	eP	P	03 39 46.2	-0.5
BR131	Keskin Array S	69.60	50	eP	P	03 39 47.8	+1.1
	comp=Z,1.8nm,0.9s						
BRTR	Keskin Array B	69.60	50	P	P	03 39 46.2	-0.5
	comp=Z,1.1nm,0.9s,baz=255,slow=2.4,SNR=6.3						
FIA0	FINESS Array S	70.39	27	eP	P	03 39 51.0	+0.2
FINES	FINESS Array B	70.39	27	P	P	03 39 51.0	+0.2
	comp=Z,2.2nm,0.9s,baz=229,slow=7.3,SNR=4.6						
PD31	Pinedale Array	73.05	312	eP	P	03 40 06.0	-1.6
	comp=Z,0.8nm,1.0s						
PDAR	Pinedale Array	73.05	312	P	P	03 40 07.2	-0.4
	comp=Z,0.7nm,0.8s,baz=90,slow=5.1,SNR=6.6						
ARA0	ARCESS Array S	73.37	19	eP	P	03 40 08.7	+0.1
ARCES	ARCESS Array B	73.37	19	P	P	03 40 08.7	+0.1
	comp=Z,2.3nm,0.9s,baz=258,slow=4.5,SNR=2.7						
LOHW	Long Hollow	73.89	313	eP	P	03 40 11.4	-1.1

	comp=Z,3.9nm,1.1s						
FLWY	Flagg Ranch	74.00	314	*e*P	P	03 40 13.3	+0.1
	comp=Z,11nm,1.1s						
MOOW	Moose Ponds	74.00	313	*e*P	P	03 40 13.5	+0.3
	comp=Z,2.6nm,1.0s						
YHH	Holmes Hill	74.18	314	*e*P	P	03 40 15.0	+0.8
	comp=Z,3.0nm,1.2s						
FXWY	Fox Creek	74.20	313	*e*P	P	03 40 13.7	-0.6
	comp=Z,3.5nm,1.1s						
YMR	Madison River	74.25	314	*e*P	P	03 40 18.5	+3.9
	comp=Z,10nm,1.1s						
BGU	Big Grassy Mou	75.50	310	*e*P	P	03 40 22.6	+0.8
	comp=Z,1.9nm,0.8s						
KVAR	Kislovodsk Arr	76.71	47	LR	LR	04 18 13.8	
	comp=Z,66nm,18.1s,baz=275,slow=39						
KBZ	Khabaz	76.85	47	LR	LR	04 16 15.9	
	comp=Z,197nm,21.4s,baz=41,slow=37						
YKA	Yellowknife Ar	78.29	332	P	P	03 40 36.0	-0.9
YKA	Yellowknife Ar	78.29	332	P	P	03 40 36.0	-0.9
	comp=Z,0.5nm,0.6s,baz=102,slow=6.1,SNR=12						
KVN	Kaiserville	79.36	308	*e*P	P	03 40 44.0	+0.5
	comp=Z,1.4nm,0.7s						
NVAR	Mina Array Bea	79.53	308	P	P	03 40 44.2	-0.3
	comp=Z,0.7nm,0.7s,baz=102,slow=6.5,SNR=5.5						
ILAR	Eielson Array	92.14	336	P	P	03 41 47.5	+1.2
	comp=Z,0.2nm,0.8s,baz=30,slow=7.3,SNR=2.4						

IDC 25 03:30:02.1±1.8**, 10°.05S**×**160°.56E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/27**, mbtmp3.8**/4**, Error ellipse: s-maj=32.7km s-min=12.2km az=59.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.86	315	*i* P	Pb	03 30 20.0	+0.1
HNR				*i* S	Sg	03 30 29.0	-0.7
HNR	Honiara	0.86	315	Pg	Pb	03 30 20.3	+0.5
	149nm,0.3s,baz=180,slow=8.5,SNR=25						
HNR				Lg	Lg	03 30 29.4	
	598nm,0.3s,baz=136,slow=19,SNR=14						
WRA	Warramunga Arr	27.14	246	P	P	03 35 46.9	-0.3
	1.1nm,0.6s,baz=73,slow=9.1,SNR=15						
STKA	Stephens Creek	27.94	216	P	P	03 35 55.1	+0.9
	1.3nm,0.5s,baz=51,slow=13,SNR=3.7						
ASAR	Alice Springs	28.81	239	P	P	03 36 01.2	-1.0
	0.3nm,0.3s,baz=62,slow=10.0,SNR=6.0						
H11S2	WAKE ISLAND Hy	29.00	12	T	T	04 04 47.1	
	baz=194,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.00	12	T	T	04 04 49.6	
	baz=194,slow=76,SNR=9.2						
H11S1	WAKE ISLAND Hy	29.01	12	T	T	04 04 48.4	
	baz=194,slow=76,SNR=5.7						
H11N1	WAKE ISLAND Hy	30.22	12	T	T	04 06 31.5	
	baz=193,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.23	12	T	T	04 06 21.9	
	baz=193,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	30.24	12	T	T	04 06 22.5	
	baz=193,slow=76,SNR=25						
ILAR	Eielson Array	84.26	20	P	P	03 42 34.6	-0.7
	0.2nm,0.5s,baz=232,slow=4.4,SNR=1.7						

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*IDC **25** 03:38:46.6±0.7, 31°.96S×178°.02W, h0^{km}, mb4.3/9, mb1 4.5/11, mb1mx4.2/36, mbtmp4.3/11, ML4.6/2, MS4.2/5, Ms1 4.2/5, ms1mx3.6/37, Error ellipse: s-maj=23.6km s-min=18.3km az=118.0*

*NEIC **25** 03:38:47.8±0.4, 32°.09S×178°.05W, h10^{km}, mb4.5/5, Error ellipse: s-maj=13.8km s-min=6.6km az=113.0*

*ISCJB **25** 03:38:48.0±0.7, 32°.30S±0°.06×178°.0W±0°.1, h24^{km}, mb4.3/11, MS4.1/4, Error ellipse: s-maj=17.1km s-min=5.8km az=22.1*

ISC 25 03:38:49.7±0.6**, 32°.10S**±0°.07×**178°.0W**±0°.1**, h24^{km}, n58,** σ**1^{s}73**/58**, mb4.3**/11**, MS4.1**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.84	2	Pn	Pn	03 39 31.5	-2.0
	164nm,0.3s,baz=85,slow=11,SNR=9.7						
RAO				Sn	Sn	03 40 04.6	-2.3
	276nm,0.3s,baz=107,slow=19,SNR=6.2						
MXZ	Matakaoa Point	6.23	208	*e*Pn	Pn	03 40 20.5	+0.4
MXZ				*e*Sn	Sn	03 41 27.4	-3.2
URZ	Urewera	7.32	212	Pn	Pn	03 40 35.1	-0.1
	5.3nm,0.3s,baz=276,slow=4.0,SNR=14						
URZ				Sn	Sn	03 41 55.8	-1.6
	5.3nm,0.3s,baz=253,slow=11,SNR=9.0						
OUZ	Omahuta	7.64	244	*e*Pn	Pn	03 40 46.1	+6.6
BKZ	Black Stump Fm	8.34	211	*e*Pn	Pn	03 40 49.8	+0.6
BKZ				*e*Sn	Sn	03 42 21.3	-1.4
BFZ	Birch Farm	9.73	207	*e*Pn	Pn	03 41 04.9	-3.2
BFZ				*e*Sn	Sn	03 42 48.0	-8.7
THZ	Tophouse	12.06	214	*e*Pn	Pn	03 41 40.4	+0.3
THZ				*e*Sn	Sn	03 43 45.5	-8.4
KHZ	Kahutara	12.29	211	*e*Pn	Pn	03 41 39.2	-3.9
KHZ				*e*Sn	Sn	03 43 47.9	-11
MQZ	McQueen's Vall	13.71	210	*e*Pn	Pn	03 42 01.3	-1.2
MQZ				*e*Sn	Sn	03 44 20.1	-14
RPZ	Rata Peaks	14.43	213	Pn	Pn	03 42 07.5	-4.9
	1.3nm,0.3s,baz=34,slow=3.9,SNR=6.0						
RPZ				Sn	Sn	03 44 36.1	-16
	1.1nm,0.3s,baz=8.7,slow=13,SNR=3.0						
FOZ	Fox Glacier	14.90	217	*e*Pn	Pn	03 42 17.2	-1.5
LBZ	Lake Benmore	15.35	214	*e*Pn	Pn	03 42 23.2	-1.5
ODZ	Otahua Downs	15.65	211	*e*Pn	Pn	03 42 24.2	-4.3
	12nm,1.1s						
ODZ				*e*Sn	Sn	03 45 09.6	-12
DZM	Mont Dzumac	17.04	302	LR	LR	03 48 19.2	
	comp=Z,2μm,18.4s,baz=169,slow=34						
MLZ	Mavora Lakes	17.07	215	*e*Pn	Pn	03 42 46.6	-0.1
	9.2nm,1.2s						
CTA	Charters Tower	34.08	282	P	P	03 45 32.6	+0.2
	3.2nm,0.5s,baz=106,slow=12,SNR=5.6						
CTAO	Charters Tower	34.08	282	*e*P	P	03 45 34.0	+1.6
	12nm,1.1s						
STKA	Stephens Creek	34.11	259	P	P	03 45 34.5	+1.9
	2.8nm,0.7s,baz=100,slow=10,SNR=5.2						
STKA				LR	LR	03 58 42.1	
	comp=Z,290nm,18.1s,baz=36,slow=35						
AS01	Alice Springs	42.98	269	*e*P	P	03 46 45.9	-1.3
ASAR	Alice Springs	43.02	269	P	P	03 46 48.0	+0.5
	2.7nm,0.5s,baz=106,slow=7.6,SNR=18						
WB2	Warramunga Arr	44.15	274	*e*P	P	03 46 57.0	+0.4
WRAB	Tennant Creek	44.16	274	*e*P	P	03 46 56.2	-0.5
	11nm,1.0s						
WR1	Warramunga Arr	44.16	274	*e*P	P	03 46 56.9	+0.1
	10nm,0.9s						
WRA	Warramunga Arr	44.16	274	P	P	03 46 56.9	+0.1
	4.4nm,0.6s,baz=113,slow=7.9,SNR=50						
VNDA	Vanda	46.41	186	LR	LR	04 02 46.5	
	comp=Z,109nm,20.1s,baz=32,slow=31						
FITZ	Fitzroy Crossi	52.35	271	LR	LR	04 09 46.8	
	comp=Z,359nm,18.4s,baz=126,slow=36						
NWAO	Narrogin (SRO)	53.79	250	LR	LR	04 10 15.3	
	comp=Z,162nm,18.1s,baz=134,slow=35						
QSPA	South Pole Qui	58.02	180	P	P	03 48 43.0	+2.6
	1.7nm,0.7s,baz=357,slow=2.8,SNR=9.1						
PETK	Petropavlovsk-	87.44	346	P	P	03 51 36.0	+1.4
	2.6nm,0.8s,baz=130,slow=6.0,SNR=4.8						
PEA1	Petropavlovsk-	87.45	346	*e*P	P	03 51 36.0	+1.3
NV01	Mina Array Sit	89.50	43	*e*P	P	03 51 44.0	-1.0
NVAR	Mina Array Bea	89.50	43	P	P	03 51 46.5	+1.5
	0.8nm,0.8s,baz=227,slow=8.4,SNR=5.9						
KLR	Kul'dur	92.48	330	P	P	03 51 59.4	+1.1
	0.8nm,0.6s,baz=222,slow=3.1,SNR=3.8						
TXAR	Lajitas Array	93.32	57	P	P	03 52 01.6	-1.3
	0.3nm,0.7s,baz=213,slow=11,SNR=3.3						
MK32	Makanchi Array	118.83	309	*e*PKPdf	PKiKP	03 57 35.0	-0.7
MKAR	Makanchi Array	118.83	309	PKP	PKiKP	03 57 35.0	-0.7
	0.3nm,0.6s,baz=70,slow=5.0,SNR=3.6						
ZALV	Zalesovo Beam	119.27	318	PKP	PKiKP	03 57 40.5	+4.2
	0.5nm,0.5s,baz=101,slow=4.6,SNR=2.2						
ZAA1	Zalesovo Array	119.27	318	*e*PKPdf	PKiKP	03 57 40.5	+4.2
ARA0	ARCESS Array S	140.24	347	*e*PKPpre	PKPpre	03 58 10.2	
ARCES	ARCESS Array B	140.24	347	PKhKP	PKPpre	03 58 10.2	
	23nm,1.3s,baz=7.1,slow=3.6,SNR=5.7						
KBZ	Khabaz	146.01	302	PKPbc	PKPbc	03 58 26.7	-0.5
	3.6nm,0.9s,baz=156,slow=2.2,SNR=6.0						
FIA1	FINESS Array S	146.72	339	*e*PKPdf	PKPab	03 58 29.1	-0.9
FIA0	FINESS Array S	146.72	339	*e*PKPdf	PKPab	03 58 29.1	-0.8
FINES	FINESS Array B	146.72	339	PKPbc	PKPab	03 58 29.1	-0.8
	6.5nm,0.5s,baz=50,slow=4.3,SNR=25						
NB2	NORSAR Subarra	150.42	351	PKP	PKiKP	03 58 38.4	-0.8
	comp=Z,0.4nm,0.5s,baz=13,slow=2.6						
NB200	NORSAR Array S	150.42	351	*e*PKPbc	PKiKP	03 58 39.0	-0.2
NOA	NORSAR Array B	150.42	351	PKPbc	PKiKP	03 58 39.0	-0.2
	comp=Z,0.7nm,0.7s,baz=13,slow=4.1,SNR=5.8						
AKASG	Malin Array Be	152.61	321	PKPbc	PKiKP	03 58 43.6	-0.3
	comp=Z,1.0nm,0.5s,baz=52,slow=2.9,SNR=7.3						
AK11	Malin Array Si	152.65	321	*e*PKPbc	PKiKP	03 58 44.6	+0.6
BR101	Keskin Array S	153.34	296	*e*PKPbc	PKiKP	03 58 45.4	-0.7
BR101				*e*PKPab	PKPab	03 58 58.8	+0.7
BRTR	Keskin Array B	153.34	296	PKPbc	PKiKP	03 58 45.4	-0.7
	comp=Z,0.6nm,0.5s,baz=144,slow=4.3,SNR=8.7						
BRTR				PKPab	PKPab	03 58 58.8	+0.7
	comp=Z,1.7nm,0.8s,baz=148,slow=3.4,SNR=5.9						
CLL	Collm	159.16	340	*e*PKPab	PKPab	03 59 22.0	-0.3
	comp=Z,5.0nm,1.0s						
CLL				*e*pPKPab	pPKPab	03 59 28.0	-0.6
GEC2	GERESS Array S	161.08	336	*e*PKPdf	PKPdf	03 58 47.3	-0.4
GEC2				*e*PKPab	PKPab	03 59 26.6	-4.3
GERES	GERESS Array B	161.08	336	PKPab	PKPab	03 59 30.9	0.0
	comp=Z,0.4nm,0.7s,baz=42,slow=3.1,SNR=3.8						
TOA0	Torodi Ar. Sit	161.14	179	*e*PKPab	PKPab	03 59 32.9	+1.1
TORD	Torodi Ar. Bea	161.14	179	PKPab	PKPab	03 59 32.8	+1.0
	comp=Z,0.7nm,0.8s,baz=178,slow=3.3,SNR=5.0						
TOA1	Torodi Ar. Sit	161.14	179	*e*PKPab	PKPab	03 59 32.8	+1.0
DAVOX	Davos/Dischmat	164.13	340	PKPab	PKPab	03 59 44.3	-0.2
	comp=Z,2.9nm,0.9s,baz=132,slow=11,SNR=3.7						

JMA 25 03:40:18.1±0.1**, 37°.66N**×**141°.99E, h25^{km}**±2^{km}**, M3.7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.77	328	P	Pb	03 40 32.5	-0.4
JIKH				S	Sb	03 40 42.4	-0.5
JFK	Kawauchi	0.93	252	P	Pb	03 40 35.3	-0.4
JFK				S	Sb	03 40 47.1	-0.6
JIO	Ouri	0.94	328	P	Pn	03 40 35.3	-0.4
JIO				S	Sb	03 40 47.5	-0.3
JMM	Marumori	0.97	283	P	Pn	03 40 35.8	-0.3
JMM				S	Sb	03 40 48.1	-0.6
ONAJ	Iwakimizuishiy	1.10	240	P	Pn	03 40 37.6	-0.4
ONAJ				*e*S	Sn	03 40 51.6	-0.8
JKMT	Kesennumamotoy	1.22	341	P	Pn	03 40 39.3	-0.2
JKMT				S	Sn	03 40 54.2	-1.0
JOU	Okura	1.26	304	P	Pb	03 40 40.8	-0.4
JOU				S	Sb	03 40 56.9	-0.2
JFT	Otama	1.32	264	P	Pb	03 40 42.0	-0.2
JFT				S	Sb	03 40 58.7	0.0
JMK	Ichinoseki	1.43	335	P	Pn	03 40 42.8	+0.4
JYS	Shirataka	1.62	291	P	Pb	03 40 46.8	-0.5
JYS				S	Sb	03 41 07.8	+0.4
MAT	Matsushiro	3.22	251	P	Pb	03 41 11.7	-2.9
MAT				*e*S	Sn	03 41 42.1	-2.6

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*KRNET **25** 03:44:38.9±0.1, 43°.60N×76°.59E, h27^{km}, mb2.2*

*SOME **25** 03:44:39.9, 43°.60N×76°.58E, h15^{km}*

*NNC **25** 03:44:39.2±0.5, 43°.57N×76°.58E, h5^{km}±4^{km}, mb2.6, mpv2.4, Error ellipse: s-maj=3.3km s-min=2.2km az=138.0*

ISC 25 03:44:39.0±1.0**, 43°.60N**±0°.02×**76°.57E**±0°.02**, h16^{km}**±9^{km}**, n30,** σ**0^{s}47**/60**, 10C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTBS	Karatobe	0.14	37	P	Pb	03 44 43.9	+0.6
	5.5nm,0.1s						
KTBS				S	Sb	03 44 46.8	+0.6
	41nm,0.1s						
KTBS	Karatobe	0.14	37	*e*P	Pb	03 44 43.9	+0.6
	baz=32						
KTBS				*e*S	Sb	03 44 46.8	+0.6
	baz=32						
KTBS	Karatobe	0.14	37	*e*P	Pb	03 44 43.9	+0.6
	5.5nm,0.1s						
KTBS				*e*S	Sb	03 44 46.8	+0.6
	41nm,0.1s						
KUU	Kurty	0.34	331	P	Pb	03 44 47.1	+0.4
	2.7nm,0.1s						
KUU				S	Sb	03 44 52.2	+0.5
	10nm,0.2s						
KUU	Kurty	0.34	331	*e*P	Pb	03 44 47.1	+0.4
	baz=29						
KUU				⇓*i*S	Sb	03 44 52.3	+0.5
	baz=29						
KUU	Kurty	0.34	331	*e*P	Pb	03 44 47.1	+0.4
	2.7nm,0.1s						
KUU				⇓*i*S	Sb	03 44 52.2	+0.5
	10nm,0.2s						
CHKK	Chushkaly	0.40	50	P	Pb	03 44 47.6	-0.1
	0.5nm,0.1s						
CHKK				S	Sb	03 44 53.2	-0.4
	7.6nm,0.2s						
CHKK	Chushkaly	0.40	50	*e*P	Pb	03 44 47.6	-0.1
	baz=49						
CHKK				*e*S	Sb	03 44 53.2	-0.4
	baz=49						
CHKK	Chushkaly	0.40	50	*e*P	Pb	03 44 47.6	-0.1
	0.5nm,0.1s						
CHKK				*e*S	Sb	03 44 53.2	-0.4
	7.6nm,0.2s						
MTBS	Maitube	0.48	192	P	Pb	03 44 49.3	+0.1
	3.2nm,0.2s						
MTBS				S	Sb	03 44 56.3	+0.3
	14nm,0.1s						
MTBS	Maitube	0.48	192	*e*P	Pb	03 44 49.4	+0.2
	baz=94						
MTBS				⇑*i*S	Sb	03 44 56.3	+0.3
	baz=94						
MTBS	Maitube	0.48	192	*e*P	Pb	03 44 49.4	+0.2
	2.1nm,0.1s						
MTBS				⇑*i*S	Sb	03 44 56.3	+0.3
	14nm,0.2s						
IZV	Izvestkoviy	0.57	176	P	Pg	03 44 50.5	+0.2
	3.6nm,0.1s						
IZV				S	Sg	03 44 58.2	+0.4
	18nm,0.1s						
IZV	Izvestkoviy	0.57	176	*e*P	Pg	03 44 50.5	+0.2
	baz=78						
IZV				*e*S	Sg	03 44 58.3	+0.4
	baz=78						
IZV	Izvestkoviy	0.57	176	*e*P	Pg	03 44 50.5	+0.2
	3.6nm,0.1s						
IZV				*e*S	Sg	03 44 58.2	+0.4
	18nm,0.1s						
TNSS	Tian-Shan	0.63	154	P	Pg	03 44 51.5	0.0
	2.3nm,0.2s						
TNSS				S	Sg	03 44 59.8	-0.1
	2.7nm,0.2s						
TNSS	Tian-Shan	0.63	154	*e*P	Pg	03 44 51.5	0.0
	baz=55						
TNSS				*e*S	Sg	03 44 59.8	-0.1
	baz=55						
TNSS	Tian-Shan	0.63	154	*e*P	Pg	03 44 51.5	0.0
	2.3nm,0.2s						
TNSS				*e*S	Sg	03 44 59.8	-0.1
	2.7nm,0.2s						
DGS	Degeres	0.68	238	P	Pg	03 44 51.7	-0.7
	0.8nm,0.2s						
DGS				S	Sg	03 45 00.3	-1.1
	2.3nm,0.3s						
DGS	Degeres	0.68	238	*e*P	Pg	03 44 51.9	-0.5
	baz=39						
DGS				*e*S	Sg	03 45 00.5	-0.9
	baz=39						
DGS	Degeres	0.68	238	*e*P	Pg	03 44 51.9	-0.5
	0.8nm,0.2s						
DGS				*e*S	Sg	03 45 00.5	-0.9
	2.3nm,0.3s						
TKM2	Tokmak 2	0.98	226	⇑P	Pg	03 44 58.4	+0.4
	2.2nm,1.1s						
TKM2				⇑S	Sg	03 45 11.6	+0.7
	0.2nm,0.1s						
TKM2	Tokmak 2	0.98	226	⇑*i*P	Pg	03 44 58.3	+0.3
	baz=27						
TKM2				⇑*i*S	Sg	03 45 11.4	+0.5
	baz=27						
ARXS	Arharly	1.10	56	P	Pb	03 44 59.8	+0.1
	1.0nm,0.2s						
ARXS				S	Sb	03 45 14.0	+0.2
	5.1nm,0.2s						
ARXS	Arharly	1.10	56	*e*P	Pb	03 44 59.8	+0.1
	1.0nm,0.2s						
ARXS				*e*S	Sb	03 45 14.0	+0.2
	5.1nm,0.2s						
BOOM	Boomskoye usch	1.20	203	⇑*i*P	Pn	03 45 01.1	-0.2
	baz=3.0						
BOOM				⇑*i*S	Sb	03 45 16.9	+0.1
	baz=3.0						
SATY	Saty	1.45	111	P	Pb	03 45 05.9	+0.2
	2.1nm,0.1s						
SATY				S	Sb	03 45 24.4	+0.5
	6.9nm,0.1s						
SATY	Saty	1.45	111	*e*P	Pb	03 45 05.9	+0.2
	2.1nm,0.1s						
SATY				*e*S	Sb	03 45 24.4	+0.5
	6.9nm,0.1s						
KDJ	Kajisay	1.54	163	⇑*i*P	Pn	03 45 05.4	-0.6
	baz=63						
KDJ				⇑*i*S	Sn	03 45 25.2	-0.5
	baz=63						
USP	Ospenovka	1.54	258	⇓*i*P	Pb	03 45 07.2	0.0
	baz=58						
USP				⇓*i*S	Sb	03 45 27.8	+1.3
	baz=58						

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*NIED **25** 03:45:00, 35°.50N×141°.10E, h44^{km}, Mw4.4 Best double couple: $M_0$5.07000×10^{15} NP1:ϕ_s196.00000°, δ22.00000°, λ92.00000°. NP2:ϕ_s14.00000°, δ68.00000°, λ89.00000°.*

*ISCJB **25** 03:45:06.5±0.5, 35°.50N±0°.03×141°.08E±0°.06, h45^{km}±4^{km}, mb4.1/38, Error ellipse: s-maj=8.6km s-min=4.9km az=171.9*

*JMA **25** 03:45:07.0±0.2, 35°.56N×141°.05E, h38^{km}±1^{km}, M3.8*

JMA Felt I J1.

*NEIC **25** 03:45:08.5±0.7, 35°.51N×140°.97E, h43^{km}±6^{km}, mb4.3/14, Error ellipse: s-maj=7.2km s-min=5.7km az=92.0*

NEIC Recorded [1 JMA] in Chiba.

*IDC **25** 03:45:10.5±2.0, 35°.49N×140°.84E, h56^{km}±18^{km}, mb3.8/22, mb1 4.0/27, mb1mx3.9/44, mbtmp4.1/27, ML3.3/5, MS3.6/8, Ms1 3.7/8, ms1mx3.4/54, Error ellipse: s-maj=15.9km s-min=11.9km az=93.0*

ISC 25 03:45:07.7±0.9**, 35°.56N**±0°.04×**141°.04E**±0°.06**, h36^{km}**±8^{km}**, n94,** σ**1^{s}78**/94**, mb4.2**/38**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.20	315	⇓P	Pn	03 45 14.2	-2.4
CHOJ				S	Sn	03 45 18.9	-6.3
JSMT	Sammumatsuo	0.49	280	P	Pn	03 45 17.9	-0.1
JIHU	Itakohorinouch	0.58	315	P	Pn	03 45 19.4	-0.2
JCN	Nagara	0.69	259	⇓P	Pn	03 45 21.5	+0.5
KTR	Katsuura	0.72	236	P	Pn	03 45 20.8	-0.5
BSO4	Boso 4	0.80	226	⇓P	Pn	03 45 22.1	-0.3
BSO3	Boso 3	0.87	210	⇓P	Pn	03 45 22.7	-0.4
BSO1	Boso 1	0.90	183	P	Pn	03 45 22.8	-0.5
BSO1				*e*S	Sn	03 45 34.4	-0.4
JYT	Yasato	0.96	315	⇓P	Pn	03 45 24.1	-0.5
JHO	Hitachi	1.12	340	P	Pn	03 45 26.4	-0.4
MJAR	Matsushiro Arr	2.49	294	P	Pn	03 45 47.2	+1.5
	5.2nm,0.3s,baz=100,slow=7.7,SNR=172						
MJAR				LR	LR	03 46 51.8	
	comp=Z,1μm,18.7s,baz=140,slow=43						
MAJO	Matsushiro	2.50	294	*e*Pn	Pn	03 45 47.8	+2.1
MAJO				*e*Sn	Sn	03 46 11.1	-3.8
MAT	Matsushiro	2.50	294	P	Pn	03 45 47.4	+1.7
MAT				S	Sn	03 46 19.8	+4.9
MJB9	Matsu-Tunnel	2.50	294	*e*Pn	Pn	03 45 47.8	+2.0
JHJ2	Mitsune	2.64	203	*e*Pn	Pn	03 45 48.3	+0.7
JHJ	Hachijo jima 2	2.64	203	P	Pn	03 45 49.1	+1.3
	69nm,0.3s,baz=280,slow=21,SNR=9.3						
JHJ				S	Sn	03 46 15.2	-3.3
	84nm,0.3s,baz=73,slow=19,SNR=5.2						
JHJ				LR	LR	03 47 04.0	
	comp=Z,459nm,19.6s,baz=46,slow=45						
INU	Inuyama	3.29	268	*e*Pn	Pn	03 45 57.5	+0.9
ERM	Erimo	6.66	14	*e*Pn	Pn	03 46 42.2	-0.6
ERM				*e*Sn	Sn	03 47 54.1	-3.3
CBIJ	Chichi jima	8.49	173	P	Pn	03 47 07.0	-1.1
CBIJ				S	Sn	03 48 32.2	-10
JCJ	Chichijima	8.49	173	P	Pn	03 47 07.0	-1.1
	24nm,0.3s,baz=257,slow=12,SNR=5.9						
JCJ				S	Sn	03 48 32.2	-11
	1.6nm,0.3s,baz=322,slow=19,SNR=2.2						
ASAJ	Asahikawa	8.63	8	P	Pn	03 47 08.8	-1.1
	1.7nm,0.3s,baz=220,slow=15,SNR=10						
ASAJ				S	Sn	03 48 43.0	-3.0
	0.4nm,0.3s,baz=322,slow=18,SNR=3.0						
JNU	Nakatsue	8.74	257	P	Pn	03 47 12.2	+0.6
	0.4nm,0.3s,baz=7.1,slow=8.1,SNR=3.4						
JNU				LR	LR	03 50 56.6	
	comp=Z,703nm,19.6s,baz=82,slow=40						
KSRS	Korea Array	10.72	284	P	Pn	03 47 42.9	+4.3
	0.2nm,0.3s,baz=105,slow=14,SNR=7.6						
KSRS				LR	LR	03 52 01.1	
	comp=Z,297nm,20.0s,baz=115,slow=39						
KSAR	Wonju Array Be	10.75	284	P	Pn	03 47 42.9	+3.9
USRK	Ussuriysk Ar.	11.08	324	P	Pn	03 47 45.5	+2.1
	0.2nm,0.3s,baz=144,slow=12,SNR=7.1						
USRK				LR	LR	03 51 41.1	
	comp=Z,322nm,18.6s,baz=124,slow=35						
KLR	Kul'dur	15.27	336	P	Pn	03 48 40.8	+0.4
	0.3nm,0.3s,baz=164,slow=8.3,SNR=8.9						
KLR				LR	LR	03 54 34.4	
	comp=Z,295nm,18.5s,baz=166,slow=37						
PETK	Petropavlovsk-	21.12	29	LR	LR	03 59 17.6	
	comp=Z,171nm,18.4s,baz=233,slow=40						
HHC	Hu-ho-hao-te	23.69	292	*e*P	P	03 50 15.3	-0.8
HHC				S	S	03 54 18.9	-10
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,3.2s						
HHC				LR	LR		
	comp=N,220nm,10.8s						
HHC				LR	LR		
	comp=E,160nm,8.6s						
HHC				LR	LR		
	comp=Z,810nm,12.2s						
MA2	Magadan	24.86	12	P	P	03 50 28.4	+1.9
	comp=Z,7.6nm,0.7s,baz=186,slow=7.4,SNR=7.5						
XAN	Xi'an	26.36	276	*e*P	P	03 50 38.4	-2.0
	comp=Z,4.4nm,0.5s						
ENH	Enshi	26.94	268	*e*P	P	03 50 43.2	-2.4
	comp=Z,7.8nm,0.6s						
H11N2	WAKE ISLAND Hy	27.69	118	T	T	04 19 59.7	
	baz=310,slow=75,SNR=51						
H11N1	WAKE ISLAND Hy	27.70	118	T	T	04 20 00.2	
	baz=310,slow=75,SNR=74						
H11N3	WAKE ISLAND Hy	27.71	118	T	T	04 19 58.3	
	baz=310,slow=75,SNR=62						
ULN	Ulaanbaatar	27.96	307	*e*P	P	03 50 52.4	-2.4
	comp=Z,2.1nm,0.7s						
SEY	Seymchan	28.30	11	P	P	03 50 59.5	+2.2
	comp=Z,1.2nm,0.3s,baz=198,slow=9.0,SNR=11						
H11S3	WAKE ISLAND Hy	28.35	120	T	T	04 20 44.6	
	baz=312,slow=75,SNR=137						
H11S1	WAKE ISLAND Hy	28.35	120	T	T	04 20 44.7	
	baz=312,slow=75,SNR=176						
H11S2	WAKE ISLAND Hy	28.36	120	T	T	04 20 45.0	
	baz=312,slow=75,SNR=132						
SONA1	Songino Array	28.38	306	*e*P	P	03 50 57.8	-0.7
SONA0	Songino Array	28.39	306	*e*P	P	03 50 58.2	-0.4
SONM	Songino Array	28.39	306	P	P	03 50 58.2	-0.4
	comp=Z,2.0nm,0.6s,baz=116,slow=9.0,SNR=20						
CMAR	Chiang Mai Arr	40.84	257	P	P	03 52 46.4	+0.4
	comp=Z,1.2nm,0.3s,baz=53,slow=6.0,SNR=3.6						
CMAR				LR	LR	04 11 19.6	
	comp=Z,105nm,18.3s,baz=220,slow=39						
ZAA1	Zalesovo Array	42.70	314	*e*P	P	03 53 01.1	+0.3
ZALV	Zalesovo Beam	42.70	314	P	P	03 53 01.1	+0.3
	comp=Z,3.8nm,0.5s,baz=94,slow=7.2,SNR=20						
MK01	Makanchi Array	44.66	303	*e*P	P	03 53 16.7	0.0
MK31	Makanchi Array	44.66	303	*e*P	P	03 53 16.4	-0.3
	comp=Z,3.9nm,1.0s						
MK32	Makanchi Array	44.66	303	*e*P	P	03 53 16.8	+0.1
MKAR	Makanchi Array	44.66	303	P	P	03 53 16.8	+0.1
	comp=Z,2.3nm,0.6s,baz=88,slow=10.0,SNR=29						
MAKZ	Makanchi	44.87	303	*e*P	P	03 53 18.5	+0.1
	comp=Z,2.9nm,0.8s						
KURK	Kurchatov	46.61	309	*e*P	P	03 53 30.8	-1.2
RAMN	Ramite	46.82	275	*e*P	P	03 53 33.6	-0.7
	comp=Z,22nm,0.8s						
JIRN	Jiri	46.86	276	*e*P	P	03 53 34.5	-0.3
	comp=Z,7.5nm,0.3s						
GUN	Gumba	47.01	277	*e*P	P	03 53 36.1	+0.2
	comp=Z,7.3nm,0.5s						
PKIN	Phulchoki	47.54	277	*e*P	P	03 53 39.6	-0.3
	comp=Z,6.6nm,0.5s						
DANN	Dangsing	48.55	278	*e*P	P	03 53 47.7	-0.1
	comp=Z,33nm,0.6s						

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PYUN  Piuthan           49.27 278  eP     P       03 53 51.8 -1.4
      comp=Z,60nm,1.1s
ILAR  Eielson Array     50.91  32   P     P       03 54 06.3 +1.5
      comp=Z,1.7nm,1.0s,baz=263,slow=6.0,SNR=12
ILB   Eielson Array     50.91  32  eP     P       03 54 04.8  0.0
      comp=Z,1.8nm,0.8s
BRVK  Borovoye          51.41 313  eP     P       03 54 08.3 -0.4
KK31  Karatay Array     53.61 301  eP     P       03 54 24.9 -0.3
      comp=Z,4.4nm,1.1s
KKAR  Karatay Array     53.61 301  eP     P       03 54 24.7 -0.6
      comp=Z,4.4nm,1.1s
WB2   Warramunga Arr    55.56 188  eP     P       03 54 38.2 -1.2
WR1   Warramunga Arr    55.56 188  eP     P       03 54 38.8 -0.7
      comp=Z,3.7nm,1.1s
WRA   Warramunga Arr    55.56 188   P     P       03 54 38.8 -0.7
      comp=Z,3.2nm,0.7s,baz=5.9,slow=7.8,SNR=40
INK   Inuvik            55.84  27   P     P       03 54 41.6 +0.7
      comp=Z,0.5nm,0.6s,baz=306,slow=7.4,SNR=5.0
ARU   Arti              57.27 319  eP     P       03 54 51.7 +0.4
ABKAR Akbulak array     58.66 311  eP     P       03 55 01.1 -0.1
      comp=Z,3.7nm,0.8s
AS31  Alice Springs     59.28 188  eP     P       03 55 05.4 -0.3
      comp=Z,0.8nm,0.8s
ASAR  Alice Springs     59.29 188   P     P       03 55 05.4 -0.3
      comp=Z,0.6nm,0.6s,baz=16,slow=12,SNR=9.0
GEYT  Alibeck           64.29 299   P     P       03 55 39.7 +0.3
      comp=Z,0.9nm,0.3s,baz=48,slow=12,SNR=3.5
YKA   Yellowknife Ar    65.24  30   P     P       03 55 46.0 +0.9
      comp=Z,0.5nm,0.8s,baz=301,slow=6.8,SNR=8.6
YKB5  Yellowknife Ar    65.24  30  eP     P       03 55 46.0 +1.0
ARA0  ARCESS Array S    65.27 340  eP     P       03 55 45.9 +0.7
ARCES ARCESS Array B    65.27 340   P     P       03 55 45.9 +0.7
      comp=Z,6.0nm,1.0s,baz=46,slow=6.3,SNR=6.4
STKA  Stephens Creek    67.08 179   P     P       03 55 57.4 +0.2
      comp=Z,0.6nm,0.4s,baz=332,slow=15,SNR=2.5
FIA0  FINESS Array S    69.98 332  eP     P       03 56 15.3 +0.3
FINES FINESS Array B    69.98 332   P     P       03 56 15.3 +0.3
      comp=Z,1.9nm,0.5s,baz=64,slow=5.6,SNR=13
KBZ   Khabaz            71.63 311   P     P       03 56 25.8 +0.4
      comp=Z,3.5nm,0.9s,baz=37,slow=3.7,SNR=10
AKASG Malin Array Be    75.28 322   P     P       03 56 46.8 +0.1
      comp=Z,3.4nm,0.6s,baz=47,slow=6.0,SNR=16
AKBB  Malin Array Si    75.28 322  eP     P       03 56 46.8 +0.1
      comp=Z,3.4nm,0.6s
NC204 NORSAR Array S    75.39 338  eP     P       03 56 47.3  0.0
      comp=Z,2.6nm,0.8s
NB2   NORSAR Subarra    75.43 337   P     P       03 56 47.5  0.0
      comp=Z,1.3nm,0.6s,baz=41,slow=5.9
NB200 NORSAR Array S    75.43 337  eP     P       03 56 47.9 +0.4
NOA   NORSAR Array B    75.43 337   P     P       03 56 47.9 +0.4
      comp=Z,2.4nm,0.7s,baz=39,slow=5.7,SNR=13
NVAR  Mina Array Bea    76.12  53   P     P       03 56 55.2 +3.1
      comp=Z,0.5nm,0.6s,baz=268,slow=7.4,SNR=3.9
PDAR  Pinedale Array    78.92  45   P     P       03 57 09.3 +1.7
      comp=Z,0.2nm,0.6s,baz=270,slow=0.7,SNR=3.5
BR101 Keskin Array S    79.60 312  eP     P       03 57 11.3  0.0
BRTR  Keskin Array B    79.60 312   P     P       03 57 11.3  0.0
      comp=Z,1.4nm,0.9s,baz=69,slow=4.1,SNR=6.6
CCUT  Cedar City        79.80  51  eP     P       03 57 13.0 +0.4
      comp=Z,2.2nm,0.6s
BRG   Berggiesshubel    82.17 329  eP     P       03 57 24.9 +0.3
      comp=Z,1.6nm,0.7s
CLL   Collm             82.22 330  eP     P       03 57 24.0 -0.9
      comp=Z,4.0nm,0.8s
GERES GERESS Array B    83.80 328   P     P       03 57 33.5 +0.2
      comp=Z,0.6nm,0.6s,baz=31,slow=3.1,SNR=5.6
LPAZ  La Paz           147.69  61  PKPbc  PKPbc   04 04 51.0 +1.4
      comp=Z,1.2nm,0.9s,baz=26,slow=15,SNR=4.6
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NIED ***25*** *03:52:00, 37.°60N×142.°10E, h11km, Mw4.0   Best double couple: M₀1.12000×10¹⁵   NP1:φs301.00000°, δ36.00000°, λ-87.00000°.   NP2:φs117.00000°, δ54.00000°, λ-93.00000°.*

IDC ***25*** *03:52:30.3±0.5, 37.°65N×141.°99E, h0km, mb4.1/23, mb1 4.3/27, mb1mx4.2/58, mbtmp4.1/27, ML3.6/4, MS4.6/1, Ms1 4.6/1, ms1mx2.9/49, Error ellipse: s-maj=15.7km s-min=13.4km az=102.0*

ISCJB ***25*** *03:52:31.4±0.7, 37.°68N±0.°02×142.°09E±0.°04, h20km±4km, mb4.3/52, Error ellipse: s-maj=5.4km s-min=3.6km az=26.1*

JMA ***25*** *03:52:32.4±0.1, 37.°66N×142.°02E, h28km±2km, M4.2*

JMA Felt I J1.

MOS ***25*** *03:52:33.0±1.1, 37.°70N×142.°10E, h30km, mb4.5/15, Error ellipse: s-maj=9.0km s-min=5.9km az=93.5*

NEIC ***25*** *03:52:35.9±0.7, 37.°69N×142.°05E, h38km±5km, mb4.5/11, Error ellipse: s-maj=7.6km s-min=5.2km az=113.0*

NEIC Recorded [1 JMA] in Fukushima, Iwate, Miyagi and Yamagata.

ISC 25 03:52:34.8±1.8**, 37.°69N**±0.°04×**142.°06E**±0.°05**, h31**km±12km**, n134, σ1.ˢ93**/154**, mb4.3**/52**, 8C-4D, Off east coast of Honshu**

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Code  Station Name      Δ°    AZ°   Phase ID         Time       Res
                                   Op     ISC       h  m  s    ISC
JIKH  Ishinomakikobu     0.78 323  P      Pn      03 52 47.1 -2.6
JIKH                               S      Sb      03 52 57.6 -2.5
JIO   Ouri               0.95 324  P      Pn      03 52 49.7 -2.3
JIO                                S      Sn      03 53 02.6 -1.9
JFK   Kawauchi           1.00 251  P      Pn      03 52 49.6 -3.2
JFK                                S      Sn      03 53 02.1 -3.8
JMM   Marumori           1.02 280  P      Pn      03 52 50.4 -2.6
JMM                                S      Sn      03 53 02.9 -3.4
ONAJ  Iwakimizuishiy     1.17 240  P      Pn      03 52 51.9 -3.2
JKMT  Kesennumamotoy     1.21 338  P      Pn      03 52 53.8 -1.8
JKMT                               S      Sn      03 53 08.8 -2.1
JOU   Okura              1.29 302  P      Pn      03 52 55.2 -1.6
JOU                                S      Sn      03 53 11.4 -1.7
JFT   Otama              1.38 263  P      Pn      03 52 56.3 -1.8
JFT                                S      Sn      03 53 13.1 -2.2
JMK   Ichinoseki         1.42 332  P      Pn      03 52 57.2 -1.3
JMK                                S      Sn      03 53 14.9 -1.3
JYS   Shirataka          1.67 289  P      Pn      03 53 00.7 -1.2
JYS                                S      Sn      03 53 22.4 +0.1
JYK   Kaneyama           1.81 313  P      Pn      03 53 02.9 -1.1
JYK                                S      Sn      03 53 24.9 -1.0
JOM   Ohasama            1.88 341  P      Pn      03 53 03.8 -1.0
JOM                                S      Sn      03 53 26.9 -0.6
JFY   Yanaizu            1.90 262  P      Pn      03 53 04.1 -1.0
JFY                                S      Sn      03 53 27.2 -0.8
MJAR  Matsushiro Arr     3.29 251  Pn     Pn      03 53 24.0 -0.3
      1.6nm,0.3s,baz=54,slow=27,SNR=39
MJAR                               Sn     Sn      03 54 05.7 +3.3
      2.8nm,0.3s,baz=72,slow=16,SNR=6.2
MAJO  Matsushiro         3.29 251  ePn    Pn      03 53 24.2 -0.1
MAJO  Matsushiro         3.29 251  eP     Pn      03 53 24.2 -0.1
MAT   Matsushiro         3.29 251   P     Pn      03 53 23.9 -0.4
MAT                                eS     Sn      03 53 59.0 -3.4
MJB9  Matsu-Tunnel       3.29 251  ePn    Pn      03 53 24.4  0.0
ERM   Erimo              4.40  11  ePn    Pn      03 53 38.4 -1.0
ERM                                eS     Sn      03 54 28.8 -0.7
ERM   Erimo              4.40  11  eP     Pn      03 53 38.4 -1.0
ERM                                eS     Sn      03 54 28.8 -0.7
INU   Inuyama            4.69 242  ePn    Pn      03 53 42.5 -1.0
JHJ2  Mitsune            4.93 203  ePn    Pn      03 53 48.5 +1.8
JHJ2                               eSn    Sn      03 54 37.9 -4.8
JHJ   Hachijo jima 2     4.93 203  Pn     Pn      03 53 45.2 -1.6
      17nm,0.3s,baz=68,slow=18,SNR=5.9
JHJ                                Sn     Sn      03 54 38.8 -4.0
      44nm,0.3s,baz=54,slow=19,SNR=3.7
ASAJ  Asahikawa          6.43   3  P      Pn      03 54 07.4  0.0
ASAJ                                              03 55 21.4
ASAJ                               pmax   pmax
      comp=Z,2.0nm,0.3s
ASAJ                               smax   smax
      comp=N,2.0nm,0.3s
ASAJ  Asahikawa          6.43   3  Pn     Pn      03 54 07.4  0.0
      comp=N,2.2nm,0.3s,baz=227,slow=8.8,SNR=12
ASAJ                               Sn     Sn      03 55 21.4 +1.8
      comp=N,2.2nm,0.3s,baz=29,slow=19,SNR=2.4
YUK   Yuzh-Kuril'sk      6.96  23  eP     Pn      03 54 14.7 +0.1
YUK                                eS     Sn      03 55 28.5 -4.1
YUK                                pmax   pmax
      comp=Z,91nm,0.3s
YUK                                pmax   pmax
      comp=N,14nm,0.2s
YUK                                pmax   pmax
      comp=E,45nm,0.4s
SHO   Shikotan           7.15  29  eP     Pn      03 54 15.6 -1.6
SHO                                eS     Sn      03 55 29.4 -8.0
SHO                                pmax   pmax
      comp=N,11nm,0.3s
SHO                                pmax   pmax
      comp=Z,24nm,0.3s
KUR   Kuril'sk           8.70  28  eP     Pn      03 54 38.7 +0.2
KUR                                eS     Sn      03 56 09.3 -6.1
KUR                                smax   smax
      comp=N,49nm,0.3s
KUR                                smax   smax
      comp=E,15nm,0.2s
YSS   Yuzh-Sakhalins     9.27   3  eP     Pn      03 54 48.3 +2.0
YSS                                eS     Sn      03 56 30.3 +0.9
YSS                                pmax   pmax
      comp=Z,10.0nm,0.8s
YSS                                MLR    MLR
      comp=N,200nm,14.0s
YSS                                MLR    MLR
      comp=Z,300nm,14.0s
USA0B Ussuriysk Arra    10.01 314  ePn    Pn      03 54 56.5 +0.1
USRK  Ussuriysk Ar.     10.01 314  Pn     Pn      03 54 58.4 +2.0
      comp=Z,0.8nm,0.3s,baz=119,slow=14,SNR=9.1
JNU   Nakatsue          10.20 247  Pn     Pn      03 55 01.8 +2.6
      comp=Z,0.3nm,0.3s,baz=124,slow=8.5,SNR=3.9
KSRS  Korea Array       11.23 273  Pn     Pn      03 55 16.7 +3.6
      comp=Z,0.2nm,0.3s,baz=87,slow=16,SNR=3.1
KSAR  Wonju Array Be    11.26 273  Pn     Pn      03 55 16.7 +3.1
KSAR  Wonju Array Be    11.26 273  P      Pn      03 55 16.7 +3.1
KLR   Kul'dur           13.73 330  Pn     Pn      03 55 47.3  0.0
      comp=Z,0.1nm,0.3s,baz=165,slow=18,SNR=3.5
ZEA   Zeya              19.02 332  eP     P       03 56 52.6 -1.5
NJ2   Nanjing           19.84 260  eP     P       03 57 02.3 -0.8
NJ2                                pmax   pmax
      comp=Z,8.0nm,0.5s
MA2   Magadan           22.60  12  eP     P       03 57 33.7 +1.0
      comp=Z,6.9nm,0.7s
MA2   Magadan           22.60  12⇑iP     P       03 57 33.6 +1.0
MA2                                pmax   pmax
      comp=Z,11nm,1.7s
MA2   Magadan           22.60  12  P      P       03 57 33.3 +0.7
      comp=Z,3.7nm,0.3s,baz=174,slow=7.8,SNR=7.4
HHC   Hu-ho-hao-te      23.76 287  eP     P       03 57 43.6 -1.0
HHC                                pmax   pmax
      comp=Z,11nm,0.6s
HHC                                pmax   pmax
      comp=Z,95nm,5.2s
SEY   Seymchan          26.05  11d iP     P       03 58 07.1 +2.0
SEY   Seymchan          26.05  11  P      P       03 58 06.9 +1.9
      comp=Z,4.0nm,0.7s,baz=192,slow=7.9,SNR=18
BOD   Bodaibo           27.26 327  eP     P       03 58 14.3 -1.7
BOD                                pmax   pmax
      comp=Z,5.0nm,1.5s
ULN   Ulaanbaatar       27.42 303⇑eP     P       03 58 18.6 +0.8
ULN                                pmax   pmax
      comp=Z,1.0nm,0.8s
SONA1 Songino Array     27.85 303  eP     P       03 58 21.9 +0.3
SONM  Songino Array     27.86 303  P      P       03 58 21.9 +0.2
      comp=Z,1.5nm,0.6s,baz=100,slow=8.9,SNR=14
H11N2 WAKE ISLAND Hy    28.05 123  T      T       04 27 49.2
      baz=315,slow=75,SNR=403
H11N1 WAKE ISLAND Hy    28.06 123  T      T       04 27 49.1
      baz=315,slow=75,SNR=411
H11N3 WAKE ISLAND Hy    28.07 123  T      T       04 27 46.4
      baz=315,slow=75,SNR=464
H11S1 WAKE ISLAND Hy    28.80 125  T      T       04 28 45.8
      baz=317,slow=76,SNR=251
H11S3 WAKE ISLAND Hy    28.80 125  T      T       04 28 38.7
      baz=317,slow=76,SNR=232
H11S2 WAKE ISLAND Hy    28.81 125  T      T       04 28 44.8
      baz=317,slow=76,SNR=225
TLY   Talaya            30.30 310⇓eP     P       03 58 43.5 +0.3
LZH   Lanzhou           30.47 279  eP     P       03 58 43.8 -1.3
LZH                                pP     pP      03 58 48.0 -5.9
LZH                                pP     pP      03 58 48.0 -5.9
LZH                                sP     sP      03 58 50.9 -6.7
LZH                                sP     sP      03 58 56.6 -1.0
LZH                                pmax   pmax
      comp=Z,24nm,1.2s
LZH                                pmax   pmax
      comp=Z,17nm,1.0s
CD2   Chengdu           32.19 269  eP     P       03 58 59.0 -1.1
GTA   Gaotai            32.87 286  eP     P       03 59 08.0 +1.9
GTA                                pP     pP      03 59 13.3 -1.6
GTA                                sP     sP      03 59 16.3 -2.3
GTA                                pmax   pmax
      comp=Z,2.0nm,1.0s
BILL  Bilibino          33.25  16⇓eP     P       03 59 09.2 +0.3
BILL                               e              04 00 21.6
BILL                               pmax   pmax
      comp=Z,8.0nm,2.1s
BILL                               MLR    MLR
      comp=Z,96nm,17.0s
KMI   Kunming           35.58 261  P      P       03 59 29.8  0.0
KMI                                pmax   pmax
      comp=Z,10.0nm,0.5s
DGZ   Jazzator, Alta    40.43 305d iP     P       04 00 11.0 +0.6
DGZ                                pmax   pmax
      comp=Z,4.0nm,0.8s
WMQ   Urumqi            41.01 296  eP     P       04 00 16.3 +1.2
WMQ                                sP     sP      04 00 25.9 -1.8
WMQ                                pmax   pmax
      comp=Z,23nm,0.7s
WMQ                                pmax   pmax
      comp=Z,620nm,5.3s
WMQ                                LR     LR
      comp=N,180nm,21.9s
WMQ                                LR     LR
      comp=E,210nm,20.7s
WMQ                                LR     LR
      comp=Z,190nm,17.5s
ZALV  Zalesovo Beam     41.86 312  P      P       04 00 21.7 -0.1
      comp=Z,3.7nm,0.6s,baz=96,slow=7.9,SNR=12
MK01  Makanchi Array    44.21 302  eP     P       04 00 40.5 -0.5
MK31  Makanchi Array    44.21 302  eP     P       04 00 41.0  0.0
MK31  Makanchi Array    44.21 302  eP     P       04 00 41.0  0.0
MKAR  Makanchi Array    44.21 302  eP     P       04 00 41.0  0.0
      comp=Z,17nm,1.0s
MKAR  Makanchi Array    44.21 302  eP     P       04 00 41.0  0.0
MKAR                               pmax   pmax
      comp=Z,17nm,1.0s
MKAR  Makanchi Array    44.21 302  P      P       04 00 40.7 -0.3
      comp=Z,1.2nm,0.7s,baz=85,slow=11,SNR=16
MAKZ  Makanchi          44.42 302  eP     P       04 00 42.8 +0.1
      comp=Z,1.9nm,0.8s
MAKZ  Makanchi          44.42 302  eP     P       04 00 42.8 +0.1
MAKZ                               pmax   pmax
      comp=Z,2.0nm,0.8s
KURK  Kurchatov         45.94 308  eP     P       04 00 54.4 -0.2
      comp=Z,5.8nm,0.6s
KURK  Kurchatov         45.94 308  eP     P       04 00 54.4 -0.2
KURK                               pmax   pmax
      comp=Z,6.0nm,0.6s
ILAR  Eielson Array     48.66  33  P      P       04 01 16.3 +0.7
      comp=Z,1.1nm,0.7s,baz=261,slow=5.8,SNR=19
KSH   Kashi             50.61 294  P      P       04 01 33.9 +2.9
KSH                                pP     pP      04 01 40.1  0.0
KSH                                PP     PP      04 03 32.3 +5.4
KSH                                pmax   pmax
      comp=Z,310nm,6.2s
AAK   Ala-Archa         50.63 298  eP     P       04 01 31.0 -0.2
      comp=Z,1.5nm,0.6s
AAK   Ala-Archa         50.63 298⇑eP     P       04 01 31.2  0.0
AAK                                pmax   pmax
      comp=Z,2.0nm,1.0s
INK   Inuvik            53.56  27  eP     P       04 01 53.4 +1.1
      comp=Z,0.6nm,0.5s
INK   Inuvik            53.56  27  eP     P       04 01 53.4 +1.1
INK                                pmax   pmax
      comp=Z,1.0nm,0.5s
INK   Inuvik            53.56  27  LR     LR      04 26 33.6
      comp=Z,514nm,19.6s,baz=163,slow=38
GAR   Garm              54.88 295  eP     P       04 02 02.9 +0.3
      comp=Z,4.8nm,0.6s
GAR   Garm              54.88 295  eP     P       04 02 02.9 +0.3
GAR                                pmax   pmax
      comp=Z,5.0nm,0.6s
CHGR  Chuyangaron       55.85 295  eP     P       04 02 09.7 +0.2
      comp=Z,13nm,1.0s
ARU   Arti              56.21 318  eP     P       04 02 11.5 -0.2
      comp=Z,15nm,0.6s
ARU   Arti              56.21 318c iP     P       04 02 11.2 -0.5
ARU                                               04 04 14.3
ARU                                S      S       04 09 58.7 -0.3
ARU                                SS     SS      04 13 40.0 -5.2
ARU                                pmax   pmax
      comp=Z,40nm,3.7s
WRAB  Tennant Creek     57.78 189⇑eP     P       04 02 22.3 -0.8
WRAB                               pmax   pmax
      comp=Z,5.0nm,1.0s
WB2   Warramunga Arr    57.79 189  eP     P       04 02 22.9 -0.3
WRA   Warramunga Arr    57.79 189   P     P       04 02 22.6 -0.6
      comp=Z,3.6nm,0.7s,baz=7.5,slow=7.1,SNR=46
ABKAR Akbulak array     57.91 310  eP     P       04 02 23.6 -0.2
AS01  Alice Springs     61.51 188  eP     P       04 02 47.5 -1.2
ASAR  Alice Springs     61.52 189   P     P       04 02 48.6 -0.2
      comp=Z,2.2nm,0.7s,baz=13,slow=6.4,SNR=20
RES   Resolute Bay      61.83  15  eP     P       04 02 50.6 +0.3
      comp=Z,2.3nm,0.5s
RES   Resolute Bay      61.83  15  eP     P       04 02 50.6 +0.3
RES                                pmax   pmax
      comp=Z,2.0nm,0.5s
YKA   Yellowknife Ar    62.98  30   P     P       04 02 58.7 +0.5
      comp=Z,0.7nm,0.7s,baz=304,slow=6.7,SNR=17
PALK  Pallekele         63.02 258  i P    P       04 02 58.4 -0.8
ARCES ARCESS Array B    63.56 339   P     P       04 03 02.2 +0.2
      comp=Z,2.2nm,0.9s,baz=52,slow=8.1,SNR=3.1
FINES FINESS Array B    68.47 332   P     P       04 03 33.4 -0.2
      comp=Z,1.5nm,0.6s,baz=42,slow=8.8,SNR=6.1
KBZ   Khabaz            70.86 311   P     P       04 03 49.4 +0.8
      comp=Z,1.9nm,0.8s,baz=44,slow=12,SNR=5.2
KIV   Kislovodsk        70.86 311  eP     P       04 03 48.5 -0.3
KIV                                pmax   pmax
      comp=Z,5.0nm,0.7s
HFS   Hagfors           73.70 336   P     P       04 04 05.3  0.0
      comp=Z,1.6nm,0.7s,baz=38,slow=7.5,SNR=4.1
NB2   NORSAR Subarra    73.78 337   P     P       04 04 05.5 -0.3
      comp=Z,2.5nm,1.0s,baz=38,slow=6.5
NOA   NORSAR Array B    73.78 337   P     P       04 04 05.8  0.0
      comp=Z,1.5nm,0.8s,baz=38,slow=6.0,SNR=10
AKASG Malin Array Be    74.09 322   P     P       04 04 07.5 -0.3
      comp=Z,1.6nm,0.4s,baz=46,slow=6.0,SNR=17
NVAR  Mina Array Bea    74.18  54   P     P       04 04 10.2 +1.4
      comp=Z,1.1nm,0.8s,baz=280,slow=5.5,SNR=6.8
H17A  Grant Village     75.24  45  eP     P       04 04 18.8 +3.9
      comp=Z,5.1nm,0.9s
PDAR  Pinedale Array    76.83  46   P     P       04 04 25.1 +1.1
      comp=Z,1.0nm,0.6s,baz=270,slow=2.6,SNR=14
ULM   Lac du Bonnet     78.67  34   P     P       04 04 32.6 -1.2
      comp=Z,1.5nm,0.7s,baz=62,slow=4.6,SNR=3.2
BRTR  Keskin Array B    78.80 312ceP     P       04 04 34.9  0.0
BRTR  Keskin Array B    78.80 312   P     P       04 04 34.7 -0.2
      comp=Z,0.3nm,0.4s,baz=90,slow=3.2,SNR=5.0
VYHS  Vyhne             80.47 326  eP     P       04 04 44.6 +1.0
VYHS  Vyhne             80.47 326  eP     P       04 04 44.6 +1.0
CLL   Collm             80.78 330  i P    P       04 04 45.4 +0.2
      comp=Z,6.0nm,1.1s
CLL                                i PcP  PcP     04 04 51.8  0.0
CLL   Collm             80.78 330  i P    P       04 04 45.4 +0.2
CLL                                i              04 04 51.8
CLL                                 pmax  pmax
      comp=Z,6.0nm,1.1s
MMAI  Mount Meron Ar    82.00 306   P     P       04 04 52.8 +0.7
      comp=Z,1.0nm,0.6s,baz=49,slow=7.8,SNR=3.7
CONA  Conrad Observa    82.21 327  eP     P       04 04 52.4 -0.6
      comp=Z,1.9nm,0.8s
KHC   Kasperske Hory    82.25 329  eP     P       04 04 53.7 +0.6
KHC                                ex     x       04 05 00.6
KHC   Kasperske Hory    82.25 329  eP     P       04 04 53.7 +0.6
KHC                                e              04 05 00.6
GERES GERESS Array B    82.42 328   P     P       04 04 54.1 +0.1
      comp=Z,0.7nm,0.4s,baz=45,slow=6.0,SNR=9.2
EKA   Eskdalemuir Ar    82.68 341   P     P       04 04 55.5 +0.4
      comp=Z,1.0nm,0.9s,baz=29,slow=5.9,SNR=2.8
MOA   Molln             82.96 328   P     P       04 04 54.0 -2.7
      comp=Z,7.2nm,1.4s
SOKA  Soboth            83.53 326  eP     P       04 04 59.6 -0.2
      comp=Z,3.2nm,1.5s
ANMO  Albuquerque       83.77  50⇑eP     P       04 05 03.1 +1.7
ANMO                                pmax  pmax
      comp=Z,5.0nm,2.5s
OBKA  Obir              83.88 327   P     P       04 05 01.4 -0.2
      comp=Z,10.0nm,1.3s
MEM   Membach           83.95 334 ⇑P     P       04 05 01.6 -0.2
MYKA  Terra Mystica     84.18 327  eP     P       04 05 00.4 -2.7
      comp=Z,4.8nm,1.0s
RETA  Reutte            84.70 329  eP     P       04 05 05.5 -0.2
      comp=Z,3.1nm,1.0s
FETA  Feichten          85.09 329  eP     P       04 05 05.6 -2.2
      comp=Z,4.9nm,1.4s
DAVA  Damuels           85.22 330  eP     P       04 05 06.9 -1.5
      comp=Z,3.6nm,0.9s
TXAR  Lajitas Array     89.31  53   P     P       04 05 29.6 +1.1
      comp=Z,0.9nm,0.5s,baz=301,slow=2.5,SNR=13
PCIG                   105.74  55   P     Pdif    04 06 35.2 -7.7
TORD  Torodi Ar. Bea   117.23 316  PKP    PKPdf   04 11 17.1 -0.5
      comp=Z,0.2nm,0.6s,baz=15,slow=1.9,SNR=3.1
LPAZ  La Paz           145.91  60  PKPbc  PKPab   04 12 13.1 +0.2
      comp=Z,2.9nm,0.6s,baz=354,slow=1.8,SNR=17
SIV   San Ignacio      150.26  50  PKPbc  PKPbc   04 12 23.7 +0.4
      baz=122,slow=4.2
PLCA  Paso Flores      154.63 107  PKPab  PKPab   04 12 47.2 -0.2
      comp=Z,1.5nm,0.9s,baz=276,slow=10,SNR=2.2
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IDC ***25*** *03:55:41.9±0.8, 31.°96S×177.°93W, h0km, mb4.5/6, mb1 4.6/8, mb1mx4.3/41, mbtmp4.5/8, ML4.3/2, Error ellipse: s-maj=26.8km s-min=20.0km az=109.0*

NEIC ***25*** *03:55:42.5±0.5, 32.°29S×177.°77W, h10km, mb4.3/5, Error ellipse: s-maj=15.9km s-min=6.8km az=110.0*

ISC 25 03:55:45.5±0.8**, 32.°25S**±0.°08×**178.°2W**±0.°2**, h20**km**, n45, σ3.ˢ09**/55**, mb4.4**/9**, South of Kermadec Islands**

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Code  Station Name      Δ°    AZ°   Phase ID         Time       Res
                                   Op     ISC       h  m  s    ISC
RAO   Raoul Island       3.00   5  Pn     Pn      03 56 27.1 -4.8
RAO                                eSn    Sn      03 56 55.4  -12
RAO   Raoul Island       3.00   5  Pn     Pn      03 56 27.1 -4.8
      112nm,0.3s,baz=72,slow=20,SNR=5.0
RAO                                Sn     Sn      03 57 01.6 -5.7
      155nm,0.3s,baz=108,slow=20,SNR=2.8
URZ   Urewera            7.11 211  Pn     Pn      03 57 30.4 +2.0
      2.5nm,0.3s,baz=50,slow=12,SNR=14
URZ                                Sn     Sn      03 58 51.4 +2.8
      14nm,0.3s,baz=49,slow=23,SNR=14
OUZ   Omahuta            7.44 244  ePn    Pn      03 57 40.6 +7.7
BKZ   Black Stump Fm     8.13 211  ePn    Pn      03 57 44.1 +1.6
BKZ                                eSn    Sn      03 59 16.9 +3.0
BFZ   Birch Farm         9.52 206  ePn    Pn      03 58 00.9 -0.6
BFZ                                eSn    Sn      03 59 46.6 -1.4
SNZO  South Karori      10.68 210  ePn    Pn      03 58 19.4 +2.1
SNZO                               eSn    Sn      04 00 11.5 -4.6
THZ   Tophouse          11.85 214  ePn    Pn      03 58 33.9 +0.5
THZ                                eSn    Sn      04 00 40.7 -4.4
KHZ   Kahutara          12.08 211  ePn    Pn      03 58 35.3 -1.2
KHZ                                eSn    Sn      04 00 44.6 -5.9
OXZ   Oxford            13.47 212  ePn    Pn      03 58 58.6 +3.1
OXZ                                eSn    Sn      04 01 16.7 -7.8
MQZ   McQueen's Vall    13.51 210  ePn    Pn      03 58 53.3 -2.6
FOZ   Fox Glacier       14.69 217  ePn    Pn      03 59 11.6 -0.5
      2.2nm,0.6s
LBZ   Lake Benmore      15.14 214  ePn    Pn      03 59 16.3 -1.8
      8.7nm,1.2s
LBZ                                eSn    Sn      04 01 56.0 -9.2
ODZ   Otahua Downs      15.44 211  ePn    Pn      03 59 20.5 -1.6
      6.9nm,0.9s
ODZ                                eSn    Sn      04 02 02.2  -10
MLZ   Mavora Lakes      16.85 215  ePn    Pn      03 59 40.3 +0.1
      9.9nm,1.1s
MLZ                                eSn    Sn      04 02 42.4 -4.5
STKA  Stephens Creek    33.93 260   P     P       04 02 30.7 +3.3
      3.8nm,0.7s,baz=88,slow=12,SNR=8.8
CTA   Charters Tower    33.97 282   P     P       04 02 29.9 +2.0
      4.7nm,0.5s,baz=113,slow=12
CTAO  Charters Tower    33.97 282  eP     P       04 02 29.6 +1.7
      9.3nm,1.0s
COEN  Coen              39.65 288  eP     P       04 03 18.7 +2.5
      7.2nm,0.8s
AS31  Alice Springs     42.87 269  eP     P       04 03 43.9 +1.2
      1.7nm,1.0s
ASAR  Alice Springs     42.87 269   P     P       04 03 43.9 +1.2
      2.3nm,0.7s,baz=106,slow=7.3,SNR=14
WB2   Warramunga Arr    44.02 274  eP     P       04 03 52.5 +0.6
WR1   Warramunga Arr    44.02 274  eP     P       04 03 52.6 +0.6
      20nm,1.1s
WRA   Warramunga Arr    44.02 274   P     P       04 03 52.6 +0.6
      7.1nm,0.5s,baz=113,slow=7.9,SNR=56
QSPA  South Pole Qui    57.86 180   P     P       04 05 38.4 +2.7
      3.3nm,1.1s,baz=94,slow=2.9,SNR=4.1
PETK  Petropavlovsk-    87.56 346   P     P       04 08 31.1 -0.5
      4.3nm,0.7s,baz=116,slow=6.6,SNR=3.3
PEA1  Petropavlovsk-    87.56 346  eP     P       04 08 31.1 -0.5
KURK  Kurchatov        122.19 313   PKP   PKPdf   04 14 37.1 -1.3
KURBB Kurchatov Arra   122.22 313   PKP   PKPdf   04 14 37.1 -1.4
      0.8nm,0.6s,baz=121,slow=1.9,SNR=6.3
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BVAR	Borovoye Array	127.59	315	PKP	PKPdf	04 14 48.0	-0.8
	0.9nm,0.5s,baz=114,slow=7.0,SNR=4.7						
KBZ	Khabaz	145.96	302	PKPbc	PKPbc	04 15 23.2	-0.3
	4.6nm,0.9s,baz=124,slow=3.9,SNR=10						
FIA0	FINESS Array S	146.81	339	*e*PKPdf	PKPbc	04 15 24.3	-1.1
FINES	FINESS Array B	146.81	339	PKPbc	PKPbc	04 15 24.3	-1.1
	4.1nm,0.5s,baz=46,slow=4.0,SNR=37						
ASF	Jabal al Asfar	150.38	279	PKPbc	PKPbc	04 15 35.2	-0.5
	4.0nm,0.8s,baz=38,slow=1.9,SNR=6.7						
NB200	NORSAR Array S	150.55	351	*e*PKPbc	PKPbc	04 15 34.2	-1.0
NOA	NORSAR Array B	150.55	351	PKPbc	PKPbc	04 15 34.2	-1.0
	0.8nm,0.8s,baz=20,slow=4.7,SNR=8.3						
HFS	Hagfors	151.01	348	PKPbc	PKPbc	04 15 34.6	-1.6
	3.4nm,0.8s,baz=116,slow=3.4,SNR=8.0						
MMAI	Mount Meron Ar	151.75	281	PKPbc	PKiKP	04 15 40.1	+0.8
	4.5nm,0.6s,baz=69,slow=4.7,SNR=10						
AKASG	Malin Array Be	152.64	320	PKPbc	PKPbc	04 15 39.4	-0.8
	1.1nm,0.6s,baz=49,slow=3.1,SNR=7.5						
AKBB	Malin Array Si	152.64	320	*e*PKPbc	PKiKP	04 15 41.0	+0.6
BR101	Keskin Array S	153.28	295	*e*PKPbc	PKPbc	04 15 41.6	-0.6
BR101				*e*PKPab	sPKPbc	04 15 51.5	+2.2
BRTR	Keskin Array B	153.28	295	PKPbc	PKPbc	04 15 41.6	-0.6
	0.7nm,0.5s,baz=140,slow=4.0,SNR=9.5						
BRTR				PKPab	sPKPbc	04 15 51.5	+2.2
	5.8nm,0.8s,baz=81,slow=1.8,SNR=24						
CLL	Collm	159.25	340	*e*PKPab	PKPab	04 16 18.0	-1.1
TORD	Torodi Ar. Bea	160.98	180	PKPab	PKPab	04 16 28.6	+1.1
	1.1nm,0.9s,baz=181,slow=2.8,SNR=6.7						
TOA1	Torodi Ar. Sit	160.99	180	*e*PKPab	PKPab	04 16 28.6	+1.1

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*IDC **25** 03:56:12.0±0.7, 15°.41S×176°.21W, $h0^{km}$, mb4.4/19, mb1 4.6/19, mb1mx4.5/42, mbtmp4.4/19, MS4.7/28, Ms1 4.7/28, ms1mx4.6/41, Error ellipse: s-maj=28.6km s-min=14.8km az=142.0*

*NEIC **25** 03:56:14.3±0.4, 15°.56S×176°.12W, $h10^{km}$, mb4.8/102, Error ellipse: s-maj=15.6km s-min=7.7km az=159.0*

*ISCJB **25** 03:56:15.8±0.3, 15°.48S±0°.09×176°.10W±0°.06, $h26^{km}$, mb4.6/124, MS4.7/29, Error ellipse: s-maj=14.4km s-min=6.2km az=157.4*

*GCMT **25** 03:56:18.3±0.1, 15°.19S±0°.01×175°.98W±0°.01, $h13^{km}$, MW5.3/132, Moment Tensor Solution. s81,c122; s132,c230; Duration: $1^{s}1$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.09±.02; $M_{\theta\theta}$0.38±.02; $M_{\phi\phi}$-0.29±.02; $M_{r\theta}$-0.02±.04; $M_{\theta\phi}$1.12±.02; $M_{\phi r}$-0.14±.04; Best double couple: $M_0$1.17800×10^{17} NP1:ϕ_s8.00000°, δ89.00000°, λ-173.00000°. NP2:ϕ_s278.00000°, δ83.00000°, λ-1.00000°. Principal axes: T 1.2220, Plg4.0000°, Azm143.0000°; N -0.0870, Plg83.0000°, Azm14.0000°; P -1.1340, Plg6.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 03:56:17.1±0.4**, 15°.5S**±0°.1**×176°.06W**±0°.08**, $h26^{km}$, n226, σ1^{s}53**/197**, mb4.7**/124**, MS4.8**/29**, 2C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.07	248	*e*Pn	Pn	03 57 31.1	-14
NIUE	Niue	6.86	122	*e*Pn	Pn	03 57 54.1	-1.9
RAR	Rarotonga	16.47	113	LR	LR	04 04 56.7	
	comp=Z,1µm,21.6s,baz=292,slow=32						
OUENC	Ouen Island, N	17.57	244	*e*P	P	04 00 22.4	+1.2
	169nm,1.1s						
DZM	Mont Dzumac	17.81	246	*e*P	Pn	04 00 23.6	+0.2
	203nm,1.4s						
DZM				*e*LR	LR	04 04 26.9	
	comp=Z,9µm,25.1s						
DZM	Mont Dzumac	17.81	246	*e*Pn	P	04 00 29.4	+5.5
	29nm,0.9s						
DZM	Mont Dzumac	17.81	246	P	P	04 00 24.6	+0.7
	0.4nm,0.3s,baz=35,slow=22,SNR=4.0						
DZM				LR	LR	04 06 08.6	
	comp=Z,6µm,18.8s,baz=72,slow=34						
URZ	Urewera	23.47	194	LR	LR	04 10 12.4	
	comp=Z,2µm,18.2s,baz=23,slow=36						
HNR	Honiara	24.18	282	LR	LR	04 09 22.8	
	comp=Z,3µm,20.6s,baz=118,slow=33						
PAE	Paea	25.46	99	*e*T	T	04 27 54.8	
	2.1nm,0.3s						
PPT	Papeete	25.46	98	LR	LR	04 08 47.4	
	comp=Z,360nm,22.0s,baz=269,slow=30						
PPT2	Papeete2	25.46	98	*e*LQ	LQ	04 06 48.3	
	8µm,25.8s						
PPT2				*e*LR	LR	04 07 56.6	
	comp=Z,741nm,23.8s						
PPT2	Papeete2	25.46	98	*e*T	T	04 27 56.0	
	3.8nm,0.3s						
TIAR	Tiarei	25.68	98	*e*T	T	04 28 11.4	
	4.6nm,0.3s						
TVO	Taravao	25.78	99	*e*T	T	04 28 18.1	
	1.5nm,0.3s						
TBI	Tubuai	26.24	111	*e*LQ	LQ	04 07 13.5	
	6µm,28.2s						
TBI				*e*LR	LR	04 08 26.2	
	comp=Z,2µm,27.2s						
TBI	Tubuai	26.24	111	*e*T	T	04 29 00.3	
	9.7nm,0.3s						
PMOR	Pomariorio Ree	27.17	93	*e*T	T	04 30 00.4	
	4.5nm,0.3s						
VAH	Vaihoa	27.41	93	*e*T	T	04 30 18.3	
	8.7nm,0.3s						
TAOE	Nuku Hiva Isla	35.68	84	*e*LR	LR	04 12 33.9	
	comp=Z,3µm,26.5s						
TAOE	Nuku Hiva Isla	35.68	84	*e*T	T	04 40 32.7	
	30nm,0.2s						
CTA	Charters Tower	36.12	257	P	P	04 03 15.0	-2.4
	6.3nm,0.9s,baz=100,slow=11,SNR=2.6						
H11N3	WAKE ISLAND Hy	38.79	334	T	T	04 45 00.5	
	baz=152,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	38.79	334	T	T	04 44 46.8	
	baz=152,slow=76,SNR=66						
H11N2	WAKE ISLAND Hy	38.81	334	T	T	04 45 03.5	
	baz=152,slow=76,SNR=18						
COEN	Coen	39.42	267	*e*P	P	04 03 46.7	+1.4
	17nm,1.1s						
TOO	Toolangi	40.44	230	*e*P	P	04 03 55.2	+1.7
	36nm,1.1s						
STKA	Stephens Creek	41.78	239	*e*P	P	04 04 03.9	-0.7
	3.6nm,1.0s						
STKA	Stephens Creek	41.78	239	P	P	04 04 01.2	-3.4
	12nm,1.0s,baz=70,slow=7.9,SNR=9.1						
STKA				LR	LR	04 21 04.4	
	comp=Z,1µm,18.0s,baz=68,slow=36						
WRA	Warramunga Arr	47.33	257	P	P	04 04 46.4	-2.7
	4.2nm,0.9s,baz=90,slow=7.6,SNR=4.6						
WRA				LR	LR	04 22 02.1	
	comp=Z,1µm,21.9s,baz=100,slow=33						
AS01	Alice Springs	47.60	252	*e*P	P	04 04 48.8	-2.5
AS31	Alice Springs	47.65	252	*e*P	P	04 04 50.2	-1.4
	1.9nm,0.8s						
ASAR	Alice Springs	47.65	252	P	P	04 04 48.9	-2.7
	6.3nm,0.7s,baz=87,slow=7.7,SNR=11						
ASAR				LR	LR	04 22 57.8	
	comp=Z,1µm,20.7s,baz=90,slow=34						
FITZ	Fitzroy Crossi	55.68	258	P	P	04 05 49.7	-2.0
	8.9nm,1.0s,baz=94,slow=13,SNR=2.9						
VNDA	Vanda	63.04	185	LR	LR	04 28 44.5	
	comp=Z,331nm,20.9s,baz=26,slow=31						
MJAR	Matsushiro Arr	67.38	321	LR	LR	04 31 01.2	
	comp=Z,344nm,22.0s,baz=125,slow=31						
PETK	Petropavlovsk-	71.96	344	*e*P	P	04 07 37.8	-0.4
PETK	Petropavlovsk-	71.96	344	P	P	04 07 36.2	-2.0
	7.6nm,1.0s,baz=128,slow=8.0,SNR=5.4						
PETK				LR	LR	04 32 41.0	
	comp=Z,515nm,21.9s,baz=153,slow=30						
KSRS	Korea Array	74.45	317	P	P	04 07 52.1	-1.0
	0.4nm,0.3s,baz=127,slow=8.0,SNR=5.9						
KSRS				LR	LR	04 37 11.4	
	comp=Z,337nm,19.5s,baz=130,slow=33						
KSAR	Wonju Array Be	74.47	317	P	P	04 07 52.1	-1.1
KS01	Wonju Array Si	74.48	317	*e*P	P	04 07 52.3	-1.1
ISA	Isabella, Lake	74.52	46	*e*P	P	04 07 55.4	+1.6
CMB	Columbia Colle	74.54	43	*e*P	P	04 07 53.5	-0.3
	6.2nm,1.0s						
QSPA	South Pole Qui	74.55	180	*e*P	P	04 07 55.1	+1.6
	43nm,1.0s						
QSPA	South Pole Qui	74.55	180	P	P	04 07 53.7	+0.1
	3.2nm,0.8s,baz=16,slow=3.3,SNR=5.5						
AFDM	Forest Hills D	74.68	42	*e*P	P	04 07 53.7	-0.9
	7.2nm,1.1s						
ORV	Oroville	74.70	41	*e*P	P	04 07 55.8	+1.2
	4.4nm,1.1s						
PFO	Pinyon Flats O	74.87	48	LR	LR	04 33 01.1	
	comp=Z,870nm,20.2s,baz=278,slow=30						
MDPB	Devils Postpil	75.18	44	*e*P	P	04 07 59.1	+1.3
	7.7nm,1.1s						
OMMB	Old Mammoth Mi	75.22	44	*e*P	P	04 07 59.5	+1.4
	3.6nm,1.0s						
YBH	Yreka Blue Hor	75.24	38	*e*P	P	04 07 57.3	-0.5
	12nm,1.0s						
YBH	Yreka Blue Hor	75.24	38	LR	LR	04 35 06.1	
	comp=Z,728nm,18.3s,baz=231,slow=31						
WAKR	Walker	75.42	43	*e*P	P	04 07 58.4	-0.7
	8.0nm,1.0s						
GSC	Goldstone, Bar	75.49	47	*e*P	P	04 08 00.9	+1.5
	6.0nm,1.1s						
GSC				*e*PcP	PcP	04 08 11.3	-1.1
BEKR	Beckworth	75.60	41	*e*P	P	04 07 59.0	-1.1
	11nm,1.1s						
PNTR	Pine Nut	75.64	42	*e*P	P	04 07 59.5	-0.8
	13nm,0.9s						
VCNR	Virginia City	75.73	42	*e*P	P	04 08 02.3	+1.5
	11nm,1.1s						
YERR	Yerington	75.82	42	*e*P	P	04 08 00.3	-1.0
	12nm,1.1s						
USRK	Ussuriysk Ar.	75.94	324	P	P	04 08 04.2	+2.6
	1.0nm,0.6s,baz=101,slow=12,SNR=4.0						
USRK				LR	LR	04 35 30.9	
	comp=Z,1µm,21.6s,baz=129,slow=31						
RYN	Ryan	76.09	43	*e*P	P	04 08 01.9	-1.0
	10.0nm,1.1s						
NV01	Mina Array Sit	76.13	43	*e*P	P	04 08 01.6	-1.5
NVAR	Mina Array Bea	76.13	43	P	P	04 08 02.1	-1.1
	6.8nm,0.9s,baz=226,slow=9.7,SNR=18						
NVAR				LR	LR	04 33 49.9	
	comp=Z,379nm,20.3s,baz=232,slow=30						
PAHR	Pah Rah Range	76.13	42	*e*P	P	04 08 02.5	-0.5
	11nm,1.2s						
NV11	Mina Array Sit	76.23	43	*e*P	P	04 08 02.1	-1.5
	0.8nm,1.1s						
113A	Mohawk Valley,	76.42	50	*e*P	P	04 08 06.5	+1.9
	6.0nm,0.8s						
KVN	Kaiserville	76.60	43	*e*P	P	04 08 04.7	-1.1
	8.3nm,1.1s						
TPNV	Topopah Spring	76.73	45	*e*P	P	04 08 07.6	+1.1
	5.4nm,0.9s						
MOD	Modoc Plateau	76.80	39	*e*P	P	04 08 05.5	-1.3
	7.7nm,1.0s						
SHPR	Sheep Range	77.25	46	*e*P	P	04 08 11.2	+1.7
	3.1nm,0.9s						
PINE	Pine Mountain	77.51	37	*e*P	P	04 08 10.1	-0.7
	16nm,1.0s						
Y14A	Wickenburg	77.54	49	*e*P	P	04 08 10.4	-0.6
	7.1nm,0.9s						
R11A	Troy Canyon, C	77.90	44	*e*P	P	04 08 12.3	-0.8
	2.5nm,1.1s						
WVOR	Wild Horse Val	78.12	40	*e*P	P	04 08 13.5	-0.6
	4.8nm,1.0s						
NJ2	Nanjing	78.19	308	*e*P	P	04 08 14.8	+0.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
TUC	Tucson	78.44	52	*e*P	P	04 08 15.5	-0.6
	comp=Z,13nm,1.1s						
I07A	Izee	78.52	38	*e*P	P	04 08 17.6	+1.3
	comp=Z,7.9nm,1.1s						
J08A	Circle Bar Ran	78.73	39	*e*P	P	04 08 18.7	+1.3
	comp=Z,8.5nm,1.1s						
X16A	Lo Mia Camp, P	78.91	50	*e*P	P	04 08 18.6	-0.2
	comp=Z,11nm,0.9s						
GAMB	Gambell	79.09	2	*e*P	P	04 08 19.4	+0.7
	comp=Z,7.4nm,1.0s						
BBB	Bella Bella	79.14	28	LR	LR	04 34 45.2	
	comp=Z,336nm,21.2s,baz=244,slow=29						
KNB	Kanab	79.14	47	*e*P	P	04 08 21.6	+1.7
	comp=Z,6.7nm,1.1s						
PSUT	Pine Spring	79.17	45	*e*P	P	04 08 20.9	+0.8
	comp=Z,5.0nm,0.9s						
319A	Douglas	79.18	53	*e*P	P	04 08 20.2	0.0
	comp=Z,12nm,1.0s						
KLR	Kul'dur	79.22	328	LR	LR	04 37 48.7	
	comp=Z,669nm,21.9s,baz=152,slow=32						
U15A	North Rim	79.23	47	*e*P	P	04 08 20.2	-0.4
	comp=Z,7.7nm,1.1s						
SZCU	Shurtz Canyon	79.23	46	*e*P	P	04 08 18.2	-2.3
	comp=Z,5.2nm,0.7s						
SUA	Susitna One	79.30	12	*e*P	P	04 08 19.9	-0.3
	comp=Z,12nm,0.8s						
ELK	Elko	79.36	42	*e*P	P	04 08 19.9	-1.2
	comp=Z,5.4nm,1.0s						
WUAZ	Wupatki	79.47	49	*e*P	P	04 08 23.8	+2.0
	comp=Z,6.6nm,1.0s						
MA2	Magadan	79.50	344	*e*P	P	04 08 20.8	-0.3
MA2	Magadan	79.50	344	P	P	04 08 19.0	-2.1
	comp=Z,2.2nm,0.3s,baz=150,slow=16,SNR=2.6						
G08A	Pilot Rock	79.53	37	*e*P	P	04 08 20.0	-1.8
	comp=Z,8.6nm,1.1s						
E07A	Sunnyside	79.75	36	*e*P	P	04 08 24.0	+1.2
	comp=Z,8.2nm,1.1s						
HAWA	Hanford	79.83	36	*e*P	P	04 08 24.4	+1.2
X18A	Snowflake	80.06	50	*e*P	P	04 08 27.2	+2.2
	comp=Z,5.1nm,0.9s						
MTPU	Mount Pierson	80.08	46	*e*P	P	04 08 27.2	+2.0
	comp=Z,2.8nm,1.0s						
ANM	Nome	80.22	5	*e*P	P	04 08 25.8	+0.9
	comp=Z,6.3nm,1.2s						
BMO	Blue Mountains	80.26	38	*e*P	P	04 08 24.1	-1.7
	comp=Z,6.1nm,1.1s						
MSU	Marysvale	80.30	46	*e*P	P	04 08 28.4	+2.1
QIZ	Qiongzhong	80.57	293	P	P	04 08 28.6	+0.8
QIZ				S	S	04 18 28.1	-5.5
QIZ				LR	LR		
	comp=Z,560nm,20.6s						
DUG	Dugway, Tooele	80.69	44	*e*P	P	04 08 28.3	+0.1
	comp=Z,5.8nm,1.1s						
E09A	Wood Farm, Sta	80.69	36	*e*P	P	04 08 28.8	+0.9
	comp=Z,4.1nm,0.8s						
F10A	Beach Ranch, E	80.92	37	*e*P	P	04 08 29.4	+0.1
	comp=Z,5.5nm,1.0s						
B08A	Colville Reser	81.08	34	*e*P	P	04 08 29.9	-0.1
	comp=Z,5.1nm,1.1s						
TRF	Thorofare Moun	81.19	11	*e*P	P	04 08 32.8	+2.4
	comp=Z,15nm,1.0s						
HLID	Hailey	81.34	40	*e*P	P	04 08 30.4	-1.2
	comp=Z,6.5nm,0.9s						
RND	Reindeer	81.44	12	*e*P	P	04 08 31.6	+0.1
	comp=Z,19nm,1.1s						
HVU	Hansel Valley	81.49	42	*e*P	P	04 08 33.7	+1.2
	comp=Z,8.6nm,1.2s						
MCK	McKinley	81.71	12	*e*P	P	04 08 32.8	-0.2
	comp=Z,15nm,1.1s						
JLU	Jordanelle	81.79	44	*e*P	P	04 08 35.6	+1.4
	comp=Z,5.2nm,1.1s						
SEY	Seymchan	81.96	346	P	P	04 08 31.8	-2.5
	comp=Z,2.7nm,0.8s,baz=131,slow=8.2,SNR=5.0						
TCUT	Toone Canyon	82.07	44	*e*P	P	04 08 34.8	-0.8
	comp=Z,28nm,1.1s						
LAZ	Ladron	82.10	51	*e*P	P	04 08 35.8	-0.1
MNTX	Cornudas Mount	82.35	54	*e*P	P	04 08 38.3	+1.3
	comp=Z,12nm,1.1s						
BNM	Barren Site	82.38	52	*e*P	P	04 08 39.6	+2.2
PV17	East Wray Mesa	82.44	47	*e*P	P	04 08 36.8	-0.9
	comp=Z,5.4nm,1.0s						
PV13	Radium Mtn., P	82.48	47	*e*P	P	04 08 39.4	+1.5
	comp=Z,7.5nm,1.2s						
WRH	Wood River Hil	82.54	12	*e*P	P	04 08 37.2	-0.1
	comp=Z,15nm,1.1s						
MLY	Manley	82.55	11	*e*P	P	04 08 36.7	-0.6
	comp=Z,10nm,1.0s						
PV01	Paradox Valley	82.65	47	*e*P	P	04 08 40.0	+1.3
	comp=Z,6.3nm,1.0s						
HDA	Harding Lake	82.72	12	*e*P	P	04 08 40.0	+1.8
	comp=Z,13nm,1.0s						
DLBC	Dease Lake	82.74	22	P	P	04 08 38.9	+0.4
	comp=Z,2.4nm,0.9s,baz=236,slow=8.7,SNR=3.3						
DLBC				LR	LR	04 39 01.3	
	comp=Z,542nm,19.3s,baz=154,slow=31						
TX31	Lajitas Ar. Si	82.80	57	*e*P	P	04 08 39.1	-0.4
TXAR	Lajitas Array	82.80	57	P	P	04 08 38.8	-0.7
	comp=Z,4.2nm,1.0s,baz=224,slow=5.2,SNR=20						
TXAR				LR	LR	04 38 10.6	
	comp=Z,737nm,19.6s,baz=0.0,slow=30						
PV15	Paradox Valley	82.81	47	*e*P	P	04 08 41.0	+1.4
	comp=Z,15nm,1.2s						
ANMO	Albuquerque	82.83	51	*e*P	P	04 08 38.6	-1.1
	comp=Z,12nm,1.1s						
IM3	Indian Mountai	82.94	9	*e*P	P	04 08 38.8	-0.5
MCMT	McKenzie Canyo	82.95	40	*e*P	P	04 08 39.6	-0.5
COLA	College	82.95	12	*e*P	P	04 08 38.6	-0.7
	comp=Z,23nm,1.0s						
MDM	Murphy Dome	82.95	12	*e*P	P	04 08 39.1	-0.3
ILAR	Eielson Array	83.05	12	P	P	04 08 37.3	-2.6
	comp=Z,6.2nm,1.2s,baz=223,slow=6.2,SNR=12						
ILAR				LR	LR	04 38 27.0	
	comp=Z,138nm,20.8s,baz=201,slow=30						
ILB	Eielson Array	83.05	12	*e*P	P	04 08 40.1	+0.2
IL1	Eielson Array	83.05	12	*e*P	P	04 08 38.2	-1.7
DLMT	Dillon	83.37	39	*e*P	P	04 08 41.5	-0.7
	comp=Z,13nm,1.1s						
TPAW	Teton Pass	83.49	42	*e*P	P	04 08 41.0	-2.0
	comp=Z,6.4nm,0.9s						
REDW	Red Top Meadow	83.49	42	*e*P	P	04 08 44.2	+1.2
	comp=Z,12nm,1.1s						
FXWY	Fox Creek	83.51	41	*e*P	P	04 08 43.1	0.0
	comp=Z,3.4nm,1.0s						
SNOW	Snow King Moun	83.60	42	*e*P	P	04 08 45.1	+1.5
	comp=Z,17nm,1.1s						
BJT	Baijiatuau	83.68	314	*e*P	P	04 08 42.9	-0.8
	comp=Z,2.6nm,0.4s						
BJI	Beijing	83.69	314	⥣*e*P	P	04 08 46.0	+2.3
BJI				pmax	pmax		
	comp=Z,11nm,1.1s						
S22A	4UR Ranch, Cre	83.73	48	*e*P	P	04 08 43.5	-0.9
	comp=Z,8.2nm,0.9s						
MOOW	Moose Ponds	83.75	41	*e*P	P	04 08 45.1	+0.9
	comp=Z,4.4nm,1.1s						
O20A	White River Ci	83.76	46	*e*P	P	04 08 45.1	+0.7
	comp=Z,8.3nm,1.0s						
LOHW	Long Hollow	83.77	42	*e*P	P	04 08 45.5	+1.1
	comp=Z,5.1nm,1.1s						
RDOG	Red Dog Mine	83.86	5	*e*P	P	04 08 44.9	+0.9
	comp=Z,6.1nm,0.9s						
FLWY	Flagg Ranch	83.93	41	*e*P	P	04 08 46.9	+1.7
	comp=Z,14nm,1.0s						
YHB	Horse Butte	83.94	40	*e*P	P	04 08 44.9	-0.3
	comp=Z,14nm,1.1s						
YPP	Pitchstone Pla	83.95	41	*e*P	P	04 08 48.1	+2.7
PRP	Porcupine Dome	83.98	12	*e*P	P	04 08 45.1	+0.2
	comp=Z,7.4nm,0.8s						
YMR	Madison River	84.04	41	*e*P	P	04 08 47.8	+2.1
	comp=Z,18nm,1.1s						
BW06	Boulder Array	84.06	43	*e*P	P	04 08 43.9	-2.0
	comp=Z,4.3nm,0.9s						
PD31	Pinedale Array	84.06	43	*e*P	P	04 08 44.1	-1.7
PDAR	Pinedale Array	84.06	43	*e*P	P	04 08 43.7	-2.2
PDAR	Pinedale Array	84.06	43	P	P	04 08 43.5	-2.3
	comp=Z,4.4nm,0.9s,baz=204,slow=3.3,SNR=18						
PDAR				LR	LR	04 38 52.0	
	comp=Z,228nm,19.6s,baz=253,slow=30						
H17A	Grant Village	84.16	41	*e*P	P	04 08 48.8	+2.4
	comp=Z,9.1nm,1.1s						
DAWY	Dawson	84.16	15	*e*P	P	04 08 45.3	-0.4
	comp=Z,13nm,1.0s						
YHH	Holmes Hill	84.17	41	*e*P	P	04 08 47.4	+0.9
	comp=Z,4.7nm,1.1s						
SMCO	Snowmass	84.23	47	*e*P	P	04 08 47.9	+0.9
	comp=Z,7.7nm,1.0s						
BILL	Bilibino	84.28	353	*e*P	P	04 08 45.7	-0.4
	comp=Z,8.0nm,1.0s						
EGAK	Eagle	84.32	14	*e*P	P	04 08 45.2	-1.2
	comp=Z,7.0nm,0.9s						
LKWY	Lake	84.35	41	*e*P	P	04 08 47.6	+0.2
	comp=Z,15nm,1.1s						
HRY	Holter Researc	84.50	39	*e*P	P	04 08 48.9	+1.1
COLD	Coldfoot	84.65	10	*e*P	P	04 08 49.9	+1.9
	comp=Z,9.3nm,1.2s						
LNIG	Linares	84.73	63	*e*P	P	04 08 47.4	-2.0
	comp=Z,7.4nm,1.0s						
MSTX	Muleshoe	85.25	53	*e*P	P	04 08 53.8	+1.9
RLMT	Red Lodge	85.32	41	*e*P	P	04 08 53.5	+1.4
	comp=Z,8.4nm,1.1s						
N23A	Red Feather La	85.67	46	*e*P	P	04 08 56.1	+2.0
	comp=Z,7.3nm,1.0s						
TOLK	Toolik Lake Re	86.03	9	*e*P	P	04 08 57.9	+2.9
	comp=Z,13nm,1.1s						
EPYK	Eagle Plains	86.69	15	*e*P	P	04 08 58.5	+0.2
	comp=Z,7.0nm,1.0s						
MAW	Mawson	86.88	199	LR	LR	04 45 53.3	
	comp=Z,513nm,18.1s,baz=109,slow=34						
HHC	Hu-ho-hao-te	87.22	314	*e*P	P	04 09 03.0	+1.5
HHC	Hu-ho-hao-te	87.22	314	S	S	04 19 37.3	-2.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,240nm,4.8s						
HHC				LR	LR		
	comp=N,190nm,10.4s						
HHC				LR	LR		
	comp=E,250nm,11.2s						
HHC				LR	LR		
	comp=Z,430nm,12.1s						
LAO	LASA Array	87.92	40	*e*P	P	04 09 03.5	-1.2
	comp=Z,6.4nm,0.9s						
KMI	Kunming	88.76	296	P	P	04 09 12.1	+2.8
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
INK	Inuvik	88.98	15	P	P	04 09 09.0	-0.1
	comp=Z,1.5nm,1.1s,baz=212,slow=6.8,SNR=3.1						
CD2	Chengdu	89.68	302	*e*P	P	04 09 14.3	+1.0
DGMT	Dagmar	89.91	39	*e*P	P	04 09 13.0	-0.9
	comp=Z,13nm,1.0s						
CM01	Chiang Mai Arr	90.19	289	*e*P	P	04 09 17.9	+2.0
CMAR	Chiang Mai Arr	90.22	289	P	P	04 09 15.9	-0.1
	comp=Z,0.9nm,0.4s,baz=141,slow=3.5,SNR=6.5						
CMAR				LR	LR	04 44 51.7	
	comp=Z,324nm,21.7s,baz=155,slow=32						
YKA	Yellowknife Ar	91.21	24	P	P	04 09 20.1	+0.5
	comp=Z,1.1nm,0.8s,baz=244,slow=4.7,SNR=12						
YKA				LR	LR	04 42 01.7	
	comp=Z,54nm,21.9s,baz=238,slow=30						
YKB5	Yellowknife Ar	91.21	24	*e*P	P	04 09 19.0	-0.6
LZH	Lanzhou	91.22	307	*e*P	P	04 09 22.3	+1.8
LZH				pP	pP	04 09 25.1	-3.2
LZH				sP	pwP	04 09 27.6	-3.4
LZH	Lanzhou	91.22	307	SKS	SKSac	04 19 57.0	+5.6
LZH	Lanzhou	91.22	307	SS	SS	04 26 27.8	+4.7
LZH				pmax	pmax		
	comp=Z,110nm,1.1s						
LZH				pmax	pmax		
	comp=Z,310nm,4.1s						
LZH				LR	LR		
	comp=N,400nm,16.8s						
LZH				LR	LR		
	comp=E,800nm,17.3s						
LZH				LR	LR		
	comp=Z,590nm,18.4s						
PLCA	Paso Flores	91.34	133	LR	LR	04 42 30.3	
	comp=Z,423nm,20.5s,baz=270,slow=30						
ULN	Ulaanbaatar	92.81	319	*e*P	P	04 09 30.8	+3.2
	comp=Z,3.6nm,1.0s						
SONA1	Songino Array	93.21	319	*e*P	P	04 09 31.7	+2.3
SONM	Songino Array	93.21	319	P	P	04 09 28.8	-0.6
	comp=Z,0.1nm,0.3s,baz=96,slow=8.8,SNR=3.2						
NNA	Nana	95.53	104	LR	LR	04 42 01.6	
	comp=Z,68nm,21.4s,baz=278,slow=29						
ULM	Lac du Bonnet	95.62	39	LR	LR	04 47 44.4	
	comp=Z,682nm,19.1s,baz=259,slow=32						
ARCES	ARCESS Array B	124.32	351	PKP	PKPdf	04 15 13.2	0.0
	comp=Z,3.3nm,0.9s,baz=48,slow=1.3,SNR=3.2						
FIA1	FINESS Array S	131.44	346	*e*PKPdf	PKPdf	04 15 24.3	-2.6
NB2	NORSAR Subarra	134.21	355	PKP	PKPdf	04 15 32.7	+0.5
	comp=Z,0.9nm,0.7s,baz=17,slow=2.6						
AK11	Malin Array Si	139.44	335	*e*PKPpre	PKPpre	04 15 36.0	
CLL	Collm	143.54	350	*e*PKPdf	PKPdf	04 15 50.0	+0.6
DPC	Dobruska-Polom	143.81	347	*e*PKP	PKiKP	04 15 52.0	-1.5
DPC				*e*x	x	04 15 56.7	
VRAC	Vranov	144.72	346	*e*PKP	PKPdf	04 15 51.5	-0.1
MLR	Muntele Rosu	144.83	333	PKP	PKPdf	04 15 52.0	0.0
	comp=Z,3.9nm,0.9s,baz=42,slow=12,SNR=4.7						
JAVC	Velka Javorina	144.87	344	*e*PKP	PKiKP	04 15 57.3	+1.6
KRUC	Moravsky	145.00	346	*e*PKP	PKPbc	04 15 51.5	+0.1
ANTO	Ankara	145.02	320	*e*PKPbc	PKPab	04 15 52.0	+0.2
KHC	Kasperske Hory	145.53	349	*e*PKPdf	PKPdf	04 15 53.2	+0.1
KHC	Kasperske Hory	145.53	349	*e*PKP	PKPdf	04 15 52.1	-1.0
GEC2	GERESS Array S	145.78	349	*e*PKPdf	PKPab	04 15 54.9	+0.4
GERES	GERESS Array B	145.78	349	PKPbc	PKPdf	04 15 51.8	-1.8
	comp=Z,1.6nm,0.7s,baz=346,slow=3.3,SNR=11						
GEA0	GERESS Array S	145.79	349	*e*PKPdf	PKPdf	04 15 53.5	-0.1
WLF	Walferdange	145.87	357	⥥PKP	PKPbc	04 15 54.3	+0.2
WLF	Walferdange	145.87	357	⥣pPKP	PKiKP	04 15 58.6	+0.9
CONA	Conrad Observa	146.19	346	*e*PKPab	PKPbc	04 15 55.4	+0.1
	comp=Z,22nm,1.6s						
MOA	Molln	146.62	347	PKiKP	PKiKP	04 15 59.0	-0.4
	comp=Z,10nm,1.2s						
ARSA	Arzberg	146.90	345	*e*PKPab	PKPbc	04 15 57.5	+0.2
	comp=Z,8.0nm,1.2s						
BFO	Black Forest	147.05	355	*e*PKPbc	PKPdf	04 15 56.6	+1.0
KBA	Koelnbreinsper	147.55	348	*e*PKiKP	PKPab	04 16 00.5	-0.9

	comp=Z,5.7nm,1.2s						
SOKA	Soboth	147.56	346	PKPbc	PKPdf	04 15 56.7	+0.1
	comp=Z,15nm,1.7s						
RETA	Reutte	147.60	351	*e*pPKPdf	PKPbc	04 15 59.0	-0.3
	comp=Z,7.8nm,1.5s						
WTTA	Wattenberg	147.68	350	*e*P	PKPbc	04 15 59.9	+0.3
	comp=Z,7.9nm,1.0s						
MOTA	Moosalm	147.69	351	*e*PKPbc	PKPdf	04 15 58.0	+1.1
	comp=Z,4.9nm,0.8s						
SQTA	Sankt Quirin	147.79	351	*e*pPKPdf	PKPbc	04 15 59.5	-0.4
	comp=Z,9.8nm,1.5s						
OBKA	Obir	147.83	346	PKPbc	PKPdf	04 15 58.5	+1.4
	comp=Z,9.8nm,1.5s						
MYKA	Terra Mystica	147.91	347	*e*PKPbc	PKPbc	04 15 59.1	-1.1
	comp=Z,15nm,1.1s						
DAVA	Damuels	147.91	352	*e*pPKPbc	PKiKP	04 16 02.5	+0.3
	comp=Z,11nm,1.1s						
ABTA	Abfaltersbach	148.03	349	*i* PKPbc	PKPdf	04 15 58.3	+0.9
	comp=Z,13nm,1.0s						
FETA	Feichten	148.06	351	*e*P	PKPbc	04 16 00.7	0.0
	comp=Z,10nm,1.1s						
VTS	Vitosha	148.29	332	*e*PKPbc	PKPbc	04 16 01.9	+0.5
FUORN	Ofenpass-Fuorn	148.52	352	*e*PKPbc	PKPbc	04 16 02.3	+0.2
TOA0	Torodi Ar. Sit	176.81	137	*e*PKPdf	PKPdf	04 16 27.8	+1.6
TOA0				*e*PKPab	PKPab	04 18 10.1	+1.4

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*IDC **25** 04:03:32.1±2.4, 6°.71S×129°.74E, h121^{km}±22^{km}, mb4.0/9, mb1 4.1/13, mb1mx3.8/46, mbtmp4.4/13, Error ellipse: s-maj=30.8km s-min=11.9km az=79.0*

*ISCJB **25** 04:03:33.6±0.3, 6°.81S±0°.03×129°.89E±0°.05, h150^{km}, mb4.1/13, Error ellipse: s-maj=6.5km s-min=4.2km az=173.7*

*DJA **25** 04:03:35.2±0.3, 7°S±2°×13°0E±°, h174^{km}±6^{km}, M5.0/12, mb4.8/8, mB5.5/6, MLv5.1/12, Mw(mB)5.0/6*

*NEIC **25** 04:03:36.1±0.6, 6°.72S×129°.68E, h157^{km}±6^{km}, mb4.3/7, Error ellipse: s-maj=8.7km s-min=6.9km az=88.0*

ISC 25 04:03:34.7±0.5**, 6°.81S**±0°.04×**129°.82E**±0°.05**, h150**^{km}**, n46, σ2^{s}.71**/58**, mb4.3**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.87	128	*e*Pn	Pn	04 04 12.9	+4.5
SAUI				*e*Sn	Sn	04 04 36.7	+2.4
SAUI	Saumlaki	1.87	128	P	Pn	04 04 12.9	+4.5
SAUI				S	Sn	04 04 37.1	+2.9
BNDI	Bandanaira	2.28	2	P	Pn	04 04 16.7	+3.5
BNDI				S	Sn	04 04 47.5	+4.7
NLAI	Namlea	4.47	323	P	Pn	04 04 43.1	+1.9
FAKI	Fak Fak	4.56	32	*e*Pn	Pn	04 04 42.1	-0.4
FAKI				*e*Sn	Sn	04 05 28.0	-7.2
FAKI	Fak Fak	4.56	32	P	Pn	04 04 42.5	+0.1
FAKI				S	Sn	04 05 32.5	-2.7
SIJI	Sorong	6.08	14	P	Pn	04 04 57.9	-4.7
	2.7nm,0.3s,baz=285,slow=20,SNR=3.0						
SIJI				S	Sn	04 06 05.1	-6.2
	21nm,0.3s,baz=211,slow=12,SNR=6.0						
SANI	Sanana	6.08	321	P	Pn	04 05 04.7	+2.1
MTN	Manton Dam	6.13	168	*e*Pn	Pn	04 05 05.0	+1.8
MTN				*e*Sn	Sn	04 06 10.7	-1.8
SOEI	Soe	6.22	242	*e*Pn	Pn	04 05 06.6	+2.0
SOEI				*e*Sn	Sn	04 06 14.1	-0.8
SOEI	Soe	6.22	242	P	Pn	04 05 05.4	+0.8
	85nm,0.7s						
SOEI				S	Sn	04 06 17.3	+2.4
	85nm,0.7s						
RKPI	Ransiki, Papua	6.83	40	P	Pn	04 05 14.1	+1.6
	109nm,0.5s,14μm						
RKPI				S	Sn	04 06 25.7	-3.5
	109nm,0.5s,14μm						
BATI	Baumata	6.96	241	P	Pn	04 05 16.4	+2.1
	53nm,0.7s						
BATI	Baumata	6.96	241	P	Pn	04 05 15.3	+1.0
	18nm,0.3s,baz=136,slow=2.8,SNR=7.1						
BATI				S	Sn	04 06 29.1	-3.3
	36nm,0.3s,baz=104,slow=7.1,SNR=11						
BKSI	Bulukumba	9.76	278	P	Pn	04 05 54.0	+2.4
FITZ	Fitzroy Crossi	11.93	200	*e*Pn	Pn	04 06 19.7	-0.5
FITZ				*e*Sn	Sn	04 08 19.8	-12
FITZ	Fitzroy Crossi	11.93	200	P	Pn	04 06 19.3	-0.9
	1.8nm,0.3s,baz=22,slow=9.7,SNR=44						
FITZ				S	Sn	04 08 20.9	-11
	2.8nm,0.3s,baz=35,slow=16,SNR=3.1						
WRAB	Tennant Creek	13.76	162	*e*Pn	Pn	04 06 42.7	-1.0
WRAB				*e*Sn	Sn	04 09 10.0	-6.3
WRA	Warramunga Arr	13.77	162	P	Pn	04 06 42.5	-1.3
	4.9nm,0.3s,baz=346,slow=13,SNR=69						
WRA				S	Sn	04 09 08.0	-8.4
	3.2nm,0.3s,baz=333,slow=23,SNR=6.0						
WB2	Warramunga Arr	13.77	162	*e*Pn	Pn	04 06 42.9	-1.0
WB2				*e*Sn	Sn	04 09 10.5	-6.0
COEN	Coen	14.93	119	*e*Pn	P	04 07 02.4	+2.2
	5.7nm,0.6s						
AS31	Alice Springs	17.21	167	*e*P	Pn	04 07 28.1	+1.9
	6.9nm,0.4s						
ASAR	Alice Springs	17.21	167	P	Pn	04 07 28.1	+1.9
	3.1nm,0.3s,baz=341,slow=9.2,SNR=55						
ASAR				S	S	04 10 30.8	-6.5
	0.7nm,0.3s,baz=343,slow=22,SNR=3.9						
AS01	Alice Springs	17.22	167	*e*P	Pn	04 07 27.8	+1.4
MANU	Manus Island	18.12	76	*e*P	Pn	04 07 38.9	+1.8
FORT	Forrest	23.90	184	*e*P	P	04 08 36.1	+1.4
	20nm,0.9s						
BBOO	Buckleboo	26.51	168	*e*P	P	04 08 59.7	+1.4
	4.6nm,0.5s						
STKA	Stephens Creek	27.25	158	*e*P	P	04 09 06.6	+1.6
	1.0nm,1.0s						
STKA	Stephens Creek	27.25	158	P	P	04 09 06.5	+1.6
	3.3nm,0.4s,baz=335,slow=7.3,SNR=10.0						
NWAO	Narrogin (SRO)	28.50	203	P	P	04 09 16.9	+0.9
	5.1nm,0.3s,baz=279,slow=7.7,SNR=8.5						
CMAR	Chiang Mai Arr	39.48	310	P	P	04 10 50.7	-0.1
	0.7nm,0.3s,baz=132,slow=6.6,SNR=4.7						
HHC	Hu-ho-hao-te	50.31	342	*e*P	P	04 12 23.4	+7.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,3.8s						
ULN	Ulaanbaatar	58.03	342	*e*P	P	04 13 11.0	-1.0
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	58.21	342	P	P	04 13 12.3	-1.0
	comp=Z,0.8nm,0.6s,baz=217,slow=31,SNR=10.0						
MK01	Makanchi Array	67.95	327	*e*P	P	04 14 17.8	+0.3
MK31	Makanchi Array	67.97	327	*e*P	P	04 14 17.6	+0.1
MKAR	Makanchi Array	67.97	327	P	P	04 14 17.5	-0.1
	comp=Z,2.9nm,0.6s,baz=118,slow=8.0,SNR=49						
ZALV	Zalesovo Beam	71.34	334	P	P	04 14 36.8	-1.2
	comp=Z,1.7nm,0.5s,baz=127,slow=5.4,SNR=7.8						
SEY	Seymchan	71.66	11	P	P	04 14 40.6	+0.9
	comp=Z,0.4nm,0.3s,baz=107,slow=19,SNR=3.5						
KURBB	Kurchatov Arra	72.26	329	P	P	04 14 43.5	-0.1
	comp=Z,3.0nm,0.5s,baz=125,slow=5.0,SNR=24						
KURK	Kurchatov	72.27	329	P	P	04 14 43.5	-0.1
QSPA	South Pole Qui	83.16	180	*e*P	P	04 15 44.0	+0.1
	comp=Z,6.1nm,0.5s						
QSPA	South Pole Qui	83.16	180	P	P	04 15 43.9	+0.1
	comp=Z,1.5nm,0.5s,baz=297,slow=0.7,SNR=14						
TORD	Torodi Ar. Bea	128.60	281	PKP	PKPdf	04 22 24.9	-0.1
	comp=Z,0.5nm,0.8s,baz=116,slow=2.3,SNR=3.0						
CPUP	Villa Florida	146.33	168	PKPbc	PKPbc	04 22 59.3	+0.7
	comp=Z,4.5nm,0.8s,baz=197,slow=0.8,SNR=9.4						
LPAZ	La Paz	150.97	142	PKPbc	PKPbc	04 23 12.6	+1.0
	comp=Z,1.9nm,0.4s,baz=26,slow=2.4,SNR=19						

IDC 25 04:07:12.8±42.0**, 36°.36N×101°.58E, h0**^{km}**, mb3.1**/2**, mb1 3.3**/4**, mb1mx3.1**/57**, mbtmp3.3**/4**, ML3.1**/2**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/15**, Error ellipse: s-maj=579.6km s-min=63.0km az=157.0, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTO	Baotou	7.86	55	*e*P	Pn	04 09 06.9	-1.5
SONM	Songino Array	12.01	16	Pn	Pn	04 10 04.8	-0.5
	0.4nm,0.3s,baz=201,slow=14,SNR=6.8						
MKAR	Makanchi Array	17.76	312	P	Pn	04 11 21.1	-0.3
	0.0nm,0.3s,baz=126,slow=9.4,SNR=1.7						
ZALV	Zalesovo Beam	21.10	332	P	P	04 11 59.6	+1.0
	0.9nm,0.8s,baz=144,slow=12,SNR=2.0						
KURBB	Kurchatov Arra	21.86	318	P	P	04 12 06.4	-0.4
	0.6nm,0.7s,baz=117,slow=12,SNR=4.6						
OBN	Obninsk	47.23	315	LR	LR	04 36 06.8	
	comp=Z,49nm,21.4s,baz=215,slow=37						

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*IDC **25** 04:10:04.0±2.5, 34°.78S×103°.17W, h0^{km}, mb3.6/5, mb1 4.0/5, mb1mx3.7/25, mbtmp3.6/5, MS3.4/1, Ms1 3.4/1, ms1mx3.1/19, Error ellipse: s-maj=76.7km s-min=34.3km az=21.0*

ISC 25 04:10:04.7±2.6**, 34°.9S**±0°.5×**103°.2W**±0°.3**, h10**^{km}**, n11, σ0^{s}.91**/7**, mb3.6**/5**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	9.40	324	LR	LR	04 15 08.6	
	comp=Z,218nm,19.9s,baz=132,slow=33						
LPAZ	La Paz	36.42	68	P	P	04 17 10.9	+0.5
	0.8nm,0.8s,baz=218,slow=9.9,SNR=2.4						
SIV	San Ignacio	42.09	74	P	P	04 17 56.1	-1.0
	1.0nm,0.9s,baz=253,slow=11,SNR=4.5						
TXAR	Lajitas Array	63.94	360	P	P	04 20 37.5	-0.5
	0.1nm,0.3s,baz=182,slow=9.9,SNR=2.5						
NVAR	Mina Array Bea	74.34	348	P	P	04 21 42.7	+0.1
	0.8nm,0.7s,baz=195,slow=6.5,SNR=4.8						
PDAR	Pinedale Array	77.56	355	P	P	04 22 01.3	+0.5
	0.6nm,0.8s,baz=172,slow=8.1,SNR=7.4						
H01W1	Cape Leeuwin H	102.25	211	T	T	06 17 26.3	
	baz=148,slow=76,SNR=4.3						
H01W2	Cape Leeuwin H	102.25	211	T	T	06 17 26.6	
	baz=148,slow=76,SNR=7.1						
H01W3	Cape Leeuwin H	102.26	211	T	T	06 17 27.6	
	baz=148,slow=76,SNR=4.8						
BRTR	Keskin Array B	145.60	69	PKPbc	PKPab	04 29 45.0	+1.2
	0.9nm,0.9s,baz=237,slow=1.5,SNR=5.0						
SONM	Songino Array	154.51	309	PKPbc	PKPbc	04 30 05.0	-0.5
	0.5nm,0.8s,baz=111,slow=3.2,SNR=2.2						

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*IDC **25** 04:44:10.0±1.1, 11°.36S×165°.76E, h0^{km}, mb4.4/13, mb1 4.5/13, mb1mx4.2/39, mbtmp4.3/13, MS3.7/4, Ms1 3.6/4, ms1mx3.2/41, Error ellipse: s-maj=42.8km s-min=17.5km az=137.0*

*ISCJB **25** 04:44:12.4±0.4, 11°.34S±0°.05×165°.61E±0°.08, h24^{km}, mb4.4/21, MS4.0/4, Error ellipse: s-maj=11.2km s-min=7.0km az=12.5*

*NEIC **25** 04:44:12.5±0.4, 11°.21S×165°.58E, h10^{km}, mb4.5/10, Error ellipse: s-maj=13.2km s-min=7.9km az=126.0*

ISC 25 04:44:14.5±0.6**, 11°.26S**±0°.07×**165°.6E**±0°.1**, h24**^{km}**, n45, σ0^{s}.98**/37**, mb4.5**/21**, MS3.9**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.78	176	Pn	Pn	04 46 48.0	+0.5
	3.4nm,0.3s,baz=336,slow=13,SNR=22						
DZM				Sn	Sn	04 48 46.7	-0.8
	0.4nm,0.3s,baz=248,slow=19,SNR=2.2						
DZM				LR	LR	04 50 01.8	
	comp=Z,136nm,21.0s,baz=8.5,slow=33						
ONTNC	Ouen Toro	11.02	176	*e*Pn	Pn	04 46 52.4	+1.7
TARA	Tarawa	14.49	31	*e*Pn	Pn	04 47 39.6	+1.4
CTA	Charters Tower	20.58	242	P	P	04 48 52.5	+0.7
	8.3nm,0.8s,baz=69,slow=13,SNR=11						
CTAO	Charters Tower	20.58	242	*e*P	P	04 48 51.7	-0.1
	25nm,1.1s						
COEN	Coen	22.05	261	*e*P	P	04 49 06.7	-1.1
	11nm,0.9s						
RAO	Raoul Island	23.60	142	LR	LR	04 57 21.0	
	comp=Z,494nm,20.0s,baz=178,slow=34						
URZ	Urewera	28.79	161	*e*P	P	04 50 05.3	-5.2
	11nm,1.2s						
H11S2	WAKE ISLAND Hy	29.58	2	T	T	05 20 53.0	
	baz=178						
H11S3	WAKE ISLAND Hy	29.59	2	T	T	05 20 51.0	
	baz=178						
H11S1	WAKE ISLAND Hy	29.60	2	T	T	05 20 56.2	
	baz=178						
STKA	Stephens Creek	30.19	224	P	P	04 50 23.3	+0.2
	3.8nm,0.5s,baz=34,slow=11,SNR=11						
STKA				LR	LR	05 01 29.5	
	comp=Z,65nm,18.4s,baz=27,slow=34						
H11N1	WAKE ISLAND Hy	30.80	2	T	T	05 22 24.4	
	baz=183						
H11N3	WAKE ISLAND Hy	30.81	2	T	T	05 22 34.9	
	baz=183						
H11N2	WAKE ISLAND Hy	30.82	2	T	T	05 22 27.5	
	baz=183						
WRAB	Tennant Creek	31.27	250	*e*P	P	04 50 32.5	-0.3
	6.1nm,0.8s						
WR1	Warramunga Arr	31.28	250	*e*P	P	04 50 32.4	-0.5
	14nm,0.8s						
WRA	Warramunga Arr	31.28	250	P	P	04 50 32.4	-0.6
	8.5nm,0.7s,baz=82,slow=9.0,SNR=67						
ASAR	Alice Springs	32.58	244	P	P	04 50 43.3	-1.0
	2.3nm,0.7s,baz=72,slow=9.5,SNR=19						
FITZ	Fitzroy Crossi	39.19	255	P	P	04 51 40.0	-1.0
	3.7nm,0.8s,baz=70,slow=12,SNR=3.8						
PPT	Papeete	43.78	104	LR	LR	05 07 06.9	
	comp=Z,148nm,20.8s,baz=316,slow=32						
JNU	Nakatsue	55.17	324	P	P	04 53 45.1	-0.3
	3.5nm,0.6s,baz=95,slow=7.4,SNR=3.6						
CMAR	Chiang Mai Arr	72.07	294	P	P	04 55 38.6	+1.4
	1.9nm,0.4s,baz=128,slow=5.0,SNR=14						
CMAR				LR	LR	05 27 47.9	
	comp=Z,542nm,18.8s,baz=16,slow=36						
ULN	Ulaanbaatar	78.39	324	*e*P	P	04 56 14.1	+0.8
	2.9nm,0.7s						
SONA0	Songino Array	78.76	324	*e*P	P	04 56 16.1	+0.9
SONM	Songino Array	78.76	324	P	P	04 56 16.1	+0.9
	0.4nm,0.3s,baz=141,slow=7.7,SNR=5.3						
WRH	Wood River Hil	83.18	18	*e*P	P	04 56 36.9	-1.3
	3.9nm,1.0s						
ILAR	Eielson Array	83.76	19	P	P	04 56 40.6	-0.7
	1.4nm,0.6s,baz=233,slow=5.2,SNR=33						
ILB	Eielson Array	83.76	19	*e*P	P	04 56 40.6	-0.7
SCRK	Sand Creek	84.16	20	*e*P	P	04 56 43.7	+0.2
	3.5nm,0.8s						
AFDM	Forest Hills D	84.44	49	*e*P	P	04 56 43.6	-1.7
	3.0nm,1.0s						
EGAK	Eagle	85.62	20	*e*P	P	04 56 51.6	+1.0
	5.7nm,0.8s						
NV01	Mina Array Sit	86.27	50	*e*P	P	04 56 54.0	-0.7
NVAR	Mina Array Bea	86.27	50	P	P	04 56 54.0	-0.7
	1.2nm,0.9s,baz=224,slow=7.3,SNR=7.2						
MK32	Makanchi Array	93.58	317	*e*P	P	04 57 29.2	+0.4
MKAR	Makanchi Array	93.58	317	P	P	04 57 29.2	+0.5
	3.0nm,0.7s,baz=94,slow=6.5,SNR=41						
ZALV	Zalesovo Beam	93.65	324	P	P	04 57 28.0	-0.8
	1.1nm,0.6s,baz=113,slow=3.4,SNR=4.7						
ZAA1	Zalesovo Array	93.65	324	*e*P	P	04 57 28.0	-0.8
YKA	Yellowknife Ar	95.23	27	P	P	04 57 34.2	-1.6
	0.3nm,0.7s,baz=255,slow=4.7,SNR=7.0						
YKB5	Yellowknife Ar	95.23	27	*e*P	P	04 57 34.2	-1.6
AKASG	Malin Array Be	126.97	327	PKP	PKiKP	05 03 16.5	-0.4
	0.1nm,0.3s,baz=49,slow=1.7,SNR=2.8						
GEC2	GERESS Array S	135.84	333	*e*PKPdf	PKiKP	05 03 35.9	+0.8
GERES	GERESS Array B	135.84	333	PKP	PKiKP	05 03 35.9	+0.8
	0.5nm,0.8s,baz=116,slow=3.1,SNR=3.6						
KEST	Kesra	147.50	322	PKPbc	PKPbc	05 03 56.1	-1.0
	3.6nm,0.7s,baz=250,slow=1.4,SNR=6.7						
ESDC	Sonseca Array	150.22	344	PKPab	PKPab	05 04 11.2	+1.3
	0.7nm,0.6s,baz=28,slow=2.4,SNR=7.1						

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*NEIC **25** 04:51:35.3±0.0, 18°.09N×101°.80W, h6^{km}, MD4.0(MEX), After MEX.*

MEX 25 04:51:35.3±0.9**, 18°.09N×101°.81W, h6**^{km}±25^{km}**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.58	146	*e*P	Pg	04 51 45.9	-0.6
ZIIG				*e*S	Sg	04 51 54.4	+0.4
ZIIG	Zihuatanejo	0.58	146	*e*P	Pg	04 51 45.9	-0.6
ZIIG				*e*S	Sg	04 51 54.4	+0.4
ARIG	Puente Sto Nin	1.40	82	*e*P	Pn	04 51 57.5	-3.9
ARIG				*e*S	Sb	04 52 14.6	-5.4
ARIG	Puente Sto Nin	1.40	82	*e*P	Pn	04 51 57.5	-3.9
ARIG				*e*S	Sb	04 52 14.6	-5.4
MOIG	Morelia	1.69	20	*e*Pn	Pn	04 52 01.7	-3.8
MOIG				*e*Sn	Sn	04 52 14.1	-13
CAIG	El Cayaco	1.79	125	*e*P	Pn	04 52 02.7	-4.1
CAIG				*i* S	Sn	04 52 24.2	-5.7
CAIG	El Cayaco	1.79	125	*e*P	Pn	04 52 02.7	-4.1
CAIG				*i* S	Sn	04 52 24.2	-5.7
MEIG	Mezcala	2.09	94	*i* P	Pn	04 52 07.1	-3.8
MEIG	Mezcala	2.09	94	*i* P	Pn	04 52 07.1	-3.8
EZ5V		2.19	309	*e*P	Pn	04 52 10.0	-2.6
PLIG	Platanillo	2.21	82	*e*P	Pn	04 52 10.0	-2.6
PLIG	Platanillo	2.21	82	*e*P	Pn	04 52 10.0	-2.6
R15V		2.33	298	*e*P	Pn	04 52 11.6	-2.6

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*IDC **25** 04:54:03.0±3.8, 20°.40S×178°.23W, h596^{km}±44^{km}, mb3.2/7, mb1 3.5/9, mb1mx3.2/38, mbtmp4.2/9, Error ellipse: s-maj=29.7km s-min=23.5km az=167.0*

ISC 25 04:53:57.5±0.9**, 20°.3S**±0°.2×**177°.9W**±0°.2**, h534**^{km}**, n16, σ1^{s}.55**/16**, mb3.8**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.68	260	P	P	04 57 07.2	+3.2
	0.5nm,0.3s,baz=73,slow=19,SNR=1.1						
URZ	Urewera	18.45	192	P	P	04 57 40.0	-0.1
	2.3nm,0.3s,baz=227,slow=2.8,SNR=9.6						
CTA	Charters Tower	33.57	264	P	P	04 59 53.3	-0.2
	baz=91,slow=12						
JAY	Jayapura	44.02	288	P	P	05 01 17.7	-0.4
	11nm,0.5s,baz=100,slow=3.8,SNR=5.8						
ASAR	Alice Springs	44.63	256	P	P	05 01 21.9	-0.8
	2.3nm,0.7s,baz=89,slow=8.5,SNR=20						
ASAR				PcP	PcP	05 02 53.4	-0.7
	0.3nm,0.7s,baz=114,slow=4.6,SNR=5.3						
WRA	Warramunga Arr	44.69	262	P	P	05 01 21.7	-1.5
	1.1nm,0.3s,baz=96,slow=7.6,SNR=88						
PETK	Petropavlovsk-	76.05	345	P	P	05 04 49.7	-0.1
	1.6nm,0.6s,baz=156,slow=7.3,SNR=2.5						
NVAR	Mina Array Bea	80.81	43	P	P	05 05 18.6	+2.7
	0.4nm,0.8s,baz=229,slow=8.1,SNR=4.6						
ILAR	Eielson Array	88.06	13	P	P	05 05 50.4	-0.2
	0.6nm,0.4s,baz=214,slow=5.4,SNR=16						
PDAR	Pinedale Array	88.75	43	P	P	05 05 56.5	+1.9
	0.3nm,0.6s,baz=238,slow=2.8,SNR=3.9						
BVAR	Borovoye Array	118.92	320	PKP	PKPdf	05 11 43.7	-1.4
	0.5nm,0.3s,baz=124,slow=3.5,SNR=4.5						
ARCES	ARCESS Array B	128.69	350	PKP	PKPdf	05 12 02.5	-0.9
	5.3nm,1.0s,baz=57,slow=3.3,SNR=5.2						
FINES	FINESS Array B	135.55	344	PKP	PKPdf	05 12 15.8	-0.6
	0.7nm,0.7s,baz=86,slow=5.7,SNR=3.7						
AKASG	Malin Array Be	142.82	331	PKhKP	PKPpre	05 12 25.8	
	1.7nm,0.5s,baz=44,slow=4.3,SNR=16						
BRTR	Keskin Array B	146.71	313	PKPbc	PKPbc	05 12 38.8	-1.2
	0.7nm,0.5s,baz=129,slow=3.8,SNR=7.0						
GERES	GERESS Array B	149.98	345	PKPbc	PKPbc	05 12 46.4	-1.4
	0.6nm,0.6s,baz=20,slow=3.1,SNR=5.2						

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*DDA **25** 05:01:47.2, 39°.10N×29°.47E, h12^{km}, ML2.6*

*ISK **25** 05:01:47.9, 39°.13N×29°.43E, h5^{km}, ML2.1/7*

*ISCJB **25** 05:01:48.1±0.5, 39°.08N±0°.03×29°.46E±0°.05, h10^{km}±3^{km}, Error ellipse: s-maj=7.3km s-min=4.3km az=35.4*

ISC 25 05:01:47.7±0.9**, 39°.09N**±0°.03×**29°.46E**±0°.04**, h13**^{km}±5^{km}**, n18, σ0^{s}.32**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	Gediz	0.02	102	*i* P	Pg	05 01 50.4	+0.2
GDZ				*i* S	Sg	05 01 51.3	-0.6
GDZ				IAML_P			
	comp=Z,67μm,0.1s						
GEDZ	Gediz	0.06	217	PG	Pg	05 01 50.2	-0.1
GEDZ				SG	Sg	05 01 52.1	-0.1
SHAP	Saphane-Kutahy	0.20	249	PG	Pg	05 01 52.3	+0.2
SHAP				SG	Sg	05 01 55.5	+0.3
TVSB	Tavsanli	0.36	0	PG	Pg	05 01 54.9	0.0
TVSB				SG	Sg	05 01 59.8	0.0
USAK	Uak-Merkez	0.51	222	*i* P	Pb	05 01 58.3	-0.2
USAK				*i* S	Sg	05 02 04.8	+0.3
USAK				IAML_P			
	comp=Z,2μm,0.1s						
DEMI	Demirci	0.58	265	*i* P	Pg	05 01 59.1	0.0
DEMI				*i* S	Sb	05 02 07.5	-0.4
KHAL	Karahalli	0.72	178	*i* P	Pg	05 02 01.3	-0.4
KHAL				IAML_P			
	comp=Z,967nm,0.1s						
KULA	Kula-Manisa	0.85	227	PG	Pg	05 02 03.8	-0.3
DURS	Dursunbey	0.92	304	*i* P	Pn	05 02 06.5	+0.2
DURS				IAML_P			
	comp=Z,423nm,0.1s						
MANT	Manisa	0.93	230	*i* P	Pb	05 02 05.8	+0.1
MANT				*i* S	Sg	05 02 17.9	+0.2
MANT				IAML_P			
	comp=Z,698nm,0.1s						
KZIL	AFYON_Kizioren	0.99	147	*i* P	Pg	05 02 06.8	0.0
KZIL				IAML_P			
	comp=Z,219nm,0.2s						
BORA	Eskisehir	1.10	44	*i* P	Pb	05 02 08.8	+0.2
BORA				IAML_P			
	comp=Z,2μm,0.1s						
CAVI	Cavuskoy	1.15	15	PN	Pn	05 02 09.8	+0.3
MDNY	Mudanya-Bursa	1.35	341	PN	Pg	05 02 13.5	-0.1
KCTX	Karacabey (Bur	1.45	324	PN	Pg	05 02 15.2	-0.3
YLV	Yalova	1.47	357	PN	Pg	05 02 15.3	-0.7
ARMT	Armutlu	1.54	343	PN	Pb	05 02 16.2	+0.1
GULT	Gulveren	1.57	31	PN	Pb	05 02 16.9	+0.3

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*GUC **25** 05:02:28.7±0.4, 18°.34S×71°.53W, h31^{km}±4^{km}, ML4.1*

*ISCJB **25** 05:02:29.6±0.8, 18°.29S±0°.04×71°.55W±0°.06, h45^{km}±8^{km}, mb4.3/15, MS3.6/4, Error ellipse: s-maj=9.2km s-min=5.7km az=163.7*

*NEIC **25** 05:02:30.9±0.8, 18°.24S×71°.45W, h41^{km}±7^{km}, mb4.4/14, ML4.1(GUC), Error ellipse: s-maj=10.4km s-min=6.7km az=81.0*

*IDC **25** 05:02:33.9±2.1, 18°.17S×71°.26W, h61^{km}±18^{km}, mb3.9/10, mb1 4.0/15, mb1mx3.8/38, mbtmp4.2/15, MS3.7/8, Ms1 3.7/8, ms1mx3.5/26, Error ellipse: s-maj=21.9km s-min=16.1km az=65.0*

ISC 25 05:02:31.7±0.9**, 18°.27S**±0°.05×**71°.47W**±0°.06**, h49**^{km}±10^{km}**, n104, σ2^{s}.02**/101**, mb4.3**/15**, MS3.6**/4**, 3C-5D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	IPOC Station P	1.13	108⇓	*e*P	Pn	05 02 49.5	-1.9
PB12				*e*S	Sn	05 03 04.6	-1.3
PB12				IAML		05 03 06.0	
	comp=N,5μm,0.6s						
PSGC	Pisagua	1.83	136	*e*P	Pn	05 03 00.0	-0.9
PSGC				*e*S	Sn	05 03 24.0	+1.0
PSGC				IAML		05 03 27.8	
	comp=E,1μm,0.4s						
MNMC	Minye Minye	1.97	116	*e*Pn	Pn	05 03 02.5	-0.4
MNMC				*e*Sn	Sn	05 03 26.6	0.0
MNMC	Minye Minye	1.97	116⇓	*e*P	Pn	05 03 02.5	-0.4
MNMC				IAML		05 03 36.8	
	comp=E,5μm,0.4s						
PB11	IPOC Station P	2.27	131	*e*Pn	Pn	05 03 06.7	-0.2
PB11	IPOC Station P	2.27	131⇑	*e*P	Pn	05 03 06.3	-0.6
PB11				*e*S	Sn	05 03 35.0	+1.3
PB11				IAML		05 03 38.9	
	comp=N,2μm,0.5s						
PB08	IPOC Station P	2.87	131	*e*P	Pn	05 03 15.3	0.0
PB08				*e*S	Sn	05 03 50.7	+1.8
PB08				IAML		05 04 00.5	
	comp=N,545nm,0.3s						
PB01	IPOC Station P	3.33	146	*e*Pn	Pn	05 03 21.3	-0.2
PB01	IPOC Station P	3.33	146	*e*P	Pn	05 03 20.6	-0.8
PB01				*e*S	Sn	05 04 00.2	+0.4
PB01				IAML		05 04 24.1	
	comp=N,409nm,0.6s						
PB02	IPOC Station P	3.38	154⇓	*e*P	Pn	05 03 21.2	-0.8
PB02				*e*S	Sn	05 04 01.2	+0.3
PB02				IAML		05 04 25.6	
	comp=E,643nm,0.5s						
LPAZ	La Paz	3.75	59	*e*Pn	Pn	05 03 28.4	+0.8
LPAZ	La Paz	3.75	59	P	Pn	05 03 28.6	+1.1
	comp=E,4.1nm,0.3s,baz=246,slow=7.5,SNR=70						
LPAZ				LR	LR	05 05 17.4	
	comp=E,1μm,19.2s,baz=252,slow=46						
PB07	IPOC Station P	3.75	157	*e*P	Pn	05 03 26.3	-0.9
PB09	IPOC Station P	4.09	150	*e*P	Pn	05 03 32.1	+0.3
PB03	IPOC Station P	4.09	157⇑	*e*P	Pn	05 03 30.9	-1.0
PB03				*e*S	Sn	05 04 18.7	+0.1
PB04	IPOC Station P	4.23	163	*e*Pn	Pn	05 03 32.5	-1.3
PB04				*e*Sn	Sn	05 04 20.9	-1.1
PB04	IPOC Station P	4.23	163⇑	*e*P	Pn	05 03 32.1	-1.7
LVC	Limon Verde	4.94	151	*e*Pn	Pn	05 03 43.7	0.0
LVC	Limon Verde	4.94	151	P	Pn	05 03 44.1	+0.4
	comp=E,8.6nm,0.3s,baz=344,slow=8.2,SNR=45						
LVC				LR	LR	05 05 50.1	
	comp=E,506nm,19.2s,baz=324,slow=40						
PB10	IPOC Station P	5.29	171	*e*Pn	Pn	05 03 45.8	-2.4

GO02	Mina Guanaco	7.08	166	*e*Pn	Pn	05 04 11.0	-2.0
NNA	Nana	8.12	320	*e*Pn	Pn	05 04 26.4	-0.7
NNA				*e*Sn	Sn	05 05 53.5	-4.1
NNA	Nana	8.12	320	P	Pn	05 04 30.5	+3.4
	comp=E,1.0nm,0.3s,baz=207,slow=11,SNR=3.1						
NNA				S	Sn	05 05 53.5	-4.1
	comp=E,3.6nm,0.3s,baz=231,slow=13,SNR=2.7						
SIV	San Ignacio	10.19	79	P	Pn	05 04 55.3	-0.2
	comp=E,1.9nm,0.3s,baz=278,slow=8.8,SNR=36						
SIV				LR	LR	05 09 21.1	
	comp=E,803nm,18.3s,baz=274,slow=41						
LCO	Las Campanas	10.72	176	*e*Pn	Pn	05 05 02.4	-0.5
ATAH	Atahualpa	12.96	328	LR	LR	05 11 05.7	
	comp=E,258nm,20.9s,baz=148,slow=39						
CPUP	Villa Florida	15.34	124	*e*Pn	Pn	05 06 05.1	+0.1
	comp=E,8.1nm,1.4s						
CPUP	Villa Florida	15.34	124	P	Pn	05 06 05.5	+0.5
	comp=E,0.1nm,0.3s,baz=314,slow=11,SNR=3.7						
OTAV	Otavalo	19.63	339	*e*P	P	05 06 56.7	-0.1
	comp=E,9.9nm,1.2s						
OTAV	Otavalo	19.63	339	⇓*e*P	Pn	05 07 07.5	+8.9
OTAV	Otavalo	19.63	339	⇓*e*P	Pn	05 07 07.5	+8.9
GCUF	Volcan Galeras	20.22	343	*e*P	Pn	05 07 10.7	+5.2
GCUF	Volcan Galeras	20.22	343	*e*P	Pn	05 07 10.7	+5.2
CRUC	La Cruz	20.44	344	*e*P	Pn	05 07 11.7	+3.7
CRUC	La Cruz	20.44	344	*e*P	Pn	05 07 11.7	+3.7
PTGA	Pitinga	20.77	34	*e*P	P	05 07 07.0	-1.7
	comp=E,16nm,0.6s						
PTGA	Pitinga	20.77	34	P	P	05 07 07.3	-1.4
	comp=E,13nm,0.5s,baz=203,slow=12,SNR=42						
PTGA				LR	LR	05 16 00.2	
	comp=E,302nm,20.6s,baz=206,slow=39						
SOTA	Rioblanco	20.90	345	*e*P	P	05 07 12.7	+2.1
SOTA	Rioblanco	20.90	345	*e*P	P	05 07 12.7	+2.1
PCON	Cinco Dias	21.03	346	*e*P	P	05 07 17.5	+5.3
PCON	Cinco Dias	21.03	346	*e*P	P	05 07 17.5	+5.3
BETC	Betania	21.18	349	*e*P	P	05 07 13.5	+0.3
BETC	Betania	21.18	349	*e*P	P	05 07 13.5	+0.3
POPC	Popayan, Colom	21.30	346	*e*P	P	05 07 19.2	+4.5
POPC	Popayan, Colom	21.30	346	*e*P	P	05 07 19.2	+4.5
TRQA	Tornquist	21.39	159	*e*P	P	05 07 16.2	+0.9
	comp=E,17nm,1.1s						
VILC	Villavicencio,	22.35	354	*e*P	P	05 07 25.5	-0.2
VILC	Villavicencio,	22.35	354	*e*P	P	05 07 25.5	-0.2
PLCA	Paso Flores	22.40	178	*e*P	P	05 07 26.9	+0.8
	comp=E,5.3nm,0.9s						
PLCA	Paso Flores	22.40	178	P	P	05 07 28.9	+2.7
	comp=E,3.0nm,1.0s,baz=23,slow=13,SNR=3.2						
BDFB	Brasilia	22.58	87	*e*P	P	05 07 26.6	-1.8
	comp=E,5.6nm,0.5s						
BDFB	Brasilia	22.58	87	P	P	05 07 26.8	-1.6
	comp=E,5.7nm,0.5s,baz=262,slow=9.7,SNR=23						
BDFB				LR	LR	05 15 57.0	
	comp=E,172nm,18.3s,baz=274,slow=36						
YOTC	Yotoco, Valle	22.63	347	*e*P	P	05 07 31.3	+2.5
YOTC	Yotoco, Valle	22.63	347	*e*P	P	05 07 31.3	+2.5
MALC	Bahia Malaga	22.88	345	*e*P	P	05 07 38.4	+7.1
MALC	Bahia Malaga	22.88	345	*e*P	P	05 07 38.4	+7.1
ANIL	Santa Ana	22.95	350	*e*P	P	05 07 33.9	+1.6
ANIL	Santa Ana	22.95	350	*e*P	P	05 07 33.9	+1.6
ROSC	El Rosal	23.13	353	*e*P	P	05 07 34.1	-0.2
	comp=E,3.4nm,0.8s						
ROSC	El Rosal	23.13	353	P	P	05 07 34.8	+0.6
	comp=E,1.3nm,0.3s,baz=132,slow=18,SNR=2.3						
RREF	El Recreo	23.34	350	*e*P	P	05 07 39.0	+2.5
RREF	El Recreo	23.34	350	*e*P	P	05 07 39.0	+2.5
PLMC	San Jos del P	23.51	348	*e*P	P	05 07 36.8	-0.8
PLMC	San Jos del P	23.51	348	*e*P	P	05 07 36.8	-0.8
RUSC	La Rusia	24.06	356	*e*P	P	05 07 41.6	-1.5
RUSC	La Rusia	24.06	356	*e*P	P	05 07 41.6	-1.5
HELC	Santa Helena	24.63	350	*e*P	P	05 07 49.2	+1.0
HELC	Santa Helena	24.63	350	*e*P	P	05 07 49.2	+1.0
BARC	Barichara	24.76	356	*e*P	P	05 07 46.5	-2.7
BARC	Barichara	24.76	356	*e*P	P	05 07 46.5	-2.7
PTBC	PUERTO BERRIO,	24.82	353	*e*P	P	05 07 47.6	-1.9
PTBC	PUERTO BERRIO,	24.82	353	*e*P	P	05 07 47.6	-1.9
SOLC	Bahia Solano	25.04	346	*e*P	P	05 07 53.2	+1.8
SOLC	Bahia Solano	25.04	346	*e*P	P	05 07 53.2	+1.8
ZARC	Zaragoza, Cauc	25.81	352	*e*P	P	05 07 57.7	-0.8
ZARC	Zaragoza, Cauc	25.81	352	*e*P	P	05 07 57.7	-0.8
SDV	Santo Domingo	26.99	2	*e*P	P	05 08 07.8	-1.5
	comp=E,6.7nm,0.9s						
SDV	Santo Domingo	26.99	2	P	P	05 08 09.4	0.0
	comp=E,3.5nm,0.7s,baz=52,slow=5.0,SNR=8.6						
SDV				LR	LR	05 20 22.8	
	comp=E,121nm,20.1s,baz=68,slow=40						
MDP	Montagnes des	29.73	40	LR	LR	05 21 25.7	
	comp=E,173nm,19.6s,baz=202,slow=38						
T49A	Edmonton	56.65	347	*e*P	P	05 12 09.7	-0.2
	comp=E,6.7nm,0.9s						
H43A	Windswept, Lux	64.19	347	*e*P	P	05 13 01.3	+0.1
	comp=E,11nm,1.0s						
SNAA	Sanae	66.10	161	*e*P	P	05 13 13.7	+0.2
	comp=E,9.7nm,1.5s						
DBIC	Dimbokro	70.20	76	*e*P	P	05 13 39.8	-0.2
	comp=E,15nm,1.5s						
DBIC	Dimbokro	70.20	76	P	P	05 13 41.0	+1.1
	comp=E,1.9nm,0.7s,baz=242,slow=7.4,SNR=3.2						
ULM	Lac du Bonnet	71.54	344	P	P	05 13 46.7	-0.6
	comp=E,0.8nm,0.6s,baz=158,slow=5.4,SNR=2.9						
QSPA	South Pole Qui	71.91	180	*e*P	P	05 13 51.5	+1.9
	comp=E,14nm,1.6s						
TOA1	Torodi Ar. Sit	78.59	72	*e*P	P	05 14 26.7	-2.1
TORD	Torodi Ar. Bea	78.59	72	P	P	05 14 26.7	-2.1
	comp=E,1.6nm,1.1s,baz=266,slow=6.0,SNR=4.7						
PAB	San Pablo	84.94	46	*e*P	P	05 15 02.4	+0.5
	comp=E,8.6nm,1.1s						
ESDC	Sonseca Array	85.27	46	P	P	05 15 02.9	-0.5
	comp=E,2.5nm,1.0s,baz=250,slow=4.7,SNR=6.6						
YKA	Yellowknife Ar	87.36	341	P	P	05 15 13.9	+0.9
	comp=E,3.4nm,0.7s,baz=137,slow=5.0,SNR=30						
YKB5	Yellowknife Ar	87.36	341	*e*P	P	05 15 13.9	+0.9
H11S2	WAKE ISLAND Hy	125.02	280	T	T	07 38 53.6	
	baz=100,slow=75,SNR=76						
H11N3	WAKE ISLAND Hy	125.02	282	T	T	07 38 28.6	
	baz=99,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	125.02	280	T	T	07 38 49.8	
	baz=100,slow=75,SNR=77						
H11S3	WAKE ISLAND Hy	125.03	280	T	T	07 38 54.9	
	baz=100,slow=75,SNR=91						
H11N2	WAKE ISLAND Hy	125.04	282	T	T	07 38 50.0	
	baz=99,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	125.04	282	T	T	07 38 53.9	
	baz=99,slow=75,SNR=5.7						
WR1	Warramunga Arr	134.36	215	*e*PKPdf	PKiKP	05 21 46.5	0.0
WRA	Warramunga Arr	134.36	215	PKP	PKiKP	05 21 46.5	0.0
	comp=E,0.3nm,0.8s,baz=146,slow=2.0,SNR=4.5						
MK32	Makanchi Array	144.29	31	*e*PKPdf	PKPdf	05 22 02.2	-0.2
MKAR	Makanchi Array	144.29	31	PKP	PKPdf	05 22 02.2	-0.2
	comp=E,0.4nm,0.7s,baz=319,slow=3.8,SNR=4.1						
SONA0	Songino Array	150.46	3	*e*PKPbc	PKiKP	05 22 19.7	+0.9
SONM	Songino Array	150.46	3	PKPbc	PKiKP	05 22 19.7	+0.9
	comp=E,1.1nm,0.8s,baz=327,slow=2.1,SNR=3.6						

IDC ***25*** *05:08:15.1±0.9, 51°.63N×178°.57W, h0^{km}, mb3.8/9, mb1 4.1/10, mb1mx3.8/62, mbtmp3.9/10, ML4.2/1, Error ellipse: s-maj=38.4km s-min=17.0km az=152.0*

ISCJB ***25*** *05:08:16.2±0.6, 51°.66N±0°.08×178°.22W±0°.10, h10^{km}, mb4.0/14, Error ellipse: s-maj=12.8km s-min=7.2km az=152.6*

NEIC ***25*** *05:08:17.7±0.6, 51°.49N×178°.12W, h10^{km}, mb4.2/20, Error ellipse: s-maj=15.4km s-min=7.7km az=137.0*

ISC 25 05:08:17.9±1.3**, 51°.6N**±0°.2×**178°.1W**±0°.1**, h10^{km}, n44,** σ**0^s.91**/37**, mb4.0**/14**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	Kanaga Island	0.66	65	*e*Pg	Pg	05 08 30.3	-0.4
ADK	Adak	0.94	70	*e*Pg	Pg	05 08 34.6	-1.5
ADK				*e*Sg	Sg	05 08 48.9	+0.6
SPIA	Saint Paul Isl	7.25	36	*e*Pn	Pn	05 10 03.5	-0.3
SPIA				*e*Sn	Sn	05 11 25.2	-0.9
UNV	Unalaska Valle	7.41	68	*e*Pn	Pn	05 10 06.5	+0.4
AKUT	Akutan	7.90	66	*e*Pn	Pn	05 10 13.5	+0.8
OHAK	Old Harbor	15.47	59	*e*Pn	Pn	05 11 56.6	+0.6
	113nm,1.7s						
SVW2	Sparrevohn	15.63	44	*e*Pn	Pn	05 11 58.0	-0.1
	24nm,1.5s						
KDAK	Kodiak Island	15.96	57	*e*Pn	Pn	05 12 01.1	-1.1
	104nm,1.6s						
KDAK	Kodiak Island	15.96	57	Pn	Pn	05 12 01.3	-0.9
	0.9nm,0.3s,baz=252,slow=2.3,SNR=15						
SEW	Seward	18.09	51	*e*Pn	Pn	05 12 28.4	-0.6
	83nm,1.5s						
GHO	Glory Hole Cre	18.84	46	*e*P	P	05 12 38.5	+0.8
	44nm,1.7s						
TRF	Thorofare Moun	18.90	40	*e*P	P	05 12 40.2	+1.6
	18nm,1.4s						
KNK	Knik Glacier	18.93	47	*e*P	P	05 12 40.2	+1.5
	28nm,1.5s						
MLY	Manley	19.48	36	*e*P	P	05 12 46.0	+1.3
	5.6nm,1.0s						
DHY	Denali Highway	19.96	43	*e*P	P	05 12 50.6	+0.4
	32nm,1.7s						
WRH	Wood River Hil	20.22	39	*e*P	P	05 12 52.4	-0.3
	4.4nm,1.1s						
MDM	Murphy Dome	20.39	38	*e*P	P	05 12 55.4	+0.8
	5.7nm,0.9s						
CCB	Clear Creek Bu	20.41	39	*e*P	P	05 12 54.7	0.0
	5.2nm,1.3s						
PAX	Paxson	20.75	44	*e*P	P	05 12 59.2	+0.6
	9.2nm,1.3s						
ILAR	Eielson Array	20.82	39	P	P	05 13 00.3	+1.1
	0.6nm,0.8s,baz=249,slow=10.0,SNR=9.6						
ILB	Eielson Array	20.82	39	*e*P	P	05 13 00.3	+1.1
SCRK	Sand Creek	21.70	42	*e*P	P	05 13 09.1	+0.2
	4.5nm,1.1s						
EGAK	Eagle	23.12	41	*e*P	P	05 13 25.0	+1.3
	17nm,1.6s						
INK	Inuvik	27.05	35	*e*P	P	05 13 59.9	-0.1
	5.5nm,1.5s						
INK	Inuvik	27.05	35	P	P	05 14 00.2	+0.2
	1.3nm,0.9s,baz=226,slow=7.5,SNR=3.3						
KLR	Kul'dur	31.54	286	P	P	05 14 35.4	-4.7
	0.8nm,0.7s,baz=63,slow=9.0,SNR=3.0						
H11N2	WAKE ISLAND Hy	33.89	206	T	T	05 50 35.5	
	baz=17,slow=76,SNR=230						
H11N3	WAKE ISLAND Hy	33.90	206	T	T	05 50 40.1	
	baz=17,slow=76,SNR=187						
H11N1	WAKE ISLAND Hy	33.91	206	T	T	05 50 40.7	
	baz=17,slow=76,SNR=172						
H11S1	WAKE ISLAND Hy	35.11	206	T	T	05 52 10.3	
	baz=17,slow=76,SNR=1130						
H11S2	WAKE ISLAND Hy	35.13	206	T	T	05 52 10.2	
	baz=17,slow=76,SNR=692						
H11S3	WAKE ISLAND Hy	35.13	206	T	T	05 52 12.0	
	baz=17,slow=76,SNR=642						
HAWA	Hanford	37.90	74	*e*P	P	05 15 35.4	+0.5
	5.4nm,0.8s						
NEW	Newport	38.41	70	P	P	05 15 41.3	+2.0
	0.8nm,0.5s,baz=287,slow=13,SNR=3.9						
WVOR	Wild Horse Val	40.54	79	*e*P	P	05 15 58.4	+1.1
	5.8nm,1.2s						
HLID	Hailey	42.47	75	*e*P	P	05 16 14.2	+1.0
	2.4nm,0.9s						
NV01	Mina Array Sit	43.10	83	*e*P	P	05 16 18.5	+0.1
NVAR	Mina Array Bea	43.10	83	P	P	05 16 18.5	+0.1
	0.6nm,0.7s,baz=277,slow=8.2,SNR=5.5						
PD31	Pinedale Array	45.84	73	*e*P	P	05 16 39.3	-0.9
PDAR	Pinedale Array	45.84	73	P	P	05 16 39.3	-0.9
	1.7nm,0.7s,baz=300,slow=4.6,SNR=14						
O20A	White River Ci	48.22	75	*e*P	P	05 16 58.6	-0.1
	12nm,1.4s						
WRA	Warramunga Arr	82.45	224	P	P	05 20 37.6	-2.8
	0.4nm,0.7s,baz=31,slow=5.9,SNR=5.5						
ASAR	Alice Springs	85.92	223	P	P	05 20 57.1	-0.9
	0.6nm,0.4s,baz=26,slow=5.6,SNR=5.2						
STKA	Stephens Creek	90.33	213	P	P	05 21 18.2	-0.6
	0.5nm,0.2s,baz=346,slow=8.1,SNR=3.4						

BJI ***25*** *05:11:07.2, 34°.45N×85°.70E, h10^{km}, mB5.5/57, mb4.9/65, Ms5.5/87, Ms7 5.4/77*

MOS ***25*** *05:11:07.8±1.2, 34°.41N×85°.70E, h22^{km}, mb5.2/78, MS5.0/39, Error ellipse: s-maj=5.8km s-min=3.1km az=118.3*

NDI ***25*** *05:11:07.0±3.0, 34°.35N×85°.62E, h10^{km}, mb5.0, mb5.1(NEIC)*

ISCJB ***25*** *05:11:07.2±0.1, 34°.35N±0°.02×85°.74E±0°.02, h15^{km}, mb5.0/190, MS5.1/75, Error ellipse: s-maj=2.7km s-min=2.0km az=29.4*

NEIC ***25*** *05:11:07.5±0.1, 34°.29N×85°.65E, h10^{km}, mb5.1/100, MW5.4, Error ellipse: s-maj=4.0km s-min=3.0km az=214.0, Moment Tensor Solution. s12 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.35; M$_{\theta\theta}$-1.53; M$_{\phi\phi}$1.88; M$_{r\theta}$-0.01; M$_{\theta\phi}$-0.02; M$_{\phi r}$-0.17; Best double couple: M$_0$1.70000×10^{17} NP1:φ$_s$135.00000°,δ87.00000°,λ177.00000°. NP2: φ$_s$225.00000°,δ87.00000°,λ3.00000°. Principal axes: T 1.9000, Plg4.0000°, Azm90.0000°; N -0.3700, Plg86.0000°, Azm264.0000°; P -1.5300, Plg0.0000°, Azm360.0000°;*

IDC ***25*** *05:11:10.7±3.6, 34°.31N×85°.66E, h33^{km}±27^{km}, mb4.5/37, mb1 4.6/42, mb1mx4.5/52, mbtmp4.7/42, ML4.0/5, MS4.9/33, Ms1 4.9/33, ms1mx4.9/36 Error ellipse: s-maj=10.8km s-min=9.0km az=21.0*

GCMT ***25*** *05:11:11.5±0.1, 34°.30N±0°.01×85°.63E±0°.01, h26^{km}, MW5.6/131, Moment Tensor Solution. s95,c147; s131,c310; Duration: 1^s.5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.40±.04; M$_{\theta\theta}$-2.61±.03; M$_{\phi\phi}$3.01±.04; M$_{r\theta}$0.72±.08; M$_{\theta\phi}$0.36±.03; M$_{\phi r}$0.25±.08; Best double couple: M$_0$2.94800×10^{17} NP1:φ$_s$227.00000°,δ82.00000°, λ-15.00000°. NP2:φ$_s$320.00000°,δ75.00000°, λ-172.00000°. Principal axes: T 3.0580, Plg5.0000°, Azm274.0000°; N -0.2180, Plg73.0000°, Azm21.0000°; P -2.8390, Plg16.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 25 05:11:07.9±0.6**, 34°.34N**±0°.03×**85°.58E**±0°.03**, h14^{km}**±3^{km}**, h14^{km}:pP-P, n599,** σ**2^s.38**/651**, mb5.1**/202**, MS5.1**/76**, 54C-37D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	Dangsing	6.17	195	*e*P	Pn	05 12 41.1	+2.1
	472nm,0.5s						
KKN	Kakani	6.54	182	*e*P	Pn	05 12 46.3	+2.3
	398nm,0.6s						
PYUN	Piuthan	6.61	200	*e*P	Pn	05 12 45.3	+0.4
	594nm,0.8s						
LSA	Lhasa	6.62	133	Pn	Pn	05 12 49.6	+4.3
LSA				LR	LR		
	comp=E,36μm,12.7s						
LSA				LR	LR		
	comp=Z,18μm,15.1s						
LSA	Lhasa	6.62	133	*e*Pn	Pn	05 12 45.9	+0.6
LSA	Lhasa	6.62	133	P	Pn	05 12 50.2	+5.0
LSA	Lhasa	6.62	133	*e*P	Pn	05 12 45.9	+0.6
JIRN	Jiri	6.68	175	*e*P	Pn	05 12 48.1	+2.0
	430nm,0.4s						
DMN	Daman	6.72	184	*e*P	Pn	05 12 48.5	+1.9
	350nm,0.5s						
PKIN	Phulchoki	6.75	181	*e*P	Pn	05 12 49.0	+2.1
	588nm,0.7s						
PKI	Pulchoki	6.75	181	*e*P	Pn	05 12 49.2	+2.2
	1μm,0.9s						
KOLN	Koldanda	6.77	195	*e*P	Pn	05 12 48.8	+1.7
	867nm,0.8s						
RAMN	Ramite	7.42	173	*e*P	Pn	05 12 56.6	+0.5
	870nm,0.7s						
DDI	Dehra Dun	7.52	240	*e*P	Pn	05 12 56.0	-1.3
DDI				*e*S	Sn	05 14 15.3	-7.2
ODAN	Odare	7.62	168	*e*P	Pn	05 12 59.1	+0.3
	1μm,0.9s						
SMLA	Simla	7.78	248	*e*P	Pn	05 13 02.2	+1.4
SMLA				*e*S	Sn	05 14 23.7	-4.9
DHRM	DHARAMSHALA	8.04	258	*e*P	Pn	05 13 05.6	+1.0
DHRM				*e*S	Sn	05 14 28.6	-7.0
NDI	New Delhi	9.10	234	*e*P	Pn	05 13 18.0	-0.9
NDI				*e*S	Sn	05 14 55.0	-6.1
KSH	Kashi	9.26	307	⇑*i*P	Pn	05 13 23.9	+2.7
KSH				sP		05 13 34.8	
KSH				S	Sn	05 15 10.4	+5.1
KSH				sS		05 15 19.0	
KSH				pmax	pmax		
	comp=Z,31nm,1.0s						
KSH				pmax	pmax		
	comp=Z,1μm,4.3s						
KSH				LR	LR		
	comp=N,39μm,5.4s						
KSH				LR	LR		
	comp=E,34μm,4.1s						
KSH				LR	LR		
	comp=Z,36μm,7.7s						
TARG	Taragay, Kyrgy	9.59	323	*e*Pn	Pn	05 13 27.9	+1.9
WMQ	Urumqi	9.61	9	P	Pn	05 13 28.0	+2.1
WMQ				PP	PnPn	05 13 37.5	+3.9
WMQ				S	Sn	05 15 18.3	+4.7
WMQ				sS		05 15 23.0	
WMQ				pmax	pmax		
	comp=Z,160nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,2μm,4.1s						
WMQ				smax	smax		
	comp=N,330nm,1.7s						
WMQ				smax	smax		
	comp=E,360nm,1.3s						
WMQ				LR	LR		
	comp=N,13μm,8.5s						
WMQ				LR	LR		
	comp=E,21μm,7.3s						
WMQ				LR	LR		
	comp=Z,14μm,18.7s						
WMQ	Urumqi	9.61	9	*e*Pn	Pn	05 13 27.7	+1.8
WMQ	Urumqi	9.61	9	*e*P	Pn	05 13 27.7	+1.8
SHLS	Shalkode	10.01	333	*e*P	Pn	05 13 29.7	-1.7
SHLS				pmax	pmax		
	comp=Z,812nm,1.8s						
SHLS				MLR	MLR		
	comp=Z,3μm,12.0s						
SHLS	Shalkode	10.01	333	*e*P	Pn	05 13 29.7	-1.7
	comp=Z,812nm,1.8s						
SHLS				*e*LR	LR	05 17 21.8	
	comp=Z,3μm,12.5s						
PDGK	Podgornoye	10.15	334	P	Pn	05 13 34.6	+1.2
PDGK				pmax	pmax		
	comp=Z,248nm,1.4s						
UZB	Uzynbulak	10.17	332	*e*P	Pn	05 13 33.0	-0.6
UZB				*e*S	Sn	05 15 26.9	-0.6
UZB				pmax	pmax		
	comp=Z,247nm,0.8s						
UZB				smax	smax		
	comp=E,1μm,2.5s						
UZB				MLR	MLR		
	comp=Z,3μm,11.0s						
UZB	Uzynbulak	10.17	332	*e*P	Pn	05 13 33.1	-0.6
	comp=Z,247nm,0.8s						
UZB				⇓*i*PP	PnPn	05 13 39.6	-1.8
UZB				*e*S	Sn	05 15 27.0	-0.6
	comp=Z,1μm,2.5s						
UZB				⇓*i*SSS	SSS	05 15 51.9	
	comp=Z,2μm,3.1s						
UZB				*e*LR	LR	05 18 01.1	
	comp=Z,3μm,10.7s						
CHCP	Chirah Chowk	10.25	270	P	Pn	05 13 33.9	-0.8
NIL	Nilore	10.26	270	*e*Pn	Pn	05 13 34.2	-0.6
NIL	Nilore	10.26	270	*e*P	Pn	05 13 34.2	-0.6
SHL	Shillong	10.31	146	*e*Pn	Pn	05 13 35.1	-0.6
SHL	Shillong	10.31	146	*e*P	Pn	05 13 34.0	-1.7
SHL				*i* x	x	05 17 10.0	
SATY	Saty	10.35	329	*d* *i*P	Pn	05 13 36.6	+0.5
SATY				*e*SS	Sn	05 15 43.0	+11
SATY				pmax	pmax		
	comp=Z,935nm,1.0s						
SATY				MLR	MLR		
	comp=Z,3μm,11.0s						
SATY	Saty	10.35	329	⇓*i*P	Pn	05 13 36.6	+0.5
	comp=Z,935nm,1.0s						
SATY				⇓*i*PP	PnPn	05 13 43.5	-0.3
SATY				*e*SS	Sn	05 15 43.0	+11
SATY				*e*SSS	SSS	05 15 58.8	
SATY				*e*LR	LR	05 17 21.0	
	comp=Z,3μm,11.1s						
ZHN	Zhinishke	10.42	330	*e*P	Pn	05 13 36.4	-0.7
ZHN				*e*S	Sn	05 15 30.5	-3.3
ZHN				pmax	pmax		
	comp=Z,399nm,1.0s						
ZHN				smax	smax		
	comp=E,105nm,1.6s						
ZHN				MLR	MLR		
	comp=Z,2μm,11.0s						
ZHN	Zhinishke	10.42	330	*e*P	Pn	05 13 36.5	-0.7
	comp=Z,399nm,1.0s						
ZHN				⇑*i*PP	PnPn	05 13 42.5	-2.3
ZHN				*e*S	Sn	05 15 30.6	-3.3
	comp=Z,105nm,1.6s						
ZHN				*e*SSS	SSS	05 15 59.8	
ZHN				*e*LR	LR	05 17 20.9	
	comp=Z,2μm,10.7s						
BOK	Bokaro	10.51	178	*e*P	Pn	05 13 37.3	-1.0
ULHL	Ulahol	10.77	320	P	Pn	05 13 45.4	+3.5
	SNR=15						
TNSS	Tian-Shan	10.99	325	*e*P	Pn	05 13 45.2	+0.1
TNSS				pmax	pmax		
	comp=Z,332nm,0.7s						
TNSS	Tian-Shan	10.99	325	*e*P	Pn	05 13 45.3	+0.1
	comp=Z,332nm,0.7s						
TNSS				⇑*i*PP	PnPn	05 13 50.7	-2.1
SARP	Sargodha	11.09	261	P	Pn	05 13 45.8	-0.3
AAA	Alma-Ata	11.13	325	*e*P	Pn	05 13 44.9	-1.9
AAA				pmax	pmax		
	comp=Z,87nm,0.4s						
AAA				MLR	MLR		
	comp=Z,1μm,13.0s						
AAA	Alma-Ata	11.13	325	*e*P	Pn	05 13 44.9	-1.9
	comp=Z,86nm,0.4s						
AAA				⇓*i*PP	PnPn	05 13 52.7	-1.8
AAA				*e*LR	LR	05 17 43.2	
	comp=Z,1μm,13.4s						
SFK	Sufi-Kurgan	11.17	304	*i* P	Pn	05 13 49.1	+1.7
SFK				pmax	pmax		
	comp=Z,170nm,1.3s						
KZA	Kyzart	11.20	317	P	Pn	05 13 51.3	+3.2
	SNR=12						
MTBS	Maitube	11.31	324	*e*P	Pn	05 13 47.9	-1.3
MTBS				pmax	pmax		
	comp=Z,254nm,0.7s						
MTBS	Maitube	11.31	324	*e*P	Pn	05 13 48.0	-1.3
	comp=Z,254nm,0.7s						
MTBS				⇓*i*PP	PnPn	05 13 54.4	-2.5
MTBS				*e*SSS	SSS	05 16 20.7	
CEP	Cherat	11.35	271	P	Pn	05 13 49.2	-0.7
TKM2	Tokmak 2	11.58	321	P	Pn	05 13 54.8	+1.8
	SNR=5.1						
TKM2	Tokmak 2	11.58	321	*i* P	Pn	05 13 54.0	+1.0
TKM2				pmax	pmax		
	comp=Z,269nm,1.4s						
CHKK	Chushkaly	11.60	327	*e*P	Pn	05 13 52.0	-1.1
CHKK				pmax	pmax		
	comp=Z,163nm,1.1s						
CHKK	Chushkaly	11.60	327	*e*P	Pn	05 13 52.0	-1.1
	comp=Z,163nm,1.1s						
CHKK				⇑*e*PP	PnPn	05 13 59.5	-1.4
THW	Thamme Wali	11.65	266	⇑P	Pn	05 13 52.3	-1.5
UCH	Uchtor	11.72	315	P	Pn	05 13 57.2	+2.0
	SNR=32						
KBK	Karagaybulak	11.75	318	P	Pn	05 13 56.9	+1.6
	SNR=29						
KUU	Kurty	11.93	326	*e*P	Pn	05 13 55.7	-1.9
KUU				pmax	pmax		
	comp=Z,82nm,1.1s						
KUU				MLR	MLR		
	comp=Z,1μm,11.0s						
KUU	Kurty	11.93	326	*e*P	Pn	05 13 55.7	-1.9
	comp=Z,82nm,1.1s						
KUU				⇓*i*PP	PnPn	05 14 01.9	-3.4
KUU				*e*LR	LR	05 18 30.9	
	comp=Z,1μm,10.7s						
TDK	Taldyqorghan	11.99	335	*e*P	Pn	05 13 57.6	-0.8
TDK				pmax	pmax		
	comp=Z,872nm,1.8s						
TDK				MLR	MLR		
	comp=Z,10μm,12.0s						
TDK	Taldyqorghan	11.99	335	*e*P	Pn	05 13 57.7	-0.7
	comp=Z,872nm,1.8s						
TDK				⇓*i*PP	PnPn	05 14 04.3	-1.9
TDK				*e*LR	LR	05 18 38.9	
	comp=Z,10μm,12.5s						
AAK	Ala-Archa	11.99	317	P	Pn	05 14 01.0	+2.4
	SNR=23						
AAK	Ala-Archa	11.99	317	*e*Pn	Pn	05 14 00.3	+1.7
AAK	Ala-Archa	11.99	317	P	Pn	05 14 01.4	+2.8
AAK	Ala-Archa	11.99	317	P	Pn	05 14 02.2	+3.6
	SNR=42						
AAK	Ala-Archa	11.99	317	Pn	Pn	05 13 59.6	+1.0
	comp=Z,1.3nm,0.3s,baz=122,slow=8.8,SNR=34						
AAK				LR	LR	05 19 42.7	
	comp=Z,2μm,21.1s,baz=126,slow=42						
CHMS	Chumysh	12.09	319	P	Pn	05 14 01.8	+2.0
	SNR=16						
AML	Almayashu	12.15	313	P	Pn	05 14 03.1	+2.2

	SNR=26						
JBP	**Jabalpur**	12.17	205	*e*P	**Pn**	**05 14 01.2**	**+0.3**
JBP				*e*S	**Sn**	**05 16 08.0**	**-8.4**
USP	**Ospenovka**	12.40	319	P	**Pn**	**05 14 05.7**	**+1.6**
	SNR=15						
EKS2	**Erkin-Say**	12.42	315	P	**Pn**	**05 14 06.8**	**+2.4**
	SNR=36						
GTA	**Gaotai**	12.47	62	⇑P	**Pn**	**05 14 04.1**	**-1.0**
GTA				pP	P	05 14 08.5	-8.4
GTA				sP		05 14 11.5	
GTA				S	**Sn**	**05 16 23.5**	**-0.3**
GTA				sS		05 16 29.6	
GTA				SS		05 16 39.3	
GTA				pmax	pmax		
	comp=Z,550nm,4.8s						
GTA				LR	LR		
	comp=Z,49µm,16.2s						
GTA				LR	LR		
	comp=Z,14µm,17.8s						
GTA				LR	LR		
	comp=Z,16µm,18.7s						
MK31	**Makanchi Array**	12.68	350	P	**Pn**	**05 14 07.4**	**-0.5**
MK31				pmax	pmax		
	comp=Z,102nm,1.0s						
MKAR	**Makanchi Array**	12.68	350	*e*Pn	**Pn**	**05 14 07.6**	**-0.3**
MKAR				*e*Sn	**Sn**	**05 16 25.9**	**-3.1**
MKAR	**Makanchi Array**	12.68	350	*e*P	**Pn**	**05 14 07.6**	**-0.3**
MKAR				*e*		05 16 25.9	
MKAR	**Makanchi Array**	12.68	350	Pn	**Pn**	**05 14 07.7**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=163,slow=13,SNR=196						
MAKZ	**Makanchi**	12.75	349	*e*Pn	**Pn**	**05 14 08.3**	**-0.5**
MAKZ	**Makanchi**	12.75	349	P	**Pn**	**05 14 08.0**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,185nm,1.3s						
BRDH	**Bariadhala**	12.78	154	Pn	**Pn**	**05 14 07.7**	**-1.6**
	comp=Z,29nm,0.3s,baz=44,slow=7.7,SNR=5.6						
MNAS	**Manas**	13.07	312	P	**Pn**	**05 14 17.1**	**+3.7**
GAR	**Garm**	13.10	295	*e*Pn	**Pn**	**05 14 12.7**	**-1.1**
GAR	**Garm**	13.10	295	*e*P	**Pn**	**05 14 12.7**	**-1.1**
ZSN	**Zaisan**	13.11	358	*d i*P	**Pn**	**05 14 12.2**	**-1.4**
ZSN				pmax	pmax		
	comp=Z,253nm,1.0s						
ZSN	**Zaisan**	13.11	358	⇓*i*P	**Pn**	**05 14 12.3**	**-1.4**
	comp=Z,253nm,1.1s						
ZSN				*e*LR	LR	05 19 35.1	
	comp=Z,613nm,12.0s						
BHPL	**Bhopal**	13.16	215	*e*P	**Pn**	**05 14 11.6**	**-3.0**
BHPL				*e*x	x	05 16 25.3	
KBL	**Kabul**	13.65	275	*e*Pn	**Pn**	**05 14 20.4**	**-1.0**
KBL	**Kabul**	13.65	275	*e*P	**Pn**	**05 14 20.4**	**-1.0**
BTLS	**Baital**	13.88	324	*e*P	**Pn**	**05 14 23.7**	**-0.4**
BTLS				pmax	pmax		
	comp=Z,40nm,1.2s						
BTLS				MLR	MLR		
	comp=Z,1µm,12.0s						
BTLS	**Baital**	13.88	324	*e*P	**Pn**	**05 14 23.8**	**-0.4**
	comp=Z,40nm,1.2s						
BTLS				*e*PP	**PnPn**	**05 14 31.7**	**-0.4**
BTLS				⇑*i*SSS	SSS	05 17 23.9	
BTLS				*e*LR	LR	05 19 19.5	
	comp=Z,1µm,11.6s						
CHGR	**Chuyangaron**	13.89	293	*e*Pn	**Pn**	**05 14 22.1**	**-2.5**
DZA	**Taraz**	14.02	312	*e*P	**P**	**05 14 32.4**	**-1.7**
DZA				MLR	MLR		
	comp=Z,2µm,12.0s						
DZA	**Taraz**	14.02	312	*e*PP	**P**	**05 14 32.5**	**-1.7**
DZA				*e*LR	LR	05 19 56.1	
	comp=Z,2µm,11.6s						
NGP	**Nagpur**	14.35	205	⇓*e*P	**Pn**	**05 14 30.8**	**0.0**
NGP				*e*x	x	05 16 59.5	
IUG	**Iuzhnay**	14.48	307	*ce*P	**Pn**	**05 14 31.8**	**-0.7**
IUG				pmax	pmax		
	comp=Z,251nm,1.2s						
IUG				MLR	MLR		
	comp=Z,2µm,9.0s						
IUG	**Iuzhnay**	14.48	307	*e*P	**Pn**	**05 14 31.8**	**-0.7**
	comp=Z,251nm,1.2s						
IUG				⇑*i*PP	**PnPn**	**05 14 40.2**	**-0.2**
IUG				⇓*i*SSS	SSS	05 17 38.9	
	comp=Z,3µm,4.5s						
IUG				*e*LR	LR	05 19 48.9	
	comp=Z,2µm,9.4s						
KK31	**Karatay Array**	14.64	311	*i* P	**Pn**	**05 14 35.1**	**+0.4**
KK31				pmax	pmax		
	comp=Z,44nm,1.3s						
KKAR	**Karatay Array**	14.64	311	*e*Pn	**Pn**	**05 14 35.4**	**+0.7**
KKAR	**Karatay Array**	14.64	311	*e*P	**Pn**	**05 14 35.4**	**+0.7**
CHM	**Chimkent**	14.84	307	*e*P	**P**	**05 14 44.5**	**+1.3**
CHM				*e*S	**Sn**	**05 17 21.4**	**-0.1**
CHM				smax	smax		
	comp=E,2µm,3.1s						
CHM				MLR	MLR		
	comp=Z,1µm,13.0s						
CHM	**Chimkent**	14.84	307	*e*PP	**P**	**05 14 44.5**	**+1.3**
CHM				*e*S	**Sn**	**05 17 21.5**	**-0.1**
	comp=Z,2µm,3.1s						
CHM				*e*LR	LR	05 20 10.3	
	comp=Z,1µm,12.9s						
LZH	**Lanzhou**	15.03	78	*e*P	**Pn**	**05 14 37.4**	**-2.8**
LZH				pP	P	05 14 41.4	-4.1
LZH				sP	pP	05 14 44.4	-6.5
LZH				PP	**PnPn**	**05 14 49.3**	**+1.2**
LZH				*e*S	**Sn**	**05 17 20.6**	**-6.0**
LZH				sS	S	05 17 29.3	-15
LZH				pmax	pmax		
	comp=Z,30nm,1.2s						
LZH				pmax	pmax		
	comp=Z,230nm,4.3s						
LZH				LR	LR		
	comp=Z,11µm,11.1s						
LZH				LR	LR		
	comp=Z,8µm,10.8s						
LZH				LR	LR		
	comp=Z,11µm,12.2s						
DGZ	**Jazzator, Alta**	15.41	5	*ce*P	**Pn**	**05 14 45.2**	**+0.2**
CD2	**Chengdu**	15.69	98	P	**Pn**	**05 14 47.4**	**-1.3**
CD2				sP	sP	05 15 01.5	+0.8
CD2				S	**Sn**	**05 17 41.3**	**-1.2**
CD2				pmax	pmax		
	comp=Z,2µm,4.7s						
CD2				LR	LR		
	comp=Z,30µm,9.4s						
CD2				LR	LR		
	comp=Z,25µm,9.4s						
CD2				LR	LR		
	comp=Z,34µm,9.8s						
SEM	**Semipalatinsk**	16.52	348	*e*P	**Pn**	**05 14 57.1**	**-2.3**
SEM				pmax	pmax		
	comp=Z,383nm,1.5s						
SEM				MLR	MLR		
	comp=Z,2µm,15.0s						
SEM	**Semipalatinsk**	16.52	348	*e*P	**Pn**	**05 14 57.1**	**-2.3**
	comp=Z,383nm,1.5s						
SEM				⇓*i*PP	**P**	**05 15 04.8**	**+2.8**
SEM				⇓*i*SS	**S**	**05 18 14.1**	**-0.4**
	comp=Z,3µm,4.6s						
SEM				*e*LR	LR	05 21 17.2	
	comp=Z,2µm,14.7s						
OTUK	**Ortayu**	17.05	329	P	**Pn**	**05 15 06.6**	**+0.7**
OTUK				pmax	pmax		
	comp=Z,233nm,1.2s						
KURBB	**Kurchatov Arra**	17.07	345	P	**Pn**	**05 15 05.6**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=158,slow=11,SNR=59						
KURK	**Kurchatov**	17.13	345	*e*Pn	**Pn**	**05 15 06.3**	**-0.6**
	comp=Z,342nm,1.3s						
KURK				*e*Sn	**Sn**	**05 18 08.9**	**-8.2**
KURK	**Kurchatov**	17.13	345	*e*P	**Pn**	**05 15 06.3**	**-0.6**
KURK				*e*		05 18 08.9	
KURK				pmax	pmax		
	comp=Z,342nm,1.3s						
KURK	**Kurchatov**	17.13	345	P	**Pn**	**05 15 07.6**	**+0.7**
	SNR=120						
KMI	**Kunming**	17.49	117	P	**Pn**	**05 15 09.3**	**-2.4**
KMI				pP	P	05 15 13.6	+0.7
KMI				sP	pP	05 15 15.8	-2.4
KMI				S	**Sn**	**05 18 20.6**	**-5.8**
KMI				pmax	pmax		
	comp=Z,220nm,1.3s						
KMI				pmax	pmax		
	comp=Z,1µm,4.2s						
KMI				LR	LR		
	comp=Z,4µm,9.4s						
KMI				LR	LR		
	comp=Z,6µm,15.0s						
KMI	**Kunming**	17.49	117	*e*Pn	**Pn**	**05 15 11.0**	**-0.7**
	comp=Z,338nm,1.3s						
KMI	**Kunming**	17.49	117	*e*P	**Pn**	**05 15 11.0**	**-0.7**
KMI				pmax	pmax		
	comp=Z,338nm,1.3s						
BHJ	**Bhuj**	17.78	236	*e*P	**Pn**	**05 15 13.8**	**-1.2**
BHJ				IAmb	IAmb	05 15 19.1	
	comp=Z,45nm,1.0s						
HYB	**Hyderabad**	17.99	202	⇓*i*P	**Pn**	**05 15 14.0**	**-3.8**
	comp=Z,190nm,1.0s						
HYB				*e*S	**Sn**	**05 18 40.0**	**+1.6**
HYB	**Hyderabad**	17.99	202	*e*x	**Pn**	**05 15 14.5**	**-3.3**
HYB				IAmb	IAmb	05 15 15.0	
	comp=Z,334nm,1.4s						
KNGR	**Kungurtug, Tuv**	18.44	25	*de*P	**Pn**	**05 15 24.2**	**+1.0**
POO	**Poona**	18.91	217	*e*P	**P**	**05 15 26.4**	**-1.9**
POO				IAmb	IAmb	05 15 29.5	
	comp=Z,44nm,0.7s						
XAN	**Xi'an**	19.31	84	P	**P**	**05 15 32.0**	**-0.7**
XAN				pP	Pn	05 15 35.5	+1.8
XAN				sP	pP	05 15 39.0	+1.0
XAN				PP	sP	05 15 50.4	+10
XAN				S	**Sn**	**05 19 08.3**	**-1.8**
XAN				sS	S	05 19 13.8	+2.8
XAN				pmax	pmax		
	comp=Z,49nm,1.5s						
XAN				pmax	pmax		
	comp=Z,3µm,3.9s						
XAN				LR	LR		
	comp=Z,4µm,9.0s						
XAN				LR	LR		
	comp=Z,7µm,9.0s						
XAN				LR	LR		
	comp=Z,7µm,8.9s						
XAN	**Xi'an**	19.31	84	*e*P	**P**	**05 15 31.2**	**-1.5**
	comp=Z,177nm,1.3s						
XAN	**Xi'an**	19.31	84	*e*P	**P**	**05 15 31.2**	**-1.5**
XAN				pmax	pmax		
	comp=Z,177nm,1.3s						
CHTO	**Chiang Mai**	19.51	139	*e*P	**P**	**05 15 34.4**	**-0.5**
	comp=Z,64nm,1.3s						
CHTO	**Chiang Mai**	19.51	139	*e*P	**P**	**05 15 34.4**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,64nm,1.3s						
CHTO	**Chiang Mai**	19.51	139	P	**Pn**	**05 15 37.0**	**+0.8**
	SNR=25						
CHTO	**Chiang Mai**	19.51	139	P	**Pn**	**05 15 36.1**	**-0.1**
	comp=Z,134nm,1.2s,comp=Z,5µm						
CMMT	**Chiang Mai**	19.52	139	P	**Pn**	**05 15 36.0**	**-0.3**
	comp=Z,30nm,1.2s,comp=Z,1µm						
ZALV	**Zalesovo Beam**	19.61	359	P	**P**	**05 15 35.5**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=180,slow=11,SNR=131						
ZALV				LR	LR	05 24 06.5	
	comp=Z,3µm,18.1s,baz=182,slow=40						
ZAA1	**Zalesovo Array**	19.61	359	*e*P	**P**	**05 15 35.5**	**-0.3**
GYA	**Guiyang**	19.79	108	⇑*i*P	**P**	**05 15 37.8**	**-0.2**
GYA				PP	**PnPn**	**05 15 58.4**	**+5.0**
GYA				S	**S**	**05 19 11.1**	**-10**
GYA				SS	**SnSn**	**05 19 42.0**	**+5.9**
GYA				pmax	pmax		
	comp=Z,150nm,1.2s						
GYA				pmax	pmax		
	comp=Z,970nm,4.1s						
GYA				LR	LR		
	comp=Z,4µm,8.7s						
GYA				LR	LR		
	comp=Z,5µm,9.3s						
GYA				LR	LR		
	comp=Z,4µm,9.6s						
CM31	**Chiang Mai Arr**	19.80	140	*e*P	**P**	**05 15 37.9**	**-0.3**
CM31	**Chiang Mai Arr**	19.80	140	P	**Pn**	**05 15 39.1**	**-0.6**
	SNR=38						
CMAR	**Chiang Mai Arr**	19.80	140	P	**P**	**05 15 37.9**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=324,slow=9.8,SNR=46						
LAMP	**Lampang**	20.13	138	P	Pn	05 15 46.4	+2.9
	comp=Z,12nm,1.0s,comp=Z,107nm						
BTO	**Baotou**	20.35	65	*e*P	**P**	**05 15 40.8**	**-3.2**
BTO				S	**S**	**05 19 25.4**	**-6.4**
NVS	**Novosibirsk**	20.56	356	⇑*i*P	**P**	**05 15 46.8**	**+0.7**
NVS				*e*S	**S**	**05 19 26.6**	**-8.9**
NVS				pmax	pmax		
	comp=N,236nm,1.8s						
NVS				pmax	pmax		
	comp=Z,309nm,1.8s						
NVS				smax	smax		
	comp=E,132nm,2.1s						
MOY	**Mondy**	20.59	28	*e*P	Pn	05 15 49.9	+1.1
MOY				pmax	pmax		
	comp=Z,136nm,2.3s						
ENH	**Enshi**	20.60	95	*e*P	**P**	**05 15 46.0**	**-0.7**
	comp=Z,234nm,1.4s						
SONA0	**Songino Array**	20.60	43	*e*P	Pn	05 15 48.1	-0.9
SONM	**Songino Array**	20.60	43	P	Pn	05 15 48.1	-0.9
	comp=Z,59nm,1.1s,baz=234,slow=11,SNR=74						
SONM				LR	LR	05 23 51.7	
	comp=Z,4µm,19.6s,baz=231,slow=37						
ZAK	**Zakamensk**	20.60	34	*e*P	**P**	**05 15 47.4**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,37nm,1.2s						
SUKH	**Sukhothai**	20.98	140	P	Pn	05 15 55.1	+1.7
	comp=Z,8.1nm,1.2s						
ULN	**Ulaanbaatar**	20.99	43	*e*P	**P**	**05 15 51.4**	**+0.5**
	comp=Z,85nm,1.0s						
ULN	**Ulaanbaatar**	20.99	43	*e*P	**P**	**05 15 51.4**	**+0.5**
ULN				pmax	pmax		
	comp=Z,85nm,1.0s						
ULN	**Ulaanbaatar**	20.99	43	P	Pn	05 15 52.5	-1.1
	SNR=41						
UTTA	**Uttaradit**	21.27	137	P	**P**	**05 15 54.0**	**0.0**
	comp=Z,13nm,1.1s						
HHC	**Hu-ho-hao-te**	21.55	65	*e*P	**P**	**05 15 57.3**	**+0.3**
HHC				pP	pP	05 16 01.1	-1.3
HHC				PP	sP	05 16 22.6	+18
HHC				*e*S	**S**	**05 19 49.3**	**-6.2**
HHC				sS	Sn	05 19 55.6	-8.3
HHC				SS	**SnSn**	**05 20 22.3**	**+3.3**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,2µm,3.6s						
HHC				LR	LR		
	comp=Z,52µm,14.9s						
HHC				LR	LR		
	comp=Z,9µm,14.1s						
HHC				LR	LR		
	comp=Z,14µm,13.9s						
GOA	**Goa**	21.55	212	*e*P	**P**	**05 15 55.5**	**-1.5**
BVAR	**Borovoye Array**	21.58	335	P	**P**	**05 15 58.3**	**+1.2**
	comp=Z,22nm,0.9s,baz=136,slow=9.5,SNR=91						
BVAR				LR	LR	05 23 59.3	
	comp=Z,2µm,19.4s,baz=145,slow=36						
BRVK	**Borovoye**	21.65	334	*e*P	**P**	**05 15 59.0**	**+1.2**
	comp=Z,238nm,1.4s						
BRVK	**Borovoye**	21.65	334	P	**P**	**05 15 58.4**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,207nm,1.3s						
BRVK	**Borovoye**	21.65	334	P	**P**	**05 15 58.8**	**+1.0**
	SNR=132						
BRVK				P	**P**	**05 15 58.8**	**+1.0**
	SNR=132						
UMPA	**Umpang Tak**	21.65	143	P	**P**	**05 16 01.7**	**+3.6**
	comp=Z,15nm,1.0s						
TLY	**Talaya**	21.69	31	*e*P	**P**	**05 15 60.0**	**+1.7**
	comp=Z,23nm,1.1s						
TLY	**Talaya**	21.69	31	*e*P	**P**	**05 15 59.3**	**+1.0**
TLY				*e*S	**S**	**05 19 57.9**	**0.0**
TLY				*e*SS	**SnSn**	**05 20 26.4**	**+4.2**
TLY				pmax	pmax		
	comp=Z,118nm,1.9s						
TLY				MLR	MLR		
	comp=Z,2µm,14.0s						
TLY	**Talaya**	21.69	31	P	**P**	**05 16 00.6**	**+2.3**
	SNR=12						
MDRS	**Chennai**	21.73	194	*e*P	**P**	**05 16 00.0**	**+1.2**
MDRS				IAmb	IAmb	05 16 07.0	
	comp=Z,132nm,0.9s						
TIY	**Taiyuan**	21.95	73	*e*P	**P**	**05 16 00.8**	**-0.5**
TIY				S	**S**	**05 20 01.5**	**-1.9**
TIY				pmax	pmax		
	comp=Z,41nm,0.8s						
TIY				pmax	pmax		
	comp=Z,930nm,5.8s						
TIY				LR	LR		
	comp=Z,1µm,11.5s						
TIY				LR	LR		
	comp=Z,8µm,9.0s						
TIY				LR	LR		
	comp=Z,8µm,11.0s						
GEYT	**Alibeck**	22.43	287	P	**P**	**05 16 07.8**	**+1.4**
	comp=Z,50nm,1.0s,baz=99,slow=9.2,SNR=27						
GEYT				LR	LR	05 26 52.0	
	comp=Z,8µm,19.2s,baz=60,slow=42						
PBKT	**Sadao Pong**	22.45	138	*e*P	**P**	**05 16 06.2**	**-0.4**
	comp=Z,67nm,1.0s						
PBKT	**Sadao Pong**	22.45	138	P	**P**	**05 16 07.9**	**+1.2**
	comp=Z,65nm,1.4s,comp=Z,1µm						
PBA	**Port Blair**	23.51	162	*e*P	P	05 16 17.9	+0.3
	comp=Z,339nm,1.4s						
PBA	**Port Blair**	23.51	162	*e*P	P	05 16 16.9	-0.7
CHAI	**Chaiyaphum**	23.56	137	P	**P**	**05 16 18.0**	**-0.1**
	comp=Z,24nm,1.0s,comp=Z,233nm						
SKNT	**Sakolnakorn**	23.89	132	P	**P**	**05 16 21.4**	**0.0**
	comp=Z,28nm,1.0s,comp=Z,2µm						
AB31	**Akbulak array**	24.08	316	*i* P	**P**	**05 16 23.3**	**+0.5**
AB31				pmax	pmax		
	comp=Z,24nm,0.8s						
ABKAR	**Akbulak array**	24.08	316	*e*P	**P**	**05 16 23.7**	**+0.9**
	comp=Z,51nm,1.1s						
WHN	**Wuhan**	24.54	91	⇑P	**P**	**05 16 26.8**	**-0.4**
WHN				S	**S**	**05 20 46.6**	**-0.9**
WHN				LR	LR		
	comp=Z,12µm,9.3s						
WHN				LR	LR		
	comp=Z,9µm,9.6s						
WHN				LR	LR		
	comp=Z,14µm,10.9s						
PHET	**Kaeng Krachan**	24.86	146	P	**P**	**05 16 31.7**	**+1.5**
	comp=Z,12nm,0.9s,comp=Z,162nm						
BJT	**Baijiatuau**	24.95	68	*e*P	**P**	**05 16 30.4**	**-0.4**
	comp=Z,67nm,1.3s						
BJT	**Baijiatuau**	24.95	68	*e*P	**P**	**05 16 30.4**	**-0.4**
BJT				pmax	pmax		
	comp=Z,67nm,1.3s						
SRAK	**Srakaew**	25.13	140	P	**P**	**05 16 37.2**	**+4.5**
	comp=Z,132nm,1.2s,comp=Z,1µm						
AKTO	**Aktyubinsk**	25.73	317	P	**P**	**05 16 38.8**	**+0.9**
AKTO				pmax	pmax		
	comp=Z,90nm,1.0s						
AKTO	**Aktyubinsk**	25.73	317	P	**P**	**05 16 39.6**	**+1.7**
	comp=Z,37nm,1.0s,baz=108,slow=8.5,SNR=13						
AKTO				LR	LR	05 27 49.6	
	comp=Z,4µm,19.2s,baz=123,slow=39						
TIA	**Tai'an**	25.76	77	P	**P**	**05 16 39.1**	**+0.8**
TIA				pmax	pmax		
	comp=Z,7.0nm,1.6s						
TIA				pmax	pmax		
	comp=Z,340nm,5.3s						
TIA				LR	LR		
	comp=Z,3µm,12.7s						
TIA				LR	LR		
	comp=Z,3µm,13.0s						
TIA				LR	LR		
	comp=Z,4µm,13.5s						
JLN	**Jalan Bani Buh**	25.98	249	P	**P**	**05 16 44.0**	**+3.6**
	SNR=20						
JLN				P	**P**	**05 16 44.0**	**+3.6**
	SNR=20						
WSAR	**Wadi Sarin**	26.00	252	P	**P**	**05 16 43.5**	**+3.0**
	SNR=22						
WSAR	**Wadi Sarin**	26.00	252	P	**P**	**05 16 42.4**	**+1.8**
	comp=Z,94nm,1.1s,baz=96,slow=6.4,SNR=16						
WSAR				LR	LR	05 28 22.5	
	comp=Z,2µm,18.9s,baz=94,slow=40						
BIDO	**Bidbid**	26.26	253	P	**P**	**05 16 49.0**	**+6.1**
	SNR=9.7						
BIDO				P	**P**	**05 16 49.0**	**+6.1**
	SNR=9.7						
QIZ	**Qiongzhong**	26.41	119	P	**P**	**05 16 45.6**	**+1.3**
QIZ				S	**S**	**05 21 22.4**	**+4.9**
QIZ				pmax	pmax		
	comp=Z,750nm,4.6s						
QIZ				LR	LR		
	comp=Z,5µm,15.2s						
QIZ				LR	LR		
	comp=Z,5µm,18.6s						
GZH	**Guangzhou**	26.72	107	P	**P**	**05 16 49.4**	**+2.3**
GZH				S	**S**	**05 21 27.6**	**+5.3**
GZH				LR	LR		
	comp=Z,4µm,12.2s						
TRD	**Trivandrum**	26.91	199	*e*P	**P**	**05 16 49.4**	**+0.7**
PALK	**Pallekele**	27.31	191	*e*P	**P**	**05 16 52.8**	**+0.4**
	comp=Z,39nm,1.1s						
PALK	**Pallekele**	27.31	191	P	**P**	**05 16 53.8**	**+1.3**
	comp=Z,22nm,1.0s,baz=295,slow=5.3,SNR=6.3						
PALK				LR	LR	05 28 09.1	
	comp=Z,2µm,19.3s,baz=270,slow=37						
ASHO	**Ashiyiah**	27.35	257	*i* P	**P**	**05 16 55.4**	**+2.6**
	SNR=7.7						
ASHO	**Ashiyiah**	27.35	257	P	**P**	**05 16 57.9**	**+5.1**
	SNR=5.8						
ASHO				P	**P**	**05 16 57.9**	**+5.1**
	SNR=5.8						
BSY	**Bisya**	27.39	253	P	**P**	**05 16 58.4**	**+5.3**
	SNR=7.7						
MHTO	**MHTO**	27.74	249	P	**P**	**05 16 59.0**	**+2.8**
	SNR=25						
MHTO				P	**P**	**05 16 59.0**	**+2.8**
	SNR=25						
NJ2	**Nanjing**	27.87	85	*e*P	**P**	**05 16 57.3**	**0.0**
NJ2				S	**S**	**05 21 38.4**	**-1.9**
NJ2				sS	**pS**	**05 21 47.5**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NJ2				LR	LR		
	comp=Z,6µm,11.4s						
NJ2				LR	LR		
	comp=Z,6µm,15.2s						
NJ2				LR	LR		
	comp=Z,3µm,14.4s						
SVE	**Sverdlovsk**	28.17	331	⇑*e*P	**P**	**05 17 01.8**	**+2.1**
SVE				pmax	pmax		
	comp=Z,43nm,1.3s						
SVE				MLR	MLR		
	comp=Z,2µm,14.0s						
DQM	**DQM**	28.67	247	P	**P**	**05 17 06.9**	**+2.4**
	SNR=9.1						
DQM				P	**P**	**05 17 06.9**	**+2.4**
	SNR=9.1						
ARU	**Arti**	28.78	328	*e*P	**P**	**05 17 06.2**	**+0.9**
	comp=Z,24nm,1.1s						
ARU	**Arti**	28.78	328	*d i*P	**P**	**05 17 06.1**	**+0.9**
ARU				PPP	PPP	05 18 03.3	
ARU				S	**S**	**05 21 56.7**	**+2.5**
ARU				pmax	pmax		
	comp=Z,35nm,1.8s						
ARU				MLR	MLR		
	comp=Z,4µm,16.0s						
DL2	**Dalian**	29.16	70	*e*P	**P**	**05 17 10.1**	**+1.4**
DL2				S	**S**	**05 22 01.5**	**+1.0**
DL2				pmax	pmax		
	comp=Z,39nm,0.9s						
DL2				pmax	pmax		
	comp=Z,210nm,3.7s						
DL2				LR	LR		
	comp=Z,7µm,19.1s						
DL2				LR	LR		
	comp=Z,4µm,17.8s						
DL2				LR	LR		
	comp=Z,6µm,14.7s						
LKRN	**Lenkeran, Azer**	29.76	289	P	**P**	**05 17 16.4**	**+2.4**
SSE	**Sheshan**	30.04	86	P	**P**	**05 17 13.0**	**-3.6**
SSE				S	**S**	**05 22 12.1**	**-2.3**
SSE				pmax	pmax		
	comp=Z,15nm,0.6s						
SSE				pmax	pmax		
	comp=Z,73nm,3.9s						
SSE				LR	LR		
	comp=N,2µm,12.2s						
SSE				LR	LR		
	comp=E,2µm,15.7s						
QZH	**Quanzhou**	30.07	99	⇑*i*P	**P**	**05 17 19.4**	**+2.5**
QZH				S	**S**	**05 22 17.4**	**+2.4**
QZH				LR	LR		
	comp=E,6µm,10.9s						
QZH				LR	LR		
	comp=E,3µm,14.4s						
QZH				LR	LR		
	comp=E,3µm,11.4s						
BOD	**Bodaibo**	30.25	30	*e*P	**P**	**05 17 14.1**	**-4.1**
BOD				pmax	pmax		
	comp=Z,15nm,1.4s						
SNY	**Shenyang**	30.64	65	⇓P	**P**	**05 17 21.4**	**-0.3**
SNY				S	**S**	**05 22 25.8**	**+2.2**
SNY				pmax	pmax		

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      comp=Z,14nm,0.5s
SNY                                pmax     pmax
      comp=Z,120nm,3.5s
SNY                                LR       LR
      comp=Z,30µm,14.5s
SNY                                LR       LR
      comp=Z,8µm,12.7s
SNY                                LR       LR
      comp=Z,12µm,17.7s
MAK   Makhachkala       30.74 298c iP       P       05 17 20.4 -2.2
MAK                                e                05 18 21.5
MAK                                eS       S       05 22 22.9 -2.3
MAK                                eSS      ScP     05 24 00.8 -1.5
MAK                                MLR      MLR
      comp=Z,22µm,19.0s
LHMI  Lhok Sumawe       30.83 157  eP       P       05 17 23.9 +0.2
      comp=Z,113nm,1.0s
SEKA  Sheki             30.91 294  P        P       05 17 26.8 +2.5
ZKTA  Zakatala          31.35 295  P        P       05 17 30.1 +2.0
GANJ  Ganja             31.58 293  P        P       05 17 32.5 +2.3
GROC  Groznyy           32.00 298  eP       P       05 17 36.4 +2.6
GROC                               e                05 18 39.2
GROC                               e                05 20 23.0
GROC                               pmax     pmax
      comp=Z,142nm,1.0s
CN2   Changchun         32.10  61  eP       P       05 17 34.1 -0.5
CN2                                eS       S       05 22 53.9 +7.5
CN2                                pmax     pmax
      comp=Z,10.0nm,0.9s
CN2                                pmax     pmax
      comp=Z,200nm,3.0s
CN2                                LR       LR
      comp=Z,18µm,13.0s
CN2                                LR       LR
      comp=Z,7µm,13.0s
CN2                                LR       LR
      comp=Z,8µm,12.0s
KULM  Kulim             32.11 151  eP       P       05 17 34.5 -0.4
      comp=Z,67nm,1.4s
NAX   Nakhchivan        32.29 290  P        P       05 17 38.5 +2.1
TBLG  Delisi            32.76 295  eP       P       05 17 41.6 +1.1
      comp=Z,41nm,1.2s
TBLG  Delisi            32.76 295  eP       P       05 17 41.6 +1.1
TBLG                               pmax     pmax
      comp=Z,41nm,1.2s
GNI   Garni             32.81 292  eP       P       05 17 43.8 +2.7
GNI   Garni             32.81 292  eP       P       05 17 43.6 +2.5
      comp=Z,135nm,1.1s
GNI   Garni             32.81 292  i P      P       05 17 43.8 +2.7
      SNR=23
GNI   Garni             32.81 292  eP       P       05 17 43.6 +2.5
GNI                                pmax     pmax
      comp=Z,135nm,1.1s
GNI   Garni             32.81 292  P        P       05 17 45.3 +4.2
      SNR=39
CLDR  Caldiran          33.51 291  eP       P       05 17 49.9 +2.6
NCK   Nalchik           33.62 298⇑ eP       P       05 17 50.1 +2.2
NCK                                pmax     pmax
      comp=Z,41nm,1.4s
PSI   Prapat            33.76 155  eP       P       05 17 48.5 -1.0
      comp=Z,16nm,1.0s
PSI   Prapat            33.76 155  eP       P       05 17 48.5 -1.0
PSI                                pmax     pmax
      comp=Z,16nm,1.0s
PSI   Prapat            33.76 155  P        P       05 17 49.5 +0.1
      comp=Z,4.9nm,0.7s,baz=0.3,slow=5.3,SNR=4.2
TJN   Taejon            33.95  74⇑ eP       P       05 17 51.8 +0.9
CUKT  Cukurca           33.97 287  eP       P       05 17 54.8 +3.6
VANB  Van               33.98 290  eP       P       05 17 59.4 +8.2
KIRV  Kirov             34.08 327  P        P       05 17 53.0 +1.3
      comp=Z,33nm,0.6s,baz=115,slow=8.8,SNR=4.7
KBZ   Khabaz            34.13 299  P        P       05 17 53.8 +1.4
      comp=Z,3.1nm,0.8s,baz=136,slow=4.2,SNR=4.4
KBZ                                LR       LR      05 33 08.3
      comp=Z,4µm,18.7s,baz=102,slow=38
AGRB  Hanur-Agry        34.19 291  eP       P       05 17 55.4 +2.2
KS15  Wonju Array Si    34.20  72  eP       P       05 17 53.5 +0.5
KSRS  Korea Array       34.23  72  P        P       05 17 53.5 +0.2
      comp=Z,4.4nm,0.9s,baz=273,slow=8.1,SNR=15
KSRS                               LR       LR      05 34 25.0
      comp=Z,759nm,19.8s,baz=296,slow=41
NEY   Neytrino          34.25 298⇑ eP       P       05 17 55.1 +1.5
NEY                                pmax     pmax
      comp=Z,2.0nm,0.8s
KIV   Kislovodsk        34.29 299  eP       P       05 17 55.6 +1.8
      comp=Z,42nm,1.3s
KIV   Kislovodsk        34.29 299  eP       P       05 17 54.8 +0.9
KIV                                eS       S       05 23 22.7 +2.1
KIV                                pmax     pmax
      comp=Z,25nm,1.0s
KIV                                MLR      MLR
      comp=Z,3µm,16.0s
KIV   Kislovodsk        34.29 299  P        P       05 17 56.6 +2.8
      SNR=8.2
KIV                                P        P       05 17 56.6 +2.8
      SNR=8.2
MLAZ  Malazgirt-MUS     34.57 291  eP       P       05 18 00.6 +4.1
SENK  Senkaya-Erzuru    34.61 293  eP       P       05 18 00.8 +4.0
ZEA   Zeya              35.02  43  eP       P       05 18 00.5 +0.5
ZEA                                pmax     pmax
      comp=Z,21nm,1.2s
ZEA                                MLR      MLR
      comp=Z,13µm,12.0s
ZEA                                MLR      MLR
      comp=E,8µm,13.0s
ZEA                                MLR      MLR
      comp=N,4µm,11.0s
KOPR  Koprukoy-ERZUR    35.03 292  eP       P       05 18 04.9 +4.5
GURO  Guroymak-BITLI    35.04 290  eP       P       05 18 04.3 +3.8
BATM  Batumi            35.05 295  eP       P       05 18 04.2 +3.9
NRIK  Noril'sk          35.07   1  P        P       05 18 00.1  0.0
      comp=N,45nm,0.9s,baz=173,slow=6.7,SNR=41
NRIK                               LR       LR      05 34 15.4
      comp=N,4µm,18.8s,baz=196,slow=40
BCA   Borcka            35.11 295  eP       P       05 18 04.1 +3.2
MDJ   Mudanjiang        35.11  60  P        P       05 18 04.4 +3.6
MDJ                                pP       pP      05 18 08.1 +1.4
MDJ                                sP       sP      05 18 09.8 +0.7
MDJ                                PP       PP      05 19 19.0 -1.4
MDJ                                S        S       05 23 32.3 -0.8
MDJ                                sS       pS      05 23 39.4 -0.3
MDJ                                SS       SS      05 25 43.8  -22
MDJ                                pmax     pmax
      comp=N,26nm,1.8s
MDJ                                pmax     pmax
      comp=N,530nm,4.8s
MDJ                                LR       LR
      comp=N,9µm,10.8s
MDJ                                LR       LR
      comp=N,4µm,11.9s
MDJ                                LR       LR
      comp=N,5µm,13.5s
VRTB  Varto-Mus         35.42 291  eP       P       05 18 07.5 +3.8
VRH   Novokhopyorsk     35.72 312  eP       P       05 18 10.4 +4.4
VRH                                pmax     pmax
      comp=Z,130nm,1.7s
VRH                                MLR      MLR
      comp=Z,2µm,13.0s
SVAN  Silvan-Diyarba    35.74 289  eP       P       05 18 10.2 +3.8
CHOM  Cayeli-Rize       35.77 294  eP       P       05 18 09.7 +3.1
BNGB  Bingl             36.04 291  eP       P       05 18 13.1 +4.1
KOPT  Kop Dagi          36.06 293  i P      P       05 18 13.9 +4.5
KOPT                               IAML_P
      comp=Z,369nm,0.9s
YEDI  Yedisu-Bingol     36.09 292  eP       P       05 18 13.1 +3.6
BAYB  BAYBURT           36.23 293  i P      P       05 18 14.9 +4.2
BAYB                               IAML_P
      comp=Z,319nm,1.0s
BAYT  Aydıntepe-Bayb    36.30 293  eP       P       05 18 15.8 +4.5
MAZI  Mazidag           36.43 288  eP       P       05 18 15.5 +3.1
SOC   Sochi             36.44 299  eP       P       05 18 14.1 +1.9
SOC                                eS       S       05 23 55.6 +2.1
SOC                                eSS      SnSn    05 26 17.1 -4.5
SOC                                pmax     pmax
      comp=Z,88nm,1.2s
SOC                                MLR      MLR
      comp=Z,4µm,18.0s
RAYN  Ar Rayn           36.48 264  eP       P       05 18 12.9  0.0
      comp=Z,42nm,1.3s
RAYN  Ar Rayn           36.48 264  i P      P       05 18 13.5 +0.5
      SNR=18
RAYN  Ar Rayn           36.48 264  eP       P       05 18 12.9  0.0
RAYN                               pmax     pmax
      comp=Z,42nm,1.3s
VLA   Vladivostok       36.77  62d eP       P       05 18 15.6 +0.5
VLA                                pmax     pmax
      comp=Z,29nm,0.9s
BKNI  Bangkinang        36.81 154  eP       P       05 18 15.1 -0.5
      comp=Z,85nm,0.4s
USRK  Ussuriysk Ar.     36.82  60  P        P       05 18 14.9 -0.5
      comp=Z,6.3nm,1.1s,baz=264,slow=9.4,SNR=6.2
USRK                               LR       LR      05 34 33.4
      comp=Z,2µm,20.8s,baz=264,slow=38
KLR   Kul'dur           36.90  52⇑ iP       P       05 18 16.6 +0.5
KLR   Kul'dur           36.90  52  P        P       05 18 15.5 -0.6
      comp=Z,5.0nm,0.9s,baz=268,slow=8.4,SNR=12
TNCL  Tunceli-Merkez    36.90 291  i P      P       05 18 23.2 +6.8
TNCL                               IAML_P
      comp=Z,42nm,0.3s
KELT  Kelkit            37.00 293  i P      P       05 18 21.2 +3.9
KELT                               IAML_P
      comp=Z,466nm,1.0s
PRGR  Permogore         37.22 330  eP       P       05 18 17.5 -1.1
PRGR                               pmax     pmax
      comp=Z,15nm,0.4s
VSR   Storozhevoye      37.31 311d eP       P       05 18 22.6 +3.1
VSR                                pmax     pmax
      comp=Z,76nm,0.9s
ELZG  Elazig            37.41 290  i P      P       05 18 24.2 +3.4
ELZG                               IAML_P
      comp=Z,85nm,0.3s
JNU   Nakatsue          37.45  79  eP       P       05 18 22.0 +0.9
      comp=Z,32nm,1.2s
JNU   Nakatsue          37.45  79  P        P       05 18 22.0 +0.9
      comp=Z,25nm,1.2s,baz=170,slow=1.2,SNR=5.5
JNU                                LR       LR      05 34 45.7
      comp=Z,3µm,19.2s,baz=296,slow=38
REFA  Refahiye_ERZN     37.46 292  i P      P       05 18 25.4 +4.2
REFA                               IAML_P
      comp=Z,107nm,0.1s
LPSR  Galich'ya Gora    37.68 313  eP       P       05 18 27.2 +4.6
LPSR                               pmax     pmax
      comp=Z,60nm,0.8s
LPSR                               MLR      MLR
      comp=Z,2µm,15.0s
KEMA  Kemaliye          37.69 292  i P      P       05 18 26.2 +3.2
KEMA                               IAML_P
      comp=Z,581nm,0.8s
URFA  Urfa              37.71 289  eP       P       05 18 26.3 +3.1
SUSE  Susehri           37.80 293  i P      P       05 18 27.8 +3.8
SUSE                               IAML_P
      comp=Z,241nm,0.9s
ORDU  Ordu-Boztepe      37.97 294  i P      P       05 18 28.9 +3.5
ORDU                               IAML_P
      comp=Z,210nm,0.4s
ANN   Anapa             38.06 301  eP       P       05 18 25.9  0.0
ANN                                e                05 19 53.2
ANN                                eS       S       05 24 21.8 +3.8
ANN                                pmax     pmax
      comp=Z,65nm,1.1s
ANN                                MLR      MLR
      comp=Z,4µm,19.0s
ANN                                MLR      MLR
      comp=E,485nm,19.0s
ANN                                MLR      MLR
      comp=N,2µm,19.0s
HEKM  Malatya_Hekimh    38.15 291  i P      P       05 18 30.9 +3.8
HEKM                               IAML_P
      comp=Z,390nm,0.7s
CUZAR Zara_SIVAS        38.16 293  i P      P       05 18 31.3 +4.2
CUKAN kangal_SIVAS      38.47 292  i P      P       05 18 32.3 +2.6
DARE  Darende-Malaty    38.57 291  eP       P       05 18 34.2 +3.7
GZT   Gaziantep         38.71 289  i P      P       05 18 35.3 +3.6
GZT                                IAML_P
      comp=Z,545nm,0.4s
SVSK  Karacayir         38.75 293  eP       P       05 18 33.4 +1.6
GAZ   Gaziantep         39.02 289  eP       P       05 18 36.6 +2.4
TOKT  Tokat             39.04 294  eP       P       05 18 36.6 +2.2
MOS   Moscow            39.06 318  eP       P       05 18 38.0 +3.8
MOS                                e                05 20 08.3
MOS                                ePPP     PPP     05 20 36.5
MOS                                eS       S       05 24 33.9 +1.1
MOS                                pmax     pmax
      comp=Z,133nm,1.5s
MOS                                pmax     pmax
      comp=E,71nm,1.0s
YAK   Yakutsk           39.16  31  eP       P       05 18 33.7 -1.3
YAK                                e*PP     pP      05 18 41.0 +0.1
YAK                                ePPP     PPP     05 20 30.3
YAK                                e                05 20 43.0
YAK                                eS       S       05 24 31.2 -3.1
YAK                                eSS      SS      05 27 13.9  -13
YAK                                pmax     pmax
      comp=N,14nm,0.9s
YAK                                pmax     pmax
      comp=Z,85nm,1.0s
YAK                                pmax     pmax
      comp=E,34nm,1.4s
YAK                                smax     smax
      comp=N,939nm,20.1s
YAK                                MLR      MLR
      comp=Z,7µm,18.0s
YAK                                MLR      MLR
      comp=N,7µm,15.0s
YAK                                MLR      MLR
      comp=E,5µm,14.0s
KVT   Kavak             39.33 295  eP       P       05 18 44.7 +8.0
CUSAR Sarkisla-SIVAS    39.39 292  i P      P       05 18 41.1 +3.7
OBN   Obninsk           39.52 317  eP       P       05 18 38.6 +0.6
      comp=E,82nm,1.3s
OBN   Obninsk           39.52 317c eP       P       05 18 40.1 +2.1
OBN                                e                05 20 11.8
OBN                                i S      S       05 24 42.3 +2.6
OBN                                i SS     SS      05 27 21.1  -13
OBN                                pmax     pmax
      comp=Z,103nm,1.7s
OBN                                MLR      MLR
      comp=Z,2µm,20.0s
KLMR  Klimovskoe        39.58 326  eP       P       05 18 39.0 +0.5
KLMR                               e                05 20 10.8
KLMR                               e                05 20 46.1
KLMR                               pmax     pmax
      comp=Z,62nm,1.4s
KLMR  Klimovskoe        39.58 326  eP       P       05 18 39.0 +0.5
KLMR                               AMP              05 18 45.0
      comp=Z,62nm,1.4s
KLMR                               ePP      PP      05 20 10.9 +1.7
KLMR                               ePcP     PcP     05 20 46.2 +0.7
ANDN  Andirin           39.62 289  i P      P       05 18 41.6 +2.3
ANDN                               IAML_P
      comp=Z,614nm,0.7s
TAHT  Tahtakopru-Hat    39.98 288  eP       P       05 18 48.2 +6.0
GRNR  Gornyy            40.04  50  eP       P       05 18 42.2 -0.3
GRNR                               pmax     pmax
      comp=Z,11nm,1.0s
KOZT  Kozan             40.05 289  eP       P       05 18 45.9 +3.2
YOZ   Yozgat            40.07 293  eP       P       05 18 43.0  0.0
CEYT  Ceyhan            40.20 289  eP       P       05 18 45.5 +1.6
SIRC  Yozgat            40.24 292  i P      P       05 18 46.4 +1.9
SIM   Simferopol'       40.41 301c iP       P       05 18 46.5 +0.9
SIM                                eS       S       05 24 54.8 +1.4
SIM                                eSS      SS      05 27 50.0 -2.3
SIM                                pmax     pmax
      comp=Z,120nm,1.2s
SIM                                MLR      MLR
      comp=Z,2µm,17.0s
ASF   Jabal al Asfar    40.46 281  P        P       05 18 47.7 +1.4
      comp=Z,5.7nm,0.8s,baz=38,slow=1.8,SNR=8.7
KARA  Karaisali         40.69 289  eP       P       05 18 50.5 +2.4
ILGA  Ilgaz             41.08 295  eP       P       05 18 52.9 +1.5
      comp=Z,72nm,1.0s
BR101 Keskin Array S    41.33 293  eP       P       05 18 54.7 +1.2
BR131 Keskin Array S    41.33 293  P        P       05 18 55.3 +1.8
      SNR=22
BRTR  Keskin Array B    41.33 293  P        P       05 18 54.7 +1.2
      comp=Z,14nm,1.0s,baz=98,slow=7.3,SNR=57
BRTR                               PP       PnPn    05 20 34.1 +0.6
      comp=Z,19nm,1.2s,baz=91,slow=7.8,SNR=5.1
BRTR                               LR       LR      05 38 33.4
      comp=Z,1µm,22.0s,baz=62,slow=40
TMCR  Tamitsa           41.45 331  eP       P       05 18 55.0 +1.1
TMCR                               pmax     pmax
      comp=Z,38nm,0.7s
ANTO  Ankara            41.95 294  eP       P       05 18 59.5 +1.1
      comp=Z,65nm,1.3s
ANTO  Ankara            41.95 294⇓ iP       P       05 19 00.6 +2.1
ANTO  Ankara            41.95 294  eP       P       05 18 59.6 +1.1
ANTO                               pmax     pmax
      comp=Z,65nm,1.3s
ANTO  Ankara            41.95 294  P        P       05 19 00.1 +1.6
      SNR=13
ANTO                               P        P       05 19 00.1 +1.6
      SNR=13
DAMY  Dhamar            41.98 252  eP       P       05 18 59.8 +0.5
      comp=Z,134nm,1.4s
MAJO  Matsushiro        42.49  71  eP       P       05 19 02.0 -0.8
MAJO  Matsushiro        42.49  71⇑ eP       P       05 19 05.2 +2.4
MAJO                               pmax     pmax
      comp=Z,12nm,1.1s
MJAR  Matsushiro Arr    42.49  71  P        P       05 19 02.0 -0.8
      comp=Z,4.5nm,0.8s,baz=280,slow=9.0,SNR=3.5
MJAR                               LR       LR      05 37 33.4
      comp=Z,2µm,18.2s,baz=300,slow=37
DGAR  Diego Garcia      43.35 199⇑ eP       P       05 19 11.3 +1.5
AKASG Malin Array Be    43.54 310  P        P       05 19 11.1 +0.1
      comp=Z,4.0nm,0.7s,baz=79,slow=6.4,SNR=33
AKASG                              PP       PcP     05 20 58.5 -0.1
      comp=Z,2.2nm,0.6s,baz=78,slow=8.1,SNR=3.7
AKASG                              LR       LR      05 38 50.7
      comp=Z,3µm,20.0s,baz=110,slow=38
AKBB  Malin Array Si    43.54 310  eP       P       05 19 12.1 +1.0
      comp=Z,39nm,0.9s
AKBB  Malin Array Si    43.54 310  eP       P       05 19 12.1 +1.0
AKBB                               pmax     pmax
      comp=Z,39nm,0.9s
KIEV  Kiev              43.55 310  eP       P       05 19 12.2 +1.1
      comp=Z,44nm,1.0s
KIEV  Kiev              43.55 310⇑ iP       P       05 19 13.0 +1.9
KIEV  Kiev              43.55 310  i P      P       05 19 12.5 +1.4
      SNR=17
KIEV  Kiev              43.55 310⇓ eP       P       05 19 12.2 +1.1
KIEV                               pmax     pmax
      comp=Z,41nm,1.5s
KIS   Kishinev          43.96 304  eP       P       05 19 17.5 +3.0
      comp=Z,200nm,1.4s
KIS                                eS       S       05 25 46.5 +0.7
KIS                                eSS      SS      05 28 57.0 -5.3
KIS                                eLQ      LQ      05 34 47.0
      comp=Z,5µm,20.0s
KIS                                LRM      MLR     05 40 14.0
      comp=Z,2µm,16.0s
KIS   Kishinev          43.96 304  eP       P       05 19 17.5 +3.0
KIS                                i                05 19 22.0
KIS                                eS       S       05 25 46.5 +0.7
KIS                                eSS      SS      05 28 57.0 -5.3
KIS                                pmax     pmax
      comp=Z,180nm,1.4s
KIS                                MLR      MLR
      comp=Z,2µm,16.0s
TYV   Tymovskoe         43.99  50  eP       P       05 19 20.8 +6.1
TYV                                pmax     pmax
      comp=Z,12nm,1.0s
TYV                                pmax     pmax
      comp=Z,200nm,6.4s
TYV                                MLR      MLR
      comp=E,6µm,12.0s
TYV                                MLR      MLR
      comp=Z,4µm,12.0s
ISP   Isparta           44.09 291  eP       P       05 19 17.1 +1.2
      comp=Z,43nm,1.3s
ISP   Isparta           44.09 291⇓ iP       P       05 19 17.8 +1.9
ISP   Isparta           44.09 291  eP       P       05 19 17.1 +1.2
ISP                                pmax     pmax
      comp=Z,43nm,1.3s
YSS   Yuzh-Sakhalins    44.24  56  eP       P       05 19 22.1 +5.3
YSS                                e                05 19 34.8
YSS                                e                05 21 38.5
YSS                                eS       S       05 25 55.6 +5.7
YSS                                eSS      ScS     05 29 14.0 -0.8
YSS                                pmax     pmax
      comp=Z,10.0nm,0.9s
YSS                                MLR      MLR
      comp=N,2µm,12.0s
YSS                                MLR      MLR
      comp=E,2µm,12.0s
YSS                                MLR      MLR
      comp=Z,3µm,12.0s
YLV   Yalova            44.41 295⇓ iP       P       05 19 20.1 +1.8
YLV   Yalova            44.41 295 ⇓P        P       05 19 20.1 +1.8
MICGM Minsk             44.43 315⇓ eP       P       05 19 24.0 +5.8
MICGM                              PM               05 19 25.0
      comp=Z,0.3nm,1.0s
MICGM                              eLR      LR      05 35 10.0
MNK   Minsk             44.43 315⇓ eP       P       05 19 24.0 +5.8
APA   Apatity           44.50 334⇓ iP       P       05 19 16.5 -2.0
APA                                pmax     pmax
      comp=Z,6.0nm,1.0s
CFR   Carcaliu          44.61 302⇑ iP       P       05 19 21.0 +1.3
CFR   Carcaliu          44.61 302 ⇑P        P       05 19 21.0 +1.3
TLB   Topalu            44.75 301⇓ iP       P       05 19 21.9 +1.1
TLB   Topalu            44.75 301 ⇓P        P       05 19 21.9 +1.1
ICOR  Ion Corvin        44.98 300⇑ iP       P       05 19 24.5 +1.8
NACGM Naroch            45.09 316  e        P       05 19 25.0 +1.6
NACGM                              eLQ      LQ      05 29 29.0
NACGM                              eLR      LR      05 38 46.0
NACGM                              LRM      MLR     05 42 02.0
IDID  Didziasalis       45.13 316  eP       P       05 19 25.8 +2.1
IDID                               IAmb     IAmb    05 19 31.4
      comp=Z,22nm,1.2s
VSU   Vasula            45.35 321c eP       P       05 19 26.6 +1.2
VSU                                pmax     pmax
      comp=Z,183nm,1.7s
VSU   Vasula            45.35 321  eP       P       05 19 26.9 +1.5
VSU                                IAmb     IAmb    05 19 32.9
      comp=Z,117nm,0.9s
IIGN  Ignalina          45.43 316  eP       P       05 19 27.9 +1.8
IIGN                               IAmb     IAmb    05 19 34.0
      comp=Z,25nm,1.1s
IZAR  Zarasai           45.43 317  eP       P       05 19 27.8 +1.7
IZAR                               IAmb     IAmb    05 19 33.9
      comp=Z,52nm,1.4s
MANT  Manisa            45.45 293  eP       P       05 19 27.6 +0.8
      comp=Z,83nm,1.3s
ISAL  Salakas           45.49 317  eP       P       05 19 28.5 +1.9
ISAL                               IAmb     IAmb    05 19 34.5
      comp=Z,48nm,1.3s
TESR  Tescani           45.49 304⇑ iP       P       05 19 28.7 +1.9
VRI   Vrincioaia        45.51 303⇓ iP       P       05 19 29.5 +2.6
VRI   Vrincioaia        45.51 303 ⇓P        P       05 19 29.5 +2.6
PLOR  Plostina          45.57 303⇑ iP       P       05 19 30.9 +3.5
PLOR  Plostina          45.57 303 ⇑P        P       05 19 30.9 +3.5
PHSR  Pinarhisar        45.59 297⇑ iP       P       05 19 29.3 +1.7
BIZ   Bicaz             45.81 305⇑ iP       P       05 19 32.1 +2.8
FIA0  FINESS Array S    46.03 325  eP       P       05 19 31.1 +0.3
FIA0  FINESS Array S    46.03 325  eP       P       05 19 31.1 +0.3
FINES FINESS Array B    46.03 325  P        P       05 19 31.1 +0.3
      comp=Z,4.0nm,0.6s,baz=105,slow=7.5,SNR=17
FINES                              PcP      PcP     05 21 08.4 +1.3
      comp=Z,7.0nm,0.8s,baz=84,slow=5.9,SNR=5.3
FINES                              LR       LR      05 40 27.4
      comp=Z,3µm,19.8s,baz=96,slow=38
MLR   Muntele Rosu      46.10 303  eP       P       05 19 32.9 +1.1
      comp=Z,80nm,1.0s
MLR   Muntele Rosu      46.10 303⇑ iP       P       05 19 34.9 +3.1
MLR   Muntele Rosu      46.10 303  eP       P       05 19 32.9 +1.1
MLR                                pmax     pmax
      comp=Z,80nm,1.0s
OZUR                    46.13 303⇑ iP       P       05 19 34.8 +2.9
BURAR Bucovina Array    46.34 306⇑ iP       P       05 19 36.4 +2.8
BURAR Bucovina Array    46.34 306 ⇑P        P       05 19 36.4 +2.8
DOPR  Dopca             46.42 303⇓ iP       P       05 19 37.4 +3.2
VOIR                    46.73 303⇑ iP       P       05 19 37.3 +0.6
VOIR                    46.73 303 ⇑P        P       05 19 37.3 +0.6
YUK   Yuzh-Kuril'sk     46.78  59  eP       P       05 19 36.5 -0.4
YUK                                e                05 21 28.0
YUK                                ePPP     PPP     05 22 14.3
YUK                                eS       S       05 26 27.6 +1.1
YUK                                eSSS     SSS     05 30 56.8
LVV   L'vov             46.91 309  eP       P       05 19 43.2 +5.3
LVV                                MLR      MLR
      comp=Z,2µm,19.0s
SUW   Suwalki           47.19 315  eP       P       05 19 44.2 +4.3
SUW   Suwalki           47.19 315  eP       P       05 19 41.0 +1.1
      comp=Z,77nm,1.1s
SUW   Suwalki           47.19 315  eP       P       05 19 41.0 +1.1
SUW                                pmax     pmax
      comp=Z,77nm,1.1s
KARP  Karpathos         47.28 289  eP       P       05 19 41.9 +0.8
      comp=Z,170nm,1.0s
KWP   Kalwaria Pacla    47.78 309  eP       P       05 19 48.2 +3.5
KWP   Kalwaria Pacla    47.78 309  eP       P       05 19 46.2 +1.5
      comp=Z,452nm,1.2s
KWP   Kalwaria Pacla    47.78 309  eP       P       05 19 46.2 +1.5
ARA0  ARCESS Array S    47.87 336  eP       P       05 19 46.0 +1.0
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ARCES	ARCESS Array B	47.87	336	P	P	05 19 46.0	+1.0
	comp=Z,11nm,0.9s,baz=80,slow=6.8,SNR=12						
TRPA	Tarpa	48.07	307	⇓iP	P	05 19 51.9	+5.0
DRGR		48.14	305	⇑iP	P	05 19 50.0	+2.4
DRGR		48.14	305	⇑P	P	05 19 50.0	+2.4
UZH	Uzhgorod	48.17	307	⇑iP	P	05 19 53.0	+5.4
UZH				i		05 19 57.0	
UZH				i S	S	05 26 50.0	+3.8
UZH				ePS	PKiKP	05 27 06.0	-59
UZH				eSSS	SSS	05 31 22.0	
VTS	Vitosha	48.52	299	eP	P	05 19 52.3	+1.6
	comp=Z,9.9nm,1.0s						
MA2	Magadan	48.69	38	eP	P	05 19 52.0	+0.4
	comp=Z,22nm,1.3s						
MA2	Magadan	48.69	38	deP	P	05 19 51.9	+0.4
MA2				pmax	pmax		
	comp=Z,17nm,1.3s						
MA2	Magadan	48.69	38	P	P	05 19 51.7	+0.2
	comp=Z,3.8nm,0.5s,baz=248,slow=8.7,SNR=7.0						
BEL	Belsk	48.77	312	eP	P	05 19 58.2	+5.9
BEL	Belsk	48.77	312	eP	P	05 19 58.2	+5.9
KLNR	Kaliningrad	48.90	315	⇑eP	P	05 19 55.3	+2.1
KLNR				pmax	pmax		
	comp=Z,223nm,1.5s						
NIE	Niedzica	49.36	309	eP	P	05 19 59.5	+2.6
NIE	Niedzica	49.36	309	eP	P	05 19 59.5	+2.6
SEY	Seymchan	49.58	34	⇑iP	P	05 19 59.3	+1.1
SEY	Seymchan	49.58	34	P	P	05 19 58.5	+0.2
	comp=Z,6.3nm,0.8s,baz=256,slow=7.5,SNR=22						
OJC	Ojcow	49.58	310	eP	P	05 19 59.4	+0.9
OJC	Ojcow	49.58	310	eP	P	05 19 59.6	+1.1
	comp=Z,26nm,1.3s						
OJC	Ojcow	49.58	310	eP	P	05 19 59.6	+1.1
OJC				pmax	pmax		
	comp=Z,27nm,1.3s						
PSZ	Piszkesteto	49.86	307	eP	P	05 20 01.1	+0.4
	comp=Z,7.4nm,0.8s						
PSZ	Piszkesteto	49.86	307	eP	P	05 20 01.1	+0.4
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PSZ	Piszkesteto	49.86	307	eP	P	05 20 04.1	+3.3
VYHS	Vyhne	50.46	308	eP	P	05 20 09.9	+4.7
VYHS	Vyhne	50.46	308	eP	P	05 20 09.9	+4.7
DIVS	Divibare	50.52	302	eP	P	05 20 07.0	+1.2
	comp=Z,28nm,1.2s						
OKC	Ostrava-Krasne	50.69	309	eP	P	05 20 13.3	+6.4
OKC				ex	x	05 20 16.1	
OKC				AMS	AMS	05 42 40.0	
	comp=Z,2µm,19.1s						
OKC	Ostrava-Krasne	50.69	309	eP	P	05 20 13.3	+6.4
OKC				e		05 20 16.1	
OKC				MLR	MLR		
	comp=Z,2µm,19.1s						
MORH	Mrgy, Hungar	51.01	305	eP	P	05 20 12.1	+2.7
MORC	Moravsky Berou	51.08	309	eP	P	05 20 11.1	+1.2
	comp=Z,20nm,1.1s						
MORC	Moravsky Berou	51.08	309	eP	P	05 20 11.1	+1.2
MORC				pmax	pmax		
	comp=Z,20nm,1.1s						
MORC	Moravsky Berou	51.08	309	eP	P	05 20 12.0	+2.1
JAVC	Velka Javorina	51.16	308	eP	P	05 20 13.6	+3.1
KRLC	Kraliky	51.52	310	eP	P	05 20 18.6	+5.4
KRLC				ex	x	05 20 23.2	
KRLC	Kraliky	51.52	310	eP	P	05 20 18.6	+5.4
KRLC				e		05 20 23.2	
KSP	Ksiaz	51.70	311	eP	P	05 20 17.3	+2.8
KSP	Ksiaz	51.70	311	eP	P	05 20 17.3	+2.8
DPC	Dobruska-Polom	51.76	310	eP	P	05 20 17.2	+2.2
DPC				ex	x	05 20 20.9	
DPC				AMS	AMS	05 43 20.0	
	comp=Z,2µm,14.9s						
DPC	Dobruska-Polom	51.76	310	eP	P	05 20 17.2	+2.2
DPC				e		05 20 20.9	
DPC				MLR	MLR		
	comp=Z,2µm,14.9s						
VRAC	Vranov	51.77	309	eP	P	05 20 17.5	+2.4
UPC	Upice	51.93	311	eP	P	05 20 22.4	+6.2
UPC				ex	x	05 20 26.3	
UPC				AMS	AMS	05 42 40.0	
	comp=Z,2µm,22.8s						
UPC	Upice	51.93	311	eP	P	05 20 22.4	+6.2
UPC				e		05 20 26.3	
UPC				MLR	MLR		
	comp=Z,2µm,22.8s						
KRUC	Moravsky	51.95	309	eP	P	05 20 18.5	+2.1
TREC	Trest	52.49	309	eP	P	05 20 26.4	+6.0
TREC				AMS	AMS	05 43 30.0	
	comp=Z,3µm,26.7s						
TREC	Trest	52.49	309	eP	P	05 20 26.4	+6.0
TREC				MLR	MLR		
	comp=Z,3µm,26.7s						
SKR	Severo-Kuril's	52.51	49	eP	P	05 20 18.9	-1.5
SKR				eS	S	05 27 48.6	+2.1
SKR				pmax	pmax		
	comp=Z,65nm,1.3s						
SKR				MLR	MLR		
	comp=Z,3µm,16.0s						
CONA	Conrad Observa	52.52	307	P	P	05 20 19.3	-1.4
	comp=Z,23nm,1.0s,SNR=6.6						
GOPC	GO Pecny, Ondr	52.81	310	AMS	AMS	05 44 00.0	
	comp=Z,2µm,14.8s						
PVCC	Panska Ves	52.83	311	eP	P	05 20 28.8	+5.9
PVCC				ex	x	05 20 32.7	
PVCC				AMS	AMS	05 43 10.0	
	comp=Z,2µm,20.4s						
PVCC	Panska Ves	52.83	311	eP	P	05 20 28.8	+5.9
PVCC				e		05 20 32.7	
PVCC				MLR	MLR		
	comp=Z,2µm,20.4s						
ARSA	Arzberg	52.89	307	epP	P	05 20 24.8	+1.4
	comp=Z,7.3nm,1.1s						
PRU	Pruhonice	52.95	310	eP	P	05 20 29.9	+6.1
PRU				ex	x	05 20 33.7	
PRU				AMS	AMS	05 44 00.0	
	comp=Z,2µm,18.0s						
PRU	Pruhonice	52.95	310	eP	P	05 20 29.9	+6.1
PRU				e		05 20 33.7	
PRU				MLR	MLR		
	comp=Z,2µm,18.0s						
PETK	Petropavlovsk-	53.04	46	LR	LR	05 43 59.9	
	comp=Z,2µm,18.2s,baz=282,slow=37						
BRG	Berggiesshubel	53.16	311	eP	P	05 20 26.9	+1.6
	comp=Z,6.6nm,1.2s						
BRG				i		05 20 30.7	
	comp=Z,24nm,1.0s						
BRG				S	S	05 27 59.0	+3.6
	comp=N,7µm,19.2s						
	comp=E,3µm,24.1s						
	comp=Z,3µm,20.9s						
BRG	Berggiesshubel	53.16	311	eP	P	05 20 26.9	+1.6
BRG				i		05 20 30.7	
BRG				S	S	05 27 59.0	+3.6
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRG				MLR	MLR		
	comp=N,7µm,19.2s						
BRG				MLR	MLR		
	comp=E,3µm,24.1s						
BRG				MLR	MLR		
	comp=Z,3µm,20.9s						
NB2	NORSAR Subarra	53.20	324	P	P	05 20 25.0	-0.5
	comp=Z,31nm,1.0s,baz=84,slow=7.4						
NB2	NORSAR Subarra	53.20	324	P	P	05 20 25.0	-0.5
	baz=84,slow=7.4						
NB200	NORSAR Array S	53.20	324	eP	P	05 20 25.2	-0.2
NOA	NORSAR Array B	53.20	324	P	P	05 20 25.2	-0.2
	comp=Z,8.9nm,0.7s,baz=84,slow=7.5,SNR=23						
NOA				LR	LR	05 44 40.1	
	comp=Z,2µm,20.7s,baz=85,slow=38						
SOKA	Soboth	53.35	306	eP	P	05 20 27.8	+1.0
	comp=Z,29nm,1.0s,SNR=7.9						
MOA	Molln	53.59	308	P	P	05 20 28.0	-0.5
	comp=Z,10nm,0.9s						
PET	Petropavlovsk	53.63	46	eP	P	05 20 30.6	+1.9
PET				eS	S	05 28 01.7	0.0
PET				eSS	SS	05 31 41.7	0.0
PET				pmax	pmax		
	comp=Z,32nm,1.4s						
PET				MLR	MLR		
	comp=Z,4µm,15.0s						
CLL	Collm	53.65	312	eP	P	05 20 30.6	+1.7
	comp=Z,16nm,1.0s						
CLL	Collm	53.65	312	eP	P	05 20 30.0	+1.1
CLL				i Pmax		05 20 32.7	
	comp=Z,22nm,1.1s						
CLL				e		05 20 49.0	
CLL				ePPP	PPP	05 23 37.0	
CLL				ePPPP		05 23 52.0	
CLL				LmV		05 45 00.0	
	comp=Z,2µm,20.2s						
CLL	Collm	53.65	312	eP	P	05 20 30.0	+1.1
CLL				pmax	pmax		
	comp=Z,22nm,1.1s						
CLL				MLR	MLR		
	comp=Z,2µm,20.2s						
OBKA	Obir	53.71	306	pP	P	05 20 31.0	+1.5
	comp=Z,16nm,1.2s						
GEC2	GERESS Array S	53.73	309	eP	P	05 20 30.2	+0.6
GEC2	GERESS Array S	53.73	309	eP	P	05 20 30.3	+0.6
GERES	GERESS Array B	53.73	309	P	P	05 20 30.2	+0.6
	comp=Z,2.6nm,0.7s,baz=76,slow=7.0,SNR=40						
GERES				LR	LR	05 45 59.6	
	comp=Z,2µm,19.1s,baz=82,slow=39						
KHC	Kasperske Hory	53.75	309	eP	P	05 20 31.4	+1.7
	comp=Z,6.3nm,1.1s						
KHC	Kasperske Hory	53.75	309	eP	P	05 20 33.5	+3.8
KHC				ex	x	05 20 35.5	
KHC				AMS	AMS	05 44 00.0	
	comp=Z,3µm,24.6s						
KHC	Kasperske Hory	53.75	309	eP	P	05 20 31.4	+1.7
KHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KONO	Kongsberg	54.16	323	eP	P	05 20 34.4	+1.9
	comp=Z,38nm,1.4s						
KONO	Kongsberg	54.16	323	eP	P	05 20 34.4	+1.9
KONO				pmax	pmax		
	comp=Z,38nm,1.4s						
NKC	Novy Kostel	54.22	311	AMS	AMS	05 44 20.0	
	comp=Z,2µm,19.2s						
MYKA	Terra Mystica	54.29	306	P	P	05 20 33.4	-0.3
	comp=Z,5.2nm,1.3s						
KBA	Koelnbreinsper	54.37	307	epP	P	05 20 37.4	+2.9
	comp=Z,6.8nm,0.9s						
MOX	Moxa	54.65	311	P	P	05 20 42.6	+6.4
MOX				pmax	pmax		
	comp=Z,14nm,1.2s						
ABTA	Abfaltersbach	55.01	307	eP	P	05 20 40.0	+1.0
	comp=Z,8.3nm,1.0s						
CEL	Celeste	55.08	296	eP	P	05 20 41.8	+2.2
	comp=Z,64nm,1.2s						
GRA1	Grafenberg Arr	55.12	310	eP	P	05 20 42.0	+2.4
	comp=Z,28nm,1.0s						
GRFO	Grafenberg	55.12	310	eP	P	05 20 41.8	+2.2
	comp=Z,30nm,1.1s						
BILL	Bilibino	55.20	27	eP	P	05 20 41.2	+1.3
	comp=Z,13nm,1.0s						
BILL	Bilibino	55.20	27	ceP	P	05 20 41.2	+1.3
BILL				i		05 20 46.1	
BILL				eS	S	05 28 36.6	+14
BILL				pmax	pmax		
	comp=Z,22nm,2.5s						
BILL				MLR	MLR		
	comp=Z,1µm,16.0s						
WTTA	Wattenberg	55.45	307	pP	P	05 20 43.3	+1.0
	comp=Z,3.9nm,0.6s						
WATA	Walderalm	55.48	307	eP	P	05 20 47.0	+4.6
	comp=Z,5.6nm,0.7s						
SQTA	Sankt Quirin	55.75	307	eP	P	05 20 45.1	+0.8
	comp=Z,13nm,0.9s						
MOTA	Moosalm	55.78	308	P	P	05 20 44.1	-0.6
	comp=Z,6.0nm,0.9s						
RETA	Reutte	55.97	308	epP	P	05 20 47.0	+1.1
	comp=Z,14nm,1.1s						
FETA	Feichten	56.12	307	epP	P	05 20 48.8	+1.8
	comp=Z,17nm,1.0s						
DAVA	Damuels	56.60	308	eP	P	05 20 51.3	+0.8
	comp=Z,24nm,1.1s						
BFO	Black Forest	57.31	309	eP	P	05 20 57.4	+2.1
	comp=Z,26nm,1.5s						
KMBO	Kilima Mbogo	57.38	242	eP	P	05 20 57.2	+0.7
	comp=Z,69nm,1.4s						
KMBO	Kilima Mbogo	57.38	242	i P	P	05 20 57.3	+0.7
	SNR=10						
KMBO	Kilima Mbogo	57.38	242	eP	P	05 20 57.2	+0.7
KMBO				pmax	pmax		
	comp=Z,69nm,1.4s						
KMBO	Kilima Mbogo	57.38	242	P	P	05 20 58.6	+2.1
	SNR=18						
KMBO				P	P	05 20 58.6	+2.1
	SNR=18						
KMBO	Kilima Mbogo	57.38	242	P	P	05 20 56.6	+0.1
	comp=Z,9.4nm,0.8s,baz=38,slow=9.4,SNR=6.4						
KMBO				LR	LR	05 44 14.7	
	comp=Z,772nm,20.6s,baz=54,slow=35						
ECH	Echery	58.09	309	eP	P	05 21 01.7	+0.9
	comp=Z,22nm,1.3s						
ECH	Echery	58.09	309	eP	P	05 21 01.7	+0.9
ECH				pmax	pmax		
	comp=Z,23nm,1.3s						
MEM	Membach	58.11	312	⇑P	P	05 21 03.1	+2.2
MEM				⇑pP	pP	05 21 06.2	-0.9
	comp=Z,15nm,1.2s						
BEBN	Eben Emael	58.26	313	⇑sP	sP	05 21 07.5	-2.9
WLF	Walferdange	58.30	311	eP	P	05 21 03.7	+1.5
	comp=Z,95nm,1.0s						
WLF	Walferdange	58.30	311	eP	P	05 21 03.7	+1.5
WLF				pmax	pmax		
	comp=Z,95nm,1.0s						
WLF	Walferdange	58.30	311	⇑P	P	05 21 05.2	+3.0
WLF				⇓sP	pP	05 21 08.2	-0.2
	comp=Z,20nm,1.1s						
SENIN	Lac Senin/Sane	58.57	307	eP	P	05 21 05.6	+1.1
	comp=Z,16nm,1.0s						
BCLA	Clavier	58.60	312	⇑P	P	05 21 05.0	+0.7
BCLA				⇑pP	pP	05 21 09.7	-0.7
BNI	Bardonecchia	59.40	306	eP	P	05 21 11.2	+1.1
	comp=Z,37nm,1.2s						
BNI	Bardonecchia	59.40	306	eP	P	05 21 11.2	+1.1
BNI				pmax	pmax		
	comp=Z,37nm,1.2s						
DAG	Danmarks Havn	60.03	345	i P	P	05 21 13.6	-0.1
	comp=Z,15nm,1.2s						
	comp=Z,2µm,21.0s						
DAG	Danmarks Havn	60.03	345	i P	P	05 21 13.6	-0.1
DAG				pmax	pmax		
	comp=Z,23nm,1.2s						
DAG				MLR	MLR		
	comp=Z,2µm,21.0s						
SMF	Signal de Mont	60.73	309	eP	P	05 21 21.0	+1.9
SMF				pmax	pmax		
	comp=Z,22nm,1.0s						
SSB	Saint Sauveur	60.74	307	eP	P	05 21 21.1	+1.9
	comp=Z,41nm,1.5s						
SSB	Saint Sauveur	60.74	307	eP	P	05 21 21.1	+1.9
SSB				pmax	pmax		
	comp=Z,41nm,1.5s						
KEST	Kesra	60.88	295	LR	LR	05 51 26.9	
	comp=Z,744nm,19.4s,baz=26,slow=40						
MBAR	Mbarara	61.93	248	eP	P	05 21 27.8	0.0
	comp=Z,35nm,1.2s						
MBAR	Mbarara	61.93	248	eP	P	05 21 27.8	0.0
MBAR				pmax	pmax		
	comp=Z,35nm,1.2s						
CAF	Calviac	62.51	307	eP	P	05 21 34.8	+3.7
CAF				pmax	pmax		
	comp=Z,14nm,1.1s						
MFF	Saint Martin d	63.30	310	eP	P	05 21 41.0	+4.7
MFF				pmax	pmax		
	comp=Z,21nm,1.2s						
ABPO	Ambohimpanom	64.41	221	eP	P	05 21 44.8	+0.8
	comp=Z,32nm,1.4s						
ABPO	Ambohimpanom	64.41	221	eP	P	05 21 44.8	+0.8
ABPO				pmax	pmax		
	comp=Z,32nm,1.4s						
SUMG	Summit	66.67	344	eP	P	05 21 58.8	+0.5
	comp=Z,35nm,1.0s						
SUMG	Summit	66.67	344	⇑iP	P	05 21 59.3	+1.0
	comp=Z,136nm,1.3s						
SUMG	Summit	66.67	344	⇑iP	P	05 21 59.3	+1.0
SUMG				pmax	pmax		
	comp=Z,140nm,1.3s						
ANM	Nome	67.05	26	eP	P	05 22 01.4	+1.1
	comp=Z,12nm,1.1s						
ANM	Nome	67.05	26	eP	P	05 22 01.4	+1.1
ANM				pmax	pmax		
	comp=Z,12nm,1.1s						
TULEG	Thule	68.22	354	eP	P	05 22 06.9	-0.6
	comp=Z,16nm,0.9s						
ESDC	Sonseca Array	68.77	304	P	P	05 22 11.8	+0.1
	comp=Z,6.4nm,0.9s,baz=58,slow=6.7,SNR=19						
ESDC				LR	LR	05 56 12.4	
	comp=Z,703nm,19.8s,baz=40,slow=39						
TOLK	Toolik Lake Re	69.55	19	eP	P	05 22 16.0	0.0
	comp=Z,22nm,0.8s						
TAM	Tamanrasset	69.62	284	eP	P	05 22 17.3	-0.1
	comp=Z,8.7nm,1.2s						
TAM	Tamanrasset	69.62	284	eP	P	05 22 17.3	-0.1
TAM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PBRG	Braganca	69.64	307	eP	P	05 22 22.2	+5.2
	comp=Z,26nm,2.0s						
MVO	Moncorvo	70.14	307	eP	P	05 22 25.5	+5.4
	comp=Z,34nm,1.2s						
MVO	Moncorvo	70.14	307	eLQ	LQ	05 46 35.4	
MVO				eLR	LR	05 51 37.9	
	comp=Z,641nm,20.0s						
COLD	Coldfoot	70.36	20	eP	P	05 22 21.4	+0.5
	comp=Z,8.6nm,0.9s						
PGAV	Gavieira, Arco	70.57	308	eLR	LR	05 54 20.7	
	comp=Z,1µm,17.0s						
MTE	Manteigas	70.85	306	eP	P	05 22 30.1	+5.6
MTE	Manteigas	70.85	306	eLQ	LQ	05 44 52.8	
MTE				eLR	LR	05 52 09.6	
	comp=Z,686nm,16.0s						
PCBR	Castelo Branco	71.07	306	eP	P	05 22 31.1	+5.4
	comp=Z,27nm,1.6s						
WRAB	Tennant Creek	71.17	132	eP	P	05 22 25.5	-1.0
	comp=Z,79nm,1.4s						
WRAB	Tennant Creek	71.17	132	eP	P	05 22 25.5	-1.0
WRAB				pmax	pmax		
	comp=Z,79nm,1.4s						
WR1	Warramunga Arr	71.17	132	eP	P	05 22 25.6	-0.8
	comp=Z,26nm,0.6s						
WRA	Warramunga Arr	71.17	132	P	P	05 22 25.6	-0.8
	comp=Z,18nm,0.7s,baz=326,slow=6.6,SNR=207						
WRA				LR	LR	05 57 38.0	
	comp=Z,389nm,20.7s,baz=270,slow=39						
PMRV	Marv??o	71.22	305	eP	P	05 22 32.2	+5.5
	comp=Z,32nm,1.7s						
PMRV	Marv??o	71.22	305	eLQ	LQ	05 47 56.4	
PMRV				eLR	LR	05 52 16.8	
	comp=Z,629nm,18.0s						
RES	Resolute Bay	71.25	0	eP	P	05 22 27.7	+1.5
	comp=Z,7.0nm,1.2s						
RES	Resolute Bay	71.25	0	eP	P	05 22 27.7	+1.5
RES				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MLY	Manley	71.72	22	eP	P	05 22 29.9	+0.6
	comp=Z,19nm,1.3s						
FYU	Fort Yukon	72.21	19	eP	P	05 22 33.2	+1.1
	comp=Z,24nm,1.2s						
CAST	Castle Rocks	72.40	24	eP	P	05 22 33.5	+0.2
	comp=Z,10.0nm,0.7s						
PVAQ	Vaqueiros	72.44	303	eLQ	LQ	05 44 50.0	
MDM	Murphy Dome	72.53	21	eP	P	05 22 34.5	+0.4
	comp=Z,10nm,0.8s						
COLA	College	72.70	21	eP	P	05 22 35.3	+0.3
	comp=Z,21nm,0.8s						
COLA	College	72.70	21	eP	P	05 22 35.3	+0.3
COLA				pmax	pmax		
	comp=Z,21nm,0.8s						
PPLA	Purkeypile	72.72	24	eP	P	05 22 35.9	+0.5
	comp=Z,14nm,0.8s						
SVW2	Sparrevohn	72.73	26	eP	P	05 22 35.6	+0.3
	comp=Z,26nm,1.2s						
COEN	Coen	72.79	121	eP	P	05 22 36.0	-0.3
	comp=Z,27nm,1.5s						
PRP	Porcupine Dome	72.91	20	eP	P	05 22 36.7	+0.2
	comp=Z,9.2nm,0.8s						
WRH	Wood River Hil	72.92	21	eP	P	05 22 36.1	-0.3
	comp=Z,5.5nm,0.9s						
ILAR	Eielson Array	73.06	21	P	P	05 22 36.9	-0.3
	comp=Z,7.6nm,0.8s,baz=308,slow=4.8,SNR=74						
ILAR				PP	PP	05 25 19.5	+0.2
	comp=Z,6.2nm,1.0s,baz=312,slow=8.3,SNR=12						
ILAR				LR	LR	05 57 36.3	
	comp=Z,656nm,21.7s,baz=321,slow=38						
ILB	Eielson Array	73.06	21	eP	P	05 22 36.9	-0.3
LSZ	Lusaka	73.54	238	eP	P	05 22 41.1	+0.2
	comp=Z,15nm,0.8s						
LSZ	Lusaka	73.54	238	P	P	05 22 42.2	+1.3
	SNR=6.7						
LSZ				P	P	05 22 42.2	+1.3
	SNR=6.7						
INK	Inuvik	73.59	14	eP	P	05 22 40.4	+0.2
	comp=Z,27nm,1.4s						
INK	Inuvik	73.59	14	eP	P	05 22 40.4	+0.2
INK				pmax	pmax		
	comp=Z,27nm,1.4s						
INK	Inuvik	73.59	14	P	P	05 22 40.5	+0.3
	comp=Z,6.9nm,1.1s,baz=333,slow=7.3,SNR=14						
SFJD	Kangerlussuaq	73.64	344	eP	P	05 22 40.4	-0.1
	comp=Z,34nm,1.1s						
SFJD	Kangerlussuaq	73.64	344	i P	P	05 22 40.4	-0.1
	comp=Z,25nm,0.9s						
SFJD	Kangerlussuaq	73.64	344	i P	P	05 22 40.4	-0.1
SFJD				pmax	pmax		
	comp=Z,25nm,0.9s						
AS31	Alice Springs	73.72	134	eP	P	05 22 40.8	-0.9
	comp=Z,4.7nm,0.8s						
ASAR	Alice Springs	73.72	134	P	P	05 22 41.5	-0.2
	comp=Z,14nm,0.7s,baz=319,slow=6.3,SNR=47						
ASAR				LR	LR	05 58 24.3	
	comp=Z,296nm,20.5s,baz=323,slow=38						
DHY	Denali Highway	74.15	22	eP	P	05 22 44.1	+0.2
	comp=Z,10nm,0.7s						
SUA	Susitna One	74.20	25	eP	P	05 22 44.5	+0.4
	comp=Z,14nm,0.8s						
RIDG	Independ'e Rid	74.43	21	eP	P	05 22 45.0	-0.4
	comp=Z,23nm,0.8s						
SCRK	Sand Creek	74.50	20	eP	P	05 22 46.1	+0.3
	comp=Z,17nm,0.8s						
EPYK	Eagle Plains	74.50	16	eP	P	05 22 45.4	-0.3
	comp=Z,13nm,0.9s						
GHO	Glory Hole Cre	74.60	24	eP	P	05 22 46.8	+0.4
	comp=Z,15nm,0.9s						
EGAK	Eagle	74.67	19	eP	P	05 22 47.0	+0.4
	comp=Z,11nm,0.8s						
DOT	Dot Lake	74.73	21	eP	P	05 22 47.0	-0.1
	comp=Z,6.9nm,0.8s						
SML	Sawmill	74.77	23	eP	P	05 22 47.6	+0.3
	comp=Z,31nm,0.8s						
SML	Sawmill	74.77	23	eP	P	05 22 47.6	+0.3
SML				pmax	pmax		
	comp=Z,31nm,0.8s						
PAX	Paxson	74.82	22	eP	P	05 22 47.8	+0.1
	comp=Z,6.6nm,0.9s						
PAX	Paxson	74.82	22	eP	P	05 22 47.8	+0.1
PAX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KNK	Knik Glacier	75.01	24	eP	P	05 22 49.0	+0.3
	comp=Z,19nm,0.9s						
SCM	Sheep Creek Mo	75.08	23	eP	P	05 22 49.0	-0.1
	comp=Z,26nm,0.8s						
SCM	Sheep Creek Mo	75.08	23	eP	P	05 22 49.0	-0.1
SCM				pmax	pmax		
	comp=Z,26nm,0.8s						
HARP	HAARP	75.34	22	eP	P	05 22 51.5	+0.9
	comp=Z,34nm,0.9s						
MENT	Mentasta	75.37	21	eP	P	05 22 51.4	+0.6
	comp=Z,4.6nm,0.7s						
DAWY	Dawson	75.70	19	eP	P	05 22 52.6	-0.1
	comp=Z,14nm,1.0s						
KDAK	Kodiak Island	76.09	28	i P	P	05 22 55.9	+1.0
TOA1	Torodi Ar. Sit	77.71	278	eP	P	05 23 03.3	-1.5
TORD	Torodi Ar. Bea	77.71	278	P	P	05 23 03.3	-1.5
	comp=Z,2.8nm,0.6s,baz=42,slow=4.3,SNR=26						
TORD				LR	LR	06 01 03.5	
	comp=Z,636nm,19.0s,baz=350,slow=38						
CTAO	Charters Tower	79.10	123	eP	P	05 23 12.3	+0.1
	comp=Z,53nm,1.3s						
CTAO	Charters Tower	79.10	123	eP	P	05 23 12.3	+0.1
CTAO				pmax	pmax		
	comp=Z,53nm,1.3s						
WHY	Whitehorse	79.71	19	eP	P	05 23 15.2	+0.1
	comp=Z,8.7nm,1.0s						
SKAG	Skagway	80.59	20	eP	P	05 23 20.1	+0.4
	comp=Z,30nm,1.0s						
YKA	Yellowknife Ar	82.14	9	P	P	05 23 26.3	-1.6
	comp=Z,3.4nm,0.8s,baz=340,slow=5.1,SNR=58						
YKA				PKKPbc	PKKPbc	05 41 57.2	+0.5
	comp=Z,0.2nm,0.6s,baz=146,slow=2.5,SNR=4.8						
YKA				LR	LR	06 04 48.2	
	comp=Z,72nm,18.2s,baz=346,slow=39						
STKA	Stephens Creek	84.36	135	eP	P	05 23 38.5	-1.2
	comp=Z,2.9nm,1.0s						
STKA	Stephens Creek	84.36	135	P	P	05 23 38.2	-1.5
	comp=Z,4.0nm,0.8s,baz=329,slow=7.4,SNR=5.6						
STKA				LR	LR	06 05 01.9	

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         comp=Z,838nm,21.7s,baz=310,slow=38
BOSA  Boshof            84.69 230  P       P        05 23 40.5 -1.1
         comp=Z,6.4nm,0.8s,baz=50,slow=2.8,SNR=12
BOSA                               LR      LR       05 59 34.0
         comp=Z,331nm,21.0s,baz=48,slow=34
DBIC  Dimbokro          86.64 276 eP       P        05 23 51.1 -0.5
         comp=Z,23nm,1.0s
DBIC  Dimbokro          86.64 276  P       P        05 23 50.8 -0.8
         comp=Z,4.8nm,1.0s,baz=29,slow=5.9,SNR=3.4
DBIC                               LR      LR       06 05 29.7
         comp=Z,1μm,20.5s,baz=39,slow=38
KIC   Kosan Boka        86.72 275 ePKP2    P        05 23 56.7 +4.7
         comp=Z,68nm,1.1s
TIC   Toumodi           86.79 276 ePKP2    P        05 23 57.0 +4.6
LIC   Lamto             87.03 275 ePKP2    P        05 23 58.0 +4.5
         comp=Z,82nm,1.1s
FCC   Fort Churchill    87.25 360 eP       P        05 23 53.2 -0.5
         comp=Z,13nm,1.3s
FCC   Fort Churchill    87.25 360 eP       P        05 23 53.2 -0.5
FCC                                pmax    pmax
         comp=Z,13nm,1.3s
SCHQ  Schefferville     88.07 344 eP       P        05 23 56.9 -0.9
         comp=Z,11nm,1.0s
SCHQ  Schefferville     88.07 344  P       P        05 23 56.4 -1.4
         comp=Z,7.6nm,0.9s,baz=36,slow=5.7,SNR=5.5
SCHQ                               LR      LR       06 08 06.3
         comp=Z,596nm,21.7s,baz=22,slow=39
FFC   Flin Flon         91.05   4 eP       P        05 24 11.0 -0.8
         comp=Z,19nm,1.2s
FFC   Flin Flon         91.05   4 eP       P        05 24 11.0 -0.8
FFC                                pmax    pmax
         comp=Z,19nm,1.2s
DZM   Mont Dzumac       95.05 113 eP       P        05 24 34.2 +3.5
         comp=Z,58nm,1.2s
DZM   Mont Dzumac       95.05 113 eLR      LR       05 54 59.0
         comp=Z,788nm,27.2s
ULM   Lac du Bonnet     95.77   1  P       P        05 24 32.6 -1.0
         comp=Z,3.8nm,1.0s,baz=117,slow=6.7,SNR=3.0
ULM                                LR      LR       06 10 46.0
         comp=Z,861nm,18.9s,baz=5.5,slow=37
QSPA  South Pole Qui   124.13 180 ePKPdf   PKPdf    05 30 04.0 -1.2
QSPA  South Pole Qui   124.13 180  PKP     PKPdf    05 30 03.4 -1.8
         comp=Z,2.5nm,0.9s,baz=265,slow=9.6,SNR=4.2
PPT2  Papeete2         128.29  86 eLR      LR       06 10 34.5
         comp=Z,1μm,31.0s
TAOE  Nuku Hiva Isla   131.05  70 eLR      LR       06 11 57.4
         comp=Z,752nm,25.1s
TBI   Tubuai           131.08  92 eLR      LR       06 11 56.5
         comp=Z,484nm,25.0s
ROSC  El Rosal         136.66 330 ePKPdf   PKPdf    05 30 28.7 -2.3
ROSC  El Rosal         136.66 330  PKP     PKPdf    05 30 30.7 -0.3
         comp=Z,2.2nm,0.3s,baz=119,slow=3.6,SNR=2.6
OTAV  Otavalo          142.48 333 ePKPdf   PKPdf    05 30 39.0 -2.7
OTAV  Otavalo          142.48 333 ePKIKP   PKPdf    05 30 39.0 -2.7
CPUP  Villa Florida    147.15 274 ePKPdf   PKPdf    05 30 49.4 +0.6
CPUP  Villa Florida    147.15 274  PKPbc   PKPbc    05 30 50.8 -0.1
         comp=Z,13nm,1.0s,baz=46,slow=1.6,SNR=17
LPAZ  La Paz           150.34 301 ePKPdf   PKPdf    05 30 54.4 -0.6
LPAZ  La Paz           150.34 301  PKPbc   PKPbc    05 30 59.6 -0.5
         comp=Z,6.9nm,1.0s,baz=39,slow=3.6,SNR=11
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IDC 25 05:16:03.1±3.0**,32°.16S**×**177°.91W,h0km,mb4.0**/2**,**
mb1 4.2/3**,mb1mx3.9**/26**,mbtmp4.0**/3**,ML3.9**/1**,Error**
ellipse: s-maj=73.6km s-min=45.5km az=124.0,South
of Kermadec Islands

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Code  Station Name          Δ°  AZ°    Phase ID           Time     Res
                                   Op      ISC        h  m  s    ISC
URZ   Urewera            7.33 212  Pn      Pn       05 17 50.9 -0.4
         2.0nm,0.3s,baz=297,slow=9.5,SNR=8.1
URZ                                Sn      Sn       05 19 13.0 -2.2
         2.7nm,0.3s,baz=187,slow=18,SNR=6.8
ASAR  Alice Springs     43.12 269  P       P        05 24 06.0 +0.6
         0.7nm,0.4s,baz=107,slow=7.4,SNR=5.2
WRA   Warramunga Arr    44.27 274  P       P        05 24 14.0 -0.6
         1.2nm,0.3s,baz=112,slow=8.0,SNR=17
FINES FINESS Array B   146.81 339  PKPbc   PKPbc    05 35 45.7 -0.7
         1.3nm,0.7s,baz=18,slow=1.7,SNR=7.0
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*BJI **25** 05:22:17.5,34°.34N×85°.69E,h20km,mB4.5/1,mb4.5/23,*
Ms4.3/6,Ms7 4.2/4
*NEIC **25** 05:22:17.3±0.2,34°.32N×85°.70E,h10km,mb4.7/30,Error*
ellipse: s-maj=5.1km s-min=3.2km az=220.0
*MOS **25** 05:22:18.4±1.1,34°.32N×85°.74E,h31km,mb4.8/39,Error*
ellipse: s-maj=8.6km s-min=4.4km az=118.5
*ISCJB **25** 05:22:18.9±0.2,34°.37N±0°.02×85°.68E±0°.03,h33km,*
mb4.5/80,Error ellipse: s-maj=3.9km s-min=2.8km
az=146.5
*NDI **25** 05:22:18.4±2.9,34°.23N×85°.66E,h10km,mb4.7,*
mb4.7(NEIC)
*IDC **25** 05:22:20.5±4.6,34°.33N×85°.68E,h33km±34km,mb4.1/25,*
mb1 4.3/30,mb1mx4.2/43,mbtmp4.4/30,ML3.7/5,Error
ellipse: s-maj=15.2km s-min=12.3km az=27.0
ISC 25 05:22:20.9±0.3**,34°.32N**±0°.05×**85°.63E**±0°.04**,h35km,n219,**
σ**1ˢ46**/222**,mb4.5**/82**,2C-1D,Xizang**

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Code  Station Name          Δ°  AZ°    Phase ID           Time     Res
                                   Op      ISC        h  m  s    ISC
DANN  Dangsing           6.16 196 eP       Pn       05 23 52.0 +2.4
         96nm,0.5s
GUN   Gumba              6.39 178 eP       Pn       05 23 55.3 +2.5
         125nm,0.6s
KKN   Kakani             6.51 183 eP       Pn       05 23 58.0 +3.6
         64nm,0.5s
LSA   Lhasa              6.57 133 ePn      Pn       05 23 55.1 -0.3
LSA   Lhasa              6.57 133 eP       Pn       05 23 55.1 -0.3
PYUN  Piuthan            6.60 201 eP       Pn       05 23 56.4 +0.8
         69nm,0.7s
JIRN  Jiri               6.65 176 eP       Pn       05 23 59.0 +2.5
         93nm,0.4s
DMN   Daman              6.70 184 eP       Pn       05 24 00.2 +3.2
         55nm,0.5s
PKIN  Phulchoki          6.72 182 eP       Pn       05 24 00.0 +2.7
         63nm,0.5s
PKI   Pulchoki           6.73 182 eP       Pn       05 23 59.5 +2.0
         121nm,0.5s
KOLN  Koldanda           6.75 196 eP       Pn       05 23 59.7 +2.0
         124nm,0.7s
RAMN  Ramite             7.39 173 eP       Pn       05 24 07.1 +0.6
         149nm,0.8s
DDI   Dehra Dun          7.55 240 eP       Pn       05 24 09.3 +0.8
ODAN  Odare              7.58 168 eP       Pn       05 24 10.0 +0.8
         68nm,0.5s
SMLA  Simla              7.81 248 eP       Pn       05 24 12.8 +0.8
DHRM  DHARAMSHALA        8.08 258 eP       Pn       05 24 14.6 -1.4
KSH   Kashi              9.31 307  P       Pn       05 24 38.4 +5.7
KSH                                sP               05 24 45.8
WMQ   Urumqi             9.62   9 eP       Pn       05 24 45.0 +8.1
WMQ                                smax    smax
         comp=N,45nm,1.9s
WMQ                                smax    smax
         comp=E,28nm,1.5s
TARG  Taragay, Kyrgy     9.63 322 ePn      Pn       05 24 38.3 +1.0
PDGK  Podgornoye        10.19 334  P       Pn       05 24 48.3 +3.6
KDJ   Kajisay           10.24 322 ePn      Pn       05 24 45.9 +0.4
KDJ   Kajisay           10.24 322 eP       Pn       05 24 45.9 +0.4
SHL   Shillong          10.26 147 ePn      Pn       05 24 44.8 -1.0
SHL   Shillong          10.26 147 eP       Pn       05 24 44.8 -1.0
SHL   Shillong          10.26 147 eP       Pn       05 24 44.2 -1.6
NIL   Nilore            10.30 270 ePn      Pn       05 24 46.5 +0.3
NIL   Nilore            10.30 270 eP       Pn       05 24 46.5 +0.3
NRN   Naryn             10.41 316 ePn      Pn       05 24 48.5 +0.6
NRN   Naryn             10.41 316 eP       Pn       05 24 48.5 +0.6
BOK   Bokaro            10.49 179 eP       Pn       05 24 47.7 -1.1
BOK                                IAmb    IAmb     05 24 49.0
         comp=Z,76nm,2.1s
ULHL  Ulahol            10.82 320  P       Pn       05 24 57.1 +3.7
         SNR=6.0
TKM2  Tokmak 2          11.63 321  P       Pn       05 25 04.7 +0.3
         SNR=18
UCH   Uchtor            11.77 315  P       Pn       05 25 10.1 +3.5
         SNR=15
KBK   Karagaybulak      11.80 318  P       Pn       05 25 07.8 +1.1
         SNR=17
AAK   Ala-Archa         12.04 317  P       Pn       05 25 11.6 +1.6
         SNR=8.5
AAK   Ala-Archa         12.04 317 ePn      Pn       05 25 10.1  0.0
AAK   Ala-Archa         12.04 317ceP       Pn       05 25 11.2 +1.1
AAK                                pmax    pmax
         comp=Z,76nm,2.5s
AAK   Ala-Archa         12.04 317  Pn      Pn       05 25 10.9 +0.8
         comp=Z,0.6nm,0.3s,baz=127,slow=7.5,SNR=21
GTA   Gaotai            12.44  62 eP       Pn       05 25 17.3 +1.8
GTA                                pP      P        05 25 21.3 -5.6
GTA                                sP               05 25 24.4
EKS2  Erkin-Say         12.47 315  P       Pn       05 25 15.7 -0.2
         SNR=5.8
MK32  Makanchi Array    12.72 350 ePn      Pn       05 25 17.7 -1.5
MKAR  Makanchi Array    12.72 350 ePn      Pn       05 25 17.5 -1.7
MKAR  Makanchi Array    12.72 350  Pn      Pn       05 25 17.7 -1.5
         comp=Z,0.2nm,0.3s,baz=164,slow=14,SNR=24
MAKZ  Makanchi          12.78 349 ePn      Pn       05 25 18.9 -1.1
MAKZ  Makanchi          12.78 349 eP       Pn       05 25 18.9 -1.1
GAR   Garm              13.15 295 ePn      Pn       05 25 25.7 +0.5
GAR   Garm              13.15 295 eP       Pn       05 25 25.7 +0.5
BHPL  Bhopal            13.17 215 eP       Pn       05 25 23.1 -2.3
BHPL                               IAmb    IAmb     05 25 26.1
         comp=Z,12nm,1.1s
CHGR  Chuyangaron       13.94 293 ePn      Pn       05 25 36.4 +0.4
KKAR  Karatay Array     14.69 311 ePn      Pn       05 25 45.1 -1.0
KKAR  Karatay Array     14.69 311 eP       Pn       05 25 45.1 -1.0
LZH   Lanzhou           15.00  78 eP       Pn       05 25 48.8 -1.5
LZH                                pP      P        05 25 51.8 -3.6
LZH                                pmax    pmax
         comp=Z,27nm,1.1s
DGZ   Jazzator, Alta    15.43   4 i P      Pn       05 25 54.7 -1.2
CD2   Chengdu           15.65  98 eP       Pn       05 25 57.0 -1.8
OTUK  Ortayu            17.09 328  P       P        05 26 19.4 +1.0
KURBB Kurchatov Arra    17.10 344  P       Pn       05 26 15.7 -1.4
         comp=Z,0.1nm,0.3s,baz=162,slow=11,SNR=16
KURK  Kurchatov         17.17 345 ePn      Pn       05 26 18.3 +0.4
         comp=Z,28nm,1.0s
KURK  Kurchatov         17.17 345ceP       Pn       05 26 18.5 +0.6
KURK                               pmax    pmax
         comp=Z,39nm,1.3s
KMI   Kunming           17.44 117  P       P        05 26 23.1 +0.5
KMI                                pP      Pn       05 26 24.9 +3.3
KMI                                sP      pP       05 26 26.0 -7.3
KMI                                pmax    pmax
         comp=Z,29nm,1.1s
KMI   Kunming           17.44 117 ePn      Pn       05 26 20.9 -0.7
         comp=Z,21nm,0.8s
KMI   Kunming           17.44 117 eP       Pn       05 26 20.9 -0.7
KMI                                pmax    pmax
         comp=Z,21nm,0.8s
HYB   Hyderabad         17.98 202 eP       Pn       05 26 25.1 -3.1
POO   Poona             18.91 217 eP       P        05 26 37.3 -1.3
POO                                IAmb    IAmb     05 26 37.5
         comp=Z,14nm,0.3s
XAN   Xi'an             19.27  84  P       P        05 26 42.0 -0.5
XAN                                pP      Pn       05 26 45.4 +1.7
XAN                                pmax    pmax
         comp=Z,10.0nm,0.9s
XAN   Xi'an             19.27  84 eP       P        05 26 41.2 -1.3
         comp=Z,8.6nm,0.9s
XAN   Xi'an             19.27  84 eP       P        05 26 41.2 -1.3
XAN                                pmax    pmax
         comp=Z,9.0nm,0.9s
CHTO  Chiang Mai        19.46 139 eP       Pn       05 26 45.4 -0.7
         comp=Z,5.6nm,0.8s
CHTO  Chiang Mai        19.46 139 eP       Pn       05 26 45.4 -0.7
CHTO                               pmax    pmax
         comp=Z,6.0nm,0.8s
CHTO  Chiang Mai        19.46 139  P       Pn       05 26 49.7 +3.6
         comp=Z,44nm,1.0s
CMMT  Chiang Mai        19.47 139  P       Pn       05 26 49.6 +3.5
         comp=Z,9.9nm,0.9s
ZALV  Zalesovo Beam     19.64 359  P       P        05 26 45.7 -0.5
         comp=Z,0.3nm,0.3s,baz=186,slow=10,SNR=22
ZAA1  Zalesovo Array    19.64 359 eP       P        05 26 45.7 -0.6
GYA   Guiyang           19.74 108  P       Pn       05 26 48.4 -1.0
GYA                                PP      sP       05 27 07.4 +3.8
GYA                                S       S        05 30 25.8 -2.7
GYA                                SS      SnSn     05 30 51.3 +6.7
GYA                                pmax    pmax
         comp=Z,20nm,0.8s
GYA                                pmax    pmax
         comp=Z,110nm,4.8s
GYA                                LR      LR
         comp=Z,420nm,9.3s
GYA                                LR      LR
         comp=Z,410nm,9.6s
CM31  Chiang Mai Arr    19.76 140 eP       P        05 26 47.0 -0.9
CMAR  Chiang Mai Arr    19.76 140  P       P        05 26 47.0 -0.9
CMAR                               pmax    pmax
         comp=Z,1.0nm,0.3s
CMAR  Chiang Mai Arr    19.76 140  P       P        05 26 47.0 -0.9
         comp=Z,0.9nm,0.3s,baz=324,slow=11,SNR=31
LAMP  Lampang           20.08 138  P       Pn       05 26 58.5 +5.2
         comp=Z,3.1nm,0.7s
ENH   Enshi             20.55  95 eP       P        05 26 56.1 -0.3
         comp=Z,11nm,0.8s
MOY   Mondy             20.59  28 eP       P        05 26 57.5 +0.7
MOY                                pmax    pmax
         comp=Z,17nm,1.8s
SONA0 Songino Array     20.59  43 eP       P        05 26 57.1 +0.3
SONM  Songino Array     20.59  43  P       P        05 26 57.1 +0.3
         comp=Z,5.5nm,0.9s,baz=235,slow=14,SNR=17
SONM                               PcP     PcP      05 31 06.3 -0.4
         comp=Z,0.4nm,0.7s,baz=219,slow=1.9,SNR=3.5
NVS   Novosibirsk       20.59 356 eP       P        05 26 55.0 -1.6
ZAK   Zakamensk         20.60  33 eP       P        05 26 56.7 -0.2
ZAK                                pmax    pmax
         comp=Z,6.0nm,1.3s
SUKH  Sukhothai         20.93 140  P       Pn       05 27 04.9 +1.7
         comp=Z,4.2nm,1.0s
ULN   Ulaanbaatar       20.98  43 eP       P        05 27 01.1 +0.1
         comp=Z,11nm,1.1s
ULN   Ulaanbaatar       20.98  43 eP       P        05 27 01.1 +0.1
ULN                                pmax    pmax
         comp=Z,11nm,1.1s
UTTA  Uttaradit         21.22 137  P       P        05 27 07.5 +3.8
         comp=Z,1.8nm,0.6s
HHC   Hu-ho-hao-te      21.52  65 eP       P        05 27 06.3 -0.6
HHC                                pmax    pmax
         comp=Z,11nm,0.8s
GOA   Goa               21.55 212 eP       P        05 27 06.6 -0.7
GOA                                IAmb    IAmb     05 27 09.0
         comp=Z,17nm,0.5s
BVAR  Borovoye Array    21.63 334  P       P        05 27 08.5 +0.7
         comp=Z,8.6nm,0.7s,baz=133,slow=11,SNR=14
TLY   Talaya            21.69  31 i P      P        05 27 06.4 -2.1
TLY                                pmax    pmax
         comp=Z,11nm,0.9s
BRVK  Borovoye          21.69 334 eP       P        05 27 09.2 +0.7
         comp=Z,29nm,1.1s
BRVK  Borovoye          21.69 334 eP       P        05 27 09.2 +0.7
BRVK                               pmax    pmax
         comp=Z,29nm,1.1s
MDRS  Chennai           21.71 194 eP       P        05 27 07.7 -1.3
MDRS                               IAmb    IAmb     05 27 08.4
         comp=Z,12nm,0.3s
PBKT  Sadao Pong        22.40 138  P       P        05 27 17.6 +1.2
         comp=Z,12nm,1.1s
UTHA  Uthaitani         22.44 143  P       P        05 27 18.3 +1.5
         comp=Z,3.2nm,0.9s
GEYT  Alibeck           22.48 287  P       P        05 27 17.8 +0.6
         comp=Z,9.9nm,0.9s,baz=101,slow=7.7,SNR=13
PBA   Port Blair        23.47 162 eP       P        05 27 27.4  0.0
CHAI  Chaiyaphum        23.51 137  P       P        05 27 28.2 +0.5
         comp=Z,5.4nm,0.8s
SKNT  Sakolnakorn       23.84 132  P       P        05 27 31.5 +0.6
         comp=Z,11nm,1.1s
ABKAR Akbulak array     24.13 316 eP       P        05 27 34.0 +0.7
PHET  Kaeng Krachan     24.82 146  P       P        05 27 41.6 +1.8
         comp=Z,7.8nm,0.8s
SRAK  Srakaew           25.09 140  P       P        05 27 47.2 +5.0
         comp=Z,48nm,0.9s
AKTO  Aktyubinsk        25.79 317  P       P        05 27 48.5 +0.2
         comp=Z,7.9nm,1.0s,baz=115,slow=7.6,SNR=11
WSAR  Wadi Sarin        26.04 252  P       P        05 27 50.8 -0.1
         comp=Z,13nm,0.9s,baz=89,slow=5.9,SNR=4.3
NJ2   Nanjing           27.83  85 eP       P        05 28 05.6 -1.3
NJ2                                pmax    pmax
         comp=Z,11nm,0.6s
ARU   Arti              28.83 328d iP      P        05 28 17.0 +1.4
ARU                                                 05 29 05.1
ARU                                S       S        05 33 08.6 +5.6
ARU                                SS      SnSn     05 34 25.7 -0.6
ARU                                pmax    pmax
         comp=Z,18nm,1.9s
CN2   Changchun         32.07  61 eP       P        05 28 44.6 +0.3
CN2                                pmax    pmax
         comp=Z,10.0nm,0.8s
GNI   Garni             32.86 292 eP       P        05 28 53.2 +1.7
         comp=Z,36nm,1.1s
GNI   Garni             32.86 292 i P      P        05 28 54.1 +2.6
GNI                                pmax    pmax
         comp=Z,88nm,1.1s
ZEI   Tsey              33.43 297 eP       P        05 28 53.9 -2.6
ZEI                                pmax    pmax
         comp=Z,4.0nm,0.9s
KBZ   Khabaz            34.18 299  P       P        05 29 02.9 +0.1
         comp=Z,1.3nm,0.8s,baz=79,slow=16,SNR=2.7
NEY   Neytrino          34.30 298 eP       P        05 29 06.8 +2.8
NEY                                pmax    pmax
         comp=Z,2.0nm,1.0s
KIV   Kislovodsk        34.34 299 eP       P        05 29 04.2 -0.1
KIV                                pmax    pmax
         comp=Z,7.0nm,1.1s
NRIK  Noril'sk          35.09   1  P       P        05 29 10.2  0.0
         comp=Z,8.3nm,0.7s,baz=167,slow=7.6,SNR=6.0
KLR   Kul'dur           36.88  52  P       P        05 29 25.5 -0.4
         comp=Z,1.9nm,0.8s,baz=309,slow=7.5,SNR=4.3
VSR   Storozhevoye      37.36 311 eP       P        05 29 30.4 +0.5
VSR                                pmax    pmax
         comp=Z,20nm,1.5s
LPSR  Galich'ya Gora    37.73 313 eP       P        05 29 32.8 -0.2
LPSR                               pmax    pmax
         comp=Z,10.0nm,1.0s
OBN   Obninsk           39.57 317 i P      P        05 29 48.7 +0.4
OBN                                pmax    pmax
         comp=Z,10.0nm,1.1s
KLMR  Klimovskoe        39.63 326 eP       P        05 29 48.5 -0.2
KLMR                               pmax    pmax
         comp=Z,17nm,1.2s
KLMR  Klimovskoe        39.63 326 eP       P        05 29 48.6 -0.2
KLMR                               AMP              05 29 53.5
         comp=Z,17nm,1.2s
ILGA  Ilgaz             41.13 295 eP       P        05 30 02.3 +0.5
         comp=Z,15nm,1.0s
BR101 Keskin Array S    41.38 293 eP       P        05 30 04.9 +1.1
BRTR  Keskin Array B    41.38 293  P       P        05 30 04.9 +1.1
         comp=Z,2.7nm,0.8s,baz=120,slow=10,SNR=15
BRTR                               PP      PnPn     05 31 43.1 -1.3
         comp=Z,3.1nm,1.2s,baz=123,slow=4.6,SNR=5.0
TMCR  Tamitsa           41.50 331 eP       P        05 30 04.2  0.0
TMCR                               pmax    pmax
         comp=Z,20nm,1.0s
AKASG Malin Array Be    43.59 310  P       P        05 30 21.2 -0.2
         comp=Z,1.7nm,0.7s,baz=86,slow=6.6,SNR=9.8
AKASG                              PP      PcP      05 32 06.7 -1.8
         comp=Z,0.1nm,0.3s,baz=75,slow=10,SNR=4.0
AKBB  Malin Array Si    43.59 310 eP       P        05 30 21.3 -0.1
         comp=Z,8.6nm,1.1s
AKBB  Malin Array Si    43.59 310 eP       P        05 30 21.3 -0.1
AKBB                               pmax    pmax
         comp=Z,9.0nm,1.1s
KIEV  Kiev              43.60 310 i P      P        05 30 21.9 +0.5
KIEV                               pmax    pmax
         comp=Z,6.0nm,1.0s
JOF   Joensuu           43.95 328  P       P        05 30 25.3 +1.2
JOF                                pmax    pmax
         comp=Z,29nm,1.6s
VSU   Vasula            45.40 321 i P      P        05 30 37.0 +1.3
VSU                                pmax    pmax
         comp=Z,41nm,1.0s
FIA0  FINESS Array S    46.08 325 eP       P        05 30 41.0 -0.1
FIA0  FINESS Array S    46.08 325 eP       P        05 30 41.0 -0.1
FINES FINESS Array B    46.08 325 i P      P        05 30 43.5 +2.5
FINES                              pmax    pmax
         comp=Z,5.0nm,0.8s
FINES FINESS Array B    46.08 325  P       P        05 30 41.0 -0.1
         comp=Z,4.4nm,0.8s,baz=101,slow=9.9,SNR=11
MLR   Muntele Rosu      46.15 303 eP       P        05 30 43.2 +1.1
         comp=Z,22nm,1.2s
MLR   Muntele Rosu      46.15 303 eP       P        05 30 43.2 +1.1
MLR                                pmax    pmax
         comp=Z,22nm,1.2s
SUF   Sumiainen         46.23 327  P       P        05 30 44.1 +1.9
VAF   Ylistaro          47.86 327  P       P        05 30 58.8 +3.9
VAF                                pmax    pmax
         comp=Z,22nm,0.9s
ARA0  ARCESS Array S    47.91 336 eP       P        05 30 55.0 -0.2
ARCES ARCESS Array B    47.91 336  P       P        05 30 55.0 -0.2
         comp=Z,6.2nm,1.0s,baz=64,slow=5.5,SNR=5.1
DRGR                    48.19 305  P       P        05 31 00.3 +2.4
DRGR                               pmax    pmax
         comp=Z,12nm,1.3s
IDI   Anoyia            49.18 289 eP       P        05 31 06.0 +0.4
         comp=Z,54nm,1.4s
SEY   Seymchan          49.57  34 i P      P        05 31 07.3 -0.8
DPC   Dobruska-Polom    51.81 310 eP       P        05 31 26.6 +1.4
DPC   Dobruska-Polom    51.81 310 eP       P        05 31 26.6 +1.4
UPC   Upice             51.98 311 eP       P        05 31 28.0 +1.6
UPC   Upice             51.98 311 eP       P        05 31 28.0 +1.6
CONA  Conrad Observa    52.57 307 eP       P        05 31 31.6 +0.6
         comp=Z,3.6nm,0.8s
BRG   Berggiesshubel    53.21 311 eP       P        05 31 36.2 +0.7
         comp=Z,30nm,1.7s
BRG   Berggiesshubel    53.21 311 eP       P        05 31 36.2 +0.7
BRG                                pmax    pmax
         comp=Z,30nm,1.7s
NB2   NORSAR Subarra    53.24 324  P       P        05 31 34.7 -0.9
         comp=Z,1.9nm,0.7s,baz=85,slow=7.4
NB200 NORSAR Array S    53.24 324 eP       P        05 31 35.2 -0.5
NOA   NORSAR Array B    53.24 324  P       P        05 31 35.2 -0.5
         comp=Z,3.2nm,0.8s,baz=84,slow=7.5,SNR=17
SOKA  Soboth            53.40 306  P       P        05 31 35.2 -1.9
         comp=Z,6.0nm,0.9s
CLL   Collm             53.70 312 eP       P        05 31 39.0 -0.1
CLL   Collm             53.70 312  L       L        05 32 00.0
         comp=N,700nm,21.4s
CLL                                L       L        05 32 00.0
         comp=E,400nm,19.7s
CLL   Collm             53.70 312 eP       P        05 31 39.0 -0.1
GEC2  GERESS Array S    53.78 309 eP       P        05 31 40.9 +1.0
GEC2  GERESS Array S    53.78 309 eP       P        05 31 40.9 +1.0
GERES GERESS Array B    53.78 309  P       P        05 31 40.9 +1.0
         comp=E,3.1nm,0.7s,baz=75,slow=7.1,SNR=24
KHC   Kasperske Hory    53.80 309 eP       P        05 31 40.7 +0.8
KHC   Kasperske Hory    53.80 309 eP       P        05 31 40.7 +0.8
BILL  Bilibino          55.21  27 i P      P        05 31 48.9 -0.9
BILL                               pmax    pmax
         comp=Z,3.0nm,1.2s
SQTA  Sankt Quirin      55.80 307 eP       P        05 31 54.8 +0.3
         comp=Z,3.2nm,0.7s
FETA  Feichten          56.17 307  P       P        05 31 55.7 -1.5
         comp=Z,5.3nm,1.2s
KMBO  Kilima Mbogo      57.41 243 eP       P        05 32 06.4 -0.1
         comp=Z,13nm,1.4s
KMBO  Kilima Mbogo      57.41 243 eP       P        05 32 06.4 -0.1
KMBO                               pmax    pmax
         comp=Z,13nm,1.4s
KMBO  Kilima Mbogo      57.41 243  P       P        05 32 07.0 +0.5
         comp=Z,1.1nm,0.3s,baz=25,slow=3.5,SNR=4.8
BNI   Bardonecchia      59.45 306 eP       P        05 32 20.5 +0.2
         comp=Z,14nm,1.4s
BNI   Bardonecchia      59.45 306 eP       P        05 32 20.5 +0.2
BNI                                pmax    pmax
         comp=Z,14nm,1.4s
DAG   Danmarks Havn     60.06 345 i P      P        05 32 23.3 -0.5
         comp=Z,4.1nm,0.8s
DAG   Danmarks Havn     60.06 345 i P      P        05 32 23.3 -0.5
DAG                                pmax    pmax
         comp=Z,3.0nm,0.8s
FITZ  Fitzroy Crossi    64.55 137 eP       P        05 32 54.5  0.0
         comp=Z,52nm,1.5s
SUMG  Summit            66.71 344 eP       P        05 33 07.9 -0.4
         comp=Z,18nm,1.3s
SUMG  Summit            66.71 344 eP       P        05 33 07.9 -0.4
SUMG                               pmax    pmax
         comp=Z,19nm,1.3s
ESDC  Sonseca Array     68.82 304  P       P        05 33 21.6 -0.1
         comp=Z,1.4nm,0.8s,baz=52,slow=7.3,SNR=6.5
TOLK  Toolik Lake Re    69.56  19 eP       P        05 33 25.1 -0.7
         comp=Z,7.4nm,0.8s
WR1   Warramunga Arr    71.12 132 eP       P        05 33 36.0 +0.1
         comp=Z,12nm,0.6s
WRA   Warramunga Arr    71.12 132  P       P        05 33 36.0 +0.1
         comp=Z,11nm,0.8s,baz=327,slow=6.6,SNR=140
WRAB  Tennant Creek     71.12 132 eP       P        05 33 36.0 +0.1
         comp=Z,12nm,0.8s
WRAB  Tennant Creek     71.12 132 i P      P        05 33 35.9  0.0
WRAB                               pmax    pmax
         comp=Z,12nm,0.9s
WB2   Warramunga Arr    71.13 132 eP       P        05 33 35.8 -0.1
         comp=Z,13nm,0.6s
MLY   Manley            71.73  22 eP       P        05 33 39.1 +0.1
         comp=Z,2.5nm,0.9s
CAST  Castle Rocks      72.40  24 eP       P        05 33 43.8 +0.7
         comp=Z,11nm,1.6s
COLA  College           72.71  21 i P      P        05 33 44.7 -0.1
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COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CCB	**Clear Creek Bu**	**72.89**	**21**	*e*P	**P**	**05 33 45.3**	**-0.6**
	comp=Z,4.9nm,1.5s						
WRH	**Wood River Hil**	**72.93**	**21**	*e*P	**P**	**05 33 45.2**	**-1.0**
	comp=Z,9.9nm,1.7s						
ILAR	**Eielson Array**	**73.07**	**21**	P	**P**	**05 33 46.5**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=306,slow=4.7,SNR=31						
ILAR				PP	**PP**	**05 36 29.4**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=308,slow=7.6,SNR=8.0						
ILB	**Eielson Array**	**73.07**	**21**	*e*P	**P**	**05 33 46.5**	**-0.5**
INK	**Inuvik**	**73.60**	**14**	P	**P**	**05 33 49.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=307,slow=7.6,SNR=3.9						
AS31	**Alice Springs**	**73.67**	**135**	*e*P	**P**	**05 33 51.0**	**-0.1**
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	**73.67**	**135**	P	**P**	**05 33 51.6**	**+0.6**
	comp=Z,7.6nm,0.7s,baz=320,slow=5.9,SNR=41						
RSO	**Redoubt South**	**74.19**	**26**	*e*P	**P**	**05 33 50.7**	**-3.2**
SCRK	**Sand Creek**	**74.51**	**20**	*e*P	**P**	**05 33 55.4**	**-0.2**
	comp=Z,10nm,1.1s						
EPYK	**Eagle Plains**	**74.51**	**16**	*e*P	**P**	**05 33 55.1**	**-0.4**
	comp=Z,16nm,1.4s						
SML	**Sawmill**	**74.77**	**23**	*e*P	**P**	**05 33 56.5**	**-0.6**
	comp=Z,12nm,0.8s						
SML	**Sawmill**	**74.77**	**23**	*e*P	**P**	**05 33 56.5**	**-0.6**
SML				pmax	pmax		
	comp=Z,12nm,0.8s						
TOA1	**Torodi Ar. Sit**	**77.76**	**278**	*e*P	**P**	**05 34 14.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**77.76**	**278**	P	**P**	**05 34 14.2**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=37,slow=4.9,SNR=14						
CTAO	**Charters Tower**	**79.05**	**123**	*e*P	**P**	**05 34 21.6**	**0.0**
	comp=Z,14nm,1.3s						
CTAO	**Charters Tower**	**79.05**	**123**	*e*P	**P**	**05 34 21.6**	**0.0**
CTAO				pmax	pmax		
	comp=Z,14nm,1.3s						
LBTB	**Lobatse**	**82.00**	**233**	*e*P	**P**	**05 34 36.7**	**-0.8**
	comp=Z,6.0nm,0.8s						
LBTB	**Lobatse**	**82.00**	**233**	*e*P	**P**	**05 34 36.7**	**-0.8**
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YKA	**Yellowknife Ar**	**82.16**	**9**	P	**P**	**05 34 37.0**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=343,slow=4.9,SNR=22						
YKB5	**Yellowknife Ar**	**82.16**	**9**	*e*P	**P**	**05 34 37.0**	**-0.6**
STKA	**Stephens Creek**	**84.31**	**135**	P	**P**	**05 34 48.6**	**-0.5**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**84.31**	**135**	P	**P**	**05 34 48.6**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=334,slow=9.4,SNR=3.9						
BOSA	**Boshof**	**84.70**	**230**	*e*P	**P**	**05 34 50.8**	**-0.5**
	comp=Z,9.2nm,1.3s						
BOSA	**Boshof**	**84.70**	**230**	*e*P	**P**	**05 34 50.8**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BOSA	**Boshof**	**84.70**	**230**	P	**P**	**05 34 50.8**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=39,slow=3.7,SNR=4.3						
DBIC	**Dimbokro**	**86.69**	**276**	*e*P	**P**	**05 35 00.7**	**-0.8**
	comp=Z,22nm,1.4s						
DBIC	**Dimbokro**	**86.69**	**276**	*e*P	**P**	**05 35 00.7**	**-0.8**
DBIC				pmax	pmax		
	comp=Z,22nm,1.4s						
DBIC	**Dimbokro**	**86.69**	**276**	P	**P**	**05 35 01.1**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=348,slow=10,SNR=3.4						
FFC	**Flin Flon**	**91.08**	**4**	*i* P	**P**	**05 35 22.3**	**+0.8**
CPUP	**Villa Florida**	**147.19**	**274**	*e*PKPdf	**PKPdf**	**05 41 58.9**	**+0.5**
CPUP	**Villa Florida**	**147.19**	**274**	PKPbc	**PKPbc**	**05 42 00.0**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=42,slow=3.5,SNR=4.5						
LPAZ	**La Paz**	**150.39**	**301**	*e*PKPdf	**PKPdf**	**05 42 05.0**	**+0.4**
LPAZ	**La Paz**	**150.39**	**301**	PKPbc	**PKPbc**	**05 42 09.2**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=350,slow=6.1,SNR=3.2						

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*IDC **25** 06:04:13.5±1.5, 51.°36N×96.°19E, h0^{km}, mb3.7/3, mb1 3.6/5, mb1mx3.3/38, mbtmp3.5/5, ML2.5/2, Error ellipse: s-maj=43.1km s-min=18.1km az=10.0*

*MOS **25** 06:04:14.3±2.3, 51.°58N×95.°99E, h10^{km}, mb4.0/3, Error ellipse: s-maj=12.9km s-min=10.2km az=23.2*

*ASRS **25** 06:04:16.6±2.0, 51.°47N×95.°67E, h15^{km}, Ms3.4/3*

ISC 25 06:04:14.2±0.6, **51.°62N**±0.°05×**96.°06E**±0.°03, **h10**^{km}**, n37,** σ**2**^{s}**88**/43, **mb3.8**/4, **4C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	**Todzha**	**0.78**	**2**	*e*PG	**Pg**	**06 04 27.7**	**-1.6**
TDJR				*e*S	**Sg**	**06 04 38.3**	**-1.2**
KZLR	**Kyzyl**	**1.00**	**275**	*e*Pg	**Pg**	**06 04 30.9**	**-2.6**
KZLR	**Kyzyl**	**1.00**	**275**	*e*PG	**Pg**	**06 04 30.9**	**-2.6**
KNGR	**Kungurtug, Tuv**	**1.37**	**137***c*	*i*PG	**Pn**	**06 04 38.9**	**-0.6**
KNGR				*i* S	**Sg**	**06 04 58.1**	**-0.2**
ORL	**Orlik**	**2.49**	**67**	*e*PN	**Pn**	**06 04 57.3**	**+2.4**
ORL				*e*		06 05 30.1	
ORL				pmax	pmax		
	comp=Z,122nm,0.3s						
ORL				smax	smax		
	comp=N,665nm,0.7s						
MOY	**Mondy**	**3.07**	**87**	*e*PN	**Pb**	**06 05 08.6**	**-0.4**
MOY				*e*		06 05 49.6	
MOY				pmax	pmax		
	comp=Z,170nm,0.7s						
MOY				smax	smax		
	comp=N,781nm,1.2s						
CERR	**Cheremushki**	**3.11**	**295**	*e*Pg	**Pb**	**06 05 08.6**	**-1.0**
CERR				*e*Sg	**Sb**	**06 05 48.1**	**+0.6**
CERR	**Cheremushki**	**3.11**	**295**	*e*PN	**Pb**	**06 05 08.6**	**-1.0**
CERR				*e*		06 05 48.1	
ARS	**Arshan**	**3.96**	**83**	*e*PN	**Pb**	**06 05 24.3**	**+0.1**
ARS				*e*		06 06 16.3	
ARS				pmax	pmax		
	comp=Z,85nm,0.6s						
ARS				smax	smax		
	comp=E,2μm,0.8s						
TLY	**Talaya**	**4.72**	**86**	*i* PN	**Pb**	**06 05 37.2**	**+0.1**
TLY				*i* S	**Sb**	**06 06 38.1**	**+4.2**
ZAK	**Zakamensk**	**4.73**	**102**	*e*PN	**Pb**	**06 05 37.9**	**+0.7**
ZAK				*e*		06 06 42.4	
ZAK				pmax	pmax		
	comp=Z,23nm,0.7s						
ZAK				smax	smax		
	comp=N,206nm,0.9s						
IRK	**Irkutsk**	**5.12**	**80**	*e*PN	**Pb**	**06 05 45.8**	**+2.0**
IRK				*e*		06 06 49.7	
IRK				pmax	pmax		
	comp=Z,129nm,0.1s						
IRK				smax	smax		
	comp=N,630nm,1.3s						
TASR	**Tashtagol**	**5.16**	**286**	*e*Pg	**Pb**	**06 05 45.5**	**+1.0**
TASR				*e*Sg	**Sb**	**06 06 51.7**	**+5.2**
TASR	**Tashtagol**	**5.16**	**286**	*e*PN	**Pb**	**06 05 45.5**	**+1.0**
TASR				*e*		06 06 51.7	
DGZ	**Jazzator, Alta**	**5.81**	**254**	*i* PN	Pn	06 05 45.1	+4.5
ELT	**Eltsovka**	**6.23**	**289**	*e*Pn	**Pn**	**06 05 47.4**	**+1.3**
ELT				*e*Pg	**Pb**	**06 06 04.2**	**+1.6**
ELT				*e*Sn	**Sn**	**06 06 53.0**	**-4.2**
ELT				*e*Sg	**Sb**	**06 07 23.3**	**+6.2**
ELT	**Eltsovka**	**6.23**	**289**	*e*PN	**Pn**	**06 05 47.4**	**+1.3**
ELT				*e*		06 06 04.2	
ELT				*e*		06 07 23.3	
UKR	**Ust'-Kan**	**7.11**	**269**	*e*Pg	Pb	06 06 23.2	+5.4
UKR	**Ust'-Kan**	**7.11**	**269**	*e*P*	Pb	06 06 23.2	+5.4
ZALV	**Zalesovo Beam**	**7.21**	**293**	Pn	**Pn**	**06 06 01.4**	**+1.9**
	comp=N,0.3nm,0.3s,baz=98,slow=10,SNR=7.8						
ZALV				Lg	Lg	06 07 50.4	
	comp=N,0.9nm,0.3s,baz=115,slow=23,SNR=6.4						
SONM	**Songino Array**	**7.69**	**115**	Pg	**Pb**	**06 06 30.8**	**+3.1**
	comp=N,0.5nm,0.3s,baz=299,slow=18,SNR=15						
SONM				Lg	Lg	06 08 13.8	
	comp=N,1.9nm,0.3s,baz=304,slow=32,SNR=7.6						
NVS	**Novosibirsk**	**8.34**	**298**	*e*Pn	**Pn**	**06 06 19.2**	**+4.2**
NVS				*e*Pg	Pg	06 06 48.1	-5.7
NVS				*e*Sg	**Sg**	**06 08 34.9**	**-6.7**
NVS	**Novosibirsk**	**8.34**	**298**	*e*P	**Pn**	**06 06 19.2**	**+4.2**
MK31	**Makanchi Array**	**10.22**	**247**	⇑Pn	**Pn**	**06 06 43.5**	**+2.7**
	comp=N,1.5nm,0.9s,baz=72,slow=6.4,SNR=4.0						
MK31				⇓Pg		06 07 20.4	
	comp=N,4.0nm,0.8s,baz=57,slow=14,SNR=4.6						
MK31				⇓Lg	Lg	06 09 32.3	
	comp=N,13nm,0.8s,baz=61,slow=32,SNR=5.2						
MK31	**Makanchi Array**	**10.22**	**247**	P	**Pn**	**06 06 43.5**	**+2.7**
MKAR	**Makanchi Array**	**10.22**	**247**	Pn	**Pn**	**06 06 41.6**	**+0.7**
	comp=N,0.1nm,0.3s,baz=72,slow=7.8,SNR=3.8						
MKAR				Lg	Lg	06 09 37.4	
	comp=N,0.3nm,0.3s,baz=59,slow=30,SNR=5.9						
MAKZ	**Makanchi**	**10.39**	**248**	⇓Lg	Lg	06 09 37.4	
	comp=N,19nm,1.1s						
KURK	**Kurchatov**	**10.99**	**272**	*i* P	**Pn**	**06 06 53.8**	**+2.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BOD	**Bodaibo**	**12.07**	**52**	*e*P	**Pn**	**06 07 03.5**	**-2.5**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.6s						
HIA	**Hailar**	**15.26**	**90**⇑	*e*P	**Pn**	**06 07 45.4**	**-4.1**
HIA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**15.79**	**285**	*i* P	**P**	**06 08 00.0**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.9s						
AAK	**Ala-Archa**	**17.15**	**247**	*i* P	**P**	**06 08 16.2**	**+0.5**
ARU	**Arti**	**22.35**	**297***c*	*i*P	**P**	**06 09 13.4**	**+1.5**
ARU						06 09 33.8	
ARU				S	**S**	**06 13 19.3**	**+2.0**
ARU				pmax	pmax		
	comp=Z,17nm,2.5s						
KLR	**Kul'dur**	**22.73**	**82**	*i* P	**P**	**06 09 10.1**	**-5.9**
BRTR	**Keskin Array B**	**43.92**	**280**	P	**P**	**06 12 21.7**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=57,slow=5.6,SNR=4.0						
ASAR	**Alice Springs**	**81.99**	**145**	P	**P**	**06 16 32.6**	**-1.6**
	comp=Z,0.8nm,0.9s,baz=337,slow=6.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	**82.50**	**282**	P	**P**	**06 16 40.3**	**+3.2**
	comp=Z,0.5nm,0.7s,baz=39,slow=5.0,SNR=2.4						

IDC 25 06:11:06.9±1.3**, 2.°14N**×**124.°74E, h0**^{km}**, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.5**/47**, mbtmp3.6**/5**, Error ellipse: s-maj=175.1km s-min=19.8km az=65.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.88**	**157**	P	P	06 16 21.7	-0.7
	0.6nm,0.6s,baz=335,slow=11,SNR=18						
ASAR	**Alice Springs**	**27.15**	**161**	P	P	06 16 53.4	+1.3
	0.3nm,0.5s,baz=343,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	**57.76**	**327**	P	P	06 20 59.6	-0.2
	0.5nm,0.5s,baz=120,slow=8.3,SNR=11						
ZALV	**Zalesovo Beam**	**61.13**	**334**	P	P	06 21 22.7	-0.3
	0.4nm,0.5s,baz=125,slow=7.6,SNR=2.2						
AKASG	**Malin Array Be**	**91.87**	**321**	P	P	06 24 16.9	-0.2
	0.9nm,0.4s,baz=91,slow=6.7,SNR=6.6						

IDC 25 06:12:05.2±2.9**, 32.°00S**×**178.°38W, h0**^{km}**, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.7**/35**, mbtmp3.8**/3**, ML3.4**/1**, Error ellipse: s-maj=69.9km s-min=44.9km az=120.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.25**	**209**	Pn	Pn	06 13 50.6	-1.9
	0.7nm,0.3s,baz=90,slow=13,SNR=4.1						
URZ				Sn	Sn	06 15 10.2	-5.3
	1.4nm,0.3s,baz=216,slow=19,SNR=5.2						
ASAR	**Alice Springs**	**42.73**	**269**	P	P	06 20 05.2	+0.9
	0.7nm,0.7s,baz=108,slow=7.5,SNR=4.7						
WRA	**Warramunga Arr**	**43.86**	**274**	P	P	06 20 13.0	-0.5
	0.5nm,0.3s,baz=112,slow=8.0,SNR=15						
FINES	**FINESS Array B**	**146.52**	**339**	PKPbc	PKPdf	06 31 46.9	+0.7
	1.0nm,0.7s,baz=46,slow=4.0,SNR=5.5						

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*IDC **25** 06:18:16.9±1.1, 3.°79N×92.°60E, h0^{km}, mb3.8/8, mb1 4.0/11, mb1mx3.7/48, mbtmp3.9/11, ML4.2/3, Error ellipse: s-maj=36.7km s-min=17.9km az=40.0*

*ISCJB **25** 06:18:18.9±0.7, 3.°69N±0.°07×92.°82E±0.°05, h33^{km}, mb3.8/8, Error ellipse: s-maj=10.7km s-min=5.5km az=23.1*

*DJA **25** 06:18:22.4±0.9, 4°N±4°×9°3E±°, h10^{km}, M4.5/8, mb4.6/5, MLv4.4/8*

ISC 25 06:18:21.1±0.8**, 3.°73N**±0.°08×**92.°77E**±0.°07**, h35**^{km}**, n19,** σ**1**^{s}**59**/25**, mb3.9**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**3.07**	**55**	P	**Pn**	**06 19 07.0**	**-0.2**
BSI				S	**Sn**	**06 19 39.5**	**-3.2**
MLSI	**Meulaboh, Aceh**	**3.67**	**81**	P	**Pn**	**06 19 14.7**	**-0.6**
MLSI				S	**Sn**	**06 19 56.5**	**-0.9**
SNSI	**Sinabang, Aceh**	**3.79**	**110**	P	**Pn**	**06 19 15.7**	**-1.3**
SNSI				S	**Sn**	**06 19 58.0**	**-2.3**
LHMI	**Lhok Sumawe**	**4.42**	**70**	P	**Pn**	**06 19 26.3**	**+0.5**
KCSI	**Kotacane, Aceh**	**5.00**	**92**	P	**Pn**	**06 19 34.4**	**+0.7**
KCSI				S	**Sn**	**06 20 28.4**	**-1.8**
GSI	**Gunungsitoli**	**5.37**	**117**	P	**Pn**	**06 19 38.3**	**-0.5**
GSI				S	**Sn**	**06 20 37.6**	**-1.9**
PSI	**Prapat**	**6.21**	**98**	Pn	**Pn**	**06 19 51.0**	**+0.5**
	3.2nm,0.3s,baz=359,slow=4.6,SNR=14						
PSI				Sn	**Sn**	**06 21 00.6**	**+0.2**
	1.4nm,0.3s,baz=180,slow=1.4,SNR=5.8						
PBSI	**Pulau Batu**	**6.67**	**124**	P	**Pn**	**06 19 55.4**	**-1.2**
	187nm,0.9s						
MNSI	**Mandailing Nat**	**7.40**	**113**	P	**Pn**	**06 20 06.1**	**-0.6**
PALK	**Pallekele**	**12.52**	**287**	Pn	**Pn**	**06 21 15.1**	**-1.8**
	0.8nm,0.3s,baz=116,slow=15,SNR=5.1						
PALK				Sn	Sn	06 23 22.0	-13
	0.9nm,0.3s,baz=116,slow=12,SNR=5.8						
CMAR	**Chiang Mai Arr**	**15.84**	**22**	Pn	**Pn**	**06 22 00.2**	**-1.4**
	0.8nm,0.3s,baz=220,slow=12,SNR=9.8						
MKAR	**Makanchi Array**	**43.85**	**350**	P	**P**	**06 26 24.9**	**+0.9**
	1.6nm,0.7s,baz=168,slow=8.6,SNR=21						
WRA	**Warramunga Arr**	**47.12**	**122**	P	**P**	**06 26 52.9**	**+2.6**
	0.3nm,0.5s,baz=296,slow=9.0,SNR=4.4						
ASAR	**Alice Springs**	**48.44**	**126**	P	**P**	**06 27 03.1**	**+2.6**
	0.4nm,0.7s,baz=292,slow=7.8,SNR=3.1						
ZALV	**Zalesovo Beam**	**50.48**	**354**	P	**P**	**06 27 16.7**	**+1.3**
	2.2nm,0.5s,baz=184,slow=9.6,SNR=13						
KLR	**Kul'dur**	**56.13**	**30**	P	**P**	**06 27 58.4**	**+1.3**
	1.0nm,0.7s,baz=254,slow=7.4,SNR=3.8						
BRTR	**Keskin Array B**	**64.15**	**313**	P	**P**	**06 28 51.2**	**-1.2**
	0.7nm,0.6s,baz=129,slow=6.9,SNR=5.1						
FINES	**FINESS Array B**	**75.74**	**333**	P	**P**	**06 30 02.0**	**-1.0**
	0.8nm,0.7s,baz=125,slow=8.7,SNR=2.4						
GERES	**GERESS Array B**	**80.01**	**319**	P	**P**	**06 30 28.5**	**+1.4**
	1.0nm,0.7s,baz=101,slow=5.6,SNR=8.8						

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*NIED **25** 06:26:00, 36.°90N×139.°40E, h5^{km}, Mw4.1 Best double couple: M$_0$1.40000×10^{15} NP1:φ$_s$70.00000°, δ83.00000°, λ-179.00000°. NP2:φ$_s$340.00000°, δ89.00000°, λ-7.00000°.*

*ISCJB **25** 06:26:49.1±0.4, 36.°86N±0.°03×139.°41E±0.°04, h10^{km}, mb3.6/7, MS3.4/1, Error ellipse: s-maj=4.7km s-min=3.8km az=37.9*

*JMA **25** 06:26:49.1, 36.°88N×139.°41E, h3^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: φ$_s$333.00000°, δ84.00000°, λ18.00000°. NP2: φ$_s$241.00000°, δ72.00000°, λ173.00000°. Principal axes: T Plg17.0000°, Azm198.0000°; N Plg71.0000°, Azm352.0000°; P Plg8.0000°, Azm106.0000°;*

JMA Felt III J1.

*IDC **25** 06:26:49.5±0.9, 36.°76N×139.°45E, h0^{km}, mb3.6/7, mb1 3.8/9, mb1mx3.6/43, mbtmp3.7/9, ML3.3/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/40 Error ellipse: s-maj=18.5km s-min=11.1km az=159.0*

ISC 25 06:26:50.5±0.7**, 36.°88N**±0.°03×**139.°40E**±0.°04**, h10**^{km}**, n18,** σ**1**^{s}**66**/23**, mb3.6**/7**, 3C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.17**	**227**	⇑P	**Pg**	**06 26 52.7**	**-1.6**
JKT				S	**Sg**	**06 26 55.1**	**-1.8**
JSB	**Shiboa**	**0.42**	**78**	⇓P	**Pg**	**06 26 57.9**	**-0.9**
JSB				S	**Sb**	**06 27 04.0**	**-2.6**
JAG	**Ashikaga**	**0.46**	**175**	⇑P	**Pg**	**06 26 58.0**	**-1.5**
JAG				S	**Sg**	**06 27 03.9**	**-1.7**
JHK	**Hiroka**	**0.48**	**320**	⇓P	**Pg**	**06 26 58.6**	**-1.3**
JHK				S	**Sg**	**06 27 05.2**	**-1.0**
JFY	**Yanaizu**	**0.57**	**25**	⇑P	**Pg**	**06 27 00.5**	**-1.2**
JFY				S	**Sg**	**06 27 08.0**	**-1.3**
JIZZ	**Izumozaki**	**0.85**	**320**	P	**Pn**	**06 27 06.8**	**-1.8**
MJAR	**Matsushiro Arr**	**1.02**	**251**	Pg	**Pg**	**06 27 08.3**	**-1.9**
	18nm,0.3s,baz=68,slow=14,SNR=300						
MJAR				Lg	Lg	06 27 21.4	
	21nm,0.3s,baz=129,slow=13,SNR=20						
MAT	**Matsushiro**	**1.02**	**251**	P	**Pg**	**06 27 08.7**	**-1.5**
MAT				S	**Sg**	**06 27 21.8**	**-1.6**
JHJ	**Hachijo jima 2**	**3.77**	**175**	Pn	**Pn**	**06 27 48.5**	**-0.2**
	12nm,0.3s,baz=90,slow=20,SNR=2.8						
KSRS	**Korea Array**	**9.18**	**277**	Pn	**Pn**	**06 29 05.1**	**+2.0**
	0.2nm,0.3s,baz=86,slow=14,SNR=3.2						
KSRS				LR	LR	06 32 12.8	
	comp=Z,220nm,19.8s,baz=154,slow=35						
USRK	**Ussuriysk Ar.**	**9.23**	**325**	Pn	Pn	06 29 08.7	+5.1
	0.1nm,0.3s,baz=130,slow=13,SNR=2.4						
MA2	**Magadan**	**23.87**	**14**	P	**P**	**06 32 03.5**	**-0.4**
	1.5nm,0.4s,baz=180,slow=12,SNR=3.9						
ZALV	**Zalesovo Beam**	**40.83**	**313**	P	**P**	**06 34 34.7**	**+2.6**
	0.7nm,0.6s,baz=118,slow=9.0,SNR=2.9						
MKAR	**Makanchi Array**	**42.83**	**302**	P	**P**	**06 34 51.2**	**+2.5**
	0.4nm,0.8s,baz=81,slow=8.9,SNR=3.6						
MKAR				LR	LR	06 53 10.6	
	comp=Z,55nm,21.9s,baz=14,slow=37						
ILAR	**Eielson Array**	**50.48**	**32**	P	**P**	**06 35 49.0**	**+0.8**
	0.4nm,0.8s,baz=278,slow=6.9,SNR=5.2						
WRA	**Warramunga Arr**	**56.72**	**186**	P	**P**	**06 36 34.0**	**-0.5**
	2.4nm,0.8s,baz=1.6,slow=7.6,SNR=27						
ASAR	**Alice Springs**	**60.45**	**186**	P	**P**	**06 37 00.1**	**-0.4**
	0.9nm,0.8s,baz=7.8,slow=7.3,SNR=7.8						
YKA	**Yellowknife Ar**	**64.74**	**30**	P	**P**	**06 37 29.1**	**+0.5**
	0.1nm,0.5s,baz=303,slow=7.1,SNR=5.7						

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*IDC **25** 06:33:36.6±3.1, 14.°98N×94.°12W, h0^{km}, mb3.6/4, mb1 3.8/7, mb1mx3.5/40, mbtmp3.5/7, ML3.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.7/36, Error ellipse: s-maj=73.3km s-min=28.7km az=35.0*

*NEIC **25** 06:33:38.2±0.0, 14.°67N×94.°33W, h16^{km}, MD4.1(MEX), After MEX.*

*MEX **25** 06:33:38.3±0.6, 14.°66N×94.°33W, h16^{km}±16^{km}, MD4.1*

ISC 25 06:33:35.4±2.3**, 14.°91N**±0.°09×**94.°31W**±0.°05**, h1**^{km}±13^{km}**, n19,** σ**1**^{s}**89**/28**, mb3.7**/4**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.31**	**53**	*e*Pn	**Pg**	**06 34 01.1**	**+0.4**
PCIG				*e*Sn	**Sg**	**06 34 17.7**	**0.0**
PCIG		**1.31**	**53**	*i* P	**Pg**	**06 34 01.1**	**+0.4**
PCIG				*e*S	**Sg**	**06 34 17.7**	**0.0**
HUIG	**Huatulco**	**1.94**	**296**	*e*Pn	**Pn**	**06 34 08.4**	**-1.1**
HUIG				*e*Sn	**Sn**	**06 34 30.2**	**-4.4**
HUIG	**Huatulco**	**1.94**	**296**	*i* P	**Pn**	**06 34 08.4**	**-1.1**
HUIG				*i* S	**Sn**	**06 34 30.2**	**-4.4**
CMIG	**Matias Romero**	**2.24**	**346**	*e*Pn	**Pb**	**06 34 15.1**	**-1.6**
CMIG				*e*Sn	**Sn**	**06 34 41.3**	**-0.7**
CMIG	**Matias Romero**	**2.24**	**346**	*e*P	**Pb**	**06 34 15.1**	**-1.6**
CMIG				*e*S	**Sn**	**06 34 41.3**	**-0.7**
CMIG	**Matias Romero**	**2.24**	**346**	Pn	**Pb**	**06 34 15.4**	**-1.3**
	9.6nm,0.3s,baz=172,slow=14,SNR=128						
CMIG				Sn	**Sb**	**06 34 43.6**	**-1.4**
	34nm,0.3s,baz=60,slow=15,SNR=12						
CMIG				LR	LR	06 35 06.6	
	comp=Z,463nm,20.5s,baz=316,slow=41						
CCIG	**Comitan**	**2.50**	**57**	*e*Pn	**Pb**	**06 34 19.8**	**-1.4**
CCIG				*e*Sn	**Sb**	**06 34 50.4**	**-2.2**
CCIG	**Comitan**	**2.50**	**57**	*e*P	**Pb**	**06 34 19.8**	**-1.4**
CCIG				*e*S	**Sb**	**06 34 50.4**	**-2.2**
APG	**El Apazote**	**3.71**	**88**	Pn	**Pn**	**06 34 34.1**	**-0.2**
	2.9nm,0.3s,baz=195,slow=17,SNR=14						
TEIG	**Tepich**	**7.81**	**47**	*e*Pn	**Pn**	**06 35 30.8**	**+0.5**
ESTN	**Estel**	**7.91**	**102**	*e*Pn	**Pn**	**06 35 29.9**	**-1.9**
833A	**Chaparral WMA,**	**14.16**	**341**	*e*Pn	**Pn**	**06 36 59.4**	**+2.2**
TXAR	**Lajitas Array**	**16.76**	**330**	Pn	**P**	**06 37 35.7**	**+1.7**
	0.0nm,0.3s,baz=149,slow=15,SNR=2.5						
HHAR	**Hobbs**	**21.29**	**1**	*e*P	**P**	**06 38 24.2**	**+0.7**
NVAR	**Mina Array Bea**	**31.58**	**322**	P	**P**	**06 40 02.9**	**+2.9**
	0.4nm,0.7s,baz=141,slow=9.6,SNR=4.0						
YKA	**Yellowknife Ar**	**49.65**	**348**	P	**P**	**06 42 29.0**	**+0.5**
	0.4nm,0.6s,baz=154,slow=7.2,SNR=14						
INK	**Inuvik**	**58.95**	**344**	P	**P**	**06 43 36.4**	**+0.3**
	0.9nm,0.8s,baz=129,slow=8.0,SNR=4.0						
RES	**Resolute Bay**	**59.77**	**360**	P	**P**	**06 43 42.0**	**+0.3**
	0.5nm,0.6s,baz=202,slow=7.7,SNR=5.3						

IDC 25 06:35:50.9±2.2**, 2.°20N**×**127.°12E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.2**/39**, mbtmp3.3**/3**, Error ellipse: s-maj=180.3km s-min=25.0km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.12**	**162**	P	P	06 40 57.2	-1.5
	0.6nm,0.6s,baz=341,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**26.54**	**166**	P	P	06 41 31.9	+1.3
	0.1nm,0.3s,baz=346,slow=13,SNR=2.3						
MKAR	**Makanchi Array**	**59.03**	**326**	P	P	06 45 52.5	-0.2
	0.2nm,0.5s,baz=118,slow=8.1,SNR=3.4						

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*ISCJB **25** 06:38:01.6±0.3, 11.°90S±0.°04×166.°60E±0.°07, h150^{km}, mb4.5/44, Error ellipse: s-maj=10.2km s-min=5.2km az=175.1*

*IDC **25** 06:38:01.4±3.0, 11.°83S×166.°61E, h131^{km}±25^{km}, mb4.0/13, mb1 4.2/14, mb1mx3.9/35, mbtmp4.4/14, Error ellipse: s-maj=20.6km s-min=14.7km az=84.0*

*NEIC **25** 06:38:03.7±0.8, 11.°90S×166.°61E, h155^{km}±7^{km}, mb4.7/31, Error ellipse: s-maj=5.8km s-min=4.9km az=80.0*

ISC 25 06:38:03.2±0.5**, 11.°90S**±0.°06×**166.°6E**±0.°1**, h150**^{km}**, n78,** σ**0**^{s}**82**/85**, mb4.6**/44**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**9.62**	**172**	*e*Pn	**Pn**	**06 40 17.7**	**-0.5**
DZM	**Mont Dzumac**	**10.11**	**181**	*e*Pn	**Pn**	**06 40 25.5**	**+0.7**
DZM				*e*Sn	**Sn**	**06 42 16.7**	**-0.1**
DZM	**Mont Dzumac**	**10.11**	**181**	P	**Pn**	**06 40 26.2**	**+1.3**
	12nm,0.3s,baz=354,slow=12,SNR=77						
DZM				S	**Sn**	**06 42 15.5**	**-1.3**
	0.5nm,0.3s,baz=73,slow=20,SNR=4.9						
ONTNC	**Ouen Toro**	**10.35**	**181**	*e*Pn	**Pn**	**06 40 29.1**	**+1.2**
OUENC	**Ouen Island, N**	**10.46**	**179**	*e*Pn	**Pn**	**06 40 30.1**	**+0.8**
PINNC	**Pines Island,**	**10.68**	**176**	*e*Pn	**Pn**	**06 40 33.2**	**+0.9**
EIDS	**Eidsvold**	**19.84**	**225**	*e*P	**P**	**06 42 23.1**	**+0.5**
	26nm,1.4s						
ARMA	**Armidale**	**23.05**	**215**	*e*P	**P**	**06 42 56.6**	**+0.9**
	10nm,0.8s						
URZ	**Urewera**	**27.88**	**162**	*e*P	**P**	**06 43 39.1**	**+0.2**
	30nm,1.3s						
URZ	**Urewera**	**27.88**	**162**	P	**P**	**06 43 39.1**	**+0.2**
	7.1nm,0.8s,baz=341,slow=12,SNR=3.6						
BKZ	**Black Stump Fm**	**28.55**	**164**	*e*P	**P**	**06 43 45.0**	**+0.1**
	45nm,1.5s						
BFZ	**Birch Farm**	**29.90**	**165**	*e*P	**P**	**06 43 55.8**	**-1.1**
	48nm,1.3s						
SNZO	**South Karori**	**30.15**	**168**	*e*P	**P**	**06 43 58.4**	**-0.6**
	134nm,1.5s						
THZ	**Tophouse**	**30.26**	**171**	*e*P	**P**	**06 44 00.6**	**+0.5**
	14nm,0.8s						
STKA	**Stephens Creek**	**30.40**	**225**	*e*P	**P**	**06 44 01.6**	**+0.3**
	2.0nm,1.4s						
STKA	**Stephens Creek**	**30.40**	**225**	P	**P**	**06 44 01.9**	**+0.5**
	2.3nm,0.7s,baz=55,slow=12,SNR=5.5						
KHZ	**Kahutara**	**31.00**	**170**	*e*P	**P**	**06 44 05.8**	**-0.7**
	55nm,1.5s						
LTZ	**Lake Taylor**	**31.16**	**172**	*e*P	**P**	**06 44 08.3**	**+0.4**
	19nm,0.6s						
FOZ	**Fox Glacier**	**31.64**	**176**	*e*P	**P**	**06 44 12.6**	**+0.5**
	12nm,0.8s						
OXZ	**Oxford**	**31.66**	**172**	*e*P	**P**	**06 44 12.7**	**+0.4**
	31nm,1.2s						
TOO	**Toolangi**	**31.78**	**213**	*e*P	**P**	**06 44 13.2**	**-0.2**
	29nm,1.6s						
RPZ	**Rata Peaks**	**31.93**	**174**	*e*P	**P**	**06 44 15.0**	**+0.4**
	26nm,1.2s						
RPZ	**Rata Peaks**	**31.93**	**174**	P	**P**	**06 44 14.6**	**0.0**
	6.7nm,0.5s,baz=0.9,slow=2.1,SNR=9.3						
WR1	**Warramunga Arr**	**31.97**	**251**	*e*P	**P**	**06 44 14.8**	**-0.4**
WRA	**Warramunga Arr**	**31.97**	**251**	P	**P**	**06 44 14.8**	**-0.5**
	0.3nm,0.4s,baz=79,slow=8.8,SNR=13						
WRA				pP	**pP**	**06 44 42.4**	**-3.3**
	1.4nm,0.9s,baz=81,slow=8.7,SNR=4.6						
WRA				PcP	**PcP**	**06 47 01.5**	**-0.5**
	1.8nm,0.8s,baz=79,slow=3.2,SNR=9.7						
MQZ	**McQueen's Vall**	**32.12**	**172**	*e*P	**P**	**06 44 15.8**	**-0.5**
	100nm,1.6s						
LBZ	**Lake Benmore**	**32.52**	**175**	*e*P	**P**	**06 44 19.9**	**+0.1**
	39nm,1.4s						
WKZ	**Wanaka**	**32.88**	**177**	*e*P	**P**	**06 44 23.4**	**+0.5**
	111nm,1.7s						
AS31	**Alice Springs**	**33.15**	**245**	*e*P	**P**	**06 44 25.0**	**-0.6**
	1.0nm,0.8s						
ASAR	**Alice Springs**	**33.15**	**245**	P	**P**	**06 44 25.1**	**-0.6**
	2.5nm,0.7s,baz=69,slow=9.9,SNR=26						
ASAR				pP	**pP**	**06 44 53.8**	**-2.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.3nm,0.8s,baz=80,slow=8.0,SNR=4.8						
ASAR				PcP	PcP	06 47 05.2	0.0
	2.0nm,0.6s,baz=74,slow=2.3,SNR=19						
ASAR				ScP	ScP	06 50 38.4	+2.7
	0.7nm,0.9s,baz=81,slow=3.9,SNR=4.4						
WHZ	**Wether Hill Ro**	33.89	178	*e*P	P	06 44 31.2	-0.5
	27nm,1.3s						
BBOO	**Buckleboo**	34.85	228	*e*P	P	06 44 40.2	+0.1
	12nm,1.0s						
FITZ	**Fitzroy Crossi**	39.95	256	*e*P	P	06 45 22.8	-0.4
	34nm,1.6s						
FORT	**Forrest**	40.23	236	*e*P	P	06 45 25.4	0.0
	26nm,1.3s						
MBWA	**Marble Bar**	45.70	252	*e*P	P	06 46 09.3	-0.2
	132nm,1.6s						
VNDA	**Vanda**	65.65	181	*e*P	P	06 48 31.7	+0.8
VNDA	**Vanda**	65.65	181	P	P	06 48 32.4	+1.5
	2.7nm,0.7s,baz=351,slow=7.1,SNR=8.9						
CASY	**Casey**	65.88	202	*e*P	P	06 48 31.7	-0.8
	28nm,1.3s						
KLR	**Kul'dur**	68.17	336	P	P	06 48 47.1	0.0
	2.1nm,0.6s,baz=127,slow=4.2,SNR=14						
CM31	**Chiang Mai Arr**	73.20	294	*e*P	P	06 49 19.7	+1.4
CMAR	**Chiang Mai Arr**	73.20	294	P	P	06 49 19.7	+1.4
	0.7nm,0.3s,baz=122,slow=4.8,SNR=11						
HIA	**Hailar**	73.51	330	*e*P	P	06 49 19.8	+0.3
	4.7nm,0.7s						
QSPA	**South Pole Qui**	78.11	180	*e*P	P	06 49 45.5	+0.1
	18nm,1.1s						
ULN	**Ulaanbaatar**	79.47	324	*e*P	P	06 49 53.8	+0.6
	5.7nm,0.7s						
SONA0	**Songino Array**	79.83	324	*e*P	P	06 49 55.8	+0.6
SONM	**Songino Array**	79.83	324	P	P	06 49 55.8	+0.6
	1.2nm,0.4s,baz=144,slow=5.7,SNR=22						
SUA	**Susitna One**	80.46	19	*e*P	P	06 49 57.9	-0.3
	22nm,1.6s						
CAST	**Castle Rocks**	81.52	17	*e*P	P	06 50 03.6	0.0
	7.0nm,1.2s						
RND	**Reindeer**	82.48	19	*e*P	P	06 50 07.8	-0.9
	17nm,1.5s						
WRH	**Wood River Hil**	83.49	18	*e*P	P	06 50 12.9	-0.8
	10nm,1.5s						
HDA	**Harding Lake**	83.79	18	*e*P	P	06 50 15.2	-0.2
	9.8nm,1.3s						
ILAR	**Eielson Array**	84.07	18	P	P	06 50 16.3	-0.4
	1.1nm,0.6s,baz=238,slow=5.0,SNR=21						
ILB	**Eielson Array**	84.07	18	*e*P	P	06 50 16.3	-0.4
SCRK	**Sand Creek**	84.44	20	*e*P	P	06 50 18.6	-0.2
	11nm,1.6s						
EGAK	**Eagle**	85.90	20	*e*P	P	06 50 25.4	-0.5
	8.6nm,1.3s						
MK32	**Makanchi Array**	94.70	317	*e*P	P	06 51 07.7	+0.2
MKAR	**Makanchi Array**	94.70	317	P	P	06 51 07.7	+0.2
	4.4nm,0.5s,baz=86,slow=6.2,SNR=56						
ZALV	**Zalesovo Beam**	94.72	324	P	P	06 51 07.0	-0.4
	1.3nm,0.7s,baz=119,slow=3.2,SNR=5.6						
ZAA1	**Zalesovo Array**	94.72	324	*e*P	P	06 51 07.0	-0.4
MAKZ	**Makanchi**	94.91	317	*e*P	P	06 51 08.3	-0.2
	4.9nm,1.0s						
YKA	**Yellowknife Ar**	95.36	27	P	P	06 51 08.6	-1.4
	0.3nm,0.4s,baz=257,slow=4.7,SNR=13						
YKB5	**Yellowknife Ar**	95.36	27	*e*P	P	06 51 08.7	-1.4
ARA0	**ARCESS Array S**	117.36	346	*e*PKPdf	PKPdf	06 56 30.1	-0.3
ARCES	**ARCESS Array B**	117.36	346	PKP	PKPdf	06 56 30.1	-0.3
	1.5nm,0.4s,baz=82,slow=2.0,SNR=36						
FIA0	**FINESS Array S**	122.86	339	*e*PKPdf	PKPdf	06 56 40.8	-0.4
FINES	**FINESS Array B**	122.86	339	PKP	PKPdf	06 56 40.8	-0.4
	2.0nm,0.8s,baz=45,slow=2.3,SNR=12						
BOSA	**Boshof**	125.04	222	PKP	PKPdf	06 56 46.9	+0.3
	1.3nm,0.6s,baz=304,slow=3.7,SNR=3.3						
NB200	**NORSAR Array S**	127.74	345	*e*PKPdf	PKPdf	06 56 50.4	-0.2
NOA	**NORSAR Array B**	127.74	345	PKP	PKPdf	06 56 50.4	-0.2
	0.2nm,0.4s,baz=261,slow=3.5,SNR=2.7						
BR101	**Keskin Array S**	130.14	312	*e*PKPdf	PKPdf	06 56 56.0	0.0
BRTR	**Keskin Array B**	130.14	312	PKP	PKPdf	06 56 56.0	0.0
	0.4nm,0.5s,baz=113,slow=3.7,SNR=3.2						
CLL	**Collm**	135.21	337	*e*PKPdf	PKiKP	06 57 07.0	+0.5
GEC2	**GERESS Array S**	136.83	334	*e*PKPdf	PKPdf	06 57 09.0	+0.8
GERES	**GERESS Array B**	136.83	334	PKP	PKPdf	06 57 09.0	+0.8
	0.4nm,0.5s,baz=108,slow=4.3,SNR=3.9						
KEST	**Kesra**	148.59	323	PKPbc	PKPbc	06 57 33.4	+0.3
	6.2nm,0.9s,baz=28,slow=1.7,SNR=6.0						
ESDC	**Sonseca Array**	151.10	345	PKPbc	PKPbc	06 57 39.4	+0.4
	1.7nm,0.8s,baz=360,slow=2.7,SNR=6.7						
TORD	**Torodi Ar. Bea**	165.19	276	PKP	PKPdf	06 57 50.5	-0.1
	1.4nm,1.0s,baz=120,slow=0.2,SNR=5.5						
TOA1	**Torodi Ar. Sit**	165.19	276	*e*PKPdf	PKPdf	06 57 50.5	-0.1

NNC 25 07:04:27.2±1.0**, 41°.91N×78°.15E, h0^{km}, mb3.3, mpv3.0, 5C-3D, Error ellipse: s-maj=7.3km s-min=3.9km az=167.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	1.17	9	P	Pg	07 04 47.9	-1.7
	6.0nm,0.1s						
SATY				S	Sg	07 05 04.7	+0.1
	15nm,0.1s						
KURS	**Kuram**	1.58	0	P	Pn	07 04 55.3	-1.2
	2.0nm,0.1s						
KURS				S	Sn	07 05 17.7	0.0
	3.0nm,0.4s						
PDGK	**Podgornoye**	1.73	34	P	Pn	07 04 58.2	-0.5
	3.0nm,0.1s						
PDGK				S	Sb	07 05 22.5	+0.2
	2.9nm,0.8s						
PDGK	**Podgornoye**	1.73	34	⇓Pg	Pb	07 04 59.5	-0.4
	0.5nm,0.1s						
PDGK				⇓Lg	Lg	07 05 23.7	
	6.0nm,0.8s						
MTBS	**Maitube**	1.76	314	Pg	Pn	07 04 59.5	+0.3
	7.2nm,0.1s						
MTBS				Lg	Lg	07 05 25.1	
	7.9nm,0.2s						
KST	**Kastek**	1.98	306	Pg	Pn	07 05 02.9	+0.8
	6.7nm,0.5s						
KST				Lg	Lg	07 05 30.5	
	9.0nm,0.9s						
KTBS	**Karatobe**	2.10	330	Pg	Pb	07 05 05.5	-0.8
	6.9nm,0.2s						
KTBS				Lg	Lg	07 05 35.5	
	8.8nm,0.2s						
CHKK	**Chushkaly**	2.12	337	Pg	Pb	07 05 05.7	-0.9
	14nm,0.2s						
CHKK				Lg	Lg	07 05 35.7	
	16nm,0.2s						
TKM2	**Tokmak 2**	2.15	299	⇑Pg	Pb	07 05 07.7	+0.6
	1.9nm,0.3s						
TKM2				⇓Lg	Lg	07 05 35.8	
	5.6nm,0.7s						
DGS	**Degeres**	2.21	308	Pg	Pn	07 05 06.1	+0.9
	6.2nm,0.4s						
DGS				Lg	Lg	07 05 36.2	
	9.5nm,0.3s						
KTMS	**Ketmen**	2.23	46	Pg	Pb	07 05 08.3	-0.3
	3.5nm,0.1s						
KTMS				Lg	Lg	07 05 39.8	
	2.1nm,0.2s						
ARXS	**Arharly**	2.31	354	Pg	Pb	07 05 08.6	-1.3
	6.4nm,0.4s						
ARXS				Lg	Lg	07 05 40.6	
	4.9nm,0.3s						
KUU	**Kurty**	2.39	327	Pg	Pb	07 05 10.4	-0.7
	3.2nm,0.3s						
KUU				Lg	Lg	07 05 43.6	
	4.7nm,0.7s						
DJR	**Jarkent**	2.70	26	Pg	Pb	07 05 14.9	-1.6
	0.6nm,0.3s						
DJR				Lg	Lg	07 05 51.7	
	2.3nm,1.0s						
AAK	**Ala-Archa**	2.81	286	⇑Pg	Pb	07 05 19.5	+1.1
	1.2nm,0.5s						
AAK				⇑Lg	Lg	07 05 56.9	
	9.9nm,1.4s						
MK31	**Makanchi Array**	5.71	30	⇑Pn	Pn	07 05 54.3	+1.0
	1.0nm,1.0s,baz=194,slow=13,SNR=2.7						
MK31				⇑Pg	Pg	07 06 13.5	-3.2
	0.2nm,0.5s						

ISCJB ***25*** *07:08:42.6±0.2, 14°.29N±0°.03×91°.54W±0°.02, h61^{km}, mb4.2/80, Error ellipse: s-maj=4.4km s-min=1.8km az=34.5*

IDC ***25*** *07:08:45.2±0.8, 14°.15N×91°.48W, h83^{km}±6^{km}, mb3.8/13, mb1 4.0/17, mb1mx3.8/44, mbtmp4.1/17, MS2.8/1, Ms1 2.8/1, ms1mx2.7/40, Error ellipse: s-maj=10.3km s-min=7.9km az=28.0*

NEIC ***25*** *07:08:45.2±0.6, 14°.23N×91°.48W, h78^{km}±5^{km}, mb4.2/91, MD4.4(MEX), Error ellipse: s-maj=7.5km s-min=4.7km az=216.0*

NEIC Felt at Antigua Guatemala and Guatemala.

UCR ***25*** *07:08:46.3±1.6, 14°.08N×91°.39W, h59^{km}±28^{km}, MD4.0, ML4.3, mb4.2(NEIC)*

MEX ***25*** *07:08:46.3±0.9, 14°.15N×91°.64W, h45^{km}±38^{km}, MD4.4*

ISC 25 07:08:43.1±0.5**, 14°.14N**±0°.05×**91°.57W**±0°.04**, h61^{km}, n374, σ1°.50**/401**, mb4.2**/82**, 1C-3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	0.77	66	⇓*i*P	Pn	07 08 59.9	+1.4
PCG	**Pacaya**	0.97	75	⇓*e*P	Pn	07 09 02.8	+1.7
PCG				*e*S	Sn	07 09 15.2	+0.9
THIG		1.02	319	*i* P	Pn	07 09 02.5	+1.1
THIG				*i* S	Sn	07 09 14.4	-0.7
THIG		1.02	319	*i* P	Pn	07 09 02.5	+1.1
THIG				*i* S	Sn	07 09 14.4	-0.7
IXG	**Ixpaco**	1.08	88	*e*P	Pn	07 09 03.9	+1.4
NBG	**Las Nubes**	1.27	69	⇓*i*P	Pn	07 09 07.4	+2.4
APG	**El Apazote**	1.38	51	P	Pn	07 09 07.5	+1.1
	196nm,0.3s,baz=198,slow=8.9,SNR=890						
APG				S	Sn	07 09 26.1	+2.3
	430nm,0.3s,baz=238,slow=23,SNR=20						
APG				LR	LR	07 09 47.0	
	comp=Z,3µm,19.1s,baz=80,slow=48						
RTR	**El Retiro**	1.89	97	*e*P	Pn	07 09 14.6	+1.4
SBLS	**San Blas**	1.92	99	*e*P	Pn	07 09 14.8	+1.2
SBLS				*e*S	Sn	07 09 37.9	+1.0
CEVE	**Cerro Verde**	1.92	99	*e*P	Pn	07 09 15.1	+1.4
CEVE				*e*S	Sn	07 09 38.2	+1.3
CEVE				IAML		07 09 42.0	
	comp=Z,15µm,0.5s						
SNJE	**San Jose**	1.93	98	*e*P	Pn	07 09 14.9	+1.1
UNIC	**Santa Ana**	1.96	94	*e*P	Pn	07 09 14.9	+0.8
UNIC				IAML		07 09 46.5	
	comp=Z,1µm,0.3s						
MRL	**Marmol**	2.04	63	⇑*e*P	Pn	07 09 17.4	+2.0
MTO3	**Montecristo**	2.16	83	*e*P	Pn	07 09 17.3	+0.3
CCIG	**Comitan**	2.20	346	*e*Pn	Pn	07 09 19.7	+2.1
CCIG				*e*S	Sn	07 09 49.9	+6.1
CCIG	**Comitan**	2.20	346	*e*P	Pn	07 09 19.6	+2.1
CCIG				*e*S	Sn	07 09 49.9	+6.1
PCIG		2.23	315	*e*P	Pn	07 09 18.2	+0.5
PCIG				*e*S	Sn	07 09 44.0	-0.1
PCIG		2.23	315	*e*P	Pn	07 09 18.2	+0.5
PCIG				*e*S	Sn	07 09 44.0	-0.1
BOQS	**Boqueron**	2.26	100	*e*P	Pn	07 09 20.1	+1.7
BOQS				*e*S	Sn	07 09 44.9	-0.4
UEES	**San Salvador**	2.30	100	*e*P	Pn	07 09 20.4	+1.7
UEES				*e*S	Sn	07 09 46.3	+0.4
SNET	**Serv Nac Est T**	2.32	101	*e*P	Pn	07 09 20.2	+1.2
SNET				*e*S	Sn	07 09 46.8	+0.4
SNET				IAML		07 09 58.7	
	comp=Z,3µm,0.3s						
OPAM	**San Salvador**	2.34	100	*e*P	Pn	07 09 20.4	+1.1
OPAM				*e*S	Sn	07 09 46.7	-0.3
OPAM				IAML		07 10 00.9	
	comp=Z,3µm,0.2s						
LOMA	**San Marcos**	2.38	101	*e*P	Pn	07 09 20.8	+1.1
LOMA				*e*S	Sn	07 09 47.5	-0.3
LOMA				IAML		07 09 58.1	
	comp=Z,5µm,0.5s						
UDBS	**Soyapango**	2.38	100	*e*P	Pn	07 09 20.8	+1.0
UDBS				*e*S	Sn	07 09 48.1	+0.2
UDBS				IAML		07 09 52.8	
	comp=Z,4µm,0.3s						
LFU	**La Fuente**	2.42	99	*e*P	Pn	07 09 21.5	+1.1
LFU				*e*S	Sn	07 09 48.9	0.0
LBRS	**Las Brisas**	2.49	99	*e*P	Pn	07 09 22.2	+0.9
LFRS	**El Faro**	2.49	101	*e*P	Pn	07 09 22.7	+1.4
LLGN	**La Laguna**	2.54	89	*e*P	Pn	07 09 22.4	+0.4
PAVA	**Las Pavas**	2.59	99	*e*P	Pn	07 09 23.8	+1.0
UESV	**Ojushtada**	2.81	105	*e*P	Pn	07 09 26.0	+0.4
VICT	**Victoria**	2.85	93	*e*P	Pn	07 09 26.3	0.0
TECA	**Tecapa**	3.05	102	*e*P	Pn	07 09 30.4	+1.3
PACA	**Pacayal**	3.23	101	*e*P	Pn	07 09 32.9	+1.5
LCND	**La Caada**	3.67	102	*e*P	Pn	07 09 38.7	+1.3
LCND				*e*S	Sn	07 10 19.8	+0.3
CNCH	**Conchagua**	3.73	103	*e*P	Pn	07 09 39.7	+1.4
CMIG	**Matias Romero**	4.34	313	P	Pn	07 09 48.6	+2.1
CMIG				*e*S	Sn	07 10 36.3	+0.4
CMIG	**Matias Romero**	4.34	313	*e*P	Pn	07 09 47.8	+1.3
CMIG				*e*S	Sn	07 10 36.3	+0.4
CMIG	**Matias Romero**	4.34	313	P	Pn	07 09 48.6	+2.1
	comp=Z,15nm,0.3s,baz=130,slow=8.8,SNR=99						
CMIG				S	Sn	07 10 40.6	+4.8
	comp=Z,17nm,0.3s,baz=337,slow=8.0,SNR=7.3						
HUIG	**Huatulco**	4.67	291	*e*P	Pn	07 09 50.3	-0.9
HUIG	**Huatulco**	4.67	291	*e*P	Pn	07 09 50.3	-0.9
ESTN	**Estel**	5.16	101	*e*Pn	Pn	07 09 59.7	+1.7
ESTN	**Estel**	5.16	101	*e*P	Pn	07 09 59.6	+1.7
BOAB	**BOACO BROADBAN**	5.99	106	*e*Pn	Pn	07 10 11.6	+2.5
TEIG	**Tepich**	6.83	27	*e*Pn	Pn	07 10 19.5	-1.2
MYIG	**Mrida**	7.01	14	*e*Pn	Pn	07 10 23.7	+0.6
LVIG	**Laguna Verde**	7.24	321	*e*Pn	Pn	07 10 25.1	-1.2
ESPN	**Las Esperanzas**	7.34	104	*e*Pn	Pn	07 10 30.6	+2.9
JTS	**JuntasAbangare**	7.51	120	*e*Pn	Pn	07 10 33.8	+3.7
JTS				S	Sn	07 11 55.7	+1.8
JTS	**JuntasAbangare**	7.51	120	P	Pn	07 10 32.5	+2.4
	comp=Z,3.2nm,0.3s,baz=18,slow=20,SNR=20						
JTS				S	Sn	07 11 55.7	+1.8
	comp=Z,1.3nm,0.3s,baz=284,slow=19,SNR=2.3						
JTS				LR	LR	07 12 55.7	
	comp=Z,79nm,21.7s,baz=348,slow=34						
HDC	**Heredia**	8.37	119	*e*Pn	Pn	07 10 44.8	+2.9
UNM	**Universidad Na**	8.93	306	*e*Pn	Pn	07 10 53.2	+3.5
MOIG	**Morelia**	10.72	302	*e*Pn	Pn	07 11 19.9	+5.7
LNIG	**Linares**	13.03	326	*e*Pn	P	07 11 51.3	-2.6
MTDJ	**Mount Denham**	14.08	71	*e*Pn	P	07 12 03.7	-2.0
061Z	**Ochoppi**	15.37	39	*e*Pn	Pn	07 12 14.7	-1.6
	comp=Z,46nm,1.0s						
059Z	**Ave Maria**	15.41	36	P	Pn	07 12 16.5	-0.3
	baz=220						
058A	**Arcadia**	15.76	34	P	Pn	07 12 21.5	+0.2
	baz=217						
958A	**Wauchula**	16.21	33	P	Pn	07 12 27.2	+0.2
	baz=216						
857A	**Zephyrhills**	16.53	30	P	Pn	07 12 30.7	-0.3
	baz=213						
448A	**Bay Minette**	17.06	11	P	P	07 12 38.1	-0.4
	baz=192						
655A	**Horseshoe Beac**	17.13	25	P	P	07 12 38.6	-0.6
	baz=208						
757A	**Oxford**	17.17	29	P	P	07 12 39.3	-0.4
	baz=213						
553A	**Crawfordville**	17.28	21	P	P	07 12 40.9	0.0
	baz=204						
656A	**Willston**	17.32	27	P	P	07 12 41.1	-0.2
	baz=211						
554A	**Perry**	17.46	23	P	P	07 12 42.8	-0.1
	baz=206						
435B	**Jarrell**	17.47	343	P	P	07 12 44.6	+1.6
	baz=160						
349A	**Repton**	17.60	12	P	P	07 12 45.1	+0.7
	baz=194						
NATX	**Nacogdoches**	17.77	351	*e*P	P	07 12 48.9	+2.5
	comp=Z,15nm,0.7s						
NATX	**Nacogdoches**	17.77	351	P	P	07 12 47.5	+1.1
	baz=170						
555A	**McAlpin**	17.78	25	*e*P	P	07 12 49.5	+3.0
	comp=Z,118nm,0.6s						
555A	**McAlpin**	17.78	25	P	P	07 12 47.2	+0.7
	baz=208,SNR=12						
556A	**Lake Butler**	17.91	27	P	P	07 12 47.9	0.0
	baz=210						
JCT	**Junction City**	17.95	336	P	P	07 12 50.3	+2.0
	baz=153						
658A	**Bunnell**	17.96	30	*e*P	Pn	07 12 47.8	-0.8
	comp=Z,85nm,1.1s						
658A	**Bunnell**	17.96	30	P	P	07 12 49.0	+0.6
	baz=214						
454A	**Quitman**	18.05	23	P	Pn	07 12 50.4	+0.7
	baz=205						
YOTC	**Yotoco, Valle**	18.09	122	*e*P	P	07 12 51.9	+1.7
YOTC	**Yotoco, Valle**	18.09	122	*e*P	P	07 12 51.9	+1.7
249A	**Camden**	18.22	12	P	Pn	07 12 52.9	+1.1
	baz=194						
557A	**Orange Park**	18.23	28	P	Pn	07 12 52.1	+0.3
	baz=212						
455A	**Stateville**	18.30	24	P	Pn	07 12 53.3	+0.5
	baz=207						
352A	**Blakely**	18.31	18	*e*P	Pn	07 12 53.8	+1.0
	comp=Z,38nm,1.1s						
352A	**Blakely**	18.31	18	P	Pn	07 12 54.0	+1.2
	baz=201						
250A	**Grady**	18.41	14	*e*P	Pn	07 12 56.1	+2.0
	comp=Z,15nm,0.6s						
250A	**Grady**	18.41	14	P	Pn	07 12 55.5	+1.4
	baz=196						
WHTX	**Lake Whitney,**	18.57	344	*e*P	P	07 12 55.4	+0.2
	comp=Z,10nm,0.8s						
WHTX	**Lake Whitney,**	18.57	344	P	Pn	07 12 56.2	+0.2
	baz=162						
ANIL	**Santa Ana**	18.60	119	*e*P	P	07 12 56.7	+0.8
ANIL	**Santa Ana**	18.60	119	*e*P	P	07 12 56.7	+0.8
POPC	**Popayan, Colom**	18.69	127	*e*P	P	07 12 59.5	+2.6
POPC	**Popayan, Colom**	18.69	127	*e*P	P	07 12 59.5	+2.6
147A	**Livingston**	18.70	9	P	Pn	07 12 57.6	+0.1
	baz=190,SNR=9.2						
456A	**Hilliard**	18.70	26	*e*P	Pn	07 12 56.9	-0.7
	comp=Z,31nm,1.0s						
TIGA	**Tifton**	18.72	22	P	Pn	07 12 57.0	-0.8
	baz=205						
251A	**Midway**	18.74	16	P	Pn	07 12 58.6	+0.5
	baz=199						
TXAR	**Lajitas Array**	18.82	325	P	Pn	07 13 00.6	+1.5
	comp=Z,0.2nm,0.3s,baz=147,slow=12,SNR=7.6						
457A	**Yulee**	18.82	28	P	Pn	07 12 59.0	0.0
	baz=211						
252A	**Lumpkin**	18.85	18	P	Pn	07 12 59.6	+0.2
	baz=201						
149A	**Jones**	18.89	13	P	Pn	07 12 59.8	-0.1
	baz=194						
SOTA	**Rioblanco**	19.00	128	*e*P	P	07 13 02.6	+2.1
SOTA	**Rioblanco**	19.00	128	*e*P	P	07 13 02.6	+2.1
PCON	**Cinco Dias**	19.04	127	*e*P	Pn	07 13 04.3	+2.0
PCON	**Cinco Dias**	19.04	127	*e*P	Pn	07 13 04.3	+2.0
150A	**Eclectic**	19.07	14	P	Pn	07 13 01.1	-0.9
	baz=196,SNR=9.3						
253A	**Americus**	19.10	20	P	Pn	07 13 01.9	-0.4
	baz=202						
151A	**Opelika**	19.18	16	P	P	07 13 02.0	+0.2
	baz=198,SNR=13						
356A	**Blackshear**	19.18	25	P	Pn	07 13 02.6	-0.6
	baz=209						
LRAL	**Lakeview Retre**	19.27	12	*e*P	Pn	07 13 04.6	+0.2
	comp=Z,11nm,0.8s						
LRAL	**Lakeview Retre**	19.27	12	P	Pn	07 13 04.0	-0.3
	baz=193						
254A	**Abbeville**	19.28	22	P	Pn	07 13 03.5	-1.0
	baz=205						
ROSC	**El Rosal**	19.35	117	P	P	07 13 05.1	+0.9
	comp=Z,0.4nm,0.3s,baz=99,slow=22,SNR=4.2						
152A	**Waverly Hall**	19.48	18	*e*P	Pn	07 13 05.5	-1.3
	comp=Z,8.8nm,0.6s						
152A	**Waverly Hall**	19.48	18	P	Pn	07 13 05.7	-1.1
	baz=200						
Z49A	**Columbiana**	19.52	13	P	Pn	07 13 07.0	-0.3
	baz=194						
255A	**Hazlehurst**	19.57	24	*e*P	Pn	07 13 06.5	-1.4
	comp=Z,17nm,0.9s						
255A	**Hazlehurst**	19.57	24	P	Pn	07 13 06.9	-0.9
	baz=207						
Z50A	**Ashland**	19.71	14	*e*P	Pn	07 13 08.7	-0.9
	comp=Z,12nm,0.8s						
Z50A	**Ashland**	19.71	14	P	Pn	07 13 08.5	-1.1
	baz=196						
PAMC	**Pamplona, Colo**	19.72	108	*e*P	P	07 13 07.6	-0.8
PAMC	**Pamplona, Colo**	19.72	108	*e*P	P	07 13 07.6	-0.8
ABTX	**Abilene, Hawle**	19.82	340	*e*P	P	07 13 09.6	+0.8
	comp=Z,13nm,0.8s						
ABTX	**Abilene, Hawle**	19.82	340	P	P	07 13 09.9	+1.1
	baz=156,SNR=5.0						
256A	**Glennville**	19.85	25	P	P	07 13 09.6	+0.5
	baz=208						
154A	**Montrose**	19.95	21	P	Pn	07 13 10.8	-1.6
	baz=204						
RUSC	**La Rusia**	19.95	112	*e*P	P	07 13 08.5	-2.4
RUSC	**La Rusia**	19.95	112	*e*P	P	07 13 08.5	-2.4
CHIC	**Chingaza**	19.96	117	*e*P	P	07 13 11.2	+0.3
CHIC	**Chingaza**	19.96	117	*e*P	P	07 13 11.2	+0.3
Z52A	**Williamson**	20.05	18	P	P	07 13 11.6	+0.2
	baz=200,SNR=5.4						
FLOC	**Florencia**	20.08	127	*e*P	P	07 13 14.0	+2.1
FLOC	**Florencia**	20.08	127	*e*P	P	07 13 14.0	+2.1
Y48A	**Jasper**	20.09	11	P	P	07 13 12.4	+0.7
	baz=192						
Y49A	**Blount Mountai**	20.19	13	*e*P	Pn	07 13 14.4	-0.8
	comp=Z,10nm,0.8s						
Y49A	**Blount Mountai**	20.19	13	P	Pn	07 13 14.0	-1.2
	baz=194						
155A	**Kite**	20.19	23	P	P	07 13 13.0	+0.2
	baz=206						
X40A	**Basin Creek Fa**	20.30	357	P	Pn	07 13 15.0	-1.4
	baz=176						
OXF	**Oxford**	20.38	5	*e*P	P	07 13 14.3	-0.5
	comp=Z,17nm,0.9s						
OXF	**Oxford**	20.38	5	P	P	07 13 14.5	-0.3
	baz=186						
MIAR	**Mount Ida**	20.40	355	*e*P	P	07 13 14.5	-0.5
	comp=Z,5.3nm,0.8s						
MIAR	**Mount Ida**	20.40	355	P	P	07 13 15.4	+0.3
	baz=174						
Z53A	**Monticello**	20.40	20	P	P	07 13 15.3	+0.2
	baz=203						
X46A	**Booneville**	20.51	7	P	P	07 13 16.3	+0.1
	baz=188						
Y51A	**Rockmart**	20.54	16	P	P	07 13 16.8	+0.2
	baz=198,SNR=8.1						
GOGA	**Godfrey**	20.56	20	*e*P	P	07 13 17.3	+0.5
	comp=Z,12nm,1.1s						
GOGA	**Godfrey**	20.56	20	P	P	07 13 16.7	0.0
	baz=203						
UALR	**University of**	20.56	358	*e*P	P	07 13 17.6	+0.7
	comp=Z,11nm,0.7s						
X47A	**Russelville**	20.57	9	P	P	07 13 17.2	+0.3
	baz=190						
Z54A	**Sparta**	20.61	21	P	P	07 13 17.3	0.0
	baz=204						
X48A	**Hartselle**	20.64	11	*e*P	P	07 13 17.4	-0.2
	comp=Z,9.0nm,0.7s						
X48A	**Hartselle**	20.64	11	P	P	07 13 17.7	0.0
	baz=192						
Y52A	**Lilburn**	20.79	18	*e*P	P	07 13 19.2	-0.1
	comp=Z,12nm,0.6s						
Y52A	**Lilburn**	20.79	18	P	P	07 13 20.0	+0.7
	baz=201,SNR=6.9						
BANI	**BANI**	20.80	75	*e*P	P	07 13 18.1	-1.5
X49A	**Woodville**	20.84	12	P	P	07 13 20.0	+0.2
	baz=194						
Y53A	**Monroe**	20.93	19	P	P	07 13 21.2	+0.4
	baz=202						
X50B	**Fort Payne**	20.93	14	P	P	07 13 21.0	+0.1
	baz=196						
W41B	**Gary Mavity, V**	20.96	358	*e*P	P	07 13 20.8	-0.3
	comp=Z,4.6nm,0.7s						
W41B	**Gary Mavity, V**	20.96	358	P	Pn	07 13 22.5	-1.7
	baz=178						
W39A	**Magazine**	21.07	355	*e*P	P	07 13 21.8	-0.4
	comp=Z,5.5nm,0.9s						
W39A	**Magazine**	21.07	355	P	P	07 13 23.5	+1.3
	baz=174						
WHAR	**Wooly Hollow**	21.07	358	*e*P	P	07 13 22.4	+0.1
	comp=Z,6.6nm,0.8s						
SDV	**Santo Domingo**	21.16	102	*e*P	P	07 13 21.3	-2.4
	comp=Z,4.9nm,0.9s						
SDV	**Santo Domingo**	21.16	102	P	P	07 13 21.6	-2.0
	comp=Z,2.3nm,0.4s,baz=311,slow=7.6,SNR=15						
X51A	**Calhoun**	21.23	15	P	P	07 13 23.7	-0.2
	baz=198						
Y54A	**Tignall**	21.23	21	P	P	07 13 23.7	-0.3
	baz=204,SNR=7.6						
W48A	**Pulaski**	21.33	11	P	P	07 13 24.9	-0.2
	baz=192						
W47A	**Westpoint**	21.33	9	P	P	07 13 24.5	-0.6
	baz=190						
W49A	**Belvidere**	21.43	12	P	P	07 13 26.6	+0.5
	baz=194						
WMOK	**Wichita Mounta**	21.52	344	P	P	07 13 27.3	+0.1
	baz=160						
X52A	**Dahlonega**	21.53	17	P	P	07 13 26.7	-0.6
	baz=200						
NHSC	**New Hope**	21.55	27	P	P	07 13 26.6	-0.8
	baz=211						
MNTX	**Cornudas Mount**	21.58	326	*e*P	P	07 13 29.5	+1.7
	comp=Z,7.7nm,0.8s						

MNTX	Cornudas Mount	21.58	326	P	P	07 13 28.4	+0.6
	baz=141,SNR=9.4						
Y55A	Saluda	21.59	22	P	P	07 13 26.9	-1.0
	baz=206						
SWET	Sewanee	21.60	13	eP	P	07 13 28.4	+0.4
	comp=Z,8.6nm,0.8s						
X53A	Estanollee	21.61	19	P	P	07 13 27.2	-0.9
	baz=202						
V44A	Blytheville	21.65	4	P	P	07 13 27.6	-0.9
	baz=184						
HODGE	Hodges	21.71	21	eP	P	07 13 26.9	-2.2
	comp=Z,4.9nm,0.9s						
W50A	Signal Mountai	21.72	14	eP	P	07 13 29.2	-0.1
	comp=Z,10nm,1.1s						
V46A	Holladay	21.80	8	P	P	07 13 28.7	-1.3
	baz=189						
V47A	Nunnelly	21.91	9	P	P	07 13 29.8	-1.4
	baz=190						
V48A	Smith Brothers	21.93	10	P	P	07 13 30.2	-1.3
	baz=192						
X54A	Belton	21.96	21	P	P	07 13 30.1	-1.7
	baz=204						
W52A	Murphy	21.98	17	P	P	07 13 30.5	-1.5
	baz=200						
TUL1	Leonard	22.01	351	eP	P	07 13 33.9	+1.5
	comp=Z,6.0nm,0.8s						
JSC	Jenkinsville	22.12	23	eP	P	07 13 31.9	-1.7
	comp=Z,6.8nm,0.7s						
U42A	Revenden	22.12	1	P	P	07 13 31.8	-1.8
	baz=181,SNR=7.5						
V49A	McMinnville	22.13	12	P	P	07 13 32.7	-1.0
	baz=194						
CPCT	Cooper Cave	22.15	15	eP	P	07 13 32.9	-1.0
	comp=Z,6.6nm,0.9s						
X55A	Gracelyn & Ava	22.15	22	P	P	07 13 32.0	-1.9
	baz=206						
HHAR	Hobbs	22.16	355	eP	P	07 13 32.8	-1.1
	comp=Z,3.3nm,0.6s						
U40A	Yellville	22.16	357	P	P	07 13 32.2	-1.7
	baz=176						
WVT	Waverly	22.16	8	eP	P	07 13 33.7	-0.2
	comp=Z,3.4nm,0.7s						
WVT	Waverly	22.16	8	P	P	07 13 32.3	-1.6
	baz=189						
U43A	Rector	22.17	2	P	P	07 13 32.5	-1.5
	baz=183						
MSTX	Muleshoe	22.20	335	eP	P	07 13 35.0	+0.4
	comp=Z,13nm,0.9s						
MSTX	Muleshoe	22.20	335	P	P	07 13 33.8	-0.8
	baz=150						
U45A	Rockin P Farm,	22.26	6	P	P	07 13 33.3	-1.8
	baz=187						
U46A	Springville	22.34	7	P	P	07 13 33.9	-1.9
	baz=188						
TKL	Tuckaleechee C	22.55	17	P	P	07 13 37.1	-1.1
	comp=Z,7.8nm,0.8s,baz=180,slow=11,SNR=15						
PBMO	Poplar Bluff	22.57	2	eP	P	07 13 36.8	-1.6
	comp=Z,18nm,0.6s						
AMTX	Amarillo	22.58	338	P	P	07 13 37.7	-1.0
	baz=154						
V52A	Sevierville	22.77	17	eP	P	07 13 40.2	-0.2
	comp=Z,6.0nm,0.8s						
V52A	Sevierville	22.77	17	P	P	07 13 38.7	-1.8
	baz=200						
T42A	Van Buren	22.80	1	eP	P	07 13 38.9	-1.9
	comp=Z,10.0nm,1.0s						
T42A	Van Buren	22.80	1	P	P	07 13 38.7	-2.1
	baz=181,SNR=7.2						
T41A	Mountain View	22.82	360	P	P	07 13 39.1	-1.9
	baz=179,SNR=11						
V53A	Saluda	22.84	19	eP	P	07 13 41.0	-0.3
	comp=Z,2.3nm,0.6s						
V53A	Saluda	22.84	19	P	P	07 13 39.6	-1.7
	baz=202						
KMSC	Kings Mountain	22.86	22	P	P	07 13 38.6	-2.8
	baz=206						
T43A	Greenville	22.88	3	P	P	07 13 39.3	-2.3
	baz=183						
T44A	Benton	22.93	4	P	P	07 13 39.7	-2.3
	baz=185						
U50A	Jamestown	22.99	14	P	P	07 13 40.1	-2.6
	baz=197						
T46A	Princeton	23.05	8	P	P	07 13 42.4	-0.8
	baz=189						
T47A	Sharon Grove	23.11	9	eP	P	07 13 42.4	-1.5
	comp=Z,5.3nm,0.8s						
T47A	Sharon Grove	23.11	9	P	P	07 13 42.9	-0.9
	baz=191						
U51A	La Follette	23.16	16	P	P	07 13 42.9	-1.5
	baz=199						
U52A	Thorn Hill	23.35	17	P	P	07 13 43.7	-2.6
	baz=200						
S41A	Jillco Farms,	23.36	360	P	P	07 13 44.0	-2.2
	baz=179,SNR=8.2						
S43A	Fulton Ridge,	23.38	3	P	P	07 13 44.4	-2.1
	baz=183						
TZTN	Tazewell	23.44	16	eP	P	07 13 46.5	-0.6
	comp=Z,8.2nm,1.1s						
TZTN	Tazewell	23.44	16	P	P	07 13 45.1	-2.0
	baz=200						
X59A	McDuffie Farm,	23.48	28	P	P	07 13 44.5	-2.9
	baz=213						
T49A	Edmonton	23.50	12	eP	P	07 13 45.3	-2.3
	comp=Z,4.4nm,0.8s						
T49A	Edmonton	23.50	12	P	P	07 13 46.0	-1.6
	baz=195						
121A	Cookes Peak, D	23.54	324	P	P	07 13 47.3	-1.0
	baz=137						
S42A	Caledonia	23.55	2	P	P	07 13 45.7	-2.3
	baz=182						
S44A	Carbondale	23.55	5	P	P	07 13 46.0	-2.0
	baz=185						
U53A	Fall Branch	23.56	18	P	P	07 13 46.6	-1.6
	baz=202						
T50A	Nancy	23.57	14	P	P	07 13 46.1	-2.1
	baz=196						
SIUC	Southern Illin	23.58	5	eP	P	07 13 46.4	-1.8
	comp=Z,14nm,0.6s						
S46A	Don Dixon Farm	23.70	8	P	P	07 13 47.8	-1.7
	baz=189						
T51A	Gray	23.73	15	P	P	07 13 47.9	-1.8
	baz=198						
CCM	Cathedral Cave	23.83	1	eP	P	07 13 49.0	-1.5
	comp=Z,12nm,0.9s						
CCM	Cathedral Cave	23.83	1	P	P	07 13 48.5	-2.0
	baz=181						
R42A	Luebbering	24.06	2	P	P	07 13 50.7	-1.9
	baz=182,SNR=6.3						
R41A	Rosebud	24.07	0	P	P	07 13 50.8	-1.9
	baz=180,SNR=20						
R43A	Red Bud	24.09	3	P	P	07 13 51.3	-1.6
	baz=184						
R44A	Waltonville	24.12	5	P	P	07 13 52.0	-1.2
	baz=186						
T52A	Hallie	24.13	17	P	P	07 13 51.7	-1.6
	baz=200						
T53A	Wise	24.14	18	P	P	07 13 51.6	-1.9
	baz=202						
BNM	Barren Site	24.14	328	eP	P	07 13 55.1	+1.3
S49A	Springfield	24.21	12	P	P	07 13 52.3	-1.7
	baz=195						
R45A	Skylar, Fairfi	24.24	6	P	P	07 13 52.8	-1.5
	baz=188						
S50A	Richmond	24.30	14	P	P	07 13 53.8	-1.1
	baz=197						
CNNC	Cliffs of the	24.36	28	P	P	07 13 53.6	-1.8
	baz=214						
WCI	Wyandotte Cave	24.45	10	eP	P	07 13 55.6	-0.6
	comp=Z,6.4nm,0.8s						
WCI	Wyandotte Cave	24.45	10	P	P	07 13 54.3	-1.9
	baz=192						
R47A	Wooly Knot Far	24.48	10	P	P	07 13 54.7	-1.7
	baz=192						
T54A	Tazewell	24.51	20	P	P	07 13 54.9	-2.0
	baz=204						
S52A	Salyersville	24.64	16	P	P	07 13 55.7	-2.2
	baz=200						
ANMO	Albuquerque	24.69	330	P	P	07 13 59.5	+0.8
	baz=143						
ANMO	Albuquerque	24.69	330	P	P	07 13 59.5	+0.8
	comp=Z,1.4nm,0.7s,baz=146,slow=12,SNR=11						
OLIL	Olney	24.69	7	eP	P	07 13 58.2	-0.2
	comp=Z,14nm,0.8s						
Q42A	Golden Eagle	24.70	2	P	P	07 13 57.0	-1.5
	baz=182						
Q41A	Truxton	24.72	1	P	P	07 13 57.6	-1.1
	baz=181,SNR=18						
Q43A	New Douglas	24.76	3	P	P	07 13 58.6	-0.5
	baz=184						
Q44A	Meyer Farm, Va	24.77	5	eP	P	07 13 58.2	-0.9
	comp=Z,4.6nm,0.9s						
Q44A	Meyer Farm, Va	24.77	5	P	P	07 13 58.2	-0.9
	baz=186						
Q45A	Warren Harvey,	24.85	6	P	P	07 13 59.0	-0.8
	baz=188						
R50A	Paris	24.89	14	P	P	07 13 59.2	-1.0
	baz=197						
S53A	Williamson	24.91	18	P	P	07 13 59.2	-1.2
	baz=202						
TUC	Tucson	25.20	319	eP	P	07 14 04.7	+1.5
	comp=Z,4.7nm,0.8s						
TUC	Tucson	25.20	319	P	P	07 14 04.8	+1.6
	baz=131						
Q48A	North Vernon	25.23	11	P	P	07 14 02.5	-0.8
	baz=193						
KSU1	Kansas State U	25.26	351	P	P	07 14 03.3	-0.3
	baz=168						
P44A	Sand Creek, Wi	25.37	5	P	P	07 14 03.7	-0.9
	baz=186						
P42A	Winchester	25.38	2	eP	P	07 14 02.7	-1.9
	comp=Z,9.9nm,0.9s						
P42A	Winchester	25.38	2	P	P	07 14 03.5	-1.1
	baz=183,SNR=5.3						
P41A	Barry, Barry	25.45	1	P	P	07 14 03.6	-1.7
	baz=181						
P45A	Graceland, Par	25.52	7	eP	P	07 14 04.5	-1.4
	comp=Z,10nm,0.8s						
P45A	Graceland, Par	25.52	7	P	P	07 14 04.6	-1.3
	baz=188						
T25A	Trinidad	25.61	336	P	P	07 14 05.8	-1.3
	baz=150						
P46A	Rosedale	25.67	8	P	P	07 14 06.2	-1.1
	baz=190						
R54A	Victor	25.72	19	P	P	07 14 05.8	-2.0
	baz=204						
P48A	Milroy	25.80	11	P	P	07 14 06.7	-1.7
	baz=194						
Q51A	Peebles	25.84	15	P	P	07 14 06.9	-1.9
	baz=198						
O41A	Passleys Farm,	25.89	1	P	P	07 14 07.9	-1.3
	baz=181						
O42A	Bath	25.99	3	P	P	07 14 09.1	-1.1
	baz=183						
Q52A	Bidwell	26.06	17	P	P	07 14 08.9	-1.9
	baz=201						
O45A	Potomac	26.23	7	P	P	07 14 10.6	-1.7
	baz=188						
214A	Organ Pipe Nat	26.30	316	P	P	07 14 14.0	+0.8
	baz=127						
SFIN	Lafayette	26.44	8	P	P	07 14 13.4	-0.8
	baz=190						
Q54A	Coxs Mills	26.50	19	P	P	07 14 13.3	-1.5
	baz=204						
N44A	Piper City	26.73	6	P	P	07 14 15.3	-1.6
	baz=187						
X16A	Lo Mia Camp, P	27.03	322	eP	P	07 14 22.3	+2.5
	comp=Z,3.6nm,0.8s						
O51A	Pataskala	27.08	15	P	P	07 14 18.5	-1.5
	baz=199						
N47A	Urbana	27.14	10	P	P	07 14 19.1	-1.4
	baz=192						
M41A	Milan	27.15	2	P	P	07 14 19.3	-1.3
	baz=182						
M40A	Post Highland	27.17	0	P	P	07 14 19.8	-0.9
	baz=180						
P54A	Burton	27.18	19	P	P	07 14 19.6	-1.4
	baz=204						
N48A	Decatur	27.23	11	P	P	07 14 20.3	-1.0
	baz=194						
O52A	Adamsville	27.25	16	P	P	07 14 20.2	-1.4
	baz=201						
WUAZ	Wupatki	27.75	324	P	P	07 14 28.1	+1.8
	baz=135						
L40A	Anamosa	27.83	1	P	P	07 14 25.4	-1.2
	baz=180						
K39A	Oelwein	28.47	360	P	P	07 14 31.3	-1.1
	baz=179						
PDMCI	Parker Dam,Lak	28.63	318	P	P	07 14 35.6	+1.7
	baz=129						
JFWS	Jewell Farm	28.70	2	P	P	07 14 34.7	+0.2
	baz=182						
U15A	North Rim	28.92	324	eP	P	07 14 36.8	-0.1
	comp=Z,1.9nm,0.8s						
J39A	Decorah	29.10	360	P	P	07 14 38.5	+0.5
	baz=180						
BC3	Big Chuckawall	29.10	316	P	P	07 14 40.3	+2.0
	baz=126						
J42A	Columbus	29.16	4	P	P	07 14 39.4	+0.9
	baz=185						
IRM	Iron Mountain	29.20	317	P	P	07 14 41.3	+2.3
	baz=127						
MTPU	Mount Pierson	30.02	326	eP	P	07 14 46.8	+0.2
	comp=Z,3.0nm,0.8s						
Q16A	Castle Valley	30.14	329	eP	P	07 14 47.9	+0.4
	comp=Z,2.5nm,0.8s						
SZCU	Shurtz Canyon	30.20	325	eP	P	07 14 50.5	+2.5
	comp=Z,3.0nm,0.8s						
TUQ	Turquoise Moun	30.48	318	P	P	07 14 53.0	+2.5
	baz=128						
GSC	Goldstone, Bar	30.98	317	P	P	07 14 56.3	+1.5
	baz=126						
DRWO	Darlington Wes	31.61	18	P	P	07 14 60.0	-0.1
	baz=204						
TPNV	Topopah Spring	31.63	320	P	P	07 15 02.4	+1.8
	baz=129						
LRMC	Laurel Mtn Rad	31.66	317	P	P	07 15 02.6	+1.8
	baz=125						
MPMC	Manual Prospec	31.87	318	P	P	07 15 04.4	+1.6
	baz=126,SNR=6.9						
R11A	Troy Canyon, C	32.15	323	eP	P	07 15 06.4	+1.3
	comp=Z,2.1nm,1.0s						
R11A	Troy Canyon, C	32.15	323	P	P	07 15 07.0	+1.8
	baz=132						
BW06	Boulder Array	32.47	335	P	P	07 15 09.6	+1.6
	baz=146						
PDAR	Pinedale Array	32.47	335	P	P	07 15 09.2	+1.1
	comp=Z,0.6nm,0.8s,baz=186,slow=4.5,SNR=4.2						
PDAR				PcP	PcP	07 17 53.1	-0.8
	comp=Z,0.5nm,0.6s,baz=146,slow=4.5,SNR=6.1						
BGU	Big Grassy Mou	32.59	329	eP	P	07 15 10.1	+1.1
	comp=Z,2.2nm,0.7s						
VES	Vestal, Richgr	32.80	316	P	P	07 15 12.9	+2.2
	baz=124						
NCB	Newcomb	33.23	23	eP	P	07 15 13.1	-1.3
	comp=Z,5.7nm,0.9s						
REDW	Red Top Meadow	33.50	334	eP	P	07 15 17.5	+0.5
	comp=Z,4.1nm,1.0s						
SNOW	Snow King Moun	33.54	334	eP	P	07 15 18.2	+0.8
	comp=Z,3.3nm,0.6s						
ELK	Elko	33.61	327	eP	P	07 15 18.9	+1.0
	comp=Z,1.8nm,0.7s						
LONY	Lake Ozonia	33.65	22	eP	P	07 15 16.4	-1.6
	comp=Z,7.3nm,1.0s						
EYMN	Ely	33.71	0	eP	P	07 15 16.7	-1.7
	comp=Z,2.2nm,1.0s						
NVAR	Mina Array Bea	33.83	321	P	P	07 15 22.0	+2.1
	comp=Z,7.9nm,0.8s,baz=135,slow=9.1,SNR=53						
NVAR				pP	pP	07 15 39.9	+4.8
	comp=Z,4.3nm,0.7s,baz=137,slow=7.9,SNR=8.6						
NVAR				PcP	PcP	07 17 58.2	+0.5
	comp=Z,2.4nm,0.6s,baz=133,slow=3.3,SNR=15						
KVN	Kaiserville	34.09	322	eP	P	07 15 22.0	-0.1
	comp=Z,4.1nm,0.9s						
PTGA	Pitinga	34.61	113	eP	P	07 15 25.3	-1.3
	comp=Z,7.4nm,0.8s						
HLID	Hailey	35.26	331	eP	P	07 15 34.1	+2.0
	comp=Z,3.2nm,1.0s						
HLID	Hailey	35.26	331	P	P	07 15 33.6	+1.5
	baz=139						
MCMT	McKenzie Canyo	35.53	334	eP	P	07 15 36.0	+1.5
BEKR	Beckworth	35.97	321	eP	P	07 15 39.4	+1.1
	comp=Z,3.4nm,0.8s						
ULM	Lac du Bonnet	36.19	355	P	P	07 15 37.6	-2.1
	comp=Z,1.5nm,0.7s,baz=137,slow=3.8,SNR=3.8						
PKME	Peaks-Kenny Pk	36.32	27	P	P	07 15 40.7	-0.2
	baz=218						
J08A	Circle Bar Ran	37.15	327	eP	P	07 15 50.0	+1.8
	comp=Z,8.3nm,0.6s						
M04C	Macdoel	38.03	322	P	P	07 15 57.2	+1.6
	baz=127						
LPAZ	La Paz	38.08	142	P	P	07 15 56.6	-0.2
	comp=Z,0.7nm,0.6s,baz=235,slow=7.1,SNR=3.9						
F10A	Beach Ranch, E	38.39	331	eP	P	07 15 59.6	+1.0
	comp=Z,12nm,0.9s						
L04D	Klamath Falls	38.57	322	P	P	07 16 01.5	+1.3
	baz=127						
MNMC	Minye Minye	39.51	146	eP	P	07 16 10.9	+2.4
	comp=Z,2.9nm,0.8s						
H04A	Detroit Lake	40.04	326	eP	P	07 16 13.6	+1.3
	comp=Z,7.6nm,0.7s						
NEW	Newport	40.06	333	P	P	07 16 13.7	+1.3
	baz=139						
C09A	Chrisman Ranch	40.23	332	eP	P	07 16 14.4	+0.7
	comp=Z,7.6nm,0.6s						
F05D	White Salmon	40.43	328	P	P	07 16 17.0	+1.5
	baz=132						
LTY	Liberty	40.97	330	eP	P	07 16 20.8	+0.8
	comp=Z,2.2nm,0.9s						
LON	Longmire	41.19	328	eP	P	07 16 22.7	+0.9
	comp=Z,4.7nm,0.8s						
SIV	San Ignacio	42.48	134	P	P	07 16 32.6	-0.1
	comp=Z,3.7nm,0.6s,baz=310,slow=8.3,SNR=35						
SIV				pP	pP	07 16 50.0	+1.8
	comp=Z,11nm,0.9s,baz=321,slow=9.0,SNR=18						
SIV				PcP	PcP	07 18 24.5	-0.2
	comp=Z,1.8nm,0.9s,baz=308,slow=3.0,SNR=5.1						
FCC	Fort Churchill	44.59	358	eP	P	07 16 46.8	-2.1
	comp=Z,5.8nm,1.1s						
SCHQ	Schefferville	44.95	20	P	P	07 16 49.5	-2.5
	comp=Z,6.0nm,0.7s,baz=225,slow=7.2,SNR=15						
YKA	Yellowknife Ar	50.99	346	P	P	07 17 37.0	-1.4
	comp=Z,1.0nm,0.6s,baz=150,slow=7.6,SNR=22						
YKA				pP	pP	07 17 58.1	+3.7
	comp=Z,0.8nm,0.7s,baz=149,slow=7.5,SNR=4.1						
YKA				PcP	PcP	07 18 52.8	-1.0
	comp=Z,1.4nm,0.7s,baz=152,slow=3.7,SNR=20						
BDFB	Brasilia	52.24	123	P	P	07 17 47.3	-1.3
	comp=Z,1.4nm,0.5s,baz=289,slow=9.7,SNR=4.0						
DAWY	Dawson	59.71	338	eP	P	07 18 40.4	-0.8
	comp=Z,0.3nm,0.4s						
INK	Inuvik	60.43	343	eP	P	07 18 44.1	-1.8
	comp=Z,1.6nm,0.8s						
RES	Resolute Bay	60.57	359	eP	P	07 18 44.3	-2.6
	comp=Z,2.1nm,0.6s						
EGAK	Eagle	60.74	338	eP	P	07 18 48.0	-0.1
	comp=Z,1.2nm,0.9s						
HDA	Harding Lake	62.74	336	eP	P	07 19 01.0	-0.7
	comp=Z,4.1nm,1.0s						
HDA	Harding Lake	62.74	336	P	P	07 19 01.5	-0.1
	baz=116						
KDAK	Kodiak Island	62.82	328	eP	P	07 19 02.8	+0.5
	comp=Z,4.7nm,0.9s						
ILAR	Eielson Array	62.88	337	P	P	07 19 01.8	-0.7
	comp=Z,1.6nm,0.8s,baz=110,slow=5.7,SNR=27						
OHAK	Old Harbor	63.02	327	eP	P	07 19 03.9	+0.3
	comp=Z,1.4nm,0.6s						
RND	Reindeer	63.08	335	eP	P	07 19 03.6	-0.4
	comp=Z,2.6nm,1.0s						
CCB	Clear Creek Bu	63.18	336	eP	P	07 19 02.2	-2.3
	comp=Z,1.7nm,0.8s						
WRH	Wood River Hil	63.22	336	eP	P	07 19 04.0	-0.8
	comp=Z,3.3nm,1.1s						
MDM	Murphy Dome	63.48	337	eP	P	07 19 05.8	-0.7
	comp=Z,1.8nm,0.7s						
TRF	Thorofare Moun	63.69	335	eP	P	07 19 07.8	-0.4
	comp=Z,5.7nm,0.8s						
PPLA	Purkeypile	64.29	334	eP	P	07 19 10.1	-2.0
	comp=Z,2.7nm,0.8s						
CAST	Castle Rocks	64.43	334	eP	P	07 19 11.7	-1.1
	comp=Z,3.6nm,1.0s						
MLY	Manley	64.48	336	eP	P	07 19 12.4	-0.7
	comp=Z,6.5nm,0.7s						
SVW2	Sparrevohn	65.25	331	eP	P	07 19 17.4	-0.7
	comp=Z,3.4nm,0.6s						
TOLK	Toolik Lake Re	65.53	340	eP	P	07 19 19.3	-0.5
	comp=Z,1.1nm,0.6s						
TOLK	Toolik Lake Re	65.53	340	P	P	07 19 19.4	-0.5
	baz=115						
ARCES	ARCESS Array B	85.88	18	P	P	07 21 13.8	-2.1
	comp=Z,2.0nm,0.7s,baz=350,slow=4.9,SNR=5.8						
WRA	Warramunga Arr	135.83	256	PKP	PKPdf	07 27 58.0	+0.1
	comp=Z,0.4nm,0.7s,baz=89,slow=2.7,SNR=4.8						
ASAR	Alice Springs	136.10	251	PKP	PKPdf	07 27 58.2	-0.1
	comp=Z,0.3nm,0.5s,baz=82,slow=2.8,SNR=5.8						
CMAR	Chiang Mai Arr	146.00	342	PKPbc	PKPdf	07 28 16.6	+0.5
	comp=Z,12nm,0.7s,baz=333,slow=3.4,SNR=45						

ISCJB ***25*** *07:10:38.5±1.1, 11°.08S±0°.08×166°.1E±0°.1, h61^{km}, mb3.9/4, Error ellipse: s-maj=16.6km s-min=8.9km az=145.0*

IDC ***25*** *07:10:38.8±1.4, 11°.02S×166°.11E, h51^{km}±9^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.5/38, mbtmp4.1/6, MS3.1/1, Ms1 3.1/1, ms1mx2.7/46, Error ellipse: s-maj=38.4km s-min=24.7km az=132.0*

ISC 25 07:10:39.3±1.0, **11°.00S**±0°.10×**166°.1E**±0°.1, **h61**^{km}, **n11,** σ**1**^{s}.**47**/13, **mb4.0**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.28	284	P	Pn	07 12 07.9	-1.5
	28nm,0.3s,baz=340,slow=4.7,SNR=5.2						
HNR				S	Sn	07 13 21.6	+1.9
	15nm,0.3s,baz=192,slow=9.3,SNR=2.0						
HNR				LR	LR	07 14 29.2	
	comp=Z,189nm,20.9s,baz=86,slow=37						
DZM	Mont Dzumac	11.01	178	P	Pn	07 13 13.1	-1.1
	0.3nm,0.3s,baz=311,slow=20,SNR=3.1						
DZM				S	Sn	07 15 17.4	+1.6
	0.3nm,0.3s,baz=198,slow=19,SNR=2.1						
H11S2	WAKE ISLAND Hy	29.31	1	T	T	07 47 02.2	
	baz=181,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	29.32	1	T	T	07 47 02.5	
	baz=181,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	29.33	1	T	T	07 47 03.5	
	baz=181,slow=76,SNR=23						
WRA	Warramunga Arr	31.85	250	P	P	07 16 59.0	+0.3
	1.3nm,0.7s,baz=82,slow=8.8,SNR=8.0						
WRA				pP	pP	07 17 12.6	-0.4
	1.8nm,0.8s,baz=82,slow=9.0,SNR=8.7						
ASAR	Alice Springs	33.14	243	P	P	07 17 10.8	+0.7
	0.5nm,0.7s,baz=73,slow=10,SNR=4.6						
ASAR				pP	pP	07 17 23.7	-0.4
	1.4nm,0.8s,baz=70,slow=10,SNR=7.6						
ILAR	Eielson Array	83.36	18	P	P	07 23 01.2	+1.8
	0.8nm,0.6s,baz=240,slow=4.9,SNR=23						
MKAR	Makanchi Array	93.75	317	P	P	07 23 50.4	+0.7
	0.6nm,0.7s,baz=101,slow=6.3,SNR=4.4						
MKAR				pP	pP	07 24 04.4	-2.3
	0.2nm,0.3s,baz=101,slow=7.6,SNR=2.9						
ARCES	ARCESS Array B	116.39	346	PKP	PKPdf	07 29 16.1	+0.5
	2.3nm,0.8s,baz=79,slow=1.9,SNR=8.0						
FINES	FINESS Array B	121.87	339	PKP	PKPdf	07 29 24.9	-1.4
	1.8nm,1.0s,baz=21,slow=4.8,SNR=3.2						

ISCJB ***25*** *07:17:08.9±0.4, 46°.97N±0°.03×147°.18E±0°.07, h346^{km}, mb3.5/12, Error ellipse: s-maj=6.7km s-min=4.2km az=4.9*

SKHL ***25*** *07:17:08.3±0.8, 47°.04N×147°.38E, h344^{km}±9^{km}, mb4.5/4, msh4.5/4*

MOS ***25*** *07:17:09.1±0.8, 47°.05N×147°.23E, h344^{km}, mb3.8/4, Error ellipse: s-maj=15.8km s-min=9.5km az=77.3*

IDC ***25*** *07:17:11.4±1.4, 47°.11N×147°.14E, h348^{km}±15^{km}, mb3.3/12, mb1 3.4/21, mb1mx3.2/46, mbtmp4.0/21, Error ellipse: s-maj=16.0km s-min=10.1km az=150.0*

ISC 25 07:17:09.7±0.5, **46°.93N**±0°.05×**147°.21E**±0°.06, **h346**^{km}, **n51,** σ**1**^{s}.**94**/67, **mb3.6**/12, **1C-3D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.76	165	iP	Pn	07 17 58.0	-1.0
KUR				AMB	AMB	07 17 58.9	
	50nm,0.4s						
KUR				AMB	AMB	07 18 01.3	
	500nm,4.0s						
KUR				iS	S	07 18 37.4	-1.1
KUR				A	A	07 18 38.8	
	160nm,1.0s						
KUR				A	A	07 18 38.8	
	140nm,1.0s						
KUR				A	A	07 18 46.5	
	1μm,4.0s						
KUR				A	A	07 18 46.5	
	800nm,4.0s						
KUR	Kuril'sk	1.76	165	ePN	Pn	07 17 58.7	-0.3
KUR				eS	S	07 18 37.4	-1.1
KUR				pmax	pmax		
	comp=Z,39nm,0.4s						
KUR				smax	smax		
	comp=N,66nm,0.6s						
KUR				smax	smax		
	comp=E,52nm,0.6s						

LAGR	Lagunnoye	3.04	200	*i* S	S	07 18 57.0	0.0
YUK	Yuzh-Kuril'sk	3.05	199	*i* P	Pn	07 18 09.2	0.0
YUK				AMB	AMB	07 18 10.0	
	comp=E,40nm,0.2s						
YUK				AMB	AMB	07 18 10.0	
	comp=E,100nm,0.2s						
YUK				AMB	AMB	07 18 10.0	
	comp=E,30nm,0.2s						
YUK				AMB	AMB	07 18 10.7	
	comp=E,600nm,2.0s						
YUK				*i* S	S	07 18 57.0	0.0
YUK				A	A	07 18 59.8	
	comp=E,800nm,2.0s						
YUK				A	A	07 18 59.8	
	comp=E,2μm,2.0s						
YUK				A	A	07 19 00.2	
	comp=E,310nm,0.4s						
YUK				A	A	07 19 00.2	
	comp=E,290nm,0.4s						
YUK	Yuzh-Kuril'sk	3.05	199	⇓*i*PN	Pn	07 18 09.1	-0.1
YUK				*i* S	S	07 18 55.0	-2.0
YUK				pmax	pmax		
	comp=N,37nm,0.2s						
YUK				pmax	pmax		
	comp=Z,259nm,0.2s						
YUK				pmax	pmax		
	comp=E,110nm,0.3s						
YUK				smax	smax		
	comp=N,150nm,0.3s						
YUK				smax	smax		
	comp=E,247nm,0.3s						
YSS	Yuzh-Sakhalins	3.05	272	*e*P	Pn	07 18 09.6	+0.5
YSS				AMB	AMB	07 18 10.1	
	comp=E,80nm,1.0s						
YSS				AMB	AMB	07 18 13.1	
	comp=E,200nm,5.0s						
YSS				*e*S	S	07 18 56.0	-1.0
YSS				A	A	07 18 58.0	
	comp=E,400nm,5.0s						
YSS				A	A	07 18 58.0	
	comp=E,200nm,5.0s						
YSS				A	A	07 18 59.0	
	comp=E,50nm,1.0s						
YSS	Yuzh-Sakhalins	3.05	272	⇑*i*PN	Pn	07 18 09.7	+0.6
YSS				*e*S	S	07 18 56.0	-1.0
YSS				pmax	pmax		
	comp=Z,80nm,1.0s						
YSS				smax	smax		
	comp=E,50nm,1.4s						
GRPR	Tuman	3.11	200	*e*P	Pn	07 18 09.9	+0.2
GRPR				AMB	AMB	07 18 10.8	
	comp=E,20nm,0.4s						
GRPR				*i* S	S	07 18 57.1	-0.9
GRPR				A	A	07 18 59.8	
	comp=E,150nm,0.5s						
GRPR				A	A	07 18 59.8	
	comp=E,100nm,0.5s						
GRPR	Tuman	3.11	200	⇓*i*PN	Pn	07 18 09.9	+0.2
GRPR				*i* S	S	07 18 57.1	-0.9
GRPR				pmax	pmax		
	comp=N,50nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,182nm,0.4s						
GRPR				pmax	pmax		
	comp=E,50nm,0.3s						
GRPR				smax	smax		
	comp=E,148nm,0.5s						
GRPR				smax	smax		
	comp=N,90nm,0.2s						
GLVR	Golovnino	3.41	201	*i* P	Pn	07 18 12.0	-0.6
GLVR				AMB	AMB	07 18 13.0	
	comp=N,60nm,0.4s						
GLVR				AMB	AMB	07 18 13.0	
	comp=N,140nm,0.4s						
GLVR				AMB	AMB	07 18 13.0	
	comp=N,40nm,0.4s						
GLVR				*i* S	S	07 19 02.0	-1.1
GLVR				A	A	07 19 02.0	
	comp=N,260nm,0.4s						
GLVR				A	A	07 19 02.0	
	comp=N,190nm,0.4s						
GLVR	Golovnino	3.41	201	⇓*i*PN	Pn	07 18 12.8	+0.2
GLVR				*i* S	S	07 19 02.4	-0.7
GLVR				pmax	pmax		
	comp=E,141nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,365nm,0.4s						
GLVR				pmax	pmax		
	comp=N,64nm,0.1s						
GLVR				smax	smax		
	comp=N,277nm,0.3s						
GLVR				smax	smax		
	comp=E,194nm,0.4s						
NEM2	Nemuro 2	3.71	197	P	Pn	07 18 13.1	-2.5
NEM2				*e*S	S	07 19 02.6	-6.0
JTKR	Abashiri--Toko	3.76	219	P	Pn	07 18 16.5	+0.5
JTKR				*e*S	S	07 19 09.1	-0.4
JSE	Soyaes	3.78	240	P	Pn	07 18 17.2	+1.0
JWK2	Keihoku	4.03	248	P	Pn	07 18 20.4	+1.7
UGL	Uglegorsk	4.07	304	*e*P	Pn	07 18 17.3	-1.7
UGL				AMB	AMB	07 18 20.0	
	comp=E,30nm,0.4s						
UGL				*e*S	S	07 19 13.3	-1.6
UGL				A	A	07 19 21.0	
	comp=E,40nm,0.4s						
UGL				A	A	07 19 21.0	
	comp=E,50nm,0.4s						
ASAJ	Asahikawa	4.29	231	P	Pn	07 18 23.0	+1.5
	comp=E,9.6nm,0.3s,baz=64,slow=10,SNR=50						
JAK	Akkeshi	4.32	205	P	Pn	07 18 19.7	-2.1
JAK				*e*S	S	07 19 15.1	-4.8
JAR	Ashorobuto	4.37	215	P	Pn	07 18 22.2	-0.2
TYV	Tymovskoe	4.95	324	*e*P	Pn	07 18 27.0	-1.4
TYV				AMB	AMB	07 18 29.4	
	comp=E,115nm,4.0s						
TYV				*e*S	S	07 19 28.7	-3.3
TYV				A	A	07 19 37.8	
	comp=E,440nm,5.0s						
TYV				A	A	07 19 37.8	
	comp=E,270nm,5.0s						
JCH	Churui	5.11	214	P	Pn	07 18 28.8	-1.5
JCH				*e*S	S	07 19 30.4	-5.2
JNBK	Urakawa-nobuka	5.63	216	P	Pn	07 18 34.1	-2.1
JKB	Kayabe	6.71	223	P	Pn	07 18 47.0	-1.5
JKB				*e*S	S	07 20 02.6	-6.1
JOT	Ohata	7.10	221	P	Pn	07 18 51.3	-1.8
JOT				*e*S	S	07 20 09.5	-7.7
NKL	Nikolayevsk	7.51	328	*e*P	Pn	07 18 56.5	-1.2
NKL	Nikolayevsk	7.51	328	*e*PN	Pn	07 18 56.5	-1.2
JANG	Nango	7.74	214	*e*S	S	07 20 23.1	-8.1
PETK	Petropavlovsk-	9.15	44	P	P	07 19 18.7	-1.0
	comp=E,0.2nm,0.3s,baz=223,slow=7.7,SNR=5.1						
KLR	Kul'dur	10.60	288	P	P	07 19 35.2	-0.6
	comp=E,0.4nm,0.3s,baz=96,slow=12,SNR=6.4						
USRK	Ussuriysk Ar.	11.02	261	P	P	07 19 40.6	+0.2
	comp=E,1.2nm,0.3s,baz=66,slow=11,SNR=21						
EKMR	Ekimchan	11.04	309	*e*P	P	07 19 40.0	-0.6
EKMR				AMB	AMB	07 19 48.6	
	comp=E,6.0nm,0.6s						
MJAR	Matsushiro Arr	12.36	216	P	Pn	07 19 58.2	+2.5
	comp=E,0.2nm,0.3s,baz=11,slow=11,SNR=5.9						
MA2	Magadan	12.84	8	P	Pn	07 19 59.3	-1.9
	comp=E,0.5nm,0.3s,baz=184,slow=18,SNR=5.3						
BMKR	Bomnak	13.95	311	*e*P	Pn	07 20 13.5	-0.7
BMKR				AMB	AMB	07 20 17.2	
	comp=E,30nm,0.5s						
KROS	Kirovskiy	14.83	308	*e*P	P	07 20 21.0	-1.4
KROS				AMB	AMB	07 20 25.2	
	comp=E,30nm,0.9s						
SEY	Seymchan	16.30	8	P	Pn	07 20 38.6	-2.7
	comp=E,1.1nm,0.3s,baz=354,slow=24,SNR=21						
KSRS	Korea Array	17.11	243	P	Pn	07 20 49.9	-0.8
	comp=E,0.3nm,0.3s,baz=46,slow=10,SNR=8.4						
JNU	Nakatsue	18.57	228	P	P	07 21 06.7	+3.9
	comp=E,0.3nm,0.3s,baz=0.9,slow=2.4,SNR=3.6						
SONM	Songino Array	27.43	287	P	P	07 22 25.5	+0.8
	comp=E,0.8nm,0.8s,baz=92,slow=7.9,SNR=5.2						
ILAR	Eielson Array	38.93	39	P	P	07 24 02.9	+0.1
	comp=E,2.0nm,0.7s,baz=269,slow=7.8,SNR=43						
ZALV	Zalesovo Beam	39.18	304	P	P	07 24 06.3	+1.3
	comp=E,0.6nm,0.4s,baz=76,slow=6.1,SNR=2.3						
MKAR	Makanchi Array	43.22	295	P	P	07 24 37.6	0.0
	comp=E,1.3nm,0.5s,baz=70,slow=5.6,SNR=8.0						
YKA	Yellowknife Ar	53.15	35	P	P	07 25 52.7	+0.2
	comp=E,1.1nm,0.5s,baz=303,slow=7.1,SNR=24						
FINES	FINESS Array B	62.07	332	P	P	07 26 54.1	+0.1
	comp=E,1.3nm,0.6s,baz=28,slow=8.6,SNR=7.7						
GEYT	Alibeck	62.98	297	P	P	07 27 01.0	+0.6
	comp=E,3.9nm,0.6s,baz=25,slow=4.9,SNR=6.9						
NVAR	Mina Array Bea	65.88	59	P	P	07 27 21.2	+1.9
	comp=E,1.2nm,0.7s,baz=295,slow=6.5,SNR=12						
WRA	Warramunga Arr	67.56	193	*e*P	P	07 27 31.4	+1.8
WRA	Warramunga Arr	67.56	193	P	P	07 27 31.7	+2.0
	comp=E,0.3nm,0.4s,baz=9.5,slow=6.6,SNR=10.0						
PDAR	Pinedale Array	67.84	51	P	P	07 27 32.8	+1.3
	comp=E,1.0nm,0.4s,baz=354,slow=1.0,SNR=20						
AKASG	Malin Array Be	69.05	323	P	P	07 27 38.1	-0.3
	comp=E,0.5nm,0.3s,baz=38,slow=6.6,SNR=4.0						
TXAR	Lajitas Array	80.86	57	P	P	07 28 47.1	+1.2
	comp=E,1.0nm,0.5s,baz=273,slow=3.1,SNR=4.0						

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*GII **25** 07:18:12.3±0.3, 33°.18N×35°.60E, h15^{km}, MD1.1/2*
*ISCJB **25** 07:18:13.0±0.6, 33°.19N±0°.03×35°.61E±0°.06, h17^{km}±6^{km}, Error ellipse: s-maj=9.0km s-min=4.0km az=31.8*
*GRAL **25** 07:18:13.4±0.3, 33°.16N×35°.62E, h15^{km}±3^{km}, MD2.6*
ISC 25 07:18:12.7±0.9**, 33°.17N**±0°.04×**35°.62E**±0°.05**, h17**^{km}±6^{km}**, n13,** σ0^{s}.**24**/21**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.04	51	Pg	Pg	07 18 15.8	-0.1
KSDI				Sg	Sg	07 18 18.0	0.0
NATI	Neve Ativ	0.13	45	Pg	Pb	07 18 16.9	+0.1
NATI				Sg	Sb	07 18 19.7	+0.3
SHBL	Chebaa	0.21	29	*e*P	Pb	07 18 18.0	-0.1
SHBL				*e*S	Sb	07 18 21.5	-0.3
MMA0B	Mount Meron ar	0.24	231	Pg	Pg	07 18 18.0	-0.3
MMA0B				Sg	Sg	07 18 22.2	+0.1
KSHT	Keshet	0.24	140	Pg	Pb	07 18 18.8	+0.1
RCY	Rachaya	0.37	28	*e*P	Pg	07 18 20.6	+0.1
RCY				*e*S	Sg	07 18 26.0	+0.1
QRWL	Qaraoun	0.38	7	*e*P	Pg	07 18 20.8	+0.1
QRWL				*e*S	Sg	07 18 26.2	+0.1
HNTI	Hanita	0.39	257	Pg	Pg	07 18 20.5	-0.2
HNTI				Sg	Sg	07 18 26.4	+0.3
BLGI	Bet Lehem HaGe	0.57	220	Sg	Sb	07 18 32.2	+0.3
OFRI	`Ofer	0.77	225	Sg	Sb	07 18 38.2	+0.5
HMDT	Nahal Hemdat	0.92	185	Pg	Pb	07 18 30.2	+0.1
HMDT				Sg	Sn	07 18 43.3	-0.2
SLTI	Sal'it	1.05	208	Sg	Sn	07 18 47.0	+0.2
DSI	Dead Sea	1.61	187	Pn	Pn	07 18 39.9	-0.4

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*NNC **25** 07:22:16.9±1.6, 40°.37N×77°.09E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=12.9km s-min=6.4km az=137.0*
*SOME **25** 07:22:17.4, 40°.33N×77°.20E, h20^{km}*
*KRNET **25** 07:22:19.7±0.1, 40°.48N×77°.13E, h17^{km}, mb3.0*
ISC 25 07:22:19.5±1.3**, 40°.49N**±0°.04×**77°.09E**±0°.04**, h15**^{km}±15^{km}**, n55,** σ1^{s}.**73**/81**, 23C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.25	319	⇓*i*P	Pb	07 22 43.7	+0.7
	baz=17						
NRN				⇓*i*S	Sg	07 23 01.8	+1.7
	baz=17						
KSH	Kashi	1.29	222	⇓*i*P	Pg	07 22 45.0	+0.6
	baz=24						
KSH				⇓*i*S	Sg	07 23 03.3	+2.1
	baz=24						
TARG	Taragay, Kyrgy	1.35	23	⇓*i*P	Pb	07 22 45.0	+0.2
	baz=22						
TARG				⇓*i*S	Sg	07 23 03.4	+0.1
	baz=22						
KDJ	Kajisay	1.64	2	⇑*i*P	Pg	07 22 50.7	-0.4
	baz=2.0						
KDJ				⇑*i*S	Sg	07 23 12.9	+0.4
	baz=2.0						
ULHL	Ulahol	1.87	340	P	Pb	07 22 54.6	+1.1
	SNR=54						
ULHL	Ulahol	1.87	340	⇑*i*P	Pb	07 22 54.5	+1.1
	baz=40						
ULHL				⇑*i*S	Sg	07 23 19.9	+0.2
	baz=40						
KZA	Kyzart	2.11	320	P	Pb	07 22 59.3	+1.7
	SNR=24						
KZA	Kyzart	2.11	320	⇑*i*P	Pb	07 22 58.2	+0.6
	baz=19						
KZA				⇑*i*S	Sg	07 23 26.7	-0.6
	baz=19						
BOOM	Boomskoye usch	2.18	337	⇑*i*P	Pb	07 22 58.9	+0.2
	baz=36						
BOOM				⇑*i*S	Sb	07 23 28.0	+2.4
	baz=36						
ARLS	Aral	2.50	304	⇑*i*P	Pb	07 23 03.6	-0.5
	baz=4.0						
ARLS				⇑*i*S	Sb	07 23 35.8	+1.1
	baz=4.0						
IZV	Izvestkoviy	2.57	352	Pg	Pb	07 23 06.9	+1.5
	14nm,0.4s						
IZV				Lg	Lg	07 23 42.6	
	28nm,0.3s						
IZV	Izvestkoviy	2.57	352	*e*P	Pb	07 23 06.9	+1.5
	14nm,0.4s						
IZV				*e*S	Sg	07 23 42.6	+0.5
	28nm,0.3s						
UCH	Uchtor	2.60	313	P	Pb	07 23 08.3	+2.2
	SNR=6.0						
MDOK	Medeo	2.67	359	Pg	Pb	07 23 08.5	+1.3
	4.2nm,0.2s						
MDOK				Lg	Lg	07 23 44.9	
	22nm,0.6s						
MDOK	Medeo	2.67	359	⇓*i*P	Pb	07 23 08.5	+1.3
	4.2nm,0.2s						
MDOK				⇓*i*S	Sg	07 23 44.9	-0.5
	22nm,0.6s						
TKM2	Tokmak 2	2.67	336	P	Pb	07 23 09.3	+2.1
	SNR=14						
TKM2	Tokmak 2	2.67	336	⇓Pg	Pb	07 23 08.0	+0.8
	2.7nm,0.2s						
TKM2				⇑Lg	Lg	07 23 45.7	
	7.6nm,0.6s						
MTBS	Maitube	2.69	350	Pg	Pb	07 23 08.8	+1.5
	7.2nm,0.2s						
MTBS				Lg	Lg	07 23 45.3	
	17nm,0.2s						
MTBS	Maitube	2.69	350	⇑*i*P	Pb	07 23 08.8	+1.5
	7.2nm,0.2s						
MTBS				⇑*i*S	Sg	07 23 45.3	-0.5
	17nm,0.2s						
KST	Kastek	2.69	342	Pg	Pb	07 23 08.8	+1.4
	9.2nm,0.2s						
KST				Lg	Lg	07 23 46.2	
	11nm,0.8s						
KST	Kastek	2.69	342	*e*P	Pb	07 23 08.8	+1.4
	9.2nm,0.5s						
KST				*e*S	Sg	07 23 45.6	-0.3
	11nm,0.6s						
KBK	Karagaybulak	2.70	324	P	Pg	07 23 10.0	-1.2
	SNR=7.0						
KOTS	Kotyrbulak	2.75	0	Pg	Pb	07 23 09.9	+1.5
	7.9nm,0.2s						
KOTS				Lg	Lg	07 23 47.5	
	27nm,0.5s						
KOTS	Kotyrbulak	2.75	0	*e*P	Pb	07 23 09.9	+1.5
	7.9nm,0.2s						
KOTS				*e*S	Sg	07 23 47.5	-0.2
	27nm,0.5s						
SATY	Saty	2.75	21	Pg	Pb	07 23 08.9	+0.4
	9.1nm,0.5s						
SATY				Lg	Lg	07 23 45.9	
	33nm,0.4s						
SATY	Saty	2.75	21	*e*P	Pb	07 23 08.9	+0.4
	9.1nm,0.5s						
SATY				*e*S	Sg	07 23 45.9	-2.1
	33nm,0.4s						
SFK	Sufi-Kurgan	2.78	261	⇑Pg	Pb	07 23 07.2	-1.8
	1.1nm,0.3s						
SFK				⇓Lg	Lg	07 23 43.7	
	8.7nm,0.4s						
SFK	Sufi-Kurgan	2.78	261	Pg	Pb	07 23 07.5	-1.5
	1.5nm,0.1s						
SFK				Lg	Lg	07 23 43.8	
	7.7nm,0.3s						
SFK	Sufi-Kurgan	2.78	261	⇓*i*P	Pb	07 23 07.6	-1.5
	baz=62						
SFK				⇓*i*S	Sb	07 23 43.0	0.0
	baz=62						
AAK	Ala-Archa	2.90	319	P	Pb	07 23 13.4	+2.4
	SNR=6.4						
AAK	Ala-Archa	2.90	319	Pg	Pg	07 23 13.7	-1.4
AAK				⇑Lg	Lg	07 23 52.3	
	8.1nm,0.6s						
AAK	Ala-Archa	2.90	319	⇑*e*P	Pb	07 23 09.7	-1.3
	baz=18						
AAK				⇑*i*S	Sb	07 23 45.4	-0.9
	baz=18						
DGS	Degeres	2.92	341	Pg	Pb	07 23 11.6	+0.2
	8.5nm,0.4s						
DGS				Lg	Lg	07 23 50.8	
	14nm,0.5s						
DGS	Degeres	2.92	341	*e*P	Pb	07 23 11.6	+0.2
	8.5nm,0.4s						
DGS				*e*S	Sg	07 23 50.8	-2.6
	14nm,0.5s						
UZB	Uzynbulak	3.03	28	*e*P	Pb	07 23 14.1	+0.9
	2.2nm,0.5s						
UZB				*e*S	Sg	07 23 54.6	-2.1
	14nm,0.8s						
KURS	Kuram	3.11	15	Pg	Pb	07 23 15.5	+1.1
	15nm,0.4s						
KURS				Lg	Lg	07 23 57.9	
	9.8nm,0.9s						
KURS	Kuram	3.11	15	*e*P	Pb	07 23 16.0	+1.6
	15nm,0.4s						
KURS				*e*S	Sg	07 23 57.9	-1.4
	9.8nm,0.9s						
ARSB	Arslanbob	3.22	286	⇑*e*P	Pb	07 23 13.9	-2.6
	baz=86						
ARSB				⇑*i*S	Sb	07 23 53.5	-2.0
	baz=86						
KTBS	Karatobe	3.24	355	Pg	Pb	07 23 18.9	+2.2
KTBS				Lg	Lg	07 24 02.9	
	13nm,0.3s						
KTBS	Karatobe	3.24	355	*e*P	Pb	07 23 18.8	+2.2
	5.4nm,0.4s						
KTBS				*e*S	Sg	07 24 02.9	-0.6
	13nm,0.5s						
PDGK	Podgornoye	3.36	32	⇑Pg	Pb	07 23 20.7	+1.9
	9.9nm,0.9s						
PDGK				⇑Lg	Lg	07 24 05.0	
	3.4nm,0.6s						
CHKK	Chushkaly	3.37	359	Pg	Pb	07 23 20.5	+1.7
	8.5nm,0.5s						
CHKK				Lg	Lg	07 24 06.3	
	22nm,0.3s						
CHKK	Chushkaly	3.37	359	*e*P	Pb	07 23 20.6	+1.7
	8.5nm,0.5s						
CHKK				*e*S	Sg	07 24 06.3	-1.3
	22nm,0.3s						
USP	Ospenovka	3.38	326	P	Pb	07 23 21.5	+2.3
	SNR=6.1						
KUU	Kurty	3.45	351	Pg	Pb	07 23 21.7	+1.4
	3.2nm,0.5s						
KUU				Lg	Lg	07 24 08.6	
	11nm,0.8s						
KUU	Kurty	3.45	351	*e*P	Pb	07 23 21.7	+1.4
	1.7nm,0.3s						
KUU				*e*S	Sg	07 24 07.9	-2.3
	10nm,0.4s						
ARXS	Arharly	3.76	8	Pg	Pb	07 23 27.5	+1.8
	2.6nm,0.2s						
ARXS				Lg	Lg	07 24 18.1	
	16nm,0.5s						
ARXS	Arharly	3.76	8	*e*P	Pb	07 23 27.5	+1.8
	2.6nm,0.2s						
ARXS				*e*S	Sg	07 24 18.1	-2.3
	16nm,0.5s						
MNAS	Manas	3.98	302	⇓Pg	Pb	07 23 31.3	+1.9
	2.6nm,0.5s						
MNAS				⇓Lg	Lg	07 24 26.0	
	4.8nm,1.0s						
MNAS	Manas	3.98	302	Pg	Pb	07 23 32.1	+2.7
	1.7nm,0.4s						
MNAS				Lg	Lg	07 24 26.2	
	1.5nm,0.4s						
DJR	Jarkent	4.33	27	Pg	Pb	07 23 36.8	+1.4
	1.9nm,0.8s						
DJR				Lg	Lg	07 24 34.5	
	2.7nm,0.6s						
DJR	Jarkent	4.33	27	*e*P	Pb	07 23 37.2	+1.9
	0.8nm,0.6s						
DJR				*e*S	Sg	07 24 34.5	-4.1
	3.2nm,0.4s						
KAPS	Kapalarasan	5.08	18	Pg	Pb	07 23 51.3	+3.3
	2.3nm,0.4s						
KAPS				Lg	Lg	07 24 59.1	
	3.4nm,0.4s						
KAPS	Kapalarasan	5.08	18	*e*P	Pb	07 23 51.3	+3.3
	2.3nm,0.4s						
KAPS				*e*S	Sg	07 24 59.1	-3.3
	3.4nm,0.4s						
KK31	Karatay Array	5.56	300	⇑Pg	Pb	07 24 00.1	+3.8
	0.5nm,0.5s,baz=124,slow=17,SNR=4.6						
KK31				⇑Lg	Lg	07 25 16.1	
	1.1nm,0.7s,baz=127,slow=29,SNR=4.4						

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*NIED **25** 07:23:00, 36°.90N×139°.40E, h8^{km}, Mw5.8 Best double couple: M$_0$5.54000×10^{17} NP1:φ$_s$258.00000°, δ75.00000°, λ-170.00000°. NP2:φ$_s$165.00000°, δ80.00000°, λ-15.00000°.*
*BJI **25** 07:23:52.5, 36°.80N×139°.40E, h5^{km}, mB5.6/62, mb5.3/40, Ms6.2/89, Ms7 6.0/57*
*JMA **25** 07:23:53.5, 36°.87N×139°.41E, h3^{km}±1^{km}, M6.3 Broadband fault plane solution: P waves. NP1: φ$_s$73.00000°, δ90.00000°, λ170.00000°. NP2: φ$_s$163.00000°, δ80.00000°, λ0.00000°. Principal axes: T Plg7.0000°, Azm27.0000°; N Plg80.0000°, Azm253.0000°; P Plg7.0000°, Azm118.0000°;*
*IDC **25** 07:23:54.2±0.3, 36°.90N×139°.33E, h0^{km}, mb5.2/40, mb1 5.3/46, mb1mx5.3/55, mbtmp5.2/46, ML4.5/4, MS5.6/56, Ms1 5.6/56, ms1mx5.5/68 Error ellipse: s-maj=8.8km s-min=7.2km az=130.0*
*ISCJB **25** 07:23:54.8±0.1, 36°.80N±0°.01×139°.22E±0°.01, h12^{km}, mb5.8/581, MS5.7/488, Error ellipse: s-maj=1.9km s-min=1.6km az=152.5*
*NEIC **25** 07:23:56.0±0.1, 36°.84N×139°.25E, h10^{km}, mb5.9/298, MS5.6/297, MW5.7, MW5.8, Error ellipse: s-maj=2.1km s-min=1.6km az=139.0, Moment Tensor Solution. s29 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.36; M$_{\theta\theta}$1.98; M$_{\phi\phi}$-1.62; M$_{r\theta}$-0.48; M$_{\theta\phi}$-3.48; M$_{\phi r}$-0.53; Best double couple: M$_0$4.00000×10^{17} NP1:φ$_s$346.00000°, δ81.00000°, λ-7.00000°. NP2:φ$_s$77.00000°, δ83.00000°, λ-171.00000°. Principal axes: T 4.1000, Plg2.0000°, Azm211.0000°; N -0.2200, Plg79.0000°, Azm112.0000°; P -3.8700, Plg11.0000°, Azm302.0000°;*
NEIC Felt [IV] at Utsunomiya and [III] at Chiba, Hitachi, Niigata, Tokyo and Yokohama. Felt throughout east-central Honshu. Recorded [5U JMA] in Tochigi.
*NEIC **25** 07:23:56.0±0.0, 37°.29N×139°.75E, h21^{km}, Moment Tensor Solution. s11 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.20; M$_{\theta\theta}$1.35; M$_{\phi\phi}$-1.55; M$_{r\theta}$-3.35; M$_{\theta\phi}$-4.94; M$_{\phi r}$-0.83; Best double couple: M$_0$6.20000×10^{17} NP1:φ$_s$81.00000°, δ90.00000°, λ-146.00000°. NP2:φ$_s$351.00000°, δ56.00000°, λ0.00000°. Principal axes: T 5.9800, Plg22.0000°, Azm211.0000°; N 0.4200, Plg56.0000°, Azm81.0000°; P -6.4000, Plg23.0000°, Azm311.0000°;*
*MOS **25** 07:23:57.7±1.1, 37°.05N×139°.17E, h28^{km}, mb6.1/128, MS5.8/112 Error ellipse: s-maj=5.0km s-min=3.6km az=109.4*
*GCMT **25** 07:23:57.0±0.1, 36°.89N×139°.39E, h13^{km}, MW5.8/142, Moment Tensor Solution. s120,c249; s142,c440; Duration: 1^{s}.9 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.55±.04; M$_{\theta\theta}$3.26±.05; M$_{\phi\phi}$-2.71±.05; M$_{r\theta}$-0.50±.11; M$_{\theta\phi}$-5.55±.05; M$_{\phi r}$-0.12±.11; Best double couple: M$_0$6.32300×10^{17} NP1:φ$_s$76.00000°, δ89.00000°, λ-175.00000°. NP2:φ$_s$346.00000°, δ85.00000°, λ-1.00000°. Principal axes: T 6.5960, Plg3.0000°, Azm211.0000°; N -0.5430, Plg85.0000°, Azm83.0000°; P -6.0500, Plg4.0000°, Azm301.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 25 07:23:56.3±0.4**, 36°.89N**±0°.02×**139°.38E**±0°.02**, h14**^{km}±2^{km}**, h14**^{km}**:pP-P, n1931,** σ1^{s}.**45**/1903**, mb5.9**/613**, MS5.7**/497**, 101C-54D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

JKT	**Katashina**	**0.15**	**221**	⇑P	**Pg**	**07 23 57.2**	**-3.0**
JSB	**Shiboa**	**0.45**	**79**	⇓P	**Pg**	**07 24 02.5**	**-2.6**
JHK	**Hiroka**	**0.46**	**322**	⇓P	**Pg**	**07 24 03.2**	**-2.3**
JHK				*e*S	**Sg**	**07 24 10.1**	**-1.6**
JAG	**Ashikaga**	**0.46**	**172**	⇑P	**Pg**	**07 24 02.4**	**-3.1**
JAG				S	**Sg**	**07 24 08.6**	**-3.1**
JFY	**Yanaizu**	**0.58**	**27**	⇑P	**Pg**	**07 24 04.9**	**-2.9**
JFY				S	**Sg**	**07 24 13.0**	**-2.5**
JGK	**Kuni**	**0.67**	**242**	⇑P	**Pg**	**07 24 07.4**	**-2.0**
JIZZ	**Izumozaki**	**0.84**	**321**	⇓P	**Pg**	**07 24 11.5**	**-1.0**
JNS	**Sasagawa**	**0.93**	**357**	⇑P	**Pg**	**07 24 11.6**	**-2.7**
JNS				S	**Sg**	**07 24 24.8**	**-1.8**
JRY	**Ryogami san**	**0.95**	**204**	⇑P	**Pg**	**07 24 11.6**	**-3.0**
JJN	**Nakama**	**0.99**	**283**	⇓P	**Pb**	**07 24 13.9**	**-1.4**
MJAR	**Matsushiro Arr**	**1.00**	**250**	Pg	**Pb**	**07 24 12.8**	**-2.5**
	658nm,0.3s,baz=72,slow=16,SNR=3164						
MJAR				Lg	Lg	07 24 26.1	
	451nm,0.3s,baz=289,slow=29,SNR=18						
MAJO	**Matsushiro**	**1.00**	**250**	*e*Pg	**Pb**	**07 24 13.6**	**-1.8**
MAJO	**Matsushiro**	**1.00**	**250**	*c* *i*P	**Pb**	**07 24 13.2**	**-2.2**
MAT	**Matsushiro**	**1.00**	**250**	P	**Pb**	**07 24 13.1**	**-2.3**
MAT				S	**Sb**	**07 24 27.0**	**-1.4**
MAT	**Matsushiro**	**1.00**	**250**	P	**Pb**	**07 24 13.2**	**-2.2**
ONAJ	**Iwakimizuishiy**	**1.16**	**79**	⇓P	**Pb**	**07 24 14.9**	**-3.3**
JIHU	**Itakohorinouch**	**1.30**	**134**	P	**Pn**	**07 24 17.5**	**-2.6**
JYS	**Shirataka**	**1.44**	**22**	⇑P	**Pn**	**07 24 20.3**	**-1.7**
JSD	**Sado**	**1.45**	**323**	⇓P	**Pn**	**07 24 20.7**	**-1.4**
JYN	**Shimob**	**1.54**	**206**	⇑P	**Pn**	**07 24 21.9**	**-1.5**
JAW	**Awa shima**	**1.57**	**356**	⇑P	**Pn**	**07 24 22.5**	**-1.3**
JSZ	**Suzu**	**1.70**	**290**	⇓P	**Pn**	**07 24 24.5**	**-1.1**
JYA	**Atsumi**	**1.73**	**9**	⇑P	**Pn**	**07 24 25.1**	**-0.8**
I30JP	**ISUMI INFRASON**	**1.75**	**154**	Pn	**Pn**	**07 24 25.0**	**-1.1**
	baz=300,slow=25,SNR=5.6						
I30JP				*i*		07 32 38.7	
	baz=339,slow=324,SNR=1.6						
JOU	**Okura**	**1.80**	**34**	⇑P	**Pn**	**07 24 26.2**	**-0.7**
JYK	**Kaneyama**	**2.17**	**21**	⇑P	**Pn**	**07 24 31.6**	**-0.5**
JIO	**Ouri**	**2.22**	**44**	⇑P	**Pn**	**07 24 31.9**	**-0.7**
INU	**Inuyama**	**2.45**	**232**	*e*Pn	**Pn**	**07 24 36.4**	**+0.6**
JMK	**Ichinoseki**	**2.53**	**35**	⇑P	**Pn**	**07 24 36.5**	**-0.4**
MIYJ	**Miyakonagasawa**	**3.31**	**35**	⇑P	**Pn**	**07 24 47.9**	**+0.3**
JAH	**Hinai**	**3.44**	**16**	⇑P	**Pn**	**07 24 49.9**	**+0.4**
JHJ	**Hachijo jima 2**	**3.77**	**175**	Pn	**Pn**	**07 24 54.1**	**0.0**
	576nm,0.3s,baz=328,slow=2.0,SNR=55						
JHJ2	**Mitsune**	**3.78**	**174**	*e*Pn	**Pn**	**07 24 54.3**	**+0.1**
ERM	**Erimo**	**5.90**	**29**	*e*Pn	**Pn**	**07 25 22.6**	**-0.7**
ERM	**Erimo**	**5.90**	**29**	*c* *e*P	**Pn**	**07 25 23.4**	**+0.2**
ERM				pmax	pmax		
	comp=Z,1μm,1.3s						
ASAJ	**Asahikawa**	**7.63**	**18**	Pn	**Pn**	**07 25 46.5**	**-0.4**
	comp=Z,6.3nm,0.3s,baz=225,slow=13,SNR=46						
ASAJ				LR	LR	07 29 04.0	
	comp=Z,54μm,18.1s,baz=210,slow=41						
JNU	**Nakatsue**	**7.92**	**244**	*e*Pn	**Pn**	**07 25 51.8**	**+0.8**
JNU	**Nakatsue**	**7.92**	**244**	Pn	**Pn**	**07 25 52.3**	**+1.3**
	comp=Z,5.4nm,0.3s,baz=54,slow=9.0,SNR=58						
JNU				LR	LR	07 29 03.9	
	comp=Z,40μm,19.3s,baz=56,slow=39						
GLVR	**Golovnino**	**8.30**	**33**	⇓*i*P	**Pn**	**07 25 54.0**	**-2.1**
GLVR				*i* S	**Sn**	**07 27 28.8**	**-0.8**
GLVR				pmax	pmax		
	comp=Z,610nm,0.7s						
GLVR				pmax	pmax		
	comp=N,303nm,0.5s						
GLVR				pmax	pmax		
	comp=E,39nm,0.5s						
TEY	**Ternei**	**8.41**	**346**	⇑*e*P	**Pn**	**07 26 02.2**	**+4.5**
TEY				*e*S	**Sn**	**07 27 29.5**	**-2.8**
TEY				pmax	pmax		
	comp=Z,40nm,1.2s						
TEY				pmax	pmax		
	comp=N,50nm,1.1s						
TEY				MLR	MLR		
	comp=E,79μm,14.0s						
TEY				MLR	MLR		
	comp=N,44μm,17.0s						
TEY				MLR	MLR		
	comp=Z,53μm,17.0s						
VLA	**Vladivostok**	**8.47**	**320**	⇓*e*P	**Pn**	**07 26 02.7**	**+4.2**
MSHR	**Mys Shultsa**	**8.51**	**314**	*i* P	**Pn**	**07 25 58.8**	**-0.2**
GRPR	**Tuman**	**8.61**	**32**	⇓*i*P	**Pn**	**07 25 58.8**	**-1.6**
GRPR				*i* S	**Sn**	**07 27 36.3**	**-1.0**
GRPR				pmax	pmax		
	comp=E,438nm,0.5s						
GRPR				pmax	pmax		
	comp=Z,348nm,0.5s						
GRPR				pmax	pmax		
	comp=N,131nm,0.4s						
LAGR	**Lagunnoye**	**8.67**	**32**	⇓*i*P	**Pn**	**07 26 00.2**	**-1.0**
LAGR				*i* S	**Sn**	**07 27 37.2**	**-1.5**
LAGR				pmax	pmax		
	comp=N,1μm,0.6s						
LAGR				pmax	pmax		
	comp=E,492nm,0.6s						
LAGR				pmax	pmax		
	comp=Z,1μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**8.68**	**33**	*c* *i*P	**Pn**	**07 25 59.5**	**-1.9**
YUK				*i* S	**Sn**	**07 27 39.1**	**0.0**
YUK				pmax	pmax		
	comp=N,529nm,0.6s						
YUK				pmax	pmax		
	comp=E,662nm,0.6s						
YUK				pmax	pmax		
	comp=Z,584nm,0.6s						
YUK				MLR	MLR		
	comp=Z,3μm,16.0s						
YUK				MLR	MLR		
	comp=N,2μm,10.0s						
SHO	**Shikotan**	**9.00**	**37**	⇓*i*P	**Pn**	**07 26 03.8**	**-2.0**
SHO				*e*S	**Sn**	**07 27 43.0**	**-3.9**
SHO				pmax	pmax		
	comp=Z,134nm,0.7s						
KSRS	**Korea Array**	**9.16**	**277**	Pn	**Pn**	**07 26 09.5**	**+1.5**
	comp=Z,9.7nm,0.3s,baz=90,slow=15,SNR=52						
KSRS				LR	LR	07 29 29.1	
	comp=Z,72μm,19.8s,baz=100,slow=37						
KS15	**Wonju Array Si**	**9.19**	**277**	*e*Pn	**Pn**	**07 26 09.5**	**+1.1**
KSAR	**Wonju Array Be**	**9.19**	**277**	Pn	**Pn**	**07 26 09.5**	**+1.1**
KSAR	**Wonju Array Be**	**9.19**	**277**	P	**Pn**	**07 26 09.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**9.22**	**325**	Pn	**Pn**	**07 26 09.9**	**+1.1**
	comp=Z,1.7nm,0.3s,baz=132,slow=13,SNR=23						
USRK				Sn	**Sn**	**07 27 52.0**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=128,slow=19,SNR=4.9						
USRK				LR	LR	07 29 27.4	
	comp=Z,59μm,19.8s,baz=133,slow=36						
I45RU	**USSURIYSK INFR**	**9.22**	**325**	*i*		08 26 00.0	
	baz=134,slow=347,SNR=1.9						
TJN	**Taejon**	**9.67**	**271**	*c* *e*P	**Pn**	**07 26 17.7**	**+2.7**
CBIJ	**Chichi jima**	**10.05**	**165**	*e*Pn	**Pn**	**07 26 16.9**	**-3.3**
JCJ	**Chichijima**	**10.05**	**165**	Pn	**Pn**	**07 26 16.9**	**-3.3**
	comp=Z,65nm,0.3s,baz=299,slow=15,SNR=15						
JCJ				LR	LR	07 30 42.8	
	comp=Z,48μm,18.2s,baz=358,slow=41						
YSS	**Yuzh-Sakhalins**	**10.37**	**13**	*e*Pn	**Pn**	**07 26 24.3**	**-0.2**
YSS	**Yuzh-Sakhalins**	**10.37**	**13**	⇑*i*P	**Pn**	**07 26 24.5**	**0.0**
YSS				*e*S	**Sn**	**07 28 20.5**	**0.0**
YSS				pmax	pmax		
	comp=Z,120nm,0.9s						
YSS				MLR	MLR		
	comp=Z,44μm,12.0s						
YSS				MLR	MLR		
	comp=N,32μm,13.0s						
KUR	**Kuril'sk**	**10.51**	**35**	⇑*i*P	**Pn**	**07 26 25.8**	**-0.7**
KUR				*i* S	**Sn**	**07 28 21.7**	**-2.3**
KUR				pmax	pmax		
	comp=N,53nm,0.6s						
KUR				pmax	pmax		
	comp=Z,664nm,0.6s						
KUR				pmax	pmax		
	comp=E,46nm,0.3s						
KUR				MLR	MLR		
	comp=Z,2μm,16.0s						
KUR				MLR	MLR		
	comp=E,212nm,12.0s						
KUR				MLR	MLR		
	comp=N,3μm,13.0s						
MDJ	**Mudanjiang**	**10.70**	**319**	*e*Pn	**Pn**	**07 26 30.4**	**+1.3**
UGL	**Uglegorsk**	**12.34**	**8**	*e*P	**Pn**	**07 26 50.3**	**-1.2**
UGL				*e*S	**Sn**	**07 29 09.8**	**+1.0**
UGL				pmax	pmax		
	comp=Z,2μm,4.0s						
UGL				pmax	pmax		
	comp=N,2μm,4.2s						
UGL				pmax	pmax		
	comp=E,900nm,5.3s						
UGL				pmax	pmax		
	comp=Z,82nm,0.9s						
UGL				smax	smax		
	comp=E,5μm,8.5s						
UGL				smax	smax		
	comp=N,102nm,2.5s						
UGL				MLR	MLR		
	comp=E,26μm,12.0s						
UGL				MLR	MLR		
	comp=Z,17μm,12.0s						
UGL				MLR	MLR		
	comp=N,21μm,13.0s						
CN2	**Changchun**	**12.66**	**307**	*e*P	**Pn**	**07 26 58.5**	**+2.6**
CN2				pmax	pmax		
	comp=N,60nm,1.6s						
CN2				pmax	pmax		
	comp=N,6μm,8.0s						
CN2				LR	LR		
	comp=N,34μm,13.0s						
CN2				LR	LR		
	comp=N,62μm,13.0s						
CN2				LR	LR		
	comp=N,57μm,13.0s						
SNY	**Shenyang**	**13.18**	**297**	⇓P	**Pn**	**07 27 03.3**	**+0.3**
SNY				S	**Sn**	**07 29 29.3**	**0.0**
SNY				pmax	pmax		
	comp=N,220nm,1.5s						
SNY				pmax	pmax		
	comp=N,7μm,7.9s						
SNY				LR	LR		
	comp=N,113μm,13.1s						
SNY				LR	LR		
	comp=N,79μm,13.3s						
SNY				LR	LR		
	comp=N,108μm,15.7s						
KLR	**Kul'dur**	**13.53**	**338**	*c* *i*P	**Pn**	**07 27 11.1**	**+3.4**
KLR	**Kul'dur**	**13.53**	**338**	Pn	**Pn**	**07 27 08.8**	**+1.1**
	comp=N,1.0nm,0.3s,baz=147,slow=11,SNR=69						
KLR				LR	LR	07 32 11.9	
	comp=N,50μm,18.3s,baz=154,slow=37						
JOW	**Kunigami**	**13.75**	**226**	*e*Pn	**Pn**	**07 27 10.9**	**+0.1**
JOW	**Kunigami**	**13.75**	**226**	Pn	**Pn**	**07 27 11.1**	**+0.2**
	comp=N,0.1nm,0.3s,baz=82,slow=18,SNR=2.9						
GRNR	**Gornyy**	**14.04**	**352**	*e*P	**Pn**	**07 27 16.8**	**+2.1**
GRNR				pmax	pmax		
	comp=Z,55nm,1.1s						
DL2	**Dalian**	**14.16**	**284**	⇓*i*P	**Pn**	**07 27 19.3**	**+2.9**
DL2				S	Sn	07 30 02.5	+9.2
DL2				pmax	pmax		
	comp=Z,440nm,0.9s						
DL2				pmax	pmax		
	comp=Z,4μm,6.9s						
DL2				LR	LR		
	comp=Z,53μm,11.7s						
DL2				LR	LR		
	comp=Z,64μm,13.6s						
DL2				LR	LR		
	comp=Z,82μm,15.3s						
TYV	**Tymovskoe**	**14.17**	**9**	*e*P	**Pn**	**07 27 16.0**	**-0.5**
TYV				*e*S	**Sn**	**07 29 55.9**	**+2.5**
TYV				pmax	pmax		
	comp=Z,3μm,2.7s						
TYV				pmax	pmax		
	comp=Z,265nm,1.3s						
TYV				smax	smax		
	comp=E,4μm,7.6s						
TYV				smax	smax		
	comp=E,32nm,1.3s						
TYV				MLR	MLR		
	comp=N,12μm,15.0s						
TYV				MLR	MLR		
	comp=Z,21μm,15.0s						
SSE	**Sheshan**	**16.14**	**254**	P	**Pn**	**07 27 43.0**	**+0.2**
SSE				S	**Sn**	**07 30 42.5**	**+0.8**
SSE				pmax	pmax		
	comp=Z,560nm,4.3s						
SSE	**Sheshan**	**16.14**	**254**	*e*Pn	**Pn**	**07 27 43.2**	**+0.5**
	comp=Z,2μm,1.8s						
NKL	**Nikolayevsk**	**16.29**	**3**	*e*P	**Pn**	**07 27 41.0**	**-3.5**
NKL				*e*S	**Sn**	**07 30 45.0**	**+0.1**
NKL				pmax	pmax		
	comp=N,1μm,15.0s						
NKL				pmax	pmax		
	comp=Z,1μm,13.0s						
NKL				pmax	pmax		
	comp=N,69nm,1.2s						
NKL				pmax	pmax		
	comp=Z,170nm,1.2s						
NKL				smax	smax		
	comp=E,8μm,11.0s						
NKL				MLR	MLR		
	comp=N,22μm,14.0s						
NKL				MLR	MLR		
	comp=E,25μm,14.0s						
NKL				MLR	MLR		
	comp=Z,29μm,12.0s						
OKH	**Okha**	**16.85**	**7**	*d* *e*P	**Pn**	**07 27 48.3**	**-3.3**
OKH				*e*S	**Sn**	**07 30 51.3**	**-7.1**
OKH				MLR	MLR		
	comp=Z,16μm,14.0s						
NJ2	**Nanjing**	**17.59**	**260**	*e*P	**P**	**07 28 01.5**	**-0.5**
NJ2				pP	**pP**	**07 28 05.3**	**-1.0**
NJ2				sP	**sP**	**07 28 08.0**	**-0.3**
NJ2				S	**Sn**	**07 31 18.0**	**+1.4**
NJ2				LR	LR		
	comp=Z,28μm,17.5s						
NJ2				LR	LR		
	comp=Z,43μm,16.2s						
NJ2				LR	LR		
	comp=Z,42μm,13.7s						
TIA	**Tai'an**	**17.89**	**275**	P	**P**	**07 28 06.0**	**+0.7**
TIA				pmax	pmax		
	comp=Z,2μm,6.3s						
TIA				LR	LR		
	comp=Z,19μm,13.3s						
TIA				LR	LR		
	comp=Z,24μm,15.5s						
TIA				LR	LR		
	comp=Z,35μm,15.7s						
SKR	**Severo-Kuril's**	**18.28**	**36**	*e*P	**Pn**	**07 28 08.2**	**-1.1**
SKR				pmax	pmax		
	comp=Z,4μm,3.6s						
SKR				pmax	pmax		
	comp=Z,264nm,1.3s						
SKR				MLR	MLR		
	comp=Z,24μm,14.0s						
BJT	**Baijiatuau**	**18.43**	**287**	*e*Pn	**Pn**	**07 28 11.6**	**+0.2**
	comp=Z,798nm,1.9s						
BJT	**Baijiatuau**	**18.43**	**287**	*e*P	**Pn**	**07 28 11.6**	**+0.2**
BJT				pmax	pmax		
	comp=Z,798nm,1.9s						
ZEA	**Zeya**	**18.84**	**337**	*e*P	**P**	**07 28 14.0**	**-1.6**
ZEA				*e*S	**Sn**	**07 31 44.0**	**-2.7**
ZEA				pmax	pmax		
	comp=N,160nm,1.2s						
ZEA				pmax	pmax		
	comp=E,72nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,280nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,2μm,6.0s						
ZEA				pmax	pmax		
	comp=N,1μm,5.0s						
ZEA				pmax	pmax		
	comp=E,500nm,5.0s						
ZEA				smax	smax		
	comp=Z,2μm,10.0s						
ZEA				smax	smax		
	comp=E,6μm,11.0s						
ZEA				smax	smax		
	comp=N,4μm,8.0s						
ZEA				MLR	MLR		
	comp=Z,58μm,15.0s						
ZEA				MLR	MLR		
	comp=N,46μm,14.0s						
HIA	**Hailar**	**18.88**	**317**	*e*P	**P**	**07 28 15.5**	**-0.6**
	comp=N,463nm,1.8s						
HIA	**Hailar**	**18.88**	**317**	*e*P	**P**	**07 28 15.5**	**-0.6**
HIA				pmax	pmax		
	comp=Z,463nm,1.8s						
YHNB	**Yeheng**	**19.64**	**237**	*e*P	**Pn**	**07 28 25.7**	**-0.4**
	comp=Z,125nm,1.4s						
SSLB	**Suanglung**	**20.52**	**236**	*e*P	**P**	**07 28 34.0**	**-0.3**
	comp=Z,229nm,2.0s						
SSLB				LR	LR		
	comp=Z,20μm,19.0s						
YULB	**Yu-li**	**20.57**	**234**	PFAKE		07 28 50.0	+13
YULB				LR	LR		
	comp=Z,16μm,18.0s						
PETK	**Petropavlovsk-**	**20.66**	**32**	P	**P**	**07 28 36.1**	**+0.6**
	comp=Z,26nm,0.8s,baz=212,slow=10,SNR=16						
PETK				LR	LR	07 36 41.8	
	comp=Z,7μm,18.0s,baz=222,slow=37						
PEA1	**Petropavlovsk-**	**20.67**	**32**	*e*P	**P**	**07 28 36.1**	**+0.5**
SARN	**Sarigan**	**20.89**	**163**	*e*P	**P**	**07 28 38.8**	**+0.6**
	comp=Z,698nm,1.0s						
PET	**Petropavlovsk**	**21.02**	**34**	α *i*P	**P**	**07 28 39.7**	**+0.3**
PET				*e*S	**S**	**07 32 29.3**	**-3.7**
PET						07 33 00.2	
PET				pmax	pmax		
	comp=Z,5μm,4.4s						
PET				pmax	pmax		
	comp=Z,3μm,9.4s						
PET				MLR	MLR		
	comp=Z,18μm,17.0s						
PET				MLR	MLR		
	comp=Z,17μm,17.0s						
TPUB	**Ta-pu**	**21.07**	**235**	*e*P	**P**	**07 28 38.7**	**-1.5**
	comp=Z,76nm,1.0s						
TPUB				LR	LR		
	comp=Z,23μm,18.0s						
TWG	**Pinlang**	**21.12**	**234**	*e*P	**P**	**07 28 39.8**	**-1.0**
	comp=Z,505nm,1.1s						
TWG				LR	LR		
	comp=Z,50μm,18.0s						
ANA2	**Anatahan**	**21.22**	**163**	*e*P	**P**	**07 28 41.8**	**+0.1**
	comp=Z,1μm,1.4s						
QZH	**Quanzhou**	**21.39**	**242**	⇑*i*P	**P**	**07 28 43.0**	**-0.5**
QZH				S	**S**	**07 32 38.8**	**-1.8**
QZH				pmax	pmax		
	comp=Z,2μm,9.8s						
QZH				LR	LR		
	comp=Z,23μm,16.1s						
QZH				LR	LR		
	comp=Z,12μm,13.3s						
QZH				LR	LR		
	comp=Z,21μm,14.2s						
TIY	**Taiyuan**	**21.43**	**280**	*e*P	**P**	**07 28 43.3**	**-0.7**
TIY				S	Sn	07 32 47.0	-2.3
TIY				pmax	pmax		
	comp=Z,2μm,4.0s						
TIY				LR	LR		
	comp=Z,27μm,12.6s						
TIY				LR	LR		
	comp=Z,73μm,14.8s						
WHN	**Wuhan**	**21.72**	**260**	⇑P	**P**	**07 28 46.8**	**-0.3**
WHN				S	**S**	**07 32 49.5**	**+2.3**
WHN				LR	LR		
	comp=Z,30μm,9.9s						
HHC	**Hu-ho-hao-te**	**21.97**	**289**	*e*P	**P**	**07 28 49.0**	**-0.9**
HHC				pP	pP	07 28 53.8	-0.4
HHC				sP	sP	07 28 56.5	+0.3
HHC				PP	**PnPn**	**07 29 17.0**	**+5.5**
HHC				S	**S**	**07 32 47.0**	**-5.1**
HHC				sS	pS	07 32 54.3	-4.6
HHC				LR	LR		
	comp=Z,18μm,12.5s						
HHC				LR	LR		
	comp=Z,27μm,12.6s						
HHC				LR	LR		
	comp=Z,37μm,12.2s						
BTO	**Baotou**	**23.14**	**288**	*e*P	**P**	**07 28 58.5**	**-3.7**
GUMO	**Guam**	**23.71**	**167**	*e*P	**P**	**07 29 06.0**	**-1.9**
	comp=Z,926nm,1.1s						
GUMO	**Guam**	**23.71**	**167**	P	**P**	**07 29 05.5**	**-2.4**
	comp=Z,507nm,0.9s,baz=181,slow=5.5,SNR=16						
GUMO				LR	LR	07 37 44.5	
	comp=Z,10μm,19.0s,baz=343,slow=35						
MA2	**Magadan**	**23.87**	**14**	*e*P	**P**	**07 29 07.9**	**-1.2**
	comp=Z,417nm,1.3s						
MA2				LR	LR		
	comp=Z,15μm,18.0s						
MA2	**Magadan**	**23.87**	**14**	*c* *i*P	**P**	**07 29 08.5**	**-0.6**
MA2				pmax	pmax		
	comp=Z,491nm,1.7s						
MA2	**Magadan**	**23.87**	**14**	P	**P**	**07 29 07.5**	**-1.6**
	comp=Z,449nm,1.2s,baz=200,slow=11,SNR=69						
XAN	**Xi'an**	**24.92**	**273**	P	**P**	**07 29 16.5**	**-2.5**
XAN				pP	pP	07 29 20.8	-2.8
XAN				sP	sP	07 29 23.3	-2.2
XAN				PP		07 29 56.0	
XAN				S	**S**	**07 33 41.0**	**-1.0**
XAN				sS	pS	07 33 47.8	+0.8
XAN				pmax	pmax		
	comp=Z,890nm,5.7s						
XAN				LR	LR		
	comp=Z,17μm,13.3s						
XAN				LR	LR		
	comp=Z,26μm,13.5s						
XAN				LR	LR		
	comp=Z,35μm,12.2s						
XAN	**Xi'an**	**24.92**	**273**	*e*P	**P**	**07 29 17.5**	**-1.5**
	comp=Z,179nm,1.8s						
XAN				LR	LR		
	comp=Z,26μm,19.0s						
XAN	**Xi'an**	**24.92**	**273**	*e*P	**P**	**07 29 17.5**	**-1.5**
XAN				pmax	pmax		
	comp=Z,179nm,1.8s						
XAN				MLR	MLR		
	comp=Z,26μm,19.0s						
ENH	**Enshi**	**25.69**	**264**	*e*P	**P**	**07 29 24.8**	**-1.2**
	comp=Z,46nm,0.8s						
ENH				LR	LR		
	comp=Z,20μm,19.0s						
YAK	**Yakutsk**	**25.89**	**350**	*c* *i*P	**P**	**07 29 27.3**	**-0.1**
YAK				*e**PP	**sP**	**07 29 37.3**	**+3.3**
YAK				*e*		07 30 04.5	
YAK				*e*PPP	PPP	07 30 12.3	
YAK				*e*S	**S**	**07 33 57.4**	**+0.7**
YAK				*e**SS	sS	07 34 15.3	+11
YAK				*e*SS		07 34 54.1	
YAK				pmax	pmax		
	comp=Z,805nm,1.0s						
YAK				pmax	pmax		
	comp=N,346nm,1.1s						
YAK				pmax	pmax		
	comp=E,180nm,1.2s						
YAK				pmax	pmax		
	comp=Z,4μm,3.0s						
YAK				pmax	pmax		
	comp=E,2μm,2.5s						
YAK				pmax	pmax		
	comp=N,3μm,2.6s						
YAK				smax	smax		
	comp=N,16μm,4.3s						
YAK				smax	smax		
	comp=E,62μm,6.6s						
YAK				MLR	MLR		
	comp=Z,106μm,16.0s						
YAK				MLR	MLR		
	comp=N,100μm,17.0s						
YAK				MLR	MLR		
	comp=E,53μm,16.0s						
ULN	**Ulaanbaatar**	**26.09**	**305**	*e*P	**P**	**07 29 28.4**	**-1.2**
	comp=E,68nm,1.3s						
ULN				LR	LR		
	comp=Z,26μm,19.0s						
ULN	**Ulaanbaatar**	**26.09**	**305**	*d* *i*P	**P**	**07 29 28.3**	**-1.4**
ULN				pmax	pmax		
	comp=Z,76nm,1.7s						
ULN				MLR	MLR		
	comp=Z,23μm,15.0s						
ULN	**Ulaanbaatar**	**26.09**	**305**	P	**P**	**07 29 29.4**	**-0.3**
	SNR=30						
GZH	**Guangzhou**	**26.31**	**246**	P	**P**	**07 29 27.5**	**-4.1**
GZH				S	**S**	**07 33 58.3**	**-5.7**
GZH				LR	LR		
	comp=Z,24μm,12.2s						
GZH				LR	LR		
	comp=Z,22μm,12.7s						
SONA0	**Songino Array**	**26.52**	**305**	*e*P	**P**	**07 29 31.7**	**-1.8**
SONA0				*e*PcP	**PcP**	**07 32 59.7**	**+1.7**
SONM	**Songino Array**	**26.52**	**305**	P	**P**	**07 29 31.7**	**-1.8**
	comp=Z,22nm,1.1s,baz=108,slow=8.5,SNR=48						
SONM				PcP	**PcP**	**07 32 59.7**	**+1.7**
	comp=Z,2.6nm,0.6s,baz=134,slow=1.7,SNR=4.1						
SONM				LR	LR	07 40 29.3	
	comp=Z,31μm,19.0s,baz=105,slow=38						
BOD	**Bodaibo**	**26.81**	**329**	*e*P	**P**	**07 29 34.9**	**-0.9**
BOD				pmax	pmax		
	comp=Z,250nm,1.7s						
SEY	**Seymchan**	**27.28**	**13**	LR	LR	07 42 05.8	
	comp=Z,4μm,19.1s,baz=202,slow=40						

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LZH  Lanzhou          28.48 279  eP      P       07 29 51.0  -0.2
LZH                               pP     pP      07 29 54.5  -1.4
LZH                               sP     sP      07 29 56.5  -1.2
LZH                               PP     PnPn    07 30 40.5   0.0
LZH                              eS      S       07 34 34.8  -3.7
LZH                               sS     pS      07 34 42.5  -1.1
LZH                               SS     SnSn    07 36 00.3  +3.3
LZH                               pmax   pmax
     comp=Z,74nm,1.1s
LZH                               pmax   pmax
     comp=Z,420nm,6.0s
LZH                               LR     LR
     comp=Z,34µm,16.0s
LZH                               LR     LR
     comp=Z,56µm,17.1s
SMY  Shemya           28.93  46   PFAKE          07 30 10.0  +15
SMY                               LR     LR
     comp=Z,5µm,19.0s
ZAK  Zakamensk        29.09 309  eP      P       07 29 54.5  -1.9
TLY  Talaya           29.20 312  eP      P       07 29 55.8  -1.5
     comp=Z,32nm,1.3s
TLY                               LR     LR
     comp=Z,18µm,22.0s
TLY  Talaya           29.20 312  eP      P       07 29 55.5  -1.8
TLY                              e               07 30 49.5
TLY                              ePPP    PPP     07 30 57.3
TLY                              eS      S       07 34 50.5  +1.2
TLY                              eSS     ScP     07 36 10.8   -35
TLY                              eSSS    SSS     07 36 28.0
TLY                               pmax   pmax
     comp=Z,64nm,1.4s
TLY                               MLR    MLR
     comp=Z,42µm,17.0s
TLY  Talaya           29.20 312   P      P       07 29 56.9  -0.4
     SNR=14
GYA  Guiyang          29.59 259   P      P       07 29 59.5  -1.6
GYA                               PP     PnPn    07 30 57.5  +1.8
GYA                               PcP    PcP     07 33 07.5  +1.7
GYA                               S      S       07 34 55.0  -0.9
GYA                               SS     SnSn    07 36 27.8  +3.6
GYA                               pmax   pmax
     comp=Z,50nm,1.0s
GYA                               LR     LR
     comp=Z,49µm,19.8s
GYA                               LR     LR
     comp=Z,18µm,17.4s
GYA                               LR     LR
     comp=Z,23µm,17.1s
WAKE Wake Island      29.62 119   PFAKE          07 30 10.0  +8.8
WAKE                              LR     LR
     comp=Z,10µm,19.0s
CD2  Chengdu          30.04 269   P      P       07 30 03.3  -1.7
CD2                               pP     pP      07 30 06.3  -3.3
CD2                               sP     sP      07 30 07.8  -3.7
CD2                               S      S       07 35 09.5  +6.7
CD2                               pmax   pmax
     comp=Z,40nm,0.5s
CD2                               pmax   pmax
     comp=Z,660nm,7.5s
CD2                               LR     LR
     comp=Z,73µm,18.6s
MOY  Mondy            30.80 311  eP      P       07 30 10.2  -1.3
MOY                               pmax   pmax
     comp=Z,44nm,2.4s
GTA  Gaotai           31.05 287 ⇓P       P       07 30 12.0  -1.9
GTA                               pP     pP      07 30 18.5   0.0
GTA                               sP     sP      07 30 21.8  +1.4
GTA                               PP     PnPn    07 31 13.5  -1.4
GTA                               PcP    PcP     07 33 12.0  +2.6
GTA                               S      S       07 35 15.0  -3.6
GTA                               sS     sS      07 35 25.0  -1.3
GTA                               PcS    PcS     07 36 54.0  +0.4
GTA                               ScP    ScP     07 36 55.3  +3.5
GTA                               SS     SnSn    07 36 59.0  -0.4
GTA                               pmax   pmax
     comp=Z,290nm,6.0s
GTA                               LR     LR
     comp=Z,19µm,14.6s
GTA                               LR     LR
     comp=Z,19µm,15.2s
GTA                               LR     LR
     comp=Z,22µm,16.8s
QIZ  Qiongzhong       31.39 244   P      P       07 30 16.8  -0.1
QIZ                               S      S       07 35 26.3  +2.3
QIZ                               LR     LR
     comp=Z,18µm,24.0s
QIZ                               LR     LR
     comp=Z,16µm,22.6s
QIZ                               LR     LR
     comp=Z,11µm,15.2s
QIZ  Qiongzhong       31.39 244   PFAKE          07 30 30.0  +13
QIZ                               LR     LR
     comp=Z,6µm,20.0s
DAV  Davao City (W)   32.23 206   PFAKE          07 30 40.0  +16
DAV                               LR     LR
     comp=Z,8µm,20.0s
DAV  Davao City (W)   32.23 206   LR     LR      07 43 06.8
     comp=Z,8µm,20.4s,baz=27,slow=36
KCP  Kidapawan        32.47 207⇓iP       P       07 30 25.1  -1.3
KNGR Kungurtug, Tuv   32.74 308c iP      P       07 30 27.3  -1.3
KMI  Kunming          33.33 260   P      P       07 30 35.8  +1.7
KMI                               pP     pP      07 30 38.3  -0.5
KMI                               sP     sP      07 30 39.3  -1.4
KMI                               PP     PP      07 31 47.5  -2.0
KMI                               PcP    PcP     07 33 16.5  +0.5
KMI                               S      S       07 35 53.0  -1.6
KMI                               SS     SS      07 37 53.5   -25
KMI                               pmax   pmax
     comp=Z,13nm,0.5s
KMI                               pmax   pmax
     comp=Z,190nm,4.8s
KMI                               LR     LR
     comp=Z,16µm,15.5s
KMI                               LR     LR
     comp=Z,23µm,17.7s
KMI                               LR     LR
     comp=Z,29µm,17.7s
KMI  Kunming          33.33 260   PFAKE          07 30 50.0  +16
KMI                               LR     LR
     comp=Z,30µm,18.0s
ADK  Adak             34.23  50  eP      P       07 30 41.7  +0.3
     comp=Z,160nm,1.5s
ADK                               LR     LR
     comp=Z,7µm,18.0s
ADK  Adak             34.23  50  eP      P       07 30 41.7  +0.3
ADK                               pmax   pmax
     comp=Z,160nm,1.5s
ADK                               MLR    MLR
     comp=Z,7µm,18.0s
PATS Pohnpei          34.54 145  eP      P       07 30 45.1  +0.7
     comp=Z,515nm,1.5s
PATS                              LR     LR
     comp=Z,12µm,20.0s
BILL Bilibino         34.64  17  eP      P       07 30 45.0  +0.1
     comp=Z,46nm,1.0s
BILL                              LR     LR
     comp=Z,14µm,18.0s
BILL Bilibino         34.64  17c iP      P       07 30 44.6  -0.2
BILL                             e               07 32 01.9
BILL                             i S     S       07 36 12.4  -1.3
BILL                              pmax   pmax
     comp=Z,134nm,2.5s
BILL                              MLR    MLR
     comp=Z,13µm,18.0s
SGSI Sangihe          35.41 204   P      P       07 30 49.6  -2.3
     comp=Z,575nm,0.5s,comp=Z,14µm
SKNT Sakolnakorn      36.98 247   P      P       07 31 06.0  +0.6
     comp=Z,16nm,1.0s,comp=Z,2µm
MIDW Midway           37.21  91   PFAKE          07 31 20.0  +13
MIDW                              LR     LR
     comp=Z,10µm,21.0s
KKM  Kota Kinabalu    37.28 220  eP      P       07 31 06.9  -1.1
     comp=Z,131nm,1.5s
KKM                               LR     LR
     comp=Z,7µm,20.0s
TNTI Ternate          37.61 200  eP      P       07 31 09.7  -1.0
     comp=Z,225nm,1.4s
TNTI                              LR     LR
     comp=Z,5µm,20.0s
TNTI Ternate          37.61 200   P      P       07 31 09.0  -1.7
     comp=Z,109nm,1.3s
KWAJ Kwajalein Atol   37.91 130  eP      P       07 31 11.9  -1.3
     comp=Z,928nm,1.4s
KWAJ                              LR     LR
     comp=Z,6µm,19.0s
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KWAJ Kwajalein Atol   37.91 130  eP      P       07 31 11.9  -1.3
KWAJ                              pmax   pmax
     comp=Z,928nm,1.4s
KWAJ                              MLR    MLR
     comp=Z,6µm,19.0s
BAKI Biak             38.01 185   P      P       07 31 14.1  +0.1
SWI  Sorong           38.30 193   P      P       07 31 15.7  -0.8
     comp=Z,62nm,0.5s
RKPI Ransiki, Papua   38.51 188   P      P       07 31 17.7  -0.5
     comp=Z,95nm,0.9s,comp=Z,12µm
PAYA Payao            38.65 254   P      P       07 31 23.1  +3.6
SPIA Saint Paul Isl   38.77  42  eP      P       07 31 20.9  +0.8
     comp=Z,270nm,1.4s
KMSI Cibinong         38.84 205   P      P       07 31 19.4  -1.6
     comp=Z,542nm,1.1s
UTTA Uttaradit        39.07 251   P      P       07 31 25.6  +2.6
     comp=Z,3.5nm,0.8s
CHAI Chaiyaphum       39.13 248   P      P       07 31 23.6  +0.1
     comp=Z,18nm,1.1s,comp=Z,162nm
DGZ  Jazzator, Alta   39.16 306d iP      P       07 31 22.7  -0.9
DGZ                               pmax   pmax
     comp=Z,25nm,1.0s
DGZ                               MLR    MLR
     comp=Z,11µm,13.0s
JAY  Jayapura         39.22 178   P      P       07 31 23.9  -0.3
     comp=Z,2µm,1.1s,comp=Z,14µm
JAY  Jayapura         39.22 178   P      P       07 31 24.5  +0.3
     comp=Z,216nm,1.0s,baz=317,slow=4.6,SNR=22
GENI Genyem           39.28 179   P      P       07 31 25.0  +0.3
     comp=Z,865nm,1.2s,comp=Z,7µm
LAMP Lampang          39.31 253   P      P       07 31 27.5  +2.4
MANU Manus Island     39.44 167  eP      P       07 31 26.2  +0.1
     comp=Z,150nm,1.4s
MANU                              LR     LR
     comp=Z,5µm,20.0s
WMQ  Urumqi           39.45 297   P      P       07 31 25.8  -0.3
WMQ                               pP     pP      07 31 29.0  -1.7
WMQ                               sP     sP      07 31 33.8  +1.2
WMQ                               PP     PnPn    07 32 59.8  +0.5
WMQ                               PcP    PcP     07 33 36.0  +2.2
WMQ                               S      S       07 37 29.0  +1.5
WMQ                               SS     SS      07 40 15.0  -6.6
WMQ                               pmax   pmax
     comp=Z,93nm,1.3s
WMQ                               pmax   pmax
     comp=Z,1µm,8.5s
WMQ                               LR     LR
     comp=Z,31µm,15.1s
WMQ                               LR     LR
     comp=Z,27µm,18.5s
WMQ  Urumqi           39.45 297  eP      P       07 31 25.7  -0.3
     comp=Z,98nm,1.5s
WMQ                               LR     LR
     comp=Z,19µm,19.0s
WMQ  Urumqi           39.45 297  eP      P       07 31 25.7  -0.3
WMQ                               pmax   pmax
     comp=Z,98nm,1.5s
WMQ                               MLR    MLR
     comp=Z,19µm,19.0s
PBKT Sadao Pong       39.47 250   P      P       07 31 26.9  +0.5
     comp=Z,29nm,1.5s,comp=Z,1µm
MRSI Marisa           39.66 208   P      P       07 31 25.5  -2.4
     comp=Z,226nm,1.0s,comp=Z,2µm
CMMT Chiang Mai       39.67 254   P      P       07 31 28.6  +0.5
     comp=Z,19nm,0.9s,comp=Z,636nm
CHTO Chiang Mai       39.68 254  eP      P       07 31 27.2  -0.8
     comp=Z,15nm,0.9s
CHTO                              LR     LR
     comp=Z,12µm,20.0s
CHTO Chiang Mai       39.68 254  eP      P       07 31 27.3  -0.8
CHTO                              pmax   pmax
     comp=Z,15nm,0.9s
CHTO                              MLR    MLR
     comp=Z,12µm,20.0s
CHTO Chiang Mai       39.68 254   P      P       07 31 30.1  +2.0
     SNR=6.1
CHTO Chiang Mai       39.68 254   P      P       07 31 28.7  +0.6
     comp=Z,84nm,0.9s,comp=Z,2µm
GAMB Gambell          39.69  32  eP      P       07 31 28.4  +0.7
     comp=Z,172nm,1.6s
GAMB                              LR     LR
     comp=Z,4µm,21.0s
CM31 Chiang Mai Arr   39.88 254  eP      P       07 31 29.2  -0.6
CM31                             ePcP    PcP     07 33 37.2  +1.8
CMAR Chiang Mai Arr   39.88 254   P      P       07 31 29.2  -0.6
     comp=Z,5.0nm,0.9s,baz=46,slow=6.2,SNR=18
CMAR                              PcP    PcP     07 33 37.2  +1.8
     comp=Z,5.7nm,0.9s,baz=27,slow=2.1,SNR=8.8
CMAR                              LR     LR      07 49 09.2
     comp=Z,9µm,18.6s,baz=50,slow=38
SUKH Sukhothai        39.93 252   P      P       07 31 33.5  +3.3
FAKI Fak Fak          40.15 191  eP      P       07 31 30.6  -1.4
     comp=Z,227nm,1.3s
FAKI                              LR     LR
     comp=Z,14µm,22.0s
FAKI Fak Fak          40.15 191   P      P       07 31 31.1  -0.9
     comp=Z,149nm,1.3s,comp=Z,2µm
SRAK Srakaew          40.31 245   P      P       07 31 30.4  -2.9
     comp=Z,108nm,1.0s
UNV  Unalaska Valle   40.55  48   PFAKE          07 31 50.0  +15
UNV                               LR     LR
     comp=Z,5µm,21.0s
MPSI Mapaga           40.59 211   P      P       07 31 33.0  -2.6
     comp=Z,48nm,1.2s,comp=Z,722nm
LSA  Lhasa            40.59 274   P      P       07 31 36.5  +0.3
LSA                               LR     LR
     comp=Z,3µm,21.4s
LSA                               LR     LR
     comp=Z,6µm,16.8s
LSA                               LR     LR
     comp=Z,20µm,15.3s
LSA  Lhasa            40.59 274  eP      P       07 31 35.6  -0.6
     comp=Z,26nm,1.0s
LSA                               LR     LR
     comp=Z,20µm,18.0s
LSA  Lhasa            40.59 274  i P     P       07 31 37.2  +1.1
     SNR=7.8
LSA  Lhasa            40.59 274  eP      P       07 31 35.6  -0.6
LSA                               pmax   pmax
     comp=Z,26nm,1.0s
LSA                               MLR    MLR
     comp=Z,20µm,18.0s
SANI Sanana           40.69 201   P      P       07 31 33.8  -2.6
     comp=Z,128nm,1.2s,comp=Z,1µm
LUWI Luwuk            40.76 206  eP      P       07 31 35.3  -1.7
     comp=Z,305nm,1.1s
LUWI Luwuk            40.76 206   P      P       07 31 33.8  -3.2
     comp=Z,254nm,1.1s
ZAA1 Zalesovo Array   40.81 313  eP      P       07 31 35.8  -1.3
ZAA1                             ePcP    PcP     07 33 38.8  +1.0
ZALV Zalesovo Beam    40.81 313   P      P       07 31 35.8  -1.3
     comp=Z,25nm,0.8s,baz=88,slow=6.9,SNR=74
ZALV                              PcP    PcP     07 33 38.8  +1.0
     comp=Z,7.8nm,0.6s,baz=111,slow=1.9,SNR=6.1
ZALV                              LR     LR      07 49 11.2
     comp=Z,6µm,18.3s,baz=103,slow=37
ZSN  Zaisan           40.99 303  eP      P       07 31 38.6  -0.1
ZSN                               pmax   pmax
     comp=Z,47nm,1.4s
ZSN                               MLR    MLR
     comp=Z,5µm,14.0s
ZSN  Zaisan           40.99 303  eP      P       07 31 38.6  -0.1
     comp=Z,47nm,1.4s
ZSN                              eLR     LR      07 48 59.9
     comp=Z,5µm,14.2s
UTHA Uthaitani        41.25 250   P      P       07 31 48.6  +7.5
UMPA Umpang Tak       41.29 251   P      P       07 31 44.6  +3.1
NLAI Namlea           41.52 199   P      P       07 31 42.1  -1.2
     comp=Z,60nm,0.9s
PCI  Palu             41.74 210   P      P       07 31 42.6  -2.5
     comp=Z,174nm,1.0s
NVS  Novosibirsk      41.76 314⇑iP       P       07 31 45.0  +0.1
NVS                              e               07 33 22.5
NVS                              eS      S       07 38 01.8  +0.2
NVS                               pmax   pmax
     comp=E,113nm,2.5s
NVS                               pmax   pmax
     comp=Z,130nm,2.5s
NVS                               pmax   pmax
     comp=Z,45nm,2.0s
NVS                               smax   smax
     comp=E,55nm,2.2s
SHL  Shillong         41.77 268  eP      P       07 31 44.1  -1.4
     comp=E,42nm,1.1s
SHL                               LR     LR
     comp=Z,24µm,19.0s
SHL  Shillong         41.77 268  eP      P       07 31 44.1  -1.4
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SHL                               pmax   pmax
     comp=Z,42nm,1.1s
SHL                               MLR    MLR
     comp=Z,24µm,19.0s
SHL  Shillong         41.77 268  eP      P       07 31 45.0  -0.5
BNDI Bandanaira       42.13 194   P      P       07 31 46.9  -1.3
     comp=Z,708nm,1.2s,comp=Z,7µm
SGKI Sangatta, Kali   42.35 213   P      P       07 31 47.4  -2.7
     comp=Z,220nm,1.0s
SBUM Sibu             42.43 223  eP      P       07 31 49.5  -1.2
     comp=Z,98nm,1.6s
SBUM                              LR     LR
     comp=Z,7µm,18.0s
RABL Rabaul           42.57 161  eP      P       07 31 50.7  -1.2
     comp=Z,92nm,0.8s
RABL                              LR     LR
     comp=Z,5µm,21.0s
ANM  Nome             42.58  32  eP      P       07 31 52.8  +1.4
     comp=Z,374nm,1.6s
ANM                               LR     LR
     comp=Z,5µm,18.0s
ANM  Nome             42.58  32  eP      P       07 31 52.8  +1.4
ANM                               pmax   pmax
     comp=Z,374nm,1.6s
ANM                               MLR    MLR
     comp=Z,5µm,18.0s
NRIK Noril'sk         42.73 336   P      P       07 31 52.6   0.0
     comp=Z,38nm,1.1s,baz=117,slow=8.2,SNR=46
NRIK                              PcP    PcP     07 33 46.0  +2.1
     comp=Z,14nm,1.0s,baz=277,slow=2.2,SNR=4.7
NRIK                              LR     LR      07 49 05.5
     comp=Z,10µm,18.7s,baz=113,slow=35
PHET Kaeng Krachan    42.80 247   P      P       07 31 54.8  +1.1
     comp=Z,25nm,1.0s,comp=Z,199nm
MK31 Makanchi Array   42.81 302  i P     P       07 31 52.4  -1.2
MK31                              pmax   pmax
     comp=Z,16nm,0.9s
MK32 Makanchi Array   42.81 302  eP      P       07 31 52.9  -0.8
MKAR Makanchi Array   42.81 302  eP      P       07 31 52.9  -0.8
     comp=Z,68nm,0.8s
MKAR                              LR     LR
     comp=Z,5µm,20.0s
MKAR Makanchi Array   42.81 302  eP      P       07 31 52.9  -0.8
MKAR                              pmax   pmax
     comp=Z,68nm,0.8s
MKAR                              MLR    MLR
     comp=Z,5µm,20.0s
MKAR Makanchi Array   42.81 302   P      P       07 31 52.9  -0.8
     comp=Z,5.6nm,0.8s,baz=88,slow=8.1,SNR=31
MKAR                              LR     LR      07 50 24.3
     comp=Z,25µm,18.8s,baz=89,slow=37
MAKZ Makanchi         43.02 302  eP      P       07 31 54.2  -1.1
     comp=Z,108nm,1.9s
MAKZ                              LR     LR
     comp=Z,30µm,19.0s
MAKZ Makanchi         43.02 302  eP      P       07 31 54.2  -1.1
MAKZ                              pmax   pmax
     comp=Z,109nm,1.9s
MAKZ                              MLR    MLR
     comp=Z,30µm,19.0s
BKB  Balikpapan       43.31 214   P      P       07 31 54.1  -3.8
     comp=Z,267nm,0.9s
BRDH Bariadhala       43.35 265   LR     LR      07 52 30.1
     comp=Z,16µm,20.1s,baz=88,slow=40
KDI  Kendari          43.53 205   P      P       07 31 57.6  -2.1
     comp=Z,114nm,1.3s,comp=Z,2µm
TTSI Tana Toraja      43.70 209   P      P       07 31 58.8  -2.2
SEM  Semipalatinsk    43.74 307d iP      P       07 31 58.5  -2.8
SEM                              i S     S       07 38 29.2  -1.9
SEM                               pmax   pmax
     comp=Z,327nm,1.0s
SEM                               smax   smax
     comp=N,2µm,6.5s
SEM                               MLR    MLR
     comp=Z,23µm,13.0s
SEM  Semipalatinsk    43.74 307⇓iP       P       07 31 58.5  -2.8
     comp=Z,327nm,1.0s
SEM                             ⇓iS      S       07 38 29.3  -1.9
     comp=Z,2µm,6.5s
SEM                              eLR     LR      07 50 25.2
     comp=Z,23µm,13.4s
MTKI Muara Teweh, K   43.96 217   P      P       07 32 00.3  -2.8
     comp=Z,120nm,0.9s
KSM  Kuching          44.29 224  eP      P       07 32 04.8  -1.0
     comp=Z,62nm,0.9s
RDOG Red Dog Mine     44.38  27  eP      P       07 32 06.0  +0.1
     comp=Z,305nm,1.6s
RDOG                              LR     LR
     comp=Z,6µm,22.0s
SPSI Sidrap Palu      44.56 208   P      P       07 32 05.5  -2.4
     comp=Z,55nm,1.2s,comp=Z,747nm
KURK Kurchatov        44.74 308  eP      P       07 32 07.7  -1.3
     comp=Z,420nm,1.8s
KURK                              LR     LR
     comp=Z,14µm,20.0s
KURK Kurchatov        44.74 308  eP      P       07 32 07.7  -1.3
KURK                              pmax   pmax
     comp=Z,420nm,1.8s
KURK                              MLR    MLR
     comp=Z,14µm,20.0s
KURK Kurchatov        44.74 308   P      P       07 32 08.0  -1.0
     SNR=61
ODAN Odare            44.79 273  eP      P       07 32 09.5  -0.5
     comp=Z,133nm,1.1s
KURBB Kurchatov Arra  44.80 308   P      P       07 32 08.9  -0.6
     comp=Z,59nm,0.8s,baz=84,slow=8.0,SNR=130
BNSI Bone             44.84 208   P      P       07 32 08.0  -2.1
     comp=Z,213nm,1.2s,comp=Z,2µm
BBSI Bau Bau          44.98 204   P      P       07 32 09.5  -1.8
CHGN Chignik          45.21  44   PFAKE          07 32 30.0  +17
CHGN                              LR     LR
     comp=Z,4µm,19.0s
SAUI Saumlaki         45.27 191  eP      P       07 32 12.7  -0.8
     comp=Z,1µm,1.5s
SAUI Saumlaki         45.27 191   P      P       07 32 13.1  -0.4
     comp=Z,560nm,1.4s
RAMN Ramite           45.38 273  eP      P       07 32 14.1  -0.6
     comp=Z,217nm,1.0s
PDGK Podgornoye       45.40 298   P      P       07 32 11.9  -2.6
PDGK                              pmax   pmax
     comp=Z,46nm,1.1s
JIRN Jiri             45.40 274  eP      P       07 32 14.7  -0.3
     comp=Z,275nm,1.1s
SHLS Shalkode         45.46 297  eP      P       07 32 11.8  -3.2
SHLS                             eS      S       07 38 52.5  -3.6
SHLS                              pmax   pmax
     comp=Z,340nm,2.3s
SHLS                              smax   smax
     comp=E,573nm,4.5s
SHLS                              MLR    MLR
     comp=Z,25µm,16.0s
SHLS Shalkode         45.46 297  eP      P       07 32 11.8  -3.2
     comp=Z,340nm,2.3s
SHLS                             eS      S       07 38 52.6  -3.6
     comp=Z,573nm,4.5s
SHLS                             eLR     LR      07 51 13.8
     comp=Z,25µm,15.5s
GUN  Gumba            45.54 275  eP      P       07 32 15.5  -0.6
     comp=Z,238nm,1.2s
BKSI Bulukumba        45.68 207   P      P       07 32 14.8  -2.0
     comp=Z,65nm,1.0s,comp=Z,688nm
UZB  Uzynbulak        45.77 297d iP      P       07 32 15.2  -2.3
UZB                              i S     S       07 39 02.4  +1.7
UZB                               pmax   pmax
     comp=Z,187nm,2.0s
UZB                               smax   smax
     comp=E,547nm,3.8s
UZB                               MLR    MLR
     comp=Z,11µm,14.0s
UZB  Uzynbulak        45.77 297⇓iP       P       07 32 15.3  -2.3
     comp=Z,187nm,2.0s
UZB                             ⇑iS      S       07 39 02.5  +1.7
     comp=Z,547nm,3.9s
UZB                              eLR     LR      07 51 36.7
     comp=Z,11µm,13.9s
PKI  Pulchoki         46.06 275  eP      P       07 32 19.6  -0.6
     comp=Z,134nm,1.3s
PKIN Phulchoki        46.07 275  eP      P       07 32 19.5  -0.7
     comp=Z,215nm,1.7s
KKN  Kakani           46.07 275  eP      P       07 32 19.9  -0.3
     comp=Z,493nm,1.7s
ZHN  Zhinishke        46.19 298d iP      P       07 32 18.8  -1.9
ZHN                               pmax   pmax
     comp=Z,196nm,2.2s
ZHN                               MLR    MLR
     comp=Z,12µm,16.0s
ZHN  Zhinishke        46.19 298⇓iP       P       07 32 18.8  -1.9
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      comp=Z,196nm,2.2s
ZHN                               eLR      LR       07 52 13.3
      comp=Z,12µm,15.6s
TRTT  Trang             46.19 241  P       P        07 32 23.8 +2.9
      comp=Z,13nm,1.3s
SATY  Saty              46.23 297 eP       P        07 32 19.2 -1.9
SATY                              eS       S        07 39 10.3 +3.0
SATY                               pmax    pmax
      comp=Z,282nm,1.9s
SATY                               smax    smax
      comp=E,479nm,2.8s
SATY                               MLR     MLR
      comp=Z,15µm,15.0s
SATY  Saty              46.23 297 eP       P        07 32 19.2 -1.9
      comp=Z,282nm,1.9s
SATY                              eS       S        07 39 10.3 +3.0
      comp=Z,479nm,2.8s
SATY                              eLR      LR       07 52 19.0
      comp=Z,15µm,14.5s
DMN   Daman             46.29 275 eP       P        07 32 21.3 -0.6
      comp=Z,382nm,1.8s
PRZ   Przheval'sk       46.38 297 eP       P        07 32 22.6 +0.3
      comp=Z,123nm,1.2s
PRZ                                LR      LR
      comp=Z,18µm,18.0s
PRZ   Przheval'sk       46.38 297 eP       P        07 32 22.6 +0.3
PRZ                                pmax    pmax
      comp=Z,123nm,1.2s
PRZ                                MLR     MLR
      comp=Z,18µm,18.0s
SVW2  Sparrevohn        46.63  37 eP       P        07 32 25.0 +1.2
      comp=Z,117nm,1.2s
TARA  Tarawa            46.99 131 eP       P        07 32 27.4 +0.2
      comp=Z,993nm,1.9s
TARA                               LR      LR
      comp=Z,14µm,21.0s
TARG  Taragay, Kyrgy    47.00 296 eP       P        07 32 26.8 -0.7
      comp=Z,101nm,1.2s
TARG                               LR      LR
      comp=Z,12µm,19.0s
CHKK  Chushkaly         47.04 299⇓iP       P        07 32 25.2 -2.1
CHKK                               pmax    pmax
      comp=Z,248nm,1.0s
CHKK  Chushkaly         47.04 299⇓iP       P        07 32 25.2 -2.1
      comp=Z,248nm,1.0s
DANN  Dangsing          47.05 276 eP       P        07 32 27.4 -0.5
      comp=Z,284nm,1.0s
PKDT  Phuket            47.11 243  P       P        07 32 29.4 +1.3
      comp=Z,14nm,0.6s
AAA   Alma-Ata          47.25 298 eP       P        07 32 28.3 -0.7
AAA                               i S      S        07 39 21.5 -0.3
AAA                                pmax    pmax
      comp=Z,222nm,0.8s
AAA                                smax    smax
      comp=N,373nm,6.4s
AAA                                MLR     MLR
      comp=Z,9µm,18.0s
AAA   Alma-Ata          47.25 298 eP       P        07 32 28.4 -0.7
      comp=Z,222nm,0.8s
AAA                              ⇓iS       S        07 39 21.6 -0.3
      comp=Z,373nm,6.4s
AAA                               eLR      LR       07 52 25.0
      comp=Z,9µm,18.5s
TNSS  Tian-Shan         47.27 298 eP       P        07 32 28.5 -1.1
TNSS                               pmax    pmax
      comp=Z,578nm,1.0s
TNSS  Tian-Shan         47.27 298 eP       P        07 32 28.6 -1.1
      comp=Z,578nm,1.0s
KDJ   Kajisay           47.34 297 eP       P        07 32 29.7 -0.2
      comp=Z,108nm,1.5s
KDJ   Kajisay           47.34 297 eP       P        07 32 29.7 -0.2
KDJ                                pmax    pmax
      comp=Z,108nm,1.5s
KULM  Kulim             47.34 238  PFAKE            07 32 40.0 +10
KULM                               LR      LR
      comp=Z,4µm,20.0s
BOK   Bokaro            47.41 270 eP       P        07 32 30.1 -0.3
BOK                                IAMs_20 IAMs_20  07 53 55.4
      comp=Z,12µm,14.9s
KOLN  Koldanda          47.42 276 eP       P        07 32 30.3 -0.4
      comp=Z,533nm,1.6s
KUU   Kurty             47.49 299d iP      P        07 32 28.6 -2.2
KUU                               eS       S        07 39 26.0 +1.0
KUU                                pmax    pmax
      comp=Z,241nm,1.1s
KUU                                smax    smax
      comp=N,326nm,5.5s
KUU                                MLR     MLR
      comp=Z,7µm,13.0s
KUU   Kurty             47.49 299⇓iP       P        07 32 28.6 -2.2
      comp=Z,241nm,1.1s
KUU                               eS       S        07 39 26.1 +1.0
      comp=Z,326nm,5.5s
KUU                               eLR      LR       07 52 59.5
      comp=Z,7µm,13.4s
IPM   Ipoh              47.68 237  PFAKE            07 32 40.0 +7.4
IPM                                LR      LR
      comp=Z,8µm,19.0s
PYUN  Piuthan           47.77 276 eP       P        07 32 33.1 -0.3
      comp=Z,567nm,1.4s
MYKOM Kota Tinggi       47.87 232  PFAKE            07 32 50.0 +16
MYKOM                              LR      LR
      comp=Z,6µm,20.0s
OHAK  Old Harbor        47.97  43 eP       P        07 32 35.2 +0.9
      comp=Z,54nm,1.0s
OHAK                               LR      LR
      comp=Z,5µm,21.0s
RSO   Redoubt South     48.03  38 eP       P        07 32 35.9 +1.0
MMRI  Maumere           48.05 203 eP       P        07 32 33.6 -1.7
      comp=Z,381nm,1.2s
MMRI  Maumere           48.05 203  P       P        07 32 33.9 -1.4
      comp=Z,297nm,1.1s,comp=Z,6µm
TPRI  Tanjung Pinang    48.13 230  P       P        07 32 32.9 -3.1
PPLA  Purkeypile        48.22  35 eP       P        07 32 37.9 +1.6
      comp=Z,305nm,1.5s
TKM2  Tokmak 2          48.26 298  P       P        07 32 37.5 +0.5
      SNR=58
TKM2  Tokmak 2          48.26 298  P       P        07 32 36.5 -0.5
TKM2                               pmax    pmax
      comp=Z,109nm,1.4s
CAST  Castle Rocks      48.27  34 eP       P        07 32 37.9 +1.3
      comp=Z,351nm,2.0s
KDAK  Kodiak Island     48.30  42 eP       P        07 32 36.9 +0.1
      comp=Z,611nm,1.9s
KDAK                               LR      LR
      comp=Z,5µm,19.0s
KDAK  Kodiak Island     48.30  42 eP       P        07 32 36.9 +0.1
KDAK                               pmax    pmax
      comp=Z,611nm,1.9s
KDAK                               MLR     MLR
      comp=Z,5µm,19.0s
KDAK  Kodiak Island     48.30  42  P       P        07 32 36.4 -0.4
      comp=Z,27nm,0.6s,baz=296,slow=4.4,SNR=14
EDFI  Ende, Flores      48.33 204  P       P        07 32 36.0 -1.6
      comp=Z,114nm,1.5s
NRN   Naryn             48.38 296 eP       P        07 32 37.4 -0.8
      comp=Z,64nm,1.3s
NRN                                LR      LR
      comp=Z,14µm,18.0s
SOEI  Soe               48.52 200 eP       P        07 32 37.4 -1.7
      comp=Z,309nm,1.1s
SOEI  Soe               48.52 200  P       P        07 32 37.5 -1.5
      comp=Z,286nm,1.2s
HOM   Homer             48.63  39 eP       P        07 32 40.4 +1.0
      comp=Z,195nm,1.0s
KZA   Kyzart            48.74 297  P       P        07 32 44.5 +3.5
      SNR=36
PBA   Port Blair        48.75 251 eP       P        07 32 40.5 -0.3
      comp=Z,118nm,1.2s
PBA   Port Blair        48.75 251 eP       P        07 32 39.3 -1.5
PBA                                IAmb    IAmb     07 33 07.7
      comp=Z,164nm,8.8s
KBK   Karagaybulak      48.79 298  P       P        07 32 41.7 +0.6
      SNR=48
BTLS  Baital            48.80 301d iP      P        07 32 38.6 -2.2
BTLS                              i S      S        07 39 45.4 +1.9
BTLS                               pmax    pmax
      comp=Z,463nm,1.3s
BTLS                               smax    smax
      comp=E,552nm,6.5s
BTLS                               MLR     MLR
      comp=Z,10µm,14.0s
BTLS  Baital            48.80 301⇓iP       P        07 32 38.6 -2.2
      comp=Z,463nm,1.2s
BTLS                             ⇑iS       S        07 39 45.4 +1.9
      comp=Z,552nm,6.5s
BTLS                              eLR      LR       07 53 40.5
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      comp=Z,10µm,14.5s
CHMS  Chumysh           48.84 298  P       P        07 32 41.0 -0.2
      SNR=16
MLY   Manley            48.84  32 eP       P        07 32 41.7 +0.8
      comp=Z,125nm,1.2s
USP   Ospenovka         48.94 299  P       P        07 32 42.3 +0.2
      SNR=39
KSH   Kashi             48.97 294⇓iP       P        07 32 45.0 +2.6
KSH                                sP      sP       07 32 53.0 +3.7
KSH                                PP      PP       07 34 41.3 +5.6
KSH                                S       S        07 39 48.8 +2.5
KSH                                ScS     ScS      07 42 33.5 -1.1
KSH                                SS      SS       07 43 17.8 +0.9
KSH                                pmax    pmax
      comp=Z,87nm,1.1s
KSH                                pmax    pmax
      comp=Z,1µm,3.8s
KSH                                LR      LR
      comp=Z,5µm,10.2s
KSH                                LR      LR
      comp=Z,3µm,10.4s
KSH                                LR      LR
      comp=Z,5µm,10.6s
FRU1  Bishkek           48.98 298 eP       P        07 32 42.6 +0.3
      comp=Z,181nm,1.3s
FRU1                               LR      LR
      comp=Z,39µm,18.0s
FRU1  Bishkek           48.98 298 eP       P        07 32 42.7 +0.3
FRU1                               pmax    pmax
      comp=Z,181nm,1.3s
FRU1                               MLR     MLR
      comp=Z,39µm,18.0s
BRLK  Bradley Lake      49.01  39 eP       P        07 32 43.0 +0.7
      comp=Z,203nm,1.4s
TRF   Thorofare Moun    49.07  34 eP       P        07 32 43.3 +0.4
      comp=Z,65nm,1.1s
TRF                                LR      LR
      comp=Z,3µm,20.0s
COLD  Coldfoot          49.08  29 eP       P        07 32 44.5 +1.9
      comp=Z,28nm,1.0s
COLD                               LR      LR
      comp=Z,4µm,21.0s
BATI  Baumata           49.11 201  P       P        07 32 42.3 -1.2
      comp=Z,141nm,1.2s
BATI  Baumata           49.11 201  P       P        07 32 42.7 -0.9
      comp=Z,272nm,1.0s,baz=235,slow=3.2,SNR=10
AAK   Ala-Archa         49.12 298  P       P        07 32 44.0 +0.4
      SNR=21
AAK   Ala-Archa         49.12 298 eP       P        07 32 43.2 -0.4
      comp=Z,32nm,1.0s
AAK   Ala-Archa         49.12 298 i P      P        07 32 44.0 +0.4
      SNR=17
AAK   Ala-Archa         49.12 298d iP      P        07 32 43.1 -0.5
AAK                                pmax    pmax
      comp=Z,69nm,1.3s
AAK                                MLR     MLR
      comp=Z,33µm,18.0s
AAK   Ala-Archa         49.12 298  P       P        07 32 43.5 -0.1
      SNR=28
AAK                                P       P        07 32 43.5 -0.1
      SNR=28
AAK   Ala-Archa         49.12 298  P       P        07 32 42.8 -0.8
      comp=Z,25nm,1.0s,baz=78,slow=7.4,SNR=30
AAK                                LR      LR       07 54 43.0
      comp=Z,37µm,18.2s,baz=58,slow=38
OTUK  Ortayu            49.19 306  P       P        07 32 43.6 -0.3
OTUK                               pmax    pmax
      comp=Z,95nm,2.3s
JOHN  Johnston Islan    49.20 100  PFAKE            07 33 00.0 +16
JOHN                               LR      LR
      comp=Z,8µm,21.0s
UCH   Uchtor            49.22 297  P       P        07 32 45.6 +0.9
      SNR=17
BWNR  Bhubaneshwar      49.23 266 eP       P        07 32 35.5 -8.9
TOLK  Toolik Lake Re    49.35  27 eP       P        07 32 46.0 +1.2
      comp=Z,234nm,1.4s
TOLK                               LR      LR
      comp=Z,4µm,19.0s
TOLK  Toolik Lake Re    49.35  27  P       P        07 32 46.1 +1.2
      baz=268
BWN   Browne            49.41  33  PFAKE            07 33 00.0 +15
BWN                                LR      LR
      comp=Z,3µm,19.0s
BVAR  Borovoye Array    49.46 312  LR      LR       07 53 34.1
      comp=Z,5µm,19.7s,baz=77,slow=36
RC01  Rabbit Creek A    49.47  37 eP       P        07 32 46.5 +0.8
      comp=Z,133nm,1.2s
RC01                               LR      LR
      comp=Z,4µm,19.0s
BRVK  Borovoye          49.52 312 eP       P        07 32 45.5 -0.8
      comp=Z,188nm,1.5s
BRVK                               LR      LR
      comp=Z,8µm,18.0s
BRVK  Borovoye          49.52 312 eP       P        07 32 45.5 -0.8
BRVK                               pmax    pmax
      comp=Z,188nm,1.5s
BRVK                               MLR     MLR
      comp=Z,8µm,18.0s
BRVK  Borovoye          49.52 312  P       P        07 32 46.1 -0.1
      SNR=72
EKS2  Erkin-Say         49.62 298  P       P        07 32 47.4  0.0
      SNR=24
PPBI  Pangkal Pinang    49.63 226  P       P        07 32 44.7 -2.8
MCK   McKinley          49.66  34 eP       P        07 32 48.1 +0.9
      comp=Z,130nm,1.2s
MCK                                LR      LR
      comp=Z,3µm,18.0s
SEW   Seward            49.70  38 eP       P        07 32 48.1 +0.6
      comp=Z,142nm,1.2s
SEW                                LR      LR
      comp=Z,4µm,20.0s
PMR   Palmer            49.72  36 eP       P        07 32 47.9 +0.3
      comp=Z,136nm,1.2s
PMR                                LR      LR
      comp=Z,4µm,20.0s
PMR   Palmer            49.72  36 eP       P        07 32 47.9 +0.3
PMR                                pmax    pmax
      comp=Z,136nm,1.2s
PMR                                MLR     MLR
      comp=Z,4µm,20.0s
RND   Reindeer          49.72  34 eP       P        07 32 48.6 +0.9
RND                                LR      LR
      comp=Z,6µm,19.0s
RND   Reindeer          49.72  34 eP       P        07 32 48.6 +0.9
RND                                MLR     MLR
      comp=Z,6µm,19.0s
KMMI  Kalianget         49.76 214  P       P        07 32 46.4 -2.1
      comp=Z,152nm,1.0s,comp=Z,1µm
PLAI  Plampang          49.78 208  P       P        07 32 46.4 -2.2
      comp=Z,179nm,1.1s
GHO   Glory Hole Cre    49.80  36 eP       P        07 32 49.4 +1.0
      comp=Z,216nm,1.2s
GHO                                LR      LR
      comp=Z,4µm,20.0s
AML   Almayashu         49.83 297  P       P        07 32 50.3 +1.0
      SNR=90
MDM   Murphy Dome       49.91  32 eP       P        07 32 50.1 +1.0
      comp=Z,231nm,1.2s
MDM                                LR      LR
      comp=Z,2µm,20.0s
LHMI  Lhok Sumawe       49.95 241  P       P        07 32 46.9 -3.1
      comp=Z,79nm,1.5s
HNR   Honiara           49.96 153  LR      LR       07 52 30.7
      comp=Z,8µm,21.5s,baz=329,slow=34
WRH   Wood River Hil    49.99  33 eP       P        07 32 50.2 +0.5
      comp=Z,134nm,1.7s
WRH                                LR      LR
      comp=Z,3µm,20.0s
KNK   Knik Glacier      50.05  37 eP       P        07 32 51.0 +0.7
      comp=Z,83nm,1.1s
KNK                                LR      LR
      comp=Z,4µm,19.0s
MTN   Manton Dam        50.07 191 eP       P        07 32 49.6 -1.1
      comp=Z,270nm,1.4s
MTN                                LR      LR
      comp=Z,3µm,20.0s
TCOL  CIGO, UAF Yank    50.07  32  P       P        07 32 51.6 +1.3
      baz=273,SNR=12
COLA  College           50.07  32 eP       P        07 32 51.2 +0.9
      comp=Z,352nm,1.8s
COLA                               LR      LR
      comp=Z,3µm,19.0s
COLA  College           50.07  32 eP       P        07 32 51.2 +0.9
COLA                               pmax    pmax
      comp=Z,352nm,1.8s
COLA                               MLR     MLR
      comp=Z,3µm,19.0s
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SML   Sawmill           50.08  36 eP       P        07 32 51.3 +0.8
      comp=Z,174nm,1.2s
SML                                LR      LR
      comp=Z,5µm,19.0s
SML   Sawmill           50.08  36 eP       P        07 32 51.3 +0.8
SML                                pmax    pmax
      comp=Z,174nm,1.2s
SML                                MLR     MLR
      comp=Z,5µm,19.0s
CCB   Clear Creek Bu    50.11  32 eP       P        07 32 51.5 +1.0
      comp=Z,108nm,1.4s
CCB                                LR      LR
      comp=Z,3µm,20.0s
SRBI  Singaraja         50.14 212  P       P        07 32 49.3 -2.1
      comp=Z,114nm,1.0s
POKR  Poker Plat Res    50.24  32  P       P        07 32 52.6 +1.0
      baz=273,SNR=78
GRJI  Gresik            50.32 216  P       P        07 32 50.5 -2.2
      comp=Z,162nm,1.1s
PSI   Prapat            50.33 237 eP       P        07 32 52.4 -0.6
      comp=Z,54nm,1.4s
PSI                                LR      LR
      comp=Z,8µm,20.0s
PSI   Prapat            50.33 237 eP       P        07 32 52.4 -0.6
PSI                                pmax    pmax
      comp=Z,54nm,1.4s
PSI                                MLR     MLR
      comp=Z,8µm,20.0s
PSI   Prapat            50.33 237  LR      LR       07 56 39.8
      comp=Z,3µm,18.7s,baz=89,slow=39
DHY   Denali Highway    50.41  34 eP       P        07 32 54.1 +1.0
      comp=Z,159nm,1.4s
DHY                                LR      LR
      comp=Z,5µm,20.0s
HDA   Harding Lake      50.49  33 eP       P        07 32 53.6 +0.1
      comp=Z,150nm,1.2s
HDA                                LR      LR
      comp=Z,4µm,19.0s
HDA   Harding Lake      50.49  33  P       P        07 32 54.0 +0.5
      baz=274,SNR=57
ILAR  Eielson Array     50.49  32  P       P        07 32 53.2 -0.2
      comp=Z,30nm,0.9s,baz=272,slow=6.1,SNR=112
ILAR                               LR      LR       07 54 09.4
      comp=Z,2µm,20.8s,baz=316,slow=36
ILB   Eielson Array     50.49  32 eP       P        07 32 53.2 -0.2
SCM   Sheep Creek Mo    50.55  36 eP       P        07 32 54.9 +0.9
      comp=Z,172nm,1.2s
SCM                                LR      LR
      comp=Z,3µm,20.0s
SCM   Sheep Creek Mo    50.55  36 eP       P        07 32 54.9 +0.9
SCM                                pmax    pmax
      comp=Z,172nm,1.2s
SCM                                MLR     MLR
      comp=Z,3µm,20.0s
MNAS  Manas             50.57 298  P       P        07 32 54.1 -0.5
MNAS                               pmax    pmax
      comp=Z,170nm,1.2s
ARSB  Arslanbob         50.58 297 eP       P        07 32 54.6 -0.1
      comp=Z,748nm,1.9s
ARSB                               LR      LR
      comp=Z,27µm,18.0s
KCSI  Kotacane, Aceh    50.59 239  P       P        07 32 51.8 -3.0
      comp=Z,18nm,0.9s
DNP   Denpasar          50.68 212  P       P        07 32 53.4 -2.0
      comp=Z,522nm,1.2s
COEN  Coen              50.69 175 eP       P        07 32 55.2 -0.3
      comp=Z,176nm,0.9s
COEN                               LR      LR
      comp=Z,5µm,22.0s
DDI   Dehra Dun         50.73 282 eP       P        07 32 54.7 -1.1
DDI                                IAmb    IAmb     07 33 00.2
      comp=Z,30nm,4.7s
BKNI  Bangkinang        50.78 233  PFAKE            07 33 10.0 +14
BKNI                               LR      LR
      comp=Z,4µm,20.0s
BSI   Banda Aceh        50.93 243  P       P        07 32 54.4 -3.0
      comp=Z,17nm,0.6s,comp=Z,25µm
JAGI  Jajag, Banyuwa    50.94 213 eP       P        07 32 56.0 -1.4
      comp=Z,172nm,1.1s
JAGI  Jajag, Banyuwa    50.94 213  P       P        07 32 55.4 -2.0
      comp=Z,156nm,1.2s
MLSI  Meulaboh, Aceh    51.01 241  P       P        07 32 55.0 -3.0
      comp=Z,83nm,1.3s
PRP   Porcupine Dome    51.01  31 eP       P        07 32 58.0 +0.4
      comp=Z,85nm,1.0s
FYU   Fort Yukon        51.05  30 eP       P        07 32 59.0 +1.4
      comp=Z,344nm,1.4s
SMLA  Simla             51.10 283 eP       P        07 32 57.0 -1.5
SMLA                               IAMs_20 IAMs_20  07 55 30.3
      comp=Z,14µm,27.0s
NGJI  Ngawi             51.20 217  P       P        07 32 56.9 -2.4
      comp=Z,81nm,2.0s
KLU   Klutina           51.26  36 eP       P        07 33 00.3 +0.9
      comp=Z,123nm,1.1s
DZA   Taraz             51.27 299 eP       P        07 32 59.1 -0.6
DZA                                pmax    pmax
      comp=Z,798nm,0.9s
DZA                                MLR     MLR
      comp=Z,9µm,15.0s
DZA   Taraz             51.27 299 eP       P        07 32 59.1 -0.6
      comp=Z,798nm,0.9s
DZA                               eLR      LR       07 55 13.2
      comp=Z,9µm,14.5s
PAX   Paxson            51.28  34 eP       P        07 33 00.5 +0.9
      comp=Z,133nm,1.6s
PAX                                LR      LR
      comp=Z,5µm,20.0s
PAX   Paxson            51.28  34 eP       P        07 33 00.5 +0.9
PAX                                pmax    pmax
      comp=Z,133nm,1.6s
PAX                                MLR     MLR
      comp=Z,5µm,20.0s
DHRM  DHARAMSHALA       51.32 285 eP       P        07 32 59.6 -0.8
DHRM                               IAMs_20 IAMs_20  07 56 02.7
      comp=Z,12µm,18.9s
DIV   Divide            51.38  37 eP       P        07 33 00.9 +0.7
      comp=Z,181nm,1.1s
DIV                                LR      LR
      comp=Z,5µm,21.0s
SMRI  Semarang          51.42 218  PFAKE            07 33 10.0 +9.0
SMRI                               LR      LR
      comp=Z,5µm,21.0s
SMRI  Semarang          51.42 218  P       P        07 32 58.7 -2.3
      comp=Z,195nm,1.3s
EYAK  Cordova Ski Ar    51.47  38 eP       P        07 33 02.2 +1.4
      comp=Z,151nm,1.0s
EYAK                               LR      LR
      comp=Z,6µm,19.0s
RIDG  Independ’e Rid    51.48  33 eP       P        07 33 01.2 +0.2
      comp=Z,261nm,1.7s
RIDG                               LR      LR
      comp=Z,4µm,20.0s
HARP  HAARP             51.50  35 eP       P        07 33 00.2 -0.9
      comp=Z,185nm,1.0s
PWJI  Pagerwojo         51.61 216  P       P        07 33 01.0 -1.4
KK31  Karatay Array     51.78 300 i P      P        07 33 03.0 -0.5
KK31                               pmax    pmax
      comp=Z,218nm,1.3s
KKAR  Karatay Array     51.78 300 eP       P        07 33 02.7 -0.8
KKAR  Karatay Array     51.78 300 eP       P        07 33 02.7 -0.8
SCRK  Sand Creek        51.83  33 eP       P        07 33 03.8 +0.1
      comp=Z,184nm,1.2s
SCRK                               LR      LR
      comp=Z,3µm,19.0s
DOT   Dot Lake          51.83  34 eP       P        07 33 04.0 +0.4
      comp=Z,107nm,1.3s
DOT                                LR      LR
      comp=Z,4µm,20.0s
PCJI  Pacitan           52.06 216  P       P        07 33 03.6 -2.1
      comp=Z,123nm,1.3s
NDI   New Delhi         52.09 280 eP       P        07 33 06.5 +0.5
UGM   Wanagama          52.13 217 eP       P        07 33 05.2 -1.1
      comp=Z,719nm,1.2s
UGM   Wanagama          52.13 217  P       P        07 33 03.6 -2.7
      comp=Z,499nm,1.3s
KRJI  Kerinci           52.38 231  P       P        07 33 05.4 -2.9
      comp=Z,132nm,1.7s
SNSI  Sinabang, Aceh    52.38 239  P       P        07 33 05.4 -2.9
      comp=Z,154nm,1.7s
IUG   Iuzhnay           52.42 299c iP      P        07 33 06.4 -2.0
IUG                               eS       S        07 40 37.0 +2.9
IUG                                pmax    pmax
      comp=Z,1µm,0.8s
IUG                                smax    smax
      comp=E,1µm,4.6s
IUG                                MLR     MLR
      comp=Z,8µm,17.0s
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IUG   Iuzhnay          52.42 299⇑iP     P        07 33 06.4  -2.0
          comp=Z,1µm,0.8s
IUG                            ⇓eS      S        07 40 37.0  +2.9
          comp=Z,1µm,4.6s
IUG                              eLR    LR       07 56 00.1
          comp=Z,8µm,16.6s
KPJI  Karang Pucung    52.42 219  P     P        07 33 06.1  -2.3
          comp=Z,153nm,1.1s
JBP   Jabalpur         52.45 272 eP     P        07 33 09.5  +0.9
JBP                              ex     x        07 36 25.8
LHSI  Lahat            52.50 227  P     P        07 33 06.4  -2.6
          comp=Z,119nm,1.4s
KLI   Kotabumi         52.56 225  P     P        07 33 06.7  -2.8
          comp=Z,110nm,1.2s,comp=Z,4µm
MDSI  Maura Dua        52.64 226  P     P        07 33 07.5  -2.6
          comp=Z,63nm,1.2s
CHM   Chimkent         52.66 299 eP     P        07 33 12.3  +2.2
CHM                              eS     S        07 40 38.9  +1.7
CHM                               pmax  pmax
          comp=Z,1µm,2.2s
CHM                               smax  smax
          comp=E,970nm,5.0s
CHM                               MLR   MLR
          comp=Z,4µm,15.0s
CHM   Chimkent         52.66 299 eP     P        07 33 12.3  +2.2
          comp=Z,1µm,2.2s
CHM                              eS     S        07 40 39.0  +1.7
          comp=Z,970nm,5.0s
CHM                              eLR    LR       07 56 07.5
          comp=Z,4µm,14.8s
MASI  Maura Aman, Be   52.72 229  P     P        07 33 08.0  -2.8
          comp=Z,302nm,1.4s
TGL   Tana Glacier     52.85  37  PFAKE          07 33 20.0  +8.7
TGL                               LR    LR
          comp=Z,5µm,20.0s
PBSI  Pulau Batu       52.87 236  P     P        07 33 09.0  -2.8
          comp=Z,80nm,1.3s
EGAK  Eagle            52.93  32 eP     P        07 33 13.0  +1.3
BALM  Baldy            53.03  37 eP     P        07 33 14.0  +1.3
          comp=Z,105nm,1.1s
BALM                              LR    LR
          comp=Z,4µm,21.0s
BALM  Baldy            53.03  37 eP     P        07 33 14.0  +1.3
BALM                              pmax  pmax
          comp=Z,105nm,1.1s
BALM                              MLR   MLR
          comp=Z,4µm,21.0s
NIL   Nilore           53.11 287 eP     P        07 33 13.7  +0.2
          comp=Z,241nm,1.4s
NIL                               LR    LR
          comp=Z,6µm,20.0s
NIL   Nilore           53.11 287 eP     P        07 33 13.7  +0.2
NIL                               pmax  pmax
          comp=Z,241nm,1.4s
NIL                               MLR   MLR
          comp=Z,6µm,20.0s
CISI  Cisompet, Garu   53.18 220  PFAKE          07 33 30.0  +16
CISI                              LR    LR
          comp=Z,3µm,21.0s
CISI  Cisompet, Garu   53.18 220  P     P        07 33 11.8  -2.4
          comp=Z,76nm,1.3s,comp=Z,5µm
GAR   Garm             53.28 295 eP     P        07 33 14.3  -0.5
          comp=Z,266nm,1.3s
GAR                               LR    LR
          comp=Z,44µm,19.0s
GAR   Garm             53.28 295 eP     P        07 33 14.3  -0.5
GAR                               pmax  pmax
          comp=Z,266nm,1.3s
GAR                               MLR   MLR
          comp=Z,44µm,19.0s
SISI  Saibi            53.29 234  P     P        07 33 12.2  -2.8
          comp=Z,32nm,1.1s
KASI  Kota Agung       53.30 225  P     P        07 33 12.5  -2.5
          comp=Z,78nm,1.2s
PPSI  Pulau Pagai      53.80 232  P     P        07 33 16.1  -2.6
DAWY  Dawson           53.81  33 eP     P        07 33 19.7  +1.5
          comp=Z,82nm,1.4s
DAWY                              LR    LR
          comp=Z,3µm,19.0s
SVE   Sverdlovsk       54.18 318ceP     P        07 33 21.4  +0.5
SVE                              eS     S        07 40 57.9  +0.6
SVE                              e               07 43 09.0
SVE                               pmax  pmax
          comp=Z,367nm,2.0s
SVE                               MLR   MLR
          comp=E,9µm,15.0s
SVE                               MLR   MLR
          comp=Z,12µm,14.0s
SVE                               MLR   MLR
          comp=N,5µm,14.0s
NGP   Nagpur           54.20 271 eP     P        07 33 20.0  -1.6
CHGR  Chuyangaron      54.25 295 eP     P        07 33 21.4  -0.5
          comp=N,285nm,0.9s
CHGR                              LR    LR
          comp=Z,38µm,19.0s
BHPL  Bhopal           54.46 274 eP     P        07 33 23.0  -0.6
EPYK  Eagle Plains     54.46  30 eP     P        07 33 24.2  +1.3
          comp=Z,393nm,1.3s
EPYK                              LR    LR
          comp=Z,4µm,20.0s
EPYK  Eagle Plains     54.46  30  P     P        07 33 23.7  +0.8
          baz=282
INK   Inuvik           55.26  27 eP     P        07 33 29.2  +0.6
          comp=Z,120nm,1.1s
INK   Inuvik           55.26  27  P     P        07 33 29.1  +0.6
          comp=Z,56nm,0.9s,baz=292,slow=6.5,SNR=92
INK                               LR    LR       07 59 26.0
          comp=Z,5µm,19.4s,baz=270,slow=39
ARU   Arti             55.39 318 eP     P        07 33 29.1  -0.6
          comp=Z,321nm,1.3s
ARU                               LR    LR
          comp=Z,10µm,18.0s
ARU   Arti             55.39 318diP     P        07 33 29.7   0.0
ARU                              eS     S        07 41 15.1  +1.5
ARU                               SSS   SSS      07 46 58.6
ARU                               pmax  pmax
          comp=Z,305nm,1.4s
ARU                               MLR   MLR
          comp=Z,12µm,16.0s
HYT   Haines Junctio   55.39  36 eP     P        07 33 31.5  +1.7
          comp=Z,230nm,1.3s
FITZ  Fitzroy Crossi   56.20 196 eP     P        07 33 36.0  +0.2
          comp=Z,180nm,1.4s
FITZ  Fitzroy Crossi   56.20 196  P     P        07 33 35.0  -0.9
          comp=Z,77nm,1.1s,baz=20,slow=9.3,SNR=23
FITZ                              LR    LR       07 58 27.7
          comp=Z,1µm,19.4s,baz=40,slow=37
HYB   Hyderabad        56.57 267 i P    P        07 33 38.0  -0.7
HYB                              ePcP   PcP      07 34 37.0  +1.8
HYB                              eS     S        07 41 32.0  +1.7
HYB                              e               07 43 24.0
HYB   Hyderabad        56.57 267 eP     P        07 33 37.7  -1.1
HYB                               IAMs_20 IAMs_20 08 01 39.9
          comp=Z,10µm,31.3s
WHY   Whitehorse       56.67  36 eP     P        07 33 40.3  +1.3
          comp=Z,120nm,1.2s
WRAB  Tennant Creek    56.71 186 eP     P        07 33 38.8  -0.7
          comp=Z,396nm,1.0s
WRAB                              LR    LR
          comp=Z,5µm,22.0s
WRAB  Tennant Creek    56.71 186ceP     P        07 33 37.7  -1.8
WRAB                              pmax  pmax
          comp=Z,515nm,1.3s
WRAB                              MLR   MLR
          comp=Z,2µm,18.0s
WR1   Warramunga Arr   56.72 186 eP     P        07 33 38.7  -0.9
          comp=Z,403nm,1.0s
WR1                              ePcP   PcP      07 34 37.2  +1.6
WRA   Warramunga Arr   56.72 186  P     P        07 33 38.7  -0.9
          comp=Z,248nm,1.0s,baz=1.6,slow=7.6,SNR=388
WRA                               PcP   PcP      07 34 37.2  +1.6
          comp=Z,42nm,0.9s,baz=359,slow=4.2,SNR=7.2
WRA                               LR    LR       07 58 10.7
          comp=Z,3µm,19.8s,baz=5.0,slow=36
WRA                               PKP2bc         08 03 44.9
          comp=Z,1.9nm,1.1s,baz=194,slow=2.9,SNR=6.5
WRA                               P4KPbc         08 10 54.6
          comp=Z,2.0nm,1.0s,baz=6.1,slow=4.4,SNR=6.0
AB31  Akbulak array    56.78 310 i P    P        07 33 38.4  -1.4
AB31                              pmax  pmax
          comp=Z,122nm,1.5s
ABKAR Akbulak array    56.78 310 eP     P        07 33 39.4  -0.4
SKAG  Skagway          56.81  37 eP     P        07 33 41.6  +1.8
          comp=Z,145nm,1.4s
SKAG                              LR    LR
          comp=Z,5µm,18.0s
CTA   Charters Tower   57.04 172  P     P        07 33 41.7  -0.1
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          comp=Z,27nm,0.9s,baz=353,slow=9.1,SNR=19
CTA                               LR    LR       07 57 50.4
          comp=Z,2µm,21.8s,baz=332,slow=36
CTAO  Charters Tower   57.04 172 eP     P        07 33 41.5  -0.3
          comp=Z,213nm,1.8s
CTAO                              LR    LR
          comp=Z,4µm,21.0s
CTAO  Charters Tower   57.04 172 eP     P        07 33 41.5  -0.3
CTAO                              pmax  pmax
          comp=Z,213nm,1.8s
CTAO                              MLR   MLR
          comp=Z,4µm,21.0s
BESE  Bessie Mountai   57.31  38 eP     P        07 33 45.5  +2.0
          comp=Z,203nm,1.4s
AKTO  Aktyubinsk       57.55 311  P     P        07 33 44.5  -0.8
AKTO                              pmax  pmax
          comp=Z,95nm,1.4s
AKTO  Aktyubinsk       57.55 311  LR    LR       08 00 20.3
          comp=Z,8µm,19.0s,baz=67,slow=38
SIT   Sitka            57.56  40 eP     P        07 33 47.1  +2.0
          comp=Z,260nm,1.4s
SIT   Sitka            57.56  40 eP     P        07 33 47.2  +2.0
SIT                               pmax  pmax
          comp=Z,260nm,1.4s
JIS   Juneau Island    57.65  39 eP     P        07 33 47.3  +1.6
          comp=Z,139nm,1.2s
MDRS  Chennai          57.65 262 eP     P        07 33 46.7  +0.4
MDRS                              IAmb  IAmb     07 34 29.0
          comp=Z,2µm,16.1s
BYL   Byron's Ledge    59.14  88  PFAKE          07 34 10.0  +13
BYL                               LR    LR
          comp=Z,4µm,22.0s
CRAG  Craig            59.26  41 eP     P        07 33 58.6  +1.5
          comp=Z,137nm,1.3s
NPOC  North of Pu‘u    59.27  88  PFAKE          07 34 10.0  +12
NPOC                              LR    LR
          comp=Z,3µm,18.0s
WRAK  Wrangell Islan   59.32  40 eP     P        07 33 58.7  +1.3
          comp=Z,194nm,1.4s
KIRV  Kirov            59.38 323  LR    LR       08 01 14.2
          comp=Z,12µm,20.2s,baz=59,slow=38
POO   Poona            59.74 271 eP     P        07 33 59.0  -2.0
POO                               IAMs_20 IAMs_20 08 01 10.3
          comp=Z,8µm,15.3s
DLBC  Dease Lake       59.74  38 eP     P        07 34 01.8  +1.3
          comp=Z,190nm,1.4s
PRGR  Permogore        60.00 327⇑iP     P        07 34 02.2  +0.2
PRGR                              pmax  pmax
          comp=Z,144nm,1.5s
KNTN  Kanton           60.16 120  PFAKE          07 34 20.0  +16
KNTN                              LR    LR
          comp=Z,5µm,20.0s
BOM   Bombay           60.38 272 eP     P        07 34 05.4  +0.1
AS31  Alice Springs    60.45 186 eP     P        07 34 04.7  -0.8
          comp=Z,21nm,1.0s
ASAR  Alice Springs    60.45 186  P     P        07 34 04.8  -0.7
          comp=Z,53nm,0.8s,baz=7.4,slow=5.7,SNR=223
ASAR                              PcP   PcP      07 34 52.0  +1.7
          comp=Z,23nm,0.9s,baz=4.5,slow=4.3,SNR=5.9
ASAR                              LR    LR       07 58 19.0
          comp=Z,3µm,21.5s,baz=12,slow=34
ASAR                              PKP2bc         08 03 39.8
          comp=Z,3.4nm,1.1s,baz=168,slow=2.2,SNR=12
ASAR                              P4KPbc         08 11 12.4
          comp=Z,1.7nm,1.1s,baz=12,slow=4.7,SNR=6.0
DIB   Dawson Inlet,    60.46  44 eP     P        07 34 06.9  +1.6
          comp=Z,315nm,1.7s
KBS   Kingsbay         60.52 350 eP     P        07 34 06.1  +0.7
          comp=Z,279nm,1.6s
KBS                               LR    LR
          comp=Z,6µm,18.0s
KBS   Kingsbay         60.52 350 eP     P        07 34 06.1  +0.7
KBS                               pmax  pmax
          comp=Z,279nm,1.6s
KBS                               MLR   MLR
          comp=Z,6µm,18.0s
MBWA  Marble Bar       60.64 201 eP     P        07 34 06.5  -0.3
          comp=Z,446nm,1.3s
BHJ   Bhuj             60.65 278 eP     P        07 34 07.6  +0.5
BHJ                               IAMs_20 IAMs_20 08 02 36.8
          comp=Z,13µm,19.9s
PALK  Pallekele        60.74 256 eP     P        07 34 07.8  -0.1
          comp=Z,50nm,1.0s
PALK  Pallekele        60.74 256 i P    P        07 34 08.7  +0.8
          SNR=12
PALK  Pallekele        60.74 256 eP     P        07 34 07.8  -0.1
PALK                              pmax  pmax
          comp=Z,50nm,1.0s
PALK  Pallekele        60.74 256  P     P        07 34 09.3  +1.4
          SNR=7.0
PALK                              P     P        07 34 09.3  +1.4
          SNR=7.0
PALK  Pallekele        60.74 256  LR    LR       08 01 45.0
          comp=Z,6µm,21.1s,baz=115,slow=37
HSPB  Hornsund (broa   61.25 348 eP     P        07 34 10.8  +0.5
HSPB                             eS     S        07 42 31.2  +1.8
HSPB                              MLR   MLR
          comp=Z,16µm,18.6s
GOA   Goa              61.41 268 eP     P        07 34 11.9  -0.4
LVZ   Lovozero         61.57 335  PFAKE          07 34 30.0  +17
LVZ                               LR    LR
          comp=Z,16µm,20.0s
LVZ   Lovozero         61.57 335 i P    P        07 34 11.7  -1.0
LVZ                               pmax  pmax
          comp=Z,27nm,1.3s
LVZ                               MLR   MLR
          comp=Z,16µm,18.0s
TMCR  Tamitsa          62.09 331 eP     P        07 34 15.9  -0.3
TMCR                              pmax  pmax
          comp=Z,157nm,1.5s
APA   Apatity          62.15 335⇓iP     P        07 34 14.2  -2.3
APA                              i               07 36 37.0
APA                              i S    S        07 42 34.0  -7.0
APA                              i               07 44 02.0
APA                               pmax  pmax
          comp=Z,12nm,0.9s
APA                               MLR   MLR
          comp=Z,20µm,18.0s
GEYT  Alibeck          62.47 298  P     P        07 34 19.9  +0.6
          comp=Z,48nm,1.0s,baz=60,slow=3.6,SNR=45
GEYT                              LR    LR       08 03 15.5
          comp=Z,11µm,19.8s,baz=45,slow=38
EIDS  Eidsvold         62.90 168 eP     P        07 34 22.3  +0.3
          comp=Z,117nm,1.1s
EIDS                              LR    LR
          comp=Z,4µm,22.0s
TRD   Trivandrum       62.93 260 eP     P        07 34 22.7  +0.2
KEV   Kevo             63.00 339 eP     P        07 34 22.3  +0.2
          comp=Z,286nm,1.9s
KEV                               LR    LR
          comp=Z,11µm,18.0s
KEV   Kevo             63.00 339 eP     P        07 34 22.3  +0.2
KEV                               pmax  pmax
          comp=Z,286nm,1.9s
KEV                               MLR   MLR
          comp=Z,11µm,18.0s
KLMR  Klimovskoe       63.00 327 eP     P        07 34 20.7  -1.6
KLMR                             e               07 36 39.0
KLMR                              pmax  pmax
          comp=Z,123nm,1.5s
KLMR  Klimovskoe       63.00 327 eP     P        07 34 20.7  -1.6
KLMR                              AMP            07 34 26.2
          comp=Z,123nm,1.6s
KLMR                             ePP    PP       07 36 39.1  -1.4
RES   Resolute Bay     63.15  14 eP     P        07 34 22.9  -0.2
          comp=Z,104nm,1.0s
RES   Resolute Bay     63.15  14 eP     P        07 34 22.9  -0.2
RES                               pmax  pmax
          comp=Z,104nm,1.0s
RES   Resolute Bay     63.15  14  LR    LR       08 04 54.5
          comp=Z,3µm,19.2s,baz=308,slow=39
BBB   Bella Bella      63.30  44 eP     P        07 34 25.9  +1.5
          comp=Z,446nm,1.6s
ARA0  ARCESS Array S   63.55 339 eP     P        07 34 25.7  -0.2
ARA0                             ePP    PP       07 36 46.3  +1.1
ARCES ARCESS Array B   63.55 339  P     P        07 34 25.7  -0.2
          comp=Z,9.5nm,0.8s,baz=55,slow=5.0,SNR=16
ARCES                             PP    PP       07 36 46.3  +1.1
          comp=Z,5.4nm,1.0s,baz=352,slow=3.7,SNR=3.7
ARCES                             LR    LR       08 05 13.3
          comp=Z,6µm,18.3s,baz=68,slow=39
GIRL  Giralia          63.78 206 eP     P        07 34 28.5  +0.7
          comp=Z,303nm,1.1s
DZM   Mont Dzumac      63.96 152 eP     P        07 34 30.3  +1.1
          comp=Z,335nm,1.3s
DZM                              eS     S        07 43 02.2  -2.7
          comp=Z,6µm,30.6s
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DZM                              eLQ    LQ       07 50 56.3
          comp=Z,10µm,33.7s
DZM                              eLR    LR       07 53 36.0
          comp=Z,12µm,24.2s
DZM   Mont Dzumac      63.96 152 eP     P        07 34 30.2  +1.0
          comp=Z,178nm,1.3s
DZM   Mont Dzumac      63.96 152  P     P        07 34 28.7  -0.5
          comp=Z,82nm,1.1s,baz=11,slow=7.2,SNR=12
DZM                               LR    LR       08 05 03.1
          comp=Z,3µm,18.2s,baz=348,slow=39
ONTNC Ouen Toro        64.18 152 eP     P        07 34 30.9  +0.4
          comp=Z,168nm,1.2s
OUENC Ouen Island, N   64.43 152 eP     P        07 34 32.7  +0.6
          comp=Z,534nm,2.0s
YKA   Yellowknife Ar   64.75  30  P     P        07 34 33.6  -0.2
          comp=Z,29nm,1.1s,baz=298,slow=6.5,SNR=97
YKA                               PKPPKP         08 03 11.6
          comp=Z,0.6nm,1.0s,baz=103,slow=3.5,SNR=4.9
YKA                               LR    LR       08 06 21.8
          comp=Z,196nm,18.5s,baz=314,slow=39
YKB5  Yellowknife Ar   64.75  30 eP     P        07 34 33.6  -0.2
PINNC Pines Island,    64.83 151  PFAKE          07 34 50.0  +15
PINNC                             LR    LR
          comp=Z,6µm,21.0s
MSVF  Nonsavu          65.44 139 eP     P        07 34 40.5  +1.6
          comp=Z,127nm,1.3s
MSVF                              LR    LR
          comp=Z,6µm,22.0s
MSVF  Nonsavu          65.44 139 eP     P        07 34 40.5  +1.6
MSVF                              pmax  pmax
          comp=Z,127nm,1.3s
MSVF                              MLR   MLR
          comp=Z,6µm,22.0s
TULEG Thule            65.45   7 eP     P        07 34 37.6  -0.6
          comp=Z,261nm,1.3s
TULEG                             LR    LR
          comp=Z,3µm,18.0s
DAG   Danmarks Havn    65.78 355⇓iP     P        07 34 40.1  -0.2
          comp=Z,189nm,1.3s
          comp=Z,3µm,19.0s
DAG   Danmarks Havn    65.78 355⇓iP     P        07 34 40.1  -0.2
DAG                               pmax  pmax
          comp=Z,360nm,1.3s
DAG                               MLR   MLR
          comp=Z,3µm,19.0s
MNCI  Minicoy          66.15 262 eP     P        07 34 43.2  -0.5
          comp=Z,129nm,0.9s
MNCI                              LR    LR
          comp=Z,6µm,19.0s
MNCY  Minicoy          66.18 262 eP     P        07 34 44.1  +0.2
MOS   Moscow           66.39 323 eP     P        07 34 41.7  -2.8
MOS                              e               07 35 09.2
MOS                              e               07 37 09.1
MOS                              eS     S        07 43 34.8  +0.9
MOS                              e               07 43 52.3
MOS                               pmax  pmax
          comp=Z,1µm,2.1s
MOS                               pmax  pmax
          comp=Z,470nm,1.9s
MOS                               MLR   MLR
          comp=E,9µm,15.0s
MOS                               MLR   MLR
          comp=Z,12µm,15.0s
VRH   Novokhopyorsk    66.59 317 eP     P        07 34 44.9  -1.0
VRH                              eS     S        07 43 31.5  -4.9
VRH                               pmax  pmax
          comp=Z,80nm,1.2s
VRH                               smax  smax
          comp=N,650nm,6.7s
VRH                               MLR   MLR
          comp=Z,12µm,15.0s
OBN   Obninsk          67.23 323 eP     P        07 34 49.8  -0.1
          comp=Z,282nm,1.4s
OBN   Obninsk          67.23 323c iP    P        07 34 50.0  +0.1
OBN                              i               07 34 54.9
OBN                              i S    S        07 43 44.7  +0.7
OBN                              eSS    SS       07 48 05.1  +2.5
OBN                               pmax  pmax
          comp=Z,346nm,2.0s
OBN                               MLR   MLR
          comp=Z,10µm,15.0s
OBN   Obninsk          67.23 323  LR    LR       08 05 49.5
          comp=Z,2µm,20.5s,baz=57,slow=37
MAK   Makhachkala      67.26 307 eP     P        07 34 46.6  -3.7
MAK                              e               07 37 14.0
MAK                              eS     S        07 43 39.4  -5.4
MAK                              eSS    SS       07 48 00.9  -2.8
MAK                               pmax  pmax
          comp=Z,247nm,0.9s
MAK                               MLR   MLR
          comp=Z,13µm,16.0s
LPSR  Galich'ya Gora   67.36 319 eP     P        07 34 50.1  -0.7
LPSR                             eS     S        07 43 43.9  -1.8
LPSR                              pmax  pmax
          comp=Z,130nm,1.2s
LPSR                              smax  smax
          comp=N,1µm,5.8s
LPSR                              MLR   MLR
          comp=Z,22µm,15.0s
LLLB  Lillooet         67.48  43 eP     P        07 34 52.5  +0.8
          comp=Z,125nm,1.1s
VORR  Voronezh         67.70 319 eP     P        07 34 51.0  -1.9
VORR                              pmax  pmax
          comp=Z,400nm,2.0s
ARMA  Armidale         67.93 169 eP     P        07 34 55.3  +0.7
          comp=Z,146nm,1.1s
ARMA                              LR    LR
          comp=Z,3µm,20.0s
VSR   Storozhevoye     67.96 318 eP     P        07 34 54.4  -0.2
VSR                              eS     S        07 43 48.6  -4.4
VSR                               pmax  pmax
          comp=Z,130nm,1.2s
VSR                               smax  smax
          comp=N,510nm,7.2s
VSR                               MLR   MLR
          comp=Z,18µm,14.0s
A04D  Lummi Island     68.00  45  P     P        07 34 56.2  +1.3
          baz=301
NLWA  Neilton Lookou   68.01  47 eP     P        07 34 56.2  +1.2
          comp=Z,240nm,1.4s
FORT  Forrest          68.14 190 eP     P        07 34 55.8   0.0
          comp=Z,187nm,0.9s
FIA0  FINESS Array S   68.18 332 eP     P        07 34 55.7  -0.1
FIA0  FINESS Array S   68.18 332 eP     P        07 34 55.7  -0.1
FINES FINESS Array B   68.18 332  P     P        07 34 55.7   0.0
          comp=Z,54nm,1.0s,baz=66,slow=4.8,SNR=40
FINES                             LR    LR       08 06 45.5
          comp=Z,9µm,20.2s,baz=42,slow=38
KULLO Kullorsuaq       68.27   5 i P    P        07 34 56.8  +0.7
          comp=Z,204nm,1.3s
KULLO Kullorsuaq       68.27   5 i P    P        07 34 56.8  +0.7
KULLO                             pmax  pmax
          comp=Z,200nm,1.3s
D03D  Eldon            68.39  46  P     P        07 34 59.1  +1.8
          baz=301,SNR=11
STKA  Stephens Creek   68.44 178 eP     P        07 34 57.3  -0.3
          comp=Z,20nm,1.2s
STKA  Stephens Creek   68.44 178 eP     P        07 34 57.3  -0.3
STKA                              pmax  pmax
          comp=Z,20nm,1.2s
STKA  Stephens Creek   68.44 178  P     P        07 34 57.3  -0.3
          comp=Z,52nm,1.0s,baz=347,slow=7.8,SNR=53
STKA                              PKPPKP P'P'df  08 03 19.2  +13
          comp=Z,1.1nm,0.8s,baz=121,slow=4.5,SNR=3.6
STKA                              LR    LR       08 05 28.7
          comp=Z,2µm,20.5s,baz=0.7,slow=36
B05A  Bryant           68.58  45  P     P        07 34 59.6  +1.1
          baz=302,SNR=9.9
D04E  Lakebay          68.76  46  P     P        07 35 01.1  +1.5
          baz=302
B06A  Marblemount      68.79  45 eP     P        07 35 00.8  +1.0
          comp=Z,234nm,1.5s
GOF   Gofitskoye       68.97 311⇓iP     P        07 35 00.1  -0.9
GOF                              eS     S        07 44 07.5  +2.3
GOF                               pmax  pmax
          comp=Z,160nm,1.7s
MORW  Morawa           69.17 202 eP     P        07 35 02.0  -0.3
          comp=Z,163nm,1.1s
F04D  Rainier, OR      69.20  48  P     P        07 35 04.2  +1.8
          baz=302
E04D  Cinebar          69.21  47  P     P        07 35 04.2  +1.8
          baz=302,SNR=11
JLN   Jalan Bani Buh   69.29 283  P     P        07 35 06.1  +2.7
          SNR=8.2
JLN                               P     P        07 35 06.1  +2.7
          SNR=8.2
WSAR  Wadi Sarin       69.32 284  P     P        07 35 05.5  +1.9
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	SNR=8.2						
WSAR	Wadi Sarin	69.32	284	LR	LR	08 08 17.9	
	comp=Z,4µm,20.5s,baz=98,slow=38						
BBOO	Buckleboo	69.40	183	*e*P	P	07 35 03.6	-0.1
	comp=Z,103nm,1.1s						
BBOO				LR	LR		
	comp=Z,4µm,20.0s						
NCK	Nalchik	69.44	309	*e*P	P	07 35 04.1	+0.1
NCK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NCK				MLR	MLR		
	comp=Z,13µm,18.0s						
C06D	Leavenworth	69.45	45	P	P	07 35 05.6	+1.6
	baz=303,SNR=8.3						
G03D	McMinnville, O	69.51	48	P	P	07 35 06.2	+1.9
	baz=302						
LON	Longmire	69.55	46	*e*P	P	07 35 05.0	+0.3
	comp=Z,71nm,1.4s						
LON				LR	LR		
	comp=Z,1µm,21.0s						
LON	Longmire	69.55	46	*e*P	P	07 35 05.0	+0.3
LON				pmax	pmax		
	comp=Z,71nm,1.4s						
LON				MLR	MLR		
	comp=Z,1µm,21.0s						
BIDO	Bidbid	69.56	285	P	P	07 35 09.0	+3.9
	SNR=6.3						
BIDO				P	P	07 35 09.0	+3.9
	SNR=6.3						
TBLG	Delisi	69.65	307	*e*P	P	07 35 05.0	-0.3
	comp=Z,308nm,1.9s						
TBLG	Delisi	69.65	307	*e*P	P	07 35 05.0	-0.3
TBLG				pmax	pmax		
	comp=Z,308nm,1.9s						
I02D	Swisshome	69.74	50	P	P	07 35 07.4	+1.6
	baz=302						
VSU	Vasula	69.75	329	*d i*P	P	07 35 05.4	-0.1
VSU				pmax	pmax		
	comp=Z,396nm,1.3s						
VSU				MLR	MLR		
	comp=Z,17µm,18.0s						
VSU	Vasula	69.75	329	*e*P	P	07 35 04.5	-1.0
VSU				IAmb	IAmb	07 35 09.0	
	comp=Z,516nm,1.4s						
KBZ	Khabaz	69.75	310	P	P	07 35 05.5	-0.3
	comp=Z,16nm,0.9s,baz=81,slow=6.9,SNR=38						
KBZ				LR	LR	08 09 45.4	
	comp=Z,6µm,18.1s,baz=50,slow=40						
SHME	Shamm	69.76	288	*i* P	P	07 35 07.0	+0.8
	SNR=5.9						
KIV	Kislovodsk	69.76	310	*e*P	P	07 35 06.2	+0.2
KIV	Kislovodsk	69.76	310	*e*P	P	07 35 05.8	-0.3
	comp=Z,121nm,1.1s						
KIV				LR	LR		
	comp=Z,11µm,18.0s						
KIV	Kislovodsk	69.76	310	⇓*i*P	P	07 35 06.3	+0.2
KIV	Kislovodsk	69.76	310	*i* P	P	07 35 06.7	+0.6
	SNR=49						
KIV	Kislovodsk	69.76	310	*e*P	P	07 35 05.8	-0.3
KIV				*e*S	S	07 44 16.1	+1.3
KIV				*e*SS	SS	07 48 45.8	+3.3
KIV				pmax	pmax		
	comp=Z,227nm,4.7s						
KIV				pmax	pmax		
	comp=Z,80nm,1.1s						
KIV				MLR	MLR		
	comp=Z,10µm,17.0s						
KIV	Kislovodsk	69.76	310	P	P	07 35 06.5	+0.4
	SNR=61						
COR	Corvallis	69.81	49	*e*P	P	07 35 07.7	+1.5
	comp=Z,245nm,1.3s						
COR	Corvallis	69.81	49	*e*P	P	07 35 07.7	+1.5
COR				pmax	pmax		
	comp=Z,245nm,1.3s						
SHA1	Shidzhatmaz	69.89	310	*i* P	P	07 35 08.2	+1.1
LTY	Liberty	69.93	46	*e*P	P	07 35 08.2	+1.1
	comp=Z,248nm,1.7s						
B08A	Colville Reser	70.09	44	*e*P	P	07 35 09.1	+1.1
	comp=Z,186nm,1.4s						
KEBM	Edson Butte	70.09	51	*e*P	P	07 35 11.7	+3.6
	comp=Z,193nm,1.2s						
MSFE	Esma-Masafi	70.11	287	P	P	07 35 09.5	+1.1
NEY	Neytrino	70.11	309	⇓*i*P	P	07 35 10.1	+1.7
NEY				MLR	MLR		
	comp=Z,4µm,16.0s						
J01E	Myrtle Point	70.19	51	P	P	07 35 10.8	+2.3
	baz=302						
H04D	Lebanon	70.19	49	P	P	07 35 10.4	+1.9
	baz=303,SNR=8.0						
F05D	White Salmon	70.22	47	P	P	07 35 10.3	+1.6
	baz=303,SNR=9.7						
I03D	Drain, OR	70.26	50	P	P	07 35 11.2	+2.3
	baz=302,SNR=11						
HATD	Hatta, Dubai	70.41	287	*i* P	P	07 35 11.8	+1.5
	SNR=7.6						
H04A	Detroit Lake	70.44	48	*e*P	P	07 35 11.3	+1.2
	comp=Z,166nm,1.2s						
SOHO	SOHO	70.47	286	P	P	07 35 13.2	+2.6
	SNR=9.1						
SOHO				P	P	07 35 13.2	+2.6
	SNR=9.1						
GNI	Garni	70.48	306	*e*P	P	07 35 11.9	+1.3
GNI	Garni	70.48	306	*e*P	P	07 35 11.1	+0.5
	comp=Z,309nm,1.8s						
GNI				LR	LR		
	comp=Z,9µm,19.0s						
GNI	Garni	70.48	306	*i* P	P	07 35 12.0	+1.4
	SNR=11						
GNI	Garni	70.48	306	*d i*P	P	07 35 11.3	+0.7
GNI				pmax	pmax		
	comp=Z,579nm,2.3s						
GNI				MLR	MLR		
	comp=Z,26µm,19.0s						
GNI	Garni	70.48	306	P	P	07 35 12.3	+1.7
	SNR=34						
ASHO	Ashiyiah	70.54	287	*i* P	P	07 35 11.9	+0.8
	SNR=8.4						
ASHO	Ashiyiah	70.54	287	P	P	07 35 14.8	+3.7
	SNR=5.0						
ASHO				P	P	07 35 14.8	+3.7
	SNR=5.0						
K02D	Willamette Mer	70.60	51	P	P	07 35 12.7	+1.5
	baz=303,SNR=8.8						
G05D	Wamic, OR	70.65	48	P	P	07 35 13.5	+2.1
	baz=303,SNR=11						
BSY	Bisya	70.70	284	P	P	07 35 19.0	+6.9
	SNR=7.4						
I04A	Tendick Farm,	70.78	49	P	P	07 35 13.7	+1.5
	baz=303,SNR=18						
E07A	Sunnyside	70.78	46	*e*P	P	07 35 13.7	+1.5
	comp=Z,221nm,1.4s						
SUMG	Summit	70.82	359	*e*P	P	07 35 12.6	+0.1
	comp=Z,290nm,1.2s						
SUMG				LR	LR		
	comp=Z,4µm,18.0s						
SUMG	Summit	70.82	359	⇓*i*P	P	07 35 13.2	+0.8
	comp=Z,746nm,1.2s						
SUMG	Summit	70.82	359	⇓*i*P	P	07 35 13.2	+0.8
SUMG				pmax	pmax		
	comp=Z,750nm,1.2s						
FAQ	Al Faqa, Dubai	70.87	287	*i* P	P	07 35 13.6	+0.6
	SNR=7.5						
L02E	Cave Junction	70.93	51	P	P	07 35 14.8	+1.7
	baz=303,SNR=6.0						
C09A	Chrisman Ranch	70.99	44	*e*P	P	07 35 14.4	+1.0
	comp=Z,186nm,1.3s						
D08A	Wollman Farm,	71.04	45	*e*P	P	07 35 14.7	+1.0
	comp=Z,156nm,1.3s						
MHTO	MHTO	71.05	282	P	P	07 35 15.0	+0.8
	SNR=32						
MHTO				P	P	07 35 15.0	+0.8
	SNR=32						
HAWA	Hanford	71.06	46	*e*P	P	07 35 15.2	+1.3
	comp=Z,150nm,1.4s						
HUMO	Hull Mountain	71.09	51	*e*P	P	07 35 15.4	+1.3
	comp=Z,219nm,1.9s						
F07A	Phinny Hill Vi	71.11	46	*e*P	P	07 35 14.8	+0.7
	comp=Z,150nm,1.2s						
ALNE	Al Ain	71.12	286	*i* P	P	07 35 15.2	+0.6
	SNR=7.5						
I05D	Terrebonne, OR	71.13	48	P	P	07 35 15.8	+1.5
	baz=303,SNR=16						
J04D	Umpqua Nationa	71.27	50	P	P	07 35 17.3	+1.8
	baz=303,SNR=8.0						
E08A	Dider Farm, El	71.28	46	*e*P	P	07 35 16.0	+0.9
	comp=Z,144nm,1.4s						
NEW	Newport	71.36	43	*e*P	P	07 35 16.0	+0.3
	comp=Z,125nm,1.2s						
NEW	Newport	71.36	43	*e*P	P	07 35 16.0	+0.3
NEW				pmax	pmax		
	comp=Z,125nm,1.2s						
NEW	Newport	71.36	43	P	P	07 35 17.0	+1.3
	baz=305,SNR=47						
KHMM	Horse Mountain	71.54	53	*e*P	P	07 35 18.3	+1.2
	comp=Z,189nm,1.5s						
CLDR	Caldiran	71.55	305	*e*P	P	07 35 18.2	+1.0
BATM	Batumi	71.64	308	*e*P	P	07 35 17.8	+0.4
IZAR	Zarasai	71.65	327	*e*P	P	07 35 17.0	-0.2
IZAR				IAmb	IAmb	07 35 20.8	
	comp=Z,50nm,1.2s						
PINE	Pine Mountain	71.67	49	*e*P	P	07 35 18.9	+1.0
	comp=Z,263nm,1.2s						
MICGM	Minsk	71.69	325	⇑*i*P	P	07 35 17.0	-0.5
MICGM				PM		07 35 20.0	
	comp=Z,0.5nm,1.5s						
MICGM				*e*PcP	PcP	07 35 40.0	+3.4
MICGM				*e*PP	PP	07 37 59.0	+2.9
MICGM				*e*PPP	PPP	07 39 40.0	
MICGM				*e*PsP		07 41 23.0	
MICGM				*e*S	S	07 44 36.0	-0.7
MICGM				*e*PS	PnS	07 45 06.0	+0.3
MICGM				*e*SS	SS	07 49 10.0	-1.4
MICGM				*e*LQ	LQ	08 00 28.0	
MICGM				*e*LR	LR	08 06 30.0	
MICGM				LRM	MLR	08 10 20.0	
	comp=Z,20nm,14.0s						
MICGM				LRM	MLR	08 10 23.0	
	comp=E,11nm,16.0s						
MNK	Minsk	71.69	325	⇑*i*P	P	07 35 17.0	-0.5
MNK				*e*		07 35 40.0	
MNK				*e*		07 37 59.0	
MNK				*e*PPP	PPP	07 39 40.0	
MNK				*e*S	S	07 44 36.0	-0.7
MNK				*e*SS	SS	07 49 10.0	-1.4
MNK				pmax	pmax		
	comp=Z,490nm,1.5s						
MNK				MLR	MLR		
	comp=Z,21µm,14.0s						
MNK				MLR	MLR		
	comp=E,11µm,16.0s						
IDID	Didziasalis	71.70	326	*e*P	P	07 35 17.2	-0.3
IDID				IAmb	IAmb	07 35 21.2	
	comp=Z,41nm,1.1s						
L04D	Klamath Falls	71.70	51	P	P	07 35 19.5	+1.5
	baz=304,SNR=18						
YBH	Yreka Blue Hor	71.72	51	*e*P	P	07 35 19.0	+1.0
	comp=Z,157nm,1.5s						
YBH	Yreka Blue Hor	71.72	51	*e*P	P	07 35 19.0	+1.0
YBH				pmax	pmax		
	comp=Z,157nm,1.5s						
SOC	Sochi	71.77	311	*c i*P	P	07 35 18.8	+0.6
SOC				*e*PPP	PPP	07 39 39.6	
SOC				*e*S	S	07 44 28.5	-9.5
SOC				pmax	pmax		
	comp=Z,48nm,1.2s						
SOC				MLR	MLR		
	comp=Z,5µm,13.0s						
BCA	Borcka	71.77	308	*e*P	P	07 35 18.5	+0.2
BCA	Borcka	71.77	308	⇑*i*P	P	07 35 18.9	+0.6
J05D	Fort Rock, OR	71.78	49	P	P	07 35 20.4	+2.0
	baz=304,SNR=26						
E09A	Wood Farm, Sta	71.79	45	*e*P	P	07 35 19.4	+1.2
	comp=Z,192nm,1.3s						
SENK	Senkaya-Erzuru	71.80	307	*e*P	P	07 35 19.1	+0.4
ISAL	Salakas	71.81	327	*e*P	P	07 35 17.9	-0.3
ISAL				IAmb	IAmb	07 35 23.1	
	comp=Z,81nm,1.2s						
M02C	Callahan	71.81	52	P	P	07 35 20.9	+2.3
	baz=303,SNR=16						
K04D	Chiloquin, OR	71.82	50	P	P	07 35 20.5	+1.8
	baz=304,SNR=8.4						
IIGN	Ignalina	71.91	326	*e*P	P	07 35 18.7	-0.1
IIGN				IAmb	IAmb	07 35 22.5	
	comp=Z,56nm,1.2s						
KMRM	Mail Ridge	71.91	53	*e*P	P	07 35 20.7	+1.5
	comp=Z,124nm,1.4s						
AGRB	Hanur-Agry	71.92	306	*e*P	P	07 35 20.4	+1.0
NACGM	Naroch	71.94	326	*e*P	P	07 35 19.0	0.0
NACGM				*e*P	pP	07 35 20.0	-4.0
NACGM				PM		07 35 23.0	
	comp=Z,0.2nm,1.0s						
NACGM				*e*PP	PP	07 38 13.0	+15
NACGM				*e*PPP	PPP	07 39 20.0	
NACGM				*e*S	S	07 44 39.0	-0.5
NACGM				*e*SS	SS	07 49 06.0	-9.1
NACGM				*e*SSS	SSS	07 53 30.0	
NACGM				*e*LQ	LQ	08 00 12.0	
NACGM				*e*LR	LR	08 03 04.0	
NACGM				LRM	MLR	08 09 44.0	
	comp=Z,15nm,15.0s						
NACGM				LRM	MLR	08 09 56.0	
	comp=E,14nm,16.0s						
NACGM				LRM	MLR	08 10 05.0	
	comp=N,12nm,16.0s						
DQM	DQM	71.96	282	P	P	07 35 20.0	+0.3
	SNR=12						
DQM				P	P	07 35 20.0	+0.3
	SNR=12						
G08A	Pilot Rock	72.01	47	*e*P	P	07 35 21.5	+1.8
	comp=N,160nm,1.6s						
SCO	Scoresbysund	72.09	354	*e*P	P	07 35 20.7	+1.1
	comp=N,246nm,1.5s						
SCO	Scoresbysund	72.09	354	*i* P	P	07 35 20.2	+0.6
	comp=N,269nm,1.6s						
SCO	Scoresbysund	72.09	354	*i* P	P	07 35 20.2	+0.6
SCO				pmax	pmax		
	comp=Z,270nm,1.6s						
SLIT	Slitere, Latvi	72.10	330	*e*P	P	07 35 17.8	-2.0
SLIT				IAmb	IAmb	07 35 22.8	
	comp=Z,751nm,1.3s						
N02D	Trinity Center	72.14	52	P	P	07 35 22.1	+1.6
	baz=304,SNR=15						
VANB	Van	72.20	305	*e*P	P	07 35 22.1	+1.1
M04C	Macdoel	72.23	51	P	P	07 35 23.0	+1.8
	baz=304,SNR=33						
KCPM	Cahto Peak	72.29	54	*e*P	P	07 35 24.7	+3.2
	comp=Z,247nm,1.4s						
I07A	Izee	72.37	48	*e*P	P	07 35 24.2	+2.2
	comp=Z,115nm,1.4s						
CAN	Canberra	72.39	172	PFAKE		07 35 30.0	+8.2
CAN				LR	LR		
	comp=Z,3µm,20.0s						
KOPR	Koprukoy-ERZUR	72.43	307	*e*P	P	07 35 23.4	+1.0
MLAZ	Malazgirt-MUS	72.44	306	*e*P	P	07 35 23.7	+1.2
ANN	Anapa	72.45	313	*e*P	P	07 35 21.0	-1.2
ANN				*e*		07 38 02.1	
ANN				*e*S	S	07 44 46.6	+1.0
ANN				pmax	pmax		
	comp=Z,238nm,2.0s						
WDC	Whiskeytown Da	72.46	52	*e*P	P	07 35 23.6	+1.2
	comp=Z,142nm,1.4s						
WDC	Whiskeytown Da	72.46	52	*e*P	P	07 35 23.6	+1.2
WDC				pmax	pmax		
	comp=Z,143nm,1.4s						
NWAO	Narrogin (SRO)	72.47	199	*e*P	P	07 35 22.1	-0.1
	comp=Z,186nm,1.1s						
NWAO	Narrogin (SRO)	72.47	199	*e*P	P	07 35 22.1	-0.1
NWAO				pmax	pmax		
	comp=Z,186nm,1.1s						
NWAO	Narrogin (SRO)	72.47	199	P	P	07 35 22.5	+0.2
	SNR=8.4						
NWAO				P	P	07 35 22.5	+0.2
	SNR=8.4						
NWAO	Narrogin (SRO)	72.47	199	LR	LR	08 06 41.2	
	comp=Z,2µm,21.1s,baz=244,slow=35						
CHOM	Cayeli-Rize	72.51	308	*e*P	P	07 35 24.2	+1.5
O02D	Mt. Diablo Mer	72.53	53	P	P	07 35 24.7	+1.8
	baz=304,SNR=17						
AKDM	Akdamar-Van	72.61	305	*e*P	P	07 35 23.0	-0.5
F10A	Beach Ranch, E	72.62	45	*e*P	P	07 35 24.5	+1.1
	comp=Z,83nm,1.3s						
O03E	Paynes Creek	73.09	52	P	P	07 35 27.1	+0.9
	baz=304,SNR=29						
GURO	Guroymak-BITLI	73.11	306	*e*P	P	07 35 24.6	-1.8
MOD	Modoc Plateau	73.12	50	*e*P	P	07 35 27.7	+1.3
	comp=Z,158nm,1.5s						
VRTB	Varto-Mus	73.14	306	*e*P	P	07 35 27.7	+1.1
KTUT	Trabzon	73.19	309	*e*P	P	07 35 24.8	-1.9
BMO	Blue Mountains	73.22	46	*e*P	P	07 35 28.0	+1.1
	comp=Z,129nm,1.2s						
BMO				LR	LR		
	comp=Z,2µm,19.0s						
GDXM	Geysers	73.28	54	*e*P	P	07 35 28.9	+1.5
	comp=Z,171nm,1.6s						
GDXM				LR	LR		
	comp=Z,3µm,21.0s						
BAYT	Aydıntepe-Bayb	73.29	308	*e*P	P	07 35 28.6	+1.1
PBUR	Paburg	73.32	329	*e*P	P	07 35 26.7	-0.4
PBUR				IAmb	IAmb	07 35 30.3	
	comp=Z,381nm,1.3s						
J08A	Circle Bar Ran	73.40	48	*e*P	P	07 35 29.0	+1.0
	comp=Z,210nm,1.4s						
AKASG	Malin Array Be	73.41	321	P	P	07 35 27.6	-0.2
	comp=Z,28nm,0.9s,baz=47,slow=6.4,SNR=55						
AKASG				LR	LR	08 10 34.3	
	comp=Z,13µm,18.1s,baz=50,slow=38						
AKBB	Malin Array Si	73.41	321	*e*P	P	07 35 27.7	-0.1
	comp=Z,318nm,1.8s						
KIEV	Kiev	73.42	321	*e*P	P	07 35 27.7	-0.1
	comp=Z,287nm,1.7s						
KIEV				LR	LR		
	comp=Z,15µm,19.0s						
KIEV	Kiev	73.42	321	⇑*i*P	P	07 35 27.8	0.0
KIEV	Kiev	73.42	321	*i* P	P	07 35 27.5	-0.3
	SNR=36						
KIEV	Kiev	73.42	321	*e*P	P	07 35 27.7	-0.1
KIEV				pmax	pmax		
	comp=Z,287nm,1.7s						
KIEV				MLR	MLR		
	comp=Z,15µm,19.0s						
MZR	Muzera	73.44	286	P	P	07 35 31.7	+3.3
	SNR=5.9						
MZR				P	P	07 35 31.7	+3.3
	SNR=5.9						
YEDI	Yedisu-Bingol	73.57	307	*e*P	P	07 35 28.8	-0.4
NB2	NORSAR Subarra	73.68	336	P	P	07 35 28.7	-0.6
	comp=Z,356nm,1.4s,baz=40,slow=6.2						
NB2	NORSAR Subarra	73.68	336	P	P	07 35 28.7	-0.6
	baz=40,slow=6.2						
NB200	NORSAR Array S	73.68	336	*e*P	P	07 35 29.1	-0.2
NB200				*e*PP	PP	07 38 14.3	+1.4
NOA	NORSAR Array B	73.68	336	P	P	07 35 29.1	-0.2
	comp=Z,46nm,1.0s,baz=40,slow=5.8,SNR=66						
NOA				PP	PP	07 38 14.3	+1.4
	comp=Z,6.0nm,1.0s,baz=42,slow=8.6,SNR=4.4						
NOA				LR	LR	08 10 43.6	
	comp=Z,10µm,19.1s,baz=50,slow=38						
ORV	Oroville	73.69	53	*e*P	P	07 35 30.5	+0.8
	comp=Z,101nm,1.3s						
ORV	Oroville	73.69	53	*e*P	P	07 35 30.5	+0.8
ORV				pmax	pmax		
	comp=Z,101nm,1.3s						
BNGB	Bingl	73.74	307	*e*P	P	07 35 32.1	+2.0
WVOR	Wild Horse Val	73.83	49	*e*P	P	07 35 31.4	+0.8
	comp=Z,225nm,1.5s						
SVAN	Silvan-Diyarba	73.88	306	*e*P	P	07 35 31.1	+0.3
ILULI	Ilulissat	73.93	4	*e*P	P	07 35 31.0	+0.5
	comp=Z,242nm,1.6s						
ILULI				LR	LR		
	comp=Z,3µm,20.0s						
ILULI	Ilulissat	73.93	4	*i* P	P	07 35 31.7	+1.2
	comp=Z,261nm,1.6s						
	comp=Z,3µm,16.0s						
ILULI	Ilulissat	73.93	4	*i* P	P	07 35 31.7	+1.2
ILULI				pmax	pmax		
	comp=Z,260nm,1.6s						
ILULI				MLR	MLR		
	comp=Z,3µm,16.0s						
MSO	Missoula	73.95	43	*e*P	P	07 35 32.0	+0.8
	comp=Z,128nm,1.4s						
MSO	Missoula	73.95	43	P	P	07 35 32.2	+1.0
	baz=307						
SUW	Suwalki	74.12	327	*e*P	P	07 35 32.0	+0.1
SUW				*e*S	S	07 45 05.9	+1.6
SUW	Suwalki	74.12	327	*e*P	P	07 35 32.1	+0.2
	comp=Z,166nm,1.3s						
SUW				LR	LR		
	comp=Z,6µm,20.0s						
SUW	Suwalki	74.12	327	*e*P	P	07 35 32.0	+0.1
SUW				*e*S	S	07 45 05.9	+1.6
BEKR	Beckworth	74.24	52	*e*P	P	07 35 33.5	+0.3
	comp=Z,130nm,1.2s						
SIM	Simferopol'	74.28	315	*c i*P	P	07 35 32.1	-0.9
SIM				*i* S	S	07 45 08.0	+1.6
SIM				pmax	pmax		
	comp=Z,156nm,1.7s						
SIM				MLR	MLR		
	comp=Z,7µm,15.0s						
TOO	Toolangi	74.30	175	*e*P	P	07 35 33.7	+0.7
	comp=Z,97nm,1.2s						
TOO				LR	LR		
	comp=Z,4µm,22.0s						
TOO	Toolangi	74.30	175	*e*P	P	07 35 33.7	+0.7
TOO				pmax	pmax		
	comp=Z,97nm,1.2s						
TOO				MLR	MLR		
	comp=Z,4µm,22.0s						
AFDM	Forest Hills D	74.38	53	*e*P	P	07 35 35.0	+1.3
	comp=Z,127nm,1.4s						
FFC	Flin Flon	74.70	32	*e*P	P	07 35 36.0	+0.7
	comp=Z,95nm,1.0s						
FFC	Flin Flon	74.70	32	*e*P	P	07 35 36.0	+0.7
FFC				pmax	pmax		
	comp=Z,95nm,1.0s						
MAZI	Mazidag	74.76	305	*e*P	P	07 35 36.6	+0.5
RUBR	Rubicon Trail	74.84	52	*e*P	P	07 35 37.5	+0.8
	comp=Z,134nm,1.2s						
FCC	Fort Churchill	74.85	26	*e*P	P	07 35 36.0	0.0
	comp=Z,175nm,1.4s						
FCC	Fort Churchill	74.85	26	*e*P	P	07 35 36.0	0.0
FCC				pmax	pmax		
	comp=Z,175nm,1.4s						
PAHR	Pah Rah Range	74.95	52	*e*P	P	07 35 38.0	+0.8
	comp=Z,131nm,1.2s						
VCNR	Virginia City	75.02	52	*e*P	P	07 35 38.8	+1.2
	comp=Z,102nm,1.3s						
PNTR	Pine Nut	75.17	52	*e*P	P	07 35 39.5	+0.9
	comp=Z,215nm,1.4s						
HRY	Holter Researc	75.17	42	*e*P	P	07 35 39.2	+0.8
DMTO	DMTO	75.23	281	P	P	07 35 43.0	+4.1
	SNR=5.6						
DMTO				P	P	07 35 43.0	+4.1
	SNR=5.6						
KONO	Kongsberg	75.27	336	*e*P	P	07 35 39.1	+0.7
	comp=Z,143nm,1.5s						
KONO				LR	LR		
	comp=Z,11µm,19.0s						
KONO	Kongsberg	75.27	336	*e*P	P	07 35 39.1	+0.7
KONO				pmax	pmax		
	comp=Z,143nm,1.5s						
KONO				MLR	MLR		
	comp=Z,11µm,19.0s						
CMB	Columbia Colle	75.28	53	*e*P	P	07 35 39.8	+0.8
	comp=Z,164nm,1.4s						
CMB	Columbia Colle	75.28	53	*e*P	P	07 35 39.8	+0.8
CMB				pmax	pmax		
	comp=Z,164nm,1.4s						
SAO	San Andreas Ge	75.32	55	*e*P	P	07 35 40.0	+0.8
	comp=Z,100nm,1.4s						
SAO	San Andreas Ge	75.32	55	*e*P	P	07 35 40.0	+0.8
SAO				pmax	pmax		
	comp=Z,100nm,1.4s						
KVT	Kavak	75.44	311	*e*P	P	07 35 39.8	0.0
EGMT	Eagleton	75.45	40	*e*P	P	07 35 40.4	+0.5
	comp=Z,252nm,1.0s						
EGMT				LR	LR		
	comp=Z,2µm,19.0s						
EGMT	Eagleton	75.45	40	P	P	07 35 41.3	+1.4
	baz=309						
YERR	Yerington	75.46	52	*e*P	P	07 35 40.8	+0.6
	comp=Z,204nm,1.3s						
SVSK	Karacayir	75.53	309	*e*P	P	07 35 41.4	+1.1
TOKT	Tokat	75.58	310	*e*P	P	07 35 42.1	+1.4
DLMT	Dillon	75.59	44	*e*P	P	07 35 41.5	+0.7
	comp=Z,187nm,1.2s						
WAKR	Walker	75.61	53	*e*P	P	07 35 41.9	+0.8
	comp=Z,169nm,1.4s						
WAKR				LR	LR		
	comp=Z,2µm,19.0s						
HLID	Hailey	75.66	46	*e*P	P	07 35 42.0	+0.7
	comp=Z,90nm,1.2s						
HLID				LR	LR		
	comp=Z,2µm,19.0s						
HLID	Hailey	75.66	46	P	P	07 35 42.9	+1.7
	baz=308						
MCMT	McKenzie Canyo	75.78	44	*e*P	P	07 35 43.2	+1.2
URFA	Urfa	75.82	306	*e*P	P	07 35 43.1	+0.9
KIS	Kishinev	75.94	319	⇑*i*P	P	07 35 41.0	-1.5
	comp=Z,500nm,2.0s						
KIS	Kishinev	75.94	319	*e*PcP	PcP	07 35 56.0	+1.1

KIS	**Kishinev**	**75.94**	**319**	*e*PP	PP	07 38 48.0	+16
KIS	**Kishinev**	**75.94**	**319**	⇑*i*P	**P**	**07 35 41.0**	**-1.5**
KIS				*e*		07 35 56.0	
KIS				*e*		07 40 24.0	
KIS				*e*S	**S**	**07 45 22.0**	**-2.8**
KIS				*e*		07 45 42.0	
KIS				*e*		07 46 14.0	
KIS				pmax	pmax		
	comp=Z,500nm,2.0s						
KIS				MLR	MLR		
	comp=Z,18µm,16.0s						
BOZ	**Bozeman (W)**	**75.98**	**43**	*e*P	**P**	**07 35 44.1**	**+1.1**
	comp=Z,145nm,1.1s						
BOZ				LR	LR		
	comp=Z,2µm,19.0s						
BOZ	**Bozeman (W)**	**75.98**	**43**	P	**P**	**07 35 44.3**	**+1.3**
	baz=309						
DARE	**Darende-Malaty**	**76.02**	**308**	*e*P	**P**	**07 35 44.0**	**+0.7**
RYN	**Ryan**	**76.12**	**52**	*e*P	**P**	**07 35 44.9**	**+0.9**
	comp=Z,157nm,1.3s						
KVN	**Kaiserville**	**76.14**	**52**	*e*P	**P**	**07 35 44.9**	**+0.8**
	comp=Z,178nm,1.1s						
KVN	**Kaiserville**	**76.14**	**52**	*e*P	**P**	**07 35 44.9**	**+0.8**
KVN				pmax	pmax		
	comp=Z,178nm,1.1s						
SFJD	**Kangerlussuaq**	**76.16**	**4**	*e*P	**P**	**07 35 44.0**	**+0.6**
	comp=Z,149nm,1.4s						
SFJD	**Kangerlussuaq**	**76.16**	**4**	*i* P	**P**	**07 35 43.6**	**+0.2**
	comp=Z,98nm,1.3s						
SFJD	**Kangerlussuaq**	**76.16**	**4**	*e*P	**P**	**07 35 44.0**	**+0.6**
SFJD				pmax	pmax		
	comp=Z,149nm,1.4s						
SFJD	**Kangerlussuaq**	**76.16**	**4**	P	**P**	**07 35 43.0**	**-0.4**
	comp=Z,29nm,1.0s,baz=1.9,slow=6.4,SNR=10						
SFJD				LR	LR	08 08 35.6	
	comp=Z,2µm,21.8s,baz=346,slow=35						
MDPB	**Devils Postpil**	**76.35**	**53**	*e*P	**P**	**07 35 46.5**	**+1.1**
	comp=Z,104nm,1.3s						
NV01	**Mina Array Sit**	**76.38**	**52**	*e*P	**P**	**07 35 45.6**	**+0.1**
NVAR	**Mina Array Bea**	**76.38**	**52**	P	**P**	**07 35 45.6**	**+0.1**
	comp=Z,60nm,0.9s,baz=293,slow=2.4,SNR=8.5						
DGAR	**Diego Garcia**	**76.40**	**250**	*e*P	**P**	**07 35 45.8**	**+0.2**
	comp=Z,97nm,0.9s						
DGAR				LR	LR		
	comp=Z,3µm,20.0s						
DGAR	**Diego Garcia**	**76.40**	**250**	*e*P	**P**	**07 35 45.8**	**+0.2**
DGAR				pmax	pmax		
	comp=Z,97nm,0.9s						
DGAR				MLR	MLR		
	comp=Z,3µm,20.0s						
OMMB	**Old Mammoth Mi**	**76.41**	**53**	*e*P	**P**	**07 35 46.9**	**+1.0**
	comp=Z,120nm,1.4s						
MLAC	**Mammoth, Mammo**	**76.51**	**53**	P	**P**	**07 35 48.1**	**+1.8**
	baz=306,SNR=21						
LVV	**L'vov**	**76.53**	**323**	*e*P	**P**	**07 35 46.3**	**+0.5**
LVV				*e*S	**S**	**07 45 28.8**	**-2.4**
LVV				MLR	MLR		
	comp=Z,5µm,16.0s						
QLMT	**Earthquake Lak**	**76.57**	**44**	*e*P	**P**	**07 35 47.3**	**+0.9**
BEL	**Belsk**	**76.67**	**326**	*e*P	**P**	**07 35 47.6**	**+1.0**
BEL				*e*S	**S**	**07 45 34.3**	**+1.7**
BEL	**Belsk**	**76.67**	**326**	*e*P	**P**	**07 35 47.6**	**+1.0**
BEL				*e*S	**S**	**07 45 34.3**	**+1.7**
PAGB	**Antelope Grade**	**76.70**	**55**	*e*P	**P**	**07 35 49.5**	**+2.3**
	comp=Z,208nm,1.3s						
ABTO	**Aybut**	**76.73**	**282**	P	**P**	**07 35 50.1**	**+2.5**
	SNR=5.8						
YHB	**Horse Butte**	**76.75**	**44**	*e*P	**P**	**07 35 48.7**	**+1.2**
	comp=Z,114nm,1.1s						
BSD	**Bornholm Skovb**	**76.79**	**331**	⇑*i*P	**P**	**07 35 47.3**	**+0.1**
	comp=Z,163nm,1.4s						
	comp=Z,8µm,15.0s						
BSD	**Bornholm Skovb**	**76.79**	**331**	⇑*i*P	**P**	**07 35 47.3**	**+0.1**
BSD				pmax	pmax		
	comp=Z,160nm,1.4s						
BSD				MLR	MLR		
	comp=Z,8µm,15.0s						
ILGA	**Ilgaz**	**76.86**	**312**	*e*P	**P**	**07 35 48.8**	**+0.6**
	comp=Z,363nm,1.9s						
ILGA				LR	LR		
	comp=Z,5µm,18.0s						
ELK	**Elko**	**76.88**	**49**	*e*P	**P**	**07 35 49.3**	**+0.9**
	comp=Z,146nm,1.5s						
ELK				LR	LR		
	comp=Z,2µm,21.0s						
YHH	**Holmes Hill**	**76.91**	**43**	*e*P	**P**	**07 35 49.5**	**+1.0**
	comp=Z,101nm,1.3s						
YHH				LR	LR		
	comp=Z,2µm,18.0s						
GCMT	**Greycliff**	**76.92**	**42**	*e*P	**P**	**07 35 49.6**	**+1.3**
YMR	**Madison River**	**76.92**	**44**	*e*P	**P**	**07 35 49.5**	**+1.1**
	comp=Z,154nm,1.3s						
VOG	**Valley Oaks Go**	**76.93**	**54**	P	**P**	**07 35 49.4**	**+1.0**
	baz=306						
GAZ	**Gaziantep**	**77.02**	**307**	*e*P	**P**	**07 35 51.0**	**+2.1**
KMRS	**Kahramanmaras**	**77.02**	**307**	*e*P	**P**	**07 35 47.9**	**-1.0**
RAO	**Raoul Island**	**77.04**	**143**	PFAKE		07 36 00.0	+11
RAO				LR	LR		
	comp=Z,6µm,19.0s						
YNR	**Norris Junctio**	**77.05**	**43**	*e*P	**P**	**07 35 52.4**	**+3.1**
	comp=Z,253nm,1.7s						
PRAR	**RASCA**	**77.06**	**320**	⇑*i*P	**P**	**07 35 50.0**	**+1.1**
SMMC	**Simmler**	**77.12**	**56**	P	**P**	**07 35 51.3**	**+1.8**
	baz=306,SNR=7.8						
YFT	**Old Faithful**	**77.13**	**44**	*e*P	**P**	**07 35 53.1**	**+3.4**
	comp=Z,151nm,1.3s						
YFT				LR	LR		
	comp=Z,3µm,19.0s						
GKP	**Gorka Klasztor**	**77.19**	**329**	*e*P	**P**	**07 35 51.3**	**+1.8**
GKP				*e*S	**S**	**07 45 38.2**	**-0.1**
GKP				LMZ	LR	08 12 35.1	
	comp=Z,14µm,17.0s						
GKP	**Gorka Klasztor**	**77.19**	**329**	*e*P	**P**	**07 35 51.3**	**+1.8**
GKP				*e*S	**S**	**07 45 38.2**	**-0.1**
GKP				MLR	MLR		
	comp=Z,14µm,17.0s						
TIN	**Tinemaha, Big**	**77.24**	**53**	P	**P**	**07 35 51.9**	**+1.6**
	baz=307,SNR=10						
YPP	**Pitchstone Pla**	**77.27**	**44**	*e*P	**P**	**07 35 52.1**	**+1.6**
	comp=Z,165nm,1.6s						
FRB	**Frobisher Bay**	**77.28**	**12**	P	**P**	**07 35 48.8**	**-1.0**
	comp=Z,30nm,0.9s,baz=344,slow=6.2,SNR=46						
KWP	**Kalwaria Pacla**	**77.29**	**323**	*e*P	**P**	**07 35 50.5**	**+0.4**
KWP				*e*S	**S**	**07 45 40.3**	**+0.7**
KWP				LMZ	LR	08 12 35.9	
	comp=Z,14µm,16.3s						
KWP	**Kalwaria Pacla**	**77.29**	**323**	PFAKE		07 36 00.0	+10
KWP				LR	LR		
	comp=Z,53µm,20.0s						
KWP	**Kalwaria Pacla**	**77.29**	**323**	*e*P	**P**	**07 35 50.5**	**+0.4**
KWP				*e*S	**S**	**07 45 40.3**	**+0.7**
KWP				MLR	MLR		
	comp=Z,14µm,16.3s						
LKWY	**Lake**	**77.30**	**43**	*e*P	**P**	**07 35 52.6**	**+2.0**
	comp=Z,171nm,1.3s						
LKWY	**Lake**	**77.30**	**43**	*e*P	**P**	**07 35 52.6**	**+2.0**
LKWY				pmax	pmax		
	comp=Z,171nm,1.3s						
COP	**Copenhagen**	**77.31**	**332**	⇑*i*P	**P**	**07 35 50.7**	**+0.6**
	comp=Z,129nm,1.1s						
	comp=Z,6µm,15.0s						
COP	**Copenhagen**	**77.31**	**332**	⇑*i*P	**P**	**07 35 50.7**	**+0.6**
COP				pmax	pmax		
	comp=Z,130nm,1.1s						
COP				MLR	MLR		
	comp=Z,6µm,15.0s						
H17A	**Grant Village**	**77.31**	**44**	*e*P	**P**	**07 35 52.9**	**+2.2**
	comp=Z,194nm,1.1s						
H17A				LR	LR		
	comp=Z,5µm,22.0s						
H17A	**Grant Village**	**77.31**	**44**	P	**P**	**07 35 54.0**	**+3.3**
	baz=310						
TESR	**Tescani**	**77.39**	**319**	⇑*i*P	**P**	**07 35 50.7**	**-0.1**
BIZ	**Bicaz**	**77.39**	**320**	⇑*i*P	**P**	**07 35 51.6**	**+0.8**
BURAR	**Bucovina Array**	**77.41**	**321**	⇓*i*P	**P**	**07 35 51.8**	**+0.9**
VES	**Vestal, Richgr**	**77.41**	**55**	P	**P**	**07 35 51.4**	**+0.4**
	baz=306,SNR=28						
FLWY	**Flagg Ranch**	**77.44**	**44**	*e*P	**P**	**07 35 53.2**	**+1.8**
	comp=Z,257nm,1.4s						
CFR	**Carcaliu**	**77.46**	**318**	⇑*i*P	**P**	**07 35 52.4**	**+1.2**
PKM	**Mcpherson Peak**	**77.49**	**56**	P	**P**	**07 35 53.1**	**+1.4**
	baz=306,SNR=13						
FXWY	**Fox Creek**	**77.54**	**44**	*e*P	**P**	**07 35 52.8**	**+0.9**
	comp=Z,120nm,1.3s						
RLMT	**Red Lodge**	**77.56**	**42**	*e*P	**P**	**07 35 53.0**	**+0.9**
	comp=Z,200nm,1.4s						
RLMT	**Red Lodge**	**77.56**	**42**	P	**P**	**07 35 54.1**	**+2.0**
	baz=310						
MOOW	**Moose Ponds**	**77.63**	**44**	*e*P	**P**	**07 35 53.6**	**+1.2**
	comp=Z,177nm,1.5s						
TPAW	**Teton Pass**	**77.68**	**45**	*e*P	**P**	**07 35 53.0**	**+0.2**
	comp=Z,105nm,1.2s						
CWC	**Cottonwood Cre**	**77.70**	**54**	P	**P**	**07 35 54.4**	**+1.5**
	baz=307						
HVU	**Hansel Valley**	**77.71**	**47**	*e*P	**P**	**07 35 53.6**	**+0.8**
	comp=Z,106nm,1.3s						
HVU	**Hansel Valley**	**77.71**	**47**	*e*P	**P**	**07 35 53.6**	**+0.8**
HVU				pmax	pmax		
	comp=Z,106nm,1.3s						
BR101	**Keskin Array S**	**77.72**	**311**	*e*P	**P**	**07 35 53.3**	**+0.4**
BR131	**Keskin Array S**	**77.72**	**311**	P	**P**	**07 35 54.1**	**+1.2**
	SNR=24						
BRTR	**Keskin Array B**	**77.72**	**311**	P	**P**	**07 35 53.3**	**+0.4**
	comp=Z,3.8nm,0.9s,baz=90,slow=2.9,SNR=20						
BRTR				LR	LR	08 13 07.1	
	comp=Z,2µm,18.5s,baz=33,slow=38						
KOZT	**Kozan**	**77.72**	**308**	*e*P	**P**	**07 35 53.5**	**+0.7**
VRI	**Vrincioaia**	**77.77**	**319**	⇑*i*P	**P**	**07 35 54.0**	**+1.1**
TIRR	**Tirgusor**	**77.78**	**317**	PFAKE		07 36 00.0	+7.1
TIRR				LR	LR		
	comp=Z,5µm,20.0s						
LOHW	**Long Hollow**	**77.80**	**44**	*e*P	**P**	**07 35 55.0**	**+1.6**
	comp=Z,93nm,1.4s						
ANGG	**Ammassalik, Gr**	**77.80**	**359**	PFAKE		07 36 00.0	+7.4
ANGG				LR	LR		
	comp=Z,5µm,19.0s						
SNOW	**Snow King Moun**	**77.81**	**44**	*e*P	**P**	**07 35 54.9**	**+1.4**
	comp=Z,73nm,1.1s						
REDW	**Red Top Meadow**	**77.82**	**45**	*e*P	**P**	**07 35 54.0**	**+0.5**
	comp=Z,114nm,1.3s						
SBC	**Santa Barbara**	**77.82**	**56**	P	**P**	**07 35 55.1**	**+1.7**
	baz=306						
PLOR	**Plostina**	**77.82**	**319**	⇑*i*P	**P**	**07 35 54.2**	**+1.0**
GRAC	**Grapevine Rang**	**77.83**	**53**	P	**P**	**07 35 55.2**	**+1.7**
	baz=307,SNR=21						
RGN	**Rugen**	**77.83**	**331**	PFAKE		07 36 00.0	+7.0
RGN				LR	LR		
	comp=Z,11µm,18.0s						
RGN	**Rugen**	**77.83**	**331**	*e*P	**P**	**07 35 53.3**	**+0.3**
RGN				IAmb	IAmb	07 35 56.9	
	comp=Z,205nm,1.2s						
MUD	**Monsted U'grnd**	**77.89**	**334**	*i* P	**P**	**07 35 53.8**	**+0.5**
	comp=Z,164nm,1.4s						
	comp=Z,8µm,13.0s						
MUD	**Monsted U'grnd**	**77.89**	**334**	*i* P	**P**	**07 35 53.8**	**+0.5**
MUD				pmax	pmax		
	comp=Z,160nm,1.4s						
MUD				MLR	MLR		
	comp=Z,8µm,13.0s						
TLB	**Topalu**	**77.90**	**317**	⇓*i*P	**P**	**07 35 53.9**	**+0.3**
ISA	**Isabella, Lake**	**77.91**	**55**	*e*P	**P**	**07 35 54.3**	**+0.4**
	comp=Z,42nm,1.2s						
ISA	**Isabella, Lake**	**77.91**	**55**	*e*P	**P**	**07 35 54.3**	**+0.4**
ISA				pmax	pmax		
	comp=Z,42nm,1.2s						
ISA	**Isabella, Lake**	**77.91**	**55**	P	**P**	**07 35 54.4**	**+0.4**
	baz=307,SNR=16						
DGMT	**Dagmar**	**77.96**	**38**	*e*P	**P**	**07 35 54.8**	**+0.8**
	comp=Z,215nm,1.3s						
DGMT				LR	LR		
	comp=Z,3µm,22.0s						
DGMT	**Dagmar**	**77.96**	**38**	P	**P**	**07 35 54.8**	**+0.8**
	baz=313						
ARVC	**Arvin**	**78.00**	**55**	P	**P**	**07 35 55.5**	**+1.1**
	baz=307,SNR=9.5						
AHID	**Auburn Hatcher**	**78.05**	**45**	*e*P	**P**	**07 35 56.2**	**+1.4**
	comp=Z,82nm,1.3s						
BGU	**Big Grassy Mou**	**78.09**	**48**	*e*P	**P**	**07 35 56.2**	**+1.2**
	comp=Z,206nm,1.8s						
DAC	**Darwin (Calif)**	**78.11**	**54**	*e*P	**P**	**07 35 55.8**	**+0.6**
	comp=Z,66nm,1.1s						
DAC	**Darwin (Calif)**	**78.11**	**54**	*e*P	**P**	**07 35 55.8**	**+0.6**
DAC				pmax	pmax		
	comp=Z,66nm,1.1s						
R11A	**Troy Canyon, C**	**78.13**	**51**	*e*P	**P**	**07 35 56.2**	**+1.0**
	comp=Z,167nm,1.3s						
R11A	**Troy Canyon, C**	**78.13**	**51**	P	**P**	**07 35 56.7**	**+1.4**
	baz=308,SNR=115						
SCZ2	**Santa Cruz Isl**	**78.13**	**56**	P	**P**	**07 35 55.8**	**+0.7**
	baz=307						
ANTO	**Ankara**	**78.14**	**311**	*e*P	**P**	**07 35 55.5**	**+0.3**
	comp=Z,96nm,1.6s						
ANTO				LR	LR		
	comp=Z,4µm,18.0s						
ANTO	**Ankara**	**78.14**	**311**	P	**P**	**07 35 56.1**	**+0.9**
	SNR=18						
ANTO				P	**P**	**07 35 56.1**	**+0.9**
	SNR=18						
LAO	**LASA Array**	**78.14**	**40**	*e*P	**P**	**07 35 56.0**	**+0.9**
	comp=Z,307nm,1.4s						
LAO				LR	LR		
	comp=Z,2µm,21.0s						
LAO	**LASA Array**	**78.14**	**40**	P	**P**	**07 35 56.6**	**+1.5**
	baz=312						
UZH	**Uzhgorod**	**78.17**	**323**	⇓*i*P	**P**	**07 35 54.9**	**-0.1**
UZH				*i*		07 36 04.2	
UZH				*e*		07 38 51.0	
UZH				*i* S	**S**	**07 45 45.0**	**-4.0**
UZH				*i*		07 46 10.0	
UZH				*e*SP	**SPn**	**07 46 32.0**	**+4.2**
ARCR	**ARCALIA**	**78.19**	**321**	⇓*i*P	**P**	**07 35 56.9**	**+1.7**
SPUT	**South Promonto**	**78.19**	**47**	*e*P	**P**	**07 35 57.1**	**+1.5**
	comp=Z,299nm,1.9s						
OJC	**Ojcow**	**78.24**	**325**	*e*P	**P**	**07 35 55.8**	**+0.4**
OJC				*e*S	**S**	**07 45 50.4**	**+0.6**
OJC				LMZ	LR	08 13 59.1	
	comp=Z,15µm,16.2s						
OJC	**Ojcow**	**78.24**	**325**	*e*P	**P**	**07 35 55.5**	**0.0**
	comp=Z,246nm,1.7s						
OJC	**Ojcow**	**78.24**	**325**	*e*P	**P**	**07 35 55.8**	**+0.4**
OJC				*e*S	**S**	**07 45 50.4**	**+0.6**
OJC				MLR	MLR		
	comp=Z,15µm,16.2s						
MPMC	**Manual Prospec**	**78.31**	**54**	P	**P**	**07 35 57.3**	**+1.0**
	baz=307,SNR=34						
OSI	**Osito Audit: C**	**78.37**	**55**	*e*P	**P**	**07 35 57.5**	**+1.0**
	comp=Z,176nm,1.6s						
OSI	**Osito Audit: C**	**78.37**	**55**	P	**P**	**07 35 57.8**	**+1.3**
	baz=307						
TRPA	**Tarpa**	**78.39**	**322**	⇓*i*P	**P**	**07 35 57.3**	**+1.0**
TRPA	**Tarpa**	**78.39**	**322**	*e*P	**P**	**07 35 57.0**	**+0.7**
TRPA				*e*S	**S**	**07 45 56.1**	**+4.7**
PSN	**Preselentsi**	**78.40**	**316**	*e*P	**P**	**07 35 55.9**	**-0.5**
MLR	**Muntele Rosu**	**78.43**	**319**	*e*P	**P**	**07 35 56.9**	**+0.2**
	comp=Z,164nm,1.9s						
MLR	**Muntele Rosu**	**78.43**	**319**	⇑*i*P	**P**	**07 35 57.2**	**+0.5**
MLR	**Muntele Rosu**	**78.43**	**319**	*e*P	**P**	**07 35 56.9**	**+0.2**
MLR				pmax	pmax		
	comp=Z,164nm,1.9s						
MLR	**Muntele Rosu**	**78.43**	**319**	LR	LR	08 14 11.6	
	comp=Z,10µm,18.9s,baz=40,slow=38						
BLG	**Laguna Peak, P**	**78.45**	**56**	P	**P**	**07 35 58.0**	**+1.1**
	baz=307						
FURC	**Furnace Creek,**	**78.47**	**53**	P	**P**	**07 35 57.9**	**+1.0**
	baz=308,SNR=61						
OUZ	**Omahuta**	**78.48**	**152**	PFAKE		07 36 10.0	+13
OUZ				LR	LR		
	comp=Z,5µm,20.0s						
LRMC	**Laurel Mtn Rad**	**78.54**	**54**	P	**P**	**07 35 58.8**	**+1.3**
	baz=307,SNR=28						
TPNV	**Topopah Spring**	**78.57**	**52**	*e*P	**P**	**07 35 58.8**	**+1.1**
	comp=Z,176nm,1.2s						
TPNV	**Topopah Spring**	**78.57**	**52**	*e*P	**P**	**07 35 58.8**	**+1.1**
TPNV				pmax	pmax		
	comp=Z,176nm,1.2s						
TPNV	**Topopah Spring**	**78.57**	**52**	P	**P**	**07 35 59.1**	**+1.4**
	baz=308,SNR=68						
NIE	**Niedzica**	**78.57**	**324**	*e*P	**P**	**07 35 57.7**	**+0.4**
NIE				*e*S	**S**	**07 45 56.4**	**+2.9**
NIE				LMZ	LR	08 13 26.3	
	comp=Z,5µm,19.1s						
NIE	**Niedzica**	**78.57**	**324**	*e*P	**P**	**07 35 57.7**	**+0.4**
NIE				*e*S	**S**	**07 45 56.4**	**+2.9**
NIE				MLR	MLR		
	comp=Z,5µm,19.1s						
SNCC	**San Nicolas Is**	**78.65**	**57**	P	**P**	**07 35 59.6**	**+1.6**
	baz=307						
DUG	**Dugway, Tooele**	**78.68**	**48**	*e*P	**P**	**07 35 59.1**	**+0.9**
	comp=Z,141nm,1.3s						
DUG				LR	LR		
	comp=Z,2µm,21.0s						
DUG	**Dugway, Tooele**	**78.68**	**48**	*e*P	**P**	**07 35 59.1**	**+0.9**
DUG				pmax	pmax		
	comp=Z,141nm,1.3s						
DUG				MLR	MLR		
	comp=Z,2µm,21.0s						
DUG	**Dugway, Tooele**	**78.68**	**48**	P	**P**	**07 36 00.1**	**+1.9**
	baz=309,SNR=64						
EDW2	**Edwards Air Fo**	**78.69**	**55**	P	**P**	**07 35 59.7**	**+1.4**
	baz=307,SNR=26						
DECC	**Green Verdugo**	**78.84**	**56**	P	**P**	**07 35 60.0**	**+0.9**
	baz=307						
TCUT	**Toone Canyon**	**78.92**	**47**	*e*P	**P**	**07 36 00.8**	**+1.1**
	comp=Z,281nm,1.4s						
BW06	**Boulder Array**	**78.92**	**44**	*e*P	**P**	**07 36 00.1**	**+0.4**
	comp=Z,81nm,1.2s						
BW06				LR	LR		
	comp=Z,2µm,19.0s						
BW06	**Boulder Array**	**78.92**	**44**	P	**P**	**07 36 00.1**	**+0.4**
	baz=310,SNR=48						
PD31	**Pinedale Array**	**78.92**	**44**	*e*P	**P**	**07 35 59.7**	**0.0**
PDAR	**Pinedale Array**	**78.92**	**44**	P	**P**	**07 35 59.7**	**0.0**
	comp=Z,21nm,0.9s,baz=279,slow=2.0,SNR=92						
VOIR		**78.94**	**319**	⇑*i*P	**P**	**07 36 00.0**	**+0.5**
CTU	**Camp Tracy**	**78.99**	**47**	*e*P	**P**	**07 36 01.0**	**+1.0**
	comp=Z,119nm,1.5s						
PASC	**Pasadena Art C**	**78.99**	**56**	*e*P	**P**	**07 36 01.0**	**+1.1**
	comp=Z,234nm,1.8s						
PASC				LR	LR		
	comp=Z,2µm,19.0s						
MWC	**Mount Wilson**	**79.05**	**55**	*e*P	**P**	**07 36 03.1**	**+2.7**
	comp=Z,217nm,1.6s						
PSUT	**Pine Spring**	**79.09**	**50**	*e*P	**P**	**07 36 01.5**	**+0.9**
	comp=Z,91nm,1.2s						
LANS	**Liptovska Anna**	**79.15**	**325**	*e*P	**P**	**07 36 02.6**	**+2.1**
LANS	**Liptovska Anna**	**79.15**	**325**	*e*P	**P**	**07 36 02.6**	**+2.1**
PRD	**Provadia**	**79.15**	**316**	*e*P	**P**	**07 36 01.6**	**+1.1**
SHOC	**Shoshone, Teco**	**79.19**	**53**	P	**P**	**07 36 02.7**	**+1.7**
	baz=308,SNR=11						
RAYN	**Ar Rayn**	**79.19**	**291**	*e*P	**P**	**07 36 01.3**	**+0.1**
	comp=Z,367nm,1.8s						
RAYN				LR	LR		
	comp=Z,7µm,18.0s						
RAYN	**Ar Rayn**	**79.19**	**291**	*i* P	**P**	**07 36 01.7**	**+0.5**
	SNR=25						
RAYN	**Ar Rayn**	**79.19**	**291**	*e*P	**P**	**07 36 01.3**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,367nm,1.8s						
RAYN				MLR	MLR		
	comp=Z,7µm,18.0s						
FMP	**Fort Macarthur**	**79.20**	**56**	P	**P**	**07 36 01.9**	**+0.9**
	baz=307						
RUE	**Ruedersdorf**	**79.20**	**330**	*e*P	**P**	**07 36 00.5**	**-0.1**
RUE				IAmb	IAmb	07 36 05.4	
	comp=Z,82nm,1.1s						
ARR	**Arges**	**79.20**	**319**	⇑*i*P	**P**	**07 36 02.4**	**+1.5**
GSC	**Goldstone, Bar**	**79.21**	**54**	*e*P	**P**	**07 36 02.9**	**+1.7**
	comp=Z,109nm,1.4s						
GSC	**Goldstone, Bar**	**79.21**	**54**	*e*P	**P**	**07 36 02.9**	**+1.7**
GSC				pmax	pmax		
	comp=Z,109nm,1.4s						
GSC	**Goldstone, Bar**	**79.21**	**54**	P	**P**	**07 36 02.4**	**+1.2**
	baz=308,SNR=27						
LTVH	**Ltavrtes, Hu**	**79.22**	**322**	*e*P	**P**	**07 36 01.1**	**+0.3**
LTVH				*e*S	**S**	**07 46 04.0**	**+3.7**
DRGR		**79.22**	**321**	⇑*i*P	**P**	**07 36 01.5**	**+0.5**
DRGR		**79.22**	**321**	P	**P**	**07 36 01.4**	**+0.5**
JLU	**Jordanelle**	**79.23**	**47**	*e*P	**P**	**07 36 03.5**	**+2.2**
	comp=Z,176nm,1.6s						
OKC	**Ostrava-Krasne**	**79.26**	**326**	*e*S	**S**	**07 46 01.3**	**+0.6**
OKC				AMS	AMS	08 14 30.0	
	comp=Z,14µm,15.1s						
NLU	**North Lily Min**	**79.27**	**48**	*e*P	**P**	**07 36 02.5**	**+1.0**
	comp=Z,80nm,1.2s						
BFSC	**Mount Baldy Ra**	**79.30**	**55**	P	**P**	**07 36 02.4**	**+0.7**
	baz=308,SNR=15						
CIS	**Catalina Islan**	**79.30**	**56**	P	**P**	**07 36 02.6**	**+1.0**
	baz=307						
RRX	**Edison Barstow**	**79.35**	**54**	P	**P**	**07 36 03.5**	**+1.7**
	baz=308						
KSP	**Ksiaz**	**79.36**	**327**	*e*P	**P**	**07 36 01.6**	**0.0**
KSP				*e*S	**S**	**07 46 02.4**	**+0.7**
KSP				LMZ	LR	08 13 37.6	
	comp=Z,7µm,18.9s						
KSP	**Ksiaz**	**79.36**	**327**	*e*P	**P**	**07 36 01.6**	**0.0**
KSP				*e*S	**S**	**07 46 02.4**	**+0.7**
KSP				MLR	MLR		
	comp=Z,7µm,18.9s						
SCI2	**San Clemente I**	**79.47**	**57**	P	**P**	**07 36 03.9**	**+1.4**
	baz=307						
MPU	**Maple Canyon**	**79.49**	**48**	*e*P	**P**	**07 36 03.7**	**+0.9**
	comp=Z,98nm,1.1s						
SHPR	**Sheep Range**	**79.53**	**52**	*e*P	**P**	**07 36 03.9**	**+0.9**
	comp=Z,136nm,1.3s						
MORC	**Moravsky Berou**	**79.58**	**326**	*e*P	**P**	**07 36 03.5**	**+0.7**
	comp=Z,212nm,1.8s						
MORC				LR	LR		
	comp=Z,8µm,18.0s						
MORC	**Moravsky Berou**	**79.58**	**326**	⇑*i*P	**P**	**07 36 03.6**	**+0.7**
MORC	**Moravsky Berou**	**79.58**	**326**	*e*P	**P**	**07 36 03.5**	**+0.7**
MORC				pmax	pmax		
	comp=Z,212nm,1.8s						
MORC				MLR	MLR		
	comp=Z,8µm,18.0s						
MORC	**Moravsky Berou**	**79.58**	**326**	*e*P	**P**	**07 36 03.3**	**+0.5**
MORC				*e*PP	**PP**	**07 39 04.8**	**+2.0**
TUQ	**Turquoise Moun**	**79.70**	**53**	P	**P**	**07 36 05.0**	**+1.1**
	baz=308,SNR=69						
DPC	**Dobruska-Polom**	**79.70**	**327**	*e*P	**P**	**07 36 04.5**	**+1.0**
DPC				*e*S	**S**	**07 46 04.7**	**-0.8**
DPC				AMS	AMS	08 16 30.0	
	comp=Z,10µm,13.0s						
DPC	**Dobruska-Polom**	**79.70**	**327**	*e*P	**P**	**07 36 04.5**	**+1.0**
DPC				*e*S	**S**	**07 46 04.7**	**-0.8**
DPC				MLR	MLR		
	comp=Z,10µm,13.0s						
UPC	**Upice**	**79.72**	**327**	*e*P	**P**	**07 36 04.3**	**+0.7**
UPC				*e*S	**S**	**07 46 08.4**	**+2.8**
UPC				AMS	AMS	08 15 20.0	
	comp=Z,11µm,14.2s						
UPC	**Upice**	**79.72**	**327**	*e*P	**P**	**07 36 04.3**	**+0.7**
UPC				*e*S	**S**	**07 46 08.4**	**+2.8**
UPC				MLR	MLR		
	comp=Z,11µm,14.2s						
TAU	**Tasmania Unive**	**79.75**	**174**	*e*P	**P**	**07 36 04.5**	**+1.2**
	comp=Z,186nm,1.4s						
TAU				LR	LR		
	comp=Z,5µm,22.0s						
TAU	**Tasmania Unive**	**79.75**	**174**	*e*P	**P**	**07 36 04.6**	**+1.2**
TAU				pmax	pmax		
	comp=Z,186nm,1.4s						
TAU				MLR	MLR		
	comp=Z,5µm,22.0s						
BBRC	**Big Bear Solar**	**79.77**	**55**	P	**P**	**07 36 05.5**	**+1.0**
	baz=308,SNR=8.9						
HEC	**Hector,Ludlow**	**79.81**	**54**	P	**P**	**07 36 05.8**	**+1.4**
	baz=308,SNR=19						
PSZ	**Piszkesteto**	**79.82**	**323**	*e*P	**P**	**07 36 04.9**	**+0.7**
	comp=Z,362nm,1.8s						
PSZ				LR	LR		
	comp=Z,10µm,18.0s						
PSZ	**Piszkesteto**	**79.82**	**323**	⇓*i*P	**P**	**07 36 05.2**	**+1.0**
PSZ	**Piszkesteto**	**79.82**	**323**	*e*P	**P**	**07 36 04.9**	**+0.7**
PSZ				pmax	pmax		
	comp=Z,362nm,1.8s						
PSZ				MLR	MLR		
	comp=Z,10µm,18.0s						
PSZ	**Piszkesteto**	**79.82**	**323**	⇓*e*P	**P**	**07 36 04.0**	**-0.2**
PSZ				*e*S	**S**	**07 46 09.0**	**+2.2**
TCRU	**Three Creeks R**	**79.90**	**49**	*e*P	**P**	**07 36 05.9**	**+0.9**
	comp=Z,122nm,1.5s						
VYHS	**Vyhne**	**79.91**	**324**	*e*P	**P**	**07 36 05.5**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,147nm,2.2s						
VYHS	**Vyhne**	**79.91**	**324**	*e*P	**P**	**07 36 05.5**	**+0.9**
VYHS				*e*		07 45 44.8	
SZH	**Strazhica**	**79.91**	**317**	*e*P	**P**	**07 36 04.5**	**-0.2**
MURC	**Murrieta**	**79.99**	**56**	P	**P**	**07 36 06.5**	**+1.1**
	baz=308,SNR=17						
BHL	**Bhannes**	**80.00**	**305**	*e*P	**P**	**07 36 04.5**	**-1.0**
CCUT	**Cedar City**	**80.00**	**50**	*e*P	**P**	**07 36 06.7**	**+1.1**
	comp=Z,91nm,1.3s						
CCUT				LR	LR		
	comp=Z,2µm,20.0s						
JMB	**Yambol**	**80.08**	**316**	*e*P	**P**	**07 36 06.0**	**+0.4**
SIRR	**Siria**	**80.11**	**321**	⇑*i*P	**P**	**07 36 05.9**	**+0.2**
SZCU	**Shurtz Canyon**	**80.14**	**50**	*e*P	**P**	**07 36 08.0**	**+1.6**
	comp=Z,71nm,1.3s						

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SZCU                                LR      LR
      comp=Z,2µm,20.0s
GZR   Gura Zlata          80.15 320⇑iP      P       07 36 06.4 +0.4
BIGH  Upper Bighouse      80.15 341⇑eP      P       07 36 06.3 +0.6
BIGH                                IAmb    IAmb    07 36 09.1
      comp=Z,223nm,1.5s
JAVC  Velka Javorina      80.18 325 eP      P       07 36 07.7 +1.5
TMUT  Trail Mountain      80.20  48 eP      P       07 36 08.4 +1.7
      comp=Z,114nm,1.5s
ASF   Jabal al Asfar      80.22 303  P      P       07 36 08.3 +1.6
GMRC  Granite Mounta      80.27  54  P      P       07 36 08.4 +1.4
      baz=308,SNR=17
SHBL  Chebaa              80.28 304 eP      P       07 36 07.6 +0.6
PVCC  Panska Ves          80.33 328 eP      P       07 36 09.1 +2.3
PVCC                                AMS     AMS     08 14 30.0
      comp=Z,11µm,17.1s
PVCC  Panska Ves          80.33 328 eP      P       07 36 09.1 +2.3
PVCC                                MLR     MLR
      comp=Z,11µm,17.1s
BRG   Berggiesshubel      80.34 328⇑iP      P       07 36 07.0 +0.2
      comp=Z,225nm,1.8s
BRG                                 ePP     PP      07 39 09.7 +0.7
      comp=Z,32nm,1.6s
BRG                                 S       S       07 46 15.0 +3.0
BRG                                 SS      SS      07 51 16.0  -6.2
      comp=N,6µm,14.6s
      comp=E,6µm,18.2s
      comp=Z,10µm,17.1s
BRG   Berggiesshubel      80.34 328⇑iP      P       07 36 07.0 +0.2
BRG                                 e               07 39 09.7
BRG                                 S       S       07 46 15.0 +3.0
BRG                                 SS      SS      07 51 16.0  -6.2
BRG                                 pmax    pmax
      comp=Z,225nm,1.8s
BRG                                 pmax    pmax
      comp=Z,32nm,1.6s
BRG                                 MLR     MLR
      comp=N,6µm,14.6s
BRG                                 MLR     MLR
      comp=E,6µm,18.2s
BRG                                 MLR     MLR
      comp=Z,10µm,17.1s
VRAC  Vranov              80.34 326 eP      P       07 36 07.5 +0.5
VRAC                                ePP     PP      07 39 11.3 +2.2
VRAC  Vranov              80.34 326 LR      LR      08 13 47.3
      comp=Z,9µm,19.2s,baz=38,slow=37
P17A  Butcher Ranch,      80.37  48 eP      P       07 36 08.6 +1.1
      comp=Z,146nm,1.1s
P17A                                LR      LR
      comp=Z,2µm,21.0s
CLL   Collm               80.40 329 eP      P       07 36 07.2 +0.1
      comp=Z,138nm,1.4s
CLL                                 LR      LR
      comp=Z,8µm,20.0s
CLL   Collm               80.40 329⇑iP      P       07 36 07.3 +0.1
      comp=Z,237nm,1.7s
CLL                                 ePmax           07 36 12.0
CLL                                 e               07 36 18.0
CLL                                 e               07 36 51.0
CLL                                 e               07 39 01.0
CLL                                 eS      S       07 46 12.0  -0.6
CLL                                 ePPS    PPS     07 47 18.0
CLL                                 eSS     SS      07 51 24.0 +0.9
CLL                                 eSSS    SSS     07 54 48.0
CLL                                 e               07 56 24.0
CLL                                 Lmax            08 16 00.0
CLL   Collm               80.40 329⇑iP      P       07 36 07.3 +0.1
CLL                                 e               07 36 18.0
CLL                                 eS      S       07 46 12.0  -0.6
CLL                                 pmax    pmax
      comp=Z,237nm,1.7s
EDRB  Edirne              80.40 316  P      P       07 36 07.4   0.0
EDRB  Edirne              80.40 316  P      P       07 36 07.4   0.0
LCMT  Little Creek M      80.42  51 eP      P       07 36 09.0 +1.2
      comp=Z,121nm,1.2s
MTPU  Mount Pierson       80.42  49 eP      P       07 36 08.9 +0.9
      comp=Z,111nm,1.1s
MTPU                                LR      LR
      comp=Z,2µm,18.0s
LDFC  Landfair            80.44  53 eP      P       07 36 08.7 +0.8
      comp=Z,189nm,1.3s
Q16A  Castle Valley       80.47  48 eP      P       07 36 09.2 +1.1
      comp=Z,297nm,1.7s
Q16A                                LR      LR
      comp=Z,2µm,19.0s
PFO   Pinyon Flats O      80.47  55 eP      P       07 36 09.2 +1.1
      comp=Z,181nm,1.5s
PFO   Pinyon Flats O      80.47  55  P      P       07 36 09.2 +1.1
      baz=308,SNR=40
XPFO  Pion Flat           80.47  55 eP      P       07 36 09.1 +1.0
      comp=Z,178nm,1.4s
109C  Camp Elliot, M      80.49  56  P      P       07 36 09.0 +1.0
      baz=308,SNR=7.3
CPE   Camp Elliot         80.49  56 eP      P       07 36 09.3 +1.3
      comp=Z,152nm,1.4s
ULM   Lac du Bonnet       80.51  32  P      P       07 36 08.2 +0.3
      comp=Z,39nm,0.9s,baz=314,slow=6.3,SNR=58
ULM                                 LR      LR      08 13 43.8
      comp=Z,2µm,20.2s,baz=332,slow=37
BELC  Belle Mtn. Jos      80.53  55  P      P       07 36 09.1 +0.7
      baz=308,SNR=16
BUD   Budapest            80.54 324 eP      P       07 36 08.0   0.0
BZS   Buzias              80.58 321⇑iP      P       07 36 08.5 +0.2
MDND  Maddock             80.60  36 eP      P       07 36 09.3 +1.0
      comp=Z,261nm,1.3s
MDND                                LR      LR
      comp=Z,2µm,21.0s
MDND  Maddock             80.60  36  P      P       07 36 09.3 +1.0
      baz=316
KRUC  Moravsky            80.61 326 eP      P       07 36 09.0 +0.6
KRUC                                ePP     PP      07 39 13.7 +2.4
KNB   Kanab               80.67  51 eP      P       07 36 10.2 +1.0
      comp=Z,217nm,1.3s
K22A  Casper              80.68  43 eP      P       07 36 09.9 +0.8
      comp=Z,286nm,1.7s
K22A                                LR      LR
      comp=Z,2µm,20.0s
K22A  Casper              80.68  43  P      P       07 36 10.0 +0.9
      baz=312,SNR=26
GOPC  GO Pecny, Ondr      80.69 327 eP      P       07 36 09.5 +0.7
GOPC                                eS      S       07 46 17.8 +1.9
GOPC                                AMS     AMS     08 18 30.0
      comp=Z,10µm,13.9s
GOPC  GO Pecny, Ondr      80.69 327 eP      P       07 36 09.5 +0.7
GOPC                                eS      S       07 46 17.8 +1.9
GOPC                                MLR     MLR
      comp=Z,10µm,13.9s
MODS  Modra-Piesok        80.72 325 eP      P       07 36 10.0 +1.0
MODS                                pmax    pmax
      comp=Z,319nm,2.2s
MODS  Modra-Piesok        80.72 325 eP      P       07 36 10.0 +1.0
PKCU  Pink Cliffs         80.72  50 eP      P       07 36 13.2 +3.6
      comp=Z,145nm,1.3s
SRU   San Rafael Swe      80.73  48 eP      P       07 36 10.0 +0.5
      comp=Z,85nm,1.0s
SRU                                 LR      LR
      comp=Z,1µm,20.0s
SRU   San Rafael Swe      80.73  48 eP      P       07 36 10.0 +0.5
SRU                                 pmax    pmax
      comp=Z,85nm,1.0s
SRU                                 MLR     MLR
      comp=Z,1µm,20.0s
PRU   Pruhonice           80.74 328 eP      P       07 36 10.9 +1.9
PRU                                 eS      S       07 46 18.2 +1.9
PRU                                 AMS     AMS     08 16 20.0
      comp=Z,10µm,14.3s
PRU   Pruhonice           80.74 328 eP      P       07 36 10.9 +1.9
PRU                                 eS      S       07 46 18.2 +1.9
PRU                                 MLR     MLR
      comp=Z,10µm,14.3s
ISP   Isparta             80.81 311  P      P       07 36 09.9 +0.1
ISP                                 LR      LR
      comp=Z,2µm,21.0s
ISP   Isparta             80.81 311  P      P       07 36 09.9 +0.1
ISP   Isparta             80.81 311  P      P       07 36 09.9 +0.1
ISP                                 MLR     MLR
      comp=Z,2µm,21.0s
TREC  Trest               80.85 327 eP      P       07 36 11.6 +1.9
TREC                                AMS     AMS     08 15 50.0
      comp=Z,14µm,14.6s
TREC  Trest               80.85 327 eP      P       07 36 11.6 +1.9
TREC                                MLR     MLR
      comp=Z,14µm,14.6s
CSS   Mathiatis           80.86 307 eP      P       07 36 10.0   0.0
      comp=Z,125nm,1.5s
CSS                                 LR      LR
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      comp=Z,5µm,20.0s
CSS   Mathiatis           80.86 307  P      P       07 36 09.6  -0.4
BAR   Barrett             80.90  56 eP      P       07 36 11.2 +0.9
      comp=Z,146nm,1.4s
ZST   Bratislava          80.92 325 eP      P       07 36 10.6 +0.5
ZST   Bratislava          80.92 325 eP      P       07 36 10.5 +0.5
MONP2 Monument Peak       80.94  56  P      P       07 36 11.4 +0.7
      baz=308,SNR=16
RWWY  Rawlins             80.95  44 eP      P       07 36 10.8 +0.1
      comp=Z,142nm,1.2s
NEE2  Needles Airpor      80.95  53  P      P       07 36 11.3 +0.8
      baz=309
IRM   Iron Mountain       80.99  54  P      P       07 36 12.2 +1.5
      baz=309,SNR=50
RSSD  Black Hills         81.02  41 eP      P       07 36 11.5 +0.6
      comp=Z,252nm,1.8s
RSSD                                LR      LR
      comp=Z,2µm,21.0s
RSSD  Black Hills         81.02  41 eP      P       07 36 11.5 +0.6
RSSD                                pmax    pmax
      comp=Z,252nm,1.8s
RSSD                                MLR     MLR
      comp=Z,2µm,21.0s
RSSD  Black Hills         81.02  41  P      P       07 36 12.0 +1.1
      baz=314
BC3   Big Chuckawall      81.10  55  P      P       07 36 12.7 +1.3
      baz=309,SNR=26
MDVR  Moldovita           81.11 320⇑iP      P       07 36 11.6 +0.4
W13A  Hualapai Mount      81.22  53 eP      P       07 36 13.0 +0.9
      comp=Z,84nm,1.4s
IKP   In-Ko-Pah, Jac      81.30  56  P      P       07 36 13.5 +1.1
      baz=308,SNR=17
SWSC  Sam W. Stewart      81.32  55  P      P       07 36 13.5 +1.1
      baz=308,SNR=13
PGB   Panagyurishte       81.35 317 eP      P       07 36 12.5   0.0
U15A  North Rim           81.38  51 eP      P       07 36 13.8 +0.8
      comp=Z,225nm,1.4s
KAC   Achnashellach       81.38 342⇑eP      P       07 36 12.0  -0.2
O20A  White River Ci      81.39  46 eP      P       07 36 13.9 +0.9
      comp=Z,89nm,1.2s
O20A  White River Ci      81.39  46  P      P       07 36 14.1 +1.2
      baz=312,SNR=27
RAR   Rarotonga           81.41 124 LR      LR      08 07 35.5
      comp=Z,3µm,19.5s,baz=287,slow=32
ALN   Alexandroupoli      81.43 315 PFAKE           07 36 20.0 +7.2
ALN                                 LR      LR
      comp=Z,3µm,19.0s
NKC   Novy Kostel         81.45 329 AMS     AMS     08 15 30.0
      comp=Z,11µm,15.0s
KULA  Kula-Manisa         81.48 312  P      P       07 36 12.0  -1.3
KULA  Kula-Manisa         81.48 312  P      P       07 36 12.0  -1.3
TIH   Tihany              81.50 324 eP      P       07 36 14.0 +0.9
TIH                                 eS      S       07 46 28.1 +3.8
RDO   Rodhopi             81.55 316  P      P       07 36 11.8  -1.7
RDO   Rodhopi             81.55 316  P      P       07 36 11.8  -1.7
SOP   Sopron              81.55 325 eP      P       07 36 14.0 +0.7
SOP                                 eS      S       07 46 28.1 +3.3
PDMCI Parker Dam,Lak      81.55  53  P      P       07 36 15.1 +1.4
      baz=309,SNR=18
MANT  Manisa              81.56 312 eP      P       07 36 13.8  -0.1
      comp=Z,214nm,1.5s
MANT                                LR      LR
      comp=Z,15µm,20.0s
KPL   Plockton            81.61 342⇑eP      P       07 36 14.0 +0.5
KPL                                 IAmb    IAmb    07 36 16.9
      comp=Z,199nm,1.4s
MORH  Mrgy, Hungar        81.63 323 eP      P       07 36 12.1  -1.7
MORH                                eS      S       07 46 25.1  -0.5
RZN   Rozhen              81.64 317 eP      P       07 36 14.9 +0.7
Y12C  Blythe              81.65  54 eP      P       07 36 14.9 +0.7
      comp=Z,111nm,1.2s
Y12C  Blythe              81.65  54  P      P       07 36 15.5 +1.3
      baz=309,SNR=37
CONA  Conrad Observa      81.69 325 i pP    P       07 36 15.2 +1.0
      comp=Z,86nm,1.7s,SNR=32
KHC   Kasperske Hory      81.80 327 eP      P       07 36 15.2 +0.5
      comp=Z,97nm,1.9s
KHC                                 LR      LR
      comp=Z,3µm,22.0s
KHC   Kasperske Hory      81.80 327 eP      P       07 36 15.1 +0.3
KHC                                 ex      x       07 36 24.5
KHC                                 ex      x       07 39 05.0
KHC                                 eS      S       07 46 27.8 +0.3
KHC                                 AMS     AMS     08 16 20.0
      comp=Z,9µm,14.9s
KHC   Kasperske Hory      81.80 327 eP      P       07 36 15.1 +0.3
KHC                                 e               07 36 24.5
KHC                                 eS      S       07 46 27.8 +0.3
KHC                                 MLR     MLR
      comp=Z,9µm,14.9s
VTS   Vitosha             81.81 318 eP      P       07 36 15.7 +0.6
      comp=Z,42nm,1.3s
VTS                                 LR      LR
      comp=Z,6µm,19.0s
VTS   Vitosha             81.81 318⇑iP      P       07 36 15.9 +0.9
VTS   Vitosha             81.81 318  P      P       07 36 16.0 +0.9
VTS   Vitosha             81.81 318 eP      P       07 36 15.7 +0.6
HIZ   Hauiti              81.86 153 eP      P       07 36 16.2 +1.3
      comp=Z,346nm,1.6s
HIZ                                 LR      LR
      comp=Z,4µm,21.0s
GLA   Glamis              81.89  55 eP      P       07 36 16.2 +0.7
      comp=Z,124nm,1.3s
GLA   Glamis              81.89  55 eP      P       07 36 16.2 +0.7
GLA                                 pmax    pmax
      comp=Z,124nm,1.3s
GLA   Glamis              81.89  55  P      P       07 36 17.0 +1.5
      baz=309,SNR=13
PV09  Paradox Valley      81.95  48 eP      P       07 36 17.2 +1.1
GEC2  GERESS Array S      81.97 327 eP      P       07 36 14.9  -0.8
GEC2  GERESS Array S      81.97 327 eP      P       07 36 14.9  -0.8
GERES GERESS Array B      81.97 327  P      P       07 36 14.9  -0.8
      comp=Z,3.8nm,0.8s,baz=35,slow=4.9,SNR=17
GERES                               PKKPbc  PKKPbc  07 54 46.1 +1.2
      comp=Z,1.2nm,0.9s,baz=289,slow=4.1,SNR=6.7
GERES                               LR      LR      08 15 43.5
      comp=Z,5µm,19.2s,baz=34,slow=38
AGMN  Agassiz Nation      81.97  34 eP      P       07 36 15.7 +0.1
      comp=Z,67nm,1.2s
AGMN                                LR      LR
      comp=Z,3µm,19.0s
AGMN  Agassiz Nation      81.97  34  P      P       07 36 15.9 +0.2
      baz=318,SNR=24
EZN   Ezine               81.98 314  P      P       07 36 16.3 +0.5
EZN   Ezine               81.98 314  P      P       07 36 16.3 +0.5
PV21  Cone Mtn., Par      82.00  47 eP      P       07 36 18.4 +2.1
      comp=Z,114nm,1.0s
PV23  Carpenter Ridg      82.06  47 eP      P       07 36 18.3 +1.7
      comp=Z,187nm,1.2s
IVI   Ivigtut             82.06   4 eP      P       07 36 16.3 +0.6
      comp=Z,96nm,1.1s
IVI                                 LR      LR
      comp=Z,6µm,21.0s
PV10  Paradox Valley      82.09  48 eP      P       07 36 17.9 +1.2
      comp=Z,246nm,1.0s
PV14  Lion Creek, Pa      82.10  48 eP      P       07 36 18.1 +1.3
      comp=Z,169nm,1.1s
PV20  West Nyswonger      82.15  48 eP      P       07 36 18.5 +1.5
      comp=Z,173nm,1.1s
PV04  Paradox Valley      82.16  47 eP      P       07 36 18.1 +1.1
      comp=Z,254nm,1.4s
PV19  Morning Glory       82.17  48 eP      P       07 36 18.3 +1.2
      comp=Z,159nm,1.1s
PHWY  Pilot Hill          82.18  43 eP      P       07 36 18.0 +0.8
      comp=Z,198nm,1.6s
N23A  Red Feather La      82.19  44 eP      P       07 36 17.9 +0.7
      comp=Z,249nm,1.5s
N23A  Red Feather La      82.19  44  P      P       07 36 19.1 +1.8
      baz=313,SNR=42
PV17  East Wray Mesa      82.20  48 eP      P       07 36 18.2 +0.9
      comp=Z,245nm,1.2s
PV16  Nyswonger Mesa      82.20  48 eP      P       07 36 18.0 +0.7
      comp=Z,190nm,1.3s
PV11  David Mesa, Pa      82.24  48 eP      P       07 36 18.5 +1.1
      comp=Z,342nm,1.5s
MMB   Musomiste           82.25 317 eP      P       07 36 18.2 +1.0
PV05  Paradox Valley      82.25  48 eP      P       07 36 18.7 +1.2
      comp=Z,229nm,1.1s
PV12  Saucer Basin,       82.27  47 eP      P       07 36 19.2 +1.6
      comp=Z,144nm,1.4s
PV07  Paradox Valley      82.28  47 eP      P       07 36 19.2 +1.5
      comp=Z,156nm,1.6s
PV07                                LR      LR
      comp=Z,2µm,20.0s
PV03  Paradox Valley      82.28  48 eP      P       07 36 18.4 +0.7
      comp=Z,196nm,1.4s
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EAB   Aberfoyle           82.29 340⇑eP      P       07 36 17.4 +0.3
EBL   Broad Law           82.30 340 eP      P       07 36 17.4 +0.2
NVR   Nevrokopi           82.34 317  P      P       07 36 18.1 +0.4
NVR   Nevrokopi           82.34 317  P      P       07 36 18.1 +0.4
ARSA  Arzberg             82.34 325 i P     P       07 36 17.9 +0.3
      comp=Z,58nm,1.6s,SNR=22
EAU   Auchinoon           82.35 340⇑eP      P       07 36 17.3  -0.1
PV13  Radium Mtn., P      82.36  48 eP      P       07 36 19.0 +0.9
      comp=Z,192nm,1.2s
MXZ   Matakaoa Point      82.37 150 PFAKE           07 36 30.0  +12
MXZ                                 LR      LR
      comp=Z,10µm,18.0s
GRA1  Grafenberg Arr      82.37 329 eP      P       07 36 17.9 +0.2
      comp=Z,525nm,1.8s
GRA1                                LR      LR
      comp=Z,9µm,18.0s
GRFO  Grafenberg          82.37 329 eP      P       07 36 17.8 +0.1
      comp=Z,485nm,1.8s
GRFO                                LR      LR
      comp=Z,8µm,18.0s
PV02  Paradox Valley      82.38  48 eP      P       07 36 20.5 +2.3
      comp=Z,348nm,1.8s
KKB   Krupnik             82.41 318 eP      P       07 36 18.2 +0.2
PV15  Paradox Valley      82.44  47 eP      P       07 36 20.1 +1.5
      comp=Z,50nm,1.1s
PV15                                LR      LR
      comp=Z,2µm,20.0s
FETY  Fethiye             82.45 310  P      P       07 36 17.8  -0.6
FETY  Fethiye             82.45 310  P      P       07 36 17.8  -0.6
MOA   Molln               82.47 326 i pP    P       07 36 19.6 +1.3
      comp=Z,56nm,1.6s,SNR=18
DIVS  Divibare            82.47 321 eP      P       07 36 18.5 +0.1
      comp=Z,156nm,1.9s
DIVS                                LR      LR
      comp=Z,8µm,20.0s
URZ   Urewera             82.49 151  P      P       07 36 18.2   0.0
      comp=Z,13nm,1.0s,baz=56,slow=2.3,SNR=3.6
URZ                                 LR      LR      08 09 12.6
      comp=Z,3µm,21.9s,baz=354,slow=33
Y14A  Wickenburg          82.51  53 eP      P       07 36 19.6 +0.9
      comp=Z,132nm,1.4s
PV01  Paradox Valley      82.53  47 eP      P       07 36 19.8 +0.8
      comp=Z,124nm,1.2s
WUAZ  Wupatki             82.53  51 eP      P       07 36 19.9 +0.9
      comp=Z,117nm,1.2s
WUAZ  Wupatki             82.53  51  P      P       07 36 20.7 +1.7
      baz=310,SNR=49
KOGS  Kog                 82.60 324 eP      P       07 36 19.0 +0.1
KOGS                                eS      S       07 46 33.9  -1.7
YER   Yerkesik            82.61 311  P      P       07 36 20.2 +1.0
YER   Yerkesik            82.61 311  P      P       07 36 20.2 +1.0
SRS   Serrai              82.64 317  P      P       07 36 19.3   0.0
SRS   Serrai              82.64 317  P      P       07 36 19.3   0.0
PGBU  Glenifferbraes      82.66 340⇑eP      P       07 36 19.6 +0.6
PGBU                                IAmb    IAmb    07 36 22.4
      comp=Z,170nm,1.3s
SIGR  SIGRI               82.66 314  P      P       07 36 19.4   0.0
SIGR  SIGRI               82.66 314  P      P       07 36 19.4   0.0
EKA   Eskdalemuir Ar      82.71 339  P      P       07 36 19.4 +0.1
      comp=Z,10nm,0.9s,baz=45,slow=4.8,SNR=11
ESK   Eskdalemuir         82.74 340 eP      P       07 36 22.5 +3.1
      comp=Z,89nm,1.4s
ESK                                 LR      LR
      comp=Z,8µm,18.0s
ESK   Eskdalemuir         82.74 340 i P     P       07 36 23.1 +3.6
113A  Mohawk Valley,      82.76  54 eP      P       07 36 21.2 +1.2
      comp=Z,252nm,1.8s
SMCO  Snowmass            82.76  46 eP      P       07 36 21.3 +0.8
      comp=Z,84nm,1.4s
BHH   Howats Hill         82.94 339⇑eP      P       07 36 20.8 +0.3
GROS  Grobnik             82.94 325 eP      P       07 36 19.9  -0.9
OUR   Ouranopolis         82.97 316  P      P       07 36 16.6  -4.3
OUR   Ouranopolis         82.97 316  P      P       07 36 16.6  -4.3
OUR   Ouranopolis         82.97 316  P      P       07 36 16.6  -4.3
SOH   Sokhos              82.98 317  P      P       07 36 20.8  -0.3
PERS  Pernice             82.99 325 eP      P       07 36 21.4 +0.3
SOKA  Soboth              82.99 325 i pP    P       07 36 21.5 +0.4
      comp=Z,139nm,1.5s,SNR=42
STIP  Stip                83.01 318 i P     P       07 36 20.7  -0.5
BKZ   Black Stump Fm      83.04 152 eP      P       07 36 22.3 +1.2
      comp=Z,37nm,1.0s
BKZ                                 LR      LR
      comp=Z,8µm,18.0s
VAY   Valandovo           83.06 317 i P     P       07 36 22.0 +0.6
CHOS  Chios island        83.10 313  P      P       07 36 22.8 +1.0
ISCO  Idaho Springs       83.12  45 eP      P       07 36 23.1 +0.9
      comp=Z,205nm,1.8s
ISCO                                LR      LR
      comp=Z,2µm,20.0s
ISCO  Idaho Springs       83.12  45 eP      P       07 36 23.1 +0.9
ISCO                                pmax    pmax
      comp=Z,205nm,1.8s
ISCO                                MLR     MLR
      comp=Z,2µm,20.0s
ISCO  Idaho Springs       83.12  45  P      P       07 36 24.0 +1.9
      baz=313,SNR=33
MVCO  Mesa Verde          83.18  48 eP      P       07 36 23.4 +1.0
      comp=Z,326nm,1.8s
MVCO  Mesa Verde          83.18  48  P      P       07 36 23.9 +1.5
      baz=312,SNR=19
X16A  Lo Mia Camp, P      83.20  52 eP      P       07 36 23.6 +1.1
      comp=Z,117nm,1.3s
PLG   Polygyros           83.24 316  P      P       07 36 21.4  -1.0
PLG   Polygyros           83.24 316  P      P       07 36 21.4  -1.0
PLG   Polygyros           83.24 316  P      P       07 36 21.4  -1.0
BODT  Bodrum              83.24 312  P      P       07 36 22.8 +0.4
BODT  Bodrum              83.24 312  P      P       07 36 22.8 +0.4
HORT  Hortiatis           83.27 317  P      P       07 36 20.8  -1.8
HORT  Hortiatis           83.27 317  P      P       07 36 20.8  -1.8
PLE   Pljevlja            83.33 320⇑iP      P       07 36 23.6 +0.7
OBKA  Obir                83.34 325 i pP    P       07 36 24.2 +1.3
      comp=Z,40nm,1.9s
SUSD  Miller              83.37  38  P      P       07 36 23.6 +0.6
      baz=317,SNR=7.8
IVA   Berane              83.39 320⇑iP      P       07 36 24.0 +0.8
BLY   Banja Luka          83.40 323 eP      P       07 36 23.5 +0.4
      comp=Z,161nm,1.9s
BLY                                 LR      LR
      comp=Z,9µm,20.0s
GRG   Griva               83.41 317  P      P       07 36 23.3   0.0
GRG   Griva               83.41 317  P      P       07 36 23.3   0.0
GRG   Griva               83.41 317  P      P       07 36 23.3   0.0
PAIG  Paliouri            83.41 316  P      P       07 36 23.3 +0.1
KBA   Koelnbreinsper      83.46 326 i pP    P       07 36 24.8 +1.2
      comp=Z,109nm,1.8s,SNR=20
KOME  Kolasin             83.60 320⇑iP      P       07 36 25.3 +1.0
MYKA  Terra Mystica       83.66 326 i P     P       07 36 24.3  -0.2
      comp=Z,66nm,1.6s,SNR=17
BEBN  Eben Emael          83.67 333 ⇑P      P       07 36 24.1  -0.2
MEM   Membach             83.69 332 ⇑P      P       07 36 24.2  -0.3
MEM                                 ⇑pP     PcP     07 36 26.6  -2.1
      comp=Z,41nm,2.3s
LJU   Ljubljana           83.70 325 eP      P       07 36 24.7 +0.1
CLGH  Cloghs, Cushen      83.74 341⇑eP      P       07 36 25.7 +1.1
W18A  Petrified Fore      83.81  50 eP      P       07 36 26.6 +1.0
      comp=Z,89nm,1.3s
W18A                                LR      LR
      comp=Z,2µm,20.0s
W18A  Petrified Fore      83.81  50  P      P       07 36 27.3 +1.7
      baz=311,SNR=20
S22A  4UR Ranch, Cre      83.81  47 eP      P       07 36 26.5 +0.7
      comp=Z,121nm,1.3s
S22A                                LR      LR
      comp=Z,2µm,19.0s
S22A  4UR Ranch, Cre      83.81  47  P      P       07 36 27.5 +1.8
      baz=313,SNR=63
214A  Organ Pipe Nat      83.90  54  P      P       07 36 27.2 +1.2
      baz=310,SNR=21
STU   Stuttgart           83.92 329 PFAKE           07 36 40.0  +14
STU                                 LR      LR
      comp=Z,5µm,18.0s
Q24A  Divide              83.95  45 eP      P       07 36 27.4 +1.0
      comp=Z,80nm,1.5s
Q24A                                LR      LR
      comp=Z,2µm,19.0s
Q24A  Divide              83.95  45  P      P       07 36 27.6 +1.2
      baz=313,SNR=10
PHP   Peshkopia           83.95 319  P      P       07 36 26.0  -0.1
PHP   Peshkopia           83.95 319  P      P       07 36 26.0  -0.1
PHP   Peshkopia           83.95 319  P      P       07 36 26.0  -0.1
LIT   Litokhoron          83.95 317 eP      P       07 36 26.2 +0.1
      comp=Z,512nm,2.0s
LIT                                 LR      LR
      comp=Z,6µm,19.0s
LIT   Litokhoron          83.95 317  P      P       07 36 25.6  -0.5
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LIT	Litokhoron	83.95	317	*e*P	P	07 36 26.2	+0.1
LIT				pmax	pmax		
	comp=Z,512nm,2.0s						
LIT				MLR	MLR		
	comp=Z,6µm,19.0s						
PDG	Podgorica	84.04	320	⇑*i*P	P	07 36 26.9	+0.5
TTG	Podgorica	84.04	320	⇑*i*P	P	07 36 28.2	+1.8
TTG	Podgorica	84.04	320	*e*P	P	07 36 26.7	+0.4
	comp=Z,333nm,1.7s						
TTG				LR	LR		
	comp=Z,8µm,19.0s						
WATA	Walderalm	84.04	327	*i* pP	P	07 36 27.6	+1.1
	comp=Z,8.0nm,0.8s						
SKIA	Skiathos	84.06	315	P	P	07 36 27.4	+0.8
X18A	Snowflake	84.06	51	*e*P	P	07 36 27.5	+0.6
	comp=Z,88nm,1.2s						
THZ	Tophouse	84.06	155	*e*P	P	07 36 26.6	+0.4
	comp=Z,60nm,1.1s						
THZ				LR	LR		
	comp=Z,2µm,18.0s						
WTTA	Wattenberg	84.07	327	*i* pP	P	07 36 26.9	+0.2
	comp=Z,59nm,2.1s,SNR=7.9						
XOR	Xorichti	84.07	316	P	P	07 36 15.7	-11
ABTA	Abfaltersbach	84.08	326	*i* P	P	07 36 26.3	-0.4
	comp=Z,45nm,1.7s						
FNA	Florina	84.08	318	P	P	07 36 26.3	-0.5
FNA				LR	LR		
	comp=Z,5µm,19.0s						
FNA	Florina	84.08	318	P	P	07 36 26.3	-0.5
FNA	Florina	84.08	318	P	P	07 36 26.3	-0.5
FNA				MLR	MLR		
	comp=Z,5µm,19.0s						
NEO	Neokhori	84.09	316	P	P	07 36 26.4	-0.4
NEO	Neokhori	84.09	316	P	P	07 36 26.4	-0.4
IDGL	Inch Island, C	84.11	342	*e*P	P	07 36 25.9	-0.6
IDGL	Inch Island, C	84.11	342	*e*S	S	07 46 47.8	-2.7
IDGL				*e*LQ	LQ	07 58 36.9	
IDGL	Inch Island, C	84.11	342	⇑*e*P	P	07 36 27.4	+0.9
IDGL				IAmb	IAmb	07 36 30.5	
	comp=Z,552nm,1.9s						
BCLA	Clavier	84.11	332	⇑P	P	07 36 26.3	-0.3
BCLA				⇑pP	PcP	07 36 28.5	-2.0
	comp=Z,54nm,2.3s						
CEME	Cevo	84.13	320	⇑*i*P	P	07 36 28.5	+1.5
EYMN	Ely	84.13	32	*e*P	P	07 36 27.0	+0.2
	comp=Z,118nm,1.1s						
EYMN	Ely	84.13	32	P	P	07 36 27.6	+0.7
	baz=321,SNR=33						
UCC	Uccle	84.15	333	PFAKE		07 36 40.0	+13
UCC				LR	LR		
	comp=Z,9µm,19.0s						
UCC	Uccle	84.15	333	⇑P	P	07 36 26.7	0.0
OHR	Ohrid	84.17	318	*i* P	P	07 36 21.9	-5.2
FYTO	Fytoko, Volos	84.18	316	P	P	07 36 26.9	-0.3
FYTO	Fytoko, Volos	84.18	316	P	P	07 36 26.9	-0.3
MOTA	Moosalm	84.23	328	*i* pP	P	07 36 28.1	+0.5
	comp=Z,39nm,1.4s						
DRME	Dracevica, Mon	84.25	320	⇑*i*P	P	07 36 29.5	+2.0
RETA	Reutte	84.27	328	*i* pP	P	07 36 27.9	+0.3
	comp=Z,108nm,1.7s,SNR=26						
SNZO	South Karori	84.28	154	PFAKE		07 36 40.0	+13
SNZO				LR	LR		
	comp=Z,5µm,19.0s						
BFZ	Birch Farm	84.28	153	*e*P	P	07 36 28.0	+0.7
	comp=Z,59nm,1.0s						
BFZ				LR	LR		
	comp=Z,5µm,18.0s						
SQTA	Sankt Quirin	84.29	327	*i* P	P	07 36 27.9	+0.2
	comp=Z,53nm,1.8s,SNR=11						
OGNE	Ogallala	84.29	42	*e*P	P	07 36 28.7	+0.8
	comp=Z,182nm,1.3s						
OGNE	Ogallala	84.29	42	P	P	07 36 28.6	+0.8
	baz=315,SNR=21						
TRI	Trieste	84.30	325	PFAKE		07 36 40.0	+12
TRI				LR	LR		
	comp=Z,11µm,19.0s						
KARP	Karpathos	84.33	311	P	P	07 36 27.9	-0.2
KARP				LR	LR		
	comp=Z,3µm,20.0s						
KARP	Karpathos	84.33	311	P	P	07 36 27.9	-0.2
WLF	Walferdange	84.41	332	*e*P	P	07 36 27.9	-0.2
	comp=Z,2µm,1.9s						
WLF				LR	LR		
	comp=Z,32µm,19.0s						
WLF	Walferdange	84.41	332	*e*P	P	07 36 27.9	-0.2
WLF				pmax	pmax		
	comp=Z,2µm,1.9s						
WLF				MLR	MLR		
	comp=Z,32µm,19.0s						
WLF	Walferdange	84.41	332	⇑P	P	07 36 27.7	-0.4
	comp=Z,112nm,2.1s						
TIR	Tirane	84.49	319	PFAKE		07 36 40.0	+11
TIR				LR	LR		
	comp=Z,17µm,19.0s						
SDCO	Great Sand Dun	84.58	46	*e*P	P	07 36 30.1	+0.5
	comp=Z,161nm,1.6s						
SDCO	Great Sand Dun	84.58	46	P	P	07 36 31.1	+1.5
	baz=313,SNR=48						
BFO	Black Forest	84.62	330	*e*P	P	07 36 29.4	+0.1
	comp=Z,209nm,1.6s						
BFO				LR	LR		
	comp=Z,6µm,18.0s						
BFO	Black Forest	84.62	330	*e*P	P	07 36 29.4	+0.1
BFO				pmax	pmax		
	comp=Z,209nm,1.6s						
BFO				MLR	MLR		
	comp=Z,6µm,18.0s						
ATAL	Atalanti	84.63	315	P	P	07 36 24.8	-4.7
ATAL	Atalanti	84.63	315	P	P	07 36 24.8	-4.7
DOU	Dourbes	84.64	333	⇑P	P	07 36 29.3	0.0
	comp=Z,43nm,2.3s						
FETA	Feichten	84.65	328	*i* P	P	07 36 29.7	+0.1
	comp=Z,31nm,1.5s,SNR=8.5						
LKR	Lokris	84.67	315	P	P	07 36 26.2	-3.5
LKR	Lokris	84.67	315	P	P	07 36 26.2	-3.5
FOZ	Fox Glacier	84.69	158	*e*P	P	07 36 29.9	+0.6
	comp=Z,95nm,1.5s						
FOZ				LR	LR		
	comp=Z,3µm,19.0s						
LTZ	Lake Taylor	84.77	156	PFAKE		07 36 40.0	+10
LTZ				LR	LR		
	comp=Z,4µm,20.0s						
AXAR	Agios Charalam	84.78	315	P	P	07 36 31.9	+1.6
AXAR	Agios Charalam	84.78	315	P	P	07 36 31.9	+1.6
AGG	Agios Georgios	84.79	316	*e*P	P	07 36 30.3	0.0
	comp=Z,169nm,1.9s						
AGG				LR	LR		
	comp=Z,8µm,19.0s						
AGG	Agios Georgios	84.79	316	*e*P	P	07 36 30.3	0.0
AGG				pmax	pmax		
	comp=Z,169nm,1.9s						
AGG				MLR	MLR		
	comp=Z,8µm,19.0s						
DAVA	Damuels	84.80	328	*i* pP	P	07 36 31.0	+0.6
	comp=Z,64nm,1.4s,SNR=14						
SANT	Santorini	84.81	312	PFAKE		07 36 40.0	+10
SANT				LR	LR		
	comp=Z,4µm,18.0s						
WLF1	Llynfaes	84.86	339	⇑*e*P	P	07 36 30.9	+0.6
WLF1				IAmb	IAmb	07 36 33.4	
	comp=Z,406nm,1.7s						
KHZ	Kahutara	84.86	155	PFAKE		07 36 40.0	+10
KHZ				LR	LR		
	comp=Z,5µm,18.0s						
TUC	Tucson	84.98	53	*e*P	P	07 36 31.9	+0.4
	comp=Z,93nm,1.3s						
TUC				LR	LR		
	comp=Z,2µm,19.0s						
TUC	Tucson	84.98	53	*e*P	P	07 36 31.9	+0.4
TUC				pmax	pmax		
	comp=Z,93nm,1.3s						
TUC				MLR	MLR		
	comp=Z,2µm,19.0s						
TUC	Tucson	84.98	53	P	P	07 36 32.9	+1.4
	baz=311						
ECSD	EROS Data Cent	85.03	37	*e*P	P	07 36 31.3	-0.2
	comp=Z,98nm,1.3s						
ECSD				LR	LR		
	comp=Z,2µm,19.0s						
ECSD	EROS Data Cent	85.03	37	P	P	07 36 32.1	+0.7
	baz=318,SNR=33						
C40A	Isle Royale Na	85.12	30	*e*P	P	07 36 32.3	+0.5
	comp=Z,231nm,1.9s						
C40A	Isle Royale Na	85.12	30	P	P	07 36 32.9	+1.1
	baz=323						
E38A	The Farm, Brul	85.15	32	*e*P	P	07 36 32.0	0.0
	comp=Z,81nm,1.0s						
E38A	The Farm, Brul	85.15	32	P	P	07 36 32.5	+0.5
	baz=322,SNR=21						
FUORN	Ofenpass-Fuorn	85.16	328	*e*P	P	07 36 31.9	-0.4
	comp=Z,291nm,1.8s						
FUORN				LR	LR		
	comp=Z,6µm,20.0s						
ECH	Echery	85.18	330	*e*P	P	07 36 32.0	-0.1
	comp=Z,95nm,1.4s						
ECH				LR	LR		
	comp=Z,6µm,19.0s						
ECH	Echery	85.18	330	*e*P	P	07 36 32.0	-0.1
ECH				pmax	pmax		
	comp=Z,95nm,1.4s						
ECH				MLR	MLR		
	comp=Z,6µm,19.0s						
OXZ	Oxford	85.18	157	*e*P	P	07 36 32.5	+0.6
	comp=Z,76nm,1.2s						
OXZ				LR	LR		
	comp=Z,4µm,19.0s						
DAVOX	Davos/Dischmat	85.20	328	LR	LR	08 17 54.6	
	comp=Z,8µm,18.3s,baz=24,slow=38						
RPZ	Rata Peaks	85.23	158	*e*P	P	07 36 32.7	+0.7
	comp=Z,95nm,1.7s						
RPZ	Rata Peaks	85.23	158	P	P	07 36 32.2	+0.1
	comp=Z,14nm,0.9s,baz=325,slow=7.0,SNR=4.9						
RPZ				LR	LR	08 18 14.0	
	comp=Z,869nm,18.0s,baz=338,slow=38						
DAMY	Dhamar	85.30	285	*e*P	P	07 36 33.0	-0.5
	comp=Z,84nm,1.1s						
DAMY				LR	LR		
	comp=Z,6µm,18.0s						
KSCO	Kaye Shedlock’	85.33	44	*e*P	P	07 36 33.5	+0.3
	comp=Z,268nm,1.6s						
KSCO	Kaye Shedlock’	85.33	44	P	P	07 36 33.8	+0.6
	baz=315,SNR=9.1						
F37A	Hinrichs Farm,	85.37	34	P	P	07 36 33.6	+0.5
	baz=321,SNR=11						
TRIZ	Trizonia	85.39	316	P	P	07 36 33.5	+0.2
DSB	Dublin	85.45	340	*e*P	P	07 36 31.8	-1.5
DSB	Dublin	85.45	340	PFAKE		07 36 40.0	+6.7
DSB				LR	LR		
	comp=Z,5µm,20.0s						
F38A	Pierce - Schro	85.52	33	P	P	07 36 34.8	+1.0
	baz=321,SNR=45						
LBZ	Lake Benmore	85.58	158	*e*P	P	07 36 34.7	+0.9
	comp=Z,109nm,1.2s						
LBZ				LR	LR		
	comp=Z,4µm,19.0s						
MCH1	Michaelchurch	85.58	338	*e*P	P	07 36 33.8	-0.1
MCH1				IAmb	IAmb	07 36 36.9	
	comp=Z,681nm,2.0s						
CRLZ	Canterbury Las	85.59	156	PFAKE		07 36 50.0	+16
CRLZ				LR	LR		
	comp=Z,4µm,20.0s						
LAST	Lasithi	85.61	311	P	P	07 36 28.8	-5.8
LAST	Lasithi	85.61	311	P	P	07 36 28.8	-5.8
PMOR	Pomariorio Ree	85.63	112	*e*P	P	07 36 36.3	+1.6
	comp=Z,123nm,1.4s						
PMOR	Pomariorio Ree	85.63	112	*e*T	T	09 09 43.0	
	comp=Z,10nm,0.2s						
T25A	Trinidad	85.63	46	*e*P	P	07 36 35.2	+0.3
	comp=Z,112nm,1.1s						
T25A	Trinidad	85.63	46	P	P	07 36 36.2	+1.4
	baz=314,SNR=25						
WKZ	Wanaka	85.64	159	PFAKE		07 36 50.0	+16
WKZ				LR	LR		
	comp=Z,4µm,19.0s						
TUE	Stuetta	85.67	328	*e*P	P	07 36 34.5	-0.3
	comp=Z,214nm,1.9s						
TUE				LR	LR		
	comp=Z,12µm,18.0s						
DCZ	Deep Cove	85.72	161	PFAKE		07 36 50.0	+16
DCZ				LR	LR		
	comp=Z,2µm,18.0s						
MQZ	McQueen’s Vall	85.72	156	PFAKE		07 36 50.0	+16
MQZ				LR	LR		
	comp=Z,4µm,18.0s						
OLDB	Oldbury-Upon-S	85.73	337	⇑*e*P	P	07 36 34.3	-0.4
E39A	Mellen	85.76	32	P	P	07 36 35.5	+0.5
	baz=322,SNR=22						
LAZ	Ladron	85.88	49	*e*P	P	07 36 37.6	+1.5
MLZ	Mavora Lakes	85.89	160	*e*P	P	07 36 36.0	+0.6
	comp=Z,42nm,1.2s						
MLZ				LR	LR		
	comp=Z,3µm,18.0s						
SCHQ	Schefferville	85.91	15	*e*P	P	07 36 36.0	+0.4
	comp=Z,87nm,1.3s						
SCHQ	Schefferville	85.91	15	P	P	07 36 36.5	+0.9
	comp=Z,20nm,0.9s,baz=6.2,slow=5.9,SNR=18						
SCHQ				LR	LR	08 18 22.3	
	comp=Z,2µm,18.4s,baz=348,slow=38						
ANMO	Albuquerque	85.92	49	*e*P	P	07 36 36.3	0.0
	comp=Z,90nm,1.4s						
ANMO	Albuquerque	85.92	49	*ce*P	P	07 36 37.1	+0.8
ANMO				pmax	pmax		
	comp=Z,144nm,2.5s						
ANMO	Albuquerque	85.92	49	P	P	07 36 37.9	+1.6
	baz=313						
F39A	Loretta	85.97	33	P	P	07 36 36.6	+0.5
	baz=322,SNR=18						
BGNE	Belgrade	85.99	40	*e*P	P	07 36 36.4	+0.1
	comp=Z,167nm,1.1s						
BGNE	Belgrade	85.99	40	P	P	07 36 36.7	+0.4
	baz=318,SNR=13						
PPT	Papeete	86.04	115	LR	LR	08 09 25.2	
	comp=Z,3µm,20.0s,baz=295,slow=32						
D41A	Chassel	86.05	31	*e*P	P	07 36 36.7	+0.3
	comp=Z,332nm,1.8s						
D41A	Chassel	86.05	31	P	P	07 36 37.3	+0.8
	baz=324,SNR=12						
PPT2	Papeete2	86.05	115	*e*S	S	07 47 09.6	-1.3
	comp=Z,3µm,34.5s						
PPT2	Papeete2	86.05	115	*e*LR	LR	08 03 49.0	
	comp=Z,9µm,26.8s,baz=311						
IGLA	Glengowla, Co	86.07	342	*e*P	P	07 36 34.9	-1.5
IGLA	Glengowla, Co	86.07	342	*e*S	S	07 47 06.7	-3.3
IGLA				*e*LQ	LQ	07 59 18.0	
LENM	Lemitar	86.14	50	*e*P	P	07 36 38.9	+1.5
G38A	Ridgeland	86.14	34	P	P	07 36 37.1	+0.2
	baz=321,SNR=15						
Y22D	IRIS PASSCAL I	86.23	50	PFAKE		07 36 50.0	+12
Y22D				LR	LR		
	comp=Z,2µm,21.0s						
Y22D	IRIS PASSCAL I	86.23	50	P	P	07 36 39.3	+1.6
	baz=313						
PYZ	Puysegur Point	86.25	161	PFAKE		07 36 50.0	+13
PYZ				LR	LR		
	comp=Z,4µm,18.0s						
ITM	Ithomi	86.31	315	*e*P	P	07 36 38.2	+0.3
	comp=Z,499nm,1.9s						
ITM				LR	LR		
	comp=Z,4µm,19.0s						
F40A	Park Falls	86.31	32	P	P	07 36 38.5	+0.7
	baz=322,SNR=21						
ODZ	Otahua Downs	86.31	158	PFAKE		07 36 50.0	+13
ODZ				LR	LR		
	comp=Z,4µm,20.0s						
WHZ	Wether Hill Ro	86.33	160	PFAKE		07 36 50.0	+13
WHZ				LR	LR		
	comp=Z,2µm,20.0s						
H38A	Maiden Rock	86.34	34	P	P	07 36 38.8	+0.9
	baz=321,SNR=15						
G39A	Holcombe	86.35	33	P	P	07 36 38.0	+0.1
	baz=322,SNR=15						
BNM	Barren Site	86.36	49	*e*P	P	07 36 38.8	+0.3
E41A	Kenton	86.36	31	P	P	07 36 38.7	+0.7
	baz=323,SNR=26						
319A	Douglas	86.56	53	*e*P	P	07 36 40.3	+0.9
	comp=Z,125nm,1.5s						
319A				LR	LR		
	comp=Z,2µm,19.0s						
COWI	Conover	86.58	31	*e*P	P	07 36 39.1	0.0
	comp=Z,122nm,1.5s						
SENIN	Lac Senin/Sane	86.61	329	*e*P	P	07 36 39.1	-0.4
	comp=Z,95nm,1.7s						
SENIN				LR	LR		
	comp=Z,6µm,20.0s						
121A	Cookes Peak, D	86.73	51	P	P	07 36 41.9	+1.6
	baz=312,SNR=16						
H39A	Augusta	86.78	34	P	P	07 36 40.5	+0.4
	baz=322,SNR=16						
G40A	Rib Lake	86.79	33	*e*P	P	07 36 40.1	-0.1
	comp=Z,82nm,1.1s						
G40A				LR	LR		
	comp=Z,2µm,21.0s						
G40A	Rib Lake	86.79	33	P	P	07 36 40.8	+0.7
	baz=322,SNR=25						
E42A	Champion	86.82	31	P	P	07 36 40.9	+0.7
	baz=324,SNR=11						
F41A	Three Lakes	86.88	32	*e*P	P	07 36 40.9	+0.3
	comp=Z,178nm,1.4s						
F41A				LR	LR		
	comp=Z,2µm,20.0s						
F41A	Three Lakes	86.88	32	P	P	07 36 41.5	+0.9
	baz=323,SNR=24						
AQU	L'Aquila	87.02	323	*e*P	P	07 36 42.0	+0.7
	comp=Z,168nm,1.5s						
AQU				LR	LR		
	comp=Z,12µm,20.0s						
AQU	L'Aquila	87.02	323	*e*P	P	07 36 42.0	+0.7
AQU				pmax	pmax		
	comp=Z,168nm,1.5s						
AQU				MLR	MLR		
	comp=Z,12µm,20.0s						
VLC	Villacollemand	87.03	326	*e*P	P	07 36 41.7	+0.4
	comp=Z,279nm,2.0s						
VLC				LR	LR		
	comp=Z,8µm,19.0s						
CBKS	Cedar Bluff	87.05	42	*e*P	P	07 36 42.2	+0.7
	comp=Z,121nm,1.4s						
CBKS	Cedar Bluff	87.05	42	*e*P	P	07 36 42.2	+0.7
CBKS				pmax	pmax		
	comp=Z,121nm,1.4s						
CBKS	Cedar Bluff	87.05	42	P	P	07 36 41.5	0.0
	baz=317,SNR=6.4						
CLF	Chambon-Foret	87.21	333	*e*P	P	07 36 43.9	+1.9
	comp=Z,259nm,1.9s						
CLF				LR	LR		
	comp=Z,8µm,21.0s						
H40A	Chili	87.22	33	P	P	07 36 43.1	+0.8
	baz=322,SNR=24						
E43A	Lone Tree Farm	87.24	30	*e*P	P	07 36 42.4	+0.1
	comp=Z,180nm,1.6s						
E43A				LR	LR		
	comp=Z,2µm,19.0s						
E43A	Lone Tree Farm	87.24	30	P	P	07 36 42.8	+0.6
	baz=325,SNR=8.5						
G41A	Antigo	87.27	32	P	P	07 36 43.3	+0.8
	baz=323,SNR=13						
F42A	Maple Grove Fa	87.27	31	P	P	07 36 43.5	+1.1
	baz=324						
I39A	Houston	87.32	34	*e*P	P	07 36 42.9	+0.2
	comp=Z,79nm,1.0s						
I39A	Houston	87.32	34	P	P	07 36 43.1	+0.4
	baz=322,SNR=21						
E44A	Grand Marais A	87.47	29	*e*P	P	07 36 44.5	+1.1
E44A				LR	LR		
	comp=Z,3µm,20.0s						
H41A	Junction City	87.54	33	*e*P	P	07 36 44.0	+0.3
	comp=Z,111nm,1.2s						
H41A	Junction City	87.54	33	P	P	07 36 44.0	+0.3
	baz=323,SNR=18						
G42A	Mountain	87.57	32	*e*P	P	07 36 44.3	+0.4
	comp=Z,130nm,1.3s						
G42A	Mountain	87.57	32	P	P	07 36 44.7	+0.8
	baz=324,SNR=18						
F43A	Flat Rock, Esc	87.61	31	P	P	07 36 45.0	+1.0
	baz=324,SNR=9.2						
J39A	Decorah	87.64	35	P	P	07 36 44.5	+0.2
	baz=322,SNR=23						
VAL	Valentia	87.64	342	*e*P	P	07 36 43.3	-0.7
VAL	Valentia	87.64	342	*e*S	S	07 47 24.2	-1.1
VAL				*e*LQ	LQ	08 00 16.6	
I40A	Norwalk	87.69	34	P	P	07 36 45.0	+0.5
	baz=322,SNR=14						
TIP	Timpagrande	87.70	319	*e*P	P	07 36 44.5	-0.2
	comp=Z,138nm,1.9s						
TIP				LR	LR		
	comp=Z,8µm,18.0s						
MATQ	Matagami	87.72	23	P	P	07 36 44.8	+0.3
	baz=331,SNR=13						
TAOE	Nuku Hiva Isla	87.72	103	*e*S	S	07 47 23.2	-4.2
	comp=Z,522nm,26.9s						
TAOE	Nuku Hiva Isla	87.72	103	*e*LQ	LQ	08 00 43.5	
	comp=Z,3µm,29.4s						
TAOE				*e*LR	LR	08 04 29.3	
	comp=Z,6µm,21.5s,baz=318						
F44A	Big Bay de Noc	87.80	30	P	P	07 36 45.9	+0.9
	baz=325,SNR=9.5						
CCA1	Carnmenellis	87.84	338	⇑*e*P	P	07 36 45.2	+0.2
G43A	Wallace	87.86	31	*e*P	P	07 36 45.8	+0.5
	comp=Z,168nm,1.4s						
G43A	Wallace	87.86	31	P	P	07 36 46.7	+1.4
	baz=324,SNR=17						
I41A	Arkdale	87.89	33	*e*P	P	07 36 45.8	+0.4
	comp=Z,116nm,1.2s						
I41A	Arkdale	87.89	33	P	P	07 36 46.2	+0.7
	baz=323,SNR=21						
BNI	Bardonecchia	87.93	329	*e*P	P	07 36 46.4	+0.6
	comp=Z,94nm,1.7s						
BNI				LR	LR		
	comp=Z,8µm,18.0s						
BNI	Bardonecchia	87.93	329	*e*P	P	07 36 46.4	+0.6
BNI				pmax	pmax		
	comp=Z,94nm,1.7s						
BNI				MLR	MLR		
	comp=Z,8µm,18.0s						
D46A	Sault St. Mari	87.97	28	P	P	07 36 46.4	+0.7
	baz=327,SNR=21						
E45A	Wooded Hills,	87.97	29	P	P	07 36 46.8	+1.0
	baz=326						
J40A	Soldiers Grove	88.03	34	P	P	07 36 46.7	+0.6
	baz=322,SNR=12						
SCIA	State Center	88.05	36	*e*P	P	07 36 46.3	+0.1
	comp=Z,218nm,1.3s						
SCIA				LR	LR		
	comp=Z,2µm,21.0s						
SCIA	State Center	88.05	36	P	P	07 36 47.3	+1.1
	baz=321,SNR=14						
K39A	Oelwein	88.05	35	P	P	07 36 46.2	0.0
	baz=321,SNR=18						
H42A	Shiocton	88.11	32	*e*P	P	07 36 46.9	+0.4
	comp=Z,116nm,1.2s						
H42A	Shiocton	88.11	32	P	P	07 36 47.4	+1.0
	baz=324,SNR=12						
D47A	Chapleau	88.18	28	P	P	07 36 47.8	+1.0
	baz=327,SNR=21						
E46A	Sault Ste Mari	88.30	29	P	P	07 36 48.3	+0.9
	baz=326,SNR=23						
ATD	Arta Tunnel	88.32	283	LR	LR	08 20 59.4	
	comp=Z,1µm,19.2s,baz=46,slow=39						
J41A	Loganville	88.38	34	P	P	07 36 48.4	+0.6
	baz=323,SNR=15						
F45A	CMU Biological	88.40	30	P	P	07 36 48.7	+0.9
	baz=326,SNR=12						
K40A	Colesburg	88.40	35	P	P	07 36 48.6	+0.7
	baz=322,SNR=26						
I42A	Draeger Farm,	88.44	33	*e*P	P	07 36 48.3	+0.3
	comp=Z,138nm,1.4s						
I42A	Draeger Farm,	88.44	33	P	P	07 36 49.0	+0.9
	baz=323,SNR=13						
L39A	Vinton	88.45	36	P	P	07 36 48.4	+0.3
	baz=321,SNR=23						
H43A	Windswept, Lux	88.47	32	*e*P	P	07 36 48.5	+0.3
	comp=Z,146nm,1.1s						
H43A	Windswept, Lux	88.47	32	P	P	07 36 48.6	+0.5
	baz=324,SNR=12						
KSU1	Kansas State U	88.49	40	*e*P	P	07 36 48.6	+0.2
	comp=Z,73nm,1.0s						
KSU1				LR	LR		
	comp=Z,2µm,21.0s						
KSU1	Kansas State U	88.49	40	P	P	07 36 48.8	+0.5
	baz=318,SNR=18						
LSQQ	Lebel-sur-Quev	88.55	23	P	P	07 36 49.4	+1.0
	baz=332						
D48A	Paudash Townsh	88.55	27	P	P	07 36 49.2	+0.6
	baz=328,SNR=11						
CHGQ	Chibougamau	88.57	21	P	P	07 36 49.0	+0.5
	baz=334,SNR=14						
E47A	Iron Bridge	88.62	28	P	P	07 36 49.5	+0.7
	baz=327,SNR=19						
SSB	Saint Sauveur	88.62	330	PFAKE		07 37 00.0	+11
SSB				LR	LR		
	comp=Z,5µm,20.0s						
F46A	Macinaw City C	88.62	29	P	P	07 36 50.0	+1.2
	baz=326,SNR=16						
JFWS	Jewell Farm	88.63	34	*e*P	P	07 36 49.0	0.0
	comp=Z,122nm,1.8s						
JFWS	Jewell Farm	88.63	34	*e*P	P	07 36 49.0	0.0
JFWS				pmax	pmax		
	comp=Z,122nm,1.8s						
JFWS	Jewell Farm	88.63	34	P	P	07 36 49.3	+0.3
	baz=322,SNR=11						
I43A	Langenfeld Bro	88.78	32	P	P	07 36 50.4	+0.7

	baz=324,SNR=6.6						
AMTX	Amarillo	88.78	46	*e*P	P	07 36 51.0	+1.1
	comp=Z,96nm,1.2s						
AMTX	Amarillo	88.78	46	P	P	07 36 51.3	+1.3
	baz=316						
MSTX	Muleshoe	88.79	47	*e*P	P	07 36 51.2	+1.1
	comp=Z,73nm,1.4s						
MSTX				LR	LR		
	comp=Z,2µm,20.0s						
MSTX	Muleshoe	88.79	47	P	P	07 36 50.8	+0.8
	baz=315,SNR=6.9						
MNTX	Cornudas Mount	88.79	50	*e*P	P	07 36 51.4	+1.4
	comp=Z,105nm,2.0s						
MNTX	Cornudas Mount	88.79	50	P	P	07 36 51.1	+1.2
	baz=314,SNR=8.4						
J42A	Columbus	88.81	33	P	P	07 36 50.4	+0.6
	baz=323,SNR=15						
CEL	Celeste	88.83	319	PFAKE		07 37 00.0	+10
CEL				LR	LR		
	comp=Z,10µm,18.0s						
K41A	Shullsburg	88.85	34	P	P	07 36 50.2	+0.2
	baz=322,SNR=11						
L40A	Anamosa	88.86	35	*e*P	P	07 36 50.2	+0.2
	comp=Z,101nm,1.1s						
L40A				LR	LR		
	comp=Z,2µm,19.0s						
L40A	Anamosa	88.86	35	P	P	07 36 50.6	+0.5
	baz=322,SNR=19						
G45A	Suttons Bay	88.87	30	P	P	07 36 51.1	+1.0
	baz=326,SNR=8.2						
M39A	Webster	88.87	36	P	P	07 36 50.7	+0.5
	baz=321,SNR=24						
G46A	Petoskey	88.96	29	P	P	07 36 51.5	+1.0
	baz=326,SNR=11						
E48A	Lockeyer	89.01	27	P	P	07 36 51.3	+0.7
	baz=328,SNR=13						
H45A	Beulah	89.06	31	P	P	07 36 52.2	+1.3
	baz=325,SNR=6.0						
J43A	Natural Harves	89.07	33	P	P	07 36 51.8	+0.8
	baz=324,SNR=8.1						
K42A	Prairie Point,	89.14	34	P	P	07 36 51.3	-0.1
	baz=323,SNR=12						
L41A	Preston	89.18	35	P	P	07 36 51.7	+0.2
	baz=322,SNR=19						
U32A	Winter Ranch,	89.22	43	PFAKE		07 37 00.0	+8.1
U32A				LR	LR		
	comp=Z,2µm,20.0s						
VLDQ	Val d'Or	89.23	24	*e*P	P	07 36 51.6	0.0
	comp=Z,211nm,1.4s						
M40A	Post Highland	89.24	36	P	P	07 36 52.6	+0.8
	baz=322,SNR=12						
D50A	G1974 Best Tow	89.25	26	P	P	07 36 52.4	+0.6
	baz=330,SNR=12						
MFF	Saint Martin d	89.29	333	*e*P	P	07 36 53.8	+1.8
MFF				pmax	pmax		
	comp=Z,161nm,2.0s						
F48A	Evansville	89.39	28	P	P	07 36 53.5	+1.0
	baz=328,SNR=9.6						
I45A	Fountain	89.46	31	P	P	07 36 54.2	+1.4
	baz=325						
GLMI	Grayling	89.46	30	*e*P	P	07 36 53.5	+0.6
	comp=Z,188nm,1.1s						
GLMI	Grayling	89.46	30	P	P	07 36 54.3	+1.5
	baz=326,SNR=8.4						
H46A	Fife Lake	89.47	30	P	P	07 36 53.8	+0.9
	baz=326,SNR=15						
G47A	Hillman	89.47	29	P	P	07 36 53.8	+0.9
	baz=327,SNR=9.7						
D51A	Lot 18 Range I	89.48	25	P	P	07 36 53.4	+0.5
	baz=330,SNR=9.1						
E50A	Wahnapitae	89.58	26	P	P	07 36 54.2	+0.9
	baz=329,SNR=12						
N40A	Mertquake, Sal	89.61	36	P	P	07 36 54.8	+1.2
	baz=322,SNR=12						
L42A	Oliver, Polo	89.61	34	*e*P	P	07 36 54.0	+0.4
	comp=Z,69nm,1.1s						
L42A				LR	LR		
	comp=Z,3µm,20.0s						
L42A	Oliver, Polo	89.61	34	P	P	07 36 53.8	+0.2
	baz=323,SNR=11						
K43A	Burlington	89.65	33	*e*P	P	07 36 55.8	+2.1
	comp=Z,89nm,1.4s						
K43A	Burlington	89.65	33	P	P	07 36 54.2	+0.5
	baz=324						
F49A	Sandfield	89.66	28	P	P	07 36 54.4	+0.7
	baz=328,SNR=8.9						
M41A	Milan	89.71	35	P	P	07 36 54.9	+0.9
	baz=322,SNR=16						
H47A	Mio	89.81	30	P	P	07 36 55.9	+1.5
	baz=327,SNR=9.1						
I46A	Reed City	89.86	31	P	P	07 36 56.0	+1.2
	baz=326,SNR=7.1						
TBI	Tubuai	89.86	120	*e*S	S	07 47 45.2	-1.7
	comp=Z,409nm,28.0s						
TBI	Tubuai	89.86	120	*e*LQ	LQ	08 01 35.5	
	comp=Z,2µm,28.0s						
TBI				*e*LR	LR	08 05 26.0	
	comp=Z,7µm,24.0s,baz=307						
J45A	Montague	89.89	31	P	P	07 36 56.0	+1.2
	baz=325						
L43A	Garden Prairie	89.89	34	P	P	07 36 55.5	+0.6
	baz=324,SNR=7.8						
D52A	ZEK Kipawa Sen	89.91	25	P	P	07 36 55.9	+1.1
	baz=331,SNR=10						
E51A	G1948 Merrick	89.92	26	P	P	07 36 55.8	+0.8
	baz=330,SNR=14						
M42A	Sheffield	90.01	35	P	P	07 36 56.0	+0.5
	baz=323,SNR=7.8						
D53A	Lac Vacive, Po	90.05	24	P	P	07 36 56.4	+0.8
	baz=331						
H48A	Harrisville	90.07	29	P	P	07 36 56.8	+1.1
	baz=327,SNR=7.4						
N41A	Harden Midland	90.09	36	*e*P	P	07 36 56.6	+0.8
	comp=Z,160nm,1.4s						
N41A	Harden Midland	90.09	36	P	P	07 36 56.8	+1.0
	baz=322,SNR=5.2						
I47A	Gladwin	90.17	30	P	P	07 36 57.8	+1.6
	baz=326,SNR=8.8						
L44A	Lake County Fo	90.26	33	P	P	07 36 57.5	+0.9
	baz=324						
J46A	Howard City	90.27	31	P	P	07 36 57.8	+1.1
	baz=326						
F51A	Arnstein	90.29	26	P	P	07 36 57.3	+0.6
	baz=330,SNR=12						
TOBO	Tobermory, Bru	90.31	28	P	P	07 36 57.7	+0.9
	baz=328						
D54A	Lac Fusel, La	90.33	24	P	P	07 36 57.4	+0.6
	baz=332,SNR=10.0						
I48A	Sherman Twp	90.36	29	P	P	07 36 58.7	+1.7
	baz=327,SNR=8.8						
N42A	Yates City	90.38	35	P	P	07 36 58.3	+1.1
	baz=323						
M43A	Waltham Townsh	90.39	34	P	P	07 36 58.0	+0.8
	baz=323,SNR=20						
E52A	Mattawa	90.42	25	P	P	07 36 58.2	+1.0
	baz=331						
WMOK	Wichita Mounta	90.54	44	*e*P	P	07 36 58.9	+0.8
	comp=Z,109nm,1.5s						
WMOK				LR	LR		
	comp=Z,2µm,20.0s						
WMOK	Wichita Mounta	90.54	44	*e*P	P	07 36 58.9	+0.8
WMOK				pmax	pmax		
	comp=Z,109nm,1.5s						
WMOK				MLR	MLR		
	comp=Z,2µm,20.0s						
WMOK	Wichita Mounta	90.54	44	P	P	07 36 59.0	+0.9
	baz=317,SNR=15						
O41A	Passleys Farm,	90.55	36	P	P	07 36 59.0	+1.0
	baz=322,SNR=20						
F52A	Sundridge	90.62	26	P	P	07 36 59.2	+0.9
	baz=330,SNR=15						
E53A	Dumoine, Ponti	90.68	25	P	P	07 36 59.5	+1.0
	baz=331						
KLBO	Killbear Provi	90.68	27	P	P	07 36 59.7	+1.2
	baz=329,SNR=9.9						
N43A	Stutzman Famil	90.69	35	P	P	07 36 59.6	+0.9
	baz=323						
J47A	Sunmer	90.70	31	P	P	07 37 00.1	+1.5
	baz=326,SNR=11						
CLTB	Caltabellotta	90.74	320	PFAKE		07 37 10.0	+11
CLTB				LR	LR		
	comp=Z,7µm,19.0s						
K46A	Dorr	90.75	32	P	P	07 37 00.0	+1.1
	baz=326						
E54A	Lac Daplat, Po	90.79	24	P	P	07 36 59.2	+0.3
	baz=332						
P41A	Barry, Barry	90.81	37	P	P	07 36 59.9	+0.7
	baz=322,SNR=15						
M44A	Midewin, Midew	90.84	34	*e*P	P	07 36 59.9	+0.6
	comp=Z,116nm,1.3s						
M44A	Midewin, Midew	90.84	34	P	P	07 37 00.1	+0.8
	baz=324,SNR=8.5						
O42A	Bath	90.86	36	P	P	07 37 00.1	+0.6
	baz=323						
BUKO	Buck Lake	90.90	26	P	P	07 37 00.5	+0.9
	baz=330,SNR=10						
I49A	Point Hope	90.91	29	P	P	07 37 01.0	+1.4
	baz=328,SNR=6.7						
ALGO	Algonquin Park	90.92	25	P	P	07 37 00.2	+0.6
	baz=331,SNR=7.5						
HDIL	Hopedale	90.94	35	*e*P	P	07 37 00.4	+0.6
	comp=Z,103nm,1.1s						
HDIL				LR	LR		
	comp=Z,2µm,20.0s						
HDIL	Hopedale	90.94	35	P	P	07 37 00.7	+0.9
	baz=323,SNR=13						
BMRO	Meriville Lake	90.96	28	P	P	07 37 01.4	+1.5
	baz=329						
J48A	Bridge Port	91.07	30	P	P	07 37 02.0	+1.7
	baz=327,SNR=12						
L46A	Eue Claire	91.09	32	P	P	07 37 01.3	+0.8
	baz=325						
K47A	Vermontville	91.09	31	P	P	07 37 01.7	+1.2
	baz=326						
O43A	Sugar Creek Fa	91.14	35	P	P	07 37 01.9	+1.2
	baz=323						
BRCO	Bruce Peninsul	91.18	28	P	P	07 37 02.4	+1.5
	baz=329						
P42A	Winchester	91.22	36	*e*P	P	07 37 01.9	+0.8
	comp=Z,83nm,1.1s						
P42A				LR	LR		
	comp=Z,2µm,19.0s						
P42A	Winchester	91.22	36	P	P	07 37 02.0	+0.8
	baz=322,SNR=20						
J49A	Marlette	91.27	30	P	P	07 37 02.6	+1.3
	baz=327,SNR=9.5						
N44A	Piper City	91.27	34	P	P	07 37 02.4	+1.0
	baz=324,SNR=9.3						
BASO	Ashfield	91.29	28	P	P	07 37 02.9	+1.5
	baz=328,SNR=5.7						
Q41A	Truxton	91.29	37	P	P	07 37 02.5	+1.1
	baz=322,SNR=16						
TUL1	Leonard	91.31	42	*e*P	P	07 37 02.3	+0.7
	comp=Z,66nm,1.2s						
TUL1	Leonard	91.31	42	P	P	07 37 02.4	+0.8
	baz=319,SNR=11						
LATQ	La Tuque	91.31	21	P	P	07 37 02.5	+1.1
	baz=335,SNR=6.8						
K48A	Perry	91.34	30	P	P	07 37 03.3	+1.7
	baz=327,SNR=5.6						
WDD	Wied Dalam	91.37	318	PFAKE		07 37 10.0	+8.1
WDD				LR	LR		
	comp=Z,5µm,19.0s						
BWLO	Walkerton	91.40	28	P	P	07 37 03.3	+1.4
	baz=329						
PEMO	Pembroke	91.43	25	P	P	07 37 02.7	+0.7
	baz=332,SNR=6.7						
G53A	Haliburton	91.45	26	P	P	07 37 03.0	+0.9
	baz=331,SNR=9.5						
TXAR	Lajitas Array	91.50	51	P	P	07 37 03.1	+0.3
	comp=Z,8.8nm,0.8s,baz=298,slow=2.7,SNR=20						
N45A	Kentland	91.51	34	P	P	07 37 03.7	+1.3
	baz=324,SNR=5.4						
M46A	Old House Fiel	91.56	33	*e*P	P	07 37 03.4	+0.8
	comp=Z,76nm,1.3s						
M46A				LR	LR		
	comp=Z,2µm,20.0s						
M46A	Old House Fiel	91.56	33	P	P	07 37 04.0	+1.4
	baz=325,SNR=5.5						
P43A	Skaggs, Pawnee	91.56	36	P	P	07 37 03.6	+0.9
	baz=323						
SADO	Sadowa	91.57	26	*e*P	P	07 37 04.7	+2.1
	comp=Z,137nm,1.7s						
ABTX	Abilene, Hawle	91.58	46	*e*P	P	07 37 03.9	+0.9
	comp=Z,112nm,1.3s						
ABTX				LR	LR		
	comp=Z,1µm,19.0s						
ABTX	Abilene, Hawle	91.58	46	P	P	07 37 04.0	+1.0
	baz=317,SNR=14						
L47A	Sherwood	91.58	32	P	P	07 37 03.8	+1.0
	baz=326,SNR=6.5						
F55A	Otter Lake	91.59	24	P	P	07 37 03.5	+0.8
	baz=332						
K49A	Clarkson	91.63	30	P	P	07 37 04.3	+1.3
	baz=327						
O44A	Mansfield	91.64	35	P	P	07 37 03.9	+0.8
	baz=324						
Q42A	Golden Eagle	91.66	37	P	P	07 37 04.1	+1.0
	baz=322,SNR=9.0						
I51A	Listowel	91.71	28	P	P	07 37 05.1	+1.7
	baz=329,SNR=5.6						
R41A	Rosebud	91.73	38	P	P	07 37 04.5	+1.0
	baz=322,SNR=21						
BANO	Bancroft	91.78	25	P	P	07 37 04.6	+1.0
	baz=331,SNR=7.5						
N46A	Monticello	91.81	33	P	P	07 37 04.6	+0.8
	baz=325,SNR=6.7						
TRQ	Mont Tremblant	91.82	23	*e*P	P	07 37 04.7	+0.9
O45A	Potomac	91.90	34	P	P	07 37 05.5	+1.3
	baz=324,SNR=12						
M47A	Cromwell	91.91	32	P	P	07 37 05.2	+0.9
	baz=326						
L48A	N Adams	91.93	31	P	P	07 37 05.6	+1.2
	baz=326,SNR=9.5						
AAM	Ann Arbor	91.95	30	PFAKE		07 37 20.0	+16
AAM				LR	LR		
	comp=Z,3µm,21.0s						
AAM	Ann Arbor	91.95	30	P	P	07 37 05.3	+0.9
	baz=327						
G55A	Calabogie	91.98	25	P	P	07 37 05.2	+0.7
	baz=332,SNR=8.9						
CCM	Cathedral Cave	91.99	38	*e*P	P	07 37 05.4	+0.7
	comp=Z,76nm,1.3s						
CCM	Cathedral Cave	91.99	38	*e*P	P	07 37 05.4	+0.7
CCM				pmax	pmax		
	comp=Z,76nm,1.3s						
CCM	Cathedral Cave	91.99	38	P	P	07 37 05.9	+1.2
	baz=322						
HHAR	Hobbs	92.00	40	PFAKE		07 37 20.0	+15
HHAR				LR	LR		
	comp=Z,2µm,21.0s						
SLM	Saint Louis	92.02	37	PFAKE		07 37 20.0	+15
SLM				LR	LR		
	comp=Z,2µm,19.0s						
R42A	Luebbering	92.03	37	P	P	07 37 05.7	+0.8
	baz=322,SNR=11						
Q43A	New Douglas	92.03	36	P	P	07 37 05.8	+0.9
	baz=323						
PLVO	Plevna	92.05	25	*e*P	P	07 37 05.9	+1.1
	comp=Z,41nm,1.4s						
PLVO	Plevna	92.05	25	P	P	07 37 05.7	+0.8
	baz=332						
L49A	Milan	92.07	31	P	P	07 37 06.3	+1.3
	baz=327,SNR=6.9						
SFIN	Lafayette	92.07	34	*e*P	P	07 37 05.9	+0.9
	comp=Z,112nm,1.4s						
SFIN	Lafayette	92.07	34	P	P	07 37 06.0	+0.9
	baz=325,SNR=6.5						
S41A	Jillco Farms,	92.11	38	P	P	07 37 06.0	+0.7
	baz=322,SNR=8.4						
P44A	Sand Creek, Wi	92.12	35	P	P	07 37 06.3	+1.0
	baz=324,SNR=15						
M48A	Edgerton	92.19	32	*e*P	P	07 37 06.3	+0.7
	comp=Z,83nm,1.5s						
M48A	Edgerton	92.19	32	P	P	07 37 06.7	+1.1
	baz=326						
ORIO	Orleans, Innes	92.20	24	P	P	07 37 06.7	+1.2
	baz=333,SNR=5.4						
I53A	Kortright Cn E	92.23	27	P	P	07 37 06.5	+0.8
	baz=330						
ACTO	Acton	92.24	28	P	P	07 37 07.0	+1.3
	baz=330						
ALFO	Alfred	92.25	23	P	P	07 37 06.1	+0.4
	baz=333,SNR=8.7						
N47A	Urbana	92.28	32	P	P	07 37 06.9	+0.9
	baz=326,SNR=8.6						
PKRO	Pickering	92.29	27	P	P	07 37 07.5	+1.5
	baz=330						
DELO	Deloro Mine	92.32	26	P	P	07 37 07.4	+1.3
	baz=331						
Q44A	Meyer Farm, Va	92.39	36	*e*P	P	07 37 07.5	+1.0
	comp=Z,105nm,1.4s						
Q44A	Meyer Farm, Va	92.39	36	P	P	07 37 07.7	+1.2
	baz=323,SNR=9.2						
J52A	Paris	92.40	28	P	P	07 37 08.1	+1.6
	baz=329						
S42A	Caledonia	92.43	38	P	P	07 37 07.8	+1.0
	baz=322,SNR=18						
H55A	Tweed	92.44	25	P	P	07 37 08.1	+1.4
	baz=332						
FVM	French Village	92.44	37	*e*P	P	07 37 07.4	+0.6
	comp=Z,59nm,1.3s						
FVM				LR	LR		
	comp=Z,2µm,20.0s						
FVM	French Village	92.44	37	*e*P	P	07 37 07.4	+0.6
FVM				pmax	pmax		
	comp=Z,59nm,1.3s						
FVM				MLR	MLR		
	comp=Z,2µm,20.0s						
K51A	Iona Station	92.45	29	P	P	07 37 08.3	+1.5
	baz=328,SNR=5.4						
R43A	Red Bud	92.45	37	P	P	07 37 07.6	+0.7
	baz=323,SNR=8.2						
P45A	Graceland, Par	92.47	35	*e*P	P	07 37 09.3	+2.4
	comp=Z,64nm,1.4s						
P45A				LR	LR		
	comp=Z,2µm,19.0s						
P45A	Graceland, Par	92.47	35	P	P	07 37 07.9	+1.0
	baz=324						
DRWO	Darlington Wes	92.50	27	P	P	07 37 07.5	+0.6
	baz=330						
TORO	Toronto--Lesli	92.50	27	P	P	07 37 08.1	+1.2
	baz=330						
DRCO	St. Marys Ceme	92.50	27	P	P	07 37 07.5	+0.6
	baz=330						
U40A	Yellville	92.50	40	P	P	07 37 07.6	+0.5
	baz=321,SNR=33						
M49A	Liberty Center	92.51	31	P	P	07 37 08.3	+1.2
	baz=327						
T41A	Mountain View	92.52	39	P	P	07 37 07.8	+0.6
	baz=322,SNR=15						
I55A	Frankford	92.56	26	P	P	07 37 08.3	+1.0
	baz=331						
WLVO	Wesleyville	92.57	26	P	P	07 37 08.5	+1.3
	baz=331						
N48A	Decatur	92.58	32	P	P	07 37 08.3	+0.9
	baz=326,SNR=6.9						
O47A	Sheridan	92.60	33	P	P	07 37 08.0	+0.5
	baz=325,SNR=5.6						
P46A	Rosedale	92.64	34	P	P	07 37 08.8	+1.1
	baz=324						
K52A	Tillsonburg	92.70	28	P	P	07 37 09.4	+1.5
	baz=329,SNR=6.9						
H56A	Elgin	92.72	25	P	P	07 37 08.7	+0.8
	baz=332						
TYNO	Tyneside	92.75	28	P	P	07 37 09.5	+1.4
	baz=330						
Q45A	Warren Harvey,	92.79	35	P	P	07 37 09.7	+1.3
	baz=324,SNR=8.2						
T42A	Van Buren	92.87	38	*e*P	P	07 37 09.4	+0.6
	comp=Z,67nm,1.4s						
T42A	Van Buren	92.87	38	P	P	07 37 09.8	+1.1
	baz=322,SNR=18						
R44A	Waltonville	92.88	36	P	P	07 37 09.4	+0.6
	baz=323,SNR=8.3						
N49A	Columbus Grove	92.89	32	*e*P	P	07 37 09.5	+0.7
	comp=Z,52nm,1.3s						
N49A	Columbus Grove	92.89	32	P	P	07 37 09.7	+0.9
	baz=327						
W39A	Magazine	92.91	41	*e*P	P	07 37 09.8	+0.8
	comp=Z,80nm,1.5s						
W39A				LR	LR		
	comp=Z,2µm,18.0s						
W39A	Magazine	92.91	41	P	P	07 37 09.8	+0.8
	baz=320,SNR=8.8						
DRLN	Deer Lake	92.94	11	PFAKE		07 37 20.0	+11
DRLN				LR	LR		
	comp=Z,4µm,20.0s						
S43A	Fulton Ridge,	92.94	37	P	P	07 37 09.6	+0.5
	baz=323,SNR=8.2						
OLIL	Olney	92.95	35	*e*P	P	07 37 10.2	+1.0
	comp=Z,109nm,1.4s						
U41A	Viola	92.99	39	P	P	07 37 09.8	+0.4
	baz=321,SNR=6.8						
O48A	Farmland	93.02	33	P	P	07 37 10.1	+0.6
	baz=326,SNR=7.1						
JCT	Junction City	93.04	48	*e*P	P	07 37 10.6	+0.8
	comp=Z,346nm,2.0s						
JCT				LR	LR		
	comp=Z,2µm,19.0s						
JCT	Junction City	93.04	48	*e*P	P	07 37 10.6	+0.8
JCT				pmax	pmax		
	comp=Z,346nm,2.0s						
JCT				MLR	MLR		
	comp=Z,2µm,19.0s						
JCT	Junction City	93.04	48	P	P	07 37 10.8	+1.0
	baz=317,SNR=19						
FURI	Furi	93.17	283	PFAKE		07 37 20.0	+9.1
FURI				LR	LR		
	comp=Z,5µm,20.0s						
P47A	Martinsville	93.17	34	P	P	07 37 11.1	+1.0
	baz=325,SNR=7.7						
BATG	Bathurst New B	93.17	17	*e*P	P	07 37 11.8	+1.8
	comp=Z,163nm,1.7s						
BATG				LR	LR		
	comp=Z,4µm,22.0s						
R45A	Skylar, Fairfi	93.22	36	P	P	07 37 11.3	+0.9
	baz=324,SNR=5.5						
T43A	Greenville	93.22	38	P	P	07 37 11.1	+0.7
	baz=322,SNR=8.9						
S44A	Carbondale	93.24	37	P	P	07 37 11.5	+1.0
	baz=323,SNR=14						
SIUC	Southern Illin	93.24	37	*e*P	P	07 37 11.1	+0.6
	comp=Z,57nm,1.0s						
LONY	Lake Ozonia	93.24	24	*e*P	P	07 37 12.3	+1.9
	comp=Z,137nm,1.9s						
LONY				LR	LR		
	comp=Z,3µm,20.0s						
LONY	Lake Ozonia	93.24	24	P	P	07 37 10.7	+0.3
	baz=334						
PQI	Presque Isle	93.26	19	*e*P	P	07 37 12.7	+2.3
	comp=Z,360nm,1.9s						
WHTX	Lake Whitney,	93.31	45	*e*P	P	07 37 12.0	+1.1
	comp=Z,92nm,1.3s						
WHTX				LR	LR		
	comp=Z,2µm,21.0s						
WHTX	Lake Whitney,	93.31	45	P	P	07 37 11.8	+0.9
	baz=318,SNR=12						
BLO	Bloomington	93.31	34	*e*P	P	07 37 11.5	+0.7
	comp=Z,80nm,1.6s						
BLO	Bloomington	93.31	34	*e*P	P	07 37 11.5	+0.7
BLO				pmax	pmax		
	comp=Z,80nm,1.6s						
U42A	Revenden	93.33	39	P	P	07 37 11.2	+0.3
	baz=322						
MOQ	Mont Orford	93.34	22	*e*P	P	07 37 11.6	+0.7
J55A	Hilton	93.35	26	P	P	07 37 12.0	+1.1
	baz=331						
M51A	Elyria	93.36	30	P	P	07 37 12.0	+1.1
	baz=328						
PBMO	Poplar Bluff	93.39	38	*e*P	P	07 37 11.8	+0.6
	comp=Z,48nm,1.1s						
O49A	Covington	93.43	32	*e*P	P	07 37 12.3	+1.0
	comp=Z,38nm,1.3s						
O49A				LR	LR		
	comp=Z,2µm,20.0s						
O49A	Covington	93.43	32	P	P	07 37 12.1	+0.7
	baz=326						
N50A	Nevada	93.44	31	P	P	07 37 12.2	+0.8
	baz=327						
M52A	Chesterland	93.51	29	P	P	07 37 12.9	+1.2
	baz=329						
MIAR	Mount Ida	93.52	41	*e*P	P	07 37 12.7	+0.9
	comp=Z,94nm,1.4s						
MIAR				LR	LR		
	comp=Z,2µm,18.0s						
MIAR	Mount Ida	93.52	41	*e*P	P	07 37 12.7	+0.9
MIAR				pmax	pmax		
	comp=Z,95nm,1.4s						
MIAR				MLR	MLR		
	comp=Z,2µm,18.0s						
MIAR	Mount Ida	93.52	41	P	P	07 37 12.7	+0.9
	baz=320,SNR=15						
ERPA	Erie	93.55	28	*e*P	P	07 37 13.0	+1.2
	comp=Z,72nm,1.4s						
ERPA	Erie	93.55	28	P	P	07 37 12.7	+0.9
	baz=330						
Q47A	Bedord North L	93.55	34	P	P	07 37 12.6	+0.8
	baz=325,SNR=5.8						
T44A	Benton	93.56	37	P	P	07 37 12.7	+0.7
	baz=323						
P48A	Milroy	93.56	33	P	P	07 37 12.7	+0.7
	baz=326,SNR=6.1						
S45A	Carrier Mills	93.57	36	P	P	07 37 12.9	+0.9

	baz=324,SNR=9.0						
L53A	Girard	93.58	28	P	P	07 37 12.7	+0.7
	baz=329						
WHAR	Wooly Hollow	93.62	40	*e*P	P	07 37 13.1	+0.8
	comp=Z,74nm,1.2s						
WHAR				LR	LR		
	comp=Z,2μm,19.0s						
N51A	Ashland	93.63	30	PFAKE		07 37 20.0	+7.7
N51A				LR	LR		
	comp=Z,3μm,19.0s						
R46A	Gibon Southern	93.64	35	P	P	07 37 13.1	+0.8
	baz=324						
K55A	Perry	93.73	27	P	P	07 37 13.8	+1.1
	baz=331						
U43A	Rector	93.73	38	P	P	07 37 13.8	+1.1
	baz=322						
W41B	Gary Mavity, V	93.73	40	*e*P	P	07 37 13.7	+0.9
	comp=Z,82nm,1.6s						
W41B	Gary Mavity, V	93.73	40	P	P	07 37 13.4	+0.6
	baz=321,SNR=7.1						
O50A	Cable	93.77	32	P	P	07 37 13.7	+0.8
	baz=327,SNR=11						
MMNY	Mt. Morris Dam	93.78	27	*e*P	P	07 37 14.3	+1.4
	comp=Z,129nm,1.5s						
P49A	Miami Univ. Ec	93.81	33	P	P	07 37 13.8	+0.7
	baz=326,SNR=5.4						
PARMO	Parma	93.82	38	*e*P	P	07 37 13.8	+0.7
	comp=Z,58nm,0.9s						
PARMO				LR	LR		
	comp=Z,2μm,21.0s						
Q48A	North Vernon	93.86	34	P	P	07 37 14.1	+0.7
	baz=326,SNR=5.3						
M53A	WI Miller and	93.87	29	P	P	07 37 14.1	+0.8
	baz=329						
ALLY	Alegheny Colle	93.89	29	PFAKE		07 37 30.0	+17
ALLY				LR	LR		
	comp=Z,3μm,21.0s						
NCB	Newcomb	93.94	24	*e*P	P	07 37 16.0	+2.4
	comp=Z,127nm,1.8s						
NCB				LR	LR		
	comp=Z,3μm,22.0s						
X40A	Basin Creek Fa	93.96	41	*e*P	P	07 37 14.6	+0.8
	comp=Z,89nm,1.6s						
X40A				LR	LR		
	comp=Z,2μm,19.0s						
X40A	Basin Creek Fa	93.96	41	P	P	07 37 14.7	+0.8
	baz=321,SNR=11						
ACSO	Alum Creek Sta	93.96	31	*e*P	P	07 37 14.3	+0.5
	comp=Z,26nm,1.0s						
ACSO	Alum Creek Sta	93.96	31	P	P	07 37 14.5	+0.7
	baz=327						
S46A	Don Dixon Farm	93.97	36	P	P	07 37 14.6	+0.8
	baz=324						
U44A	Portageville	93.97	38	P	P	07 37 14.9	+1.0
	baz=323						
UALR	University of	93.99	40	*e*P	P	07 37 14.9	+0.9
	comp=Z,34nm,1.4s						
UALR				LR	LR		
	comp=Z,2μm,20.0s						
R47A	Wooly Knot Far	94.03	35	P	P	07 37 15.0	+0.9
	baz=325,SNR=5.4						
W42A	Bald Knob	94.03	40	P	P	07 37 14.9	+0.7
	baz=322						
PVMO	Portageville	94.04	38	PFAKE		07 37 30.0	+16
PVMO				LR	LR		
	comp=Z,2μm,19.0s						
T45A	Paducah	94.07	37	PFAKE		07 37 30.0	+16
T45A				LR	LR		
	comp=Z,2μm,19.0s						
T45A	Paducah	94.07	37	P	P	07 37 15.2	+0.9
	baz=324						
L55A	Hinsdale	94.07	27	P	P	07 37 14.9	+0.6
	baz=331						
V43A	Jonesboro	94.12	39	P	P	07 37 15.6	+1.1
	baz=322						
435B	Jarrell	94.12	46	*e*P	P	07 37 15.7	+1.0
	comp=Z,97nm,1.6s						
435B				LR	LR		
	comp=Z,1μm,20.0s						
435B	Jarrell	94.12	46	P	P	07 37 15.6	+0.9
	baz=318						
KEST	Kesra	94.14	321	*e*P	P	07 37 15.1	+0.3
	comp=Z,60nm,1.6s						
KEST	Kesra	94.14	321	P	P	07 37 15.1	+0.3
	comp=Z,12nm,1.2s,baz=350,slow=0.8,SNR=4.7						
KEST				LR	LR	08 23 20.3	
	comp=Z,7μm,18.6s,baz=350,slow=38						
P50A	Jamestown	94.14	32	P	P	07 37 15.3	+0.7
	baz=327,SNR=5.6						
Q49A	Aurora	94.17	33	P	P	07 37 15.8	+1.1
	baz=326						
WCI	Wyandotte Cave	94.19	34	*e*P	P	07 37 16.0	+1.2
	comp=Z,53nm,1.4s						
WCI				LR	LR		
	comp=Z,3μm,19.0s						
WCI	Wyandotte Cave	94.19	34	*e*P	P	07 37 16.0	+1.2
WCI				pmax	pmax		
	comp=Z,53nm,1.4s						
WCI				MLR	MLR		
	comp=Z,3μm,19.0s						
WCI	Wyandotte Cave	94.19	34	P	P	07 37 15.7	+0.9
	baz=325						
O51A	Pataskala	94.19	31	P	P	07 37 16.0	+1.1
	baz=328						
M54A	Oil Creek Stat	94.19	28	*e*P	P	07 37 15.3	+0.4
	comp=Z,97nm,1.8s						
M54A				LR	LR		
	comp=Z,3μm,18.0s						
M54A	Oil Creek Stat	94.19	28	P	P	07 37 15.6	+0.7
	baz=330						
R48A	Northridge Ran	94.23	34	P	P	07 37 16.0	+1.0
	baz=325						
GNAR	Gosnell	94.24	38	PFAKE		07 37 30.0	+15
GNAR				LR	LR		
	comp=Z,2μm,21.0s						
HBAR	Harrisburg	94.24	39	PFAKE		07 37 30.0	+15
HBAR				LR	LR		
	comp=Z,2μm,20.0s						
U44B	Burton Farm, H	94.27	37	P	P	07 37 15.6	+0.3
	baz=323						
GLAT	Glass	94.36	37	PFAKE		07 37 30.0	+14
GLAT				LR	LR		
	comp=Z,2μm,20.0s						
T46A	Princeton	94.41	36	P	P	07 37 17.0	+1.1
	baz=324,SNR=9.2						
WLAR	White Oak Lake	94.42	42	*e*P	P	07 37 16.9	+0.9
	comp=Z,194nm,1.9s						
WLAR				LR	LR		
	comp=Z,2μm,20.0s						
S47A	Hartford	94.44	35	P	P	07 37 16.5	+0.5
	baz=325						
O52A	Adamsville	94.53	30	PFAKE		07 37 30.0	+14
O52A				LR	LR		
	comp=Z,2μm,18.0s						
O52A	Adamsville	94.53	30	P	P	07 37 17.1	+0.7
	baz=328						
N54A	Moraine State	94.54	29	P	P	07 37 17.2	+0.7
	baz=330						
U45A	Rockin P Farm,	94.55	37	P	P	07 37 18.4	+1.9
	baz=323						
P51A	Williamsport	94.56	32	P	P	07 37 17.1	+0.6
	baz=327						
M55A	Ridgway	94.57	28	P	P	07 37 17.3	+0.7
	baz=330						
HALT	Halls	94.62	38	PFAKE		07 37 30.0	+13
HALT				LR	LR		
	comp=Z,2μm,21.0s						
R49A	Shelbyville	94.64	34	P	P	07 37 18.1	+1.2
	baz=326						
O53A	New Philadelph	94.67	30	P	P	07 37 18.0	+1.0
	baz=329						
Q50A	Georgetown	94.70	33	P	P	07 37 18.0	+0.8
	baz=327						
S48A	Wiedeman Farm,	94.76	35	P	P	07 37 18.2	+0.7
	baz=325,SNR=5.5						
LMN	Caledonia Moun	94.81	17	PFAKE		07 37 30.0	+12
LMN				LR	LR		
	comp=Z,4μm,19.0s						
P52A	Corning	94.82	31	P	P	07 37 18.4	+0.7
	baz=328						
Q51A	Peebles	94.82	32	*e*P	P	07 37 18.2	+0.4
	comp=Z,33nm,1.0s						
Q51A				LR	LR		
	comp=Z,3μm,22.0s						
Q51A	Peebles	94.82	32	P	P	07 37 18.6	+0.9
	baz=327						
T47A	Sharon Grove	94.82	36	*e*P	P	07 37 18.6	+0.8
	comp=Z,31nm,1.0s						
T47A	Sharon Grove	94.82	36	P	P	07 37 18.6	+0.8
	baz=324,SNR=7.4						
U46A	Springville	94.82	37	P	P	07 37 18.2	+0.4
	baz=324						
833A	Chaparral WMA,	94.84	49	*e*P	P	07 37 18.9	+0.9
	comp=Z,104nm,1.6s						
833A				LR	LR		
	comp=Z,2μm,20.0s						
833A	Chaparral WMA,	94.84	49	P	P	07 37 19.7	+1.6
	baz=317						
Z41A	Richland Creek	94.92	42	PFAKE		07 37 30.0	+12
Z41A				LR	LR		
	comp=Z,2μm,19.0s						
Z41A	Richland Creek	94.92	42	P	P	07 37 19.6	+1.3
	baz=321						
BINY	Binghamton	94.93	26	P	P	07 37 19.2	+1.0
	baz=332						
V45A	Humboldt	94.94	38	P	P	07 37 18.9	+0.6
	baz=323						
X43A	Marvell	94.94	40	*e*P	P	07 37 19.6	+1.2
	comp=Z,69nm,1.2s						
X43A				LR	LR		
	comp=Z,2μm,20.0s						
X43A	Marvell	94.94	40	P	P	07 37 19.1	+0.7
	baz=322						
MET	Memphis--Engin	94.95	39	PFAKE		07 37 30.0	+12
MET				LR	LR		
	comp=Z,2μm,19.0s						
CCAR	Cane Creek	94.95	41	*e*P	P	07 37 19.6	+1.2
	comp=Z,109nm,1.4s						
S49A	Springfield	95.00	34	P	P	07 37 19.2	+0.6
	baz=326,SNR=7.6						
R50A	Paris	95.02	33	P	P	07 37 19.7	+1.0
	baz=326						
NATX	Nacogdoches	95.05	44	PFAKE		07 37 30.0	+11
NATX				LR	LR		
	comp=Z,2μm,21.0s						
NATX	Nacogdoches	95.05	44	P	P	07 37 20.0	+1.1
	baz=320						
T48A	Bowling Green	95.05	35	P	P	07 37 19.6	+0.7
	baz=325						
O54A	Avella	95.06	29	P	P	07 37 20.0	+1.2
	baz=329						
N55A	Marion Center	95.08	28	P	P	07 37 19.7	+0.8
	baz=330						
WVT	Waverly	95.17	37	*e*P	P	07 37 19.9	+0.5
	comp=Z,14nm,0.9s						
WVT				LR	LR		
	comp=Z,2μm,21.0s						
WVT	Waverly	95.17	37	*e*P	P	07 37 19.9	+0.5
WVT				pmax	pmax		
	comp=Z,14nm,0.9s						
WVT				MLR	MLR		
	comp=Z,2μm,21.0s						
WVT	Waverly	95.17	37	P	P	07 37 20.3	+0.9
	baz=324						
U47A	Clarksville	95.18	36	P	P	07 37 20.1	+0.7
	baz=324						
P53A	Whipple	95.25	30	PFAKE		07 37 30.0	+10
P53A				LR	LR		
	comp=Z,2μm,20.0s						
W45A	Hickory Valley	95.29	38	P	P	07 37 20.7	+0.8
	baz=323						
V46A	Holladay	95.30	37	P	P	07 37 20.6	+0.6
	baz=324,SNR=8.1						
R51A	Hillsboro	95.33	33	P	P	07 37 21.0	+0.9
	baz=327						
Q52A	Bidwell	95.33	31	P	P	07 37 20.7	+0.7
	baz=328						
T49A	Edmonton	95.45	35	*e*P	P	07 37 22.4	+1.7
	comp=Z,53nm,1.4s						
T49A	Edmonton	95.45	35	P	P	07 37 21.6	+0.9
	baz=326,SNR=7.3						
U48A	Cassie Pea, Po	95.47	36	P	P	07 37 21.4	+0.6
	baz=325						
S50A	Richmond	95.48	33	P	P	07 37 21.6	+0.8
	baz=326,SNR=7.9						
P54A	Burton	95.51	30	P	P	07 37 21.5	+0.6
	baz=329						
V47A	Nunnelly	95.56	37	P	P	07 37 21.7	+0.5
	baz=324,SNR=9.9						
SSPA	Standing Stone	95.62	28	P	P	07 37 22.1	+0.7
	baz=331						
OXF	Oxford	95.69	39	*e*P	P	07 37 22.3	+0.5
	comp=Z,45nm,1.2s						
OXF				LR	LR		
	comp=Z,2μm,22.0s						
OXF	Oxford	95.69	39	*e*P	P	07 37 22.3	+0.5
OXF				pmax	pmax		
	comp=Z,45nm,1.2s						
OXF				MLR	MLR		
	comp=Z,2μm,22.0s						
OXF	Oxford	95.69	39	P	P	07 37 22.6	+0.8
	baz=323						
R52A	Catlettsburg	95.70	32	P	P	07 37 22.3	+0.5
	baz=328						
W46A	Michie	95.71	38	P	P	07 37 21.5	-0.4
	baz=324						
MCWV	Mont Chateau	95.72	29	PFAKE		07 37 30.0	+8.2
MCWV				LR	LR		
	comp=Z,1μm,20.0s						
MCWV	Mont Chateau	95.72	29	P	P	07 37 22.4	+0.6
	baz=330						
HKT	Hockley	95.75	46	*e*P	P	07 37 22.9	+0.8
	comp=Z,72nm,2.0s						
HKT				LR	LR		
	comp=Z,2μm,19.0s						
HKT	Hockley	95.75	46	*e*P	P	07 37 22.9	+0.8
HKT				pmax	pmax		
	comp=Z,72nm,2.0s						
HKT				MLR	MLR		
	comp=Z,2μm,19.0s						
U49A	Red Boiling Sp	95.82	35	P	P	07 37 23.2	+0.8
	baz=325,SNR=7.5						
T50A	Nancy	95.83	34	P	P	07 37 23.2	+0.8
	baz=326,SNR=7.3						
P55A	Reedsville	95.85	29	P	P	07 37 23.3	+0.8
	baz=330						
S51A	Beattyville	95.87	33	P	P	07 37 23.5	+0.9
	baz=327						
Q54A	Coxs Mills	95.90	30	P	P	07 37 23.4	+0.7
	baz=329						
GBN	Guysborough	95.94	15	PFAKE		07 37 30.0	+7.3
GBN				LR	LR		
	comp=Z,4μm,20.0s						
V48A	Smith Brothers	95.97	36	*e*P	P	07 37 23.7	+0.7
	comp=Z,21nm,1.0s						
V48A				LR	LR		
	comp=Z,2μm,20.0s						
V48A	Smith Brothers	95.97	36	P	P	07 37 23.6	+0.6
	baz=325,SNR=6.5						
PLAL	Pickwick Lake	95.98	37	PFAKE		07 37 30.0	+6.9
PLAL				LR	LR		
	comp=Z,2μm,20.0s						
W47A	Westpoint	95.99	37	P	P	07 37 23.8	+0.6
	baz=324						
S52A	Salyersville	96.06	33	P	P	07 37 24.8	+1.3
	baz=327						
X46A	Booneville	96.07	38	P	P	07 37 24.4	+0.9
	baz=323						
HRV	Adam Dziewonsk	96.10	22	P	P	07 37 24.5	+1.0
	baz=336						
N59A	State Game Lan	96.14	26	P	P	07 37 24.2	+0.4
	baz=332						
PGAV	Gavieira, Arco	96.14	336	*e*LR	LR	08 16 07.5	
	comp=Z,4μm,18.0s						
HAL	Halifax	96.23	16	PFAKE		07 37 40.0	+16
HAL				LR	LR		
	comp=Z,4μm,22.0s						
T51A	Gray	96.28	34	P	P	07 37 25.0	+0.5
	baz=327						
U50A	Jamestown	96.33	34	P	P	07 37 25.1	+0.4
	baz=326,SNR=6.5						
V49A	McMinnville	96.38	36	P	P	07 37 24.8	-0.1
	baz=325						
W48A	Pulaski	96.40	37	P	P	07 37 25.6	+0.6
	baz=324,SNR=13						
MVO	Moncorvo	96.45	335	*e*LQ	LQ	08 10 49.3	
MVO				*e*LR	LR	08 18 24.6	
	comp=Z,6μm,18.0s						
X47A	Russelville	96.46	38	P	P	07 37 25.8	+0.5
	baz=324,SNR=5.6						
S53A	Williamson	96.47	32	P	P	07 37 25.3	0.0
	baz=328						
POLO	Lamas de Olo	96.52	336	*e*LR	LR	08 18 19.9	
ESDC	Sonseca Array	96.68	332	P	P	07 37 26.1	-0.2
	comp=Z,0.8nm,0.7s,baz=22,slow=3.2,SNR=4.3						
ESDC				PKKPbc	PKKPbc	07 54 10.9	+2.3
	comp=Z,0.3nm,0.4s,baz=176,slow=4.3,SNR=4.9						
ESDC				LR	LR	08 23 46.7	
	comp=Z,4μm,18.8s,baz=45,slow=37						
W49A	Belvidere	96.73	36	P	P	07 37 26.9	+0.3
	baz=325,SNR=5.6						
TZTN	Tazewell	96.81	34	PFAKE		07 37 40.0	+13
TZTN				LR	LR		
	comp=Z,2μm,21.0s						
TZTN	Tazewell	96.81	34	P	P	07 37 27.5	+0.6
	baz=327						
SWET	Sewanee	96.81	36	*e*P	P	07 37 27.6	+0.7
	comp=Z,19nm,1.1s						
SWET				LR	LR		
	comp=Z,2μm,20.0s						
V50A	Pikevile	96.83	35	P	P	07 37 27.6	+0.6
	baz=326						
T53A	Wise	96.88	33	P	P	07 37 27.1	-0.2
	baz=328						
X48A	Hartselle	96.90	37	*e*P	P	07 37 28.2	+0.9
	comp=Z,37nm,1.5s						
X48A				LR	LR		
	comp=Z,2μm,20.0s						
X48A	Hartselle	96.90	37	P	P	07 37 27.3	0.0
	baz=324						
145A	Houston Renfro	96.94	40	P	P	07 37 28.0	+0.5
	baz=322						
PAB	San Pablo	96.94	333	PFAKE		07 37 40.0	+13
PAB				LR	LR		
	comp=Z,6μm,20.0s						
U52A	Thorn Hill	97.01	33	P	Pdif	07 37 28.0	+0.1
	baz=327						
V51A	Loudon	97.06	34	PFAKE		07 37 40.0	+12
V51A				LR	LR		
	comp=Z,2μm,19.0s						
V51A	Loudon	97.06	34	P	Pdif	07 37 28.4	+0.3
	baz=326						
S55A	Lewisburg	97.07	31	P	Pdif	07 37 28.5	+0.3
	baz=329						
SDMD	Soldier's Deli	97.08	27	PFAKE		07 37 40.0	+12
SDMD				LR	LR		
	comp=Z,2μm,21.0s						
W50A	Signal Mountai	97.12	35	PFAKE		07 37 40.0	+12
W50A				LR	LR		
	comp=Z,2μm,19.0s						
W50A	Signal Mountai	97.12	35	P	Pdif	07 37 28.9	+0.5
	baz=326						
X49A	Woodville	97.20	37	P	Pdif	07 37 28.9	+0.1
	baz=325						
T54A	Tazewell	97.23	32	P	Pdif	07 37 29.0	+0.1
	baz=328						
LNIG	Linares	97.27	52	*e*P	Pdif	07 37 30.1	+0.8
	comp=Z,39nm,1.5s						
LNIG				LR	LR		
	comp=Z,1μm,19.0s						
CPCT	Cooper Cave	97.28	35	*e*P	Pdif	07 37 30.0	+1.0
	comp=Z,19nm,1.1s						
CPCT				LR	LR		
	comp=Z,2μm,19.0s						
Y48A	Jasper	97.28	37	P	Pdif	07 37 29.2	+0.1
	baz=324						
MTE	Manteigas	97.31	335	*e*LQ	LQ	08 11 06.3	
MTE				*e*LR	LR	08 17 16.1	
	comp=Z,7μm,18.0s						
MTE	Manteigas	97.31	335	PFAKE		07 37 40.0	+11
MTE				LR	LR		
	comp=Z,7μm,19.0s						
CART	Cartagena	97.33	329	PFAKE		07 37 40.0	+11
CART				LR	LR		
	comp=Z,4μm,19.0s						
V52A	Sevierville	97.37	34	*e*P	Pdif	07 37 30.4	+1.0
	comp=Z,64nm,1.7s						
V52A				LR	LR		
	comp=Z,3μm,21.0s						
V52A	Sevierville	97.37	34	P	Pdif	07 37 29.8	+0.3
	baz=327						
U53A	Fall Branch	97.38	33	P	Pdif	07 37 30.0	+0.5
	baz=328						
W51A	Cleveland	97.41	35	P	Pdif	07 37 30.0	+0.3
	baz=326						
X50B	Fort Payne	97.56	36	P	Pdif	07 37 30.4	0.0
	baz=325						
BLA	Blacksburg	97.58	31	PFAKE		07 37 40.0	+10
BLA				LR	LR		
	comp=Z,2μm,20.0s						
BLA	Blacksburg	97.58	31	P	Pdif	07 37 30.4	0.0
	baz=329						
Y49A	Blount Mountai	97.69	37	PFAKE		07 37 40.0	+9.0
Y49A				LR	LR		
	comp=Z,2μm,19.0s						
147A	Livingston	97.73	39	PFAKE		07 37 40.0	+8.9
147A				LR	LR		
	comp=Z,2μm,20.0s						
W52A	Murphy	97.84	35	*e*P	Pdif	07 37 32.0	+0.4
	comp=Z,63nm,1.9s						
W52A				LR	LR		
	comp=Z,2μm,20.0s						
W52A	Murphy	97.84	35	P	P	07 37 31.6	0.0
	baz=326						
X51A	Calhoun	97.85	36	PFAKE		07 37 40.0	+8.4
X51A				LR	LR		
	comp=Z,2μm,19.0s						
X51A	Calhoun	97.85	36	P	Pdif	07 37 32.0	+0.3
	baz=326						
V53A	Saluda	97.86	34	PFAKE		07 37 40.0	+8.3
V53A				LR	LR		
	comp=Z,2μm,19.0s						
V53A	Saluda	97.86	34	P	Pdif	07 37 32.0	+0.2
	baz=327						
CBN	Corbin Frederi	97.94	28	PFAKE		07 37 40.0	+8.1
CBN				LR	LR		
	comp=Z,3μm,21.0s						
R58B	Mineral	97.95	29	PFAKE		07 37 40.0	+8.0
R58B				LR	LR		
	comp=Z,3μm,20.0s						
LRAL	Lakeview Retre	98.07	38	PFAKE		07 37 40.0	+7.4
LRAL				LR	LR		
	comp=Z,2μm,19.0s						
LRAL	Lakeview Retre	98.07	38	P	Pdif	07 37 33.0	+0.4
	baz=324						
W53A	Cullowhee	98.12	34	P	Pdif	07 37 33.5	+0.5
	baz=327						
PMRV	Marv??o	98.13	335	*e*LQ	LQ	08 11 24.3	
PMRV				*e*LR	LR	08 20 04.0	
	comp=Z,6μm,18.0s						
Z49A	Columbiana	98.17	37	P	Pdif	07 37 33.1	+0.1
	baz=325						
X52A	Dahlonega	98.26	35	P	P	07 37 32.1	-1.4
	baz=326						
Y51A	Rockmart	98.30	36	P	P	07 37 33.2	-0.4
	baz=326						
Z50A	Ashland	98.42	37	*e*P	Pdif	07 37 34.4	+0.2
	comp=Z,39nm,1.4s						
Z50A	Ashland	98.42	37	P	Pdif	07 37 34.4	+0.2
	baz=325,SNR=5.5						
149A	Jones	98.53	38	P	Pdif	07 37 35.2	+0.5
	baz=324						
X53A	Estanollee	98.62	34	P	Pdif	07 37 36.0	+1.0
	baz=327						
W54A	Cherokee Point	98.63	33	P	Pdif	07 37 36.0	+0.9
	baz=328						
PESTR	Estremoz	98.70	334	PFAKE		07 37 50.0	+15
PESTR				LR	LR		
	comp=Z,4μm,18.0s						
Z51A	Franklin	98.73	36	P	Pdif	07 37 36.0	+0.5
	baz=326						
Y52A	Lilburn	98.80	35	PFAKE		07 37 50.0	+14
Y52A				LR	LR		
	comp=Z,2μm,20.0s						
Y52A	Lilburn	98.80	35	P	Pdif	07 37 36.4	+0.6
	baz=326						
249A	Camden	98.87	39	P	Pdif	07 37 37.0	+0.9
	baz=324						
150A	Eclectic	98.90	37	P	Pdif	07 37 36.3	0.0
	baz=325						
KMSC	Kings Mountain	98.95	33	PFAKE		07 37 50.0	+13
KMSC				LR	LR		
	comp=Z,3μm,20.0s						
KMSC	Kings Mountain	98.95	33	P	P	07 37 36.1	-0.4
	baz=328						
X54A	Belton	99.00	34	P	Pdif	07 37 37.1	+0.4
	baz=328						
PAULI	Pauline	99.02	33	PFAKE		07 37 50.0	+13
PAULI				LR	LR		
	comp=Z,2μm,21.0s						
Y53A	Monroe	99.03	35	P	Pdif	07 37 38.0	+1.1
	baz=327						
Z52A	Williamson	99.19	36	P	Pdif	07 37 38.3	+0.7

	baz=326						
250A	Grady	99.29	38	PFAKE		07 37 50.0	+12
250A				LR	LR		
	comp=Z,2µm,18.0s						
250A	Grady	99.29	38	P	Pdif	07 37 38.0	-0.1
	baz=325						
151A	Opelika	99.30	37	P	Pdif	07 37 38.0	-0.1
	baz=325						
349A	Repton	99.33	39	P	Pdif	07 37 38.8	+0.5
	baz=324						
X55A	Gracelyn & Ava	99.39	33	P	Pdif	07 37 38.9	+0.4
	baz=328						
Y54A	Tignall	99.43	34	P	Pdif	07 37 39.0	+0.3
	baz=327						
GOGA	Godfrey	99.45	35	PFAKE		07 37 50.0	+11
GOGA				LR	LR		
	comp=Z,2µm,19.0s						
152A	Waverly Hall	99.48	37	PFAKE		07 37 50.0	+11
152A				LR	LR		
	comp=Z,2µm,20.0s						
152A	Waverly Hall	99.48	37	P	Pdif	07 37 38.9	0.0
	baz=326						
Z53A	Monticello	99.51	35	P	Pdif	07 37 39.1	+0.1
	baz=327						
BRAL	Brewton	99.55	39	PFAKE		07 37 50.0	+11
BRAL				LR	LR		
	comp=Z,2µm,18.0s						
JSC	Jenkinsville	99.71	33	PFAKE		07 37 50.0	+10
JSC				LR	LR		
	comp=Z,3µm,20.0s						
PVAQ	Vaqueiros	100.05	334	*e*LQ	LQ	08 12 18.8	
253A	Americus	100.26	36	PFAKE		07 37 50.0	+7.6
253A				LR	LR		
	comp=Z,2µm,20.0s						
154A	Montrose	100.28	35	PFAKE		07 37 50.0	+7.5
154A				LR	LR		
	comp=Z,2µm,20.0s						
CNNC	Cliffs of the	100.31	30	PFAKE		07 37 50.0	+7.5
CNNC				LR	LR		
	comp=Z,3µm,21.0s						
SFS	San Fernando	100.34	332	PFAKE		07 37 50.0	+7.4
SFS				LR	LR		
	comp=Z,4µm,18.0s						
352A	Blakely	100.35	37	PFAKE		07 37 50.0	+7.2
352A				LR	LR		
	comp=Z,1µm,19.0s						
KMBO	Kilima Mbogo	100.37	276	*e*Pdif	Pdif	07 37 42.1	-1.3
KMBO				LR	LR		
	comp=Z,3µm,18.0s						
KMBO	Kilima Mbogo	100.37	276	*e*P	Pdif	07 37 42.2	-1.3
KMBO				MLR	MLR		
	comp=Z,3µm,18.0s						
KMBO	Kilima Mbogo	100.37	276	P	Pdif	07 37 42.5	-0.9
	comp=Z,0.7nm,0.3s,baz=44,slow=5.0,SNR=5.3						
PFVI	Vila Bisbo	100.68	335	PFAKE		07 38 00.0	+16
PFVI				LR	LR		
	comp=Z,6µm,18.0s						
254A	Abbeville	100.75	36	P	Pdif	07 37 45.1	+0.6
	baz=327						
TIGA	Tifton	101.03	36	PFAKE		07 38 00.0	+14
TIGA				LR	LR		
	comp=Z,2µm,22.0s						
255A	Hazlehurst	101.15	35	PFAKE		07 38 00.0	+14
255A				LR	LR		
	comp=Z,2µm,21.0s						
255A	Hazlehurst	101.15	35	P	Pdif	07 37 46.6	+0.3
	baz=327						
NHSC	New Hope	101.19	33	PFAKE		07 38 00.0	+14
NHSC				LR	LR		
	comp=Z,3µm,21.0s						
UNM	Universidad Na	101.44	55	PFAKE		07 38 00.0	+12
UNM				LR	LR		
	comp=Z,2µm,21.0s						
257A	Skidaway Islan	101.77	34	PFAKE		07 38 00.0	+11
257A				LR	LR		
	comp=Z,2µm,19.0s						
456A	Hilliard	102.36	36	PFAKE		07 38 00.0	+8.3
456A				LR	LR		
	comp=Z,2µm,20.0s						
555A	McAlpin	102.42	37	PFAKE		07 38 00.0	+8.0
555A				LR	LR		
	comp=Z,2µm,20.0s						
RTC	Rabat Centre	102.78	332	PFAKE		07 38 00.0	+6.4
RTC				LR	LR		
	comp=Z,12µm,19.0s						
ABPO	Ambohimpanom	102.83	256	PFAKE		07 38 10.0	+16
ABPO				LR	LR		
	comp=Z,2µm,18.0s						
656A	Willston	103.25	37	PFAKE		07 38 10.0	+14
656A				LR	LR		
	comp=Z,2µm,19.0s						
658A	Bunnell	103.81	36	PFAKE		07 38 10.0	+12
658A				LR	LR		
	comp=Z,2µm,21.0s						
957A	Wimauma	104.81	38	PFAKE		07 38 10.0	+7.3
957A				LR	LR		
	comp=Z,2µm,20.0s						
DWPF	Disney Wildern	104.83	37	PFAKE		07 38 10.0	+7.2
DWPF				LR	LR		
	comp=Z,2µm,19.0s						
CASY	Casey	105.21	192	PFAKE		07 42 30.0	+13
CASY				LR	LR		
	comp=Z,2µm,22.0s						
MBAR	Mbarara	105.22	281	PFAKE		07 42 30.0	+11
MBAR				LR	LR		
	comp=Z,3µm,20.0s						
059A	Moore Haven	105.93	37	PFAKE		07 42 30.0	+10
059A				LR	LR		
	comp=Z,2µm,22.0s						
MYIG	Mrida	106.14	47	PFAKE		07 42 30.0	+9.5
MYIG				LR	LR		
	comp=Z,1µm,22.0s						
060A	Indiantown	106.24	36	PFAKE		07 42 30.0	+9.4
060A				LR	LR		
	comp=Z,2µm,22.0s						
TAM	Tamanrasset	106.41	316	PFAKE		07 42 30.0	+8.8
TAM				LR	LR		
	comp=Z,2µm,20.0s						
061Z	Ochoppi	106.96	38	PFAKE		07 42 30.0	+8.0
061Z				LR	LR		
	comp=Z,2µm,20.0s						
PMOZ	Porto Moniz, M	107.28	339	*e*LR	LR	08 24 39.1	
	comp=Z,3µm,18.0s						
CCIG	Comitan	108.22	52	PFAKE		07 42 40.0	+15
CCIG				LR	LR		
	comp=Z,2µm,21.0s						
GTBY	Guantanamo Bay	114.79	36	PFAKE		07 42 50.0	+13
GTBY				LR	LR		
	comp=Z,1µm,20.0s						
MTDJ	Mount Denham	115.06	39	PFAKE		07 42 50.0	+12
MTDJ				LR	LR		
	comp=Z,1µm,21.0s						
GRTK	Grand Turk	115.17	31	PFAKE		07 42 50.0	+12
GRTK				LR	LR		
	comp=Z,2µm,19.0s						
LSZ	Lusaka	115.86	270	PFAKE		07 42 50.0	+11
LSZ				LR	LR		
	comp=Z,2µm,19.0s						
ESPN	Las Esperanzas	116.20	49	PFAKE		07 42 50.0	+10
ESPN				LR	LR		
	comp=Z,900nm,20.0s						
TOA1	Torodi Ar. Sit	116.26	313	*e*PKPdf	PKPdf	07 42 38.5	-1.3
TORD	Torodi Ar. Bea	116.26	313	PKP	PKPdf	07 42 38.5	-1.3
	comp=Z,1.5nm,0.9s,baz=12,slow=2.1,SNR=6.4						
TORD				PP	PP	07 43 36.9	-7.7
	comp=Z,2.0nm,1.1s,baz=42,slow=4.6,SNR=5.1						
TORD				PKKPbc	PKKPbc	07 53 11.6	+3.7
	comp=Z,1.5nm,0.6s,baz=222,slow=2.3,SNR=9.3						
JTS	JuntasAbangare	117.28	51	PFAKE		07 42 50.0	+8.1
JTS				LR	LR		
	comp=Z,800nm,21.0s						
SDDR	Presa de Saban	117.35	33	PFAKE		07 42 50.0	+8.0
SDDR				LR	LR		
	comp=Z,3µm,21.0s						
HDC	Heredia	118.03	50	PFAKE		07 43 00.0	+17
HDC				LR	LR		
	comp=Z,1µm,20.0s						
KOWA	Kowa	118.34	319	PFAKE		07 43 00.0	+16
KOWA				LR	LR		
	comp=Z,2µm,20.0s						
SDD	Santo Domingo	118.40	32	PFAKE		07 43 00.0	+16
SDD				LR	LR		
	comp=Z,1µm,18.0s						
MPR	Mayaguez	119.76	29	PFAKE		07 43 00.0	+13
MPR				LR	LR		
	comp=Z,1µm,21.0s						
SJG	San Juan	120.23	28	PFAKE		07 43 00.0	+13
SJG				LR	LR		
	comp=Z,900nm,20.0s						
HUMP	Col San Antoni	120.31	28	PFAKE		07 43 00.0	+12
HUMP				LR	LR		
	comp=Z,1µm,19.0s						
CUPR	Culebra, Puert	120.38	27	PFAKE		07 43 00.0	+12
CUPR				LR	LR		
	comp=Z,1µm,19.0s						
MTP	Monte Pirata	120.47	28	PFAKE		07 43 00.0	+12
MTP				LR	LR		
	comp=Z,1µm,20.0s						
SMRT	St. Maarten	121.39	25	PFAKE		07 43 00.0	+10
SMRT				LR	LR		
	comp=Z,2µm,22.0s						
SEUS	St. Eustatius	121.94	25	PFAKE		07 43 00.0	+9.1
SEUS				LR	LR		
	comp=Z,2µm,22.0s						
BOSA	Boshof	124.94	258	PKP	PKPdf	07 42 55.2	-1.1
	comp=Z,5.1nm,0.8s,baz=139,slow=1.6,SNR=9.8						
FDF	Fort de France	125.13	25	PFAKE		07 43 10.0	+13
FDF				LR	LR		
	comp=Z,1µm,21.0s						
DBIC	Dimbokro	125.26	315	*e*PKPdf	PKPdf	07 42 56.3	-0.9
DBIC	Dimbokro	125.26	315	PKP	PKPdf	07 42 56.5	-0.7
	comp=Z,3.8nm,0.6s,baz=3.2,slow=2.4,SNR=6.8						
BRRC	Barranca, Sant	126.39	42	*e*P	PKiKP	07 43 01.0	+1.2
BRRC	Barranca, Sant	126.39	42	*e*P	PKiKP	07 43 01.0	+1.2
PTBC	PUERTO BERRIO,	126.45	43	*e*P	PKPdf	07 42 58.0	-1.5
PTBC	PUERTO BERRIO,	126.45	43	*e*P	PKPdf	07 42 58.0	-1.5
SDV	Santo Domingo	126.47	38	*e*PKPdf	PKPdf	07 42 59.1	-0.7
SDV				LR	LR		
	comp=Z,1µm,21.0s						
SDV	Santo Domingo	126.47	38	*e*P	PKPdf	07 42 59.4	-0.4
SDV	Santo Domingo	126.47	38	*e*P	PKPdf	07 42 59.4	-0.4
SDV	Santo Domingo	126.47	38	PKP	PKPdf	07 42 59.8	+0.1
	comp=Z,8.7nm,0.7s,baz=289,slow=2.0,SNR=10						
TSUM	Tsumeb	126.48	273	*e*PKPdf	PKPdf	07 42 58.8	-0.7
TSUM				LR	LR		
	comp=Z,2µm,19.0s						
QSPA	South Pole Qui	126.63	180	*e*PKPdf	PKiKP	07 42 58.9	+0.2
QSPA				LR	LR		
	comp=Z,2µm,20.0s						
BBGH	Gun Hill	127.14	23	PFAKE		07 43 10.0	+8.7
BBGH				LR	LR		
	comp=Z,3µm,21.0s						
GRGR	Grenville	127.38	26	PFAKE		07 43 10.0	+8.3
GRGR				LR	LR		
	comp=Z,1µm,21.0s						
YOTC	Yotoco, Valle	127.46	47	*e*P	PKiKP	07 43 01.9	-0.2
YOTC	Yotoco, Valle	127.46	47	*e*P	PKiKP	07 43 01.9	-0.2
ROSC	El Rosal	127.93	44	*e*PKPdf	PKPdf	07 43 02.2	-0.6
ROSC	El Rosal	127.93	44	PKP	PKiKP	07 43 03.2	-0.2
	comp=Z,4.5nm,0.5s,baz=104,slow=2.1,SNR=7.4						
POPC	Popayan, Colom	128.41	49	*e*P	PKPdf	07 43 03.6	0.0
POPC	Popayan, Colom	128.41	49	*e*P	PKPdf	07 43 03.6	0.0
CHIC	Chingaza	128.43	44	*e*P	PKPdf	07 43 04.0	+0.3
CHIC	Chingaza	128.43	44	*e*P	PKPdf	07 43 04.0	+0.3
PCON	Cinco Dias	128.75	48	*e*P	PKiKP	07 43 07.3	+2.1
PCON	Cinco Dias	128.75	48	*e*P	PKiKP	07 43 07.3	+2.1
SOTA	Rioblanco	128.77	49	*e*P	PKiKP	07 43 06.1	+0.9
SOTA	Rioblanco	128.77	49	*e*P	PKiKP	07 43 06.1	+0.9
OTAV	Otavalo	129.11	52	*e*PKPdf	PKPdf	07 43 04.5	-0.6
OTAV				LR	LR		
	comp=Z,1µm,18.0s						
OTAV	Otavalo	129.11	52	*e*PKIKP	PKPdf	07 43 04.5	-0.6
OTAV				MLR	MLR		
	comp=Z,1µm,18.0s						
FLOC	Florencia	129.78	48	*e*P	PKiKP	07 43 07.4	+0.8
FLOC	Florencia	129.78	48	*e*P	PKiKP	07 43 07.4	+0.8
SUR	Sutherland	130.01	256	PFAKE		07 43 20.0	+13
SUR				LR	LR		
	comp=Z,2µm,20.0s						
ATAH	Atahualpa	134.64	59	PKP	PKiKP	07 43 16.8	-0.1
	comp=Z,7.1nm,0.9s,baz=328,slow=3.0,SNR=14						
NVL	N'lazarevskaya	136.53	202	*e*PKIKP	PKPdf	07 43 16.8	+0.1
NVL				MLR	MLR		
	comp=Z,1µm,22.0s						
NNA	Nana	139.14	62	*e*PKPdf	PKPdf	07 43 23.4	+0.1
NNA				*e*PKPdf	PKPdf	07 43 24.1	+0.8
NNA				LR	LR		
	comp=Z,1µm,19.0s						
NNA	Nana	139.14	62	PKP	PKPdf	07 43 24.1	+0.8
	comp=Z,10nm,0.7s,baz=248,slow=2.3,SNR=3.9						
PTGA	Pitinga	139.82	31	PFAKE		07 43 40.0	+13
PTGA				LR	LR		
	comp=Z,2µm,19.0s						
PTGA	Pitinga	139.82	31	PP	PP	07 46 20.1	+0.8
	comp=Z,1.1nm,0.4s,baz=20,slow=5.9,SNR=5.9						
SNAA	Sanae	140.12	198	P	PKPpre	07 43 14.8	
SNAA	Sanae	140.12	198	*e*PKPpre	PKPpre	07 43 15.3	
SNAA				LR	LR		
	comp=Z,1µm,20.0s						
SNAA	Sanae	140.12	198	*e*PKHKP	PKPpre	07 43 15.3	
SNAA				MLR	MLR		
	comp=Z,1µm,20.0s						
VNA2	Neumayer--Watz	141.71	197	P	PKPpre	07 43 21.2	
VNA3	Neumayer Olymp	141.99	196	P	PKPpre	07 43 22.1	
VNA1	Neumayer--Stat	142.11	197	P	PKPpre	07 43 20.0	
LPAZ	La Paz	148.16	57	*e*PKPdf	PKPdf	07 43 40.2	+0.5
LPAZ	La Paz	148.16	57	PKPbc	PKPbc	07 43 41.4	-1.5
	comp=Z,23nm,1.1s,baz=4.4,slow=1.6,SNR=21						
RCBR	Riachuelo	148.79	351	*e*PKPdf	PKPdf	07 43 41.3	+1.2
RCBR				LR	LR		
	comp=Z,35µm,20.0s						
RCBR	Riachuelo	148.79	351	*e*PKIKP	PKPdf	07 43 41.3	+1.2
MNMC	Minye Minye	149.08	63	*e*PKPdf	PKPdf	07 43 41.8	+1.1
MNMC				LR	LR		
	comp=Z,1µm,21.0s						
PB11	IPOC Station P	149.44	64	*e*PKPdf	PKPdf	07 43 42.2	+1.0
PB11				LR	LR		
	comp=Z,2µm,20.0s						
PB01	IPOC Station P	150.37	66	PFAKE		07 43 50.0	+1.5
PB01				LR	LR		
	comp=Z,2µm,21.0s						
PB04	IPOC Station P	150.66	69	*e*PKPdf	PKPdf	07 43 44.3	+1.3
PB04				*e*PKPbc	sPKPdf	07 43 50.4	+0.3
PB04				LR	LR		
	comp=Z,2µm,20.0s						
PB10	IPOC Station P	151.04	71	*e*PKPbc	PKiKP	07 43 51.1	+1.4
PB10				LR	LR		
	comp=Z,1µm,22.0s						
LVC	Limon Verde	151.75	68	*e*PKPdf	PKPdf	07 43 45.9	+1.0
LVC				*e*PKPbc	PKiKP	07 43 53.1	+1.4
LVC				LR	LR		
	comp=Z,2µm,22.0s						
LVC	Limon Verde	151.75	68	*e*PKIKP	PKPdf	07 43 45.9	+1.0
LVC				*e*		07 43 53.1	
LVC				MLR	MLR		
	comp=Z,2µm,22.0s						
LVC	Limon Verde	151.75	68	PKP	PKPdf	07 43 45.9	+1.0
	comp=Z,1.2nm,0.4s,baz=51,slow=0.9,SNR=6.3						
LVC				PKPbc	PKiKP	07 43 53.1	+1.4
	comp=Z,22nm,0.8s,baz=266,slow=1.4,SNR=18						
SIV	San Ignacio	152.40	46	PKP	PKPdf	07 43 46.3	+0.7
	comp=Z,2.1nm,0.7s,baz=16,slow=2.3,SNR=13						
SIV				PKPbc	PKPbc	07 43 52.5	0.0
	comp=Z,7.9nm,0.8s,baz=323,slow=3.3,SNR=19						
SIV				PKPab	PKPab	07 44 04.0	+1.5
	comp=Z,22nm,1.0s,baz=325,slow=3.2,SNR=13						
GO02	Mina Guanaco	152.67	73	*e*PKPdf	PKPdf	07 43 47.0	+0.9
GO02				*e*PKPbc	PKiKP	07 43 54.1	+0.7
GO02				LR	LR		
	comp=Z,2µm,20.0s						
GO09	Cerro Castillo	153.31	133	*e*PKPdf	PKPdf	07 43 47.4	+1.5
GO09				*e*PKPbc	PKiKP	07 43 55.5	+2.0
GO10	Punta Arenas	153.31	137	*e*PKPbc	PKiKP	07 43 55.4	+1.9
LCO	Las Campanas	153.65	81	*e*PKPdf	PKPdf	07 43 48.4	+1.0
LCO				*e*PKPab	PKPab	07 44 10.0	+2.1
LCO				LR	LR		
	comp=Z,1µm,20.0s						
LCO	Las Campanas	153.65	81	*e*PKIKP	PKPdf	07 43 48.4	+1.0
LCO				MLR	MLR		
	comp=Z,1µm,20.0s						
USHA	Ushuaia	153.86	142	PKPbc	PKiKP	07 43 55.5	+1.0
	comp=Z,21nm,1.0s,baz=242,slow=1.1,SNR=10						
GO04	Tololo Observa	154.04	84	PFAKE		07 44 00.0	+4.0
GO04				LR	LR		
	comp=Z,2µm,19.0s						
PEL	Peldehue	155.15	90	PFAKE		07 44 00.0	+11
PEL				LR	LR		
	comp=Z,2µm,21.0s						
GO06	Curarrehue	155.68	106	*e*PKPdf	PKPdf	07 43 50.7	+1.0
GO06				LR	LR		
	comp=Z,2µm,18.0s						
RTLS	Leoncito	155.84	86	*e*P	PKPab	07 44 20.1	+2.9
AUSP	Uspallata	155.91	87	*e*P	PKPab	07 44 20.9	+3.4
RTLL	Cerro Villicun	156.33	85	*e*P	PKPab	07 44 21.9	+2.9
PLCA	Paso Flores	156.42	109	*e*PKPdf	PKPdf	07 43 51.0	+0.4
PLCA				*e*PKPab	PKPab	07 44 21.1	+1.9
PLCA	Paso Flores	156.42	109	PKP	PKPdf	07 43 51.0	+0.4
	comp=Z,11nm,1.3s,baz=300,slow=7.0,SNR=3.3						
PLCA				PKPbc	sPKPdf	07 44 01.1	+3.4
	comp=Z,4.5nm,1.0s,baz=322,slow=5.1,SNR=4.0						
PLCA				PKPab	PKPab	07 44 20.8	+1.6
	comp=Z,12nm,1.0s,baz=300,slow=4.7,SNR=7.5						
ARCO	CERRO ARCO	156.46	89	*e*P	PKPab	07 44 21.7	+2.0
ASAL	Salagasta	156.47	88	*e*P	PKPab	07 44 20.6	+1.0
AAGR	Agrelo	156.62	89	*e*P	PKPab	07 44 22.2	+1.9
ACAN	Cantantal	157.68	86	*e*P	PKPab	07 44 27.4	+2.5
BDFB	Brasilia	157.85	19	PKP	PKPdf	07 43 53.9	+0.7
	comp=Z,3.3nm,0.8s,baz=7.4,slow=3.6,SNR=5.1						
BDFB				PKPab	PKPab	07 44 26.6	+0.9
	comp=Z,11nm,1.1s,baz=343,slow=8.3,SNR=7.5						
BDFB				PP	PP	07 48 05.2	+1.1
	comp=Z,3.5nm,0.9s,baz=353,slow=3.9,SNR=4.6						
TCA	Tanti	159.42	81	*e*P	PKPab	07 44 34.4	+1.9
CPUP	Villa Florida	162.33	58	*e*PKPdf	PKPdf	07 43 57.9	+0.2
CPUP				*e*PKPab	PKPab	07 44 45.9	+0.8
CPUP	Villa Florida	162.33	58	PKP	PKPdf	07 43 58.6	+0.9
	comp=Z,8.2nm,1.2s,baz=353,slow=4.6,SNR=6.2						
CPUP				PKPab	PKPab	07 44 45.7	+0.6
	comp=Z,4.1nm,1.0s,baz=299,slow=5.1,SNR=4.8						

IDC 25 07:26:02.2±2.0, 11°.81S×168°.46E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.7/43, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=61.7km s-min=29.7km az=131.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.39	190	Pn	Pn	07 28 31.5	-1.1
	0.7nm,0.3s,baz=288,slow=19,SNR=10						
CTA	Charters Tower	22.86	246	P	P	07 31 07.2	-0.2
	5.6nm,0.8s,baz=48,slow=8.9,SNR=6.3						
WRA	Warramunga Arr	33.75	252	P	P	07 32 46.1	+0.2
	0.8nm,0.7s,baz=81,slow=8.8,SNR=5.2						
ASAR	Alice Springs	34.87	245	P	P	07 32 55.6	+0.1
	0.8nm,0.7s,baz=70,slow=9.8,SNR=11						
ILAR	Eielson Array	83.41	18	P	P	07 38 31.1	+0.1
	0.5nm,0.7s,baz=234,slow=5.5,SNR=5.1						

JMA 25 07:27:42.1, 36°.89N×139°.40E, h4km±1km, M3.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	Katashina	0.17	225	P	Pg	07 27 45.9	+0.4
JKT				S	Sg	07 27 48.4	+0.6
JSB	Shiboa	0.42	79	*e*S	Sg	07 27 57.0	+1.2
JHK	Hiroka	0.47	320	P	Pg	07 27 51.3	+0.1
JHK				S	Sg	07 27 57.6	+0.3
JFY	Yanaizu	0.57	25	P	Pg	07 27 53.3	+0.2
JFY				S	Sg	07 28 00.6	+0.1
JNS	Sasagawa	0.93	356	S	Sg	07 28 12.0	0.0
MAT	Matsushiro	1.02	250	P	Pg	07 28 01.7	+0.1
MAT				S	Sg	07 28 14.8	-0.1

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*ISCJB **25** 07:31:59.8±0.4, 36°.89N±0°.02×139°.38E±0°.03, h9km±3km, mb4.1/36, Error ellipse: s-maj=4.5km s-min=3.4km az=39.2*

*IDC **25** 07:31:59.6±0.6, 36°.88N×139°.37E, h0km, mb4.0/16, mb1 4.1/20, mb1mx4.0/52, mbtmp4.0/20, ML3.4/3, Error ellipse: s-maj=15.7km s-min=9.0km az=147.0*

*JMA **25** 07:31:59.9, 36°.89N×139°.41E, h3km±1km, M4.0*

JMA Felt II J1.

*NEIC **25** 07:32:01.7±0.3, 36°.87N×139°.24E, h10km, mb4.3/17, Error ellipse: s-maj=7.8km s-min=4.9km az=126.0*

ISC 25 07:32:00.3±1.1, 36°.89N±0°.03×139°.39E±0°.03, h3km±7km, n73, σ1s.16/80, mb4.2/36, 2C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	Katashina	0.17	223	P	Pg	07 32 03.8	+0.2
JKT				S	Sg	07 32 06.6	+0.8
JSB	Shiboa	0.43	79	⇓P	Pg	07 32 08.6	0.0
JSB				S	Sg	07 32 13.9	-0.3
JHK	Hiroka	0.47	320	⇓P	Pg	07 32 09.3	0.0
JHK				S	Sg	07 32 15.7	+0.4
JAG	Ashikaga	0.47	174	P	Pg	07 32 09.3	0.0
JAG				*e*S	Sg	07 32 14.9	-0.4
JFY	Yanaizu	0.57	26	⇑P	Pg	07 32 11.0	-0.3
JFY				S	Sg	07 32 18.4	-0.4
JIZZ	Izumozaki	0.84	320	P	Pb	07 32 17.7	+0.1
JNS	Sasagawa	0.93	356	⇑P	Pg	07 32 17.7	-0.4
JNS				S	Sg	07 32 29.9	-0.3
JFT	Otama	0.98	50	P	Pg	07 32 18.5	-0.6
JFT				S	Sg	07 32 30.9	-1.0
MJAR	Matsushiro Arr	1.01	250	Pg	Pg	07 32 19.3	-0.4
	66nm,0.3s,baz=73,slow=17,SNR=193						
MJAR				Lg	Lg	07 32 31.8	
	24nm,0.3s,baz=99,slow=15,SNR=14						
MAJO	Matsushiro	1.01	250	*e*Pn	Pb	07 32 19.5	-1.0
MAT	Matsushiro	1.01	250	P	Pb	07 32 19.5	-1.0
MAT				S	Sb	07 32 32.7	-1.6
INU	Inuyama	2.46	232	*e*Pn	Pn	07 32 41.8	+0.4
JHJ	Hachijo jima 2	3.78	175	Pn	Pn	07 33 00.8	+1.4
	29nm,0.3s,baz=241,slow=6.9,SNR=4.5						
JHJ2	Mitsune	3.79	175	*e*Pn	Pn	07 33 01.0	+1.4
ERM	Erimo	5.89	28	*e*Pn	Pn	07 33 30.5	+2.0
ASAJ	Asahikawa	7.62	18	Pn	Pn	07 33 53.1	+0.9
	0.3nm,0.3s,baz=98,slow=15,SNR=4.0						
KSRS	Korea Array	9.17	277	Pn	Pn	07 34 14.2	+0.7
	0.4nm,0.3s,baz=90,slow=15,SNR=6.7						
KS15	Wonju Array Si	9.20	277	*e*Pn	Pn	07 34 14.2	+0.2
USRK	Ussuriysk Ar.	9.22	325	Pn	Pn	07 34 15.5	+1.4
	baz=99,slow=9.3,SNR=2.1						
YSS	Yuzh-Sakhalins	10.36	13	*e*Pn	Pn	07 34 31.3	+1.5
NJ2	Nanjing	17.60	260	*e*P	P	07 36 07.0	-0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
PETK	Petropavlovsk-	20.65	32	P	Pn	07 36 42.1	-1.1
	comp=Z,3.4nm,0.8s,baz=207,slow=6.2,SNR=4.1						
HHC	Hu-ho-hao-te	21.98	289	*e*Pg	P	07 36 55.3	-0.3
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN	Xi'an	24.93	273	P	P	07 37 29.0	+4.2
XAN				pP	sP	07 37 33.5	+6.8
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONA0	Songino Array	26.53	305	*e*P	P	07 37 37.4	-1.8
SONM	Songino Array	26.53	305	P	P	07 37 37.4	-1.8
	comp=Z,0.3nm,0.6s,baz=94,slow=15,SNR=2.0						
LZH	Lanzhou	28.49	279	*e*P	P	07 38 01.0	+4.0
LZH				pP	sP	07 38 05.0	+6.1
LZH				sP	pP	07 38 08.8	+10
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
CD2	Chengdu	30.05	269	*e*P	P	07 38 09.8	-1.0
GTA	Gaotai	31.06	287	*e*P	P	07 38 19.5	-0.2
GTA				pP	sP	07 38 23.8	+2.2
GTA				sP	pP	07 38 26.5	+5.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KMI	Kunming	33.34	260	P	P	07 38 41.0	+1.0
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ	Urumqi	39.46	297	*e*P	P	07 39 33.8	+1.9
ZAA1	Zalesovo Array	40.82	313	*e*P	P	07 39 42.4	-0.5
ZALV	Zalesovo Beam	40.82	313	P	P	07 39 42.4	-0.5
	comp=Z,1.2nm,0.6s,baz=77,slow=9.0,SNR=2.8						
ANM	Nome	42.56	32	*e*P	P	07 39 58.8	+1.7
	comp=Z,3.7nm,1.2s						
MK32	Makanchi Array	42.82	302	*e*P	P	07 39 59.2	-0.3
MKAR	Makanchi Array	42.82	302	P	P	07 39 59.2	-0.3
	comp=Z,0.7nm,0.8s,baz=87,slow=6.2,SNR=3.7						
MLY	Manley	48.83	32	*e*P	P	07 40 47.5	+0.8
	comp=Z,2.6nm,0.8s						
TOLK	Toolik Lake Re	49.34	27	*e*P	P	07 40 52.6	+2.1
	comp=Z,2.6nm,0.9s						
RND	Reindeer	49.71	34	*e*P	P	07 40 53.9	+0.5
	comp=Z,2.2nm,0.9s						
MDM	Murphy Dome	49.90	32	*e*P	P	07 40 55.9	+1.1
	comp=Z,6.8nm,1.0s						

ILAR	Eielson Array	50.48	32	P	P	07 40 59.8	+0.6
	comp=Z,1.8nm,0.8s,baz=274,slow=6.4,SNR=12						
ILB	Eielson Array	50.48	32	eP	P	07 40 59.8	+0.6
DAWY	Dawson	53.80	33	eP	P	07 41 25.5	+1.5
	comp=Z,1.3nm,1.0s						
EPYK	Eagle Plains	54.45	30	eP	P	07 41 30.2	+1.5
	comp=Z,9.5nm,0.9s						
INK	Inuvik	55.25	27	eP	P	07 41 35.5	+1.1
	comp=Z,4.7nm,1.0s						
INK	Inuvik	55.25	27	P	P	07 41 34.2	-0.1
	comp=Z,3.4nm,0.8s,baz=287,slow=6.3,SNR=13						
HYT	Haines Junctio	55.38	36	eP	P	07 41 37.9	+2.4
	comp=Z,3.3nm,0.8s						
WRAB	Tennant Creek	56.72	186	eP	P	07 41 44.9	-0.5
	comp=Z,9.1nm,1.0s						
WR1	Warramunga Arr	56.73	186	eP	P	07 41 44.4	-1.1
	comp=Z,1.6nm,0.6s						
WRA	Warramunga Arr	56.73	186	P	P	07 41 44.4	-1.1
	comp=Z,4.3nm,0.8s,baz=2.1,slow=7.4,SNR=22						
ABKAR	Akbulak array	56.79	310	eP	P	07 41 45.0	-0.6
AS31	Alice Springs	60.45	186	eP	P	07 42 10.9	-0.5
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	60.45	186	P	P	07 42 11.2	-0.2
	comp=Z,1.1nm,0.8s,baz=17,slow=12,SNR=8.3						
RES	Resolute Bay	63.14	14	eP	P	07 42 29.2	+0.3
RES	Resolute Bay	63.14	14	P	P	07 42 28.4	-0.5
	comp=Z,3.3nm,0.8s,baz=295,slow=6.4,SNR=10						
YKA	Yellowknife Ar	64.74	30	P	P	07 42 39.0	-0.5
	comp=Z,0.8nm,0.7s,baz=304,slow=6.8,SNR=10						
YKB5	Yellowknife Ar	64.74	30	eP	P	07 42 39.0	-0.5
STKA	Stephens Creek	68.44	178	eP	P	07 43 03.2	-0.3
STKA	Stephens Creek	68.44	178	P	P	07 43 02.2	-1.3
	comp=Z,1.7nm,0.8s,baz=333,slow=7.9,SNR=2.8						
AKASG	Malin Array Be	73.41	321	P	P	07 43 32.9	-0.8
	comp=Z,0.4nm,0.4s,baz=46,slow=6.7,SNR=5.9						
NB2	NORSAR Subarra	73.68	337	P	P	07 43 34.4	-0.7
	comp=Z,0.5nm,0.7s,baz=39,slow=6.2						
NB200	NORSAR Array S	73.68	337	eP	P	07 43 34.5	-0.6
NOA	NORSAR Array B	73.68	337	P	P	07 43 34.5	-0.6
	comp=Z,0.8nm,0.7s,baz=38,slow=5.9,SNR=4.1						
BEKR	Beckworth	74.23	52	eP	P	07 43 39.8	+0.9
	comp=Z,3.7nm,1.1s						
CMB	Columbia Colle	75.26	53	eP	P	07 43 45.5	+0.7
	comp=Z,2.5nm,1.0s						
DLMT	Dillon	75.57	44	eP	P	07 43 47.5	+0.9
	comp=Z,4.9nm,0.9s						
KVN	Kaiserville	76.12	52	eP	P	07 43 50.5	+0.7
	comp=Z,2.9nm,1.0s						
NV01	Mina Array Sit	76.36	52	eP	P	07 43 51.9	+0.6
NVAR	Mina Array Bea	76.36	52	P	P	07 43 51.9	+0.6
	comp=Z,1.7nm,0.8s,baz=276,slow=5.2,SNR=9.4						
DUG	Dugway, Tooele	78.66	48	eP	P	07 44 04.4	+0.4
	comp=Z,1.8nm,1.1s						
PD31	Pinedale Array	78.91	44	eP	P	07 44 05.5	+0.1
PDAR	Pinedale Array	78.91	44	P	P	07 44 05.5	+0.1
	comp=Z,0.9nm,0.8s,baz=261,slow=3.3,SNR=6.7						
ULM	Lac du Bonnet	80.50	32	P	P	07 44 13.2	-0.5
	comp=Z,2.5nm,0.9s,baz=307,slow=5.4,SNR=3.3						

NIED ***25*** *07:34:00, 36°.90N×139°.40E, h5^{km}, Mw4.5 Best double couple: $M_0$6.68000×10^{15} NP1:ϕ_s153.00000°, δ86.00000°, λ0.00000°. NP2:ϕ_s63.00000°, δ90.00000°, λ176.00000°.*

ISCJB ***25*** *07:34:42.4±0.5, 36°.88N±0°.03×139°.42E±0°.03, h11^{km}±3^{km}, mb4.4/60, MS5.3/2, Error ellipse: s-maj=5.5km s-min=3.6km az=135.9*

IDC ***25*** *07:34:42.0±0.5, 36°.88N×139°.43E, h0^{km}, mb3.9/21, mb1 4.1/27, mb1mx4.1/53, mbtmp4.0/27, ML3.8/5, MS4.9/1, Ms1 4.9/1, ms1mx3.7/56, Error ellipse: s-maj=14.1km s-min=8.8km az=147.0*

JMA ***25*** *07:34:42.7, 36°.88N×139°.43E, h5^{km}±1^{km}, M4.7*

JMA Felt IV J1.

NEIC ***25*** *07:34:43.8±0.2, 36°.84N×139°.39E, h10^{km}, mb4.6/35, Error ellipse: s-maj=6.3km s-min=4.2km az=136.0*

NEIC Recorded [4 JMA] in Tochigi.

ISC 25 07:34:43.3±1.1**, 36°.87N**±0°.03×**139°.43E**±0°.04**, h7**^{km}±7^{km}**, n108, σ1^{s}01**/109**, mb4.5**/60**, 2C-4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKT	Katashina	0.18	234	⇓P	Pg	07 34 46.6	-0.3
JKT				S	Sg	07 34 49.1	-0.3
JSB	Shiboa	0.41	76	⇓P	Pg	07 34 51.2	-0.1
JAG	Ashikaga	0.44	177	⇑P	Pg	07 34 51.6	-0.3
JHK	Hiroka	0.50	319	⇓P	Pg	07 34 52.4	-0.6
JHK				S	Sg	07 34 59.0	-0.5
JFY	Yanaizu	0.58	22	⇑P	Pg	07 34 53.9	-0.6
JFY				S	Sg	07 35 01.4	-0.7
JGK	Kuni	0.70	244	⇓P	Pg	07 34 56.6	-0.2
JGK				S	Sg	07 35 05.9	-0.1
MJAR	Matsushiro Arr	1.03	252	Pg	Pg	07 35 02.0	-1.1
	90nm,0.3s,baz=72,slow=16,SNR=60						
MJAR				Lg	Lg	07 35 14.9	
	56nm,0.3s,baz=161,slow=18,SNR=13						
MAJO	Matsushiro	1.03	252	ePg	Pg	07 35 02.5	-0.6
MAT	Matsushiro	1.03	252	P	Pg	07 35 02.3	-0.8
MAT				S	Sg	07 35 15.3	-1.2
INU	Inuyama	2.47	233	ePn	Pn	07 35 25.4	+1.5
JHJ	Hachijo jima 2	3.75	175	Pn	Pn	07 35 42.0	+0.4
	40nm,0.3s,baz=284,slow=5.4,SNR=5.1						
JHJ2	Mitsune	3.76	175	ePn	Pn	07 35 42.5	+0.7
ERM	Erimo	5.89	28	ePn	Pn	07 36 12.7	+1.7
ASAJ	Asahikawa	7.63	17	Pn	Pn	07 36 35.9	+1.1
	1.9nm,0.3s,baz=230,slow=14,SNR=10.0						
JNU	Nakatsue	7.95	244	ePn	Pn	07 36 39.9	+0.6
JNU	Nakatsue	7.95	244	Pn	Pn	07 36 41.1	+1.8
	0.8nm,0.3s,baz=58,slow=5.3,SNR=14						
KSRS	Korea Array	9.20	277	Pn	Pn	07 36 58.6	+2.2
	1.0nm,0.3s,baz=88,slow=15,SNR=8.9						
KS15	Wonju Array Si	9.23	277	ePn	Pn	07 36 58.6	+1.8
USRK	Ussuriysk Ar.	9.25	325	Pn	Pn	07 36 58.6	+1.5
	0.3nm,0.3s,baz=128,slow=15,SNR=4.0						
YSS	Yuzh-Sakhalins	10.38	13	ePn	Pn	07 37 13.9	+1.4
MDJ	Mudanjiang	10.74	319	P	Pn	07 37 24.8	+7.3
MDJ				pmax	pmax		
	comp=Z,20nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,6µm,9.4s						
MDJ	Mudanjiang	10.74	319	ePn	Pn	07 37 17.7	+0.2
KLR	Kul'dur	13.56	338	Pn	Pn	07 37 57.6	+1.7
	comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=7.8						
NJ2	Nanjing	17.62	260	eP	P	07 38 50.0	-0.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
YOJ	Yonaguni jima	18.74	233	eP	P	07 38 59.4	-3.2
	comp=Z,106nm,1.1s						
PETK	Petropavlovsk-	20.65	32	P	Pn	07 39 24.1	-1.6
	comp=Z,2.2nm,0.7s,baz=226,slow=9.6,SNR=3.1						
PEA1	Petropavlovsk-	20.66	32	eP	P	07 39 24.1	+0.7
HHC	Hu-ho-hao-te	22.02	289	eP	P	07 39 38.3	0.0
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
MA2	Magadan	23.88	14	eP	P	07 39 56.4	-0.8
	comp=Z,10nm,0.8s						
XAN	Xi'an	24.96	273	P	P	07 40 08.3	+0.9
XAN				pP	sP	07 40 12.5	+1.3
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
SONA0	Songino Array	26.56	305	eP	P	07 40 21.7	-0.3
SONM	Songino Array	26.56	305	P	P	07 40 21.7	-0.3
	comp=Z,0.5nm,0.4s,baz=110,slow=11,SNR=4.5						
LZH	Lanzhou	28.52	279	eP	P	07 40 43.3	+3.6
LZH				pP	sP	07 40 45.8	+2.4
LZH				sP	pP	07 40 48.0	+5.7
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
CD2	Chengdu	30.08	269	eP	P	07 40 53.0	-0.4
GTA	Gaotai	31.09	287	eP	P	07 41 04.0	+1.7
GTA				pP	sP	07 41 08.5	+2.4
GTA				sP	pP	07 41 11.0	+6.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DAV	Davao City (W)	32.24	206	LR	LR	07 54 13.2	
	comp=Z,2µm,18.5s,baz=12,slow=36						
KMI	Kunming	33.36	260	P	P	07 41 24.5	+2.0
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
WMQ	Urumqi	39.49	297	eP	P	07 42 16.8	+2.3
WMQ				LR	LR		
	comp=N,7µm,12.1s						
WMQ				LR	LR		
	comp=E,6µm,12.1s						
WMQ				LR	LR		
	comp=Z,10µm,13.9s						
ZAA1	Zalesovo Array	40.85	313	eP	P	07 42 25.0	-0.5
ZALV	Zalesovo Beam	40.85	313	P	P	07 42 25.0	-0.5
	comp=Z,1.3nm,0.6s,baz=81,slow=5.5,SNR=4.8						
ANM	Nome	42.57	32	eP	P	07 42 40.5	+1.1
	comp=Z,6.0nm,1.4s						
MK32	Makanchi Array	42.86	302	eP	P	07 42 41.4	-0.6
MKAR	Makanchi Array	42.86	302	P	P	07 42 41.4	-0.6
	comp=Z,0.2nm,0.3s,baz=81,slow=8.9,SNR=3.4						
KURK	Kurchatov	44.78	308	eP	P	07 42 57.2	-0.2
	comp=Z,7.1nm,0.9s						
SVW2	Sparrevohn	46.62	37	eP	P	07 43 12.1	+0.3
	comp=Z,23nm,1.6s						
CAST	Castle Rocks	48.26	34	eP	P	07 43 25.3	+0.7
	comp=Z,2.9nm,1.1s						
MLY	Manley	48.83	32	eP	P	07 43 29.9	+0.9
	comp=Z,9.0nm,1.7s						
KSH	Kashi	49.02	294	P	P	07 43 37.8	+6.9
KSH				pmax	pmax		
	comp=Z,880nm,7.9s						
TRF	Thorofare Moun	49.06	34	eP	P	07 43 30.6	-0.3
	comp=Z,4.9nm,1.1s						
TOLK	Toolik Lake Re	49.34	27	eP	P	07 43 33.6	+0.7
	comp=Z,6.5nm,1.2s						
BRVK	Borovoye	49.56	312	eP	P	07 43 34.2	-0.5
	comp=Z,12nm,1.5s						
SEW	Seward	49.68	38	eP	P	07 43 36.3	+0.9
	comp=Z,97nm,1.6s						
RND	Reindeer	49.71	34	eP	P	07 43 36.3	+0.6
	comp=Z,10nm,1.3s						
MDM	Murphy Dome	49.90	32	eP	P	07 43 37.9	+0.8
	comp=Z,8.8nm,1.2s						
WRH	Wood River Hil	49.98	33	eP	P	07 43 38.8	+1.1
	comp=Z,3.9nm,1.2s						
ILAR	Eielson Array	50.48	32	P	P	07 43 41.5	0.0
	comp=Z,1.2nm,0.9s,baz=269,slow=4.9,SNR=9.0						
ILB	Eielson Array	50.48	32	eP	P	07 43 41.5	0.0
SCM	Sheep Creek Mo	50.54	36	eP	P	07 43 43.2	+1.1
	comp=Z,71nm,1.6s						
ARSB	Arslanbob	50.63	297	eP	P	07 43 43.7	+0.5
	comp=Z,28nm,1.4s						
SCRK	Sand Creek	51.81	33	eP	P	07 43 52.5	+0.8
	comp=Z,24nm,1.7s						
KKAR	Karatay Array	51.83	300	eP	P	07 43 52.0	+0.1
	comp=Z,17nm,1.3s						
EGAK	Eagle	52.92	32	eP	P	07 44 00.0	+0.3
	comp=Z,6.0nm,1.2s						
DAWY	Dawson	53.80	33	eP	P	07 44 07.0	+0.8
	comp=Z,7.7nm,1.5s						
CHGR	Chuyangaron	54.29	295	eP	P	07 44 11.1	+0.8
	comp=Z,27nm,1.2s						
EPYK	Eagle Plains	54.46	30	eP	P	07 44 12.3	+1.3
	comp=Z,18nm,1.4s						
INK	Inuvik	55.26	27	eP	P	07 44 16.9	+0.2
	comp=Z,3.6nm,1.1s						
INK	Inuvik	55.26	27	P	P	07 44 17.1	+0.4
	comp=Z,1.1nm,0.5s,baz=307,slow=6.7,SNR=12						
WRAB	Tennant Creek	56.70	186	eP	P	07 44 27.6	0.0
	comp=Z,15nm,1.1s						
WB2	Warramunga Arr	56.71	186	eP	P	07 44 27.7	+0.1
	comp=Z,19nm,0.9s						
WR1	Warramunga Arr	56.71	186	eP	P	07 44 26.5	-1.1
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	56.71	186	P	P	07 44 26.5	-1.1
	comp=Z,12nm,0.8s,baz=2.5,slow=7.6,SNR=33						
ABKAR	Akbulak array	56.82	310	eP	P	07 44 27.8	-0.5
	comp=Z,8.7nm,1.5s						
AS31	Alice Springs	60.43	186	eP	P	07 44 53.8	+0.2
	comp=Z,3.4nm,1.5s						
ASAR	Alice Springs	60.44	186	P	P	07 44 54.2	+0.6
	comp=Z,1.9nm,0.8s,baz=11,slow=5.4,SNR=20						
GEYT	Alibeck	62.52	298	P	P	07 45 07.6	-0.1
	comp=Z,3.0nm,1.0s,baz=28,slow=6.7,SNR=3.9						
RES	Resolute Bay	63.15	14	eP	P	07 45 11.0	-0.3
RES	Resolute Bay	63.15	14	P	P	07 45 11.5	+0.3
	comp=Z,3.5nm,1.0s,baz=302,slow=6.5,SNR=8.3						
YKA	Yellowknife Ar	64.74	30	P	P	07 45 21.7	-0.2
	comp=Z,0.5nm,0.7s,baz=305,slow=6.7,SNR=7.4						
YKB5	Yellowknife Ar	64.74	30	eP	P	07 45 21.7	-0.2
FIA0	FINESS Array S	68.21	332	eP	P	07 45 44.5	+0.4
FINES	FINESS Array B	68.21	332	P	P	07 45 44.5	+0.4
	comp=Z,1.3nm,0.6s,baz=90,slow=7.6,SNR=4.4						
STKA	Stephens Creek	68.42	178	eP	P	07 45 46.3	+0.7
	comp=Z,1.9nm,1.6s						
STKA	Stephens Creek	68.42	178	P	P	07 45 46.1	+0.5
	comp=Z,3.1nm,0.8s,baz=354,slow=12,SNR=5.6						
KBZ	Khabaz	69.79	310	P	P	07 45 55.1	+0.9
	comp=Z,1.6nm,0.8s,baz=249,slow=3.6,SNR=3.8						
SUMG	Summit	70.84	359	eP	P	07 46 00.3	-0.3
	comp=Z,4.9nm,0.9s						
AKASG	Malin Array Be	73.44	321	P	P	07 46 15.0	-1.1
	comp=Z,1.0nm,0.7s,baz=47,slow=6.5,SNR=4.7						
AKBB	Malin Array Si	73.44	321	eP	P	07 46 14.2	-1.9
	comp=Z,3.8nm,1.1s						
NB2	NORSAR Subarra	73.71	337	P	P	07 46 17.4	-0.2
	comp=Z,4.1nm,0.9s,baz=40,slow=6.5						
NB200	NORSAR Array S	73.71	337	eP	P	07 46 16.9	-0.7
NOA	NORSAR Array B	73.71	337	P	P	07 46 16.9	-0.7
	comp=Z,1.6nm,0.7s,baz=40,slow=5.8,SNR=7.0						
BEKR	Beckworth	74.22	52	eP	P	07 46 21.9	+0.8
	comp=Z,3.0nm,1.1s						
FCC	Fort Churchill	74.85	26	eP	P	07 46 24.0	-0.2
	comp=Z,4.9nm,1.4s						
HLID	Hailey	75.64	46	eP	P	07 46 29.7	+0.4
	comp=Z,3.7nm,1.3s						
KVN	Kaiserville	76.11	52	eP	P	07 46 32.8	+0.7
	comp=Z,5.0nm,1.1s						
NV01	Mina Array Sit	76.35	52	eP	P	07 46 32.5	-1.0
NVAR	Mina Array Bea	76.35	52	P	P	07 46 32.5	-1.0
	comp=Z,1.8nm,0.9s,baz=282,slow=5.4,SNR=4.2						
FRB	Frobisher Bay	77.28	12	P	P	07 46 37.0	-0.9
	comp=Z,1.9nm,0.8s,baz=329,slow=5.2,SNR=5.3						
H17A	Grant Village	77.30	44	eP	P	07 46 38.7	-0.1
	comp=Z,6.7nm,1.2s						
BR101	Keskin Array S	77.76	311	eP	P	07 46 40.5	-0.7
BRTR	Keskin Array B	77.76	311	P	P	07 46 40.5	-0.7
	comp=Z,0.3nm,0.6s,baz=52,slow=2.4,SNR=2.8						
R11A	Troy Canyon, C	78.11	51	eP	P	07 46 43.5	+0.2
	comp=Z,12nm,1.5s						
PD31	Pinedale Array	78.91	44	eP	P	07 46 46.8	-0.9
PDAR	Pinedale Array	78.91	44	P	P	07 46 46.8	-0.9
	comp=Z,1.3nm,1.0s,baz=289,slow=4.5,SNR=5.9						
ULM	Lac du Bonnet	80.50	32	P	P	07 46 55.0	-0.9
	comp=Z,2.1nm,0.9s,baz=220,slow=1.8,SNR=3.2						
GEC2	GERESS Array S	82.00	327	eP	P	07 47 02.6	-1.4
GERES	GERESS Array B	82.00	327	P	P	07 47 02.6	-1.4
	comp=Z,0.2nm,0.2s,baz=20,slow=3.1,SNR=2.7						
LPAZ	La Paz	148.13	57	ePKPdf	PKPdf	07 54 27.3	-0.6
LPAZ	La Paz	148.13	57	PKPbc	PKiKP	07 54 31.7	-1.1
	comp=Z,1.9nm,0.9s,baz=1.2,slow=4.6,SNR=4.7						

ATH 25 07:35:11.9, 37°.84N×21°.41E, h27^{km}±4^{km}**, ML1.7**/1**, Error ellipse: s-maj=5.1km s-min=2.3km az=4.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.22	12	P	Pb	07 35 18.4	+0.4
RLS				S	Sb	07 35 22.5	+0.3
DRO	Drossia	0.26	65	P	Pb	07 35 18.3	-0.3
DRO				S	Sb	07 35 23.1	0.0
DRO				AML	AML	07 35 23.5	
	comp=N,308µm,0.3s						
DRO				AML	AML	07 35 23.6	
	comp=E,447µm,0.3s						
AXS	Araxos	0.36	356	P	Pb	07 35 19.9	0.0
LAKA	Lakka	0.60	48	P	Pb	07 35 23.8	-0.2
LAKA				S	Sn	07 35 33.5	-0.2
KLV	Kalavryta, Ach	0.62	71	P	Pb	07 35 24.1	-0.2
KLV				S	Sn	07 35 33.9	-0.3
TRIP	Tripoli	0.75	114	P	Pn	07 35 27.2	+0.3

KRNET ***25*** *07:44:57.8±0.1, 41°.75N×76°.26E, h17^{km}, mb2.4*

NNC ***25*** *07:44:59.4±1.4, 41°.81N×76°.18E, h0^{km}, mb2.7, mpv2.6, Error ellipse: s-maj=9.3km s-min=6.2km az=8.0*

ISC 25 07:44:58.1±1.1**, 41°.77N**±0°.03×**76°.23E**±0°.02**, h7**^{km}±10^{km}**, n20, σ0^{s}81**/35**, 29C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	0.38	208	⇑iP	Pg	07 45 05.6	0.0
	baz=13						
NRN				⇑iS	Sg	07 45 11.4	+0.9
	baz=13						
ULHL	Ulahol	0.48	1	⇑iP	Pg	07 45 07.4	-0.1
	baz=58						
ULHL				⇑iS	Sg	07 45 14.6	+0.8
	baz=58						
BOOM	Boomskoye usch	0.76	343	⇑iP	Pg	07 45 12.4	-0.3
	baz=42						
BOOM				⇑iS	Sb	07 45 23.5	-0.8
	baz=42						
KDJ	Kajisay	0.79	62	⇑iP	Pg	07 45 12.8	-0.6
	baz=62						
KDJ				⇑iS	Sg	07 45 24.1	+0.3
	baz=62						
KZA	Kyzart	0.80	293	⇑iP	Pg	07 45 13.2	-0.3
	baz=94						
KZA				⇑iS	Sg	07 45 24.8	+0.9
	baz=94						
TARG	Taragay, Kyrgy	1.18	91	⇑iP	Pg	07 45 19.6	-1.1
	baz=91						
TARG				⇑iS	Sg	07 45 35.3	-0.7
	baz=91						
TKM2	Tokmak 2	1.25	338	⇓P	Pb	07 45 21.3	-0.8
	1.7nm,0.8s						
TKM2				⇓S	Sn	07 45 38.9	-0.5
	1.2nm,0.6s						
TKM2	Tokmak 2	1.25	338	⇑iP	Pb	07 45 21.6	-0.5
	baz=37						
TKM2				⇑iS	Sn	07 45 38.8	-0.5
	baz=37						
KBK	Karagaybulak	1.30	313	⇑iP	Pn	07 45 23.0	+0.1
	baz=13						
KBK				⇑iS	Sn	07 45 40.4	-0.3
	baz=13						
ARLS	Aral	1.43	274	⇑iP	Pn	07 45 24.6	0.0
	baz=75						
ARLS				⇑iS	Sg	07 45 44.4	+0.3
	baz=75						
AAK	Ala-Archa	1.56	305	P	Pg	07 45 28.1	+0.1
	0.6nm,0.3s						
AAK				⇑S	Sn	07 45 45.9	-1.0
	1.1nm,0.5s						
AAK	Ala-Archa	1.56	305	⇑iP	Pb	07 45 27.3	-0.1
	baz=5.0						
AAK				⇑iS	Sg	07 45 48.2	0.0
	baz=5.0						
PRZ	Przheval'sk	1.76	65	⇑iP	Pn	07 45 29.8	+0.6
	baz=65						
PRZ				⇑iS	Sb	07 45 53.6	+0.3
	baz=65						
KTBS	Karatobe	1.97	10	Pg	Pb	07 45 34.8	+0.4
	3.3nm,0.2s						
KTBS				Lg	Lg	07 46 02.5	
	4.3nm,0.4s						
USP	Ospenovka	1.97	320	⇑iP	Pb	07 45 34.3	-0.1
	baz=20						
USP				⇑iS	Sg	07 46 00.6	-0.9
	baz=20						
SATY	Saty	2.06	51	Pg	Pb	07 45 35.8	-0.2
	2.3nm,0.2s						
SATY				Lg	Lg	07 46 04.0	
	5.2nm,0.3s						
KUU	Kurty	2.13	2	Pg	Pb	07 45 37.5	+0.5
	2.4nm,0.3s						
KUU				Lg	Lg	07 46 07.0	
	4.4nm,0.4s						
CHKK	Chushkaly	2.16	15	Pg	Pb	07 45 38.1	+0.6
	2.2nm,0.3s						
CHKK				Lg	Lg	07 46 08.1	
	5.2nm,0.2s						
PDGK	Podgornoye	2.87	56	⇑Pn	Pb	07 45 47.8	-1.9
	2.0nm,1.0s						
PDGK				⇑Lg	Lg	07 46 29.7	
	5.0nm,0.8s						
PDGK	Podgornoye	2.87	56	⇑iP	Pn	07 45 46.1	+1.7
	baz=55						
PDGK				⇑iS	Sn	07 46 21.3	+2.1
	baz=55						

IDC ***25*** *07:45:32.6±1.7, 34°.22N×85°.57E, h0^{km}, mb3.5/3, mb1 3.6/6, mb1mx3.3/52, mbtmp3.4/6, ML2.8/3, Error ellipse: s-maj=113.5km s-min=20.9km az=58.0*

ISCJB ***25*** *07:45:35.7±1.2, 34°.4N±0°.2×85°.7E±0°.4, h33^{km}, mb3.4/3, Error ellipse: s-maj=54.2km s-min=15.1km az=148.2*

ISC 25 07:45:38.1±1.5**, 34°.4N**±0°.2×**85°.7E**±0°.3**, h35**^{km}**, n6, σ0^{s}54**/6**, mb3.4**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	12.04	316	Pn	Pn	07 48 27.0	-0.3
	0.1nm,0.3s,baz=163,slow=20,SNR=3.2						
MKAR	Makanchi Array	12.67	349	Pn	Pn	07 48 35.2	-0.4
	0.1nm,0.3s,baz=171,slow=16,SNR=4.8						
KURBB	Kurchatov Arra	17.06	344	P	Pn	07 49 33.9	+0.2
	0.0nm,0.3s,baz=164,slow=11,SNR=3.4						
BVAR	Borovoye Array	21.60	334	P	P	07 50 25.3	+0.6
	0.5nm,0.6s,baz=118,slow=8.3,SNR=3.1						
WRA	Warramunga Arr	71.11	132	P	P	07 56 52.7	-0.3
	0.7nm,0.9s,baz=325,slow=6.5,SNR=3.8						
ASAR	Alice Springs	73.67	135	P	P	07 57 08.5	+0.2
	0.3nm,0.7s,baz=308,slow=6.0,SNR=4.3						

IDC ***25*** *07:47:38.6±2.2, 23°.05S×66°.25W, h189^{km}±25^{km}, mb3.7/2, mb1 3.6/6, mb1mx3.3/30, mbtmp4.2/6, MS4.1/1, Ms1 4.1/1, ms1mx3.1/29, Error ellipse: s-maj=48.8km s-min=21.9km az=154.0*

ISCJB ***25*** *07:47:40.4±0.7, 22°.90S±0°.04×66°.9W±0°.1, h263^{km}±14^{km}, mb3.8/2, Error ellipse: s-maj=21.3km s-min=6.1km az=5.2*

NEIC ***25*** *07:47:41.0±0.0, 22°.80S×67°.17W, h262^{km}, ML4.1(GUC), After GUC.*

GUC ***25*** *07:47:41.6±0.5, 22°.80S×67°.17W, h262^{km}±11^{km}, ML4.1*

ISC 25 07:47:40.5±1.0**, 22°.90S**±0°.05×**66°.8W**±0°.1**, h238**^{km}±15^{km}**, n35, σ1^{s}11**/56**, 12C-3D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.99	278	ePn	Pn	07 48 22.8	+0.6
LVC				eS	S	07 48 54.4	-0.4
LVC	Limon Verde	1.99	278	P	Pn	07 48 23.3	+1.1
	27nm,0.3s,baz=98,slow=6.2,SNR=256						
LVC				S	S	07 48 55.8	+0.9
	15nm,0.3s,baz=248,slow=22,SNR=26						
PB15	IPOC Station P	2.50	262	⇑iP	Pn	07 48 28.3	+1.2
PB15				i S	S	07 49 04.5	+0.9
PB09	IPOC Station P	2.53	295	⇑iP	Pn	07 48 29.0	+1.7
PB09				IAML		07 49 08.8	
	comp=E,316nm,0.3s						
PB06	IPOC Station P	2.58	274	⇑iP	Pn	07 48 29.0	+1.1
PB06				i S	S	07 49 05.7	+0.5
PB06				IAML		07 49 09.1	
	comp=N,332nm,0.1s						
PB03	IPOC Station P	2.88	286	⇑iP	Pn	07 48 32.1	+1.0
PB03				i S	S	07 49 10.7	-0.1
PB03				IAML		07 49 11.8	
	comp=E,565nm,0.1s						
PB07	IPOC Station P	3.10	291	⇑iP	Pn	07 48 34.8	+1.3
PB07				i S	S	07 49 14.6	-0.7
PB01	IPOC Station P	3.12	306	ePn	Pn	07 48 33.8	+0.2
PB01				eS	S	07 49 14.7	-0.8
PB01	IPOC Station P	3.12	306	⇑iP	Pn	07 48 34.5	+0.9
PB01				i S	S	07 49 15.4	-0.1
PB05	IPOC Station P	3.16	270	⇑iP	Pn	07 48 35.3	+1.2
PB05				i S	S	07 49 16.1	-0.2
PB04	IPOC Station P	3.16	280	ePn	Pn	07 48 34.9	+0.7
PB04				eS	S	07 49 15.6	-0.9
PB04	IPOC Station P	3.16	280	⇑iP	Pn	07 48 35.4	+1.2
PB04				i S	S	07 49 16.2	-0.3
PB02	IPOC Station P	3.29	298	⇑iP	Pn	07 48 36.4	+0.9
PB02				i S	S	07 49 17.8	-1.1
GO02	Mina Guanaco	3.42	228	ePn	Pn	07 48 38.0	+0.7
GO02				eS	S	07 49 22.0	0.0
GO02	Mina Guanaco	3.42	228	⇑iP	Pn	07 48 38.2	+1.0
GO02				i S	S	07 49 22.9	+0.9
PB08	IPOC Station P	3.52	321	⇓iP	Pn	07 48 40.2	+1.7
PB08				i S	S	07 49 24.9	+0.6
PB10	IPOC Station P	3.53	259	ePn	Pn	07 48 39.2	+1.0
PB10				eS	S	07 49 23.3	-0.3
PB10	IPOC Station P	3.53	259	⇑iP	Pn	07 48 39.6	+1.5
PB10				i S	S	07 49 23.0	-0.7
PB14	IPOC Station P	3.74	242	⇑iP	Pn	07 48 42.0	+1.1
PB14				i S	S	07 49 28.4	-0.3
PB11	IPOC Station P	4.11	319	ePn	Pn	07 48 44.6	-0.6
PB11				eS	S	07 49 34.5	-2.0
PB11	IPOC Station P	4.11	319	⇓iP	Pn	07 48 45.4	+0.1

PB11				iS	S	07 49 34.8	-1.8
MNMC	Minye Minye	4.58	324	ePn	Pn	07 48 51.1	+0.1
MNMC				eS	S	07 49 45.2	-1.7
MNMC	Minye Minye	4.58	324	⇓iP	Pn	07 48 51.5	+0.5
MNMC				iS	S	07 49 45.3	-1.6
LPAZ	La Paz	6.70	349	ePn	Pn	07 49 17.7	-0.1
LPAZ	La Paz	6.70	349	P	Pn	07 49 18.4	+0.6
	comp=E,2.4nm,0.3s,baz=142,slow=6.1,SNR=55						
LCO	Las Campanas	7.04	209	ePn	Pn	07 49 20.3	-1.4
LCO				eS	S	07 50 39.4	-3.3
GO04	Tololo Observa	8.09	206	ePn	Pn	07 49 33.5	-1.6
SIV	San Ignacio	8.73	39	P	Pn	07 49 39.4	-3.7
	comp=E,1.3nm,0.3s,baz=234,slow=8.4,SNR=31						
TRQA	Tornquist	15.66	166	eP	P	07 51 07.8	-0.5
BDFB	Brasilia	19.12	71	P	P	07 51 44.5	-1.6
	comp=E,0.5nm,0.3s,baz=251,slow=11,SNR=8.4						
SDV	Santo Domingo	31.81	353	LR	LR	08 09 47.8	
	comp=E,317nm,20.0s,baz=49,slow=42						
DBIC	Dimbokro	67.27	72	P	P	07 58 09.6	-0.4
	comp=E,2.4nm,0.6s,baz=225,slow=7.1,SNR=3.1						
TOA1	Torodi Ar. Sit	75.99	69	eP	P	07 59 02.6	+0.7
TORD	Torodi Ar. Bea	75.99	69	P	P	07 59 02.6	+0.7
	comp=E,0.7nm,0.4s,baz=252,slow=5.2,SNR=13						
MKAR	Makanchi Array	145.54	39	PKPbc	PKiKP	08 06 55.2	+0.8
	comp=E,0.2nm,0.5s,baz=343,slow=1.5,SNR=3.1						

IDC ***25*** *07:53:57.4±1.5, 10°.08S×118°.70E, h0km, mb3.9/3, mb1 4.0/7, mb1mx3.7/52, mbtmp3.9/7, ML3.8/4, Error ellipse: s-maj=54.5km s-min=18.9km az=44.0*

ISCJB ***25*** *07:54:01.5±0.7, 10°.37S±0°.07×118°.68E±0°.06, h51km, mb3.9/3, Error ellipse: s-maj=12.0km s-min=5.7km az=42.3*

DJA ***25*** *07:54:05.2±1.0, 10°S±4°×11°9E±°, h14km±8km, M4.3/13, mb4.5/4, MLv4.2/13*

ISC 25 07:54:02.6±1.1, **10°.40S**±0°.10×**118°.58E**±0°.07, **h51km, n17,** σ**2.s39**/21, **mb4.0**/3, **South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.75	333	P	Pn	07 54 30.6	+0.1
PLAI				S	Sn	07 54 52.0	+0.3
BASI	Baing, Sumba	1.98	85	P	Pn	07 54 36.3	+2.7
BASI				S	Sn	07 55 00.2	+3.0
EDFI	Ende, Flores	3.48	62	P	Pn	07 54 55.1	+0.8
SRBI	Singaraja	4.04	304	P	Pn	07 55 04.0	+2.1
BATI	Baumata	5.01	88	P	Pn	07 55 18.2	+3.0
BATI	Baumata	5.01	88	Pn	Pn	07 55 13.4	-1.8
	4.4nm,0.3s,baz=286,slow=18,SNR=2.8						
BATI				Sn	Sn	07 56 09.7	-2.2
	11nm,0.3s,baz=279,slow=19,SNR=3.9						
BKSI	Bulukumba	5.27	17	P	Pn	07 55 17.3	-1.5
SOEI	Soe	5.64	84	P	Pn	07 55 25.6	+1.6
	43nm,0.8s						
BNSI	Bone	6.15	14	P	Pn	07 55 30.4	-0.5
	55nm,0.6s						
SPSI	Sidrap Palu	6.50	11	P	Pn	07 55 35.6	-0.1
TTSI	Tana Toraja	7.41	10	P	Pn	07 55 50.2	+2.0
FITZ	Fitzroy Crossi	10.27	139	Pn	Pn	07 56 28.4	+1.2
	0.7nm,0.3s,baz=327,slow=11,SNR=10						
WRA	Warramunga Arr	17.91	124	P	Pn	07 58 07.3	-0.9
	0.2nm,0.3s,baz=301,slow=13,SNR=12						
WRA				S	Sn	08 01 20.1	-7.2
	0.1nm,0.3s,baz=304,slow=25,SNR=4.3						
ASAR	Alice Springs	19.69	134	P	Pn	07 58 30.7	+1.1
	0.4nm,0.3s,baz=315,slow=11,SNR=36						
SONM	Songino Array	58.98	350	P	P	08 03 57.5	+0.5
	0.8nm,0.5s,baz=169,slow=8.1,SNR=5.5						
MKAR	Makanchi Array	65.51	333	P	P	08 04 41.0	+0.4
	0.6nm,0.6s,baz=152,slow=6.4,SNR=8.2						
ZALV	Zalesovo Beam	70.20	340	P	P	08 05 10.0	+0.1
	1.0nm,0.5s,baz=153,slow=6.6,SNR=4.0						

ISK ***25*** *08:03:08.2, 36°.54N×45°.08E, h10km, ML4.3/17*

IDC ***25*** *08:03:11.2±0.7, 36°.97N×44°.98E, h0km, mb3.9/17, mb1 4.1/27, mb1mx3.9/60, mbtmp3.9/27, ML3.9/7, Error ellipse: s-maj=12.0km s-min=11.0km az=164.0*

ISN ***25*** *08:03:11.6±0.7, 37°.25N×44°.98E, h14km±6km, ML4.3*

NEIC ***25*** *08:03:12.7±0.0, 37°.17N×45°.18E, h4km, mb4.3/23, ML3.9(THR), MN4.3(TEH), After TEH.*

TEH ***25*** *08:03:12.5, 37°.21N×45°.21E, h5km, ML4.2*

MOS ***25*** *08:03:12.0±1.4, 36°.80N×45°.08E, h23km, mb4.4/21, Error ellipse: s-maj=7.0km s-min=4.0km az=103.9*

THR ***25*** *08:03:14.7, 37°.18N×45°.24E, h14km, ML3.9*

AZER ***25*** *08:03:15.9±0.6, 37°.11N×45°.30E, h2km, ml4.1/20, Error ellipse: s-maj=5.7km s-min=3.0km az=63.0*

DDA ***25*** *08:03:44.2, 37°.19N×44°.75E, h4km, ML4.1*

ISC 25 08:03:13.5±1.1, **36°.97N**±0°.02×**45°.11E**±0°.02, **h15km**±7km, **n271,** σ**2.s00**/304, **mb4.2**/49, **41C-15D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOVA	Hakkari_Yksek	0.90	314	⇑iP	Pg	08 03 27.6	-3.4
YOVA				iS	Sg	08 03 40.9	-1.9
IAZR	Azarshahr	0.99	44	ePg	Pg	08 03 28.5	-4.3
IAZR				IAMB	IAmb	08 03 48.6	
	comp=Z,30μm,0.5s						
CUKT	Cukurca	1.23	283	PN	Pn	08 03 34.0	-2.3
CUKT				SN	Sb	08 03 52.8	+0.5
CUKT	Cukurca	1.23	283	⇑iP	Pn	08 03 34.2	-2.1
CUKT				iS	Sb	08 03 52.9	+0.5
CUKT				IAML_P			
	comp=Z,44μm,0.5s						
ITBZ	Tabriz	1.51	33	ePn	Pn	08 03 36.7	-3.4
ITBZ				IAMB	IAmb	08 03 57.2	
	comp=Z,39μm,0.5s						
IBST	Bostanabad	1.60	62	ePn	Pn	08 03 38.8	-2.6
IBST				IAMB	IAmb	08 04 02.2	
	comp=Z,21μm,0.7s						
IKRK	Kirkuk	1.69	202	ePn	Pg	08 03 46.0	+0.1
IKRK				eSn	Sg	08 04 10.0	+2.1
MSL	Mosul	1.71	251	ePg	Pn	08 03 43.0	+0.3
MSL				eSg	Sn	08 04 05.5	+1.3
IMRD	Marand	1.80	15	ePn	Pn	08 03 41.2	-3.0
IMRD				IAMB	IAmb	08 04 17.3	
	comp=Z,31μm,0.5s						
IHRS	Heris	2.04	48	ePn	Pn	08 03 47.5	0.0
IHRS				IAMB	IAmb	08 04 28.3	
	comp=Z,14μm,0.6s						
TVAN	Van	2.06	320	⇑iP	Pn	08 03 48.7	+0.8
TVAN				iS	Sg	08 04 20.5	+0.7
TVAN	Van	2.06	320	ePn	Pn	08 03 48.6	+0.8
ORD	Ordubad	2.08	19	ePn	Pn	08 03 48.6	+0.7
ORD	Ordubad	2.08	19	⇓P	Pn	08 03 48.6	+0.7
ORD				⇓S	Sn	08 04 15.5	+1.9
GEVA	Gevas	2.11	310	⇑iP	Pn	08 03 49.1	+0.6
GEVA				iS	Sb	08 04 19.1	+1.5
GEVA	Gevas	2.11	310	ePn	Pn	08 03 49.3	+0.9
VANB	Van	2.12	320	PN	Pn	08 03 48.4	-0.1
VANB				SN	Sn	08 04 17.6	+3.0
VANB	Van	2.12	320	ePn	Pn	08 03 48.8	+0.3
AKDM	Akdamar-Van	2.17	309	PN	Pn	08 03 50.1	+0.9
AKDM				SN	Sn	08 04 19.4	+3.5
ISRB	Sarab	2.21	67	ePn	Pn	08 03 50.4	+0.6
ISRB				IAMB	IAmb	08 04 25.6	
	comp=Z,22μm,0.8s						
SIRN	Sırnak	2.21	285	⇑iP	Pn	08 03 50.7	+0.9
SIRN				iS	Sn	08 04 19.5	+2.5
SIRN				IAML_P			
	comp=Z,19μm,0.4s						
SIRN	Sırnak	2.21	285	ePn	Pn	08 03 51.9	+2.1
NAX	Nakhchivan	2.22	8	P	Pn	08 03 51.4	+1.5
NAX	Nakhchivan	2.22	8	ePn	Pn	08 03 51.4	+1.5
NAX	Nakhchivan	2.22	8	⇑P	Pn	08 03 51.5	+1.5
	SNR=13						
NAX				⇑S	Sn	08 04 19.0	+1.9
VMUR	Van-Muradiye	2.35	329	⇑iP	Pn	08 03 52.9	+1.1
VMUR				iS	Sg	08 04 29.2	0.0
VMUR	Van-Muradiye	2.35	329	ePn	Pn	08 03 53.1	+1.3
CLDR	Caldiran	2.36	337	PN	Pn	08 03 53.6	+1.6
CLDR	Caldiran	2.36	337	⇑iP	Pn	08 03 52.6	+0.6
CLDR				iS	Sb	08 04 28.8	+3.7
CLDR	Caldiran	2.36	337	ePn	Pn	08 03 53.3	+1.3
MAKU	Maku	2.40	352	ePn	Pn	08 03 53.1	+0.6
MAKU	Maku	2.40	352	ePn	Pn	08 03 53.1	+0.6
SBZ	Shahbuz	2.45	8	ePn	Pn	08 03 55.2	+2.2
SBZ	Shahbuz	2.45	8	⇓P	Pn	08 03 55.2	+2.2
SBZ				⇑S	Sn	08 04 25.7	+3.0
ILIN	Lien	2.54	143	ePn	Pb	08 03 59.1	+0.1
SNGE	Sanandaj	2.61	135	ePn	Pb	08 03 59.7	-0.4
SNGE	Sanandaj	2.61	135	eAML	AML	08 04 46.3	
	comp=E,512nm,0.7s						
SNGE	Sanandaj	2.61	135	ePn	Pb	08 03 59.7	-0.4
SNGE				eSg	Sg	08 04 39.0	+1.6
ADCV	BITLIS_Adilcev	2.63	315	⇑iP	Pn	08 03 57.5	+1.9
ADCV				iS	Sb	08 04 33.9	+1.3
SRTM	Siirt_Merkez	2.73	293	⇓iP	Pn	08 03 59.4	+2.4
SRTM				iS	Sg	08 04 40.9	-0.4
SRTM	Siirt_Merkez	2.73	293	ePn	Pn	08 03 58.8	+1.9
HYR	Heyderabad	2.75	356	ePn	Pn	08 03 59.6	+2.4
HYR	Heyderabad	2.75	356	⇑P	Pn	08 03 59.6	+2.4
DYDN	Diyadin	2.80	337	eP	Pn	08 03 58.7	+0.7
DYDN				iS	Sg	08 04 43.2	-0.4
DYDN	Diyadin	2.80	337	ePn	Pb	08 04 02.3	-1.1
GRMI	Germi	2.87	49	ePn	Pn	08 03 59.2	+0.4
GRMI	Germi	2.87	49	ePn	Pn	08 03 59.2	+0.4
ZNJK	Zanjan	2.88	95	ePn	Pn	08 04 01.3	+2.1
ZNJK	Zanjan	2.88	95	ePn	Pn	08 04 01.3	+2.1
IGHG	Ghaleghazi	2.89	155	ePn	Pb	08 04 04.7	-0.2
IGHG				IAMB	IAmb	08 05 03.3	
	comp=N,7μm,0.6s						
GURO	Guroymak-BITLI	2.90	304	PN	Pn	08 03 59.2	-0.1
GURO	Guroymak-BITLI	2.90	304	ePn	Pn	08 04 01.0	+1.7
MLAZ	Malazgirt-MUS	2.96	318	PN	Pn	08 04 00.9	+0.7
IGDI	IGDIR	3.00	345	eP	Pn	08 04 03.8	+3.2
IGDI				iS	Sg	08 04 50.7	+0.6
TUTA	Tutak	3.03	324	eP	Pn	08 04 01.3	+0.2
TUTA				iS	Sg	08 04 51.4	+0.6
TUTA	Tutak	3.03	324	ePn	Pn	08 04 01.3	+0.2
LRK	Lerik	3.06	56	ePn	Pn	08 04 02.0	+0.6
LRK	Lerik	3.06	56	⇓P	Pn	08 04 02.0	+0.6
	SNR=12						
LRK				⇑S	Sn	08 04 38.5	+0.7
TASB	TASBURUN-IGDIR	3.08	347	PN	Pn	08 04 04.3	+2.5
TASB	TASBURUN-IGDIR	3.08	347	ePn	Pn	08 04 05.6	+3.8
AGRB	Hanur-Agry	3.09	328	PN	Pn	08 04 03.6	+1.7
AGRB	Hanur-Agry	3.09	328	ePn	Pn	08 04 04.3	+2.4
HSRG	Sareghieh	3.09	123	IAMB	IAmb	08 04 59.9	
	comp=N,0.0nm,0.8s						
HSRG				ePn	Pn	08 04 06.1	+4.0
GNI	Garni	3.19	355	PN	Pn	08 04 06.0	+2.8
GNI	Garni	3.19	355	ePn	Pn	08 04 01.4	-1.9
GNI				ePg	Pb	08 04 09.8	-0.2
GNI				eSn	Sn	08 04 34.3	-6.8
GNI	Garni	3.19	355	eP	Pn	08 04 01.4	-1.9
GNI				e		08 04 34.3	
GNI	Garni	3.19	355	ePn	Pn	08 04 07.5	+4.3
GNI	Garni	3.19	355	Pn	Pn	08 04 05.7	+2.4
	comp=N,3.7nm,0.3s,baz=204,slow=4.1,SNR=33						
GNI				Pg	Pb	08 04 09.8	-0.2
	comp=N,4.8nm,0.3s,baz=269,slow=3.1,SNR=32						
GNI				Lg	Lg	08 04 52.8	
	comp=N,6.8nm,0.3s,baz=180,slow=20,SNR=3.6						
BTMN	Batman	3.19	288	eP	Pn	08 04 04.3	+1.0
BTMN				iS	Sg	08 04 55.9	-0.1
BTMN	Batman	3.19	288	ePn	Pb	08 04 08.7	-1.3
ASTR	Astara	3.32	60	ePn	Pn	08 04 06.0	+1.1
ASTR	Astara	3.32	60	⇓P	Pn	08 04 06.0	+1.1
	SNR=9.9						
ASTR				⇓S	Sn	08 04 45.0	+0.9
SVAN	Silvan-Diyarba	3.32	292	PN	Pn	08 04 04.4	-0.6
SVAN	Silvan-Diyarba	3.32	292	ePn	Pn	08 04 07.2	+2.2
LKRN	Lenkeran, Azer	3.38	58	P	Pn	08 04 07.1	+1.3
LKRN	Lenkeran, Azer	3.38	58	ePn	Pn	08 04 07.1	+1.3
LKRN	Lenkeran, Azer	3.38	58	P	Pn	08 04 07.1	+1.3
	SNR=5.7						
LKRN				⇑S	Sn	08 04 46.6	+0.9
IKOM	Komasi	3.41	144	ePn	Pn	08 04 10.8	+4.5
IKOM				IAMB	IAmb	08 05 25.4	
	comp=Z,0.0nm,1.2s						
GLBA	Clilabad	3.44	48	ePn	Pn	08 04 07.5	+0.9
GLBA	Clilabad	3.44	48	P	Pn	08 04 07.6	+0.9
	SNR=37						
GLBA				⇑S	Sn	08 04 48.3	+1.2
MARD	Mardin	3.48	277	iP	Pn	08 04 07.3	+0.2
MARD				iS	Sb	08 05 00.3	+3.4
VRTB	Varto-Mus	3.62	308	PN	Pn	08 04 09.8	+0.6
VRTB	Varto-Mus	3.62	308	ePn	Pn	08 04 11.4	+2.2
BRDA	Brd	3.67	26	⇓S	Sn	08 04 54.1	+1.6
BHD	Baghdad	3.74	189	ePn	Pn	08 04 14.0	+3.3
BHD				eSn	Sb	08 05 00.5	-3.9
MAZI	Mazidag	3.75	279	PN	Pn	08 04 09.0	-2.0
MAZI	Mazidag	3.75	279	ePn	Pn	08 04 13.2	+2.2
GDB	GEDABAY	3.78	7	ePn	Pn	08 04 13.4	+2.1
GDB	GEDABAY	3.78	7	P	Pn	08 04 13.5	+2.1
	SNR=6.5						
GDB				⇑S	Sn	08 04 57.6	+2.0
GANJ	Ganja	3.79	14	P	Pn	08 04 13.5	+2.1
GANJ	Ganja	3.79	14	ePn	Pn	08 04 13.5	+2.1
GANJ	Ganja	3.79	14	⇑P	Pn	08 04 13.6	+2.1
	SNR=14						
GANJ				⇑S	Sn	08 04 57.8	+2.0
IBDR	Badra	3.91	170	ePn	Pn	08 04 17.0	+4.0
IBDR				eSn	Sb	08 05 05.0	-4.3
KOPR	Koprukoy-ERZUR	3.95	321	PN	Pn	08 04 15.5	+1.7
HOMI	Horasan	3.97	322	ePn	Pn	08 04 16.5	+2.5
BNGB	Bingl	4.04	301	PN	Pn	08 04 15.3	+0.4
QZX	Qazax, Azerbai	4.09	3	ePn	Pn	08 04 17.5	+2.0
QZX	Qazax, Azerbai	4.09	3	⇓P	Pn	08 04 17.5	+2.0
	SNR=9.4						
MNGR	Mingechevir, A	4.10	21	⇓S	Sn	08 05 04.8	+1.6
IKFM	Kafar-mosalman	4.10	146	ePn	Pn	08 04 20.2	+4.5
IKFM				IAMB	IAmb	08 06 00.4	
	comp=Z,0.0nm,2.3s						
BINT	Bingol	4.12	299	P	Pn	08 04 16.9	+0.9
BINT	Bingol	4.12	299	ePn	Pn	08 04 16.9	+0.9
KDMR	Kurdemir	4.17	34	⇑S	Sn	08 05 06.3	+1.4
SENK	Senkaya-Erzuru	4.18	330	PN	Pn	08 04 19.3	+2.3
SENK	Senkaya-Erzuru	4.18	330	ePn	Pn	08 04 20.1	+3.1
ALIB	Äli-Bayra	4.27	45	⇓S	Sn	08 05 08.4	+0.9
YEDI	Yedisu-Bingol	4.36	306	PN	Pn	08 04 20.2	+0.9
YEDI	Yedisu-Bingol	4.36	306	ePn	Pn	08 04 21.5	+2.2
QBL	Gabala	4.50	27	⇑S	Sn	08 05 15.4	+2.1
IML	Ismayilli	4.51	31	⇑S	Sn	08 05 14.7	+1.3
SEKA	Sheki	4.53	20	P	Pn	08 04 23.6	+1.9
SEKA	Sheki	4.53	20	ePn	Pn	08 04 23.6	+1.9
SEKA	Sheki	4.53	20	⇓P	Pn	08 04 23.6	+1.9
	SNR=7.7						
ASAO	Ashtian	4.67	120	ePn	Pn	08 04 27.6	+3.9
ASAO	Ashtian	4.67	120	ePn	Pn	08 04 27.6	+3.9
PQL	Pirkuli	4.68	34	ePn	Pn	08 04 24.9	+1.2
PQL	Pirkuli	4.68	34	⇑P	Pn	08 04 25.0	+1.2
	SNR=9.8						
TBLG	Delisi	4.76	357	ePn	Pn	08 04 23.6	-1.2
TBLG	Delisi	4.76	357	eP	Pn	08 04 23.6	-1.2
ZKTA	Zakatala	4.81	14	P	Pn	08 04 27.1	+1.7
ZKTA	Zakatala	4.81	14	ePn	Pn	08 04 27.1	+1.7
ZKTA	Zakatala	4.81	14	⇑P	Pn	08 04 27.1	+1.7
	SNR=5.6						
AKT	Akhty	4.94	24	iP	Pn	08 04 30.3	+3.0
AKT	Akhty	4.94	24	ePn	Pn	08 04 30.3	+3.0
URFA	Urfa	5.04	277	PN	Pn	08 04 27.2	-1.5
KHMZ	Khomeyn	5.11	128	ePn	Pn	08 04 33.6	+3.9
KHMZ	Khomeyn	5.11	128	ePn	Pn	08 04 33.6	+3.9
RTB	Rutbah	5.57	226	ePn	Pn	08 04 38.0	+2.2
RTB				eSn	Sn	08 05 41.0	+1.4
IDMV	Damavand	5.76	102	ePn	Pn	08 04 41.1	+2.3
IDMV				IAMB	IAmb	08 06 30.0	
	comp=Z,1μm,1.3s						
NSR	Nassriya	6.01	172	ePn	Pn	08 04 46.0	+4.2
NSR				eSn	Sn	08 05 55.0	+4.7
NEY	Neytrino	6.53	344	iP	Pn	08 04 53.5	+4.3
NEY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NCK	Nalchik	6.62	350	iP	Pn	08 04 52.5	+2.2
NCK				pmax	pmax		
	comp=Z,20nm,0.4s						
DOMR	Dombai	6.85	338	iP	Pn	08 04 57.1	+3.5
DOMR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	6.96	347	Pn	Pn	08 04 57.3	+2.5
	comp=Z,0.1nm,0.3s,baz=112,slow=11,SNR=3.2						
SHA1	Shidzhatmaz	7.01	345	iP	Pn	08 05 00.4	+4.5
KIV	Kislovodsk	7.22	346	ePn	Pn	08 04 57.2	-1.3
KIV	Kislovodsk	7.22	346	eP	Pn	08 04 57.2	-1.3
RPOR	Krasnaya Polya	7.67	333	iP	Pn	08 05 08.3	+3.6
RPOR				pmax	pmax		
	comp=Z,13nm,1.0s						
SOC	Sochi	7.78	330	eP	Pn	08 05 08.7	+2.5
SOC				e		08 06 39.9	
SOC				pmax	pmax		
	comp=Z,22nm,0.7s						
ASF	Jabal al Asfar	8.29	237	Pn	Pn	08 05 13.5	+0.2
	comp=Z,0.4nm,0.3s,baz=15,slow=11,SNR=5.0						
ASF				Lg	Lg	08 07 35.7	
	comp=Z,0.6nm,0.3s,baz=211,slow=19,SNR=4.6						
MMAI	Mount Meron Ar	8.89	246	Pn	Pn	08 05 19.2	-2.3
	comp=Z,3.1nm,0.3s,baz=57,slow=14,SNR=2.9						
BR101	Keskin Array S	9.42	290	ePn	Pn	08 05 30.4	+1.6
BRTR	Keskin Array B	9.42	290	Pn	Pn	08 05 30.4	+1.6
	comp=Z,0.1nm,0.3s,baz=101,slow=12,SNR=11						
GEYT	Alibeck	10.39	81	Pn	Pn	08 05 42.7	+0.7
	comp=Z,0.5nm,0.3s,baz=289,slow=14,SNR=7.3						
RAYN	Ar Rayn	13.41	178	ePn	Pn	08 06 19.8	-3.5
RAYN				eSn	Sn	08 08 53.5	+1.3
RAYN	Ar Rayn	13.41	178	eP	Pn	08 06 19.8	-3.5
RAYN				e		08 08 53.5	
VSR	Storozhevoye	14.86	345	⇑eP	Pn	08 06 47.1	+4.2
VSR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ABKAR	Akbulak array	16.34	37	ePn	Pn	08 07 00.8	-1.4
	comp=Z,2.3nm,0.9s						
AKTO	Aktyubinsk	16.34	31	Pn	Pn	08 07 02.5	+0.2
	comp=Z,0.7nm,0.3s,baz=219,slow=10,SNR=55						
PLOR	Plostina	16.42	308	⇓iP	Pn	08 07 06.2	+2.9
PLOR	Plostina	16.42	308	⇓P	Pn	08 07 06.2	+2.9
IDI	Anoyia	16.42	270	ePn	Pn	08 07 02.8	-0.7
	comp=Z,7.0nm,1.0s						
MLR	Muntele Rosu	16.71	307	⇑iP	Pn	08 07 09.5	+2.4
MLR	Muntele Rosu	16.71	307	Pn	Pn	08 07 08.9	+1.8
	comp=Z,0.2nm,0.3s,baz=150,slow=10,SNR=4.3						
BIZ	Bicaz	17.25	311	⇑iP	P	08 07 18.0	+2.8
VOIR		17.27	306	⇑iP	Pn	08 07 15.7	+1.6
VOIR		17.27	306	⇑P	Pn	08 07 15.7	+1.6
AKASG	Malin Array Be	17.83	325	P	Pn	08 07 18.7	-2.2
	comp=Z,0.2nm,0.3s,baz=131,slow=12,SNR=7.0						
AKBB	Malin Array Si	17.83	325	ePn	Pn	08 07 20.0	-0.9
	comp=Z,7.0nm,1.1s						
AKBB	Malin Array Si	17.83	325	eP	Pn	08 07 20.0	-0.9
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIEV	Kiev	17.83	325	iP	P	08 07 23.2	+1.7
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WSAR	Wadi Sarin	17.98	136	P	Pn	08 07 24.1	+1.2
	comp=Z,0.7nm,0.3s,baz=16,slow=11,SNR=5.7						
BURAR	Bucovina Array	18.11	312	⇑iP	P	08 07 27.1	+2.3
BURAR	Bucovina Array	18.11	312	⇑P	P	08 07 27.1	+2.3
LOT	Lotru	18.11	305	⇑iP	P	08 07 26.7	+1.8
BUR08	Bucovina Ar. S	18.13	312	ePn	Pn	08 07 23.4	-1.4
	comp=Z,2.2nm,0.9s						
GZR	Gura Zlata	18.75	304	⇑iP	P	08 07 32.9	+1.0
GZR	Gura Zlata	18.75	304	⇑P	P	08 07 32.9	+1.0
OBN	Obninsk	19.06	345	⇑eP	Pn	08 07 37.6	+1.7
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DRGR		19.29	308	⇑iP	P	08 07 39.1	+1.3
DRGR		19.29	308	⇑P	P	08 07 39.1	+1.3
SIRR	Siria	19.78	305	⇑iP	P	08 07 44.8	+1.7
TRPA	Tarpa	19.95	311	⇑iP	Pn	08 07 47.3	+0.8
KKAR	Karatay Array	20.35	65	eP	P	08 07 48.7	-0.6
	comp=Z,8.0nm,1.0s						
KKAR	Karatay Array	20.35	65	eP	P	08 07 48.7	-0.6
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KWP	Kalwaria Pacla	20.54	315	eP	P	08 07 50.8	-0.5
	comp=Z,87nm,1.1s						
KWP	Kalwaria Pacla	20.54	315	eP	P	08 07 50.8	-0.5
KWP				pmax	pmax		
	comp=Z,87nm,1.1s						
ARU	Arti	21.47	21	eP	P	08 07 59.9	-1.3
	comp=Z,6.9nm,0.8s						
ARU	Arti	21.47	21	d iP	P	08 08 01.1	-0.1
ARU				S	S	08 11 56.1	-2.6
ARU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PSZ	Piszkesteto	21.49	309	eP	P	08 08 00.6	-1.0
	comp=Z,11nm,1.1s						
PSZ	Piszkesteto	21.49	309	eP	P	08 08 00.6	-1.0
PSZ				pmax	pmax		
	comp=Z,11nm,1.1s						
MNAS	Manas	21.73	67	P	P	08 08 06.7	+2.4
MNAS				pmax	pmax		
	comp=Z,6.0nm,2.2s						
MORH	Mrgy, Hungar	21.76	303	eP	P	08 08 03.0	-1.4
ARSB	Arslanbob	22.01	70	eP	P	08 08 06.3	-1.0
	comp=Z,7.6nm,1.0s						
LANS	Liptovska Anna	22.22	311	eP	P	08 08 14.4	+5.0
LANS	Liptovska Anna	22.22	311	esP	P	08 08 14.4	+5.0
VYHS	Vyhne	22.36	309	eP	P	08 08 13.3	+2.4
VYHS	Vyhne	22.36	309	eP	P	08 08 13.2	+2.4
OJC	Ojcow	22.48	314	eP	P	08 08 11.5	-0.7
	comp=Z,9.0nm,0.6s						
OJC	Ojcow	22.48	314	eP	P	08 08 11.5	-0.7
OJC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OTUK	Ortayu	22.87	52	P	P	08 08 18.0	+1.7
AAK	Ala-Archa	23.21	67	eP	P	08 08 20.1	+0.1
	comp=Z,2.6nm,0.8s						
AAK	Ala-Archa	23.21	67	c eP	P	08 08 21.1	+1.1
AAK				pmax	pmax		
	comp=Z,12nm,2.5s						
AAK	Ala-Archa	23.21	67	P	P	08 08 21.0	+1.0
	comp=Z,0.5nm,0.4s,baz=297,slow=2.3,SNR=2.5						
JAVC	Velka Javorina	23.21	309	eP	P	08 08 23.5	+3.7
MODS	Modra-Piesok	23.29	308	eP	P	08 08 23.1	+2.5
MODS	Modra-Piesok	23.29	308	eP	P	08 08 23.1	+2.5
SOP	Sopron	23.54	306	eP	P	08 08 22.1	-1.0
MORC	Moravsky Berou	23.62	312	eP	P	08 08 25.9	+2.0
BRVK	Borovoye	23.80	40	eP	P	08 08 24.7	-0.9
	comp=Z,4.1nm,0.8s						
BRVK	Borovoye	23.80	40	eP	P	08 08 24.7	-0.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BVAR	Borovoye Array	23.84	40	P	P	08 08 25.9	0.0
	comp=Z,2.5nm,0.8s,baz=233,slow=6.5,SNR=11						
VRAC	Vranov	24.03	310	P	P	08 08 26.3	-1.5
	comp=Z,2.9nm,0.4s,baz=143,slow=5.1,SNR=3.0						
CONA	Conrad Observa	24.06	306	i pP	P	08 08 28.8	+0.7
	comp=Z,14nm,1.3s						
KRUC	Moravsky	24.07	309	eP	P	08 08 30.0	+1.9
ARSA	Arzberg	24.10	305	iP	P	08 08 31.4	+2.9
	comp=Z,8.4nm,1.1s						
KLMR	Klimovskoe	24.17	353	P	P	08 08 33.9	+5.0
KLMR				pmax	pmax		
	comp=Z,11nm,1.3s						
KLMR	Klimovskoe	24.17	353	P	P	08 08 33.9	+5.0
KLMR				AMP		08 08 46.7	
	comp=Z,11nm,1.3s						
SOKA	Soboth	24.29	303	i pP	P	08 08 32.2	+1.9
	comp=Z,8.1nm,1.3s						
AQU	L'Aquila	24.91	292	eP	P	08 08 35.5	-0.4
	comp=Z,18nm,0.4s						
AQU	L'Aquila	24.91	292	eP	P	08 08 35.5	-0.4
AQU				pmax	pmax		
	comp=Z,18nm,0.4s						
MOA	Molln	25.07	305	i pP	P	08 08 38.1	+0.8
	comp=Z,14nm,0.8s						
KBA	Koelnbreinsper	25.51	303	iP	P	08 08 43.1	+1.7
	comp=Z,20nm,1.6s						
GEC2	GERESS Array S	25.70	307	eP	P	08 08 42.7	-0.3
GEC2	GERESS Array S	25.70	307	eP	P	08 08 42.7	-0.3
GERES	GERESS Array B	25.70	307	P	P	08 08 42.7	-0.3
	comp=Z,2.1nm,0.7s,baz=114,slow=8.9,SNR=14						
KHC	Kasperske Hory	25.85	308	eP	P	08 08 43.9	-0.5
	comp=Z,2.7nm,1.0s						
KHC	Kasperske Hory	25.85	308	eP	P	08 08 43.9	-0.5
KHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ABTA	Abfaltersbach	26.01	302	iP	P	08 08 47.3	+1.4
	comp=Z,12nm,1.3s						
WTTA	Wattenberg	26.69	303	i pP	P	08 08 53.0	+0.9
	comp=Z,13nm,1.3s						
CLL	Collm	26.88	312	eP	P	08 08 55.0	+1.5
CLL	Collm	26.88	312	eP	P	08 08 55.0	+1.5
SQTA	Sankt Quirin	26.97	303	i pP	P	08 08 55.2	+0.7
	comp=Z,7.2nm,0.9s						
MOTA	Moosalm	27.06	303	iP	P	08 08 54.7	-0.7
	comp=Z,16nm,1.2s						
FETA	Feichten	27.26	302	i pP	P	08 08 58.2	+1.0
	comp=Z,11nm,1.1s						
FIA0	FINESS Array S	27.26	340	eP	P	08 08 56.1	-0.7
FIA0	FINESS Array S	27.26	340	eP	P	08 08 56.1	-0.7
FINES	FINESS Array B	27.26	340	P	P	08 08 56.1	-0.7
	comp=Z,1.0nm,0.6s,baz=226,slow=7.6,SNR=3.9						
RETA	Reutte	27.31	303	pP	P	08 08 58.2	+0.6

	comp=Z,3.7nm,0.8s						
KURBB	Kurchatov Arra	27.45	50	P	P	08 08 59.1	+0.4
	comp=Z,1.4nm,0.8s,baz=262,slow=9.0,SNR=7.8						
GRA1	Grafenberg Arr	27.49	308	eP	P	08 08 58.7	-0.4
	comp=Z,14nm,1.1s						
GRF	Grafenberg Arr	27.49	308	eP	P	08 08 58.7	-0.4
GRF				pmax	pmax		
	comp=Z,14nm,1.1s						
GRFO	Grafenberg	27.49	308	eP	P	08 08 58.7	-0.3
	comp=Z,8.2nm,0.8s						
GRFO	Grafenberg	27.49	308	eP	P	08 08 58.7	-0.3
GRFO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	27.53	49	eP	P	08 08 59.1	-0.3
KURK	Kurchatov	27.53	49	ceP	P	08 09 00.7	+1.3
KURK				pmax	pmax		
	comp=Z,10.0nm,1.8s						
DAVOX	Davos/Dischmat	27.80	302	P	P	08 09 01.1	-1.0
	comp=Z,4.2nm,0.7s,baz=347,slow=20,SNR=5.4						
DAVA	Damuels	27.87	303	i pP	P	08 09 03.3	+0.6
KEST	Kesra	28.73	278	eP	P	08 09 09.3	-1.0
	comp=Z,9.7nm,0.9s						
KEST	Kesra	28.73	278	P	P	08 09 09.1	-1.2
	comp=Z,1.5nm,0.6s,baz=20,slow=12,SNR=2.0						
MK32	Makanchi Array	29.13	59	eP	P	08 09 14.7	+0.9
MKAR	Makanchi Array	29.13	59	eP	P	08 09 13.2	-0.6
	comp=Z,7.1nm,0.8s						
MKAR	Makanchi Array	29.13	59	eP	P	08 09 13.2	-0.6
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	Makanchi Array	29.13	59	P	P	08 09 14.7	+0.9
	comp=Z,1.3nm,0.9s,baz=272,slow=5.6,SNR=7.5						
SENIN	Lac Senin/Sane	29.52	301	eP	P	08 09 15.7	-1.7
	comp=Z,3.0nm,0.8s						
BNI	Bardonecchia	29.88	298	eP	P	08 09 19.2	-1.3
	comp=Z,9.7nm,1.0s						
BNI	Bardonecchia	29.88	298	eP	P	08 09 19.2	-1.3
BNI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NB200	NORSAR Array S	32.15	329	eP	P	08 09 38.3	-2.0
NOA	NORSAR Array B	32.15	329	P	P	08 09 38.3	-2.0
	comp=Z,0.1nm,0.3s,baz=131,slow=8.8,SNR=2.7						
WMQ	Urumqi	32.86	65	eP	P	08 09 45.0	-1.7
WMQ				LR	LR		
	comp=N,4µm,13.7s						
WMQ				LR	LR		
	comp=E,2µm,10.9s						
WMQ				LR	LR		
	comp=Z,1µm,14.3s						
ARA0	ARCESS Array S	34.32	348	eP	P	08 09 58.6	-0.4
ARCES	ARCESS Array B	34.32	348	P	P	08 09 58.6	-0.4
	comp=Z,1.8nm,0.8s,baz=138,slow=11,SNR=4.1						
ESDC	Sonseca Array	38.21	290	P	P	08 10 32.2	-0.6
	comp=Z,1.0nm,0.6s,baz=70,slow=9.4,SNR=6.7						
NRIK	Noril'sk	39.68	22	P	P	08 10 45.1	+0.6
	comp=Z,2.1nm,0.7s,baz=249,slow=6.3,SNR=3.7						
SHL	Shillong	41.20	92	eP	P	08 10 56.8	-1.1
	comp=Z,10nm,0.3s						
SHL	Shillong	41.20	92	eP	P	08 10 56.8	-1.1
SHL				pmax	pmax		
	comp=Z,10.0nm,0.3s						
GTA	Gaotai	42.51	69	eP	P	08 10 59.3	-9.1
GTA				pP	pP	08 11 10.0	-3.7
GTA				sP	sP	08 11 14.3	-1.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
PALK	Pallekele	43.83	124	i P	P	08 11 15.5	-3.7
TOA1	Torodi Ar. Sit	45.41	250	eP	P	08 11 30.5	-1.2
TORD	Torodi Ar. Bea	45.41	250	P	P	08 11 30.5	-1.2
	comp=Z,0.6nm,0.6s,baz=60,slow=8.9,SNR=4.1						
ULN	Ulaanbaatar	45.86	56	ceP	P	08 11 36.9	+1.7
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
KMI	Kunming	50.09	86	P	P	08 12 06.5	-1.8
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
CHTO	Chiang Mai	50.24	96	eP	P	08 12 07.8	-1.4
	comp=Z,5.4nm,0.9s						
CHTO	Chiang Mai	50.24	96	eP	P	08 12 07.8	-1.4
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CM31	Chiang Mai Arr	50.43	96	eP	P	08 12 11.6	+0.9
CMAR	Chiang Mai Arr	50.43	96	P	P	08 12 11.6	+0.9
	comp=Z,1.9nm,0.3s,baz=297,slow=8.9,SNR=14						
HHC	Hu-ho-hao-te	50.74	64	eP	P	08 12 09.8	-3.1
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,370nm,6.5s						
SEY	Seymchan	64.93	29	P	P	08 13 52.4	+0.4
	comp=Z,0.4nm,0.3s,baz=288,slow=6.3,SNR=6.0						
JNU	Nakatsue	67.96	65	eP	P	08 14 10.4	-1.6
	comp=Z,3.4nm,1.0s						
YKA	Yellowknife Ar	79.54	351	P	P	08 15 18.1	-1.2
	comp=Z,0.3nm,1.0s,baz=15,slow=5.4,SNR=4.7						
YKB5	Yellowknife Ar	79.54	351	eP	P	08 15 18.1	-1.2

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*BJI **25** 08:05:30.1, 32.°40S×178.°00W, h5^{km}, mB5.6/2, mb5.3/15, Ms5.6/3, Ms7 5.4/4*

*NEIC **25** 08:05:31.6±0.2, 32.°29S×178.°00W, h10^{km}, mb4.9/67, Error ellipse: s-maj=6.3km s-min=3.2km az=128.0*

*IDC **25** 08:05:31.0±0.6, 31.°94S×177.°96W, h0^{km}, mb4.8/15, mb1 4.9/16, mb1mx4.6/43, mbtmp4.8/16, ML5.1/1, MS4.8/13, Ms1 4.8/13, ms1mx4.4/40, Error ellipse: s-maj=19.6km s-min=19.0km az=144.0*

*WEL **25** 08:05:31.0±0.9, 32°S±4°×17°7W±1°4, h33^{km}, ML5.6/17*

*ISCJB **25** 08:05:32.7±0.2, 32.°27S±0.°03×178.°03W±0.°05, h24^{km}, mb5.0/75, MS4.8/15, Error ellipse: s-maj=6.2km s-min=2.4km az=30.1*

*MOS **25** 08:05:33.6±1.2, 32.°08S×178.°05W, h24^{km}, mb5.2/31, MS4.9/6, Error ellipse: s-maj=13.1km s-min=10.5km az=87.7*

*GCMT **25** 08:05:36.6±0.4, 32.°15S±0.°03×177.°68W±0.°03, h28^{km}, MW5.2/67, Moment Tensor Solution. s34,c45; s67,c98; Duration: $1^{s}0$ Moment tensor: Scale 10^{16}Nm; M_{rr}6.25±.37; $M_{\theta\theta}$-1.30±.23; $M_{\phi\phi}$-4.96±.22; $M_{r\theta}$1.39±.39; $M_{\theta\phi}$-2.32±.14; $M_{\phi r}$4.41±.30; Best double couple: $M_0$7.70700×10^{16} NP1:ϕ_s21.00000°,δ63.00000°, λ86.00000°. NP2:ϕ_s210.00000°,δ27.00000°,λ99.00000°. Principal axes: T 7.8130, Plg71.0000°, Azm282.0000°; N -0.2200, Plg4.0000°, Azm23.0000°; P -7.6020, Plg18.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 08:05:33.9±0.4**, 32.°18S**±0.°04×**177.°91W**±0.°07**, h24^{km}, n317, σ1^{s}81**/332**, mb5.0**/74**, MS4.9**/15**, 3C-2D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.90	360	P	Pn	08 06 15.8	-2.9
GLKZ				S	Sn	08 06 49.0	-3.8
RAO	Raoul Island	2.92	360	ePn	Pn	08 06 17.4	-1.4
RAO				eSn	Sn	08 06 52.8	-0.3
RAO	Raoul Island	2.92	360	eP	Pn	08 06 17.4	-1.4
RAO				e		08 06 52.8	
RAO	Raoul Island	2.92	360	Pn	Pn	08 06 15.1	-3.8
	300nm,0.3s,baz=100,slow=15,SNR=9.2						
RAO				Sn	Sn	08 06 50.3	-2.8
	546nm,0.3s,baz=127,slow=20,SNR=3.9						
RIZ	Raoul Island	2.92	360	P	Pn	08 06 15.4	-3.5
RIZ				S	Sn	08 06 50.2	-3.0
MXZ	Matakaoa Point	6.21	209	ePn	Pn	08 07 03.7	-0.4
MXZ				eSn	Sn	08 08 13.4	-0.9
MXZ	Matakaoa Point	6.21	209	P	Pn	08 07 01.1	-3.0
MXZ				S	Sn	08 08 14.3	0.0
WMGZ	Waiomatatini S	6.39	207	P	Pn	08 07 05.2	-1.3
WMGZ				S	Sn	08 08 20.2	+1.5
PKGZ	Pakihiroa	6.58	209	P	Pn	08 07 06.7	-2.6
PKGZ				S	Sn	08 08 22.7	-0.8
HAZ	Te Kaha	6.60	211	P	Pn	08 07 09.8	+0.4
HAZ				S	Sn	08 08 25.1	+1.3
PUZ	Puketiti	6.67	207	P	Pn	08 07 08.5	-2.0
PUZ				S	Sn	08 08 25.3	-0.4
RUGZ	Raukumara Rang	6.82	211	P	Pn	08 07 11.5	-1.0
RUGZ				S	Sn	08 08 28.9	-0.6
TWGZ	Tauwhareparae	6.87	208	P	Pn	08 07 11.5	-1.7
TWGZ				S	Sn	08 08 31.2	+0.5
KUZ	Kuaotunu	6.96	227	P	Pn	08 07 17.2	+2.8
CNGZ	Carnagh Statio	7.05	206	P	Pn	08 07 13.5	-2.1
CNGZ				S	Sn	08 08 35.9	+1.0
MWZ	Matawai	7.19	210	P	Pn	08 07 16.0	-1.6
MWZ				S	Sn	08 08 37.8	-0.7
OPRZ	Ohinepanea	7.25	217	P	Pn	08 07 18.4	-0.1
OPRZ				S	Sn	08 08 41.5	+1.5
URZ	Urewera	7.31	213	ePn	Pn	08 07 18.1	-1.1
URZ				eSn	Sn	08 08 39.6	-1.8
URZ	Urewera	7.31	213	Pn	Pn	08 07 17.1	-2.1
	9.3nm,0.3s,baz=332,slow=2.8,SNR=49						
URZ				Sn	Sn	08 08 40.7	-0.7
	69nm,0.3s,baz=55,slow=10,SNR=15						
URZ	Urewera	7.31	213	P	Pn	08 07 17.9	-1.3
URZ				S	Sn	08 08 40.2	-1.2
TGRZ	Tauranga	7.32	219	P	Pn	08 07 19.2	-0.2
WCZ	Waipu Caves	7.45	238	P	Pn	08 07 27.0	+5.9
OMRZ	Omania	7.55	217	P	Pn	08 07 24.5	+2.0
KMRZ	Kaimai	7.58	220	P	Pn	08 07 24.1	+1.2
RTZ	Ruatahuna	7.66	212	P	Pn	08 07 22.3	-1.8
OUZ	Omahuta	7.71	244	ePn	Pn	08 07 24.2	-0.4
OUZ	Omahuta	7.71	244	P	Pn	08 07 28.9	+4.3
KNZ	Kokohu	7.72	207	P	Pn	08 07 22.7	-2.1
TOZ	Tahuroa Road	7.75	222	P	Pn	08 07 26.6	+1.5
ALRZ	Allen Road	7.91	215	P	Pn	08 07 28.9	+1.4
ALRZ				S	Sn	08 08 54.3	-2.0
BKZ	Black Stump Fm	8.33	212	ePn	Pn	08 07 31.9	-1.3
BKZ	Black Stump Fm	8.33	212	P	Pn	08 07 31.7	-1.5
KATZ	Kakaramea	8.55	216	P	Pn	08 07 36.5	+0.1
HIZ	Hauiti	8.65	221	ePn	Pn	08 07 35.6	-2.1
HIZ	Hauiti	8.65	221	P	Pn	08 07 38.9	+1.2
NGZ	Ngauruhoe	8.75	215	P	Pn	08 07 40.0	+0.8
MOVZ	Moawhango	8.86	214	P	Pn	08 07 40.7	+0.1
MOVZ				S	Sn	08 09 15.3	-4.4
TRVZ	Turoa	8.88	215	P	Pn	08 07 42.1	+1.2
PXZ	Pawanui	8.91	207	P	Pn	08 07 39.4	-1.7
PKVZ	Pokaka	8.97	216	P	Pn	08 07 44.9	+2.9
VRZ	Vera Road	9.15	219	P	Pn	08 07 45.3	+0.9
WAZ	Wanganui	9.50	215	P	Pn	08 07 50.1	+0.8
BFZ	Birch Farm	9.71	207	ePn	Pn	08 07 49.1	-3.0
BFZ				eSn	Sn	08 09 33.4	-6.9
SNZO	South Karori	10.87	211	ePn	Pn	08 08 05.8	-2.2
SNZO				eSn	Sn	08 10 02.1	-6.7
THZ	Tophouse	12.06	215	ePn	Pn	08 08 22.0	-2.3
THZ				eSn	Sn	08 10 29.7	-8.3
THZ	Tophouse	12.06	215	P	Pn	08 08 21.4	-2.8
KHZ	Kahutara	12.28	211	ePn	Pn	08 08 24.3	-2.9
KHZ				eSn	Sn	08 10 33.9	-9.2
LTZ	Lake Taylor	13.14	214	ePn	Pn	08 08 35.0	-4.0
LTZ				eSn	Sn	08 10 56.2	-8.2
INZ	Inchbonnie	13.49	216	P	Pn	08 08 41.1	-2.8
INZ				S	Sn	08 11 00.8	-12
OXZ	Oxford	13.67	213	ePn	Pn	08 08 42.3	-3.9
OXZ				eSn	Sn	08 11 05.0	-12
MQZ	McQueen's Vall	13.70	210	ePn	Pn	08 08 41.6	-5.0
MQZ				eSn	Sn	08 11 06.4	-12
WVZ	Waitaha Valley	14.10	216	P	Pn	08 08 49.5	-2.7
RPZ	Rata Peaks	14.43	214	ePn	Pn	08 08 52.5	-4.0
RPZ				eSn	Sn	08 11 23.1	-13
RPZ	Rata Peaks	14.43	214	Pn	Pn	08 08 52.1	-4.4
	1.3nm,0.3s,baz=85,slow=2.3,SNR=6.1						
RPZ				Sn	Sn	08 11 22.7	-13
	2.9nm,0.3s,baz=278,slow=20,SNR=9.4						
RPZ	Rata Peaks	14.43	214	P	Pn	08 08 51.8	-4.8
MSVF	Nonsavu	14.84	345	ePn	Pn	08 08 59.2	-3.2
MSVF	Nonsavu	14.84	345	i P	Pn	08 09 02.3	-0.1
FOZ	Fox Glacier	14.90	217	ePn	Pn	08 08 59.3	-3.6
FOZ	Fox Glacier	14.90	217	P	Pn	08 08 59.4	-3.6
LBZ	Lake Benmore	15.34	214	ePn	Pn	08 09 06.1	-2.8
	22nm,1.1s						
LBZ	Lake Benmore	15.34	214	P	Pn	08 09 05.5	-3.4
ODZ	Otahua Downs	15.64	211	ePn	Pn	08 09 10.0	-2.7
	29nm,0.8s						
ODZ	Otahua Downs	15.64	211	P	Pn	08 09 09.4	-3.3
JCZ	Jackson Bay	15.81	218	P	Pn	08 09 10.2	-4.8
PINNC	Pines Island,	16.11	303	ePn	Pn	08 09 16.9	-1.9
	52nm,1.0s						
WKZ	Wanaka	16.23	215	ePn	Pn	08 09 16.8	-3.6
	12nm,0.8s						
WKZ	Wanaka	16.23	215	P	Pn	08 09 17.8	-2.5
EAZ	Earnscleugh	16.39	214	P	P	08 09 24.3	-0.7
MSZ	Milford Sound	16.67	218	P	Pn	08 09 22.2	-3.7
TUZ	Tuapeka	16.79	211	P	P	08 09 31.8	+2.4
MLZ	Mavora Lakes	17.06	215	ePn	Pn	08 09 27.6	-3.3
	27nm,1.3s						
MLZ	Mavora Lakes	17.06	215	P	P	08 09 31.9	-0.6
DZM	Mont Dzumac	17.17	302	ePn	P	08 09 34.2	+0.4
	66nm,1.2s						
DZM	Mont Dzumac	17.17	302	P	P	08 09 34.4	+0.5
	0.7nm,0.3s,baz=98,slow=14,SNR=9.1						
DZM				LR	LR	08 15 04.2	
	comp=Z,5µm,18.3s,baz=167,slow=34						
SYZ	Scrubby Hill	17.46	211	P	P	08 09 39.1	+2.3
WHZ	Wether Hill Ro	17.52	215	ePn	Pn	08 09 32.9	-3.7
	31nm,1.1s						
WHZ	Wether Hill Ro	17.52	215	P	Pn	08 09 33.9	-2.7
DCZ	Deep Cove	17.61	217	ePn	Pn	08 09 34.3	-3.3
	24nm,1.3s						
MGCD	Mangrove Creek	26.05	259	P	P	08 11 07.9	+2.4
	baz=26,SNR=12						
CNB	Canberra Magne	27.33	254	P	P	08 11 20.2	+3.1
	baz=27,SNR=5.1						
MILA	Mila	27.46	251	P	P	08 11 21.1	+2.9
	baz=27						
CAN	Canberra	27.63	254	P	P	08 11 25.0	+5.3
	baz=28						
EIDS	Eidsvold	27.95	276	P	P	08 11 24.2	+1.6
	baz=28,SNR=4.9						
EIDS	Eidsvold	27.95	276	eP	P	08 11 23.2	+0.6
	30nm,1.1s						
YNG	Young	28.19	256	P	P	08 11 27.6	+2.8
	baz=28						
PPT	Papeete	29.42	67	LR	LR	08 22 57.6	
	comp=Z,1µm,18.3s,baz=269,slow=36						
RMQ	Roma	29.54	272	P	P	08 11 39.9	+3.1
	baz=29,SNR=6.1						
TOO	Toolangi	30.38	250	eP	P	08 11 43.8	-0.3
	17nm,1.1s						
TOO	Toolangi	30.38	250	eP	P	08 11 43.8	-0.3
TOO				pmax	pmax		
	comp=Z,17nm,1.1s						
HNR	Honiara	30.54	313	LR	LR	08 20 44.0	
	comp=Z,405nm,19.0s,baz=225,slow=30						
CMSA	Cobar Meteorol	30.84	261	P	P	08 11 49.8	+1.6
	baz=31,SNR=54						
ARPS	Mount Arapiles	33.33	251	P	P	08 12 11.3	+1.3
	baz=33,SNR=7.4						
STKA	Stephens Creek	34.20	259	P	P	08 12 19.1	+1.5
	baz=34,SNR=25						
STKA	Stephens Creek	34.20	259	eP	P	08 12 16.4	-1.2
	comp=Z,2.6nm,0.8s						
STKA	Stephens Creek	34.20	259	P	P	08 12 18.9	+1.3
	comp=Z,10nm,0.7s,baz=97,slow=11,SNR=31						
STKA				LR	LR	08 25 27.6	
	comp=Z,2µm,19.1s,baz=36,slow=35						
CTA	Charters Tower	34.20	282	P	P	08 12 19.6	+1.8
	comp=Z,16nm,0.8s,baz=109,slow=11,SNR=22						
CTA				LR	LR	08 26 11.1	
	comp=Z,1µm,18.1s,baz=151,slow=36						
CTAO	Charters Tower	34.20	282	eP	P	08 12 16.5	-1.3
	comp=Z,34nm,1.0s						
CTAO	Charters Tower	34.20	282	eP	P	08 12 16.5	-1.3
CTAO				pmax	pmax		
	comp=Z,34nm,1.0s						
HTT	Hallett	36.12	256	P	P	08 12 35.6	+1.4
	baz=36,SNR=8.6						
MTSU	Mount Surprise	36.74	283	P	P	08 12 41.2	+1.5
	baz=37,SNR=9.7						
BBOO	Buckleboo	38.60	256	P	P	08 12 54.6	-0.6
	baz=38,SNR=15						
BBOO	Buckleboo	38.60	256	eP	P	08 12 54.2	-1.0
	comp=Z,25nm,0.8s						
QIS	Mount Isa	39.56	276	P	P	08 13 04.0	+0.6
	baz=39,SNR=5.7						
COEN	Coen	39.86	288	P	P	08 13 07.0	+1.1
	baz=40,SNR=18						
COEN	Coen	39.86	288	eP	P	08 13 05.5	-0.4
	comp=Z,18nm,0.8s						
AS06	Alice Springs	43.07	269	P	P	08 13 32.3	0.0
	baz=43						
AS31	Alice Springs	43.12	269	eP	P	08 13 31.8	-0.9
	comp=Z,4.7nm,0.8s						
ASAR	Alice Springs	43.12	269	P	P	08 13 31.9	-0.7
	comp=Z,6.8nm,0.6s,baz=107,slow=7.7,SNR=72						
ASAR				S	S	08 19 56.1	-1.6
	comp=Z,1.1nm,1.0s,baz=114,slow=15,SNR=4.4						
ASAR				LR	LR	08 31 33.3	
	comp=Z,1µm,18.6s,baz=98,slow=36						
WB2	Warramunga Arr	44.26	274	eP	P	08 13 39.8	-2.0
	comp=Z,66nm,1.4s						
WRAB	Tennant Creek	44.27	274	eP	P	08 13 40.6	-1.2
	comp=Z,22nm,0.8s						
WRAB	Tennant Creek	44.27	274	ceP	P	08 13 40.7	-1.1
WRAB				pmax	pmax		
	comp=Z,38nm,1.3s						
WR1	Warramunga Arr	44.27	274	eP	P	08 13 41.1	-0.8
	comp=Z,59nm,1.3s						
WRA	Warramunga Arr	44.27	274	P	P	08 13 41.1	-0.8
	comp=Z,17nm,0.6s,baz=114,slow=7.6,SNR=113						
WRA				S	S	08 20 20.7	+6.2
	comp=Z,2.2nm,0.9s,baz=112,slow=14,SNR=4.8						
WRA				LR	LR	08 31 33.1	
	comp=Z,1µm,18.0s,baz=110,slow=35						
FORT	Forrest	45.70	257	P	P	08 13 52.4	-0.7
	baz=46,SNR=17						
FORT	Forrest	45.70	257	eP	P	08 13 52.0	-1.1
	comp=Z,56nm,0.7s						
WRKA	Warakurna	47.36	264	P	P	08 14 05.2	-1.0
	baz=47,SNR=7.4						
JAY	Jayapura	48.80	299	LR	LR	08 34 26.6	
	comp=Z,513nm,18.1s,baz=136,slow=36						
MTN	Manton Dam	50.36	280	P	P	08 14 28.7	-0.6
	baz=50,SNR=5.3						
MTN	Manton Dam	50.36	280	eP	P	08 14 28.6	-0.6
	comp=Z,17nm,0.8s						
FITZ	Fitzroy Crossi	52.46	271	P	P	08 14 44.9	-0.1
	baz=52						
FITZ	Fitzroy Crossi	52.46	271	eP	P	08 14 44.4	-0.6
	comp=Z,9.2nm,0.9s						
FITZ	Fitzroy Crossi	52.46	271	P	P	08 14 44.4	-0.6
	comp=Z,7.5nm,0.7s,baz=170,slow=7.6,SNR=8.1						
FITZ				LR	LR	08 36 42.1	
	comp=Z,2µm,19.0s,baz=111,slow=36						
CASY	Casey	53.62	208	eP	P	08 14 53.3	+0.5
	comp=Z,26nm,0.8s						
NWAO	Narrogin (SRO)	53.87	251	LR	LR	08 35 30.5	
	comp=Z,1µm,18.8s,baz=270,slow=33						
FAKI	Fak Fak	55.04	291	eP	P	08 15 03.0	-1.0
	comp=Z,30nm,0.9s						
QSPA	South Pole Qui	57.94	180	eP	P	08 15 25.4	+1.4
	comp=Z,53nm,1.1s						
QSPA	South Pole Qui	57.94	180	P	P	08 15 27.9	+3.8
	comp=Z,11nm,1.0s,baz=41,slow=4.6,SNR=16						
BATI	Baumata	57.97	278	LR	LR	08 40 04.8	
	comp=Z,1µm,19.8s,baz=130,slow=36						
GO10	Punta Arenas	74.04	143	eP	P	08 17 08.2	+0.5
	comp=Z,34nm,1.1s						
SNAA	Sanae	76.38	178	P	P	08 17 22.6	+1.7
SNAA	Sanae	76.38	178	eP	P	08 17 20.8	-0.1
	comp=Z,14nm,0.9s						
SNAA	Sanae	76.38	178	eP	P	08 17 20.8	-0.1
SNAA				pmax	pmax		
	comp=Z,14nm,0.9s						
VNA3	Neumayer Olymp	76.53	176	P	P	08 17 23.1	+1.4
VNA2	Neumayer--Watz	76.97	177	P	P	08 17 25.3	+1.3
	baz=177,slow=5.8						
NVL	N'lazarevskaya	77.11	183	eP	P	08 17 27.5	+2.6
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,754nm,17.0s						
VNA1	Neumayer--Stat	77.20	176	P	P	08 17 27.2	+1.8
PLCA	Paso Flores	81.24	133	eP	P	08 17 49.0	+0.9
	comp=Z,20nm,1.4s						
PLCA	Paso Flores	81.24	133	eP	P	08 17 49.0	+0.9
PLCA				pmax	pmax		
	comp=Z,20nm,1.4s						
PLCA	Paso Flores	81.24	133	P	P	08 17 50.4	+2.3
	comp=Z,5.0nm,1.1s,baz=254,slow=10,SNR=3.1						
ASAJ	Asahikawa	84.05	333	P	P	08 18 03.9	+1.7
	comp=Z,11nm,0.7s,baz=181,slow=11,SNR=9.5						
KSRS	Korea Array	85.75	320	P	P	08 18 11.2	+0.3
	comp=Z,0.7nm,0.5s,baz=136,slow=6.6,SNR=4.5						
KS15	Wonju Array Si	85.76	320	eP	P	08 18 11.2	+0.2
YSS	Yuzh-Sakhalins	86.38	334	eP	P	08 18 15.0	+1.2
YSS				e		08 18 17.5	
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
BAR	Barrett	86.59	48	eP	P	08 18 15.6	+0.3
	comp=Z,16nm,1.4s						
PFO	Pinyon Flats O	87.35	47	eP	P	08 18 19.8	+0.7
	comp=Z,17nm,1.4s						
PFO	Pinyon Flats O	87.35	47	eP	P	08 18 19.8	+0.7
PFO				pmax	pmax		
	comp=Z,17nm,1.4s						
XPFO	Pion Flat	87.35	47	eP	P	08 18 19.6	+0.5
	comp=Z,16nm,1.3s						
NJ2	Nanjing	87.46	311	eP	P	08 18 22.0	+2.6
NJ2				pmax	pmax		
	comp=Z,16nm,0.8s						
ISA	Isabella, Lake	87.50	45	eP	P	08 18 19.9	+0.2
	comp=Z,14nm,1.1s						
ISA	Isabella, Lake	87.50	45	eP	P	08 18 19.9	+0.2
ISA				pmax	pmax		
	comp=Z,14nm,1.1s						
PETK	Petropavlovsk-	87.55	346	P	P	08 18 19.4	+0.1
	comp=Z,11nm,0.7s,baz=145,slow=7.3,SNR=19						
PEA1	Petropavlovsk-	87.55	346	eP	P	08 18 19.4	0.0
GLA	Glamis	88.01	49	eP	P	08 18 23.2	+1.1
	comp=Z,13nm,1.1s						
CMB	Columbia Colle	88.03	42	eP	P	08 18 22.6	+0.5
	comp=Z,4.7nm,0.8s						
CMB	Columbia Colle	88.03	42	eP	P	08 18 22.6	+0.5
CMB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GSC	Goldstone, Bar	88.26	46	eP	P	08 18 24.0	+0.6
	comp=Z,24nm,1.4s						
GSC	Goldstone, Bar	88.26	46	eP	P	08 18 24.0	+0.6
GSC				pmax	pmax		
	comp=Z,24nm,1.4s						
AFDM	Forest Hills D	88.34	41	eP	P	08 18 24.5	+1.0
	comp=Z,4.1nm,1.0s						
ORV	Oroville	88.47	40	eP	P	08 18 24.8	+0.6
	comp=Z,3.0nm,0.8s						
ORV	Oroville	88.47	40	eP	P	08 18 24.8	+0.6
ORV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MDPB	Devils Postpil	88.49	43	eP	P	08 18 25.0	+0.4
	comp=Z,7.2nm,1.3s						
OMMB	Old Mammoth Mi	88.53	43	eP	P	08 18 25.6	+0.8
	comp=Z,14nm,1.4s						
Y12C	Blythe	88.65	48	eP	P	08 18 25.9	+0.7
	comp=Z,9.0nm,1.3s						
USRK	Ussuriysk Ar.	88.68	326	P	P	08 18 25.3	+0.3
	comp=Z,4.6nm,0.7s,baz=144,slow=4.0,SNR=11						
WAKR	Walker	88.89	42	eP	P	08 18 27.1	+0.7
	comp=Z,21nm,1.5s						
LDFC	Landfair	89.15	47	eP	P	08 18 28.7	+1.1
	comp=Z,20nm,0.7s						
PNTR	Pine Nut	89.20	41	eP	P	08 18 28.4	+0.5
	comp=Z,14nm,1.1s						
YERR	Yerington	89.33	42	eP	P	08 18 29.0	+0.6
	comp=Z,6.0nm,1.1s						
NV01	Mina Array Sit	89.48	43	eP	P	08 18 30.3	+1.1
NVAR	Mina Array Bea	89.48	43	P	P	08 18 30.3	+1.1
	comp=Z,3.6nm,0.7s,baz=222,slow=8.0,SNR=29						
TPNV	Topopah Spring	89.69	45	eP	P	08 18 31.0	+0.9
	comp=Z,5.8nm,0.8s						
TPNV	Topopah Spring	89.69	45	eP	P	08 18 31.0	+0.9
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TYV	Tymovskoe	89.71	336	eP	P	08 18 29.9	+0.3
TYV				pmax	pmax		
	comp=Z,19nm,0.7s						
Y14A	Wickenburg	89.74	49	eP	P	08 18 31.2	+0.9
	comp=Z,8.0nm,1.0s						
W13A	Hualapai Mount	89.93	47	eP	P	08 18 31.9	+0.5
	comp=Z,8.5nm,1.0s						
KVN	Kaiserville	90.02	42	eP	P	08 18 32.1	+0.5
	comp=Z,4.6nm,1.0s						
KVN	Kaiserville	90.02	42	eP	P	08 18 32.2	+0.5
KVN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SHPR	Sheep Range	90.06	46	eP	P	08 18 32.6	+0.7
	comp=Z,7.4nm,1.2s						
TUC	Tucson	90.16	51	eP	P	08 18 33.0	+0.7
	comp=Z,17nm,1.4s						
TUC	Tucson	90.16	51	eP	P	08 18 33.0	+0.7
TUC				pmax	pmax		
	comp=Z,17nm,1.4s						
X16A	Lo Mia Camp, P	91.04	49	eP	P	08 18 36.9	+0.3
	comp=Z,7.1nm,0.9s						
BMN	Battle Mountai	91.46	42	eP	P	08 18 38.7	+0.5

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BMN   Battle Mountai   91.46  42 eP      P       08 18 38.7 +0.5
LCMT  Little Creek M   91.56  46 eP      P       08 18 39.4 +0.6
      comp=Z,4.4nm,0.9s
U15A  North Rim        91.77  47 eP      P       08 18 40.4 +0.4
      comp=Z,8.2nm,0.8s
WUAZ  Wupatki          91.78  48 eP      P       08 18 40.4 +0.6
      comp=Z,11nm,1.3s
KNB   Kanab            91.82  47 eP      P       08 18 40.6 +0.6
      comp=Z,6.9nm,0.8s
KNB   Kanab            91.82  47 eP      P       08 18 40.6 +0.6
KNB                                pmax    pmax
      comp=Z,7.0nm,0.8s
CCUT  Cedar City       91.83  46 eP      P       08 18 40.9 +0.7
      comp=Z,5.5nm,1.2s
X18A  Snowflake        92.08  50 eP      P       08 18 41.9 +0.6
      comp=Z,5.5nm,1.1s
PSUT  Pine Spring      92.16  45 eP      P       08 18 42.1 +0.5
      comp=Z,2.2nm,0.9s
KLR   Kul'dur          92.60 330  P      P       08 18 43.4 +0.3
      comp=Z,5.1nm,0.7s,baz=122,slow=3.0,SNR=28
J08A  Circle Bar Ran   92.75  39 eP      P       08 18 44.5 +0.4
      comp=Z,5.5nm,1.0s
ELK   Elko             92.79  43 eP      P       08 18 44.7 +0.1
      comp=Z,2.1nm,0.8s
ELK   Elko             92.79  43 eP      P       08 18 44.7 +0.1
ELK                                pmax    pmax
      comp=Z,2.0nm,0.8s
MTPU  Mount Pierson    92.86  46 eP      P       08 18 45.6 +0.5
      comp=Z,6.0nm,1.1s
Y22D  IRIS PASSCAL I   93.80  52 eP      P       08 18 49.7 +0.5
      comp=Z,19nm,0.6s
CMAR  Chiang Mai Arr   94.06 289  LR     LR      09 03 26.7
      comp=Z,84nm,19.0s,baz=125,slow=37
TMUT  Trail Mountain   94.24  46 eP      P       08 18 51.9 +0.5
      comp=Z,4.7nm,0.9s
SRU   San Rafael Swe   94.54  46 eP      P       08 18 53.2 +0.6
      comp=Z,3.4nm,0.8s
SRU   San Rafael Swe   94.54  46 eP      P       08 18 53.2 +0.6
SRU                                pmax    pmax
      comp=Z,3.0nm,0.8s
ANMO  Albuquerque      94.62  51 i P     P       08 18 53.7 +0.7
ANMO                               pmax    pmax
      comp=Z,2.0nm,1.3s
KMI   Kunming          94.69 297  P      P       08 18 53.5  -0.1
KMI                                pmax    pmax
      comp=Z,10.0nm,0.5s
HVU   Hansel Valley    94.88  43 eP      P       08 18 54.5 +0.5
      comp=Z,3.4nm,1.0s
HVU   Hansel Valley    94.88  43 eP      P       08 18 54.5 +0.5
HVU                                pmax    pmax
      comp=Z,3.0nm,1.0s
MA2   Magadan          95.02 345  LR     LR      08 55 12.6
      comp=Z,396nm,19.8s,baz=195,slow=32
HLID  Hailey           95.09  41 eP      P       08 18 55.5 +0.6
      comp=Z,2.1nm,0.8s
MSTX  Muleshoe         96.54  54 eP      P       08 19 02.0 +0.3
      comp=Z,6.6nm,0.9s
SNOW  Snow King Moun   97.09  43 eP      P       08 19 03.9  -0.3
      comp=Z,3.3nm,0.7s
PD31  Pinedale Array   97.36  44 eP      Pdif    08 19 05.7 +0.2
PDAR  Pinedale Array   97.36  44  P      Pdif    08 19 05.7 +0.2
      comp=Z,0.7nm,0.7s,baz=201,slow=4.6,SNR=7.6
PDAR                               PKKPbc  PKKPbc  08 35 45.2 +1.0
      comp=Z,0.5nm,0.7s,baz=88,slow=3.3,SNR=5.0
HHC   Hu-ho-hao-te     97.52 314 eP      Pdif    08 19 08.0 +2.0
HHC                                pmax    pmax
      comp=Z,10.0nm,0.8s
SEY   Seymchan         97.72 347  P      P       08 19 06.0  -0.1
      comp=Z,2.6nm,0.7s,baz=164,slow=5.0,SNR=14
BILL  Bilibino        100.61 354 i P     Pdif    08 19 21.9 +2.9
BILL                               pmax    pmax
      comp=Z,2.0nm,1.0s
YKA   Yellowknife Ar  107.00  26  PKKPbc PKKPbc  08 35 14.0  -2.0
      comp=Z,0.6nm,0.8s,baz=41,slow=3.2,SNR=11
WMQ   Urumqi          114.38 308 ePKP    PKiKP   08 24 12.3 +0.8
WMQ                                LR      LR
      comp=Z,1µm,15.5s
DGZ   Jazzator, Alta  116.60 314 i PKIKP PKPdf   08 24 15.5  -0.2
SJG   San Juan        117.56  85 ePdif   Pdif    08 20 37.3 +1.8
SJG   San Juan        117.56  85 eP      Pdif    08 20 37.3 +1.8
MK32  Makanchi Array  118.97 309 ePKPdf  PKPdf   08 24 19.4  -0.8
MKAR  Makanchi Array  118.97 309 ePKPdf  PKPdf   08 24 19.9  -0.4
MKAR  Makanchi Array  118.97 309  PKP    PKPdf   08 24 19.4  -0.8
      comp=Z,1.7nm,0.7s,baz=62,slow=2.9,SNR=16
MAKZ  Makanchi        119.17 309 ePKPdf  PKPdf   08 24 20.1  -0.5
MAKZ  Makanchi        119.17 309 ePKIKP  PKPdf   08 24 20.1  -0.5
KSH   Kashi           121.20 300  PKP    PKiKP   08 24 25.0  0.0
KSH                                PP      PP      08 25 54.8  -1.1
KSH                                SKS     SKSdf   08 31 30.8  -4.6
KSH                                LR      LR
      comp=Z,250nm,4.5s
KSH                                LR      LR
      comp=Z,240nm,4.4s
KSH                                LR      LR
      comp=Z,580nm,4.9s
NRIK  Noril'sk        121.28 336  PKP    PKPdf   08 24 22.9  -1.0
      comp=Z,2.7nm,0.7s,baz=114,slow=3.6,SNR=5.4
NRN   Naryn           121.75 302 ePKPdf  PKPdf   08 24 25.6  -0.5
NRN   Naryn           121.75 302 ePKIKP  PKPdf   08 24 25.6  -0.5
KURK  Kurchatov       122.32 313 ePKPdf  PKPdf   08 24 25.8  -0.7
KURK  Kurchatov       122.32 313 i PKIKP PKiKP   08 24 26.7  0.0
TKM2  Tokmak 2        122.45 303  P      PKiKP   08 24 27.8 +0.4
      SNR=6.1
KBK   Karagaybulak    122.84 303  P      PKiKP   08 24 28.9 +0.7
      SNR=6.0
CHMS  Chumysh         123.06 303  P      PKiKP   08 24 28.6 +0.1
      SNR=5.6
AAK   Ala-Archa       123.15 303 i PKIKP PKPdf   08 24 28.3  -0.3
USP   Ospenovka       123.31 304  P      PKPdf   08 24 28.7  0.0
      SNR=5.6
AML   Almayashu       123.59 302  P      PKiKP   08 24 30.1 +0.1
      SNR=7.6
GAR   Garm            125.26 298 ePKPdf  PKPdf   08 24 30.8  -1.9
GAR   Garm            125.26 298 ePKIKP  PKPdf   08 24 30.8  -1.9
KKAR  Karatay Array   126.11 303 ePKPdf  PKPdf   08 24 34.0  -0.1
KKAR  Karatay Array   126.11 303 ePKIKP  PKPdf   08 24 34.0  -0.1
BRVK  Borovoye        127.79 315 i PKIKP PKiKP   08 24 37.6 +0.1
KBS   Kingsbay        132.96 357c iPKIKP PKiKP   08 24 46.7  -0.5
ABKAR Akbulak array   134.11 309 ePKPdf  PKPdf   08 24 49.3 +0.3
GEYT  Alibeck         134.36 293  PKP    PKPdf   08 24 50.2 +0.4
      comp=Z,2.6nm,0.7s,baz=186,slow=3.0,SNR=5.1
ARU   Arti            134.50 320 i PKIKP PKiKP   08 24 51.4 +0.5
ARU                                                08 27 20.5
ARA0  ARCESS Array S  140.34 347 ePKPdf  PKPdf   08 25 00.2 +0.3
ARCES ARCESS Array B  140.34 347  PKP    PKPdf   08 25 00.2 +0.3
      comp=Z,5.0nm,0.8s,baz=25,slow=2.5,SNR=5.2
KLMR  Klimovskoe      142.35 331 ePKIKP  PKPdf   08 25 01.7  -2.0
KLMR                               pmax    pmax
      comp=Z,12nm,1.4s
KLMR  Klimovskoe      142.35 331 ePKPdf  PKPdf   08 25 01.7  -2.0
KLMR                               AMP             08 25 17.1
      comp=Z,12nm,1.4s
ZEI   Tsey            145.49 300 i PKIKP PKPab   08 25 10.4  0.0
ZEI                                pmax    pmax
      comp=Z,10.0nm,0.7s
MOS   Moscow          145.83 324 i PKIKP PKPdf   08 25 09.4  -0.5
MOS                                pmax    pmax
      comp=Z,78nm,0.7s
GOF   Gofitskoye      145.88 304 ePKP2   PKPab   08 25 11.7 +0.2
GOF                                pmax    pmax
      comp=Z,20nm,0.6s
KBZ   Khabaz          146.14 302  PKPbc  PKPab   08 25 12.4  -0.1
      comp=Z,8.6nm,0.9s,baz=44,slow=4.6,SNR=19
KIV   Kislovodsk      146.27 302 i PKP2  PKPab   08 25 14.3 +1.1
NEY   Neytrino        146.31 301 i PKP2  PKPab   08 25 13.3  -0.2
LPSR  Galich'ya Gora  146.51 319 ePKP2   PKPbc   08 25 12.8 +0.1
LPSR                               pmax    pmax
      comp=Z,80nm,0.7s
OBN   Obninsk         146.66 324⇑iPKP2   PKPbc   08 25 13.2 +0.2
OBN                                pmax    pmax
      comp=Z,77nm,1.5s
FIA0  FINESS Array S  146.83 339 ePKPdf  PKPbc   08 25 12.6  -0.8
FIA0  FINESS Array S  146.83 339 ePKP2   PKPbc   08 25 12.6  -0.8
FINES FINESS Array B  146.83 339  PKPbc  PKPbc   08 25 12.6  -0.8
      comp=Z,19nm,0.7s,baz=64,slow=4.4,SNR=47
VSR   Storozhevoye    146.88 316 ePKP2   PKPbc   08 25 14.1 +0.3
VSR                                pmax    pmax
      comp=Z,40nm,0.9s
VSU   Vasula          148.87 335 eP      PKPbc   08 25 19.2 +0.3
VSU                                IAmb    IAmb    08 25 23.3
      comp=Z,75nm,0.5s
NB2   NORSAR Subarra150.51 351  PKP    PKPbc   08 25 22.5  -0.4
      comp=Z,12nm,1.0s,baz=12,slow=4.3
NB200 NORSAR Array S 150.51 351 ePKPbc  PKPbc   08 25 21.4  -1.5
NOA   NORSAR Array B 150.51 351  PKPbc  PKPbc   08 25 21.4  -1.5
      comp=Z,3.7nm,0.7s,baz=15,slow=4.2,SNR=18
IZAR  Zarasai         151.00 332 eP      PKPab   08 25 29.7  -2.0
IZAR                               IAmb    IAmb    08 25 33.7
      comp=Z,8.1nm,1.0s
IDID  Didziasalis     151.10 330 eP      PKiKP   08 25 25.7 +0.8
IDID                               IAmb    IAmb    08 25 28.6
      comp=Z,4.8nm,0.7s
ISAL  Salakas         151.17 331 eP      PKPab   08 25 29.7  -2.8
ISAL                               IAmb    IAmb    08 25 33.6
      comp=Z,11nm,1.1s
IIGN  Ignalina        151.29 331 eP      PKiKP   08 25 27.1 +1.8
IIGN                               IAmb    IAmb    08 25 33.3
      comp=Z,6.2nm,0.8s
NACGM Naroch          151.36 330 e       PKiKP   08 25 26.0 +0.5
PBUR  Paburg          152.43 336 eP      PKiKP   08 25 27.9 +0.3
PBUR                               IAmb    IAmb    08 25 29.8
      comp=Z,38nm,0.8s
AKASG Malin Array Be  152.74 321  PKPbc  PKiKP   08 25 28.7 +0.2
      comp=Z,3.9nm,0.7s,baz=61,slow=2.4,SNR=14
AKBB  Malin Array Si  152.74 321 ePKPbc  PKPbc   08 25 28.2  -0.1
AKBB  Malin Array Si  152.74 321 ePKIKP  PKPbc   08 25 28.2  -0.1
KIEV  Kiev            152.75 321 ePKPbc  PKPbc   08 25 28.2  -0.1
KIEV  Kiev            152.75 321 ePKIKP  PKPbc   08 25 28.2  -0.1
ILGA  Ilgaz           153.23 298 ePKPbc  PKiKP   08 25 30.6 +0.5
LIC   Lamto           153.34 164 eP      PKiKP   08 25 31.3 +0.4
      comp=Z,75nm,1.4s
BR101 Keskin Array S  153.47 295 ePKPbc  PKiKP   08 25 31.2 +0.6
BRTR  Keskin Array B  153.47 295  PKPbc  PKiKP   08 25 31.2 +0.6
      comp=Z,2.4nm,0.8s,baz=129,slow=3.5,SNR=10
KIC   Kosan Boka      153.53 165 eP      PKiKP   08 25 31.6 +0.3
      comp=Z,13nm,0.6s
TIC   Toumodi         153.75 164 eP      PKiKP   08 25 33.5 +1.8
DBIC  Dimbokro        153.81 164  PKPbc  PKiKP   08 25 32.1 +0.3
      comp=Z,2.9nm,0.7s,baz=162,slow=4.7,SNR=4.6
LANS  Liptovska Anna  158.61 327 ePKP2   PKPab   08 26 05.0 +0.6
LANS  Liptovska Anna  158.61 327 ePKP    PKPab   08 26 05.0 +0.6
UPC   Upice           158.98 335 ePKPAB  PKPab   08 26 06.4 +0.5
UPC   Upice           158.98 335 ePKP2   PKPab   08 26 06.4 +0.5
DPC   Dobruska-Polom  158.99 334 ePKPAB  PKPab   08 26 06.8 +0.8
DPC   Dobruska-Polom  158.99 334 ePKP2   PKPab   08 26 06.8 +0.8
CLL   Collm           159.27 340 ePKPab  PKPab   08 26 07.2 +0.1
CLL   Collm           159.27 340⇓iPKPab  PKPab   08 26 06.4  -0.6
      comp=Z,12nm,0.7s
CLL                                LmV             09 46 00.0
      comp=Z,300nm,19.8s
CLL   Collm           159.27 340⇓iPKP2   PKPab   08 26 06.4  -0.6
CLL                                pmax    pmax
      comp=Z,12nm,0.7s
CLL                                MLR     MLR
      comp=Z,300nm,19.8s
VYHS  Vyhne           159.37 327 ePKP2   PKPab   08 26 07.6  -0.1
VYHS  Vyhne           159.37 327 ePKP    PKPab   08 26 07.6  -0.1
PVCC  Panska Ves      159.46 337 ePKPAB  PKPab   08 26 08.6 +0.7
PVCC  Panska Ves      159.46 337 ePKP2   PKPab   08 26 08.6 +0.7
MODS  Modra-Piesok    160.16 329 ePKP2   PKPab   08 26 11.7 +0.6
MODS  Modra-Piesok    160.16 329 ePKP    PKPab   08 26 11.7 +0.6
KHC   Kasperske Hory  160.99 336 ePKPAB  PKPab   08 26 15.2 +0.5
KHC   Kasperske Hory  160.99 336 ePKP2   PKPab   08 26 15.2 +0.5
TORD  Torodi Ar. Bea  161.06 179  PKPab  PKPab   08 26 17.1 +1.4
      comp=Z,4.3nm,0.7s,baz=179,slow=4.0,SNR=16
TOA1  Torodi Ar. Sit  161.06 179 ePKPab  PKPab   08 26 17.1 +1.3
CONA  Conrad Observa  161.11 330 ePKPab  PKPab   08 26 15.3  -0.1
      comp=Z,6.5nm,0.7s
GEC2  GERESS Array S  161.19 336 ePKPab  PKPab   08 26 15.5  -0.2
GEC2  GERESS Array S  161.19 336 ePKP2   PKPab   08 26 15.5  -0.2
GERES GERESS Array B  161.19 336  PKPab  PKPab   08 26 15.5  -0.2
      comp=Z,1.8nm,0.6s,baz=33,slow=5.1,SNR=12
MOA   Molln           161.82 333 ePKPab  PKPab   08 26 18.7 +0.3
      comp=Z,2.5nm,0.8s
SOKA  Soboth          162.44 329 ePKPab  PKPab   08 26 20.9  -0.3
      comp=Z,1.3nm,0.6s
KBA   Koelnbreinsper  162.81 333 ePKPab  PKPab   08 26 22.8  -0.1
      comp=Z,3.0nm,0.5s
MYKA  Terra Mystica   163.06 332 i PKPab PKPab   08 26 23.5  -0.4
      comp=Z,4.7nm,0.6s
RETA  Reutte          163.34 339 i PKPab PKPab   08 26 25.5 +0.4
      comp=Z,7.8nm,0.8s
MOTA  Moosalm         163.36 338 ePKPab  PKPab   08 26 25.8 +0.5
      comp=Z,4.8nm,0.7s
ABTA  Abfaltersbach   163.40 334  PKPab  PKPab   08 26 25.2  -0.2
      comp=Z,2.2nm,0.7s
SQTA  Sankt Quirin    163.44 338 ePKPab  PKPab   08 26 26.0 +0.4
      comp=Z,4.3nm,0.6s
FETA  Feichten        163.77 338 ePKPab  PKPab   08 26 27.3 +0.2
      comp=Z,7.4nm,0.9s
DAVA  Damuels         163.78 341 i PKPab PKPab   08 26 27.0  -0.1
      comp=Z,8.9nm,0.7s
FUORN Ofenpass-Fuorn  164.27 339 ePKPab  PKPab   08 26 29.6 +0.2
```

IDC 25 08:08:33.7±3.2**,6°.90S**×**148°.24E,h0**^{km}**,mb3.7**/2**, mb1 3.9**/3**,mb1mx3.4**/39**,mbtmp3.7**/3**,ML3.5**/1**,MS4.1**/2**, Ms1 4.1**/2**,ms1mx3.5**/40**,Error ellipse: s-maj=99.1km s-min=43.2km az=120.0,New Britain region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
WRA   Warramunga Arr   18.71 225  P       Pn      08 12 54.1  -0.1
      0.2nm,0.3s,baz=50,slow=11,SNR=9.7
ASAR  Alice Springs    21.62 218  P       P       08 13 26.1 +0.5
      1.3nm,0.5s,baz=55,slow=9.2,SNR=31
FITZ  Fitzroy Crossi   24.68 241  P       P       08 13 56.2  -0.4
      4.0nm,1.0s,baz=69,slow=9.2,SNR=11
JHJ   Hachijo jima 2   40.60 349  LR      LR      08 32 35.4
      comp=Z,199nm,19.2s,baz=285,slow=36
JNU   Nakatsue         43.09 338  LR      LR      08 34 15.7
      comp=Z,321nm,18.2s,baz=56,slow=36
TORD  Torodi Ar. Bea  146.50 283  PKPbc   PKPdf   08 28 17.2 +0.5
      0.1nm,0.3s,baz=68,slow=3.3,SNR=2.8
```

SKO ***25*** *08:09:23.1,41°.90N×19°.59E,h32*^{km}

TIR ***25*** *08:09:27.1,41°.14N×19°.50E,h25*^{km}*,Md3.3/6*

ISCJB ***25*** *08:09:29.6±0.5,41°.12N±0°.02×19°.52E±0°.04,h18*^{km}*±6*^{km}*, Error ellipse: s-maj=5.6km s-min=3.5km az=164.1*

BEO ***25*** *08:09:29.7±0.4,41°.16N×19°.61E,h9*^{km}*±3*^{km}*,ML2.5/5*

PDG ***25*** *08:09:30.0±0.3,41°.23N×19°.66E,h15*^{km}*,ML2.8/10,Error ellipse: s-maj=1.0km s-min=1.0km az=0.0*

ISC 25 08:09:28.8±1.0**,41°.12N**±0°.02×**19°.55E**±0°.03**,h14**^{km}±8^{km}**, n36,**σ**0**^{s}**.98**/60**,7C-5D,Albania**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
TIR   Tirane            0.33  46  ePg     Pg      08 09 34.7  -0.8
TIR                               eSg     Sg      08 09 40.0  -0.1
TIR   Tirane            0.33  46⇑iPg     Pg      08 09 34.8  -0.8
TIR   Tirane            0.33  46 i PG     Pg      08 09 34.9  -0.6
TIR                              i SG     Sg      08 09 41.4 +1.2
VLO   Vlora             0.65 184 i PG     Pg      08 09 40.6  -0.9
VLO                              i SG     Sn      08 09 51.7  -1.9
PHP   Peshkopia         0.87  50 i PG     Pb      08 09 44.8  -1.0
PHP                              i SG     Sg      08 09 58.4 +1.1
ULC   Ulcinj            0.87 345⇑iPg     Pb      08 09 45.0  -0.8
ULC                              i Sg     Sb      08 09 57.7 +0.4
TPE   Tepelena          0.90 157 i PG     Pn      08 09 46.6  -0.3
TPE                              i SG     Sn      08 10 00.0 +0.3
OHR   Ohrid             0.94  90⇑iPg     Pb      08 09 45.4  -1.6
OHR                              i Sg     Sn      08 10 01.5 +0.6
DRME  Dracevica, Mon    1.10 346⇑iPg     Pn      08 09 48.9  -0.9
DRME                             i Sg     Sn      08 10 05.2 +0.4
SRN   Sarande           1.28 164 i PG     Pb      08 09 52.9 +0.2
SRN                              i SG     Sg      08 10 12.8 +2.5
BCI   Bajram Curri      1.30  17 i PG     Pn      08 09 51.6  -1.0
BCI                              i SG     Sg      08 10 11.1 +0.2
PDG   Podgorica         1.33 350 ePg      Pn      08 09 52.8  -0.1
PDG                              eSg      Sb      08 10 11.2 +0.9
TTG   Podgorica         1.33 350⇑iPg     Pn      08 09 53.0 +0.1
TTG                              i Sg     Sg      08 10 12.5 +0.9
BIA   Bitola            1.34  94 ePg      Pn      08 09 51.8  -1.4
BIA                              i Sg     Sg      08 10 13.0 +0.9
FNA   Florina           1.42 103 ePg      Pb      08 09 54.8  -0.3
FNA                              eSg      Sg      08 10 14.0  -0.6
FNA   Florina           1.42 103 i Pg     Pb      08 09 54.8  -0.3
CEME  Cevo              1.50 342⇑iPg     Pn      08 09 54.4  -1.0
CEME                             i Sg     Sb      08 10 16.4 +0.9
PVY   Plav              1.50  11⇓iPg     Pb      08 09 56.5  -0.1
PVY                              i Sg     Sb      08 10 16.7 +1.1
HCY   Herceg Novi       1.54 329⇓iPg     Pb      08 09 57.2  0.0
HCY                              i Sg     Sb      08 10 16.6  0.0
IGT   Igoumenitsa       1.69 159 ePg      Pb      08 09 59.9 +0.2
IGT                              eSg      Sg      08 10 25.0 +1.7
NKME  Niksic            1.71 345⇓iPn     Pn      08 09 59.1 +0.9
NKME                             i Sn     Sb      08 10 22.1 +0.8
KOME  Kolasin           1.73 359⇑iPn     Pb      08 09 59.9  -0.5
KOME                             i Sn     Sb      08 10 22.7 +0.7
NKY   Niksic            1.74 346⇓iPn     Pn      08 09 59.7 +1.0
NKY                              i Sn     Sb      08 10 23.0 +0.6
IVA   Berane            1.77   8⇓iPn     Pn      08 09 59.6 +0.5
IVA                              i Sn     Sb      08 10 23.4 +0.3
TREB  Trebinje          1.83 331 ePn      Pn      08 10 00.5 +0.7
SJES  Sjenica           2.16   8 ePn      Pn      08 10 04.9 +0.4
SJES                             eSn      Sn      08 10 30.9  -0.2
STON  Ston              2.23 322 ePn      Pn      08 10 03.9  -1.3
STON                              Sn      Sn      08 10 30.4  -2.2
BARS  Barje             2.39  44 ePn      Pn      08 10 08.8 +1.3
SELS  Selova            2.40  29 ePn      Pn      08 10 08.0 +0.3
IVAS  Ivanjica          2.49  10 ePn      Pn      08 10 09.3 +0.3
BBLS  Lazi&#263;i       2.75 358 ePn      Pn      08 10 14.2 +1.7
GRUS  Gruza             2.90  17 ePn      Pn      08 10 15.0 +0.5
BOVS  Bovan             2.98  32 ePn      Pn      08 10 17.0 +1.4
DIVS  Divibare          2.99   6 ePn      Pn      08 10 16.9 +1.0
HAPS  Han Pijesak,Bl    3.00 352 ePn      Pn      08 10 16.7 +0.7
TRUS  Trudelj           3.17  11 ePn      Pn      08 10 19.2 +1.0
```

ISCJB ***25*** *08:12:07.0±0.7,36°.85N±0°.04×139°.39E±0°.05,h5*^{km}*±6*^{km}*, mb3.5/2,Error ellipse: s-maj=8.3km s-min=5.6km az=38.3*

JMA ***25*** *08:12:07.0,36°.85N×139°.40E,h3*^{km}*±1*^{km}*,M2.4*

IDC ***25*** *08:12:09.6±2.2,36°.80N×139°.26E,h0*^{km}*,mb3.4/2, mb1 3.7/2,mb1mx3.2/46,mbtmp3.4/2,Error ellipse: s-maj=31.2km s-min=14.0km az=180.0*

ISC 25 08:12:07.5±1.3**,36°.85N**±0°.04×**139°.38E**±0°.04**,h1**^{km}±15^{km}**, n9,**σ**0**^{s}**.40**/12**,Eastern Honshu**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
JKT   Katashina         0.13 233  P       Pg      08 12 10.2 +0.1
JKT                               S       Sg      08 12 12.4 +0.5
JAG   Ashikaga          0.43 172  P       Pg      08 12 15.4  -0.2
JSB   Shiboa            0.45  74  P       Pg      08 12 16.1  0.0
JHK   Hiroka            0.49 324  P       Pg      08 12 17.0  0.0
JHK                               S       Sg      08 12 23.8 +0.4
JFY   Yanaizu           0.61  25  P       Pg      08 12 19.1  -0.2
JFY                               S       Sg      08 12 27.0  -0.3
MJAR  Matsushiro Arr    0.99 252  Pg      Pg      08 12 25.7  -0.8
      4.2nm,0.3s,baz=72,slow=18,SNR=42
MJAR                              Lg      Lg      08 12 38.6
      1.3nm,0.3s,baz=86,slow=35,SNR=7.7
MAT   Matsushiro        0.99 252  P       Pg      08 12 26.4  -0.1
MAT                               S       Sg      08 12 39.3  -0.1
WRA   Warramunga Arr   56.68 186  P       P       08 21 52.6 +0.1
      0.8nm,1.1s,baz=0.2,slow=7.5,SNR=5.6
ASAR  Alice Springs    60.41 186  P       P       08 22 21.8 +3.3
      0.2nm,0.7s,baz=18,slow=9.7,SNR=3.7
```

NNC ***25*** *08:12:12.7±1.3,54°.17N×87°.36E,h0*^{km}*,mb3.2,mpv3.0, Error ellipse: s-maj=10.8km s-min=6.5km az=35.0, Suspected Mining explosion.*

IDC 25 08:12:14.2±3.0**,54°.18N**×**87°.35E,h0**^{km}**,mb1 2.9**/2**, mb1mx2.8**/56**,mbtmp2.9**/2**,ML2.6**/2**,4C-2D,Error ellipse: s-maj=23.7km s-min=16.5km az=60.0,Southwestern Siberia**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
I46RU ZALESOVO INFRA    1.51 262  i               08 23 53.8
      baz=81,slow=354,SNR=0.9
ZAA0  Zalesovo Array    1.51 262 ⇑Pn      Pn      08 12 41.0  -1.4
      2.2nm,0.3s
ZAA0                             ⇑Sn      Sg      08 13 02.5  -0.1
      3.6nm,0.2s
ZALV  Zalesovo Beam     1.51 262  Pg      Pn      08 12 41.1  -1.4
      3.5nm,0.3s,baz=80,slow=15,SNR=26
ZALV                              Lg      Lg      08 13 02.1
      1.3nm,0.3s,baz=82,slow=29,SNR=5.2
KURK  Kurchatov         6.37 240 ⇑Pg      Pb      08 14 08.1 +2.4
      3.4nm,1.0s
KURK                             ⇓Lg      Lg      08 15 34.1
      9.8nm,1.2s
KURBB Kurchatov Arra    6.47 240  Pn      Pn      08 13 51.0 +0.5
      0.1nm,0.3s,baz=54,slow=13,SNR=5.6
KURBB                             Sn      Sn      08 15 04.2  -0.7
      0.1nm,0.3s,baz=53,slow=22,SNR=2.9
KURBB                             Lg      Lg      08 15 38.1
      0.0nm,0.3s,baz=60,slow=31,SNR=3.0
MK31  Makanchi Array    8.07 206  Pn      Pn      08 14 11.4  -1.1
      0.5nm,0.7s,baz=28,slow=14,SNR=7.6
MK31                             ⇓Sn      Sn      08 15 43.8  -0.6
      0.4nm,0.5s,baz=256,slow=38,SNR=4.2
MK31                             ⇑Lg      Lg      08 16 30.4
      7.1nm,1.3s,baz=22,slow=28,SNR=3.8
MKAR  Makanchi Array    8.07 206  Pn      Pn      08 14 13.7 +1.2
      0.1nm,0.3s,baz=27,slow=14,SNR=5.9
MKAR                              Sn      Sn      08 15 45.1 +0.7
      0.1nm,0.3s,baz=35,slow=23,SNR=4.1
MKAR                              Lg      Lg      08 16 30.4
      0.1nm,0.3s,baz=10,slow=25,SNR=5.3
```

IDC 25 08:18:29.7±2.1**,3°.15N**×**125°.99E,h0**^{km}**,mb3.4**/3**, mb1 3.6**/3**,mb1mx3.3**/45**,mbtmp3.4**/3**,Error ellipse: s-maj=190.3km s-min=26.6km az=65.0,Talaud Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
WRA   Warramunga Arr   24.37 161  P       P       08 23 49.0  -0.8
      0.4nm,0.5s,baz=339,slow=11,SNR=6.7
ASAR  Alice Springs    27.74 164  P       P       08 24 21.2 +1.0
      0.5nm,1.0s,baz=345,slow=11,SNR=3.1
MKAR  Makanchi Array   57.62 326  P       P       08 28 21.3  -0.3
      0.3nm,0.4s,baz=119,slow=8.1,SNR=5.4
```

ISCJB ***25*** *08:19:01.2±0.6,36°.84N±0°.03×139°.41E±0°.06,h10*^{km}*, mb3.3/2,Error ellipse: s-maj=6.5km s-min=3.9km az=13.1*

JMA ***25*** *08:19:01.3,36°.85N×139°.41E,h3*^{km}*±1*^{km}*,M2.5*

IDC ***25*** *08:19:03.1±1.5,36°.75N×139°.32E,h0*^{km}*,mb3.3/2, mb1 3.7/2,mb1mx3.2/43,mbtmp3.3/2,Error ellipse: s-maj=24.0km s-min=12.4km az=163.0*

ISC 25 08:19:02.5±0.9**,36°.85N**±0°.03×**139°.38E**±0°.05**,h10**^{km}**,n10,** σ**1**^{s}**.44**/16**,Eastern Honshu**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
JKT   Katashina         0.13 233  P       Pg      08 19 04.6  -1.0
JKT                               S       Sg      08 19 07.1  -0.7
JAG   Ashikaga          0.42 172  P       Pg      08 19 09.7  -1.1
JAG                               S       Sg      08 19 15.2  -1.2
JHK   Hiroka            0.49 324  P       Pg      08 19 11.4  -0.7
JHK                               S       Sg      08 19 18.3  -0.4
JFY   Yanaizu           0.62  25  P       Pg      08 19 13.2  -1.2
JFY                               S       Sg      08 19 21.2  -1.4
JRY   Ryogami san       0.91 205  P       Pg      08 19 18.9  -1.2
JNS   Sasagawa          0.97 357  P       Pb      08 19 20.1  -1.3
JNS                               S       Sg      08 19 32.7  -1.1
MJAR  Matsushiro Arr    0.99 252  Pg      Pg      08 19 20.3  -1.2
      5.0nm,0.3s,baz=71,slow=18,SNR=56
MJAR                              Lg      Lg      08 19 32.8
      2.2nm,0.3s,baz=149,slow=34,SNR=9.6
MAT   Matsushiro        0.99 252  P       Pg      08 19 20.7  -0.8
MAT                               S       Sg      08 19 33.9  -0.5
ILAR  Eielson Array    50.52  32  P       P       08 28 03.9 +3.4
      0.3nm,0.9s,baz=269,slow=8.1,SNR=2.8
WRA   Warramunga Arr   56.68 186  P       P       08 28 46.8 +0.7
      0.3nm,0.7s,baz=0.9,slow=7.6,SNR=7.5
```

IDC 25 08:20:49.6±58.0**,16°.26S**×**177°.22W,h0**^{km}**,mb3.7**/3**, mb1 3.9**/3**,mb1mx3.5**/40**,mbtmp3.7**/3**,Error ellipse: s-maj=1079.0km s-min=159.6km az=78.0,Fiji Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
STKA  Stephens Creek   40.43 240  P       P       08 28 29.8  -0.1
      0.9nm,0.6s,baz=78,slow=9.3,SNR=3.5
WRA   Warramunga Arr   46.07 258  P       P       08 29 15.8 +0.1
      0.2nm,0.4s,baz=91,slow=8.2,SNR=9.0
ASAR  Alice Springs    46.35 253  P       P       08 29 17.6  -0.3
      1.3nm,0.6s,baz=89,slow=8.4,SNR=24
```

DJA ***25*** *08:31:04.7±1.6,10°S±5°×11°9E±°,h18*^{km}*±15*^{km}*,M4.2/7, MLv4.2/7*

ISCJB ***25*** *08:31:17.3±1.0,10°.3S±0°.2×118°.4E±0°.2,h10*^{km}*,mb3.9/5,*

Error ellipse: s-maj=32.5km s-min=11.3km az=136.9

*IDC **25** 08:31:18.4±1.6, 10°.13S×118°.53E, h0^{km}, mb3.9/5, mb1 3.9/9, mb1mx3.7/49, mbtmp3.8/9, ML3.4/4, Error ellipse: s-maj=63.9km s-min=19.4km az=47.0*

ISC 25 08:31:19.8±1.1, 10°.2S±0°.1×118°.6E±0°.1, h10^{km}, n13, σ0^{s}.95/11, mb4.0/5, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.54**	**329**	S	**Pg**	**08 31 49.0**	**-0.4**
WSI	**Waingapu**	**1.77**	**74**	P	Pg	08 32 01.8	+8.0
BASI	**Baing, Sumba**	**1.98**	**92**	S	**Pg**	**08 31 57.0**	**-0.7**
BATI	**Baumata**	**5.01**	**91**	Pn	**Pn**	**08 32 36.7**	**+1.5**
	3.9nm,0.3s,baz=284,slow=17,SNR=3.4						
BNSI	**Bone**	**5.92**	**15**	P	Pb	08 32 56.0	-7.2
FITZ	**Fitzroy Crossi**	**10.45**	**140**	Pn	**Pn**	**08 33 51.1**	**+1.2**
	0.3nm,0.3s,baz=333,slow=12,SNR=9.0						
WRA	**Warramunga Arr**	**18.05**	**124**	P	**Pn**	**08 35 30.1**	**-0.9**
	0.1nm,0.3s,baz=304,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**19.86**	**134**	P	**Pn**	**08 35 51.8**	**-1.1**
	0.1nm,0.3s,baz=323,slow=13,SNR=8.7						
SONM	**Songino Array**	**58.74**	**350**	P	**P**	**08 41 17.6**	**-0.4**
	0.7nm,0.6s,baz=166,slow=8.7,SNR=6.0						
MKAR	**Makanchi Array**	**65.29**	**333**	P	**P**	**08 42 02.0**	**0.0**
	0.9nm,0.6s,baz=143,slow=7.0,SNR=8.4						
KURBB	**Kurchatov Arra**	**69.82**	**334**	P	**P**	**08 42 30.7**	**+0.2**
	0.5nm,0.5s,baz=143,slow=5.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**69.97**	**340**	P	**P**	**08 42 30.8**	**-0.5**
	1.8nm,0.6s,baz=156,slow=4.2,SNR=6.3						
SEY	**Seymchan**	**77.38**	**15**	P	**P**	**08 43 15.1**	**+0.5**
	0.4nm,0.4s,baz=244,slow=4.5,SNR=5.2						

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*NIED **25** 08:33:00, 36°.90N×139°.40E, h5^{km}, Mw4.0 Best double couple: $M_0$1.26000×10^{15} NP1:ϕ_s34.00000°, δ58.00000°, λ21.00000°. NP2:ϕ_s293.00000°, δ72.00000°, λ146.00000°.*

*ISCJB **25** 08:33:38.8±0.4, 36°.87N±0°.02×139°.40E±0°.04, h10^{km}, mb3.6/9, Error ellipse: s-maj=5.0km s-min=3.2km az=17.4*

*JMA **25** 08:33:38.6, 36°.87N×139°.41E, h3^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s29.00000°, δ78.00000°, λ-25.00000°. NP2:ϕ_s125.00000°, δ65.00000°, λ-167.00000°. Principal axes: T Plg9.0000°, Azm79.0000°; N Plg62.0000°, Azm187.0000°; P Plg26.0000°, Azm345.0000°;*

JMA Felt II J1.

*IDC **25** 08:33:39.3±0.8, 36°.80N×139°.34E, h0^{km}, mb3.6/9, mb1 3.8/14, mb1mx3.6/54, mbtmp3.6/14, ML3.4/4 Error ellipse: s-maj=17.1km s-min=9.7km az=151.0*

ISC 25 08:33:40.5±0.6, 36°.88N±0°.03×139°.38E±0°.03, h10^{km}, n25, σ1^{s}.71/32, mb3.6/9, 3C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKT	**Katashina**	**0.15**	**223**	⇑P	**Pg**	**08 33 42.1**	**-1.8**
JKT				S	**Sg**	**08 33 44.6**	**-1.6**
JSB	**Shiboa**	**0.45**	**78**	⇑P	**Pg**	**08 33 47.4**	**-1.8**
JAG	**Ashikaga**	**0.46**	**172**	⇓P	**Pg**	**08 33 47.4**	**-1.9**
JAG				*e*S	**Sg**	**08 33 53.6**	**-1.7**
JHK	**Hiroka**	**0.47**	**322**	⇓P	**Pg**	**08 33 48.2**	**-1.4**
JHK				S	**Sg**	**08 33 54.9**	**-0.9**
JFY	**Yanaizu**	**0.59**	**26**	⇓P	**Pg**	**08 33 50.0**	**-2.0**
JFY				S	**Sg**	**08 33 57.6**	**-2.2**
JIZZ	**Izumozaki**	**0.84**	**321**	P	**Pn**	**08 33 56.5**	**-1.9**
JRY	**Ryogami san**	**0.94**	**204**	⇑P	**Pg**	**08 33 56.7**	**-1.8**
JRY				S	**Sb**	**08 34 10.0**	**-1.4**
JNS	**Sasagawa**	**0.94**	**357**	⇓P	**Pg**	**08 33 56.6**	**-2.0**
JNS				S	**Sg**	**08 34 09.2**	**-1.7**
MJAR	**Matsushiro Arr**	**0.99**	**251**	Pg	**Pg**	**08 33 57.8**	**-1.8**
	37nm,0.3s,baz=115,slow=6.8,SNR=629						
MJAR				Lg	Lg	08 34 09.5	
	22nm,0.3s,baz=71,slow=27,SNR=16						
MJAR				LR	LR	08 34 35.2	
	comp=Z,894nm,18.0s,baz=50,slow=60						
MAT	**Matsushiro**	**1.00**	**251**	P	**Pg**	**08 33 58.0**	**-1.6**
MAT				S	**Sg**	**08 34 11.4**	**-1.2**
JFT	**Otama**	**1.00**	**50**	P	**Pg**	**08 33 57.3**	**-2.4**
JHJ	**Hachijo jima 2**	**3.76**	**175**	Pn	**Pn**	**08 34 39.2**	**+0.7**
	29nm,0.3s,baz=130,slow=22,SNR=4.6						
ASAJ	**Asahikawa**	**7.64**	**18**	Pn	**Pn**	**08 35 34.1**	**+2.3**
	0.4nm,0.3s,baz=185,slow=20,SNR=4.8						
KSRS	**Korea Array**	**9.16**	**277**	Pn	**Pn**	**08 35 53.6**	**+1.0**
	0.3nm,0.3s,baz=86,slow=19,SNR=3.5						
USRK	**Ussuriysk Ar.**	**9.22**	**325**	Pn	**Pn**	**08 35 55.7**	**+2.2**
	0.1nm,0.3s,baz=137,slow=13,SNR=2.7						
KLR	**Kul'dur**	**13.54**	**338**	Pn	**Pn**	**08 36 54.6**	**+2.1**
	0.1nm,0.3s,baz=151,slow=14,SNR=4.1						
SEY	**Seymchan**	**27.29**	**13**	P	**P**	**08 39 26.7**	**+1.9**
	0.4nm,0.3s,baz=229,slow=13,SNR=4.6						
MKAR	**Makanchi Array**	**42.82**	**302**	P	**P**	**08 41 38.5**	**0.0**
	0.2nm,0.3s,baz=98,slow=8.9,SNR=4.2						
KURBB	**Kurchatov Arra**	**44.81**	**308**	P	**P**	**08 41 53.6**	**-0.7**
	0.7nm,0.7s,baz=84,slow=8.3,SNR=3.8						
ILAR	**Eielson Array**	**50.50**	**32**	P	**P**	**08 42 37.8**	**-0.5**
	0.5nm,0.8s,baz=272,slow=7.1,SNR=5.1						
INK	**Inuvik**	**55.27**	**27**	P	**P**	**08 43 13.8**	**+0.3**
	0.7nm,0.8s,baz=236,slow=7.3,SNR=4.1						
WRA	**Warramunga Arr**	**56.71**	**186**	P	**P**	**08 43 23.6**	**-0.7**
	2.0nm,0.5s,baz=1.3,slow=7.6,SNR=38						
ASAR	**Alice Springs**	**60.44**	**186**	P	**P**	**08 43 50.6**	**+0.3**
	0.5nm,0.6s,baz=14,slow=14,SNR=8.2						
YKA	**Yellowknife Ar**	**64.76**	**30**	P	**P**	**08 44 21.4**	**+2.8**
	0.3nm,0.8s,baz=306,slow=6.9,SNR=4.6						
NVAR	**Mina Array Bea**	**76.38**	**52**	P	**P**	**08 45 30.4**	**+0.1**
	0.4nm,0.7s,baz=302,slow=4.1,SNR=3.7						

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*ISCJB **25** 08:46:15.7±0.7, 10°.90S±0°.08×165°.94E±0°.09, h10^{km}, mb4.0/1, MS3.9/1, Error ellipse: s-maj=14.7km s-min=9.5km az=143.5*

*IDC **25** 08:46:16.0±1.0, 10°.74S×165°.96E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx3.9/39, mbtmp4.1/10, ML4.5/2, MS3.7/2, Ms1 3.7/2, ms1mx3.2/37, Error ellipse: s-maj=29.4km s-min=20.9km az=133.0*

*NEIC **25** 08:46:17.1±0.6, 10°.81S×166°.00E, h10^{km}, mb4.6/8, Error ellipse: s-maj=11.1km s-min=7.5km az=51.0*

ISC 25 08:46:17.3±0.9, 10°.8S±0°.1×166°.0E±0°.1, h10^{km}, n28, σ0^{s}.92/24, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.13**	**282**	Pn	**Pn**	**08 47 48.6**	**+0.6**
	26nm,0.3s,baz=150,slow=7.9,SNR=5.0						
HNR				LR	LR	08 50 23.2	
	comp=Z,300nm,19.4s,baz=298,slow=41						
MARNC	**Mare, Loyalty**	**10.79**	**170**	*e*Pn	**Pn**	**08 48 52.6**	**+0.7**
DZM	**Mont Dzumac**	**11.21**	**178**	*e*Pn	**Pn**	**08 48 58.0**	**+0.3**
DZM	**Mont Dzumac**	**11.21**	**178**	Pn	**Pn**	**08 48 59.7**	**+1.9**
	1.5nm,0.3s,baz=7.6,slow=8.2,SNR=14						
ONTNC	**Ouen Toro**	**11.44**	**178**	*e*Pn	**Pn**	**08 49 01.4**	**+0.5**
PINNC	**Pines Island,**	**11.82**	**174**	*e*Pn	**Pn**	**08 49 06.0**	**0.0**
EIDS	**Eidsvold**	**20.25**	**222**	*e*P	**P**	**08 50 52.2**	**-0.7**
	15nm,1.1s						
CTA	**Charters Tower**	**21.14**	**242**	P	**P**	**08 51 03.8**	**+1.1**
	5.6nm,0.9s,baz=69,slow=13,SNR=5.0						
CTAO	**Charters Tower**	**21.14**	**242**	*e*P	**P**	**08 51 02.5**	**-0.2**
	12nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**29.12**	**1**	T	T	09 22 38.2	
	baz=181,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**29.13**	**1**	T	T	09 22 41.8	
	baz=181,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	**29.14**	**1**	T	T	09 22 43.2	
	baz=181,slow=76,SNR=28						
BKZ	**Black Stump Fm**	**29.74**	**163**	*e*P	**P**	**08 52 22.3**	**-1.7**
	3.7nm,0.7s						
STKA	**Stephens Creek**	**30.79**	**223**	*e*P	**P**	**08 52 33.6**	**+0.3**
STKA	**Stephens Creek**	**30.79**	**223**	P	**P**	**08 52 33.9**	**+0.6**
	1.5nm,0.7s,baz=349,slow=7.2,SNR=2.8						
THZ	**Tophouse**	**31.42**	**170**	*e*P	**P**	**08 52 38.8**	**0.0**
	14nm,1.1s						
WB2	**Warramunga Arr**	**31.80**	**250**	*e*P	**P**	**08 52 41.0**	**-1.3**
	7.8nm,1.0s						
WR1	**Warramunga Arr**	**31.81**	**250**	*e*P	**P**	**08 52 41.1**	**-1.4**
	9.2nm,1.0s						
WRA	**Warramunga Arr**	**31.81**	**250**	P	**P**	**08 52 41.1**	**-1.4**
	3.4nm,0.9s,baz=82,slow=9.2,SNR=7.6						
FOZ	**Fox Glacier**	**32.77**	**175**	*e*P	**P**	**08 52 50.4**	**-0.1**
	10nm,1.0s						
RPZ	**Rata Peaks**	**33.07**	**173**	*e*P	**P**	**08 52 52.3**	**-0.9**
	12nm,0.9s						
RPZ	**Rata Peaks**	**33.07**	**173**	P	**P**	**08 52 53.9**	**+0.7**
	7.0nm,0.8s,baz=90,slow=4.3,SNR=4.5						
ASAR	**Alice Springs**	**33.13**	**243**	P	**P**	**08 52 53.9**	**-0.2**
	0.8nm,0.6s,baz=64,slow=10,SNR=16						
SIJI	**Sorong**	**35.91**	**284**	LR	LR	09 08 42.6	
	comp=Z,215nm,19.0s,baz=68,slow=38						
FITZ	**Fitzroy Crossi**	**39.70**	**255**	*e*P	**P**	**08 53 49.6**	**-0.5**
ILAR	**Eielson Array**	**83.21**	**18**	P	**P**	**08 58 43.9**	**+0.4**
	0.6nm,1.1s,baz=215,slow=7.7,SNR=3.5						
NVAR	**Mina Array Bea**	**85.67**	**50**	P	**P**	**08 58 57.3**	**+0.4**
	0.4nm,0.7s,baz=204,slow=2.0,SNR=2.9						
MKAR	**Makanchi Array**	**93.53**	**317**	P	**P**	**08 59 33.2**	**-0.4**
	0.1nm,0.3s,baz=83,slow=6.8,SNR=3.3						

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*IDC **25** 08:50:26.8±1.4, 3°.71S×144°.60E, h0^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.7/36, mbtmp3.7/9, ML3.5/2, Error ellipse: s-maj=40.6km s-min=19.7km az=107.0*

*ISCJB **25** 08:50:29.6±1.1, 3°.7S±0°.1×144°.4E±0°.2, h26^{km}, mb3.6/7, Error ellipse: s-maj=25.2km s-min=14.6km az=11.2*

ISC 25 08:50:31.4±1.3, 3°.7S±0°.1×144°.4E±0°.2, h26^{km}, n10, σ1^{s}.12/10, mb3.7/7, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.89**	**287**	Pn	**Pn**	**08 51 28.2**	**-1.4**
	1.0nm,0.3s,baz=138,slow=14,SNR=4.8						
WRA	**Warramunga Arr**	**18.91**	**211**	P	**P**	**08 54 49.6**	**-0.7**
	0.2nm,0.3s,baz=31,slow=12,SNR=8.8						
ASAR	**Alice Springs**	**22.30**	**206**	P	**P**	**08 55 26.6**	**-0.5**
	0.4nm,0.4s,baz=33,slow=7.8,SNR=18						
FITZ	**Fitzroy Crossi**	**23.30**	**231**	P	**P**	**08 55 38.6**	**+1.1**
KSRS	**Korea Array**	**43.72**	**341**	P	**P**	**08 58 34.5**	**+0.1**
	1.3nm,0.7s,baz=159,slow=9.5,SNR=5.8						
CMAR	**Chiang Mai Arr**	**49.90**	**298**	P	**P**	**08 59 24.7**	**+1.5**
	0.7nm,0.3s,baz=122,slow=6.3,SNR=4.6						
SONM	**Songino Array**	**61.16**	**332**	P	**P**	**09 00 44.4**	**+0.6**
	0.3nm,0.6s,baz=139,slow=9.6,SNR=2.7						
MKAR	**Makanchi Array**	**74.09**	**321**	P	**P**	**09 02 06.3**	**+0.9**
	0.2nm,0.4s,baz=123,slow=7.6,SNR=3.4						
ZALV	**Zalesovo Beam**	**75.71**	**328**	P	**P**	**09 02 13.5**	**-1.0**
	0.3nm,0.4s,baz=103,slow=4.6,SNR=3.0						
ILAR	**Eielson Array**	**84.40**	**24**	P	**P**	**09 03 00.4**	**-0.8**
	0.7nm,0.8s,baz=259,slow=5.0,SNR=8.7						

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*ISCJB **25** 08:53:44.2±0.7, 38°.90N±0°.02×25°.66E±0°.04, h3^{km}±5^{km}, Error ellipse: s-maj=5.4km s-min=3.5km az=163.1*

*DDA **25** 08:53:44.5, 38°.92N×25°.72E, h7^{km}±2^{km}, ML2.7*

*ATH **25** 08:53:44.8, 38°.90N×25°.69E, h18^{km}±8^{km}, ML2.4/3, Error ellipse: s-maj=8.2km s-min=1.1km az=70.0*

*ISK **25** 08:53:44.2, 38°.93N×25°.70E, h6^{km}, ML2.8/9*

*THE **25** 08:53:45.5, 38°.91N×25°.71E, h13^{km}±2^{km}, ML2.3/3, Error ellipse: s-maj=3.0km s-min=1.4km az=102.0*

ISC 25 08:53:45.0±1.1, 38°.91N±0°.02×25°.70E±0°.03, h13^{km}±9^{km}, n29, σ0^{s}.62/46, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.33**	**22**	P	**Pg**	**08 53 51.6**	**0.0**
SIGR				S	**Sb**	**08 53 57.1**	**-0.8**
SIGR				AML	AML	08 53 58.0	
	comp=N,2454μm,0.3s						
SIGR				AML	AML	08 53 58.4	
	comp=E,1934μm,0.6s						
SIGR	**SIGRI**	**0.33**	**22**	P	**Pg**	**08 53 51.6**	**0.0**
SIGR				S	**Sb**	**08 53 57.0**	**-0.8**
PRK	**Paraskevi**	**0.56**	**53**	P	**Pg**	**08 53 55.7**	**-0.3**
PRK				S	**Sb**	**08 54 04.3**	**-0.3**
PRK				AML	AML	08 54 06.3	
	comp=N,791μm,0.4s						
PRK				AML	AML	08 54 11.3	
	comp=E,660μm,0.5s						
PRK	**Paraskevi**	**0.56**	**53**	P	**Pb**	**08 53 57.1**	**+0.5**
PRK				S	**Sb**	**08 54 04.4**	**-0.1**
CHOS	**Chios island**	**0.59**	**152**	P	**Pg**	**08 53 56.3**	**-0.3**
CHOS				S	**Sg**	**08 54 04.6**	**+0.2**
CHOS				AML	AML	08 54 05.8	
	comp=N,963μm,0.7s						
CHOS				AML	AML	08 54 08.7	
	comp=E,1102μm,0.3s						
CHOS	**Chios island**	**0.59**	**152**	P	**Pg**	**08 53 56.2**	**-0.3**
AYVA	**Ayvalik**	**0.87**	**62**	*i* P	**Pg**	**08 54 01.5**	**-0.3**
AYVA				*i* S	**Sb**	**08 54 14.0**	**+0.5**
AYVA				IAML_P			
	comp=Z,368nm,0.2s						
URLA	**Izmir**	**0.89**	**128**	PG	**Pg**	**08 54 02.2**	**0.0**
URLA				SG	**Sb**	**08 54 14.8**	**+0.7**
URLA	**Izmir**	**0.89**	**128**	*i* P	**Pg**	**08 54 01.7**	**-0.6**
URLA				*i* S	**Sn**	**08 54 15.4**	**-0.6**
URLA				IAML_P			
	comp=Z,2μm,0.3s						
ZEY	**zmir**	**0.92**	**136**	*e*P	**Pg**	**08 54 01.4**	**-1.4**
ZEY				*i* S	**Sn**	**08 54 16.4**	**-0.2**
ZEY				IAML_P			
	comp=Z,1μm,0.2s						
BOZC	**Bozcaada**	**0.97**	**16**	PG	**Pb**	**08 54 03.2**	**-0.5**
BOZC				SG	**Sg**	**08 54 16.6**	**+0.1**
EZN	**Ezine**	**1.04**	**28**	PG	**Pb**	**08 54 03.9**	**-0.9**
EZN	**Ezine**	**1.04**	**28**	P	**Pb**	**08 54 04.7**	**-0.1**
EZN				S	**Sn**	**08 54 19.1**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**1.06**	**38**	*i* P	**Pn**	**08 54 05.5**	**-0.1**
BAYC				*i* S	**Sn**	**08 54 19.9**	**-0.3**
BAYC				IAML_P			
	comp=Z,1μm,0.2s						
LIA	**Limnos Island**	**1.06**	**338**	P	**Pg**	**08 54 05.4**	**-0.1**
LIA				S	**Sn**	**08 54 19.9**	**-0.3**
LIA	**Limnos Island**	**1.06**	**338**	P	**Pn**	**08 54 05.7**	**+0.1**
LIA				S	**Sn**	**08 54 20.3**	**+0.1**
ZEDA	**zmir-Bergama**	**1.08**	**86**	*i* P	**Pn**	**08 54 05.6**	**-0.1**
ZEDA				*i* S	**Sn**	**08 54 20.8**	**+0.2**
ZEDA				IAML_P			
	comp=Z,1μm,0.1s						
DGB	**zmir**	**1.26**	**132**	*i* P	**Pb**	**08 54 08.5**	**-0.2**
DGB				*i* S	**Sg**	**08 54 26.3**	**+0.6**
DGB				IAML_P			
	comp=Z,295nm,0.2s						
AOS	**Alonnisos**	**1.44**	**281**	PN	**Pb**	**08 54 11.5**	**-0.1**
AOS	**Alonnisos**	**1.44**	**281**	P	**Pb**	**08 54 11.8**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.60**	**22**	PN	**Pn**	**08 54 13.6**	**+0.6**
STEP	**BALIKESIR_Sava**	**1.64**	**73**	*i* P	**Pn**	**08 54 13.6**	**+0.1**
STEP				*i* S	**Sg**	**08 54 37.9**	**+0.1**
STEP				IAML_P			
	comp=Z,385nm,0.1s						
LPK	**Lapseki**	**1.68**	**29**	PN	**Pb**	**08 54 14.8**	**-0.9**
ERIK	**Erikli-Kesan**	**1.87**	**19**	PN	**Pn**	**08 54 17.1**	**+0.5**
KRBG	**Karabiga-Canak**	**1.93**	**39**	PN	**Pn**	**08 54 18.1**	**+0.6**
ALN	**Alexandroupoli**	**2.00**	**8**	PN	**Pn**	**08 54 19.2**	**+0.7**
SBT4	**Kumbag-Tekirda**	**2.38**	**36**	PN	**Pn**	**08 54 24.7**	**+1.2**
KCTX	**Karacabey (Bur**	**2.46**	**56**	PN	**Pn**	**08 54 26.1**	**+1.3**
ARMT	**Armutlu**	**2.95**	**55**	PN	**Pn**	**08 54 33.3**	**+1.8**

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*IDC **25** 09:04:39.9±1.8, 6°.63N×126°.58E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.5/37, mbtmp3.9/5, Error ellipse: s-maj=54.6km s-min=15.8km az=47.0*

*ISCJB **25** 09:04:44.9±0.9, 6°.30N±0°.05×126°.31E±0°.05, h30^{km}±6^{km}, mb3.7/5, Error ellipse: s-maj=9.2km s-min=7.2km az=157.2*

*MAN **25** 09:04:45.8, 6°.47N×126°.29E, h28^{km}, MS3.2*

ISC 25 09:04:46.4±1.7, 6°.36N±0°.08×126°.3E±0°.1, h38^{km}±6^{km}, n12, σ1^{s}.30/18, mb3.7/5, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.58**	**357**	*e*P	**Pn**	**09 04 57.6**	**-0.7**
MATI				*e*S	**Sn**	**09 05 05.4**	**-1.2**
DDMP	**Don Marcelino,**	**0.62**	**246**	*e*P	**Pn**	**09 04 59.2**	**+0.4**
DDMP				*e*S	**Sn**	**09 05 05.3**	**-2.4**
DAV	**Davao City (W)**	**0.99**	**315**	Pn	**Pn**	**09 05 03.2**	**-0.6**
	128nm,0.3s,baz=100,slow=12,SNR=7.2						
DAV				Sn	**Sn**	**09 05 18.8**	**+2.3**
	234nm,0.3s,baz=294,slow=21,SNR=17						
DMPH	**Davao City--Mi**	**1.05**	**313**	⇑*e*P	**Pn**	**09 05 05.3**	**+0.7**
DMPH				*e*S	**Sn**	**09 05 19.7**	**+1.6**
KCP	**Kidapawan**	**1.35**	**299**	⇓*i*P	**Pn**	**09 05 08.7**	**0.0**
KCP				*i* S	**Sn**	**09 05 25.6**	**+0.1**
GSPH	**General Santos**	**1.35**	**258**	⇑*e*P	**Pn**	**09 05 08.1**	**-0.8**
SKMP	**Bagumbayan, Su**	**1.74**	**275**	*e*P	**Pn**	**09 05 14.3**	**+0.2**
SKMP				*e*S	**Sn**	**09 05 34.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**24.31**	**181**	P	**P**	**09 10 01.5**	**+1.0**
	12nm,1.3s,baz=14,slow=7.5,SNR=4.6						
WRA	**Warramunga Arr**	**27.32**	**163**	P	**P**	**09 10 27.5**	**-0.3**
	0.4nm,0.5s,baz=343,slow=10,SNR=11						
ASAR	**Alice Springs**	**30.76**	**166**	P	**P**	**09 10 59.1**	**+0.7**
	0.8nm,0.6s,baz=344,slow=7.0,SNR=21						
STKA	**Stephens Creek**	**40.74**	**160**	P	**P**	**09 12 24.8**	**+1.1**
	1.7nm,0.7s,baz=342,slow=6.4,SNR=3.2						
MKAR	**Makanchi Array**	**55.16**	**324**	P	**P**	**09 14 13.3**	**-1.9**
	0.3nm,0.4s,baz=123,slow=7.2,SNR=4.8						

MAN 25 09:10:42.4, 10°.10N×125°.02E, h83^{km}, mb3.8, ML2.6, MS2.1, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.16**	**283**	*e*P	Pn	09 10 55.9	+1.4
MSLP				*e*S	Sn	09 11 05.2	+1.9
SNPH	**Sibulan**	**1.91**	**247**	*i* P	Pn	09 11 13.7	+0.4
SNPH				*i* S	Sn	09 11 37.6	+0.8
PAGZ	**Pagadian**	**2.76**	**216**	*e*P	Pn	09 11 25.6	+1.0

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*ISCJB **25** 09:12:04.3±0.8, 24°.88N±0°.08×95°.13E±0°.07, h104^{km}, mb3.6/4, Error ellipse: s-maj=12.1km s-min=9.0km az=160.3*

*IDC **25** 09:12:05.7±3.9, 24°.82N×95°.15E, h104^{km}±64^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.1/52, mbtmp3.8/6, ML4.1/2, Error ellipse: s-maj=55.2km s-min=19.7km az=3.0*

ISC 25 09:12:05.8±0.9, 24°.9N±0°.1×95°.12E±0°.08, h104^{km}, n7, σ1^{s}.30/9, mb3.6/4, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**3.01**	**284**	*e*PN	**Pn**	**09 12 53.0**	**+1.0**
SHL				*i* SN	**Sn**	**09 13 25.0**	**-2.5**
BRDH	**Bariadhala**	**3.87**	**236**	P	**Pn**	**09 13 03.3**	**0.0**
	32nm,0.3s,baz=283,slow=16,SNR=1.9						
BRDH				S	**Sn**	**09 13 47.6**	**-0.2**
	42nm,0.3s,baz=255,slow=20,SNR=8.5						
CMAR	**Chiang Mai Arr**	**7.32**	**150**	P	**Pn**	**09 13 49.7**	**-0.4**
	0.5nm,0.3s,baz=326,slow=14,SNR=9.5						
MKAR	**Makanchi Array**	**24.15**	**338**	P	**P**	**09 17 13.5**	**+1.4**
	1.2nm,0.4s,baz=145,slow=10.0,SNR=14						
SONM	**Songino Array**	**24.59**	**18**	P	**P**	**09 17 15.5**	**-0.8**
	0.4nm,0.3s,baz=212,slow=12,SNR=4.4						
KSRS	**Korea Array**	**30.58**	**58**	P	**P**	**09 18 09.5**	**-0.3**
	0.6nm,0.7s,baz=252,slow=12,SNR=3.3						
FINES	**FINESS Array B**	**58.46**	**328**	P	**P**	**09 21 50.9**	**+0.3**
	1.9nm,0.9s,baz=87,slow=10,SNR=2.8						

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*IDC **25** 09:17:25.5±1.0, 8°.28S×127°.61E, h0^{km}, mb3.9/4, mb1 4.0/7, mb1mx3.7/49, mbtmp3.9/7, ML3.8/3, Error ellipse: s-maj=28.1km s-min=20.2km az=62.0*

*ISCJB **25** 09:17:26.7±0.8, 8°.48S±0°.07×127°.78E±0°.07, h33^{km}, mb3.8/4, Error ellipse: s-maj=10.4km s-min=9.2km az=27.4*

ISC 25 09:17:29.5±0.9, 8°.48S±0°.08×127°.75E±0°.09, h35^{km}, n8, σ2^{s}.89/11, mb3.8/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.38**	**247**	Pn	**Pn**	**09 18 32.9**	**-0.8**
	5.1nm,0.3s,baz=97,slow=19,SNR=3.1						
BATI				Sn	**Sn**	**09 19 23.9**	**+0.3**
	38nm,0.3s,baz=106,slow=15,SNR=6.3						
SIJI	**Sorong**	**8.33**	**25**	Pn	**Pn**	**09 19 26.1**	**-1.8**
	0.9nm,0.3s,baz=49,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**13.06**	**151**	Pn	**Pn**	**09 20 32.4**	**-0.2**
	1.6nm,0.3s,baz=319,slow=13,SNR=96						
WRA				Sn	**Sn**	**09 22 55.7**	**-1.1**
	1.5nm,0.3s,baz=300,slow=14,SNR=6.9						
ASAR	**Alice Springs**	**16.21**	**159**	Pn	**Pn**	**09 21 15.9**	**+1.1**
	0.5nm,0.3s,baz=335,slow=13,SNR=29						
ASAR				Sn	**Sn**	**09 24 07.5**	**-6.1**
	0.2nm,0.3s,baz=320,slow=17,SNR=2.8						
CTA	**Charters Tower**	**21.30**	**125**	P	**P**	**09 22 15.6**	**+2.4**
	1.6nm,0.9s,baz=316,slow=12,SNR=2.0						
STKA	**Stephens Creek**	**26.61**	**153**	P	**P**	**09 23 08.8**	**+4.1**
	2.6nm,0.4s,baz=334,slow=8.7,SNR=14						
MKAR	**Makanchi Array**	**68.27**	**328**	P	**P**	**09 28 27.6**	**+0.7**
	0.3nm,0.5s,baz=121,slow=7.9,SNR=7.7						
ZALV	**Zalesovo Beam**	**71.94**	**335**	P	**P**	**09 28 48.5**	**-0.7**
	0.7nm,0.4s,baz=125,slow=7.2,SNR=3.3						

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*IDC **25** 09:18:28.4±1.2, 14°.63N×146°.92E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.7/56, mbtmp3.9/9, ML3.9/1, MS2.7/1, Ms1 2.7/1, ms1mx2.6/41, Error ellipse: s-maj=30.5km s-min=20.1km az=122.0*

*ISCJB **25** 09:18:31.5±1.1, 14°.6N±0°.1×147°.0E±0°.1, h33^{km}, mb3.8/8, Error ellipse: s-maj=23.9km s-min=10.3km az=136.9*

ISC 25 09:18:33.5±1.2, 14°.6N±0°.2×146°.8E±0°.1, h33^{km}, n9, σ0^{s}.73/10, mb4.0/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.12**	**242**	Pn	**Pn**	**09 19 07.1**	**+0.4**
	30nm,0.3s,baz=17,slow=4.2,SNR=11						
GUMO				Sn	**Sb**	**09 19 36.6**	**-0.7**
	66nm,0.3s,baz=7.5,slow=19,SNR=7.2						
GUMO				LR	LR	09 19 59.4	
	comp=Z,168nm,18.4s,baz=120,slow=40						
JNU	**Nakatsue**	**23.43**	**325**	P	**P**	**09 23 40.3**	**+0.3**
	4.0nm,0.7s,baz=82,slow=4.7,SNR=3.5						
KSRS	**Korea Array**	**28.27**	**327**	P	**P**	**09 24 23.2**	**-0.6**
	0.9nm,0.6s,baz=151,slow=9.2,SNR=4.9						
WRA	**Warramunga Arr**	**36.45**	**200**	P	**P**	**09 25 35.7**	**+0.2**
	1.4nm,0.9s,baz=16,slow=9.5,SNR=3.9						
SONM	**Songino Array**	**47.01**	**323**	P	**P**	**09 27 02.3**	**+0.5**
	1.1nm,0.6s,baz=136,slow=6.5,SNR=5.1						
MKAR	**Makanchi Array**	**62.07**	**315**	P	**P**	**09 28 52.0**	**+0.9**
	1.6nm,0.5s,baz=88,slow=8.6,SNR=19						
ILAR	**Eielson Array**	**66.86**	**25**	P	**P**	**09 29 21.8**	**-0.3**
	0.2nm,0.6s,baz=259,slow=5.5,SNR=3.7						
YKA	**Yellowknife Ar**	**81.11**	**28**	P	**P**	**09 30 45.4**	**+0.1**
	0.1nm,0.4s,baz=281,slow=5.1,SNR=4.0						
FINES	**FINESS Array B**	**91.03**	**336**	P	**P**	**09 31 33.1**	**-1.2**
	1.2nm,0.8s,baz=31,slow=3.2,SNR=2.8						

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*ISCJB **25** 09:19:16.9±0.3, 35°.40S±0°.07×17°.02W±0°.07, h10^{km}, mb4.7/46, MS4.5/13, Error ellipse: s-maj=10.3km s-min=7.6km az=157.1*

*IDC **25** 09:19:16.7±0.5, 35°.41S×16°.89W, h0^{km}, mb4.4/23, mb1 4.4/23, mb1mx4.3/47, mbtmp4.4/23, MS4.5/13, Ms1 4.5/13, ms1mx4.4/18, Error ellipse: s-maj=19.0km s-min=11.5km az=170.0*

*NEIC **25** 09:19:18.1±0.3, 35°.41S×16°.96W, h10^{km}, mb4.8/20, Error ellipse: s-maj=12.8km s-min=7.4km az=170.0*

*GCMT **25** 09:19:23.1±0.1, 35°.52S±0°.01×16°.77W±0°.01, h18^{km}, MW5.4/115, Moment Tensor Solution. s81,c116; s115,c211; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.10±.03; $M_{\theta\theta}$-0.35±.03; $M_{\phi\phi}$0.45±.02; $M_{r\theta}$-0.26±.05; $M_{\theta\phi}$1.23±.02; $M_{\phi r}$0.37±.05; Best double couple: $M_0$1.37200×10^{17} NP1:ϕ_s172.00000°, δ81.00000°, λ-163.00000°. NP2:ϕ_s80.00000°, δ73.00000°, λ-9.00000°. Principal axes: T 1.3610, Plg6.0000°, Azm305.0000°; N 0.0230, Plg71.0000°, Azm198.0000°; P -1.3840, Plg18.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 09:19:18.6±0.4, 35°.39S±0°.09×16°.97W±0°.08, h10^{km}, n106, σ1^{s}.64/78, mb4.7/53, MS4.5/13, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H09W1	**TRISTAN DA CUN**	**4.12**	**116**	T	T	09 24 36.6	
	SNR=104						
H09N1	**TRISTAN DA CUN**	**4.12**	**115**	T	T	09 24 38.3	
	SNR=147						
H10S2	**ASCENSION HYDR**	**26.39**	**5**	T	T	09 52 46.4	
	baz=184,slow=74,SNR=166						
H10S3	**ASCENSION HYDR**	**26.40**	**5**	T	T	09 52 46.8	
	baz=184,slow=74,SNR=118						
H10S1	**ASCENSION HYDR**	**26.41**	**5**	T	T	09 52 47.8	
	baz=184,slow=74,SNR=113						
H10N1	**ASCENSION HYDR**	**27.51**	**5**	T	T	09 53 58.4	
	baz=191,slow=79,SNR=14						
H10N3	**ASCENSION HYDR**	**27.51**	**5**	T	T	09 53 58.7	
	baz=191,slow=79,SNR=42						
H10N2	**ASCENSION HYDR**	**27.52**	**5**	T	T	09 54 03.0	
	baz=191,slow=79,SNR=22						
SUR	**Sutherland**	**31.39**	**96**	LR	LR	09 35 10.4	
	comp=Z,599nm,20.4s,baz=247,slow=30						

BDFB	Brasilia	34.01	297	P	P	09 26 01.6	-1.4
	9.3nm,1.0s,baz=127,slow=7.9,SNR=9.1						
BDFB				LR	LR	09 38 07.3	
	comp=Z,2µm,18.1s,baz=114,slow=33						
TSUM	Tsumeb	34.47	71	eP	P	09 26 04.9	-2.0
	12nm,1.1s						
TSUM				eP	P	09 26 05.2	-1.6
TSUM	Tsumeb	34.47	71	P	P	09 26 05.2	-1.6
	1.3nm,0.4s,baz=245,slow=12,SNR=3.7						
CPUP	Villa Florida	35.60	273	eP	P	09 26 15.3	-1.1
	8.4nm,1.1s						
CPUP	Villa Florida	35.60	273	P	P	09 26 15.3	-1.1
	3.8nm,0.9s,baz=109,slow=7.4,SNR=6.7						
CPUP				LR	LR	09 38 13.2	
	comp=Z,1µm,21.1s,baz=124,slow=32						
VNA1	Neumayer--Stat	35.63	175	P	P	09 26 25.7	+10
VNA2	Neumayer--Watz	35.97	175	P	P	09 26 19.7	+0.6
	baz=346,slow=11						
VNA3	Neumayer Olymp	36.13	176	P	P	09 26 20.9	+0.4
BOSA	Boshof	36.23	91	P	P	09 26 19.6	-2.4
	3.2nm,0.9s,baz=227,slow=9.3,SNR=4.3						
BOSA				LR	LR	09 38 01.9	
	comp=Z,603nm,19.0s,baz=239,slow=31						
SNAA	Sanae	37.10	173	P	P	09 26 32.1	+3.3
SNAA	Sanae	37.10	173	eP	P	09 26 28.0	-0.8
	9.4nm,1.1s						
SNAA	Sanae	37.10	173	P	P	09 26 28.0	-0.8
	2.2nm,1.0s,baz=353,slow=14,SNR=2.0						
LBTB	Lobatse	37.96	86	eP	P	09 26 35.0	-1.7
	13nm,1.0s						
LBTB	Lobatse	37.96	86	P	P	09 26 35.0	-1.7
	6.6nm,1.0s,baz=253,slow=12,SNR=6.8						
USHA	Ushuaia	40.11	225	P	P	09 26 55.2	+1.0
	8.7nm,1.2s,baz=45,slow=18,SNR=3.0						
PLCA	Paso Flores	41.98	246	eP	P	09 27 08.6	-1.4
	10.0nm,1.1s						
PLCA	Paso Flores	41.98	246	P	P	09 27 08.6	-1.4
	5.1nm,0.9s,baz=121,slow=6.7,SNR=6.0						
PLCA				LR	LR	09 42 51.7	
	comp=Z,616nm,18.7s,baz=122,slow=34						
MATP	Matopo	42.49	82	P	P	09 27 13.7	-0.6
	5.0nm,0.7s,baz=238,slow=9.3,SNR=13						
LIC	Lamto	42.89	18	eP	P	09 27 20.8	+3.4
	85nm,1.4s						
KIC	Kosan Boka	43.09	18	eP	P	09 27 19.4	+0.4
	73nm,1.3s						
TIC	Toumodi	43.30	17	eP	P	09 27 22.1	+1.4
DBIC	Dimbokro	43.36	18	eP	P	09 27 19.8	-1.4
	18nm,1.1s						
DBIC	Dimbokro	43.36	18	P	P	09 27 19.8	-1.4
	15nm,1.2s,baz=216,slow=6.3,SNR=3.2						
DBIC				LR	LR	09 40 55.6	
	comp=Z,284nm,22.0s,baz=173,slow=30						
SIV	San Ignacio	43.77	285	P	P	09 27 24.4	-0.2
	13nm,0.9s,baz=122,slow=8.1,SNR=33						
LSZ	Lusaka	45.01	75	eP	P	09 27 34.2	-0.4
	7.7nm,0.9s						
LSZ	Lusaka	45.01	75	P	P	09 27 33.3	-1.3
	4.5nm,0.8s,baz=205,slow=5.4,SNR=5.8						
GO02	Mina Guanaco	46.11	268	eP	P	09 27 43.4	-0.1
	24nm,1.1s						
LVC	Limon Verde	46.70	271	eP	P	09 27 47.1	-1.1
LVC				eP	P	09 27 47.4	-0.8
LVC	Limon Verde	46.70	271	P	P	09 27 47.1	-1.1
	4.9nm,0.6s,baz=62,slow=4.4,SNR=5.1						
PB10	IPOC Station P	47.63	269	eP	P	09 27 54.9	-0.1
	46nm,1.1s						
PB04	IPOC Station P	47.84	271	eP	P	09 27 56.7	-0.2
	43nm,1.0s						
PB01	IPOC Station P	47.91	273	eP	P	09 27 55.9	-1.4
	9.1nm,0.7s						
PB11	IPOC Station P	48.68	274	eP	P	09 28 02.0	-1.4
	86nm,1.1s						
MNMC	Minye Minye	48.95	275	eP	P	09 28 04.1	-1.5
	48nm,0.9s						
LPAZ	La Paz	49.25	279	P	P	09 28 05.9	-2.4
	6.1nm,0.9s,baz=113,slow=8.0,SNR=10						
TORD	Torodi Ar. Bea	51.41	24	P	P	09 28 22.1	-1.7
	5.1nm,1.0s,baz=199,slow=7.5,SNR=9.1						
TORD				LR	LR	09 46 31.3	
	comp=Z,424nm,18.6s,baz=290,slow=32						
TOA1	Torodi Ar. Sit	51.41	24	eP	P	09 28 22.1	-1.7
PTGA	Pitinga	52.78	301	eP	P	09 28 33.9	-0.2
	20nm,1.1s						
MAW	Mawson	54.00	152	LR	LR	09 46 31.9	
	comp=Z,427nm,21.7s,baz=273,slow=30						
QSPA	South Pole Qui	54.86	180	eP	P	09 28 48.9	-0.1
	36nm,1.1s						
NNA	Nana	58.65	278	P	P	09 29 16.9	+0.5
	16nm,0.9s,baz=150,slow=4.2,SNR=6.0						
KMBO	Kilima Mbogo	60.73	68	LR	LR	09 53 27.4	
	comp=Z,763nm,19.1s,baz=258,slow=34						
ATAH	Atahualpa	62.68	281	P	P	09 29 46.0	+1.7
	7.0nm,1.0s,baz=135,slow=7.9,SNR=7.5						
ROSC	El Rosal	66.99	294	LR	LR	09 57 55.3	
	comp=Z,883nm,20.4s,baz=174,slow=35						
SDV	Santo Domingo	67.05	300	P	P	09 30 12.5	0.0
	10nm,1.1s,baz=252,slow=9.1,SNR=5.8						
OTAV	Otavalo	67.19	288	eP	P	09 30 13.7	0.0
	5.3nm,0.9s						
VNDA	Vanda	67.36	180	P	P	09 30 16.2	+2.9
	6.8nm,1.1s,baz=219,slow=17,SNR=1.9						
MDT	Midelt	68.83	11	P	P	09 30 26.2	+3.0
	2.2nm,0.8s,baz=201,slow=7.4,SNR=3.5						
KEST	Kesra	74.89	22	eP	P	09 30 59.4	-0.1
	12nm,0.9s						
KEST	Kesra	74.89	22	P	P	09 30 59.4	-0.1
	3.0nm,0.8s,baz=0.0,slow=8.1,SNR=3.1						
KEST				LR	LR	10 00 12.2	
	comp=Z,526nm,21.3s,baz=168,slow=33						
ESDC	Sonseca Array	75.65	10	P	P	09 31 05.4	+1.6
	0.2nm,0.3s,baz=180,slow=3.0,SNR=4.2						
JTS	JuntasAbangare	78.51	291	eP	P	09 31 20.7	+0.3
	8.0nm,0.9s						
JTS	JuntasAbangare	78.51	291	P	P	09 31 22.1	+1.7
	7.0nm,0.9s,baz=314,slow=8.6,SNR=4.2						
DAVOX	Davos/Dischmat	85.29	18	P	P	09 31 55.0	-0.5
	4.2nm,0.9s,baz=140,slow=8.8,SNR=7.8						
FETA	Feichten	85.73	19	eP	P	09 32 04.9	+7.2
	8.0nm,1.3s						
DAVA	Damuels	85.76	18	PcP	P	09 32 02.1	+4.3
	13nm,1.2s						
DIVS	Divibare	85.95	26	eP	P	09 31 59.3	+0.5
	7.1nm,1.1s						
ABTA	Abfaltersbach	85.96	20	P	P	09 32 05.3	+6.6
	15nm,1.3s						
SQTA	Sankt Quirin	86.04	19	eP	P	09 32 08.7	+10
	3.5nm,0.5s						
MOTA	Moosalm	86.12	19	pP	P	09 32 04.3	+4.7
	4.4nm,0.9s						
MYKA	Terra Mystica	86.17	21	eP	P	09 32 07.9	+8.2
	3.9nm,0.8s						
RETA	Reutte	86.17	18	P	P	09 32 06.4	+6.7
	0.3nm,0.3s						
WTTA	Wattenberg	86.19	19	pP	P	09 32 05.3	+5.3
	8.2nm,1.0s						
OBKA	Obir	86.32	21	eP	P	09 32 10.8	+10
	6.4nm,1.0s						
KBA	Koelnbreinsper	86.49	20	eP	P	09 32 11.2	+10
	7.7nm,1.2s						
SOKA	Soboth	86.62	21	epP	P	09 32 06.8	+4.8
	12nm,1.1s						
ARSA	Arzberg	87.28	21	pP	P	09 32 10.6	+5.5
	2.5nm,0.7s						
MOA	Molln	87.45	20	PcP	P	09 32 09.8	+3.9
	6.2nm,0.9s						
CONA	Conrad Observa	87.99	21	epP	P	09 32 14.0	+5.4
	3.7nm,1.1s						
BR101	Keskin Array S	88.11	37	eP	P	09 32 10.2	+0.8
BRTR	Keskin Array B	88.11	37	P	P	09 32 10.2	+0.8
	0.5nm,0.9s,baz=186,slow=3.9,SNR=3.2						
GERES	GERESS Array B	88.20	20	LR	LR	10 08 51.8	
	comp=Z,202nm,21.6s,baz=214,slow=34						
CLL	Collm	90.26	18	eP	P	09 32 22.0	+3.0
AKASG	Malin Array Be	94.89	27	P	P	09 32 41.0	+0.6
	0.2nm,0.3s,baz=223,slow=10.0,SNR=3.3						
AKBB	Malin Array Si	94.89	27	eP	P	09 32 41.0	+0.6
	2.5nm,1.0s						
KBZ	Khabaz	95.73	39	LR	LR	10 14 17.4	
	comp=Z,118nm,21.4s,baz=216,slow=34						
H01W2	Cape Leeuwin H	96.50	141	T	T	11 20 43.0	
	baz=219,slow=75,SNR=19						
H01W3	Cape Leeuwin H	96.51	141	T	T	11 20 44.0	
	baz=219,slow=75,SNR=22						
H01W1	Cape Leeuwin H	96.51	141	T	T	11 20 44.1	
	baz=219,slow=75,SNR=16						
ASAR	Alice Springs	115.11	150	PKP	PKiKP	09 37 59.6	-1.0
	0.4nm,0.9s,baz=197,slow=1.0,SNR=2.7						
TULEG	Thule	116.25	348	ePKPdf	PKPdf	09 37 58.6	-2.4
WR1	Warramunga Arr	118.61	149	ePKPdf	PKPdf	09 38 05.3	-2.1
WRA	Warramunga Arr	118.61	149	PKP	PKPdf	09 38 05.3	-2.1
	0.3nm,0.9s,baz=227,slow=1.9,SNR=3.1						
MK32	Makanchi Array	120.61	52	ePKPdf	PKiKP	09 38 10.8	+0.5
MKAR	Makanchi Array	120.61	52	PKP	PKiKP	09 38 10.8	+0.5
	0.1nm,0.2s,baz=280,slow=0.9,SNR=2.3						
YKA	Yellowknife Ar	124.13	326	PKP	PKPdf	09 38 16.4	0.0
	0.9nm,0.8s,baz=100,slow=2.1,SNR=14						
YKB5	Yellowknife Ar	124.13	326	ePKPdf	PKPdf	09 38 16.4	0.0
SONA0	Songino Array	136.79	55	ePKPdf	PKPdf	09 38 40.6	-0.5
SONM	Songino Array	136.79	55	PKP	PKPdf	09 38 40.6	-0.5
	0.5nm,0.5s,baz=163,slow=5.6,SNR=3.0						
ILAR	Eielson Array	138.21	330	PKhKP	PKPpre	09 38 35.5	
	0.9nm,0.9s,baz=7.2,slow=4.4,SNR=4.2						
ILAR				PKP	PKPdf	09 38 42.0	-1.0
	1.6nm,0.9s,baz=356,slow=2.8,SNR=6.8						
ILB	Eielson Array	138.21	330	ePKPdf	PKPdf	09 38 42.0	-1.0
CAST	Castle Rocks	140.84	330	ePKPpre	PKPpre	09 38 41.9	
SEY	Seymchan	151.64	10	PKPbc	PKPbc	09 39 11.2	-1.1
	8.9nm,0.9s,baz=14,slow=3.1,SNR=14						
KS15	Wonju Array Si	151.74	75	ePKPbc	PKiKP	09 39 15.1	+1.3
KSAR	Wonju Array Be	151.74	75	PKPbc	PKiKP	09 39 15.1	+1.3
KSRS	Korea Array	151.77	75	PKPbc	PKiKP	09 39 15.1	+1.3
	1.0nm,0.7s,baz=278,slow=2.7,SNR=4.9						
KLR	Kul'dur	153.27	49	PKPbc	PKiKP	09 39 17.6	+1.1
	1.4nm,0.7s,baz=334,slow=2.8,SNR=4.3						

IDC 25 09:24:34.6±1.3,5°.02S×151°.25E,h0^{km},mb3.9/7, mb1 4.2/7,mb1mx3.8/34,mbtmp3.9/7,Error ellipse: s-maj=50.7km s-min=19.9km az=120.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.16	227	P	P	09 29 31.9	-0.5
	1.2nm,0.4s,baz=52,slow=10,SNR=8.7						
ASAR	Alice Springs	24.96	220	P	P	09 29 59.2	-0.9
	2.1nm,0.9s,baz=57,slow=9.0,SNR=18						
FITZ	Fitzroy Crossi	28.20	240	P	P	09 30 30.6	+1.3
	2.2nm,0.3s,baz=59,slow=9.6,SNR=12						
MJAR	Matsushiro Arr	43.11	345	P	P	09 32 35.3	-1.5
	1.4nm,0.8s,baz=182,slow=9.7,SNR=2.5						
SONM	Songino Array	65.69	329	P	P	09 35 22.0	+0.8
	0.4nm,0.6s,baz=131,slow=4.4,SNR=2.2						
ILAR	Eielson Array	82.95	22	P	P	09 37 01.1	-0.1
	0.7nm,0.9s,baz=259,slow=5.5,SNR=7.4						
NVAR	Mina Array Bea	93.44	52	P	P	09 37 53.4	+0.8
	0.6nm,0.8s,baz=241,slow=8.3,SNR=4.7						
TORD	Torodi Ar. Bea	148.90	287	PKPbc	PKPbc	09 44 24.5	-1.0
	2.0nm,0.8s,baz=93,slow=3.4,SNR=8.8						

IGQ 25 09:37:23.0±0.9,3°S±21°×7°8W±2°1,h64^{km},MLv3.6, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUYO	Puyo, Santa Ro	1.42	355	P	Pn	09 37 52.9	+6.1
PUYO				S	Sn	09 38 16.5	+12
COHC	Cochancay	1.42	288	P	Pn	09 37 53.0	+6.3
COHC				S	Sn	09 38 16.6	+12
PAT1	Patacocha	1.50	339	P	Pn	09 37 54.1	+5.9
BPAT	Tungurahua Vol	1.50	339	P	Pn	09 37 53.8	+5.5
BPAT				S	Sn	09 38 17.4	+10
ARRY	Arrayan	1.51	338	P	Pn	09 37 53.3	+5.1
BMAS	Trigal station	1.52	338	P	Pn	09 37 53.7	+5.3
BMAS				S	Sn	09 38 18.6	+11
RETU	Refugio	1.55	340	P	Pn	09 37 55.1	+6.1
BULB	Ulba Tungurahu	1.56	341	P	Pn	09 37 54.4	+5.5
BULB				S	Sn	09 38 18.8	+10
BBIL	Ulba Tungurahu	1.57	338	P	Pn	09 37 54.0	+5.0
BIL2	Estacion Bilba	1.57	338	P	Pn	09 37 54.9	+5.9
BRUN	Tungurahua Vol	1.57	341	P	Pn	09 37 54.7	+5.6
RUN5	Runtun	1.58	341	P	Pn	09 37 55.1	+5.9
POND	Pondoa	1.58	340	P	Pn	09 37 54.2	+5.0
JUI6	Juive	1.59	339	P	Pn	09 37 54.2	+5.0
MILO	Milagro-Astudi	1.77	291	P	Pn	09 38 00.4	+9.1
PIS1	Pisayambo	1.91	345	P	Pn	09 38 01.7	+8.0
SAGO	Sagoatoa	1.91	336	P	Pn	09 37 59.8	+6.0
ARDO	Archidona, Ten	1.91	3	P	Pn	09 38 00.2	+6.8
BTAM	Cotopaxi Volca	2.28	347	P	Pn	09 38 07.2	+8.3
BREF	Cotopaxi Volca	2.30	346	P	Pn	09 38 08.2	+9.0
BVC2	Cotopaxi Volca	2.30	347	P	Pn	09 38 07.8	+8.6
MCRA	Macar, Loja	2.51	235	P	Pn	09 38 02.8	+1.3

MEX 25 09:43:24.5±0.6,15°.36N×92°.28W,h178^{km}±7^{km},MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.45	178	iP	Pn	09 43 47.6	-1.2
THIG				iS	Sn	09 44 05.5	-2.1
CCIG	Comitan	0.93	9	iP	Pn	09 43 50.6	-1.1
CCIG				iS	Sn	09 44 10.3	-2.5
PCIG		0.97	291	iP	Pn	09 43 50.5	-1.2
PCIG				iS	Sn	09 44 10.2	-2.5

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*IDC **25** 09:47:46.0±0.7,6°.56S×148°.18E,h0^{km},mb4.2/13, mb1 4.4/15,mb1mx4.2/39,mbtmp4.2/15,ML4.1/2,MS3.8/4, Ms1 3.8/4,ms1mx3.3/38,Error ellipse: s-maj=26.9km s-min=14.8km az=99.0*

*ISCJB **25** 09:47:51.0±0.4,6°.64S±0°.06×148°.11E±0°.08,h51^{km}, mb4.3/16,Error ellipse: s-maj=12.5km s-min=5.6km az=32.4*

*NEIC **25** 09:47:51.9±1.0,6°.60S×148°.06E,h39^{km}±10^{km},mb4.1/7, Error ellipse: s-maj=11.3km s-min=6.3km az=127.0*

ISC 25 09:47:53.0±0.5,6°.69S±0°.07×148°.17E±0°.09,h51^{km},n43, σ2^{s}.07/45,mb4.3/16,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.68	58	ePn	Pn	09 49 01.7	+0.5
COEN	Coen	8.74	214	ePn	Pn	09 49 56.6	-0.3
COEN				eSn	Sn	09 51 39.1	+5.0
HNR	Honiara	11.97	104	LR	LR	09 54 10.5	
	comp=Z,242nm,18.4s,baz=260,slow=32						
CTA	Charters Tower	13.45	188	Pn	Pn	09 51 00.9	-0.4
	0.2nm,0.3s,baz=6.5,slow=13,SNR=5.8						
CTAO	Charters Tower	13.45	188	ePn	Pn	09 50 57.2	-4.1
SIJI	Sorong	17.82	288	P	P	09 51 59.2	+1.4
	0.5nm,0.3s,baz=127,slow=20,SNR=3.1						
MTN	Manton Dam	17.87	249	ePn	Pn	09 51 56.3	-1.8
	11nm,1.0s						
WRAB	Tennant Creek	18.80	224	eP	P	09 52 08.3	-0.1
	11nm,0.9s						
WB2	Warramunga Arr	18.81	224	eP	P	09 52 08.3	-0.2
	8.0nm,0.6s						
WR1	Warramunga Arr	18.81	224	eP	P	09 52 07.9	-0.7
	12nm,0.8s						
WR1				eSn	Sn	09 55 34.0	-5.5
WRA	Warramunga Arr	18.82	224	P	P	09 52 07.9	-0.7
	1.0nm,0.3s,baz=50,slow=11,SNR=58						
WRA				S	Sn	09 55 34.0	-5.5
	0.1nm,0.3s,baz=49,slow=23,SNR=4.0						
WRA				LR	LR	10 00 11.2	
	comp=Z,566nm,19.4s,baz=190,slow=39						
GUMO	Guam	20.41	351	LR	LR	09 58 48.1	
	comp=Z,141nm,20.7s,baz=116,slow=33						
AS31	Alice Springs	21.75	218	eP	P	09 52 40.5	+0.1
	9.2nm,0.6s						
AS31				eS	S	09 56 42.7	+4.3
ASAR	Alice Springs	21.75	218	P	P	09 52 40.5	+0.1
	16nm,0.5s,baz=52,slow=9.5,SNR=408						
ASAR				S	S	09 56 42.7	+4.2
	9.1nm,1.0s,baz=30,slow=22,SNR=20						
ASAR				LR	LR	10 01 42.5	
	comp=Z,507nm,19.5s,baz=168,slow=38						
FITZ	Fitzroy Crossi	24.72	241	P	P	09 53 10.7	+0.9
	13nm,0.4s,baz=49,slow=8.4,SNR=99						
STKA	Stephens Creek	25.80	193	eP	P	09 53 18.5	-0.9
	1.4nm,0.9s						
STKA	Stephens Creek	25.80	193	P	P	09 53 19.1	-0.4
	1.9nm,0.4s,baz=4.2,slow=8.9,SNR=12						
RPZ	Rata Peaks	41.99	155	P	P	09 55 39.8	+0.5
	3.9nm,0.6s,baz=0.0,slow=6.1,SNR=4.6						
USRK	Ussuriysk Ar.	52.72	345	P	P	09 57 02.1	-0.4
	2.8nm,0.8s,baz=157,slow=10,SNR=5.1						
CM31	Chiang Mai Arr	54.60	298	eP	P	09 57 15.4	-1.4
CMAR	Chiang Mai Arr	54.60	298	P	P	09 57 15.4	-1.4
	1.3nm,0.3s,baz=140,slow=27,SNR=3.6						
BJT	Baijiatuau	55.05	330	eP	P	09 57 22.8	+3.1
	47nm,0.4s						
KLR	Kul'dur	57.51	347	P	P	09 57 35.7	-1.3
	1.7nm,0.7s,baz=162,slow=3.7,SNR=6.7						
PETK	Petropavlovsk-	60.11	7	P	P	09 57 54.7	-0.3
	3.5nm,1.0s,baz=203,slow=6.3,SNR=3.0						
PEA1	Petropavlovsk-	60.12	7	eP	P	09 57 54.8	-0.3
SONA0	Songino Array	65.57	330	eP	P	09 58 31.7	+0.1
SONM	Songino Array	65.57	330	P	P	09 58 31.7	+0.1
	1.3nm,0.9s,baz=176,slow=5.9,SNR=5.7						
MK32	Makanchi Array	78.77	320	eP	P	09 59 49.3	-1.0
MKAR	Makanchi Array	78.77	320	P	P	09 59 49.3	-1.0
	0.2nm,0.3s,baz=96,slow=8.7,SNR=5.3						
ZALV	Zalesovo Beam	80.21	328	P	P	09 59 57.4	-0.6
	0.6nm,0.3s,baz=121,slow=6.4,SNR=2.2						
ZAA1	Zalesovo Array	80.21	328	eP	P	09 59 57.4	-0.6
KKAR	Karatay Array	85.60	314	eP	P	10 00 25.9	-0.3
	4.9nm,1.1s						
ILAR	Eielson Array	85.65	23	P	P	10 00 24.1	-1.8
	0.8nm,0.8s,baz=249,slow=4.7,SNR=5.1						
ILB	Eielson Array	85.65	23	eP	P	10 00 24.1	-1.8
NV01	Mina Array Sit	96.87	52	eP	P	10 01 19.6	+0.3
NVAR	Mina Array Bea	96.87	52	P	P	10 01 19.6	+0.3
	0.6nm,0.7s,baz=268,slow=4.1,SNR=4.3						
RPN	Rapa Nui	97.99	119	LR	LR	10 37 37.1	
	comp=Z,1µm,21.4s,baz=306,slow=30						
GEC2	GERESS Array S	123.13	326	ePKPdf	PKiKP	10 06 45.4	+0.9
GERES	GERESS Array B	123.13	326	PKP	PKiKP	10 06 45.4	+0.9
	1.1nm,0.7s,baz=351,slow=1.8,SNR=7.7						
TORD	Torodi Ar. Bea	146.39	284	PKPbc	PKPbc	10 07 29.5	+0.1
	3.3nm,0.9s,baz=48,slow=3.4,SNR=16						
TOA1	Torodi Ar. Sit	146.39	284	ePKPdf	PKPbc	10 07 29.5	+0.1
PTGA	Pitinga	150.97	104	ePKPdf	PKPdf	10 07 38.1	+2.5
DBIC	Dimbokro	153.21	272	PKPbc	PKiKP	10 07 47.6	+1.0
	2.8nm,0.8s,baz=353,slow=3.3,SNR=3.3						

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*NIED **25** 09:55:00,36°.90N×139°.40E,h5^{km},Mw4.1 Best double couple: $M_0$1.76000×10^{15} NP1:ϕ_s357.00000°,δ62.00000°, λ13.00000°. NP2:ϕ_s261.00000°,δ79.00000°,λ151.00000°.*

*ISCJB **25** 09:55:13.5±0.4,36°.91N±0°.03×139°.39E±0°.05,h10^{km}, mb3.6/11,MS4.2/1,Error ellipse: s-maj=6.0km s-min=4.0km az=38.5*

*IDC **25** 09:55:13.8±0.7,36°.86N×139°.41E,h0^{km},mb3.7/11, mb1 3.9/15,mb1mx3.8/37,mbtmp3.7/15,ML3.2/4,MS3.4/6, Ms1 3.4/6,ms1mx3.1/44,Error ellipse: s-maj=19.0km s-min=9.5km az=150.0*

*JMA **25** 09:55:13.5,36°.92N×139°.39E,h4^{km}±1^{km},M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s165.00000°,δ89.00000°,λ-21.00000°. NP2: ϕ_s255.00000°,δ69.00000°,λ-179.00000°. Principal axes: T Plg14.0000°, Azm212.0000°; N Plg69.0000°, Azm343.0000°; P Plg15.0000°, Azm118.0000°;*

JMA Felt III J1.

ISC 25 09:55:15.3±0.6,36°.91N±0°.04×139°.38E±0°.04,h10^{km},n24, σ1^{s}.43/26,mb3.7/11,3C-2D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKT	Katashina	0.18	216	⇑P	Pg	09 55 17.6	-1.5
JKT				S	Sg	09 55 20.5	-1.3
JSB	Shiboa	0.44	82	⇓P	Pg	09 55 22.4	-1.4
JHK	Hiroka	0.45	319	⇓P	Pg	09 55 22.4	-1.6
JHK				S	Sg	09 55 28.5	-1.4
JAG	Ashikaga	0.49	173	⇑P	Pg	09 55 23.2	-1.6
JFY	Yanaizu	0.56	28	⇑P	Pg	09 55 24.2	-2.0
JFY				S	Sg	09 55 31.0	-2.5
MJAR	Matsushiro Arr	1.01	249	Pg	Pg	09 55 32.8	-1.9
	85nm,0.3s,baz=105,slow=7.9,SNR=3351						
MJAR				Lg	Lg	09 55 46.3	
	15nm,0.3s,baz=70,slow=25,SNR=15						
MJAR				LR	LR	09 56 11.9	
	comp=Z,275nm,20.9s,baz=90,slow=58						
MAT	Matsushiro	1.01	249	P	Pg	09 55 33.2	-1.5
MAT				S	Sg	09 55 46.2	-1.7
ASAJ	Asahikawa	7.60	18	Pn	Pn	09 57 07.6	+1.5
	0.4nm,0.3s,baz=197,slow=14,SNR=3.1						
ASAJ				LR	LR	10 00 21.8	
	comp=Z,196nm,19.0s,baz=209,slow=40						
JNU	Nakatsue	7.93	244	Pn	Pn	09 57 11.0	+0.3
	0.3nm,0.3s,baz=42,slow=9.1,SNR=5.3						
JNU				LR	LR	10 00 47.4	
	comp=Z,147nm,20.6s,baz=36,slow=42						
KSRS	Korea Array	9.16	277	Pn	Pn	09 57 30.0	+2.6
	0.8nm,0.3s,baz=86,slow=14,SNR=6.5						
KSRS				LR	LR	10 00 47.1	
	comp=Z,197nm,20.2s,baz=100,slow=36						
USRK	Ussuriysk Ar.	9.20	325	Pn	Pn	09 57 29.4	+1.5
	0.4nm,0.3s,baz=144,slow=12,SNR=6.1						
USRK				LR	LR	10 00 45.1	
	comp=Z,128nm,18.9s,baz=93,slow=36						
KLR	Kul'dur	13.51	338	LR	LR	10 03 10.8	
	comp=Z,153nm,19.2s,baz=148,slow=35						
MA2	Magadan	23.85	14	P	P	10 00 27.6	-0.8
	1.3nm,0.3s,baz=168,slow=7.5,SNR=5.0						
SONM	Songino Array	26.51	305	P	P	10 00 53.1	+0.1
	0.6nm,0.8s,baz=117,slow=8.5,SNR=3.9						
MKAR	Makanchi Array	42.80	302	P	P	10 03 13.1	0.0
	0.1nm,0.3s,baz=85,slow=3.0,SNR=2.8						
ILAR	Eielson Array	50.47	32	P	P	10 04 12.8	-0.1
	0.5nm,0.8s,baz=272,slow=7.3,SNR=4.4						
INK	Inuvik	55.24	27	P	P	10 04 48.4	+0.3
	1.4nm,0.9s,baz=278,slow=6.6,SNR=4.8						
WRA	Warramunga Arr	56.75	186	P	P	10 04 58.5	-0.8
	2.3nm,0.6s,baz=0.9,slow=7.4,SNR=36						
ASAR	Alice Springs	60.47	186	P	P	10 05 25.8	+0.4
	0.8nm,0.8s,baz=22,slow=6.7,SNR=9.0						
YKA	Yellowknife Ar	64.72	30	P	P	10 05 53.4	+0.1
	0.5nm,0.9s,baz=305,slow=6.8,SNR=5.5						
YBH	Yreka Blue Hor	71.70	51	LR	LR	10 32 56.4	
	comp=Z,154nm,21.7s,baz=84,slow=32						
AKASG	Malin Array Be	73.39	321	P	P	10 06 48.4	+1.1
	0.1nm,0.2s,baz=49,slow=6.1,SNR=3.2						
NVAR	Mina Array Bea	76.36	52	P	P	10 07 05.8	+0.8
	1.2nm,0.9s,baz=287,slow=5.9,SNR=5.6						
PDAR	Pinedale Array	78.90	44	P	P	10 07 19.4	+0.3
	0.5nm,0.9s,baz=284,slow=6.0,SNR=4.8						

IDC 25 10:07:57.9±2.7,5°.34S×131°.70E,h0^{km},mb4.1/2, mb1 4.0/4,mb1mx3.6/32,mbtmp3.9/4,ML3.8/2,Error ellipse: s-maj=239.9km s-min=24.6km az=70.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.74	170	Pn	Pn	10 11 28.9	+1.1
	0.4nm,0.3s,baz=342,slow=14,SNR=20						
WRA				Sn	Sn	10 13 58.7	-13
	1.1nm,0.3s,baz=331,slow=22,SNR=14						
ASAR	Alice Springs	18.34	174	P	Pn	10 12 13.2	-0.8
	0.6nm,0.3s,baz=348,slow=9.7,SNR=58						
ASAR				S	Sn	10 15 23.4	-16
	0.3nm,0.3s,baz=355,slow=28,SNR=6.5						
STKA	Stephens Creek	27.98	162	P	P	10 13 50.4	-0.1
	0.8nm,0.3s,baz=338,slow=11,SNR=4.9						
MKAR	Makanchi Array	67.79	326	P	P	10 18 57.8	+0.1
	0.8nm,0.4s,baz=112,slow=8.0,SNR=13						

IDC 25 10:23:09.3±17.0,22°.76S×178°.43W,h430^{km}±131^{km}, mb3.5/4,mb1 3.6/5,mb1mx3.1/40,mbtmp4.3/5,Error ellipse: s-maj=257.2km s-min=52.1km az=57.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.92	193	P	P	10 26 31.3	+0.8
	1.9nm,0.3s,baz=314,slow=2.7,SNR=10						
URZ				S	S	10 29 00.3	-17
	0.7nm,0.3s,baz=194,slow=22,SNR=6.9						
RPZ	Rata Peaks	22.64	200	P	P	10 27 35.2	-0.4
	3.3nm,0.7s,baz=22,slow=5.5,SNR=4.4						
STKA	Stephens Creek	36.49	247	P	P	10 29 35.2	-1.1
	0.8nm,0.4s,baz=58,slow=10.0,SNR=3.9						
ASAR	Alice Springs	43.66	259	P	P	10 30 34.8	+0.4
	4.0nm,0.8s,baz=97,slow=7.5,SNR=61						
WRA	Warramunga Arr	43.94	264	P	P	10 30 36.5	-0.1
	7.2nm,0.5s,baz=96,slow=8.4,SNR=373						

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*SOME **25** 10:34:51.1,42°.55N×79°.68E,h20^{km}*

*KRNET **25** 10:34:51.9±0.1,42°.61N×79°.68E,h20^{km},mb3.2*

*NNC **25** 10:34:51.4±0.7,42.°62N×79.°68E,h0^{km},mb3.6,mpv3.4,*
Error ellipse: s-maj=4.8km s-min=2.5km az=136.0

ISC 25 10:34:51.5±1.5**,42.°67N**±0.°04×**79.°67E**±0.°04**,h1**^{km}±11^{km}**,**
n58,σ**1^{s}.05**/99**,26C-19D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode** baz=15	**0.51**	**343**	*e*P	**Pb**	**10 35 03.3**	**-0.1**
SHLS	baz=15			*e*S	**Sb**	**10 35 12.2**	**+0.8**
SHLS	**Shalkode** 120nm,0.1s	**0.51**	**343**	*e*P	**Pb**	**10 35 03.3**	**-0.1**
SHLS	368nm,0.2s			*e*S	**Sb**	**10 35 12.2**	**+0.8**
UZB	**Uzynbulak** baz=18	**0.68**	**316**	*e*P	**Pb**	**10 35 05.4**	**-0.8**
UZB	baz=18			*e*S	**Sb**	**10 35 15.6**	**-0.5**
UZB	**Uzynbulak** 16nm,0.2s	**0.68**	**316**	*e*P	**Pb**	**10 35 05.4**	**-0.8**
UZB	244nm,0.2s			*e*S	**Sb**	**10 35 15.6**	**-0.5**
PDGK	**Podgornoye** 17nm,0.4s	**0.68**	**349**	⇑P	**Pb**	**10 35 05.5**	**-0.6**
PDGK	15nm,0.3s			⇑S	**Sb**	**10 35 15.7**	**-0.4**
PDGK	**Podgornoye** baz=49	**0.68**	**349**	⇓*i*P	**Pb**	**10 35 05.6**	**-0.6**
PDGK	baz=49			⇓*i*S	**Sb**	**10 35 15.7**	**-0.4**
KTMS	**Ketmen** 16nm,0.1s	**0.93**	**33**	P	**Pb**	**10 35 09.6**	**-0.9**
KTMS	42nm,0.1s			S	**Sb**	**10 35 23.0**	**-0.4**
KTMS	**Ketmen** baz=29	**0.93**	**33**	*e*P	**Pb**	**10 35 09.6**	**-0.9**
KTMS	baz=29			*e*S	**Sb**	**10 35 23.0**	**-0.4**
KTMS	**Ketmen** 16nm,0.1s	**0.93**	**33**	*e*P	**Pb**	**10 35 09.6**	**-0.9**
KTMS	42nm,0.1s			*e*S	**Sb**	**10 35 23.0**	**-0.4**
PRZ	**Przheval'sk** baz=63	**0.95**	**259**	⇑*i*P	**Pg**	**10 35 09.5**	**-0.2**
PRZ	baz=63			⇑*i*S	**Sg**	**10 35 22.7**	**+0.6**
SATY	**Saty** 20nm,0.1s	**1.01**	**293**	P	**Pg**	**10 35 11.1**	**+0.3**
SATY	156nm,0.1s			S	**Sn**	**10 35 25.5**	**-2.3**
SATY	**Saty** 20nm,0.1s	**1.01**	**293**	⇑*i*P	**Pg**	**10 35 11.1**	**+0.3**
SATY	156nm,0.1s			⇓*i*S	**Sn**	**10 35 25.5**	**-2.3**
KURS	**Kuram** 5.4nm,0.3s	**1.37**	**307**	P	**Pg**	**10 35 17.9**	**+0.2**
KURS	33nm,0.6s			S	**Sg**	**10 35 36.8**	**+1.3**
KURS	**Kuram** baz=9.0	**1.37**	**307**	⇓*e*P	**Pg**	**10 35 17.9**	**+0.2**
KURS	baz=9.0			⇓*e*S	**Sg**	**10 35 36.8**	**+1.3**
KURS	**Kuram** 5.4nm,0.3s	**1.37**	**307**	⇓*e*P	**Pg**	**10 35 17.9**	**+0.2**
KURS	33nm,0.6s			⇓*e*S	**Sg**	**10 35 36.8**	**+1.3**
DJR	**Jarkent** 14nm,0.5s	**1.67**	**3**	P	**Pg**	**10 35 23.0**	**-0.4**
DJR	20nm,0.3s			S	**Sg**	**10 35 46.8**	**+1.7**
DJR	**Jarkent** 16nm,0.2s	**1.67**	**3**	*e*P	**Pg**	**10 35 23.2**	**-0.3**
DJR	16nm,0.1s			*e*S	**Sg**	**10 35 46.5**	**+1.5**
KDJ	**Kajisay** baz=56	**1.92**	**255**	⇑*i*P	**Pb**	**10 35 26.6**	**-0.8**
KDJ	baz=56			⇑*i*S	**Sb**	**10 35 51.8**	**-0.1**
KOTS	**Kotyrbulak** 11nm,0.1s	**1.96**	**288**	Pg	**Pg**	**10 35 28.9**	**-0.1**
KOTS	130nm,0.4s			Lg	Lg	10 35 56.0	
KOTS	**Kotyrbulak** 10nm,0.3s	**1.96**	**288**	*e*P	**Pb**	**10 35 28.1**	**0.0**
KOTS	130nm,0.4s			*e*S	**Sg**	**10 35 55.0**	**+0.6**
MDOK	**Medeo** 3.8nm,0.4s	**1.99**	**285**	⇓P	**Pb**	**10 35 28.2**	**-0.3**
MDOK	36nm,0.6s			⇓S	**Sg**	**10 35 54.5**	**-0.8**
MDOK	**Medeo** 5.7nm,0.2s	**1.99**	**285**	Pg	**Pb**	**10 35 28.1**	**-0.4**
MDOK	43nm,0.6s			Lg	Lg	10 35 54.9	
MDOK	**Medeo** baz=87	**1.99**	**285**	⇑*i*P	**Pb**	**10 35 28.1**	**-0.4**
MDOK	baz=87			⇓*i*S	**Sg**	**10 35 54.8**	**-0.5**
MDOK	**Medeo** 5.7nm,0.2s	**1.99**	**285**	⇑*i*P	**Pb**	**10 35 28.1**	**-0.4**
MDOK	43nm,0.6s			⇓*i*S	**Sg**	**10 35 54.9**	**-0.5**
TNSS	**Tian-Shan** 14nm,0.4s	**2.03**	**281**	Pg	**Pb**	**10 35 28.6**	**-0.9**
TNSS	59nm,0.4s			Lg	Lg	10 35 56.6	
TNSS	**Tian-Shan** baz=83	**2.03**	**281**	*e*P	**Pb**	**10 35 28.8**	**-0.7**
TNSS	baz=83			*e*S	**Sg**	**10 35 56.2**	**-0.7**
TNSS	**Tian-Shan** 11nm,0.2s	**2.03**	**281**	*e*P	**Pb**	**10 35 28.8**	**-0.7**
TNSS	34nm,0.2s			*e*S	**Sg**	**10 35 56.1**	**-0.7**
ARXS	**Arharly** 11nm,0.3s	**2.05**	**320**	Pg	**Pb**	**10 35 29.2**	**-0.3**
ARXS	74nm,0.3s			Lg	Lg	10 35 56.8	
ARXS	**Arharly** 11nm,0.3s	**2.05**	**320**	*e*P	**Pb**	**10 35 29.2**	**-0.3**
ARXS	74nm,0.3s			*e*S	**Sg**	**10 35 56.8**	**-0.5**
KNDC	**Almaty** 138nm,0.8s	**2.06**	**286**	⇓S	**Sb**	**10 35 55.4**	**-0.4**
IZV	**Izvestkoviy** 17nm,0.1s	**2.28**	**280**	Pg	**Pb**	**10 35 32.9**	**-0.5**
IZV	46nm,0.2s			Lg	Lg	10 36 02.8	
IZV	**Izvestkoviy** 17nm,0.1s	**2.28**	**280**	*e*P	**Pb**	**10 35 32.9**	**-0.5**
IZV	46nm,0.2s			*e*S	**Sb**	**10 36 02.8**	**+0.7**
CHKK	**Chushkaly** 5.3nm,0.2s	**2.29**	**302**	Pg	**Pb**	**10 35 33.6**	**0.0**
CHKK	53nm,0.2s			Lg	Lg	10 36 03.7	
CHKK	**Chushkaly** 5.3nm,0.2s	**2.29**	**302**	⇑*i*P	**Pb**	**10 35 33.6**	**0.0**
CHKK	53nm,0.2s			⇑*i*S	**Sg**	**10 36 03.7**	**-1.3**
KTBS	**Karatobe** 5.0nm,0.1s	**2.42**	**297**	Pg	**Pb**	**10 35 35.7**	**-0.1**
KTBS	75nm,0.2s			Lg	Lg	10 36 07.6	
KTBS	**Karatobe** baz=97	**2.42**	**297**	*e*P	**Pb**	**10 35 35.7**	**-0.1**
KTBS	baz=97			*e*S	**Sg**	**10 36 07.6**	**-1.6**
KTBS	**Karatobe** 5.0nm,0.1s	**2.42**	**297**	*e*P	**Pb**	**10 35 35.7**	**-0.1**
KTBS	75nm,0.2s			*e*S	**Sg**	**10 36 07.6**	**-1.6**
MTBS	**Maitube** 11nm,0.4s	**2.42**	**282**	Pg	**Pb**	**10 35 35.7**	**-0.3**
MTBS	50nm,0.6s			Lg	Lg	10 36 07.6	
MTBS	**Maitube** 11nm,0.4s	**2.42**	**282**	*e*P	**Pb**	**10 35 35.4**	**-0.5**
MTBS	50nm,0.6s			⇓*i*S	**Sg**	**10 36 07.6**	**-1.8**
ULHL	**Ulahol** baz=63	**2.57**	**262**	⇑*i*P	**Pn**	**10 35 35.6**	**+1.2**
ULHL	baz=63			⇑*i*S	**Sb**	**10 36 07.7**	**-3.0**
KAPS	**Kapalarasan** 8.1nm,0.3s	**2.63**	**355**	Pg	**Pb**	**10 35 39.5**	**+0.1**
KAPS	17nm,0.7s			Lg	Lg	10 36 14.5	
KAPS	**Kapalarasan** 8.1nm,0.3s	**2.63**	**355**	*e*P	**Pb**	**10 35 39.5**	**+0.1**
KAPS	17nm,0.7s			⇓*e*S	**Sg**	**10 36 14.5**	**-1.4**
KUU	**Kurty** 2.5nm,0.2s	**2.72**	**298**	Pg	**Pb**	**10 35 41.4**	**+0.4**
KUU	19nm,0.4s			Lg	Lg	10 36 16.8	
KUU	**Kurty** 0.7nm,0.2s	**2.72**	**298**	*e*P	**Pb**	**10 35 41.1**	**+0.1**
KUU	24nm,0.3s			⇑*i*S	**Sg**	**10 36 16.8**	**-2.1**
KST	**Kastek** 7.0nm,0.2s	**2.75**	**279**	Pg	**Pb**	**10 35 40.7**	**-0.9**
KST	38nm,0.4s			Lg	Lg	10 36 16.9	
KST	**Kastek** 7.0nm,0.2s	**2.75**	**279**	*e*P	**Pb**	**10 35 40.6**	**-0.9**
KST	28nm,0.4s			*e*S	**Sb**	**10 36 16.4**	**+0.6**
BOOM	**Boomskoye usch** baz=69	**2.76**	**268**	⇑*e*P	**Pn**	**10 35 38.6**	**+1.6**
BOOM	baz=69			⇑*i*S	**Sb**	**10 36 12.5**	**-3.6**
DGS	**Degeres** 11nm,0.3s	**2.92**	**283**	Pg	**Pb**	**10 35 42.4**	**-1.9**
DGS	51nm,0.6s			Lg	Lg	10 36 19.8	
DGS	**Degeres** 6.1nm,0.3s	**2.92**	**283**	*e*P	**Pb**	**10 35 42.9**	**-1.5**
DGS	51nm,0.6s			*e*S	**Sb**	**10 36 20.6**	**0.0**
NRN	**Naryn** baz=48	**3.00**	**247**	⇑*e*P	**Pn**	**10 35 41.7**	**+1.3**
NRN	baz=48			⇑*i*S	**Sn**	**10 36 17.7**	**+0.6**
TKM2	**Tokmak 2** 3.3nm,0.6s	**3.01**	**276**	⇓Pn	**Pn**	**10 35 41.7**	**+1.3**
TKM2	14nm,0.6s			⇓Lg	Lg	10 36 27.1	
TKM2	**Tokmak 2** baz=77	**3.01**	**276**	⇑*i*P	**Pn**	**10 35 42.1**	**+1.6**
TKM2	baz=77			⇑*i*S	**Sn**	**10 36 18.8**	**+1.6**
KZA	**Kyzart** baz=62	**3.33**	**261**	⇓*i*P	**Pn**	**10 35 46.6**	**+1.6**
KZA	baz=62			⇓*i*S	**Sn**	**10 36 26.3**	**+0.9**
SGDS	**Sogindy** 2.2nm,0.4s	**3.77**	**284**	Pg	**Pb**	**10 35 59.2**	**+0.2**
SGDS	6.2nm,0.4s			Lg	Lg	10 36 47.8	
AAK	**Ala-Archa** 2.6nm,0.6s	**3.82**	**271**	⇑Pg	**Pb**	**10 36 01.3**	**+1.6**
AAK	7.6nm,0.5s			⇑Lg	Lg	10 36 51.4	
ARLS	**Aral** baz=61	**4.05**	**260**	⇑*i*P	**Pn**	**10 35 56.0**	**+1.3**
ARLS	baz=61			⇑*i*S	**Sn**	**10 36 42.9**	**+0.1**
MK31	**Makanchi Array** 0.1nm,0.1s,baz=21,slow=6.0,SNR=11	**4.53**	**23**	⇑Pn	**Pn**	**10 36 01.1**	**-0.2**
MK31	0.3nm,0.3s,baz=205,slow=27,SNR=3.9			⇓Sn	**Sn**	**10 36 54.2**	**-0.4**
MK31	1.4nm,0.5s,baz=200,slow=23,SNR=7.5			⇑Lg	Lg	10 37 14.9	
MRKS	**Merke** 3.2nm,0.5s	**4.75**	**273**	Pg	**Pb**	**10 36 17.4**	**+1.9**
MRKS	5.1nm,0.3s			Lg	Lg	10 37 19.1	

*IDC **25** 11:00:37.6±0.8,41.°81N×4.°34E,h0^{km},mb3.7/8,*
mb1 3.9/16,mb1mx3.8/48,mbtmp3.8/16,ML4.2/6,MS3.0/4,
Ms1 3.0/4,ms1mx2.6/57,Error ellipse: s-maj=19.4km
s-min=14.6km az=138.0
*ISCJB **25** 11:00:38.1±0.2,41.°97N±0.°02×4.°18E±0.°02,h10^{km},*
mb3.9/10,Error ellipse: s-maj=2.3km s-min=1.5km
az=156.4
*STR **25** 11:00:38.9±1.6,42°N±8°×°±°,h7^{km}±14^{km},M4.2/18,*
mB5.1/1,mb4.6/2,MLv4.2/18,Mw(mB)4.4/1
*MDD **25** 11:00:39.2±0.7,41.°85N×4.°27E,h5^{km}±4^{km},mb4.6/1,*
mbLg3.8/2,Error ellipse: s-maj=4.7km s-min=3.0km
az=139.0,PRXIMO
*LDG **25** 11:00:42.7±0.1,41.°85N×4.°26E,h25^{km},Md3.7/5,Ml4.3/63,*
Error ellipse: s-maj=2.4km s-min=1.4km az=144.0
*ROM **25** 11:00:43.8±0.3,41.°87N±0.°02×4.°93E±0.°02,h12^{km}±1^{km},*
ML3.7/30

ISC 25 11:00:38.3±0.5**,41.°88N**±0.°03×**4.°23E**±0.°03**,h10**^{km}**,n268,**
σ**2^{s}.60**/417**,mb3.9**/10**,2C-3D,Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EJON	**La Jonquera** 34nm,0.1s,SNR=18	**1.15**	**300**	⇓Pg	**Pg**	**11 01 00.6**	**+0.2**
EJON	524nm,0.1s,SNR=26			Lg	Lg	11 01 15.4	
SJAF	**Saint Jean de** 7.1nm,0.1s,SNR=18	**1.17**	**302**	⇓Pg	**Pb**	**11 01 00.8**	**+0.1**
SJAF	397nm,0.2s,SNR=7.9			Lg	Lg	11 01 15.4	
SJAF	**Saint Jean de**	**1.17**	**302**	P	**Pb**	**11 01 00.7**	**0.0**
SJAF				Pg	**Pb**	**11 01 00.8**	**+0.1**
CFON	**Fontmartina** 167nm,0.2s,SNR=18	**1.35**	**266**	⇑Pg	**Pn**	**11 01 03.7**	**+0.4**
CFON	2μm,0.2s,SNR=7.9			Sn	**Sb**	**11 01 20.3**	**-0.8**
VALF	**Valcebollere**	**1.73**	**288**	Pn	**Pb**	**11 01 09.7**	**-0.6**
CLLI	**Llivia** 22nm,0.1s,SNR=18	**1.78**	**290**	⇓Pn	**Pb**	**11 01 10.5**	**-0.7**
CLLI	151nm,0.1s,SNR=7.9			Sn	**Sn**	**11 01 31.9**	**-0.2**
CARF	**Carcanieres**	**1.79**	**299**	Pn	**Pn**	**11 01 09.9**	**+0.6**
ARBF	**Arbois**	**1.80**	**26**	P	**Pn**	**11 01 10.1**	**+0.6**
FNEB	**Nbias**	**1.88**	**304**	P	**Pn**	**11 01 11.1**	**+0.6**
MAHO	**Mahon**	**1.98**	**179**	Pn	**Pn**	**11 01 10.3**	**-1.6**
MAHO				Sn	**Sn**	**11 01 29.8**	**-7.0**
MAHO	**Mahon**	**1.98**	**179**	*e*P	**Pn**	**11 01 10.3**	**-1.6**
MAHO				*e*S	**Sn**	**11 01 29.8**	**-7.0**
EMIR	**Miracle** 5.5nm,0.2s,SNR=18	**2.02**	**272**	⇑Pn	**Pn**	**11 01 13.8**	**+1.2**
EMIR	160nm,0.1s,SNR=7.9			Sn	**Sn**	**11 01 38.1**	**+0.2**
ARTF	**Artigues**	**2.06**	**34**	P	**Pn**	**11 01 13.7**	**+0.6**
MTLF	**Montolieu** SNR=1.0	**2.08**	**315**	*e*Pn	**Pn**	**11 01 13.7**	**+0.3**
MTLF	990nm,0.3s,SNR=1.0			*e*Sn	**Sn**	**11 01 38.3**	**-1.1**
MTLF	**Montolieu**	**2.08**	**315**	Pn	**Pn**	**11 01 13.7**	**+0.3**
MTLF	495nm,0.3s			Sn	**Sn**	**11 01 38.3**	**-1.1**
LASF	**Ste Croix** SNR=1.0	**2.21**	**353**	*e*Pn	**Pn**	**11 01 15.2**	**+0.1**
LASF	1μm,0.4s			*e*Sn	**Sn**	**11 01 40.7**	**-1.9**
LASF	**Ste Croix**	**2.21**	**353**	Pn	**Pn**	**11 01 15.2**	**+0.1**
LASF	681nm,0.4s			Sn	**Sn**	**11 01 40.7**	**-1.9**
LMR	**La Mourre** SNR=1.0	**2.22**	**48**	*e*Pn	**Pn**	**11 01 15.3**	**+0.1**
LMR	1μm,0.3s			*e*Sn	**Sn**	**11 01 39.9**	**-2.8**
LMR	**La Mourre**	**2.22**	**48**	Pn	**Pn**	**11 01 15.3**	**+0.1**
LMR	611nm,0.3s			Sn	**Sn**	**11 01 39.9**	**-2.8**
TRBF	**Trabuc cave**	**2.23**	**355**	P	**Pn**	**11 01 15.7**	**+0.3**
BSTF	**la Bastide-des**	**2.25**	**27**	P	**Pn**	**11 01 16.1**	**+0.4**
RUSF	**Rustrel**	**2.26**	**24**	P	**Pn**	**11 01 17.4**	**+1.7**
SMRF	**Simiane la Rot** SNR=1.0	**2.32**	**25**	*e*Pn	**Pn**	**11 01 17.6**	**+1.0**
SMRF	370nm,0.4s			*e*Sn	**Sn**	**11 01 44.1**	**-1.0**
SMRF	**Simiane la Rot**	**2.32**	**25**	Pn	**Pn**	**11 01 17.6**	**+1.0**
SMRF	370nm,0.4s			Sn	**Sn**	**11 01 44.1**	**-1.0**
CSOR	**Sort** 16nm,0.2s,SNR=7.9	**2.36**	**283**	Pn	**Pn**	**11 01 19.3**	**+2.1**
CSOR	154nm,0.2s,SNR=7.9			Sn	**Sn**	**11 01 46.7**	**+0.5**
ETOS	**Mallorca** 23nm,0.1s,SNR=90	**2.37**	**208**	Pn	**Pn**	**11 01 16.3**	**-0.9**
ETOS	64nm,0.1s,SNR=10			Sn	**Sn**	**11 01 41.0**	**-5.4**
MLYF	**Mely**	**2.39**	**28**	P	**Pn**	**11 01 19.2**	**+1.6**
EPOB	**Poblet** 18nm,0.2s,SNR=100	**2.42**	**258**	Pn	**Pn**	**11 01 18.8**	**+0.8**
EPOB	143nm,0.1s,SNR=9.2			Sn	**Sn**	**11 01 47.6**	**-0.2**
FRF	**La Foret Royal** SNR=1.0	**2.45**	**46**	*e*Pn	**Pn**	**11 01 18.6**	**+0.3**
FRF	1μm,0.2s			*e*Sn	**Sn**	**11 01 46.5**	**-1.8**
FRF	**La Foret Royal**	**2.45**	**46**	Pn	**Pn**	**11 01 18.6**	**+0.3**
FRF	559nm,0.2s			Sn	**Sn**	**11 01 46.5**	**-1.8**
CALF	**Calern**	**2.72**	**46**	P	**Pn**	**11 01 22.6**	**+0.3**
OG26	**St.-Nazaire-De**	**2.81**	**16**	Pn	**Pn**	**11 01 24.5**	**+1.1**
MVIF	**Mont Vial**	**2.94**	**46**	Pn	**Pn**	**11 01 25.9**	**+0.6**
MVIF				P	**Pn**	**11 01 25.8**	**+0.5**
REVF	**Revere**	**2.96**	**50**	Pn	**Pn**	**11 01 25.8**	**+0.3**
REVF				P	Pb	11 01 26.0	-5.3
VIVF	**Saint-Julien-l** SNR=1.0	**2.99**	**6**	*e*Pn	**Pn**	**11 01 26.0**	**+0.1**
VIVF	174nm,0.2s			*e*Sn	**Sn**	**11 01 58.7**	**-3.1**
VIVF	**Saint-Julien-l**	**2.99**	**6**	Pn	**Pn**	**11 01 26.0**	**+0.1**
VIVF	87nm,0.2s			Sn	**Sn**	**11 01 58.7**	**-3.1**
EBR	**Ebro Roquetas** 367nm,0.1s,SNR=7.9	**3.01**	**251**	Pn	**Pn**	**11 01 26.2**	**+0.2**
EBR	798nm,0.2s,SNR=7.9			Sn	**Sn**	**11 02 01.5**	**-0.6**
ESCA	**l'Escarene**	**3.02**	**49**	P	**Pn**	**11 01 26.5**	**+0.3**
ERTA	**Horta de San J** 29nm,0.1s,SNR=101	**3.07**	**254**	Pn	**Pn**	**11 01 27.7**	**+0.7**
ERTA	67nm,0.2s			Sn	**Sn**	**11 02 02.6**	**-1.2**
SBF	**Sospel** SNR=1.0	**3.08**	**49**	*e*Pn	**Pn**	**11 01 27.4**	**+0.3**
SBF	394nm,0.2s			*e*Sn	**Sn**	**11 02 01.1**	**-2.8**
SBF	**Sospel**	**3.08**	**49**	Pn	**Pn**	**11 01 27.4**	**+0.3**
SBF	197nm,0.2s			Sn	**Sn**	**11 02 01.1**	**-2.8**
OGAG	**Argentiere**	**3.08**	**32**	P	**Pb**	**11 01 32.7**	**-0.6**
ISO	**Isola**	**3.09**	**41**	P	**Pn**	**11 01 28.0**	**+0.8**
ECHI	**Chisagues Biel** 7.8nm,0.1s,SNR=7.9	**3.10**	**286**	Pn	**Pn**	**11 01 29.9**	**+2.5**
ECHI	44nm,0.2s,SNR=4.0			Sn	**Sn**	**11 02 05.5**	**+0.9**
EPF	**Esparros** SNR=1.0	**3.10**	**293**	*e*Pn	**Pn**	**11 01 28.9**	**+1.5**
EPF	**Esparros**	**3.10**	**293**	*e*P	**Pb**	**11 01 32.1**	**-1.5**
EPF	**Esparros**	**3.10**	**293**	Pn	**Pn**	**11 01 28.9**	**+1.5**
EPF				Pg	**Pg**	**11 01 40.6**	**+2.8**
EPF	150nm,0.5s			Sn	**Sn**	**11 02 03.3**	**-1.2**
SURF	**Saint Ours**	**3.21**	**35**	P	**Pn**	**11 01 30.5**	**+1.5**
NEGI	**Seborga**	**3.22**	**51**	P	**Pn**	**11 01 28.6**	**-0.5**
NEGI	**Seborga**	**3.22**	**51**	P	**Pn**	**11 01 28.5**	**-0.5**
NEGI				S	**Sn**	**11 02 02.3**	**-5.2**
NEGI	comp=E,418μm,1.4s			AML	AML		
NEGI	comp=N,452μm,0.3s			AML	AML		
NEGI	comp=E,474μm,1.5s			AML	AML		
NEGI	comp=N,452μm,0.3s			AML	AML		
NEGI	comp=E,474μm,1.5s			AML	AML		
NEGI	comp=N,452μm,0.3s			AML	AML		
SAOF	**Saorge**	**3.22**	**48**	P	**Pn**	**11 01 29.5**	**+0.4**
SAOF	**Saorge**	**3.22**	**48**	P	**Pn**	**11 01 29.6**	**+0.5**
SAOF				S	**Sn**	**11 02 03.8**	**-3.7**
SAOF	comp=E,428μm,0.7s			AML	AML		
SAOF	comp=N,433μm,0.4s			AML	AML		
SAOF	comp=E,428μm,0.7s			AML	AML		
SAOF	comp=N,433μm,0.4s			AML	AML		
ORIF	**Oris-en-Rattie** SNR=1.0	**3.27**	**21**	*e*Pn	**Pn**	**11 01 31.2**	**+1.5**
ORIF	comp=N,125nm,0.4s,SNR=1.0			*e*Sn	**Sn**	**11 02 07.1**	**-1.5**
ORIF	**Oris-en-Rattie**	**3.27**	**21**	Pn	**Pn**	**11 01 31.2**	**+1.5**
ORIF	comp=N,63nm,0.4s			Sn	**Sn**	**11 02 07.1**	**-1.5**
ORIF	**Oris-en-Rattie**	**3.27**	**21**	P	**Pn**	**11 01 31.4**	**+1.8**
STV	**Sant Anna di V**	**3.27**	**43**	P	**Pn**	**11 01 30.7**	**+0.9**
STV	**Sant Anna di V**	**3.27**	**43**	P	**Pn**	**11 01 30.7**	**+0.9**
STV				S	**Sn**	**11 02 06.1**	**-2.7**
STV	comp=E,392μm,0.6s			AML	AML		
STV	comp=N,455μm,0.7s			AML	AML		
STV	comp=E,392μm,0.6s			AML	AML		
STV	comp=N,455μm,0.7s			AML	AML		
ENR	**Entracque**	**3.31**	**44**	P	**Pn**	**11 01 31.1**	**+0.9**
ENR	**Entracque**	**3.31**	**44**	P	**Pn**	**11 01 31.2**	**+1.0**
ENR				S	**Sn**	**11 02 07.2**	**-2.5**
ENR	comp=E,742μm,0.6s			AML	AML		
ENR	comp=N,646μm,0.5s			AML	AML		
ENR	comp=N,646μm,0.5s			AML	AML		
ENR	comp=E,742μm,0.6s			AML	AML		
PZZ	**Stroppo**	**3.37**	**38**	P	**Pn**	**11 01 32.9**	**+1.8**
PZZ	**Stroppo**	**3.37**	**38**	P	**Pn**	**11 01 33.1**	**+2.0**
PZZ				S	**Sn**	**11 02 08.1**	**-3.1**
PZZ	comp=E,710μm,0.6s			AML	AML		
PZZ	comp=N,594μm,0.4s			AML	AML		
PZZ	comp=E,710μm,0.6s			AML	AML		
PZZ	comp=N,594μm,0.4s			AML	AML		
IMI	**Imperia**	**3.37**	**52**	P	**Pn**	**11 01 30.6**	**-0.5**
IMI	**Imperia**	**3.37**	**52**	P	**Pn**	**11 01 30.6**	**-0.5**
IMI				S	**Sn**	**11 02 06.0**	**-5.2**
IMI	comp=E,412μm,0.5s			AML	AML		
IMI	comp=N,448μm,0.3s			AML	AML		
IMI	comp=N,448μm,0.3s			AML	AML		
IMI	comp=E,412μm,0.5s			AML	AML		
MBDF	**Montbardon** SNR=1.0	**3.40**	**32**	*e*Pn	**Pn**	**11 01 33.7**	**+2.2**
MBDF				*e*S	**Sn**	**11 02 16.0**	**+4.1**
MBDF	comp=E,168nm,0.7s			*e*Sg	**Sg**	**11 02 30.0**	**+2.6**
MBDF	**Montbardon**	**3.40**	**32**	Pn	**Pn**	**11 01 33.7**	**+2.2**
MBDF				Sn	**Sn**	**11 02 16.0**	**+4.1**
MBDF	comp=E,84nm,0.7s			Lg	Lg	11 02 30.0	
MGRO	**Montegrosso**	**3.40**	**49**	P	**Pn**	**11 01 31.6**	**0.0**
SSB	**Saint Sauveur**	**3.41**	**4**	P	**Pn**	**11 01 32.1**	**+0.5**
SSB				Pn	**Pn**	**11 01 32.1**	**+0.5**
DOI	**San Damiano**	**3.43**	**39**	P	**Pn**	**11 01 33.7**	**+1.8**
DOI	comp=E,709μm,0.3s			AML	AML		
DOI	comp=N,571μm,0.9s			AML	AML		
DOI	comp=E,709μm,0.3s			AML	AML		
DOI	comp=N,571μm,0.9s			AML	AML		
LBL	**Lubilhac**	**3.43**	**348**	Pn	**Pn**	**11 01 32.7**	**+0.8**
LBL				P	Pb	11 01 33.3	-5.9
CAF	**Calviac** SNR=1.0	**3.43**	**333**	*e*Pn	**Pn**	**11 01 33.3**	**+1.4**
CAF	comp=N,208nm,0.4s,SNR=1.0			*e*Sn	**Sn**	**11 02 11.4**	**-1.2**
CAF	comp=N,161nm,0.4s			*e*Sg	**Sg**	**11 02 31.6**	**+3.1**
CAF	**Calviac**	**3.43**	**333**	Pn	**Pn**	**11 01 33.3**	**+1.4**
CAF	comp=N,104nm,0.4s			Sn	**Sn**	**11 02 11.4**	**-1.2**
CAF	comp=N,80nm,0.4s			Lg	Lg	11 02 31.6	
ESAC	**San Caprasio**	**3.52**	**269**	Pn	**Pn**	**11 01 34.7**	**+1.6**

```
             comp=N,17nm,0.1s,SNR=25
ESAC                                Sn     Sn       11 02 14.0  -0.9
             comp=N,372nm,0.3s
GRN    Grenoble            3.54  18 Pn     Pn       11 01 34.5 +1.2
GBOS   Grotte di Boss      3.54  47 P      Pn       11 01 34.5 +1.0
RRL    Rocca Remolon       3.57  31 P      Pn       11 01 36.0 +2.0
RRL    Rocca Remolon       3.57  31 P      Pn       11 01 36.0 +2.0
RRL                                 AML    AML
             comp=E,430µm,0.3s
RRL                                 AML    AML
             comp=N,397µm,1.0s
RRL                                 AML    AML
             comp=E,430µm,0.3s
RRL                                 AML    AML
             comp=N,397µm,1.0s
RORO   Rocca Rossa         3.59  50 P      Pn       11 01 33.8  -0.2
RORO   Rocca Rossa         3.59  50 P      Pn       11 01 33.9  -0.2
RORO                                AML    AML
             comp=E,327µm,0.1s
RORO                                AML    AML
             comp=N,254µm,0.4s
RORO                                AML    AML
             comp=E,327µm,0.1s
RORO                                AML    AML
             comp=N,254µm,0.4s
GDM    Grand'Maison        3.59  22 P      Pn       11 01 35.7 +1.5
GDM                                 Pn     Pb       11 01 35.9  -6.2
EIBI   Ibiza               3.60 219 Pn     Pn       11 01 34.3 +0.1
             comp=N,2.6nm,0.1s,SNR=10.0
EIBI                                Sn     Sn       11 02 10.9  -5.9
             comp=N,79nm,0.3s
PGF    Pioggiola           3.60  78 ePn    Pn       11 01 32.6  -1.7
PGF                                 eSn    Sn       11 02 11.5  -5.5
             comp=N,186nm,0.2s
PGF    Pioggiola           3.60  78 Pn     Pn       11 01 32.6  -1.7
PGF                                 Sn     Sn       11 02 11.5  -5.5
             comp=N,93nm,0.2s
PGF    Pioggiola           3.60  78 P      Pn       11 01 32.7  -1.7
PGF                                 S      Sn       11 02 09.7  -7.3
BNI    Bardonecchia        3.64  28 P      Pn       11 01 38.0 +3.1
BNI                                 AML    AML
             comp=E,109µm,1.6s
BNI                                 AML    AML
             comp=N,111µm,1.6s
BNI                                 AML    AML
             comp=E,109µm,1.6s
BNI                                 AML    AML
             comp=N,111µm,1.6s
ETSF   Etsaut              3.69 288 ePn    Pn       11 01 37.2 +1.7
ETSF                                eSn    Sn       11 02 19.0  -0.1
ETSF                                eSg    Sg       11 02 38.6 +1.7
             comp=N,414nm,0.6s
ETSF   Etsaut              3.69 288 Pn     Pn       11 01 37.2 +1.7
ETSF                                Sn     Sn       11 02 19.0  -0.1
ETSF                                Lg     Lg       11 02 38.6
             comp=N,207nm,0.6s
BHB    Bricherasio         3.69  36 P      Pn       11 01 37.6 +2.1
BHB    Bricherasio         3.69  36 P      Pn       11 01 37.6 +2.1
BHB                                 AML    AML
             comp=E,281µm,0.5s
BHB                                 AML    AML
             comp=N,249µm,0.7s
BHB                                 AML    AML
             comp=N,249µm,0.7s
BHB                                 AML    AML
             comp=E,281µm,0.5s
ATE    Arette              3.84 290 Pn     Pn       11 01 40.7 +3.2
             comp=E,3.0nm,0.1s,SNR=7.9
EMOS   Mosqueruela         3.86 248 Pn     Pn       11 01 39.2 +1.3
             comp=E,4.2nm,0.1s,SNR=43
EMOS                                Sn     Sn       11 02 20.6  -2.9
             comp=E,22nm,0.3s
OGSM   Saint Maurice       3.88  15 P      Pn       11 01 39.1 +1.1
QLNO   Quiliano            3.88  50 P      Pn       11 01 38.7 +0.6
QLNO                                AML    AML
             comp=E,210µm,0.4s
QLNO                                AML    AML
             comp=N,216µm,0.7s
QLNO                                AML    AML
             comp=N,216µm,0.7s
QLNO                                AML    AML
             comp=E,210µm,0.4s
RSP    Reno Superiore      3.94  33 P      Pn       11 01 41.6 +2.6
RSP    Reno Superiore      3.94  33 P      Pn       11 01 41.6 +2.6
RSP                                 AML    AML
             comp=E,186µm,0.7s
RSP                                 AML    AML
             comp=N,186µm,0.8s
RSP                                 AML    AML
             comp=E,186µm,0.7s
RSP                                 AML    AML
             comp=N,186µm,0.8s
RJF    Les Rejaudoux       3.95 331 ePn    Pn       11 01 39.9 +0.9
             SNR=1.0
RJF                                 eSn    Sn       11 02 23.3  -2.1
             comp=N,113nm,0.3s,SNR=1.0
RJF    Les Rejaudoux       3.95 331 Pn     Pn       11 01 39.9 +0.9
RJF                                 Sn     Sn       11 02 23.3  -2.1
             comp=N,56nm,0.3s
CFF    Clermont-Ferra      3.97 349 P      Pn       11 01 40.7 +1.5
PYM    Petit Puy Mans      3.97 348 Pn     Pn       11 01 40.1 +0.7
PYM                                 P      Pn       11 01 40.9 +1.6
LFF    La Frestale         3.98 321 ePn    Pn       11 01 40.5 +1.1
             SNR=1.0
LFF                                 eSn    Sn       11 02 24.2  -1.8
             comp=N,177nm,0.3s
LFF                                 eSg    Sg       11 02 48.5 +2.4
             comp=N,375nm,0.5s
LFF    La Frestale         3.98 321 Pn     Pn       11 01 40.5 +1.1
LFF                                 Sn     Sn       11 02 24.2  -1.8
             comp=N,89nm,0.3s
LFF                                 Lg     Lg       11 02 48.5
             comp=N,188nm,0.5s
LPG    La Plagne           4.05  26 ePn    Pn       11 01 43.9 +3.2
             SNR=1.0
LPG                                 eSn    Sn       11 02 26.2  -2.1
             comp=N,156nm,0.5s
LPG    La Plagne           4.05  26 Pn     Pn       11 01 43.9 +3.2
LPG                                 Sn     Sn       11 02 26.2  -2.1
             comp=N,78nm,0.5s
LPL    La Plagne           4.06  26 ePn    Pn       11 01 43.8 +3.1
             SNR=1.0
LPL                                 eSn    Sn       11 02 26.4  -2.0
             comp=N,131nm,0.4s
LPL    La Plagne           4.06  26 Pn     Pn       11 01 43.8 +3.1
LPL                                 Sn     Sn       11 02 26.4  -2.0
             comp=N,65nm,0.4s
PCP    Piancastagn         4.12  48 P      Pn       11 01 41.8 +0.3
PCP    Piancastagn         4.12  48 P      Pn       11 01 42.0 +0.6
PCP                                 AML    AML
             comp=E,171µm,1.3s
PCP                                 AML    AML
             comp=N,192µm,1.3s
PCP                                 AML    AML
             comp=N,192µm,1.3s
PCP                                 AML    AML
             comp=E,171µm,1.3s
LSD    Lago del Serru      4.15  29 P      Pn       11 01 44.8 +2.8
LSD    Lago del Serru      4.15  29 P      Pn       11 01 45.0 +3.0
LSD                                 AML    AML
             comp=E,251µm,1.0s
LSD                                 AML    AML
             comp=N,152µm,0.7s
LSD                                 AML    AML
             comp=N,152µm,0.7s
LSD                                 AML    AML
             comp=E,251µm,1.0s
IELO   Elcoad              4.17 285 Pn     Pn       11 01 44.0 +2.0
             comp=E,2.5nm,0.1s,SNR=7.9
MONC   Moncucco Torin      4.17  39 P      Pn       11 01 44.7 +2.7
MONC                                AML    AML
             comp=E,376µm,1.6s
MONC                                AML    AML
             comp=N,458µm,0.6s
MONC                                AML    AML
             comp=N,458µm,0.6s
MONC                                AML    AML
             comp=E,376µm,1.6s
RSL    Roselend            4.18  24 P      Pn       11 01 44.2 +1.9
SJPF   Ste Jean            4.22 289 ePn    Pn       11 01 44.9 +2.2
             SNR=1.0
SJPF   Ste Jean            4.22 289 ePg    Pg       11 02 00.8 +1.6
SJPF                                eSg    Sg       11 02 55.6 +1.8
             comp=E,276nm,0.6s,SNR=1.0
SJPF   Ste Jean            4.22 289 Pn     Pn       11 01 44.9 +2.2
SJPF                                Pg     Pg       11 02 00.8 +1.6
SJPF                                Lg     Lg       11 02 55.6
             comp=E,138nm,0.6s
ROTM   Rocchetta Tana      4.22  44 P      Pn       11 01 45.0 +2.2
ROTM                                AML    AML
             comp=E,1270µm,1.2s
ROTM                                AML    AML
             comp=N,1312µm,0.6s
ROTM                                AML    AML
             comp=E,1270µm,1.2s
ROTM                                AML    AML
             comp=N,1312µm,0.6s
EORO   Oroz-Betelu         4.23 286 Pn     Pn       11 01 44.9 +2.0
             comp=N,0.1nm,0.2s,SNR=7.9
AGO    Saint Agoulin       4.25 350 Pn     Pn       11 01 44.0 +0.9
AGO                                 P      Pn       11 01 44.5 +1.4
OG35   Corcelles           4.27  13 P      Pn       11 01 44.3 +0.8
MRGE   Morge               4.39  27 P      Pn       11 01 48.4 +3.1
MRGE                                AML    AML
             comp=E,120µm,1.0s
MRGE                                AML    AML
             comp=N,181µm,1.0s
MRGE                                AML    AML
             comp=E,120µm,1.0s
MRGE                                AML    AML
             comp=N,181µm,1.0s
TRAV   Traversella         4.44  34 P      Pn       11 01 47.7 +1.9
TRAV   Traversella         4.44  34 P      Pn       11 01 47.6 +1.9
TRAV                                AML    AML
             comp=E,128µm,0.4s
TRAV                                AML    AML
             comp=N,164µm,0.4s
TRAV                                AML    AML
             comp=E,128µm,0.4s
TRAV                                AML    AML
             comp=N,164µm,0.4s
EALK   Alkurruntz          4.45 289 Pn     Pn       11 01 48.0 +2.1
             comp=N,1.1nm,0.1s,SNR=67
EALK                                Sn     Sn       11 02 38.1 +0.3
             comp=N,87nm,0.4s,SNR=7.9
OG02   Monnetier-Morn      4.51  18 P      Pn       11 01 48.1 +1.4
ECHE   Chera               4.56 242 Pn     Pn       11 01 47.9 +0.4
             comp=N,4.2nm,0.2s,SNR=7.9
ECHE                                Sn     Sn       11 02 37.9  -2.7
             comp=N,5.2nm,0.2s,SNR=7.9
MSSA   Maissana            4.57  56 P      Pn       11 01 47.2  -0.4
TCF    Toulx Ste Croi      4.64 342 ePn    Pn       11 01 49.8 +1.3
             SNR=1.0
TCF                                 eSn    Sn       11 02 40.2  -2.3
             comp=N,57nm,0.3s,SNR=1.0
TCF                                 eSg    Sg       11 03 06.9  -0.4
             comp=N,86nm,0.4s,SNR=1.0
TCF    Toulx Ste Croi      4.64 342 Pn     Pn       11 01 49.8 +1.3
TCF                                 Sn     Sn       11 02 40.2  -2.3
             comp=N,29nm,0.3s
TCF                                 Lg     Lg       11 03 06.9
             comp=N,43nm,0.4s
EBEN2  Beniarda presa      4.66 228 Pn     Pn       11 01 49.1 +0.3
             comp=N,2.9nm,0.1s,SNR=7.9
EBEN2                               Sn     Sn       11 02 38.8  -4.0
             comp=N,9.4nm,0.1s,SNR=7.9
PLMA   Palmaria, Port      4.66  60 P      Pn       11 01 47.9  -0.8
PLMA                                S      Sn       11 02 34.9  -7.8
SMF    Signal de Mont      4.77 357 ePn    Pn       11 01 51.4 +1.1
             SNR=1.0
SMF                                 eSn    Sn       11 02 43.2  -2.5
             comp=N,72nm,0.2s,SNR=1.0
SMF    Signal de Mont      4.77 357 Pn     Pn       11 01 51.4 +1.1
SMF                                 Sn     Sn       11 02 43.2  -2.5
             comp=N,36nm,0.2s
BOB    Bobbio (Coli)       4.78  51 P      Pn       11 01 51.5 +1.1
BOB                                 AML    AML
             comp=E,148µm,1.5s
BOB                                 AML    AML
             comp=N,166µm,1.1s
BOB                                 AML    AML
             comp=N,166µm,1.1s
BOB                                 AML    AML
             comp=E,148µm,1.5s
BGF    Bois d'Agland       4.78 348 ePn    Pn       11 01 51.4 +1.0
             SNR=1.0
BGF                                 eSn    Sn       11 02 43.7  -2.2
             comp=E,187nm,0.4s,SNR=1.0
BGF                                 eSg    Sg       11 03 12.9 +1.1
             comp=E,215nm,0.4s
BGF    Bois d'Agland       4.78 348 Pn     Pn       11 01 51.4 +1.0
BGF                                 Sn     Sn       11 02 43.7  -2.2
             comp=E,93nm,0.4s
BGF                                 Lg     Lg       11 03 12.9
             comp=E,108nm,0.4s
DIX    Grande Dixence      4.78  28 P      Pn       11 01 53.8 +3.1
DIX                                 AML    AML
             comp=E,61µm,0.4s
DIX                                 AML    AML
             comp=N,113µm,0.6s
DIX                                 AML    AML
             comp=N,113µm,0.6s
DIX                                 AML    AML
             comp=E,61µm,0.4s
ETOR   Torete              4.85 259 Pn     Pn       11 01 53.0 +1.6
             comp=E,14nm,0.3s,SNR=16
ETOR                                Sn     Sn       11 02 46.3  -1.4
             comp=E,54nm,0.3s,SNR=7.9
EQUI   Equi                4.91  60 P      Pn       11 01 51.9  -0.2
EQUI   Equi                4.91  60 P      Pn       11 01 52.0  -0.1
CABF   La Chapelle         4.91  15 eSn    Sn       11 02 44.9  -4.4
             comp=E,74nm,0.5s
CABF                                eSg    Sg       11 03 17.4 +1.3
CABF   La Chapelle         4.91  15 Sn     Sn       11 02 44.9  -4.4
             comp=E,37nm,0.5s
CABF                                Lg     Lg       11 03 17.4
AVF    Avril sur Loir      4.95 353 ePn    Pn       11 01 53.7 +1.0
             SNR=1.0
AVF                                 eSn    Sn       11 02 47.6  -2.4
             comp=E,51nm,0.3s
AVF                                 eSg    Sg       11 03 18.7 +1.5
             comp=E,74nm,0.6s
AVF    Avril sur Loir      4.95 353 Pn     Pn       11 01 53.7 +1.0
AVF                                 Sn     Sn       11 02 47.6  -2.4
             comp=E,26nm,0.3s
AVF                                 Lg     Lg       11 03 18.7
             comp=E,37nm,0.6s
MMK    Mattmark            4.96  32 P      Pn       11 01 56.6 +3.5
MMK                                 AML    AML
             comp=E,75µm,0.4s
MMK                                 AML    AML
             comp=N,65µm,0.7s
MMK                                 AML    AML
             comp=N,65µm,0.7s
MMK                                 AML    AML
             comp=E,75µm,0.4s
CASP   Castiglione de      5.00  77 P      Pn       11 01 52.2  -1.3
GRAM   Graiana             5.00  57 P      Pn       11 01 53.9 +0.4
GRAM   Graiana             5.00  57 P      Pn       11 01 54.3 +0.9
GRAM                                AML    AML
             comp=E,174µm,1.3s
GRAM                                AML    AML
             comp=N,156µm,0.9s
GRAM                                AML    AML
             comp=N,156µm,0.9s
GRAM                                AML    AML
             comp=E,174µm,1.3s
MAIM   Mastiano            5.03  64 P      Pn       11 01 53.6  -0.2
MAIM   Mastiano            5.03  64 P      Pn       11 01 53.7  -0.1
MAIM                                AML    AML
             comp=E,138µm,0.4s
MAIM                                AML    AML
             comp=N,128µm,0.4s
MAIM                                AML    AML
             comp=E,138µm,0.4s
MAIM                                AML    AML
             comp=N,128µm,0.4s
VLC    Villacollemand      5.05  61 P      Pn       11 01 54.3 +0.2
BDI    Bagni Di Lucca      5.15  63 P      Pn       11 01 55.6   0.0
BDI                                 S      Sn       11 02 47.5  -7.6
BDI                                 AML    AML
             comp=E,196µm,0.4s
BDI                                 AML    AML
             comp=N,158µm,0.5s
BDI                                 AML    AML
             comp=E,196µm,0.4s
BDI                                 AML    AML
             comp=N,158µm,0.5s
ERBM   Eremo               5.18  59 P      Pn       11 01 56.8 +0.8
SSF    Saint Saulge        5.21 355 ePn    Pn       11 01 57.3 +1.0
             SNR=1.0
SSF                                 eSn    Sn       11 02 53.2  -3.1
             comp=N,40nm,0.3s,SNR=1.0
SSF    Saint Saulge        5.21 355 Pn     Pn       11 01 57.3 +1.0
SSF                                 Sn     Sn       11 02 53.2  -3.1
             comp=N,20nm,0.3s
POPM   Popiglio            5.25  63 P      Pn       11 01 58.5 +1.6
POPM                                S      Sn       11 02 60.0 +2.5
LOR    Lormes              5.39 357 ePn    Pn       11 02 00.1 +1.3
             baz=178,SNR=1.0
LOR                                 eSn    Sn       11 02 58.3  -2.7
             comp=N,64nm,0.3s,baz=178,SNR=1.0
LOR                                 eSg    Sg       11 03 32.3 +0.8
             comp=N,70nm,0.5s,baz=180
LOR    Lormes              5.39 357 Pn     Pn       11 02 00.1 +1.3
LOR                                 Sn     Sn       11 02 58.3  -2.7
             comp=N,32nm,0.3s
LOR                                 Lg     Lg       11 03 32.3
             comp=N,35nm,0.5s
LOR    Lormes              5.39 357 P      Pn       11 01 59.8 +1.0
MTCR   Monte La Croce      5.41  64 P      Pn       11 01 59.1  -0.1
ARCI   Arcidosso           5.45  77 P      Pn       11 02 02.6 +2.9
ARCI                                AML    AML
             comp=E,99µm,1.6s
ARCI                                AML    AML
             comp=N,74µm,1.2s
ARCI                                AML    AML
             comp=N,74µm,1.2s
ARCI                                AML    AML
             comp=E,99µm,1.6s
ETOB   Tobarra             5.48 236 Pn     Pn       11 02 00.2 +0.1
             comp=E,5.3nm,0.2s,SNR=8.8
ETOB                                Sn     Sn       11 02 59.2  -4.0
             comp=E,11nm,0.2s
HYF    Humbligny           5.51 349 ePn    Pn       11 02 02.7 +2.3
HYF                                 eSn    Sn       11 03 01.5  -2.2
HYF                                 eSg    Sg       11 03 35.8 +0.7
HYF    Humbligny           5.51 349 Pn     Pn       11 02 02.7 +2.3
HYF                                 Sn     Sn       11 03 01.5  -2.2
HYF                                 Lg     Lg       11 03 35.8
FUSIO  Fusio               5.57  33 P      Pn       11 02 04.2 +2.8
FUSIO                               AML    AML
             comp=E,39µm,0.7s
FUSIO                               AML    AML
             comp=N,47µm,0.6s
FUSIO                               AML    AML
             comp=E,39µm,0.7s
FUSIO                               AML    AML
             comp=N,47µm,0.6s
MFF    Saint Martin d      5.67 328 ePn    Pn       11 02 03.8 +1.2
             SNR=1.0
MFF    Saint Martin d      5.67 328 ePg    Pg       11 02 27.5 +0.6
MFF                                 eSn    Sn       11 03 04.5  -3.3
             comp=N,28nm,0.3s,SNR=1.0
MFF                                 eSg    Sg       11 03 41.1 +0.7
             comp=N,66nm,0.5s
MFF    Saint Martin d      5.67 328 Pn     Pn       11 02 03.8 +1.2
MFF                                 Pg     Pg       11 02 27.5 +0.6
MFF                                 Sn     Sn       11 03 04.5  -3.3
             comp=N,14nm,0.3s
MFF                                 Lg     Lg       11 03 41.1
             comp=N,33nm,0.5s
LOMF   Lomont              5.78  18 P      Pn       11 02 04.6 +0.5
LOMF                                Pn     Pn       11 02 04.4 +0.3
ELAN   Lanestosa           5.82 286 Pn     Pn       11 02 06.6 +1.9
             comp=N,3.1nm,0.2s,SNR=7.8
ELAN                                Sn     Sn       11 03 09.3  -2.2
             comp=N,10nm,0.2s,SNR=4.0
BNALP  Bannalp             5.82  30 P      Pn       11 02 06.9 +2.0
BNALP                               AML    AML
             comp=E,64µm,1.6s
BNALP                               AML    AML
             comp=N,55µm,1.2s
BNALP                               AML    AML
             comp=N,55µm,1.2s
BNALP                               AML    AML
             comp=E,64µm,1.6s
EMUR   La Murta            5.83 228 Sn     Sn       11 03 06.0  -5.7
             comp=E,2.1nm,0.3s,SNR=4.0
UCM    Universidad Co      5.86 257 eP     Pn       11 02 08.0 +2.7
UCM                                 eS     Sg       11 03 51.3 +4.8
HINF   Hinteralfeld        6.22  17 ePn    Pn       11 02 09.8  -0.4
             SNR=1.0
HINF                                eSn    Sn       11 03 16.5  -4.9
             comp=E,36nm,0.3s,SNR=1.0
HINF   Hinteralfeld        6.22  17 Pn     Pn       11 02 09.8  -0.4
HINF                                Sn     Sn       11 03 16.5  -4.9
             comp=E,18nm,0.3s
HAU    Haudompre           6.31  13 ePn    Pn       11 02 11.4   0.0
             SNR=1.0
HAU                                 eSn    Sn       11 03 19.9  -3.6
             comp=E,35nm,0.3s
HAU    Haudompre           6.31  13 Pn     Pn       11 02 11.4   0.0
HAU                                 Sn     Sn       11 03 19.9  -3.6
             comp=E,17nm,0.3s
MOF    Molkenrain          6.32  18 Pn     Pn       11 02 11.0  -0.6
MOF                                 P      Pn       11 02 11.4  -0.2
RMP    Rome, Mte Porz      6.33  88 P      Pn       11 02 18.4 +6.8
SFTF   Sexfontaines        6.35   5 ePn    Pn       11 02 12.9 +0.9
             baz=182
SFTF                                eSn    Sn       11 03 21.0  -3.5
             comp=E,34nm,0.4s
SFTF                                eSg    Sg       11 04 01.0  -1.1
             comp=E,187nm,1.0s,baz=185
SFTF   Sexfontaines        6.35   5 Pn     Pn       11 02 12.9 +0.9
SFTF                                Sn     Sn       11 03 21.0  -3.5
             comp=E,34nm,0.4s
SFTF                                Lg     Lg       11 04 01.0
             comp=E,187nm,1.0s
DAVOX  Davos/Dischmat      6.36  38 Pn     Pn       11 02 14.1 +1.9
             comp=E,2.9nm,0.3s,baz=230,slow=5.1,SNR=18
DAVOX                               Sn     Sn       11 03 23.4  -1.5
             comp=E,0.6nm,0.3s,baz=328,slow=21,SNR=0.9
SESP   Santiago Espad      6.42 236 Pn     Pn       11 02 13.7 +0.7
             comp=E,0.7nm,0.2s,SNR=7.9
SESP                                Sn     Sn       11 03 22.8  -3.6
             comp=E,8.7nm,0.2s,SNR=7.9
FUORN  Ofenpass-Fuorn      6.42  40 P      Pn       11 02 16.4 +3.3
GUD    Guadarrama          6.44 262 Pn     Pn       11 02 14.2 +0.8
             comp=E,7.9nm,0.3s,SNR=17
GUD                                 Sn     Sn       11 03 22.1  -4.8
             comp=E,10nm,0.4s
ESDC   Sonseca Array       6.60 253 Pn     Pn       11 02 16.1 +0.7
             comp=E,10nm,0.2s,baz=69,slow=14,SNR=27
ESDC                                Sn     Sn       11 03 25.6  -5.1
             comp=E,2.6nm,0.1s,baz=74,slow=26,SNR=9.7
ESDC   Sonseca Array       6.60 253 Pn     Pn       11 02 16.0 +0.6
             comp=E,2.3nm,0.3s,baz=69,slow=14,SNR=18
ESDC                                Sn     Sn       11 03 25.6  -5.1
             comp=E,5.3nm,0.3s,baz=67,slow=24,SNR=9.1
ESDC                                Lg     Lg       11 04 17.4
             comp=E,3.0nm,0.3s,baz=58,slow=28,SNR=4.8
KIZ    Kirchzarten         6.61  22 P      Pn       11 02 15.1  -0.5
MEZF   Maizieres J'vi      6.65   5 ePn    Pn       11 02 17.1 +1.1
             baz=185,SNR=1.0
MEZF                                eSn    Sn       11 03 28.9  -2.9
             comp=E,36nm,0.3s,SNR=1.0
MEZF                                eSg    Sg       11 04 09.9  -1.7
             comp=E,98nm,0.7s,baz=186
MEZF   Maizieres J'vi      6.65   5 Pn     Pn       11 02 17.1 +1.1
MEZF                                Sn     Sn       11 03 28.9  -2.9
             comp=E,36nm,0.3s
MEZF                                Lg     Lg       11 04 09.9
             comp=E,98nm,0.7s
ECH    Echery              6.67  17 P      Pn       11 02 15.9  -0.4
DAVA   Damuels             6.74  35 ePn    Pn       11 02 20.1 +2.6
             comp=E,2.6nm,0.1s
PAGF   Fort de Pagny       6.76   8 ePn    Pn       11 02 18.6 +1.1
             baz=187
PAGF                                eSn    Sn       11 03 30.8  -3.7
             comp=E,46nm,0.4s,baz=189
CDF    Champ du Feu        6.88  17 ePn    Pn       11 02 18.6  -0.7
             SNR=1.0
CDF                                 eSn    Sn       11 03 32.5  -5.1
             comp=E,32nm,0.4s,SNR=1.0
CDF    Champ du Feu        6.88  17 Pn     Pn       11 02 18.6  -0.7
CDF                                 Sn     Sn       11 03 32.5  -5.1
             comp=E,16nm,0.4s
WLS    Welschbruch         6.89  18 P      Pn       11 02 18.9  -0.6
PAB    San Pablo           6.92 253 Pn     Pn       11 02 20.5 +0.6
             comp=E,1.5nm,0.2s,SNR=7.9
PAB                                 Sn     Sn       11 03 34.8  -4.0
             comp=E,2.2nm,0.2s,SNR=7.9
FETA   Feichten            6.93  40 ePn    Pn       11 02 24.7 +4.6
             comp=E,1.4nm,0.2s
EQES   Quesada             6.94 236 Pn     Pn       11 02 20.3 +0.1
             comp=E,0.1nm,0.2s,SNR=7.9
EQES                                Sn     Sn       11 03 35.1  -4.1
             comp=E,2.9nm,0.2s,SNR=7.9
```

EARI	Arriondas	7.11	285	Pn	Pn	11 02 24.7	+2.2
	comp=E,2.5nm,0.2s,SNR=4.6						
EARI				Sn	Sn	11 03 39.9	-3.4
	comp=E,1.8nm,0.3s						
OPP	Oppenau	7.18	22	P	Pn	11 02 22.7	-0.7
RETA	Reutte	7.28	37	ePn	Pn	11 02 26.5	+1.6
	comp=E,1.1nm,0.2s						
SQTA	Sankt Quirin	7.30	41	ePn	Pn	11 02 28.7	+3.5
	comp=E,2.8nm,0.2s						
KEST	Kesra	7.32	145	Pn	Pn	11 02 23.9	-1.5
	comp=E,2.7nm,0.3s,baz=249,slow=2.3,SNR=20						
KEST				Sn	Sn	11 03 42.3	-6.3
	comp=E,0.5nm,0.3s,baz=53,slow=19,SNR=1.1						
MOTA	Moosalm	7.34	40	ePn	Pn	11 02 28.7	+3.1
	comp=E,0.5nm,0.1s						
LDF	La Druitiere	7.38	337	ePn	Pn	11 02 27.0	+0.9
	SNR=1.0						
LDF				eSn	Sn	11 03 45.9	-4.0
	comp=E,40nm,0.4s						
LDF				eSg	Sg	11 04 33.4	-1.8
	comp=E,94nm,0.9s						
GRR	Gorron	7.44	333	ePn	Pn	11 02 28.0	+1.2
	SNR=1.0						
GRR				eSn	Sn	11 03 47.0	-4.2
	comp=E,26nm,0.3s,SNR=1.0						
GRR				eSg	Sg	11 04 34.3	-2.6
	comp=E,24nm,0.5s						
GRR	Gorron	7.44	333	Pn	Pn	11 02 28.0	+1.2
GRR				Sn	Sn	11 03 47.0	-4.2
	comp=E,13nm,0.3s						
GRR				Lg	Lg	11 04 34.3	
	comp=E,12nm,0.5s						
WTTA	Wattenberg	7.54	42	ePn	Pn	11 02 32.7	+4.2
	comp=E,15nm,0.7s						
WATA	Walderalm	7.56	41	ePn	Pn	11 02 32.2	+3.5
	comp=E,2.1nm,0.2s						
FLN	La Foliniere	7.64	336	ePn	Pn	11 02 30.9	+1.3
	baz=156,SNR=1.0						
FLN				eSn	Sn	11 03 51.9	-4.3
	comp=E,22nm,0.4s,baz=155						
FLN				eSg	Sg	11 04 42.8	-0.6
	comp=E,132nm,1.1s,baz=164						
FLN	La Foliniere	7.64	336	Pn	Pn	11 02 30.9	+1.3
FLN				Sn	Sn	11 03 51.9	-4.3
	comp=E,11nm,0.4s						
FLN				Lg	Lg	11 04 42.8	
	comp=E,66nm,1.1s						
ABTA	Abfaltersbach	7.67	48	ePn	Pn	11 02 33.1	+2.9
	comp=E,2.6nm,0.3s						
EADA	Adamuz	7.71	244	Pn	Pn	11 02 31.1	+0.5
	comp=E,0.0nm,0.2s,SNR=7.9						
EADA				Sn	Sn	11 03 52.0	-6.1
	comp=E,1.5nm,0.3s,SNR=7.9						
SGMF	Saint Gilles	7.98	325	ePn	Pn	11 02 34.7	+0.4
	SNR=1.0						
SGMF				eSn	Sn	11 03 58.8	-5.8
	comp=E,38nm,0.5s						
SGMF	Saint Gilles	7.98	325	Pn	Pn	11 02 34.7	+0.4
SGMF				Sn	Sn	11 03 58.8	-5.8
	comp=E,19nm,0.5s						
QUIF	Quistinic	8.00	321	ePn	Pn	11 02 35.5	+1.0
	SNR=1.0						
QUIF				eSn	Sn	11 03 58.8	-6.2
	comp=E,26nm,0.4s						
QUIF				eSg	Sg	11 04 54.0	-0.9
	comp=E,132nm,1.0s						
QUIF	Quistinic	8.00	321	Pn	Pn	11 02 35.5	+1.0
QUIF				Sn	Sn	11 03 58.8	-6.2
	comp=E,13nm,0.4s						
QUIF				Lg	Lg	11 04 54.0	
	comp=E,66nm,1.0s						
BAIF	Baives	8.18	360	ePn	Pn	11 02 38.5	+1.5
	SNR=1.0						
BAIF				eSn	Sn	11 04 04.9	-4.6
	comp=E,21nm,0.6s						
BAIF				eSg	Sg	11 04 57.7	-3.0
	comp=E,78nm,1.0s						
BAIF	Baives	8.18	360	Pn	Pn	11 02 38.5	+1.5
BAIF				Sn	Sn	11 04 04.9	-4.6
	comp=E,11nm,0.6s						
BAIF				Lg	Lg	11 04 57.7	
	comp=E,39nm,1.0s						
ECAL	Calabor	8.18	274	Pn	Pn	11 02 38.4	+1.2
	comp=E,2.7nm,0.2s,SNR=5.2						
ECAL				Sn	Sn	11 04 04.8	-5.0
	comp=E,5.6nm,0.2s,SNR=4.5						
DOU	Dourbes	8.22	2	P	Pn	11 02 38.9	+1.3
DOU	Dourbes	8.22	2	x	Pn	11 02 39.7	+2.1
DOU	Dourbes	8.22	2	x	Pn	11 02 43.0	+5.5
GIVF	Givet	8.23	3	ePn	Pn	11 02 39.0	+1.2
	SNR=1.0						
GIVF				eSn	Sn	11 04 06.6	-4.2
	comp=E,4.1nm,0.2s						
GIVF				eSg	Sg	11 04 59.9	-2.5
	comp=E,70nm,0.9s						
GIVF	Givet	8.23	3	Pn	Pn	11 02 39.0	+1.2
GIVF				Sn	Sn	11 04 06.6	-4.2
	comp=E,2.0nm,0.2s						
GIVF				Lg	Lg	11 04 59.9	
	comp=E,35nm,0.9s						
MYKA	Terra Mystica	8.25	52	ePn	Pn	11 02 41.8	+3.6
	comp=E,1.0nm,0.3s						
ECAB	El Cabril	8.33	246	Pn	Pn	11 02 40.6	+1.5
	comp=E,0.2nm,0.3s,SNR=8.5						
KBA	Koelnbreinsper	8.33	48	ePn	Pn	11 02 41.4	+2.1
	comp=E,0.8nm,0.2s						
ROSF	Rostrenen	8.36	323	ePn	Pn	11 02 40.1	+0.7
	SNR=1.0						
ROSF				eSn	Sn	11 04 05.3	-8.5
	comp=E,24nm,0.3s						
ROSF				eSg	Sg	11 05 04.2	-2.1
	comp=E,208nm,1.3s						
ROSF	Rostrenen	8.36	323	Pn	Pn	11 02 40.1	+0.7
ROSF				Sn	Sn	11 04 05.3	-8.5
	comp=E,12nm,0.3s						
ROSF				Lg	Lg	11 05 04.2	
	comp=E,104nm,1.3s						
BMRD	Maredsous	8.43	2	P	Pn	11 02 41.9	+1.4
BMRD				x	x	11 02 43.3	
BMRD				S	Sn	11 04 10.2	-5.5
BBOU	Bougnies	8.51	359	P	Pn	11 02 43.8	+2.2
BBOU				S	Sn	11 04 17.5	-0.1
EPON	Pontenova	8.52	284	Pn	Pn	11 02 43.5	+1.8
	comp=E,1.8nm,0.3s,SNR=5.9						
EPON				Sn	Sn	11 04 13.1	-4.9
	comp=E,9.5nm,0.4s,SNR=4.7						
BGES	Gesves	8.53	4	P	Pn	11 02 43.1	+1.3
BHOU	Houvegnez	8.56	8	P	Pn	11 02 44.0	+1.6
BRQR	Ronquire	8.73	360	P	Pn	11 02 47.0	+2.5
OBKA	Obir	8.73	55	ePn	Pn	11 02 48.5	+3.7
	comp=E,1.4nm,0.3s						
BSKQ	Steenkerk	8.77	359	P	Pn	11 02 46.8	+1.6
MEM	Membach	8.82	7	P	Pn	11 02 47.1	+1.3
MEM				x	x	11 02 47.7	
MEM				S	Sn	11 04 19.3	-5.8
BEBN	Eben Emael	8.97	6	P	Pn	11 02 49.8	+1.9
SOKA	Soboth	9.11	55	ePn	Pn	11 02 53.8	+3.9
	comp=E,0.6nm,0.3s						
EBAD	Badajoz	9.14	254	Pn	Pn	11 02 49.5	-0.7
	comp=E,0.3nm,0.1s,SNR=7.1						
EBAD				Sn	Sn	11 04 25.1	-8.0
	comp=E,0.1nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	9.17	280	Pn	Pn	11 02 51.6	+0.8
	comp=E,1.5nm,0.1s,SNR=7.9						
EAGO				Sn	Sn	11 04 28.0	-6.0
	comp=E,1.3nm,0.2s,SNR=7.9						
ELOB	Lobios	9.17	274	Pn	Pn	11 02 51.7	+0.9
	comp=E,1.6nm,0.2s,SNR=5.7						
ELOB				Sn	Sn	11 04 27.3	-6.8
	comp=E,2.0nm,0.3s						
MOA	Molln	9.29	47	ePn	Pn	11 02 57.5	+5.3
	comp=E,1.1nm,0.2s						
GERES	GERESS Array B	9.63	40	Pn	Pn	11 02 57.6	+0.6
	comp=E,1.6nm,0.3s,baz=225,slow=12,SNR=31						
GERES				Sn	Sn	11 04 39.8	-5.5
	comp=E,1.9nm,0.3s,baz=242,slow=23,SNR=8.1						
ARSA	Arzberg	9.68	52	ePn	Pn	11 02 58.8	+1.2
	comp=E,2.0nm,0.3s						
EMAZ	Mazaricos	9.83	281	Pn	Pn	11 03 00.3	+0.6
	comp=E,6.3nm,0.3s,SNR=7.9						
EMAZ				Sn	Sn	11 04 42.8	-7.3
	comp=E,2.5nm,0.2s,SNR=7.9						
VRAC	Vranov	11.40	45	Pn	Pn	11 03 23.1	+1.9
	comp=E,0.2nm,0.3s,baz=294,slow=20,SNR=1.6						
VRAC				Sn	Sn	11 05 13.3	-15
	comp=E,0.3nm,0.3s,baz=245,slow=22,SNR=1.5						
MDT	Midelt	11.45	221	Pn	Pn	11 03 21.9	-0.1
	comp=E,0.1nm,0.3s,baz=14,slow=4.2,SNR=2.5						
EKA	Eskdalemuir Ar	14.31	343	Pn	Pn	11 03 59.8	-1.1
	baz=160,slow=14,SNR=3.6						
HFS	Hagfors	19.19	14	Pn	Pn	11 05 05.5	+2.7
	comp=E,0.1nm,0.3s,baz=196,slow=10,SNR=2.8						
AKASG	Malin Array Be	19.32	54	P	P	11 05 04.0	+0.5
	comp=E,0.6nm,0.3s,baz=244,slow=11,SNR=3.4						
NOA	NORSAR Array B	19.65	10	LR	LR	11 13 12.6	
	comp=E,21nm,21.1s,baz=50,slow=38						
BRTR	Keskin Array B	22.32	86	P	P	11 05 36.1	0.0
	comp=E,1.1nm,0.9s,baz=275,slow=10.0,SNR=4.4						
FINES	FINESS Array B	23.60	27	P	P	11 05 49.9	+0.8
	comp=E,0.8nm,0.4s,baz=207,slow=8.0,SNR=7.8						
OBN	Obninsk	24.92	47	LR	LR	11 17 18.6	
	comp=E,9.8nm,18.9s,baz=334,slow=40						
BORG	Borgarnes	27.16	336	P	P	11 06 23.3	+1.9
	comp=E,62nm,1.1s,baz=162,slow=3.2,SNR=3.0						
KVAR	Kislovodsk Arr	28.08	73	LR	LR	11 18 53.9	
	comp=E,73nm,21.9s,baz=220,slow=39						
TORD	Torodi Ar. Bea	28.71	185	P	P	11 06 36.2	+0.5
	comp=E,0.4nm,0.7s,baz=359,slow=11,SNR=2.7						
DBIC	Dimbokro	35.98	195	P	P	11 07 37.3	-2.1
	comp=E,3.4nm,0.9s,baz=0.0,slow=10,SNR=2.2						
ZALV	Zalesovo Beam	52.51	47	P	P	11 09 52.3	+1.0
	comp=E,1.0nm,0.7s,baz=293,slow=7.7,SNR=2.8						
MKAR	Makanchi Array	53.88	56	P	P	11 10 02.7	+1.1
	comp=E,1.7nm,0.7s,baz=291,slow=5.6,SNR=8.4						
TSUM	Tsumeb	62.02	166	LR	LR	11 37 35.8	
	comp=E,50nm,19.3s,baz=340,slow=36						
YKA	Yellowknife Ar	65.05	333	P	P	11 11 20.2	+1.9
	comp=E,1.6nm,0.6s,baz=49,slow=6.4,SNR=43						
PDAR	Pinedale Array	76.81	316	P	P	11 12 31.6	+1.1
	comp=E,0.2nm,0.6s,baz=47,slow=6.6,SNR=2.3						
TXAR	Lajitas Array	82.89	303	P	P	11 13 05.1	+1.6
	comp=E,0.7nm,0.7s,baz=93,slow=5.9,SNR=2.8						
ASAR	Alice Springs	134.63	83	PKP	PKPdf	11 19 58.1	+0.8
	comp=E,0.3nm,0.5s,baz=322,slow=2.0,SNR=6.3						
STKA	Stephens Creek	144.78	88	PKP	PKPbc	11 20 14.8	+0.4
	comp=E,4.7nm,0.6s,baz=328,slow=6.1,SNR=13						

IDC ***25*** *11:07:45.6±1.1, 1.°59N×126.°09E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.6/38, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=95.2km s-min=18.4km az=69.0*

ISCJB ***25*** *11:07:50.9±0.6, 1.°51N±0.°05×126.°30E±0.°05, h54^{km}, mb3.8/5, Error ellipse: s-maj=7.8km s-min=6.0km az=40.8*

DJA ***25*** *11:07:51.8±0.4, 2°N±3°×12°6E±°, h56^{km}±15^{km}, M4.2/10, mb4.2/1, MLv4.2/10*

ISC 25 11:07:52.7±0.8**, 1.°51N**±0.°06×**126.°32E**±0.°06**, h54**^{km}**, n14, σ1^{s}14**/19**, mb3.8**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.28	125	P	Pn	11 08 13.6	-0.7
TNTI				S	Sn	11 08 29.8	-0.6
SGSI	Sangihe	2.30	340	P	Pn	11 08 28.7	+0.4
SGSI				S	Sn	11 08 54.0	-1.4
KMSI	Cibinong	2.51	248	P	Pn	11 08 31.1	0.0
KMSI				S	Sn	11 09 00.5	-0.1
SANI	Sanana	3.55	185	P	Pn	11 08 43.5	-1.8
LUWI	Luwuk	4.36	234	P	Pn	11 08 55.9	-0.5
MRSI	Marisa	4.49	257	P	Pn	11 08 58.1	-0.2
MPSI	Mapaga	6.52	260	P	Pn	11 09 25.5	-0.6
	13nm,0.7s						
TTSI	Tana Toraja	7.92	235	P	Pn	11 09 44.6	-0.6
FITZ	Fitzroy Crossi	19.49	182	P	P	11 12 15.3	-0.1
	0.2nm,0.3s,baz=3.2,slow=9.0,SNR=5.2						
WRA	Warramunga Arr	22.72	160	P	P	11 12 50.0	-0.3
	1.8nm,0.4s,baz=339,slow=11,SNR=36						
WRA				PcP	PcP	11 16 41.5	+0.6
	0.1nm,0.6s,baz=338,slow=1.8,SNR=2.7						
ASAR	Alice Springs	26.09	164	P	P	11 13 22.2	+0.7
	0.5nm,0.4s,baz=343,slow=7.6,SNR=20						
ASAR				PcP	PcP	11 16 49.2	+0.9
	0.2nm,0.5s,baz=356,slow=2.2,SNR=5.3						
STKA	Stephens Creek	36.23	158	P	P	11 14 53.6	+3.0
	1.5nm,1.1s,baz=345,slow=12,SNR=1.6						
SONM	Songino Array	49.27	342	P	P	11 16 35.2	-1.0
	0.3nm,0.3s,baz=157,slow=7.2,SNR=3.3						
MKAR	Makanchi Array	59.15	326	P	P	11 17 46.7	-1.3
	0.6nm,0.3s,baz=120,slow=7.5,SNR=12						

IDC ***25*** *11:14:46.6±1.3, 32.°25S×178.°02W, h0^{km}, mb4.1/4, mb1 4.2/7, mb1mx4.0/25, mbtmp4.2/7, ML4.1/3, MS3.6/3, Ms1 3.5/3, ms1mx3.1/34, Error ellipse: s-maj=40.3km s-min=22.2km az=128.0*

NEIC ***25*** *11:14:47.6±0.7, 32.°23S×178.°03W, h10^{km}, mb4.3/7, Error ellipse: s-maj=15.2km s-min=5.2km az=102.0*

ISC 25 11:14:49.2±1.0**, 32.°33S**±0.°09×**178.°0W**±0.°2**, h24**^{km}**, n39, σ1^{s}92**/46**, mb4.3**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.07	1	ePn	Pn	11 15 33.6	-2.6
RAO	Raoul Island	3.07	1	Pn	Pn	11 15 33.8	-2.4
	79nm,0.3s,baz=68,slow=8.9,SNR=5.6						
MXZ	Matakaoa Point	6.04	209	ePn	Pn	11 16 18.2	+1.2
URZ	Urewera	7.14	213	ePn	Pn	11 16 33.1	+1.0
URZ				eSn	Sn	11 17 54.8	+2.3
URZ	Urewera	7.14	213	Pn	Pn	11 16 32.8	+0.7
	1.7nm,0.3s,baz=258,slow=4.4,SNR=11						
URZ				Sn	Sn	11 17 55.8	+3.3
	5.4nm,0.3s,baz=242,slow=21,SNR=12						
OUZ	Omahuta	7.57	245	ePn	Pn	11 16 38.2	+0.2
BKZ	Black Stump Fm	8.16	212	ePn	Pn	11 16 47.5	+1.3
BFZ	Birch Farm	9.54	207	ePn	Pn	11 17 06.3	+1.4
BFZ				eSn	Sn	11 18 51.2	-0.1
SNZO	South Karori	10.70	211	ePn	Pn	11 17 21.4	+0.5
SNZO				eSn	Sn	11 19 16.5	-3.3
THZ	Tophouse	11.89	215	ePn	Pn	11 17 38.7	+1.5
THZ				eSn	Sn	11 19 44.0	-5.1
KHZ	Kahutara	12.10	211	ePn	Pn	11 17 40.4	+0.3
KHZ				eSn	Sn	11 19 49.0	-5.3
OXZ	Oxford	13.50	213	ePn	Pn	11 18 00.6	+1.4
OXZ				eSn	Sn	11 20 22.5	-5.9
RPZ	Rata Peaks	14.26	214	ePn	Pn	11 18 10.2	+0.7
RPZ				eSn	Sn	11 20 38.0	-8.8
RPZ	Rata Peaks	14.26	214	Pn	Pn	11 18 09.5	-0.1
	0.4nm,0.3s,baz=51,slow=14,SNR=2.8						
RPZ				Sn	Sn	11 20 37.5	-9.4
	0.3nm,0.3s,baz=270,slow=12,SNR=2.3						
FOZ	Fox Glacier	14.73	217	ePn	Pn	11 18 16.7	+0.8
DZM	Mont Dzumac	17.18	303	eLR	LR	11 22 44.8	
	comp=Z,314nm,22.9s						
DZM	Mont Dzumac	17.18	303	LR	LR	11 23 45.6	
	comp=Z,249nm,18.7s,baz=196,slow=32						
WHZ	Wether Hill Ro	17.35	215	ePn	Pn	11 18 50.1	+0.4
	5.2nm,0.9s						
TBI	Tubuai	26.71	78	eLR	LR	11 27 23.9	
	comp=Z,100nm,28.0s						
STKA	Stephens Creek	34.09	260	P	P	11 21 33.7	+1.8
	1.6nm,0.7s,baz=98,slow=14,SNR=2.3						
STKA				LR	LR	11 34 20.6	
	comp=Z,101nm,19.8s,baz=30,slow=34						
CTA	Charters Tower	34.15	282	P	P	11 21 33.7	+1.1
	1.6nm,0.4s,baz=113,slow=13,SNR=4.3						
CTA				PcP	PcP	11 24 10.5	+1.0
	3.5nm,1.0s,baz=156,slow=19,SNR=2.2						
COEN	Coen	39.83	288	eP	P	11 22 21.4	+0.4
	7.1nm,1.1s						
AS31	Alice Springs	43.04	269	eP	P	11 22 47.9	+0.6
	1.6nm,1.1s						
ASAR	Alice Springs	43.04	269	P	P	11 22 47.9	+0.6
	1.5nm,0.7s,baz=105,slow=7.0,SNR=38						
ASAR				PcP	PcP	11 24 37.9	+0.7
	0.2nm,0.8s,baz=115,slow=3.5,SNR=2.7						
WC3	Warramunga Arr	44.17	274	eP	P	11 22 56.1	-0.2
	4.3nm,0.8s						
WB2	Warramunga Arr	44.19	274	eP	P	11 22 56.8	+0.2
	5.4nm,0.8s						
WRAB	Tennant Creek	44.20	274	eP	P	11 22 56.3	-0.3
	3.8nm,0.7s						
WR1	Warramunga Arr	44.20	274	eP	P	11 22 56.9	+0.3
	3.8nm,0.6s						
WRA	Warramunga Arr	44.20	274	P	P	11 22 56.9	+0.3
	1.9nm,0.5s,baz=111,slow=8.1,SNR=59						
WRA				PcP	PcP	11 24 41.8	+0.7
	0.4nm,0.9s,baz=105,slow=3.3,SNR=2.2						
WRA				LR	LR	11 40 18.3	
	comp=Z,38nm,19.5s,baz=65,slow=35						
ARA0	ARCESS Array S	140.47	347	ePKPdf	PKiKP	11 34 16.5	-1.5
ARCES	ARCESS Array B	140.47	347	PKP	PKiKP	11 34 16.5	-1.5
	4.1nm,0.9s,baz=48,slow=1.3,SNR=2.8						
KBZ	Khabaz	146.15	302	PKPbc	PKiKP	11 34 28.9	-1.5
	2.0nm,0.9s,baz=310,slow=1.7,SNR=4.8						
FIA0	FINESS Array S	146.94	339	ePKPbc	PKPab	11 34 29.7	-0.7
FINES	FINESS Array B	146.94	339	PKPbc	PKPab	11 34 29.7	-0.7
	3.0nm,0.4s,baz=55,slow=3.5,SNR=37						
NB2	NORSAR Subarra	150.65	351	PKP	PKPab	11 34 45.5	+0.1
	comp=Z,1.0nm,0.7s,baz=15,slow=2.5						
NOA	NORSAR Array B	150.65	351	PKPbc	PKiKP	11 34 40.4	+1.2
	comp=Z,0.2nm,0.4s,baz=19,slow=2.7,SNR=2.2						
AKASG	Malin Array Be	152.81	320	PKPbc	PKiKP	11 34 43.7	-0.1
	comp=Z,0.5nm,0.5s,baz=65,slow=2.7,SNR=3.4						
BR101	Keskin Array S	153.46	295	ePKPbc	PKiKP	11 34 46.8	+1.0
BRTR	Keskin Array B	153.47	295	PKPbc	PKiKP	11 34 46.8	+1.0
	comp=Z,1.1nm,0.8s,baz=151,slow=2.8,SNR=4.7						

KRNET ***25*** *11:16:39.3±0.1, 42.°48N×78.°45E, h22^{km}, mb2.4*

SOME ***25*** *11:16:40.3, 42.°52N×78.°43E, h10^{km}*

NNC ***25*** *11:16:40.5±0.8, 42.°55N×78.°43E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=6.1km s-min=2.8km az=164.0*

ISC 25 11:16:40.0±0.9**, 42.°49N**±0.°03×**78.°43E**±0.°02**, h11**^{km}±5^{km}**, n43, σ0^{s}90**/85**, 13C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.02	251	⇑iP	Pg	11 16 42.3	+0.1
	baz=88						
PRZ				⇑iS	Sg	11 16 44.1	+0.4
	baz=88						
SATY	Saty	0.57	358	P	Pg	11 16 50.6	-0.5
	3.9nm,0.3s						
SATY				S	Sg	11 16 58.1	-0.5
	33nm,0.2s						
SATY	Saty	0.57	358	⇓iP	Pg	11 16 50.6	-0.5
	3.9nm,0.3s						
SATY				⇓iS	Sg	11 16 58.1	-0.5
	33nm,0.2s						
UZB	Uzynbulak	0.79	33	P	Pg	11 16 54.9	-0.4
	0.5nm,0.1s						
UZB				S	Sg	11 17 05.1	-0.5
	8.8nm,0.1s						
UZB	Uzynbulak	0.79	33	eP	Pg	11 16 54.9	-0.4
	baz=32						
UZB				eS	Sg	11 17 05.1	-0.5
	baz=32						
UZB	Uzynbulak	0.79	33	eP	Pg	11 16 54.9	-0.4
	0.5nm,0.1s						
UZB				eS	Sg	11 17 05.1	-0.5
	8.8nm,0.1s						
TARG	Taragay, Kyrgy	0.89	212	⇓iP	Pg	11 16 55.8	-1.5
	baz=13						
TARG				⇓iS	Sg	11 17 07.2	-1.7
	baz=13						
KDJ	Kajisay	0.99	249	⇑iP	Pg	11 16 58.2	-1.0
	baz=50						
KDJ				⇑iS	Sg	11 17 11.4	-0.7
	baz=50						
PDGK	Podgornoye	1.14	43	P	Pg	11 17 01.4	-0.6
	0.2nm,0.1s						
PDGK				S	Sg	11 17 15.8	-1.1
	1.2nm,0.1s						
PDGK	Podgornoye	1.14	43	⇓iP	Pg	11 17 00.7	-1.3
	baz=41						
PDGK				⇓iS	Sg	11 17 15.6	-1.3
	baz=41						
MDOK	Medeo	1.22	304	Pg	Pb	11 17 02.4	-0.8
	2.0nm,0.3s						
MDOK				Lg	Lg	11 17 18.3	
	7.3nm,0.3s						
MDOK	Medeo	1.22	304	eP	Pb	11 17 02.4	-0.8
	baz=4.0						
MDOK				eS	Sb	11 17 18.3	-0.7
	baz=4.0						
MDOK	Medeo	1.22	304	eP	Pb	11 17 02.4	-0.8
	2.0nm,0.3s						
MDOK				eS	Sb	11 17 18.3	-0.7
	7.3nm,0.3s						
KOTS	Kotyrbulak	1.22	308	P	Pb	11 17 02.6	-0.6
	1.6nm,0.2s						
KOTS				S	Sb	11 17 18.7	-0.4
	9.4nm,0.3s						
KOTS	Kotyrbulak	1.22	308	eP	Pb	11 17 02.6	-0.6
	baz=8.0						
KOTS				eS	Sb	11 17 18.7	-0.4
	baz=8.0						
KOTS	Kotyrbulak	1.22	308	eP	Pb	11 17 02.6	-0.6
	1.6nm,0.2s						
KOTS				eS	Sb	11 17 18.7	-0.4
	9.4nm,0.3s						
TNSS	Tian-Shan	1.22	297	P	Pb	11 17 02.2	-1.2
	1.0nm,0.1s						
TNSS				S	Sg	11 17 18.4	-1.1
	4.5nm,0.2s						
TNSS	Tian-Shan	1.22	297	eP	Pb	11 17 02.3	-1.1
	baz=97						
TNSS				eS	Sg	11 17 18.3	-1.1
	baz=97						
TNSS	Tian-Shan	1.22	297	eP	Pb	11 17 02.3	-1.1
	1.0nm,0.1s						
TNSS				eS	Sg	11 17 18.4	-1.1
	4.5nm,0.2s						
IZV	Izvestkoviy	1.44	293	P	Pn	11 17 06.9	+0.6
	1.9nm,0.2s						
IZV				S	Sb	11 17 26.1	+0.5
	8.8nm,0.2s						
IZV	Izvestkoviy	1.44	293	eP	Pn	11 17 06.9	+0.6
	baz=93						
IZV				eS	Sb	11 17 26.1	+0.5
	baz=93						
IZV	Izvestkoviy	1.44	293	eP	Pn	11 17 06.9	+0.6
	1.9nm,0.2s						
IZV				eS	Sb	11 17 26.1	+0.5
	8.8nm,0.2s						
ULHL	Ulahol	1.64	262	⇑iP	Pn	11 17 09.3	+0.3
	baz=63						
ULHL				⇑iS	Sb	11 17 31.4	+0.2
	baz=63						
KTMS	Ketmen	1.70	55	P	Pb	11 17 11.3	-0.2
	1.4nm,0.2s						
KTMS				S	Sn	11 17 32.3	+0.5
	1.9nm,0.2s						
KTMS	Ketmen	1.70	55	eP	Pn	11 17 10.6	+0.7
	baz=54						
KTMS				eS	Sn	11 17 32.3	+0.5
	baz=54						
KTMS	Ketmen	1.70	55	eP	Pn	11 17 10.6	+0.7
	1.4nm,0.2s						
KTMS				eS	Sn	11 17 32.3	+0.5
	1.9nm,0.2s						
CHKK	Chushkaly	1.72	323	P	Pb	11 17 11.6	-0.1
	2.1nm,0.2s						
CHKK				S	Sg	11 17 34.2	-1.2
	23nm,0.2s						
CHKK	Chushkaly	1.72	323	eP	Pb	11 17 11.6	-0.1
	baz=23						
CHKK				eS	Sg	11 17 34.2	-1.2
	baz=23						
CHKK	Chushkaly	1.72	323	eP	Pb	11 17 11.6	-0.1
	2.1nm,0.2s						
CHKK				eS	Sg	11 17 34.2	-1.2
	23nm,0.2s						
KTBS	Karatobe	1.77	314	P	Pb	11 17 12.6	0.0
	2.2nm,0.2s						
KTBS				S	Sg	11 17 35.8	-1.0
	12nm,0.2s						
KTBS	Karatobe	1.77	314	eP	Pb	11 17 12.6	0.0
	baz=12						
KTBS				eS	Sg	11 17 35.9	-1.0
	baz=12						
KTBS	Karatobe	1.77	314	eP	Pb	11 17 12.6	0.0
	2.2nm,0.2s						
KTBS				eS	Sg	11 17 35.8	-1.0
	12nm,0.2s						
ARXS	Arharly	1.78	346	P	Pb	11 17 12.8	+0.2
	0.9nm,0.2s						
ARXS				S	Sg	11 17 35.9	-1.3
	7.8nm,0.5s						
ARXS	Arharly	1.78	346	eP	Pb	11 17 12.6	-0.1
	1.2nm,0.2s						
ARXS				eS	Sg	11 17 35.9	-1.3
	7.8nm,0.5s						
BOOM	Boomskoye usch	1.84	271	⇓eP	Pn	11 17 13.0	+1.2
	baz=71						
BOOM				⇓iS	Sb	11 17 37.3	+0.3
	baz=71						
KST	Kastek	1.90	288	P	Pb	11 17 14.5	-0.3
	5.2nm,1.8s						
KST				S	Sb	11 17 38.2	-0.4
	7.5nm,0.5s						

KST	Kastek	1.90	288	⇓iP	Pb	11 17 14.5	-0.3
	baz=88						
KST				⇓eS	Sb	11 17 39.1	+0.5
	baz=88						
KST	Kastek	1.90	288	⇓iP	Pb	11 17 14.5	-0.3
	2.6nm,0.3s						
KST				eS	Sb	11 17 39.1	+0.5
	7.5nm,0.5s						
NRN	Naryn	2.10	241	⇑iP	Pn	11 17 16.1	+0.7
	baz=41						
NRN				⇑iS	Sn	11 17 43.3	+1.6
	baz=41						
TKM2	Tokmak 2	2.13	283	⇑Pn	Pb	11 17 18.8	0.0
	1.6nm,0.9s						
TKM2				⇑Sn	Sb	11 17 46.3	+0.9
	3.4nm,0.4s						
TKM2	Tokmak 2	2.13	283	⇑iP	Pn	11 17 17.3	+1.5
	baz=83						
TKM2				⇑iS	Sb	11 17 45.2	-0.2
	baz=83						
KBK	Karagaybulak	2.58	275	⇓iP	Pn	11 17 23.2	+1.3
	baz=75						
KBK				⇓iS	Sn	11 17 55.3	+2.0
	baz=75						
AAK	Ala-Archa	2.91	274	⇑Pg	Pg	11 17 34.5	-1.3
	1.6nm,0.9s						
AAK				⇓Sn	Sn	11 18 04.6	+3.1
	2.2nm,0.6s						

MEX 25 11:20:42.6±1.0**,16°.29N**×**98°.22W,h6**^{km}±5^{km}**,MD3.6,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.14	40	i P	Pg	11 20 44.9	-0.6
PNIG				i S	Sg	11 20 47.8	+0.3
VHO	Vista Hermosa	1.63	61	i P	Pn	11 21 08.5	-3.4
VHO				eS	Sn	11 21 28.4	-4.9

ISCJB ***25*** *11:28:04.1±0.4, 30°.82S±0°.07×59°.63E±0°.07, h10*^{km}*, mb4.6/57, MS4.0/27, Error ellipse: s-maj=10.9km s-min=7.9km az=14.8*

IDC ***25*** *11:28:04.4±0.5, 30°.76S×59°.61E, h0*^{km}*, mb4.3/21, mb1 4.4/22, mb1mx4.3/47, mbtmp4.3/22, ML4.3/1, MS3.9/26, Ms1 3.9/26, ms1mx3.8/43, Error ellipse: s-maj=17.7km s-min=13.6km az=21.0*

BJI ***25*** *11:28:04.7, 30°.70S×59°.90E, h5*^{km}*, mB5.3/17, mb4.9/34, Ms4.7/4, Ms7 4.3/3*

NEIC ***25*** *11:28:06.0±0.2, 30°.77S×59°.70E, h10*^{km}*, mb4.8/34, Error ellipse: s-maj=6.2km s-min=5.4km az=185.0*

GCMT ***25*** *11:28:07.0±0.3, 30°.70S±0°.02×59°.49E±0°.04, h13*^{km}*±1*^{km}*, MW4.9/75, Moment Tensor Solution. s26,c29; s75,c102; Duration: 0 Moment tensor: Scale* 10^{16}*Nm;* M_{rr}*-2.93±.19;* $M_{\theta\theta}$*2.52±.13;* $M_{\phi\phi}$*0.41±.11;* $M_{r\theta}$*0.89±.26;* $M_{\theta\phi}$*0.57±.09;* $M_{\phi r}$*0.39±.36; Best double couple:* M_0*2.95900×*10^{16} *NP1:*ϕ_s*253.00000°, δ54.00000°, λ-93.00000°. NP2:* ϕ_s*78.00000°, δ36.00000°, λ-86.00000°. Principal axes: T 2.8230, Plg9.0000°, Azm345.0000°; N 0.2790, Plg3.0000°, Azm255.0000°; P -3.0960, Plg80.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 11:28:06.2±0.4**,30°.65S**±0°.08×**59°.63E**±0°.08**,h10**^{km}**,n139,** σ**1**^{s}**.05**/123**,mb4.8**/57**,MS4.0**/27**,1D,Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	Riviere de l'E	10.07	339	ePn	Pn	11 30 28.9	-2.2
ABPO	Ambohimpanom	16.13	313	ePn	Pn	11 31 53.7	+0.4
	28nm,1.2s						
OPO	Ambohidratompo	16.49	314	Pn	P	11 31 59.6	-1.0
	1.0nm,0.3s,baz=119,slow=14,SNR=7.0						
OPO				LR	LR	11 37 09.1	
	comp=Z,730nm,18.0s,baz=162,slow=33						
H08S1	Diego Carcia H	25.85	30	T	T	12 00 44.7	
	baz=208						
H08S2	Diego Garcia H	25.86	30	T	T	12 00 41.4	
	baz=208,slow=74						
H08S3	Diego Garcia H	25.87	30	T	T	12 00 57.3	
	baz=208,slow=74						
H08N3	Diego Garcia H	26.42	26	T	T	12 01 29.3	
	baz=203,slow=74,SNR=8.5						
H08N1	Diego Carcia H	26.43	26	T	T	12 01 30.1	
	baz=203,slow=74,SNR=4.5						
H08N2	Diego Garcia H	26.45	26	T	T	12 01 30.6	
	baz=203,slow=74,SNR=7.6						
MATP	Matopo	29.79	283	LR	LR	11 44 03.5	
	comp=Z,386nm,21.9s,baz=113,slow=32						
BOSA	Boshof	29.89	265	eP	P	11 34 13.8	-0.5
BOSA	Boshof	29.89	265	P	P	11 34 13.0	-1.3
	2.7nm,0.9s,baz=124,slow=10,SNR=3.8						
BOSA				LR	LR	11 43 54.7	
	comp=Z,113nm,21.5s,baz=88,slow=32						
LBTB	Lobatse	30.54	272	eP	P	11 34 20.0	-0.1
	12nm,1.4s						
LBTB	Lobatse	30.54	272	P	P	11 34 19.5	-0.6
	3.3nm,1.0s,baz=108,slow=7.9,SNR=3.4						
LSZ	Lusaka	32.60	291	eP	P	11 34 39.6	+1.3
	4.5nm,1.1s						
KMBO	Kilima Mbogo	36.23	320	P	P	11 35 10.2	+0.4
	1.3nm,0.3s,baz=167,slow=8.1,SNR=2.1						
KMBO				LR	LR	11 47 16.0	
	comp=Z,266nm,20.6s,baz=101,slow=32						
MAW	Mawson	37.04	178	LR	LR	11 46 59.0	
	comp=Z,319nm,19.5s,baz=8.5,slow=31						
TSUM	Tsumeb	39.59	277	eP	P	11 35 38.5	+0.4
TSUM	Tsumeb	39.59	277	P	P	11 35 38.4	+0.2
	0.8nm,0.3s,baz=113,slow=7.7,SNR=2.4						
MBAR	Mbarara	40.55	312	eP	P	11 35 47.2	+1.0
	5.4nm,1.3s						
MBAR	Mbarara	40.55	312	P	P	11 35 46.5	+0.3
	2.6nm,0.2s,baz=163,slow=19,SNR=2.5						
H01W2	Cape Leeuwin H	45.55	110	T	T	12 24 59.2	
	baz=260,slow=75,SNR=43						
H01W3	Cape Leeuwin H	45.56	110	T	T	12 25 00.3	
	baz=260,slow=75,SNR=41						
H01W1	Cape Leeuwin H	45.57	110	T	T	12 25 01.1	
	baz=260,slow=75,SNR=40						
DAMY	Dhamar	47.29	340	eP	P	11 36 41.1	+0.7
	16nm,1.1s						
HYB	Hyderabad	51.14	23	i P	P	11 37 11.0	+1.5
SNAA	Sanae	52.62	201	eP	P	11 37 19.9	-0.1
	15nm,1.1s						
SNAA	Sanae	52.62	201	P	P	11 37 19.3	-0.7
	7.3nm,0.9s,baz=40,slow=5.7,SNR=9.1						
RAYN	Ar Rayn	55.54	344	eP	P	11 37 42.3	+0.5
	3.7nm,0.9s						
QSPA	South Pole Qui	59.52	180	P	P	11 38 08.4	-1.1
	8.6nm,1.0s,baz=289,slow=2.8,SNR=17						
CM31	Chiang Mai Arr	61.75	43	eP	P	11 38 26.6	+1.4
CMAR	Chiang Mai Arr	61.75	43	P	P	11 38 26.6	+1.4
	10nm,1.1s,baz=229,slow=6.8,SNR=6.4						
CMAR				LR	LR	12 02 41.8	
	comp=Z,46nm,18.0s,baz=218,slow=34						
CHTO	Chiang Mai	62.03	43	eP	P	11 38 26.0	-1.0
	6.1nm,1.1s						
CHTO	Chiang Mai	62.03	43	P	P	11 38 29.1	+2.1
	28nm,1.4s,2μm						
CMMT	Chiang Mai	62.03	43	P	P	11 38 29.0	+2.0
	6.4nm,1.4s,471nm						
VNDA	Vanda	62.91	166	LR	LR	12 03 23.7	
	comp=Z,62nm,21.5s,baz=280,slow=34						
SHL	Shillong	63.85	32	eP	P	11 38 39.0	-0.3
	15nm,1.0s						
NIL	Nilore	65.23	12	eP	P	11 38 47.7	-0.2
	8.0nm,0.8s						
ASAR	Alice Springs	65.38	104	P	P	11 38 48.9	-0.4
	5.7nm,0.9s,baz=242,slow=6.0,SNR=22						
AS31	Alice Springs	65.38	104	eP	P	11 38 47.4	-1.9
	4.0nm,1.3s						
KBL	Kabul	65.44	9	eP	P	11 38 49.9	+0.4
	6.9nm,0.9s						
LSA	Lhasa	67.09	30	P	P	11 39 02.5	+2.0
LSA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LSA	Lhasa	67.09	30	eP	P	11 39 01.7	+1.2
	10nm,1.1s						
WR1	Warramunga Arr	67.31	100	eP	P	11 39 01.4	-0.2
	34nm,1.4s						
WRA	Warramunga Arr	67.31	100	P	P	11 39 01.4	-0.2
	8.8nm,1.0s,baz=241,slow=5.4,SNR=18						
WRA				LR	LR	12 04 54.5	
	comp=Z,71nm,20.0s,baz=200,slow=33						
WRAB	Tennant Creek	67.32	100	eP	P	11 39 00.1	-1.7
	30nm,1.4s						
GEYT	Alibeck	68.23	359	LR	LR	12 07 28.7	
	comp=Z,75nm,18.6s,baz=205,slow=35						
STKA	Stephens Creek	68.34	115	eP	P	11 39 07.3	-0.7
	2.7nm,1.4s						
STKA	Stephens Creek	68.34	115	P	P	11 39 07.9	-0.1
	3.0nm,1.0s,baz=231,slow=5.5,SNR=3.5						
KMI	Kunming	69.13	42	P	P	11 39 16.5	+3.4
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
CHGR	Chuyangaron	69.52	8	eP	P	11 39 15.8	+0.8
	22nm,1.4s						
GAR	Garm	70.00	9	eP	P	11 39 18.9	+0.8
	7.1nm,1.0s						
TORD	Torodi Ar. Bea	70.67	299	P	P	11 39 22.5	0.0
	0.7nm,0.6s,baz=109,slow=8.0,SNR=5.9						
TORD				LR	LR	12 10 22.1	
	comp=Z,204nm,19.2s,baz=40,slow=36						
TOA1	Torodi Ar. Sit	70.67	299	eP	P	11 39 22.5	0.0
KSH	Kashi	71.44	13	P	P	11 39 25.5	-1.3
KSH				pP	pwP	11 39 34.0	-0.8
KSH				PP	PP	11 42 04.0	-1.7
KSH				S	S	11 48 40.0	-5.2
KSH				sS	sS	11 48 52.5	+4.0
KSH				SS	SS	11 53 19.8	-0.9
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
KSH				LR	LR		
	comp=N,160nm,5.5s						
KSH				LR	LR		
	comp=Z,410nm,5.1s						
GNI	Garni	71.78	348	eP	P	11 39 29.5	+0.7
	11nm,1.3s						
DBIC	Dimbokro	71.93	289	LR	LR	12 08 21.1	
	comp=Z,141nm,21.7s,baz=104,slow=34						
ARSB	Arslanbob	72.67	10	eP	P	11 39 35.0	+0.8
	9.2nm,1.1s						
NRN	Naryn	73.30	13	eP	P	11 39 38.9	+0.8
	5.7nm,1.4s						
SIJI	Sorong	73.79	81	P	P	11 39 41.0	-0.3
	12nm,0.9s,baz=236,slow=4.6,SNR=2.5						
TARG	Taragay, Kyrgy	73.94	14	eP	P	11 39 42.5	+0.5
	8.3nm,1.2s						
BRTR	Keskin Array B	74.06	339	P	P	11 39 41.9	-0.5
	1.0nm,0.9s,baz=165,slow=10,SNR=4.8						
BRTR				LR	LR	12 09 36.0	
	comp=Z,46nm,19.8s,baz=108,slow=34						
BR101	Keskin Array S	74.06	339	eP	P	11 39 41.9	-0.5
KKAR	Karatay Array	74.06	8	eP	P	11 39 43.1	+0.9
AAK	Ala-Archa	74.19	11	eP	P	11 39 44.0	+0.8
	12nm,1.3s						
KDJ	Kajisay	74.20	13	eP	P	11 39 43.6	+0.4
	13nm,1.0s						
PRZ	Przheval'sk	74.79	14	eP	P	11 39 47.5	+0.8
	30nm,1.0s						
PMSA	Palmer Station	75.32	202	LR	LR	12 05 42.8	
	comp=Z,101nm,20.4s,baz=133,slow=30						
KBZ	Khabaz	75.58	348	LR	LR	12 12 01.3	
	comp=Z,161nm,20.0s,baz=161,slow=35						
ENH	Enshi	76.92	43	eP	P	11 39 58.5	-0.4
	16nm,1.1s						
LZH	Lanzhou	78.29	35	eP	P	11 40 08.3	+1.7
LZH				pP	pwP	11 40 12.3	-2.3
LZH				sP	PcP	11 40 15.0	-0.9
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ	Urumqi	78.43	20	eP	P	11 40 08.5	+1.4
WMQ				sP	pwP	11 40 15.3	+0.3
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.1s						
WMQ				LR	LR		
	comp=N,220nm,17.9s						
WMQ				LR	LR		
	comp=E,92nm,19.9s						
WMQ				LR	LR		
	comp=Z,140nm,17.5s						
WMQ	Urumqi	78.43	20	eP	P	11 40 07.7	+0.7
	7.3nm,0.8s						
GTA	Gaotai	79.08	31	⇓P	P	11 40 12.0	+1.2
GTA				pP	PcP	11 40 20.8	+1.5
GTA				sP	pwP	11 40 25.0	+6.2
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,66nm,5.4s						
GTA				LR	LR		
	comp=N,160nm,17.5s						
GTA				LR	LR		
	comp=E,120nm,18.1s						
GTA				LR	LR		
	comp=Z,98nm,16.8s						
XAN	Xi'an	79.39	40	P	P	11 40 13.0	+0.5
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
XAN				pmax	pmax		
	comp=Z,190nm,4.8s						
XAN	Xi'an	79.39	40	eP	P	11 40 12.0	-0.6
	23nm,1.3s						
ABKAR	Akbulak array	79.54	0	eP	P	11 40 13.1	+0.2
MAKZ	Makanchi	79.69	15	eP	P	11 40 14.1	+0.3
	9.6nm,1.4s						
MK32	Makanchi Array	79.75	16	eP	P	11 40 15.0	+0.8
MKAR	Makanchi Array	79.75	16	eP	P	11 40 14.6	+0.5
	21nm,1.1s						
MKAR	Makanchi Array	79.75	16	P	P	11 40 15.0	+0.8
	1.8nm,0.9s,baz=207,slow=7.8,SNR=14						
KEST	Kesra	81.19	321	LR	LR	12 15 16.7	
	comp=Z,179nm,21.4s,baz=71,slow=35						
KURBB	Kurchatov Arra	82.62	12	P	P	11 40 30.4	+1.1
	1.9nm,0.9s,baz=206,slow=5.8,SNR=15						
KURK	Kurchatov	82.73	12	eP	P	11 40 30.4	+0.6
	9.9nm,1.2s						
RPZ	Rata Peaks	83.05	137	LR	LR	12 10 20.6	
	comp=Z,171nm,19.4s,baz=243,slow=31						
NJ2	Nanjing	83.88	47	eP	P	11 40 35.5	-0.7
NJ2				pmax	pmax		
	comp=Z,11nm,1.0s						
AKASG	Malin Array Be	85.34	341	P	P	11 40 43.2	+0.1
	0.1nm,0.3s,baz=167,slow=4.1,SNR=4.9						
AKASG				LR	LR	12 18 28.6	
	comp=Z,26nm,19.5s,baz=285,slow=35						
HHC	Hu-ho-hao-te	85.83	37	eP	P	11 40 47.5	+1.5
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.3s						
ARU	Arti	86.73	359	eP	P	11 40 50.7	+0.8
	15nm,1.2s						
VYHS	Vyhne	86.83	334	esP	sP	11 41 01.0	+8.0
ZALV	Zalesovo Beam	87.03	15	P	P	11 40 51.0	-0.4
	4.4nm,0.8s,baz=217,slow=3.7,SNR=13						
ZALV				LR	LR	12 16 40.8	
	comp=Z,72nm,20.8s,baz=103,slow=34						
ZAA1	Zalesovo Array	87.03	15	eP	P	11 40 51.0	-0.4
OBN	Obninsk	87.68	347	eP	P	11 40 55.5	+1.0
	16nm,0.5s						
BJI	Beijing	87.72	40	P	P	11 40 56.5	+1.4
BJI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SONA0	Songino Array	88.68	29	eP	P	11 40 59.8	+0.1
SONM	Songino Array	88.68	29	P	P	11 40 59.8	+0.1
	1.2nm,0.9s,baz=214,slow=5.0,SNR=6.5						
SONM				LR	LR	12 18 30.4	
	comp=Z,165nm,20.2s,baz=190,slow=34						
ULN	Ulaanbaatar	88.99	30	eP	P	11 41 00.9	-0.2
	5.1nm,1.2s						
GEC2	GERESS Array S	89.13	332	eP	P	11 41 01.2	-0.5
GERES	GERESS Array B	89.13	332	P	P	11 41 01.2	-0.5
	0.1nm,0.3s,baz=129,slow=4.0,SNR=3.6						
GERES				LR	LR	12 22 23.4	
	comp=Z,32nm,18.0s,baz=158,slow=36						
URZ	Urewera	90.02	136	LR	LR	12 13 32.4	
	comp=Z,130nm,21.4s,baz=287,slow=30						
CLL	Collm	91.34	333	eSS	SS	11 58 24.0	+7.4
KLMR	Klimovskoe	92.64	350	eP	P	11 41 16.8	-0.8
KLMR				AMP		11 41 18.6	
	comp=Z,15nm,1.5s						
KS15	Wonju Array Si	93.03	48	eP	P	11 41 19.5	-0.5
KSRS	Korea Array	93.06	48	P	P	11 41 19.5	-0.6
	comp=Z,1.0nm,0.8s,baz=250,slow=3.7,SNR=5.4						
KSRS				LR	LR	12 20 42.8	
	comp=Z,30nm,21.1s,baz=244,slow=34						
PLCA	Paso Flores	95.33	216	LR	LR	12 20 16.9	
	comp=Z,55nm,18.9s,baz=189,slow=33						
BDFB	Brasilia	96.65	248	LR	LR	12 18 10.0	
	comp=Z,46nm,18.7s,baz=235,slow=31						
MJAR	Matsushiro Arr	99.39	53	LR	LR	12 24 09.7	
	comp=Z,35nm,20.8s,baz=55,slow=34						
NOA	NORSAR Array B	99.48	338	LR	LR	12 26 40.2	
	comp=Z,26nm,19.8s,baz=165,slow=35						
ILAR	Eielson Array	142.07	18	PKP	PKPdf	11 47 36.7	-1.2
	comp=Z,0.3nm,0.7s,baz=294,slow=2.8,SNR=2.7						
ILB	Eielson Array	142.07	18	ePKPdf	PKPdf	11 47 36.7	-1.2
PAX	Paxson	143.87	19	ePKPdf	PKPdf	11 47 40.9	-0.3
DAWY	Dawson	144.47	14	ePKPdf	PKPbc	11 47 40.9	+0.2
SADO	Sadowa	144.85	305	ePKPab	PKPbc	11 47 43.0	+0.5
KLU	Klutina	144.89	21	ePKPdf	PKPdf	11 47 43.1	+0.1
DIV	Divide	145.21	21	ePKPbc	PKPdf	11 47 43.9	+0.4
M54A	Oil Creek Stat	145.65	300	ePKPdf	PKPdf	11 47 44.5	-0.4
FCC	Fort Churchill	146.68	335	ePKPdf	PKPdf	11 47 46.1	+0.2
O52A	Adamsville	147.41	298	ePKPbc	PKPbc	11 47 50.1	-0.2
N51A	Ashland	147.74	299	ePKPbc	PKPbc	11 47 51.4	+0.2
YKA	Yellowknife Ar	147.92	355	PKPbc	PKPbc	11 47 50.5	-0.4
	comp=Z,4.7nm,1.0s,baz=356,slow=2.7,SNR=34						
YKB5	Yellowknife Ar	147.92	355	ePKPbc	PKPbc	11 47 50.5	-0.4
N49A	Columbus Grove	149.10	299	ePKPdf	PKPdf	11 47 50.7	+0.1
Z50A	Ashland	150.73	284	ePKPdf	PKPdf	11 47 53.5	0.0
Z50A				ePKPbc	PKPbc	11 47 59.0	0.0
SWET	Sewanee	150.83	288	ePKPdf	PKPdf	11 47 53.5	-0.1
SWET				ePKPbc	PKPbc	11 47 59.3	+0.1
250A	Grady	150.90	282	ePKPbc	PKiKP	11 47 59.8	-0.2
G42A	Mountain	151.12	309	ePKPbc	PKiKP	11 47 59.9	-0.2
COWI	Conover	151.29	311	ePKPbc	PKPbc	11 47 60.0	+0.1
COWI				ePKPab	pPKPab	11 48 09.0	-0.7
T47A	Sharon Grove	151.75	292	ePKPbc	PKPbc	11 48 01.2	0.0
M44A	Midewin, Midew	151.89	301	ePKPdf	PKPdf	11 47 54.5	-0.4
M44A				ePKPbc	PKiKP	11 48 02.0	+0.3
M44A				ePKPab	PKPab	11 48 11.2	+0.6
EYMN	Ely	151.99	316	ePKPbc	PKPbc	11 48 01.4	+0.1
EYMN				ePKPab	PKPab	11 48 10.8	0.0
FFC	Flin Flon	152.57	337	ePKPbc	PKPbc	11 48 02.6	+0.1
ULM	Lac du Bonnet	153.17	324	PKPbc	PKPbc	11 48 03.2	-0.7
	comp=Z,2.9nm,0.9s,baz=352,slow=1.9,SNR=4.4						
NEW	Newport	162.23	353	ePKPab	PKPab	11 48 56.4	+1.6
FXWY	Fox Creek	165.06	333	ePKPdf	PKPdf	11 48 10.8	-0.1
PD31	Pinedale Array	165.13	327	ePKPdf	PKPdf	11 48 09.4	-1.5
PD31				ePKPab	PKPab	11 49 06.9	-1.0
PDAR	Pinedale Array	165.13	327	PKP	PKPdf	11 48 09.4	-1.5
	comp=Z,3.1nm,1.3s,baz=90,slow=1.5,SNR=6.5						
PDAR				PKPab	PKPab	11 49 06.9	-1.0
	comp=Z,0.4nm,0.7s,baz=96,slow=3.6,SNR=2.9						
MNTX	Cornudas Mount	167.12	279	ePKPdf	PKPdf	11 48 13.6	+1.0
NV01	Mina Array Sit	172.05	348	ePKPdf	PKPdf	11 48 16.9	+1.3
NVAR	Mina Array Bea	172.05	348	PKP	PKPdf	11 48 16.9	+1.3
	comp=Z,0.8nm,1.0s,baz=180,slow=1.5,SNR=6.1						

MEX 25 11:34:29.1±0.8**,14°.72N**×**92°.67W,h68**^{km}±21^{km}**,MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.43	64	i P	Pn	11 34 40.5	-0.6
THIG				i S	Sn	11 34 47.4	-2.6
PCIG		1.11	332	eP	Pn	11 34 47.6	-1.3
PCIG				i S	Sn	11 35 02.3	-1.5

IDC ***25*** *11:36:16.5±4.0, 5°.08S×103°.67E, h0*^{km}*, mb3.6/5, mb1 3.8/5, mb1mx3.5/34, mbtmp3.6/5, Error ellipse: s-maj=188.0km s-min=21.0km az=53.0*

ISCJB ***25*** *11:36:17.6±1.8, 5°.79S±0°.06×103°.70E±0°.06, h2*^{km}*±10*^{km}*, mb3.7/5, Error ellipse: s-maj=11.5km s-min=7.5km az=40.2*

DJA ***25*** *11:36:18.2±0.8, 6°S±5°×10°4E±°, h10*^{km}*, M3.6/6, MLv3.6/6*

ISC 25 11:36:16.9±2.1**,5°.76S**±0°.10×**103°.63E**±0°.06**,h17**^{km}±11^{km}**, n12,** σ**2**^{s}**.03**/16**,mb3.6**/5**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	0.85	30	P	Pn	11 36 35.2	+0.9
LWLI				S	Sn	11 36 46.0	-0.4
KASI	Kota Agung	0.90	75	P	Pb	11 36 33.8	-0.2
KASI				S	Sb	11 36 45.4	-0.3
MDSI	Maura Dua	1.38	23	P	Pg	11 36 42.8	-0.8
MDSI				S	Sn	11 37 02.3	+3.1
KLI	Kotabumi	1.52	54	P	Pg	11 36 45.5	-0.6
MNAI	Manna	1.54	334	P	Pg	11 36 46.7	0.0
MNAI				S	Sg	11 37 08.0	+1.2
BLSI	Bandar Lampung	1.66	76	P	Pb	11 36 46.5	-0.5
BLSI				S	Sb	11 37 07.6	0.0
LHSI	Lahat	1.92	357	P	Pb	11 36 52.0	+0.4
CMAR	Chiang Mai Arr	24.50	349	P	P	11 41 32.4	-3.1
	0.4nm,0.4s,baz=185,slow=9.7,SNR=1.5						
WRA	Warramunga Arr	33.01	118	P	P	11 42 55.3	+3.8
	0.4nm,0.8s,baz=286,slow=9.6,SNR=9.6						
ASAR	Alice Springs	34.14	125	P	P	11 43 07.3	+6.0
	0.3nm,0.3s,baz=302,slow=7.9,SNR=12						
MKAR	Makanchi Array	55.64	342	P	P	11 45 49.8	-2.2
	0.5nm,0.5s,baz=147,slow=8.4,SNR=8.2						
ZALV	Zalesovo Beam	61.55	347	P	P	11 46 30.4	-2.6
	0.9nm,0.4s,baz=160,slow=5.7,SNR=3.6						

IDC ***25*** *11:50:15.8±1.6, 11°.07S×165°.50E, h0*^{km}*, mb3.8/4, mb1 4.0/6, mb1mx3.7/39, mbtmp3.9/6, ML4.2/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/30, Error ellipse: s-maj=37.7km s-min=28.8km az=128.0*

ISCJB ***25*** *11:50:18.0±1.3, 11°.2S±0°.1×165°.6E±0°.1, h30*^{km}*, mb4.0/5, MS3.9/1, Error ellipse: s-maj=22.8km s-min=11.6km az=37.2*

ISC 25 11:50:19.8±1.4**,11°.1S**±0°.2×**165°.6E**±0°.1**,h30**^{km}**,n14,** σ**1**^{s}**.77**/8**,mb3.8**/5**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.84	286	Pn	Pn	11 51 42.7	-1.7
	10nm,0.3s,baz=117,slow=6.8,SNR=3.2						
HNR				Sn	Sn	11 52 53.3	+2.9
	12nm,0.3s,baz=322,slow=13,SNR=3.9						
HNR				LR	LR	11 53 45.3	
	comp=Z,68nm,20.6s,baz=76,slow=37						
DZM	Mont Dzumac	10.93	176	Pn	Pn	11 52 55.0	+0.7
	1.0nm,0.3s,baz=0.0,slow=20,SNR=14						
H11S2	WAKE ISLAND Hy	29.43	2	T	T	12 26 37.6	
	baz=181,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.44	2	T	T	12 26 36.8	
	baz=181,slow=76,SNR=6.3						
H11S1	WAKE ISLAND Hy	29.45	2	T	T	12 26 36.9	
	baz=181,slow=76,SNR=7.1						
STKA	Stephens Creek	30.32	223	P	P	11 56 29.4	+0.5
	0.9nm,0.6s,baz=45,slow=20,SNR=3.0						
H11N1	WAKE ISLAND Hy	30.65	2	T	T	12 28 10.3	
	baz=182,slow=76,SNR=5.6						
H11N3	WAKE ISLAND Hy	30.66	2	T	T	12 28 07.4	
	baz=182,slow=76,SNR=5.9						
H11N2	WAKE ISLAND Hy	30.67	2	T	T	12 28 12.3	
	baz=182,slow=76,SNR=5.4						
WRA	Warramunga Arr	31.36	250	P	P	11 56 36.9	-1.2
	1.3nm,0.8s,baz=82,slow=9.0,SNR=7.0						
ASAR	Alice Springs	32.67	243	P	P	11 56 48.5	-1.2
	0.7nm,0.8s,baz=66,slow=10,SNR=7.7						
BATI	Baumata	41.23	267	P	P	11 58 02.3	-0.2
	32nm,0.7s,baz=100,slow=7.7,SNR=2.8						
QSPA	South Pole Qui	78.89	180	LR	LR	12 33 16.0	
	comp=Z,60nm,19.6s,baz=147,slow=33						
ILAR	Eielson Array	83.61	19	P	P	12 02 45.7	+0.8
	0.7nm,0.9s,baz=227,slow=3.8,SNR=4.5						

IDC 25 11:54:50.3±7.8**,1°.86N**×**124°.93E,h0**^{km}**,mb3.9**/3**, mb1 4.1**/4**,mb1mx3.5**/48**,mbtmp4.0**/4**,ML4.5**/1**,Error ellipse: s-maj=127.7km s-min=105.5km az=122.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.84	178	P	Pn	11 59 24.9	+0.5
	0.9nm,0.3s,baz=15,slow=11,SNR=32						
WRA	Warramunga Arr	23.55	157	P	P	12 00 02.7	+0.2
	1.9nm,0.4s,baz=333,slow=11,SNR=48						
ASAR	Alice Springs	26.83	162	P	P	12 00 32.1	-0.6
	0.4nm,0.3s,baz=341,slow=7.4,SNR=28						
STKA	Stephens Creek	37.09	156	P	P	12 02 01.7	-0.8
	0.8nm,0.4s,baz=328,slow=9.5,SNR=4.2						

ISCJB ***25*** *12:01:40.1±0.2, 18°.88S±0°.04×169°.43E±0°.04, h246km, mb4.6/98, Error ellipse: s-maj=6.7km s-min=4.2km az=145.4*
BJI ***25*** *12:01:41.5, 19°.00S×169°.50E, h261km, mB5.0/6, mb4.5/10*
NEIC ***25*** *12:01:43.6±0.3, 18°.97S×169°.49E, h272km±3km, mb4.7/84, Error ellipse: s-maj=3.7km s-min=2.8km az=155.0*
IDC ***25*** *12:01:44.6±1.2, 18°.99S×169°.52E, h280km±11km, mb4.1/20, mb1 4.3/22, mb1mx4.1/31, mbtmp4.7/22, Error ellipse: s-maj=13.7km s-min=9.5km az=149.0*
ISC 25 12:01:41.1±0.4**, 18°.93S**±0°.06×**169°.51E**±0°.06**, h246**km**,**
n230, σ**1s.00**/236**, mb4.7**/98**, 3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.89**	**208**	*e*Pn	**Pn**	**12 02 35.4**	**+3.3**
PINNC	**Pines Island,**	**4.14**	**207**	*e*Pn	**Pn**	**12 02 49.1**	**+2.7**
DZM	**Mont Dzumac**	**4.25**	**222**	*e*Pn	**Pn**	**12 02 51.0**	**+3.3**
DZM				*e*S	**S**	**12 03 42.9**	**+2.2**
DZM	**Mont Dzumac**	**4.25**	**222**	P	Pn	12 02 52.0	+4.3
	11nm,0.3s,baz=56,slow=15,SNR=92						
DZM				S	**S**	**12 03 39.0**	**-1.6**
	4.1nm,0.3s,baz=143,slow=20,SNR=0.8						
OUENC	**Ouen Island, N**	**4.28**	**215**	*e*Pn	**Pn**	**12 02 51.1**	**+3.2**
MSVF	**Nonsavu**	**8.20**	**83**	*e*Pn	**Pn**	**12 03 40.3**	**+3.3**
HNR	**Honiara**	**13.22**	**314**	*e*P	**P**	**12 04 44.0**	**+2.4**
HNR				*e*S	S	12 06 07.0	-60
HNR	**Honiara**	**13.22**	**314**	*e*Pn	**P**	**12 04 42.1**	**+0.5**
HNR				*e*S	**S**	**12 07 09.4**	**+2.5**
HNR	**Honiara**	**13.22**	**314**	P	**P**	**12 04 43.5**	**+1.9**
	26nm,0.3s,baz=199,slow=2.6,SNR=29						
HNR				S	**S**	**12 07 09.4**	**+2.5**
	6.2nm,0.3s,baz=108,slow=7.6,SNR=1.6						
ARMA	**Armidale**	**19.84**	**231**	*e*P	**P**	**12 05 54.6**	**+0.7**
	15nm,0.9s						
MXZ	**Matakaoa Point**	**20.10**	**159**	*e*P	**P**	**12 05 58.2**	**+1.8**
	103nm,1.3s						
URZ	**Urewera**	**20.37**	**163**	*e*P	**P**	**12 06 00.1**	**+0.8**
	59nm,1.6s						
URZ	**Urewera**	**20.37**	**163**	P	**P**	**12 05 59.9**	**+0.6**
	14nm,0.9s,baz=326,slow=11,SNR=6.4						
BKZ	**Black Stump Fm**	**21.06**	**165**	*e*P	**P**	**12 06 06.7**	**+0.2**
	12nm,0.7s						
CTA	**Charters Tower**	**21.95**	**263**	P	**P**	**12 06 16.5**	**+1.3**
	21nm,0.6s,baz=89,slow=11,SNR=35						
CTAO	**Charters Tower**	**21.95**	**263**	*e*P	**P**	**12 06 15.2**	**+0.1**
	25nm,0.8s						
BFZ	**Birch Farm**	**22.44**	**166**	*e*P	**P**	**12 06 18.8**	**-0.6**
	87nm,1.6s						
SNZO	**South Karori**	**22.75**	**170**	*e*P	**P**	**12 06 21.6**	**-0.5**
	92nm,1.3s						
THZ	**Tophouse**	**22.94**	**173**	*e*P	**P**	**12 06 24.7**	**+0.7**
	14nm,1.1s						
KNTN	**Kanton**	**24.40**	**51**	*e*P	**P**	**12 06 37.0**	**-0.5**
	231nm,1.1s						
FOZ	**Fox Glacier**	**24.53**	**179**	*e*P	**P**	**12 06 37.9**	**-0.4**
	7.1nm,0.8s						
RPZ	**Rata Peaks**	**24.75**	**177**	P	**P**	**12 06 40.9**	**+0.6**
	5.1nm,0.9s,baz=10,slow=14,SNR=3.0						
COEN	**Coen**	**25.72**	**277**	*e*P	**P**	**12 06 49.6**	**+0.2**
	11nm,0.9s						
TOO	**Toolangi**	**28.02**	**224**	*e*P	**P**	**12 07 09.2**	**-0.4**
	45nm,1.6s						
STKA	**Stephens Creek**	**28.23**	**237**	*e*P	**P**	**12 07 11.5**	**0.0**
	3.0nm,0.6s						
STKA	**Stephens Creek**	**28.23**	**237**	P	**P**	**12 07 12.7**	**+1.2**
	16nm,0.6s,baz=61,slow=8.8,SNR=51						
WRAB	**Tennant Creek**	**33.13**	**262**	*e*P	**P**	**12 07 54.0**	**-0.6**
	9.3nm,0.8s						
WR1	**Warramunga Arr**	**33.15**	**262**	*e*P	**P**	**12 07 54.5**	**-0.2**
	30nm,1.1s						
WRA	**Warramunga Arr**	**33.15**	**262**	P	**P**	**12 07 54.5**	**-0.2**
	12nm,0.6s,baz=82,slow=6.0,SNR=166						
WRA				S	**S**	**12 12 52.6**	**-3.2**
	1.0nm,0.8s,baz=91,slow=15,SNR=5.4						
WRA				ScP	**ScP**	**12 13 50.1**	**-2.4**
	1.3nm,0.9s,baz=88,slow=3.7,SNR=5.7						
AS31	**Alice Springs**	**33.45**	**256**	*e*P	**P**	**12 07 57.5**	**+0.2**
	40nm,0.4s						
ASAR	**Alice Springs**	**33.45**	**256**	P	**P**	**12 07 57.7**	**+0.3**
	74nm,0.6s,baz=81,slow=9.0,SNR=1660						
ASAR				S	**S**	**12 12 57.0**	**-3.5**
	0.6nm,0.7s,baz=83,slow=17,SNR=4.3						
ASAR				ScP	**ScP**	**12 13 51.8**	**-1.7**
	1.7nm,0.8s,baz=107,slow=3.6,SNR=10.0						
MTN	**Manton Dam**	**37.35**	**274**	*e*P	**P**	**12 08 30.2**	**-0.3**
	38nm,0.6s						
FORT	**Forrest**	**39.21**	**244**	*e*P	**P**	**12 08 45.1**	**-0.7**
	18nm,0.8s						
FAKI	**Fak Fak**	**39.76**	**289**	*e*P	**P**	**12 08 49.9**	**-0.6**
	26nm,1.0s						
FITZ	**Fitzroy Crossi**	**41.53**	**264**	*e*P	**P**	**12 09 05.1**	**+0.2**
	23nm,0.6s						
FITZ	**Fitzroy Crossi**	**41.53**	**264**	P	**P**	**12 09 05.7**	**+0.8**
	23nm,0.6s,baz=90,slow=20						
BATI	**Baumata**	**45.10**	**274**	P	**P**	**12 09 34.6**	**+1.1**
	21nm,0.5s,baz=119,slow=6.1						
MBWA	**Marble Bar**	**46.66**	**258**	*e*P	**P**	**12 09 45.6**	**0.0**
	111nm,1.5s						
NWAO	**Narrogin (SRO)**	**48.58**	**243**	*e*P	**P**	**12 09 59.5**	**-0.6**
	26nm,1.3s						
MORW	**Morawa**	**49.52**	**248**	*e*P	**P**	**12 10 06.7**	**-0.6**
	2.8nm,0.5s						
KHLU	**Kahalu`u**	**51.16**	**43**	*e*P	**P**	**12 10 19.8**	**+0.1**
	154nm,1.3s						
KIP	**Kipapa**	**51.17**	**40**	*e*P	**P**	**12 10 19.5**	**-0.1**
	190nm,1.5s						
AIN	**Ainahou**	**51.29**	**44**	*e*P	**P**	**12 10 20.4**	**-0.3**
	410nm,1.7s						
HMH	**Humu‘ula Sheep**	**51.44**	**44**	*e*P	**P**	**12 10 22.1**	**+0.2**
	112nm,1.0s						
KSM	**Kuching**	**61.55**	**282**	*e*P	**P**	**12 11 32.3**	**-0.6**
	17nm,0.7s						
MJAR	**Matsushiro Arr**	**62.60**	**332**	P	**P**	**12 11 39.9**	**+0.6**
	1.7nm,0.7s,baz=172,slow=4.1,SNR=4.4						
MAJO	**Matsushiro**	**62.60**	**332**	*e*P	**P**	**12 11 39.9**	**+0.6**
ASAJ	**Asahikawa**	**67.40**	**339**	P	**P**	**12 12 10.3**	**+0.3**
	2.9nm,0.5s,baz=192,slow=4.0,SNR=8.0						
NJ2	**Nanjing**	**70.16**	**316**	*e*P	**P**	**12 12 28.3**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
QSPA	**South Pole Qui**	**71.12**	**180**	*e*P	**P**	**12 12 32.1**	**-0.7**
	5.5nm,1.0s						
ADK	**Adak**	**71.53**	**9**	*e*P	**P**	**12 12 35.0**	**0.0**
	50nm,1.4s						
PETK	**Petropavlovsk-**	**72.46**	**353**	P	**P**	**12 12 41.7**	**+1.1**
	10nm,0.7s,baz=149,slow=9.2,SNR=17						
PEA1	**Petropavlovsk-**	**72.47**	**353**	*e*P	**P**	**12 12 41.7**	**+1.1**
KLR	**Kul'dur**	**75.69**	**336**	P	**P**	**12 13 00.0**	**+0.7**
	1.7nm,0.7s,baz=91,slow=3.0,SNR=7.7						
LAMP	**Lampang**	**78.04**	**294**	P	**P**	**12 13 15.5**	**+2.4**
CM31	**Chiang Mai Arr**	**78.61**	**294**	*e*P	**P**	**12 13 17.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**78.61**	**294**	P	**P**	**12 13 17.1**	**+0.9**
	2.1nm,0.8s,baz=130,slow=4.3,SNR=13						
HHC	**Hu-ho-hao-te**	**80.15**	**319**	*e*P	**P**	**12 13 23.3**	**-0.9**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
OHAK	**Old Harbor**	**81.98**	**19**	*e*P	**P**	**12 13 33.2**	**+0.1**
	92nm,1.7s						
KDAK	**Kodiak Island**	**82.66**	**19**	*e*P	**P**	**12 13 36.9**	**+0.2**
	43nm,1.2s						
KDAK	**Kodiak Island**	**82.66**	**19**	P	**P**	**12 13 37.2**	**+0.5**
	11nm,0.8s,baz=222,slow=5.1,SNR=8.9						
LZH	**Lanzhou**	**82.71**	**312**	*e*P	P	12 13 46.0	+8.3
LZH				pP	pP	12 14 42.5	+6.4
LZH				sP	sP	12 15 09.0	+7.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
GAMB	**Gambell**	**83.73**	**8**	*e*P	**P**	**12 13 42.0**	**0.0**
	comp=Z,13nm,0.6s						
SVW2	**Sparrevohn**	**84.53**	**16**	*e*P	**P**	**12 13 46.6**	**+0.4**
	comp=Z,24nm,1.5s						
HOPS	**Hopland Field**	**85.34**	**46**	*e*P	**P**	**12 13 50.7**	**0.0**
	comp=Z,34nm,1.3s						
ANM	**Nome**	**85.45**	**11**	*e*P	**P**	**12 13 50.7**	**+0.1**
	comp=Z,6.4nm,0.7s						
KMRM	**Mail Ridge**	**85.51**	**45**	*e*P	**P**	**12 13 52.0**	**+0.4**
	comp=Z,21nm,0.7s						
PKM	**Mcpherson Peak**	**85.76**	**51**	P	**P**	**12 13 52.9**	**-0.2**
	baz=244						
KHMM	**Horse Mountain**	**85.81**	**44**	*e*P	**P**	**12 13 53.7**	**+0.5**
	comp=Z,22nm,0.9s						
SMMC	**Simmler**	**85.82**	**51**	P	**P**	**12 13 53.6**	**+0.4**
	baz=243						
PAGB	**Antelope Grade**	**85.82**	**50**	*e*P	**P**	**12 13 53.3**	**+0.1**
	comp=Z,10nm,0.7s						
SCI2	**San Clemente I**	**85.88**	**53**	P	**P**	**12 13 53.8**	**+0.3**
	baz=244						
O02D	**Mt. Diablo Mer**	**86.10**	**45**	P	**P**	**12 13 55.3**	**+0.7**
	baz=241,SNR=9.4						
CIS	**Catalina Islan**	**86.16**	**53**	P	**P**	**12 13 55.2**	**+0.4**
	baz=244						
FMP	**Fort Macarthur**	**86.38**	**53**	P	**P**	**12 13 56.0**	**+0.1**
	baz=244						
WDC	**Whiskeytown Da**	**86.46**	**45**	*e*P	**P**	**12 13 56.4**	**+0.3**
	comp=Z,9.1nm,0.9s						
N02D	**Trinity Center**	**86.54**	**45**	P	**P**	**12 13 57.7**	**+1.1**
	baz=241,SNR=6.2						
DECC	**Green Verdugo**	**86.58**	**52**	P	**P**	**12 13 57.2**	**+0.2**
	baz=244						
ARVC	**Arvin**	**86.59**	**51**	P	**P**	**12 13 57.2**	**+0.3**
	baz=244						
M02C	**Callahan**	**86.64**	**44**	P	**P**	**12 13 58.0**	**+0.9**
	baz=241,SNR=6.3						
ORV	**Oroville**	**86.68**	**46**	*e*P	**P**	**12 13 57.2**	**0.0**
VES	**Vestal, Richgr**	**86.72**	**50**	P	**P**	**12 13 57.4**	**-0.1**
	baz=244						
K02D	**Willamette Mer**	**86.75**	**43**	P	**P**	**12 13 58.0**	**+0.4**
	baz=241						
BILL	**Bilibino**	**86.75**	**359**	*e*P	**P**	**12 13 56.8**	**-0.1**
	comp=Z,5.6nm,0.8s						
CMB	**Columbia Colle**	**86.76**	**48**	*e*P	**P**	**12 13 57.1**	**-0.6**
	comp=Z,12nm,0.8s						
AFDM	**Forest Hills D**	**86.77**	**47**	*e*P	**P**	**12 13 57.5**	**-0.2**
	comp=Z,12nm,1.0s						
MWC	**Mount Wilson**	**86.78**	**52**	*e*P	**P**	**12 13 57.7**	**-0.4**
	comp=Z,12nm,0.6s						
J01E	**Myrtle Point**	**86.81**	**42**	P	**P**	**12 13 57.9**	**+0.2**
	baz=240						
O03E	**Paynes Creek**	**86.82**	**46**	P	**P**	**12 13 58.2**	**+0.2**
	baz=242,SNR=5.6						
YBH	**Yreka Blue Hor**	**86.90**	**44**	*e*P	**P**	**12 13 58.1**	**-0.3**
	comp=Z,17nm,1.1s						
109C	**Camp Elliot, M**	**86.94**	**54**	P	**P**	**12 13 58.6**	**0.0**
	baz=245						
CPE	**Camp Elliot**	**86.94**	**54**	*e*P	**P**	**12 13 58.1**	**-0.5**
	comp=Z,12nm,0.9s						
BFSC	**Mount Baldy Ra**	**87.08**	**52**	P	**P**	**12 13 59.3**	**-0.2**
	baz=245,SNR=7.7						
ISA	**Isabella, Lake**	**87.09**	**51**	*e*P	**P**	**12 13 59.4**	**0.0**
	comp=Z,14nm,0.8s						
ISA	**Isabella, Lake**	**87.09**	**51**	P	**P**	**12 13 59.9**	**+0.5**
	baz=244,SNR=14						
EDW2	**Edwards Air Fo**	**87.11**	**52**	P	**P**	**12 13 59.9**	**+0.4**
	baz=245,SNR=7.1						
SONA0	**Songino Array**	**87.12**	**323**	*e*P	**P**	**12 13 58.7**	**-0.6**
SONM	**Songino Array**	**87.12**	**323**	P	**P**	**12 13 58.7**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=154,slow=6.0,SNR=6.4						
HUMO	**Hull Mountain**	**87.16**	**43**	*e*P	**P**	**12 13 59.5**	**+0.1**
	comp=Z,9.5nm,0.8s						
MURC	**Murrieta**	**87.17**	**53**	P	**P**	**12 14 00.0**	**+0.3**
	baz=245						
L04D	**Klamath Falls**	**87.40**	**44**	P	**P**	**12 14 01.3**	**+0.5**
	baz=242						
MONP2	**Monument Peak**	**87.46**	**54**	P	**P**	**12 14 01.9**	**+0.5**
	baz=246,SNR=8.0						
M04C	**Macdoel**	**87.50**	**44**	P	**P**	**12 14 01.8**	**+0.6**
	baz=242						
MDPB	**Devils Postpil**	**87.51**	**49**	*e*P	**P**	**12 14 01.1**	**-0.4**
	comp=Z,7.9nm,1.0s						
LRMC	**Laurel Mtn Rad**	**87.59**	**51**	P	**P**	**12 14 02.3**	**+0.5**
	baz=245						
IKP	**In-Ko-Pah, Jac**	**87.60**	**54**	P	**P**	**12 14 02.5**	**+0.6**
	baz=246						
BEKR	**Beckworth**	**87.61**	**46**	*e*P	**P**	**12 14 01.6**	**-0.3**
	comp=Z,5.4nm,0.7s						
WAKR	**Walker**	**87.64**	**48**	*e*P	**P**	**12 14 01.9**	**-0.2**
	comp=Z,10nm,1.1s						
BBRC	**Big Bear Solar**	**87.65**	**53**	P	**P**	**12 14 02.5**	**+0.3**
	baz=245,SNR=5.2						
MLAC	**Mammoth, Mammo**	**87.68**	**49**	P	**P**	**12 14 02.5**	**+0.1**
	baz=244						
CWC	**Cottonwood Cre**	**87.71**	**50**	P	**P**	**12 14 02.6**	**+0.2**
	baz=244						
PFO	**Pinyon Flats O**	**87.73**	**53**	*e*P	**P**	**12 14 02.2**	**-0.4**
	comp=Z,5.5nm,0.9s						
PFO	**Pinyon Flats O**	**87.73**	**53**	P	**P**	**12 14 02.6**	**0.0**
	baz=246						
XPFO	**Pion Flat**	**87.73**	**53**	*e*P	**P**	**12 14 02.3**	**-0.2**
	comp=Z,6.0nm,0.9s						
TIN	**Tinemaha, Big**	**87.86**	**50**	P	**P**	**12 14 03.7**	**+0.6**
	baz=244						
K04D	**Chiloquin, OR**	**87.95**	**43**	P	**P**	**12 14 03.9**	**+0.6**
	baz=242						
SWSC	**Sam W. Stewart**	**87.96**	**54**	P	**P**	**12 14 03.7**	**+0.2**
	baz=246						
MPMC	**Manual Prospec**	**87.98**	**51**	P	**P**	**12 14 04.1**	**+0.3**
	baz=245,SNR=7.4						
YERR	**Yerington**	**87.99**	**48**	*e*P	**P**	**12 14 03.5**	**-0.2**
	comp=Z,6.0nm,0.8s						
DAC	**Darwin (Calif)**	**88.00**	**51**	*e*P	**P**	**12 14 03.7**	**-0.1**
	comp=Z,14nm,1.4s						
I04A	**Tendick Farm,**	**88.08**	**42**	P	**P**	**12 14 04.1**	**+0.3**
	baz=241						
GSC	**Goldstone, Bar**	**88.17**	**52**	P	**P**	**12 14 04.6**	**+0.1**
	baz=245						
PAHR	**Pah Rah Range**	**88.21**	**47**	*e*P	**P**	**12 14 04.6**	**-0.1**
	comp=Z,9.1nm,1.2s						
BELC	**Belle Mtn. Jos**	**88.24**	**53**	P	**P**	**12 14 05.6**	**+0.6**
	baz=246,SNR=8.3						
RND	**Reindeer**	**88.25**	**17**	*e*P	**P**	**12 14 03.2**	**-1.0**
	comp=Z,6.0nm,1.0s						
HEC	**Hector,Ludlow**	**88.32**	**52**	P	**P**	**12 14 05.4**	**+0.2**
	baz=246,SNR=6.6						
RYN	**Ryan**	**88.34**	**48**	*e*P	**P**	**12 14 04.5**	**-0.9**
	comp=Z,8.9nm,1.0s						
NV01	**Mina Array Sit**	**88.41**	**48**	*e*P	**P**	**12 14 05.5**	**-0.2**
NVAR	**Mina Array Bea**	**88.41**	**48**	P	**P**	**12 14 05.5**	**-0.2**
	comp=Z,6.8nm,0.9s,baz=226,slow=8.7,SNR=31						
GRAC	**Grapevine Rang**	**88.47**	**50**	P	**P**	**12 14 06.5**	**+0.7**
	baz=245						
BC3	**Big Chuckawall**	**88.51**	**54**	P	**P**	**12 14 06.7**	**+0.5**
	baz=246						
MOD	**Modoc Plateau**	**88.57**	**45**	*e*P	**P**	**12 14 06.0**	**-0.4**
	comp=Z,13nm,1.0s						
J05D	**Fort Rock, OR**	**88.59**	**43**	P	**P**	**12 14 07.2**	**+0.8**
	baz=242						
FURC	**Furnace Creek,**	**88.61**	**51**	P	**P**	**12 14 07.0**	**+0.6**
	baz=245,SNR=8.3						
F04D	**Rainier, OR**	**88.81**	**40**	P	**P**	**12 14 08.0**	**+0.9**
	baz=241						
SHOC	**Shoshone, Teco**	**88.81**	**51**	P	**P**	**12 14 08.0**	**+0.6**
	baz=246						
GMRC	**Granite Mounta**	**88.81**	**53**	P	**P**	**12 14 07.9**	**+0.3**
	baz=246						
KVN	**Kaiserville**	**88.82**	**48**	*e*P	**P**	**12 14 07.0**	**-0.6**
	comp=Z,7.1nm,0.8s						
TUQ	**Turquoise Moun**	**88.88**	**52**	P	**P**	**12 14 08.2**	**+0.3**
	baz=246,SNR=8.6						
IRM	**Iron Mountain**	**88.95**	**53**	P	**P**	**12 14 08.7**	**+0.6**
	baz=246,SNR=9.2						
I05D	**Terrebonne, OR**	**89.02**	**42**	P	**P**	**12 14 08.7**	**+0.5**
	baz=242						
TPNV	**Topopah Spring**	**89.26**	**50**	*e*P	**P**	**12 14 09.6**	**-0.1**
	comp=Z,13nm,0.8s						
TPNV	**Topopah Spring**	**89.26**	**50**	P	**P**	**12 14 10.2**	**+0.5**
	baz=246,SNR=13						
Y12C	**Blythe**	**89.26**	**54**	*e*P	**P**	**12 14 09.6**	**+0.1**
	comp=Z,13nm,1.0s						
Y12C	**Blythe**	**89.26**	**54**	P	**P**	**12 14 10.3**	**+0.8**
	baz=247,SNR=6.0						
E04D	**Cinebar**	**89.31**	**40**	P	**P**	**12 14 08.9**	**-0.6**
	baz=241						
LDFC	**Landfair**	**89.34**	**53**	*e*P	**P**	**12 14 10.2**	**+0.1**
	comp=Z,24nm,0.9s						
D03D	**Eldon**	**89.47**	**39**	P	**P**	**12 14 11.0**	**+0.8**
	baz=241						
HDA	**Harding Lake**	**89.57**	**17**	P	**P**	**12 14 08.6**	**-1.6**
	baz=221						
F05D	**White Salmon**	**89.66**	**41**	P	**P**	**12 14 11.5**	**+0.3**
	baz=242						
TCOL	**CIGO, UAF Yank**	**89.67**	**17**	P	**P**	**12 14 09.5**	**-1.1**
	baz=220						
PDMCI	**Parker Dam,Lak**	**89.77**	**54**	P	**P**	**12 14 12.3**	**+0.4**
	baz=247						
ILAR	**Eielson Array**	**89.86**	**17**	P	**P**	**12 14 09.8**	**-1.8**
	comp=Z,2.0nm,0.7s,baz=237,slow=5.2,SNR=22						
SHPR	**Sheep Range**	**89.88**	**51**	*e*P	**P**	**12 14 12.8**	**+0.3**
	comp=Z,7.7nm,0.9s						
214A	**Organ Pipe Nat**	**89.89**	**56**	P	**P**	**12 14 12.9**	**+0.3**
	baz=248,SNR=5.0						
WVOR	**Wild Horse Val**	**89.92**	**45**	*e*P	**P**	**12 14 12.1**	**-0.5**
	comp=Z,15nm,1.1s						
BMN	**Battle Mountai**	**90.02**	**47**	*e*P	**P**	**12 14 13.1**	**0.0**
I07A	**Izee**	**90.08**	**43**	*e*P	**P**	**12 14 13.1**	**-0.1**
	comp=Z,9.7nm,0.8s						
R11A	**Troy Canyon, C**	**90.31**	**49**	*e*P	**P**	**12 14 14.2**	**-0.3**
	comp=Z,1.9nm,0.8s						
R11A	**Troy Canyon, C**	**90.31**	**49**	P	**P**	**12 14 14.3**	**-0.3**
	baz=246						
B05A	**Bryant**	**90.40**	**38**	P	**P**	**12 14 15.0**	**+0.5**
	baz=242						
J08A	**Circle Bar Ran**	**90.43**	**44**	*e*P	**P**	**12 14 14.6**	**-0.3**
	comp=Z,10.0nm,0.8s						
G08A	**Pilot Rock**	**90.96**	**42**	*e*P	**P**	**12 14 17.4**	**0.0**
	comp=Z,8.4nm,0.9s						
E07A	**Sunnyside**	**90.96**	**41**	*e*P	**P**	**12 14 17.8**	**+0.6**
	comp=Z,13nm,0.8s						
HAWA	**Hanford**	**91.09**	**41**	*e*P	**P**	**12 14 18.0**	**+0.2**
	comp=Z,10nm,0.9s						
LCMT	**Little Creek M**	**91.49**	**51**	*e*P	**P**	**12 14 20.0**	**-0.1**
	comp=Z,8.2nm,0.9s						
ELK	**Elko**	**91.52**	**47**	*e*P	**P**	**12 14 19.8**	**-0.4**
	comp=Z,1.9nm,0.9s						
EGAK	**Eagle**	**91.55**	**19**	*e*P	**P**	**12 14 18.7**	**-0.7**
	comp=Z,5.3nm,0.8s						
CCUT	**Cedar City**	**91.61**	**51**	*e*P	**P**	**12 14 21.1**	**+0.4**
	comp=Z,6.3nm,1.1s						
TUC	**Tucson**	**91.62**	**56**	*e*P	**P**	**12 14 20.9**	**+0.2**
	comp=Z,8.3nm,1.0s						
TUC	**Tucson**	**91.62**	**56**	P	**P**	**12 14 21.4**	**+0.8**
	baz=249						
KNB	**Kanab**	**91.81**	**51**	*e*P	**P**	**12 14 21.6**	**+0.1**
	comp=Z,5.7nm,0.9s						
X16A	**Lo Mia Camp, P**	**91.88**	**54**	*e*P	**P**	**12 14 22.4**	**+0.5**
	comp=Z,9.5nm,0.9s						
U15A	**North Rim**	**91.98**	**52**	*e*P	**P**	**12 14 22.8**	**+0.3**
	comp=Z,8.8nm,0.8s						
TOLK	**Toolik Lake Re**	**92.18**	**14**	P	**P**	**12 14 22.4**	**0.0**
	baz=218						
WUAZ	**Wupatki**	**92.33**	**53**	*e*P	**P**	**12 14 23.7**	**-0.3**
	comp=Z,6.0nm,0.9s						
WUAZ	**Wupatki**	**92.33**	**53**	P	**P**	**12 14 24.3**	**+0.3**
	baz=248						
319A	**Douglas**	**92.48**	**58**	*e*P	**P**	**12 14 25.4**	**+0.7**
	comp=Z,14nm,0.8s						
MTPU	**Mount Pierson**	**92.66**	**51**	*e*P	**P**	**12 14 25.5**	**-0.1**
	comp=Z,4.1nm,0.8s						
DUG	**Dugway, Tooele**	**93.01**	**49**	P	**P**	**12 14 27.0**	**0.0**
	baz=248						
HLID	**Hailey**	**93.20**	**45**	*e*P	**P**	**12 14 27.6**	**-0.3**
	comp=Z,4.3nm,1.0s						
HLID	**Hailey**	**93.20**	**45**	P	**P**	**12 14 28.1**	**+0.3**
	baz=247						
NEW	**Newport**	**93.38**	**40**	P	**P**	**12 14 29.2**	**+0.9**
	baz=245						
W18A	**Petrified Fore**	**93.44**	**54**	P	**P**	**12 14 29.4**	**+0.3**
	baz=249						
EPYK	**Eagle Plains**	**93.99**	**19**	P	**P**	**12 14 29.5**	**-1.2**
	baz=230						
ANMO	**Albuquerque**	**95.92**	**55**	P	**P**	**12 14 40.7**	**+0.2**
	baz=251						
INK	**Inuvik**	**96.17**	**18**	*e*P	**P**	**12 14 39.7**	**-0.8**
	comp=Z,5.8nm,1.2s						
INK	**Inuvik**	**96.17**	**18**	P	**P**	**12 14 39.5**	**-1.0**
	comp=Z,2.6nm,0.9s,baz=263,slow=4.0,SNR=8.3						
BW06	**Boulder Array**	**96.22**	**47**	P	**P**	**12 14 42.3**	**+0.6**
	baz=250						
PD31	**Pinedale Array**	**96.22**	**47**	*e*P	**P**	**12 14 41.3**	**-0.4**
PDAR	**Pinedale Array**	**96.22**	**47**	P	**P**	**12 14 41.3**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=147,slow=3.0,SNR=4.6						
O20A	**White River Ci**	**96.27**	**50**	P	**P**	**12 14 42.6**	**+0.7**
	baz=251						
TXAR	**Lajitas Array**	**96.39**	**61**	P	**P**	**12 14 41.5**	**-1.1**
	comp=Z,0.7nm,0.9s,baz=197,slow=2.8,SNR=2.3						
S22A	**4UR Ranch, Cre**	**96.53**	**52**	P	**P**	**12 14 43.8**	**+0.5**
	baz=251						
WMQ	**Urumqi**	**97.17**	**314**	*e*P	Pdif	12 14 47.0	+1.2
YKA	**Yellowknife Ar**	**100.28**	**27**	P	**Pdif**	**12 14 58.5**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=254,slow=4.6,SNR=23						
YKB5	**Yellowknife Ar**	**100.28**	**27**	*e*Pdif	**Pdif**	**12 14 58.5**	**-0.5**
MK32	**Makanchi Array**	**101.69**	**316**	*e*Pdif	**Pdif**	**12 15 06.1**	**+0.3**
MKAR	**Makanchi Array**	**101.69**	**316**	P	**Pdif**	**12 15 06.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=101,slow=4.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**102.02**	**323**	P	**Pdif**	**12 15 06.0**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=114,slow=7.1,SNR=3.2						
ZAA1	**Zalesovo Array**	**102.02**	**323**	*e*Pdif	**Pdif**	**12 15 06.0**	**-1.0**
SCHQ	**Schefferville**	**124.51**	**36**	PKP	**PKPdf**	**12 20 08.1**	**-2.8**
	comp=Z,3.8nm,1.0s,baz=297,slow=5.2,SNR=2.9						
ARA0	**ARCESS Array S**	**124.83**	**345**	*e*PKPdf	**PKPdf**	**12 20 09.7**	**-1.3**
ARCES	**ARCESS Array B**	**124.83**	**345**	PKP	**PKPdf**	**12 20 09.7**	**-1.3**
	comp=Z,3.8nm,0.9s,baz=78,slow=1.9,SNR=12						
FINES	**FINESS Array B**	**130.40**	**338**	SKPbc	**SKPbc**	**12 23 18.1**	**-3.7**
	comp=Z,1.2nm,0.4s,baz=67,slow=4.7,SNR=13						
NB200	**NORSAR Array S**	**135.21**	**345**	*e*PKPdf	**PKPdf**	**12 20 30.1**	**-0.9**
NOA	**NORSAR Array B**	**135.21**	**345**	PKP	**PKPdf**	**12 20 30.1**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=50,slow=2.3,SNR=2.7						
AKASG	**Malin Array Be**	**135.39**	**325**	PKP	**PKPdf**	**12 20 30.5**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=55,slow=2.6,SNR=3.1						
AKASG				SKPbc	**SKPbc**	**12 23 35.9**	**-3.3**
	comp=Z,0.5nm,0.4s,baz=50,slow=4.3,SNR=4.6						
BR101	**Keskin Array S**	**136.82**	**308**	*e*PKPdf	**PKPdf**	**12 20 34.0**	**-0.7**
BRTR	**Keskin Array B**	**136.82**	**308**	PKP	**PKPdf**	**12 20 34.0**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=55,slow=1.9,SNR=2.6						
CONA	**Conrad Observa**	**144.01**	**329**	*e*PKiKP	**PKiKP**	**12 20 51.3**	**+0.3**
	comp=Z,2.1nm,1.0s						
KHC	**Kasperske Hory**	**144.18**	**333**	*e*PKP	**PKPab**	**12 20 46.1**	**+0.1**
GEC2	**GERESS Array S**	**144.34**	**332**	*e*PKPbc	**PKPab**	**12 20 46.1**	**-0.6**
GERES	**GERESS Array B**	**144.34**	**332**	PKP	**PKPab**	**12 20 46.1**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=33,slow=4.2,SNR=21						
ARSA	**Arzberg**	**144.64**	**329**	*e*PKPdf	**PKPdf**	**12 20 48.2**	**-0.2**
	comp=Z,1.7nm,0.5s						
MOA	**Molln**	**144.82**	**331**	*i* PKPdf	PKPbc	12 20 48.1	-0.2
	comp=Z,8.0nm,0.8s						
SOKA	**Soboth**	**145.28**	**329**	*i* PKPab	**PKPdf**	**12 20 49.2**	**-0.4**
	comp=Z,1.7nm,0.5s						
KBA	**Koelnbreinsper**	**145.81**	**331**	*i* PKPab	**PKPbc**	**12 20 51.1**	**-0.5**
	comp=Z,2.8nm,0.6s						
MYKA	**Terra Mystica**	**145.99**	**330**	*i* PKPbc	**PKPdf**	**12 20 51.0**	**+0.1**
	comp=Z,2.1nm,0.5s						
ABTA	**Abfaltersbach**	**146.44**	**331**	*i* PKPbc	**PKPdf**	**12 20 52.2**	**+0.7**
	comp=Z,3.0nm,0.5s						
WTTA	**Wattenberg**	**146.44**	**332**	*i* PKPdf	**PKPdf**	**12 20 49.4**	**-2.3**
	comp=Z,7.3nm,0.9s						
WLF	**Walferdange**	**146.55**	**340**	⇑PKP	**PKPbc**	**12 20 53.7**	**+0.3**
MOTA	**Moosalm**	**146.61**	**333**	*i* PKPab	**PKPbc**	**12 20 53.3**	**-0.6**
	comp=Z,3.2nm,0.5s						
RETA	**Reutte**	**146.64**	**333**	*i* PKPbc	**PKPbc**	**12 20 53.3**	**-0.6**
	comp=Z,2.0nm,0.5s						
DOU	**Dourbes**	**146.65**	**342**	⇑PKPbc	**PKPdf**	**12 20 51.4**	**-0.3**
DOU				⇑PKPab	**PKPbc**	**12 20 53.0**	**-0.7**
SQTA	**Sankt Quirin**	**146.66**	**333**	*i* PKPbc	**PKPbc**	**12 20 53.4**	**-0.6**
	comp=Z,7.5nm,0.7s						
FETA	**Feichten**	**147.02**	**333**	*i* PKPbc	**PKPbc**	**12 20 54.0**	**-1.1**
	comp=Z,4.8nm,0.5s						
DAVA	**Damuels**	**147.17**	**334**	*e*PKPbc	**PKPdf**	**12 20 53.8**	**+1.0**
	comp=Z,3.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**166.96**	**246**	PKP	**PKPdf**	**12 21 16.6**	**-1.5**
	comp=Z,1.1nm,1.0s,baz=359,slow=1.8,SNR=4.5						
TOA1	**Torodi Ar. Sit**	**166.96**	**246**	*e*PKPdf	**PKPdf**	**12 21 16.6**	**-1.5**

NNC ***25*** *12:03:21.5±2.0, 41°.17N×71°.06E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=16.2km s-min=9.1km az=48.0*
KRNET ***25*** *12:03:24.6±0.1, 41°.35N×70°.97E, h23km, mb2.3*
ISC 25 12:03:23.4±1.7**, 41°.31N**±0°.04×**71°.01E**±0°.05**, h4**km±12km**,**
n16, σ**1s.13**/28**, 19C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.87**	**55**	⇑*i*P	**Pb**	**12 03 41.1**	**0.0**
	baz=60						
ARK				⇑*i*S	**Sb**	**12 03 53.1**	**-0.1**
	baz=60						
ARK	**Arkit**	**0.87**	**55**	⇑*i*P	**Pb**	**12 03 41.1**	**0.0**
	baz=60						
ARK				⇑*i*S	**Sb**	**12 03 53.1**	**-0.1**
	baz=60						
BTK	**Batken**	**1.26**	**187**	⇑*e*P	**Pn**	**12 03 48.2**	**+0.4**
	baz=85						
BTK				⇑*i*S	**Sn**	**12 04 05.9**	**+0.7**
	baz=85						
ARSB	**Arslanbob**	**1.49**	**89**	⇓*i*P	**Pg**	**12 03 52.1**	**+0.2**
	baz=90						
ARSB				⇓*i*S	**Sg**	**12 04 12.0**	**+0.8**
	baz=90						
MNAS	**Manas**	**1.62**	**43**	⇑P	**Pn**	**12 03 51.8**	**-1.2**
	1.6nm,0.4s						
MNAS				⇓S	**Sg**	**12 04 16.2**	**+0.6**

	3.3nm,0.3s						
MNAS	**Manas**	**1.62**	**43**	⇑*i*P	**Pn**	**12 03 53.4**	**+0.4**
	baz=45						
MNAS				⇑*i*S	**Sb**	**12 04 15.2**	**+0.2**
	baz=45						
KK31	**Karatay Array**	**1.83**	**349**	⇑P	**Pn**	**12 03 55.2**	**-0.5**
	4.5nm,0.3s,baz=165,slow=18,SNR=110						
KK31				S	**Sg**	**12 04 23.4**	**+1.1**
	12nm,0.5s,baz=157,slow=25,SNR=16						
AML	**Almayashu**	**2.17**	**67**	⇑*i*P	**Pn**	**12 04 00.2**	**-0.6**
	baz=68						
AML				⇑*i*S	**Sb**	**12 04 29.6**	**-1.4**
	baz=68						
SFK	**Sufi-Kurgan**	**2.30**	**123**	⇑Pg	**Pn**	**12 04 02.3**	**0.0**
	0.7nm,0.5s						
SFK				⇓Lg	Lg	12 04 33.2	
	2.4nm,0.4s						
SFK	**Sufi-Kurgan**	**2.30**	**123**	⇑*i*P	**Pn**	**12 04 03.4**	**+1.1**
	baz=24						
SFK				⇑*i*S	**Sb**	**12 04 32.2**	**-2.2**
	baz=24						
EKS2	**Erkin-Say**	**2.47**	**56**	⇓*i*P	**Pn**	**12 04 05.2**	**+0.6**
	baz=57						
EKS2				⇓*i*S	**Sb**	**12 04 37.0**	**-2.3**
	baz=57						
ARLS	**Aral**	**2.55**	**76**	⇓*e*P	**Pn**	**12 04 06.7**	**+1.0**
	baz=77						
ARLS				⇓*i*S	**Sn**	**12 04 38.8**	**+1.5**
	baz=77						
UCH	**Uchtor**	**2.78**	**70**	⇑*i*P	**Pn**	**12 04 08.8**	**-0.3**
	baz=71						
UCH				⇑*i*S	**Sn**	**12 04 44.5**	**+1.1**
	baz=71						
AAK	**Ala-Archa**	**2.92**	**62**	⇑Pg	**Pb**	**12 04 13.9**	**-2.2**
	1.2nm,0.3s						
AAK				⇑Lg	Lg	12 04 53.7	
	4.2nm,0.8s						
AAK	**Ala-Archa**	**2.92**	**62**	⇓*i*P	**Pn**	**12 04 10.8**	**0.0**
	baz=63						
AAK				⇓*i*S	**Sn**	**12 04 48.0**	**+1.5**
	baz=63						
TKM2	**Tokmak 2**	**3.78**	**63**	⇓Lg	Lg	12 05 19.0	
	2.2nm,0.8s						

IDC 25 12:07:15.3±3.1**, 18°.26S**×**175°.29W, h0^{km}, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.8**/32**, mbtmp4.1**/4**, Error ellipse: s-maj=166.1km s-min=55.7km az=155.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.32**	**261**	P	P	12 14 22.5	+1.3
	1.1nm,0.6s,baz=69,slow=14,SNR=1.2						
WRA	**Warramunga Arr**	**47.49**	**259**	P	P	12 15 52.0	-0.5
	0.5nm,0.4s,baz=96,slow=7.5,SNR=22						
WRA				PcP	PcP	12 17 21.3	-1.7
	0.6nm,0.9s,baz=86,slow=3.4,SNR=2.6						
ASAR	**Alice Springs**	**47.55**	**254**	P	P	12 15 53.5	+0.5
	2.8nm,0.6s,baz=89,slow=8.5,SNR=44						
ASAR				PcP	PcP	12 17 22.0	-1.2
	0.2nm,0.4s,baz=107,slow=3.8,SNR=4.9						
FITZ	**Fitzroy Crossi**	**55.90**	**260**	P	P	12 16 54.1	-1.3
	6.6nm,1.0s,baz=106,slow=7.4,SNR=2.4						
BRTR	**Keskin Array B**	**147.10**	**317**	PKPbc	PKPab	12 27 01.7	-0.7
	0.4nm,0.5s,baz=70,slow=1.7,SNR=2.2						

*NEIC **25** 12:15:27.8±0.0, 17°.10N×94°.96W, h122^{km}, MD4.2(MEX), After MEX.*

MEX 25 12:15:27.8±1.2**, 17°.10N**×**94°.96W, h123^{km}**±12^{km}**, MD4.2, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.07**	**97**	*e*Pn	Pn	12 15 43.5	-1.0
CMIG				*e*Sn	Sn	12 15 55.8	-1.3
CMIG	**Matias Romero**	**0.07**	**97**	*i* P	Pn	12 15 43.5	-1.0
CMIG				*e*S	Sn	12 15 55.8	-1.3
TUIG	**Tuzandepetl**	**1.06**	**29**	*e*Pn	Pn	12 15 48.5	-2.2
TUIG				*e*Sn	Sn	12 16 05.5	-2.5
TUIG	**Tuzandepetl**	**1.06**	**29**	*i* P	Pn	12 15 48.5	-2.2
TUIG				*i* S	Sn	12 16 05.5	-2.5
OXBJ	**Oaxaca**	**1.69**	**269**	*i* P	Pn	12 15 57.5	-0.3
OXBJ				*e*S	Sn	12 16 21.1	+0.4
VHO	**Vista Hermosa**	**1.70**	**269**	*e*Pn	Pn	12 15 57.3	-0.6
VHO				*e*Sn	Sn	12 16 18.9	-1.9
VHO	**Vista Hermosa**	**1.70**	**269**	*e*P	Pn	12 15 57.3	-0.6
VHO				*e*S	Sn	12 16 18.9	-1.9
HUIG	**Huatulco**	**1.72**	**220**	*e*Pn	Pn	12 15 56.0	-2.0
HUIG				*e*Sn	Sn	12 16 18.3	-2.7
HUIG	**Huatulco**	**1.72**	**220**	*i* P	Pn	12 15 56.0	-2.0
HUIG				*e*S	Sn	12 16 18.3	-2.7
PCIG		**2.17**	**129**	*e*Pn	Pn	12 16 03.0	-0.5
PCIG				*e*Sn	Sn	12 16 30.6	-0.3
PCIG		**2.17**	**129**	*i* P	Pn	12 16 03.0	-0.5
PCIG				*e*S	Sn	12 16 30.6	-0.3
CCIG	**Comitan**	**2.83**	**106**	*e*Pn	Pn	12 16 11.1	-1.0
CCIG				*e*Sn	Sn	12 16 46.8	+0.7
CCIG	**Comitan**	**2.83**	**106**	*i* P	Pn	12 16 11.1	-1.0
CCIG				*i* S	Sn	12 16 46.8	+0.7
LVIG	**Laguna Verde**	**2.95**	**332**	*e*Pn	Pn	12 16 09.3	-4.3
LVIG				*e*Sn	Sn	12 16 41.8	-7.0
LVIG	**Laguna Verde**	**2.95**	**332**	*i* P	Pn	12 16 09.3	-4.3
LVIG				*i* S	Sn	12 16 41.8	-7.0
TEIG	**Tepich**	**7.06**	**63**	*e*Pn	Pn	12 17 03.6	-4.9
TEIG				*e*Sn	Sn	12 18 21.8	-5.5

*ISCJB **25** 12:17:21.1±0.9, 23°.4S±0°.1×180°.0W±0°.2, h532^{km}, mb4.1/12, Error ellipse: s-maj=19.4km s-min=15.7km az=157.6*

*IDC **25** 12:17:24.8±1.6, 23°.50S×179°.99W, h566^{km}±17^{km}, mb3.6/12, mb1 3.7/15, mb1mx3.5/33, mbtmp4.5/15, Error ellipse: s-maj=19.1km s-min=16.6km az=42.0*

ISC 25 12:17:22.1±0.9**, 23°.3S**±0°.1×**180°.0W**±0°.1**, h532^{km}, n16,** σ**2^{s}01**/18**, mb4.2**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.17**	**163**	P	**P**	**12 19 04.6**	**+3.3**
	50nm,0.3s,baz=189,slow=19,SNR=2.0						
DZM	**Mont Dzumac**	**12.61**	**273**	P	**P**	**12 20 09.1**	**+2.0**
	0.3nm,0.3s,baz=84,slow=18,SNR=3.1						
URZ	**Urewera**	**15.08**	**189**	P	**P**	**12 20 30.8**	**-1.7**
	1.8nm,0.3s,baz=279,slow=4.2,SNR=16						
RPZ	**Rata Peaks**	**21.63**	**198**	P	**P**	**12 21 33.2**	**-0.4**
	5.3nm,0.5s,baz=2.9,slow=3.9,SNR=6.3						
CTA	**Charters Tower**	**31.51**	**269**	P	**P**	**12 23 01.4**	**+0.6**
	19nm,0.4s,baz=95,slow=11,SNR=72						
STKA	**Stephens Creek**	**34.96**	**247**	P	**P**	**12 23 29.9**	**+0.1**
	5.0nm,0.5s,baz=94,slow=8.5,SNR=18						
ASAR	**Alice Springs**	**42.16**	**260**	P	**P**	**12 24 28.1**	**-0.2**
	6.2nm,0.5s,baz=95,slow=7.4,SNR=155						
ASAR				ScP	**ScP**	**12 29 06.3**	**-4.0**
	0.3nm,0.6s,baz=117,slow=4.0,SNR=3.0						
WRA	**Warramunga Arr**	**42.48**	**266**	P	**P**	**12 24 30.2**	**-0.5**
	6.2nm,0.4s,baz=92,slow=8.5,SNR=234						
WRA				ScP	**ScP**	**12 29 06.9**	**-4.8**
	0.3nm,0.8s,baz=99,slow=3.6,SNR=2.9						
JAY	**Jayapura**	**43.33**	**293**	P	**P**	**12 24 38.1**	**+0.6**
	21nm,0.9s,baz=82,slow=7.1,SNR=2.3						
FITZ	**Fitzroy Crossi**	**50.90**	**265**	P	**P**	**12 25 34.7**	**+0.2**
	1.6nm,0.4s,baz=91,slow=3.1,SNR=10						
SIJI	**Sorong**	**52.29**	**288**	P	**P**	**12 25 44.7**	**+0.1**
	5.8nm,0.6s,baz=200,slow=24,SNR=5.1						
NWAO	**Narrogin (SRO)**	**55.49**	**245**	P	**P**	**12 26 05.8**	**-1.2**
	6.9nm,0.8s,baz=84,slow=10,SNR=2.8						
QSPA	**South Pole Qui**	**66.74**	**180**	P	**P**	**12 27 19.4**	**-0.9**
	1.6nm,1.0s,baz=278,slow=1.5,SNR=5.6						
PETK	**Petropavlovsk-**	**78.57**	**346**	P	**P**	**12 28 28.3**	**+0.1**
	2.4nm,0.9s,baz=158,slow=9.8,SNR=3.9						
PDAR	**Pinedale Array**	**92.27**	**44**	P	**P**	**12 29 35.9**	**+0.3**
	0.1nm,0.5s,baz=225,slow=5.0,SNR=2.2						
AKASG	**Malin Array Be**	**144.52**	**328**	PKP	**PKPdf**	**12 35 56.9**	**-0.8**
	0.5nm,0.5s,baz=49,slow=4.4,SNR=3.5						

*ISCJB **25** 12:20:02.4±0.4, 13°.19S±0°.04×167°.77E±0°.06, h33^{km}, mb4.4/23, MS3.6/8, Error ellipse: s-maj=8.4km s-min=5.9km az=163.8*

*NEIC **25** 12:20:05.2±0.8, 13°.13S×167°.71E, h44^{km}±7^{km}, mb4.6/14, Error ellipse: s-maj=6.4km s-min=6.2km az=152.0*

*IDC **25** 12:20:06.5±3.6, 13°.14S×167°.69E, h55^{km}±32^{km}, mb4.0/13, mb1 4.2/15, mb1mx4.0/35, mbtmp4.3/15, ML4.4/2, MS3.5/9, Ms1 3.6/9, ms1mx3.2/31, Error ellipse: s-maj=23.6km s-min=19.4km az=109.0*

ISC 25 12:20:03.9±0.6**, 13°.12S**±0°.06×**167°.88E**±0°.08**, h35^{km}, n50,** σ**1^{s}15**/49**, mb4.5**/23**, MS3.5**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**8.31**	**179**	*e*Pn	**Pn**	**12 22 02.5**	**+0.5**
HNR	**Honiara**	**8.60**	**294**	*e*Pn	**Pn**	**12 22 05.4**	**-0.5**
HNR				*e*Sn	**Sn**	**12 23 44.9**	**+3.1**
HNR	**Honiara**	**8.60**	**294**	P	**Pn**	**12 22 07.0**	**+1.1**
	11nm,0.3s,baz=106,slow=5.9,SNR=4.2						
HNR				S	**Sn**	**12 23 44.8**	**+3.1**
	7.1nm,0.3s,baz=139,slow=12,SNR=1.2						
DZM	**Mont Dzumac**	**9.01**	**189**	*e*Pn	**Pn**	**12 22 12.3**	**+0.7**
DZM				S	**Sn**	**12 23 53.1**	**+1.3**
DZM	**Mont Dzumac**	**9.01**	**189**	P	**Pn**	**12 22 13.1**	**+1.5**
	1.8nm,0.3s,baz=160,slow=20,SNR=13						
DZM				S	**Sn**	**12 23 53.1**	**+1.3**
	baz=256,slow=21,SNR=1.4						
DZM				LR	LR	12 24 34.8	
	comp=Z,104nm,19.7s,baz=28,slow=30						
ONTNC	**Ouen Toro**	**9.24**	**188**	*e*Pn	**Pn**	**12 22 15.6**	**+1.0**
PINNC	**Pines Island,**	**9.45**	**182**	*e*Pn	**Pn**	**12 22 18.8**	**+1.2**
EIDS	**Eidsvold**	**19.97**	**230**	*e*P	**Pn**	**12 24 33.6**	**-1.6**
	26nm,1.3s						
CTA	**Charters Tower**	**21.83**	**249**	P	**P**	**12 24 52.3**	**-1.1**
	3.6nm,0.7s,baz=70,slow=14,SNR=6.0						
CTAO	**Charters Tower**	**21.83**	**249**	*e*P	**P**	**12 24 52.6**	**-0.9**
	17nm,1.4s						
ARMA	**Armidale**	**22.84**	**219**	*e*P	**P**	**12 25 03.6**	**-0.6**
	27nm,1.3s						
BKZ	**Black Stump Fm**	**27.04**	**165**	*e*P	**P**	**12 25 44.5**	**+1.6**
	9.3nm,0.8s						
STKA	**Stephens Creek**	**30.49**	**228**	*e*P	**P**	**12 26 12.8**	**-0.9**
	3.5nm,1.4s						
STKA	**Stephens Creek**	**30.49**	**228**	P	**P**	**12 26 14.1**	**+0.4**
	4.4nm,0.6s,baz=47,slow=9.0,SNR=13						
STKA				LR	LR	12 38 02.4	
	comp=Z,110nm,18.0s,baz=30,slow=36						
RPZ	**Rata Peaks**	**30.61**	**175**	LR	LR	12 37 04.1	
	comp=Z,85nm,18.2s,baz=342,slow=33						
H11S2	**WAKE ISLAND Hy**	**31.43**	**358**	T	T	12 59 29.9	
	baz=181						
H11S3	**WAKE ISLAND Hy**	**31.44**	**358**	T	T	12 59 33.5	
	baz=181						
H11S1	**WAKE ISLAND Hy**	**31.45**	**358**	T	T	12 59 33.9	
	baz=181						
WR1	**Warramunga Arr**	**32.81**	**254**	*e*P	**P**	**12 26 32.6**	**-1.7**
	8.8nm,1.3s						
WRA	**Warramunga Arr**	**32.81**	**254**	P	**P**	**12 26 32.6**	**-1.7**
	1.0nm,0.6s,baz=85,slow=9.2,SNR=7.1						
WRA				LR	LR	12 39 10.1	
	comp=Z,54nm,18.9s,baz=70,slow=35						
AS31	**Alice Springs**	**33.81**	**247**	*e*P	**P**	**12 26 41.9**	**-1.1**
	1.4nm,0.8s						
ASAR	**Alice Springs**	**33.82**	**247**	P	**P**	**12 26 41.8**	**-1.3**
	2.9nm,0.7s,baz=74,slow=9.1,SNR=15						
ASAR				LR	LR	12 39 37.0	
	comp=Z,89nm,18.3s,baz=80,slow=35						
BBOO	**Buckleboo**	**35.04**	**231**	*e*P	**P**	**12 26 52.6**	**-0.9**
	27nm,1.4s						
FORT	**Forrest**	**40.63**	**238**	*e*P	**P**	**12 27 40.2**	**-0.5**
	34nm,0.8s						
MBWA	**Marble Bar**	**46.55**	**253**	*e*P	**P**	**12 28 28.3**	**-0.3**
	47nm,1.3s						
NWAO	**Narrogin (SRO)**	**50.09**	**238**	P	**P**	**12 28 54.3**	**-1.4**
	12nm,0.9s,baz=119,slow=15,SNR=3.4						
MORW	**Morawa**	**50.50**	**243**	*e*P	**P**	**12 28 57.7**	**-1.2**
PETK	**Petropavlovsk-**	**66.54**	**353**	LR	LR	12 59 11.6	
	comp=Z,13nm,18.6s,baz=81,slow=35						
CM31	**Chiang Mai Arr**	**74.85**	**293**	*e*P	**P**	**12 31 41.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**74.85**	**293**	P	**P**	**12 31 41.0**	**-0.4**
	1.1nm,0.8s,baz=120,slow=4.0,SNR=7.9						
QSPA	**South Pole Qui**	**76.90**	**180**	*e*P	**P**	**12 31 52.8**	**+0.3**
	9.1nm,1.3s						
QSPA	**South Pole Qui**	**76.90**	**180**	P	**P**	**12 31 52.9**	**+0.4**
	4.2nm,1.0s,baz=41,slow=2.3,SNR=5.6						
SONA0	**Songino Array**	**81.56**	**323**	*e*P	**P**	**12 32 18.3**	**+0.1**
SONM	**Songino Array**	**81.56**	**323**	P	**P**	**12 32 18.3**	**+0.1**
	1.0nm,0.8s,baz=130,slow=4.6,SNR=5.2						
ILAR	**Eielson Array**	**84.82**	**18**	P	**P**	**12 32 34.4**	**0.0**
	1.0nm,0.8s,baz=246,slow=5.5,SNR=8.0						
ILAR				PP	**PP**	**12 35 50.5**	**-0.8**
	0.2nm,0.4s,baz=194,slow=10,SNR=4.3						
ILAR				LR	LR	13 06 41.8	
	comp=Z,53nm,19.3s,baz=150,slow=33						
ILB	**Eielson Array**	**84.82**	**18**	*e*P	**P**	**12 32 34.4**	**0.0**
TLY	**Talaya**	**85.00**	**326**	*e*P	**P**	**12 32 35.8**	**+0.2**
	4.7nm,0.6s						
NV01	**Mina Array Sit**	**85.78**	**49**	*e*P	**P**	**12 32 41.9**	**+1.8**
NVAR	**Mina Array Bea**	**85.78**	**49**	P	**P**	**12 32 41.9**	**+1.8**
	1.3nm,0.8s,baz=239,slow=9.6,SNR=7.6						
NVAR				LR	LR	13 06 18.9	
	comp=Z,88nm,18.2s,baz=310,slow=32						
U15A	**North Rim**	**89.69**	**53**	*e*P	**P**	**12 32 59.7**	**+0.7**
	2.6nm,0.7s						
YKA	**Yellowknife Ar**	**95.86**	**27**	P	**P**	**12 33 26.0**	**-0.4**
	0.4nm,0.7s,baz=254,slow=4.6,SNR=9.3						
YKB5	**Yellowknife Ar**	**95.86**	**27**	*e*P	**P**	**12 33 26.1**	**-0.4**
ZALV	**Zalesovo Beam**	**96.45**	**324**	P	**P**	**12 33 29.5**	**+0.1**
	0.3nm,0.3s,baz=106,slow=8.1,SNR=1.9						
ZAA1	**Zalesovo Array**	**96.45**	**324**	*e*P	**P**	**12 33 29.5**	**+0.1**
MK32	**Makanchi Array**	**96.45**	**316**	*e*P	**P**	**12 33 29.6**	**0.0**
MKAR	**Makanchi Array**	**96.45**	**316**	*e*P	**P**	**12 33 29.8**	**+0.2**
	20nm,0.9s						
MKAR	**Makanchi Array**	**96.45**	**316**	P	**P**	**12 33 29.6**	**0.0**
	2.8nm,0.8s,baz=101,slow=6.5,SNR=16						
MAKZ	**Makanchi**	**96.67**	**316**	*e*P	**P**	**12 33 30.8**	**+0.2**
	3.7nm,1.0s						
NRIK	**Noril'sk**	**98.79**	**339**	LR	LR	13 16 32.9	
	comp=Z,36nm,19.9s,baz=44,slow=34						
ESDC	**Sonseca Array**	**152.59**	**346**	PKPab	**PKPab**	**12 40 06.6**	**-0.9**
	0.3nm,0.5s,baz=1.0,slow=3.5,SNR=3.5						

*ISCJB **25** 12:24:57.3±0.5, 36°.89N±0°.03×139°.40E±0°.04, h9^{km}±4^{km}, mb3.3/2, MS3.3/1, Error ellipse: s-maj=5.6km s-min=3.7km az=32.3*

*JMA **25** 12:24:57.5, 36°.89N×139°.41E, h4^{km}±1^{km}, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s67.00000°, δ88.00000°, λ-166.00000°. NP2: ϕ_s337.00000°, δ76.00000°, λ-2.00000°. Principal axes: T Plg8.0000°, Azm201.0000°; N Plg76.0000°, Azm76.0000°; P Plg11.0000°, Azm293.0000°;*

JMA Felt III J1.

*IDC **25** 12:24:58.3±1.9, 36°.80N×139°.39E, h0^{km}, mb3.3/2, mb1 3.6/2, mb1mx3.1/38, mbtmp3.3/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/20 Error ellipse: s-maj=16.7km s-min=12.9km az=38.0*

ISC 25 12:24:57.8±1.2**, 36°.90N**±0°.03×**139°.40E**±0°.03**, h2^{km}**±13^{km}**, n13,** σ**0^{s}41**/21**, 6C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.17**	**223**	⇑P	**Pg**	**12 25 01.3**	**+0.1**
JKT				S	**Sg**	**12 25 03.8**	**+0.3**
JSB	**Shiboa**	**0.42**	**80**	⇓P	**Pg**	**12 25 06.2**	**+0.3**
JSB				S	**Sg**	**12 25 12.1**	**+0.6**
JHK	**Hiroka**	**0.47**	**319**	⇓P	**Pg**	**12 25 06.9**	**+0.1**
JHK				S	**Sg**	**12 25 13.2**	**+0.4**
JAG	**Ashikaga**	**0.47**	**175**	⇑P	**Pg**	**12 25 06.6**	**-0.2**
JAG				S	**Sg**	**12 25 12.7**	**-0.2**
JFY	**Yanaizu**	**0.57**	**25**	⇑P	**Pg**	**12 25 08.6**	**-0.1**
JFY				S	**Sg**	**12 25 16.0**	**0.0**
JNS	**Sasagawa**	**0.92**	**356**	⇑P	**Pg**	**12 25 15.2**	**-0.3**
JNS				S	**Sg**	**12 25 27.6**	**+0.1**
JRY	**Ryogami san**	**0.96**	**205**	⇑P	**Pg**	**12 25 15.7**	**-0.5**
JRY				S	**Sg**	**12 25 29.3**	**+0.6**
JFT	**Otama**	**0.97**	**50**	⇑P	**Pg**	**12 25 15.9**	**-0.6**
JFT				S	**Sg**	**12 25 28.6**	**-0.5**
MJAR	**Matsushiro Arr**	**1.02**	**250**	Pg	**Pg**	**12 25 16.7**	**-0.6**
	8.8nm,0.3s,baz=75,slow=18,SNR=194						
MJAR				Lg	Lg	12 25 30.3	
	12nm,0.3s,baz=73,slow=38,SNR=19						
MAT	**Matsushiro**	**1.02**	**250**	P	**Pg**	**12 25 17.3**	**0.0**
MAT				S	**Sg**	**12 25 30.3**	**-0.3**
ZALV	**Zalesovo Beam**	**40.82**	**313**	LR	LR	12 49 01.7	
	comp=Z,43nm,19.2s,baz=62,slow=35						
WRA	**Warramunga Arr**	**56.73**	**186**	P	**P**	**12 34 42.8**	**-0.2**
	0.5nm,0.8s,baz=1.3,slow=7.7,SNR=10						
ASAR	**Alice Springs**	**60.46**	**186**	P	**P**	**12 35 09.4**	**+0.5**
	0.1nm,0.6s,baz=9.8,slow=7.1,SNR=1.5						

ROM 25 12:25:29.5±0.1**, 42°.473N**±0°.003×**13°.491E**±0°.005**, h14^{km}, ML2.1**/13**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**316**	P	Pg	12 25 32.9	+0.1
CAMP				S	Sg	12 25 35.1	+0.2
AQU	**L'Aquila**	**0.14**	**209**	P	Pb	12 25 33.6	-0.3
AQU				S	Sb	12 25 36.4	-0.4
AQU				AML	AML		
	comp=E,1505µm,0.3s						
AQU				AML	AML		
	comp=N,1490µm,1.0s						
AQU				AML	AML		
	comp=E,1545µm,0.2s						
AQU				AML	AML		
	comp=N,1450µm,1.0s						
AQU				AML	AML		
	comp=E,1510µm,0.3s						
AQU				AML	AML		
	comp=N,1490µm,1.0s						
AQU				AML	AML		
	comp=E,1545µm,0.2s						
AQU				AML	AML		
	comp=N,1450µm,1.0s						
AQU				AML	AML		
	comp=E,1505µm,0.3s						
AQU				AML	AML		
	comp=E,1545µm,0.2s						
AQU				AML	AML		
	comp=N,1490µm,1.0s						
AQU				AML	AML		
	comp=N,1450µm,1.0s						
TERO	**Teramo**	**0.17**	**29**	P	Pg	12 25 33.9	+0.2
TERO				S	Sg	12 25 37.0	+0.5
SMA1	**SAN MARTINO**	**0.20**	**324**	P	Pg	12 25 34.3	+0.2
SMA1				S	Sg	12 25 37.7	+0.5
SMA1				AML	AML		
	comp=E,640µm,0.3s						
SMA1				AML	AML		
	comp=N,534µm,0.3s						
SMA1				AML	AML		
	comp=E,639µm,0.3s						
SMA1				AML	AML		
	comp=N,534µm,0.3s						
SMA1				AML	AML		
	comp=E,640µm,0.3s						
SMA1				AML	AML		
	comp=N,534µm,0.3s						
FAGN	**Fagnano**	**0.22**	**162**	P	Pg	12 25 34.7	+0.3
FAGN				S	Sb	12 25 38.9	-0.2
FAGN				AML	AML		
	comp=E,1580µm,0.6s						
FAGN				AML	AML		
	comp=N,1610µm,0.3s						
FAGN				AML	AML		
	comp=E,1580µm,0.6s						
FAGN				AML	AML		
	comp=N,1610µm,0.3s						
FAGN				AML	AML		
	comp=N,1610µm,0.3s						
FAGN				AML	AML		
	comp=E,1580µm,0.6s						
VCEL	**Villa Celiera**	**0.27**	**107**	P	Pg	12 25 35.7	+0.3
VCEL				S	Sb	12 25 40.3	-0.4
VCEL				AML	AML		
	comp=E,618µm,1.1s						
VCEL				AML	AML		
	comp=N,618µm,0.8s						
VCEL				AML	AML		
	comp=E,618µm,1.1s						
VCEL				AML	AML		
	comp=N,618µm,0.8s						
VCEL				AML	AML		
	comp=N,618µm,0.8s						
VCEL				AML	AML		
	comp=E,618µm,1.1s						
FIAM	**Fiamignano**	**0.34**	**234**	P	Pg	12 25 36.8	+0.2
FIAM				AML	AML		
	comp=E,117µm,0.4s						
FIAM				AML	AML		
	comp=N,124µm,1.4s						
FIAM				AML	AML		
	comp=E,117µm,0.4s						
FIAM				AML	AML		
	comp=N,124µm,1.4s						
FIAM				AML	AML		
	comp=N,124µm,1.4s						
FIAM				AML	AML		
	comp=E,117µm,0.4s						
LNSS	**Leonessa**	**0.36**	**291**	P	Pg	12 25 36.9	0.0
LNSS				S	Sg	12 25 42.4	+0.6
LNSS				AML	AML		
	comp=E,402µm,0.4s						
LNSS				AML	AML		
	comp=N,664µm,0.1s						
LNSS				AML	AML		
	comp=E,402µm,0.4s						
LNSS				AML	AML		
	comp=N,664µm,0.1s						
LNSS				AML	AML		
	comp=N,664µm,0.1s						
LNSS				AML	AML		
	comp=E,402µm,0.4s						
NRCA	**Norcia**	**0.46**	**322**	P	Pg	12 25 38.4	-0.3
NRCA				S	Sg	12 25 45.3	+0.5
NRCA				AML	AML		
	comp=E,474µm,0.1s						
NRCA				AML	AML		
	comp=N,358µm,0.1s						
NRCA				AML	AML		
	comp=E,474µm,0.1s						
NRCA				AML	AML		
	comp=N,358µm,0.1s						
INTR	**Introdacqua**	**0.55**	**146**	P	Pg	12 25 40.1	-0.4
INTR				S	Sg	12 25 48.3	+0.5
INTR				AML	AML		
	comp=E,81µm,0.3s						
INTR				AML	AML		
	comp=N,120µm,1.1s						
INTR				AML	AML		
	comp=E,81µm,0.3s						
INTR				AML	AML		
	comp=N,120µm,1.1s						
FDMO	**Fiordimonte**	**0.64**	**332**	P	Pg	12 25 41.4	-0.6
FDMO				S	Sb	12 25 51.2	0.0
FDMO				AML	AML		
	comp=E,74µm,0.3s						
FDMO				AML	AML		
	comp=N,89µm,1.2s						
FDMO				AML	AML		
	comp=E,74µm,0.3s						
FDMO				AML	AML		
	comp=N,89µm,1.2s						
FDMO				AML	AML		
	comp=E,74µm,0.3s						
FDMO				AML	AML		
	comp=N,89µm,1.2s						
GUMA	**Gualdo di Mace**	**0.67**	**29**	P	Pg	12 25 41.6	-1.1
GUMA				S	Sg	12 25 49.9	-1.7
GUMA				AML	AML		
	comp=E,434µm,0.8s						
GUMA				AML	AML		
	comp=N,296µm,0.7s						
GUMA				AML	AML		
	comp=N,296µm,0.7s						
GUMA				AML	AML		
	comp=E,434µm,0.8s						
CESI	**CESI - Serrava**	**0.69**	**321**	P	Pg	12 25 42.5	-0.4
CESI				S	Sb	12 25 52.6	0.0
CESI				AML	AML		
	comp=E,42µm,1.4s						
CESI				AML	AML		
	comp=N,29µm,0.5s						
CESI				AML	AML		
	comp=E,42µm,1.4s						
CESI				AML	AML		
	comp=N,29µm,0.5s						
CESI				AML	AML		
	comp=E,42µm,1.4s						
CESI				AML	AML		
	comp=N,29µm,0.5s						
MOMA	**Monte Martano**	**0.76**	**296**	P	Pg	12 25 43.8	-0.4
MOMA				AML	AML		
	comp=E,164µm,0.2s						
MOMA				AML	AML		

	comp=N,209µm,0.2s						
MOMA				AML	AML		
	comp=N,209µm,0.2s						
MOMA				AML	AML		
	comp=E,164µm,0.2s						
SNTG	**Esanatoglia**	**0.88**	**333**	P	Pb	12 25 46.0	-0.6
MOCO	**Biccari - m.te**	**1.66**	**131**	AML	AML		
	comp=E,89µm,1.6s						
MOCO				AML	AML		
	comp=E,89µm,1.6s						
MOCO				AML	AML		
	comp=N,72µm,1.6s						
MOCO				AML	AML		
	comp=N,72µm,1.6s						

ROM 25 12:26:05.8±0.1, 43°.355N±0°.005×13°.218E±0°.006, h9^{km}, ML1.0/2, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CING	**Cingoli**	**0.03**	**321**	P	Pg	12 26 07.5	-0.1
CING				S	Sg	12 26 09.1	+0.2
TRE1	**Treia**	**0.08**	**123**	P	Pg	12 26 08.8	+0.7
TRE1				S	Sg	12 26 10.5	+0.8
MDAR	**Monte D'Aria**	**0.17**	**199**	P	Pg	12 26 09.9	+0.4
MDAR				S	Sg	12 26 13.0	+0.9
SNTG	**Esanatoglia**	**0.23**	**244**	P	Pg	12 26 11.1	+0.7
SNTG				S	Sg	12 26 15.4	+1.8
SNTG				AML	AML		
	comp=E,55µm,1.3s						
SNTG				AML	AML		
	comp=N,97µm,0.2s						
SNTG				AML	AML		
	comp=N,97µm,0.2s						
SNTG				AML	AML		
	comp=E,55µm,1.3s						
ARVD	**Arcevia**	**0.25**	**305**	P	Pg	12 26 11.8	+0.9
ARVD				S	Sg	12 26 15.9	+1.7
ARVD				AML	AML		
	comp=E,49µm,1.4s						
ARVD				AML	AML		
	comp=N,40µm,0.2s						
ARVD				AML	AML		
	comp=N,40µm,0.2s						
ARVD				AML	AML		
	comp=E,49µm,1.4s						
FDMO	**Fiordimonte**	**0.33**	**197**	P	Pg	12 26 12.8	+0.4
FDMO				S	Sb	12 26 18.6	-0.8
CESI	**CESI - Serrava**	**0.42**	**213**	P	Pg	12 26 14.6	+0.5
CESI				S	Sb	12 26 21.5	-0.4
GUMA	**Gualdo di Mace**	**0.60**	**119**	P	Pg	12 26 12.7	-4.8
GUMA				S	Sg	12 26 17.8	-7.5

ROM 25 12:27:02.2±0.1, 42°.476N±0°.003×13°.490E±0°.005, h14^{km}, ML1.9/12, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**315**	P	Pg	12 27 05.5	+0.1
CAMP				S	Sg	12 27 07.8	+0.2
AQU	**L'Aquila**	**0.14**	**208**	P	Pg	12 27 06.2	+0.3
AQU				S	Sb	12 27 09.0	-0.4
AQU				AML	AML		
	comp=E,893µm,1.4s						
AQU				AML	AML		
	comp=N,886µm,0.2s						
AQU				AML	AML		
	comp=E,912µm,1.4s						
AQU				AML	AML		
	comp=N,870µm,0.2s						
AQU				AML	AML		
	comp=E,893µm,1.4s						
AQU				AML	AML		
	comp=N,886µm,0.2s						
AQU				AML	AML		
	comp=E,912µm,1.4s						
AQU				AML	AML		
	comp=N,870µm,0.2s						
AQU				AML	AML		
	comp=E,893µm,1.4s						
AQU				AML	AML		
	comp=E,912µm,1.4s						
AQU				AML	AML		
	comp=N,870µm,0.2s						
AQU				AML	AML		
	comp=N,886µm,0.2s						
TERO	**Teramo**	**0.17**	**30**	P	Pg	12 27 06.5	+0.1
TERO				S	Sg	12 27 09.7	+0.6
TERO				AML	AML		
	comp=E,162µm,1.6s						
TERO				AML	AML		
	comp=N,208µm,0.3s						
TERO				AML	AML		
	comp=E,162µm,1.6s						
TERO				AML	AML		
	comp=N,208µm,0.3s						
TERO				AML	AML		
	comp=N,208µm,0.3s						
TERO				AML	AML		
	comp=E,162µm,1.6s						
SMA1	**SAN MARTINO**	**0.19**	**324**	P	Pg	12 27 06.9	+0.2
SMA1				S	Sg	12 27 10.3	+0.5
SMA1				AML	AML		
	comp=E,518µm,0.3s						
SMA1				AML	AML		
	comp=N,408µm,0.3s						
SMA1				AML	AML		
	comp=E,519µm,0.3s						
SMA1				AML	AML		
	comp=N,408µm,0.3s						
SMA1				AML	AML		
	comp=E,519µm,0.3s						
SMA1				AML	AML		
	comp=N,408µm,0.3s						
FAGN	**Fagnano**	**0.22**	**162**	P	Pg	12 27 07.3	+0.2
FAGN				S	Sb	12 27 11.3	-0.5
FAGN				AML	AML		
	comp=E,1230µm,1.6s						
FAGN				AML	AML		
	comp=N,1134µm,0.2s						
FAGN				AML	AML		
	comp=E,1230µm,1.6s						
FAGN				AML	AML		
	comp=N,1134µm,0.2s						
FAGN				AML	AML		
	comp=N,1134µm,0.2s						
FAGN				AML	AML		
	comp=E,1230µm,1.6s						
VCEL	**Villa Celiera**	**0.27**	**107**	P	Pg	12 27 08.3	+0.3
VCEL				S	Sb	12 27 12.8	-0.5
VCEL				AML	AML		
	comp=E,428µm,0.4s						
VCEL				AML	AML		
	comp=N,476µm,0.9s						
VCEL				AML	AML		
	comp=E,428µm,0.4s						
VCEL				AML	AML		
	comp=N,476µm,0.9s						
VCEL				AML	AML		
	comp=E,428µm,0.4s						
VCEL				AML	AML		
	comp=N,476µm,0.9s						
FIAM	**Fiamignano**	**0.35**	**233**	P	Pg	12 27 09.5	+0.2
FIAM				AML	AML		
	comp=E,83µm,0.9s						
FIAM				AML	AML		
	comp=N,67µm,0.4s						
FIAM				AML	AML		
	comp=E,83µm,0.9s						
FIAM				AML	AML		
	comp=N,67µm,0.4s						
FIAM				AML	AML		
	comp=N,67µm,0.4s						
FIAM				AML	AML		
	comp=E,83µm,0.9s						
LNSS	**Leonessa**	**0.36**	**291**	P	Pg	12 27 09.4	0.0
LNSS				S	Sg	12 27 15.1	+0.7
LNSS				AML	AML		
	comp=E,245µm,0.8s						
LNSS				AML	AML		
	comp=N,424µm,0.1s						
LNSS				AML	AML		
	comp=E,245µm,0.8s						
LNSS				AML	AML		
	comp=N,424µm,0.1s						
LNSS				AML	AML		
	comp=N,424µm,0.1s						
LNSS				AML	AML		
	comp=E,245µm,0.8s						
NRCA	**Norcia**	**0.45**	**322**	P	Pg	12 27 10.9	-0.3
NRCA				S	Sg	12 27 17.9	+0.6
NRCA				AML	AML		
	comp=E,314µm,0.7s						
NRCA				AML	AML		
	comp=N,222µm,0.1s						
NRCA				AML	AML		
	comp=N,222µm,0.1s						
NRCA				AML	AML		
	comp=E,314µm,0.7s						
PTQR	**Pietraquaria**	**0.46**	**188**	P	Pg	12 27 11.2	-0.1
PTQR				S	Sb	12 27 18.6	-0.1
OFFI	**Offida**	**0.48**	**17**	P	Pb	12 27 12.4	+0.1
OFFI				AML	AML		
	comp=E,234µm,1.6s						
OFFI				AML	AML		
	comp=N,286µm,0.4s						
OFFI				AML	AML		
	comp=N,286µm,0.4s						
OFFI				AML	AML		
	comp=E,234µm,1.6s						
INTR	**Introdacqua**	**0.56**	**146**	P	Pg	12 27 12.6	-0.5
FDMO	**Fiordimonte**	**0.63**	**332**	P	Pg	12 27 14.1	-0.5
FDMO				S	Sb	12 27 23.8	+0.1
FDMO				AML	AML		
	comp=E,46µm,0.2s						
FDMO				AML	AML		
	comp=N,72µm,0.9s						
FDMO				AML	AML		
	comp=E,46µm,0.2s						
FDMO				AML	AML		
	comp=N,72µm,0.9s						
FDMO				AML	AML		
	comp=E,46µm,0.2s						
FDMO				AML	AML		
	comp=N,72µm,0.9s						
LPEL	**Lama dei Pelig**	**0.67**	**130**	P	Pg	12 27 14.7	-0.5
LPEL				S	Sb	12 27 24.6	-0.1
LPEL				AML	AML		
	comp=E,87µm,1.2s						
LPEL				AML	AML		
	comp=N,89µm,1.2s						
LPEL				AML	AML		
	comp=E,87µm,1.2s						
LPEL				AML	AML		
	comp=N,89µm,1.2s						
CESI	**CESI - Serrava**	**0.68**	**321**	P	Pg	12 27 15.0	-0.5
CESI				S	Sb	12 27 25.0	-0.1
CESI				AML	AML		
	comp=E,31µm,1.4s						
CESI				AML	AML		
	comp=N,24µm,0.5s						
CESI				AML	AML		
	comp=E,31µm,1.4s						
CESI				AML	AML		
	comp=N,24µm,0.5s						
MOMA	**Monte Martano**	**0.75**	**296**	P	Pg	12 27 16.5	-0.4
MOMA				S	Sb	12 27 27.1	-0.1
SNTG	**Esanatoglia**	**0.88**	**333**	P	Pb	12 27 18.8	-0.4
SNTG				S	Sb	12 27 30.8	+0.1

*IDC **25** 12:33:45.7±1.3, 6°.16S×151°.11E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.7/28, mbtmp3.6/7, Error ellipse: s-maj=53.3km s-min=21.4km az=113.0*

*ISCJB **25** 12:33:50.6±1.1, 6°.2S±0°.2×151°.0E±0°.3, h43^{km}, mb3.5/7, Error ellipse: s-maj=46.9km s-min=17.4km az=23.6*

ISC 25 12:33:52.0±1.2, 6°.2S±0°.2×151°.1E±0°.3, h43^{km}, n8, σ0^{s}.93/8, mb3.6/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.23**	**228**	P	**P**	**12 38 33.9**	**-0.6**
	0.8nm,0.5s,baz=55,slow=10,SNR=8.8						
ASAR	**Alice Springs**	**23.96**	**222**	P	**P**	**12 39 01.9**	**-0.6**
	1.1nm,0.8s,baz=58,slow=8.9,SNR=16						
STKA	**Stephens Creek**	**27.04**	**198**	P	**P**	**12 39 31.3**	**+0.9**
	1.0nm,0.5s,baz=38,slow=8.9,SNR=3.7						
SONM	**Songino Array**	**66.59**	**329**	P	**P**	**12 44 38.6**	**+0.6**
	0.2nm,0.3s,baz=123,slow=5.3,SNR=3.2						
MKAR	**Makanchi Array**	**80.24**	**319**	P	**P**	**12 45 58.5**	**+0.2**
	0.4nm,0.9s,baz=106,slow=5.5,SNR=3.0						
ILAR	**Eielson Array**	**84.09**	**22**	P	**P**	**12 46 16.8**	**-1.2**
	0.6nm,0.8s,baz=255,slow=5.3,SNR=4.7						
YKA	**Yellowknife Ar**	**97.46**	**28**	P	**P**	**12 47 21.7**	**+0.7**
	0.1nm,0.5s,baz=272,slow=4.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**149.04**	**285**	PKPbc	**PKPbc**	**12 53 36.1**	**-0.5**
	0.6nm,0.6s,baz=82,slow=2.8,SNR=4.4						

MEX 25 12:55:28.0±0.4, 16°.26N×98°.04W, h4^{km}±8^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.16**	**328**	*e*P	Pg	12 55 30.8	-0.3
PNIG				*i* S	Sg	12 55 33.3	0.0
HUIG	**Huatulco**	**1.92**	**104**	*e*P	Pn	12 55 57.9	-3.6

*ISK **25** 12:58:51.4, 40°.60N×30°.31E, h4^{km}, ML1.9/7*

*ISCJB **25** 12:58:52.2±0.5, 40°.60N±0°.03×30°.28E±0°.05, h8^{km}±5^{km}, Error ellipse: s-maj=6.8km s-min=4.6km az=173.5*

*DDA **25** 12:58:52.0, 40°.60N×30°.31E, h7^{km}±4^{km}, ML2.7*

ISC 25 12:58:52.1±1.0, 40°.61N±0°.03×30°.32E±0°.04, h11^{km}±7^{km}, n12, σ0^{s}.38/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUV	**Serdivan-Sakar**	**0.13**	**4**	PG	**Pg**	**12 58 54.9**	**-0.3**
SAUV				SG	**Sg**	**12 58 57.7**	**+0.3**
GEYV	**SAKARYA_Geyve**	**0.13**	**187**	*i* P	**Pg**	**12 58 55.1**	**-0.1**
GEYV				*i* S	**Sg**	**12 58 57.5**	**+0.2**
GEYV				IAML_P			
	comp=Z,27µm,0.1s						
GULT	**Gulveren**	**0.23**	**140**	PG	**Pg**	**12 58 56.4**	**-0.6**
GULT				SG	**Sg**	**12 59 00.8**	**+0.5**
SAHE	**Sakarya_HENDEK**	**0.47**	**59**	*i* P	**Pb**	**12 59 02.1**	**-0.4**
SAHE				*i* S	**Sb**	**12 59 09.4**	**-0.1**
SAHE				IAML_P			
	comp=Z,811nm,0.2s						
KAND	**Kocaeli-Kandir**	**0.49**	**349**	*i* P	**Pg**	**12 59 01.6**	**-0.1**
KAND				*i* S	**Sb**	**12 59 10.5**	**+0.6**
KAND				IAML_P			
	comp=Z,198nm,0.1s						
CAVI	**Cavuskoy**	**0.55**	**222**	PG	**Pg**	**12 59 02.6**	**-0.1**
MDUB	**Mudurnu**	**0.69**	**102**	PG	**Pg**	**12 59 05.4**	**0.0**
YLV	**Yalova**	**0.72**	**267**	PG	**Pg**	**12 59 05.7**	**-0.3**
BORA	**Eskisehir**	**0.74**	**172**	*i* P	**Pb**	**12 59 07.0**	**0.0**
BORA				*i* S	**Sb**	**12 59 17.6**	**+0.4**
BORA				IAML_P			
	comp=Z,4µm,0.1s						
SBT5	**Esenkoy-Cinarc**	**1.09**	**271**	PN	**Pg**	**12 59 12.8**	**-0.3**
ARMT	**Armutlu**	**1.11**	**268**	PN	**Pg**	**12 59 12.9**	**-0.5**
TVSB	**Tavsanli**	**1.33**	**210**	PN	**Pg**	**12 59 17.3**	**-0.4**

*ISCJB **25** 13:00:46.9±0.5, 36°.81N±0°.03×139°.41E±0°.04, h10^{km}, mb3.6/4, MS3.9/1, Error ellipse: s-maj=5.1km s-min=3.7km az=140.7*

*IDC **25** 13:00:47.7±1.0, 36°.69N×139°.36E, h0^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.4/64, mbtmp3.6/6, ML3.1/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/40, Error ellipse: s-maj=19.1km s-min=10.9km az=160.0*

*JMA **25** 13:00:47.1, 36°.82N×139°.42E, h4^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s187.00000°, δ89.00000°, λ22.00000°. NP2: ϕ_s96.00000°, δ68.00000°, λ179.00000°. Principal axes: T Plg16.0000°, Azm54.0000°; N Plg68.0000°, Azm188.0000°; P Plg15.0000°, Azm319.0000°;*

JMA Felt IV J1.

ISC 25 13:00:48.3±0.9, 36°.82N±0°.03×139°.40E±0°.03, h10^{km}, n16, σ1^{s}.36/20, mb3.7/4, 4C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKT	**Katashina**	**0.13**	**246**	⇑P	**Pg**	**13 00 50.3**	**-1.2**
JKT				S	**Sg**	**13 00 52.6**	**-1.1**
JAG	**Ashikaga**	**0.40**	**174**	P	**Pg**	**13 00 54.9**	**-1.2**
JAG				S	**Sg**	**13 01 00.0**	**-1.4**
JSB	**Shiboa**	**0.44**	**70**	⇑P	**Pg**	**13 00 55.9**	**-1.1**
JSB				S	**Sg**	**13 01 02.1**	**-0.8**
JHK	**Hiroka**	**0.53**	**325**	⇓P	**Pg**	**13 00 57.5**	**-1.1**
JHK				S	**Sg**	**13 01 04.7**	**-0.8**
JFY	**Yanaizu**	**0.64**	**23**	⇑P	**Pg**	**13 00 59.2**	**-1.5**
JFY				S	**Sg**	**13 01 07.3**	**-1.7**
JGK	**Kuni**	**0.66**	**247**	⇑P	**Pg**	**13 01 00.4**	**-0.8**
JGK				S	**Sg**	**13 01 09.5**	**-0.4**
MJAR	**Matsushiro Arr**	**1.00**	**254**	Pg	**Pg**	**13 01 05.5**	**-2.0**
	12nm,0.3s,baz=75,slow=18,SNR=256						
MJAR				Lg	Lg	13 01 17.8	
	11nm,0.3s,baz=256,slow=39,SNR=28						
MAT	**Matsushiro**	**1.00**	**254**	P	**Pg**	**13 01 06.3**	**-1.2**
MAT				S	**Sg**	**13 01 19.2**	**-1.3**
ASAJ	**Asahikawa**	**7.69**	**17**	Pn	Pn	13 02 43.8	+3.5
	0.3nm,0.3s,baz=197,slow=3.2,SNR=5.0						
JNU	**Nakatsue**	**7.91**	**245**	Pn	**Pn**	**13 02 45.0**	**+1.6**
	0.2nm,0.3s,baz=73,slow=19,SNR=3.9						
JNU				LR	LR	13 06 05.4	
	comp=Z,69nm,20.0s,baz=46,slow=41						
KSRS	**Korea Array**	**9.19**	**277**	LR	LR	13 06 20.3	
	comp=Z,40nm,20.3s,baz=105,slow=36						
ILAR	**Eielson Array**	**50.54**	**32**	P	**P**	**13 09 48.2**	**+1.7**
	0.5nm,0.9s,baz=251,slow=5.6,SNR=3.5						
INK	**Inuvik**	**55.31**	**27**	P	**P**	**13 10 23.4**	**+1.8**
	1.0nm,1.0s,baz=295,slow=4.9,SNR=3.3						
WRA	**Warramunga Arr**	**56.66**	**186**	P	**P**	**13 10 31.1**	**-0.6**
	0.7nm,0.7s,baz=0.1,slow=7.5,SNR=11						
ASAR	**Alice Springs**	**60.38**	**186**	P	**P**	**13 10 57.7**	**-0.1**
	0.3nm,0.7s,baz=13,slow=8.8,SNR=3.4						
NEW	**Newport**	**71.40**	**43**	LR	LR	13 45 16.2	
	comp=Z,55nm,18.5s,baz=288,slow=37						

MEX 25 13:05:35.5±0.4, 13°.75N×91°.37W, h20^{km}±56^{km}, MD4.0, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**2.63**	**344**	*e*P	Pn	13 06 14.9	-2.1
PCIG		**2.65**	**318**	*e*P	Pn	13 06 14.5	-2.6
PCIG				*e*S	Sn	13 06 45.4	-3.2

*ISCJB **25** 13:12:41.4±0.4, 60°.73N±0°.03×147°.20W±0°.05, h30^{km}±3^{km}, mb3.6/1, Error ellipse: s-maj=5.1km s-min=3.7km az=171.3*

*NEIC **25** 13:12:42.8±0.0, 60°.74N×147°.19W, h23^{km}, ML2.6(AEIC), After AEIC.*

*IDC **25** 13:12:46.9±1.2, 61°.07N×149°.41W, h115^{km}±44^{km}, mb3.3/1, mb1 3.0/4, mb1mx2.7/57, mbtmp3.1/4, Error ellipse: s-maj=71.0km s-min=9.7km az=112.0*

ISC 25 13:12:41.8±0.9, 60°.73N±0°.03×147°.29W±0°.02, h18^{km}±6^{km}, n50, σ1^{s}.81/61, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLI	**Glacier Island**	**0.18**	**33**	P	**Pg**	**13 12 47.2**	**+0.8**
GLI				S	**Sg**	**13 12 51.6**	**+2.2**
JPK	**Jack Peak**	**0.47**	**46**	P	**Pg**	**13 12 50.5**	**-0.8**
HIN	**Hinchinbrook I**	**0.52**	**131**	P	**Pb**	**13 12 52.6**	**+0.3**
PWL	**Port Wells**	**0.53**	**284**	P	**Pb**	**13 12 52.5**	**0.0**
PWL				S	**Sb**	**13 13 00.6**	**+0.8**
VMT	**TAPS TI Valdez**	**0.57**	**52**	P	**Pg**	**13 12 52.2**	**-0.9**
VMT				S	**Sg**	**13 12 59.9**	**-0.9**
EYAK	**Cordova Ski Ar**	**0.78**	**103**	P	**Pg**	**13 12 56.1**	**-0.9**
DIV	**Divide**	**0.84**	**61**	P	**Pg**	**13 12 56.1**	**-2.1**
DIV				S	**Sg**	**13 13 06.6**	**-2.8**
PTE	**Portage**	**0.86**	**280**	P	**Pb**	**13 12 58.0**	**-0.1**
KNK	**Knik Glacier**	**0.89**	**321**	P	**Pb**	**13 12 57.9**	**-0.8**
KLU	**Klutina**	**1.01**	**41**	P	**Pg**	**13 12 58.9**	**-2.5**
KLU				S	**Sg**	**13 13 11.4**	**-3.3**
SCM	**Sheep Creek Mo**	**1.10**	**359**	P	**Pg**	**13 13 00.8**	**-2.4**
SCM				S	**Sg**	**13 13 15.3**	**-2.4**
SML	**Sawmill**	**1.19**	**335**	P	**Pg**	**13 13 02.6**	**-2.2**
SML				S	**Sb**	**13 13 18.6**	**-0.4**
PMR	**Palmer**	**1.24**	**315**	P	**Pg**	**13 13 03.3**	**-2.4**
SEW	**Seward**	**1.24**	**240**	P	**Pg**	**13 13 03.9**	**-1.8**
RC01	**Rabbit Creek A**	**1.25**	**288**	P	**Pb**	**13 13 04.0**	**-0.8**
RC01				S	**Sn**	**13 13 22.0**	**+1.3**
PS12	**TAPS Pump St12**	**1.28**	**54**	P	**Pn**	**13 13 03.0**	**-1.8**
PS12				S	**Sg**	**13 13 19.3**	**-3.9**
GHO	**Glory Hole Cre**	**1.31**	**324**	P	**Pg**	**13 13 04.5**	**-2.4**
SLKM	**Skilak Lake**	**1.46**	**262**	P	**Pn**	**13 13 07.4**	**0.0**
HMT	**Hamilton**	**1.55**	**104**	P	**Pn**	**13 13 07.0**	**-1.5**
PS11	**TAPS Pump St11**	**1.61**	**32**	P	**Pn**	**13 13 09.2**	**-0.2**
NICHA	**Nichawak Mount**	**1.72**	**105**	P	**Pn**	**13 13 09.5**	**-1.4**
SUA	**Susitna One**	**1.83**	**295**	P	**Pn**	**13 13 12.4**	**0.0**
BRLK	**Bradley Lake**	**2.04**	**243**	P	**Pn**	**13 13 15.3**	**0.0**
MCARA	**McCarthy VSAT**	**2.18**	**71**	P	**Pn**	**13 13 16.1**	**-1.0**
KULT	**Kultieth River**	**2.31**	**100**	P	**Pn**	**13 13 17.2**	**-1.8**
DHY	**Denali Highway**	**2.35**	**359**	P	**Pn**	**13 13 19.7**	**0.0**
PAX	**Paxson**	**2.41**	**20**	P	**Pn**	**13 13 20.4**	**0.0**
KIAG	**Kiagna River**	**2.42**	**83**	P	**Pn**	**13 13 19.2**	**-1.4**
BALM	**Baldy**	**2.44**	**81**	P	**Pn**	**13 13 19.5**	**-1.3**
HUR	**Hurricane**	**2.51**	**335**	P	**Pn**	**13 13 22.2**	**+0.4**
SPWE	**Spurr West**	**2.62**	**284**	P	**Pn**	**13 13 23.2**	**-0.1**
RED	**Redoubt Volcan**	**2.72**	**266**	P	**Pn**	**13 13 23.9**	**-0.8**
RND	**Reindeer**	**2.78**	**345**	P	**Pn**	**13 13 25.8**	**+0.3**
TRF	**Thorofare Moun**	**3.07**	**334**	P	**Pn**	**13 13 29.5**	**0.0**
MCK	**McKinley**	**3.11**	**346**	P	**Pn**	**13 13 30.6**	**+0.7**
PPLA	**Purkeypile**	**3.18**	**315**	P	**Pn**	**13 13 30.4**	**-0.6**
RIDG	**Independ'e Rid**	**3.23**	**20**	P	**Pn**	**13 13 31.8**	**+0.2**
CAST	**Castle Rocks**	**3.51**	**322**	P	**Pn**	**13 13 35.4**	**-0.1**
PCA	**Pinnacle**	**3.55**	**97**	P	**Pn**	**13 13 34.7**	**-1.3**
WRH	**Wood River Hil**	**3.77**	**355**	P	**Pn**	**13 13 38.8**	**-0.2**
CHUM	**Lake Minchumin**	**3.94**	**326**	P	**Pn**	**13 13 41.1**	**-0.1**
KDAK	**Kodiak Island**	**4.02**	**225**	P	**Pn**	**13 13 41.8**	**-0.5**
	2.7nm,0.3s,baz=35,slow=12,SNR=72						
KDAK				S	**Sn**	**13 14 24.8**	**-4.1**
	0.9nm,0.3s,baz=210,slow=16,SNR=7.6						
IL18	**Eielson Array**	**4.05**	**3**	P	**Pn**	**13 13 41.4**	**-1.4**
ILAR	**Eielson Array**	**4.06**	**2**	P	**Pn**	**13 13 45.9**	**+2.9**
	1.1nm,0.3s,baz=200,slow=13,SNR=12						
ILAR				S	**Sn**	**13 14 29.6**	**-0.4**
	0.5nm,0.3s,baz=200,slow=16,SNR=5.6						
COLA	**College**	**4.17**	**357**	P	**Pn**	**13 13 43.7**	**-0.7**
MLY	**Manley**	**4.59**	**341**	P	**Pn**	**13 13 49.9**	**-0.4**
OHAK	**Old Harbor**	**4.69**	**224**	P	**Pn**	**13 13 50.8**	**-0.9**
IM3	**Indian Mountai**	**6.01**	**334**	P	**Pn**	**13 14 09.4**	**-0.4**
YKA	**Yellowknife Ar**	**15.55**	**69**	P	**P**	**13 16 30.5**	**+6.4**
	0.0nm,0.3s,baz=275,slow=9.7,SNR=2.3						
TXAR	**Lajitas Array**	**42.69**	**117**	P	**P**	**13 20 40.5**	**+3.1**
	0.5nm,0.4s,baz=348,slow=12,SNR=4.8						

*ISCJB **25** 13:25:04.0±0.5, 40°.46N±0°.03×36°.98E±0°.04, h2^{km}±9^{km}, Error ellipse: s-maj=5.2km s-min=4.4km az=28.1*

*DDA **25** 13:25:03.3, 40°.46N×36°.99E, h7^{km}±3^{km}, ML2.7*

*ISK **25** 13:25:03.4, 40°.45N×36°.98E, h8^{km}, ML2.3/6*

ISC 25 13:25:04.5±1.1, 40°.45N±0°.03×36°.97E±0°.03, h3^{km}±12^{km}, n14, σ1^{s}.08/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSDY	**Resadiye-TOKAT**	**0.28**	**101**	PG	**Pg**	**13 25 09.4**	**-0.5**
RSDY				SG	**Sg**	**13 25 13.7**	**+0.2**
ERBA	**Erbaa**	**0.28**	**325**	*i* P	**Pg**	**13 25 10.6**	**+0.6**
ERBA				*i* S	**Sg**	**13 25 14.7**	**+1.0**
ERBA				IAML_P			
	comp=Z,12µm,0.1s						
TOKT	**Tokat**	**0.35**	**248**	PG	**Pg**	**13 25 10.8**	**-0.4**
TOKT				SG	**Sg**	**13 25 16.5**	**+0.7**
TOKA	**Tokat**	**0.40**	**252**	*i* P	**Pg**	**13 25 11.8**	**-0.3**
SVSK	**Karacayir**	**0.53**	**178**	PG	**Pg**	**13 25 14.3**	**-0.4**
SVSK				SG	**Sg**	**13 25 21.8**	**+0.2**
CUZAR	**Zara_SIVAS**	**0.83**	**132**	*i* P	**Pg**	**13 25 20.1**	**-0.3**
CUZAR				*i* S	**Sg**	**13 25 31.9**	**+0.7**
ORDU	**Ordu-Boztepe**	**0.86**	**51**	*i* P	**Pg**	**13 25 20.1**	**-0.9**
ORDU				*i* S	**Sg**	**13 25 32.6**	**+0.3**
KVT	**Kavak**	**0.94**	**312**	PG	**Pg**	**13 25 21.9**	**-0.7**
CUSAR	**Sarkisla-SIVAS**	**1.17**	**209**	*i* P	**Pg**	**13 25 25.5**	**-1.4**
CUSAR				*i* S	**Sn**	**13 25 45.9**	**+1.4**
CUALT	**Altinyayla-SIV**	**1.19**	**188**	*i* P	**Pb**	**13 25 27.8**	**0.0**
CUALT				*i* S	**Sn**	**13 25 46.3**	**+1.4**
YOZ	**Yozgat**	**1.50**	**238**	PN	**Pn**	**13 25 31.4**	**-1.1**
KEMA	**Kemaliye**	**1.66**	**135**	*i* S	**Sg**	**13 26 00.7**	**+2.7**
DIKM	**Dikmen**	**1.76**	**313**	PN	**Pn**	**13 25 35.1**	**-0.9**
DARE	**Darende-Malaty**	**1.92**	**168**	PN	**Pn**	**13 25 37.2**	**-1.0**

IDC ***25*** *13:25:52.3±8.6, 36°.35N×70°.73E, h170^{km}±100^{km}, mb3.2/2, mb1 3.2/4, mb1mx2.8/33, mbtmp3.6/4, Error ellipse: s-maj=82.3km s-min=26.7km az=143.0*

ISCJB ***25*** *13:25:53.7±1.0, 36°.77N±0°.08×70°.82E±0°.08, h200^{km}, mb3.3/1, Error ellipse: s-maj=12.1km s-min=7.3km az=149.0*

NNC ***25*** *13:25:54.6±2.5, 36°.75N×70°.75E, h128^{km}±41^{km}, mb2.9, mpv3.6, Error ellipse: s-maj=23.6km s-min=18.8km az=56.0*

ISC 25 13:25:55.0±1.2**, 36°.77N**±0°.10×**70°.77E**±0°.07**, h200^{km}, n13, σ2^{s}05**/19**, 7C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.89	33	⇓P	Pn	13 26 53.7	-1.9
	12nm,0.6s						
SFK				⇑S	Sn	13 27 39.5	-3.7
	14nm,0.3s						
MNAS	Manas	5.87	13	⇓P	Pn	13 27 20.1	-0.5
	2.8nm,0.5s						
MNAS				⇑S	Sn	13 28 25.7	-2.6
	14nm,0.7s						
KK31	Karatay Array	6.33	358	⇓P	Pn	13 27 26.4	-0.1
	2.6nm,0.4s,baz=184,slow=14,SNR=42						
KK31				S	Sn	13 28 38.0	-1.0
	4.7nm,0.9s,baz=184,slow=19,SNR=13						
AAK	Ala-Archa	6.53	25	⇓P	Pn	13 27 28.1	-1.0
	2.4nm,0.5s						
AAK				⇑S	Sn	13 28 42.8	-1.0
	8.9nm,0.7s						
TKM2	Tokmak 2	7.18	30	⇑P	Pn	13 27 35.8	-1.9
	2.7nm,0.9s						
PDGK	Podgornoye	9.36	43	⇓P	Pn	13 28 04.2	-1.7
	0.7nm,0.4s						
GEYT	Alibeck	10.14	280	P	Pn	13 28 15.2	-0.9
	1.0nm,0.3s,baz=100,slow=12,SNR=10						
GEYT				S	Sn	13 30 06.8	-2.6
	1.1nm,0.3s,baz=135,slow=55,SNR=5.5						
MK31	Makanchi Array	13.19	37	⇑P	P	13 29 00.6	+2.9
	1.0nm,0.8s,baz=205,slow=7.0,SNR=4.0						
MKAR	Makanchi Array	13.19	37	P	Pn	13 28 56.3	+1.7
	0.1nm,0.3s,baz=213,slow=13,SNR=3.1						
AB31	Akbulak array	14.76	331	P	P	13 29 16.8	+1.8
	0.4nm,0.5s,baz=151,slow=12,SNR=14						
AB31				⇑S	Sn	13 31 59.4	+0.3
	0.4nm,0.5s,baz=156,slow=23,SNR=3.5						
BVA0	Borovoye Array	16.26	359	⇑P	Pn	13 29 35.6	+3.4
	1.9nm,1.1s,baz=132,slow=2.7,SNR=4.5						
ZALV	Zalesovo Beam	19.75	25	P	Pn	13 30 13.2	-0.2
	1.0nm,0.4s,baz=209,slow=11,SNR=5.0						
WRA	Warramunga Arr	82.29	122	P	P	13 37 54.0	-0.2
	0.8nm,1.1s,baz=322,slow=4.5,SNR=3.0						

ISN ***25*** *13:38:41.4±1.0, 37°.04N×44°.86E, h2^{km}±772^{km}, ML2.6*

ISC 25 13:38:44.8±2.4**, 37°.12N**±0°.08×**45°.0E**±0°.1**, h12^{km}, n4, σ1^{s}77**/6**, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOVA	Hakkari_Yksek	0.75	309	*i* P	Pn	13 39 01.9	+0.5
YOVA				*i* S	Sn	13 39 13.4	+0.6
YOVA				IAML_P			
	comp=Z,2µm,0.3s						
CUKT	Cukurca	1.14	277	*i* P	Pn	13 39 09.9	+3.2
CUKT				*i* S	Sn	13 39 31.7	+9.4
CUKT				IAML_P			
	comp=Z,1µm,0.3s						
MSL	Mosul	1.70	245	*e*Pg	Pg	13 39 16.0	-1.4
	baz=65						
MSL				*e*Sg	Sg	13 39 40.0	+0.5
IKRK	Kirkuk	1.81	198	*e*Pg	Pg	13 39 18.0	-1.5
IKRK				*e*Sg	Sg	13 39 45.0	+2.1

IDC ***25*** *13:41:26.7±1.3, 52°.72N×132°.14W, h8^{km}±7^{km}, mb4.2/24, mb1 4.3/34, mb1mx4.2/47, mbtmp4.2/34, ML3.7/10, MS3.8/24, Ms1 3.8/24, ms1mx3.6/45, Error ellipse: s-maj=13.1km s-min=5.3km az=43.0*

PGC ***25*** *13:41:26.4±1.0, 52°.69N×132°.25W, h22^{km}, mb4.4, ML4.7/18, Mw4.9, 68km southwest of Sandspit, Bc Haida Gwaii Region*

NEIC ***25*** *13:41:26.4±0.0, 52°.69N×132°.25W, h22^{km}, mb4.4/141, MW4.6, MW4.9(OTT), Moment Tensor Solution. s24 Moment tensor: Scale 10^{15}Nm; M_{rr}7.18; $M_{\theta\theta}$-4.07; $M_{\phi\phi}$-3.10; $M_{r\theta}$3.07; $M_{\theta\phi}$3.38; $M_{\phi r}$-3.54; Best double couple: $M_0$8.50000×10^{15} NP1:ϕ_s135.00000°, δ62.00000°, λ94.00000°. NP2:ϕ_s307.00000°, δ29.00000°, λ82.00000°. Principal axes: T 8.6000, Plg73.0000°, Azm55.0000°; N -0.2200, Plg4.0000°, Azm313.0000°; P -8.3900, Plg17.0000°, Azm222.0000°; After OTT.*

ISCJB ***25*** *13:41:27.6±0.3, 52°.85N±0°.02×132°.07W±0°.04, h22^{km}±2^{km}, mb4.5/96, MS3.7/18 Error ellipse: s-maj=4.4km s-min=1.8km az=143.0*

ISC 25 13:41:28.0±0.9**, 52°.78N**±0°.03×**132°.20W**±0°.04**, h16^{km}**±5^{km}**, n487, σ1^{s}38**/493**, mb4.5**/96**, MS3.8**/18**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG1B	Mitchell Dam	0.16	16	P	Pg	13 41 32.2	0.0
HG1B				S	Sg	13 41 35.8	+0.9
BNB	Barry Inlet	0.34	127	P	Pg	13 41 33.3	-1.9
BNB				S	Sg	13 41 38.3	-1.8
MOBC	Moresby Island	0.39	21	P	Pb	13 41 36.0	-0.5
MOBC				S	Sb	13 41 42.8	+0.5
DIB	Dawson Inlet,	0.45	339	*e*Pg	Pg	13 41 36.7	-0.5
DIB	Dawson Inlet,	0.45	339	P	Pg	13 41 36.6	-0.5
DIB				S	Sb	13 41 44.0	0.0
H02S1	DAWSON INLET T	0.45	339	Pg	Pg	13 41 36.1	-1.0
H02S1				Lg	Lg	13 41 43.9	
MASB	Masset	1.24	5	P	Pn	13 41 50.1	-0.5
NDB	Naden	1.25	340	P	Pn	13 41 49.4	-1.4
RUBB	Prince Rupert	1.94	36	Pn	Pn	13 41 58.9	-1.3
RUBB				Sn	Sn	13 42 23.3	-0.8
BBB	Bella Bella	2.57	102	Pn	Pn	13 42 05.9	-3.0
BBB				Sn	Sn	13 42 36.5	-3.3
BBB	Bella Bella	2.57	102	Pn	Pn	13 42 06.0	-3.0
	19nm,0.3s,baz=283,slow=6.1,SNR=188						
BBB				Pg	Pb	13 42 13.4	-0.2
	78nm,0.3s,baz=282,slow=17,SNR=74						
BBB				Sn	Sn	13 42 36.1	-3.7
	90nm,0.3s,baz=145,slow=23,SNR=7.4						
BBB				Lg	Lg	13 42 44.8	
	252nm,0.3s,baz=20,slow=22,SNR=7.3						
BBB				LR	LR	13 43 11.1	
	comp=Z,2µm,21.2s,baz=277,slow=41						
CRAG	Craig	2.75	349	*e*Pn	Pn	13 42 10.3	-1.0
HOLB	Holberg	3.32	129	Pn	Pn	13 42 15.2	-4.1
HOLB				Sn	Sn	13 42 53.2	-5.1
BCBC	Bella Coola	3.35	95	Pn	Pn	13 42 18.0	-1.6
PHC	Port Hardy	3.62	123	Pn	Pn	13 42 19.2	-4.1
PHC				Sn	Sn	13 42 59.5	-6.2
WRAK	Wrangell Islan	3.65	359	*e*Pn	Pn	13 42 23.5	-0.2
PACB	Port Alice, BC	3.76	127	Pn	Pn	13 42 21.4	-3.8
BPBC	Brooks Peninsu	3.82	132	Pn	Pn	13 42 22.5	-3.6
MAYB	Maynard	3.94	125	Pn	Pn	13 42 23.7	-4.2
TLCB	Telegraph Cove	4.02	122	Pn	Pn	13 42 25.3	-3.5
EDB	Eliza Dome	4.32	130	Pn	Pn	13 42 29.3	-3.6
WOSB	Woss	4.39	124	Pn	Pn	13 42 30.9	-3.1
NCRB	Newcastle Ridg	4.51	119	Pn	Pn	13 42 33.0	-2.7
SIT	Sitka	4.65	338	*e*Pn	Pn	13 42 37.3	0.0
GDR	Gold River	4.90	125	Pn	Pn	13 42 37.8	-3.2
FSB	Fort Saint Jam	4.98	67	Pn	Pn	13 42 40.7	-1.4
CBB	Campbell River	5.09	120	Pn	Pn	13 42 41.3	-2.2
JIS	Juneau Island	5.64	348	*e*Pn	Pn	13 42 51.1	0.0
TXB	Texada	5.77	119	Pn	Pn	13 42 49.6	-3.3
DLBC	Dease Lake	5.80	11	Pn	Pn	13 42 55.2	+1.9
DLBC				Sn	Sn	13 43 56.8	-2.7
DLBC				Sg	Sg	13 44 27.6	-6.4
DLBC	Dease Lake	5.80	11	Pn	Pn	13 42 55.3	+2.0
	6.2nm,0.3s,baz=205,slow=11,SNR=107						
DLBC				Pg	Pb	13 43 08.3	-0.4
	9.1nm,0.3s,baz=201,slow=15,SNR=11						
DLBC				Sn	Sn	13 44 00.7	+1.2
	10nm,0.3s,baz=236,slow=10,SNR=3.9						
DLBC				Lg	Lg	13 44 25.6	
	16nm,0.3s,baz=298,slow=9.3,SNR=7.6						
B927	Port Alberni	5.87	124	Pn	Pn	13 42 52.2	-2.1
BESE	Bessie Mountai	6.00	347	*e*Pn	Pn	13 42 56.7	+0.6
BESE	Bessie Mountai	6.00	347	Pn	Pn	13 42 55.7	-0.3
MGB	Mount Grey	6.08	126	Pn	Pn	13 42 53.7	-3.5
GHNB	Nanoose	6.11	122	Pn	Pn	13 42 56.1	-1.4
SHB	Sechelt	6.13	118	Pn	Pn	13 42 56.8	-1.1
SHB				Sg	Sb	13 44 33.0	+5.5
NLLB	Nanaimo Lost L	6.29	121	Pn	Pn	13 42 58.1	-1.9
WSLR	Whistler	6.38	111	Pn	Pn	13 42 56.3	-5.0
WSLR				Sg	Sb	13 44 42.6	+8.0
WPB	Watts Point	6.46	115	Pn	Pn	13 43 00.6	-1.7
BMBC	Bull Mountain	6.72	57	Pn	Pn	13 43 06.2	+0.2
LZB	Mount Lazard	6.76	125	Pn	Pn	13 43 02.8	-3.8
LLLB	Lillooet	6.78	105	*e*Pn	Pn	13 43 07.0	+0.3
LLLB	Lillooet	6.78	105	Pn	Pn	13 43 05.9	-0.8
SKAG	Skagway	6.92	347	*e*Pn	Pn	13 43 09.4	+0.9
PGC	Sidney	6.93	123	*e*Pn	Pn	13 43 09.6	+0.9
PLBC	Pleasant Camp	7.08	343	Pn	Pn	13 43 10.5	-0.3
VDB	Vedder Mountai	7.41	116	Pn	Pn	13 43 10.6	-4.8
NLWA	Neilton Lookou	7.60	132	*e*Pn	Pn	13 43 17.7	-0.3
B05A	Bryant	7.87	121	P	Pn	13 43 22.3	+0.6
	baz=308						
PNL	Peninsula	7.98	333	Pn	Pn	13 43 23.0	-0.2
JCW	Jim Creek	8.00	121	Pn	Pn	13 43 21.3	-2.2
FNBB	Fort Nelson	8.01	37	Pn	Pn	13 43 22.9	-0.7
FNBB				Sn	Sn	13 44 53.7	0.0
WHY	Whitehorse	8.03	351	*e*Pn	Pn	13 43 24.6	+0.6
WHY	Whitehorse	8.03	351	Pn	Pn	13 43 24.3	+0.3
B06A	Marblemount	8.04	118	*e*Pn	Pn	13 43 25.3	+1.4
HYT	Haines Junctio	8.57	342	Pn	Pn	13 43 29.8	-1.5
PNT	Penticton	8.65	109	Pn	Pn	13 43 27.6	-4.9
E04D	Cinebar	8.82	131	P	Pn	13 43 35.7	+1.0
	baz=318						
SLEB	Sale Mountain	8.84	95	Pn	Pn	13 43 35.0	-0.1
YUK6	Outpost Mounta	8.84	340	Pn	Pn	13 43 35.4	+0.2
LON	Longmire	9.03	128	*e*Pn	Pn	13 43 38.8	+1.1
LON	Longmire	9.03	128	Pn	Pn	13 43 36.1	-1.6
LTY	Liberty	9.25	122	*e*Pn	Pn	13 43 41.6	+0.9
LTY	Liberty	9.25	122	Pn	Pn	13 43 38.2	-2.5
B08A	Colville Reser	9.31	113	*e*Pn	Pn	13 43 42.5	+1.1
G03D	McMinnville, O	9.58	139	P	Pn	13 43 46.7	+1.6
	baz=325						
CTGM	Chitina Glacie	9.59	332	Pn	Pn	13 43 44.0	-1.4
BALM	Baldy	9.95	330	*e*Pn	Pn	13 43 51.9	+1.7
BALM	Baldy	9.95	330	Pn	Pn	13 43 50.1	-0.1
YUK3	Moose Creek	10.05	337	Pn	Pn	13 43 51.0	-0.7
HMT	Hamilton	10.06	324	*e*Pn	Pn	13 43 53.2	+1.5
COR	Corvallis	10.09	141	*e*Pn	Pn	13 43 54.0	+2.0
E07A	Sunnyside	10.13	123	*e*Pn	Pn	13 43 53.1	+0.4
D08A	Wollman Farm,	10.30	119	*e*Pn	Pn	13 43 54.8	-0.2
H04D	Lebanon	10.36	139	P	Pn	13 43 57.0	+1.2
	baz=326						
G05D	Wamic, OR	10.39	132	P	Pn	13 43 57.9	+1.7
	baz=320						
HAWA	Hanford	10.41	123	*e*Pn	Pn	13 43 57.7	+1.2
H04A	Detroit Lake	10.45	137	*e*Pn	Pn	13 43 58.9	+1.8
F07A	Phinny Hill Vi	10.56	126	*e*Pn	Pn	13 44 00.2	+1.7
E08A	Dider Farm, El	10.59	121	*e*Pn	Pn	13 43 58.9	0.0
NEW	Newport	10.61	109	*e*Pn	Pn	13 44 00.4	+1.1
NEW				Lg	Lg	13 46 52.7	
NEW	Newport	10.61	109	P	Pn	13 44 00.7	+1.4
	baz=300						
NEW	Newport	10.61	109	Pn	Pn	13 43 58.8	-0.4
	0.2nm,0.3s,baz=292,slow=11,SNR=4.9						
NEW				Lg	Lg	13 46 52.7	
	0.1nm,0.3s,baz=30,slow=18,SNR=2.1						
EYAK	Cordova Ski Ar	10.76	322	*e*Pn	Pn	13 44 04.5	+3.4
E09A	Wood Farm, Sta	11.05	119	*e*Pn	Pn	13 44 05.1	-0.2
I04A	Tendick Farm,	11.10	140	P	Pn	13 44 08.3	+2.3
	baz=327						
KLU	Klutina	11.45	325	*e*Pn	Pn	13 44 12.0	+1.3
G08A	Pilot Rock	11.47	126	*e*Pn	Pn	13 44 12.1	+1.0
K02D	Willamette Mer	11.61	147	P	Pn	13 44 15.6	+2.7
	baz=333						
PINE	Pine Mountain	11.70	136	*e*Pn	Pn	13 44 15.4	+1.1
HARP	HAARP	11.86	329	*e*Pn	Pn	13 44 16.6	+0.3
F10A	Beach Ranch, E	11.89	119	*e*Pn	Pn	13 44 16.6	-0.2
DAWY	Dawson	11.91	345	*e*Pn	Pn	13 44 17.9	+0.9
DAWY	Dawson	11.91	345	Pn	Pn	13 44 16.4	-0.5
HUMO	Hull Mountain	11.92	145	*e*Pn	Pn	13 44 17.1	-0.2
SEW	Seward	12.01	314	*e*Pn	Pn	13 44 20.4	+2.2
I07A	Izee	12.11	131	*e*Pn	Pn	13 44 21.8	+2.0
SCM	Sheep Creek Mo	12.18	324	*e*Pn	Pn	13 44 22.5	+1.9
KNK	Knik Glacier	12.33	321	*e*Pn	Pn	13 44 24.0	+1.4
PAX	Paxson	12.38	331	*e*Pn	Pn	13 44 23.0	-0.5
BRLK	Bradley Lake	12.49	311	*e*Pn	Pn	13 44 25.2	+0.4
SML	Sawmill	12.53	323	*e*Pn	Pn	13 44 26.1	+0.7
DOT	Dot Lake	12.53	335	*e*Pn	Pn	13 44 26.4	+1.0
BMO	Blue Mountains	12.61	123	*e*Pn	Pn	13 44 27.9	+1.3
KDAK	Kodiak Island	12.63	301	*e*Pn	Pn	13 44 28.1	+1.4
KDAK				Sn	Sn	13 46 42.9	-3.9
KDAK	Kodiak Island	12.63	301	Pn	Pn	13 44 25.2	-1.5
	0.2nm,0.3s,baz=83,slow=11,SNR=4.4						
KDAK				Sn	Sn	13 46 42.9	-3.9
	0.1nm,0.3s,baz=35,slow=11,SNR=2.0						
KDAK				LR	LR	13 48 21.7	
	comp=Z,683nm,18.6s,baz=138,slow=33						
RC01	Rabbit Creek A	12.65	318	*e*Pn	Pn	13 44 28.5	+1.5
PMR	Palmer	12.70	321	*e*Pn	Pn	13 44 30.8	+3.2
GHO	Glory Hole Cre	12.72	322	*e*Pn	Pn	13 44 30.6	+2.5
SCRK	Sand Creek	12.78	336	*e*Pn	Pn	13 44 31.2	+2.3
YBH	Yreka Blue Hor	12.78	146	*e*Pn	Pn	13 44 31.7	+2.6
YBH	Yreka Blue Hor	12.78	146	Pn	Pn	13 44 30.3	+1.3
	0.1nm,0.3s,baz=339,slow=7.6,SNR=6.8						
YBH				LR	LR	13 48 39.3	
	comp=Z,794nm,18.8s,baz=330,slow=34						
HOM	Homer	12.79	310	*e*Pn	Pn	13 44 31.1	+2.3
RIDG	Independ'e Rid	12.81	334	*e*Pn	Pn	13 44 31.4	+2.1
OHAK	Old Harbor	12.87	299	*e*Pn	Pn	13 44 30.9	+0.9
EGAK	Eagle	12.87	343	*e*Pn	Pn	13 44 31.5	+1.5
J08A	Circle Bar Ran	13.14	130	*e*Pn	Pn	13 44 35.7	+1.8
MSO	Missoula	13.20	110	*e*Pn	Pn	13 44 37.4	+2.7
MSO	Missoula	13.20	110	P	Pn	13 44 35.2	+0.5
	baz=303,SNR=9.7						
KHMM	Horse Mountain	13.24	151	*e*Pn	Pn	13 44 38.4	+3.1
SUA	Susitna One	13.26	318	*e*Pn	Pn	13 44 37.5	+2.1
YKA	Yellowknife Ar	13.49	37	Pn	Pn	13 44 37.2	-1.2
	0.7nm,0.3s,baz=227,slow=12,SNR=82						
YKA				Lg	Lg	13 48 34.5	
	0.4nm,0.3s,baz=272,slow=21,SNR=5.7						
YKA				LR	LR	13 50 43.4	
	comp=Z,20nm,20.6s,baz=232,slow=41						
MOD	Modoc Plateau	13.53	139	*e*Pn	Pn	13 44 41.2	+1.9
YKW1	Yellowknife Ar	13.53	37	Pn	Pn	13 44 37.6	-1.3
YKW3	Yellowknife Ar	13.53	37	Pn	Pn	13 44 37.2	-1.8
RSO	Redoubt South	13.63	312	*e*Pn	Pn	13 44 41.7	+1.1
RND	Reindeer	13.76	327	*e*Pn	Pn	13 44 44.2	+2.0
WVOR	Wild Horse Val	13.79	133	*e*Pn	Pn	13 44 45.9	+3.1
EPYK	Eagle Plains	13.81	352	*e*Pn	Pn	13 44 44.6	+1.7
EPYK	Eagle Plains	13.81	352	P	Pn	13 44 44.4	+1.5
	baz=169,SNR=7.7						
WDC	Whiskeytown Da	13.87	148	*e*Pn	Pn	13 44 46.1	+2.3
MCK	McKinley	14.01	328	*e*Pn	Pn	13 44 48.4	+2.8
O02D	Mt. Diablo Mer	14.16	149	P	Pn	13 44 49.3	+1.5
	baz=336						
ILAR	Eielson Array	14.17	334	Pn	Pn	13 44 48.8	+1.0
	0.1nm,0.3s,baz=153,slow=12,SNR=9.5						
ILAR				Lg	Lg	13 49 00.8	
	0.0nm,0.3s,baz=122,slow=26,SNR=3.7						
ILAR				LR	LR	13 50 27.4	
	comp=Z,1µm,18.2s,baz=150,slow=38						
TRF	Thorofare Moun	14.27	326	*e*Pn	Pn	13 44 49.2	-0.1
WRH	Wood River Hil	14.28	331	*e*Pn	Pn	13 44 51.4	+2.1
O03E	Paynes Creek	14.38	146	P	Pn	13 44 53.1	+2.3
	baz=334,SNR=6.0						
PRP	Porcupine Dome	14.43	337	*e*Pn	Pn	13 44 53.5	+2.1
HRY	Holter Researc	14.48	107	*e*Pn	Pn	13 44 54.2	+2.0
POKR	Poker Plat Res	14.59	334	P	Pn	13 44 54.8	+1.3
	baz=141						
PPLA	Purkeypile	14.62	322	*e*Pn	Pn	13 44 55.5	+1.4
MDM	Murphy Dome	14.69	332	*e*Pn	Pn	13 44 56.7	+1.8
CAST	Castle Rocks	14.89	323	*e*Pn	Pn	13 44 58.5	+0.9
HLID	Hailey	14.99	121	*e*Pn	Pn	13 44 59.7	+0.4
HLID	Hailey	14.99	121	P	Pn	13 45 00.0	+0.7
	baz=314,SNR=13						
MCMT	McKenzie Canyo	15.00	114	*e*Pn	Pn	13 45 00.2	+0.9
EGMT	Eagleton	15.06	99	*e*Pn	Pn	13 45 00.5	+0.5
	39nm,1.1s						
EGMT	Eagleton	15.06	99	P	Pn	13 45 00.0	0.0
	baz=296,SNR=11						
ORV	Oroville	15.14	147	*e*Pn	Pn	13 45 02.4	+1.4
	21nm,1.1s						
SVW2	Sparrevohn	15.16	313	*e*Pn	Pn	13 45 02.8	+1.6
	22nm,1.0s						
FYU	Fort Yukon	15.26	340	*e*Pn	Pn	13 45 04.7	+2.3
	54nm,1.4s						
BEKR	Beckworth	15.26	143	*e*Pn	P	13 45 08.0	+0.3
	31nm,1.1s						
MLY	Manley	15.48	330	*e*Pn	Pn	13 45 05.0	-0.4
	48nm,1.8s						
INK	Inuvik	15.59	358	*e*Pn	Pn	13 45 07.7	+1.1
	7.4nm,0.8s						
INK				Lg	Lg	13 49 33.6	
INK	Inuvik	15.59	358	Pn	Pn	13 45 06.6	-0.1
INK	Inuvik	15.59	358	Pn	Pn	13 45 07.8	+1.1
	0.2nm,0.3s,baz=179,slow=10,SNR=10						
INK				Lg	Lg	13 49 33.6	
	0.0nm,0.3s,baz=229,slow=17,SNR=2.2						
INK				LR	LR	13 51 27.5	
	comp=Z,684nm,18.7s,baz=166,slow=38						
PAHR	Pah Rah Range	15.77	141	*e*Pn	P	13 45 15.1	+1.9
	34nm,1.2s						
QLMT	Earthquake Lak	15.79	112	*e*Pn	Pn	13 45 11.0	+1.3
AFDM	Forest Hills D	15.87	146	*e*Pn	P	13 45 15.2	+1.0
	25nm,1.1s						
YHB	Horse Butte	15.97	112	*e*Pn	Pn	13 45 12.7	+0.6
	14nm,0.8s						
VCNR	Virginia City	16.02	142	*e*Pn	Pn	13 45 13.9	+1.1
	23nm,1.1s						
RUBR	Rubicon Trail	16.06	144	*e*Pn	Pn	13 45 14.7	+1.5
	15nm,0.8s						
YHH	Holmes Hill	16.14	111	*e*Pn	Pn	13 45 15.6	+1.3
	18nm,1.1s						
YMR	Madison River	16.15	112	*e*Pn	Pn	13 45 15.8	+1.5
	24nm,1.0s						
PNTR	Pine Nut	16.23	143	*e*Pn	P	13 45 19.9	+1.6
	22nm,1.1s						
GCMT	Greycliff	16.24	106	*e*Pn	Pn	13 45 16.5	+1.1
YNR	Norris Junctio	16.28	111	*e*Pn	P	13 45 18.3	-0.7
	28nm,1.5s						
YFT	Old Faithful	16.36	112	*e*Pn	Pn	13 45 18.0	+1.0
	18nm,1.1s						
YERR	Yerington	16.45	142	*e*Pn	Pn	13 45 19.6	+1.5
	21nm,1.3s						
YPP	Pitchstone Pla	16.49	113	*e*Pn	Pn	13 45 19.4	+0.7
	15nm,1.2s						
LKWY	Lake	16.53	111	*e*Pn	Pn	13 45 19.6	+0.3
	13nm,0.9s						
H17A	Grant Village	16.54	112	*e*Pn	P	13 45 22.2	+0.4
	90nm,1.9s						
H17A	Grant Village	16.54	112	P	Pn	13 45 21.0	+1.7
	baz=308,SNR=11						
FLWY	Flagg Ranch	16.66	113	*e*Pn	Pn	13 45 22.0	+1.2
	40nm,1.1s						
ELK	Elko	16.68	129	*e*Pn	Pn	13 45 22.1	+0.9
	16nm,1.0s						
ELK	Elko	16.68	129	Pn	Pn	13 45 20.9	-0.3
	0.0nm,0.3s,baz=321,slow=13,SNR=8.4						
ELK				LR	LR	13 51 47.5	
	comp=Z,437nm,20.5s,baz=328,slow=37						
FXWY	Fox Creek	16.77	115	*e*Pn	Pn	13 45 23.1	+0.9
	11nm,0.9s						
WAKR	Walker	16.80	143	*e*Pn	Pn	13 45 24.0	+1.4
	44nm,1.5s						
KVN	Kaiserville	16.83	139	*e*Pn	Pn	13 45 24.4	+1.4
	27nm,1.0s						
MOOW	Moose Ponds	16.85	114	*e*Pn	Pn	13 45 24.5	+1.3
	22nm,1.4s						
RLMT	Red Lodge	16.85	108	*e*Pn	Pn	13 45 24.7	+1.5
	27nm,1.1s						
RLMT	Red Lodge	16.85	108	P	Pn	13 45 23.9	+0.6
	baz=305						
CMB	Columbia Colle	16.89	146	*e*Pn	Pn	13 45 24.6	+1.1
	11nm,1.0s						
TPAW	Teton Pass	16.90	115	*e*Pn	Pn	13 45 25.4	+1.4
	21nm,0.8s						
COLD	Coldfoot	16.94	336	*e*Pn	Pn	13 45 25.2	+1.2
	9.0nm,1.2s						
LOHW	Long Hollow	17.02	114	*e*Pn	P	13 45 28.2	+1.1
	18nm,1.2s						
SNOW	Snow King Moun	17.03	115	*e*Pn	P	13 45 28.6	+1.3
	44nm,1.7s						
RYN	Ryan	17.03	141	*e*Pn	Pn	13 45 26.8	+1.3
	16nm,1.1s						
REDW	Red Top Meadow	17.04	115	*e*Pn	Pn	13 45 26.9	+1.3
	52nm,1.6s						
HVU	Hansel Valley	17.11	122	*e*Pn	Pn	13 45 27.6	+1.1
	11nm,1.1s						
KUKN	Kugluktuk,NWT	17.19	22	P	Pn	13 45 26.9	-0.3
NVAR	Mina Array Bea	17.29	141	P	Pn	13 45 29.0	+0.2
	0.1nm,0.3s,baz=312,slow=6.8,SNR=16						
NVAR				PcP	PcP	13 50 10.2	-0.8
	0.1nm,0.3s,baz=294,slow=0.9,SNR=3.8						
NVAR				LR	LR	13 52 34.6	
	comp=Z,364nm,18.5s,baz=318,slow=39						
AHID	Auburn Hatcher	17.30	117	*e*P	P	13 45 31.8	+1.5
	17nm,1.1s						
BGU	Big Grassy Mou	17.61	125	*e*Pn	Pn	13 45 33.7	+1.0
	14nm,1.4s						
MDPB	Devils Postpil	17.70	144	*e*Pn	P	13 45 35.6	+0.8
	14nm,1.2s						
MLAC	Mammoth, Mammo	17.79	143	P	P	13 45 36.8	+1.1
	baz=332						
LAO	LASA Array	17.81	100	*e*P	P	13 45 36.6	+0.9
	38nm,1.0s						
LAO	LASA Array	17.81	100	P	P	13 45 35.9	+0.2
	baz=299						
TOLK	Toolik Lake Re	17.91	339	*e*Pn	P	13 45 37.1	+0.4
	11nm,1.0s						
TOLK	Toolik Lake Re	17.91	339	P	P	13 45 38.1	+1.5
	baz=144						
FFC	Flin Flon	17.91	72	*e*Pn	Pn	13 45 35.3	-0.8
	11nm,0.9s						
BW06	Boulder Array	18.15	114	*e*P	P	13 45 40.3	+0.7
	16nm,1.1s						
BW06	Boulder Array	18.15	114	P	P	13 45 40.4	+0.7
	baz=311,SNR=14						
PDAR	Pinedale Array	18.15	114	P	P	13 45 41.0	+1.4
	0.4nm,0.3s,baz=308,slow=8.5,SNR=32						
PDAR				Lg	Lg	13 50 59.1	
	0.1nm,0.3s,baz=311,slow=15,SNR=2.3						
DGMT	Dagmar	18.23	92	*e*Pn	Pn	13 45 40.2	+0.2
	24nm,1.0s						
DGMT	Dagmar	18.23	92	P	Pn	13 45 40.5	+0.4
	baz=294						
DUG	Dugway, Tooele	18.28	126	*e*Pn	P	13 45 41.9	+0.9
	12nm,0.9s						
DUG	Dugway, Tooele	18.28	126	P	Pn	13 45 41.5	+0.7
	baz=320,SNR=14						
TCUT	Toone Canyon	18.30	121	*e*Pn	P	13 45 42.3	+1.0
	20nm,1.1s						
R11A	Troy Canyon, C	18.47	135	*e*P	P	13 45 43.9	+0.7
	6.0nm,1.0s						
R11A	Troy Canyon, C	18.47	135	P	P	13 45 44.0	+0.8
	baz=327,SNR=7.4						
TIN	Tinemaha, Big	18.53	143	P	P	13 45 44.9	+1.2
	baz=332						
NLU	North Lily Min	18.82	125	*e*P	P	13 45 48.1	+1.0
	9.3nm,1.1s						
GRAC	Grapevine Rang	18.90	141	P	Pn	13 45 49.4	+1.0
	baz=331,SNR=8.4						
PAGB	Antelope Grade	19.03	149	*e*P	P	13 45 50.6	+1.5
	30nm,1.2s						
PSUT	Pine Spring	19.09	131	*e*P	P	13 45 50.8	+0.8
	48nm,1.9s						
CWC	Cottonwood Cre	19.13	143	P	Pn	13 45 52.2	+0.9
	baz=333						
TPNV	Topopah Spring	19.38	138	*e*P	P	13 45 54.3	+1.2
	24nm,0.9s						
TPNV	Topopah Spring	19.38	138	P	P	13 45 54.1	+0.9
	baz=330,SNR=20						
DAC	Darwin (Calif)	19.45	142	*e*P	P	13 45 54.8	+0.9
	38nm,1.8s						
SMMC	Simmler	19.50	149	P	P	13 45 55.8	+1.5
	baz=337						
FURC	Furnace Creek,	19.56	140	P	Pn	13 45 56.6	+0.4
	baz=331,SNR=8.4						
ISA	Isabella, Lake	19.68	145	*e*P	P	13 45 57.4	+1.1
	30nm,1.1s						
ISA	Isabella, Lake	19.68	145	P	P	13 45 57.5	+1.1
	baz=334,SNR=20						
MPMC	Manual Prospec	19.68	142	P	P	13 45 57.8	+1.3
	baz=333,SNR=17						
TCRU	Three Creeks R	19.69	128	*e*P	Pn	13 45 58.2	+0.2
	10nm,0.9s						
TMUT	Trail Mountain	19.76	125	*e*P	P	13 45 58.1	+0.8
	7.6nm,0.9s						
P17A	Butcher Ranch,	19.86	124	*e*P	P	13 45 60.0	+1.6
	12nm,1.1s						
MSU	Marysvale	19.89	128	*e*P	Pn	13 46 00.7	+0.2
K22A	Casper	19.93	110	*e*P	P	13 45 59.0	-0.1
	17nm,0.8s						
K22A	Casper	19.93	110	P	P	13 45 59.3	+0.2

	baz=309						
PKM	Mcpherson Peak	19.95	149	P	P	13 46 00.6	+1.3
	baz=337						
ARVC	Arvin	20.05	146	P	P	13 46 01.3	+1.1
	baz=336						
Q16A	Castle Valley	20.07	125	*e*P	P	13 46 01.9	+1.3
	10nm,0.8s						
CCUT	Cedar City	20.12	132	*e*P	P	13 46 01.7	+0.5
	18nm,0.9s						
LRMC	Laurel Mtn Rad	20.13	144	P	P	13 46 02.1	+0.9
	baz=334,SNR=5.2						
RWWY	Rawlins	20.17	113	*e*P	P	13 46 02.9	+1.1
	22nm,0.9s						
SZCU	Shurtz Canyon	20.20	131	*e*P	P	13 46 02.7	+0.5
	28nm,1.0s						
SHPR	Sheep Range	20.21	137	*e*P	P	13 46 03.0	+0.8
	11nm,1.0s						
SRU	San Rafael Swe	20.24	124	*e*P	P	13 46 03.4	+0.8
	24nm,1.1s						
MTPU	Mount Pierson	20.27	129	*e*P	P	13 46 04.3	+1.3
	13nm,1.1s						
SHOC	Shoshone, Teco	20.29	140	P	P	13 46 04.3	+1.5
	baz=331,SNR=12						
SBC	Santa Barbara	20.39	149	P	P	13 46 05.6	+1.7
	baz=338						
RSSD	Black Hills	20.48	104	*e*P	P	13 46 06.2	+1.1
	14nm,0.8s						
RSSD	Black Hills	20.48	104	P	P	13 46 05.4	+0.2
	baz=305						
ANM	Nome	20.60	318	*e*P	P	13 46 07.4	+1.4
	21nm,1.0s						
GSC	Goldstone, Bar	20.61	142	*e*P	P	13 46 08.1	+1.6
	22nm,1.0s						
GSC	Goldstone, Bar	20.61	142	P	P	13 46 08.0	+1.6
	baz=333,SNR=14						
LCMT	Little Creek M	20.61	132	*e*P	P	13 46 08.1	+1.6
	28nm,1.1s						
O20A	White River Ci	20.68	118	*e*P	P	13 46 08.3	+1.0
	44nm,0.9s						
O20A	White River Ci	20.68	118	P	P	13 46 08.1	+0.9
	baz=316,SNR=18						
PKCU	Pink Cliffs	20.69	130	*e*P	P	13 46 08.9	+1.4
	30nm,1.1s						
KNB	Kanab	20.80	132	*e*P	P	13 46 09.8	+1.2
	15nm,1.2s						
SCZ2	Santa Cruz Isl	20.83	149	P	P	13 46 10.2	+1.5
	baz=338						
TUQ	Turquoise Moun	20.83	140	P	P	13 46 10.2	+1.4
	baz=331,SNR=22						
BLG	Laguna Peak, P	20.90	148	P	P	13 46 10.9	+1.5
	baz=337						
RRX	Edison Barstow	20.92	143	P	P	13 46 11.0	+1.3
	baz=333						
DECC	Green Verdugo	21.01	146	P	P	13 46 12.0	+1.3
	baz=336						
MWC	Mount Wilson	21.13	146	*e*P	P	13 46 13.6	+1.5
	45nm,1.1s						
PASC	Pasadena Art C	21.13	146	*e*P	P	13 46 13.5	+1.6
	35nm,1.0s						
HEC	Hector,Ludlow	21.20	142	P	P	13 46 13.7	+0.9
	baz=333,SNR=15						
BFSC	Mount Baldy Ra	21.25	145	P	P	13 46 14.6	+1.2
	baz=335,SNR=15						
MDND	Maddock	21.28	90	P	P	13 46 13.1	-0.4
	baz=295						
N23A	Red Feather La	21.41	113	*e*P	P	13 46 15.5	+0.3
	18nm,0.9s						
N23A	Red Feather La	21.41	113	P	P	13 46 15.4	+0.3
	baz=312,SNR=11						
PHWY	Pilot Hill	21.41	112	*e*P	P	13 46 15.4	+0.2
	16nm,1.0s						
PV09	Paradox Valley	21.41	123	*e*P	P	13 46 16.1	+0.8
LDFC	Landfair	21.46	139	*e*P	P	13 46 16.2	+0.6
	27nm,0.9s						
BBRC	Big Bear Solar	21.49	143	P	P	13 46 16.7	+0.6
	baz=334						
GMRC	Granite Mounta	21.50	140	P	P	13 46 17.0	+0.9
	baz=332,SNR=9.0						
PV23	Carpenter Ridg	21.51	123	*e*P	P	13 46 16.8	+0.4
	18nm,0.9s						
FMP	Fort Macarthur	21.52	147	P	P	13 46 16.8	+0.7
	baz=336						
U15A	North Rim	21.52	132	*e*P	P	13 46 17.4	+0.9
	21nm,0.8s						
SNCC	San Nicolas Is	21.55	150	P	P	13 46 16.7	+0.2
	baz=339						
PV10	Paradox Valley	21.56	123	*e*P	P	13 46 18.1	+1.3
	33nm,1.2s						
PV14	Lion Creek, Pa	21.57	123	*e*P	P	13 46 17.4	+0.5
	33nm,1.1s						
PV04	Paradox Valley	21.61	122	*e*P	P	13 46 17.7	+0.4
	20nm,1.0s						
PV20	West Nyswonger	21.62	123	*e*P	P	13 46 18.0	+0.6
	19nm,1.0s						
PV19	Morning Glory	21.64	123	*e*P	P	13 46 18.0	+0.4
	17nm,0.9s						
PV16	Nyswonger Mesa	21.67	123	*e*P	P	13 46 18.6	+0.6
	18nm,1.0s						
PV17	East Wray Mesa	21.67	123	*e*P	P	13 46 18.6	+0.6
	27nm,1.0s						
PV11	David Mesa, Pa	21.70	123	*e*P	P	13 46 19.0	+0.8
	28nm,1.0s						
PV07	Paradox Valley	21.71	122	*e*P	P	13 46 19.5	+1.1
	12nm,0.8s						
PV12	Saucer Basin,	21.72	122	*e*P	P	13 46 19.2	+0.7
	27nm,1.0s						
PV03	Paradox Valley	21.75	123	*e*P	P	13 46 19.4	+0.6
	16nm,0.9s						
PV05	Paradox Valley	21.75	123	*e*P	P	13 46 19.9	+1.0
	78nm,1.7s						
CIS	Catalina Islan	21.76	147	P	P	13 46 19.2	+0.4
	baz=337						
PV13	Radium Mtn., P	21.83	123	*e*P	P	13 46 20.4	+0.7
	34nm,1.1s						
PV02	Paradox Valley	21.84	123	*e*P	P	13 46 20.3	+0.5
	16nm,1.1s						
PV15	Paradox Valley	21.87	122	*e*P	P	13 46 20.9	+0.8
	16nm,0.9s						
W13A	Hualapai Mount	21.95	136	*e*P	P	13 46 21.8	+0.8
	6.6nm,0.8s						
PV01	Paradox Valley	21.98	122	*e*P	P	13 46 21.9	+0.6
	16nm,0.9s						
MURC	Murrieta	21.99	145	P	P	13 46 21.7	+0.5
	baz=335						
FCC	Fort Churchill	22.02	59	*e*P	P	13 46 21.9	+0.6
	22nm,1.1s						
FCC	Fort Churchill	22.02	59	P	P	13 46 21.4	+0.1
SMCO	Snowmass	22.05	118	*e*P	P	13 46 22.8	+0.6
	16nm,0.9s						
BELC	Belle Mtn. Jos	22.07	142	P	P	13 46 22.9	+0.7
	baz=333,SNR=11						
SCI2	San Clemente I	22.11	148	P	P	13 46 22.9	+0.5
	baz=338						
PFO	Pinyon Flats O	22.25	143	*e*P	P	13 46 24.1	+0.1
	21nm,1.6s						
PFO	Pinyon Flats O	22.25	143	P	P	13 46 24.4	+0.3
	baz=334						
XPFO	Pion Flat	22.25	143	*e*P	P	13 46 24.1	0.0
	22nm,1.6s						
IRM	Iron Mountain	22.25	140	P	P	13 46 24.8	+0.7
	baz=332,SNR=6.7						
ISCO	Idaho Springs	22.34	115	*e*P	P	13 46 25.3	0.0
	6.6nm,0.9s						
PDMCI	Parker Dam,Lak	22.53	138	P	P	13 46 27.3	+0.3
	baz=330						
BC3	Big Chuckawall	22.58	141	P	P	13 46 28.1	+0.5
	baz=333						
ULM	Lac du Bonnet	22.60	82	P	P	13 46 27.4	-0.2
	9.9nm,0.9s,baz=293,slow=11,SNR=14						
ULM				Lg	Lg	13 53 16.6	
	1.6nm,0.6s,baz=203,slow=21,SNR=2.3						
ULM				LR	LR	13 56 24.3	
	comp=Z,153nm,18.7s,baz=296,slow=40						
WUAZ	Wupatki	22.70	131	*e*P	P	13 46 29.2	+0.4
	21nm,1.3s						
WUAZ	Wupatki	22.70	131	P	P	13 46 29.0	+0.1
	baz=326,SNR=9.7						
MVCO	Mesa Verde	22.72	124	*e*P	P	13 46 29.2	0.0
	26nm,1.3s						
MVCO	Mesa Verde	22.72	124	P	P	13 46 29.2	0.0
	baz=321,SNR=8.5						
Y12C	Blythe	22.86	139	*e*P	P	13 46 30.9	+0.5
	8.2nm,0.9s						
Y12C	Blythe	22.86	139	P	P	13 46 30.9	+0.5
	baz=332						
MONP2	Monument Peak	22.91	144	P	P	13 46 31.4	+0.3
	baz=335						
SWSC	Sam W. Stewart	23.09	143	P	P	13 46 32.8	+0.1
	baz=334						
GAMB	Gambell	23.09	314	*e*P	P	13 46 33.0	+0.5
	9.3nm,0.9s						
S22A	4UR Ranch, Cre	23.18	120	*e*P	P	13 46 34.6	+0.6
	55nm,1.5s						
S22A	4UR Ranch, Cre	23.18	120	P	P	13 46 34.0	0.0
	baz=318,SNR=21						
Q24A	Divide	23.19	116	P	P	13 46 34.0	-0.1
	baz=315						
IKP	In-Ko-Pah, Jac	23.24	144	P	P	13 46 34.6	+0.2
	baz=335,SNR=5.2						
Y14A	Wickenburg	23.31	136	*e*P	P	13 46 35.6	+0.5
	6.0nm,0.8s						
SUSD	Miller	23.34	98	P	P	13 46 35.0	-0.3
	baz=303						
GLA	Glamis	23.36	141	*e*P	P	13 46 35.9	+0.3
	17nm,1.1s						
GLA	Glamis	23.36	141	P	P	13 46 35.8	+0.2
	baz=333,SNR=6.1						
AGMN	Agassiz Nation	23.36	86	*e*P	P	13 46 35.3	-0.1
	16nm,0.9s						
AGMN	Agassiz Nation	23.36	86	P	P	13 46 34.6	-0.9
	baz=295,SNR=7.1						
X16A	Lo Mia Camp, P	23.58	133	*e*P	P	13 46 38.2	+0.2
	4.3nm,0.9s						
OGNE	Ogallala	23.60	108	*e*P	P	13 46 38.1	+0.2
	49nm,1.0s						
OGNE	Ogallala	23.60	108	P	P	13 46 38.1	+0.2
	baz=310						
W18A	Petrified Fore	23.78	129	P	P	13 46 40.3	+0.4
	baz=325						
SDCO	Great Sand Dun	23.88	118	*e*P	P	13 46 41.0	0.0
	11nm,1.0s						
SDCO	Great Sand Dun	23.88	118	P	P	13 46 41.2	+0.3
	baz=318,SNR=12						
X18A	Snowflake	24.17	130	*e*P	P	13 46 43.6	+0.1
	24nm,1.0s						
KSCO	Kaye Shedlock’	24.55	112	*e*P	P	13 46 47.6	+0.6
	20nm,0.8s						
KSCO	Kaye Shedlock’	24.55	112	P	P	13 46 47.7	+0.7
	baz=314						
T25A	Trinidad	24.91	118	*e*P	P	13 46 50.4	+0.1
	12nm,1.3s						
T25A	Trinidad	24.91	118	P	P	13 46 50.6	+0.3
	baz=318						
214A	Organ Pipe Nat	25.12	138	P	P	13 46 52.7	+0.7
	baz=332						
ECSD	EROS Data Cent	25.14	97	*e*P	P	13 46 52.0	0.0
	36nm,1.1s						
ECSD	EROS Data Cent	25.14	97	P	P	13 46 52.6	+0.5
	baz=304,SNR=20						
ANMO	Albuquerque	25.52	124	*e*P	P	13 46 56.0	+0.2
	4.1nm,0.8s						
ANMO	Albuquerque	25.52	124	P	P	13 46 56.3	+0.5
	baz=322						
ANMO	Albuquerque	25.52	124	P	P	13 46 55.3	-0.5
	4.0nm,0.8s,baz=315,slow=10,SNR=18						
ANMO				LR	LR	13 58 44.2	
	comp=Z,39nm,19.8s,baz=324,slow=41						
BGNE	Belgrade	25.58	103	*e*P	P	13 46 55.5	-0.6
	28nm,0.9s						
BGNE	Belgrade	25.58	103	P	P	13 46 56.0	-0.1
	baz=308						
LAZ	Ladron	25.61	126	*e*P	P	13 46 57.8	+1.1
TUC	Tucson	25.66	134	*e*P	P	13 46 57.5	+0.6
	6.1nm,0.9s						
TUC	Tucson	25.66	134	P	P	13 46 58.0	+1.0
	baz=329						
EYMN	Ely	26.15	84	*e*P	P	13 47 02.0	+0.8
	20nm,1.1s						
EYMN	Ely	26.15	84	P	P	13 47 02.3	+1.0
	baz=296,SNR=8.2						
CBKS	Cedar Bluff	26.33	109	*e*P	P	13 47 03.1	+0.2
	15nm,0.7s						
CBKS	Cedar Bluff	26.33	109	P	P	13 47 03.1	+0.2
	baz=313						
RES	Resolute Bay	26.59	21	*e*P	P	13 47 05.8	+1.0
	12nm,1.3s						
RES	Resolute Bay	26.59	21	P	P	13 47 06.0	+1.1
	1.6nm,1.1s,baz=231,slow=13,SNR=3.7						
RES				LR	LR	13 56 41.5	
	comp=Z,39nm,21.0s,baz=178,slow=34						
121A	Cookes Peak, D	26.83	129	P	P	13 47 08.3	+0.7
	baz=326						
F38A	Pierce - Schro	26.85	88	P	P	13 47 08.9	+1.4
	baz=299,SNR=7.3						
319A	Douglas	27.12	133	*e*P	P	13 47 10.7	+0.6
	14nm,1.1s						
E39A	Mellen	27.45	87	P	P	13 47 13.8	+0.9
	baz=299						
H39A	Augusta	27.86	90	P	P	13 47 16.7	+0.1
	baz=302						
MSTX	Muleshoe	28.18	120	P	P	13 47 19.6	0.0
	baz=321						
J39A	Decorah	28.33	93	P	P	13 47 20.8	0.0
	baz=304						
MNTX	Cornudas Mount	28.66	127	*e*P	P	13 47 24.1	+0.2
	6.2nm,1.0s						
MNTX	Cornudas Mount	28.66	127	P	P	13 47 24.6	+0.7
	baz=325,SNR=7.1						
JFWS	Jewell Farm	29.45	93	P	P	13 47 30.6	-0.1
	baz=304						
WMOK	Wichita Mounta	29.76	114	*e*P	P	13 47 33.9	+0.3
	13nm,0.8s						
WMOK	Wichita Mounta	29.76	114	P	P	13 47 34.3	+0.7
	baz=318,SNR=7.6						
F43A	Flat Rock, Esc	29.77	85	P	P	13 47 33.7	+0.2
	baz=300						
N41A	Harden Midland	30.37	97	P	P	13 47 39.1	+0.2
	baz=307						
TUL1	Leonard	30.60	109	P	P	13 47 41.5	+0.5
	baz=315						
O41A	Passleys Farm,	30.72	98	P	P	13 47 42.2	+0.2
	baz=308						
P41A	Barry, Barry	30.89	98	P	P	13 47 44.0	+0.5
	baz=309						
Q41A	Truxton	31.24	100	P	P	13 47 47.0	+0.4
	baz=310						
TXAR	Lajitas Array	31.45	127	P	P	13 47 49.6	+1.0
	5.5nm,0.7s,baz=326,slow=7.7,SNR=24						
R41A	Rosebud	31.58	101	P	P	13 47 49.1	-0.5
	baz=311,SNR=6.2						
CCM	Cathedral Cave	31.82	101	*e*P	P	13 47 51.5	-0.2
	7.8nm,0.9s						
CCM	Cathedral Cave	31.82	101	P	P	13 47 51.8	+0.1
	baz=311						
S41A	Jillco Farms,	31.82	102	P	P	13 47 51.4	-0.3
	baz=312						
U40A	Yellville	32.00	105	P	P	13 47 53.0	-0.3
	baz=313,SNR=8.2						
T41A	Mountain View	32.18	103	P	P	13 47 54.1	-0.8
	baz=312						
W39A	Magazine	32.27	108	*e*P	P	13 47 55.8	+0.2
	13nm,1.2s						
W39A	Magazine	32.27	108	P	P	13 47 55.8	+0.2
	baz=315						
S42A	Caledonia	32.27	101	P	P	13 47 55.6	0.0
	baz=311						
BILL	Bilibino	32.33	322	*e*P	P	13 47 56.8	+0.9
	6.9nm,1.1s						
JCT	Junction City	32.47	120	P	P	13 47 57.5	0.0
	baz=323						
T42A	Van Buren	32.59	102	P	P	13 47 58.0	-0.4
	baz=312						
S43A	Fulton Ridge,	32.83	101	P	P	13 48 00.7	+0.2
	baz=311						
MIAR	Mount Ida	32.85	108	*e*P	P	13 48 00.2	-0.5
	20nm,0.9s						
MIAR	Mount Ida	32.85	108	P	P	13 48 00.5	-0.2
	baz=316,SNR=8.8						
U42A	Revenden	32.96	103	P	P	13 48 00.9	-0.8
	baz=313						
P45A	Graceland, Par	32.98	96	P	P	13 48 00.8	-1.0
	baz=308						
T43A	Greenville	33.03	101	P	P	13 48 01.6	-0.7
	baz=312						
X40A	Basin Creek Fa	33.32	107	P	P	13 48 05.2	+0.4
	baz=315						
Q47A	Bedord North L	34.15	95	P	P	13 48 11.7	-0.3
	baz=309						
T46A	Princeton	34.48	99	P	P	13 48 14.5	-0.4
	baz=311						
R47A	Wooly Knot Far	34.49	96	P	P	13 48 14.5	-0.5
	baz=310						
D53A	Lac Vacive, Po	34.82	77	P	P	13 48 18.1	+0.3
	baz=300						
S48A	Wiedeman Farm,	35.19	97	P	P	13 48 20.8	-0.2
	baz=310						
E53A	Dumoine, Ponti	35.20	78	P	P	13 48 20.4	-0.6
	baz=301						
OXF	Oxford	35.30	104	*e*P	P	13 48 21.2	-0.8
	28nm,0.9s						
OXF	Oxford	35.30	104	P	P	13 48 21.7	-0.3
	baz=314						
T50A	Nancy	36.34	96	P	P	13 48 30.7	-0.2
	baz=311						
V49A	McMinnville	36.53	99	P	P	13 48 32.4	-0.1
	baz=312						
U50A	Jamestown	36.73	97	P	P	13 48 34.3	0.0
	baz=312						
X48A	Hartselle	36.75	102	P	P	13 48 33.9	-0.5
	baz=314						
T51A	Gray	36.91	96	P	P	13 48 35.5	-0.3
	baz=311						
LNIG	Linares	37.20	126	*e*P	P	13 48 37.9	-0.3
	5.7nm,0.9s						
M55A	Ridgway	37.25	86	P	P	13 48 38.4	-0.2
	baz=306						
W50A	Signal Mountai	37.27	99	P	P	13 48 38.2	-0.6
	baz=313						
SCHQ	Schefferville	37.40	60	P	P	13 48 39.2	-0.5
	3.5nm,0.8s,baz=287,slow=14,SNR=3.0						
X50B	Fort Payne	37.57	100	P	P	13 48 41.0	-0.5
	baz=314						
W51A	Cleveland	37.63	99	P	P	13 48 41.1	-0.7
	baz=313						
V52A	Sevierville	37.87	97	P	P	13 48 43.6	-0.3
	baz=312						
R54A	Victor	37.92	92	P	P	13 48 43.9	-0.4
	baz=310						
LONY	Lake Ozonia	37.97	79	P	P	13 48 43.7	-1.0
	baz=303						
X51A	Calhoun	37.97	99	*e*P	P	13 48 44.6	-0.2
	72nm,1.6s						
X51A	Calhoun	37.97	99	P	P	13 48 45.0	+0.2
	baz=313						
W52A	Murphy	38.17	98	*e*P	P	13 48 46.0	-0.5
	14nm,0.8s						
W52A	Murphy	38.17	98	P	P	13 48 46.2	-0.3
	baz=313						
149A	Jones	38.20	104	P	P	13 48 46.7	0.0
	baz=316						
Z50A	Ashland	38.25	102	P	P	13 48 46.5	-0.6
	baz=315						
T54A	Tazewell	38.29	94	P	P	13 48 47.6	+0.1
	baz=311						
249A	Camden	38.45	105	P	P	13 48 49.0	+0.2
	baz=316						
V53A	Saluda	38.46	96	P	P	13 48 48.8	-0.1
	baz=312						
X52A	Dahlonega	38.53	99	P	P	13 48 49.4	-0.1
	baz=313						
W53A	Cullowhee	38.58	97	P	P	13 48 50.3	+0.3
	baz=313						
150A	Eclectic	38.65	103	P	P	13 48 49.8	-0.7
	baz=315						
Y52A	Lilburn	38.93	100	P	P	13 48 53.1	+0.2
	baz=314						
X53A	Estanollee	38.95	98	P	P	13 48 52.7	-0.3
	baz=313						
250A	Grady	38.95	104	P	P	13 48 52.6	-0.4
	baz=316						
SEY	Seymchan	39.07	315	P	P	13 48 54.8	+1.1
	5.6nm,1.0s,baz=84,slow=6.8,SNR=16						
151A	Opelika	39.12	102	P	P	13 48 53.3	-1.1
	baz=315						
152A	Waverly Hall	39.38	102	P	P	13 48 56.0	-0.6
	baz=315						
GOGA	Godfrey	39.60	100	P	P	13 48 58.3	-0.2
	baz=314						
Z53A	Monticello	39.63	100	P	P	13 48 57.8	-0.9
	baz=314						
Y54A	Tignall	39.76	98	P	P	13 48 59.6	-0.1
	baz=314						
R58B	Mineral	39.95	89	P	P	13 49 01.5	+0.2
	baz=310						
X55A	Gracelyn & Ava	39.98	97	P	P	13 49 01.2	-0.4
	baz=313						
Z54A	Sparta	40.10	99	P	P	13 49 02.1	-0.4
	baz=314						
PETK	Petropavlovsk-	40.67	300	P	P	13 49 08.2	+1.0
	1.6nm,0.7s,baz=64,slow=8.8,SNR=4.4						
PETK				LR	LR	14 04 34.3	
	comp=Z,91nm,21.2s,baz=80,slow=34						
254A	Abbeville	40.74	101	P	P	13 49 07.3	-0.6
	baz=315						
MA2	Magadan	41.13	311	*e*P	P	13 49 11.8	+1.0
	8.2nm,1.0s						
MA2	Magadan	41.13	311	P	P	13 49 12.2	+1.4
	5.8nm,0.8s,baz=64,slow=7.4,SNR=11						
SUMG	Summit	41.80	27	*i* P	P	13 49 18.4	+1.8
	28nm,1.1s						
DAG	Danmarks Havn	44.18	18	*i* P	P	13 49 36.4	+1.1
	11nm,1.3s						
NRIK	Noril'sk	54.76	344	P	P	13 50 56.0	-0.2
	5.1nm,0.6s,baz=59,slow=5.4,SNR=4.2						
H11N2	WAKE ISLAND Hy	56.98	259	T	T	14 53 01.4	
	baz=39,slow=76,SNR=2278						
H11N3	WAKE ISLAND Hy	56.99	259	T	T	14 53 01.6	
	baz=39,slow=76,SNR=2427						
H11N1	WAKE ISLAND Hy	57.00	259	T	T	14 53 02.6	
	baz=39,slow=76,SNR=1771						
H11S1	WAKE ISLAND Hy	58.05	258	T	T	14 54 21.0	
	baz=39						
H11S2	WAKE ISLAND Hy	58.06	258	T	T	14 54 22.8	
	baz=39						
H11S3	WAKE ISLAND Hy	58.06	258	T	T	14 54 22.5	
	baz=39						
USRK	Ussuriysk Ar.	59.49	304	P	P	13 51 30.6	+0.7
	2.4nm,0.9s,baz=31,slow=7.3,SNR=4.3						
USRK				LR	LR	14 16 58.2	
	comp=Z,70nm,19.4s,baz=25,slow=36						
NB2	NORSAR Subarra	62.83	19	P	P	13 51 53.2	+0.8
	comp=Z,11nm,1.2s,baz=337,slow=6.5						
NOA	NORSAR Array B	62.83	19	P	P	13 51 52.5	+0.2
	comp=Z,1.6nm,0.8s,baz=338,slow=6.7,SNR=4.7						
NOA				LR	LR	14 20 18.6	
	comp=Z,106nm,18.9s,baz=350,slow=37						
FINES	FINESS Array B	64.81	11	P	P	13 52 05.3	0.0
	comp=Z,2.7nm,0.8s,baz=26,slow=9.3,SNR=6.3						
KLMR	Klimovskoe	66.52	4	*e*P	P	13 52 16.1	-0.2
KLMR				AMP		13 52 35.0	
	comp=Z,10.0nm,1.4s						
KSRS	Korea Array	66.54	301	LR	LR	14 19 24.3	
	comp=Z,32nm,21.2s,baz=45,slow=34						
SONM	Songino Array	68.05	322	P	P	13 52 27.1	+0.7
	comp=Z,0.2nm,0.5s,baz=45,slow=4.9,SNR=3.7						
SONM				LR	LR	14 23 29.3	
	comp=Z,92nm,18.1s,baz=26,slow=37						
ZALV	Zalesovo Beam	69.26	338	P	P	13 52 33.8	+0.1
	comp=Z,2.8nm,0.6s,baz=17,slow=6.2,SNR=12						
ZALV				LR	LR	14 25 33.9	
	comp=Z,71nm,19.8s,baz=55,slow=38						
ARU	Arti	70.79	354	*e*P	P	13 52 42.7	-0.3
	comp=Z,7.6nm,1.0s						
HHC	Hu-ho-hao-te	71.70	314	*e*P	P	13 52 49.8	+0.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,75nm,4.5s						
BRG	Berggiesshubel	72.84	22	*e*P	P	13 52 56.2	+0.8
	comp=Z,4.6nm,0.9s						
BRVK	Borovoye	72.86	346	*e*P	P	13 52 55.0	-0.5
	comp=Z,5.3nm,0.8s						
KURK	Kurchatov	73.64	340	*e*P	P	13 52 59.5	-0.7
	comp=Z,5.1nm,0.9s						
GERES	GERESS Array B	74.69	23	P	P	13 53 07.1	+0.7
	comp=Z,1.0nm,0.7s,baz=353,slow=4.4,SNR=6.7						
GERES				LR	LR	14 28 48.7	
	comp=Z,59nm,19.5s,baz=325,slow=38						
AKASG	Malin Array Be	75.70	12	P	P	13 53 12.1	0.0
	comp=Z,2.2nm,0.7s,baz=353,slow=5.6,SNR=9.3						
AKASG				LR	LR	14 29 10.9	
	comp=Z,52nm,19.2s,baz=310,slow=38						
VYHS	Vyhne	76.14	19	*e*P	P	13 53 16.2	+1.5
MKAR	Makanchi Array	76.51	336	*e*P	P	13 53 16.6	-0.3
	comp=Z,14nm,0.7s						
MKAR	Makanchi Array	76.51	336	P	P	13 53 16.7	-0.1
	comp=Z,2.1nm,0.7s,baz=331,slow=4.7,SNR=8.5						
MKAR				LR	LR	14 29 26.8	
	comp=Z,81nm,21.0s,baz=22,slow=38						
MAKZ	Makanchi	76.58	337	*e*P	P	13 53 16.6	-0.6
	comp=Z,8.3nm,0.9s						
ESDC	Sonseca Array	77.59	38	P	P	13 53 23.4	+0.3
	comp=Z,1.0nm,0.8s,baz=323,slow=6.0,SNR=5.7						
ESDC				LR	LR	14 26 24.3	

	comp=Z,62nm,18.2s,baz=345,slow=35						
GTA	**Gaotai**	**77.72**	**321**	*e*P	P	13 53 31.0	+7.1
GTA				pP	PcP	13 53 36.0	+2.1
GTA				sP	sP	13 53 38.5	+7.4
GTA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
ABKAR	**Akbulak array**	**77.81**	**352**	*e*P	**P**	**13 53 23.6**	**-0.4**
WMQ	**Urumqi**	**77.83**	**332**	*e*P	**P**	**13 53 27.3**	**+2.9**
WMQ				LR	LR		
	comp=N,150nm,21.5s						
WMQ				LR	LR		
	comp=E,120nm,22.1s						
WMQ				LR	LR		
	comp=Z,100nm,17.1s						
PTGA	**Pitinga**	**79.91**	**105**	*e*P	**P**	**13 53 35.0**	**-1.0**
	comp=Z,9.3nm,1.1s						
AAK	**Ala-Archa**	**82.20**	**340**	*e*P	**P**	**13 53 47.7**	**-0.5**
	comp=Z,6.3nm,1.3s						
KBZ	**Khabaz**	**83.77**	**4**	P	**P**	**13 53 55.9**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=272,slow=3.5,SNR=9.0						
KBZ				LR	LR	14 33 21.6	
	comp=Z,27nm,21.9s,baz=354,slow=37						
KEST	**Kesra**	**85.71**	**30**	P	**P**	**13 54 06.7**	**+0.6**
	comp=Z,2.2nm,0.6s,baz=326,slow=11,SNR=2.6						
KEST				LR	LR	14 33 30.4	
	comp=Z,89nm,18.3s,baz=290,slow=36						
GAR	**Garm**	**86.52**	**343**	*e*P	**P**	**13 54 10.0**	**-0.1**
	comp=Z,16nm,1.2s						
BRTR	**Keskin Array B**	**87.05**	**11**	P	**P**	**13 54 12.9**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=325,slow=1.5,SNR=11						
BRTR				LR	LR	14 36 43.2	
	comp=Z,17nm,18.3s,baz=296,slow=38						
CHGR	**Chuyangaron**	**87.06**	**343**	*e*P	**P**	**13 54 12.5**	**-0.1**
LPAZ	**La Paz**	**88.07**	**120**	P	**P**	**13 54 16.8**	**-1.5**
	comp=Z,3.6nm,0.9s,baz=9.2,slow=10.0,SNR=8.5						
KMI	**Kunming**	**88.90**	**312**	P	**P**	**13 54 22.0**	**+0.2**
KMI				pmax	pmax		
	comp=Z,19nm,0.5s						
GEYT	**Alibeck**	**89.21**	**352**	P	**P**	**13 54 22.7**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=323,slow=4.5,SNR=3.7						
GEYT				LR	LR	14 37 39.0	
	comp=Z,36nm,21.2s,baz=185,slow=38						
CMAR	**Chiang Mai Arr**	**96.41**	**312**	P	**P**	**13 54 56.0**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=13,slow=5.4,SNR=5.4						
VNDA	**Vanda**	**136.18**	**197**	PKP	**PKPdf**	**14 00 46.0**	**-0.7**
	comp=Z,3.5nm,0.9s,baz=6.4,slow=3.6,SNR=2.1						
BOSA	**Boshof**	**150.66**	**43**	PKPbc	**PKPbc**	**14 01 18.2**	**-0.8**
	comp=Z,3.8nm,0.7s,baz=330,slow=3.5,SNR=6.1						

GUC 25 13:52:40.4±0.5**, 23°.80S×67°.59W, h209^{km}**±8^{km}**, ML4.1, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.70**	**314**	*e*P	Pn	13 53 17.9	+0.7
LVC				*e*S	S	13 53 47.2	+1.8
PB15	**IPOC Station P**	**1.83**	**288**	*e*P	Pn	13 53 19.2	+1.1
PB15				*e*S	S	13 53 49.1	+2.0
PB15				IAML		13 53 54.2	
	comp=E,2μm,0.5s						
PB06	**IPOC Station P**	**2.13**	**300**	⇑*e*P	Pn	13 53 22.7	+1.6
PB06				*e*S	S	13 53 54.4	+2.1
PB06				IAML		13 53 57.0	
	comp=E,433nm,0.2s						
PB03	**IPOC Station P**	**2.65**	**311**	⇑*e*P	Pn	13 53 28.6	+1.8
PB03				*e*S	S	13 54 04.7	+2.3
PB03				IAML		13 54 06.4	
	comp=E,309nm,0.3s						
PB10	**IPOC Station P**	**2.73**	**275**	⇑*e*P	Pn	13 53 29.3	+1.8
PB10				*e*S	S	13 54 06.0	+2.2

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*IDC **25** 13:54:49.9±0.8, 29°.52N×52°.19E, h0^{km}, mb3.8/20, mb1 4.0/24, mb1mx3.9/50, mbtmp3.8/24, ML3.4/4, MS3.4/3, Ms1 3.3/3, ms1mx2.6/48, Error ellipse: s-maj=18.0km s-min=13.8km az=12.0*

*NEIC **25** 13:54:52.5±0.0, 29°.67N×52°.09E, h18^{km}, mb4.1/6, ML3.6(THR), After THR.*

*THR **25** 13:54:52.5, 29°.67N×52°.09E, h18^{km}, ML3.6*

*TEH **25** 13:54:52.0, 29°.65N×52°.13E, h8^{km}, ML3.6*

*ISCJB **25** 13:54:52.1±0.3, 29°.53N±0°.02×52°.11E±0°.04, h25^{km}, mb3.9/22, Error ellipse: s-maj=5.1km s-min=2.8km az=149.1*

*OMAN **25** 13:54:57.4±1.0, 29°.19N×52°.16E, h5^{km}, ml4.0/6, Error ellipse: s-maj=10.4km s-min=9.9km az=303.0*

*DSN **25** 13:54:57.0±1.0, 29°.16N×52°.04E, h12^{km}, ML3.7/8, Error ellipse: s-maj=15.3km s-min=6.6km az=18.0*

ISC 25 13:54:53.8±0.4**, 29°.66N**±0°.04×**52°.13E**±0°.04**, h25^{km}, n91, σ1^s.45**/95**, mb3.8**/22**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.28**	**295**	*e*Pg	**Pb**	**13 54 58.4**	**-2.4**
IKAZ				*e*Sg	**Sb**	**13 55 02.1**	**-3.5**
IKAZ				IAMB	IAmb	13 55 05.6	
	comp=Z,66μm,0.3s						
SHI	**Shiraz**	**0.33**	**93**	*e*Pg	**Pb**	**13 54 58.6**	**-2.8**
SHI				*e*Sg	**Sb**	**13 55 04.6**	**-2.1**
SHI				IAMB	IAmb	13 55 05.2	
	comp=Z,100μm,0.4s						
IPAR	**Pars**	**0.82**	**77**	IAMB	IAmb	13 55 21.9	
	comp=Z,29μm,0.6s						
IPAR				*e*Pg	**Pb**	**13 55 07.9**	**-1.6**
GHIR	**Ghir-Karzin**	**1.56**	**151**	*e*Pn	**Pb**	**13 55 21.5**	**-0.6**
GHIR	**Ghir-Karzin**	**1.56**	**151**	*e*AML	AML	13 55 48.9	
	comp=E,1μm,0.4s						
GHIR	**Ghir-Karzin**	**1.56**	**151**	*e*Pn	**Pb**	**13 55 21.5**	**-0.6**
GHIR				*e*Sg	**Sb**	**13 55 42.9**	**+1.4**
JHRM	**Jahrom**	**1.71**	**132**	*e*Pn	**Pb**	**13 55 24.8**	**+0.2**
IRAM	**Ramesheh**	**2.15**	**6**	*e*Pn	**Pb**	**13 55 30.7**	**-1.5**
IRAM				IAMB	IAmb	13 56 08.4	
	comp=Z,4μm,0.5s						
ISAD	**Sadrabad**	**2.61**	**30**	*e*Pn	**Pb**	**13 55 37.9**	**-2.2**
ISAD				IAMB	IAmb	13 56 30.1	
	comp=Z,3μm,0.9s						
ZNGN	**Zangian**	**2.68**	**336**	*e*Pn	**Pn**	**13 55 37.7**	**+2.0**
IGAR	**Gharneh**	**2.73**	**358**	*e*Pn	**Pn**	**13 55 38.9**	**+2.6**
IGAR				IAMB	IAmb	13 55 47.7	
	comp=Z,1μm,0.4s						
IMEH	**Mehriz**	**2.75**	**51**	*e*Pn	**Pb**	**13 55 40.2**	**-2.2**
IMEH				IAMB	IAmb	13 56 34.4	
	comp=Z,2μm,0.8s						
ROKH	**ROKH**	**2.84**	**341**	*e*Pn	**Pn**	**13 55 40.8**	**+3.1**
ROKH				IAMB	IAmb	13 56 37.0	
	comp=Z,0.0nm,0.9s						
IPIR	**Pirpir**	**3.20**	**341**	*e*Pn	**Pn**	**13 55 45.6**	**+2.9**
IZEF	**Zefreh**	**3.23**	**3**	*e*Pn	**Pn**	**13 55 45.8**	**+2.6**
IZEF				IAMB	IAmb	13 56 06.0	
	comp=Z,818nm,0.6s						
IKLH	**Kolahrood**	**3.68**	**353**	IAMB	IAmb	13 56 12.8	
	comp=Z,912nm,0.8s						
ANAR	**Anarak**	**3.77**	**21**	*e*Pn	**Pn**	**13 55 53.5**	**+3.0**
KHGB	**Koh Gabri**	**3.83**	**78**	*e*Pn	**Pn**	**13 55 53.1**	**+1.6**
KHGB				IAMB	IAmb	13 57 01.1	
	comp=Z,0.0nm,0.9s						
NGRK	**Negar Kerman**	**4.00**	**89**	*e*Pn	**Pn**	**13 55 55.7**	**+1.8**
NGRK				IAMB	IAmb	13 57 18.7	
	comp=Z,0.0nm,0.7s						
KRBR	**Kerman**	**4.04**	**84**	*e*Pn	**Pn**	**13 55 56.5**	**+2.2**
KRBR	**Kerman**	**4.04**	**84**	*e*AML	AML	13 57 06.2	
	comp=N,52nm,0.7s						
KRBR				*e*AML	AML	13 57 07.9	
	comp=E,67nm,0.6s						
KRBR	**Kerman**	**4.04**	**84**	*e*Pn	**Pn**	**13 55 56.5**	**+2.2**
KRSH	**Karshahi**	**4.30**	**0**	*e*Pn	**Pn**	**13 55 59.5**	**+1.8**
ISFB	**Sefidab**	**4.68**	**1**	*e*Pn	**Pn**	**13 56 04.7**	**+1.8**
SHME	**Shamm**	**5.05**	**134**	P	**Pn**	**13 56 08.5**	**+0.4**
TPRV	**Parvadeh(Tabas**	**5.14**	**48**	*e*Pn	**Pn**	**13 56 11.3**	**+2.0**
BANOM	**Banah**	**5.24**	**134**	*i* P	**Pn**	**13 56 11.7**	**+1.0**
	SNR=20						
BANOM	**Banah**	**5.24**	**134**	P	**Pn**	**13 56 11.1**	**+0.4**
	SNR=20						
BANOM				S	**Sn**	**13 57 10.3**	**-0.1**
MSFE	**Esma-Masafi**	**5.58**	**139**	*i* P	**Pn**	**13 56 15.6**	**+0.3**
	SNR=16						
NAZ	**Nazwa, Dubai**	**5.61**	**145**	P	**Pn**	**13 56 16.3**	**+0.6**
NAZ	**Nazwa, Dubai**	**5.61**	**145**	S	**Sn**	**13 57 18.3**	**-1.1**
MDH	**Madha**	**5.71**	**139**	P	**Pn**	**13 56 17.2**	**+0.3**
MDH	**Madha**	**5.71**	**139**	P	**Pn**	**13 56 17.7**	**+0.7**
MDH				S	**Sn**	**13 57 20.7**	**-1.0**
FAQ	**Al Faqa, Dubai**	**5.79**	**147**	P	**Pn**	**13 56 18.3**	**+0.3**
FAQ				S	**Sn**	**13 57 22.1**	**-1.5**
TKDS	**Koohdasht(Taba**	**5.80**	**46**	*e*Pn	**Pn**	**13 56 20.5**	**+2.2**
HATD	**Hatta, Dubai**	**5.99**	**143**	P	**Pn**	**13 56 21.0**	**+0.2**
HATD				S	**Sn**	**13 57 26.8**	**-1.9**
HATD	**Hatta, Dubai**	**5.99**	**143**	P	**Pn**	**13 56 22.2**	**+1.3**
ASHO	**Ashiyiah**	**6.07**	**144**	P	**Pn**	**13 56 21.8**	**-0.1**
ASHO	**Ashiyiah**	**6.07**	**144**	P	**Pn**	**13 56 23.0**	**+1.0**
ASHO				S	**Sn**	**13 57 28.9**	**-1.7**
ALNE	**Al Ain**	**6.45**	**149**	P	**Pn**	**13 56 27.9**	**+0.7**
SOHO	**SOHO**	**6.76**	**143**	P	**Pn**	**13 56 31.7**	**+0.2**
SOHO				S	**Sn**	**13 57 45.1**	**-2.6**
RAYN	**Ar Rayn**	**8.52**	**226**	*e*Pn	**Pn**	**13 56 54.1**	**-1.5**
RAYN	**Ar Rayn**	**8.52**	**226**	*i* P	**Pn**	**13 56 54.3**	**-1.3**
	SNR=21						
WSAR	**Wadi Sarin**	**8.65**	**136**	Pn	**Pn**	**13 56 56.1**	**-1.3**
	comp=E,2.1nm,0.3s,baz=70,slow=4.8,SNR=13						
WSAR				Sn	**Sn**	**13 58 30.6**	**-3.5**
	comp=E,1.9nm,0.3s,baz=148,slow=18,SNR=6.5						
GEYT	**Alibeck**	**9.63**	**30**	Pn	**Pn**	**13 57 11.5**	**+0.6**
	comp=E,0.2nm,0.3s,baz=220,slow=13,SNR=2.7						
ASF	**Jabal al Asfar**	**13.32**	**285**	Pn	**Pn**	**13 58 00.7**	**-0.7**
	comp=E,0.2nm,0.3s,baz=113,slow=7.7,SNR=2.5						
ASF				Lg	Lg	14 02 08.0	
	comp=E,0.3nm,0.3s,baz=231,slow=23,SNR=1.3						
KBZ	**Khabaz**	**15.86**	**335**	Pn	**P**	**13 58 38.0**	**-0.8**
	comp=E,0.1nm,0.3s,baz=140,slow=17,SNR=2.6						
GAR	**Garm**	**17.65**	**53**	*e*Pn	**Pn**	**13 58 57.8**	**-0.2**
	comp=E,28nm,1.9s						
KKAR	**Karatay Array**	**19.92**	**43**	*e*P	**P**	**13 59 21.7**	**-1.9**
	comp=E,6.3nm,1.4s						
ATD	**Arta Tunnel**	**20.00**	**208**	LR	LR	14 08 20.2	
	comp=E,41nm,19.2s,baz=13,slow=41						
ABKAR	**Akbulak array**	**20.46**	**15**	*e*P	**P**	**13 59 30.1**	**+0.7**
	comp=E,2.2nm,1.0s						
AKTO	**Aktyubinsk**	**21.22**	**10**	P	**P**	**13 59 38.1**	**+0.5**
	comp=E,1.5nm,0.5s,baz=191,slow=10,SNR=6.2						
AAK	**Ala-Archa**	**22.14**	**48**	*e*P	**P**	**13 59 48.5**	**+0.7**
	comp=E,6.9nm,1.4s						
AAK	**Ala-Archa**	**22.14**	**48**	P	**P**	**13 59 48.2**	**+0.4**
	comp=E,1.3nm,0.8s,baz=198,slow=7.6,SNR=5.2						
MLR	**Muntele Rosu**	**25.93**	**315**	P	**P**	**14 00 26.1**	**+2.0**
	comp=E,1.2nm,0.6s,baz=144,slow=14,SNR=1.9						
BVAR	**Borovoye Array**	**26.92**	**25**	P	**P**	**14 00 34.0**	**+1.2**
	comp=E,1.2nm,0.7s,baz=224,slow=10,SNR=6.2						
AKASG	**Malin Array Be**	**27.15**	**327**	P	**P**	**14 00 36.7**	**+1.9**
	comp=E,0.3nm,0.3s,baz=133,slow=9.0,SNR=3.1						
KURBB	**Kurchatov Arra**	**28.82**	**36**	P	**P**	**14 00 50.4**	**+0.6**
	comp=E,1.7nm,0.2s,baz=238,slow=8.8,SNR=1.5						
KURK	**Kurchatov**	**28.92**	**36**	*e*P	**P**	**14 00 50.4**	**-0.3**
MK32	**Makanchi Array**	**28.98**	**45**	*e*P	**P**	**14 00 51.8**	**+0.5**
MKAR	**Makanchi Array**	**28.98**	**45**	P	**P**	**14 00 51.8**	**+0.5**
	comp=E,0.2nm,0.4s,baz=237,slow=6.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**33.89**	**35**	P	**P**	**14 01 34.4**	**+0.1**
	comp=E,0.6nm,0.5s,baz=243,slow=6.3,SNR=3.4						
ZAA1	**Zalesovo Array**	**33.89**	**35**	*e*P	**P**	**14 01 34.4**	**+0.1**
BRDH	**Bariadhala**	**36.01**	**92**	LR	LR	14 18 56.3	
	comp=E,52nm,18.4s,baz=141,slow=40						
FIA0	**FINESS Array S**	**36.15**	**339**	*e*P	**P**	**14 01 54.0**	**+0.4**
FINES	**FINESS Array B**	**36.15**	**339**	P	**P**	**14 01 54.1**	**+0.4**
	comp=E,0.9nm,0.4s,baz=138,slow=10.0,SNR=12						
NB200	**NORSAR Array S**	**41.39**	**331**	*e*P	**P**	**14 02 39.2**	**+1.5**
NOA	**NORSAR Array B**	**41.39**	**331**	P	**P**	**14 02 39.2**	**+1.5**
	comp=E,0.5nm,0.7s,baz=121,slow=8.5,SNR=2.2						
ARA0	**ARCESS Array S**	**42.73**	**347**	*e*P	**P**	**14 02 49.2**	**+0.6**
ARCES	**ARCESS Array B**	**42.73**	**347**	P	**P**	**14 02 49.2**	**+0.6**
	comp=E,2.5nm,0.8s,baz=146,slow=9.8,SNR=4.0						
CM31	**Chiang Mai Arr**	**43.91**	**94**	*e*P	**P**	**14 02 58.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**43.91**	**94**	P	**P**	**14 02 58.5**	**-0.3**
	comp=E,0.4nm,0.7s,baz=287,slow=7.3,SNR=3.8						
SONA0	**Songino Array**	**45.06**	**51**	*e*P	**P**	**14 03 08.3**	**+0.5**
SONM	**Songino Array**	**45.06**	**51**	P	**P**	**14 03 08.3**	**+0.5**
	comp=E,0.7nm,0.7s,baz=267,slow=7.4,SNR=5.2						
TOA1	**Torodi Ar. Sit**	**49.36**	**262**	*e*P	**P**	**14 03 41.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**49.36**	**262**	P	**P**	**14 03 41.2**	**-0.2**
	comp=E,2.9nm,0.8s,baz=58,slow=8.0,SNR=14						
DBIC	**Dimbokro**	**58.14**	**259**	*e*P	**P**	**14 04 46.0**	**+0.3**
	comp=E,34nm,1.8s						
DBIC	**Dimbokro**	**58.14**	**259**	P	**P**	**14 04 46.5**	**+0.7**
	comp=E,3.0nm,0.9s,baz=45,slow=5.7,SNR=3.6						
KS15	**Wonju Array Si**	**62.06**	**61**	*e*P	**P**	**14 05 12.7**	**+0.3**
KSAR	**Wonju Array Be**	**62.06**	**61**	P	**P**	**14 05 12.7**	**+0.3**
KSRS	**Korea Array**	**62.09**	**61**	P	**P**	**14 05 12.7**	**+0.2**
	comp=E,1.4nm,0.7s,baz=277,slow=6.9,SNR=7.2						
BOSA	**Boshof**	**63.38**	**206**	LR	LR	14 36 32.9	
	comp=E,54nm,18.5s,baz=30,slow=40						
SCHQ	**Schefferville**	**80.93**	**329**	*e*P	**P**	**14 07 06.2**	**+0.4**
	comp=E,70nm,2.0s						
SCHQ	**Schefferville**	**80.93**	**329**	P	**P**	**14 07 06.5**	**+0.7**
	comp=E,3.4nm,1.0s,baz=60,slow=18,SNR=3.0						
ILAR	**Eielson Array**	**84.71**	**8**	P	**P**	**14 07 25.5**	**+0.2**
	comp=E,0.3nm,0.7s,baz=327,slow=3.9,SNR=4.8						
ILB	**Eielson Array**	**84.71**	**8**	*e*P	**P**	**14 07 25.5**	**+0.2**
YKA	**Yellowknife Ar**	**87.55**	**354**	P	**P**	**14 07 40.2**	**+1.0**
	comp=E,0.5nm,0.7s,baz=10,slow=5.1,SNR=14						
YKB5	**Yellowknife Ar**	**87.55**	**354**	*e*P	**P**	**14 07 40.2**	**+1.0**
WRA	**Warramunga Arr**	**93.20**	**111**	P	**P**	**14 08 05.3**	**-1.1**
	comp=E,0.4nm,0.9s,baz=312,slow=4.1,SNR=2.4						
WR1	**Warramunga Arr**	**93.21**	**111**	*e*P	**P**	**14 08 05.3**	**-1.1**
	comp=E,30nm,1.8s						
ASAR	**Alice Springs**	**94.72**	**114**	P	**P**	**14 08 12.5**	**-0.9**
	comp=E,0.5nm,1.1s,baz=303,slow=4.9,SNR=4.5						

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*IDC **25** 14:05:49.3±0.8, 11°.52N×141°.90E, h0^{km}, mb3.7/10, mb1 3.9/11, mb1mx3.7/44, mbtmp3.7/11, ML3.5/1, Error ellipse: s-maj=25.6km s-min=18.0km az=101.0*

*ISCJB **25** 14:05:53.8±0.7, 11°.5N±0°.1×141°.92E±0°.10, h49^{km}, mb3.7/11, Error ellipse: s-maj=17.7km s-min=10.3km az=138.9*

ISC 25 14:05:55.8±0.9**, 11°.5N**±0°.1×**142°.0E**±0°.1**, h49^{km}, n12, σ1^s.48**/13**, mb3.7**/11**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.50**	**54**	Pn	**Pn**	**14 06 44.9**	**-2.9**
	4.4nm,0.3s,baz=184,slow=15,SNR=2.0						
GUMO				Sn	**Sn**	**14 07 29.6**	**+1.6**
	4.2nm,0.3s,baz=283,slow=18,SNR=2.0						
WRA	**Warramunga Arr**	**32.14**	**194**	P	**P**	**14 12 18.1**	**-0.7**
	0.7nm,0.8s,baz=12,slow=9.7,SNR=5.4						
USRK	**Ussuriysk Ar.**	**33.69**	**347**	P	**P**	**14 12 32.6**	**+0.5**
	2.2nm,0.7s,baz=180,slow=9.1,SNR=6.3						
ASAR	**Alice Springs**	**35.84**	**193**	P	**P**	**14 12 51.0**	**+0.1**
	0.3nm,0.5s,baz=20,slow=12,SNR=12						
KLR	**Kul'dur**	**38.55**	**349**	P	**P**	**14 13 14.3**	**+0.7**
	2.2nm,0.8s,baz=136,slow=9.3,SNR=5.6						
SONM	**Songino Array**	**46.87**	**328**	P	**P**	**14 14 20.1**	**-1.2**
	0.3nm,0.5s,baz=140,slow=7.5,SNR=3.0						
MKAR	**Makanchi Array**	**61.05**	**317**	P	**P**	**14 16 04.5**	**-0.1**
	0.3nm,0.6s,baz=100,slow=6.0,SNR=2.9						
KURBB	**Kurchatov Arra**	**64.41**	**321**	P	**P**	**14 16 26.8**	**-0.1**
	0.7nm,0.6s,baz=104,slow=6.4,SNR=5.3						
BVAR	**Borovoye Array**	**69.82**	**322**	P	**P**	**14 17 01.5**	**+0.4**
	0.5nm,0.5s,baz=113,slow=7.7,SNR=4.0						
ILAR	**Eielson Array**	**71.65**	**25**	P	**P**	**14 17 11.6**	**-0.5**
	0.6nm,0.7s,baz=252,slow=5.1,SNR=12						
YKA	**Yellowknife Ar**	**85.99**	**27**	P	**P**	**14 18 31.2**	**+0.5**
	0.2nm,0.4s,baz=290,slow=4.9,SNR=4.9						
NVAR	**Mina Array Bea**	**90.42**	**51**	P	**P**	**14 18 55.4**	**+2.8**
	0.3nm,0.6s,baz=280,slow=5.4,SNR=2.9						

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*BJI **25** 14:08:51.3, 35°.72N×99°.18E, h5^{km}, ML3.7/13, Ms3.8/4, Ms7 3.8/3*

*IDC **25** 14:08:52.5±1.7, 35°.82N×99°.08E, h0^{km}, mb3.3/5, mb1 3.6/8, mb1mx3.4/52, mbtmp3.4/8, ML3.5/3, Error ellipse: s-maj=35.7km s-min=28.4km az=36.0*

ISC 25 14:08:54.0±1.1**, 35°.83N**±0°.08×**98°.6E**±0°.1**, h10^{km}, n11, σ2^s.00**/13**, mb3.4**/3**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**3.69**	**14**	Pn	**Pn**	**14 09 52.0**	**+0.8**
GTA				Pg	**Pb**	**14 09 59.0**	**-0.4**
GTA				Sn	**Sn**	**14 10 34.0**	**-0.9**
GTA				Sg	**Sb**	**14 10 45.0**	**+0.7**
GTA				smax	smax		
	comp=E,120nm,1.1s						
LZH	**Lanzhou**	**4.23**	**85**	*e*Pn	Pn	14 09 51.5	-7.2
LZH				Pg	Pb	14 09 59.0	-10
LZH				Sn	Sn	14 10 37.8	-10
LZH				Sg	Sb	14 10 47.8	-12
LZH				smax	smax		
	comp=N,450nm,0.6s						
LZH				smax	smax		
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=Z,1μm,4.6s						
SONM	**Songino Array**	**13.30**	**23**	Pn	Pn	14 11 59.9	-3.1
	0.2nm,0.3s,baz=203,slow=15,SNR=9.5						
MKAR	**Makanchi Array**	**16.42**	**317**	Pn	**Pn**	**14 12 43.6**	**-0.8**
	0.1nm,0.3s,baz=131,slow=12,SNR=7.3						
MKAR				Sn	**Sn**	**14 15 42.8**	**-3.9**
	0.1nm,0.3s,baz=124,slow=28,SNR=3.0						
CMAR	**Chiang Mai Arr**	**17.31**	**179**	P	**Pn**	**14 12 54.0**	**-1.8**
	0.1nm,0.3s,baz=352,slow=13,SNR=4.8						
AAK	**Ala-Archa**	**19.86**	**297**	P	**Pn**	**14 13 30.0**	**+3.1**
	0.6nm,0.7s,baz=108,slow=13,SNR=2.0						
ZALV	**Zalesovo Beam**	**20.52**	**336**	P	**P**	**14 13 32.3**	**+0.1**
	0.8nm,0.5s,baz=153,slow=11,SNR=2.7						
KURBB	**Kurchatov Arra**	**20.71**	**322**	P	**P**	**14 13 35.2**	**+0.9**
	1.6nm,0.6s,baz=125,slow=12,SNR=13						
BVAR	**Borovoye Array**	**26.25**	**320**	P	**P**	**14 14 31.8**	**+2.7**
	0.6nm,0.6s,baz=104,slow=11,SNR=2.4						
ILAR	**Eielson Array**	**67.52**	**25**	P	**P**	**14 19 49.2**	**-0.8**
	0.4nm,0.8s,baz=300,slow=7.2,SNR=4.2						
YKA	**Yellowknife Ar**	**78.42**	**15**	P	**P**	**14 20 55.1**	**+0.6**
	0.1nm,0.5s,baz=325,slow=5.3,SNR=5.2						

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*NIED **25** 14:11:00, 36°.90N×139°.40E, h5^{km}, Mw3.6 Best double couple: M$_0$2.66000×10^{14} NP1:φ$_s$215.00000°, δ51.00000°, λ34.00000°. NP2:φ$_s$102.00000°, δ64.00000°, λ136.00000°.*

*ISCJB **25** 14:11:43.9±0.7, 36°.90N±0°.04×139°.40E±0°.04, h13^{km}±5^{km}, mb4.1/4, Error ellipse: s-maj=6.3km s-min=5.6km az=39.0*

*IDC **25** 14:11:43.5±1.0, 36°.83N×139°.47E, h0^{km}, mb3.5/3, mb1 3.7/6, mb1mx3.4/43, mbtmp3.5/6, ML2.7/3, Error ellipse: s-maj=21.4km s-min=12.0km az=157.0*

*JMA **25** 14:11:44.3, 36°.91N×139°.40E, h3^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: φ$_s$283.00000°, δ69.00000°, λ142.00000°. NP2: φ$_s$29.00000°, δ55.00000°, λ26.00000°. Principal axes: T Plg41.0000°, Azm241.0000°; N Plg48.0000°, Azm79.0000°; P Plg9.0000°, Azm339.0000°;*

JMA Felt II J1.

ISC 25 14:11:43.9±1.4**, 36°.85N**±0°.04×**139°.46E**±0°.05**, h1^{km}**±11^{km}**, n14, σ1^s.05**/20**, mb3.8**/4**, 2C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.19**	**243**	⇑P	**Pg**	**14 11 48.3**	**+0.7**
JKT				S	**Sg**	**14 11 50.9**	**+0.8**
JSB	**Shiboa**	**0.39**	**73**	⇑P	**Pb**	**14 11 53.2**	**-0.3**
JSB				S	**Sb**	**14 11 59.3**	**-0.6**
JAG	**Ashikaga**	**0.43**	**181**	⇓P	**Pb**	**14 11 53.8**	**-0.4**
JAG				S	**Sb**	**14 12 00.1**	**-1.0**
JHK	**Hiroka**	**0.53**	**318**	⇓P	**Pg**	**14 11 53.4**	**-0.7**
JHK				S	**Sg**	**14 11 59.6**	**-1.4**
JFY	**Yanaizu**	**0.58**	**19**	⇓P	**Pg**	**14 11 55.3**	**+0.2**
JFY				S	**Sg**	**14 12 02.5**	**-0.2**
MJAR	**Matsushiro Arr**	**1.05**	**253**	Pg	**Pg**	**14 12 02.9**	**-1.2**
	34nm,0.3s,baz=72,slow=18,SNR=1795						
MJAR				Lg	Lg	14 12 18.4	
	6.1nm,0.3s,baz=42,slow=28,SNR=8.9						
MAT	**Matsushiro**	**1.05**	**253**	P	**Pg**	**14 12 03.9**	**-0.2**
MAT				S	**Sg**	**14 12 17.2**	**-0.6**
ASAJ	**Asahikawa**	**7.64**	**17**	Pn	**Pn**	**14 13 37.5**	**+1.3**
	0.2nm,0.3s,baz=230,slow=17,SNR=2.7						
KSRS	**Korea Array**	**9.23**	**277**	Pn	**Pn**	**14 13 59.6**	**+1.6**
	0.3nm,0.3s,baz=88,slow=14,SNR=5.0						
USRK	**Ussuriysk Ar.**	**9.28**	**325**	Pn	**Pn**	**14 14 00.5**	**+1.8**
	0.1nm,0.3s,baz=136,slow=13,SNR=3.0						
KURBB	**Kurchatov Arra**	**44.88**	**308**	P	**P**	**14 19 57.9**	**-1.7**
	42nm,0.6s,baz=89,slow=8.4,SNR=3.0						
WRA	**Warramunga Arr**	**56.70**	**186**	P	**P**	**14 21 28.7**	**-0.3**
	0.6nm,0.5s,baz=1.5,slow=7.5,SNR=13						
ASAR	**Alice Springs**	**60.42**	**186**	P	**P**	**14 21 54.7**	**-0.2**
	0.6nm,0.8s,baz=8.8,slow=6.7,SNR=5.2						
YKA	**Yellowknife Ar**	**64.74**	**30**	P	**P**	**14 22 23.5**	**+0.2**
	0.2nm,0.7s,baz=299,slow=6.3,SNR=4.1						

MAN 25 14:19:43.0, 10°.33N×122°.05E, h1^{km}, mb3.8, ML2.6, MS2.1, 2C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.61**	**61**	*e*P	Pg	14 19 52.7	-2.0
GUIM				*e*S	Sg	14 20 01.9	-0.7
CUYO	**Cuyo Island**	**1.14**	**297**	*e*P	Pg	14 20 04.8	0.0
CUYO				*e*S	Sn	14 20 23.1	+0.7
RCP	**Roxas**	**1.40**	**29**	⇑*e*P	Pn	14 20 09.0	-0.7
RCP				*e*S	Sn	14 20 30.5	+1.6
SNPH	**Sibulan**	**1.53**	**130**	⇑*i*P	Pn	14 20 10.9	-0.6
SNPH				*i* S	Sn	14 20 15.3	-17
MSLP	**Maasin**	**2.77**	**94**	*e*P	Pn	14 20 20.7	-7.9

IGQ 25 14:25:30.6±0.2**, 2°S**±3°×**8°0W**±°**, h6^{km}, MLv3.9, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORR	**Playas El Morr**	**0.27**	**162**	P	Pb	14 25 38.2	+0.4
MORR				S	Sb	14 25 44.9	+2.3
SALI	**Salinas**	**0.60**	**289**	P	Pg	14 25 41.0	-1.2
MILO	**Milagro-Astudi**	**0.87**	**83**	P	Pg	14 25 46.0	-1.4
MILO				S	Sg	14 25 59.1	+0.4
COHC	**Cochancay**	**1.17**	**94**	P	Pg	14 25 50.0	-3.1
COHC				S	Sg	14 26 05.5	-2.8
IGUA	**Igualata**	**1.99**	**63**	P	Pn	14 26 03.9	-1.5
MCRA	**Macar, Loja**	**2.02**	**167**	P	Pn	14 26 01.8	-3.6
BIL2	**Estacion Bilba**	**2.13**	**64**	P	Pn	14 26 07.0	0.0
BMAS	**Trigal station**	**2.13**	**66**	P	Pn	14 26 04.9	-2.1
BBIL	**Ulba Tungurahu**	**2.15**	**64**	P	Pn	14 26 05.5	-1.8
BBIL				S	Sn	14 26 32.8	-1.5
ARRY	**Arrayan**	**2.15**	**66**	P	Pn	14 26 05.4	-1.9
PAT1	**Patacocha**	**2.17**	**66**	P	Pn	14 26 06.4	-1.2
BPAT	**Tungurahua Vol**	**2.17**	**66**	P	Pn	14 26 05.9	-1.8
JUI6	**Juive**	**2.17**	**64**	P	Pn	14 26 06.5	-1.1
RETU	**Refugio**	**2.18**	**65**	P	Pn	14 26 06.5	-1.4
POND	**Pondoa**	**2.19**	**64**	P	Pn	14 26 06.7	-1.2
POND				S	Sn	14 26 33.4	-2.1
RUN5	**Runtun**	**2.22**	**64**	P	Pn	14 26 07.0	-1.3
BULB	**Ulba Tungurahu**	**2.22**	**65**	P	Pn	14 26 06.8	-1.5
BULB				S	Sn	14 26 34.6	-1.7
BRUN	**Tungurahua Vol**	**2.23**	**65**	P	Pn	14 26 07.0	-1.3
BRUN				S	Sn	14 26 33.6	-2.8
ILLI	**Illinizas Sur**	**2.37**	**46**	P	Pn	14 26 08.8	-1.7
MAG1	**Magdalena**	**2.39**	**16**	P	Pn	14 26 08.0	-2.3
PIS1	**Pisayambo**	**2.42**	**57**	P	Pn	14 26 11.0	-0.2
PIS1				S	Sn	14 26 40.5	-0.9
PISA	**Pisayambo**	**2.43**	**57**	P	Pn	14 26 11.2	0.0
BREF	**Cotopaxi Volca**	**2.61**	**49**	P	Pn	14 26 14.4	+0.4
BVC2	**Cotopaxi Volca**	**2.64**	**50**	P	Pn	14 26 14.4	+0.1
BTAM	**Cotopaxi Volca**	**2.64**	**50**	P	Pn	14 26 14.0	-0.3
PITA	**Cotopaxi Volc**	**2.69**	**48**	P	Pn	14 26 14.7	-0.2
GGPC	**Guagua Pichinc**	**2.85**	**40**	P	Pn	14 26 15.9	-1.3
PINO	**Pino**	**2.86**	**39**	P	Pn	14 26 15.6	-1.7
GOLV	**Golondrinas**	**2.88**	**27**	P	Pn	14 26 15.3	-1.8
YANA	**Yana**	**2.92**	**39**	P	Pn	14 26 15.9	-2.1
ANTS	**Antisana-Sarah**	**2.93**	**50**	P	Pn	14 26 18.7	+0.4
PAC1	**Pacto, Paraso**	**3.10**	**32**	P	Pn	14 26 17.2	-3.0
OTAV	**Otavalo**	**3.27**	**37**	P	Pn	14 26 20.8	-1.9
CUIC	**Cuicocha-Domo**	**3.38**	**38**	P	Pn	14 26 23.3	-0.9

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*ISK **25** 14:26:37.6, 39°.91N×33°.11E, h7^{km}, ML1.9/8*

*ISCJB **25** 14:26:38.5±0.5, 39°.85N±0°.03×33°.09E±0°.04, h9^{km}, Error ellipse: s-maj=5.0km s-min=4.0km az=178.1*

*DDA **25** 14:26:38.6, 39°.89N×33°.13E, h7^{km}±2^{km}, ML2.6*

ISC 25 14:26:37.5±0.8**, 39°.89N**±0°.04×**33°.15E**±0°.03**, h9^{km}, n15, σ2^s.26**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.27**	**266**	PG	**Pg**	**14 26 42.9**	**-0.1**
ANTO				SG	**Sg**	**14 26 47.0**	**+0.3**
LOD	**Lodumlu**	**0.29**	**270**	PG	**Pg**	**14 26 43.4**	**0.0**
LOD				SG	**Sg**	**14 26 47.8**	**+0.4**
BBAL	**Bala**	**0.35**	**183**	*i* S	**Sg**	**14 26 46.0**	**-2.9**
BBAL				*i* P	**Sg**	**14 26 46.1**	**-2.9**
BBAL				IAML_P			
	comp=Z,4μm,0.1s						
AFSR	**Afar-Bala (An**	**0.45**	**188**	PG	**Pg**	**14 26 47.1**	**+0.9**
DELI	**KIRIKKALE**	**0.60**	**79**	*i* P	**Pb**	**14 26 51.4**	**+1.1**
DELI				*i* S	**Sb**	**14 27 00.8**	**+1.8**
DELI				IAML_P			

	comp=Z,584nm,0.1s						
ELDT	Eldivan	0.64	20	*i* P	Pb	14 26 51.6	+0.7
ELDT				*i* S	Sb	14 27 01.4	+1.3
ELDT				IAML_P			
	comp=Z,1µm,0.3s						
KKUL	Konya-Kulu	0.74	194	*i* P	Pb	14 26 53.5	+1.0
KKUL				IAML_P			
	comp=Z,178nm,0.1s						
CMDR	Camlidere-ANKA	0.80	320	*i* P	Pb	14 26 54.3	+0.7
CMDR				IAML_P			
	comp=Z,2µm,0.2s						
KULU	Kulu	0.85	188	PG	Pg	14 26 54.7	+0.8
CDAG	Cicekdag	0.98	105	*i* P	Pn	14 26 58.9	+1.3
CDAG				IAML_P			
	comp=Z,455nm,0.1s						
SERE	Sereflikochisa	0.99	161	PG	Pg	14 26 57.5	+0.9
YAYX	Yaylak	1.08	151	PN	Pg	14 26 59.1	+0.9
SVRH	Sivrihisar-ESK	1.33	251	PN	Pn	14 27 02.8	+0.5
CTAK	Corum_Osmancik	1.47	58	*i* P	Pn	14 26 53.8	-11
CTAK				*i* S	Sn	14 27 16.5	-7.3
CTAK				IAML_P			
	comp=Z,290nm,0.2s						
YOZ	Yozgat	1.69	98	PN	Pn	14 27 09.2	+1.8

NIED **25** *14:32:00, 36°.90N×139°.40E, h5^{km}, Mw3.8 Best double couple: M$_0$6.27000×10^{14} NP1:φ$_s$26.00000°, δ85.00000°, λ1.00000°. NP2:φ$_s$296.00000°, δ89.00000°, λ175.00000°.*

ISCJB **25** *14:32:16.9±0.4, 36°.87N±0°.02×139°.40E±0°.04, h10^{km}, mb3.5/5, MS2.9/1, Error ellipse: s-maj=4.7km s-min=3.3km az=25.7*

JMA **25** *14:32:16.8, 36°.87N×139°.40E, h3^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$123.00000°, δ76.00000°, λ-158.00000°. NP2: φ$_s$27.00000°, δ68.00000°, λ-16.00000°. Principal axes: T Plg5.0000°, Azm254.0000°; N Plg63.0000°, Azm154.0000°; P Plg26.0000°, Azm346.0000°;*

JMA Felt II J1.

IDC **25** *14:32:18.5±0.9, 36°.64N×139°.35E, h0^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.4/36, mbtmp3.4/7, ML3.1/2, MS2.9/4, Ms1 2.9/4, ms1mx2.6/33 Error ellipse: s-maj=21.6km s-min=10.8km az=168.0*

ISC 25 14:32:18.5±0.8**, 36°.86N**±0°.03×**139°.39E**±0°.03**, h10^{km}, n19, σ1^s.70**/22**, mb3.5**/5**, 3C-4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKT	Katashina	0.14	229	⇑P	Pg	14 32 20.4	-1.4
JKT				S	Sg	14 32 22.8	-1.3
JAG	Ashikaga	0.44	173	⇓P	Pg	14 32 25.7	-1.4
JAG				S	Sg	14 32 31.6	-1.3
JSB	Shiboa	0.44	76	⇑P	Pg	14 32 25.7	-1.4
JSB				*e*S	Sg	14 32 31.8	-1.2
JHK	Hiroka	0.48	323	⇓P	Pg	14 32 26.4	-1.5
JHK				S	Sg	14 32 33.1	-1.2
JFY	Yanaizu	0.60	25	⇓P	Pg	14 32 28.3	-1.8
JFY				S	Sg	14 32 36.0	-2.1
JRY	Ryogami san	0.93	205	⇑P	Pg	14 32 34.8	-1.6
JRY				S	Sb	14 32 47.9	-1.2
JNS	Sasagawa	0.96	357	⇓P	Pg	14 32 34.9	-2.0
JNS				S	Sg	14 32 47.5	-1.8
MJAR	Matsushiro Arr	1.00	252	Pg	Pg	14 32 35.8	-1.9
	14nm,0.3s,baz=74,slow=17,SNR=689						
MJAR				Lg	Lg	14 32 49.2	
	11nm,0.3s,baz=72,slow=29,SNR=14						
MAT	Matsushiro	1.00	252	P	Pg	14 32 36.2	-1.5
MAT				S	Sg	14 32 49.4	-1.3
ASAJ	Asahikawa	7.65	18	Pn	Pn	14 34 12.8	+2.9
	0.3nm,0.3s,baz=191,slow=11,SNR=4.3						
JNU	Nakatsue	7.91	244	LR	LR	14 37 35.0	
	comp=Z,105nm,18.7s,baz=62,slow=41						
KSRS	Korea Array	9.17	277	Pn	Pn	14 34 32.9	+2.1
	0.2nm,0.3s,baz=86,slow=15,SNR=2.9						
KSRS				LR	LR	14 38 09.9	
	comp=Z,24nm,18.2s,baz=75,slow=38						
KLR	Kul'dur	13.55	338	LR	LR	14 40 34.6	
	comp=Z,43nm,18.4s,baz=110,slow=36						
PETK	Petropavlovsk-	20.68	32	LR	LR	14 45 13.9	
	comp=Z,52nm,18.5s,baz=108,slow=37						
MKAR	Makanchi Array	42.83	302	P	P	14 40 17.0	+0.5
	0.2nm,0.7s,baz=96,slow=8.9,SNR=2.6						
ILAR	Eielson Array	50.51	32	P	P	14 41 19.6	+3.2
	0.5nm,0.8s,baz=268,slow=6.3,SNR=4.5						
WRA	Warramunga Arr	56.70	186	P	P	14 42 01.5	-0.7
	1.2nm,0.5s,baz=1.1,slow=7.4,SNR=29						
ASAR	Alice Springs	60.42	186	P	P	14 42 28.6	+0.4
	0.4nm,0.7s,baz=10,slow=7.0,SNR=7.2						
YKA	Yellowknife Ar	64.77	30	P	P	14 43 01.2	+4.5
	0.1nm,0.4s,baz=304,slow=6.7,SNR=2.8						

IDC **25** *14:43:19.6±1.1, 67°.56N×142°.45E, h0^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.3/47, mbtmp3.4/6, ML3.0/1, Error ellipse: s-maj=37.8km s-min=19.7km az=164.0*

ISCJB **25** *14:43:20.4±0.5, 67°.62N±0°.04×142°.4E±0°.1, h10^{km}, Error ellipse: s-maj=7.1km s-min=5.9km az=169.2*

MOS **25** *14:43:20.1±3.0, 67°.70N×142°.29E, h10^{km}, mb3.9/2, Error ellipse: s-maj=29.2km s-min=10.6km az=89.1*

YARS **25** *14:43:21.6±0.1, 67°.640N±0°.005×142°.55E±0°.01, h11^{km}±6^{km}*

ISC 25 14:43:20.6±0.6**, 67°.63N**±0°.03×**142°.24E**±0°.04**, h10^{km}, n21, σ1^s.86**/36**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.23	161	*e*P	Pn	14 43 43.4	-0.4
MOMR				*e*S	Sb	14 43 58.6	-1.1
MOMR	Moma	1.23	161	*e*P	Pn	14 43 43.4	-0.4
MOMR				*e*S	Sb	14 43 58.6	-1.1
YBGR	Belaya Gora	1.74	57	*e*P	Pn	14 43 50.5	-0.3
YBGR				*e*S	Sn	14 44 11.9	-1.1
YBGR	Belaya Gora	1.74	57	*e*P	Pn	14 43 50.5	-0.3
YBGR				*e*P	Pb	14 43 50.9	-1.7
YBGR				*e*S	Sn	14 44 11.9	-1.1
DEPR	Deputatskiy	1.97	335	*e*P	Pb	14 43 56.0	-0.5
DEPR				*e*S	Sg	14 44 24.2	+0.3
DEPR	Deputatskiy	1.97	335	*e*P	Pb	14 43 56.0	-0.5
DEPR				*e*P	Pg	14 43 57.7	-0.7
DEPR				*e*S	Sg	14 44 24.2	+0.3
BTGS	Batagay	2.91	274	*e*P	Pb	14 44 10.5	-1.9
BTGS	Batagay	2.91	274	*e*P	Pb	14 44 10.5	-1.9
BTGS				*e*P	Pg	14 44 16.2	0.0
BTGS				*e*S	Sg	14 44 54.6	+0.8
ATKR	Artyk	3.66	160	*e*P	Pb	14 44 26.5	+1.2
ATKR	Artyk	3.66	160	*e*P	Pb	14 44 26.5	+1.2
ATKR				*e*S	Sg	14 45 14.3	-3.7
SEY	Seymchan	6.34	133	Pn	Pn	14 44 54.0	-0.1
	0.4nm,0.3s,baz=319,slow=19,SNR=5.4						
SEY				Sn	Sn	14 46 09.7	+3.3
	0.3nm,0.3s,baz=78,slow=13,SNR=2.2						
SEY				Lg	Lg	14 46 33.5	
	0.6nm,0.3s,baz=174,slow=7.4,SNR=4.6						
YAK	Yakutsk	7.75	230	*e*P	Pn	14 45 13.8	+0.6
YAK				*e*		14 46 41.9	
YAK				pmax	pmax		
	comp=Z,16nm,0.3s						
YAK				smax	smax		
	comp=E,68nm,0.6s						
YAK				smax	smax		
	comp=N,74nm,0.6s						
YAK	Yakutsk	7.75	230	*e*P	Pg	14 45 42.9	-5.8
YAK				*e*S	Sn	14 46 41.4	+0.6
YAK				*e*S	Sg	14 47 24.0	-4.8
USMR	Ust'-Maya	7.98	209	*e*P	Pn	14 45 19.5	+3.1
USMR				*e*S	Sn	14 46 47.5	+0.9
USMR	Ust'-Maya	7.98	209	*e*P	Pn	14 45 19.5	+3.1
USMR				*e*P	Pg	14 45 47.1	-6.0
USMR				*e*S	Sn	14 46 47.5	+0.9
USMR				*e*S	Sg	14 47 32.4	-3.9
MA2	Magadan	8.92	151	Lg	Lg	14 47 55.4	
	comp=N,0.3nm,0.3s,baz=142,slow=14,SNR=1.9						
SONM	Songino Array	26.91	241	P	P	14 49 01.1	-0.5
	comp=N,0.1nm,0.3s,baz=38,slow=9.7,SNR=2.5						
ILAR	Eielson Array	27.32	62	P	P	14 49 03.5	-1.5
	comp=N,0.5nm,0.8s,baz=298,slow=7.8,SNR=7.0						
MKAR	Makanchi Array	36.59	266	P	P	14 50 28.1	+1.8
	comp=N,0.9nm,0.6s,baz=30,slow=7.8,SNR=13						
YKA	Yellowknife Ar	38.95	46	P	P	14 50 47.2	+1.2
	comp=N,0.2nm,0.7s,baz=324,slow=8.1,SNR=6.3						
BRTR	Keskin Array B	60.40	303	P	P	14 53 31.3	+1.5
	comp=N,0.8nm,0.9s,baz=34,slow=5.4,SNR=3.2						

ISCJB **25** *14:50:54.1±1.0, 11°.14S±0°.08×165°.8E±0°.1, h61^{km}, mb3.7/5, Error ellipse: s-maj=16.1km s-min=8.5km az=145.5*

IDC **25** *14:50:54.1±3.4, 11°.01S×165°.88E, h48^{km}±29^{km}, mb3.4/6, mb1 3.8/8, mb1mx3.5/34, mbtmp3.9/8, ML4.5/2, MS3.4/3, Ms1 3.4/3, ms1mx3.1/20, Error ellipse: s-maj=30.0km s-min=20.3km az=53.0*

ISC 25 14:50:55.5±1.2**, 11°.1S**±0°.1×**165°.8E**±0°.1**, h61^{km}, n15, σ0^s.76**/10**, mb3.7**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.03	285	P	Pn	14 52 21.4	-0.6
	25nm,0.3s,baz=129,slow=5.6,SNR=19						
HNR				S	Sn	14 53 29.3	-0.5
	baz=164,slow=20,SNR=1.3						
HNR				LR	LR	14 54 49.9	
	comp=Z,282nm,18.4s,baz=132,slow=39						
DZM	Mont Dzumac	10.95	177	P	Pn	14 53 29.3	-0.2
	2.0nm,0.3s,baz=336,slow=15,SNR=19						
DZM				S	Sn	14 55 30.0	-0.6
	0.3nm,0.3s,baz=66,slow=20,SNR=2.9						
DZM				LR	LR	14 57 42.7	
	comp=Z,298nm,18.9s,baz=25,slow=37						
CTA	Charters Tower	20.87	242	P	P	14 55 34.2	+1.5
	0.9nm,0.4s,baz=73,slow=14,SNR=3.3						
H11S2	WAKE ISLAND Hy	29.39	2	T	T	15 27 16.2	
	baz=181,slow=76,SNR=233						
H11S3	WAKE ISLAND Hy	29.39	2	T	T	15 27 15.3	
	baz=181,slow=76,SNR=115						
H11S1	WAKE ISLAND Hy	29.40	2	T	T	15 27 16.3	
	baz=181,slow=76,SNR=141						
H11N1	WAKE ISLAND Hy	30.61	2	T	T	15 28 46.6	
	baz=182,slow=76,SNR=112						
H11N3	WAKE ISLAND Hy	30.61	2	T	T	15 28 47.0	
	baz=182,slow=76,SNR=58						
H11N2	WAKE ISLAND Hy	30.63	2	T	T	15 28 48.0	
	baz=182,slow=76,SNR=59						
WRA	Warramunga Arr	31.56	250	P	P	14 57 12.9	+0.5
	1.0nm,0.7s,baz=81,slow=8.9,SNR=10						
GUMO	Guam	32.14	319	LR	LR	15 07 54.6	
	comp=Z,55nm,20.9s,baz=122,slow=32						
ASAR	Alice Springs	32.87	243	P	P	14 57 24.2	+0.4
	0.4nm,0.7s,baz=67,slow=10,SNR=7.9						
CMAR	Chiang Mai Arr	72.21	294	P	P	15 02 14.1	-0.4
	0.3nm,0.3s,baz=108,slow=5.8,SNR=3.7						
ILAR	Eielson Array	83.51	18	P	P	15 03 16.2	-0.1
	0.5nm,0.6s,baz=238,slow=4.8,SNR=7.8						
MKAR	Makanchi Array	93.61	317	P	P	15 04 05.5	+0.3
	0.3nm,0.7s,baz=113,slow=5.5,SNR=3.1						

IDC 25 15:06:10.2±1.9**, 7°.60S**×**122°.78E, h0^{km}, mb3.3**/1**, mb1 3.5**/3**, mb1mx3.2**/36**, mbtmp3.3**/3**, ML2.7**/2**, Error ellipse: s-maj=291.9km s-min=28.5km az=57.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.62	139	Pn	Pn	15 10 03.7	-1.1
	0.0nm,0.3s,baz=312,slow=13,SNR=2.9						
ASAR	Alice Springs	19.21	147	P	Pn	15 10 36.6	-0.2
	0.0nm,0.3s,baz=327,slow=12,SNR=8.6						
MKAR	Makanchi Array	65.00	331	P	P	15 16 52.1	0.0
	0.3nm,0.7s,baz=137,slow=6.9,SNR=3.3						

BJI **25** *15:14:33.0, 11°.08S×165°.90E, h5^{km}, mB5.5/47, mb5.1/56, Ms5.3/54, Ms7 5.1/50*

IDC **25** *15:14:33.7±0.4, 11°.11S×165°.98E, h0^{km}, mb4.8/22, mb1 5.0/24, mb1mx4.9/31, mbtmp4.8/24, ML5.1/2, MS5.0/26, Ms1 5.0/26, ms1mx4.8/46, Error ellipse: s-maj=13.6km s-min=11.1km az=123.0*

ISCJB **25** *15:14:34.2±1.3, 11°.17S±0°.03×165°.90E±0°.02, h10^{km}±7^{km}, mb5.2/197, MS5.3/282, Error ellipse: s-maj=5.1km s-min=4.0km az=163.0*

NEIC **25** *15:14:35.4±0.1, 11°.11S×165°.90E, h10^{km}, mb5.3/148, MS5.4/237, MW5.3, Error ellipse: s-maj=3.6km s-min=2.8km az=117.0 Best double couple: NP1: φ$_s$175.00000°, δ71.00000°, λ89.00000°. NP2: φ$_s$358.00000°, δ19.00000°, λ93.00000°. Principal axes: T 1.0100, Plg64.0000°, Azm84.0000°; N -0.0100, Plg1.0000°, Azm176.0000°; P -1.0000, Plg26.0000°, Azm266.0000°;*

MOS **25** *15:14:37.6±0.8, 11°.14S×165°.80E, h33^{km}, mb5.3/57, MS5.1/23 Error ellipse: s-maj=8.1km s-min=7.1km az=108.4*

GCMT **25** *15:14:40.4±0.1, 11°.17S±0°.01×165°.75E±0°.01, h19^{km}, MW5.5/115, Moment Tensor Solution. s113, c199; s115, c211; Duration: 1^s.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.48±.02; M$_{\theta\theta}$0.05±.02; M$_{\phi\phi}$-1.53±.02; M$_{r\theta}$0.22±.04; M$_{\theta\phi}$0.17±.01; M$_{\phi r}$-1.33±.05; Best double couple: M$_0$2.02700×10^{17} NP1:φ$_s$172.00000°, δ66.00000°, λ88.00000°. NP2:φ$_s$357.00000°, δ24.00000°, λ95.00000°. Principal axes: T 1.9950, Plg69.0000°, Azm78.0000°; N 0.0640, Plg2.0000°, Azm173.0000°; P -2.0590, Plg21.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 15:14:36.7±0.6**, 11°.18S**±0°.04×**165°.82E**±0°.04**, h15^{km}**±3^{km}**, n651, σ1^s.50**/520**, mb5.2**/207**, MS5.4**/282**, 15C-4D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.04	286	*i* P	Pn	15 16 07.0	+1.5
HNR				*i* S	Sn	15 17 15.0	+0.6
HNR	Honiara	6.04	286	Pn	Pn	15 16 06.6	+1.1
	74nm,0.3s,baz=176,slow=2.9,SNR=55						
HNR				Sn	Sn	15 17 17.1	+2.7
	17nm,0.3s,baz=30,slow=20,SNR=1.7						
HNR				LR	LR	15 18 36.4	
	comp=Z,29µm,21.4s,baz=108,slow=39						
MARNC	Mare, Loyalty	10.46	169	*e*Pn	Pn	15 17 07.7	+1.5
DZM	Mont Dzumac	10.85	177	*e*Pn	Pn	15 17 12.7	+1.0
	96nm,0.6s						
DZM				*e*LQ	LQ	15 19 14.3	
	8µm,28.4s						
DZM				*e*LR	LR	15 19 46.0	
	comp=Z,4µm,22.3s						
DZM	Mont Dzumac	10.85	177	*e*Pn	Pn	15 17 12.9	+1.2
DZM				Sn	Sn	15 19 08.1	-4.9
DZM	Mont Dzumac	10.85	177	Pn	Pn	15 17 12.5	+0.9
	7.5nm,0.3s,baz=338,slow=6.8,SNR=42						
DZM				Sn	Sn	15 19 08.1	-4.9
	0.2nm,0.3s,baz=195,slow=13,SNR=2.1						
DZM				LR	LR	15 21 08.9	
	comp=Z,6µm,18.9s,baz=18,slow=36						
OUENC	Ouen Island, N	11.22	175	*e*Pn	Pn	15 17 18.1	+1.4
PINNC	Pines Island,	11.48	172	*e*Pn	Pn	15 17 21.3	+1.2
MSVF	Nonsavu	13.51	120	*e*Pn	Pn	15 17 51.3	+3.2
MSVF	Nonsavu	13.51	120	*e*P	Pn	15 17 51.3	+3.2
TARA	Tarawa	14.31	30	*e*Pn	Pn	15 18 01.2	+2.3
RABL	Rabaul	15.20	296	*e*Pn	Pn	15 18 12.0	+0.9
	322nm,1.4s						
PATS	Pohnpei	19.39	337	*e*P	Pn	15 19 04.5	+1.0
	273nm,1.3s						
EIDS	Eidsvold	19.85	223	P	Pn	15 19 09.2	+0.3
	baz=20,SNR=3.8						
EIDS	Eidsvold	19.85	223	*e*P	Pn	15 19 08.7	-0.2
	67nm,1.0s						
MANU	Manus Island	20.44	295	*e*P	P	15 19 14.3	+0.6
	909nm,1.5s						
MANU				LR	LR		
	comp=Z,6µm,21.0s						
CTA	Charters Tower	20.81	242	P	P	15 19 18.8	+1.0
	comp=Z,40nm,1.1s,baz=67,slow=14,SNR=16						
CTA				S	Sn	15 23 14.7	-0.3
	comp=Z,1.2nm,0.7s,baz=216,slow=19,SNR=4.1						
CTA				LR	LR	15 26 46.2	
	comp=Z,6µm,18.7s,baz=56,slow=35						
CTAO	Charters Tower	20.81	242	*e*P	P	15 19 18.1	+0.4
	comp=Z,97nm,1.1s						
CTAO				LR	LR		
	comp=Z,8µm,18.0s						
CTAO	Charters Tower	20.81	242	*e*P	P	15 19 18.1	+0.4
CTAO				pmax	pmax		
	comp=Z,97nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,8µm,18.0s						
LHI	Lord Howe Isla	21.19	196	PFAKE		15 19 30.0	+8.3
LHI				LR	LR		
	comp=Z,6µm,18.0s						
MTSU	Mount Surprise	21.91	249	P	P	15 19 30.9	+1.2
	baz=22,SNR=47						
RMQ	Roma	22.16	224	P	P	15 19 33.5	+1.4
	baz=22,SNR=9.3						
COEN	Coen	22.27	260	P	P	15 19 35.3	+1.8
	baz=22,SNR=12						
COEN	Coen	22.27	260	*e*P	P	15 19 34.6	+1.0
	comp=Z,129nm,1.3s						
COEN				LR	LR		
	comp=Z,6µm,18.0s						
ARMA	Armidale	23.25	212	P	P	15 19 45.6	+1.8
	baz=24,SNR=4.7						
ARMA	Armidale	23.25	212	*e*P	P	15 19 44.3	+0.6
	comp=Z,100nm,1.2s						
ARMA				LR	LR		
	comp=Z,4µm,18.0s						
RAO	Raoul Island	23.53	142	PFAKE		15 20 00.0	+14
RAO				LR	LR		
	comp=Z,5µm,19.0s						
KNTN	Kanton	23.78	71	PFAKE		15 20 00.0	+11
KNTN				LR	LR		
	comp=Z,6µm,19.0s						
OUZ	Omahuta	24.96	165	PFAKE		15 20 10.0	+10
OUZ				LR	LR		
	comp=Z,6µm,19.0s						
JAY	Jayapura	26.36	287	LR	LR	15 32 00.1	
	comp=Z,5µm,18.2s,baz=62,slow=40						
QIS	Mount Isa	26.85	246	P	P	15 20 18.7	+1.7
	baz=27,SNR=10						
CMSA	Cobar Meteorol	27.51	220	P	P	15 20 23.8	+1.0
	baz=28,SNR=7.3						
CNB	Canberra Magne	28.30	209	P	P	15 20 33.7	+3.7
	baz=28						
HIZ	Hauiti	28.40	165	PFAKE		15 20 40.0	+9.4
HIZ				LR	LR		
	comp=Z,6µm,18.0s						
CAN	Canberra	28.49	210	PFAKE		15 20 40.0	+8.5
CAN				LR	LR		
	comp=Z,2µm,19.0s						
MXZ	Matakaoa Point	28.57	159	PFAKE		15 20 40.0	+7.9
MXZ				LR	LR		
	comp=Z,5µm,20.0s						
URZ	Urewera	28.80	161	*e*P	P	15 20 35.0	+0.8
	comp=Z,80nm,1.5s						
URZ	Urewera	28.80	161	P	P	15 20 34.3	+0.2
	comp=Z,23nm,0.9s,baz=138,slow=1.2,SNR=9.8						
URZ				LR	LR	15 30 21.0	
	comp=Z,4µm,20.4s,baz=336,slow=33						
BKZ	Black Stump Fm	29.45	163	*e*P	P	15 20 39.4	-0.6
	comp=Z,43nm,1.0s						
BKZ				LR	LR		
	comp=Z,4µm,22.0s						
H11S2	WAKE ISLAND Hy	29.49	2	T	T	15 51 10.4	
	baz=181,slow=76,SNR=260						
H11S3	WAKE ISLAND Hy	29.49	2	T	T	15 51 12.0	
	baz=181,slow=76,SNR=246						
H11S1	WAKE ISLAND Hy	29.51	2	T	T	15 51 13.1	
	baz=181,slow=76,SNR=150						
STKA	Stephens Creek	30.40	224	P	P	15 20 50.2	+1.7
	baz=31,SNR=11						
STKA	Stephens Creek	30.40	224	P	P	15 20 50.0	+1.5
	comp=Z,8.0nm,0.8s,baz=30,slow=8.5,SNR=13						
STKA				PcP	PcP	15 23 49.0	+0.8
	comp=Z,4.4nm,0.7s,baz=85,slow=3.7,SNR=3.9						
STKA				LR	LR	15 32 51.6	
	comp=Z,3µm,18.5s,baz=47,slow=36						
H11N1	WAKE ISLAND Hy	30.71	2	T	T	15 52 43.4	
	baz=182,slow=76,SNR=125						
H11N3	WAKE ISLAND Hy	30.72	2	T	T	15 52 43.7	
	baz=182,slow=76,SNR=108						
H11N2	WAKE ISLAND Hy	30.73	2	T	T	15 52 44.7	
	baz=182,slow=76,SNR=82						
BFZ	Birch Farm	30.80	164	*e*P	P	15 20 51.0	-0.9
	comp=Z,236nm,1.9s						
BFZ				LR	LR		
	comp=Z,6µm,20.0s						
SNZO	South Karori	31.02	167	PFAKE		15 21 10.0	+16
SNZO				LR	LR		
	comp=Z,5µm,18.0s						
THZ	Tophouse	31.10	170	*e*P	P	15 20 53.8	-0.7
	comp=Z,44nm,0.7s						
THZ				LR	LR		
	comp=Z,2µm,20.0s						
WB8	Warramunga Arr	31.45	250	P	P	15 20 58.1	+0.2
	baz=32						
WRAB	Tennant Creek	31.50	250	*e*P	P	15 20 57.2	-1.1
	comp=Z,70nm,1.1s						
WRAB				LR	LR		
	comp=Z,5µm,18.0s						
WRAB	Tennant Creek	31.50	250	*e*P	P	15 20 57.2	-1.1
WRAB				pmax	pmax		
	comp=Z,70nm,1.1s						
WRAB				MLR	MLR		
	comp=Z,5µm,18.0s						
WRA	Warramunga Arr	31.51	250	P	P	15 20 58.0	-0.4
	comp=Z,29nm,1.0s,baz=80,slow=9.3,SNR=82						
WRA				PcP	PcP	15 23 51.4	0.0
	comp=Z,9.0nm,0.9s,baz=80,slow=3.0,SNR=12						
WRA				ScP	ScP	15 27 36.1	+1.9
	comp=Z,2.4nm,1.2s,baz=82,slow=3.4,SNR=4.8						
WRA				LR	LR	15 33 42.1	
	comp=Z,4µm,18.0s,baz=80,slow=36						
KHZ	Kahutara	31.84	169	*e*P	P	15 21 01.2	+0.2
	comp=Z,104nm,1.3s						
KHZ				LR	LR		
	comp=Z,3µm,19.0s						
LTZ	Lake Taylor	31.98	171	*e*P	P	15 21 02.5	+0.1
	comp=Z,233nm,1.6s						
LTZ				LR	LR		
	comp=Z,4µm,18.0s						
TOO	Toolangi	32.00	211	P	P	15 21 04.6	+2.0
	baz=32,SNR=5.7						
TOO	Toolangi	32.00	211	*e*P	P	15 21 02.5	-0.1
	comp=Z,29nm,1.1s						
TOO				LR	LR		
	comp=Z,3µm,18.0s						
TOO	Toolangi	32.00	211	*e*P	P	15 21 02.5	-0.1
TOO				pmax	pmax		
	comp=Z,29nm,1.1s						
TOO				MLR	MLR		
	comp=Z,3µm,18.0s						
GUMO	Guam	32.21	319	LR	LR	15 34 42.6	
	comp=Z,2µm,18.5s,baz=127,slow=38						
FOZ	Fox Glacier	32.42	175	*e*P	P	15 21 06.2	+0.2
	comp=Z,74nm,1.1s						
FOZ				LR	LR		
	comp=Z,3µm,19.0s						
OXZ	Oxford	32.48	172	*e*P	P	15 21 06.9	+0.2
	comp=Z,178nm,1.5s						
OXZ				LR	LR		
	comp=Z,3µm,19.0s						
KDU	Kakadu	32.65	264	P	P	15 21 09.4	+0.9
	baz=33,SNR=6.5						
RPZ	Rata Peaks	32.73	173	*e*P	P	15 21 08.7	-0.2
	comp=Z,86nm,1.0s						
RPZ	Rata Peaks	32.73	173	P	P	15 21 08.2	-0.7
	comp=Z,32nm,0.6s,baz=296,slow=3.4,SNR=41						
RPZ				LR	LR	15 34 02.0	
	comp=Z,1µm,18.0s,baz=356,slow=36						
ASAR	Alice Springs	32.80	243	P	P	15 21 08.9	-0.9
	comp=Z,5.2nm,0.8s,baz=74,slow=9.4,SNR=37						
ASAR				PcP	PcP	15 23 54.9	0.0
	comp=Z,9.7nm,0.9s,baz=76,slow=3.0,SNR=16						
ASAR				ScP	ScP	15 27 40.3	+1.7
	comp=Z,2.2nm,1.0s,baz=90,slow=3.8,SNR=6.2						
ASAR				LR	LR	15 33 53.1	
	comp=Z,4µm,18.5s,baz=76,slow=35						
CRLZ	Canterbury Las	32.81	171	*e*P	P	15 21 09.8	+0.3
	comp=Z,664nm,1.8s						
MQZ	McQueen's Vall	32.95	171	*e*P	P	15 21 10.7	0.0
	comp=Z,144nm,1.2s						
MQZ				LR	LR		
	comp=Z,3µm,20.0s						
HTT	Hallett	33.13	224	P	P	15 21 13.6	+1.1
	baz=33,SNR=5.7						
LBZ	Lake Benmore	33.30	174	*e*P	P	15 21 13.3	-0.5
	comp=Z,116nm,1.7s						
LBZ				LR	LR		
	comp=Z,2µm,18.0s						
ARPS	Mount Arapiles	33.42	216	P	P	15 21 17.1	+2.2
	baz=34,SNR=5.1						
WKZ	Wanaka	33.65	176	*e*P	P	15 21 17.7	+0.8
	comp=Z,70nm,1.1s						
WKZ				LR	LR		
	comp=Z,3µm,21.0s						

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ANA2  Anatahan          33.81 324  PFAKE           15 21 30.0  +11
ANA2                               LR       LR
      comp=Z,3µm,21.0s
MTN   Manton Dam        33.96 264  PFAKE           15 21 30.0  +10
MTN                                LR       LR
      comp=Z,3µm,22.0s
ODZ   Otahua Downs      34.00 174 eP        P      15 21 20.6 +0.7
      comp=Z,134nm,1.7s
ODZ                                LR       LR
      comp=Z,1µm,20.0s
MLZ   Mavora Lakes      34.13 177  PFAKE           15 21 30.0 +9.0
MLZ                                LR       LR
      comp=Z,4µm,19.0s
DCZ   Deep Cove         34.19 178  PFAKE           15 21 30.0 +8.5
DCZ                                LR       LR
      comp=Z,1µm,18.0s
FAKI  Fak Fak           34.28 281  PFAKE           15 21 30.0 +7.3
FAKI                               LR       LR
      comp=Z,3µm,21.0s
RAR   Rarotonga         34.44 111  LR       LR     15 32 24.2
      comp=Z,3µm,20.9s,baz=270,slow=31
WHZ   Wether Hill Ro    34.65 177  PFAKE           15 21 40.0  +15
WHZ                                LR       LR
      comp=Z,2µm,19.0s
BBOO  Buckleboo         34.80 227  P        P      15 21 27.9 +1.0
      baz=35
BBOO  Buckleboo         34.80 227 eP        P      15 21 27.0  0.0
      comp=Z,43nm,0.9s
BBOO                               LR       LR
      comp=Z,3µm,19.0s
SIJI  Sorong            35.81 284  P        P      15 21 35.4 -0.5
      comp=Z,18nm,0.8s,baz=64,slow=24,SNR=6.9
SIJI                               LR       LR     15 38 12.0
      comp=Z,3µm,18.2s,baz=126,slow=40
KNRA  Kununurra         36.29 259  P        P      15 21 41.7 +1.7
      baz=36,SNR=4.6
WRKA  Warakurna         38.09 244  P        P      15 21 55.3  0.0
      baz=38,SNR=8.9
FITZ  Fitzroy Crossi    39.42 255  P        P      15 22 07.1 +0.7
      baz=40,SNR=3.9
FITZ  Fitzroy Crossi    39.42 255 eP        P      15 22 06.7 +0.2
      comp=Z,103nm,1.5s
FITZ  Fitzroy Crossi    39.42 255  LR       LR     15 38 07.5
      comp=Z,3µm,18.4s,baz=82,slow=36
TNTI  Ternate           40.02 285  PFAKE           15 22 20.0 +8.5
TNTI                               LR       LR
      comp=Z,1µm,20.0s
BATI  Baumata           41.41 267  LR       LR     15 39 47.3
      comp=Z,2µm,20.8s,baz=114,slow=36
PPT   Papeete           43.59 104  LR       LR     15 37 47.0
      comp=Z,2µm,18.2s,baz=251,slow=32
PPT2  Papeete2          43.59 104 eS        S      15 29 13.2 +3.2
      comp=Z,1µm,26.2s
PPT2                              eLQ       LQ     15 32 59.9
      comp=Z,1µm,26.9s
PPT2                              eLR       LR     15 34 49.5
      comp=Z,3µm,21.5s,baz=276
DAV   Davao City (W)    43.96 293  LR       LR     15 41 06.5
      comp=Z,1µm,19.0s,baz=104,slow=36
TBI   Tubuai            44.21 112 eS        S      15 29 23.8 +5.0
      comp=Z,1µm,28.8s
TBI                               eLQ       LQ     15 33 17.8
      comp=Z,2µm,33.2s
TBI                               eLR       LR     15 35 10.6
      comp=Z,6µm,26.5s,baz=280
JCJ   Chichijima        44.42 329  LR       LR     15 39 03.3
      comp=Z,1µm,21.1s,baz=152,slow=33
BNSI  Bone              45.75 275  P        P      15 22 57.2 -0.7
SPSI  Sidrap Palu       46.16 275  P        P      15 23 01.5 +0.3
MEEK  Meekatharra       46.96 244  P        P      15 23 07.7 +0.3
      baz=47,SNR=13
MPSI  Mapaga            47.04 281  P        P      15 23 06.2 -1.9
MWH   Moku‘aweowe       48.71  52 eP        P      15 23 23.0 +1.5
      comp=Z,220nm,1.2s
HMH   Humu‘ula Sheep    48.87  51 eP        P      15 23 23.9 +1.4
      comp=Z,332nm,1.2s
POHA  Pohakuloa         48.92  51 eP        P      15 23 23.6 +0.8
      comp=Z,159nm,1.0s
SBLHI Steaming Bluff    48.93  52  PFAKE           15 23 30.0 +7.2
SBLHI                              LR       LR
      comp=Z,2µm,20.0s
NPOC  North of Pu‘u     49.03  52  PFAKE           15 23 30.0 +6.5
NPOC                               LR       LR
      comp=Z,2µm,19.0s
NWAO  Narrogin (SRO)    49.45 236  P        P      15 23 28.5 +2.0
      baz=50
NWAO  Narrogin (SRO)    49.45 236 eP        P      15 23 26.4 -0.1
      comp=Z,69nm,1.1s
NWAO  Narrogin (SRO)    49.45 236 eP        P      15 23 26.4 -0.1
NWAO                               pmax     pmax
      comp=Z,69nm,1.1s
NWAO  Narrogin (SRO)    49.45 236  P        P      15 23 25.9 -0.6
NWAO                               P        P      15 23 25.9 -0.6
NWAO  Narrogin (SRO)    49.45 236  LR       LR     15 44 43.0
      comp=Z,8µm,18.2s,baz=308,slow=36
MORW  Morawa            49.63 241  P        P      15 23 29.6 +1.7
      baz=50,SNR=3.5
MORW  Morawa            49.63 241 eP        P      15 23 28.4 +0.4
      comp=Z,198nm,1.8s
MUN   Mundaring         50.07 238  P        P      15 23 32.4 +1.2
      baz=50,SNR=3.5
KKM   Kota Kinabalu     52.25 287  P        P      15 23 48.0 +0.1
TAOE  Nuku Hiva Isla    53.20  93 eS        S      15 31 29.4 +3.5
      comp=Z,1µm,26.6s
TAOE                              eLR       LR     15 39 18.7
      comp=Z,2µm,23.0s,baz=269
INU   Inuyama           53.70 331  PFAKE           15 24 10.0  +12
INU                                LR       LR
      comp=Z,900nm,20.0s
MJAR  Matsushiro Arr    54.12 333  P        P      15 24 00.3 -0.9
      comp=Z,9.1nm,0.7s,baz=169,slow=9.4,SNR=22
MAJO  Matsushiro        54.12 333 eP        P      15 24 00.6 -0.6
      comp=Z,22nm,1.0s
MAJO                               LR       LR
      comp=Z,1µm,20.0s
MAJO  Matsushiro        54.12 333 eP        P      15 24 00.6 -0.6
MAJO                               pmax     pmax
      comp=Z,22nm,1.0s
MAJO                               MLR      MLR
      comp=Z,1µm,20.0s
MAT   Matsushiro        54.12 333  P        P      15 24 00.5 -0.7
MAT                                S        S      15 31 31.2 -6.3
YOJ   Yonaguni jima     54.78 311  PFAKE           15 24 20.0  +14
YOJ                                LR       LR
      comp=Z,2µm,21.0s
SBUM  Sibu              55.00 281 eP        P      15 24 07.5 -0.6
      comp=Z,35nm,1.3s
JNU   Nakatsue          55.23 324 eP        P      15 24 08.6 -0.8
      comp=Z,22nm,0.8s
JNU                                LR       LR
      comp=Z,1µm,22.0s
JNU   Nakatsue          55.23 324  P        P      15 24 08.9 -0.4
      comp=Z,16nm,0.8s,baz=110,slow=2.2,SNR=13
YULB  Yu-li             55.48 309  PFAKE           15 24 20.0 +8.7
YULB                               LR       LR
      comp=Z,1µm,20.0s
NACB  Ninganchiao       55.68 310  PFAKE           15 24 20.0 +7.3
NACB                               LR       LR
      comp=Z,1µm,19.0s
TPUB  Ta-pu             55.94 308  PFAKE           15 24 30.0  +15
TPUB                               LR       LR
      comp=Z,1µm,20.0s
SSLB  Suanglung         55.95 309  PFAKE           15 24 30.0  +15
SSLB                               LR       LR
      comp=Z,1µm,20.0s
YHNB  Yeheng            56.12 310  PFAKE           15 24 30.0  +14
YHNB                               LR       LR
      comp=Z,2µm,22.0s
TATO  Taipei            56.21 310  PFAKE           15 24 30.0  +14
TATO                               LR       LR
      comp=Z,2µm,20.0s
KSM   Kuching           56.60 279  PFAKE           15 24 30.0  +10
KSM                                LR       LR
      comp=Z,600nm,20.0s
KSM   Kuching           56.60 279  P        P      15 24 20.2 +0.7
ERM   Erimo             56.88 340  PFAKE           15 24 30.0 +9.1
ERM                                LR       LR
      comp=Z,2µm,21.0s
YUK   Yuzh-Kuril'sk     57.87 343 eP        P      15 24 26.9 -0.9
YUK                               eS        S      15 32 24.9 -2.1
YUK                               eSS       SS     15 36 17.5 -0.8
YUK                                MLR      MLR
      comp=Z,1µm,20.0s
YUK                                MLR      MLR
      comp=E,685nm,16.0s
YUK                                MLR      MLR
      comp=N,1µm,14.0s
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QZH   Quanzhou          58.39 309 eP        P      15 24 33.8 +1.9
QZH                                S        S      15 32 35.3 +0.8
QZH                                LR       LR
      comp=N,660nm,19.4s
QZH                                LR       LR
      comp=N,740nm,17.5s
QZH                                LR       LR
      comp=N,900nm,21.3s
TJN   Taejon            59.58 324ceP        P      15 24 40.4 +0.5
SSE   Sheshan           60.00 316  P        P      15 24 44.0 +1.1
SSE                                S        S      15 32 55.0 -0.2
SSE                                pmax     pmax
      comp=N,18nm,0.7s
SSE                                pmax     pmax
      comp=N,89nm,4.7s
SSE                                LR       LR
      comp=N,310nm,17.9s
SSE                                LR       LR
      comp=N,410nm,16.8s
SSE   Sheshan           60.00 316  PFAKE           15 24 50.0 +7.1
SSE                                LR       LR
      comp=Z,1µm,19.0s
KSRS  Korea Array       60.03 326  P        P      15 24 43.2 +0.3
      comp=Z,2.6nm,0.8s,baz=141,slow=7.0,SNR=12
KSAR  Wonju Array Be    60.04 326  P        P      15 24 43.2 +0.2
KSAR  Wonju Array Be    60.04 326  P        P      15 24 43.3 +0.2
YSS   Yuzh-Sakhalins    61.43 342 eP        P      15 24 52.6 +0.3
      comp=Z,57nm,1.3s
YSS                                LR       LR
      comp=Z,1µm,20.0s
YSS   Yuzh-Sakhalins    61.43 342⇑iP        P      15 24 53.3 +0.9
YSS                               e                15 27 04.4
YSS                               eS        S      15 33 13.6 +0.7
YSS                               ePS       PnS    15 33 22.3 -5.4
YSS                               eSSS      SSS    15 39 47.2
YSS                                pmax     pmax
      comp=Z,20nm,1.1s
YSS                                pmax     pmax
      comp=Z,200nm,6.0s
TEY   Ternei            61.87 337⇑eP        P      15 24 55.5 +0.1
TEY                                pmax     pmax
      comp=Z,20nm,1.1s
TEY                                pmax     pmax
      comp=N,20nm,1.1s
TEY                                pmax     pmax
      comp=E,10.0nm,1.2s
NJ2   Nanjing           62.16 315 ⇑P        P      15 24 58.0 +0.4
NJ2                                pP       sP     15 25 02.5 -0.4
NJ2                                S        S      15 33 23.5 +0.7
NJ2                                sS       sS     15 33 29.3 +0.6
NJ2                                pmax     pmax
      comp=E,16nm,1.0s
NJ2                                LR       LR
      comp=E,650nm,19.5s
NJ2                                LR       LR
      comp=E,620nm,23.9s
NJ2                                LR       LR
      comp=E,950nm,17.3s
QIZ   Qiongzhong        62.81 298  P        P      15 25 00.5 -1.7
QIZ                                S        S      15 33 31.3  0.0
QIZ                                LR       LR
      comp=E,580nm,18.6s
QIZ                                LR       LR
      comp=E,870nm,19.6s
QIZ                                LR       LR
      comp=E,1µm,21.6s
QIZ   Qiongzhong        62.81 298  PFAKE           15 25 10.0 +7.8
QIZ                                LR       LR
      comp=Z,2µm,22.0s
MYKOM Kota Tinggi       62.94 278 eP        P      15 25 02.9 -0.3
      comp=Z,46nm,1.2s
USRK  Ussuriysk Ar.     63.10 333  P        P      15 25 02.8 -0.8
      comp=Z,9.2nm,0.8s,baz=137,slow=6.7,SNR=21
KGM   Kluang            63.51 278  P        P      15 25 09.0 +2.0
PET   Petropavlovsk     64.24 355 eP        P      15 25 12.5 +1.6
PET                                pmax     pmax
      comp=Z,36nm,1.7s
PETK  Petropavlovsk-    64.40 355  P        P      15 25 12.0 -0.1
PETK  Petropavlovsk-    64.40 355  P        P      15 25 11.9 -0.1
      comp=Z,9.2nm,0.8s,baz=156,slow=8.9,SNR=12
MDJ   Mudanjiang        64.50 332  P        P      15 25 13.8 +1.0
MDJ                                pP       sP     15 25 17.5 -0.7
MDJ                                sP       pwP    15 25 19.0 -1.6
MDJ                                PcP      PcP    15 25 49.8 +2.8
MDJ                                PP       PP     15 27 34.0 -1.0
MDJ                                S        S      15 33 50.8 -0.7
MDJ                                sS       sS     15 33 57.0 -1.4
MDJ                                ScS      ScS    15 35 07.3 +0.5
MDJ                                SS       SS     15 38 00.8 -1.5
MDJ                                pmax     pmax
      comp=Z,21nm,1.0s
MDJ                                pmax     pmax
      comp=Z,390nm,5.6s
MDJ                                LR       LR
      comp=Z,580nm,22.3s
MDJ                                LR       LR
      comp=Z,510nm,19.1s
MDJ                                LR       LR
      comp=Z,840nm,21.5s
MDJ   Mudanjiang        64.50 332 eP        P      15 25 11.8 -1.0
      comp=Z,24nm,1.1s
MDJ                                LR       LR
      comp=Z,700nm,20.0s
WHN   Wuhan             64.53 312 ⇑P        P      15 25 26.0  +13
WHN                                S        S      15 33 52.0 -0.4
WHN                                LR       LR
      comp=N,2µm,13.5s
WHN                                LR       LR
      comp=E,1µm,15.6s
WHN                                LR       LR
      comp=Z,3µm,20.2s
DL2   Dalian            64.63 323  P        P      15 25 06.8 -7.0
DL2                               eS        S      15 33 43.0  -10
DL2                                pmax     pmax
      comp=Z,41nm,1.1s
DL2                                pmax     pmax
      comp=Z,320nm,4.7s
DL2                                LR       LR
      comp=N,380nm,15.4s
DL2                                LR       LR
      comp=E,640nm,15.6s
DL2                                LR       LR
      comp=Z,930nm,17.3s
TYV   Tymovskoe         64.99 344 eP        P      15 25 16.4 +0.5
TYV                               e                15 33 45.1
TYV                                pmax     pmax
      comp=Z,300nm,3.7s
TYV                                pmax     pmax
      comp=Z,10.0nm,1.5s
BKNI  Bangkinang        65.36 276 eP        P      15 25 20.1 +1.1
      comp=Z,225nm,1.0s
FRIM  Kepong            65.44 279  P        P      15 25 21.3 +1.6
CN2   Changchun         65.89 329 eP        P      15 25 22.5 +0.6
CN2                               eS        S      15 34 13.0 +4.4
CN2                                pmax     pmax
      comp=Z,10.0nm,0.9s
CN2                                pmax     pmax
      comp=Z,300nm,6.0s
CN2                                LR       LR
      comp=Z,680nm,17.0s
CN2                                LR       LR
      comp=Z,640nm,17.0s
CN2                                LR       LR
      comp=Z,1µm,19.0s
CASY  Casey             66.29 201 eP        P      15 25 24.0 -0.1
      comp=Z,74nm,1.2s
CASY                               LR       LR
      comp=Z,1µm,18.0s
IPM   Ipoh              66.32 280 eP        P      15 25 24.9 -0.4
      comp=Z,56nm,0.9s
IPM   Ipoh              66.32 280  P        P      15 25 27.0 +1.7
VNDA  Vanda             66.36 181  LR       LR     15 51 04.1
      comp=Z,862nm,19.2s,baz=11,slow=33
GRNR  Gornyy            66.79 340 eP        P      15 25 29.1 +1.6
GRNR                               pmax     pmax
      comp=Z,16nm,1.0s
KULM  Kulim             66.88 281  PFAKE           15 25 40.0  +11
KULM                               LR       LR
      comp=Z,700nm,21.0s
KLR   Kul'dur           67.21 337 i P       P      15 25 30.1 -0.1
SKNT  Sakolnakorn       67.21 294  P        P      15 25 32.1 +1.2
      comp=Z,15nm,1.2s
NKL   Nikolayevsk       67.58 344 eP        P      15 25 33.3 +0.8
NKL                                pmax     pmax
      comp=Z,51nm,1.0s
NKL                                MLR      MLR
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      comp=Z,1µm,17.0s
PSI   Prapat            67.96 278 eP        P      15 25 35.2 -0.6
      comp=Z,104nm,1.6s
PSI   Prapat            67.96 278 eP        P      15 25 35.3 -0.6
PSI                                pmax     pmax
      comp=Z,104nm,1.6s
PSI   Prapat            67.96 278  LR       LR     15 57 25.2
      comp=Z,375nm,20.5s,baz=91,slow=38
SRAK  Srakaew           68.01 290  P        P      15 25 39.4 +3.5
      comp=Z,21nm,1.1s
ENH   Enshi             68.04 309 eP        P      15 25 34.3 -1.6
      comp=Z,23nm,1.0s
TRTT  Trang             68.45 283  P        P      15 25 54.0  +15
GYA   Guiyang           68.55 304⇑iP        P      15 25 40.3 +1.0
GYA                                PP       PP     15 28 12.5 +1.6
GYA                                S        S      15 34 41.3 -0.3
GYA                                SKS      SKiKP  15 35 35.8 +3.0
GYA                                SS       SS     15 39 02.3 -3.8
GYA                                pmax     pmax
      comp=Z,20nm,1.1s
GYA                                pmax     pmax
      comp=Z,180nm,5.0s
GYA                                LR       LR
      comp=Z,470nm,20.2s
GYA                                LR       LR
      comp=Z,520nm,18.6s
GYA                                LR       LR
      comp=Z,840nm,20.2s
BJT   Baijiatuau        68.62 321  PFAKE           15 25 50.0  +11
BJT                                LR       LR
      comp=Z,1µm,19.0s
CHAI  Chaiyaphum        68.66 292  P        P      15 25 41.1 +1.1
      comp=Z,5.5nm,1.3s
PATY  Pattaya           68.76 289  P        P      15 25 43.1 +2.4
      comp=Z,16nm,1.2s
GSI   Gunungsitoli      68.95 276 eP        P      15 25 39.6 -2.4
      comp=Z,70nm,1.0s
KRAB  Krabi             69.02 283  P        P      15 25 44.7 +2.4
      comp=Z,22nm,0.8s
PBKT  Sadao Pong        69.80 292 eP        P      15 25 47.6 +0.5
PBKT  Sadao Pong        69.80 292  P        P      15 25 48.6 +1.6
      comp=Z,23nm,1.1s
PHET  Kaeng Krachan     69.91 288  P        P      15 25 50.1 +2.3
      comp=Z,8.6nm,1.0s
XAN   Xi'an             70.26 312  P        P      15 25 50.0 +0.3
XAN                                pP       sP     15 25 54.5 -0.5
XAN                                sP       pwP    15 25 57.0 -0.4
XAN                                PP       PP     15 28 26.8 +1.3
XAN                                S        S      15 35 00.8 -0.6
XAN                                sS       sS     15 35 09.0 +1.5
XAN                                SS       SS     15 39 32.0 -0.1
XAN                                pmax     pmax
      comp=Z,15nm,1.0s
XAN                                pmax     pmax
      comp=Z,260nm,3.8s
XAN                                LR       LR
      comp=Z,590nm,20.6s
XAN                                LR       LR
      comp=Z,810nm,19.5s
XAN                                LR       LR
      comp=Z,1µm,20.9s
XAN   Xi'an             70.26 312 eP        P      15 25 49.8 +0.1
      comp=Z,20nm,1.0s
XAN                                LR       LR
      comp=Z,1µm,21.0s
XAN   Xi'an             70.26 312 eP        P      15 25 49.8 +0.1
XAN                                pmax     pmax
      comp=Z,20nm,1.0s
XAN                                MLR      MLR
      comp=Z,1µm,21.0s
UTTA  Uttaradit         70.55 293  P        P      15 25 53.6 +1.9
      comp=Z,4.4nm,0.9s
NANT  Nan               70.77 294  P        P      15 25 54.5 +1.5
      comp=Z,6.8nm,1.0s
UTHA  Uthaitani         70.87 291  P        P      15 25 55.6 +1.9
      comp=Z,8.2nm,1.0s,comp=Z,76nm
KMI   Kunming           71.25 301  P        P      15 25 57.8 +1.7
KMI                                pP       sP     15 26 01.0 -0.5
KMI                                sP       pwP    15 26 02.3 -1.5
KMI                                S        S      15 35 14.8 +1.2
KMI                                SS       SS     15 39 47.3 -0.7
KMI                                pmax     pmax
      comp=Z,28nm,0.8s
KMI                                pmax     pmax
      comp=Z,310nm,5.3s
KMI                                LR       LR
      comp=Z,310nm,14.4s
KMI                                LR       LR
      comp=Z,740nm,18.5s
KMI                                LR       LR
      comp=Z,990nm,19.2s
KMI   Kunming           71.25 301  PFAKE           15 26 10.0  +14
KMI                                LR       LR
      comp=Z,1µm,19.0s
SUKH  Sukhothai         71.30 293  P        P      15 25 58.3 +2.1
      comp=Z,5.1nm,0.8s
MA2   Magadan           71.55 352 eP        P      15 25 56.2 -0.7
      comp=Z,14nm,1.2s
MA2                                LR       LR
      comp=Z,2µm,22.0s
MA2   Magadan           71.55 352ceP        P      15 25 56.8  0.0
MA2                                pmax     pmax
      comp=Z,32nm,2.5s
UMPA  Umpang Tak        71.61 291  P        P      15 26 00.3 +2.2
      comp=Z,4.7nm,1.1s
LAMP  Lampang           71.64 294  P        P      15 26 00.3 +2.1
      comp=Z,11nm,0.9s,comp=Z,102nm
HHC   Hu-ho-hao-te      71.98 320 eP        P      15 26 01.8 +1.8
HHC                                pP       pwP    15 26 07.3 -0.4
HHC                                sP       PcP    15 26 12.0 -6.6
HHC                                S        S      15 35 20.3 -0.9
HHC                                sS       sS     15 35 29.8 +2.4
HHC                                SKS      SKSac  15 36 01.8 -2.0
HHC                                SS       SS     15 40 02.0 +3.6
HHC                                pmax     pmax
      comp=Z,19nm,1.1s
HHC                                pmax     pmax
      comp=Z,280nm,5.0s
HHC                                LR       LR
      comp=Z,1µm,16.9s
HHC                                LR       LR
      comp=Z,550nm,14.6s
HHC                                LR       LR
      comp=Z,2µm,15.6s
CM31  Chiang Mai Arr    72.23 294  P        P      15 26 04.0 +2.1
      SNR=14
CMAR  Chiang Mai Arr    72.23 294  P        P      15 26 03.4 +1.5
      comp=Z,13nm,0.8s,baz=121,slow=4.5,SNR=80
CMMT  Chiang Mai        72.34 294  P        P      15 26 03.6 +1.1
      comp=Z,18nm,1.2s
CHTO  Chiang Mai        72.35 294 eP        P      15 26 02.2 -0.3
      comp=Z,19nm,1.0s
CHTO                               LR       LR
      comp=Z,700nm,22.0s
CHTO  Chiang Mai        72.35 294 eP        P      15 26 02.2 -0.3
CHTO                               pmax     pmax
      comp=Z,19nm,1.0s
CHTO                               MLR      MLR
      comp=Z,700nm,22.0s
CHTO  Chiang Mai        72.35 294  P        P      15 26 04.1 +1.6
      SNR=16
CHTO                               P        P      15 26 04.1 +1.6
      SNR=16
CHTO  Chiang Mai        72.35 294  P        P      15 26 03.7 +1.2
      comp=Z,82nm,1.2s
ZEA   Zeya              72.49 337 eP        P      15 26 03.6 +1.0
ZEA                               eS        S      15 35 28.0 +1.8
ZEA                                pmax     pmax
      comp=N,37nm,1.4s
ZEA                                pmax     pmax
      comp=Z,64nm,1.4s
ZEA                                smax     smax
      comp=E,200nm,12.0s
ZEA                                smax     smax
      comp=N,500nm,14.0s
HIA   Hailar            72.52 330 eP        P      15 26 02.6 -0.3
      comp=N,16nm,1.1s
HIA   Hailar            72.52 330 eP        P      15 26 02.6 -0.3
HIA                                pmax     pmax
      comp=Z,16nm,1.1s
CD2   Chengdu           72.74 307  P        P      15 26 05.8 +1.1
CD2                                pP       sP     15 26 09.0 -1.1
CD2                                S        S      15 35 32.8 +2.7
CD2                                SS       SS     15 40 13.3 +3.0
CD2                                pmax     pmax
      comp=Z,60nm,0.5s
```

CD2				pmax	pmax		
	comp=Z,670nm,5.3s						
CD2				LR	LR		
	comp=Z,1µm,15.7s						
CD2				LR	LR		
	comp=Z,2µm,17.7s						
CD2				LR	LR		
	comp=Z,2µm,19.6s						
BTO	Baotou	72.84	319	eP	P	15 26 05.5	+0.4
SEY	Seymchan	74.61	354	ceP	P	15 26 15.4	+0.5
LZH	Lanzhou	74.90	312	eP	P	15 26 19.5	+2.1
LZH				pP	pwP	15 26 23.0	-2.1
LZH				sP	sP	15 26 25.5	+2.7
LZH				eS	S	15 35 56.5	+1.9
LZH				sS	sS	15 36 07.5	+6.8
LZH				SS	SS	15 40 44.0	+0.7
LZH				pmax	pmax		
	comp=Z,42nm,1.1s						
LZH				pmax	pmax		
	comp=Z,190nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,990nm,15.3s						
LZH				LR	LR		
	comp=Z,2µm,17.2s						
GAMB	Gambell	76.68	10	PFAKE		15 26 40.0	+13
GAMB				LR	LR		
	comp=Z,2µm,21.0s						
CIT	Chita	77.31	330	eP	P	15 26 32.0	+1.4
CIT				e		15 26 37.4	
CIT				e		15 26 45.6	
CIT				pmax	pmax		
	comp=Z,62nm,1.6s						
SVW2	Sparrevohn	78.21	18	eP	P	15 26 35.6	+0.2
	comp=Z,64nm,1.4s						
YAK	Yakutsk	78.24	344	eP	P	15 26 34.1	-1.4
YAK				e*PP	PcP	15 26 43.6	-1.3
YAK				e		15 29 32.7	
YAK				eS	S	15 36 24.9	-4.8
YAK				e*SS	ScS	15 37 05.1	+10
YAK				eSS	SS	15 41 29.4	-2.9
YAK				pmax	pmax		
	comp=Z,115nm,0.9s						
YAK				pmax	pmax		
	comp=N,45nm,1.2s						
YAK				pmax	pmax		
	comp=E,40nm,1.4s						
YAK				pmax	pmax		
	comp=Z,297nm,2.5s						
YAK				pmax	pmax		
	comp=E,115nm,1.5s						
YAK				pmax	pmax		
	comp=N,295nm,2.8s						
YAK				smax	smax		
	comp=N,1µm,17.3s						
YAK				smax	smax		
	comp=E,975nm,16.2s						
YAK				MLR	MLR		
	comp=Z,7µm,18.0s						
YAK				MLR	MLR		
	comp=E,4µm,18.0s						
YAK				MLR	MLR		
	comp=N,4µm,18.0s						
ULN	Ulaanbaatar	78.45	324	eP	P	15 26 36.9	-0.3
	comp=N,11nm,0.9s						
ULN				LR	LR		
	comp=Z,600nm,18.0s						
ULN	Ulaanbaatar	78.45	324	eP	P	15 26 36.9	-0.3
ULN				pmax	pmax		
	comp=Z,11nm,0.9s						
ULN				MLR	MLR		
	comp=Z,600nm,18.0s						
ULN	Ulaanbaatar	78.45	324	P	P	15 26 38.7	+1.5
	SNR=8.8						
ULN				P	P	15 26 38.7	+1.5
	SNR=8.8						
ANM	Nome	78.60	12	eP	P	15 26 37.2	-0.3
	comp=Z,33nm,1.3s						
ANM	Nome	78.60	12	eP	P	15 26 37.2	-0.3
ANM				pmax	pmax		
	comp=Z,33nm,1.3s						
BRLK	Bradley Lake	78.73	21	eP	P	15 26 38.0	-0.4
	comp=Z,52nm,1.1s						
SONM	Songino Array	78.81	324	P	P	15 26 39.4	+0.2
	comp=Z,3.9nm,0.9s,baz=139,slow=5.6,SNR=21						
QSPA	South Pole Qui	78.83	180	eP	P	15 26 38.0	-1.0
	comp=Z,62nm,1.1s						
QSPA	South Pole Qui	78.83	180	P	P	15 26 38.9	-0.1
	comp=Z,10nm,1.0s,baz=336,slow=2.6,SNR=13						
QSPA				LR	LR	15 56 51.0	
	comp=Z,248nm,20.8s,baz=32,slow=32						
BILL	Bilibino	79.01	0	eP	P	15 26 38.6	-1.0
	comp=Z,42nm,0.9s						
BILL	Bilibino	79.01	0	⇓eP	P	15 26 38.9	-0.7
BILL				i		15 26 49.0	
BILL				e		15 29 37.6	
BILL				i S	S	15 36 37.8	+0.1
BILL				eSS	SS	15 41 49.8	+6.1
BILL				pmax	pmax		
	comp=Z,88nm,1.7s						
GTA	Gaotai	79.20	314	⇓P	P	15 26 42.5	+1.0
GTA				pP	pwP	15 26 47.3	-1.9
GTA				sP	PcP	15 26 49.8	0.0
GTA				S	S	15 36 40.5	-0.7
GTA				sS	sS	15 36 51.0	+3.4
GTA				SS	SS	15 41 48.8	+0.7
GTA				pmax	pmax		
	comp=Z,19nm,1.2s						
GTA				pmax	pmax		
	comp=Z,160nm,5.2s						
GTA				LR	LR		
	comp=Z,500nm,20.0s						
GTA				LR	LR		
	comp=Z,950nm,22.2s						
GTA				LR	LR		
	comp=Z,1µm,22.2s						
SUA	Susitna One	80.02	20	eP	P	15 26 44.6	-0.8
	comp=Z,50nm,1.2s						
PPLA	Purkeypile	80.62	18	eP	P	15 26 49.7	+1.0
	comp=Z,114nm,2.0s						
SHL	Shillong	80.64	298	eP	P	15 26 51.0	+1.3
PMR	Palmer	80.65	20	eP	P	15 26 47.6	-1.0
	comp=Z,101nm,2.0s						
PMR	Palmer	80.65	20	eP	P	15 26 47.6	-1.0
PMR				pmax	pmax		
	comp=Z,101nm,2.0s						
BOD	Bodaibo	80.68	335	eP	P	15 26 45.7	-3.2
BOD				pmax	pmax		
	comp=Z,14nm,1.5s						
KNK	Knik Glacier	80.75	20	eP	P	15 26 48.1	-1.2
	comp=Z,90nm,1.7s						
GHO	Glory Hole Cre	80.85	20	eP	P	15 26 48.9	-0.9
	comp=Z,39nm,1.3s						
CAST	Castle Rocks	81.05	18	eP	P	15 26 49.9	-0.9
	comp=Z,29nm,1.0s						
SML	Sawmill	81.07	20	eP	P	15 26 50.8	-0.2
	comp=Z,52nm,1.3s						
SML	Sawmill	81.07	20	eP	P	15 26 50.8	-0.2
SML				pmax	pmax		
	comp=Z,53nm,1.3s						
DIV	Divide	81.50	22	eP	P	15 26 52.7	-0.6
	comp=Z,30nm,1.0s						
TRF	Thorofare Moun	81.62	18	eP	P	15 26 52.8	-1.2
	comp=Z,24nm,1.2s						
KLU	Klutina	81.69	21	eP	P	15 26 54.1	-0.2
	comp=Z,36nm,1.1s						
ZAK	Zakamensk	81.85	325	eP	P	15 26 54.1	-1.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
RND	Reindeer	82.03	19	eP	P	15 26 55.4	-0.7
	comp=Z,38nm,1.1s						
RND	Reindeer	82.03	19	eP	P	15 26 55.4	-0.7
RND				pmax	pmax		
	comp=Z,38nm,1.1s						
RDOG	Red Dog Mine	82.14	11	eP	P	15 26 56.0	-0.4
	comp=Z,31nm,0.9s						
MCK	McKinley	82.24	19	eP	P	15 26 56.8	-0.3
	comp=Z,67nm,1.3s						
MCK	McKinley	82.24	19	eP	P	15 26 56.8	-0.3
MCK				pmax	pmax		
	comp=Z,67nm,1.3s						
TLY	Talaya	82.27	326	eP	P	15 26 57.5	-0.1
	comp=Z,7.8nm,0.8s						
TLY				LR	LR		
	comp=Z,600nm,20.0s						
TLY	Talaya	82.27	326	eP	P	15 26 58.0	+0.5
TLY				eS	S	15 37 06.9	-5.7
TLY				pmax	pmax		
	comp=Z,35nm,1.5s						
TLY				MLR	MLR		
	comp=Z,1µm,19.0s						
TLY	Talaya	82.27	326	P	P	15 26 58.3	+0.8
	SNR=5.7						
TLY				P	P	15 26 58.3	+0.8
	SNR=5.7						
DHY	Denali Highway	82.28	20	eP	P	15 26 57.4	-0.1
	comp=Z,31nm,1.2s						
DHY				LR	LR		
	comp=Z,2µm,18.0s						
LSA	Lhasa	82.49	302	eP	P	15 26 59.0	-0.7
	comp=Z,16nm,1.5s						
LSA				LR	LR		
	comp=Z,600nm,22.0s						
LSA	Lhasa	82.49	302	eP	P	15 26 59.0	-0.7
LSA				pmax	pmax		
	comp=Z,16nm,1.5s						
LSA				MLR	MLR		
	comp=Z,600nm,22.0s						
HARP	HAARP	82.58	21	eP	P	15 26 59.1	+0.2
	comp=Z,36nm,0.9s						
MLY	Manley	82.64	17	eP	P	15 26 59.2	0.0
	comp=Z,25nm,1.3s						
BALM	Baldy	82.71	23	eP	P	15 26 59.7	0.0
	comp=Z,21nm,0.9s						
BALM	Baldy	82.71	23	eP	P	15 26 59.7	0.0
BALM				pmax	pmax		
	comp=Z,21nm,0.9s						
GDXM	Geysers	82.84	48	PFAKE		15 27 10.0	+9.1
GDXM				LR	LR		
	comp=Z,1µm,18.0s						
PAX	Paxson	82.84	20	eP	P	15 27 00.1	-0.3
	comp=Z,25nm,1.3s						
PAX	Paxson	82.84	20	eP	P	15 27 00.1	-0.3
PAX				pmax	pmax		
	comp=Z,25nm,1.3s						
WRH	Wood River Hil	83.03	18	eP	P	15 26 59.2	-2.0
	comp=Z,43nm,1.1s						
SAO	San Andreas Ge	83.16	51	PFAKE		15 27 10.0	+7.6
SAO				LR	LR		
	comp=Z,2µm,20.0s						
O02D	Mt. Diablo Mer	83.33	47	P	P	15 27 02.2	-1.2
	baz=249,SNR=7.2						
HDA	Harding Lake	83.34	19	eP	P	15 27 01.6	-1.2
	comp=Z,85nm,1.0s						
HDA	Harding Lake	83.34	19	P	P	15 27 01.7	-1.1
	baz=226						
TCOL	CIGO, UAF Yank	83.38	18	P	P	15 27 02.3	-0.7
	baz=226						
COLA	College	83.39	18	eP	P	15 27 01.5	-1.4
	comp=Z,46nm,1.1s						
COLA				LR	LR		
	comp=Z,1µm,18.0s						
COLA	College	83.39	18	eP	P	15 27 01.5	-1.4
COLA				pmax	pmax		
	comp=Z,46nm,1.1s						
COLA				MLR	MLR		
	comp=Z,1µm,18.0s						
RIDG	Independ'e Rid	83.57	20	eP	P	15 27 03.0	-1.1
	comp=Z,70nm,1.2s						
RIDG				LR	LR		
	comp=Z,2µm,19.0s						
ILAR	Eielson Array	83.61	18	P	P	15 27 02.6	-1.5
	comp=Z,8.0nm,0.8s,baz=231,slow=4.6,SNR=66						
ILAR				PKKPbc	PKKPbc	15 45 21.9	-3.2
	comp=Z,0.2nm,0.8s,baz=27,slow=4.2,SNR=5.1						
WDC	Whiskeytown Da	83.64	47	PFAKE		15 27 20.0	+15
WDC				LR	LR		
	comp=Z,1µm,20.0s						
N02D	Trinity Center	83.67	46	P	P	15 27 04.5	-0.6
	baz=249						
POKR	Poker Plat Res	83.68	18	P	P	15 27 03.8	-0.7
	baz=226						
M02C	Callahan	83.71	46	P	P	15 27 04.3	-1.0
	baz=249						
MOY	Mondy	83.73	325	eP	P	15 27 06.2	+1.0
MOY				pmax	pmax		
	comp=Z,36nm,3.1s						
PAGB	Antelope Grade	83.74	52	PFAKE		15 27 20.0	+15
PAGB				LR	LR		
	comp=Z,2µm,19.0s						
DOT	Dot Lake	83.77	20	eP	P	15 27 04.2	-0.9
	comp=Z,92nm,1.5s						
YBH	Yreka Blue Hor	83.93	46	eP	P	15 27 05.8	-0.6
	comp=Z,12nm,0.9s						
SCRK	Sand Creek	84.01	20	eP	P	15 27 05.5	-0.9
	comp=Z,64nm,1.2s						
ORV	Oroville	84.05	48	eP	P	15 27 05.7	-1.2
	comp=Z,12nm,1.0s						
ORV	Oroville	84.05	48	eP	P	15 27 05.7	-1.2
ORV				pmax	pmax		
	comp=Z,12nm,1.0s						
HUMO	Hull Mountain	84.07	45	PFAKE		15 27 20.0	+13
HUMO				LR	LR		
	comp=Z,2µm,19.0s						
O03E	Paynes Creek	84.08	47	P	P	15 27 05.9	-1.3
	baz=250,SNR=5.8						
AFDM	Forest Hills D	84.23	49	eP	P	15 27 06.4	-1.5
	comp=Z,19nm,1.0s						
CMB	Columbia Colle	84.37	50	eP	P	15 27 07.5	-1.2
	comp=Z,9.7nm,0.9s						
CMB				LR	LR		
	comp=Z,2µm,20.0s						
CMB	Columbia Colle	84.37	50	eP	P	15 27 07.5	-1.2
CMB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMB				MLR	MLR		
	comp=Z,2µm,20.0s						
COLD	Coldfoot	84.40	16	eP	P	15 27 08.7	+0.6
	comp=Z,10nm,1.2s						
HYT	Haines Junctio	84.47	24	eP	P	15 27 08.3	-0.5
PRP	Porcupine Dome	84.54	18	eP	P	15 27 09.2	+0.1
	comp=Z,24nm,1.4s						
OSI	Osito Audit: C	84.58	53	PFAKE		15 27 20.0	+10
OSI				LR	LR		
	comp=Z,2µm,18.0s						
MAW	Mawson	84.63	202	LR	LR	16 01 13.3	
	comp=Z,349nm,19.7s,baz=98,slow=33						
PASC	Pasadena Art C	84.88	54	PFAKE		15 27 20.0	+8.7
PASC				LR	LR		
	comp=Z,2µm,20.0s						
ODAN	Odare	84.88	299	eP	P	15 27 11.8	0.0
	comp=Z,53nm,1.0s						
BEKR	Beckworth	84.98	48	eP	P	15 27 11.1	-0.8
	comp=Z,12nm,0.9s						
BEKR				LR	LR		
	comp=Z,900nm,20.0s						
MWC	Mount Wilson	84.99	54	eP	P	15 27 10.8	-1.3
	comp=Z,12nm,0.9s						
MWC	Mount Wilson	84.99	54	eP	P	15 27 10.8	-1.3
MWC				pmax	pmax		
	comp=Z,12nm,0.9s						
ISA	Isabella, Lake	85.09	52	eP	P	15 27 11.5	-0.9
	comp=Z,14nm,1.1s						
ISA	Isabella, Lake	85.09	52	eP	P	15 27 11.5	-0.9
ISA				pmax	pmax		
	comp=Z,14nm,1.1s						
ISA	Isabella, Lake	85.09	52	P	P	15 27 11.9	-0.6
	baz=253,SNR=7.8						
MDPB	Devils Postpil	85.22	50	eP	P	15 27 12.0	-1.3
	comp=Z,19nm,1.0s						
MDPB				LR	LR		
	comp=Z,2µm,19.0s						
WAKR	Walker	85.22	49	eP	P	15 27 12.2	-1.0
	comp=Z,46nm,1.7s						
WAKR				LR	LR		
	comp=Z,2µm,19.0s						
EDW2	Edwards Air Fo	85.24	53	P	P	15 27 12.5	-0.7
	baz=253,SNR=12						
KNGR	Kungurtug, Tuv	85.25	324	i P	P	15 27 12.8	-0.1
PNTR	Pine Nut	85.29	49	eP	P	15 27 12.2	-1.3
	comp=Z,12nm,0.9s						
BFSC	Mount Baldy Ra	85.31	54	P	P	15 27 12.4	-1.3
	baz=253						
FYU	Fort Yukon	85.34	18	eP	P	15 27 12.4	-0.4
	comp=Z,72nm,1.8s						
CPE	Camp Elliot	85.38	55	PFAKE		15 27 20.0	+6.2
CPE				LR	LR		
	comp=Z,2µm,19.0s						
EGAK	Eagle	85.47	20	eP	P	15 27 12.8	-0.7
	comp=Z,74nm,1.0s						
J05D	Fort Rock, OR	85.49	44	P	P	15 27 13.8	-0.5
	baz=250						
YERR	Yerington	85.52	49	eP	P	15 27 13.6	-1.1
	comp=Z,25nm,1.6s						
RAMN	Ramite	85.58	298	eP	P	15 27 15.7	+0.4
TOLK	Toolik Lake Re	85.60	15	eP	P	15 27 14.1	-0.1
	comp=Z,19nm,1.3s						
TOLK	Toolik Lake Re	85.60	15	P	P	15 27 14.6	+0.5
	baz=224						
CWC	Cottonwood Cre	85.63	52	P	P	15 27 14.4	-0.8
	baz=253						
PAHR	Pah Rah Range	85.64	48	eP	P	15 27 13.6	-1.6
	comp=Z,16nm,1.1s						
DAWY	Dawson	85.65	21	eP	P	15 27 14.0	-0.5
	comp=Z,35nm,1.4s						
LRMC	Laurel Mtn Rad	85.66	53	P	P	15 27 15.0	-0.3
	baz=253,SNR=6.9						
MOD	Modoc Plateau	85.68	46	eP	P	15 27 13.6	-1.7
	comp=Z,10nm,0.9s						
I05D	Terrebonne, OR	85.78	43	P	P	15 27 15.1	-0.5
	baz=250						
MONP2	Monument Peak	85.93	56	P	P	15 27 15.9	-1.0
	baz=254						
RYN	Ryan	85.94	50	PFAKE		15 27 30.0	+13
RYN				LR	LR		
	comp=Z,2µm,20.0s						
DAC	Darwin (Calif)	85.95	52	eP	P	15 27 15.9	-1.0
	comp=Z,14nm,1.3s						
DAC	Darwin (Calif)	85.95	52	eP	P	15 27 15.9	-1.0
DAC				pmax	pmax		
	comp=Z,14nm,1.3s						
MPMC	Manual Prospec	85.97	52	P	P	15 27 16.5	-0.5
	baz=253,SNR=7.4						
NVAR	Mina Array Bea	86.05	50	P	P	15 27 16.4	-0.9
	comp=Z,6.0nm,0.8s,baz=235,slow=7.3,SNR=30						
NVAR				LR	LR	16 00 17.1	
	comp=Z,1µm,18.9s,baz=280,slow=32						
PFO	Pinyon Flats O	86.09	55	PFAKE		15 27 30.0	+12
PFO				LR	LR		
	comp=Z,2µm,19.0s						
PFO	Pinyon Flats O	86.09	55	P	P	15 27 17.0	-0.5
	baz=254						
XPFO	Pion Flat	86.10	55	PFAKE		15 27 30.0	+12
XPFO				LR	LR		
	comp=Z,2µm,19.0s						
IKP	In-Ko-Pah, Jac	86.11	56	P	P	15 27 17.0	-0.6
	baz=254						
JIRN	Jiri	86.12	299	eP	P	15 27 18.8	+0.7
	comp=Z,42nm,1.0s						
GSC	Goldstone, Bar	86.29	53	eP	P	15 27 17.4	-1.0
	comp=Z,11nm,1.3s						
GSC				LR	LR		
	comp=Z,1µm,21.0s						
GSC	Goldstone, Bar	86.29	53	P	P	15 27 17.9	-0.5
	baz=254						
GRAC	Grapevine Rang	86.34	51	P	P	15 27 17.9	-0.6
	baz=253						
KVN	Kaiserville	86.39	49	eP	P	15 27 17.4	-1.5
	comp=Z,7.9nm,0.9s						
KVN				LR	LR		
	comp=Z,1µm,20.0s						
KVN	Kaiserville	86.39	49	eP	P	15 27 17.4	-1.5
KVN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KVN				MLR	MLR		
	comp=Z,1µm,20.0s						
GUN	Gumba	86.45	299	eP	P	15 27 20.2	+0.5
	comp=Z,60nm,1.3s						
HEC	Hector,Ludlow	86.53	54	P	P	15 27 18.7	-0.9
	baz=254,SNR=7.5						
BELC	Belle Mtn. Jos	86.57	55	P	P	15 27 18.8	-1.1
	baz=254,SNR=12						
PALK	Pallekele	86.64	278	eP	P	15 27 18.8	-1.7
	comp=Z,22nm,1.0s						
PALK				LR	LR		
	comp=Z,400nm,22.0s						
PALK	Pallekele	86.64	278	eP	P	15 27 18.8	-1.7
PALK				pmax	pmax		
	comp=Z,22nm,1.0s						
PALK				MLR	MLR		
	comp=Z,400nm,22.0s						
PALK	Pallekele	86.64	278	P	P	15 27 19.1	-1.4
PALK				P	P	15 27 19.1	-1.4
PKI	Pulchoki	86.77	299	eP	P	15 27 21.2	0.0
	comp=Z,48nm,1.2s						
PKIN	Phulchoki	86.78	299	eP	P	15 27 21.5	+0.3
	comp=Z,42nm,1.3s						
BC3	Big Chuckawall	86.92	55	P	P	15 27 20.6	-1.0
	baz=254						
KKN	Kakani	86.93	299	eP	P	15 27 22.4	+0.5
	comp=Z,40nm,1.2s						
I07A	Izee	86.94	44	eP	P	15 27 20.7	-0.7
	comp=Z,14nm,1.0s						
TUQ	Turquoise Moun	87.02	53	P	P	15 27 21.7	-0.4
	baz=254,SNR=6.7						
WVOR	Wild Horse Val	87.02	46	eP	P	15 27 21.1	-0.8
	comp=Z,14nm,1.0s						
WVOR	Wild Horse Val	87.02	46	eP	P	15 27 21.1	-0.8
WVOR				pmax	pmax		
	comp=Z,14nm,1.0s						
DMN	Daman	87.04	299	eP	P	15 27 22.9	+0.4
	comp=Z,78nm,1.3s						
GMRC	Granite Mounta	87.05	54	P	P	15 27 22.4	+0.2
	baz=254,SNR=7.7						
TPNV	Topopah Spring	87.18	52	eP	P	15 27 21.4	-1.4
	comp=Z,27nm,1.6s						
TPNV				LR	LR		
	comp=Z,2µm,19.0s						
TPNV	Topopah Spring	87.18	52	eP	P	15 27 21.4	-1.4
TPNV				pmax	pmax		
	comp=Z,27nm,1.6s						
TPNV				MLR	MLR		
	comp=Z,2µm,19.0s						
TPNV	Topopah Spring	87.18	52	P	P	15 27 22.0	-0.8
	baz=254						
GLA	Glamis	87.26	56	P	P	15 27 22.7	-0.5
	baz=255						
IRM	Iron Mountain	87.30	55	P	P	15 27 22.9	-0.4
	baz=255,SNR=6.9						
J08A	Circle Bar Ran	87.42	45	eP	P	15 27 22.8	-1.0
	comp=Z,17nm,1.0s						
LDFC	Landfair	87.57	54	eP	P	15 27 23.1	-1.6
	comp=Z,30nm,1.0s						
LDFC				LR	LR		
	comp=Z,2µm,18.0s						
Y12C	Blythe	87.69	55	eP	P	15 27 24.7	-0.4
	comp=Z,29nm,1.4s						
Y12C				LR	LR		
	comp=Z,1µm,20.0s						
Y12C	Blythe	87.69	55	P	P	15 27 24.5	-0.6
	baz=255						
G08A	Pilot Rock	87.69	43	eP	P	15 27 23.6	-1.4
	comp=Z,12nm,1.0s						
SHPR	Sheep Range	87.90	52	eP	P	15 27 25.2	-1.1
	comp=Z,47nm,2.0s						
SHPR				LR	LR		
	comp=Z,2µm,20.0s						
EPYK	Eagle Plains	87.91	20	eP	P	15 27 24.3	-1.2
	comp=Z,33nm,1.2s						
EPYK	Eagle Plains	87.91	20	P	P	15 27 25.9	+0.4
	baz=236						
SRIG	Santa Rosalia	88.02	62	PFAKE		15 27 40.0	+13
SRIG				LR	LR		
	comp=Z,2µm,19.0s						
113A	Mohawk Valley,	88.05	56	eP	P	15 27 26.4	-0.4
	comp=Z,20nm,1.4s						
R11A	Troy Canyon, C	88.07	50	eP	P	15 27 26.0	-1.1
	comp=Z,13nm,1.4s						
R11A				LR	LR		
	comp=Z,2µm,20.0s						
R11A	Troy Canyon, C	88.07	50	P	P	15 27 26.6	-0.5
	baz=254						
PDMCI	Parker Dam,Lak	88.14	55	P	P	15 27 27.0	-0.3
	baz=255						
DANN	Dangsing	88.37	299	eP	P	15 27 28.3	-0.6
	comp=Z,30nm,0.9s						
KOLN	Koldanda	88.37	299	eP	P	15 27 28.3	-0.5
	comp=Z,19nm,0.9s						
W13A	Hualapai Mount	88.54	54	eP	P	15 27 27.4	-2.0
	comp=Z,12nm,1.3s						
W13A				LR	LR		
	comp=Z,2µm,18.0s						
214A	Organ Pipe Nat	88.64	57	P	P	15 27 29.0	-0.8
	baz=256						
BMO	Blue Mountains	88.67	44	eP	P	15 27 28.4	-1.3
	comp=Z,17nm,1.4s						
BMO	Blue Mountains	88.67	44	eP	P	15 27 28.4	-1.3
BMO				pmax	pmax		
	comp=Z,17nm,1.4s						
Y14A	Wickenburg	88.96	55	eP	P	15 27 29.4	-1.8

	comp=Z,5.8nm,1.0s						
Y14A				LR	LR		
	comp=Z,1µm,19.0s						
PYUN	**Piuthan**	88.97	299	*e*P	P	15 27 30.9	-0.7
	comp=Z,23nm,0.8s						
ELK	**Elko**	88.98	48	*e*P	P	15 27 30.3	-1.1
	comp=Z,14nm,1.4s						
ELK	**Elko**	88.98	48	*e*P	P	15 27 30.3	-1.1
ELK				pmax	pmax		
	comp=Z,14nm,1.4s						
F10A	**Beach Ranch, E**	89.05	43	*e*P	P	15 27 30.3	-1.1
	comp=Z,77nm,2.0s						
WMQ	**Urumqi**	89.24	315	P	P	15 27 32.3	0.0
WMQ				pP	sP	15 27 35.8	-2.0
WMQ				SKS	SKSac	15 38 00.3	-1.8
WMQ				S	ScS	15 38 24.5	-1.8
WMQ				SS	SS	15 44 16.5	+0.4
WMQ				pmax	pmax		
	comp=Z,33nm,1.3s						
WMQ				LR	LR		
	comp=Z,2µm,16.9s						
WMQ				LR	LR		
	comp=Z,1µm,17.5s						
WMQ				LR	LR		
	comp=Z,1µm,22.5s						
WMQ	**Urumqi**	89.24	315	PFAKE		15 27 40.0	+7.7
WMQ				LR	LR		
	comp=Z,701nm,21.0s						
PSUT	**Pine Spring**	89.43	51	*e*P	P	15 27 32.1	-1.4
	comp=Z,10nm,1.0s						
PSUT				LR	LR		
	comp=Z,2µm,19.0s						
LCMT	**Little Creek M**	89.52	52	*e*P	P	15 27 32.5	-1.4
	comp=Z,8.8nm,0.9s						
LCMT				LR	LR		
	comp=Z,1µm,20.0s						
CCUT	**Cedar City**	89.56	52	*e*P	P	15 27 33.0	-1.2
	comp=Z,11nm,1.0s						
CCUT				LR	LR		
	comp=Z,2µm,20.0s						
SZCU	**Shurtz Canyon**	89.79	52	*e*P	P	15 27 33.7	-1.6
NEW	**Newport**	89.79	41	P	P	15 27 34.4	-0.4
	baz=253						
KNB	**Kanab**	89.85	52	*e*P	P	15 27 34.8	-0.7
	comp=Z,30nm,1.4s						
INK	**Inuvik**	90.00	19	*e*P	P	15 27 34.6	-0.6
	comp=Z,16nm,1.4s						
INK	**Inuvik**	90.00	19	*e*P	P	15 27 34.6	-0.6
INK				pmax	pmax		
	comp=Z,16nm,1.4s						
U15A	**North Rim**	90.12	53	*e*P	P	15 27 34.4	-2.5
	comp=Z,16nm,0.8s						
U15A				LR	LR		
	comp=Z,2µm,20.0s						
HLID	**Hailey**	90.31	46	*e*P	P	15 27 35.8	-1.8
	comp=Z,6.4nm,0.9s						
HLID	**Hailey**	90.31	46	P	P	15 27 36.8	-0.7
	baz=255						
X16A	**Lo Mia Camp, P**	90.33	55	*e*P	P	15 27 36.6	-1.2
	comp=Z,8.8nm,0.9s						
PKCU	**Pink Cliffs**	90.35	52	*e*P	P	15 27 37.3	-0.7
	comp=Z,27nm,1.3s						
PKCU				LR	LR		
	comp=Z,2µm,19.0s						
TUC	**Tucson**	90.39	57	*e*P	P	15 27 37.4	-0.6
	comp=Z,14nm,1.4s						
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	90.39	57	*e*P	P	15 27 37.4	-0.6
TUC				pmax	pmax		
	comp=Z,14nm,1.4s						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	90.39	57	P	P	15 27 37.5	-0.5
	baz=257						
TCRU	**Three Creeks R**	90.52	51	PFAKE		15 27 50.0	+11
TCRU				LR	LR		
	comp=Z,2µm,18.0s						
MTPU	**Mount Pierson**	90.59	51	*e*P	P	15 27 37.9	-1.2
	comp=Z,11nm,0.9s						
MTPU				LR	LR		
	comp=Z,2µm,22.0s						
DUG	**Dugway, Tooele**	90.63	49	*e*P	P	15 27 37.9	-1.1
	comp=Z,7.3nm,0.9s						
DUG	**Dugway, Tooele**	90.63	49	*e*P	P	15 27 37.9	-1.1
DUG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DUG	**Dugway, Tooele**	90.63	49	P	P	15 27 38.5	-0.5
	baz=256						
WUAZ	**Wupatki**	90.64	54	*e*P	P	15 27 37.9	-1.3
	comp=Z,11nm,1.0s						
WUAZ				LR	LR		
	comp=Z,1µm,18.0s						
WUAZ	**Wupatki**	90.64	54	P	P	15 27 38.5	-0.6
	baz=257						
BGU	**Big Grassy Mou**	90.64	48	*e*P	P	15 27 38.2	-0.9
	comp=Z,9.3nm,1.0s						
MSU	**Marysvale**	90.70	51	*e*P	P	15 27 38.5	-1.0
MSU	**Marysvale**	90.70	51	*e*P	P	15 27 38.5	-1.0
HYB	**Hyderabad**	90.72	288	*i* P	P	15 27 40.0	+0.2
HYB				*e*SKS	SKSac	15 38 12.0	+0.3
HVU	**Hansel Valley**	91.04	48	*e*P	P	15 27 39.8	-1.1
	comp=Z,20nm,1.2s						
HVU	**Hansel Valley**	91.04	48	*e*P	P	15 27 39.8	-1.1
HVU				pmax	pmax		
	comp=Z,21nm,1.2s						
DGZ	**Jazzator, Alta**	91.05	320*c*	*i*P	P	15 27 40.7	0.0
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NLU	**North Lily Min**	91.12	50	*e*P	P	15 27 40.3	-1.1
	comp=Z,11nm,1.0s						
NLU				LR	LR		
	comp=Z,2µm,20.0s						
319A	**Douglas**	91.44	58	*e*P	P	15 27 41.2	-1.7
	comp=Z,16nm,1.1s						
319A				LR	LR		
	comp=Z,2µm,20.0s						
MPU	**Maple Canyon**	91.46	50	*e*P	P	15 27 42.3	-0.6
	comp=Z,9.9nm,1.1s						
MPU				LR	LR		
	comp=Z,2µm,22.0s						
CTU	**Camp Tracy**	91.53	49	*e*P	P	15 27 42.2	-1.0
	comp=Z,33nm,1.7s						
X18A	**Snowflake**	91.56	55	PFAKE		15 27 50.0	+6.5
X18A				LR	LR		
	comp=Z,900nm,19.0s						
Q16A	**Castle Valley**	91.56	51	*e*P	P	15 27 43.0	-0.5
	comp=Z,11nm,1.1s						
Q16A				LR	LR		
	comp=Z,2µm,18.0s						
TMUT	**Trail Mountain**	91.62	50	*e*P	P	15 27 43.4	-0.4
	comp=Z,8.2nm,0.9s						
TMUT				LR	LR		
	comp=Z,1µm,20.0s						
SYO	**Syowa Base**	91.68	197⇓	*i*pP	pP	15 27 45.0	-1.9
SYO	**Syowa Base**	91.68	197⇑	*e*sP	sP	15 27 49.0	+0.8
MCMT	**McKenzie Canyo**	91.72	45	*e*P	P	15 27 43.6	-0.5
JLU	**Jordanelle**	91.73	49	PFAKE		15 27 50.0	+5.7
JLU				LR	LR		
	comp=Z,1µm,19.0s						
TCUT	**Toone Canyon**	91.88	49	*e*P	P	15 27 44.3	-0.6
	comp=Z,45nm,1.6s						
P17A	**Butcher Ranch,**	92.01	50	PFAKE		15 28 00.0	+15
P17A				LR	LR		
	comp=Z,2µm,18.0s						
DLMT	**Dillon**	92.02	44	PFAKE		15 28 00.0	+15
DLMT				LR	LR		
	comp=Z,1µm,21.0s						
SRU	**San Rafael Swe**	92.10	51	PFAKE		15 28 00.0	+14
SRU				LR	LR		
	comp=Z,1µm,20.0s						
LRM	**Limekiln Ridge**	92.23	44	*e*P	P	15 27 45.1	-1.3
FXWY	**Fox Creek**	92.72	46	*e*P	P	15 27 46.9	-1.9
	comp=Z,7.1nm,1.2s						
TPAW	**Teton Pass**	92.74	46	*e*P	P	15 27 47.7	-1.2
	comp=Z,28nm,1.8s						
HRY	**Holter Researc**	92.85	43	*e*P	P	15 27 48.0	-1.1
121A	**Cookes Peak, D**	92.92	58	P	P	15 27 49.7	-0.1
	baz=259						
MOOW	**Moose Ponds**	92.94	46	*e*P	P	15 27 48.8	-1.0
	comp=Z,4.4nm,1.1s						
YMR	**Madison River**	92.99	45	*e*P	P	15 27 49.4	-0.6
	comp=Z,9.9nm,1.1s						
LOHW	**Long Hollow**	93.01	46	*e*P	P	15 27 49.0	-1.1
	comp=Z,17nm,1.8s						
YFT	**Old Faithful**	93.03	45	PFAKE		15 28 00.0	+10
YFT				LR	LR		
	comp=Z,2µm,18.0s						
PV14	**Lion Creek, Pa**	93.09	52	PFAKE		15 28 00.0	+9.4
PV14				LR	LR		
	comp=Z,2µm,20.0s						
YHH	**Holmes Hill**	93.10	45	PFAKE		15 28 00.0	+9.5
YHH				LR	LR		
	comp=Z,1µm,19.0s						
PV23	**Carpenter Ridg**	93.11	52	*e*P	P	15 27 49.6	-1.1
	comp=Z,8.4nm,0.7s						
H17A	**Grant Village**	93.20	46	P	P	15 27 51.2	+0.2
	baz=258						
PV13	**Radium Mtn., P**	93.20	52	PFAKE		15 28 00.0	+8.9
PV13				LR	LR		
	comp=Z,2µm,21.0s						
MVCO	**Mesa Verde**	93.26	53	PFAKE		15 28 00.0	+8.6
MVCO				LR	LR		
	comp=Z,2µm,18.0s						
PV02	**Paradox Valley**	93.28	52	PFAKE		15 28 00.0	+8.6
PV02				LR	LR		
	comp=Z,2µm,21.0s						
LKWY	**Lake**	93.36	45	PFAKE		15 28 00.0	+8.3
LKWY				LR	LR		
	comp=Z,2µm,19.0s						
BW06	**Boulder Array**	93.58	47	*e*P	P	15 27 51.6	-1.2
	comp=Z,17nm,1.8s						
BW06	**Boulder Array**	93.58	47	P	P	15 27 52.6	-0.2
	baz=258						
PDAR	**Pinedale Array**	93.58	47	P	P	15 27 51.0	-1.7
	comp=Z,1.6nm,0.8s,baz=226,slow=2.1,SNR=12						
PDAR				LR	LR	16 02 38.8	
	comp=Z,266nm,21.5s,baz=280,slow=31						
MKAR	**Makanchi Array**	93.67	317	*e*P	P	15 27 52.1	-0.7
	comp=Z,53nm,0.9s						
MKAR				PKKP	PKKPdf	15 44 56.4	-2.1
MKAR	**Makanchi Array**	93.67	317	P	P	15 27 52.0	-0.7
	comp=Z,7.7nm,0.8s,baz=102,slow=6.1,SNR=63						
MKAR				PKKP	PKKPdf	15 44 56.4	-2.1
	comp=Z,1.6nm,0.8s,baz=354,slow=2.4,SNR=14						
HPIG		93.67	63	PFAKE		15 28 00.0	+6.5
HPIG				LR	LR		
	comp=Z,1µm,20.0s						
ZALV	**Zalesovo Beam**	93.70	324	P	P	15 27 51.8	-0.9
	comp=Z,4.4nm,0.9s,baz=108,slow=4.8,SNR=15						
MAKZ	**Makanchi**	93.88	317	*e*P	P	15 27 53.0	-0.7
	comp=Z,15nm,1.0s						
MAKZ				LR	LR		
	comp=Z,900nm,22.0s						
MAKZ	**Makanchi**	93.88	317	*e*P	P	15 27 53.0	-0.7
MAKZ				pmax	pmax		
	comp=Z,15nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,900nm,22.0s						
O20A	**White River Ci**	94.03	50	PFAKE		15 28 10.0	+15
O20A				LR	LR		
	comp=Z,2µm,19.0s						
ANMO	**Albuquerque**	94.46	55	PFAKE		15 28 10.0	+13
ANMO				LR	LR		
	comp=Z,1µm,21.0s						
EGMT	**Eagleton**	94.51	42	P	P	15 27 56.4	-0.3
	baz=258						
S22A	**4UR Ranch, Cre**	94.67	53	PFAKE		15 28 10.0	+12
S22A				LR	LR		
	comp=Z,1µm,18.0s						
S22A	**4UR Ranch, Cre**	94.67	53	P	P	15 27 57.1	-0.9
	baz=260						
MNTX	**Cornudas Mount**	94.77	59	PFAKE		15 28 10.0	+12
MNTX				LR	LR		
	comp=Z,2µm,20.0s						
NVS	**Novosibirsk**	94.81	325	*e*P	P	15 27 56.9	-0.8
NVS				*e*		15 31 42.0	
SMCO	**Snowmass**	94.81	51	PFAKE		15 28 10.0	+11
SMCO				LR	LR		
	comp=Z,2µm,20.0s						
YKA	**Yellowknife Ar**	95.05	27	P	P	15 27 56.1	-2.6
	comp=Z,1.2nm,0.5s,baz=255,slow=4.7,SNR=24						
YKA				PP	PP	15 31 47.5	-0.7
	comp=Z,0.2nm,0.5s,baz=257,slow=7.8,SNR=4.1						
YKA				PKKPbc	PKKPbc	15 44 54.2	-2.0
	comp=Z,0.1nm,0.4s,baz=70,slow=3.5,SNR=3.9						
YKA				LR	LR	16 06 38.4	
	comp=Z,80nm,19.0s,baz=255,slow=33						
TXAR	**Lajitas Array**	95.83	61	PP	PP	15 31 54.5	-0.9
	comp=Z,1.2nm,0.8s,baz=261,slow=9.9,SNR=6.4						
TXAR				LR	LR	16 06 40.5	
	comp=Z,1µm,18.2s,baz=0.0,slow=33						
N23A	**Red Feather La**	95.89	50	PFAKE		15 28 10.0	+6.6
N23A				LR	LR		
	comp=Z,1µm,19.0s						
ISCO	**Idaho Springs**	95.96	51	PFAKE		15 28 10.0	+6.2
ISCO				LR	LR		
	comp=Z,2µm,22.0s						
Q24A	**Divide**	96.18	52	PFAKE		15 28 20.0	+15
Q24A				LR	LR		
	comp=Z,1µm,18.0s						
NRIK	**Noril'sk**	96.27	340	P	P	15 28 01.5	-2.6
	comp=Z,1.1nm,0.3s,baz=113,slow=1.9,SNR=6.1						
T25A	**Trinidad**	96.46	54	PFAKE		15 28 20.0	+14
T25A				LR	LR		
	comp=Z,1µm,20.0s						
KURK	**Kurchatov**	96.79	320	*e*P	P	15 28 05.9	-1.0
	comp=Z,7.8nm,1.3s						
KURK				LR	LR		
	comp=Z,900nm,18.0s						
KURK	**Kurchatov**	96.79	320	*e*P	P	15 28 05.9	-1.0
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK				MLR	MLR		
	comp=Z,900nm,18.0s						
KURK	**Kurchatov**	96.79	320	P	P	15 28 06.0	-0.8
KURK				P	P	15 28 06.0	-0.8
KSH	**Kashi**	96.89	309	P	P	15 28 08.8	+1.0
KSH				pP	pwP	15 28 13.0	-2.5
KSH				PP	PP	15 32 04.0	+0.6
KSH				SKS	SKSac	15 38 46.0	+1.3
KSH				S	S	15 39 29.0	-1.0
KSH				sS	sS	15 39 36.8	+0.2
KSH				SS	SS	15 46 09.0	+2.9
KSH				LR	LR		
	comp=Z,200nm,4.4s						
KSH				LR	LR		
	comp=Z,200nm,5.1s						
KSH				LR	LR		
	comp=Z,650nm,10.4s						
SNAA	**Sanae**	96.99	184	PFAKE		15 28 20.0	+12
SNAA				LR	LR		
	comp=Z,1µm,18.0s						
MSTX	**Muleshoe**	97.30	57	PFAKE		15 28 20.0	+10
MSTX				LR	LR		
	comp=Z,2µm,20.0s						
NIL	**Nilore**	98.22	303	PFAKE		15 28 20.0	+6.2
NIL				LR	LR		
	comp=Z,500nm,20.0s						
AMTX	**Amarillo**	98.32	56	PFAKE		15 28 20.0	+5.6
AMTX				LR	LR		
	comp=Z,2µm,20.0s						
FRU1	**Bishkek**	98.36	312	PFAKE		15 28 20.0	+5.7
FRU1				LR	LR		
	comp=Z,700nm,22.0s						
AAK	**Ala-Archa**	98.44	312	PFAKE		15 28 30.0	+15
AAK				LR	LR		
	comp=Z,700nm,22.0s						
AAK	**Ala-Archa**	98.44	312*c*	*e*P	P	15 28 14.4	-0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,2.5s						
AAK	**Ala-Archa**	98.44	312	P	P	15 28 12.9	-1.9
LNIG	**Linares**	98.85	66	PFAKE		15 28 30.0	+13
LNIG				LR	LR		
	comp=Z,1µm,19.0s						
JCT	**Junction City**	99.31	61	PFAKE		15 28 30.0	+11
JCT				LR	LR		
	comp=Z,2µm,20.0s						
833A	**Chaparral WMA,**	99.38	63	PFAKE		15 28 30.0	+11
833A				LR	LR		
	comp=Z,1µm,18.0s						
ABTX	**Abilene, Hawle**	99.72	59	PFAKE		15 28 30.0	+9.5
ABTX				LR	LR		
	comp=Z,2µm,20.0s						
FFC	**Flin Flon**	100.29	36	PFAKE		15 28 30.0	+7.5
FFC				LR	LR		
	comp=Z,2µm,18.0s						
FFC	**Flin Flon**	100.29	36	*i* P	Pdif	15 28 23.0	+0.5
WMOK	**Wichita Mounta**	100.67	57	PFAKE		15 28 40.0	+15
WMOK				LR	LR		
	comp=Z,2µm,18.0s						
435B	**Jarrell**	101.25	61	PFAKE		15 28 40.0	+13
435B				LR	LR		
	comp=Z,2µm,20.0s						
WHTX	**Lake Whitney,**	101.48	59	PFAKE		15 28 40.0	+12
WHTX				LR	LR		
	comp=Z,2µm,18.0s						
BGNE	**Belgrade**	101.79	50	PFAKE		15 28 40.0	+10
BGNE				LR	LR		
	comp=Z,2µm,19.0s						
CHGR	**Chuyangaron**	102.06	307	PFAKE		15 28 40.0	+9.1
CHGR				LR	LR		
	comp=Z,2µm,20.0s						
BRVK	**Borovoye**	102.16	322	PFAKE		15 28 40.0	+9.1
BRVK				LR	LR		
	comp=Z,1µm,21.0s						
BRVK	**Borovoye**	102.16	322	*i* P	Pdif	15 28 30.5	-0.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	**Borovoye**	102.16	322	P	Pdif	15 28 29.0	-1.9
HKT	**Hockley**	102.67	62	PFAKE		15 28 40.0	+6.5
HKT				LR	LR		
	comp=Z,2µm,18.0s						
TUL1	**Leonard**	103.22	56	PFAKE		15 28 50.0	+14
TUL1				LR	LR		
	comp=Z,2µm,18.0s						
NATX	**Nacogdoches**	103.83	60	PFAKE		15 28 50.0	+11
NATX				LR	LR		
	comp=Z,2µm,18.0s						
CCIG	**Comitan**	104.49	76	PFAKE		15 28 50.0	+7.8
CCIG				LR	LR		
	comp=Z,700nm,18.0s						
FCC	**Fort Churchill**	104.71	32	PFAKE		15 28 50.0	+8.0
FCC				LR	LR		
	comp=Z,2µm,19.0s						
MIAR	**Mount Ida**	104.93	57	PFAKE		15 28 50.0	+6.4
MIAR				LR	LR		
	comp=Z,2µm,20.0s						
Z41A	**Richland Creek**	105.50	58	PFAKE		15 33 10.0	+10
Z41A				LR	LR		
	comp=Z,2µm,19.0s						
SCIA	**State Center**	105.51	50	PFAKE		15 33 10.0	+10
SCIA				LR	LR		
	comp=Z,2µm,20.0s						
UALR	**University of**	105.96	57	PFAKE		15 33 10.0	+9.4
UALR				LR	LR		
	comp=Z,2µm,18.0s						
WHAR	**Wooly Hollow**	106.03	56	PFAKE		15 33 10.0	+9.3
WHAR				LR	LR		
	comp=Z,2µm,21.0s						
W41B	**Gary Mavity, V**	106.06	57	PFAKE		15 33 10.0	+9.3
W41B				LR	LR		
	comp=Z,2µm,20.0s						
L40A	**Anamosa**	107.00	49	PFAKE		15 33 10.0	+7.7
L40A				LR	LR		
	comp=Z,2µm,18.0s						
PBMO	**Poplar Bluff**	107.58	55	PFAKE		15 33 10.0	+6.5
PBMO				LR	LR		
	comp=Z,2µm,20.0s						
G40A	**Rib Lake**	107.68	46	PFAKE		15 33 10.0	+6.5
G40A				LR	LR		
	comp=Z,2µm,18.0s						
MET	**Memphis--Engin**	107.95	57	PFAKE		15 33 20.0	+16
MET				LR	LR		
	comp=Z,2µm,18.0s						
GLAT	**Glass**	108.49	55	PFAKE		15 33 20.0	+15
GLAT				LR	LR		
	comp=Z,2µm,20.0s						
SIUC	**Southern Illin**	108.55	54	PFAKE		15 33 20.0	+15
SIUC				LR	LR		
	comp=Z,2µm,20.0s						
TEIG	**Tepich**	108.58	72	PFAKE		15 33 20.0	+14
TEIG				LR	LR		
	comp=Z,700nm,21.0s						
ARU	**Arti**	108.78	326	PFAKE		15 33 20.0	+15
ARU				LR	LR		
	comp=Z,900nm,20.0s						
TGUH	**Tegucigalpa,Un**	108.87	79	PFAKE		15 33 20.0	+14
TGUH				LR	LR		
	comp=Z,900nm,20.0s						
T45A	**Paducah**	109.01	55	PFAKE		15 33 20.0	+14
T45A				LR	LR		
	comp=Z,2µm,20.0s						
147A	**Livingston**	109.29	59	PFAKE		15 33 20.0	+13
147A				LR	LR		
	comp=Z,1µm,20.0s						
M44A	**Midewin, Midew**	109.39	50	PFAKE		15 33 20.0	+13
M44A				LR	LR		
	comp=Z,2µm,19.0s						
WVT	**Waverly**	109.67	56	PFAKE		15 33 20.0	+13
WVT				LR	LR		
	comp=Z,2µm,19.0s						
T47A	**Sharon Grove**	110.24	55	PFAKE		15 33 20.0	+11
T47A				LR	LR		
	comp=Z,2µm,18.0s						
X48A	**Hartselle**	110.32	57	PFAKE		15 33 20.0	+11
X48A				LR	LR		
	comp=Z,1µm,20.0s						
LRAL	**Lakeview Retre**	110.36	59	PFAKE		15 33 20.0	+11
LRAL				LR	LR		
	comp=Z,2µm,21.0s						
V48A	**Smith Brothers**	110.49	56	PFAKE		15 33 20.0	+11
V48A				LR	LR		
	comp=Z,1µm,18.0s						
JTS	**JuntasAbangare**	110.62	83	PFAKE		15 33 20.0	+10
JTS				LR	LR		
	comp=Z,700nm,18.0s						
M46A	**Old House Fiel**	110.66	50	PFAKE		15 33 20.0	+11
M46A				LR	LR		
	comp=Z,2µm,18.0s						
Y49A	**Blount Mountai**	110.85	58	PFAKE		15 33 20.0	+10
Y49A				LR	LR		
	comp=Z,2µm,21.0s						
Z50A	**Ashland**	111.26	59	PFAKE		15 33 20.0	+9.4
Z50A				LR	LR		
	comp=Z,2µm,18.0s						
HDC	**Heredia**	111.40	84	PFAKE		15 33 20.0	+8.5
HDC				LR	LR		
	comp=Z,800nm,18.0s						
ESPN	**Las Esperanzas**	111.51	81	PFAKE		15 33 20.0	+8.5
ESPN				LR	LR		
	comp=Z,600nm,21.0s						
152A	**Waverly Hall**	112.28	59	PFAKE		15 33 20.0	+7.5
152A				LR	LR		
	comp=Z,2µm,20.0s						
Y52A	**Lilburn**	112.81	58	PFAKE		15 33 20.0	+6.5
Y52A				LR	LR		
	comp=Z,2µm,18.0s						
GOGA	**Godfrey**	113.32	58	PFAKE		15 33 30.0	+16
GOGA				LR	LR		
	comp=Z,2µm,19.0s						
154A	**Montrose**	113.64	59	PFAKE		15 33 30.0	+15
154A				LR	LR		
	comp=Z,2µm,21.0s						
NNA	**Nana**	113.65	108	PFAKE		15 33 30.0	+14
NNA				LR	LR		
	comp=Z,1µm,21.0s						
V53A	**Saluda**	113.76	56	PFAKE		15 33 30.0	+15
V53A				LR	LR		
	comp=Z,1µm,19.0s						
HODGE	**Hodges**	114.29	57	PFAKE		15 33 30.0	+14
HODGE				LR	LR		
	comp=Z,2µm,19.0s						
ABTO	**Aybut**	114.59	284	P	PKiKP	15 33 20.7	+3.3
GO02	**Mina Guanaco**	115.05	125	PFAKE		15 33 30.0	+12
GO02				LR	LR		
	comp=Z,1µm,18.0s						
JSC	**Jenkinsville**	115.11	57	PFAKE		15 33 30.0	+12
JSC				LR	LR		
	comp=Z,2µm,20.0s						
ERPA	**Erie**	115.33	49	PFAKE		15 33 30.0	+12
ERPA				LR	LR		
	comp=Z,2µm,19.0s						
NHSC	**New Hope**	116.08	59	PFAKE		15 33 30.0	+10
NHSC				LR	LR		
	comp=Z,2µm,20.0s						
ARCES	**ARCESS Array B**	116.48	345	PKP	PKPdf	15 33 18.0	-1.5
	comp=Z,4.9nm,0.8s,baz=71,slow=1.8,SNR=16						
PB11	**IPOC Station P**	117.33	119	PFAKE		15 33 30.0	+7.2
PB11				LR	LR		
	comp=Z,1µm,22.0s						
GNI	**Garni**	120.80	310	PFAKE		15 33 40.0	+11
GNI				LR	LR		
	comp=Z,400nm,21.0s						
GNI	**Garni**	120.80	310*c*	*i*PKIKP	PKiKP	15 33 31.3	+2.3
GNI				pmax	pmax		
	comp=Z,86nm,1.7s						
OBN	**Obninsk**	120.95	329	PFAKE		15 33 40.0	+11

OBN				LR	LR		
	comp=Z,600nm,19.0s						
OBN	Obninsk	120.95	329	ePKIKP	PKPdf	15 33 16.2	-12
OBN				ePS	PS	15 44 45.2	-4.3
OBN				eSS	SS	15 51 29.9	+1.5
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	Kislovodsk	121.37	315	PFAKE		15 33 40.0	+10
KIV				LR	LR		
	comp=Z,501nm,20.0s						
FINES	FINESS Array B	121.92	339	PKP	PKPdf	15 33 28.5	-1.6
	comp=Z,2.9nm,0.9s,baz=123,slow=7.0,SNR=5.7						
RAYN	Ar Rayn	122.08	291	ePKPdf	PKPdf	15 33 30.1	-1.6
RAYN	Ar Rayn	122.08	291	ePKIKP	PKPdf	15 33 30.1	-1.6
SOC	Sochi	123.54	315	i PKIKP	PKPdf	15 33 32.7	-1.1
SOC				e		15 35 14.8	
SOC				e		15 40 31.9	
SOC				ePS	PS	15 45 10.2	-2.8
SOC				eSS	SS	15 52 06.0	+3.7
SOC				eSSS	SSS	15 56 37.5	
SOC				MLR	MLR		
	comp=Z,449nm,20.0s						
CPUP	Villa Florida	123.88	132	PKP	PKPdf	15 33 33.0	-2.0
	comp=Z,3.1nm,1.1s,baz=256,slow=4.2,SNR=2.7						
ATD	Arta Tunnel	124.17	276	PFAKE		15 33 50.0	+14
ATD				LR	LR		
	comp=Z,500nm,19.0s						
SDV	Santo Domingo	124.43	87	PKP	PKPdf	15 33 34.5	-2.1
	comp=Z,5.5nm,0.7s,baz=287,slow=4.7,SNR=6.7						
SDDR	Presa de Saban	124.51	75	PFAKE		15 33 50.0	+13
SDDR				LR	LR		
	comp=Z,1μm,20.0s						
BOSA	Boshof	125.07	223	PKP	PKPdf	15 33 36.5	-1.0
	comp=Z,5.9nm,0.7s,baz=79,slow=2.8,SNR=8.4						
SDD	Santo Domingo	125.80	75	PFAKE		15 33 50.0	+11
SDD				LR	LR		
	comp=Z,1μm,21.0s						
NB2	NORSAR Subarra	126.85	345	PKPdf	PKPdf	15 33 39.5	-0.2
	comp=Z,8.3nm,1.2s,baz=31,slow=1.9						
NB2	NORSAR Subarra	126.85	345	PKPdf	PKPdf	15 33 39.5	-0.2
	baz=31,slow=1.9						
NOA	NORSAR Array B	126.85	345	PKP	PKPdf	15 33 38.0	-1.6
	comp=Z,2.1nm,0.8s,baz=30,slow=2.0,SNR=6.2						
AKASG	Malin Array Be	127.01	327	PKP	PKiKP	15 33 40.3	-0.4
	comp=Z,2.2nm,0.8s,baz=46,slow=1.5,SNR=15						
KIEV	Kiev	127.03	327	PFAKE		15 33 50.0	+9.3
KIEV				LR	LR		
	comp=Z,600nm,20.0s						
KMBO	Kilima Mbogo	127.44	260	PKP	PKiKP	15 33 43.9	+0.9
KMBO				LR	LR		
	comp=Z,400nm,19.0s						
KMBO	Kilima Mbogo	127.44	260	PKIKP	PKiKP	15 33 43.9	+0.9
KMBO				MLR	MLR		
	comp=Z,400nm,19.0s						
KMBO	Kilima Mbogo	127.44	260	P	PKiKP	15 33 45.0	+1.9
KMBO	Kilima Mbogo	127.44	260	PKP	PKiKP	15 33 43.9	+0.9
	comp=Z,1.7nm,0.7s,baz=160,slow=1.3,SNR=6.1						
FURI	Furi	127.96	273	PFAKE		15 33 50.0	+5.9
FURI				LR	LR		
	comp=Z,500nm,19.0s						
SUW	Suwalki	128.01	333	PFAKE		15 33 50.0	+7.4
SUW				LR	LR		
	comp=Z,800nm,20.0s						
MPR	Mayaguez	128.44	76	PFAKE		15 33 50.0	+5.5
MPR				LR	LR		
	comp=Z,800nm,20.0s						
KONO	Kongsberg	128.46	345	PFAKE		15 33 50.0	+6.7
KONO				LR	LR		
	comp=Z,600nm,18.0s						
BRTR	Keskin Array B	129.11	313	PKP	PKPdf	15 33 43.9	-0.9
	comp=Z,2.0nm,1.0s,baz=45,slow=1.9,SNR=9.2						
ANTO	Ankara	129.66	313	PFAKE		15 34 00.0	+14
ANTO				LR	LR		
	comp=Z,300nm,20.0s						
LSZ	Lusaka	130.49	239	PFAKE		15 34 00.0	+11
LSZ				LR	LR		
	comp=Z,700nm,18.0s						
LSZ	Lusaka	130.49	239	P	PKiKP	15 33 50.1	+1.2
	SNR=6.9						
TIRR	Tirgusor	130.67	320	PFAKE		15 34 00.0	+12
TIRR				LR	LR		
	comp=Z,500nm,19.0s						
MLR	Muntele Rosu	131.66	323	PFAKE		15 34 00.0	+10
MLR				LR	LR		
	comp=Z,500nm,20.0s						
UZH	Uzhgorod	131.88	328	ePKIKP	PKPdf	15 33 48.5	-1.0
UZH				e		15 33 57.2	
UZH				e		15 36 07.9	
SMRT	St. Maarten	132.30	76	PFAKE		15 34 00.0	+7.7
SMRT				LR	LR		
	comp=Z,1μm,22.0s						
PTGA	Pitinga	132.98	102	PKP	PKiKP	15 33 53.1	-0.7
	comp=Z,5.5nm,1.0s,baz=311,slow=19,SNR=2.6						
OKC	Ostrava-Krasne	133.13	332	AMS	AMS	16 37 40.0	
	comp=Z,700nm,15.0s						
MORC	Moravsky Berou	133.45	332	PFAKE		15 34 00.0	+6.2
MORC				LR	LR		
	comp=Z,700nm,21.0s						
PSZ	Piszkesteto	133.57	329	PFAKE		15 34 00.0	+5.9
PSZ				LR	LR		
	comp=Z,700nm,20.0s						
DPC	Dobruska-Polom	133.59	333	AMS	AMS	16 32 20.0	
	comp=Z,1μm,22.3s						
UPC	Upice	133.61	334	AMS	AMS	16 32 00.0	
	comp=Z,900nm,21.0s						
MBAR	Mbarara	133.86	258	PFAKE		15 34 10.0	+14
MBAR				LR	LR		
	comp=Z,700nm,20.0s						
BRG	Berggiesshubel	134.21	335	ePKP	PKiKP	15 34 03.4	+8.2
	comp=Z,11nm,1.4s						
BRG	Berggiesshubel	134.21	335	ePKIKP	PKiKP	15 34 03.4	+8.2
BRG				pmax	pmax		
	comp=Z,11nm,1.4s						
CLL	Collm	134.25	336	PFAKE		15 34 10.0	+15
CLL				LR	LR		
	comp=Z,700nm,20.0s						
CLL	Collm	134.25	336	ePKiKP	PKiKP	15 33 56.0	+0.7
	comp=Z,8.0nm,1.2s						
CLL				ePKSdf	PKSdf	15 37 28.0	-2.1
CLL				ePPS	PPS	15 48 30.0	
CLL				ePPPrev		15 49 48.0	
CLL				e		15 53 42.0	
CLL				eSKSSKSac		15 56 24.0	
CLL				eSSS	SSS	15 59 00.0	
CLL				Lm	MLR	16 37 00.0	
	comp=N,500nm,19.2s						
CLL				Lm	MLR	16 37 00.0	
	comp=E,100nm,18.4s						
CLL				Lm	MLR	16 37 00.0	
	comp=Z,700nm,19.8s						
CLL	Collm	134.25	336	ePKIKP	PKiKP	15 33 56.0	+0.7
CLL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CLL				MLR	MLR		
	comp=Z,700nm,19.8s						
MODS	Modra-Piesok	134.56	331	ePKIKP	PKiKP	15 33 56.5	+0.5
MODS	Modra-Piesok	134.56	331	ePKP	PKiKP	15 33 56.5	+0.5
GOPC	GO Pecny, Ondr	134.58	334	AMS	AMS	16 34 20.0	
	comp=Z,800nm,21.2s						
PRU	Pruhonice	134.63	334	AMS	AMS	16 35 20.0	
	comp=Z,900nm,24.3s						
TREC	Trest	134.73	333	AMS	AMS	16 33 00.0	
	comp=Z,1μm,24.1s						
VTS	Vitosha	134.85	321	PFAKE		15 34 10.0	+13
VTS				LR	LR		
	comp=Z,500nm,20.0s						
NKC	Novy Kostel	135.31	336	AMS	AMS	16 33 30.0	
	comp=Z,900nm,25.9s						
KHC	Kasperske Hory	135.69	334	PFAKE		15 34 10.0	+12
KHC				LR	LR		
	comp=Z,400nm,21.0s						
GERES	GERESS Array B	135.85	334	PKP	PKPdf	15 33 57.7	+0.6
	comp=Z,3.4nm,1.0s,baz=29,slow=3.0,SNR=13						
DIVS	Divibare	135.93	324	ePKPdf	PKPdf	15 33 57.1	-0.3
GRA1	Grafenberg Arr	136.23	336	PFAKE		15 34 10.0	+11
GRA1				LR	LR		
	comp=Z,800nm,19.0s						
GRFO	Grafenberg	136.23	336	PFAKE		15 34 10.0	+11
GRFO				LR	LR		
	comp=Z,800nm,20.0s						
TSUM	Tsumeb	136.51	226	PFAKE		15 34 10.0	+9.0
TSUM				LR	LR		
	comp=Z,1μm,18.0s						
FNA	Florina	137.01	320	PFAKE		15 34 10.0	+8.7
FNA				LR	LR		
	comp=Z,500nm,20.0s						
BLY	Banja Luka	137.07	327	PFAKE		15 34 10.0	+8.8
BLY				LR	LR		
	comp=Z,500nm,20.0s						
BDFB	Brasilia	137.20	128	PKP	PKPdf	15 33 58.7	-1.9
	comp=Z,1.9nm,0.3s,baz=352,slow=2.0,SNR=3.5						
IDI	Anoyia	137.22	311	PFAKE		15 34 10.0	+8.1
IDI				LR	LR		
	comp=Z,300nm,20.0s						
MEM	Membach	137.33	341	⇑PKiKP	PKiKP	15 34 02.4	+0.8
TTG	Podgorica	137.37	323	PFAKE		15 34 10.0	+8.1
TTG				LR	LR		
	comp=Z,500nm,19.0s						
UCC	Uccle	137.67	343	PFAKE		15 34 10.0	+7.8
UCC				LR	LR		
	comp=Z,900nm,20.0s						
BCLA	Clavier	137.72	342	⇓PKiKP	PKiKP	15 34 02.1	-0.2
WLF	Walferdange	138.10	340	PFAKE		15 34 10.0	+6.8
WLF				LR	LR		
	comp=Z,4μm,18.0s						
WLF	Walferdange	138.10	340	⇑PKiKP	PKiKP	15 34 03.3	+0.1
TRI	Trieste	138.14	331	PFAKE		15 34 10.0	+6.6
TRI				LR	LR		
	comp=Z,600nm,21.0s						
DOU	Dourbes	138.22	342	⇑PKiKP	PKiKP	15 34 04.0	+0.6
BFO	Black Forest	138.45	337	i PKIKP	PKPdf	15 33 55.4	-6.5
ECH	Echery	138.98	338	PFAKE		15 34 10.0	+4.9
ECH				LR	LR		
	comp=Z,700nm,21.0s						
FUORN	Ofenpass-Fuorn	139.05	334	PFAKE		15 34 10.0	+4.4
FUORN				LR	LR		
	comp=Z,1μm,20.0s						
TUE	Stuetta	139.55	335	PFAKE		15 34 20.0	+13
TUE				LR	LR		
	comp=Z,800nm,20.0s						
AQU	L'Aquila	140.71	327	PFAKE		15 34 20.0	+11
AQU				LR	LR		
	comp=Z,600nm,20.0s						
VLC	Villacollemand	140.90	332	PFAKE		15 34 20.0	+11
VLC				LR	LR		
	comp=Z,800nm,21.0s						
BNI	Bardonecchia	141.80	336	PFAKE		15 34 20.0	+8.9
BNI				LR	LR		
	comp=Z,1μm,20.0s						
CEL	Celeste	141.93	320	PFAKE		15 34 20.0	+8.5
CEL				LR	LR		
	comp=Z,400nm,21.0s						
CLTB	Caltabellotta	144.01	322	PFAKE		15 34 20.0	+4.2
CLTB				LR	LR		
	comp=Z,900nm,20.0s						
KEST	Kesra	147.56	323	PKPbc	PKPbc	15 34 20.5	-0.5
	comp=Z,13nm,0.8s,baz=293,slow=1.6,SNR=11						
PBRG	Braganca	148.80	349	ePKPdf	PKiKP	15 34 24.8	-0.7
POLO	Lamas de Olo	149.40	351	ePKPdf	PKiKP	15 34 26.1	-0.7
MVO	Moncorvo	149.47	349	ePKPdf	PKPbc	15 34 26.1	+0.3
PVRL	Vila Real	149.48	350	ePKPdf	PKiKP	15 34 26.4	-0.5
PVIS	Viseu	150.06	350	ePKPdf	PKiKP	15 34 27.5	-0.6
ESDC	Sonseca Array	150.20	344	PKP	PKPdf	15 34 21.6	-0.9
	comp=Z,0.2nm,0.4s,baz=6.3,slow=3.5,SNR=5.2						
ESDC				PKPbc	PKPbc	15 34 27.1	-0.5
	comp=Z,3.4nm,0.7s,baz=0.2,slow=1.7,SNR=5.0						
ESDC				PKPab	PKPab	15 34 34.5	+1.0
	comp=Z,5.8nm,0.7s,baz=17,slow=3.8,SNR=16						
MTE	Manteigas	150.31	350	ePKPdf	PKiKP	15 34 28.5	-0.1
MTE	Manteigas	150.31	350	ePKPdf	PKPdf	15 34 21.8	-0.9
PAB	San Pablo	150.43	344	ePKPbc	PKPbc	15 34 27.5	-0.7
PAB	San Pablo	150.43	344	ePKIKP	PKPbc	15 34 27.5	-0.7
PCAS	Casmilo, Conde	150.80	351	ePKPdf	PKiKP	15 34 29.8	+0.2
PCBR	Castelo Branco	150.84	349	ePKPdf	PKiKP	15 34 30.2	+0.6
PMRV	Marv??o	151.22	349	ePKPdf	PKiKP	15 34 30.2	-0.3
PMTG	Montargil	151.72	350	ePKPdf	PKiKP	15 34 31.2	-0.3
PESTR	Estremoz	151.80	349	PFAKE		15 34 40.0	-0.1
PESTR				LR	LR		
	comp=Z,500nm,20.0s						
PBDV	Barranco-do-Ve	153.44	349	ePKPdf	PKPbc	15 34 33.6	-1.4
MORF	Marmelete	153.51	350	ePKPdf	PKPbc	15 34 33.7	-1.5
PFVI	Vila Bisbo	153.71	350	PFAKE		15 34 40.0	+4.3
PFVI				LR	LR		
	comp=Z,800nm,19.0s						
TAM	Tamanrasset	157.93	304	PFAKE		15 34 40.0	+6.0
TAM				LR	LR		
	comp=Z,500nm,20.0s						
TOA0	Torodi Ar. Sit	164.36	279	P	PKPdf	15 34 42.2	+1.4
	SNR=6.4						
TORD	Torodi Ar. Bea	164.36	279	PKP	PKPdf	15 34 39.6	-1.2
	comp=Z,3.2nm,1.0s,baz=104,slow=1.3,SNR=15						
TORD				PKPab	PKPab	15 35 35.3	+0.1
	comp=Z,5.5nm,1.1s,baz=84,slow=2.1,SNR=7.9						
KIC	Kosan Boka	169.52	244	eP	PKPdf	15 34 42.8	-2.0
	comp=Z,145nm,1.8s						
LIC	Lamto	169.71	242	eP	PKPdf	15 34 44.8	-0.1
	comp=Z,88nm,1.8s						
DBIC	Dimbokro	169.76	245	PKP	PKPdf	15 34 43.5	-1.3
	comp=Z,7.1nm,0.9s,baz=32,slow=1.5,SNR=4.8						
TIC	Toumodi	169.90	244	eP	PKPdf	15 34 44.2	-0.8

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*SOME **25** 15:19:51.4, 42°.68N×74°.97E, h5^{km}*

*KRNET **25** 15:19:51.3±0.1, 42°.68N×74°.96E, h11^{km}, mb2.2*

*NNC **25** 15:19:51.3±0.4, 42°.68N×74°.96E, h0^{km}, mb2.6, mpv2.3, Error ellipse: s-maj=7.0km s-min=1.3km az=162.0*

*KNET **25** 15:19:51.2±0.2, 42°.66N×74°.96E, h5^{km}±2^{km}, ml1.0, Error ellipse: s-maj=1.8km s-min=1.4km az=137.0*

ISC 25 15:19:51.2±0.9, **42°.68N**±0°.02×**74°.96E**±0°.02, **h5**^{km}±5^{km}, **n46, σ0ˢ.63**/85, **25C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.03	198	⇓P	Pg	15 19 52.6	+0.1
	410nm,0.1s,SNR=60						
KBK				⇑S	Sg	15 19 53.3	0.0
	1μm,0.2s						
KBK	Karagaybulak	0.03	198	⇑iP	Pg	15 19 52.4	-0.1
	baz=96						
KBK				⇑iS	Sg	15 19 53.2	-0.2
	baz=96						
AAK	Ala-Archa	0.35	263	⇑P	Pg	15 19 58.4	+0.4
	3.7nm,0.2s,SNR=11						
AAK				⇓S	Sg	15 20 03.5	+0.9
	13nm,0.3s						
AAK	Ala-Archa	0.35	263	⇑P	Pg	15 19 58.0	0.0
	0.8nm,0.2s						
AAK				⇓S	Sg	15 20 03.2	+0.6
	12nm,0.5s						
AAK	Ala-Archa	0.35	263	⇑iP	Pg	15 19 58.2	+0.2
	baz=63						
AAK				⇑iS	Sg	15 20 03.0	+0.4
	baz=63						
CHMS	Chumysh	0.35	334	⇑P	Pg	15 19 58.5	+0.4
	0.9nm,0.1s						
CHMS				⇓S	Sg	15 20 03.6	+0.8
	11nm,0.2s						
CHMS	Chumysh	0.35	334	⇑iP	Pg	15 19 58.4	+0.3
	baz=35						
CHMS				⇑iS	Sg	15 20 03.5	+0.8
	baz=35						
TKM2	Tokmak 2	0.53	63	⇓P	Pg	15 20 01.7	+0.3
	3.0nm,0.1s,SNR=18						
TKM2				⇑S	Sg	15 20 09.1	+0.8
	11nm,0.1s						
TKM2	Tokmak 2	0.53	63	⇑P	Pg	15 20 01.6	+0.2
	0.8nm,0.2s						
TKM2				⇓S	Sg	15 20 09.0	+0.8
	2.0nm,0.2s						
UCH	Uchtor	0.56	216	⇓P	Pg	15 20 02.3	+0.2
	4.8nm,0.1s,SNR=13						
UCH				⇓S	Sg	15 20 10.0	+0.5
	2.9nm,0.1s						
UCH	Uchtor	0.56	216	⇑iP	Pg	15 20 02.1	0.0
	baz=16						
UCH				⇑iS	Sg	15 20 09.8	+0.4
	baz=16						
KZA	Kyzart	0.64	160	⇓P	Pg	15 20 04.2	+0.7
	1.3nm,0.1s,SNR=5.6						
KZA				⇓S	Sb	15 20 13.4	-1.1
	9.2nm,0.3s						
KZA	Kyzart	0.64	160	⇑iP	Pg	15 20 04.1	+0.5
	baz=60						
KZA				⇑iS	Sg	15 20 12.7	+0.8
	baz=60						
USP	Ospenovka	0.68	330	⇑P	Pg	15 20 04.7	+0.4
	0.9nm,0.2s,SNR=8.8						
USP	Ospenovka	0.68	330	⇑iP	Pg	15 20 04.6	+0.4
	baz=31						
USP				⇑iS	Sg	15 20 13.4	+0.4
	baz=31						
BOOM	Boomskoye usch	0.75	104	⇓iP	Pg	15 20 05.6	0.0
	baz=4.0						
BOOM				⇓iS	Sg	15 20 15.8	+0.4
	baz=4.0						
SGDS	Sogindy	0.81	343	P	Pb	15 20 07.6	-0.2
	1.7nm,0.1s						
SGDS				S	Sb	15 20 19.4	+0.3
	4.3nm,0.1s						
DGS	Degeres	0.82	47	P	Pg	15 20 05.3	-1.7
	0.3nm,0.1s						
DGS				S	Sg	15 20 16.5	-1.1
	3.0nm,0.4s						
DGS	Degeres	0.82	47	eP	Pg	15 20 05.8	-1.1
	baz=46						
DGS				eS	Sg	15 20 16.4	-1.1
	baz=46						
DGS	Degeres	0.82	47	eP	Pg	15 20 05.8	-1.1
	0.3nm,0.1s						
DGS				eS	Sg	15 20 16.5	-1.1
	3.0nm,0.4s						
KST	Kastek	0.82	64	P	Pg	15 20 07.2	+0.2
	0.9nm,0.1s						
KST				S	Sb	15 20 19.0	-0.5
	2.9nm,0.3s						
KST	Kastek	0.82	64	eP	Pg	15 20 07.2	+0.2
	baz=64						
KST				eS	Sb	15 20 19.0	-0.5
	baz=64						
KST	Kastek	0.82	64	eP	Pg	15 20 07.2	+0.2
	0.9nm,0.1s						
KST				eS	Sb	15 20 19.0	-0.5
	2.9nm,0.3s						
EKS2	Erkin-Say	0.87	269	⇓iP	Pg	15 20 08.4	+0.4
	baz=69						
EKS2				⇓iS	Sb	15 20 20.8	-0.2
	baz=69						
ARLS	Aral	0.95	210	⇑iP	Pg	15 20 09.0	-0.4
	baz=10.0						
ARLS				⇑iS	Sg	15 20 21.3	-0.4
	baz=10.0						
ULHL	Ulahol	1.04	114	⇓iP	Pg	15 20 11.5	+0.2
	baz=14						
ULHL				⇓iS	Sg	15 20 25.0	+0.2
	baz=14						
AML	Almayashu	1.09	240	⇑iP	Pg	15 20 11.3	-0.8
	baz=40						
AML				⇑iS	Sg	15 20 25.2	-1.0
	baz=40						
IZV	Izvestkoviy	1.27	73	P	Pg	15 20 15.5	0.0
	1.5nm,0.1s						
IZV				S	Sn	15 20 33.2	-0.1
	2.2nm,0.1s						
IZV	Izvestkoviy	1.27	73	eP	Pg	15 20 15.5	0.0
	baz=73						
IZV				eS	Sn	15 20 33.1	-0.1
	baz=73						
IZV	Izvestkoviy	1.27	73	eP	Pg	15 20 15.5	0.0
	1.5nm,0.1s						
IZV				eS	Sn	15 20 33.2	-0.1
	2.2nm,0.1s						
MRKS	Merke	1.28	273	P	Pg	15 20 15.2	-0.6
	1.6nm,0.2s						
MRKS				S	Sg	15 20 32.6	+0.2
	3.5nm,0.2s						
MRKS	Merke	1.28	273	eP	Pg	15 20 15.2	-0.6
	baz=74						
MRKS				eS	Sg	15 20 32.6	+0.2
	baz=74						
MRKS	Merke	1.28	273	eP	Pg	15 20 15.2	-0.6
	1.6nm,0.2s						
MRKS				eS	Sg	15 20 32.6	+0.2
	3.5nm,0.2s						
KUU	Kurty	1.57	39	P	Pb	15 20 20.6	-0.3
	1.1nm,0.2s						
KUU				S	Sg	15 20 42.6	+0.7
	2.5nm,0.2s						
KUU	Kurty	1.57	39	eP	Pb	15 20 20.9	0.0
	baz=39						
KUU				eS	Sg	15 20 42.6	+0.7
	baz=39						
KUU	Kurty	1.57	39	eP	Pb	15 20 20.9	0.0
	1.1nm,0.2s						
KUU				eS	Sg	15 20 42.6	+0.7
	2.5nm,0.2s						
MDOK	Medeo	1.61	72	P	Pb	15 20 21.5	0.0
	1.0nm,0.5s						
MDOK				⇓S	Sb	15 20 42.6	+0.4
	4.3nm,0.4s						
MDOK	Medeo	1.61	72	Pg	Pb	15 20 21.5	0.0
	1.3nm,0.3s						
MDOK				Lg	Lg	15 20 44.9	
	7.6nm,0.4s						
MDOK	Medeo	1.61	72	eP	Pg	15 20 22.2	+0.1
	baz=72						
MDOK				eS	Sg	15 20 44.9	+2.0
	baz=72						
MDOK	Medeo	1.61	72	eP	Pg	15 20 22.2	+0.1
	1.3nm,0.3s						
MDOK				eS	Sg	15 20 44.9	+2.0
	7.6nm,0.4s						
MNAS	Manas	1.82	265	⇑Lg	Lg	15 20 49.5	
	0.6nm,0.3s						
MNAS	Manas	1.82	265	P	Pb	15 20 25.6	+0.4
	0.1nm,0.1s						
MNAS				S	Sg	15 20 50.3	+0.5
	0.6nm,0.1s						
CHKK	Chushkaly	1.89	51	Pg	Pb	15 20 26.3	+0.1
	1.3nm,0.2s						
CHKK				Lg	Lg	15 20 52.6	
	5.4nm,0.2s						
CHKK	Chushkaly	1.89	51	eP	Pb	15 20 26.3	+0.1
	baz=51						
CHKK				eS	Sg	15 20 51.8	-0.1
	baz=51						
CHKK	Chushkaly	1.89	51	eP	Pb	15 20 26.3	+0.1
	1.3nm,0.2s						
CHKK				eS	Sg	15 20 51.8	-0.1
	5.4nm,0.2s						
KK31	Karatay Array	3.29	279	⇑Lg	Lg	15 21 36.1	
	0.5nm,0.5s,baz=97,slow=28,SNR=3.7						

MAN 25 15:22:03.2, 9°.52N×126°.76E, h32^{km}, mb5.2, ML4.1, MS4.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.99	214	⇑eP	Pn	15 22 49.1	+0.6

MEX 25 15:22:11.8±0.7, **16°.35N×98°.02W, h13**^{km}±5^{km}, **MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.11	294	eP	Pg	15 22 13.9	-1.0
PNIG				i S	Sg	15 22 16.7	-0.4
VHO	Vista Hermosa	1.43	60	eP	Pn	15 22 34.5	-3.2
VHO				eS	Sn	15 22 51.2	-5.3
OXBJ	Oaxaca	1.44	60	eP	Pn	15 22 34.4	-3.4
HUIG	Huatulco	1.93	107	eP	Pn	15 22 41.1	-3.3
CAIG	El Cayaco	2.26	288	eP	Pn	15 22 45.7	-3.2
CMIG	Matias Romero	3.10	76	eP	Pn	15 22 58.4	-2.1

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*IDC **25** 15:23:38.3±0.8, 11°.25S×166°.03E, h0^{km}, mb3.9/10, mb1 4.1/12, mb1mx4.0/39, mbtmp4.0/12, ML4.5/2, Error ellipse: s-maj=27.9km s-min=19.4km az=136.0*

*NEIC **25** 15:23:40.4±0.6, 11°.11S×165°.91E, h10^{km}, mb4.5/2, Error ellipse: s-maj=12.1km s-min=10.0km az=107.0*

*ISCJB **25** 15:23:45.2±0.6, 11°.28S±0°.08×165°.75E±0°.07, h61^{km}, mb4.0/11, Error ellipse: s-maj=13.0km s-min=9.1km az=34.0*

ISC 25 15:23:46.1±0.7, **11°.17S**±0°.09×**165°.89E**±0°.08, **h61**^{km}, **n19, σ1ˢ.40**/23, **mb3.8**/11, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	286	Pn	Pn	15 25 12.7	-1.0
	32nm,0.3s,baz=151,slow=8.1,SNR=11						
HNR				Sn	Sn	15 26 21.1	-1.0
	baz=42,slow=19,SNR=1.9						
DZM	Mont Dzumac	10.86	177	ePn	Pn	15 26 17.8	-1.0
DZM	Mont Dzumac	10.86	177	Pn	Pn	15 26 15.8	-3.1
	1.1nm,0.3s,baz=30,slow=20,SNR=9.8						
PINNC	Pines Island,	11.48	173	ePn	Pn	15 26 26.8	-0.4

TARA	Tarawa	14.27	30	*e*Pn	Pn	15 27 02.6	-2.5
RABL	Rabaul	15.26	296	*e*Pn	Pn	15 27 16.8	-1.2
	53nm,0.6s						
CTA	Charters Tower	20.87	242	P	P	15 28 23.7	+0.4
	4.4nm,1.0s,baz=61,slow=13,SNR=3.3						
STKA	Stephens Creek	30.45	224	P	P	15 29 53.4	+0.3
	1.2nm,0.7s,baz=21,slow=14,SNR=3.5						
WR1	Warramunga Arr	31.57	250	*e*P	P	15 30 03.3	+0.1
	47nm,1.8s						
WR1				*e*PcP	PcP	15 32 56.1	+1.4
WRA	Warramunga Arr	31.57	250	P	P	15 30 03.3	+0.1
	3.9nm,0.8s,baz=82,slow=9.2,SNR=19						
WRA				PcP	PcP	15 32 56.1	+1.4
	0.3nm,0.7s,baz=82,slow=3.7,SNR=3.3						
AS31	Alice Springs	32.86	244	*e*P	P	15 30 14.1	-0.3
	2.2nm,1.3s						
ASAR	Alice Springs	32.86	244	P	P	15 30 13.5	-1.0
	1.0nm,0.8s,baz=67,slow=9.5,SNR=8.6						
ASAR				PcP	PcP	15 32 59.0	+0.9
	0.4nm,0.8s,baz=72,slow=3.0,SNR=3.1						
CMAR	Chiang Mai Arr	72.29	294	P	P	15 35 08.7	+3.0
	0.5nm,0.3s,baz=109,slow=4.9,SNR=3.0						
QSPA	South Pole Qui	78.84	180	P	P	15 35 42.5	0.0
	1.6nm,1.1s,baz=26,slow=3.0,SNR=1.8						
ILAR	Eielson Array	83.58	18	P	P	15 36 08.2	+0.9
	0.7nm,0.9s,baz=222,slow=5.1,SNR=7.9						
NVAR	Mina Array Bea	85.99	50	P	P	15 36 21.5	+1.1
	0.6nm,0.8s,baz=225,slow=8.9,SNR=3.2						
MK32	Makanchi Array	93.71	317	*e*P	P	15 36 56.9	+0.6
MKAR	Makanchi Array	93.71	317	P	P	15 36 56.9	+0.6
	0.3nm,0.8s,baz=104,slow=5.5,SNR=3.0						
YKA	Yellowknife Ar	95.02	27	P	P	15 37 01.4	-0.4
	0.1nm,0.5s,baz=269,slow=6.7,SNR=2.8						

*IDC **25** 15:28:48.9±1.1, 11°.09S×165°.93E, h0^{km}, mb4.0/9, mb1 4.2/11, mb1mx3.9/48, mbtmp4.1/11, ML4.3/2, Error ellipse: s-maj=34.8km s-min=21.5km az=133.0*

*NEIC **25** 15:28:50.5±0.6, 11°.09S×165°.92E, h10^{km}, mb4.6/5, Error ellipse: s-maj=14.7km s-min=9.3km az=120.0*

*ISCJB **25** 15:28:55.3±0.7, 11°.24S±0°.08×165°.77E±0°.09, h61^{km}, mb4.1/10, Error ellipse: s-maj=13.0km s-min=11.9km az=16.5*

ISC 25 15:28:56.7±0.8, 11°.26S±0°.07×165°.81E±0°.10, h61^{km}, n22, σ1^s.47/28, mb3.8/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.05	287	Pn	Pn	15 30 21.8	-1.7
	21nm,0.3s,baz=142,slow=5.8,SNR=12						
HNR				Sn	Sn	15 31 29.5	-2.0
	3.2nm,0.3s,baz=198,slow=20,SNR=1.8						
DZM	Mont Dzumac	10.77	177	*e*Pn	Pn	15 31 28.7	+0.4
DZM				Sn	Sn	15 33 24.9	-2.5
DZM	Mont Dzumac	10.77	177	Pn	Pn	15 31 28.1	-0.2
	0.7nm,0.3s,baz=318,slow=21,SNR=16						
DZM				Sn	Sn	15 33 24.9	-2.5
	0.3nm,0.3s,baz=24,slow=20,SNR=2.1						
EIDS	Eidsvold	19.79	223	*e*P	Pn	15 33 23.3	-0.8
	79nm,1.9s						
KWAJ	Kwajalein Atol	20.01	5	*e*P	P	15 33 22.3	-2.2
	333nm,1.2s						
CTA	Charters Tower	20.76	243	P	P	15 33 34.3	+1.6
	6.0nm,0.8s,baz=67,slow=12,SNR=6.1						
STKA	Stephens Creek	30.34	224	*e*P	P	15 35 03.9	+1.2
	4.7nm,1.7s						
STKA	Stephens Creek	30.34	224	P	P	15 35 04.3	+1.6
	2.8nm,0.7s,baz=40,slow=9.7,SNR=5.8						
WR1	Warramunga Arr	31.47	250	*e*P	P	15 35 13.5	+0.7
	50nm,1.9s						
WR1				*e*PcP	PcP	15 38 07.1	+2.2
WRA	Warramunga Arr	31.47	250	P	P	15 35 13.5	+0.6
	5.9nm,0.8s,baz=82,slow=9.0,SNR=29						
WRA				PcP	PcP	15 38 07.1	+2.2
	0.3nm,0.7s,baz=69,slow=3.4,SNR=2.3						
AS31	Alice Springs	32.76	244	*e*P	P	15 35 23.3	-0.8
	1.2nm,0.9s						
ASAR	Alice Springs	32.76	244	P	P	15 35 24.1	-0.1
	1.3nm,0.8s,baz=69,slow=9.1,SNR=13						
ASAR				PcP	PcP	15 38 09.7	+1.3
	0.3nm,0.8s,baz=60,slow=3.0,SNR=2.9						
FITZ	Fitzroy Crossi	39.39	255	*e*P	P	15 36 21.5	+0.7
	83nm,1.7s						
FITZ	Fitzroy Crossi	39.39	255	P	P	15 36 21.4	+0.6
	3.4nm,0.8s,baz=124,slow=3.6,SNR=3.9						
CM31	Chiang Mai Arr	72.26	294	*e*P	P	15 40 17.8	+1.7
CMAR	Chiang Mai Arr	72.26	294	P	P	15 40 17.8	+1.7
	1.0nm,0.7s,baz=121,slow=4.0,SNR=6.5						
ILAR	Eielson Array	83.69	18	P	P	15 41 18.2	-0.2
	0.6nm,0.8s,baz=245,slow=4.7,SNR=5.1						
ILB	Eielson Array	83.69	18	*e*P	P	15 41 18.2	-0.2
MK32	Makanchi Array	93.72	317	*e*P	P	15 42 07.4	+0.5
MKAR	Makanchi Array	93.72	317	P	P	15 42 07.4	+0.5
	0.3nm,0.9s,baz=101,slow=4.6,SNR=3.1						
YKA	Yellowknife Ar	95.13	27	P	P	15 42 11.8	-1.1
	0.1nm,0.6s,baz=256,slow=5.0,SNR=2.9						
YKB5	Yellowknife Ar	95.13	27	*e*P	P	15 42 11.8	-1.1

*IDC **25** 15:36:28.3±1.0, 11°.34S×166°.06E, h0^{km}, mb3.9/9, mb1 4.2/11, mb1mx3.9/45, mbtmp4.0/11, ML3.8/2, MS3.9/2, Ms1 3.9/2, ms1mx3.4/41, Error ellipse: s-maj=28.0km s-min=21.4km az=136.0*

*NEIC **25** 15:36:31.2±5.5, 11°.33S×166°.01E, h17^{km}±34^{km}, mb4.5/3, Error ellipse: s-maj=13.4km s-min=12.2km az=191.0*

*ISCJB **25** 15:36:32.7±0.6, 11°.40S±0°.09×165°.84E±0°.08, h37^{km}, mb4.0/10, MS4.3/1, Error ellipse: s-maj=13.7km s-min=10.2km az=22.1*

ISC 25 15:36:34.1±0.8, 11°.3S±0°.1×165°.9E±0°.1, h37^{km}, n20, σ0^s.83/20, mb3.9/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.18	287	Pn	Pn	15 38 02.7	-0.2
	20nm,0.3s,baz=127,slow=8.0,SNR=9.3						
HNR				Sn	Sn	15 39 11.1	-1.3
	3.4nm,0.3s,baz=113,slow=7.7,SNR=1.8						
HNR				LR	LR	15 40 26.4	
	comp=Z,368nm,21.1s,baz=90,slow=38						
DZM	Mont Dzumac	10.69	177	Pn	Pn	15 39 04.6	-0.3
	0.1nm,0.3s,baz=133,slow=19,SNR=1.8						
CTA	Charters Tower	20.83	243	P	P	15 41 12.8	0.0
	3.9nm,0.8s,baz=55,slow=15,SNR=5.0						
CTAO	Charters Tower	20.83	243	*e*P	P	15 41 12.6	-0.1
	45nm,1.6s						
STKA	Stephens Creek	30.36	224	*e*P	P	15 42 43.1	+0.5
	5.7nm,2.0s						
STKA	Stephens Creek	30.36	224	P	P	15 42 43.0	+0.3
	2.1nm,0.7s,baz=47,slow=11,SNR=4.0						
WR1	Warramunga Arr	31.56	250	*e*P	P	15 42 53.5	+0.2
	12nm,1.0s						
WRA	Warramunga Arr	31.56	250	P	P	15 42 53.5	+0.1
	5.1nm,0.8s,baz=82,slow=9.2,SNR=22						
AS31	Alice Springs	32.83	244	*e*P	P	15 43 04.1	-0.3
	2.1nm,1.4s						
ASAR	Alice Springs	32.83	244	P	P	15 43 03.9	-0.6
	1.0nm,0.8s,baz=71,slow=9.3,SNR=12						
BATI	Baumata	41.52	267	LR	LR	16 01 51.8	
	comp=Z,423nm,18.6s,baz=144,slow=37						
CM31	Chiang Mai Arr	72.39	294	*e*P	P	15 47 57.9	+0.9
CMAR	Chiang Mai Arr	72.39	294	P	P	15 47 57.9	+0.9
	0.6nm,0.3s,baz=18,slow=6.0,SNR=3.8						
QSPA	South Pole Qui	78.68	180	P	P	15 48 32.2	-0.2
	0.5nm,0.8s,baz=334,slow=7.1,SNR=2.7						
ILAR	Eielson Array	83.72	18	P	P	15 48 58.5	-0.3
	0.5nm,0.7s,baz=236,slow=5.2,SNR=4.7						
ILB	Eielson Array	83.72	18	*e*P	P	15 48 58.5	-0.3
NV01	Mina Array Sit	86.07	50	*e*P	P	15 49 10.4	-1.1
NVAR	Mina Array Bea	86.07	50	P	P	15 49 10.4	-1.1
	0.6nm,0.8s,baz=247,slow=9.4,SNR=3.4						
MK32	Makanchi Array	93.85	317	*e*P	P	15 49 49.2	+1.5
MKAR	Makanchi Array	93.85	317	P	P	15 49 49.3	+1.5
	0.3nm,0.8s,baz=101,slow=4.6,SNR=1.6						

*ISCJB **25** 15:38:45.6±0.4, 4°.24N±0°.06×128°.33E±0°.09, h46^{km}, mb3.8/14, Error ellipse: s-maj=15.0km s-min=5.8km az=148.3*

*IDC **25** 15:38:46.8±2.7, 4°.27N×128°.25E, h36^{km}±22^{km}, mb3.7/14, mb1 3.8/16, mb1mx3.6/46, mbtmp3.9/16, ML3.8/2, Error ellipse: s-maj=27.6km s-min=11.4km az=76.0*

ISC 25 15:38:47.6±0.6, 4°.26N±0°.09×128°.5E±0°.1, h46^{km}, n28, σ1^s.81/32, mb3.9/17, 1C, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	3.29	304	*e*P	Pn	15 39 32.1	-4.6
MATI	Mati	3.45	321	*e*P	Pn	15 39 39.8	+0.9
MATI				*e*S	Sn	15 40 28.8	+10
DAV	Davao City (W)	3.99	314	Pn	Pn	15 39 45.7	-0.7
	12nm,0.3s,baz=132,slow=12,SNR=1.5						
KCP	Kidapawan	4.32	309	⇑*i*P	Pn	15 39 53.1	+2.3
KCP				*e*S	Sn	15 40 45.5	+5.5
SKMP	Bagumbayan, Su	4.49	300	*e*P	Pn	15 39 53.0	-0.2
BUKP	Musuan	4.93	317	*e*P	Pn	15 39 58.1	-1.1
BUKP				*e*S	Sn	15 41 04.3	+9.3
SIJI	Sorong	5.82	151	Pn	Pn	15 40 13.1	+1.6
	1.7nm,0.3s,baz=321,slow=18,SNR=6.2						
SIJI				Sn	Sn	15 41 17.7	+0.7
	2.6nm,0.3s,baz=352,slow=24,SNR=7.8						
FITZ	Fitzroy Crossi	22.39	187	P	P	15 43 41.4	-0.8
	4.9nm,1.0s,baz=6.3,slow=9.2,SNR=2.7						
WRA	Warramunga Arr	24.74	167	P	P	15 44 05.0	+0.1
	1.1nm,0.6s,baz=344,slow=10,SNR=14						
ASAR	Alice Springs	28.26	169	P	P	15 44 37.1	+0.4
	0.2nm,0.4s,baz=358,slow=7.5,SNR=5.4						
ASAR				PcP	PcP	15 47 50.1	+0.7
	0.5nm,0.6s,baz=353,slow=2.6,SNR=9.9						
ASAR				ScP	ScP	15 51 28.9	+2.1
	0.5nm,1.0s,baz=350,slow=2.3,SNR=3.4						
CMAR	Chiang Mai Arr	32.11	298	P	P	15 45 09.1	-1.8
	0.4nm,0.4s,baz=113,slow=7.0,SNR=3.9						
KSRS	Korea Array	33.04	359	P	P	15 45 18.7	+0.1
	0.9nm,0.8s,baz=172,slow=10,SNR=4.2						
STKA	Stephens Creek	38.05	162	P	P	15 46 03.5	+1.7
	0.4nm,0.4s,baz=334,slow=14,SNR=2.2						
USRK	Ussuriysk Ar.	39.90	4	P	P	15 46 17.8	+0.7
	1.0nm,0.6s,baz=173,slow=8.1,SNR=3.6						
ASAJ	Asahikawa	41.61	15	P	P	15 46 30.8	-0.4
	3.5nm,0.8s,baz=231,slow=6.5,SNR=2.8						
RAMN	Ramite	45.86	304	*e*P	P	15 47 04.7	-1.3
JIRN	Jiri	46.47	305	*e*P	P	15 47 09.3	-1.6
GUN	Gumba	46.82	305	*e*P	P	15 47 11.9	-1.7
	18nm,1.0s						
DMN	Daman	47.34	304	*e*P	P	15 47 16.5	-1.1
SONM	Songino Array	47.37	340	P	P	15 47 16.8	-0.5
	1.1nm,0.7s,baz=147,slow=10,SNR=5.7						
KOLN	Koldanda	48.65	304	*e*P	P	15 47 26.1	-1.5
DANN	Dangsing	48.72	304	*e*P	P	15 47 26.6	-1.7
	20nm,0.8s						
PYUN	Piuthan	49.27	304	*e*P	P	15 47 30.4	-2.0
	20nm,1.0s						
PETK	Petropavlovsk-	54.31	21	P	P	15 48 10.6	+1.4
	3.0nm,0.7s,baz=188,slow=4.3,SNR=9.2						
MKAR	Makanchi Array	58.12	324	P	P	15 48 36.1	-0.4
	2.4nm,0.7s,baz=113,slow=8.0,SNR=14						
ZALV	Zalesovo Beam	60.91	332	P	P	15 48 54.6	-1.1
	0.6nm,0.4s,baz=89,slow=6.7,SNR=3.7						
NRIK	Noril'sk	70.33	346	P	P	15 49 55.3	-0.9
	0.8nm,0.3s,baz=96,slow=7.9,SNR=4.2						
ILAR	Eielson Array	83.89	25	P	P	15 51 12.5	+0.2
	0.4nm,0.8s,baz=246,slow=4.5,SNR=4.4						

IDC 25 15:54:02.1±2.0, 11°.12S×165°.84E, h0^{km}, mb3.4/3, mb1 3.8/5, mb1mx3.6/46, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=42.1km s-min=36.0km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.04	286	Pn	Pn	15 55 33.7	+1.0
	3.1nm,0.3s,baz=124,slow=3.6,SNR=1.6						
DZM	Mont Dzumac	10.91	177	Pn	Pn	15 56 40.4	+0.7
	0.3nm,0.3s,baz=131,slow=19,SNR=3.4						
DZM				Sn	Sn	15 58 37.7	-4.8
	0.1nm,0.3s,baz=144,slow=19,SNR=2.3						
WRA	Warramunga Arr	31.55	250	P	P	16 00 27.0	+0.6
	0.3nm,0.6s,baz=82,slow=9.1,SNR=2.2						
ASAR	Alice Springs	32.84	243	P	P	16 00 36.5	-1.3
	0.2nm,0.8s,baz=67,slow=9.8,SNR=1.3						
ILAR	Eielson Array	83.55	18	P	P	16 06 31.7	0.0
	0.9nm,1.1s,baz=231,slow=4.6,SNR=3.0						

IDC 25 15:57:27.5±1.2, 19°.83N×144°.80E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/48, mbtmp3.5/4, Error ellipse: s-maj=97.5km s-min=24.6km az=104.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	40.84	195	P	P	16 05 11.4	+0.2
	0.3nm,0.4s,baz=3.3,slow=8.8,SNR=6.8						
ASAR	Alice Springs	44.52	194	P	P	16 05 40.4	-0.7
	0.1nm,0.5s,baz=14,slow=6.7,SNR=6.5						
ILAR	Eielson Array	63.01	27	P	P	16 07 55.5	-0.6
	0.2nm,0.4s,baz=262,slow=5.6,SNR=7.1						
FINES	FINESS Array B	85.50	335	P	P	16 10 08.2	+1.0
	1.1nm,0.8s,baz=46,slow=5.5,SNR=5.0						

*NIED **25** 16:00:00, 29°.10N×131°.50E, h47^{km}, Mw5.3 Best double couple: $M_0$1.00000×10^{17} NP1:ϕ_s256.00000°, δ43.00000°, λ142.00000°. NP2:ϕ_s16.00000°, δ65.00000°, λ54.00000°.*

*MOS **25** 16:00:16.3±1.0, 29°.02N×131°.52E, h28^{km}, mb5.5/84, MS5.0/25, Error ellipse: s-maj=6.0km s-min=3.8km az=110.0*

*ISCJB **25** 16:00:16.8±0.6, 29°.00N±0°.01×131°.56E±0°.02, h32^{km}±4^{km}, mb5.2/256, MS4.8/68, Error ellipse: s-maj=2.7km s-min=2.0km az=36.4*

*BJI **25** 16:00:17.1, 28°.98N×131°.55E, h41^{km}, mB5.2/55, mb4.9/55, Ms5.0/89, Ms7 4.9/82*

*JMA **25** 16:00:18.4±0.1, 29°.06N×131°.50E, h85^{km}±4^{km}, M5.1*

JMA Felt II J1.

*GCMT **25** 16:00:19.6±0.1, 29°.05N±0°.01×131°.50E±0°.01, h37^{km}, MW5.4/121, Moment Tensor Solution. s82,c131; s121,c216; Duration: 1^s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.84±.03; $M_{\theta\theta}$-0.39±.02; $M_{\phi\phi}$-0.44±.02; $M_{r\theta}$-0.42±.02; $M_{\theta\phi}$-0.93±.01; $M_{\phi r}$0.60±.02; Best double couple: $M_0$1.39000×10^{17} NP1:ϕ_s12.00000°, δ60.00000°, λ44.00000°. NP2:ϕ_s256.00000°, δ53.00000°, λ141.00000°. Principal axes: T 1.4220, Plg52.0000°, Azm228.0000°; N -0.0620, Plg38.0000°, Azm39.0000°; P -1.3590, Plg4.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **25** 16:00:19.7±1.5, 29°.04N×131°.55E, h42^{km}±13^{km}, mb4.5/35, mb1 4.6/44, mb1mx4.6/53, mbtmp4.8/44, ML4.7/7, MS4.6/40, Ms1 4.6/40, ms1mx4.5/50 Error ellipse: s-maj=10.6km s-min=8.3km az=92.0*

*NEIC **25** 16:00:19.6±0.4, 29°.01N×131°.51E, h46^{km}±3^{km}, mb5.5/175, Error ellipse: s-maj=3.4km s-min=2.5km az=139.0*

NEIC Felt at Yomitan-son, Okinawa. Recorded [2 JMA] in Miyazki and on Amami-oshima, Uke-jima and Yoro-jima.

ISC 25 16:00:19.1±0.3, 28°.98N±0°.03×131°.57E±0°.03, h36^{km}±1^{km}, h37^{km}:pP-P, n733, σ1^s.49/820, mb5.4/279, MS4.7/68, 65C-45D, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMTN	Minamitane	1.52	338	⇓P	Pn	16 00 43.4	-0.4
JMTN				*e*S	Sn	16 01 01.7	-0.7
JYAK	Yakushimahirau	1.55	324	⇓P	Pn	16 00 44.0	-0.2
JYAK				*e*S	Sn	16 01 02.4	-0.7
JZK	Kikaishima	1.55	245	⇑P	Pn	16 00 45.0	+0.8
JZK				*e*S	Sn	16 01 04.2	+1.1
JNN	Nakanoshima	1.71	300	⇓P	Pn	16 00 46.2	-0.1
JNN				*e*S	Sn	16 01 06.3	-0.6
JTN	Tanegashima 3	1.74	343	⇓P	Pn	16 00 46.1	-0.7
JTN				*e*S	Sn	16 01 06.5	-1.3
JAM	Amami Oshima	1.82	252	⇓P	Pn	16 00 47.9	+0.1
JAM				*e*S	Sn	16 01 09.0	-0.6
JKC	Kuchinoerabu	1.90	321	⇓P	Pn	16 00 48.6	-0.3
JTAJ	Takarajima	2.08	275	⇓P	Pn	16 00 51.0	-0.4
JTAJ				*e*S	Sn	16 01 15.3	-0.7
JAMN	Amaminishikomi	2.23	251	⇑P	Pn	16 00 53.8	+0.3
JAMN				*e*S	Sn	16 01 19.6	-0.2
JTSR	Tashiro 2	2.25	346	⇓P	Pn	16 00 53.3	-0.5
JTSR				*e*S	Sn	16 01 18.9	-1.4
JNAR	Kushima--Naru	2.55	354	⇓P	Pn	16 00 57.7	-0.2
JNAR				S	Sn	16 01 26.7	-0.9
JTK	Tokunoshima	2.60	243	⇑P	Pn	16 00 59.0	+0.4
JTK				S	Sn	16 01 28.9	0.0
JSU	Suzuyama	2.69	339	⇓P	Pn	16 00 59.2	-0.7
JSU				S	Sn	16 01 29.1	-2.1
JTZ	Takazaki	2.94	352	⇓P	Pn	16 01 03.0	-0.2
JTZ				*e*S	Sn	16 01 36.7	-0.6
JOKE	Okinoerabujima	3.10	239	P	Pn	16 01 05.5	0.0
JOKE				*e*S	Sn	16 01 40.4	-0.9
JSJ	Shimokoshiki	3.13	330	⇓P	Pn	16 01 04.5	-1.3
JSJ				*e*S	Sn	16 01 38.4	-3.5
JMZ	Minamidaito 2	3.17	186	⇓P	Pn	16 01 06.5	+0.1
JMZ				*e*S	Sn	16 01 41.2	-1.7
JZO	Okuchi	3.25	345	⇓P	Pn	16 01 07.1	-0.5
JZO				S	Sn	16 01 43.3	-1.8
JYRO	Yoronjima	3.38	235	P	Pn	16 01 09.2	-0.1
JYRO				S	Sn	16 01 46.4	-1.7
JOW	Kunigami	3.62	234	⇑P	Pn	16 01 12.4	-0.2
JOW				S	Sn	16 01 52.7	-1.4
JOW	Kunigami	3.62	234	P	Pn	16 01 12.4	-0.2
	92nm,0.3s,baz=97,slow=18,SNR=2283						
JOW				S	Sn	16 01 52.5	-1.6
	164nm,0.3s,baz=67,slow=27,SNR=27						
JKIT	Kitakata	3.63	358	⇓P	Pn	16 01 12.2	-0.6
JHD	Hondo	3.68	341	⇓P	Pn	16 01 13.1	-0.4
JIH	Iheya	3.73	239	⇑P	Pn	16 01 13.7	-0.4
JIH				S	Sn	16 01 54.2	-2.6
NGSJ	Nagasakinomoza	3.94	338	⇓P	Pn	16 01 16.4	-0.6
JNTH	Nagotoyohara	3.99	233	P	Pn	16 01 17.3	-0.4
JNTH				S	Sn	16 02 00.4	-2.8
JTO	Tosashimizu	4.01	15	P	Pn	16 01 16.8	-1.1
JNU	Nakatsue	4.17	352	P	Pn	16 01 19.9	-0.3
	86nm,0.3s,baz=201,slow=1.9,SNR=335						
JNU				S	Sn	16 02 04.4	-3.3
	69nm,0.3s,baz=151,slow=16,SNR=6.2						
JNU				LR	LR	16 02 51.0	
	comp=Z,3μm,20.2s,baz=203,slow=37						
JJT3	Tamagusuku3	4.39	231	P	Pn	16 01 22.9	-0.3
JKU	Kubokawa	4.50	16	⇑P	Pn	16 01 24.8	+0.1
JAGN	Aguni-jima	4.51	239	⇑P	Pn	16 01 24.2	-0.7
JKE	Kume jima 2	5.00	239	⇑P	Pn	16 01 30.4	-1.2
JJS	Sakaide	5.74	20	P	Pn	16 01 42.1	+0.4
JKS	Kasai	6.60	24	P	Pn	16 01 53.9	+0.4
JKN2	Miekihoku	6.60	36	⇑P	Pn	16 01 54.1	+0.6
JHE	Heguri	6.65	31	P	Pn	16 01 54.5	+0.3
JOGS	Gusukube	6.93	234	⇑P	Pn	16 01 56.2	-1.9
JIE	Ise	6.94	38	P	Pn	16 01 59.1	+0.8
TSUJ	Tsu 2	7.04	35	P	Pn	16 02 00.5	+0.9
JKY	Yasaka	7.27	23	P	Pn	16 02 03.8	+1.1
JFM	Mihama	7.52	29	P	Pn	16 02 07.3	+1.1
JISG	Ishigakijimahi	7.82	238	P	Pn	16 02 07.4	-3.0
INU	Inuyama	7.85	35	*e*Pn	Pn	16 02 11.4	+0.8
JHJ	Hachijo jima 2	8.16	58	P	Pn	16 02 17.1	+2.1
	140nm,0.3s,baz=84,slow=23,SNR=19						
JHJ				S	Sn	16 03 44.1	-1.9
	5.7nm,0.3s,baz=97,slow=19,SNR=1.7						
JHJ				LR	LR	16 04 58.1	
	comp=Z,9μm,21.5s,baz=300,slow=34						
TJN	Taejon	8.18	335	*ce*P	Pn	16 02 15.6	+0.4
JHJ2	Mitsune	8.18	58	*e*Pn	Pn	16 02 17.2	+1.9
YOJ	Yonaguni jima	8.88	241	*e*Pn	Pn	16 02 22.2	-2.6
YOJ	Yonaguni jima	8.88	241	*e*P	Pn	16 02 22.2	-2.6
KSAR	Wonju Array Be	8.98	341	P	Pn	16 02 26.9	+0.7
KSAR	Wonju Array Be	8.98	341	P	Pn	16 02 26.9	+0.7
KSRS	Korea Array	8.98	341	P	Pn	16 02 26.9	+0.7
	5.0nm,0.3s,baz=156,slow=14,SNR=107						
KSRS				LR	LR	16 06 17.0	
	comp=Z,3μm,18.1s,baz=154,slow=40						
SSE	Sheshan	9.24	286	P	Pn	16 02 28.0	-1.8
SSE				S	Sn	16 04 12.0	-0.5
SSE				pmax	pmax		
	comp=Z,14nm,0.6s						
SSE				pmax	pmax		
	comp=Z,220nm,5.3s						
SSE				LR	LR		
	comp=N,2μm,15.7s						
SSE				LR	LR		
	comp=E,2μm,14.1s						
SSE	Sheshan	9.24	286	*e*Pn	Pn	16 02 28.0	-1.8
MAJO	Matsushiro	9.38	35	*e*Pn	Pn	16 02 32.8	+1.1
MAJO	Matsushiro	9.38	35	*e*P	Pn	16 02 32.8	+1.1
MAT	Matsushiro	9.38	35	P	Pn	16 02 32.8	+1.1
MAT				S	Sn	16 04 14.4	-1.5
MJAR	Matsushiro Arr	9.38	35	P	Pn	16 02 33.5	+1.7
	4.5nm,0.3s,baz=228,slow=16,SNR=248						
MJAR				LR	LR	16 06 05.0	
	comp=Z,5μm,20.7s,baz=180,slow=37						
CBIJ	Chichi jima	9.57	99	P	Pn	16 02 35.5	+1.2
CBIJ				S	Sn	16 04 18.0	-2.6
JCJ	Chichijima	9.57	99	P	Pn	16 02 35.5	+1.2
	46nm,0.3s,baz=88,slow=24,SNR=14						
JCJ				S	Sn	16 04 18.0	-2.6
	14nm,0.3s,baz=108,slow=19,SNR=3.1						
JCJ				LR	LR	16 05 40.7	
	comp=Z,7μm,21.2s,baz=296,slow=34						
YHNB	Yeheng	10.06	247	*e*Pn	Pn	16 02 39.5	-1.7
NACB	Ninganchiao	10.13	244	*e*Pn	Pn	16 02 38.3	-3.7
YULB	Yu-li	10.77	241	*e*Pn	Pn	16 02 45.4	-5.5
SSLB	Suanglung	10.83	244	*e*Pn	Pn	16 02 47.6	-4.0
TWG	Pinlang	11.26	239	*e*Pn	Pn	16 02 52.1	-5.5
TPUB	Ta-pu	11.34	243	*e*Pn	Pn	16 02 54.6	-4.0
NJ2	Nanjing	11.38	289	⇓P	Pn	16 02 59.3	+0.2
NJ2				pP		16 03 07.8	
NJ2				S	Sn	16 05 03.0	-2.0
NJ2				pmax	pmax		
	comp=Z,140nm,1.1s						
NJ2				LR	LR		
	comp=N,4μm,14.6s						
NJ2				LR	LR		
	comp=E,4μm,17.9s						
NJ2				LR	LR		
	comp=Z,5μm,16.3s						
QZH	Quanzhou	12.25	254	⇑*i*P	Pn	16 03 09.5	-1.5
QZH				S	Sn	16 05 27.3	+0.9
QZH				LR	LR		
	comp=N,4μm,16.8s						
QZH				LR	LR		
	comp=E,2μm,17.3s						
QZH				LR	LR		
	comp=Z,4μm,16.3s						
DL2	Dalian	12.88	323	⇓*i*P	Pn	16 03 19.5	0.0
DL2				pP	P	16 03 28.3	-1.4
DL2				sP		16 03 38.5	
DL2				S	Sn	16 05 44.5	+3.0
DL2				pmax	pmax		
	comp=Z,100nm,0.8s						
DL2				pmax	pmax		
	comp=Z,1μm,9.5s						
DL2				LR	LR		
	comp=N,3μm,15.3s						
DL2				LR	LR		
	comp=E,3μm,15.9s						
DL2				LR	LR		
	comp=Z,5μm,15.8s						
SGCP	Mt. Cagua	13.79	221	*e*P	Pn	16 03 30.0	-2.1
TIA	Tai'an	14.14	304	P	Pn	16 03 36.8	0.0
TIA				pmax	pmax		
	comp=Z,250nm,7.0s						
TIA				LR	LR		
	comp=N,2μm,13.8s						
TIA				LR	LR		
	comp=E,2μm,15.8s						
TIA				LR	LR		
	comp=Z,3μm,15.6s						
PALP	Palanan	14.54	217	*e*P	P	16 03 49.4	+1.0
APYP	Conner	14.56	223	*e*P	Pn	16 03 39.9	-2.7
CAUP	Cauayan	14.96	219	*e*P	Pn	16 03 49.8	+1.9
WHN	Wuhan	15.04	280	⇑P	P	16 03 53.3	-0.5
WHN				S	Sn	16 06 34.5	+0.2
WHN				LR	LR		
	comp=N,7μm,15.0s						
WHN				LR	LR		
	comp=E,6μm,15.7s						
WHN				LR	LR		
	comp=Z,7μm,15.8s						
USRK	Ussuriysk Ar.	15.19	1	P	Pn	16 03 51.8	+0.9
	3.8nm,0.3s,baz=168,slow=8.0,SNR=44						
USRK				LR	LR	16 09 45.1	
	comp=Z,1μm,19.6s,baz=172,slow=37						
CN2	Changchun	15.58	343	*e*P	Pn	16 03 56.8	+0.9
CN2				LR	LR		
	comp=N,3μm,17.0s						
CN2				LR	LR		
	comp=E,3μm,17.0s						
CN2				LR	LR		
	comp=Z,4μm,17.0s						
MDJ	Mudanjiang	15.68	355	P	Pn	16 03 57.0	-0.2
MDJ				pP	pP	16 04 05.5	-3.5

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MDJ                                sP     sP      16 04 12.0 -2.0
MDJ                                S      Sn      16 06 49.8  0.0
MDJ                                SS     S       16 07 04.0 +0.1
MDJ                                pmax   pmax
      comp=Z,890nm,3.6s
MDJ                                LR     LR
      comp=N,3µm,18.3s
MDJ                                LR     LR
      comp=E,2µm,16.7s
MDJ                                LR     LR
      comp=Z,3µm,19.1s
MDJ   Mudanjiang       15.68 355  ePn    Pn      16 03 56.4 -0.8
      171nm,1.8s
ERM   Erimo            16.04  33  ePn    P       16 04 04.5 -0.4
ERM   Erimo            16.04  33  eP     P       16 04 04.5 -0.4
SMPP  San Manuel, Pa   16.24 220  eP     Pn      16 04 02.5 -2.1
TEY   Ternei           16.51  13⇑eP     P       16 04 18.1 +8.0
TEY                                pmax   pmax
      comp=Z,600nm,2.0s
TEY                                pmax   pmax
      comp=E,30nm,2.1s
TEY                                pmax   pmax
      comp=N,90nm,1.3s
TEY                                pmax   pmax
      comp=Z,90nm,2.0s
TEY                                MLR    MLR
      comp=E,2µm,26.0s
TEY                                MLR    MLR
      comp=N,3µm,18.0s
POLP  Polilio Island   16.75 214  eP     Pn      16 04 11.8 +0.7
BJT   Baijiatuau       16.78 315  ePn    Pn      16 04 10.3 -0.9
      comp=N,123nm,0.9s
BJT   Baijiatuau       16.78 315  eP     Pn      16 04 10.3 -0.9
BJT                                pmax   pmax
      comp=Z,123nm,0.9s
PVCP  Virac            16.79 206  eP     Pn      16 04 11.8 +0.3
SCZP  Santa Cruz       16.98 222  eP     Pn      16 04 09.2 -4.6
ASAJ  Asahikawa        17.48  27  P      Pn      16 04 17.9 -2.1
      comp=Z,0.2nm,0.3s,baz=145,slow=6.2,SNR=9.5
ASAJ                               LR     LR      16 10 57.2
      comp=Z,4µm,21.1s,baz=212,slow=36
TGY   Tagaytay City    17.79 216  P      P       16 04 25.8 +1.3
      comp=Z,46nm,0.3s,baz=11,slow=4.7,SNR=13
BOAC  Boac             17.89 212  eP     P       16 04 26.6 +1.0
ANA2  Anatahan         18.11 131  eP     P       16 04 31.2 +3.3
      comp=Z,432nm,0.4s
TIY   Taiyuan          18.18 304  eP     P       16 04 28.8 +0.1
TIY                                pP     pP      16 04 39.3 +2.3
TIY                                S      S       16 07 54.0 -1.0
TIY                                pmax   pmax
      comp=Z,36nm,0.8s
TIY                                pmax   pmax
      comp=Z,740nm,4.1s
TIY                                LR     LR
      comp=Z,3µm,13.6s
TIY                                LR     LR
      comp=Z,2µm,14.9s
TIY                                LR     LR
      comp=Z,4µm,15.6s
OTRP  Odiongan         18.78 210  eP     Pn      16 04 38.6 +2.6
YUK   Yuzh-Kuril'sk    18.87  33  i P    Pn      16 04 37.0 +0.1
OCLP  Ormoc            18.99 201  eP     Pn      16 04 42.8 +4.2
SJMP  San Jose         19.11 213  eP     P       16 04 35.1 -3.8
RCP   Roxas            19.19 207⇑eP     Pn      16 04 42.0 +1.0
ENH   Enshi            19.24 279  eP     P       16 04 39.3 -1.0
      comp=Z,363nm,1.4s
GUMO  Guam             19.68 138  eP     Pn      16 04 46.3 -0.5
      comp=Z,923nm,1.5s
GUMO  Guam             19.68 138  P      P       16 04 45.1 -0.1
      comp=Z,4.3nm,0.3s,baz=198,slow=20,SNR=2.0
GUMO                               LR     LR      16 11 55.6
      comp=Z,2µm,18.3s,baz=320,slow=35
MSLP  Maasin           19.78 200  eP     Pn      16 04 48.6 +0.6
XAN   Xi'an            19.94 290  P      P       16 04 46.8 -1.2
XAN                                pP     pP      16 04 57.3 +0.9
XAN                                sP     sP      16 05 03.3 +1.6
XAN                                PP     PnPn    16 05 07.3 +2.9
XAN                                S      S       16 08 24.5 -6.0
XAN                                sS     sS      16 08 39.8 -3.6
XAN                                SS     SnSn    16 08 52.0 +4.4
XAN                                pmax   pmax
      comp=Z,84nm,1.1s
XAN                                pmax   pmax
      comp=Z,490nm,5.0s
XAN                                LR     LR
      comp=Z,2µm,13.6s
XAN                                LR     LR
      comp=Z,2µm,11.9s
XAN                                LR     LR
      comp=Z,2µm,12.5s
XAN   Xi'an            19.94 290  eP     P       16 04 46.6 -1.4
      comp=Z,78nm,0.8s
XAN   Xi'an            19.94 290  eP     P       16 04 46.6 -1.4
XAN                                pmax   pmax
      comp=Z,78nm,0.8s
BUSP  Coron            19.95 214  eP     Pn      16 04 49.3 -0.6
YSS   Yuzh-Sakhalins   19.95  23  eP     Pn      16 04 49.1 -0.7
      comp=Z,287nm,1.8s
YSS   Yuzh-Sakhalins   19.95  23  eP     P       16 04 48.4 +0.5
YSS                               eS     S       16 08 26.0 -4.3
YSS                                pmax   pmax
      comp=Z,40nm,1.0s
YSS                                MLR    MLR
      comp=Z,1µm,12.0s
GUIM  Jordan           20.11 207  eP     Pn      16 04 51.9 +0.1
HHC   Hu-ho-hao-te     20.18 311  eP     P       16 04 50.5 -0.1
HHC                                pP     pP      16 04 57.5 -1.4
HHC                                sP     pwP     16 05 00.8 -3.3
HHC                                PP     PnPn    16 05 09.3 +1.7
HHC                                S      S       16 08 29.0 -6.2
HHC                                SS     SnSn    16 08 56.5 +3.1
HHC                                pmax   pmax
      comp=Z,60nm,1.2s
HHC                                pmax   pmax
      comp=Z,570nm,3.8s
HHC                                LR     LR
      comp=Z,4µm,15.7s
HHC                                LR     LR
      comp=Z,2µm,13.3s
HHC                                LR     LR
      comp=Z,4µm,14.9s
KLR   Kul'dur          20.22   0⇓iP     P       16 04 50.4 -0.4
KLR   Kul'dur          20.22   0  P      P       16 04 50.1 -0.7
      comp=Z,25nm,0.6s,baz=184,slow=8.0,SNR=77
KLR                                LR     LR      16 13 18.6
      comp=Z,2µm,20.8s,baz=178,slow=39
BUTP  Butuan           20.68 197  eP     P       16 04 55.1 -0.9
KUR   Kuril'sk         20.72  34  eP     Pn      16 05 03.9 +5.1
KUR                               eS     Sn      16 09 00.3 +8.8
KUR                                pmax   pmax
      comp=Z,281nm,1.6s
KUR                                MLR    MLR
      comp=Z,992nm,13.0s
ENPP  El Nido          21.01 215  eP     P       16 04 59.6 -0.1
BTO   Baotou           21.10 309  eP     P       16 04 59.8 -0.7
BTO                                S      S       16 08 52.0 -1.4
UGL   Uglegorsk        21.62  19  eP     P       16 05 09.1 +3.2
UGL                               e               16 05 18.2
UGL                               e               16 05 36.4
UGL                                pmax   pmax
      comp=Z,20nm,2.2s
UGL                                MLR    MLR
      comp=N,2µm,16.0s
UGL                                MLR    MLR
      comp=E,2µm,17.0s
BUKP  Musuan           21.87 198  eP     P       16 05 09.3 +0.4
GRNR  Gornyy           22.07   8  eP     P       16 05 10.0 -0.7
GRNR                               pmax   pmax
      comp=Z,7.0nm,1.0s
QIZ   Qiongzhong       22.15 248  P      P       16 05 13.0 +1.1
QIZ                                pP     pP      16 05 21.5 +1.3
QIZ                                pmax   pmax
      comp=Z,120nm,1.6s
QIZ                                LR     LR
      comp=Z,1µm,21.6s
QIZ                                LR     LR
      comp=Z,2µm,20.2s
QIZ                                LR     LR
      comp=Z,2µm,19.6s
QIZ   Qiongzhong       22.15 248  eP     P       16 05 12.2 +0.4
      comp=Z,525nm,1.8s
GYA   Guiyang          22.18 269⇑iP     P       16 05 10.3 -2.0
GYA                                pP     pP      16 05 20.8 +0.2
GYA                                PP     PnPn    16 05 39.5 +4.3
GYA                                S      S       16 09 06.3 -8.3
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GYA                                SS     SnSn    16 09 43.0 +0.3
GYA                                pmax   pmax
      comp=Z,140nm,5.9s
GYA                                LR     LR
      comp=Z,2µm,14.1s
GYA                                LR     LR
      comp=Z,2µm,16.4s
GYA                                LR     LR
      comp=Z,3µm,16.4s
HIA   Hailar           22.18 339  eP     P       16 05 11.0 -1.0
      comp=Z,60nm,1.3s
HIA   Hailar           22.18 339  eP     P       16 05 11.0 -1.0
HIA                                pmax   pmax
      comp=Z,60nm,1.3s
PAGZ  Pagadian         22.39 202  eP     P       16 05 14.6 +0.1
DAV   Davao City (W)   22.52 196  LR     LR      16 13 31.7
      comp=Z,1µm,21.0s,baz=48,slow=35
KCP   Kidapawan        22.70 197⇑iP     P       16 05 17.2 -0.6
SKMP  Bagumbayan, Su   23.31 198  eP     P       16 05 24.6 +0.6
TYV   Tymovskoe        23.40  18  eP     P       16 05 27.9 +3.4
TYV                                pmax   pmax
      comp=Z,200nm,3.7s
TYV                                pmax   pmax
      comp=Z,13nm,1.4s
TYV                                MLR    MLR
      comp=Z,2µm,16.0s
BATP  Bataraza         23.89 216  eP     P       16 05 28.6 -0.9
CD2   Chengdu          24.15 281 ⇓P      P       16 05 30.0 -1.9
CD2                                pP     pP      16 05 40.5 -0.4
CD2                                sP     sP      16 05 45.5 +0.2
CD2                                S      S       16 09 45.5 -2.1
CD2                                sS     sS      16 10 03.8 +1.5
CD2                                pmax   pmax
      comp=Z,130nm,0.9s
CD2                                pmax   pmax
      comp=Z,670nm,5.3s
CD2                                LR     LR
      comp=Z,8µm,13.5s
CD2                                LR     LR
      comp=Z,7µm,11.6s
CD2                                LR     LR
      comp=Z,6µm,12.4s
LZH   Lanzhou          24.37 294  eP     P       16 05 32.5 -1.5
LZH                                pP     pP      16 05 40.3 -2.8
LZH                                sP     sP      16 05 45.8 -1.7
LZH                                PP     PnPn    16 06 09.3 +4.2
LZH                               eS     S       16 09 47.5 -3.8
LZH                                pmax   pmax
      comp=Z,58nm,1.2s
LZH                                pmax   pmax
      comp=Z,330nm,5.2s
LZH                                LR     LR
      comp=Z,5µm,13.5s
LZH                                LR     LR
      comp=Z,1µm,11.4s
LZH                                LR     LR
      comp=Z,8µm,14.6s
ZEA   Zeya             24.93 354  eP     P       16 05 37.8 -0.9
ZEA                               eS     S       16 10 04.0 +4.3
ZEA                                pmax   pmax
      comp=E,29nm,1.2s
ZEA                                pmax   pmax
      comp=N,110nm,1.4s
ZEA                                pmax   pmax
      comp=Z,180nm,1.4s
ZEA                                pmax   pmax
      comp=Z,1µm,7.0s
ZEA                                smax   smax
      comp=N,2µm,13.0s
ZEA                                MLR    MLR
      comp=N,1µm,16.0s
ZEA                                MLR    MLR
      comp=Z,2µm,16.0s
ZEA                                MLR    MLR
      comp=E,700nm,12.0s
NKL   Nikolayevsk      25.06  13  eP     P       16 05 40.0 +0.2
NKL                               e               16 09 56.0
NKL                                pmax   pmax
      comp=Z,43nm,1.0s
NKL                                pmax   pmax
      comp=Z,1µm,4.0s
KMI   Kunming          25.93 268  P      P       16 05 48.8 +0.5
KMI                                pP     sP      16 06 00.5 -1.4
KMI                                sP     pwP     16 06 04.5 +1.6
KMI                                S      S       16 10 14.5 -2.0
KMI                                sS     sS      16 10 36.5 +5.3
KMI                                pmax   pmax
      comp=Z,18nm,0.5s
KMI                                pmax   pmax
      comp=Z,270nm,6.4s
KMI                                LR     LR
      comp=Z,1µm,15.4s
KMI                                LR     LR
      comp=Z,2µm,16.9s
KMI                                LR     LR
      comp=Z,2µm,16.9s
CIT   Chita            26.64 335  eP     P       16 05 46.4 -7.8
CIT                               e               16 05 59.5
CIT                               e               16 06 40.6
CIT                               e               16 06 47.0
ULN   Ulaanbaatar      26.73 322  eP     P       16 05 54.0 -1.2
      comp=Z,42nm,1.0s
ULN   Ulaanbaatar      26.73 322  eP     P       16 05 54.0 -1.2
ULN                                pmax   pmax
      comp=Z,42nm,1.0s
SDKM  Sandakan         26.91 213  P      P       16 05 57.8 +0.8
SONM  Songino Array    27.07 321  P      P       16 05 57.4 -0.9
      comp=Z,3.2nm,0.5s,baz=137,slow=8.8,SNR=29
SONM                               PcP    PcP     16 09 18.1 -0.6
      comp=Z,0.7nm,0.5s,baz=139,slow=3.7,SNR=4.5
TSM   Tawau            27.78 210  P      P       16 06 06.0 +1.2
SKNT  Sakolnakorn      28.00 251  P      P       16 06 07.8 +1.1
      comp=Z,51nm,1.3s,comp=Z,784nm
GTA   Gaotai           28.12 300 ⇓P      P       16 06 09.3 +1.5
GTA                                pP     pP      16 06 14.8 -2.1
GTA                                sP     sP      16 06 18.0 -3.1
GTA                                PcP    PcP     16 09 22.5 +1.1
GTA                                S      S       16 10 52.5 +1.9
GTA                                sS     sS      16 11 02.5 -3.7
GTA                                SS     SnSn    16 12 12.8 +5.0
GTA                                pmax   pmax
      comp=Z,260nm,6.7s
GTA                                LR     LR
      comp=Z,2µm,16.5s
GTA                                LR     LR
      comp=Z,2µm,14.6s
GTA                                LR     LR
      comp=Z,3µm,14.0s
SKR   Severo-Kuril’s   28.49  34ceP     P       16 06 13.1 +2.4
SIJI  Sorong           29.69 181  P      P       16 06 21.6 -0.1
      comp=Z,11nm,0.7s,baz=335,slow=18,SNR=5.4
CHAI  Chaiyaphum       30.18 251  P      P       16 06 26.7 +0.6
      comp=Z,48nm,1.2s,comp=Z,451nm
ZAK   Zakamensk        30.20 323  eP     P       16 06 25.2 -0.9
ZAK                                pmax   pmax
      comp=Z,8.0nm,1.5s
UTTA  Uttaradit        30.50 255  P      P       16 06 29.5 +0.6
      comp=Z,24nm,0.9s,comp=Z,249nm
PBKT  Sadao Pong       30.70 253  eP     P       16 06 31.4 +0.8
PBKT  Sadao Pong       30.70 253  P      P       16 06 31.7 +1.0
      comp=Z,139nm,1.4s,comp=Z,2µm
TLY   Talaya           30.77 325  eP     P       16 06 29.7 -1.3
      comp=Z,50nm,1.6s
TLY   Talaya           30.77 325  eP     P       16 06 31.0  0.0
TLY                               eS     S       16 11 39.5 +7.8
TLY                                pmax   pmax
      comp=Z,37nm,1.4s
TLY                                MLR    MLR
      comp=Z,3µm,20.0s
PETK  Petropavlovsk-   30.81  31  P      P       16 06 31.6 +0.2
      comp=Z,5.0nm,0.9s,baz=225,slow=5.9,SNR=5.1
PETK                               LR     LR      16 18 13.8
      comp=Z,2µm,21.9s,baz=231,slow=35
LAMP  Lampang          30.94 257  P      P       16 06 34.1 +1.3
      comp=Z,15nm,1.2s,comp=Z,173nm
BTM   Bintulu          31.09 218  P      P       16 06 36.8 +2.7
SRAK  Srakaew          31.14 248  P      P       16 06 31.7 -2.8
      comp=Z,181nm,1.2s,comp=Z,2µm
SANI  Sanana           31.32 191  P      P       16 06 35.3 -0.8
BOD   Bodaibo          31.32 342  eP     P       16 06 35.5 -0.2
BOD                                pmax   pmax
      comp=Z,16nm,1.5s
SUKH  Sukhothai        31.40 256  P      P       16 06 38.3 +1.4
      comp=Z,13nm,1.3s
CMMT  Chiang Mai       31.40 259  P      P       16 06 37.5 +0.6
      comp=Z,54nm,1.5s,comp=Z,815nm
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CHTO  Chiang Mai       31.41 259  eP     P       16 06 37.0 +0.1
      comp=Z,106nm,1.4s
CHTO  Chiang Mai       31.41 259  eP     P       16 06 37.0 +0.1
CHTO                               pmax   pmax
      comp=Z,106nm,1.4s
CHTO  Chiang Mai       31.41 259  P      P       16 06 38.0 +1.0
      SNR=29
CHTO  Chiang Mai       31.41 259  P      P       16 06 37.6 +0.7
      comp=Z,240nm,1.5s,comp=Z,4µm
CM31  Chiang Mai Arr   31.56 258  P      P       16 06 39.4 +1.1
      SNR=20
CMAR  Chiang Mai Arr   31.56 258  P      P       16 06 38.7 +0.4
      comp=Z,8.7nm,1.0s,baz=52,slow=8.1,SNR=65
CMAR                               PcP    PcP     16 09 31.6 +1.2
      comp=Z,4.3nm,0.6s,baz=35,slow=1.2,SNR=20
CMAR                               LR     LR      16 20 09.2
      comp=Z,1µm,19.9s,baz=73,slow=38
FAKI  Fak Fak          31.73 179  eP     P       16 06 40.1 +0.4
      comp=Z,200nm,1.2s
FAKI  Fak Fak          31.73 179  P      P       16 06 40.1 +0.4
PCI   Palu             31.77 203  P      P       16 06 41.6 +1.5
MOY   Mondy            32.12 323  eP     P       16 06 42.5 -0.5
MOY                                pmax   pmax
      comp=Z,29nm,2.7s
SBUM  Sibu             32.18 218  eP     P       16 06 42.8 -0.8
      comp=Z,65nm,1.3s
SBUM  Sibu             32.18 218  P      P       16 06 44.7 +1.0
NLAI  Namlea           32.32 188  P      P       16 06 45.5 +0.6
SMKI  Samarinda        32.33 208  P      P       16 06 48.4 +3.4
UTHA  Uthaitani        32.47 253  P      P       16 06 47.6 +1.3
      comp=Z,25nm,1.2s,comp=Z,253nm
JAY   Jayapura         32.52 163  LR     LR      16 16 57.0
      comp=Z,2µm,21.3s,baz=350,slow=31
UMPA  Umpang Tak       32.65 254  P      P       16 06 50.1 +2.2
      comp=Z,37nm,1.2s,comp=Z,338nm
PATY  Pattaya          32.69 247  P      P       16 06 50.9 +2.7
      comp=Z,3.1nm,0.8s,comp=Z,2µm
YAK   Yakutsk          33.07 358  eP     P       16 06 54.6 +3.6
YAK                               e*PP   sP      16 07 02.5 -1.8
YAK                               e               16 08 02.3
YAK                               ePPP   PPP     16 08 19.6
YAK                               eS     S       16 12 13.5 +6.2
YAK                               eSS    SnSn    16 14 13.0 +5.5
YAK                                pmax   pmax
      comp=Z,222nm,1.3s
YAK                                pmax   pmax
      comp=N,164nm,1.2s
YAK                                pmax   pmax
      comp=E,30nm,1.0s
YAK                                pmax   pmax
      comp=Z,124nm,1.1s
YAK                                smax   smax
      comp=E,496nm,2.2s
YAK                                smax   smax
      comp=N,850nm,3.5s
YAK                                MLR    MLR
      comp=Z,7µm,19.0s
YAK                                MLR    MLR
      comp=E,2µm,18.0s
YAK                                MLR    MLR
      comp=N,6µm,20.0s
BKB   Balikpapan       33.19 208  P      P       16 06 51.8 -0.7
MA2   Magadan          33.27  18  eP     P       16 06 52.1 -0.8
      comp=N,31nm,1.0s
MA2   Magadan          33.27  18ceP     P       16 06 52.3 -0.5
MA2                                pmax   pmax
      comp=Z,15nm,1.0s
MA2   Magadan          33.27  18  P      P       16 06 51.7 -1.1
      comp=Z,5.3nm,1.1s,baz=181,slow=8.6,SNR=6.2
MA2                                LR     LR      16 20 36.5
      comp=Z,679nm,19.5s,baz=168,slow=37
PHET  Kaeng Krachan    33.70 248  P      P       16 06 58.8 +1.8
      comp=Z,13nm,0.9s,comp=Z,236nm
KSM   Kuching          34.05 220  eP     P       16 07 01.0 +1.0
      comp=Z,258nm,1.3s
KSM   Kuching          34.05 220  P      P       16 07 01.8 +1.8
LSA   Lhasa            35.12 281  P      P       16 07 08.8 -0.9
LSA   Lhasa            35.12 281  eP     P       16 07 08.2 -1.5
      comp=Z,29nm,1.0s
LSA   Lhasa            35.12 281  P      P       16 07 10.8 +1.1
LSA   Lhasa            35.12 281  eP     P       16 07 08.2 -1.5
LSA                                pmax   pmax
      comp=Z,29nm,1.0s
SHL   Shillong         35.33 274  eP     P       16 07 12.0 +0.8
SKLT  Songkhla         36.35 239  P      P       16 07 23.3 +3.4
      comp=Z,105nm,1.4s,comp=Z,1µm
SEY   Seymchan         36.55  16⇑eP     P       16 07 20.7 -0.3
SEY   Seymchan         36.55  16  P      P       16 07 20.4 -0.6
      comp=Z,0.9nm,0.7s,baz=256,slow=4.2,SNR=3.9
TRTT  Trang            36.64 241  P      P       16 07 24.3 +2.0
      comp=Z,41nm,1.4s,comp=Z,748nm
KRAB  Krabi            36.78 242  P      P       16 07 25.3 +1.8
      comp=Z,75nm,1.0s,comp=Z,904nm
KULM  Kulim            37.57 237  eP     P       16 07 30.1 -0.1
      comp=Z,94nm,1.2s
KULM  Kulim            37.57 237  P      P       16 07 31.9 +1.7
PKDT  Phuket           37.65 243  P      P       16 07 33.2 +2.3
      comp=Z,44nm,1.4s,comp=Z,828nm
MYKOM Kota Tinggi      37.80 229  eP     P       16 07 31.4 -0.7
      comp=Z,187nm,1.7s
MYKOM Kota Tinggi      37.80 229  P      P       16 07 34.0 +1.9
WMQ   Urumqi           37.84 305  P      P       16 07 34.5 +2.2
WMQ                                pP     sP      16 07 43.8 -1.9
WMQ                                pmax   pmax
      comp=Z,47nm,1.3s
WMQ                                pmax   pmax
      comp=Z,1µm,11.7s
WMQ                                LR     LR
      comp=Z,3µm,17.1s
WMQ                                LR     LR
      comp=Z,2µm,18.1s
WMQ                                LR     LR
      comp=Z,2µm,19.5s
IPM   Ipoh             37.84 236  eP     P       16 07 31.6 -1.0
      comp=Z,139nm,1.3s
IPM   Ipoh             37.84 236  P      P       16 07 33.5 +0.9
KGM   Kluang           37.99 230  P      P       16 07 35.5 +1.7
TPI   Tanjungpandan    39.02 220  P      P       16 07 43.3 +0.9
      comp=Z,89nm,1.7s
DSRI  Dabo             39.04 226  P      P       16 07 44.5 +1.9
DGZ   Jazzator, Alta   39.20 314  i P    P       16 07 44.6 +0.8
RAMN  Ramite           39.59 278  eP     P       16 07 46.4 -1.0
      comp=Z,20nm,0.5s
BATI  Baumata          39.70 192  P      P       16 07 47.1 -0.9
      comp=Z,67nm,1.0s,baz=182,slow=2.8,SNR=4.7
BATI                               LR     LR      16 25 07.5
      comp=Z,333nm,20.7s,baz=80,slow=37
JIRN  Jiri             39.78 279  eP     P       16 07 48.4 -0.8
GUN   Gumba            39.99 280  eP     P       16 07 50.3 -0.6
      comp=Z,77nm,0.5s
PKI   Pulchoki         40.48 279  eP     P       16 07 53.7 -1.2
      comp=Z,102nm,1.3s
PKIN  Phulchoki        40.49 279  eP     P       16 07 53.6 -1.3
PSI   Prapat           40.51 236  eP     P       16 07 54.3 -0.7
      comp=Z,128nm,1.5s
PSI                               ePcP   PcP     16 09 56.8 -0.4
PSI   Prapat           40.51 236  P      P       16 07 55.0  0.0
      comp=Z,18nm,0.7s,baz=0.4,slow=3.3,SNR=20
PSI                                PcP    PcP     16 09 57.4 +0.2
      comp=Z,10nm,0.8s,baz=180,slow=4.1,SNR=5.5
PSI                                LR     LR      16 23 46.0
      comp=Z,781nm,21.5s,baz=80,slow=35
KKN   Kakani           40.54 280  eP     P       16 07 54.3 -1.0
      comp=Z,28nm,0.7s
DMN   Daman            40.73 280  eP     P       16 07 55.9 -1.0
BKNI  Bangkinang       40.77 231  eP     P       16 07 56.6 -0.3
      comp=Z,349nm,1.4s
KCSI  Kotacane, Aceh   40.88 238  P      P       16 07 57.5 -0.4
MLSI  Meulaboh, Aceh   41.42 240  P      P       16 08 02.7 +0.4
MNSI  Mandailing Nat   41.44 233  P      P       16 08 02.8 +0.3
BSI   Banda Aceh       41.49 243  P      P       16 08 03.3 +0.3
MTN   Manton Dam       41.58 181  eP     P       16 08 02.9 -0.6
      comp=Z,284nm,1.5s
DANN  Dangsing         41.72 281  eP     P       16 08 04.4 -0.7
      comp=Z,81nm,0.9s
ZALV  Zalesovo Beam    41.95 320  P      P       16 08 05.5 -0.8
      comp=Z,3.9nm,0.5s,baz=105,slow=8.2,SNR=19
ZALV                               PcP    PcP     16 10 00.5 -0.6
      comp=Z,6.1nm,0.7s,baz=116,slow=3.2,SNR=5.4
ZALV                               LR     LR      16 28 04.9
      comp=Z,625nm,20.8s,baz=80,slow=40
KOLN  Koldanda         41.99 280  eP     P       16 08 06.3 -0.9
MK31  Makanchi Array   42.01 309  i P    P       16 08 05.5 -1.4
MK31                               pmax   pmax
      comp=Z,16nm,0.7s
MKAR  Makanchi Array   42.01 309  eP     P       16 08 05.4 -1.5
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	comp=Z,105nm,0.7s						
MKAR				PcP	PcP	16 10 01.3	-0.2
MKAR	Makanchi Array	42.01	309	eP	P	16 08 05.4	-1.5
MKAR						16 10 01.3	
MKAR				pmax	pmax		
	comp=Z,105nm,0.7s						
MKAR	Makanchi Array	42.01	309	P	P	16 08 05.8	-1.1
	comp=Z,7.5nm,0.7s,baz=94,slow=10,SNR=48						
MKAR				PcP	PcP	16 10 01.3	-0.2
	comp=Z,5.2nm,0.7s,baz=89,slow=2.9,SNR=3.9						
MAKZ	Makanchi	42.23	309	eP	P	16 08 07.0	-1.6
	comp=Z,27nm,1.3s						
MAKZ	Makanchi	42.23	309	eP	P	16 08 07.0	-1.6
MAKZ				pmax	pmax		
	comp=Z,27nm,1.3s						
PYUN	Piuthan	42.44	281	eP	P	16 08 10.2	-0.6
GSI	Gunungsitoli	42.51	236	eP	P	16 08 10.7	-0.5
	comp=Z,344nm,1.1s						
NVS	Novosibirsk	43.10	321	eP	P	16 08 13.8	-1.7
NVS				e		16 09 54.6	
NVS				eS	S	16 14 41.3	+2.3
NVS				pmax	pmax		
	comp=E,42nm,1.7s						
NVS				pmax	pmax		
	comp=Z,45nm,1.7s						
NVS				pmax	pmax		
	comp=N,13nm,1.6s						
NVS				pmax	pmax		
	comp=Z,20nm,1.6s						
NVS				smax	smax		
	comp=E,27nm,2.1s						
PDGK	Podgornoye	43.74	304	P	P	16 08 19.5	-1.5
PDGK				pmax	pmax		
	comp=Z,16nm,0.9s						
BILL	Bilibino	44.14	18	eP	P	16 08 23.3	-0.4
	comp=Z,140nm,1.8s						
BILL	Bilibino	44.14	18	⇓iP	P	16 08 23.0	-0.8
BILL				i		16 08 35.8	
BILL				eSS	SS	16 18 19.5	+7.4
BILL				pmax	pmax		
	comp=Z,16nm,1.5s						
BILL				MLR	MLR		
	comp=Z,767nm,18.0s						
PRZ	Przheval'sk	44.53	302	eP	P	16 08 26.8	-0.7
	comp=Z,28nm,1.0s						
PRZ	Przheval'sk	44.53	302	eP	P	16 08 26.8	-0.7
PRZ				pmax	pmax		
	comp=Z,28nm,1.0s						
KURK	Kurchatov	44.95	314	eP	P	16 08 29.7	-0.7
	comp=Z,51nm,1.1s						
KURK				PcP	PcP	16 10 11.0	-0.2
KURK	Kurchatov	44.95	314	eP	P	16 08 29.7	-0.7
KURK						16 10 11.0	
KURK				pmax	pmax		
	comp=Z,51nm,1.1s						
KURK	Kurchatov	44.95	314	P	P	16 08 30.4	-0.1
	SNR=17						
KURK				P	P	16 08 30.4	-0.1
	SNR=17						
KURBB	Kurchatov Arra	44.99	314	P	P	16 08 30.2	-0.6
	comp=Z,17nm,0.5s,baz=97,slow=9.0,SNR=54						
KURBB				PcP	PcP	16 10 11.0	-0.4
	comp=Z,2.3nm,0.6s,baz=102,slow=3.7,SNR=2.1						
KDJ	Kajisay	45.44	302	eP	P	16 08 33.8	-0.9
	comp=Z,22nm,1.2s						
KDJ	Kajisay	45.44	302	eP	P	16 08 33.8	-0.9
KDJ				pmax	pmax		
	comp=Z,22nm,1.2s						
NRN	Naryn	46.35	301	eP	P	16 08 39.7	-2.3
	comp=Z,24nm,1.4s						
NRN	Naryn	46.35	301	eP	P	16 08 39.7	-2.3
NRN				pmax	pmax		
	comp=Z,24nm,1.4s						
KSH	Kashi	46.49	298	P	P	16 08 48.0	+5.0
KSH				sP	pwP	16 09 04.0	+6.1
KSH				PP	PP	16 10 35.0	+2.5
KSH				S	S	16 15 36.0	+7.1
KSH				sS	sS	16 15 49.0	+3.9
KSH				SS	SS	16 18 47.8	-7.1
KSH				pmax	pmax		
	comp=Z,20nm,0.7s						
KSH				pmax	pmax		
	comp=Z,540nm,5.9s						
KSH				LR	LR		
	comp=Z,640nm,7.5s						
KSH				LR	LR		
	comp=Z,760nm,7.6s						
KSH				LR	LR		
	comp=Z,2µm,15.7s						
TKM2	Tokmak 2	46.59	303	P	P	16 08 43.8	0.0
	SNR=8.5						
KZA	Kyzart	46.88	302	P	P	16 08 50.5	+4.2
	SNR=9.7						
KBK	Karagaybulak	47.07	303	P	P	16 08 49.3	+1.8
	SNR=11						
FITZ	Fitzroy Crossi	47.16	188	eP	P	16 08 47.7	-0.4
	comp=Z,134nm,1.6s						
FITZ	Fitzroy Crossi	47.16	188	LR	LR	16 27 54.0	
	comp=Z,273nm,19.1s,baz=8.0,slow=35						
CHMS	Chumysh	47.20	303	P	P	16 08 49.8	+1.4
	SNR=8.7						
USP	Ospenovka	47.38	304	P	P	16 08 51.0	+1.3
	SNR=8.5						
AAK	Ala-Archa	47.41	303	P	P	16 08 52.3	+2.2
	SNR=7.1						
AAK	Ala-Archa	47.41	303	eP	P	16 08 49.8	-0.4
	comp=Z,10nm,0.9s						
AAK	Ala-Archa	47.41	303	i P	P	16 08 50.6	+0.4
	SNR=10						
AAK	Ala-Archa	47.41	303	ceP	P	16 08 50.7	+0.6
AAK				pmax	pmax		
	comp=Z,20nm,1.7s						
AAK	Ala-Archa	47.41	303	P	P	16 08 51.9	+1.8
	SNR=8.1						
AAK				P	P	16 08 51.9	+1.8
	SNR=8.1						
UCH	Uchtor	47.41	302	P	P	16 08 53.6	+3.1
	SNR=21						
NRIK	Noril'sk	47.60	340	P	P	16 08 50.2	-0.8
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NRIK				MLR	MLR		
	comp=Z,1µm,18.3s						
NRIK	Noril'sk	47.60	340	P	P	16 08 50.2	-0.8
	comp=Z,5.6nm,0.7s,baz=121,slow=8.9,SNR=18						
NRIK				LR	LR	16 30 52.9	
	comp=Z,1µm,18.3s,baz=134,slow=39						
EKS2	Erkin-Say	47.94	303	P	P	16 08 55.5	+1.4
	SNR=10						
AML	Almayashu	48.03	302	P	P	16 08 56.5	+1.2
	SNR=13						
SFK	Sufi-Kurgan	48.34	299	i P	P	16 08 57.5	0.0
SFK				pmax	pmax		
	comp=Z,24nm,1.4s						
WRAB	Tennant Creek	48.70	177	eP	P	16 08 59.5	-0.5
	comp=Z,27nm,1.0s						
WRAB	Tennant Creek	48.70	177	eP	P	16 08 59.6	-0.5
WRAB				pmax	pmax		
	comp=Z,27nm,1.0s						
WRA	Warramunga Arr	48.71	177	P	P	16 09 00.1	0.0
	comp=Z,7.5nm,0.8s,baz=352,slow=8.2,SNR=82						
WRA				LR	LR	16 28 32.1	
	comp=Z,450nm,20.9s,baz=0.0,slow=35						
OTUK	Ortayu	48.84	310	P	P	16 09 00.8	-0.1
OTUK				pmax	pmax		
	comp=Z,49nm,0.9s						
MNAS	Manas	48.89	303	i P	P	16 09 01.5	0.0
MNAS				pmax	pmax		
	comp=Z,19nm,1.3s						
NIL	Nilore	49.48	291	eP	P	16 09 04.3	-1.7
	comp=Z,191nm,1.9s						
NIL	Nilore	49.48	291	eP	P	16 09 04.3	-1.7
NIL				pmax	pmax		
	comp=Z,191nm,1.9s						
HYB	Hyderabad	49.71	269	i P	P	16 09 08.0	0.0
BVA0	Borovoye Array	50.26	317	P	P	16 09 11.2	-0.4
BVA0				pmax	pmax		
	comp=Z,19nm,0.8s						
BVAR	Borovoye Array	50.26	317	LR	LR	16 33 23.2	
	comp=Z,554nm,18.6s,baz=95,slow=40						
KK31	Karatay Array	50.30	304	i P	P	16 09 11.9	-0.2
KK31				pmax	pmax		
	comp=Z,26nm,0.8s						
KKAR	Karatay Array	50.30	304	eP	P	16 09 11.6	-0.5
KKAR	Karatay Array	50.30	304	eP	P	16 09 11.6	-0.5
BRVK	Borovoye	50.33	317	eP	P	16 09 11.8	-0.3
	comp=Z,130nm,1.4s						
BRVK	Borovoye	50.33	317	eP	P	16 09 11.8	-0.3
BRVK				pmax	pmax		
	comp=Z,131nm,1.4s						
BRVK	Borovoye	50.33	317	P	P	16 09 12.8	+0.7
	SNR=12						
BRVK				P	P	16 09 12.8	+0.7
	SNR=12						
CTA	Charters Tower	50.80	162	LR	LR	16 27 58.8	
	comp=Z,388nm,19.4s,baz=3.5,slow=33						
CTAO	Charters Tower	50.80	162	eP	P	16 09 16.9	+0.9
	comp=Z,18nm,0.9s						
CTAO	Charters Tower	50.80	162	eP	P	16 09 16.9	+0.9
CTAO				pmax	pmax		
	comp=Z,18nm,0.9s						
GAR	Garm	50.91	298	eP	P	16 09 16.6	-0.4
	comp=Z,324nm,1.9s						
GAR	Garm	50.91	298	eP	P	16 09 16.6	-0.4
GAR				pmax	pmax		
	comp=Z,324nm,1.9s						
CHGR	Chuyangaron	51.86	298	eP	P	16 09 23.7	-0.3
	comp=Z,213nm,1.5s						
ASAR	Alice Springs	52.39	177	P	P	16 09 28.1	+0.2
	comp=Z,4.9nm,0.5s,baz=10,slow=13,SNR=180						
ASAR				PcP	PcP	16 10 38.8	+0.3
	comp=Z,4.9nm,0.8s,baz=356,slow=3.0,SNR=6.0						
ASAR				LR	LR	16 30 39.5	
	comp=Z,491nm,21.2s,baz=2.0,slow=35						
PALK	Pallekele	52.47	256	eP	P	16 09 28.8	+0.1
	comp=Z,59nm,1.3s						
PALK	Pallekele	52.47	256	P	P	16 09 29.5	+0.8
PALK	Pallekele	52.47	256	eP	P	16 09 28.8	+0.1
PALK				pmax	pmax		
	comp=Z,59nm,1.3s						
ANM	Nome	52.68	29	eP	P	16 09 30.2	+0.7
	comp=Z,84nm,1.7s						
ANM	Nome	52.68	29	eP	P	16 09 30.2	+0.7
ANM				pmax	pmax		
	comp=Z,84nm,1.7s						
POO	Poona	53.40	272	eP	P	16 09 33.5	-2.1
RDOG	Red Dog Mine	54.33	25	eP	P	16 09 42.8	+1.2
	comp=Z,87nm,1.6s						
SVE	Sverdlovsk	55.94	321	deP	P	16 09 53.7	+0.3
SVE				eS	S	16 17 39.8	+1.2
SVE				pmax	pmax		
	comp=Z,44nm,0.9s						
SVE				MLR	MLR		
	comp=Z,2µm,16.0s						
SVW2	Sparrevohn	56.85	34	eP	P	16 10 00.5	+0.7
	comp=Z,66nm,1.6s						
AB31	Akbulak array	56.97	312	i P	P	16 10 00.0	-0.8
AB31				pmax	pmax		
	comp=Z,21nm,0.7s						
ABKAR	Akbulak array	56.97	312	eP	P	16 10 00.3	-0.5
ARU	Arti	57.11	321	eP	P	16 10 00.5	-1.2
	comp=Z,57nm,0.9s						
ARU	Arti	57.11	321	c iP	P	16 10 01.0	-0.7
ARU						16 10 55.1	
ARU						16 12 04.1	
ARU				PPP	PPP	16 13 23.7	
ARU				S	S	16 17 54.8	+0.8
ARU				SS	SS	16 21 40.9	-1.8
ARU				pmax	pmax		
	comp=Z,61nm,1.4s						
ARU				MLR	MLR		
	comp=Z,3µm,16.0s						
AKTO	Aktyubinsk	58.05	314	LR	LR	16 37 14.2	
	comp=Z,2µm,18.4s,baz=80,slow=38						
PPLA	Purkeypile	58.40	31	eP	P	16 10 11.0	+0.2
	comp=Z,133nm,1.6s						
CAST	Castle Rocks	58.43	31	eP	P	16 10 10.4	-0.5
	comp=Z,94nm,1.7s						
KDAK	Kodiak Island	58.55	38	eP	P	16 10 10.8	-1.0
	comp=Z,80nm,0.6s						
KDAK	Kodiak Island	58.55	38	eP	P	16 10 10.8	-1.0
KDAK				pmax	pmax		
	comp=Z,79nm,0.6s						
KDAK	Kodiak Island	58.55	38	P	P	16 10 10.8	-1.0
	comp=Z,17nm,0.6s,baz=271,slow=4.5,SNR=23						
MLY	Manley	58.95	29	eP	P	16 10 14.2	-0.3
	comp=Z,81nm,1.7s						
COLD	Coldfoot	59.09	26	eP	P	16 10 14.9	-0.5
	comp=Z,20nm,1.4s						
SUA	Susitna One	59.16	33	eP	P	16 10 15.8	-0.3
	comp=Z,35nm,0.6s						
TRF	Thorofare Moun	59.23	31	eP	P	16 10 15.9	-0.8
	comp=Z,18nm,1.1s						
TOLK	Toolik Lake Re	59.30	25	eP	P	16 10 16.6	-0.3
	comp=Z,80nm,1.5s						
TOLK	Toolik Lake Re	59.30	25	P	P	16 10 17.4	+0.5
	baz=271						
FORT	Forrest	59.52	184	eP	P	16 10 18.9	+0.2
	comp=Z,36nm,0.8s						
RC01	Rabbit Creek A	59.68	34	eP	P	16 10 20.1	+0.5
	comp=Z,23nm,1.0s						
MCK	McKinley	59.82	30	eP	P	16 10 20.4	-0.1
	comp=Z,169nm,1.8s						
RND	Reindeer	59.88	31	eP	P	16 10 19.7	-1.3
	comp=Z,45nm,0.7s						
RND	Reindeer	59.88	31	eP	P	16 10 19.7	-1.3
RND				pmax	pmax		
	comp=Z,45nm,0.7s						
PMR	Palmer	59.92	33	eP	P	16 10 21.8	+0.6
	comp=Z,64nm,1.4s						
PMR	Palmer	59.92	33	eP	P	16 10 21.8	+0.6
PMR				pmax	pmax		
	comp=Z,64nm,1.4s						
GHO	Glory Hole Cre	60.00	33	eP	P	16 10 21.8	-0.1
	comp=Z,147nm,1.9s						
MDM	Murphy Dome	60.02	29	eP	P	16 10 21.4	-0.5
	comp=Z,46nm,1.0s						
WRH	Wood River Hil	60.12	30	eP	P	16 10 22.1	-0.5
	comp=Z,24nm,1.2s						
KNK	Knik Glacier	60.26	33	eP	P	16 10 23.1	-0.5
	comp=Z,27nm,0.7s						
SML	Sawmill	60.28	33	eP	P	16 10 23.3	-0.4
	comp=Z,35nm,1.1s						
SML	Sawmill	60.28	33	eP	P	16 10 23.3	-0.4
SML				pmax	pmax		
	comp=Z,35nm,1.1s						
POKR	Poker Plat Res	60.34	29	P	P	16 10 24.5	+0.4
	baz=275						
GEYT	Alibeck	60.50	299	P	P	16 10 26.4	+0.7
	comp=Z,11nm,0.6s,baz=62,slow=3.5,SNR=25						
GEYT				LR	LR	16 40 51.8	
	comp=Z,390nm,18.4s,baz=110,slow=40						
DHY	Denali Highway	60.58	31	eP	P	16 10 25.2	-0.6
	comp=Z,17nm,1.1s						
ILAR	Eielson Array	60.61	29	P	P	16 10 25.2	-0.7
	comp=Z,1.3nm,0.6s,baz=264,slow=5.8,SNR=26						
ILAR				LR	LR	16 38 16.0	
	comp=Z,267nm,18.8s,baz=272,slow=38						
HDA	Harding Lake	60.62	30	eP	P	16 10 24.6	-1.4
	comp=Z,24nm,0.8s						
HDA	Harding Lake	60.62	30	P	P	16 10 25.0	-1.0
	baz=276						
DZM	Mont Dzumac	60.88	143	eS	S	16 18 47.2	+3.4
	comp=Z,535nm,30.1s						
DZM				eLQ	LQ	16 26 01.9	
	comp=Z,2µm,31.8s						
DZM				eLR	LR	16 28 36.9	
	comp=Z,858nm,28.4s						
DZM	Mont Dzumac	60.88	143	P	P	16 10 29.1	+0.8
	comp=Z,6.1nm,0.6s,baz=151,slow=22,SNR=8.7						
PRP	Porcupine Dome	61.10	28	eP	P	16 10 28.6	-0.8
	comp=Z,16nm,1.2s						
STKA	Stephens Creek	61.27	170	P	P	16 10 31.3	+0.7
	comp=Z,9.0nm,0.5s,baz=346,slow=6.9,SNR=38						
STKA				LR	LR	16 35 58.7	
	comp=Z,490nm,22.0s,baz=347,slow=35						
PAX	Paxson	61.45	31	eP	P	16 10 31.9	+0.1
	comp=Z,44nm,1.5s						
PAX	Paxson	61.45	31	eP	P	16 10 31.9	+0.1
PAX				pmax	pmax		
	comp=Z,44nm,1.5s						
DIV	Divide	61.59	33	eP	P	16 10 32.9	+0.2
	comp=Z,25nm,0.6s						
RIDG	Independ'e Rid	61.62	30	eP	P	16 10 32.5	-0.4
	comp=Z,85nm,1.7s						
HARP	HAARP	61.68	32	eP	P	16 10 33.1	-0.1
	comp=Z,146nm,1.7s						
SCRK	Sand Creek	61.96	30	eP	P	16 10 34.3	-0.9
	comp=Z,42nm,1.3s						
DOT	Dot Lake	61.98	30	eP	P	16 10 34.1	-1.1
	comp=Z,18nm,0.6s						
EGAK	Eagle	63.04	29	eP	P	16 10 41.6	-0.6
	comp=Z,11nm,0.8s						
PRGR	Permogore	63.05	328	eP	P	16 10 38.4	-3.9
PRGR				pmax	pmax		
	comp=Z,37nm,1.3s						
DAWY	Dawson	63.93	29	eP	P	16 10 48.4	+0.2
	comp=Z,8.7nm,0.8s						
EPYK	Eagle Plains	64.49	27	eP	P	16 10 51.5	-0.3
	comp=Z,168nm,1.8s						
EPYK	Eagle Plains	64.49	27	P	P	16 10 52.3	+0.5
	baz=284						
JLN	Jalan Bani Buh	64.56	282	P	P	16 10 55.0	+2.1
	SNR=6.2						
INK	Inuvik	65.19	24	eP	P	16 10 56.2	0.0
	comp=Z,70nm,1.6s						
INK	Inuvik	65.19	24	eP	P	16 10 56.2	0.0
INK				pmax	pmax		
	comp=Z,70nm,1.6s						
INK	Inuvik	65.19	24	P	P	16 10 56.2	0.0
	comp=Z,2.8nm,0.5s,baz=309,slow=7.4,SNR=18						
TMCR	Tamitsa	65.82	331	eP	P	16 10 59.1	-1.2
TMCR				pmax	pmax		
	comp=Z,22nm,0.8s						
KLMR	Klimovskoe	66.11	328	eP	P	16 11 00.3	-2.0
KLMR				pmax	pmax		
	comp=Z,56nm,1.4s						
KLMR	Klimovskoe	66.11	328	eP	P	16 11 00.4	-1.9
KLMR				AMP		16 11 14.7	
	comp=Z,56nm,1.4s						
MHTO	MHTO	66.25	282	P	P	16 11 05.0	+1.1
	SNR=12						
MHTO				P	P	16 11 05.0	+1.1
	SNR=12						
APA	Apatity	66.58	336	⇓iP	P	16 11 04.0	-1.2
APA				i		16 11 15.3	
APA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SPITS	Spitsbergen Ar	66.75	348	LR	LR	16 42 22.6	
	comp=Z,344nm,20.9s,baz=210,slow=38						
MAK	Makhachkala	66.80	307	eP	P	16 11 07.1	+0.1
MAK				e		16 13 32.2	
MAK				eS	S	16 19 56.8	-0.1
MAK				eSS	SS	16 24 14.9	+0.1
MAK				pmax	pmax		
	comp=Z,152nm,1.4s						
FAQ	Al Faqa, Dubai	66.81	286	P	P	16 11 08.0	+0.5
WHY	Whitehorse	66.87	32	eP	P	16 11 07.3	0.0
	comp=Z,102nm,1.8s						
ALNE	Al Ain	66.94	286	P	P	16 11 08.9	+0.6
LKRN	Lenkeran, Azer	67.28	303	P	P	16 11 09.6	-0.5
TOO	Toolangi	67.48	168	eP	P	16 11 11.8	+0.6
	comp=Z,138nm,1.9s						
TOO	Toolangi	67.48	168	eP	P	16 11 11.8	+0.6
TOO				pmax	pmax		
	comp=Z,138nm,1.9s						
SEKA	Sheki	67.59	306	P	P	16 11 11.9	-0.3
MNGR	Mingechevir, A	67.82	305	P	P	16 11 13.4	-0.1
ZKTA	Zakatala	67.86	306	P	P	16 11 13.4	-0.4
GROC	Groznyy	67.91	308	eP	P	16 11 11.7	-2.4
GROC				e		16 11 38.5	
GROC				eS	S	16 20 10.2	0.0
GROC				pmax	pmax		
	comp=Z,60nm,1.1s						
GANJ	Ganja	68.41	305	P	P	16 11 17.3	0.0
ARCES	ARCESS Array B	68.53	339	P	P	16 11 17.1	-0.4
	comp=Z,6.1nm,0.8s,baz=68,slow=8.4,SNR=16						
ARCES				LR	LR	16 47 16.7	
	comp=Z,1µm,18.6s,baz=46,slow=41						
MOS	Moscow	68.69	323	eP	P	16 11 17.0	-1.7
MOS				e		16 11 43.0	
MOS				pmax	pmax		
	comp=Z,36nm,0.8s						
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
GOF	Gofitskoye	69.14	311	eP	P	16 11 21.1	-0.6
GOF				eS	S	16 20 28.1	+3.3
GOF				pmax	pmax		
	comp=Z,50nm,1.0s						
ZEI	Tsey	69.36	308	eP	P	16 11 20.2	-3.2
ZEI				pmax	pmax		
	comp=Z,34nm,0.7s						
VSR	Storozhevoye	69.41	318	eP	P	16 11 22.0	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR				MLR	MLR		
	comp=Z,1µm,18.0s						
OBN	Obninsk	69.47	322	ceP	P	16 11 25.3	+1.8
OBN				i		16 11 35.5	
OBN				e		16 13 57.4	
OBN				eS	S	16 20 31.9	+3.6
OBN				eSS	SS	16 24 55.0	-0.4
OBN				pmax	pmax		
	comp=Z,30nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
NAX	Nakhchivan	69.52	304	P	P	16 11 25.2	+0.9
GNI	Garni	69.71	305	eP	P	16 11 26.2	+0.7
	comp=Z,107nm,1.4s						
GNI	Garni	69.71	305	i P	P	16 11 26.7	+1.1
	SNR=9.0						
GNI	Garni	69.71	305	ceP	P	16 11 26.9	+1.4
GNI				pmax	pmax		
	comp=Z,332nm,1.7s						
GNI	Garni	69.71	305	P	P	16 11 27.4	+1.8
	SNR=19						
GNI				P	P	16 11 27.4	+1.8
	SNR=19						
KBZ	Khabaz	69.71	309	P	P	16 11 25.7	+0.5
	comp=Z,12nm,0.8s,baz=71,slow=5.3,SNR=30						
KIV	Kislovodsk	69.77	310	eP	P	16 11 25.1	-0.6
	comp=Z,108nm,1.1s						
KIV	Kislovodsk	69.77	310	i P	P	16 11 26.6	+0.8
	SNR=12						
KIV	Kislovodsk	69.77	310	eP	P	16 11 25.2	-0.6
KIV				pmax	pmax		
	comp=Z,108nm,1.1s						
KIV	Kislovodsk	69.77	310	P	P	16 11 26.5	+0.8
	SNR=28						
KIV				P	P	16 11 26.5	+0.8
	SNR=28						
BCA	Borcka	71.43	308	⇑iP	P	16 11 35.9	+0.1
SOC	Sochi	71.91	310	c iP	P	16 11 37.8	-0.8
SOC				e*PP	pP	16 11 46.8	-1.5
SOC				e*SP	sP	16 11 50.9	-1.4
SOC				e		16 14 15.9	
SOC				eS	S	16 20 53.5	-3.5
SOC				eSS	SS	16 25 40.5	+7.2
SOC				pmax	pmax		
	comp=Z,24nm,0.6s						
SOC				MLR	MLR		
	comp=Z,582nm,19.0s						
FINES	FINESS Array B	71.92	331	P	P	16 11 37.5	-0.8
	comp=Z,9.7nm,0.6s,baz=70,slow=6.2,SNR=62						
FINES				LR	LR	16 47 02.0	
	comp=Z,1µm,18.2s,baz=60,slow=39						
RES	Resolute Bay	72.28	12	eP	P	16 11 39.9	-0.4
	comp=Z,54nm,1.3s						
RES	Resolute Bay	72.28	12	eP	P	16 11 39.9	-0.4
RES				pmax	pmax		
	comp=Z,54nm,1.3s						
RES	Resolute Bay	72.28	12	P	P	16 11 39.9	-0.4
	comp=Z,10nm,0.7s,baz=312,slow=6.0,SNR=64						
RES				LR	LR	16 46 02.0	
	comp=Z,303nm,19.5s,baz=313,slow=38						
DAG	Danmarks Havn	72.90	353	i P	P	16 11 43.4	-0.6
DAG				i		16 11 52.3	
DAG	Danmarks Havn	72.90	353	i P	P	16 11 43.4	-0.6
DAG				i		16 11 52.3	
ANN	Anapa	72.93	312	eP	P	16 11 43.4	-1.3
ANN				eS	S	16 21 09.0	+0.3
ANN				pmax	pmax		
	comp=Z,111nm,1.6s						
VSU	Vasula	73.01	328	eP	P	16 11 44.5	-0.4
VSU				IAmb	IAmb	16 11 57.8	
	comp=Z,209nm,1.0s						
TULEG	Thule	73.96	5	eP	P	16 11 49.4	-0.8
	comp=Z,92nm,1.3s						
IDID	Didziasalis	74.49	325	eP	P	16 11 53.6	0.0
IDID				IAmb	IAmb	16 12 07.9	
	comp=Z,25nm,0.9s						
NACGM	Naroch	74.67	325	e	P	16 11 54.0	-0.7
NACGM				eLQ	LQ	16 25 05.0	
NACGM				eLR	LR	16 46 20.0	
ISAL	Salakas	74.68	325	eP	P	16 11 54.6	-0.1
ISAL				IAmb	IAmb	16 12 09.0	
	comp=Z,20nm,1.0s						
IIGN	Ignalina	74.73	325	eP	P	16 11 55.1	0.0

IIGN				IAmb	IAmb	16 12 09.4	
	comp=Z,24nm,1.1s						
YKA	Yellowknife Ar	74.77	26	P	P	16 11 54.6	-0.5
	comp=Z,1.5nm,0.5s,baz=300,slow=5.7,SNR=28						
YKA				LR	LR	16 48 56.0	
	comp=Z,23nm,18.6s,baz=293,slow=39						
SIM	Simferopol'	75.00	313	eP	P	16 11 57.2	+0.4
SIM				pmax	pmax		
	comp=Z,32nm,0.9s						
SIM				MLR	MLR		
	comp=Z,660nm,17.6s						
AKASG	Malin Array Be	75.35	320	P	P	16 11 57.8	-0.8
	comp=Z,15nm,0.6s,baz=57,slow=6.2,SNR=53						
KIEV	Kiev	75.36	320	eP	P	16 11 57.5	-1.2
	comp=Z,41nm,1.0s						
KIEV	Kiev	75.36	320	iP	P	16 11 57.9	-0.8
	SNR=25						
KIEV	Kiev	75.36	320	eP	P	16 11 57.5	-1.2
KIEV				pmax	pmax		
	comp=Z,41nm,1.0s						
SLIT	Slitere, Latvi	75.48	328	eP	P	16 11 57.6	-1.7
SLIT				IAmb	IAmb	16 12 11.9	
	comp=Z,167nm,0.8s						
RAYN	Ar Rayn	75.73	289	eP	P	16 12 00.8	-0.6
	comp=Z,60nm,1.1s						
RAYN	Ar Rayn	75.73	289	iP	P	16 12 01.5	+0.1
	SNR=23						
RAYN	Ar Rayn	75.73	289	eP	P	16 12 00.8	-0.6
RAYN				pmax	pmax		
	comp=Z,60nm,1.1s						
PBUR	Paburg	76.49	327	⇑eP	P	16 12 03.4	-1.6
PBUR				IAmb	IAmb	16 12 18.3	
	comp=Z,66nm,0.8s						
KULLO	Kullorsuaq	76.53	2	iP	P	16 12 04.4	-0.6
	comp=Z,13nm,0.7s						
KULLO	Kullorsuaq	76.53	2	iP	P	16 12 04.4	-0.6
KULLO				pmax	pmax		
	comp=Z,13nm,0.7s						
SUW	Suwalki	76.94	325	eP	P	16 12 07.0	-0.6
SUW				esP	sP	16 12 20.5	-0.8
SUW	Suwalki	76.94	325	eP	P	16 12 06.6	-1.0
	comp=Z,114nm,1.0s						
SUW	Suwalki	76.94	325	eP	P	16 12 06.6	-1.0
SUW				pmax	pmax		
	comp=Z,114nm,1.0s						
KIS	Kishinev	77.34	317	eP	P	16 12 16.0	+5.9
KIS				eL	L	16 45 36.0	
KIS				LRM	MLR	16 49 30.0	
	comp=Z,700nm,18.0s						
KIS	Kishinev	77.34	317	eP	P	16 12 16.0	+5.9
KIS				i		16 12 21.0	
KIS				e		16 12 27.0	
KIS				MLR	MLR		
	comp=Z,800nm,18.0s						
BR131	Keskin Array S	77.66	309	P	P	16 12 12.7	+0.5
	SNR=33						
BRTR	Keskin Array B	77.66	309	P	P	16 12 12.0	-0.2
BRTR	Keskin Array B	77.66	309	P	P	16 12 11.9	-0.2
	comp=Z,7.7nm,0.8s,baz=105,slow=4.1,SNR=43						
NB2	NORSAR Subarra	78.13	335	P	P	16 12 12.9	-1.4
	comp=Z,14nm,0.7s,baz=51,slow=5.6						
NB2	NORSAR Subarra	78.13	335	P	P	16 12 12.9	-1.4
	baz=51,slow=5.6						
NOA	NORSAR Array B	78.13	335	P	P	16 12 13.1	-1.2
	comp=Z,4.7nm,0.7s,baz=50,slow=5.5,SNR=20						
NOA				LR	LR	16 51 34.7	
	comp=Z,368nm,18.8s,baz=60,slow=39						
ANTO	Ankara	78.17	309	eP	P	16 12 14.4	-0.5
	comp=Z,45nm,1.1s						
ANTO	Ankara	78.17	309	⇑iP	P	16 12 14.7	-0.2
ANTO	Ankara	78.17	309	eP	P	16 12 14.4	-0.5
ANTO				pmax	pmax		
	comp=Z,45nm,1.1s						
ANTO	Ankara	78.17	309	P	P	16 12 15.9	+0.9
	SNR=7.8						
ANTO				P	P	16 12 15.9	+0.9
	SNR=7.8						
TLCR		78.22	315	⇑iP	P	16 12 15.3	+0.3
TLCR		78.22	315	⇑P	P	16 12 15.3	+0.3
SUMG	Summit	78.48	357	eP	P	16 12 16.0	-0.4
	comp=Z,29nm,0.8s						
SUMG	Summit	78.48	357	iP	P	16 12 16.6	+0.2
	comp=Z,28nm,0.7s						
SUMG	Summit	78.48	357	eP	P	16 12 16.0	-0.4
SUMG				pmax	pmax		
	comp=Z,29nm,0.8s						
CFR	Carcaliu	78.65	315	⇓iP	P	16 12 17.1	-0.2
CFR	Carcaliu	78.65	315	⇓P	P	16 12 17.1	-0.2
LVV	L'vov	78.68	321	eP	P	16 12 17.0	-0.4
LVV				MLR	MLR		
	comp=Z,600nm,18.0s						
PRAR	RASCA	78.70	318	⇓iP	P	16 12 20.8	+3.2
TESR	Tescani	78.88	317	⇑iP	P	16 12 18.4	-0.2
PETR	Petresti	78.93	316	⇑iP	P	16 12 20.6	+1.7
BIZ	Bicaz	78.99	318	⇑iP	P	16 12 19.2	0.0
TLB	Topalu	79.00	315	⇑iP	P	16 12 19.9	+0.6
TLB	Topalu	79.00	315	⇑P	P	16 12 19.9	+0.6
ODBI	Odobesti	79.01	316	⇑iP	P	16 12 20.4	+1.1
HARR	Harsova	79.02	315	⇑iP	P	16 12 20.0	+0.7
HARR	Harsova	79.02	315	⇑P	P	16 12 20.1	+0.7
BURAR	Bucovina Array	79.16	319	⇓iP	P	16 12 20.4	+0.2
BURAR	Bucovina Array	79.16	319	⇓P	P	16 12 20.4	+0.2
VRI	Vrincioaia	79.16	317	⇑iP	P	16 12 21.5	+1.3
VRI	Vrincioaia	79.16	317	⇑P	P	16 12 21.5	+1.3
PLOR	Plostina	79.22	317	⇓iP	P	16 12 21.6	+1.1
PLOR	Plostina	79.22	317	⇓P	P	16 12 21.6	+1.1
URZ	Urewera	79.29	145	P	P	16 12 19.9	-0.8
	comp=Z,7.3nm,0.8s,baz=14,slow=4.2,SNR=4.3						
ICOR	Ion Corvin	79.38	315	⇑iP	P	16 12 22.5	+1.1
KWP	Kalwaria Pacla	79.51	321	eP	P	16 12 22.2	+0.2
KWP	Kalwaria Pacla	79.51	321	eP	P	16 12 22.2	+0.2
MLR	Muntele Rosu	79.82	317	eP	P	16 12 23.0	-0.9
	comp=Z,61nm,1.2s						
MLR	Muntele Rosu	79.82	317	⇑iP	P	16 12 24.9	+0.9
MLR	Muntele Rosu	79.82	317	eP	P	16 12 23.0	-0.9
MLR				pmax	pmax		
	comp=Z,61nm,1.2s						
DOPR	Dopca	79.91	317	⇓iP	P	16 12 25.1	+0.8
SECR		79.98	316	⇑iP	P	16 12 25.5	+0.8
CSS	Mathiatis	80.10	304	eP	P	16 12 24.4	-1.1
	comp=Z,65nm,1.3s						
YLV	Yalova	80.14	311	⇑iP	P	16 12 26.0	+0.3
YLV	Yalova	80.14	311	⇑P	P	16 12 26.0	+0.3
UZH	Uzhgorod	80.28	321	eP	P	16 12 25.6	-0.5
UZH				e		16 12 35.8	
UZH				e		16 15 29.7	
UZH				eS	S	16 22 24.5	-4.4
UZH				MLR	MLR		
	comp=N,70nm,16.0s						
UZH				MLR	MLR		
	comp=E,200nm,16.0s						
UZH				MLR	MLR		
	comp=Z,200nm,16.0s						
VOIR		80.39	317	⇑iP	P	16 12 27.2	+0.3
VOIR		80.39	317	⇑P	P	16 12 27.2	+0.3
CTYL	Yalikoy Yolu	80.40	312	⇑iP	P	16 12 31.3	+4.4
TRPA	Tarpa	80.41	320	⇓iP	P	16 12 27.4	+0.5
TRPA	Tarpa	80.41	320	⇑eP	P	16 12 27.0	+0.1
CJR	Cluj-Napoca	80.57	318	⇓iP	P	16 12 30.4	+2.5
CJR	Cluj-Napoca	80.57	318	⇓P	P	16 12 30.4	+2.5
DAMY	Dhamar	80.66	281	eP	P	16 12 31.0	+1.8
	comp=Z,257nm,2.0s						
ARR	Arges	80.68	317	⇓iP	P	16 12 28.8	+0.3
OJC	Ojcow	80.75	323	eP	P	16 12 28.9	+0.2
OJC	Ojcow	80.75	323	eP	P	16 12 28.1	-0.6
	comp=Z,67nm,0.8s						
OJC	Ojcow	80.75	323	eP	P	16 12 28.1	-0.6
OJC				pmax	pmax		
	comp=Z,67nm,0.8s						
NIE	Niedzica	80.94	322	eP	P	16 12 30.1	+0.4
NIE	Niedzica	80.94	322	eP	P	16 12 30.1	+0.4
DRGR		81.04	319	⇑iP	P	16 12 30.7	+0.3
DRGR		81.04	319	⇑P	P	16 12 30.7	+0.3
LTVH	Ltavrtes, Hu	81.18	320	eP	P	16 12 41.1	+10
LANS	Liptovska Anna	81.54	322	eP	P	16 12 34.4	+1.5
LANS				e		16 12 47.7	
LANS	Liptovska Anna	81.54	322	eP	P	16 12 34.4	+1.5
LANS				epP	sP	16 12 47.7	+1.0
NEW	Newport	81.61	39	P	P	16 12 33.0	-0.4
NEW	Newport	81.61	39	P	P	16 12 33.6	+0.3
	baz=305						
NEW	Newport	81.61	39	P	P	16 12 33.0	-0.4
	comp=Z,3.3nm,0.7s,baz=287,slow=9.1,SNR=3.6						
MANT	Manisa	81.72	309	eP	P	16 12 33.2	-1.1
	comp=Z,153nm,1.1s						
GZR	Gura Zlata	81.77	318	⇑iP	P	16 12 35.7	+1.4
GZR	Gura Zlata	81.77	318	⇑P	P	16 12 35.7	+1.4
YBH	Yreka Blue Hor	81.84	47	P	P	16 12 34.8	0.0
	comp=Z,3.4nm,0.9s,baz=257,slow=4.2,SNR=3.4						
OKC	Ostrava-Krasne	81.84	323	AMS	AMS	16 54 40.0	
	comp=Z,700nm,16.2s						
SIRR	Siria	81.94	319	⇑iP	P	16 12 35.5	+0.4
J05D	Fort Rock, OR	81.94	45	P	P	16 12 36.2	+0.9
	baz=302						
PSZ	Piszkesteto	82.01	321	eP	P	16 12 34.8	-0.7
	comp=Z,73nm,1.4s						
PSZ	Piszkesteto	82.01	321	⇑iP	P	16 12 35.9	+0.4
PSZ	Piszkesteto	82.01	321	eP	P	16 12 34.8	-0.7
PSZ				pmax	pmax		
	comp=Z,73nm,1.4s						
ALN	Alexandroupoli	82.14	312	eP	P	16 12 35.3	-0.9
	comp=Z,18nm,1.2s						
ALN	Alexandroupoli	82.14	312	eP	P	16 12 35.3	-0.9
ALN				pmax	pmax		
	comp=Z,18nm,1.2s						
MORC	Moravsky Berou	82.20	323	eP	P	16 12 35.8	-0.6
	comp=Z,20nm,0.9s						
MORC	Moravsky Berou	82.20	323	⇓iP	P	16 12 36.8	+0.4
MORC	Moravsky Berou	82.20	323	eP	P	16 12 35.8	-0.6
MORC				pmax	pmax		
	comp=Z,20nm,0.9s						
MORC	Moravsky Berou	82.20	323	eP	P	16 12 36.3	-0.1
KSP	Ksiaz	82.20	325	eP	P	16 12 36.8	+0.4
KSP	Ksiaz	82.20	325	eP	P	16 12 36.8	+0.4
VYHS	Vyhne	82.26	322	eP	P	16 12 37.1	+0.4
VYHS				e		16 12 50.8	
VYHS				pmax	pmax		
	comp=Z,26nm,1.1s						
VYHS	Vyhne	82.26	322	eP	P	16 12 37.1	+0.4
VYHS				epP	sP	16 12 50.8	+0.4
PUNG	Punghina	82.28	317	⇑iP	P	16 12 37.9	+1.0
BZS	Buzias	82.32	318	⇑iP	P	16 12 37.2	+0.1
BZS	Buzias	82.32	318	⇑P	P	16 12 37.2	+0.1
M04C	Macdoel	82.36	46	P	P	16 12 37.6	0.0
	baz=302						
KRLC	Kraliky	82.41	324	eP	P	16 12 38.1	+0.6
KRLC				epP	sP	16 12 49.5	-1.8
KRLC	Kraliky	82.41	324	eP	P	16 12 38.1	+0.6
KRLC				e		16 12 49.5	
KOLL	Kolacno	82.44	322	eP	P	16 12 38.9	+1.3
KOLL				e		16 12 50.9	
KOLL	Kolacno	82.44	322	eP	P	16 12 38.9	+1.3
KOLL				epP	sP	16 12 50.8	-0.6
DPC	Dobruska-Polom	82.49	324	eP	P	16 12 38.7	+0.8
DPC				epP	sP	16 12 51.7	0.0
DPC				AMS	AMS	16 53 00.0	
	comp=Z,1µm,17.1s						
DPC	Dobruska-Polom	82.49	324	eP	P	16 12 38.7	+0.8
DPC				e		16 12 51.7	
DPC				MLR	MLR		
	comp=Z,1µm,17.1s						
UPC	Upice	82.55	324	eP	P	16 12 39.7	+1.5
UPC				epP	sP	16 12 50.9	-1.0
UPC				AMS	AMS	16 52 50.0	
	comp=Z,1µm,16.7s						
UPC	Upice	82.55	324	eP	P	16 12 39.7	+1.5
UPC				e		16 12 50.9	
UPC				MLR	MLR		
	comp=Z,1µm,16.7s						
JAVC	Velka Javorina	82.67	322	eP	P	16 12 40.3	+1.4
BUD	Budapest	82.74	321	eP	P	16 12 50.1	+11
VRAC	Vranov	82.97	323	⇓iP	P	16 12 41.2	+0.8
VRAC	Vranov	82.97	323	⇓P	P	16 12 41.2	+0.8
VRAC	Vranov	82.97	323	eP	P	16 12 40.7	+0.3
SMOL	Smolenice	83.00	322	eP	P	16 12 43.0	+2.4
SMOL				e		16 12 54.0	
SMOL	Smolenice	83.00	322	eP	P	16 12 43.0	+2.4
SMOL				epP	sP	16 12 54.0	-0.3
VTS	Vitosha	83.00	315	eP	P	16 12 40.4	-0.5
	comp=Z,34nm,1.1s						
VTS	Vitosha	83.00	315	⇓iP	P	16 12 41.6	+0.7
VTS	Vitosha	83.00	315	eP	P	16 12 40.4	-0.5
VTS				pmax	pmax		
	comp=Z,34nm,1.1s						
MODS	Modra-Piesok	83.17	322	eP	P	16 12 42.0	+0.6
MODS				e		16 12 55.1	
MODS				pmax	pmax		
	comp=Z,141nm,1.9s						
MODS	Modra-Piesok	83.17	322	eP	P	16 12 42.0	+0.6
MODS				epP	sP	16 12 55.1	-0.1
KRUC	Moravsky	83.22	323	eP	P	16 12 41.9	+0.2
MOD	Modoc Plateau	83.27	46	eP	P	16 12 41.8	-0.4
	comp=Z,51nm,1.8s						
PVCC	Panska Ves	83.27	325	eP	P	16 12 42.7	+0.8
PVCC				epP	pP	16 12 52.2	+0.5
PVCC				AMS	AMS	16 54 10.0	
	comp=Z,1µm,17.6s						
PVCC	Panska Ves	83.27	325	eP	P	16 12 42.7	+0.8
PVCC				e		16 12 52.2	
PVCC				MLR	MLR		
	comp=Z,1µm,17.6s						
BRG	Berggiesshubel	83.36	326	iP	P	16 12 42.2	-0.2
	comp=Z,19nm,1.0s						
BRG				ePP	PP	16 15 38.7	-15
	comp=Z,6.5nm,1.1s						
BRG				S	S	16 22 59.0	-1.7
BRG	Berggiesshubel	83.36	326	iP	P	16 12 42.2	-0.2
BRG				S	S	16 22 59.0	-1.7
BRG				pmax	pmax		
	comp=Z,19nm,1.0s						
ZST	Bratislava	83.37	322	eP	P	16 12 42.6	+0.2
ZST				e		16 12 56.1	
ZST	Bratislava	83.37	322	eP	P	16 12 42.6	+0.2
ZST				epP	sP	16 12 56.1	-0.1
BMO	Blue Mountains	83.44	42	eP	P	16 12 42.4	-0.6
	comp=Z,74nm,1.8s						
BMO	Blue Mountains	83.44	42	eP	P	16 12 42.4	-0.6
BMO				pmax	pmax		
	comp=Z,73nm,1.8s						
GOPC	GO Pecny, Ondr	83.54	324	eP	P	16 12 43.8	+0.5
GOPC				epP	sP	16 12 55.3	-1.8
GOPC				AMS	AMS	16 53 20.0	
	comp=Z,1µm,15.2s						
GOPC	GO Pecny, Ondr	83.54	324	eP	P	16 12 43.8	+0.5
GOPC				e		16 12 55.3	
GOPC				MLR	MLR		
	comp=Z,1µm,15.2s						
CLL	Collm	83.55	326	eP	P	16 12 42.6	-0.7
	comp=Z,48nm,1.0s						
CLL	Collm	83.55	326	⇑iP	P	16 12 42.9	-0.4
	comp=Z,47nm,1.1s						
CLL				i (pP)	PcP	16 12 50.2	+2.7
CLL				i		16 12 54.5	
CLL				ePP	PP	16 15 54.0	-1.3
CLL				ePKPPKPdf	P'P'df	16 39 08.0	-3.0
CLL				Lm	MLR	16 54 00.0	
	comp=N,800nm,18.1s						
CLL				Lm	MLR	16 54 00.0	
	comp=E,800nm,18.1s						
CLL				Lm	MLR	16 54 00.0	
	comp=Z,2µm,18.8s						
CLL	Collm	83.55	326	⇑iP	P	16 12 42.9	-0.4
CLL				i		16 12 50.2	
CLL				pmax	pmax		
	comp=Z,47nm,1.1s						
CLL				MLR	MLR		
	comp=Z,2µm,18.8s						
TREC	Trest	83.56	324	eP	P	16 12 44.1	+0.7
TREC				AMS	AMS	16 53 20.0	
	comp=Z,800nm,18.7s						
TREC	Trest	83.56	324	eP	P	16 12 44.1	+0.7
TREC				MLR	MLR		
	comp=Z,800nm,18.7s						
J08A	Circle Bar Ran	83.59	44	eP	P	16 12 43.2	-0.6
	comp=Z,28nm,1.3s						
PRU	Pruhonice	83.61	325	eP	P	16 12 44.2	+0.5
PRU				epP	sP	16 12 55.7	-1.7
PRU				AMS	AMS	16 53 30.0	
	comp=Z,1µm,15.0s						
PRU	Pruhonice	83.61	325	eP	P	16 12 44.2	+0.5
PRU				e		16 12 55.7	
PRU				MLR	MLR		
	comp=Z,1µm,15.0s						
MORH	Mrgy, Hungar	83.69	320	⇑eP	P	16 12 43.1	-1.0
TIH	Tihany	83.70	321	eP	P	16 12 44.0	-0.2
ORV	Oroville	83.77	48	eP	P	16 12 43.4	-1.3
	comp=Z,43nm,1.6s						
ORV	Oroville	83.77	48	eP	P	16 12 43.4	-1.3
ORV				pmax	pmax		
	comp=Z,43nm,1.6s						
SOP	Sopron	83.97	322	eP	P	16 12 45.1	-0.4
WVOR	Wild Horse Val	84.01	44	eP	P	16 12 43.9	-2.1
	comp=Z,8.7nm,0.8s						
WVOR	Wild Horse Val	84.01	44	eP	P	16 12 43.9	-2.1
WVOR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VAY	Valandovo	84.13	314	iP	P	16 12 45.8	-0.7
VAY	Valandovo	84.13	314	iP	P	16 12 45.9	-0.6
DIVS	Divibare	84.14	318	eP	P	16 12 45.8	-0.8
	comp=Z,22nm,0.9s						
STIP	Stip	84.16	315	iP	P	16 12 45.0	-1.6
STIP	Stip	84.16	315	iP	P	16 12 45.1	-1.5
CONA	Conrad Observa	84.19	322	ePcP	P	16 12 47.3	+0.6
	comp=Z,36nm,1.2s,SNR=23						
BORG	Borgarnes	84.21	349	LR	LR	16 52 21.9	
	comp=Z,216nm,19.2s,baz=16,slow=37						
SFJD	Kangerlussuaq	84.31	1	eP	P	16 12 46.2	-0.7
	comp=Z,35nm,1.1s						
SFJD	Kangerlussuaq	84.31	1	iP	P	16 12 45.6	-1.2
	comp=Z,12nm,0.7s						
SFJD	Kangerlussuaq	84.31	1	eP	P	16 12 46.2	-0.7
SFJD				pmax	pmax		
	comp=Z,35nm,1.1s						
SFJD	Kangerlussuaq	84.31	1	LR	LR	16 51 57.8	
	comp=Z,309nm,21.1s,baz=346,slow=37						
BEHE	Becsehely	84.58	321	eP	P	16 12 48.1	-0.6
KHC	Kasperske Hory	84.64	324	eP	P	16 12 47.9	-1.1
	comp=Z,14nm,1.4s						
KHC	Kasperske Hory	84.64	324	eP	P	16 12 49.3	+0.3
KHC				epP	pP	16 13 00.3	+1.5
KHC				AMS	AMS	16 54 00.0	
	comp=Z,1µm,16.3s						
KHC	Kasperske Hory	84.64	324	eP	P	16 12 47.9	-1.1
KHC				pmax	pmax		
	comp=Z,14nm,1.4s						
FCC	Fort Churchill	84.70	22	eP	P	16 12 47.9	-1.1
	comp=Z,89nm,1.8s						
FCC	Fort Churchill	84.70	22	eP	P	16 12 47.9	-1.1
FCC				pmax	pmax		
	comp=Z,89nm,1.8s						
GERES	GERESS Array B	84.76	324	P	P	16 12 49.4	-0.2
	comp=Z,2.2nm,0.8s,baz=36,slow=5.0,SNR=15						
ARSA	Arzberg	84.79	322	ePcP	P	16 12 49.9	+0.1
	comp=Z,31nm,1.2s,SNR=6.3						
FFC	Flin Flon	84.80	28	eP	P	16 12 48.5	-1.1
	comp=Z,18nm,1.3s						
FFC	Flin Flon	84.80	28	eP	P	16 12 48.5	-1.1
FFC				pmax	pmax		
	comp=Z,18nm,1.3s						
PAHR	Pah Rah Range	85.06	47	eP	P	16 12 50.3	-1.1
	comp=Z,57nm,1.6s						
BIA	Bitola	85.08	315	eP	P	16 12 50.3	-1.0
MOA	Molln	85.09	323	ePcP	P	16 12 51.0	-0.2
	comp=Z,33nm,1.1s,SNR=6.2						
PNTR	Pine Nut	85.26	48	eP	P	16 12 52.1	-0.4
	comp=Z,18nm,0.8s						
CMB	Columbia Colle	85.33	49	eP	P	16 12 51.5	-1.1
	comp=Z,50nm,1.6s						
CMB	Columbia Colle	85.33	49	eP	P	16 12 51.5	-1.1
CMB				pmax	pmax		
	comp=Z,50nm,1.6s						
OHR	Ohrid	85.35	315	iP	P	16 12 47.9	-4.8
BLY	Banja Luka	85.38	319	eP	P	16 12 51.6	-1.2
	comp=Z,107nm,1.8s						
BLY	Banja Luka	85.38	319	⇑iP	P	16 12 52.3	-0.4
PERS	Pernice	85.39	322	eP	P	16 12 52.6	-0.1
SOKA	Soboth	85.41	322	ePcP	P	16 12 52.9	0.0
	comp=Z,52nm,1.0s,SNR=11						
GRA1	Grafenberg Arr	85.46	326	eP	P	16 12 52.3	-0.8
	comp=Z,32nm,0.9s						
GRF	Grafenberg Arr	85.46	326	eP	P	16 12 52.3	-0.8
GRF				pmax	pmax		
	comp=Z,32nm,0.9s						
GRFO	Grafenberg	85.46	326	eP	P	16 12 52.2	-0.8
	comp=Z,33nm,1.0s						
GRFO	Grafenberg	85.46	326	eP	P	16 12 52.2	-0.8
GRFO				pmax	pmax		
	comp=Z,33nm,1.0s						
TTG	Podgorica	85.54	317	eP	P	16 12 52.4	-1.1
	comp=Z,36nm,0.9s						
TTG	Podgorica	85.54	317	eP	P	16 12 52.4	-1.1
TTG				pmax	pmax		
	comp=Z,36nm,0.9s						
YERR	Yerington	85.55	48	eP	P	16 12 53.3	-0.7
	comp=Z,55nm,1.6s						
LRM	Limekiln Ridge	85.63	39	eP	P	16 12 54.5	+0.2
WAKR	Walker	85.69	48	eP	P	16 12 54.5	-0.2
	comp=Z,66nm,1.7s						
EGMT	Eagleton	85.69	36	eP	P	16 12 53.6	-0.8
	comp=Z,31nm,1.2s						
EGMT	Eagleton	85.69	36	P	P	16 12 54.0	-0.3
	baz=310						
OBKA	Obir	85.77	322	ePcP	P	16 12 54.2	-0.6
	comp=Z,18nm,0.8s						
HLID	Hailey	85.88	42	eP	P	16 12 54.7	-0.7
	comp=Z,60nm,1.8s						
HLID	Hailey	85.88	42	P	P	16 12 55.8	+0.3
	baz=307						
IDI	Anoyia	85.90	308	⇓iP	P	16 13 06.7	+11
KBA	Koelnbreinsper	86.06	323	ePcP	P	16 12 55.2	-1.1
	comp=Z,10nm,0.8s						
MYKA	Terra Mystica	86.18	322	ePcP	P	16 12 56.1	-0.6
	comp=Z,16nm,0.8s						
RYN	Ryan	86.21	48	eP	P	16 12 56.6	-0.6
	comp=Z,51nm,1.6s						
FRB	Frobisher Bay	86.22	9	LR	LR	16 53 13.5	
	comp=Z,294nm,20.9s,baz=352,slow=37						
KVN	Kaiserville	86.25	47	eP	P	16 12 56.6	-0.7
	comp=Z,90nm,1.7s						
KVN	Kaiserville	86.25	47	eP	P	16 12 56.7	-0.7
KVN				pmax	pmax		
	comp=Z,90nm,1.7s						
NVAR	Mina Array Bea	86.47	48	P	P	16 12 59.1	+0.6
	comp=Z,3.4nm,0.6s,baz=302,slow=5.6,SNR=29						
NVAR				LR	LR	16 47 05.0	
	comp=Z,124nm,19.0s,baz=290,slow=32						
OMMB	Old Mammoth Mi	86.47	49	eP	P	16 12 58.0	-0.7
ABTA	Abfaltersbach	86.71	323	ePcP	P	16 12 58.4	-1.0
	comp=Z,32nm,1.3s						
YHB	Horse Butte	86.99	39	eP	P	16 13 00.7	-0.3
	comp=Z,60nm,1.8s						
MOTA	Moosalm	87.06	324	iP	P	16 12 59.7	-1.4
	comp=Z,6.5nm,0.8s						
ELK	Elko	87.06	44	eP	P	16 13 00.7	-0.7
	comp=Z,41nm,1.8s						
ELK	Elko	87.06	44	eP	P	16 13 00.7	-0.7
ELK				pmax	pmax		
	comp=Z,41nm,1.8s						
RETA	Reutte	87.14	324	iPcP	P	16 13 01.3	-0.1
	comp=Z,13nm,2.2s						
YHH	Holmes Hill	87.16	39	eP	P	16 13 03.0	+1.2
	comp=Z,14nm,1.4s						
YMR	Madison River	87.17	39	eP	P	16 13 00.5	-1.3
	comp=Z,27nm,1.3s						
MEM	Membach	87.31	329	⇓sP	sP	16 13 16.3	+0.6
	comp=Z,13nm,1.3s						
YFT	Old Faithful	87.38	39	eP	P	16 13 02.0	-0.9
	comp=Z,62nm,1.8s						
PKM	Mcpherson Peak	87.45	51	P	P	16 13 04.1	+0.8
	baz=304						
YPP	Pitchstone Pla	87.51	40	eP	P	16 13 03.2	-0.3
	comp=Z,45nm,1.9s						
LKWY	Lake	87.55	39	eP	P	16 13 03.5	-0.2
	comp=Z,11nm,1.0s						
LKWY	Lake	87.55	39	eP	P	16 13 03.5	-0.2
LKWY				pmax	pmax		
	comp=Z,11nm,1.0s						
H17A	Grant Village	87.56	39	eP	P	16 13 03.2	-0.6
	comp=Z,55nm,1.6s						
H17A	Grant Village	87.56	39	P	P	16 13 05.7	+2.0
	baz=309						
FLWY	Flagg Ranch	87.69	40	eP	P	16 13 03.5	-0.8
	comp=Z,16nm,0.9s						
DAVA	Damuels	87.72	325	ePcP	P	16 13 03.6	-0.8
	comp=Z,10nm,1.2s						
BCLA	Clavier	87.77	329	⇑sP	sP	16 13 19.2	+1.2
FXWY	Fox Creek	87.78	40	eP	P	16 13 04.3	-0.5
	comp=Z,21nm,1.5s						
BFO	Black Forest	87.79	326	iP	P	16 13 04.3	-0.2
RLMT	Red Lodge	87.81	38	eP	P	16 13 04.4	-0.5
	comp=Z,18nm,1.2s						
RLMT	Red Lodge	87.81	38	P	P	16 13 05.6	+0.7
	baz=310						
MOOW	Moose Ponds	87.87	40	eP	P	16 13 05.4	+0.2
	comp=Z,28nm,2.0s						

WLF	Walferdange	87.91	328	⇑P	P	16 13 04.8	-0.1
WLF				⇓sP	sP	16 13 19.1	+0.5
	comp=Z,24nm,1.1s						
TPAW	Teton Pass	87.92	40	eP	P	16 13 04.6	-0.9
	comp=Z,8.0nm,0.8s						
HVU	Hansel Valley	87.92	42	eP	P	16 13 06.2	+0.9
	comp=Z,7.6nm,1.0s						
HVU	Hansel Valley	87.92	42	eP	P	16 13 06.3	+0.9
HVU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FUORN	Ofenpass-Fuorn	87.97	324	eP	P	16 13 03.7	-1.9
	comp=Z,40nm,1.4s						
R11A	Troy Canyon, C	88.26	46	eP	P	16 13 06.5	-0.6
	comp=Z,7.2nm,0.3s						
BGU	Big Grassy Mou	88.29	43	eP	P	16 13 06.3	-0.9
	comp=Z,27nm,1.8s						
DOU	Dourbes	88.31	329	⇓sP	sP	16 13 20.8	+0.2
MPMC	Manual Prospec	88.35	49	P	P	16 13 07.8	+0.1
	baz=305						
LAO	LASA Array	88.38	36	P	P	16 13 07.5	+0.2
	baz=312						
TPNV	Topopah Spring	88.65	48	eP	P	16 13 08.2	-0.8
	comp=Z,45nm,2.0s						
TPNV	Topopah Spring	88.65	48	eP	P	16 13 08.2	-0.8
TPNV				pmax	pmax		
	comp=Z,45nm,2.0s						
TPNV	Topopah Spring	88.65	48	P	P	16 13 09.3	+0.3
	baz=306						
PPT	Papeete	89.03	111	LR	LR	16 44 58.2	
	comp=Z,186nm,22.0s,baz=300,slow=30						
PPT2	Papeete2	89.04	111	eS	S	16 24 01.0	+3.9
	comp=Z,192nm,23.2s						
PPT2	Papeete2	89.04	111	eLR	LR	16 41 48.9	
	comp=Z,580nm,23.8s						
TCUT	Toone Canyon	89.14	42	eP	P	16 13 10.6	-0.6
	comp=Z,73nm,1.7s						
BW06	Boulder Array	89.16	40	eP	P	16 13 10.6	-0.7
	comp=Z,37nm,2.0s						
BW06	Boulder Array	89.16	40	P	P	16 13 11.2	-0.2
	baz=310						
PDAR	Pinedale Array	89.16	40	P	P	16 13 10.9	-0.4
	comp=Z,2.0nm,0.7s,baz=288,slow=1.0,SNR=20						
NLU	North Lily Min	89.46	44	eP	P	16 13 12.0	-0.8
	comp=Z,37nm,1.9s						
MPU	Maple Canyon	89.69	43	eP	P	16 13 12.9	-0.9
	comp=Z,50nm,1.9s						
MSU	Marysvale	90.29	45	eP	P	16 13 16.8	+0.1
MSU	Marysvale	90.29	45	eP	P	16 13 16.8	+0.1
LCMT	Little Creek M	90.55	46	eP	P	16 13 17.1	-0.7
	comp=Z,31nm,1.8s						
P17A	Butcher Ranch,	90.57	43	eP	P	16 13 17.3	-0.6
	comp=Z,77nm,1.8s						
MTPU	Mount Pierson	90.58	45	eP	P	16 13 17.4	-0.8
	comp=Z,30nm,1.7s						
ULM	Lac du Bonnet	90.62	28	LR	LR	16 57 16.3	
	comp=Z,184nm,18.1s,baz=324,slow=38						
Q16A	Castle Valley	90.66	44	eP	P	16 13 20.4	+2.1
	comp=Z,39nm,1.7s						
KNB	Kanab	90.81	46	eP	P	16 13 19.1	0.0
	comp=Z,53nm,1.9s						
KNB	Kanab	90.81	46	eP	P	16 13 19.1	0.0
KNB				pmax	pmax		
	comp=Z,53nm,1.9s						
RSSD	Black Hills	91.26	36	eP	P	16 13 20.2	-0.9
	comp=Z,11nm,0.8s						
RSSD	Black Hills	91.26	36	eP	P	16 13 20.2	-0.9
RSSD				pmax	pmax		
	comp=Z,11nm,0.8s						
RSSD	Black Hills	91.26	36	P	P	16 13 21.4	+0.3
	baz=314						
U15A	North Rim	91.51	46	eP	P	16 13 22.6	+0.2
	comp=Z,50nm,1.9s						
O20A	White River Ci	91.62	42	eP	P	16 13 22.1	-0.7
	comp=Z,12nm,1.1s						
O20A	White River Ci	91.62	42	P	P	16 13 22.7	-0.1
	baz=311						
TBI	Tubuai	92.06	115	eS	S	16 24 25.7	+1.3
	comp=Z,368nm,31.2s						
TBI	Tubuai	92.06	115	eLR	LR	16 43 11.6	
	comp=Z,303nm,24.5s						
PV09	Paradox Valley	92.15	43	eP	P	16 13 26.2	+0.8
PV21	Cone Mtn., Par	92.21	43	eP	P	16 13 24.9	-0.7
	comp=Z,89nm,1.8s						
PV23	Carpenter Ridg	92.26	43	eP	P	16 13 24.2	-1.7
	comp=Z,18nm,0.9s						
PV10	Paradox Valley	92.29	43	eP	P	16 13 25.3	-0.7
	comp=Z,30nm,0.9s						
PV14	Lion Creek, Pa	92.30	43	eP	P	16 13 24.9	-1.1
	comp=Z,20nm,0.9s						
PV20	West Nyswonger	92.35	43	eP	P	16 13 25.4	-0.9
	comp=Z,21nm,0.9s						
PV04	Paradox Valley	92.36	43	eP	P	16 13 25.9	-0.3
	comp=Z,64nm,1.6s						
PV19	Morning Glory	92.36	43	eP	P	16 13 25.2	-1.1
	comp=Z,17nm,0.9s						
PV17	East Wray Mesa	92.40	43	eP	P	16 13 25.6	-0.9
	comp=Z,134nm,1.9s						
PV16	Nyswonger Mesa	92.40	43	eP	P	16 13 25.0	-1.5
	comp=Z,81nm,1.9s						
N23A	Red Feather La	92.43	40	eP	P	16 13 25.1	-1.5
	comp=Z,28nm,1.5s						
N23A	Red Feather La	92.43	40	P	P	16 13 26.8	+0.2
	baz=312						
PV11	David Mesa, Pa	92.44	43	eP	P	16 13 25.1	-1.5
	comp=Z,88nm,1.8s						
PV05	Paradox Valley	92.44	44	eP	P	16 13 25.8	-0.9
	comp=Z,116nm,1.8s						
PV12	Saucer Basin,	92.47	43	eP	P	16 13 26.1	-0.7
	comp=Z,13nm,0.8s						
PV03	Paradox Valley	92.48	43	eP	P	16 13 26.1	-0.7
	comp=Z,34nm,1.6s						
PV07	Paradox Valley	92.48	43	eP	P	16 13 25.4	-1.5
	comp=Z,47nm,1.8s						
PV13	Radium Mtn., P	92.56	43	eP	P	16 13 25.8	-1.4
	comp=Z,17nm,0.9s						
Y14A	Wickenburg	92.57	49	eP	P	16 13 26.2	-0.9
	comp=Z,33nm,1.8s						
PV02	Paradox Valley	92.58	43	eP	P	16 13 26.2	-1.1
	comp=Z,12nm,0.9s						
WUAZ	Wupatki	92.65	47	eP	P	16 13 25.8	-1.8
	comp=Z,43nm,1.7s						
PV01	Paradox Valley	92.73	43	eP	P	16 13 25.5	-2.5
	comp=Z,59nm,1.8s						
TAOE	Nuku Hiva Isla	92.74	99	eLR	LR	16 43 27.5	
	comp=Z,645nm,25.3s						
SMCO	Snowmass	92.98	42	eP	P	16 13 30.1	+0.7
	comp=Z,38nm,1.7s						
X16A	Lo Mia Camp, P	93.30	48	eP	P	16 13 29.4	-1.2
	comp=Z,33nm,1.8s						
MVCO	Mesa Verde	93.37	44	eP	P	16 13 29.9	-1.0
	comp=Z,42nm,1.9s						
S22A	4UR Ranch, Cre	94.02	43	eP	P	16 13 32.8	-1.2
	comp=Z,16nm,1.4s						
EYMN	Ely	94.21	27	P	P	16 13 34.0	-0.3
	baz=323						
KMBO	Kilima Mbogo	94.32	271	i P	P	16 13 36.2	+0.5
KMBO	Kilima Mbogo	94.32	271	P	P	16 13 35.4	-0.4
	comp=Z,0.5nm,0.3s,baz=28,slow=5.0,SNR=4.2						
KMBO				LR	LR	17 00 20.2	
	comp=Z,121nm,18.3s,baz=100,slow=38						
SCHQ	Schefferville	95.04	11	LR	LR	16 59 01.6	
	comp=Z,474nm,20.8s,baz=324,slow=37						
TUC	Tucson	95.04	49	P	P	16 13 36.0	-2.5
	comp=Z,24nm,1.6s						
TUC	Tucson	95.04	49	P	P	16 13 36.0	-2.5
TUC				pmax	pmax		
	comp=Z,24nm,1.6s						
E39A	Mellen	95.86	28	P	P	16 13 40.7	-1.1
	baz=324						
E40A	Wakefield	96.07	27	P	P	16 13 42.9	+0.1
	baz=324						
G40A	Rib Lake	96.90	28	P	P	16 13 46.1	-0.6
	baz=324						
ESDC	Sonseca Array	100.14	327	P	Pdif	16 14 00.9	-0.5
	comp=Z,0.2nm,0.3s,baz=15,slow=5.3,SNR=2.8						
TXAR	Lajitas Array	101.61	47	P	Pdif	16 14 07.0	-1.1
	comp=Z,0.4nm,0.5s,baz=324,slow=4.5,SNR=3.4						
TORD	Torodi Ar. Bea	115.99	304	PKP	PKPdf	16 18 57.2	-1.6
	comp=Z,1.0nm,0.6s,baz=122,slow=1.9,SNR=8.6						
BOSA	Boshof	116.49	251	PKP	PKPdf	16 18 59.4	-0.2
	comp=Z,1.9nm,0.6s,baz=61,slow=2.2,SNR=6.7						
SYO	Syowa Base	117.42	204⇑	ePdiff	Pdif	16 15 19.6	+2.4
DBIC	Dimbokro	125.09	303	PKP	PKPdf	16 19 15.8	-0.6
	comp=Z,6.1nm,0.7s,baz=79,slow=1.0,SNR=7.3						
KIC	Kosan Boka	125.21	303	ePKIKP	PKPdf	16 19 15.5	-1.1
	comp=Z,16nm,0.7s						
TIC	Toumodi	125.23	303	ePKIKP	PKPdf	16 19 15.4	-1.3
LIC	Lamto	125.52	303	ePKIKP	PKPdf	16 19 15.9	-1.3
	comp=Z,67nm,1.5s						
SDV	Santo Domingo	136.68	33	ePKPdf	PKPdf	16 19 37.3	-1.3
MDP	Montagnes des	145.87	7	PKPbc	PKPbc	16 19 55.3	-0.1
	comp=Z,17nm,0.7s,baz=290,slow=0.9,SNR=7.0						
NNA	Nana	148.59	63	i PKP2	PKPab	16 20 11.1	+4.5
PTGA	Pitinga	149.82	23	ePKPdf	PKPdf	16 20 01.0	-0.4
PTGA				ePKPbc	PKPbc	16 20 05.2	-0.8
PTGA	Pitinga	149.82	23	PKP	PKPdf	16 20 01.4	+0.1
	comp=Z,7.9nm,0.9s,baz=122,slow=23,SNR=5.1						
PTGA				PKPbc	PKPbc	16 20 05.3	-0.8
	comp=Z,7.9nm,0.9s,baz=32,slow=4.2,SNR=11						
GO09	Cerro Castillo	151.43	148	ePKPbc	PKPbc	16 20 08.7	0.0
LPAZ	La Paz	157.90	59	PKP	PKPdf	16 20 13.6	+0.2
	comp=Z,1.0nm,0.7s,baz=123,slow=2.1,SNR=2.5						
PLCA	Paso Flores	158.46	129	PKPab	PKPab	16 20 44.5	-3.0
	comp=Z,2.7nm,1.0s,baz=284,slow=3.9,SNR=3.6						
SIV	San Ignacio	162.59	45	PKP	PKPdf	16 20 18.1	+0.2
	comp=Z,1.6nm,0.6s,baz=121,slow=0.5,SNR=11						
SIV				PKPab	PKPab	16 21 03.8	-2.2
	comp=Z,2.0nm,0.6s,baz=8.9,slow=1.5,SNR=5.8						
CPUP	Villa Florida	171.68	74	PKP	PKPdf	16 20 24.2	0.0
	comp=Z,1.8nm,0.8s,baz=297,slow=4.5,SNR=3.3						

ISCJB ***25*** *16:13:36.7±0.2, 7°.29S±0°.03×127°.01E±0°.04, h376km, mb4.2/55, Error ellipse: s-maj=5.0km s-min=3.9km az=150.0*

DJA ***25*** *16:13:37.9±0.2, 7°S±3°×12°7E±°, h380km±3km, M4.7/32, mb4.7/32, mB5.2/10, MLv5.1/13, Mw(mB)4.5/10*

NEIC ***25*** *16:13:37.9±0.3, 7°.25S×126°.93E, h378km±3km, mb4.5/22, Error ellipse: s-maj=6.0km s-min=4.3km az=58.0*

KLM ***25*** *16:13:38.4, 7°.18S×127°.13E, h387km, mb5.0*

IDC ***25*** *16:13:38.3±1.2, 7°.24S×126°.95E, h376km±12km, mb3.9/20, mb1 4.0/24, mb1mx3.8/46, mbtmp4.6/24, Error ellipse: s-maj=15.9km s-min=8.5km az=75.0*

ISC 25 16:13:37.7±0.3, **7°.25S**±0°.04×**126°.95E**±0°.05, **h376km, n156,** σ**1s.85**/163, **mb4.2**/55, **1C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	3.64	227	ePn	Pn	16 14 45.6	+0.6
SOEI	Soe	3.64	227	P	Pn	16 14 45.7	+0.7
NLAI	Namlea	3.99	2	P	Pn	16 14 50.9	+2.7
SAUI	Saumlaki	4.37	100	ePn	Pn	16 14 52.1	+0.1
SAUI	Saumlaki	4.37	100	P	Pn	16 14 52.3	+0.3
BATI	Baumata	4.38	228	P	Pn	16 14 53.4	+1.3
BATI	Baumata	4.38	228	P	Pn	16 14 53.4	+1.3
	538nm,0.3s,baz=90,slow=1.4,SNR=410						
BATI				S	S	16 15 46.8	-5.6
	191nm,0.3s,baz=88,slow=0.7,SNR=8.7						
MMRI	Maumere	4.87	253	ePn	Pn	16 14 57.0	-0.2
MMRI	Maumere	4.87	253	P	Pn	16 14 57.3	+0.1
SANI	Sanana	5.25	349	P	Pn	16 15 02.0	+0.7
KDI	Kendari	5.41	307	P	Pn	16 15 02.3	-0.7
EDFI	Ende, Flores	5.42	254	P	Pn	16 15 02.7	-0.5
FAKI	Fak Fak	6.81	51	ePn	Pn	16 15 17.5	-1.1
FAKI	Fak Fak	6.81	51	P	Pn	16 15 17.2	-1.4
MTN	Manton Dam	6.92	144	ePn	Pn	16 15 20.0	+0.2
BKSI	Bulukumba	7.05	285	P	P	16 15 29.3	+6.9
BNSI	Bone	7.38	292	P	P	16 15 27.7	+1.7
LUWI	Luwuk	7.44	326	ePn	P	16 15 27.5	+0.7
LUWI	Luwuk	7.44	326	P	P	16 15 28.2	+1.4
SIJI	Sorong	7.66	34	P	Pn	16 15 27.7	-0.7
	19nm,0.3s,baz=222,slow=5.9,SNR=50						
SIJI				S	S	16 16 52.6	-6.2
	11nm,0.3s,baz=345,slow=20,SNR=12						
SWI	Sorong	7.66	34	P	Pn	16 15 27.7	-0.7
SPSI	Sidrap Palu	7.86	294	P	P	16 15 33.2	+1.7
TNTI	Ternate	7.98	3	ePn	Pn	16 15 32.5	+0.5
TNTI	Ternate	7.98	3	P	P	16 15 33.0	+0.1
TTSI	Tana Toraja	8.24	300	P	P	16 15 38.0	+1.5
KMSI	Cibinong	8.32	339	P	P	16 15 39.0	+1.6
MRSI	Marisa	9.16	327	P	P	16 15 48.0	+1.3
RKPI	Ransiki, Papua	9.18	52	P	P	16 15 47.2	+0.2
PLAI	Plampang	9.22	260	P	Pn	16 15 44.7	-1.9
PCI	Palu	9.49	311	P	P	16 15 53.1	+2.7
MPSI	Mapaga	10.31	317	P	P	16 16 02.2	+2.6
SRPI	Serui, Papua	10.69	60	P	Pn	16 16 05.1	+1.3
FITZ	Fitzroy Crossi	10.86	187	eP	P	16 16 05.7	+0.1
FITZ	Fitzroy Crossi	10.86	187	P	P	16 16 05.8	+0.3
	7.2nm,0.3s,baz=20,slow=8.9,SNR=114						
JAGI	Jajag, Banyuwa	12.74	264	eP	P	16 16 23.6	-2.9
JAGI	Jajag, Banyuwa	12.74	264	P	P	16 16 23.4	-3.1
KMMI	Kalianget	12.89	270	P	Pn	16 16 33.8	+4.2
KCP	Kidapawan	14.29	352⇑	iP	P	16 16 44.9	+1.4
WRAB	Tennant Creek	14.51	151	eP	P	16 16 45.9	+0.1
WRA	Warramunga Arr	14.51	151	P	P	16 16 45.9	0.0
	19nm,0.3s,baz=327,slow=13,SNR=370						
WRA				S	S	16 19 18.9	-2.8
	0.7nm,0.3s,baz=326,slow=21,SNR=9.4						
PWJI	Pagerwojo	15.04	266	P	P	16 16 49.7	-1.9
BUKP	Musuan	15.14	353	eP	P	16 16 53.4	+0.6
SDKM	Sandakan	16.09	322	P	P	16 17 04.8	+1.7
BUTP	Butuan	16.16	355	eS	P	16 17 08.4	+4.5
UGM	Wanagama	16.30	267	eP	P	16 17 04.8	-0.6
	1µm,1.7s						
COEN	Coen	17.27	114	eP	P	16 17 15.6	-0.1
	7.4nm,0.6s						
ASAR	Alice Springs	17.64	159	P	P	16 17 21.1	+1.6
	2.5nm,0.3s,baz=339,slow=10,SNR=88						
ASAR				S	S	16 20 21.7	-1.7
	0.5nm,0.3s,baz=341,slow=22,SNR=7.7						
KPJI	Karang Pucung	17.88	269	P	P	16 17 21.9	-0.2
CMJI	Cimerak	18.35	267	P	P	16 17 24.3	-2.9
KSM	Kuching	18.73	297	eP	P	16 17 30.9	-0.4
	84nm,0.8s						
CISI	Cisompet, Garu	18.98	268	eP	P	16 17 33.3	-0.6
	198nm,0.8s						
CISI	Cisompet, Garu	18.98	268	P	P	16 17 34.5	+0.6
GIRL	Giralia	19.60	217	eP	P	16 17 40.2	+0.2
	522nm,1.5s						
TPI	Tanjungpandan	19.73	282	P	P	16 17 44.6	+3.2
DBJI	Dramaga	20.07	271	P	P	16 17 43.3	-1.3
PPBI	Pangkal Pinang	21.35	283	P	P	16 17 58.0	+1.8
MDSI	Maura Dua	22.82	276	P	P	16 18 09.4	-0.2
KGM	Kluang	25.32	290	P	P	16 18 34.8	+2.7
BBOO	Buckleboo	26.80	163	eP	P	16 18 45.4	+0.4
	26nm,0.8s						
KTGM	Kuala Trenggan	26.85	297	P	P	16 18 48.2	+2.5
NWAO	Narrogin (SRO)	27.10	198	P	P	16 18 47.8	+0.2
	6.3nm,0.6s,baz=249,slow=9.3,SNR=6.6						
STKA	Stephens Creek	28.05	153	P	P	16 18 57.0	+0.9
	6.4nm,0.4s,baz=330,slow=8.6,SNR=31						
IPM	Ipoh	28.38	293	P	P	16 18 60.0	+0.8
MNSI	Mandailing Nat	28.45	285	P	P	16 18 59.8	0.0
PSI	Prapat	29.70	289	eP	P	16 19 10.6	-0.4
	50nm,0.7s						
PSI	Prapat	29.70	289	P	P	16 19 11.4	+0.5
	57nm,0.9s,baz=177,slow=1.3,SNR=33						
TRTT	Trang	31.04	298	P	P	16 19 24.2	+1.7
	22nm,0.8s						
KRAB	Krabi	31.65	299	P	P	16 19 29.5	+1.7
	61nm,0.9s,493nm						
MLSI	Meulaboh, Aceh	32.56	290	P	P	16 19 35.8	+0.1
PATY	Pattaya	32.76	308	P	P	16 19 39.7	+2.4
	7.5nm,0.8s						
SKNT	Sakolnakorn	33.09	317	P	P	16 19 43.5	+3.4
	6.5nm,0.9s						
PHET	Kaeng Krachan	33.74	306	P	P	16 19 48.5	+2.8
	3.4nm,0.8s						
CHAI	Chaiyaphum	33.77	313	P	P	16 19 48.1	+2.2
	5.2nm,0.8s						
PBKT	Sadao Pong	34.94	313	P	P	16 19 58.7	+2.8
UTHA	Uthaitani	35.44	310	P	P	16 20 02.2	+2.1
	6.2nm,0.9s,71nm						
UTTA	Uttaradit	36.01	314	P	P	16 20 06.4	+1.6
	6.7nm,0.7s,56nm						
UMPA	Umpang Tak	36.28	310	P	P	16 20 08.9	+1.7
	4.8nm,0.9s						
SUKH	Sukhothai	36.51	313	P	P	16 20 12.5	+3.5
	5.8nm,0.8s						
LAMP	Lampang	37.18	314	P	P	16 20 18.1	+3.5
	4.8nm,0.7s						
CMAR	Chiang Mai Arr	37.63	313	P	P	16 20 19.2	+0.9
	6.9nm,0.7s,baz=144,slow=6.9,SNR=40						
CMAR				PcP	PcP	16 22 28.6	+1.6
	2.3nm,0.7s,baz=163,slow=2.7,SNR=12						
CMAR				ScP	ScP	16 25 39.5	+1.4
	1.5nm,0.9s,baz=162,slow=3.1,SNR=9.2						
CMMT	Chiang Mai	37.86	314	P	P	16 20 21.7	+1.4
	9.3nm,1.8s						
CHTO	Chiang Mai	37.86	314	eP	P	16 20 20.9	+0.6
	6.7nm,0.6s						
CHTO	Chiang Mai	37.86	314	P	P	16 20 22.4	+2.1
	40nm,1.1s						
NJ2	Nanjing	39.84	349	eP	P	16 20 37.5	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI	Kunming	39.89	325	P	P	16 20 39.3	+2.2
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
JNU	Nakatsue	40.32	5	eP	P	16 20 40.8	+0.5
	comp=Z,28nm,1.0s						
JNU	Nakatsue	40.32	5	P	P	16 20 40.6	+0.4
	comp=Z,5.7nm,0.8s,baz=217,slow=6.4,SNR=6.0						
ENH	Enshi	40.90	337	eP	P	16 20 44.7	-0.2
	comp=Z,4.7nm,0.7s						
CD2	Chengdu	43.97	331	eP	P	16 21 10.0	+0.6
KSAR	Wonju Array Be	44.47	1	P	P	16 21 14.3	+1.2
XAN	Xi'an	44.48	338	P	P	16 21 13.5	+0.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,210nm,6.5s						
KSRS	Korea Array	44.48	1	P	P	16 21 14.3	+1.1
	comp=Z,3.6nm,0.8s,baz=173,slow=9.0,SNR=14						
LZH	Lanzhou	48.27	335	eP	P	16 21 41.8	-0.8
LZH				pP	pP	16 22 58.0	+0.2
LZH				PP	PP	16 23 48.3	+8.9
LZH				sP	sP	16 23 49.5	+10
LZH				eS	S	16 28 06.3	-7.0
LZH				sS	sS	16 30 28.3	+0.6
LZH				SS	SS	16 31 41.3	-7.3
LZH				pmax	pmax		
	comp=Z,27nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.7s						
HHC	Hu-ho-hao-te	49.91	345	eP	P	16 21 56.5	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,360nm,5.2s						
LSA	Lhasa	50.34	319	eP	P	16 21 57.1	-1.4
	comp=Z,7.0nm,0.7s						
MDJ	Mudanjiang	51.68	2	eP	P	16 22 05.8	-1.8
	comp=Z,24nm,0.9s						
RAMN	Ramite	51.80	313	eP	P	16 22 10.0	+0.9
	comp=Z,68nm,0.6s						
JIRN	Jiri	52.51	313	eP	P	16 22 14.9	+0.5
	comp=Z,40nm,0.7s						
GTA	Gaotai	52.79	334	eP	P	16 22 17.3	+1.4
GTA				PcP	PcP	16 23 21.3	+1.6
GTA				pP	pwP	16 23 38.5	+1.5
GTA				sP	PP	16 24 21.8	+1.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GUN	Gumba	52.88	313	eP	P	16 22 17.5	+0.5
	comp=Z,44nm,0.7s						
RPZ	Rata Peaks	52.92	141	eP	P	16 22 16.9	+0.2
	comp=Z,44nm,1.2s						
PKI	Pulchoki	53.03	313	eP	P	16 22 18.3	+0.2
	comp=Z,22nm,0.6s						
PKIN	Phulchoki	53.04	313	eP	P	16 22 18.2	+0.1
	comp=Z,16nm,0.5s						
KKN	Kakani	53.24	313	eP	P	16 22 19.8	+0.3
	comp=Z,14nm,0.6s						
DMN	Daman	53.27	312	eP	P	16 22 20.3	+0.5
	comp=Z,28nm,0.9s						
KOLN	Koldanda	54.47	312	eP	P	16 22 28.9	+0.6
	comp=Z,52nm,0.8s						
DANN	Dangsing	54.67	312	eP	P	16 22 30.1	+0.3
	comp=Z,32nm,0.8s						
PYUN	Piuthan	55.10	312	eP	P	16 22 33.3	+0.5
	comp=Z,72nm,0.9s						
SONM	Songino Array	57.77	344	P	P	16 22 52.2	+1.3
	comp=Z,0.5nm,0.4s,baz=164,slow=7.5,SNR=9.3						
SONM				PcP	PcP	16 23 39.5	+0.6
	comp=Z,1.5nm,0.8s,baz=162,slow=4.7,SNR=6.7						
WMQ	Urumqi	61.99	329	eP	P	16 23 21.0	+1.7
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
NIL	Nilore	65.12	312	eP	P	16 23 39.4	-0.3
	comp=Z,10nm,0.5s						
KSH	Kashi	66.19	319	P	P	16 23 47.5	+1.0
KSH				pP	pwP	16 25 13.3	+2.3
KSH				PP	PP	16 26 22.5	+4.4
KSH				PcS		16 28 20.8	
KSH				S	S	16 31 58.5	-6.2
KSH	Kashi	66.19	319	sS	sS	16 34 34.8	+6.3
KSH	Kashi	66.19	319	SS	SS	16 36 35.3	+6.0
KSH				pmax	pmax		
	comp=Z,160nm,5.1s						
KSH				LR	LR		
	comp=N,110nm,4.2s						
KSH				LR	LR		
	comp=E,150nm,4.4s						
KSH				LR	LR		
	comp=Z,420nm,6.1s						
MKAR	Makanchi Array	66.81	328	eP	P	16 23 50.3	+0.2
	comp=Z,16nm,0.7s						
MKAR	Makanchi Array	66.81	328	P	P	16 23 50.9	+0.8
	comp=Z,3.3nm,0.7s,baz=128,slow=7.6,SNR=37						
KDJ	Kajisay	66.87	322	eP	P	16 23 52.2	+1.4
	comp=Z,7.4nm,1.4s						
MAKZ	Makanchi	66.98	328	eP	P	16 23 51.4	+0.2
	comp=Z,6.0nm,1.4s						
AAK	Ala-Archa	68.81	321	eP	P	16 24 03.5	+0.8
	comp=Z,3.6nm,0.6s						
GAR	Garm	69.72	316	eP	P	16 24 08.1	-0.2
	comp=Z,28nm,1.6s						
CHGR	Chuyangaron	70.37	315	eP	P	16 24 12.1	0.0
ZALV	Zalesovo Beam	70.50	335	P	P	16 24 12.4	0.0
	comp=Z,8.2nm,0.6s,baz=129,slow=4.4,SNR=36						
KURBB	Kurchatov Arra	71.17	330	P	P	16 24 17.3	+0.8
	comp=Z,16nm,0.6s,baz=134,slow=4.9,SNR=17						
KURK	Kurchatov	71.18	330	eP	P	16 24 17.0	+0.4
	comp=Z,19nm,0.9s						
KKAR	Karatay Array	71.56	320	eP	P	16 24 17.6	-1.4
VNDA	Vanda	72.58	173	P	P	16 24 24.9	+0.4
	comp=Z,3.5nm,0.8s,baz=317,slow=10,SNR=5.5						
SEY	Seymchan	72.64	12	P	P	16 24 25.8	+0.9
	comp=Z,1.5nm,0.6s,baz=218,slow=4.4,SNR=13						
BVAR	Borovoye Array	76.69	329	P	P	16 24 48.2	+0.1
	comp=Z,5.9nm,0.7s,baz=142,slow=7.5,SNR=21						
BRVK	Borovoye	76.76	329	eP	P	16 24 48.7	+0.2
	comp=Z,12nm,1.0s						
GEYT	Alibeck	78.08	311	P	P	16 24 56.2	0.0
	comp=Z,3.0nm,0.8s,baz=146,slow=2.9,SNR=6.3						
ABKAR	Akbulak array	80.84	322	eP	P	16 25 10.3	-0.2
NRIK	Noril'sk	81.09	347	P	P	16 25 11.8	+0.4
	comp=Z,3.7nm,0.8s,baz=130,slow=7.1,SNR=6.0						
SYO	Syowa Base	82.33	201⇓	eP	P	16 25 16.0	-1.9
SYO	Syowa Base	82.33	201⇓	eX	P	16 25 27.0	+9.1
AKTO	Aktyubinsk	82.43	323	P	P	16 25 19.2	+0.4
	comp=Z,7.3nm,0.8s,baz=100,slow=6.6,SNR=21						
QSPA	South Pole Qui	82.73	180	eP	P	16 25 20.4	+0.1
	comp=Z,10nm,0.9s						
ARU	Arti	84.33	329	eP	P	16 25 27.8	-0.4
	comp=Z,7.7nm,0.9s						
RAYN	Ar Rayn	85.09	294	eP	P	16 25 32.2	-0.5
	comp=Z,8.0nm,0.8s						
SNAA	Sanae	94.70	194	P	P	16 26 17.3	+0.6
	comp=Z,2.5nm,0.8s,baz=141,slow=4.8,SNR=8.5						
ILAR	Eielson Array	94.86	25	P	P	16 26 15.9	-1.6
	comp=Z,0.3nm,0.7s,baz=242,slow=4.9,SNR=4.3						
BOSA	Boshof	96.73	240	P	P	16 26 26.2	-0.6
	comp=Z,0.8nm,0.4s,baz=85,slow=1.4,SNR=3.6						
BRTR	Keskin Array B	97.12	309	P	P	16 26 27.5	-0.9
	comp=Z,0.6nm,0.8s,baz=131,slow=6.5,SNR=4.4						
YKA	Yellowknife Ar	109.29	26	PKiKP	PKiKP	16 31 22.4	-0.8
	comp=Z,0.3nm,0.6s,baz=295,slow=2.1,SNR=3.1						
YKA				PKKPbc	PKKPbc	16 42 30.1	-2.7
	comp=Z,0.6nm,0.7s,baz=110,slow=3.2,SNR=10						
GERES	GERESS Array B	110.66	320	PKiKP	PKiKP	16 31 26.9	+0.5
	comp=Z,0.5nm,0.5s,baz=74,slow=4.2,SNR=4.4						
PDAR	Pinedale Array	119.20	45	PKKPbc	PKKPbc	16 41 58.0	-1.0
	comp=Z,0.6nm,0.6s,baz=120,slow=5.5,SNR=4.1						
ULM	Lac du Bonnet	124.28	32	PKP	PKPdf	16 31 51.9	-0.4
	comp=Z,1.7nm,0.5s,baz=269,slow=1.7,SNR=4.9						
ESDC	Sonseca Array	125.53	314	PKP	PKPdf	16 31 55.6	+0.4
	comp=Z,0.1nm,0.4s,baz=84,slow=2.3,SNR=3.5						
TORD	Torodi Ar. Bea	125.89	281	PKP	PKPdf	16 31 55.9	-0.6
	comp=Z,1.6nm,0.7s,baz=74,slow=1.9,SNR=9.4						
TXAR	Lajitas Array	127.64	58	PKP	PKiKP	16 32 00.9	+0.8
	comp=Z,0.6nm,0.6s,baz=242,slow=1.2,SNR=4.8						
P42A	Winchester	133.59	40	ePKPdf	PKPdf	16 32 09.4	-1.0
S51A	Beattyville	138.98	38	ePKPdf	PKPdf	16 32 20.8	+0.4
GO02	Mina Guanaco	143.98	154	ePKPdf	PKPab	16 32 29.4	+0.7
CPUP	Villa Florida	146.36	173	PKPbc	PKPbc	16 32 35.5	-0.2
	comp=Z,12nm,0.9s,baz=175,slow=2.5,SNR=19						

LVC	**Limon Verde**	**146.51**	**153**	PKPbc	**PKPbc**	**16 32 37.4**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=305,slow=2.1,SNR=7.1						
JTS	**JuntasAbangare**	**148.33**	**82**	*e*PKPbc	**PKPbc**	**16 32 41.2**	**-0.1**
LPAZ	**La Paz**	**152.25**	**148**	PKPbc	**PKiKP**	**16 32 52.1**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=61,slow=2.6,SNR=7.6						

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*NIED **25** 16:19:00, 38°.20N×141°.80E, h62^{km}, Mw4.4 Best double couple: $M_0$5.11000×10^{15} NP1:ϕ_s58.00000°, δ35.00000°, λ140.00000°. NP2:ϕ_s183.00000°, δ68.00000°, λ62.00000°.*

*MOS **25** 16:19:22.9±1.2, 38°.35N×141°.83E, h33^{km}, mb4.7/33, Error ellipse: s-maj=7.2km s-min=5.2km az=92.9*

*BJI **25** 16:19:24.6, 38°.01N×141°.75E, h59^{km}, mB5.0/24, mb4.6/49, Ms4.3/11, Ms7 4.3/6*

*JMA **25** 16:19:26.8, 38°.25N×141°.78E, h57^{km}±1^{km}, M4.4 Broadband fault plane solution: P waves. NP1: ϕ_s164.00000°, δ84.00000°, λ39.00000°. NP2:ϕ_s69.00000°, δ52.00000°, λ172.00000°. Principal axes: T Plg31.0000°, Azm34.0000°; N Plg51.0000°, Azm172.0000°; P Plg21.0000°, Azm290.0000°;*

JMA Felt III J1.

*ISCJB **25** 16:19:26.4±0.3, 38°.28N±0°.03×141°.75E±0°.04, h66^{km}±2^{km}, mb4.5/94 Error ellipse: s-maj=5.5km s-min=3.6km az=135.7*

*NEIC **25** 16:19:28.0±0.5, 38°.34N×141°.71E, h65^{km}±4^{km}, mb4.7/58, Error ellipse: s-maj=5.9km s-min=3.9km az=146.0*

NEIC Felt [III] at Sendai. Also felt at Fukushima, Ichinoseki, Iwanuma and Koriyama. Recorded [3 JMA] in Miyagi.

*IDC **25** 16:19:29.3±1.9, 38°.27N×141°.67E, h78^{km}±17^{km}, mb3.9/24, mb1 4.1/29, mb1mx3.9/56, mbtmp4.2/29, MS3.6/5, Ms1 3.6/5, ms1mx3.2/49, Error ellipse: s-maj=14.3km s-min=11.5km az=117.0*

ISC 25 16:19:26.2±0.7**, 38°.27N**±0°.04×**141°.92E**±0°.05**, h55**^{km}±5^{km}**, n207,** σ1^s**.54**/230**, mb4.6**/103**, 13C-12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.36**	**276**	P	**Pn**	**16 19 36.3**	**0.0**
JIKH				S	**Sn**	**16 19 43.0**	**-0.6**
JIO	**Ouri**	**0.48**	**292**	⇑P	**Pn**	**16 19 37.6**	**0.0**
JIO				S	**Sn**	**16 19 45.2**	**-0.6**
JKMT	**Kesennumamotoy**	**0.64**	**327**	P	**Pn**	**16 19 39.9**	**+0.5**
JKMT				S	**Sn**	**16 19 49.1**	**+0.1**
OFUJ	**Ofunato**	**0.83**	**347**	⇑P	**Pn**	**16 19 42.5**	**+0.7**
JOFO	**Osakifurukawao**	**0.85**	**293**	P	**Pn**	**16 19 42.0**	**-0.1**
JOFO				S	**Sn**	**16 19 53.0**	**-0.8**
JMK	**Ichinoseki**	**0.87**	**321**	⇓P	**Pn**	**16 19 42.7**	**+0.4**
JMK				S	**Sn**	**16 19 54.2**	**0.0**
JMM	**Marumori**	**0.98**	**246**	⇑P	**Pn**	**16 19 42.8**	**-0.9**
JMM				S	**Sn**	**16 19 54.7**	**-1.9**
JOU	**Okura**	**0.99**	**276**	⇓P	**Pn**	**16 19 43.5**	**-0.4**
JOU				S	**Sn**	**16 19 55.7**	**-1.3**
JFK	**Kawauchi**	**1.23**	**223**	⇑P	**Pn**	**16 19 46.5**	**-0.6**
JFK				S	**Sn**	**16 20 01.2**	**-1.5**
JOM	**Ohasama**	**1.29**	**338**	⇓P	**Pn**	**16 19 48.8**	**+0.8**
JOM				S	**Sn**	**16 20 05.2**	**+0.9**
JYK	**Kaneyama**	**1.38**	**298**	⇓P	**Pn**	**16 19 49.0**	**-0.1**
JYK				S	**Sn**	**16 20 06.0**	**-0.3**
JYS	**Shirataka**	**1.46**	**269**	⇓P	**Pn**	**16 19 49.9**	**-0.3**
JYS				S	**Sn**	**16 20 07.3**	**-1.0**
JFT	**Otama**	**1.46**	**239**	⇑P	**Pn**	**16 19 50.1**	**-0.1**
JFT				S	**Sn**	**16 20 06.8**	**-1.5**
JRG	**Rokugo**	**1.50**	**319**	⇓P	**Pn**	**16 19 51.4**	**+0.6**
JRG				*e*S	**Sn**	**16 20 10.4**	**+1.1**
JYA	**Atsumi**	**1.76**	**281**	⇓P	**Pn**	**16 19 54.1**	**-0.2**
JYA				S	**Sn**	**16 20 15.4**	**-0.2**
MJAR	**Matsushiro Arr**	**3.42**	**241**	P	**Pn**	**16 20 17.8**	**+0.8**
	2.3nm,0.3s,baz=84,slow=15,SNR=68						
MJAR				S	**Sn**	**16 20 55.5**	**-0.8**
	1.6nm,0.3s,baz=281,slow=14,SNR=5.5						
MJAR				LR	LR	16 21 52.0	
	comp=Z,807nm,20.7s,baz=85,slow=44						
MAJO	**Matsushiro**	**3.42**	**241**	*e*Pn	**Pn**	**16 20 18.4**	**+1.4**
MAJO	**Matsushiro**	**3.42**	**241**	*d i*P	**Pn**	**16 20 18.6**	**+1.6**
MAT	**Matsushiro**	**3.42**	**241**	P	**Pn**	**16 20 18.5**	**+1.5**
MAT				S	**Sn**	**16 20 58.9**	**+2.5**
ERM	**Erimo**	**3.86**	**14**	*e*Pn	**Pn**	**16 20 23.1**	**+0.2**
ERM	**Erimo**	**3.86**	**14**	*e*P	**Pn**	**16 20 23.1**	**+0.2**
INU	**Inuyama**	**4.90**	**235**	*e*Pn	**Pn**	**16 20 38.5**	**+1.2**
JHJ2	**Mitsune**	**5.43**	**199**	*e*Pn	**Pn**	**16 20 44.4**	**-0.1**
JHJ	**Hachijo jima 2**	**5.43**	**199**	P	**Pn**	**16 20 42.8**	**-1.7**
	32nm,0.3s,baz=104,slow=23,SNR=11						
JHJ				S	**Sn**	**16 21 41.8**	**-3.9**
	32nm,0.3s,baz=72,slow=20,SNR=4.2						
ASAJ	**Asahikawa**	**5.86**	**5**	P	**Pn**	**16 20 50.6**	**+0.2**
	8.6nm,0.3s,baz=212,slow=10,SNR=154						
ASAJ				S	**Sn**	**16 21 52.7**	**-3.5**
	3.0nm,0.3s,baz=183,slow=12,SNR=3.6						
YUK	**Yuzh-Kuril'sk**	**6.48**	**26**	*d i*P	**Pn**	**16 20 57.7**	**-1.1**
YUK				*i* S	**Sn**	**16 22 06.8**	**-4.5**
YUK				pmax	pmax		
	comp=Z,190nm,0.2s						
YUK				pmax	pmax		
	comp=E,56nm,0.1s						
YUK				smax	smax		
	comp=E,629nm,0.6s						
YUK				smax	smax		
	comp=N,332nm,0.5s						
SHO	**Shikotan**	**6.71**	**32**	*c i*P	**Pn**	**16 21 00.5**	**-1.5**
SHO				*i* S	**Sn**	**16 22 10.9**	**-6.1**
SHO				pmax	pmax		
	comp=E,32nm,0.3s						
SHO				pmax	pmax		
	comp=Z,66nm,0.3s						
SHO				pmax	pmax		
	comp=N,29nm,0.4s						
TEY	**Ternei**	**7.84**	**331**	⇑*e*P	Pn	16 21 22.4	+4.9
TEY				pmax	pmax		
	comp=N,90nm,0.7s						
TEY				pmax	pmax		
	comp=E,50nm,0.7s						
TEY				pmax	pmax		
	comp=Z,80nm,0.7s						
KUR	**Kuril'sk**	**8.25**	**31**	*c i*P	**Pn**	**16 21 22.8**	**-0.3**
KUR				*i* S	**Sn**	**16 22 50.7**	**-4.1**
KUR				pmax	pmax		
	comp=Z,82nm,0.5s						
KUR				pmax	pmax		
	comp=N,21nm,0.3s						
KUR				pmax	pmax		
	comp=E,18nm,0.4s						
YSS	**Yuzh-Sakhalins**	**8.70**	**4**	*e*Pn	**Pn**	**16 21 28.6**	**-0.6**
YSS	**Yuzh-Sakhalins**	**8.70**	**4**	*e*P	**Pn**	**16 21 27.6**	**-1.6**
YSS				*e*		16 23 07.6	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VLA	**Vladivostok**	**9.03**	**306**	*i* P	**Pn**	**16 21 34.6**	**+0.9**
VLA				pmax	pmax		
	comp=Z,19nm,0.7s						
USRK	**Ussuriysk Ar.**	**9.53**	**312**	P	**Pn**	**16 21 42.1**	**+1.5**
	comp=Z,3.3nm,0.3s,baz=122,slow=13,SNR=42						
JNU	**Nakatsue**	**10.34**	**244**	*e*Pn	**Pn**	**16 21 53.0**	**+1.2**
JNU	**Nakatsue**	**10.34**	**244**	P	**Pn**	**16 21 53.7**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=42,slow=9.1,SNR=2.6						
JNU				LR	LR	16 26 03.8	
	comp=Z,402nm,21.5s,baz=50,slow=39						
KSRS	**Korea Array**	**11.10**	**270**	P	**Pn**	**16 22 03.9**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=82,slow=14,SNR=9.5						
KSRS				LR	LR	16 25 58.7	
	comp=Z,398nm,18.5s,baz=88,slow=36						
KSAR	**Wonju Array Be**	**11.13**	**270**	P	**Pn**	**16 22 03.9**	**+1.4**
KSAR	**Wonju Array Be**	**11.13**	**270**	P	**Pn**	**16 22 03.9**	**+1.4**
MDJ	**Mudanjiang**	**11.21**	**308**	P	Pn	16 22 08.5	+5.0
MDJ				pmax	pmax		
	comp=Z,31nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,280nm,4.1s						
TJN	**Taejon**	**11.74**	**265**	*ce*P	**Pn**	**16 22 13.3**	**+2.4**
TYV	**Tymovskoe**	**12.60**	**2**	*e*P	**Pn**	**16 22 21.1**	**-1.4**
TYV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KLR	**Kul'dur**	**13.17**	**329**	*i* P	**Pn**	**16 22 31.3**	**+1.0**
KLR	**Kul'dur**	**13.17**	**329**	P	**Pn**	**16 22 30.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=3.4						
KLR				LR	LR	16 27 01.7	
	comp=Z,166nm,18.3s,baz=168,slow=35						
PETK	**Petropavlovsk-**	**18.42**	**31**	P	**P**	**16 23 36.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=206,slow=13,SNR=8.5						
ZEA	**Zeya**	**18.46**	**332**	*e*P	**P**	**16 23 35.0**	**-2.1**
ZEA				pmax	pmax		
	comp=Z,15nm,0.6s						
SSE	**Sheshan**	**18.47**	**253**	*e*P	**P**	**16 23 37.5**	**+0.1**
	comp=Z,70nm,0.7s						
NJ2	**Nanjing**	**19.83**	**259**	*e*P	**P**	**16 23 52.5**	**+0.2**
NJ2				S	**S**	**16 27 30.0**	**-2.6**
NJ2				pmax	pmax		
	comp=Z,24nm,0.7s						
TIA	**Tai'an**	**19.83**	**272**	P	**P**	**16 23 51.0**	**-1.3**
BJI	**Beijing**	**20.02**	**283**	⇑*e*P	**P**	**16 23 54.5**	**+0.2**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJT	**Baijiatuau**	**20.03**	**283**	*e*P	**P**	**16 23 51.4**	**-3.0**
	comp=Z,15nm,0.7s						
BJT	**Baijiatuau**	**20.03**	**283**	*e*P	**P**	**16 23 51.4**	**-3.0**
BJT				pmax	pmax		
	comp=Z,15nm,0.7s						
MA2	**Magadan**	**22.06**	**12**	*e*P	**P**	**16 24 16.8**	**+0.8**
	comp=Z,61nm,0.7s						
MA2	**Magadan**	**22.06**	**12**	*i* P	**P**	**16 24 16.5**	**+0.4**
MA2				pmax	pmax		
	comp=Z,16nm,0.7s						
MA2	**Magadan**	**22.06**	**12**	P	**P**	**16 24 16.8**	**+0.8**
	comp=Z,16nm,0.7s,baz=195,slow=9.0,SNR=31						
HHC	**Hu-ho-hao-te**	**23.49**	**286**	*e*P	**P**	**16 24 30.0**	**-1.0**
HHC				S	**S**	**16 28 35.5**	**-5.1**
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,570nm,6.4s						
HHC				LR	LR		
	comp=Z,350nm,11.5s						
HHC				LR	LR		
	comp=Z,230nm,8.6s						
YAK	**Yakutsk**	**24.95**	**346**	*e*P	**P**	**16 24 41.9**	**-2.1**
YAK				*e**PP	**pP**	**16 24 58.3**	**+0.5**
YAK				*e*S	**S**	**16 28 56.1**	**-7.4**
YAK				pmax	pmax		
	comp=Z,34nm,1.0s						
YAK				pmax	pmax		
	comp=N,29nm,1.3s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				smax	smax		
	comp=E,530nm,3.7s						
YAK				smax	smax		
	comp=N,855nm,4.0s						
SEY	**Seymchan**	**25.50**	**11**	P	**P**	**16 24 50.4**	**+1.4**
	comp=N,10nm,0.9s,baz=196,slow=7.0,SNR=24						
BOD	**Bodaibo**	**26.71**	**326**	*e*P	**P**	**16 24 58.8**	**-1.2**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN	**Xi'an**	**26.89**	**271**	P	**P**	**16 25 00.0**	**-1.9**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,140nm,5.7s						
XAN	**Xi'an**	**26.89**	**271**	*e*P	**P**	**16 24 59.7**	**-2.2**
	comp=Z,61nm,1.8s						
XAN	**Xi'an**	**26.89**	**271**	*e*P	**P**	**16 24 59.7**	**-2.2**
XAN				pmax	pmax		
	comp=Z,61nm,1.8s						
ULN	**Ulaanbaatar**	**27.01**	**302**	*e*P	**P**	**16 25 01.9**	**-1.1**
	comp=Z,14nm,1.5s						
ULN	**Ulaanbaatar**	**27.01**	**302**	*e*P	**P**	**16 25 01.9**	**-1.1**
ULN				pmax	pmax		
	comp=Z,14nm,1.5s						
SONM	**Songino Array**	**27.45**	**302**	P	**P**	**16 25 06.2**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=106,slow=9.0,SNR=12						
ENH	**Enshi**	**27.86**	**263**	*e*P	**P**	**16 25 09.1**	**-1.4**
	comp=Z,38nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**28.47**	**123**	T	T	16 55 28.1	
	baz=316,slow=75,SNR=1113						
H11N1	**WAKE ISLAND Hy**	**28.48**	**123**	T	T	16 55 39.9	
	baz=316,slow=75,SNR=1398						
H11N3	**WAKE ISLAND Hy**	**28.48**	**123**	T	T	16 55 40.6	
	baz=316,slow=75,SNR=1344						
H11S1	**WAKE ISLAND Hy**	**29.22**	**125**	T	T	16 56 29.7	
	baz=318,slow=76,SNR=667						
H11S3	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	16 56 29.9	
	baz=318,slow=76,SNR=1119						
H11S2	**WAKE ISLAND Hy**	**29.24**	**125**	T	T	16 56 30.9	
	baz=318,slow=76,SNR=606						
ZAK	**Zakamensk**	**29.83**	**307**	*e*P	**P**	**16 25 26.8**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY	**Talaya**	**29.84**	**309**	*i* P	**P**	**16 25 26.7**	**-1.3**
LZH	**Lanzhou**	**30.27**	**278**	*e*P	**P**	**16 25 36.0**	**+3.9**
LZH				pP	sP	16 25 50.5	-2.1
LZH				sP	pP	16 25 56.3	+10
LZH				PP	**PnPn**	**16 26 34.0**	**+2.2**
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,5.2s						
LZH				LR	LR		
	comp=Z,640nm,12.7s						
LZH				LR	LR		
	comp=Z,580nm,13.8s						
LZH				LR	LR		
	comp=Z,640nm,15.7s						
GYA	**Guiyang**	**31.84**	**259**	P	**P**	**16 25 45.3**	**-0.6**
GYA				pP	pP	16 26 02.5	+2.6
GYA				PP	**PnPn**	**16 26 53.0**	**+0.9**
GYA				S	**S**	**16 30 52.0**	**-0.7**
GYA				sS	sS	16 31 17.5	+1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=Z,90nm,17.5s						
GYA				LR	LR		
	comp=Z,120nm,17.0s						
CD2	**Chengdu**	**32.09**	**268**	*e*P	**P**	**16 25 46.5**	**-1.5**
GTA	**Gaotai**	**32.60**	**285**	*e*P	**P**	**16 25 52.5**	**0.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BILL	**Bilibino**	**32.73**	**17**	⇓*i*P	**P**	**16 25 53.2**	**+0.1**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,224nm,18.0s						
DAV	**Davao City (W)**	**34.41**	**210**	LR	LR	16 36 51.5	
	comp=Z,80nm,21.9s,baz=339,slow=30						
KMI	**Kunming**	**35.56**	**260**	P	**P**	**16 26 18.3**	**-0.1**
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
DGZ	**Jazzator, Alta**	**40.00**	**305**	*d i*P	**P**	**16 26 56.2**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ	**Urumqi**	**40.65**	**296**	P	**P**	**16 27 01.8**	**+0.9**
WMQ				pP	pP	16 27 13.0	-2.2
WMQ				sP	sP	16 27 23.3	+1.6
WMQ				pmax	pmax		
	comp=Z,69nm,0.9s						
WMQ	**Urumqi**	**40.65**	**296**	*e*P	**P**	**16 26 59.8**	**-1.1**
	comp=Z,23nm,0.8s						
WMQ	**Urumqi**	**40.65**	**296**	*e*P	**P**	**16 26 59.8**	**-1.1**
WMQ				pmax	pmax		
	comp=Z,23nm,0.8s						
ZALV	**Zalesovo Beam**	**41.39**	**311**	P	**P**	**16 27 06.5**	**-0.2**
	comp=Z,3.1nm,0.4s,baz=82,slow=7.6,SNR=12						
CHTO	**Chiang Mai**	**41.99**	**255**	*e*P	**P**	**16 27 11.7**	**-0.4**
	comp=Z,3.5nm,0.6s						
CHTO	**Chiang Mai**	**41.99**	**255**	*e*P	**P**	**16 27 11.7**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**42.21**	**254**	P	**P**	**16 27 13.5**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=48,slow=4.4,SNR=6.2						
NVS	**Novosibirsk**	**42.28**	**313**	*e*P	**P**	**16 27 13.4**	**-0.6**
LSA	**Lhasa**	**42.51**	**274**	*e*P	**P**	**16 27 16.4**	**-0.3**
	comp=Z,6.7nm,0.6s						
LSA	**Lhasa**	**42.51**	**274**	*e*P	**P**	**16 27 16.4**	**-0.3**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MKAR	**Makanchi Array**	**43.81**	**301**	*e*P	**P**	**16 27 25.9**	**-0.6**
	comp=Z,42nm,0.8s						
MKAR	**Makanchi Array**	**43.81**	**301**	*e*P	**P**	**16 27 25.9**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,42nm,0.8s						
MKAR	**Makanchi Array**	**43.81**	**301**	P	**P**	**16 27 26.2**	**-0.2**
	comp=Z,5.4nm,0.7s,baz=85,slow=10.0,SNR=24						
MAKZ	**Makanchi**	**44.02**	**301**	*e*P	**P**	**16 27 27.4**	**-0.8**
	comp=Z,8.7nm,0.9s						
MAKZ	**Makanchi**	**44.02**	**301**	*e*P	**P**	**16 27 27.4**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KURK	**Kurchatov**	**45.49**	**307**	*e*P	**P**	**16 27 39.0**	**-0.7**
	comp=Z,15nm,0.8s						
KURK	**Kurchatov**	**45.49**	**307**	P	**P**	**16 27 39.9**	**+0.2**
KURK				pmax	pmax		
	comp=Z,24nm,0.8s						
KURBB	**Kurchatov Arra**	**45.56**	**307**	P	**P**	**16 27 39.9**	**-0.5**
	comp=Z,24nm,0.8s,baz=82,slow=8.4,SNR=45						
KDAK	**Kodiak Island**	**45.91**	**43**	*ce*P	**P**	**16 27 44.3**	**+1.3**
PDGK	**Podgornoye**	**46.56**	**297**	P	**P**	**16 27 47.4**	**-1.0**
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TOLK	**Toolik Lake Re**	**47.19**	**28**	*e*P	**P**	**16 27 54.5**	**+1.6**
	comp=Z,18nm,1.8s						
RAMN	**Ramite**	**47.32**	**273**	*e*P	**P**	**16 27 54.2**	**-0.5**
	comp=Z,21nm,0.7s						
GUN	**Gumba**	**47.44**	**275**	*e*P	**P**	**16 27 55.4**	**-0.4**
	comp=Z,35nm,0.8s						
MDM	**Murphy Dome**	**47.66**	**33**	*e*P	**P**	**16 27 58.1**	**+1.5**
	comp=Z,9.1nm,1.1s						
KKN	**Kakani**	**47.97**	**275**	*e*P	**P**	**16 27 59.3**	**-0.4**
	comp=Z,24nm,0.8s						
PKI	**Pulchoki**	**47.97**	**275**	*e*P	**P**	**16 27 58.9**	**-0.9**
	comp=Z,6.0nm,0.6s						
PKIN	**Phulchoki**	**47.97**	**275**	*e*P	**P**	**16 27 58.9**	**-0.9**
	comp=Z,7.2nm,0.5s						
DMN	**Daman**	**48.19**	**275**	*e*P	**P**	**16 28 00.9**	**-0.5**
	comp=Z,6.8nm,0.5s						
ILAR	**Eielson Array**	**48.24**	**33**	P	**P**	**16 28 02.4**	**+1.4**
	comp=Z,3.0nm,0.7s,baz=267,slow=6.2,SNR=28						
KDJ	**Kajisay**	**48.54**	**296**	*e*P	**P**	**16 28 04.8**	**+0.9**
	comp=Z,3.3nm,0.6s						
KDJ	**Kajisay**	**48.54**	**296**	*e*P	**P**	**16 28 04.8**	**+0.9**
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
DANN	**Dangsing**	**48.90**	**276**	*e*P	**P**	**16 28 06.9**	**0.0**
	comp=Z,70nm,0.6s						
KOLN	**Koldanda**	**49.29**	**276**	*e*P	**P**	**16 28 09.5**	**-0.3**
	comp=Z,14nm,0.6s						
SCRK	**Sand Creek**	**49.55**	**34**	*e*P	**P**	**16 28 12.2**	**+0.9**
	comp=Z,9.2nm,1.0s						
PYUN	**Piuthan**	**49.62**	**277**	*e*P	**P**	**16 28 12.0**	**-0.3**
	comp=Z,16nm,0.5s						
OTUK	**Ortayu**	**50.03**	**305**	P	**P**	**16 28 14.1**	**-0.9**
OTUK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVAR	**Borovoye Array**	**50.04**	**312**	P	**P**	**16 28 14.8**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=56,slow=11,SNR=7.8						
BRVK	**Borovoye**	**50.10**	**312**	*i* P	**P**	**16 28 16.9**	**+1.6**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	**Ala-Archa**	**50.26**	**298**	*e*P	**P**	**16 28 16.5**	**-0.5**
	comp=Z,2.3nm,0.8s						
AAK	**Ala-Archa**	**50.26**	**298**	*e*P	**P**	**16 28 16.5**	**-0.5**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	**Ala-Archa**	**50.26**	**298**	P	**P**	**16 28 16.6**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=90,slow=4.9,SNR=7.7						
KSH	**Kashi**	**50.27**	**293**	P	P	16 28 22.5	+5.4
KSH				pP	sP	16 28 37.3	-0.8
KSH				PP	**PP**	**16 30 16.3**	**+3.6**
KSH				S	**S**	**16 35 28.5**	**+2.9**
KSH				sS	sS	16 35 55.0	+4.7
KSH				SS	**SS**	**16 38 57.3**	**-2.1**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSH				LR	LR		
	comp=Z,340nm,4.8s						
KSH				LR	LR		
	comp=Z,280nm,5.8s						
KSH				LR	LR		
	comp=Z,480nm,6.4s						
MNAS	**Manas**	**51.70**	**298**	P	**P**	**16 28 27.1**	**-0.6**
MNAS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SFK	**Sufi-Kurgan**	**51.87**	**295**	P	**P**	**16 28 28.5**	**-0.7**
SFK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK	**Inuvik**	**53.10**	**28**	*e*P	**P**	**16 28 39.3**	**+1.8**
	comp=Z,4.9nm,0.8s						
INK	**Inuvik**	**53.10**	**28**	*e*P	**P**	**16 28 39.3**	**+1.8**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GAR	**Garm**	**54.53**	**295**	*e*P	**P**	**16 28 48.8**	**+0.2**
	comp=Z,7.7nm,0.9s						
GAR	**Garm**	**54.53**	**295**	*e*P	**P**	**16 28 48.8**	**+0.2**
GAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIL	**Nilore**	**54.61**	**288**	*e*P	**P**	**16 28 49.4**	**+0.2**
	comp=Z,8.7nm,0.6s						
NIL	**Nilore**	**54.61**	**288**	*e*P	**P**	**16 28 49.4**	**+0.2**
NIL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CHGR	**Chuyangaron**	**55.50**	**295**	*e*P	**P**	**16 28 54.4**	**-1.1**
ARU	**Arti**	**55.70**	**318**	*e*P	**P**	**16 28 55.1**	**-1.5**
	comp=Z,29nm,1.6s						
ARU	**Arti**	**55.70**	**318**	*d i*P	**P**	**16 28 56.5**	**-0.1**
ARU						16 30 56.2	
ARU				S	**S**	**16 36 41.1**	**+2.4**
ARU				SS	**SS**	**16 40 26.4**	**+2.4**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ABKAR	**Akbulak array**	**57.45**	**310**	*e*P	**P**	**16 29 08.0**	**-1.1**
AKTO	**Aktyubinsk**	**58.15**	**312**	P	**P**	**16 29 12.4**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=77,slow=12,SNR=3.7						
WRA	**Warramunga Arr**	**58.34**	**188**	P	**P**	**16 29 15.3**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=6.0,slow=7.0,SNR=21						
RES	**Resolute Bay**	**61.30**	**15**	*e*P	**P**	**16 29 35.7**	**+0.5**
	comp=Z,4.7nm,0.8s						
RES	**Resolute Bay**	**61.30**	**15**	*e*P	**P**	**16 29 35.7**	**+0.5**
RES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ASAR	**Alice Springs**	**62.07**	**188**	P	**P**	**16 29 41.4**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=12,slow=5.1,SNR=11						
YKA	**Yellowknife Ar**	**62.54**	**31**	P	**P**	**16 29 45.1**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=302,slow=6.8,SNR=26						
ARCES	**ARCESS Array B**	**62.98**	**339**	P	**P**	**16 29 46.9**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=66,slow=11,SNR=3.6						
FINES	**FINESS Array B**	**67.91**	**332**	*ce*P	**P**	**16 30 20.2**	**+1.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**67.91**	**332**	P	**P**	**16 30 18.1**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=50,slow=6.0,SNR=5.0						
KIV	**Kislovodsk**	**70.40**	**311**	*e*P	**P**	**16 30 33.1**	**-1.3**
	comp=Z,8.1nm,0.7s						
KIV	**Kislovodsk**	**70.40**	**311**	*e*P	**P**	**16 30 33.1**	**-1.3**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KBZ	**Khabaz**	**70.40**	**311**	P	**P**	**16 30 34.2**	**0.0**
	comp=Z,1.0nm,0.8s,baz=254,slow=19,SNR=3.0						
FFC	**Flin Flon**	**72.45**	**33**	*ce*P	**P**	**16 30 48.2**	**+1.8**
FCC	**Fort Churchill**	**72.72**	**27**	*e*P	**P**	**16 30 48.5**	**+0.6**
	comp=Z,7.7nm,1.1s						
FCC	**Fort Churchill**	**72.72**	**27**	*e*P	**P**	**16 30 48.5**	**+0.6**
FCC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CMB	**Columbia Colle**	**72.83**	**55**	*e*P	**P**	**16 30 50.4**	**+1.3**
	comp=Z,16nm,1.8s						
CMB	**Columbia Colle**	**72.83**	**55**	*e*P	**P**	**16 30 50.4**	**+1.3**
CMB				pmax	pmax		
	comp=Z,16nm,1.8s						
EGMT	**Eagleton**	**73.08**	**42**	*e*P	**P**	**16 30 51.6**	**+1.2**
	comp=Z,11nm,1.0s						
HFS	**Hagfors**	**73.12**	**336**	P	**P**	**16 30 50.5**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=29,slow=6.8,SNR=7.8						
NB2	**NORSAR Subarra**	**73.20**	**337**	P	**P**	**16 30 51.1**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**73.20**	**337**	P	**P**	**16 30 51.5**	**+0.7**
	comp=Z,2.0nm,0.9s,baz=39,slow=5.8,SNR=5.2						
AKASG	**Malin Array Be**	**73.56**	**322**	P	**P**	**16 30 52.2**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=43,slow=6.0,SNR=7.3						
KIEV	**Kiev**	**73.58**	**322**	*e*P	**P**	**16 30 52.5**	**-0.6**
KIEV	**Kiev**	**73.58**	**322**	*i* P	**P**	**16 30 54.9**	**+1.8**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KVN	**Kaiserville**	**73.69**	**53**	*e*P	**P**	**16 30 55.3**	**+1.0**
	comp=Z,6.9nm,1.0s						
KVN	**Kaiserville**	**73.69**	**53**	*e*P	**P**	**16 30 55.3**	**+1.0**
KVN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NVAR	**Mina Array Bea**	**73.93**	**54**	P	**P**	**16 30 57.9**	**+2.1**
	comp=Z,3.1nm,0.8s,baz=281,slow=6.3,SNR=18						
H17A	**Grant Village**	**74.91**	**45**	*e*P	**P**	**16 31 02.8**	**+1.4**
	comp=Z,7.7nm,0.9s						
IMW	**Indian Meadow**	**75.02**	**46**	*e*P	**P**	**16 31 03.7**	**+1.6**
	comp=Z,5.2nm,0.8s						
FXWY	**Fox Creek**	**75.13**	**46**	*e*P	**P**	**16 31 03.9**	**+1.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,4.7nm,1.0s						
TPAW	**Teton Pass**	75.27	46	eP	P	16 31 03.9	+0.4
	comp=Z,26nm,2.0s						
BGU	**Big Grassy Mou**	75.66	49	eP	P	16 31 06.9	+1.3
R11A	**Troy Canyon, C**	75.69	52	eP	P	16 31 06.9	+1.0
	comp=Z,7.3nm,1.3s						
TPNV	**Topopah Spring**	76.12	54	eP	P	16 31 09.5	+1.2
TPNV	**Topopah Spring**	76.12	54	eP	P	16 31 09.5	+1.2
DUG	**Dugway, Tooele**	76.25	50	eP	P	16 31 10.1	+1.2
DUG	**Dugway, Tooele**	76.25	50	eP	P	16 31 10.1	+1.2
BW06	**Boulder Array**	76.52	46	eP	P	16 31 10.7	+0.1
PDAR	**Pinedale Array**	76.52	46	P	P	16 31 12.3	+1.8
	comp=Z,2.8nm,0.6s,baz=265,slow=2.5,SNR=30						
MPU	**Maple Canyon**	77.06	49	eP	P	16 31 15.4	+1.7
	comp=Z,6.0nm,0.9s						
P17A	**Butcher Ranch,**	77.94	49	eP	P	16 31 20.2	+1.7
	comp=Z,10nm,1.1s						
MTPU	**Mount Pierson**	77.98	51	eP	P	16 31 21.3	+2.3
	comp=Z,4.2nm,0.9s						
ULM	**Lac du Bonnet**	78.25	34	P	P	16 31 19.8	0.0
	comp=Z,2.3nm,0.7s,baz=314,slow=6.3,SNR=4.8						
SRU	**San Rafael Swe**	78.30	49	eP	P	16 31 22.2	+1.7
	comp=Z,6.9nm,0.8s						
SRU	**San Rafael Swe**	78.30	49	eP	P	16 31 22.3	+1.7
SRU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
U15A	**North Rim**	78.93	52	eP	P	16 31 26.0	+1.8
	comp=Z,4.4nm,0.9s						
PV09	**Paradox Valley**	79.52	49	eP	P	16 31 28.0	+0.6
PV21	**Cone Mtn., Par**	79.58	49	eP	P	16 31 29.1	+1.5
	comp=Z,7.3nm,0.9s						
PV23	**Carpenter Ridg**	79.62	49	eP	P	16 31 28.1	+0.2
	comp=Z,11nm,1.1s						
PV10	**Paradox Valley**	79.66	49	eP	P	16 31 29.7	+1.6
	comp=Z,20nm,1.0s						
PV14	**Lion Creek, Pa**	79.67	49	eP	P	16 31 29.1	+1.0
	comp=Z,14nm,1.1s						
PV20	**West Nyswonger**	79.72	49	eP	P	16 31 30.1	+1.8
	comp=Z,10nm,0.8s						
PV04	**Paradox Valley**	79.73	49	eP	P	16 31 30.4	+2.0
	comp=Z,8.6nm,1.0s						
PV19	**Morning Glory**	79.73	49	eP	P	16 31 30.1	+1.6
	comp=Z,9.5nm,0.9s						
PV17	**East Wray Mesa**	79.77	49	eP	P	16 31 30.6	+2.0
	comp=Z,9.7nm,0.9s						
PV16	**Nyswonger Mesa**	79.77	49	eP	P	16 31 29.8	+1.1
	comp=Z,5.7nm,0.9s						
PV11	**David Mesa, Pa**	79.81	49	eP	P	16 31 30.4	+1.6
	comp=Z,10nm,1.1s						
PV03	**Paradox Valley**	79.85	49	eP	P	16 31 30.8	+1.8
	comp=Z,6.0nm,1.0s						
PV13	**Radium Mtn., P**	79.93	49	eP	P	16 31 30.9	+1.4
	comp=Z,7.7nm,1.0s						
WUAZ	**Wupatki**	80.09	52	eP	P	16 31 32.2	+1.9
	comp=Z,5.8nm,0.9s						
MVCO	**Mesa Verde**	80.75	50	eP	P	16 31 35.3	+1.4
	comp=Z,13nm,1.4s						
X16A	**Lo Mia Camp, P**	80.75	53	eP	P	16 31 35.5	+1.6
	comp=Z,3.7nm,0.9s						
ECSD	**EROS Data Cent**	82.70	39	eP	P	16 31 44.0	+0.2
	comp=Z,4.9nm,0.8s						
ANMO	**Albuquerque**	83.49	50	eP	P	16 31 50.2	+2.0
	comp=Z,6.3nm,1.1s						
ANMO	**Albuquerque**	83.49	50	eP	P	16 31 50.3	+2.0
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TXAR	**Lajitas Array**	89.05	53	P	P	16 32 17.4	+1.8
	comp=Z,2.5nm,0.7s,baz=298,slow=3.5,SNR=17						
CCM	**Cathedral Cave**	89.65	39	eP	P	16 32 16.9	-1.1
	comp=Z,8.0nm,0.8s						
CCM	**Cathedral Cave**	89.65	39	eP	P	16 32 16.9	-1.1
CCM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
T42A	**Van Buren**	90.52	40	eP	P	16 32 23.4	+1.3
	comp=Z,4.6nm,0.7s						
Q51A	**Peebles**	92.56	34	eP	P	16 32 31.6	0.0
	comp=Z,11nm,0.6s						
TZTN	**Tazewell**	94.52	35	eP	P	16 32 40.1	-0.6
	comp=Z,25nm,1.3s						
LPAZ	**La Paz**	145.71	59	PKPbc	PKPab	16 39 00.7	+0.3
	comp=Z,5.0nm,0.9s,baz=352,slow=5.6,SNR=17						

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*ISK **25** 16:24:53.9, 42°.33N×40°.87E, h8^{km}, ML2.6/3*
*TIF **25** 16:24:54.6, 42°.32N×40°.86E, h42^{km}±1^{km}*
*NORS **25** 16:24:55.7±0.0, 42°.55N×41°.07E, h1^{km}, MPVA3.4*
*MOS **25** 16:24:55.2±0.0, 42°.47N×41°.05E, h4^{km}, MPVA3.4*
*DDA **25** 16:24:55.5, 42°.26N×41°.06E, h7^{km}±2^{km}, ML3.2*
ISC 25 16:24:54.0±1.3, **42°.43N**±0°.02×**41°.02E**±0°.04, **h10**^{km}±11^{km}, **n25**, σ**0^{s}.67**/50, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	**Batumi**	0.96	148	PG	Pb	16 25 13.0	+0.3
BATM				SG	Sb	16 25 26.4	+0.8
BATM	**Batumi**	0.96	148	P	Pb	16 25 13.1	+0.3
BATM				S	Sg	16 25 26.8	+1.7
DOMR	**Dombai**	0.97	27	ePg	Pb	16 25 12.9	-0.1
DOMR				eSg	Sg	16 25 25.5	+0.1
BCA	**Borcka**	1.08	155	PG	Pb	16 25 14.1	-0.7
BCA				SG	Sb	16 25 29.2	+0.3
ARXR	**Arkhyz**	1.15	9	ePg	Pn	16 25 16.4	+0.1
ARXR				eSg	Sn	16 25 31.7	-0.5
DBOC	**Borcka**	1.19	156	i P	Pn	16 25 16.8	+0.2
DBOC				i S	Sb	16 25 32.2	+0.3
DBOC				IAML_P			
	comp=Z,3μm,0.1s						
CHOM	**Cayeli-Rize**	1.34	188	PN	Pn	16 25 17.8	-1.0
CHOM				SN	Sn	16 25 35.7	-1.0
ARTV	**Artvin**	1.42	151	i P	Pn	16 25 19.9	0.0
ARTV				i S	Sn	16 25 38.4	-0.3
ARTV				IAML_P			
	comp=Z,3μm,0.1s						
DBAD	**Bademkaya**	1.50	160	i P	Pn	16 25 20.9	-0.1
DBAD				i S	Sn	16 25 39.8	-0.8
DBAD				IAML_P			
	comp=Z,2μm,0.1s						
NEY	**Neytrino**	1.50	56	ePg	Pb	16 25 22.1	+0.1
NEY				eSg	Sb	16 25 41.3	+0.1
SOC	**Sochi**	1.50	321	ePg	Pb	16 25 22.4	+0.5
SOC				i Sg	Sg	16 25 42.4	+0.2
DAGI	**Agillar**	1.51	153	i P	Pn	16 25 21.6	+0.4
DAGI				i S	Sn	16 25 40.5	-0.4
DAGI				IAML_P			
	comp=Z,693nm,0.1s						
EPOS	**Posof**	1.57	125	i P	Pb	16 25 23.9	+0.6
EPOS				i S	Sb	16 25 43.8	+0.5
DDEM	**Demirkent**	1.63	160	i P	Pn	16 25 23.4	+0.6
DDEM				i S	Sn	16 25 44.0	+0.1
DDEM				IAML_P			
	comp=Z,1μm,0.1s						
GUZR	**Guzeripl'**	1.70	338	i Pg	Pb	16 25 25.8	+0.4
GUZR				i Sg	Sg	16 25 49.3	+0.6
SHA1	**Shidzhatmaz**	1.78	42	ePg	Pb	16 25 27.4	+0.6
SHA1				i Pg	Pg	16 25 27.5	-0.6
SHA1				i Sg	Sb	16 25 49.9	+0.7
SHA1				eSg	Sg	16 25 50.2	-1.0
LZRR	**Lazarevskoye**	1.93	322	ePg	Pb	16 25 29.5	+0.3
LZRR				i Sg	Sg	16 25 54.8	-1.1
DIGR	**Digorskoe uzhe**	1.95	75	ePg	Pb	16 25 29.4	-0.3
DIGR				eSg	Sb	16 25 53.5	-0.7
KIV	**Kislovodsk**	1.96	38	PN	Pb	16 25 30.4	+0.6
KIV	**Kislovodsk**	1.96	38	ePg	Pb	16 25 30.4	+0.6
KIV				eSg	Sb	16 25 55.5	+1.3
KIV0	**Kislovodsk Arr**	1.96	38	ePg	Pb	16 25 30.5	+0.7
KIV0				eSg	Sb	16 25 55.6	+1.2
BEYR	**Belyy Ugol+**	2.06	39	ePg	Pb	16 25 31.2	-0.3
BEYR				eSg	Sb	16 25 58.0	+0.8
SENK	**Senkaya-Erzuru**	2.12	151	PN	Pn	16 25 30.1	+0.5
ZEI	**Tsey**	2.16	79	ePg	Pb	16 25 32.7	-0.6
ZEI				eSg	Sb	16 26 01.1	+0.9
LACR	**Lac**	2.45	80	ePn	Pb	16 25 37.6	-0.7
LACR				eSn	Sb	16 26 09.1	+0.5

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*ISCJB **25** 16:26:27.2±0.5, 2°.20S±0°.05×128°.88E±0°.04, h10^{km}, mb4.3/3, Error ellipse: s-maj=7.0km s-min=5.3km az=168.6*
*DJA **25** 16:26:29.8±0.3, 2°S±6°×12°9E±°, h10^{km}, M4.5/9, mb4.6/7, mB4.8/1, MLv4.4/9, Mw(mB)4.1/1*
*IDC **25** 16:26:31.7±5.4, 2°.47S×129°.38E, h0^{km}, mb4.3/2, mb1 4.5/5, mb1mx3.7/41, mbtmp4.3/5, ML4.3/3, Error ellipse: s-maj=116.3km s-min=22.8km az=118.0*
*NEIC **25** 16:26:41.6±1.1, 2°.85S×129°.37E, h59^{km}±17^{km}, mb4.1/7, Error ellipse: s-maj=16.9km s-min=9.5km az=188.0*
ISC 25 16:26:28.8±0.9, **2°.03S**±0°.08×**128°.87E**±0°.05, **h10**^{km}, **n27**, σ**2^{s}.62**/30, **mb4.3**/3, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	**Namlea**	2.14	236	P	Pn	16 27 06.2	+1.6
NLAI				S	Sn	16 27 30.2	-1.1
SWI	**Sorong**	2.65	64	P	Pn	16 27 13.2	+1.6
SIJI	**Sorong**	2.65	64	Pn	Pn	16 27 13.3	+1.7
	74nm,0.3s,baz=273,slow=19,SNR=746						
SIJI				Sn	Sn	16 27 43.8	-0.1
	70nm,0.3s,baz=4.3,slow=23,SNR=22						
SANI	**Sanana**	2.88	269	P	Pn	16 27 13.5	-1.3
SANI				S	Sn	16 27 44.9	-4.7
TNTI	**Ternate**	3.16	332	P	Pn	16 27 19.9	+1.3
FAKI	**Fak Fak**	3.49	105	ePn	Pn	16 27 24.3	+1.1
FAKI	**Fak Fak**	3.49	105	P	Pn	16 27 24.2	+1.1
RKPI	**Ransiki, Papua**	5.33	85	P	Pn	16 27 49.5	+1.1
LUWI	**Luwuk**	6.18	279	P	Pn	16 28 00.2	+0.1
KDI	**Kendari**	6.53	253	P	Pn	16 28 06.6	+1.6
MRSI	**Marisa**	7.36	290	P	Pn	16 28 15.9	-0.5
SOEI	**Soe**	8.94	211	ePn	Pn	16 28 42.9	+4.7
MPSI	**Mapaga**	9.28	285	P	Pn	16 28 44.6	+1.9
SPSI	**Sidrap Palu**	9.29	258	P	Pn	16 28 47.5	+4.6
MTN	**Manton Dam**	10.98	168	ePn	Pn	16 29 05.0	-1.0
JAGI	**Jajag, Banyuwa**	15.99	246	ePn	P	16 30 24.4	+6.9
	367nm,1.9s						
FITZ	**Fitzroy Crossi**	16.29	191	ePn	Pn	16 30 16.3	-1.4
	96nm,1.8s						
FITZ	**Fitzroy Crossi**	16.29	191	Pn	Pn	16 30 17.4	-0.4
	0.5nm,0.3s,baz=354,slow=9.1,SNR=13						
COEN	**Coen**	18.45	131	ePn	P	16 30 43.3	-1.4
	12nm,1.1s						
WRAB	**Tennant Creek**	18.59	164	ePn	P	16 30 43.8	-2.4
	11nm,0.7s						
WR1	**Warramunga Arr**	18.59	164	ePn	P	16 30 42.5	-3.8
	10nm,0.9s						
WR1				eSn	Sn	16 33 59.1	-15
WRA	**Warramunga Arr**	18.59	164	P	P	16 30 42.5	-3.8
	1.6nm,0.3s,baz=346,slow=12,SNR=50						
WRA				S	Sn	16 33 59.1	-15
	0.3nm,0.3s,baz=338,slow=22,SNR=4.5						
WB2	**Warramunga Arr**	18.59	164	ePn	P	16 30 44.2	-2.1
	9.5nm,0.8s						
AS31	**Alice Springs**	22.06	168	eP	P	16 31 22.5	-1.5
	6.8nm,0.5s						
ASAR	**Alice Springs**	22.06	168	P	P	16 31 22.6	-1.4
	12nm,0.4s,baz=345,slow=9.0,SNR=155						
ASAR				S	S	16 35 16.8	-11
	1.5nm,0.8s,baz=351,slow=23,SNR=6.4						
STKA	**Stephens Creek**	32.02	159	eP	P	16 32 54.5	-1.1
	4.1nm,1.9s						
STKA	**Stephens Creek**	32.02	159	P	P	16 32 55.8	+0.2
	0.9nm,0.4s,baz=345,slow=10,SNR=5.0						

IDC 25 16:28:32.4±1.8, **8°.40S**×**127°.96E**, **h0**^{km}, **mb3.4**/2, **mb1 3.9**/5, **mb1mx3.6**/32, **mbtmp3.7**/5, **ML3.9**/3, **Error ellipse: s-maj=49.4km s-min=27.3km az=82.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	4.61	247	Pn	Pn	16 29 43.7	+0.3
	4.6nm,0.3s,baz=70,slow=2.3,SNR=8.7						
BATI				Sn	Sn	16 30 30.2	-7.5
	6.9nm,0.3s,baz=76,slow=8.3,SNR=2.8						
FITZ	**Fitzroy Crossi**	9.90	193	Pn	Pn	16 30 54.9	-1.2
	1.1nm,0.3s,baz=23,slow=11,SNR=16						
FITZ				Sn	Sn	16 32 35.9	-12
	0.4nm,0.3s,baz=315,slow=6.0,SNR=2.7						
WRA	**Warramunga Arr**	13.03	152	Pn	Pn	16 31 40.1	+1.2
	0.5nm,0.3s,baz=334,slow=13,SNR=3.1						
CMAR	**Chiang Mai Arr**	39.14	313	P	P	16 36 02.1	+0.1
	0.3nm,0.8s,baz=138,slow=6.9,SNR=5.6						
MKAR	**Makanchi Array**	68.31	328	P	P	16 39 35.2	-0.2
	0.3nm,0.7s,baz=136,slow=7.9,SNR=3.0						
KURBB	**Kurchatov Arra**	72.66	330	P	P	16 40 01.9	+0.1
	10nm,0.5s,baz=137,slow=5.3,SNR=4.5						

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*JMA **25** 16:31:49.9±0.3, 43°.32N×146°.90E, h45^{km}±4^{km}, M2.9*
*ISCJB **25** 16:31:50.5±1.2, 43°.47N±0°.08×146°.88E±0°.08, h48^{km}±12^{km}, Error ellipse: s-maj=14.7km s-min=6.9km az=149.2*
*SKHL **25** 16:31:51.5±0.5, 43°.47N×146°.89E, h42^{km}±2^{km}, mb3.7/6*
ISC 25 16:31:50.8±5.0, **43°.4N**±0°.1×**146°.91E**±0°.09, **h38**^{km}±7^{km}, **n12**, σ**0^{s}.73**/21, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	0.45	353	i P	Pn	16 32 00.8	+0.3
SHO				AMB	AMB	16 32 01.0	
	50nm,0.2s						
SHO				i S	Sn	16 32 08.0	+0.5
SHO				A	A	16 32 08.4	
	2μm,0.3s						
SHO				A	A	16 32 08.4	
	2μm,0.3s						
NEM2	**Nemuro 2**	0.85	266	P	Pn	16 32 05.6	-0.6
NEM2				eS	Sn	16 32 17.2	-0.2
YUK	**Yuzh-Kuril'sk**	0.97	309	i P	Pn	16 32 07.9	+0.1
YUK				AMB	AMB	16 32 09.0	
	30nm,0.2s						
YUK				i S	Sn	16 32 19.7	-0.6
YUK				A	A	16 32 24.2	
	160nm,0.1s						
YUK				A	A	16 32 24.2	
	270nm,0.1s						
GRPR	**Tuman**	1.00	305	i P	Pn	16 32 08.0	-0.2
GRPR				AMB	AMB	16 32 09.0	
	50nm,0.2s						
GRPR				AMB	AMB	16 32 09.0	
	90nm,0.2s						
GRPR				AMB	AMB	16 32 09.0	
	20nm,0.2s						
GRPR				eS	Sn	16 32 20.0	-1.0
GRPR				A	A	16 32 22.0	
	200nm,0.2s						
GRPR				A	A	16 32 22.0	
	260nm,0.2s						
LAGR	**Lagunnoye**	1.03	308	eP	Pn	16 32 09.0	+0.4
LAGR				AMB	AMB	16 32 09.0	
	20nm,0.2s						
LAGR				eS	Sn	16 32 22.0	+0.3
LAGR				A	A	16 32 23.0	
	340nm,0.2s						
LAGR				A	A	16 32 23.0	
	310nm,0.2s						
GLVR	**Golovnino**	1.05	288	i P	Pn	16 32 08.0	-0.9
GLVR				AMB	AMB	16 32 09.0	
	20nm,0.3s						
GLVR				AMB	AMB	16 32 09.0	
	80nm,0.3s						
GLVR				eS	Sn	16 32 21.0	-1.4
GLVR				A	A	16 32 22.0	
	250nm,0.3s						
GLVR				A	A	16 32 22.0	
	330nm,0.3s						
JRA	**Rausu**	1.39	292	P	Pn	16 32 13.9	+0.3
JNK	**Nakash**	1.60	276	P	Pn	16 32 16.3	-0.2
JNK				eS	Sn	16 32 35.9	+0.1
JAK	**Akkeshi**	1.67	256	P	Pn	16 32 17.2	-0.2
KUR	**Kuril'sk**	1.93	21	eP	Pn	16 32 21.0	0.0
KUR				AMB	AMB	16 32 23.3	
	3.0nm,0.3s						
KUR				AMB	AMB	16 32 23.3	
	6.0nm,0.3s						
KUR				AMB	AMB	16 32 23.3	
	20nm,0.3s						
KUR				i S	Sn	16 32 43.2	-0.8
KUR				A	A	16 32 46.0	
	80nm,0.2s						
KUR				A	A	16 32 46.0	
	60nm,0.2s						
JTKR	**Abashiri--Toko**	2.24	285	P	Pn	16 32 26.6	+1.3
JAR	**Ashorobuto**	2.29	268	P	Pn	16 32 26.8	+0.8
JAR				eS	Sn	16 32 53.5	+0.6

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*ISCJB **25** 16:48:10.5±0.3, 11°.14S±0°.06×165°.85E±0°.07, h10^{km}, mb4.4/25, Error ellipse: s-maj=10.2km s-min=9.1km az=22.4*
*IDC **25** 16:48:10.2±0.5, 11°.09S×165°.97E, h0^{km}, mb4.3/20, mb1 4.4/22, mb1mx4.3/40, mbtmp4.3/22, ML4.8/2, MS3.9/1, Ms1 3.9/1, ms1mx3.2/26, Error ellipse: s-maj=18.8km s-min=14.0km az=104.0*
*BJI **25** 16:48:11.0, 11°.00S×165°.80E, h7^{km}, mB5.1/13, mb4.7/19, Ms4.8/5, Ms7 4.5/5*
ISC 25 16:48:12.1±0.5, **11°.09S**±0°.08×**165°.9E**±0°.1, **h10**^{km}, **n57**, σ**1^{s}.23**/50, **mb4.4**/25, **1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	6.13	285	eP	Pn	16 49 43.0	+0.2
HNR	**Honiara**	6.13	285	Pn	Pn	16 49 43.4	+0.7
	43nm,0.3s,baz=142,slow=2.3,SNR=19						
DZM	**Mont Dzumac**	10.93	178	ePn	Pn	16 50 50.0	+1.2
	31nm,0.5s						
DZM				eLR	LR	16 53 24.2	
	comp=Z,495nm,22.5s						
DZM	**Mont Dzumac**	10.93	178	Pn	Pn	16 50 49.9	+1.1
	3.6nm,0.3s,baz=293,slow=22,SNR=25						
CTA	**Charters Tower**	20.95	242	P	P	16 52 55.6	+0.2
	17nm,1.1s,baz=75,slow=12,SNR=9.1						
URZ	**Urewera**	28.85	162	P	P	16 54 10.9	+0.2
	4.1nm,0.4s,baz=238,slow=3.3,SNR=7.3						
H11S2	**WAKE ISLAND Hy**	29.40	1	T	T	17 24 47.0	
	baz=184						
H11S3	**WAKE ISLAND Hy**	29.40	1	T	T	17 24 47.5	
	baz=184						
H11S1	**WAKE ISLAND Hy**	29.42	1	T	T	17 24 46.6	
	baz=184						
STKA	**Stephens Creek**	30.55	224	P	P	16 54 25.9	0.0
	2.7nm,0.7s,baz=34,slow=9.4,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	30.62	2	T	T	17 26 17.5	
	baz=183						
H11N3	**WAKE ISLAND Hy**	30.62	2	T	T	17 26 17.2	
	baz=183						
H11N2	**WAKE ISLAND Hy**	30.64	2	T	T	17 26 17.5	
	baz=183						
WRA	**Warramunga Arr**	31.65	250	P	P	16 54 34.4	-1.4
	9.0nm,0.9s,baz=81,slow=9.2,SNR=34						
WRA				PcP	PcP	16 57 28.7	+0.7
	1.0nm,0.7s,baz=78,slow=3.1,SNR=5.2						
RPZ	**Rata Peaks**	32.81	173	P	P	16 54 45.4	-0.3
	23nm,0.7s,baz=332,slow=2.5,SNR=15						
ASAR	**Alice Springs**	32.95	243	P	P	16 54 45.6	-1.6
	1.8nm,0.8s,baz=64,slow=10,SNR=22						
ASAR				PcP	PcP	16 57 30.8	-0.7
	1.2nm,0.7s,baz=68,slow=3.5,SNR=5.5						
ASAR				ScP	ScP	17 01 16.8	+0.8
	1.1nm,1.1s,baz=96,slow=2.5,SNR=4.2						
BATI	**Baumata**	41.54	267	LR	LR	17 14 26.0	
	comp=Z,151nm,21.5s,baz=95,slow=38						
PPT2	**Papeete2**	43.50	104	eLR	LR	17 08 38.0	
	comp=Z,329nm,27.8s						
SCPH	**Surigao**	45.26	296	eP	P	16 56 24.8	-5.4
MJAR	**Matsushiro Arr**	54.10	332	P	P	16 57 38.3	+1.0
	2.0nm,1.0s,baz=184,slow=7.5,SNR=3.4						
ASAJ	**Asahikawa**	58.90	341	P	P	16 58 12.2	+0.9
	5.2nm,0.8s,baz=189,slow=9.9,SNR=3.6						
NJ2	**Nanjing**	62.19	315	eP	P	16 58 32.5	-1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	**Ussuriysk Ar.**	63.07	333	P	P	16 58 39.6	0.0
	1.2nm,0.7s,baz=107,slow=7.4,SNR=3.7						
PETK	**Petropavlovsk-**	64.33	354	P	P	16 58 47.1	-0.6
	2.5nm,0.8s,baz=153,slow=9.7,SNR=2.7						
KLR	**Kul'dur**	67.17	336	P	P	16 59 06.3	+0.1
	1.5nm,0.8s,baz=102,slow=11,SNR=4.5						
XAN	**Xi'an**	70.29	312	P	P	16 59 34.3	+8.2
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,140nm,4.1s						
KMI	**Kunming**	71.31	301	P	P	16 59 35.3	+2.6
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC	**Hu-ho-hao-te**	71.99	320	eP	P	16 59 36.3	0.0
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,99nm,3.6s						
CMAR	**Chiang Mai Arr**	72.31	293	P	P	16 59 39.2	+0.7
	comp=Z,2.1nm,0.8s,baz=118,slow=4.6,SNR=18						
CD2	**Chengdu**	72.78	307	eP	P	16 59 40.0	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	74.93	312	eP	P	16 59 54.3	+0.5
LZH				pP	pP	16 59 57.8	+1.3
LZH				sP	sP	16 59 59.5	+2.0
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
SONM	**Songino Array**	78.81	324	P	P	17 00 15.1	-0.3
	comp=Z,1.1nm,1.0s,baz=88,slow=5.3,SNR=4.4						
GTA	**Gaotai**	79.23	314	eP	P	17 00 19.0	+1.1
GTA				pP	pwP	17 00 24.5	+1.6
GTA				sP	PcP	17 00 27.8	+1.6
GTA				pmax	pmax		
	comp=Z,110nm,5.1s						
GTA				LR	LR		
	comp=Z,140nm,19.0s						
GTA				LR	LR		
	comp=Z,97nm,18.7s						
GTA				LR	LR		
	comp=Z,120nm,17.5s						
O02D	**Mt. Diablo Mer**	83.18	47	P	P	17 00 40.0	+1.2
	baz=249						
HDA	**Harding Lake**	83.22	19	P	P	17 00 38.2	-0.2
	baz=226						
ILAR	**Eielson Array**	83.49	18	P	P	17 00 39.7	-0.1
	comp=Z,2.5nm,0.9s,baz=233,slow=4.8,SNR=16						
M02C	**Callahan**	83.56	46	P	P	17 00 41.8	+1.0
	baz=249						
ISA	**Isabella, Lake**	84.94	52	P	P	17 00 47.5	-0.4
	baz=253						
EDW2	**Edwards Air Fo**	85.09	53	P	P	17 00 48.9	+0.2
	baz=253						
CWC	**Cottonwood Cre**	85.48	52	P	P	17 00 50.9	+0.2
	baz=253						
TOLK	**Toolik Lake Re**	85.48	15	P	P	17 00 51.4	+1.6
	baz=224						
MPMC	**Manual Prospec**	85.82	52	P	P	17 00 52.9	+0.4
	baz=253						
NVAR	**Mina Array Bea**	85.90	50	P	P	17 00 52.7	-0.1
	comp=Z,1.1nm,0.7s,baz=232,slow=7.7,SNR=5.9						
PDMCI	**Parker Dam,Lak**	87.99	55	P	P	17 01 03.7	+1.0
	baz=255						
WMQ	**Urumqi**	89.26	315	eP	P	17 01 09.3	+0.6
WMQ				LR	LR		
	comp=Z,190nm,19.1s						
WMQ				LR	LR		
	comp=Z,100nm,22.3s						
WMQ				LR	LR		
	comp=Z,140nm,19.3s						
NEW	**Newport**	89.65	41	P	P	17 01 09.5	-0.8
	comp=Z,1.2nm,0.6s,baz=220,slow=7.9,SNR=3.4						
SYO	**Syowa Base**	91.80	197⇓	eP	P	17 01 18.3	-1.6
PDAR	**Pinedale Array**	93.44	47	P	P	17 01 28.1	-0.2
	comp=Z,0.2nm,0.6s,baz=265,slow=4.3,SNR=2.3						
MKAR	**Makanchi Array**	93.69	317	P	P	17 01 28.9	-0.2
	comp=Z,1.5nm,0.7s,baz=99,slow=7.5,SNR=15						
ZALV	**Zalesovo Beam**	93.70	324	P	P	17 01 27.3	-1.6
	comp=Z,0.6nm,0.7s,baz=109,slow=7.8,SNR=3.1						
YKA	**Yellowknife Ar**	94.92	27	P	P	17 01 32.8	-1.5
	comp=Z,0.4nm,0.6s,baz=256,slow=4.7,SNR=7.4						
ARCES	**ARCESS Array B**	116.42	346	PKP	PKPdf	17 06 54.2	-1.4
	comp=Z,4.0nm,0.9s,baz=350,slow=2.1,SNR=3.5						
BOSA	**Boshof**	125.22	223	PKP	PKPdf	17 07 14.1	+0.1
	comp=Z,2.1nm,0.7s,baz=198,slow=1.3,SNR=5.1						
VYHS	**Vyhne**	133.70	330	ePKP	PKiKP	17 07 32.3	+1.8
GERES	**GERESS Array B**	135.83	334	PKP	PKPdf	17 07 30.9	-2.4
	comp=Z,0.5nm,0.8s,baz=328,slow=6.6,SNR=3.7						
ESDC	**Sonseca Array**	150.15	344	PKPbc	PKPdf	17 08 03.0	+4.3
	comp=Z,0.1nm,0.3s,baz=5.2,slow=1.4,SNR=3.2						
TORD	**Torodi Ar. Bea**	164.46	279	PKP	PKPdf	17 08 15.9	-1.3
	comp=Z,0.6nm,0.8s,baz=63,slow=0.5,SNR=3.3						

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*IDC **25** 16:48:43.8±0.6, 11°.13S×165°.97E, h0^{km}, mb4.4/18, mb1 4.5/20, mb1mx4.3/40, mbtmp4.4/20, ML4.7/2, MS4.1/2, Ms1 4.1/2, ms1mx3.4/26, Error ellipse: s-maj=21.6km s-min=16.1km az=110.0*
*ISCJB **25** 16:48:44.0±0.3, 11°.07S±0°.05×165°.82E±0°.06, h10^{km}, mb4.4/23, MS4.1/1, Error ellipse: s-maj=8.3km s-min=6.8km az=167.2*
*NEIC **25** 16:48:45.8±0.3, 11°.01S×165°.90E, h10^{km}, mb4.7/8, Error*

ellipse: s-maj=9.3km s-min=6.1km az=93.0

ISC 25 16:48:45.3±0.5**, 11°.08S**±0°.06×**165°.91E**±0°.08**, h10^{km}, n53,**
σ**1^{s}.23**/60**, mb4.5**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.09	285	Pn	Pn	16 50 16.4	+0.9
	36nm,0.3s,baz=10,slow=19,SNR=5.1						
HNR				Sn	Sn	16 51 23.9	-1.4
	10nm,0.3s,baz=96,slow=18,SNR=3.0						
HNR	Honiara	6.09	285	eS	Pn	16 50 14.0	-1.5
MARNC	Mare, Loyalty	10.54	169	ePn	Pn	16 51 18.6	+2.1
DZM	Mont Dzumac	10.94	177	ePn	Pn	16 51 23.2	+1.1
DZM				Sn	Sn	16 53 22.1	-2.5
DZM	Mont Dzumac	10.94	177	Pn	Pn	16 51 22.1	0.0
	3.5nm,0.3s,baz=318,slow=16,SNR=7.0						
DZM				Sn	Sn	16 53 22.1	-2.5
	0.6nm,0.3s,baz=110,slow=17,SNR=2.2						
DZM				LR	LR	16 55 11.2	
	comp=Z,890nm,18.0s,baz=18,slow=36						
ONTNC	Ouen Toro	11.17	177	ePn	Pn	16 51 28.9	+3.6
PINNC	Pines Island,	11.56	173	ePn	Pn	16 51 33.5	+3.0
TARA	Tarawa	14.19	30	ePn	P	16 52 12.7	-1.4
KWAJ	Kwajalein Atol	19.83	5	eP	Pn	16 53 17.6	-0.4
	464nm,1.4s						
EIDS	Eidsvold	19.97	223	eP	Pn	16 53 19.4	-0.3
	27nm,1.2s						
STKA	Stephens Creek	30.52	224	eP	P	16 54 59.9	+0.9
	9.3nm,1.8s						
STKA	Stephens Creek	30.52	224	P	P	16 54 58.8	-0.2
	4.3nm,0.7s,baz=24,slow=9.2,SNR=5.1						
WR1	Warramunga Arr	31.62	250	eP	P	16 55 08.3	-0.5
	19nm,1.0s						
WR1				ePcP	PcP	16 58 01.9	+0.8
WRA	Warramunga Arr	31.62	250	P	P	16 55 08.3	-0.5
	11nm,0.9s,baz=80,slow=9.2,SNR=7.8						
WRA				PcP	PcP	16 58 01.9	+0.8
	2.2nm,1.1s,baz=87,slow=2.9,SNR=5.0						
RPZ	Rata Peaks	32.81	173	P	P	16 55 18.6	-0.4
	22nm,0.8s,baz=317,slow=2.6,SNR=5.3						
AS31	Alice Springs	32.91	243	eP	P	16 55 19.5	-0.7
	1.9nm,1.1s						
ASAR	Alice Springs	32.91	243	P	P	16 55 19.2	-1.0
	2.7nm,0.8s,baz=70,slow=9.3,SNR=6.2						
ASAR				PcP	PcP	16 58 05.2	+0.5
	3.9nm,1.0s,baz=91,slow=3.0,SNR=6.6						
MJAR	Matsushiro Arr	54.08	332	P	P	16 58 10.1	-0.2
	3.4nm,0.8s,baz=172,slow=8.4,SNR=5.7						
MAJO	Matsushiro	54.08	332	eP	P	16 58 10.1	-0.3
JNU	Nakatsue	55.20	324	eP	P	16 58 19.4	+0.8
	19nm,1.3s						
JNU	Nakatsue	55.20	324	P	P	16 58 19.5	+0.8
	11nm,1.1s,baz=108,slow=6.4,SNR=3.1						
ASAJ	Asahikawa	58.88	341	P	P	16 58 45.8	+1.4
	2.1nm,0.5s,baz=200,slow=5.8,SNR=6.4						
USRK	Ussuriysk Ar.	63.05	333	P	P	16 59 14.3	+1.6
	2.2nm,0.7s,baz=134,slow=8.2,SNR=5.1						
PETK	Petropavlovsk-	64.32	355	P	P	16 59 20.1	-0.9
	3.4nm,1.0s,baz=146,slow=10,SNR=3.2						
PEA1	Petropavlovsk-	64.33	355	eP	P	16 59 20.1	-0.9
KLR	Kul'dur	67.16	336	P	P	16 59 40.2	+0.8
	2.1nm,0.7s,baz=174,slow=6.7,SNR=4.5						
CM31	Chiang Mai Arr	72.27	294	eP	P	17 00 13.2	+1.7
CMAR	Chiang Mai Arr	72.27	294	P	P	17 00 13.2	+1.7
	2.7nm,0.9s,baz=108,slow=4.1,SNR=8.5						
CHTO	Chiang Mai	72.38	294	eP	P	17 00 12.3	+0.1
	4.1nm,1.0s						
LZH	Lanzhou	74.90	312	eP	P	17 00 29.3	+2.4
LZH				pP	PcP	17 00 41.5	+0.7
LZH				sP	pwP	17 00 46.5	+14
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
ILAR	Eielson Array	83.50	18	P	P	17 01 13.3	+0.2
	comp=Z,2.1nm,0.7s,baz=226,slow=6.5,SNR=6.0						
ILB	Eielson Array	83.50	18	eP	P	17 01 13.3	+0.2
NV01	Mina Array Sit	85.93	50	eP	P	17 01 27.2	+1.0
NVAR	Mina Array Bea	85.93	50	P	P	17 01 27.2	+1.0
	comp=Z,1.3nm,0.7s,baz=233,slow=9.4,SNR=5.5						
NEW	Newport	89.67	41	P	P	17 01 42.6	-1.1
	comp=Z,1.0nm,0.6s,baz=197,slow=14,SNR=2.2						
U15A	North Rim	90.00	53	eP	P	17 01 46.2	+0.4
	comp=Z,4.3nm,0.8s						
PD31	Pinedale Array	93.46	47	eP	P	17 02 01.1	-0.6
PDAR	Pinedale Array	93.46	47	P	P	17 02 01.0	-0.6
	comp=Z,0.7nm,0.9s,baz=5.7,slow=0.9,SNR=3.0						
MK32	Makanchi Array	93.66	317	eP	P	17 02 02.6	+0.4
MKAR	Makanchi Array	93.66	317	P	P	17 02 02.6	+0.4
	comp=Z,2.1nm,0.7s,baz=92,slow=6.1,SNR=7.5						
ZALV	Zalesovo Beam	93.68	324	P	P	17 02 01.6	-0.5
	comp=Z,0.6nm,0.5s,baz=90,slow=4.4,SNR=3.9						
ZAA1	Zalesovo Array	93.68	324	eP	P	17 02 01.6	-0.5
YKA	Yellowknife Ar	94.94	27	P	P	17 02 06.6	-1.0
	comp=Z,0.4nm,0.6s,baz=256,slow=4.9,SNR=4.5						
YKB5	Yellowknife Ar	94.94	27	eP	P	17 02 06.6	-1.0
NRIK	Noril'sk	96.21	340	LR	LR	17 42 02.8	
	comp=Z,76nm,21.4s,baz=28,slow=33						
ARA0	ARCESS Array S	116.41	346	ePKPdf	PKPdf	17 07 28.3	-0.6
ARCES	ARCESS Array B	116.41	346	PKP	PKPdf	17 07 28.3	-0.6
	comp=Z,1.9nm,0.7s,baz=86,slow=2.1,SNR=7.1						
BOSA	Boshof	125.19	223	PKP	PKiKP	17 07 47.7	+0.2
	comp=Z,1.6nm,0.6s,baz=166,slow=3.7,SNR=4.2						
GEC2	GERESS Array S	135.81	334	ePKPdf	PKiKP	17 08 07.7	-0.5
GERES	GERESS Array B	135.81	334	PKP	PKiKP	17 08 07.7	-0.5
	comp=Z,0.5nm,0.7s,baz=355,slow=6.7,SNR=4.1						
ESDC	Sonseca Array	150.14	344	PKPbc	PKiKP	17 08 37.5	-0.3
	comp=Z,0.2nm,0.3s,baz=355,slow=3.2,SNR=4.5						
TORD	Torodi Ar. Bea	164.43	279	PKP	PKPdf	17 08 50.7	+0.3
	comp=Z,0.6nm,0.7s,baz=343,slow=1.5,SNR=2.7						
TORD				PKPab	PKPab	17 09 43.4	-1.5
	comp=Z,1.5nm,1.0s,baz=85,slow=3.5,SNR=3.9						
TOA1	Torodi Ar. Sit	164.43	279	ePKPdf	PKPdf	17 08 50.7	+0.3
TOA1				ePKPab	PKPab	17 09 43.4	-1.5

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*ISCJB **25** 16:51:42.8*±*0.2, 24°.20N*±*0°.01*×*122°.32E*±*0°.01, h55^{km}*±*4^{km},*
Error ellipse: s-maj=2.5km s-min=1.7km az=155.8
*JMA **25** 16:51:42.4*±*0.1, 24°.14N*×*122°.28E, h55^{km}*±*3^{km}, M3.4*
*TAP **25** 16:51:43.0, 24°.22N*×*122°.27E, h60^{km}, ML3.8, B*

ISC 25 16:51:43.3±1.2**, 24°.20N**±0°.02×**122°.31E**±0°.02**, h50^{km}**±9^{km}**,**
n135, σ**1^{s}.00**/244**, 5C-9D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.39	335	i P	Pn	16 51 53.6	+0.4
	baz=331						
EOS1				eS	Sn	16 52 01.4	+1.1
	baz=331						
NANB	Nanao	0.56	294	eP	Pn	16 51 55.4	+0.1
	baz=299						
NANB				eS	Sn	16 52 04.1	+0.2
	baz=299						
ENA	Nanau	0.56	294	P	Pn	16 51 55.4	+0.1
	baz=299						
ENA				eS	Sn	16 52 04.2	+0.2
	baz=299						
TWC	Suao	0.58	314	⇑P	Pn	16 51 55.4	-0.2
	baz=316						
TWC				eS	Sn	16 52 04.2	-0.2
	baz=316						
JYNG	Yonagunijimaku	0.63	67	P	Pn	16 51 56.4	+0.2
JYNG				eS	Sn	16 52 06.1	+0.6
NACB	Ninganchiao	0.65	268	⇓eP	Pn	16 51 56.1	-0.4
	baz=266						
NACB				eS	Sn	16 52 05.7	-0.3
	baz=266						
TWD	Chiawan	0.66	260	⇓iP	Pn	16 51 56.1	-0.4
	baz=251						
TWD				eS	Sn	16 52 05.8	-0.3
	baz=251						
HWA	Hwalien	0.68	251	P	Pn	16 51 56.8	+0.1
	baz=248						
HWA				eS	Sn	16 52 07.5	+1.0
	baz=248						
YOJ	Yonaguni jima	0.69	68	P	Pn	16 51 57.1	+0.2
	baz=70						
YOJ				eS	Sn	16 52 07.1	+0.2
	baz=70						
YOJ	Yonaguni jima	0.69	68	P	Pn	16 51 57.1	+0.2
YOJ				eS	Sn	16 52 07.2	+0.3
ENLB	Shoufeng	0.71	246	⇓eP	Pn	16 51 57.1	-0.1
	baz=237						
ENLB				eS	Sn	16 52 07.5	+0.3
	baz=237						
EGS		0.73	332	eP	Pn	16 51 57.3	-0.2
	baz=342						
ETLH	Xiulin Townshi	0.75	271	eP	Pn	16 51 57.6	-0.3
	baz=269						
ETLH				eS	Sn	16 52 08.3	-0.2
	baz=269						
ILA	Ilan	0.76	318	eP	Pn	16 51 58.4	+0.5
	baz=327						
ILA				eS	Sn	16 52 09.3	+0.9
	baz=327						
TWE	Neicheng	0.78	312	⇑P	Pn	16 51 58.4	+0.3
	baz=307						
TWE				eS	Sn	16 52 09.2	+0.3
	baz=307						
NTC	Toucheng	0.78	326	eP	Pn	16 51 58.2	+0.1
	baz=336						
ENTT	Nioudou	0.81	303	P	Pn	16 51 58.8	+0.3
	baz=297						
ENTT				S	Sn	16 52 09.9	+0.4
	baz=297						
NDT	Datong Townshi	0.83	299	P	Pn	16 51 59.1	+0.3
	baz=294						
NDT				eS	Sn	16 52 10.5	+0.5
	baz=294						
TWB1	Santiao Chiao	0.86	340	⇑P	Pn	16 51 58.6	-0.5
	baz=332						
TWB1				eS	Sn	16 52 09.4	-1.2
	baz=332						
NNSB	Datong	0.87	285	⇓eP	Pn	16 51 59.3	-0.2
	baz=285						
NNSB				eS	Sn	16 52 11.1	-0.2
	baz=285						
NNS	Nan Shan	0.89	286	P	Pn	16 51 59.4	-0.3
	baz=286						
NNS				eS	Sn	16 52 11.7	+0.1
	baz=286						
TIPB	Shuangxi	0.89	330	eP	Pn	16 51 59.2	-0.4
	baz=341						
TIPB				eS	Sn	16 52 10.5	-1.0
	baz=341						
ESL	Shilin	0.89	245	P	Pn	16 51 59.0	-0.6
	baz=250						
ESL				eS	Sn	16 52 10.8	-0.6
	baz=250						
NWLT	Wulai	0.93	308	eP	Pn	16 52 00.6	+0.4
	baz=302						
NWLT				eS	Sn	16 52 12.8	+0.3
	baz=302						
WHF	Hehuan Shan	0.95	267	P	Pn	16 52 00.4	-0.4
	baz=257						
WHF				eS	Sn	16 52 12.9	-0.7
	baz=257						
EGFH	Guangfu	0.96	237	eP	Pn	16 52 00.2	-0.4
	baz=230						
EGFH				eS	Sn	16 52 13.4	+0.1
	baz=230						
YHNB	Yeheng	0.97	299	⇓eP	Pn	16 52 00.9	+0.2
	baz=299						
YHNB				eS	Sn	16 52 13.3	-0.2
	baz=299						
NSK	Sanguang	0.99	299	P	Pn	16 52 01.1	+0.2
	baz=299						
NSK				eS	Sn	16 52 13.8	-0.1
	baz=299						
NWF	Wu-fen Shan	0.99	331	eP	Pn	16 52 00.7	-0.3
	baz=342						
NWF				eS	Sn	16 52 12.8	-1.3
	baz=342						
WFSB	Wu-fen Shan	0.99	331	eP	Pn	16 52 00.7	-0.3
	baz=342						
WFSB				eS	Sn	16 52 12.8	-1.1
	baz=342						
TWA	Mucha	1.02	320	⇑P	Pn	16 52 01.4	+0.1
	baz=332						
TWA				eS	Sn	16 52 14.9	+0.3
	baz=332						
TWT	Tachien	1.03	273	eP	Pn	16 52 02.1	+0.4
	baz=272						
TWT				eS	Sn	16 52 15.6	+0.4
	baz=272						
NHDH	Xindian Distri	1.04	317	P	Pn	16 52 01.9	+0.3
	baz=327						
NHDH				eS	Sn	16 52 15.9	+0.8
	baz=327						
CHGB	Renai	1.04	263	⇓eP	Pn	16 52 01.7	-0.1
	baz=254						
CHGB				eS	Sn	16 52 15.1	-0.4
	baz=254						
TDCB	Techi	1.05	273	eP	Pn	16 52 02.2	+0.3
	baz=273						
TDCB				eS	Sn	16 52 15.1	-0.4
	baz=273						
OWD	Renai	1.06	257	eP	Pn	16 52 01.9	-0.2
	baz=256						
OWD				eS	Sn	16 52 15.0	-0.9
	baz=256						
HGSD	Ruisui	1.07	229	eP	Pn	16 52 01.5	-0.5
	baz=222						
HGSD				eS	Sn	16 52 15.0	-0.8
	baz=222						
TATO	Taipei	1.07	316	eP	Pn	16 52 02.1	+0.1
	baz=326						
TATO				eS	Sn	16 52 16.3	+0.4
	baz=326						
TAP	Taipei	1.11	319	eP	Pn	16 52 02.3	-0.2
	baz=333						
TAP				eS	Sn	16 52 16.6	-0.1
	baz=333						
EHY	Hungye	1.14	233	P	Pn	16 52 02.2	-0.7
	baz=230						
EHY				eS	Sn	16 52 16.4	-1.0
	baz=230						
VWDT	VWDT	1.16	248	⇓eP	Pn	16 52 03.3	+0.2
	baz=246						
VWDT				eS	Sn	16 52 17.4	-0.4
	baz=246						
YM11	YM11	1.17	325	eP	Pn	16 52 02.9	-0.6
	baz=336						
YM11				eS	Sn	16 52 18.6	+0.2
	baz=336						
YM05	YM05	1.17	325	eP	Pn	16 52 02.8	-0.6
	baz=336						
YM05				eS	Sn	16 52 19.1	+0.7
	baz=336						
YM04	YM04	1.18	324	eP	Pn	16 52 03.0	-0.5
	baz=335						
YM04				eS	Sn	16 52 17.2	-1.4
	baz=335						
YM08	YM08	1.18	327	eP	Pn	16 52 02.7	-0.9
	baz=336						
YM08				eS	Sn	16 52 17.1	-1.5
	baz=336						
TWS1	Kuangyinshan	1.21	318	⇑P	Pn	16 52 03.9	0.0
	baz=330						
TWS1				eS	Sn	16 52 20.0	+0.9
	baz=330						
ANP	Anpu	1.22	324	eP	Pn	16 52 03.6	-0.4
	baz=335						
ANP				eS	Sn	16 52 19.5	0.0
	baz=335						
YULB	Yu-li	1.23	229	⇓eP	Pn	16 52 03.4	-0.7
	baz=237						
YULB				eS	Sn	16 52 18.3	-1.3
	baz=237						
NTST	Danshui	1.24	321	eP	Pn	16 52 04.2	0.0
	baz=333						
NTST				eS	Sn	16 52 20.1	+0.2
	baz=333						
WHP	Taichung City	1.25	274	P	Pn	16 52 05.5	+1.1
	baz=274						
WHP				eS	Sn	16 52 20.7	+0.5
	baz=274						
TWY	Chenhua	1.25	329	eP	Pn	16 52 04.0	-0.4
	baz=339						
TWY				eS	Sn	16 52 19.8	-0.4
	baz=339						
LIOB	Emei	1.26	291	eP	Pn	16 52 04.4	-0.2
	baz=292						
LIOB				eS	Sn	16 52 20.2	-0.2
	baz=292						
NSTT	Nanjuang	1.27	290	P	Pn	16 52 05.4	+0.8
	baz=291						
NSTT				eS	Sn	16 52 21.2	+0.7
	baz=291						
NCU	National Centr	1.28	307	eP	Pn	16 52 05.1	+0.3
	baz=308						
NCU				eS	Sn	16 52 21.0	+0.2
	baz=308						
NCUH	Zhongli	1.28	307	eP	Pn	16 52 05.2	+0.4
	baz=308						
NCUH				eS	Sn	16 52 21.7	+0.9
	baz=308						
SSLB	Suanglung	1.30	252	⇓eP	Pn	16 52 05.2	0.0
	baz=251						
SSLB				eS	Sn	16 52 20.8	-0.8
	baz=251						
IRIF	Iriomote-Funau	1.30	84	P	Pn	16 52 05.0	-0.2
IRIF				S	Sn	16 52 21.6	+0.1
SMLT	Sun Moon Lake	1.32	257	P	Pn	16 52 05.8	+0.3
	baz=250						
SMLT				eS	Sn	16 52 21.9	-0.3
	baz=250						
SBCB	Hsinchu	1.34	296	eP	Pn	16 52 06.5	+0.8
	baz=309						
SBCB				eS	Sn	16 52 23.6	+1.2
	baz=309						
TYC	Yuchr	1.36	258	P	Pn	16 52 06.5	+0.6
	baz=251						
TYC				eS	Sn	16 52 22.9	+0.1
	baz=251						
HSN	Hsinchu	1.36	296	eP	Pn	16 52 06.5	+0.7
	baz=299						
HSN				eS	Sn	16 52 23.5	+0.7
	baz=299						
FULB	Fuli	1.36	223	eP	Pn	16 52 05.3	-0.7
	baz=212						
FULB				eS	Sn	16 52 22.1	-0.9
	baz=212						
HATJ	Hateruma jima	1.38	96	P	Pn	16 52 06.9	+0.8
HATJ				eS	Sn	16 52 24.5	+1.3
CHKT	Chengkung	1.40	218	P	Pn	16 52 05.4	-1.0
	baz=208						
CHKT				eS	Sn	16 52 21.5	-2.2
	baz=208						
TWQ1	Liyutan	1.41	276	P	Pn	16 52 07.5	+0.9
	baz=277						
TWQ1				eS	Sn	16 52 25.3	+1.3
	baz=277						
WHYT	Xinyi Township	1.42	250	eP	Pn	16 52 07.5	+0.7
	baz=244						
NMLH	Miaoli	1.42	284	eP	Pn	16 52 07.8	+1.0
	baz=284						
NMLH				eS	Sn	16 52 25.8	+1.4
	baz=284						
NSY	Sanyi	1.43	279	eP	Pn	16 52 07.8	+1.0
	baz=279						
NSY				eS	Sn	16 52 25.5	+1.0
	baz=279						
PCYT	Pengchaiyu	1.44	351	eP	Pn	16 52 05.8	-1.3
	baz=345						
PTSB	Yuanli	1.48	280	eP	Pn	16 52 08.4	+0.8
	baz=280						
PTSB				eS	Sn	16 52 26.4	+0.6
	baz=280						
TCU	Taichung	1.49	268	eP	Pn	16 52 08.9	+1.2
	baz=268						
TCU				eS	Sn	16 52 27.4	+1.3
	baz=268						
WJS	Zhushan	1.49	256	eP	Pn	16 52 09.4	+1.6
	baz=255						
WJS				eS	Sn	16 52 27.4	+1.3
	baz=255						
WNT	Mingjian	1.52	258	eP	Pn	16 52 09.6	+1.5
	baz=258						
WNT				eS	Sn	16 52 27.6	+0.9
	baz=258						
WDJ	Dajia District	1.53	276	eP	Pn	16 52 09.0	+0.8
	baz=276						
WDJ				eS	Sn	16 52 28.2	+1.2
	baz=276						
ALS	Alishan	1.54	244	P	Pn	16 52 09.3	+0.7
	baz=235						
ALS				eS	Sn	16 52 26.9	-0.7
	baz=235						
ELDTW	Lidau	1.55	230	P	Pn	16 52 08.0	-0.7
	baz=227						
ELDTW				eS	Sn	16 52 26.3	-1.4
	baz=227						
JKRS	Kuro-shima	1.55	88	P	Pn	16 52 09.1	+0.5
JKRS				eS	Sn	16 52 28.1	+0.5
WCHH	Zhanghua	1.60	266	eP	Pn	16 52 10.3	+1.1
	baz=266						
WCHH				eS	Sn	16 52 30.4	+1.6
	baz=266						
CHN5	Tsauling	1.61	248	P	Pn	16 52 10.5	+1.1
	baz=239						
CHN5				eS	Sn	16 52 30.1	+1.1
	baz=239						
WGK	Gukeng	1.68	253	eP	Pn	16 52 11.5	+1.3
	baz=242						
WGK				eS	Sn	16 52 31.8	+1.2
	baz=242						
JIJ	Ishigaki jima	1.68	84	P	Pn	16 52 10.0	-0.3
JIJ				S	Sn	16 52 29.9	-0.8
WDLH	Douliu	1.70	253	eP	Pn	16 52 12.2	+1.7
	baz=243						
WDLH				eS	Sn	16 52 33.4	+2.3
	baz=243						
STYT	Tauyuan	1.76	234	P	Pn	16 52 12.0	+0.6
	baz=226						
STYT				eS	Sn	16 52 32.9	+0.2
	baz=226						
TWGBT	Beinan	1.78	220	eP	Pn	16 52 10.7	-1.0
	baz=224						
TWGBT				eS	Sn	16 52 30.6	-2.5
	baz=224						
TPUB	Ta-pu	1.78	240	eP	Pn	16 52 12.8	+1.1
	baz=239						
TPUB				eS	Sn	16 52 33.6	+0.5
	baz=239						
TWG	Pinlang	1.78	220	eP	Pn	16 52 10.7	-1.0
	baz=224						
TWG				eS	Sn	16 52 30.9	-2.3
	baz=224						
CHN4	Tsaushan	1.78	242	P	Pn	16 52 13.1	+1.4
	baz=232						
CHN4				eS	Sn	16 52 34.8	+1.6
	baz=232						
TTN	Taitung	1.79	217	eP	Pn	16 52 11.7	-0.1
	baz=208						
TTN				eS	Sn	16 52 33.4	0.0
	baz=208						
CHN2	Minshiung	1.80	249	eP	Pn	16 52 13.8	+1.9
	baz=248						
CHN2				eS	Sn	16 52 37.1	+3.4
	baz=248						
RLNB	Erlin	1.81	261	eP	Pn	16 52 12.5	+0.5
	baz=261						
RLNB				eS	Sn	16 52 34.7	+0.9
	baz=261						
WTP	Ta-pu	1.82	239	eP	Pn	16 52 13.4	+1.2
	baz=237						
WTP				eS	Sn	16 52 34.9	+0.7
	baz=237						
CHY	Chiayi	1.86	248	eP	Pn	16 52 14.4	+1.6
	baz=247						
JISG	Ishigakijimahi	1.87	78	P	Pn	16 52 12.4	-0.4
JISG				S	Sn	16 52 35.4	+0.2
WTCT	Ta-ch'eng	1.88	260	eP	Pn	16 52 13.4	+0.3
	baz=261						
WTCT				eS	Sn	16 52 35.5	-0.1
	baz=261						
TWK	Hsinying	1.91	241	P	Pn	16 52 14.9	+1.4
	baz=240						
TWK				eS	Sn	16 52 37.3	+0.9
	baz=240						
CHN1	Nanshi	1.92	239	P	Pn	16 52 14.9	+1.3
	baz=237						
CHN1				eS	Sn	16 52 37.6	+1.1
	baz=237						
SNST	Tainan City	1.92	240	eP	Pn	16 52 15.4	+1.7
	baz=239						
SNST				eS	Sn	16 52 37.8	+1.1
	baz=239						
SGST	Jiashian	1.93	235	P	Pn	16 52 15.2	+1.5
	baz=233						
SGST				eS	Sn	16 52 38.2	+1.3
	baz=233						
SLGT	Liugui	1.94	232	eP	Pn	16 52 15.1	+1.3
	baz=230						
WLGB	Puzi	1.97	249	eP	Pn	16 52 15.7	+1.4
	baz=248						
WSF	Szhu	1.99	254	eP	Pn	16 52 15.5	+1.0
	baz=266						
WSF				eS	Sn	16 52 40.3	+2.0
	baz=266						
ECL	Taimali	2.02	218	eP	Pn	16 52 13.8	-1.2
	baz=221						
ECL				eS	Sn	16 52 36.8	-2.3
	baz=221						

CHN8	Yiju baz=235	2.10	247	eP	Pn	16 52 17.0	+0.9
CHN8	baz=235			eS	Sn	16 52 41.8	+0.8
SSD	Sandimen baz=225	2.11	227	eP	Pn	16 52 17.1	+0.9
SSD	baz=225			eS	Sn	16 52 42.2	+0.9
MASBT	Mashibuluo baz=221	2.21	225	eP	Pn	16 52 17.9	+0.4
MASBT	baz=221			eS	Sn	16 52 44.0	+0.4
TWM1	Shoushan baz=240	2.21	232	eP	Pn	16 52 20.3	+2.8
TWM1	baz=240			eS	Sn	16 52 47.9	+4.3
JTJ	Tarama	2.23	78	P	Pn	16 52 18.0	+0.2
JTJ				eS	Sn	16 52 44.2	+0.1
EAST	Anshuo baz=214	2.25	217	eP	Pn	16 52 17.6	-0.5
EAST	baz=214			eS	Sn	16 52 42.7	-2.1
LAY	Lan-yu baz=189	2.26	198	eP	Pn	16 52 17.0	-1.2
SNJT	Kaohsiung City baz=231	2.31	232	eP	Pn	16 52 19.9	+1.0
SSPT	Xinbi baz=221	2.34	223	eP	Pn	16 52 21.2	+1.9
SCZT	Fangliau baz=215	2.39	221	eP	Pn	16 52 21.0	+1.0
SCZT	baz=215			eS	Sn	16 52 48.8	+0.7
WLCH	Liuqiu baz=222	2.56	224	eP	Pn	16 52 26.3	+4.0
TWP	Hsiaoliuchiu baz=222	2.57	225	eP	Pn	16 52 24.1	+1.6
PHUB	P'eng-hu baz=255	2.60	255	eP	Pn	16 52 22.4	-0.5
PHUB	baz=255			eS	Sn	16 52 51.8	-1.3
PNG	Penghu baz=257	2.60	257	eP	Pn	16 52 22.3	-0.5
PNG	baz=257			eS	Sn	16 52 52.1	-1.1
WDGT	Dungji baz=249	2.60	249	eP	Pn	16 52 23.2	+0.4
WDGT	baz=249			eS	Sn	16 52 51.5	-1.7
TWKBT	Hengchun baz=209	2.64	212	eP	Pn	16 52 23.4	0.0
TWK1	Hengchun baz=209	2.64	212	eP	Pn	16 52 23.2	-0.2
PTTC	Pingtan baz=301	2.64	300	eP	Pn	16 52 22.4	-1.1
JIRB	Irabujima	2.68	76	P	Pn	16 52 24.3	+0.3
JIRB				eS	Sn	16 52 55.7	+0.4
VWUC	VWUC baz=288	2.72	287	eP	Pn	16 52 23.5	-1.0
JIKM	Ikemajima	2.77	74	P	Pn	16 52 25.4	+0.1
JIKM				S	Sn	16 52 58.0	+0.5
JMJ	Miyako jima 2	2.79	77	P	Pn	16 52 26.2	+0.7
JMJ				S	Sn	16 52 58.0	+0.1
VCHM	Qimei baz=250	2.82	250	eP	Pn	16 52 25.9	+0.1
JOGS	Gusukube	2.88	78	P	Pn	16 52 27.1	+0.4
JOGS				S	Sn	16 53 00.9	+0.8
MATB	Ma-tsu baz=313	2.89	313	eP	Pn	16 52 25.7	-1.2
PTMZ	Houxiangcun baz=287	3.02	287	eP	Pn	16 52 27.8	-0.9
LYJJ	Jianjiangzhen baz=317	3.29	316	eP	Pn	16 52 31.3	-0.9
XPSS	Dashiqiu baz=336	3.32	325	eP	Pn	16 52 31.7	-1.1
MHZQ	Yeshan baz=304	3.52	303	eP	Pn	16 52 34.2	-1.3
KNM	Kinmen baz=265	3.54	274	eP	Pn	16 52 36.7	+0.9
KNMB	Chin-men Tao baz=267	3.58	275	eP	Pn	16 52 35.3	-1.1
AXDP	Jialang baz=282	4.01	281	eP	Pn	16 52 41.4	-0.8
ZPLA	Ao Xicun baz=268	4.17	267	eP	Pn	16 52 43.6	-0.9

MEX 25 16:55:36.5±0.7**, 14°.08N×93°.34W, h16**km±999km**, MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.33	51	iP	Pn	16 55 57.4	-3.0
THIG				iS	Sn	16 56 12.8	-4.8
PCIG		1.62	4	eP	Pn	16 56 00.9	-3.6
PCIG				iS	Sn	16 56 20.2	-4.8
CCIG	Comitan	2.48	28	eP	Pn	16 56 13.9	-2.5
CCIG				eS	Sn	16 56 41.7	-4.7

ISCJB ***25*** *16:57:53.7±1.1, 11°.2S±0°.1×163°.2E±0°.1, h34km, mb3.5/4, Error ellipse: s-maj=24.1km s-min=10.7km az=42.1*
IDC ***25*** *16:57:56.6±3.2, 11°.13S×163°.14E, h45km±27km, mb3.5/4, mb1 3.8/6, mb1mx3.4/44, mbtmp3.8/6, ML3.7/2, MS3.7/1, Ms1 3.7/1, ms1mx3.0/19, Error ellipse: s-maj=32.6km s-min=20.4km az=54.0*
ISC 25 16:57:55.5±1.2**, 11°.1S**±0°.2×**163°.2E**±0°.1**, h34**km**, n7, σ0s.99**/9**, mb3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.61	296	eP	Pn	16 58 50.0	+1.0
HNR				eS	Sn	16 59 30.0	-0.5
HNR	Honiara 11nm,0.3s,baz=112,slow=7.3,SNR=8.1	3.61	296	P	Pn	16 58 49.5	+0.5
HNR	10nm,0.3s,baz=156,slow=20,SNR=3.2			S	Sn	16 59 30.7	+0.3
DZM	Mont Dzumac 0.3nm,0.3s,baz=351,slow=19,SNR=4.6	11.37	165	P	Pn	17 00 36.4	+0.8
DZM	comp=Z,361nm,18.6s,baz=12,slow=33			LR	LR	17 04 14.6	
WRA	Warramunga Arr 1.0nm,1.0s,baz=79,slow=9.1,SNR=5.2	29.15	249	P	P	17 03 52.8	-1.0
ASAR	Alice Springs 1.1nm,1.0s,baz=61,slow=10,SNR=10	30.58	242	P	P	17 04 05.2	-1.1
SONM	Songino Array 0.2nm,0.5s,baz=135,slow=6.3,SNR=3.2	77.23	325	P	P	17 09 47.1	+0.8
YKA	Yellowknife Ar 0.1nm,0.3s,baz=260,slow=3.1,SNR=4.1	96.14	28	P	P	17 11 18.6	-0.9

JMA ***25*** *16:58:36.8±0.1, 33°.22N×140°.88E, h55km±4km, M3.5*
IDC ***25*** *16:58:41.8±1.9, 32°.94N×139°.58E, h68km±46km, mb3.6/2, mb1 3.8/3, mb1mx3.1/45, mbtmp3.8/3, ML2.5/1, Error ellipse: s-maj=119.2km s-min=13.1km az=66.0*
ISC 25 16:58:36.5±2.4**, 33°.13N**±0°.08×**140°.9E**±0°.1**, h36**km±5km**, n22, σ1s.17**/30**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.91	269	P	Pn	16 58 53.5	+0.8
JHCJ	Hachijojimakas	0.92	267	P	Pn	16 58 53.7	+0.7
JHJ	Hachijo jima 2 227nm,0.3s,baz=185,slow=23,SNR=73	0.93	270	P	Pn	16 58 53.6	+0.5
JHJ	217nm,0.3s,baz=330,slow=20,SNR=17			S	Sn	16 59 02.7	-2.6
JAOM	Aogashimamukai	1.16	236	P	Pn	16 58 57.7	+1.5
JMKN	Mikurajimanish	1.33	305	P	Pn	16 58 58.7	+0.1
BSO1	Boso 1	1.52	3	P	Pn	16 59 00.9	+0.2
BSO2	Boso 2	1.62	356	eS	Sn	16 59 22.2	+0.3
BSO3	Boso 3	1.70	349	P	Pn	16 59 03.5	+0.1
BSO3				S	Sn	16 59 23.7	-0.1
JKO	Kozu shima	1.81	306	S	Sn	16 59 26.0	-0.8
BSO4	Boso 4	1.92	346	P	Pn	16 59 06.8	+0.3
BSO4				eS	Sn	16 59 29.1	-0.2
JTHY	Toshimahigashi	1.93	317	P	Pn	16 59 07.4	+0.6
JTHY				eS	Sn	16 59 29.6	-0.3
JIM2	Oshima 3	2.00	323	P	Pn	16 59 07.6	-0.2
JIM2				eS	Sn	16 59 31.2	-0.4
JIZS	Izushimoda	2.31	314	P	Pn	16 59 12.7	+0.7
JIZS				eS	Sn	16 59 38.2	-1.0
JOD2	Odawara 2	2.60	325	P	Pn	16 59 16.2	+0.1
TK02	Tokai 2	2.75	288	P	Pn	16 59 19.2	+1.4
TK04	Tokai 4	2.81	297	P	Pn	16 59 20.4	+1.6
SHZ3	Shizuoka 3	2.95	312	P	Pn	16 59 22.6	+1.7
JYN	Shimob	3.06	321	P	Pn	16 59 23.7	+1.2
MJAR	Matsushiro Arr 0.4nm,0.3s,baz=164,slow=14,SNR=18	4.06	328	P	Pn	16 59 38.0	+1.9
MJAR	0.1nm,0.3s,baz=134,slow=7.0,SNR=3.7			S	Sn	17 00 20.3	-2.1
MAT	Matsushiro	4.06	328	P	Pn	16 59 38.4	+2.3
MAT				S	Sn	17 00 22.8	+0.4
WRA	Warramunga Arr 1.1nm,0.4s,baz=4.5,slow=7.5,SNR=43	53.14	188	P	P	17 07 50.1	-0.7
ASAR	Alice Springs 0.4nm,0.4s,baz=4.0,slow=6.7,SNR=21	56.87	188	P	P	17 08 17.1	-0.6

IDC ***25*** *17:03:06.9±0.8, 10°.63N×126°.29E, h0km, mb3.7/11, mb1 3.9/11, mb1mx3.7/39, mbtmp3.7/11, Error ellipse: s-maj=41.8km s-min=15.8km az=71.0*
ISCJB ***25*** *17:03:09.8±2.2, 10°.73N±0°.04×126°.52E±0°.05, h33km±17km, mb3.7/11, Error ellipse: s-maj=8.8km s-min=6.8km az=177.2*
MAN ***25*** *17:03:11.6, 10°.82N×126°.37E, h24km, MS3.4*
ISC 25 17:03:11.2±2.0**, 10°.75N**±0°.04×**126°.39E**±0°.09**, h27**km±14km**, n23, σ1s.45**/32**, mb3.9**/11**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	1.26	312	eP	Pb	17 03 33.9	-0.4
BESP				eS	Sb	17 03 48.9	-1.2
SCPH	Surigao	1.31	223	eP	Pn	17 03 32.8	-0.9
SCPH				eS	Sn	17 03 49.5	-0.7
PLP	Palo	1.45	287⇓	eP	Pn	17 03 34.9	-0.6
PLP				eS	Sb	17 03 55.6	+0.1
MSLP	Maasin	1.62	248	eP	Pn	17 03 37.7	-0.3
MSLP				eS	Sb	17 04 00.4	-0.2
OCLP	Ormoc	1.77	280	eP	Pb	17 03 42.2	-0.8
OCLP				eS	Sb	17 04 09.7	+4.8
BUTP	Butuan	1.92	203	eP	Pn	17 03 42.0	-0.2
BUTP				eS	Sb	17 04 10.0	+0.9
LLP	Lapu-Lapu	2.42	260	eP	Pn	17 03 48.8	-0.2
LLP				eS	Sb	17 04 23.0	-0.6
BUKP	Musuan	3.14	205	eP	Pn	17 04 01.9	+2.9
BUKP				eS	Sn	17 04 36.0	+0.4
PVCP	Virac	3.58	323	eP	Pn	17 04 05.6	+0.7
PVCP				eS	Sn	17 04 45.2	-1.1
RCP	Roxas	3.67	283⇑	eP	Pn	17 04 08.0	+1.9
GUIM	Jordan	3.74	268	eP	Pn	17 04 08.0	+0.9
CMAR	Chiang Mai Arr 0.4nm,0.8s,baz=110,slow=7.3,SNR=4.3	27.62	289	P	P	17 08 56.9	+0.2
WRA	Warramunga Arr 0.4nm,0.7s,baz=347,slow=9.4,SNR=4.4	31.49	166	P	P	17 09 28.5	-2.3
USRK	Ussuriysk Ar. 1.8nm,0.7s,baz=188,slow=10,SNR=4.9	33.68	7	P	P	17 09 51.0	+1.2
ASAR	Alice Springs 0.3nm,0.6s,baz=347,slow=7.0,SNR=11	34.98	168	P	P	17 10 00.0	-1.4
SONM	Songino Array 0.2nm,0.5s,baz=132,slow=6.0,SNR=2.1	40.62	339	P	P	17 10 49.0	+0.1
STKA	Stephens Creek 1.5nm,0.7s,baz=329,slow=9.5,SNR=3.6	44.81	162	P	P	17 11 22.0	-0.9
MKAR	Makanchi Array 1.0nm,0.7s,baz=111,slow=7.9,SNR=2.5	51.72	322	P	P	17 12 15.9	-0.2
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=101,slow=7.7,SNR=4.0	54.27	331	P	P	17 12 33.1	-1.6
ARCES	ARCESS Array B 3.9nm,0.9s,baz=79,slow=6.3,SNR=7.3	83.79	340	P	P	17 15 38.9	+1.1
FINES	FINESS Array B 0.8nm,0.8s,baz=64,slow=4.4,SNR=5.4	85.53	332	P	P	17 15 47.2	+0.6
YKA	Yellowknife Ar 0.2nm,0.7s,baz=301,slow=4.8,SNR=3.7	93.28	24	P	P	17 16 23.7	+0.5
PLCA	Paso Flores 0.8nm,0.5s,baz=272,slow=1.4,SNR=6.0	146.59	156	PKPbc	PKPbc	17 22 52.0	+1.3

IDC 25 17:30:25.9±5.0**, 7°.18S×144°.37E, h0**km**, mb3.7**/2**, mb1 3.8**/4**, mb1mx3.4**/37**, mbtmp3.5**/4**, ML3.1**/2**, Error ellipse: s-maj=138.3km s-min=33.9km az=97.0, Near south coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=37,slow=12,SNR=5.4	15.99	216	Pn	Pn	17 34 12.0	-0.3
ASAR	Alice Springs 0.1nm,0.3s,baz=38,slow=10,SNR=18	19.23	210	P	P	17 34 51.7	-0.1
CMAR	Chiang Mai Arr 0.4nm,0.3s,baz=117,slow=6.4,SNR=4.2	51.54	300	P	P	17 39 33.5	-0.5
MKAR	Makanchi Array 0.4nm,0.7s,baz=129,slow=5.7,SNR=3.2	76.76	321	P	P	17 42 19.7	+0.4

ISCJB ***25*** *17:30:30.3±0.6, 11°.17S±0°.07×165°.90E±0°.07, h10km, mb4.4/14, MS3.6/1, Error ellipse: s-maj=12.1km s-min=7.8km az=135.3*
IDC ***25*** *17:30:30.4±0.8, 11°.02S×165°.94E, h0km, mb4.2/11, mb1 4.3/13, mb1mx4.0/44, mbtmp4.3/13, ML4.5/2, MS3.5/3, Ms1 3.5/3, ms1mx3.0/37, Error ellipse: s-maj=20.6km s-min=19.7km az=80.0*
NEIC ***25*** *17:30:31.7±0.4, 11°.06S×166°.01E, h10km, mb5.0/4, Error ellipse: s-maj=11.3km s-min=9.1km az=74.0*
ISC 25 17:30:31.9±0.7**, 11°.11S**±0°.08×**165°.97E**±0°.09**, h10**km**, n28, σ1s.11**/33**, mb4.3**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.15	285	eP	Pn	17 32 03.0	+0.1
HNR				eS	Sn	17 33 12.0	-1.4
HNR	Honiara 11nm,0.3s,baz=168,slow=3.0,SNR=11	6.15	285	Pn	Pn	17 32 03.8	+0.9
HNR	baz=144,slow=19,SNR=1.7			Sn	Sn	17 33 12.8	-0.6
HNR	comp=Z,683nm,21.2s,baz=110,slow=40			LR	LR	17 34 31.8	
DZM	Mont Dzumac 25nm,0.5s	10.91	178	ePn	Pn	17 33 09.7	+1.4
DZM	comp=Z,163nm,23.4s			eLR	LR	17 35 31.0	
DZM	Mont Dzumac	10.91	178	ePn	Pn	17 33 09.1	+0.8
DZM				eSn	Sn	17 35 08.5	-2.1
DZM	Mont Dzumac 3.1nm,0.3s,baz=344,slow=13,SNR=26	10.91	178	Pn	Pn	17 33 10.0	+1.7
DZM	0.3nm,0.3s,baz=310,slow=18,SNR=2.3			Sn	Sn	17 35 08.5	-2.1
DZM	comp=Z,136nm,20.3s,baz=24,slow=35			LR	LR	17 36 53.8	
CTA	Charters Tower 4.4nm,0.7s,baz=85,slow=9.0,SNR=5.3	20.96	242	P	P	17 35 16.1	+0.7
URZ	Urewera 4.9nm,0.7s,baz=15,slow=16,SNR=3.1	28.82	162	P	P	17 36 31.6	+1.3
URZ	comp=Z,150nm,19.0s,baz=352,slow=32			LR	LR	17 46 06.8	
STKA	Stephens Creek 1.6nm,0.7s,baz=51,slow=13,SNR=3.6	30.55	224	P	P	17 36 46.7	+1.0
THZ	Tophouse 102nm,2.0s	31.14	170	eP	P	17 36 49.5	-1.3
WR1	Warramunga Arr 15nm,0.9s	31.67	250	eP	P	17 36 55.1	-0.6
WR1				ePcP	PcP	17 39 47.8	0.0
WRA	Warramunga Arr 5.3nm,0.8s,baz=82,slow=9.2,SNR=27	31.67	250	P	P	17 36 55.1	-0.6
WRA	0.4nm,0.7s,baz=76,slow=3.6,SNR=2.9			PcP	PcP	17 39 47.8	0.0
LTZ	Lake Taylor 19nm,0.8s	32.03	171	eP	P	17 36 59.5	+0.9
FOZ	Fox Glacier 13nm,0.8s	32.48	175	eP	P	17 37 02.1	-0.4
RPZ	Rata Peaks 11nm,0.7s,baz=301,slow=1.4,SNR=10	32.79	173	P	P	17 37 06.4	+1.1
ASAR	Alice Springs 1.3nm,0.8s,baz=64,slow=10,SNR=9.3	32.96	243	P	P	17 37 06.0	-1.1
ASAR	0.5nm,0.6s,baz=83,slow=2.2,SNR=5.9			PcP	PcP	17 39 51.5	+0.1
FITZ	Fitzroy Crossi 4.5nm,0.7s,baz=101,slow=5.2,SNR=4.6	39.57	255	P	P	17 38 03.0	-0.6
PPT2	Papeete2 comp=Z,105nm,23.0s	43.47	104	eLR	LR	17 51 13.5	
TBI	Tubuai comp=Z,164nm,27.2s	44.11	112	eLR	LR	17 51 30.7	
CM31	Chiang Mai Arr	72.34	293	eP	P	17 41 59.9	+1.4
CMAR	Chiang Mai Arr 1.6nm,0.9s,baz=120,slow=4.5,SNR=10	72.34	293	P	P	17 41 59.9	+1.4
ILAR	Eielson Array 0.7nm,0.8s,baz=238,slow=4.6,SNR=8.0	83.50	18	P	P	17 42 59.7	+0.1
ILB	Eielson Array	83.50	18	eP	P	17 42 59.7	+0.1
MK32	Makanchi Array	93.72	317	eP	P	17 43 49.0	0.0
MKAR	Makanchi Array 0.5nm,0.7s,baz=94,slow=5.8,SNR=6.0	93.72	317	P	P	17 43 49.0	0.0
YKA	Yellowknife Ar 0.1nm,0.5s,baz=251,slow=4.0,SNR=2.5	94.93	27	P	P	17 43 52.7	-1.4
YKB5	Yellowknife Ar	94.93	27	eP	P	17 43 52.7	-1.4
ARA0	ARCESS Array S	116.45	346	ePKPdf	PKPdf	17 49 14.5	-1.0
ARCES	ARCESS Array B 3.6nm,0.8s,baz=56,slow=1.6,SNR=3.6	116.45	346	PKP	PKPdf	17 49 14.5	-1.0

IDC 25 17:39:30.4±5.3**, 7°.79S×129°.14E, h239**km±57km**, mb2.7**/1**, mb1 2.7**/4**, mb1mx2.6**/40**, mbtmp3.3**/4**, Error ellipse: s-maj=54.7km s-min=22.0km az=48.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata 1.3nm,0.3s,baz=180,slow=12,SNR=1.8	5.91	246	P	Pn	17 40 57.2	-0.1
BATI	1.2nm,0.3s,baz=270,slow=17,SNR=2.3			S	S	17 42 06.5	0.0
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=30,slow=14,SNR=1.4	10.79	198	P	Pn	17 42 00.9	+1.8
FITZ	0.2nm,0.3s,baz=294,slow=20,SNR=3.6			S	S	17 44 00.9	+0.8
WRA	Warramunga Arr 0.1nm,0.3s,baz=337,slow=12,SNR=2.3	13.09	158	P	Pn	17 42 28.2	+0.5
WRA	0.2nm,0.3s,baz=333,slow=23,SNR=7.3			S	S	17 44 50.5	-2.4
ASAR	Alice Springs baz=342,slow=8.5,SNR=1.2	16.43	164	P	P	17 43 06.1	-0.6
MKAR	Makanchi Array 0.1nm,0.5s,baz=122,slow=7.6,SNR=2.1	68.42	327	P	P	17 50 06.5	-0.1

TAP 25 17:48:09.2, 24°.24N×121°.80E, h20km±1km**, ML1.5, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	Nanao baz=345	0.19	346	eP	Pb	17 48 14.7	0.0
NANB	baz=345			eS	Sb	17 48 18.8	+0.3
ENA	Nanau baz=345	0.20	344	P	Pb	17 48 14.7	0.0
ENA	baz=345			S	Sb	17 48 18.8	+0.4
NACB	Ninganchiao baz=251	0.20	251	eP	Pb	17 48 14.8	+0.1
EOS1	EOS1 baz=43	0.43	44	eP	Pb	17 48 18.3	+0.3
EOS1	baz=43			eS	Sn	17 48 26.2	-1.3
NDT	Datong Townshi baz=323	0.45	324	eP	Pb	17 48 18.9	+0.5
ENTT	Nioudou baz=332	0.45	332	eP	Pb	17 48 19.1	+0.5
ENTT	baz=332			eS	Sb	17 48 26.2	+1.3

TAP 25 17:48:12.7, 24°.21N×121°.23E, h13km**, ML1.3, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWT	Tachien baz=300	0.07	309	eP	Pg	17 48 15.6	+0.1
TWT	baz=300			eS	Sg	17 48 17.1	-0.4
WHF	Hehuan Shan baz=151	0.07	156	iP	Pg	17 48 15.5	-0.3
WHF	baz=151			S	Sg	17 48 17.1	-0.9
TDCB	Techi baz=301	0.08	302	eP	Pg	17 48 15.6	0.0
TDCB	baz=301			eS	Sg	17 48 17.1	-0.6
CHGB	Renai baz=199	0.16	200	eP	Pg	17 48 16.6	-0.1
CHGB	baz=199			eS	Sg	17 48 19.0	-0.4
ETLH	Xiulin Townshi baz=91	0.23	91	eP	Pg	17 48 18.0	+0.4
ETLH	baz=91			eS	Sg	17 48 21.1	+0.1
NNSB	Datong baz=296	0.26	32	eP	Pg	17 48 18.2	0.0
NNSB	Datong baz=32	0.26	32	eP	Pg	17 48 18.2	0.0
NNSB	baz=32			eS	Sg	17 48 21.6	-0.2
NNS	Nan Shan baz=31	0.26	29	eP	Pg	17 48 18.4	+0.1
NNS	baz=31			eS	Sg	17 48 21.9	-0.1
OWD	Renai baz=191	0.26	192	eP	Pg	17 48 18.3	0.0
WHP	Taichung City baz=284	0.27	284	eP	Pb	17 48 19.6	+0.1
NACB	Ninganchiao baz=96	0.33	96	eP	Pg	17 48 19.4	-0.1
NACB	baz=96			eS	Sg	17 48 24.2	+0.2
NACB	Ninganchiao baz=251	0.33	96	eS	Pg	17 48 19.2	-0.3
TWD	Chiawan baz=110	0.36	111	eP	Pb	17 48 20.6	-0.4
ESL	Shilin baz=154	0.43	155	eP	Pg	17 48 21.2	-0.2
ESL	baz=154			eS	Sg	17 48 27.2	0.0
SMLT	Sun Moon Lake baz=222	0.45	223	eP	Pg	17 48 21.8	+0.2
TYC	Yuchr baz=227	0.46	228	eP	Pg	17 48 22.0	+0.2
VWDT	VWDT baz=190	0.46	190	eP	Pg	17 48 21.8	-0.1
VWDT	baz=190			eS	Sg	17 48 28.6	+0.5
NDT	Datong Townshi baz=33	0.47	33	eP	Pg	17 48 22.1	+0.2
YHNB	Yeheng baz=317	0.47	16	eP	Pg	17 48 21.3	-0.8
YHNB	Yeheng baz=15	0.47	16	eP	Pg	17 48 21.4	-0.8
LIOB	Emei baz=335	0.48	335	eS	Sb	17 48 29.2	-0.7
SSLB	Suanglung baz=211	0.49	211	eP	Pg	17 48 22.3	-0.1
SSLB	baz=211			eS	Sg	17 48 28.6	-0.4

ISCJB ***25*** *17:54:00.1±0.6, 13°.91N±0°.07×144°.7E±0°.2, h200km, mb3.6/14, Error ellipse: s-maj=21.2km s-min=10.0km az=2.9*
IDC ***25*** *17:54:00.9±0.3, 13°.93N×144°.75E, h193km±3km, mb3.5/14, mb1 3.7/15, mb1mx3.4/51, mbtmp4.0/15, Error ellipse: s-maj=22.2km s-min=10.0km az=99.0*
ISC 25 17:54:01.4±0.7**, 13°.9N**±0°.1×**144°.7E**±0°.2**, h200**km**, n17, σ0s.77**/18**, mb3.8**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam 136nm,0.3s,baz=278,slow=2.7,SNR=62	0.34	155	P	Pn	17 54 27.9	-0.1
GUMO	410nm,0.3s,baz=356,slow=23,SNR=42			S	Sn	17 54 47.7	-0.9
SIJI	Sorong 1.1nm,0.3s,baz=45,slow=20,SNR=4.4	19.82	223	P	P	17 58 16.1	-0.9
JNU	Nakatsue 3.3nm,0.6s,baz=144,slow=4.9,SNR=6.7	22.92	329	P	P	17 58 48.5	+0.5
MJAR	Matsushiro Arr 12nm,1.1s,baz=175,slow=10,SNR=12	23.29	347	P	P	17 58 51.2	-0.2
MAT	Matsushiro	23.29	347	P	P	17 58 51.4	+0.1
KSRS	Korea Array 1.0nm,0.5s,baz=144,slow=9.4,SNR=6.2	27.83	330	P	P	17 59 32.0	-0.1
WRA	Warramunga Arr 1.8nm,0.7s,baz=16,slow=9.5,SNR=29	35.15	197	P	P	18 00 36.5	+0.3
KLR	Kul'dur 2.5nm,0.9s,baz=101,slow=6.3,SNR=6.8	36.81	346	P	P	18 00 50.4	+0.4
FITZ	Fitzroy Crossi 2.6nm,0.8s,baz=18,slow=9.6,SNR=7.1	36.95	211	P	P	18 00 52.0	+0.6
ASAR	Alice Springs 0.3nm,0.4s,baz=11,slow=13,SNR=11	38.80	196	P	P	18 01 07.6	+0.6
MA2	Magadan 2.6nm,0.4s,baz=156,slow=20,SNR=11	45.82	4	P	P	18 02 03.4	+0.3
SONM	Songino Array 0.5nm,0.5s,baz=134,slow=8.1,SNR=5.0	46.40	325	P	P	18 02 07.4	-0.6
SEY	Seymchan	49.27	5	P	P	18 02 29.6	+0.1

	1.5nm,0.7s,baz=82,slow=22,SNR=12						
MKAR	Makanchi Array	61.17	316	P	P	18 03 55.5	+0.7
	0.7nm,0.7s,baz=92,slow=9.0,SNR=8.6						
ILAR	Eielson Array	68.35	25	P	P	18 04 39.6	-1.3
	0.5nm,0.5s,baz=248,slow=5.8,SNR=12						
YKA	Yellowknife Ar	82.65	27	P	P	18 06 01.3	-0.9
	0.4nm,0.6s,baz=291,slow=5.4,SNR=5.4						
NVAR	Mina Array Bea	86.84	51	P	P	18 06 25.6	+1.7
	1.2nm,0.7s,baz=263,slow=6.7,SNR=8.3						

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*ISCJB **25** 17:54:16.6±0.8, 15°.51S±0°.05×72°.44W±0°.06, h71km±9km, mb4.1/17, Error ellipse: s-maj=10.9km s-min=7.5km az=142.1*

*NEIC **25** 17:54:22.3±0.3, 15°.70S×72°.29W, mb4.5/8, Error ellipse: s-maj=13.7km s-min=6.3km az=66.0*

*IDC **25** 17:54:23.1±0.8, 15°.54S×72°.29W, h118km±6km, mb3.8/12, mb1 3.9/16, mb1mx3.8/38, mbtmp4.2/16, Error ellipse: s-maj=18.1km s-min=12.9km az=59.0*

ISC 25 17:54:18.4±0.5**, 15°.54S**±0°.06×**72°.48W**±0°.08**, h78km**±4km**, h78km:pP-P, n67, σ1s56**/73**, mb4.2**/17**, 2C-4D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	3.68	146	⇓eP	Pn	17 55 14.7	+1.6
PB12				i S	Sn	17 56 02.7	+7.2
LPAZ	La Paz	4.25	101	P	Pn	17 55 27.1	+5.8
	23nm,0.3s,baz=282,slow=8.1,SNR=169						
LPAZ				S	Sn	17 56 06.2	-3.8
	3.8nm,0.3s,baz=312,slow=14,SNR=2.4						
MNMC	Minye Minye	4.51	143	ePn	Pn	17 55 25.4	+0.9
MNMC	Minye Minye	4.51	143	⇓iP	Pn	17 55 26.1	+1.6
PSGC	Pisagua	4.62	151	⇓eP	Pn	17 55 26.3	+0.5
PSGC				eS	Sn	17 56 30.0	+12
PB11	IPOC Station P	4.99	148	ePn	Pn	17 55 31.7	+0.8
PB11	IPOC Station P	4.99	148	⇓eP	Pn	17 55 31.4	+0.5
NNA	Nana	5.52	309	S	Sn	17 56 40.2	-0.1
	19nm,0.3s,baz=54,slow=18,SNR=4.1						
PB08	IPOC Station P	5.56	146	eP	Pn	17 55 40.2	+1.2
PB01	IPOC Station P	6.17	153	ePn	Pn	17 55 46.8	-0.2
PB01	IPOC Station P	6.17	153	⇑eP	Pn	17 55 47.1	+0.1
PB02	IPOC Station P	6.25	157	eP	Pn	17 55 47.7	-0.4
PB07	IPOC Station P	6.63	159	eP	Pn	17 55 53.1	-0.2
PB09	IPOC Station P	6.94	154	⇑eP	Pn	17 55 58.4	+0.9
PB03	IPOC Station P	6.97	159	eP	Pn	17 55 57.6	-0.4
PB04	IPOC Station P	7.11	162	ePn	Pn	17 55 58.6	-1.2
PB04	IPOC Station P	7.11	162	eP	Pn	17 55 58.9	-1.0
PB05	IPOC Station P	7.58	164	eP	Pn	17 56 05.3	-1.1
LVC	Limon Verde	7.80	155	ePn	Pn	17 56 10.1	+0.6
LVC				eSn	Sn	17 57 32.0	-4.5
LVC	Limon Verde	7.80	155	P	Pn	17 56 10.4	+0.9
	6.9nm,0.3s,baz=7.2,slow=7.8,SNR=182						
LVC				S	Sn	17 57 32.0	-4.5
	7.7nm,0.3s,baz=108,slow=20,SNR=9.0						
PB10	IPOC Station P	8.14	167	ePn	Pn	17 56 12.5	-1.3
PB10	IPOC Station P	8.14	167	eP	Pn	17 56 12.2	-1.6
GO02	Mina Guanaco	9.95	165	ePn	Pn	17 56 38.2	-0.6
ATAH	Atahualpa	10.17	325	P	Pn	17 56 47.7	+5.8
	baz=336,slow=20,SNR=1.9						
SIV	San Ignacio	10.99	94	P	Pn	17 56 53.3	+0.5
	3.7nm,0.3s,baz=282,slow=11,SNR=26						
CPUP	Villa Florida	17.74	130	P	Pn	17 58 20.6	+0.3
	0.2nm,0.3s,baz=314,slow=12,SNR=4.9						
PTGA	Pitinga	19.21	41	eP	P	17 58 37.2	+0.9
	31nm,0.6s						
PTGA	Pitinga	19.21	41	P	P	17 58 36.6	+0.3
	9.0nm,0.3s,baz=215,slow=15,SNR=92						
BDFB	Brasilia	23.56	94	P	P	17 59 22.5	+0.2
	4.1nm,0.5s,baz=287,slow=11,SNR=4.5						
GO06	Curarrehue	23.97	178	eP	P	17 59 26.8	+1.1
	11nm,0.9s						
SDV	Santo Domingo	24.34	4	eP	P	17 59 30.0	+0.8
	15nm,0.9s						
SDV	Santo Domingo	24.34	4	P	P	17 59 29.6	+0.4
	3.4nm,0.6s,baz=194,slow=12,SNR=5.2						
PLCA	Paso Flores	25.16	177	eP	P	17 59 37.0	+0.6
	12nm,0.9s						
PLCA	Paso Flores	25.16	177	P	P	17 59 36.8	+0.3
	6.9nm,0.8s,baz=22,slow=11,SNR=13						
USHA	Ushuaia	39.34	176	P	P	18 01 40.5	+0.7
	4.5nm,0.6s,baz=24,slow=10.0,SNR=4.7						
TXAR	Lajitas Array	53.83	326	P	P	18 03 34.9	+1.4
	0.4nm,0.5s,baz=160,slow=8.2,SNR=4.0						
ANMO	Albuquerque	59.68	328	P	P	18 04 15.9	+0.9
	1.1nm,0.5s,baz=168,slow=9.3,SNR=3.4						
SDCO	Great Sand Dun	61.42	331	eP	P	18 04 28.7	+1.8
	3.1nm,0.7s						
ULM	Lac du Bonnet	68.67	344	P	P	18 05 12.3	-0.9
	1.4nm,0.4s,baz=168,slow=4.8,SNR=4.2						
NV01	Mina Array Sit	68.73	323	eP	P	18 05 15.9	+1.8
NVAR	Mina Array Bea	68.73	323	P	P	18 05 16.0	+1.8
	0.2nm,0.5s,baz=149,slow=7.4,SNR=2.5						
SNAA	Sanae	68.98	161	eP	P	18 05 15.4	+0.3
	6.1nm,0.6s						
LKWY	Lake	69.06	332	eP	P	18 05 15.7	-0.5
	14nm,1.0s						
DBIC	Dimbokro	70.50	77	P	P	18 05 24.4	-0.8
	2.3nm,0.5s,baz=200,slow=3.9,SNR=5.7						
QSPA	South Pole Qui	74.62	180	eP	P	18 05 50.3	+1.3
	5.8nm,1.0s						
TOA1	Torodi Ar. Sit	78.70	73	eP	P	18 06 12.5	-0.3
TORD	Torodi Ar. Bea	78.70	73	P	P	18 06 12.5	-0.3
	2.1nm,0.6s,baz=283,slow=5.8,SNR=11						
ESDC	Sonseca Array	84.08	46	P	P	18 06 40.7	0.0
	0.4nm,0.4s,baz=250,slow=6.2,SNR=5.3						
YKA	Yellowknife Ar	84.48	342	P	P	18 06 42.5	+0.3
	1.6nm,0.7s,baz=136,slow=5.0,SNR=19						
YKA				pP	sP	18 07 12.6	-1.2
	0.6nm,0.7s,baz=134,slow=5.1,SNR=2.5						
YKB5	Yellowknife Ar	84.48	342	eP	P	18 06 42.5	+0.3
YKB5				epP	sP	18 07 12.6	-1.2
PEA1	Petropavlovsk-	125.77	325	ePKPdf	PKiKP	18 13 11.0	-0.3
PETK	Petropavlovsk-	125.77	325	PKP	PKiKP	18 13 11.0	-0.3
	1.6nm,0.8s,baz=130,slow=3.3,SNR=3.6						
ASAR	Alice Springs	133.27	214	PKP	PKPdf	18 13 25.4	-0.7
	0.7nm,0.5s,baz=131,slow=2.0,SNR=20						
WR1	Warramunga Arr	135.97	218	ePKPdf	PKPdf	18 13 31.1	-0.1
WRA	Warramunga Arr	135.97	218	PKP	PKPdf	18 13 31.1	-0.1
	2.0nm,0.8s,baz=143,slow=1.7,SNR=20						
ZAA1	Zalesovo Array	137.76	20	ePKPdf	PKPdf	18 13 31.6	-1.9
ZAA1				epPKPdf	sPKPdf	18 14 05.5	-0.3
ZALV	Zalesovo Beam	137.76	20	PKP	PKPdf	18 13 31.6	-1.9
	1.8nm,0.6s,baz=295,slow=3.4,SNR=10						
ZALV				pPKP	sPKPdf	18 14 05.5	-0.3
	1.1nm,0.8s,baz=321,slow=2.1,SNR=2.9						
MK32	Makanchi Array	142.42	29	ePKPpre	PKPpre	18 13 37.4	
MKAR	Makanchi Array	142.42	29	PKhKP	PKPpre	18 13 37.4	
	0.2nm,0.6s,baz=31,slow=3.7,SNR=2.5						
USRK	Ussuriysk Ar.	144.69	329	PKP	PKPdf	18 13 45.5	-0.8
	2.6nm,0.6s,baz=23,slow=3.6,SNR=8.1						
MJAR	Matsushiro Arr	145.63	313	PKPbc	PKPab	18 13 47.9	-1.0
	2.2nm,0.7s,baz=95,slow=0.9,SNR=6.4						
MAJO	Matsushiro	145.63	313	ePKPdf	PKPab	18 13 47.9	-1.0
SONA0	Songino Array	147.78	1	ePKPdf	PKPbc	18 13 53.0	-1.4
SONA0				epPKPdf	sPKPdf	18 14 25.1	+1.2
SONM	Songino Array	147.78	1	PKPbc	PKPbc	18 13 53.0	-1.4
	2.4nm,0.6s,baz=320,slow=2.0,SNR=17						
SONM				pPKPbc	sPKPdf	18 14 25.1	+1.2
	0.3nm,0.5s,baz=90,slow=27,SNR=3.6						
KSRS	Korea Array	151.67	324	PKPbc	PKiKP	18 14 04.6	+0.1
	4.6nm,0.7s,baz=356,slow=1.8,SNR=20						
KS15	Wonju Array Si	151.70	324	ePKPbc	PKiKP	18 14 04.6	0.0
KSAR	Wonju Array Be	151.70	324	PKPbc	PKiKP	18 14 04.6	0.0

IDC 25 17:56:56.0±1.7**, 2°.75N×127°.79E, h0km, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.4**/39**, mbtmp3.7**/4**, Error ellipse: s-maj=105.8km s-min=23.9km az=71.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.83	186	P	P	18 01 37.9	-1.4
	2.0nm,0.7s,baz=13,slow=14,SNR=2.1						
WRA	Warramunga Arr	23.45	164	P	P	18 02 07.2	-0.1
	2.6nm,0.6s,baz=344,slow=9.9,SNR=26						
ASAR	Alice Springs	26.92	168	P	P	18 02 38.4	-0.7
	0.4nm,0.3s,baz=344,slow=11,SNR=10						
ASAR				PcP	PcP	18 06 01.5	-0.1
	0.2nm,0.3s,baz=353,slow=2.4,SNR=4.7						
MKAR	Makanchi Array	58.96	325	P	P	18 06 58.6	+1.3
	0.3nm,0.5s,baz=106,slow=8.0,SNR=4.0						

IDC 25 17:57:32.4±1.7**, 11°.59S×165°.05E, h0km, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/37**, mbtmp3.7**/5**, ML4.3**/1**, Error ellipse: s-maj=49.5km s-min=31.7km az=123.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.51	173	Pn	Pn	18 00 04.9	+0.4
	2.2nm,0.3s,baz=330,slow=23,SNR=29						
WRA	Warramunga Arr	30.66	250	P	P	18 03 49.0	0.0
	0.7nm,0.9s,baz=83,slow=9.2,SNR=3.6						
ASAR	Alice Springs	31.94	244	P	P	18 03 59.9	-0.3
	0.4nm,0.7s,baz=74,slow=11,SNR=3.5						
ILAR	Eielson Array	84.24	19	P	P	18 10 05.2	-0.4
	0.2nm,0.6s,baz=240,slow=4.3,SNR=4.0						
MKAR	Makanchi Array	93.45	317	P	P	18 10 50.5	+0.5
	0.4nm,0.8s,baz=90,slow=6.1,SNR=4.2						

IDC 25 18:12:40.1±3.7**, 11°.82S×165°.51E, h0km, mb3.6**/4**, mb1 3.7**/4**, mb1mx3.4**/24**, mbtmp3.5**/4**, Error ellipse: s-maj=153.9km s-min=31.0km az=137.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.01	251	P	P	18 19 00.7	+1.0
	0.5nm,1.1s,baz=82,slow=8.9,SNR=3.1						
ASAR	Alice Springs	32.25	244	P	P	18 19 09.8	-0.9
	0.3nm,0.9s,baz=68,slow=9.8,SNR=4.1						
ILAR	Eielson Array	84.32	19	P	P	18 25 13.9	+0.2
	0.2nm,0.6s,baz=260,slow=4.2,SNR=3.8						
MKAR	Makanchi Array	93.93	317	P	P	18 25 59.4	-0.5
	1.2nm,0.7s,baz=95,slow=6.3,SNR=13						

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*IDC **25** 18:43:11.3±1.3, 12°.07S×165°.53E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/41, mbtmp3.7/7, ML3.7/1, MS3.2/1, Ms1 3.1/1, ms1mx2.6/28, Error ellipse: s-maj=44.7km s-min=26.9km az=131.0*

*ISCJB **25** 18:43:14.6±0.9, 12°.2S±0°.1×165°.5E±0°.2, h33km, mb3.6/6, MS3.1/1, Error ellipse: s-maj=26.9km s-min=18.4km az=4.8*

ISC 25 18:43:16.6±1.0**, 12°.1S**±0°.1×**165°.5E**±0°.2**, h35km, n8, σ0s97**/7**, mb3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.94	175	Pn	Pn	18 45 37.4	+0.4
	0.7nm,0.3s,baz=132,slow=22,SNR=8.0						
STKA	Stephens Creek	29.54	224	LR	LR	19 00 15.7	
	comp=Z,40nm,19.1s,baz=32,slow=35						
WRA	Warramunga Arr	30.94	251	P	P	18 49 30.2	-0.3
	0.8nm,0.8s,baz=80,slow=8.7,SNR=5.3						
ASAR	Alice Springs	32.15	245	P	P	18 49 40.0	-1.1
	0.4nm,0.7s,baz=74,slow=9.3,SNR=5.0						
CMAR	Chiang Mai Arr	72.36	294	P	P	18 54 40.3	+0.8
	0.5nm,0.7s,baz=122,slow=4.1,SNR=5.1						
ILAR	Eielson Array	84.59	19	P	P	18 55 46.2	+0.3
	0.5nm,0.5s,baz=225,slow=5.7,SNR=11						
MKAR	Makanchi Array	94.16	317	P	P	18 56 32.3	+0.5
	0.4nm,0.8s,baz=90,slow=7.8,SNR=4.3						
YKA	Yellowknife Ar	96.01	27	P	P	18 56 38.8	-1.1
	0.1nm,0.4s,baz=250,slow=5.2,SNR=2.8						

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*ISCJB **25** 18:52:53.3±0.3, 24°.38N±0°.01×122°.00E±0°.02, h17km±3km, Error ellipse: s-maj=2.6km s-min=1.8km az=35.9*

*JMA **25** 18:52:53.6±0.1, 24°.45N×121°.94E, h53km, M2.3*

*TAP **25** 18:52:53.2, 24°.41N×121°.92E, h25km, ML3.3, B*

ISC 25 18:52:53.8±0.9**, 24°.40N**±0°.02×**121°.97E**±0°.02**, h20km**±1km**, n105, σ0s81**/182**, 5D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	Nanao	0.20	279	P	Pb	18 52 58.5	-0.9
	baz=278						
NANB				eS	Sb	18 53 02.0	-1.3
	baz=278						
ENA	Nanau	0.21	278	⇓iP	Pb	18 52 58.5	-0.9
	baz=277						
ENA				S	Sb	18 53 02.0	-1.4
	baz=277						
EOS1	EOS1	0.21	44	⇓iP	Pb	18 52 59.7	+0.3
	baz=47						
EOS1				S	Sb	18 53 05.0	+1.7
	baz=47						
TWC	Suao	0.24	333	⇓iP	Pb	18 52 59.1	-0.6
	baz=345						
TWC				S	Sb	18 53 03.0	-0.8
	baz=345						
NACB	Ninganchiao	0.41	237	P	Pb	18 53 01.4	-0.8
	baz=236						
NACB				S	Sb	18 53 08.2	+0.4
	baz=236						
ILA	Ilan	0.42	332	eP	Pb	18 53 02.2	-0.2
	baz=331						
ILA				S	Sb	18 53 08.7	+0.4
	baz=331						
TWE	Neicheng	0.42	320	⇓P	Pb	18 53 02.0	-0.5
	baz=325						
TWE				S	Sb	18 53 07.6	-0.8
	baz=325						
ENTT	Nioudou	0.44	304	P	Pb	18 53 02.2	-0.6
	baz=307						
ENTT				eS	Sb	18 53 08.0	-0.9
	baz=307						
EGS		0.45	356	P	Pb	18 53 02.8	-0.2
	baz=3.0						
EGS				eS	Sb	18 53 09.8	+0.6
	baz=3.0						
NDT	Datong Townshi	0.46	296	P	Pb	18 53 02.6	-0.6
	baz=299						
NDT				eS	Sb	18 53 08.9	-0.6
	baz=299						
TWD	Chiawan	0.46	227	⇓P	Pb	18 53 02.5	-0.7
	baz=225						
TWD				eS	Sb	18 53 09.9	+0.3
	baz=225						
NTC	Toucheng	0.47	345	eP	Pb	18 53 02.8	-0.5
	baz=350						
NTC				eS	Sb	18 53 09.6	-0.3
	baz=350						
ETLH	Xiulin Townshi	0.48	247	eP	Pb	18 53 02.9	-0.7
	baz=247						
ETLH				eS	Sb	18 53 10.3	+0.1
	baz=247						
HWA	Hwalien	0.53	218	eP	Pb	18 53 03.8	-0.6
	baz=212						
NNSB	Datong	0.53	273	P	Pb	18 53 03.6	-0.9
	baz=279						
NNSB				eS	Sb	18 53 10.9	-1.0
	baz=279						
NNS	Nan Shan	0.54	275	P	Pb	18 53 03.7	-1.1
	baz=280						
NNS				eS	Sb	18 53 11.3	-0.9
	baz=280						
NWLT	Wulai	0.57	312	eP	Pb	18 53 04.3	-0.8
	baz=315						
NWLT				eS	Sb	18 53 11.9	-1.0
	baz=315						
TIPB	Shuangxi	0.59	347	eP	Pb	18 53 04.8	-0.6
	baz=357						
TIPB				eS	Sb	18 53 12.8	-0.6
	baz=357						
ENLB	Shoufeng	0.59	214	eP	Pb	18 53 05.3	-0.3
	baz=210						
ENLB				eS	Sn	18 53 15.7	-0.4
	baz=210						
YHNB	Yeheng	0.60	297	P	Pb	18 53 04.9	-0.9
	baz=298						
YHNB				eS	Sb	18 53 12.9	-1.0
	baz=298						
TWB1	Santiao Chiao	0.61	2	eP	Pb	18 53 05.4	-0.4
	baz=2.0						
TWB1				eS	Sb	18 53 13.3	-0.7
	baz=2.0						
NSK	Sanguang	0.62	297	P	Pb	18 53 05.0	-1.0
	baz=298						
NSK				eS	Sb	18 53 13.2	-1.2
	baz=298						
TWA	Mucha	0.68	329	eP	Pb	18 53 07.0	+0.1
	baz=326						
TWA				eS	Sb	18 53 16.1	+0.1
	baz=326						
WHF	Hehuan Shan	0.69	249	eP	Pb	18 53 06.4	-1.0
	baz=253						
WHF				eS	Sb	18 53 16.2	-0.5
	baz=253						
NHDH	Xindian Distri	0.69	325	P	Pb	18 53 07.0	-0.2
	baz=321						
NHDH				eS	Sb	18 53 16.4	+0.1
	baz=321						
NWF	Wu-fen Shan	0.69	346	eP	Pb	18 53 07.1	-0.1
	baz=343						
NWF				eS	Sb	18 53 16.6	+0.2
	baz=343						
WFSB	Wu-fen Shan	0.69	346	eP	Pb	18 53 07.1	-0.1
	baz=343						
WFSB				eS	Sb	18 53 16.6	+0.3
	baz=343						
TATO	Taipei	0.72	323	eP	Pb	18 53 07.3	-0.4
	baz=319						
TATO				eS	Sb	18 53 16.6	-0.5
	baz=319						
TWT	Tachien	0.73	259	eP	Pb	18 53 07.9	-0.1
	baz=258						
TWT				eS	Sb	18 53 18.0	+0.3
	baz=258						
TDCB	Techi	0.75	259	eP	Pb	18 53 07.8	-0.5
	baz=258						
TDCB				eS	Sb	18 53 17.3	-0.8
	baz=258						
ESL	Shilin	0.76	220	eP	Pb	18 53 06.9	-1.4
	baz=230						
ESL				eS	Sb	18 53 18.4	+0.3
	baz=230						
TAP	Taipei	0.76	327	eP	Pb	18 53 08.6	+0.2
	baz=330						
TAP				eS	Sb	18 53 18.9	+0.6
	baz=330						
CHGB	Renai	0.80	245	eP	Pb	18 53 08.2	-0.9
	baz=243						
CHGB				eS	Sb	18 53 19.4	-0.1
	baz=243						
YM01	YM01	0.83	334	eP	Pb	18 53 09.5	-0.1
	baz=349						
YM01				eS	Sb	18 53 20.2	0.0
	baz=349						
YM07	YM07	0.84	338	eP	Pb	18 53 09.5	-0.2
	baz=341						
YM07				eS	Sb	18 53 20.6	+0.2
	baz=341						
YM10	YM10	0.84	334	eP	Pb	18 53 09.8	0.0
	baz=349						
YM10				eS	Sb	18 53 21.0	+0.3
	baz=349						
YM11	YM11	0.84	335	eP	Pb	18 53 09.7	-0.1
	baz=338						
YM11				eS	Sb	18 53 21.1	+0.4
	baz=338						
OWD	Renai	0.85	239	eP	Pb	18 53 08.7	-1.2
	baz=236						
OWD				eS	Sb	18 53 20.2	-0.6
	baz=236						
YM05	YM05	0.85	335	eP	Pb	18 53 09.6	-0.3
	baz=349						
YM05				eS	Sn	18 53 21.3	-1.2
	baz=349						
YM04	YM04	0.85	333	eP	Pb	18 53 09.7	-0.2
	baz=336						
YM04				eS	Sb	18 53 20.3	-0.5
	baz=336						
YM08	YM08	0.86	337	eP	Pb	18 53 09.7	-0.3
	baz=339						
TWS1	Kuangyinshan	0.86	325	eP	Pb	18 53 09.9	-0.2
	baz=338						
TWS1				eS	Sn	18 53 22.4	-0.3
	baz=338						
EGFH	Guangfu	0.88	214	eP	Pb	18 53 09.0	-1.3
	baz=225						
EGFH				eS	Sb	18 53 22.2	+0.6
	baz=225						
ANP	Anpu	0.88	333	eP	Pb	18 53 10.1	-0.4
	baz=322						
JYNG	Yonagunijimaku	0.89	86	P	Pb	18 53 10.4	-0.2
JYNG				S	Sn	18 53 23.4	-0.1
NTST	Danshui	0.90	328	eP	Pb	18 53 10.5	-0.1
	baz=341						
NTST				eS	Sn	18 53 23.6	0.0
	baz=341						
LIOB	Emei	0.90	286	eP	Pb	18 53 09.6	-1.2
	baz=287						
LIOB				eS	Sb	18 53 22.3	0.0
	baz=287						
NSTT	Nanjuang	0.91	285	eP	Pb	18 53 10.5	-0.4
	baz=286						
NSTT				eS	Sb	18 53 22.9	+0.4
	baz=286						
NCU	National Centr	0.91	309	eP	Pb	18 53 10.6	-0.3
	baz=310						
NCUH	Zhongli	0.91	309	eP	Pb	18 53 10.9	0.0
	baz=297						
NCUH				eS	Sn	18 53 23.3	-0.7
	baz=297						
TWY	Chenhua	0.94	339	eP	Pn	18 53 11.6	-0.2
	baz=342						
TWY				eS	Sn	18 53 23.8	-0.8
	baz=342						
WHP	Taichung City	0.94	263	eP	Pb	18 53 11.3	-0.1
	baz=267						
WHP				eS	Sb	18 53 23.1	-0.4
	baz=267						
YOJ	Yonaguni jima	0.95	86	eP	Pb	18 53 11.3	-0.3
	baz=79						
YOJ				eS	Sn	18 53 24.9	-0.1
	baz=79						
YOJ	Yonaguni jima	0.95	86	P	Pb	18 53 11.3	-0.3
YOJ				S	Sb	18 53 24.4	+0.6
SBCB	Hsinchu	0.98	294	eP	Pb	18 53 12.0	0.0
	baz=295						
SBCB				eS	Sn	18 53 26.5	+1.0
	baz=295						
VWDT	VWDT	0.99	230	eP	Pb	18 53 10.9	-1.4
	baz=227						
VWDT				eS	Sb	18 53 24.9	+0.1
	baz=227						
HSN	Hsinchu	0.99	294	eP	Pb	18 53 12.2	-0.1
	baz=297						
HGSD	Ruisui	1.03	209	eP	Pb	18 53 11.4	-1.5
	baz=221						
EHY	Hungye	1.06	214	eP	Pn	18 53 10.9	-2.7
	baz=210						
NMLH	Miaoli	1.08	278	eP	Pb	18 53 13.9	+0.1
	baz=278						
NMLH				eS	Sn	18 53 28.7	+0.6
	baz=278						
TWQ1	Liyutan	1.09	268	eP	Pn	18 53 14.0	+0.1
	baz=267						
TWQ1				eS	Sn	18 53 28.5	+0.1
	baz=267						
NSY	Sanyi	1.10	271	eP	Pb	18 53 14.7	+0.6
	baz=271						
NSY				eS	Sn	18 53 29.3	+0.7
	baz=271						
SMLT	Sun Moon Lake	1.10	242	eP	Pn	18 53 13.1	-1.1
	baz=233						
SMLT				eS	Sb	18 53 28.3	+0.1
	baz=233						
SSLB	Suanglung	1.11	237	eP	Pn	18 53 12.8	-1.4
	baz=227						
SSLB				eS	Sb	18 53 28.4	+0.2
	baz=227						
TYC	Yuchr	1.13	244	eP	Pn	18 53 13.4	-0.9
	baz=251						
TYC				eS	Sb	18 53 29.2	+0.5
	baz=251						
YULB	Yu-li	1.17	212	eP	Pn	18 53 12.4	-2.6
	baz=209						
TCU	Taichung	1.20	258	eP	Pn	18 53 15.2	-0.2
	baz=257						
TCU				eS	Sn	18 53 32.7	+1.5
	baz=257						
TWF1	Yuli	1.21	211	eP	Pn	18 53 13.0	-2.5
	baz=220						
WDJ	Dajia District	1.21	268	eP	Pb	18 53 16.1	+0.1
	baz=268						
WDJ				eS	Sn	18 53 32.4	+1.1
	baz=268						
WHYT	Xinyi Township	1.23	236	eP	Pn	18 53 15.4	-0.5
	baz=234						
WHYT				eS	Sb	18 53 31.8	-0.2
	baz=234						
WJS	Zhushan	1.27	243	eP	Pn	18 53 16.9	+0.5

	baz=227						
WJS				eS	Sb	18 53 34.6	+1.7
	baz=227						
WNT	Mingjian	1.28	246	eP	Pb	18 53 17.3	+0.1
	baz=245						
WNT				eS	Sb	18 53 34.6	+1.4
	baz=245						
WCHH	Zhanghua	1.32	256	eP	Pn	18 53 17.1	0.0
	baz=254						
FULB	Fuli	1.34	207	eP	Pn	18 53 16.5	-0.9
	baz=219						
CHN5	Tsauling	1.42	236	eP	Pn	18 53 18.9	+0.3
	baz=234						
CHN5				eS	Sb	18 53 38.2	+0.8
	baz=234						
WGK	Gukeng	1.47	241	eP	Pn	18 53 19.7	+0.6
	baz=240						
WGK				eS	Sb	18 53 39.9	+1.3
	baz=240						
ELDTW	Lidau	1.48	216	eP	Pn	18 53 17.5	-2.0
	baz=203						
WDLH	Douliu	1.48	242	eP	Pn	18 53 20.1	+0.8
	baz=240						
WDLH				eS	Sb	18 53 39.9	+0.8
	baz=240						
RLNB	Erlin	1.55	251	eP	Pn	18 53 20.2	-0.1
	baz=249						
IRIF	Iriomote-Funau	1.61	92	P	Pn	18 53 20.6	-0.4
IRIF				eS	Sn	18 53 41.6	+0.4
CHN2	Minshiung	1.61	238	eP	Pn	18 53 21.6	+0.5
	baz=224						
CHN4	Tsaushan	1.63	231	eP	Pn	18 53 21.9	+0.5
	baz=229						
CHN4				eS	Sb	18 53 44.2	+0.8
	baz=229						
TPUB	Ta-pu	1.64	229	eP	Pn	18 53 21.7	+0.2
	baz=226						
STYT	Tauyuan	1.65	222	eP	Pn	18 53 21.6	-0.1
	baz=220						
CHY	Chiayi	1.67	238	eP	Pn	18 53 22.5	+0.7
	baz=224						
WTP	Ta-pu	1.69	227	eP	Pn	18 53 22.6	+0.4
	baz=225						
TWK	Hsinying	1.76	231	eP	Pn	18 53 23.7	+0.5
	baz=229						
TWK				eS	Sb	18 53 47.5	+0.4
	baz=229						
WSF	Szhu	1.77	245	eP	Pn	18 53 23.1	-0.1
	baz=243						
WSF				eS	Sn	18 53 46.4	+1.4
	baz=243						
TWGBT	Beinan	1.77	208	eP	Pn	18 53 22.1	-1.2
	baz=194						
TWG	Pinlang	1.77	208	eP	Pn	18 53 21.8	-1.4
	baz=194						
SNST	Tainan City	1.78	229	eP	Pn	18 53 24.3	+0.8
	baz=228						
SNST				eS	Sb	18 53 48.7	+1.0
	baz=228						
CHN1	Nanshi	1.79	228	eP	Pn	18 53 24.4	+0.9
	baz=226						
CHN1				eS	Sb	18 53 48.5	+0.7
	baz=226						
SGST	Jiashian	1.82	224	eP	Pn	18 53 24.7	+0.7
	baz=210						
SGST				eS	Sb	18 53 48.6	-0.3
	baz=210						
SLGT	Liugui	1.85	221	eP	Pn	18 53 24.7	+0.4
	baz=220						
SLGT				eS	Sn	18 53 48.5	+1.4
	baz=220						
JKRS	Kuro-shima	1.87	94	P	Pn	18 53 24.8	+0.2
JKRS				S	Sn	18 53 48.1	+0.5
CHN8	Yiju	1.92	237	eP	Pn	18 53 26.1	+0.9
	baz=234						
JIJ	Ishigaki jima	1.98	91	P	Pn	18 53 26.1	-0.1
JIJ				S	Sn	18 53 49.4	-1.1
ECL	Taimali	2.02	208	eP	Pn	18 53 25.9	-0.8
	baz=196						
JISG	Ishigakijimahi	2.14	84	P	Pn	18 53 27.9	-0.5
JISG				eS	Sn	18 53 54.4	0.0
MASBT	Mashibuluo	2.16	215	eP	Pn	18 53 29.4	+0.8
	baz=214						
EAST	Anshuo	2.25	207	eP	Pn	18 53 29.3	-0.6
	baz=197						
SSPT	Xinbi	2.30	214	eP	Pn	18 53 32.1	+1.6
	baz=201						
PNG	Penghu	2.35	250	eP	Pn	18 53 30.1	-1.2
	baz=246						
PHUB	P'eng-hu	2.36	249	eP	Pn	18 53 30.0	-1.3
	baz=244						
VWUC	VWUC	2.36	285	eP	Pn	18 53 29.8	-1.6
	baz=282						

WEL 25 19:15:49.9±1.2**,36°S**±7°×**17°8E**±1°6**,h33**^{km}**,ML3.7**/11**,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	2.26	173	P	Pn	19 16 25.5	+0.6
WMGZ				S	Sn	19 16 53.0	+1.4
PKGZ	Pakihiroa	2.31	180	P	Pn	19 16 26.4	+0.7
PKGZ				S	Sn	19 16 54.2	+1.2
RUGZ	Raukumara Rang	2.41	187	P	Pn	19 16 27.7	+0.6
RUGZ				S	Sn	19 16 56.6	+1.1
PUZ	Puketiti	2.50	177	P	Pn	19 16 27.9	-0.4
PUZ				S	Sn	19 16 56.9	-0.7
TWGZ	Tauwhareparae	2.60	182	P	Pn	19 16 29.9	+0.3
TWGZ				S	Sn	19 17 01.4	+1.3
URZ	Urewera	2.79	196	P	Pn	19 16 32.7	+0.5
URZ				S	Sn	19 17 05.9	+1.2
MWZ	Matawai	2.79	189	P	Pn	19 16 32.6	+0.4
MWZ				S	Sn	19 17 05.4	+0.6
TKGZ	Te Karaka	2.87	183	P	Pn	19 16 32.7	-0.6
TKGZ				S	Sn	19 17 06.1	-0.5
CNGZ	Carnagh Statio	2.91	178	P	Pn	19 16 32.9	-0.9
MUGZ	Murupara	3.08	199	P	Pn	19 16 37.0	+0.7
RTZ	Ruatahuna	3.16	196	P	Pn	19 16 36.9	-0.5
SNGZ	Shannon Statio	3.25	190	P	Pn	19 16 37.5	-1.2
SNGZ				S	Sn	19 17 16.0	-0.2
MTHZ	Maungataniwha	3.42	196	P	Pn	19 16 40.9	-0.1
KWHZ	Kaweka Forest	4.06	198	P	Pn	19 16 47.8	-2.0
KAHZ	Kahuranaki	4.32	192	P	Pn	19 16 50.5	-2.8

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*SOME **25** 19:34:46.8, 42°.25N×76°.17E, h10^{km}*

*KRNET **25** 19:34:46.5±0.1, 42°.22N×76°.17E, h20^{km}, mb2.1*

*NNC **25** 19:34:46.1±1.6, 42°.23N×76°.13E, h0^{km}, mb2.1, mpv2.2, Error ellipse: s-maj=10.3km s-min=6.0km az=168.0*

ISC 25 19:34:46.5±1.1**,42°.24N**±0°.03×**76°.17E**±0°.02**,h13**^{km}±10^{km}**, n25,**σ**0^{s}93**/49**,15C-3D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOOM	Boomskoye usch	0.30	326	⇑iP	Pg	19 34 53.2	+0.4
	baz=29						
BOOM				⇑iS	Sg	19 34 58.0	+0.9
	baz=29						
KZA	Kyzart	0.70	257	⇑iP	Pg	19 35 00.3	+0.1
	baz=59						
KZA				⇑iS	Sg	19 35 09.5	0.0
	baz=59						
KDJ	Kajisay	0.76	98	⇑iP	Pg	19 35 01.2	-0.1
	baz=96						
KDJ				⇑iS	Sg	19 35 11.3	0.0
	baz=96						
TKM2	Tokmak 2	0.80	328	⇑P	Pg	19 35 00.6	-1.5
	0.4nm,0.5s						
TKM2				⇓S	Sb	19 35 13.5	+0.3
	2.2nm,0.4s						
TKM2	Tokmak 2	0.80	328	⇑iP	Pg	19 35 02.0	-0.1
	baz=29						
TKM2				⇑iS	Sg	19 35 13.3	+0.7
	baz=29						
KST	Kastek	0.82	349	eP	Pg	19 35 02.7	+0.3
	baz=50						
KST				eS	Sb	19 35 14.3	+0.7
	baz=50						
KST	Kastek	0.82	349	eP	Pg	19 35 02.7	+0.3
	0.8nm,0.1s						
KST				eS	Sb	19 35 14.2	+0.7
	2.0nm,0.2s						
IZV	Izvestkoviy	0.86	22	P	Pb	19 35 03.6	+0.3
	2.0nm,0.2s						
IZV				S	Sb	19 35 15.3	+0.5
	3.6nm,0.2s						
IZV	Izvestkoviy	0.86	22	eP	Pb	19 35 03.7	+0.3
	baz=22						
IZV				eS	Sb	19 35 16.0	+1.1
	baz=22						
IZV	Izvestkoviy	0.86	22	eP	Pb	19 35 03.7	+0.3
	2.0nm,0.2s						
IZV				eS	Sb	19 35 16.0	+1.1
	3.6nm,0.2s						
KBK	Karagaybulak	0.99	295	⇑iP	Pg	19 35 05.5	-0.2
	baz=96						
KBK				⇑iS	Sb	19 35 19.2	+0.5
	baz=96						
DGS	Degeres	1.04	344	P	Pg	19 35 04.9	-1.7
	0.6nm,0.1s						
DGS				S	Sg	19 35 18.7	-1.6
	1.9nm,0.2s						
DGS	Degeres	1.04	344	eP	Pg	19 35 05.0	-1.7
	baz=44						
DGS				eS	Sg	19 35 18.1	-2.2
	baz=44						
DGS	Degeres	1.04	344	eP	Pg	19 35 05.0	-1.7
	0.6nm,0.1s						
DGS				eS	Sg	19 35 18.1	-2.2
	1.9nm,0.2s						
AAK	Ala-Archa	1.30	288	P	Pn	19 35 10.7	+0.2
	0.6nm,0.6s						
AAK				S	Sb	19 35 27.8	+0.3
	3.7nm,1.1s						
AAK	Ala-Archa	1.30	288	⇑iP	Pb	19 35 11.1	+0.2
	baz=89						
AAK				⇑iS	Sb	19 35 27.9	+0.4
	baz=89						
TARG	Taragay, Kyrgy	1.32	112	⇓iP	Pn	19 35 10.3	-0.7
	baz=11						
TARG				⇓iS	Sb	19 35 27.6	-0.8
	baz=11						
KTBS	Karatobe	1.52	14	P	Pb	19 35 15.3	+0.8
	0.8nm,0.1s						
KTBS				S	Sb	19 35 34.4	+0.7
	4.0nm,0.4s						
KTBS	Karatobe	1.52	14	eP	Pb	19 35 15.1	+0.6
	baz=9.0						
KTBS				eS	Sb	19 35 35.0	+1.3
	baz=9.0						
KTBS	Karatobe	1.52	14	eP	Pb	19 35 15.1	+0.6
	0.8nm,0.1s						
KTBS				eS	Sb	19 35 35.0	+1.3
	4.0nm,0.4s						
USP	Ospenovka	1.60	310	⇑iP	Pb	19 35 15.8	-0.1
	baz=11						
USP				⇑iS	Sb	19 35 36.9	+0.9
	baz=11						
CHKK	Chushkaly	1.72	20	P	Pb	19 35 18.8	+0.8
	0.8nm,0.2s						
CHKK				S	Sg	19 35 42.0	+0.1
	3.3nm,0.2s						
CHKK	Chushkaly	1.72	20	eP	Pb	19 35 18.8	+0.8
	baz=20						
CHKK				eS	Sg	19 35 42.0	+0.1
	baz=20						
CHKK	Chushkaly	1.72	20	eP	Pb	19 35 18.8	+0.8
	0.8nm,0.2s						
CHKK				eS	Sg	19 35 42.0	+0.1
	3.3nm,0.2s						
ARXS	Arharly	2.31	31	Pg	Pg	19 35 30.1	-0.8
	0.7nm,0.4s						
ARXS				Lg	Lg	19 35 59.5	
	1.9nm,0.4s						

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*ISCJB **25** 19:44:59.8±0.3, 36°.27N±0°.03×71°.26E±0°.05, h100^{km}, mb3.8/17, Error ellipse: s-maj=5.5km s-min=3.6km az=167.4*

*BJI **25** 19:44:59.5, 36°.45N×71°.20E, h96^{km}, mb4.0/4*

*IDC **25** 19:44:59.9±2.8, 36°.15N×71°.26E, h93^{km}±25^{km}, mb3.6/15, mb1 3.7/20, mb1mx3.5/49, mbtmp4.0/20, MS3.4/3, Ms1 3.4/3, ms1mx2.5/55, Error ellipse: s-maj=18.7km s-min=14.7km az=15.0*

*MOS **25** 19:45:01.3±1.0, 36°.36N×71°.34E, h116^{km}, mb4.4/6, Error ellipse: s-maj=10.9km s-min=4.9km az=88.0*

*NEIC **25** 19:45:02.3±0.5, 36°.38N×71°.28E, h124^{km}±9^{km}, mb4.0/4, Error ellipse: s-maj=7.7km s-min=6.9km az=95.0*

*NNC **25** 19:45:03.5±1.3, 36°.51N×70°.89E, h114^{km}±14^{km}, mb3.9, mpv4.6, Error ellipse: s-maj=11.6km s-min=7.5km az=157.0*

ISC 25 19:45:00.3±0.5**,36°.29N**±0°.04×**71°.24E**±0°.05**,h100**^{km}**,n106,** σ**2^{s}48**/124**,mb3.8**/17**,19C-6D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.50	226	ePn	Pn	19 45 43.5	+3.8
KBL	Kabul	2.50	226	ePN	Pn	19 45 43.5	+3.8
CEP	Cherat	2.52	167	P	Pn	19 45 43.7	+3.9
CEP				S	Sn	19 46 14.0	+3.9
GAR	Garm	2.81	345	ePn	Pn	19 45 45.8	+2.2
GAR	Garm	2.81	345	ePN	Pn	19 45 45.8	+2.2
CHGR	Chuyangaron	2.89	326	ePn	Pn	19 45 46.5	+1.9
CHCP	Chirah Chowk	3.10	147	P	Pn	19 45 51.1	+3.6
NIL	Nilore	3.11	147	ePn	Pn	19 45 50.9	+3.4
NIL	Nilore	3.11	147	ePN	Pn	19 45 50.9	+3.4
THW	Thamme Wali	3.51	173	P	Pn	19 45 55.9	+2.9
SFK	Sufi-Kurgan	4.12	25	⇑P	Pn	19 46 03.8	+2.4
	32nm,0.5s						
SFK				⇑S	Sn	19 46 51.7	+3.0
	32nm,0.3s						
SFK	Sufi-Kurgan	4.12	25	PN	Pn	19 46 03.8	+2.4
SFK				S	Sn	19 46 51.7	+3.0
SARP	Sargodha	4.51	164	P	Pn	19 46 08.3	+1.8
KSH	Kashi	4.94	48	P	Pn	19 46 09.5	-2.8
KSH				S	Sn	19 46 56.5	-12
KSH				smax	smax		
	comp=N,2μm,0.3s						
KSH				smax	smax		
	comp=E,1μm,0.2s						
TAS	Tashkent	5.26	344	PN	Pn	19 46 17.8	+1.3
DHRM	DHARAMSHALA	5.81	132	eP	Pn	19 46 25.9	+1.6
DHRM				eS	Sn	19 47 27.4	-2.2
DHRM				IAML		19 47 30.4	
	comp=E,418nm,0.2s						
DHRM				IAML		19 47 31.7	
	comp=N,589nm,0.3s						
AML	Almayashu	6.14	17	P	Pn	19 46 30.7	+1.9
	SNR=214						
MNAS	Manas	6.27	9	⇓P	Pn	19 46 31.8	+1.5
	comp=N,44nm,0.7s						
MNAS				⇓S	Sn	19 47 40.6	0.0
	comp=N,107nm,0.5s						
MNAS	Manas	6.27	9	PN	Pn	19 46 31.8	+1.5
UCH	Uchtor	6.45	22	P	Pn	19 46 35.1	+2.0
	SNR=52						
KZA	Kyzart	6.57	27	P	Pn	19 46 36.4	+1.8
	SNR=26						
EKS2	Erkin-Say	6.66	16	P	Pn	19 46 37.7	+2.1
	SNR=47						
AAK	Ala-Archa	6.82	21	P	Pn	19 46 40.0	+2.1
	SNR=72						
AAK	Ala-Archa	6.82	21	ePn	Pn	19 46 39.7	+1.8
AAK	Ala-Archa	6.82	21	⇑P	Pn	19 46 39.6	+1.8
	comp=N,20nm,0.4s						
AAK				⇑S	Sn	19 47 55.7	+1.6
	comp=N,33nm,0.7s						
AAK	Ala-Archa	6.82	21	P	Pn	19 46 39.8	+1.9
	comp=N,16nm,0.3s,baz=184,slow=7.2,SNR=271						
AAK				S	Sn	19 47 52.5	-1.6
	comp=N,2.3nm,0.3s,baz=303,slow=22,SNR=12						
KK31	Karatay Array	6.83	356	⇑P	Pn	19 46 38.8	+1.0
	comp=N,42nm,0.3s,baz=182,slow=13,SNR=632						
KK31				⇑S	Sn	19 47 51.7	-2.4
	comp=N,27nm,0.4s,baz=183,slow=24,SNR=12						
KK31	Karatay Array	6.83	356	PN	Pn	19 46 38.8	+1.0
KKAR	Karatay Array	6.83	356	ePn	Pn	19 46 39.2	+1.3
KKAR	Karatay Array	6.83	356	ePN	Pn	19 46 39.2	+1.3
KBK	Karagaybulak	6.98	23	P	Pn	19 46 41.8	+1.8
	SNR=27						
ULHL	Ulahol	7.10	32	P	Pn	19 46 44.3	+2.6
	SNR=14						
SMLA	Simla	7.13	134	eP	Pn	19 46 43.1	+1.1
SMLA				eS	Sn	19 47 57.1	-4.3
SMLA				IAML		19 48 03.2	
	comp=E,163nm,0.0s						
SMLA				IAML		19 48 03.4	
	comp=N,184nm,0.4s						
CHMS	Chumysh	7.23	21	P	Pn	19 46 45.1	+1.8
	SNR=36						
USP	Ospenovka	7.41	19	P	Pn	19 46 47.4	+1.7
	SNR=65						
TKM2	Tokmak 2	7.43	26	P	Pn	19 46 48.0	+1.8
	SNR=47						
TKM2	Tokmak 2	7.43	26	⇑P	Pn	19 46 47.5	+1.3
	comp=N,21nm,0.6s						
TKM2	Tokmak 2	7.43	26	⇑P	Pn	19 46 47.5	+1.3
	comp=N,21nm,0.6s						
TKM2	Tokmak 2	7.43	26	PN	Pn	19 46 47.0	+0.8
TKM2	Tokmak 2	7.43	26	⇑iP	Pn	19 46 48.0	+1.8
	baz=37						
TKM2				⇑iS	Sn	19 47 12.8	-56
	baz=37						
KDJ	Kajisay	7.43	37	ePn	Pn	19 46 47.2	+1.0
KDJ	Kajisay	7.43	37	ePN	Pn	19 46 47.2	+1.0
KDJ	Kajisay	7.43	37	⇑iP	Pn	19 46 49.7	+3.5
	baz=90						
KDJ				⇑iS	Sn	19 47 12.8	-56
	baz=90						
TARG	Taragay, Kyrgy	7.46	41	ePn	Pn	19 46 46.6	-0.1
DDI	Dehra Dun	8.24	134	eP	Pn	19 46 58.4	+1.2
DDI				eS	Sn	19 48 24.4	-4.1
PRZ	Przheval'sk	8.30	40	ePn	Pn	19 46 58.3	+0.2
PRZ	Przheval'sk	8.30	40	ePN	Pn	19 46 58.3	+0.2
JOSI	Joshimath	9.00	127	eP	Pn	19 47 08.3	+0.7
JOSI				ex	x	19 48 40.3	
JOSI				IAML		19 48 49.9	
	comp=E,136nm,0.2s						
KHET	Khetri	9.06	153	eP	Pn	19 47 06.8	-1.4
KHET				eS	Sn	19 48 41.8	-6.6
KHET				IAML		19 48 44.6	
	comp=E,62nm,0.1s						
KHET				IAML		19 48 45.0	
	comp=N,50nm,0.4s						
KALG	Kalgarh	9.25	135	eS	Sn	19 48 48.2	-4.9
KUDL	Kundal	9.26	150	eP	Pn	19 47 08.7	-2.2
KUDL				eS	Sn	19 48 47.1	-6.1
KUDL				IAML		19 48 47.9	
	comp=N,20nm,0.5s						
SONA	Sohna	9.41	147	eS	Sn	19 48 47.9	-9.1
SONA				IAML		19 48 54.5	
	comp=E,70nm,0.3s						
GEYT	Alibeck	10.61	283	P	Pn	19 47 28.6	-0.7
	comp=E,2.2nm,0.3s,baz=98,slow=10,SNR=28						
GEYT				S	Sn	19 49 23.1	-3.0
	comp=E,3.6nm,0.3s,baz=134,slow=32,SNR=11						
GYA0B	ALIBECK ARRAY	10.61	283	⇑P	Pn	19 47 27.3	-2.0
	comp=E,2.7nm,0.4s						
GYA0B				⇑S	Sn	19 49 21.9	-4.2
	comp=E,24nm,0.6s						
OTUK	Ortayu	11.98	4	⇓P	Pn	19 47 46.3	-1.3
	comp=E,8.1nm,0.7s						
OTUK				⇑S	Sn	19 49 56.3	-2.8
	comp=E,13nm,0.6s						
OTUK	Ortayu	11.98	4	P	Pn	19 47 46.3	-1.3
OTUK				S	Sn	19 49 56.3	-2.8
BHJ	Bhuj	13.06	186	eP	Pn	19 47 59.6	-2.4
MAKZ	Makanchi	13.22	34	ePn	Pn	19 48 03.6	-0.4
MAKZ	Makanchi	13.22	34	eP	Pn	19 48 03.6	-0.4
MK31	Makanchi Array	13.35	35	P	P	19 48 10.0	-1.7
	comp=E,0.3nm,0.3s,baz=222,slow=10,SNR=7.7						
MK31	Makanchi Array	13.35	35	P	P	19 48 09.9	-1.7
MKAR	Makanchi Array	13.35	35	P	Pn	19 48 05.8	+0.1
	comp=E,0.1nm,0.3s,baz=225,slow=14,SNR=6.1						
BHPL	Bhopal	14.06	156	ex	Pn	19 48 13.7	-1.4
BHPL				ex	x	19 50 41.0	
KURBB	Kurchatov Arra	15.26	18	P	Pn	19 48 27.5	-2.7
	comp=E,0.1nm,0.3s,baz=209,slow=11,SNR=3.9						
AB31	Akbulak array	15.36	331	⇑P	Pn	19 48 30.8	-0.7
	comp=E,12nm,0.6s,baz=142,slow=12,SNR=360						
AB31				⇓S	Sn	19 51 15.1	-5.9
	comp=E,2.6nm,0.5s,baz=152,slow=23,SNR=6.1						
AB31	Akbulak array	15.36	331	P	Pn	19 48 30.8	-0.7
AB31				S	Sn	19 51 15.1	-5.9
ABKAR	Akbulak array	15.36	331	ePn	Pn	19 48 30.7	-0.8
	comp=E,14nm,0.5s						
KURK	Kurchatov	15.37	18	⇑P	Pn	19 48 32.8	+1.3
	comp=E,4.1nm,0.8s						
KURK	Kurchatov	15.37	18	P	Pn	19 48 32.8	+1.3
BVA0	Borovoye Array	16.75	358	⇑P	Pn	19 48 49.0	+0.3
	comp=E,4.8nm,0.8s,baz=174,slow=14,SNR=12						
BVA0	Borovoye Array	16.75	358	P	Pn	19 48 48.9	+0.3
BVAR	Borovoye Array	16.75	358	P	Pn	19 48 48.8	+0.2
	comp=E,1.1nm,0.3s,baz=171,slow=12,SNR=16						
BVAR				S	Sn	19 51 44.7	-10
	comp=E,0.5nm,0.3s,baz=163,slow=22,SNR=5.2						
BRVK	Borovoye	16.78	358	ePn	Pn	19 48 48.6	-0.4
	comp=E,4.8nm,0.7s						
BRVK	Borovoye	16.78	358	eP	Pn	19 48 48.6	-0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WSAR	Wadi Sarin	16.98	223	P	P	19 48 55.2	+3.2
	comp=Z,0.4nm,0.3s,baz=105,slow=4.3,SNR=4.7						
AKTO	Aktyubinsk	17.06	330	⇓P	P	19 48 53.5	+0.8
	comp=Z,13nm,0.8s						
AKTO				⇑S	Sn	19 51 58.4	-3.5
	comp=Z,5.0nm,0.8s						
AKTO	Aktyubinsk	17.06	330	P	P	19 48 53.5	+0.8
AKTO				S	Sn	19 51 58.4	-3.5
AKTO	Aktyubinsk	17.06	330	P	P	19 48 53.2	+0.5
	comp=Z,1.2nm,0.3s,baz=137,slow=13,SNR=33						
AKTO				S	Sn	19 51 51.5	-10
	comp=Z,0.2nm,0.3s,baz=323,slow=20,SNR=3.2						
AKTO				LR	LR	19 56 52.0	
	comp=Z,22nm,18.5s,baz=341,slow=41						
BOK	Bokaro	17.74	131	eP	Pn	19 49 04.8	+3.9
LSA	Lhasa	17.93	106	eP	P	19 49 03.7	+0.7
	comp=Z,2.6nm,0.6s						
LSA	Lhasa	17.93	106	eP	P	19 49 03.7	+0.7
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAA0	Zalesovo Array	20.03	24	⇓P	P	19 49 25.7	+0.6
	comp=Z,4.1nm,0.3s						
ZALV	Zalesovo Beam	20.03	24	P	P	19 49 25.7	+0.6
	comp=Z,11nm,0.3s,baz=206,slow=10,SNR=68						
NVS	Novosibirsk	20.31	20	eP	P	19 49 27.4	-0.7
GNI	Garni	21.14	289	eP	P	19 49 37.8	+0.4
	comp=Z,9.9nm,0.9s						
GNI	Garni	21.14	289	eP	P	19 49 37.8	+0.4
GNI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GNI	Garni	21.14	289	P	P	19 49 38.3	+1.0
	comp=Z,2.1nm,0.6s,baz=98,slow=15,SNR=2.5						
ARU	Arti	21.90	341	P	P	19 49 46.9	+1.9
ARU				pmax	pmax		
	comp=Z,13nm,0.9s						
KBZ	Khabaz	22.87	298	P	P	19 49 57.4	+2.2
	comp=Z,0.4nm,0.6s,baz=129,slow=6.5,SNR=2.2						
KIRV	Kirov	26.52	334	P	P	19 50 31.0	+2.9
	comp=Z,6.1nm,0.6s,baz=62,slow=2.6,SNR=4.1						
SONM	Songino Array	28.30	55	P	P	19 50 46.0	+1.6
	comp=Z,0.4nm,0.9s,baz=254,slow=8.9,SNR=3.0						
CMAR	Chiang Mai Arr	30.18	119	P	P	19 51 01.8	+0.5
	comp=Z,0.4nm,0.7s,baz=297,slow=8.7,SNR=5.3						
JOF	Joensuu	36.15	330	P	P	19 51 55.2	+2.6
JOF				pmax	pmax		
	comp=Z,18nm,2.9s						
FINES	FINESS Array B	37.77	326	P	P	19 52 07.8	+1.5
	comp=Z,1.2nm,0.4s,baz=122,slow=9.8,SNR=12						
SUF	Sumiainen	38.20	328	P	P	19 52 12.4	+2.5
SUF				pmax	pmax		
	comp=Z,26nm,1.0s						
ARCES	ARCESS Array B	41.41	338	P	P	19 52 38.1	+1.6
	comp=Z,9.9nm,1.1s,baz=101,slow=9.3,SNR=8.6						
NB2	NORSAR Subarra	44.67	323	P	P	19 53 03.9	+1.1
	comp=Z,0.3nm,0.4s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.67	323	P	P	19 53 03.9	+1.1
	comp=Z,0.8nm,0.7s,baz=98,slow=7.7,SNR=6.3						
MJAR	Matsushiro Arr	52.85	68	LR	LR	20 18 49.4	
	comp=Z,19nm,18.4s,baz=20,slow=38						
TORD	Torodi Ar. Bea	65.91	269	P	P	19 55 35.1	-0.7
	comp=Z,0.6nm,0.5s,baz=40,slow=6.7,SNR=12						
INK	Inuvik	74.08	9	P	P	19 56 25.9	+0.9
	comp=Z,0.5nm,0.7s,baz=323,slow=5.1,SNR=2.9						
BOSA	Boshof	77.71	220	P	P	19 56 47.1	+0.9
	comp=Z,2.8nm,0.7s,baz=42,slow=6.2,SNR=5.8						
KDAK	Kodiak Island	79.32	22	LR	LR	20 35 15.5	
	comp=Z,182nm,18.5s,baz=120,slow=38						
YKA	Yellowknife Ar	81.45	3	P	P	19 57 06.5	+0.6
	comp=Z,0.3nm,0.4s,baz=350,slow=5.5,SNR=7.6						
WRA	Warramunga Arr	81.71	122	P	P	19 57 07.7	-0.3
	comp=Z,0.6nm,0.9s,baz=324,slow=4.8,SNR=4.9						
ASAR	Alice Springs	83.97	125	P	P	19 57 18.6	-1.0
	comp=Z,0.3nm,0.6s,baz=308,slow=4.6,SNR=5.4						

*ISCJB **25** 19:45:29.8±0.8, 36°.3N±0°.1×71°.0E±0°.2, h100^{km}, mb3.3/7, Error ellipse: s-maj=18.9km s-min=16.5km az=165.5*
*IDC **25** 19:45:31.9±5.9, 36°.37N×71°.10E, h104^{km}±53^{km}, mb3.1/7, mb1 3.4/9, mb1mx3.1/46, mbtmp3.6/9, Error ellipse: s-maj=50.5km s-min=21.5km az=37.0*
ISC 25 19:45:31.5±1.0**, 36°.3N**±0°.1×**71°.1E**±0°.2**, h100**^{km}**, n9, σ0^{s}.75**/9**, mb3.4**/7**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.82**	**22**	P	**Pn**	**19 47 09.2**	**+0.2**
	3.1nm,0.3s,baz=201,slow=8.6,SNR=2.0						
MKAR	**Makanchi Array**	**13.38**	**35**	P	**Pn**	**19 48 37.6**	**+0.3**
	0.2nm,0.3s,baz=220,slow=10,SNR=2.3						
CMAR	**Chiang Mai Arr**	**30.33**	**119**	P	**P**	**19 51 33.4**	**-0.3**
	0.3nm,0.7s,baz=309,slow=8.8,SNR=3.0						
FINES	**FINESS Array B**	**37.65**	**326**	P	**P**	**19 52 35.7**	**-0.8**
	0.3nm,0.4s,baz=115,slow=12,SNR=1.1						
NOA	**NORSAR Array B**	**44.54**	**323**	P	**P**	**19 53 32.8**	**-0.2**
	0.4nm,0.6s,baz=96,slow=7.7,SNR=1.9						
TORD	**Torodi Ar. Bea**	**65.78**	**269**	P	**P**	**19 56 06.7**	**+0.5**
	0.3nm,0.6s,baz=49,slow=6.3,SNR=1.6						
YKA	**Yellowknife Ar**	**81.40**	**3**	P	**P**	**19 57 37.0**	**+0.1**
	0.2nm,0.6s,baz=88,slow=35,SNR=2.2						
WRA	**Warramunga Arr**	**81.86**	**122**	P	**P**	**19 57 38.9**	**-1.0**
	0.3nm,0.5s,baz=325,slow=4.9,SNR=1.7						
ASAR	**Alice Springs**	**84.11**	**125**	P	**P**	**19 57 52.6**	**+1.1**
	0.2nm,0.4s,baz=178,slow=34,SNR=1.6						

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*KRNET **25** 19:46:15.8±0.1, 43°.91N×77°.60E, h19^{km}, mb2.7*
*NNC **25** 19:46:16.7±0.2, 44°.00N×77°.61E, h10^{km}±2^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=2.2km s-min=1.5km az=145.0*
ISC 25 19:46:16.4±1.0**, 43°.95N**±0°.03×**77°.62E**±0°.02**, h13**^{km}±9^{km}**, n20, σ0^{s}.96**/39**, 8C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARXS	**Arharly**	**0.30**	**29**	P	**Pg**	**19 46 22.8**	**+0.1**
	4.3nm,0.1s						
ARXS				S	**Sg**	**19 46 26.9**	**0.0**
	49nm,0.1s						
CHKK	**Chushkaly**	**0.47**	**258**	P	**Pb**	**19 46 26.9**	**+0.4**
	23nm,0.1s						
CHKK				S	**Sb**	**19 46 34.2**	**+0.8**
	10nm,0.2s						
KURS	**Kuram**	**0.61**	**139**	P	**Pn**	**19 46 30.0**	**-0.9**
	3.2nm,0.1s						
KURS				S	**Sn**	**19 46 39.7**	**-0.9**
	11nm,0.3s						
KTBS	**Karatobe**	**0.72**	**251**	P	**Pn**	**19 46 31.3**	**-1.1**
	2.5nm,0.2s						
KTBS				S	**Sb**	**19 46 41.2**	**+0.5**
	6.9nm,0.2s						
KOTS	**Kotyrbulak**	**0.81**	**207**	P	**Pn**	**19 46 34.0**	**+0.3**
	1.3nm,0.1s						
KOTS				S	**Sn**	**19 46 46.1**	**+0.4**
	41nm,0.2s						
MDOK	**Medeo**	**0.89**	**208**	⇑P	**Pn**	**19 46 34.6**	**-0.2**
	0.4nm,0.4s						
MDOK				⇑S	**Sn**	**19 46 47.8**	**+0.1**
	5.7nm,0.5s						
MDOK	**Medeo**	**0.89**	**208**	Pg	**Pn**	**19 46 35.1**	**+0.3**
	1.4nm,0.1s						
MDOK				Lg	Lg	19 46 48.1	
	9.0nm,0.4s						
KUU	**Kurty**	**0.93**	**267**	P	**Pn**	**19 46 34.4**	**-0.8**
	3.4nm,0.1s						
KUU				S	**Sn**	**19 46 47.3**	**-1.1**
	12nm,0.1s						
TNSS	**Tian-Shan**	**1.04**	**208**	P	**Pn**	**19 46 37.7**	**+0.7**
	1.0nm,0.1s						
TNSS				S	**Sn**	**19 46 53.0**	**+1.4**
	14nm,0.2s						
SATY	**Saty**	**1.06**	**147**	P	**Pg**	**19 46 37.6**	**+0.7**
	3.9nm,0.1s						
SATY				S	**Sn**	**19 46 52.7**	**+1.0**
	27nm,0.1s						
IZV	**Izvestkoviy**	**1.17**	**219**	P	**Pg**	**19 46 40.5**	**+1.4**
IZV				S	**Sn**	**19 46 54.8**	**+0.1**
UZB	**Uzynbulak**	**1.30**	**128**	P	**Pg**	**19 46 41.1**	**-0.4**
	0.7nm,0.1s						
UZB				S	**Sg**	**19 46 58.6**	**+0.3**
	6.1nm,0.2s						
PDGK	**Podgornoye**	**1.49**	**114**	P	**Pb**	**19 46 43.9**	**-0.2**
	0.3nm,0.2s						
PDGK				S	**Sb**	**19 47 03.6**	**+0.6**
	1.8nm,0.1s						
PDGK	**Podgornoye**	**1.49**	**114**	⇓P	**Pg**	**19 46 44.6**	**-0.5**
	0.9nm,0.5s						
PDGK				⇓S	**Sb**	**19 47 03.6**	**+0.6**
	1.7nm,0.5s						
PDGK	**Podgornoye**	**1.49**	**114**	⇑*i*P	**Pb**	**19 46 43.6**	**-0.5**
	baz=12						
PDGK				⇑*i*S	**Sb**	**19 47 03.6**	**+0.6**
	baz=12						
KST	**Kastek**	**1.51**	**234**	P	**Pg**	**19 46 45.1**	**-0.4**
	1.9nm,0.1s						
KST				S	**Sg**	**19 47 05.2**	**+0.1**
	5.2nm,0.4s						
PRZ	**Przheval'sk**	**1.57**	**159**	⇑*i*P	**Pb**	**19 46 44.7**	**-0.8**
	baz=57						
PRZ				⇑*i*S	**Sg**	**19 47 06.3**	**-0.8**
	baz=57						
DJR	**Jarkent**	**1.61**	**76**	P	**Pb**	**19 46 45.4**	**-0.6**
	0.9nm,0.2s						
DJR				S	**Sb**	**19 47 06.9**	**+0.7**
	1.0nm,0.2s						
KAPS	**Kapalarasan**	**1.82**	**42**	P	**Pn**	**19 46 48.1**	**+0.6**
	2.0nm,0.2s						
KAPS				S	**Sn**	**19 47 10.8**	**+0.3**
	6.1nm,0.2s						
UCH	**Uchtor**	**2.86**	**234**	⇑*i*P	**Pn**	**19 47 03.8**	**+1.7**
	baz=34						
UCH				⇑*i*S	**Sb**	**19 47 39.0**	**-3.5**
	baz=34						

IDC 25 19:46:23.1±6.4**, 31°.63S**×**178°.35W, h0**^{km}**, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.6**/27**, mbtmp3.7**/2**, Error ellipse: s-maj=274.8km s-min=54.8km az=158.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.76**	**268**	P	P	19 54 22.0	-0.6
	0.2nm,0.4s,baz=111,slow=7.5,SNR=9.1						
WRA	**Warramunga Arr**	**43.86**	**274**	P	P	19 54 31.6	+0.2
	0.8nm,0.3s,baz=112,slow=8.0,SNR=34						
FINES	**FINESS Array B**	**146.19**	**339**	PKPbc	PKPdf	20 06 03.8	+0.2
	0.9nm,0.4s,baz=46,slow=4.0,SNR=9.2						

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*ISCJB **25** 19:48:36.8±0.4, 39°.55N±0°.03×28°.05E±0°.03, h13^{km}±4^{km}, Error ellipse: s-maj=4.9km s-min=3.9km az=20.5*
*DDA **25** 19:48:36.3, 39°.50N×28°.06E, h7^{km}±4^{km}, ML2.5*
*ISK **25** 19:48:36.4, 39°.56N×28°.10E, h4^{km}, ML2.3/4*
ISC 25 19:48:36.3±0.9**, 39°.51N**±0°.03×**28°.07E**±0°.03**, h18**^{km}±8^{km}**, n12, σ0^{s}.64**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.20**	**313**	PG	**Pg**	**19 48 41.2**	**0.0**
BALB				SG	**Sg**	**19 48 44.9**	**+0.5**
STEP	**BALIKESIR_Sava**	**0.30**	**244**	*i* P	**Pb**	**19 48 43.6**	**+0.4**
STEP				*i* S	**Sb**	**19 48 47.7**	**-0.2**
STEP				IAML_P			
	comp=Z,2µm,0.1s						
DURS	**Dursunbey**	**0.33**	**73**	*i* P	**Pb**	**19 48 43.7**	**-0.1**
DURS				*i* S	**Sb**	**19 48 49.3**	**+0.5**
DURS				IAML_P			
	comp=Z,2µm,0.1s						
BALY	**Balya**	**0.42**	**304**	*i* P	**Pb**	**19 48 45.5**	**+0.2**
BALY				*i* S	**Sg**	**19 48 51.1**	**+0.5**
BALY				IAML_P			
	comp=Z,1µm,0.1s						
DST	**Dursunbey**	**0.44**	**77**	PG	**Pg**	**19 48 44.9**	**-0.4**
DST				SG	**Sg**	**19 48 51.0**	**-0.3**
DEMI	**Demirci**	**0.69**	**132**	*i* P	**Pn**	**19 48 50.8**	**-0.5**
DEMI				*i* S	**Sn**	**19 49 01.0**	**-0.6**
DEMI				IAML_P			
	comp=Z,2µm,0.1s						
KCTX	**Karacabey (Bur**	**0.79**	**16**	PG	**Pg**	**19 48 51.0**	**-0.8**
KCTX				SG	**Sg**	**19 49 02.2**	**-0.1**
EDC	**Edincik**	**0.85**	**350**	PG	**Pb**	**19 48 52.7**	**0.0**
EDC				SG	**Sb**	**19 49 04.2**	**+0.4**
KNL	**Balıkesir**	**0.87**	**332**	*i* P	**Pb**	**19 48 53.1**	**+0.2**
ZEDA	**zmir-Bergama**	**0.94**	**235**	*i* P	**Pb**	**19 48 53.2**	**-0.9**
ZEDA				*i* S	**Sb**	**19 49 05.4**	**-0.8**
USAK	**Uak-Merkez**	**1.08**	**137**	*i* P	**Pg**	**19 48 58.1**	**+0.8**
USAK				*i* S	**Sn**	**19 49 12.7**	**+1.4**
MANT	**Manisa**	**1.08**	**159**	*i* P	**Pg**	**19 48 57.1**	**-0.3**
MANT				*i* S	**Sn**	**19 49 12.7**	**+1.1**
MANT				IAML_P			
	comp=Z,432nm,0.1s						

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*ISCJB **25** 19:48:37.9±0.7, 39°.35N±0°.04×26°.16E±0°.05, h12^{km}, Error ellipse: s-maj=6.3km s-min=5.2km az=135.4*
*ISK **25** 19:48:37.4, 39°.35N×26°.18E, h8^{km}, ML2.1/8*
ISC 25 19:48:37.9±1.0**, 39°.35N**±0°.05×**26°.18E**±0°.05**, h12**^{km}**, n11, σ0^{s}.38**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.28**	**242**	PG	**Pg**	**19 48 43.6**	**-0.1**
SIGR				SG	**Sg**	**19 48 47.9**	**+0.3**
AYVA	**Ayvalik**	**0.40**	**95**	*i* P	**Pg**	**19 48 46.1**	**+0.3**
AYVA				*i* S	**Sb**	**19 48 52.6**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.49**	**36**	*i* P	**Pb**	**19 48 47.9**	**-0.5**
EZN	**Ezine**	**0.49**	**13**	PG	**Pg**	**19 48 47.5**	**0.0**
EZN				SG	**Sb**	**19 48 54.9**	**-0.7**
BOZC	**Bozcaada**	**0.50**	**349**	PG	**Pg**	**19 48 47.8**	**+0.1**
BOZC				SG	**Sg**	**19 48 55.1**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.07**	**12**	PG	**Pb**	**19 48 58.4**	**0.0**
LPK	**Lapseki**	**1.12**	**23**	PN	**Pb**	**19 48 59.1**	**0.0**
ERIK	**Erikli-Kesan**	**1.35**	**11**	PN	**Pb**	**19 49 02.9**	**-0.1**
KRBG	**Karabiga-Canak**	**1.35**	**39**	PN	**Pn**	**19 49 02.5**	**-0.1**
ENEZ	**Enez**	**1.39**	**359**	PN	**Pb**	**19 49 03.5**	**-0.2**
ALN	**Alexandroupoli**	**1.55**	**356**	PN	**Pn**	**19 49 05.7**	**+0.4**

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*NIED **25** 19:57:00, 39°.10N×143°.30E, h11^{km}, Mw3.4 Best double couple: M$_0$1.30000×10^{14} NP1:φ$_s$130.00000°, δ66.00000°, λ-26.00000°. NP2:φ$_s$231.00000°, δ66.00000°, λ-154.00000°.*
*ISCJB **25** 19:57:41.9±1.8, 39°.14N±0°.05×143°.45E±0°.08, h18^{km}±11^{km}, mb3.1/3, Error ellipse: s-maj=11.4km s-min=8.2km az=27.0*
*JMA **25** 19:57:42.7±0.2, 39°.10N×143°.32E, h9^{km}±2^{km}, M3.7*
*IDC **25** 19:57:46.1±2.1, 39°.46N×142°.65E, h0^{km}, mb3.2/3, mb1 3.3/5, mb1mx3.2/35, mbtmp3.2/5, ML2.8/2, Error ellipse: s-maj=50.0km s-min=23.9km az=88.0*
ISC 25 19:57:45.8±3.2**, 39°.22N**±0°.06×**143°.19E**±0°.08**, h15**^{km}±18^{km}**, n20, σ1^{s}.38**/25**, mb3.2**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.12**	**289**	P	**Pn**	**19 58 05.8**	**-1.2**
MIYJ				*e*S	**Sn**	**19 58 22.7**	**+0.5**
OFUJ	**Ofunato**	**1.19**	**264**	P	**Pn**	**19 58 06.4**	**-1.5**
OFUJ				S	**Sb**	**19 58 22.9**	**-0.5**
JTH	**Tanohata**	**1.26**	**305**	P	**Pn**	**19 58 08.9**	**+0.1**
JTH				*e*S	**Sg**	**19 58 27.0**	**+0.6**
JKMT	**Kesennumamotoy**	**1.40**	**254**	P	**Pn**	**19 58 09.2**	**-1.6**
JOM	**Ohasama**	**1.50**	**280**	P	**Pn**	**19 58 11.5**	**-0.6**
JOM				*e*S	**Sb**	**19 58 32.6**	**+0.5**
JMK	**Ichinoseki**	**1.56**	**261**	P	**Pn**	**19 58 12.0**	**-1.0**
JMK				*e*S	**Sn**	**19 58 33.2**	**+0.3**
JIO	**Ouri**	**1.63**	**243**	P	**Pn**	**19 58 12.1**	**-1.8**
JIO				*e*S	**Sn**	**19 58 33.7**	**-0.9**
JANG	**Nango**	**1.73**	**312**	P	**Pn**	**19 58 14.7**	**-0.7**
JANG				*e*S	**Sb**	**19 58 39.1**	**+0.2**
JRG	**Rokugo**	**1.99**	**276**	P	**Pn**	**19 58 19.0**	**0.0**
JOU	**Okura**	**2.15**	**248**	P	**Pn**	**19 58 20.7**	**-0.4**
JYK	**Kaneyama**	**2.23**	**263**	P	**Pn**	**19 58 22.4**	**+0.2**
JTM	**Tenmabayashi**	**2.26**	**315**	P	**Pn**	**19 58 23.7**	**+1.0**
MJAR	**Matsushiro Arr**	**4.76**	**237**	Pn	**Pn**	**19 58 56.1**	**-0.9**
	0.1nm,0.3s,baz=51,slow=9.8,SNR=3.4						
ASAJ	**Asahikawa**	**4.92**	**355**	Pn	**Pn**	**19 58 57.2**	**-1.9**
	1.0nm,0.3s,baz=192,slow=12,SNR=18						
ASAJ				Sn	**Sn**	**19 59 55.0**	**-0.7**
	0.3nm,0.3s,baz=101,slow=5.2,SNR=2.2						
SONM	**Songino Array**	**27.82**	**300**	P	**P**	**20 03 32.9**	**-1.5**
	0.2nm,0.5s,baz=111,slow=7.9,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**28.19**	**127**	T	T	20 32 49.1	
	baz=320,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.20**	**127**	T	T	20 32 48.5	
	baz=320,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.21**	**127**	T	T	20 32 51.1	
	baz=320,slow=74						
MKAR	**Makanchi Array**	**44.19**	**301**	P	**P**	**20 05 52.4**	**-1.6**
	0.3nm,0.8s,baz=88,slow=8.8,SNR=2.8						
WRA	**Warramunga Arr**	**59.43**	**190**	P	**P**	**20 07 51.8**	**+3.9**
	0.3nm,0.8s,baz=7.3,slow=6.9,SNR=5.6						

NNC 25 20:03:32.6±3.1**, 37°.60N**×**71°.37E, h0**^{km}**, mb3.8, mpv3.4, 5C-3D, Error ellipse: s-maj=23.6km s-min=22.1km az=152.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.93**	**34**	⇓P	Pn	20 04 21.0	+0.3
	5.0nm,0.4s						
SFK				⇑S	Sn	20 04 58.7	+2.1
	3.2nm,0.3s						
MNAS	**Manas**	**4.96**	**10**	⇓P	Pn	20 04 48.9	+0.5
	4.6nm,0.3s						
MNAS				⇑S	Sn	20 05 47.0	+0.5
	7.7nm,0.6s						
KK31	**Karatay Array**	**5.53**	**353**	P	Pn	20 04 57.5	+1.3
	1.0nm,0.3s,baz=181,slow=16,SNR=24						
KK31				⇑S	Sn	20 06 02.2	+1.7
	1.0nm,0.3s,baz=175,slow=23,SNR=9.0						
AAK	**Ala-Archa**	**5.57**	**24**	⇑P	Pn	20 04 56.1	-0.8
	1.0nm,0.3s						
AAK				⇑S	Sn	20 06 01.3	-0.3
	1.3nm,0.5s						
TKM2	**Tokmak 2**	**6.22**	**30**	⇓P	Pn	20 05 03.4	-2.4
	1.3nm,0.6s						

IDC 25 20:07:52.9±5.7**, 30°.90S**×**178°.64W, h0**^{km}**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/31**, mbtmp3.5**/2**, Error ellipse: s-maj=225.9km s-min=56.0km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.53**	**268**	P	P	20 15 49.7	-0.7
	0.4nm,0.7s,baz=110,slow=7.3,SNR=6.2						
WRA	**Warramunga Arr**	**43.57**	**273**	P	P	20 15 59.2	+0.4
	0.5nm,0.4s,baz=113,slow=8.0,SNR=24						
FINES	**FINESS Array B**	**145.41**	**339**	PKPbc	PKPbc	20 27 31.1	-0.9
	2.7nm,1.0s,baz=56,slow=3.4,SNR=7.8						

MEX 25 20:10:31.7±0.9**, 16°.33N**×**96°.41W, h52**^{km}±14^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.62**	**153**	*e*P	Pn	20 10 43.0	-1.6
HUIG				*e*S	Sn	20 10 52.5	-1.3
PANG	**Puerto Angel**	**0.66**	**186**	*i* P	Pn	20 10 43.4	-1.6
PANG				*i* S	Sn	20 10 52.8	-1.9
OXBJ	**Oaxaca**	**0.80**	**338**	*e*P	Pn	20 10 44.5	-2.5
VHO	**Vista Hermosa**	**0.81**	**337**	*e*P	Pn	20 10 45.2	-1.9
VHO				*i* S	Sn	20 10 56.3	-2.1
CMIG	**Matias Romero**	**1.65**	**62**	*i* P	Pn	20 10 56.5	-1.7
CMIG				*i* S	Sn	20 11 15.8	-2.4
PNIG	**Pinotepa**	**1.65**	**273**	*e*P	Pn	20 10 56.1	-2.2

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*NIED **25** 20:12:00, 39°.60N×142°.10E, h47^{km}, Mw3.9 Best double couple: M$_0$7.95000×10^{14} NP1:φ$_s$206.00000°, δ25.00000°, λ95.00000°. NP2:φ$_s$20.00000°, δ65.00000°, λ87.00000°.*
*ISCJB **25** 20:12:55.3±0.6, 39°.64N±0°.03×142°.15E±0°.07, h56^{km}±3^{km}, mb3.9/21, Error ellipse: s-maj=9.1km s-min=4.5km az=11.5*
*JMA **25** 20:12:56.4, 39°.64N×142°.11E, h48^{km}±1^{km}, M4.0*
JMA Felt II J1.
*IDC **25** 20:12:58.8±1.6, 39°.65N×142°.07E, h73^{km}±13^{km}, mb3.6/21, mb1 3.7/26, mb1mx3.6/56, mbtmp3.9/26, MS2.7/3, Ms1 2.7/3, ms1mx2.4/38, Error ellipse: s-maj=16.1km s-min=8.8km az=118.0*
ISC 25 20:12:56.4±0.9**, 39°.64N**±0°.04×**142°.14E**±0°.07**, h49**^{km}±7^{km}**, n55, σ1^{s}.18**/63**, mb4.0**/26**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.25**	**256**	P	**Pn**	**20 13 04.8**	**-0.2**
MIYJ				S	**Sn**	**20 13 10.5**	**-0.5**
JTH	**Tanohata**	**0.37**	**325**	P	**Pn**	**20 13 05.9**	**-0.1**
JTH				S	**Sn**	**20 13 12.5**	**-0.4**
OFUJ	**Ofunato**	**0.67**	**213**	P	**Pn**	**20 13 09.2**	**-0.4**
OFUJ				S	**Sn**	**20 13 18.2**	**-1.0**
JOM	**Ohasama**	**0.67**	**256**	P	**Pn**	**20 13 09.6**	**-0.1**
JOM				S	**Sn**	**20 13 19.1**	**-0.2**
JKZ	**Kuzumaki**	**0.71**	**299**	P	**Pn**	**20 13 10.2**	**-0.1**
JKZ				S	**Sn**	**20 13 19.7**	**-0.6**
JANG	**Nango**	**0.88**	**327**	P	**Pn**	**20 13 12.0**	**-0.4**
JANG				S	**Sn**	**20 13 22.8**	**-1.3**
JMK	**Ichinoseki**	**0.99**	**226**	P	**Pn**	**20 13 13.6**	**-0.3**
JMK				S	**Sn**	**20 13 26.3**	**-0.5**
JRG	**Rokugo**	**1.19**	**259**	P	**Pn**	**20 13 16.4**	**-0.2**
JAH	**Hinai**	**1.28**	**296**	P	**Pn**	**20 13 17.9**	**+0.1**
JAH				S	**Sn**	**20 13 33.9**	**+0.1**
JIO	**Ouri**	**1.33**	**208**	P	**Pn**	**20 13 18.2**	**-0.4**
JIO				S	**Sn**	**20 13 34.1**	**-1.0**
JTM	**Tenmabayashi**	**1.41**	**325**	P	**Pn**	**20 13 19.6**	**0.0**
JTM				*e*S	**Sn**	**20 13 37.1**	**+0.1**
MJAR	**Matsushiro Arr**	**4.38**	**226**	P	**Pn**	**20 14 02.9**	**+2.6**
	0.9nm,0.3s,baz=33,slow=13,SNR=70						
MJAR				S	**Sn**	**20 14 53.4**	**+3.3**
	baz=48,slow=31,SNR=2.3						
MAT	**Matsushiro**	**4.38**	**226**	P	**Pn**	**20 14 02.7**	**+2.4**
MAT				*e*S	**Sn**	**20 14 54.7**	**+4.6**
ASAJ	**Asahikawa**	**4.49**	**4**	P	**Pn**	**20 14 02.4**	**+0.6**
	2.0nm,0.3s,baz=191,slow=17,SNR=14						
ASAJ				S	**Sn**	**20 14 55.2**	**+2.5**
	1.4nm,0.3s,baz=131,slow=19,SNR=2.6						
ASAJ				LR	LR	20 16 17.4	
	comp=Z,71nm,18.2s,baz=180,slow=44						
USRK	**Ussuriysk Ar.**	**8.83**	**304**	P	**Pn**	**20 15 03.6**	**+2.3**
	0.7nm,0.3s,baz=114,slow=16,SNR=14						
JNU	**Nakatsue**	**11.16**	**238**	P	**Pn**	**20 15 33.9**	**+0.7**
	0.4nm,0.3s,baz=119,slow=19,SNR=4.6						
KSRS	**Korea Array**	**11.34**	**263**	P	Pn	20 15 40.3	+4.6
	1.0nm,0.3s,baz=70,slow=14,SNR=13						
KSRS				LR	LR	20 19 36.0	
	comp=Z,37nm,19.5s,baz=63,slow=35						
KLR	**Kul'dur**	**12.11**	**326**	P	**Pn**	**20 15 48.3**	**+2.1**
	0.1nm,0.3s,baz=162,slow=7.3,SNR=3.6						
KLR				LR	LR	20 19 39.7	
	comp=Z,37nm,20.2s,baz=120,slow=33						
MA2	**Magadan**	**20.69**	**12**	P	**P**	**20 17 32.2**	**0.0**
	2.6nm,0.5s,baz=216,slow=10,SNR=4.2						
SEY	**Seymchan**	**24.13**	**11**	P	**P**	**20 18 08.3**	**+0.9**
	2.1nm,0.6s,baz=203,slow=7.4,SNR=18						
SONM	**Songino Array**	**26.90**	**300**	P	**P**	**20 18 32.1**	**-0.7**
	0.7nm,0.6s,baz=96,slow=9.4,SNR=7.4						
H11N2	**WAKE ISLAND Hy**	**29.10**	**126**	T	T	20 49 33.4	
	baz=318,slow=75,SNR=170						
H11N1	**WAKE ISLAND Hy**	**29.11**	**126**	T	T	20 49 26.2	
	baz=318,slow=75,SNR=162						
H11N3	**WAKE ISLAND Hy**	**29.12**	**126**	T	T	20 49 27.7	
	baz=318,slow=75,SNR=138						
H11S1	**WAKE ISLAND Hy**	**29.90**	**128**	T	T	20 50 36.9	
	baz=319,slow=76,SNR=30						
H11S3	**WAKE ISLAND Hy**	**29.90**	**128**	T	T	20 50 31.3	
	baz=319,slow=76,SNR=38						
H11S2	**WAKE ISLAND Hy**	**29.92**	**128**	T	T	20 50 37.0	
	baz=319,slow=76,SNR=25						
ZALV	**Zalesovo Beam**	**40.62**	**310**	P	**P**	**20 20 30.7**	**-0.6**
	2.9nm,0.4s,baz=91,slow=8.2,SNR=17						
ZALV				PcP	**PcP**	**20 22 31.7**	**-0.7**
	0.8nm,0.3s,baz=110,slow=2.6,SNR=4.5						
CMAR	**Chiang Mai Arr**	**42.75**	**253**	P	**P**	**20 20 49.1**	**0.0**
	0.2nm,0.5s,baz=44,slow=8.0,SNR=3.2						
MKAR	**Makanchi Array**	**43.27**	**300**	P	**P**	**20 20 52.6**	**-0.4**
	1.7nm,0.6s,baz=84,slow=9.7,SNR=23						
KDAK	**Kodiak Island**	**44.80**	**44**	P	**P**	**20 21 04.8**	**-0.3**
	5.1nm,0.8s,baz=307,slow=21,SNR=10						
KURBB	**Kurchatov Arra**	**44.89**	**306**	P	**P**	**20 21 05.2**	**-0.7**
	45nm,0.8s,baz=77,slow=8.3,SNR=35						
ILAR	**Eielson Array**	**47.00**	**34**	P	**P**	**20 21 22.8**	**+0.4**
	0.7nm,0.9s,baz=265,slow=6.1,SNR=9.9						
JIRN	**Jiri**	**47.39**	**273**	*e*P	**P**	**20 21 26.9**	**+0.6**
	3.6nm,0.3s						
RAMN	**Ramite**	**47.43**	**272**	*e*P	**P**	**20 21 25.5**	**-1.0**
GUN	**Gumba**	**47.51**	**274**	*e*P	**P**	**20 21 27.3**	**+0.1**
	12nm,0.6s						
PKI	**Pulchoki**	**48.04**	**274**	*e*P	**P**	**20 21 30.5**	**-0.8**
PKIN	**Phulchoki**	**48.05**	**274**	*e*P	**P**	**20 21 30.3**	**-1.0**
DANN	**Dangsing**	**48.93**	**275**	*e*P	**P**	**20 21 38.1**	**0.0**
	27nm,0.5s						
BVAR	**Borovoye Array**	**49.27**	**311**	P	**P**	**20 21 39.5**	**-0.5**
	0.9nm,0.5s,baz=67,slow=8.2,SNR=5.9						
BVAR				PcP	**PcP**	**20 23 02.2**	**0.0**
	0.2nm,0.3s,baz=114,slow=1.7,SNR=3.8						
KOLN	**Koldanda**	**49.33**	**275**	*e*P	**P**	**20 21 40.9**	**-0.2**
	7.7nm,0.7s						
PYUN	**Piuthan**	**49.64**	**276**	*e*P	**P**	**20 21 43.2**	**-0.2**
	2.5nm,0.3s						
AAK	**Ala-Archa**	**49.79**	**297**	P	**P**	**20 21 43.8**	**-0.6**
	0.6nm,0.3s,baz=119,slow=5.5,SNR=5.8						
INK	**Inuvik**	**51.82**	**28**	P	**P**	**20 21 60.0**	**+1.0**
	0.7nm,0.4s,baz=286,slow=8.2,SNR=4.2						
AKTO	**Aktyubinsk**	**57.38**	**311**	P	**P**	**20 22 39.4**	**-0.2**
	1.1nm,0.5s,baz=76,slow=15,SNR=5.2						
WRA	**Warramunga Arr**	**59.72**	**188**	P	**P**	**20 22 54.8**	**-1.2**
	0.9nm,0.8s,baz=6.7,slow=7.1,SNR=3.8						
GEYT	**Alibeck**	**63.09**	**298**	P	**P**	**20 23 18.1**	**-0.8**
	1.1nm,0.6s,baz=28,slow=6.5,SNR=3.2						
ASAR	**Alice Springs**	**63.44**	**188**	P	**P**	**20 23 20.4**	**-0.8**
	0.5nm,0.7s,baz=360,slow=4.3,SNR=6.4						
FINES	**FINESS Array B**	**66.78**	**332**	P	**P**	**20 23 41.6**	**-0.8**
	1.6nm,0.6s,baz=39,slow=9.1,SNR=11						
KBZ	**Khabaz**	**69.65**	**310**	P	**P**	**20 24 00.6**	**0.0**
	0.7nm,0.4s,baz=40,slow=8.8,SNR=3.8						
NB2	**NORSAR Subarra**	**72.01**	**337**	P	**P**	**20 24 14.4**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=35,slow=6.5						
NOA	**NORSAR Array B**	**72.01**	**337**	P	**P**	**20 24 13.8**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=53,slow=6.9,SNR=6.8						
AKASG	**Malin Array Be**	**72.59**	**322**	P	**P**	**20 24 17.4**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=42,slow=6.1,SNR=6.0						
PDAR	**Pinedale Array**	**75.45**	**46**	P	**P**	**20 24 36.6**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=256,slow=0.4,SNR=3.7						
GERES	**GERESS Array B**	**80.80**	**328**	P	**P**	**20 25 03.8**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=61,slow=8.1,SNR=3.7						

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*ISCJB **25** 20:22:37.9±1.4, 32°.23S±0°.09×178°.1W±0°.3, h24^{km}, mb3.8/3, Error ellipse: s-maj=35.3km s-min=7.7km az=18.3*
*IDC **25** 20:22:37.3±1.5, 32°.07S×178°.02W, h0^{km}, mb3.9/3, mb1 4.2/5, mb1mx3.9/34, mbtmp4.0/5, ML4.0/2, Error ellipse: s-maj=43.6km s-min=24.3km az=127.0*
ISC 25 20:22:40.0±1.2**, 32°.2S**±0°.1×**178°.1W**±0°.3**, h24**^{km}**, n8, σ1^{s}.54**/10**, mb3.9**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.89**	**3**	Pn	**Pn**	**20 23 21.9**	**-2.7**
	77nm,0.3s,baz=108,slow=19,SNR=2.5						
RAO				Sn	**Sn**	**20 23 59.3**	**+0.7**
	60nm,0.3s,baz=90,slow=20,SNR=2.2						
URZ	**Urewera**	**7.26**	**212**	Pn	**Pn**	**20 24 24.2**	**-0.4**
	0.8nm,0.3s,baz=75,slow=16,SNR=4.6						
URZ				Sn	**Sn**	**20 25 44.4**	**-1.8**
	1.5nm,0.3s,baz=81,slow=24,SNR=6.5						
ASAR	**Alice Springs**	**42.98**	**269**	P	**P**	**20 30 39.1**	**+1.6**
	1.1nm,0.7s,baz=105,slow=7.5,SNR=14						
WRA	**Warramunga Arr**	**44.13**	**274**	P	**P**	**20 30 47.7**	**+0.9**
	0.7nm,0.3s,baz=112,slow=8.1,SNR=32						
NVAR	**Mina Array Bea**	**89.56**	**43**	P	**P**	**20 35 36.1**	**+0.4**
	0.4nm,0.5s,baz=242,slow=4.8,SNR=3.8						
MKAR	**Makanchi Array**	**118.84**	**309**	PKP	**PKiKP**	**20 41 27.2**	**+1.0**
	0.2nm,0.6s,baz=94,slow=1.9,SNR=1.7						
FINES	**FINESS Array B**	**146.76**	**339**	PKPbc	**PKPbc**	**20 42 19.9**	**+0.8**
	1.6nm,0.7s,baz=38,slow=5.3,SNR=6.6						
NOA	**NORSAR Array B**	**150.47**	**351**	PKPbc	**PKiKP**	**20 42 30.3**	**+0.7**
	0.4nm,0.7s,baz=14,slow=4.1,SNR=2.5						

IDC 25 20:41:34.1±1.4**, 1°.44S**×**121°.72E, h0**^{km}**, mb3.1**/4**, mb1 3.3**/4**, mb1mx3.2**/26**, mbtmp3.1**/4**, Error ellipse: s-maj=161.4km s-min=21.0km az=63.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.15	147	P	P	20 46 30.4	-1.4
	0.2nm,0.3s,baz=318,slow=12,SNR=12						
ASAR	Alice Springs	25.06	153	P	P	20 47 01.6	+1.2
	0.4nm,0.7s,baz=330,slow=12,SNR=3.7						
SONM	Songino Array	50.86	347	P	P	20 50 36.9	0.0
	0.1nm,0.3s,baz=147,slow=8.6,SNR=3.0						
MKAR	Makanchi Array	59.17	329	P	P	20 51 36.7	-0.2
	0.2nm,0.5s,baz=138,slow=8.9,SNR=3.0						

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*ISCJB **25** 20:52:50.5±0.3, 42°.84N±0°.02×1°.45W±0°.03, h21^{km}±3^{km}, Error ellipse: s-maj=4.4km s-min=3.1km az=140.7*

*SFS **25** 20:52:51.0, 42°.79N×1°.41W, h2^{km}, ML2.2, OIZAL/AGOITZ (NAVARRA)*

*STR **25** 20:52:51.3±0.4, 43°N±2°×°±°, h5^{km}, M2.0/5, MLv2.0/5*

*MDD **25** 20:52:51.2±0.1, 42°.81N×1°.41W, h3^{km}±3^{km}, mb3.5/1, mbLg2.3/20, Error ellipse: s-maj=2.7km s-min=1.2km az=162.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA.

*LDG **25** 20:52:51.5±0.1, 42°.82N×1°.39W, h2^{km}, Md2.6/2, Ml2.5/12, Error ellipse: s-maj=1.4km s-min=1.1km az=150.0*

ISC 25 20:52:50.3±0.8, **42°.86N**±0°.02×**1°.45W**±0°.02, **h14**^{km}±6^{km}, **n55**, σ**0^{s}.98**/93, **3C-1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EORO	Oroz-Betelu	0.11	73	Pg	Pg	20 52 53.5	-0.1
	148nm,0.1s,SNR=7.9						
EORO				Lg	Lg	20 52 55.0	
	830nm,0.1s,SNR=5.0						
EARA	Aranguren	0.13	226	⇑Pg	Pg	20 52 53.5	-0.2
	104nm,0.1s,SNR=18						
EARA				Lg	Lg	20 52 55.6	
	494nm,0.1s,SNR=5.0						
EARA	Aranguren	0.13	226	Pg	Pg	20 52 53.5	-0.2
EARA				Sg	Sg	20 52 55.7	-0.4
IELO	Elcoad	0.16	96	⇓Pg	Pg	20 52 53.7	-0.5
	120nm,0.1s,SNR=18						
IELO				Lg	Lg	20 52 55.7	
	1μm,0.2s,SNR=7.9						
SJPF	Ste Jean	0.30	34	*e*Pg	Pb	20 52 57.5	0.0
SJPF				*e*Sg	Sb	20 53 02.2	-0.2
	79nm,0.2s						
SJPF	Ste Jean	0.30	34	Pg	Pb	20 52 57.5	0.0
SJPF				Lg	Lg	20 53 02.2	
	40nm,0.2s						
EALK	Alkurruntz	0.36	354	⇑Pg	Pb	20 52 58.8	+0.3
	10.0nm,0.1s,SNR=18						
EALK				Lg	Lg	20 53 05.0	
	115nm,0.3s,SNR=5.0						
EALK	Alkurruntz	0.36	354	Pg	Pb	20 52 58.9	+0.3
EALK				Sg	Sb	20 53 04.9	+0.8
OSSF	Osses	0.42	20	Pg	Pb	20 52 59.4	-0.1
OSSF				Sg	Sb	20 53 05.7	-0.1
ATE	Arette	0.60	68	⇑Pg	Pg	20 53 02.1	+0.2
	3.1nm,0.1s,SNR=18						
ATE				Lg	Lg	20 53 10.5	
	43nm,0.1s,SNR=7.9						
ATE	Arette	0.60	68	Pg	Pg	20 53 02.2	+0.2
ATE				Pg	Pg	20 53 02.2	+0.2
ATE				Sg	Sg	20 53 10.5	+0.6
ATE				Sg	Sg	20 53 10.5	+0.6
ETSF	Etsaut	0.66	86	*e*Pg	Pg	20 53 02.6	-0.5
ETSF				*e*Sg	Sg	20 53 12.2	+0.3
	31nm,0.2s						
ETSF	Etsaut	0.66	86	Pg	Pg	20 53 02.6	-0.5
ETSF				Lg	Lg	20 53 12.2	
	15nm,0.2s						
TERF	Tercis-les-Bai	0.85	17	Pg	Pn	20 53 08.5	+0.6
TERF				Sg	Sn	20 53 20.2	-0.1
ECHI	Chisagues Biel	1.23	99	Pg	Pn	20 53 13.4	+0.1
	5.7nm,0.2s,SNR=7.9						
ECHI				Lg	Lg	20 53 29.8	
	6.5nm,0.2s,SNR=7.9						
ECHI	Chisagues Biel	1.23	99	Pg	Pn	20 53 14.0	+0.8
ECHI				Sg	Sb	20 53 30.0	+0.8
EPF	Esparros	1.33	82	*e*Pn	Pn	20 53 15.2	+0.7
EPF				*e*Sg	Sb	20 53 32.6	+0.6
	36nm,0.2s						
EPF	Esparros	1.33	82	Pn	Pn	20 53 15.2	+0.7
EPF				Lg	Lg	20 53 32.6	
	18nm,0.2s						
ESAC	San Caprasio	1.35	147	Pg	Pn	20 53 15.5	+0.6
	28nm,0.2s,SNR=13						
ESAC				Lg	Lg	20 53 32.4	
	28nm,0.2s,SNR=4.7						
ELAN	Lanestosa	1.50	285	Pg	Pg	20 53 19.7	+0.6
	0.6nm,0.1s,SNR=24						
ELAN				Lg	Lg	20 53 40.8	
	7.6nm,0.2s,SNR=9.2						
CSOR	Sort	1.97	103	Pg	Pb	20 53 26.0	0.0
	2.8nm,0.2s,SNR=7.9						
CSOR				Lg	Lg	20 53 53.1	
	4.1nm,0.2s,SNR=7.9						
ETOR	Torete	2.09	193	Pn	Pn	20 53 25.7	+0.8
	2.4nm,0.4s,SNR=12						
ETOR				Pg	Pb	20 53 28.4	+0.4
	7.7nm,0.4s,SNR=11						
ETOR				Lg	Lg	20 53 53.9	
	7.2nm,0.3s,SNR=5.0						
ERTA	Horta de San J	2.32	144	Pn	Pn	20 53 28.4	+0.2
	0.7nm,0.3s,SNR=7.9						
ERTA				Pg	Pb	20 53 32.2	+0.2
	1.4nm,0.5s,SNR=4.0						
ERTA				Lg	Lg	20 54 01.7	
	4.9nm,0.3s,SNR=7.9						
EMIR	Miracle	2.40	112	Pn	Pn	20 53 29.9	+0.7
	1.1nm,0.3s,SNR=7.9						
EMIR				Pg	Pb	20 53 34.6	+1.3
	1.0nm,0.3s,SNR=7.9						
EMIR				Lg	Lg	20 54 06.3	
	4.4nm,0.3s,SNR=5.6						
EPOB	Poblet	2.41	128	Pn	Pn	20 53 29.6	+0.2
	1.7nm,0.4s,SNR=7.9						
EPOB				Pg	Pb	20 53 34.6	+1.0
	0.1nm,0.5s,SNR=7.9						
EPOB				Sn	Sn	20 53 57.9	-0.9
	0.9nm,0.4s,SNR=7.9						
EPOB				Lg	Lg	20 54 04.3	
	3.4nm,0.2s,SNR=7.9						
CLLI	Llivia	2.56	97	Pg	Pb	20 53 37.8	+1.8
	4.4nm,0.5s,SNR=12						
CLLI				Lg	Lg	20 54 11.3	
	5.5nm,0.4s,SNR=8.5						
EMOS	Mosqueruela	2.60	163	Pg	Pb	20 53 37.0	+0.2
	0.5nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	20 54 11.7	
	10.0nm,0.5s,SNR=7.9						
LFF	La Frestale	2.62	37	*e*Pn	Pn	20 53 33.6	+1.5
LFF				*e*Sn	Sn	20 54 03.7	0.0
LFF				*e*Sg	Sg	20 54 14.4	+0.1
	6.3nm,0.4s						
LFF	La Frestale	2.62	37	Pn	Pn	20 53 33.6	+1.5
LFF				Sn	Sn	20 54 03.7	0.0
LFF				Lg	Lg	20 54 14.4	
	3.2nm,0.4s						
MTLF	Montolieu	2.73	79	*e*Pn	Pn	20 53 34.3	+0.6
MTLF	Montolieu	2.73	79	*e*Pg	Pg	20 53 41.5	-1.1
MTLF				*e*Sn	Sn	20 54 05.3	-1.3
	1.3nm,0.2s						
MTLF				*e*Sg	Sg	20 54 16.6	-1.4
	2.5nm,0.3s						
MTLF	Montolieu	2.73	79	Pn	Pn	20 53 34.3	+0.6
MTLF				Pg	Pg	20 53 41.5	-1.1
MTLF				Sn	Sn	20 54 05.3	-1.3
	0.6nm,0.2s						
MTLF				Lg	Lg	20 54 16.6	
	1.2nm,0.3s						
EARI	Arriondas	2.79	280	Pn	Pb	20 53 37.6	-2.3
	6.8nm,0.7s,SNR=7.9						
EARI				Sn	Sn	20 54 09.5	+1.5
	9.1nm,0.6s,SNR=7.9						
UCM	Universidad Co	2.88	208	*i* P	Pn	20 53 36.4	+0.6
UCM				*e*S	Sg	20 54 20.3	-2.5
GUD	Guadarrama	3.00	223	Pn	Pn	20 53 38.4	+0.9
	0.2nm,0.4s,SNR=7.9						
GUD				Sn	Sn	20 54 14.1	+0.7
	3.9nm,0.4s,SNR=7.9						
GUD				Lg	Lg	20 54 24.9	
	4.6nm,0.4s,SNR=7.9						
CFON	Fontmartina	3.09	110	Pn	Pn	20 53 39.5	+0.8
	9.6nm,0.9s,SNR=8.4						
CFON				Pg	Pb	20 53 47.1	+2.1
	2.2nm,0.3s,SNR=6.9						
CFON				Lg	Lg	20 54 26.7	
	7.7nm,0.3s,SNR=7.9						
SJAF	Saint Jean de	3.22	95	Lg	Lg	20 54 33.1	
	8.8nm,0.6s,SNR=4.0						
EJON	La Jonquera	3.23	96	Lg	Lg	20 54 33.7	
	12nm,1.0s,SNR=7.9						
RJF	Les Rejaudoux	3.25	40	*e*Pn	Pn	20 53 40.7	-0.1
RJF				*e*Sn	Sn	20 54 18.7	-0.6
	3.5nm,0.2s						
RJF	Les Rejaudoux	3.25	40	Pn	Pn	20 53 40.7	-0.1
RJF				Sn	Sn	20 54 18.7	-0.6
	1.8nm,0.2s						
CAF	Calviac	3.28	50	*e*Pn	Pn	20 53 41.2	-0.1
CAF				*e*Sn	Sn	20 54 19.0	-1.1
	2.2nm,0.2s						
CAF	Calviac	3.28	50	Pn	Pn	20 53 41.2	-0.1
CAF				Sn	Sn	20 54 19.0	-1.1
	1.1nm,0.2s						
MFF	Saint Martin d	3.86	14	*e*Pn	Pn	20 53 50.6	+1.4
MFF				*e*Sn	Sn	20 54 34.1	-0.2
	1.1nm,0.2s						
MFF	Saint Martin d	3.86	14	Pn	Pn	20 53 50.6	+1.4
MFF				Sn	Sn	20 54 34.1	-0.2
	0.6nm,0.2s						
PAB	San Pablo	3.97	214	Pn	Pn	20 53 51.2	+0.4
	1.1nm,0.6s,SNR=7.9						
PAB				Sn	Sn	20 54 35.5	-1.7
	0.4nm,0.3s,SNR=7.9						
ECAL	Calabor	4.02	259	Pn	Pn	20 53 53.4	+1.9
	1.8nm,0.3s,SNR=7.9						
TCF	Toulx Ste Croi	4.31	36	*e*Pn	Pn	20 53 56.8	+1.3
TCF				*e*Sn	Sn	20 54 44.0	-1.6
	1.1nm,0.3s						
TCF	Toulx Ste Croi	4.31	36	Pn	Pn	20 53 56.8	+1.3
TCF				Sn	Sn	20 54 44.0	-1.6
	0.6nm,0.3s						
MVO	Moncorvo	4.49	250	Pn	Pn	20 53 58.7	+0.8
	0.3nm,0.8s,SNR=7.9						
MVO				Sn	Sn	20 54 49.3	-0.7
	1.9nm,0.4s,SNR=7.9						
MVO				Lg	Lg	20 55 13.4	
	17nm,1.2s,SNR=4.0						
BGF	Bois d'Agland	4.80	38	*e*Pn	Pn	20 54 03.7	+1.5
BGF				*e*Sn	Sn	20 54 56.2	-1.4
	5.8nm,0.5s						
BGF				*e*Sg	Sg	20 55 22.6	-1.8
	3.7nm,0.5s						
BGF	Bois d'Agland	4.80	38	Pn	Pn	20 54 03.7	+1.5
BGF				Sn	Sn	20 54 56.2	-1.4
	2.9nm,0.5s						
BGF				Lg	Lg	20 55 22.6	
	1.9nm,0.5s						
EQES	Quesada	5.20	194	Pn	Pn	20 54 09.0	+1.2
	0.5nm,0.3s,SNR=7.9						
EADA	Adamuz	5.26	208	Pn	Pn	20 54 09.5	+1.0
	0.4nm,0.1s,SNR=7.9						
SSF	Saint Saulge	5.48	38	*e*Pn	Pn	20 54 11.8	+0.3
SSF	Saint Saulge	5.48	38	Pn	Pn	20 54 11.8	+0.3

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*KRNET **25** 20:55:27.1±0.1, 42°.52N×79°.63E, h10^{km}, mb2.5*

*SOME **25** 20:55:28.2, 42°.53N×79°.70E, h20^{km}*

*NNC **25** 20:55:28.0±1.1, 42°.58N×79°.61E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=7.2km s-min=3.9km az=144.0*

ISC 25 20:55:26.9±1.4, **42°.52N**±0°.04×**79°.65E**±0°.04, **h7**^{km}±10^{km}, **n48**, σ**0^{s}.75**/88, **16C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.66	348	P	Pb	20 55 40.6	-0.2
	15nm,0.1s						
SHLS				S	Sb	20 55 49.9	-0.3
	39nm,0.2s						
SHLS	Shalkode	0.66	348	*e*P	Pb	20 55 40.6	-0.2
	baz=16						
SHLS				*e*S	Sb	20 55 49.9	-0.3
	baz=16						
SHLS	Shalkode	0.66	348	*e*P	Pb	20 55 40.6	-0.2
	15nm,0.1s						
SHLS				*e*S	Sb	20 55 49.9	-0.3
	39nm,0.2s						
UZB	Uzynbulak	0.78	324	P	Pg	20 55 42.0	+0.1
	2.0nm,0.1s						
UZB				S	Sg	20 55 52.3	+0.1
	10nm,0.2s						
UZB	Uzynbulak	0.78	324	*e*P	Pg	20 55 42.0	+0.1
	baz=25						
UZB				*e*S	Sg	20 55 52.2	+0.1
	baz=25						
UZB	Uzynbulak	0.78	324	*e*P	Pg	20 55 42.0	+0.1
	2.0nm,0.1s						
UZB				*e*S	Sg	20 55 52.2	+0.1
	10nm,0.2s						
PDGK	Podgornoye	0.82	352	P	Pg	20 55 42.6	-0.1
	2.0nm,0.2s						
PDGK				S	Sg	20 55 52.9	-0.5
	1.5nm,0.2s						
PDGK	Podgornoye	0.82	352	⇓P	Pg	20 55 42.5	-0.3
	1.9nm,0.2s						
PDGK				⇑S	Sg	20 55 53.3	-0.1
	1.7nm,0.2s						
PDGK	Podgornoye	0.82	352	⇑*i*P	Pg	20 55 42.4	-0.3
	baz=53						
PDGK				⇑*i*S	Sg	20 55 53.5	+0.1
	baz=53						
PRZ	Przheval'sk	0.92	268	⇑*i*P	Pg	20 55 44.1	-0.5
	baz=68						
PRZ				⇑*i*S	Sg	20 55 56.7	+0.1
	baz=68						
SATY	Saty	1.06	301	P	Pb	20 55 47.9	+0.1
	1.9nm,0.1s						
SATY				S	Sg	20 56 01.2	+0.1
	16nm,0.1s						
SATY	Saty	1.06	301	*e*P	Pg	20 55 47.1	-0.2
	0.6nm,0.2s						
SATY				*e*S	Sg	20 56 01.1	-0.1
	7.8nm,0.2s						
KTMS	Ketmen	1.06	29	P	Pg	20 55 47.2	-0.1
	2.0nm,0.1s						
KTMS				S	Sg	20 56 01.1	0.0
	5.1nm,0.3s						
KTMS	Ketmen	1.06	29	*e*P	Pg	20 55 47.2	-0.1
	baz=29						
KTMS				*e*S	Sg	20 56 01.1	0.0
	baz=29						
KTMS	Ketmen	1.06	29	*e*P	Pg	20 55 47.2	-0.1
	2.0nm,0.1s						
KTMS				*e*S	Sg	20 56 01.1	0.0
	5.1nm,0.3s						
KURS	Kuram	1.46	312	P	Pn	20 55 53.7	0.0
	1.1nm,0.4s						
KURS				S	Sn	20 56 12.1	-1.0
	4.3nm,0.5s						
KURS	Kuram	1.46	312	*e*P	Pn	20 55 53.7	0.0
	baz=12						
KURS				*e*S	Sn	20 56 12.1	-1.0
	baz=12						
KURS	Kuram	1.46	312	*e*P	Pn	20 55 53.7	0.0
	1.1nm,0.4s						
KURS				*e*S	Sn	20 56 12.1	-1.0
	4.3nm,0.5s						
TARG	Taragay, Kyrgy	1.58	241	⇑*i*P	Pn	20 55 56.1	+0.4
	baz=40						
TARG				⇑*i*S	Sb	20 56 17.6	+0.6
	baz=40						
MNBS	Baschi	1.81	330	P	Pb	20 56 00.3	-0.1
	0.8nm,0.2s						
MNBS				S	Sb	20 56 24.0	+0.7
	7.0nm,0.2s						
MNBS	Baschi	1.81	330	*e*P	Pb	20 56 00.3	-0.1
	baz=31						
MNBS				*e*S	Sb	20 56 23.5	+0.2
	baz=31						
MNBS	Baschi	1.81	330	*e*P	Pb	20 56 00.3	-0.1
	0.8nm,0.2s						
MNBS				*e*S	Sb	20 56 23.5	+0.2
	7.0nm,0.2s						
DJR	Jarkent	1.82	3	P	Pb	20 56 00.5	-0.1
	0.7nm,0.1s						
DJR				S	Sb	20 56 23.7	0.0
	1.5nm,0.2s						
DJR	Jarkent	1.82	3	*e*P	Pb	20 56 00.5	-0.1
	0.7nm,0.1s						
DJR				*e*S	Sb	20 56 23.7	0.0
	1.5nm,0.2s						
KDJ	Kajisay	1.87	259	⇑*i*P	Pb	20 56 01.8	+0.3
	baz=58						
KDJ				⇑*i*S	Sg	20 56 26.6	-0.4
	baz=58						
KOTS	Kotyrbulak	2.00	292	Pg	Pg	20 56 04.8	-0.4
	1.9nm,0.3s						
KOTS				Lg	Lg	20 56 30.6	
	12nm,0.3s						
KOTS	Kotyrbulak	2.00	292	*e*P	Pg	20 56 04.8	-0.4
	baz=92						
KOTS				*e*S	Sg	20 56 30.7	-0.4
	baz=92						
KOTS	Kotyrbulak	2.00	292	*e*P	Pg	20 56 04.8	-0.4
	1.9nm,0.3s						
KOTS				*e*S	Sg	20 56 30.6	-0.5
	12nm,0.3s						
MDOK	Medeo	2.02	290	Pg	Pb	20 56 04.4	+0.4
	1.3nm,0.4s						
MDOK				Lg	Lg	20 56 30.9	
	3.2nm,0.6s						
MDOK	Medeo	2.02	290	Pg	Pb	20 56 04.6	+0.6
	1.4nm,0.3s						
MDOK				Lg	Lg	20 56 30.7	
	3.3nm,0.5s						
MDOK	Medeo	2.02	290	*e*P	Pb	20 56 04.6	+0.6
	baz=90						
MDOK				*e*S	Sb	20 56 30.7	+1.3
	baz=90						
MDOK	Medeo	2.02	290	*e*P	Pb	20 56 04.6	+0.6
	1.4nm,0.3s						
MDOK				*e*S	Sb	20 56 30.7	+1.3
	3.3nm,0.5s						
TNSS	Tian-Shan	2.06	286	Pg	Pb	20 56 04.8	0.0
	1.7nm,0.2s						
TNSS				Lg	Lg	20 56 31.2	
	2.1nm,0.4s						
TNSS	Tian-Shan	2.06	286	*e*P	Pb	20 56 04.8	0.0
	baz=86						
TNSS				*e*S	Sb	20 56 31.3	+0.6
	baz=86						
TNSS	Tian-Shan	2.06	286	*e*P	Pb	20 56 04.8	0.0
	1.7nm,0.2s						
TNSS				*e*S	Sb	20 56 31.2	+0.6
	2.1nm,0.4s						
IZV	Izvestkoviy	2.29	284	Pg	Pb	20 56 08.8	+0.1
	1.2nm,0.1s						
IZV				Lg	Lg	20 56 38.3	
	3.9nm,0.2s						
IZV	Izvestkoviy	2.29	284	*e*P	Pb	20 56 08.8	+0.1
	baz=84						
IZV				*e*S	Sb	20 56 38.3	+1.0
	baz=84						
IZV	Izvestkoviy	2.29	284	*e*P	Pb	20 56 08.8	+0.1
	1.2nm,0.1s						
IZV				*e*S	Sb	20 56 38.3	+1.0
	3.9nm,0.2s						
CHKK	Chushkaly	2.36	305	Pg	Pb	20 56 10.3	+0.5
	0.5nm,0.1s						
CHKK				Lg	Lg	20 56 40.3	
	4.7nm,0.2s						
CHKK	Chushkaly	2.36	305	*e*P	Pb	20 56 10.3	+0.5
	baz=6.0						
CHKK				*e*S	Sb	20 56 40.3	+1.2
	baz=6.0						
CHKK	Chushkaly	2.36	305	*e*P	Pb	20 56 10.3	+0.5
	0.5nm,0.1s						
CHKK				*e*S	Sb	20 56 40.3	+1.2
	4.7nm,0.2s						
KTBS	Karatobe	2.48	300	Pg	Pb	20 56 11.0	-0.8
	0.7nm,0.2s						
KTBS				Lg	Lg	20 56 41.6	
	6.0nm,0.4s						
KTBS	Karatobe	2.48	300	*e*P	Pb	20 56 11.0	-0.8
	baz=99						
KTBS				*e*S	Sb	20 56 41.6	-1.0
	baz=99						
KTBS	Karatobe	2.48	300	*e*P	Pb	20 56 11.0	-0.8
	0.7nm,0.2s						
KTBS				*e*S	Sb	20 56 41.5	-1.0
	6.0nm,0.4s						
ULHL	Ulahol	2.54	265	⇑*i*P	Pb	20 56 11.2	-1.7
	baz=65						
ULHL				⇑*i*S	Sb	20 56 43.9	-0.5
	baz=65						
BOOM	Boomskoye usch	2.74	271	⇑*i*P	Pn	20 56 13.8	+2.3
	baz=71						
BOOM				⇑*i*S	Sb	20 56 48.2	-2.0
	baz=71						
TKM2	Tokmak 2	3.01	279	⇑Pg	Pb	20 56 21.1	+0.1
	0.3nm,0.2s						
TKM2				⇓Lg	Lg	20 57 01.2	
	0.7nm,0.2s						
TKM2	Tokmak 2	3.01	279	⇑*i*P	Pn	20 56 18.0	+2.8
	baz=79						
TKM2				⇑*i*S	Sb	20 56 55.6	-2.5
	baz=79						

IDC 25 20:56:39.4±2.0, **6°.59S**×**130°.42E**, **h0**^{km}, **mb3.2**/1, **mb1 3.5**/4, **mb1mx3.3**/34, **mbtmp3.3**/4, **ML3.1**/4, **Error ellipse: s-maj=53.2km s-min=27.8km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	7.59	241	Pn	Pn	20 58 32.3	+0.9
	2.0nm,0.3s,baz=60,slow=20,SNR=4.1						
BATI				Sn	Sn	20 59 48.5	-10
	1.6nm,0.3s,baz=270,slow=20,SNR=2.0						
FITZ	Fitzroy Crossi	12.36	202	Pn	Pn	20 59 36.5	-0.2
	0.0nm,0.3s,baz=24,slow=12,SNR=2.3						
FITZ				Sn	Sn	21 01 40.8	-14
	0.1nm,0.3s,baz=298,slow=15,SNR=3.3						
WRA	Warramunga Arr	13.81	164	Pn	Pn	20 59 56.0	-0.6
	0.1nm,0.3s,baz=345,slow=12,SNR=5.7						
WRA				Sn	Sn	21 02 25.9	-5.0
	0.2nm,0.3s,baz=347,slow=21,SNR=6.5						
ASAR	Alice Springs	17.31	169	P	Pn	21 00 42.8	+0.1
	0.1nm,0.3s,baz=343,slow=9.5,SNR=8.1						
MKAR	Makanchi Array	68.11	327	P	P	21 07 41.1	-0.1
	0.1nm,0.6s,baz=130,slow=4.5,SNR=2.4						

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*NORS **25** 21:01:19.2±0.0, 42°.30N×42°.99E, h10^{km}, MPVA3.3*

*TIF **25** 21:01:19.1, 42°.38N×43°.03E, h12^{km}±1^{km}*

*ISK **25** 21:01:19.3, 42°.35N×43°.05E, h4^{km}, ML2.6/6*

ISC 25 21:01:20.5±1.1, **42°.34N**±0°.02×**43°.05E**±0°.02, **h7**^{km}±10^{km}, **n32**, σ**0^{s}.91**/53, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIGR	Digorskoe uzhe	0.68	35	*i* Pg	Pg	21 01 33.4	-0.3
DIGR				*e*Sg	Sb	21 01 43.7	-0.9
ZEI	Tsey	0.77	54	*e*Pg	Pg	21 01 34.9	-0.5
ZEI				*e*Sg	Sb	21 01 46.6	-0.5
EPOS	Posof	0.87	196	*i* P	Pb	21 01 37.5	-0.4
NEY	Neytrino	0.94	345	*e*Pg	Pg	21 01 38.0	-0.6
NEY				*e*Sg	Sg	21 01 51.1	+0.2
LACR	Lac	1.04	62	*e*Pg	Pg	21 01 39.9	-0.5
LACR				*e*Sg	Sn	21 01 55.6	-1.0
KORR	Kora	1.06	45	*e*Pg	Pg	21 01 40.4	-0.4
KORR				*e*Sg	Sn	21 01 56.8	-0.1
GUDG	Gudauri	1.06	83	P	Pn	21 01 42.4	+0.4
LSNR	Lesken	1.10	31	*e*Pg	Pb	21 01 41.6	-0.3
LSNR				*e*Sg	Sn	21 01 56.9	-0.9
TRLG	Trialeti	1.12	135	P	Pb	21 01 41.6	-0.6
TRLG				S	Sn	21 01 58.0	-0.5
BGD	Bogdanovka	1.15	159	P	Pn	21 01 43.2	+0.1
BGD				S	Sn	21 01 59.7	+0.5
BATM	Batumi	1.25	235	PN	Pb	21 01 43.5	-0.9
BATM				SN	Sn	21 02 01.9	+0.4
BATM	Batumi	1.25	235	P	Pb	21 01 43.7	-0.7
BATM				S	Sn	21 02 01.9	+0.4
STDR	Stavd-Durt	1.27	35	*e*Pg	Pg	21 01 46.6	+1.8
STDR				*e*Sg	Sn	21 02 06.0	+4.0
BCA	Borcka	1.39	231	PN	Pn	21 01 45.8	-0.6
BCA				SN	Sg	21 02 05.8	+0.6
TBLG	Delisi	1.39	115	PN	Pn	21 01 45.9	-0.5
TBLG				SN	Sg	21 02 05.8	+0.5
TBLG	Delisi	1.39	115	P	Pn	21 01 45.8	-0.6
TBLG				S	Sg	21 02 05.5	+0.3
SEAG	Tbilisi Sea	1.42	113	P	Sg	21 02 07.3	+1.0
ARTV	Artvin	1.43	217	*i* P	Pb	21 01 47.0	-0.5
ARTV				*i* S	Sg	21 02 07.9	+1.6
ARTV				IAML_P			
	comp=Z,2μm,0.2s						
SHA1	Shidzhatmaz	1.43	348	*e*Pg	Pb	21 01 47.4	-0.2

SHA1				eSg	Sg	21 02 06.4	-0.1
DBOC	Borcka	1.43	227	i P	Pg	21 01 47.4	-0.6
DBOC				i S	Sg	21 02 07.1	+0.5
DBOC				IAML_P			
	comp=Z,2µm,0.3s						
BTNK	Botanikuri	1.46	116	P	Pb	21 01 47.1	-0.8
BTNK				S	Sg	21 02 07.6	+0.3
DAGI	Agillar	1.52	215	i P	Pb	21 01 48.5	-0.6
DAGI				i S	Sg	21 02 10.0	+0.7
DAGI				IAML_P			
	comp=Z,1µm,0.6s						
KIV	Kislovodsk	1.64	351	PN	Pn	21 01 50.0	+0.1
DBAD	Bademkaya	1.67	218	i P	Pb	21 01 51.2	-0.3
DBAD				i S	Sg	21 02 14.3	+0.3
DBAD				IAML_P			
	comp=Z,2µm,0.3s						
EAK	Akyaka	1.70	166	i P	Pb	21 01 51.8	-0.4
EAK				IAML_P			
	comp=Z,1µm,0.8s						
DDEM	Demirkent	1.74	215	i P	Pb	21 01 52.4	-0.5
DDEM				i S	Sg	21 02 18.0	+1.5
DDEM				IAML_P			
	comp=Z,2µm,0.4s						
SENK	Senkaya-Erzuru	1.85	197	PN	Pb	21 01 53.4	-1.4
DIGO	Kars	1.94	173	i P	Pb	21 01 56.1	-0.1
DIGO				IAML_P			
	comp=Z,298nm,0.3s						
KOPR	Koprukoy-ERZUR	2.51	202	PN	Pn	21 02 02.4	+0.5
GNI	Garni	2.53	149	PN	Pn	21 02 03.3	+1.2
AGRB	Hanur-Agry	2.76	181	PN	Pn	21 02 05.9	+0.6
BAYT	Aydıntepe-Bayb	2.93	229	PN	Pn	21 02 08.0	+0.4

*KRNET **25** 21:02:24.4±0.1, 43°.90N×77°.08E, h21^{km}, mb2.0*
*NNC **25** 21:02:24.4±0.9, 43°.89N×77°.08E, h5^{km}±5^{km}, mb2.6, mpv2.2, Error ellipse: s-maj=8.0km s-min=4.8km az=167.0, Suspected Mining explosion.*
*SOME **25** 21:02:25.1, 43°.95N×77°.02E*
ISC 25 21:02:24.5±1.0**, 43°.89N**±0°.04×**77°.08E**±0°.03**, h0^{km}, n13, σ1^{s}06**/26**, 9C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKK	Chushkaly	0.08	244	P	Pg	21 02 27.1	+1.2
	7.2nm,0.0s						
CHKK				S	Sg	21 02 28.5	+1.6
	80nm,0.2s						
KTBS	Karatobe	0.34	239	P	Pg	21 02 31.8	+0.8
	1.6nm,0.2s						
KTBS				S	Sg	21 02 36.8	+1.4
	8.4nm,0.3s						
KUU	Kurty	0.54	271	P	Pg	21 02 34.9	+0.1
	0.9nm,0.1s						
KUU				S	Sg	21 02 42.0	+0.3
	10.0nm,0.1s						
ARXS	Arharly	0.63	58	P	Pg	21 02 36.5	0.0
	0.4nm,0.1s						
ARXS				S	Sg	21 02 44.8	+0.1
	3.5nm,0.1s						
KOTS	Kotyrbulak	0.65	178	P	Pb	21 02 38.3	-0.6
KOTS				S	Sg	21 02 47.1	+1.7
DGS	Degeres	1.15	236	P	Pg	21 02 44.1	-2.4
	0.3nm,0.1s						
DGS				S	Sg	21 02 59.0	-2.4
	1.8nm,0.4s						
SATY	Saty	1.27	130	P	Pg	21 02 48.8	-0.1
	3.3nm,0.2s						
SATY				S	Sg	21 03 04.2	-1.0
	2.8nm,0.1s						
TKM2	Tokmak 2	1.45	229	⇑P	Pn	21 02 51.7	-0.5
	3.3nm,1.1s						
TKM2				⇓S	Sn	21 03 12.0	0.0
	0.8nm,0.6s						
TKM2	Tokmak 2	1.45	229	⇑iP	Pn	21 02 51.5	-0.7
	baz=28						
TKM2				⇑iS	Sg	21 03 10.9	-0.2
	baz=28						
ULHL	Ulahol	1.75	201	⇓iP	Pn	21 02 57.0	+0.7
	baz=1.0						
ULHL				⇓iS	Sb	21 03 20.4	+0.1
	baz=1.0						
KDJ	Kajisay	1.76	178	⇑eP	Pn	21 02 57.1	+0.7
	baz=77						
KDJ				⇑iS	Sb	21 03 20.6	+0.2
	baz=77						
PDGK	Podgornoye	1.84	107	⇑iP	Pn	21 02 57.8	+0.4
	baz=7.0						
PDGK				⇑iS	Sb	21 03 23.0	+0.4
	baz=7.0						
USP	Ospenovka	1.98	253	⇑iP	Pn	21 02 59.9	+0.6
	baz=52						
USP				⇑iS	Sb	21 03 26.3	-0.3
	baz=52						

*SOME **25** 21:08:38.2, 40°.00N×77°.60E, h15^{km}*
*KRNET **25** 21:08:39.8±0.1, 40°.16N×77°.68E, mb2.5*
*NNC **25** 21:08:39.2±1.4, 40°.13N×77°.60E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=11.5km s-min=5.9km az=136.0*
ISC 25 21:08:37.5±2.3**, 40°.08N**±0°.08×**77°.62E**±0°.06**, h2^{km}**±18^{km}**, n32, σ1^{s}50**/49**, 22C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.66	5	⇑iP	Pb	21 09 09.4	+0.3
	baz=3.0						
TARG				⇑iS	Sg	21 09 31.0	+0.2
	baz=3.0						
NRN	Naryn	1.83	318	⇓iP	Pg	21 09 13.4	+0.8
	baz=15						
NRN				⇓iS	Sg	21 09 38.4	+2.0
	baz=15						
KDJ	Kajisay	2.08	351	⇑iP	Pg	21 09 17.7	+0.3
	baz=50						
KDJ				⇑iS	Sg	21 09 44.4	+0.1
	baz=50						
ULHL	Ulahol	2.41	335	⇑iP	Pg	21 09 23.3	-0.3
	baz=33						
ULHL				⇑iS	Sg	21 09 55.4	+0.6
	baz=33						
PRZ	Przheval'sk	2.48	13	⇑iP	Pb	21 09 22.1	-0.8
	baz=13						
PRZ				⇑iS	Sb	21 09 52.9	-1.0
	baz=13						
KZA	Kyzart	2.69	319	⇑iP	Pg	21 09 28.9	-0.1
	baz=17						
KZA				⇑iS	Sg	21 10 05.2	+1.4
	baz=17						
BOOM	Boomskoye usch	2.72	333	⇑eP	Pb	21 09 26.4	-0.7
	baz=31						
BOOM				⇑iS	Sb	21 10 00.4	-0.7
	baz=31						
TNSS	Tian-Shan	3.00	350	Pg	Pb	21 09 33.9	+2.0
	2.9nm,0.3s						
TNSS				Lg	Lg	21 10 14.9	
	7.5nm,0.4s						
TNSS	Tian-Shan	3.00	350	eP	Pb	21 09 33.9	+2.0
	2.9nm,0.3s						
TNSS				eS	Sg	21 10 13.9	-0.1
	7.5nm,0.4s						
SATY	Saty	3.04	11	Pg	Pb	21 09 34.3	+1.9
	2.2nm,0.4s						
SATY				Lg	Lg	21 10 14.3	
	3.6nm,0.2s						
SATY	Saty	3.04	11	eP	Pb	21 09 34.1	+1.7
	2.2nm,0.4s						
SATY				eS	Sg	21 10 13.9	-1.1
	3.6nm,0.2s						
IZV	Izvestkoviy	3.05	346	Pg	Pg	21 09 35.4	-0.6
	1.3nm,0.2s						
IZV				Lg	Lg	21 10 16.4	
	12nm,0.6s						
IZV	Izvestkoviy	3.05	346	eP	Pg	21 09 35.4	-0.6
	1.3nm,0.2s						
IZV				eS	Sg	21 10 16.4	+0.8
	12nm,0.6s						
ARLS	Aral	3.07	307	⇑iP	Pb	21 09 31.5	-1.5
	baz=5.0						
ARLS				⇑iS	Sb	21 10 09.7	-1.3
	baz=5.0						
MDOK	Medeo	3.11	352	Pg	Pb	21 09 33.8	+0.1
	1.9nm,0.6s						
MDOK				Lg	Lg	21 10 15.2	
	7.2nm,0.6s						
MDOK	Medeo	3.11	352	eP	Pg	21 09 36.0	-1.2
MDOK				eS	Sg	21 10 17.1	-0.4
SFK	Sufi-Kurgan	3.16	270	⇑Pg	Pg	21 09 37.8	-0.3
	0.6nm,0.4s						
SFK				⇑Lg	Lg	21 10 21.6	
	1.2nm,0.4s						
SFK	Sufi-Kurgan	3.16	270	Pg	Pb	21 09 35.0	+0.4
	1.0nm,0.1s						
SFK				Lg	Lg	21 10 15.9	
	1.6nm,0.3s						
KOTS	Kotyrbulak	3.18	353	Pg	Pg	21 09 37.5	-0.9
	1.3nm,0.2s						
KOTS				Lg	Lg	21 10 19.5	
	21nm,0.5s						
KOTS	Kotyrbulak	3.18	353	eP	Pg	21 09 37.4	-1.0
	1.5nm,0.4s						
KOTS				eS	Sg	21 10 19.5	-0.1
	21nm,0.5s						
KST	Kastek	3.21	338	Pg	Pb	21 09 37.4	+1.9
	3.9nm,1.2s						
KST				Lg	Lg	21 10 19.9	
	4.3nm,0.7s						
KST	Kastek	3.21	338	eP	Pb	21 09 37.4	+1.9
	1.7nm,0.7s						
KST				eS	Sg	21 10 19.9	-0.9
	4.3nm,0.7s						
TKM2	Tokmak 2	3.22	332	⇑Pg	Pb	21 09 36.7	+1.1
	1.7nm,1.1s						
TKM2				⇑Lg	Lg	21 10 21.5	
	1.8nm,0.5s						
DGS	Degeres	3.45	337	Pg	Pb	21 09 40.0	+0.5
	1.8nm,0.4s						
DGS				Lg	Lg	21 10 22.6	
	4.7nm,0.5s						
DGS	Degeres	3.45	337	eP	Pb	21 09 41.0	+1.5
	1.3nm,0.5s						
DGS				eS	Sg	21 10 26.0	-2.5
	4.7nm,0.5s						
AAK	Ala-Archa	3.48	318	⇑Pg	Pb	21 09 42.0	+2.1
	0.8nm,0.5s						
AAK				⇑Lg	Lg	21 10 28.2	
	4.4nm,0.8s						
PDGK	Podgornoye	3.54	23	Pg	Pb	21 09 43.5	+2.5
	0.7nm,0.3s						
PDGK				Lg	Lg	21 10 30.9	
	2.2nm,0.7s						
PDGK	Podgornoye	3.54	23	⇑Pg	Pb	21 09 41.6	+0.6
	0.7nm,0.5s						
PDGK				⇑Lg	Lg	21 10 29.2	
	3.9nm,0.6s						
CHKK	Chushkaly	3.80	353	Pg	Pb	21 09 47.9	+2.5
	0.9nm,0.3s						
CHKK				Lg	Lg	21 10 37.9	
	7.0nm,0.4s						
CHKK	Chushkaly	3.80	353	eP	Pb	21 09 47.9	+2.5
	0.9nm,0.3s						
CHKK				eS	Sg	21 10 37.9	-1.8
	7.0nm,0.4s						
ARXS	Arharly	4.14	2	Pg	Pb	21 09 54.1	+3.0
	0.4nm,0.3s						
ARXS				Lg	Lg	21 10 48.0	
	3.0nm,0.4s						
ARXS	Arharly	4.14	2	eP	Pb	21 09 53.7	+2.6
	0.4nm,0.3s						
ARXS				eS	Sg	21 10 48.0	-2.4
	3.0nm,0.4s						

*INMG **25** 21:10:18.4±1.2, 37°.04N×13°.04W, h10^{km}, ML2.1, Error ellipse: s-maj=9.5km s-min=7.5km az=134.0*
MDD 25 21:10:16.9±2.3**, 37°.22N×12°.64W, h0^{km}, mb3.6**/2**, Error ellipse: s-maj=23.5km s-min=20.0km az=151.0, PRXIMO SOLUCIN POBRE, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.05	91	ePn	Pn	21 11 04.7	-1.7
PFVI				eSn	Sn	21 11 39.8	-3.8
PFVI	Vila Bisbo	3.05	91	Pn	Pn	21 11 04.7	-1.7
	0.1nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	3.14	83	ePn	Pn	21 11 06.5	-1.1
PTEO				eSn	Sn	21 11 43.4	-2.4
PTEO	Sao Teotonio	3.14	83	Pn	Pn	21 11 06.5	-1.1
PTEO				Sn	Sn	21 11 43.4	-2.4
PMAFR	Mafra	3.17	56	ePn	Pn	21 11 07.7	-0.3
PMAFR				eSn	Sn	21 11 44.8	-1.7
PMAFR				A	A	21 12 11.4	
	16nm,0.6s						
PMAFR	Mafra	3.17	56	Pn	Pn	21 11 06.8	-1.2
	2.0nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	21 11 43.2	-3.3
	16nm,1.0s,SNR=7.9						
MORF	Marmelete	3.19	87	ePn	Pn	21 11 06.5	-1.9
MORF	Marmelete	3.19	87	Pn	Pn	21 11 06.5	-1.9
PNCL	Nicolau / Gran	3.38	74	ePn	Pn	21 11 10.9	-0.1
PNCL				eSn	Sn	21 11 48.4	-3.4
PNCL				A	A	21 11 57.5	
	2.7nm,0.8s						
PNCL	Nicolau / Gran	3.38	74	Pn	Pn	21 11 10.9	-0.1
PNCL				Sn	Sn	21 11 48.4	-3.4
	2.7nm,0.8s						
PBDV	Barranco-do-Ve	3.76	88	ePn	Pn	21 11 15.3	-0.9
PBDV				eSn	Sn	21 11 58.9	-2.3
PBDV				A	A	21 11 59.4	
	2.0nm,0.8s						
PBDV	Barranco-do-Ve	3.76	88	Pn	Pn	21 11 15.3	-0.9
PBDV				Sn	Sn	21 11 58.9	-2.3
	2.0nm,0.8s						
PVAQ	Vaqueiros	3.93	86	ePn	Pn	21 11 17.8	-0.7
PVAQ				eSn	Sn	21 12 02.1	-3.3
PVAQ				A	A	21 12 06.3	
	2.2nm,0.5s						
PVAQ	Vaqueiros	3.93	86	Pn	Pn	21 11 17.8	-0.7
PVAQ				Sn	Sn	21 12 02.1	-3.3
	2.2nm,0.5s						
PMTG	Montargil	3.94	61	ePn	Pn	21 11 17.2	-1.5
PMTG				eSn	Sn	21 12 02.4	-3.2
PMTG				A	A	21 12 05.9	
	2.1nm,0.7s						
PMTG	Montargil	3.94	61	Pn	Pn	21 11 17.2	-1.5
PMTG				Sn	Sn	21 12 02.4	-3.2
	2.1nm,0.7s						
PTOM	Tomar	4.09	53	ePn	Pn	21 11 19.5	-1.3
PTOM				eSn	Sn	21 12 05.6	-3.8
PTOM				A	A	21 12 12.1	
	6.1nm,0.7s						
PTOM	Tomar	4.09	53	Pn	Pn	21 11 19.5	-1.3
PTOM				Sn	Sn	21 12 05.6	-3.8
	3.1nm,0.7s						
EGRO	El Granado	4.12	84	Pn	Pn	21 11 19.5	-1.6
	1.0nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	21 12 06.3	-3.8
	0.7nm,0.4s,SNR=7.9						
PESTR	Estremoz	4.31	66	ePn	Pn	21 11 23.3	-0.5
PESTR				eSn	Sn	21 12 11.3	-3.5
PMRV	Marv??o	4.68	60	ePn	Pn	21 11 28.1	-0.8
PMRV				eSn	Sn	21 12 19.8	-4.1
PMRV				A	A	21 12 24.3	
	1.8nm,0.7s						
PMRV	Marv??o	4.68	60	Pn	Pn	21 11 28.1	-0.8
PMRV				Sn	Sn	21 12 19.8	-4.1
	1.8nm,0.7s						
EBAD	Badajoz	4.70	69	Pn	Pn	21 11 28.2	-1.0
	0.1nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	21 12 19.5	-5.0
	0.8nm,0.7s,SNR=7.9						
EMIN	Mina Concepcio	4.78	82	Pn	Pn	21 11 28.4	-1.8
	0.3nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	21 12 21.7	-4.6
	0.8nm,0.8s,SNR=7.9						
ECAB	El Cabril	5.80	79	Pn	Pn	21 11 43.2	-1.0
	0.8nm,0.4s,SNR=6.9						
ECAB				Sn	Sn	21 12 45.7	-5.7
	0.4nm,0.3s,SNR=4.0						
EADA	Adamuz	6.46	79	Pn	Pn	21 11 51.8	-1.7
	0.3nm,0.1s,SNR=7.9						

*IGIL **25** 21:17:04.7, 37°.13N×12°.61W, h0^{km}*
*INMG **25** 21:17:06.5±1.2, 37°.06N×13°.01W, h10^{km}, ML2.2, Error ellipse: s-maj=10.0km s-min=7.9km az=149.0*
MDD 25 21:17:05.1±2.3**, 37°.21N×12°.60W, h0^{km}, mb3.7**/1**, Error ellipse: s-maj=25.9km s-min=20.1km az=160.0, PRXIMO SOLUCIN POBRE, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.01	90	ePn	Pn	21 17 52.7	-1.3
PFVI				eSn	Sn	21 18 27.6	-3.2
PFVI				A	A	21 18 33.7	
	6.8nm,0.8s						
PFVI	Vila Bisbo	3.01	90	Pn	Pn	21 17 51.6	-2.4
	0.6nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	3.10	83	ePn	Pn	21 17 54.7	-0.6
PTEO				eSn	Sn	21 18 29.6	-3.4
PTEO				A	A	21 18 56.7	
	6.4nm,0.7s						
PTEO	Sao Teotonio	3.10	83	Pn	Pn	21 17 54.7	-0.6
PTEO				Sn	Sn	21 18 29.6	-3.4
	3.2nm,0.7s						
PMAFR	Mafra	3.14	55	ePn	Pn	21 17 55.4	-0.5
PMAFR				eSn	Sn	21 18 32.3	-1.8
PMAFR				A	A	21 18 49.0	
	14nm,0.7s						
PMAFR	Mafra	3.14	55	Pn	Pn	21 17 54.2	-1.7
	2.9nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	21 18 31.9	-2.2
	13nm,0.5s,SNR=7.9						
MORF	Marmelete	3.15	87	eP	Pn	21 17 53.9	-2.1
MORF	Marmelete	3.15	87	ePn	Pn	21 17 55.2	-0.8
MORF				eSn	Sn	21 18 31.8	-2.5
MORF				A	A	21 18 35.3	
	3.2nm,0.8s						
MORF	Marmelete	3.15	87	Pn	Pn	21 17 55.2	-0.8
MORF				Sn	Sn	21 18 31.8	-2.5
	3.2nm,0.8s						
PNCL	Nicolau / Gran	3.35	73	ePn	Pn	21 17 58.4	-0.3
PNCL				eSn	Sn	21 18 35.9	-3.3
PNCL				A	A	21 18 43.9	
	2.4nm,0.8s						
PNCL	Nicolau / Gran	3.35	73	Pn	Pn	21 17 58.4	-0.3
PNCL				Sn	Sn	21 18 35.9	-3.3
	2.4nm,0.8s						
PBDV	Barranco-do-Ve	3.72	88	ePn	Pn	21 18 03.0	-0.9
PBDV	Barranco-do-Ve	3.72	88	Pn	Pn	21 18 03.0	-0.9
PVAQ	Vaqueiros	3.89	86	ePn	Pn	21 18 05.2	-1.0
PVAQ				eSn	Sn	21 18 49.5	-3.1
PVAQ				A	A	21 19 00.0	
	2.3nm,0.7s						
PVAQ	Vaqueiros	3.89	86	Pn	Pn	21 18 05.2	-1.0
PVAQ				Sn	Sn	21 18 49.5	-3.1
	2.3nm,0.7s						
PMTG	Montargil	3.91	60	ePn	Pn	21 18 04.9	-1.5
PMTG				eSn	Sn	21 18 49.7	-3.4
PMTG				A	A	21 18 51.4	
	3.1nm,0.8s						
PMTG	Montargil	3.91	60	Pn	Pn	21 18 04.9	-1.5
PMTG				Sn	Sn	21 18 49.7	-3.4
	3.1nm,0.8s						
EGRO	El Granado	4.08	84	Pn	Pn	21 18 08.1	-0.7
	0.8nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	21 18 53.4	-3.9
	1.6nm,0.7s,SNR=7.9						
PESTR	Estremoz	4.28	66	ePn	Pn	21 18 10.4	-1.2
PESTR				eSn	Sn	21 18 59.2	-3.0
PESTR				A	A	21 19 05.0	
	3.4nm,0.6s						
PMRV	Marv??o	4.65	60	ePn	Pn	21 18 15.4	-1.2
PMRV				eSn	Sn	21 19 07.2	-4.2
PMRV				A	A	21 19 08.7	
	3.2nm,0.6s						
PMRV	Marv??o	4.65	60	Pn	Pn	21 18 15.4	-1.2
PMRV				Sn	Sn	21 19 07.2	-4.2
	3.2nm,0.6s						
EBAD	Badajoz	4.67	69	Pn	Pn	21 18 15.5	-1.4
	0.3nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	21 19 07.0	-4.8
	0.5nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	4.74	81	Pn	Pn	21 18 16.1	-1.8
	0.4nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	21 19 09.3	-4.2
	2.6nm,0.6s,SNR=7.9						
ECAB	El Cabril	5.76	79	Pn	Pn	21 18 30.2	-1.6
	0.5nm,0.2s,SNR=7.4						
ECAB				Sn	Sn	21 19 33.1	-5.6
	0.6nm,0.3s,SNR=7.9						
EADA	Adamuz	6.43	79	Pn	Pn	21 18 39.6	-1.5
	0.2nm,0.2s,SNR=7.9						
EADA				Sn	Sn	21 19 49.7	-5.5
	0.2nm,0.3s,SNR=7.9						

*DRS **25** 21:25:51.6±0.0, 42°.56N×45°.36E, h15^{km}*
*NORS **25** 21:25:51.5±0.0, 42°.52N×45°.51E, h7^{km}, MPVA4.3*
*MOS **25** 21:25:52.9±0.7, 42°.62N×45°.50E, h10^{km}, mb4.3/1, Error ellipse: s-maj=6.8km s-min=4.5km az=28.2*
*TIF **25** 21:25:52.9, 42°.63N×45°.41E, h5^{km}±3^{km}*
*AZER **25** 21:25:53.6±1.9, 42°.34N×45°.44E, h2^{km}, ml3.1/26, Error ellipse: s-maj=3.2km s-min=2.3km az=329.0*
*ISK **25** 21:25:54.7, 42°.48N×45°.58E, h3^{km}, ML3.1/3*
ISC 25 21:25:52.2±1.0**, 42°.57N**±0°.01×**45°.48E**±0°.01**, h6^{km}**±9^{km}**, n127, σ1^{s}29**/232**, 22C-36D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	Botlikh	0.56	80	⇑ePG	Pg	21 26 03.0	+0.1
BTLR				e		21 26 13.0	
BTLR				pmax	pmax		
	comp=Z,408nm,0.6s						
BTLR				smax	smax		
	comp=N,620nm,1.1s						
BTLR	Botlikh	0.56	80	ePg	Pg	21 26 03.1	+0.1
BTLR				eSg	Sb	21 26 11.9	-0.7
DVE	Vedeno	0.61	51	ePG	Pg	21 26 03.8	-0.2
DVE				eS	Sg	21 26 12.3	+0.2
DVE	Vedeno	0.61	51	ePg	Pg	21 26 03.7	-0.3
DVE				eSg	Sg	21 26 12.1	0.0
KMGR	Komgaron	0.66	318	ePG	Pb	21 26 06.3	+0.1
KMGR				eS	Sn	21 26 17.8	-1.1
KMGR	Komgaron	0.66	318	ePg	Pb	21 26 06.1	-0.1
KMGR				eSg	Sn	21 26 17.4	-1.5
GROC	Groznyy	0.68	20	⇓iPG	Pb	21 26 05.9	-0.4
GROC				eS	Sb	21 26 16.3	+0.4
GROC	Groznyy	0.68	20	i Pg	Pb	21 26 05.8	-0.6
GROC				eSg	Sb	21 26 16.1	+0.1
GUDG	Gudauri	0.75	262	P	Pn	21 26 08.0	-1.4
GUDG				S	Sb	21 26 17.7	-0.4
VLKR	Vladikavkaz	0.76	309	ePG	Pn	21 26 08.0	-1.4
VLKR				eS	Sn	21 26 19.5	-1.7
VLKR	Vladikavkaz	0.76	309	ePg	Pb	21 26 07.8	0.0
VLKR				eSg	Sn	21 26 19.5	-1.7
XNZR	Khunzakh	0.91	91	⇑ePG	Pb	21 26 10.1	-0.3
XNZR				e		21 26 23.1	
XNZR	Khunzakh	0.91	91	i Pg	Pg	21 26 07.7	-1.9
XNZR				eSg	Sb	21 26 22.0	-0.7
LACR	Lac	0.91	287	ePG	Pb	21 26 09.6	-0.8
LACR				eS	Sb	21 26 21.8	-0.9
LACR	Lac	0.91	287	ePg	Pg	21 26 09.1	-0.5
LACR				eSg	Sg	21 26 21.2	-0.2
SEAG	Tbilisi Sea	0.95	212	P	Pn	21 26 12.8	+0.9
SEAG				S	Sn	21 26 26.9	+1.1
UNCR	Uncukul	0.98	81	⇓iPG	Pb	21 26 11.0	-0.6
UNCR				eS	Sn	21 26 25.5	-1.2
UNCR				pmax	pmax		
	comp=Z,537nm,0.4s						
UNCR	Uncukul	0.98	81	i Pg	Pb	21 26 11.0	-0.6
UNCR				eSg	Sn	21 26 25.5	-1.2
DLMR	Dylym	0.98	59	⇓iPG	Pb	21 26 11.0	-0.6
DLMR				eS	Sb	21 26 24.0	-0.8
DLMR				pmax	pmax		
	comp=Z,137nm,0.3s						
DLMR	Dylym	0.98	59	i Pg	Pb	21 26 11.0	-0.6
DLMR				eSg	Sb	21 26 24.0	-0.8
TBLG	Delisi	1.00	214	P	Pn	21 26 13.1	+0.3
TBLG				S	Sn	21 26 28.1	+1.0
TBLG	Delisi	1.00	214	ePG	Pn	21 26 13.0	+0.3
TBLG				eS	Sn	21 26 28.1	+1.0
TBLG	Delisi	1.00	214	i P	Pn	21 26 13.7	+1.0
TBLG				i S	Sn	21 26 28.3	+1.1
TBLG				IAML_P			
	comp=Z,8µm,0.2s						
BTNK	Botanikuri	1.02	210	P	Pn	21 26 13.4	+0.4
BTNK				S	Sn	21 26 29.6	+2.1
BTNK	Botanikuri	1.02	210	i P	Pn	21 26 13.6	+0.6
BTNK				i S	Sn	21 26 30.2	+2.7
BTNK				IAML_P			
	comp=Z,11µm,0.2s						
BTKR	Batakoyurt	1.06	320	ePG	Pn	21 26 14.0	+0.5
BTKR				eS	Sn	21 26 30.2	+1.7
BTKR	Batakoyurt	1.06	320	ePg	Pn	21 26 14.0	+0.5

BTKR				eSg	Sn	21 26 30.2	+1.7
ARNR	Ardon	1.07	305	⇓iPG	Pn	21 26 13.8	+0.1
ARNR				eS	Sn	21 26 30.0	+1.2
ARNR	Ardon	1.07	305	i Pg	Pn	21 26 13.7	+0.1
ARNR				eSg	Sn	21 26 29.3	+0.5
KRNR	Karanay	1.08	76	⇑iPG	Pg	21 26 12.5	-0.5
KRNR				eS	Sb	21 26 27.5	-0.3
KRNR				pmax	pmax		
	comp=Z,146nm,0.3s						
KRNR	Karanay	1.08	76	i Pg	Pg	21 26 12.5	-0.5
KRNR				eSg	Sb	21 26 27.5	-0.3
DBC	Dubki	1.09	65	ePG	Pg	21 26 12.6	-0.5
DBC				eS	Sn	21 26 29.4	-0.1
DBC	Dubki	1.09	65	ePg	Pg	21 26 12.6	-0.5
DBC				eSg	Sn	21 26 29.4	-0.1
GNBR	Gunib	1.11	99	ePG	Pn	21 26 13.7	-0.6
GNBR				eS	Sn	21 26 29.3	-0.7
GNBR	Gunib	1.11	99	i Pg	Pn	21 26 13.8	-0.6
GNBR				eSg	Sn	21 26 29.7	-0.2
ARKR	Arakani	1.12	88	⇓iPG	Pn	21 26 14.0	-0.4
ARKR				eS	Sn	21 26 31.0	+0.9
ARKR				pmax	pmax		
	comp=Z,143nm,0.3s						
ARKR	Arakani	1.12	88	i Pg	Pn	21 26 14.0	-0.4
ARKR				eSg	Sn	21 26 31.0	+0.9
KORR	Kora	1.16	297	ePG	Pn	21 26 15.4	+0.5
KORR				eS	Sn	21 26 32.7	+1.6
KORR	Kora	1.16	297	ePg	Pn	21 26 15.0	+0.1
KORR				eSg	Sn	21 26 32.0	+0.9
ZEI	Tsey	1.18	281	ePG	Pb	21 26 14.1	-1.0
ZEI				eS	Sn	21 26 31.4	-0.5
ZEI	Tsey	1.18	281	ePg	Pb	21 26 14.1	-1.0
ZEI				eSg	Sn	21 26 31.4	-0.5
BUJR	Buynaksk	1.23	77	⇓iPG	Pg	21 26 16.0	+0.3
BUJR				eS	Sn	21 26 33.5	+0.7
BUJR				pmax	pmax		
	comp=Z,219nm,0.3s						
BUJR	Buynaksk	1.23	77	i Pg	Pg	21 26 16.0	+0.3
BUJR				eSg	Sn	21 26 33.5	+0.7
ZKTA	Zakatala	1.26	137	⇓P	Pg	21 26 17.4	+1.1
	SNR=18						
ZKTA				⇓S	Sn	21 26 33.8	+0.3
TRKR	Terskaya	1.28	335	ePG	Pg	21 26 17.1	+0.4
TRKR				eS	Sg	21 26 35.4	+2.2
TRKR	Terskaya	1.28	335	ePg	Pg	21 26 17.1	+0.4
TRKR				eSg	Sg	21 26 35.4	+2.2
KMKR	Kumukh	1.28	109	⇓iPG	Pb	21 26 16.0	-0.7
KMKR				eS	Sn	21 26 35.0	+0.8
KMKR				pmax	pmax		
	comp=Z,83nm,0.3s						
KMKR	Kumukh	1.28	109	i Pg	Pb	21 26 16.0	-0.7
KMKR				eSg	Sn	21 26 35.0	+0.8
STDR	Stavd-Durt	1.31	308	ePG	Pg	21 26 18.0	+0.7
STDR				eS	Sg	21 26 37.8	+3.5
STDR	Stavd-Durt	1.31	308	ePg	Pg	21 26 17.7	+0.4
STDR				eSg	Sg	21 26 36.6	+2.3
LSNR	Lesken	1.41	301	ePG	Pg	21 26 18.6	-0.5
LSNR				eS	Sg	21 26 39.3	+2.0
LSNR	Lesken	1.41	301	ePg	Pg	21 26 18.6	-0.5
LSNR				eSg	Sg	21 26 39.3	+2.0
KZRT	Kazreti	1.43	215	P	Pg	21 26 19.9	+0.3
KZRT				S	Sg	21 26 40.0	+1.9
DIGR	Digorskoe uzhe	1.44	284	ePG	Pb	21 26 18.6	-0.8
DIGR				eS	Sg	21 26 38.5	+0.2
DIGR	Digorskoe uzhe	1.44	284	ePg	Pb	21 26 18.6	-0.8
DIGR				eSg	Sg	21 26 38.5	+0.2
TRLG	Trialeti	1.45	225	P	Pg	21 26 20.8	+0.8
TRLG				S	Sg	21 26 42.1	+3.3
PRTR	Priterechnaya	1.47	324	ePG	Pg	21 26 20.2	-0.1
PRTR				eS	Sg	21 26 41.2	+1.8
PRTR	Priterechnaya	1.47	324	ePg	Pg	21 26 20.2	-0.1
PRTR				eSg	Sg	21 26 41.2	+1.8
QZX	Qazax, Azerbai	1.51	183	⇑P	Pg	21 26 21.5	+0.4
	SNR=176						
QZX				⇓S	Sg	21 26 43.7	+2.9
MAK	Makhachkala	1.54	75	ePG	Pb	21 26 20.0	-1.1
MAK				e		21 26 43.3	
MAK				pmax	pmax		
	comp=Z,199nm,0.6s						
MAK				smax	smax		
	comp=E,679nm,0.5s						
MAK				smax	smax		
	comp=E,777nm,0.5s						
MAK	Makhachkala	1.54	75	ePg	Pb	21 26 20.4	-0.7
MAK				eSg	Sg	21 26 43.8	+2.0
SGKR	Sergokala	1.62	93	ePG	Pb	21 26 22.0	-0.4
SGKR				eS	Sg	21 26 44.0	-0.1
SGKR	Sergokala	1.62	93	ePg	Pb	21 26 22.0	-0.4
SGKR				eSg	Sg	21 26 44.0	-0.1
URKR	Urkarakh	1.65	103	⇓iPN	Pg	21 26 23.6	-0.1
URKR				eS	Sg	21 26 46.6	+1.5
URKR	Urkarakh	1.65	103	i Pg	Pg	21 26 23.7	-0.1
URKR				eSg	Sg	21 26 46.7	+1.5
NCK	Nalchik	1.66	305	ePN	Pb	21 26 22.6	-0.6
NCK				i S	Sg	21 26 45.8	+0.2
NCK	Nalchik	1.66	305	ePg	Pb	21 26 22.6	-0.6
NCK				i Sg	Sg	21 26 45.8	+0.2
GDB	GEDABAY	1.86	174	⇑P	Pg	21 26 26.7	-1.1
	SNR=100						
GDB				⇓S	Sg	21 26 51.9	0.0
SEKA	Sheki	1.87	136	⇓P	Pg	21 26 27.9	-0.1
	SNR=80						
SEKA				⇓S	Sg	21 26 54.8	+2.6
BGD	Bogdanovka	1.91	228	P	Pg	21 26 29.2	+0.4
BGD				S	Sg	21 26 54.9	+1.3
KBTC	Kuba-Taba	1.96	310	ePN	Pb	21 26 27.7	-0.6
KBTC				eS	Sg	21 26 53.7	-1.5
KBTC	Kuba-Taba	1.96	310	ePg	Pb	21 26 27.7	-0.6
KBTC				eSg	Sg	21 26 53.7	-1.5
AKT	Akhty	2.00	122	ePN	Pb	21 26 29.0	+0.1
AKT				eS	Sg	21 26 56.6	+0.2
AKT	Akhty	2.00	122	i Pg	Pb	21 26 29.0	+0.1
AKT				eSg	Sg	21 26 55.7	-0.7
GANJ	Ganja	2.02	161	⇑P	Pb	21 26 29.2	-0.1
	SNR=44						
GANJ				⇑S	Sg	21 26 56.3	-0.9
NEY	Neytrino	2.13	289	ePN	Pb	21 26 30.7	-0.6
NEY				eS	Sb	21 26 58.9	+0.8
NEY	Neytrino	2.13	289	ePg	Pb	21 26 30.7	-0.6
NEY				eSg	Sb	21 26 58.9	+0.8
MNGR	Mingechevir, A	2.16	146	⇑S	Sg	21 27 02.0	+0.4
DRN	Derbent	2.18	103	⇓ePN	Pg	21 26 33.1	-0.9
DRN				e		21 27 08.7	
DRN				pmax	pmax		
	comp=Z,68nm,0.6s						
DRN				smax	smax		
	comp=N,100nm,0.8s						
DRN	Derbent	2.18	103	ePg	Pb	21 26 31.9	-0.1
DRN				eSg	Sg	21 27 01.8	-0.5
EPOS	Posof	2.31	243	i P	Pg	21 26 35.5	-0.9
EPOS				i S	Sg	21 27 06.4	+0.1
QSAR	Qusar	2.33	116	⇓P	Pg	21 26 35.6	-1.1
	SNR=28						
QSAR				⇓S	Sg	21 27 07.0	+0.1
EAK	Akyaka	2.35	217	i P	Pb	21 26 35.2	+0.3
EAK				IAML_P			
	comp=Z,3µm,0.5s						
SHA1	Shidzhatmaz	2.37	300	ePN	Pn	21 26 32.9	+1.1
SHA1				eS	Sb	21 27 05.6	+0.6
SHA1	Shidzhatmaz	2.37	300	ePn	Pn	21 26 31.0	-0.8
SHA1				ePn	Pb	21 26 31.4	-4.0
SHA1				eSn	Sb	21 27 04.2	-0.8
QBL	Gabala	2.40	132	⇓P	Pb	21 26 36.2	+0.6
	SNR=6.5						
QBL				⇓S	Sg	21 27 08.4	-0.7
BEYR	Belyy Ugol+	2.42	307	⇓ePN	Pn	21 26 31.8	-0.4
BEYR				eS	Sb	21 27 05.6	-0.6
BEYR	Belyy Ugol+	2.42	307	ePn	Pn	21 26 31.8	-0.4
BEYR				eSn	Sb	21 27 05.6	-0.6
XNQ	Khinaliq	2.43	124	⇑P	Pb	21 26 36.6	+0.2
	SNR=19						
XNQ				⇑S	Sg	21 27 09.8	-0.4
KIV0	Kislovodsk Arr	2.46	305	ePn	Pn	21 26 33.2	+0.3
KIV0				eSn	Sb	21 27 06.5	-0.8
KIV	Kislovodsk	2.46	305	⇑ePN	Pn	21 26 33.2	+0.3
KIV				eS	Sb	21 27 06.6	-0.9
KIV	Kislovodsk	2.46	305	ePn	Pn	21 26 32.7	-0.2
KIV				eSn	Sn	21 27 04.3	+0.9
GNI	Garni	2.48	193	i PN	Pb	21 26 36.7	-0.5
GNI	Garni	2.48	193	ePn	Pb	21 26 36.7	-0.5
QUBA	Quba, Azerbaij	2.56	117	⇑P	Pb	21 26 38.6	+0.2
	SNR=6.2						
QUBA				⇓S	Sg	21 27 12.7	-1.5
BRDA	Brd	2.63	150	⇓P	Pb	21 26 39.2	-0.6
	SNR=6.3						
BRDA				⇓S	Sb	21 27 12.2	-0.1
DIGO	Kars	2.67	217	i P	Pb	21 26 40.6	+0.2
DIGO				IAML_P			
	comp=Z,1µm,0.3s						
IML	Ismayilli	2.69	130	⇓P	Pb	21 26 39.7	-1.1
	SNR=9.6						
IML				⇑S	Sb	21 27 14.5	+0.5
TASB	TASBURUN-IGDIR	2.75	200	PN	Pb	21 26 40.1	-1.6
TASB				SN	Sb	21 27 13.5	-2.1
ZRD	Zardab	2.83	143	⇓S	Sb	21 27 17.5	-0.2
HYR	Heyderabad	2.89	190	⇓P	Pb	21 26 41.4	-2.7
HYR				⇑S	Sb	21 27 16.8	-2.8
DOMR	Dombai	2.92	286	i PN	Pn	21 26 39.0	-0.2
DOMR	Dombai	2.92	286	ePn	Pn	21 26 39.0	-0.2
PQL	Pirkuli	2.93	126	⇓P	Pb	21 26 43.8	-1.1
	SNR=7.1						
SIZA	Siyzn	2.96	119	⇓P	Pb	21 26 44.6	-0.7
SIZA				⇓S	Sb	21 27 22.3	+0.5
KDMR	Kurdemir	2.99	136	⇑S	Sb	21 27 21.5	-1.0
GOF	Gofitskoye	3.05	326	ePN	Pg	21 26 49.8	-0.8
GOF				eS	Sg	21 27 29.6	-0.5
GOF				pmax	pmax		
	comp=Z,20nm,0.7s						
GOF				smax	smax		
	comp=E,60nm,0.4s						
GOF	Gofitskoye	3.05	326	ePn	Pn	21 26 43.1	+2.3
GOF				eSn	Sn	21 27 18.4	+0.8
DAGI	Agillar	3.05	242	i P	Pb	21 26 46.2	-0.7
DAGI				IAML_P			
	comp=Z,43nm,0.2s						
BCA	Borcka	3.08	250	PN	Pb	21 26 46.4	-1.0
BCA				SN	Sb	21 27 24.0	-1.3
SENK	Senkaya-Erzuru	3.09	231	PN	Pb	21 26 46.2	-1.3
SENK				SN	Sb	21 27 23.9	-1.6
DBOC	Borcka	3.09	248	i P	Pb	21 26 46.7	-0.9
DBOC				i S	Sg	21 27 29.6	-1.9
DBOC				IAML_P			
	comp=Z,353nm,0.5s						
ATGJ	Altiaghaj	3.10	122	⇑P	Pb	21 26 45.3	-2.5
ATGJ				⇑S	Sb	21 27 26.3	+0.5
SBZ	Shahbuz	3.17	179	⇑P	Pb	21 26 48.9	0.0
SBZ				⇑S	Sb	21 27 24.5	-3.3
DBAD	Bademkaya	3.23	243	i P	Pb	21 26 47.9	-1.9
DBAD				IAML_P			
	comp=Z,146nm,0.3s						
ARXR	Arkhyz	3.24	289	ePn	Pn	21 26 45.7	+2.1
ARXR				eSn	Sn	21 27 24.1	+1.6
NVNR	Nevinnomyssk	3.27	310	ePn	Pb	21 26 49.0	-1.6
NVNR				eSn	Sb	21 27 31.2	+0.6
GBS	Qobustan	3.30	127	⇓P	Pb	21 26 48.8	-2.3
	SNR=6.5						
GBS				⇓S	Sb	21 27 30.6	-0.9
NAX	Nakhchivan	3.39	180	⇓S	Sb	21 27 29.3	-4.9
AGRB	Hanur-Agry	3.53	213	PN	Pb	21 26 52.2	-2.9
ORD	Ordubad	3.66	174	⇑P	Pn	21 26 51.8	+2.5
ORD				⇑S	Sb	21 27 37.9	-3.9
TUTA	Tutak	3.75	213	i P	Pn	21 26 50.8	0.0
GLBA	Clilabad	3.99	145	⇓P	Pn	21 26 57.1	+3.4
	SNR=7.8						
LRK	Lerik	4.49	150	⇓P	Pn	21 27 04.1	+3.4
	SNR=5.4						
LRK				⇓S	Sn	21 27 55.6	+2.3
LKRN	Lenkeran, Azer	4.60	146	⇑P	Pn	21 27 05.1	+2.9
ASTR	Astara	4.73	147	⇓P	Pn	21 27 07.3	+3.3
ARU	Arti	16.23	27	i P	Pn	21 29 40.3	-0.2
ARU				pmax	pmax		
	comp=Z,12nm,2.0s						

IDC ***25*** *21:26:12.6±0.6, 10°.85S×165°.99E, h0^{km}, mb4.4/19, mb1 4.6/21, mb1mx4.5/36, mbtmp4.4/21, ML5.2/2, MS4.0/11, Ms1 4.0/11, ms1mx3.8/25, Error ellipse: s-maj=19.7km s-min=14.7km az=117.0*

BJI ***25*** *21:26:13.6, 10°.69S×165°.82E, h6^{km}, mB5.1/25, mb4.7/38, Ms4.8/8, Ms7 4.5/7*

ISCJB ***25*** *21:26:16.9±0.3, 10°.90S±0°.04×165°.88E±0°.05, h35^{km}, mb4.6/56, MS4.1/13, Error ellipse: s-maj=7.6km s-min=5.4km az=174.7*

GCMT ***25*** *21:26:17.8±0.2, 10°.81S±0°.01×165°.75E±0°.01, h20^{km}±1^{km}, MW5.0/81, Moment Tensor Solution. s35,c42; s81,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.79±.15; M$_{\theta\theta}$3.62±.12; M$_{\phi\phi}$-2.83±.12; M$_{r\theta}$0.36±.20; M$_{\theta\phi}$-1.93±.10; M$_{\phi r}$-0.70±.23; Best double couple: M$_0$3.85000×10^{16} NP1:ϕ_s330.00000°, δ86.00000°, λ-13.00000°. NP2: ϕ_s61.00000°, δ77.00000°, λ-176.00000°. Principal axes: T 4.2110, Plg6.0000°, Azm16.0000°; N -0.7230, Plg76.0000°, Azm132.0000°; P -3.4900, Plg12.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***25*** *21:26:17.8±1.9, 10°.82S×165°.89E, h29^{km}±14^{km}, mb4.8/36 Error ellipse: s-maj=7.1km s-min=5.6km az=86.0*

ISC 25 21:26:19.3±0.4, **10°.89S**±0°.06×**165°.83E**±0°.06, **h35**^{km}, **n100,** σ1^{s}.**80**/96, **mb4.7**/56, **MS4.2**/13, **1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.97	284	ePn	Pn	21 27 46.6	+1.4
HNR				eS	Sn	21 29 00.5	+8.0
HNR	Honiara	5.97	284	Pn	Pn	21 27 45.5	+0.3
	90nm,0.3s,baz=142,slow=3.8,SNR=14						
HNR				Sn	Sn	21 28 56.5	+4.1
	9.2nm,0.3s,baz=252,slow=20,SNR=1.4						
HNR				LR	LR	21 29 51.6	
	comp=Z,2µm,20.5s,baz=114,slow=36						
MARNC	Mare, Loyalty	10.74	169	ePn	Pn	21 28 48.6	-2.0
DZM	Mont Dzumac	11.13	177	ePn	Pn	21 28 56.2	+0.1
	59nm,0.4s						
DZM				eLR	LR	21 31 32.4	
	comp=Z,1µm,27.1s						
DZM	Mont Dzumac	11.13	177	ePn	Pn	21 28 57.3	+1.2
DZM				eSn	Sn	21 30 59.5	+0.1
DZM	Mont Dzumac	11.13	177	Pn	Pn	21 28 55.1	-1.0
	8.6nm,0.3s,baz=0.5,slow=13,SNR=40						
DZM				Sn	Sn	21 30 55.8	-3.7
	0.6nm,0.3s,baz=322,slow=19,SNR=3.3						
PINNC	Pines Island,	11.76	173	ePn	Pn	21 29 04.5	-0.1
MSVF	Nonsavu	13.65	121	ePn	Pn	21 29 33.7	+3.2
TARA	Tarawa	14.06	31	ePn	Pn	21 29 33.2	-3.0
RABL	Rabaul	15.09	295	ePn	Pn	21 29 47.5	-2.5
EIDS	Eidsvold	20.06	222	eP	P	21 30 45.9	-3.7
	5.1nm,1.1s						
MANU	Manus Island	20.33	294	eP	P	21 30 46.7	-5.9
	100nm,1.0s						
CTA	Charters Tower	20.94	242	P	P	21 31 00.7	+1.4
	14nm,0.8s,baz=70,slow=12,SNR=11						
CTAO	Charters Tower	20.94	242	eP	P	21 31 00.2	+0.9
	25nm,1.0s						
COEN	Coen	22.33	260	eP	P	21 31 14.1	-0.2
	13nm,1.1s						
ARMA	Armidale	23.49	212	eP	P	21 31 25.9	-0.2
	14nm,0.9s						
H11S2	WAKE ISLAND Hy	29.21	2	T	T	22 02 34.7	
	baz=181,slow=76,SNR=606						
H11S3	WAKE ISLAND Hy	29.21	2	T	T	22 02 39.5	
	baz=181,slow=76,SNR=414						
H11S1	WAKE ISLAND Hy	29.23	2	T	T	22 02 36.0	
	baz=181,slow=76,SNR=430						
BKZ	Black Stump Fm	29.72	163	eP	P	21 32 22.7	+0.5
	14nm,0.6s						
H11N1	WAKE ISLAND Hy	30.43	2	T	T	22 04 07.5	
	baz=182,slow=76,SNR=393						
H11N3	WAKE ISLAND Hy	30.44	2	T	T	22 04 06.6	
	baz=182,slow=76,SNR=387						
H11N2	WAKE ISLAND Hy	30.45	2	T	T	22 04 07.6	
	baz=182,slow=76,SNR=321						
STKA	Stephens Creek	30.61	223	P	P	21 32 29.1	-1.0
	1.4nm,0.5s,baz=35,slow=10,SNR=5.5						
STKA				LR	LR	21 44 23.4	
	comp=Z,587nm,18.3s,baz=42,slow=36						
THZ	Tophouse	31.37	170	eP	P	21 32 36.7	-0.1
	32nm,1.2s						
WRAB	Tennant Creek	31.60	250	eP	P	21 32 38.4	-0.6
	12nm,0.9s						
WRA	Warramunga Arr	31.61	250	P	P	21 32 38.3	-0.9
	10nm,0.9s,baz=80,slow=9.2,SNR=35						
WRA				PcP	PcP	21 35 30.7	-0.4
	0.4nm,0.7s,baz=67,slow=3.0,SNR=2.3						
WRA				ScP	ScP	21 39 14.8	+2.9
	2.0nm,1.0s,baz=81,slow=4.2,SNR=5.7						
WRA				LR	LR	21 45 20.5	
	comp=Z,429nm,18.1s,baz=65,slow=36						
LTZ	Lake Taylor	32.26	171	eP	P	21 32 44.5	-0.1
	20nm,0.7s						
FOZ	Fox Glacier	32.70	175	eP	P	21 32 48.7	+0.4
	37nm,1.1s						
OXZ	Oxford	32.76	172	eP	P	21 32 48.7	-0.2
	43nm,1.1s						
ASAR	Alice Springs	32.93	243	P	P	21 32 49.8	-1.0
	8.3nm,0.9s,baz=72,slow=9.5,SNR=52						
ASAR				PcP	PcP	21 35 33.9	-0.8
	0.5nm,0.7s,baz=57,slow=3.4,SNR=3.2						
ASAR				ScP	ScP	21 39 19.1	+2.7
	1.7nm,1.1s,baz=75,slow=3.9,SNR=4.3						
ASAR				LR	LR	21 45 50.9	
	comp=Z,305nm,18.8s,baz=74,slow=36						
RPZ	Rata Peaks	33.01	173	eP	P	21 32 51.5	+0.4
	29nm,1.0s						
RPZ	Rata Peaks	33.01	173	P	P	21 32 49.9	-1.3
	21nm,0.7s,baz=302,slow=3.2,SNR=11						
FITZ	Fitzroy Crossi	39.50	255	eP	P	21 33 46.8	0.0
	6.9nm,0.7s						
FITZ	Fitzroy Crossi	39.50	255	P	P	21 33 45.8	-1.1
	15nm,0.8s,baz=118,slow=5.9,SNR=13						
PPT	Papeete	43.65	104	LR	LR	21 47 55.0	
	comp=Z,190nm,21.6s,baz=334,slow=30						
PPT2	Papeete2	43.65	104	eLQ	LQ	21 44 46.8	
	935nm,26.8s						
PPT2				eLR	LR	21 46 39.3	
	comp=Z,385nm,24.2s,baz=287						
TBI	Tubuai	44.31	112	eS	S	21 41 04.4	+6.3
	177nm,25.2s						
TBI				eLQ	LQ	21 45 03.1	
	406nm,30.2s						
TBI				eLR	LR	21 46 51.5	
	comp=Z,357nm,31.8s						
NWAO	Narrogin (SRO)	49.62	236	eP	P	21 35 08.6	+1.2
	108nm,1.1s						
MJAR	Matsushiro Arr	53.88	332	P	P	21 35 37.5	-1.7
	7.2nm,0.9s,baz=167,slow=8.6,SNR=15						
MAJO	Matsushiro	53.88	332	eP	P	21 35 38.1	-1.0
	6.8nm,0.7s						
MAT	Matsushiro	53.88	332	P	P	21 35 37.9	-1.2
JNU	Nakatsue	55.01	324	eP	P	21 35 46.3	-1.1
	15nm,1.0s						
JNU	Nakatsue	55.01	324	P	P	21 35 46.5	-0.9
	10nm,0.8s,baz=182,slow=2.2,SNR=7.9						
KSRS	Korea Array	59.80	326	P	P	21 36 20.7	-0.4
	1.7nm,0.8s,baz=139,slow=7.6,SNR=7.4						
KSAR	Wonju Array Be	59.81	326	P	P	21 36 20.6	-0.5
NJ2	Nanjing	61.97	315	eP	P	21 36 35.0	-1.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	62.85	333	P	P	21 36 41.1	-0.5
	7.2nm,1.1s,baz=154,slow=7.5,SNR=9.1						
PETK	Petropavlovsk-	64.12	355	P	P	21 36 48.9	-1.0
	2.5nm,0.8s,baz=163,slow=11,SNR=3.1						
MDJ	Mudanjiang	64.25	332	eP	P	21 36 50.5	-0.4
	1.8nm,0.4s						
CN2	Changchun	65.65	329	eP	P	21 37 00.0	0.0
VNDA	Vanda	66.65	181	LR	LR	22 02 46.0	
	comp=Z,148nm,19.4s,baz=346,slow=33						
BJI	Beijing	68.42	321	⇓eP	P	21 37 19.0	+1.4
BJI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
XAN	Xi'an	70.08	312	P	P	21 37 28.0	-0.2
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,160nm,3.6s						
KMI	Kunming	71.11	301	P	P	21 37 35.8	+0.9
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC	Hu-ho-hao-te	71.77	320	eP	P	21 37 39.0	+0.6
HHC				S	S	21 46 53.0	-3.4
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,3.9s						
HHC				LR	LR		
	comp=N,110nm,14.7s						
HHC				LR	LR		
	comp=E,160nm,14.7s						
CMAR	Chiang Mai Arr	72.13	293	P	P	21 37 40.7	-0.1
	2.0nm,0.9s,baz=125,slow=4.9,SNR=14						
CMAR				LR	LR	22 07 39.8	
	comp=Z,37nm,21.1s,baz=95,slow=34						
CMMT	Chiang Mai	72.23	294	P	P	21 37 43.1	+1.6
	3.3nm,1.5s						
CHTO	Chiang Mai	72.24	294	eP	P	21 37 41.7	+0.2
	4.6nm,1.1s						
CHTO	Chiang Mai	72.24	294	P	P	21 37 43.1	+1.6
	15nm,1.6s						
CD2	Chengdu	72.58	307	eP	P	21 37 43.0	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	74.72	312	eP	P	21 37 56.8	+0.9
LZH				pP	pP	21 38 00.0	-6.8
LZH				sP	PcP	21 38 02.3	-7.7
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GAMB	Gambell	76.41	10	eP	P	21 38 04.4	-0.3
	14nm,1.1s						
ULN	Ulaanbaatar	78.23	324	eP	P	21 38 15.1	-0.4
	2.8nm,0.7s						
ANM	Nome	78.32	12	eP	P	21 38 15.3	-0.2
	3.2nm,0.9s						
ANM				ePcP	PcP	21 38 25.6	+0.9
SONM	Songino Array	78.59	324	P	P	21 38 15.7	-1.8
	1.6nm,1.1s,baz=139,slow=6.8,SNR=5.5						
BILL	Bilibino	78.73	0	eP	P	21 38 16.5	-1.2
	8.2nm,0.9s						
GTA	Gaotai	79.01	314	eP	P	21 38 20.5	+0.5
GTA				pP	PcP	21 38 28.5	0.0
GTA				sP	pP	21 38 32.8	+1.7
GTA				pmax	pmax		
	comp=Z,130nm,6.0s						
GTA				LR	LR		
	comp=N,250nm,20.9s						
GTA				LR	LR		
	comp=E,200nm,19.7s						
GTA				LR	LR		
	comp=Z,200nm,18.7s						
QSPA	South Pole Qui	79.11	180	eP	P	21 38 19.0	-1.1
	7.5nm,1.1s						
RND	Reindeer	81.77	19	eP	P	21 38 35.2	+1.0
	10nm,1.1s						
RDOG	Red Dog Mine	81.86	11	eP	P	21 38 34.4	-0.1
	7.1nm,0.8s						
WRH	Wood River Hil	82.76	18	eP	P	21 38 38.0	-1.3
	9.8nm,1.2s						
MDM	Murphy Dome	83.06	18	eP	P	21 38 39.5	-1.4
	9.1nm,1.1s						
HDA	Harding Lake	83.07	19	eP	P	21 38 39.7	-1.2
	22nm,1.0s						
COLA	College	83.12	18	eP	P	21 38 39.5	-1.5
	8.6nm,0.8s						
RIDG	Independ'e Rid	83.31	20	eP	P	21 38 42.9	+0.7
	11nm,1.1s						
ILAR	Eielson Array	83.34	18	P	P	21 38 40.2	-2.1
	4.5nm,1.0s,baz=222,slow=6.5,SNR=23						
ILAR				LR	LR	22 11 03.7	
	comp=Z,37nm,21.5s,baz=164,slow=32						
SCRK	Sand Creek	83.75	20	eP	P	21 38 43.9	-0.7
	9.7nm,1.1s						
MAW	Mawson	84.89	202	LR	LR	22 14 41.8	
	comp=Z,94nm,18.1s,baz=155,slow=34						
EGAK	Eagle	85.21	20	eP	P	21 38 51.1	-0.7
	19nm,1.0s						
DAWY	Dawson	85.39	21	eP	P	21 38 52.6	-0.1
	4.3nm,0.9s						
NVAR	Mina Array Bea	85.86	50	P	P	21 38 54.9	-1.0
	0.8nm,0.5s,baz=240,slow=7.1,SNR=3.2						
EPYK	Eagle Plains	87.64	20	eP	P	21 39 04.3	+0.6
	10nm,1.1s						
WMQ	Urumqi	89.05	315	eP	P	21 39 11.0	+0.1
WMQ				LR	LR		
	comp=N,290nm,25.5s						
WMQ				LR	LR		
	comp=E,160nm,21.5s						
WMQ				LR	LR		
	comp=Z,200nm,25.5s						
U15A	North Rim	89.95	53	eP	P	21 39 18.8	+3.1
	3.8nm,1.1s						
PDAR	Pinedale Array	93.39	47	P	P	21 39 30.1	-1.2

	0.3nm,0.7s,baz=278,slow=2.6,SNR=2.8						
MKAR	Makanchi Array	93.47	317	*e*P	P	21 39 30.8	-0.6
	7.9nm,0.8s						
MKAR	Makanchi Array	93.47	317	P	P	21 39 30.4	-0.9
	0.9nm,0.6s,baz=98,slow=5.5,SNR=8.5						
MKAR				LR	LR	22 21 59.1	
	comp=Z,38nm,19.5s,baz=82,slow=36						
ZALV	Zalesovo Beam	93.48	324	P	P	21 39 29.7	-1.5
	0.5nm,0.5s,baz=132,slow=4.1,SNR=2.8						
MAKZ	Makanchi	93.68	317	*e*P	P	21 39 34.6	+2.3
	3.7nm,1.0s						
YKA	Yellowknife Ar	94.80	27	P	P	21 39 33.7	-3.3
	0.1nm,0.3s,baz=259,slow=5.0,SNR=3.8						
NRIK	Noril'sk	96.01	340	LR	LR	22 22 34.7	
	comp=Z,39nm,19.7s,baz=62,slow=35						
ARCES	ARCESS Array B	116.21	346	PKP	PKiKP	21 44 56.3	-2.1
	15nm,1.2s,baz=96,slow=2.7,SNR=4.1						
FINES	FINESS Array B	121.66	339	PKP	PKPdf	21 45 07.5	-1.5
	3.6nm,1.1s,baz=64,slow=3.2,SNR=4.6						
NOA	NORSAR Array B	126.58	345	PKP	PKPdf	21 45 17.2	-1.4
	0.5nm,0.6s,baz=342,slow=1.9,SNR=3.8						
VYHS	Vyhne	133.48	330	*e*PKP	PKPdf	21 45 29.7	-2.3
GERES	GERESS Array B	135.60	334	PKP	PKPdf	21 45 36.1	0.0
	0.4nm,0.7s,baz=18,slow=1.2,SNR=2.9						
KEST	Kesra	147.34	323	PKPbc	PKPdf	21 45 59.3	+1.8
	6.5nm,1.0s,baz=87,slow=2.6,SNR=3.3						
ESDC	Sonseca Array	149.94	344	PKPbc	PKPdf	21 46 05.0	+3.5
	0.6nm,0.7s,baz=23,slow=3.0,SNR=4.5						
TORD	Torodi Ar. Bea	164.32	280	PKP	PKPdf	21 46 18.8	-1.4
	0.5nm,0.8s,baz=64,slow=0.4,SNR=3.3						
TORD				PKPab	PKPab	21 47 14.1	-0.4
	0.9nm,1.0s,baz=73,slow=5.4,SNR=3.2						

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*SOME **25** 21:27:52.9, 42°.30N×75°.90E, h15^{km}*
*KRNET **25** 21:27:53.0±0.1, 42°.32N×75°.86E, h18^{km}, mb2.7*
*NNC **25** 21:27:52.7±0.4, 42°.32N×75°.86E, h0^{km}±3^{km}, mb3.1, mpv3.0, Error ellipse: s-maj=3.2km s-min=1.6km az=162.0*
*KNET **25** 21:27:52.7±0.2, 42°.32N×75°.85E, h0^{km}, ml1.9, Error ellipse: s-maj=2.2km s-min=1.5km az=19.0*
ISC 25 21:27:53.1±0.9**, 42°.32N**±0°.02×**75°.84E**±0°.01**, h9**^{km}±8^{km}**, n87, σ1^s.30**/153**, 53C-18D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM	Boomskoye usch	0.19	25	⇑*i*P	Pg	21 27 57.3	+0.2
	baz=20						
BOOM				⇑*i*S	Sg	21 28 00.3	+0.5
	baz=20						
ULHL	Ulahol	0.31	104	P	Pg	21 27 58.8	-0.6
	28nm,0.1s,SNR=315						
ULHL				⇑S	Sg	21 28 03.0	-0.6
	330nm,0.3s						
ULHL	Ulahol	0.31	104	⇑*i*P	Pg	21 27 58.6	-0.8
	baz=4.0						
ULHL				⇑*i*S	Sg	21 28 02.7	-0.8
	baz=4.0						
KZA	Kyzart	0.50	241	⇓P	Pg	21 28 03.4	+0.6
	11nm,0.1s,SNR=17						
KZA				⇓S	Sg	21 28 10.8	+1.4
	64nm,0.3s						
KZA	Kyzart	0.50	241	⇑*i*P	Pg	21 28 03.2	+0.4
	baz=42						
KZA				⇑*i*S	Sg	21 28 10.6	+1.1
	baz=42						
TKM2	Tokmak 2	0.62	344	⇑P	Pg	21 28 05.5	+0.3
	11nm,0.1s,SNR=92						
TKM2				⇓S	Sb	21 28 14.3	-1.0
	328nm,0.1s						
TKM2	Tokmak 2	0.62	344	⇑P	Pg	21 28 05.4	+0.1
	4.5nm,0.2s						
TKM2				⇑S	Sb	21 28 14.4	-0.8
	50nm,0.2s						
TKM2	Tokmak 2	0.62	344	⇑*i*P	Pg	21 28 05.3	+0.1
	baz=42						
TKM2				⇑*i*S	Sb	21 28 14.2	-1.0
	baz=42						
KST	Kastek	0.73	7	P	Pg	21 28 07.1	0.0
	14nm,0.1s						
KST				S	Sb	21 28 17.6	-0.5
	282nm,0.3s						
KST	Kastek	0.73	7	*e*P	Pg	21 28 07.1	0.0
	baz=6.0						
KST				*e*S	Sb	21 28 17.5	-0.6
	baz=6.0						
KST	Kastek	0.73	7	*e*P	Pg	21 28 07.1	0.0
	14nm,0.1s						
KST				*e*S	Sb	21 28 17.5	-0.6
	282nm,0.3s						
KBK	Karagaybulak	0.74	297	P	Pb	21 28 08.0	-0.2
	9.1nm,0.2s,SNR=26						
KBK				⇓S	Sb	21 28 18.7	+0.3
	20nm,0.1s						
KBK	Karagaybulak	0.74	297	⇑*i*P	Pg	21 28 07.7	+0.4
	baz=97						
KBK				⇑*i*S	Sb	21 28 18.3	-0.1
	baz=97						
IZV	Izvestkoviy	0.92	39	P	Pb	21 28 10.4	-0.8
IZV				S	Sg	21 28 23.1	+0.4
IZV	Izvestkoviy	0.92	39	*e*P	Pb	21 28 10.4	-0.8
	baz=38						
IZV				*e*S	Sg	21 28 23.1	+0.4
	baz=38						
IZV	Izvestkoviy	0.92	39	*e*P	Pb	21 28 10.4	-0.8
	3.8nm,0.1s						
IZV				*e*S	Sg	21 28 23.1	+0.4
	122nm,0.3s						
MTBS	Maitube	0.92	28	P	Pb	21 28 10.4	-0.8
	8.1nm,0.2s						
MTBS				S	Sg	21 28 23.0	+0.3
	157nm,0.2s						
MTBS	Maitube	0.92	28	⇑*i*P	Pb	21 28 10.4	-0.8
	baz=27						
MTBS				⇑*i*S	Sg	21 28 23.0	+0.3
	baz=27						
MTBS	Maitube	0.92	28	⇑*i*P	Pb	21 28 10.4	-0.8
	8.1nm,0.2s						
MTBS				⇑*i*S	Sg	21 28 23.0	+0.3
	157nm,0.2s						
DGS	Degeres	0.92	357	P	Pb	21 28 08.6	-2.7
	5.1nm,0.1s						
DGS				S	Sb	21 28 21.3	-2.4
	74nm,0.2s						
DGS	Degeres	0.92	357	*e*P	Pb	21 28 09.1	-2.2
	baz=56						
DGS				*e*S	Sb	21 28 20.9	-2.8
	baz=56						
DGS	Degeres	0.92	357	*e*P	Pb	21 28 09.1	-2.2
	5.1nm,0.1s						
DGS				*e*S	Sb	21 28 20.9	-2.8
	74nm,0.2s						
UCH	Uchtor	0.98	265	⇑P	Pb	21 28 12.0	-0.5
	2.8nm,0.3s						
UCH	Uchtor	0.98	265	⇑*i*P	Pb	21 28 11.4	-1.2
	baz=65						
UCH				⇑*i*S	Sb	21 28 25.0	-0.8
	baz=65						
KDJ	Kajisay	1.02	100	⇑*i*P	Pn	21 28 12.4	-1.3
	baz=0.0						
KDJ				⇑*i*S	Sg	21 28 25.7	-0.2
	baz=0.0						
AAK	Ala-Archa	1.04	288	⇑P	Pb	21 28 13.1	-0.3
	5.0nm,0.3s,SNR=5.5						
AAK				⇑S	Sg	21 28 27.2	+0.6
	7.7nm,0.2s						
AAK	Ala-Archa	1.04	288	⇑P	Pb	21 28 13.1	-0.3
	1.4nm,0.5s						
AAK				⇑S	Sg	21 28 27.2	+0.6
	8.1nm,0.5s						
AAK	Ala-Archa	1.04	288	⇑*i*P	Pb	21 28 13.0	-0.3
	baz=88						
AAK				⇑*i*S	Sb	21 28 26.9	-0.2
	baz=88						
CHMS	Chumysh	1.05	311	⇓P	Pb	21 28 13.1	-0.2
	2.3nm,0.1s						
CHMS	Chumysh	1.05	311	⇑*i*P	Pb	21 28 12.8	-0.6
	baz=10.0						
CHMS				⇑*i*S	Sb	21 28 26.8	-0.4
	baz=10.0						
ARLS	Aral	1.22	248	⇑*i*P	Pn	21 28 15.7	-0.7
	baz=49						
ARLS				⇑*i*S	Sb	21 28 31.9	-0.3
	baz=49						
KNDC	Almaty	1.22	43	P	Pg	21 28 16.1	-0.5
KNDC				⇑S	Sg	21 28 32.6	+0.1
	49nm,0.5s						
MDOK	Medeo	1.23	46	⇑P	Pb	21 28 15.7	-0.8
	2.9nm,0.4s						
MDOK				⇑S	Sg	21 28 32.0	-0.6
	21nm,0.6s						
KOTS	Kotyrbulak	1.31	45	P	Pb	21 28 17.4	-0.5
	12nm,0.2s						
KOTS				S	Sg	21 28 35.0	-0.3
	55nm,0.4s						
KOTS	Kotyrbulak	1.31	45	*e*P	Pb	21 28 17.4	-0.5
	baz=45						
KOTS				*e*S	Sg	21 28 35.0	-0.3
	baz=45						
KOTS	Kotyrbulak	1.31	45	*e*P	Pb	21 28 17.4	-0.5
	12nm,0.2s						
KOTS				*e*S	Sg	21 28 35.0	-0.3
	55nm,0.4s						
USP	Ospenovka	1.36	314	⇑P	Pb	21 28 18.7	0.0
	4.0nm,0.2s,SNR=13						
USP	Ospenovka	1.36	314	⇓*i*P	Pb	21 28 18.3	-0.5
	baz=14						
USP				⇓*i*S	Sg	21 28 37.1	+0.2
	baz=14						
SGDS	Sogindy	1.44	322	P	Pb	21 28 19.9	-0.1
	5.4nm,0.2s						
SGDS				S	Sg	21 28 39.1	-0.1
	12nm,0.1s						
KTBS	Karatobe	1.52	24	P	Pb	21 28 21.3	-0.2
	9.3nm,0.2s						
KTBS				S	Sg	21 28 41.1	-0.9
	52nm,0.3s						
KTBS	Karatobe	1.52	24	*e*P	Pb	21 28 21.3	-0.2
	baz=18						
KTBS				*e*S	Sg	21 28 41.2	-0.9
	baz=18						
KTBS	Karatobe	1.52	24	*e*P	Pb	21 28 21.3	-0.2
	9.3nm,0.2s						
KTBS				*e*S	Sg	21 28 41.1	-0.9
	52nm,0.3s						
EKS2	Erkin-Say	1.56	283	⇑P	Pg	21 28 23.1	+0.1
	2.8nm,0.2s,SNR=7.5						
TARG	Taragay, Kyrgy	1.58	111	⇑*i*P	Pb	21 28 21.3	-1.4
	baz=11						
TARG				⇑*i*S	Sb	21 28 41.9	-1.1
	baz=11						
AML	Almayashu	1.60	264	⇑P	Pb	21 28 23.4	+0.4
	2.8nm,0.2s,SNR=9.6						
AML	Almayashu	1.60	264	⇑*i*P	Pb	21 28 23.2	+0.2
	baz=64						
AML				⇑*i*S	Sg	21 28 44.3	-0.3
	baz=64						
KUU	Kurty	1.61	13	P	Pb	21 28 23.1	+0.1
	5.8nm,0.2s						
KUU				S	Sg	21 28 44.1	-0.8
	26nm,0.3s						
KUU	Kurty	1.61	13	⇓*i*P	Pb	21 28 23.1	+0.1
	baz=13						
KUU				⇓*i*S	Sg	21 28 44.2	-0.8
	baz=13						
KUU	Kurty	1.61	13	⇓*i*P	Pb	21 28 23.1	+0.1
	5.8nm,0.2s						
KUU				⇓*i*S	Sg	21 28 44.1	-0.8
	26nm,0.3s						
CHKK	Chushkaly	1.75	28	P	Pb	21 28 25.2	-0.2
	4.2nm,0.3s						
CHKK				S	Sg	21 28 48.4	-0.9
	71nm,0.2s						
CHKK	Chushkaly	1.75	28	*e*P	Pb	21 28 25.2	-0.2
	baz=28						
CHKK				*e*S	Sg	21 28 48.5	-0.9
	baz=28						
CHKK	Chushkaly	1.75	28	*e*P	Pb	21 28 25.2	-0.2
	4.2nm,0.3s						
CHKK				*e*S	Sg	21 28 48.4	-0.9
	71nm,0.2s						
PRZ	Przheval'sk	1.91	84	⇑*i*P	Pb	21 28 27.0	-1.1
	baz=84						
PRZ				⇑*i*S	Sg	21 28 52.1	-2.3
	baz=84						
MRKS	Merke	1.97	283	Pg	Pb	21 28 29.8	+0.6
	4.2nm,0.2s						
MRKS				Lg	Lg	21 28 56.2	
	8.5nm,0.3s						
MRKS	Merke	1.97	283	⇑*i*P	Pb	21 28 29.8	+0.6
	baz=83						
MRKS				⇑*e*S	Sg	21 28 56.3	-0.2
	baz=83						
MRKS	Merke	1.97	283	⇑*i*P	Pb	21 28 29.8	+0.6
	4.2nm,0.2s						
MRKS				*e*S	Sg	21 28 56.4	-0.2
	8.5nm,0.3s						
SATY	Saty	2.03	68	Pg	Pb	21 28 29.6	-0.7
	6.0nm,0.1s						
SATY				Lg	Lg	21 28 56.2	
	30nm,0.1s						
SATY	Saty	2.03	68	*e*P	Pb	21 28 29.6	-0.7
	6.0nm,0.1s						
SATY				*e*S	Sg	21 28 56.1	-2.3
	30nm,0.1s						
KURS	Kuram	2.08	55	Pg	Pb	21 28 30.4	-0.5
	6.5nm,0.4s						
KURS				Lg	Lg	21 28 57.5	
	7.7nm,0.9s						
KURS	Kuram	2.08	55	*e*P	Pb	21 28 30.4	-0.5
	baz=55						
KURS				*e*S	Sg	21 28 57.4	-2.3
	baz=55						
KURS	Kuram	2.08	55	*e*P	Pb	21 28 30.4	-0.5
	6.5nm,0.4s						
KURS				*e*S	Sg	21 28 57.5	-2.3
	7.7nm,0.9s						
ARXS	Arharly	2.39	37	Pg	Pb	21 28 35.4	-0.8
	6.3nm,0.3s						
ARXS				Lg	Lg	21 29 06.5	
	24nm,0.2s						
ARXS	Arharly	2.39	37	*e*P	Pb	21 28 35.4	-0.8
	6.3nm,0.3s						
ARXS				*e*S	Sb	21 29 06.1	+0.4
	24nm,0.2s						
MNAS	Manas	2.47	275	⇑Pn	Pb	21 28 35.6	-2.1
	1.7nm,0.6s						
MNAS				⇑Lg	Lg	21 29 12.3	
	3.7nm,0.5s						
MNAS	Manas	2.47	275	Pg	Pb	21 28 38.1	+0.4
	0.8nm,0.4s						
MNAS				Lg	Lg	21 29 11.2	
	2.7nm,0.6s						
MNAS	Manas	2.47	275	⇑*i*P	Pn	21 28 35.2	+1.6
	baz=75						
MNAS				⇑*i*S	Sb	21 29 06.0	-2.3
	baz=75						
UZB	Uzynbulak	2.49	70	Pg	Pb	21 28 36.5	-1.5
	4.4nm,0.3s						
UZB				Lg	Lg	21 29 07.8	
	10.0nm,0.5s						
UZB	Uzynbulak	2.49	70	*e*P	Pb	21 28 36.5	-1.5
	baz=69						
UZB				*e*S	Sb	21 29 07.8	-1.0
	baz=69						
UZB	Uzynbulak	2.49	70	*e*P	Pb	21 28 36.5	-1.5
	4.4nm,0.3s						
UZB				*e*S	Sb	21 29 07.8	-1.0
	10.0nm,0.5s						
MNBS	Baschi	2.57	46	Pg	Pb	21 28 38.6	-0.8
	2.6nm,0.2s						
MNBS				Lg	Lg	21 29 12.7	
	9.8nm,0.3s						
MNBS	Baschi	2.57	46	*e*P	Pb	21 28 38.6	-0.8
	baz=49						
MNBS				*e*S	Sb	21 29 11.1	0.0
	baz=49						
MNBS	Baschi	2.57	46	*e*P	Pb	21 28 38.6	-0.8
	2.6nm,0.2s						
MNBS				*e*S	Sb	21 29 11.2	0.0
	9.8nm,0.3s						
SHLS	Shalkode	2.80	71	Pg	Pg	21 28 48.8	+2.1
	1.8nm,0.2s						
SHLS				Lg	Lg	21 29 28.5	
	18nm,0.4s						
SHLS	Shalkode	2.80	71	*e*P	Pg	21 28 48.8	+2.1
	baz=73						
SHLS				*e*S	Sg	21 29 28.5	+5.5
	baz=73						
SHLS	Shalkode	2.80	71	*e*P	Pg	21 28 48.8	+2.1
	1.8nm,0.2s						
SHLS				*e*S	Sg	21 29 28.5	+5.5
	18nm,0.4s						
PDGK	Podgornoye	2.87	68	Pg	Pb	21 28 44.0	-0.5
	0.6nm,0.3s						
PDGK				Lg	Lg	21 29 20.5	
	4.0nm,0.4s						
PDGK	Podgornoye	2.87	68	⇓Pn	Pn	21 28 40.5	+1.5
	0.7nm,0.4s						
PDGK				⇓Lg	Lg	21 29 22.1	
	4.9nm,0.5s						
PDGK	Podgornoye	2.87	68	⇓*i*P	Pn	21 28 40.6	+1.5
	baz=68						
PDGK				⇓*i*S	Sn	21 29 14.4	+0.6
	baz=68						
SFK	Sufi-Kurgan	2.90	218	⇓Pn	Pb	21 28 42.3	-2.8
	1.1nm,0.6s						
SFK				⇓Lg	Lg	21 29 25.9	
	3.9nm,0.4s						
SFK	Sufi-Kurgan	2.90	218	Pg	Pg	21 28 47.1	-1.6
	0.5nm,0.2s						
SFK				Lg	Lg	21 29 25.4	
	2.4nm,0.3s						
BTLS	Baital	3.01	335	Pg	Pb	21 28 47.9	+1.1
	1.0nm,0.1s						
BTLS				Lg	Lg	21 29 26.8	
	2.8nm,0.5s						
BTLS	Baital	3.01	335	*e*P	Pb	21 28 47.5	+0.6
	baz=35						
BTLS				*e*S	Sg	21 29 26.8	-3.0
	baz=35						
BTLS	Baital	3.01	335	*e*P	Pb	21 28 47.5	+0.6
	1.0nm,0.1s						
BTLS				*e*S	Sg	21 29 26.8	-3.0
	2.8nm,0.5s						
KTMS	Ketmen	3.50	70	Pg	Pb	21 28 55.9	+0.6
	0.4nm,0.1s						
KTMS				Lg	Lg	21 29 40.6	
	6.2nm,0.5s						
KTMS	Ketmen	3.50	70	*e*P	Pb	21 28 55.9	+0.6
	baz=69						
KTMS				*e*S	Sb	21 29 40.6	+2.6
	baz=69						
KTMS	Ketmen	3.50	70	*e*P	Pb	21 28 55.9	+0.6
	0.4nm,0.1s						
KTMS				*e*S	Sb	21 29 40.6	+2.6
	6.2nm,0.5s						
KK31	Karatay Array	4.00	283	⇓Pg	Pb	21 29 06.6	+2.9
	0.2nm,0.3s,baz=90,slow=16,SNR=3.7						
KK31				⇑Lg	Lg	21 30 00.6	
	0.4nm,0.3s,baz=99,slow=28,SNR=5.2						

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*IDC **25** 21:28:09.7±1.2, 3°.20N×92°.86E, h0^{km}, mb3.8/7, mb1 3.9/10, mb1mx3.7/44, mbtmp3.8/10, ML3.9/3, MS3.2/2, Ms1 3.3/2, ms1mx2.7/32, Error ellipse: s-maj=37.7km s-min=18.4km az=42.0*
*ISCJB **25** 21:28:12.4±0.9, 3°.1N±0°.1×92°.9E±0°.1, h33^{km}, mb3.8/7, MS3.7/1, Error ellipse: s-maj=22.0km s-min=10.4km az=37.7*
ISC 25 21:28:14.4±1.1**, 3°.2N**±0°.2×**92°.95E**±0°.09**, h35**^{km}**, n21, σ1^s.39**/21**, mb4.1**/13**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.98	94	Pn	Pn	21 29 41.4	+0.8
	2.2nm,0.3s,baz=360,slow=6.0,SNR=5.1						
PSI				Sn	Sn	21 30 45.2	-2.8
	1.6nm,0.3s,baz=360,slow=16,SNR=3.3						
PALK	Pallekele	12.85	289	Pn	Pn	21 31 12.5	-2.2
	0.9nm,0.3s,baz=115,slow=11,SNR=5.3						
PALK				Sn	Sn	21 33 23.6	-13
	3.1nm,0.3s,baz=116,slow=4.1,SNR=8.9						
CMAR	Chiang Mai Arr	16.26	21	Pn	Pn	21 31 59.0	-1.3
	0.2nm,0.3s,baz=214,slow=13,SNR=6.6						
CMAR				LR	LR	21 39 15.7	
	comp=Z,24nm,18.7s,baz=190,slow=41						
RAMN	Ramite	24.39	346	*e*P	P	21 33 31.3	+1.4
JIRN	Jiri	25.17	346	*e*P	P	21 33 38.0	+0.9
	12nm,0.7s						
PKI	Pulchoki	25.29	344	*e*P	P	21 33 40.0	+1.9
	18nm,1.3s						
PKIN	Phulchoki	25.30	344	*e*P	P	21 33 40.0	+1.9
	4.2nm,0.6s						
DMN	Daman	25.41	344	*e*P	P	21 33 41.1	+2.0
GUN	Gumba	25.49	345	*e*P	P	21 33 41.0	+1.1
	7.9nm,0.7s						
KKN	Kakani	25.53	344	*e*P	P	21 33 40.9	+0.7
KOLN	Koldanda	26.02	341	*e*P	P	21 33 45.3	+0.7
	9.2nm,0.9s						
DANN	Dangsing	26.50	342	*e*P	P	21 33 49.9	+0.8
	8.3nm,0.7s						
PYUN	Piuthan	26.52	340	*e*P	P	21 33 50.0	+0.8
MKAR	Makanchi Array	44.40	350	P	P	21 36 22.2	+0.4
	1.6nm,0.6s,baz=170,slow=8.5,SNR=24						
SONM	Songino Array	45.96	13	P	P	21 36 34.3	+0.1
	0.2nm,0.6s,baz=194,slow=10,SNR=2.3						
WRA	Warramunga Arr	46.69	121	P	P	21 36 41.4	+1.2
	0.6nm,0.9s,baz=304,slow=8.0,SNR=4.9						
KSRS	Korea Array	46.79	39	LR	LR	21 58 06.0	
	comp=Z,84nm,19.3s,baz=132,slow=38						
GEYT	Alibeck	47.00	322	P	P	21 36 42.6	+0.2
	2.7nm,0.5s,baz=138,slow=6.9,SNR=9.1						
ASAR	Alice Springs	47.99	126	P	P	21 36 50.7	+0.4
	1.0nm,0.9s,baz=328,slow=12,SNR=4.4						
ZALV	Zalesovo Beam	51.03	354	P	P	21 37 13.4	+0.5
	1.4nm,0.5s,baz=181,slow=9.8,SNR=7.5						
BRTR	Keskin Array B	64.64	313	P	P	21 38 48.9	-0.1
	0.4nm,0.6s,baz=104,slow=6.1,SNR=2.6						

IGQ 25 21:42:01.4±0.4**, 2°S**±2°×**7°8W**±°**, h12**^{km}**, MLv3.5, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUYO	Puyo, Santa Ro	0.72	13	P	Pg	21 42 14.7	-0.8
PAT1	Patacocha	0.73	340	P	Pg	21 42 15.4	-0.4
BPAT	Tungurahua Vol	0.74	340	P	Pg	21 42 15.4	-0.4
BPAT				S	Sb	21 42 26.8	0.0
ARRY	Arrayan	0.74	339	P	Pg	21 42 15.0	-0.9
BMAS	Trigal station	0.75	337	P	Pg	21 42 15.5	-0.6
BMAS				S	Sb	21 42 27.0	-0.1
RETU	Refugio	0.79	341	P	Pg	21 42 16.0	-0.8
BULB	Ulba Tungurahu	0.79	344	P	Pg	21 42 16.1	-0.7
BULB				S	Sg	21 42 27.6	+0.4
BBIL	Ulba Tungurahu	0.81	338	P	Pg	21 42 16.4	-0.7
BBIL				S	Sb	21 42 28.6	+0.1
BIL2	Estacion Bilba	0.81	337	P	Pg	21 42 16.5	-0.6
BRUN	Tungurahua Vol	0.81	344	P	Pg	21 42 16.5	-0.6
BRUN				S	Sb	21 42 28.8	+0.2
RUN5	Runtun	0.82	343	P	Pg	21 42 16.7	-0.7
POND	Pondoa	0.82	341	P	Pg	21 42 16.7	-0.6
POND				S	Sb	21 42 28.9	-0.1
JUI6	Juive	0.82	340	P	Pg	21 42 17.3	-0.1
COHC	Cochancay	1.10	256	P	Pb	21 42 21.5	-0.9
COHC				S	Sg	21 42 37.3	+0.3
SAGO	Sagoatoa	1.15	335	P	Pg	21 42 23.7	+0.1
PIS1	Pisayambo	1.15	350	P	Pb	21 42 22.6	-1.0
PIS1				S	Sn	21 42 40.2	+0.4
PISA	Pisayambo	1.15	350	P	Pb	21 42 22.7	-0.9
ARDO	Archidona, Ten	1.26	18	P	Pn	21 42 22.5	-2.4
ARDO				S	Sb	21 42 39.9	-1.5
MILO	Milagro-Astudi	1.37	267	P	Pb	21 42 26.8	-0.2
MILO				S	Sg	21 42 47.7	+2.1
BMOR	Cotopaxi Volca	1.49	349	P	Pn	21 42 28.6	+0.1
BMOR				S	Sg	21 42 50.5	+1.1
BTAM	Cotopaxi Volca	1.53	352	P	Pn	21 42 28.7	-0.4
BTAM				S	Sg	21 42 51.4	+0.5
COV1	Cotopaxi Volc	1.54	354	P	Pb	21 42 30.5	+0.2
BREF	Cotopaxi Volca	1.54	351	P	Pn	21 42 29.5	+0.1
BREF				S	Sg	21 42 52.3	+1.0
BVC2	Cotopaxi Volca	1.55	352	P	Pn	21 42 29.3	-0.1
BVC2				S	Sg	21 42 52.4	+1.0
VC1	Cotopaxi 1	1.56	352	P	Pn	21 42 29.7	+0.2
NAS2	Nasa	1.57	350	P	Pb	21 42 30.4	-0.3
ILLI	Illinizas Sur	1.57	340	P	Pn	21 42 30.2	+0.6
PITA	Cotopaxi Volc	1.65	351	P	Pn	21 42 31.3	+0.6
ANTM	Antisana-La Mi	1.65	359	P	Pn	21 42 30.0	-0.8
ANTM				S	Sn	21 42 52.7	+0.4
ANTG	Antisana-Guama	1.69	358	P	Pn	21 42 30.9	-0.4
ANTG				S	Sb	21 42 53.8	-0.4
ANTS	Antisana-Sarah	1.69	1	P	Pn	21 42 30.9	-0.5
ANTS				S	Sb	21 42 54.4	0.0
ANTI	Antisana	1.74	1	P	Pn	21 42 31.5	-0.5
GGPC	Guagua Pichinc	2.05	348	P	Pb	21 42 38.6	-0.3
PINO	Pino	2.07	348	P	Pb	21 42 39.1	-0.3
CONE	Cono NE Rev Vo	2.19	14	P	Pn	21 42 38.1	+0.1
MCRA	Macar, Loja	2.79	219	P	Pb	21 42 48.7	-2.5

IDC 25 21:51:20.0±3.2**,3°.64N**×**94°.21E,h0^{km},mb3.7**/3**,mb1 4.0**/4**, mb1mx3.5**/29**,mbtmp3.7**/4**,ML4.3**/1**,Error ellipse: s-maj=118.7km s-min=28.9km az=59.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.43	17	Pn	Pn	21 54 59.1	-0.1
	0.4nm,0.3s,baz=210,slow=11,SNR=11						
H08S2	Diego Garcia H	24.40	243	T	T	22 22 38.1	
	baz=61						
H08S3	Diego Garcia H	24.40	243	T	T	22 22 36.1	
	baz=61						
H08S1	Diego Carcia H	24.42	243	T	T	22 22 37.9	
	baz=61						
MKAR	Makanchi Array	44.21	348	P	P	21 59 31.3	+0.4
	0.5nm,0.4s,baz=166,slow=8.8,SNR=6.8						
WRA	Warramunga Arr	45.85	122	P	P	21 59 44.2	-0.1
	1.1nm,1.0s,baz=300,slow=9.0,SNR=7.6						
ZALV	Zalesovo Beam	50.73	353	P	P	22 00 20.7	-0.8
	0.4nm,0.4s,baz=186,slow=7.7,SNR=2.7						

ISCJB ***25*** *21:59:14.8±0.7, 51°.43N±0°.03×16°.12E±0°.03, h0^{km}, Error ellipse: s-maj=4.9km s-min=2.8km az=15.6*
PRU ***25*** *21:59:16.7±0.0, 51°.48N×16°.11E, h0^{km}*
VIE ***25*** *21:59:18.2±1.1, 51°.28N×16°.15E, h0^{km}, mb2.3/3, ml2.6/5, Error ellipse: s-maj=7.5km s-min=5.8km az=28.0, Suspected Mining induced.*
ISC 25 21:59:17.2±1.2**,51°.40N**±0°.05×**16°.14E**±0°.03**,h0^{km},n24, σ0^{s}.73**/47**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.57	170	*e*Pg	Pg	21 59 28.7	+0.5
KSP				*i* Sg	Sb	21 59 37.4	-1.3
UPC	Upice	0.90	185	*e*PG	Pg	21 59 34.7	+0.2
UPC				*e*SG	Sb	21 59 48.2	-0.1
	comp=Z,84nm,0.5s						
DPC	Dobruska-Polom	1.06	174	*e*PG	Pg	21 59 37.4	-0.2
DPC				*e*SG	Sb	21 59 52.6	-0.3
	comp=Z,15nm,0.3s						
PVCC	Panska Ves	1.32	229	*e*PG	Pg	21 59 42.2	-0.4
PVCC				*e*SG	Sn	22 00 01.0	-0.3
	comp=Z,105nm,0.2s						
KRLC	Kraliky	1.39	163	*e*PG	Pn	21 59 44.1	+0.1
KRLC				*e*SG	Sn	22 00 03.1	0.0
	comp=Z,5.6nm,0.2s						
BRG	Berggiesshubel	1.48	250	PG	Pn	21 59 44.8	-0.3
BRG				SG	Sg	22 00 04.5	-0.3
	47nm,0.3s						
GOPC	GO Pecny, Ondr	1.72	210	*e*PG	Pb	21 59 49.3	-0.4
GOPC				*e*SG	Sg	22 00 12.8	+0.3
	comp=Z,7.9nm,0.3s						
PRU	Pruhonice	1.74	216	*e*PG	Pn	21 59 49.4	+0.7
PRU				*e*SG	Sg	22 00 13.7	+0.5
	comp=Z,17nm,0.5s						
MORC	Moravsky Berou	1.86	151	*e*PN	Pn	21 59 49.4	-1.0
MORC				*e*SG	Sg	22 00 16.8	-0.1
CLL	Collm	1.97	268	*e*Pg	Pn	21 59 52.0	+0.2
CLL				*e*		22 00 14.0	
CLL				*e*Sg	Sb	22 00 19.0	+0.1
	comp=Z,15nm,0.5s						
OKC	Ostrava-Krasne	2.02	140	*e*PG	Pb	21 59 54.9	0.0
OKC				*e*SG	Sg	22 00 22.3	+0.1
	comp=Z,9.0nm,0.5s						
VRAC	Vranov	2.12	172	*e*PN	Pn	21 59 53.8	-0.1
VRAC				*e*SG	Sg	22 00 25.6	+0.4
TREC	Trest	2.15	191	*e*SG	Sg	22 00 26.8	+0.5
	comp=Z,13nm,0.4s						
KRUC	Moravsky	2.35	176	*e*PN	Pn	21 59 56.9	-0.2
KRUC				*e*SG	Sg	22 00 32.8	+0.1
OJC	Ojcow	2.61	116	*e*Pg	Pg	22 00 07.5	+0.3
OJC				*e*Sg	Sg	22 00 42.2	+1.2
NKC	Novy Kostel	2.62	245	*e*PG	Pb	22 00 05.7	+0.7
NKC				*e*SG	Sg	22 00 41.4	+0.2
	comp=Z,23nm,0.3s						
KHC	Kasperske Hory	2.81	217	*e*PN	Pn	22 00 02.5	-0.9
KHC				*e*PG	Pb	22 00 08.5	+0.3
KHC				*e*SN	Sn	22 00 37.3	-0.6
KHC				*e*SG	Sg	22 00 47.8	+0.5
	comp=Z,7.3nm,0.3s						
SMOL	Smolenice	3.01	163	*e*SG	Sg	22 00 55.5	+1.6
LANS	Liptovska Anna	3.11	135	*e*SG	Sg	22 00 56.8	-0.2
MODS	Modra-Piesok	3.12	166	*e*PG	Pg	22 00 18.6	+1.6
MODS				*e*SG	Sg	22 00 59.8	+2.3
VYHS	Vyhne	3.40	148	*e*PN	Pn	22 00 10.5	-1.0
VYHS				*e*PG	Pg	22 00 21.8	-0.5
VYHS				*e*SG	Sg	22 01 05.5	-0.7
CONA	Conrad Observa	3.48	183	*e*Pn	Pn	22 00 13.0	+0.2
	comp=Z,0.2nm,0.1s						
CONA				Sg	Sg	22 01 10.2	+1.1
	comp=Z,6.0nm,0.4s						
MOA	Molln	3.76	200	*i* Pn	Pn	22 00 16.4	-0.1
	comp=Z,0.6nm,0.2s						
MOA				Sg	Sg	22 01 17.4	-0.5
	comp=Z,2.5nm,0.2s						
ARSA	Arzberg	4.18	186	*e*Sg	Sg	22 01 30.4	-0.9
	comp=Z,6.0nm,0.6s						

IDC 25 22:31:52.1±1.5**,29°.81N**×**105°.01E,h0^{km},mb3.4**/3**, mb1 3.6**/3**,mb1mx3.1**/38**,mbtmp3.5**/3**,MS4.2**/2**,Ms1 4.2**/2**, ms1mx2.8**/52**,Error ellipse: s-maj=224.7km s-min=25.1km az=56.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	24.47	320	P	P	22 37 12.5	-0.4
	0.2nm,0.5s,baz=115,slow=11,SNR=3.5						
AAK	Ala-Archa	27.59	306	LR	LR	22 50 53.0	
	comp=Z,441nm,21.1s,baz=71,slow=41						
ZALV	Zalesovo Beam	28.23	334	P	P	22 37 47.5	+1.0
	0.4nm,0.3s,baz=131,slow=6.5,SNR=3.6						
KURBB	Kurchatov Arra	28.75	324	P	P	22 37 50.8	-0.5
	43nm,0.7s,baz=131,slow=9.9,SNR=3.9						
WRA	Warramunga Arr	56.96	147	P	P	22 41 39.5	-0.1
	0.2nm,0.5s,baz=337,slow=8.1,SNR=5.5						
DLBC	Dease Lake	80.87	26	LR	LR	23 20 35.9	
	comp=Z,187nm,21.8s,baz=96,slow=36						

IDC ***25*** *22:44:54.6±1.0, 9°.39S×105°.33E, h0^{km}, mb4.2/14, mb1 4.3/14, mb1mx4.1/35, mbtmp4.2/14, MS3.4/5, Ms1 3.4/5, ms1mx3.0/36, Error ellipse: s-maj=41.5km s-min=14.3km az=47.0*
NEIC ***25*** *22:44:55.5±0.4, 9°.45S×105°.36E, h10^{km}, mb4.5/9, Error ellipse: s-maj=11.8km s-min=7.0km az=39.0*
ISCJB ***25*** *22:44:57.8±0.4, 9°.35S±0°.04×105°.51E±0°.03, h33^{km}, mb4.3/31, MS3.4/5, Error ellipse: s-maj=6.1km s-min=4.6km az=7.2*
DJA ***25*** *22:44:57.8±0.7, 9°S±6°×10°5E±°, h10^{km}, M4.8/15, mb5.0/7, mB5.8/2, MLv4.8/15, Mw(mB)5.3/2*
ISC 25 22:44:59.4±0.6**,9°.37S**±0°.07×**105°.49E**±0°.06**,h35^{km},n97, σ1^{s}.97**/90**,mb4.4**/34**,MS3.3**/5**,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	Christmas Isla	1.12	172	*e*Pn	Pn	22 45 13.0	-5.6
XMIS				*e*Sn	Sn	22 45 22.8	-10
SKJI	Sukabumi	2.57	24	P	Pn	22 45 37.2	-1.4
SKJI				S	Sn	22 46 08.7	0.0
CISI	Cisompet, Garu	2.92	52	*e*Pn	Pn	22 45 43.4	-0.1
CISI				*e*Sn	Sn	22 46 16.1	-1.3
CISI	Cisompet, Garu	2.92	52	P	Pn	22 45 42.8	-0.6
CISI				S	Sn	22 46 15.3	-2.1
DBJI	Dramaga	3.06	24	P	Pn	22 45 45.9	+0.6
DBJI				S	Sn	22 46 22.8	+2.0
CMJI	Cimerak	3.33	62	P	Pn	22 45 48.2	-0.7
KASI	Kota Agung	3.94	346	P	Pn	22 45 55.0	-2.4
KASI				S	Sn	22 46 37.1	-5.3
KPJI	Karang Pucung	3.96	60	P	Pn	22 45 58.3	+0.6
KLI	Kotabumi	4.52	352	P	Pn	22 46 02.0	-3.3
LWLI	Liwa	4.55	342	P	Pn	22 46 03.4	-2.4
LWLI				S	Sn	22 46 55.8	-1.7
MDSI	Maura Dua	5.02	345	P	Pn	22 46 10.3	-1.9
UGM	Wanagama	5.19	74	*e*Pn	Pn	22 46 14.0	-0.5
UGM				*e*Sn	Sn	22 47 09.1	-4.1
UGM	Wanagama	5.19	74	P	Pn	22 46 13.7	-0.9
SMRI	Semarang	5.42	65	*e*Pn	Pn	22 46 18.2	+0.5
MNAI	Manna	5.57	333	*e*Pn	Pn	22 46 16.6	-3.2
MNAI				*e*Sn	Sn	22 47 18.9	-3.7
MNAI	Manna	5.57	333	P	Pn	22 46 16.8	-3.0
PCJI	Pacitan	5.75	79	P	Pn	22 46 22.0	-0.2
LHSI	Lahat	5.84	340	P	Pn	22 46 21.9	-1.6
PWJI	Pagerwojo	6.39	78	P	Pn	22 46 30.6	-0.4
JAGI	Jajag, Banyuwa	8.61	85	*e*Pn	Pn	22 47 01.9	+0.3
JAGI				*e*Sn	Sn	22 48 27.7	-10
JAGI	Jajag, Banyuwa	8.61	85	P	Pn	22 47 01.3	-0.3
GSI	Gunungsitoli	13.21	323	*e*Pn	Pn	22 47 58.5	-6.0
GSI	Gunungsitoli	13.21	323	P	Pn	22 47 57.9	-6.6
GIRL	Giralia	15.64	149	*e*Pn	Pn	22 48 31.4	-5.9
	67nm,1.0s						
GIRL				*e*Sn	Sn	22 51 09.5	-20
LHMI	Lhok Sumawe	16.81	329	*e*Pn	Pn	22 48 50.8	-1.4
	45nm,1.0s						
MBWA	Marble Bar	18.05	132	*e*Pn	Pn	22 49 03.4	-4.1
	14nm,1.1s						
MBWA				*e*Sn	Sn	22 52 08.4	-19
KKM	Kota Kinabalu	18.67	35	*e*P	P	22 49 14.2	-0.5
	9.7nm,0.7s						
FITZ	Fitzroy Crossi	21.40	116	P	P	22 49 45.9	+1.7
FITZ				*e*S	S	22 53 32.6	-7.4
FITZ	Fitzroy Crossi	21.40	116	P	P	22 49 45.9	+1.7
	5.9nm,0.8s,baz=277,slow=3.1,SNR=5.6						
PHET	Kaeng Krachan	22.88	345	P	P	22 50 01.8	+1.7
	6.2nm,0.9s						
SRAK	Srakaew	23.48	352	P	P	22 50 07.5	+1.5
	25nm,1.2s						
CHAI	Chaiyaphum	25.34	352	P	P	22 50 26.0	+2.8
	12nm,0.9s,106nm						
UTHA	Uthaitani	25.48	346	P	P	22 50 27.2	+2.8
	4.0nm,1.4s,51nm						
PBKT	Sadao Pong	26.15	350	P	P	22 50 35.3	+4.8
	19nm,1.1s						
H01W3	Cape Leeuwin H	26.61	164	T	T	23 17 10.6	
	baz=341,slow=76,SNR=31						
H01W1	Cape Leeuwin H	26.62	164	T	T	23 17 11.3	
	baz=341,slow=76,SNR=28						
H01W2	Cape Leeuwin H	26.62	164	T	T	23 17 12.0	
	baz=341,slow=76,SNR=33						
SUKH	Sukhothai	27.30	348	P	P	22 50 45.5	+4.7
	5.2nm,0.8s						
UTTA	Uttaradit	27.37	350	P	P	22 50 46.0	+4.5
	3.2nm,1.0s						
LAMP	Lampang	28.31	348	P	P	22 50 55.7	+5.8
CM31	Chiang Mai Arr	28.39	347	*e*P	P	22 50 51.8	+1.2
CMAR	Chiang Mai Arr	28.39	347	P	P	22 50 51.8	+1.2
	4.6nm,0.5s,baz=182,slow=8.5,SNR=21						
CHTO	Chiang Mai	28.73	347	*e*P	P	22 50 53.7	0.0
	7.7nm,0.8s						
CHTO	Chiang Mai	28.73	347	P	P	22 50 54.8	+1.1
	48nm,0.9s						
WR1	Warramunga Arr	29.78	114	*e*P	P	22 51 04.7	+1.6
WR1				*e*PcP	PcP	22 54 06.8	+0.4
WRA	Warramunga Arr	29.78	114	P	P	22 51 04.7	+1.6
	0.8nm,0.8s,baz=285,slow=10,SNR=7.9						
WRA				PcP	PcP	22 54 06.8	+0.4
	0.3nm,0.5s,baz=296,slow=2.5,SNR=3.5						
ASAR	Alice Springs	30.65	121	P	P	22 51 12.2	+1.5
	1.2nm,0.6s,baz=290,slow=8.3,SNR=8.8						
H08S2	Diego Garcia H	32.67	270	T	T	23 26 17.4	
	baz=97,slow=76,SNR=9.4						
H08S3	Diego Garcia H	32.68	270	T	T	23 26 19.7	
	baz=97,slow=76,SNR=17						
H08S1	Diego Carcia H	32.69	270	T	T	23 26 16.5	
	baz=97,slow=76,SNR=5.7						
H08N1	Diego Carcia H	34.27	272	T	T	23 28 37.8	
	baz=145,slow=74,SNR=4.5						
H08N2	Diego Garcia H	34.28	272	T	T	23 28 37.9	
	baz=145,slow=74,SNR=6.7						
H08N3	Diego Garcia H	34.29	272	T	T	23 28 35.0	
	baz=145,slow=74,SNR=5.7						
STKA	Stephens Creek	40.25	129	P	P	22 52 34.0	+1.0
	4.6nm,0.6s,baz=299,slow=9.3,SNR=11						
RAMN	Ramite	40.48	334	*e*P	P	22 52 36.5	+1.2
	8.5nm,0.5s						
LSA	Lhasa	41.22	341	*e*P	P	22 52 42.5	+0.9
	4.9nm,0.9s						
JIRN	Jiri	41.28	334	*e*P	P	22 52 43.0	+1.1
	26nm,0.7s						
PKI	Pulchoki	41.55	333	*e*P	P	22 52 44.6	+0.5
PKIN	Phulchoki	41.56	333	*e*P	P	22 52 44.5	+0.4
GUN	Gumba	41.63	333	*e*P	P	22 52 45.8	+1.0
	16nm,0.6s						
DMN	Daman	41.72	332	*e*P	P	22 52 45.7	+0.3
KKN	Kakani	41.80	333	*e*P	P	22 52 46.7	+0.7
KOLN	Koldanda	42.57	331	*e*P	P	22 52 53.0	+0.7
DANN	Dangsing	42.98	331	*e*P	P	22 52 56.3	+0.6
PYUN	Piuthan	43.14	330	*e*P	P	22 52 57.5	+0.6
XAN	Xi'an	43.29	4	P	P	22 52 58.5	+0.7
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,72nm,4.1s						
LZH	Lanzhou	45.23	358	*e*P	P	22 53 12.0	-1.5
LZH				pP	pP	22 53 23.5	+1.5
LZH				sP	pwP	22 53 28.0	-1.8
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
JNU	Nakatsue	48.69	29	LR	LR	23 15 15.9	
	comp=Z,242nm,20.1s,baz=230,slow=37						
GTA	Gaotai	48.81	354	*e*P	P	22 53 43.3	+2.0
GTA				pP	pP	22 53 49.5	-0.4
GTA				sP	sP	22 53 52.5	-0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSRS	Korea Array	51.10	23	LR	LR	23 16 36.9	
	comp=Z,11nm,20.9s,baz=0.0,slow=37						
KSH	Kashi	55.82	333	P	P	22 54 32.5	-0.9
KSH				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH				pmax	pmax		
	comp=Z,400nm,5.0s						
WSAR	Wadi Sarin	56.13	306	LR	LR	23 16 40.4	
	comp=Z,24nm,19.3s,baz=219,slow=34						
SONA0	Songino Array	56.95	1	*e*P	P	22 54 42.9	+1.6
SONM	Songino Array	56.95	1	P	P	22 54 42.9	+1.6
	comp=Z,0.8nm,0.5s,baz=179,slow=9.3,SNR=14						
SONM				LR	LR	23 21 25.6	
	comp=Z,50nm,18.5s,baz=43,slow=38						
GAR	Garm	58.18	328	*e*P	P	22 54 49.3	-0.8
	comp=Z,5.8nm,0.8s						
USRK	Ussuriysk Ar.	58.48	22	P	P	22 54 51.4	-0.5
	comp=Z,1.3nm,0.7s,baz=208,slow=11,SNR=3.6						
CHGR	Chuyangaron	58.54	327	*e*P	P	22 54 51.1	-1.5
	comp=Z,5.1nm,0.8s						
MK32	Makanchi Array	59.62	342	*e*P	P	22 55 00.3	+0.5
MKAR	Makanchi Array	59.62	342	P	P	22 55 00.3	+0.5
	comp=Z,2.2nm,0.8s,baz=154,slow=8.1,SNR=16						
KURK	Kurchatov	64.22	341	*e*P	P	22 55 31.5	+0.9
	comp=Z,5.4nm,0.9s						
GEYT	Alibeck	64.56	320	P	P	22 55 33.6	+0.4
	comp=Z,2.2nm,0.6s,baz=135,slow=5.5,SNR=9.2						
ZALV	Zalesovo Beam	65.46	347	P	P	22 55 38.6	0.0
	comp=Z,1.7nm,0.6s,baz=127,slow=3.9,SNR=9.1						
ZAA1	Zalesovo Array	65.46	347	*e*P	P	22 55 38.6	0.0
BRVK	Borovoye	69.03	338	*e*P	P	22 56 01.8	+0.5
ABKAR	Akbulak array	70.69	330	*e*P	P	22 56 11.9	+0.3
KBZ	Khabaz	77.41	319	P	P	22 56 51.3	+0.4
	comp=Z,2.5nm,0.9s,baz=76,slow=6.0,SNR=5.7						
MMAI	Mount Meron Ar	78.77	306	LR	LR	23 32 23.4	
	comp=Z,8.1nm,18.1s,baz=180,slow=36						
SEY	Seymchan	80.52	20	P	P	22 57 08.7	+1.1
	comp=Z,1.0nm,0.5s,baz=242,slow=6.0,SNR=6.9						
BR101	Keskin Array S	82.29	312	*e*P	P	22 57 17.4	-0.3
BRTR	Keskin Array B	82.29	312	P	P	22 57 17.4	-0.3
	comp=Z,1.2nm,0.8s,baz=131,slow=6.7,SNR=8.0						
FIA0	FINESS Array S	93.13	332	*e*P	P	22 58 10.1	+0.6
FINES	FINESS Array B	93.13	332	P	P	22 58 10.1	+0.6
	comp=Z,1.0nm,0.8s,baz=102,slow=8.0,SNR=3.4						
ARA0	ARCESS Array S	95.22	340	*e*P	P	22 58 19.4	+0.4
ARCES	ARCESS Array B	95.22	340	P	P	22 58 19.4	+0.4
	comp=Z,14nm,1.1s,baz=93,slow=5.8,SNR=4.4						
BEKR	Beckworth	129.22	45	*e*PKPdf	PKPdf	23 04 02.1	-2.4
TXAR	Lajitas Array	146.24	50	PKPbc	PKPab	23 04 39.1	+1.4
	comp=Z,0.6nm,0.7s,baz=324,slow=2.5,SNR=3.1						
Q51A	Peebles	149.42	14	*e*PKPdf	PKPdf	23 04 40.3	-0.4

PAS ***25*** *22:53:03.7±0.0, 31°.26N×115°.92W, h10^{km}*
ISCJB ***25*** *22:53:03.3±0.6, 31°.10N±0°.04×115°.96W±0°.03, h10^{km}, mb4.2/10, MS3.8/5, Error ellipse: s-maj=7.0km s-min=2.9km az=24.3*
NEIC ***25*** *22:53:04.2±0.0, 31°.22N×115°.92W, h5^{km}, mb4.2/5, MD4.0(MEX), ML4.1(ECX), MW4.1(PAS), After ECX.*
NEIC Felt [III] at Tijuana. Also felt at Camalu, Ensenada and San Felipe. Felt at Camp Pendleton, Oceanside and San Diego, California.
IDC ***25*** *22:53:04.7±2.0, 31°.23N×115°.86W, h0^{km}, mb3.9/6, mb1 4.1/11, mb1mx3.8/49, mbtmp3.9/11, ML3.9/5, MS3.5/13, Ms1 3.5/13, ms1mx3.3/46, Error ellipse: s-maj=35.0km s-min=13.9km az=40.0*
ECX ***25*** *22:53:04.2±0.6, 31°.22N×115°.92W, h5^{km}, MD4.1, ML4.3, Fault plane solution: NP1:ϕ_s120.00000°, δ90.00000°, λ0.00000°.*
MEX ***25*** *22:53:05.1±0.4, 31°.11N×115°.93W, h20^{km}±67^{km}, MD4.0*
ISC 25 22:53:04.9±0.8**,31°.18N**±0°.05×**115°.98W**±0°.04**,h10^{km}, n150,σ2^{s}.30**/145**,mb4.0**/10**,MS3.9**/5**,7C-9D,Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAX	El Zacaton	0.42	323	⇓*e*P	Pg	22 53 11.6	-1.6
ZAX				IAML		22 53 21.2	
	comp=E,39μm,0.7s						
ZAX				⇑*e*		22 53 21.2	
ZAX				⇓*e*		22 53 22.0	
ZAX				IAML		22 53 22.0	
	comp=N,35μm,0.9s						
SPIG	San Pedro Mart	0.46	106	*e*P	Pg	22 53 12.4	-1.6
SPIG				*e*S	Sg	22 53 18.0	-2.0
SPIG	San Pedro Mart	0.46	106	*e*P	Pg	22 53 12.4	-1.6
SPIG				*e*S	Sg	22 53 18.0	-2.0
SPIG	San Pedro Mart	0.46	106	⇑*e*P	Pg	22 53 12.2	-1.7
SPIG				*e*S	Sg	22 53 18.2	-1.9
SPX	San Pedro Mart	0.46	106	*e*P	Pg	22 53 12.0	-2.0
SPX				*e*S	Sg	22 53 17.8	-2.3
SPX	San Pedro Mart	0.46	106	*e*P	Pg	22 53 12.0	-2.0
SPX				*e*S	Sg	22 53 17.8	-2.3
SPX	San Pedro Mart	0.46	106	⇑*e*P	Pg	22 53 12.2	-1.7
SPX				*e*S	Sg	22 53 18.2	-1.9
ECNX	Esteban Cantu	0.71	312	⇑*e*P	Pg	22 53 17.0	-1.7
ECNX				⇓*e*P	Pn	22 53 19.5	-1.6
ECNX				*e*S	Sn	22 53 32.3	+0.1
ECBX	El Chinero	0.85	69	⇑*e*P	Pg	22 53 18.8	-2.4
ECBX				*e*S	Sg	22 53 28.9	-3.3
PBX	Punta Banda	0.85	312	⇑*e*P	Pg	22 53 19.4	-1.9
CBX	Cerro Bola	1.28	333	*e*P	Pn	22 53 25.8	-3.1
CBX				*e*S	Sb	22 53 41.8	-3.8
CBX	Cerro Bola	1.28	333	*e*P	Pn	22 53 25.8	-3.1
CBX				*e*S	Sb	22 53 41.8	-3.8
CBX	Cerro Bola	1.28	333	⇓*e*P	Pn	22 53 25.9	-3.0
CBX				*e*S	Sb	22 53 43.2	-2.4
CBX				⇑*e*		22 53 50.2	
CBX				IAML		22 53 50.2	
	comp=N,6μm,0.6s						
CPBX	Cerro Prieto	1.37	25	*e*P	Pn	22 53 27.0	-3.0
TJIG	Tijuana	1.39	335	*e*P	Pn	22 53 27.5	-2.8
TJIG				*e*S	Sb	22 53 44.4	-4.3
TJIG	Tijuana	1.39	335	⇓*e*P	Pn	22 53 27.6	-2.7
TJIG				*e*S	Sb	22 53 45.3	-3.4
RMX	La Rumorosa	1.43	357	⇓*e*P	Pn	22 53 27.9	-3.1
RMX				*e*S	Sb	22 53 45.4	-4.5
RMX				IAML		22 53 52.4	
	comp=E,6μm,0.6s						
RMX				*e*		22 53 52.4	
IKP	In-Ko-Pah, Jac	1.48	356	⇓*e*P	Pn	22 53 29.6	-2.0
BAR	Barrett	1.61	339	*e*Pn	Pn	22 53 31.2	-2.2
BAR	Barrett	1.61	339	⇓*e*P	Pn	22 53 31.2	-2.2
MONP2	Monument Peak	1.75	348	⇓*e*P	Pn	22 53 34.0	-1.5
CPE	Camp Elliot	1.96	331	*e*Pn	Pn	22 53 36.9	-1.3
GLA	Glamis	2.11	27	*e*Pn	Pn	22 53 37.5	-2.8
113A	Mohawk Valley,	2.46	49	*e*Pn	Pn	22 53 42.5	-2.6
XPFO	Pion Flat	2.46	351	*e*Pn	Pn	22 53 43.7	-1.5
PFO	Pinyon Flats O	2.46	351	*e*Pn	Pn	22 53 45.1	-0.1
PFO				*e*S	Sb	22 54 16.9	-2.9
PFO				Lg	Lg	22 54 17.9	
PFO	Pinyon Flats O	2.46	351	Pn	Pn	22 53 45.3	+0.1
	comp=E,14nm,0.3s,baz=161,slow=11,SNR=84						
PFO				LR	LR	22 54 03.7	
	comp=E,152nm,19.6s,baz=194,slow=24						
PFO				Lg	Lg	22 54 17.9	
	comp=E,70nm,0.3s,baz=217,slow=11,SNR=22						
Y12C	Blythe	2.85	25	*e*Pn	Pn	22 53 48.4	-1.9
MWC	Mount Wilson	3.51	331	*e*Pn	Pn	22 53 59.0	-0.6
PASC	Pasadena Art C	3.52	329	*e*Pn	Pn	22 53 59.8	+0.2
Y14A	Wickenburg	3.73	42	*e*Pn	Pn	22 54 00.9	-1.7
LDFC	Landfair	3.96	10	*e*Pn	Pn	22 54 09.1	+3.3
OSI	Osito Audit: C	4.13	327	*e*Pn	Pn	22 54 10.4	+2.3
GSC	Goldstone, Bar	4.17	351	*e*Pn	Pn	22 54 10.3	+1.6
W13A	Hualapai Mount	4.29	24	*e*Pn	Pn	22 54 10.2	-0.3
TUC	Tucson	4.57	74	*e*Pn	Pn	22 54 11.4	-2.7
TUC				*e*Pg	Pb	22 54 27.3	+2.2
TUC				*e*S	Sn	22 55 07.8	+0.5
ISA	Isabella, Lake	4.94	336	*e*Pn	Pn	22 54 21.5	+2.3
X16A	Lo Mia Camp, P	5.01	49	*e*Pn	Pn	22 54 19.0	-1.3
SRIG	Santa Rosalia	5.04	139	*e*Pn	Pn	22 54 21.9	+1.4
SRIG				*e*Sg	Sg	22 55 43.2	-3.6
DAC	Darwin (Calif)	5.26	346	*e*Pn	Pn	22 54 25.8	+2.0
DAC				*e*Pg	Pb	22 54 38.8	+1.7
DAC				*e*S	Sb	22 55 36.0	-4.5
SHPR	Sheep Range	5.36	7	*e*Pn	Pn	22 54 26.3	+1.2
319A	Douglas	5.74	86	*e*Pn	Pn	22 54 29.3	-0.9
TPNV	Topopah Spring	5.76	358	*e*Pn	Pn	22 54 32.6	+2.0
WUAZ	Wupatki	5.80	40	*e*Pn	Pn	22 54 30.8	-0.3
WUAZ				*e*S	Sn	22 55 40.4	+2.7
U15A	North Rim	6.07	29	*e*Pn	Pn	22 54 35.1	+0.1
X18A	Snowflake	6.08	55	*e*Pn	Pn	22 54 34.4	-0.6
LCMT	Little Creek M	6.25	21	*e*Pn	Pn	22 54 37.8	+0.5
KNB	Kanab	6.39	23	*e*Pn	Pn	22 54 39.7	+0.5
W18A	Petrified Fore	6.55	51	*e*Pn	Pn	22 54 41.4	0.0
CCUT	Cedar City	6.72	18	*e*Pn	Pn	22 54 44.9	+1.1
SZCU	Shurtz Canyon	6.84	20	*e*Pn	Pn	22 54 46.5	+1.1
OMMB	Old Mammoth Mi	6.89	340	*e*Pn	Pn	22 54 45.2	-1.1
MDPB	Devils Postpil	6.93	339	*e*Pn	Pn	22 54 51.6	+4.9
PKCU	Pink Cliffs	6.95	25	*e*Pn	Pn	22 54 48.4	+1.3
R11A	Troy Canyon, C	7.17	2	*e*Pn	Pn	22 54 52.6	+2.8
NVAR	Mina Array Bea	7.49	346	Pn	Pn	22 54 58.9	+4.6
	comp=E,0.8nm,0.3s,baz=159,slow=15,SNR=4.5						
NVAR				Lg	Lg	22 56 56.8	
	comp=E,0.5nm,0.3s,baz=176,slow=14,SNR=2.2						
NVAR				LR	LR	22 57 60.0	
	comp=E,324nm,19.0s,baz=91,slow=40						
MTPU	Mount Pierson	7.53	24	*e*Pn	Pn	22 54 57.3	+2.3
PSUT	Pine Spring	7.55	13	*e*Pn	Pn	22 54 56.5	+1.4
RYN	Ryan	7.72	345	*e*Pn	Pn	22 55 03.4	+5.9
CMB	Columbia Colle	7.75	333	*e*Pn	Pn	22 54 58.1	+0.3
WAKR	Walker	7.84	340	*e*Pn	Pn	22 55 00.2	+1.0
MSU	Marysvale	7.96	22	*e*Pn	Pn	22 55 03.9	+3.1
TCRU	Three Creeks R	7.96	20	*e*Pn	Pn	22 55 05.8	+4.8
KVN	Kaiserville	8.05	348	*e*Pn	Pn	22 55 04.7	+2.7
LAZ	Ladron	8.11	64	*e*Pn	Pn	22 55 02.5	-0.4
LENM	Lemitar	8.16	66	*e*Pn	Pn	22 55 02.3	-1.2
YERR	Yerington	8.24	342	*e*Pn	Pn	22 55 06.3	+1.7
BNM	Barren Site	8.42	67	*e*Pn	Pn	22 55 06.4	-0.8
PNTR	Pine Nut	8.43	340	*e*Pn	Pn	22 55 10.9	+3.6
MVCO	Mesa Verde	8.64	44	*e*Pn	Pn	22 55 10.9	+0.8
LPIG	La Paz	8.65	143	LR	LR	22 58 20.8	
	comp=E,315nm,21.3s,baz=17,slow=37						
Q16A	Castle Valley	8.67	26	*e*Pn	Pn	22 55 14.7	+4.2
ANMO	Albuquerque	8.83	62	*e*Pn	Pn	22 55 12.8	0.0
ANMO				Lg	Lg	22 57 31.1	
ANMO	Albuquerque	8.83	62	Pn	Pn	22 55 13.9	+1.1
	comp=E,0.3nm,0.3s,baz=250,slow=15,SNR=4.4						
ANMO				Lg	Lg	22 57 31.1	
	comp=E,0.1nm,0.3s,baz=118,slow=11,SNR=1.7						
ANMO				LR	LR	22 58 50.2	
	comp=E,274nm,20.4s,baz=258,slow=40						
PV05	Paradox Valley	8.92	38	*e*Pn	Pn	22 55 18.5	+4.5
PAHR	Pah Rah Range	8.95	343	*e*Pn	Pn	22 55 18.9	+4.5
TMUT	Trail Mountain	8.99	24	*e*Pn	Pn	22 55 18.3	+3.3
MNTX	Cornudas Mount	9.07	84	*e*Pn	Pn	22 55 15.6	-0.3
SRU	San Rafael Swe	9.09	28	*e*Pn	Pn	22 55 18.3	+2.0
PV13	Radium Mtn., P	9.12	38	*e*Pn	Pn	22 55 19.1	+2.3
PV17	East Wray Mesa	9.14	37	*e*Pn	Pn	22 55 19.7	+2.7
PV19	Morning Glory	9.15	37	*e*Pn	Pn	22 55 20.3	+3.1
PV10	Paradox Valley	9.17	37	*e*Pn	Pn	22 55 20.1	+2.6
PV14	Lion Creek, Pa	9.18	37	*e*Pn	Pn	22 55 20.8	+3.3
PV03	Paradox Valley	9.18	38	*e*Pn	Pn	22 55 20.0	+2.4
PV20	West Nyswonger	9.18	37	*e*Pn	Pn	22 55 20.1	+2.5
PV16	Nyswonger Mesa	9.19	37	*e*Pn	Pn	22 55 20.1	+2.5
PV11	David Mesa, Pa	9.20	38	*e*Pn	Pn	22 55 20.3	+2.4
PV02	Paradox Valley	9.20	38	*e*Pn	Pn	22 55 20.4	+2.5
PV09	Paradox Valley	9.22	36	*e*Pn	Pn	22 55 20.5	+2.3
PV01	Paradox Valley	9.24	39	*e*Pn	Pn	22 55 20.7	+2.3
PV23	Carpenter Ridg	9.24	36	*e*Pn	Pn	22 55 21.0	+2.5

PV12	Saucer Basin,	9.25	38	ePn	Pn	22 55 20.8	+2.3
PV04	Paradox Valley	9.26	37	ePn	Pn	22 55 21.2	+2.7
P17A	Butcher Ranch,	9.32	26	ePn	Pn	22 55 22.4	+3.0
NLU	North Lily Min	9.32	19	ePn	Pn	22 55 24.9	+5.4
PV21	Cone Mtn., Par	9.35	36	ePn	Pn	22 55 22.3	+2.4
PV07	Paradox Valley	9.42	38	ePn	Pn	22 55 23.3	+2.4
PV15	Paradox Valley	9.44	39	ePn	Pn	22 55 24.2	+3.1
ELK	Elko	9.57	3	Pn	Pn	22 55 26.5	+3.6
	comp=E,0.1nm,0.3s,baz=176,slow=9.5,SNR=6.0						
ELK				Lg	Lg	22 57 57.8	
	comp=E,0.0nm,0.3s,baz=244,slow=18,SNR=2.1						
ELK				LR	LR	22 58 52.1	
	comp=E,182nm,20.2s,baz=164,slow=36						
S22A	4UR Ranch, Cre	10.00	47	ePn	Pn	22 55 30.8	+1.9
BGU	Big Grassy Mou	10.02	13	ePn	Pn	22 55 34.0	+5.0
CTU	Camp Tracy	10.10	19	ePn	Pn	22 55 28.9	-1.2
JLU	Jordanelle	10.10	20	ePn	Pn	22 55 33.2	+3.1
SPUT	South Promonto	10.51	15	ePn	Pn	22 55 38.3	+2.7
TCUT	Toone Canyon	10.59	19	ePn	Pn	22 55 41.4	+4.6
TXAR	Lajitas Array	10.80	97	Pn	Pn	22 55 41.2	+1.5
	comp=E,0.5nm,0.3s,baz=276,slow=12,SNR=22						
TXAR				Lg	Lg	22 58 45.7	
	comp=E,0.1nm,0.3s,baz=291,slow=20,SNR=2.6						
TXAR				LR	LR	23 00 00.1	
	comp=E,99nm,18.0s,baz=0.0,slow=39						
SDCO	Great Sand Dun	10.85	50	ePn	Pn	22 55 41.2	+0.7
	comp=E,4.0nm,0.8s						
SMCO	Snowmass	10.86	40	ePn	Pn	22 55 43.2	+2.4
O20A	White River Ci	10.93	33	ePn	Pn	22 55 41.7	+0.2
T25A	Trinidad	11.28	55	ePn	Pn	22 55 45.8	-0.5
YBH	Yreka Blue Hor	11.84	335	LR	LR	23 01 01.1	
	comp=E,160nm,19.9s,baz=254,slow=40						
ISCO	Idaho Springs	12.05	42	ePn	Pn	22 55 59.1	+2.2
HLID	Hailey	12.43	5	ePn	Pn	22 56 01.2	-0.7
N23A	Red Feather La	12.64	37	ePn	Pn	22 56 08.9	+4.0
BW06	Boulder Array	12.65	22	ePn	Pn	22 56 07.7	+2.6
PDAR	Pinedale Array	12.65	22	Pn	Pn	22 56 07.7	+2.6
	comp=E,0.2nm,0.3s,baz=189,slow=12,SNR=14						
PDAR				LR	LR	23 00 42.0	
	comp=E,157nm,21.9s,baz=356,slow=36						
REDW	Red Top Meadow	12.83	17	ePn	Pn	22 56 11.6	+4.1
TPAW	Teton Pass	12.92	17	ePn	Pn	22 56 13.3	+4.5
FXWY	Fox Creek	13.04	16	ePn	P	22 56 15.3	-5.7
LOHW	Long Hollow	13.12	17	ePn	Pn	22 56 14.7	+3.1
MOOW	Moose Ponds	13.22	17	ePn	Pn	22 56 15.4	+2.6
FLWY	Flagg Ranch	13.54	16	ePn	Pn	22 56 20.4	+3.1
K22A	Casper	13.71	31	ePn	Pn	22 56 19.3	-0.2
ABTX	Abilene, Hawle	13.96	80	ePn	Pn	22 56 21.9	-0.8
YNR	Norris Junctio	14.14	16	ePn	P	22 56 30.0	-3.2
DLMT	Dillon	14.41	10	eP	P	22 56 36.5	+0.5
WMOK	Wichita Mounta	14.87	72	ePn	P	22 56 37.5	-3.5
	comp=E,4.3nm,0.9s						
WMOK				eSn	Sn	22 59 26.3	+6.3
RLMT	Red Lodge	14.88	19	ePn	P	22 56 41.1	-0.2
MSO	Missoula	15.71	5	ePn	P	22 56 54.9	+4.5
	comp=E,5.5nm,1.0s						
NEW	Newport	17.09	357	P	P	22 57 07.7	+2.1
	comp=E,0.0nm,0.3s,baz=196,slow=18,SNR=3.7						
KSU1	Kansas State U	17.68	58	ePn	P	22 57 12.3	+0.1
	comp=E,14nm,1.1s						
SCIA	State Center	21.13	53	eP	P	22 57 54.8	+4.9
	comp=E,23nm,1.1s						
ULM	Lac du Bonnet	24.26	32	P	P	22 58 21.7	-0.3
	comp=E,3.1nm,0.8s,baz=222,slow=6.9,SNR=5.9						
TKL	Tuckaleechee C	27.18	72	LR	LR	23 08 21.6	
	comp=E,84nm,21.0s,baz=241,slow=34						
DLBC	Dease Lake	28.90	345	P	P	22 59 03.6	-0.2
	comp=E,0.8nm,0.4s,baz=190,slow=18,SNR=3.0						
YKA	Yellowknife Ar	31.34	1	P	P	22 59 25.3	+0.1
	comp=E,0.6nm,0.9s,baz=179,slow=9.2,SNR=7.1						
SADO	Sadowa	31.77	54	LR	LR	23 12 11.3	
	comp=E,136nm,18.2s,baz=333,slow=36						
INK	Inuvik	38.55	350	P	P	23 00 29.1	+1.8
	comp=E,2.1nm,1.0s,baz=140,slow=12,SNR=5.4						
ILAR	Eielson Array	38.69	339	P	P	23 00 30.6	+2.1
	comp=E,1.4nm,0.7s,baz=159,slow=8.1,SNR=16						
TOLK	Toolik Lake Re	42.20	342	eP	P	23 01 03.2	+5.6
	comp=E,3.3nm,0.8s						
FRB	Frobisher Bay	44.01	28	LR	LR	23 19 15.1	
	comp=E,133nm,18.8s,baz=193,slow=36						
RDOG	Red Dog Mine	45.78	337	eP	P	23 01 30.9	+4.6
	comp=E,9.3nm,0.6s						
SFJD	Kangerlussuaq	52.11	27	LR	LR	23 24 48.3	
	comp=E,135nm,19.1s,baz=120,slow=37						
JMIC	Jan Mayen	66.28	20	LR	LR	23 32 35.6	
	comp=E,80nm,18.7s,baz=60,slow=36						
H11N3	WAKE ISLAND Hy	69.34	281	T	T	00 20 28.9	
	baz=64,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	69.34	281	T	T	00 20 28.9	
	baz=64,slow=75,SNR=8.0						
H11N1	WAKE ISLAND Hy	69.35	281	T	T	00 20 30.2	
	baz=64,slow=75,SNR=11						
FINES	FINESS Array B	82.71	17	P	P	23 05 29.0	+0.5
	comp=E,2.5nm,1.0s,baz=247,slow=7.1,SNR=3.1						
HHC	Hu-ho-hao-te	95.93	326	eP	P	23 06 33.3	+1.1
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.2s						

ISN ***25*** *22:55:45.8±1.1, 35°.81N×45°.85E, h9^{km}±12^{km}, ML3.4*
AZER ***25*** *22:55:49.4±2.3, 35°.25N×46°.09E, h15^{km}, ml3.5/6, Error ellipse: s-maj=26.4km s-min=17.3km az=120.0*
THR ***25*** *22:55:50.6, 35°.61N×45°.90E, h18^{km}, ML3.1*
TEH ***25*** *22:55:51.3, 35°.74N×46°.01E, h10^{km}, ML3.5*
ISK ***25*** *22:55:58.9, 36°.42N×45°.81E, h5^{km}, ML3.5/7*
ISC 25 22:55:48.6±1.2**, 35°.82N**±0°.02×**45°.81E**±0°.02**, h14**^{km}±10^{km}**, n43, σ1ˢ.68**/58**, 5C-9D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKRK	Kirkuk	1.27	251	ePn	Pn	22 56 12.0	0.0
IKRK				eSn	Sg	22 56 30.0	+0.4
ILIN	Lien	1.30	133	ePg	Pn	22 56 12.5	-0.1
SNGE	Sanandaj	1.44	120	eAML	AML	22 56 39.1	
	comp=N,371nm,0.5s						
SNGE				ePg	Pn	22 56 14.7	+0.2
SNGE				eSg	Sn	22 56 32.0	-1.5
SNGE				eAML	AML	22 56 42.5	
	comp=E,327nm,0.6s						
IGHG	Ghaleghazi	1.61	157	ePn	Pb	22 56 19.6	+1.4
IGHG				IAMB	IAmb	22 56 50.8	
	comp=Z,10μm,0.4s						
KCHF	Cheshme Sefid,	1.84	146	ePn	Pb	22 56 23.0	+0.9
KCHF				IAMB	IAmb	22 56 50.7	
	comp=Z,0.0nm,0.7s						
IAZR	Azarshahr	1.86	4	ePn	Pg	22 56 25.1	+0.7
IAZR				IAMB	IAmb	22 56 29.2	
	comp=Z,9μm,0.3s						
IBST	Bostanabad	2.07	24	IAMB	IAmb	22 56 31.4	
	comp=Z,2μm,0.4s						
HSRG	Sareghieh	2.09	105	ePn	Pb	22 56 26.6	+0.1
HSRG				IAMB	IAmb	22 57 00.9	
	comp=N,0.0nm,0.6s						
IBZA	Bozab	2.15	128	ePn	Pg	22 56 29.4	-0.5
IBZA				IAMB	IAmb	22 57 01.7	
	comp=N,0.0nm,0.7s						
IKOM	Komasi	2.15	139	ePn	Pb	22 56 28.7	+1.3
IKOM				IAMB	IAmb	22 57 05.8	
	comp=Z,0.0nm,0.8s						
MSL	Mosul	2.27	286	ePn	Pn	22 56 26.0	+0.3
MSL				eSn	Sb	22 56 55.0	-2.2
CUKT	Cukurca	2.28	309	PN	Pg	22 56 34.4	+2.0
CUKT				SN	Sg	22 57 00.1	-1.9
ITBZ	Tabriz	2.43	6	ePn	Pb	22 56 33.9	+1.7
ITBZ				IAMB	IAmb	22 56 39.5	
	comp=Z,2μm,0.4s						
ZNJK	Zanjan	2.47	69	ePn	Pb	22 56 32.7	-0.3
ZNJK	Zanjan	2.47	69	ePn	Pb	22 56 32.7	-0.3
ZNJK				eSg	Sg	22 57 08.9	+0.8
ISRB	Sarab	2.50	36	ePn	Pb	22 56 34.1	+0.7
ISRB				IAMB	IAmb	22 56 39.9	
	comp=Z,1μm,0.3s						
IHRS	Heris	2.68	21	ePn	Pb	22 56 37.6	+1.0
IHRS				IAMB	IAmb	22 56 50.5	
	comp=Z,1μm,0.4s						
IBDR	Badra	2.70	178	ePn	Pn	22 56 31.0	-0.6
IBDR				eSn	Sn	22 57 04.0	-0.1
HSAM	Samen	2.79	124	ePn	Pb	22 56 38.1	-0.4
HSAM				IAMB	IAmb	22 57 35.2	
	comp=E,0.0nm,1.3s						
BHD	Baghdad	2.80	205	ePn	Pn	22 56 33.0	0.0
BHD				eSn	Sn	22 57 07.0	+0.4
IDOB	Doab	2.81	135	ePn	Pb	22 56 38.8	+0.1
IDOB				IAMB	IAmb	22 57 31.3	
	comp=Z,0.0nm,1.4s						
IKFM	Kafar-mosalman	2.83	143	ePn	Pb	22 56 37.9	-1.1
IKFM				IAMB	IAmb	22 57 27.3	
	comp=Z,0.0nm,1.0s						
IMRD	Marand	2.89	358	ePn	Pg	22 56 43.3	-0.8
IMRD				IAMB	IAmb	22 57 33.6	
	comp=Z,1μm,0.5s						
ORD	Ordubad	3.11	3	⇑P	Pb	22 56 46.2	+2.4
ORD				⇓S	Sg	22 57 29.5	+1.0
NAX	Nakhchivan	3.36	356	⇓P	Pb	22 56 50.1	+2.0
NAX				⇑S	Sg	22 57 36.9	+0.3
AKDM	Akdamar-Van	3.38	319	PN	Pb	22 56 48.6	+0.2
AKDM				SN	Sn	22 57 24.7	+3.5
VANB	Van	3.38	326	PN	Pb	22 56 46.9	-1.5
VANB				SN	Sn	22 57 21.9	+0.7
GRMI	Germi	3.42	28	ePn	Pb	22 56 47.1	-1.9
GRMI	Germi	3.42	28	ePn	Pb	22 56 47.1	-1.9
LRK	Lerik	3.47	35	⇓P	Pb	22 56 47.5	-2.4
	SNR=7.5						
LRK				⇓S	Sb	22 57 36.1	+4.2
ASTR	Astara	3.63	40	⇓P	Pb	22 56 50.5	-2.1
ASTR				⇓S	Sb	22 57 36.7	+0.4
CLDR	Caldiran	3.65	336	PN	Pb	22 56 50.7	-2.3
LKRN	Lenkeran, Azer	3.73	38	⇓P	Pb	22 56 50.6	-3.8
LKRN				⇓S	Sb	22 57 41.1	+1.7
GLBA	Clilabad	3.99	30	⇑P	Pb	22 56 55.3	-3.4
	SNR=7.1						
GLBA				⇑S	Sb	22 57 45.4	-1.3
GURO	Guroymak-BITLI	4.07	313	PN	Pb	22 56 58.9	-1.3
SVAN	Silvan-Diyarba	4.37	304	PN	Pb	22 57 04.4	-0.8
AGRB	Hanur-Agry	4.37	330	PN	Pb	22 57 01.5	-3.8
MAZI	Mazidag	4.62	292	PN	Pb	22 57 09.5	0.0
NSR	Nassriya	4.80	177	ePn	Pn	22 57 00.0	-0.5
NSR				eSn	Sn	22 57 55.0	-0.9
GANJ	Ganja	4.84	5	⇓P	Pb	22 57 10.7	-2.5
	SNR=6.4						
GDB	GEDABAY	4.90	359	⇑P	Pb	22 57 12.4	-1.9
	SNR=3.2						
RTB	Rutbah	5.33	240	ePn	Pn	22 57 08.0	+0.1
RTB				eSn	Sn	22 58 09.0	-0.1
IKLH	Kolahrood	5.37	116	ePn	Pn	22 57 15.2	+6.6
IKLH				IAMB	IAmb	22 58 52.0	
	comp=Z,154nm,0.7s						

JMA 25 23:00:58.8±0.3**, 39°.94N×144°.89E, h52**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	2.33	271	P	Pn	23 01 35.3	+0.7
MIYJ	Miyakonagasawa	2.39	262	P	Pn	23 01 36.8	+1.3
MIYJ				eS	Sn	23 02 04.8	+1.1
JEM	Erimo	2.45	328	P	Pn	23 01 38.0	+1.7
JEM				eS	Sn	23 02 07.0	+1.9
JKEN	Kujiedanarisaw	2.46	277	P	Pn	23 01 37.2	+0.9
JKEN				eS	Sn	23 02 05.8	+0.7
JANG	Nango	2.62	281	P	Pn	23 01 39.7	+1.0
JOM	Ohasama	2.81	262	P	Pn	23 01 42.9	+1.6
JOM				eS	Sn	23 02 15.3	+1.3
JNBK	Urakawa-nobuka	2.84	326	P	Pn	23 01 43.8	+2.2
JNBK				eS	Sn	23 02 17.5	+2.9
JCH	Churui	2.91	337	P	Pn	23 01 43.7	+1.1
JCH				eS	Sn	23 02 16.7	+0.4
JMK	Ichinoseki	3.01	252	P	Pn	23 01 45.1	+1.2
JAK	Akkeshi	3.06	357	P	Pn	23 01 44.5	-0.1
JAK				eS	Sn	23 02 19.0	-0.9
JOT	Ohata	3.26	297	P	Pn	23 01 49.0	+1.7
JOT				eS	Sn	23 02 26.4	+1.5
JAR	Ashorobuto	3.46	346	P	Pn	23 01 50.6	+0.5
JAR				eS	Sn	23 02 29.2	-0.6
NEM2	Nemuro 2	3.48	10	P	Pn	23 01 49.5	-0.9
NEM2				eS	Sn	23 02 27.1	-3.2
JKB	Kayabe	3.51	305	P	Pn	23 01 52.8	+2.0
JKB				eS	Sn	23 02 33.1	+2.0
JFR	Furan	3.65	333	P	Pn	23 01 54.4	+1.6
JTKR	Abashiri--Toko	4.09	350	P	Pn	23 02 00.2	+1.4
JTKR				eS	Sn	23 02 45.6	+0.2
JHR	Hokuryu	4.47	329	P	Pn	23 02 07.7	+3.7
JHR				eS	Sn	23 02 58.4	+3.6

KRNET ***25*** *23:05:30.1±0.1, 40°.26N×76°.73E, mb2.7*
SOME ***25*** *23:05:32.9, 40°.23N×76°.58E, h20^{km}*
NNC ***25*** *23:05:32.0±1.8, 40°.29N×76°.60E, h0^{km}±12^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=13.8km s-min=6.3km az=139.0*
ISC 25 23:05:29.3±1.5**, 40°.24N**±0°.06×**76°.67E**±0°.04**, h10**^{km}**, n26, σ1ˢ.19**/41**, 15C-13D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.72	30	⇓iP	Pb	23 06 01.2	0.0
	baz=29						
TARG				⇓iS	Sg	23 06 23.8	-0.8
	baz=29						
KDJ	Kajisay	1.93	11	⇑iP	Pb	23 06 05.5	+0.8
	baz=11						
KDJ				⇑iS	Sg	23 06 30.6	-0.7
	baz=11						
ULHL	Ulahol	2.03	351	⇑iP	Pb	23 06 06.4	0.0
	baz=50						
ULHL				⇑iS	Sb	23 06 33.5	+1.6
	baz=50						
KZA	Kyzart	2.13	330	⇑iP	Pb	23 06 08.3	+0.1
	baz=29						
KZA				⇑iS	Sb	23 06 36.5	+1.7
	baz=29						
BOOM	Boomskoye usch	2.32	346	⇑iP	Pb	23 06 10.8	-0.5
	baz=45						
BOOM				⇑iS	Sb	23 06 40.1	+0.1
	baz=45						
ARLS	Aral	2.40	313	⇓iP	Pb	23 06 12.1	-0.7
	baz=12						
ARLS				⇓iS	Sb	23 06 42.9	+0.4
	baz=12						
SFK	Sufi-Kurgan	2.44	266	⇓Pn	Pb	23 06 13.7	+0.2
	0.9nm,0.4s						
SFK				⇑Lg	Lg	23 06 47.5	
	4.2nm,0.4s						
SFK	Sufi-Kurgan	2.44	266	Pg	Pb	23 06 14.4	+1.0
	1.0nm,0.1s						
SFK				Lg	Lg	23 06 44.2	
	3.5nm,0.2s						
SFK	Sufi-Kurgan	2.44	266	⇑iP	Pb	23 06 13.2	-0.2
	baz=66						
SFK				⇑iS	Sb	23 06 44.5	+0.9
	baz=66						
KBK	Karagaybulak	2.74	332	⇓iP	Pb	23 06 17.2	-1.3
	baz=31						
KBK				⇓iS	Sb	23 06 51.5	-0.7
	baz=31						
IZV	Izvestkoviy	2.79	359	Pg	Pg	23 06 23.3	+0.4
IZV				Lg	Lg	23 06 59.7	
IZV	Izvestkoviy	2.79	359	eP	Pg	23 06 23.3	+0.4
	2.1nm,0.5s						
IZV				eS	Sg	23 06 59.7	+0.6
	5.0nm,0.3s						
TKM2	Tokmak 2	2.80	344	⇓Pn	Pn	23 06 15.9	+1.6
	1.6nm,0.3s						
TKM2				⇓Lg	Lg	23 06 59.4	
	3.2nm,0.6s						
TNSS	Tian-Shan	2.80	4	eP	Pb	23 06 21.6	+1.9
	1.8nm,0.4s						
TNSS				eS	Sb	23 06 56.6	+2.3
	6.7nm,0.7s						
KST	Kastek	2.85	349	Pg	Pg	23 06 23.4	-0.5
	4.5nm,0.8s						
KST				Lg	Lg	23 06 59.5	
	6.0nm,1.3s						
KST	Kastek	2.85	349	eP	Pg	23 06 23.2	-0.8
	4.5nm,0.8s						
KST				eS	Sg	23 06 59.5	-1.4
	6.0nm,1.3s						
AAK	Ala-Archa	2.90	326	⇑Pg	Pg	23 06 24.3	-0.6
	3.9nm,0.6s						
AAK				⇓Lg	Lg	23 07 01.5	
	9.4nm,1.1s						
MDOK	Medeo	2.94	5	⇑Pg	Pg	23 06 24.2	-1.3
	3.1nm,0.5s						
MDOK				⇑Lg	Lg	23 07 03.9	
	5.3nm,0.6s						
SATY	Saty	3.10	24	eP	Pg	23 06 28.7	-0.1
	3.6nm,0.4s						
SATY				eS	Sg	23 07 08.6	-0.4
	3.8nm,0.4s						
UZB	Uzynbulak	3.40	30	eP	Pg	23 06 32.5	-1.9
	0.7nm,0.2s						
UZB				eS	Sg	23 07 15.2	-3.2
	2.3nm,0.7s						
MRKS	Merke	3.60	315	Pg	Pg	23 06 38.3	0.0
	5.0nm,0.4s						
MRKS				Lg	Lg	23 07 23.1	
	3.0nm,0.6s						
MRKS	Merke	3.60	315	eP	Pg	23 06 37.3	-1.0
	5.0nm,0.4s						
MRKS				eS	Sg	23 07 23.5	-1.4
	3.0nm,0.7s						
KUU	Kurty	3.66	356	Pg	Pg	23 06 38.8	-0.6
	1.6nm,0.4s						
KUU				Lg	Lg	23 07 25.4	
	2.3nm,0.5s						
KUU	Kurty	3.66	356	eP	Pg	23 06 38.3	-1.1
	1.6nm,0.4s						
KUU				eS	Sg	23 07 25.7	-1.2
	3.7nm,0.8s						
PDGK	Podgornoye	3.74	33	⇓Pg	Pg	23 06 39.2	-1.7
	2.0nm,0.8s						
PDGK				⇓Lg	Lg	23 07 28.2	
	3.6nm,0.9s						
MNAS	Manas	3.86	307	⇑Pg	Pg	23 06 41.8	-1.4
	1.1nm,0.8s						
MNAS				⇓Lg	Lg	23 07 34.0	
	2.3nm,0.8s						

NIED ***25*** *23:19:00, 36°.90N×139°.40E, h5^{km}, Mw3.5 Best double couple: M$_0$1.72000×10^{14} NP1:φ$_s$266.00000°, δ80.00000°, λ-177.00000°. NP2:φ$_s$176.00000°, δ87.00000°, λ-10.00000°.*
JMA 25 23:19:05.2, 36°.89N×139°.41E, h4^{km}±1^{km}**, M3.3, 3C-2D Broadband fault plane solution: P waves. NP1:** φ$_s$292.00000°, δ70.00000°, λ-150.00000°. **NP2:** φ$_s$191.00000°, δ62.00000°, λ-23.00000°. **Principal axes:** T Plg5.0000°, Azm60.0000°; N Plg55.0000°, Azm323.0000°; P Plg35.0000°, Azm153.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKT	Katashina	0.18	226	⇑P	Pg	23 19 09.0	+0.3
JKT				S	Sg	23 19 11.6	+0.5
JSB	Shiboa	0.42	79	⇑P	Pg	23 19 13.9	+0.7
JAG	Ashikaga	0.47	176	⇓P	Pg	23 19 14.4	+0.3
JHK	Hiroka	0.48	319	⇓P	Pg	23 19 14.6	+0.2
JHK				S	Sg	23 19 21.1	+0.5
JFY	Yanaizu	0.57	24	⇑P	Pg	23 19 16.4	+0.3
JFY				S	Sg	23 19 23.6	+0.1
MAT	Matsushiro	1.03	251	P	Pg	23 19 24.7	-0.2
MAT				S	Sg	23 19 38.1	-0.1

ISCJB ***25*** *23:33:22.8±0.4, 39°.14N±0°.03×29°.02E±0°.03, h9^{km}±3^{km} Error ellipse: s-maj=4.8km s-min=3.8km az=158.7*
DDA ***25*** *23:33:22.2, 39°.12N×29°.04E, h7^{km}±2^{km}, ML2.7*
ISK ***25*** *23:33:22.4, 39°.17N×29°.05E, h7^{km}, ML1.9/7*
ISC 25 23:33:22.5±0.9**, 39°.14N**±0°.03×**29°.02E**±0°.03**, h12**^{km}±6^{km}**, n17, σ0ˢ.47**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMAA	Simav-Kutahya	0.05	220	PG	Pg	23 33 24.9	-0.1
SMAA				SG	Sg	23 33 26.6	-0.1
SHAP	Saphane-Kutahy	0.19	126	PG	Pg	23 33 26.8	-0.1
SHAP				SG	Sg	23 33 29.9	0.0
DEMI	Demirci	0.26	248	i P	Pb	23 33 28.8	-0.4
DEMI				i S	Sg	23 33 32.3	+0.8
DEMI				IAML_P			
	comp=Z,3μm,0.1s						
GEDZ	Gediz	0.32	107	PG	Pg	23 33 28.9	-0.1
GEDZ				SG	Sg	23 33 33.7	+0.3
GDZ	Gediz	0.36	98	i P	Pg	23 33 30.0	+0.2
GDZ				i S	Sb	23 33 35.8	-0.8
USAK	Uak-Merkez	0.42	180	i P	Pg	23 33 31.3	+0.3
USAK				i S	Sg	23 33 37.4	+0.8
TVSB	Tavsanli	0.46	48	PG	Pg	23 33 31.3	-0.4
TVSB				SG	Sg	23 33 37.6	-0.3
DURS	Dursunbey	0.63	318	i P	Pg	23 33 34.8	0.0
KULA	Kula-Manisa	0.68	204	PG	Pg	23 33 35.5	-0.3
MANT	Manisa	0.74	209	i P	Pb	23 33 37.7	+0.2
MANT				i S	Sg	23 33 46.0	-0.6
MANT				IAML_P			
	comp=Z,914nm,0.1s						
KHAL	Karahalli	0.85	154	i P	Pn	23 33 40.2	-0.2
KHAL				i S	Sb	23 33 50.5	-0.2
AKHS	Akhisar	0.97	255	i P	Pg	23 33 41.4	+0.1
BALB	Balikesir	1.02	300	PG	Pn	23 33 42.9	+0.3
STEP	BALIKESIR_Sava	1.04	284	i P	Pn	23 33 43.1	+0.2
STEP				IAML_P			
	comp=Z,550nm,0.1s						
MDNY	Mudanya-Bursa	1.23	355	PN	Pg	23 33 46.0	-0.3
BORA	Eskisehir	1.33	56	i P	Pg	23 33 48.5	+0.3
BORA				i S	Sg	23 34 06.8	+1.2
GULT	Gulveren	1.73	41	PN	Pn	23 33 52.8	+0.3

IDC ***25*** *23:37:57.7±0.4, 48°.46S×87°.25W, h0^{km}, mb4.9/18, mb1 4.9/20, mb1mx4.9/29, mbtmp4.8/20, ML3.7/2, MS4.6/25, Ms1 4.6/25, ms1mx4.5/30, Error ellipse: s-maj=17.5km s-min=12.8km az=118.0*
MOS ***25*** *23:37:58.5±0.9, 48°.32S×87°.15W, h10^{km}, mb5.6/18, MS4.7/14, Error ellipse: s-maj=15.8km s-min=8.0km az=85.2*
GCMT ***25*** *23:37:59.6±0.1, 48°.48S±0°.01×87°.32W±0°.01, h12^{km}, MW5.2/117, Moment Tensor Solution. s73,c109; s117,c181; Duration: 1ˢ.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.73±.01; M$_{\theta\theta}$-0.05±.01; M$_{\phi\phi}$-0.68±.01; M$_{r\theta}$-0.09±.03; M$_{\theta\phi}$0.13±.01; M$_{\phi r}$0.27±.03; Best double couple: M$_0$0.77200×10^{17} NP1:φ$_s$346.00000°, δ56.00000°, λ87.00000°. NP2:φ$_s$171.00000°, δ34.00000°, λ94.00000°. Principal axes: T 0.7820, Plg79.0000°, Azm246.0000°; N -0.0200, Plg2.0000°, Azm348.0000°; P -0.7620, Plg11.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***25*** *23:37:59.6±0.2, 48°.38S×87°.12W, h10^{km}, mb5.5/49, MS4.8/46 Error ellipse: s-maj=5.1km s-min=5.0km az=82.0*
BJI ***25*** *23:38:00.3, 48°.30S×86°.90W, h15^{km}, mB5.4/13, Ms5.5/13, Ms7 5.2/11*
ISCJB ***25*** *23:38:05.4±1.7, 48°.34S±0°.04×86°.91W±0°.08, h66^{km}±14^{km}, mb5.2/64, Error ellipse: s-maj=8.7km s-min=6.6km az=13.3*
ISC 25 23:37:59.1±2.0**, 48°.36S**±0°.06×**87°.22W**±0°.06**, h9**^{km}±11^{km}**, n922, σ1ˢ.05**/901**, mb5.4**/63**, MS4.9**/72**, 18C-3D, Southern Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO09	Cerro Castillo	10.05	112	ePn	Pn	23 40 23.8	+0.2
GO09				eSn	Sn	23 42 03.4	-13
GO10	Punta Arenas	11.30	121	ePn	Pn	23 40 42.5	+1.8
USHA	Ushuaia	13.33	126	Pn	Pn	23 41 09.5	+1.2
	0.5nm,0.3s,baz=284,slow=16,SNR=4.8						
USHA				LR	LR	23 45 30.6	
	comp=Z,5μm,18.5s,baz=302,slow=34						
PLCA	Paso Flores	14.11	63	Pn	Pn	23 41 21.3	+2.2
	0.1nm,0.3s,baz=249,slow=12,SNR=8.4						
PLCA				LR	LR	23 45 46.0	
	comp=Z,5μm,18.0s,baz=260,slow=33						
GO06	Curarrehue	14.32	58	ePn	Pn	23 41 20.4	-1.7
EFI	East Falkland	18.97	111	eP	Pn	23 42 21.7	+0.6
	151nm,1.5s						
EFI	East Falkland	18.97	111	eP	Pn	23 42 21.7	+0.6
EFI				pmax	pmax		
	comp=Z,151nm,1.5s						
ROC1	El Roble	19.62	44	eP	Pn	23 42 30.8	+1.5
	comp=Z,28nm,0.9s						
PEL	Peldehue	19.64	45	eP	P	23 42 25.8	-2.2
	comp=Z,359nm,2.0s						
PEL	Peldehue	19.64	45	eP	P	23 42 25.8	-2.2

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PEL                                      pmax      pmax
       comp=Z,359nm,2.0s
PMSA   Palmer Station     20.61 151      LR        LR          23 48 25.3
       comp=Z,886nm,19.9s,baz=316,slow=31
TRQA   Tornquist          21.00  70   eP           P           23 42 43.6 +0.9
       comp=Z,126nm,1.5s
TRQA                                     LR        LR
       comp=Z,5μm,21.0s
TRQA   Tornquist          21.00  70   eP           P           23 42 43.6 +0.9
TRQA                                     pmax      pmax
       comp=Z,126nm,1.5s
TRQA                                     MLR       MLR
       comp=Z,5μm,21.0s
TRQA   Tornquist          21.00  70   eP           Pn          23 42 44.8  -0.5
GO04   Tololo Observa     22.09  41   eP           P           23 42 55.6 +0.9
       comp=Z,546nm,1.8s
LCO    Las Campanas       23.14  39   eP           P           23 43 05.4  -0.5
       comp=Z,261nm,1.7s
LCO                                      LR        LR
       comp=Z,1μm,19.0s
LCO    Las Campanas       23.14  39   eP           P           23 43 05.4  -0.5
LCO                                      pmax      pmax
       comp=Z,261nm,1.7s
LCO                                      MLR       MLR
       comp=Z,1μm,19.0s
LCO    Las Campanas       23.14  39   eP           P           23 43 06.8 +1.0
GO03   Copiap             24.58  39   eP           P           23 43 20.4 +1.0
       comp=Z,120nm,1.4s
GO02   Mina Guanaco       27.00  37   eP           P           23 43 42.2 +0.7
       comp=Z,133nm,1.4s
RPN    Rapa Nui           27.30 313      LR        LR          23 51 26.0
       comp=Z,1μm,19.9s,baz=136,slow=30
PB04   IPOC Station P     29.33  34   eP           P           23 44 02.5 +0.2
       comp=Z,71nm,1.0s
LVC    Limon Verde        29.56  36   eP           P           23 44 04.7 +0.2
       comp=Z,52nm,1.0s
LVC                                      PcP       PcP         23 47 09.8 +0.4
LVC                                      LR        LR
       comp=Z,1μm,22.0s
LVC    Limon Verde        29.56  36   eP           P           23 44 04.7 +0.2
LVC                                                            23 47 09.9
LVC                                      pmax      pmax
       comp=Z,53nm,1.0s
LVC                                      MLR       MLR
       comp=Z,1μm,22.0s
LVC    Limon Verde        29.56  36      P         P           23 44 05.6 +1.1
       comp=Z,33nm,1.0s,baz=202,slow=8.9,SNR=18
LVC                                      PcP       PcP         23 47 09.8 +0.4
       comp=Z,4.4nm,0.9s,baz=262,slow=7.1,SNR=3.7
LVC                                      LR        LR          23 52 58.1
       comp=Z,1μm,20.8s,baz=208,slow=30
LVC    Limon Verde        29.56  36   eP           P           23 44 05.8 +1.3
PLTB   Pedras Altas       30.30  69   eP           P           23 44 11.4 +0.8
PB01   IPOC Station P     30.76  34   eP           P           23 44 15.9 +1.1
       comp=Z,62nm,1.1s
CPSB   Cacapava Do Su     31.34  67   eP           P           23 44 21.0 +1.2
HOPE   Hope Point         31.67 120      PFAKE                 23 44 30.0 +7.6
HOPE                                     LR        LR
       comp=Z,984nm,20.0s
PB11   IPOC Station P     31.87  33   eP           P           23 44 25.2 +0.5
       comp=Z,135nm,1.4s
CPUP   Villa Florida      32.05  57      P         P           23 44 25.3  -0.8
       comp=Z,6.6nm,0.8s,baz=222,slow=9.1,SNR=9.7
CPUP                                     LR        LR          23 56 51.7
       comp=Z,2μm,18.7s,baz=220,slow=35
CPUP   Villa Florida      32.05  57   eP           P           23 44 26.6 +0.6
MNMC   Minye Minye        32.47  32   eP           P           23 44 30.0  -0.1
       comp=Z,60nm,1.0s
CNLB   Canela             33.70  69   eP           P           23 44 42.3 +1.7
ITAB   Concordia          34.41  65   eP           P           23 44 47.8 +1.2
TER01  Tubaro-SC          35.33  70   eP           P           23 44 56.1 +1.5
LPAZ   La Paz             35.62  33      P         P           23 44 58.9 +1.0
       comp=Z,32nm,1.2s,baz=191,slow=7.6,SNR=40
LPAZ                                     PcP       PcP         23 47 27.3 +0.8
       comp=Z,7.2nm,0.9s,baz=149,slow=4.4,SNR=4.6
LPAZ                                     LR        LR          23 57 29.8
       comp=Z,276nm,18.3s,baz=171,slow=33
LPAZ   La Paz             35.62  33   eP           P           23 44 59.4 +1.5
PTGB   Pitanga            36.32  62   eP           P           23 45 04.1 +0.8
NNA    Nana               37.28  17   eP           P           23 45 12.8 +1.4
       comp=Z,56nm,1.4s
NNA                                      LR        LR
       comp=Z,384nm,19.0s
NNA    Nana               37.28  17   eP           P           23 45 12.8 +1.4
NNA                                      pmax      pmax
       comp=Z,57nm,1.4s
NNA                                      MLR       MLR
       comp=Z,384nm,19.0s
TRCB   Terra Rica         37.47  59   eP           P           23 45 13.8 +0.9
AQDB   Aquidauana         37.62  53   eP           P           23 45 14.4 +0.3
TIJ01  Guaruva-PR         37.71  66   eP           P           23 45 11.5  -3.6
SIV    San Ignacio        38.76  43      P         P           23 45 24.4 +0.5
       comp=Z,6.9nm,1.1s,baz=229,slow=11,SNR=14
SIV                                      LR        LR          00 00 18.2
       comp=Z,936nm,21.5s,baz=234,slow=34
ITRB   Iturama            41.20  59   eP           P           23 45 44.5 +0.4
BB19B  Bebedouro          41.20  62   eP           P           23 45 45.1 +0.9
VNA3   Neumayer Olymp     41.27 151      P         P           23 45 45.3 +1.2
ATAH   Atahualpa          41.76  13      P         P           23 45 51.1 +1.9
       comp=Z,53nm,1.0s,baz=193,slow=6.0,SNR=34
VNA1   Neumayer--Stat     41.83 151      P         P           23 45 48.4  -0.3
QSPA   South Pole Qui     41.87 180   eP           P           23 45 49.8 +0.5
       comp=Z,47nm,1.4s
QSPA                                  ePcP         PcP         23 47 44.9 +0.1
QSPA                                     LR        LR
       comp=Z,523nm,20.0s
QSPA   South Pole Qui     41.87 180      P         P           23 45 47.5  -1.8
       comp=Z,18nm,1.1s,baz=151,slow=3.5,SNR=15
QSPA                                     PcP       PcP         23 47 45.7 +0.9
       comp=Z,20nm,1.1s,baz=245,slow=1.4,SNR=7.2
VNA2   Neumayer--Watz     42.06 151      P         P           23 45 51.9 +1.3
ESAR   Angra dos Reis     42.21  69   eP           P           23 45 53.6 +1.3
SNAA   Sanae              43.32 153      P         P           23 46 01.6 +0.6
SNAA   Sanae              43.32 153   eP           P           23 46 01.3 +0.4
       comp=Z,53nm,1.3s
SNAA   Sanae              43.32 153   eP           P           23 46 01.3 +0.4
SNAA                                     pmax      pmax
       comp=Z,53nm,1.3s
SNAA   Sanae              43.32 153      P         P           23 46 01.7 +0.8
       comp=Z,24nm,1.1s,baz=245,slow=6.7,SNR=15
VAS01  Vassouras-RJ       43.38  69   eP           P           23 46 04.0 +2.1
BSCB   Bom Sucesso        43.51  66   eP           P           23 46 04.4 +1.4
IPMB   Ipameri, GO        43.79  60   eP           P           23 46 05.7 +0.5
PMNB   Patos De Minas     44.39  62   eP           P           23 46 11.2 +1.1
BDFB   Brasilia           45.77  58      P         P           23 46 21.1  -0.1
       comp=Z,7.6nm,0.8s,baz=214,slow=9.7,SNR=8.3
BDFB                                     PcP       PcP         23 47 58.7   0.0
       comp=Z,1.8nm,0.7s,baz=198,slow=6.4,SNR=3.6
BDFB                                     LR        LR          00 06 02.9
       comp=Z,2μm,18.6s,baz=226,slow=37
ALF01  Guarapari-ES       46.30  70   eP           P           23 46 26.4 +1.3
SBA    Scott Base         46.43 196      PFAKE                 23 46 40.0  +15
SBA                                      LR        LR
       comp=Z,2μm,20.0s
MCI6   Montes Claros      47.25  64   eP           P           23 46 33.9 +1.2
MCI9   Montes Claros      47.34  63   eP           P           23 46 34.2 +0.9
MCI8   Montes Claros      47.35  63   eP           P           23 46 34.2 +0.8
SJMB   Sao Joao De Ma     47.45  68   eP           P           23 46 35.7 +1.6
RIB01  Linhares ES        47.48  69   eP           P           23 46 36.0 +1.7
VNDA   Vanda              47.51 196      P         P           23 46 36.0 +2.1
VNDA   Vanda              47.51 196      P         P           23 46 36.0 +2.1
       comp=Z,4.8nm,1.0s,baz=152,slow=13,SNR=4.5
VNDA                                     LR        LR          00 03 32.2
       comp=Z,852nm,19.3s,baz=130,slow=32
BSFB   Barra de Sao F     47.56  68   eP           P           23 46 35.0 +0.1
NVL    N'lazarevskaya     48.07 154   eP           P           23 46 38.6 +0.3
NVL                                   eS           S           23 53 38.2 +1.9
NVL                                      pmax      pmax
       comp=Z,38nm,1.3s
JANB   Januaria           48.38  62   eP           P           23 46 42.0 +0.6
OTAV   Otavalo            49.00  12   eP           P           23 46 47.2 +0.5
       comp=Z,269nm,1.6s
OTAV                                  ePcP         PcP         23 48 10.8 +0.2
OTAV                                     LR        LR
       comp=Z,205nm,20.0s
OTAV   Otavalo            49.00  12   eP           P           23 46 47.2 +0.5
OTAV                                  e                        23 48 10.8
OTAV                                     pmax      pmax
       comp=Z,269nm,1.6s
OTAV                                     MLR       MLR
       comp=Z,205nm,20.0s
OTAV   Otavalo            49.00  12   eP           P           23 46 47.3 +0.6
PTLC   Puerto Leguiza     49.53  16   eP           P           23 46 47.4  -2.8
PTLC   Puerto Leguiza     49.53  16   eP           P           23 46 47.4  -2.8
GCUF   Volcan Galeras     50.13  13   eP           P           23 46 56.6 +1.3

GCUF   Volcan Galeras     50.13  13   eP           P           23 46 56.6 +1.3
FLOC   Florencia          50.75  15   eP           P           23 46 60.0 +0.5
FLOC   Florencia          50.75  15   eP           P           23 46 60.0 +0.5
SOTA   Rioblanco          51.14  14   eP           P           23 47 02.0  -0.8
SOTA   Rioblanco          51.14  14   eP           P           23 47 02.0  -0.8
PCON   Cinco Dias         51.36  14   eP           P           23 47 05.2 +0.6
PCON   Cinco Dias         51.36  14   eP           P           23 47 05.2 +0.6
POPC   Popayan, Colom     51.52  14   eP           P           23 47 04.8  -0.7
POPC   Popayan, Colom     51.52  14   eP           P           23 47 04.8  -0.7
PTGA   Pitinga            52.97  35      PFAKE                 23 47 30.0  +14
PTGA                                     LR        LR
       comp=Z,17μm,21.0s
PTGA   Pitinga            52.97  35   eP           P           23 47 15.2  -0.8
YOTC   Yotoco, Valle      52.99  14   eP           P           23 47 14.6  -1.6
YOTC   Yotoco, Valle      52.99  14   eP           P           23 47 14.6  -1.6
ANIL   Santa Ana          53.64  15   eP           P           23 47 22.5 +1.3
ANIL   Santa Ana          53.64  15   eP           P           23 47 22.5 +1.3
PLMC   San Jos del P      53.91  14   eP           P           23 47 22.8  -0.1
PLMC   San Jos del P      53.91  14   eP           P           23 47 22.8  -0.1
RREF   El Recreo          54.05  15   eP           P           23 47 25.2 +0.6
RREF   El Recreo          54.05  15   eP           P           23 47 25.2 +0.6
CHIC   Chingaza           54.08  17   eP           P           23 47 24.9 +0.3
CHIC   Chingaza           54.08  17   eP           P           23 47 24.9 +0.3
ROSC   El Rosal           54.17  16   eP           P           23 47 26.3 +1.0
ROSC   El Rosal           54.17  16   eP           P           23 47 26.3 +1.0
ROSC   El Rosal           54.17  16      P         P           23 47 27.0 +1.7
       comp=Z,15nm,0.8s,baz=153,slow=5.0,SNR=22
ROSC                                     LR        LR          00 07 54.0
       comp=Z,397nm,19.2s,baz=198,slow=33
TBI    Tubuai             54.61 274   eS           S           23 55 09.0 +1.3
       comp=Z,562nm,25.8s
TBI                                   eLR          LR          00 03 14.4
       comp=Z,3μm,27.5s,baz=138
HELC   Santa Helena       55.29  14   eP           P           23 47 32.7  -0.5
HELC   Santa Helena       55.29  14   eP           P           23 47 32.7  -0.5
RUSC   La Rusia           55.44  17   eP           P           23 47 31.6  -2.9
RUSC   La Rusia           55.44  17   eP           P           23 47 31.6  -2.9
PTBC   PUERTO BERRIO,     55.81  15   eP           P           23 47 34.8  -1.8
PTBC   PUERTO BERRIO,     55.81  15   eP           P           23 47 34.8  -1.8
SYO    Syowa Base         56.56 160⇑  eP           P           23 47 40.8  -0.5
ZARC   Zaragoza, Cauc     56.67  15   eP           P           23 47 41.9  -0.9
ZARC   Zaragoza, Cauc     56.67  15   eP           P           23 47 41.9  -0.9
UREC   San Jos de Ur      56.82  14   eP           P           23 47 41.2  -2.6
UREC   San Jos de Ur      56.82  14   eP           P           23 47 41.2  -2.6
BCIP   Isla Barro Col     57.65   9      PFAKE                 23 48 00.0  +10
BCIP                                     LR        LR
       comp=Z,229nm,20.0s
JTS    JuntasAbangare     58.43   3   eP           P           23 47 56.0 +0.9
       comp=Z,101nm,1.6s
JTS    JuntasAbangare     58.43   3   eP           P           23 47 56.0 +0.9
JTS                                      pmax      pmax
       comp=Z,101nm,1.6s
PPT2   Papeete2           58.74 279   eS           S           23 56 03.8 +1.2
       comp=Z,601nm,26.0s
PPT2                                  eLR          LR          00 05 16.6
       comp=Z,3μm,24.0s,baz=138
PPT    Papeete            58.75 279      LR        LR          00 06 30.5
       comp=Z,1μm,20.3s,baz=173,slow=29
NBLI   Livramento-PB      58.83  63   eP           P           23 47 58.5 +0.5
SDV    Santo Domingo      58.85  19   eP           P           23 47 56.8  -1.5
       comp=Z,156nm,1.8s
SDV                                      LR        LR
       comp=Z,382nm,19.0s
SDV    Santo Domingo      58.85  19   eP           P           23 47 57.4  -1.0
TAOE   Nuku Hiva Isla     59.25 293   eLR          LR          00 05 27.0
       comp=Z,2μm,25.7s,baz=158
NBPA   Parau_RN           60.02  62   eP           P           23 48 07.7 +1.4
MAW    Mawson             62.18 168      LR        LR          00 15 29.7
       comp=Z,176nm,18.4s,baz=199,slow=36
RAR    Rarotonga          62.96 268      P         P           23 48 27.4 +1.4
RAR    Rarotonga          62.96 268      LR        LR          00 11 27.0
       comp=Z,696nm,18.6s,baz=141,slow=32
GRGR   Grenville          64.36  28      PFAKE                 23 48 50.0  +15
GRGR                                     LR        LR
       comp=Z,687nm,20.0s
CCIG   Comitan            64.50 355   eP           P           23 48 36.6 +0.3
       comp=Z,77nm,1.3s
SNZO   South Karori       65.20 235      PFAKE                 23 48 50.0  +10
SNZO                                     LR        LR
       comp=Z,1μm,19.0s
LBZ    Lake Benmore       65.47 230   eP           P           23 48 43.2 +1.0
       comp=Z,128nm,1.7s
RPZ    Rata Peaks         65.49 231      LR        LR          00 09 50.9
       comp=Z,797nm,21.9s,baz=118,slow=29
BKZ    Black Stump Fm     65.67 238   eP           P           23 48 45.1 +1.4
       comp=Z,100nm,1.5s
THZ    Tophouse           65.86 234   eP           P           23 48 45.7 +0.8
       comp=Z,118nm,1.6s
THZ                                   ePcP         PcP         23 49 17.8 +2.0
URZ    Urewera            65.94 239      LR        LR          00 09 59.7
       comp=Z,901nm,21.6s,baz=177,slow=29
BBGH   Gun Hill           65.98  30      PFAKE                 23 49 00.0  +14
BBGH                                     LR        LR
       comp=Z,2μm,19.0s
FOZ    Fox Glacier        66.26 231   eP           P           23 48 48.4 +1.1
       comp=Z,90nm,1.5s
LVIG   Laguna Verde       68.27 351   eP           P           23 49 01.7 +1.6
       comp=Z,95nm,1.5s
SDDR   Presa de Saban     68.54  16      PFAKE                 23 49 10.0 +8.1
SDDR                                     LR        LR
       comp=Z,530nm,19.0s
OBIP   Obispado Ponce     68.62  21   eP           P           23 49 00.9  -1.5
       comp=Z,84nm,1.2s
CBYP   Canovanas          69.03  22   eP           P           23 49 03.9  -1.1
       comp=Z,150nm,1.6s
LNIG   Linares            73.75 348   eP           P           23 49 32.9  -0.5
       comp=Z,58nm,1.6s
KVTX   Kingsville         76.17 350      PFAKE                 23 50 00.0  +13
KVTX                                     LR        LR
       comp=Z,602nm,20.0s
DWPF   Disney Wildern     76.30   5   eP           P           23 49 48.1 +0.2
HPIG                      76.76 343   eP           P           23 49 52.3 +1.4
833A   Chaparral WMA,     77.11 349   eP           P           23 49 54.0 +1.4
HKT    Hockley            78.34 352   eP           P           23 50 00.0 +0.8
HKT    Hockley            78.34 352   eP           P           23 50 00.0 +0.8
TXAR   Lajitas Array      78.74 345      P         P           23 50 02.6 +0.9
       comp=Z,27nm,1.1s,baz=168,slow=6.4,SNR=69
TXAR                                     LR        LR          00 18 36.5
       comp=Z,108nm,18.8s,baz=0.0,slow=31
JCT    Junction City      79.29 349   eP           P           23 50 05.7 +1.0
JCT                                      LR        LR
       comp=Z,1292μm,22.0s
JCT    Junction City      79.29 349   eP           P           23 50 05.7 +1.0
JCT    Junction City      79.29 349      P         P           23 50 06.0 +1.4
       baz=172
435B   Jarrell            79.33 351   eP           P           23 50 06.4 +1.5
435B   Jarrell            79.33 351      P         P           23 50 05.7 +0.9
       baz=173
349A   Repton             79.35   0      P         P           23 50 05.6 +0.7
       baz=180
352A   Blakely            79.51   2      P         P           23 50 06.0 +0.2
       baz=182
249A   Camden             79.97   0      P         P           23 50 09.5 +1.2
       baz=180
250A   Grady              79.98   1   eP           P           23 50 08.7 +0.4
250A   Grady              79.98   1      P         P           23 50 09.2 +0.9
       baz=181
254A   Abbeville          80.02   3      P         P           23 50 09.0 +0.5
       baz=183
252A   Lumpkin            80.03   2      P         P           23 50 09.1 +0.6
       baz=182
NATX   Nacogdoches        80.04 354      P         P           23 50 10.0 +1.4
       baz=175
251A   Midway             80.11   2      P         P           23 50 09.5 +0.5
       baz=181
253A   Americus           80.11   3      P         P           23 50 09.5 +0.5
       baz=182
151A   Opelika            80.54   2      P         P           23 50 11.6 +0.3
       baz=181
149A   Jones              80.60   0      P         P           23 50 11.9 +0.3
       baz=180
150A   Eclectic           80.61   1      P         P           23 50 12.1 +0.5
       baz=181
147A   Livingston         80.68 359   eP           P           23 50 12.2 +0.1
147A   Livingston         80.68 359      P         P           23 50 12.8 +0.8
       baz=179
154A   Montrose           80.69   4      P         P           23 50 13.0 +0.9
       baz=183
152A   Waverly Hall       80.70   2   eP           P           23 50 12.6 +0.4
152A   Waverly Hall       80.70   2      P         P           23 50 12.6 +0.4
       baz=182
155A   Kite               80.73   4      P         P           23 50 13.1 +0.7
       baz=183
156A   Sylvania           80.81   5      P         P           23 50 13.5 +0.7
       baz=184

LRAL   Lakeview Retre     81.03   0   eP           P           23 50 14.1 +0.2
       comp=Z,34nm,1.0s
LRAL   Lakeview Retre     81.03   0      P         P           23 50 14.3 +0.4
       baz=180
Z49A   Columbiana         81.19   1      P         P           23 50 14.5  -0.3
       baz=180
Z52A   Williamson         81.22   2      P         P           23 50 15.2 +0.2
       baz=182
Z50A   Ashland            81.26   1   eP           P           23 50 15.3 +0.2
Z50A   Ashland            81.26   1      P         P           23 50 15.2   0.0
       baz=181
Z54A   Sparta             81.33   4      P         P           23 50 15.3  -0.2
       baz=183
Z51A   Franklin           81.33   2      P         P           23 50 16.0 +0.4
       baz=181
Z53A   Monticello         81.34   3      P         P           23 50 15.3  -0.2
       baz=182
MNTX   Cornudas Mount     81.34 344   eP           P           23 50 15.9 +0.2
MNTX   Cornudas Mount     81.34 344      P         P           23 50 15.5  -0.1
       baz=168
Z55A   Blythe             81.34   4      P         P           23 50 15.3  -0.2
       baz=183
NHSC   New Hope           81.35   6   eP           P           23 50 16.2 +0.6
NHSC   New Hope           81.35   6      P         P           23 50 15.9 +0.4
       baz=185
ABTX   Abilene, Hawle     81.39 349   eP           P           23 50 16.1 +0.3
ABTX   Abilene, Hawle     81.39 349      P         P           23 50 16.1 +0.3
       baz=172
Z41A   Richland Creek     81.41 355      P         P           23 50 16.1 +0.2
       baz=176
GOGA   Godfrey            81.48   3   eP           P           23 50 16.4 +0.1
GOGA   Godfrey            81.48   3   eP           P           23 50 16.4 +0.1
GOGA   Godfrey            81.48   3      P         P           23 50 15.8  -0.5
       baz=182
Z57A   Bowman             81.50   6      P         P           23 50 16.3  -0.1
       baz=184
Z58A   St. Stephen        81.60   6      P         P           23 50 16.3  -0.6
       baz=185
WLAR   White Oak Lake     81.85 355   eP           P           23 50 19.3 +1.1
Y49A   Blount Mountai     81.86   1   eP           P           23 50 18.6 +0.3
Y49A   Blount Mountai     81.86   1      P         P           23 50 18.3   0.0
       baz=180
Y50A   Piedmont           81.90   1      P         P           23 50 18.1  -0.4
       baz=181
Y48A   Jasper             81.91   0      P         P           23 50 18.3  -0.2
       baz=180
Y52A   Lilburn            81.91   3   eP           P           23 50 19.0 +0.4
Y52A   Lilburn            81.91   3      P         P           23 50 18.5   0.0
       baz=182
Y53A   Monroe             81.91   3      P         P           23 50 18.9 +0.3
       baz=182
Y51A   Rockmart           81.92   2      P         P           23 50 18.3  -0.3
       baz=181
Y54A   Tignall            81.96   4      P         P           23 50 18.9 +0.1
       baz=183
Y55A   Saluda             82.07   5      P         P           23 50 19.5   0.0
       baz=184
HODGE  Hodges             82.34   4   eP           P           23 50 21.0 +0.1
X48A   Hartselle          82.44   0   eP           P           23 50 20.9  -0.4
X48A   Hartselle          82.44   0      P         P           23 50 21.0  -0.4
       baz=180
JSC    Jenkinsville       82.45   5   eP           P           23 50 21.4 +0.1
X50B   Fort Payne         82.47   1      P         P           23 50 21.0  -0.5
       baz=181
BOSA   Boshof             82.48 125      P         P           23 50 22.2 +0.1
       comp=Z,5.6nm,0.9s,baz=162,slow=3.8,SNR=5.4
BOSA                                     LR        LR          00 24 52.8
       comp=Z,400nm,18.0s,baz=223,slow=34
BOSA   Boshof             82.48 125   eP           P           23 50 22.1  -0.1
X49A   Woodville          82.51   1      P         P           23 50 21.5  -0.1
       baz=180
X47A   Russelville        82.51 359      P         P           23 50 21.2  -0.5
       baz=180
OXF    Oxford             82.53 358   eP           P           23 50 21.2  -0.6
OXF    Oxford             82.53 358   eP           P           23 50 21.2  -0.6
OXF    Oxford             82.53 358      P         P           23 50 20.7  -1.1
       baz=178
X46A   Booneville         82.56 359      P         P           23 50 22.0 +0.1
       baz=179
X53A   Estanollee         82.57   3      P         P           23 50 21.8  -0.3
       baz=183
X43A   Marvell            82.58 357      P         P           23 50 21.9  -0.1
       baz=178
X51A   Calhoun            82.58   2   eP           P           23 50 22.5 +0.4
X51A   Calhoun            82.58   2      P         P           23 50 22.1 +0.1
       baz=182
121A   Cookes Peak, D     82.61 343      P         P           23 50 23.8 +1.3
       baz=166
X55A   Gracelyn & Ava     82.61   5      P         P           23 50 22.0  -0.3
       baz=184
X40A   Basin Creek Fa     82.63 355   eP           P           23 50 22.3  -0.1
X40A   Basin Creek Fa     82.63 355      P         P           23 50 22.1  -0.2
       baz=176
X52A   Dahlonega          82.65   3      P         P           23 50 22.6 +0.2
       baz=182
X54A   Belton             82.65   4      P         P           23 50 22.2  -0.3
       baz=183
X56A   White Oak          82.67   5      P         P           23 50 21.8  -0.7
       baz=184
X57A   Johnson Farm,      82.70   6      P         P           23 50 22.6  -0.1
       baz=185
MIAR   Mount Ida          82.73 355   eP           P           23 50 22.3  -0.5
       comp=Z,32nm,1.1s
MIAR   Mount Ida          82.73 355   eP           P           23 50 22.3  -0.5
MIAR                                     pmax      pmax
       comp=Z,32nm,1.1s
MIAR   Mount Ida          82.73 355      P         P           23 50 22.9   0.0
       baz=176
X58A   Rowland            82.85   7      P         P           23 50 22.8  -0.6
       baz=185
UALR   University of      82.89 356   eP           P           23 50 23.8 +0.2
X59A   McDuffie Farm,     82.92   7      P         P           23 50 23.7  -0.1
       baz=186
PAULI  Pauline            82.95   4   eP           P           23 50 24.4 +0.4
TUC    Tucson             83.03 340   eP           P           23 50 25.6 +1.0
       comp=Z,38nm,1.2s
TUC                                      LR        LR
       comp=Z,213nm,19.0s
TUC    Tucson             83.03 340   eP           P           23 50 25.6 +1.0
TUC                                      pmax      pmax
       comp=Z,38nm,1.2s
TUC                                      MLR       MLR
       comp=Z,213nm,19.0s
TUC    Tucson             83.03 340      P         P           23 50 25.7 +1.0
       baz=164
W49A   Belvidere          83.11   1      P         P           23 50 24.5  -0.3
       baz=181
W48A   Pulaski            83.13   0      P         P           23 50 24.3  -0.6
       baz=180
MSTX   Muleshoe           83.14 347   eP           P           23 50 25.9 +0.8
MSTX   Muleshoe           83.14 347      P         P           23 50 25.5 +0.4
       baz=170
W52A   Murphy             83.14   3   eP           P           23 50 25.0   0.0
W52A   Murphy             83.14   3      P         P           23 50 24.6  -0.4
       baz=182
W45A   Hickory Valley     83.17 358      P         P           23 50 24.0  -1.0
       baz=179
214A   Organ Pipe Nat     83.18 338      P         P           23 50 26.5 +1.2
       baz=163
W51A   Cleveland          83.18   2      P         P           23 50 24.5  -0.6
       baz=182
W54A   Cherokee Point     83.20   4      P         P           23 50 24.5  -0.7
       baz=183
W50A   Signal Mountai     83.21   2   eP           P           23 50 25.4   0.0
W50A   Signal Mountai     83.21   2      P         P           23 50 25.1  -0.3
       baz=181
SWET   Sewanee            83.22   1   eP           P           23 50 25.4   0.0
W53A   Cullowhee          83.24   3      P         P           23 50 25.2  -0.4
       baz=183
W47A   Westpoint          83.24 360      P         P           23 50 24.8  -0.7
       baz=180
W41B   Gary Mavity, V     83.29 356   eP           P           23 50 25.5  -0.2
W41B   Gary Mavity, V     83.29 356      P         P           23 50 25.5  -0.2
       baz=177
KMSC   Kings Mountain     83.30   5   eP           P           23 50 25.2  -0.6
KMSC   Kings Mountain     83.30   5      P         P           23 50 25.0  -0.8
       baz=184
W42A   Bald Knob          83.35 356      P         P           23 50 25.5  -0.5
       baz=177
WMOK   Wichita Mounta     83.37 350   eP           P           23 50 26.3   0.0
WMOK   Wichita Mounta     83.37 350   eP           P           23 50 26.3   0.0
WMOK   Wichita Mounta     83.37 350      P         P           23 50 26.2   0.0
       baz=172
W39A   Magazine           83.39 355   eP           P           23 50 26.5 +0.3
W39A   Magazine           83.39 355      P         P           23 50 26.4 +0.2
       baz=176
WHAR   Wooly Hollow       83.40 356   eP           P           23 50 26.5 +0.2
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CPCT	Cooper Cave	83.47	2	*e*P	P	23 50 26.4	-0.3
V50A	Pikevile	83.68	2	P	P	23 50 27.4	-0.3
	baz=181						
V48A	Smith Brothers	83.73	0	P	P	23 50 27.3	-0.7
	baz=180						
V53A	Saluda	83.75	4	*e*P	P	23 50 27.6	-0.6
V53A	Saluda	83.75	4	P	P	23 50 27.0	-1.2
	baz=183						
V49A	McMinnville	83.76	1	P	P	23 50 27.3	-0.9
	baz=181						
V46A	Holladay	83.79	359	P	P	23 50 27.2	-1.1
	baz=179						
V47A	Nunnelly	83.82	360	P	P	23 50 27.5	-0.9
	baz=180						
V51A	Loudon	83.83	2	*e*P	P	23 50 28.2	-0.3
V51A	Loudon	83.83	2	P	P	23 50 28.4	-0.1
	baz=182						
AMTX	Amarillo	83.88	348	*e*P	P	23 50 29.6	+0.7
	comp=Z,55nm,1.0s						
AMTX	Amarillo	83.88	348	P	P	23 50 29.7	+0.8
	baz=170						
V52A	Sevierville	83.89	3	*e*P	P	23 50 28.3	-0.5
V52A	Sevierville	83.89	3	P	P	23 50 28.2	-0.6
	baz=182						
V54A	Nebo	83.90	4	P	P	23 50 28.4	-0.5
	baz=183						
BNM	Barren Site	83.96	344	*e*P	P	23 50 31.0	+1.5
V55A	Taylorsville	84.01	5	P	P	23 50 28.5	-1.0
	baz=184						
LENM	Lemitar	84.04	344	*e*P	P	23 50 31.7	+1.9
WVT	Waverly	84.12	360	*e*P	P	23 50 29.5	-0.5
WVT	Waverly	84.12	360	*e*P	P	23 50 29.5	-0.5
WVT	Waverly	84.12	360	P	P	23 50 29.0	-0.9
	baz=180						
TUL1	Leonard	84.25	353	*e*P	P	23 50 31.1	+0.5
TUL1	Leonard	84.25	353	P	P	23 50 30.5	-0.2
	baz=174						
LAZ	Ladron	84.30	344	*e*P	P	23 50 32.6	+1.4
U45A	Rockin P Farm,	84.35	359	P	P	23 50 30.2	-0.9
	baz=179						
U46A	Springville	84.35	359	P	P	23 50 29.8	-1.3
	baz=179						
U43A	Rector	84.41	357	P	P	23 50 30.9	-0.5
	baz=178						
U42A	Revenden	84.42	357	P	P	23 50 30.5	-1.0
	baz=177						
U51A	La Follette	84.42	3	P	P	23 50 30.6	-0.9
	baz=182						
U47A	Clarksville	84.43	360	P	P	23 50 30.5	-1.0
	baz=180						
U50A	Jamestown	84.43	2	P	P	23 50 30.6	-1.0
	baz=182						
U41A	Viola	84.44	356	P	P	23 50 31.0	-0.5
	baz=177						
U52A	Thorn Hill	84.45	3	P	P	23 50 30.8	-0.9
	baz=182						
U53A	Fall Branch	84.45	4	P	P	23 50 30.6	-1.1
	baz=183						
HHAR	Hobbs	84.48	355	*e*P	P	23 50 31.8	0.0
U40A	Yellville	84.49	355	P	P	23 50 31.3	-0.6
	baz=176						
U48A	Cassie Pea, Po	84.50	1	P	P	23 50 31.4	-0.5
	baz=180						
U49A	Red Boiling Sp	84.51	1	P	P	23 50 30.9	-1.0
	baz=181						
SACV	Santiago Islan	84.54	60	PFAKE		23 50 40.0	+7.4
SACV				LR	LR		
	comp=Z,305nm,19.0s						
TZTN	Tazewell	84.59	3	*e*P	P	23 50 31.9	-0.5
	comp=Z,57nm,1.4s						
TZTN	Tazewell	84.59	3	P	P	23 50 31.9	-0.5
	baz=182						
U55A	TA2, Sparta	84.67	5	P	P	23 50 32.0	-0.8
	baz=184						
IKP	In-Ko-Pah, Jac	84.69	336	P	P	23 50 34.0	+1.0
	baz=161						
ANMO	Albuquerque	84.70	344	*e*P	P	23 50 34.1	+0.9
	comp=Z,30nm,1.1s						
ANMO	Albuquerque	84.70	344	*e*P	P	23 50 34.1	+0.9
ANMO				pmax	pmax		
	comp=Z,29nm,1.1s						
ANMO	Albuquerque	84.70	344	P	P	23 50 34.2	+1.0
	baz=167						
GLA	Glamis	84.73	337	P	P	23 50 33.9	+0.7
	baz=162						
BAR	Barrett	84.88	335	*e*P	P	23 50 35.1	+1.2
SWSC	Sam W. Stewart	84.89	336	P	P	23 50 34.7	+0.8
	baz=161						
T47A	Sharon Grove	84.97	0	*e*P	P	23 50 33.8	-0.5
T47A	Sharon Grove	84.97	0	P	P	23 50 33.2	-1.1
	baz=180						
X18A	Snowflake	84.99	341	*e*P	P	23 50 36.5	+1.9
T51A	Gray	85.00	3	P	P	23 50 33.5	-1.0
	baz=182						
MONP2	Monument Peak	85.01	336	P	P	23 50 36.1	+1.3
	baz=161						
T45A	Paducah	85.02	359	P	P	23 50 33.8	-0.7
	baz=179						
T46A	Princeton	85.03	359	P	P	23 50 33.8	-0.8
	baz=180						
T50A	Nancy	85.03	2	P	P	23 50 33.8	-0.8
	baz=182						
T53A	Wise	85.07	4	P	P	23 50 34.0	-0.8
	baz=183						
T42A	Van Buren	85.09	357	*e*P	P	23 50 33.7	-1.1
T42A	Van Buren	85.09	357	P	P	23 50 33.9	-0.9
	baz=177						
T48A	Bowling Green	85.10	1	P	P	23 50 33.9	-1.0
	baz=180						
T49A	Edmonton	85.11	1	*e*P	P	23 50 34.2	-0.7
T49A	Edmonton	85.11	1	P	P	23 50 34.1	-0.9
	baz=181						
T43A	Greenville	85.11	358	P	P	23 50 33.7	-1.3
	baz=178						
T41A	Mountain View	85.13	356	P	P	23 50 34.2	-0.8
	baz=177						
T52A	Hallie	85.18	3	P	P	23 50 34.5	-0.8
	baz=183						
109C	Camp Elliot, M	85.19	335	P	P	23 50 36.3	+0.9
	baz=161						
T54A	Tazewell	85.20	5	P	P	23 50 34.5	-1.0
	baz=184						
TSUM	Tsumeb	85.27	114	PFAKE		23 50 50.0	+13
TSUM				LR	LR		
	comp=Z,478nm,20.0s						
Y12C	Blythe	85.31	337	*e*P	P	23 50 37.6	+1.6
Y12C	Blythe	85.31	337	P	P	23 50 37.2	+1.2
	baz=162						
BLA	Blacksburg	85.41	5	*e*P	P	23 50 36.5	0.0
BLA	Blacksburg	85.41	5	*e*P	P	23 50 36.5	0.0
BLA	Blacksburg	85.41	5	P	P	23 50 35.4	-1.1
	baz=184						
BC3	Big Chuckawall	85.47	337	P	P	23 50 37.9	+1.0
	baz=162						
W18A	Petrified Fore	85.51	342	*e*P	P	23 50 38.2	+1.0
W18A	Petrified Fore	85.51	342	P	P	23 50 38.2	+1.0
	baz=165						
S47A	Hartford	85.58	0	P	P	23 50 36.3	-1.0
	baz=180						
S43A	Fulton Ridge,	85.59	358	P	P	23 50 36.4	-1.0
	baz=178						
S48A	Wiedeman Farm,	85.65	1	P	P	23 50 36.2	-1.4
	baz=181						
S41A	Jillco Farms,	85.67	356	P	P	23 50 37.6	-0.2
	baz=177						
S45A	Carrier Mills	85.67	359	P	P	23 50 36.4	-1.3
	baz=179						
S46A	Don Dixon Farm	85.67	360	P	P	23 50 36.6	-1.1
	baz=180						
S51A	Beattyville	85.69	3	*e*P	P	23 50 36.9	-0.9
S51A	Beattyville	85.69	3	P	P	23 50 36.9	-0.9
	baz=182						
TPFO	Pinon Flats	85.69	336	P	P	23 50 39.8	+1.7
	baz=161						
SCI2	San Clemente I	85.69	334	P	P	23 50 39.8	+1.9
	baz=160						
XPFO	Pion Flat	85.69	336	*e*P	P	23 50 39.0	+0.9
PFO	Pinyon Flats O	85.69	336	*e*P	P	23 50 38.9	+0.8
	comp=Z,23nm,1.1s						
PFO	Pinyon Flats O	85.69	336	P	P	23 50 39.2	+1.1
	baz=161						
S44A	Carbondale	85.70	358	P	P	23 50 36.8	-1.0
	baz=179						
S50A	Richmond	85.70	2	P	P	23 50 36.5	-1.4
	baz=182						
SIUC	Southern Illin	85.72	358	*e*P	P	23 50 37.6	-0.3
PDMCI	Parker Dam,Lak	85.74	338	P	P	23 50 39.1	+0.9
	baz=162						
S49A	Springfield	85.79	2	P	P	23 50 37.0	-1.3
	baz=181						
S53A	Williamson	85.79	4	P	P	23 50 37.4	-0.9
	baz=183						
S42A	Caledonia	85.81	357	P	P	23 50 37.4	-1.0
	baz=178						
IRM	Iron Mountain	85.86	337	P	P	23 50 40.0	+1.2
	baz=162						
MURC	Murrieta	85.89	335	P	P	23 50 39.8	+0.9
	baz=160						
BELC	Belle Mtn. Jos	85.94	336	P	P	23 50 40.4	+1.1
	baz=161						
USIN	University of	85.95	360	*e*P	P	23 50 38.5	-0.6
S55A	Lewisburg	85.97	5	P	P	23 50 38.2	-1.0
	baz=184						
FVM	French Village	86.02	357	*e*P	P	23 50 38.6	-0.9
FVM	French Village	86.02	357	*e*P	P	23 50 38.6	-0.9
CIS	Catalina Islan	86.05	334	P	P	23 50 40.4	+0.6
	baz=160						
CCM	Cathedral Cave	86.11	357	*e*P	P	23 50 39.1	-0.8
	comp=Z,286nm,1.0s						
CCM	Cathedral Cave	86.11	357	P	P	23 50 39.3	-0.6
	baz=177						
R46A	Gibon Southern	86.20	360	P	P	23 50 39.2	-1.1
	baz=180						
WCI	Wyandotte Cave	86.22	1	*e*P	P	23 50 39.0	-1.4
	comp=Z,163nm,1.0s						
WCI	Wyandotte Cave	86.22	1	*e*P	P	23 50 39.1	-1.4
WCI				pmax	pmax		
	comp=Z,163nm,1.0s						
WCI	Wyandotte Cave	86.22	1	P	P	23 50 39.0	-1.4
	baz=181						
WUAZ	Wupatki	86.25	340	*e*P	P	23 50 41.9	+1.0
	comp=Z,21nm,1.1s						
WUAZ	Wupatki	86.25	340	P	P	23 50 41.6	+0.8
	baz=164						
R44A	Waltonville	86.25	359	P	P	23 50 39.6	-1.0
	baz=179						
R45A	Skylar, Fairfi	86.28	359	P	P	23 50 39.7	-1.0
	baz=179						
R47A	Wooly Knot Far	86.28	1	P	P	23 50 39.3	-1.4
	baz=180						
R43A	Red Bud	86.30	358	P	P	23 50 40.1	-0.7
	baz=178						
R49A	Shelbyville	86.30	2	P	P	23 50 39.6	-1.2
	baz=181						
R50A	Paris	86.31	2	P	P	23 50 39.8	-1.1
	baz=182						
R42A	Luebbering	86.32	357	P	P	23 50 40.2	-0.7
	baz=178						
R54A	Victor	86.34	5	P	P	23 50 39.9	-1.2
	baz=184						
R51A	Hillsboro	86.35	3	P	P	23 50 40.0	-1.0
	baz=182						
R58B	Mineral	86.35	7	*e*P	P	23 50 40.8	-0.3
R58B	Mineral	86.35	7	P	P	23 50 40.5	-0.5
	baz=186						
R41A	Rosebud	86.36	357	P	P	23 50 40.1	-1.0
	baz=177						
R48A	Northridge Ran	86.39	1	P	P	23 50 40.3	-1.0
	baz=181						
R52A	Catlettsburg	86.42	4	P	P	23 50 40.4	-1.0
	baz=183						
BBRC	Big Bear Solar	86.43	336	P	P	23 50 42.7	+0.9
	baz=161						
R53A	Hurricane	86.44	4	P	P	23 50 40.5	-1.0
	baz=183						
T25A	Trinidad	86.49	346	*e*P	P	23 50 43.6	+1.6
T25A	Trinidad	86.49	346	P	P	23 50 43.3	+1.2
	baz=169						
R55A	Marlinton	86.50	6	P	P	23 50 41.5	-0.4
	baz=185						
GMRC	Granite Mounta	86.59	337	P	P	23 50 43.8	+1.3
	baz=162						
BFSC	Mount Baldy Ra	86.62	335	P	P	23 50 43.1	+0.4
	baz=160						
MWC	Mount Wilson	86.71	335	*e*P	P	23 50 44.3	+1.1
MWC	Mount Wilson	86.71	335	*e*P	P	23 50 44.3	+1.1
OLIL	Olney	86.72	359	*e*P	P	23 50 42.4	-0.4
DECC	Green Verdugo	86.82	335	P	P	23 50 44.2	+0.7
	baz=160						
Q50A	Georgetown	86.88	3	P	P	23 50 43.0	-0.7
	baz=182						
Q45A	Warren Harvey,	86.88	359	P	P	23 50 42.5	-1.1
	baz=179						
Q44A	Meyer Farm, Va	86.90	359	*e*P	P	23 50 43.3	-0.4
Q44A	Meyer Farm, Va	86.90	359	P	P	23 50 42.7	-1.1
	baz=179						
Q47A	Bedord North L	86.92	1	P	P	23 50 42.5	-1.3
	baz=180						
Q48A	North Vernon	86.92	1	P	P	23 50 43.1	-0.7
	baz=181						
Q42A	Golden Eagle	86.95	357	P	P	23 50 43.7	-0.2
	baz=178						
Q43A	New Douglas	86.95	358	P	P	23 50 43.4	-0.6
	baz=178						
Q41A	Truxton	87.01	357	P	P	23 50 43.7	-0.6
	baz=177						
Q49A	Aurora	87.01	2	P	P	23 50 43.3	-0.9
	baz=182						
Q52A	Bidwell	87.06	4	P	P	23 50 43.4	-1.1
	baz=183						
Q51A	Peebles	87.08	3	*e*P	P	23 50 44.0	-0.6
Q51A	Peebles	87.08	3	P	P	23 50 43.5	-1.1
	baz=182						
BLO	Bloomington	87.16	1	*e*P	P	23 50 44.4	-0.6
BLO	Bloomington	87.16	1	*e*P	P	23 50 44.4	-0.6
Q55A	Buckhannon	87.21	6	P	P	23 50 44.4	-0.9
	baz=185						
SDCO	Great Sand Dun	87.26	346	*e*P	P	23 50 46.4	+0.5
	comp=Z,12nm,1.1s						
SDCO	Great Sand Dun	87.26	346	P	P	23 50 46.9	+1.0
	baz=168						
TUQ	Turquoise Moun	87.27	337	P	P	23 50 46.9	+1.1
	baz=161						
MVCO	Mesa Verde	87.28	343	*e*P	P	23 50 47.2	+1.2
	comp=Z,58nm,1.4s						
MVCO	Mesa Verde	87.28	343	P	P	23 50 47.0	+1.1
	baz=166						
EDW2	Edwards Air Fo	87.31	335	P	P	23 50 46.5	+0.6
	baz=160						
GSC	Goldstone, Bar	87.38	336	*e*P	P	23 50 47.7	+1.4
GSC	Goldstone, Bar	87.38	336	*e*P	P	23 50 47.7	+1.4
GSC	Goldstone, Bar	87.38	336	P	P	23 50 47.2	+0.9
	baz=161						
P48A	Milroy	87.46	1	P	P	23 50 45.0	-1.4
	baz=181						
P44A	Sand Creek, Wi	87.46	359	P	P	23 50 45.7	-0.7
	baz=179						
P47A	Martinsville	87.47	1	P	P	23 50 45.3	-1.2
	baz=181						
KSU1	Kansas State U	87.48	353	*e*P	P	23 50 47.0	+0.4
	comp=Z,23nm,0.7s						
KSU1	Kansas State U	87.48	353	P	P	23 50 46.5	-0.1
	baz=174						
S22A	4UR Ranch, Cre	87.49	345	*e*P	P	23 50 49.0	+1.9
S22A	4UR Ranch, Cre	87.49	345	P	P	23 50 48.4	+1.3
	baz=167						
CBKS	Cedar Bluff	87.51	350	*e*P	P	23 50 48.2	+1.4
CBKS	Cedar Bluff	87.51	350	*e*P	P	23 50 48.2	+1.4
CBKS	Cedar Bluff	87.51	350	P	P	23 50 47.5	+0.8
	baz=172						
P45A	Graceland, Par	87.51	360	*e*P	P	23 50 46.0	-0.7
P45A	Graceland, Par	87.51	360	P	P	23 50 45.7	-1.0
	baz=180						
P51A	Williamsport	87.54	3	*e*P	P	23 50 46.2	-0.6
P51A	Williamsport	87.54	3	P	P	23 50 46.0	-0.8
	baz=183						
P49A	Miami Univ. Ec	87.55	2	P	P	23 50 45.8	-1.0
	baz=182						
P46A	Rosedale	87.60	0	P	P	23 50 46.1	-1.0
	baz=180						
P42A	Winchester	87.61	358	*e*P	P	23 50 46.6	-0.6
P42A	Winchester	87.61	358	P	P	23 50 46.2	-0.9
	baz=178						
P53A	Whipple	87.62	5	*e*P	P	23 50 46.7	-0.6
P53A	Whipple	87.62	5	P	P	23 50 46.3	-0.9
	baz=184						
P50A	Jamestown	87.64	3	P	P	23 50 46.2	-1.1
	baz=182						
P43A	Skaggs, Pawnee	87.65	358	P	P	23 50 46.5	-0.8
	baz=178						
P41A	Barry, Barry	87.72	357	P	P	23 50 47.1	-0.6
	baz=177						
P52A	Corning	87.73	4	P	P	23 50 46.7	-1.1
	baz=183						
P55A	Reedsville	87.74	6	P	P	23 50 46.9	-0.9
	baz=185						
P54A	Burton	87.79	5	P	P	23 50 46.8	-1.3
	baz=184						
KNB	Kanab	88.01	340	*e*P	P	23 50 50.7	+1.3
KNB	Kanab	88.01	340	*e*P	P	23 50 50.7	+1.3
KSCO	Kaye Shedlock’	88.06	348	*e*P	P	23 50 51.4	+1.9
KSCO	Kaye Shedlock’	88.06	348	P	P	23 50 50.8	+1.2
	baz=170						
SHPR	Sheep Range	88.09	338	*e*P	P	23 50 51.4	+1.6
O44A	Mansfield	88.14	359	P	P	23 50 48.6	-1.0
	baz=179						
O41A	Passleys Farm,	88.16	357	P	P	23 50 48.6	-1.2
	baz=178						
ISA	Isabella, Lake	88.18	335	*e*P	P	23 50 51.6	+1.5
ISA	Isabella, Lake	88.18	335	*e*P	P	23 50 51.6	+1.5
ISA	Isabella, Lake	88.18	335	P	P	23 50 51.0	+0.9
	baz=160						
O50A	Cable	88.19	3	P	P	23 50 49.1	-0.8
	baz=182						
PV01	Paradox Valley	88.19	343	*e*P	P	23 50 51.3	+1.0
O49A	Covington	88.21	2	*e*P	P	23 50 49.0	-1.0
O49A	Covington	88.21	2	P	P	23 50 48.5	-1.5
	baz=182						
O47A	Sheridan	88.22	1	P	P	23 50 48.6	-1.4
	baz=181						
O51A	Pataskala	88.22	4	P	P	23 50 49.2	-0.9
	baz=183						
O52A	Adamsville	88.23	4	*e*P	P	23 50 49.9	-0.2
O52A	Adamsville	88.23	4	P	P	23 50 49.3	-0.8
	baz=184						
O45A	Potomac	88.23	360	P	P	23 50 49.1	-1.0
	baz=180						
PV05	Paradox Valley	88.24	343	*e*P	P	23 50 51.9	+1.4
O48A	Farmland	88.26	2	P	P	23 50 49.3	-1.0
	baz=181						
PV13	Radium Mtn., P	88.26	343	*e*P	P	23 50 51.9	+1.2
MPMC	Manual Prospec	88.28	336	P	P	23 50 51.6	+0.9
	baz=160						
O43A	Sugar Creek Fa	88.29	358	P	P	23 50 49.6	-0.8
	baz=179						
PV02	Paradox Valley	88.29	343	*e*P	P	23 50 52.1	+1.4
ACSO	Alum Creek Sta	88.29	3	*e*P	P	23 50 49.2	-1.3
ACSO	Alum Creek Sta	88.29	3	P	P	23 50 49.6	-0.8
	baz=183						
PKCU	Pink Cliffs	88.30	340	*e*P	P	23 50 53.2	+2.2
PV03	Paradox Valley	88.36	343	*e*P	P	23 50 51.2	+0.2
SFIN	Lafayette	88.36	0	*e*P	P	23 50 49.9	-0.8
SFIN	Lafayette	88.36	0	P	P	23 50 49.4	-1.3
	baz=180						
PV15	Paradox Valley	88.37	343	*e*P	P	23 50 52.8	+1.6
O53A	New Philadelph	88.39	5	P	P	23 50 50.3	-0.6
	baz=184						
Q24A	Divide	88.39	346	P	P	23 50 52.8	+1.4
	baz=168						
PV17	East Wray Mesa	88.41	343	*e*P	P	23 50 52.6	+1.3
PV11	David Mesa, Pa	88.41	343	*e*P	P	23 50 52.6	+1.3
PV12	Saucer Basin,	88.41	343	*e*P	P	23 50 52.7	+1.3
PV16	Nyswonger Mesa	88.43	343	*e*P	P	23 50 52.7	+1.3
PV19	Morning Glory	88.44	343	*e*P	P	23 50 52.8	+1.4
PV20	West Nyswonger	88.47	343	*e*P	P	23 50 52.7	+1.2
O55A	Ligonier	88.47	6	P	P	23 50 51.4	+0.1
	baz=185						
PV07	Paradox Valley	88.50	343	*e*P	P	23 50 53.1	+1.4
PV04	Paradox Valley	88.50	343	*e*P	P	23 50 53.1	+1.4
PV14	Lion Creek, Pa	88.51	343	*e*P	P	23 50 53.1	+1.3
MVL	Millersville	88.51	8	*e*P	P	23 50 51.4	0.0
DAC	Darwin (Calif)	88.51	336	*e*P	P	23 50 52.9	+1.1
DAC	Darwin (Calif)	88.51	336	*e*P	P	23 50 52.9	+1.1
PV10	Paradox Valley	88.51	343	*e*P	P	23 50 52.7	+0.9
HDIL	Hopedale	88.56	358	*e*P	P	23 50 50.8	-0.9
	comp=Z,66nm,1.1s						
HDIL	Hopedale	88.56	358	P	P	23 50 50.7	-0.9
	baz=179						
PV23	Carpenter Ridg	88.58	343	*e*P	P	23 50 53.7	+1.5
O56A	Blue Knob Stat	88.58	7	*e*P	P	23 50 51.5	-0.4
O56A	Blue Knob Stat	88.58	7	P	P	23 50 51.3	-0.6
	baz=186						
SZCU	Shurtz Canyon	88.63	340	*e*P	P	23 50 54.2	+1.9
CCUT	Cedar City	88.65	339	*e*P	P	23 50 54.3	+1.8
PV09	Paradox Valley	88.65	343	*e*P	P	23 50 54.0	+1.5
PV21	Cone Mtn., Par	88.68	343	*e*P	P	23 50 54.0	+1.4
PAGS	Pennsylvania G	88.70	8	*e*P	P	23 50 52.5	+0.2
N44A	Piper City	88.78	359	P	P	23 50 51.4	-1.2
	baz=179						
TPNV	Topopah Spring	88.79	337	*e*P	P	23 50 54.5	+1.5
TPNV	Topopah Spring	88.79	337	P	P	23 50 53.8	+0.7
	baz=161						
CWC	Cottonwood Cre	88.80	336	P	P	23 50 53.9	+0.8
	baz=160						
N50A	Nevada	88.83	3	P	P	23 50 51.7	-1.2
	baz=183						
N45A	Kentland	88.83	360	P	P	23 50 52.0	-1.0
	baz=180						
MTPU	Mount Pierson	88.85	341	*e*P	P	23 50 55.0	+1.4
N48A	Decatur	88.86	2	P	P	23 50 52.1	-1.0
	baz=181						
N47A	Urbana	88.87	1	P	P	23 50 51.6	-1.5
	baz=181						
N46A	Monticello	88.88	0	P	P	23 50 51.8	-1.3
	baz=180						
SMCO	Snowmass	88.91	345	*e*P	P	23 50 55.3	+1.4
N52A	McGinn’s Farm,	88.93	4	P	P	23 50 52.3	-1.1
	baz=184						
N43A	Stutzman Famil	88.94	359	P	P	23 50 52.7	-0.7
	baz=179						
N49A	Columbus Grove	88.94	2	*e*P	P	23 50 52.6	-0.8
N49A	Columbus Grove	88.94	2	P	P	23 50 52.1	-1.3
	baz=182						
STKA	Stephens Creek	88.97	220	P	P	23 50 53.3	-0.9
	comp=Z,3.4nm,1.0s,baz=228,slow=5.0,SNR=3.6						
STKA				LR	LR	00 22 30.5	
	comp=Z,531nm,20.8s,baz=183,slow=30						
N53A	Lisbon	88.97	5	P	P	23 50 52.6	-0.9
	baz=184						
SSPA	Standing Stone	89.00	7	*e*P	P	23 50 53.2	-0.5
SSPA	Standing Stone	89.00	7	P	P	23 50 52.9	-0.9
	baz=186						
N51A	Ashland	89.00	4	P	P	23 50 53.0	-0.7
	baz=183						
N55A	Marion Center	89.06	6	P	P	23 50 53.6	-0.5
	baz=185						
N54A	Moraine State	89.17	5	*e*P	P	23 50 54.0	-0.6
N54A	Moraine State	89.17	5	P	P	23 50 53.9	-0.6
	baz=185						
LUPA	Lehigh Univers	89.20	9	*e*P	P	23 50 54.9	+0.3
ISCO	Idaho Springs	89.29	346	*e*P	P	23 50 56.9	+1.4
	comp=Z,24nm,1.1s						
ISCO	Idaho Springs	89.29	346	*e*P	P	23 50 56.9	+1.4
ISCO				pmax	pmax		
	comp=Z,24nm,1.1s						
ISCO	Idaho Springs	89.29	346	P	P	23 50 56.9	+1.4
	baz=168						
MSU	Marysvale	89.30	341	*e*P	P	23 50 57.2	+1.7
MSU	Marysvale	89.30	341	*e*P	P	23 50 57.2	+1.7
M47A	Cromwell	89.35	1	P	P	23 50 54.2	-1.2
	baz=181						
BRNJ	Basking Ridge	89.37	10	*e*P	P	23 50 55.6	+0.2
M44A	Midewin, Midew	89.37	359	*e*P	P	23 50 55.2	-0.3
M44A	Midewin, Midew	89.37	359	P	P	23 50 54.8	-0.6
	baz=179						
M46A	Old House Fiel	89.39	1	*e*P	P	23 50 55.0	-0.5
M46A	Old House Fiel	89.39	1	P	P	23 50 54.6	-1.0
	baz=180						
M41A	Milan	89.40	358	P	P	23 50 53.8	-1.8
	baz=178						
M51A	Elyria	89.42	4	P	P	23 50 55.0	-0.7
	baz=183						
M43A	Waltham Townsh	89.43	359	P	P	23 50 54.7	-1.0
	baz=179						
LIC	Lamto	89.44	80	*e*P	P	23 50 56.0	-0.5
	comp=Z,61nm,1.3s						
M50A	Fremont	89.46	3	P	P	23 50 55.3	-0.5
	baz=183						
N59A	State Game Lan	89.47	9	*e*P	P	23 50 56.1	+0.1
N59A	State Game Lan	89.47	9	P	P	23 50 56.1	+0.1
	baz=188						
M48A	Edgerton	89.49	2	P	P	23 50 54.7	-1.3
	baz=182						
M49A	Liberty Center	89.50	2	P	P	23 50 55.3	-0.7
	baz=182						
M39A	Webster	89.57	356	P	P	23 50 55.2	-1.2
	baz=177						
M53A	WI Miller and	89.61	5	P	P	23 50 55.5	-1.1
	baz=184						

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M52A  Chesterland        89.67   4  P       P        23 50 56.2 -0.7
      baz=184
PSUT  Pine Spring        89.70 339 eP       P        23 50 58.9 +1.5
KIC   Kosan Boka         89.73  80 eP       P        23 50 57.5 -0.4
      comp=Z,118nm,1.7s
M54A  Oil Creek Stat     89.74   6 eP       P        23 50 56.4 -0.8
M54A  Oil Creek Stat     89.74   6  P       P        23 50 56.0 -1.2
      baz=185
TIC   Toumodi            89.76  80 eP       P        23 50 57.6 -0.4
M55A  Ridgway            89.76   6  P       P        23 50 56.9 -0.5
      baz=186
ODNJ  Ogdensburg         89.76  10 eP       P        23 50 57.1 -0.2
TMUT  Trail Mountain     89.84 342 eP       P        23 50 59.5 +1.4
ALLY  Alegheny Colle     89.85   5 eP       P        23 50 57.6 -0.1
DBIC  Dimbokro           89.89  80  P       P        23 50 58.4 -0.2
      comp=Z,7.7nm,0.9s,baz=183,slow=3.5,SNR=6.1
DBIC                                LR      LR       00 28 36.8
      comp=Z,271nm,18.4s,baz=212,slow=34
DBIC  Dimbokro           89.89  80 eP       P        23 50 58.8 +0.2
OGNE  Ogallala           89.89 349 eP       P        23 50 59.3 +1.3
      comp=Z,98nm,1.6s
OGNE                                LR      LR
      comp=Z,212nm,22.0s
OGNE  Ogallala           89.89 349  P       P        23 50 59.0 +1.0
      baz=170
BGNE  Belgrade           89.91 352 eP       P        23 50 59.4 +1.3
BGNE  Belgrade           89.91 352  P       P        23 50 58.5 +0.5
      baz=173
P17A  Butcher Ranch,     89.91 342 eP       P        23 50 59.3 +1.0
R11A  Troy Canyon, C     89.94 338 eP       P        23 50 59.9 +1.4
R11A  Troy Canyon, C     89.94 338  P       P        23 50 59.2 +0.7
      baz=162
L48A  N Adams            89.96   2  P       P        23 50 57.1 -1.1
      baz=182
L47A  Sherwood           89.97   2  P       P        23 50 56.9 -1.3
      baz=181
L46A  Eue Claire         90.00   1  P       P        23 50 57.9 -0.5
      baz=181
L42A  Oliver, Polo       90.01 358 eP       P        23 50 57.8 -0.6
L42A  Oliver, Polo       90.01 358  P       P        23 50 57.6 -0.8
      baz=178
O20A  White River Ci     90.07 344 eP       P        23 50 60.0 +1.0
O20A  White River Ci     90.07 344  P       P        23 50 60.0 +1.0
      baz=166
L50A  Kingsville         90.11   3  P       P        23 50 57.7 -1.2
      baz=183
KSPA  Keystone Colle     90.11   9 eP       P        23 50 59.1 +0.2
L40A  Anamosa            90.11 357 eP       P        23 50 58.7 -0.2
L40A  Anamosa            90.11 357  P       P        23 50 58.3 -0.6
      baz=177
L49A  Milan              90.14   3  P       P        23 50 57.9 -1.1
      baz=182
L53A  Girard             90.14   5  P       P        23 50 58.1 -1.0
      baz=185
OMMB  Old Mammoth Mi     90.15 335 eP       P        23 51 02.4 +2.8
L43A  Garden Prairie     90.17 359  P       P        23 50 58.7 -0.5
      baz=179
YLE   Yale               90.19  11 eP       P        23 51 00.8 +1.6
L39A  Vinton             90.20 356  P       P        23 50 58.2 -1.1
      baz=177
ERPA  Erie               90.32   5 eP       P        23 50 59.1 -0.8
ERPA  Erie               90.32   5  P       P        23 50 59.1 -0.8
      baz=185
AAM   Ann Arbor          90.34   3 eP       P        23 50 58.5 -1.3
      comp=Z,25nm,0.7s
AAM   Ann Arbor          90.34   3 eP       P        23 50 58.6 -1.3
AAM                                 pmax    pmax
      comp=Z,25nm,0.7s
AAM   Ann Arbor          90.34   3  P       P        23 50 58.6 -1.3
      baz=182
N23A  Red Feather La     90.41 346 eP       P        23 51 01.9 +1.2
N23A  Red Feather La     90.41 346  P       P        23 51 02.6 +1.9
      baz=168
L55A  Hinsdale           90.50   7  P       P        23 51 00.3 -0.5
      baz=186
MPU   Maple Canyon       90.62 341 eP       P        23 51 02.9 +1.3
K41A  Shullsburg         90.63 358  P       P        23 51 01.1 -0.2
      baz=178
NLU   North Lily Min     90.66 341 eP       P        23 51 02.9 +1.1
K47A  Vermontville       90.67   2  P       P        23 51 00.6 -0.9
      baz=181
K46A  Dorr               90.68   1  P       P        23 51 00.4 -1.1
      baz=181
K43A  Burlington         90.69 359 eP       P        23 51 01.6 +0.1
BINY  Binghamton         90.72   8 eP       P        23 51 02.0 +0.3
BINY  Binghamton         90.72   8  P       P        23 51 01.0 -0.8
      baz=187
NVAR  Mina Array Bea     90.72 336  P       P        23 51 03.1 +0.9
      comp=Z,2.9nm,0.9s,baz=153,slow=5.3,SNR=10
PHWY  Pilot Hill         90.73 346 eP       P        23 51 03.4 +1.2
K40A  Colesburg          90.75 357  P       P        23 51 00.7 -1.2
      baz=177
K39A  Oelwein            90.78 357  P       P        23 51 00.5 -1.5
      baz=177
K42A  Prairie Point,     90.78 358  P       P        23 51 00.9 -1.1
      baz=178
K48A  Perry              90.83   2  P       P        23 51 00.9 -1.3
      baz=182
JFWS  Jewell Farm        90.93 358 eP       P        23 51 02.3 -0.4
JFWS  Jewell Farm        90.93 358 eP       P        23 51 02.3 -0.4
JFWS  Jewell Farm        90.93 358  P       P        23 51 02.1 -0.6
      baz=178
CMB   Columbia Colle     90.94 334 eP       P        23 51 04.2 +1.2
K52A  Tillsonburg        90.94   5  P       P        23 51 02.1 -0.7
      baz=184
RYN   Ryan               90.97 336 eP       P        23 51 05.4 +2.2
POHA  Pohakuloa          91.05 299  PFAKE            23 51 20.0  +16
POHA                                LR      LR
      comp=Z,2µm,21.0s
DUG   Dugway, Tooele     91.05 341 eP       P        23 51 03.7 +0.2
      comp=Z,24nm,1.2s
DUG   Dugway, Tooele     91.05 341 eP       P        23 51 03.7 +0.2
DUG                                 pmax    pmax
      comp=Z,24nm,1.2s
DUG   Dugway, Tooele     91.05 341  P       P        23 51 04.5 +0.9
      baz=163
K55A  Perry              91.07   7  P       P        23 51 02.8 -0.6
      baz=186
MMNY  Mt. Morris Dam     91.08   7 eP       P        23 51 03.1 -0.3
WAKR  Walker             91.11 335 eP       P        23 51 06.3 +2.4
KVN   Kaiserville        91.25 336 eP       P        23 51 05.7 +1.2
KVN   Kaiserville        91.25 336 eP       P        23 51 05.7 +1.2
TYNO  Tyneside           91.31   5  P       P        23 51 04.2 -0.2
      baz=185
J42A  Columbus           91.31 359  P       P        23 51 03.7 -0.8
      baz=179
ELFO  Elginfield         91.32   4  P       P        23 51 03.4 -1.1
      baz=184
J48A  Bridge Port        91.33   3  P       P        23 51 03.6 -0.9
      baz=182
J41A  Loganville         91.38 358  P       P        23 51 04.3 -0.5
      baz=178
RWWY  Rawlins            91.39 345 eP       P        23 51 05.1 -0.1
J39A  Decorah            91.40 357  P       P        23 51 04.5 -0.4
      baz=177
J49A  Marlette           91.41   3  P       P        23 51 03.3 -1.6
      baz=183
J52A  Paris              91.41   5  P       P        23 51 04.2 -0.7
      baz=184
J40A  Soldiers Grove     91.43 357  P       P        23 51 04.3 -0.7
      baz=178
YERR  Yerington          91.50 336 eP       P        23 51 08.0 +2.3
TCUT  Toone Canyon       91.63 342 eP       P        23 51 07.4 +1.1
PNTR  Pine Nut           91.70 335 eP       P        23 51 08.9 +2.3
BGU   Big Grassy Mou     91.80 341 eP       P        23 51 07.5 +0.5
I42A  Draeger Farm,      91.88 359 eP       P        23 51 07.0 -0.1
I42A  Draeger Farm,      91.88 359  P       P        23 51 06.4 -0.7
      baz=179
I39A  Houston            91.91 357 eP       P        23 51 06.5 -0.8
I39A  Houston            91.91 357  P       P        23 51 06.4 -0.8
      baz=177
I40A  Norwalk            91.92 358  P       P        23 51 06.3 -0.9
      baz=178
I51A  Listowel           91.94   4  P       P        23 51 06.1 -1.3
      baz=184
AFDM  Forest Hills D     91.95 334 eP       P        23 51 09.1 +1.5
I49A  Point Hope         92.00   3  P       P        23 51 07.3 -0.3
      baz=183
SPUT  South Promonto     92.03 341 eP       P        23 51 08.9 +0.8
I41A  Arkdale            92.07 358 eP       P        23 51 07.3 -0.6
ECSD  EROS Data Cent     92.08 353 eP       P        23 51 07.7 -0.4
      comp=Z,37nm,1.4s
ECSD  EROS Data Cent     92.08 353  P       P        23 51 07.8 -0.2
      baz=174
ELK   Elko               92.13 339 eP       P        23 51 09.1 +0.4
ELK   Elko               92.13 339 eP       P        23 51 09.1 +0.4
HWUT  Hardware Ranch     92.14 342 eP       P        23 51 09.2 +0.6
ACCN  Adirondack Com     92.14  10 eP       P        23 51 08.6 +0.3
PAHR  Pah Rah Range      92.21 336 eP       P        23 51 10.3 +1.4
K22A  Casper             92.22 346 eP       P        23 51 10.2 +1.2
K22A  Casper             92.22 346  P       P        23 51 10.1 +1.2
      baz=167
HVU   Hansel Valley      92.56 341 eP       P        23 51 10.8 +0.3
HVU   Hansel Valley      92.56 341 eP       P        23 51 10.8 +0.3
BEKR  Beckworth          92.63 335 eP       P        23 51 11.6 +0.7
H40A  Chili              92.64 358  P       P        23 51 10.3 -0.3
      baz=178
NCB   Newcomb            92.66   9 eP       P        23 51 10.6 -0.1
ORV   Oroville           92.67 334 eP       P        23 51 12.3 +1.4
ORV   Oroville           92.67 334 eP       P        23 51 12.3 +1.4
H38A  Maiden Rock        92.76 356  P       P        23 51 10.7 -0.4
      baz=177
BW06  Boulder Array      92.86 344 eP       P        23 51 12.2 +0.2
      comp=Z,12nm,1.2s
BW06  Boulder Array      92.86 344  P       P        23 51 12.4 +0.5
      baz=165
PDAR  Pinedale Array     92.86 344  P       P        23 51 12.0 +0.1
      comp=Z,11nm,1.1s,baz=160,slow=4.7,SNR=31
PDAR                                PP      PP       23 54 56.9 +2.0
      comp=Z,1.1nm,1.1s,baz=162,slow=6.2,SNR=3.9
DELO  Deloro Mine        92.88   7  P       P        23 51 11.4 -0.3
      baz=186
H55A  Tweed              92.95   7  P       P        23 51 10.8 -1.2
      baz=187
SADO  Sadowa             93.02   6  LR      LR       00 27 40.7
      comp=Z,113nm,18.2s,baz=184,slow=32
G45A  Suttons Bay        93.03   1  P       P        23 51 12.1 -0.3
      baz=181
AHID  Auburn Hatcher     93.16 343  PFAKE            23 51 20.0 +6.7
AHID                                LR      LR
      comp=Z,441nm,19.0s
G42A  Mountain           93.23 359 eP       P        23 51 12.8 -0.4
G42A  Mountain           93.23 359  P       P        23 51 12.8 -0.4
      baz=179
G38A  Ridgeland          93.24 357  P       P        23 51 12.5 -0.9
      baz=177
G43A  Wallace            93.24 360  P       P        23 51 13.0 -0.2
      baz=180
LONY  Lake Ozonia        93.26   9 eP       P        23 51 13.4  0.0
LONY  Lake Ozonia        93.26   9  P       P        23 51 13.2 -0.2
      baz=188
RSSD  Black Hills        93.28 348 eP       P        23 51 14.3 +0.5
RSSD  Black Hills        93.28 348 eP       P        23 51 14.3 +0.5
RSSD  Black Hills        93.28 348  P       P        23 51 14.3 +0.5
      baz=169
G40A  Rib Lake           93.28 358 eP       P        23 51 12.9 -0.7
G40A  Rib Lake           93.28 358  P       P        23 51 12.7 -0.8
      baz=178
G39A  Holcombe           93.33 357  P       P        23 51 12.9 -0.9
      baz=177
SPMN  Marine on St.      93.33 356 eP       P        23 51 12.7 -1.1
SPMN  Marine on St.      93.33 356  P       P        23 51 12.3 -1.5
      baz=176
TOBO  Tobermory, Bru     93.34   4  P       P        23 51 12.2 -1.5
      baz=184
KCPM  Cahto Peak         93.41 333 eP       P        23 51 16.6 +2.2
O03E  Paynes Creek       93.44 334  P       P        23 51 15.0 +0.5
      baz=158
PLVO  Plevna             93.44   7  P       P        23 51 13.3 -1.0
      baz=187
KLBO  Killbear Provi     93.54   5  P       P        23 51 13.7 -1.0
      baz=185
BUKO  Buck Lake          93.67   6  P       P        23 51 13.1 -2.2
      baz=185
REDW  Red Top Meadow     93.68 343 eP       P        23 51 16.2 +0.5
F41A  Three Lakes        93.73 359  P       P        23 51 15.2 -0.4
      baz=179
F42A  Maple Grove Fa     93.74 359  P       P        23 51 15.3 -0.3
      baz=179
F43A  Flat Rock, Esc     93.81   0  P       P        23 51 14.9 -1.0
      baz=180
TPAW  Teton Pass         93.82 343 eP       P        23 51 15.3 -1.1
LOHW  Long Hollow        93.87 343 eP       P        23 51 16.9 +0.4
WDC   Whiskeytown Da     93.92 334 eP       P        23 51 16.8 +0.2
WDC   Whiskeytown Da     93.92 334 eP       P        23 51 16.8 +0.2
F40A  Park Falls         93.93 358  P       P        23 51 15.5 -1.0
      baz=178
F39A  Loretta            93.95 357  P       P        23 51 15.6 -1.0
      baz=178
FXWY  Fox Creek          93.98 343 eP       P        23 51 17.5 +0.4
F38A  Pierce - Schro     94.03 357  P       P        23 51 15.8 -1.1
      baz=177
F52A  Sundridge          94.03   6  P       P        23 51 15.2 -1.7
      baz=185
MOOW  Moose Ponds        94.03 343 eP       P        23 51 18.0 +0.6
PEMO  Pembroke           94.06   7  P       P        23 51 16.2 -0.8
      baz=187
COWI  Conover            94.09 359 eP       P        23 51 16.8 -0.5
F51A  Arnstein           94.12   5  P       P        23 51 16.1 -1.3
      baz=185
ALGO  Algonquin Park     94.28   6  P       P        23 51 16.8 -1.2
      baz=186
N02D  Trinity Center     94.33 334  P       P        23 51 19.7 +1.2
      baz=157
FLWY  Flagg Ranch        94.34 343 eP       P        23 51 19.5 +0.8
E43A  Lone Tree Farm     94.36   0  P       P        23 51 17.9 -0.5
      baz=180
E39A  Mellen             94.40 358  P       P        23 51 18.1 -0.6
      baz=178
E42A  Champion           94.41 360  P       P        23 51 17.7 -1.0
      baz=180
E40A  Wakefield          94.45 358  P       P        23 51 17.9 -1.0
      baz=178
E41A  Kenton             94.46 359  P       P        23 51 18.0 -0.9
      baz=179
MOD   Modoc Plateau      94.51 336 eP       P        23 51 20.7 +1.2
HLID  Hailey             94.62 341 eP       P        23 51 20.9 +1.0
HLID                                LR      LR
      comp=Z,240nm,19.0s
HLID  Hailey             94.62 341  P       P        23 51 20.9 +1.0
      baz=162
LSZ   Lusaka             94.65 119  PFAKE            23 51 30.0 +9.1
LSZ                                 LR      LR
      comp=Z,397nm,20.0s
E38A  The Farm, Brul     94.66 357 eP       P        23 51 19.3 -0.5
YFT   Old Faithful       94.73 343 eP       P        23 51 23.1 +2.6
M02C  Callahan           94.76 334  P       P        23 51 21.5 +1.0
      baz=157
M04C  Macdoel            94.83 335  P       P        23 51 22.1 +1.2
      baz=158
YHH   Holmes Hill        95.05 343 eP       P        23 51 23.4 +1.4
RLMT  Red Lodge          95.08 345 eP       P        23 51 22.4 +0.3
RLMT  Red Lodge          95.08 345  P       P        23 51 22.3 +0.2
      baz=165
BOZ   Bozeman (W)        95.98 343  PFAKE            23 51 40.0  +14
BOZ                                 LR      LR
      comp=Z,250nm,19.0s
BOZ   Bozeman (W)        95.98 343  P       P        23 51 26.7 +0.5
      baz=164
J05D  Fort Rock, OR      96.05 336  P       P        23 51 27.6 +1.1
      baz=158
LAO   LASA Array         96.11 347  P       P        23 51 27.4 +0.9
      baz=167
LATQ  La Tuque           96.19  10  P       P        23 51 26.2 -0.5
      baz=190
BMO   Blue Mountains     96.51 339  PFAKE            23 51 40.0  +12
BMO                                 LR      LR
      comp=Z,372nm,20.0s
AGMN  Agassiz Nation     96.57 354 eP       P        23 51 27.3 -1.2
      comp=Z,4.2nm,0.9s
G08A  Pilot Rock         97.32 338 eP       Pdif     23 51 34.0 +1.7
HNR   Honiara            97.70 247  PFAKE            23 51 50.0  +15
HNR                                 LR      LR
      comp=Z,325nm,22.0s
ULM   Lac du Bonnet      98.51 354  P       P        23 51 35.5 -1.6
      comp=Z,1.3nm,0.5s,baz=200,slow=1.5,SNR=4.9
ULM                                 LR      LR       00 31 48.7
      comp=Z,123nm,18.7s,baz=156,slow=33
TORD  Torodi Ar. Bea     98.98  80  P       P        23 51 38.7 -1.5
      comp=Z,2.7nm,1.2s,baz=215,slow=4.2,SNR=6.6
TORD                                LR      LR       00 34 03.4
      comp=Z,272nm,18.5s,baz=265,slow=34
ASAR  Alice Springs      99.39 218  P       Pdif     23 51 41.3 -0.8
      comp=Z,1.6nm,1.0s,baz=163,slow=4.0,SNR=7.6
ASAR                                PP      PP       23 55 42.2 -2.2
      comp=Z,0.6nm,0.8s,baz=148,slow=7.4,SNR=5.2
ASAR                                LR      LR       00 29 50.4
      comp=Z,353nm,19.0s,baz=139,slow=31
NEW   Newport            99.68 340  LR      LR       00 30 01.5
      comp=Z,137nm,19.3s,baz=264,slow=31
ABPO  Ambohimpanom      101.57 136  PFAKE            23 52 00.0 +8.0
ABPO                                LR      LR
      comp=Z,138nm,20.0s
WRA   Warramunga Arr    102.52 220  P       Pdif     23 51 53.7 -2.3
      comp=Z,1.2nm,1.1s,baz=141,slow=3.9,SNR=4.6
MBAR  Mbarara           107.75 112  PFAKE            23 56 40.0  +13
MBAR                                LR      LR
      comp=Z,602nm,22.0s
KMBO  Kilima Mbogo      111.28 118  PFAKE            23 56 50.0  +16
KMBO                                LR      LR
      comp=Z,320nm,20.0s
KMBO  Kilima Mbogo      111.28 118c iPKIKP  PKiKP    23 56 26.6 -7.4
KMBO                                pmax    pmax
      comp=Z,2.0nm,0.8s
YKA   Yellowknife Ar    112.64 347  PKiKP   PKiKP    23 56 33.6 -1.0
      comp=Z,0.5nm,0.7s,baz=158,slow=1.6,SNR=7.6
YKA                                 PP      PP       23 57 21.9 -0.7
      comp=Z,0.3nm,0.8s,baz=150,slow=5.5,SNR=4.8
YKA                                 PKKPbc  PKKPbc   00 07 19.6 -4.2
      comp=Z,0.4nm,1.0s,baz=350,slow=3.6,SNR=5.0
PAB   San Pablo         114.12  57  PFAKE            23 56 50.0  +12
PAB                                 LR      LR
      comp=Z,417nm,19.0s
H11S2 WAKE ISLAND Hy114.21 271      T       T        02 00 45.1
      baz=133
H11S3 WAKE ISLAND Hy114.23 271      T       T        02 00 50.6
      baz=133
H11S1 WAKE ISLAND Hy114.23 271      T       T        02 00 47.7
      baz=133
H11N3 WAKE ISLAND Hy114.94 272      T       T        02 01 41.9
      baz=137,slow=75,SNR=5.1
H11N1 WAKE ISLAND Hy114.95 272      T       T        02 01 39.8
      baz=137
H11N2 WAKE ISLAND Hy114.96 272      T       T        02 01 42.2
      baz=137,slow=75,SNR=3.7
INK   Inuvik            121.36 342  PKP     PKPdf    23 56 49.6 -1.6
      comp=Z,4.1nm,1.1s,baz=199,slow=3.3,SNR=6.7
KAPI  Kappang           121.83 212  PFAKE            23 57 10.0  +16
KAPI                                LR      LR
      comp=Z,274nm,19.0s
ILAR  Eielson Array     121.93 334  PKP     PKPdf    23 56 52.2 -0.2
      comp=Z,4.0nm,0.8s,baz=176,slow=2.4,SNR=34
RES   Resolute Bay      122.87 358  PKP     PKPdf    23 56 52.5 -1.4
      comp=Z,5.2nm,1.1s,baz=184,slow=6.2,SNR=10
TOLK  Toolik Lake Re    125.45 337  P       PKiKP    23 56 59.9 +0.3
      baz=134
DOU   Dourbes           125.71  52 ⇓PKiKP   PKPdf    23 56 59.9 -0.2
MEM   Membach           126.75  53 ⇑Pdif    Pdif     23 53 42.6 -0.2
MEM                                ⇑PKiKP   PKiKP    23 57 02.6  0.0
DAVA  Damuels           127.01  58 ePKPdf   PKiKP    23 57 03.5  0.0
      comp=Z,14nm,1.1s
FETA  Feichten          127.34  58 i PKPdf  PKiKP    23 57 04.3 +0.2
      comp=Z,22nm,1.3s
RETA  Reutte            127.62  58 ePKPdf   PKiKP    23 57 04.6 +0.1
      comp=Z,22nm,1.5s
SQTA  Sankt Quirin      127.73  58 i PKPdf  PKPdf    23 57 04.2  0.0
      comp=Z,20nm,1.4s
MOTA  Moosalm           127.73  58 i PKPdf  PKPdf    23 57 04.3  0.0
      comp=Z,15nm,1.1s
WTTA  Wattenberg        127.99  59 i PKPdf  PKiKP    23 57 05.6 +0.2
      comp=Z,20nm,1.4s
WATA  Walderalm         128.00  59 i PKPdf  PKPdf    23 57 04.8 +0.1
      comp=Z,2.2nm,0.6s
ABTA  Abfaltersbach     128.21  60 ePKPdf   PKPdf    23 57 05.5 +0.4
      comp=Z,14nm,1.4s
MYKA  Terra Mystica     128.80  60 i PKPdf  PKPdf    23 57 06.6 +0.4
      comp=Z,7.2nm,1.1s
KBA   Koelnbreinsper    128.87  60 i PKPdf  PKPdf    23 57 06.3 -0.3
      comp=Z,12nm,1.4s
OBKA  Obir              129.26  61 i PKPdf  PKiKP    23 57 07.9 +0.1
      comp=Z,25nm,1.9s
SOKA  Soboth            129.63  61 i PKPdf  PKiKP    23 57 08.4 -0.2
      comp=Z,13nm,1.4s
MOA   Molln             129.81  59 i PKPdf  PKPdf    23 57 08.2 +0.2
      comp=Z,19nm,1.5s
GERES GERESS Array B 130.01  58     PKP     PKPdf    23 57 08.2 -0.3
      comp=Z,2.0nm,0.8s,baz=197,slow=2.8,SNR=16
KHC   Kasperske Hory    130.09  57  AMS     AMS      00 51 40.0
      comp=Z,400nm,18.5s
ARSA  Arzberg           130.22  60 i PKPdf  PKPdf    23 57 09.4 +0.5
      comp=Z,18nm,1.5s
CONA  Conrad Observa    130.77  60 ePKPdf   PKPdf    23 57 10.0  0.0
      comp=Z,8.8nm,1.3s
CLL   Collm             130.87  55 i PKPdf  PKPdf    23 57 09.8 -0.1
      comp=Z,29nm,1.7s
CLL                                eSS      SS       00 17 02.0 +4.7
CLL                                e                 00 17 48.0
CLL                                eSSS     SSS      00 21 48.0
CLL                                eSSSS             00 25 30.0
CLL                                 Lm      MLR      00 51 00.0
      comp=Z,300nm,21.6s
CLL   Collm             130.87  55 i PKIKP  PKPdf    23 57 09.8 -0.1
CLL                                 pmax    pmax
      comp=Z,29nm,1.7s
CLL                                 MLR     MLR
      comp=Z,300nm,21.6s
BRG   Berggiesshubel    131.17  56 ePKIKP   PKPdf    23 57 10.2 -0.3
BRG                                 pmax    pmax
      comp=Z,42nm,2.0s
VYHS  Vyhne             132.77  61 ePKIKP   PKPdf    23 57 13.6  0.0
VYHS  Vyhne             132.77  61 ePKP     PKPdf    23 57 13.6  0.0
LANS  Liptovska Anna    133.46  60 ePKIKP   PKiKP    23 57 16.0 -0.2
LANS  Liptovska Anna    133.46  60 ePKP     PKiKP    23 57 16.0 -0.2
UZH   Uzhgorod          134.86  62 ePKHKP   PKPpre   23 57 07.0
UZH                                e                 23 57 17.3
RAYN  Ar Rayn           135.32 106  PFAKE            23 57 30.0 +9.2
RAYN                                LR      LR
      comp=Z,292nm,20.0s
RAYN  Ar Rayn           135.32 106  PKPdf   PKPdf    23 57 19.8 +0.5
MNCY  Minicoy           136.69 151 eP       PKPdf    23 57 20.8 -1.2
ANTO  Ankara            137.10  78  PFAKE            23 57 30.0 +6.1
ANTO                                LR      LR
      comp=Z,231nm,19.0s
BRTR  Keskin Array B    137.58  79c iPKIKP  PKPpre   23 57 18.0
BRTR  Keskin Array B    137.58  79  PKhKP   PKPpre   23 57 17.0
      comp=Z,0.8nm,0.8s,baz=324,slow=3.5,SNR=4.1
BRTR                                PKP     PKPdf    23 57 23.1  0.0
      comp=Z,4.1nm,0.9s,baz=188,slow=3.7,SNR=18
PALK  Pallekele         137.79 162  PKiKP   PKiKP    23 57 25.7 -0.4
TRD   Trivandrum        138.09 156 eP       PKPdf    23 57 25.6 +1.0
TRD                                 IAmb    IAmb     23 57 43.3
      comp=Z,4.7nm,4.5s
BILL  Bilibino          139.61 326  PFAKE            23 57 40.0  +12
BILL                                LR      LR
      comp=Z,216nm,19.0s
BILL  Bilibino          139.61 326c iPKIKP  PKPdf    23 57 26.7 +1.0
BILL                                pmax    pmax
      comp=Z,22nm,1.7s
AKASG Malin Array Be    139.81  62c iPKIKP  PKPdf    23 57 26.0 -0.6
AKASG                               pmax    pmax
      comp=Z,1.0nm,0.5s
AKASG Malin Array Be    139.81  62  PKP     PKPdf    23 57 25.8 -0.8
      comp=Z,0.7nm,0.5s,baz=257,slow=2.3,SNR=11
PETK  Petropavlovsk-    139.90 302  PKP     PKPdf    23 57 27.4 +0.7
      comp=Z,24nm,1.1s,baz=93,slow=6.4,SNR=14
SKR   Severo-Kuril's    139.93 298c iPKIKP  PKPdf    23 57 25.8 -1.0
VSU   Vasula            140.92  50c iPKIKP  PKPdf    23 57 26.1 -2.2
VSU                                 pmax    pmax
      comp=Z,35nm,1.0s
ERM   Erimo             144.47 279  PFAKE            23 57 50.0  +11
ERM                                 LR      LR
      comp=Z,342nm,20.0s
ERM   Erimo             144.47 279c iPKIKP  PKPab    23 57 33.7 +0.2
ERM                                 pmax    pmax
      comp=Z,37nm,1.3s
SEY   Seymchan          144.78 317  PKP     PKPab    23 57 33.8 -0.2
      comp=Z,44nm,1.2s,baz=110,slow=4.2,SNR=50
APA   Apatity           144.93  35⇓iPKIKP   PKPab    23 57 33.9 -0.6
MJAR  Matsushiro Arr    144.95 267  PKP     PKPab    23 57 34.9 -0.7
      comp=Z,16nm,0.8s,baz=173,slow=4.1,SNR=34
MAJO  Matsushiro        144.95 267 ePKPdf   PKPab    23 57 35.1 -0.4
MAJO                                LR      LR
      comp=Z,485nm,22.0s
MAJO  Matsushiro        144.95 267 ePKIKP   PKPab    23 57 35.1 -0.4
MAJO                                MLR     MLR
      comp=Z,485nm,22.0s
MAJO  Matsushiro        144.95 267 eP       PKPab    23 57 34.6 -0.9
MAT   Matsushiro        144.95 267  PKP     PKPab    23 57 34.9 -0.6
JOW   Kunigami          145.05 245  PKPbc   PKPdf    23 57 36.9 +0.2
      comp=Z,13nm,1.1s,baz=157,slow=13,SNR=10
GNI   Garni             145.12  85 ePKPbc   PKPab    23 57 36.5 +0.3
GNI                                 LR      LR
      comp=Z,299nm,22.0s
GNI   Garni             145.12  85 i PKPdf  PKPab    23 57 36.6 +0.3
      SNR=32
GNI   Garni             145.12  85c iPKIKP  PKPbc    23 57 35.8 -0.4
GNI                                 pmax    pmax
      comp=Z,785nm,1.7s
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GNI	Garni	145.12	85	PKPdf	PKPdf	23 57 37.0	+0.3
	SNR=21						
MA2	Magadan	145.22	311	*e*PKPdf	PKPbc	23 57 35.1	-0.5
MA2				LR	LR		
	comp=Z,267nm,21.0s						
MA2	Magadan	145.22	311	*e*PKIKP	PKPbc	23 57 35.1	-0.5
MA2				MLR	MLR		
	comp=Z,267nm,21.0s						
MA2	Magadan	145.22	311	PKPbc	PKPbc	23 57 35.1	-0.5
	comp=Z,87nm,1.1s,baz=104,slow=3.7,SNR=66						
NEY	Neytrino	145.25	79⇓	*i*PKIKP	PKPbc	23 57 36.0	-0.5
OBN	Obninsk	145.39	57	*e*PKPdf	PKPbc	23 57 35.3	-0.9
OBN	Obninsk	145.39	57*c*	*i*PKP2	PKPbc	23 57 35.1	-1.2
OBN				pmax	pmax		
	comp=Z,201nm,1.6s						
LVZ	Lovozero	145.39	34	*e*PKPdf	PKPdf	23 57 36.2	+0.2
LVZ	Lovozero	145.39	34*c*	*i*PKIKP	PKPab	23 57 36.6	+0.4
LVZ				pmax	pmax		
	comp=Z,163nm,1.3s						
KIV	Kislovodsk	145.53	78	*e*PKPbc	PKPdf	23 57 36.7	-0.4
KIV				LR	LR		
	comp=Z,144nm,22.0s						
KIV	Kislovodsk	145.53	78	*i* PKPbc	PKPdf	23 57 36.9	-0.2
	SNR=16						
KIV	Kislovodsk	145.53	78	*e*PKIKP	PKPdf	23 57 36.7	-0.4
KIV				MLR	MLR		
	comp=Z,144nm,22.0s						
KIV	Kislovodsk	145.53	78	PKPdf	PKPdf	23 57 37.2	+0.2
	SNR=13						
KBZ	Khabaz	145.57	79	PKPbc	PKPdf	23 57 36.7	-0.3
	comp=Z,11nm,1.0s,baz=267,slow=4.2,SNR=19						
ASAJ	Asahikawa	145.77	282	PKPbc	PKPbc	23 57 38.2	+0.4
	comp=Z,62nm,1.2s,baz=224,slow=7.5,SNR=13						
ZEI	Tsey	145.81	81	*i* PKIKP	PKPdf	23 57 35.0	-2.8
ZEI				pmax	pmax		
	comp=Z,74nm,1.3s						
VSR	Storozhevoye	145.91	65	*e*PKIKP	PKPdf	23 57 36.5	-0.8
VSR				pmax	pmax		
	comp=Z,40nm,1.8s						
NCK	Nalchik	145.93	79	*i* PKP2	PKPdf	23 57 38.0	+0.3
MOS	Moscow	146.10	56	*i* PKIKP	PKPdf	23 57 36.2	-1.3
MOS				pmax	pmax		
	comp=Z,142nm,1.8s						
LPSR	Galich'ya Gora	146.15	62	*e*PKIKP	PKPdf	23 57 36.6	-1.1
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
GOF	Gofitskoye	146.22	77⇑	*i*PKP2	PKPdf	23 57 37.9	-0.2
GOF				pmax	pmax		
	comp=Z,80nm,1.0s						
POO	Poona	146.50	146	*e*P	PKPdf	23 57 38.7	-0.7
POO				IAmb	IAmb	23 57 55.3	
	comp=Z,2.6nm,3.4s						
YSS	Yuzh-Sakhalins	146.79	287	*e*PKPbc	PKPbc	23 57 40.5	-0.3
YSS				LR	LR		
	comp=Z,164nm,19.0s						
YSS	Yuzh-Sakhalins	146.79	287	*e*PKP2	PKPdf	23 57 39.9	+0.9
YSS				pmax	pmax		
	comp=Z,50nm,1.3s						
YSS				MLR	MLR		
	comp=E,100nm,16.0s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YSS				MLR	MLR		
	comp=N,100nm,15.0s						
HYB	Hyderabad	147.02	154	*i* PKP	PKPdf	23 57 40.0	-0.3
HYB	Hyderabad	147.02	154	*e*P	PKPdf	23 57 40.6	+0.3
HYB				IAmb	IAmb	23 58 01.4	
	comp=Z,19nm,5.8s						
GROC	Groznyy	147.25	81	*e*PKIKP	PKPdf	23 57 39.9	0.0
GROC				*e*		00 01 07.6	
GROC				*e*		00 04 47.0	
GROC				pmax	pmax		
	comp=Z,76nm,1.4s						
KLMR	Klimovskoe	147.68	47	*e*PKIKP	PKPdf	23 57 38.3	-1.7
KLMR				pmax	pmax		
	comp=Z,203nm,1.5s						
KLMR	Klimovskoe	147.68	47	*e*PKPdf	PKPdf	23 57 38.4	-1.6
KLMR				AMP		23 57 44.6	
	comp=Z,203nm,1.4s						
JNU	Nakatsue	147.74	256	PKPbc	PKPdf	23 57 42.1	+1.0
	comp=Z,44nm,1.2s,baz=81,slow=8.0,SNR=5.2						
BHJ	Bhuj	148.94	136	*e*P	PKPdf	23 57 43.4	+0.1
CM31	Chiang Mai Arr	149.75	192	PKPdf	PKPdf	23 57 45.5	+0.8
	SNR=26						
CMAR	Chiang Mai Arr	149.75	192	PKP	PKPdf	23 57 44.5	-0.2
	comp=Z,2.6nm,0.8s,baz=227,slow=2.1,SNR=19						
CMAR				PKPbc	PKPbc	23 57 49.9	+0.4
	comp=Z,31nm,1.1s,baz=213,slow=2.4,SNR=40						
NKL	Nikolayevsk	149.78	297	*e*PKHKP	PKPpre	23 57 47.0	
NKL				pmax	pmax		
	comp=Z,150nm,1.5s						
TEY	Ternei	150.06	280⇑	*e*PKIKP	PKPbc	23 57 49.1	-0.3
TEY				pmax	pmax		
	comp=Z,40nm,1.6s						
CHTO	Chiang Mai	150.10	192	*e*PKPdf	PKPdf	23 57 45.6	+0.3
CHTO				*e*PKPbc	PKPbc	23 57 50.2	-0.1
CHTO				LR	LR		
	comp=Z,164nm,19.0s						
CHTO	Chiang Mai	150.10	192	*e*PKIKP	PKPdf	23 57 45.6	+0.3
CHTO				*e*		23 57 50.2	
CHTO				MLR	MLR		
	comp=Z,164nm,19.0s						
CHTO	Chiang Mai	150.10	192	*e*P	PKPdf	23 57 44.1	-1.2
PRGR	Permogore	150.61	46	*e*PKIKP	PKPdf	23 57 42.6	-2.1
PRGR				pmax	pmax		
	comp=Z,117nm,1.2s						
NGP	Nagpur	150.69	153	*e*P	PKPdf	23 57 45.6	-0.6
BWNR	Bhubaneshwar	151.44	166	*e*P	PKPdf	23 57 46.0	-1.2
GRNR	Gornyy	151.89	292	*e*PKIKP	PKPbc	23 57 53.5	0.0
GRNR				pmax	pmax		
	comp=Z,29nm,1.0s						
BHPL	Bhopal	152.12	149	*e*P	PKPdf	23 57 47.2	-1.1
KSRS	Korea Array	152.27	260	PKP	PKPdf	23 57 47.8	-0.3
	comp=Z,0.6nm,0.4s,baz=64,slow=2.9,SNR=5.9						
KSRS				PKPbc	PKPbc	23 57 55.0	+0.3
	comp=Z,12nm,1.1s,baz=137,slow=1.4,SNR=20						
KSAR	Wonju Array Be	152.29	260	PKP	PKPdf	23 57 47.8	-0.3
KSAR				PKPbc	PKPbc	23 57 55.0	+0.2
KSAR	Wonju Array Be	152.29	260	PKIKP	PKPdf	23 57 47.8	-0.3
KSAR						23 57 55.1	
SSE	Sheshan	152.39	242	PFAKE		23 58 00.0	+4.5
SSE				LR	LR		
	comp=Z,272nm,22.0s						
USRK	Ussuriysk Ar.	152.79	276	PKP	PKPdf	23 57 50.2	+1.7
	comp=Z,3.0nm,1.1s,baz=129,slow=2.0,SNR=2.7						
USRK				PKPbc	PKPbc	23 57 55.9	+0.2
	comp=Z,5.8nm,0.9s,baz=130,slow=3.0,SNR=15						
USRK				PKPab	PKPab	23 58 06.9	+0.2
	comp=Z,10.0nm,1.1s,baz=90,slow=3.8,SNR=11						
GEYT	Alibeck	152.86	100	PKP	PKPdf	23 57 49.4	+0.4
	comp=Z,5.5nm,1.1s,baz=357,slow=3.0,SNR=14						
GEYT				PKPbc	PKiKP	23 57 56.5	+0.2
	comp=Z,7.1nm,1.0s,baz=268,slow=4.5,SNR=11						
NJ2	Nanjing	154.45	240	*e*PKPbc	PKPdf	23 57 51.5	+0.2
MDJ	Mudanjiang	154.54	275	*e*PKPbc	PKPbc	23 57 59.3	-0.2
MDJ				*e*PKPab	PKPab	23 58 14.7	+0.5
MDJ				LR	LR		
	comp=Z,382nm,21.0s						
BOK	Bokaro	154.88	165	*e*P	PKPdf	23 57 51.7	-0.5
YAK	Yakutsk	155.31	317	*e*PKP2	PKPab	23 58 16.3	-0.6
YAK				pmax	pmax		
	comp=Z,356nm,1.0s						
YAK				pmax	pmax		
	comp=N,36nm,1.0s						
YAK				pmax	pmax		
	comp=E,153nm,1.1s						
KMI	Kunming	155.51	202	PKP	PKPdf	23 57 53.5	+0.2
KMI				pPKP	sPKPdf	23 57 55.8	+0.5
KMI				sPKP		23 57 57.0	
GYA	Guiyang	155.59	211	PKPab	PKPab	23 58 22.0	+2.8
GYA				AMB	AMB		
	comp=Z,30µm,8.0s						
SHL	Shillong	157.23	178	*e*P	PKPdf	23 57 52.4	-3.2
ARU	Arti	157.81	56	*e*PKPdf	PKPdf	23 57 54.2	-0.7
ARU				*e*PKPab	PKPab	23 58 27.7	-0.2
ARU				LR	LR		
	comp=Z,144nm,22.0s						
ARU	Arti	157.81	56	*i* PKIKP	PKPdf	23 57 55.0	0.0
ZEA	Zeya	157.82	297	*e*PKIKP	PKPdf	23 58 03.2	+8.1
ZEA				*e*		23 58 26.0	
ZEA				pmax	pmax		
	comp=Z,96nm,1.8s						
ENH	Enshi	157.87	221	PFAKE		23 58 10.0	+14
ENH				LR	LR		
	comp=Z,175nm,20.0s						
NRIK	Noril'sk	158.80	5	PKPab	PKPab	23 58 31.9	+0.1
	comp=Z,5.4nm,0.9s,baz=19,slow=3.1,SNR=7.9						
SVE	Sverdlovsk	158.89	54	*e*PKIKP	PKPdf	23 57 57.5	+1.2
SVE				pmax	pmax		
	comp=Z,29nm,1.9s						
NIL	Nilore	159.27	128	*e*PKPdf	PKPdf	23 57 57.8	+0.2
NIL				LR	LR		
	comp=Z,128nm,21.0s						
NIL	Nilore	159.27	128	*e*PKIKP	PKPdf	23 57 57.8	+0.2
NIL				MLR	MLR		
	comp=Z,128nm,21.0s						
DHRM	DHARAMSHALA	159.65	136	*e*P	PKPdf	23 57 58.5	+0.2
CD2	Chengdu	160.66	210	PKP	PKPdf	23 57 58.8	-0.4
XAN	Xi'an	161.28	226	PKP	PKPdf	23 57 57.8	-2.0
BJT	Baijiatuau	161.32	252	PFAKE		23 58 10.0	+10
BJT				LR	LR		
	comp=Z,239nm,22.0s						
LSA	Lhasa	161.32	176	*e*PKPdf	PKPdf	23 58 00.8	+0.3
LSA				LR	LR		
	comp=Z,171nm,19.0s						
LSA	Lhasa	161.32	176	*e*PKIKP	PKPdf	23 58 00.8	+0.3
LSA				MLR	MLR		
	comp=Z,171nm,19.0s						
HIA	Hailar	162.25	283	PFAKE		23 58 10.0	+10
HIA				LR	LR		
	comp=Z,250nm,21.0s						
BOD	Bodaibo	164.19	315	*e*PKIKP	PKPdf	23 57 55.8	-5.9
BOD				pmax	pmax		
	comp=Z,14nm,1.7s						
HHC	Hu-ho-hao-te	164.68	248	*e*PKP	PKPdf	23 58 02.5	-0.4
HHC				LR	LR		
	comp=Z,170nm,14.7s						
HHC				LR	LR		
	comp=Z,120nm,13.0s						
BRVK	Borovoye	165.02	63	*e*PKPdf	PKPdf	23 58 02.5	-0.1
BRVK				LR	LR		
	comp=Z,233nm,21.0s						
BRVK	Borovoye	165.02	63	*e*PKIKP	PKPdf	23 58 02.5	-0.1
BRVK				MLR	MLR		
	comp=Z,233nm,21.0s						
BRVK	Borovoye	165.02	63	PKPdf	PKPdf	23 58 02.9	+0.2
	SNR=9.0						
KSH	Kashi	165.03	120⇑	*i*PKP	PKPdf	23 58 03.0	-0.3
KSH				SKS	SKSdf	00 05 08.3	+0.7
KSH				SKKS	SKKSac	00 09 34.5	-0.1
KSH				AMB	AMB		
	comp=Z,530nm,4.1s						
KSH				LR	LR		
	comp=Z,150nm,4.4s						
KSH				LR	LR		
	comp=Z,140nm,5.1s						
KSH				LR	LR		
	comp=Z,420nm,5.3s						
LZH	Lanzhou	165.27	218	*e*PKP	PKPdf	23 58 02.0	-1.7
LZH				pPKP	sPKPdf	23 58 10.5	+4.8
LZH				sPKP		23 58 13.8	
LZH				PKPab	PKPab	23 59 02.3	+1.1
AAK	Ala-Archa	165.97	107	*e*PKPdf	PKPdf	23 58 04.1	+0.1
AAK				LR	LR		
	comp=Z,232nm,20.0s						
AAK	Ala-Archa	165.97	107	*i* PKPdf	PKPdf	23 58 04.3	+0.2
	SNR=13						
AAK	Ala-Archa	165.97	107	*e*PKIKP	PKPdf	23 58 04.1	+0.1
AAK				MLR	MLR		
	comp=Z,232nm,20.0s						
AAK	Ala-Archa	165.97	107	PKPdf	PKPdf	23 58 04.6	+0.5
	SNR=9.5						
GTA	Gaotai	169.72	212	⇑PKP	PKPdf	23 58 05.5	-1.2
GTA				PKPab	PKPab	23 59 20.8	+0.1
GTA				PP	PP	00 03 12.0	+1.6
GTA				SKS	SKSdf	00 05 11.5	+1.2
GTA				SS	SS	00 24 08.3	+0.2
GTA				AMB	AMB		
	comp=Z,140nm,6.3s						
GTA				LR	LR		
	comp=Z,110nm,18.7s						
GTA				LR	LR		
	comp=Z,180nm,20.0s						
GTA				LR	LR		
	comp=Z,200nm,18.7s						
ULN	Ulaanbaatar	170.43	272	PFAKE		23 58 20.0	+13
ULN				LR	LR		
	comp=Z,215nm,20.0s						
KURK	Kurchatov	170.50	70	*e*PKPdf	PKPdf	23 58 05.6	-1.0
KURK				LR	LR		
	comp=Z,589nm,21.0s						
KURK	Kurchatov	170.50	70	PKPdf	PKPdf	23 58 06.1	-0.4
	SNR=7.8						
SONM	Songino Array	170.87	272	PKP	PKPdf	23 58 04.3	-2.7
	comp=Z,3.4nm,1.3s,baz=214,slow=1.1,SNR=10						
SONM				PKPab	PKPab	23 59 24.7	-1.0
	comp=Z,1.1nm,0.8s,baz=127,slow=4.0,SNR=5.9						
NVS	Novosibirsk	171.21	39⇑	*i*PKIKP	PKPdf	23 58 04.7	-2.1
NVS				*e*		23 59 26.8	
NVS				pmax	pmax		
	comp=Z,26nm,1.4s						
NVS				pmax	pmax		
	comp=E,14nm,1.5s						
TLY	Talaya	172.25	299	PFAKE		23 58 20.0	+13
TLY				LR	LR		
	comp=Z,213nm,22.0s						
TLY	Talaya	172.25	299	*e*PKIKP	PKPdf	23 58 06.1	-1.4
TLY				pmax	pmax		
	comp=Z,36nm,2.0s						
ZALV	Zalesovo Beam	172.50	39	PKP	PKPdf	23 58 05.5	-1.9
	comp=Z,25nm,1.2s,baz=270,slow=1.5,SNR=41						
ZALV				PKPab	PKPab	23 59 32.3	-0.2
	comp=Z,6.8nm,1.0s,baz=305,slow=5.2,SNR=8.2						
MKAR	Makanchi Array	172.74	99	PKP	PKPdf	23 58 07.2	-0.6
	comp=Z,12nm,1.2s,baz=301,slow=0.7,SNR=30						
MKAR				PKPab	PKPab	23 59 32.6	-1.3
	comp=Z,1.1nm,0.9s,baz=262,slow=6.3,SNR=5.0						
MKAR				PP	PP	00 03 27.7	+1.6
	comp=Z,0.5nm,0.9s,baz=243,slow=4.9,SNR=4.3						
WMQ	Urumqi	174.25	140	*e*PKP	PKPdf	23 58 09.5	+0.9
WMQ				LR	LR		
	comp=Z,450nm,23.1s						
WMQ				LR	LR		
	comp=Z,560nm,29.7s						
WMQ				LR	LR		
	comp=Z,450nm,27.3s						

IDC 25 23:50:37.7±1.9**, 5°.73S**×**151°.88E, h0^{km}, mb4.0**/4**, mb1 4.3**/4**, mb1mx3.7**/44**, mbtmp4.0**/4**, Error ellipse: s-maj=108.8km s-min=25.0km az=129.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.15	229	P	P	23 55 36.2	+0.9
	1.5nm,0.6s,baz=56,slow=10,SNR=13						
ASAR	Alice Springs	24.85	222	P	P	23 56 02.0	-0.1
	3.2nm,0.7s,baz=55,slow=9.1,SNR=23						
FITZ	Fitzroy Crossi	28.41	242	P	P	23 56 32.3	-1.9
	3.3nm,0.8s,baz=80,slow=11,SNR=2.9						
ILAR	Eielson Array	83.36	22	P	P	00 03 05.5	-0.8
	1.3nm,0.8s,baz=252,slow=5.2,SNR=14						
TORD	Torodi Ar. Bea	149.70	286	PKPbc	PKiKP	00 10 32.3	+0.7
	0.4nm,0.8s,baz=84,slow=2.0,SNR=3.1						

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*IDC **25** 23:51:49.7±2.3, 0°.59S×98°.43E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.7/50, mbtmp3.8/8, ML3.8/2, MS2.5/1, Ms1 2.5/1, ms1mx2.3/33, Error ellipse: s-maj=85.8km s-min=17.4km az=63.0*

*ISCJB **25** 23:51:52.7±0.7, 0°.43S±0°.06×98°.48E±0°.07, h32^{km}, mb3.8/6, Error ellipse: s-maj=11.6km s-min=6.7km az=148.4*

*DJA **25** 23:51:52.1±0.5, 0°S±4°×9°9E±°, h10^{km}, M3.8/7, MLv3.8/7*

ISC 25 23:51:54.1±0.9**, 0°.43S**±0°.07×**98°.40E**±0°.08**, h32^{km}, n19,** σ**1^s.85**/17**, mb3.8**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.39	343	P	Pb	23 52 00.3	-2.7
PBSI				S	Sb	23 52 07.4	-1.7
SISI	Saibi	1.13	142	P	Pn	23 52 12.1	-1.5
MNSI	Mandailing Nat	1.70	44	P	Pn	23 52 19.2	-2.3
MNSI				S	Sn	23 52 39.9	-2.3
GSI	Gunungsitoli	1.91	335	P	Pn	23 52 25.8	+1.4
PDSI	Padang	2.12	103	P	Pn	23 52 26.0	-1.3
BKNI	Bangkinang	2.75	74	P	Pb	23 52 45.3	+2.7
PSI	Prapat	3.26	9	Pn	Pn	23 52 42.4	-0.7
	1.5nm,0.3s,baz=0.0,slow=0.0,SNR=4.0						
PSI				LR	LR	23 53 35.1	
	comp=Z,69nm,19.5s,baz=94,slow=32						
KRJI	Kerinci	3.48	118	P	Pb	23 53 00.8	+5.7
KCSI	Kotacane, Aceh	3.98	351	P	Pn	23 52 52.9	0.0
CMAR	Chiang Mai Arr	18.78	2	P	Pn	23 56 13.8	+2.3
	0.4nm,0.3s,baz=188,slow=13,SNR=4.0						
H08S2	Diego Garcia H	26.80	254	T	T	00 25 15.5	
	baz=75,slow=76,SNR=14						
H08S3	Diego Garcia H	26.80	254	T	T	00 25 13.9	
	baz=75,slow=76,SNR=153						
H08S1	Diego Carcia H	26.81	254	T	T	00 25 19.0	
	baz=75,slow=76,SNR=15						
WRA	Warramunga Arr	40.17	121	P	P	23 59 26.4	-1.3
	1.1nm,0.7s,baz=302,slow=9.0,SNR=16						
ASAR	Alice Springs	41.47	126	P	P	23 59 37.8	-0.6
	1.3nm,0.7s,baz=301,slow=8.1,SNR=9.7						
SONM	Songino Array	48.58	7	P	P	00 00 36.0	+1.4
	0.7nm,0.6s,baz=190,slow=7.3,SNR=3.9						
MKAR	Makanchi Array	49.11	345	P	P	00 00 40.1	+1.5
	0.4nm,0.6s,baz=140,slow=8.1,SNR=3.9						
STKA	Stephens Creek	51.38	132	P	P	00 00 56.0	-0.1
	2.4nm,0.9s,baz=305,slow=12,SNR=4.0						
ZALV	Zalesovo Beam	55.35	350	P	P	00 01 25.9	+1.2
	0.9nm,0.6s,baz=178,slow=4.3,SNR=2.7						

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*NEIC **26** 00:05:51.3±0.5, 27°.49S×176°.60W, h35^{km}, mb4.0/7, Error ellipse: s-maj=19.0km s-min=6.8km az=116.0*

*IDC **26** 00:05:55.2±4.5, 27°.47S×176°.71W, h65^{km}±45^{km}, mb3.8/11, mb1 4.0/12, mb1mx4.0/23, mbtmp4.1/12, ML4.5/2, MS4.2/4, Ms1 4.2/4, ms1mx3.5/29, Error ellipse: s-maj=56.3km s-min=25.8km az=162.0*

ISC 26 00:05:49.5±0.7**, 27°.87S**±0°.10×**176°.1W**±0°.1**, h34^{km}, n45,** σ**2^s.13**/45**, mb4.1**/12**, MS4.2**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.08	228	*e*Sn	Sb	00 06 51.6	-0.6
RAO				S	Sb	00 06 56.8	+4.6
RAO	Raoul Island	2.08	228	P	Pb	00 06 28.5	+1.8
	365nm,0.3s,baz=76,slow=12,SNR=16						
RAO				S	Sb	00 06 56.8	+4.6
	393nm,0.3s,baz=252,slow=23,SNR=5.2						
NIUE	Niue	10.44	34	*e*Pn	Pn	00 08 06.4	-11
NIUE				*e*Sn	Sn	00 09 46.6	-26
URZ	Urewera	11.80	207	P	Pn	00 08 40.8	+5.4
	1.2nm,0.3s,baz=65,slow=5.1,SNR=4.0						
URZ				S	Sn	00 10 49.1	+3.3
	2.5nm,0.3s,baz=68,slow=20,SNR=13						
BKZ	Black Stump Fm	12.83	207	*e*Pn	Pn	00 08 47.5	-2.0
BFZ	Birch Farm	14.24	204	*e*Pn	Pn	00 09 08.1	-0.6
BFZ				*e*Sn	Sn	00 11 42.4	-3.0
THZ	Tophouse	16.50	210	*e*Pn	Pn	00 09 39.9	+1.5
	12nm,1.2s						
THZ				*e*Sn	Sn	00 12 35.1	-5.4
KHZ	Kahutara	16.77	207	*e*Pn	Pn	00 09 41.1	-0.6
	20nm,0.9s						
KHZ				*e*Sn	Sn	00 12 35.5	-11
OXZ	Oxford	18.14	209	*e*P	P	00 10 00.3	+1.5
	12nm,1.1s						
OXZ				*e*Sn	Sn	00 13 09.1	-11
RPZ	Rata Peaks	18.88	210	*e*P	P	00 10 07.8	+0.8
	10nm,1.1s						
FOZ	Fox Glacier	19.30	212	*e*P	P	00 10 11.0	-0.5
	5.8nm,0.9s						
ODZ	Otahua Downs	20.12	208	*e*P	Pn	00 10 23.9	+1.4
	9.4nm,1.1s						
ODZ				*e*S	S	00 13 59.1	-5.5
WKZ	Wanaka	20.66	211	*e*P	Pn	00 10 29.8	+0.9
STKA	Stephens Creek	36.70	253	P	P	00 12 53.3	-0.1
	2.5nm,0.9s,baz=82,slow=12,SNR=5.4						
AS31	Alice Springs	44.94	264	*e*P	P	00 14 00.3	-1.2
	1.1nm,0.9s						
ASAR	Alice Springs	44.94	264	P	P	00 14 00.3	-1.2
	1.0nm,0.5s,baz=93,slow=7.2,SNR=12						
WRA	Warramunga Arr	45.70	269	P	P	00 14 05.7	-1.9
	2.2nm,0.6s,baz=104,slow=7.9,SNR=24						
WRA				LR	LR	00 32 24.5	
	comp=Z,232nm,19.2s,baz=120,slow=35						
MJAR	Matsushiro Arr	77.13	324	P	P	00 17 37.5	-2.0
	1.0nm,0.3s,baz=171,slow=5.6,SNR=4.7						
MAJO	Matsushiro	77.13	324	*e*P	P	00 17 37.5	-2.0
PLCA	Paso Flores	83.03	132	LR	LR	00 48 55.8	
	comp=Z,48nm,18.4s,baz=221,slow=31						
KSRS	Korea Array	83.51	318	P	P	00 18 13.4	-0.4
	2.0nm,0.8s,baz=137,slow=4.6,SNR=5.8						
KS15	Wonju Array Si	83.52	318	*e*P	P	00 18 13.4	-0.5
KSAR	Wonju Array Be	83.52	318	P	P	00 18 13.4	-0.5
PETK	Petropavlovsk-	83.80	344	P	P	00 18 14.4	-0.6
	2.4nm,0.9s,baz=349,slow=18,SNR=3.3						
PETK				LR	LR	00 47 51.6	
	comp=Z,327nm,21.7s,baz=119,slow=30						
PEA1	Petropavlovsk-	83.80	344	*e*P	P	00 18 14.4	-0.6
NV01	Mina Array Sit	85.28	42	*e*P	P	00 18 25.1	+2.0
NVAR	Mina Array Bea	85.28	42	P	P	00 18 25.1	+2.0
	0.2nm,0.3s,baz=231,slow=6.9,SNR=2.5						
USRK	Ussuriysk Ar.	85.98	325	P	P	00 18 24.5	-1.6
	1.8nm,0.8s,baz=141,slow=37,SNR=3.2						
PD31	Pinedale Array	93.18	43	*e*P	P	00 19 04.1	+3.6
PDAR	Pinedale Array	93.18	43	P	P	00 19 04.1	+3.6
	0.4nm,0.8s,baz=245,slow=1.7,SNR=2.0						
CM31	Chiang Mai Arr	94.12	289	*e*P	P	00 19 05.6	+0.6
CMAR	Chiang Mai Arr	94.12	289	P	P	00 19 05.6	+0.6
	0.3nm,0.3s,baz=155,slow=3.2,SNR=3.4						
CMAR				LR	LR	00 59 20.1	
	comp=Z,106nm,20.8s,baz=182,slow=34						
ILAR	Eielson Array	95.11	12	P	P	00 19 09.0	+0.5
	0.5nm,0.8s,baz=211,slow=6.9,SNR=3.7						
ILB	Eielson Array	95.11	12	*e*P	P	00 19 09.0	+0.5
MK32	Makanchi Array	117.38	311	*e*PKPdf	PKPdf	00 24 31.2	-0.1
MKAR	Makanchi Array	117.38	311	PKP	PKPdf	00 24 31.2	-0.1
	0.2nm,0.5s,baz=124,slow=1.5,SNR=3.8						
FIA0	FINESS Array S	143.28	342	*e*PKPpre	PKPpre	00 25 15.8	
FIA0				*e*PKPdf	PKPdf	00 25 20.6	+1.0
FINES	FINESS Array B	143.28	342	PKhKP	PKPpre	00 25 15.8	
	1.5nm,0.8s,baz=41,slow=3.5,SNR=5.9						
FINES				PKP	PKPdf	00 25 20.6	+1.0
	2.8nm,0.9s,baz=49,slow=2.8,SNR=4.9						
KBZ	Khabaz	144.96	307	PKP	PKPbc	00 25 22.3	0.0
	1.1nm,0.9s,baz=161,slow=1.2,SNR=3.2						
NB2	NORSAR Subarra	146.46	354	PKP	PKPdf	00 25 25.9	+0.8
	comp=Z,0.8nm,0.6s,baz=11,slow=3.1						
NB200	NORSAR Array S	146.46	354	*e*PKPdf	PKPdf	00 25 25.8	+0.6
NOA	NORSAR Array B	146.46	354	PKPbc	PKPdf	00 25 25.8	+0.6
	comp=Z,2.0nm,0.8s,baz=15,slow=4.5,SNR=7.4						
AKASG	Malin Array Be	150.18	327	PKPbc	PKPbc	00 25 36.3	-0.2
	comp=Z,1.7nm,0.7s,baz=44,slow=3.8,SNR=7.8						
BR101	Keskin Array S	152.70	303	*e*PKPbc	PKPbc	00 25 43.0	0.0
BRTR	Keskin Array B	152.70	303	PKPbc	PKPbc	00 25 42.9	0.0
	comp=Z,0.5nm,0.7s,baz=96,slow=3.3,SNR=3.4						

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*HEL **26** 00:21:49.8, 67°.87N×19°.91E, h0^{km}, ML1.7, Explosion*

UPP 26 00:21:51.5±0.0**, 67°.85N**×**20°.20E, h0^{km}, ML2.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	25	P	Pg	00 21 54.0	+0.2
KUA				S	Sg	00 21 55.6	+0.4
KUA	Kurravaara	0.12	25	*i* P	Pg	00 21 54.0	+0.2
KUA				*i* S	Sg	00 21 55.6	+0.4
RATU	Laukkuluspa	0.23	264	P	Pg	00 21 56.1	+0.2
RATU				S	Sg	00 21 59.4	+0.4
RATU	Laukkuluspa	0.23	264	*i* P	Pg	00 21 56.1	+0.2
RATU				*i* S	Sg	00 21 59.4	+0.4
NIKU	Nikkaluokta	0.44	273	P	Pg	00 22 00.1	+0.1
NIKU				S	Sg	00 22 06.1	+0.4
NIKU	Nikkaluokta	0.44	273	*i* P	Pg	00 22 00.1	+0.1
NIKU				*i* S	Sg	00 22 06.1	+0.4
LANU	Lannavaara	0.70	72	P	Pg	00 22 04.8	-0.2
LANU				S	Sg	00 22 13.9	-0.1
LANU	Lannavaara	0.70	72	*i* P	Pg	00 22 04.8	-0.2
LANU				*i* S	Sg	00 22 13.9	-0.1
DUNU	Dundret	0.74	169	P	Pg	00 22 05.4	-0.3
DUNU	Dundret	0.74	169	*i* P	Pg	00 22 05.4	-0.3
MASU	Masugnsbyn	0.79	119	P	Pg	00 22 06.5	-0.2
MASU	Masugnsbyn	0.79	119	*i* P	Pg	00 22 06.5	-0.2
SALU	Saltoluokta	0.80	235	P	Pg	00 22 06.5	-0.3
SALU				S	Sg	00 22 17.4	+0.2
SALU	Saltoluokta	0.80	235	*i* P	Pg	00 22 06.5	-0.3
SALU				*i* S	Sg	00 22 17.4	+0.2
KIF	Kilpisjarvi	1.18	11	*e*P	Pg	00 22 14.2	0.0
KIF	Kilpisjarvi	1.18	11	*e*PB	Pg	00 22 14.3	+0.1

KIF				MSG		00 22 26.9	
	comp=Z,4.9nm,0.2s						
KIF				*e*S	Sg	00 22 29.9	+0.4
PAJU	**Pajala**	1.40	125	P	Pg	00 22 17.1	-1.1
PAJU				S	Sg	00 22 35.8	-0.5
PAJU	**Pajala**	1.40	125	*e*P	Pg	00 22 17.1	-1.1
PAJU				*e*S	Sg	00 22 35.8	-0.5
HEF	**Hetta**	1.41	65	*e*P	Pn	00 22 17.2	-1.2
HEF	**Hetta**	1.41	65	*e*PG	Pn	00 22 17.4	-1.0
	baz=245						
HEF				MSG		00 22 35.2	
	comp=Z,4.9nm,0.2s						
HEF				*e*SB	Sg	00 22 36.0	-0.7
ERTU	**Ertsjaerv**	1.51	148	P	Pn	00 22 19.1	-0.7
ERTU	**Ertsjaerv**	1.51	148	*e*P	Pn	00 22 19.0	-0.8
HARU	**Harads**	1.72	169	P	Pn	00 22 22.7	+0.1
HARU	**Harads**	1.72	169	*e*P	Pn	00 22 22.7	+0.1
KALU	**Kalix**	2.35	147	P	Pn	00 22 32.4	+1.1
KALU	**Kalix**	2.35	147	*e*P	Pn	00 22 32.4	+1.1
	baz=331						
KALU				*e*SG	Sb	00 23 04.2	0.0
TOF	**Tornio**	2.41	136	*e*PB	Pn	00 22 33.5	+1.5
TOF				MSG		00 23 03.6	
	comp=Z,3.7nm,0.2s						
TOF				*e*SG	Sb	00 23 06.0	+0.3
SGF	**Sodankyl**	2.45	97	*e*PB	Pb	00 22 34.5	-1.8
SGF				*e*SG	Sb	00 23 07.8	+0.8
ARE0	**ARCESS Array S**	2.57	46	*e*P	Pn	00 22 35.6	+1.2
	baz=228						
ARE0				*e*S	Sn	00 23 05.1	-1.2
KEV	**Kevo**	3.13	49	*e*S	Sn	00 23 21.1	+1.2
KEV				MSG		00 23 23.9	
	comp=Z,1.7nm,0.2s						
KU6	**Riekki**	4.23	111	*e*PG	Pb	00 23 07.4	+0.8
	baz=308						
KU6				*e*SG	Sg	00 24 04.8	-2.4

UPP 26 00:22:11.5±0.1,67°.88N×20°.17E,h0^{km},ML2.2, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.10	39	P	Pg	00 22 13.6	+0.2
	baz=218						
KUA				S	Sg	00 22 15.2	+0.5
RATU	**Laukkuluspa**	0.23	257	P	Pg	00 22 15.9	+0.1
RATU				S	Sg	00 22 18.8	+0.1
NIKU	**Nikkaluokta**	0.43	269	P	Pg	00 22 19.8	+0.1
SALU	**Saltoluokta**	0.81	233	P	Pg	00 22 26.8	-0.2
ERTU	**Ertsjaerv**	1.54	148	P	Pn	00 22 39.9	-0.2
ERTU				S	Sn	00 23 00.5	-0.4
ERTU	**Ertsjaerv**	1.54	148	S	Pn	00 22 39.8	-0.3
ERTU	**Ertsjaerv**	1.54	148	*e*SB	Pn	00 22 39.6	-0.5
HARU	**Harads**	1.75	169	P	Pn	00 22 43.5	+0.5
HARU				S	Sg	00 23 07.4	-0.3
KALU	**Kalix**	2.38	147	P	Pn	00 22 52.3	+0.6

IDC 26 00:37:36.2±3.2,2°.49S×136°.48E,h0^{km},mb3.1/2, mb1 3.4/3,mb1mx3.2/26,mbtmp3.2/3,ML3.2/1,Error ellipse: s-maj=127.3km s-min=32.1km az=81.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	17.47	187	P	Pn	00 41 41.7	+0.3
	0.1nm,0.3s,baz=8.4,slow=13,SNR=7.8						
ASAR	**Alice Springs**	21.20	187	P	P	00 42 23.4	-0.2
	0.4nm,0.6s,baz=11,slow=10,SNR=5.0						
MKAR	**Makanchi Array**	68.27	323	P	P	00 48 39.1	0.0
	0.2nm,0.7s,baz=120,slow=6.3,SNR=2.5						

NEIC 26 00:39:04.8±0.8,18°.78N×72°.19W,h10^{km},ML3.6,Error ellipse: s-maj=14.1km s-min=8.5km az=148.0,Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGNH	**Logne**	0.48	236	*e*Pg	Pg	00 39 14.5	+0.4
JAKH	**Jacmel**	0.62	210	*e*Pg	Pg	00 39 15.8	-1.0
JAKH				*e*Sg	Sg	00 39 23.2	-1.9
SDDR	**Presa de Saban**	0.87	76	*e*Pn	Pn	00 39 23.4	+0.2
SDDR				*e*Sn	Sb	00 39 33.9	0.0
BANI	**BANI**	1.78	102	*e*Pn	Pn	00 39 36.4	+0.8
SDD	**Santo Domingo**	2.18	98	*e*Pn	Pn	00 39 36.1	-5.0
GRTK	**Grand Turk**	2.89	20	*e*Pn	Pn	00 39 49.7	-1.2
GTBY	**Guantanamo Bay**	2.99	293	*e*Pn	Pn	00 39 53.1	+0.9
GTBY				*e*S	Sn	00 40 27.3	-0.8
MTP	**Monte Pirata**	6.33	95	*e*Pn	Pn	00 40 34.1	-4.1
STVI	**Saint Thomas**	6.87	92	*e*Pn	Pn	00 40 38.5	-7.1

IDC 26 00:42:34.1±3.3,9°.11N×127°.16E,h0^{km},mb3.3/3, mb1 3.5/3,mb1mx3.2/30,mbtmp3.3/3,Error ellipse: s-maj=253.4km s-min=26.5km az=66.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	29.72	166	P	P	00 48 41.4	-0.8
	0.2nm,0.4s,baz=347,slow=9.2,SNR=4.0						
ASAR	**Alice Springs**	33.24	169	P	P	00 49 14.0	+0.9
	0.3nm,0.6s,baz=354,slow=8.4,SNR=4.4						
MKAR	**Makanchi Array**	53.48	323	P	P	00 51 56.1	-0.1
	0.3nm,0.9s,baz=120,slow=8.5,SNR=2.9						

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*MOS **26** 00:52:14.3±0.0,42°.52N×45°.51E,h17^{km},MPVA3.1*
*NORS **26** 00:52:16.1±0.0,42°.59N×45°.53E,h11^{km},MPVA3.1*
ISC 26 00:52:17.2±1.2,42°.59N±0°.04×45°.52E±0°.03,h20^{km}±4^{km}, n17,σ1ˢ.00/34,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVE	**Vedeno**	0.58	51	*e*Pg	**Pb**	**00 52 28.0**	**-0.6**
DVE				*e*Sg	**Sb**	**00 52 37.0**	**+0.6**
GROC	**Groznyy**	0.64	19	*e*Pg	**Pn**	**00 52 30.8**	**-0.4**
GROC				*e*Sg	**Sn**	**00 52 40.9**	**0.0**
KMGR	**Komgaron**	0.67	314	*e*Pg	**Pn**	**00 52 31.0**	**-0.6**
KMGR				*e*Sg	**Sn**	**00 52 42.3**	**+0.8**
GUDG	**Gudauri**	0.78	261	P	**Pn**	**00 52 32.9**	**-0.3**
GUDG				S	**Sb**	**00 52 42.4**	**0.0**
LACR	**Lac**	0.93	285	*e*Pg	**Pg**	**00 52 34.2**	**-1.1**
LACR				*e*Sg	**Sg**	**00 52 46.5**	**-1.0**
DBC	**Dubki**	1.06	66	*e*Pg	**Pb**	**00 52 36.0**	**-0.9**
DBC				*e*Sg	**Sn**	**00 52 51.2**	**0.0**
ARNR	**Ardon**	1.08	303	*e*Pg	**Pb**	**00 52 36.1**	**-1.1**
ARNR				*e*Sg	**Sb**	**00 52 50.6**	**-0.2**
GNBR	**Gunib**	1.09	100	*e*Pg	**Pn**	**00 52 37.4**	**0.0**
GNBR				*e*Sg	**Sn**	**00 52 52.9**	**+0.9**
KORR	**Kora**	1.17	295	*e*Pg	**Pg**	**00 52 39.8**	**-0.2**
KORR				*e*Sg	**Sn**	**00 52 57.0**	**+3.0**
ZEI	**Tsey**	1.21	280	*e*Pg	**Pn**	**00 52 38.5**	**-0.7**
ZEI				*e*Sg	**Sb**	**00 52 54.6**	**-0.1**
TRKR	**Terskaya**	1.27	333	*e*Pg	**Pg**	**00 52 41.4**	**-0.3**
TRKR				*e*Sg	**Sg**	**00 53 00.2**	**+1.9**
STDR	**Stavd-Durt**	1.32	307	*e*Pg	**Pg**	**00 52 42.9**	**+0.3**
STDR				*e*Sg	**Sg**	**00 53 01.8**	**+1.9**
LSNR	**Lesken**	1.42	300	*e*Pg	**Pg**	**00 52 44.3**	**-0.3**
LSNR				*e*Sg	**Sg**	**00 53 03.0**	**0.0**
DIGR	**Digorskoe uzhe**	1.46	283	*e*Pg	**Pn**	**00 52 42.6**	**0.0**
DIGR				*e*Sg	**Sb**	**00 53 02.1**	**+0.2**
TRLG	**Trialeti**	1.49	225	P	**Pg**	**00 52 45.6**	**-0.3**
TRLG				S	**Sg**	**00 53 07.1**	**+1.8**
NCK	**Nalchik**	1.67	303	*e*Pg	**Pb**	**00 52 47.4**	**+0.1**
NCK				*e*Sg	**Sg**	**00 53 10.5**	**-0.6**
NEY	**Neytrino**	2.15	289	*e*Pg	**Pb**	**00 52 54.1**	**-1.5**
NEY				*e*Sg	**Sb**	**00 53 22.2**	**+0.2**

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*IDC **26** 00:59:41.2±2.1,18°.89N×39°.20E,h0^{km},mb3.7/6, mb1 3.8/6,mb1mx3.5/36,mbtmp3.8/6,MS3.5/9,Ms1 3.5/9, ms1mx3.2/46,Error ellipse: s-maj=54.7km s-min=27.3km az=154.0*
*ISCJB **26** 00:59:44.1±1.0,19°.31N±0°.06×39°.45E±0°.07,h10^{km}, mb3.8/5,MS3.5/6,Error ellipse: s-maj=10.1km s-min=7.0km az=142.8*
*SGS **26** 00:59:44,19°.31N×39°.37E,h10^{km},Ml3.4*
ISC 26 00:59:46.1±1.5,19°.34N±0°.07×39°.5E±0°.1,h10^{km},n24, σ1ˢ.56/19,mb3.8/5,MS3.5/6,Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHS	**Al Lith**	1.26	42	P	**Pn**	**01 00 07.4**	**-2.4**
LTHS				S	**Sb**	**01 00 24.6**	**-1.8**
SHBS		1.67	6	P	Pn	01 00 12.1	-3.3
SHBS				S	Sn	01 00 21.9	-15
QNF01	**Al Qunfudhah**	1.68	88	P	**Pn**	**01 00 13.8**	**-1.7**
QNF01				S	**Sn**	**01 00 36.5**	**-0.6**
LBNS	**Jabal Laban**	1.74	12	P	**Pn**	**01 00 14.9**	**-1.5**
QNF02	**Al Qunfudhah**	1.89	98	P	**Pn**	**01 00 17.0**	**-1.6**
QNF02				S	**Sn**	**01 00 42.8**	**+0.3**
FRAS	**Faraa**	1.96	29	P	**Pn**	**01 00 18.8**	**-0.8**
FRAS				S	**Sn**	**01 00 44.7**	**+0.3**
BAHS	**BAHS**	2.07	72	P	**Pn**	**01 00 21.3**	**+0.1**
AMGES	**AMGES**	2.11	114	P	**Pn**	**01 00 19.1**	**-2.4**
ENMS	**ENMS**	2.91	95	P	**Pn**	**01 00 33.2**	**+0.4**
DRBS	**Ad Darb**	3.05	119	P	**Pn**	**01 00 33.0**	**-1.5**
TATS	**Tathlith**	3.75	86	P	**Pn**	**01 00 46.7**	**+2.5**
ATD	**Arta Tunnel**	8.41	157	LR	LR	01 04 21.3	
	comp=Z,117nm,21.8s,baz=336,slow=34						
MMAI	**Mount Meron Ar**	14.11	346	LR	LR	01 09 02.7	
	comp=Z,90nm,18.6s,baz=225,slow=39						
WSAR	**Wadi Sarin**	18.24	74	LR	LR	01 12 06.6	
	comp=Z,252nm,18.2s,baz=287,slow=40						
KMBO	**Kilima Mbogo**	20.46	186	LR	LR	01 11 19.2	
	comp=Z,167nm,20.3s,baz=308,slow=35						
BRTR	**Keskin Array B**	20.94	347	P	**P**	**01 04 29.4**	**+0.2**
	1.7nm,0.8s,baz=170,slow=15,SNR=10						
GNI	**Garni**	21.22	11	P	**P**	**01 04 34.8**	**+2.4**
	3.4nm,0.8s,baz=169,slow=6.6,SNR=5.0						
GNI				LR	LR	01 12 58.2	
	comp=Z,107nm,21.7s,baz=243,slow=37						
GEYT	**Alibeck**	24.61	37	LR	LR	01 16 01.4	
	comp=Z,258nm,19.1s,baz=290,slow=39						
TORD	**Torodi Ar. Bea**	36.76	266	P	P	01 06 48.1	-6.1
	1.4nm,1.0s,baz=71,slow=9.2,SNR=5.5						
TORD				LR	LR	01 22 00.9	
	comp=Z,73nm,18.3s,baz=355,slow=37						
AAK	**Ala-Archa**	37.53	44	LR	LR	01 25 21.0	
	comp=Z,127nm,21.0s,baz=44,slow=40						
MKAR	**Makanchi Array**	44.33	42	P	**P**	**01 07 57.2**	**+0.8**
	1.9nm,0.8s,baz=232,slow=8.8,SNR=18						
DBIC	**Dimbokro**	44.88	260	LR	LR	01 26 47.5	
	comp=Z,69nm,19.2s,baz=83,slow=36						
ZALV	**Zalesovo Beam**	48.85	34	P	**P**	**01 08 32.1**	**+0.3**
	1.0nm,0.6s,baz=248,slow=7.8,SNR=4.6						
SONM	**Songino Array**	60.47	45	P	**P**	**01 09 56.6**	**+0.2**
	0.5nm,0.7s,baz=260,slow=5.7,SNR=4.8						

IDC 26 01:01:55.8±1.4,17°.94N×146°.63E,h0^{km},mb3.6/4, mb1 3.8/4,mb1mx3.4/38,mbtmp3.6/4,Error ellipse: s-maj=59.8km s-min=30.5km az=96.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	39.53	198	P	P	01 09 28.6	0.0
	0.3nm,0.7s,baz=23,slow=8.7,SNR=7.6						
MKAR	**Makanchi Array**	59.62	314	P	P	01 12 02.4	+0.7
	0.2nm,0.5s,baz=85,slow=7.7,SNR=3.6						
YKA	**Yellowknife Ar**	78.24	28	P	P	01 13 58.0	+0.9
	0.2nm,0.6s,baz=287,slow=5.2,SNR=4.2						
FINES	**FINESS Array B**	87.94	336	P	P	01 14 45.6	-1.7
	0.6nm,0.4s,baz=72,slow=3.2,SNR=10						

MEX 26 01:18:56.6±0.6,18°.20N×100°.56W,h51^{km}±5^{km},MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	0.22	68	*e*P	Pn	01 19 03.3	-1.9
ARIG				*e*S	Sn	01 19 09.7	-1.6
MEIG	**Mezcala**	0.94	107	*i* P	Pn	01 19 11.9	-1.7
MEIG				*e*S	Sn	01 19 24.4	-1.7
PLIG	**Platanillo**	1.02	79	*e*P	Pn	01 19 13.1	-1.7
PLIG				*e*S	Sn	01 19 25.9	-2.2
ZIIG	**Zihuatanejo**	1.04	236	*e*P	Pn	01 19 13.4	-1.6
ZIIG				*i* S	Sn	01 19 26.8	-1.7
CAIG	**El Cayaco**	1.18	166	*e*P	Pn	01 19 15.1	-1.7
CAIG				*i* S	Sn	01 19 29.6	-2.2
YAIG	**Yautepec**	1.56	65	*e*P	Pn	01 19 20.5	-1.6
PPM	**Popocatepetl**	2.03	64	*i* P	Pn	01 19 28.0	-0.8
PPM				*i* S	Sn	01 19 50.9	-2.3

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*IDC **26** 01:21:11.7±2.4,11°.25S×113°.48E,h0^{km},mb3.6/5, mb1 3.9/6,mb1mx3.6/41,mbtmp3.7/6,ML3.5/1,MS3.3/1, Ms1 3.3/1,ms1mx2.6/36,Error ellipse: s-maj=100.9km s-min=20.7km az=47.0*
*ISCJB **26** 01:21:13.6±1.1,10°.96S±0°.10×113°.8E±0°.1,h25^{km}, mb3.7/5,MS3.1/1,Error ellipse: s-maj=17.9km s-min=9.9km az=139.3*
*DJA **26** 01:21:15.1±2.2,11°S±21°×11°4E±°,h10^{km},M4.1/7, mb4.3/1,MLv4.0/7*
ISC 26 01:21:15.4±1.2,11°.0S±0°.1×113°.8E±0°.1,h25^{km},n12, σ2ˢ.17/12,mb3.7/5,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	2.58	8	P	**Pn**	**01 21 53.8**	**-1.9**
SRBI	**Singaraja**	3.25	25	P	**Pn**	**01 22 03.8**	**-1.1**
PWJI	**Pagerwojo**	3.59	326	P	**Pn**	**01 22 07.3**	**-2.3**
PLAI	**Plampang**	4.49	61	P	**Pn**	**01 22 21.0**	**-0.9**
BKSI	**Bulukumba**	8.45	48	P	**Pn**	**01 23 15.7**	**-0.6**
FITZ	**Fitzroy Crossi**	13.42	123	Pn	**Pn**	**01 24 23.7**	**-0.8**
	0.2nm,0.3s,baz=297,slow=11,SNR=3.5						
FITZ				Sn	Sn	01 26 42.3	-11
	0.2nm,0.3s,baz=354,slow=23,SNR=2.4						
PSI	**Prapat**	20.21	312	LR	LR	01 33 41.8	
	comp=Z,72nm,18.1s,baz=270,slow=37						
WRA	**Warramunga Arr**	21.65	117	P	**P**	**01 26 05.0**	**+0.7**
	2.9nm,0.6s,baz=290,slow=12,SNR=26						
WRA				S	**S**	**01 29 59.2**	**-3.9**
	0.3nm,0.8s,baz=293,slow=21,SNR=2.7						
ASAR	**Alice Springs**	22.88	126	P	**P**	**01 26 19.7**	**+2.3**
	1.5nm,0.6s,baz=302,slow=9.2,SNR=17						
SONM	**Songino Array**	58.98	354	P	**P**	**01 31 16.1**	**+3.1**
	0.2nm,0.3s,baz=180,slow=5.8,SNR=3.3						
MKAR	**Makanchi Array**	64.11	336	P	**P**	**01 31 47.8**	**+0.3**
	0.2nm,0.4s,baz=131,slow=6.8,SNR=3.6						
ZALV	**Zalesovo Beam**	69.26	342	P	**P**	**01 32 19.9**	**-0.3**
	0.7nm,0.5s,baz=150,slow=5.1,SNR=3.0						

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*ISK **26** 01:32:49.9,37°.43N×38°.63E,h6^{km},ML2.3/4*
*DDA **26** 01:32:50.4,37°.45N×38°.61E,h7^{km}±2^{km},ML2.7*
*ISCJB **26** 01:32:51.1±0.5,37°.44N±0°.03×38°.64E±0°.03,h6^{km}±5^{km}, Error ellipse: s-maj=5.4km s-min=3.5km az=177.2*
ISC 26 01:32:50.6±0.9,37°.46N±0°.04×38°.63E±0°.02,h9^{km}±8^{km}, n15,σ0ˢ.81/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	**Urfa**	0.15	95	PG	**Pg**	**01 32 53.6**	**-0.4**
URFA				SG	**Sg**	**01 32 56.2**	**-0.2**
ATAB	**Bozova**	0.27	273	*i* P	**Pg**	**01 32 56.1**	**+0.1**
ATAB				*i* S	**Sg**	**01 33 00.2**	**+0.6**
ATAB				IAML_P			
	comp=Z,6μm,0.1s						
SANL	**SANLIURFA_Merk**	0.40	135	*i* P	**Pg**	**01 32 58.9**	**+0.3**
SANL				*i* S	**Sb**	**01 33 04.9**	**-1.3**
SANL				IAML_P			
	comp=Z,2μm,0.1s						
SURC	**SANLIURFA_SURC**	0.58	181	*i* P	**Pg**	**01 33 02.0**	**+0.3**
SURC				*i* S	**Sb**	**01 33 11.0**	**-0.2**
SURC				IAML_P			
	comp=Z,278nm,0.1s						
GZT	**Gaziantep**	0.85	264	*i* P	**Pg**	**01 33 06.6**	**-0.5**
GZT				*i* S	**Sn**	**01 33 20.9**	**-0.7**
GZT				IAML_P			
	comp=Z,1μm,0.1s						
AKCD	**Akcadag**	1.01	326	*i* P	**Pn**	**01 33 10.4**	**-0.7**
AKCD				*i* S	**Sn**	**01 33 26.2**	**+0.8**
ELZG	**Elazig**	1.08	15	*i* P	**Pb**	**01 33 11.3**	**-0.3**
ELZG				*i* S	**Sn**	**01 33 27.5**	**+0.3**
ELZG				IAML_P			
	comp=Z,383nm,0.2s						
GAZ	**Gaziantep**	1.17	256	PN	**Pg**	**01 33 12.8**	**-0.2**
GAZ				SN	**Sg**	**01 33 28.7**	**+0.5**
DIYA	**Diyarbakir**	1.27	68	*i* P	**Pg**	**01 33 15.4**	**+0.3**
DIYA				*i* S	**Sg**	**01 33 34.0**	**+2.5**
DIYA				IAML_P			
	comp=Z,734nm,0.2s						
KUZU	**Kuzuini**	1.42	242	*i* P	**Pg**	**01 33 18.1**	**+0.2**
KUZU				*i* S	**Sg**	**01 33 37.5**	**+1.3**
KUZU				IAML_P			
	comp=Z,871nm,0.2s						
DARE	**Darende-Malaty**	1.44	321	PN	**Pb**	**01 33 17.2**	**-0.4**
DARE				SN	**Sg**	**01 33 37.6**	**+0.8**
MAZI	**Mazidag**	1.45	89	PN	**Pb**	**01 33 17.4**	**-0.4**
MAZI				SN	**Sg**	**01 33 37.0**	**-0.1**
HANI	**Diyarbakir_Han**	1.69	55	*i* P	**Pn**	**01 33 19.7**	**-0.8**
HANI				IAML_P			
	comp=Z,93nm,0.1s						
SVAN	**Silvan-Diyarba**	2.15	70	PN	**Pn**	**01 33 27.3**	**+0.6**
TAHT	**Tahtakopru-Hat**	2.24	242	PN	**Pn**	**01 33 28.3**	**+0.5**

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*NNC **26** 01:34:50.5±0.5,42°.90N×77°.32E,h0^{km},mb2.7,mpv3.0, Error ellipse: s-maj=3.4km s-min=2.0km az=178.0*
*SOME **26** 01:34:51.3,42°.92N×77°.32E,h20^{km}*
*KRNET **26** 01:34:51.3±0.1,42°.92N×77°.32E,h19^{km},mb2.9*
*KNET **26** 01:34:53.1±0.5,42°.90N×77°.11E,h8^{km}±2^{km},ml1.9,Error ellipse: s-maj=2.8km s-min=1.5km az=71.0*
ISC 26 01:34:51.7±0.9,42°.93N±0°.02×77°.26E±0°.01,h19^{km}±2^{km}, n63,σ1ˢ.36/116,32C-20D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	0.26	296	*e*P	**Pg**	**01 34 57.5**	**-0.4**
	baz=93						
TNSS				*e*S	**Sb**	**01 35 01.8**	**-0.2**
	baz=93						
TNSS	**Tian-Shan**	0.26	296	*e*P	**Pg**	**01 34 57.5**	**-0.4**
	6.4nm,0.1s						
TNSS				*e*S	**Sb**	**01 35 01.8**	**-0.2**
	166nm,0.2s						
MDOK	**Medeo**	0.28	327	⇑P	**Pg**	**01 34 57.6**	**-0.6**
	8.7nm,0.2s						
MDOK				⇓S	**Sg**	**01 35 02.1**	**-0.5**
	78nm,0.5s						
KOTS	**Kotyrbulak**	0.33	341	P	**Pg**	**01 34 58.4**	**-0.5**
	63nm,0.1s						
KOTS				S	**Sg**	**01 35 03.2**	**-0.6**
	160nm,0.3s						
KOTS	**Kotyrbulak**	0.33	341	*e*P	**Pg**	**01 34 58.4**	**-0.5**
	baz=34						
KOTS				*e*S	**Sg**	**01 35 03.3**	**-0.6**
	baz=34						
KOTS	**Kotyrbulak**	0.33	341	*e*P	**Pg**	**01 34 58.4**	**-0.5**
	63nm,0.1s						
KOTS				*e*S	**Sg**	**01 35 03.2**	**-0.6**
	160nm,0.3s						
KNDC	**Almaty**	0.36	324	⇑P	**Pg**	**01 34 59.2**	**-0.3**
	3.8nm,0.1s						
KNDC				⇓S	**Sg**	**01 35 05.0**	**+0.3**
	41nm,0.3s						
AAA	**Alma-Ata**	0.38	318	P	**Pg**	**01 34 59.9**	**+0.2**
	103nm,0.1s						
AAA				S	**Sb**	**01 35 06.0**	**+0.4**
	480nm,0.2s						
AAA	**Alma-Ata**	0.38	318	*e*P	**Pg**	**01 35 00.0**	**+0.2**
	baz=14						
AAA				*e*S	**Sb**	**01 35 06.1**	**+0.4**
	baz=14						
AAA	**Alma-Ata**	0.38	318	*e*P	**Pg**	**01 34 60.0**	**+0.2**
	103nm,0.1s						
AAA				*e*S	**Sb**	**01 35 06.0**	**+0.4**
	281nm,0.1s						
IZV	**Izvestkoviy**	0.49	283	P	**Pb**	**01 35 01.4**	**-0.4**
	26nm,0.2s						
IZV				S	**Sg**	**01 35 08.9**	**+0.5**
	117nm,0.3s						
IZV	**Izvestkoviy**	0.49	283	*e*P	**Pb**	**01 35 01.4**	**-0.4**
	baz=82						
IZV				*e*S	**Sg**	**01 35 08.9**	**+0.5**
	baz=82						
IZV	**Izvestkoviy**	0.49	283	*e*P	**Pb**	**01 35 01.4**	**-0.4**
	26nm,0.2s						
IZV				*e*S	**Sg**	**01 35 08.9**	**+0.5**
	117nm,0.3s						
MTBS	**Maitube**	0.64	289	P	**Pb**	**01 35 04.1**	**-0.2**
	11nm,0.1s						
MTBS				S	**Sb**	**01 35 13.2**	**+0.3**
	49nm,0.2s						
MTBS	**Maitube**	0.64	289	*e*P	**Pb**	**01 35 04.1**	**-0.2**
	baz=88						
MTBS				*e*S	**Sb**	**01 35 13.2**	**+0.3**
	baz=88						
MTBS	**Maitube**	0.64	289	*e*P	**Pb**	**01 35 04.1**	**-0.2**
	11nm,0.1s						
MTBS				*e*S	**Sb**	**01 35 13.2**	**+0.3**
	49nm,0.2s						
KDJ	**Kajisay**	0.80	184	⇑*i*P	**Pg**	**01 35 06.9**	**-0.5**
	baz=87						
KDJ				⇑*i*S	**Sg**	**01 35 17.4**	**-0.6**
	baz=87						
SATY	**Saty**	0.85	81	P	**Pb**	**01 35 06.6**	**-1.4**
	28nm,0.1s						
SATY				S	**Sg**	**01 35 17.8**	**-1.9**
	83nm,0.1s						
SATY	**Saty**	0.85	81	*e*P	**Pb**	**01 35 06.6**	**-1.4**
	28nm,0.1s						
SATY				*e*S	**Sg**	**01 35 17.8**	**-1.9**
	43nm,0.1s						
KURS	**Kuram**	0.87	49	*e*P	**Pb**	**01 35 07.1**	**-1.2**
	baz=48						
KURS				*e*S	**Sb**	**01 35 18.2**	**-1.4**
	baz=48						
KURS	**Kuram**	0.87	49	*e*P	**Pb**	**01 35 07.1**	**-1.2**
	2.3nm,0.1s						
KURS				*e*S	**Sb**	**01 35 18.2**	**-1.4**
	7.0nm,0.1s						
KTBS	**Karatobe**	0.89	332	P	**Pb**	**01 35 08.4**	**-0.2**
	6.3nm,0.1s						
KTBS				S	**Sb**	**01 35 20.3**	**+0.1**
	33nm,0.2s						
KTBS	**Karatobe**	0.89	332	*e*P	**Pb**	**01 35 08.4**	**-0.2**
	6.3nm,0.1s						
KTBS				*e*S	**Sb**	**01 35 20.3**	**+0.1**
	33nm,0.2s						
PRZ	**Przheval'sk**	0.95	117	⇑*i*P	**Pb**	**01 35 08.6**	**-1.1**
	baz=18						
PRZ				⇑*i*S	**Sg**	**01 35 21.1**	**-1.7**
	baz=18						
CHKK	**Chushkaly**	0.95	348	*e*P	**Pb**	**01 35 09.3**	**-0.3**
	baz=46						
CHKK				*e*S	**Sb**	**01 35 22.0**	**+0.2**
	baz=46						
CHKK	**Chushkaly**	0.95	348	*e*P	**Pb**	**01 35 09.3**	**-0.3**
	19nm,0.1s						
CHKK				*e*S	**Sb**	**01 35 22.0**	**+0.2**
	29nm,0.2s						
KST	**Kastek**	0.96	278	*e*P	**Pb**	**01 35 09.6**	**-0.2**
	baz=77						
KST				*e*S	**Sb**	**01 35 23.1**	**+0.9**
	baz=77						
KST	**Kastek**	0.96	278	*e*P	**Pb**	**01 35 09.6**	**-0.2**
	17nm,0.2s						
KST				*e*S	**Sb**	**01 35 23.1**	**+0.9**
	16nm,0.3s						
ULHL	**Ulahol**	1.01	228	⇑P	**Pb**	**01 35 10.7**	**-0.2**
	7.5nm,0.2s,SNR=61						
ULHL				⇑S	**Sb**	**01 35 24.7**	**+0.8**
	9.5nm,0.1s						
ULHL	**Ulahol**	1.01	228	⇑*i*P	**Pb**	**01 35 10.6**	**-0.2**
	baz=30						
ULHL				⇑*i*S	**Sb**	**01 35 24.3**	**+0.5**
	baz=30						
BOOM	**Boomskoye usch**	1.07	246	⇑*i*P	**Pb**	**01 35 11.5**	**-0.2**
	baz=47						
BOOM				⇑*i*S	**Sn**	**01 35 26.4**	**+0.2**
	baz=47						
KUU	**Kurty**	1.18	326	*e*P	**Pn**	**01 35 13.4**	**+0.2**
	baz=24						
KUU				*e*S	**Sn**	**01 35 29.0**	**+0.2**
	baz=24						
KUU	**Kurty**	1.18	326	*e*P	**Pn**	**01 35 13.4**	**+0.2**
	1.7nm,0.2s						
KUU				*e*S	**Sn**	**01 35 29.0**	**+0.2**
	27nm,0.2s						
TKM2	**Tokmak 2**	1.22	270	⇑P	**Pb**	**01 35 14.6**	**+0.2**
	3.6nm,0.1s,SNR=30						
TKM2				⇓S	**Sn**	**01 35 31.2**	**+1.1**
	16nm,0.1s						
TKM2	**Tokmak 2**	1.22	270	⇑P	**Pn**	**01 35 14.3**	**+0.3**
	1.0nm,0.3s						
TKM2				⇑S	**Sn**	**01 35 31.3**	**+1.2**

	2.6nm,0.2s						
TKM2	**Tokmak 2** baz=70	**1.22**	**270**	⇑*i*P	**Pn**	**01 35 14.2**	**+0.2**
TKM2	baz=70			⇑*i*S	**Sn**	**01 35 31.2**	**+1.1**
TARG	**Taragay, Kyrgy** baz=63	**1.26**	**161**	⇓*i*P	**Pb**	**01 35 14.4**	**-0.7**
TARG	baz=63			⇓*i*S	**Sn**	**01 35 30.5**	**-0.9**
UZB	**Uzynbulak** baz=79	**1.31**	**80**	*e*P	**Pb**	**01 35 14.5**	**-1.4**
UZB	baz=79			*e*S	**Sn**	**01 35 31.0**	**-1.3**
UZB	**Uzynbulak** 9.5nm,0.2s	**1.31**	**80**	*e*P	**Pb**	**01 35 14.4**	**-1.4**
UZB	16nm,0.1s			*e*S	**Sn**	**01 35 31.0**	**-1.3**
ARXS	**Arharly** 3.2nm,0.2s	**1.35**	**18**	P	**Pb**	**01 35 15.9**	**-0.6**
ARXS	28nm,0.2s			S	**Sb**	**01 35 33.4**	**-0.1**
ARXS	**Arharly** 3.2nm,0.2s	**1.35**	**18**	*e*P	**Pb**	**01 35 15.9**	**-0.6**
ARXS	28nm,0.2s			*e*S	**Sb**	**01 35 33.4**	**-0.1**
SHLS	**Shalkode** baz=82	**1.63**	**81**	*e*P	**Pg**	**01 35 26.2**	**+3.1**
SHLS	baz=82			*e*S	**Sg**	**01 35 51.4**	**+7.0**
SHLS	**Shalkode** 7.5nm,0.2s	**1.63**	**81**	*e*P	**Pg**	**01 35 26.2**	**+3.1**
SHLS	21nm,0.4s			*e*S	**Sg**	**01 35 51.4**	**+7.0**
PDGK	**Podgornoye** 1.5nm,0.4s	**1.68**	**75**	⇑P	**Pn**	**01 35 20.1**	**-0.2**
PDGK	5.2nm,0.5s			⇓S	**Sb**	**01 35 42.6**	**-0.4**
PDGK	**Podgornoye** baz=75	**1.68**	**75**	⇑*i*P	**Pb**	**01 35 20.8**	**-1.3**
PDGK	baz=75			⇑*i*S	**Sb**	**01 35 42.4**	**-0.6**
KZA	**Kyzart** 2.8nm,0.2s,SNR=7.5	**1.71**	**241**	⇑P	**Pb**	**01 35 23.3**	**+0.5**
KZA	**Kyzart** baz=42	**1.71**	**241**	⇑*i*P	**Pb**	**01 35 23.5**	**+0.7**
KZA	baz=42			⇑*i*S	**Sg**	**01 35 46.9**	**-0.1**
KBK	**Karagaybulak** 5.8nm,0.1s	**1.72**	**262**	⇓P	**Pb**	**01 35 23.8**	**+0.9**
NRN	**Naryn** baz=14	**1.76**	**213**	⇑*i*P	**Pb**	**01 35 24.1**	**+0.5**
NRN	baz=14			⇑*i*S	**Sg**	**01 35 47.8**	**-0.8**
CHMS	**Chumysh** 2.3nm,0.1s,SNR=7.1	**1.84**	**273**	⇓P	**Pb**	**01 35 25.1**	**+0.3**
CHMS	**Chumysh** baz=73	**1.84**	**273**	⇓*i*P	**Pb**	**01 35 25.2**	**+0.3**
CHMS	baz=73			⇓*i*S	**Sg**	**01 35 50.2**	**-0.9**
USP	**Ospenovka** baz=80	**2.05**	**281**	⇓*i*P	**Pb**	**01 35 28.0**	**-0.4**
USP	baz=80			⇓*i*S	**Sb**	**01 35 55.1**	**+1.6**
AAK	**Ala-Archa** 8.6nm,0.3s,SNR=12	**2.06**	**263**	⇑P	**Pb**	**01 35 29.1**	**+0.6**
AAK	**Ala-Archa** 3.2nm,0.3s	**2.06**	**263**	⇓Pg	**Pb**	**01 35 29.1**	**+0.6**
AAK	6.2nm,0.6s			⇓Lg	Lg	01 35 57.2	
AAK	**Ala-Archa** baz=63	**2.06**	**263**	⇑*i*P	**Pb**	**01 35 28.5**	**-0.1**
AAK	baz=63			⇑*i*S	**Sb**	**01 35 55.9**	**+2.1**
DJR	**Jarkent** 0.5nm,0.2s	**2.31**	**52**	*e*P	**Pb**	**01 35 32.2**	**-0.7**
DJR	4.2nm,0.3s			*e*S	**Sb**	**01 36 01.9**	**+0.8**
ARLS	**Aral** baz=46	**2.42**	**245**	⇓*i*P	**Pb**	**01 35 33.1**	**-1.7**
ARLS	baz=46			⇓*i*S	**Sb**	**01 36 03.4**	**-0.9**
EKS2	**Erkin-Say** baz=65	**2.58**	**265**	⇓*i*P	**Pb**	**01 35 36.1**	**-1.3**
EKS2	baz=65			⇓*i*S	**Sb**	**01 36 08.5**	**-0.3**
MRKS	**Merke** 1.4nm,0.2s	**2.97**	**268**	*e*P	**Pb**	**01 35 45.1**	**+0.9**
MRKS	3.4nm,0.3s			*e*S	**Sb**	**01 36 24.0**	**+3.9**
MNAS	**Manas** 0.5nm,0.5s	**3.53**	**264**	⇑Pg	**Pg**	**01 35 57.9**	**-1.5**
MNAS	0.4nm,0.3s			⇑Lg	Lg	01 36 43.2	
SFK	**Sufi-Kurgan** 0.9nm,0.7s	**4.05**	**225**	⇑Pg	**Pb**	**01 36 00.7**	**-1.9**
SFK	0.7nm,0.5s			⇓Lg	Lg	01 37 00.7	
KK31	**Karatay Array** 0.1nm,0.3s,baz=93,slow=16,SNR=5.8	**4.95**	**274**	Pg	**Pg**	**01 36 24.4**	**-2.1**
KK31	0.5nm,0.4s,baz=86,slow=28,SNR=8.7			⇑Lg	Lg	01 37 29.1	
MK31	**Makanchi Array** 0.1nm,0.3s,baz=221,slow=29,SNR=3.8	**5.27**	**41**	⇓Lg	Lg	01 37 32.3	

SOME ***26*** *01:40:45.9, 42°.55N×79°.70E, h20^{km}*
KRNET ***26*** *01:40:46.3±0.1, 42°.61N×79°.64E, h14^{km}, mb3.9*
BJI ***26*** *01:40:46.0, 42°.69N×79°.62E, h9^{km}, ML3.2/9*
NNC ***26*** *01:40:46.1±1.0, 42°.62N×79°.66E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=6.8km s-min=3.8km az=126.0*
ISC 26 01:40:50.9±1.3**, 42°.76N**±0°.04×**79°.70E**±0°.04**, h35^{km}, n77, σ2^{s}.83**/112**, 25C-23D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode** 528nm,0.2s	**0.43**	**337**	P	**Pn**	**01 40 57.6**	**-3.1**
SHLS	2µm,0.5s			S	**Sn**	**01 41 06.3**	**-1.3**
SHLS	**Shalkode** baz=18	**0.43**	**337**	*e*P	**Pn**	**01 40 57.6**	**-3.1**
SHLS	baz=18			*e*S	**Sn**	**01 41 06.3**	**-1.3**
SHLS	**Shalkode** 528nm,0.2s	**0.43**	**337**	*e*P	**Pn**	**01 40 57.6**	**-3.1**
SHLS	2µm,0.5s			*e*S	**Sn**	**01 41 06.3**	**-1.3**
PDGK	**Podgornoye** 87nm,0.4s	**0.59**	**345**	P	**Pn**	**01 40 60.0**	**-2.9**
PDGK	166nm,0.3s			S	**Sn**	**01 41 10.3**	**-1.1**
PDGK	**Podgornoye** 76nm,0.4s	**0.59**	**345**	⇑P	**Pn**	**01 40 59.7**	**-3.2**
PDGK	176nm,0.4s			⇑S	**Sn**	**01 41 10.2**	**-1.2**
PDGK	**Podgornoye** baz=51	**0.59**	**345**	⇓*i*P	**Pn**	**01 41 00.0**	**-2.9**
PDGK	baz=51			⇓*i*S	**Sn**	**01 41 10.5**	**-0.9**
UZB	**Uzynbulak** 70nm,0.2s	**0.63**	**308**	P	Pn	01 40 59.9	-3.6
UZB	1µm,0.3s			S	**Sn**	**01 41 09.8**	**-2.6**
UZB	**Uzynbulak** baz=20	**0.63**	**308**	*e*P	Pn	01 40 59.9	-3.6
UZB	baz=20			*e*S	**Sn**	**01 41 09.9**	**-2.6**
UZB	**Uzynbulak** 70nm,0.2s	**0.63**	**308**	*e*P	Pn	01 40 59.9	-3.6
UZB	1µm,0.3s			*e*S	**Sn**	**01 41 09.8**	**-2.6**
PRZ	**Przheval'sk** baz=63	**0.99**	**254**	⇑*i*P	Pn	01 41 03.7	-4.8
PRZ	baz=63			⇑*i*S	**Sn**	**01 41 17.6**	**-3.8**
SATY	**Saty** 57nm,0.3s	**0.99**	**288**	*e*P	**Pn**	**01 41 05.4**	**-3.1**
SATY	368nm,0.3s			*e*S	**Sn**	**01 41 19.7**	**-1.7**
KURS	**Kuram** baz=10.0	**1.33**	**304**	*e*P	**Pn**	**01 41 12.2**	**-0.9**
KURS	baz=10.0			*e*S	**Sn**	**01 41 31.0**	**+1.4**
KURS	**Kuram** 10nm,0.3s	**1.33**	**304**	*e*P	**Pn**	**01 41 12.2**	**-0.9**
KURS	102nm,0.5s			*e*S	**Sn**	**01 41 31.0**	**+1.4**
DJR	**Jarkent** 30nm,0.3s	**1.58**	**2**	*e*P	**Pn**	**01 41 17.7**	**+1.3**
DJR	57nm,0.3s			*e*S	**Sn**	**01 41 40.7**	**+5.1**
MNBS	**Baschi** 59nm,0.2s	**1.62**	**325**	P	**Pn**	**01 41 18.0**	**+0.9**
MNBS	514nm,0.4s			S	**Sn**	**01 41 41.1**	**+4.2**
MNBS	**Baschi** baz=29	**1.62**	**325**	*e*P	**Pn**	**01 41 18.0**	**+0.9**
MNBS	baz=29			*e*S	**Sn**	**01 41 41.1**	**+4.2**
MNBS	**Baschi** 59nm,0.2s	**1.62**	**325**	*e*P	**Pn**	**01 41 18.0**	**+0.9**
MNBS	514nm,0.4s			*e*S	**Sn**	**01 41 41.1**	**+4.2**
KOTS	**Kotyrbulak** 57nm,0.2s	**1.96**	**285**	P	**Pn**	**01 41 22.2**	**+0.5**
KOTS	1µm,0.4s			S	**Sn**	**01 41 47.9**	**+2.9**
KOTS	**Kotyrbulak** baz=89	**1.96**	**285**	*e*P	**Pn**	**01 41 22.2**	**+0.5**
KOTS	baz=89			*e*S	**Sn**	**01 41 48.0**	**+2.9**
KOTS	**Kotyrbulak** 57nm,0.2s	**1.96**	**285**	*e*P	**Pn**	**01 41 22.2**	**+0.5**
KOTS	1µm,0.4s			*e*S	**Sn**	**01 41 47.9**	**+2.9**
KDJ	**Kajisay** baz=56	**1.96**	**252**	⇑*i*P	**Pn**	**01 41 21.2**	**-0.6**
KDJ	baz=56			⇑*i*S	**Sn**	**01 41 46.9**	**+1.5**
MDOK	**Medeo** 22nm,0.4s	**1.99**	**283**	⇓Pg	**Pn**	**01 41 22.1**	**0.0**
MDOK	133nm,0.6s			⇑Lg	Lg	01 41 49.0	
MDOK	**Medeo** baz=87	**1.99**	**283**	*e*P	**Pn**	**01 41 22.1**	**0.0**
MDOK	baz=87			*e*S	**Sn**	**01 41 48.5**	**+2.7**
MDOK	**Medeo** 45nm,0.4s	**1.99**	**283**	*e*P	**Pn**	**01 41 22.1**	**0.0**
MDOK	186nm,0.5s			*e*S	**Sn**	**01 41 48.5**	**+2.7**
ARXS	**Arharly** 34nm,0.4s	**1.99**	**318**	Pg	**Pn**	**01 41 24.0**	**+1.9**
ARXS	567nm,0.4s			Lg	Lg	01 41 50.9	
ARXS	**Arharly** 34nm,0.4s	**1.99**	**318**	*e*P	**Pn**	**01 41 24.0**	**+1.9**
ARXS	567nm,0.4s			*e*S	**Sn**	**01 41 50.9**	**+5.1**
TNSS	**Tian-Shan** baz=83	**2.04**	**279**	*e*P	**Pn**	**01 41 22.6**	**-0.5**
TNSS	baz=83			*e*S	**Sn**	**01 41 49.4**	**+1.9**
TNSS	**Tian-Shan** 85nm,0.4s	**2.04**	**279**	*e*P	**Pn**	**01 41 22.6**	**-0.5**
TNSS	222nm,0.3s			*e*S	**Sn**	**01 41 49.3**	**+1.9**
KNDC	**Almaty** 28nm,0.3s	**2.06**	**284**	⇓Pg	**Pn**	**01 41 24.4**	**+1.4**
KNDC	558nm,0.6s			⇑Lg	Lg	01 41 54.1	
AAA	**Alma-Ata** 148nm,0.4s	**2.09**	**283**	Pg	**Pn**	**01 41 24.8**	**+1.4**
AAA	445nm,0.6s			Lg	Lg	01 41 53.0	
AAA	**Alma-Ata** baz=88	**2.09**	**283**	*e*P	**Pn**	**01 41 24.8**	**+1.4**
AAA	baz=88			*e*S	**Sn**	**01 41 53.0**	**+4.7**
AAA	**Alma-Ata** 148nm,0.4s	**2.09**	**283**	*e*P	**Pn**	**01 41 24.8**	**+1.4**
AAA	445nm,0.6s			*e*S	**Sn**	**01 41 53.0**	**+4.7**
CHKK	**Chushkaly** baz=4.0	**2.26**	**300**	*e*P	**Pn**	**01 41 28.3**	**+2.6**
CHKK	baz=4.0			*e*S	**Sn**	**01 41 58.0**	**+5.6**
CHKK	**Chushkaly** 15nm,0.3s	**2.26**	**300**	*e*P	**Pn**	**01 41 28.3**	**+2.6**
CHKK	293nm,0.3s			*e*S	**Sn**	**01 41 58.0**	**+5.6**
IZV	**Izvestkoviy** 78nm,0.2s	**2.28**	**278**	Pg	**Pn**	**01 41 27.2**	**+1.0**
IZV	335nm,0.4s			Lg	Lg	01 41 56.7	
IZV	**Izvestkoviy** baz=82	**2.28**	**278**	*e*P	**Pn**	**01 41 27.2**	**+1.0**
IZV	baz=82			*e*S	**Sn**	**01 41 56.7**	**+3.5**
IZV	**Izvestkoviy** 78nm,0.2s	**2.28**	**278**	*e*P	**Pn**	**01 41 27.2**	**+1.0**
IZV	335nm,0.4s			*e*S	**Sn**	**01 41 56.7**	**+3.5**
KTBS	**Karatobe** 28nm,0.3s	**2.40**	**294**	Pg	**Pn**	**01 41 30.0**	**+2.3**
KTBS	359nm,0.3s			Lg	Lg	01 42 01.7	
KTBS	**Karatobe** baz=97	**2.40**	**294**	*e*P	**Pn**	**01 41 30.0**	**+2.3**
KTBS	baz=97			*e*S	**Sn**	**01 42 01.7**	**+5.8**
KTBS	**Karatobe** 28nm,0.3s	**2.40**	**294**	*e*P	**Pn**	**01 41 30.0**	**+2.3**
KTBS	359nm,0.3s			*e*S	**Sn**	**01 42 01.7**	**+5.8**
MTBS	**Maitube** baz=84	**2.43**	**280**	*e*P	**Pn**	**01 41 30.5**	**+2.4**
MTBS	baz=84			*e*S	**Sn**	**01 42 02.1**	**+5.5**
MTBS	**Maitube** 61nm,0.1s	**2.43**	**280**	*e*P	**Pn**	**01 41 30.5**	**+2.4**
MTBS	266nm,0.4s			*e*S	**Sn**	**01 42 02.1**	**+5.5**
TDK	**Taldyqorghan** 47nm,0.3s	**2.43**	**338**	*e*P	**Pn**	**01 41 32.0**	**+3.9**
TDK	294nm,0.8s			*e*S	Sn	01 42 05.2	+8.6
ULHL	**Ulahol** SNR=54	**2.60**	**260**	P	**Pn**	**01 41 29.6**	**-1.1**
ULHL	**Ulahol** baz=63	**2.60**	**260**	⇑*i*P	**Pn**	**01 41 30.3**	**-0.4**
ULHL	baz=63			⇑*i*S	**Sn**	**01 42 03.3**	**+2.1**
KUU	**Kurty** baz=99	**2.70**	**296**	*e*P	**Pn**	**01 41 35.5**	**+3.7**
KUU	baz=99			*e*S	Sn	01 42 11.0	+7.7
KUU	**Kurty** 7.3nm,0.4s	**2.70**	**296**	*e*P	**Pn**	**01 41 35.5**	**+3.7**
KUU	78nm,0.4s			*e*S	Sn	01 42 11.0	+7.7
KST	**Kastek** baz=80	**2.76**	**277**	*e*P	**Pn**	**01 41 35.6**	**+2.9**
KST	baz=80			*e*S	**Sn**	**01 42 11.8**	**+6.9**
KST	**Kastek** 68nm,0.2s	**2.76**	**277**	*e*P	**Pn**	**01 41 35.6**	**+2.9**
KST	121nm,0.6s			*e*S	**Sn**	**01 42 11.8**	**+6.9**
BOOM	**Boomskoye usch** baz=69	**2.79**	**266**	⇑*i*P	**Pn**	**01 41 33.2**	**+0.1**
BOOM	baz=69			⇑*i*S	**Sn**	**01 42 07.7**	**+2.1**
DGS	**Degeres** 60nm,0.6s	**2.92**	**281**	Pg	**Pn**	**01 41 37.7**	**+2.8**
DGS	340nm,0.6s			Lg	Lg	01 42 14.6	
TKM2	**Tokmak 2** SNR=20	**3.02**	**274**	P	**Pn**	**01 41 38.4**	**+2.1**
TKM2	**Tokmak 2** 9.5nm,0.3s	**3.02**	**274**	⇑Pn	**Pn**	**01 41 37.2**	**+0.8**
TKM2	79nm,0.5s			⇓Lg	Lg	01 42 18.7	
TKM2	**Tokmak 2** baz=77	**3.02**	**274**	⇓*i*P	**Pn**	**01 41 36.8**	**+0.4**
TKM2	baz=77			⇓*i*S	**Sn**	**01 42 14.4**	**+3.0**
NRN	**Naryn** baz=48	**3.05**	**246**	⇓*i*P	**Pn**	**01 41 36.7**	**-0.2**
NRN	baz=48			⇓*i*S	**Sn**	**01 42 13.1**	**+0.7**
KZA	**Kyzart** SNR=10.0	**3.36**	**260**	P	**Pn**	**01 41 42.1**	**+0.9**
KBK	**Karagaybulak** SNR=25	**3.50**	**270**	P	**Pn**	**01 41 44.8**	**+1.8**
CHMS	**Chumysh** SNR=7.7	**3.64**	**275**	P	Pn	01 41 49.4	+4.6
CHMS	**Chumysh** baz=78	**3.64**	**275**	⇓*i*P	**Pn**	**01 41 45.5**	**+0.7**
CHMS	baz=78			⇓*i*S	**Sn**	**01 42 28.9**	**+2.4**
AAK	**Ala-Archa** SNR=11	**3.84**	**270**	P	**Pn**	**01 41 51.4**	**+3.8**
AAK	**Ala-Archa** 6.6nm,0.3s	**3.84**	**270**	⇓Pg	Pn	01 41 53.9	+6.4
AAK	28nm,0.6s			⇑Lg	Lg	01 42 44.0	
AAK	**Ala-Archa** baz=72	**3.84**	**270**	⇑*i*P	**Pn**	**01 41 47.8**	**+0.3**
AAK	baz=72			⇑*i*S	**Sn**	**01 42 34.0**	**+2.5**
USP	**Ospenovka** SNR=11	**3.84**	**279**	P	Pn	01 41 54.2	+6.6
UCH	**Uchtor** SNR=8.4	**3.87**	**264**	P	**Pn**	**01 41 51.6**	**+3.4**
ARLS	**Aral** baz=61	**4.08**	**259**	⇑*i*P	**Pn**	**01 41 51.0**	**+0.1**
ARLS	baz=61			⇑*i*S	**Sn**	**01 42 38.8**	**+1.2**
EKS2	**Erkin-Say** SNR=5.6	**4.36**	**271**	P	Pn	01 42 03.6	+8.9
MAKZ	**Makanchi** 2.2nm,0.2s	**4.36**	**21**	⇑Pn	**Pn**	**01 41 56.3**	**+1.7**
MAKZ	1.9nm,0.3s			⇓Sn	**Sn**	**01 42 49.4**	**+5.1**
MAKZ	6.0nm,0.5s			⇓Lg	Lg	01 43 05.5	
MK31	**Makanchi Array** 0.8nm,0.2s,baz=202,slow=13,SNR=123	**4.44**	**24**	⇑Pn	**Pn**	**01 41 57.2**	**+1.5**
MK31	8.2nm,0.5s			⇓Sn	**Sn**	**01 42 49.6**	**+3.5**
MK31	4.5nm,0.4s,baz=197,slow=26,SNR=9.1			⇓Lg	Lg	01 43 05.9	
AML	**Almayashu** SNR=13	**4.49**	**264**	P	Pn	01 42 07.8	+11
ARSB	**Arslanbob** baz=58	**5.20**	**256**	⇓*i*P	**Pn**	**01 42 05.9**	**-0.4**
ARSB	baz=58			⇓*i*S	**Sn**	**01 43 05.4**	**+0.3**
MNAS	**Manas** 4.7nm,0.5s	**5.31**	**270**	⇓Pg	Pn	01 42 22.5	+15
MNAS	7.2nm,0.6s			⇑Lg	Lg	01 43 32.1	
SFK	**Sufi-Kurgan** 4.6nm,0.8s	**5.41**	**242**	⇓Pg	Pn	01 42 23.4	+14
SFK	15nm,1.0s			⇑Lg	Lg	01 43 34.7	
WMQ	**Urumqi**	**5.93**	**77**	*e*Pn	**Pn**	**01 42 16.0**	**-0.3**
WMQ				Sn	**Sn**	**01 43 22.5**	**-0.5**
WMQ	comp=N,33nm,0.9s			smax	smax		
WMQ	comp=E,25nm,1.3s			smax	smax		
KK31	**Karatay Array** 1.3nm,0.5s,baz=89,slow=15,SNR=26	**6.75**	**276**	⇓Pg	Pn	01 42 47.1	+20
KK31	4.7nm,0.5s			⇓Lg	Lg	01 44 16.3	
OTUK	**Ortayu** 3.4nm,1.0s	**7.54**	**319**	⇑Pn	**Pn**	**01 42 37.0**	**-1.2**
OTUK	11nm,0.6s			⇓Lg	Lg	01 44 43.2	
KURBB	**Kurchatov Arra** 15nm,0.7s	**7.91**	**355**	⇑Lg	Lg	01 45 01.6	
KURK	**Kurchatov** 10nm,0.9s	**8.00**	**355**	⇑Lg	Lg	01 45 00.9	

IDC ***26*** *01:41:46.0±2.1, 19°.00N×39°.12E, h0^{km}, mb3.6/8, mb1 3.7/8, mb1mx3.4/49, mbtmp3.6/8, MS3.5/12, Ms1 3.5/12, ms1mx3.2/35, Error ellipse: s-maj=51.8km s-min=23.4km az=165.0*
ISCJB ***26*** *01:41:46.2±0.8, 19°.23N±0°.08×39°.27E±0°.06, h10^{km}, mb3.6/7, MS3.5/10, Error ellipse: s-maj=12.9km s-min=6.3km az=32.5*
SGS ***26*** *01:41:50, 19°.27N×39°.32E, h25^{km}, Ml3.2*
ISC 26 01:41:47.7±0.9**, 19°.24N**±0°.08×**39°.27E**±0°.08**, h10^{km}, n31, σ1^{s}.87**/22**, mb3.8**/7**, MS3.4**/10**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHS	**Al Lith**	**1.49**	**46**	P	**Pn**	**01 42 13.7**	**-0.8**
QNF01	**Al Qunfudhah**	**1.90**	**85**	P	**Pn**	**01 42 18.8**	**-1.4**
QNF01				S	**Sn**	**01 42 40.4**	**-3.9**
QNF02	**Al Qunfudhah**	**2.10**	**95**	P	**Pn**	**01 42 21.0**	**-2.0**
FRAS	**Faraa**	**2.15**	**33**	P	**Pn**	**01 42 22.2**	**-1.8**
AMGES	**AMGES**	**2.28**	**109**	P	**Pn**	**01 42 23.5**	**-1.9**
AMGES				S	**Sn**	**01 42 50.6**	**-3.1**
BAHS	**BAHS**	**2.31**	**71**	P	**Pn**	**01 42 25.9**	**-0.3**
ENMS	**ENMS**	**3.12**	**93**	P	**Pn**	**01 42 37.9**	**+0.6**
DRBS	**Ad Darb**	**3.20**	**116**	P	**Pn**	**01 42 37.4**	**-0.7**
HAJR	**Hajar**	**3.66**	**6**	P	**Pn**	**01 42 42.9**	**-1.6**
TATS	**Tathlith**	**3.98**	**85**	P	**Pn**	**01 42 51.4**	**+2.4**
KNGHS	**KNGHS**	**4.11**	**103**	P	**Pn**	**01 42 51.7**	**+0.8**
RHT05	**RHT05**	**4.64**	**359**	P	**Pn**	**01 42 56.8**	**-1.2**
RHT07	**RHT07**	**5.40**	**358**	P	**Pn**	**01 43 07.5**	**-1.0**
MMAI	**Mount Meron Ar** comp=Z,121nm,20.2s,baz=125,slow=35	**14.15**	**347**	LR	LR	01 50 02.1	
WSAR	**Wadi Sarin** comp=Z,190nm,18.5s,baz=282,slow=41	**18.48**	**74**	LR	LR	01 54 27.6	
KMBO	**Kilima Mbogo** comp=Z,94nm,18.1s,baz=86,slow=37	**20.34**	**186**	LR	LR	01 54 08.0	
BRTR	**Keskin Array B** 2.0nm,0.8s,baz=171,slow=14,SNR=12	**20.98**	**348**	P	Pn	01 46 33.7	-0.2
GNI	**Garni** comp=Z,101nm,19.2s,baz=216,slow=38	**21.36**	**12**	LR	LR	01 55 35.0	
KBZ	**Khabaz** comp=Z,96nm,19.0s,baz=204,slow=38	**24.60**	**6**	LR	LR	01 57 38.5	
GEYT	**Alibeck** comp=Z,86nm,18.3s,baz=255,slow=37	**24.82**	**37**	LR	LR	01 57 04.1	
GERES	**GERESS Array B** 0.3nm,0.3s,baz=163,slow=5.2,SNR=5.1	**36.01**	**331**	P	**P**	**01 48 49.7**	**+0.6**
TORD	**Torodi Ar. Bea** 1.3nm,0.9s,baz=90,slow=10,SNR=5.5	**36.54**	**266**	P	**P**	**01 48 52.6**	**-1.2**
BVAR	**Borovoye Array** 0.3nm,0.5s,baz=233,slow=14,SNR=2.4	**41.44**	**28**	P	**P**	**01 49 36.8**	**+2.4**
ESDC	**Sonseca Array** 0.5nm,0.6s,baz=107,slow=7.9,SNR=4.2	**42.30**	**308**	P	**P**	**01 49 41.2**	**-0.7**
MKAR	**Makanchi Array** 1.2nm,0.8s,baz=243,slow=5.3,SNR=8.5	**44.55**	**42**	P	**P**	**01 50 01.4**	**+1.6**
MKAR	comp=Z,42nm,19.8s,baz=276,slow=37			LR	LR	02 09 31.3	
DBIC	**Dimbokro** comp=Z,87nm,18.6s,baz=48,slow=34	**44.65**	**260**	LR	LR	02 07 10.6	
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=248,slow=7.8,SNR=3.8	**49.05**	**34**	P	**P**	**01 50 36.7**	**+1.8**
ZALV	comp=Z,36nm,19.2s,baz=261,slow=41			LR	LR	02 15 21.5	
NRIK	**Noril'sk** comp=Z,49nm,18.6s,baz=53,slow=41	**58.03**	**18**	LR	LR	02 21 37.6	
SONM	**Songino Array** 0.7nm,0.9s,baz=258,slow=7.4,SNR=5.4	**60.69**	**45**	P	**P**	**01 52 00.9**	**+1.4**
SFJD	**Kangerlussuaq** comp=Z,78nm,18.2s,baz=296,slow=39	**72.43**	**336**	LR	LR	02 28 53.1	
KSRS	**Korea Array** comp=Z,34nm,21.2s,baz=260,slow=39	**77.52**	**55**	LR	LR	02 32 39.4	

DJA ***26*** *01:47:16.7±1.1, 3°N±3°×9°6E±°, h13^{km}±6^{km}, M4.6/14, mb5.0/5, mB5.2/6, MLv4.5/14, Mw(mB)4.6/6*
ISCJB ***26*** *01:47:17.7±0.3, 2°.56N±0°.03×95°.96E±0°.03, h25^{km}, mb4.4/43, MS3.6/6, Error ellipse: s-maj=5.8km s-min=3.5km az=135.6*
KLM ***26*** *01:47:18.9, 2°.50N×95°.78E, h89^{km}, mb4.5*
IDC ***26*** *01:47:23.0±3.6, 2°.62N×96°.07E, h53^{km}±33^{km}, mb3.7/15, mb1 3.8/17, mb1mx3.7/45, mbtmp4.0/17, ML4.1/2, MS3.4/6, Ms1 3.4/6, ms1mx3.0/37, Error ellipse: s-maj=24.7km s-min=15.2km az=56.0*
NEIC ***26*** *01:47:22.1±0.8, 2°.58N×96°.07E, h48^{km}±7^{km}, mb4.6/23, Error ellipse: s-maj=7.5km s-min=4.4km az=66.0*
BJI ***26*** *01:47:23.4, 2°.60N×96°.20E, h53^{km}, mB5.0/22, mb4.6/38, Ms4.4/9, Ms7 4.1/9*
ISC 26 01:47:19.5±0.5**, 2°.57N**±0°.04×**96°.01E**±0°.05**, h25^{km}, n115, σ1^{s}.48**/115**, mb4.6**/53**, MS3.7**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.35**	**116**	P	**Pn**	**01 47 28.7**	**-0.4**
TPTI		**1.36**	**59**	P	**Pn**	**01 47 42.6**	**-0.3**
MLSI	**Meulaboh, Aceh**	**1.73**	**13**	P	**Pn**	**01 47 47.4**	**-0.7**
KCSI	**Kotacane, Aceh**	**2.00**	**62**	P	**Pn**	**01 47 52.8**	**+1.1**
GSI	**Gunungsitoli**	**2.00**	**129**	*e*Pn	**Pn**	**01 47 52.0**	**+0.2**

GSI				*e*Sn	Sn	01 48 15.8	-0.4
GSI	Gunungsitoli	2.00	129	P	Pn	01 47 52.2	+0.4
TSI	Tuntungan	2.71	70	P	Pb	01 48 05.6	-1.8
LHMI	Lhok Sumawe	2.81	19	*e*Pn	Pn	01 48 03.9	+1.1
LHMI				*e*Sn	Sn	01 48 33.4	-2.5
LHMI	Lhok Sumawe	2.81	19	P	Pn	01 48 03.9	+1.1
PSI	Prapat	2.92	85	*e*Pn	Pn	01 48 05.3	+0.7
PSI				*e*Sn	Sn	01 48 40.1	+1.2
PSI	Prapat	2.92	85	P	Pn	01 48 05.9	+1.4
	8.0nm,0.3s,baz=181,slow=4.7,SNR=44						
PSI				S	Sn	01 48 40.1	+1.2
	6.1nm,0.3s,baz=181,slow=4.9,SNR=3.6						
PSI				LR	LR	01 49 38.7	
	comp=Z,354nm,20.4s,baz=73,slow=48						
BSI	Banda Aceh	3.00	346	P	Pn	01 48 03.5	-2.0
PBSI	Pulau Batu	3.45	139	P	Pn	01 48 11.9	+0.2
MNSI	Mandailing Nat	3.98	116	P	Pn	01 48 19.9	+0.9
SISI	Saibi	4.94	141	P	Pn	01 48 32.4	+0.2
PPI	Padang Panjang	5.32	124	P	Pn	01 48 39.0	+1.6
IPM	Ipoh	5.35	69	*e*Pn	Pn	01 48 38.9	+0.9
IPM				*e*Sn	Sn	01 49 36.6	-2.2
IPM	Ipoh	5.35	69	P	Pn	01 48 39.5	+1.6
KULM	Kulim	5.36	60	*e*Pn	Pn	01 48 39.2	+1.2
KULM				*e*Sn	Sn	01 49 37.0	-2.0
KULM	Kulim	5.36	60	P	Pn	01 48 39.3	+1.2
PDSI	Padang	5.63	128	P	Pn	01 48 42.6	+0.8
TRTT	Trang	6.39	35	P	Pn	01 48 53.0	+0.9
	11nm,0.8s,0.1nm						
SDSI	Sungai Dareh	6.44	123	P	Pn	01 48 54.5	+1.7
PPSI	Pulau Pagai	6.63	143	P	Pn	01 48 55.3	-0.2
KGM	Kluang	7.32	94	P	Pn	01 49 06.9	+1.9
KTGM	Kuala Trenggan	7.62	69	P	Pn	01 49 10.2	+1.2
KSM	Kuching	14.33	94	*e*Pn	Pn	01 50 37.3	-3.7
PBKT	Sadao Pong	14.75	19	P	P	01 50 51.8	-0.6
	12nm,0.8s						
SUKH	Sukhothai	15.24	13	P	P	01 50 57.5	-0.4
	4.3nm,0.8s						
PALK	Pallekele	15.95	288	S	Sn	01 53 40.2	-18
	0.4nm,0.3s,baz=294,slow=3.4,SNR=2.4						
CM01	Chiang Mai Arr	16.02	10	*e*Pn	Pn	01 51 03.5	+0.2
CM31	Chiang Mai Arr	16.05	10	*e*Pn	Pn	01 51 04.4	+0.7
CMAR	Chiang Mai Arr	16.05	10	P	P	01 51 05.7	-1.3
	0.6nm,0.3s,baz=196,slow=11,SNR=17						
CMAR				LR	LR	01 57 29.0	
	comp=Z,81nm,19.0s,baz=205,slow=38						
BRDH	Bariadhala	20.43	348	LR	LR	02 00 53.6	
	comp=Z,108nm,18.2s,baz=153,slow=40						
KMI	Kunming	23.35	16	P	P	01 52 27.0	+0.6
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
DGAR	Diego Garcia	25.51	247	*e*P	P	01 52 47.2	+0.9
	163nm,1.5s						
H08S2	Diego Garcia H	25.56	246	T	T	02 19 01.8	
	baz=67,slow=76,SNR=381						
H08S3	Diego Garcia H	25.56	246	T	T	02 19 01.8	
	baz=67,slow=76,SNR=1703						
H08S1	Diego Carcia H	25.58	246	T	T	02 19 03.1	
	baz=67,slow=76,SNR=82						
GYA	Guiyang	25.86	22	*e*P	P	01 52 49.5	0.0
GYA				pP	sP	01 53 05.8	+5.8
GYA				sP	pP	01 53 11.0	+14
GYA				PP	PnPn	01 53 34.0	+6.8
GYA				S	S	01 57 17.0	-1.1
GYA				sS	sS	01 57 38.3	+8.1
GYA				SS	SnSn	01 58 23.5	+8.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,110nm,5.3s						
GYA				LR	LR		
	comp=N,380nm,12.1s						
GYA				LR	LR		
	comp=E,370nm,11.0s						
GYA				LR	LR		
	comp=Z,360nm,13.9s						
RAMN	Ramite	25.87	340	*e*P	P	01 52 50.3	+0.6
	38nm,0.8s						
JIRN	Jiri	26.66	340	*e*P	P	01 52 57.4	+0.4
	50nm,0.7s						
PKI	Pulchoki	26.85	339	*e*P	P	01 52 59.4	+0.7
	14nm,0.6s						
PKIN	Phulchoki	26.86	339	*e*P	P	01 52 59.4	+0.7
	12nm,0.6s						
DMN	Daman	27.00	338	*e*P	P	01 53 00.8	+0.9
	27nm,0.9s						
GUN	Gumba	27.00	340	*e*P	P	01 53 00.4	+0.4
	28nm,0.6s						
KKN	Kakani	27.10	339	*e*P	P	01 53 01.0	+0.3
	43nm,0.8s						
KOLN	Koldanda	27.73	336	*e*P	P	01 53 06.5	+0.1
	33nm,0.9s						
DANN	Dangsing	28.18	337	*e*P	P	01 53 10.4	-0.1
	32nm,0.8s						
PYUN	Piuthan	28.27	335	*e*P	P	01 53 11.3	+0.1
	14nm,0.7s						
CD2	Chengdu	29.13	14	*e*P	P	01 53 19.0	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	33.55	20	P	P	01 53 56.0	-1.6
XAN				pP	sP	01 54 10.3	+2.2
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
XAN				pmax	pmax		
	comp=Z,95nm,4.2s						
XAN	Xi'an	33.55	20	*e*P	P	01 53 56.3	-1.3
	11nm,0.8s						
LZH	Lanzhou	34.13	11	*e*P	P	01 54 02.0	-0.7
LZH				pP	sP	01 54 18.0	+4.7
LZH				sP	pP	01 54 25.0	+15
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
NJ2	Nanjing	36.36	34	*e*P	P	01 54 22.3	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GTA	Gaotai	36.84	5	P	P	01 54 25.0	-0.9
GTA				pP	sP	01 54 37.0	+0.5
GTA				sP	pP	01 54 42.5	+9.1
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC	Hu-ho-hao-te	40.62	18	*e*P	P	01 54 58.3	+0.7
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
H01W3	Cape Leeuwin H	40.95	157	T	T	02 38 20.4	
	baz=332,slow=76,SNR=224						
H01W2	Cape Leeuwin H	40.97	157	T	T	02 38 21.4	
	baz=332,slow=76,SNR=217						
H01W1	Cape Leeuwin H	40.97	157	T	T	02 38 20.9	
	baz=332,slow=76,SNR=186						
KSH	Kashi	41.05	336	P	P	01 55 07.5	+6.4
KSH				pP	sP	01 55 17.5	+5.7
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,350nm,5.3s						
BJT	Baijiatuau	41.52	24	*e*P	P	01 55 05.3	+0.4
	19nm,0.7s						
BJI	Beijing	41.54	24	P	P	01 55 05.8	+0.8
BJI				pmax	pmax		
	comp=Z,180nm,4.5s						
WMQ	Urumqi	41.74	351	*e*P	P	01 55 08.3	+1.6
WMQ				LR	LR		
	comp=N,110nm,18.3s						
WMQ				LR	LR		
	comp=E,94nm,16.9s						
WMQ				LR	LR		
	comp=Z,120nm,20.5s						
TARG	Taragay, Kyrgy	42.28	340	*e*P	P	01 55 08.7	-2.9
	6.0nm,0.7s						
NRN	Naryn	42.68	338	*e*P	P	01 55 15.2	+0.5
	9.8nm,1.3s						
GAR	Garm	43.17	330	*e*P	P	01 55 18.1	-0.4
	18nm,0.9s						
CHGR	Chuyangaron	43.49	329	*e*P	P	01 55 21.4	+0.3
	26nm,0.7s						
WR1	Warramunga Arr	43.77	122	*e*P	P	01 55 23.1	-0.4
	0.9nm,0.4s						
WRA	Warramunga Arr	43.77	122	P	P	01 55 23.1	-0.4
	1.3nm,0.6s,baz=299,slow=9.3,SNR=3.5						
WB2	Warramunga Arr	43.77	122	*e*P	P	01 55 19.6	-3.9
AAK	Ala-Archa	44.29	337	*e*P	P	01 55 26.8	-0.6
	7.8nm,1.3s						
FORT	Forrest	45.08	140	*e*P	P	01 55 33.8	+0.1
	28nm,1.3s						
AS31	Alice Springs	45.16	127	*e*P	P	01 55 34.4	-0.2
	1.2nm,1.3s						
ASAR	Alice Springs	45.16	127	P	P	01 55 34.4	-0.2
	1.0nm,0.6s,baz=302,slow=7.8,SNR=11						
ASAR				LR	LR	02 17 18.1	
	comp=Z,37nm,20.1s,baz=72,slow=40						
KS15	Wonju Array Si	45.40	36	*e*P	P	01 55 35.6	-0.6
	15nm,1.3s						
KSAR	Wonju Array Be	45.40	36	P	P	01 55 35.6	-0.6
KSRS	Korea Array	45.43	36	P	P	01 55 35.6	-0.8
	2.7nm,0.8s,baz=228,slow=9.2,SNR=8.1						
KSRS				LR	LR	02 16 49.8	
	comp=Z,66nm,18.5s,baz=225,slow=39						
MK01	Makanchi Array	45.62	347	*e*P	P	01 55 37.1	-0.7
MK31	Makanchi Array	45.64	347	*e*P	P	01 55 37.8	-0.2
	6.3nm,0.9s						
MK32	Makanchi Array	45.64	347	*e*P	P	01 55 37.8	-0.2
MKAR	Makanchi Array	45.64	347	*e*P	P	01 55 37.8	-0.2
	53nm,0.9s						
MKAR	Makanchi Array	45.64	347	P	P	01 55 37.8	-0.2
	2.4nm,0.6s,baz=160,slow=8.4,SNR=32						
MAKZ	Makanchi	45.73	347	*e*P	P	01 55 38.4	-0.3
	6.8nm,0.6s						
SONA0	Songino Array	45.98	10	*e*P	P	01 55 40.2	-0.5
SONA0				*e*PcP	PcP	01 57 18.4	+1.1
SONM	Songino Array	45.98	10	P	P	01 55 40.2	-0.5
	4.8nm,0.7s,baz=191,slow=9.2,SNR=29						
SONM				PcP	PcP	01 57 18.4	+1.1
	0.3nm,0.6s,baz=197,slow=2.8,SNR=2.4						
SONA1	Songino Array	45.99	10	*e*P	P	01 55 40.7	-0.2
ULN	Ulaanbaatar	46.12	10	*e*P	P	01 55 41.3	-0.6
	1.9nm,0.8s						
KK31	Karatay Array	46.31	334	*e*P	P	01 55 44.1	+0.8
	9.3nm,1.2s						
KKAR	Karatay Array	46.31	334	*e*P	P	01 55 44.1	+0.8
	9.3nm,1.2s						
CN2	Changchun	48.65	28	*e*P	P	01 56 02.5	+1.0
GEYT	Alibeck	49.41	320	P	P	01 56 07.7	+0.3
	0.9nm,0.6s,baz=133,slow=6.1,SNR=3.0						
KURK	Kurchatov	50.18	346	*e*P	P	01 56 14.0	+1.0
	3.2nm,0.8s						
ZAA0	Zalesovo Array	52.04	352	*e*P	P	01 56 26.7	-0.2
	7.4nm,0.8s						
ZALV	Zalesovo Beam	52.04	352	P	P	01 56 26.4	-0.6
	3.1nm,0.5s,baz=181,slow=6.6,SNR=15						
ZAA1	Zalesovo Array	52.04	352	*e*P	P	01 56 26.4	-0.6
USRK	Ussuriysk Ar.	52.24	32	P	P	01 56 28.7	+0.1
	0.9nm,0.7s,baz=242,slow=8.0,SNR=3.5						
STKA	Stephens Creek	55.15	132	*e*P	P	01 56 49.3	-0.8
	2.2nm,1.3s						
STKA	Stephens Creek	55.15	132	P	P	01 56 49.3	-0.8
	3.0nm,0.8s,baz=299,slow=6.4,SNR=5.7						
ABKAR	Akbulak array	55.76	332	*e*P	P	01 56 54.9	+0.6
	13nm,0.8s						
KMBO	Kilima Mbogo	58.86	267	*e*P	P	01 57 17.7	+0.6
	4.3nm,1.3s						
KMBO	Kilima Mbogo	58.86	267	P	P	01 57 17.7	+0.6
	0.9nm,0.6s,baz=55,slow=8.5,SNR=4.0						
KBZ	Khabaz	62.27	319	P	P	01 57 45.1	+5.6
	1.9nm,0.8s,baz=123,slow=7.7,SNR=6.3						
KIRV	Kirov	66.58	336	LR	LR	02 30 37.7	
	comp=Z,47nm,18.9s,baz=176,slow=39						
AKASG	Malin Array Be	73.46	322	P	P	01 58 48.8	-1.0
	0.1nm,0.2s,baz=95,slow=3.9,SNR=4.2						
AKBB	Malin Array Si	73.46	322	*e*P	P	01 58 48.8	-1.0
FIA0	FINESS Array S	78.25	333	*e*P	P	01 59 16.3	-0.6
FINES	FINESS Array B	78.25	333	P	P	01 59 16.3	-0.6
	1.2nm,1.0s,baz=357,slow=3.8,SNR=2.4						
GEA0	GERESS Array S	83.01	319	*e*P	P	01 59 40.5	-2.4
GEC2	GERESS Array S	83.01	319	*e*P	P	01 59 42.0	-0.9
	9.7nm,1.3s						
GERES	GERESS Array B	83.01	319	P	P	01 59 42.0	-0.9
	0.5nm,0.8s,baz=298,slow=8.6,SNR=3.4						
TORD	Torodi Ar. Bea	93.62	283	P	P	02 00 34.6	+0.1
	0.2nm,0.8s,baz=103,slow=5.9,SNR=2.7						
TOA1	Torodi Ar. Sit	93.62	283	*e*P	P	02 00 34.6	+0.1
ESDC	Sonseca Array	96.04	310	P	P	02 00 45.4	+0.2
	0.0nm,0.2s,baz=64,slow=4.3,SNR=2.8						
LPAZ	La Paz	159.28	228	PKPab	PKPab	02 07 56.0	+1.2
	1.6nm,0.9s,baz=111,slow=2.2,SNR=4.5						

IDC 26 01:49:05.0±2.2, 6°.55S×129°.59E, h0km, mb3.7/1, mb1 3.7/4, mb1mx3.5/32, mbtmp3.5/4, ML3.6/3, MS3.6/2, Ms1 3.7/2, ms1mx2.9/24, Error ellipse: s-maj=89.1km s-min=28.1km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.11	198	Pn	Pn	01 52 00.0	+1.1
	0.5nm,0.3s,baz=28,slow=9.7,SNR=18						
FITZ				Sn	Sn	01 54 03.0	-12
	0.3nm,0.3s,baz=278,slow=4.5,SNR=3.6						
WRA	Warramunga Arr	14.09	161	Pn	Pn	01 52 25.9	-0.2
	0.3nm,0.3s,baz=341,slow=13,SNR=20						
WRA				Sn	Sn	01 54 46.4	-17
	0.5nm,0.3s,baz=342,slow=22,SNR=11						
ASAR	Alice Springs	17.52	167	P	Pn	01 53 10.1	-0.8
	0.1nm,0.3s,baz=1.4,slow=11,SNR=5.5						
ASAR				S	Sn	01 56 12.3	-14
	0.1nm,0.3s,baz=342,slow=17,SNR=3.9						
USRK	Ussuriysk Ar.	50.56	2	LR	LR	02 19 36.3	
	comp=Z,32nm,20.6s,baz=140,slow=36						
MKAR	Makanchi Array	67.62	327	P	P	02 00 03.8	0.0
	0.3nm,0.3s,baz=126,slow=7.8,SNR=6.2						
ILAR	Eielson Array	93.11	25	LR	LR	02 45 14.8	
	comp=Z,70nm,20.3s,baz=161,slow=36						

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*ISK **26** 02:17:04.1, 38°.70N×43°.28E, h2km, ML2.4/5*
*ISCJB **26** 02:17:05.5±0.5, 38°.72N±0°.02×43°.25E±0°.04, h11km±12km, Error ellipse: s-maj=5.5km s-min=3.7km az=9.2*
*DDA **26** 02:17:05.4, 38°.71N×43°.31E, h7km±6km, ML2.6*
ISC 26 02:17:05.4±0.9, **38°.72N**±0°.02×**43°.29E**±0°.03, **h13**km±8km, **n15, σ0ˢ.82**/25, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.15	148	PG	Pg	02 17 08.9	-0.3
VANB				SG	Sg	02 17 13.0	+1.2
TVAN	Van	0.21	154	*i* P	Pg	02 17 09.2	-1.1
TVAN				*i* S	Sg	02 17 13.9	+0.3
ERCV	ERCIS-VAN	0.30	7	PG	Pg	02 17 11.5	-0.3
ERCV				SG	Sg	02 17 16.6	+0.6
VMUR	Van-Muradiye	0.35	39	*i* P	Pg	02 17 12.0	-0.6
VMUR				*i* S	Sb	02 17 19.8	+0.7
VMUR				IAML_P			
	comp=Z,738nm,0.1s						
GEVA	Gevas	0.45	204	*i* P	Pg	02 17 13.4	-0.9
GEVA				*i* S	Sb	02 17 22.2	+0.3
GEVA				IAML_P			
	comp=Z,978nm,0.2s						
ADCV	BITLIS_Adilcev	0.45	281	*i* P	Pb	02 17 14.6	-0.7
ADCV				*i* S	Sb	02 17 23.7	+1.6
ADCV				IAML_P			
	comp=Z,467nm,0.1s						
AKDM	Akdamar-Van	0.46	212	PG	Pg	02 17 14.0	-0.6
AKDM				SG	Sg	02 17 20.9	+0.1
CLDR	Caldiran	0.65	49	PG	Pb	02 17 18.1	-0.6
CLDR				SG	Sb	02 17 27.9	+0.1
CLDR	Caldiran	0.65	49	*i* P	Pg	02 17 17.4	-0.7
CLDR				*i* S	Sb	02 17 28.2	+0.4
MLAZ	Malazgirt-MUS	0.71	306	PG	Pg	02 17 19.1	-0.2
TUTA	Tutak	0.77	332	*i* P	Pb	02 17 20.5	-0.4
TUTA				*i* S	Sb	02 17 32.8	+1.4
TUTA				IAML_P			
	comp=Z,2μm,0.2s						
AGRB	Hanur-Agry	0.88	345	PG	Pg	02 17 21.9	-0.7
GURO	Guroymak-BITLI	1.00	261	PG	Pg	02 17 23.6	-1.1
CUKT	Cukurca	1.49	170	PN	Pb	02 17 32.7	-0.4
CUKT	Cukurca	1.49	170	*i* P	Pg	02 17 34.9	+0.7

KRSC 26 02:23:45.3±2.4, **49°.25N×156°.07E, h36**km±34km, **ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.44	1	*e*S	Sn	02 24 29.3	+2.9
ALID	Alaid	1.66	349	*e*P	Pn	02 24 12.2	+0.2
ALID				*e*S	Sn	02 24 32.7	+0.6
PAU	Pauzhetka	2.27	12	*e*S	Sn	02 24 51.5	+4.5
KDTR	Khodutka, Kamc	2.87	26	*e*P	Pn	02 24 31.8	+3.4
KDTR				*e*S	Sn	02 25 06.4	+4.8
MTVR	Mutnovka	3.51	22	S	Sn	02 25 24.2	+6.6
RUS	Russkaya	3.55	25	*e*P	Pn	02 24 41.1	+3.4
RUS				*e*S	Sn	02 25 23.0	+4.6
UGLR	Uglovaya	4.33	23	*e*P	Pn	02 24 53.4	+4.8
AVH	Avacha	4.36	22	*e*P	Pn	02 24 54.7	+5.7
KOK	Koryaka	4.36	21	*e*P	Pn	02 24 54.8	+5.8
SDLR	Sedlovina	4.41	23	*e*P	Pn	02 24 53.9	+4.2
SPN	Mys Shipunski	4.59	31	S	Sn	02 25 48.6	+4.5

MEX 26 02:25:28.9±0.7, **14°.17N×92°.02W, h20**km±352km, **MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.77	342	*i* P	Pb	02 25 42.1	-1.4
CCIG	Comitan	2.10	357	*e*P	Pn	02 26 00.6	-2.5
CCIG				*e*S	Sn	02 26 24.9	-3.9

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*IDC **26** 02:29:47.3±2.3, 8°.26S×121°.78E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.4/30, mbtmp3.4/3, ML2.8/2, Error ellipse: s-maj=251.6km s-min=30.6km az=54.0*
*ISCJB **26** 02:29:48.8±1.4, 8°.5S±0°.1×121°.71E±0°.08, h31km, mb3.3/1, Error ellipse: s-maj=17.6km s-min=11.9km az=176.9*
*DJA **26** 02:29:48.6±1.9, 9°S±22°×12°2E±°, h24km±8km, M3.2/3, MLv3.2/3*
ISC 26 02:29:50.1±1.4, **8°.6S**±0°.1×**121°.78E**±0°.08, **h31**km, **n5, σ2ˢ.96**/7, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	0.20	207	P	Pb	02 29 56.5	-0.1
EDFI				S	Sb	02 29 57.4	-3.6
MMRI	Maumere	0.46	98	P	Pb	02 29 58.7	-1.2
MMRI				S	Sn	02 30 07.5	-0.2
WRA	Warramunga Arr	16.59	134	Pn	P	02 33 42.2	-0.7
	0.0nm,0.3s,baz=311,slow=15,SNR=3.4						
ASAR	Alice Springs	18.97	144	P	Pn	02 34 14.5	+4.5
	0.1nm,0.3s,baz=317,slow=11,SNR=5.5						
MKAR	Makanchi Array	65.37	331	P	P	02 40 29.8	+0.2
	0.1nm,0.3s,baz=140,slow=8.1,SNR=3.6						

IDC 26 02:33:52.4±5.7, **31°.09S×175°.07W, h0**km, **mb3.5**/3, **mb1 3.9**/3, **mb1mx3.6**/31, **mbtmp3.5**/3, **Error ellipse: s-maj=318.0km s-min=39.5km az=161.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.59	266	P	P	02 42 14.4	-0.1
	0.2nm,0.5s,baz=112,slow=7.5,SNR=3.9						
WRA	Warramunga Arr	46.64	271	P	P	02 42 22.7	-0.1
	0.3nm,0.3s,baz=112,slow=8.0,SNR=14						
NVAR	Mina Array Bea	87.06	41	P	P	02 46 40.1	0.0
	0.2nm,0.3s,baz=212,slow=8.5,SNR=2.4						

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*ISCJB **26** 02:35:12.8±1.2, 34°.8N±0°.1×24°.81E±0°.04, h23km±12km, Error ellipse: s-maj=17.2km s-min=6.0km az=174.7*
*THE **26** 02:35:12.8, 34°.79N×24°.82E, h20km, ML2.4/3, Error ellipse: s-maj=1.3km s-min=0.5km az=356.0*
*ATH **26** 02:35:12.4, 34°.86N×24°.81E, h28km±3km, ML2.7/1, Error ellipse: s-maj=3.4km s-min=1.0km az=345.0*
ISC 26 02:35:11.7±1.6, **34°.79N**±0°.07×**24°.81E**±0°.03, **h9**km±16km, **n16, σ0ˢ.33**/23, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMBK	Timbaki Herakl	0.28	352	P	Pb	02 35 19.3	+0.3
TMBK				S	Sb	02 35 23.9	0.0
KSTL	Kastelli Herak	0.55	22	P	Pb	02 35 24.4	+0.8
GVD	Gavdhos	0.60	275	P	Pb	02 35 24.5	+0.1
GVD				S	Sb	02 35 33.1	+0.2
GVD				AML	AML	02 35 37.7	
	comp=E,1514μm,0.3s						
GVD				AML	AML	02 35 41.5	
	comp=N,1567μm,0.4s						
GVD	Gavdhos	0.60	275	P	Pb	02 35 24.4	+0.1
GVD				S	Sb	02 35 33.3	+0.4
PRNS	Prines Rethymn	0.63	336	P	Pb	02 35 24.7	-0.1
LAST	Lasithi	0.66	56	P	Pg	02 35 24.6	+0.1
LAST				S	Sb	02 35 34.5	-0.3
LAST	Lasithi	0.66	56	P	Pb	02 35 25.1	-0.4
LAST				S	Sb	02 35 34.7	-0.1
VAM	Vamos	0.80	321	P	Pb	02 35 27.3	-0.4
VAM	Vamos	0.80	321	P	Pb	02 35 27.3	-0.4
NPS	Neapolis	0.81	54	P	Pb	02 35 27.6	-0.4
NPS	Neapolis	0.81	54	P	Pb	02 35 27.6	-0.4
IMMV	Iera Moni Meta	0.95	315	P	Pg	02 35 29.8	-0.3
IMMV				S	Sg	02 35 42.6	+0.1
IMMV	Iera Moni Meta	0.95	315	P	Pg	02 35 30.0	-0.1
IMMV				S	Sb	02 35 43.4	+0.2
CHAN	Chania	0.96	319	P	Pg	02 35 30.0	-0.2
KERA	Keramoti	1.18	300	P	Pb	02 35 34.0	-0.2
ZKR	Zakros	1.20	74	P	Pg	02 35 34.9	+0.2

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*ISCJB **26** 02:46:20.3±0.6, 44°.20N±0°.04×147°.43E±0°.07, h96km±4km, mb3.8/22, Error ellipse: s-maj=9.6km s-min=5.4km az=34.4*
*MOS **26** 02:46:20.6±1.2, 44°.25N×147°.43E, h100km, mb4.0/16, Error ellipse: s-maj=10.9km s-min=8.8km az=88.7*
*SKHL **26** 02:46:20.4±0.6, 44°.14N×147°.50E, h99km±7km, mb4.2/7, msh5.4/5*
*JMA **26** 02:46:21.7±0.3, 43°.92N×147°.50E, h81km±5km, M4.1*
*IDC **26** 02:46:24.5±2.0, 44°.27N×147°.46E, h118km±17km, mb3.5/20, mb1 3.7/22, mb1mx3.6/33, mbtmp3.9/22, Error ellipse: s-maj=16.5km s-min=11.8km az=146.0*
ISC 26 02:46:20.6±0.9, **44°.15N**±0°.05×**147°.54E**±0°.06, **h87**km±7km, **n79, σ1ˢ.18**/94, **mb3.8**/22, **3C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.10	12	*i* P	Pn	02 46 41.7	+0.4
KUR				AMB	AMB	02 46 42.4	
	60nm,0.2s						
KUR				AMB	AMB	02 46 42.4	
	80nm,0.2s						
KUR				AMB	AMB	02 46 42.4	
	30nm,0.2s						
KUR				*e*S	Sn	02 46 57.2	+0.4
KUR				A	A	02 46 57.9	
	260nm,0.2s						
KUR				A	A	02 46 57.9	
	320nm,0.2s						
KUR	Kuril'sk	1.10	12	c *i*PN	Pn	02 46 41.7	+0.4
KUR				*e*S	Sn	02 46 57.2	+0.4
KUR				pmax	pmax		
	comp=N,62nm,0.1s						
KUR				pmax	pmax		
	comp=E,81nm,0.1s						
KUR				pmax	pmax		
	comp=Z,308nm,0.1s						
KUR				smax	smax		
	comp=E,2μm,0.2s						
KUR				smax	smax		
	comp=N,2μm,0.4s						
YUK	Yuzh-Kuril'sk	1.22	265	*i* P	Pn	02 46 42.8	+0.2
YUK				AMB	AMB	02 46 43.8	
	comp=N,50nm,0.3s						
YUK				AMB	AMB	02 46 43.8	
	comp=N,80nm,0.3s						
YUK				AMB	AMB	02 46 43.8	
	comp=N,70nm,0.3s						
YUK				*e*S	Sn	02 46 59.3	+0.1
YUK				A	A	02 47 01.9	
	comp=N,250nm,0.2s						
YUK				A	A	02 47 01.9	
	comp=N,340nm,0.2s						
YUK	Yuzh-Kuril'sk	1.22	265	d *i*PN	Pn	02 46 42.8	+0.2
YUK				*e*S	Sn	02 46 59.1	-0.1
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=N,591nm,0.1s						
YUK				pmax	pmax		
	comp=E,815nm,0.1s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
YUK				smax	smax		
	comp=N,2μm,0.2s						

LAGR	**Lagunnoye**	1.27	266	*i* P	Pn	02 46 43.0	-0.2
LAGR				AMB	AMB	02 46 43.0	
	comp=N,70nm,0.2s						
LAGR				AMB	AMB	02 46 43.0	
	comp=N,20nm,0.2s						
LAGR				*e*S	Sn	02 47 00.0	-0.3
LAGR				A	A	02 47 02.8	
	comp=N,320nm,0.2s						
LAGR				A	A	02 47 02.8	
	comp=N,240nm,0.2s						
LAGR	**Lagunnoye**	1.27	266*c*	*i*PN	Pn	02 46 43.6	+0.4
LAGR				*e*S	Sn	02 47 00.6	+0.3
LAGR				pmax	pmax		
	comp=N,151nm,0.1s						
LAGR				pmax	pmax		
	comp=E,71nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,1μm,0.1s						
LAGR				smax	smax		
	comp=N,2μm,0.2s						
LAGR				smax	smax		
	comp=E,1μm,0.2s						
GRPR	**Tuman**	1.28	263	*i* P	Pn	02 46 43.0	-0.5
GRPR				AMB	AMB	02 46 44.0	
	comp=E,40nm,0.3s						
GRPR				AMB	AMB	02 46 44.0	
	comp=E,90nm,0.3s						
GRPR				*e*S	Sn	02 47 00.0	-0.7
GRPR				A	A	02 47 02.4	
	comp=E,250nm,0.2s						
GRPR				A	A	02 47 02.4	
	comp=E,310nm,0.2s						
GRPR	**Tuman**	1.28	263*c*	*i*PN	Pn	02 46 43.6	+0.1
GRPR				*e*S	Sn	02 47 00.8	+0.1
GRPR				pmax	pmax		
	comp=Z,1μm,0.1s						
GRPR				pmax	pmax		
	comp=N,393nm,0.2s						
GRPR				pmax	pmax		
	comp=E,441nm,0.2s						
GRPR				smax	smax		
	comp=N,896nm,0.1s						
GRPR				smax	smax		
	comp=E,2μm,0.2s						
GLVR	**Golovnino**	1.52	255	*i* P	Pn	02 46 46.0	-0.4
GLVR				AMB	AMB	02 46 48.0	
	comp=E,60nm,0.3s						
GLVR				*e*S	Sn	02 47 06.0	+0.2
GLVR				A	A	02 47 08.0	
	comp=E,280nm,0.2s						
GLVR				A	A	02 47 08.0	
	comp=E,220nm,0.2s						
GLVR	**Golovnino**	1.52	255*d*	*i*PN	Pn	02 46 46.8	+0.4
GLVR				*e*S	Sn	02 47 06.1	+0.2
GLVR				pmax	pmax		
	comp=Z,889nm,0.1s						
GLVR				smax	smax		
	comp=E,2μm,0.2s						
GLVR				smax	smax		
	comp=N,2μm,0.1s						
NEM2	**Nemuro 2**	1.52	239	P	Pn	02 46 45.8	-0.7
NEM2				*e*S	Sn	02 47 03.9	-2.1
JRA	**Rausu**	1.76	264	P	Pn	02 46 50.5	+1.0
JKHN	**Kushirohamanak**	2.03	239	P	Pn	02 46 52.8	-0.3
JKHN				*e*S	Sn	02 47 16.3	-1.6
JNK	**Nakash**	2.12	255	P	Pn	02 46 54.6	+0.4
JAK	**Akkeshi**	2.37	242	P	Pn	02 46 57.1	-0.4
JAK				*e*S	Sn	02 47 24.0	-1.8
JTKR	**Abashiri--Toko**	2.62	267	P	Pn	02 47 02.0	+1.0
JAR	**Ashorobuto**	2.86	254	P	Pn	02 47 05.2	+1.0
JOB	**Onbets**	2.97	246	P	Pn	02 47 06.0	+0.4
JOB				*e*S	Sn	02 47 39.3	-1.0
JMP	**Maruseppu**	3.02	269	P	Pn	02 47 07.7	+1.4
HRK	**Horoka**	3.27	259	*e*P	Pn	02 47 11.1	+1.4
JCH	**Churui**	3.41	245	P	Pn	02 47 11.3	-0.3
JCH				*e*S	Sn	02 47 49.1	-1.9
JKK2	**Kamakawa 2**	3.47	267	P	Pn	02 47 14.0	+1.6
JKA	**Kamikawa-asahi**	3.56	271	*e*P	Pn	02 47 15.1	+1.6
ASAJ	**Asahikawa**	3.56	271	P	Pn	02 47 15.7	+2.1
	comp=N,6.4nm,0.3s,baz=67,slow=16,SNR=32						
ASAJ				S	Sn	02 47 59.2	+4.6
	comp=N,1.5nm,0.3s,baz=66,slow=33,SNR=2.2						
JSE	**Soyaes**	3.63	285	P	Pn	02 47 16.2	+1.7
ERM	**Erimo**	3.86	238	*e*P	Pn	02 47 18.6	+1.0
ERM	**Erimo**	3.86	238	*i* PN	Pn	02 47 18.6	+1.0
JNBK	**Urakawa-nobuka**	3.97	243	P	Pn	02 47 18.7	-0.4
YSS	**Yuzh-Sakhalins**	4.37	311	*e*P	Pn	02 47 25.0	+0.4
YSS				AMB	AMB	02 47 26.0	
	comp=N,20nm,0.9s						
YSS				*e*S	Sn	02 48 12.6	-1.7
YSS				A	A	02 48 15.0	
	comp=N,30nm,0.9s						
YSS				A	A	02 48 15.0	
	comp=N,50nm,0.9s						
YSS	**Yuzh-Sakhalins**	4.37	311	*e*PN	Pn	02 47 25.4	+0.8
YSS				*e*S	Sn	02 48 12.6	-1.7
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				smax	smax		
	comp=N,30nm,0.8s						
YSS				smax	smax		
	comp=E,50nm,1.1s						
YSS				MLR	MLR		
	comp=Z,100nm,17.0s						
TYV	**Tymovskoe**	7.48	336	*e*P	Pn	02 48 07.4	+0.5
TYV				AMB	AMB	02 48 08.5	
	comp=Z,5.0nm,1.0s						
TYV				*e*S	Sn	02 49 28.2	-1.8
TYV				A	A	02 49 30.6	
	comp=Z,200nm,7.0s						
TYV	**Tymovskoe**	7.48	336	*e*PN	Pn	02 48 05.1	-1.8
TYV				*e*S	Sn	02 49 28.2	-1.8
TYV				pmax	pmax		
	comp=Z,5.0nm,1.4s						
TYV				smax	smax		
	comp=N,200nm,7.1s						
SEY	**Seymchan**	19.02	7	P	P	02 50 36.4	+1.1
	comp=N,0.2nm,0.3s,baz=171,slow=9.8,SNR=4.4						
HIA	**Hailar**	19.68	295	*e*P	Pn	02 50 43.8	-1.0
HIA	**Hailar**	19.68	295	*i* P	Pn	02 50 43.8	-1.0
HIA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	**Bilibino**	25.89	16	*e*P	P	02 51 45.3	+1.3
BILL	**Bilibino**	25.89	16	*e*P	P	02 51 45.3	+1.3
SONM	**Songino Array**	28.58	292	P	P	02 52 08.0	-0.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	28.58	292	P	P	02 52 08.0	-0.4
	comp=Z,0.7nm,0.5s,baz=85,slow=7.7,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	29.23	140	T	T	03 23 10.1	
	baz=330,slow=76,SNR=98						
H11N1	**WAKE ISLAND Hy**	29.24	140	T	T	03 23 13.0	
	baz=330,slow=76,SNR=99						
H11N3	**WAKE ISLAND Hy**	29.24	140	T	T	03 23 10.7	
	baz=330,slow=76,SNR=91						
H11S1	**WAKE ISLAND Hy**	30.21	142	T	T	03 24 20.3	
	baz=332,slow=76,SNR=259						
H11S3	**WAKE ISLAND Hy**	30.21	142	T	T	03 24 20.9	
	baz=332,slow=76,SNR=129						
H11S2	**WAKE ISLAND Hy**	30.22	142	T	T	03 24 22.7	
	baz=332,slow=76,SNR=151						
ILAR	**Eielson Array**	40.99	37	P	P	02 53 55.1	+0.5
	comp=Z,0.5nm,0.7s,baz=254,slow=5.3,SNR=10						
MKAR	**Makanchi Array**	44.65	297	*e*P	P	02 54 24.3	-0.1
MKAR	**Makanchi Array**	44.65	297	P	P	02 54 24.1	-0.3
	comp=Z,1.6nm,0.5s,baz=79,slow=8.5,SNR=18						
MKAR				PcP	PcP	02 56 07.4	+1.8
	comp=Z,0.1nm,0.2s,baz=62,slow=3.4,SNR=2.0						
INK	**Inuvik**	45.91	31	P	P	02 54 34.7	+0.7
	comp=Z,1.5nm,0.4s,baz=281,slow=7.1,SNR=18						
CMAR	**Chiang Mai Arr**	47.91	254	*e*P	P	02 54 52.0	+1.8
CMAR	**Chiang Mai Arr**	47.91	254	P	P	02 54 52.0	+1.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	47.91	254	P	P	02 54 52.0	+1.8
	comp=Z,1.3nm,0.3s,baz=39,slow=5.8,SNR=2.3						
AAK	**Ala-Archa**	51.44	295	*e*P	P	02 55 16.2	-0.7
AAK	**Ala-Archa**	51.44	295	*i* P	P	02 55 16.2	-0.7
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARU	**Arti**	54.24	317	*e*P	P	02 55 36.1	-1.0
ARU	**Arti**	54.24	317	*i* P	P	02 55 36.1	-1.0
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RES	**Resolute Bay**	54.50	17	*e*P	P	02 55 37.1	-1.6
RES	**Resolute Bay**	54.50	17	P	P	02 55 37.3	-1.4
	comp=Z,1.0nm,0.4s,baz=337,slow=4.9,SNR=13						
YKA	**Yellowknife Ar**	55.31	34	*e*P	P	02 55 45.8	+1.1
YKA	**Yellowknife Ar**	55.31	34	P	P	02 55 46.6	+1.9
	comp=Z,0.5nm,0.7s,baz=302,slow=7.1,SNR=9.4						
ARCES	**ARCESS Array B**	58.97	340	P	P	02 56 08.7	-1.7
	comp=Z,3.4nm,0.9s,baz=45,slow=7.8,SNR=6.0						
GEYT	**Alibeck**	64.49	299	P	P	02 56 48.6	+0.6
	comp=Z,0.7nm,0.4s,baz=56,slow=8.9,SNR=3.1						
FINES	**FINESS Array B**	64.64	333	P	P	02 56 46.6	-1.9
	comp=Z,2.0nm,0.5s,baz=38,slow=7.1,SNR=16						
WRA	**Warramunga Arr**	64.92	194	P	P	02 56 50.7	-0.1
	comp=Z,0.6nm,1.0s,baz=10,slow=7.2,SNR=3.3						
NVAR	**Mina Array Bea**	67.13	58	P	P	02 57 05.5	+0.3
	comp=Z,0.4nm,0.6s,baz=286,slow=5.3,SNR=2.4						
ASAR	**Alice Springs**	68.64	193	P	P	02 57 15.1	+0.7
	comp=Z,0.2nm,0.4s,baz=211,slow=38,SNR=4.0						
NB2	**NORSAR Subarra**	69.33	339	P	P	02 57 16.8	-1.5
	comp=Z,0.3nm,0.4s,baz=32,slow=6.5						
NOA	**NORSAR Array B**	69.33	339	P	P	02 57 17.1	-1.2
	comp=Z,0.7nm,0.6s,baz=32,slow=6.7,SNR=11						
PDAR	**Pinedale Array**	69.43	50	P	P	02 57 20.4	+0.8
	comp=Z,0.1nm,0.5s,baz=347,slow=3.7,SNR=2.3						
KBZ	**Khabaz**	69.74	312	P	P	02 57 21.5	+0.4
	comp=Z,0.9nm,0.5s,baz=103,slow=6.3,SNR=6.4						
AKASG	**Malin Array Be**	71.42	324	P	P	02 57 30.1	-1.0
	comp=Z,1.2nm,0.5s,baz=37,slow=6.0,SNR=9.1						
CLL	**Collm**	77.08	333	*e*P	P	02 58 04.0	-0.1
CLL	**Collm**	77.08	333	*e*P	P	02 58 04.0	-0.1
CLL	**Collm**	77.08	333	*e*P	P	02 58 04.0	-0.1
BRTR	**Keskin Array B**	77.47	314	P	P	02 58 07.3	+0.7
	comp=Z,0.5nm,0.8s,baz=51,slow=8.0,SNR=3.2						
GERES	**GERESS Array B**	78.94	331	*e*P	P	02 58 14.8	+0.3
GERES	**GERESS Array B**	78.94	331	*e*P	P	02 58 14.8	+0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	**GERESS Array B**	78.94	331	P	P	02 58 14.3	-0.2
	comp=Z,0.6nm,0.4s,baz=32,slow=5.9,SNR=8.1						
TXAR	**Lajitas Array**	82.19	57	P	P	02 58 32.1	-0.1
	comp=Z,0.6nm,0.7s,baz=304,slow=4.2,SNR=7.0						

ISC 26 02:51:06.6±2.0**, 51°.39N**±0°.09×**16°.17E**±0°.07**, h0^{km}, n10, σ0^{s}.56**/18**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.56	172	*e*Pg	Pg	02 51 17.1	-0.1
KSP				*e*Sg	Sg	02 51 25.0	+0.6
UPC	**Upice**	0.89	187	*e*PG	Pg	02 51 23.2	-0.4
UPC				*e*SG	Sg	02 51 35.6	+0.4
DPC	**Dobruska-Polom**	1.05	175	*e*PG	Pg	02 51 26.0	-0.6
DPC				*e*SG	Sg	02 51 39.9	-0.3
PVCC	**Panska Ves**	1.33	230	*e*PG	Pg	02 51 31.5	-0.6
PVCC				*e*SG	Sb	02 51 50.2	+0.2
	comp=Z,15nm,0.3s						
BRG	**Berggiesshubel**	1.50	251	PG	Pn	02 51 34.8	+0.1
BRG				SG	Sg	02 51 54.4	-0.2
	3.5nm,0.3s						
PRU	**Pruhonice**	1.75	217	*e*PG	Pn	02 51 38.7	+0.6
PRU				*e*SG	Sb	02 52 01.6	-0.3
CLL	**Collm**	1.99	269	*e*Pg	Pb	02 51 43.0	-0.6
CLL				*e*Sg	Sb	02 52 10.0	+1.1
OKC	**Ostrava-Krasne**	2.00	140	*e*SG	Sn	02 52 07.6	+0.2
NKC	**Novy Kostel**	2.63	245	*e*SG	Sg	02 52 32.0	+0.9
KHC	**Kasperske Hory**	2.81	217	*e*PG	Pb	02 51 57.4	-0.2
KHC				*e*SG	Sg	02 52 36.7	-0.1

ISCJB ***26*** *03:07:19.0±0.6, 37°.01N±0°.03×5°.19E±0°.07, h10^{km}, Error ellipse: s-maj=8.6km s-min=5.0km az=179.1*

CRAAG ***26*** *03:07:19.9, 36°.71N×5°.17E, Ml3.2*

LDG ***26*** *03:07:23.4±0.2, 36°.87N×5°.15E, h10^{km}, Ml2.8/5, Error ellipse: s-maj=7.5km s-min=4.2km az=106.0*

ISC 26 03:07:19.3±1.0**, 36°.88N**±0°.05×**5°.21E**±0°.04**, h10^{km}, n15, σ1^{s}.65**/19**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	0.63	121	P	Pb	03 07 32.5	0.0
SET	**Setif**	0.69	167	P	Pb	03 07 34.0	+0.5
CKHR	**Kef el Ahmar**	0.89	164	P	Pg	03 07 35.9	-0.6
CASM	**Ain Smara**	1.20	120	P	Pb	03 07 41.6	-0.5
ATAF	**Djebel Tarf**	1.25	217	P	Pg	03 07 43.8	+0.4
CTEI	**Djebel Teioual**	1.26	130	P	Pg	03 07 44.2	+0.7
CKFL	**Kef-Lekhel**	1.30	111	P	Pg	03 07 45.9	+1.6
CAEH	**'Ain El Ouahch**	1.32	94	P	Pg	03 07 45.0	+0.4
ADJB	**Djebel Djouab**	1.60	244	P	Pb	03 07 48.6	-0.4
CMAH	**Djebel Manchou**	1.79	97	P	Pn	03 07 50.2	-0.2
ABSA	**Djebel Ababsia**	1.92	108	P	Pg	03 07 56.1	-0.1
PGF	**Pioggiola**	6.37	26	*e*Pn	Pn	03 08 55.4	+2.1
PGF				*e*Sn	Sn	03 10 04.6	-1.6
	1.2nm,0.2s						
LMR	**La Mourre**	6.53	8	*e*Pn	Pn	03 08 57.2	+1.9
LMR				*e*Sn	Sn	03 10 07.6	-2.2
	0.9nm,0.2s						
FRF	**La Foret Royal**	6.77	9	*e*Pn	Pn	03 09 00.5	+1.8
FRF				*e*Sn	Sn	03 10 12.7	-3.0
	0.5nm,0.3s						
SBF	**Sospel**	7.18	13	*e*Pn	Pn	03 09 06.4	+2.0
SBF				*e*Sn	Sn	03 10 23.4	-2.7
	0.6nm,0.2s						

SJA ***26*** *03:14:39.6±0.9, 27°.33S×71°.82W, h33^{km}, ML4.3, MW4.0*

BJI ***26*** *03:14:40.4, 28°.21S×71°.96W, h15^{km}*

ISCJB ***26*** *03:14:42.2±0.6, 27°.31S±0°.02×71°.56W±0°.08, h46^{km}±6^{km}, mb4.5/10, MS3.7/3, Error ellipse: s-maj=11.2km s-min=3.0km az=178.0*

NEIC ***26*** *03:14:44.2±0.6, 27°.43S×71°.35W, mb4.9/6, ML4.5(GUC), Error ellipse: s-maj=17.5km s-min=5.7km az=93.0*

NEIC Felt [III] at Copiapo and Tierra Amarilla. Also felt at Vallenar.

GUC ***26*** *03:14:45.1±0.6, 27°.62S×70°.41W, h118^{km}±6^{km}, ML4.5*

IDC ***26*** *03:14:45.7±1.3, 27°.48S×71°.08W, h39^{km}±7^{km}, mb4.1/6, mb1 4.0/9, mb1mx3.8/27, mbtmp4.2/9, ML3.7/3, MS3.5/5, Ms1 3.4/5, ms1mx3.2/24, Error ellipse: s-maj=39.3km s-min=18.2km az=108.0*

ISC 26 03:14:43.1±0.8**, 27°.35S**±0°.03×**71°.44W**±0°.06**, h27^{km}**±4^{km}**, n105, σ1^{s}.80**/126**, mb4.3**/12**, MS3.8**/3**, 1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	**Copiap**	1.09	103	*e*Pn	Pn	03 15 02.6	-0.1
GO03				*e*Sn	Sb	03 15 14.8	-2.5
GO03	**Copiap**	1.09	103	*e*P	Pn	03 15 02.4	-0.4
GO03				*e*S	Sb	03 15 14.6	-2.7
GO03				IAML		03 15 15.8	
	comp=N,14μm,0.4s						
LCO	**Las Campanas**	1.77	159	*e*Pn	Pn	03 15 12.2	-0.1
LCO				*e*Sn	Sn	03 15 31.4	-2.8
LCO	**Las Campanas**	1.77	159	*e*P	Pn	03 15 12.4	+0.1
LCO				*e*S	Sn	03 15 31.6	-2.5
LCO	**Las Campanas**	1.77	159	*i* P	Pn	03 15 12.4	+0.1
LCO				*i* S	Sn	03 15 31.8	-2.4
LCO				IAML		03 15 35.7	
	comp=E,5μm,0.5s						
GO02	**Mina Guanaco**	2.74	38	*e*Pn	Pn	03 15 27.6	+2.0
GO02				*e*Sn	Sn	03 15 57.4	-0.7
GO02	**Mina Guanaco**	2.74	38	*e*P	Pn	03 15 27.0	+1.4
GO02				*e*S	Sn	03 15 59.1	+1.1
GO02				IAML		03 16 10.9	
	comp=E,4μm,0.8s						
GO04	**Tololo Observa**	2.86	169	*e*Pn	Pn	03 15 27.5	+0.1
GO04				*e*Sn	Sn	03 15 57.8	-3.2
GO04	**Tololo Observa**	2.86	169⇑	*i*P	Pn	03 15 27.4	+0.1
GO04				*e*S	Sn	03 15 58.9	-2.2
GO04				*e*S		03 15 59.6	
PB14	**IPOC Station P**	2.87	19	*e*P	Pn	03 15 28.6	+1.2
PB14				*e*S	Sn	03 16 01.2	-0.1
PB14	**IPOC Station P**	2.87	19	*e*P	Pn	03 15 28.5	+1.1
PB14				*e*S	Sn	03 16 01.4	+0.1
PB14				IAML		03 16 02.5	
	comp=E,1μm,0.6s						
AROD	**Rodeo**	3.29	149	*e*P	Pn	03 15 35.8	+2.6
AROD				*e*S	Sn	03 16 13.9	+2.2
AGUA	**GUANDACOL**	3.35	130	*e*P	Pn	03 15 37.7	+3.8
ACDV	**Cuesta del Vie**	3.46	145	*e*P	Pn	03 15 38.3	+2.8
CMCH	**Combarbala**	3.83	174	*e*P	Pn	03 15 40.0	-0.4
ACCO	**Cerro Coronel**	3.83	148	*e*P	Pn	03 15 43.4	+2.7
PB10	**IPOC Station P**	3.91	12	*e*Pn	Pn	03 15 41.9	+0.5
PB10	**IPOC Station P**	3.91	12	*e*P	Pn	03 15 41.5	+0.1
PB10				*e*S	Sn	03 16 24.8	-1.7
AMOG	**MOGNA**	4.40	145	*e*P	Pn	03 15 50.1	+1.8
AMOG				*e*S	Sn	03 16 42.9	+4.2
PB15	**IPOC Station P**	4.49	24	*e*P	Pn	03 15 51.4	+1.7
PB05	**IPOC Station P**	4.62	14	*e*P	Pn	03 15 51.6	+0.3
RTLL	**Cerro Villicun**	4.73	148	*e*P	Pn	03 15 54.9	+2.1
RTLL				*e*P		03 15 55.2	
RTLL				IAML		03 17 15.8	
	comp=Z,172nm,0.5s						
RTLS	**Leoncito**	4.80	158	*e*P	Pn	03 15 56.7	+2.7
RTLS				IAML		03 17 12.2	
	comp=Z,244nm,0.7s						
ZON	**Zonda**	4.82	151	*e*P	Pn	03 15 55.9	+1.9
ZON				*e*S	Sb	03 17 08.2	+3.7
PB06	**IPOC Station P**	4.93	20	*e*P	Pn	03 15 56.2	+0.6
CFA	**Coronel Fontan**	5.07	147	*e*P	Pn	03 15 59.3	+1.8
CYA	**Choya**	5.10	104	*e*P	Pn	03 15 59.5	+1.6
CYA				IAML		03 17 23.0	
	comp=Z,94nm,0.6s						
PB04	**IPOC Station P**	5.13	13	*e*Pn	Pn	03 15 58.6	+0.1
PB04				*e*Sn	Sn	03 16 54.6	-2.3
PB04	**IPOC Station P**	5.13	13	*e*P	Pn	03 15 58.5	+0.1
RTCV	**Cerro Valdivia**	5.15	151	*e*P	Pn	03 16 00.4	+1.8
AUSP	**Uspallata**	5.17	160	*e*P	Pn	03 16 01.8	+2.8
LVC	**Limon Verde**	5.25	26	*e*Pn	Pn	03 16 01.8	+1.5
LVC				*e*Sn	Sn	03 16 58.3	-1.7
LVC	**Limon Verde**	5.25	26	*e*P	Pn	03 16 01.9	+1.7
LVC				*e*S	Sb	03 17 15.8	-1.3
LVC	**Limon Verde**	5.25	26	Pn	Pn	03 16 01.6	+1.4
	comp=Z,3.0nm,0.3s,baz=169,slow=4.5,SNR=21						
LVC				Sn	Sn	03 16 59.2	-0.9
	comp=Z,19nm,0.3s,baz=75,slow=20,SNR=11						
APLL	**PUNTA DE LOS L**	5.26	126	*e*P	Pn	03 16 01.0	+0.9
AHML	**Horco Molle**	5.47	85	*e*P	Pn	03 16 06.2	+3.3
AHML				*e*P		03 16 07.1	
AHML				IAML		03 16 14.7	
	comp=Z,55nm,0.4s						
PB03	**IPOC Station P**	5.50	17	*e*P	Pn	03 16 03.4	-0.1
ROC1	**El Roble**	5.62	176	*e*Pn	Pn	03 16 04.2	-1.0
ROC1				*e*Sn	Sn	03 17 02.7	-6.2
ROC1	**El Roble**	5.62	176	*e*P	Pn	03 16 04.3	-0.8
ASAL	**Salagasta**	5.69	157	*e*P	Pn	03 16 07.9	+1.9
PB07	**IPOC Station P**	5.78	14	*e*P	Pn	03 16 07.4	+0.1
PEL	**Peldehue**	5.81	174	*e*Pn	Pn	03 16 06.9	-0.6
PEL				*e*Sn	Sn	03 17 11.0	-2.3
PEL	**Peldehue**	5.81	174	*e*P	Pn	03 16 07.6	0.0
PB09	**IPOC Station P**	5.88	20	*e*P	Pn	03 16 09.7	+1.0
ARCO	**CERRO ARCO**	5.88	159	*e*P	Pn	03 16 10.5	+1.8
ARCO				IAML		03 16 32.7	
	comp=Z,73nm,0.4s						
ARCO				*e*S	Sn	03 17 14.4	-1.0
ACAN	**Cantantal**	6.14	144	*e*P	Pn	03 16 13.3	+1.2
AAGR	**Agrelo**	6.14	159	*e*P	Pn	03 16 14.0	+1.8
PB02	**IPOC Station P**	6.17	13	*e*P	Pn	03 16 12.6	0.0
PB01	**IPOC Station P**	6.53	16	*e*Pn	Pn	03 16 17.1	-0.5
PB01	**IPOC Station P**	6.53	16	*e*P	Pn	03 16 17.4	-0.1
AVIZ	**Vizcacheras**	6.60	158	*e*P	Pn	03 16 19.9	+1.4
MRA	**San Martin**	7.08	137	*e*P	Pn	03 16 25.1	0.0
MRA				IAML		03 16 34.7	
	comp=Z,83nm,0.4s						
TCA	**Tanti**	7.17	125	*e*P	Pn	03 16 25.9	-0.5
TCA				*e*S	Sn	03 17 41.1	-5.8
PB11	**IPOC Station P**	7.73	13	*e*Pn	Pn	03 16 33.0	-1.2
PB11				*e*Sn	Sn	03 17 56.8	-4.2
PB11	**IPOC Station P**	7.73	13	*e*P	Pn	03 16 33.0	-1.2
MNMC	**Minye Minye**	8.36	12	*e*Pn	Pn	03 16 42.4	-0.5
MNMC				*e*Sn	Sn	03 18 14.4	-2.1
MNMCX	**Minye Minye**	8.36	12	*e*P	Pn	03 16 42.0	-0.8
MNMCX				*e*S	Sn	03 18 15.0	-1.6
PB12	**IPOC Station P**	8.76	7	*e*P	Pn	03 16 47.9	-0.3
LPAZ	**La Paz**	11.43	16	Pn	Pn	03 17 26.3	+1.0
	comp=Z,0.4nm,0.3s,baz=194,slow=5.6,SNR=10.0						
GO06	**Curarrehue**	12.20	180	*e*Pn	Pn	03 17 32.3	-2.9
CPUP	**Villa Florida**	12.64	89	LR	LR	03 22 39.4	
	comp=Z,99nm,20.6s,baz=260,slow=38						
TRQA	**Tornquist**	13.30	146	*e*Pn	Pn	03 17 48.3	-2.0
PLCA	**Paso Flores**	13.37	177	*e*Pn	Pn	03 17 48.2	-3.0
PLCA	**Paso Flores**	13.37	177	Pn	Pn	03 17 50.0	-1.1
	comp=Z,0.1nm,0.3s,baz=9.5,slow=12,SNR=3.3						
SIV	**San Ignacio**	14.84	42	Pn	Pn	03 18 05.9	-5.5
	comp=Z,0.7nm,0.3s,baz=249,slow=12,SNR=15						
NNA	**Nana**	16.11	341	LR	LR	03 23 09.8	
	comp=Z,88nm,21.8s,baz=196,slow=31						
BDFB	**Brasilia**	24.66	67	P	P	03 20 01.3	-0.7
	comp=Z,5.9nm,0.7s,baz=232,slow=6.6,SNR=9.0						
BDFB				pP	sP	03 20 11.5	0.0
	comp=Z,5.0nm,0.7s,baz=239,slow=5.9,SNR=4.8						
BDFB				LR	LR	03 31 00.1	
	comp=Z,126nm,18.3s,baz=259,slow=40						
EFI	**East Falkland**	26.30	161	*e*P	P	03 20 14.8	-1.6
	comp=Z,48nm,1.4s						
USHA	**Ushuaia**	27.54	176	P	P	03 20 27.2	-0.3
	comp=Z,2.2nm,0.7s,baz=356,slow=13,SNR=2.2						
HOPE	**Hope Point**	37.09	146	*e*P	P	03 21 47.6	-3.3
	comp=Z,34nm,1.3s						
VNA3	**Neumayer Olymp**	55.35	160	P	P	03 24 14.0	-0.3
VNA1	**Neumayer--Stat**	55.62	159	P	P	03 24 17.3	+1.2
VNA2	**Neumayer--Watz**	55.97	159	P	P	03 24 18.8	+0.1
	baz=291,slow=8.8						
SNAA	**Sanae**	57.57	160	P	P	03 24 29.9	-0.2
SNAA	**Sanae**	57.57	160	*e*P	P	03 24 29.9	-0.2
	comp=Z,5.5nm,0.6s						
SNAA	**Sanae**	57.57	160	P	P	03 24 29.9	-0.2
	comp=Z,4.3nm,0.5s,baz=277,slow=8.1,SNR=46						
HKT	**Hockley**	61.58	336	*e*P	P	03 24 59.2	+1.1
	comp=Z,11nm,1.2s						
TXAR	**Lajitas Array**	64.27	329	pP	pP	03 25 30.2	+6.7
	comp=Z,0.3nm,0.6s,baz=142,slow=7.9,SNR=3.4						
SYO	**Syowa Base**	71.86	159⇓	*e*P	P	03 26 02.0	-1.2
W18A	**Petrified Fore**	71.91	328	*e*P	P	03 26 06.7	+2.5
	comp=Z,10.0nm,0.8s						
DBIC	**Dimbokro**	72.64	73	*e*P	P	03 26 08.4	-0.3
	comp=Z,7.7nm,1.3s						
DBIC	**Dimbokro**	72.64	73	P	P	03 26 08.4	-0.3
	comp=Z,1.7nm,0.6s,baz=207,slow=6.8,SNR=4.6						
DBIC				LR	LR	03 56 01.9	
	comp=Z,58nm,19.4s,baz=240,slow=34						
TOA0	**Torodi Ar. Sit**	81.48	70	*e*P	P	03 26 57.1	-1.3
TOA1	**Torodi Ar. Sit**	81.48	70	*e*P	P	03 26 56.9	-1.6
TORD	**Torodi Ar. Bea**	81.48	70	P	P	03 26 56.9	-1.6
	comp=Z,2.1nm,0.6s,baz=273,slow=5.2,SNR=16						
TORD				pP	pwP	03 27 10.5	-0.4
	comp=Z,1.0nm,0.6s,baz=245,slow=4.4,SNR=4.1						
BOSA	**Boshof**	82.72	118	P	P	03 27 04.3	-0.8
	comp=Z,1.0nm,0.5s,baz=236,slow=4.5,SNR=4.7						
BOSA				LR	LR	04 02 24.7	
	comp=Z,37nm,18.3s,baz=194,slow=35						
YKA	**Yellowknife Ar**	95.95	341	pP	pP	03 28 19.3	+4.9
	comp=Z,0.4nm,0.9s,baz=139,slow=4.7,SNR=5.2						
VYHS	**Vyhne**	110.12	45	*e*PDIFF	Pdif	03 29 13.7	+3.0
WR1	**Warramunga Arr**	126.77	211	*e*PKPdf	PKPdf	03 33 44.9	-0.1
WRA	**Warramunga Arr**	126.77	211	PKP	PKPdf	03 33 44.9	-0.1
	comp=Z,0.6nm,0.6s,baz=157,slow=1.7,SNR=9.0						
WRA				pPKP	sPKPdf	03 33 57.7	+2.3
	comp=Z,0.4nm,0.6s,baz=152,slow=1.7,SNR=2.8						
CHGR	**Chuyangaron**	145.32	61	*e*PKPbc	PKPbc	03 34 19.3	+0.7
ZAA1	**Zalesovo Array**	148.20	27	*e*PKPbc	PKPbc	03 34 27.4	+1.2
ZAA0	**Zalesovo Array**	148.20	27	*e*PKPbc	PKPbc	03 34 27.9	+1.6
ZALV	**Zalesovo Beam**	148.20	27	PKPbc	PKPbc	03 34 27.4	+1.2
	comp=Z,2.8nm,0.6s,baz=287,slow=4.0,SNR=12						
AAK	**Ala-Archa**	148.44	52	*e*PKPbc	PKPbc	03 34 29.6	+2.1
MK31	**Makanchi Array**	151.65	40	*e*PKPbc	PKPbc	03 34 36.0	+1.0
MK32	**Makanchi Array**	151.65	40	*e*PKPbc	PKPbc	03 34 35.5	+0.6
MKAR	**Makanchi Array**	151.65	40	*e*PKPbc	PKPbc	03 34 36.0	+1.0
MKAR	**Makanchi Array**	151.65	40	PKPbc	PKPbc	03 34 35.5	+0.6
	comp=Z,1.7nm,0.8s,baz=309,slow=2.6,SNR=15						
MK01	**Makanchi Array**	151.67	40	*e*PKPbc	PKPbc	03 34 35.7	+0.7
WMQ	**Urumqi**	156.48	40	*e*PKP	PKPdf	03 34 36.3	+0.7
CN2	**Changchun**	158.67	325	*e*PKP	PKPdf	03 34 40.5	+2.3
HHC	**Hu-ho-hao-te**	166.31	350	*e*PKP	PKPdf	03 34 47.5	+1.4
NJ2	**Nanjing**	169.91	300	*e*PKP	PKPdf	03 34 50.3	+1.7
LZH	**Lanzhou**	170.41	24	*e*PKP	PKPdf	03 34 47.3	-1.7
LZH				pPKP	pPKPdf	03 34 56.0	-0.8
LZH				sPKP		03 35 00.0	

THR ***26*** *03:27:28.9, 30°.26N×56°.16E, h14^{km}, ML3.7*

ISCJB ***26*** *03:27:29.5±0.3, 30°.16N±0°.03×56°.19E±0°.04, h10^{km}, Error ellipse: s-maj=5.3km s-min=4.2km az=161.4*

TEH ***26*** *03:27:29.3, 30°.18N×56°.18E, h10^{km}, ML3.8*

DSN ***26*** *03:28:12.8±1.9, 27°.13N×56°.08E, h12^{km}, ML2.6/8, Error*

ellipse: s-maj=22.0km s-min=15.3km az=35.0

ISC 26 03:27:29.6±1.0, 30.°18N±0.°04×56.°15E±0.°05, h10^{km}, n40, σ1.s39/41, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.34	55	ePg	Pg	03 27 36.2	-0.3
KHGB				IAMB	IAmb	03 27 44.1	
	comp=Z,0.0nm,0.1s						
TVBK	TV Kerman	0.56	110	ePg	Pg	03 27 39.9	-0.7
TVBK				IAMB	IAmb	03 27 40.2	
	comp=Z,0.0nm,0.1s						
KRBR	Kerman	0.56	110	eAML	AML	03 27 52.3	
	comp=N,4µm,0.2s						
KRBR				ePg	Pb	03 27 40.7	-1.1
KRBR				eAML	AML	03 27 53.5	
	comp=E,5µm,0.2s						
NGRK	Negar Kerman	0.73	137	ePg	Pg	03 27 42.3	-1.5
NGRK				IAMB	IAmb	03 27 58.3	
	comp=Z,0.0nm,0.2s						
CHMN	Cheshme madani	1.25	105	ePg	Pb	03 27 52.3	-1.1
CHMN				IAMB	IAmb	03 28 13.3	
	comp=Z,0.0nm,0.2s						
IMEH	Mehriz	1.79	313	ePn	Pn	03 28 00.2	-0.6
IMEH				IAMB	IAmb	03 28 31.5	
	comp=Z,11µm,0.3s						
ICHK	Chekchek	2.54	324	IAMB	IAmb		
	comp=Z,0.0nm,0.0s						
ICHK				ePn	Pn	03 28 12.1	+1.0
YZKH	Yazd	2.58	329	ePn	Pn	03 28 11.5	0.0
YZKH	Yazd	2.58	329	ePn	Pn	03 28 11.5	0.0
YZKH				eSg	Sb	03 28 47.7	0.0
NIAN	Nian	2.68	167	ePn	Pn	03 28 14.7	+1.9
NIAN				IAMB	IAmb	03 28 57.8	
	comp=Z,0.0nm,0.6s						
IPAR	Pars	2.71	264	ePn	Pn	03 28 15.6	+2.0
IPAR				IAMB	IAmb	03 29 04.6	
	comp=Z,4µm,0.8s						
ISAD	Sadrabad	2.73	310	ePn	Pn	03 28 14.8	+1.0
ISAD				IAMB	IAmb	03 29 09.6	
	comp=Z,4µm,0.6s						
ISRV	Sarvestan	2.76	254	ePn	Pn	03 28 16.0	+1.8
ISRV				IAMB	IAmb	03 28 20.1	
	comp=Z,3µm,0.3s						
GENO	Geno	2.77	180	ePn	Pn	03 28 15.9	+1.7
GENO				IAMB	IAmb	03 28 17.0	
	comp=Z,0.0nm,0.2s						
TPRV	Parvadeh(Tabas	2.87	9	ePn	Pn	03 28 17.9	+2.3
TPRV				IAMB	IAmb	03 29 05.3	
	comp=Z,0.0nm,0.4s						
IKOO	Kooshah	3.31	47	ePn	Pn	03 28 23.2	+1.5
IKOO				IAMB	IAmb	03 29 29.3	
	comp=Z,3µm,0.6s						
GHIR	Ghir-Karzin	3.35	236	ePn	Pn	03 28 23.7	+1.5
GHIR	Ghir-Karzin	3.35	236	ePn	Pn	03 28 23.7	+1.5
ITEG	Tejag	3.50	39	ePn	Pn	03 28 25.5	+1.2
ITEG				IAMB	IAmb	03 29 30.6	
	comp=Z,2µm,0.7s						
TKDS	Koohdasht(Taba	3.52	13	ePn	Pn	03 28 26.7	+2.2
TKDS				IAMB	IAmb	03 29 30.9	
	comp=Z,0.0nm,0.5s						
IRAM	Ramesheh	3.62	298	ePn	Pn	03 28 27.5	+1.5
IRAM				IAMB	IAmb	03 29 32.9	
	comp=Z,598nm,0.6s						
ANAR	Anarak	3.64	326	ePn	Pn	03 28 26.8	+0.6
ANAR				IAMB	IAmb	03 29 34.3	
	comp=Z,0.0nm,0.3s						
IKAZ	Kazeroun	3.76	265	ePn	Pn	03 28 29.0	+1.0
IKAZ				IAMB	IAmb	03 29 38.9	
	comp=Z,1µm,0.8s						
TNSJ	Nastanj	3.79	6	ePn	Pn	03 28 30.0	+1.8
TNSJ				IAMB	IAmb	03 29 41.3	
	comp=Z,0.0nm,0.6s						
SHME	Shamm	4.12	180	eP	Pn	03 28 33.4	+0.8
	SNR=5.3						
SHME	Shamm	4.12	180	ePn	Pn	03 28 33.5	+0.9
IZEF	Zefreh	4.24	311	ePn	Pn	03 28 34.9	+0.4
IZEF				IAMB	IAmb	03 29 54.1	
	comp=Z,458nm,0.6s						
BANOM	Banah	4.24	178	eP	Pn	03 28 35.7	+1.3
	SNR=48						
MSFE	Esma-Masafi	4.80	180	eP	Pn	03 28 43.0	+1.0
	SNR=19						
MSFE	Esma-Masafi	4.80	180	ePn	Pn	03 28 43.7	+1.6
MDH	Madha	4.87	178	ePn	Pn	03 28 42.9	0.0
NAZ	Nazwa, Dubai	5.19	185	eP	Pn	03 28 49.0	+1.6
	SNR=13						
NAZ	Nazwa, Dubai	5.19	185	ePn	Pn	03 28 49.1	+1.7
HATD	Hatta, Dubai	5.33	180	P	Pn	03 28 50.7	+1.4
HATD	Hatta, Dubai	5.33	180	ePn	Pn	03 28 51.5	+2.1
FAQ	Al Faqa, Dubai	5.44	185	eP	Pn	03 28 52.0	+1.2
	SNR=10						
FAQ	Al Faqa, Dubai	5.44	185	ePn	Pn	03 28 52.4	+1.6
ASHO	Ashiyiah	5.48	181	eP	Pn	03 28 52.5	+1.1
	SNR=39						
ASHO	Ashiyiah	5.48	181	ePn	Pn	03 28 52.1	+0.8
ALNE	Al Ain	6.11	183	P	Pn	03 29 01.3	+1.3

IDC 26 03:40:51.5±3.0, 31.°93S×178.°15W, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.6/35, mbtmp3.6/3, ML3.0/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/26, Error ellipse: s-maj=71.2km s-min=44.9km az=121.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.41	210	Pn	Pn	03 42 40.1	-0.8
	0.2nm,0.3s,baz=9.9,slow=18,SNR=2.0						
URZ				Sn	Sn	03 44 00.9	-4.8
	0.6nm,0.3s,baz=156,slow=19,SNR=5.0						
ASAR	Alice Springs	42.92	269	P	P	03 48 52.2	-0.1
	0.6nm,0.9s,baz=102,slow=6.7,SNR=5.0						
WRA	Warramunga Arr	44.05	274	P	P	03 49 01.4	0.0
	0.4nm,0.3s,baz=114,slow=7.9,SNR=13						
GUMO	Guam	57.48	316	LR	LR	04 15 28.9	
	comp=Z,76nm,18.0s,baz=100,slow=36						
FINES	FINESS Array B	146.53	339	PKPbc	PKPdf	04 00 33.2	+0.6
	0.6nm,0.4s,baz=35,slow=4.7,SNR=8.2						

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*ISCJB **26** 03:53:30.4±1.6, 3.°7N±0.°4×122.°7E±0.°5, h604^{km}, mb3.7/4, Error ellipse: s-maj=82.7km s-min=11.6km az=146.9*

*IDC **26** 03:53:32.1±2.6, 3.°80N×122.°80E, h605^{km}±31^{km}, mb2.9/4, mb1 3.1/4, mb1mx2.6/41, mbtmp3.9/4, Error ellipse: s-maj=109.1km s-min=16.7km az=64.0*

ISC 26 03:53:31.9±1.5, 3.°8N±0.°3×122.°7E±0.°5, h604^{km}, n10, σ0.s40/12, mb3.7/4, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.92	172	P	P	03 57 42.6	-0.2
	2.8nm,1.1s,baz=346,slow=13,SNR=4.1						
WRA	Warramunga Arr	26.21	154	P	P	03 58 20.3	-0.4
	1.7nm,0.5s,baz=337,slow=9.5,SNR=40						
WRA				ScP	ScP	04 04 09.4	-0.7
	0.4nm,0.8s,baz=345,slow=3.1,SNR=3.1						
ASAR	Alice Springs	29.39	159	P	P	03 58 48.8	+0.4
	1.0nm,0.5s,baz=334,slow=7.4,SNR=16						
RAMN	Ramite	41.45	307	eP	P	04 00 28.1	0.0
	4.5nm,0.5s						
JIRN	Jiri	42.10	308	eP	P	04 00 33.1	-0.2
	8.0nm,0.4s						
GUN	Gumba	42.46	308	eP	P	04 00 35.9	-0.2
	5.6nm,0.4s						
KOLN	Koldanda	44.20	307	eP	P	04 00 49.2	-0.2
	6.9nm,0.5s						
DANN	Dangsing	44.33	308	eP	P	04 00 50.0	-0.5
	11nm,0.5s						
PYUN	Piuthan	44.83	307	eP	P	04 00 54.2	0.0
	6.9nm,0.5s						
MKAR	Makanchi Array	55.27	327	P	P	04 02 10.1	+0.4
	0.6nm,0.3s,baz=126,slow=8.5,SNR=8.2						
MKAR				PcP	PcP	04 03 00.9	-0.1
	0.2nm,0.3s,baz=118,slow=5.1,SNR=2.9						

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*IDC **26** 03:55:22.0±2.8, 52.°40N×170.°73E, h0^{km}, mb3.4/3, mb1 3.9/4, mb1mx3.3/50, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=86.5km s-min=34.2km az=174.0*

*KRSC **26** 03:55:21.6±2.3, 52.°18N×170.°55E, h84^{km}±56^{km}, ML4.1*

*MOS **26** 03:55:23.4±0.8, 52.°16N×170.°55E, h42^{km}, mb4.3/1, Error ellipse: s-maj=20.2km s-min=8.6km az=22.1*

ISC 26 03:55:29.5±4.1, 52.°2N±0.°1×170.°0E±0.°2, h35^{km}, n39, σ1.s39/53, mb3.5/3, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	2.55	77	eP	Pn	03 55 57.3	-11
SMY				eS	Sn	03 56 21.9	-16
SMY	Shemya	2.55	77	P	Pn	03 55 57.3	-11
SMY				S	Sn	03 56 21.9	-16
KBTR	Krutoberegovo	5.81	316	P	Pn	03 56 52.1	-1.0
KBTR	Krutoberegovo	5.81	316	P	Pn	03 56 52.1	-1.0
SPN	Mys Shipunski	6.14	282	eP	Pn	03 56 58.2	+0.5
SPN				eS	Sn	03 58 05.4	-1.2
SPN	Mys Shipunski	6.14	282	P	Pn	03 56 58.2	+0.5
SPN				S	Sn	03 58 05.4	-1.2
KZV	Kizimen	6.46	301	eP	Pn	03 57 02.8	+0.6
KZV				eS	Sn	03 58 13.7	-1.0
KZV	Kizimen	6.46	301	P	Pn	03 57 02.8	+0.6
KZV				S	Sn	03 58 13.7	-1.0
TUMR	Tumrok	6.61	302	eP	Pn	03 57 05.4	+1.2
TUMR	Tumrok	6.61	302	P	Pn	03 57 05.4	+1.2
SDLR	Sedlovina	6.84	283	eP	Pn	03 57 08.6	+1.2
SDLR	Sedlovina	6.84	283	P	Pn	03 57 08.6	+1.2
UGLR	Uglovaya	6.87	283	eP	Pn	03 57 09.1	+1.3
UGLR	Uglovaya	6.87	283	P	Pn	03 57 09.1	+1.3
SMAR	Somma	6.89	283	eP	Pn	03 57 09.0	+0.9
SMAR	Somma	6.89	283	P	Pn	03 57 09.0	+0.9
DALK	Dalny	6.90	281	eP	Pn	03 57 09.0	+0.9
DALK				eS	Sn	03 58 24.9	-0.4
DALK	Dalny	6.90	281	P	Pn	03 57 09.0	+0.9
DALK				S	Sn	03 58 24.9	-0.4
AVH	Avacha	6.93	283	P	Pn	03 57 10.0	+1.5
AVH				S	Sn	03 58 26.0	0.0
AVH	Avacha	6.93	283	P	Pn	03 57 10.0	+1.5
AVH				S	Sn	03 58 26.0	0.0
KRX	Arik	6.99	284	eP	Pn	03 57 10.5	+1.1
KRX	Arik	6.99	284	P	Pn	03 57 10.5	+1.1
KOK	Koryaka	6.99	283	P	Pn	03 57 10.5	+1.1
KOK	Koryaka	6.99	283	P	Pn	03 57 10.5	+1.1
RUS	Russkaya	7.05	276	P	Pn	03 57 10.7	+0.6
RUS				S	Sn	03 58 27.2	-1.8
RUS	Russkaya	7.05	276	P	Pn	03 57 10.7	+0.6
RUS				S	Sn	03 58 27.2	-1.8
MTVR	Mutnovka	7.25	277	P	Pn	03 57 14.3	+1.3
MTVR				eS	Sn	03 58 32.8	-1.3
MTVR	Mutnovka	7.25	277	P	Pn	03 57 14.3	+1.3
MTVR				S	Sn	03 58 32.8	-1.3
KRMR	Karymshinskiy	7.28	280	P	Pn	03 57 14.0	+0.8
KRMR				S	Sn	03 58 33.0	-1.5
KRMR	Karymshinskiy	7.28	280	P	Pn	03 57 14.0	+0.8
KRMR				S	Sn	03 58 33.0	-1.5
KDTR	Khodutka, Kamc	7.38	272	P	Pn	03 57 14.4	-0.2
KDTR				S	Sn	03 58 34.5	-2.5
KDTR	Khodutka, Kamc	7.38	272	P	Pn	03 57 14.4	-0.2
KDTR				S	Sn	03 58 34.5	-2.5
GNL	Ganaly	7.44	286	P	Pn	03 57 17.6	+2.0
GNL				S	Sn	03 58 42.0	+3.3
GNL	Ganaly	7.44	286	P	Pn	03 57 17.6	+2.0
GNL				S	Sn	03 58 42.0	+3.3
PETK	Petropavlovsk-	7.54	282	Pn	Pn	03 57 18.6	+1.7
	1.0nm,0.3s,baz=94,slow=17,SNR=13						
PETK				Sn	Sn	03 58 41.1	0.0
	0.5nm,0.3s,baz=94,slow=34,SNR=3.9						
ALID	Alaid	9.12	267	P	Pn	03 57 39.7	+1.1
ILAR	Eielson Array	25.21	43	P	P	04 00 44.4	-7.1
	1.2nm,0.9s,baz=245,slow=7.8,SNR=14						
YKA	Yellowknife Ar	39.62	45	P	P	04 02 51.5	-5.7
	0.2nm,0.6s,baz=290,slow=7.4,SNR=3.9						
TXAR	Lajitas Array	65.25	74	P	P	04 06 02.4	-5.2
	0.3nm,0.5s,baz=316,slow=5.6,SNR=6.2						

MEX 26 04:01:09.3±1.0, 14.°58N×92.°81W, h20^{km}±240^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.62	58	iP	Pb	04 01 20.4	-1.1
THIG				iS	Sb	04 01 27.8	-2.0
CMIG	Matias Romero	3.20	322	eP	Pn	04 01 58.3	-0.2

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*IDC **26** 04:04:28.4±1.1, 21.°37S×67.°18W, h174^{km}±15^{km}, mb3.5/3, mb1 3.5/6, mb1mx3.2/35, mbtmp3.8/6, Error ellipse: s-maj=35.6km s-min=16.7km az=122.0*

*GUC **26** 04:04:30.3±0.6, 21.°27S×67.°94W, h217^{km}±5^{km}, ML3.5*

ISC 26 04:04:29.5±1.1, 21.°27S±0.°06×67.°5W±0.°1, h189^{km}±12^{km}, n20, σ1.s09/34, mb3.8/3, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.72	252⇓	eP	Pn	04 05 05.4	+1.0
PB09				eS	Sn	04 05 32.2	+0.7
PB09				IAML		04 05 35.3	
	comp=N,112nm,0.3s						
PB01	IPOC Station P	1.88	276	eP	Pn	04 05 06.5	+0.5
PB01				iS	Sn	04 05 34.0	-0.3
PB01				IAML		04 05 36.5	
	comp=E,162nm,0.2s						
LVC	Limon Verde	1.88	224	P	Pn	04 05 06.9	+0.6
	comp=E,1.5nm,0.3s,baz=48,slow=9.7,SNR=32						
LVC				S	Sn	04 05 34.4	-0.5
	comp=E,10nm,0.3s,baz=328,slow=19,SNR=45						
PB08	IPOC Station P	1.92	305⇑	eP	Pn	04 05 08.1	+1.4
PB08				iS	Sn	04 05 36.7	+1.0
PB08				IAML		04 05 37.4	
	comp=N,141nm,0.4s						
PB02	IPOC Station P	2.25	268	eP	Pn	04 05 10.5	+0.6
PB02				eS	Sn	04 05 40.5	-0.9
PB02				IAML		04 05 42.4	
	comp=E,338nm,0.2s						
PB03	IPOC Station P	2.25	249	eP	Pn	04 05 10.3	+0.3
PB03				eS	Sn	04 05 40.5	-1.0
PB03				IAML		04 05 41.6	
	comp=N,334nm,0.1s						
PB07	IPOC Station P	2.28	258	eP	Pn	04 05 10.7	+0.2
PB07				eS	Sn	04 05 41.0	-1.2
PB07				IAML		04 05 41.9	
	comp=N,334nm,0.2s						
PB06	IPOC Station P	2.41	233	eP	Pn	04 05 12.4	+0.6
PB06				iS	Sn	04 05 44.6	-0.2
PB06				IAML		04 05 45.6	
	comp=E,187nm,0.4s						
PB11	IPOC Station P	2.52	306⇑	eP	Pn	04 05 13.6	+0.5
PB11				eS	Sn	04 05 46.5	-0.6
PB11				IAML		04 05 48.9	
	comp=E,379nm,0.2s						
PB15	IPOC Station P	2.67	223	eP	Pn	04 05 15.7	+0.8
PB15				eS	Sn	04 05 50.6	+0.3
PB04	IPOC Station P	2.69	246	eP	Pn	04 05 15.4	+0.3
PB04				eS	Sn	04 05 49.0	-1.6
PB04				IAML		04 05 51.9	
	comp=N,194nm,0.2s						
MNMC	Minye Minye	2.90	317⇑	eP	Pn	04 05 18.8	+1.1
MNMC				eS	Sn	04 05 55.5	+0.2
PB05	IPOC Station P	2.97	237	eP	Pn	04 05 18.6	+0.3
PB05				eS	Sn	04 05 54.6	-1.9
PB05				IAML		04 05 55.1	
	comp=N,82nm,0.2s						
PSGC	Pisagua	2.98	303	eP	Pn	04 05 18.5	+0.1
PSGC				eS	Sn	04 05 54.9	-1.6
PSGC				IAML		04 05 58.3	
	comp=N,105nm,0.5s						
LPAZ	La Paz	4.99	353	P	Pn	04 05 45.4	+1.2
	comp=N,1.7nm,0.3s,baz=156,slow=5.7,SNR=40						
SIV	San Ignacio	8.03	50	P	Pn	04 06 20.0	-3.3
	comp=N,1.9nm,0.3s,baz=242,slow=11,SNR=34						
SIV				S	Sn	04 07 45.0	-8.7
	comp=N,0.3nm,0.3s,baz=164,slow=20,SNR=4.0						
PTGA	Pitinga	21.69	21	P	P	04 09 05.2	-0.4
	comp=N,2.4nm,0.3s,baz=247,slow=18,SNR=14						
TORD	Torodi Ar. Bea	76.03	70	P	P	04 15 55.7	-0.8
	comp=N,0.7nm,0.4s,baz=253,slow=5.3,SNR=19						
YKA	Yellowknife Ar	91.41	340	P	P	04 17 14.8	+1.3
	comp=N,0.2nm,0.5s,baz=130,slow=4.6,SNR=6.1						
MKAR	Makanchi Array	144.66	37	PKP	PKPdf	04 23 44.2	+0.6
	comp=N,0.4nm,0.4s,baz=318,slow=3.3,SNR=7.0						

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*DDA **26** 04:04:54.4, 40.°77N×30.°26E, h7^{km}±2^{km}, ML2.5*

*ISK **26** 04:04:54.2, 40.°77N×30.°26E, h6^{km}, ML2.4/11*

ISC 26 04:04:54.6±0.9, 40.°76N±0.°03×30.°25E±0.°02, h14^{km}±7^{km}, n26, σ0.s79/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUV	Serdivan-Sakar	0.06	110	PG	Pg	04 04 56.6	-0.7
SPNC	Sapanca-Adapaz	0.09	151	PG	Pg	04 04 57.1	-0.5
GEYV	SAKARYA_Geyve	0.28	173	iP	Pb	04 05 00.7	-0.6
GEYV				iS	Sb	04 05 05.2	-0.6
GEYV				IAML_P			
	comp=Z,2µm,0.1s						
KAND	Kocaeli-Kandir	0.34	352	iP	Pb	04 05 02.7	+0.4
KAND				iS	Sb	04 05 07.0	-0.5
KAND				IAML_P			
	comp=Z,574nm,0.1s						
GULT	Gulveren	0.38	149	PG	Pg	04 05 02.4	+0.1
GULT				SG	Sg	04 05 07.9	+0.3
SAHE	Sakarya_HENDEK	0.47	78	iP	Pb	04 05 04.2	-0.3
SAHE				iS	Sb	04 05 10.4	-0.8
SAHE				IAML_P			
	comp=Z,490nm,0.1s						
BTAS	Taskesti	0.60	108	iP	Pb	04 05 06.3	-0.5
BTAS				iS	Sb	04 05 15.1	-0.1
BTAS				IAML_P			
	comp=Z,853nm,0.1s						
SILT	Sile	0.61	311	PG	Pb	04 05 06.6	-0.3
SILT				SG	Sb	04 05 15.2	-0.1
CAVI	Cavuskoy	0.64	209	PG	Pg	04 05 06.9	-0.2
YLV	Yalova	0.70	254	PG	Pb	04 05 08.4	-0.1
YLV				SG	Sb	04 05 18.6	+0.6
MDUB	Mudurnu	0.78	112	PG	Pb	04 05 09.5	-0.3
BUY	Buyukada	0.87	276	iP	Pb	04 05 11.3	0.0
BUY				iS	Sn	04 05 23.9	-0.8
BUY				IAML_P			
	comp=Z,560nm,0.1s						
BORA	Eskisehir	0.89	170	iP	Pn	04 05 12.7	0.0
BORA				iS	Sn	04 05 25.2	-0.3
BORA				IAML_P			
	comp=Z,1µm,0.1s						
KAVV	Kandilli-Istan	0.95	289	PG	Pn	04 05 12.9	-0.6
ISK	Istanbul-Kandi	0.95	289	PG	Pg	04 05 12.9	-0.1
KLYT	Kilyos	1.04	299	PG	Pb	04 05 13.8	-0.5
SBT5	Esenkoy-Cinarc	1.05	263	PG	Pg	04 05 15.3	+0.5
ARMT	Armutlu	1.08	260	PG	Pn	04 05 14.9	-0.3
MDNY	Mudanya-Bursa	1.11	250	PN	Pb	04 05 15.2	-0.3
KIBS	BOLU	1.27	105	iP	Pg	04 05 19.4	+0.5
KIBS				iS	Sg	04 05 38.7	+3.3
KIBS				IAML_P			
	comp=Z,313nm,0.2s						
BCAM	Yenicaga	1.38	87	iP	Pg	04 05 20.5	-0.5
BCAM				IAML_P			
	comp=Z,156nm,0.1s						
CTKS	Kestanelik-??a	1.41	290	PN	Pb	04 05 20.4	-0.1
TVSB	Tavsanli	1.44	205	PN	Pg	04 05 21.9	-0.4
KCTX	Karacabey (Bur	1.53	252	PN	Pg	04 05 23.3	-0.6
SLVT	Silivri	1.62	288	PN	Pb	04 05 24.2	+0.1
GDZ	Gediz	1.77	200	iP	Pg	04 05 28.7	+0.1
GDZ				iS	Sg	04 05 53.4	+1.8

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*IDC **26** 04:16:51.9±0.8, 3.°42N×126.°79E, h0^{km}, mb4.1/10, mb1 4.2/10, mb1mx3.9/38, mbtmp4.1/10, Error ellipse: s-maj=49.1km s-min=14.5km az=72.0*

*ISCJB **26** 04:16:56.8±0.4, 3.°40N±0.°05×126.°80E±0.°06, h53^{km}, mb4.2/20, Error ellipse: s-maj=10.7km s-min=5.1km az=145.3*

*NEIC **26** 04:16:56.9±0.3, 3.°35N×126.°71E, h35^{km}, mb4.4/12, Error ellipse: s-maj=13.4km s-min=6.3km az=65.0*

*DJA **26** 04:16:58.1±0.9, 4°N±4°×12°7E±°, h10^{km}, M4.3/3, MLv4.3/3*

ISC 26 04:16:58.9±0.6, 3.°26N±0.°07×126.°68E±0.°09, h53^{km}, n36, σ1.s79/44, mb4.2/20, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.23	290	P	Pn	04 17 19.9	+0.1
SGSI				S	Sn	04 17 36.0	+0.6
DDMP	Don Marcelino,	2.99	341	eP	Pn	04 17 42.7	-1.1
DDMP				eS	Sn	04 18 21.5	+3.0
SKMP	Bagumbayan, Su	3.88	327	eP	Pn	04 17 55.2	-0.9
SKMP				eS	Sn	04 18 37.4	-3.0
KCP	Kidapawan	4.05	337⇓	iP	Pn	04 18 01.3	+2.9
KCP				iS	Sn	04 18 51.6	+6.9
BUKP	Musuan	4.87	341	eP	Pn	04 18 09.4	-0.2
BUKP				eS	Sn	04 18 48.5	-16
PAGZ	Pagadian	5.62	324	eP	Pn	04 18 19.9	-0.1
SSLB	Suanglung	21.15	345	eP	P	04 21 36.1	-3.5
	24nm,1.2s						
FITZ	Fitzroy Crossi	21.25	183	eP	P	04 21 43.0	+2.3
	9.4nm,1.3s						
FITZ	Fitzroy Crossi	21.25	183	P	P	04 21 43.0	+2.3
	4.3nm,1.0s,baz=12,slow=11,SNR=2.7						
MANU	Manus Island	21.33	104	eP	P	04 21 41.4	-0.4
	20nm,0.8s						
YHNB	Yeheng	21.89	347	eP	P	04 21 45.4	-2.3
	24nm,1.2s						
MYKOM	Kota Tinggi	22.86	267	eP	P	04 21 57.3	-0.8
	30nm,1.5s						
WRAB	Tennant Creek	24.25	162	eP	P	04 22 10.7	-0.4
	9.3nm,1.0s						
WR1	Warramunga Arr	24.25	162	eP	P	04 22 11.5	+0.4
	5.5nm,0.6s						
WRA	Warramunga Arr	24.25	162	P	P	04 22 11.5	+0.4
	3.5nm,0.7s,baz=338,slow=11,SNR=23						
WB2	Warramunga Arr	24.26	162	eP	P	04 22 11.4	+0.2
ASAR	Alice Springs	27.67	166	P	P	04 22 42.5	+0.4
	0.5nm,0.4s,baz=345,slow=6.9,SNR=9.6						
AS01	Alice Springs	27.68	166	eP	P	04 22 41.6	-0.5
CTAO	Charters Tower	30.13	141	eP	P	04 23 03.2	-0.7
	6.8nm,1.1s						
CM31	Chiang Mai Arr	31.07	301	eP	P	04 23 12.6	+0.4
	5.5nm,0.4s						
CMAR	Chiang Mai Arr	31.07	301	P	P	04 23 12.6	+0.3
	1.1nm,0.3s,baz=110,slow=7.8,SNR=3.1						
STKA	Stephens Creek	37.71	159	eP	P	04 24 10.1	+0.6
	0.7nm,0.8s						
STKA	Stephens Creek	37.71	159	P	P	04 24 10.1	+0.6
	2.2nm,0.6s,baz=348,slow=11,SNR=4.4						
KLR	Kul'dur	46.01	5	P	P	04 25 16.6	-0.4
	1.0nm,0.8s,baz=180,slow=2.0,SNR=2.7						
SONA0	Songino Array	47.73	342	eP	P	04 25 29.7	-0.9
SONA0				ePcP	PcP	04 26 57.8	-1.4
SONM	Songino Array	47.73	342	P	P	04 25 29.7	-0.9
	0.7nm,0.6s,baz=155,slow=8.2,SNR=6.1						
SONM				PcP	PcP	04 26 57.8	-1.4
	0.4nm,0.7s,baz=148,slow=3.2,SNR=3.2						
MK01	Makanchi Array	57.90	325	eP	P	04 26 45.9	+0.4
MK31	Makanchi Array	57.91	325	eP	P	04 26 46.3	+0.6
	1.2nm,0.6s						
MK32	Makanchi Array	57.91	325	eP	P	04 26 44.6	-1.1
MK32				ePcP	PcP	04 27 38.6	+1.1
MKAR	Makanchi Array	57.91	325	P	P	04 26 44.6	-1.1
	1.8nm,0.5s,baz=122,slow=7.2,SNR=25						
MKAR				PcP	PcP	04 27 38.6	+1.1
	0.5nm,0.5s,baz=136,slow=4.1,SNR=3.7						
ZALV	Zalesovo Beam	60.98	333	P	P	04 27 05.0	-1.7
	0.6nm,0.5s,baz=129,slow=7.8,SNR=2.9						
ZAA1	Zalesovo Array	60.99	333	eP	P	04 27 05.0	-1.7
KURK	Kurchatov	62.11	328	eP	P	04 27 14.8	+0.5
	5.0nm,0.7s						
ABKAR	Akbulak array	72.48	321	eP	P	04 28 19.8	-0.2
ARA0	ARCESS Array S	90.87	340	eP	P	04 29 58.1	+1.7
ARCES	ARCESS Array B	90.87	340	P	P	04 29 58.1	+1.7
	8.1nm,1.1s,baz=84,slow=4.6,SNR=3.0						

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*ISCJB **26** 04:32:38.5±0.7, 12.°8N±0.°1×93.°20E±0.°07, h58^{km}, mb3.7/14, MS3.1/2, Error ellipse: s-maj=15.5km s-min=9.5km az=3.4*

*IDC **26** 04:32:40.3±1.0, 12.°91N×93.°27E, h55^{km}±8^{km}, mb3.5/13, mb1 3.7/14, mb1mx3.5/49, mbtmp3.7/14, MS2.7/4, Ms1 2.8/4, ms1mx2.5/51, Error ellipse: s-maj=32.6km s-min=14.5km az=57.0*

ISC 26 04:32:40.8±0.7, 12.°95N±0.°10×93.°25E±0.°10, h58^{km}, n24, σ1.s21/28, mb3.7/14, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHET	Kaeng Krachan	6.22	90	P	Pn	04 34 11.4	+1.4
UMPA	Umpang Tak	6.32	59	P	Pn	04 34 11.4	0.0
UTHA	Uthaitani	6.54	66	P	Pn	04 34 15.5	+1.1
SUKH	Sukhothai	7.63	53	P	Pn	04 34 31.7	+2.4
CMAR	Chiang Mai Arr	7.75	44	P	Pn	04 34 30.1	-0.8
	1.0nm,0.3s,baz=235,slow=17,SNR=12						
CMAR				S	Sn	04 35 54.9	-2.4
	0.9nm,0.3s,baz=235,slow=31,SNR=3.1						

CMAR				LR	LR	04 38 28.3	
	comp=Z,6.8nm,18.7s,baz=210,slow=45						
LAMP	Lampang	8.27	47	P	Pn	04 34 40.9	+2.8
	9.1nm,0.6s,0.0nm						
PBKT	Sadao Pong	8.29	63	P	Pn	04 34 41.2	+2.9
PALK	Pallekele	13.58	247	LR	LR	04 40 24.4	
	comp=Z,54nm,20.0s,baz=115,slow=34						
MKAR	Makanchi Array	34.97	347	P	P	04 39 27.6	+0.3
	0.3nm,0.5s,baz=169,slow=8.1,SNR=4.2						
SONM	Songino Array	36.47	15	P	P	04 39 40.8	+0.5
	0.3nm,0.6s,baz=188,slow=9.7,SNR=2.9						
SONM				PcP	PcP	04 42 04.0	+0.8
	0.3nm,0.7s,baz=185,slow=4.5,SNR=2.6						
KSRS	Korea Array	39.38	46	LR	LR	04 57 28.4	
	comp=Z,16nm,18.4s,baz=40,slow=38						
KURBB	Kurchatov Arra	39.44	345	P	P	04 40 05.1	0.0
	0.1nm,0.3s,baz=157,slow=8.2,SNR=4.5						
KURBB				pP	pP	04 40 19.1	-0.7
	0.2nm,0.4s,baz=167,slow=7.8,SNR=3.2						
ZALV	Zalesovo Beam	41.44	352	P	P	04 40 21.7	+0.2
	0.7nm,0.3s,baz=168,slow=7.4,SNR=3.7						
AKTO	Aktyubinsk	47.12	330	P	P	04 41 07.3	+0.3
	0.6nm,0.5s,baz=139,slow=9.3,SNR=4.3						
WRA	Warramunga Arr	52.00	128	P	P	04 41 43.7	-0.9
	0.7nm,1.1s,baz=309,slow=8.5,SNR=10						
WRA				pP	pP	04 41 59.5	+0.2
	0.2nm,0.6s,baz=302,slow=9.5,SNR=1.9						
WRA				PcP	PcP	04 42 55.9	-0.5
	1.0nm,1.2s,baz=311,slow=3.5,SNR=4.8						
ASAR	Alice Springs	53.90	132	P	P	04 41 57.6	-1.0
	0.2nm,0.3s,baz=306,slow=6.7,SNR=4.7						
ASAR				pP	pP	04 42 12.5	-0.9
	0.2nm,0.4s,baz=316,slow=7.4,SNR=1.6						
FINES	FINESS Array B	67.85	331	P	P	04 43 32.4	-0.2
	1.4nm,0.7s,baz=88,slow=7.9,SNR=6.5						
ARCES	ARCESS Array B	70.22	340	P	P	04 43 47.5	+0.2
	3.2nm,1.0s,baz=129,slow=1.7,SNR=3.9						
GERES	GERESS Array B	73.50	317	P	P	04 44 08.0	+0.5
	0.6nm,0.6s,baz=87,slow=6.3,SNR=3.4						
NOA	NORSAR Array B	74.91	330	P	P	04 44 14.8	-0.6
	0.3nm,0.5s,baz=91,slow=5.6,SNR=2.2						
NOA				LR	LR	05 19 45.7	
	comp=Z,12nm,18.6s,baz=0.0,slow=38						
ESDC	Sonseca Array	87.30	310	P	P	04 45 21.7	+0.1
	0.1nm,0.4s,baz=79,slow=5.4,SNR=3.4						
ILAR	Eielson Array	90.39	22	P	P	04 45 35.1	-0.5
	0.4nm,0.7s,baz=296,slow=4.1,SNR=5.9						
INK	Inuvik	92.38	16	P	P	04 45 44.4	-0.3
	0.4nm,0.5s,baz=318,slow=2.6,SNR=5.8						
TXAR	Lajitas Array	134.90	21	PKP	PKiKP	04 51 55.4	-0.1
	0.2nm,0.7s,baz=82,slow=1.6,SNR=3.8						

ISCJB ***26*** *04:33:03.0±0.3, 51°.52N±0°.01×16°.13E±0°.03, h0^{km}, mb3.4/2, Error ellipse: s-maj=2.7km s-min=2.1km az=163.9*

IPEC ***26*** *04:33:05.1±0.2, 51°.53N×16°.17E, h0^{km}, ML2.6/4, Error ellipse: s-maj=1.8km s-min=1.4km az=41.0*

IDC ***26*** *04:33:06.2±0.6, 51°.52N×15°.92E, h0^{km}, mb3.3/2, mb1 3.5/10, mb1mx3.3/49, mbtmp3.3/10, ML3.0/8, Error ellipse: s-maj=14.0km s-min=7.7km az=103.0*

LDG ***26*** *04:33:08.2±0.2, 51°.27N×15°.89E, h1^{km}, Ml3.4/3, Error ellipse: s-maj=5.0km s-min=2.6km az=23.0, Suspected Mining induced.*

VIE ***26*** *04:33:09.7±0.8, 51°.14N×16°.18E, h0^{km}, mb2.6/8, ml2.9/10, Error ellipse: s-maj=7.6km s-min=5.1km az=56.0, Suspected Mining induced.*

UPP ***26*** *04:33:10.1±2.7, 51°.79N×15°.49E, h0^{km}, ML1.8, Suspected explosion*

ISC 26 04:33:04.0±0.6**, 51°.57N**±0°.03×**16°.17E**±0°.02**, h0**^{km}**, n65, σ2^{s}23**/121**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.73	174	*i* Pg	Pg	04 33 18.6	+0.6
KSP				*e*Sg	Sg	04 33 27.1	-0.3
UPC	Upice	1.07	185	*e*PG	Pg	04 33 24.7	+0.3
UPC				*e*SG	Sg	04 33 37.7	-0.5
DPC	Dobruska-Polom	1.22	175	*e*PG	Pg	04 33 27.4	0.0
DPC				*e*SG	Sg	04 33 41.9	-1.4
	comp=Z,110nm,0.6s						
PVCC	Panska Ves	1.45	225	*e*PG	Pn	04 33 31.8	+0.3
PVCC				*e*SG	Sg	04 33 50.5	-0.1
	comp=Z,340nm,0.3s						
KRLC	Kraliky	1.54	165	*e*PG	Pn	04 33 33.2	+0.4
KRLC				*e*SG	Sg	04 33 51.6	-2.0
	comp=Z,30nm,0.6s						
BRG	Berggiesshubel	1.56	244	PN	Pn	04 33 32.9	-0.1
BRG				PG	Pg	04 33 34.6	+0.6
BRG				SG	Sn	04 33 54.3	+0.4
	200nm,0.4s						
PRU	Pruhonice	1.89	214	*e*PN	Pn	04 33 37.4	-0.1
PRU				*e*PG	Pb	04 33 39.0	-0.3
PRU				*e*SG	Sb	04 34 03.7	+0.2
	comp=Z,85nm,0.6s						
MORC	Moravsky Berou	2.00	153	*e*PN	Pn	04 33 39.3	+0.3
MORC				*e*SG	Sb	04 34 06.7	+0.1
MORC	Moravsky Berou	2.00	153	*e*Pn	Pn	04 33 39.3	+0.3
	baz=334						
MORC				*e*Sg	Sb	04 34 06.7	+0.1
	34nm,0.4s,baz=334						
CLL	Collm	2.00	264	*e*Pn	Pn	04 33 39.0	0.0
CLL				*e*Pg	Pb	04 33 42.0	+0.8
CLL				*i*		04 33 46.5	
CLL				*e*		04 33 57.0	
CLL				*e*Sg	Sg	04 34 08.0	-0.2
	comp=Z,62nm,0.5s						
OKC	Ostrava-Krasne	2.14	143	*e*PN	Pn	04 33 41.3	+0.3
OKC				*e*PG	Pb	04 33 44.8	+1.1
OKC				*e*SG	Sb	04 34 11.0	+0.3
	comp=Z,41nm,0.4s						
CHZP	Chorzow	2.20	124	*e*Pg	Pg	04 33 48.1	+2.0
CHZP				*e*Sg	Sg	04 34 16.9	+2.4
VRAC	Vranov	2.28	173	*e*PN	Pn	04 33 43.5	+0.6
VRAC				*e*SG	Sb	04 34 15.2	+0.5
VRAC	Vranov	2.28	173	*e*Pn	Pn	04 33 43.5	+0.6
	baz=353						
VRAC				*e*Sg	Sb	04 34 15.2	+0.5
	comp=Z,38nm,0.4s,baz=353						
VRAC	Vranov	2.28	173	Pn	Pn	04 33 43.6	+0.6
	comp=Z,5.2nm,0.3s,baz=346,slow=14,SNR=16						
VRAC				Lg	Lg	04 34 13.0	
	comp=Z,5.6nm,0.3s,baz=21,slow=23,SNR=5.3						
TREC	Trest	2.32	191	*e*PN	Pn	04 33 44.3	+0.9
TREC				*e*PG	Pb	04 33 47.6	+0.9
TREC				*e*SG	Sb	04 34 16.3	+0.5
	comp=Z,38nm,0.4s						
KRUC	Moravsky	2.51	177	*e*PN	Pn	04 33 46.9	+0.8
KRUC				*e*PG	Pb	04 33 50.4	+0.4
KRUC				*e*SG	Sb	04 34 22.9	+1.4
KRUC	Moravsky	2.51	177	*e*Pn	Pn	04 33 46.9	+0.8
	baz=357						
KRUC	Moravsky	2.51	177	*e*Pg	Pb	04 33 50.4	+0.4
	baz=357						
KRUC				*e*Sg	Sb	04 34 22.8	+1.3
	comp=Z,22nm,0.3s,baz=357						
OJC	Ojcow	2.67	119	*e*Pg	Pg	04 33 56.0	+0.9
OJC				*e*Sg	Sg	04 34 31.1	+1.5
NKC	Novy Kostel	2.71	242	*e*PG	Pg	04 33 55.4	-0.5
NKC				*e*SG	Sg	04 34 29.6	-1.4
	comp=Z,220nm,1.2s						
JAVC	Velka Javorina	2.88	160	*e*PN	Pn	04 33 51.9	+0.7
JAVC				*e*SG	Sb	04 34 34.3	+2.2
JAVC	Velka Javorina	2.88	160	*e*Pn	Pn	04 33 51.9	+0.7
	baz=341						
JAVC				*e*Sg	Sb	04 34 34.2	+2.2
	comp=Z,31nm,0.6s,baz=341						
KHC	Kasperske Hory	2.95	215	*e*PN	Pn	04 33 52.3	+0.1
KHC				*e*PG	Pb	04 33 58.7	+1.2
KHC				*e*SN	Sn	04 34 26.6	-1.7
KHC				*e*SG	Sb	04 34 35.7	+1.6
	comp=Z,28nm,0.3s						
GERES	GERESS Array B	3.15	211	Pn	Pn	04 33 55.4	+0.4
	comp=Z,1.9nm,0.3s,baz=27,slow=12,SNR=32						
GERES				Pg	Pb	04 34 02.1	+1.1
	comp=Z,5.1nm,0.3s,baz=29,slow=20,SNR=35						
GERES				Sn	Sn	04 34 28.2	-5.1
	comp=Z,3.7nm,0.3s,baz=32,slow=24,SNR=6.3						
GERES				Lg	Lg	04 34 41.0	
	comp=Z,3.7nm,0.3s,baz=32,slow=28,SNR=4.8						
SMOL	Smolenice	3.16	165	*e*PN	Pn	04 33 53.9	-1.2
SMOL				*e*PG	Pg	04 34 05.1	+0.5
SMOL				*e*SG	Sg	04 34 44.7	-0.9
LANS	Liptovska Anna	3.21	138	*e*PN	Pn	04 33 57.0	+1.2
LANS				*e*PG	Pg	04 34 08.7	+3.1
LANS				*e*		04 34 46.5	
MODS	Modra-Piesok	3.28	167	*e*PN	Pn	04 33 57.9	+1.3
MODS				*e*PG	Pg	04 34 06.8	0.0
MODS				*e*SG	Sg	04 34 49.6	+0.4
MODS				*e*LG	Lg	04 34 52.4	
NIE	Niedzica	3.41	128	*e*P	Pg	04 34 09.7	+0.4
NIE				*e*S	Sg	04 34 55.1	+1.7
ZST	Bratislava	3.43	169	*e*PN	Pn	04 33 59.1	+0.4
ZST				*e*SG	Sb	04 34 49.5	+1.7
VYHS	Vyhne	3.53	150	*e*PN	Pn	04 34 00.2	+0.2
VYHS				*e*PG	Pg	04 34 11.4	-0.2
VYHS				*e*		04 34 56.9	
BSD	Bornholm Skovb	3.63	349	*i* P	Pn	04 34 02.4	+1.0
BSD				*i* S	Sn	04 34 43.8	-1.1
CONA	Conrad Observa	3.65	183	*i* Pn	Pn	04 34 02.5	+0.7
	comp=Z,1.3nm,0.3s						
CONA				*e*Sg	Sb	04 34 55.4	+1.2
	comp=Z,20nm,0.3s						
MOA	Molln	3.92	199	*i* Pn	Pn	04 34 06.2	+0.7
	comp=Z,1.3nm,0.2s						
MOA				Sg	Sg	04 35 08.3	-1.7
	comp=Z,26nm,0.5s						
ARSA	Arzberg	4.34	186	*i* Pn	Pn	04 34 12.0	+0.7
	comp=Z,1.5nm,0.3s						
ARSA				Sg	Sb	04 35 17.4	+3.3
	comp=Z,29nm,0.7s						
LUNU	Lund	4.38	339	P	Pn	04 34 12.1	+0.3
BLEU	Blekinge	4.75	358	P	Pn	04 34 18.6	+1.8
DEL	Delary	5.09	345	P	Pn	04 34 22.4	+0.8
DEL				S	Sn	04 35 16.9	-4.1
OBKA	Obir	5.17	192	*e*Pn	Pn	04 34 23.8	+1.1
	comp=Z,0.4nm,0.2s						
OBKA				Sg	Sg	04 35 45.9	-4.2
	comp=Z,6.8nm,0.5s						
WTTA	Wattenberg	5.22	216	*i* Pn	Pn	04 34 25.2	+1.7
	comp=Z,1.1nm,0.2s						
MOTA	Moosalm	5.36	220	*i* Pn	Pn	04 34 26.5	+1.1
MOTA				Sg	Sg	04 35 55.3	-0.9
	comp=Z,4.9nm,0.5s						
RETA	Reutte	5.39	223	*i* Pn	Pn	04 34 25.9	+0.2
	comp=Z,0.7nm,0.2s						
VXJU	Vaexsjoe	5.41	353	P	Pn	04 34 27.4	+1.5
SQTA	Sankt Quirin	5.42	219	*i* Pn	Pn	04 34 28.1	+1.9
	comp=Z,2.8nm,0.2s						
OSKU	Oskarshamn	5.64	360	P	Pn	04 34 30.9	+1.9
BYXU	Byxelkrok	5.75	5	P	Pn	04 34 32.6	+2.0
BYXU				S	Sn	04 35 36.1	-1.1
FABU	Falkenberg	5.81	341	P	Pn	04 34 32.0	+0.7
FABU				S	Sn	04 35 34.4	-4.1
GNOU	Gnosjoe	5.90	347	P	Pn	04 34 33.7	+1.1
GNOU				S	Sn	04 35 37.8	-3.2
VSTU	Vaestervik	6.11	2	P	Pn	04 34 37.5	+2.1
DAVOX	Davos/Dischmat	6.32	223	Pn	Pn	04 34 39.2	+0.7
	comp=Z,0.4nm,0.3s,baz=24,slow=12,SNR=5.2						
DAVOX				Sn	Sn	04 35 48.7	-2.8
	comp=Z,0.4nm,0.3s,baz=335,slow=19,SNR=2.4						
DAVOX				Lg	Lg	04 36 22.8	
	comp=Z,0.6nm,0.3s,baz=180,slow=19,SNR=3.1						
CDF	Champ du Feu	6.54	245	*e*Pn	Pn	04 34 40.8	-0.8
CDF				*e*Sg	Sb	04 36 23.8	+6.3
	comp=Z,16nm,0.7s						
LNKU	Linkoeping	6.68	357	P	Pn	04 34 44.8	+1.5
LNKU				S	Sn	04 35 56.6	-3.5
VIKU	Vikbolandet	6.96	2	P	Pn	04 34 48.9	+1.8
HINF	Hinteralfeld	7.11	242	*e*P	Pn	04 34 53.1	+3.8
HINF				*e*Sg	Sb	04 36 41.8	+8.1
	comp=Z,9.4nm,0.6s						
HAU	Haudompre	7.29	245	*e*Sg	Sb	04 36 47.4	+8.7
	comp=Z,3.9nm,0.4s						
PAGF	Fort de Pagny	7.37	250	*e*Sg	Sb	04 36 50.5	+10
AKASG	Malin Array Be	8.26	91	Pn	Pn	04 35 06.2	+1.2
	comp=Z,1.3nm,0.3s,baz=279,slow=12,SNR=10						
AKASG				Lg	Lg	04 37 32.8	
	baz=283,slow=26,SNR=2.8						
HFS	Hagfors	8.70	352	Pn	Pn	04 35 11.9	+1.0
	comp=Z,0.2nm,0.3s,baz=167,slow=14,SNR=6.8						
HFS				Sn	Sn	04 36 45.9	-3.7
	comp=Z,0.1nm,0.3s,baz=161,slow=24,SNR=2.6						
MBDF	Montbardon	9.28	226	*e*P	Pn	04 35 21.7	+2.5
NOA	NORSAR Array B	9.88	346	Pn	Pn	04 35 26.1	-1.1
	comp=Z,0.0nm,0.3s,baz=174,slow=12,SNR=4.4						
NOA				Sn	Sn	04 37 11.4	-7.4
	comp=Z,0.0nm,0.3s,baz=158,slow=17,SNR=2.1						
FINES	FINESS Array B	11.29	25	Pn	Pn	04 35 45.8	-0.7
	comp=Z,0.2nm,0.3s,baz=208,slow=11,SNR=7.9						
FINES				Sn	Sn	04 37 45.8	-7.5
	comp=Z,0.1nm,0.3s,baz=201,slow=19,SNR=3.7						
EKA	Eskdalemuir Ar	12.11	296	Pn	Pn	04 35 55.1	-2.6
	baz=99,slow=14,SNR=4.0						
ARCES	ARCESS Array B	18.56	10	Pn	P	04 37 19.9	-2.1
	comp=Z,0.3nm,0.3s,baz=203,slow=11,SNR=9.6						
YKA	Yellowknife Ar	59.82	336	P	P	04 43 12.0	+1.5
	comp=Z,0.2nm,0.6s,baz=26,slow=6.9,SNR=4.0						
PDAR	Pinedale Array	74.92	322	P	P	04 44 49.1	+2.3
	comp=Z,0.2nm,0.6s,baz=61,slow=6.4,SNR=2.7						

ISCJB ***26*** *04:51:52.1±0.4, 43°.89N±0°.06×144°.22E±0°.07, h190^{km}±3^{km}, mb3.6/12, Error ellipse: s-maj=10.4km s-min=7.9km az=17.0*

IDC ***26*** *04:51:53.3±1.1, 43°.93N×144°.22E, h184^{km}±6^{km}, mb3.3/12, mb1 3.4/13, mb1mx3.2/53, mbtmp3.8/13, Error ellipse: s-maj=20.4km s-min=15.0km az=147.0*

JMA ***26*** *04:51:53.7±0.2, 43°.91N×144°.17E, h183^{km}±2^{km}, M2.8*

ISC 26 04:51:53.2±0.7**, 43°.89N**±0°.07×**144°.21E**±0°.06**, h186**^{km}±6^{km}**, n35, σ0^{s}67**/41**, mb3.4**/12**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTKR	Abashiri--Toko	0.24	291	P	Pn	04 52 18.1	+0.2
JTKR				*e*S	Sn	04 52 36.4	-0.5
JNK	Nakash	0.47	129	P	Pn	04 52 19.2	+0.6
JNK				*e*S	Sn	04 52 38.9	+0.8
JMP	Maruseppu	0.63	281	P	Pn	04 52 19.3	0.0
JMP				*e*S	Sn	04 52 38.6	-0.8
JRA	Rausu	0.66	85	P	Pn	04 52 20.1	+0.7
JAR	Ashorobuto	0.67	209	P	Pn	04 52 20.2	+0.7
JAR				*e*S	Sn	04 52 40.1	+0.3
JAK	Akkeshi	0.96	158	P	Pn	04 52 21.3	+0.1
JAK				*e*S	Sn	04 52 42.7	-0.1
JOB	Onbets	1.02	196	P	Pn	04 52 22.4	+0.7
JOB				*e*S	Sn	04 52 43.9	+0.2
JKHN	Kushirohamanak	1.06	139	P	Pn	04 52 22.1	+0.2
JKHN				*e*S	Sn	04 52 43.8	-0.3
JKK2	Kamakawa 2	1.06	270	P	Pn	04 52 22.2	+0.2
JKK2				*e*S	Sn	04 52 43.8	-0.4
ASAJ	Asahikawa	1.19	282	P	Pn	04 52 23.4	+0.5
	1.3nm,0.3s,baz=135,slow=5.7,SNR=6.3						
ASAJ				S	Sn	04 52 45.6	-0.3
	1.0nm,0.3s,baz=241,slow=32,SNR=12						
NEM2	Nemuro 2	1.23	115	P	Pn	04 52 23.0	-0.2
NEM2				*e*S	Sn	04 52 45.2	-1.3
JFR	Furan	1.38	239	P	Pn	04 52 25.5	+0.9
JCH	Churui	1.42	206	P	Pn	04 52 24.8	-0.1
JCH				*e*S	Sn	04 52 47.8	-1.6
JSE	Soyaes	1.58	313	P	Pn	04 52 26.1	-0.3
JNBK	Urakawa-nobuka	1.93	214	P	Pn	04 52 29.8	-0.1
JNBK				*e*S	Sn	04 52 57.2	-1.2
SEY	Seymchan	19.66	11	P	P	04 56 05.7	-1.8
	0.2nm,0.3s,baz=184,slow=6.8,SNR=6.1						
SONM	Songino Array	26.45	292	P	P	04 57 13.7	+0.8
	1.3nm,0.7s,baz=80,slow=8.3,SNR=8.1						
H11N2	WAKE ISLAND Hy	30.66	135	T	T	05 29 26.5	
	baz=328,slow=75,SNR=8.5						
H11N1	WAKE ISLAND Hy	30.67	135	T	T	05 29 29.7	
	baz=328,slow=75,SNR=8.8						
H11N3	WAKE ISLAND Hy	30.67	135	T	T	05 29 28.6	
	baz=328,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	31.58	136	T	T	05 30 38.4	
	baz=330,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	31.59	136	T	T	05 30 38.3	
	baz=330,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	31.60	136	T	T	05 30 40.0	
	baz=330,slow=76,SNR=8.9						
MKAR	Makanchi Array	42.63	296	P	P	04 59 31.3	+0.3
	0.6nm,0.7s,baz=85,slow=9.2,SNR=5.0						
ILAR	Eielson Array	42.63	36	P	P	04 59 31.2	+0.5
	0.6nm,0.8s,baz=255,slow=6.1,SNR=9.1						
KURBB	Kurchatov Arra	43.77	303	P	P	04 59 40.3	+0.3
	0.2nm,0.3s,baz=73,slow=8.8,SNR=4.1						
INK	Inuvik	47.35	30	P	P	05 00 07.7	-0.1
	0.7nm,0.4s,baz=292,slow=8.7,SNR=11						
BVAR	Borovoye Array	47.76	308	P	P	05 00 11.7	+0.5
	0.4nm,0.3s,baz=82,slow=10.0,SNR=5.1						
RES	Resolute Bay	55.44	16	P	P	05 01 07.3	-0.3
	1.0nm,0.4s,baz=299,slow=6.6,SNR=11						
YKA	Yellowknife Ar	56.86	33	P	P	05 01 18.5	+0.7
	0.2nm,0.5s,baz=304,slow=7.1,SNR=8.1						
FINES	FINESS Array B	63.77	332	P	P	05 02 04.7	0.0
	3.3nm,0.5s,baz=46,slow=7.8,SNR=40						
WRA	Warramunga Arr	64.16	190	P	P	05 02 07.8	+0.1
	0.6nm,1.1s,baz=8.9,slow=6.8,SNR=3.1						
NB2	NORSAR Subarra	68.69	338	P	P	05 02 35.7	-0.3
	comp=Z,0.5nm,0.6s,baz=33,slow=6.5						
NOA	NORSAR Array B	68.69	338	P	P	05 02 35.8	-0.3
	comp=Z,0.9nm,0.8s,baz=34,slow=6.2,SNR=5.1						
HFS	Hagfors	68.72	336	P	P	05 02 35.7	-0.5
	comp=Z,1.8nm,0.5s,baz=47,slow=6.5,SNR=11						

JMA ***26*** *04:52:11.9±0.2, 24°.03N×122°.29E, h24^{km}±5^{km}, M2.6*

TAP ***26*** *04:52:11.8, 24°.12N×122°.27E, h23^{km}±1^{km}, ML3.1, C*

ISCJB ***26*** *04:52:12.1±0.3, 24°.09N±0°.02×122°.28E±0°.02, h24^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.1km az=144.4*

ISC 26 04:52:11.7±1.1**, 24°.08N**±0°.02×**122°.27E**±0°.02**, h23**^{km}±12^{km}**, n76, σ0^{s}69**/144**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.49	344	*e*P	Pb	04 52 21.4	-0.3
	baz=342						
EOS1				*e*S	Sb	04 52 28.7	+0.2
	baz=342						
NANB	Nanao	0.59	306	*e*P	Pb	04 52 23.1	-0.4
	baz=302						
NANB				*e*S	Sb	04 52 32.0	+0.6
	baz=302						
ENA	Nanau	0.60	306	P	Pb	04 52 23.9	+0.3
	baz=302						
ENA				S	Sb	04 52 31.7	0.0
	baz=302						
TWD	Chiawan	0.62	270	*e*P	Pb	04 52 24.2	+0.3
	baz=266						
TWD				S	Sb	04 52 33.3	+1.1
	baz=266						
NACB	Ninganchiao	0.63	279	*e*P	Pb	04 52 24.3	+0.2
	baz=275						
NACB				*e*S	Sn	04 52 34.0	-0.6
	baz=275						
ENLB	Shoufeng	0.64	255	*e*P	Pn	04 52 25.1	-0.3
	baz=250						
ENLB				*e*S	Sn	04 52 34.5	-0.3
	baz=250						
TWC	Suao	0.66	324	P	Pb	04 52 23.7	-0.9
	baz=322						
TWC				*i* S	Sb	04 52 31.9	-1.4
	baz=322						
JYNG	Yonagunijimaku	0.72	59	P	Pb	04 52 25.4	-0.2
JYNG				*e*S	Sb	04 52 35.1	+0.1
ETLH	Xiulin Townshi	0.74	280	*e*P	Pb	04 52 26.1	+0.1
	baz=276						
ETLH				*e*S	Sn	04 52 37.2	-0.2
	baz=276						
YOJ	Yonaguni jima	0.77	60	*e*P	Pb	04 52 26.4	-0.1
	baz=62						
YOJ				*e*S	Sb	04 52 36.6	-0.1
	baz=62						
YOJ	Yonaguni jima	0.77	60	P	Pb	04 52 26.7	+0.2
YOJ				S	Sb	04 52 36.5	-0.1
ESL	Shilin	0.81	251	P	Pb	04 52 26.9	-0.3
	baz=248						
ESL				*e*S	Sn	04 52 38.8	-0.4
	baz=248						
ILA	Ilan	0.84	325	*e*P	Pn	04 52 28.2	+0.1
	baz=323						
ILA				*e*S	Sb	04 52 38.4	-0.1
	baz=323						
TWE	Neicheng	0.85	319	P	Pb	04 52 27.7	-0.1
	baz=318						
TWE				S	Sb	04 52 38.3	-0.4
	baz=318						
ENTT	Nioudou	0.86	311	P	Pb	04 52 28.1	+0.2
	baz=309						
ENTT				S	Sb	04 52 39.7	+0.7
	baz=309						
NDT	Datong Townshi	0.87	307	P	Pn	04 52 28.7	+0.1
	baz=304						
NDT				S	Sb	04 52 39.2	-0.2
	baz=304						
NTC	Toucheng	0.87	332	*e*P	Pb	04 52 28.6	+0.3
	baz=331						
NTC				*e*S	Sb	04 52 39.4	-0.1
	baz=331						
NNSB	Datong	0.89	293	*e*P	Pb	04 52 28.7	+0.2
	baz=290						
NNSB				*e*S	Sn	04 52 41.0	-0.1
	baz=290						
NNS	Nan Shan	0.90	294	P	Pb	04 52 28.9	+0.1
	baz=291						
NNS				S	Sn	04 52 41.5	+0.1
	baz=291						
WHF	Hehuan Shan	0.93	274	*e*P	Pn	04 52 29.8	0.0
	baz=271						
WHF				*e*S	Sb	04 52 41.5	0.0
	baz=271						
HGSD	Ruisui	0.97	233	*e*P	Pb	04 52 29.8	-0.1
	baz=231						
HGSD				*e*S	Sb	04 52 42.6	+0.3
	baz=231						
TIPB	Shuangxi	0.98	335	P	Pn	04 52 30.1	-0.1
	baz=334						
TIPB				S	Sb	04 52 41.8	-0.8
	baz=334						
NWLT	Wulai	0.99	315	*e*P	Pb	04 52 30.7	+0.5
	baz=313						
NWLT				*e*S	Sn	04 52 43.7	+0.1
	baz=313						
CHGB	Renai	1.01	269	*e*P	Pn	04 52 30.3	-0.4
	baz=266						
CHGB				*e*S	Sn	04 52 44.6	+0.4
	baz=266						
YHNB	Yeheng	1.01	306	*e*P	Pn	04 52 30.6	0.0
	baz=303						
YHNB				*e*S	Sn	04 52 44.2	0.0
	baz=303						
OWD	Renai	1.01	263	*e*P	Pn	04 52 30.6	-0.1
	baz=260						
OWD				*e*S	Sb	04 52 43.4	-0.2
	baz=260						
TWT	Tachien	1.02	280	*e*S	Sn	04 52 44.9	+0.4
	baz=277						
NSK	Sanguang	1.03	306	P	Pn	04 52 30.9	0.0
	baz=303						
NSK				S	Sb	04 52 44.4	+0.4
	baz=303						
TDCB	Techi	1.03	280	*e*P	Pb	04 52 31.3	+0.2
	baz=277						
TDCB				*e*S	Sb	04 52 44.7	+0.4
	baz=277						
EHY	Hungye	1.04	237	*e*P	Pn	04 52 30.9	-0.1
	baz=234						
EHY				*e*S	Sb	04 52 44.5	+0.2
	baz=234						
VWDT	VWDT	1.09	253	*e*P	Pb	04 52 31.9	+0.1
	baz=250						
VWDT				*e*S	Sn	04 52 46.5	+0.6
	baz=250						
NWF	Wu-fen Shan	1.09	336	P	Pn	04 52 31.6	-0.1
	baz=334						
NWF				S	Sb	04 52 45.4	-0.3
	baz=334						
WFSB	Wu-fen Shan	1.09	336	*e*P	Pn	04 52 31.5	-0.1
	baz=334						
WFSB				*e*S	Sb	04 52 45.6	-0.1
	baz=334						
TWA	Mucha	1.10	325	*e*P	Pb	04 52 32.1	0.0
	baz=324						
TWA				*e*S	Sb	04 52 45.9	-0.1
	baz=324						
NHDH	Xindian Distri	1.12	322	*e*P	Pb	04 52 33.6	+1.2
	baz=321						
YULB	Yu-li	1.12	233	*e*P	Pn	04 52 31.6	-0.5
	baz=231						
YULB				*e*S	Sb	04 52 45.9	-0.8
	baz=231						
TWF1	Yuli	1.15	231	*e*P	Pn	04 52 31.7	-0.8
	baz=229						
TWF1				*e*S	Sn	04 52 47.1	-0.4
	baz=229						
WHP	Taichung City	1.23	280	*e*P	Pb	04 52 34.9	+0.5

	baz=277						
WHP				*e*S	Sb	04 52 50.3	+0.5
	baz=277						
SSLB	**Suanglung**	1.24	257	*e*P	Pn	04 52 33.7	0.0
	baz=254						
YM01	**YM01**	1.24	329	*e*P	Pb	04 52 35.0	+0.5
	baz=328						
YM01				*e*S	Sn	04 52 50.0	+0.1
	baz=328						
FULB	**Fuli**	1.25	226	*e*P	Pn	04 52 33.1	-0.8
	baz=224						
FULB				*e*S	Sn	04 52 49.0	-1.1
	baz=224						
YM05	**YM05**	1.26	329	*e*P	Pn	04 52 34.4	+0.3
	baz=328						
YM05				*e*S	Sn	04 52 50.5	+0.2
	baz=328						
YM04	**YM04**	1.27	328	*e*P	Pb	04 52 35.2	+0.2
	baz=326						
SMLT	**Sun Moon Lake**	1.27	262	*e*P	Pn	04 52 34.8	+0.5
	baz=259						
SMLT				*e*S	Sb	04 52 51.5	+0.4
	baz=259						
LIOB	**Emei**	1.28	297	*e*P	Pn	04 52 34.3	+0.1
	baz=294						
LIOB				*e*S	Sb	04 52 51.4	+0.2
	baz=294						
CHKT	**Chengkung**	1.28	221	*e*P	Pb	04 52 34.8	-0.4
	baz=219						
CHKT				*e*S	Sb	04 52 52.4	+1.2
	baz=219						
NSTT	**Nanjuang**	1.29	296	P	Pb	04 52 35.6	+0.3
	baz=293						
NSTT				*e*S	Sn	04 52 50.7	-0.1
	baz=293						
TYC	**Yuchr**	1.31	263	*e*P	Pn	04 52 34.8	+0.1
	baz=260						
TYC				*e*S	Sb	04 52 51.9	0.0
	baz=260						
TWY	**Chenhua**	1.34	333	*e*S	Sn	04 52 51.5	-0.8
	baz=332						
IRIF	**Iriomote-Funau**	1.35	79	P	Pb	04 52 36.5	+0.1
IRIF				S	Sb	04 52 54.3	+1.0
WHYT	**Xinyi Township**	1.35	254	*e*P	Pb	04 52 36.6	+0.1
	baz=252						
WHYT				*e*S	Sb	04 52 55.3	+1.9
	baz=252						
TWQ1	**Liyutan**	1.40	281	*e*P	Pb	04 52 37.8	+0.6
	baz=279						
TWQ1				*e*S	Sn	04 52 54.0	+0.3
	baz=279						
HATJ	**Hateruma jima**	1.40	90	*e*S	Sb	04 52 55.3	+0.7
ELDTW	**Lidau**	1.45	233	*e*P	Pn	04 52 37.0	+0.2
	baz=230						
ELDTW				*e*S	Sn	04 52 54.8	-0.4
	baz=230						
ALS	**Alishan**	1.46	248	P	Pn	04 52 37.8	+0.8
	baz=245						
ALS				S	Sn	04 52 55.9	+0.3
	baz=245						
CHN5	**Tsauling**	1.54	252	*e*P	Pb	04 52 39.2	-0.4
	baz=250						
CHN5				*e*S	Sb	04 52 58.6	-0.1
	baz=250						
JKRS	**Kuro-shima**	1.59	84	P	Pb	04 52 40.3	-0.2
JKRS				S	Sb	04 53 00.0	-0.2
STYT	**Tauyuan**	1.66	237	*e*P	Pn	04 52 40.4	+0.9
	baz=235						
STYT				*e*S	Sn	04 53 00.8	+0.5
	baz=235						
TWGBT	**Beinan**	1.67	221	*e*P	Pn	04 52 38.2	-1.3
	baz=220						
TWGBT				*e*S	Sn	04 53 00.6	+0.3
	baz=220						
TWG	**Pinlang**	1.67	222	*e*P	Pn	04 52 38.4	-1.2
	baz=220						
TWG				*e*S	Sn	04 53 00.6	+0.3
	baz=220						
TPUB	**Ta-pu**	1.69	243	*e*P	Pb	04 52 41.2	-1.0
	baz=241						
TPUB				*e*S	Sb	04 53 02.7	-0.4
	baz=241						
CHN4	**Tsaushan**	1.70	245	*e*P	Pb	04 52 42.3	-0.1
	baz=243						
CHN4				*e*S	Sb	04 53 03.0	-0.3
	baz=243						
JIJ	**Ishigaki jima**	1.73	80	P	Pn	04 52 40.9	+0.5
JIJ				S	Sn	04 53 02.1	+0.3
WTP	**Ta-pu**	1.73	242	*e*P	Pn	04 52 41.7	+1.1
	baz=240						
WTP				*e*S	Sb	04 53 03.5	-0.8
	baz=240						
TWK	**Hsinying**	1.83	244	*e*P	Pn	04 52 43.2	+1.4
	baz=242						
TWK				*e*S	Sn	04 53 05.7	+1.4
	baz=242						
CHN1	**Nanshi**	1.83	241	*e*P	Pb	04 52 43.4	-1.2
	baz=239						
CHN1				*e*S	Sn	04 53 05.5	+1.2
	baz=239						
SNST	**Tainan City**	1.84	243	*e*P	Pb	04 52 43.6	-1.1
	baz=241						
SNST				*e*S	Sn	04 53 05.8	+1.3
	baz=241						
SLGT	**Liugui**	1.84	235	*e*P	Pn	04 52 43.5	+1.5
	baz=233						
SLGT				*e*S	Sn	04 53 05.7	+1.0
	baz=233						
JISG	**Ishigakijimahi**	1.93	74	*e*S	Sn	04 53 06.5	-0.1
SSD	**Sandimen**	2.01	229	*e*P	Pb	04 52 46.3	-1.2
	baz=227						
SSD				*e*S	Sb	04 53 11.1	-1.0
	baz=227						
MASBT	**Mashibuluo**	2.10	226	*e*P	Pn	04 52 47.3	+1.8
	baz=225						
MASBT				*e*S	Sn	04 53 12.8	+1.9
	baz=225						
LAY	**Lan-yu**	2.13	198	*e*P	Pn	04 52 44.7	-1.3
	baz=197						
LAY				*e*S	Sn	04 53 11.3	-0.5
	baz=197						
EAST	**Anshuo**	2.14	218	*e*P	Pn	04 52 47.2	+1.2
	baz=217						
EAST				*e*S	Sn	04 53 13.3	+1.4
	baz=217						
VWUC	**VWUC**	2.73	290	*e*P	Pn	04 52 54.3	+0.1
	baz=288						
VWUC				*e*S	Sn	04 53 26.0	-0.5
	baz=288						
PTMZ	**Houxiangcun**	3.03	289	*e*P	Pn	04 52 57.7	-0.6
	baz=287						
PTMZ				*e*S	Sn	04 53 31.3	-2.6
	baz=287						
XPSS	**Dashiqiu**	3.41	327	*e*P	Pn	04 53 03.0	-0.5
	baz=326						

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*ISCJB **26** 05:05:20.7±0.7, 51.°47N±0.°03×16.°20E±0.°05, h0^{km}, mb3.0/1, Error ellipse: s-maj=5.0km s-min=3.4km az=37.2*

*IPEC **26** 05:05:22.4±0.5, 51.°50N×16.°27E, h0^{km}±2^{km}, ML1.7/3, Error ellipse: s-maj=3.4km s-min=2.4km az=46.0*

*IDC **26** 05:05:24.3±0.9, 51.°43N×16.°05E, h0^{km}, mb3.1/1, mb1 3.1/5, mb1mx3.0/44, mbtmp3.0/5, ML2.4/3, Error ellipse: s-maj=20.9km s-min=8.3km az=103.0*

*PRU **26** 05:05:24.2±0.0, 51.°43N×16.°17E, h0^{km}*

ISC 26 05:05:22.2±1.0, **51.°52N**±0.°05×**16.°24E**±0.°04, **h0**^{km}, **n23**, σ**0.^{s}76**/44, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.68	177	*i* Pg	Pg	05 05 35.4	+0.3
KSP				*i* Sg	Sg	05 05 43.6	-0.2
UPC	**Upice**	1.02	188	*e*PG	Pg	05 05 41.7	0.0
UPC				*e*SG	Sg	05 05 54.3	-0.6
	comp=Z,24nm,0.3s						
DPC	**Dobruska-Polom**	1.17	177	*e*PG	Pg	05 05 44.3	-0.2
DPC				*e*SG	Sg	05 05 58.5	-1.2
	comp=Z,14nm,0.6s						
PVCC	**Panska Ves**	1.45	227	*e*PG	Pn	05 05 49.4	-0.2
PVCC				*e*SG	Sg	05 06 08.2	-0.3
	comp=Z,49nm,0.4s						
KRLC	**Kraliky**	1.48	166	*e*PG	Pg	05 05 50.6	0.0
KRLC				*e*SG	Sg	05 06 08.6	-1.2
BRG	**Berggiesshubel**	1.58	247	PG	Pb	05 05 51.9	-0.3
BRG				SG	Sn	05 06 12.2	-0.4
	19nm,0.4s						
PRU	**Pruhonice**	1.87	216	*e*PG	Pn	05 05 56.3	+0.9
PRU				*e*SG	Sn	05 06 20.1	+0.4
	comp=Z,8.4nm,0.3s						
MORC	**Moravsky Berou**	1.93	154	*e*PN	Pn	05 05 56.3	0.0
MORC				*e*SG	Sn	05 06 21.9	+0.6
MORC	**Moravsky Berou**	1.93	154	*e*Pn	Pn	05 05 56.2	0.0
	baz=335						
MORC				*e*Sg	Sn	05 06 21.9	+0.6
	6.9nm,0.3s,baz=335						
CLL	**Collm**	2.04	265	*e*Pg	Pg	05 06 01.0	-0.2
CLL				*e*Sg	Sg	05 06 27.0	-0.5
OKC	**Ostrava-Krasne**	2.08	143	*e*SG	Sb	05 06 27.1	+0.1
VRAC	**Vranov**	2.22	174	*e*PN	Pn	05 06 00.3	0.0
VRAC				*e*SG	Sb	05 06 31.2	0.0
VRAC	**Vranov**	2.22	174	*e*Pn	Pn	05 06 00.2	0.0
	baz=355						
VRAC				*e*Sg	Sb	05 06 31.1	-0.1
	3.4nm,0.3s,baz=355						
VRAC	**Vranov**	2.22	174	Pn	Pb	05 06 01.9	-1.3
	1.0nm,0.3s,baz=345,slow=15,SNR=5.5						
VRAC				Lg	Lg	05 06 31.3	
	1.3nm,0.3s,baz=270,slow=20,SNR=6.7						
TREC	**Trest**	2.28	192	*e*PG	Pb	05 06 04.3	+0.2
TREC				*e*SG	Sb	05 06 32.9	+0.1
KRUC	**Moravsky**	2.46	178	*e*PN	Pn	05 06 03.4	-0.1
KRUC				*e*SG	Sb	05 06 38.9	+0.8
KRUC	**Moravsky**	2.46	178	*e*Pn	Pn	05 06 03.4	-0.1
	baz=358						
KRUC				*e*Sg	Sb	05 06 38.9	+0.8
	5.0nm,0.5s,baz=358						
NKC	**Novy Kostel**	2.72	243	*e*PN	Pn	05 06 07.3	+0.2
NKC				*e*PG	Pg	05 06 13.5	-0.8
NKC				*e*SG	Sg	05 06 49.6	0.0
	comp=Z,9.2nm,0.3s						
KHC	**Kasperske Hory**	2.93	217	*e*PN	Pn	05 06 10.2	+0.1
KHC				*e*PG	Pb	05 06 15.9	+0.6
KHC				*e*SN	Sn	05 06 42.9	-3.1
KHC				*e*SG	Sb	05 06 53.0	+1.3
GERES	**GERESS Array B**	3.13	212	Pn	Pn	05 06 12.9	+0.1
	0.3nm,0.3s,baz=31,slow=12,SNR=4.8						
GERES				Pg	Pb	05 06 19.1	+0.4
	1.5nm,0.3s,baz=34,slow=17,SNR=23						
GERES				Lg	Lg	05 06 57.8	
	2.0nm,0.3s,baz=31,slow=27,SNR=7.8						
HFS	**Hagfors**	8.76	352	Pn	Pn	05 07 29.6	-0.3
	baz=169,slow=16,SNR=2.1						
FINES	**FINESS Array B**	11.32	25	Pn	Pn	05 08 04.7	-0.3
	0.1nm,0.3s,baz=206,slow=12,SNR=3.4						
TORD	**Torodi Ar. Bea**	40.04	202	P	P	05 13 00.3	+1.4
	0.3nm,0.8s,baz=19,slow=9.2,SNR=3.2						

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*KRSC **26** 05:10:33.8±1.8, 48.°32N×156.°75E, h16^{km}±37^{km}, ML4.4*

*ISCJB **26** 05:10:34.4±0.7, 48.°26N±0.°06×155.°9E±0.°1, h33^{km}, mb4.1/19, Error ellipse: s-maj=12.0km s-min=3.9km az=37.9*

*SKHL **26** 05:10:34.5±0.5, 48.°09N×156.°07E, h45^{km}±5^{km}, mb4.3/3*

*MOS **26** 05:10:35.3±0.9, 48.°29N×155.°72E, h44^{km}, mb4.4/10, Error ellipse: s-maj=14.4km s-min=4.9km az=79.2*

*IDC **26** 05:10:38.5±1.7, 48.°34N×155.°63E, h50^{km}±7^{km}, mb3.7/15, mb1 3.9/19, mb1mx3.6/54, mbtmp3.9/19, MS3.2/6, Ms1 3.3/6, ms1mx2.9/40, Error ellipse: s-maj=36.9km s-min=16.0km az=157.0*

ISC 26 05:10:35.9±0.8, **48.°20N**±0.°08×**156.°02E**±0.°08, **h35**^{km}, **n80**, σ**1.^{s}24**/91, **mb4.0**/19, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	2.49	1	*e*P	Pn	05 11 13.7	-0.1
SKR				*e*S	Sn	05 11 43.3	+0.4
SKR	**Severo-Kuril's**	2.49	1	*e*P	Pn	05 11 14.2	+0.4
SKR				AMB	AMB	05 11 17.0	
	70nm,0.5s						
SKR				*e*S	Sn	05 11 43.6	+0.7
SKR				A	A	05 11 59.9	
	580nm,0.6s						
SKR				A	A	05 11 59.9	
	210nm,0.6s						
SKR	**Severo-Kuril's**	2.49	1	*e*PN	Pn	05 11 14.2	+0.4
SKR				*e*S	Sn	05 11 43.6	+0.7
SKR				pmax	pmax		
	comp=Z,68nm,0.5s						
SKR				smax	smax		
	comp=E,211nm,0.8s						
SKR				smax	smax		
	comp=N,579nm,0.6s						
ALID	**Alaid**	2.69	354	*e*P	Pn	05 11 17.1	+0.3
ALID				*e*S	Sn	05 11 50.5	+2.3
PAU	**Pauzhetka**	3.31	9	*e*P	Pn	05 11 25.8	+0.6
PAU				*e*S	Sn	05 12 04.3	+1.0
PAU	**Pauzhetka**	3.31	9	*e*P	Pn	05 11 25.8	+0.6
PAU				*e*S	Sn	05 12 04.6	+1.3
PAU	**Pauzhetka**	3.31	9	PN	Pn	05 11 25.8	+0.6
PAU				S	Sn	05 12 04.3	+1.0
KDTR	**Khodutka, Kamc**	3.85	19	*e*P	Pn	05 11 32.3	-0.2
KDTR				*e*S	Sn	05 12 15.9	-0.6
KDTR	**Khodutka, Kamc**	3.85	19	PN	Pn	05 11 32.3	-0.2
KDTR				S	Sn	05 12 15.9	-0.6
MTVR	**Mutnovka**	4.51	17	*e*P	Pn	05 11 42.5	+0.8
MTVR				*e*S	Sn	05 12 32.7	-0.3
MTVR	**Mutnovka**	4.51	17	PN	Pn	05 11 42.5	+0.8
MTVR				S	Sn	05 12 32.7	-0.3
RUS	**Russkaya**	4.53	20	*e*P	Pn	05 11 41.4	-0.5
RUS				*e*S	Sn	05 12 31.3	-2.0
RUS	**Russkaya**	4.53	20	*e*P	Pn	05 11 41.4	-0.5
RUS	**Russkaya**	4.53	20	PN	Pn	05 11 41.4	-0.5
APC	**Apacha**	4.79	8	*e*P	Pn	05 11 47.1	+1.7
APC	**Apacha**	4.79	8	PN	Pn	05 11 47.1	+1.7
KRMR	**Karymshinskiy**	4.83	15	*e*P	Pn	05 11 47.5	+1.5
KRMR	**Karymshinskiy**	4.83	15	PN	Pn	05 11 47.5	+1.5
PETK	**Petropavlovsk-**	5.03	12	P	Pn	05 11 50.2	+1.4
	comp=N,1.1nm,0.3s,baz=176,slow=14,SNR=11						
PETK				S	Sn	05 12 45.1	-0.6
	comp=N,0.7nm,0.3s,baz=175,slow=20,SNR=2.5						
PETK				LR	LR	05 13 14.7	
	comp=N,21nm,21.8s,baz=206,slow=32						
PET	**Petropavlovsk**	5.12	18	*e*S	Sn	05 12 47.6	0.0
PET	**Petropavlovsk**	5.12	18	*e*PN	Pn	05 11 59.7	+10
PET				pmax	pmax		
	comp=Z,19nm,0.7s						
DALK	**Dalny**	5.14	19	*e*P	Pn	05 11 50.6	+0.3
DALK				*e*S	Sn	05 12 47.7	-0.6
DALK	**Dalny**	5.14	19	PN	Pn	05 11 50.6	+0.3
UGLR	**Uglovaya**	5.32	18	*e*P	Pn	05 11 53.9	+1.0
UGLR	**Uglovaya**	5.32	18	PN	Pn	05 11 53.9	+1.0
AVH	**Avacha**	5.36	18	*e*P	Pn	05 11 54.9	+1.6
AVH	**Avacha**	5.36	18	PN	Pn	05 11 54.9	+1.6
KOK	**Koryaka**	5.36	17	*e*P	Pn	05 11 55.3	+1.9
KOK				*e*S	Sn	05 12 55.2	+1.2
KOK	**Koryaka**	5.36	17	*e*P	Pn	05 11 55.3	+1.9
KOK	**Koryaka**	5.36	17	PN	Pn	05 11 55.3	+1.9
KOK				S	Sn	05 12 55.2	+1.2
SMAR	**Somma**	5.37	18	*e*P	Pn	05 11 55.5	+1.9
SMAR	**Somma**	5.37	18	PN	Pn	05 11 55.5	+1.9
SDLR	**Sedlovina**	5.40	19	*e*P	Pn	05 11 54.4	+0.4
SDLR				*e*S	Sn	05 12 54.3	-0.6
SDLR	**Sedlovina**	5.40	19	PN	Pn	05 11 54.4	+0.4
NLC	**Nalytchevo**	5.41	22	*e*S	Sn	05 12 51.2	-3.7
KRX	**Arik**	5.43	17	*e*P	Pn	05 11 56.3	+1.9
KRX	**Arik**	5.43	17	PN	Pn	05 11 56.3	+1.9
SPN	**Mys Shipunski**	5.53	26	*e*P	Pn	05 11 55.7	+0.1
SPN				*e*S	Sn	05 12 56.5	-1.3
SPN	**Mys Shipunski**	5.53	26	PN	Pn	05 11 55.7	+0.1
GNL	**Ganaly**	5.64	12	*e*P	Pn	05 11 58.6	+1.4
GNL	**Ganaly**	5.64	12	PN	Pn	05 11 58.6	+1.4
TUMD	**Tumrok D**	7.52	20	*e*S	Sn	05 13 46.3	-0.7
YSS	**Yuzh-Sakhalins**	9.06	267	*e*P	Pn	05 12 44.3	+0.3
YSS				AMB	AMB	05 12 45.1	
	comp=Z,10.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	9.06	267	*e*PN	Pn	05 12 44.3	+0.3
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
ASAJ	**Asahikawa**	10.17	251	P	Pn	05 12 58.0	-1.2
	comp=Z,0.5nm,0.3s,baz=97,slow=28,SNR=4.0						
ASAJ				LR	LR	05 16 41.6	
	comp=Z,86nm,18.3s,baz=309,slow=36						
MA2	**Magadan**	11.81	347	LR	LR	05 18 17.9	
	comp=Z,52nm,18.1s,baz=127,slow=40						
SEY	**Seymchan**	14.91	354	P	Pn	05 14 02.0	-1.8
	comp=Z,0.9nm,0.3s,baz=141,slow=13,SNR=6.5						
EKMR	**Ekimchan**	15.40	297	*e*P	Pn	05 14 10.0	-0.4
EKMR				AMB	AMB	05 14 15.8	
	comp=Z,3.0nm,0.5s						
KLR	**Kul'dur**	16.04	283	P	Pn	05 14 17.3	-1.3
	comp=Z,0.1nm,0.3s,baz=56,slow=12,SNR=5.6						
KLR				LR	LR	05 20 38.9	
	comp=Z,73nm,18.0s,baz=101,slow=38						
KROS	**Kirovskiy**	19.11	300	*e*P	Pn	05 14 56.6	+0.1
BILL	**Bilibino**	20.57	11	*e*P	P	05 15 10.2	-1.0
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSRS	**Korea Array**	23.11	253	P	P	05 15 41.7	+3.2
	comp=Z,0.9nm,0.5s,baz=64,slow=11,SNR=4.4						
KSRS				LR	LR	05 24 31.0	
	comp=Z,37nm,18.3s,baz=24,slow=36						
H11N2	**WAKE ISLAND Hy**	29.73	159	T	T	05 48 44.7	
	baz=341,slow=74						
H11N1	**WAKE ISLAND Hy**	29.75	159	T	T	05 48 55.4	
	baz=341,slow=74						
H11N3	**WAKE ISLAND Hy**	29.75	159	T	T	05 48 58.3	
	baz=341						
H11S1	**WAKE ISLAND Hy**	30.86	160	T	T	05 50 15.0	
	baz=344,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	30.87	160	T	T	05 50 13.3	
	baz=344,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	30.88	160	T	T	05 50 06.9	
	baz=344,slow=76,SNR=18						
SONM	**Songino Array**	32.73	288	P	P	05 17 03.3	-1.9
	comp=Z,0.2nm,0.4s,baz=82,slow=11,SNR=2.9						
ILAR	**Eielson Array**	34.18	40	P	P	05 17 18.2	+0.8
	comp=Z,0.7nm,1.0s,baz=250,slow=8.5,SNR=4.4						
MKAR	**Makanchi Array**	48.03	297	P	P	05 19 09.4	-1.9
	comp=Z,3.3nm,0.7s,baz=65,slow=8.1,SNR=36						
MKAR				pP	sP	05 19 23.9	0.0
	comp=Z,0.9nm,0.6s,baz=71,slow=8.6,SNR=3.2						
KURK	**Kurchatov**	48.20	304	*e*P	P	05 19 11.3	-1.3
KURK	**Kurchatov**	48.20	304	P	P	05 19 11.3	-1.3
KURK				*PP	sP	05 19 25.8	+0.7
KURK				pmax	pmax		
	comp=Z,39nm,0.6s						
KURBB	**Kurchatov Arra**	48.30	304	P	P	05 19 11.3	-2.1
	comp=Z,39nm,0.6s,baz=67,slow=8.0,SNR=17						
KURBB				pP	sP	05 19 25.8	-0.1
	comp=Z,1.5nm,0.6s,baz=68,slow=8.6,SNR=7.7						
YKA	**Yellowknife Ar**	48.58	38	P	P	05 19 16.8	+1.6
	comp=Z,0.4nm,0.9s,baz=293,slow=7.2,SNR=4.1						
RES	**Resolute Bay**	48.83	19	P	P	05 19 19.1	+2.1
	comp=Z,0.7nm,0.6s,baz=302,slow=7.3,SNR=4.9						
BVAR	**Borovoye Array**	51.46	310	P	P	05 19 35.5	-1.8
	comp=Z,0.6nm,0.5s,baz=56,slow=7.2,SNR=5.4						
CMAR	**Chiang Mai Arr**	54.62	258	P	P	05 20 01.1	+0.1
	comp=Z,0.5nm,0.3s,baz=31,slow=7.4,SNR=5.2						
AAK	**Ala-Archa**	54.95	297	LR	LR	05 44 48.3	
	comp=Z,26nm,18.8s,baz=22,slow=38						
PDAR	**Pinedale Array**	62.30	56	LR	LR	05 48 28.8	
	comp=Z,101nm,19.6s,baz=296,slow=36						
FINES	**FINESS Array B**	63.55	336	P	P	05 21 01.5	-0.8
	comp=Z,2.9nm,0.7s,baz=33,slow=7.7,SNR=15						
OBN	**Obninsk**	65.21	327	*e*P	P	05 21 05.9	-7.3
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NB2	**NORSAR Subarra**	67.47	342	P	P	05 21 27.6	-0.1
	comp=Z,1.5nm,0.7s,baz=25,slow=6.5						
NOA	**NORSAR Array B**	67.47	342	P	P	05 21 27.7	0.0
	comp=Z,3.4nm,0.8s,baz=25,slow=6.4,SNR=11						
GEYT	**Alibeck**	67.53	302	P	P	05 21 28.2	-0.2
	comp=Z,1.3nm,0.6s,baz=72,slow=4.7,SNR=3.6						
KBZ	**Khabaz**	71.25	315	P	P	05 21 51.5	+0.3
	comp=Z,4.5nm,0.8s,baz=69,slow=3.7,SNR=11						
AKASG	**Malin Array Be**	71.41	328	P	P	05 21 50.8	-1.3
	comp=Z,1.5nm,0.7s,baz=32,slow=6.0,SNR=6.1						
AKASG				pP	sP	05 22 05.3	+0.8
	comp=Z,0.5nm,0.5s,baz=34,slow=5.9,SNR=2.4						
TXAR	**Lajitas Array**	75.07	63	P	P	05 22 15.3	+1.1
	comp=Z,0.3nm,0.6s,baz=288,slow=4.2,SNR=4.7						
GERES	**GERESS Array B**	77.98	336	P	P	05 22 30.6	+0.3
	comp=Z,0.3nm,0.4s,baz=15,slow=4.2,SNR=2.9						
BRTR	**Keskin Array B**	78.65	318	P	P	05 22 33.6	-0.6
	comp=Z,1.7nm,0.9s,baz=42,slow=2.0,SNR=6.0						

IDC 26 05:14:58.8±3.4, **30.°41S**×**138.°35E**, **h0**^{km}, **mb1 3.1**/3, **mb1mx3.0**/28, **mbtmp2.9**/3, **ML2.8**/3, **Error ellipse: s-maj=77.0km s-min=14.4km az=43.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	3.14	119	Pn	Pn	05 15 49.2	-0.3
	0.5nm,0.3s,baz=299,slow=12,SNR=7.7						
STKA				Pg	Pb	05 15 56.8	+1.3
	1.7nm,0.3s,baz=299,slow=14,SNR=19						
STKA				Sn	Sn	05 16 27.1	-0.7
	1.1nm,0.3s,baz=315,slow=7.4,SNR=4.3						
STKA				Lg	Lg	05 16 38.3	
	1.9nm,0.3s,baz=37,slow=20,SNR=4.8						
ASAR	**Alice Springs**	7.80	328	Pn	Pn	05 16 54.8	+1.1
	0.1nm,0.3s,baz=150,slow=13,SNR=6.1						
ASAR				Sn	Sn	05 18 21.8	-0.9
	0.2nm,0.3s,baz=154,slow=22,SNR=3.3						
ASAR				Lg	Lg	05 19 05.9	
	0.0nm,0.3s,baz=151,slow=25,SNR=2.7						
WRA	**Warramunga Arr**	11.04	340	Pn	Pn	05 17 38.0	0.0
	0.1nm,0.3s,baz=157,slow=12,SNR=6.0						
WRA				Sn	Sn	05 19 39.2	-3.0
	0.0nm,0.3s,baz=153,slow=24,SNR=2.8						

IDC 26 05:18:02.9±3.3, **32.°29S**×**177.°88W**, **h0**^{km}, **mb3.6**/2, **mb1 3.8**/3, **mb1mx3.7**/34, **mbtmp3.6**/3, **ML3.4**/1, **Error ellipse: s-maj=75.5km s-min=37.3km az=115.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	7.22	213	Pn	Pn	05 19 50.0	+0.2
	0.7nm,0.3s,baz=34,slow=7.3,SNR=4.0						
URZ				Sn	Sn	05 21 11.9	-0.6
	2.5nm,0.3s,baz=314,slow=18,SNR=8.5						
ASAR	**Alice Springs**	43.14	269	P	P	05 26 06.4	+1.0
	0.2nm,0.4s,baz=110,slow=7.2,SNR=4.1						
WRA	**Warramunga Arr**	44.30	274	P	P	05 26 14.0	-0.8
	0.5nm,0.3s,baz=112,slow=8.0,SNR=22						
FINES	**FINESS Array B**	146.95	339	PKPbc	PKPbc	05 37 45.8	-0.8
	4.5nm,1.1s,baz=49,slow=4.2,SNR=4.1						

SVSA 26 05:18:47.3±0.8, **37.°56N**×**25.°32W**, **h5**^{km}, **MD3.6**, **ML2.1**, **1D**, **Error ellipse: s-maj=3.0km s-min=1.4km az=73.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	0.25	29	⇓*i*P	Pg	05 18 51.8	-0.4
BART				*e*S	Sg	05 18 55.7	+0.3
BART				A	A	05 18 57.0	
	343nm,0.6s						
CMLA	**Cha da Macela**	0.26	321	*e*S	Sg	05 18 55.8	0.0
CMLA				A	A	05 19 03.1	
	75nm,0.3s						
GRON	**Grota Negra**	0.27	321	*e*P	Pg	05 18 51.0	-1.5
GRON				*e*S	Sg	05 18 54.2	-1.9
GRON				A	A	05 18 56.7	
	124nm,0.1s						
PCALD	**Caldeiras da R**	0.27	331	*e*S	Sg	05 18 55.9	-0.3
PDA	**Ponta Delgada**	0.33	304	*e*P	Pg	05 18 53.2	-0.5
PDA				*e*S	Sg	05 18 58.0	0.0
PDA				A	A	05 18 59.9	
	58nm,0.2s						
PSMA	**Santa Maria**	0.58	165	*e*S	Sg	05 19 05.0	-1.1
PSMN	**Pico do Norte,**	0.59	160	*e*S	Sg	05 19 04.8	-1.6

IDC 26 05:22:06.5±2.0, **7.°89S**×**122.°20E**, **h0**^{km}, **mb3.3**/1, **mb1 3.5**/3, **mb1mx3.3**/44, **mbtmp3.3**/3, **ML2.5**/2, **Error ellipse: s-maj=269.1km s-min=28.5km az=55.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	16.78	137	Pn	Pn	05 26 01.8	-1.3
	0.0nm,0.3s,baz=310,slow=15,SNR=3.1						
ASAR	**Alice Springs**	19.28	146	P	Pn	05 26 33.9	-0.2
	0.1nm,0.3s,baz=327,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	64.98	331	P	P	05 32 48.3	0.0
	0.3nm,0.8s,baz=132,slow=7.2,SNR=3.1						

WEL 26 05:31:57.7±0.8, **33°S**±7°×**17°9E**±1°3, **h33**^{km}, **ML4.4**/7, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.31	36	S	Sn	05 33 47.8	-2.1
GRZ	Great Barrier	4.62	221	S	Sn	05 33 55.7	-2.0
MXZ	Matakaoa Point	4.80	189	P	Pn	05 33 10.0	+2.3
MXZ				S	Sn	05 34 02.6	+0.4
WMGZ	Waiomatatini S	5.05	187	P	Pn	05 33 12.0	+1.0
WMGZ				S	Sn	05 34 09.1	+0.9
HAZ	Te Kaha	5.08	193	P	Pn	05 33 14.4	+3.0
HAZ				S	Sn	05 34 11.4	+2.5
PKGZ	Pakihiroa	5.16	190	P	Pn	05 33 13.6	+1.0
PKGZ				S	Sn	05 34 10.2	-0.8
RUGZ	Raukumara Rang	5.30	193	P	Pn	05 33 16.5	+1.9
RUGZ				S	Sn	05 34 14.1	-0.5
PUZ	Puketiti	5.31	188	P	Pn	05 33 14.7	0.0
PUZ				S	Sn	05 34 12.7	-2.0
TWGZ	Tauwhareparae	5.45	190	P	Pn	05 33 17.5	+0.9
TWGZ				S	Sn	05 34 17.4	-0.8
MWZ	Matawai	5.69	193	P	Pn	05 33 21.2	+1.3
MWZ				S	Sn	05 34 23.3	-0.7
URZ	Urewera	5.71	197	P	Pn	05 33 22.3	+2.2
URZ				S	Sn	05 34 24.1	-0.2
NMHZ	Naumai	6.57	197	P	Pn	05 33 32.9	+0.8
NMHZ				S	Sn	05 34 44.0	-1.9
KWHZ	Kaweka Forest	6.98	198	P	Pn	05 33 38.2	+0.6
KWHZ				S	Sn	05 34 53.0	-2.8
BHHZ	Black Hill Sta	7.14	200	P	Pn	05 33 41.6	+1.8
BHHZ				S	Sn	05 34 57.8	-2.0
PNHZ	Pukenui	7.50	198	P	Pn	05 33 45.1	+0.4
PNHZ				S	Sn	05 35 04.1	-4.4
BFZ	Birch Farm	8.21	196	P	Pn	05 33 51.9	-2.5
BFZ				S	Sn	05 35 18.5	-7.6
MRZ	Mangatainoka R	8.36	199	P	Pn	05 33 54.0	-2.5
MRZ				S	Sn	05 35 22.1	-7.7
TIWZ	Tintock	8.39	198	P	Pn	05 33 56.7	-0.2
TIWZ				S	Sn	05 35 23.1	-7.4
OGWZ	Otaki Gorge	8.63	201	P	Pn	05 33 58.4	-1.7
OGWZ				S	Sn	05 35 29.0	-7.2
KIW	Kapiti Island	8.75	202	P	Pn	05 33 59.9	-1.9
CAW	Cannon Point	8.92	201	P	Pn	05 34 02.8	-1.5
TCW	Tory Channel	9.27	204	P	Pn	05 34 07.6	-1.3
PLWZ	Palliser	9.30	199	P	Pn	05 34 07.4	-1.9
TUWZ	Tuamarina	9.58	204	P	Pn	05 34 11.6	-1.6
QRZ	Quartz Range	9.63	212	P	Pn	05 34 14.4	+0.5
KHZ	Kahutara	10.59	203	P	Pn	05 34 24.0	-3.1

IDC 26 05:47:48.1±3.2**, 14°.65S×175°.33W, h0km, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.5**/33**, mbtmp3.5**/3**, Error ellipse: s-maj=454.7km s-min=30.4km az=157.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.20	256	P	P	05 56 30.9	0.0
	0.2nm,0.5s,baz=90,slow=7.1,SNR=8.0						
ASAR	Alice Springs	48.58	251	P	P	05 56 33.4	-0.3
	0.9nm,0.6s,baz=88,slow=8.1,SNR=7.0						
TXAR	Lajitas Array	81.75	57	P	P	06 00 09.3	0.0
	0.3nm,0.8s,baz=242,slow=7.1,SNR=2.9						

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*BJI **26** 05:54:59.2, 3°.72N×128°.68E, h37km, mB4.9/5, mb4.6/14*
*ISCJB **26** 05:55:01.5±0.5, 4°.38N±0°.05×128°.40E±0°.06, h10km, mb4.3/18, MS3.1/2, Error ellipse: s-maj=8.5km s-min=7.2km az=14.8*
*IDC **26** 05:55:01.9±0.7, 4°.35N×128°.20E, h0km, mb4.0/12, mb1 4.1/12, mb1mx3.9/34, mbtmp4.0/12, MS3.1/6, Ms1 3.2/6, ms1mx2.9/38, Error ellipse: s-maj=34.6km s-min=14.3km az=73.0*
*DJA **26** 05:55:07.3±1.1, 4°N±9°×12°8E±°, h10km, M4.8/7, mb5.0/4, mB5.2/1, MLv4.8/7, Mw(mB)4.6/1*
*NEIC **26** 05:55:07.0±0.4, 4°.32N×128°.16E, h35km, mb4.5/1, Error ellipse: s-maj=21.6km s-min=8.7km az=74.0*
ISC 26 05:55:03.8±0.6**, 4°.37N**±0°.05×**128°.18E**±0°.07**, h10km, n43, σ1ˢ.49**/44**, mb4.3**/18**, 1D, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.73	256	P	Pb	05 55 50.7	-2.0
SGSI				S	Sb	05 56 23.8	-2.4
DDMP	Don Marcelino,	3.00	305	*e*P	Pb	05 55 54.7	-2.7
DDMP				*e*S	Sb	05 56 35.2	+1.1
MATI	Mati	3.20	323	*e*P	Pg	05 56 06.9	+1.8
MATI				*e*S	Sg	05 56 57.9	+11
DAV	Davao City (W)	3.73	316	LR	LR	05 57 47.0	
	comp=Z,149nm,18.4s,baz=288,slow=44						
KCP	Kidapawan	4.04	311	⇓*i*P	Pb	05 56 12.0	-3.2
KCP				*i* S	Sb	05 57 03.8	-0.3
SKMP	Bagumbayan, Su	4.20	301	*e*P	Pn	05 56 12.7	+4.7
SKMP				*e*S	Sn	05 56 55.4	-1.8
BUKP	Musuan	4.67	319	*e*P	Pb	05 56 23.8	-2.1
BUKP				*e*S	Sb	05 57 22.7	+0.5
KMSI	Cibinong	5.64	228	P	Pn	05 56 30.9	+3.2
SANI	Sanana	6.74	199	P	Pn	05 56 44.4	+1.5
MRSI	Marisa	7.33	238	P	Pn	05 56 54.8	+3.8
MPSI	Mapaga	9.19	244	P	Pn	05 57 19.5	+3.0
GUMO	Guam	18.85	60	LR	LR	06 04 55.7	
	comp=Z,92nm,20.3s,baz=134,slow=32						
FITZ	Fitzroy Crossi	22.46	186	P	P	06 00 01.8	-1.5
	2.6nm,0.8s,baz=5.2,slow=11,SNR=2.7						
WRA	Warramunga Arr	24.91	166	P	P	06 00 26.1	-1.0
	1.3nm,0.5s,baz=343,slow=10,SNR=18						
WRA				LR	LR	06 11 44.5	
	comp=Z,36nm,18.8s,baz=10.0,slow=40						
ASAR	Alice Springs	28.42	169	P	P	06 00 58.1	-0.7
	0.2nm,0.3s,baz=354,slow=7.7,SNR=2.9						
ASAR				PcP	PcP	06 04 10.2	-1.0
	0.6nm,0.6s,baz=357,slow=2.5,SNR=6.9						
PSI	Prapat	29.24	268	LR	LR	06 13 48.0	
	comp=Z,68nm,18.6s,baz=98,slow=38						
CMAR	Chiang Mai Arr	31.82	298	P	P	06 01 29.7	+0.7
	0.9nm,0.5s,baz=102,slow=7.5,SNR=3.5						
CMAR				LR	LR	06 14 46.9	
	comp=Z,34nm,18.1s,baz=173,slow=37						
MJAR	Matsushiro Arr	33.32	15	LR	LR	06 13 46.8	
	comp=Z,26nm,22.0s,baz=110,slow=34						
XAN	Xi'an	34.53	331	P	P	06 01 52.3	-0.2
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
XAN				pmax	pmax		
	comp=Z,110nm,7.1s						
XAN	Xi'an	34.53	331	*e*P	P	06 01 51.5	-1.0
	47nm,0.8s						
STKA	Stephens Creek	38.24	161	P	P	06 02 25.2	+1.0
	1.6nm,0.5s,baz=338,slow=12,SNR=3.6						
LZH	Lanzhou	38.71	328	*e*P	P	06 02 30.0	+1.6
LZH				pP	pwP	06 02 39.3	+4.3
LZH				sP	sP	06 02 43.5	+12
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC	Hu-ho-hao-te	39.27	340	*e*P	P	06 02 33.8	+0.9
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
SHL	Shillong	40.68	305	*e*x	P	06 02 45.0	+0.1
GTA	Gaotai	43.32	328	*e*P	P	06 03 06.8	+0.6
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ODAN	Odare	44.89	304	*e*P	P	06 03 19.1	-0.1
	17nm,0.7s						
RAMN	Ramite	45.58	304	*e*P	P	06 03 24.8	+0.1
	8.0nm,0.5s						
JIRN	Jiri	46.19	305	*e*P	P	06 03 29.3	-0.3
	19nm,0.7s						
GUN	Gumba	46.53	305	*e*P	P	06 03 32.0	-0.3
	16nm,0.7s						
PKI	Pulchoki	46.79	304	*e*P	P	06 03 34.2	-0.1
PKIN	Phulchoki	46.81	304	*e*P	P	06 03 34.7	+0.4
ULN	Ulaanbaatar	46.98	341	*e*P	P	06 03 34.9	-0.4
	5.0nm,0.9s						
SONM	Songino Array	47.18	340	P	P	06 03 36.9	+0.1
	1.5nm,0.8s,baz=154,slow=7.2,SNR=6.3						
KOLN	Koldanda	48.36	304	*e*P	P	06 03 46.3	-0.1
	19nm,0.7s						
DANN	Dangsing	48.44	304	*e*P	P	06 03 46.6	-0.4
	20nm,0.6s						
PYUN	Piuthan	48.98	304	*e*P	P	06 03 51.0	-0.1
	18nm,0.8s						
PETK	Petropavlovsk-	54.31	21	P	P	06 04 31.1	+0.8
	2.1nm,0.7s,baz=197,slow=8.5,SNR=3.8						
MKAR	Makanchi Array	57.87	324	P	P	06 04 55.9	0.0
	2.7nm,0.6s,baz=122,slow=8.3,SNR=47						
ZALV	Zalesovo Beam	60.69	332	P	P	06 05 14.1	-1.2
	1.7nm,0.7s,baz=110,slow=6.5,SNR=7.3						
KURK	Kurchatov	61.99	327	*e*P	P	06 05 23.8	-0.3
	47nm,0.6s						
GEYT	Alibeck	71.63	308	P	P	06 06 26.1	+0.1
	1.2nm,0.4s,baz=116,slow=5.0,SNR=4.2						
ILAR	Eielson Array	83.91	25	P	P	06 07 32.6	-1.1
	0.7nm,0.9s,baz=251,slow=5.4,SNR=6.3						
YKA	Yellowknife Ar	98.32	25	P	P	06 08 40.9	-0.7
	0.2nm,0.7s,baz=296,slow=4.4,SNR=4.7						

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*ISCJB **26** 06:09:17.1±0.4, 23°.96N±0°.02×122°.43E±0°.02, h27km±3km, Error ellipse: s-maj=3.9km s-min=2.2km az=160.9*
*JMA **26** 06:09:17.1±0.2, 23°.97N×122°.42E, h26km±5km, M2.9*
*TAP **26** 06:09:17.0, 23°.96N×122°.45E, h27km, ML3.1, D*
ISC 26 06:09:17.0±1.1**, 23°.97N**±0°.03×**122°.43E**±0°.02**, h25**km±12km**, n56, σ0ˢ.66**/99**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.64	335	*e*P	Pb	06 09 29.5	-0.1
	baz=333						
EOS1				*e*S	Sb	06 09 38.7	+0.6
	baz=333						
JYNG	Yonagunijimaku	0.67	44	P	Pb	06 09 30.0	-0.1
JYNG				S	Sb	06 09 38.5	-0.6
YOJ	Yonaguni jima	0.72	47	*e*P	Pb	06 09 30.9	0.0
	baz=44						
YOJ				*e*S	Sb	06 09 40.2	-0.3
	baz=44						
YOJ	Yonaguni jima	0.72	47	P	Pb	06 09 30.9	0.0
YOJ				S	Sb	06 09 39.8	-0.7
ENLB	Shoufeng	0.76	265	*e*S	Sn	06 09 42.7	0.0
	baz=266						
NANB	Nanao	0.77	306	*e*P	Pb	06 09 31.6	-0.2
	baz=306						
NANB				S	Sn	06 09 43.6	+0.6
	baz=306						
TWD	Chiawan	0.77	278	*e*P	Pb	06 09 31.4	-0.4
	baz=279						
TWD				*e*S	Sb	06 09 41.9	0.0
	baz=279						
ENA	Nanau	0.78	306	P	Pb	06 09 31.7	-0.2
	baz=306						
ENA				*e*S	Sn	06 09 43.8	+0.6
	baz=306						
NACB	Ninganchiao	0.79	285	*e*P	Pb	06 09 32.0	-0.1
	baz=285						
NACB				*e*S	Sb	06 09 43.1	+0.6
	baz=285						
TWC	Suao	0.83	320	P	Pb	06 09 32.0	-0.7
	baz=320						
TWC				*e*S	Sb	06 09 43.7	+0.2
	baz=320						
ETLH	Xiulin Townshi	0.90	285	*e*P	Pn	06 09 33.9	-0.2
	baz=285						
ETLH				*e*S	Sb	06 09 46.1	+0.5
	baz=285						
ESL	Shilin	0.93	261	*e*P	Pn	06 09 33.7	-0.7
	baz=261						
ESL				*e*S	Sb	06 09 46.1	-0.2
	baz=261						
EGFH	Guangfu	0.97	252	*e*S	Sn	06 09 48.0	+0.2
	baz=253						
EGS		0.98	333	P	Pn	06 09 35.4	+0.2
	baz=332						
EGS				*e*S	Sb	06 09 48.0	0.0
	baz=332						
TWE	Neicheng	1.02	317	P	Pn	06 09 35.9	+0.2
	baz=317						
HGSD	Ruisui	1.04	243	*e*P	Pn	06 09 35.5	-0.4
	baz=243						
HGSD				*e*S	Sn	06 09 49.1	-0.5
	baz=243						
NDT	Datong Townshi	1.05	307	P	Pb	06 09 37.1	+0.6
	baz=306						
NDT				*e*S	Sb	06 09 50.6	+0.8
	baz=306						
NNSB	Datong	1.06	296	*e*P	Pn	06 09 36.3	-0.1
	baz=295						
NNSB				*e*S	Sn	06 09 50.1	-0.2
	baz=295						
NNS	Nan Shan	1.07	296	P	Pn	06 09 36.6	0.0
	baz=296						
NNS				S	Sn	06 09 50.5	-0.2
	baz=296						
WHF	Hehuan Shan	1.08	280	*e*P	Pn	06 09 36.7	-0.2
	baz=279						
WHF				S	Sn	06 09 51.0	-0.3
	baz=279						
TWB1	Santiao Chiao	1.11	339	P	Pn	06 09 36.7	-0.2
	baz=338						
TWB1				*e*S	Sn	06 09 51.5	+0.1
	baz=338						
EHY	Hungye	1.11	246	*e*P	Pn	06 09 36.8	-0.2
	baz=246						
EHY				*e*S	Sn	06 09 51.2	-0.3
	baz=246						
TIPB	Shuangxi	1.14	331	*e*P	Pn	06 09 37.3	-0.1
	baz=330						
TIPB				S	Sn	06 09 52.0	-0.2
	baz=330						
CHGB	Renai	1.15	275	*e*P	Pn	06 09 37.7	0.0
	baz=275						
CHGB				*e*S	Sn	06 09 52.7	0.0
	baz=275						
TWT	Tachien	1.18	284	*e*S	Sb	06 09 54.6	+0.8
	baz=283						
YULB	Yu-li	1.19	241	*e*P	Pn	06 09 37.9	-0.1
	baz=242						
YULB				*e*S	Sn	06 09 52.9	-0.4
	baz=242						
YHNB	Yeheng	1.19	306	P	Pn	06 09 38.4	+0.3
	baz=305						
YHNB				*e*S	Sb	06 09 54.0	+0.1
	baz=305						
TDCB	Techi	1.20	284	*e*P	Pn	06 09 38.1	-0.2
	baz=284						
TDCB				*e*S	Sn	06 09 53.7	0.0
	baz=284						
VWDT	VWDT	1.20	260	*e*P	Pn	06 09 38.4	+0.3
	baz=260						
VWDT				*e*S	Sn	06 09 53.5	-0.1
	baz=260						
NSK	Sanguang	1.21	306	*e*P	Pn	06 09 38.3	+0.1
	baz=305						
NSK				*e*S	Sn	06 09 53.7	-0.2
	baz=305						
TWF1	Yuli	1.21	240	P	Pn	06 09 38.3	0.0
	baz=240						
TWF1				*e*S	Sn	06 09 54.0	+0.2
	baz=240						
IRIF	Iriomote-Funau	1.24	73	P	Pb	06 09 40.1	+0.3
IRIF				S	Sb	06 09 56.0	+0.6
HATJ	Hateruma jima	1.26	86	P	Pn	06 09 39.1	+0.1
HATJ				S	Sb	06 09 55.9	0.0
FULB	Fuli	1.29	234	*e*P	Pn	06 09 39.3	-0.1
	baz=234						
FULB				*e*S	Sn	06 09 55.9	-0.1
	baz=234						
WHP	Taichung City	1.39	283	*e*P	Pb	06 09 43.1	+0.7
	baz=283						
WHP				*e*S	Sb	06 10 01.4	+1.7
	baz=283						
SMLT	Sun Moon Lake	1.40	267	*e*P	Pn	06 09 41.5	+0.5
	baz=266						
SMLT				*e*S	Sn	06 09 59.2	+0.4
	baz=266						
JKRS	Kuro-shima	1.47	79	P	Pb	06 09 42.7	-0.9
JKRS				S	Sn	06 10 00.1	-0.1
ELDTW	Lidau	1.51	239	*e*P	Pn	06 09 42.4	-0.2
	baz=239						
ELDTW				*e*S	Sn	06 10 01.4	0.0
	baz=239						
JIJ	Ishigaki jima	1.61	76	P	Pn	06 09 44.5	+0.7
JIJ				S	Sn	06 10 04.3	+0.5
CHN5	Tsauling	1.65	257	*e*P	Pn	06 09 45.6	+1.2
	baz=257						
PCYT	Pengchaiyu	1.69	349	*e*P	Pn	06 09 44.7	-0.2
	baz=348						
TWGBT	Beinan	1.69	228	*e*P	Pn	06 09 45.1	+0.2
	baz=228						
TWGBT				*e*S	Sn	06 10 05.4	-0.3
	baz=228						
TWG	Pinlang	1.69	228	P	Pn	06 09 45.1	+0.1
	baz=228						
TWG				*e*S	Sn	06 10 05.5	-0.3
	baz=228						
STYT	Tauyuan	1.73	243	*e*P	Pn	06 09 46.5	+1.0
	baz=242						
CHN4	Tsaushan	1.79	250	*e*P	Pb	06 09 49.0	-0.2
	baz=250						
CHN4				*e*S	Sb	06 10 12.1	+0.9
	baz=250						
WTP	Ta-pu	1.81	247	*e*P	Pb	06 09 48.4	-1.2
	baz=247						
JISG	Ishigakijimahi	1.82	70	P	Pb	06 09 48.2	-1.5
JISG				S	Sn	06 10 10.1	+1.1
TWK	Hsinying	1.91	249	*e*P	Pb	06 09 50.1	-1.2
	baz=248						
TWK				*e*S	Sn	06 10 12.9	+1.6
	baz=248						
SSD	Sandimen	2.05	234	*e*P	Pn	06 09 51.0	+1.2
	baz=234						
LAY	Lan-yu	2.08	203	*e*P	Pn	06 09 50.1	-0.3
	baz=203						
EAST	Anshuo	2.15	223	*e*P	Pn	06 09 51.6	+0.4
	baz=223						
JTJ	Tarama	2.18	72	S	Sn	06 10 19.0	+1.2
WDGT	Dungji	2.64	255	*e*P	Pn	06 09 58.7	+0.8
	baz=254						
WDGT				*e*S	Sn	06 10 29.5	+0.4
	baz=254						
PHUB	P'eng-hu	2.66	261	*e*S	Sn	06 10 29.4	-0.2
	baz=260						
VWUC	VWUC	2.90	291	*e*P	Pn	06 10 01.3	-0.2
	baz=290						
VWUC				*e*S	Sn	06 10 33.3	-2.3
	baz=290						
PTMZ	Houxiangcun	3.20	290	*e*P	Pn	06 10 05.6	-0.1
	baz=289						
PTMZ				*e*S	Sn	06 10 40.2	-2.8
	baz=289						

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*ISK **26** 06:11:49.6, 37°.59N×35°.70E, h9km, ML2.2/4*
*DDA **26** 06:11:51.0, 37°.54N×35°.66E, h7km±4km, ML2.6*
ISC 26 06:11:51.0±1.1**, 37°.52N**±0°.03×**35°.66E**±0°.03**, h7**km±11km**, n14, σ0ˢ.92**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	Kozan	0.14	105	PG	Pg	06 11 53.7	-0.2
KOZT				SG	Sg	06 11 55.7	-0.2
CEYT	Ceyhan	0.51	172	PG	Pg	06 12 01.3	+0.4
CEYT				SG	Sb	06 12 10.2	+0.3
KARA	Karaisali	0.55	242	PG	Pg	06 12 01.7	+0.2
KARA				SG	Sb	06 12 10.6	-0.3
ANDN	Andirin	0.55	83	*i* P	Pb	06 12 01.9	-1.1
SAIM	ADANA	0.57	36	*i* P	Pb	06 12 01.9	-1.5
YAHY	KAYSERI_Yahyal	0.62	338	*i* P	Pb	06 12 03.8	-0.5
YAHY				*i* S	Sb	06 12 12.4	-0.9
YAHY				IAML_P			
	comp=Z,864nm,0.1s						
YURE	YUREGIR	0.69	182	PG	Pg	06 12 04.2	-0.1
YURE	YUREGIR	0.69	182	*i* P	Pb	06 12 05.1	-0.3
GULE	Gulek	0.74	252	*i* P	Pb	06 12 06.0	-0.4
GULE				*i* S	Sb	06 12 17.2	+0.5
TAHT	Tahtakopru-Hat	1.22	160	PN	Pn	06 12 13.6	-0.8
KERG	Konya-Eregli	1.23	266	*i* P	Pg	06 12 14.3	-0.2
KERG				IAML_P			
	comp=Z,100nm,0.1s						
ELBS	KAHRAMANMARAS	1.42	55	*i* P	Pg	06 12 19.3	+1.1
ELBS				*i* S	Sg	06 12 38.7	+2.2
ELBS				IAML_P			
	comp=Z,115nm,0.2s						
GZT	Gaziantep	1.52	96	*i* P	Pg	06 12 21.2	+0.9
KEBE	Keben-Mersin	1.89	236	PN	Pn	06 12 24.5	+0.8

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*IDC **26** 06:21:40.0±0.8, 57°.44S×147°.20E, h0km, mb4.3/6, mb1 4.5/6, mb1mx4.1/35, mbtmp4.3/6, MS3.8/12, Ms1 3.8/12, ms1mx3.7/19, Error ellipse: s-maj=39.9km s-min=18.8km az=81.0*
*NEIC **26** 06:21:41.3±0.5, 57°.44S×147°.26E, h10km, mb4.6/1, Error ellipse: s-maj=24.2km s-min=11.3km az=81.0*
ISC 26 06:21:41.3±0.7**, 57°.3S**±0°.1×**147°.9E**±0°.2**, h10km, n32, σ1ˢ.61**/18**, mb4.4**/6**, MS3.7**/11**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	19.93	57	LR	LR	06 32 20.4	
	comp=Z,429nm,21.5s,baz=221,slow=32						
VNDA	Vanda	20.88	172	P	P	06 26 21.9	-1.1
	7.7nm,1.0s,baz=326,slow=11,SNR=4.8						
VNDA				LR	LR	06 33 28.6	
	comp=Z,284nm,19.2s,baz=342,slow=34						
STKA	Stephens Creek	25.79	348	P	P	06 27 13.5	+1.3
	3.5nm,0.7s,baz=168,slow=10,SNR=6.2						
URZ	Urewera	27.04	58	P	P	06 27 26.4	+3.0
	12nm,0.9s,baz=269,slow=8.3,SNR=3.7						
URZ				LR	LR	06 36 41.6	
	comp=Z,378nm,21.0s,baz=209,slow=33						
H01W1	Cape Leeuwin H	31.85	300	T	T	07 01 39.4	
	baz=144,slow=75,SNR=66						
H01W2	Cape Leeuwin H	31.86	300	T	T	07 01 42.7	
	baz=144,slow=75,SNR=56						
H01W3	Cape Leeuwin H	31.87	300	T	T	07 01 41.6	
	baz=144,slow=75,SNR=48						
QSPA	South Pole Qui	32.80	180	P	P	06 28 13.3	-1.1
QSPA				*e*P	P	06 28 15.2	+0.8
QSPA	South Pole Qui	32.80	180	P	P	06 28 13.3	-1.1
	6.7nm,1.0s,baz=8.0,slow=3.8,SNR=8.7						
ASAR	Alice Springs	35.09	337	P	P	06 28 34.5	0.0
	2.1nm,0.7s,baz=166,slow=9.7,SNR=18						
ASAR				LR	LR	06 40 32.7	
	comp=Z,93nm,20.8s,baz=160,slow=32						
CTA	Charters Tower	37.18	358	LR	LR	06 42 51.6	
	comp=Z,326nm,19.1s,baz=166,slow=34						
MAW	Mawson	37.45	219	LR	LR	06 42 52.1	
	comp=Z,425nm,20.9s,baz=106,slow=34						
DZM	Mont Dzumac	37.72	29	*e*S	S	06 34 43.0	-4.3
	74nm,25.0s						
DZM				*e*LR	LR	06 39 08.6	
	comp=Z,734nm,25.6s						
WRA	Warramunga Arr	38.63	339	P	P	06 29 04.0	-0.6
	4.0nm,0.7s,baz=165,slow=7.2,SNR=19						
WRA				LR	LR	06 44 54.6	
	comp=Z,55nm,18.3s,baz=190,slow=36						
WRAB	Tennant Creek	38.63	339	*e*P	P	06 29 04.3	-0.4
	14nm,1.1s						
PPT2	Papeete2	60.61	76	*e*LR	LR	06 49 52.8	
	comp=Z,98nm,25.0s						
PPT	Papeete	60.62	76	LR	LR	06 52 46.6	
	comp=Z,46nm,21.6s,baz=202,slow=31						
GUMO	Guam	70.67	357	LR	LR	07 04 57.4	
	comp=Z,50nm,18.1s,baz=106,slow=37						
H08S2	Diego Garcia H	75.71	278	T	T	07 56 25.7	
	baz=147,slow=76,SNR=20						
H08S1	Diego Carcia H	75.72	278	T	T	07 56 27.5	
	baz=147,slow=76,SNR=6.6						
H08S3	Diego Garcia H	75.72	278	T	T	07 56 28.7	
	baz=147,slow=76,SNR=40						
CMAR	Chiang Mai Arr	85.74	314	LR	LR	07 11 43.3	
	comp=Z,61nm,19.6s,baz=183,slow=35						
MJAR	Matsushiro Arr	93.84	352	LR	LR	07 17 44.3	
	comp=Z,18nm,18.3s,baz=90,slow=36						
KSRS	Korea Array	95.89	344	LR	LR	07 17 43.1	
	comp=Z,12nm,19.7s,baz=50,slow=35						
AAK	Ala-Archa	116.89	308	*e*PKPdf	PKiKP	06 40 26.1	+0.8
YKA	Yellowknife Ar	140.98	47	PKP	PKPdf	06 41 09.9	0.0
	0.2nm,0.7s,baz=250,slow=3.3,SNR=4.0						
ULM	Lac du Bonnet	142.95	73	PKP	PKPdf	06 41 14.3	+0.4
	1.7nm,1.0s,baz=233,slow=10,SNR=3.0						
AKASG	Malin Array Be	144.45	286	PKP	PKPab	06 41 14.2	-0.7
	0.3nm,0.4s,baz=108,slow=3.5,SNR=3.8						
KEST	Kesra	145.00	250	PKP	PKPdf	06 41 19.1	+0.9
	4.2nm,0.9s,baz=63,slow=6.8,SNR=4.0						
FINES	FINESS Array B	150.92	303	PKPbc	PKPbc	06 41 32.2	-0.4
	4.3nm,0.9s,baz=108,slow=5.0,SNR=6.1						
RES	Resolute Bay	151.13	29	PKPbc	PKiKP	06 41 34.6	+1.4
	1.1nm,0.3s,baz=230,slow=4.8,SNR=17						
GERES	GERESS Array B	151.68	273	PKPbc	PKPbc	06 41 34.2	-0.7
	0.6nm,0.4s,baz=124,slow=0.7,SNR=3.8						

IDC 26 06:26:17.4±2.4**, 1°.89S×139°.59E, h0km, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.7**/33**, mbtmp3.9**/5**, ML4.1**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/22**, Error ellipse: s-maj=77.3km**

s-min=26.0km az=85.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.66**	**196**	P	P	06 30 35.4	-1.7
	0.7nm,0.3s,baz=20,slow=12,SNR=26						
WRA				S	Sn	06 33 53.2	-14
	0.1nm,0.3s,baz=16,slow=24,SNR=3.9						
FITZ	**Fitzroy Crossi**	**21.14**	**219**	P	P	06 31 05.4	+1.3
	5.0nm,1.0s,baz=45,slow=13,SNR=2.7						
FITZ				S	S	06 34 50.1	-10
	7.0nm,1.0s,baz=334,slow=16,SNR=3.8						
FITZ				LR	LR	06 40 25.1	
	comp=Z,59nm,18.3s,baz=48,slow=40						
ASAR	**Alice Springs**	**22.34**	**194**	P	P	06 31 16.2	-0.8
	2.8nm,0.7s,baz=23,slow=10,SNR=26						
ASAR				S	S	06 35 19.1	-4.7
	0.4nm,0.8s,baz=20,slow=24,SNR=2.9						
STKA	**Stephens Creek**	**29.89**	**177**	P	P	06 32 28.2	+1.3
	1.3nm,0.8s,baz=351,slow=11,SNR=3.7						
H11S3	**WAKE ISLAND Hy**	**33.49**	**52**	T	T	07 08 39.0	
	baz=236,slow=75,SNR=32						
H11S2	**WAKE ISLAND Hy**	**33.50**	**52**	T	T	07 08 40.3	
	baz=236,slow=75,SNR=58						
H11S1	**WAKE ISLAND Hy**	**33.50**	**52**	T	T	07 08 41.1	
	baz=236,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**34.34**	**50**	T	T	07 09 43.8	
	baz=233,slow=74						
H11N2	**WAKE ISLAND Hy**	**34.35**	**50**	T	T	07 09 48.6	
	baz=233,slow=74						
H11N3	**WAKE ISLAND Hy**	**34.36**	**50**	T	T	07 09 54.0	
	baz=233						
MKAR	**Makanchi Array**	**69.69**	**322**	P	P	06 37 28.8	-0.3
	0.6nm,0.7s,baz=109,slow=7.4,SNR=5.7						

*IDC **26** 06:29:25.7±0.7, 0°.63N×28°.93W, h0km, mb4.2/13, mb1 4.3/13, mb1mx4.1/40, mbtmp4.2/13, MS3.8/15, Ms1 3.8/15, ms1mx3.6/27, Error ellipse: s-maj=31.0km s-min=13.7km az=155.0*

*ISCJB **26** 06:29:27.2±0.5, 0°.9N±0°.2×29°.08W±0°.06, h16km, mb4.2/12, MS3.8/14, Error ellipse: s-maj=23.3km s-min=7.6km az=166.0*

ISC 26 06:29:28.4±0.7, **0°.8N**±0°.2×**29°.0W**±0°.1, **h16km, n58, σ1ˢ.27**/40, **mb4.0**/12, **MS3.8**/14, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	**ASCENSION HYDR**	**16.83**	**121**	T	T	06 50 55.7	
	baz=300,slow=75,SNR=2552						
H10N2	**ASCENSION HYDR**	**16.83**	**121**	T	T	06 50 56.1	
	baz=300,slow=75,SNR=2172						
H10N1	**ASCENSION HYDR**	**16.85**	**121**	T	T	06 50 57.3	
	baz=300,slow=75,SNR=4272						
H10S3	**ASCENSION HYDR**	**17.27**	**124**	T	T	06 51 30.9	
	baz=303,slow=75,SNR=2436						
H10S1	**ASCENSION HYDR**	**17.28**	**124**	T	T	06 51 31.3	
	baz=303,slow=75,SNR=3424						
H10S2	**ASCENSION HYDR**	**17.29**	**124**	T	T	06 51 32.3	
	baz=303,slow=75,SNR=2135						
MDP	**Montagnes des**	**23.96**	**281**	LR	LR	06 41 44.6	
	comp=Z,123nm,21.0s,baz=92,slow=31						
LIC	**Lamto**	**24.56**	**77**	*e*P	**P**	**06 34 48.7**	**+0.8**
	53nm,1.2s						
TIC	**Toumodi**	**24.66**	**76**	*e*P	**P**	**06 34 49.7**	**+0.9**
DBIC	**Dimbokro**	**24.82**	**76**	P	**P**	**06 34 50.6**	**+0.3**
	33nm,1.0s,baz=241,slow=9.6,SNR=12						
DBIC				LR	LR	06 42 46.0	
	comp=Z,64nm,20.7s,baz=232,slow=32						
BDFB	**Brasilia**	**24.84**	**228**	P	**P**	**06 34 49.7**	**-0.8**
	1.9nm,0.6s,baz=33,slow=12,SNR=4.2						
BDFB				LR	LR	06 43 38.3	
	comp=Z,324nm,18.6s,baz=77,slow=34						
KIC	**Kosan Boka**	**24.87**	**77**	*e*P	**P**	**06 34 51.4**	**+0.7**
	71nm,1.2s						
TORD	**Torodi Ar. Bea**	**32.84**	**67**	P	**P**	**06 36 01.5**	**-0.2**
	1.7nm,0.9s,baz=246,slow=9.8,SNR=7.5						
TORD				LR	LR	06 47 22.4	
	comp=Z,117nm,20.6s,baz=295,slow=33						
H05S1	**Guadeloupe/Mar**	**34.24**	**295**	T	T	07 11 52.1	
	SNR=20						
H05N1	**Guadeloupe/Mar**	**35.14**	**298**	T	T	07 12 56.5	
SIV	**San Ignacio**	**35.74**	**241**	P	**P**	**06 36 27.7**	**+0.8**
	2.4nm,1.1s,baz=75,slow=10,SNR=5.6						
CPUP	**Villa Florida**	**38.34**	**223**	LR	LR	06 52 18.7	
	comp=Z,475nm,18.9s,baz=40,slow=36						
H09N1	**TRISTAN DA CUN**	**40.71**	**159**	T	T	07 20 47.3	
	SNR=36						
H09W1	**TRISTAN DA CUN**	**40.73**	**159**	T	T	07 20 47.8	
	SNR=57						
LPAZ	**La Paz**	**42.13**	**245**	P	**P**	**06 37 21.2**	**+0.1**
	7.3nm,1.0s,baz=54,slow=8.3,SNR=14						
LPAZ				LR	LR	06 54 08.5	
	comp=Z,75nm,19.8s,baz=67,slow=35						
SDV	**Santo Domingo**	**42.19**	**282**	*e*P	**P**	**06 37 20.0**	**-1.1**
SDV	**Santo Domingo**	**42.19**	**282**	*e*P	**P**	**06 37 20.0**	**-1.1**
SDV	**Santo Domingo**	**42.19**	**282**	P	**P**	**06 37 21.8**	**+0.7**
	17nm,0.9s,baz=92,slow=3.5,SNR=19						
PAMC	**Pamplona, Colo**	**44.01**	**280**	*e*P	**P**	**06 37 36.7**	**+0.5**
PAMC	**Pamplona, Colo**	**44.01**	**280**	*e*P	**P**	**06 37 36.7**	**+0.5**
RUSC	**La Rusia**	**44.25**	**278**	*e*P	**P**	**06 37 39.2**	**+1.1**
RUSC	**La Rusia**	**44.25**	**278**	*e*P	**P**	**06 37 39.2**	**+1.1**
BARC	**Barichara**	**44.41**	**279**	*e*P	**P**	**06 37 40.1**	**+0.9**
BARC	**Barichara**	**44.41**	**279**	*e*P	**P**	**06 37 40.1**	**+0.9**
OCAC	**Ocana**	**44.73**	**281**	*e*P	**P**	**06 37 39.2**	**-2.4**
OCAC	**Ocana**	**44.73**	**281**	*e*P	**P**	**06 37 39.2**	**-2.4**
ESDC	**Sonseca Array**	**44.98**	**28**	P	**P**	**06 37 43.0**	**-0.1**
	1.7nm,0.8s,baz=218,slow=8.4,SNR=8.8						
ROSC	**El Rosal**	**45.40**	**276**	*e*P	**P**	**06 37 47.7**	**+0.4**
ROSC	**El Rosal**	**45.40**	**276**	*e*P	**P**	**06 37 47.7**	**+0.4**
ROSC	**El Rosal**	**45.40**	**276**	P	**P**	**06 37 48.2**	**+1.0**
	10nm,0.7s,baz=105,slow=9.8,SNR=11						
ROSC				LR	LR	06 55 40.0	
	comp=Z,173nm,18.2s,baz=77,slow=35						
PTBC	**PUERTO BERRIO,**	**45.66**	**278**	*e*P	**P**	**06 37 46.9**	**-2.0**
PTBC	**PUERTO BERRIO,**	**45.66**	**278**	*e*P	**P**	**06 37 46.9**	**-2.0**
ZARC	**Zaragoza, Cauc**	**46.16**	**280**	*e*P	**P**	**06 37 50.1**	**-2.7**
ZARC	**Zaragoza, Cauc**	**46.16**	**280**	*e*P	**P**	**06 37 50.1**	**-2.7**
PLMC	**San Jos del P**	**47.35**	**276**	*e*P	**P**	**06 38 01.0**	**-1.3**
PLMC	**San Jos del P**	**47.35**	**276**	*e*P	**P**	**06 38 01.0**	**-1.3**
SOTA	**Rioblanco**	**47.57**	**272**	*e*P	**P**	**06 38 06.0**	**+1.5**
SOTA	**Rioblanco**	**47.57**	**272**	*e*P	**P**	**06 38 06.0**	**+1.5**
POPC	**Popayan, Colom**	**47.65**	**273**	*e*P	**P**	**06 38 04.4**	**-0.3**
POPC	**Popayan, Colom**	**47.65**	**273**	*e*P	**P**	**06 38 04.4**	**-0.3**
KEST	**Kesra**	**49.81**	**41**	LR	LR	07 00 06.3	
	comp=Z,140nm,19.0s,baz=214,slow=37						
GERES	**GERESS Array B**	**60.33**	**31**	P	**P**	**06 39 37.6**	**+0.9**
	1.2nm,0.3s,baz=219,slow=7.6,SNR=6.5						
GERES				LR	LR	07 04 20.0	
	comp=Z,42nm,18.2s,baz=274,slow=35						
NOA	**NORSAR Array B**	**67.48**	**20**	LR	LR	07 07 11.0	
	comp=Z,49nm,18.2s,baz=230,slow=34						
BRTR	**Keskin Array B**	**68.75**	**47**	P	**P**	**06 40 31.6**	**-0.4**
	0.4nm,0.4s,baz=235,slow=5.1,SNR=5.7						
BRTR				LR	LR	07 12 18.8	
	comp=Z,42nm,19.0s,baz=272,slow=37						
AKASG	**Malin Array Be**	**69.84**	**35**	P	**P**	**06 40 37.6**	**-0.7**
	23nm,1.4s,baz=243,slow=6.3,SNR=11						
FINES	**FINESS Array B**	**73.36**	**24**	LR	LR	07 10 02.1	
	comp=Z,60nm,20.0s,baz=260,slow=33						
ULM	**Lac du Bonnet**	**74.77**	**322**	LR	LR	07 09 34.2	
	comp=Z,47nm,18.9s,baz=173,slow=32						
TXAR	**Lajitas Array**	**76.24**	**300**	P	**P**	**06 41 17.5**	**+0.7**
	1.1nm,1.0s,baz=101,slow=6.2,SNR=6.7						
ARCES	**ARCESS Array B**	**77.50**	**17**	LR	LR	07 12 04.5	
	comp=Z,46nm,21.0s,baz=298,slow=33						
PDAR	**Pinedale Array**	**82.52**	**313**	LR	LR	07 14 12.1	
	comp=Z,56nm,19.3s,baz=300,slow=32						
NVAR	**Mina Array Bea**	**88.95**	**308**	P	**P**	**06 42 23.9**	**+0.9**
	0.5nm,0.7s,baz=125,slow=5.8,SNR=3.7						
ASAR	**Alice Springs**	**151.85**	**145**	PKPbc	**PKPbc**	**06 49 22.4**	**-1.2**
	0.9nm,0.8s,baz=194,slow=2.5,SNR=7.5						
WRA	**Warramunga Arr**	**154.94**	**141**	PKPbc	**PKPbc**	**06 49 29.1**	**-1.2**
	0.6nm,1.0s,baz=237,slow=2.3,SNR=2.6						

*DDA **26** 06:48:14.8, 37°.52N×35°.70E, h7km±6km, ML2.5*

*ISK **26** 06:48:14.6, 37°.55N×35°.69E, h5km, ML2.3/7*

*ISCJB **26** 06:48:15.5±0.4, 37°.52N±0°.03×35°.69E±0°.03, h9km±4km, Error ellipse: s-maj=5.1km s-min=4.1km az=142.0*

ISC 26 06:48:15.2±1.0, **37°.53N**±0°.03×**35°.70E**±0°.03, **h9km**±8km, **n19, σ0ˢ.56**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.11**	**116**	PG	**Pg**	**06 48 17.9**	**0.0**
KOZT				SG	**Sg**	**06 48 19.9**	**+0.1**
ANDN	**Andirin**	**0.52**	**84**	*i* P	**Pg**	**06 48 25.1**	**-0.1**
ANDN				*i* S	**Sb**	**06 48 34.7**	**+0.6**
ANDN				IAML_P			
	comp=Z,4μm,0.3s						
CEYT	**Ceyhan**	**0.52**	**176**	PG	**Pb**	**06 48 25.6**	**-0.8**
CEYT				SG	**Sb**	**06 48 33.6**	**-0.5**
SAIM	**ADANA**	**0.54**	**34**	*i* P	**Pb**	**06 48 26.8**	**0.0**
SAIM				*i* S	**Sb**	**06 48 34.5**	**-0.3**
KARA	**Karaisali**	**0.58**	**242**	PG	**Pg**	**06 48 26.3**	**-0.1**
KARA				SG	**Sg**	**06 48 34.3**	**+0.3**
YAHY	**KAYSERI_Yahyal**	**0.62**	**335**	*i* P	**Pb**	**06 48 28.4**	**+0.1**
YAHY				*i* S	**Sb**	**06 48 37.1**	**-0.1**
YAHY				IAML_P			
	comp=Z,910nm,0.1s						
YURE	**YUREGIR**	**0.71**	**184**	PG	**Pg**	**06 48 28.6**	**-0.2**
GULE	**Gulek**	**0.78**	**252**	*i* P	**Pb**	**06 48 30.4**	**-0.5**
GULE				*i* S	**Sb**	**06 48 42.5**	**+0.9**
GULE				IAML_P			
	comp=Z,649nm,0.2s						
MERS	**Mersin**	**1.15**	**235**	PN	**Pb**	**06 48 37.2**	**0.0**
TAHT	**Tahtakopru-Hat**	**1.22**	**161**	PN	**Pn**	**06 48 38.6**	**+0.3**
GAZ	**Gaziantep**	**1.26**	**106**	PN	**Pn**	**06 48 39.3**	**+0.4**
KERG	**Konya-Eregli**	**1.26**	**265**	*i* P	**Pg**	**06 48 38.3**	**-1.1**
BNN	**Bunyan**	**1.32**	**5**	PN	**Pn**	**06 48 39.7**	**-0.2**
ELBS	**KAHRAMANMARAS**	**1.38**	**55**	*i* P	**Pn**	**06 48 40.4**	**-0.3**
ELBS				IAML_P			
	comp=Z,104nm,0.2s						
GZT	**Gaziantep**	**1.49**	**96**	*i* P	**Pn**	**06 48 42.6**	**+0.3**
GZT				IAML_P			
	comp=Z,205nm,0.1s						
KIZK	**Mersin**	**1.63**	**230**	PN	**Pb**	**06 48 44.7**	**-0.6**
DARE	**Darende-Malaty**	**1.75**	**53**	PN	**Pn**	**06 48 46.3**	**+0.5**
KEBE	**Keben-Mersin**	**1.92**	**236**	PN	**Pn**	**06 48 49.0**	**+0.9**
TEVE	**Tevekalti-Mers**	**2.11**	**240**	PN	**Pn**	**06 48 51.8**	**+1.1**

IDC 26 06:49:58.0±1.8, **7°.29S**×**123°.16E, h0km, mb3.2**/1, **mb1 3.5**/3, **mb1mx3.3**/35, **mbtmp3.3**/3, **ML3.7**/1, **Error ellipse: s-maj=280.6km s-min=28.9km az=57.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.61**	**140**	Pn	Pn	06 53 52.9	+0.4
	baz=311,slow=12,SNR=2.4						
ASAR	**Alice Springs**	**19.28**	**149**	P	P	06 54 24.4	-0.2
	0.2nm,0.3s,baz=330,slow=11,SNR=5.3						
MKAR	**Makanchi Array**	**64.92**	**330**	P	P	07 00 39.4	0.0
	0.2nm,0.6s,baz=140,slow=7.6,SNR=2.6						

MEX 26 06:51:17.1±0.5, **16°.33N**×**98°.20W, h14km**±1km, **MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.10**	**47**	*i* P	Pg	06 51 19.0	-1.2
PNIG				*i* S	Sg	06 51 21.8	-0.6
VHO	**Vista Hermosa**	**1.59**	**62**	*e*P	Pn	06 51 41.8	-3.3
VHO				*e*S	Sn	06 52 01.0	-4.5

IDC 26 06:59:49.1±61.0, **20°.81S**×**179°.61W, h0km, mb3.8**/3, **mb1 4.0**/3, **mb1mx3.7**/30, **mbtmp3.8**/3, **Error ellipse: s-maj=1093.0km s-min=152.5km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.30**	**244**	P	P	07 06 53.5	-1.0
	0.5nm,0.3s,baz=90,slow=8.1,SNR=2.7						
ASAR	**Alice Springs**	**42.98**	**257**	P	P	07 07 51.3	+0.9
	1.8nm,0.6s,baz=91,slow=7.9,SNR=20						
WRA	**Warramunga Arr**	**43.07**	**263**	P	P	07 07 50.7	-0.4
	0.3nm,0.3s,baz=96,slow=7.5,SNR=11						

*ISCJB **26** 07:02:19.8±1.1, 13°.35S±0°.04×167°.22E±0°.05, h236km±11km, mb4.6/84, Error ellipse: s-maj=8.0km s-min=6.8km az=8.4*

*IDC **26** 07:02:19.3±0.7, 13°.32S×167°.27E, h218km±6km, mb4.2/22, mb1 4.3/23, mb1mx4.2/32, mbtmp4.7/23, Error ellipse: s-maj=13.2km s-min=8.8km az=97.0*

*BJI **26** 07:02:19.4, 13°.18S×167°.50E, h232km, mB5.0/16, mb4.6/32*

*NEIC **26** 07:02:20.6±0.6, 13°.30S×167°.22E, h231km±6km, mb4.7/59, Error ellipse: s-maj=4.2km s-min=3.5km az=81.0*

ISC 26 07:02:19.9±0.7, **13°.30S**±0°.06×**167°.25E**±0°.08, **h223km**±6km, **n160, σ0ˢ.90**/180, **mb4.7**/83, **1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**8.17**	**175**	*e*Pn	**Pn**	**07 04 15.1**	**-0.2**
DZM	**Mont Dzumac**	**8.76**	**185**	*e*Pn	**Pn**	**07 04 23.1**	**+0.2**
DZM				*e*S	**S**	**07 06 05.0**	**+3.2**
DZM	**Mont Dzumac**	**8.76**	**185**	P	**Pn**	**07 04 23.2**	**+0.2**
	1.5nm,0.3s,baz=291,slow=18,SNR=12						
DZM				S	**S**	**07 06 03.4**	**+1.5**
	0.7nm,0.3s,baz=131,slow=19,SNR=2.5						
ONTNC	**Ouen Toro**	**8.99**	**185**	*e*Pn	**Pn**	**07 04 26.5**	**+0.6**
PINNC	**Pines Island,**	**9.26**	**179**	*e*Pn	**Pn**	**07 04 29.7**	**+0.3**
EIDS	**Eidsvold**	**19.39**	**229**	*e*P	**P**	**07 06 29.7**	**+0.5**
	23nm,0.6s						
CTA	**Charters Tower**	**21.20**	**249**	P	**P**	**07 06 48.3**	**-0.2**
	9.2nm,0.9s,baz=71,slow=13,SNR=7.3						
CTA				PcP	**PcP**	**07 10 44.0**	**-0.5**
	1.1nm,0.5s,baz=169,slow=2.7,SNR=3.1						
CTAO	**Charters Tower**	**21.20**	**249**	*e*P	**P**	**07 06 48.3**	**-0.2**
	29nm,1.4s						
ARMA	**Armidale**	**22.32**	**218**	*e*P	**P**	**07 06 59.8**	**+0.5**
	14nm,0.8s						
OUZ	**Omahuta**	**22.57**	**166**	*e*P	**P**	**07 07 02.2**	**+0.9**
	69nm,1.6s						
COEN	**Coen**	**23.40**	**266**	*e*P	**P**	**07 07 09.5**	**+0.3**
	13nm,0.7s						
MXZ	**Matakaoa Point**	**26.10**	**160**	*e*P	**P**	**07 07 33.5**	**+0.3**
	98nm,1.2s						
URZ	**Urewera**	**26.36**	**162**	*e*P	**P**	**07 07 35.9**	**+0.4**
URZ	**Urewera**	**26.36**	**162**	P	**P**	**07 07 35.1**	**-0.5**
	10nm,0.7s,baz=127,slow=1.4,SNR=8.9						
BKZ	**Black Stump Fm**	**27.03**	**164**	*e*P	**P**	**07 07 41.5**	**-0.1**
	19nm,1.2s						
BFZ	**Birch Farm**	**28.39**	**166**	*e*P	**P**	**07 07 53.1**	**-0.5**
	23nm,1.0s						
SNZO	**South Karori**	**28.66**	**168**	*e*P	**P**	**07 07 56.2**	**+0.3**
THZ	**Tophouse**	**28.78**	**171**	*e*P	**P**	**07 07 57.8**	**+0.7**
	12nm,0.8s						
KHZ	**Kahutara**	**29.52**	**171**	*e*P	**P**	**07 08 03.5**	**+0.1**
	12nm,0.9s						
LTZ	**Lake Taylor**	**29.70**	**173**	*e*P	**P**	**07 08 05.7**	**+0.6**
	17nm,0.8s						
STKA	**Stephens Creek**	**29.92**	**228**	*e*P	**P**	**07 08 07.4**	**+0.2**
	2.4nm,0.6s						
STKA				*e*PcP	**PcP**	**07 11 04.3**	**+0.1**
STKA	**Stephens Creek**	**29.92**	**228**	P	**P**	**07 08 07.7**	**+0.5**
	10nm,0.6s,baz=48,slow=8.4,SNR=54						
STKA				PcP	**PcP**	**07 11 04.1**	**-0.1**
	11nm,0.6s,baz=84,slow=3.8,SNR=19						
STKA				ScP	**ScP**	**07 14 27.0**	**+1.8**
	1.9nm,0.6s,baz=49,slow=2.4,SNR=5.5						
OXZ	**Oxford**	**30.20**	**173**	*e*P	**P**	**07 08 09.7**	**+0.2**
	13nm,0.7s						
FOZ	**Fox Glacier**	**30.21**	**176**	*e*P	**P**	**07 08 10.1**	**+0.6**
	14nm,0.7s						
RPZ	**Rata Peaks**	**30.48**	**175**	*e*P	**P**	**07 08 12.3**	**+0.3**
	39nm,1.6s						
RPZ	**Rata Peaks**	**30.48**	**175**	P	**P**	**07 08 12.5**	**+0.5**
	6.9nm,0.6s,baz=287,slow=4.7,SNR=6.2						
MQZ	**McQueen's Vall**	**30.65**	**172**	*e*P	**P**	**07 08 13.7**	**+0.2**
	42nm,1.3s						
TOO	**Toolangi**	**30.99**	**215**	*e*P	**P**	**07 08 16.5**	**-0.1**
	16nm,1.4s						
LBZ	**Lake Benmore**	**31.08**	**176**	*e*P	**P**	**07 08 17.2**	**0.0**
	24nm,1.3s						
WKZ	**Wanaka**	**31.46**	**178**	*e*P	**P**	**07 08 21.0**	**+0.5**
	68nm,1.7s						
ODZ	**Otahua Downs**	**31.77**	**175**	*e*P	**P**	**07 08 23.3**	**+0.1**
	19nm,1.4s						
DCZ	**Deep Cove**	**32.06**	**180**	*e*P	**P**	**07 08 26.2**	**+0.5**
	19nm,1.3s						
WB2	**Warramunga Arr**	**32.17**	**254**	*e*P	**P**	**07 08 26.1**	**-0.9**
WRAB	**Tennant Creek**	**32.17**	**254**	*e*P	**P**	**07 08 26.1**	**-1.0**
	16nm,1.3s						
WR1	**Warramunga Arr**	**32.18**	**254**	*e*P	**P**	**07 08 26.1**	**-1.1**
	5.8nm,0.7s						
WR1				*e*PcP	**PcP**	**07 11 10.1**	**-0.5**
WRA	**Warramunga Arr**	**32.18**	**254**	P	**P**	**07 08 26.1**	**-1.1**
	4.0nm,0.5s,baz=86,slow=9.2,SNR=46						
WRA				pP	**pP**	**07 09 09.6**	**-2.4**
	2.1nm,0.7s,baz=84,slow=9.0,SNR=4.2						
WRA				PcP	**PcP**	**07 11 10.1**	**-0.5**
	1.3nm,0.6s,baz=87,slow=3.3,SNR=4.8						
WRA				S	**S**	**07 13 20.9**	**-2.6**
	1.6nm,1.1s,baz=85,slow=14,SNR=3.0						
WRA				ScP	**ScP**	**07 14 33.8**	**+0.8**
	2.4nm,0.9s,baz=81,slow=3.6,SNR=10						
AS01	**Alice Springs**	**33.14**	**247**	*e*P	**P**	**07 08 34.9**	**-0.6**
AS31	**Alice Springs**	**33.18**	**247**	*e*P	**P**	**07 08 34.9**	**-1.0**
	2.9nm,0.6s						
AS31				*e*PcP	**PcP**	**07 11 13.3**	**0.0**
ASAR	**Alice Springs**	**33.18**	**247**	P	**P**	**07 08 35.1**	**-0.8**
	7.1nm,0.6s,baz=76,slow=9.2,SNR=103						
ASAR				pP	**pP**	**07 09 21.2**	**+0.4**
	4.2nm,0.5s,baz=72,slow=9.4,SNR=4.8						
ASAR				PcP	**PcP**	**07 11 13.4**	**+0.1**
	4.1nm,0.6s,baz=79,slow=3.2,SNR=18						
ASAR				S	**S**	**07 13 36.4**	**-2.7**
	1.2nm,0.8s,baz=83,slow=15,SNR=7.2						
ASAR				ScP	**ScP**	**07 14 37.5**	**+1.1**
	4.4nm,0.8s,baz=86,slow=3.2,SNR=24						
BBOO	**Buckleboo**	**34.45**	**230**	*e*P	**P**	**07 08 46.5**	**-0.1**
	8.7nm,0.8s						
FORT	**Forrest**	**40.02**	**238**	*e*P	**P**	**07 09 32.9**	**-0.5**
	17nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.28**	**258**	*e*P	**P**	**07 09 35.7**	**+0.1**
	47nm,1.5s						
NWAO	**Narrogin (SRO)**	**49.47**	**238**	*e*P	**P**	**07 10 47.3**	**-0.6**
	69nm,1.6s						
MORW	**Morawa**	**49.88**	**243**	*e*P	**P**	**07 10 50.9**	**-0.1**
	34nm,1.6s						
MJAR	**Matsushiro Arr**	**56.64**	**332**	P	**P**	**07 11 39.6**	**-0.4**
	7.1nm,0.6s,baz=173,slow=9.1,SNR=13						
MAJO	**Matsushiro**	**56.64**	**332**	*e*P	**P**	**07 11 39.6**	**-0.4**
MAT	**Matsushiro**	**56.64**	**332**	P	**P**	**07 11 39.7**	**-0.2**
MJB9	**Matsu-Tunnel**	**56.64**	**332**	*e*P	**P**	**07 11 39.9**	**-0.1**
	10nm,0.5s						
JNU	**Nakatsue**	**57.76**	**324**	*e*P	**P**	**07 11 48.0**	**+0.2**
	18nm,1.0s						
JNU	**Nakatsue**	**57.76**	**324**	P	**P**	**07 11 48.0**	**+0.2**
	14nm,0.8s,baz=110,slow=2.6,SNR=5.9						
ASAJ	**Asahikawa**	**61.40**	**340**	P	**P**	**07 12 13.3**	**+0.9**
	20nm,0.5s,baz=212,slow=6.7,SNR=25						
KSRS	**Korea Array**	**62.56**	**325**	P	**P**	**07 12 20.8**	**+0.6**
	1.4nm,0.6s,baz=140,slow=7.3,SNR=6.2						
YSS	**Yuzh-Sakhalins**	**63.87**	**342**	*e*P	**P**	**07 12 28.5**	**-0.2**
	15nm,0.8s						
VNDA	**Vanda**	**64.28**	**181**	*e*P	**P**	**07 12 31.3**	**+0.3**
VNDA	**Vanda**	**64.28**	**181**	P	**P**	**07 12 31.5**	**+0.6**
	2.9nm,0.6s,baz=1.7,slow=6.1,SNR=9.8						
NJ2	**Nanjing**	**64.65**	**315**	*e*P	**P**	**07 12 35.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**65.61**	**333**	P	**P**	**07 12 41.0**	**+1.1**
	5.1nm,0.8s,baz=134,slow=5.9,SNR=9.1						
PEA0B	**Petropavlovsk-**	**66.65**	**354**	*e*P	**P**	**07 12 46.9**	**+0.5**
	29nm,1.3s						
PETK	**Petropavlovsk-**	**66.65**	**354**	*e*P	**P**	**07 12 46.8**	**+0.4**
PETK	**Petropavlovsk-**	**66.65**	**354**	P	**P**	**07 12 47.1**	**+0.8**
	6.4nm,0.5s,baz=159,slow=7.0,SNR=16						
PEA1	**Petropavlovsk-**	**66.65**	**354**	*e*P	**P**	**07 12 47.1**	**+0.8**
CN2	**Changchun**	**68.42**	**329**	*e*P	**P**	**07 13 01.0**	**+3.4**
UNV	**Unalaska Valle**	**70.54**	**16**	*e*P	**P**	**07 13 09.9**	**-0.4**
	144nm,1.7s						
SPIA	**Saint Paul Isl**	**72.66**	**13**	*e*P	**P**	**07 13 23.0**	**+0.1**
	43nm,0.6s						
XAN	**Xi'an**	**72.72**	**312**	P	**P**	**07 13 24.5**	**+0.6**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,4.5s						
KMI	**Kunming**	**73.54**	**301**	P	**P**	**07 13 30.5**	**+1.4**
KMI				pmax	pmax		
	comp=Z,22nm,0.8s						
CM01	**Chiang Mai Arr**	**74.33**	**294**	*e*P	**P**	**07 13 33.8**	**+0.3**
CM31	**Chiang Mai Arr**	**74.36**	**294**	*e*P	**P**	**07 13 33.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**74.36**	**294**	P	**P**	**07 13 34.6**	**+1.0**
	6.7nm,0.8s,baz=128,slow=4.4,SNR=23						
CHTO	**Chiang Mai**	**74.48**	**294**	*e*P	**P**	**07 13 34.5**	**+0.1**
	8.6nm,1.1s						
CHTO	**Chiang Mai**	**74.48**	**294**	P	**P**	**07 13 35.9**	**+1.5**
	42nm,1.0s						
HHC	**Hu-ho-hao-te**	**74.49**	**319**	*e*P	**P**	**07 13 36.8**	**+2.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,6.1s						
CD2	**Chengdu**	**75.13**	**307**	*e*P	**P**	**07 13 38.0**	**+0.1**
QSPA	**South Pole Qui**	**76.72**	**180**	*e*P	**P**	**07 13 46.6**	**+0.2**
	11nm,0.7s						
LZH	**Lanzhou**	**77.35**	**312**	*e*P	**P**	**07 13 51.8**	**+1.4**
LZH				pP	pP	07 14 43.5	+0.6
LZH				sP	sP	07 15 08.0	+1.6
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
KDAK	**Kodiak Island**	**78.14**	**21**	*e*P	**P**	**07 13 54.5**	**+0.4**
	202nm,1.6s						
GAMB	**Gambell**	**78.53**	**9**	*e*P	**P**	**07 13 56.2**	**+0.2**
	7.1nm,0.7s						
BRLK	**Bradley Lake**	**80.23**	**20**	*e*P	**P**	**07 14 05.4**	**0.0**
	67nm,1.6s						
ANM	**Nome**	**80.38**	**12**	*e*P	**P**	**07 14 06.3**	**+0.2**
	18nm,1.5s						
SEW	**Seward**	**80.96**	**20**	*e*P	**P**	**07 14 09.4**	**+0.2**
	64nm,1.3s						
ULN	**Ulaanbaatar**	**80.98**	**324**	*e*P	**P**	**07 14 08.8**	**-1.0**
	13nm,1.0s						
BILL	**Bilibino**	**81.12**	**360**	*e*P	**P**	**07 14 10.1**	**+0.3**
	12nm,0.7s						
SONA0	**Songino Array**	**81.34**	**323**	*e*P	**P**	**07 14 11.9**	**+0.3**
SONM	**Songino Array**	**81.34**	**323**	P	**P**	**07 14 12.0**	**+0.3**
	2.3nm,0.6s,baz=142,slow=5.2,SNR=9.6						
SONA1	**Songino Array**	**81.34**	**323**	*e*P	**P**	**07 14 11.7**	**0.0**
RC01	**Rabbit Creek A**	**81.60**	**20**	*e*P	**P**	**07 14 12.5**	**0.0**
	15nm,0.8s						
GTA	**Gaotai**	**81.67**	**314**	*e*P	**P**	**07 14 14.8**	**+1.2**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PMR	**Palmer**	**82.17**	**19**	*e*P	**P**	**07 14 15.5**	**+0.1**
	5.6nm,0.6s						
CAST	**Castle Rocks**	**82.64**	**17**	*e*P	**P**	**07 14 17.7**	**-0.3**
	10nm,0.6s						
TRF	**Thorofare Moun**	**83.19**	**18**	*e*P	**P**	**07 14 19.8**	**-1.1**
	11nm,1.1s						
RND	**Reindeer**	**83.59**	**18**	*e*P	**P**	**07 14 22.9**	**+0.1**
	17nm,0.6s						
BWN	**Browne**	**83.98**	**18**	*e*P	**P**	**07 14 24.4**	**-0.2**
	31nm,0.8s						
IM3	**Indian Mountai**	**84.20**	**15**	*e*P	**P**	**07 14 26.2**	**+0.4**
MLY	**Manley**	**84.26**	**17**	*e*P	**P**	**07 14 26.0**	**-0.2**
	11nm,1.3s						
WRH	**Wood River Hil**	**84.61**	**18**	*e*P	**P**	**07 14 27.6**	**-0.2**
	9.9nm,0.7s						
TLY	**Talaya**	**84.80**	**326**	*e*P	**P**	**07 14 28.9**	**-0.3**
	12nm,0.8s						
HDA	**Harding Lake**	**84.90**	**18**	*e*P	**P**	**07 14 29.3**	**-0.1**
	24nm,1.2s						
MDM	**Murphy Dome**	**84.92**	**17**	*e*P	**P**	**07 14 28.9**	**-0.5**
	29nm,1.2s						
COLA	**College**	**84.97**	**18**	*e*P	**P**	**07 14 29.4**	**-0.2**
	30nm,1.3s						
IL1	**Eielson Array**	**85.18**	**18**	*e*P	**P**	**07 14 30.2**	**-0.5**
ILAR	**Eielson Array**	**85.18**	**18**	P	**P**	**07 14 30.1**	**-0.7**
	7.8nm,0.6s,baz=242,slow=4.9,SNR=166						
ILAR				pP	**pP**	**07 15 23.6**	**-0.6**
	4.6nm,0.8s,baz=234,slow=5.9,SNR=7.8						
ILB	**Eielson Array**	**85.18**	**18**	*e*P	**P**	**07 14 30.0**	**-0.7**
COLD	**Coldfoot**	**86.06**	**15**	*e*P	**P**	**07 14 35.7**	**+0.7**
	6.3nm,1.4s						
NV01	**Mina Array Sit**	**86.36**	**49**	*e*P	**P**	**07 14 37.2**	**-0.2**
NVAR	**Mina Array Bea**	**86.36**	**49**	P	**P**	**07 14 37.9**	**+0.5**
	1.6nm,0.7s,baz=224,slow=6.2,SNR=5.6						
WMQ	**Urumqi**	**91.72**	**315**	*e*P	**P**	**07 15 03.5**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
JBP	**Jabalpur**	**92.67**	**293**⇑	*e*P	**P**	**07 15 09.5**	**+2.5**
JBP				*e*S	pP	07 16 12.4	+11
SNAA	**Sanae**	**94.97**	**183**	P	**P**	**07 15 16.1**	**-0.6**
TXAR	**Lajitas Array**	**95.61**	**61**	P	**P**	**07 15 19.0**	**-1.5**
	0.2nm,0.6s,baz=162,slow=5.1,SNR=3.5						

VNA3	**Neumayer Olymp**	**95.63**	**181**	P	**P**	**07 15 19.0**	**-0.7**
VNA2	**Neumayer--Watz**	**95.90**	**182**	P	**P**	**07 15 20.5**	**-0.4**
	baz=190,slow=4.6						
MK01	**Makanchi Array**	**96.15**	**316**	*e*P	**P**	**07 15 22.5**	**+0.1**
MK31	**Makanchi Array**	**96.16**	**316**	*e*P	**P**	**07 15 22.7**	**+0.3**
	4.1nm,0.6s						
MK32	**Makanchi Array**	**96.16**	**316**	*e*P	**P**	**07 15 22.9**	**+0.5**
MKAR	**Makanchi Array**	**96.16**	**316**	*e*P	**P**	**07 15 22.6**	**+0.2**
	36nm,0.5s						
MKAR	**Makanchi Array**	**96.16**	**316**	P	**P**	**07 15 22.9**	**+0.5**
	4.6nm,0.5s,baz=89,slow=6.4,SNR=44						
VNA1	**Neumayer--Stat**	**96.20**	**182**	P	**P**	**07 15 22.2**	**0.0**
ZAA0	**Zalesovo Array**	**96.23**	**324**	*e*P	**P**	**07 15 22.0**	**-0.6**
	3.9nm,0.8s						
ZALV	**Zalesovo Beam**	**96.23**	**324**	*e*P	**P**	**07 15 21.8**	**-0.7**
ZALV	**Zalesovo Beam**	**96.23**	**324**	P	**P**	**07 15 22.0**	**-0.6**
	3.6nm,0.6s,baz=116,slow=4.7,SNR=15						
ZAA1	**Zalesovo Array**	**96.23**	**324**	*e*P	**P**	**07 15 22.0**	**-0.6**
YKA	**Yellowknife Ar**	**96.29**	**27**	P	**P**	**07 15 21.6**	**-1.0**
	0.5nm,0.6s,baz=257,slow=4.7,SNR=13						
YKA				pP	**pP**	**07 16 16.2**	**-0.4**
	1.1nm,0.9s,baz=255,slow=4.6,SNR=8.1						
YKB5	**Yellowknife Ar**	**96.29**	**27**	*e*P	**P**	**07 15 21.7**	**-0.9**
MAKZ	**Makanchi**	**96.37**	**316**	*e*P	**P**	**07 15 23.4**	**-0.1**
	8.9nm,1.4s						
NRIK	**Noril'sk**	**98.74**	**339**	P	Pdif	07 15 31.9	-1.6
	2.7nm,0.5s,baz=94,slow=3.6,SNR=5.7						
LPAZ	**La Paz**	**117.87**	**117**	PKP	**PKPdf**	**07 20 40.6**	**-0.9**
	1.3nm,0.7s,baz=327,slow=3.4,SNR=5.2						
ARA0	**ARCESS Array S**	**118.87**	**346**	*e*PKPdf	**PKPdf**	**07 20 39.8**	**-1.4**
ARCES	**ARCESS Array B**	**118.87**	**346**	PKP	**PKPdf**	**07 20 39.8**	**-1.4**
	4.4nm,0.5s,baz=77,slow=1.4,SNR=32						
CPUP	**Villa Florida**	**121.43**	**132**	PKP	**PKPdf**	**07 20 47.0**	**-0.4**
	1.8nm,0.8s,baz=308,slow=5.1,SNR=4.0						
KBZ	**Khabaz**	**123.76**	**314**	PKP	**PKPdf**	**07 20 49.5**	**-1.7**
	1.6nm,0.8s,baz=18,slow=3.2,SNR=4.2						
FIA0	**FINESS Array S**	**124.39**	**339**	*e*PKPdf	**PKPdf**	**07 20 51.0**	**-0.9**
FINES	**FINESS Array B**	**124.39**	**339**	PKP	**PKPdf**	**07 20 51.0**	**-0.9**
	5.0nm,0.9s,baz=75,slow=2.8,SNR=16						
BOSA	**Boshof**	**124.44**	**221**	PKP	**PKPdf**	**07 20 52.8**	**-0.5**
	3.5nm,0.6s,baz=150,slow=3.3,SNR=6.1						
NB2	**NORSAR Subarra**	**129.25**	**345**	PKPdf	**PKPdf**	**07 21 01.4**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=31,slow=1.9						
NB200	**NORSAR Array S**	**129.25**	**345**	*e*PKPdf	**PKPdf**	**07 21 00.5**	**-0.9**
NOA	**NORSAR Array B**	**129.25**	**345**	PKP	**PKPdf**	**07 21 00.5**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=34,slow=2.1,SNR=7.5						
AKASG	**Malin Array Be**	**129.54**	**327**	PKP	**PKPdf**	**07 21 00.9**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=48,slow=2.9,SNR=6.9						
BR101	**Keskin Array S**	**131.56**	**312**	*e*PKPdf	**PKPdf**	**07 21 06.5**	**0.0**
BRTR	**Keskin Array B**	**131.56**	**312**	PKP	**PKPdf**	**07 21 06.5**	**0.0**
	comp=Z,0.9nm,0.5s,baz=116,slow=3.1,SNR=5.2						
BDFB	**Brasilia**	**134.80**	**128**	PKP	**PKPdf**	**07 21 11.7**	**-1.5**
	comp=Z,3.2nm,0.8s,baz=211,slow=8.2,SNR=3.5						
TSUM	**Tsumeb**	**136.00**	**223**	PKP	**PKPdf**	**07 21 14.7**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=148,slow=1.7,SNR=4.6						
VYHS	**Vyhne**	**136.25**	**330**	*e*PKP	**PKiKP**	**07 21 16.7**	**+0.1**
BRG	**Berggiesshubel**	**136.71**	**335**	*e*PKP	**PKiKP**	**07 21 18.0**	**+0.6**
	comp=Z,28nm,1.8s						
CLL	**Collm**	**136.75**	**337**	*e*PKPdf	**PKiKP**	**07 21 18.0**	**+0.6**
MODS	**Modra-Piesok**	**137.08**	**331**	*e*PKP	**PKiKP**	**07 21 18.8**	**+0.5**
GERES	**GERESS Array B**	**138.36**	**334**	PKP	**PKPdf**	**07 21 18.1**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=252,slow=2.7,SNR=7.8						
KEST	**Kesra**	**150.09**	**322**	*e*PKPbc	**PKiKP**	**07 21 45.7**	**+0.2**
KEST	**Kesra**	**150.09**	**322**	PKPbc	**PKiKP**	**07 21 45.5**	**+0.1**
	comp=Z,23nm,0.7s,baz=155,slow=0.3,SNR=25						
PBRG	**Braganca**	**151.12**	**351**	*e*PKPdf	**PKiKP**	**07 21 47.5**	**+0.1**
PGAV	**Gavieira, Arco**	**151.18**	**353**	*e*PKPdf	**PKiKP**	**07 21 48.1**	**+0.6**
POLO	**Lamas de Olo**	**151.70**	**352**	*e*PKPdf	**PKiKP**	**07 21 49.0**	**+0.4**
MVO	**Moncorvo**	**151.79**	**351**	*e*PKPdf	**PKiKP**	**07 21 49.3**	**+0.5**
ESDC	**Sonseca Array**	**152.61**	**345**	PKPbc	**PKiKP**	**07 21 50.5**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=16,slow=2.9,SNR=12						
ESDC				PKPab	**PKPab**	**07 22 02.2**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=3.6,slow=4.2,SNR=9.9						
MTE	**Manteigas**	**152.62**	**351**	*e*PKPdf	**PKiKP**	**07 21 51.0**	**+0.5**
PCBR	**Castelo Branco**	**153.16**	**351**	*e*PKPdf	**PKiKP**	**07 21 52.0**	**+0.5**
PESTR	**Estremoz**	**154.13**	**351**	*e*PKPab	**PKPab**	**07 22 08.9**	**+0.9**
PBEJ	**Beja**	**154.99**	**351**	*e*PKPab	**PKPab**	**07 22 14.2**	**+2.5**
TORD	**Torodi Ar. Bea**	**165.93**	**271**	PKP	**PKPdf**	**07 21 57.4**	**-1.6**
	comp=Z,2.9nm,1.1s,baz=357,slow=3.1,SNR=8.6						
TORD				PKPab	**PKPab**	**07 22 58.9**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=94,slow=4.6,SNR=4.7						
TOA1	**Torodi Ar. Sit**	**165.94**	**271**	*e*PKPdf	**PKPdf**	**07 21 57.4**	**-1.6**
TOA1				*e*PKPab	**PKPab**	**07 22 58.9**	**-1.4**
DBIC	**Dimbokro**	**169.81**	**230**	PKP	**PKPdf**	**07 22 00.2**	**-1.5**
	comp=Z,3.1nm,0.9s,baz=56,slow=3.6,SNR=3.0						

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*IDC **26** 07:06:20.4±1.4, 11°.35S×164°.86E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.9/25, mbtmp4.0/7, ML4.1/3, Error ellipse: s-maj=32.9km s-min=26.1km az=126.0*

*ISCJB **26** 07:06:23.7±1.0, 11°.5S±0°.1×164°.8E±0°.1, h34^{km}, mb3.7/5, Error ellipse: s-maj=18.9km s-min=11.0km az=40.0*

ISC 26 07:06:25.4±1.1**, 11°.5S**±0°.1×**164°.9E**±0°.1**, h34**^{km}**, n14, σ0ˢ.90**/9**, mb3.8**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.24**	**292**	Pn	**Pn**	**07 07 40.8**	**-0.6**
	31nm,0.3s,baz=171,slow=16,SNR=3.4						
HNR				Sn	**Sn**	**07 08 42.0**	**+1.4**
	8.7nm,0.3s,baz=66,slow=20,SNR=4.1						
DZM	**Mont Dzumac**	**10.67**	**172**	Pn	**Pn**	**07 08 56.7**	**+0.7**
	0.8nm,0.3s,baz=352,slow=14,SNR=9.1						
CTA	**Charters Tower**	**19.84**	**242**	P	**Pn**	**07 10 55.0**	**-0.4**
	0.2nm,0.3s,baz=58,slow=9.5,SNR=2.2						
H11S2	**WAKE ISLAND Hy**	**29.81**	**4**	T	T	07 43 48.6	
	baz=184,slow=76,SNR=8.3						
H11S3	**WAKE ISLAND Hy**	**29.81**	**3**	T	T	07 43 47.5	
	baz=184,slow=76,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**29.83**	**4**	T	T	07 43 46.9	
	baz=184,slow=76,SNR=6.7						
WRA	**Warramunga Arr**	**30.53**	**250**	P	**P**	**07 12 35.6**	**-0.3**
	0.7nm,0.8s,baz=76,slow=9.9,SNR=3.2						
H11N1	**WAKE ISLAND Hy**	**31.04**	**4**	T	T	07 45 24.6	
	baz=182,slow=76,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**31.04**	**4**	T	T	07 45 22.5	
	baz=182,slow=76,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	**31.05**	**4**	T	T	07 45 19.5	
	baz=182,slow=76,SNR=4.1						
ASAR	**Alice Springs**	**31.84**	**243**	P	**P**	**07 12 46.5**	**-0.9**
	0.8nm,0.9s,baz=66,slow=10,SNR=3.3						
SONM	**Songino Array**	**78.48**	**324**	P	**P**	**07 18 22.8**	**-0.5**
	0.5nm,0.4s,baz=113,slow=3.7,SNR=4.1						
ILAR	**Eielson Array**	**84.17**	**19**	P	**P**	**07 18 52.8**	**-0.1**
	0.5nm,0.7s,baz=229,slow=5.4,SNR=5.0						
MKAR	**Makanchi Array**	**93.23**	**317**	P	**P**	**07 19 37.5**	**+0.9**
	0.3nm,0.5s,baz=97,slow=6.2,SNR=4.0						

MEX 26 07:09:13.8±0.5**, 17°.61N**×**92°.07W, h20**^{km}**, MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.32**	**183**	*e*P	Pn	07 09 33.7	-3.6
CCIG				*e*S	Sn	07 09 49.9	-4.5
CMIG	**Matias Romero**	**2.74**	**260**	*e*P	Pn	07 09 54.5	-2.2

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*ISK **26** 07:17:13.2, 38°.26N×42°.48E, h5^{km}, ML2.6/10*

*ISCJB **26** 07:17:14.6±0.4, 38°.30N±0°.03×42°.49E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=5.0km s-min=3.0km az=158.2*

*DDA **26** 07:17:14.5, 38°.36N×42°.50E, h7^{km}±3^{km}, ML2.8*

ISC 26 07:17:14.0±1.1**, 38°.29N**±0°.03×**42°.50E**±0°.02**, h8**^{km}±10^{km}**, n25, σ0ˢ.54**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKDM	**Akdamar-Van**	**0.38**	**84**	PG	**Pg**	**07 17 21.6**	**+0.1**
AKDM				SG	**Sg**	**07 17 27.3**	**+0.8**
GEVA	**Gevas**	**0.44**	**87**	*i* P	**Pb**	**07 17 23.5**	**-0.7**
GEVA				*i* S	**Sb**	**07 17 31.5**	**+0.5**
GEVA				IAML_P			
	comp=Z,14μm,0.3s						
GURO	**Guroymak-BITLI**	**0.45**	**305**	PG	**Pg**	**07 17 22.9**	**0.0**
GURO				SG	**Sg**	**07 17 29.1**	**+0.3**
SRTM	**Siirt_Merkez**	**0.55**	**237**	*i* P	**Pb**	**07 17 26.0**	**+0.1**
SRTM				*i* S	**Sb**	**07 17 34.9**	**+0.9**
SRTM				IAML_P			
	comp=Z,2μm,0.2s						
ADCV	**BITLIS_Adilcev**	**0.55**	**19**	*i* P	**Pb**	**07 17 25.8**	**-0.2**
ADCV				*i* S	**Sb**	**07 17 34.0**	**-0.1**
TVAN	**Van**	**0.75**	**71**	*i* P	**Pb**	**07 17 29.0**	**-0.5**
VANB	**Van**	**0.76**	**66**	PG	**Pg**	**07 17 28.1**	**-0.6**
VANB				SG	**Sb**	**07 17 39.9**	**-0.3**
SIRN	**Sırnak**	**0.80**	**185**	*i* P	**Pn**	**07 17 32.1**	**+0.5**
MLAZ	**Malazgirt-MUS**	**0.85**	**3**	PG	**Pb**	**07 17 30.4**	**-0.8**
MLAZ				SG	**Sb**	**07 17 42.6**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.03**	**263**	PG	**Pg**	**07 17 33.1**	**-0.8**
SVAN				SG	**Sb**	**07 17 47.6**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.03**	**263**	*i* P	**Pn**	**07 17 35.3**	**+0.4**
SVAN				*i* S	**Sn**	**07 17 49.3**	**-0.3**
BTMN	**Batman**	**1.05**	**248**	*i* P	**Pn**	**07 17 36.0**	**+0.9**
VMUR	**Van-Muradiye**	**1.09**	**50**	*i* P	**Pb**	**07 17 35.4**	**+0.1**
VMUR				*i* S	**Sb**	**07 17 49.6**	**-0.1**
VMUR				IAML_P			
	comp=Z,542nm,0.2s						
TUTA	**Tutak**	**1.14**	**12**	*i* P	**Pb**	**07 17 35.6**	**-0.5**
VRTB	**Varto-Mus**	**1.19**	**317**	PN	**Pn**	**07 17 37.0**	**-0.2**
AGRB	**Hanur-Agry**	**1.34**	**16**	PN	**Pg**	**07 17 39.7**	**-0.1**
CUKT	**Cukurca**	**1.36**	**140**	PN	**Pn**	**07 17 38.9**	**-0.5**
CLDR	**Caldiran**	**1.40**	**52**	PN	**Pg**	**07 17 40.7**	**-0.2**
CLDR	**Caldiran**	**1.40**	**52**	*i* P	**Pb**	**07 17 40.4**	**-0.1**
CLDR				*i* S	**Sn**	**07 17 59.7**	**+0.9**
CLDR				IAML_P			
	comp=Z,878nm,0.2s						
BNGB	**Bingl**	**1.59**	**297**	PN	**Pn**	**07 17 42.6**	**0.0**
MARD	**Mardin**	**1.68**	**235**	*i* P	**Pb**	**07 17 44.8**	**-0.4**
MARD				*i* S	**Sb**	**07 18 06.3**	**-0.2**
KOPR	**Koprukoy-ERZUR**	**1.77**	**344**	PN	**Pb**	**07 17 45.9**	**-1.0**
HOMI	**Horasan**	**1.81**	**345**	*i* P	**Pg**	**07 17 49.5**	**+0.7**
MAZI	**Mazidag**	**1.82**	**244**	PN	**Pn**	**07 17 45.2**	**-0.6**
YEDI	**Yedisu-Bingol**	**1.91**	**308**	PN	**Pn**	**07 17 47.8**	**+0.8**

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*DJA **26** 07:19:47.0±0.4, 9°S±9°×12°2E±°, h15^{km}±3^{km}, M3.3/4, MLv3.3/4*

*IDC **26** 07:20:15.3±1.8, 10°.08S×124°.14E, h0^{km}, mb3.7/1, mb1 3.6/4, mb1mx3.4/30, mbtmp3.4/4, ML3.2/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/24, Error ellipse: s-maj=29.6km s-min=11.8km az=170.0*

*ISCJB **26** 07:20:16.6±0.8, 10°.5S±0°.1×123°.9E±0°.2, h35^{km}, mb3.7/1, MS3.3/3, Error ellipse: s-maj=26.9km s-min=6.0km az=147.8*

ISC 26 07:20:18.1±1.1**, 10°.3S**±0°.1×**123°.9E**±0°.1**, h35**^{km}**, n10, σ2ˢ.20**/10**, MS3.1**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.28**	**296**	P	**Pn**	**07 20 25.5**	**-0.3**
BATI				S	**Sn**	**07 20 30.8**	**-0.2**
BATI	**Baumata**	**0.28**	**296**	Pg	**Pn**	**07 20 25.3**	**-0.5**
	493nm,0.3s,baz=150,slow=1.7,SNR=114						
BATI				Lg	Lg	07 20 31.1	
	663nm,0.3s,baz=17,slow=19,SNR=42						
SOEI	**Soe**	**0.67**	**31**	P	Pn	07 20 40.2	+9.0
FITZ	**Fitzroy Crossi**	**7.90**	**168**	Pn	**Pn**	**07 22 13.4**	**+2.9**
	0.2nm,0.3s,baz=350,slow=12,SNR=7.9						
FITZ				Sn	**Sn**	**07 23 36.5**	**-2.3**
	1.5nm,0.3s,baz=112,slow=17,SNR=10						
WRA	**Warramunga Arr**	**13.87**	**135**	Pn	**Pn**	**07 23 33.9**	**+1.5**
	0.1nm,0.3s,baz=307,slow=14,SNR=4.3						
WRA				Sn	**Sn**	**07 26 03.1**	**-2.1**
	0.2nm,0.3s,baz=274,slow=20,SNR=6.5						
ASAR	**Alice Springs**	**16.33**	**146**	Pn	**P**	**07 24 07.8**	**+0.3**
	0.1nm,0.3s,baz=318,slow=12,SNR=5.0						
ASAR				Sn	**Sn**	**07 27 01.9**	**-3.3**
	0.1nm,0.3s,baz=309,slow=22,SNR=5.0						
ASAR				LR	LR	07 30 20.6	
	comp=Z,63nm,19.3s,baz=175,slow=37						
NWAO	**Narrogin (SRO)**	**23.32**	**194**	LR	LR	07 35 35.5	
	comp=Z,66nm,18.9s,baz=352,slow=39						
CMAR	**Chiang Mai Arr**	**37.76**	**319**	LR	LR	07 47 55.0	
	comp=Z,31nm,18.4s,baz=190,slow=44						
MKAR	**Makanchi Array**	**67.92**	**330**	P	**P**	**07 31 14.7**	**+1.5**
	0.6nm,0.8s,baz=152,slow=6.5,SNR=3.7						
BOSA	**Boshof**	**92.60**	**240**	LR	LR	08 07 07.7	
	comp=Z,32nm,20.0s,baz=30,slow=30						

PGC 26 07:23:55.5±0.2**, 48°.38N**×**129°.08W, h10**^{km}**, MLSn3.1**/10**, Mw3.7**/10**, 247km Wsw of Tofino, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOFB	**Tofino**	**2.24**	**69**	Pn	Pn	07 24 29.8	-2.7
MAYB	**Maynard**	**2.38**	**31**	Pn	Pn	07 24 32.9	-1.7
MAYB				Sn	Sn	07 24 58.0	-5.9
WOSB	**Woss**	**2.42**	**42**	Pn	Pn	07 24 33.2	-2.0
PHC	**Port Hardy**	**2.56**	**24**	Pn	Pn	07 24 35.7	-1.3
BTB	**Buttle Lake**	**2.59**	**64**	Pn	Pn	07 24 35.8	-1.7
TLCB	**Telegraph Cove**	**2.62**	**33**	Pn	Pn	07 24 36.4	-1.4
TLCB				Sn	Sn	07 25 06.0	-3.5
NCRB	**Newcastle Ridg**	**2.83**	**43**	Pn	Pn	07 24 39.1	-1.7
CBB	**Campbell River**	**2.94**	**54**	Pn	Pn	07 24 40.9	-1.3
CBB				Sn	Sn	07 25 13.5	-4.2
MGB	**Mount Grey**	**2.97**	**76**	Pn	Pn	07 24 40.4	-2.4
MGB				Sn	Sn	07 25 13.5	-5.0
YOUB	**Youbou, Lake C**	**3.24**	**79**	Pn	Pn	07 24 44.4	-2.0
TXB	**Texada**	**3.33**	**65**	Pn	Pn	07 24 46.0	-1.5
LZB	**Mount Lazard**	**3.50**	**84**	Pn	Pn	07 24 48.3	-1.7
SHB	**Sechelt**	**3.64**	**68**	Pn	Pn	07 24 50.8	-1.1
BBB	**Bella Bella**	**3.86**	**9**	Pn	Pn	07 24 53.3	-1.5
BBB				Sn	Sn	07 25 37.1	-3.0

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*ISK **26** 07:25:05.4, 38°.31N×42°.50E, h4^{km}, ML2.5/4*

*ISCJB **26** 07:25:06.6±0.6, 38°.33N±0°.04×42°.50E±0°.04, h11^{km}±9^{km}, Error ellipse: s-maj=7.3km s-min=4.8km az=169.1*

*DDA **26** 07:25:07.0, 38°.32N×42°.52E, h7^{km}±2^{km}, ML2.6*

ISC 26 07:25:06.4±1.1**, 38°.31N**±0°.05×**42°.50E**±0°.03**, h9**^{km}±12^{km}**, n9, σ0ˢ.53**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKDM	**Akdamar-Van**	**0.38**	**88**	PG	**Pg**	**07 25 13.5**	**-0.4**
AKDM				SG	**Sg**	**07 25 19.5**	**+0.7**
GEVA	**Gevas**	**0.44**	**90**	*i* P	**Pg**	**07 25 14.6**	**-0.4**
GEVA				*i* S	**Sb**	**07 25 22.9**	**-0.2**
GEVA				IAML_P			
	comp=Z,5μm,0.2s						
GURO	**Guroymak-BITLI**	**0.44**	**303**	PG	**Pg**	**07 25 14.6**	**-0.4**
GURO				SG	**Sg**	**07 25 21.3**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.52**	**19**	*i* P	**Pg**	**07 25 17.1**	**+0.4**
ADCV				*i* S	**Sb**	**07 25 25.2**	**-0.5**
ADCV				IAML_P			
	comp=Z,501nm,0.1s						
SRTM	**Siirt_Merkez**	**0.56**	**235**	*i* P	**Pb**	**07 25 18.1**	**-0.3**
SRTM				*i* S	**Sb**	**07 25 27.3**	**+0.7**
SRTM				IAML_P			
	comp=Z,448nm,0.1s						
MLAZ	**Malazgirt-MUS**	**0.83**	**2**	PG	**Pg**	**07 25 22.0**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.04**	**261**	PG	**Pg**	**07 25 25.9**	**-0.5**
AGRB	**Hanur-Agry**	**1.32**	**17**	PN	**Pn**	**07 25 31.3**	**+0.1**
MAZI	**Mazidag**	**1.84**	**243**	PN	**Pn**	**07 25 38.7**	**+0.4**

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*DDA **26** 07:34:15.0, 40°.65N×36°.80E, h25^{km}±2^{km}, ML2.8*

*ISCJB **26** 07:34:16.8±0.6, 40°.59N±0°.03×36°.91E±0°.04, h5^{km}±6^{km}, Error ellipse: s-maj=5.7km s-min=5.2km az=41.2*

*ISK **26** 07:34:16.0, 40°.59N×36°.91E, h9^{km}, ML2.2/5*

ISC 26 07:34:16.6±1.0**, 40°.60N**±0°.04×**36°.90E**±0°.03**, h17**^{km}±8^{km}**, n11, σ0ˢ.72**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERBA	**Erbaa**	**0.14**	**306**	*i* P	**Pg**	**07 34 20.8**	**+0.1**
ERBA				*i* S	**Sb**	**07 34 22.7**	**-1.0**
RSDY	**Resadiye-TOKAT**	**0.38**	**122**	PG	**Pg**	**07 34 24.1**	**-0.4**
RSDY				SG	**Sg**	**07 34 29.3**	**-0.5**
TOKT	**Tokat**	**0.39**	**225**	PG	**Pg**	**07 34 24.2**	**-0.4**
TOKT				SG	**Sg**	**07 34 30.1**	**0.0**
SVSK	**Karacayir**	**0.68**	**174**	PG	**Pb**	**07 34 29.3**	**-0.8**
SVSK				SG	**Sb**	**07 34 39.3**	**+0.1**
KVT	**Kavak**	**0.81**	**307**	PG	**Pb**	**07 34 32.1**	**-0.2**
ORDU	**Ordu-Boztepe**	**0.82**	**61**	*i* P	**Pg**	**07 34 33.1**	**+0.5**
ORDU				*i* S	**Sn**	**07 34 44.7**	**-0.6**
ORDU				IAML_P			
	comp=Z,359nm,0.1s						
CUSAR	**Sarkisla-SIVAS**	**1.28**	**203**	*i* P	**Pn**	**07 34 40.0**	**+0.1**
CUSAR				*i* S	**Sg**	**07 34 59.9**	**+1.8**
CUKAN	**kangal_SIVAS**	**1.35**	**161**	*i* P	**Pn**	**07 34 41.4**	**+0.5**
YOZ	**Yozgat**	**1.55**	**232**	PN	**Pn**	**07 34 44.4**	**+0.9**
DIKM	**Dikmen**	**1.63**	**311**	PN	**Pb**	**07 34 45.8**	**-0.4**
KELT	**Kelkit**	**1.85**	**103**	*i* P	**Pb**	**07 34 49.9**	**-0.2**
KELT				*i* S	**Sb**	**07 35 13.5**	**+0.4**
KELT				IAML_P			
	comp=Z,224nm,0.2s						

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*ISN **26** 07:34:59.3±0.8, 35°.79N×45°.88E, h6^{km}±8^{km}, ML3.0*

*TEH **26** 07:35:03.0, 35°.72N×45°.86E, h10^{km}, ML3.0*

ISC 26 07:35:01.1±1.6**, 35°.77N**±0°.04×**45°.88E**±0°.04**, h2**^{km}±14^{km}**, n15, σ0ˢ.80**/21**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIN	**Lien**	**1.23**	**134**	*e*Pg	**Pn**	**07 35 24.9**	**-0.6**
ILIN				*e*Sg	**Sn**	**07 35 44.3**	**+1.5**
ILIN				IAMB	IAmb	07 35 46.5	
	comp=Z,3μm,0.2s						
IKRK	**Kirkuk**	**1.31**	**254**	*e*Pn	**Pg**	**07 35 26.0**	**-0.2**
IKRK				*e*Sn	**Sn**	**07 35 45.0**	**+0.6**
IVIS	**Veis**	**1.48**	**147**	*e*Pn	**Pg**	**07 35 29.7**	**+0.3**
IVIS				IAMB	IAmb	07 35 57.4	
	comp=Z,2μm,0.2s						
IGHG	**Ghaleghazi**	**1.55**	**158**	*e*Pn	**Pg**	**07 35 31.6**	**+0.8**
IGHG				IAMB	IAmb	07 35 34.9	
	comp=Z,3μm,0.2s						
IAZR	**Azarshahr**	**1.90**	**2**	*e*Pn	**Pg**	**07 35 38.2**	**+0.6**
IAZR				IAMB	IAmb	07 36 13.5	
	comp=N,6μm,0.5s						
HSRG	**Sareghieh**	**2.03**	**104**	*e*Pn	**Pg**	**07 35 39.7**	**-0.2**
HSRG				IAMB	IAmb	07 36 13.7	
	comp=N,0.0nm,0.6s						
IKOM	**Komasi**	**2.08**	**140**	*e*Pn	**Pg**	**07 35 41.6**	**+0.6**
IKOM				IAMB	IAmb	07 36 18.6	
	comp=Z,0.0nm,0.7s						
IBST	**Bostanabad**	**2.09**	**23**	*e*Pn	**Pb**	**07 35 40.7**	**+0.9**
IBST				IAMB	IAmb	07 36 09.9	
	comp=N,388nm,0.4s						
MSL	**Mosul**	**2.33**	**286**	*e*Pn	**Pn**	**07 35 40.0**	**-0.4**
MSL				*e*Sn	**Sn**	**07 36 10.0**	**+0.4**
IBDR	**Badra**	**2.66**	**179**	*e*Pn	**Pn**	**07 35 45.0**	**+0.1**
IBDR				*e*Sn	**Sn**	**07 36 18.0**	**+0.3**
IHRS	**Heris**	**2.70**	**20**	*e*Pn	**Pb**	**07 35 50.6**	**+0.3**
IHRS				IAMB	IAmb	07 36 38.0	
	comp=Z,247nm,0.5s						
BHD	**Baghdad**	**2.79**	**207**	*e*Pn	**Pn**	**07 35 47.0**	**+0.3**
BHD				*e*Sn	**Sn**	**07 36 21.0**	**+0.1**
HAGD	**Aghdareh**	**2.83**	**109**	*e*Pn	**Pb**	**07 35 51.4**	**-1.0**
IMRD	**Marand**	**2.94**	**357**	*e*Pn	**Pg**	**07 35 56.4**	**-1.0**
IMRD				IAMB	IAmb	07 36 52.9	
	comp=E,477nm,0.4s						
NSR	**Nassriya**	**4.76**	**177**	*e*Pn	**Pn**	**07 36 13.0**	**-0.7**
NSR				*e*Sn	**Sn**	**07 37 08.0**	**-1.4**

IDC 26 08:00:18.6±3.1**, 31°.94S**×**178°.17W, h0**^{km}**, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.7**/20**, mbtmp3.7**/3**, ML3.4**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.5**/29**, Error ellipse: s-maj=71.4km s-min=46.4km az=120.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.40**	**210**	Pn	Pn	08 02 06.4	-1.5
	0.6nm,0.3s,baz=35,slow=16,SNR=5.7						
URZ				Sn	Sn	08 03 25.4	-7.1
	2.6nm,0.3s,baz=88,slow=17,SNR=9.9						
DZM	**Mont Dzumac**	**16.85**	**302**	LR	LR	08 08 02.5	
	comp=Z,47nm,22.0s,baz=188,slow=28						
ASAR	**Alice Springs**	**42.91**	**269**	P	P	08 08 19.1	-0.1
	0.4nm,0.5s,baz=107,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**44.03**	**274**	P	P	08 08 28.4	+0.1
	0.7nm,0.4s,baz=112,slow=8.0,SNR=15						
FINES	**FINESS Array B**	**146.53**	**339**	PKPbc	PKPdf	08 20 00.3	+0.6
	1.1nm,0.7s,baz=64,slow=4.4,SNR=5.1						

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*GUC **26** 08:05:05.0±0.4, 31°.26S×69°.40W, h157^{km}±19^{km}, ML3.0*

*SJA **26** 08:05:05.7±0.7, 31°.30S×69°.10W, h107^{km}±3^{km}, ML2.8, MW3.3*

*ISCJB **26** 08:05:06.1±0.9, 31°.29S±0°.03×69°.06W±0°.05, h113^{km}±7^{km}, Error ellipse: s-maj=7.2km s-min=5.1km az=7.8*

ISC 26 08:05:07.1±1.7**, 31°.29S**±0°.04×**69°.09W**±0°.05**, h105**^{km}±12^{km}**, n20, σ0ˢ.63**/30**, 2C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.43**	**126**	IAML		08 05 35.7	
	comp=Z,333nm,0.3s						
RTLL	**Cerro Villicun**	**0.53**	**94**	*e*P	**Pn**	**08 05 23.0**	**-0.7**
RTLL				*e*S	**Sn**	**08 05 35.9**	**-0.2**
RTLL				IAML		08 05 35.9	
	comp=Z,535nm,0.2s						
RTLS	**Leoncito**	**0.54**	**200**	*e*P	**Pn**	**08 05 23.7**	**-0.4**
RTLS				*e*S	**Sn**	**08 05 37.1**	**+0.3**
RTLS				IAML		08 05 37.5	
	comp=Z,327nm,0.2s						
AMOG	**MOGNA**	**0.62**	**55**	*e*P	**Pn**	**08 05 24.0**	**-0.4**
AMOG				*e*S	**Sn**	**08 05 37.5**	**+0.1**
ACCO	**Cerro Coronel**	**0.70**	**1**	*e*P	**Pn**	**08 05 25.3**	**-0.1**
ACCO				*e*S	**Sn**	**08 05 40.2**	**+1.1**
RTCV	**Cerro Valdivia**	**0.73**	**141**	*e*P	**Pn**	**08 05 25.0**	**-0.4**
RTCV				*e*S	**Sn**	**08 05 39.4**	**+0.3**
AUSP	**Uspallata**	**0.96**	**195**	*e*P	**Pn**	**08 05 27.6**	**-0.3**
AUSP				*e*S	**Sn**	**08 05 43.9**	**+0.4**
ACDV	**Cuesta del Vie**	**1.12**	**359**	*e*P	**Pn**	**08 05 29.2**	**-0.2**
ACDV				IAML		08 05 47.7	
	comp=Z,97nm,0.3s						
AROD	**Rodeo**	**1.17**	**343**	*e*P	**Pn**	**08 05 30.2**	**0.0**
AROD				*e*S	**Sn**	**08 05 48.3**	**+0.8**
ASAL	**Salagasta**	**1.31**	**171**	*e*P	**Pn**	**08 05 31.6**	**0.0**
ASAL				*e*S	**Sn**	**08 05 50.2**	**+0.2**
ARCO	**CERRO ARCO**	**1.55**	**175**	*e*P	**Pn**	**08 05 34.2**	**-0.2**
ARCO				IAML		08 05 57.5	
	comp=Z,151nm,0.3s						
CMCH	**Combarbala**	**1.64**	**274**	*i* P	**Pn**	**08 05 35.0**	**-0.5**
CMCH				*i* S	**Sn**	**08 05 57.1**	**0.0**
AAGR	**Agrelo**	**1.80**	**173**	*e*P	**Pn**	**08 05 37.4**	**-0.2**
GO04	**Tololo Observa**	**1.85**	**307⇑**	*i*P	**Pn**	**08 05 37.4**	**-0.8**
GO04				*i* S	**Sn**	**08 06 02.0**	**+0.1**
AGUA	**GUANDACOL**	**1.87**	**16**	*e*P	**Pn**	**08 05 38.7**	**+0.3**
FCH	**Farellones**	**2.27**	**206**	*e*P	**Pn**	**08 05 44.0**	**+0.3**
FCH				*i* S	**Sn**	**08 06 13.6**	**+1.9**
FCH				IAML		08 06 20.2	
	comp=E,64nm,0.3s						
ROCH	**El Roble**	**2.34**	**224**	*e*P	**Pn**	**08 05 43.6**	**-0.9**
ROCH				*i* S	**Sn**	**08 06 12.4**	**-0.7**
ROCH				IAML		08 06 15.9	
	comp=N,61nm,0.2s						
APLL	**PUNTA DE LOS L**	**2.38**	**69**	*e*P	**Pn**	**08 05 44.0**	**-0.8**
APLL				IAML		08 06 14.7	
	comp=Z,23nm,0.1s						
CLCH	**Cerro Calan**	**2.43**	**210**	*i* S	**Sn**	**08 06 15.6**	**+0.6**
CLCH				IAML		08 06 23.3	
	comp=E,73nm,0.2s						
SYO	**Syowa Base**	**67.46**	**158⇑**	*e*P	pP	08 16 12.2	-5.7

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*ISK **26** 08:11:44.3, 38°.75N×43°.17E, h1^{km}, ML1.6/3*

*DDA **26** 08:11:45.2, 38°.75N×43°.15E, h7^{km}±2^{km}, ML2.6*

ISC 26 08:11:44.8±1.1**, 38°.72N**±0°.03×**43°.20E**±0°.06**, h31**^{km}±9^{km}**, n7, σ0ˢ.57**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.20**	**131**	PG	**Pb**	**08 11 51.5**	**+0.2**
VANB				SG	**Sn**	**08 11 56.7**	**+0.6**
TVAN	**Van**	**0.25**	**140**	*i* P	**Pb**	**08 11 51.7**	**-0.4**
TVAN				*i* S	**Sb**	**08 11 56.9**	**0.0**
TVAN				IAML_P			
	comp=Z,2μm,0.1s						
VMUR	**Van-Muradiye**	**0.39**	**47**	*i* P	**Pb**	**08 11 53.7**	**-0.2**
VMUR				*i* S	**Sn**	**08 12 00.6**	**-0.5**
VMUR				IAML_P			
	comp=Z,360nm,0.1s						
GEVA	**Gevas**	**0.42**	**195**	*i* P	**Pn**	**08 11 54.7**	**-0.2**
GEVA				*i* S	**Sn**	**08 12 02.9**	**+1.1**
AKDM	**Akdamar-Van**	**0.43**	**204**	PG	**Pb**	**08 11 54.1**	**-0.3**
AKDM				SG	**Sn**	**08 12 01.4**	**-0.5**
TUTA	**Tutak**	**0.74**	**336**	*i* P	**Pb**	**08 11 59.4**	**-0.1**
TUTA				*i* S	**Sn**	**08 12 09.7**	**-0.1**
TUTA				IAML_P			
	comp=Z,2μm,0.2s						
AGRB	**Hanur-Agry**	**0.87**	**349**	PG	**Pb**	**08 12 01.4**	**-0.2**
AGRB				SG	**Sb**	**08 12 13.8**	**+0.9**

IDC 26 08:34:25.9±2.0**, 7°.40S**×**123°.05E, h0^{km}, mb3.4**/1**, mb1 3.4**/3**, mb1mx3.2**/37**, mbtmp3.3**/3**, ML2.9**/2**, Error ellipse: s-maj=308.3km s-min=30.6km az=57.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.59	140	Pn	Pn	08 38 18.8	-1.3
	0.0nm,0.3s,baz=311,slow=12,SNR=3.7						
ASAR	Alice Springs	19.24	148	P	Pn	08 38 52.7	-0.1
	0.1nm,0.3s,baz=330,slow=12,SNR=7.2						
MKAR	Makanchi Array	64.96	330	P	P	08 45 07.5	-0.1
	0.2nm,0.4s,baz=120,slow=7.2,SNR=3.5						

*ISK **26** 08:52:59.4, 38°.76N×43°.48E, h14^{km}, ML2.2/3*

*ISCJB **26** 08:53:00.8±0.8, 38°.76N±0°.03×43°.51E±0°.07, h10^{km}±6^{km}, Error ellipse: s-maj=10.3km s-min=4.3km az=22.3*

*DDA **26** 08:53:00.2, 38°.74N×43°.54E, h7^{km}±6^{km}, ML2.8*

ISC 26 08:53:00.1±1.3**, 38°.76N**±0°.03×**43°.48E**±0°.05**, h15^{km}**±11^{km}**, n10, σ0^{s}.59**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.17	203	PG	Pb	08 53 05.3	+0.1
VANB				SG	Sb	08 53 09.8	+1.3
VMUR	Van-Muradiye	0.24	18	i P	Pg	08 53 05.9	+0.2
VMUR				i S	Sb	08 53 10.7	+0.1
VMUR				IAML_P			
	comp=Z,1µm,0.1s						
CLDR	Caldiran	0.52	42	PG	Pg	08 53 09.9	-0.6
CLDR	Caldiran	0.52	42	i P	Pg	08 53 10.2	-0.3
CLDR				i S	Sb	08 53 18.9	+0.4
CLDR				IAML_P			
	comp=Z,2µm,0.1s						
GEVA	Gevas	0.55	217	i P	Pb	08 53 11.6	0.0
GEVA				i S	Sn	08 53 21.9	-0.7
AKDM	Akdamar-Van	0.58	222	PG	Pg	08 53 11.4	-0.2
AKDM				SG	Sb	08 53 19.9	-0.2
ADCV	BITLIS_Adilcev	0.59	275	i P	Pb	08 53 12.8	+0.5
ADCV				i S	Sn	08 53 23.3	-0.4
ADCV				IAML_P			
	comp=Z,739nm,0.1s						
TUTA	Tutak	0.82	322	i P	Pb	08 53 16.5	+0.2
TUTA				i S	Sn	08 53 30.0	+0.4
TUTA				IAML_P			
	comp=Z,738nm,0.1s						
AGRB	Hanur-Agry	0.90	336	PG	Pg	08 53 16.8	-0.9
AGRB				SG	Sb	08 53 30.2	+0.7
GURO	Guroymak-BITLI	1.15	260	PN	Pb	08 53 21.6	-0.2

*IDC **26** 08:56:58.4±0.5, 24°.31N×123°.51E, h0^{km}, mb4.4/30, mb1 4.5/31, mb1mx4.4/51, mbtmp4.4/31, ML2.6/1, MS3.5/16, Ms1 3.5/16, ms1mx3.3/55, Error ellipse: s-maj=14.7km s-min=11.9km az=75.0*

*NIED **26** 08:57:00, 24°.30N×123°.50E, h35^{km}, Mw4.4 Best double couple: M$_0$4.28000×10^{15} NP1:ϕ_s282.00000°, δ34.00000°, λ109.00000°. NP2:ϕ_s79.00000°, δ58.00000°, λ77.00000°.*

*MOS **26** 08:57:02.7±0.8, 24°.31N×123°.52E, h42^{km}, mb4.8/38, Error ellipse: s-maj=9.1km s-min=6.0km az=120.1*

*BJI **26** 08:57:03.3, 24°.25N×123°.54E, h50^{km}, mb4.3/32, mB4.6/15, ML3.9/6, Ms4.0/14, Ms7 3.8/15*

*ISCJB **26** 08:57:04.2±0.2, 24°.27N±0°.03×123°.45E±0°.02, h54^{km}±2^{km}, mb4.4/70, MS3.5/11, Error ellipse: s-maj=5.4km s-min=3.2km az=168.7*

*NEIC **26** 08:57:04.2±0.3, 24°.29N×123°.51E, h42^{km}±3^{km}, mb4.5/30, Error ellipse: s-maj=3.4km s-min=3.2km az=127.0*

NEIC Recorded [1 JMA] on Iriomote-jima and Yonaguni-jima.

*JMA **26** 08:57:05.2±0.1, 24°.30N×123°.44E, h46^{km}±1^{km}, M3.9*

JMA Felt I J1.

ISC 26 08:57:04.6±0.6**, 24°.29N**±0°.04×**123°.45E**±0°.02**, h43^{km}**±5^{km}**, n189, σ0^{s}.91**/206**, mb4.5**/77**, MS3.5**/12**, 5C-10D, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.26	79	P	Pn	08 57 13.5	+0.8
IRIF				S	Sn	08 57 19.5	+1.2
HATJ	Hateruma jima	0.40	125	P	Pn	08 57 14.9	+0.7
HATJ				S	Sn	08 57 22.4	+1.5
YOJ	Yonaguni jima	0.44	294	ePn	Pn	08 57 14.9	+0.2
YOJ				eSn	Sn	08 57 23.0	+1.2
YOJ	Yonaguni jima	0.44	294	eP	Pn	08 57 14.9	+0.2
YOJ				e		08 57 23.0	
YOJ	Yonaguni jima	0.44	294	P	Pn	08 57 15.3	+0.6
YOJ				eS	Sn	08 57 22.5	+0.8
JYNG	Yonagunijimaku	0.49	290	P	Pn	08 57 15.9	+0.6
JYNG				S	Sn	08 57 23.8	+0.9
JKRS	Kuro-shima	0.51	95	P	Pn	08 57 16.7	+1.1
JIJ	Ishigaki jima	0.64	83	P	Pn	08 57 17.9	+0.7
JIJ				S	Sn	08 57 27.0	+0.7
JISG	Ishigakijimahi	0.84	69	P	Pn	08 57 20.8	+0.8
JISG				S	Sn	08 57 32.3	+1.1
JTJ	Tarama	1.19	73	P	Pn	08 57 26.1	+1.3
JTJ				S	Sn	08 57 41.9	+2.0
NACB	Ninganchiao	1.70	267	ePn	Pn	08 57 32.3	+0.5
TATO	Taipei	1.91	291	ePn	Pn	08 57 35.0	+0.3
YHNB	Yeheng	1.93	282	ePn	Pn	08 57 35.6	+0.6
YULB	Yu-li	2.16	246	ePn	Pn	08 57 38.1	0.0
YULB				eSn	Sn	08 58 02.2	-1.6
SSLB	Suanglung	2.34	258	ePn	Pn	08 57 41.5	+0.9
SSLB				eSn	Sn	08 58 07.1	-0.9
TWG	Pinlang	2.62	237	ePn	Pn	08 57 44.1	-0.4
TPUB	Ta-pu	2.76	250	ePn	Pn	08 57 47.2	+0.8
TPUB				eSn	Sn	08 58 20.3	+1.6
QZH	Quanzhou	4.47	279	⇑iP	Pn	08 58 10.8	+1.0
QZH				S	Sn	08 58 58.5	-2.1
QZH				smax	smax		
	comp=N,150nm,0.5s						
QZH				smax	smax		
	comp=E,96nm,0.4s						
QZH				LR	LR		
	comp=Z,320nm,6.2s						
JOW	Kunigami	5.04	59	ePn	Pn	08 58 16.8	-0.9
JOW				eSn	Sn	08 59 13.6	-1.1
JOW	Kunigami	5.04	59	Pn	Pn	08 58 18.2	+0.6
	0.4nm,0.3s,baz=75,slow=24,SNR=6.3						
JOW				Sn	Sn	08 59 12.8	-1.8
	0.2nm,0.3s,baz=105,slow=14,SNR=1.7						
NJ2	Nanjing	8.73	333	eP	Pn	08 59 09.3	+1.0
WHN	Wuhan	10.21	310	⇑P	Pn	08 59 30.0	+1.5
WHN				LR	LR		
	comp=Z,2µm,13.2s						
JNU	Nakatsue	10.95	35	LR	LR	09 04 26.1	
	comp=Z,144nm,19.8s,baz=216,slow=41						
KSRS	Korea Array	13.67	15	Pn	P	09 00 19.7	-3.9
	0.2nm,0.3s,baz=195,slow=12,SNR=13						
KSRS				LR	LR	09 06 08.5	
	comp=Z,202nm,19.5s,baz=194,slow=40						
QIZ	Qiongzhong	13.69	250	P	Pn	09 00 15.0	-1.2
QIZ				S	Sn	09 02 47.5	+0.6
QIZ				LR	LR		
	comp=N,120nm,4.0s						
QIZ				LR	LR		
	comp=Z,97nm,4.0s						
GYA	Guiyang	15.33	282	⇑iP	P	09 00 45.5	+3.2
GYA				PP	sP	09 00 55.3	-2.5
GYA				sP	pP	09 00 59.0	+6.6
GYA				S	Sn	09 03 28.3	+1.4
GYA				sS	S	09 03 41.8	0.0
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,6.2s						
XAN	Xi'an	15.97	311	P	P	09 00 49.3	0.0
XAN				pP	pP	09 01 00.3	+1.0
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN	Xi'an	15.97	311	ePn	Pn	09 00 46.8	+0.5
	comp=Z,14nm,1.0s						
XAN	Xi'an	15.97	311	eP	Pn	09 00 46.8	+0.5
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
JHJ	Hachijo jima 2	16.80	55	LR	LR	09 06 49.0	
	comp=Z,97nm,21.7s,baz=243,slow=35						
DAV	Davao City (W)	17.24	173	LR	LR	09 07 22.5	
	comp=Z,158nm,21.5s,baz=330,slow=36						
MAJO	Matsushiro	17.61	43	ePn	Pn	09 01 05.4	-1.5
MAJO	Matsushiro	17.61	43	eP	Pn	09 01 05.4	-1.5
MJAR	Matsushiro Arr	17.61	43	P	Pn	09 01 05.4	-1.5
	comp=Z,0.0nm,0.3s,baz=220,slow=8.4,SNR=2.9						
MJAR				LR	LR	09 08 11.3	
	comp=Z,64nm,20.4s,baz=245,slow=38						
CD2	Chengdu	18.65	295	P	Pn	09 01 20.5	+0.9
CD2				S	S	09 04 48.5	-0.7
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
CD2				LR	LR		
	comp=Z,440nm,8.8s						
CD2				LR	LR		
	comp=Z,500nm,10.8s						
KMI	Kunming	18.84	277	P	Pn	09 01 23.0	+0.9
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC	Hu-ho-hao-te	19.28	332	eP	Pn	09 01 27.8	+0.6
HHC				S	Sn	09 05 03.5	+1.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,6.0s						
HHC				LR	LR		
	comp=Z,260nm,13.8s						
HHC				LR	LR		
	comp=Z,400nm,11.2s						
CN2	Changchun	19.54	4	eP	Pn	09 01 31.0	+1.0
LZH	Lanzhou	20.59	309	eP	Pn	09 01 43.5	+0.8
LZH				pP	sP	09 01 53.0	-2.7
LZH				sP	pP	09 01 58.0	+7.6
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
USRK	Ussuriysk Ar.	21.06	17	P	P	09 01 44.4	-0.5
	comp=Z,0.7nm,0.6s,baz=207,slow=12,SNR=6.8						
USRK				LR	LR	09 09 49.1	
	comp=Z,106nm,18.8s,baz=173,slow=37						
SRAK	Srakaew	22.63	247	P	P	09 02 00.9	-1.1
	comp=Z,39nm,1.1s,comp=Z,678nm						
GUMO	Guam	22.85	114	LR	LR	09 10 37.9	
	comp=Z,54nm,19.5s,baz=299,slow=36						
CHTO	Chiang Mai	23.42	261	eP	P	09 02 10.4	+0.4
	comp=Z,5.0nm,0.9s						
CHTO	Chiang Mai	23.42	261	eP	P	09 02 10.5	+0.4
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CM01	Chiang Mai Arr	23.53	260	eP	P	09 02 10.8	-0.3
CM31	Chiang Mai Arr	23.53	260	eP	P	09 02 11.1	0.0
	comp=Z,5.8nm,0.9s						
CMAR	Chiang Mai Arr	23.53	260	P	P	09 02 12.2	+1.1
	comp=Z,1.1nm,0.3s,baz=57,slow=8.3,SNR=8.2						
CMAR				LR	LR	09 11 24.9	
	comp=Z,77nm,18.7s,baz=53,slow=37						
ERM	Erimo	24.09	38	⇓eP	P	09 02 16.6	+0.6
ERM				pmax	pmax		
	comp=Z,34nm,0.9s						
SBUM	Sibu	24.27	208	eP	P	09 02 17.1	-0.8
	comp=Z,12nm,1.1s						
GTA	Gaotai	25.01	313	eP	P	09 02 26.3	+1.7
GTA				pP	pP	09 02 37.5	+1.8
GTA				sP	sP	09 02 43.3	+2.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ASAJ	Asahikawa	25.23	34	LR	LR	09 12 32.7	
	comp=Z,87nm,18.3s,baz=329,slow=37						
KLR	Kul'dur	25.74	13	P	P	09 02 30.9	-0.1
	comp=Z,0.9nm,0.4s,baz=225,slow=10.0,SNR=5.9						
ULN	Ulaanbaatar	26.89	335	eP	P	09 02 41.3	-0.3
	comp=Z,7.3nm,1.5s						
ULN	Ulaanbaatar	26.89	335	eP	P	09 02 41.3	-0.3
ULN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
SONA0	Songino Array	27.12	334	eP	P	09 02 43.8	+0.1
SONM	Songino Array	27.12	334	P	P	09 02 43.8	+0.1
	comp=Z,1.0nm,0.3s,baz=144,slow=10,SNR=11						
SONM				LR	LR	09 14 39.0	
	comp=Z,162nm,19.9s,baz=170,slow=39						
SONA1	Songino Array	27.13	334	eP	P	09 02 43.5	-0.2
SHL	Shillong	28.62	279	eP	P	09 02 57.5	+0.1
	comp=Z,8.9nm,0.7s						
SHL	Shillong	28.62	279	eP	P	09 02 57.5	+0.1
SHL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KUR	Kuril'sk	28.77	37	⇓eP	P	09 02 59.0	+0.8
LSA	Lhasa	29.22	288	eP	P	09 03 03.7	+0.7
	comp=Z,12nm,0.8s						
LSA	Lhasa	29.22	288	eP	P	09 03 03.7	+0.7
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
TLY	Talaya	31.28	336	eP	P	09 03 20.2	-0.2
	comp=Z,3.8nm,0.9s						
TLY	Talaya	31.28	336	deP	P	09 03 21.1	+0.7
PSI	Prapat	31.89	232	P	P	09 03 26.1	-0.1
	comp=Z,3.9nm,0.5s,baz=178,slow=0.4,SNR=8.2						
PSI				LR	LR	09 15 19.9	
	comp=Z,78nm,18.6s,baz=65,slow=34						
ODAN	Odare	32.56	282	eP	P	09 03 33.7	+1.5
	comp=Z,19nm,0.6s						
PMBI	Palembang	32.58	216	P	P	09 03 38.2	+6.1
MNSI	Mandailing Nat	32.86	228	P	P	09 03 35.5	+0.9
	comp=Z,16nm,0.4s						
KNGR	Kungurtug, Tuv	33.05	329	⇑eP	P	09 03 35.4	-0.7
RAMN	Ramite	33.26	283	eP	P	09 03 39.8	+1.5
	comp=Z,24nm,1.0s						
JIRN	Jiri	33.58	284	eP	P	09 03 42.8	+1.5
	comp=Z,33nm,0.7s						
GUN	Gumba	33.85	284	eP	P	09 03 44.8	+1.3
	comp=Z,34nm,0.8s						
PKI	Pulchoki	34.28	284	eP	P	09 03 48.1	+0.8
KKN	Kakani	34.38	284	eP	P	09 03 49.2	+1.2
DMN	Daman	34.55	284	eP	P	09 03 50.5	+1.0
WMQ	Urumqi	35.09	313	eP	P	09 03 55.5	+1.7
WMQ				LR	LR		
	comp=Z,200nm,23.5s						
WMQ				LR	LR		
	comp=Z,120nm,18.1s						
WMQ				LR	LR		
	comp=Z,120nm,17.5s						
DANN	Dangsing	35.70	285	eP	P	09 04 00.6	+1.2
	comp=Z,35nm,0.8s						
KOLN	Koldanda	35.87	284	eP	P	09 04 01.9	+1.1
	comp=Z,29nm,0.9s						
PYUN	Piuthan	36.39	285	eP	P	09 04 06.5	+1.2
	comp=Z,32nm,0.9s						
DGZ	Jazzator, Alta	37.79	321	⇑eP	P	09 04 17.2	+0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PETK	Petropavlovsk-	38.64	33	eP	P	09 04 22.9	-0.8
PETK	Petropavlovsk-	38.64	33	P	P	09 04 22.6	-1.1
	comp=Z,1.1nm,0.7s,baz=225,slow=5.9,SNR=3.3						
PEA1	Petropavlovsk-	38.64	33	eP	P	09 04 22.6	-1.1
MK01	Makanchi Array	39.70	315	eP	P	09 04 32.6	-0.2
MK31	Makanchi Array	39.72	315	eP	P	09 04 33.0	+0.1
MK31	Makanchi Array	39.72	315	eP	P	09 04 33.0	+0.1
MK32	Makanchi Array	39.72	315	eP	P	09 04 32.3	-0.5
MK32				ePcP	PcP	09 06 38.4	-0.4
MKAR	Makanchi Array	39.72	315	eP	P	09 04 33.0	+0.1
	comp=Z,20nm,1.0s						
MKAR	Makanchi Array	39.72	315	eP	P	09 04 33.0	+0.1
MKAR				pmax	pmax		
	comp=Z,20nm,1.0s						
MKAR	Makanchi Array	39.72	315	P	P	09 04 32.3	-0.5
	comp=Z,1.1nm,0.3s,baz=103,slow=10.0,SNR=22						
MKAR				PcP	PcP	09 06 38.4	-0.4
	comp=Z,1.1nm,0.6s,baz=87,slow=5.2,SNR=5.2						
MAKZ	Makanchi	39.92	315	eP	P	09 04 34.6	0.0
	comp=Z,5.2nm,1.0s						
MAKZ	Makanchi	39.92	315	eP	P	09 04 34.6	0.0
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ZAA0	Zalesovo Array	41.30	326	eP	P	09 04 44.9	-0.9
	comp=Z,6.9nm,0.6s						
ZALV	Zalesovo Beam	41.30	326	eP	P	09 04 44.7	-1.1
ZALV	Zalesovo Beam	41.30	326	P	P	09 04 45.0	-0.8
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ZALV				MLR	MLR		
	comp=Z,138nm,18.4s						
ZALV	Zalesovo Beam	41.30	326	P	P	09 04 45.0	-0.8
	comp=Z,7.0nm,0.5s,baz=110,slow=7.5,SNR=14						
ZALV				LR	LR	09 23 10.3	
	comp=Z,138nm,18.4s,baz=224,slow=38						
ZAA1	Zalesovo Array	41.30	326	eP	P	09 04 45.0	-0.8
COEN	Coen	42.62	151	eP	P	09 04 56.7	-0.2
	comp=Z,5.5nm,0.8s						
NRN	Naryn	42.81	305	eP	P	09 04 58.5	-0.2
	comp=Z,4.4nm,1.0s						
NRN	Naryn	42.81	305	eP	P	09 04 58.5	-0.2
NRN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SEY	Seymchan	43.19	19	P	P	09 05 00.6	-0.5
	comp=Z,0.4nm,0.3s,baz=90,slow=20,SNR=3.4						
KURK	Kurchatov	43.35	319	eP	P	09 05 02.2	-0.4
KURK	Kurchatov	43.35	319	⇓eP	P	09 05 02.3	-0.2
KURK				pmax	pmax		
	comp=Z,14nm,2.5s						
KURBB	Kurchatov Arra	43.37	319	P	P	09 05 02.2	-0.5
	comp=Z,2.1nm,0.3s,baz=108,slow=8.2,SNR=6.6						
AAK	Ala-Archa	44.09	307	⇓eP	P	09 05 10.9	+2.1
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AAK	Ala-Archa	44.09	307	P	P	09 05 08.0	-0.8
	comp=Z,1.1nm,0.5s,baz=94,slow=18,SNR=3.6						
AAK				LR	LR	09 23 55.0	
	comp=Z,66nm,19.8s,baz=86,slow=37						
PALK	Pallekele	44.26	255	LR	LR	09 24 09.3	
	comp=Z,53nm,20.1s,baz=118,slow=37						
WRAB	Tennant Creek	45.22	165	⇓eP	P	09 05 18.2	+0.5
WRAB				pmax	pmax		
	comp=Z,56nm,2.5s						
WR1	Warramunga Arr	45.22	166	eP	P	09 05 17.7	-0.1
	comp=Z,7.4nm,0.9s						
WRA	Warramunga Arr	45.22	166	P	P	09 05 17.7	-0.1
	comp=Z,7.6nm,0.8s,baz=348,slow=8.9,SNR=34						
WB2	Warramunga Arr	45.23	165	eP	P	09 05 17.3	-0.5
	comp=Z,7.2nm,0.9s						
KBL	Kabul	47.99	295	eP	P	09 05 40.1	+0.4
	comp=Z,7.4nm,0.9s						
KBL	Kabul	47.99	295	eP	P	09 05 40.1	+0.4
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AS31	Alice Springs	48.73	167	eP	P	09 05 44.9	-0.2
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	48.73	167	P	P	09 05 45.5	+0.3
	comp=Z,1.7nm,0.6s,baz=350,slow=6.4,SNR=22						
ASAR				PcP	PcP	09 07 09.8	0.0
	comp=Z,1.3nm,0.9s,baz=356,slow=3.8,SNR=4.4						
AS01	Alice Springs	48.74	167	eP	P	09 05 45.3	0.0
AS01				ePcP	PcP	09 07 09.8	0.0
BVAR	Borovoye Array	48.91	320	P	P	09 05 45.9	-0.4
	comp=Z,3.6nm,0.5s,baz=108,slow=8.9,SNR=23						
BRVK	Borovoye	48.98	320	eP	P	09 05 46.8	0.0
	comp=Z,6.0nm,0.6s						
BRVK	Borovoye	48.98	320	eP	P	09 05 46.8	0.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NRIK	Noril'sk	49.85	344	P	P	09 05 52.3	-0.9
	comp=Z,2.4nm,0.5s,baz=270,slow=1.0,SNR=3.7						
BILL	Bilibino	50.90	19	⇓eP	P	09 06 02.0	+0.9
BILL				e		09 07 57.8	
BILL				ePPP	PPP	09 08 56.4	
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
ABKAR	Akbulak array	54.85	314	eP	P	09 06 30.8	+0.3
	comp=Z,5.7nm,0.8s						
AKTO	Aktyubinsk	56.15	316	P	P	09 06 40.2	+0.4
	comp=Z,0.7nm,0.3s,baz=72,slow=8.8,SNR=5.3						
ARU	Arti	56.27	323	d iP	P	09 06 40.4	-0.2
ARU						09 08 44.5	
ARU				S	S	09 14 29.5	+2.1
ARU				SS	SS	09 18 14.8	+0.6
ARU				pmax	pmax		
	comp=Z,76nm,4.0s						
GEYT	Alibeck	56.53	301	P	P	09 06 43.9	+1.1
	comp=Z,3.5nm,0.7s,baz=64,slow=6.8,SNR=5.8						
GEYT				LR	LR	09 34 33.8	
	comp=Z,46nm,20.4s,baz=55,slow=40						
STKA	Stephens Creek	58.48	162	eP	P	09 06 56.1	-0.2
	comp=Z,1.4nm,0.9s						
STKA	Stephens Creek	58.48	162	P	P	09 06 56.6	+0.2
	comp=Z,3.9nm,0.8s,baz=335,slow=8.1,SNR=8.9						
PPLA	Purkeypile	66.13	30	eP	P	09 07 47.5	+0.1
	comp=Z,32nm,1.6s						
KDAK	Kodiak Island	66.62	35	P	P	09 07 50.1	-0.3
KDAK	Kodiak Island	66.62	35	P	P	09 07 50.1	-0.3
	comp=Z,4.8nm,0.3s,baz=280,slow=6.1						
KBZ	Khabaz	67.03	309	P	P	09 07 54.0	+0.7
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	67.03	309	P	P	09 07 54.0	+0.7
	comp=Z,5.0nm,0.8s,baz=147,slow=5.6,SNR=14						
KIV	Kislovodsk	67.13	309	eP	P	09 07 55.1	+1.0
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
NEY	Neytrino	67.25	309	⇓eP	P	09 07 56.9	+1.9
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPSR	Galich'ya Gora	67.84	319	eP	P	09 07 57.2	-1.0
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	Storozhevoye	67.97	318	⇓iP	P	09 07 59.0	-0.1
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ILAR	Eielson Array	68.17	27	P	P	09 07 59.8	-0.4
	comp=Z,0.4nm,0.5s,baz=265,slow=4.9,SNR=9.5						
ILB	Eielson Array	68.17	27	eP	P	09 08 00.1	-0.1
	comp=Z,8.6nm,1.6s						
OBN	Obninsk	68.70	322	eP	P	09 08 04.9	+1.3
OBN				e		09 08 27.5	
OBN				e		09 10 34.9	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARA0	ARCESS Array S	70.21	338	eP	P	09 08 12.4	-0.3
ARCES	ARCESS Array B	70.21	338	P	P	09 08 12.4	-0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	70.21	338	P	P	09 08 12.4	-0.3
	comp=Z,3.5nm,0.9s,baz=64,slow=4.2,SNR=4.4						
RAYN	Ar Rayn	70.29	288	eP	P	09 08 14.0	-0.1
	comp=Z,11nm,1.3s						
RAYN	Ar Rayn	70.29	288	eP	P	09 08 14.0	-0.1
RAYN				pmax	pmax		
	comp=Z,11nm,1.3s						
FIA1	FINESS Array S	72.39	330	eP	P	09 08 26.0	0.0
FIA0	FINESS Array S	72.40	330	eP	P	09 08 25.5	-0.5
FIA0	FINESS Array S	72.40	330	eP	P	09 08 25.5	-0.5
FINES	FINESS Array B	72.40	330	P	P	09 08 25.5	-0.5
	comp=Z,0.9nm,0.3s,baz=62,slow=5.2,SNR=11						
FINES				LR	LR	09 43 30.8	
	comp=Z,142nm,18.7s,baz=346,slow=39						
AKASG	Malin Array Be	74.16	319	P	P	09 08 36.3	-0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	74.16	319	P	P	09 08 36.3	-0.3
	comp=Z,1.1nm,0.3s,baz=58,slow=6.1,SNR=12						
AKBB	Malin Array Si	74.16	319	eP	P	09 08 36.2	-0.5
AKBB	Malin Array Si	74.16	319	eP	P	09 08 36.2	-0.5
ASF	Jabal al Asfar	74.74	299	P	P	09 08 41.3	+0.8
	comp=Z,6.4nm,0.8s,baz=7.1,slow=2.0,SNR=10.0						
BR101	Keskin Array S	74.77	307	eP	P	09 08 41.4	+0.7
BR131	Keskin Array S	74.77	307	eP	P	09 08 40.7	+0.1
	comp=Z,11nm,1.0s						
BRTR	Keskin Array B	74.77	307	P	P	09 08 41.4	+0.7
	comp=Z,5.3nm,0.9s,baz=103,slow=5.5,SNR=19						
MMAI	Mount Meron Ar	75.64	300	P	P	09 08 46.4	+0.8
	comp=Z,3.0nm,0.6s,baz=55,slow=8.7,SNR=4.5						
BUR04	Bucovina Ar. S	77.72	317	eP	P	09 08 57.1	-0.1
NB201	NORSAR Array S	79.05	333	eP	P	09 09 03.7	-0.5
	comp=Z,30nm,1.4s						
NB2	NORSAR Subarra	79.09	333	P	P	09 09 03.9	-0.5
	comp=Z,1.2nm,0.5s,baz=55,slow=5.6						
NB200	NORSAR Array S	79.09	333	eP	P	09 09 03.6	-0.8
NOA	NORSAR Array B	79.09	333	P	P	09 09 03.6	-0.8
	comp=Z,2.3nm,0.7s,baz=54,slow=5.8,SNR=9.4						
OJC	Ojcow	79.92	321	eP	P	09 09 08.7	-0.3
	comp=Z,11nm,0.9s						
OJC	Ojcow	79.92	321	eP	P	09 09 08.7	-0.3
OJC				pmax	pmax		
	comp=Z,11nm,0.9s						
RPZ	Rata Peaks	80.53	147	P	P	09 09 10.7	-1.5
	comp=Z,7.4nm,1.0s,baz=43,slow=21,SNR=3.7						
VTS	Vitosha	81.00	313	eP	P	09 09 15.2	0.0
	comp=Z,12nm,1.1s						
VTS	Vitosha	81.00	313	eP	P	09 09 15.2	0.0
VTS				pmax	pmax		
	comp=Z,12nm,1.1s						
VYHS	Vyhne	81.24	319	eP	P	09 09 16.9	+0.7
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VYHS	Vyhne	81.24	319	eP	P	09 09 16.9	+0.7
MORC	Moravsky Berou	81.42	321	eP	P	09 09 18.2	+1.1
JAVC	Velka Javorina	81.76	320	eP	P	09 09 21.1	+2.1

YKW3	**Yellowknife Ar**	**82.02**	**23**	*e*P	**P**	**09 09 19.7**	**-0.2**
	comp=Z,6.0nm,0.7s						
YKA	**Yellowknife Ar**	**82.06**	**23**	P	**P**	**09 09 20.6**	**+0.5**
	comp=Z,4.1nm,0.5s,baz=303,slow=5.3,SNR=138						
YKB5	**Yellowknife Ar**	**82.06**	**23**	*e*P	**P**	**09 09 20.0**	**-0.2**
VRAC	**Vranov**	**82.18**	**321**	*e*P	**P**	**09 09 22.2**	**+1.1**
MODS	**Modra-Piesok**	**82.22**	**320**	*e*P	**P**	**09 09 20.9**	**-0.4**
MODS	**Modra-Piesok**	**82.22**	**320**	*e*P	**P**	**09 09 20.9**	**-0.4**
KRUC	**Moravsky**	**82.41**	**321**	*e*P	**P**	**09 09 22.5**	**+0.2**
CLL	**Collm**	**83.21**	**324**	*e*P	**P**	**09 09 26.0**	**-0.3**
CLL	**Collm**	**83.21**	**324**	*e*P	**P**	**09 09 26.0**	**-0.3**
GEC2	**GERESS Array S**	**84.07**	**321**	*e*P	**P**	**09 09 31.3**	**+0.3**
	comp=Z,8.4nm,1.1s						
GEC2	**GERESS Array S**	**84.07**	**321**	*e*P	**P**	**09 09 31.3**	**+0.3**
GEC2				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GERES	**GERESS Array B**	**84.07**	**321**	P	**P**	**09 09 31.3**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=53,slow=5.2,SNR=20						
GEA0	**GERESS Array S**	**84.07**	**321**	*e*P	**P**	**09 09 31.0**	**0.0**
FFC	**Flin Flon**	**92.20**	**24**	*e*P	**P**	**09 10 09.7**	**0.0**
	comp=Z,5.3nm,0.8s						
FFC	**Flin Flon**	**92.20**	**24**	*e*P	**P**	**09 10 09.7**	**0.0**
FFC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NV01	**Mina Array Sit**	**94.93**	**44**	*e*P	**P**	**09 10 22.4**	**-0.5**
NVAR	**Mina Array Bea**	**94.93**	**44**	P	**P**	**09 10 23.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=295,slow=5.9,SNR=5.1						
TXAR	**Lajitas Array**	**110.05**	**43**	PKiKP	**PKiKP**	**09 15 33.1**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=231,slow=0.1,SNR=12						

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*ISCJB **26** 09:01:17.1±0.6, 64°.69N±0°.03×30°.40E±0°.09, h0^{km}, Error ellipse: s-maj=5.6km s-min=3.7km az=14.9*

*HEL **26** 09:01:19.6±0.1, 64°.75N×30°.69E, h0^{km}, ML2.1, Explosion*

*IDC **26** 09:01:20.2±3.3, 64°.74N×31°.26E, h0^{km}, mb1 3.0/3, mb1mx2.9/52, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=51.8km s-min=10.4km az=97.0*

*BER **26** 09:01:21.7±1.7, 64°.75N×30°.67E, h0^{km}, ML1.7, ML2.3(NAO), Suspected explosion*

*NAO **26** 09:01:22.1±1.4, 64°.88N×30°.05E, ML2.3*

ISC 26 09:01:20.8±1.0**, 64°.83N**±0°.03×**30°.39E**±0°.05**, h0^{km}, n30, σ1^s.25**/49**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KU6	**Riekki**	**1.22**	**350**	PG	**Pg**	**09 01 43.5**	**-0.7**
	baz=164						
KU6				MSG		09 01 59.5	
	comp=Z,7.3nm,0.2s						
KU6				SG	**Sg**	**09 02 00.5**	**+0.4**
MSF	**Maaselka**	**1.23**	**333**	PG	**Pg**	**09 01 44.0**	**-0.4**
	baz=149						
MSF				SG	**Sb**	**09 02 01.3**	**0.0**
OUL	**Oulu**	**1.93**	**280**	PG	**Pg**	**09 01 56.9**	**-0.9**
OUL				SG	**Sg**	**09 02 22.9**	**+0.1**
JOF	**Joensuu**	**1.96**	**168**	PG	**Pn**	**09 01 53.0**	**-2.3**
OUF	**Merijarvi**	**2.48**	**262**	PG	**Pb**	**09 02 04.9**	**-1.4**
OUF				MSG		09 02 36.3	
	comp=Z,13nm,0.2s						
OUF				SG	**Sg**	**09 02 39.6**	**-0.9**
TOF	**Tornio**	**2.83**	**299**	PB	**Pb**	**09 02 11.3**	**-0.8**
	baz=112						
TOF				MSG		09 02 46.9	
	comp=Z,10.0nm,0.2s						
TOF				SB	**Sb**	**09 02 48.0**	**+0.7**
VRF	**Varrio**	**2.95**	**354**	PN	**Pn**	**09 02 09.2**	**+0.3**
	baz=171						
VRF				MSG		09 02 49.0	
	comp=Z,2.8nm,0.2s						
VRF				SG	**Sb**	**09 02 51.6**	**+0.8**
APA0	**Apatity Array**	**2.98**	**19**	Pn	**Pn**	**09 02 09.3**	**-0.1**
	baz=193,slow=16						
APA0				Lg	Lg	09 02 56.0	
	baz=196,slow=37						
APA0	**Apatity Array**	**2.98**	**19**	Pn	**Pn**	**09 02 09.3**	**-0.1**
	baz=193,slow=16						
APA0				Sg	**Sg**	**09 02 56.0**	**-0.6**
	baz=196,slow=37						
SGF	**Sodankyl**	**3.06**	**331**	PN	**Pn**	**09 02 10.8**	**+0.4**
SGF				SB	**Sb**	**09 02 54.3**	**+0.3**
KAF	**Kangasniemi**	**3.28**	**216**	PB	**Pn**	**09 02 16.0**	**+2.5**
KEF	**Keuruu**	**3.64**	**225**	PB	**Pn**	**09 02 20.1**	**+1.8**
VAF	**Ylistaro**	**3.85**	**246**	PN	**Pn**	**09 02 23.2**	**+2.0**
	baz=62						
BURU	**Burvik**	**3.88**	**270**	PN	**Pn**	**09 02 22.8**	**+1.2**
FIA0	**FINESS Array S**	**3.92**	**212**	Pn	**Pn**	**09 02 22.8**	**+0.6**
	baz=28,slow=14						
FIA0				Pg	**Pb**	**09 02 30.8**	**+0.1**
	baz=24,slow=14						
FIA0				Lg	Lg	09 03 21.9	
	baz=37,slow=28						
FIA0	**FINESS Array S**	**3.92**	**212**	Pn	**Pn**	**09 02 22.8**	**+0.6**
	baz=28,slow=14						
FIA0				Pg	**Pb**	**09 02 30.8**	**+0.1**
	baz=24,slow=14						
FIA0				Sg	**Sb**	**09 03 21.9**	**+3.3**
	baz=37,slow=28						
FIA0	**FINESS Array S**	**3.92**	**212**	PN	**Pn**	**09 02 22.3**	**+0.1**
	baz=30						
FINES	**FINESS Array B**	**3.92**	**212**	Pn	**Pn**	**09 02 22.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=34,slow=10,SNR=7.7						
FINES				Pg	**Pb**	**09 02 31.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=30,slow=15,SNR=10						
FINES				Lg	Lg	09 03 20.5	
	comp=Z,1.6nm,0.3s,baz=33,slow=28,SNR=22						
UMAU	**Umeaa**	**4.33**	**262**	SG	**Sg**	**09 03 38.6**	**-1.1**
HEF	**Hetta**	**4.49**	**326**	PG	**Pb**	**09 02 41.9**	**+1.5**
	baz=137						
KTK1	**Kautokeino**	**5.06**	**329**	*e*P	**Pn**	**09 02 37.9**	**+0.1**
KTK1				IAML		09 03 35.8	
	comp=Z,2.1nm,0.9s						
ARA0	**ARCESS Array S**	**5.10**	**340**	Pn	**Pn**	**09 02 38.0**	**-0.3**
	baz=154,slow=14						
ARA0				Lg	Lg	09 03 55.5	
	baz=156,slow=28						
ARA0	**ARCESS Array S**	**5.10**	**340**	Pn	**Pn**	**09 02 38.0**	**-0.3**
	baz=154,slow=14						
ARA0				Sg	**Sb**	**09 03 55.5**	**+3.1**
	baz=156,slow=28						
ARCES	**ARCESS Array B**	**5.10**	**340**	Pn	**Pn**	**09 02 38.4**	**0.0**
	comp=Z,0.7nm,0.3s,baz=156,slow=13,SNR=69						
ARCES				Sn	**Sn**	**09 03 38.5**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=156,slow=25,SNR=3.4						
ARCES				Lg	Lg	09 03 59.0	
	comp=Z,0.6nm,0.3s,baz=151,slow=30,SNR=6.8						
ARE0	**ARCESS Array S**	**5.10**	**340**	*e*P	**Pn**	**09 02 38.4**	**0.0**
ARE0				IAML		09 03 33.0	
	comp=Z,2.7nm,0.8s						
ARE0				*e*S	**Sn**	**09 03 35.7**	**-2.2**
KEV	**Kevo**	**5.12**	**347**	Pn	**Pn**	**09 02 38.3**	**-0.4**
KEV				Sn	**Sn**	**09 03 36.4**	**-2.0**
KEV				Lg	Lg	09 03 58.4	
KEV	**Kevo**	**5.12**	**347**	*e*P	**Pn**	**09 02 38.6**	**-0.1**
KEV				*e*S	**Sn**	**09 03 36.4**	**-2.0**
KIF	**Kilpisjarvi**	**5.64**	**322**	Pn	**Pn**	**09 02 46.9**	**+1.2**
KIF				Sn	**Sn**	**09 03 49.8**	**-1.3**
KIF	**Kilpisjarvi**	**5.64**	**322**	Pn	**Pn**	**09 02 46.9**	**+1.2**
KIF				Sn	**Sn**	**09 03 49.8**	**-1.3**
NOA	**NORSAR Array B**	**9.51**	**255**	Pn	**Pn**	**09 03 38.3**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=56,slow=11,SNR=2.7						

NEIC 26 09:03:59.5±0.0**, 51°.62N×178°.00W, h4^{km}, ML2.9**(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	**Kanaga Island**	**0.58**	**65**	*e*Pg	Pg	09 04 10.3	-0.3
KIWB				*e*Sg	Sb	09 04 20.4	-0.3
ADK	**Adak**	**0.86**	**71**	*e*Pg	Pg	09 04 15.7	-0.3
ADK				*e*Sn	Sb	09 04 29.0	+0.2
GSIG	**Igitkin Island**	**1.34**	**73**	P	Pn	09 04 23.8	-1.1
GSIG				S	Sg	09 04 42.0	-0.5
KOKL	**Mount Kliuchef**	**2.45**	**72**	*e*Pn	Pn	09 04 41.4	+1.1
KOFP	**Korovin Flat P**	**2.50**	**73**	*e*Pn	Pn	09 04 42.0	+1.1
KOFP				*e*Sn	Sb	09 05 14.7	-1.4
SPIA	**Saint Paul Isl**	**7.17**	**36**	*e*Pn	Pn	09 05 45.0	0.0
SPIA				*e*Sn	Sn	09 07 04.8	-2.0
UNV	**Unalaska Valle**	**7.33**	**68**	*e*Pn	Pn	09 05 47.5	+0.3
AKUT	**Akutan**	**7.82**	**66**	*e*Pn	Pn	09 05 54.0	+0.1
CHGN	**Chignik**	**12.44**	**60**	*e*Pn	Pn	09 06 57.2	+0.2

ATH 26 09:04:02.9, 40°.42N×21°.88E, h12^{km}±4^{km}, ML1.5/4**, Error ellipse: s-maj=4.7km s-min=1.3km az=224.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.14**	**217**	P	Pg	09 04 05.9	-0.5
KZN				S	Sg	09 04 09.5	+0.7
KZN				AML	AML	09 04 23.7	
	comp=E,2171μm,0.5s						
KZN				AML	AML	09 04 25.1	
	comp=N,1851μm,0.7s						
KZN	**Kozani**	**0.14**	**217**	P	Pg	09 04 05.8	-0.5
KZN				S	Sg	09 04 08.8	0.0
FNA	**Florina**	**0.53**	**314**	P	Pg	09 04 13.0	-0.3
FNA				S	Sg	09 04 20.8	+0.4
FNA				AML	AML	09 04 30.7	
	comp=N,115μm,0.4s						
FNA				AML	AML	09 04 35.9	
	comp=E,99μm,0.4s						
FNA	**Florina**	**0.53**	**314**	P	Pg	09 04 12.5	-0.9
FNA				S	Sg	09 04 20.6	+0.2
KPRO	**Kipourio**	**0.60**	**221**	P	Pg	09 04 14.8	0.0
KPRO				S	Sb	09 04 23.7	-0.3
KPRO				AML	AML	09 04 38.4	
	comp=E,92μm,0.4s						
KPRO				AML	AML	09 04 40.6	
	comp=N,105μm,0.6s						
KPRO	**Kipourio**	**0.60**	**221**	P	Pg	09 04 15.1	+0.3
KPRO				S	Sg	09 04 23.3	+0.6
PENT	**Pentalofos**	**0.61**	**249**	P	Pg	09 04 15.1	+0.3
NEST	**Nestorio**	**0.63**	**270**	P	Pg	09 04 15.1	-0.2
NEST				S	Sg	09 04 23.5	-0.1
NEST				AML	AML	09 04 37.5	
	comp=N,74μm,0.4s						
NEST				AML	AML	09 04 39.8	
	comp=E,81μm,0.5s						
NEST	**Nestorio**	**0.63**	**270**	P	Pb	09 04 15.7	-0.2
GRG	**Griva**	**0.67**	**36**	P	Pg	09 04 16.0	-0.1
GRG	**Griva**	**0.67**	**36**	P	Pg	09 04 15.9	-0.1
THL	**Klokotos Trika**	**0.86**	**173**	P	Pg	09 04 19.2	-0.2
THL				S	Sg	09 04 30.5	-0.1
THL	**Klokotos Trika**	**0.86**	**173**	P	Pb	09 04 19.8	+0.2
THL				S	Sn	09 04 32.5	-0.6
HORT	**Hortiatis**	**0.95**	**79**	P	Pn	09 04 21.8	-0.4

IDC 26 09:04:56.1±25.0**, 11°.25S×165°.39E, h0^{km}, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.6**/51**, mbtmp3.9**/4**, ML3.7**/1**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.9**/35**, Error ellipse: s-maj=435.6km s-min=50.0km az=50.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.65**	**288**	LR	LR	09 08 50.8	
	comp=Z,196nm,19.1s,baz=112,slow=42						
DZM	**Mont Dzumac**	**10.81**	**175**	Pn	Pn	09 07 32.2	0.0
	0.6nm,0.3s,baz=353,slow=17,SNR=14						
STKA	**Stephens Creek**	**30.05**	**223**	P	P	09 11 07.6	+0.6
	0.9nm,0.7s,baz=38,slow=12,SNR=3.0						
WRA	**Warramunga Arr**	**31.08**	**250**	P	P	09 11 16.7	+0.4
	2.2nm,0.9s,baz=82,slow=8.8,SNR=7.3						
ASAR	**Alice Springs**	**32.38**	**243**	P	P	09 11 26.9	-0.9
	0.6nm,0.8s,baz=70,slow=9.6,SNR=6.2						
ELK	**Elko**	**89.35**	**48**	LR	LR	09 47 20.0	
	comp=Z,30nm,21.9s,baz=332,slow=28						

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*SOME **26** 09:05:41.4, 39°.72N×74°.83E, h15^{km}*

*KRNET **26** 09:05:42.0±0.1, 39°.44N×74°.51E, mb2.9*

*NNC **26** 09:05:45.8±3.0, 39°.63N×74°.46E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=21.7km s-min=9.3km az=166.0*

ISC 26 09:05:42.7±1.9**, 39°.65N**±0°.07×**74°.47E**±0°.04**, h9^{km}**±12^{km}**, n31, σ1^s.62**/49**, 23C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.83**	**296**	⇑P	**Pn**	**09 06 00.7**	**0.0**
	10nm,0.4s						
SFK				⇓S	**Sn**	**09 06 14.4**	**+1.2**
	12nm,0.3s						
SFK	**Sufi-Kurgan**	**0.83**	**296**	⇑*i*P	**Pn**	**09 06 00.6**	**-0.1**
	baz=7.0						
SFK				⇑*i*S	**Sn**	**09 06 14.1**	**+0.9**
	baz=7.0						
ARSB	**Arslanbob**	**2.02**	**326**	⇑*i*P	**Pg**	**09 06 22.0**	**+0.6**
	baz=29						
ARSB				⇑*i*S	**Sg**	**09 06 51.3**	**+3.6**
	baz=29						
DRK	**Karamyk**	**2.07**	**266**	⇑*i*P	**Pb**	**09 06 20.1**	**-0.5**
	baz=72						
DRK				⇑*i*S	**Sb**	**09 06 48.1**	**+1.6**
	baz=72						
NRN	**Naryn**	**2.13**	**33**	⇑*i*P	**Pg**	**09 06 22.8**	**-0.7**
	baz=29						
NRN				⇑*i*S	**Sg**	**09 06 52.4**	**+1.2**
	baz=29						
ARLS	**Aral**	**2.21**	**357**	⇑*i*P	**Pg**	**09 06 24.6**	**-0.5**
	baz=57						
ARLS				⇑*i*S	**Sg**	**09 06 56.0**	**+2.2**
	baz=57						
KZA	**Kyzart**	**2.50**	**13**	P	**Pg**	**09 06 32.1**	**+1.5**
	SNR=6.9						
KZA	**Kyzart**	**2.50**	**13**	⇑*i*P	**Pb**	**09 06 28.9**	**+1.0**
	baz=12						
KZA				⇑*i*S	**Sg**	**09 07 02.7**	**-0.3**
	baz=12						
AML	**Almayashu**	**2.55**	**347**	P	**Pg**	**09 06 30.7**	**-0.9**
	SNR=6.0						
AML	**Almayashu**	**2.55**	**347**	⇓*i*P	**Pg**	**09 06 30.3**	**-1.2**
	baz=47						
AML				⇓*i*S	**Sg**	**09 07 04.4**	**-0.2**
	baz=47						
UCH	**Uchtor**	**2.58**	**1**	P	**Pg**	**09 06 30.6**	**-1.4**
	SNR=9.3						
UCH	**Uchtor**	**2.58**	**1**	⇓*i*P	**Pb**	**09 06 30.1**	**+0.8**
	baz=0.0						
UCH				⇓*i*S	**Sg**	**09 07 04.7**	**-0.8**
	baz=0.0						
ARK	**Arkit**	**2.87**	**319**	⇑*i*P	**Pb**	**09 06 33.4**	**-0.7**
	baz=21						
ARK				⇑*i*S	**Sb**	**09 07 10.1**	**+0.7**
	baz=21						
ULHL	**Ulahol**	**2.92**	**27**	⇓*i*P	**Pb**	**09 06 34.5**	**-0.5**
	baz=25						
ULHL				⇓*i*S	**Sb**	**09 07 12.4**	**+1.5**
	baz=25						
AAK	**Ala-Archa**	**2.99**	**0**	Pg	**Pg**	**09 06 40.0**	**+0.2**
	2.8nm,0.5s						
AAK				Lg	Lg	09 07 19.8	
	4.1nm,0.6s						
KBK	**Karagaybulak**	**3.03**	**7**	P	**Pb**	**09 06 37.0**	**+0.2**
	SNR=6.6						
BOOM	**Boomskoye usch**	**3.05**	**21**	⇑*i*P	**Pb**	**09 06 36.2**	**-1.0**
	baz=19						
BOOM				⇑*i*S	**Sb**	**09 07 15.0**	**+0.4**
	baz=19						
MNAS	**Manas**	**3.20**	**333**	⇑Pn	**Pb**	**09 06 38.9**	**-0.9**
	2.6nm,0.7s						
MNAS				⇑Sn	**Sb**	**09 07 20.3**	**+1.4**
	3.0nm,0.6s						
MNAS	**Manas**	**3.20**	**333**	Pg	**Pb**	**09 06 41.7**	**+1.9**
	1.0nm,0.4s						
MNAS				Lg	Lg	09 07 21.7	
	1.7nm,0.5s						
MNAS	**Manas**	**3.20**	**333**	⇑*i*P	**Pb**	**09 06 38.4**	**-1.4**
	baz=34						
MNAS				⇑*e*S	**Sb**	**09 07 19.5**	**+0.6**
	baz=34						
MRKS	**Merke**	**3.23**	**344**	Pg	**Pg**	**09 06 43.5**	**-1.1**
	8.7nm,0.4s						
MRKS				Lg	Lg	09 07 24.9	
	3.1nm,0.5s						
MRKS	**Merke**	**3.23**	**344**	*e*P	**Pb**	**09 06 39.9**	**-0.4**
	4.0nm,0.3s						
MRKS				*e*S	**Sb**	**09 07 22.3**	**+2.5**
	3.1nm,0.6s						
TKM2	**Tokmak 2**	**3.38**	**14**	P	**Pb**	**09 06 42.3**	**-0.5**
	SNR=6.1						
TKM2	**Tokmak 2**	**3.38**	**14**	⇓Pn	**Pb**	**09 06 41.7**	**-1.1**
	2.9nm,0.4s						
TKM2				⇑Sn	**Sb**	**09 07 22.7**	**-1.4**
	6.0nm,0.7s						
DGS	**Degeres**	**3.72**	**15**	Pg	**Pg**	**09 06 53.9**	**-0.1**
	4.7nm,0.7s						
DGS				Lg	Lg	09 07 43.1	
	10nm,0.6s						
DGS	**Degeres**	**3.72**	**15**	*e*P	**Pb**	**09 06 44.4**	**-4.2**
	5.2nm,0.7s						
DGS				*e*S	**Sb**	**09 07 30.2**	**-3.6**
	10nm,0.6s						
IZV	**Izvestkoviy**	**3.75**	**25**	Pg	**Pg**	**09 06 55.4**	**+0.9**
	3.7nm,0.6s						
IZV				Lg	Lg	09 07 45.9	
	6.0nm,0.5s						
SGDS	**Sogindy**	**3.80**	**2**	Pg	**Pg**	**09 06 56.1**	**+0.6**
	3.0nm,0.5s						
SGDS				Lg	Lg	09 07 46.7	
	2.2nm,0.6s						
KOTS	**Kotyrbulak**	**4.10**	**28**	Pg	**Pg**	**09 07 01.6**	**+0.5**
	3.6nm,0.5s						
KOTS				Lg	Lg	09 07 55.9	
	9.1nm,0.6s						
IUG	**Iuzhnay**	**4.19**	**308**	Pg	**Pb**	**09 06 54.5**	**-2.1**
	3.8nm,0.4s						
IUG				Lg	Lg	09 07 43.8	
	8.2nm,0.3s						
KK31	**Karatay Array**	**4.56**	**320**	Pg	**Pg**	**09 07 07.5**	**-2.5**
	1.2nm,0.5s,baz=90,slow=5.2,SNR=8.9						
KK31				⇑Sn	**Sb**	**09 07 53.9**	**-3.9**
	1.0nm,0.5s,baz=138,slow=24						
KK31				⇓Lg	Lg	09 08 10.9	
	0.6nm,0.4s,baz=145,slow=23						

IDC 26 09:09:25.2±3.8**, 6°.41S×147°.89E, h0^{km}, mb3.3**/1**, mb1 3.7**/2**, mb1mx3.3**/50**, mbtmp3.5**/2**, ML3.6**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/14**, Error ellipse: s-maj=137.5km s-min=46.4km az=113.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.82**	**223**	P	P	09 13 46.1	-0.6
	0.2nm,0.3s,baz=47,slow=11,SNR=9.4						
ASAR	**Alice Springs**	**21.80**	**217**	P	P	09 14 19.4	+0.4
	0.6nm,0.5s,baz=54,slow=9.2,SNR=19						
ASAR				LR	LR	09 24 15.0	
	comp=Z,71nm,19.9s,baz=292,slow=41						
TORD	**Torodi Ar. Bea**	**146.04**	**284**	PKPbc	PKPdf	09 29 07.4	-0.1
	0.5nm,0.5s,baz=73,slow=4.6,SNR=6.4						

NNC 26 09:09:57.6±6.3**, 37°.19N×70°.66E, h0^{km}, mb3.6, mpv3.1, 5C-2D, Error ellipse: s-maj=56.2km s-min=41.4km az=149.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.59**	**37**	⇓P	Pn	09 10 54.4	-0.3
	0.5nm,0.2s						
SFK				⇑S	Sn	09 11 38.8	+0.8
	1.7nm,0.3s						
MNAS	**Manas**	**5.48**	**14**	⇑P	Pn	09 11 21.1	+0.6
	1.0nm,0.5s						
MNAS				⇑S	Sn	09 12 25.6	+1.3
	1.3nm,0.3s						
KK31	**Karatay Array**	**5.91**	**359**	P	Pn	09 11 28.2	+1.9
	0.4nm,0.2s,baz=178,slow=13,SNR=37						
KK31				⇑S	Sn	09 12 38.8	+4.0
	0.4nm,0.3s,baz=186,slow=24,SNR=5.4						
AAK	**Ala-Archa**	**6.19**	**27**	⇑P	Pn	09 11 29.4	-0.9
	1.6nm,0.5s						
AAK				⇓S	Sn	09 12 41.9	+0.1
	2.9nm,0.7s						

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*IDC **26** 09:11:50.2±0.5, 53°.67N×163°.58W, h0^{km}, mb4.5/41, mb1 4.6/44, mb1mx4.5/66, mbtmp4.5/44, ML3.9/3, MS3.9/19, Ms1 4.0/19, ms1mx3.8/46, Error ellipse: s-maj=15.5km s-min=8.6km az=179.0*

*ISCJB **26** 09:11:52.2±0.8, 53°.70N±0°.03×163°.34W±0°.02, h23^{km}±5^{km}, mb4.7/175, MS4.0/24, Error ellipse: s-maj=5.3km s-min=2.2km az=4.4*

*BJI **26** 09:11:52.6, 54°.20N×164°.20W, h7^{km}, mB5.2/26, mb4.9/45, Ms4.7/8, Ms7 4.4/10*

*MOS **26** 09:11:53.1±1.1, 53°.77N×163°.44W, h27^{km}, mb5.0/83, MS4.0/12, Error ellipse: s-maj=8.4km s-min=4.8km az=91.5*

*AEIC **26** 09:11:53.0±0.0, 53°.46N×163°.37W, h28^{km}*

*NEIC **26** 09:11:54.1±1.0, 53°.68N×163°.45W, h25^{km}±6^{km}, mb4.6/98, ML4.2(AEIC), Error ellipse: s-maj=5.0km s-min=2.3km az=179.0*

ISC 26 09:11:53.6±0.8**, 53°.56N**±0°.06×**163°.48W**±0°.03**, h25^{km}**±4^{km}**, n608, σ1^s.15**/621**, mb4.8**/177**, MS4.0**/24**, 22C-17D, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRPK	**Brown Peak**	**1.10**	**352**	P	**Pb**	**09 12 13.8**	**-0.2**
SSLS	**Shishaldin Sou**	**1.20**	**346**	P	**Pb**	**09 12 15.6**	**0.0**
SSLW	**Shishaldin Wes**	**1.28**	**343**	P	**Pb**	**09 12 16.5**	**-0.5**
SSBA	**Shishaldin**	**1.28**	**343**	P	**Pn**	**09 12 16.2**	**+0.4**
SSBA				S	**Sb**	**09 12 35.4**	**+2.5**
WEBT	**Westdahl Beart**	**1.28**	**325**	P	**Pb**	**09 12 16.9**	**0.0**
AKSA	**Akutan Strait**	**1.44**	**295**	*e*Pn	**Pn**	**09 12 18.6**	**+0.6**
AKUT	**Akutan**	**1.48**	**294**	*e*Pn	**Pn**	**09 12 18.9**	**+0.4**
AKUT				*e*Sn	**Sb**	**09 12 38.3**	**-0.2**
DRIA	**Deer Island**	**1.58**	**26**	P	**Pn**	**09 12 19.4**	**-0.6**
AKMO	**Akutan Morgan**	**1.59**	**291**	*e*Pn	**Pn**	**09 12 21.0**	**+0.9**
AKGG	**Akutan Green G**	**1.62**	**294**	P	**Pn**	**09 12 21.3**	**+0.8**
AKGG				S	**Sb**	**09 12 44.0**	**+1.2**
AKRB	**Akutan Reef Bi**	**1.64**	**292**	*e*Pn	**Pn**	**09 12 21.8**	**+1.0**
DT1	**Dutton Round H**	**1.71**	**24**	*e*Pn	**Pn**	**09 12 21.9**	**+0.2**
UNV	**Unalaska Valle**	**1.82**	**280**	*e*Pn	**Pn**	**09 12 23.1**	**-0.1**
UNV				*e*Sn	**Sn**	**09 12 46.5**	**+1.1**
DOL	**Dolgoi Island**	**1.86**	**30**	P	**Pn**	**09 12 23.9**	**+0.2**
MTBL	**Makushin Table**	**1.94**	**284**	*e*Pn	**Pn**	**09 12 26.0**	**+1.0**
MREP	**Makushin Rep't**	**1.96**	**279**	P	**Pn**	**09 12 26.1**	**+0.9**
HAG	**Hague Volcano**	**1.99**	**27**	P	**Pn**	**09 12 26.4**	**+0.7**
MSW	**Makushin Switc**	**1.99**	**282**	*e*Pn	**Pn**	**09 12 26.3**	**+0.7**
PS4A	**Pavlof South-4**	**2.03**	**27**	P	**Pn**	**09 12 26.9**	**+0.8**
MCIR	**Makushin Cirqu**	**2.06**	**282**	*e*Pn	**Pn**	**09 12 28.0**	**+1.4**
PVV	**Pavlof Volcano**	**2.07**	**28**	P	**Pn**	**09 12 28.1**	**+1.4**
SDPT	**Sand Point**	**2.51**	**43**	*e*Pn	**Pn**	**09 12 32.8**	**0.0**
SDPT				*e*Sn	**Sn**	**09 13 04.0**	**+1.4**
OKSP	**Okmok Steeple**	**2.89**	**266**	P	**Pn**	**09 12 38.8**	**+0.8**
NIKH	**Nikolski High**	**3.28**	**262**	*e*Pn	**Pn**	**09 12 43.3**	**0.0**
NIKH				*e*Sn	**Sn**	**09 13 21.3**	**-0.1**
VNSS	**Veniaminof 8**	**3.55**	**39**	P	**Pn**	**09 12 48.4**	**+1.3**
VNFG	**Veniaminof 2**	**3.56**	**38**	P	**Pn**	**09 12 48.3**	**+1.1**
CHGN	**Chignik**	**4.02**	**45**	*e*Pn	**Pn**	**09 12 53.9**	**+0.5**
ANPB	**Aniakchak Plen**	**4.41**	**40**	*e*Pn	**Pn**	**09 12 59.6**	**+0.7**
AZAC	**Aniakchak**	**4.50**	**40**	P	**Pn**	**09 13 01.1**	**+0.9**
ANNE	**Aniakchak Nort**	**4.58**	**41**	P	**Pn**	**09 13 02.3**	**+1.2**
SPIA	**Saint Paul Isl**	**5.30**	**316**	*e*Pn	**Pn**	**09 13 11.0**	**0.0**
SII	**Sitkinak Islan**	**6.13**	**57**	*e*Pn	**Pn**	**09 13 21.5**	**-1.0**
CAHL	**Cahill**	**6.45**	**42**	P	**Pn**	**09 13 28.0**	**+1.2**
OHAK	**Old Harbor**	**6.87**	**54**	*e*Pn	**Pn**	**09 13 30.4**	**-2.1**
KDAK	**Kodiak Island**	**7.48**	**51**	*e*Pn	**Pn**	**09 13 38.9**	**-2.0**
KDAK	**Kodiak Island**	**7.48**	**51**	Pn	**Pn**	**09 13 38.4**	**-2.4**
	2.9nm,0.3s,baz=219,slow=5.5,SNR=11						
KDAK				Sn	**Sn**	**09 14 59.3**	**-5.4**
	0.7nm,0.3s,baz=126,slow=17,SNR=3.7						
SVW2	**Sparrevohn**	**8.68**	**26**	*e*Pn	**Pn**	**09 13 57.5**	**+0.2**
HOM	**Homer**	**8.94**	**42**	*e*Pn	**Pn**	**09 14 00.7**	**-0.2**
BRLK	**Bradley Lake**	**9.31**	**43**	*e*Pn	**Pn**	**09 14 04.9**	**-1.1**
SEW	**Seward**	**10.10**	**44**	*e*Pn	**Pn**	**09 14 15.4**	**-1.3**
SUA	**Susitna One**	**10.46**	**36**	*e*Pn	**Pn**	**09 14 20.8**	**-1.0**
RC01	**Rabbit Creek A**	**10.58**	**39**	*e*Pn	**Pn**	**09 14 20.9**	**-2.4**
PPLA	**Purkeypile**	**11.08**	**28**	*e*Pn	**Pn**	**09 14 30.5**	**+0.2**
ANM	**Nome**	**11.09**	**356**	*e*Pn	**Pn**	**09 14 30.1**	**-0.2**
GAMB	**Gambell**	**11.09**	**341**	*e*Pn	**Pn**	**09 14 30.5**	**+0.1**
PMR	**Palmer**	**11.12**	**38**	*e*Pn	**Pn**	**09 14 29.6**	**-1.2**
PMR	**Palmer**	**11.12**	**38**	*e*P	**Pn**	**09 14 29.6**	**-1.2**
KNK	**Knik Glacier**	**11.26**	**40**	*e*Pn	**Pn**	**09 14 30.6**	**-2.1**
GLI	**Glacier Island**	**11.50**	**44**	*e*Pn	**Pn**	**09 14 36.6**	**+0.7**
CAST	**Castle Rocks**	**11.53**	**26**	*e*Pn	**Pn**	**09 14 36.3**	**0.0**
SML	**Sawmill**	**11.55**	**38**	*e*Pn	**Pn**	**09 14 35.0**	**-1.7**
SML	**Sawmill**	**11.55**	**38**	*e*P	**Pn**	**09 14 35.0**	**-1.7**
SCM	**Sheep Creek Mo**	**11.95**	**40**	*e*Pn	**Pn**	**09 14 39.2**	**-2.9**
SCM	**Sheep Creek Mo**	**11.95**	**40**	*e*P	**Pn**	**09 14 39.2**	**-2.9**
TRF	**Thorofare Moun**	**12.05**	**29**	*e*Pn	**Pn**	**09 14 42.0**	**-1.6**
DIV	**Divide**	**12.18**	**44**	*e*Pn	**Pn**	**09 14 43.3**	**-1.9**
KLU	**Klutina**	**12.30**	**43**	*e*Pn	**Pn**	**09 14 44.9**	**-2.1**
RND	**Reindeer**	**12.46**	**32**	*e*Pn	**Pn**	**09 14 48.3**	**-0.8**
RND	**Reindeer**	**12.46**	**32**	*e*P	**Pn**	**09 14 48.3**	**-0.8**
MCK	**McKinley**	**12.67**	**31**	*e*Pn	**Pn**	**09 14 49.9**	**-2.0**
MCK	**McKinley**	**12.67**	**31**	*e*P	**Pn**	**09 14 49.9**	**-2.0**
DHY	**Denali Highway**	**12.72**	**35**	*e*Pn	**Pn**	**09 14 51.0**	**-1.7**
HARP	**HAARP**	**13.11**	**40**	*e*Pn	**Pn**	**09 14 55.0**	**-3.0**

MLY	Manley	13.18	24	*e*Pn	Pn	09 14 58.2	-0.7
PAX	Paxson	13.32	38	*e*Pn	Pn	09 14 58.5	-2.4
PAX	Paxson	13.32	38	*e*P	Pn	09 14 58.5	-2.4
IM3	Indian Mountai	13.37	17	*e*Pn	Pn	09 15 01.3	-0.1
WRH	Wood River Hil	13.46	30	*e*Pn	Pn	09 15 00.5	-2.2
BALM	Baldy	13.62	48	*e*Pn	Pn	09 15 02.9	-2.0
BALM	Baldy	13.62	48	*e*P	Pn	09 15 02.9	-2.0
HDA	Harding Lake	13.77	31	*e*Pn	Pn	09 15 03.5	-3.3
HDA	Harding Lake	13.77	31	P	Pn	09 15 04.3	-2.6
	baz=226						
MDM	Murphy Dome	13.79	28	*e*Pn	Pn	09 15 03.8	-3.4
COLA	College	13.83	29	*e*Pn	Pn	09 15 06.9	-0.8
	28nm,1.3s						
COLA				*e*Sn	Sn	09 17 44.1	+3.9
COLA	College	13.83	29	*e*P	Pn	09 15 06.9	-0.8
COLA				*e*		09 17 44.1	
COLA				pmax	pmax		
	comp=Z,28nm,1.3s						
MENT	Mentasta	13.96	40	*e*Pn	Pn	09 15 07.6	-2.0
RIDG	Independ'e Rid	14.02	36	*e*Pn	Pn	09 15 08.0	-2.4
ILAR	Eielson Array	14.04	30	Pn	Pn	09 15 07.6	-3.0
	comp=Z,0.2nm,0.3s,baz=228,slow=12,SNR=13						
ILAR				PcP	PcP	09 20 29.6	0.0
	comp=Z,0.2nm,0.3s,baz=264,slow=1.7,SNR=8.6						
ILB	Eielson Array	14.04	30	*e*Pn	Pn	09 15 07.8	-2.8
IL1	Eielson Array	14.04	30	*e*Pn	Pn	09 15 08.0	-2.6
DOT	Dot Lake	14.24	37	*e*Pn	Pn	09 15 11.7	-1.7
SCRK	Sand Creek	14.46	36	*e*Pn	Pn	09 15 14.3	-2.2
PRP	Porcupine Dome	14.98	30	*e*Pn	Pn	09 15 20.3	-3.1
HYT	Haines Junctio	15.77	52	*e*Pn	Pn	09 15 32.3	-1.5
	comp=Z,21nm,0.7s						
FYU	Fort Yukon	15.81	27	*e*Pn	Pn	09 15 31.4	-2.8
	comp=Z,38nm,1.7s						
EGAK	Eagle	15.93	36	*e*Pn	Pn	09 15 32.8	-3.0
	comp=Z,15nm,0.6s						
DAWY	Dawson	16.21	40	*e*Pn	Pn	09 15 37.5	-1.8
	comp=Z,22nm,0.6s						
TOLK	Toolik Lake Re	16.49	18	*e*Pn	Pn	09 15 41.2	-1.7
	comp=Z,26nm,0.8s						
TOLK	Toolik Lake Re	16.49	18	P	Pn	09 15 42.3	-0.5
	baz=210						
SKAG	Skagway	16.54	58	*e*Pn	Pn	09 15 44.1	+0.6
	comp=Z,29nm,0.9s						
WHY	Whitehorse	16.98	54	*e*Pn	Pn	09 15 49.9	+0.8
	comp=Z,78nm,1.6s						
EPYK	Eagle Plains	18.35	35	*e*P	P	09 16 04.5	-1.4
	comp=Z,27nm,0.8s						
EPYK	Eagle Plains	18.35	35	P	P	09 16 05.0	-0.9
	baz=239,SNR=12						
DLBC	Dease Lake	19.20	62	*e*P	Pn	09 16 17.2	+0.8
	comp=Z,19nm,0.9s						
DLBC	Dease Lake	19.20	62	P	Pn	09 16 16.6	+0.1
	comp=Z,0.3nm,0.3s,baz=248,slow=8.4,SNR=7.0						
BILL	Bilibino	20.37	327	*e*P	P	09 16 27.6	-0.3
	comp=Z,22nm,1.1s						
BILL	Bilibino	20.37	327	*e*P	P	09 16 28.6	+0.7
BILL				*e*		09 16 43.7	
BILL				*e*PPP	PPP	09 16 52.7	
BILL				pmax	pmax		
	comp=Z,37nm,1.7s						
BILL				MLR	MLR		
	comp=Z,1µm,17.0s						
INK	Inuvik	20.42	32	*e*P	P	09 16 26.2	-2.2
	comp=Z,12nm,0.6s						
INK	Inuvik	20.42	32	P	P	09 16 26.8	-1.7
	comp=Z,9.4nm,0.7s,baz=253,slow=11,SNR=46						
INK				PcP	PcP	09 20 40.5	+0.9
	comp=Z,3.2nm,0.8s,baz=139,slow=2.1,SNR=3.6						
PET	Petropavlovsk	22.47	284	*e*P	P	09 16 50.9	+0.3
PET				*e*S	S	09 20 49.8	-5.7
PET				pmax	pmax		
	comp=Z,25nm,1.1s						
PET				MLR	MLR		
	comp=Z,600nm,15.0s						
PEA1	Petropavlovsk-	23.00	285	*e*P	P	09 16 55.6	-0.6
PEA0B	Petropavlovsk-	23.00	285	*e*P	P	09 16 56.0	-0.2
	comp=Z,89nm,1.5s						
PETK	Petropavlovsk-	23.00	285	*e*P	P	09 16 55.9	-0.2
PETK	Petropavlovsk-	23.00	285	P	P	09 16 55.6	-0.6
	comp=Z,14nm,0.4s,baz=83,slow=12,SNR=112						
PETK				LR	LR	09 25 34.5	
	comp=Z,359nm,21.3s,baz=80,slow=36						
SEY	Seymchan	24.56	310	P	P	09 17 09.9	-1.1
	comp=Z,3.3nm,0.7s,baz=103,slow=9.1,SNR=16						
SKR	Severo-Kuril's	24.74	280	*e*P	P	09 17 11.4	-1.2
SKR				pmax	pmax		
	comp=Z,64nm,0.9s						
LLLB	Lillooet	25.47	80	*e*P	P	09 17 21.5	+2.1
	comp=Z,9.4nm,0.8s						
MA2	Magadan	25.48	302	*e*P	P	09 17 19.1	-0.3
	comp=Z,5.9nm,0.6s						
MA2	Magadan	25.48	302⇓	*e*P	P	09 17 19.7	+0.3
MA2				pmax	pmax		
	comp=Z,11nm,1.3s						
MA2	Magadan	25.48	302	P	P	09 17 18.4	-0.9
	comp=Z,6.7nm,0.7s,baz=75,slow=8.1,SNR=8.7						
D03D	Eldon	26.09	87	P	P	09 17 26.7	+1.7
	baz=299						
B05A	Bryant	26.34	85	P	P	09 17 28.6	+1.4
	baz=298						
YKW3	Yellowknife Ar	26.75	51	*e*P	P	09 17 30.6	-0.1
	comp=Z,11nm,1.0s						
YKA	Yellowknife Ar	26.75	51	P	P	09 17 31.4	+0.6
	comp=Z,3.9nm,0.5s,baz=270,slow=9.2,SNR=97						
YKA				PcP	PcP	09 20 53.8	+0.6
	comp=Z,0.7nm,0.8s,baz=280,slow=1.8,SNR=4.4						
YKA				ScP	ScP	09 24 32.0	+0.7
	comp=Z,0.4nm,0.9s,baz=268,slow=3.1,SNR=4.1						
YKB5	Yellowknife Ar	26.75	51	*e*P	P	09 17 30.9	+0.1
E04D	Cinebar	26.88	88	P	P	09 17 34.9	+2.8
	baz=301						
HAWA	Hanford	28.77	86	*e*P	P	09 17 49.6	+0.6
	comp=Z,8.1nm,0.8s						
NEW	Newport	29.29	81	P	P	09 17 55.0	+1.4
	baz=298						
NEW	Newport	29.29	81	P	P	09 17 55.6	+1.9
	comp=Z,1.9nm,0.8s,baz=328,slow=3.4,SNR=4.5						
NEW				LR	LR	09 27 33.9	
	comp=Z,301nm,18.9s,baz=264,slow=32						
J05D	Fort Rock, OR	29.45	93	P	P	09 17 57.2	+1.9
	baz=306						
YBH	Yreka Blue Hor	29.50	97	P	P	09 17 57.5	+1.9
	comp=Z,1.7nm,0.9s,baz=264,slow=4.4,SNR=2.4						
YBH				LR	LR	09 26 43.4	
	comp=Z,362nm,19.0s,baz=331,slow=30						
G08A	Pilot Rock	29.69	88	*e*P	P	09 17 58.5	+1.2
	comp=Z,6.6nm,1.0s						
I07A	Izee	30.03	90	*e*P	P	09 18 00.8	+0.5
	comp=Z,7.4nm,0.9s						
J08A	Circle Bar Ran	31.05	91	*e*P	P	09 18 10.0	+0.6
	comp=Z,12nm,1.0s						
WVOR	Wild Horse Val	31.50	92	*e*P	P	09 18 13.5	+0.2
	comp=Z,6.2nm,0.8s						
WVOR	Wild Horse Val	31.50	92	*e*P	P	09 18 13.5	+0.2
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TYV	Tymovskoe	32.46	288	*e*P	P	09 18 19.6	-1.9
TYV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NKL	Nikolayevsk	32.60	292	*e*P	P	09 18 22.0	-0.7
NKL				pmax	pmax		
	comp=Z,17nm,0.5s						
PAHR	Pah Rah Range	32.73	97	*e*P	P	09 18 25.7	+1.5
	comp=Z,5.8nm,1.0s						
YERR	Yerington	33.29	98	*e*P	P	09 18 30.1	+1.1
	comp=Z,5.2nm,0.8s						
HLID	Hailey	33.36	87	*e*P	P	09 18 29.8	+0.2
	comp=Z,7.7nm,1.0s						
HLID	Hailey	33.36	87	P	P	09 18 31.0	+1.3
	baz=305						
EGMT	Eagleton	33.72	77	P	P	09 18 33.2	+0.6
	baz=300						
RES	Resolute Bay	33.74	26	*e*P	P	09 18 31.8	-0.6
	comp=Z,3.5nm,0.8s						
RES	Resolute Bay	33.74	26	P	P	09 18 31.9	-0.6
	comp=Z,2.3nm,0.6s,baz=261,slow=12,SNR=16						
RES				LR	LR	09 33 54.6	
	comp=Z,278nm,19.5s,baz=300,slow=39						
BOZ	Bozeman (W)	33.88	82	P	P	09 18 34.7	+0.6
	baz=303						
NV01	Mina Array Sit	34.20	98	*e*P	P	09 18 37.7	+0.6
NVAR	Mina Array Bea	34.20	98	P	P	09 18 39.1	+2.0
	comp=Z,1.4nm,0.7s,baz=305,slow=9.6,SNR=6.8						
NVAR				PcP	PcP	09 21 14.2	+0.8
	comp=Z,1.0nm,0.8s,baz=261,slow=3.6,SNR=3.5						
NVAR				LR	LR	09 30 00.9	
	comp=Z,151nm,21.9s,baz=288,slow=32						
YSS	Yuzh-Sakhalins	34.28	281	*e*P	P	09 18 37.6	+0.2
YSS				*e*		09 18 47.3	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ELK	Elko	34.55	92	*e*P	P	09 18 41.1	+1.0
	comp=Z,6.6nm,1.0s						
ELK	Elko	34.55	92	*e*P	P	09 18 41.1	+1.0
ELK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ELK	Elko	34.55	92	P	P	09 18 41.5	+1.4
	comp=Z,4.6nm,0.9s,baz=306,slow=7.6,SNR=19						
YHH	Holmes Hill	34.79	83	*e*P	P	09 18 43.0	+0.8
	comp=Z,5.7nm,1.0s						
HVU	Hansel Valley	35.38	88	*e*P	P	09 18 48.0	+0.8
	comp=Z,7.6nm,1.0s						
HVU	Hansel Valley	35.38	88	*e*P	P	09 18 48.0	+0.8
HVU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VES	Vestal, Richgr	35.49	102	P	P	09 18 49.6	+1.6
	baz=314						
RLMT	Red Lodge	35.54	81	P	P	09 18 49.2	+0.6
	baz=304						
BGU	Big Grassy Mou	35.75	90	*e*P	P	09 18 50.2	-0.1
	comp=Z,16nm,1.6s						
R11A	Troy Canyon, C	35.87	95	*e*P	P	09 18 51.8	+0.4
	comp=Z,7.1nm,1.0s						
R11A	Troy Canyon, C	35.87	95	P	P	09 18 52.6	+1.2
	baz=311						
DUG	Dugway, Tooele	36.34	91	*e*P	P	09 18 55.9	+0.5
	comp=Z,11nm,1.0s						
DUG	Dugway, Tooele	36.34	91	*e*P	P	09 18 55.9	+0.5
DUG				pmax	pmax		
	comp=Z,11nm,1.0s						
DUG	Dugway, Tooele	36.34	91	P	P	09 18 57.0	+1.6
	baz=309,SNR=7.6						
TCUT	Toone Canyon	36.60	88	*e*P	P	09 18 57.8	+0.1
	comp=Z,6.8nm,0.7s						
BW06	Boulder Array	36.71	85	P	P	09 18 59.8	+1.2
	baz=306						
PD31	Pinedale Array	36.71	85	*e*P	P	09 18 58.5	-0.1
	comp=Z,10nm,1.6s						
PDAR	Pinedale Array	36.71	85	*e*P	P	09 18 58.8	+0.2
PDAR	Pinedale Array	36.71	85	P	P	09 18 59.4	+0.8
	comp=Z,0.5nm,0.6s,baz=270,slow=4.0,SNR=4.6						
PDAR				PcP	PcP	09 21 20.2	-0.5
	comp=Z,0.2nm,0.6s,baz=252,slow=1.7,SNR=2.7						
PSUT	Pine Spring	36.78	94	*e*P	P	09 18 59.0	-0.1
	comp=Z,5.5nm,0.9s						
ERM	Erimo	36.82	274⇑	*e*P	P	09 18 58.9	-0.3
ERM				pmax	pmax		
	comp=Z,37nm,0.9s						
NLU	North Lily Min	36.93	90	*e*P	P	09 19 00.9	+0.4
	comp=Z,3.9nm,0.8s						
GSC	Goldstone, Bar	37.20	100	P	P	09 19 04.4	+1.8
	baz=314						
FCC	Fort Churchill	37.41	53	*e*P	P	09 19 03.4	-0.6
	comp=Z,19nm,0.9s						
FCC	Fort Churchill	37.41	53	*e*P	P	09 19 03.4	-0.6
FCC				pmax	pmax		
	comp=Z,19nm,0.9s						
CCUT	Cedar City	37.71	94	*e*P	P	09 19 07.7	+0.5
	comp=Z,6.9nm,1.2s						
TMUT	Trail Mountain	37.86	90	*e*P	P	09 19 08.3	-0.2
	comp=Z,26nm,1.5s						
P17A	Butcher Ranch,	38.03	90	*e*P	P	09 19 09.8	+0.1
	comp=Z,5.2nm,1.0s						
MTPU	Mount Pierson	38.09	93	*e*P	P	09 19 10.3	-0.2
	comp=Z,12nm,1.5s						
Q16A	Castle Valley	38.13	91	*e*P	P	09 19 11.1	+0.5
	comp=Z,20nm,1.3s						
LCMT	Little Creek M	38.14	95	*e*P	P	09 19 10.9	+0.2
	comp=Z,10nm,1.4s						
GMRC	Granite Mounta	38.24	100	P	P	09 19 13.0	+1.6
	baz=315						
SRU	San Rafael Swe	38.39	90	*e*P	P	09 19 12.7	-0.1
	comp=Z,9.3nm,0.9s						
SRU	San Rafael Swe	38.39	90	*e*P	P	09 19 12.7	-0.1
SRU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PFO	Pinyon Flats O	38.59	102	P	P	09 19 16.0	+1.6
	baz=316						
IRM	Iron Mountain	38.98	100	P	P	09 19 19.7	+2.2
	baz=315						
W13A	Hualapai Mount	39.06	98	*e*P	P	09 19 19.5	+1.0
	comp=Z,5.2nm,0.8s						
O20A	White River Ci	39.10	87	*e*P	P	09 19 19.1	+0.3
	comp=Z,17nm,0.8s						
O20A	White River Ci	39.10	87	P	P	09 19 19.8	+1.0
	baz=309,SNR=7.7						
U15A	North Rim	39.10	95	*e*P	P	09 19 19.9	+1.0
	comp=Z,4.9nm,0.9s						
RSSD	Black Hills	39.18	79	P	P	09 19 20.5	+1.1
	baz=306						
KLR	Kul'dur	39.40	291	P	P	09 19 19.4	-1.5
	comp=Z,4.0nm,0.6s,baz=65,slow=7.1,SNR=18						
KLR				LR	LR	09 36 24.6	
	comp=Z,178nm,19.6s,baz=42,slow=38						
ZEA	Zeya	39.55	299	*e*P	P	09 19 20.8	-1.3
ZEA				pmax	pmax		
	comp=Z,51nm,1.4s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						
ZEA				MLR	MLR		
	comp=E,500nm,15.0s						
PV09	Paradox Valley	39.61	90	*e*P	P	09 19 23.1	-0.1
MDND	Maddock	39.64	71	*e*P	P	09 19 23.5	+0.5
	comp=E,54nm,1.0s						
MDND	Maddock	39.64	71	P	P	09 19 23.9	+0.9
	baz=303						
PV04	Paradox Valley	39.82	90	*e*P	P	09 19 26.1	+1.3
	comp=E,7.2nm,0.9s						
PV16	Nyswonger Mesa	39.87	90	*e*P	P	09 19 26.9	+1.7
	comp=E,4.9nm,0.7s						
PV11	David Mesa, Pa	39.90	90	*e*P	P	09 19 26.8	+1.4
	comp=E,9.9nm,0.7s						
PV12	Saucer Basin,	39.93	90	*e*P	P	09 19 27.6	+1.9
	comp=E,7.1nm,0.8s						
PV03	Paradox Valley	39.94	90	*e*P	P	09 19 27.1	+1.3
	comp=E,6.3nm,0.7s						
N23A	Red Feather La	39.99	84	P	P	09 19 26.7	+0.4
	baz=309						
PV13	Radium Mtn., P	40.02	90	*e*P	P	09 19 27.6	+1.1
	comp=E,12nm,0.9s						
PV02	Paradox Valley	40.04	90	*e*P	P	09 19 28.4	+1.8
	comp=E,8.2nm,0.8s						
PV01	Paradox Valley	40.19	90	*e*P	P	09 19 27.6	-0.3
	comp=E,7.2nm,0.7s						
ULM	Lac du Bonnet	40.43	66	*e*P	P	09 19 29.3	-0.1
	comp=E,11nm,1.0s						
ULM	Lac du Bonnet	40.43	66	*e*P	P	09 19 29.3	-0.1
ULM				pmax	pmax		
	comp=Z,11nm,1.0s						
ULM	Lac du Bonnet	40.43	66	P	P	09 19 29.1	-0.4
	comp=Z,4.7nm,0.8s,baz=309,slow=7.2,SNR=8.7						
H11N2	WAKE ISLAND Hy	40.72	226	T	T	10 03 05.5	
	baz=26,slow=76,SNR=55						
H11N3	WAKE ISLAND Hy	40.73	226	T	T	10 03 16.9	
	baz=26,slow=76,SNR=67						
H11N1	WAKE ISLAND Hy	40.74	226	T	T	10 03 20.5	
	baz=26,slow=76,SNR=56						
MVCO	Mesa Verde	40.84	91	P	P	09 19 33.7	+0.5
	baz=312						
S22A	4UR Ranch, Cre	41.48	89	*e*P	P	09 19 38.4	-0.2
	comp=Z,13nm,1.6s						
S22A	4UR Ranch, Cre	41.48	89	P	P	09 19 38.4	-0.2
	baz=312						
AGMN	Agassiz Nation	41.49	69	*e*P	P	09 19 38.1	-0.2
	comp=Z,18nm,1.0s						
AGMN	Agassiz Nation	41.49	69	P	P	09 19 38.0	-0.2
	baz=304						
W18A	Petrified Fore	41.51	94	P	P	09 19 39.4	+0.7
	baz=314						
H11S1	WAKE ISLAND Hy	41.89	225	T	T	10 04 34.3	
	baz=26,slow=75,SNR=90						
H11S2	WAKE ISLAND Hy	41.90	225	T	T	10 04 33.1	
	baz=26,slow=75,SNR=77						
H11S3	WAKE ISLAND Hy	41.91	225	T	T	10 04 33.3	
	baz=26,slow=75,SNR=69						
214A	Organ Pipe Nat	41.92	100	P	P	09 19 43.6	+1.7
	baz=317						
SUSD	Miller	41.95	75	P	P	09 19 42.9	+0.9
	baz=307						
USRK	Ussuriysk Ar.	42.09	284	P	P	09 19 41.7	-1.4
	comp=Z,1.1nm,0.7s,baz=54,slow=11,SNR=4.5						
USRK				PcP	PcP	09 21 36.9	-0.5
	comp=Z,0.8nm,0.5s,baz=43,slow=2.9,SNR=6.1						
USRK				LR	LR	09 38 34.9	
	comp=Z,102nm,19.1s,baz=43,slow=38						
SDCO	Great Sand Dun	42.27	88	*e*P	P	09 19 44.8	-0.2
	comp=Z,3.2nm,1.0s						
SDCO	Great Sand Dun	42.27	88	P	P	09 19 46.5	+1.4
	baz=312						
TUC	Tucson	42.86	98	P	P	09 19 52.1	+2.5
	baz=316						
KSCO	Kaye Shedlock'	43.16	84	P	P	09 19 53.0	+1.0
	baz=311						
MAJO	Matsushiro	43.27	271	*e*P	P	09 19 53.0	+0.2
	comp=Z,28nm,0.8s						
MAJO	Matsushiro	43.27	271	*c i*P	P	09 19 53.4	+0.6
MAJO				pmax	pmax		
	comp=Z,26nm,0.8s						
MAT	Matsushiro	43.27	271	P	P	09 19 53.6	+0.8
MJAR	Matsushiro Arr	43.27	271	P	P	09 19 53.1	+0.3
	comp=Z,5.9nm,0.7s,baz=1.3,slow=3.9,SNR=22						
MJB9	Matsu-Tunnel	43.27	271	*e*P	P	09 19 53.0	+0.2
	comp=Z,27nm,0.8s						
T25A	Trinidad	43.32	88	*e*P	P	09 19 54.1	+0.6
	comp=Z,12nm,1.2s						
T25A	Trinidad	43.32	88	P	P	09 19 54.8	+1.3
	baz=312						
ANMO	Albuquerque	43.58	92⇓	*e*P	P	09 19 57.6	+2.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ANMO	Albuquerque	43.58	92	P	P	09 19 56.2	+0.6
	baz=314						
ECSD	EROS Data Cent	43.72	75	P	P	09 19 56.0	-0.3
	baz=308						
BOD	Bodaibo	43.98	310	*e*P	P	09 19 56.8	-1.5
BOD				pmax	pmax		
	comp=Z,8.0nm,0.6s						
EYMN	Ely	44.10	67	*e*P	P	09 19 59.5	+0.1
	comp=Z,11nm,0.9s						
EYMN	Ely	44.10	67	P	P	09 19 59.3	0.0
	baz=306						
F37A	Hinrichs Farm,	44.78	70	P	P	09 20 04.9	+0.1
	baz=307						
E38A	The Farm, Brul	44.86	68	P	P	09 20 05.2	-0.2
	baz=307,SNR=5.1						
F38A	Pierce - Schro	45.06	69	P	P	09 20 07.2	+0.2
	baz=307,SNR=6.6						
E39A	Mellen	45.55	68	P	P	09 20 10.3	-0.6
	baz=307						
G38A	Ridgeland	45.55	70	P	P	09 20 10.3	-0.6
	baz=308						
H38A	Maiden Rock	45.61	71	P	P	09 20 11.3	-0.1
	baz=308						
G39A	Holcombe	45.87	70	P	P	09 20 13.4	-0.1
	baz=308						
E40A	Wakefield	45.87	68	P	P	09 20 13.2	-0.3
	baz=307						
FRB	Frobisher Bay	45.90	38	P	P	09 20 13.2	-0.1
	comp=Z,19nm,0.8s,baz=308,slow=8.5,SNR=50						
F40A	Park Falls	46.06	68	P	P	09 20 14.6	-0.4
	baz=308,SNR=5.0						
CN2	Changchun	46.08	288	*e*P	P	09 20 20.3	+5.2
H39A	Augusta	46.17	70	P	P	09 20 15.8	0.0
	baz=308						
G40A	Rib Lake	46.42	69	P	P	09 20 17.6	-0.2
	baz=308						
MSTX	Muleshoe	46.46	90	P	P	09 20 19.7	+1.4
	baz=314						
AMTX	Amarillo	46.48	88	P	P	09 20 19.5	+1.0
	baz=314						
MNTX	Cornudas Mount	46.50	94	*e*P	P	09 20 18.6	0.0
	comp=Z,9.9nm,1.3s						
MNTX	Cornudas Mount	46.50	94	P	P	09 20 20.2	+1.6
	baz=316						
I39A	Houston	46.55	71	P	P	09 20 18.8	0.0
	baz=309						
H40A	Chili	46.71	70	P	P	09 20 20.2	+0.2
	baz=309						
F41A	Three Lakes	46.74	68	P	P	09 20 20.3	0.0
	baz=308						
J39A	Decorah	46.77	72	P	P	09 20 20.3	-0.3
	baz=309						
E42A	Champion	46.97	66	P	P	09 20 22.0	-0.1
	baz=308						
I40A	Norwalk	47.04	71	P	P	09 20 22.4	-0.3
	baz=309						
NRIK	Noril'sk	47.04	333	P	P	09 20 21.9	-0.4
	comp=Z,2.3nm,0.4s,baz=81,slow=6.9,SNR=5.9						
NRIK				LR	LR	09 41 57.5	
	comp=Z,187nm,19.5s,baz=37,slow=38						
K39A	Oelwein	47.07	73	P	P	09 20 22.0	-0.9
	baz=310						
J40A	Soldiers Grove	47.28	71	P	P	09 20 24.0	-0.6
	baz=309						
I41A	Arkdale	47.35	70	P	P	09 20 24.6	-0.5
	baz=309						
L39A	Vinton	47.37	73	P	P	09 20 25.0	-0.2
	baz=310						
K40A	Colesburg	47.50	72	P	P	09 20 26.0	-0.2
	baz=310						
E43A	Lone Tree Farm	47.50	66	P	P	09 20 26.4	+0.2
	baz=308						
M39A	Webster	47.69	74	P	P	09 20 27.7	0.0
	baz=310						
J41A	Loganville	47.71	71	P	P	09 20 27.8	-0.1
	baz=310						
KBS	Kingsbay	47.75	1⇓	*i*P	P	09 20 28.2	+0.5
L40A	Anamosa	47.85	73	P	P	09 20 28.7	-0.3
	baz=310						
K41A	Shullsburg	48.03	72	P	P	09 20 29.9	-0.4
	baz=310						
DAG	Danmarks Havn	48.04	10	*i* P	P	09 20 29.2	-0.8
	comp=Z,19nm,0.6s						
DAG	Danmarks Havn	48.04	10	*i* P	P	09 20 29.2	-0.8
DAG				pmax	pmax		
	comp=Z,13nm,0.6s						
L41A	Preston	48.26	73	P	P	09 20 32.0	-0.2
	baz=310						
K42A	Prairie Point,	48.46	71	P	P	09 20 33.2	-0.4
	baz=310						
E45A	Wooded Hills,	48.50	65	P	P	09 20 34.0	0.0
	baz=309						
SPITS	Spitsbergen Ar	48.53	0	LR	LR	09 41 40.8	
	comp=Z,125nm,19.3s,baz=0.0,slow=37						
SUMG	Summit	48.54	19	*e*P	P	09 20 34.4	0.0
	comp=Z,22nm,0.8s						
SUMG	Summit	48.54	19	*i* P	P	09 20 35.0	+0.6
	comp=Z,60nm,0.8s						
SUMG	Summit	48.54	19	*i* P	P	09 20 35.0	+0.6
SUMG				pmax	pmax		
	comp=Z,60nm,0.8s						
M41A	Milan	48.69	73	P	P	09 20 35.0	-0.5
	baz=311						
KSRS	Korea Array	48.76	280	P	P	09 20 37.0	+1.0
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSRS	Korea Array	48.76	280	P	P	09 20 37.0	+1.0
	comp=Z,7.5nm,0.8s,baz=53,slow=7.2,SNR=24						
KS01	Wonju Array Si	48.76	280	*e*P	P	09 20 36.6	+0.6
L42A	Oliver, Polo	48.78	72	P	P	09 20 36.6	+0.5
	baz=311						
KS15	Wonju Array Si	48.79	280	*e*P	P	09 20 36.7	+0.5
TX31	Lajitas Ar. Si	49.23	95	*e*P	P	09 20 40.5	+0.7
	comp=Z,7.0nm,0.8s						
TXAR	Lajitas Array	49.23	95	P	P	09 20 40.9	+1.0
	comp=Z,1.8nm,0.6s,baz=299,slow=5.6,SNR=56						
TXAR				ScP	ScP	09 25 56.7	+0.8
	comp=Z,0.5nm,0.8s,baz=266,slow=3.8,SNR=4.5						
TXAR				LR	LR	09 39 27.1	
	comp=Z,122nm,18.7s,baz=0.0,slow=34						
LPIG	La Paz	49.26	105	LR	LR	09 36 21.7	
	comp=Z,98nm,20.4s,baz=327,slow=30						
TUL1	Leonard	49.27	82	P	P	09 20 40.1	+0.1
	baz=314						
O41A	Passleys Farm,	49.32	75	P	P	09 20 39.8	-0.5
	baz=312						
N42A	Yates City	49.34	74	P	P	09 20 40.0	-0.3
	baz=311						
P41A	Barry, Barry	49.51	75	P	P	09 20 41.1	-0.6
	baz=312,SNR=5.0						
M43A	Waltham Townsh	49.55	72	P	P	09 20 41.6	-0.4
	baz=311						
SFJD	Kangerlussuaq	49.70	28	P	P	09 20 43.0	+0.3
	comp=Z,9.4nm,0.6s,baz=323,slow=9.4,SNR=5.2						
O42A	Bath	49.73	74	P	P	09 20 43.1	-0.3
	baz=312						
N43A	Stutzman Famil	49.75	73	P	P	09 20 43.2	-0.4
	baz=311						
TJN	Taejon	49.81	279⇑	*e*P	P	09 20 45.1	+1.0
Q41A	Truxton	49.89	76	P	P	09 20 44.2	-0.5
	baz=312						
HDIL	Hopedale	49.94	73	*e*P	P	09 20 44.9	-0.1
	comp=Z,35nm,0.8s						

HDIL	**Hopedale**	**49.94**	**73**	P	**P**	**09 20 44.2**	**-0.8**
	baz=312						
P42A	**Winchester**	**49.98**	**75**	P	**P**	**09 20 45.1**	**-0.2**
	baz=312						
JNU	**Nakatsue**	**49.99**	**273**	*e*P	**P**	**09 20 45.7**	**+0.2**
	comp=Z,45nm,1.4s						
JNU	**Nakatsue**	**49.99**	**273**	P	**P**	**09 20 45.9**	**+0.4**
	comp=Z,9.1nm,0.9s,baz=354,slow=9.2,SNR=3.2						
R41A	**Rosebud**	**50.24**	**77**	P	**P**	**09 20 46.4**	**-0.9**
	baz=313						
Q42A	**Golden Eagle**	**50.32**	**76**	P	**P**	**09 20 47.5**	**-0.4**
	baz=312						
P43A	**Skaggs, Pawnee**	**50.41**	**74**	P	**P**	**09 20 48.1**	**-0.5**
	baz=312						
CCM	**Cathedral Cave**	**50.48**	**77**	P	**P**	**09 20 48.4**	**-0.8**
	baz=313						
S41A	**Jillco Farms,**	**50.51**	**78**	P	**P**	**09 20 47.8**	**-1.6**
	baz=313,SNR=5.5						
F49A	**Sandfield**	**50.56**	**64**	P	**P**	**09 20 49.2**	**-0.4**
	baz=310						
JCT	**Junction City**	**50.70**	**90**	*e*P	**P**	**09 20 52.0**	**+1.1**
	comp=Z,7.4nm,0.8s						
JCT	**Junction City**	**50.70**	**90**	*e*P	**P**	**09 20 52.0**	**+1.1**
JCT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
JCT	**Junction City**	**50.70**	**90**	P	**P**	**09 20 51.2**	**+0.3**
	baz=317						
U40A	**Yellville**	**50.70**	**80**	P	**P**	**09 20 49.9**	**-0.9**
	baz=314						
N45A	**Kentland**	**50.76**	**72**	P	**P**	**09 20 50.3**	**-0.8**
	baz=312						
Q43A	**New Douglas**	**50.78**	**75**	P	**P**	**09 20 51.1**	**-0.3**
	baz=313						
D50A	**G1974 Best Tow**	**50.82**	**61**	P	**P**	**09 20 50.5**	**-1.1**
	baz=310						
W39A	**Magazine**	**50.95**	**82**	P	**P**	**09 20 52.5**	**-0.2**
	baz=314						
P44A	**Sand Creek, Wi**	**51.05**	**74**	P	**P**	**09 20 52.3**	**-1.1**
	baz=312,SNR=6.4						
R43A	**Red Bud**	**51.10**	**76**	P	**P**	**09 20 53.1**	**-0.7**
	baz=313						
Q44A	**Meyer Farm, Va**	**51.20**	**75**	P	**P**	**09 20 53.9**	**-0.6**
	baz=313						
U41A	**Viola**	**51.26**	**79**	P	**P**	**09 20 54.6**	**-0.3**
	baz=314						
SFIN	**Lafayette**	**51.31**	**72**	P	**P**	**09 20 54.4**	**-0.9**
	baz=312						
S43A	**Fulton Ridge,**	**51.49**	**77**	P	**P**	**09 20 55.8**	**-1.0**
	baz=313,SNR=8.3						
MIAR	**Mount Ida**	**51.52**	**82**	P	**P**	**09 20 56.9**	**-0.1**
	baz=315						
U42A	**Revenden**	**51.65**	**79**	P	**P**	**09 20 56.8**	**-1.1**
	baz=314						
Q45A	**Warren Harvey,**	**51.70**	**74**	P	**P**	**09 20 57.6**	**-0.6**
	baz=313						
T43A	**Greenville**	**51.70**	**77**	P	**P**	**09 20 57.4**	**-0.9**
	baz=314						
N47A	**Urbana**	**51.77**	**71**	P	**P**	**09 20 57.5**	**-1.2**
	baz=312						
CHGQ	**Chibougamau**	**51.81**	**55**	P	**P**	**09 20 57.5**	**-1.5**
	baz=311						
M48A	**Edgerton**	**51.91**	**69**	P	**P**	**09 20 59.1**	**-0.7**
	baz=312						
R45A	**Skylar, Fairfi**	**52.04**	**75**	P	**P**	**09 20 59.4**	**-1.4**
	baz=313						
SCHQ	**Schefferville**	**52.08**	**47**	*e*P	**P**	**09 21 00.6**	**-0.3**
	comp=Z,10.0nm,0.9s						
SCHQ	**Schefferville**	**52.08**	**47**	P	**P**	**09 21 00.8**	**-0.1**
	comp=Z,9.6nm,1.0s,baz=316,slow=6.7,SNR=10						
N48A	**Decatur**	**52.15**	**70**	P	**P**	**09 21 00.5**	**-1.1**
	baz=312						
S45A	**Carrier Mills**	**52.28**	**76**	P	**P**	**09 21 01.7**	**-0.9**
	baz=314						
P47A	**Martinsville**	**52.38**	**72**	P	**P**	**09 21 02.8**	**-0.5**
	baz=313						
TLY	**Talaya**	**52.45**	**308**	*e*P	**P**	**09 21 03.9**	**+0.1**
	comp=Z,17nm,1.1s						
TLY	**Talaya**	**52.45**	**308**	*e*P	**P**	**09 21 04.1**	**+0.3**
TLY				pmax	pmax		
	comp=Z,27nm,0.8s						
TLY				MLR	MLR		
	comp=Z,494nm,16.0s						
O48A	**Farmland**	**52.49**	**71**	P	**P**	**09 21 03.0**	**-1.1**
	baz=313						
USIN	**University of**	**52.62**	**75**	*e*P	**P**	**09 21 04.4**	**-0.7**
	comp=Z,23nm,1.0s						
Q47A	**Bedord North L**	**52.66**	**73**	P	**P**	**09 21 04.1**	**-1.4**
	baz=313						
S46A	**Don Dixon Farm**	**52.78**	**75**	P	**P**	**09 21 06.3**	**0.0**
	baz=314						
G53A	**Haliburton**	**52.80**	**62**	P	**P**	**09 21 05.3**	**-1.1**
	baz=312						
P48A	**Milroy**	**52.87**	**72**	P	**P**	**09 21 05.7**	**-1.3**
	baz=313						
Q48A	**North Vernon**	**53.06**	**72**	P	**P**	**09 21 07.7**	**-0.7**
	baz=313						
U45A	**Rockin P Farm,**	**53.09**	**77**	P	**P**	**09 21 07.8**	**-0.8**
	baz=314						
T46A	**Princeton**	**53.12**	**76**	P	**P**	**09 21 08.0**	**-0.8**
	baz=314						
P49A	**Miami Univ. Ec**	**53.23**	**71**	P	**P**	**09 21 08.3**	**-1.3**
	baz=313						
S47A	**Hartford**	**53.32**	**74**	P	**P**	**09 21 09.5**	**-0.8**
	baz=314						
ULN	**Ulaanbaatar**	**53.34**	**303**	*e*P	**P**	**09 21 10.3**	**-0.2**
	comp=Z,15nm,1.0s						
ULN	**Ulaanbaatar**	**53.34**	**303**	*d* *i*P	**P**	**09 21 11.1**	**+0.6**
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
O50A	**Cable**	**53.42**	**70**	P	**P**	**09 21 10.6**	**-0.5**
	baz=313						
U46A	**Springville**	**53.43**	**76**	P	**P**	**09 21 10.4**	**-0.7**
	baz=314,SNR=5.7						
ZAK	**Zakamensk**	**53.49**	**307**	*e*P	**P**	**09 21 10.6**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
T47A	**Sharon Grove**	**53.61**	**75**	*e*P	**P**	**09 21 11.9**	**-0.6**
	comp=Z,16nm,1.1s						
T47A	**Sharon Grove**	**53.61**	**75**	P	**P**	**09 21 12.2**	**-0.2**
	baz=314						
SONA1	**Songino Array**	**53.68**	**303**	*e*P	**P**	**09 21 13.3**	**+0.4**
SONA0	**Songino Array**	**53.69**	**303**	*e*P	**P**	**09 21 13.1**	**0.0**
SONA0				*e*PcP	**PcP**	**09 22 19.7**	**+0.7**
SONM	**Songino Array**	**53.69**	**303**	P	**P**	**09 21 13.1**	**0.0**
	comp=Z,6.7nm,0.8s,baz=47,slow=7.3,SNR=33						
SONM				PcP	**PcP**	**09 22 19.7**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=52,slow=3.3,SNR=4.3						
P50A	**Jamestown**	**53.69**	**71**	P	**P**	**09 21 12.4**	**-0.7**
	baz=314						
MOY	**Mondy**	**53.69**	**310**	*e*P	**P**	**09 21 13.1**	**+0.1**
MOY				pmax	pmax		
	comp=Z,15nm,1.9s						
WVT	**Waverly**	**53.79**	**76**	*e*P	**P**	**09 21 13.5**	**-0.2**
	comp=Z,9.9nm,0.7s						
WVT	**Waverly**	**53.79**	**76**	*e*P	**P**	**09 21 13.5**	**-0.2**
WVT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WVT	**Waverly**	**53.79**	**76**	P	**P**	**09 21 13.6**	**-0.2**
	baz=314						
V46A	**Holladay**	**53.85**	**77**	P	**P**	**09 21 13.7**	**-0.5**
	baz=315						
U47A	**Clarksville**	**53.88**	**76**	P	**P**	**09 21 14.6**	**+0.1**
	baz=314						
T48A	**Bowling Green**	**53.94**	**75**	P	**P**	**09 21 15.4**	**+0.5**
	baz=314						
OXF	**Oxford**	**54.00**	**79**	P	**P**	**09 21 15.1**	**-0.2**
	baz=315						
S49A	**Springfield**	**54.10**	**73**	P	**P**	**09 21 15.5**	**-0.5**
	baz=314						
Q50A	**Georgetown**	**54.12**	**71**	P	**P**	**09 21 15.0**	**-1.1**
	baz=314						
W46A	**Michie**	**54.16**	**78**	P	**P**	**09 21 16.0**	**-0.5**
	baz=315						
V47A	**Nunnelly**	**54.18**	**76**	P	**P**	**09 21 16.4**	**-0.2**
	baz=315						
U48A	**Cassie Pea, Po**	**54.27**	**75**	P	**P**	**09 21 16.9**	**-0.4**
	baz=314						
R50A	**Paris**	**54.31**	**72**	P	**P**	**09 21 16.7**	**-0.8**
	baz=314						
Q51A	**Peebles**	**54.35**	**71**	*e*P	**P**	**09 21 17.1**	**-0.7**
	comp=Z,22nm,1.0s						
Q51A	**Peebles**	**54.35**	**71**	P	**P**	**09 21 16.9**	**-0.9**
	baz=314,SNR=5.7						
ALFO	**Alfred**	**54.41**	**60**	P	**P**	**09 21 16.9**	**-1.2**
	baz=313						
T49A	**Edmonton**	**54.43**	**74**	P	**P**	**09 21 18.2**	**-0.3**
	baz=314						
O52A	**Adamsville**	**54.44**	**69**	P	**P**	**09 21 17.8**	**-0.7**
	baz=314						
X46A	**Booneville**	**54.45**	**78**	P	**P**	**09 21 18.4**	**-0.2**
	baz=315						
W47A	**Westpoint**	**54.54**	**77**	P	**P**	**09 21 18.6**	**-0.6**
	baz=315						
S50A	**Richmond**	**54.68**	**73**	P	**P**	**09 21 19.9**	**-0.3**
	baz=314						
M54A	**Oil Creek Stat**	**54.68**	**66**	P	**P**	**09 21 19.2**	**-1.1**
	baz=314						
R51A	**Hillsboro**	**54.72**	**72**	P	**P**	**09 21 19.9**	**-0.6**
	baz=314,SNR=9.8						
T50A	**Nancy**	**54.89**	**74**	P	**P**	**09 21 21.1**	**-0.6**
	baz=315						
W48A	**Pulaski**	**55.00**	**77**	P	**P**	**09 21 22.3**	**-0.3**
	baz=315						
S51A	**Beattyville**	**55.17**	**72**	P	**P**	**09 21 22.9**	**-0.9**
	baz=315						
M55A	**Ridgway**	**55.20**	**66**	P	**P**	**09 21 22.8**	**-1.2**
	baz=314						
R52A	**Catlettsburg**	**55.22**	**71**	P	**P**	**09 21 23.5**	**-0.6**
	baz=314						
T51A	**Gray**	**55.44**	**73**	P	**P**	**09 21 24.8**	**-0.9**
	baz=315						
N55A	**Marion Center**	**55.56**	**66**	P	**P**	**09 21 26.0**	**-0.6**
	baz=314						
HHC	**Hu-ho-hao-te**	**55.76**	**294**	*e*P	**P**	**09 21 29.3**	**+1.2**
HHC				pmax	pmax		
	comp=Z,27nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
X49A	**Woodville**	**55.80**	**77**	P	**P**	**09 21 26.6**	**-1.7**
	baz=316						
P55A	**Reedsville**	**55.98**	**68**	P	**P**	**09 21 28.6**	**-1.0**
	baz=315						
KNGR	**Kungurtug, Tuv**	**56.01**	**311**	⇓*i*P	**P**	**09 21 29.1**	**-0.7**
Y49A	**Blount Mountai**	**56.21**	**77**	P	**P**	**09 21 30.2**	**-1.2**
	baz=316						
T53A	**Wise**	**56.23**	**72**	P	**P**	**09 21 30.4**	**-1.1**
	baz=315						
Y50A	**Piedmont**	**56.58**	**77**	P	**P**	**09 21 32.7**	**-1.3**
	baz=316						
Z49A	**Columbiana**	**56.62**	**78**	P	**P**	**09 21 33.5**	**-0.6**
	baz=316						
U53A	**Fall Branch**	**56.64**	**73**	P	**P**	**09 21 33.1**	**-1.3**
	baz=315						
T54A	**Tazewell**	**56.72**	**71**	P	**P**	**09 21 35.1**	**+0.1**
	baz=315						
BTO	**Baotou**	**56.77**	**295**	*e*P	**P**	**09 21 33.8**	**-1.5**
S55A	**Lewisburg**	**56.82**	**70**	P	**P**	**09 21 34.9**	**-0.7**
	baz=315						
149A	**Jones**	**56.89**	**79**	P	**P**	**09 21 35.6**	**-0.5**
	baz=316						
Y51A	**Rockmart**	**56.97**	**76**	P	**P**	**09 21 35.5**	**-1.2**
	baz=316						
V53A	**Saluda**	**57.00**	**73**	P	**P**	**09 21 36.0**	**-0.9**
	baz=316						
ARA0	**ARCESS Array S**	**57.05**	**356**	*e*P	**P**	**09 21 35.6**	**-1.1**
ARCES	**ARCESS Array B**	**57.05**	**356**	P	**P**	**09 21 35.6**	**-1.1**
	comp=Z,3.2nm,0.6s,baz=17,slow=7.7,SNR=15						
NJ2	**Nanjing**	**57.85**	**282**	*e*P	**P**	**09 21 45.5**	**+2.6**
Z53A	**Monticello**	**58.27**	**76**	P	**P**	**09 21 44.8**	**-1.0**
	baz=317						
253A	**Americus**	**58.83**	**77**	P	**P**	**09 21 48.3**	**-1.4**
	baz=317						
ZAA1	**Zalesovo Array**	**58.87**	**320**	*e*P	**P**	**09 21 49.4**	**-0.3**
ZAA1				*e*PcP	**PcP**	**09 22 39.7**	**+0.9**
ZAA0	**Zalesovo Array**	**58.87**	**320**	*e*P	**P**	**09 21 49.8**	**+0.1**
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**58.87**	**320**	P	**P**	**09 21 49.4**	**-0.3**
	comp=Z,4.0nm,0.7s,baz=32,slow=6.7,SNR=14						
ZALV				PcP	**PcP**	**09 22 39.7**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=68,slow=2.4,SNR=4.6						
ZALV				LR	LR	09 49 55.3	
	comp=Z,245nm,18.4s,baz=68,slow=39						
DGZ	**Jazzator, Alta**	**61.08**	**315**	*c* *i*P	**P**	**09 22 05.7**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN	**Xi'an**	**62.10**	**290**	*e*P	**P**	**09 22 12.2**	**+0.1**
	comp=Z,12nm,1.1s						
XAN	**Xi'an**	**62.10**	**290**	*e*P	**P**	**09 22 12.2**	**+0.1**
XAN				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA	**Gaotai**	**63.03**	**300**	*e*P	**P**	**09 22 18.5**	**+0.1**
GTA				pP	pP	09 22 23.0	-2.6
GTA				sP	sP	09 22 25.5	-2.8
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
LZH	**Lanzhou**	**63.38**	**295**	*e*P	**P**	**09 22 22.0**	**+1.2**
LZH				pP	pP	09 22 26.0	-2.0
LZH				sP	sP	09 22 28.8	-1.9
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
KURK	**Kurchatov**	**63.77**	**321**	*e*P	**P**	**09 22 22.9**	**0.0**
	comp=Z,17nm,1.0s						
KURK	**Kurchatov**	**63.77**	**321**	*c* *i*P	**P**	**09 22 23.1**	**+0.2**
KURK				pmax	pmax		
	comp=Z,24nm,1.3s						
KURBB	**Kurchatov Arra**	**63.88**	**321**	P	**P**	**09 22 23.6**	**0.0**
	comp=Z,9.1nm,0.9s,baz=36,slow=6.6,SNR=22						
SVE	**Sverdlovsk**	**64.22**	**335**	*e*P	**P**	**09 22 26.2**	**+0.4**
SVE				pmax	pmax		
	comp=Z,23nm,0.8s						
KLMR	**Klimovskoe**	**64.47**	**348**	*e*P	**P**	**09 22 25.5**	**-1.8**
KLMR				pmax	pmax		
	comp=Z,18nm,1.5s						
KLMR	**Klimovskoe**	**64.47**	**348**	*e*P	**P**	**09 22 25.6**	**-1.8**
KLMR				AMP		09 22 29.7	
	comp=Z,18nm,1.6s						
BVA0	**Borovoye Array**	**64.72**	**327**	*i* P	**P**	**09 22 29.4**	**+0.3**
BVA0				pmax	pmax		
	comp=Z,18nm,0.9s						
BVAR	**Borovoye Array**	**64.72**	**327**	P	**P**	**09 22 29.1**	**+0.1**
	comp=Z,13nm,0.7s,baz=39,slow=7.6,SNR=78						
BRVK	**Borovoye**	**64.72**	**327**	*e*P	**P**	**09 22 29.6**	**+0.4**
	comp=Z,14nm,0.8s						
BRVK	**Borovoye**	**64.72**	**327**	*c* *i*P	**P**	**09 22 29.5**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,17nm,0.9s						
KIRV	**Kirov**	**65.09**	**342**	P	**P**	**09 22 31.1**	**-0.3**
	comp=Z,18nm,0.6s,baz=136,slow=2.8,SNR=4.4						
ARU	**Arti**	**65.09**	**336**	*e*P	**P**	**09 22 31.0**	**-0.4**
	comp=Z,63nm,1.5s						
ARU	**Arti**	**65.09**	**336**	⇓*i*P	**P**	**09 22 31.7**	**+0.2**
ARU				pmax	pmax		
	comp=Z,32nm,1.3s						
FIA1	**FINESS Array S**	**65.09**	**355**	*e*P	**P**	**09 22 31.2**	**-0.2**
FIA0	**FINESS Array S**	**65.10**	**355**	*e*P	**P**	**09 22 30.8**	**-0.6**
FIA0	**FINESS Array S**	**65.10**	**355**	*e*P	**P**	**09 22 30.8**	**-0.6**
FINES	**FINESS Array B**	**65.10**	**355**	*i* P	**P**	**09 22 31.3**	**-0.1**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES	**FINESS Array B**	**65.10**	**355**	P	**P**	**09 22 30.8**	**-0.6**
	comp=Z,6.3nm,0.7s,baz=20,slow=8.7,SNR=13						
MK31	**Makanchi Array**	**65.49**	**316**	*e*P	**P**	**09 22 33.7**	**-0.5**
MK31	**Makanchi Array**	**65.49**	**316**	*i* P	**P**	**09 22 33.8**	**-0.4**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK32	**Makanchi Array**	**65.49**	**316**	*e*P	**P**	**09 22 33.9**	**-0.4**
MKAR	**Makanchi Array**	**65.49**	**316**	*e*P	**P**	**09 22 33.7**	**-0.5**
	comp=Z,27nm,0.8s						
MKAR	**Makanchi Array**	**65.49**	**316**	P	**P**	**09 22 33.9**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=47,slow=5.9,SNR=47						
MKAR				LR	LR	09 52 38.1	
	comp=Z,160nm,19.1s,baz=25,slow=37						
MK01	**Makanchi Array**	**65.50**	**316**	*e*P	**P**	**09 22 33.6**	**-0.8**
WMQ	**Urumqi**	**65.52**	**311**	*e*P	**P**	**09 22 34.5**	**0.0**
WMQ				pP	pP	09 22 39.3	-2.4
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,630nm,4.7s						
WMQ				LR	LR		
	comp=Z,370nm,19.5s						
WMQ				LR	LR		
	comp=Z,250nm,24.5s						
WMQ				LR	LR		
	comp=Z,170nm,16.1s						
MAKZ	**Makanchi**	**65.60**	**317**	*e*P	**P**	**09 22 34.2**	**-0.8**
	comp=Z,4.6nm,0.8s						
MAKZ	**Makanchi**	**65.60**	**317**	P	**P**	**09 22 34.4**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NB2	**NORSAR Subarra**	**65.67**	**3**	P	**P**	**09 22 35.4**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=358,slow=6.5						
NB2	**NORSAR Subarra**	**65.67**	**3**	Pn	**P**	**09 22 35.9**	**+0.7**
	baz=264,slow=14						
NB2	**NORSAR Subarra**	**65.67**	**3**	Pn	**P**	**09 22 35.9**	**+0.7**
	baz=264,slow=14						
NB200	**NORSAR Array S**	**65.67**	**3**	*e*P	**P**	**09 22 34.8**	**-0.4**
NOA	**NORSAR Array B**	**65.67**	**3**	P	**P**	**09 22 34.8**	**-0.4**
NOA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,65nm,18.2s						
NOA	**NORSAR Array B**	**65.67**	**3**	P	**P**	**09 22 34.8**	**-0.4**
	comp=Z,4.2nm,0.8s,baz=358,slow=6.4,SNR=9.0						
NOA				LR	LR	09 52 13.0	
	comp=Z,64nm,18.2s,baz=345,slow=37						
NC602	**NORSAR Array S**	**65.99**	**3**	*e*P	**P**	**09 22 38.1**	**+1.0**
NRA0	**NORESS Array S**	**65.99**	**3**	Pn	**P**	**09 22 37.5**	**+0.3**
	baz=262,slow=12						
NRA0				Pg	**pP**	**09 22 45.4**	**+1.1**
	baz=267,slow=16						
NRA0	**NORESS Array S**	**65.99**	**3**	Pn	**P**	**09 22 37.5**	**+0.3**
	baz=262,slow=12						
NRA0				Pg	**pP**	**09 22 45.4**	**+1.1**
	baz=267,slow=16						
KONO	**Kongsberg**	**67.01**	**4**	⇑*i*P	**P**	**09 22 44.2**	**+0.5**
KONO				pmax	pmax		
	comp=Z,24nm,1.3s						
VSU	**Vasula**	**68.03**	**354**	⇓*e*P	**P**	**09 22 51.0**	**+0.9**
VSU				pmax	pmax		
	comp=Z,155nm,2.5s						
VSU	**Vasula**	**68.03**	**354**	*e*P	**P**	**09 22 50.1**	**0.0**
VSU				IAmb	IAmb	09 22 51.0	
	comp=Z,52nm,0.7s						
OTUK	**Ortayu**	**68.11**	**323**	P	**P**	**09 22 51.8**	**+0.9**
OTUK				pmax	pmax		
	comp=Z,14nm,2.1s						
SNART	**Snartemo**	**68.21**	**5**	*e*S	**P**	**09 22 51.4**	**+0.1**
GYA	**Guiyang**	**69.08**	**286**	*e*P	**P**	**09 22 58.3**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PDGK	**Podgornoye**	**69.46**	**316**	P	**P**	**09 22 59.9**	**+0.4**
PDGK				pmax	pmax		
	comp=Z,16nm,1.0s						
PMOR	**Pomariorio Ree**	**69.58**	**164**	*e*T	T	10 39 01.3	
	comp=Z,11nm,0.2s						
OBN	**Obninsk**	**70.44**	**348**	*e*P	**P**	**09 23 05.0**	**-0.1**
OBN				*i*		09 23 30.6	
OBN				*e*		09 25 38.1	
OBN				*e*PPP	PPP	09 27 21.0	
OBN				pmax	pmax		
	comp=Z,48nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,6.0s						
AKTO	**Aktyubinsk**	**70.66**	**333**	P	**P**	**09 23 07.0**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,25nm,0.8s						
AKTO	**Aktyubinsk**	**70.66**	**333**	P	**P**	**09 23 07.0**	**+0.4**
	comp=Z,24nm,0.8s,baz=31,slow=6.8,SNR=62						
IZAR	**Zarasai**	**70.77**	**354**	*e*P	**P**	**09 23 07.0**	**-0.1**
IZAR				IAmb	IAmb	09 23 08.6	
	comp=Z,13nm,0.5s						
ISAL	**Salakas**	**70.95**	**354**	*e*P	**P**	**09 23 08.1**	**-0.1**
IIGN	**Ignalina**	**71.16**	**354**	*e*P	**P**	**09 23 09.5**	**0.0**
IIGN				IAmb	IAmb	09 23 11.2	
	comp=Z,10nm,0.7s						
AB31	**Akbulak array**	**71.19**	**332**	*e*P	**P**	**09 23 10.3**	**+0.5**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ABKAR	**Akbulak array**	**71.19**	**332**	*e*P	**P**	**09 23 10.2**	**+0.4**
TKM2	**Tokmak 2**	**71.38**	**318**	P	**P**	**09 23 12.1**	**+0.8**
	SNR=9.7						
TKM2	**Tokmak 2**	**71.38**	**318**	*i* P	**P**	**09 23 11.8**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,15nm,1.4s						
KDJ	**Kajisay**	**71.40**	**317**	*e*P	**P**	**09 23 12.0**	**+0.5**
	comp=Z,9.7nm,1.0s						
KDJ	**Kajisay**	**71.40**	**317**	*e*P	**P**	**09 23 12.0**	**+0.5**
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TARG	**Taragay, Kyrgy**	**71.48**	**316**	*e*P	**P**	**09 23 12.8**	**+0.6**
	comp=Z,3.9nm,0.7s						
USP	**Ospenovka**	**71.52**	**319**	P	**P**	**09 23 13.0**	**+1.0**
	SNR=13						
CHMS	**Chumysh**	**71.64**	**319**	P	**P**	**09 23 14.2**	**+1.5**
	SNR=7.3						
PPT	**Papeete**	**71.84**	**166**	LR	LR	09 48 27.0	
	comp=Z,81nm,21.1s,baz=338,slow=30						
KBK	**Karagaybulak**	**71.86**	**319**	P	**P**	**09 23 15.3**	**+1.1**
	SNR=10.0						
PPT2	**Papeete2**	**71.86**	**166**	*e*LR	LR	09 44 45.8	
	comp=Z,103nm,25.5s						
AAK	**Ala-Archa**	**72.05**	**319**	P	**P**	**09 23 16.0**	**+0.7**
	SNR=11						
AAK	**Ala-Archa**	**72.05**	**319**	*ce*P	**P**	**09 23 16.4**	**+1.1**
AAK				pmax	pmax		
	comp=Z,25nm,1.7s						
AAK	**Ala-Archa**	**72.05**	**319**	P	**P**	**09 23 15.8**	**+0.5**
	comp=Z,7.7nm,0.6s,baz=118,slow=3.4,SNR=27						
KLNR	**Kaliningrad**	**72.16**	**358**	⇓*i*P	**P**	**09 23 16.0**	**+0.5**
KLNR				pmax	pmax		
	comp=Z,38nm,0.7s						
KZA	**Kyzart**	**72.23**	**318**	P	**P**	**09 23 17.9**	**+1.2**
	SNR=5.2						
EKS2	**Erkin-Say**	**72.31**	**319**	P	**P**	**09 23 18.1**	**+1.2**
	SNR=12						
KMI	**Kunming**	**72.35**	**288**	P	**P**	**09 23 18.0**	**+0.6**
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
UCH	**Uchtor**	**72.39**	**319**	P	P	09 23 25.0	+7.3
	SNR=8.2						
NRN	**Naryn**	**72.47**	**317**	*e*P	**P**	**09 23 18.8**	**+0.7**
	comp=Z,5.8nm,0.8s						
NRN	**Naryn**	**72.47**	**317**	*e*P	**P**	**09 23 18.8**	**+0.7**
NRN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LPSR	**Galich'ya Gora**	**72.57**	**346**	*e*P	**P**	**09 23 17.3**	**-0.7**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
AML	**Almayashu**	**72.79**	**319**	P	**P**	**09 23 21.6**	**+1.5**
	SNR=12						
MNAS	**Manas**	**72.95**	**320**	P	**P**	**09 23 22.3**	**+1.6**
MNAS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KK31	**Karatay Array**	**73.17**	**322**	*e*P	**P**	**09 23 22.0**	**+0.2**
KK31	**Karatay Array**	**73.17**	**322**	*i* P	**P**	**09 23 21.9**	**+0.1**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KKAR	**Karatay Array**	**73.17**	**322**	*e*P	**P**	**09 23 22.0**	**+0.2**
KKAR	**Karatay Array**	**73.17**	**322**	*e*P	**P**	**09 23 22.0**	**+0.2**
ARSB	**Arslanbob**	**73.76**	**319**	*e*P	**P**	**09 23 25.6**	**+0.2**
	comp=Z,22nm,1.3s						
VSR	**Storozhevoye**	**73.88**	**345**	⇓*i*P	**P**	**09 23 25.9**	**+0.1**
VSR				pmax	pmax		
	comp=Z,48nm,1.1s						
KSH	**Kashi**	**74.09**	**316**	P	**P**	**09 23 31.3**	**+3.9**
KSH				sP	pwP	09 23 39.0	+1.3
KSH				pmax	pmax		
	comp=Z,26nm,0.8s						
KSH				pmax	pmax		
	comp=Z,390nm,5.3s						
SFK	**Sufi-Kurgan**	**74.67**	**318**	*i* P	**P**	**09 23 31.2**	**+0.3**
SFK				pmax	pmax		
	comp=Z,12nm,0.9s						
LSA	**Lhasa**	**75.05**	**300**	*e*P	**P**	**09 23 33.6**	**+0.1**
	comp=Z,15nm,0.8s						
LSA	**Lhasa**	**75.05**	**300**	*e*P	**P**	**09 23 33.6**	**+0.1**
LSA				pmax	pmax		
	comp=Z,15nm,0.8s						
CLL	**Collm**	**75.47**	**2**	*e*P	**P**	**09 23 35.0**	**0.0**
	comp=Z,17nm,1.2s						
CLL	**Collm**	**75.47**	**2**	*e*P	**P**	**09 23 35.0**	**0.0**
CLL				pmax	pmax		
	comp=Z,17nm,1.2s						
AKASG	**Malin Array Be**	**75.57**	**352**	*i* P	**P**	**09 23 35.2**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,14nm,0.7s						
AKASG	**Malin Array Be**	**75.57**	**352**	P	**P**	**09 23 35.3**	**-0.2**
	comp=Z,8.5nm,0.5s,baz=12,slow=5.8,SNR=34						
AKBB	**Malin Array Si**	**75.57**	**352**	*e*P	**P**	**09 23 35.6**	**+0.1**
	comp=Z,55nm,1.5s						
KIEV	**Kiev**	**75.58**	**352**	*e*P	**P**	**09 23 35.3**	**-0.3**
	comp=Z,49nm,1.5s						
KIEV	**Kiev**	**75.58**	**352**	⇑*i*P	**P**	**09 23 35.3**	**-0.3**
KIEV	**Kiev**	**75.58**	**352**	*e*P	**P**	**09 23 35.3**	**-0.3**
KIEV				pmax	pmax		
	comp=Z,49nm,1.5s						
AK11	**Malin Array Si**	**75.59**	**352**	*e*P	**P**	**09 23 34.8**	**-0.9**
MEM	**Membach**	**75.83**	**7**	⇑P	**P**	**09 23 37.6**	**+0.6**
MEM				⇑pP	**pP**	**09 23 41.6**	**-2.7**
BRG	**Berggiesshubel**	**75.92**	**2**	*e*P	**P**	**09 23 38.2**	**+0.6**

	comp=Z,25nm,1.4s						
BRG	Berggiesshubel	75.92	2	eP	P	09 23 38.2	+0.6
BRG				pmax	pmax		
	comp=Z,25nm,1.4s						
BCLA	Clavier	75.97	7	⇑P	P	09 23 36.8	-1.0
BCLA				⇓PcP	PcP	09 23 50.8	+0.6
	comp=Z,11nm,1.5s						
PVCC	Panska Ves	76.28	1	eP	P	09 23 41.0	+1.4
PVCC	Panska Ves	76.28	1	eP	P	09 23 41.0	+1.4
DPC	Dobruska-Polom	76.47	0	eP	P	09 23 42.0	+1.2
DPC	Dobruska-Polom	76.47	0	eP	P	09 23 42.0	+1.2
KRLC	Kraliky	76.74	360	eP	P	09 23 43.1	+0.8
KRLC	Kraliky	76.74	360	eP	P	09 23 43.1	+0.8
WLF	Walferdange	76.78	7	⇓P	P	09 23 43.7	+1.2
GAR	Garm	76.80	320	eP	P	09 23 43.6	+0.7
	comp=Z,15nm,0.7s						
GAR	Garm	76.80	320	eP	P	09 23 43.6	+0.7
GAR				pmax	pmax		
	comp=Z,15nm,0.7s						
LVV	L'vov	76.81	355	eP	P	09 23 42.4	-0.2
MORC	Moravsky Berou	77.04	359	⇑iP	P	09 23 44.4	+0.4
MORC	Moravsky Berou	77.04	359	eP	P	09 23 44.5	+0.4
VRAC	Vranov	77.51	360	⇑iP	P	09 23 47.8	+1.2
VRAC	Vranov	77.51	360	eP	P	09 23 47.1	+0.5
CHGR	Chuyangaron	77.54	320	eP	P	09 23 47.5	+0.4
	comp=Z,38nm,0.7s						
LANS	Liptovska Anna	77.64	358	eP	P	09 23 49.1	+1.7
LANS	Liptovska Anna	77.64	358	eP	P	09 23 49.1	+1.7
KHC	Kasperske Hory	77.66	2	eP	P	09 23 48.5	+1.0
	comp=Z,3.9nm,0.9s						
KHC	Kasperske Hory	77.66	2	eP	P	09 23 48.9	+1.4
KHC				epP	pP	09 23 53.0	-1.7
KHC	Kasperske Hory	77.66	2	eP	P	09 23 48.5	+1.0
KHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KRUC	Moravsky	77.76	0	eP	P	09 23 49.4	+1.4
GEC2	GERESS Array S	77.95	2	eP	P	09 23 50.1	+0.9
	comp=Z,6.3nm,0.9s						
GEC2	GERESS Array S	77.95	2	eP	P	09 23 50.1	+0.9
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GERES	GERESS Array B	77.95	2	P	P	09 23 49.5	+0.3
	comp=Z,3.2nm,0.6s,baz=357,slow=4.5,SNR=17						
GEA0	GERESS Array S	77.95	2	eP	P	09 23 49.7	+0.5
JAVC	Velka Javorina	77.96	359	eP	P	09 23 51.0	+1.8
VYHS	Vyhne	78.31	358	eP	P	09 23 52.3	+1.2
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
VYHS	Vyhne	78.31	358	eP	P	09 23 52.3	+1.2
MODS	Modra-Piesok	78.44	359	eP	P	09 23 53.1	+1.3
MODS				pmax	pmax		
	comp=Z,20nm,1.2s						
MODS	Modra-Piesok	78.44	359	eP	P	09 23 53.1	+1.3
TRPA	Tarpa	78.56	356	⇑iP	P	09 23 53.6	+1.2
CONA	Conrad Observa	78.89	0	iP	P	09 23 55.7	+1.3
	comp=Z,9.5nm,0.8s,SNR=5.2						
BUR08	Bucovina Ar. S	78.91	354	eP	P	09 23 55.4	+0.9
BUR04	Bucovina Ar. S	78.93	354	eP	P	09 23 55.1	+0.5
BURAR	Bucovina Array	78.94	354	⇑iP	P	09 23 55.3	+0.7
GUN	Gumba	79.19	303	eP	P	09 23 57.5	+0.8
	comp=Z,62nm,0.7s						
JIRN	Jiri	79.24	302	eP	P	09 23 58.0	+1.1
	comp=Z,106nm,0.5s						
ODAN	Odare	79.28	301	eP	P	09 23 57.7	+0.7
MOTA	Moosalm	79.37	4	iP	P	09 23 58.0	+0.9
	comp=Z,9.2nm,0.7s						
WTTA	Wattenberg	79.47	3	iP	P	09 23 59.0	+1.3
	comp=Z,13nm,0.7s						
SQTA	Sankt Quirin	79.50	4	iP	P	09 23 59.0	+1.3
	comp=Z,18nm,0.7s						
ARCR	ARCALIA	79.51	355	⇓iP	P	09 23 59.2	+1.5
BIZ	Bicaz	79.55	353	⇑iP	P	09 23 56.7	-1.2
KKN	Kakani	79.59	303	eP	P	09 23 59.6	+0.9
RAMN	Ramite	79.61	301	eP	P	09 23 59.6	+0.8
	comp=Z,71nm,0.9s						
FETA	Feichten	79.68	4	iP	P	09 24 00.0	+1.2
	comp=Z,12nm,0.8s						
DZM	Mont Dzumac	79.68	208	eLR	LR	09 48 35.2	
	comp=Z,100nm,21.9s						
PKI	Pulchoki	79.70	303	eP	P	09 24 00.0	+0.6
	comp=Z,29nm,0.7s						
PKIN	Phulchoki	79.70	303	eP	P	09 24 00.0	+0.6
	comp=Z,11nm,0.4s						
KBA	Koelnbreinsper	79.71	2	iP	P	09 24 00.5	+1.6
	comp=Z,15nm,0.8s,SNR=6.6						
CMAR	Chiang Mai Arr	79.75	287	P	P	09 24 00.2	+0.8
	comp=Z,6.4nm,0.8s,baz=17,slow=5.5,SNR=24						
CMAR				LR	LR	10 03 46.4	
	comp=Z,49nm,18.1s,baz=40,slow=39						
DMN	Daman	79.82	303	eP	P	09 24 01.0	+1.0
DANN	Dangsing	79.88	304	eP	P	09 24 01.5	+1.1
	comp=Z,131nm,0.7s						
DRGR		79.89	356	⇑iP	P	09 24 00.2	+0.4
ABTA	Abfaltersbach	80.02	3	eP	P	09 24 01.2	+0.7
	comp=Z,9.6nm,1.0s						
FUORN	Ofenpass-Fuorn	80.06	4	eP	P	09 24 00.6	-0.3
	comp=Z,38nm,1.5s						
SOKA	Soboth	80.14	1	iP	P	09 24 02.8	+1.6
	comp=Z,21nm,1.2s,SNR=6.9						
NIL	Nilore	80.23	315	eP	P	09 24 01.4	-0.4
	comp=Z,13nm,0.7s						
NIL	Nilore	80.23	315	eP	P	09 24 01.4	-0.4
NIL				pmax	pmax		
	comp=Z,13nm,0.7s						
OBKA	Obir	80.30	1	iP	P	09 24 03.3	+1.2
	comp=Z,24nm,0.8s,SNR=7.2						
KIV	Kislovodsk	80.31	341	⇓iP	P	09 24 03.5	+1.4
KIV	Kislovodsk	80.31	341	eP	P	09 24 03.2	+1.1
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
GROC	Groznyy	80.39	339	eP	P	09 24 01.7	-0.8
GROC				e		09 24 08.5	
GROC				e		09 27 01.7	
GROC				eS	S	09 34 04.3	-2.3
GROC				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ANN	Anapa	80.40	345	eP	P	09 23 57.6	-4.9
ANN				e		09 24 07.0	
ANN				eS	S	09 34 00.4	-6.2
ANN				pmax	pmax		
	comp=Z,39nm,1.2s						
KOLN	Koldanda	80.44	304	eP	P	09 24 04.0	+0.7
	comp=Z,52nm,1.0s						
PYUN	Piuthan	80.47	305	eP	P	09 24 04.2	+0.8
	comp=Z,105nm,1.0s						
KBZ	Khabaz	80.48	341	P	P	09 24 03.6	+0.6
	comp=Z,5.9nm,0.8s,baz=337,slow=3.0,SNR=15						
KBZ				LR	LR	10 04 41.3	
	comp=Z,74nm,18.9s,baz=13,slow=40						
NCK	Nalchik	80.57	340	⇓eP	P	09 24 05.5	+2.0
NCK				pmax	pmax		
	comp=Z,8.0nm,0.3s						
NEY	Neytrino	80.98	341	⇑eP	P	09 24 09.4	+3.5
NEY				pmax	pmax		
	comp=Z,3.0nm,1.6s						
BZS	Buzias	81.11	356	⇑iP	P	09 24 06.9	+0.6
VOIR		81.11	354	⇓iP	P	09 24 07.8	+1.4
ZEI	Tsey	81.19	340	eP	P	09 24 07.3	+0.3
ZEI				pmax	pmax		
	comp=Z,14nm,1.4s						
ARR	Arges	81.21	354	⇑iP	P	09 24 08.6	+1.7
SOC	Sochi	81.21	343	eP	P	09 24 07.0	+0.2
SOC				e		09 27 12.3	
SOC				eS	S	09 34 17.8	+2.6
SOC				pmax	pmax		
	comp=Z,20nm,0.6s						
GZR	Gura Zlata	81.28	356	⇑iP	P	09 24 08.1	+0.8
TBLG	Delisi	82.03	339	eP	P	09 24 13.1	+1.9
	comp=Z,25nm,0.8s						
TBLG	Delisi	82.03	339	eP	P	09 24 13.1	+1.9
TBLG				pmax	pmax		
	comp=Z,25nm,0.8s						
GEYT	Alibeck	82.04	328	P	P	09 24 12.0	+0.6
	comp=Z,6.5nm,0.8s,baz=347,slow=4.6,SNR=9.9						
DIVS	Divibare	82.68	357	eP	P	09 24 15.2	+0.5
	comp=Z,8.6nm,1.0s						
GNI	Garni	83.54	339	⇓iP	P	09 24 20.6	+1.3
GNI				pmax	pmax		
	comp=Z,39nm,0.8s						
VTS	Vitosha	84.03	355	⇓iP	P	09 24 22.5	+0.8
ES19	SONSECA Array	85.46	16	eP	P	09 24 29.3	+0.5
ESDC	Sonseca Array	85.47	16	P	P	09 24 28.8	-0.1
	comp=Z,0.3nm,0.3s,baz=342,slow=4.4,SNR=3.8						
BR101	Keskin Array S	85.92	347	eP	P	09 24 32.3	+1.0
BR131	Keskin Array S	85.92	347	eP	P	09 24 32.2	+0.9
BRTR	Keskin Array B	85.92	347	P	P	09 24 32.3	+1.0
	comp=Z,7.0nm,0.9s,baz=53,slow=2.6,SNR=24						
BRTR				LR	LR	10 07 09.6	
	comp=Z,57nm,18.9s,baz=357,slow=39						
FNA	Florina	85.94	356	eP	P	09 24 31.7	+0.4
	comp=Z,7.8nm,0.8s						
FNA	Florina	85.94	356	eP	P	09 24 31.7	+0.4
FNA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WR1	Warramunga Arr	90.58	236	eP	P	09 24 52.9	-0.5
WRA	Warramunga Arr	90.58	236	P	P	09 24 52.9	-0.5
	comp=Z,0.9nm,0.9s,baz=34,slow=5.8,SNR=5.4						
HYB	Hyderabad	91.62	302	iP	P	09 24 59.0	+0.5
ASAR	Alice Springs	93.94	235	P	P	09 25 08.7	-0.2
	comp=Z,0.6nm,0.6s,baz=28,slow=5.4,SNR=4.9						
STKA	Stephens Creek	97.47	225	LR	LR	10 05 04.7	
	comp=Z,50nm,19.9s,baz=27,slow=33						
TOA1	Torodi Ar. Sit	112.36	16	ePKiKP	PKiKP	09 30 26.3	-1.0
TORD	Torodi Ar. Bea	112.36	16	PKiKP	PKiKP	09 30 26.3	-1.0
	comp=Z,0.2nm,0.5s,baz=346,slow=2.2,SNR=4.0						
DBIC	Dimbokro	117.34	24	PKP	PKPdf	09 30 36.1	-0.8
	comp=Z,1.1nm,0.5s,baz=342,slow=3.2,SNR=3.4						
BOSA	Boshof	154.27	342	PKPbc	PKPbc	09 31 51.0	-0.2
	comp=Z,2.9nm,0.7s,baz=124,slow=1.7,SNR=5.4						

BGR ***26*** *09:21:42.1±0.3, 49°.70N×7°.27E, h10^{km}, ML2.4/5, Error ellipse: s-maj=4.4km s-min=3.3km az=111.0*
STR ***26*** *09:21:42.5±0.4, 50°N±2°×°±°, h1^{km}, M2.6/7, MLv2.6/7*
LDG ***26*** *09:21:42.7±0.0, 49°.70N×7°.22E, h10^{km}, Md3.0/3, Ml2.9/27, Error ellipse: s-maj=0.8km s-min=0.7km az=82.0*
BNS ***26*** *09:21:44.3±0.5, 49°.76N×7°.23E, h9^{km}±5^{km}, ML2.2*
ISC 26 09:21:42.8±0.9, **49°.72N**±0°.01×**7°.21E**±0°.02, **h21**^{km}±1^{km}, **n90, σ1^{s}.74**/165, **9C-5D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUP	Ruppelstein	0.10	259	⇑P*	Pb	09 21 45.9	-1.1
RUP				S*	Sb	09 21 47.8	-2.0
ABH	Alteburg	0.27	54	Pg	Pb	09 21 48.1	-1.1
ABH	Alteburg	0.27	54	⇑P*	Pb	09 21 48.1	-1.1
ABH				S*	Sb	09 21 53.8	+0.1
RIVT	Riveris	0.29	268	⇑iP*	Pb	09 21 48.8	-0.6
RIVT				S*	Sb	09 21 53.0	-0.9
FSH	Hochheid	0.36	350	⇑P*	Pb	09 21 50.6	+0.1
FSH				S*	Sb	09 21 57.4	+1.8
DUP	Duppenweiler	0.41	222	P*	Pb	09 21 50.9	-0.4
DUP				S*	Sb	09 21 56.9	-0.1
IMS	Imsbach	0.47	105	⇑eP*	Pb	09 21 51.7	-0.6
IMS				PmP		09 21 53.4	
IMS				S*	Sb	09 21 58.1	-0.7
BGG	Burgeitz	0.49	10	⇑iPg	Pb	09 21 52.7	0.0
BGG				eSg	Sb	09 21 59.0	-0.5
	205nm,0.2s						
BHE	Schloss Buerre	0.63	358	ePg	Pb	09 21 55.3	0.0
BHE				eSg	Sb	09 22 02.9	-0.8
	194nm,0.1s						
LOH	Wallersheim-Lo	0.63	317	ePg	Pn	09 21 56.0	-0.6
LOH				eSg	Sb	09 22 04.5	+0.7
	74nm,0.4s						
HILG	Hillesheim	0.67	329	ePg	Pn	09 21 56.4	-0.7
LVIA	Vianden	0.69	289	⇑P	Pn	09 21 56.5	-0.8
LVIA				S	Sb	09 22 05.1	-0.1
WLF	Walferdange	0.69	266	P	Pb	09 21 55.6	-0.5
WLF				S	Sb	09 22 05.0	-0.1
	comp=E,93nm,0.2s						
WLF	Walferdange	0.69	266	⇓P*	Pb	09 21 55.9	-0.3
WLF				eSg	Sb	09 22 05.5	+0.3
KTD	Kalmit	0.70	125	Pg	Pb	09 21 55.8	-0.5
KTD	Kalmit	0.70	125	P*	Pb	09 21 56.0	-0.4
KTD				S*	Sb	09 22 04.8	-0.8
PEB	Petersbachel	0.73	153	⇓P*	Pb	09 21 55.9	-1.0
PEB				S*	Sb	09 22 05.0	-1.5
KOE	Koeppel	0.78	25	ePg	Pb	09 21 58.1	+0.3
LKLB	Kalborn	0.81	299	⇓P	Pn	09 21 58.6	-0.3
LKLB				S	Sb	09 22 08.5	0.0
	comp=E,43nm,0.1s						
FACH	Fachingen	0.81	38	P*	Pn	09 21 58.6	-0.4
FACH				PmP		09 21 59.5	
FACH				SmS		09 22 10.7	
AHRW	Bad Neuenahr-A	0.82	354	P*	Pb	09 21 58.7	+0.2
AHRW				Pg	Pn	09 21 59.1	-0.1
AHRW				PmP		09 21 59.4	
AHRW				eSg	Sb	09 22 09.1	0.0
AHRW				SmS		09 22 10.7	
LANF	Langenberg	0.84	152	Pg	Pb	09 21 58.2	-0.5
LANF	Langenberg	0.84	152	P*	Pb	09 21 58.0	-0.6
LANF				S*	Sb	09 22 08.8	-0.7
LANF				SmS		09 22 10.9	
TDN	Todenfeld	0.87	349	eSg	Sb	09 22 10.2	-0.3
	comp=E,184nm,0.2s						
STB	Steinbach	0.91	345	ePg	Pn	09 22 00.2	-0.1
OLFT	Oleftalsperre	0.93	327	ePg	Pn	09 22 00.7	+0.1
OLFT				eSg	Sn	09 22 12.8	-0.4
TNS	Taunus Mts	0.94	57	⇑P*	Pb	09 22 00.3	-0.2
TNS				Pg	Pn	09 22 00.9	0.0
TNS				S*	Sb	09 22 12.8	+0.1
WBB	Darmstadt	0.95	82	P*	Pn	09 22 01.0	0.0
GWBC	Aumenau	0.96	45	P*	Pn	09 22 00.8	-0.2
GWBC				PmP		09 22 01.7	
BHOU	Houvegnez	1.00	310	P	Pn	09 22 01.6	0.0
BHOU				S	Sb	09 22 14.2	0.0
SWS	Schriesheim-Wi	1.00	103	P	Pn	09 22 01.6	0.0
SWS				S	Sb	09 22 13.7	-0.5
SWS				Sg	Sn	09 22 14.9	-0.1
TOD	Tromm	1.04	96	P	Pb	09 22 01.9	-0.3
TOD				S	Sb	09 22 15.4	0.0
WBA	Furth	1.05	93	P	Pn	09 22 03.8	+1.5
WBS	Wahnbachtalspe	1.09	3	ePg	Pb	09 22 03.1	+0.2
WBS				eSg	Sb	09 22 16.7	+0.1
	comp=E,64nm,0.1s						
BIW	Bindweide	1.09	22	P	Pn	09 22 02.8	0.0
BIW				PmP		09 22 03.7	
KLL	Kalltalsperre	1.09	329	ePg	Pb	09 22 03.4	+0.4
DREG	Dreilaegerbach	1.13	327	ePg	Pb	09 22 04.1	+0.4
GSH	Grosshau	1.15	333	ePg	Pb	09 22 04.3	+0.4
GSH				eSg	Sn	09 22 19.0	+0.4
	comp=E,61nm,0.5s						
MEM	Membach	1.18	320	⇑P	Pn	09 22 01.7	-2.4
MEM				S	Sn	09 22 19.9	+0.5
	comp=E,25nm,0.2s						
MEM	Membach	1.18	320	P	Pb	09 22 04.2	-0.2
MEM				Sg	Sn	09 22 20.2	+0.8
BRET	Bretten	1.20	126	Pg	Pb	09 22 05.3	+0.5
BRET				Sg	Sn	09 22 20.7	+0.8
BNS	Bensberg	1.24	359	ePg	Pb	09 22 06.5	+0.9
HOBG	Hohbusch	1.27	4	ePg	Pb	09 22 05.7	-0.3
HOBG				eSg	Sb	09 22 22.0	+0.2
	comp=E,63nm,0.5s						
PLH	Pulheim	1.31	349	eSg	Sb	09 22 22.9	-0.1
CDF	Champ du Feu	1.31	178	ePn	Pn	09 22 05.6	-0.4
	SNR=1.0						
CDF	Champ du Feu	1.31	178	ePg	Pb	09 22 07.3	+0.5
	SNR=1.0						
CDF				eSn	Sn	09 22 22.0	-0.8
	comp=E,21nm,0.2s						
WLS	Welschbruch	1.31	176	Pg	Pb	09 22 06.8	0.0
WLS	Welschbruch	1.31	176	Pg	Pb	09 22 06.8	0.0
WLS				Sg	Sb	09 22 23.3	+0.1
HGN	Heimansgroeve	1.33	322	ePg	Pn	09 22 06.3	+0.3
	comp=E,17nm,0.2s						
HGN				eSg	Sb	09 22 25.0	+1.5
OPP	Oppenau	1.38	152	Pg	Pb	09 22 08.5	+0.5
OPP	Oppenau	1.38	152	Pg	Pb	09 22 08.5	+0.5
OPP				Sg	Sb	09 22 26.2	+1.1
BCLA	Clavier	1.41	300	⇓P	Pn	09 22 07.6	+0.3
BCLA				S	Sn	09 22 25.2	0.0
WBG	Bieber	1.45	71	Pg	Pn	09 22 08.0	+0.2
ECH	Echery	1.51	181	Pn	Pb	09 22 08.8	-1.3
ECH	Echery	1.51	181	Pg	Pb	09 22 10.0	-0.1
ECH				S	Sn	09 22 25.5	-2.1
ECH				Sg	Sb	09 22 30.0	+1.2
PAGF	Fort de Pagny	1.52	220	ePn	Pn	09 22 08.2	-0.5
	baz=40						
PAGF				eSn	Sn	09 22 26.8	-1.1
	baz=27						
PAGF				eSg	Sb	09 22 30.9	+1.8
	comp=E,16nm,0.2s,baz=37						
ENTS	Ennepetalsperr	1.53	5	eSg	Sn	09 22 27.9	-0.2
BFO	Black Forest	1.58	152	P	Pn	09 22 09.2	-0.4
BFO				Pg	Pb	09 22 12.1	+0.8
BFO				Sg	Sb	09 22 31.8	+1.1
GIVF	Givet	1.59	285	ePn	Pn	09 22 09.3	-0.4
	SNR=1.0						
GIVF	Givet	1.59	285	ePg	Pb	09 22 12.7	+1.3
GIVF				eSn	Sn	09 22 28.4	-1.1
	comp=E,47nm,0.2s,SNR=1.0						
GIVF				eSg	Sb	09 22 33.3	+2.3
	comp=E,45nm,0.2s,SNR=1.0						
SIND	Sindeldorf	1.61	102	Pg	Pb	09 22 12.7	+1.0
THEF	They Montfort	1.70	209	Pg	Pn	09 22 11.1	-0.1
THEF				Pn	Pn	09 22 11.2	-0.1
THEF				Sn	Sb	09 22 33.8	-0.3
THEF				Sg	Sb	09 22 33.9	-0.3
DOU	Dourbes	1.73	284	Pn	Pb	09 22 12.5	-1.4
DOU	Dourbes	1.73	284	⇓P	Pn	09 22 12.2	+0.5
DOU				S	Sn	09 22 33.1	+0.1
	comp=E,21nm,0.2s						
HAU	Haudompre	1.81	199	ePn	Pn	09 22 12.3	-0.4
	SNR=1.0						
HAU				eSn	Sn	09 22 33.6	-1.4
	comp=E,19nm,0.2s,SNR=1.0						
KIZ	Kirchzarten	1.83	165	Pg	Pb	09 22 16.6	+1.0
KIZ				Sg	Sb	09 22 39.1	+1.1
MEZF	Maizieres J'vi	1.87	230	ePn	Pn	09 22 13.0	-0.5
	baz=50						
MEZF				eSn	Sn	09 22 34.8	-1.7
	comp=E,8.7nm,0.3s						
MEZF				eSg	Sb	09 22 41.7	+2.6
	comp=E,13nm,0.2s,baz=40						
MOF	Molkenrain	1.87	182	Pg	Pb	09 22 16.6	+0.3
MOF				Sg	Sb	09 22 40.5	+1.2
BUCH	Bad Urach	1.90	131	Sg	Sb	09 22 42.6	+2.6
HINF	Hinteralfeld	1.92	187	ePn	Pn	09 22 13.8	-0.5
	SNR=1.0						
HINF				eSn	Sn	09 22 35.2	-2.6
	comp=E,13nm,0.2s,SNR=1.0						
HINF				eSg	Sb	09 22 42.7	+2.1
	comp=E,16nm,0.2s						
BAIF	Baives	1.97	281	ePn	Pn	09 22 14.4	-0.5
	SNR=1.0						
BAIF	Baives	1.97	281	ePg	Pb	09 22 19.1	+1.2
	SNR=1.0						
BAIF				eSn	Sn	09 22 37.7	-1.2
	comp=E,9.0nm,0.2s,SNR=1.0						
BAIF				eSg	Sb	09 22 45.2	+3.2
	comp=E,19nm,0.2s						
ENDD	Endenburg	2.04	170	Pg	Pb	09 22 20.6	+1.4
ENDD				Sg	Sb	09 22 45.8	+1.8
GUT	Gutenstein	2.08	142	Sg	Sb	09 22 47.3	+2.2
SFTF	Sexfontaines	2.08	224	ePn	Pn	09 22 16.0	-0.5
SFTF				eSn	Sn	09 22 40.4	-1.4
	baz=41						
SFTF				eSg	Sb	09 22 47.9	+2.6
	comp=E,17nm,0.3s,baz=48						
WTSB	Winterswijk	2.26	354	eSg	Sb	09 22 54.1	+3.7
LOMF	Lomont	2.39	186	Pg	Pb	09 22 26.3	+1.2
LOMF				Sg	Sb	09 22 56.5	+2.5
CLZ	Clausthal	2.92	42	ePn	Pn	09 22 27.7	-0.3
CLZ				ePg	Pb	09 22 36.1	+1.9
CHRS	Christianenhau	2.98	49	ePg	Pb	09 22 36.5	+1.4
CABF	La Chapelle	3.20	194	ePn	Pn	09 22 31.4	-0.5
	SNR=1.0						
CABF				eSn	Sn	09 23 07.2	-2.3
CABF				eSg	Sb	09 23 23.0	+5.5
	comp=E,4.7nm,0.4s,SNR=1.0						
LOR	Lormes	3.31	223	ePn	Pn	09 22 32.4	-1.0
	baz=48,SNR=1.0						
LOR				eSn	Sn	09 23 09.7	-2.5
	comp=E,5.5nm,0.3s,SNR=1.0						
LOR				eSg	Sb	09 23 26.5	+5.8
	comp=E,6.5nm,0.2s,baz=43						
SSF	Saint Saulge	3.63	224	ePn	Pn	09 22 36.5	-1.2
	SNR=1.0						
SSF				eSn	Sn	09 23 17.4	-2.5
	comp=E,5.3nm,0.4s,SNR=1.0						
SSF				eSg	Sb	09 23 36.5	+6.8
	comp=E,5.0nm,0.3s						
SMF	Signal de Mont	3.81	217	ePn	Pn	09 22 39.2	-1.1
	SNR=1.0						
SMF				eSn	Sn	09 23 21.6	-2.9
	comp=E,3.3nm,0.2s,SNR=1.0						
SMF				eSg	Sb	09 23 42.1	+7.0
	comp=E,4.5nm,0.3s						
AVF	Avril sur Loir	3.90	223	ePn	Pn	09 22 40.4	-1.1
	SNR=1.0						
AVF				eSn	Sn	09 23 23.8	-2.8
	SNR=1.0						
AVF				eSg	Sb	09 23 45.0	+7.4
	comp=E,1.5nm,0.2s						
LDF	La Druitiere	4.94	260	ePn	Pn	09 22 54.9	-0.8
	SNR=1.0						
LDF				eSn	Sn	09 23 48.4	-3.8
	comp=E,1.5nm,0.2s,SNR=1.0						
LDF				eSg	Sb	09 24 17.6	+10
	comp=E,1.9nm,0.2s,SNR=1.0						
MBDF	Montbardon	5.00	184	ePn	Pn	09 22 56.1	-0.7
	SNR=1.0						
FLN	La Foliniere	5.13	262	ePn	Pn	09 22 57.6	-0.7
FLN				eSn	Sn	09 23 53.7	-3.1
	comp=E,2.9nm,0.3s,baz=76,SNR=1.0						
GRR	Gorron	5.47	259	ePn	Pn	09 23 02.2	-0.8
GRR				eSn	Sn	09 24 00.3	-4.9
	comp=E,3.1nm,0.2s,SNR=1.0						
SGMF	Saint Gilles	6.59	261	ePn	Pn	09 23 17.5	-0.9
	SNR=1.0						
QUIF	Quistinic	7.08	259	eSn	Sn	09 24 39.9	-5.0
	comp=E,12nm,0.9s,SNR=1.0						

NAO ***26*** *09:21:49.6±1.7, 60°.44N×5°.21E, h24^{km}±11^{km}, ML2.0*
BER 26 09:21:48.3±1.9, **60°.32N×4°.77E, h19**^{km}±4^{km}**, ML1.9, ML2.0**(NAO)**, 2C, Confirmed Earthquake, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASK	Askoy	0.27	53	⇑iP	Pb	09 21 53.7	-0.6
ASK				eS	Sb	09 21 57.2	-1.1
ASK				IAML		09 21 57.4	
	comp=Z,213nm,0.1s						
BER	Bergen	0.29	77	Pg	Pg	09 21 54.2	-0.5
BER				Lg	Lg	09 21 58.1	
BER	Bergen	0.29	77	eP	Pg	09 21 54.1	-0.6
BER				eS	Sb	09 21 58.0	-1.0
BER				IAML		09 21 58.2	
	comp=Z,279nm,0.3s						
SUE	Sulen	0.74	360	⇑iP	Pb	09 22 01.6	-0.8
SUE				eS	Sb	09 22 11.2	-0.9
SUE				IAML		09 22 11.8	
	comp=Z,47nm,0.2s						
ODD1	Odda	1.02	113	eP	Pb	09 22 06.3	-1.0
ODD1				eS	Sb	09 22 19.5	-0.8
ODD1				IAML		09 22 20.8	
	comp=Z,51nm,0.2s						
HYA	Hoyanger	1.10	39	eP	Pn	09 22 06.9	-1.6
HYA				eS	Sb	09 22 21.2	-1.3
HYA				IAML		09 22 22.6	
	comp=Z,40nm,0.2s						
KMY	Karmoy	1.14	168	eP	Pn	09 22 08.0	-1.1
KMY				eS	Sb	09 22 22.1	-1.6
KMY				IAML		09 22 25.4	
	comp=Z,16nm,0.1s						
BLS5	Blasjo	1.24	136	eP	Pn	09 22 09.5	-1.0
BLS5				eS	Sb	09 22 24.4	-2.2
BLS5				IAML		09 22 27.4	
	comp=Z,42nm,0.2s						
FOO	Floro	1.29	6	eP	Pn	09 22 10.2	-1.0
FOO				eS	Sn	09 22 26.1	-1.7
FOO				IAML		09 22 27.8	
	comp=Z,30nm,0.2s						
AKN	Aaknes	2.15	29	Pn	Pn	09 22 21.4	-1.7
AKN				Lg	Lg	09 22 52.1	
AKN	Aaknes	2.15	29	eP	Pn	09 22 22.1	-1.0
AKN				eS	Sn	09 22 45.0	-4.2
SNART	Snartemo	2.35	147	eP	Pn	09 22 24.6	-1.2
SNART				IAML		09 23 00.1	
	comp=Z,24nm,0.2s						
KONO	Kongsberg	2.52	103	eP	Pn	09 22 27.7	-0.4
KONO				eS	Sn	09 22 53.6	-4.6
KONO				IAML		09 23 09.7	
	comp=Z,6.0nm,0.6s						
NB2	NORSAR Subarra	3.25	74	Sg	Sb	09 23 26.2	+1.7
	baz=264,slow=37						
NC602	NORSAR Array S	3.37	80	eS	Sn	09 23 15.2	-4.0
NRA0	NORESS Array S	3.37	80	Sn	Sn	09 23 15.2	-4.0
	baz=273,slow=22						

NRA0				Lg	Lg	09 23 29.7	
	baz=271,slow=28						
NRA0	**NORESS Array S**	**3.37**	**80**	Sn	Sn	09 23 15.2	-4.0
	baz=273,slow=22						
NRA0				Sg	Sb	09 23 29.7	+1.8
	baz=271,slow=28						

DDA 26 09:22:59.2, 40°.76N×41°.13E, h7^{km}±4^{km}, ML2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDEM	**Demirkent**	**0.49**	**74**	*i* P	Pg	09 23 09.2	+0.6
DDEM				*i* S	Sb	09 23 19.3	+1.7
DDEM				IAML_P			
	comp=Z,2μm,0.1s						
DBAD	**Bademkaya**	**0.50**	**59**	*i* P	Pb	09 23 09.8	-0.6
DBAD				*i* S	Sb	09 23 16.8	-1.1
DBAD				IAML_P			
	comp=Z,4μm,0.1s						
DAGI	**Agillar**	**0.67**	**62**	*i* P	Pg	09 23 12.6	+0.4
DAGI				*i* S	Sg	09 23 20.7	-0.3
DAGI				IAML_P			
	comp=Z,895nm,0.1s						
DBOC	**Borcka**	**0.71**	**35**	*i* P	Pb	09 23 14.7	+0.8
DBOC				*i* S	Sb	09 23 23.9	0.0
DBOC				IAML_P			
	comp=Z,1μm,0.1s						
ARTV	**Artvin**	**0.74**	**55**	*i* P	Pb	09 23 14.6	+0.1
ARTV				*i* S	Sb	09 23 24.5	-0.4
ARTV				IAML_P			
	comp=Z,3μm,0.1s						
BAYB	**BAYBURT**	**0.83**	**233**	*i* P	Pb	09 23 16.4	+0.3
BAYB				*i* S	Sb	09 23 27.2	-0.5
BAYB				IAML_P			
	comp=Z,1μm,0.1s						
HOMI	**Horasan**	**0.93**	**140**	*i* P	Pg	09 23 16.6	-0.5
HOMI				*i* S	Sb	09 23 31.2	+0.8
HOMI				IAML_P			
	comp=Z,321nm,0.2s						
BATM	**Batumi**	**0.94**	**27**	P	Pn	09 23 18.4	-0.5
BATM				S	Sn	09 23 31.8	-0.8
KELT	**Kelkit**	**1.56**	**247**	*i* P	Pg	09 23 29.3	+0.2
KELT				*i* S	Sg	09 23 50.7	+1.5
KELT				IAML_P			
	comp=Z,129nm,0.1s						

ISCJB ***26*** *09:32:16.5±0.1, 64°.17N±0°.01×149°.38W±0°.03, h143^{km}±1^{km}, mb4.5/313, Error ellipse: s-maj=2.3km s-min=1.7km az=135.5*

MOS ***26*** *09:32:16.1±0.8, 64°.22N×149°.51W, h139^{km}, mb4.7/93, Error ellipse: s-maj=10.2km s-min=4.0km az=97.8*

IDC ***26*** *09:32:17.3±0.7, 64°.24N×149°.55W, h138^{km}±5^{km}, mb4.2/39, mb1 4.2/44, mb1mx4.2/56, mbtmp4.6/44, MS3.0/1, Ms1 3.0/1, ms1mx2.6/42, Error ellipse: s-maj=9.2km s-min=6.3km az=29.0*

GCMT ***26*** *09:32:17.7±0.4, 64°.19N±0°.04×149°.46W±0°.06, h154^{km}±3^{km}, MW4.9/82, Moment Tensor Solution. s17,c19; s82,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.09±.11; M$_{\theta\theta}$1.30±.24; M$_{\phi\phi}$0.79±.20; M$_{r\theta}$0.45±.14; M$_{\theta\phi}$1.06±.15; M$_{\phi r}$-1.19±.09; Best double couple: M$_0$2.42700×10^{16} NP1:φ$_s$28.00000°, δ56.00000°, λ-120.00000°. NP2:φ$_s$253.00000°, δ44.00000°, λ-54.00000°. Principal axes: T 2.1770, Plg6.0000°, Azm138.0000°; N 0.5010, Plg24.0000°, Azm46.0000°; P -2.6780, Plg65.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***26*** *09:32:17.2, 64°.62N×149°.77W, h142^{km}, mB5.1/20, mb4.8/35*

AEIC ***26*** *09:32:18.0±0.0, 64°.10N×149°.31W, h142^{km}*

NEIC ***26*** *09:32:17.7±0.1, 64°.19N×149°.43W, h137^{km}±1^{km}, mb4.6/241, MW4.7, ML4.6(AEIC), Error ellipse: s-maj=2.6km s-min=1.9km az=224.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.26; M$_{\theta\theta}$-0.02; M$_{\phi\phi}$1.28; M$_{r\theta}$0.28; M$_{\theta\phi}$0.35; M$_{\phi r}$-0.42; Best double couple: M$_0$1.40000×10^{16} NP1:φ$_s$210.00000°, δ40.00000°, λ-65.00000°. NP2:φ$_s$359.00000°, δ54.00000°, λ-110.00000°. Principal axes: T 1.4100, Plg7.0000°, Azm102.0000°; N 0.0000, Plg16.0000°, Azm10.0000°; P -1.4100, Plg72.0000°, Azm217.0000°;*

ISC 26 09:32:17.8±0.5**, 64°.13N**±0°.02×**149°.36W**±0°.03**, h145**^{km}±4^{km}**, n974, σ1^{s}11**/1095**, mb4.6**/320**, 26C-11D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BWN	**Browne**	**0.07**	**314**	*e*Pn	**Pn**	**09 32 37.4**	**+0.1**
BWN				*e*Sn	**Sn**	**09 32 50.4**	**-1.7**
MCK	**McKinley**	**0.44**	**155**	*e*Pn	**Pn**	**09 32 38.2**	**0.0**
MCK				*e*Sn	**Sn**	**09 32 53.7**	**-0.1**
MCK	**McKinley**	**0.44**	**155**	*e*P	**Pn**	**09 32 38.3**	**0.0**
MCK				*e*		09 32 53.7	
NEA	**Nenana**	**0.47**	**15**	*e*Pn	**Pn**	**09 32 38.3**	**-0.1**
NEA				*e*Sn	**Sn**	**09 32 53.6**	**-0.5**
WRH	**Wood River Hil**	**0.65**	**57**	*e*Pn	**Pn**	**09 32 39.3**	**-0.1**
WRH				*e*Sn	**Sn**	**09 32 55.4**	**-0.5**
RND	**Reindeer**	**0.76**	**163**	*e*Pn	**Pn**	**09 32 39.8**	**-0.5**
RND				*e*Sn	**Sn**	**09 32 55.6**	**-1.6**
RND	**Reindeer**	**0.76**	**163**	*e*P	**Pn**	**09 32 39.8**	**-0.5**
RND				*e*		09 32 55.6	
TRF	**Thorofare Moun**	**0.79**	**212**	*e*Pn	**Pn**	**09 32 40.6**	**0.0**
TRF				*e*Sn	**Sn**	**09 32 56.7**	**-1.2**
CCB	**Clear Creek Bu**	**0.85**	**52**	*e*Pn	**Pn**	**09 32 40.5**	**-0.3**
CCB				*e*Sn	**Sn**	**09 32 57.5**	**-0.9**
MDM	**Murphy Dome**	**0.97**	**30**	*e*Pn	**Pn**	**09 32 41.5**	**-0.3**
MDM				*e*Sn	**Sn**	**09 32 59.1**	**-1.1**
TCOL	**CIGO, UAF Yank**	**0.99**	**40**	P	**Pn**	**09 32 41.8**	**-0.2**
	baz=225,SNR=591						
COLA	**College**	**0.99**	**40**	*e*Pn	**Pn**	**09 32 41.6**	**-0.3**
COLA				*e*Sn	**Sn**	**09 32 58.5**	**-1.8**
COLA	**College**	**0.99**	**40**	*e*P	**Pn**	**09 32 41.6**	**-0.3**
COLA				*e*		09 32 58.6	
MLY	**Manley**	**1.09**	**327**	*e*Pn	**Pn**	**09 32 42.8**	**-0.1**
MLY				*e*Sn	**Sn**	**09 33 00.8**	**-1.3**
HDA	**Harding Lake**	**1.09**	**74**	*e*Pn	**Pn**	**09 32 42.4**	**-0.4**
HDA				*e*Sn	**Sn**	**09 33 01.6**	**-0.4**
HDA	**Harding Lake**	**1.09**	**74**	P	**Pn**	**09 32 42.4**	**-0.4**
	baz=260,SNR=1000						
HUR	**Hurricane**	**1.16**	**186**	*e*Pn	**Pn**	**09 32 43.0**	**-0.5**
PS08	**TAPS Pump Stn8**	**1.18**	**68**	*e*Pn	**Pn**	**09 32 43.1**	**-0.5**
IL1	**Eielson Array**	**1.25**	**58**	*e*Pn	**Pn**	**09 32 43.8**	**-0.6**
ILAR	**Eielson Array**	**1.25**	**58**	P	**Pn**	**09 32 43.7**	**-0.7**
	900nm,0.3s,baz=238,slow=9.6						
ILAR				S	**Sn**	**09 33 03.4**	**-1.4**
	186nm,0.3s,baz=239,slow=19,SNR=12						
ILB	**Eielson Array**	**1.25**	**58**	*e*Pn	**Pn**	**09 32 44.0**	**-0.4**
ILB				*e*Sn	**Sn**	**09 33 03.1**	**-1.6**
POKR	**Poker Plat Res**	**1.29**	**39**	P	**Pn**	**09 32 44.8**	**0.0**
	baz=224,SNR=935						
CHUM	**Lake Minchumin**	**1.33**	**261**	*e*Pn	**Pn**	**09 32 45.1**	**0.0**
CHUM				*e*Sn	**Sn**	**09 33 06.4**	**+0.5**
DHY	**Denali Highway**	**1.38**	**139**	*e*Pn	**Pn**	**09 32 45.4**	**-0.4**
DHY				*e*Sn	**Sn**	**09 33 06.3**	**-0.9**
CAST	**Castle Rocks**	**1.40**	**241**	*e*Pn	**Pn**	**09 32 45.8**	**-0.2**
CAST				*e*Sn	**Sn**	**09 33 06.4**	**-1.1**
PS09	**TAPS Pump Stn9**	**1.59**	**95**	*e*Pn	**Pn**	**09 32 47.8**	**-0.2**
PS10	**TAPS Pump St10**	**1.74**	**112**	*e*Pn	**Pn**	**09 32 49.5**	**-0.1**
PS06	**TAPS Pump Stn6**	**1.74**	**355**	*e*Pn	**Pn**	**09 32 49.6**	**0.0**
PS06				*e*Sn	**Sn**	**09 33 13.6**	**-0.4**
PPLA	**Purkeypile**	**1.77**	**227**	*e*Pn	**Pn**	**09 32 50.2**	**+0.1**
PPLA				*e*Sn	**Sn**	**09 33 14.9**	**+0.1**
RIDG	**Independ'e Rid**	**2.03**	**99**	*e*Pn	**Pn**	**09 32 52.5**	**-0.6**
RIDG				*e*Sn	**Sn**	**09 33 18.9**	**-1.1**
PAX	**Paxson**	**2.09**	**122**	*e*Pn	**Pn**	**09 32 53.7**	**-0.1**
PAX				*e*Sn	**Sn**	**09 33 20.6**	**-0.8**
PAX	**Paxson**	**2.09**	**122**	*e*P	**Pn**	**09 32 53.7**	**-0.1**
PAX				*e*		09 33 20.6	
PRP	**Porcupine Dome**	**2.15**	**48**	*e*Pn	**Pn**	**09 32 54.1**	**-0.4**
PRP				*e*Sn	**Sn**	**09 33 21.9**	**-0.9**
SCRK	**Sand Creek**	**2.37**	**91**	*e*Pn	**Pn**	**09 32 56.4**	**-0.7**
SCRK				*e*Sn	**Sn**	**09 33 25.4**	**-2.0**
GHO	**Glory Hole Cre**	**2.37**	**175**	*e*Pn	**Pn**	**09 32 56.9**	**-0.3**
GHO				*e*Sn	**Sn**	**09 33 26.3**	**-1.1**
SML	**Sawmill**	**2.37**	**168**	*e*Pn	**Pn**	**09 32 57.1**	**-0.1**
SML				*e*Sn	**Sn**	**09 33 25.6**	**-1.7**
SML	**Sawmill**	**2.37**	**168**	*e*P	**Pn**	**09 32 57.1**	**-0.1**
SML				*e*		09 33 25.7	
DOT	**Dot Lake**	**2.39**	**99**	*e*Pn	**Pn**	**09 32 56.6**	**-0.7**
DOT				*e*Sn	**Sn**	**09 33 25.8**	**-1.9**
SCM	**Sheep Creek Mo**	**2.48**	**157**	*e*Pn	**Pn**	**09 32 58.3**	**-0.2**
SCM				*e*Sn	**Sn**	**09 33 29.1**	**-0.6**
SCM	**Sheep Creek Mo**	**2.48**	**157**	*e*P	**Pn**	**09 32 58.3**	**-0.2**
SCM				*e*		09 33 29.1	
PMR	**Palmer**	**2.55**	**178**	*e*Pn	**Pn**	**09 32 59.1**	**-0.1**
PMR				*e*Sn	**Sn**	**09 33 29.6**	**-1.4**
PMR	**Palmer**	**2.55**	**178**	*e*P	**Pn**	**09 32 59.1**	**-0.1**
PMR				*e*		09 33 29.6	
HARP	**HAARP**	**2.57**	**130**	*e*Pn	**Pn**	**09 32 59.0**	**-0.5**
HARP				*e*Sn	**Sn**	**09 33 30.1**	**-1.4**
IM3	**Indian Mountai**	**2.63**	**317**	*e*Pn	**Pn**	**09 33 00.2**	**-0.1**
IM3				*e*Sn	**Sn**	**09 33 31.9**	**-1.2**
PS11	**TAPS Pump St11**	**2.71**	**138**	*e*Pn	**Pn**	**09 33 01.0**	**-0.2**
SUA	**Susitna One**	**2.75**	**194**	*e*Pn	**Pn**	**09 33 02.3**	**+0.4**
SUA				*e*Sn	**Sn**	**09 33 33.9**	**-1.9**
PS05	**TAPS Pump Stn5**	**2.75**	**349**	*e*Pn	**Pn**	**09 33 01.9**	**+0.2**
PS05				*e*Sn	**Sn**	**09 33 35.0**	**-0.6**
KNK	**Knik Glacier**	**2.75**	**171**	*e*Pn	**Pn**	**09 33 02.3**	**+0.4**
KNK				*e*Sn	**Sn**	**09 33 34.0**	**-1.8**
MENT	**Mentasta**	**2.79**	**113**	*e*Pn	**Pn**	**09 33 01.9**	**-0.4**
MENT				*e*Sn	**Sn**	**09 33 35.3**	**-1.3**
FYU	**Fort Yukon**	**3.00**	**33**	*e*Pn	**Pn**	**09 33 04.7**	**-0.2**
FYU				*e*Sn	**Sn**	**09 33 39.3**	**-1.9**
RC01	**Rabbit Creek A**	**3.05**	**183**	*e*Pn	**Pn**	**09 33 05.8**	**+0.1**
RC01				*e*Sn	**Sn**	**09 33 41.2**	**-1.3**
KLU	**Klutina**	**3.08**	**148**	*e*Pn	**Pn**	**09 33 06.1**	**+0.1**
KLU				*e*Sn	**Sn**	**09 33 38.8**	**-4.4**
COLD	**Coldfoot**	**3.13**	**354**	*e*Pn	**Pn**	**09 33 07.5**	**+0.9**
COLD				*e*Sn	**Sn**	**09 33 43.6**	**-0.8**
TT01	**Tatalina**	**3.23**	**251**	*e*Pn	**Pn**	**09 33 07.5**	**-0.3**
PWL	**Port Wells**	**3.31**	**171**	*e*Pn	**Pn**	**09 33 08.5**	**-0.5**
GCSA	**Galena City Sc**	**3.32**	**284**	*e*Pn	**Pn**	**09 33 09.4**	**+0.5**
JPK	**Jack Peak**	**3.34**	**156**	*e*Pn	**Pn**	**09 33 08.0**	**-1.3**
VMT	**TAPS Tl Valdez**	**3.35**	**154**	*e*Pn	**Pn**	**09 33 09.3**	**-0.1**
GLI	**Glacier Island**	**3.42**	**161**	*e*Pn	**Pn**	**09 33 09.9**	**-0.4**
GLI				*e*Sn	**Sn**	**09 33 49.2**	**-1.8**
DIV	**Divide**	**3.43**	**150**	*e*Pn	**Pn**	**09 33 09.7**	**-0.9**
DIV				*e*Sn	**Sn**	**09 33 49.4**	**-2.0**
NKA	**Nikishka**	**3.51**	**195**	*e*Pn	**Pn**	**09 33 13.0**	**+1.6**
BCA3	**Beaver Creek A**	**3.55**	**104**	*e*Pn	**Pn**	**09 33 11.0**	**-1.0**
EGAK	**Eagle**	**3.61**	**76**	*e*Pn	**Pn**	**09 33 11.7**	**-1.0**
EGAK				*e*Sn	**Sn**	**09 33 54.0**	**-1.3**
SLKM	**Skilak Lake**	**3.65**	**187**	*e*Pn	**Pn**	**09 33 13.0**	**-0.4**
SLKM	**Skilak Lake**	**3.65**	**187**	*e*P	**Pn**	**09 33 13.0**	**-0.4**
BM3	**Burnt Mountain**	**3.84**	**28**	*e*Pn	**Pn**	**09 33 15.7**	**-0.2**
RDN	**Redoubt North**	**3.96**	**205**	*e*Pn	**Pn**	**09 33 16.9**	**-0.5**
EYAK	**Cordova Ski Ar**	**3.96**	**153**	*e*Pn	**Pn**	**09 33 16.7**	**-0.7**
EYAK				*e*Sn	**Sn**	**09 34 02.6**	**-1.0**
HIN	**Hinchinbrook I**	**3.97**	**159**	*e*Pn	**Pn**	**09 33 16.7**	**-0.9**
RSO	**Redoubt South**	**4.00**	**205**	*e*Pn	**Pn**	**09 33 17.9**	**-0.2**
MCARA	**McCarthy VSAT**	**4.01**	**131**	*e*Pn	**Pn**	**09 33 18.5**	**+0.6**
SEW	**Seward**	**4.04**	**181**	*e*Pn	**Pn**	**09 33 18.0**	**-0.3**
SEW				*e*Sn	**Sn**	**09 34 03.6**	**-1.7**
SVW2	**Sparrevohn**	**4.18**	**226**	*e*Pn	**Pn**	**09 33 19.6**	**-0.7**
PTPK	**Patty Peak**	**4.33**	**130**	*e*Pn	**Pn**	**09 33 22.5**	**0.0**
DAWY	**Dawson**	**4.37**	**86**	*e*Pn	**Pn**	**09 33 21.9**	**-0.9**
DAWY				*e*Sn	**Sn**	**09 34 11.9**	**-1.4**
BRLK	**Bradley Lake**	**4.44**	**190**	*e*Pn	**Pn**	**09 33 23.6**	**-0.1**
ILW	**Iliamna West**	**4.45**	**205**	*e*Pn	**Pn**	**09 33 24.1**	**+0.1**
BALM	**Baldy**	**4.49**	**131**	*e*Pn	**Pn**	**09 33 23.9**	**-0.5**
BALM				*e*Sn	**Sn**	**09 34 15.4**	**-0.7**
BALM	**Baldy**	**4.49**	**131**	*e*P	**Pn**	**09 33 23.9**	**-0.5**
BALM				*e*		09 34 15.4	
HMT	**Hamilton**	**4.49**	**146**	*e*Pn	**Pn**	**09 33 24.5**	**+0.2**
HMT				*e*Sn	**Sn**	**09 34 14.8**	**-1.2**
TOLK	**Toolik Lake Re**	**4.54**	**359**	*e*Pn	**Pn**	**09 33 26.8**	**+1.9**
TOLK	**Toolik Lake Re**	**4.54**	**359**	P	**Pn**	**09 33 26.5**	**+1.6**
	baz=179,SNR=106						
TGL	**Tana Glacier**	**4.54**	**135**	*e*Pn	**Pn**	**09 33 24.6**	**-0.5**
TGL				*e*Sn	**Sn**	**09 34 17.5**	**+0.1**
KIAG	**Kiagna River**	**4.56**	**132**	*e*Pn	**Pn**	**09 33 24.5**	**-1.0**
HOM	**Homer**	**4.61**	**195**	*e*Pn	**Pn**	**09 33 26.1**	**+0.2**
HOM				*e*Sn	**Sn**	**09 34 18.3**	**-0.6**
NICHA	**Nichawak Mount**	**4.65**	**145**	*e*Pn	**Pn**	**09 33 26.4**	**0.0**
SUCK	**Suckling Hills**	**4.84**	**145**	*e*Pn	**Pn**	**09 33 28.8**	**-0.2**
CTGM	**Chitina Glacie**	**4.88**	**127**	*e*Pn	**Pn**	**09 33 29.5**	**-0.2**
BGLC	**Bering Glacier**	**4.93**	**142**	*e*Pn	**Pn**	**09 33 30.2**	**+0.2**
KULT	**Kultieth River**	**4.98**	**138**	*e*Pn	**Pn**	**09 33 30.4**	**-0.5**
RKAV	**Rock Avalanche**	**5.36**	**132**	*e*Pn	**Pn**	**09 33 34.9**	**-1.2**
SAMH	**Samovar Hills**	**5.68**	**131**	*e*Pn	**Pn**	**09 33 39.4**	**-0.8**
EPYK	**Eagle Plains**	**5.76**	**61**	*e*Pn	**Pn**	**09 33 39.8**	**-1.4**
EPYK	**Eagle Plains**	**5.76**	**61**	P	**Pn**	**09 33 40.3**	**-0.9**
	baz=254,SNR=48						
PCA	**Pinnacle**	**5.88**	**129**	*e*Pn	**Pn**	**09 33 42.2**	**-0.6**
HYT	**Haines Junctio**	**6.41**	**116**	*e*Pn	**Pn**	**09 33 50.3**	**+0.3**
PNL	**Peninsula**	**6.49**	**129**	*e*Pn	**Pn**	**09 33 49.8**	**-1.2**
KDAK	**Kodiak Island**	**6.55**	**195**	*e*Pn	**Pn**	**09 33 51.5**	**-0.2**
KDAK	**Kodiak Island**	**6.55**	**195**	P	**Pn**	**09 33 51.2**	**-0.6**
	3.0nm,0.3s,baz=54,slow=7.0,SNR=27						
KDAK				S	**Sn**	**09 34 58.7**	**-6.5**
	22nm,0.3s,baz=196,slow=15,SNR=7.0						
RDOG	**Red Dog Mine**	**6.76**	**312**	*e*Pn	**Pn**	**09 33 54.7**	**+0.2**
ANM	**Nome**	**6.97**	**281**	*e*Pn	**Pn**	**09 33 57.5**	**+0.3**
ANM	**Nome**	**6.97**	**281**	*e*P	**Pn**	**09 33 57.5**	**+0.3**
OHAK	**Old Harbor**	**7.19**	**197**	*e*Pn	**Pn**	**09 34 01.1**	**+0.9**
WHY	**Whitehorse**	**7.56**	**111**	*e*Pn	**Pn**	**09 34 05.9**	**+0.5**
INK	**Inuvik**	**7.64**	**50**	*e*Pn	**Pn**	**09 34 07.0**	**+0.8**
INK	**Inuvik**	**7.64**	**50**	*e*P	**Pn**	**09 34 07.0**	**+0.8**
INK	**Inuvik**	**7.64**	**50**	P	**Pn**	**09 34 04.8**	**-1.4**
	5.4nm,0.3s,baz=240,slow=15,SNR=193						
SKAG	**Skagway**	**8.12**	**119**	*e*Pn	**Pn**	**09 34 13.0**	**+0.3**
BESE	**Bessie Mountai**	**8.90**	**122**	*e*Pn	**Pn**	**09 34 22.2**	**-1.0**
JIS	**Juneau Island**	**9.29**	**122**	*e*Pn	**Pn**	**09 34 27.6**	**-0.7**
GAMB	**Gambell**	**9.82**	**278**	*e*Pn	**Pn**	**09 34 36.8**	**+1.5**
SIT	**Sitka**	**9.87**	**129**	*e*Pn	**Pn**	**09 34 36.2**	**+0.2**
SIT	**Sitka**	**9.87**	**129**	*e*P	**Pn**	**09 34 36.2**	**+0.2**
SDPT	**Sand Point**	**10.42**	**218**	*e*Pn	**Pn**	**09 34 44.8**	**+1.5**
DLBC	**Dease Lake**	**10.88**	**113**	*e*Pn	**Pn**	**09 34 49.4**	**0.0**
DLBC	**Dease Lake**	**10.88**	**113**	P	**Pn**	**09 34 49.1**	**-0.3**
	1.4nm,0.3s,baz=278,slow=6.1,SNR=30						
WRAK	**Wrangell Islan**	**11.41**	**125**	*e*Pn	**Pn**	**09 34 56.2**	**-0.1**
CRAG	**Craig**	**11.88**	**129**	*e*Pn	**Pn**	**09 35 03.0**	**+0.5**
SPIA	**Saint Paul Isl**	**12.34**	**245**	*e*Pn	**Pn**	**09 35 08.1**	**-0.3**
UNV	**Unalaska Valle**	**13.52**	**228**	*e*Pn	**Pn**	**09 35 22.0**	**-1.5**
DIB	**Dawson Inlet,**	**13.98**	**134**	*e*Pn	**Pn**	**09 35 29.4**	**0.0**
YKW3	**Yellowknife Ar**	**15.55**	**80**	*e*Pn	**Pn**	**09 35 47.5**	**-1.5**
	112nm,1.5s						
YKA	**Yellowknife Ar**	**15.58**	**80**	P	**Pn**	**09 35 48.0**	**-1.3**
	2.4nm,0.3s,baz=284,slow=11,SNR=124						
YKA				S	**S**	**09 38 44.4**	**-0.7**
	baz=289,slow=19,SNR=10						
YKA				PcP	**PcP**	**09 40 39.1**	**-1.6**
	0.3nm,0.3s,baz=301,slow=1.6,SNR=6.1						
YKA				ScP	**ScP**	**09 44 00.0**	**-1.0**
	0.1nm,0.3s,baz=290,slow=2.1,SNR=5.0						
YKB5	**Yellowknife Ar**	**15.58**	**80**	*e*Pn	**Pn**	**09 35 46.3**	**-3.0**
BBB	**Bella Bella**	**16.29**	**127**	P	**Pn**	**09 35 58.6**	**+0.6**
	0.8nm,0.3s,baz=321,slow=10,SNR=3.6						
BILL	**Bilibino**	**18.09**	**302**	*e*P	**Pn**	**09 36 19.1**	**-0.5**
	41nm,1.4s						
BILL	**Bilibino**	**18.09**	**302**	*ce*P	**Pn**	**09 36 18.9**	**-0.6**
BILL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LLLB	**Lillooet**	**19.84**	**120**	*e*P	**P**	**09 36 39.0**	**+1.8**
	comp=Z,8.8nm,0.8s						
PGC	**Sidney**	**20.88**	**126**	*e*P	**P**	**09 36 49.6**	**+1.4**
	comp=Z,22nm,0.8s						
RES	**Resolute Bay**	**20.92**	**37**	*e*P	**P**	**09 36 47.9**	**-0.5**
	comp=Z,9.3nm,0.6s						
RES	**Resolute Bay**	**20.92**	**37**	P	**P**	**09 36 47.3**	**-1.2**
	comp=Z,4.9nm,0.3s,baz=262,slow=11,SNR=47						
RES				S	**S**	**09 40 30.4**	**-2.7**
	comp=Z,3.3nm,0.8s,baz=315,slow=24,SNR=6.3						
A04D	**Lummi Island**	**21.09**	**124**	P	**P**	**09 36 51.9**	**+1.4**
	baz=327						
B05A	**Bryant**	**21.69**	**124**	P	**P**	**09 36 57.6**	**+0.6**
	baz=327						
NLWA	**Neilton Lookou**	**21.81**	**128**	*e*P	**P**	**09 37 00.1**	**+1.9**
	comp=Z,54nm,1.4s						
D05A	**Enumclaw**	**22.64**	**125**	*e*P	**P**	**09 37 09.7**	**+3.3**
	comp=Z,50nm,1.4s						
B08A	**Colville Reser**	**22.64**	**120**	*e*P	**P**	**09 37 08.7**	**+2.2**
	comp=Z,8.0nm,0.9s						
E04D	**Cinebar**	**22.98**	**127**	P	**P**	**09 37 11.2**	**+1.6**
	baz=330						
LON	**Longmire**	**23.08**	**126**	*e*P	**P**	**09 37 12.8**	**+2.3**
	comp=Z,15nm,1.4s						
LON	**Longmire**	**23.08**	**126**	*e*P	**P**	**09 37 12.8**	**+2.3**
LON				pmax	pmax		
	comp=Z,15nm,1.4s						
C09A	**Chrisman Ranch**	**23.51**	**119**	*e*P	**P**	**09 37 16.9**	**+2.5**
	comp=Z,31nm,1.6s						
NEW	**Newport**	**23.57**	**117**	*e*P	**P**	**09 37 15.9**	**+0.9**
	comp=Z,42nm,1.6s						
NEW	**Newport**	**23.57**	**117**	P	**P**	**09 37 16.3**	**+1.3**
	baz=324,SNR=7.0						
NEW	**Newport**	**23.57**	**117**	P	**P**	**09 37 16.3**	**+1.3**
	comp=Z,4.2nm,0.7s,baz=311,slow=10,SNR=8.0						
NEW				PcP	**PcP**	**09 40 56.7**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=9.5,slow=6.1,SNR=3.1						
D08A	**Wollman Farm,**	**23.88**	**121**	*e*P	**P**	**09 37 18.9**	**+1.2**
	comp=Z,39nm,1.6s						
F05D	**White Salmon**	**23.95**	**126**	P	**P**	**09 37 20.2**	**+1.8**
	baz=330						
WALA	**Waterton Lakes**	**24.22**	**112**	*e*P	**P**	**09 37 22.4**	**+1.4**
	comp=Z,46nm,1.4s						
H04D	**Lebanon**	**24.70**	**130**	P	**P**	**09 37 27.3**	**+2.1**
	baz=332						
H04A	**Detroit Lake**	**24.74**	**129**	*e*P	**P**	**09 37 26.2**	**+0.6**
	comp=Z,18nm,1.1s						
SEY	**Seymchan**	**25.22**	**294**	P	**P**	**09 37 28.9**	**-0.8**
	comp=Z,15nm,0.5s,baz=78,slow=7.1,SNR=137						
SEY				PcP	**PcP**	**09 40 58.1**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=163,slow=19,SNR=3.1						
FFC	**Flin Flon**	**25.27**	**89**	*e*P	**P**	**09 37 31.3**	**+1.1**
	comp=Z,29nm,1.4s						
FFC	**Flin Flon**	**25.27**	**89**	*e*P	**P**	**09 37 31.3**	**+1.1**
FFC				pmax	pmax		
	comp=Z,29nm,1.4s						
I05D	**Terrebonne, OR**	**25.34**	**128**	P	**P**	**09 37 32.6**	**+1.6**
	baz=331						
F10A	**Beach Ranch, E**	**25.43**	**120**	*e*P	**P**	**09 37 32.3**	**+0.5**
	comp=Z,5.4nm,0.6s						
I04A	**Tendick Farm,**	**25.45**	**130**	P	**P**	**09 37 33.2**	**+1.1**
	baz=333						
PINE	**Pine Mountain**	**25.95**	**128**	*e*P	**P**	**09 37 38.4**	**+1.7**
	comp=Z,3.9nm,0.8s						
MSO	**Missoula**	**26.00**	**115**	*e*P	**P**	**09 37 38.5**	**+1.5**
	comp=Z,9.3nm,1.3s						
MSO	**Missoula**	**26.00**	**115**	P	**P**	**09 37 36.7**	**-0.3**
	baz=325						
J04D	**Umpqua Nationa**	**26.04**	**130**	P	**P**	**09 37 39.2**	**+1.6**
	baz=333						
FCC	**Fort Churchill**	**26.21**	**76**	*e*P	**P**	**09 37 39.2**	**+0.6**
	comp=Z,19nm,1.6s						
FCC	**Fort Churchill**	**26.21**	**76**	*e*P	**P**	**09 37 39.2**	**+0.6**
FCC				pmax	pmax		
	comp=Z,19nm,1.6s						
J05D	**Fort Rock, OR**	**26.30**	**129**	P	**P**	**09 37 41.7**	**+1.9**
	baz=332						
HUMO	**Hull Mountain**	**26.33**	**132**	*e*P	**P**	**09 37 38.5**	**-1.4**
	comp=Z,6.1nm,0.8s						
EGMT	**Eagleton**	**26.75**	**108**	*e*P	**P**	**09 37 43.7**	**0.0**
	comp=Z,19nm,1.3s						
EGMT				*e*PcP	**PcP**	**09 41 03.5**	**+0.7**
EGMT	**Eagleton**	**26.75**	**108**	P	**P**	**09 37 44.8**	**+1.1**
	baz=322,SNR=7.9						
L04D	**Klamath Falls**	**26.89**	**132**	P	**P**	**09 37 46.7**	**+1.6**
	baz=334						
HRY	**Holter Researc**	**26.94**	**112**	*e*P	**P**	**09 37 47.1**	**+1.6**
TULEG	**Thule**	**27.06**	**31**	*e*P	**P**	**09 37 46.1**	**0.0**
	comp=Z,8.1nm,1.3s						
YBH	**Yreka Blue Hor**	**27.20**	**133**	*e*P	**P**	**09 37 50.1**	**+2.4**
	comp=Z,7.2nm,1.5s						
YBH	**Yreka Blue Hor**	**27.20**	**133**	P	**P**	**09 37 50.2**	**+2.4**
	comp=Z,1.3nm,0.7s,baz=32,slow=3.6,SNR=6.1						
YBH				PcP	**PcP**	**09 41 03.2**	**-0.8**
	comp=Z,2.4nm,0.9s,baz=346,slow=4.2,SNR=2.8						
J08A	**Circle Bar Ran**	**27.20**	**125**	*e*P	**P**	**09 37 50.5**	**+2.7**
	comp=Z,3.7nm,0.6s						
M04C	**Macdoel**	**27.43**	**131**	P	**P**	**09 37 52.4**	**+2.4**
	baz=334						
M02C	**Callahan**	**27.46**	**133**	P	**P**	**09 37 52.5**	**+2.4**
	baz=335						
MA2	**Magadan**	**27.68**	**289**	*e*P	**P**	**09 37 52.3**	**+0.5**
	comp=Z,17nm,0.8s						
MA2	**Magadan**	**27.68**	**289**	*c i*P	**P**	**09 37 52.2**	**+0.5**
MA2				pmax	pmax		
	comp=Z,18nm,0.8s						
MA2	**Magadan**	**27.68**	**289**	P	**P**	**09 37 51.6**	**-0.2**
	comp=Z,12nm,0.7s,baz=48,slow=10,SNR=23						
DLMT	**Dillon**	**27.73**	**115**	*e*P	**P**	**09 37 54.9**	**+2.3**
	comp=Z,5.7nm,1.4s						
N02D	**Trinity Center**	**27.88**	**133**	P	**P**	**09 37 56.5**	**+2.6**
	baz=335						
BOZ	**Bozeman (W)**	**27.93**	**113**	*e*P	**P**	**09 37 56.6**	**+2.4**
	comp=Z,5.5nm,1.4s						
BOZ				*e*PcP	**PcP**	**09 41 06.4**	**+0.6**
BOZ	**Bozeman (W)**	**27.93**	**113**	*e*P	**P**	**09 37 56.7**	**+2.4**
BOZ				*e*		09 41 06.4	
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
WVOR	**Wild Horse Val**	**27.95**	**126**	*e*P	**P**	**09 37 56.8**	**+2.3**
	comp=Z,3.5nm,1.1s						
WVOR	**Wild Horse Val**	**27.95**	**126**	*e*P	**P**	**09 37 56.8**	**+2.3**
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MCMT	**McKenzie Canyo**	**28.08**	**116**	*e*P	**P**	**09 37 58.4**	**+2.6**
KMRM	**Mail Ridge**	**28.25**	**136**	*e*P	**P**	**09 37 59.9**	**+2.8**
	comp=Z,78nm,1.5s						
WDC	**Whiskeytown Da**	**28.29**	**134**	*e*P	**P**	**09 38 00.2**	**+2.8**
	comp=Z,14nm,1.4s						
WDC	**Whiskeytown Da**	**28.29**	**134**	*e*P	**P**	**09 38 00.2**	**+2.8**
WDC				pmax	pmax		
	comp=Z,14nm,1.4s						
HLID	**Hailey**	**28.53**	**119**	*e*P	**P**	**09 38 01.8**	**+2.0**
	comp=Z,3.8nm,0.8s						
HLID				*e*PcP	**PcP**	**09 41 08.4**	**+1.1**
HLID	**Hailey**	**28.53**	**119**	P	**P**	**09 38 01.6**	**+1.9**
	baz=328,SNR=6.3						
O03E	**Paynes Creek**	**28.79**	**133**	P	**P**	**09 38 02.5**	**+0.6**
	baz=335						
PEA1	**Petropavlovsk-**	**28.79**	**273**	*e*P	**P**	**09 38 01.6**	**-0.2**
PEA1				*e*PcP	**PcP**	**09 41 06.9**	**-0.7**
PEA0B	**Petropavlovsk-**	**28.80**	**273**	*e*P	**P**	**09 38 02.5**	**+0.8**
	comp=Z,29nm,1.3s						
PETK	**Petropavlovsk-**	**28.80**	**273**	*e*P	**P**	**09 38 02.4**	**+0.6**
PETK	**Petropavlovsk-**	**28.80**	**273**	P	**P**	**09 38 01.6**	**-0.2**
	comp=Z,2.8nm,0.4s,baz=65,slow=9.8,SNR=6.3						
PETK				PcP	**PcP**	**09 41 06.9**	**-0.7**
	comp=Z,3.9nm,1.1s,baz=94,slow=4.0,SNR=4.1						
PETK				LR	LR	09 49 48.4	
	comp=Z,33nm,20.4s,baz=30,slow=37						
YHH	**Holmes Hill**	**28.91**	**113**	*e*P	**P**	**09 38 06.1**	**+2.9**
	comp=Z,5.2nm,1.0s						
YMR	**Madison River**	**28.96**	**114**	*e*P	**P**	**09 38 07.1**	**+3.6**
	comp=Z,13nm,1.2s						
LKWY	**Lake**	**29.27**	**113**	*e*P	**P**	**09 38 06.5**	**+0.1**
	comp=Z,8.2nm,1.3s						
LKWY	**Lake**	**29.27**	**113**	*e*P	**P**	**09 38 06.5**	**+0.1**
LKWY				pmax	pmax		
	comp=Z,8.0nm,1.3s						
RLMT	**Red Lodge**	**29.28**	**111**	*e*P	**P**	**09 38 08.6**	**+2.3**
	comp=Z,6.7nm,1.1s						
RLMT	**Red Lodge**	**29.28**	**111**	P	**P**	**09 38 07.6**	**+1.3**
	baz=325						
LAO	**LASA Array**	**29.28**	**106**	*e*P	**P**	**09 38 08.1**	**+1.9**
	comp=Z,20nm,1.4s						
LAO	**LASA Array**	**29.28**	**106**	P	**P**	**09 38 07.5**	**+1.3**
	baz=322						
ORV	**Oroville**	**29.56**	**133**	*e*P	**P**	**09 38 10.5**	**+1.9**
	comp=Z,6.8nm,1.4s						
ORV	**Oroville**	**29.56**	**133**	*e*P	**P**	**09 38 10.5**	**+1.9**
ORV				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HOPS	**Hopland Field**	**29.58**	**136**	*e*P	**P**	**09 38 11.2**	**+2.4**
	comp=Z,111nm,1.6s						
BEKR	**Beckworth**	**29.65**	**131**	*e*P	**P**	**09 38 11.0**	**+1.4**
	comp=Z,4.1nm,0.6s						
FXWY	**Fox Creek**	**29.79**	**115**	*e*P	**P**	**09 38 12.5**	**+1.6**
	comp=Z,6.6nm,1.4s						
FXWY				*e*PcP	**PcP**	**09 41 11.5**	**+0.9**
TPAW	**Teton Pass**	**29.95**	**115**	*e*P	**P**	**09 38 14.5**	**+2.2**
	comp=Z,5.2nm,1.0s						
TPAW				*e*PcP	**PcP**	**09 41 11.1**	**0.0**
LOHW	**Long Hollow**	**29.98**	**115**	*e*P	**P**	**09 38 15.4**	**+2.8**
	comp=Z,4.7nm,0.8s						
LOHW				*e*PcP	**PcP**	**09 41 12.0**	**+0.9**
SNOW	**Snow King Moun**	**30.05**	**115**	*e*P	**P**	**09 38 16.1**	**+2.9**
	comp=Z,4.1nm,0.6s						
REDW	**Red Top Meadow**	**30.09**	**115**	*e*P	**P**	**09 38 16.4**	**+2.8**
	comp=Z,8.9nm,1.3s						
REDW				*e*PcP	**PcP**	**09 41 12.1**	**+0.7**
PAHR	**Pah Rah Range**	**30.12**	**130**	*e*P	**P**	**09 38 15.5**	**+1.8**
	comp=Z,2.2nm,0.6s						
AFDM	**Forest Hills D**	**30.28**	**133**	*e*P	**P**	**09 38 16.9**	**+1.9**

	comp=Z,2.8nm,0.7s						
VCNR	Virginia City	30.40	131	*e*P	P	09 38 19.0	+2.8
	comp=Z,3.7nm,0.7s						
PNTR	Pine Nut	30.60	131	*e*P	P	09 38 20.3	+2.3
	comp=Z,7.8nm,0.6s						
ELK	Elko	30.66	123	P	P	09 38 21.0	+2.4
	comp=Z,1.9nm,0.9s,baz=336,slow=10,SNR=7.7						
ELK				PcP	PcP	09 41 12.9	0.0
	comp=Z,1.1nm,0.5s,baz=45,slow=2.9,SNR=7.6						
HVU	Hansel Valley	30.68	119	*e*P	P	09 38 19.6	+0.9
	comp=Z,5.2nm,1.1s						
HVU				*e*PcP	PcP	09 41 13.9	+1.1
HVU	Hansel Valley	30.68	119	*e*P	P	09 38 19.6	+0.9
HVU				*e*		09 41 14.0	
HVU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
YERR	Yerington	30.81	130	*e*P	P	09 38 22.3	+2.4
	comp=Z,3.7nm,0.6s						
ULM	Lac du Bonnet	31.06	91	*e*P	P	09 38 23.0	+1.3
	comp=Z,10nm,1.2s						
ULM	Lac du Bonnet	31.06	91	P	P	09 38 22.0	+0.3
	comp=Z,4.1nm,0.6s,baz=304,slow=7.7,SNR=12						
ULM				PcP	PcP	09 41 13.2	-0.3
	comp=Z,2.5nm,0.4s,baz=299,slow=2.8,SNR=5.6						
BW06	Boulder Array	31.11	114	*e*P	P	09 38 24.1	+1.6
	comp=Z,6.3nm,1.0s						
BW06				*e*PcP	PcP	09 41 13.9	-0.2
BW06	Boulder Array	31.11	114	P	P	09 38 23.7	+1.2
	baz=327,SNR=7.1						
PD31	Pinedale Array	31.11	114	*e*P	P	09 38 24.0	+1.5
PD31				*e*PcP	PcP	09 41 14.0	-0.1
PDAR	Pinedale Array	31.11	114	*e*P	P	09 38 24.6	+2.1
PDAR				*e*PcP	PcP	09 41 13.9	-0.1
PDAR	Pinedale Array	31.11	114	P	P	09 38 24.2	+1.7
	comp=Z,4.3nm,0.8s,baz=330,slow=4.7,SNR=33						
PDAR				PcP	PcP	09 41 13.8	-0.2
	comp=Z,4.0nm,0.5s,baz=117,slow=0.4,SNR=21						
KVN	Kaiserville	31.14	129	*e*P	P	09 38 25.5	+2.8
	comp=Z,2.6nm,0.6s						
WAKR	Walker	31.18	131	*e*P	P	09 38 25.6	+2.5
	comp=Z,5.5nm,0.6s						
CMB	Columbia Colle	31.30	133	*e*P	P	09 38 24.7	+0.7
	comp=Z,2.8nm,0.6s						
CMB	Columbia Colle	31.30	133	*e*P	P	09 38 24.7	+0.7
CMB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BGU	Big Grassy Mou	31.32	120	*e*P	P	09 38 26.8	+2.5
	comp=Z,6.2nm,1.3s						
RYN	Ryan	31.38	130	*e*P	P	09 38 28.0	+3.2
	comp=Z,3.8nm,0.5s						
NV01	Mina Array Sit	31.63	129	*e*P	P	09 38 29.8	+2.7
NV01				*e*PcP	PcP	09 41 16.4	+0.9
NVAR	Mina Array Bea	31.63	129	P	P	09 38 29.8	+2.7
	comp=Z,7.6nm,0.6s,baz=324,slow=8.1,SNR=39						
NVAR				PcP	PcP	09 41 15.9	+0.4
	comp=Z,1.9nm,0.5s,baz=298,slow=2.9,SNR=8.3						
NV11	Mina Array Sit	31.68	129	*e*P	P	09 38 29.4	+2.0
	comp=Z,0.4nm,0.5s						
TCUT	Toone Canyon	31.78	118	*e*P	P	09 38 30.9	+2.5
	comp=Z,8.0nm,0.7s						
TCUT				*e*PcP	PcP	09 41 16.9	+1.0
DUG	Dugway, Tooele	32.04	121	*e*P	P	09 38 33.3	+2.7
	comp=Z,3.0nm,0.7s						
DUG	Dugway, Tooele	32.04	121	*e*P	P	09 38 33.3	+2.7
DUG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DUG	Dugway, Tooele	32.04	121	P	P	09 38 32.2	+1.6
	baz=331						
MDPB	Devils Postpil	32.09	131	*e*P	P	09 38 33.3	+2.1
	comp=Z,6.5nm,0.5s						
OMMB	Old Mammoth Mi	32.13	131	*e*P	P	09 38 34.2	+2.6
	comp=Z,5.2nm,0.6s						
RSSD	Black Hills	32.26	106	*e*P	P	09 38 34.3	+1.7
	comp=Z,13nm,1.4s						
RSSD				*e*PcP	PcP	09 41 17.4	+0.3
RSSD	Black Hills	32.26	106	*e*P	P	09 38 34.3	+1.7
RSSD				*e*		09 41 17.4	
RSSD				pmax	pmax		
	comp=Z,13nm,1.4s						
RSSD	Black Hills	32.26	106	P	P	09 38 33.5	+1.0
	baz=324						
K22A	Casper	32.44	111	*e*P	P	09 38 33.7	-0.4
	comp=Z,10nm,1.5s						
AGMN	Agassiz Nation	32.52	93	*e*P	P	09 38 35.5	+1.0
	comp=Z,4.2nm,0.8s						
AGMN	Agassiz Nation	32.52	93	P	P	09 38 35.2	+0.7
	baz=319						
NLU	North Lily Min	32.53	120	*e*P	P	09 38 34.9	0.0
	comp=Z,7.4nm,1.2s						
MPU	Maple Canyon	32.64	119	*e*P	P	09 38 36.5	+0.6
	comp=Z,3.6nm,1.0s						
R11A	Troy Canyon, C	32.65	126	*e*P	P	09 38 37.6	+1.6
	comp=Z,3.4nm,0.6s						
R11A				*e*PcP	PcP	09 41 19.3	+1.0
R11A	Troy Canyon, C	32.65	126	P	P	09 38 37.2	+1.3
	baz=333,SNR=8.3						
RWWY	Rawlins	32.96	113	*e*P	P	09 38 36.7	-2.0
	comp=Z,10nm,1.3s						
RWWY				*e*PcP	PcP	09 41 18.9	-0.3
PSUT	Pine Spring	33.11	124	*e*P	P	09 38 42.4	+2.4
	comp=Z,6.6nm,1.0s						
PSUT				*e*PcP	PcP	09 41 20.9	+1.3
TMUT	Trail Mountain	33.43	120	*e*P	P	09 38 43.5	+0.6
	comp=Z,3.1nm,0.6s						
TMUT				*e*PcP	PcP	09 41 21.6	+1.0
PAGB	Antelope Grade	33.45	134	*e*P	P	09 38 45.2	+2.4
	comp=Z,11nm,0.6s						
CWC	Cottonwood Cre	33.51	131	P	P	09 38 45.4	+2.0
	baz=336						
TPNV	Topopah Spring	33.67	128	P	P	09 38 46.2	+1.4
	baz=334						
VES	Vestal, Richgr	33.72	132	P	P	09 38 47.0	+1.9
	baz=337						
MSU	Marysvale	33.75	121	*e*P	P	09 38 47.5	+2.0
MSU	Marysvale	33.75	121	*e*P	P	09 38 47.5	+2.0
Q16A	Castle Valley	33.77	120	*e*P	P	09 38 47.6	+1.8
	comp=Z,16nm,1.2s						
DAC	Darwin (Calif)	33.82	130	*e*P	P	09 38 47.9	+1.8
	comp=Z,4.7nm,0.6s						
SRU	San Rafael Swe	33.85	119	*e*P	P	09 38 47.8	+1.4
	comp=Z,26nm,1.5s						
SRU	San Rafael Swe	33.85	119	*e*P	P	09 38 47.8	+1.4
SRU				pmax	pmax		
	comp=Z,26nm,1.5s						
FURC	Furnace Creek,	33.89	129	P	P	09 38 48.0	+1.6
	baz=335						
SMMC	Simmler	33.91	134	P	P	09 38 48.0	+1.2
	baz=337						
MPMC	Manual Prospec	34.05	130	P	P	09 38 49.8	+1.6
	baz=336						
ISA	Isabella, Lake	34.08	132	*e*P	P	09 38 50.7	+2.4
	comp=Z,2.2nm,0.7s						
ISA	Isabella, Lake	34.08	132	*e*P	P	09 38 50.7	+2.4
ISA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ISA	Isabella, Lake	34.08	132	P	P	09 38 49.9	+1.6
	baz=336						
N23A	Red Feather La	34.14	112	*e*P	P	09 38 51.5	+2.5
	comp=Z,15nm,1.5s						
N23A	Red Feather La	34.14	112	P	P	09 38 50.6	+1.6
	baz=328						
CCUT	Cedar City	34.16	124	*e*P	P	09 38 51.9	+2.8
	comp=Z,3.7nm,0.8s						
MTPU	Mount Pierson	34.16	122	*e*P	P	09 38 52.4	+3.1
	comp=Z,7.6nm,0.9s						
MTPU				*e*PcP	PcP	09 41 24.3	+1.5
SZCU	Shurtz Canyon	34.22	123	*e*P	P	09 38 52.0	+2.4
	comp=Z,6.3nm,0.7s						
SZCU				*e*PcP	PcP	09 41 24.5	+1.7
SHPR	Sheep Range	34.45	127	*e*P	P	09 38 53.8	+2.3
	comp=Z,2.5nm,0.9s						
LRMC	Laurel Mtn Rad	34.51	131	P	P	09 38 53.8	+1.7
	baz=336,SNR=10.0						
LCMT	Little Creek M	34.68	124	*e*P	P	09 38 56.3	+2.8
	comp=Z,5.2nm,0.8s						
LCMT				*e*PcP	PcP	09 41 25.6	+1.6
EYMN	Ely	34.70	90	*e*P	P	09 38 54.4	+1.0
	comp=Z,8.9nm,0.5s						
EYMN	Ely	34.70	90	P	P	09 38 54.0	+0.6
	baz=319,SNR=6.9						
KNB	Kanab	34.83	123	*e*P	P	09 38 56.9	+2.1
	comp=Z,6.5nm,0.8s						
KNB	Kanab	34.83	123	*e*P	P	09 38 56.9	+2.1
KNB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PV09	Paradox Valley	34.92	118	*e*P	P	09 38 56.3	+0.6
PV21	Cone Mtn., Par	34.93	117	*e*P	P	09 38 58.3	+2.6
	comp=Z,5.3nm,0.7s						
GSC	Goldstone, Bar	34.97	130	*e*P	P	09 38 57.9	+2.0
	comp=Z,7.5nm,0.6s						
GSC	Goldstone, Bar	34.97	130	*e*P	P	09 38 57.9	+2.0
GSC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GSC	Goldstone, Bar	34.97	130	P	P	09 38 58.1	+2.2
	baz=336,SNR=7.9						
PV23	Carpenter Ridg	35.01	118	*e*P	P	09 38 59.8	+3.4
	comp=Z,6.6nm,0.9s						
PV14	Lion Creek, Pa	35.07	118	*e*P	P	09 38 59.1	+2.1
	comp=Z,22nm,1.6s						
PV04	Paradox Valley	35.10	118	*e*P	P	09 38 59.6	+2.5
	comp=Z,27nm,1.7s						
TUQ	Turquoise Moun	35.15	129	P	P	09 38 59.7	+2.3
	baz=335,SNR=7.6						
PV16	Nyswonger Mesa	35.17	118	*e*P	P	09 38 59.6	+1.9
	comp=Z,12nm,1.5s						
PV17	East Wray Mesa	35.18	118	*e*P	P	09 38 60.0	+2.2
	comp=Z,15nm,1.5s						
PV11	David Mesa, Pa	35.20	118	*e*P	P	09 39 00.2	+2.2
	comp=Z,5.4nm,0.6s						
PV11				*e*PcP	PcP	09 41 26.6	+1.0
ISCO	Idaho Springs	35.20	112	*e*P	P	09 39 00.6	+2.5
	comp=Z,11nm,1.5s						
ISCO	Idaho Springs	35.20	112	*e*P	P	09 39 00.6	+2.5
ISCO				pmax	pmax		
	comp=Z,11nm,1.5s						
ISCO	Idaho Springs	35.20	112	P	P	09 38 59.4	+1.2
	baz=328						
PV03	Paradox Valley	35.24	118	*e*P	P	09 38 59.9	+1.5
	comp=Z,12nm,1.5s						
PV03				*e*PcP	PcP	09 41 26.4	+0.7
PV15	Paradox Valley	35.31	117	*e*P	P	09 39 01.8	+2.8
	comp=Z,4.9nm,0.7s						
PV15				*e*PcP	PcP	09 41 26.7	+0.7
PV02	Paradox Valley	35.33	118	*e*P	P	09 38 58.0	-1.2
	comp=Z,18nm,1.6s						
PV13	Radium Mtn., P	35.34	118	*e*P	P	09 38 58.9	-0.3
	comp=Z,18nm,1.4s						
PV13				*e*PcP	PcP	09 41 26.9	+0.9
PV01	Paradox Valley	35.46	117	*e*P	P	09 39 02.6	+2.4
	comp=Z,32nm,1.6s						
PV01				*e*PcP	PcP	09 41 27.4	+1.0
E38A	The Farm, Brul	35.70	91	P	P	09 39 02.5	+0.5
	baz=321						
ECSD	EROS Data Cent	35.75	99	*e*P	P	09 39 03.6	+1.2
	comp=Z,9.8nm,1.3s						
ECSD	EROS Data Cent	35.75	99	P	P	09 39 03.0	+0.6
	baz=324						
C40A	Isle Royale Na	35.75	88	P	P	09 39 02.7	+0.4
	baz=320						
GMRC	Granite Mounta	35.83	129	P	P	09 39 04.8	+1.5
	baz=336,SNR=5.6						
F37A	Hinrichs Farm,	35.91	93	P	P	09 39 04.9	+1.1
	baz=322						
SUMG	Summit	35.94	29	*e*P	P	09 39 04.8	+0.7
	comp=Z,18nm,0.8s						
SUMG	Summit	35.94	29	*i* P	P	09 39 05.0	+0.9
	comp=Z,27nm,0.5s						
SUMG	Summit	35.94	29	*i* P	P	09 39 05.0	+0.9
SUMG				pmax	pmax		
	comp=Z,27nm,0.5s						
DAG	Danmarks Havn	36.05	17	*i* P	P	09 39 05.1	+0.6
DAG	Danmarks Havn	36.05	17	*i* P	P	09 39 05.1	+0.6
F38A	Pierce - Schro	36.06	92	P	P	09 39 06.0	+1.0
	baz=321,SNR=11						
NKL	Nikolayevsk	36.11	286	*e*P	P	09 39 05.0	-0.3
NKL				pmax	pmax		
	comp=Z,30nm,0.8s						
CIS	Catalina Islan	36.18	133	P	P	09 39 07.7	+1.6
	baz=338						
SPMN	Marine on St.	36.23	94	*e*P	P	09 39 08.0	+1.5
	comp=Z,12nm,0.5s						
SPMN	Marine on St.	36.23	94	P	P	09 39 07.3	+0.9
	baz=322,SNR=7.3						
MVCO	Mesa Verde	36.29	118	*e*P	P	09 39 09.5	+2.2
	comp=Z,14nm,1.5s						
MVCO	Mesa Verde	36.29	118	P	P	09 39 08.8	+1.5
	baz=331						
E39A	Mellen	36.31	91	P	P	09 39 07.2	0.0
	baz=321						
BELC	Belle Mtn. Jos	36.42	130	P	P	09 39 09.8	+1.4
	baz=336						
S22A	4UR Ranch, Cre	36.48	116	*e*P	P	09 39 12.1	+3.1
	comp=Z,6.6nm,1.3s						
S22A	4UR Ranch, Cre	36.48	116	P	P	09 39 10.3	+1.3
	baz=330						
F39A	Loretta	36.51	91	P	P	09 39 09.8	+1.0
	baz=321,SNR=5.9						
E40A	Wakefield	36.55	90	P	P	09 39 10.0	+0.8
	baz=321						
IRM	Iron Mountain	36.57	129	P	P	09 39 09.7	+0.2
	baz=336,SNR=5.3						
PFO	Pinyon Flats O	36.62	131	*e*P	P	09 39 11.5	+1.4
	comp=Z,9.1nm,1.3s						
PFO	Pinyon Flats O	36.62	131	*e*P	P	09 39 11.5	+1.4
PFO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PFO	Pinyon Flats O	36.62	131	P	P	09 39 11.6	+1.5
	baz=337						
PFO	Pinyon Flats O	36.62	131	P	P	09 39 10.9	+0.8
	comp=Z,3.5nm,0.9s,baz=332,slow=8.1,SNR=4.1						
XPFO	Pion Flat	36.63	131	*e*P	P	09 39 12.3	+2.3
	comp=Z,9.8nm,1.3s						
D41A	Chassel	36.66	88	*e*P	P	09 39 11.5	+1.4
	comp=Z,22nm,1.4s						
G38A	Ridgeland	36.69	93	P	P	09 39 10.9	+0.5
	baz=322						
WUAZ	Wupatki	36.69	123	*e*P	P	09 39 13.4	+2.7
	comp=Z,16nm,0.8s						
WUAZ	Wupatki	36.69	123	P	P	09 39 12.9	+2.3
	baz=333,SNR=12						
SFJD	Kangerlussuaq	36.86	40	P	P	09 39 11.7	+0.2
	comp=Z,4.6nm,0.5s,baz=296,slow=7.4						
SFJD				PcP	PcP	09 41 28.9	-0.9
	comp=Z,6.9nm,0.5s,baz=110,slow=4.0,SNR=5.0						
F40A	Park Falls	36.86	91	P	P	09 39 12.1	+0.3
	baz=321						
H38A	Maiden Rock	36.89	94	P	P	09 39 12.2	+0.2
	baz=322						
G39A	Holcombe	36.90	92	P	P	09 39 12.3	+0.2
	baz=322						
BC3	Big Chuckawall	36.92	129	P	P	09 39 14.0	+1.4
	baz=336						
TYV	Tymovskoe	36.93	282	*e*P	P	09 39 12.1	-0.2
TYV				pmax	pmax		
	comp=Z,14nm,1.4s						
E41A	Kenton	36.95	89	P	P	09 39 12.5	0.0
	baz=321						
SDCO	Great Sand Dun	37.01	114	*e*P	P	09 39 12.6	-0.8
	comp=Z,5.3nm,1.0s						
SDCO	Great Sand Dun	37.01	114	P	P	09 39 14.4	+1.0
	baz=330						
KSCO	Kaye Shedlock’	37.09	110	P	P	09 39 15.5	+1.5
	baz=328						
COWI	Conover	37.15	90	*e*P	P	09 39 15.8	+1.6
	comp=Z,13nm,1.4s						
Y12C	Blythe	37.16	128	P	P	09 39 16.2	+1.8
	baz=336						
MONP2	Monument Peak	37.30	131	P	P	09 39 17.5	+1.7
	baz=337						
H39A	Augusta	37.32	93	P	P	09 39 16.5	+0.8
	baz=322,SNR=8.5						
G40A	Rib Lake	37.34	91	*e*P	P	09 39 16.6	+0.7
	comp=Z,18nm,1.4s						
G40A	Rib Lake	37.34	91	P	P	09 39 16.3	+0.5
	baz=322						
BAR	Barrett	37.41	131	*e*P	P	09 39 15.7	-0.8
	comp=Z,17nm,1.6s						
F41A	Three Lakes	37.45	90	P	P	09 39 17.2	+0.5
	baz=321						
SWSC	Sam W. Stewart	37.45	130	P	P	09 39 18.6	+1.7
	baz=337						
Y14A	Wickenburg	37.52	126	*e*P	P	09 39 17.1	-0.4
	comp=Z,12nm,0.6s						
IKP	In-Ko-Pah, Jac	37.62	131	P	P	09 39 20.1	+1.7
	baz=337						
X16A	Lo Mia Camp, P	37.65	124	*e*P	P	09 39 18.6	-0.2
	comp=Z,7.1nm,0.8s						
X16A				*e*PcP	PcP	09 41 34.0	+0.9
W18A	Petrified Fore	37.66	121	*e*P	P	09 39 19.1	+0.3
	comp=Z,14nm,1.3s						
W18A				*e*PcP	PcP	09 41 33.6	+0.6
W18A	Petrified Fore	37.66	121	P	P	09 39 20.7	+1.9
	baz=333,SNR=6.6						
SPA0	Spitsbergen Ar	37.66	5	*e*P	P	09 39 18.1	-0.1
	comp=Z,7.7nm,0.8s						
SPA0				*e*PcP	PcP	09 41 31.5	-0.6
SPITS	Spitsbergen Ar	37.66	5	P	P	09 39 18.1	-0.1
	comp=Z,3.1nm,0.5s,baz=16,slow=6.5,SNR=18						
SPITS				PcP	PcP	09 41 31.3	-0.9
	comp=Z,2.0nm,0.5s,baz=55,slow=3.2,SNR=5.3						
GLA	Glamis	37.69	129	P	P	09 39 20.5	+1.6
	baz=336						
H40A	Chili	37.76	92	P	P	09 39 20.3	+1.0
	baz=322						
I39A	Houston	37.87	94	*e*P	P	09 39 20.7	+0.4
	comp=Z,21nm,1.4s						
I39A	Houston	37.87	94	P	P	09 39 20.3	0.0
	baz=323						
E43A	Lone Tree Farm	37.88	87	*e*P	P	09 39 20.5	+0.2
	comp=Z,12nm,1.2s						
E43A	Lone Tree Farm	37.88	87	P	P	09 39 19.9	-0.4
	baz=321						
T25A	Trinidad	37.97	113	*e*P	P	09 39 22.3	+0.8
	comp=Z,7.0nm,1.4s						
T25A				*e*PcP	PcP	09 41 34.5	+0.5
T25A	Trinidad	37.97	113	P	P	09 39 23.2	+1.7
	baz=330						
H41A	Junction City	38.09	92	*e*P	P	09 39 22.8	+0.7
	comp=Z,10nm,1.2s						
H41A	Junction City	38.09	92	P	P	09 39 22.5	+0.4
	baz=322						
G42A	Mountain	38.13	90	P	P	09 39 23.4	+1.0
	baz=322						
E44A	Grand Marais A	38.16	86	*e*P	P	09 39 23.7	+1.0
	comp=Z,25nm,1.0s						
E44A	Grand Marais A	38.16	86	P	P	09 39 23.0	+0.3
	baz=321						
J39A	Decorah	38.21	95	P	P	09 39 23.3	+0.2
	baz=323						
I40A	Norwalk	38.24	93	P	P	09 39 23.9	+0.5
	baz=323						
113A	Mohawk Valley,	38.31	128	*e*P	P	09 39 26.2	+2.1
	comp=Z,3.4nm,0.8s						
I41A	Arkdale	38.43	92	P	P	09 39 25.8	+0.8
	baz=323						
J40A	Soldiers Grove	38.58	94	P	P	09 39 26.8	+0.5
	baz=323						
K39A	Oelwein	38.63	95	P	P	09 39 27.1	+0.5
	baz=324						
H42A	Shiocton	38.66	91	P	P	09 39 27.4	+0.5
	baz=322						
D46A	Sault St. Mari	38.77	84	P	P	09 39 27.7	-0.1
	baz=321						
J41A	Loganville	38.92	93	P	P	09 39 29.6	+0.5
	baz=323,SNR=5.7						
K40A	Colesburg	38.96	95	P	P	09 39 30.0	+0.6
	baz=324						
I42A	Draeger Farm,	38.99	92	*e*P	P	09 39 30.7	+1.1
	comp=Z,19nm,1.3s						
L39A	Vinton	39.05	96	P	P	09 39 30.8	+0.6
	baz=324						
D47A	Chapleau	39.05	83	P	P	09 39 30.0	-0.2
	baz=321						
E46A	Sault Ste Mari	39.06	85	P	P	09 39 30.5	+0.3
	baz=321						
ANMO	Albuquerque	39.06	117	*e*P	P	09 39 29.5	-1.1
	comp=Z,8.6nm,1.3s						
ANMO				*e*PcP	PcP	09 41 38.8	+1.4
ANMO	Albuquerque	39.06	117	*e*P	P	09 39 29.5	-1.1
ANMO				*e*		09 41 38.8	
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ANMO	Albuquerque	39.06	117	P	P	09 39 32.8	+2.2
	baz=332						
ANMO	Albuquerque	39.06	117	P	P	09 39 32.4	+1.8
	comp=Z,1.5nm,0.6s,baz=325,slow=8.2,SNR=13						
ANMO				PcP	PcP	09 41 37.8	+0.3
	comp=Z,3.1nm,0.7s,baz=346,slow=5.2,SNR=11						
JFWS	Jewell Farm	39.18	94	*e*P	P	09 39 31.6	+0.3
	comp=Z,14nm,0.5s						
JFWS	Jewell Farm	39.18	94	*e*P	P	09 39 31.6	+0.3
JFWS				pmax	pmax		
	comp=Z,15nm,0.5s						
JFWS	Jewell Farm	39.18	94	P	P	09 39 31.6	+0.3
	baz=324,SNR=6.2						
LAZ	Ladron	39.28	119	*e*P	P	09 39 34.3	+1.9
F46A	Macinaw City C	39.33	86	P	P	09 39 33.0	+0.6
	baz=322						
I43A	Langenfeld Bro	39.33	91	P	P	09 39 32.8	+0.4
	baz=323						
J42A	Columbus	39.35	92	P	P	09 39 32.4	-0.3
	baz=323						
MATQ	Matagami	39.35	76	P	P	09 39 31.9	-0.7
	baz=319						
214A	Organ Pipe Nat	39.38	127	P	P	09 39 34.6	+1.5
	baz=336						
K41A	Shullsburg	39.40	94	P	P	09 39 33.2	+0.1
	baz=324						
L40A	Anamosa	39.44	95	*e*P	P	09 39 33.9	+0.5
	comp=Z,18nm,0.4s						
L40A	Anamosa	39.44	95	P	P	09 39 33.8	+0.4
	baz=324,SNR=6.6						
E47A	Iron Bridge	39.44	84	P	P	09 39 33.1	-0.2
	baz=321						
M39A	Webster	39.50	97	P	P	09 39 34.0	+0.1
	baz=325						
G45A	Suttons Bay	39.51	88	P	P	09 39 34.3	+0.4
	baz=322						
D48A	Paudash Townsh	39.53	82	P	P	09 39 34.0	-0.1
	baz=321						
KSU1	Kansas State U	39.55	103	*e*P	P	09 39 35.0	+0.6
	comp=Z,11nm,0.6s						
KSU1	Kansas State U	39.55	103	P	P	09 39 34.9	+0.6
	baz=327						
J43A	Natural Harves	39.61	92	P	P	09 39 34.0	-0.7
	baz=323						
G46A	Petoskey	39.64	87	P	P	09 39 35.1	+0.1
	baz=322						
D49A	Beulah Townshi	39.65	82	P	P	09 39 35.3	+0.3
	baz=321						
K42A	Prairie Point,	39.69	93	P	P	09 39 35.5	+0.1
	baz=324						
BNM	Barren Site	39.70	118	*e*P	P	09 39 38.4	+2.5
L41A	Preston	39.75	95	P	P	09 39 35.8	-0.1
	baz=324						
TUC	Tucson	39.78	124	*e*P	P	09 39 39.4	+3.0
	comp=Z,2.4nm,0.6s						
TUC	Tucson	39.78	124	*e*P	P	09 39 39.4	+3.0
TUC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TUC	Tucson	39.78	124	P	P	09 39 38.1	+1.6
	baz=335						
YSS	Yuzh-Sakhalins	39.84	278	*i* P	P	09 39 36.4	-0.2
YSS				pmax	pmax		
	comp=Z,27nm,0.9s						
SCHQ	Schefferville	40.01	63	*e*P	P	09 39 38.7	+0.7
	comp=Z,8.8nm,0.9s						
SCHQ				*e*PcP	PcP	09 41 39.6	-0.3
SCHQ	Schefferville	40.01	63	P	P	09 39 37.9	0.0
	comp=Z,6.0nm,0.5s,baz=297,slow=6.8,SNR=17						
SCHQ				PcP	PcP	09 41 39.6	-0.3
	comp=Z,2.2nm,0.6s,baz=300,slow=8.1,SNR=3.5						
H46A	Fife Lake	40.10	88	P	P	09 39 39.3	+0.5
	baz=322						
LSQQ	Lebel-sur-Quev	40.16	76	P	P	09 39 38.8	-0.5
	baz=320						
K43A	Burlington	40.19	92	*e*P	P	09 39 40.2	+0.6
	comp=Z,53nm,1.2s						
F48A	Evansville	40.22	84	P	P	09 39 39.2	-0.6
	baz=322						
M41A	Milan	40.30	95	P	P	09 39 40.4	-0.1
	baz=325						
D50A	G1974 Best Tow	40.39	81	P	P	09 39 40.8	-0.3
	baz=321						
L43A	Garden Prairie	40.43	93	P	P	09 39 41.2	-0.4
	baz=324						
E50A	Wahnapitae	40.57	82	P	P	09 39 42.2	-0.5
	baz=321						
CHGQ	Chibougamau	40.62	74	P	P	09 39 42.5	-0.5
	baz=320						
D51A	Lot 18 Range I	40.65	80	P	P	09 39 42.9	-0.4
	baz=321						
121A	Cookes Peak, D	40.69	121	P	P	09 39 44.9	+0.9
	baz=334						
N41A	Harden Midland	40.70	96	P	P	09 39 44.0	+0.1
	baz=325						
H48A	Harrisville	40.80	86	P	P	09 39 44.1	-0.5
	baz=322						
SCO	Scoresbysund	40.82	24	*e*P	P	09 39 45.0	+0.6
	comp=Z,26nm,1.4s						
SCO	Scoresbysund	40.82	24	*e*P	P	09 39 45.0	+0.6
SCO				pmax	pmax		
	comp=Z,26nm,1.4s						

U32A	**Winter Ranch,**	**40.84**	**108**	*e*P	**P**	**09 39 46.5**	**+1.5**
	comp=Z,6.6nm,0.6s						
M43A	**Waltham Townsh**	**40.94**	**94**	P	**P**	**09 39 45.8**	**+0.1**
	baz=325						
N42A	**Yates City**	**40.96**	**95**	P	**P**	**09 39 45.8**	**-0.1**
	baz=325						
NRIK	**Noril'sk**	**40.97**	**333**	P	**P**	**09 39 45.3**	**-0.3**
	comp=Z,2.4nm,0.5s,baz=27,slow=9.0,SNR=2.4						
NRIK				PcP	**PcP**	**09 41 42.7**	**0.0**
	comp=Z,3.8nm,0.6s,baz=101,slow=2.2,SNR=4.0						
AMTX	**Amarillo**	**41.02**	**112**	*e*P	**P**	**09 39 47.0**	**+0.4**
	comp=Z,14nm,1.2s						
AMTX	**Amarillo**	**41.02**	**112**	P	**P**	**09 39 47.6**	**+1.0**
	baz=331						
E51A	**G1948 Merrick**	**41.03**	**81**	P	**P**	**09 39 45.9**	**-0.5**
	baz=321						
I48A	**Sherman Twp**	**41.04**	**87**	P	**P**	**09 39 47.0**	**+0.5**
	baz=323						
D52A	**ZEK Kipawa Sen**	**41.15**	**80**	P	**P**	**09 39 47.5**	**+0.1**
	baz=321						
ZEA	**Zeya**	**41.16**	**296**	*e*P	**P**	**09 39 46.8**	**-0.6**
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
TOBO	**Tobermory, Bru**	**41.17**	**84**	P	**P**	**09 39 48.0**	**+0.4**
	baz=322						
319A	**Douglas**	**41.17**	**123**	*e*P	**P**	**09 39 51.1**	**+3.2**
	comp=Z,8.4nm,0.6s						
MSTX	**Muleshoe**	**41.38**	**114**	*e*P	**P**	**09 39 51.5**	**+2.0**
	comp=Z,11nm,0.9s						
MSTX	**Muleshoe**	**41.38**	**114**	P	**P**	**09 39 50.6**	**+1.1**
	baz=331						
D53A	**Lac Vacive, Po**	**41.38**	**79**	P	**P**	**09 39 49.4**	**+0.1**
	baz=321						
M44A	**Midewin, Midew**	**41.38**	**93**	*e*P	**P**	**09 39 50.1**	**+0.8**
	comp=Z,22nm,1.1s						
M44A	**Midewin, Midew**	**41.38**	**93**	P	**P**	**09 39 49.4**	**+0.1**
	baz=325						
ANGG	**Ammassalik, Gr**	**41.40**	**36**	*e*P	**P**	**09 39 48.8**	**-0.3**
	comp=Z,52nm,1.4s						
P41A	**Barry, Barry**	**41.46**	**97**	P	**P**	**09 39 50.3**	**+0.3**
	baz=326						
E52A	**Mattawa**	**41.58**	**80**	P	**P**	**09 39 51.0**	**0.0**
	baz=322,SNR=5.4						
KLBO	**Killbear Provi**	**41.64**	**83**	P	**P**	**09 39 51.3**	**0.0**
	baz=322						
F52A	**Sundridge**	**41.68**	**81**	P	**P**	**09 39 51.1**	**-0.6**
	baz=322						
D54A	**Lac Fusel, La**	**41.77**	**78**	P	**P**	**09 39 52.6**	**+0.1**
	baz=321						
BMRO	**Meriville Lake**	**41.80**	**84**	P	**P**	**09 39 53.2**	**+0.5**
	baz=322						
BUKO	**Buck Lake**	**41.92**	**82**	P	**P**	**09 39 53.5**	**-0.2**
	baz=322						
E53A	**Dumoine, Ponti**	**41.94**	**80**	P	**P**	**09 39 54.0**	**+0.1**
	baz=322,SNR=5.9						
J49A	**Marlette**	**41.94**	**87**	P	**P**	**09 39 54.5**	**+0.6**
	baz=323						
K48A	**Perry**	**41.96**	**88**	P	**P**	**09 39 54.3**	**+0.3**
	baz=324						
Q41A	**Truxton**	**41.99**	**98**	P	**P**	**09 39 54.2**	**0.0**
	baz=326						
BASO	**Ashfield**	**42.07**	**85**	P	**P**	**09 39 55.0**	**+0.1**
	baz=323						
E54A	**Lac Daplat, Po**	**42.10**	**79**	P	**P**	**09 39 55.0**	**-0.1**
	baz=322						
ALGO	**Algonquin Park**	**42.10**	**80**	P	**P**	**09 39 54.7**	**-0.4**
	baz=322						
ASAJ	**Asahikawa**	**42.14**	**275**	P	**P**	**09 39 54.5**	**-0.9**
	comp=Z,5.1nm,0.7s,baz=13,slow=6.1,SNR=8.0						
ASAJ				PcP	**PcP**	**09 41 46.7**	**-0.3**
	comp=Z,4.5nm,0.9s,baz=159,slow=32,SNR=2.6						
O44A	**Mansfield**	**42.20**	**95**	P	**P**	**09 39 55.7**	**-0.3**
	baz=325						
BWLO	**Walkerton**	**42.21**	**85**	P	**P**	**09 39 55.6**	**-0.5**
	baz=323						
Q42A	**Golden Eagle**	**42.32**	**98**	P	**P**	**09 39 56.8**	**-0.2**
	baz=326						
WMOK	**Wichita Mounta**	**42.34**	**109**	P	**P**	**09 39 58.0**	**+0.8**
	baz=330						
MNTX	**Cornudas Mount**	**42.35**	**119**	*e*P	**P**	**09 39 59.9**	**+2.6**
	comp=Z,6.8nm,1.4s						
MNTX				*e*PcP	**PcP**	**09 41 48.5**	**+0.6**
MNTX	**Cornudas Mount**	**42.35**	**119**	P	**P**	**09 39 59.6**	**+2.2**
	baz=333,SNR=5.0						
N46A	**Monticello**	**42.35**	**92**	P	**P**	**09 39 57.3**	**+0.1**
	baz=325						
R41A	**Rosebud**	**42.47**	**99**	P	**P**	**09 39 58.1**	**0.0**
	baz=327						
G53A	**Haliburton**	**42.51**	**81**	P	**P**	**09 39 58.2**	**-0.3**
	baz=322						
L48A	**N Adams**	**42.51**	**89**	P	**P**	**09 39 58.2**	**-0.3**
	baz=324						
I51A	**Listowel**	**42.51**	**85**	P	**P**	**09 39 58.5**	**0.0**
	baz=323						
PEMO	**Pembroke**	**42.67**	**80**	P	**P**	**09 39 59.0**	**-0.7**
	baz=322						
P44A	**Sand Creek, Wi**	**42.70**	**95**	P	**P**	**09 39 59.0**	**-1.0**
	baz=326						
NRS	**Narsarsuaq**	**42.72**	**44**	*e*P	**P**	**09 40 00.4**	**+0.5**
	comp=Z,34nm,1.4s						
CCM	**Cathedral Cave**	**42.73**	**99**	*e*P	**P**	**09 40 00.9**	**+0.6**
	comp=Z,4.9nm,0.9s						
CCM	**Cathedral Cave**	**42.73**	**99**	*e*P	**P**	**09 40 00.9**	**+0.6**
CCM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CCM	**Cathedral Cave**	**42.73**	**99**	P	**P**	**09 40 00.4**	**+0.1**
	baz=327						
R42A	**Luebbering**	**42.73**	**98**	P	**P**	**09 40 01.0**	**+0.7**
	baz=327						
KLR	**Kul'dur**	**42.78**	**289**	P	**P**	**09 39 59.4**	**-1.1**
	comp=Z,9.0nm,0.5s,baz=49,slow=7.3,SNR=83						
KLR				PcP	**PcP**	**09 41 48.7**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=337,slow=1.6,SNR=3.4						
N47A	**Urbana**	**42.82**	**91**	P	**P**	**09 40 00.5**	**-0.5**
	baz=325						
BANO	**Bancroft**	**42.90**	**81**	P	**P**	**09 40 01.5**	**-0.1**
	baz=322						
S41A	**Jillco Farms,**	**42.90**	**100**	P	**P**	**09 40 01.6**	**-0.1**
	baz=327						
F55A	**Otter Lake**	**42.93**	**79**	P	**P**	**09 40 01.1**	**-0.8**
	baz=322						
BOD	**Bodaibo**	**42.95**	**309**	*e*P	**P**	**09 40 00.8**	**-1.0**
BOD				pmax	pmax		
	comp=Z,22nm,1.3s						
Q44A	**Meyer Farm, Va**	**42.99**	**96**	P	**P**	**09 40 02.3**	**-0.1**
	baz=326						
P45A	**Graceland, Par**	**43.03**	**94**	*e*P	**P**	**09 40 03.3**	**+0.6**
	comp=Z,11nm,0.6s						
P45A	**Graceland, Par**	**43.03**	**94**	P	**P**	**09 40 02.7**	**0.0**
	baz=326						
HHAR	**Hobbs**	**43.06**	**103**	*e*P	**P**	**09 40 03.8**	**+0.8**
	comp=Z,8.5nm,1.5s						
ACTO	**Acton**	**43.09**	**84**	P	**P**	**09 40 03.2**	**+0.1**
	baz=323						
M49A	**Liberty Center**	**43.09**	**89**	P	**P**	**09 40 03.2**	**+0.1**
	baz=324						
R43A	**Red Bud**	**43.11**	**97**	P	**P**	**09 40 03.2**	**-0.2**
	baz=327						
N48A	**Decatur**	**43.13**	**91**	P	**P**	**09 40 03.1**	**-0.4**
	baz=325						
O47A	**Sheridan**	**43.14**	**92**	P	**P**	**09 40 03.0**	**-0.6**
	baz=325						
FVM	**French Village**	**43.14**	**98**	*e*P	**P**	**09 40 04.3**	**+0.7**
	comp=Z,7.9nm,0.9s						
FVM	**French Village**	**43.14**	**98**	*e*P	**P**	**09 40 04.3**	**+0.7**
FVM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
S42A	**Caledonia**	**43.16**	**99**	P	**P**	**09 40 03.7**	**0.0**
	baz=327						
P46A	**Rosedale**	**43.19**	**94**	P	**P**	**09 40 04.2**	**+0.2**
	baz=326,SNR=5.0						
G55A	**Calabogie**	**43.23**	**80**	P	**P**	**09 40 03.8**	**-0.4**
	baz=322,SNR=5.5						
LATQ	**La Tuque**	**43.24**	**75**	P	**P**	**09 40 04.5**	**+0.2**
	baz=322						
PLVO	**Plevna**	**43.25**	**80**	*e*P	**P**	**09 40 04.7**	**+0.4**
	comp=Z,20nm,1.5s						
PLVO	**Plevna**	**43.25**	**80**	P	**P**	**09 40 04.2**	**-0.2**
	baz=323						
T41A	**Mountain View**	**43.35**	**100**	P	**P**	**09 40 05.3**	**0.0**
	baz=328						
Q45A	**Warren Harvey,**	**43.38**	**95**	P	**P**	**09 40 05.2**	**-0.3**
	baz=326						
TRQ	**Mont Tremblant**	**43.40**	**77**	*e*P	**P**	**09 40 05.6**	**0.0**
DELO	**Deloro Mine**	**43.43**	**81**	P	**P**	**09 40 05.6**	**-0.2**
	baz=323						
N49A	**Columbus Grove**	**43.45**	**90**	P	**P**	**09 40 05.8**	**-0.3**
	baz=325						
U40A	**Yellville**	**43.46**	**102**	P	**P**	**09 40 06.1**	**-0.1**
	baz=328						
WLVO	**Wesleyville**	**43.56**	**82**	P	**P**	**09 40 06.6**	**-0.2**
	baz=323						
O48A	**Farmland**	**43.57**	**91**	P	**P**	**09 40 06.5**	**-0.5**
	baz=325,SNR=7.8						
ERM	**Erimo**	**43.58**	**273⇑**	*e*P	**P**	**09 40 08.1**	**+1.1**
ERM				pmax	pmax		
	comp=Z,44nm,1.3s						
TYNO	**Tyneside**	**43.58**	**84**	P	**P**	**09 40 07.0**	**-0.1**
	baz=324						
H55A	**Tweed**	**43.59**	**81**	P	**P**	**09 40 06.8**	**-0.3**
	baz=323						
ORIO	**Orleans, Innes**	**43.60**	**79**	P	**P**	**09 40 06.8**	**-0.3**
	baz=322						
S43A	**Fulton Ridge,**	**43.64**	**98**	P	**P**	**09 40 07.8**	**+0.2**
	baz=327						
T42A	**Van Buren**	**43.65**	**100**	*e*P	**P**	**09 40 08.3**	**+0.6**
	comp=Z,14nm,1.6s						
T42A	**Van Buren**	**43.65**	**100**	P	**P**	**09 40 07.4**	**-0.3**
	baz=328						
P47A	**Martinsville**	**43.71**	**93**	P	**P**	**09 40 08.0**	**-0.1**
	baz=326						
SIUC	**Southern Illin**	**43.89**	**97**	*e*P	**P**	**09 40 10.3**	**+0.7**
	comp=Z,26nm,1.3s						
S44A	**Carbondale**	**43.89**	**97**	P	**P**	**09 40 09.5**	**-0.1**
	baz=327						
H56A	**Elgin**	**43.96**	**80**	P	**P**	**09 40 09.9**	**-0.2**
	baz=323						
T43A	**Greenville**	**43.96**	**99**	P	**P**	**09 40 10.2**	**+0.1**
	baz=327,SNR=5.1						
O49A	**Covington**	**43.98**	**91**	*e*P	**P**	**09 40 10.4**	**+0.1**
	comp=Z,22nm,1.4s						
O49A	**Covington**	**43.98**	**91**	P	**P**	**09 40 09.0**	**-1.3**
	baz=325						
W39A	**Magazine**	**44.05**	**104**	P	**P**	**09 40 10.7**	**-0.1**
	baz=329						
Q47A	**Bedord North L**	**44.10**	**94**	P	**P**	**09 40 10.8**	**-0.4**
	baz=326						
P48A	**Milroy**	**44.10**	**92**	P	**P**	**09 40 10.8**	**-0.5**
	baz=326						
PBMO	**Poplar Bluff**	**44.15**	**99**	*e*P	**P**	**09 40 12.5**	**+0.8**
	comp=Z,9.5nm,0.6s						
U42A	**Revenden**	**44.16**	**100**	P	**P**	**09 40 11.7**	**-0.1**
	baz=328						
M52A	**Chesterland**	**44.19**	**87**	P	**P**	**09 40 11.6**	**-0.3**
	baz=324						
S45A	**Carrier Mills**	**44.20**	**97**	P	**P**	**09 40 12.4**	**+0.3**
	baz=327						
N51A	**Ashland**	**44.25**	**88**	*e*P	**P**	**09 40 12.7**	**+0.3**
	comp=Z,31nm,1.4s						
N51A	**Ashland**	**44.25**	**88**	P	**P**	**09 40 12.2**	**-0.2**
	baz=325						
O50A	**Cable**	**44.33**	**90**	P	**P**	**09 40 13.2**	**+0.1**
	baz=325,SNR=5.8						
L53A	**Girard**	**44.33**	**86**	P	**P**	**09 40 13.1**	**0.0**
	baz=324						
P49A	**Miami Univ. Ec**	**44.35**	**92**	P	**P**	**09 40 12.8**	**-0.5**
	baz=326						
USIN	**University of**	**44.36**	**96**	*e*P	**P**	**09 40 13.8**	**+0.5**
	comp=Z,16nm,0.4s						
Q48A	**North Vernon**	**44.41**	**93**	P	**P**	**09 40 13.1**	**-0.6**
	baz=326						
U43A	**Rector**	**44.51**	**99**	P	**P**	**09 40 14.8**	**+0.4**
	baz=328						
ACSO	**Alum Creek Sta**	**44.54**	**89**	*e*P	**P**	**09 40 15.2**	**+0.4**
	comp=Z,27nm,1.3s						
ACSO	**Alum Creek Sta**	**44.54**	**89**	P	**P**	**09 40 14.8**	**+0.1**
	baz=325						
M53A	**WI Miller and**	**44.57**	**86**	P	**P**	**09 40 15.3**	**+0.3**
	baz=325						
S46A	**Don Dixon Farm**	**44.57**	**96**	P	**P**	**09 40 14.6**	**-0.4**
	baz=327						
R47A	**Wooly Knot Far**	**44.58**	**94**	P	**P**	**09 40 15.0**	**-0.1**
	baz=326						
LONY	**Lake Ozonia**	**44.66**	**79**	*e*P	**P**	**09 40 14.8**	**-0.8**
	comp=Z,19nm,1.4s						
LONY	**Lake Ozonia**	**44.66**	**79**	P	**P**	**09 40 15.1**	**-0.6**
	baz=323						
MIAR	**Mount Ida**	**44.69**	**104**	*e*P	**P**	**09 40 16.9**	**+0.9**
	comp=Z,15nm,1.4s						
MIAR				*e*PcP	**PcP**	**09 41 56.0**	**+0.2**
MIAR	**Mount Ida**	**44.69**	**104**	P	**P**	**09 40 16.7**	**+0.7**
	baz=329						
P50A	**Jamestown**	**44.70**	**91**	P	**P**	**09 40 15.4**	**-0.6**
	baz=326						
Q49A	**Aurora**	**44.71**	**92**	P	**P**	**09 40 15.8**	**-0.3**
	baz=326						
WCI	**Wyandotte Cave**	**44.74**	**94**	*e*P	**P**	**09 40 16.8**	**+0.5**
	comp=Z,14nm,1.2s						
WCI	**Wyandotte Cave**	**44.74**	**94**	*e*P	**P**	**09 40 16.8**	**+0.5**
WCI				pmax	pmax		
	comp=Z,14nm,1.2s						
WCI	**Wyandotte Cave**	**44.74**	**94**	P	**P**	**09 40 15.9**	**-0.4**
	baz=326						
O51A	**Pataskala**	**44.78**	**89**	P	**P**	**09 40 16.2**	**-0.4**
	baz=325						
R48A	**Northridge Ran**	**44.78**	**94**	P	**P**	**09 40 16.0**	**-0.7**
	baz=326						
PUH	**Pauahi**	**44.90**	**188**	*e*P	**P**	**09 40 18.3**	**+0.5**
	comp=Z,204nm,1.4s						
AIN	**Ainahou**	**44.91**	**188**	*e*P	**P**	**09 40 19.1**	**+1.1**
	comp=Z,152nm,1.1s						
FRNY	**Flat Rock**	**44.91**	**78**	*e*P	**P**	**09 40 16.9**	**-0.7**
	comp=Z,6.1nm,1.2s						
L55A	**Hinsdale**	**44.95**	**84**	P	**P**	**09 40 17.4**	**-0.5**
	baz=324						
M54A	**Oil Creek Stat**	**44.96**	**86**	*e*P	**P**	**09 40 18.2**	**+0.2**
	comp=Z,24nm,1.3s						
M54A	**Oil Creek Stat**	**44.96**	**86**	P	**P**	**09 40 18.0**	**0.0**
	baz=325						
N53A	**Lisbon**	**45.01**	**87**	P	**P**	**09 40 18.6**	**+0.1**
	baz=325						
T46A	**Princeton**	**45.03**	**97**	P	**P**	**09 40 18.9**	**+0.2**
	baz=327						
KHU	**Kahuku**	**45.05**	**188**	*e*P	**P**	**09 40 19.7**	**+0.5**
	comp=Z,290nm,1.5s						
KHU	**Kahuku**	**45.05**	**188**	*e*P	**P**	**09 40 19.7**	**+0.5**
KHU				pmax	pmax		
	comp=Z,291nm,1.5s						
MOQ	**Mont Orford**	**45.10**	**76**	*e*P	**P**	**09 40 19.2**	**0.0**
TX31	**Lajitas Ar. Si**	**45.12**	**118**	*e*P	**P**	**09 40 21.4**	**+1.8**
TXAR	**Lajitas Array**	**45.12**	**118**	P	**P**	**09 40 21.5**	**+1.9**
	comp=Z,6.0nm,0.6s,baz=330,slow=7.2,SNR=64						
TXAR				PcP	**PcP**	**09 41 58.2**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=11,slow=3.4,SNR=7.8						
TXAR				PKiKP	**PKiKP**	**09 48 53.4**	**-1.8**
	comp=Z,0.1nm,0.4s,baz=170,slow=1.2,SNR=5.4						
O52A	**Adamsville**	**45.14**	**89**	P	**P**	**09 40 19.3**	**-0.2**
	baz=325						
N54A	**Moraine State**	**45.26**	**86**	*e*P	**P**	**09 40 20.8**	**+0.4**
	comp=Z,23nm,1.5s						
N54A	**Moraine State**	**45.26**	**86**	P	**P**	**09 40 20.3**	**-0.1**
	baz=325						
S48A	**Wiedeman Farm,**	**45.32**	**94**	P	**P**	**09 40 20.7**	**-0.2**
	baz=327,SNR=7.0						
NCB	**Newcomb**	**45.33**	**79**	*e*P	**P**	**09 40 20.7**	**-0.3**
	comp=Z,11nm,1.4s						
Q51A	**Peebles**	**45.37**	**91**	*e*P	**P**	**09 40 21.5**	**+0.2**
	comp=Z,8.8nm,0.4s						
Q51A	**Peebles**	**45.37**	**91**	P	**P**	**09 40 21.1**	**-0.3**
	baz=326						
M55A	**Ridgway**	**45.38**	**85**	P	**P**	**09 40 21.1**	**-0.3**
	baz=325						
P52A	**Corning**	**45.41**	**89**	P	**P**	**09 40 21.5**	**0.0**
	baz=326						
T47A	**Sharon Grove**	**45.42**	**96**	*e*P	**P**	**09 40 22.4**	**+0.7**
	comp=Z,22nm,1.4s						
T47A	**Sharon Grove**	**45.42**	**96**	P	**P**	**09 40 21.6**	**-0.2**
	baz=327						
U46A	**Springville**	**45.48**	**97**	P	**P**	**09 40 22.6**	**+0.5**
	baz=328						
S49A	**Springfield**	**45.55**	**94**	P	**P**	**09 40 22.4**	**-0.3**
	baz=327						
R50A	**Paris**	**45.56**	**92**	P	**P**	**09 40 23.6**	**+0.8**
	baz=326						
T48A	**Bowling Green**	**45.63**	**95**	P	**P**	**09 40 23.8**	**+0.4**
	baz=327						
JCT	**Junction City**	**45.63**	**113**	*e*P	**P**	**09 40 23.8**	**+0.3**
	comp=Z,6.8nm,0.6s						
JCT	**Junction City**	**45.63**	**113**	*e*P	**P**	**09 40 23.8**	**+0.3**
JCT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
JCT	**Junction City**	**45.63**	**113**	P	**P**	**09 40 23.9**	**+0.3**
	baz=332,SNR=5.2						
O54A	**Avella**	**45.73**	**87**	P	**P**	**09 40 24.2**	**+0.1**
	baz=325,SNR=5.2						
MET	**Memphis--Engin**	**45.76**	**100**	*e*P	**P**	**09 40 25.2**	**+0.8**
	comp=Z,90nm,0.7s						
WVT	**Waverly**	**45.83**	**97**	*e*P	**P**	**09 40 25.8**	**+0.9**
	comp=Z,19nm,1.6s						
WVT	**Waverly**	**45.83**	**97**	*e*P	**P**	**09 40 25.8**	**+0.9**
WVT				pmax	pmax		
	comp=Z,19nm,1.6s						
WVT	**Waverly**	**45.83**	**97**	P	**P**	**09 40 25.5**	**+0.6**
	baz=328						
N55A	**Marion Center**	**45.84**	**86**	P	**P**	**09 40 25.3**	**+0.2**
	baz=325,SNR=6.0						
P53A	**Whipple**	**45.85**	**89**	*e*P	**P**	**09 40 25.2**	**+0.1**
	comp=Z,24nm,1.5s						
P53A	**Whipple**	**45.85**	**89**	P	**P**	**09 40 25.0**	**0.0**
	baz=326						
R51A	**Hillsboro**	**45.87**	**92**	P	**P**	**09 40 24.7**	**-0.6**
	baz=326						
Q52A	**Bidwell**	**45.90**	**90**	P	**P**	**09 40 25.1**	**-0.4**
	baz=326						
V46A	**Holladay**	**45.98**	**98**	P	**P**	**09 40 26.6**	**+0.5**
	baz=328						
BINY	**Binghamton**	**46.00**	**82**	*e*P	**P**	**09 40 26.1**	**-0.1**
	comp=Z,22nm,1.6s						
BINY	**Binghamton**	**46.00**	**82**	P	**P**	**09 40 26.2**	**-0.1**
	baz=324						
T49A	**Edmonton**	**46.01**	**94**	P	**P**	**09 40 26.2**	**-0.2**
	baz=327						
U48A	**Cassie Pea, Po**	**46.07**	**96**	P	**P**	**09 40 26.9**	**+0.1**
	baz=327						
BATG	**Bathurst New B**	**46.13**	**70**	*e*P	**P**	**09 40 27.7**	**+0.5**
	comp=Z,12nm,0.8s						
P54A	**Burton**	**46.16**	**88**	P	**P**	**09 40 27.4**	**-0.1**
	baz=326						
O55A	**Ligonier**	**46.17**	**86**	P	**P**	**09 40 27.2**	**-0.5**
	baz=325						
V47A	**Nunnelly**	**46.21**	**97**	P	**P**	**09 40 28.2**	**+0.2**
	baz=328						
KEV	**Kevo**	**46.37**	**2**	*e*P	**P**	**09 40 28.8**	**+0.1**
	comp=Z,24nm,1.3s						
KEV	**Kevo**	**46.37**	**2**	*e*P	**P**	**09 40 28.8**	**+0.1**
KEV				pmax	pmax		
	comp=Z,24nm,1.3s						
T50A	**Nancy**	**46.38**	**94**	P	**P**	**09 40 29.0**	**-0.3**
	baz=327						
MCWV	**Mont Chateau**	**46.39**	**87**	*e*P	**P**	**09 40 30.0**	**+0.7**
	comp=Z,25nm,1.6s						
MCWV	**Mont Chateau**	**46.39**	**87**	P	**P**	**09 40 29.0**	**-0.3**
	baz=326						
PKME	**Peaks-Kenny Pk**	**46.40**	**74**	*e*P	**P**	**09 40 29.6**	**+0.4**
	comp=Z,20nm,1.0s						
PKME	**Peaks-Kenny Pk**	**46.40**	**74**	P	**P**	**09 40 29.4**	**+0.1**
	baz=324						
U49A	**Red Boiling Sp**	**46.40**	**95**	P	**P**	**09 40 29.9**	**+0.5**
	baz=327,SNR=6.0						
S51A	**Beattyville**	**46.41**	**92**	*e*P	**P**	**09 40 29.9**	**+0.4**
	comp=Z,14nm,1.4s						
S51A	**Beattyville**	**46.41**	**92**	P	**P**	**09 40 28.9**	**-0.6**
	baz=327						
SSPA	**Standing Stone**	**46.44**	**85**	*e*P	**P**	**09 40 29.5**	**-0.2**
	comp=Z,30nm,1.6s						
SSPA	**Standing Stone**	**46.44**	**85**	P	**P**	**09 40 29.1**	**-0.6**
	baz=325						
O56A	**Blue Knob Stat**	**46.45**	**86**	*e*P	**P**	**09 40 29.9**	**+0.1**
	comp=Z,15nm,1.2s						
O56A	**Blue Knob Stat**	**46.45**	**86**	P	**P**	**09 40 29.2**	**-0.6**
	baz=325						
OXF	**Oxford**	**46.51**	**100**	*e*P	**P**	**09 40 31.5**	**+1.3**
	comp=Z,64nm,1.1s						
OXF	**Oxford**	**46.51**	**100**	*e*P	**P**	**09 40 31.5**	**+1.3**
OXF				pmax	pmax		
	comp=Z,64nm,1.1s						
OXF	**Oxford**	**46.51**	**100**	P	**P**	**09 40 31.1**	**+0.9**
	baz=329						
Q54A	**Coxs Mills**	**46.51**	**89**	P	**P**	**09 40 30.2**	**0.0**
	baz=326						
HPIG		**46.52**	**122**	*e*P	**P**	**09 40 32.4**	**+1.8**
	comp=Z,7.7nm,0.6s						
P55A	**Reedsville**	**46.52**	**87**	P	**P**	**09 40 30.5**	**+0.1**
	baz=326						
R53A	**Hurricane**	**46.56**	**90**	P	**P**	**09 40 30.6**	**0.0**
	baz=326						
ARA0	**ARCESS Array S**	**46.57**	**2**	*e*P	**P**	**09 40 29.9**	**-0.4**
ARA0				*e*PcP	**PcP**	**09 42 01.4**	**-0.4**
ARCES	**ARCESS Array B**	**46.57**	**2**	*e*P	**P**	**09 40 30.8**	**+0.5**
ARCES	**ARCESS Array B**	**46.57**	**2**	P	**P**	**09 40 29.9**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=360,slow=6.8,SNR=11						
ARCES				PcP	**PcP**	**09 42 01.4**	**-0.4**
	comp=Z,5.3nm,0.8s,baz=359,slow=4.0,SNR=11						
ARE0	**ARCESS Array S**	**46.57**	**2**	*e*P	**P**	**09 40 30.7**	**+0.4**
	comp=Z,1.9nm,1.4s						
V48A	**Smith Brothers**	**46.59**	**96**	P	**P**	**09 40 30.8**	**-0.1**
	baz=328						
KSPA	**Keystone Colle**	**46.62**	**82**	*e*P	**P**	**09 40 31.3**	**+0.3**
	comp=Z,18nm,1.4s						
USRK	**Ussuriysk Ar.**	**46.66**	**284**	P	**P**	**09 40 30.3**	**-1.0**
	comp=Z,3.5nm,0.7s,baz=32,slow=10,SNR=13						
USRK				PcP	**PcP**	**09 42 01.9**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=17,slow=4.4,SNR=9.6						
W47A	**Westpoint**	**46.67**	**98**	P	**P**	**09 40 31.9**	**+0.3**
	baz=328						
T51A	**Gray**	**46.82**	**93**	P	**P**	**09 40 32.6**	**-0.1**
	baz=327						
X46A	**Booneville**	**46.83**	**99**	P	**P**	**09 40 33.6**	**+0.8**
	baz=328,SNR=9.6						
Q55A	**Buckhannon**	**46.83**	**88**	P	**P**	**09 40 32.5**	**-0.3**
	baz=326						
U50A	**Jamestown**	**46.89**	**94**	P	**P**	**09 40 33.3**	**0.0**
	baz=327						
V49A	**McMinnville**	**46.97**	**96**	P	**P**	**09 40 34.1**	**+0.2**
	baz=328						
W48A	**Pulaski**	**47.05**	**97**	P	**P**	**09 40 34.8**	**+0.3**
	baz=328						
R54A	**Victor**	**47.11**	**89**	P	**P**	**09 40 35.0**	**+0.1**
	baz=326						
T52A	**Hallie**	**47.12**	**92**	P	**P**	**09 40 35.0**	**0.0**
	baz=327						
N59A	**State Game Lan**	**47.14**	**83**	*e*P	**P**	**09 40 35.6**	**+0.5**
	comp=Z,22nm,1.5s						
MDJ	**Mudanjiang**	**47.33**	**286**	*e*P	**P**	**09 40 36.8**	**+0.2**
	comp=Z,14nm,1.3s						
TZTN	**Tazewell**	**47.35**	**93**	*e*P	**P**	**09 40 37.2**	**+0.5**
	comp=Z,39nm,1.6s						
TZTN	**Tazewell**	**47.35**	**93**	P	**P**	**09 40 36.9**	**+0.1**
	baz=327						
SWET	**Sewanee**	**47.42**	**96**	*e*P	**P**	**09 40 37.4**	**0.0**
	comp=Z,44nm,1.7s						
ODNJ	**Ogdensburg**	**47.51**	**82**	*e*P	**P**	**09 40 37.7**	**-0.2**
	comp=Z,9.6nm,1.5s						
GGN	**Saint George**	**47.54**	**72**	*e*P	**P**	**09 40 38.3**	**+0.2**
	comp=Z,27nm,1.3s						
X48A	**Hartselle**	**47.58**	**98**	*e*P	**P**	**09 40 38.7**	**+0.1**
	comp=Z,8.6nm,0.8s						
X48A	**Hartselle**	**47.58**	**98**	P	**P**	**09 40 38.7**	**+0.1**
	baz=328						
V51A	**Loudon**	**47.62**	**94**	*e*P	**P**	**09 40 39.4**	**+0.6**
	comp=Z,26nm,1.4s						
V51A	**Loudon**	**47.62**	**94**	P	**P**	**09 40 39.2**	**+0.3**
	baz=328						
W50A	**Signal Mountai**	**47.71**	**95**	*e*P	**P**	**09 40 41.5**	**+1.9**
	comp=Z,15nm,1.3s						
LMN	**Caledonia Moun**	**47.79**	**70**	*e*P	**P**	**09 40 40.3**	**+0.2**
	comp=Z,18nm,0.6s						
CPCT	**Cooper Cave**	**47.84**	**95**	*e*P	**P**	**09 40 40.1**	**-0.4**
	comp=Z,26nm,1.4s						
X49A	**Woodville**	**47.84**	**97**	P	**P**	**09 40 41.1**	**+0.5**
	baz=328						
V52A	**Sevierville**	**47.92**	**93**	*e*P	**P**	**09 40 41.6**	**+0.5**
	comp=Z,25nm,1.4s						
V52A	**Sevierville**	**47.92**	**93**	P	**P**	**09 40 41.1**	**-0.1**
	baz=328						
DRLN	**Deer Lake**	**47.97**	**62**	*e*P	**P**	**09 40 41.5**	**+0.1**
	comp=Z,38nm,1.4s						
Y48A	**Jasper**	**47.99**	**98**	P	**P**	**09 40 41.6**	**-0.1**
	baz=329						
TKL	**Tuckaleechee C**	**47.99**	**94**	*e*P	**P**	**09 40 42.0**	**+0.2**
	comp=Z,50nm,1.6s						
TKL	**Tuckaleechee C**	**47.99**	**94**	*e*P	**P**	**09 40 42.0**	**+0.2**
TKL				pmax	pmax		
	comp=Z,50nm,1.6s						
BLA	**Blacksburg**	**48.16**	**90**	*e*P	**P**	**09 40 43.9**	**+0.8**
	comp=Z,53nm,1.5s						
BLA	**Blacksburg**	**48.16**	**90**	*e*P	**P**	**09 40 43.9**	**+0.8**
BLA				pmax	pmax		
	comp=Z,53nm,1.5s						
BLA	**Blacksburg**	**48.16**	**90**	P	**P**	**09 40 43.6**	**+0.5**
	baz=327						
X50B	**Fort Payne**	**48.18**	**96**	P	**P**	**09 40 43.3**	**+0.1**
	baz=328						
Y49A	**Blount Mountai**	**48.36**	**97**	*e*P	**P**	**09 40 45.3**	**+0.7**

	comp=Z,27nm,1.4s						
Y49A	Blount Mountai	48.36	97	P	P	09 40 44.8	+0.1
	baz=329						
V53A	Saluda	48.41	93	*e*P	P	09 40 45.6	+0.6
	comp=Z,31nm,1.5s						
V53A	Saluda	48.41	93	P	P	09 40 45.4	+0.5
	baz=328						
X51A	Calhoun	48.44	95	P	P	09 40 45.2	0.0
	baz=328						
U55A	TA2, Sparta	48.48	91	P	P	09 40 45.6	0.0
	baz=327						
147A	Livingston	48.57	100	P	P	09 40 46.4	+0.2
	baz=329						
Y50A	Piedmont	48.63	97	P	P	09 40 46.7	0.0
	baz=329						
R58B	Mineral	48.65	87	*e*P	P	09 40 48.2	+1.5
	comp=Z,30nm,1.6s						
V54A	Nebo	48.69	92	P	P	09 40 47.3	+0.1
	baz=328						
LRAL	Lakeview Retre	48.81	99	*e*P	P	09 40 48.2	+0.2
	comp=Z,11nm,1.4s						
LRAL	Lakeview Retre	48.81	99	P	P	09 40 48.0	0.0
	baz=329						
X52A	Dahlonega	48.83	95	P	P	09 40 48.4	+0.2
	baz=328						
Z49A	Columbiana	48.88	98	P	P	09 40 48.9	+0.4
	baz=329						
Z50A	Ashland	49.09	97	*e*P	P	09 40 50.5	+0.3
	comp=Z,15nm,0.8s						
Z50A	Ashland	49.09	97	P	P	09 40 50.8	+0.6
	baz=329						
149A	Jones	49.27	99	P	P	09 40 52.1	+0.6
	baz=329,SNR=8.4						
Z51A	Franklin	49.36	97	P	P	09 40 52.6	+0.4
	baz=329						
Y52A	Lilburn	49.38	95	*e*P	P	09 40 53.5	+1.1
	comp=Z,42nm,1.5s						
Y52A	Lilburn	49.38	95	P	P	09 40 53.0	+0.6
	baz=328						
GBN	Guysborough	49.50	68	*e*P	P	09 40 53.3	+0.2
	comp=Z,28nm,0.5s						
X54A	Belton	49.54	93	P	P	09 40 53.7	+0.1
	baz=328						
150A	Eclectic	49.60	98	P	P	09 40 54.2	+0.2
	baz=329						
Y53A	Monroe	49.60	95	P	P	09 40 54.4	+0.4
	baz=328						
249A	Camden	49.66	99	P	P	09 40 55.3	+0.8
	baz=330						
CN2	Changchun	49.73	289	*e*P	P	09 40 49.5	-5.3
Z52A	Williamson	49.80	96	P	P	09 40 56.3	+0.7
	baz=329						
HODGE	Hodges	49.86	93	*e*P	P	09 40 56.4	+0.4
	comp=Z,37nm,1.4s						
X55A	Gracelyn & Ava	49.93	93	P	P	09 40 57.1	+0.6
	baz=328						
151A	Opelika	49.97	97	P	P	09 40 56.6	-0.3
	baz=329						
Y54A	Tignall	49.99	94	P	P	09 40 57.5	+0.6
	baz=328						
250A	Grady	50.03	99	*e*P	P	09 40 57.5	+0.2
	comp=Z,97nm,1.6s						
250A	Grady	50.03	99	P	P	09 40 57.4	+0.2
	baz=330						
152A	Waverly Hall	50.11	97	P	P	09 40 58.0	+0.1
	baz=329						
X56A	White Oak	50.18	92	P	P	09 40 58.3	0.0
	baz=328						
MJB9	Matsu-Tunnel	50.26	273	*e*P	P	09 40 59.3	+0.4
	comp=Z,13nm,0.6s						
JSC	Jenkinsville	50.26	92	*e*P	P	09 40 59.6	+0.7
	comp=Z,37nm,1.4s						
JSC	Jenkinsville	50.26	92	*e*P	P	09 40 59.6	+0.7
JSC				pmax	pmax		
	comp=Z,37nm,1.4s						
MJAR	Matsushiro Arr	50.26	273	P	P	09 40 58.4	-0.5
	comp=Z,4.2nm,0.6s,baz=293,slow=16,SNR=21						
MJAR				PcP	PcP	09 42 15.3	-0.4
	comp=Z,1.4nm,0.4s,baz=32,slow=3.6,SNR=4.2						
MAJO	Matsushiro	50.26	273	*e*P	P	09 40 59.2	+0.3
	comp=Z,13nm,0.6s						
MAJO				*e*PcP	PcP	09 42 15.3	-0.4
MAJO	Matsushiro	50.26	273	*e*P	P	09 40 59.3	+0.3
MAJO				*e*		09 42 15.4	
MAJO				pmax	pmax		
	comp=Z,13nm,0.6s						
MAT	Matsushiro	50.26	273	P	P	09 40 58.9	0.0
Y55A	Saluda	50.28	93	P	P	09 40 59.3	+0.1
	baz=328						
251A	Midway	50.31	98	P	P	09 40 59.6	+0.2
	baz=329						
252A	Lumpkin	50.68	97	P	P	09 41 02.0	-0.1
	baz=329						
LNIG	Linares	50.73	116	*e*P	P	09 41 03.5	+0.8
	comp=Z,5.1nm,0.7s						
TLY	Talaya	51.44	310	*e*P	P	09 41 09.3	+1.7
TLY				pmax	pmax		
	comp=Z,15nm,1.1s						
MOY	Mondy	52.33	312	*e*P	P	09 41 15.0	+0.7
ZAK	Zakamensk	52.66	310	*e*P	P	09 41 16.3	-0.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	53.49	305	*e*P	P	09 41 23.3	+0.4
	comp=Z,7.4nm,0.5s						
ULN				*e*PcP	PcP	09 42 28.5	+0.7
ULN	Ulaanbaatar	53.49	305	*e*P	P	09 41 23.3	+0.4
ULN				*e*		09 42 28.5	
ULN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SONA1	Songino Array	53.74	306	*e*P	P	09 41 25.3	+0.6
SONA0	Songino Array	53.75	306	*e*P	P	09 41 24.6	-0.1
SONA0				*e*PcP	PcP	09 42 29.6	+0.8
SONM	Songino Array	53.75	306	P	P	09 41 24.6	-0.1
	comp=Z,6.1nm,0.6s,baz=18,slow=5.0,SNR=40						
SONM				PcP	PcP	09 42 29.6	+0.8
	comp=Z,2.9nm,0.5s,baz=78,slow=1.5,SNR=8.5						
KSRS	Korea Array	53.96	283	P	P	09 41 26.2	0.0
	comp=Z,2.6nm,0.5s,baz=28,slow=6.8,SNR=12						
NC204	NORSAR Array S	54.02	12	*e*P	P	09 41 26.4	-0.1
	comp=Z,53nm,1.6s						
PRGR	Permogore	54.05	351	*e*P	P	09 41 26.3	-0.2
PRGR				pmax	pmax		
	comp=Z,14nm,0.6s						
NBO00	NORSAR Array S	54.27	12	*e*P	P	09 41 27.9	-0.3
	comp=Z,40nm,1.3s						
NB201	NORSAR Array S	54.29	11	*e*P	P	09 41 28.9	+0.6
	comp=Z,32nm,1.2s						
NB2	NORSAR Subarra	54.30	12	P	P	09 41 28.0	-0.4
	comp=Z,7.8nm,0.7s,baz=351,slow=7.4						
NB200	NORSAR Array S	54.30	12	*e*P	P	09 41 27.6	-0.8
NOA	NORSAR Array B	54.30	12	P	P	09 41 27.6	-0.8
	comp=Z,5.1nm,0.7s,baz=350,slow=7.2,SNR=15						
KNGR	Kungurtug, Tuv	54.36	314	⇑*i*P	P	09 41 29.1	0.0
NAO01	NORSAR Array S	54.46	12	*e*P	P	09 41 29.5	-0.1
NC602	NORSAR Array S	54.62	11	*e*P	P	09 41 31.1	+0.4
	comp=Z,19nm,1.4s						
NVS	Novosibirsk	54.63	326	*e*P	P	09 41 29.9	-0.9
FIA1	FINESS Array S	54.70	3	*e*P	P	09 41 30.8	-0.4
FIA0	FINESS Array S	54.70	3	*e*P	P	09 41 30.4	-0.7
FIA0				*e*PcP	PcP	09 42 31.4	-0.6
FIA0	FINESS Array S	54.70	3	*e*P	P	09 41 30.5	-0.7
FIA0				*e*		09 42 31.4	
FINES	FINESS Array B	54.70	3	P	P	09 41 30.4	-0.7
	comp=Z,3.7nm,0.4s,baz=2.2,slow=8.5,SNR=51						
FINES				PcP	PcP	09 42 31.4	-0.6
	comp=Z,1.6nm,0.5s,baz=46,slow=5.3,SNR=3.7						
ZAA1	Zalesovo Array	55.04	324	*e*P	P	09 41 32.6	-1.2
ZALV	Zalesovo Beam	55.04	324	*e*P	P	09 41 33.2	-0.6
ZALV	Zalesovo Beam	55.04	324	P	P	09 41 32.6	-1.2
	comp=Z,3.4nm,0.3s,baz=18,slow=7.5,SNR=11						
KLMR	Klimovskoe	55.16	355	*e*P	P	09 41 33.9	-0.6
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KLMR	Klimovskoe	55.16	355	*e*P	P	09 41 33.9	-0.6
KLMR				AMP		09 41 35.5	
	comp=Z,7.0nm,0.6s						
KONO	Kongsberg	55.52	13	*e*P	P	09 41 37.6	+0.5
	comp=Z,49nm,1.6s						
KONO	Kongsberg	55.52	13	*e*P	P	09 41 37.6	+0.5
KONO				pmax	pmax		
	comp=Z,49nm,1.6s						
JNU	Nakatsue	56.35	277	*e*P	P	09 41 43.8	+0.4
	comp=Z,45nm,1.5s						
VSU	Vasula	57.70	2	⇓*e*P	P	09 41 53.1	+0.6
VSU				pmax	pmax		
	comp=Z,56nm,0.7s						
HHC	Hu-ho-hao-te	57.79	298	*e*P	P	09 42 01.3	+7.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,61nm,6.1s						
ARU	Arti	57.87	342	*e*P	P	09 41 53.9	+0.1
	comp=Z,15nm,0.6s						
ARU	Arti	57.87	342	⇑*i*P	P	09 41 53.7	-0.1
ARU				pmax	pmax		
	comp=Z,15nm,0.7s						
ESK	Eskdalemuir	58.06	22	*e*P	P	09 41 55.4	+0.3
	comp=Z,12nm,0.6s						
ESK	Eskdalemuir	58.06	22	*e*P	P	09 41 55.4	+0.3
ESK				pmax	pmax		
	comp=Z,12nm,0.6s						
DGZ	Jazzator, Alta	58.17	320	*c i*P	P	09 41 56.8	+0.6
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	59.17	333	*e*P	P	09 42 03.1	+0.4
	comp=Z,13nm,1.2s						
BRVK	Borovoye	59.17	333	*e*P	P	09 42 03.2	+0.4
BRVK				pmax	pmax		
	comp=Z,13nm,1.2s						
BVAR	Borovoye Array	59.18	333	P	P	09 42 02.4	-0.5
	comp=Z,3.3nm,0.4s,baz=51,slow=9.1,SNR=29						
BVAR				PcP	PcP	09 42 49.3	-0.4
	comp=Z,4.3nm,0.4s,baz=222,slow=2.0,SNR=4.1						
KURK	Kurchatov	59.54	327	*e*P	P	09 42 05.1	-0.3
KURK				*e*PcP	PcP	09 42 51.2	0.0
KURK	Kurchatov	59.54	327	P	P	09 42 05.0	-0.3
KURK						09 42 51.3	
KURK				pmax	pmax		
	comp=Z,68nm,0.8s						
KURBB	Kurchatov Arra	59.65	327	P	P	09 42 05.0	-1.1
	comp=Z,68nm,0.8s,baz=29,slow=6.5,SNR=12						
KURBB				PcP	PcP	09 42 51.2	-0.4
	comp=Z,6.9nm,0.6s,baz=26,slow=4.3,SNR=17						
OBN	Obninsk	61.00	356	⇓*e*P	P	09 42 14.1	-1.1
OBN				pmax	pmax		
	comp=Z,218nm,4.9s						
KLNR	Kaliningrad	61.33	7	⇓*e*P	P	09 42 17.0	-0.4
KLNR				pmax	pmax		
	comp=Z,65nm,0.6s						
MK31	Makanchi Array	62.23	322	*e*P	P	09 42 22.5	-1.2
MK31	Makanchi Array	62.23	322	*e*P	P	09 42 22.5	-1.2
MK32	Makanchi Array	62.23	322	*e*P	P	09 42 22.4	-1.3
MK32				*e*pP	PcP	09 43 00.1	-2.2
MKAR	Makanchi Array	62.23	322	*e*P	P	09 42 22.4	-1.3
	comp=Z,22nm,0.6s						
MKAR	Makanchi Array	62.23	322	P	P	09 42 22.4	-1.3
	comp=Z,4.1nm,0.6s,baz=50,slow=6.9,SNR=60						
MKAR				PcP	PcP	09 43 00.1	-2.2
	comp=Z,1.7nm,0.5s,baz=40,slow=3.9,SNR=5.7						
MK01	Makanchi Array	62.25	322	*e*P	P	09 42 22.5	-1.3
MAKZ	Makanchi	62.30	323	*e*P	P	09 42 23.0	-1.2
	comp=Z,4.8nm,0.7s						
MAKZ	Makanchi	62.30	323	*e*P	P	09 42 23.0	-1.2
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NJ2	Nanjing	62.42	287	*e*P	P	09 42 27.8	+2.7
NJ2				pmax	pmax		
	comp=Z,92nm,1.0s						
GTA	Gaotai	63.43	306	*e*P	P	09 42 31.5	-0.3
GTA				pP	pP	09 43 04.8	-1.5
GTA				sP	sP	09 43 22.5	+0.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WMQ	Urumqi	63.43	317	*e*P	P	09 42 35.3	+3.6
WMQ				LR	LR		
	comp=Z,380nm,17.3s						
WMQ				LR	LR		
	comp=Z,250nm,25.5s						
WMQ				LR	LR		
	comp=Z,190nm,17.7s						
AKTO	Aktyubinsk	63.79	341	P	P	09 42 33.3	-0.5
	comp=Z,11nm,0.4s,baz=34,slow=7.6,SNR=59						
MEM	Membach	63.99	17	⇑P	P	09 42 35.7	+0.5
	comp=Z,13nm,1.2s						
CLL	Collm	64.08	12	⇑*i*P	P	09 42 35.5	-0.2
CLL				*e*PP	PP	09 45 02.0	+4.3
CLL	Collm	64.08	12	⇑*i*P	P	09 42 35.5	-0.2
BCLA	Clavier	64.09	18	⇑P	P	09 42 36.1	+0.4
DOU	Dourbes	64.31	18	⇑P	P	09 42 37.3	+0.1
	comp=Z,9.1nm,1.6s						
BRG	Berggiesshubel	64.60	12	*e*P	P	09 42 39.2	+0.1
	comp=Z,12nm,0.9s						
BRG	Berggiesshubel	64.60	12	*e*P	P	09 42 39.2	+0.1
BRG				pmax	pmax		
	comp=Z,12nm,0.9s						
MOX	Moxa	64.61	13	P	P	09 42 40.6	+1.4
MOX				pmax	pmax		
	comp=Z,28nm,1.1s						
ABKAR	Akbulak array	64.65	339	*e*P	P	09 42 39.4	0.0
VSR	Storozhevoye	64.80	354	⇓*e*P	P	09 42 40.8	+0.4
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LZH	Lanzhou	64.90	301	*e*P	P	09 42 41.5	0.0
LZH				pP	PcP	09 43 12.3	-1.2
LZH				sP	sP	09 43 31.5	-0.3
LZH				PP	PP	09 45 04.0	-1.5
LZH				*e*S	S	09 51 10.0	-1.1
LZH				sS	sS	09 52 10.3	-0.9
LZH				SS	SS	09 55 20.0	-4.5
LZH				pmax	pmax		
	comp=Z,54nm,1.3s						
LZH				pmax	pmax		
	comp=Z,540nm,4.9s						
WLF	Walferdange	64.94	17	⇑P	P	09 42 41.8	+0.5
PVCC	Panska Ves	65.00	11	*e*P	P	09 42 42.3	+0.6
PVCC	Panska Ves	65.00	11	*e*P	P	09 42 42.3	+0.6
NKC	Novy Kostel	65.09	13	*e*P	P	09 42 42.9	+0.5
NKC	Novy Kostel	65.09	13	*e*P	P	09 42 42.9	+0.5
DPC	Dobruska-Polom	65.31	10	*e*P	P	09 42 44.6	+0.8
DPC	Dobruska-Polom	65.31	10	*e*P	P	09 42 44.6	+0.8
AKASG	Malin Array Be	65.51	1	P	P	09 42 44.5	-0.4
	comp=Z,9.0nm,0.4s,baz=2.9,slow=6.4,SNR=53						
AKBB	Malin Array Si	65.51	1	*e*P	P	09 42 44.7	-0.3
	comp=Z,22nm,0.9s						
AKBB	Malin Array Si	65.51	1	*e*P	P	09 42 44.7	-0.3
AKBB				pmax	pmax		
	comp=Z,22nm,0.9s						
KIEV	Kiev	65.51	1	*e*P	P	09 42 44.7	-0.3
	comp=Z,23nm,1.0s						
KIEV	Kiev	65.51	1	⇑*i*P	P	09 42 44.7	-0.3
KIEV	Kiev	65.51	1	*e*P	P	09 42 44.7	-0.3
KIEV				pmax	pmax		
	comp=Z,23nm,1.0s						
PRU	Pruhonice	65.53	11	*e*P	P	09 42 45.1	0.0
PRU	Pruhonice	65.53	11	*e*P	P	09 42 45.1	0.0
AK11	Malin Array Si	65.53	1	*e*P	P	09 42 44.4	-0.6
KRLC	Kraliky	65.62	10	*e*P	P	09 42 46.3	+0.5
KRLC	Kraliky	65.62	10	*e*P	P	09 42 46.3	+0.5
MORC	Moravsky Berou	65.97	9	*e*P	P	09 42 48.4	+0.3
	comp=Z,9.4nm,0.8s						
MORC	Moravsky Berou	65.97	9	⇓*i*P	P	09 42 47.8	-0.2
MORC	Moravsky Berou	65.97	9	*e*P	P	09 42 48.4	+0.3
MORC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MORC	Moravsky Berou	65.97	9	*e*P	P	09 42 48.1	+0.1
KHC	Kasperske Hory	66.29	12	*e*P	P	09 42 50.6	+0.6
	comp=Z,5.7nm,0.9s						
KHC	Kasperske Hory	66.29	12	*e*P	P	09 42 50.6	+0.6
KHC	Kasperske Hory	66.29	12	*e*P	P	09 42 50.7	+0.6
KHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VRAC	Vranov	66.37	10	⇑*i*P	P	09 42 51.2	+0.7
VRAC	Vranov	66.37	10	*e*P	P	09 42 51.0	+0.5
ECH	Echery	66.49	17	*e*P	P	09 42 51.4	+0.1
	comp=Z,10nm,0.9s						
ECH	Echery	66.49	17	*e*P	P	09 42 51.4	+0.1
ECH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BFO	Black Forest	66.52	16	*e*P	P	09 42 52.2	+0.7
	comp=Z,8.6nm,1.1s						
BFO	Black Forest	66.52	16	*i* P	P	09 42 52.4	+0.9
GEC2	GERESS Array S	66.59	12	*e*P	P	09 42 52.0	0.0
	comp=Z,15nm,1.1s						
GEC2	GERESS Array S	66.59	12	*e*P	P	09 42 52.0	0.0
GEC2				pmax	pmax		
	comp=Z,15nm,1.1s						
GERES	GERESS Array B	66.59	12	P	P	09 42 52.1	+0.1
	comp=Z,3.9nm,0.4s,baz=2.4,slow=6.9,SNR=36						
GEA0	GERESS Array S	66.60	12	*e*P	P	09 42 51.5	-0.5
KRUC	Moravsky	66.60	10	*e*P	P	09 42 52.3	+0.3
LANS	Liptovska Anna	66.72	8	*e*P	P	09 42 53.9	+1.1
LANS	Liptovska Anna	66.72	8	*e*P	P	09 42 53.9	+1.1
JAVC	Velka Javorina	66.90	9	*e*P	P	09 42 55.2	+1.3
MFF	Saint Martin d	66.99	23	*e*P	P	09 42 54.8	+0.4
MFF				pmax	pmax		
	comp=Z,15nm,0.9s						
SSF	Saint Saulge	67.12	20	*e*P	P	09 42 55.5	+0.2
SSF				pmax	pmax		
	comp=Z,39nm,1.3s						
VYHS	Vyhne	67.34	8	*e*P	P	09 42 57.6	+0.9
VYHS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VYHS	Vyhne	67.34	8	*e*P	P	09 42 57.6	+0.9
MODS	Modra-Piesok	67.35	10	*e*P	P	09 42 58.3	+1.5
MODS				pmax	pmax		
	comp=Z,22nm,0.9s						
MODS	Modra-Piesok	67.35	10	*e*P	P	09 42 58.3	+1.5
UZH	Uzhgorod	67.39	6	*e*P	P	09 42 56.9	-0.1
USP	Ospenovka	67.51	327	P	P	09 42 57.2	-0.6
	SNR=6.9						
ZST	Bratislava	67.52	10	*e*P	P	09 42 57.9	+0.2
ZST				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZST	Bratislava	67.52	10	*e*P	P	09 42 57.9	+0.2
TKM2	Tokmak 2	67.56	326	P	P	09 42 58.2	-0.2
	SNR=8.1						
MOA	Molln	67.63	12	*e*P	P	09 42 58.8	+0.3
	comp=Z,9.5nm,1.0s						
RETA	Reutte	67.64	14	*i* P	P	09 42 59.2	+0.6
	comp=Z,8.2nm,0.9s						
CONA	Conrad Observa	67.69	11	*e*P	P	09 42 59.7	+0.8
	comp=Z,17nm,0.8s,SNR=6.3						
CHMS	Chumysh	67.70	327	P	P	09 42 59.1	0.0
	SNR=5.4						
MOTA	Moosalm	67.81	14	*i* P	P	09 43 00.5	+0.7
	comp=Z,4.8nm,0.5s						
WATA	Walderalm	67.87	14	*i* P	P	09 43 00.0	-0.2
	comp=Z,8.2nm,0.5s						
TRPA	Tarpa	67.91	6	⇑*i*P	P	09 43 00.4	+0.2
SQTA	Sankt Quirin	67.95	14	*i* P	P	09 43 01.3	+0.7
	comp=Z,22nm,0.8s,SNR=6.7						
WTTA	Wattenberg	67.95	14	*i* P	P	09 43 01.6	+0.9
	comp=Z,31nm,0.9s,SNR=7.5						
KBK	Karagaybulak	67.97	326	P	P	09 43 00.8	-0.1
	SNR=7.9						
PSZ	Piszkesteto	67.98	8	*e*P	P	09 42 59.6	-1.2
	comp=Z,16nm,0.9s						
PSZ	Piszkesteto	67.98	8	⇓*i*P	P	09 43 01.6	+0.8
PSZ	Piszkesteto	67.98	8	*e*P	P	09 42 59.6	-1.2
PSZ				pmax	pmax		
	comp=Z,16nm,0.9s						
FETA	Feichten	68.09	15	*e*P	P	09 43 02.4	+0.8
	comp=Z,18nm,1.1s,SNR=6.1						
AAK	Ala-Archa	68.10	327	*e*P	P	09 43 01.8	+0.1
	comp=Z,3.9nm,0.7s						
AAK	Ala-Archa	68.10	327	⇓*e*P	P	09 43 01.3	-0.4
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TARG	Taragay, Kyrgy	68.13	324	*e*P	P	09 43 03.3	+1.1
	comp=Z,6.7nm,1.4s						
EKS2	Erkin-Say	68.25	327	P	P	09 43 02.6	0.0
	SNR=18						
KBA	Koelnbreinsper	68.31	13	*i* P	P	09 43 03.8	+0.8
	comp=Z,44nm,0.9s,SNR=10						
ARSA	Arzberg	68.33	11	*i* P	P	09 43 03.4	+0.5
	comp=Z,11nm,1.1s						
FUORN	Ofenpass-Fuorn	68.44	15	*e*P	P	09 43 04.9	+1.0
	comp=Z,16nm,0.9s						
KZA	Kyzart	68.44	326	P	P	09 43 04.1	0.0
	SNR=7.3						
BUR08	Bucovina Ar. S	68.49	4	*e*P	P	09 43 04.3	+0.4
BUR04	Bucovina Ar. S	68.52	4	*e*P	P	09 43 04.3	+0.2
BURAR	Bucovina Array	68.52	4	⇓*i*P	P	09 43 04.3	+0.1
BURAR	Bucovina Array	68.52	4	P	P	09 43 04.3	+0.1
KK31	Karatay Array	68.58	330	*e*P	P	09 43 04.0	-0.5
KK31	Karatay Array	68.58	330	*e*P	P	09 43 04.0	-0.5
KKAR	Karatay Array	68.58	330	*e*P	P	09 43 04.0	-0.5
KKAR	Karatay Array	68.58	330	*e*P	P	09 43 04.0	-0.5
LFF	La Frestale	68.75	22	*e*P	P	09 43 05.6	+0.1
LFF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AML	Almayashu	68.77	327	P	P	09 43 06.0	-0.2
	SNR=9.2						
MYKA	Terra Mystica	68.78	12	*e*P	P	09 43 06.3	+0.6
	comp=Z,6.8nm,0.6s						
SOKA	Soboth	68.86	11	*i* P	P	09 43 06.6	+0.4
	comp=Z,11nm,1.2s						
CAF	Calviac	68.98	21	*e*P	P	09 43 07.0	0.0
CAF				pmax	pmax		
	comp=Z,14nm,1.1s						
OBKA	Obir	68.98	12	*i* P	P	09 43 07.4	+0.3
	comp=Z,44nm,1.0s,SNR=7.5						
BIZ	Bicaz	69.22	3	⇑*i*P	P	09 43 08.9	+0.5
ARSB	Arslanbob	69.71	327	*e*P	P	09 43 11.2	-0.4
	comp=Z,8.8nm,1.1s						
VRI	Vrincioaia	70.31	3	⇑*i*P	P	09 43 14.6	-0.5
VRI	Vrincioaia	70.31	3	P	P	09 43 14.6	-0.5
PLOR	Plostina	70.32	3	⇓*i*P	P	09 43 14.4	-0.8
PLOR	Plostina	70.32	3	P	P	09 43 14.3	-0.9
BZS	Buzias	70.37	7	⇑*i*P	P	09 43 15.6	+0.2
GZR	Gura Zlata	70.65	6	⇑*i*P	P	09 43 17.4	+0.2
MLR	Muntele Rosu	70.66	4	*e*P	P	09 43 18.1	+0.7
	comp=Z,27nm,1.4s						
MLR	Muntele Rosu	70.66	4	⇑*i*P	P	09 43 16.9	-0.5
MLR	Muntele Rosu	70.66	4	*e*P	P	09 43 18.1	+0.7
MLR				pmax	pmax		
	comp=Z,27nm,1.4s						
KSH	Kashi	70.68	324	P	P	09 43 20.0	+2.4
KSH				pmax	pmax		
	comp=Z,280nm,3.9s						
VOIR		70.69	4	⇑*i*P	P	09 43 17.5	0.0
ARR	Arges	70.75	4	⇑*i*P	P	09 43 18.1	+0.3
CFR	Carcaliu	71.02	2	⇑*i*P	P	09 43 19.1	-0.2
DIVS	Divibare	71.79	8	*e*P	P	09 43 23.8	-0.4
	comp=Z,9.8nm,0.7s						
KIV	Kislovodsk	71.84	351	*e*P	P	09 43 25.0	+0.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	Khabaz	72.05	351	P	P	09 43 25.7	+0.2
	comp=Z,1.3nm,0.4s,baz=92,slow=1.6,SNR=7.3						
NCK	Nalchik	72.23	350	⇑*e*P	P	09 43 28.5	+1.8
NCK				pmax	pmax		
	comp=Z,16nm,0.4s						
GAR	Garm	72.54	329	*e*P	P	09 43 28.5	-0.2
	comp=Z,13nm,0.8s						
GAR	Garm	72.54	329	*e*P	P	09 43 28.5	-0.2
GAR				pmax	pmax		
	comp=Z,13nm,0.8s						
ES19	SONSECA Array	72.97	27	*e*P	P	09 43 31.0	-0.1
ESDC	Sonseca Array	72.98	27	P	P	09 43 31.6	+0.3
	comp=Z,3.7nm,0.7s,baz=348,slow=5.1,SNR=15						
CHGR	Chuyangaron	73.13	329	*e*P	P	09 43 32.0	-0.2
	comp=Z,51nm,0.5s						
PDG	Podgorica	73.41	9	⇑*i*P	P	09 43 33.1	-0.4
TTG	Podgorica	73.41	9	*e*P	P	09 43 33.4	-0.1
	comp=Z,14nm,0.7s						
VTS	Vitosha	73.46	6	*e*P	P	09 43 32.5	-1.6
	comp=Z,6.6nm,0.6s						
VTS	Vitosha	73.46	6	⇓*i*P	P	09 43 33.5	-0.6
VTS	Vitosha	73.46	6	*e*P	P	09 43 32.5	-1.6
VTS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
DIKM	Dikmen	74.50	356	⇑*i*P	P	09 43 39.8	-0.2
KMI	Kunming	75.10	297	P	P	09 43 44.0	+0.1
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
FNA	Florina	75.17	7	*e*P	P	09 43 43.3	-0.6
	comp=Z,20nm,0.6s						
FNA	Florina	75.17	7	*e*P	P	09 43 43.3	-0.6
FNA				pmax	pmax		
	comp=Z,20nm,0.6s						
GNI	Garni	75.47	349	⇓*e*P	P	09 43 46.1	+0.4
GNI				pmax	pmax		
	comp=Z,37nm,1.2s						
LIT	Litokhoron	75.91	6	*e*P	P	09 43 47.7	-0.4
	comp=Z,34nm,1.2s						
LIT	Litokhoron	75.91	6	*e*P	P	09 43 47.7	-0.4
LIT				pmax	pmax		
	comp=Z,34nm,1.2s						
GEYT	Alibeck	75.98	338	P	P	09 43 48.8	+0.3
	comp=Z,3.7nm,0.6s,baz=321,slow=2.1,SNR=7.1						
BR101	Keskin Array S	76.46	358	*e*P	P	09 43 51.2	-0.1
BRTR	Keskin Array B	76.46	358	P	P	09 43 51.2	-0.1
	comp=Z,3.7nm,0.9s,baz=20,slow=3.9,SNR=13						
ZARC	Zaragoza, Cauc	76.55	101	*e*P	P	09 43 50.4	-1.5
ZARC	Zaragoza, Cauc	76.55	101	*e*P	P	09 43 50.4	-1.5
NIL	Nilore	76.92	325	*e*P	P	09 43 54.0	+0.1

	comp=Z,47nm,1.4s						
NIL	Nilore	76.92	325	eP	P	09 43 54.0	+0.1
NIL				pmax	pmax		
	comp=Z,47nm,1.4s						
KBL	Kabul	77.10	328	eP	P	09 43 54.4	-0.6
	comp=Z,5.4nm,0.8s						
KBL	Kabul	77.10	328	eP	P	09 43 54.4	-0.6
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SDV	Santo Domingo	77.13	96	eP	P	09 43 56.6	+1.1
	comp=Z,7.2nm,0.6s						
BRRC	Barranca, Sant	77.38	100	eP	P	09 43 54.5	-2.1
BRRC	Barranca, Sant	77.38	100	eP	P	09 43 54.5	-2.1
PTBC	PUERTO BERRIO,	77.57	101	eP	P	09 43 56.2	-1.5
PTBC	PUERTO BERRIO,	77.57	101	eP	P	09 43 56.2	-1.5
PAMC	Pamplona, Colo	77.61	99	eP	P	09 43 57.9	-0.6
PAMC	Pamplona, Colo	77.61	99	eP	P	09 43 57.9	-0.6
BARC	Barichara	78.07	100	eP	P	09 44 01.1	+0.4
BARC	Barichara	78.07	100	eP	P	09 44 01.1	+0.4
GUN	Gumba	78.64	312	eP	P	09 44 03.6	-0.2
	comp=Z,12nm,0.4s						
RREF	El Recreo	78.66	102	eP	P	09 44 06.9	+2.5
RREF	El Recreo	78.66	102	eP	P	09 44 06.9	+2.5
RUSC	La Rusia	78.74	100	eP	P	09 44 04.4	-0.3
RUSC	La Rusia	78.74	100	eP	P	09 44 04.4	-0.3
JIRN	Jiri	78.77	312	eP	P	09 44 04.6	0.0
	comp=Z,29nm,0.5s						
DANN	Dangsing	78.91	314	eP	P	09 44 05.1	-0.1
	comp=Z,14nm,0.3s						
KKN	Kakani	78.94	313	eP	P	09 44 05.4	0.0
YOTC	Yotoco, Valle	79.05	104	eP	P	09 44 05.2	-0.7
YOTC	Yotoco, Valle	79.05	104	eP	P	09 44 05.2	-0.7
KEST	Kesra	79.06	18	eP	P	09 44 06.0	+0.4
	comp=Z,15nm,1.0s						
KEST	Kesra	79.06	18	P	P	09 44 06.0	+0.4
	comp=Z,10nm,0.9s,baz=167,slow=3.0,SNR=7.7						
PKIN	Phulchoki	79.10	312	eP	P	09 44 05.6	-0.7
	comp=Z,7.8nm,0.5s						
PKI	Pulchoki	79.11	312	eP	P	09 44 05.8	-0.6
ODAN	Odare	79.11	310	eP	P	09 44 06.1	-0.2
ROSC	El Rosal	79.15	101	P	P	09 44 08.1	+1.3
	comp=Z,8.4nm,0.5s,baz=112,slow=14,SNR=5.8						
DMN	Daman	79.17	313	eP	P	09 44 06.5	-0.1
	comp=Z,9.6nm,0.3s						
RAMN	Ramite	79.29	311	eP	P	09 44 06.4	-0.9
	comp=Z,20nm,0.6s						
PYUN	Piuthan	79.38	315	eP	P	09 44 07.1	-0.6
	comp=Z,5.7nm,0.4s						
KOLN	Koldanda	79.50	314	eP	P	09 44 07.7	-0.7
CHIC	Chingaza	79.59	101	eP	P	09 44 08.5	-0.7
CHIC	Chingaza	79.59	101	eP	P	09 44 08.5	-0.7
POPC	Popayan, Colom	80.21	105	eP	P	09 44 11.8	-0.5
POPC	Popayan, Colom	80.21	105	eP	P	09 44 11.8	-0.5
SOTA	Rioblanco	80.60	105	eP	P	09 44 14.3	-0.4
SOTA	Rioblanco	80.60	105	eP	P	09 44 14.3	-0.4
FLOC	Florencia	81.50	104	eP	P	09 44 18.4	-0.5
FLOC	Florencia	81.50	104	eP	P	09 44 18.4	-0.5
CMAR	Chiang Mai Arr	82.60	297	P	P	09 44 24.5	-0.1
	comp=Z,4.1nm,0.7s,baz=4.5,slow=5.9,SNR=29						
RAYN	Ar Rayn	91.87	346	eP	P	09 45 09.6	+0.2
	comp=Z,7.6nm,0.8s						
RAYN	Ar Rayn	91.87	346	eP	P	09 45 09.6	+0.2
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RAO	Raoul Island	95.74	205	LR	LR	10 23 47.6	
	comp=Z,841nm,19.4s,baz=211,slow=32						
WR1	Warramunga Arr	101.94	249	ePdif	Pdif	09 45 53.0	-1.7
WRA	Warramunga Arr	101.94	249	P	Pdif	09 45 53.0	-1.7
	comp=Z,0.3nm,0.7s,baz=27,slow=5.6,SNR=3.7						
ASAR	Alice Springs	105.45	248	Pdiff	Pdif	09 46 09.4	-0.9
	comp=Z,0.2nm,0.6s,baz=20,slow=5.4,SNR=3.2						
PLCA	Paso Flores	121.29	119	ePKPdf	PKPdf	09 50 52.5	-0.2
PLCA	Paso Flores	121.29	119	PKP	PKPdf	09 50 52.3	-0.4
	comp=Z,1.5nm,0.6s,baz=306,slow=3.3,SNR=8.5						
BOSA	Boshof	144.31	8	PKIKP	PKPab	09 51 34.0	-0.5
BOSA				pmax	pmax		
	comp=Z,17nm,0.5s						
BOSA	Boshof	144.31	8	PKP	PKPab	09 51 34.0	-0.5
	comp=Z,17nm,0.5s,baz=355,slow=3.6,SNR=72						
VNDA	Vanda	144.51	196	ePKPdf	PKPab	09 51 34.0	+0.2
VNDA	Vanda	144.51	196	PKP	PKPab	09 51 33.6	-0.1
	comp=Z,7.5nm,0.7s,baz=9.8,slow=3.1,SNR=16						
SUR	Sutherland	147.64	16	ePKPdf	PKPbc	09 51 43.8	-0.9
QSPA	South Pole Qui	153.94	180	ePKPbc	PKPbc	09 51 58.0	-0.3
QSPA				ePKPab	PKPab	09 52 12.7	+0.3

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*NIED **26** 09:41:00, 29°.30N×142°.50E, h5^{km}, Mw4.0 Best double couple: M$_0$9.67000×10^{14} NP1:φ$_s$186.00000°, δ40.00000°, λ34.00000°. NP2:φ$_s$69.00000°, δ69.00000°, λ124.00000°.*
*IDC **26** 09:41:31.2±0.6, 29°.31N×142°.32E, h0^{km}, mb4.0/21, mb1 4.2/25, mb1mx4.1/42, mbtmp4.0/25, ML3.4/5, MS3.4/2, Ms1 3.4/2, ms1mx2.7/38, Error ellipse: s-maj=16.4km s-min=13.6km az=79.0*
*JMA **26** 09:41:32.7±0.2, 29°.35N×142°.54E, h52^{km}, M4.4*
*MOS **26** 09:41:32.8±1.0, 29°.32N×142°.34E, h23^{km}, mb4.4/19, Error ellipse: s-maj=12.7km s-min=6.0km az=111.3*
*NEIC **26** 09:41:33.5±2.0, 29°.31N×142°.27E, h14^{km}±12^{km}, mb4.4/24, Error ellipse: s-maj=5.4km s-min=4.4km az=115.0*
*ISCJB **26** 09:41:33.1±0.3, 29°.35N±0°.03×142°.24E±0°.05, h24^{km}, mb4.3/49, MS3.7/1, Error ellipse: s-maj=6.5km s-min=3.6km az=169.0*
ISC 26 09:41:34.7±0.4, **29°.34N**±0°.04×**142°.25E**±0°.07, **h24**^{km}, **n120**, σ**1^{s}45**/137, **mb4.3**/49, **3C-8D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.23	182	ePn	Pn	09 42 10.1	-0.1
CBIJ				eSn	Sn	09 42 34.7	-2.5
CBIJ	Chichi jima	2.23	182	P	Pn	09 42 08.7	-1.6
CBIJ				eS	Sn	09 42 35.0	-2.1
JCJ	Chichijima	2.24	182	Pn	Pn	09 42 10.1	-0.2
	6.0nm,0.3s,baz=272,slow=23,SNR=6.1						
JCJ				Sn	Sn	09 42 34.7	-2.5
	83nm,0.3s,baz=92,slow=24,SNR=14						
JHJ2	Mitsune	4.30	332	ePn	Pn	09 42 38.2	-0.5
JHJ2	Mitsune	4.30	332	P	Pn	09 42 39.0	+0.3
JHJ	Hachijo jima 2	4.32	331	Pn	Pn	09 42 38.4	-0.5
	16nm,0.3s,baz=194,slow=9.5,SNR=2.9						
JHJ				Sn	Sn	09 43 27.6	-1.0
	8.5nm,0.3s,baz=90,slow=20,SNR=2.3						
JHJ				LR	LR	09 44 16.0	
	comp=Z,209nm,18.6s,baz=202,slow=38						
BSO1	Boso 1	5.41	349	P	Pn	09 42 53.0	-0.4
BSO3	Boso 3	5.64	345	P	Pn	09 42 56.6	-0.3
BSO4	Boso 4	5.86	344	P	Pn	09 43 00.7	+0.7
JOD2	Odawara 2	6.49	336	P	Pn	09 43 09.8	+1.1
JHU	Hanno	6.96	340	P	Pn	09 43 15.4	+0.2
JHU				eS	Sn	09 44 32.4	-1.2
JRY	Ryogami san	7.23	338	P	Pn	09 43 19.6	+0.6
JHO	Hitachi	7.39	349	P	Pn	09 43 19.3	-1.8
JHO				eS	Sn	09 44 37.6	-6.6
JAG	Ashikaga	7.45	342	P	Pn	09 43 21.3	-0.6
JAG				eS	Sn	09 44 44.0	-1.6
INU	Inuyama	7.45	325	ePn	Pn	09 43 22.6	+0.7
MJA0	Matsu Arr-Jizo	7.93	336	eP	Pn	09 43 29.5	+0.9
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	7.95	336	Pn	Pn	09 43 29.1	+0.4
	comp=Z,1.0nm,0.3s,baz=156,slow=10,SNR=47						
MAJO	Matsushiro	7.95	336	ePn	Pn	09 43 29.4	+0.6
MAJO	Matsushiro	7.95	336	eP	Pn	09 43 29.4	+0.6
MAT	Matsushiro	7.95	336	P	Pn	09 43 29.2	+0.4
MAT				S	Sn	09 45 00.5	+2.6
MJB9	Matsu-Tunnel	7.95	336	ePn	Pn	09 43 29.3	+0.5
JFK	Kawauchi	8.09	352	P	Pn	09 43 28.6	-2.1
JFK				eS	Sn	09 44 53.3	-8.1
ERM	Erimo	12.67	3	ePn	Pn	09 44 31.6	-1.8
ERM	Erimo	12.67	3	eP	Pn	09 44 31.6	-1.8
KSRS	Korea Array	14.44	308	P	P	09 45 00.0	-4.2
KSRS	Korea Array	14.44	308	Pn	P	09 44 60.0	-4.2
	comp=Z,0.3nm,0.3s,baz=114,slow=12,SNR=7.4						
KSAR	Wonju Array Be	14.46	308	Pn	Pn	09 44 60.0	+2.1
KSAR	Wonju Array Be	14.46	308	P	Pn	09 45 00.0	+2.1
USRK	Ussuriysk Ar.	16.94	334	Pn	P	09 45 30.4	-1.4
	comp=Z,0.2nm,0.3s,baz=140,slow=9.9,SNR=6.5						
YSS	Yuzh-Sakhalins	17.59	1	eP	Pn	09 45 36.8	-1.4
YSS				pmax	pmax		
	comp=Z,12nm,1.3s						
YHNB	Yeheng	19.17	261	eP	Pn	09 45 56.9	-0.8
	comp=Z,19nm,1.1s						
YULB	Yu-li	19.68	257	eP	P	09 46 00.6	-1.6
	comp=Z,10nm,1.0s						
SSLB	Suanglung	19.83	259	eP	Pn	09 46 04.9	-0.6
	comp=Z,15nm,1.1s						
KLR	Kul'dur	21.42	341	⇑eP	P	09 46 21.1	+0.2
KLR	Kul'dur	21.42	341	P	P	09 46 20.4	-0.5
	comp=Z,1.5nm,0.5s,baz=172,slow=7.0,SNR=8.8						
TYV	Tymovskoe	21.50	1	eP	P	09 46 21.1	-0.6
TYV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NKL	Nikolayevsk	23.82	358	eP	P	09 46 45.3	-0.4
ULN	Ulaanbaatar	32.77	314	eP	P	09 48 07.1	+1.1
	comp=Z,2.9nm,0.8s						
ULN	Ulaanbaatar	32.77	314	⇓eP	P	09 48 06.9	+0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SONA1	Songino Array	33.17	314	eP	P	09 48 10.6	+1.0
SONA0	Songino Array	33.17	314	eP	P	09 48 10.2	+0.7
SONM	Songino Array	33.17	314	eP	P	09 48 11.4	+1.9
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	33.17	314	P	P	09 48 10.2	+0.7
	comp=Z,1.7nm,0.6s,baz=118,slow=9.7,SNR=11						
SEY	Seymchan	34.24	8	⇓eP	P	09 48 19.4	+1.0
SEY	Seymchan	34.24	8	P	P	09 48 18.7	+0.3
	comp=Z,1.5nm,0.6s,baz=215,slow=11,SNR=10.0						
BOD	Bodaibo	34.57	333	eP	P	09 48 21.6	+0.3
BOD				pmax	pmax		
	comp=Z,6.0nm,1.9s						
TLY	Talaya	36.27	319	eP	P	09 48 37.4	+1.4
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KNGR	Kungurtug, Tuv	39.56	315	⇓eP	P	09 49 06.3	+2.3
CMAR	Chiang Mai Arr	40.85	265	P	P	09 49 15.1	+0.2
	comp=Z,0.7nm,0.3s,baz=48,slow=9.8,SNR=5.0						
BILL	Bilibino	41.27	13	⇓eP	P	09 49 18.2	+0.5
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DGZ	Jazzator, Alta	45.78	312	deP	P	09 49 56.5	+2.0
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZAA1	Zalesovo Array	47.86	318	eP	P	09 50 11.4	+1.0
ZAA1				ePcP	PcP	09 51 38.6	-0.2
ZALV	Zalesovo Beam	47.86	318	P	P	09 50 11.4	+1.0
	comp=Z,1.7nm,0.4s,baz=101,slow=7.7,SNR=11						
ZALV				PcP	PcP	09 51 38.6	-0.2
	comp=Z,0.7nm,0.5s,baz=92,slow=2.2,SNR=2.6						
ANM	Nome	47.94	27	eP	P	09 50 12.4	+1.4
	comp=Z,2.3nm,0.8s						
ANM	Nome	47.94	27	eP	P	09 50 12.4	+1.4
ANM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK01	Makanchi Array	49.11	308	eP	P	09 50 21.3	+1.0
MK31	Makanchi Array	49.12	308	eP	P	09 50 20.4	0.0
	comp=Z,1.6nm,0.8s						
MK31	Makanchi Array	49.12	308	eP	P	09 50 20.4	0.0
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	Makanchi Array	49.12	308	eP	P	09 50 20.9	+0.5
MK32				ePcP	PcP	09 51 44.2	+0.5
MKAR	Makanchi Array	49.12	308	eP	P	09 50 20.4	0.0
	comp=Z,11nm,0.7s						
MKAR				PcP	PcP	09 51 44.2	+0.5
MKAR	Makanchi Array	49.12	308	eP	P	09 50 20.4	0.0
MKAR						09 51 44.2	
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
MKAR	Makanchi Array	49.12	308	P	P	09 50 20.9	+0.5
	comp=Z,1.7nm,0.7s,baz=94,slow=9.2,SNR=18						
MKAR				PcP	PcP	09 51 44.2	+0.5
	comp=Z,0.2nm,0.3s,baz=83,slow=4.6,SNR=2.4						
WRAB	Tennant Creek	49.58	190	⇑eP	P	09 50 23.5	-0.5
WRAB				pmax	pmax		
	comp=Z,30nm,2.5s						
WB2	Warramunga Arr	49.58	190	eP	P	09 50 23.9	-0.1
	comp=Z,4.9nm,1.0s						
WR1	Warramunga Arr	49.59	190	eP	P	09 50 23.7	-0.4
	comp=Z,5.0nm,1.0s						
WR1				ePcP	PcP	09 51 46.2	+0.6
WRA	Warramunga Arr	49.59	190	P	P	09 50 23.7	-0.4
	comp=Z,2.5nm,0.7s,baz=8.9,slow=8.1,SNR=21						
WRA				PcP	PcP	09 51 46.2	+0.6
	comp=Z,0.5nm,0.6s,baz=5.6,slow=4.0,SNR=3.6						
SVW2	Sparrevohn	51.38	33	eP	P	09 50 38.5	+1.2
	comp=Z,4.2nm,1.1s						
KURK	Kurchatov	51.48	313	eP	P	09 50 38.2	+0.1
	comp=Z,12nm,0.9s						
KURK	Kurchatov	51.48	313	P	P	09 50 39.1	+1.0
KURBB	Kurchatov Arra	51.54	313	P	P	09 50 39.1	+0.6
	comp=Z,23nm,0.5s,baz=92,slow=6.7,SNR=42						
IM3	Indian Mountai	53.03	27	eP	P	09 50 50.3	+0.9
ASAR	Alice Springs	53.31	190	P	P	09 50 51.2	-0.7
	comp=Z,0.3nm,0.6s,baz=2.1,slow=5.9,SNR=6.0						
MLY	Manley	54.12	29	eP	P	09 50 57.8	+0.4
	comp=Z,1.2nm,0.8s						
TRF	Thorofare Moun	54.13	31	eP	P	09 50 57.7	0.0
RND	Reindeer	54.77	31	eP	P	09 51 02.1	-0.2
	comp=Z,2.9nm,0.9s						
RND	Reindeer	54.77	31	eP	P	09 51 02.1	-0.2
RND				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KNK	Knik Glacier	54.84	33	eP	P	09 51 02.9	+0.2
	comp=Z,2.5nm,0.6s						
AAK	Ala-Archa	55.05	304	⇓eP	P	09 51 07.0	+2.3
MDM	Murphy Dome	55.17	29	eP	P	09 51 04.7	-0.3
	comp=Z,2.9nm,1.1s						
SCM	Sheep Creek Mo	55.39	33	eP	P	09 51 07.7	+0.9
	comp=Z,5.2nm,0.8s						
SCM	Sheep Creek Mo	55.39	33	eP	P	09 51 07.7	+0.9
SCM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
IL1	Eielson Array	55.73	29	eP	P	09 51 09.5	+0.4
ILAR	Eielson Array	55.73	29	P	P	09 51 08.7	-0.4
	comp=Z,0.9nm,0.7s,baz=262,slow=6.2,SNR=13						
ILB	Eielson Array	55.73	29	eP	P	09 51 09.1	+0.1
KLU	Klutina	56.06	33	eP	P	09 51 12.0	+0.5
	comp=Z,5.1nm,1.1s						
BVAR	Borovoye Array	56.45	316	P	P	09 51 15.4	+1.0
	comp=Z,3.9nm,0.6s,baz=97,slow=7.5,SNR=22						
BRVK	Borovoye	56.51	317	eP	P	09 51 16.1	+1.2
	comp=Z,3.7nm,0.8s						
BRVK	Borovoye	56.51	317	⇓eP	P	09 51 16.0	+1.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LPH	Laupahoehoe	56.85	84	eP	P	09 51 20.0	+2.4
KK31	Karatay Array	57.84	305	eP	P	09 51 24.6	+0.2
	comp=Z,6.5nm,0.5s						
KK31	Karatay Array	57.84	305	eP	P	09 51 24.6	+0.2
KK31				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KKAR	Karatay Array	57.84	305	eP	P	09 51 24.1	-0.4
	comp=Z,6.5nm,0.5s						
KKAR	Karatay Array	57.84	305	eP	P	09 51 24.1	-0.4
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DAWY	Dawson	58.98	30	eP	P	09 51 33.3	+1.2
CHGR	Chuyangaron	59.87	300	eP	P	09 51 38.5	-0.2
	comp=Z,10nm,0.6s						
INK	Inuvik	60.98	25	eP	P	09 51 46.1	+0.5
	comp=Z,1.4nm,1.1s						
INK	Inuvik	60.98	25	eP	P	09 51 46.1	+0.5
INK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
INK	Inuvik	60.98	25	P	P	09 51 45.6	0.0
	comp=Z,0.7nm,0.5s,baz=296,slow=6.3,SNR=10.0						
ARU	Arti	62.70	322	d iP	P	09 51 58.0	+0.6
ARU						09 54 13.0	
ARU				S	S	10 00 27.5	+3.1
ARU				SS	SS	10 04 29.1	+0.5
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ABKAR	Akbulak array	63.59	314	eP	P	09 52 04.1	+0.7
	comp=Z,3.0nm,1.0s						
AKTO	Aktyubinsk	64.48	315	P	P	09 52 09.3	0.0
	comp=Z,1.5nm,0.6s,baz=78,slow=15,SNR=7.1						
RES	Resolute Bay	69.87	14	eP	P	09 52 43.4	+0.3
	comp=Z,1.1nm,0.9s						
RES	Resolute Bay	69.87	14	eP	P	09 52 43.4	+0.3
RES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	70.15	29	P	P	09 52 45.2	+0.3
	comp=Z,0.7nm,0.5s,baz=296,slow=6.4,SNR=20						
YKB5	Yellowknife Ar	70.15	29	eP	P	09 52 45.2	+0.2
OBN	Obninsk	74.73	325	eP	P	09 53 13.1	+0.7
OBN				e		09 53 28.4	
OBN				e		09 56 01.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FIA0	FINESS Array S	75.97	334	eP	P	09 53 19.9	+0.5
FIA0	FINESS Array S	75.97	334	eP	P	09 53 19.9	+0.5
FINES	FINESS Array B	75.97	334	P	P	09 53 19.9	+0.5
	comp=Z,1.3nm,0.5s,baz=68,slow=5.6,SNR=11						
KBZ	Khabaz	76.53	313	P	P	09 53 24.1	+1.2
	comp=Z,4.7nm,0.8s,baz=64,slow=5.1,SNR=14						
NVAR	Mina Array Bea	79.09	52	P	P	09 53 38.6	+1.0
	comp=Z,1.2nm,0.7s,baz=295,slow=5.4,SNR=7.6						
AKASG	Malin Array Be	80.85	324	ceP	P	09 53 50.4	+3.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	80.85	324	P	P	09 53 46.7	+0.2
	comp=Z,0.3nm,0.3s,baz=50,slow=4.8,SNR=7.0						
AKASG				LR	LR	10 32 47.2	
	comp=Z,33nm,18.4s,baz=260,slow=38						
PDAR	Pinedale Array	82.58	45	P	P	09 53 56.6	+0.4
	comp=Z,0.2nm,0.5s,baz=32,slow=3.6,SNR=3.2						
BR101	Keskin Array S	84.53	313	eP	P	09 54 06.5	+0.4
BRTR	Keskin Array B	84.53	313	eP	P	09 54 07.3	+1.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	84.53	313	P	P	09 54 06.5	+0.4
	comp=Z,1.4nm,0.7s,baz=112,slow=5.5,SNR=6.5						
ULM	Lac du Bonnet	85.54	33	P	P	09 54 10.3	-0.5
	comp=Z,0.8nm,0.6s,baz=315,slow=5.7,SNR=2.6						
TXAR	Lajitas Array	94.21	53	P	P	09 54 52.9	+0.6
	comp=Z,0.6nm,1.0s,baz=307,slow=3.5,SNR=4.1						
LPAZ	La Paz	149.23	72	PKPbc	PKiKP	10 01 23.4	-0.5
	comp=Z,0.7nm,0.6s,baz=270,slow=5.1,SNR=3.1						

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*IDC **26** 09:47:39.7±1.3, 11°.23N×125°.82E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.6/32, mbtmp3.7/6, Error ellipse: s-maj=66.2km s-min=18.3km az=63.0*
*MAN **26** 09:47:47.6, 11°.58N×126°.01E, h10^{km}, MS3.5*
ISC 26 09:47:40.4±2.4, **11°.50N**±0°.08×**126°.41E**±0°.08, **h10**^{km}±14^{km}, **n13**, σ**1^{s}69**/18, **mb3.6**/6, **2C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.95	276	eP	Pb	09 47 58.9	-0.1
BESP				eS	Sb	09 48 11.6	-0.2
PLP	Palo	1.44	257	⇑eP	Pb	09 48 07.1	-0.2
PLP				eS	Sn	09 48 24.1	-1.4
OCLP	Ormoc	1.82	256	eP	Pg	09 48 14.6	-0.7
OCLP				eS	Sn	09 48 34.3	-0.6
MSLP	Maasin	2.04	228	eP	Pb	09 48 17.8	+0.2
MSLP				eS	Sb	09 48 44.3	+1.2
LLP	Lapu-Lapu	2.67	244	eP	Pb	09 48 27.5	-0.9
LLP				eS	Sb	09 49 01.8	+0.5
RCP	Roxas	3.59	271	⇑eP	Pn	09 48 39.0	+2.9
RCP	Roxas	3.59	271	⇓eP	Pn	09 48 39.0	+2.9
CMAR	Chiang Mai Arr	27.39	288	P	P	09 53 22.4	-4.0
	0.5nm,0.3s,baz=94,slow=7.3,SNR=2.2						
WRA	Warramunga Arr	32.21	166	P	P	09 54 08.3	-0.7
	0.6nm,0.7s,baz=343,slow=9.8,SNR=4.4						
ASAR	Alice Springs	35.72	168	P	P	09 54 39.5	0.0
	0.4nm,0.5s,baz=353,slow=7.2,SNR=12						
SONM	Songino Array	39.92	339	P	P	09 55 15.0	+0.2
	0.4nm,0.6s,baz=146,slow=7.7,SNR=3.0						
STKA	Stephens Creek	45.52	162	P	P	09 56 00.0	-0.3
	0.8nm,0.5s,baz=0.0,slow=9.1,SNR=3.6						
MKAR	Makanchi Array	51.14	322	P	P	09 56 44.9	+1.3
	0.5nm,0.6s,baz=116,slow=8.3,SNR=6.1						

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*ISCJB **26** 09:52:34.8±0.5, 30°.87N±0°.04×138°.70E±0°.08, h384^{km}, mb3.2/9, Error ellipse: s-maj=9.8km s-min=5.2km az=170.6*
*JMA **26** 09:52:34.6±0.3, 31°.01N×139°.21E, h422^{km}, M3.8*
*IDC **26** 09:52:35.6±0.7, 30°.83N×138°.60E, h375^{km}±8^{km}, mb3.0/9, mb1 3.1/13, mb1mx3.0/33, mbtmp3.7/13, Error ellipse: s-maj=20.4km s-min=9.5km az=74.0*
ISC 26 09:52:36.2±0.7, **30°.98N**±0°.07×**138°.8E**±0°.1, **h384**^{km}, **n27**, σ**2^{s}00**/33, **mb3.3**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	2.24	21	P	Pn	09 53 33.9	+1.7
JHJ	Hachijo jima 2	2.28	21	P	Pn	09 53 34.0	+1.5
	20nm,0.3s,baz=356,slow=22,SNR=13						
JHJ				S	S	09 54 19.4	+1.4
	36nm,0.3s,baz=67,slow=21,SNR=6.1						
JHJ2	Mitsune	2.29	21	P	Pn	09 53 34.5	+2.0
JIE	Ise	3.84	333	P	Pn	09 53 47.9	+2.3
BSO3	Boso 3	4.07	20	P	Pn	09 53 47.9	+0.4
BSO3				S	S	09 54 45.6	+0.2
BSO1	Boso 1	4.09	26	P	Pn	09 53 48.8	+1.4
BSO1				eS	S	09 54 46.2	+1.0
BSO4	Boso 4	4.20	17	eS	S	09 54 48.5	+0.5
JOD2	Odawara 2	4.28	3	eS	S	09 54 50.9	+1.2
CBIJ	Chichi jima	4.86	142	P	Pn	09 53 54.3	-1.8
CBIJ				S	S	09 54 57.0	-3.9
JCJ	Chichijima	4.86	142	P	Pn	09 53 54.8	-1.3
	8.3nm,0.3s,baz=0.4,slow=20,SNR=8.5						
JCJ				S	S	09 54 57.9	-3.0
	21nm,0.3s,baz=313,slow=23,SNR=11						
JHU	Hanno	4.87	4	S	S	09 54 57.6	-3.2
JRY	Ryogami san	5.02	1	P	Pn	09 53 59.2	+1.6
JYT	Yasato	5.36	12	eS	S	09 55 06.0	-4.1
JAG	Ashikaga	5.45	5	P	Pn	09 54 02.1	-0.1
JAG				eS	S	09 55 07.3	-4.8
MJAR	Matsushiro Arr	5.57	355	P	Pn	09 54 04.3	+0.9
	0.1nm,0.3s,baz=180,slow=11,SNR=6.3						
JHO	Hitachi	5.80	14	P	Pn	09 54 05.7	-0.2
JFK	Kawauchi	6.59	14	S	S	09 55 32.3	-2.8
KSRS	Korea Array	11.09	309	P	P	09 55 05.6	-0.6
	0.2nm,0.3s,baz=122,slow=11,SNR=4.5						
SONM	Songino Array	29.89	314	P	P	09 58 09.7	-0.4
	0.5nm,0.4s,baz=122,slow=8.7,SNR=5.9						
ZALV	Zalesovo Beam	44.64	317	P	P	10 00 11.3	-0.7
	0.7nm,0.4s,baz=101,slow=7.5,SNR=2.9						
MKAR	Makanchi Array	45.77	307	P	P	10 00 20.4	-0.6
	0.7nm,0.3s,baz=84,slow=9.9,SNR=12						
WRA	Warramunga Arr	50.81	185	P	P	10 00 58.5	-0.8
	0.8nm,0.3s,baz=1.1,slow=8.1,SNR=50						
ASAR	Alice Springs	54.54	186	P	P	10 01 25.7	-0.6
	0.4nm,0.3s,baz=357,slow=4.8,SNR=20						
ILAR	Eielson Array	55.77	30	P	P	10 01 36.2	+1.9
	0.4nm,0.9s,baz=269,slow=6.3,SNR=2.8						
YKA	Yellowknife Ar	70.13	28	P	P	10 03 09.6	+1.9
	0.2nm,0.5s,baz=300,slow=6.2,SNR=5.8						
FINES	FINESS Array B	73.16	332	P	P	10 03 25.4	-0.2
	0.5nm,0.5s,baz=66,slow=4.6,SNR=5.3						
BRTR	Keskin Array B	81.22	311	P	P	10 04 10.7	+0.1
	0.4nm,0.4s,baz=46,slow=4.2,SNR=3.5						

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*IDC **26** 10:11:28.5±2.7, 36°.32N×70°.11E, h190^{km}±25^{km}, mb3.4/9, mb1 3.6/14, mb1mx3.3/45, mbtmp4.0/14, Error ellipse: s-maj=21.2km s-min=17.5km az=7.0*
*ISCJB **26** 10:11:31.7±0.4, 36°.56N±0°.03×70°.41E±0°.06, h204^{km}, mb3.5/8, Error ellipse: s-maj=6.8km s-min=3.8km az=172.9*
*NNC **26** 10:11:36.6±1.7, 36°.89N×70°.43E, h220^{km}±20^{km}, mb3.1, mpv4.1, Error ellipse: s-maj=17.1km s-min=15.8km az=112.0*
ISC 26 10:11:31.1±0.6, **36°.55N**±0°.05×**70°.27E**±0°.06, **h204**^{km}, **n47**, σ**1^{s}47**/56, **mb3.7**/8, **7C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.04	153	P	Pn	10 12 23.8	+2.2
CEP				S	S	10 13 02.0	+1.5
CHCP	Chirah Chowk	3.79	139	P	Pn	10 12 32.4	+1.8
THW	Thamme Wali	3.94	162	P	Pn	10 12 34.1	+1.6
SFK	Sufi-Kurgan	4.29	35	⇑P	Pn	10 12 38.4	+1.6
	12nm,0.5s						
SFK				⇑S	S	10 13 28.3	+0.2
	75nm,0.5s						
SARP	Sargodha	5.03	156	P	Pn	10 12 46.6	+0.5
AML	Almayashu	6.17	24	P	Pn	10 13 02.2	+1.3
	SNR=86						
MNAS	Manas	6.17	16	⇓P	Pn	10 13 02.6	+1.9
	22nm,0.7s						
MNAS				⇓S	S	10 14 10.6	-0.9
	66nm,0.9s						
KK31	Karatay Array	6.54	2	P	Pn	10 13 06.9	+1.5
	6.0nm,0.5s,baz=196,slow=20,SNR=89						
KK31				⇑S	S	10 14 17.3	-2.8
	11nm,0.5s,baz=187,slow=16,SNR=8.4						
UCH	Uchtor	6.55	29	P	Pn	10 13 07.3	+1.4

	SNR=52						
EKS2	Erkin-Say	6.67	23	P	Pn	10 13 08.9	+1.7
	SNR=25						
KZA	Kyzart	6.73	33	P	Pn	10 13 09.1	+0.9
	SNR=17						
AAK	Ala-Archa	6.90	27	P	Pn	10 13 11.3	+1.2
	SNR=6.2						
AAK	Ala-Archa	6.90	27	⇑P	Pn	10 13 12.0	+1.8
	6.3nm,0.3s						
AAK				⇑S	S	10 14 28.4	-0.2
	32nm,0.6s						
AAK	Ala-Archa	6.90	27	P	Pn	10 13 11.0	+0.9
	4.6nm,0.3s,baz=194,slow=6.8,SNR=26						
AAK				S	S	10 14 27.6	-0.9
	2.1nm,0.3s,baz=330,slow=21,SNR=14						
KBK	Karagaybulak	7.08	29	P	Pn	10 13 14.3	+1.7
	SNR=6.8						
CHMS	Chumysh	7.30	27	P	Pn	10 13 16.3	+1.0
	SNR=6.9						
ULHL	Ulahol	7.33	37	P	Pn	10 13 16.7	+0.9
	SNR=14						
USP	Ospenovka	7.45	25	P	Pn	10 13 18.6	+1.4
	SNR=11						
TKM2	Tokmak 2	7.57	31	P	Pn	10 13 20.0	+1.1
	SNR=25						
TKM2	Tokmak 2	7.57	31	⇑P	Pn	10 13 18.9	0.0
	16nm,0.8s						
TKM2				⇑S	S	10 14 42.5	-2.1
	24nm,0.8s						
MDOK	Medeo	8.41	36	P	Pn	10 13 30.3	+0.6
	12nm,0.9s						
MDOK				S	S	10 15 01.4	-3.1
	10nm,1.1s						
GEYT	Alibeck	9.78	282	P	Pn	10 13 44.8	-2.7
	0.3nm,0.3s,baz=106,slow=5.1,SNR=2.3						
GEYT				S	S	10 15 39.9	+2.8
	0.6nm,0.3s,baz=114,slow=24,SNR=3.5						
MKAR	Makanchi Array	13.60	38	P	Pn	10 14 36.0	+0.2
	0.4nm,0.3s,baz=218,slow=14,SNR=17						
PYUN	Piuthan	13.66	124	eP	Pn	10 14 35.4	-1.5
	21nm,0.4s						
DANN	Dangsing	14.02	122	eP	Pn	10 14 40.4	-1.0
	18nm,0.5s						
KOLN	Koldanda	14.28	124	eP	Pn	10 14 43.4	-1.2
	8.2nm,0.3s						
AB31	Akbulak array	14.76	333	P	P	10 14 51.4	+0.5
	5.1nm,0.6s,baz=145,slow=12,SNR=76						
KURBB	Kurchatov Arra	15.27	20	P	Pn	10 14 56.0	-0.3
	0.1nm,0.3s,baz=211,slow=11,SNR=12						
DMN	Daman	15.41	121	eP	P	10 14 58.7	+0.1
	19nm,0.6s						
KKN	Kakani	15.41	120	eP	P	10 14 59.0	+0.4
	24nm,0.4s						
PKIN	Phulchoki	15.63	121	eP	Pn	10 15 01.2	+0.1
	17nm,0.4s						
PKI	Pulchoki	15.64	121	eP	Pn	10 15 01.9	+0.6
	26nm,0.5s						
JIRN	Jiri	16.13	119	eP	Pn	10 15 07.2	-0.1
	38nm,0.3s						
AKTO	Aktyubinsk	16.44	331	⇓P	Pn	10 15 12.2	+1.8
	8.6nm,0.6s						
AKTO	Aktyubinsk	16.44	331	P	Pn	10 15 12.5	+2.1
	1.3nm,0.3s,baz=143,slow=10,SNR=34						
BVA0	Borovoye Array	16.47	0	P	Pn	10 15 11.0	+0.4
	4.4nm,0.6s,baz=168,slow=7.5,SNR=23						
BVAR	Borovoye Array	16.47	0	P	Pn	10 15 12.4	+1.7
	1.3nm,0.3s,baz=160,slow=11,SNR=20						
RAMN	Ramite	16.85	120	eP	P	10 15 14.7	+0.2
	18nm,0.5s						
ZALV	Zalesovo Beam	20.12	26	P	P	10 15 50.0	+0.8
	1.4nm,0.3s,baz=219,slow=12,SNR=7.6						
SONM	Songino Array	28.79	56	P	P	10 17 11.4	+1.4
	1.3nm,0.7s,baz=253,slow=9.2,SNR=8.3						
CMAR	Chiang Mai Arr	31.00	118	P	P	10 17 29.4	-0.3
	1.2nm,0.6s,baz=300,slow=7.9,SNR=2.3						
FINES	FINESS Array B	37.11	326	P	P	10 18 19.6	-2.1
	2.2nm,1.0s,baz=195,slow=36,SNR=1.8						
TORD	Torodi Ar. Bea	65.13	268	P	P	10 21 49.2	-1.3
	0.3nm,0.4s,baz=58,slow=5.3,SNR=1.8						
ILAR	Eielson Array	74.89	16	P	P	10 22 50.2	+1.2
	0.7nm,1.0s,baz=320,slow=7.7,SNR=4.4						
YKA	Yellowknife Ar	81.22	2	P	P	10 23 24.5	+0.8
	0.3nm,0.6s,baz=349,slow=5.4,SNR=6.5						
WRA	Warramunga Arr	82.52	121	P	P	10 23 29.3	-2.0
	1.3nm,0.6s,baz=323,slow=5.0,SNR=8.3						
ASAR	Alice Springs	84.77	124	P	P	10 23 40.9	-1.8
	1.2nm,0.6s,baz=311,slow=5.0,SNR=7.3						

IDC 26 10:12:26.4±3.1**,32°.10S**×**178°.14W,h0**^{km}**,mb3.5**/2**, mb1 3.8**/3**,mb1mx3.6**/20**,mbtmp3.6**/3**,ML2.8**/1**,Error ellipse: s-maj=72.1km s-min=45.7km az=121.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.27	211	Pn	Pn	10 14 12.1	-1.7
	0.2nm,0.3s,baz=0.0,slow=19,SNR=3.0						
URZ				Sn	Sn	10 15 33.5	-3.5
	1.4nm,0.3s,baz=107,slow=19,SNR=9.3						
ASAR	Alice Springs	42.93	269	P	P	10 20 27.8	+0.6
	0.2nm,0.5s,baz=108,slow=7.7,SNR=8.1						
WRA	Warramunga Arr	44.07	274	P	P	10 20 36.0	-0.4
	0.5nm,0.4s,baz=112,slow=8.0,SNR=12						
FINES	FINESS Array B	146.69	339	PKPbc	PKPbc	10 32 08.5	-0.8
	0.7nm,0.5s,baz=29,slow=4.4,SNR=5.8						

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*ISK **26** 10:25:55.4,36°.34N×37°.50E,h5^{km},ML2.2/3*
*ISCJB **26** 10:25:56.7±1.3,36°.39N±0°.05×37°.47E±0°.05,h2^{km}±8^{km}, Error ellipse: s-maj=9.2km s-min=5.2km az=148.5*
*DDA **26** 10:25:56.7,36°.41N×37°.45E,h7^{km}±2^{km},ML2.5*
ISC 26 10:25:56.3±1.8**,36°.38N**±0°.07×**37°.48E**±0°.05**,h7**^{km}±11^{km}**, n9,**σ**0ˢ.45**/17**,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUZU	Kuzuini	0.51	321	i P	Pg	10 26 06.2	0.0
KUZU				i S	Sg	10 26 13.6	+0.7
KUZU				IAML_P			
	comp=Z,3μm,0.1s						
GAZ	Gaziantep	0.82	345	PG	Pb	10 26 12.5	-0.5
GAZ				SG	Sb	10 26 24.9	+0.6
GZT	Gaziantep	0.98	4	i P	Pb	10 26 15.7	0.0
GZT				i S	Sb	10 26 29.1	+0.3
GZT				IAML_P			
	comp=Z,1μm,0.1s						
SURC	SANLIURFA_SURC	1.04	61	i P	Pn	10 26 17.6	+0.2
SURC				i S	Sn	10 26 32.2	0.0
SURC				IAML_P			
	comp=Z,250nm,0.2s						
TAHT	Tahtakopru-Hat	1.04	270	PG	Pg	10 26 16.2	-0.1
TAHT				SG	Sn	10 26 31.5	-0.6
HCB	Kahramanmara	1.07	335	i P	Pb	10 26 16.8	-0.3
HCB				IAML_P			
	comp=Z,598nm,0.2s						
YAYL	Yayladag	1.16	253	i P	Pn	10 26 19.1	0.0
YAYL				i S	Sn	10 26 35.9	+0.7
YAYL				IAML_P			
	comp=Z,524nm,0.4s						
ANDN	Andirin	1.50	323	i P	Pg	10 26 24.8	-0.4
ANDN				i S	Sn	10 26 43.2	-0.5
ANDN				IAML_P			
	comp=Z,448nm,0.4s						
URFA	Urfa	1.51	45	PN	Pn	10 26 24.1	+0.2
URFA				SN	Sg	10 26 44.8	-0.2

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*IDC **26** 10:49:09.4±2.0,25°.58S×179°.75E,h481^{km}±20^{km}, mb3.6/15,mb1 3.7/18,mb1mx3.6/32,mbtmp4.4/18,Error ellipse: s-maj=18.9km s-min=16.2km az=96.0*
*ISCJB **26** 10:49:11.7±0.4,25°.59S±0°.03×179°.51E±0°.08,h507^{km}, mb4.0/16,Error ellipse: s-maj=9.8km s-min=4.1km az=173.5*
*WEL **26** 10:49:16.5±1.0,26°S±7°×17°9W±3°2,h554^{km}±19^{km}*
ISC 26 10:49:11.9±0.5**,25°.66S**±0°.06×**179°.64E**±0°.09**,h507**^{km}**,n68,** σ**1ˢ.84**/86**,mb4.0**/16**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	4.18	149	P	P	10 50 35.3	+3.2
RAO	Raoul Island	4.19	149	P	P	10 50 35.1	+3.0
	246nm,0.3s,baz=50,slow=17,SNR=6.0						
RAO				S	S	10 51 34.4	-3.3
	108nm,0.3s,baz=60,slow=20,SNR=2.4						
GLKZ	Green Lake	4.20	149	P	P	10 50 35.1	+2.9
GLKZ				S	S	10 51 37.8	0.0
WCZ	Waipu Caves	11.21	203	P	P	10 51 45.3	+3.5
KUZ	Kuaotunu	11.55	196	P	P	10 51 48.1	+2.7
WIAZ	Waiheke Island	11.75	198	P	P	10 51 50.6	+3.0
MXZ	Matakaoa Point	11.92	185	P	P	10 51 51.7	+2.3
MXZ				S	S	10 53 55.9	-3.2
ETAZ	East Tamaki Re	11.95	199	P	P	10 51 52.9	+3.2
MKAZ	Moumakai	12.03	197	P	P	10 51 54.2	+3.7
HAZ	Te Kaha	12.16	187	P	P	10 51 53.8	+1.9
HAZ				S	S	10 54 01.8	-2.0
WMGZ	Waiomatatini S	12.17	185	P	P	10 51 54.6	+2.6
WMGZ				S	S	10 54 01.8	-2.1
PKGZ	Pakihiroa	12.26	186	P	P	10 51 55.3	+2.2
PKGZ				S	S	10 54 03.5	-2.5
RUGZ	Raukumara Rang	12.38	187	P	P	10 51 57.3	+2.9
RUGZ				S	S	10 54 07.1	-1.3
PUZ	Puketiti	12.43	185	P	P	10 51 56.4	+1.6
PUZ				S	S	10 54 06.1	-3.0
TOZ	Tahuroa Road	12.54	195	P	P	10 51 58.0	+2.1
TWGZ	Tauwhareparae	12.56	186	P	P	10 51 58.1	+1.9
TWGZ				S	S	10 54 11.1	-0.5
DZM	Mont Dzumac	12.59	284	P	P	10 51 56.3	-0.4
	0.3nm,0.3s,baz=92,slow=19,SNR=2.4						
URZ	Urewera	12.74	189	P	P	10 51 56.4	-1.7
	3.8nm,0.3s,baz=5.4,slow=6.6,SNR=6.0						
URZ				S	S	10 54 14.8	-0.2
	1.3nm,0.3s,baz=76,slow=22,SNR=6.9						
URZ	Urewera	12.74	189	P	P	10 51 57.8	-0.2
URZ				S	S	10 54 11.5	-3.6
MWZ	Matawai	12.76	188	P	P	10 51 58.2	-0.1
MWZ				S	S	10 54 15.7	+0.1
TKGZ	Te Karaka	12.83	186	P	P	10 51 54.8	-4.1
TKGZ				S	S	10 54 14.5	-2.3
CNGZ	Carnagh Statio	12.84	185	P	P	10 51 59.7	+0.6
CNGZ				S	S	10 54 16.9	-0.1
RAGZ	Rawiri	12.94	188	P	P	10 51 59.8	-0.4
MUGZ	Murupara	13.01	190	P	P	10 52 01.0	+0.1
TLZ	Tolley Road	13.10	194	P	P	10 52 05.5	+3.6
RIGZ	Rimuhau	13.11	186	P	P	10 52 02.1	+0.2
RIGZ				S	S	10 54 17.3	-4.8
RTZ	Ruatahuna	13.11	189	P	P	10 52 03.9	+1.8
RTZ				S	S	10 54 22.2	-0.1
SNGZ	Shannon Statio	13.23	188	P	P	10 52 05.2	+2.0
SNGZ				S	S	10 54 25.4	+1.0
MTHZ	Maungataniwha	13.37	189	P	P	10 52 01.3	-3.3
MTHZ				S	S	10 54 26.2	-0.9
WATZ	Wairara	13.42	193	P	P	10 52 07.5	+2.2
HIZ	Hauiti	13.44	196	P	P	10 52 09.6	+4.3
NMHZ	Naumai	13.61	189	P	P	10 52 07.5	+0.2
KATZ	Kakaramea	13.69	193	P	P	10 52 09.0	+0.9
BKZ	Black Stump Fm	13.73	190	P	P	10 52 08.3	-0.2
WTVZ	West Tongariro	13.84	193	P	P	10 52 10.4	+0.6
NGZ	Ngauruhoe	13.90	193	P	P	10 52 12.2	+1.8
TUVZ	Tukino	13.98	193	P	P	10 52 11.4	+0.2
FWVZ	Far West T-bar	13.99	193	P	P	10 52 11.8	+0.4
TRVZ	Turoa	14.03	193	P	P	10 52 10.7	-1.2
PKVZ	Pokaka	14.06	194	P	P	10 52 13.0	+1.0
BHHZ	Black Hill Sta	14.11	191	P	P	10 52 11.4	-1.1
RPZ	Rata Peaks	19.32	199	P	P	10 53 03.0	-0.8
	1.2nm,0.3s,baz=331,slow=1.0,SNR=4.1						
CTA	Charters Tower	31.20	273	P	P	10 54 50.1	+0.8
	7.7nm,0.3s,baz=99,slow=10.0,SNR=9.0						
STKA	Stephens Creek	33.79	250	P	P	10 55 12.0	+0.8
	1.7nm,0.4s,baz=102,slow=13,SNR=4.5						
ASAR	Alice Springs	41.45	263	P	P	10 56 14.3	+0.2
	4.6nm,0.7s,baz=91,slow=7.7,SNR=38						
ASAR				PcP	PcP	10 57 59.3	-0.8
	0.4nm,0.7s,baz=90,slow=5.5,SNR=2.7						
ASAR				ScP	ScP	11 01 04.8	+3.0
	0.5nm,1.0s,baz=105,slow=4.5,SNR=3.1						
ASAR				S	S	11 01 53.0	+0.4
	1.2nm,1.0s,baz=97,slow=17,SNR=6.7						
WRA	Warramunga Arr	41.99	268	P	P	10 56 18.1	-0.3
	3.3nm,0.3s,baz=98,slow=7.0,SNR=35						
WRA				ScP	ScP	11 01 06.5	+2.5
	1.1nm,1.0s,baz=94,slow=3.6,SNR=3.7						
WRA				S	S	11 01 58.6	-1.7
	2.4nm,0.9s,baz=98,slow=15,SNR=8.0						
GUMO	Guam	51.66	315	P	P	10 57 29.8	-1.7
	32nm,0.3s,baz=180,slow=20,SNR=1.5						
MJAR	Matsushiro Arr	73.16	326	P	P	10 59 49.6	-0.9
	5.6nm,0.8s,baz=166,slow=6.0,SNR=14						
MAT	Matsushiro	73.16	326	P	P	10 59 50.0	-0.6
KSRS	Korea Array	79.38	321	P	P	11 00 25.2	+0.4
	2.8nm,0.7s,baz=130,slow=5.6,SNR=8.8						
PETK	Petropavlovsk-	80.73	347	P	P	11 00 31.4	-0.1
	4.3nm,0.8s,baz=127,slow=7.7,SNR=5.2						
USRK	Ussuriysk Ar.	82.06	328	P	P	11 00 38.5	-0.1
	1.7nm,0.8s,baz=123,slow=5.3,SNR=2.8						
KLR	Kul'dur	85.90	331	P	P	11 00 58.1	+0.7
	1.0nm,0.8s,baz=114,slow=2.3,SNR=3.0						
NVAR	Mina Array Bea	86.24	44	P	P	11 01 00.3	+0.6
	1.2nm,0.8s,baz=226,slow=8.7,SNR=6.0						
PLCA	Paso Flores	87.28	134	P	P	11 01 05.6	+1.1
	6.4nm,1.3s,baz=243,slow=4.5,SNR=2.3						
CMAR	Chiang Mai Arr	89.83	290	P	P	11 01 16.8	+0.2
	0.4nm,0.3s,baz=149,slow=2.7,SNR=2.4						
SEY	Seymchan	90.91	348	P	P	11 01 20.4	-0.1
	1.5nm,0.7s,baz=144,slow=9.3,SNR=5.2						
ILAR	Eielson Array	93.81	14	P	P	11 01 32.4	-1.4
	0.3nm,0.8s,baz=234,slow=4.5,SNR=1.9						
SONM	Songino Array	98.22	319	P	P	11 01 54.6	+0.3
	0.3nm,0.5s,baz=96,slow=4.3,SNR=1.7						
BVAR	Borovoye Array	121.53	318	PKP	PKiKP	11 07 06.9	-0.4
	0.9nm,0.5s,baz=106,slow=3.1,SNR=6.8						
AKTO	Aktyubinsk	129.32	315	PKP	PKPdf	11 07 21.6	-0.5
	0.7nm,0.5s,baz=76,slow=4.2,SNR=3.4						
ARCES	ARCESS Array B	133.53	348	PKP	PKPdf	11 07 30.0	+0.5
	3.4nm,0.9s,baz=45,slow=1.4,SNR=4.4						
NB2	NORSAR Subarra	143.76	350	PKP	PKPab	11 07 46.7	-0.6
	comp=Z,2.8nm,0.6s,baz=21,slow=3.7						
NOA	NORSAR Array B	143.76	350	PKP	PKPab	11 07 46.2	-1.0
	comp=Z,1.3nm,0.5s,baz=22,slow=3.8,SNR=19						
HFS	Hagfors	144.19	348	PKP	PKPbc	11 07 47.6	-1.0
	comp=Z,7.1nm,0.4s,baz=35,slow=3.5,SNR=38						
MMAI	Mount Meron Ar	148.08	292	PKPbc	PKiKP	11 08 01.9	0.0
	comp=Z,2.4nm,0.4s,baz=105,slow=5.3,SNR=5.4						
BRTR	Keskin Array B	148.34	305	PKPbc	PKPbc	11 08 00.5	-0.6
	comp=Z,0.7nm,0.5s,baz=144,slow=4.3,SNR=2.9						
BRTR				PKPab	PKPab	11 08 04.9	-1.3
	comp=Z,1.6nm,0.6s,baz=112,slow=3.8,SNR=6.5						
TORD	Torodi Ar. Bea	167.40	189	PKPab	PKPab	11 09 28.4	-0.3
	comp=Z,0.6nm,0.7s,baz=189,slow=2.5,SNR=4.1						

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*NORS **26** 11:03:13.2±0.0,42°.53N×41°.11E,h15^{km},MPVA3.0*
ISC 26 11:03:13.5±3.8**,42°.36N**±0°.07×**40°.7E**±0°.2**,h35**^{km}**,n4,** σ**0ˢ.91**/8**,Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATM	Batumi	1.04	137	P	Pn	11 03 31.4	-0.2
BATM				S	Sn	11 03 45.0	+0.2
NEY	Neytrino	1.71	58	ePg	Pn	11 03 40.5	-0.4
NEY				eSg	Sn	11 04 00.0	-1.6
SHA1	Shidzhatmaz	1.96	45	ePg	Pn	11 03 44.9	+0.4
SHA1				eSg	Sn	11 04 08.6	+0.5
KORR	Kora	2.55	72	ePg	Pn	11 03 52.7	+0.2
KORR				eSg	Sn	11 04 23.3	+1.0

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*SKHL **26** 11:22:55.3±0.4,44°.32N×148°.38E,h38^{km}±2^{km},mb4.1/5*
*JMA **26** 11:22:56.2±0.3,44°.11N×148°.32E,h58^{km},M3.7*
ISC 26 11:22:54.0±3.2**,44°.3N**±0°.1×**148°.5E**±0°.2**,h55**^{km}**,n15,** σ**1ˢ.10**/26**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.01	336	i P	Pn	11 23 12.0	0.0
KUR				AMB	AMB	11 23 15.5	
	70nm,0.2s						
KUR				AMB	AMB	11 23 15.5	
	20nm,0.2s						
KUR				AMB	AMB	11 23 15.5	
	30nm,0.2s						
KUR				i S	Sn	11 23 24.8	-0.4
KUR				A	A	11 23 27.0	
	190nm,0.1s						
KUR				A	A	11 23 27.0	
	120nm,0.1s						
YUK	Yuzh-Kuril'sk	1.89	262	eP	Pn	11 23 24.0	+0.2
YUK				AMB	AMB	11 23 25.0	
	30nm,0.2s						
YUK				AMB	AMB	11 23 25.0	
	20nm,0.2s						
YUK				i S	Sn	11 23 45.5	-0.9
YUK				A	A	11 23 47.0	
	290nm,0.2s						
YUK				A	A	11 23 47.0	
	240nm,0.2s						
LAGR	Lagunnoye	1.94	263	eP	Pn	11 23 25.0	+0.5
LAGR				AMB	AMB	11 23 27.0	
	30nm,0.3s						
LAGR				AMB	AMB	11 23 27.0	
	50nm,0.3s						
LAGR				AMB	AMB	11 23 27.0	
	80nm,0.3s						
LAGR				eS	Sn	11 23 46.0	-1.7
LAGR				A	A	11 23 51.0	
	310nm,0.3s						
LAGR				A	A	11 23 51.0	
	160nm,0.3s						
GRPR	Tuman	1.96	261	eP	Pn	11 23 25.0	+0.2
GRPR				AMB	AMB	11 23 26.0	
	60nm,0.3s						
GRPR				AMB	AMB	11 23 26.0	
	80nm,0.3s						
GRPR				eS	Sn	11 23 47.0	-1.2
GRPR				A	A	11 23 49.0	
	340nm,0.3s						
GRPR				A	A	11 23 49.0	
	260nm,0.3s						
NEM2	Nemuro 2	2.18	245	P	Pn	11 23 28.6	+0.8
NEM2				eS	Sn	11 23 52.3	-1.3
GLVR	Golovnino	2.19	256	i P	Pn	11 23 29.0	+1.0
GLVR				AMB	AMB	11 23 35.0	
	50nm,0.3s						
GLVR				i S	Sn	11 23 53.0	-0.9
GLVR				A	A	11 23 55.0	
	330nm,0.3s						
GLVR				A	A	11 23 55.0	
	220nm,0.3s						
JRA	Rausu	2.43	262	P	Pn	11 23 32.6	+1.4
JRA				eS	Sn	11 24 01.1	+1.4
JKHN	Kushirohamanak	2.69	244	P	Pn	11 23 35.6	+0.9
JNK	Nakash	2.79	256	P	Pn	11 23 37.4	+1.2
JNK				eS	Sn	11 24 09.0	+0.3
JAK	Akkeshi	3.03	246	P	Pn	11 23 39.9	+0.5
JAK				eS	Sn	11 24 13.2	-1.2
JTKR	Abashiri--Toko	3.29	266	P	Pn	11 23 44.0	+1.0
JAR	Ashorobuto	3.54	255	P	Pn	11 23 48.2	+1.8
JAR				eS	Sn	11 24 27.3	+0.3
JCH	Churui	4.08	247	P	Pn	11 23 54.5	+0.7
JCH				eS	Sn	11 24 37.9	-2.3
JNBK	Urakawa-nobuka	4.63	246	P	Pn	11 24 01.7	+0.3
JKB	Kayabe	5.95	249	P	Pn	11 24 19.6	+0.2

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*NEIC **26** 11:36:27.6±0.0,15°.54N×95°.36W,h16^{km},MD4.0(MEX), After MEX.*
MEX 26 11:36:27.6±0.5**,15°.54N**×**95°.36W,h16**^{km}±16^{km}**,MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.76	287	ePg	Pg	11 36 39.8	-2.7
HUIG				eSn	Sg	11 36 48.5	-4.0
HUIG	Huatulco	0.76	287	eP	Pg	11 36 39.8	-2.7
HUIG				eS	Sg	11 36 48.5	-4.0
CMIG	Matias Romero	1.61	16	ePn	Pn	11 36 51.4	-3.9
CMIG				eSn	Sn	11 37 10.5	-5.3
CMIG	Matias Romero	1.61	16	i P	Pn	11 36 51.4	-3.9
CMIG				eS	Sn	11 37 10.5	-5.3
VHO	Vista Hermosa	2.02	319	ePn	Pn	11 36 58.3	-2.9
VHO				eSn	Sn	11 37 22.3	-3.9
VHO	Vista Hermosa	2.02	319	eP	Pn	11 36 58.3	-2.9
VHO				eS	Sn	11 37 22.3	-3.9
CCIG	Comitan	3.18	76	ePn	Pn	11 37 14.4	-2.8
CCIG				eSn	Sn	11 37 53.7	-1.2
JTS	JuntasAbangare	11.40	116	ePn	Pn	11 39 09.3	-0.7

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*NIED **26** 11:41:00,41°.30N×142°.20E,h26^{km},Mw3.4 Best double couple: $M_0$1.53000×10^{14} NP1:ϕ_s67.00000°,δ43.00000°, λ22.00000°. NP2:ϕ_s321.00000°,δ75.00000°,λ131.00000°.*
*IDC **26** 11:41:46.5±1.2,41°.16N×142°.13E,h0^{km},mb3.5/6, mb1 3.7/6,mb1mx3.5/42,mbtmp3.5/6,MS2.3/1,Ms1 2.3/1, ms1mx2.1/52,Error ellipse: s-maj=30.2km s-min=27.1km az=170.0*
*JMA **26** 11:41:50.7±0.1,41°.29N×142°.24E,h31^{km}±3^{km},M3.6*
ISC 26 11:41:48.2±1.2**,41°.25N**±0°.03×**142°.22E**±0°.03**,h11**^{km}±8^{km}**, n27,**σ**0ˢ.60**/42**,mb3.7**/7**,4C-4D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	Aomorihigashid	0.66	272	⇑P	Pn	11 42 03.8	+0.3
JAHD				eS	Sn	11 42 13.3	-0.6
JARK	Aomorirokkasho	0.69	250	P	Pn	11 42 04.3	+0.4
JARK				S	Sn	11 42 13.9	-0.6
JOT	Ohata	0.89	279	P	Pn	11 42 06.8	+0.1
JOT				eS	Sn	11 42 18.7	-0.8
JTM	Tenmabayashi	0.98	242	⇓P	Pn	11 42 09.3	+1.3
JTM				S	Sn	11 42 22.6	+0.7
JANG	Nango	1.02	212	⇓P	Pn	11 42 08.9	+0.4
JANG				S	Sn	11 42 22.5	-0.4
JEM	Erimo	1.04	42	⇓P	Pg	11 42 08.6	+0.3
JEM				eS	Sg	11 42 21.5	-0.3
JKB	Kayabe	1.09	306	⇑P	Pn	11 42 09.6	+0.1
JKB				S	Sb	11 42 23.2	-0.2
JNBK	Urakawa-nobuka	1.10	21	P	Pb	11 42 09.1	-0.3
JSR	Shiriuchi	1.38	282	⇑P	Pg	11 42 15.0	+0.2
JSR				S	Sg	11 42 32.8	+0.1
JIAM	Iburiatsuma	1.39	351	P	Pb	11 42 14.5	+0.3
JIAM				S	Sg	11 42 33.0	0.0
JNB	Noboribetsu	1.50	325	P	Pn	11 42 15.2	+0.1
JNB				eS	Sn	11 42 33.1	-1.6
JBT2	Biratori 2	1.53	4	P	Pn	11 42 15.7	+0.2
JBT2				eS	Sn	11 42 34.7	-0.7
JAH	Hinai	1.60	229	P	Pg	11 42 18.6	-0.4
JAH				S	Sg	11 42 39.4	-0.3
JCH	Churui	1.61	32	⇓P	Pb	11 42 17.5	-0.5
JYM2	Yakumo 2	1.63	303	⇑P	Pb	11 42 18.2	-0.1
JYM2				S	Sb	11 42 38.8	-0.1
JEW	Eniwo	1.69	341	P	Pb	11 42 18.7	-0.6
JEW				S	Sn	11 42 39.5	+0.2
JIW	Iwasaki	1.80	249	P	Pb	11 42 21.2	0.0
JIW				eS	Sb	11 42 44.4	+0.7
JOM	Ohasama	1.91	202	P	Pb	11 42 22.6	-0.5
JOM				S	Sb	11 42 46.0	-0.9
JFR	Furan	1.93	8	P	Pn	11 42 21.5	+0.4
KSRS	Korea Array	11.70	256	LR	LR	11 48 02.7	
	comp=Z,13nm,18.0s,baz=295,slow=32						
ZALV	Zalesovo Beam	39.65	309	P	P	11 49 20.0	+0.2
	0.4nm,0.3s,baz=97,slow=8.0,SNR=2.6						
MKAR	Makanchi Array	42.53	298	P	P	11 49 42.7	-1.0
	0.3nm,0.4s,baz=83,slow=8.7,SNR=3.6						
KURBB	Kurchatov Arra	44.01	305	P	P	11 49 55.5	0.0
	0.7nm,0.4s,baz=78,slow=8.9,SNR=5.1						
ILAR	Eielson Array	45.64	35	P	P	11 50 09.5	+1.2
	1.1nm,1.0s,baz=280,slow=8.5,SNR=6.4						
BVAR	Borovoye Array	48.28	310	P	P	11 50 29.4	+0.3
	0.4nm,0.5s,baz=82,slow=8.7,SNR=3.5						
YKA	Yellowknife Ar	59.87	32	P	P	11 51 53.8	+0.3
	0.1nm,0.7s,baz=301,slow=6.8,SNR=3.3						
WRA	Warramunga Arr	61.32	188	P	P	11 52 03.2	-0.6
	0.5nm,0.8s,baz=6.0,slow=6.7,SNR=4.7						

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*ISCJB **26** 12:04:37.6±0.4,39°.15N±0°.04×29°.10E±0°.04,h11^{km}±4^{km}, Error ellipse: s-maj=6.6km s-min=5.2km az=152.7*
*ISK **26** 12:04:37.3,39°.16N×29°.10E,h8^{km},ML2.3/5*
*DDA **26** 12:04:37.6,39°.13N×29°.08E,h7^{km}±1^{km},ML2.6*
ISC 26 12:04:37.7±0.9**,39°.14N**±0°.03×**29°.09E**±0°.03**,h13**^{km}±7^{km}**, n18,**σ**0ˢ.30**/22**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMAA	Simav-Kutahya	0.09	243	PG	Pg	12 04 40.7	+0.1
SMAA				SG	Sg	12 04 42.8	0.0
SHAP	Saphane-Kutahy	0.16	139	PG	Pg	12 04 41.5	0.0
SHAP				SG	Sg	12 04 43.9	-0.3
DEMI	Demirci	0.31	251	i P	Pb	12 04 44.6	-0.5
DEMI				i S	Sg	12 04 48.6	+0.4
DEMI				IAML_P			
	comp=Z,1μm,0.1s						
GDZ	Gediz	0.31	100	i P	Pg	12 04 44.2	+0.1
TVSB	Tavsanli	0.42	43	PG	Pg	12 04 46.2	+0.1

TVSB				SG	Sg	12 04 51.8	0.0
USAK	Uak-Merkez	0.43	187	*i* P	Pg	12 04 46.5	+0.3
USAK				IAML_P			
	comp=Z,3µm,0.1s						
DURS	Dursunbey	0.66	314	*i* P	Pb	12 04 51.2	0.0
DURS				IAML_P			
	comp=Z,427nm,0.1s						
KULA	Kula-Manisa	0.71	208	PG	Pg	12 04 51.1	-0.4
MANT	Manisa	0.77	213	*i* P	Pg	12 04 52.5	-0.1
MANT				IAML_P			
	comp=Z,1µm,0.1s						
KHAL	Karahalli	0.83	158	*i* P	Pb	12 04 54.0	-0.1
KHAL				IAML_P			
	comp=Z,549nm,0.1s						
BALB	Balikesir	1.06	298	PG	Pb	12 04 57.9	0.0
CAVI	Cavuskoy	1.21	29	PN	Pb	12 04 59.9	-0.5
KCTX	Karacabey (Bur	1.25	334	PN	Pg	12 05 01.6	-0.2
ARMT	Armutlu	1.43	353	PN	Pn	12 05 03.5	+0.1
YLV	Yalova	1.44	9	PN	Pn	12 05 03.5	0.0
SBT5	Esenkoy-Cinarc	1.50	354	PN	Pn	12 05 04.3	+0.1
EDC	Edincik	1.53	322	PN	Pn	12 05 05.1	+0.4
GULT	Gulveren	1.69	40	PN	Pn	12 05 07.6	+0.6

MEX 26 12:11:17.8±0.6, 18°.20N×103°.39W, h9km±12km, MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		1.11	330	*i* P	Pg	12 11 35.5	-3.7
R15V				*e*S	Sg	12 11 50.1	-3.6
EZ5V		1.29	351	*i* P	Pn	12 11 38.7	-3.6
EZ5V				*e*S	Sb	12 11 54.5	-4.7
ZIIG	Zihuatanejo	1.93	108	*e*P	Pn	12 11 47.4	-3.5
ZIIG				*e*S	Sn	12 12 11.9	-3.3
CJM	Chamela	2.03	310	*e*P	Pn	12 11 49.3	-2.9
CJM				*e*S	Sn	12 12 13.4	-4.3
ARIG	Puente Sto Nin	2.90	88	*e*P	Pn	12 12 01.4	-2.8
ARIG				*i* S	Sn	12 12 35.0	-4.3

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*IDC **26** 12:11:58.3±0.7, 13°.19N×95°.71E, h0km, mb4.0/17, mb1 4.1/18, mb1mx3.9/67, mbtmp4.0/18, ML4.0/1, MS3.1/3, Ms1 3.2/3, ms1mx2.8/40, Error ellipse: s-maj=21.6km s-min=15.6km az=50.0*

*ISCJB **26** 12:12:01.9±0.4, 13°.30N±0°.05×95°.84E±0°.05, h33km, mb4.1/24, MS3.2/1, Error ellipse: s-maj=7.8km s-min=6.4km az=151.8*

*NEIC **26** 12:12:03.8±0.3, 13°.25N×95°.79E, h35km, mb4.2/6, Error ellipse: s-maj=5.7km s-min=5.5km az=203.0*

ISC 26 12:12:03.8±0.7, 13°.29N±0°.08×95°.81E±0°.09, h35km, n53, σ0^s.75/51, mb4.1/24, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	3.41	242	*e*Pn	Pn	12 12 54.6	+0.2
PHET	Kaeng Krachan	3.75	95	P	Pn	12 12 58.9	-0.2
UMPA	Umpang Tak	4.14	45	P	Pn	12 13 02.4	-2.2
UTHA	Uthaitani	4.18	57	P	Pn	12 13 04.8	-0.4
	9.3nm,0.7s,142nm0.1nm						
SUKH	Sukhothai	5.56	41	P	Pn	12 13 24.5	+0.4
	5.1nm,0.7s,0.1nm						
CMAR	Chiang Mai Arr	5.96	30	Pn	Pn	12 13 28.9	-0.7
	1.0nm,0.3s,baz=221,slow=15,SNR=37						
CMAR				LR	LR	12 16 14.6	
	comp=Z,99nm,19.3s,baz=214,slow=42						
PBKT	Sadao Pong	5.96	56	*e*Pn	Pn	12 13 29.5	-0.1
CHTO	Chiang Mai	6.26	28	*e*Pn	Pn	12 13 33.8	0.0
CHTO				*e*Sn	Sn	12 14 42.9	-1.3
CHTO	Chiang Mai	6.26	28	P	Pn	12 13 33.6	-0.2
UTTA	Uttaradit	6.37	45	P	Pn	12 13 36.6	+1.4
	2.8nm,0.9s,56nm0.0nm						
PSI	Prapat	10.87	163	LR	LR	12 18 30.9	
	comp=Z,141nm,21.0s,baz=284,slow=36						
AAK	Ala-Archa	34.56	332	P	P	12 18 50.5	+1.2
	2.4nm,0.9s,baz=118,slow=3.4,SNR=6.3						
MK01	Makanchi Array	35.25	344	*e*P	P	12 18 56.0	+1.0
MK31	Makanchi Array	35.27	344	*e*P	P	12 18 56.1	+0.9
	2.5nm,0.9s						
MK32	Makanchi Array	35.27	344	*e*P	P	12 18 56.2	+1.0
MKAR	Makanchi Array	35.27	344	*e*P	P	12 18 56.0	+0.7
	16nm,0.9s						
MKAR	Makanchi Array	35.27	344	P	P	12 18 56.2	+1.0
	1.7nm,0.7s,baz=155,slow=10,SNR=16						
MAKZ	Makanchi	35.37	344	*e*P	P	12 18 55.5	-0.6
	3.7nm,1.0s						
SONA0	Songino Array	35.55	12	*e*P	P	12 18 58.3	+0.6
SONM	Songino Array	35.55	12	P	P	12 18 58.3	+0.6
	1.1nm,0.9s,baz=200,slow=7.9,SNR=5.9						
SONA1	Songino Array	35.56	12	*e*P	P	12 18 58.8	+0.9
WSAR	Wadi Sarin	36.56	291	LR	LR	12 34 29.4	
	comp=Z,39nm,18.6s,baz=103,slow=37						
KSAR	Wonju Array Be	37.36	44	P	P	12 19 13.6	+0.5
KSRS	Korea Array	37.39	44	P	P	12 19 13.6	+0.2
	1.1nm,0.8s,baz=225,slow=10,SNR=4.0						
KURBB	Kurchatov Arra	39.80	343	P	P	12 19 34.0	+0.6
	4.2nm,0.9s,baz=157,slow=7.8,SNR=25						
KURK	Kurchatov	39.86	343	*e*P	P	12 19 34.7	+0.8
SAUI	Saumlaki	41.10	119	*e*P	P	12 19 44.5	-0.2
	131nm,0.8s						
ZAA0	Zalesovo Array	41.48	350	*e*P	P	12 19 47.7	+0.5
	3.2nm,0.8s						
ZALV	Zalesovo Beam	41.48	350	*e*P	P	12 19 47.5	+0.2
ZALV	Zalesovo Beam	41.48	350	P	P	12 19 47.8	+0.6
	2.7nm,0.7s,baz=180,slow=8.9,SNR=11						
ZAA1	Zalesovo Array	41.48	350	*e*P	P	12 19 47.8	+0.6
GEYT	Alibeck	41.49	313	P	P	12 19 48.1	+0.5
	1.0nm,0.3s,baz=95,slow=9.3,SNR=3.7						
MAJO	Matsushiro	44.41	51	*e*P	P	12 20 12.4	+1.2
MJAR	Matsushiro Arr	44.41	51	P	P	12 20 12.4	+1.1
	0.8nm,0.7s,baz=254,slow=10,SNR=4.4						
WR1	Warramunga Arr	50.29	130	*e*P	P	12 20 56.9	-0.3
	2.5nm,0.9s						
WRA	Warramunga Arr	50.29	130	P	P	12 20 56.9	-0.3
	1.5nm,0.9s,baz=312,slow=8.3,SNR=15						
ASAR	Alice Springs	52.32	134	P	P	12 21 12.2	-0.2
	0.7nm,0.5s,baz=313,slow=7.2,SNR=18						
AS01	Alice Springs	52.35	134	*e*P	P	12 21 12.5	-0.1
BR101	Keskin Array S	60.26	308	*e*P	P	12 22 07.9	-1.2
BRTR	Keskin Array B	60.26	308	P	P	12 22 07.9	-1.2
	0.8nm,0.8s,baz=120,slow=8.5,SNR=4.1						
AKASG	Malin Array Be	65.01	320	P	P	12 22 39.3	-1.0
	0.2nm,0.3s,baz=90,slow=5.1,SNR=4.3						
BUR04	Bucovina Ar. S	67.22	316	*e*P	P	12 22 55.1	+0.3
VTS	Vitosha	68.34	311	*e*P	P	12 23 01.6	-0.4
	1.8nm,0.6s						
FIA1	FINESS Array S	68.75	331	*e*P	P	12 23 04.1	+0.2
FIA0	FINESS Array S	68.75	331	*e*P	P	12 23 04.0	0.0
FINES	FINESS Array B	68.75	331	P	P	12 23 04.0	0.0
	2.0nm,0.7s,baz=116,slow=8.7,SNR=6.0						
HFS	Hagfors	74.65	329	P	P	12 23 39.6	+0.1
	5.1nm,0.7s,baz=116,slow=6.9,SNR=14						
GERES	GERESS Array B	74.94	317	P	P	12 23 41.4	0.0
	0.7nm,0.6s,baz=107,slow=3.2,SNR=5.1						
NB2	NORSAR Subarra	75.86	330	P	P	12 23 45.8	-0.7
	comp=Z,1.1nm,0.6s,baz=88,slow=5.9						
NB200	NORSAR Array S	75.86	330	*e*P	P	12 23 46.0	-0.5
NOA	NORSAR Array B	75.86	330	P	P	12 23 46.0	-0.5
	comp=Z,1.7nm,0.7s,baz=89,slow=5.6,SNR=5.8						
BOSA	Boshof	79.85	237	P	P	12 24 09.2	-0.2
	comp=Z,1.5nm,0.6s,baz=80,slow=11,SNR=3.3						
EKA	Eskdalemuir Ar	84.21	325	P	P	12 24 31.9	+0.3
	comp=Z,1.6nm,0.7s,baz=80,slow=6.0,SNR=4.8						

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*IDC **26** 12:23:33.4±1.3, 13°.24N×95°.78E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/50, mbtmp3.9/8, ML3.8/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/42, Error ellipse: s-maj=49.2km s-min=20.1km az=62.0*

*ISCJB **26** 12:23:36.9±0.6, 13°.29N±0°.07×95°.89E±0°.07, h33km, mb4.0/14, MS3.4/1, Error ellipse: s-maj=9.4km s-min=9.1km az=7.2*

*NEIC **26** 12:23:38.9±0.4, 13°.28N×95°.92E, h35km, mb4.2/8, Error ellipse: s-maj=7.8km s-min=6.5km az=68.0*

ISC 26 12:23:39.1±1.1, 13°.3N±0°.1×95°.8E±0°.1, h35km, n41, σ0^s.87/38, mb4.1/14, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHET	Kaeng Krachan	3.72	96	P	Pn	12 24 35.1	+0.9
UMPA	Umpang Tak	4.08	45	P	Pn	12 24 37.5	-1.7
UTHA	Uthaitani	4.13	57	P	Pn	12 24 39.4	-0.4
SUKH	Sukhothai	5.51	41	P	Pn	12 24 59.4	+0.7
	6.4nm,0.5s,0.0nm						
CM01	Chiang Mai Arr	5.88	30	*e*Pn	Pn	12 25 04.3	+0.5
CM31	Chiang Mai Arr	5.90	30	*e*Pn	Pn	12 25 02.9	-1.2
CMAR	Chiang Mai Arr	5.90	30	Pn	Pn	12 25 03.8	-0.4
	0.6nm,0.3s,baz=220,slow=15,SNR=42						
PBKT	Sadao Pong	5.91	56	*e*Pn	Pn	12 25 04.3	+0.1
SRAK	Srakaew	6.07	83	P	Pn	12 25 13.7	+7.2
	42nm,0.7s,540nm0.3nm						
CHTO	Chiang Mai	6.21	28	*e*Pn	Pn	12 25 07.7	-0.7
CHTO	Chiang Mai	6.21	28	P	Pn	12 25 08.2	-0.2
	22nm,0.6s,0.3nm						
UTTA	Uttaradit	6.31	45	P	Pn	12 25 11.5	+1.7
	2.5nm,0.6s,71nm0.0nm						
LAMP	Lampang	6.31	35	P	Pn	12 25 10.7	+0.9
	3.1nm,0.7s,0.0nm						
PSI	Prapat	10.91	163	LR	LR	12 29 52.4	
	comp=Z,158nm,21.8s,baz=279,slow=35						
ENH	Enshi	21.05	35	*e*P	P	12 28 20.7	+0.5
	13nm,1.0s						
XAN	Xi'an	23.79	28	*e*P	P	12 28 48.0	-0.7
	8.9nm,0.8s						
MK01	Makanchi Array	35.21	344	*e*P	P	12 30 31.1	+1.0
MK31	Makanchi Array	35.24	344	*e*P	P	12 30 31.1	+0.9
	2.3nm,0.9s						
MK32	Makanchi Array	35.24	344	*e*P	P	12 30 31.1	+0.9
MKAR	Makanchi Array	35.24	344	*e*P	P	12 30 31.3	+1.0
	11nm,0.8s						
MKAR	Makanchi Array	35.24	344	P	P	12 30 31.1	+0.9
	2.3nm,1.0s,baz=151,slow=10,SNR=11						
MAKZ	Makanchi	35.34	343	*e*P	P	12 30 31.9	+0.7
	1.9nm,0.9s						
SONA0	Songino Array	35.50	12	*e*P	P	12 30 32.2	-0.4
SONM	Songino Array	35.50	12	P	P	12 30 32.2	-0.4
	0.8nm,0.8s,baz=188,slow=7.5,SNR=6.1						
SONA1	Songino Array	35.51	12	*e*P	P	12 30 33.5	+0.8
KURK	Kurchatov	39.82	343	*e*P	P	12 31 09.9	+1.0
	8.0nm,0.9s						
ZAA0	Zalesovo Array	41.44	350	*e*P	P	12 31 23.0	+0.8
	3.7nm,1.0s						
ZALV	Zalesovo Beam	41.44	350	P	P	12 31 22.6	+0.4
	1.7nm,0.6s,baz=170,slow=9.0,SNR=8.5						
ZAA1	Zalesovo Array	41.44	350	*e*P	P	12 31 22.6	+0.4
GEYT	Alibeck	41.48	313	LR	LR	12 50 33.7	
	comp=Z,46nm,18.2s,baz=95,slow=39						
ABKAR	Akbulak array	46.38	328	*e*P	P	12 32 02.6	+0.6
	2.4nm,0.9s						
WRA	Warramunga Arr	50.29	130	P	P	12 32 31.8	-0.8
	1.0nm,0.9s,baz=310,slow=7.8,SNR=5.5						
WR1	Warramunga Arr	50.30	130	*e*P	P	12 32 31.8	-0.8
WC3	Warramunga Arr	50.33	130	*e*P	P	12 32 31.0	-1.9
ASAR	Alice Springs	52.33	134	P	P	12 32 47.2	-0.6
	0.4nm,0.6s,baz=311,slow=6.6,SNR=6.9						
FIA0	FINESS Array S	68.72	331	*e*P	P	12 34 39.0	-0.1
FIA1	FINESS Array S	68.72	331	*e*P	P	12 34 39.4	+0.3
FINES	FINESS Array B	68.72	331	P	P	12 34 39.0	-0.1
	1.6nm,0.7s,baz=108,slow=4.2,SNR=4.3						
NB2	NORSAR Subarra	75.83	330	P	P	12 35 20.7	-1.0
	comp=Z,0.9nm,0.6s,baz=89,slow=5.6						
NB200	NORSAR Array S	75.83	330	*e*P	P	12 35 21.0	-0.7
NOA	NORSAR Array B	75.83	330	P	P	12 35 21.0	-0.7
	comp=Z,1.8nm,0.8s,baz=88,slow=5.7,SNR=4.6						

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*ISCJB **26** 12:36:00.2±1.1, 32°.40S±0°.07×178°.6W±0°.2, h33km, mb4.2/7, Error ellipse: s-maj=27.6km s-min=5.5km az=19.6*

*NEIC **26** 12:36:02.3±1.1, 32°.41S×178°.37W, h52km±9km, mb4.5/4, Error ellipse: s-maj=18.0km s-min=10.3km az=109.0*

*IDC **26** 12:36:02.1±2.9, 32°.44S×178°.34W, h50km±24km, mb3.7/3, mb1 3.9/4, mb1mx3.6/31, mbtmp3.9/4, ML4.3/2, Error ellipse: s-maj=40.1km s-min=26.3km az=124.0*

ISC 26 12:36:00.9±1.1, 32°.41S±0°.10×178°.4W±0°.2, h33km, n20, σ1^s.52/24, mb4.2/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.17	7	*e*Pn	Pn	12 36 49.7	+1.3
RAO				*e*Sn	Sn	12 37 26.1	+1.1
RAO	Raoul Island	3.17	7	P	Pn	12 36 49.7	+1.3
	208nm,0.3s,baz=79,slow=17,SNR=7.1						
URZ	Urewera	6.92	211	*e*Pn	Pn	12 37 40.9	+1.0
URZ				*e*Sn	Sn	12 38 58.4	+1.0
URZ	Urewera	6.92	211	P	Pn	12 37 41.3	+1.4
	0.7nm,0.3s,baz=71,slow=11,SNR=5.8						
URZ				S	Sn	12 39 01.9	+4.5
	1.2nm,0.3s,baz=138,slow=14,SNR=5.2						
BKZ	Black Stump Fm	7.94	210	*e*Pn	Pn	12 37 55.2	+1.2
BKZ				*e*Sn	Sn	12 39 21.1	-1.5
STKA	Stephens Creek	33.78	260	P	P	12 42 37.7	-2.0
	1.5nm,0.5s,baz=111,slow=15,SNR=2.9						
ASAR	Alice Springs	42.74	269	P	P	12 43 55.4	+0.2
	0.5nm,0.4s,baz=107,slow=7.6,SNR=10						
WB2	Warramunga Arr	43.90	274	*e*P	P	12 44 03.3	-1.3
WRAB	Tennant Creek	43.90	274	*e*P	P	12 44 02.7	-1.9
	3.9nm,0.8s						
WR1	Warramunga Arr	43.91	274	*e*P	P	12 44 04.5	-0.2
	2.2nm,0.6s						
WRA	Warramunga Arr	43.91	274	P	P	12 44 04.5	-0.2
	1.0nm,0.4s,baz=113,slow=7.9,SNR=30						
FORT	Forrest	45.27	257	*e*P	P	12 44 16.0	+0.5
	20nm,0.9s						
CASY	Casey	53.23	209	*e*P	P	12 45 15.3	-0.5
	12nm,1.2s						
KBZ	Khabaz	145.94	301	PKPbc	PKPbc	12 55 36.5	-0.3
	0.9nm,0.8s,baz=354,slow=5.0,SNR=4.5						
FIA0	FINESS Array S	146.91	339	*e*PKPdf	PKPdf	12 55 36.8	-0.4
FINES	FINESS Array B	146.91	339	PKPbc	PKPdf	12 55 36.8	-0.4
	1.9nm,0.7s,baz=14,slow=3.9,SNR=6.2						
BR101	Keskin Array S	153.23	295	*e*PKPbc	PKPbc	12 55 55.1	-0.4
BRTR	Keskin Array B	153.23	295	PKPbc	PKPbc	12 55 55.1	-0.4
	0.4nm,0.4s,baz=228,slow=1.5,SNR=3.6						
TORD	Torodi Ar. Bea	160.83	180	PKPab	PKPab	12 56 38.7	-1.6
	1.0nm,1.0s,baz=182,slow=4.2,SNR=3.7						
TOA1	Torodi Ar. Sit	160.84	180	*e*PKPab	PKPab	12 56 38.7	-1.6

MEX 26 12:45:23.4±0.4, 16°.53N×98°.31W, h8km±23km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.22	129	*i* P	Pg	12 45 27.6	-0.3
PNIG				*i* S	Sg	12 45 30.7	-0.2

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*NIED **26** 12:46:00, 38°.70N×142°.20E, h41km, Mw4.8 Best double couple: M$_0$1.95000×10^{16} NP1:φ$_s$152.00000°, δ11.00000°, λ22.00000°. NP2:φ$_s$40.00000°, δ86.00000°, λ100.00000°.*

*BJI **26** 12:46:09.2, 38°.63N×142°.49E, h42km, mB5.0/42, mb4.7/64, Ms4.4/47, Ms7 4.2/48*

*ISCJB **26** 12:46:12.5±0.4, 38°.74N±0°.02×142°.18E±0°.03, h46km±3km, mb4.7/156, MS4.2/36, Error ellipse: s-maj=4.8km s-min=3.0km az=44.2*

*JMA **26** 12:46:12.7±0.1, 38°.71N×142°.22E, h41km±1km, M4.9*

JMA Felt III J1.

*MOS **26** 12:46:12.8±1.0, 38°.96N×142°.13E, h39km, mb5.0/62, MS4.4/6, Error ellipse: s-maj=6.3km s-min=4.1km az=97.4*

*IDC **26** 12:46:13.8±0.7, 38°.73N×142°.07E, h40km±4km, mb4.3/23, mb1 4.4/28, mb1mx4.4/37, mbtmp4.5/28, ML4.0/5, MS4.0/33, Ms1 4.0/33, ms1mx4.0/41, Error ellipse: s-maj=15.7km s-min=11.8km az=141.0*

*GCMT **26** 12:46:14.6±0.4, 38°.82N±0°.02×142°.39E±0°.04, h54km±3km, MW4.8/63, Moment Tensor Solution. s18,c21; s63,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.37±.18; M$_{θθ}$-0.19±.12; M$_{φφ}$-1.18±.12; M$_{rθ}$1.12±.08; M$_{θφ}$-0.37±.10; M$_{φr}$1.28±.09; Best double couple: M$_0$2.15700×10^{16} NP1:φ$_s$35.00000°, δ71.00000°, λ100.00000°. NP2: φ$_s$186.00000°, δ21.00000°, λ62.00000°. Principal axes: T 2.2510, Plg62.0000°, Azm321.0000°; N -0.1860, Plg10.0000°, Azm212.0000°; P -2.0640, Plg26.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **26** 12:46:14.6±0.6, 38°.71N×142°.07E, h51km±5km, mb4.7/96 Error ellipse: s-maj=5.4km s-min=3.7km az=140.0*

NEIC Felt in Fukushima, Iwate and Miyagi. Recorded [3 JMA] in Iwate and Miyagi.

ISC 26 12:46:12.0±0.5, 38°.70N±0°.04×142°.31E±0°.04, h34km±1km, h34km:pP-P, n384, σ1^s.54/401, mb4.8/165, MS4.2/37, 36C-28D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.63	308	⇓P	Pn	12 46 24.4	-0.1
OFUJ				S	Sn	12 46 32.5	-0.8
JKMT	Kesennumamotoy	0.66	280	P	Pn	12 46 24.7	-0.2
JKMT				S	Sn	12 46 32.9	-1.2
JIKH	Ishinomakikobu	0.77	240	P	Pn	12 46 26.3	-0.1
JIKH				S	Sn	12 46 35.7	-1.0
JIO	Ouri	0.79	252	⇓P	Pn	12 46 26.5	-0.2
JIO				S	Sn	12 46 35.9	-1.4
JMK	Ichinoseki	0.89	287	⇓P	Pn	12 46 28.0	-0.1
JMK				*e*S	Sn	12 46 38.7	-1.0
JOM	Ohasama	1.11	315	⇓P	Pn	12 46 31.4	+0.3
JOM				*e*S	Sn	12 46 44.9	-0.3
JTH	Tanohata	1.29	345	⇓P	Pn	12 46 33.5	-0.1
JOU	Okura	1.33	256	⇓P	Pn	12 46 34.4	+0.2
JOU				S	Sn	12 46 51.0	+0.3
JMM	Marumori	1.45	236	⇓P	Pn	12 46 35.8	0.0
JMM				*e*S	Sn	12 46 53.0	-0.7
JRG	Rokugo	1.48	299	⇓P	Pn	12 46 36.6	+0.4
JRG				*e*S	Sn	12 46 54.2	-0.2
JYK	Kaneyama	1.54	279	⇓P	Pn	12 46 37.3	+0.3
JYK				*e*S	Sn	12 46 55.6	-0.2
ERM	Erimo	3.38	11	*e*Pn	Pn	12 47 03.6	+1.3
ERM	Erimo	3.38	11	*ce*P	Pn	12 47 03.7	+1.4
MAJO	Matsushiro	3.90	238	*e*Pn	Pn	12 47 11.6	+2.0
MAJO	Matsushiro	3.90	238	*de*P	Pn	12 47 11.8	+2.2
MAT	Matsushiro	3.90	238	P	Pn	12 47 11.7	+2.1
MAT				*e*S	Sn	12 47 55.3	+1.1
MJAR	Matsushiro Arr	3.90	238	Pn	Pn	12 47 11.2	+1.7
	7.0nm,0.3s,baz=34,slow=12,SNR=165						
MJAR				LR	LR	12 48 52.5	
	comp=Z,2µm,19.5s,baz=55,slow=42						
MJB9	Matsu-Tunnel	3.90	238	*e*Pn	Pn	12 47 11.7	+2.1
INU	Inuyama	5.39	233	*e*Pn	Pn	12 47 32.5	+2.5
ASAJ	Asahikawa	5.42	2	Pn	Pn	12 47 31.4	+1.1
	4.9nm,0.3s,baz=210,slow=15,SNR=66						
ASAJ				Sn	Sn	12 48 34.2	+2.7
	1.1nm,0.3s,baz=142,slow=19,SNR=3.0						
GLVR	Golovnino	5.59	25	*e*P	Pn	12 47 32.2	-0.5
GLVR				*i* S	Sn	12 48 33.2	-2.4
GLVR				pmax	pmax		
	comp=Z,246nm,0.4s						
GLVR				pmax	pmax		
	comp=N,28nm,0.2s						
GLVR				pmax	pmax		
	comp=E,42nm,0.2s						
GLVR				smax	smax		
	comp=N,1µm,0.3s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
GRPR	Tuman	5.90	25	*e*P	Pn	12 47 36.7	-0.2
GRPR				*e*S	Sn	12 48 39.6	-3.7
GRPR				pmax	pmax		
	comp=Z,298nm,0.3s						
GRPR				pmax	pmax		
	comp=N,94nm,0.2s						
GRPR				pmax	pmax		
	comp=E,63nm,0.1s						
GRPR				smax	smax		
	comp=N,2µm,0.2s						
GRPR				smax	smax		
	comp=E,686nm,0.4s						
JHJ2	Mitsune	5.93	201	*e*Pn	Pn	12 47 37.1	-0.2
JHJ	Hachijo jima 2	5.93	201	Pn	Pn	12 47 38.0	+0.6
	comp=E,80nm,0.3s,baz=103,slow=23,SNR=19						
JHJ				Sn	Sn	12 48 39.9	-4.3
	comp=E,41nm,0.3s,baz=73,slow=19,SNR=4.0						
LAGR	Lagunnoye	5.96	25	*e*P	Pn	12 47 38.3	+0.5
LAGR				*e*S	Sn	12 48 41.1	-3.7
LAGR				pmax	pmax		
	comp=N,158nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,427nm,0.4s						
LAGR				pmax	pmax		
	comp=E,361nm,0.3s						
LAGR				smax	smax		
	comp=E,2µm,0.5s						
LAGR				smax	smax		
	comp=N,969nm,0.3s						
YUK	Yuzh-Kuril'sk	5.96	25	*c i*P	Pn	12 47 37.1	-0.7
YUK				*i* S	Sn	12 48 41.1	-3.8
YUK				pmax	pmax		
	comp=N,167nm,0.2s						
YUK				pmax	pmax		
	comp=Z,247nm,0.2s						
YUK				pmax	pmax		
	comp=E,65nm,0.1s						
YUK				smax	smax		
	comp=N,1µm,0.3s						
YUK				smax	smax		
	comp=E,419nm,0.2s						
YUK				smax	smax		
	comp=N,2µm,1.6s						
YUK				smax	smax		
	comp=E,924nm,1.1s						
SHO	Shikotan	6.19	32	*d i*P	Pn	12 47 39.4	-1.5
SHO				*i* S	Sn	12 48 44.8	-5.6
SHO				pmax	pmax		
	comp=Z,32nm,0.3s						
SHO				pmax	pmax		
	comp=E,18nm,0.1s						
SHO				pmax	pmax		
	comp=N,13nm,0.2s						
SHO				smax	smax		
	comp=N,419nm,0.3s						
SHO				smax	smax		
	comp=E,647nm,0.5s						
TEY	Ternei	7.63	328	⇑*e*P	Pn	12 48 07.2	+6.5
TEY				pmax	pmax		
	comp=Z,150nm,1.0s						
TEY				pmax	pmax		
	comp=N,150nm,1.0s						
TEY				pmax	pmax		
	comp=E,100nm,1.0s						
TEY				MLR	MLR		
	comp=N,1µm,12.0s						
KUR	Kuril'sk	7.73	31	*c i*P	Pn	12 48 02.2	+0.1
KUR				*i* S	Sn	12 49 25.0	-3.4
KUR				pmax	pmax		
	comp=Z,74nm,0.7s						
KUR				pmax	pmax		
	comp=E,45nm,0.5s						
KUR				pmax	pmax		
	comp=N,33nm,0.4s						
KUR				smax	smax		
	comp=N,320nm,0.7s						
KUR				smax	smax		
	comp=E,194nm,0.7s						
YSS	Yuzh-Sakhalins	8.26	2	*e*Pn	Pn	12 48 10.0	+0.6
YSS	Yuzh-Sakhalins	8.26	2	⇑*i*P	Pn	12 48 10.9	+1.6
YSS				*e*S	Sn	12 49 41.5	+0.1
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				pmax	pmax		
	comp=E,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,12.0s						
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
VLA	Vladivostok	9.04	303	⇑*e*P	Pn	12 48 22.8	+2.7
VLA				pmax	pmax		
	comp=Z,220nm,1.0s						
MSHR	Mys Shultsa	9.32	298	⇑*e*P	Pn	12 48 27.3	+3.4
USA0B	Ussuriysk Arra	9.50	309	*e*Pn	Pn	12 48 28.1	+1.8
USRK	Ussuriysk Ar.	9.50	309	Pn	Pn	12 48 28.8	+2.5
	comp=Z,3.3nm,0.3s,baz=114,slow=12,SNR=117						
USRK				LR	LR	12 51 57.4	
	comp=Z,2µm,19.0s,baz=106,slow=37						
JNU	Nakatsue	10.81	242	*e*Pn	Pn	12 48 46.4	+2.1
JNU	Nakatsue	10.81	242	Pn	Pn	12 48 45.6	+1.3
	comp=Z,0.8nm,0.3s,baz=54,slow=7.7,SNR=13						
JNU				LR	LR	12 53 21.8	
	comp=Z,921nm,19.1s,baz=50,slow=40						
MDJ	Mudanjiang	11.20	306	P	Pn	12 48 54.8	+5.2
MDJ				sP		12 49 10.3	
MDJ				pmax	pmax		
	comp=Z,65nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,540nm,3.1s						
MDJ				LR	LR		
	comp=Z,710nm,16.2s						

MDJ				LR	LR		
	comp=Z,2µm,17.1s						
MDJ				LR	LR		
	comp=Z,2µm,17.0s						
MDJ	Mudanjiang	11.20	306	ePn	Pn	12 48 47.5	-2.1
KSRS	Korea Array	11.41	268	Pn	Pn	12 48 56.1	+3.7
	comp=Z,1.2nm,0.3s,baz=81,slow=14,SNR=46						
KSRS				LR	LR	12 52 54.3	
	comp=Z,986nm,20.5s,baz=82,slow=36						
KS01	Wonju Array Si	11.43	268	ePn	Pn	12 48 56.6	+3.8
KS15	Wonju Array Si	11.44	268	ePn	Pn	12 48 56.6	+3.7
KSAR	Wonju Array Be	11.44	268	Pn	Pn	12 48 56.1	+3.2
KSAR	Wonju Array Be	11.44	268	P	Pn	12 48 56.2	+3.2
CBIJ	Chichi jima	11.57	181	ePn	Pn	12 48 52.3	-2.5
CBIJ				eSn	Sn	12 50 53.5	-9.2
JCJ	Chichijima	11.57	181	Pn	Pn	12 48 52.3	-2.5
	comp=Z,9.0nm,0.3s,baz=277,slow=22,SNR=6.1						
JCJ				Sn	Sn	12 50 53.5	-9.2
	comp=Z,11nm,0.3s,baz=294,slow=20,SNR=4.8						
JCJ				LR	LR	12 54 07.3	
	comp=Z,96nm,20.8s,baz=318,slow=41						
TJN	Taejon	12.09	264⇑	eP	Pn	12 49 04.7	+2.9
TYV	Tymovskoe	12.17	1	eP	Pn	12 49 02.2	-0.6
TYV				eS	Sn	12 51 17.7	+0.6
TYV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TYV				smax	smax		
	comp=E,6.0nm,1.3s						
GRNR	Gornyy	12.77	343	eP	Pn	12 49 11.0	-0.1
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
KLR	Kul'dur	12.97	328	Pn	Pn	12 49 13.8	-0.1
	comp=Z,0.2nm,0.3s,baz=133,slow=13,SNR=20						
KLR				LR	LR	12 54 10.6	
	comp=Z,1µm,19.6s,baz=140,slow=37						
CN2	Changchun	13.67	297	eP	Pn	12 49 26.3	+3.0
NKL	Nikolayevsk	14.50	356	eP	Pn	12 49 32.5	-2.1
NKL				pmax	pmax		
	comp=Z,33nm,1.1s						
DL2	Dalian	16.13	277	P	Pn	12 49 57.0	+1.0
DL2				sP	sP	12 50 10.0	-1.7
DL2				eS	Sn	12 52 53.3	-0.4
DL2				pmax	pmax		
	comp=Z,76nm,1.1s						
DL2				pmax	pmax		
	comp=Z,130nm,7.6s						
DL2				LR	LR		
	comp=Z,440nm,16.5s						
DL2				LR	LR		
	comp=Z,700nm,16.5s						
DL2				LR	LR		
	comp=Z,1µm,16.7s						
PEA0B	Petropavlovsk-	17.90	31	ePn	Pn	12 50 16.5	-1.6
	comp=Z,20nm,1.1s						
PETK	Petropavlovsk-	17.90	31	ePn	Pn	12 50 16.7	-1.4
PETK	Petropavlovsk-	17.90	31	eP	Pn	12 50 16.7	-1.4
PETK	Petropavlovsk-	17.90	31	P	Pn	12 50 16.5	-1.6
	comp=Z,0.1nm,0.3s,baz=201,slow=16,SNR=4.2						
PETK				LR	LR	12 57 46.6	
	comp=Z,258nm,18.9s,baz=215,slow=39						
PEA1	Petropavlovsk-	17.90	31	ePn	Pn	12 50 16.5	-1.6
ZEA	Zeya	18.24	330	eP	P	12 50 19.1	-3.1
ZEA				pmax	pmax		
	comp=N,65nm,1.0s						
ZEA				pmax	pmax		
	comp=E,41nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,16.0s						
ZEA				MLR	MLR		
	comp=E,500nm,14.0s						
ZEA				MLR	MLR		
	comp=N,900nm,15.0s						
TIA	Tai'an	20.13	271	P	P	12 50 41.5	-1.6
TIA				sP	sP	12 50 57.0	+1.1
TIA				pmax	pmax		
	comp=N,5.0nm,0.9s						
TIA				LR	LR		
	comp=N,180nm,14.2s						
TIA				LR	LR		
	comp=N,140nm,15.7s						
TIA				LR	LR		
	comp=N,300nm,19.9s						
NJ2	Nanjing	20.21	258	eP	P	12 50 42.5	-1.5
NJ2				S	S	12 54 29.3	+0.4
NJ2				pmax	pmax		
	comp=N,18nm,0.7s						
NJ2				LR	LR		
	comp=N,310nm,13.0s						
NJ2				LR	LR		
	comp=N,410nm,14.6s						
NJ2				LR	LR		
	comp=N,530nm,14.6s						
BJT	Baijiatuau	20.24	282	eP	P	12 50 41.4	-2.8
	comp=N,27nm,1.1s						
BJT	Baijiatuau	20.24	282	eP	P	12 50 41.4	-2.8
BJT				pmax	pmax		
	comp=Z,27nm,1.1s						
MA2	Magadan	21.58	12	eP	P	12 50 59.3	+0.8
	comp=Z,31nm,1.0s						
MA2	Magadan	21.58	12c	iP	P	12 50 59.1	+0.6
MA2				pmax	pmax		
	comp=Z,44nm,1.3s						
MA2	Magadan	21.58	12	P	P	12 50 59.2	+0.8
	comp=Z,25nm,0.9s,baz=191,slow=8.2,SNR=22						
MA2				LR	LR	12 59 05.9	
	comp=Z,181nm,22.0s,baz=194,slow=36						
YHNB	Yeheng	22.57	238	eP	P	12 51 07.9	-1.7
	comp=Z,22nm,1.1s						
SSLB	Suanglung	23.46	237	eP	P	12 51 15.9	-2.6
	comp=Z,9.2nm,0.8s						
YULB	Yu-li	23.52	236	eP	P	12 51 16.1	-2.9
	comp=Z,8.2nm,0.9s						
HHC	Hu-ho-hao-te	23.67	285	eP	P	12 51 19.0	-1.5
HHC				pP	pP	12 51 30.5	+0.6
HHC				S	S	12 55 26.0	-7.1
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.2s						
HHC				LR	LR		
	comp=Z,310nm,13.0s						
HHC				LR	LR		
	comp=Z,1µm,16.8s						
HHC				LR	LR		
	comp=Z,1µm,14.7s						
TPUB	Ta-pu	24.01	237	eP	P	12 51 21.7	-2.0
	comp=Z,17nm,0.7s						
TWG	Pinlang	24.07	235	eP	P	12 51 22.8	-1.4
	comp=Z,98nm,0.9s						
QZH	Quanzhou	24.29	243	eP	P	12 51 23.8	-2.4
QZH				S	S	12 55 39.8	-3.0
QZH				LR	LR		
	comp=Z,260nm,12.3s						
YAK	Yakutsk	24.62	346	eP	P	12 51 28.1	-0.8
YAK				e*PP	pP	12 51 37.6	-0.9
YAK				e		12 52 10.6	
YAK				eS	S	12 55 43.9	-3.7
YAK				e*SS	sS	12 56 04.9	+1.2
YAK				e		13 02 35.2	
YAK				pmax	pmax		
	comp=Z,183nm,0.9s						
YAK				pmax	pmax		
	comp=N,160nm,1.0s						
YAK				pmax	pmax		
	comp=E,35nm,1.0s						
YAK				smax	smax		
	comp=N,481nm,1.9s						
YAK				smax	smax		
	comp=E,256nm,1.6s						
YAK				MLR	MLR		
	comp=Z,2µm,14.0s						
YAK				MLR	MLR		
	comp=N,2µm,15.0s						
BTO	Baotou	24.86	285	eP	P	12 51 29.0	-2.4
SEY	Seymchan	25.03	11⇑	eP	P	12 51 34.2	+1.7
SEY	Seymchan	25.03	11	P	P	12 51 34.1	+1.6
	comp=N,31nm,0.9s,baz=201,slow=6.9,SNR=78						
GUMO	Guam	25.11	174	LR	LR	13 00 48.9	
	comp=N,176nm,21.5s,baz=28,slow=35						
BOD	Bodaibo	26.53	325	eP	P	12 51 45.1	-1.2
BOD				pmax	pmax		
	comp=Z,23nm,1.2s						
ULN	Ulaanbaatar	27.05	301	eP	P	12 51 49.8	-1.5
	comp=Z,14nm,1.0s						
ULN	Ulaanbaatar	27.05	301⇓	eP	P	12 51 51.4	+0.1
ULN				pmax	pmax		
	comp=Z,19nm,1.3s						
XAN	Xi'an	27.19	271	P	P	12 51 51.0	-1.5
XAN				pP	pP	12 52 02.8	+0.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,94nm,4.3s						
SONA1	Songino Array	27.48	301	eP	P	12 51 55.2	+0.1
SONA0	Songino Array	27.49	301	eP	P	12 51 55.0	-0.1
SONM	Songino Array	27.49	301	P	P	12 51 55.0	-0.1
	comp=Z,4.8nm,0.8s,baz=105,slow=9.2,SNR=12						
SONM				LR	LR	13 03 15.8	
	comp=Z,466nm,18.2s,baz=134,slow=37						
ENH	Enshi	28.21	263	eP	P	12 52 01.0	-0.6
	comp=Z,52nm,0.8s						
H11N2	WAKE ISLAND Hy	28.45	125	T	T	13 22 22.9	
	baz=316,slow=75,SNR=3436						
H11N1	WAKE ISLAND Hy	28.46	125	T	T	13 22 23.5	
	baz=316,slow=75,SNR=4745						
H11N3	WAKE ISLAND Hy	28.47	125	T	T	13 22 24.2	
	baz=316,slow=75,SNR=4189						
H11S1	WAKE ISLAND Hy	29.22	127	T	T	13 23 21.1	
	baz=318,slow=76,SNR=1671						
H11S3	WAKE ISLAND Hy	29.23	127	T	T	13 23 21.8	
	baz=318,slow=76,SNR=3192						
H11S2	WAKE ISLAND Hy	29.24	127	T	T	13 23 22.3	
	baz=318,slow=76,SNR=1683						
TLY	Talaya	29.81	309	eP	P	12 52 15.9	+0.2
	comp=Z,17nm,1.0s						
TLY	Talaya	29.81	309	eP	P	12 52 15.6	0.0
TLY				eS	S	12 57 16.0	+6.1
TLY				pmax	pmax		
	comp=Z,38nm,0.9s						
TLY				MLR	MLR		
	comp=Z,2µm,17.0s						
ZAK	Zakamensk	29.83	306	eP	P	12 52 14.6	-1.3
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH	Lanzhou	30.52	277	eP	P	12 52 24.3	+2.1
LZH				pP	sP	12 52 35.0	-0.8
LZH				sP	pP	12 52 40.5	+8.5
LZH				pmax	pmax		
	comp=Z,31nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,5.3s						
LZH				LR	LR		
	comp=Z,710nm,13.3s						
LZH				LR	LR		
	comp=Z,1µm,14.4s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
MOY	Mondy	31.44	308	eP	P	12 52 29.6	-0.5
MOY				pmax	pmax		
	comp=Z,34nm,2.7s						
BILL	Bilibino	32.23	17	eP	P	12 52 37.6	+0.8
	comp=Z,8.0nm,1.0s						
BILL	Bilibino	32.23	17	eP	P	12 52 37.2	+0.5
BILL				e		12 53 43.4	
BILL				ePPP	PPP	12 53 55.7	
BILL				e		12 55 24.7	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CD2	Chengdu	32.41	268	eP	P	12 52 38.0	-0.7
GTA	Gaotai	32.79	285	eP	P	12 52 42.0	-0.1
GTA				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA				pmax	pmax		
	comp=Z,95nm,7.0s						
GTA				LR	LR		
	comp=Z,330nm,15.2s						
GTA				LR	LR		
	comp=Z,820nm,19.0s						
GTA				LR	LR		
	comp=Z,1µm,18.4s						
KNGR	Kungurtug, Tuv	33.52	306⇓	iP	P	12 52 47.7	-0.6
QIZ	Qiongzhong	34.27	244	P	P	12 52 56.0	+1.0
QIZ				S	S	12 58 19.3	-0.6
QIZ				LR	LR		
	comp=Z,130nm,4.6s						
QIZ				LR	LR		
	comp=Z,230nm,3.8s						
QIZ				LR	LR		
	comp=Z,260nm,8.4s						
KMI	Kunming	35.93	260	P	P	12 53 10.0	+0.5
KMI				pmax	pmax		
	comp=Z,22nm,0.5s						
KMI				LR	LR		
	comp=Z,300nm,18.4s						
KMI				LR	LR		
	comp=Z,300nm,18.1s						
KMI				LR	LR		
	comp=Z,360nm,18.4s						
ANM	Nome	39.81	32	eP	P	12 53 45.0	+3.4
	comp=Z,7.4nm,0.8s						
ANM	Nome	39.81	32	eP	P	12 53 45.0	+3.4
ANM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DGZ	Jazzator, Alta	40.02	304c	iP	P	12 53 44.4	+0.8
DGZ				pmax	pmax		
	comp=Z,24nm,0.9s						
WMQ	Urumqi	40.75	295	P	P	12 53 50.3	+0.6
WMQ				pP	pP	12 53 59.5	-0.1
WMQ				sP	sP	12 54 08.0	+4.7
WMQ				pmax	pmax		
	comp=Z,83nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,780nm,5.7s						
WMQ				LR	LR		
	comp=Z,350nm,20.1s						
WMQ				LR	LR		
	comp=Z,370nm,27.5s						
WMQ				LR	LR		
	comp=Z,450nm,26.7s						
WMQ	Urumqi	40.75	295	eP	P	12 53 50.2	+0.6
	comp=Z,43nm,1.0s						
WMQ	Urumqi	40.75	295	eP	P	12 53 50.3	+0.6
WMQ				pmax	pmax		
	comp=Z,43nm,1.0s						
ZAA0	Zalesovo Array	41.34	311	eP	P	12 53 54.3	+0.1
	comp=Z,16nm,0.8s						
ZAA1	Zalesovo Array	41.34	311	eP	P	12 53 54.2	-0.1
ZALV	Zalesovo Beam	41.34	311	P	P	12 53 54.2	-0.1
	comp=Z,13nm,0.7s,baz=88,slow=7.7,SNR=51						
ZALV				LR	LR	13 11 38.7	
	comp=Z,428nm,20.4s,baz=48,slow=37						
NRIK	Noril'sk	42.07	334	P	P	12 53 59.5	-0.6
	comp=Z,2.4nm,0.3s,baz=113,slow=7.0,SNR=4.9						
NRIK				LR	LR	13 12 25.3	
	comp=Z,690nm,19.5s,baz=100,slow=38						
NVS	Novosibirsk	42.22	312	i P	P	12 54 01.4	-0.1
NVS				e		12 55 45.9	
NVS				pmax	pmax		
	comp=Z,12nm,0.9s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.0s						
CMMT	Chiang Mai	42.40	255	P	P	12 54 04.0	+0.6
	comp=E,13nm,0.8s						
CHTO	Chiang Mai	42.40	255	eP	P	12 54 03.4	0.0
	comp=E,9.5nm,0.8s						
CHTO	Chiang Mai	42.40	255	eP	P	12 54 03.4	0.0
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	Chiang Mai	42.40	255	P	P	12 54 05.2	+1.8
	comp=Z,56nm,0.8s						
CMAR	Chiang Mai Arr	42.62	254	P	P	12 54 04.9	-0.2
	comp=Z,0.9nm,0.7s,baz=42,slow=6.1,SNR=6.0						
CMAR				LR	LR	13 11 50.4	
	comp=Z,74nm,19.7s,baz=57,slow=36						
CM01	Chiang Mai Arr	42.63	254	eP	P	12 54 04.3	-0.9
LSA	Lhasa	42.78	274	eP	P	12 54 08.3	+1.4
	comp=Z,11nm,1.1s						
LSA	Lhasa	42.78	274	eP	P	12 54 08.3	+1.4
LSA				pmax	pmax		
	comp=Z,11nm,1.1s						
SRAK	Srakaew	43.17	246	P	P	12 54 14.5	+4.9
	comp=Z,18nm,0.5s						
MK01	Makanchi Array	43.85	301	eP	P	12 54 14.6	-0.3
MK31	Makanchi Array	43.86	301	eP	P	12 54 14.8	-0.1
	comp=Z,13nm,0.9s						
MK31	Makanchi Array	43.86	301	eP	P	12 54 14.8	-0.1
MK31				pmax	pmax		
	comp=Z,13nm,0.9s						
MK32	Makanchi Array	43.86	301	eP	P	12 54 14.6	-0.3
MKAR	Makanchi Array	43.86	301	eP	P	12 54 14.9	0.0
	comp=Z,85nm,0.8s						
MKAR	Makanchi Array	43.86	301	P	P	12 54 14.6	-0.3
	comp=Z,13nm,0.9s,baz=84,slow=9.2,SNR=73						
MKAR				LR	LR	13 13 04.9	
	comp=Z,253nm,20.4s,baz=73,slow=37						
MAKZ	Makanchi	44.06	301	eP	P	12 54 16.6	0.0
	comp=Z,17nm,0.9s						
MAKZ	Makanchi	44.06	301	eP	P	12 54 16.6	0.0
MAKZ				pmax	pmax		
	comp=Z,17nm,0.9s						
UMPA	Umpang Tak	44.07	252	P	P	12 54 19.4	+2.5
	comp=Z,3.7nm,1.0s,comp=Z,848nm						
SHL	Shillong	44.15	268	eP	P	12 54 18.0	+0.3
IM3	Indian Mountai	44.86	31	eP	P	12 54 24.6	+2.0
KURK	Kurchatov	45.48	307	eP	P	12 54 27.3	-0.4
	comp=Z,47nm,0.8s						
KURK	Kurchatov	45.48	307	eP	P	12 54 27.3	-0.4
KURK				pmax	pmax		
	comp=Z,47nm,0.8s						
PHET	Kaeng Krachan	45.64	248	P	P	12 54 31.1	+1.7
	comp=Z,5.2nm,1.0s						
MLY	Manley	46.07	33	eP	P	12 54 33.2	+0.9
	comp=Z,6.5nm,0.9s						
PDGK	Podgornoye	46.64	297	P	P	12 54 36.2	-0.9
PDGK				pmax	pmax		
	comp=Z,15nm,1.1s						
TOLK	Toolik Lake Re	46.67	28	eP	P	12 54 39.1	+2.2
	comp=Z,4.4nm,0.7s						
MCK	McKinley	46.86	35	eP	P	12 54 40.2	+1.7
	comp=Z,18nm,1.2s						
MCK	McKinley	46.86	35	eP	P	12 54 40.2	+1.7
MCK				pmax	pmax		
	comp=Z,18nm,1.2s						
GHO	Glory Hole Cre	46.96	37	eP	P	12 54 40.2	+0.9
	comp=Z,16nm,1.0s						
ODAN	Odare	47.03	273	eP	P	12 54 40.5	0.0
	comp=Z,52nm,1.0s						
MDM	Murphy Dome	47.14	33	eP	P	12 54 42.5	+1.9
	comp=Z,7.4nm,0.8s						
KNK	Knik Glacier	47.21	38	eP	P	12 54 43.5	+2.3
	comp=Z,13nm,1.0s						
WRH	Wood River Hil	47.21	34	eP	P	12 54 42.3	+1.2
	comp=Z,5.5nm,0.9s						
COLA	College	47.30	33⇑	eP	P	12 54 44.2	+2.4
COLA				pmax	pmax		
	comp=Z,27nm,2.6s						
CCB	Clear Creek Bu	47.33	33	eP	P	12 54 44.4	+2.4
	comp=Z,3.1nm,0.7s						
JIRN	Jiri	47.59	274	eP	P	12 54 45.0	0.0
DHY	Denali Highway	47.60	35	eP	P	12 54 46.6	+2.2
	comp=Z,9.5nm,1.2s						
RAMN	Ramite	47.61	273	eP	P	12 54 44.7	-0.3
	comp=Z,53nm,0.9s						
HDA	Harding Lake	47.71	34	eP	P	12 54 46.9	+1.9
	comp=Z,8.3nm,0.8s						
GUN	Gumba	47.71	275	eP	P	12 54 45.8	-0.1
	comp=Z,37nm,0.6s						
SCM	Sheep Creek Mo	47.71	37	eP	P	12 54 47.0	+1.8
	comp=Z,11nm,1.0s						
SCM	Sheep Creek Mo	47.71	37	eP	P	12 54 47.0	+1.8
SCM				pmax	pmax		
	comp=Z,11nm,1.0s						
IL1	Eielson Array	47.72	33	eP	P	12 54 46.6	+1.6
ILAR	Eielson Array	47.72	33	P	P	12 54 46.6	+1.6
	comp=Z,2.4nm,0.8s,baz=266,slow=6.4,SNR=26						
ILAR				pP	sP	12 54 57.4	-1.7
	comp=Z,8.5nm,0.7s,baz=269,slow=6.3,SNR=25						
ILB	Eielson Array	47.72	33	eP	P	12 54 46.2	+1.2
	comp=Z,12nm,0.7s						
KKN	Kakani	48.24	275	eP	P	12 54 49.7	-0.1
	comp=Z,37nm,0.7s						
PKI	Pulchoki	48.24	274	eP	P	12 54 49.4	-0.6
PKIN	Phulchoki	48.25	275	eP	P	12 54 49.3	-0.7
FYU	Fort Yukon	48.32	31	eP	P	12 54 52.3	+2.7
	comp=Z,9.2nm,0.8s						
KLU	Klutina	48.41	38	eP	P	12 54 51.9	+1.3
	comp=Z,12nm,1.2s						
DANN	Dangsing	49.16	276	eP	P	12 54 57.1	+0.1
	comp=Z,94nm,0.7s						
KOLN	Koldanda	49.55	276	eP	P	12 54 59.8	-0.1
	comp=Z,31nm,0.8s						
PYUN	Piuthan	49.87	276	eP	P	12 55 02.3	-0.1
	comp=Z,142nm,1.0s						
BRVK	Borovoye	50.05	311	eP	P	12 55 02.9	-0.1
	comp=Z,10nm,0.8s						
BRVK	Borovoye	50.05	311⇑	iP	P	12 55 02.6	-0.5
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s						
EGAK	Eagle	50.16	33	eP	P	12 55 04.5	+0.7
	comp=Z,4.4nm,0.9s						
AAK	Ala-Archa	50.34	297	eP	P	12 55 05.6	0.0
	comp=Z,3.7nm,0.9s						
AAK	Ala-Archa	50.34	297⇓	iP	P	12 55 05.7	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH	Kashi	50.39	293	P	P	12 55 10.0	+4.0
KSH				pmax	pmax		
	comp=Z,240nm,4.3s						
HNR	Honiara	50.62	157	LR	LR	13 15 03.9	
	comp=Z,257nm,20.9s,baz=328,slow=34						
EPYK	Eagle Plains	51.73	30	eP	P	12 55 18.5	+2.9
	comp=Z,18nm,0.8s						
MNAS	Manas	51.77	298	P	P	12 55 16.5	+0.1
MNAS				pmax	pmax		
	comp=Z,20nm,1.0s						
SFK	Sufi-Kurgan	51.97	295	P	P	12 55 18.2	+0.2
SFK				pmax	pmax		
	comp=Z,13nm,0.9s						
MTN	Manton Dam	52.32	194	eP	P	12 55 20.9	+0.4
	comp=Z,10nm,0.9s						
COEN	Coen	52.38	179	eP	P	12 55 22.0	+1.1
	comp=Z,15nm,1.1s						
INK	Inuvik	52.59	28	P	P	12 55 23.7	+1.9
	comp=Z,4.4nm,1.1s,baz=268,slow=7.2,SNR=14						
INK				pP	sP	12 55 35.0	-0.9
	comp=Z,5.3nm,0.7s,baz=319,slow=2.3,SNR=10						
KK31	Karatay Array	52.92	299	eP	P	12 55 24.6	-0.1
KK31	Karatay Array	52.92	299	eP	P	12 55 24.6	-0.1
SVE	Sverdlovsk	54.38	318	eP	P	12 55 35.6	+0.4
SVE				pmax	pmax		
	comp=Z,32nm,1.1s						
GAR	Garm	54.64	295	eP	P	12 55 37.2	-0.3
	comp=Z,15nm,1.0s						
GAR	Garm	54.64	295	eP	P	12 55 37.2	-0.3
GAR				pmax	pmax		
	comp=Z,15nm,1.0s						
NIL	Nilore	54.78	288	eP	P	12 55 37.6	-0.9
	comp=Z,23nm,0.9s						
NIL	Nilore	54.78	288	eP	P	12 55 37.6	-0.9
NIL				pmax	pmax		
	comp=Z,23nm,0.9s						
ARU	Arti	55.59	318	eP	P	12 55 43.5	-0.4
	comp=Z,23nm,1.0s						
ARU	Arti	55.59	318⇓	iP	P	12 55 44.0	+0.1
ARU				pmax	pmax		
	comp=Z,17nm,1.3s						
ABKAR	Akbulak array	57.42	310	eP	P	12 55 56.8	-0.3
	comp=Z,8.8nm,0.8s						
KBL	Kabul	57.49	290	eP	P	12 55 57.1	-1.0
	comp=Z,10nm,0.9s						
KBL	Kabul	57.49	290	eP	P	12 55 57.1	-1.0
KBL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WRAB	Tennant Creek	58.80	189	eP	P	12 56 07.0	+0.1
	comp=Z,6.9nm,0.9s						
WRAB	Tennant Creek	58.80	189⇑	eP	P	12 56 06.1	-0.8
WRAB				pmax	pmax		
	comp=Z,45nm,2.5s						
WB2	Warramunga Arr	58.80	189	eP	P	12 56 06.1	-0.9
WR1	Warramunga Arr	58.80	189	eP	P	12 56 07.0	+0.1
	comp=Z,6.8nm,1.0s						
WRA	Warramunga Arr	58.80	189	P	P	12 56 07.0	+0.1
	comp=Z,5.1nm,0.6s,baz=7.3,slow=7.3,SNR=34						
WRA				LR	LR	13 21 24.8	
	comp=Z,32nm,21.7s,baz=220,slow=36						
PRGR	Permogore	59.76	327	eP	P	12 56 12.4	-0.7
PRGR				e		12 58 25.2	
PRGR				pmax	pmax		
	comp=Z,20nm,1.0s						
RES	Resolute Bay	60.82	15	eP	P	12 56 20.8	+0.7
RES	Resolute Bay	60.82	15	eP	P	12 56 20.8	+0.7
TMCR	Tamitsa	61.63	331	eP	P	12 56 25.5	-0.3
TMCR				pmax	pmax		
	comp=Z,30nm,1.0s						
YKA	Yellowknife Ar	62.02	31	P	P	12 56 29.8	+1.3
	comp=Z,1.0nm,0.9s,baz=299,slow=6.7,SNR=13						
YKA				pP	sP	12 56 41.3	-1.4

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       comp=Z,1.4nm,0.7s,baz=302,slow=6.5,SNR=14
YKB5   Yellowknife Ar     62.02  31  eP      P        12 56 27.2 -1.2
AS31   Alice Springs      62.53 189  eP      P        12 56 28.1 -4.2
       comp=Z,7.4nm,0.3s
ASAR   Alice Springs      62.53 189   LR     LR       13 24 11.9
       comp=Z,63nm,20.0s,baz=7.0,slow=36
ARA0   ARCESS Array S     62.69 339  eP      P        12 56 34.0 +1.1
ARCES  ARCESS Array B     62.69 339   P      P        12 56 34.0 +1.1
       comp=Z,5.7nm,0.9s,baz=40,slow=7.1,SNR=5.4
ARCES                                 LR     LR       13 26 43.6
       comp=Z,218nm,20.4s,baz=40,slow=39
KLMR   Klimovskoe         62.73 328  eP      P        12 56 31.8 -1.5
KLMR                                 e                12 58 49.3
KLMR                                  pmax   pmax
       comp=Z,15nm,1.3s
KLMR   Klimovskoe         62.73 328  eP      P        12 56 31.9 -1.4
KLMR                                  AMP             12 56 44.7
       comp=Z,15nm,1.3s
KLMR                                 ePP     PP       12 58 49.3 -1.7
GEYT   Alibeck            63.66 299   P      P        12 56 39.5 -0.3
       comp=Z,8.1nm,0.9s,baz=49,slow=2.9,SNR=13
GEYT                                  LR     LR       13 26 13.0
       comp=Z,212nm,18.1s,baz=105,slow=38
GYA0B  ALIBECK ARRAY      63.66 299  eP      P        12 56 38.5 -1.3
       comp=Z,9.5nm,0.8s
DAG    Danmarks Havn      64.18 355  i P     P        12 56 42.3 -0.3
       comp=Z,8.4nm,0.9s
DAG    Danmarks Havn      64.18 355  i P     P        12 56 42.3 -0.3
DAG                                   pmax   pmax
       comp=Z,7.0nm,0.9s
DZM    Mont Dzumac        64.55 155  eLR     LR       13 16 08.3
       comp=Z,266nm,34.1s
OBN    Obninsk            67.19 323⇓eP      P        12 57 01.4 -0.9
OBN                                  e                12 57 29.1
OBN                                  ePPP    PPP      13 01 06.2
OBN                                   pmax   pmax
       comp=Z,54nm,2.5s
LPSR   Galich'ya Gora     67.48 320  eP      P        12 57 03.5 -0.7
LPSR                                  pmax   pmax
       comp=Z,10.0nm,0.8s
FIA1   FINESS Array S     67.67 332  eP      P        12 57 05.3  0.0
FIA0   FINESS Array S     67.67 332  eP      P        12 57 05.5 +0.2
FIA0   FINESS Array S     67.67 332  eP      P        12 57 05.5 +0.2
FINES  FINESS Array B     67.67 332ceP      P        12 57 05.1 -0.2
FINES                                 pmax   pmax
       comp=Z,13nm,0.8s
FINES  FINESS Array B     67.67 332   P      P        12 57 05.5 +0.2
       comp=Z,13nm,0.8s,baz=53,slow=7.4,SNR=18
FINES                                 LR     LR       13 28 40.5
       comp=Z,228nm,18.5s,baz=66,slow=38
VSR    Storozhevoye       68.15 319⇑eP      P        12 57 08.0 -0.5
VSR                                   pmax   pmax
       comp=Z,12nm,0.6s
SUMG   Summit             69.02   0  eP      P        12 57 15.2 +1.1
       comp=Z,17nm,1.1s
SUMG   Summit             69.02   0  i P     P        12 57 14.8 +0.7
       comp=Z,36nm,1.0s
SUMG   Summit             69.02   0  i P     P        12 57 14.8 +0.7
SUMG                                  pmax   pmax
       comp=Z,36nm,1.0s
VSU    Vasula             69.38 330⇓eP      P        12 57 15.2 -0.8
VSU                                   pmax   pmax
       comp=Z,27nm,0.8s
NCK    Nalchik            70.08 310⇓eP      P        12 57 21.1 +0.5
NCK                                   pmax   pmax
       comp=Z,10.0nm,0.3s
STKA   Stephens Creek     70.22 181   LR     LR       13 25 51.0
       comp=Z,35nm,21.9s,baz=25,slow=34
ZEI    Tsey               70.29 309  eP      P        12 57 20.2 -2.0
ZEI                                   pmax   pmax
       comp=Z,6.0nm,0.9s
KIV    Kislovodsk         70.35 311  eP      P        12 57 21.7 -0.7
       comp=Z,51nm,1.1s
KIV    Kislovodsk         70.35 311  eP      P        12 57 23.2 +0.8
KIV                                   pmax   pmax
       comp=Z,42nm,1.0s
KIV                                   MLR    MLR
       comp=Z,110nm,17.0s
KBZ    Khabaz             70.36 311   P      P        12 57 22.9 +0.6
       comp=Z,14nm,0.9s,baz=34,slow=2.5,SNR=24
KBZ                                   LR     LR       13 33 29.1
       comp=Z,128nm,18.2s,baz=38,slow=40
NEY    Neytrino           70.74 310⇓eP      P        12 57 26.8 +2.0
NEY                                   pmax   pmax
       comp=Z,3.0nm,1.0s
GNI    Garni              71.28 307⇑eP      P        12 57 29.7 +1.5
GNI                                   pmax   pmax
       comp=Z,49nm,1.3s
BEKR   Beckworth          71.30  54  eP      P        12 57 30.7 +2.4
       comp=Z,3.7nm,1.0s
FFC    Flin Flon          71.93  33  i P     P        12 57 34.3 +2.7
FCC    Fort Churchill     72.20  27  eP      P        12 57 32.0 -1.1
       comp=Z,4.9nm,0.9s
FCC    Fort Churchill     72.20  27  eP      P        12 57 32.0 -1.1
FCC                                   pmax   pmax
       comp=Z,5.0nm,0.9s
BATM   Batumi             72.32 309⇑iP      P        12 57 34.8 +0.7
BCA    Borcka             72.45 309⇓iP      P        12 57 35.5 +0.5
YERR   Yerington          72.51  54  eP      P        12 57 38.4 +2.7
       comp=Z,4.4nm,1.0s
DLMT   Dillon             72.67  45  eP      P        12 57 37.0 +0.6
       comp=Z,3.8nm,0.9s
NB2    NORSAR Subarra     72.93 337   P      P        12 57 37.0 -0.5
       comp=Z,2.2nm,0.8s,baz=34,slow=5.9
NB200  NORSAR Array S     72.93 337  eP      P        12 57 37.4 -0.1
NOA    NORSAR Array B     72.93 337   P      P        12 57 37.4 -0.1
       comp=Z,2.8nm,0.8s,baz=38,slow=5.9,SNR=6.8
NOA                                   LR     LR       13 32 16.7
       comp=Z,254nm,21.8s,baz=45,slow=38
KVN    Kaiserville        73.19  53  eP      P        12 57 40.8 +1.2
       comp=Z,7.8nm,1.1s
KVN    Kaiserville        73.19  53  eP      P        12 57 40.8 +1.2
KVN                                   pmax   pmax
       comp=Z,8.0nm,1.1s
AKASG  Malin Array Be     73.42 322ceP      P        12 57 39.5 -1.0
AKASG                                 pmax   pmax
       comp=Z,9.0nm,0.7s
AKASG  Malin Array Be     73.42 322   P      P        12 57 40.0 -0.4
       comp=Z,8.8nm,0.7s,baz=46,slow=6.1,SNR=32
AKASG                                 LR     LR       13 32 42.2
       comp=Z,276nm,18.3s,baz=30,slow=38
AKBB   Malin Array Si     73.42 322  eP      P        12 57 40.1 -0.4
       comp=Z,13nm,0.8s
AKBB   Malin Array Si     73.42 322  eP      P        12 57 40.1 -0.4
AKBB                                  pmax   pmax
       comp=Z,13nm,0.8s
KIEV   Kiev               73.43 322  eP      P        12 57 40.1 -0.4
       comp=Z,13nm,0.9s
KIEV   Kiev               73.43 322  eP      P        12 57 40.2 -0.4
KIEV                                  pmax   pmax
       comp=Z,13nm,0.9s
NV01   Mina Array Sit     73.43  54  eP      P        12 57 42.8 +1.6
NVAR   Mina Array Bea     73.43  54   P      P        12 57 43.6 +2.5
       comp=Z,3.0nm,0.9s,baz=289,slow=5.8,SNR=11
NVAR                                  LR     LR       13 26 27.7
       comp=Z,32nm,21.5s,baz=237,slow=33
AK11   Malin Array Si     73.46 322  eP      P        12 57 40.0 -0.7
YHH    Holmes Hill        74.00  45  eP      P        12 57 47.5 +3.1
       comp=Z,1.8nm,1.0s
H17A   Grant Village      74.39  45  eP      P        12 57 51.0 +4.3
       comp=Z,8.8nm,1.1s
FXWY   Fox Creek          74.62  46  eP      P        12 57 50.9 +3.0
       comp=Z,4.5nm,1.1s
KLNR   Kaliningrad        74.66 329⇑eP      P        12 57 49.4 +1.7
MOOW   Moose Ponds        74.71  46  eP      P        12 57 50.0 +1.5
       comp=Z,3.7nm,1.1s
REDW   Red Top Meadow     74.89  46  eP      P        12 57 52.9 +3.3
       comp=Z,5.4nm,1.1s
R11A   Troy Canyon, C     75.19  53  eP      P        12 57 53.4 +2.1
       comp=Z,2.5nm,0.9s
LAO    LASA Array         75.26  41  eP      P        12 57 51.1 -0.2
       comp=Z,6.9nm,0.9s
DUG    Dugway, Tooele     75.74  50  eP      P        12 57 56.5 +2.1
       comp=Z,3.7nm,0.9s
DUG    Dugway, Tooele     75.74  50  eP      P        12 57 56.5 +2.1
DUG                                   pmax   pmax
       comp=Z,4.0nm,0.9s
PD31   Pinedale Array     76.00  46  eP      P        12 57 56.4 +0.4
       comp=Z,3.8nm,1.1s
PDAR   Pinedale Array     76.00  46  eP      P        12 57 55.5 -0.4
PDAR   Pinedale Array     76.00  46   P      P        12 57 57.6 +1.7
       comp=Z,1.3nm,0.6s,baz=258,slow=1.6,SNR=12
PDAR                                  LR     LR       13 37 02.0
       comp=Z,60nm,18.0s,baz=300,slow=40
DIKM   Dikmen             76.10 312⇓iP      P        12 57 57.0 +0.8
PSUT   Pine Spring        76.14  52  eP      P        12 57 58.4 +1.6
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       comp=Z,6.0nm,1.2s
MPU    Maple Canyon       76.55  49  eP      P        12 58 01.3 +2.2
       comp=Z,4.4nm,1.0s
P17A   Butcher Ranch,     77.43  49  eP      P        12 58 05.5 +1.6
       comp=Z,5.2nm,1.0s
BUR08  Bucovina Ar. S     77.43 322  eP      P        12 58 01.5 -2.3
       comp=Z,8.3nm,0.9s
BUR04  Bucovina Ar. S     77.44 322  eP      P        12 58 04.3 +0.5
BURAR  Bucovina Array     77.44 322⇑iP      P        12 58 04.2 +0.4
BURAR  Bucovina Array     77.44 322   P      P        12 58 04.1 +0.3
LCMT   Little Creek M     77.47  53  eP      P        12 58 06.1 +1.9
       comp=Z,4.1nm,1.1s
MTPU   Mount Pierson      77.47  51  eP      P        12 58 06.8 +2.4
       comp=Z,7.8nm,1.2s
BIZ    Bicaz              77.48 321⇑iP      P        12 58 04.6 +0.7
TESR   Tescani            77.51 320⇓iP      P        12 58 04.4 +0.3
CFR    Carcaliu           77.67 319⇑iP      P        12 58 05.4 +0.5
ULM    Lac du Bonnet      77.73  34   P      P        12 58 06.7 +1.5
       comp=Z,2.2nm,0.8s,baz=338,slow=5.4,SNR=3.5
KNB    Kanab              77.73  52  eP      P        12 58 07.1 +1.4
       comp=Z,2.2nm,1.0s
KNB    Kanab              77.73  52  eP      P        12 58 07.1 +1.4
KNB                                   pmax   pmax
       comp=Z,2.0nm,1.0s
PETR   Petresti           77.76 320⇑iP      P        12 58 05.0 -0.4
SRU    San Rafael Swe     77.79  50  eP      P        12 58 08.0 +2.0
       comp=Z,6.4nm,1.0s
VRI    Vrincioaia         77.92 320⇑iP      P        12 58 07.3 +0.9
VRI    Vrincioaia         77.92 320   P      P        12 58 07.3 +0.9
PLOR   Plostina           77.97 320⇑iP      P        12 58 07.1 +0.4
PLOR   Plostina           77.97 320   P      P        12 58 07.1 +0.4
OJC    Ojcow              78.05 326  eP      P        12 58 07.8 +0.8
       comp=Z,12nm,0.9s
OJC    Ojcow              78.05 326  eP      P        12 58 07.8 +0.8
OJC                                   pmax   pmax
       comp=Z,12nm,0.9s
TLB    Topalu             78.12 318⇑iP      P        12 58 07.6 +0.1
BR101  Keskin Array S     78.28 312  eP      P        12 58 08.5 -0.1
BRTR   Keskin Array B     78.28 312   P      P        12 58 08.5 -0.1
       comp=Z,1.3nm,0.4s,baz=108,slow=4.1,SNR=13
BRTR                                  LR     LR       13 38 16.3
       comp=Z,56nm,18.3s,baz=78,slow=40
TRPA   Tarpa              78.35 324⇓iP      P        12 58 09.6 +1.0
U15A   North Rim          78.43  53  eP      P        12 58 10.5 +0.8
       comp=Z,4.4nm,1.1s
DOPR   Dopca              78.52 321⇓iP      P        12 58 10.8 +1.1
VOIR                      79.06 320⇑iP      P        12 58 13.0 +0.3
PV14   Lion Creek, Pa     79.16  49  eP      P        12 58 15.7 +2.0
       comp=Z,14nm,1.2s
PV17   East Wray Mesa     79.26  49  eP      P        12 58 16.8 +2.6
       comp=Z,8.1nm,0.9s
PV16   Nyswonger Mesa     79.27  49  eP      P        12 58 16.4 +2.2
       comp=Z,7.4nm,1.1s
ARR    Arges              79.31 321⇓iP      P        12 58 13.5 -0.6
PV03   Paradox Valley     79.34  49  eP      P        12 58 14.3 -0.4
       comp=Z,6.9nm,1.2s
MORC   Moravsky Berou     79.35 327  eP      P        12 58 14.7 +0.5
       comp=Z,12nm,1.0s
MORC   Moravsky Berou     79.35 327⇑iP      P        12 58 13.8 -0.4
MORC   Moravsky Berou     79.35 327  eP      P        12 58 14.7 +0.5
MORC                                  pmax   pmax
       comp=Z,13nm,1.0s
PV13   Radium Mtn., P     79.42  49  eP      P        12 58 15.8 +0.7
       comp=Z,7.2nm,1.0s
DPC    Dobruska-Polom     79.42 328  eP      P        12 58 15.5 +0.9
DPC    Dobruska-Polom     79.42 328  eP      P        12 58 15.5 +0.9
UPC    Upice              79.43 328  eP      P        12 58 15.6 +1.0
UPC    Upice              79.43 328  eP      P        12 58 15.6 +1.0
KRLC   Kraliky            79.44 328  eP      P        12 58 14.6 -0.1
KRLC   Kraliky            79.44 328  eP      P        12 58 14.6 -0.1
PSZ    Piszkesteto        79.71 325⇑iP      P        12 58 16.4 +0.1
VYHS   Vyhne              79.76 326  eP      P        12 58 16.9 +0.5
VYHS                                  pmax   pmax
       comp=Z,7.0nm,1.3s
VYHS   Vyhne              79.76 326  eP      P        12 58 16.9 +0.5
BRG    Berggiesshubel     79.98 330  eP      P        12 58 17.6 +0.1
       comp=Z,10nm,1.1s
BRG    Berggiesshubel     79.98 330  eP      P        12 58 17.6 +0.1
BRG                                   pmax   pmax
       comp=Z,10.0nm,1.1s
PVCC   Panska Ves         80.00 329  eP      P        12 58 18.8 +1.1
PVCC                                 epP     sP       12 58 32.1 +0.1
PVCC   Panska Ves         80.00 329  eP      P        12 58 18.8 +1.1
PVCC                                 e                12 58 32.1
CLL    Collm              80.00 330⇑iP      P        12 58 17.6 -0.1
       comp=Z,15nm,0.9s
CLL                                  e                12 58 30.0
CLL                                  epP     sP       12 58 33.0 +1.0
CLL    Collm              80.00 330⇑iP      P        12 58 17.6 -0.1
CLL                                  e*PP    pP       12 58 30.0 +1.7
CLL                                   pmax   pmax
       comp=Z,15nm,0.9s
VRAC   Vranov             80.11 327⇓iP      P        12 58 18.0 -0.3
GZR    Gura Zlata         80.21 322⇓iP      P        12 58 19.3 +0.3
X16A   Lo Mia Camp, P     80.25  54  eP      P        12 58 20.3 +0.7
       comp=Z,1.9nm,0.9s
PRU    Pruhonice          80.43 329  eP      P        12 58 21.1 +1.1
PRU    Pruhonice          80.43 329  eP      P        12 58 21.1 +1.1
RAR    Rarotonga          80.57 127   LR     LR       13 27 18.4
       comp=Z,111nm,21.0s,baz=278,slow=30
BZS    Buzias             80.61 322⇑iP      P        12 58 20.9 -0.1
RAYN   Ar Rayn            80.68 293  eP      P        12 58 21.4 -0.5
       comp=Z,3.1nm,0.7s
RAYN   Ar Rayn            80.68 293  eP      P        12 58 21.4 -0.5
RAYN                                  pmax   pmax
       comp=Z,3.0nm,0.7s
MDVR   Moldovita          81.17 322⇑iP      P        12 58 24.1  0.0
CONA   Conrad Observa     81.48 327  eP      P        12 58 26.6 +0.9
       comp=Z,8.5nm,1.0s
KHC    Kasperske Hory     81.49 329  eP      P        12 58 25.4 -0.3
       comp=Z,2.9nm,0.9s
KHC    Kasperske Hory     81.49 329  eP      P        12 58 25.3 -0.4
KHC                                  epP     sP       12 58 39.0 -1.1
KHC    Kasperske Hory     81.49 329  eP      P        12 58 25.4 -0.3
KHC                                   pmax   pmax
       comp=Z,3.0nm,0.9s
GERES  GERESS Array B     81.67 329   P      P        12 58 26.6 -0.1
       comp=Z,2.1nm,0.7s,baz=29,slow=6.1,SNR=15
GERES                                 LR     LR       13 37 43.3
       comp=Z,264nm,19.1s,baz=40,slow=38
VTS    Vitosha            81.99 319  eP      P        12 58 29.7 +1.1
       comp=Z,11nm,0.9s
VTS    Vitosha            81.99 319⇑iP      P        12 58 29.1 +0.5
VTS    Vitosha            81.99 319  eP      P        12 58 29.7 +1.1
VTS                                   pmax   pmax
       comp=Z,11nm,0.9s
ARSA   Arzberg            82.15 327  eP      P        12 58 29.7 +0.5
       comp=Z,1.8nm,0.5s
DIVS   Divibare           82.51 322  eP      P        12 58 31.0 -0.2
       comp=Z,6.2nm,1.1s
SOKA   Soboth             82.81 326  eP      P        12 58 33.0 +0.3
       comp=Z,8.7nm,0.8s
ANMO   Albuquerque        82.98  50  eP      P        12 58 36.1 +2.1
       comp=Z,3.6nm,1.0s
ANMO   Albuquerque        82.98  50⇑eP      P        12 58 36.2 +2.2
ANMO                                  pmax   pmax
       comp=Z,4.0nm,1.3s
OBKA   Obir               83.15 327  eP      P        12 58 34.5  0.0
       comp=Z,7.9nm,1.0s
KBA    Koelnbreinsper     83.21 328  ePcP    P        12 58 36.0 +1.1
       comp=Z,8.6nm,0.9s
MYKA   Terra Mystica      83.44 327  eP      P        12 58 35.7 -0.2
       comp=Z,6.6nm,0.8s
ABTA   Abfaltersbach      83.82 328  eP      P        12 58 37.8 -0.2
       comp=Z,5.4nm,0.9s
MOTA   Moosalm            83.92 329  eP      P        12 58 38.7 +0.2
       comp=Z,9.6nm,1.0s
RETA   Reutte             83.94 329  eP      P        12 58 38.8 +0.3
       comp=Z,12nm,1.1s
SQTA   Sankt Quirin       83.98 329  eP      P        12 58 38.7 -0.1
       comp=Z,2.0nm,0.4s
PDG    Podgorica          84.11 321⇓iP      P        12 58 39.0 -0.4
TTG    Podgorica          84.11 321  eP      P        12 58 39.5 +0.1
       comp=Z,21nm,1.1s
TTG    Podgorica          84.11 321  eP      P        12 58 39.5 +0.1
TTG                                   pmax   pmax
       comp=Z,21nm,1.1s
BFO    Black Forest       84.20 331  i P     P        12 58 40.5 +0.7
LIT    Litokhoron         84.20 318  eP      P        12 58 40.0 +0.1
       comp=Z,16nm,0.9s
LIT    Litokhoron         84.20 318  eP      P        12 58 40.0 +0.1
LIT                                   pmax   pmax
       comp=Z,16nm,0.9s
PMOR   Pomariorio Ree     84.20 114  eT      T        14 31 50.0
       comp=Z,67nm,0.2s
```

```
FETA   Feichten           84.33 329  eP      P        12 58 40.7  0.0
       comp=Z,5.6nm,0.8s
DAVA   Damuels            84.45 330  ePcP    P        12 58 41.6 +0.4
       comp=Z,12nm,1.0s
ECH    Echery             84.73 332  eP      P        12 58 42.6 +0.1
       comp=Z,9.3nm,1.0s
ECH    Echery             84.73 332  eP      P        12 58 42.6 +0.1
ECH                                   pmax   pmax
       comp=Z,9.0nm,1.0s
PPT    Papeete            84.75 117   LR     LR       13 28 14.7
       comp=Z,117nm,21.8s,baz=308,slow=30
PPT2   Papeete2           84.77 117  eLR     LR       13 25 24.6
       comp=Z,309nm,24.2s,baz=321
PPT2   Papeete2           84.77 117  eT      T        14 32 30.9
       comp=Z,7.9nm,0.3s
FUORN  Ofenpass-Fuorn     84.84 329  eP      P        12 58 43.5 +0.2
       comp=Z,13nm,0.8s
TAOE   Nuku Hiva Isla     85.89 105  eLR     LR       13 25 54.0
       comp=Z,216nm,23.5s
TX31   Lajitas Ar. Si     88.55  53  eP      P        12 59 02.8 +1.3
TXAR   Lajitas Array      88.55  53   P      P        12 59 03.5 +2.0
       comp=Z,1.3nm,0.9s,baz=298,slow=2.6,SNR=11
TXAR                                  pP     sP       12 59 15.2 -1.0
       comp=Z,1.1nm,0.6s,baz=295,slow=2.9,SNR=8.4
TXAR                                  LR     LR       13 35 23.0
       comp=Z,24nm,19.6s,baz=0.0,slow=33
TBI    Tubuai             88.78 121  eLR     LR       13 27 09.6
       comp=Z,183nm,24.2s
TBI    Tubuai             88.78 121  eT      T        14 37 26.6
       comp=Z,96nm,0.3s
CCM    Cathedral Cave     89.13  39  eP      P        12 59 05.3 +1.3
       comp=Z,5.2nm,1.0s
CCM    Cathedral Cave     89.13  39  eP      P        12 59 05.3 +1.3
CCM                                   pmax   pmax
       comp=Z,5.0nm,1.0s
KEST   Kesra              94.12 323   LR     LR       13 46 30.1
       comp=Z,187nm,18.5s,baz=284,slow=38
ESDC   Sonseca Array      96.11 334   LR     LR       13 48 02.7
       comp=Z,172nm,18.5s,baz=165,slow=39
LPAZ   La Paz            145.23  59  ePKPbc  PKPdf    13 05 48.1 +0.9
LPAZ   La Paz            145.23  59   PKPbc  PKPdf    13 05 48.5 +1.3
       comp=Z,0.8nm,0.4s,baz=284,slow=4.9,SNR=5.0
LPAZ                                  pPKPbc sPKPab   13 06 00.6 -1.0
       comp=Z,2.2nm,0.5s,baz=352,slow=1.2,SNR=5.1
MNMC   Minye Minye       146.19  64  ePKPdf  PKPab    13 05 50.9 +0.8
LCO    Las Campanas      151.07  81  ePKPbc  PKiKP    13 06 03.1 +0.7
LCO    Las Campanas      151.07  81  ePKIKP  PKiKP    13 06 03.1 +0.7
```

ISCJB ***26*** *12:53:15.3±0.5, 27.°83S±0.°04×140.°73E±0.°07, h10km, Error ellipse: s-maj=9.2km s-min=5.1km az=155.2*

IDC ***26*** *12:53:15.6±5.7, 27.°58S×141.°08E, h0km, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, ML3.6/3, Error ellipse: s-maj=134.8km s-min=24.6km az=64.0*

AUST ***26*** *12:53:16.3±0.0, 27.°80S×140.°79E, h10km, Error ellipse: s-maj=0.2km s-min=0.1km az=226.0*

ISC 26 12:53:17.1±0.9**, 27.°84S**±0.°06×**140.°69E**±0.°08**, h10**km**, n18, σ1.°83**/24**, South Australia**

```
Code   Station Name       Δ°   AZ°    Phase ID             Time      Res
                                     Op      ISC         h  m  s    ISC
STKA   Stephens Creek      4.10 169   P      Pn       12 54 21.3 +1.4
       baz=4.1
STKA                                  S      Sn       12 55 07.9 -0.1
       baz=4.1
STKA   Stephens Creek      4.10 169   Pn     Pn       12 54 21.4 +1.4
       1.7nm,0.3s,baz=350,slow=13,SNR=8.9
STKA                                  Pg     Pg       12 54 35.6 -0.2
       2.0nm,0.3s,baz=327,slow=10,SNR=7.5
STKA                                  Sn     Sn       12 55 07.4 -0.6
       4.4nm,0.3s,baz=321,slow=16,SNR=3.3
STKA                                  Lg     Lg       12 55 28.1
       13nm,0.3s,baz=59,slow=19,SNR=5.2
CMSA   Cobar Meteorol      5.71 131   P      Pn       12 54 41.9  0.0
       baz=5.7
HTT    Hallett             5.78 195   P      Pn       12 54 45.2 +2.2
       baz=5.9,SNR=19
BBOO   Buckleboo           6.37 218   P      Pn       12 54 53.1 +2.0
       baz=6.5
QIS    Mount Isa           7.31 352   P      Pn       12 55 06.4 +2.3
       baz=7.3,SNR=13
RMQ    Roma                7.31  81   P      Pn       12 55 03.9 -0.1
       baz=7.2,SNR=4.7
AS07   Alice Springs       7.34 303   P      Pn       12 55 06.3 +1.8
       baz=7.4
AS03   Alice Springs       7.38 303   P      Pn       12 55 06.8 +1.9
       baz=7.4
ASAR   Alice Springs       7.39 303   Pn     Pn       12 55 07.0 +1.8
       1.1nm,0.3s,baz=129,slow=14,SNR=39
ASAR                                  Sn     Sn       12 56 26.9 -2.2
       3.5nm,0.3s,baz=124,slow=22,SNR=12
AS13   Alice Springs       7.41 303   P      Pn       12 55 07.5 +2.1
       baz=7.5
ARPS   Mount Arapiles      8.96 174   P      Pn       12 55 27.3 +0.7
       baz=9.0
ARPS                                  S      Sn       12 57 03.1 -4.5
       baz=9.0
WR0    Warramunga Arr      9.65 323   P      Pn       12 55 36.0 -0.1
       baz=9.7
WRA    Warramunga Arr      9.77 322   Pn     Pn       12 55 38.0 +0.2
       0.6nm,0.3s,baz=138,slow=12,SNR=35
WRA                                   Sn     Sn       12 57 24.6 -3.1
       1.3nm,0.3s,baz=139,slow=23,SNR=7.4
WB8    Warramunga Arr      9.85 323   P      Pn       12 55 38.8 -0.1
       baz=9.9
MTSU   Mount Surprise     10.22  20   P      Pn       12 55 45.1 +1.1
       baz=10,SNR=12
FORT   Forrest            11.41 252   P      Pn       12 55 59.7 -0.4
       baz=12,SNR=10
WRKA   Warakurna          11.45 281   P      Pn       12 56 01.7 +0.9
       baz=12,SNR=4.6
```

IDC 26 13:44:18.7±2.1**, 13.°19N×95.°70E, h0**km**, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.3**/63**, mbtmp3.3**/4**, ML3.2**/1**, MS3.4**/1**, Ms1 3.3**/1**, ms1mx2.4**/38**, Error ellipse: s-maj=70.3km s-min=26.4km az=68.0, Andaman Islands region**

```
Code   Station Name       Δ°   AZ°    Phase ID             Time      Res
                                     Op      ISC         h  m  s    ISC
CMAR   Chiang Mai Arr      6.10  30   Pn     Pn       13 45 49.7 -0.5
       0.2nm,0.3s,baz=222,slow=15,SNR=8.9
MKAR   Makanchi Array     35.35 344   P      P        13 51 16.3 +0.4
       0.6nm,1.0s,baz=152,slow=9.5,SNR=4.1
WRA    Warramunga Arr     50.29 130   P      P        13 53 16.7 -0.8
       0.3nm,0.9s,baz=311,slow=8.9,SNR=2.8
ASAR   Alice Springs      52.32 134   P      P        13 53 33.0 +0.4
       0.5nm,0.8s,baz=310,slow=7.2,SNR=5.9
KBZ    Khabaz             54.34 315   LR     LR       14 22 41.6
       comp=Z,34nm,18.4s,baz=276,slow=42
```

NIED ***26*** *13:50:00, 21.°20N×120.°90E, h29km, Mw4.0 Best double couple: M0 1.17000×10^15 NP1:φs233.00000°, δ42.00000°, λ110.00000°. NP2:φs26.00000°, δ51.00000°, λ73.00000°.*

TAP ***26*** *13:50:44.2, 21.°26N×120.°74E, h75km, ML3.4, C*

JMA ***26*** *13:50:44.6±0.3, 21.°25N×120.°93E, h17km, M3.7*

IDC ***26*** *13:50:48.7±8.5, 21.°07N×120.°89E, h70km±84km, mb3.4/7, mb1 3.6/8, mb1mx3.3/61, mbtmp3.7/8, ML3.5/1, MS3.8/3, Ms1 3.8/3, ms1mx2.9/54, Error ellipse: s-maj=28.0km s-min=17.5km az=73.0*

ISC 26 13:50:44.0±2.2**, 21.°21N**±0.°08×**120.°71E**±0.°06**, h26**km±14km**, n59, σ1.°13**/77**, mb3.7**/7**, Taiwan region**

```
Code   Station Name       Δ°   AZ°    Phase ID             Time      Res
                                     Op      ISC         h  m  s    ISC
TSEB   Hengchuen, Pin      0.71  15  eP      Pn       13 50 59.2 +0.8
       baz=10.0
TSEB                                 eS      Sn       13 51 10.7 +2.2
       baz=10.0
TWKBT  Hengchun            0.74   8  eP      Pn       13 50 59.7 +0.9
       baz=6.0
TWKBT                                eS      Sn       13 51 10.9 +1.7
       baz=6.0
TWK1   Hengchun            0.74   7   P      Pn       13 50 59.6 +0.8
       baz=7.0
TWK1                                 eS      Sn       13 51 10.9 +1.7
       baz=7.0
HEN    Hengchun            0.80   2  eP      Pn       13 51 00.5 +0.9
       baz=355
LAY    Lan-yu              1.14  43  eP      Pn       13 51 03.8 -0.6
       baz=45
LAY                                  eS      Sb       13 51 19.0 -0.6
       baz=45
SCZT   Fangliau            1.16 356  eP      Pn       13 51 05.0 +0.3
```

```
                baz=355
EAST   Anshuo             1.18   6  P       Pb     13 51 05.5  -0.3
                baz=6.0
EAST                                eS      Sb     13 51 21.1  +0.4
                baz=6.0
MASBT  Mashibuluo         1.40 357  eP      Pn     13 51 08.1  +0.2
                baz=5.0
MASBT                               eS      Sn     13 51 25.4  -0.2
                baz=5.0
ECL    Taimali            1.40   9  eP      Pn     13 51 07.8  -0.2
                baz=9.0
SSD    Sandimen           1.53 357  eP      Pn     13 51 09.9  +0.2
                baz=357
SSD                                 eS      Sn     13 51 28.6  -0.2
                baz=357
TWGBT  Beinan             1.64  12  eP      Pn     13 51 09.8  -1.4
                baz=12
SLGT   Liugui             1.78 358  eP      Pn     13 51 13.5  +0.4
                baz=349
SGST   Jiashian           1.87 357  eP      Pn     13 51 14.4   0.0
                baz=356
SGST                                eS      Sn     13 51 36.3  -0.9
                baz=356
STYT   Tauyuan            1.95   1  eP      Pn     13 51 16.1  +0.6
                baz=352
CHN1   Nanshi             1.98 355  eP      Pn     13 51 16.2  +0.4
                baz=355
ELDTW  Lidau              2.00   8  eP      Pn     13 51 16.4  +0.2
                baz=13
WTP    Ta-pu              2.03 358  eP      Pn     13 51 16.9  +0.3
                baz=347
FULB   Fuli               2.06  15  eP      Pn     13 51 17.4  +0.5
                baz=24
FULB                                eS      Sn     13 51 39.8  -2.0
                baz=24
TWK    Hsinying           2.06 354  eP      Pn     13 51 17.8  +0.7
                baz=354
TPUB   Ta-pu              2.09 358  eP      Pn     13 51 17.6  +0.2
                baz=348
CHN4   Tsaushan           2.14 357  eP      Pn     13 51 18.0   0.0
                baz=348
TWF1   Yuli               2.21  14  eP      Pn     13 51 18.8  -0.2
                baz=22
YULB   Yu-li              2.24  14  eP      Pn     13 51 19.1  -0.4
                baz=22
YULB                                eS      Sn     13 51 44.0  -2.4
                baz=22
ALS    Alishan            2.29   2  eP      Pn     13 51 20.5   0.0
                baz=353
EHY    Hungye             2.36  14  eP      Pn     13 51 21.4  +0.3
                baz=21
HGSD   Ruisui             2.37  16  eP      Pn     13 51 20.8  -0.5
                baz=16
HGSD                                eS      Sn     13 51 46.7  -2.7
                baz=16
CHN5   Tsauling           2.38 359  eP      Pn     13 51 21.6  +0.1
                baz=350
CHN5                                eS      Sn     13 51 48.6  -1.2
                baz=350
WHYT   Xinyi Township     2.48   3  eP      Pn     13 51 23.2  +0.4
                baz=352
VWDT   VWDT               2.57   9  eP      Pn     13 51 24.5  +0.5
                baz=17
SSLB   Suanglung          2.58   5  eP      Pn     13 51 23.9  -0.2
                baz=354
SMLT   Sun Moon Lake      2.67   4  eP      Pn     13 51 25.1  -0.3
                baz=353
TYC    Yuchr              2.69   3  eP      Pn     13 51 25.9  +0.3
                baz=352
TYC                                 eS      Sn     13 51 55.2  -2.1
                baz=352
OWD    Renai              2.77   9  eP      Pn     13 51 27.9  +1.0
                baz=9.0
CHGB   Renai              2.87   9  eP      Pn     13 51 28.9  +0.5
                baz=8.0
CHGB                                eS      Sn     13 51 59.7  -2.5
                baz=8.0
WHF    Hehuan Shan        2.97  10  eP      Pn     13 51 29.2  -0.7
                baz=10.0
TDCB   Techi              3.06   8  eP      Pn     13 51 31.2  +0.3
                baz=8.0
TWT    Tachien            3.06   8  eP      Pn     13 51 30.8  -0.1
                baz=8.0
NNSB   Datong             3.27  11  eP      Pn     13 51 35.0  +1.3
                baz=11
NANB   Nanao              3.35  17  eP      Pn     13 51 33.2  -1.5
                baz=8.0
YHNB   Yeheng             3.50  10  eP      Pn     13 51 37.0  +0.1
                baz=10.0
YHNB                                eS      Sn     13 52 14.4  -3.2
                baz=10.0
ENTT   Nioudou            3.51  13  eP      Pn     13 51 36.0  -0.9
                baz=21
JYNG   Yonagunijimaku     3.83  32  P       Pn     13 51 42.5  +1.1
JYNG                                S       Sn     13 52 25.6   0.0
HATJ   Hateruma jima      4.03  45  eS      Sn     13 52 29.5  -0.9
IRIF   Iriomote-Funau     4.18  41  P       Pn     13 51 47.4  +1.3
IRIF                                eS      Sn     13 52 33.7  -0.5
JKRS   Kuro-shima         4.29  45  P       Pn     13 51 49.0  +1.4
JKRS                                S       Sn     13 52 37.3  +0.5
JIJ    Ishigaki jima      4.46  45  P       Pn     13 51 50.7  +0.7
JIJ                                 S       Sn     13 52 40.4  -0.8
JISG   Ishigakijimahi     4.73  44  P       Pn     13 51 54.4  +0.7
JISG                                eS      Sn     13 52 47.2  -0.5
JTJ    Tarama             5.03  46  P       Pn     13 51 59.4  +1.7
JTJ                                 S       Sn     13 52 55.3  +0.3
KSRS   Korea Array       17.36  20  P       P      13 54 46.9  +1.3
                0.1nm,0.3s,baz=194,slow=11,SNR=4.2
CMAR   Chiang Mai Arr    20.65 266  P       Pn     13 55 24.2  -0.1
                0.9nm,0.4s,baz=71,slow=9.1,SNR=12
CMAR                                LR      LR     14 04 06.5
                comp=Z,72nm,18.1s,baz=104,slow=38
MKAR   Makanchi Array    40.22 319  P       P      13 58 19.9  +1.5
                1.3nm,1.0s,baz=106,slow=9.5,SNR=7.2
ZALV   Zalesovo Beam     42.53 329  P       P      13 58 38.7  +1.5
                0.9nm,0.6s,baz=126,slow=7.5,SNR=3.6
PETK   Petropavlovsk-    42.59  32  P       P      13 58 37.9  +0.2
                4.3nm,1.0s,baz=269,slow=10,SNR=3.5
WRA    Warramunga Arr    43.02 161  P       P      13 58 39.6  -1.9
                1.6nm,0.9s,baz=343,slow=9.0,SNR=7.2
AAK    Ala-Archa         44.01 310  LR      LR     14 18 54.6
                comp=Z,49nm,19.1s,baz=199,slow=38
KURBB  Kurchatov Arra    44.13 322  P       P      13 58 52.3  +2.1
                2.8nm,0.2s,baz=119,slow=7.6,SNR=2.9
ASAR   Alice Springs     46.42 163  P       P      13 59 07.3  -1.3
                0.6nm,0.7s,baz=350,slow=7.2,SNR=8.0
ILAR   Eielson Array     72.06  27  P       P      14 02 04.7  -0.9
                0.3nm,0.8s,baz=280,slow=5.2,SNR=4.2
DAVOX  Davos/Dischmat    88.09 320  LR      LR     14 44 40.9
                comp=Z,279nm,19.0s,baz=84,slow=37
```

TEH ***26*** *13:54:39.4, 39.54N×54.52E, h10^{km}, ML4.4*

ISCJB ***26*** *13:54:40.9±0.3, 39.64N±0.03×54.59E±0.02, h37^{km}±4^{km}, mb4.3/41, MS3.5/8, Error ellipse: s-maj=4.5km s-min=2.2km az=15.8*

MOS ***26*** *13:54:40.4±1.4, 39.64N×54.57E, h31^{km}, mb4.5/26, Error ellipse: s-maj=5.5km s-min=4.2km az=38.5*

NNC ***26*** *13:54:42.0±2.3, 39.92N×55.09E, h0^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=26.9km s-min=9.3km az=75.0*

NEIC ***26*** *13:54:41.2±0.3, 39.58N×54.55E, mb4.4/21, Error ellipse: s-maj=7.5km s-min=3.9km az=178.0*

IDC ***26*** *13:54:41.9±0.7, 39.46N×54.46E, h32^{km}±3^{km}, mb4.1/25, mb1 4.2/34, mb1mx4.1/60, mbtmp4.2/34, ML4.1/8, MS3.5/14, Ms1 3.5/14, ms1mx3.2/44, Error ellipse: s-maj=14.4km s-min=7.6km az=3.0*

AZER ***26*** *13:54:45.4±0.3, 39.29N×54.16E, h15^{km}, ml4.6/20, Error ellipse: s-maj=4.0km s-min=2.6km az=14.0*

ISC 26 13:54:41.3±0.4, **39.63N**±0.04×**54.61E**±0.03, **h31**^{km}±2^{km}, **h31**^{km}**:pP-P, n288,** σ**2.10**/360, **mb4.4**/42, **MS3.6**/8, **48C-59D, Turkmenistan**

```
Code   Station Name        Δ°   AZ°  Phase ID          Time      Res
                                    Op      ISC     h  m  s     ISC
GEYT   Alibeck            3.23 121  Pn      Pn     13 55 30.8  +0.8
                27nm,0.3s,baz=297,slow=16,SNR=382
GEYT                                Sn      Sn     13 56 06.8  -0.5
                32nm,0.3s,baz=330,slow=18,SNR=8.9
GEYT                                LR      LR     13 57 20.2
                comp=Z,345nm,18.6s,baz=290,slow=49
GYA0B  ALIBECK ARRAY      3.23 121  ePn     Pn     13 55 30.8  +0.8
GYA0B  ALIBECK ARRAY      3.23 121  ⇑Pn     Pn     13 55 30.9  +0.9
                42nm,0.4s
GYA0B                               ⇓Pg     Pb     13 55 38.0  +0.1
                172nm,0.6s
GYA0B                               ⇓Lg     Lg     13 56 22.1
                711nm,0.6s
ASHT   Ashkhabad          3.40 119  P       Pn     13 55 35.1  +2.8
ASHT   Ashkhabad          3.40 119  ePn     Pn     13 55 35.1  +2.8
GALA   Gala               3.51 284  ePn     Pn     13 55 36.5  +2.8
GALA   Gala               3.51 284  ⇑P      Pn     13 55 36.5  +2.8
GALA                                ⇓S      Sn     13 56 15.8  +1.7
NDR    Nardaran           3.67 286  ePn     Pn     13 55 38.5  +2.6
NDR    Nardaran           3.67 286  ⇑P      Pn     13 55 38.6  +2.6
NDR                                 ⇓S      Sn     13 56 20.0  +1.9
IALA   Alasht             3.82 202  ePn     Pn     13 55 38.6  +0.3
IALA                                IAMB    IAmb   13 56 23.4
                comp=Z,76µm,0.4s
GOBA   Gobu               3.82 283  ePn     Pn     13 55 40.1  +2.1
GOBA   Gobu               3.82 283  ⇑P      Pn     13 55 40.2  +2.1
GOBA                                ⇓S      Sn     13 56 23.3  +1.4
IPRN   Peran              3.83 209  ePn     Pn     13 55 37.5  -0.9
IPRN                                IAMB    IAmb   13 56 23.6
                comp=Z,28µm,0.1s
IEMG   Emamgholi          3.87 124  ePn     Pn     13 55 39.9  +0.9
IEMG                                IAMB    IAmb   13 57 11.8
                comp=Z,7µm,0.7s
ISHM   Shahmirzad         3.96 196  ePn     Pn     13 55 41.5  +1.2
ISHM                                IAMB    IAmb   13 56 31.8
                comp=Z,24µm,0.3s
IANJ   Anjilo             4.20 188  ePn     Pn     13 55 45.5  +2.1
IANJ                                IAMB    IAmb   13 56 36.9
                comp=Z,7µm,0.3s
IKRD   Kardeh             4.20 132  ePn     Pb     13 55 53.8  -0.8
IKRD                                IAMB    IAmb   13 57 54.4
                comp=Z,3µm,0.8s
IFIR   Firoozkooh         4.25 201  ePn     Pn     13 55 45.7  +1.5
IFIR                                IAMB    IAmb   13 55 47.3
                comp=Z,20µm,0.2s
ALIB   &Auml;li-Bayra     4.33 276  ePn     Pn     13 55 46.6  +1.6
ALIB   &Auml;li-Bayra     4.33 276  ⇓P      Pn     13 55 46.6  +1.6
ALIB                                ⇓S      Sn     13 56 34.4   0.0
GBS    Qobustan           4.44 284  ePn     Pn     13 55 48.7  +2.1
GBS    Qobustan           4.44 284  ⇓P      Pn     13 55 48.7  +2.1
                SNR=3.9
GBS                                 ⇑S      Sn     13 56 38.5  +1.2
ILAS   Lasjerd            4.44 198  ePn     Pn     13 55 48.6  +1.8
ILAS                                IAMB    IAmb   13 55 49.7
                comp=Z,14µm,0.5s
IAKL   Akhelmad           4.46 131  ePn     Pn     13 55 48.8  +1.7
IAKL                                IAMB    IAmb   13 56 44.3
                comp=Z,5µm,0.5s
ATGJ   Altiaghaj          4.51 288  ePn     Pn     13 55 49.9  +2.3
ATGJ   Altiaghaj          4.51 288  P       Pn     13 55 50.0  +2.3
                SNR=4.0
ATGJ                                ⇑S      Sn     13 56 41.1  +2.0
IDMV   Damavand           4.54 208  ePn     Pn     13 55 49.8  +1.6
IDMV                                IAMB    IAmb   13 55 51.9
                comp=Z,8µm,0.4s
SIZA   Siyzn              4.59 290  ePn     Pn     13 55 51.4  +2.7
SIZA   Siyzn              4.59 290  ⇓P      Pn     13 55 51.5  +2.7
                SNR=3.1
SIZA                                ⇑S      Sn     13 56 43.4  +2.3
LKRN   Lenkeran, Azer     4.62 260  ePn     Pn     13 55 49.3  +0.2
LKRN   Lenkeran, Azer     4.62 260  ⇓P      Pn     13 55 49.3  +0.2
LKRN                                ⇑S      Sn     13 56 39.3  -2.4
ASTR   Astara             4.65 259  ePn     Pn     13 55 49.2  -0.3
ASTR   Astara             4.65 259  ⇑P      Pn     13 55 49.2  -0.3
                SNR=9.9
ASTR                                ⇑S      Sn     13 56 39.8  -2.6
IPAY   Payeh              4.70 131  ePn     Pn     13 55 52.0  +1.6
IPAY                                IAMB    IAmb   13 56 50.9
                comp=Z,4µm,0.3s
PQL    Pirkuli            4.75 286  ePn     Pn     13 55 53.2  +2.3
PQL    Pirkuli            4.75 286  ⇑P      Pn     13 55 53.3  +2.3
                SNR=8.1
PQL                                 ⇓S      Sn     13 56 46.4  +1.4
SAAT   Saatly             4.77 275  ⇓S      Sn     13 56 46.5  +1.1
GLBA   Clilabad           4.83 267  ePn     Pn     13 55 52.4  +0.5
GLBA   Clilabad           4.83 267  ⇓P      Pn     13 55 52.4  +0.5
                SNR=14
GLBA                                ⇑S      Sn     13 56 45.4  -1.4
IHSB   Hasanabad          4.96 213  ePn     Pn     13 55 55.0  +1.2
IHSB                                IAMB    IAmb   13 56 47.5
                comp=Z,0.0nm,0.4s
QUBA   Quba, Azerbaij     4.97 292  ⇓P      Pn     13 55 56.8  +2.9
                SNR=5.9
QUBA                                ⇓S      Sn     13 56 53.2  +2.9
LRK    Lerik              4.97 261  ePn     Pn     13 55 54.0  -0.1
LRK    Lerik              4.97 261  ⇓P      Pn     13 55 54.0  -0.1
                SNR=12
LRK                                 ⇓S      Sn     13 56 47.9  -2.7
KDMR   Kurdemir           4.99 281  ePn     Pn     13 55 55.8  +1.8
KDMR   Kurdemir           4.99 281  ⇑P      Pn     13 55 55.9  +1.8
KDMR                                ⇑S      Sn     13 56 51.8  +1.1
IMHD   Mahdasht           5.03 220  ePn     Pn     13 55 56.1  +1.3
IMHD                                IAMB    IAmb   13 55 56.9
                comp=Z,3µm,0.4s
IML    Ismayilli          5.05 285  ePn     Pn     13 55 57.4  +2.3
IML    Ismayilli          5.05 285  ⇑P      Pn     13 55 57.4  +2.3
IML                                 ⇓S      Sn     13 56 54.1  +1.7
QUB    Quba               5.07 292  ePn     Pn     13 55 56.7  +1.3
XNQ    Khinaliq           5.17 289  ePn     Pn     13 55 59.1  +2.3
XNQ    Khinaliq           5.17 289  ⇓P      Pn     13 55 59.2  +2.3
                SNR=3.8
XNQ                                 ⇑S      Sn     13 56 57.6  +2.0
QSAR   Qusar              5.18 293  ePn     Pn     13 55 59.7  +2.9
QSAR   Qusar              5.18 293  ⇑P      Pn     13 55 59.8  +2.9
                SNR=9.3
QSAR                                ⇑S      Sn     13 56 58.9  +3.2
QBL    Gabala             5.34 286  ePn     Pn     13 56 01.1  +2.1
QBL    Gabala             5.34 286  ⇓P      Pn     13 56 01.1  +2.1
                SNR=7.5
QBL                                 ⇓S      Sn     13 57 01.2  +1.7
ZRD    Zardab             5.36 279  ePn     Pn     13 56 00.8  +1.6
ZRD    Zardab             5.36 279  ⇓P      Pn     13 56 00.8  +1.6
ZRD                                 ⇑S      Sn     13 57 00.3  +0.4
IMYA   Miami              5.44 125  ePn     Pn     13 56 02.1  +1.6
IMYA                                IAMB    IAmb   13 57 06.9
                comp=Z,2µm,0.5s
AKT    Akhty              5.55 292  P       Pn     13 56 03.9  +1.9
AKT                                 S       Sn     13 57 06.9  +2.1
IRAZ   Razeghan           5.62 223  ePn     Pn     13 56 03.8  +0.7
IRAZ                                IAMB    IAmb   13 57 19.8
                comp=Z,2µm,0.6s
ISRB   Sarab              5.72 254  IAMB    IAmb   13 56 11.9
                comp=Z,2µm,0.3s
ISRB                                ePn     Pn     13 56 04.0  -0.4
BRDA   Brd                5.75 279  ePn     Pn     13 56 05.9  +1.4
BRDA   Brd                5.75 279  ⇑P      Pn     13 56 05.9  +1.4
BRDA                                ⇑S      Sn     13 57 09.7  +0.3
SEKA   Sheki              5.87 288  P       Pn     13 56 07.5  +1.2
SEKA   Sheki              5.87 288  ePn     Pn     13 56 07.5  +1.2
SEKA   Sheki              5.87 288  ⇑P      Pn     13 56 07.6  +1.2
                SNR=9.6
SEKA                                ⇓S      Sn     13 57 13.0  +0.5
MNGR   Mingechevir, A     5.87 284  P       Pn     13 56 08.1  +1.9
MNGR   Mingechevir, A     5.87 284  ePn     Pn     13 56 08.1  +1.9
MNGR   Mingechevir, A     5.87 284  ⇑P      Pn     13 56 08.2  +1.9
MNGR                                ⇓S      Sn     13 57 13.9  +1.5
IHRS   Heris              6.04 260  IAMB    IAmb   13 56 27.9
                comp=Z,3µm,0.4s
IHRS                                ePn     Pn     13 56 09.3  +0.5
MAK    Makhachkala        6.30 304  eP      Pn     13 56 07.5  -4.6
MAK                                 eS      Sn     13 57 18.7  -4.2
MAK                                 pmax    pmax
                comp=Z,116nm,0.3s
MAK                                 smax    smax
                comp=E,362nm,0.4s
MAK                                 smax    smax
                comp=E,303nm,0.4s
MAK                                 MLR     MLR
                comp=Z,1µm,15.0s
IBST   Bostanabad         6.34 255  ePn     Pn     13 56 12.8  -0.1
IBST                                IAMB    IAmb   13 57 30.9
                comp=Z,547nm,0.6s
ZKTA   Zakatala           6.40 291  P       Pn     13 56 16.0  +2.5
ZKTA   Zakatala           6.40 291  ePn     Pn     13 56 16.0  +2.5
ZKTA   Zakatala           6.40 291  ⇑P      Pn     13 56 16.0  +2.5
                SNR=5.8
ZKTA                                ⇓S      Sn     13 57 27.9  +2.4
GNBR   Gunib              6.40 298  P       Pn     13 56 18.0  +4.4
GNBR                                S       Sn     13 57 27.4  +1.7
GANJ   Ganja              6.43 282  P       Pn     13 56 15.5  +1.6
GANJ   Ganja              6.43 282  ePn     Pn     13 56 15.5  +1.6
GANJ   Ganja              6.43 282  ⇑P      Pn     13 56 15.5  +1.6
                SNR=7.9
GANJ                                ⇓S      Sn     13 57 27.0  +0.7
ORD    Ordubad            6.72 267  ePn     Pn     13 56 18.2  +0.2
ORD    Ordubad            6.72 267  ⇑P      Pn     13 56 18.2  +0.2
ORD                                 ⇑S      Sn     13 57 31.8  -1.7
DBC    Dubki              6.76 303  P       Pn     13 56 21.0  +2.5
DBC                                 S       Sn     13 57 33.8  -0.7
GDB    GEDABAY            6.87 282  ePn     Pn     13 56 21.3  +1.2
GDB    GEDABAY            6.87 282  ⇑P      Pn     13 56 21.3  +1.2
                SNR=4.1
GDB                                 ⇑S      Sn     13 57 37.1  -0.1
IMRD   Marand             6.98 265  ePn     Pn     13 56 21.9  +0.3
IMRD                                IAMB    IAmb   13 56 38.5
                comp=Z,1µm,0.4s
SBZ    Shahbuz            7.01 271  ePn     Pn     13 56 22.5  +0.6
SBZ    Shahbuz            7.01 271  ⇑P      Pn     13 56 22.6  +0.6
NAX    Nakhchivan         7.07 269  P       Pn     13 56 23.2  +0.4
NAX    Nakhchivan         7.07 269  ePn     Pn     13 56 23.2  +0.4
NAX    Nakhchivan         7.07 269  ⇓P      Pn     13 56 23.3  +0.4
                SNR=4.0
NAX                                 ⇑S      Sn     13 57 40.5  -1.7
QZX    Qazax, Azerbai     7.20 284  ePn     Pn     13 56 26.4  +1.9
QZX    Qazax, Azerbai     7.20 284  ⇑P      Pn     13 56 26.4  +1.9
                SNR=16
QZX                                 ⇑S      Sn     13 57 45.9  +0.7
DVE    Vedeno             7.20 300  P       Pn     13 56 28.8  +4.3
DVE                                 S       Sn     13 57 49.2  +4.0
GROC   Groznyy            7.52 301  eP      Pn     13 56 29.5  +0.6
GROC                                eS      Sn     13 57 56.0  +2.9
GROC                                pmax    pmax
                comp=Z,15nm,0.4s
HYR    Heyderabad         7.53 274  ⇑S      Sn     13 57 52.7  -0.7
GNI    Garni              7.61 277  ePn     Pn     13 56 28.5  -1.7
GNI    Garni              7.61 277  ePn     Pn     13 56 34.8  +4.6
GNI    Garni              7.61 277  Pn      Pn     13 56 32.4  +2.2
                comp=Z,1.4nm,0.3s,baz=155,slow=7.4,SNR=5.8
GNI                                 LR      LR     14 00 51.2
                comp=Z,80nm,19.0s,baz=72,slow=49
TBLG   Delisi             7.79 289  ePn     Pn     13 56 30.6  -2.0
TBLG   Delisi             7.79 289  eP      Pn     13 56 30.6  -2.0
LACR   Lac                8.40 296  P       Pn     13 56 41.8  +0.8
LACR                                S       Sn     13 58 12.8  -2.1
ZEI    Tsey               8.66 295  eP      Pn     13 56 48.7  +4.0
ZEI                                 pmax    pmax
                comp=Z,13nm,0.6s
AGRB   Hanur-Agry         8.97 273  ePn     Pn     13 56 52.9  +4.0
NCK    Nalchik            9.11 299⇓eP      Pn     13 56 53.1  +2.4
NCK    Nalchik            9.11 299  ePn     Pn     13 56 53.1  +2.4
NEY    Neytrino           9.63 296⇑eP      Pn     13 57 01.5  +3.6
NEY    Neytrino           9.63 296  ePn     Pn     13 57 01.6  +3.6
KBZ    Khabaz             9.67 299  P       Pn     13 56 57.5  -0.8
KBZ                                                13 58 39.5
KBZ                                 pmax    pmax
                comp=Z,1.0nm,0.3s
KBZ                                 smax    smax
                comp=N,1.0nm,0.3s
KBZ    Khabaz             9.67 299  Pn      Pn     13 56 57.5  -0.8
                comp=N,1.0nm,0.3s,baz=92,slow=7.1,SNR=22
KBZ                                 Sn      Sn     13 58 39.5  -6.3
                comp=N,1.0nm,0.3s,baz=270,slow=15,SNR=2.3
SHA1   Shidzhatmaz        9.84 299  P       Pn     13 56 59.8  -1.0
SHA1                                S       Sn     13 58 44.9  -5.3
KVAR   Kislovodsk Arr     9.89 300  Pn      Pn     13 57 01.7  +0.3
                baz=274,slow=19,SNR=7.5
KVAR                                Sn      Sn     13 58 45.1  -6.3
                baz=197,slow=11,SNR=3.7
KIV    Kislovodsk         9.89 300  ePn     Pn     13 56 60.0  -1.5
KIV    Kislovodsk         9.89 300  eP      Pn     13 57 02.1  +0.6
KIV                                 eS      Sn     13 58 52.6  +1.1
KIV                                 pmax    pmax
                comp=Z,20nm,0.9s
KIV                                 MLR     MLR
                comp=Z,24nm,10.0s
AB31   Akbulak array     10.35  20  ⇑Pn     Pn     13 57 08.0  +0.5
                comp=Z,5.1nm,0.2s
AB31                                ⇓Sn     Sn     13 58 57.7  -4.6
                comp=Z,18nm,0.3s
AB31   Akbulak array     10.35  20  P       Pn     13 57 08.0  +0.5
AB31                                               13 58 56.6
AB31                                pmax    pmax
                comp=Z,5.0nm,0.3s
ABKAR  Akbulak array     10.35  20  ePn     Pn     13 57 06.7  -0.9
AKTO   Aktyubinsk        11.07  11  ⇓Pn     Pn     13 57 17.7  +0.3
                comp=Z,29nm,0.7s
AKTO                                ⇑Sn     Sn     13 59 17.9  -2.1
                comp=Z,53nm,0.5s
AKTO   Aktyubinsk        11.07  11  Pn      Pn     13 57 18.0  +0.6
                comp=Z,1.6nm,0.3s,baz=202,slow=12,SNR=27
AKTO                                Sn      Sn     13 59 16.4  -3.6
                comp=Z,7.8nm,0.3s,baz=78,slow=21,SNR=11
GAR    Garm              12.19  88  ePn     Pn     13 57 31.9  -0.9
GAR    Garm              12.19  88  eP      Pn     13 57 32.0  -0.9
KK31   Karatay Array     12.44  69  ePn     Pn     13 57 34.2  -2.0
KK31   Karatay Array     12.44  69  Pn      Pn     13 57 34.5  -1.7
                comp=Z,5.0nm,0.5s,baz=256,slow=14,SNR=38
KK31                                ⇓Sn     Sn     13 59 46.9  -6.8
                comp=Z,4.1nm,0.3s,baz=258,slow=22,SNR=5.0
KK31   Karatay Array     12.44  69  i P     Pn     13 57 34.5  -1.7
KK31                                               13 59 49.3
KK31                                pmax    pmax
                comp=Z,5.0nm,0.5s
KK31                                smax    smax
                comp=N,7.0nm,0.4s
KKAR   Karatay Array     12.44  69  ePn     Pn     13 57 34.4  -1.8
KKAR   Karatay Array     12.44  69  eP      Pn     13 57 34.4  -1.8
MNAS   Manas             13.80  72  P       Pn     13 57 57.5  +2.5
AAK    Ala-Archa         15.28  72  ePn     Pn     13 58 14.5  -0.4
                comp=N,33nm,1.7s
AAK                                 Sn      Sn     14 01 01.1  -2.1
AAK    Ala-Archa         15.28  72  ⇓Pn     Pn     13 58 13.2  -1.7
                comp=N,8.5nm,0.9s
AAK                                 ⇓Sn     Sn     14 01 01.6  -1.6
                comp=N,21nm,1.3s
AAK    Ala-Archa         15.28  72  Pn      Pn     13 58 15.4  +0.5
                comp=N,0.4nm,0.3s,baz=235,slow=12,SNR=16
AAK                                 Sn      Sn     14 01 01.1  -2.1
                comp=N,0.3nm,0.3s,baz=350,slow=17,SNR=2.8
AAK                                 LR      LR     14 04 54.0
                comp=N,280nm,18.6s,baz=272,slow=40
OTUK   Ortayu            15.37  50  ⇑Pn     Pn     13 58 12.6  -3.4
                comp=N,6.7nm,0.5s
OTUK   Ortayu            15.37  50  P       Pn     13 58 12.6  -3.4
OTUK                                pmax    pmax
                comp=Z,7.0nm,0.5s
VSR    Storozhevoye      15.83 322  eP      Pn     13 58 19.2  -2.6
VSR                                 eS      Sn     14 01 08.9  -7.2
VSR                                 pmax    pmax
                comp=Z,30nm,1.4s
VSR                                 smax    smax
                comp=N,140nm,1.0s
ILGA   Ilgaz             15.99 282  ePn     Pn     13 58 22.9  -1.3
                comp=N,9.1nm,0.9s
NIL    Nilore            16.10 106  ePn     Pn     13 58 24.5  -0.9
                comp=N,20nm,1.0s
NIL    Nilore            16.10 106  eP      Pn     13 58 24.5  -0.9
NIL                                 pmax    pmax
                comp=Z,20nm,1.0s
TKM2   Tokmak 2          16.11  71  ⇓Pn     Pn     13 58 26.7  +1.0
                comp=Z,11nm,1.2s
TKM2                                ⇓Sn     Sn     14 01 21.5  -2.0
                comp=Z,14nm,1.1s
TKM2   Tokmak 2          16.11  71  P       Pn     13 58 26.7  +1.0
TKM2                                SN      Sn     14 01 21.5  -2.0
BR131  Keskin Array S    16.15 277  ePn     Pn     13 58 24.5  -1.6
BRTR   Keskin Array B    16.15 277  i P     P      13 58 28.5  -0.6
BRTR                                pmax    pmax
                comp=Z,1.0nm,0.5s
BRTR   Keskin Array B    16.15 277  Pn      Pn     13 58 24.0  -2.1
                comp=Z,0.1nm,0.3s,baz=78,slow=13,SNR=4.0
ASF    Jabal al Asfar    16.15 248  Pn      Pn     13 58 23.6  -2.6
                comp=Z,0.3nm,0.3s,baz=63,slow=2.3,SNR=2.0
ANTO   Ankara            16.78 278  ePn     Pn     13 58 32.4  -1.7
                comp=Z,9.4nm,0.9s
ANTO   Ankara            16.78 278  eP      Pn     13 58 32.4  -1.7
ANTO                                pmax    pmax
                comp=Z,9.0nm,0.9s
BR231  Keskin MP Arra    16.80 278  ePn     Pn     13 58 33.0  -1.2
LPSR   Galich'ya Gora    16.87 325  eP      Pn     13 58 33.0  -2.0
LPSR                                eS      Sn     14 01 32.4  -9.0
LPSR                                pmax    pmax
                comp=Z,20nm,0.7s
LPSR                                smax    smax
                comp=N,40nm,0.8s
ARU    Arti              17.01   8  ePn     Pn     13 58 34.6  -2.1
                comp=N,42nm,0.8s
ARU    Arti              17.01   8  P       Pn     13 58 34.9  -1.8
ARU                                 S       Sn     14 01 43.2  -1.5
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BRVK	Borovoye	17.19	33	ePn	Pn	13 58 37.3	-1.7
	comp=N,11nm,0.6s						
BRVK	Borovoye	17.19	33	⇓eP	Pn	13 58 38.7	-0.3
BRVK				pmax	pmax		
	comp=Z,13nm,2.3s						
BVA0	Borovoye Array	17.21	34	⇓Pn	Pn	13 58 38.7	-0.6
	comp=Z,16nm,0.8s						
BVA0				Sn	Sn	14 01 42.1	-7.6
	comp=Z,11nm,0.6s,baz=224,slow=25,SNR=15						
BVA0	Borovoye Array	17.21	34	P	Pn	13 58 38.7	-0.6
BVA0				SN	Sn	14 01 42.1	-7.6
BVAR	Borovoye Array	17.21	34	Pn	Pn	13 58 39.5	+0.2
	comp=Z,1.6nm,0.3s,baz=221,slow=14,SNR=28						
BVAR				Sn	Sn	14 01 40.0	-10
	comp=Z,1.9nm,0.3s,baz=223,slow=25,SNR=8.3						
BVAR				LR	LR	14 06 34.7	
	comp=Z,216nm,20.1s,baz=234,slow=41						
CSS	Mathiatis	17.55	261	ePn	Pn	13 58 42.3	-1.4
	comp=Z,10nm,0.9s						
SVE	Sverdlovsk	17.66	11	eP	P	13 58 45.4	-0.1
SVE				eS	Sn	14 01 49.2	-11
SVE				pmax	pmax		
	comp=Z,23nm,1.0s						
RAYN	Ar Rayn	17.82	208	ePn	Pn	13 58 45.1	-2.0
	comp=Z,14nm,1.1s						
RAYN	Ar Rayn	17.82	208	eP	Pn	13 58 45.1	-2.0
RAYN				pmax	pmax		
	comp=Z,14nm,1.1s						
ISP	Isparta	18.87	272	eP	P	13 58 55.4	-3.8
	comp=Z,16nm,0.7s						
ISP	Isparta	18.87	272	eP	P	13 58 55.4	-3.8
ISP				pmax	pmax		
	comp=Z,16nm,0.7s						
EIL	Elat	18.95	244	LR	LR	14 07 11.4	
	comp=Z,51nm,19.4s,baz=74,slow=40						
KIRV	Kirov	19.26	352	P	Pn	13 59 04.0	-0.2
	comp=Z,2.0nm,0.3s,baz=159,slow=3.3,SNR=3.6						
KIRV				LR	LR	14 07 56.2	
	comp=Z,260nm,18.8s,baz=179,slow=41						
YLV	Yalova	19.31	281	⇑iP	P	13 59 02.5	-1.4
YLV	Yalova	19.31	281	P	P	13 59 02.5	-1.4
OBN	Obninsk	19.63	328	eP	Pn	13 59 09.4	+0.7
OBN				pmax	pmax		
	comp=Z,59nm,2.5s						
OBN	Obninsk	19.63	328	LR	LR	14 08 46.3	
	comp=Z,52nm,18.6s,baz=192,slow=43						
MOS	Moscow	19.67	331	eP	P	13 59 07.0	-0.6
MOS				eS	S	14 02 39.5	-8.1
MOS				pmax	pmax		
	comp=Z,32nm,0.6s						
TLCR		19.80	295	⇑iP	P	13 59 09.3	+0.2
TLCR		19.80	295	P	P	13 59 09.3	+0.2
MFTR	Murfatlar	19.98	292	⇓iP	P	13 59 11.5	+0.5
TIRR	Tirgusor	20.01	292	⇓iP	P	13 59 11.6	+0.3
TIRR	Tirgusor	20.01	292	P	P	13 59 11.6	+0.3
KURBB	Kurchatov Arra	20.05	49	P	Pn	13 59 14.0	+0.4
	comp=Z,32nm,0.6s,baz=250,slow=11,SNR=5.9						
KURK	Kurchatov	20.14	49	eP	P	13 59 12.8	+0.1
	comp=Z,8.8nm,0.9s						
KURK	Kurchatov	20.14	49	P	Pn	13 59 14.0	-0.7
KURK				pmax	pmax		
	comp=Z,32nm,0.6s						
CFR	Carcaliu	20.27	294	⇑iP	P	13 59 14.4	+0.2
TLB	Topalu	20.28	293	⇓iP	P	13 59 14.8	+0.5
AKASG	Malin Array Be	20.94	310	P	P	13 59 21.5	+0.2
	comp=Z,14nm,0.6s,baz=104,slow=9.4,SNR=49						
AKASG				pP	pP	13 59 29.4	-0.3
	comp=Z,23nm,0.5s,baz=98,slow=8.5,SNR=29						
AKBB	Malin Array Si	20.94	310	eP	P	13 59 20.7	-0.7
AKBB				epP	pP	13 59 29.3	-0.4
KIEV	Kiev	20.94	310	eP	P	13 59 20.4	-1.0
KIEV				epP	pP	13 59 29.2	-0.5
KIEV	Kiev	20.94	310	⇓iP	P	13 59 21.4	0.0
KIEV				pmax	pmax		
	comp=Z,30nm,0.7s						
AK11	Malin Array Si	20.96	310	eP	P	13 59 20.7	-1.0
AK11				epP	pP	13 59 29.8	-0.2
MAKZ	Makanchi	21.12	61	eP	P	13 59 24.0	+0.5
	comp=Z,36nm,1.8s						
MAKZ	Makanchi	21.12	61	eP	P	13 59 24.0	+0.5
MAKZ				pmax	pmax		
	comp=Z,36nm,1.8s						
MK31	Makanchi Array	21.33	61	eP	P	13 59 25.9	+0.2
MK31	Makanchi Array	21.33	61	⇓P	P	13 59 26.6	+0.8
	comp=Z,8.2nm,0.9s,baz=113,slow=8.1,SNR=5.8						
MK31	Makanchi Array	21.33	61	i P	P	13 59 26.5	+0.8
MK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MKAR	Makanchi Array	21.33	61	eP	P	13 59 25.7	0.0
	comp=Z,34nm,0.8s						
MKAR	Makanchi Array	21.33	61	eP	P	13 59 25.7	0.0
MKAR				pmax	pmax		
	comp=Z,34nm,0.8s						
MKAR	Makanchi Array	21.33	61	P	P	13 59 27.4	+1.7
	comp=Z,1.3nm,0.5s,baz=249,slow=11,SNR=23						
MK01	Makanchi Array	21.34	61	eP	P	13 59 26.5	+0.7
VRI	Vrincioaia	21.34	296	⇓iP	P	13 59 26.9	+1.1
VRI	Vrincioaia	21.34	296	P	P	13 59 26.8	+1.0
PLOR	Plostina	21.39	296	⇑iP	P	13 59 27.0	+0.6
PLOR	Plostina	21.39	296	P	P	13 59 27.0	+0.6
MLR	Muntele Rosu	21.84	295	eP	P	13 59 32.6	+1.3
	comp=Z,29nm,0.9s						
MLR	Muntele Rosu	21.84	295	⇓iP	P	13 59 31.2	-0.1
MLR	Muntele Rosu	21.84	295	P	P	13 59 33.1	+1.8
	comp=Z,14nm,0.9s,baz=79,slow=6.7,SNR=12						
MLR				LR	LR	14 09 40.6	
	comp=Z,77nm,18.7s,baz=52,slow=41						
BIZ	Bicaz	21.91	299	⇓iP	P	13 59 32.9	+1.0
KARP	Karpathos	22.09	268	eP	P	13 59 33.8	-0.2
	comp=Z,78nm,0.8s						
DOPR	Dopca	22.28	296	⇓iP	P	13 59 36.7	+0.8
VOIR		22.47	295	⇓iP	P	13 59 38.6	+0.6
BURAR	Bucovina Array	22.62	300	⇑iP	P	13 59 41.4	+1.8
BURAR	Bucovina Array	22.62	300	P	P	13 59 41.3	+1.7
BUR04	Bucovina Ar. S	22.63	300	eP	P	13 59 38.3	-1.3
BUR08	Bucovina Ar. S	22.64	300	eP	P	13 59 38.8	-1.0
ARR	Arges	22.75	294	⇓iP	P	13 59 41.8	+0.8
KLMR	Klimovskoe	23.22	341	eP	P	13 59 44.5	-1.0
KLMR				eS	S	14 03 54.8	-0.4
KLMR				pmax	pmax		
	comp=Z,36nm,0.9s						
KLMR	Klimovskoe	23.22	341	eP	P	13 59 44.5	-1.0
KLMR				AMP		14 00 03.4	
	comp=Z,36nm,0.8s						
KLMR				eS	S	14 03 54.8	-0.4
KLMR				eS	S	14 03 54.8	-0.4
VTS	Vitosha	23.75	287	⇓iP	P	13 59 50.6	-0.5
IDI	Anoyia	23.93	269	⇑iP	P	13 59 51.1	-1.6
IDI	Anoyia	23.93	269	P	P	13 59 53.4	+0.7
	comp=Z,7.5nm,0.8s,baz=211,slow=2.4,SNR=5.9						
GZR	Gura Zlata	24.06	294	⇓iP	P	13 59 54.8	+1.0
DRGR		24.20	298	⇑iP	P	13 59 56.8	+1.6
DRGR		24.20	298	P	P	13 59 56.8	+1.6
IDID	Didziasalis	24.28	319	eP	P	14 00 03.9	+8.2
NVS	Novosibirsk	24.45	42	eP	P	13 59 59.6	+2.4
TRPA	Tarpa	24.48	301	⇓iP	P	13 59 59.9	+2.3
IIGN	Ignalina	24.56	319	eP	P	14 00 05.7	+7.5
ISAL	Salakas	24.71	320	eP	P	14 00 08.8	+9.2
IZAR	Zarasai	24.74	320	eP	P	14 00 09.1	+9.3
MDVR	Moldovita	24.80	293	⇓iP	P	14 00 02.0	+1.5
BZS	Buzias	24.89	295	⇓iP	P	14 00 03.3	+2.1
SIRR	Siria	24.89	296	⇓iP	P	14 00 03.5	+2.2
ZAA0	Zalesovo Array	24.91	45	eP	P	14 00 00.7	-0.7
	comp=Z,8.2nm,0.9s						
ZALV	Zalesovo Beam	24.91	45	eP	P	14 00 00.5	-0.9
ZALV				epP	pP	14 00 11.3	+0.8
ZALV	Zalesovo Beam	24.91	45	P	P	14 00 03.0	+1.6
	comp=Z,5.7nm,0.6s,baz=255,slow=9.8,SNR=23						
WMQ	Urumqi	24.95	70	P	P	14 00 03.0	+1.1
WMQ				pP	pP	14 00 12.5	+1.6
WMQ				sP	sP	14 00 17.8	+3.1
WMQ				pmax	pmax		
	comp=Z,26nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,700nm,4.7s						
WMQ				LR	LR		
	comp=N,160nm,18.5s						
WMQ				LR	LR		
	comp=E,230nm,17.3s						
WMQ				LR	LR		
	comp=Z,210nm,17.3s						
DGZ	Jazzator, Alta	25.24	56	d iP	P	14 00 06.9	+2.3
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ITM	Ithomi	25.65	275	eP	P	14 00 07.7	-0.6
	comp=Z,22nm,0.7s						
ITM				epP	pP	14 00 16.4	-0.8
VSU	Vasula	25.93	326	⇑eP	P	14 00 12.4	+1.8
VSU	Vasula	25.93	326	eP	P	14 00 13.2	+2.6
DIVS	Divibare	26.04	291	eP	P	14 00 12.2	+0.3
	comp=Z,15nm,0.7s						
PDG	Podgorica	26.70	288	⇓iP	P	14 00 18.7	+1.0
VYHS	Vyhne	26.98	301	eP	P	14 00 22.4	+2.2
VYHS	Vyhne	26.98	301	eP	P	14 00 22.4	+2.2
JOF	Joensuu	27.19	337	P	P	14 00 23.5	+1.6
FINES	FINESS Array B	27.97	331	P	P	14 00 30.0	+1.1
FINES				*PP	pP	14 00 39.3	+1.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES				MLR	MLR		
	comp=Z,141nm,18.6s						
FINES	FINESS Array B	27.97	331	P	P	14 00 29.9	+1.1
	comp=Z,2.0nm,0.6s,baz=133,slow=12,SNR=11						
FINES				pP	pP	14 00 39.3	+1.4
	comp=Z,3.0nm,0.5s,baz=136,slow=12,SNR=6.7						
FINES				LR	LR	14 12 40.8	
	comp=Z,141nm,18.6s,baz=92,slow=38						
VRAC	Vranov	28.53	302	LR	LR	14 14 00.0	
	comp=Z,102nm,19.3s,baz=52,slow=41						
GERES	GERESS Array B	30.40	301	P	P	14 00 51.4	+0.7
	comp=Z,0.8nm,0.4s,baz=92,slow=8.1,SNR=8.5						
GERES				pP	pP	14 01 00.5	+0.6
	comp=Z,0.7nm,0.5s,baz=96,slow=8.2,SNR=4.4						
KNGR	Kungurtug, Tuv	31.78	55	⇑eP	P	14 01 05.0	+2.1
HFS	Hagfors	32.64	323	P	P	14 01 11.2	+1.1
	comp=Z,3.2nm,0.3s,baz=109,slow=8.7,SNR=28						
HFS				pP	pP	14 01 20.7	+1.3
	comp=Z,2.6nm,0.5s,baz=99,slow=9.2,SNR=2.6						
ARCES	ARCESS Array B	33.69	342	P	P	14 01 20.8	+1.6
	comp=Z,1.1nm,0.4s,baz=139,slow=11,SNR=16						
ARCES				pP	sP	14 01 30.6	-1.5
	comp=Z,1.4nm,0.7s,baz=142,slow=9.7,SNR=1.1						
NC405	NORSAR Array S	33.89	324	eP	P	14 01 21.0	-0.1
NB2	NORSAR Subarra	34.09	323	P	P	14 01 23.2	+0.3
	comp=Z,12nm,0.8s,baz=110,slow=8.6						
NOA	NORSAR Array B	34.09	323	P	P	14 01 23.4	+0.5
	comp=Z,6.6nm,0.8s,baz=110,slow=8.3,SNR=17						
NOA				LR	LR	14 16 34.5	
	comp=Z,115nm,18.1s,baz=105,slow=38						
NRIK	Noril'sk	34.52	20	LR	LR	14 17 55.9	
	comp=Z,123nm,20.9s,baz=216,slow=40						
GTA	Gaotai	34.59	76	eP	P	14 01 31.0	+3.5
GTA				pP	pP	14 01 35.3	-1.3
GTA				sP	sP	14 01 38.3	-2.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KEST	Kesra	35.75	278	P	P	14 01 39.3	+1.9
	comp=Z,2.4nm,0.8s,baz=226,slow=3.8,SNR=4.0						
SONM	Songino Array	37.69	60	P	P	14 01 56.4	+2.4
	comp=Z,0.5nm,0.4s,baz=287,slow=9.3,SNR=4.5						
SONM				PcP	PcP	14 04 11.4	+0.7
	comp=Z,0.4nm,0.4s,baz=267,slow=3.0,SNR=4.3						
ULN	Ulaanbaatar	38.12	60	eP	P	14 01 58.2	+0.6
	comp=Z,7.4nm,0.9s						
ULN	Ulaanbaatar	38.12	60	⇑eP	P	14 02 00.0	+2.4
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
EKA	Eskdalemuir Ar	40.82	312	P	P	14 02 20.6	+0.8
EKA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
EKA	Eskdalemuir Ar	40.82	312	P	P	14 02 20.6	+0.8
	comp=Z,7.7nm,0.5s,baz=102,slow=9.3,SNR=36						
SPITS	Spitsbergen Ar	41.69	349	P	P	14 02 28.9	+2.2
	comp=Z,9.5nm,1.0s,baz=134,slow=12,SNR=6.1						
SPITS				pP	sP	14 02 38.5	-1.2
	comp=Z,13nm,1.0s,baz=134,slow=12,SNR=2.4						
KMI	Kunming	42.65	95	P	P	14 02 34.5	-0.9
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC	Hu-ho-hao-te	42.83	69	eP	P	14 02 36.3	-0.2
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,6.0s						
CMAR	Chiang Mai Arr	43.59	106	P	P	14 02 43.8	+0.9
	comp=Z,1.1nm,0.7s,baz=304,slow=7.8,SNR=10						
CM01	Chiang Mai Arr	43.63	106	eP	P	14 02 42.9	-0.2
ES19	SONSECA Array	44.32	290	eP	P	14 02 46.8	-1.7
ES19				epP	pP	14 02 57.3	-0.5
ESDC	Sonseca Array	44.38	290	P	P	14 02 49.1	+0.1
	comp=Z,1.5nm,0.6s,baz=70,slow=8.1,SNR=12						
ESDC				pP	pP	14 02 58.5	+0.1
	comp=Z,1.6nm,0.4s,baz=60,slow=8.2,SNR=8.8						
CN2	Changchun	51.56	61	eP	P	14 03 46.3	+1.9
TOA0	Torodi Ar. Sit	53.33	256	eP	P	14 03 55.8	-2.1
TORD	Torodi Ar. Bea	53.33	256	P	P	14 03 56.9	-0.9
	comp=Z,1.7nm,1.0s,baz=38,slow=5.9,SNR=5.7						
TORD				pP	pP	14 04 06.5	-1.1
	comp=Z,0.6nm,0.5s,baz=32,slow=6.6,SNR=2.1						
KLR	Kul'dur	53.67	52	P	P	14 04 01.4	+1.5
	comp=Z,2.7nm,0.8s,baz=287,slow=8.6,SNR=12						
USRK	Ussuriysk Ar.	55.75	58	P	P	14 04 15.8	+0.7
	comp=Z,2.7nm,0.7s,baz=286,slow=6.7,SNR=8.3						
USRK				LR	LR	14 30 03.8	
	comp=Z,149nm,18.6s,baz=284,slow=38						
KS01	Wonju Array Si	55.83	67	eP	P	14 04 14.6	-1.2
KSAR	Wonju Array Be	55.84	67	P	P	14 04 17.4	+1.7
KSAR	Wonju Array Be	55.84	67	P	P	14 04 17.5	+1.7
KSRS	Korea Array	55.86	67	P	P	14 04 17.4	+1.5
	comp=Z,2.5nm,0.7s,baz=278,slow=6.2,SNR=12						
SEY	Seymchan	58.86	32	⇓eP	P	14 04 39.0	+2.3
MA2	Magadan	59.69	36	⇓eP	P	14 04 44.4	+1.9
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	Bilibino	61.22	24	eP	P	14 04 53.3	+0.5
	comp=Z,4.4nm,1.1s						
BILL	Bilibino	61.22	24	eP	P	14 04 55.0	+2.2
BILL				e		14 05 09.7	
BILL				e		14 05 38.2	
BILL				e		14 07 06.1	
BILL				i PPP	PPP	14 08 37.5	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MJAR	Matsushiro Arr	63.52	63	P	P	14 05 09.7	+1.0
	comp=Z,0.9nm,0.8s,baz=301,slow=9.3,SNR=4.1						
TOLK	Toolik Lake Re	70.55	9	eP	P	14 05 53.8	+1.0
	comp=Z,5.7nm,0.8s						
SCHQ	Schefferville	73.43	329	P	P	14 06 11.6	+1.2
	comp=Z,1.4nm,0.7s,baz=50,slow=7.9,SNR=3.6						
SCHQ				pP	pP	14 06 21.4	+1.0
	comp=Z,4.4nm,0.8s,baz=37,slow=6.1,SNR=4.4						
COLA	College	74.35	10	⇓eP	P	14 06 16.8	+1.3
ILAR	Eielson Array	74.57	9	P	P	14 06 17.8	+0.9
	comp=Z,1.5nm,0.8s,baz=336,slow=4.1,SNR=14						
ILAR				pP	pP	14 06 28.1	+1.3
	comp=Z,0.9nm,0.7s,baz=336,slow=4.2,SNR=6.4						
CAST	Castle Rocks	75.11	12	eP	P	14 06 21.5	+1.5
	comp=Z,11nm,0.9s						
YKA	Yellowknife Ar	77.85	355	P	P	14 06 36.2	+0.8
	comp=Z,1.4nm,0.8s,baz=6.6,slow=6.2,SNR=42						
YKA				pP	PcP	14 06 46.3	+1.1
	comp=Z,2.2nm,0.7s,baz=5.1,slow=5.5,SNR=27						
YKA				LR	LR	14 46 29.0	
	comp=Z,7.2nm,18.1s,baz=72,slow=40						
YKB5	Yellowknife Ar	77.85	355	eP	P	14 06 35.4	-0.1
YKB5				epP	PcP	14 06 45.8	+0.5
FCC	Fort Churchill	78.56	344	eP	P	14 06 39.8	+0.4
FCC				epP	pP	14 06 50.8	+1.3
FCC	Fort Churchill	78.56	344	eP	P	14 06 39.8	+0.4
FCC				e*PP	pP	14 06 50.8	+1.3
FFC	Flin Flon	83.89	347	eP	P	14 07 07.7	-0.2
FFC				epP	pP	14 07 18.0	+0.1
FFC	Flin Flon	83.89	347	eP	P	14 07 07.7	-0.2
FFC				e*PP	pP	14 07 18.0	+0.1
ULM	Lac du Bonnet	86.81	342	P	pP	14 07 33.0	+0.4
ULM	Lac du Bonnet	86.81	342	pP	pP	14 07 33.0	+0.4
	comp=Z,3.6nm,1.0s,baz=8.1,slow=7.1,SNR=3.9						
WRA	Warramunga Arr	94.93	112	P	P	14 08 00.5	-0.3
	comp=Z,0.9nm,0.8s,baz=322,slow=4.0,SNR=7.4						

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*NIED **26** 13:55:00, 39°.80N×143°.50E, h23^{km}, Mw3.7 Best double couple: M$_0$4.14000×10^{14} NP1:φ$_s$211.00000°, δ28.00000°, λ94.00000°. NP2:φ$_s$27.00000°, δ62.00000°, λ88.00000°.*

*IDC **26** 13:55:13.8±2.4, 39°.72N×143°.70E, h0^{km}, mb3.6/3, mb1 3.6/5, mb1mx3.4/59, mbtmp3.5/5, ML3.0/2, MS2.6/2, Ms1 2.6/2, ms1mx2.4/48, Error ellipse: s-maj=58.9km s-min=27.0km az=82.0*

*ISCJB **26** 13:55:15.0±2.0, 39°.75N±0°.05×143°.56E±0°.09, h16^{km}±13^{km}, mb3.5/3, Error ellipse: s-maj=13.1km s-min=5.8km az=33.5*

*JMA **26** 13:55:15.7±0.2, 39°.77N×143°.54E, h24^{km}, M3.8*

ISC 26 13:55:14.6±2.2**, 39°.81N**±0°.06×**143°.48E**±0°.07**, h2**^{km}±12^{km}**, n25, σ1^s.42**/26**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.25	277	P	Pg	13 55 38.4	-0.1
JTH				eS	Sb	13 55 55.5	+0.1
MIYJ	Miyakonagasawa	1.30	260	P	Pg	13 55 39.4	-0.1
MIYJ				eS	Sg	13 55 56.5	+0.1
JKEN	Kujiedanarisaw	1.42	287	P	Pn	13 55 40.9	-0.4
JKEN				S	Sb	13 55 59.5	-0.7
JANG	Nango	1.61	291	P	Pn	13 55 43.7	-0.3
JOM	Ohasama	1.72	260	P	Pn	13 55 46.0	+0.5
JOM				eS	Sn	13 56 08.1	0.0
JMK	Ichinoseki	1.95	245	P	Pn	13 55 48.4	-0.2
JMK				S	Sn	13 56 13.1	-0.5
JOT	Ohata	2.43	311	P	Pn	13 55 56.3	+1.1
JNBK	Urakawa-nobuka	2.53	348	P	Pn	13 55 58.6	+2.0
JNBK				S	Sn	13 56 29.5	+1.4
JYK	Kaneyama	2.58	251	P	Pn	13 55 57.8	+0.5
JKB	Kayabe	2.79	319	P	Pn	13 56 01.7	+1.6
JCH	Churui	2.81	358	P	Pn	13 56 01.4	+1.0
JCH				eS	Sn	13 56 33.9	-0.9
JAK	Akkeshi	3.32	16	P	Pn	13 56 07.9	+0.5
JAK				eS	Sn	13 56 46.7	-0.7
ASAJ	Asahikawa	4.36	352	Pn	Pn	13 56 23.8	+2.1
	0.9nm,0.3s,baz=206,slow=17,SNR=14						
ASAJ				Sn	Sb	13 57 20.1	-4.8
	1.1nm,0.3s,baz=254,slow=18,SNR=3.6						
MJAR	Matsushiro Arr	5.28	234	Pn	Pn	13 56 35.5	+1.1
	0.2nm,0.3s,baz=43,slow=12,SNR=11						
KSRS	Korea Array	12.39	264	LR	LR	14 02 30.4	
	comp=Z,95nm,18.9s,baz=254,slow=35						
JCJ	Chichijima	12.72	185	LR	LR	14 06 10.4	
	comp=Z,7.6nm,19.4s,baz=130,slow=52						
SONM	Songino Array	27.72	299	P	P	14 01 05.7	+1.4
	0.5nm,0.5s,baz=93,slow=8.7,SNR=5.4						
H11N2	WAKE ISLAND Hy	28.37	128	T	T	14 30 48.4	
	baz=334,slow=76						
H11N1	WAKE ISLAND Hy	28.38	128	T	T	14 30 45.4	
	baz=334,slow=76						
H11N3	WAKE ISLAND Hy	28.39	128	T	T	14 30 43.9	
	baz=334,slow=76						
H11S1	WAKE ISLAND Hy	29.19	130	T	T	14 31 53.5	
	baz=321						
H11S3	WAKE ISLAND Hy	29.20	130	T	T	14 31 50.6	
	baz=321						
H11S2	WAKE ISLAND Hy	29.21	130	T	T	14 31 53.9	
	baz=321,SNR=3.2						
ZALV	Zalesovo Beam	41.31	310	P	P	14 03 01.8	+0.5
	0.7nm,0.4s,baz=98,slow=8.6,SNR=2.9						
WRA	Warramunga Arr	60.05	190	P	P	14 05 22.1	-0.8
	0.2nm,0.5s,baz=7.7,slow=6.9,SNR=4.6						

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*ISCJB **26** 14:02:57.8±0.6, 13°.48N±0°.05×120°.8E±0°.1, h141^{km}±7^{km}, mb3.2/5, Error ellipse: s-maj=16.9km s-min=8.6km az=4.4*

*IDC **26** 14:02:57.6±1.0, 13°.45N×120°.83E, h125^{km}±11^{km}, mb3.1/5, mb1 3.2/5, mb1mx3.0/63, mbtmp3.4/5, MS3.3/1, Ms1 3.3/1, ms1mx2.6/10, Error ellipse: s-maj=44.2km s-min=16.0km az=61.0*

*MAN **26** 14:02:58.4, 13°.52N×120°.75E, h125^{km}, MS3.0*

ISC 26 14:02:58.6±0.9**, 13°.51N**±0°.05×**120°.8E**±0°.1**, h131**^{km}±9^{km}**, n14, σ0^s.73**/18**, mb3.3**/5**, 1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.61	16	P	Pn	14 03 17.8	-0.8
	305nm,0.3s,baz=236,slow=1.9,SNR=23						
BOAC	Boac	1.05	93	eP	Pn	14 03 22.1	0.0
BOAC				eS	Sn	14 03 40.3	+0.4
SJMP	San Jose	1.10	162	eP	Pn	14 03 22.9	+0.3
SJMP				eS	Sn	14 03 40.5	-0.2
POLP	Polilio Island	1.67	43	eP	Pn	14 03 29.0	+0.4
POLP				eS	Sn	14 03 52.6	+1.0
OTRP	Odiongan	1.67	133	eP	Pn	14 03 29.2	+0.5
OTRP				eS	Sn	14 03 51.1	-0.6
GQP	Guinayangan	1.68	76	⇓iP	Pn	14 03 29.0	+0.2
GQP				eS	Sn	14 03 52.5	+0.6
BALP	Baler	2.35	19	eP	Pn	14 03 37.0	+0.1
CUYO	Cuyo Island	2.65	175	eP	Pn	14 03 41.9	+1.0
CMAR	Chiang Mai Arr	21.54	286	P	P	14 07 38.5	+0.9
	1.1nm,0.7s,baz=92,slow=8.0,SNR=10						
BRDH	Bariadhala	29.10	292	LR	LR	14 20 17.6	
	comp=Z,60nm,20.6s,baz=310,slow=36						
WRA	Warramunga Arr	35.83	158	P	P	14 09 44.4	-1.3
	0.4nm,0.7s,baz=325,slow=12,SNR=7.1						
SONM	Songino Array	36.26	344	P	P	14 09 49.0	-0.1
	0.2nm,0.4s,baz=152,slow=6.5,SNR=2.6						
ASAR	Alice Springs	39.12	161	P	P	14 10 12.4	-0.9
	0.2nm,0.2s,baz=338,slow=8.2,SNR=8.7						
MKAR	Makanchi Array	46.22	324	P	P	14 11 10.8	+0.3
	0.2nm,0.3s,baz=117,slow=8.2,SNR=12						

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*MOS **26** 14:05:59.8±1.0, 6°.88S×107°.37E, h111^{km}, mb5.1/52, Error ellipse: s-maj=9.6km s-min=5.8km az=104.9*

*DJA **26** 14:06:01.9±0.2, 7°S±3°×10°7E±°, h145^{km}±2^{km}, M5.1/58, mB5.6/43, mb5.4/58, MLv5.5/28, Mw(mB)5.1/43*

*ISCJB **26** 14:06:03.6±0.2, 7°.04S±0°.03×107°.25E±0°.02, h152^{km}±2^{km}, mb4.8/109, Error ellipse: s-maj=5.3km s-min=2.9km az=32.9*

*KLM **26** 14:06:03.3, 7°.53S×107°.07E, h189^{km}, mb5.0*

*IDC **26** 14:06:03.2±1.2, 6°.92S×107°.34E, h129^{km}±10^{km}, mb4.4/36, mb1 4.5/38, mb1mx4.4/50, mbtmp4.8/38, MS3.4/6, Ms1 3.4/6, ms1mx3.1/37, Error ellipse: s-maj=12.4km s-min=7.1km az=46.0*

*BJI **26** 14:06:03.0, 7°.00S×107°.20E, h140^{km}, mB5.2/34, mb4.8/52*

*NEIC **26** 14:06:04.6±0.4, 7°.00S×107°.29E, h146^{km}±3^{km}, mb4.9/32, Error ellipse: s-maj=5.6km s-min=3.8km az=45.0*

NEIC Felt [II] at Bandung and Cianjur. Also felt at Palmerah.

*GCMT **26** 14:06:04.6±0.3, 7°.31S±0°.02×107°.28E±0°.02, h144^{km}±2^{km}, MW5.0/85, Moment Tensor Solution. s40,c50; s85,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.83±.13; M$_{\theta\theta}$-2.54±.14; M$_{\phi\phi}$1.70±.15; M$_{r\theta}$2.44±.09; M$_{\theta\phi}$-1.11±.12; M$_{\phi r}$-2.69±.10; Best double couple: M$_0$4.32600×10^{16} NP1:φ$_s$122.00000°, δ83.00000°, λ125.00000°. NP2: φ$_s$222.00000°, δ36.00000°, λ12.00000°. Principal axes: T 4.8150, Plg41.0000°, Azm65.0000°; N -0.9850, Plg35.0000°, Azm297.0000°; P -3.8370, Plg29.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 14:06:04.4±0.4**, 7°.10S**±0°.04×**107°.25E**±0°.04**, h146**^{km}±2^{km}**, h146**^{km}**:pP-P, n711, σ1^s.20**/706**, mb4.9**/110**, 37C-10D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	Sukabumi	0.69	277	P	Pn	14 06 25.2	-1.2
SKJI				S	Sn	14 06 40.6	-2.5
CISI	Cisompet, Garu	0.73	129	ePn	Pn	14 06 25.4	-1.4
CISI				eSn	Sn	14 06 41.1	-2.6
CISI	Cisompet, Garu	0.73	129	P	Pn	14 06 25.2	-1.5
CISI				S	Sn	14 06 40.6	-3.1
DBJI	Dramaga	0.73	318	P	Pn	14 06 25.4	-1.3
DBJI				S	Sn	14 06 44.5	+0.9
TNG	Tangerang	1.09	327	P	Pn	14 06 30.3	+0.7
JCJI	Jatiwangi	1.18	59	P	Pn	14 06 29.6	-0.8
JCJI				S	Sn	14 06 49.5	-0.8
CMJI	Cimerak	1.38	120	P	Pn	14 06 30.9	-1.4
CMJI				S	Sn	14 06 50.5	-3.2
KPJI	Karang Pucung	1.69	98	P	Pn	14 06 35.7	0.0
BLSI	Bandar Lampung	2.63	311	P	Pn	14 06 47.6	+0.7
KASI	Kota Agung	3.15	300	P	Pn	14 06 53.8	+0.3
SMRI	Semarang	3.17	89	ePn	Pn	14 06 55.1	+1.3
SMRI	Semarang	3.17	89	P	Pn	14 06 55.1	+1.3
KLI	Kotabumi	3.25	313	P	Pn	14 06 55.9	+1.1
UGM	Wanagama	3.35	104	ePn	Pn	14 06 56.1	0.0
UGM	Wanagama	3.35	104	P	Pn	14 06 55.9	-0.2
UGM				S	Sn	14 07 34.6	-1.6
XMIS	Christmas Isla	3.71	205	ePn	Pn	14 06 55.7	-5.1
XMIS				eSn	Sn	14 07 30.9	-14
WOJI	Wonogiri, Jawa	3.72	102	P	Pn	14 07 01.0	+0.1
LWLI	Liwa	3.78	303	P	Pn	14 07 02.2	+0.4
MDSI	Maura Dua	4.00	310	P	Pn	14 07 05.3	+0.7

PCJI	Pacitan	4.05	106	P	Pn	14 07 04.4	-0.8
NGJI	Ngawi	4.19	94	P	Pn	14 07 08.4	+1.3
TPI	Tanjungpandan	4.33	5	P	Pn	14 07 09.9	+1.0
TBJI	Tambak Boyo	4.58	87	P	Pn	14 07 14.1	+1.9
PWJI	Pagerwojo	4.61	102	P	Pn	14 07 12.3	-0.3
PMBI	Palembang	4.82	329	P	Pn	14 07 16.0	+0.6
LHSI	Lahat	4.93	311	P	Pn	14 07 17.5	+0.7
	313nm,0.9s,4µm1.4nm						
PPBI	Pangkal Pinang	5.03	347	P	Pn	14 07 19.9	+1.8
	259nm,1.5s,4µm1.3nm						
MNAI	Manna	5.06	302	ePn	Pn	14 07 18.8	+0.3
MNAI	Manna	5.06	302	P	Pn	14 07 18.3	-0.3
GRJI	Gresik	5.20	88	P	Pn	14 07 22.3	+1.9
	2µm,0.7s,19µm8.0nm						
BWJI	Bawean	5.52	77	P	Pn	14 07 27.2	+2.5
	201nm,1.4s,8µm1.4nm						
MASI	Maura Aman, Be	6.35	308	P	Pn	14 07 36.2	+0.4
	2µm,0.8s,14µm5.6nm						
KMMI	Kalianget	6.67	90	P	Pn	14 07 40.5	+0.4
	418nm,1.0s,3µm1.3nm						
JAGI	Jajag, Banyuwa	6.98	102	ePn	Pn	14 07 44.0	-0.2
JAGI	Jajag, Banyuwa	6.98	102	P	Pn	14 07 44.5	+0.3
	1µm,0.7s,21µm5.0nm						
KRJI	Kerinci	7.61	311	P	Pn	14 07 52.2	-0.5
	615nm,0.7s,6µm2.0nm						
SRBI	Singaraja	7.96	98	P	Pn	14 07 56.6	-0.7
	587nm,0.8s,5µm						
DNP	Denpasar	8.05	102	P	Pn	14 07 56.5	-1.9
	2µm,0.5s,38µm						
PPSI	Pulau Pagai	8.39	300	P	Pn	14 08 01.2	-1.9
	764nm,0.8s,8µm						
KSM	Kuching	9.04	20	ePn	Pn	14 08 12.7	+0.8
KSM	Kuching	9.04	20	P	Pn	14 08 14.2	+2.4
PDSI	Padang	9.14	312	P	Pn	14 08 10.3	-2.8
MYKOM	Kota Tinggi	9.46	339	P	Pn	14 08 24.1	+6.8
PPI	Padang Panjang	9.49	314	P	Pn	14 08 15.5	-2.3
	91nm,0.7s,2µm						
BKNI	Bangkinang	9.63	320	ePn	Pn	14 08 18.0	-1.6
BKNI	Bangkinang	9.63	320	P	Pn	14 08 19.4	-0.2
	161nm,0.6s,3µm						
KBKI	Kotabaru	9.65	67	P	Pn	14 08 22.0	+2.1
	46nm,0.9s,3µm						
MTKI	Muara Teweh, K	9.78	52	P	Pn	14 08 24.8	+3.2
	52nm,0.8s,3µm						
SISI	Saibi	9.95	305	P	Pn	14 08 20.3	-3.5
	128nm,0.9s,2µm						
PLAI	Plampang	10.57	100	P	Pn	14 08 29.3	-2.8
	567nm,1.0s,5µm						
SBUM	Sibu	10.70	28	ePn	Pn	14 08 34.7	+0.9
SBUM	Sibu	10.70	28	P	Pn	14 08 38.0	+4.1
MNSI	Mandailing Nat	10.95	315	P	Pn	14 08 33.4	-3.7
	152nm,0.6s,2µm						
SMKI	Samarinda	11.93	57	P	P	14 08 54.3	-2.6
	274nm,1.2s,4µm						
SGKI	Sangatta, Kali	12.22	58	P	P	14 09 11.8	+12
GSI	Gunungsitoli	12.76	310	ePn	Pn	14 08 55.5	-5.1
GSI	Gunungsitoli	12.76	310	P	Pn	14 08 56.1	-4.6
	112nm,0.7s						
SPSI	Sidrap Palu	12.85	77	P	Pn	14 09 02.4	+0.6
	94nm,0.9s,1µm						
PSI	Prapat	12.87	320	ePn	Pn	14 08 57.5	-4.7
PSI	Prapat	12.87	320	P	Pn	14 08 58.0	-4.3
PSI				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PSI	Prapat	12.87	320	P	Pn	14 08 58.0	-4.3
	comp=Z,2.7nm,0.3s,baz=179,slow=8.3,SNR=7.5						
BKSI	Bulukumba	12.92	83	P	Pn	14 09 03.9	+1.1
	comp=Z,175nm,1.1s,comp=Z,1µm						
BNSI	Bone	13.07	79	P	P	14 09 07.3	-2.3
	comp=Z,286nm,0.9s,comp=Z,3µm						
TTSI	Tana Toraja	13.15	73	P	Pn	14 09 07.4	+1.6
	comp=Z,111nm,0.9s						
WSI	Waingapu	13.16	102	P	Pn	14 09 01.8	-4.1
	comp=Z,1µm,0.6s,comp=Z,15µm						
KULM	Kulim	13.95	332	ePn	Pn	14 09 14.7	-1.3
KULM	Kulim	13.95	332	P	Pn	14 09 15.0	-1.0
PCI	Palu	13.98	64	P	P	14 09 18.4	-1.3
	comp=Z,312nm,1.3s,comp=Z,5µm						
KCSI	Kotacane, Aceh	14.16	318	P	Pn	14 09 14.3	-4.4
	comp=Z,23nm,0.7s						
EDFI	Ende, Flores	14.40	98	P	Pn	14 09 16.4	-5.3
	comp=Z,335nm,0.8s,comp=Z,3µm						
MPSI	Mapaga	14.62	60	P	P	14 09 27.2	+0.4
	comp=Z,273nm,1.1s,comp=Z,2µm						
MMRI	Maumere	14.93	97	ePn	Pn	14 09 24.5	-3.7
	comp=Z,488nm,0.8s						
MMRI	Maumere	14.93	97	P	Pn	14 09 24.8	-3.5
	comp=Z,708nm,0.9s,comp=Z,6µm						
BBSI	Bau Bau	15.32	85	P	P	14 09 35.3	+0.8
	comp=Z,101nm,0.9s,comp=Z,929nm						
TSM	Tawau	15.51	43	P	P	14 09 40.2	+3.6
KDI	Kendari	15.62	79	P	P	14 09 37.7	-0.1
	comp=Z,405nm,1.2s,comp=Z,4µm						
KKM	Kota Kinabalu	15.83	35	ePn	Pn	14 09 39.6	+0.2
	comp=Z,180nm,1.1s						
KKM	Kota Kinabalu	15.83	35	P	P	14 09 41.3	+1.0
LHMI	Lhok Sumawe	15.98	320	ePn	Pn	14 09 36.8	-4.5
	comp=Z,84nm,1.1s						
SDKM	Sandakan	16.08	38	P	P	14 09 44.3	+1.3
MRSI	Marisa	16.48	63	P	P	14 09 48.2	+0.9
	comp=Z,113nm,0.7s,comp=Z,1µm						
BATI	Baumata	16.52	102	P	P	14 09 44.8	-3.1
	comp=Z,183nm,0.7s,comp=Z,3µm						
BATI	Baumata	16.52	102	P	P	14 09 45.5	-2.4
	comp=Z,31nm,0.3s,baz=286,slow=6.2,SNR=19						
BATI				S	S	14 12 38.4	-14
	comp=Z,17nm,0.3s,baz=217,slow=20,SNR=6.3						
LUWI	Luwuk	16.61	69	eP	Pn	14 09 50.1	+1.2
	comp=Z,469nm,1.0s						
LUWI	Luwuk	16.61	69	P	Pn	14 09 50.1	+1.2
	comp=Z,516nm,1.2s,comp=Z,6µm						
GIRL	Giralia	16.86	157	P	Pn	14 09 53.6	+1.7
	baz=17,SNR=8.3						
KDM	Kudat	16.89	35	P	Pn	14 09 54.6	+2.4
SOEI	Soe	17.04	100	eP	P	14 09 50.6	-3.1
	comp=Z,459nm,0.8s						
SOEI	Soe	17.04	100	P	P	14 09 50.8	-2.9
	comp=Z,627nm,0.8s,comp=Z,5µm						
KMSI	Cibinong	18.35	66	P	P	14 10 07.8	-0.1
	comp=Z,268nm,1.0s,comp=Z,3µm						
SANI	Sanana	19.34	76	P	P	14 10 17.5	-1.2
	comp=Z,254nm,1.1s,comp=Z,2µm						
NLAI	Namlea	20.14	80	P	P	14 10 28.6	+1.3
	comp=Z,156nm,0.6s,comp=Z,2µm						
FITZ	Fitzroy Crossi	21.00	123	P	P	14 10 36.9	+0.5
	baz=21,SNR=24						
FITZ	Fitzroy Crossi	21.00	123	eP	P	14 10 36.4	0.0
	comp=Z,59nm,1.0s						
FITZ				S	S	14 14 24.5	+2.3
FITZ	Fitzroy Crossi	21.00	123	P	P	14 10 36.7	+0.3
	comp=Z,29nm,0.7s,baz=298,slow=5.1,SNR=32						
FITZ				S	S	14 14 24.5	+2.3
	comp=Z,16nm,0.6s,baz=149,slow=18,SNR=6.2						
TNTI	Ternate	21.54	70	eP	P	14 10 41.8	-0.5
	comp=Z,616nm,1.1s						
TNTI	Ternate	21.54	70	P	P	14 10 41.2	-1.1
	comp=Z,584nm,1.1s,comp=Z,5µm						
MEEK	Meekatharra	22.24	152	P	P	14 10 50.7	+1.3
	baz=22,SNR=10						
KNRA	Kununurra	22.73	114	P	P	14 10 54.0	-0.2
	baz=23,SNR=48						
DAV	Davao City (W)	23.08	53	P	P	14 10 58.7	+1.4
	comp=Z,202nm,0.4s,baz=128,slow=2.1,SNR=12						
MORW	Morawa	23.38	160	P	P	14 11 00.6	+0.6
	baz=24,SNR=4.0						
MTN	Manton Dam	24.20	106	P	P	14 11 07.2	-0.4
	baz=24,SNR=78						
MTN	Manton Dam	24.20	106	eP	P	14 11 07.0	-0.6
	comp=Z,91nm,1.0s						
SWI	Sorong	24.73	77	P	P	14 11 12.2	-0.3
	comp=Z,249nm,0.8s,comp=Z,2µm						
FAKI	Fak Fak	25.25	82	eP	P	14 11 16.4	-0.7
	comp=Z,123nm,1.1s						
FAKI	Fak Fak	25.25	82	P	P	14 11 15.6	-1.6
	comp=Z,104nm,1.0s						
KDU	Kakadu	25.45	105	P	P	14 11 18.5	-0.5
	baz=26,SNR=17						
QIZ	Qiongzhong	26.09	6	P	P	14 11 26.3	+1.7
QIZ				pP	pP	14 11 54.3	-0.9
QIZ				S	S	14 15 50.0	+4.8
QIZ				LR	LR		
	comp=Z,160nm,12.2s						
MUN	Mundaring	26.13	163	P	P	14 11 25.3	+0.4
	baz=26,SNR=3.7						
KLBR	Kellerberrin	26.27	159	P	P	14 11 26.5	+0.3
	baz=27,SNR=7.6						
CM01	Chiang Mai Arr	26.64	342	eP	P	14 11 26.9	-2.7
CMAR	Chiang Mai Arr	26.68	342	P	P	14 11 28.9	-1.1
	comp=Z,0.6nm,0.3s,baz=177,slow=8.3,SNR=9.8						
CMAR				pP	pP	14 12 00.7	0.0
	comp=Z,5.5nm,0.8s,baz=174,slow=8.7,SNR=6.8						
CMAR				ScP	ScP	14 18 19.0	+2.3
	comp=Z,5.0nm,1.1s,baz=206,slow=3.2,SNR=13						
WRKA	Warakurna	26.90	134	P	P	14 11 32.2	+0.3
	baz=27,SNR=12						
NWAO	Narrogin (SRO)	27.33	161	P	P	14 11 35.7	+0.1
	comp=Z,15nm,0.9s,baz=226,slow=10.0,SNR=5.7						
RKPI	Ransiki, Papua	27.41	80	P	P	14 11 35.5	-1.1
	comp=Z,101nm,0.8s						
H01W3	Cape Leeuwin H	28.37	168	T	T	14 41 36.4	
	baz=347,slow=76,SNR=7.8						
H01W1	Cape Leeuwin H	28.39	168	T	T	14 41 56.7	
	baz=347,slow=76,SNR=4.8						
H01W2	Cape Leeuwin H	28.39	168	T	T	14 41 54.1	
	baz=347,slow=76,SNR=6.6						
WRA	Warramunga Arr	29.21	119	P	P	14 11 52.6	0.0
	comp=Z,48nm,0.8s,baz=288,slow=12,SNR=196						
WRA				S	S	14 16 33.2	-1.4
	comp=Z,3.9nm,0.9s,baz=304,slow=14,SNR=4.2						
WRAB	Tennant Creek	29.22	119	eP	P	14 11 52.1	-0.5
	comp=Z,82nm,1.0s						
WRAB	Tennant Creek	29.22	119	ceP	P	14 11 53.1	+0.5
WRAB				pmax	pmax		
	comp=Z,88nm,1.0s						
WB2	Warramunga Arr	29.23	119	eP	P	14 11 52.7	0.0
AS13	Alice Springs	30.42	126	P	P	14 12 04.0	+0.7
	baz=31						
ASAR	Alice Springs	30.43	126	P	P	14 12 03.8	+0.4
	comp=Z,25nm,0.8s,baz=300,slow=8.5,SNR=155						
ASAR				S	S	14 16 52.8	-1.0
	comp=Z,11nm,0.8s,baz=289,slow=14,SNR=14						
AS31	Alice Springs	30.44	126	eP	P	14 12 03.5	+0.2
	comp=Z,8.4nm,0.8s						
AS01	Alice Springs	30.47	126	eP	P	14 12 03.3	-0.4
KMI	Kunming	32.32	352	P	P	14 12 23.3	+3.3
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
TPUB	Ta-pu	32.92	23	eP	P	14 12 25.6	+0.6
	comp=Z,43nm,1.3s						
GENI	Genyem	33.10	84	P	P	14 12 26.3	-0.4
	comp=Z,86nm,1.2s						
YULB	Yu-li	33.27	24	eP	P	14 12 27.2	-0.9
	comp=Z,32nm,1.2s						
GYA	Guiyang	33.36	359	P	P	14 12 31.8	+2.9
GYA				pP	pP	14 13 02.8	+2.6
GYA				sP	sP	14 13 19.5	+2.5
GYA				PP	PP	14 13 49.8	+2.3
GYA				S	S	14 17 43.0	+3.8
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
SSLB	Suanglung	33.49	23	eP	P	14 12 29.9	0.0
	comp=Z,41nm,0.9s						
QIS	Mount Isa	34.06	116	P	P	14 12 35.7	+0.6
	baz=34,SNR=25						
YHNB	Yeheng	34.45	23	eP	P	14 12 38.4	+0.1
	comp=Z,20nm,0.9s						
H08S2	Diego Garcia H	34.46	267	T	T	14 48 29.5	
	baz=91,slow=76,SNR=23						
H08S3	Diego Garcia H	34.47	267	T	T	14 48 40.9	
	baz=91,slow=76,SNR=16						
H08S1	Diego Carcia H	34.48	267	T	T	14 48 32.8	
	baz=91,slow=76,SNR=8.9						
YOJ	Yonaguni jima	34.93	26	P	P	14 12 42.9	+0.6
YOJ				pmax	pmax		
	comp=Z,91nm,0.9s						
COEN	Coen	35.94	104	P	P	14 12 51.0	-0.2
	baz=36,SNR=56						
COEN	Coen	35.94	104	eP	P	14 12 50.7	-0.5
	comp=Z,76nm,0.9s						
H08N1	Diego Carcia H	35.98	269	T	T	14 50 49.4	
	baz=332,slow=71,SNR=4.7						
H08N2	Diego Garcia H	36.00	269	T	T	14 50 53.7	
	baz=332,slow=71,SNR=5.9						
H08N3	Diego Garcia H	36.01	269	T	T	14 50 51.5	
	baz=332,slow=71,SNR=5.3						
BBOO	Buckleboo	37.02	138	P	P	14 13 00.4	+0.3
	baz=37,SNR=9.7						
MTSU	Mount Surprise	37.72	110	P	P	14 13 07.3	+1.0
	baz=38,SNR=32						
CD2	Chengdu	37.94	355	P	P	14 13 09.5	+1.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,4.8s						
ODAN	Odare	38.86	331	eP	P	14 13 14.3	-1.5
	comp=Z,11nm,0.5s						
RAMN	Ramite	39.31	330	eP	P	14 13 18.5	-1.1
	comp=Z,3.2nm,0.3s						
HTT	Hallett	39.32	136	P	P	14 13 20.5	+1.1
	baz=40,SNR=11						
CTA	Charters Tower	39.94	113	P	P	14 13 25.5	+0.7
	comp=Z,37nm,0.9s,baz=282,slow=12,SNR=28						
CTAO	Charters Tower	39.94	113	P	P	14 13 25.4	+0.7
CTAO				pmax	pmax		
	comp=Z,57nm,1.1s						
JIRN	Jiri	40.11	330	eP	P	14 13 24.7	-1.6
	comp=Z,13nm,0.4s						
STKA	Stephens Creek	40.40	132	P	P	14 13 29.6	+1.3
	baz=41,SNR=20						
STKA	Stephens Creek	40.40	132	eP	P	14 13 29.0	+0.8
	comp=Z,7.5nm,0.5s						
STKA				S	S	14 19 25.1	-0.6
STKA	Stephens Creek	40.40	132	P	P	14 13 29.6	+1.3
	comp=Z,28nm,0.8s,baz=301,slow=9.0,SNR=54						
STKA				S	S	14 19 25.1	-0.6
	comp=Z,7.0nm,1.0s,baz=162,slow=20,SNR=6.5						
STKA				LR	LR	14 32 55.1	
	comp=Z,53nm,18.1s,baz=17,slow=40						
NJ2	Nanjing	40.47	15	eP	P	14 13 30.3	+1.5
NJ2				pmax	pmax		
	comp=Z,22nm,1.1s						
XAN	Xi'an	40.94	2	P	P	14 13 34.0	+1.3
XAN				pP	pP	14 14 05.5	+0.6
XAN				PP	PnPn	14 15 14.8	-1.1
XAN				PcP	PcP	14 15 30.3	0.0
XAN				S	S	14 19 33.5	-0.2
XAN				ScS	ScS	14 23 21.3	-0.8
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
XAN				pmax	pmax		
	comp=Z,200nm,4.7s						
XAN	Xi'an	40.94	2	eP	P	14 13 31.5	-1.2
	comp=Z,23nm,1.3s						
XAN	Xi'an	40.94	2	eP	P	14 13 31.5	-1.2
XAN				pmax	pmax		
	comp=Z,23nm,1.3s						
KOLN	Koldanda	41.52	328	eP	P	14 13 36.4	-1.3
DANN	Dangsing	41.90	328	eP	P	14 13 39.2	-1.7
PYUN	Piuthan	42.11	327	eP	P	14 13 41.0	-1.5
LZH	Lanzhou	43.07	356	eP	P	14 13 52.3	+2.2
LZH				pP	pP	14 14 26.8	+4.2
LZH				sP	sP	14 14 41.5	+2.4
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
ARPS	Mount Arapiles	43.19	138	P	P	14 13 52.6	+1.7
	baz=44,SNR=5.6						
CMSA	Cobar Meteorol	43.32	129	P	P	14 13 53.7	+1.6
	baz=44,SNR=40						
RMQ	Roma	43.91	121	P	P	14 13 58.9	+2.0
	baz=44,SNR=5.7						
TIA	Tai'an	44.07	12	P	P	14 13 58.0	+0.2
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
EIDS	Eidsvold	45.58	119	P	P	14 14 11.6	+1.5
	baz=46						
JNU	Nakatsue	45.87	28	eP	P	14 14 11.6	-0.6
	comp=Z,92nm,1.3s						
YNG	Young	46.57	131	P	P	14 14 19.7	+2.0
	baz=47,SNR=8.5						
GTA	Gaotai	46.78	352	eP	P	14 14 22.8	+3.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TJN	Taejon	47.19	22	ceP	P	14 14 22.5	+0.2
ARMA	Armidale	47.58	125	P	P	14 14 28.6	+2.8
	baz=48,SNR=3.8						
BJT	Baijiatuau	47.60	9	eP	P	14 14 25.8	+0.3
	comp=Z,27nm,0.9s						
BJT				ePcP	PcP	14 15 53.4	+0.5
BJT	Baijiatuau	47.60	9	eP	P	14 14 25.8	+0.3
BJT				e		14 15 53.4	
BJT				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC	Hu-ho-hao-te	47.87	4	eP	P	14 14 29.5	+1.8
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,6.1s						
MGCD	Mangrove Creek	48.18	129	P	P	14 14 32.5	+2.4
	baz=48						
KS15	Wonju Array Si	48.32	22	eP	P	14 14 29.5	-1.6
KSAR	Wonju Array Be	48.32	22	P	P	14 14 31.6	+0.5
KSAR				pP	pP	14 15 05.8	+1.5
KSAR				PcP	PcP	14 15 56.9	+1.3
KSAR	Wonju Array Be	48.32	22	P	P	14 14 31.6	+0.5
KSAR				*PP	pP	14 15 05.8	+1.5
KSAR						14 15 56.9	
KSRS	Korea Array	48.35	22	P	P	14 14 31.6	+0.3
	comp=Z,19nm,0.8s,baz=209,slow=8.9,SNR=68						
KSRS				pP	pP	14 15 05.8	+1.3
	comp=Z,10nm,1.1s,baz=209,slow=9.1,SNR=3.4						
KSRS				PcP	PcP	14 15 56.9	+1.2
	comp=Z,5.4nm,1.0s,baz=193,slow=3.1,SNR=8.1						
KS01	Wonju Array Si	48.36	22	eP	P	14 14 31.4	0.0
KS01				ePcP	PcP	14 15 55.4	-0.3
INU	Inuyama	50.69	32	eP	P	14 14 47.5	-1.5
	comp=Z,22nm,0.9s						
HNR	Honiara	52.17	96	eP	P	14 14 59.3	-1.2
	comp=Z,174nm,0.8s						
HNR	Honiara	52.17	96	P	P	14 14 59.5	-0.9
	comp=Z,154nm,0.7s,baz=130,slow=0.5,SNR=11						
MAJO	Matsushiro	52.22	32	eP	P	14 14 58.2	-2.2
	comp=Z,14nm,0.8s						
MAJO	Matsushiro	52.22	32	c iP	P	14 14 58.3	-2.2
MAJO				pmax	pmax		
	comp=Z,29nm,1.3s						
MAT	Matsushiro	52.22	32	P	P	14 14 58.5	-2.0
MJAR	Matsushiro Arr	52.22	32	P	P	14 14 58.7	-1.8
	comp=Z,19nm,0.7s,baz=214,slow=8.3,SNR=42						
MJAR				PcP	PcP	14 16 10.7	+0.6
	comp=Z,4.5nm,0.9s,baz=203,slow=4.9,SNR=4.2						
MJB9	Matsu-Tunnel	52.22	32	eP	P	14 14 58.1	-2.4
	comp=Z,14nm,0.7s						
CN2	Changchun	53.27	16	⇑iP	P	14 15 07.3	-0.7
CN2				epP	pP	14 15 44.0	+2.2
CN2				eS	S	14 22 26.5	-1.6
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
WMQ	Urumqi	53.68	343	eP	P	14 15 12.8	+1.7
WMQ				LR	LR		
	comp=Z,130nm,27.7s						
WMQ				LR	LR		
	comp=Z,110nm,26.9s						
WMQ				LR	LR		
	comp=Z,100nm,16.1s						
KSH	Kashi	54.66	331	P	P	14 15 20.5	+2.1
KSH				pmax	pmax		
	comp=Z,210nm,6.5s						
SONM	Songino Array	54.70	359	P	P	14 15 18.8	+0.3
	comp=Z,9.4nm,0.8s,baz=176,slow=8.5,SNR=47						
SONM				pP	pP	14 15 54.3	+1.9
	comp=Z,4.6nm,1.0s,baz=183,slow=5.9,SNR=4.1						
SONM				PcP	PcP	14 16 19.3	0.0
	comp=Z,13nm,0.4s,baz=179,slow=4.1,SNR=52						
SONM				ScP	ScP	14 20 04.2	0.0
	comp=Z,4.5nm,0.8s,baz=170,slow=3.8,SNR=17						
SONA1	Songino Array	54.71	359	eP	P	14 15 18.0	-0.5
ULN	Ulaanbaatar	54.72	360	eP	P	14 15 18.3	-0.4
	comp=Z,15nm,0.8s						
ULN	Ulaanbaatar	54.72	360	ceP	P	14 15 19.0	+0.3
ULN				pmax	pmax		
	comp=Z,17nm,0.8s						
VLA	Vladivostok	54.77	22	⇓eP	P	14 15 18.9	+0.1
VLA				pmax	pmax		
	comp=Z,45nm,1.3s						
MDJ	Mudanjiang	55.27	19	P	P	14 15 22.0	-0.5
MDJ				pmax	pmax		
	comp=Z,20nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,260nm,3.9s						
MDJ	Mudanjiang	55.27	19	eP	P	14 15 21.6	-0.9
	comp=Z,22nm,1.1s						
USA0B	Ussuriysk Arra	55.74	21	eP	P	14 15 25.0	-0.8
	comp=Z,25nm,0.9s						
USRK	Ussuriysk Ar.	55.74	21	P	P	14 15 25.3	-0.5
	comp=Z,16nm,0.8s,baz=207,slow=6.4,SNR=33						
HIA	Hailar	57.18	10	eP	P	14 15 33.7	-2.3
	comp=Z,24nm,1.2s						
HIA	Hailar	57.18	10	ceP	P	14 15 35.1	-0.9
HIA				pmax	pmax		
	comp=Z,24nm,1.3s						
GAR	Garm	57.23	326	eP	P	14 15 34.3	-2.4
	comp=Z,9.6nm,1.0s						
GAR	Garm	57.23	326	eP	P	14 15 34.3	-2.4
GAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZAK	Zakamensk	57.34	357	eP	P	14 15 35.9	-1.3
ZAK				e		14 16 11.9	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AAK	Ala-Archa	57.78	332	PcP	PcP	14 16 33.3	+1.7
	comp=Z,6.9nm,0.9s,baz=115,slow=5.4,SNR=11						
MK01	Makanchi Array	58.03	340	eP	P	14 15 40.2	-1.8
MK31	Makanchi Array	58.06	340	eP	P	14 15 40.4	-1.8
MK31	Makanchi Array	58.06	340	eP	P	14 15 40.4	-1.8
MKAR	Makanchi Array	58.06	340	eP	P	14 15 40.5	-1.7
	comp=Z,32nm,0.8s						
MKAR				pP	pP	14 16 16.9	+0.4
MKAR				PcP	sP	14 16 33.6	+1.1
MKAR				ScP	ScP	14 20 19.7	+0.7
MKAR	Makanchi Array	58.06	340	eP	P	14 15 40.5	-1.7
MKAR				*PP	pP	14 16 16.9	+0.4
MKAR						14 16 33.6	
MKAR				pmax	pmax		
	comp=Z,32nm,0.8s						
MKAR	Makanchi Array	58.06	340	P	P	14 15 41.2	-1.0
	comp=Z,1.4nm,0.5s,baz=152,slow=8.3,SNR=35						
MKAR				pP	pP	14 16 16.9	+0.4
	comp=Z,1.7nm,0.6s,baz=134,slow=8.8,SNR=3.0						
MKAR				PcP	sP	14 16 33.6	+1.1
	comp=Z,4.0nm,0.7s,baz=144,slow=5.6,SNR=9.1						
MKAR				ScP	ScP	14 20 19.7	+0.7
	comp=Z,2.6nm,0.9s,baz=147,slow=5.5,SNR=7.6						
MKAR				LR	LR	14 45 14.6	
	comp=Z,25nm,20.2s,baz=148,slow=41						
KNGR	Kungurtug, Tuv	58.08	353	⇓eP	P	14 15 41.7	-0.6
TLY	Talaya	58.62	357	eP	P	14 15 46.3	+0.3
	comp=Z,20nm,1.6s						
TLY	Talaya	58.62	357	eP	P	14 15 47.0	+1.0
TLY				pmax	pmax		
	comp=Z,19nm,1.0s						
MOY	Mondy	58.77	355	eP	P	14 15 47.8	+0.7
MOY				pmax	pmax		
	comp=Z,13nm,1.6s						
ERM	Erimo	58.86	31	⇑eP	P	14 15 47.5	-0.2
ERM				pmax	pmax		
	comp=Z,24nm,0.9s						
DGZ	Jazzator, Alta	59.14	345	d iP	P	14 15 49.7	-0.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OPO	Ambohidratompo	59.42	253	P	P	14 15 53.6	+1.2
	comp=Z,3.1nm,0.6s,baz=236,slow=5.4,SNR=3.5						
KLR	Kul'dur	60.05	18	c iP	P	14 15 54.9	-0.9
YSS	Yuzh-Sakhalins	62.35	27	eP	P	14 16 10.3	-1.0
	comp=Z,122nm,1.0s						
YSS	Yuzh-Sakhalins	62.35	27	⇑iP	P	14 16 10.6	-0.7
YSS				e		14 16 45.4	
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
KURBB	Kurchatov Arra	62.62	340	P	P	14 16 12.5	-0.5
	comp=E,32nm,0.6s,baz=155,slow=5.8,SNR=10						
KURBB				PcP	PcP	14 16 51.3	+0.7
	comp=E,6.4nm,0.7s,baz=155,slow=3.6,SNR=17						
KURBB				ScP	ScP	14 20 39.7	+0.6
	comp=E,2.3nm,0.9s,baz=156,slow=3.5,SNR=7.8						
KURK	Kurchatov	62.67	340	P	P	14 16 12.5	-0.8
KURK				PcP	PcP	14 16 51.3	+0.5
KURK				ScP	ScP	14 20 39.7	+0.4
KURK	Kurchatov	62.67	340	P	P	14 16 12.5	-0.8
KURK						14 16 51.3	
KURK				pmax	pmax		
	comp=Z,32nm,0.6s						
GRNR	Gornyy	62.91	20	eP	P	14 16 14.7	-0.3
GRNR				pmax	pmax		
	comp=Z,23nm,1.0s						

ZEA	Zeya	62.92	13	eP	P	14 16 14.7	-0.2
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
KUR	Kuril'sk	63.55	31	ceP	P	14 16 18.9	-0.3
ZAA0	Zalesovo Array	63.69	345	eP	P	14 16 18.4	-1.6
ZALV	Zalesovo Beam	63.69	345	eP	P	14 16 18.6	-1.4
ZALV				PcP	PcP	14 16 54.3	-0.6
ZALV	Zalesovo Beam	63.69	345	P	P	14 16 19.0	-1.0
	comp=Z,3.4nm,0.3s,baz=152,slow=6.5,SNR=16						
ZALV				PcP	PcP	14 16 54.3	-0.6
	comp=Z,5.4nm,0.9s,baz=161,slow=4.8,SNR=2.7						
ZALV				LR	LR	14 44 58.2	
	comp=Z,35nm,18.2s,baz=76,slow=37						
GEYT	Alibeck	64.00	318	P	P	14 16 22.4	0.0
	comp=Z,1.6nm,0.3s,baz=116,slow=6.8,SNR=8.4						
BOD	Bodaibo	64.93	4	eP	P	14 16 27.4	-0.6
BOD				pmax	pmax		
	comp=Z,19nm,1.3s						
TYV	Tymovskoe	65.31	24	eP	P	14 16 29.9	-0.7
TYV				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BVAR	Borovoye Array	67.55	337	P	P	14 16 44.0	-0.8
	comp=Z,2.1nm,0.5s,baz=143,slow=9.7,SNR=25						
BRVK	Borovoye	67.62	337	eP	P	14 16 44.1	-1.1
	comp=Z,4.3nm,0.9s						
BRVK	Borovoye	67.62	337	⇓eP	P	14 16 45.2	0.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ABKAR	Akbulak array	69.62	329	eP	P	14 16 57.1	-0.6
KMBO	Kilima Mbogo	70.01	271	P	P	14 17 02.7	+1.5
	comp=Z,1.5nm,0.3s,baz=39,slow=10,SNR=6.1						
KMBO				LR	LR	14 44 04.9	
	comp=Z,50nm,18.4s,baz=94,slow=33						
YAK	Yakutsk	71.08	11	eP	P	14 17 05.1	-1.2
YAK				e		14 17 23.4	
YAK				e*PP	pP	14 17 40.3	-1.6
YAK				eS	S	14 26 11.7	+1.1
YAK				e		14 26 44.2	
YAK				pmax	pmax		
	comp=N,87nm,0.9s						
YAK				pmax	pmax		
	comp=E,47nm,1.0s						
YAK				smax	smax		
	comp=N,680nm,4.4s						
YAK				smax	smax		
	comp=E,424nm,4.5s						
SKR	Severo-Kuril's	71.30	30	⇑eP	P	14 17 07.9	0.0
AKTO	Aktyubinsk	71.33	329	P	P	14 17 08.2	+0.1
	comp=E,1.2nm,0.3s,baz=145,slow=4.7,SNR=6.5						
PETK	Petropavlovsk-	73.56	29	eP	P	14 17 20.3	-0.9
PETK	Petropavlovsk-	73.56	29	P	P	14 17 20.5	-0.8
	comp=E,5.1nm,0.5s,baz=191,slow=4.9,SNR=42						
PET	Petropavlovsk	73.97	29	eP	P	14 17 23.0	-0.6
PET				pmax	pmax		
	comp=Z,31nm,1.4s						
GNI	Garni	74.19	315	⇑eP	P	14 17 26.9	+1.4
GNI				pmax	pmax		
	comp=Z,22nm,1.1s						
GROC	Groznyy	74.74	318	eP	P	14 17 29.4	+1.1
GROC				e		14 17 44.6	
GROC				eS	S	14 26 50.2	-2.7
GROC				pmax	pmax		
	comp=Z,12nm,0.3s						
ARU	Arti	74.81	334	d iP	P	14 17 27.9	-0.5
ARU						14 20 13.7	
ARU				S	S	14 26 53.2	+0.1
ARU				SS	SS	14 31 40.2	-4.2
ARU				pmax	pmax		
	comp=Z,26nm,2.0s						
MA2	Magadan	74.89	21	eP	P	14 17 28.4	-0.5
	comp=Z,22nm,0.9s						
MA2	Magadan	74.89	21	c iP	P	14 17 28.6	-0.2
MA2				pmax	pmax		
	comp=Z,26nm,0.9s						
SYO	Syowa Base	75.50	200	⇑eP	P	14 17 32.6	+0.4
SYO	Syowa Base	75.50	200	⇓ePcP	PcP	14 17 45.2	+0.7
VNDA	Vanda	75.83	169	P	P	14 17 35.7	+1.7
	comp=Z,4.7nm,0.9s,baz=33,slow=3.3,SNR=3.7						
ZEI	Tsey	75.83	317	eP	P	14 17 35.1	+0.2
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NCK	Nalchik	76.33	318	⇑eP	P	14 17 38.9	+1.5
NCK				pmax	pmax		
	comp=Z,8.0nm,0.3s						
MBAR	Mbarara	76.54	271	⇑eP	P	14 17 41.7	+2.3
MBAR				pmax	pmax		
	comp=Z,11nm,1.0s						
MBAR	Mbarara	76.54	271	P	P	14 17 40.5	+1.1
	comp=Z,3.7nm,0.2s,baz=123,slow=7.6,SNR=8.7						
NEY	Neytrino	76.81	317	⇓eP	P	14 17 42.0	+1.7
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	Khabaz	76.88	318	P	P	14 17 41.5	+1.0
	comp=Z,11nm,0.9s,baz=179,slow=7.5,SNR=19						
KIV	Kislovodsk	77.11	318	eP	P	14 17 42.5	+0.6
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
ASF	Jabal al Asfar	77.41	305	P	P	14 17 44.4	+0.6
ASF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ASF	Jabal al Asfar	77.41	305	P	P	14 17 44.4	+0.6
	comp=Z,3.3nm,0.8s,baz=50,slow=5.5,SNR=5.5						
NRIK	Noril'sk	77.47	353	P	P	14 17 42.2	-1.0
	comp=Z,10nm,1.1s,baz=149,slow=3.6,SNR=7.2						
SEY	Seymchan	77.81	19	⇑iP	P	14 17 45.0	-0.2
EIL	Elat	78.33	302	P	P	14 17 51.5	+2.6
	comp=Z,1.9nm,0.4s,baz=40,slow=4.5,SNR=4.7						
MMAI	Mount Meron Ar	78.85	306	P	P	14 17 52.9	+1.2
	comp=Z,2.1nm,0.6s,baz=101,slow=8.6,SNR=3.7						
SOC	Sochi	78.97	317	eP	P	14 17 50.7	-1.3
SOC				eS	S	14 27 38.9	+0.2
SOC				eSSS	SSS	14 36 06.0	
SOC				pmax	pmax		
	comp=Z,17nm,0.6s						
KIRV	Kirov	80.08	333	P	P	14 17 58.4	+0.7
	comp=Z,9.5nm,0.5s,baz=108,slow=3.1,SNR=3.8						
BR131	Keskin Array S	82.07	312	eP	P	14 18 08.1	-0.7
BRTR	Keskin Array B	82.07	312	i P	P	14 18 08.8	-0.1
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	82.07	312	P	P	14 18 08.2	-0.7
	comp=Z,3.8nm,0.8s,baz=133,slow=6.5,SNR=19						
VSR	Storozhevoye	82.09	324	⇑eP	P	14 18 08.1	-0.4
VSR				pmax	pmax		
	comp=Z,76nm,0.8s						
LPSR	Galich'ya Gora	82.74	325	eP	P	14 18 11.4	-0.4
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
QSPA	South Pole Qui	82.89	180	eP	P	14 18 12.9	+0.3
	comp=Z,15nm,1.0s						
SIM	Simferopol'	83.22	317	P	P	14 18 15.9	+1.4
SIM						14 21 31.3	
SIM				pmax	pmax		
	comp=Z,22nm,0.7s						
MOS	Moscow	84.59	328	eP	P	14 18 20.4	-0.7
MOS				e		14 18 56.6	
MOS				eS	S	14 28 29.1	-6.8
MOS				pmax	pmax		
	comp=Z,40nm,0.7s						
OBN	Obninsk	84.94	327	eP	P	14 18 21.2	-1.7
OBN				e		14 21 36.7	
OBN				ePPP	PPP	14 23 32.9	
OBN				pmax	pmax		
	comp=Z,80nm,1.8s						
OBN	Obninsk	84.94	327	P	P	14 18 22.4	-0.5
	comp=Z,3.6nm,0.5s,baz=117,slow=6.3,SNR=6.0						
OBN				LR	LR	15 00 01.3	
	comp=Z,8.1nm,19.2s,baz=345,slow=38						
NVL	N'lazarevskaya	85.14	199	eP	P	14 18 25.4	+1.7
NVL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YLV	Yalova	85.45	312	⇓iP	P	14 18 35.1	+9.2
YLV	Yalova	85.45	312	⇓P	P	14 18 35.1	+9.2
BILL	Bilibino	85.50	19	eP	P	14 18 24.1	-1.4
	comp=Z,5.7nm,0.9s						
BILL	Bilibino	85.50	19	eP	P	14 18 24.3	-1.2
BILL				e		14 21 43.9	
BILL				ePPP	PPP	14 23 36.5	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	Klimovskoe	85.58	333	eP	P	14 18 23.4	-2.5
KLMR				pmax	pmax		
	comp=Z,27nm,1.4s						
KLMR	Klimovskoe	85.58	333	eP	P	14 18 23.4	-2.5
KLMR				AMP		14 18 27.4	
	comp=Z,27nm,1.4s						
TIRR	Tirgusor	87.02	315	⇑iP	P	14 18 35.1	+1.7
TIRR	Tirgusor	87.02	315	⇑P	P	14 18 35.1	+1.7
TLB	Topalu	87.31	315	⇑iP	P	14 18 35.9	+1.1
TLB	Topalu	87.31	315	⇑P	P	14 18 35.9	+1.1
CFR	Carcaliu	87.37	316	⇑iP	P	14 18 35.5	+0.5
CFR	Carcaliu	87.37	316	⇑P	P	14 18 35.5	+0.5
AKASG	Malin Array Be	87.92	322	i P	P	14 18 38.0	+0.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	87.92	322	P	P	14 18 37.2	-0.3
	comp=Z,3.1nm,0.5s,baz=85,slow=4.7,SNR=16						
AKBB	Malin Array Si	87.92	322	eP	P	14 18 37.5	-0.1
	comp=Z,20nm,1.3s						
KIEV	Kiev	87.93	321	eP	P	14 18 37.3	-0.3
	comp=Z,21nm,1.3s						
KIEV	Kiev	87.93	321	eP	P	14 18 37.3	-0.3
KIEV				pmax	pmax		
	comp=Z,21nm,1.3s						
AK11	Malin Array Si	87.95	321	eP	P	14 18 37.1	-0.5
VRI	Vrincioaia	88.48	316	⇑iP	P	14 18 42.6	+2.2
VRI	Vrincioaia	88.48	316	⇑P	P	14 18 42.6	+2.2
TESR	Tescani	88.67	317	⇑iP	P	14 18 43.4	+2.2
MLR	Muntele Rosu	88.95	316	P	P	14 18 44.0	+1.3
MLR	Muntele Rosu	88.95	316	⇑iP	P	14 18 43.9	+1.3
MLR	Muntele Rosu	88.95	316	P	P	14 18 44.0	+1.3
MLR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MLR	Muntele Rosu	88.95	316	P	P	14 18 44.0	+1.3
	comp=Z,2.5nm,0.6s,baz=48,slow=20,SNR=4.1						
SNAA	Sanae	89.51	197	eP	P	14 18 46.5	+1.7
	comp=Z,26nm,1.3s						
SNAA	Sanae	89.51	197	eP	P	14 18 46.5	+1.7
SNAA				pmax	pmax		
	comp=Z,26nm,1.3s						
BURAR	Bucovina Array	89.84	318	⇑iP	P	14 18 47.8	+1.0
BURAR	Bucovina Array	89.84	318	⇑P	P	14 18 47.8	+1.0
VTS	Vitosha	90.36	313	⇑iP	P	14 18 45.8	-3.6
VTS	Vitosha	90.36	313	⇑P	P	14 18 45.9	-3.5
APA	Apatity	90.42	338	⇓iP	P	14 18 42.5	-6.4
APA				i *PP	pP	14 19 13.1	-13
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSU	Vasula	91.05	329	⇑eP	P	14 18 51.9	-0.1
VSU				pmax	pmax		
	comp=Z,58nm,1.2s						
GZR	Gura Zlata	91.13	315	⇑iP	P	14 18 54.9	+2.1
GZR	Gura Zlata	91.13	315	⇑P	P	14 18 54.9	+2.1
FINES	FINESS Array B	91.97	332	P	P	14 18 56.4	+0.2
	comp=Z,4.7nm,0.8s,baz=72,slow=6.2,SNR=9.1						
GAMB	Gambell	92.37	26	eP	P	14 18 58.0	+0.1
	comp=Z,27nm,1.0s						
ARCES	ARCESS Array B	93.71	340	P	P	14 19 03.5	-0.6
	comp=Z,13nm,1.2s,baz=44,slow=7.2,SNR=4.2						
MORC	Moravsky Berou	95.17	319	⇑iP	P	14 19 05.1	-6.2
MORC	Moravsky Berou	95.17	319	⇑P	P	14 19 05.1	-6.2
ANM	Nome	95.23	26	eP	P	14 19 11.8	+0.8
	comp=Z,5.9nm,1.0s						
ANM	Nome	95.23	26	eP	P	14 19 11.9	+0.8
ANM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GERES	GERESS Array B	97.62	318	P	Pdif	14 19 22.5	0.0
	comp=Z,0.2nm,0.3s,baz=175,slow=4.9,SNR=2.6						
HFS	Hagfors	97.87	330	P	P	14 19 23.1	-0.1
	comp=Z,2.4nm,0.8s,baz=61,slow=6.9,SNR=3.4						
NOA	NORSAR Array B	99.09	331	LR	LR	15 09 54.2	
	comp=Z,13nm,18.0s,baz=330,slow=39						
IM3	Indian Mountai	100.11	24	ePdif	Pdif	14 19 32.6	-0.4
TOLK	Toolik Lake Re	101.37	21	P	Pdif	14 19 38.6	0.0
	baz=280						
TCOL	CIGO, UAF Yank	102.70	25	P	Pdif	14 19 45.1	+0.5
	baz=280						
YKA	Yellowknife Ar	116.87	20	PKP	PKPdf	14 24 31.0	-0.2
	comp=Z,0.6nm,0.4s,baz=322,slow=2.5,SNR=34						
YKB5	Yellowknife Ar	116.87	20	ePKPdf	PKiKP	14 24 31.2	-0.1
B05A	Bryant	121.56	37	P	PKiKP	14 24 41.9	+1.0
	baz=298						
H04D	Lebanon	122.84	41	P	PKiKP	14 24 44.5	+0.9
	baz=295						
L04D	Klamath Falls	124.09	43	P	PKiKP	14 24 46.2	-0.1
	baz=294						
J05D	Fort Rock, OR	124.35	41	P	PKiKP	14 24 47.6	+0.8
	baz=296						
J08A	Circle Bar Ran	126.11	40	ePKPdf	PKiKP	14 24 50.8	+0.6
MSO	Missoula	127.02	34	ePKPdf	PKiKP	14 24 52.2	+0.3
MSO	Missoula	127.02	34	P	PKiKP	14 24 52.4	+0.4
	baz=305						
FFC	Flin Flon	127.04	21	ePKPdf	PKiKP	14 24 51.7	+0.1
FFC	Flin Flon	127.04	21	ePKIKP	PKiKP	14 24 51.7	+0.1
PAHR	Pah Rah Range	127.15	45	ePKPdf	PKiKP	14 24 52.8	+0.3
PNTR	Pine Nut	127.25	46	ePKPdf	PKPdf	14 24 51.8	-0.5
NV01	Mina Array Sit	128.45	46	ePKPdf	PKPdf	14 24 54.6	0.0
NVAR	Mina Array Bea	128.45	46	PKP	PKiKP	14 24 56.7	+1.5
	comp=Z,1.4nm,0.7s,baz=273,slow=2.3,SNR=7.4						
NVAR				SKPbc	SKPbc	14 28 02.6	
	comp=Z,2.2nm,0.8s,baz=265,slow=4.5,SNR=8.3						
EGMT	Eagleton	128.54	31	P	PKiKP	14 24 55.6	+0.6
	baz=310						
HLID	Hailey	128.56	38	ePKPdf	PKiKP	14 24 55.6	+0.4
HLID	Hailey	128.56	38	P	PKiKP	14 24 56.2	+1.0
	baz=303						
PKM	Mcpherson Peak	128.73	50	P	PKiKP	14 24 56.6	+0.8
	baz=292						
BOZ	Bozeman (W)	129.04	35	ePKPdf	PKiKP	14 24 55.9	-0.2
BOZ	Bozeman (W)	129.04	35	ePKIKP	PKiKP	14 24 55.9	-0.2
BOZ	Bozeman (W)	129.04	35	P	PKiKP	14 24 56.6	+0.5
	baz=307						
CWC	Cottonwood Cre	129.44	48	P	PKiKP	14 24 58.0	+0.9
	baz=294						
ISA	Isabella, Lake	129.46	49	P	PKiKP	14 24 58.1	+1.0
	baz=293						
ELK	Elko	129.49	42	ePKPdf	PKiKP	14 24 57.7	+0.4
ELK	Elko	129.49	42	ePKIKP	PKiKP	14 24 57.7	+0.4
MPMC	Manual Prospec	130.03	48	P	PKiKP	14 24 59.3	+0.8
	baz=294						
EDW2	Edwards Air Fo	130.12	50	P	PKiKP	14 24 59.7	+1.2
	baz=293						
R11A	Troy Canyon, C	130.40	45	ePKPdf	PKiKP	14 24 59.1	+0.1
R11A	Troy Canyon, C	130.40	45	P	PKiKP	14 25 00.1	+1.0
	baz=298						
GSC	Goldstone, Bar	130.85	49	P	PKiKP	14 25 01.3	+1.3
	baz=294						
DUG	Dugway, Tooele	131.36	41	ePKPdf	PKPdf	14 24 60.0	0.0
DUG	Dugway, Tooele	131.36	41	ePKIKP	PKPdf	14 25 00.0	0.0
DUG	Dugway, Tooele	131.36	41	P	PKiKP	14 25 01.8	+0.9
	baz=302						
BW06	Boulder Array	131.93	36	P	PKiKP	14 25 02.1	0.0
	baz=307						
PD31	Pinedale Array	131.93	36	ePKPdf	PKiKP	14 25 01.6	-0.5
PDAR	Pinedale Array	131.93	36	ePKPdf	PKPdf	14 25 01.3	+0.2
PDAR				SKPbc	SKPab	14 28 14.1	-0.6
PDAR	Pinedale Array	131.93	36	PKP	PKiKP	14 25 02.5	+0.4
	comp=Z,1.3nm,0.8s,baz=48,slow=2.2,SNR=11						
PDAR				SKPbc	SKPab	14 28 14.1	-0.6
	comp=Z,10nm,1.0s,baz=291,slow=1.3,SNR=29						
SCHQ	Schefferville	132.16	355	PKP	PKiKP	14 25 01.5	-0.4
	comp=Z,1.3nm,0.4s,baz=24,slow=4.4,SNR=8.1						
SCHQ				SKPbc	SKPab	14 28 14.6	-0.3
	comp=Z,20nm,0.9s,baz=35,slow=5.1,SNR=20						
PLCA	Paso Flores	132.37	182	SKPbc	SKPab	14 28 16.1	-0.3
	comp=Z,4.3nm,1.1s,baz=207,slow=8.3,SNR=4.0						
ULM	Lac du Bonnet	132.85	20	SKPbc	SKPbc	14 28 16.6	+0.2
	comp=Z,13nm,0.9s,baz=329,slow=4.5,SNR=22						
K22A	Casper	133.75	35	P	PKiKP	14 25 05.8	+0.1
	baz=310						
RSSD	Black Hills	134.11	31	ePKPdf	PKPdf	14 25 04.9	-0.2
RSSD	Black Hills	134.11	31	ePKIKP	PKPdf	14 25 04.9	-0.2
RSSD	Black Hills	134.11	31	P	PKiKP	14 25 06.4	0.0
	baz=314						
O20A	White River Ci	134.29	38	ePKPdf	PKPdf	14 25 05.9	+0.3
O20A	White River Ci	134.29	38	P	PKiKP	14 25 06.8	-0.1
	baz=306						
W18A	Petrified Fore	136.07	45	P	PKiKP	14 25 11.1	+0.4
	baz=301						
EYMN	Ely	136.28	18	P	PKiKP	14 25 10.8	+0.4
	baz=333						
C40A	Isle Royale Na	136.99	16	P	PKiKP	14 25 12.3	+0.4
	baz=336						
SDCO	Great Sand Dun	137.44	39	ePKPdf	PKiKP	14 25 12.5	-1.0
SDCO	Great Sand Dun	137.44	39	P	PKiKP	14 25 13.8	+0.2
	baz=308						
E38A	The Farm, Brul	137.44	19	P	PKiKP	14 25 13.7	+0.8
	baz=332						
F38A	Pierce - Schro	137.91	20	P	PKiKP	14 25 14.2	+0.3
	baz=331						
ECSD	EROS Data Cent	137.94	26	P	PKiKP	14 25 13.3	-0.7
	baz=323						
E39A	Mellen	137.97	18	P	PKiKP	14 25 13.4	-0.6
	baz=333						
LSQQ	Lebel-sur-Quev	138.03	4	P	PKiKP	14 25 13.7	-0.3
	baz=354						
ANMO	Albuquerque	138.44	43	P	PKiKP	14 25 15.2	-0.4
	baz=304						
T25A	Trinidad	138.49	39	P	PKiKP	14 25 15.2	-0.4
	baz=308						
F40A	Park Falls	138.51	18	P	PKiKP	14 25 14.9	-0.2
	baz=334						
121A	Cookes Peak, D	138.78	47	P	PKiKP	14 25 15.8	-0.5
	baz=300						
F41A	Three Lakes	138.99	17	P	PKiKP	14 25 16.0	-0.1
	baz=335						
E43A	Lone Tree Farm	138.99	15	P	PKiKP	14 25 16.0	0.0
	baz=338						
D46A	Sault St. Mari	139.18	12	P	PKiKP	14 25 16.1	-0.3
	baz=343						
E45A	Wooded Hills,	139.45	13	P	PKiKP	14 25 16.9	0.0
	baz=341						
H40A	Chili	139.58	19	P	PKiKP	14 25 16.7	-0.6
	baz=332						
D50A	G1974 Best Tow	139.62	7	P	PKiKP	14 25 17.2	-0.1
	baz=349						
D51A	Lot 18 Range I	139.75	7	P	PKiKP	14 25 17.6	0.0
	baz=350						
I39A	Houston	139.86	21	P	PKiKP	14 25 17.3	-0.7
	baz=330						
D54A	Lac Fusel, La	139.95	4	P	PKiKP	14 25 17.6	-0.4
	baz=354						
J39A	Decorah	140.25	22	P	PKiKP	14 25 18.2	-0.5
	baz=330						
ALGO	Algonquin Park	141.02	6	P	PKiKP	14 25 19.8	-0.3
	baz=352						
LONY	Lake Ozonia	142.59	2	ePKPpre	PKPpre	14 25 16.2	
LBNH	Lisbon	142.99	359	P	PKPdf	14 25 18.8	-2.3
	baz=1.3						
N42A	Yates City	143.04	22	P	PKPbc	14 25 18.7	+0.3
	baz=331						
K48A	Perry	143.05	14	P	PKPbc	14 25 18.7	+0.3
	baz=341						
NCB	Newcomb	143.25	2	ePKPdf	PKPbc	14 25 18.7	-0.2
N43A	Stutzman Famil	143.25	21	P	PKPbc	14 25 18.9	-0.1
	baz=332						
O41A	Passleys Farm,	143.33	24	P	PKPbc	14 25 19.3	+0.1
	baz=329						
TX31	Lajitas Ar. Si	143.45	49	ePKPdf	PKPdf	14 25 21.4	-1.1
TXAR	Lajitas Array	143.45	49	PKP	PKPdf	14 25 21.4	-1.1
	comp=Z,2.0nm,0.5s,baz=340,slow=1.7,SNR=39						
TXAR				SKPbc	SKiKP	14 28 48.2	-0.3
	comp=Z,2.6nm,1.0s,baz=256,slow=0.5,SNR=6.9						
WMOK	Wichita Mounta	143.52	37	ePKPdf	PKPbc	14 25 19.8	-0.2
WMOK	Wichita Mounta	143.52	37	ePKIKP	PKPbc	14 25 19.8	-0.2
WMOK	Wichita Mounta	143.52	37	P	PKPbc	14 25 20.1	+0.1
	baz=313						
HDIL	Hopedale	143.55	21	P	PKPbc	14 25 19.9	+0.1
	baz=332						
CPUP	Villa Florida	143.55	204	PKP	PKPdf	14 25 21.6	-1.0
	comp=Z,3.5nm,0.7s,baz=154,slow=2.3,SNR=8.1						
P41A	Barry, Barry	143.63	24	P	PKPbc	14 25 19.6	-0.5
	baz=328,SNR=11						
J55A	Hilton	143.70	6	P	PKPbc	14 25 19.9	-0.3
	baz=352						
MEDO	Medina	143.73	7	P	PKPbc	14 25 20.3	0.0
	baz=350						
N44A	Piper City	143.74	20	P	PKPbc	14 25 20.5	+0.1
	baz=334						
M46A	Old House Fiel	143.75	17	P	PKPbc	14 25 20.6	+0.2
	baz=337						
K52A	Tillsonburg	143.77	10	P	PKPbc	14 25 20.3	-0.2
	baz=347						
O43A	Sugar Creek Fa	143.78	22	P	PKPbc	14 25 20.3	-0.2
	baz=332						
L48A	N Adams	143.78	15	P	PKPbc	14 25 20.3	-0.2
	baz=340						
L49A	Milan	143.79	14	P	PKPbc	14 25 20.3	-0.2
	baz=341						
ACCN	Adirondack Com	143.85	1	ePKPdf	PKPab	14 25 19.7	-0.2
N45A	Kentland	143.90	19	P	PKPbc	14 25 20.7	-0.1
	baz=335						
P42A	Winchester	144.00	23	ePKPdf	PKPab	14 25 20.6	0.0
P42A	Winchester	144.00	23	P	PKPab	14 25 20.7	+0.2
	baz=329,SNR=15						
M47A	Cromwell	144.01	17	P	PKPbc	14 25 20.9	-0.3
	baz=338						
L50A	Kingsville	144.07	13	P	PKPab	14 25 20.8	0.0
	baz=343						
N46A	Monticello	144.11	18	P	PKPab	14 25 20.9	-0.1
	baz=336						
M48A	Edgerton	144.14	15	P	PKPab	14 25 21.0	-0.1
	baz=340						
Q41A	Truxton	144.17	25	P	PKPbc	14 25 21.5	-0.2
	baz=328,SNR=11						
O44A	Mansfield	144.20	21	P	PKPab	14 25 21.3	-0.1
	baz=333						
K55A	Perry	144.20	7	P	PKPab	14 25 21.2	-0.1
	baz=351,SNR=7.3						
MMNY	Mt. Morris Dam	144.22	6	ePKPdf	PKPab	14 25 21.2	-0.1
P43A	Skaggs, Pawnee	144.26	22	P	PKPbc	14 25 21.8	-0.2
	baz=331,SNR=7.1						
M49A	Liberty Center	144.34	15	P	PKPab	14 25 21.4	-0.5
	baz=341						
ABTX	Abilene, Hawle	144.37	41	ePKPdf	PKPbc	14 25 22.7	+0.1
ABTX	Abilene, Hawle	144.37	41	P	PKPdf	14 25 23.2	-0.6
	baz=310						
O45A	Potomac	144.37	20	P	PKPbc	14 25 22.3	+0.1
	baz=334,SNR=5.2						
TUL1	Leonard	144.40	33	ePKPdf	PKPbc	14 25 22.4	-0.2
TUL1	Leonard	144.40	33	P	PKPbc	14 25 22.6	0.0
	baz=318,SNR=8.5						
N47A	Urbana	144.43	17	P	PKPab	14 25 22.2	0.0
	baz=338,SNR=8.3						
SFIN	Lafayette	144.46	19	ePKPdf	PKPab	14 25 22.1	-0.2
SFIN	Lafayette	144.46	19	P	PKPbc	14 25 22.5	-0.1
	baz=335,SNR=14						
Q42A	Golden Eagle	144.50	24	P	PKPbc	14 25 22.5	-0.2
	baz=329,SNR=18						
TRY	Troy	144.50	1	ePKPdf	PKPbc	14 25 22.6	0.0
ERPA	Erie	144.54	9	ePKPdf	PKPbc	14 25 22.6	-0.2
ERPA	Erie	144.54	9	P	PKPab	14 25 22.5	-0.1
	baz=348,SNR=10						
M50A	Fremont	144.63	13	P	PKPab	14 25 22.7	-0.2
	baz=342,SNR=5.2						
N48A	Decatur	144.64	16	P	PKPab	14 25 22.9	-0.1
	baz=339,SNR=15						
L53A	Girard	144.65	10	P	PKPab	14 25 22.9	-0.1
	baz=347,SNR=8.7						
R41A	Rosebud	144.66	26	P	PKPbc	14 25 23.2	-0.1
	baz=327,SNR=34						
L55A	Hinsdale	144.70	7	P	PKPab	14 25 23.1	-0.1
	baz=350,SNR=12						
HRV	Adam Dziewonsk	144.72	358	ePKPbc	PKPbc	14 25 23.2	-0.1
HRV	Adam Dziewonsk	144.72	358	ePKIKP	PKPbc	14 25 23.2	-0.1
HRV	Adam Dziewonsk	144.72	358	P	PKPbc	14 25 23.2	-0.1
	baz=2.0						
P44A	Sand Creek, Wi	144.75	22	P	PKPbc	14 25 23.6	+0.1
	baz=332,SNR=25						
Q43A	New Douglas	144.80	23	P	PKPab	14 25 23.3	-0.4
	baz=330,SNR=5.9						
N49A	Columbus Grove	144.81	15	ePKPbc	PKPab	14 25 23.2	-0.4
N49A	Columbus Grove	144.81	15	P	PKPab	14 25 23.5	-0.1
	baz=340,SNR=15						
WES	Weston	144.83	358	ePKPbc	PKPdf	14 25 23.9	-0.4
M52A	Chesterland	144.86	11	P	PKPbc	14 25 23.8	0.0
	baz=345,SNR=14						
O47A	Sheridan	144.88	18	P	PKPab	14 25 23.8	-0.1
	baz=336,SNR=9.2						
M51A	Elyria	144.89	12	P	PKPab	14 25 23.5	-0.4
	baz=344						
CCM	Cathedral Cave	144.92	26	ePKPbc	PKPbc	14 25 23.6	-0.5
CCM	Cathedral Cave	144.92	26	ePKIKP	PKPbc	14 25 23.6	-0.5
CCM	Cathedral Cave	144.92	26	P	PKPab	14 25 24.0	-0.1
	baz=327						
R42A	Luebbering	144.92	25	P	PKPab	14 25 24.1	0.0
	baz=328,SNR=49						
BINY	Binghamton	144.92	4	ePKPbc	PKPbc	14 25 23.6	-0.4
BINY	Binghamton	144.92	4	P	PKPab	14 25 24.0	0.0
	baz=354,SNR=17						
QUA2	Belchertown	144.96	359	ePKPbc	PKPbc	14 25 23.6	-0.4
ALLY	Alegheny Colle	144.97	10	ePKPbc	PKPbc	14 25 23.5	-0.7
P45A	Graceland, Par	145.01	20	ePKPbc	PKPbc	14 25 24.1	-0.3
P45A	Graceland, Par	145.01	20	P	PKPdf	14 25 24.5	-0.2
	baz=334,SNR=21						

M53A	WI Miller and	145.08	10	P	PKPbc	14 25 24.3	-0.2
	baz=346,SNR=21						
HHAR	Hobbs	145.09	31	*e*PKPbc	PKPbc	14 25 24.1	-0.6
S41A	Jillco Farms,	145.09	27	P	PKPab	14 25 24.7	-0.1
	baz=326,SNR=70						
Q44A	Meyer Farm, Va	145.10	22	*e*PKPbc	PKPbc	14 25 24.5	-0.1
Q44A	Meyer Farm, Va	145.10	22	P	PKPbc	14 25 24.6	-0.1
	baz=331,SNR=22						
P46A	Rosedale	145.11	20	P	PKPdf	14 25 24.8	-0.1
	baz=334,SNR=6.0						
O48A	Farmland	145.16	17	P	PKPbc	14 25 24.5	-0.3
	baz=338,SNR=16						
M54A	Oil Creek Stat	145.19	9	*e*PKPbc	PKPbc	14 25 24.4	-0.4
M54A	Oil Creek Stat	145.19	9	P	PKPbc	14 25 24.7	-0.2
	baz=348,SNR=22						
N50A	Nevada	145.21	14	P	PKPbc	14 25 24.7	-0.2
	baz=342,SNR=20						
N51A	Ashland	145.24	13	P	PKPbc	14 25 24.8	-0.3
	baz=343,SNR=15						
R43A	Red Bud	145.28	24	P	PKPbc	14 25 25.1	-0.1
	baz=329,SNR=42						
BRYW	Bryant College	145.31	358	*e*PKPdf	PKPdf	14 25 24.8	-0.4
FVM	French Village	145.33	25	*e*PKPdf	PKPdf	14 25 24.7	-0.6
FVM	French Village	145.33	25	*e*PKIKP	PKPdf	14 25 24.7	-0.6
S42A	Caledonia	145.35	26	P	PKPbc	14 25 25.4	-0.1
	baz=327,SNR=38						
M55A	Ridgway	145.36	8	P	PKPdf	14 25 25.2	-0.1
	baz=349,SNR=14						
Q45A	Warren Harvey,	145.43	21	P	PKPab	14 25 26.0	+0.1
	baz=332,SNR=21						
O49A	Covington	145.46	16	*e*PKPdf	PKPdf	14 25 25.1	-0.3
O49A	Covington	145.46	16	P	PKPbc	14 25 25.7	0.0
	baz=340,SNR=14						
N52A	McGinn's Farm,	145.49	12	P	PKPdf	14 25 25.5	0.0
	baz=344,SNR=11						
T41A	Mountain View	145.53	27	P	PKPbc	14 25 26.0	0.0
	baz=325,SNR=52						
P47A	Martinsville	145.53	19	P	PKPbc	14 25 25.9	-0.1
	baz=336,SNR=16						
U40A	Yellville	145.57	29	P	PKPbc	14 25 26.1	-0.1
	baz=323,SNR=54						
KSPA	Keystone Colle	145.58	4	*e*PKPdf	PKPbc	14 25 26.0	0.0
JCT	Junction City	145.59	44	*e*PKPdf	PKPab	14 25 27.1	+0.2
JCT	Junction City	145.59	44	P	PKPab	14 25 26.9	0.0
	baz=307						
Q46A	CEJHS Indians,	145.59	20	P	PKPdf	14 25 25.1	-0.6
	baz=334						
M65A	Busby, Falmout	145.63	357	P	PKPdf	14 25 25.5	-0.2
	baz=3.6						
R44A	Waltonville	145.65	23	P	PKPbc	14 25 26.3	0.0
	baz=330,SNR=22						
N53A	Lisbon	145.66	11	P	PKPbc	14 25 26.4	+0.1
	baz=346,SNR=22						
N54A	Moraine State	145.66	10	*e*PKPdf	PKPbc	14 25 26.4	+0.1
N54A	Moraine State	145.66	10	P	PKPbc	14 25 26.2	-0.1
	baz=347,SNR=15						
O50A	Cable	145.68	15	P	PKPbc	14 25 26.4	0.0
	baz=341,SNR=18						
BLO	Bloomington	145.74	19	*e*PKPdf	PKPdf	14 25 26.1	+0.1
BLO	Bloomington	145.74	19	*e*PKP2	PKPdf	14 25 26.1	+0.1
ACSO	Alum Creek Sta	145.76	14	*e*PKPdf	PKPbc	14 25 26.6	0.0
ACSO	Alum Creek Sta	145.76	14	P	PKPbc	14 25 26.6	0.0
	baz=342,SNR=25						
P48A	Milroy	145.82	18	P	PKPbc	14 25 26.7	-0.2
	baz=337,SNR=14						
S43A	Fulton Ridge,	145.82	25	P	PKPbc	14 25 26.7	-0.2
	baz=328,SNR=6.2						
T42A	Van Buren	145.84	27	*e*PKPdf	PKPbc	14 25 26.7	-0.3
T42A	Van Buren	145.84	27	P	PKPbc	14 25 27.2	+0.2
	baz=326,SNR=88						
O51A	Pataskala	145.93	14	P	PKPbc	14 25 27.2	+0.1
	baz=342,SNR=17						
P49A	Miami Univ. Ec	145.96	17	P	PKPbc	14 25 27.0	-0.2
	baz=338,SNR=15						
Q47A	Bedord North L	145.99	19	P	PKPbc	14 25 27.4	0.0
	baz=335,SNR=6.6						
N55A	Marion Center	146.00	8	P	PKPbc	14 25 27.4	0.0
	baz=349,SNR=15						
W39A	Magazine	146.01	32	*e*PKPdf	PKPbc	14 25 27.1	-0.4
W39A	Magazine	146.01	32	P	PKPbc	14 25 27.5	0.0
	baz=321,SNR=9.7						
U41A	Viola	146.02	28	P	PKPbc	14 25 27.6	0.0
	baz=324,SNR=18						
SIUC	Southern Illin	146.05	24	*e*PKPdf	PKPbc	14 25 27.7	+0.1
S44A	Carbondale	146.06	24	P	PKPab	14 25 27.9	-0.5
	baz=330,SNR=11						
ODNJ	Ogdensburg	146.12	3	*e*PKPdf	PKPbc	14 25 27.9	+0.3
O52A	Adamsville	146.13	13	*e*PKPdf	PKPbc	14 25 27.1	-0.6
O52A	Adamsville	146.13	13	P	PKPbc	14 25 27.5	-0.3
	baz=344,SNR=13						
O53A	New Philadelph	146.13	12	P	PKPbc	14 25 27.4	-0.4
	baz=345,SNR=8.8						
P50A	Jamestown	146.14	15	P	PKPbc	14 25 27.5	-0.3
	baz=340,SNR=12						
T43A	Greenville	146.15	26	P	PKPbc	14 25 27.7	-0.2
	baz=328,SNR=21						
WHTX	Lake Whitney,	146.19	40	P	PKPbc	14 25 28.3	+0.1
	baz=312						
Q48A	North Vernon	146.21	18	P	PKPbc	14 25 28.2	+0.1
	baz=336,SNR=16						
N59A	State Game Lan	146.22	4	*e*PKPdf	PKPbc	14 25 27.9	-0.2
N59A	State Game Lan	146.22	4	P	PKPbc	14 25 28.1	+0.1
	baz=355,SNR=24						
PAL	Palisades	146.22	2	*e*PKPdf	PKPbc	14 25 28.1	+0.2
PAL	Palisades	146.22	2	*e*PKP2	PKPbc	14 25 28.2	+0.2
PAL	Palisades	146.22	2	P	PKPbc	14 25 28.2	+0.2
	baz=358						
SSPA	Standing Stone	146.29	7	*e*PKPdf	PKPbc	14 25 27.9	-0.3
SSPA	Standing Stone	146.29	7	P	PKPbc	14 25 28.1	-0.1
	baz=351						
U42A	Revenden	146.33	27	P	PKPbc	14 25 28.5	0.0
	baz=326,SNR=43						
S45A	Carrier Mills	146.34	23	P	PKPbc	14 25 28.6	+0.1
	baz=331,SNR=6.9						
PBMO	Poplar Bluff	146.34	26	*e*PKPdf	PKPbc	14 25 28.1	-0.4
O54A	Avella	146.35	11	P	PKPbc	14 25 28.6	+0.2
	baz=346,SNR=6.7						
T44A	Benton	146.44	25	P	PKPbc	14 25 28.8	+0.1
	baz=329,SNR=6.7						
P51A	Williamsport	146.45	15	*e*PKPdf	PKPbc	14 25 28.0	-0.7
P51A	Williamsport	146.45	15	P	PKPbc	14 25 28.6	-0.1
	baz=341						
O55A	Ligonier	146.51	9	P	PKPbc	14 25 28.3	-0.6
	baz=348						
P52A	Corning	146.53	13	P	PKPbc	14 25 28.6	-0.3
	baz=343,SNR=7.3						
R47A	Wooly Knot Far	146.53	20	P	PKPbc	14 25 29.0	0.0
	baz=335,SNR=11						
O56A	Blue Knob Stat	146.56	8	*e*PKPdf	PKPbc	14 25 28.6	-0.5
O56A	Blue Knob Stat	146.56	8	P	PKPbc	14 25 29.2	+0.1
	baz=350,SNR=9.6						
MIAR	Mount Ida	146.61	32	*e*PKPbc	PKPbc	14 25 29.5	+0.1
MIAR	Mount Ida	146.61	32	*e*PKP2	PKPbc	14 25 29.5	+0.1
MIAR	Mount Ida	146.61	32	P	PKPbc	14 25 29.8	+0.5
	baz=320						
R48A	Northridge Ran	146.65	19	P	PKPbc	14 25 29.7	+0.4
	baz=336,SNR=6.7						
S46A	Don Dixon Farm	146.66	22	P	PKPbc	14 25 29.5	+0.1
	baz=332,SNR=7.6						
BDFB	Brasilia	146.67	227	PKPbc	PKPab	14 25 31.8	+0.3
	comp=Z,1.7nm,0.3s,baz=153,slow=6.8,SNR=5.3						
WCI	Wyandotte Cave	146.67	20	*e*PKPbc	PKPbc	14 25 29.5	+0.1
WCI	Wyandotte Cave	146.67	20	*e*PKP2	PKPbc	14 25 29.5	+0.1
WCI	Wyandotte Cave	146.67	20	P	PKPbc	14 25 29.5	+0.1
	baz=335						
WHAR	Wooly Hollow	146.69	30	*e*PKPbc	PKPbc	14 25 29.0	-0.5
U43A	Rector	146.69	26	P	PKPbc	14 25 29.1	-0.3
	baz=327						
W41B	Gary Mavity, V	146.81	30	*e*PKPbc	PKPbc	14 25 29.1	-0.7
W41B	Gary Mavity, V	146.81	30	P	PKPbc	14 25 29.8	0.0
	baz=323						
Q51A	Peebles	146.81	15	*e*PKPdf	PKPdf	14 25 28.6	+0.8
Q51A	Peebles	146.81	15	P	PKPbc	14 25 29.7	-0.1
	baz=341,SNR=16						
Q50A	Georgetown	146.81	16	P	PKPbc	14 25 29.8	0.0
	baz=339,SNR=9.2						
P53A	Whipple	146.83	12	*e*PKPbc	PKPbc	14 25 29.5	-0.3
P53A	Whipple	146.83	12	P	PKPbc	14 25 30.0	+0.2
	baz=344,SNR=15						
P54A	Burton	146.90	11	P	PKPbc	14 25 30.4	+0.4
	baz=346,SNR=11						
MCWV	Mont Chateau	146.96	10	P	PKPbc	14 25 30.0	-0.2
	baz=347,SNR=7.6						
R49A	Shelbyville	146.97	18	P	PKPbc	14 25 30.3	0.0
	baz=337,SNR=13						
S47A	Hartford	147.04	21	P	PKPbc	14 25 30.3	-0.2
	baz=334						
X40A	Basin Creek Fa	147.05	31	*e*PKPbc	PKPbc	14 25 30.9	+0.3
X40A	Basin Creek Fa	147.05	31	P	PKPbc	14 25 30.8	+0.3
	baz=321,SNR=6.0						
MVL	Millersville	147.08	5	*e*PKPbc	PKPbc	14 25 30.8	+0.3
P55A	Reedsville	147.11	10	P	PKPbc	14 25 30.5	-0.1
	baz=347,SNR=7.4						
Q52A	Bidwell	147.13	14	P	PKPbc	14 25 30.5	-0.1
	baz=342,SNR=15						
T46A	Princeton	147.16	23	P	PKPbc	14 25 31.0	+0.3
	baz=332,SNR=12						
R50A	Paris	147.23	17	P	PKPbc	14 25 30.7	-0.2
	baz=338,SNR=9.7						
S48A	Wiedeman Farm,	147.27	20	P	PKPbc	14 25 31.2	+0.2
	baz=335,SNR=10						
S49A	Springfield	147.40	19	P	PKPbc	14 25 31.3	-0.1
	baz=336,SNR=9.8						
U45A	Rockin P Farm,	147.41	24	P	PKPbc	14 25 31.5	0.0
	baz=330						
R51A	Hillsboro	147.43	16	P	PKPbc	14 25 31.1	-0.4
	baz=340						
Q54A	Coxs Mills	147.43	12	P	PKPbc	14 25 31.4	-0.1
	baz=345,SNR=7.8						
T47A	Sharon Grove	147.50	22	*e*PKPbc	PKPbc	14 25 31.2	-0.6
T47A	Sharon Grove	147.50	22	P	PKPbc	14 25 31.8	+0.1
	baz=333,SNR=13						
Q55A	Buckhannon	147.56	11	P	PKPbc	14 25 32.1	+0.2
	baz=346,SNR=6.4						
R52A	Catlettsburg	147.64	15	P	PKPbc	14 25 31.7	-0.4
	baz=342						
U46A	Springville	147.64	24	P	PKPbc	14 25 32.2	+0.1
	baz=331						
T48A	Bowling Green	147.64	21	P	PKPbc	14 25 32.3	+0.2
	baz=334,SNR=8.8						
S50A	Richmond	147.77	17	P	PKPbc	14 25 32.3	-0.2
	baz=338						
R53A	Hurricane	147.81	14	P	PKPbc	14 25 32.6	+0.1
	baz=343,SNR=6.4						
V45A	Humboldt	147.85	25	P	PKPbc	14 25 32.5	-0.2
	baz=329						
U47A	Clarksville	147.91	22	P	PKPbc	14 25 33.0	+0.2
	baz=332,SNR=9.5						
T49A	Edmonton	147.94	19	*e*PKPbc	PKPbc	14 25 32.5	-0.5
T49A	Edmonton	147.94	19	P	PKPbc	14 25 33.0	0.0
	baz=336,SNR=17						
WVT	Waverly	147.98	23	*e*PKPbc	PKPbc	14 25 33.2	+0.2
WVT	Waverly	147.98	23	*e*PKP2	PKPbc	14 25 33.2	+0.2
WVT	Waverly	147.98	23	P	PKPbc	14 25 33.2	+0.2
	baz=331						
X43A	Marvell	148.00	29	P	PKiKP	14 25 34.0	-0.8
	baz=324						
Z41A	Richland Creek	148.01	33	P	PKPbc	14 25 33.1	-0.1
	baz=320						
S51A	Beattyville	148.04	16	*e*PKPbc	PKPbc	14 25 32.9	-0.2
S51A	Beattyville	148.04	16	P	PKPbc	14 25 33.0	-0.2
	baz=339,SNR=6.7						
U48A	Cassie Pea, Po	148.13	21	P	PKPbc	14 25 33.5	+0.1
	baz=334,SNR=8.6						
S52A	Salyersville	148.14	16	P	PKPbc	14 25 33.9	+0.4
	baz=340						
V46A	Holladay	148.15	24	P	PKPbc	14 25 33.4	0.0
	baz=330,SNR=6.8						
R54A	Victor	148.17	12	P	PKPbc	14 25 34.0	+0.5
	baz=344						
T50A	Nancy	148.24	19	P	PKPbc	14 25 33.7	0.0
	baz=337						
R55A	Marlinton	148.25	11	P	PKPbc	14 25 34.3	+0.5
	baz=346						
W45A	Hickory Valley	148.25	26	P	PKPbc	14 25 33.5	-0.3
	baz=328						
V47A	Nunnelly	148.36	23	P	PKPbc	14 25 34.0	0.0
	baz=331,SNR=10						
S53A	Williamson	148.39	14	P	PKPbc	14 25 33.9	-0.2
	baz=342						
U49A	Red Boiling Sp	148.39	20	P	PKPbc	14 25 34.3	+0.2
	baz=335,SNR=17						
T51A	Gray	148.57	17	P	PKPbc	14 25 34.4	-0.2
	baz=338,SNR=8.1						
HKT	Hockley	148.58	41	*e*PKPbc	PKiKP	14 25 35.6	-0.6
W46A	Michie	148.62	25	P	PKPbc	14 25 34.7	0.0
	baz=329						
OXF	Oxford	148.69	27	*e*PKPbc	PKPbc	14 25 34.5	-0.4
OXF	Oxford	148.69	27	*e*PKP2	PKPbc	14 25 34.5	-0.4
OXF	Oxford	148.69	27	P	PKPbc	14 25 34.9	0.0
	baz=327						
V48A	Smith Brothers	148.71	22	*e*PKPbc	PKPbc	14 25 34.8	-0.1
V48A	Smith Brothers	148.71	22	P	PKPbc	14 25 34.8	-0.1
	baz=332,SNR=8.2						
U50A	Jamestown	148.79	19	P	PKPbc	14 25 35.3	+0.1
	baz=336,SNR=21						
W47A	Westpoint	148.84	24	P	PKPbc	14 25 35.1	-0.2
	baz=331,SNR=15						
PLAL	Pickwick Lake	148.87	25	*e*PKPbc	PKPbc	14 25 34.6	-0.8
R58B	Mineral	148.92	8	*e*PKPbc	PKiKP	14 25 36.0	-0.7
R58B	Mineral	148.92	8	P	PKPbc	14 25 35.2	-0.2
	baz=350						
LNIG	Linares	148.92	52	*e*PKPbc	PKPbc	14 25 35.8	0.0
T53A	Wise	148.94	15	P	PKPbc	14 25 35.3	-0.3
	baz=341						
X46A	Booneville	149.02	26	P	PKPbc	14 25 35.6	-0.2
	baz=328						
V49A	McMinnville	149.02	21	P	PKPbc	14 25 35.4	-0.3
	baz=334						
TZTN	Tazewell	149.07	17	*e*PKPbc	PKPbc	14 25 35.8	-0.1
TZTN	Tazewell	149.07	17	P	PKPbc	14 25 35.7	-0.1
	baz=339						
U51A	La Follette	149.09	18	P	PKPbc	14 25 36.0	+0.1
	baz=338						
T54A	Tazewell	149.11	14	P	PKPbc	14 25 36.0	0.0
	baz=343						
W48A	Pulaski	149.20	23	P	PKPbc	14 25 36.1	-0.1
	baz=332,SNR=12						
U52A	Thorn Hill	149.27	17	P	PKPbc	14 25 36.3	-0.1
	baz=339						
X47A	Russelville	149.36	25	P	PKPbc	14 25 36.1	-0.5
	baz=330						
V50A	Pikevile	149.39	20	P	PKPbc	14 25 36.7	+0.1
	baz=335,SNR=9.4						
W49A	Belvidere	149.47	22	P	PKPbc	14 25 36.9	+0.1
	baz=333						
SWET	Sewanee	149.50	22	*e*PKPbc	PKPbc	14 25 36.4	-0.7
V51A	Loudon	149.51	19	*e*PKPbc	PKPbc	14 25 36.1	-0.8
V51A	Loudon	149.51	19	P	PKPbc	14 25 37.2	+0.3
	baz=337						
V52A	Sevierville	149.71	18	*e*PKPbc	PKPbc	14 25 36.9	-0.5
V52A	Sevierville	149.71	18	P	PKPbc	14 25 37.8	+0.3
	baz=338,SNR=11						
W50A	Signal Mountai	149.74	21	*e*PKPbc	PKPbc	14 25 37.2	-0.4
W50A	Signal Mountai	149.74	21	P	PKPbc	14 25 37.5	-0.1
	baz=335						
X48A	Hartselle	149.75	24	*e*PKPbc	PKPbc	14 25 36.9	-0.7
X48A	Hartselle	149.75	24	P	PKPbc	14 25 37.6	+0.1
	baz=331						
U55A	TA2, Sparta	149.77	13	P	PKPbc	14 25 37.5	-0.2
	baz=344						
CPCT	Cooper Cave	149.78	19	*e*PKPbc	PKPbc	14 25 37.5	-0.1
TKL	Tuckaleechee C	149.83	18	*e*PKPbc	PKPbc	14 25 37.5	-0.2
TKL	Tuckaleechee C	149.83	18	*e*PKP2	PKPbc	14 25 37.5	-0.2
W51A	Cleveland	149.97	20	P	PKPbc	14 25 38.1	0.0
	baz=336						
X49A	Woodville	149.98	23	P	PKPbc	14 25 38.2	+0.1
	baz=332						
145A	Houston Renfro	150.01	30	P	PKPbc	14 25 38.5	+0.3
	baz=324						
VBMS	Vicksburg	150.02	31	P	PKPbc	14 25 38.4	+0.2
	baz=323						
V53A	Saluda	150.10	17	*e*PKPbc	PKPbc	14 25 37.9	-0.5
V53A	Saluda	150.10	17	P	PKPbc	14 25 38.6	+0.1
	baz=340						
Y48A	Jasper	150.17	25	P	PKiKP	14 25 39.0	-0.4
	baz=330						
V54A	Nebo	150.24	15	P	PKPbc	14 25 38.9	+0.2
	baz=341						
LVC	Limon Verde	150.24	187	PKPbc	PKiKP	14 25 40.5	+0.2
	comp=Z,2.3nm,0.5s,baz=270,slow=3.0,SNR=3.1						
W52A	Murphy	150.30	19	P	PKPbc	14 25 39.1	+0.2
	baz=337						
V55A	Taylorsville	150.35	14	P	PKiKP	14 25 39.3	-0.4
	baz=343						
W53A	Cullowhee	150.47	17	P	PKiKP	14 25 39.7	-0.4
	baz=339						
X51A	Calhoun	150.47	21	P	PKPbc	14 25 39.5	+0.2
	baz=335						
Y49A	Blount Mountai	150.52	24	*e*PKPbc	PKPbc	14 25 39.0	-0.5
Y49A	Blount Mountai	150.52	24	P	PKPbc	14 25 39.6	+0.2
	baz=332						
147A	Livingston	150.75	27	*e*PKPbc	PKPbc	14 25 39.7	-0.3
147A				*e*PKPab	PKPab	14 25 47.9	+0.5
147A	Livingston	150.75	27	P	PKiKP	14 25 40.3	-0.3
	baz=327						
Y50A	Piedmont	150.76	22	P	PKiKP	14 25 40.3	-0.3
	baz=333						
X52A	Dahlonega	150.76	19	P	PKPbc	14 25 39.5	-0.5
	baz=337						
W54A	Cherokee Point	150.82	16	P	PKiKP	14 25 40.5	-0.2
	baz=341						
KMSC	Kings Mountain	150.99	15	*e*PKPbc	PKPbc	14 25 40.4	-0.1
KMSC	Kings Mountain	150.99	15	P	PKiKP	14 25 40.8	-0.3
	baz=342						
Y51A	Rockmart	151.00	21	P	PKiKP	14 25 40.8	-0.3
	baz=334						
LRAL	Lakeview Retre	151.00	25	P	PKiKP	14 25 40.8	-0.3
	baz=330						
X53A	Estanollee	151.04	18	P	PKiKP	14 25 41.3	+0.1
	baz=338						
Z49A	Columbiana	151.06	24	P	PKiKP	14 25 41.0	-0.2
	baz=331						
PAULI	Pauline	151.17	16	*e*PKPbc	PKPbc	14 25 40.1	-0.8
Z50A	Ashland	151.25	23	*e*PKPab	PKPab	14 25 49.3	-0.2
Z50A	Ashland	151.25	23	P	PKPbc	14 25 41.3	+0.1
	baz=332						
X54A	Belton	151.28	17	P	PKiKP	14 25 41.7	0.0
	baz=340						
Y52A	Lilburn	151.38	20	*e*PKPbc	PKiKP	14 25 41.9	0.0
Y52A	Lilburn	151.38	20	P	PKiKP	14 25 42.2	+0.3
	baz=336						
149A	Jones	151.46	25	P	PKiKP	14 25 42.2	+0.1
	baz=330						
Z51A	Franklin	151.48	22	P	PKiKP	14 25 42.2	+0.1
	baz=334						
Y53A	Monroe	151.55	19	P	PKiKP	14 25 42.3	+0.1
	baz=337						
X55A	Gracelyn & Ava	151.55	16	P	PKiKP	14 25 42.2	0.0
	baz=341						
X56A	White Oak	151.69	15	P	PKiKP	14 25 42.3	-0.2
	baz=342						
150A	Eclectic	151.78	24	P	PKiKP	14 25 42.4	-0.3
	baz=331						
Y54A	Tignall	151.82	18	P	PKiKP	14 25 43.0	+0.2
	baz=339						
249A	Camden	151.85	27	P	PKiKP	14 25 43.4	+0.5
	baz=329						
Z52A	Williamson	151.87	21	P	PKiKP	14 25 43.1	+0.2
	baz=335						
Y55A	Saluda	151.99	16	P	PKiKP	14 25 43.2	+0.1
	baz=340						
Z53A	Monticello	152.08	20	P	PKiKP	14 25 43.5	+0.1
	baz=337						
151A	Opelika	152.12	23	P	PKiKP	14 25 43.5	+0.1
	baz=333						
X59A	McDuffie Farm,	152.13	10	P	PKiKP	14 25 43.4	0.0
	baz=348						
250A	Grady	152.22	25	P	PKPbc	14 25 43.3	0.0
	baz=330						
152A	Waverly Hall	152.23	22	*e*PKPbc	PKPbc	14 25 42.9	-0.5
152A	Waverly Hall	152.23	22	P	PKiKP	14 25 43.6	-0.1
	baz=334						
Z54A	Sparta	152.36	18	P	PKiKP	14 25 44.1	+0.2
	baz=338						
251A	Midway	152.47	24	P	PKiKP	14 25 44.2	0.0
	baz=332						
BRAL	Brewton	152.57	27	P	PKiKP	14 25 44.9	+0.5
	baz=328						
Z55A	Blythe	152.59	17	P	PKiKP	14 25 45.0	+0.6
	baz=340						
Z57A	Bowman	152.91	15	P	PKiKP	14 25 45.7	+0.7
	baz=342						
SIV	San Ignacio	154.31	207	PKPbc	PKiKP	14 25 49.7	+1.3
	comp=Z,0.6nm,0.8s,baz=195,slow=4.4,SNR=4.8						
SIV				PKPab	PKPab	14 26 03.9	+1.1
	comp=Z,2.4nm,0.7s,baz=142,slow=5.7,SNR=8.7						
LPAZ	La Paz	156.32	191	PKPab	PKPab	14 26 14.2	+2.2
	comp=Z,0.9nm,0.6s,baz=38,slow=3.8,SNR=3.9						

*ISK **26** 14:34:37.4, 37°.00N×36°.18E, h21^{km}, ML2.3/3*
*DDA **26** 14:34:41.6, 37°.42N×36°.42E, h7^{km}±5^{km}, ML2.6*
ISC 26 14:34:41.6±1.0, **37°.39N**±0°.03×**36°.37E**±0°.03, **h12**^{km}±8^{km}, **n12,** σ**0^{s}.73**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	Andirin	0.19	355	*i* P	Pg	14 34 46.0	0.0
ANDN				*i* S	Sg	14 34 49.9	+0.8
ANDN				IAML_P			
	comp=Z,2µm,0.1s						
HCB	Kahramanmara	0.43	96	*i* P	Pg	14 34 49.5	-0.7
HCB				IAML_P			
	comp=Z,1µm,0.1s						
KOZT	Kozan	0.44	282	PG	Pg	14 34 49.6	-0.7
KOZT				SG	Sb	14 34 57.2	-0.7
SAIM	ADANA	0.63	339	*i* P	Pb	14 34 54.4	-0.2
SAIM				*i* S	Sb	14 35 03.4	0.0
SAIM				IAML_P			
	comp=Z,863nm,0.1s						
GAZ	Gaziantep	0.71	107	PG	Pg	14 34 54.2	-1.1
GAZ				SG	Sb	14 35 06.5	+0.9
AKO	Adana	0.74	276	*i* P	Pg	14 34 55.9	0.0
AKO				*i* S	Sn	14 35 08.2	-0.8
AKO				IAML_P			
	comp=Z,776nm,0.2s						
KUZU	Kuzuini	0.83	137	*i* P	Pn	14 34 58.8	-0.4
KUZU				*i* S	Sg	14 35 08.1	-0.6
KUZU				IAML_P			
	comp=Z,2µm,0.1s						
GZT	Gaziantep	0.95	92	*i* P	Pb	14 35 00.4	+0.2
GZT				*i* S	Sn	14 35 15.2	+0.7
GZT				IAML_P			
	comp=Z,1µm,0.1s						
YAHY	KAYSERI_Yahyal	1.06	312	*i* P	Pn	14 35 03.0	+0.5
YAHY				IAML_P			
	comp=Z,246nm,0.3s						
YAYL	Yayladag	1.37	189	*i* P	Pg	14 35 09.2	+1.4
YAYL				*i* S	Sg	14 35 25.1	-0.6
DARE	Darende-Malaty	1.47	36	PN	Pb	14 35 09.1	+0.1
AKCD	Akcadag	1.53	53	*i* P	Pn	14 35 09.3	+0.5
AKCD				*i* S	Sg	14 35 30.6	-0.3
AKCD				IAML_P			
	comp=Z,373nm,0.1s						

IDC 26 14:35:37.9±3.1, **27°.90S**×**176°.56W**, **h0**^{km}, **mb3.5**/2, **mb1 3.7**/2, **mb1mx3.5**/22, **mbtmp3.5**/2, **Error ellipse: s-maj=85.5km s-min=38.8km az=124.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.80	221	Pn	Pn	14 36 09.4	-0.7
	229nm,0.3s,baz=341,slow=22,SNR=15						
RAO				Sn	Sn	14 36 31.1	-2.7
	751nm,0.3s,baz=30,slow=20,SNR=13						
ASAR	Alice Springs	44.57	264	P	P	14 43 52.5	+0.6
	0.4nm,0.8s,baz=104,slow=8.1,SNR=7.0						
WRA	Warramunga Arr	45.34	269	P	P	14 43 57.7	-0.4
	0.1nm,0.4s,baz=107,slow=7.8,SNR=7.5						
AKASG	Malin Array Be	150.00	326	PKPbc	PKPbc	14 55 29.5	-0.5
	0.4nm,0.4s,baz=42,slow=3.0,SNR=3.6						

MEX 26 14:37:28.4±0.6, **15°.96N**×**98°.54W**, **h1**^{km}, **MD3.8, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.59	42	*e*P	Pg	14 37 39.8	0.0
PNIG				*e*S	Sg	14 37 47.5	+0.1

*IDC **26** 14:42:27.7±1.2, 13°.17N×95°.71E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.5/49, mbtmp3.7/7, ML3.7/1, MS3.1/3, Ms1 3.2/3, ms1mx2.7/39, Error ellipse: s-maj=54.1km s-min=18.6km az=59.0*
*NEIC **26** 14:42:29.4±0.4, 13°.23N×95°.81E, h10^{km}, mb4.5/2, Error ellipse: s-maj=10.0km s-min=7.2km az=74.0*
*ISCJB **26** 14:42:31.2±0.7, 13°.30N±0°.08×96°.0E±0°.1, h33^{km}, mb4.0/10, MS3.2/2, Error ellipse: s-maj=15.4km s-min=10.9km az=164.0*
ISC 26 14:42:33.2±1.3, **13°.3N**±0°.1×**95°.9E**±0°.2, **h35**^{km}, **n19,** σ**0^{s}.57**/17, **mb3.8**/10, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC

PBKT	Sadao Pong	5.92	56	ePn	Pn	14 43 58.8	+0.4
CM31	Chiang Mai Arr	5.93	30	ePn	Pn	14 43 58.0	-0.6
CMAR	Chiang Mai Arr	5.93	30	Pn	Pn	14 43 58.4	-0.2
	0.4nm,0.3s,baz=221,slow=15,SNR=25						
CHTO	Chiang Mai	6.24	28	ePn	Pn	14 44 02.1	-0.7
BRDH	Bariadhala	10.15	337	LR	LR	14 48 42.5	
	comp=Z,80nm,21.9s,baz=147,slow=37						
DAV	Davao City (W)	29.89	99	LR	LR	15 01 40.5	
	comp=Z,38nm,20.7s,baz=298,slow=38						
MK31	Makanchi Array	35.28	344	eP	P	14 49 25.2	+0.5
	1.4nm,1.1s						
MK32	Makanchi Array	35.28	344	eP	P	14 49 25.4	+0.7
MKAR	Makanchi Array	35.28	344	P	P	14 49 25.4	+0.7
	0.7nm,0.8s,baz=160,slow=9.6,SNR=9.2						
KURBB	Kurchatov Arra	39.81	343	P	P	14 50 03.6	+0.8
	44nm,0.7s,baz=156,slow=8.4,SNR=9.5						
ZALV	Zalesovo Beam	41.48	350	P	P	14 50 17.4	+0.7
	0.6nm,0.4s,baz=184,slow=10,SNR=4.1						
ZAA1	Zalesovo Array	41.48	350	eP	P	14 50 17.4	+0.7
WR1	Warramunga Arr	50.25	130	eP	P	14 51 26.0	-0.3
	56nm,1.9s						
WRA	Warramunga Arr	50.25	130	P	P	14 51 26.0	-0.3
	0.7nm,1.0s,baz=311,slow=8.1,SNR=7.6						
AS31	Alice Springs	52.29	134	eP	P	14 51 41.2	-0.4
	1.5nm,1.3s						
ASAR	Alice Springs	52.29	134	P	P	14 51 41.6	0.0
	0.4nm,0.5s,baz=311,slow=7.1,SNR=16						
HFS	Hagfors	74.67	329	P	P	14 54 08.9	-0.1
	1.4nm,0.5s,baz=104,slow=6.3,SNR=5.7						
NB200	NORSAR Array S	75.88	330	eP	P	14 54 15.6	-0.4
NOA	NORSAR Array B	75.88	330	P	P	14 54 15.6	-0.4
	0.6nm,0.6s,baz=95,slow=5.4,SNR=2.8						
NOA				LR	LR	15 31 06.9	
	comp=Z,20nm,18.2s,baz=15,slow=38						

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*ISCJB **26** 14:53:50.6±0.5, 49°.56N±0°.04×156°.06E±0°.09, h54km, mb3.8/12, Error ellipse: s-maj=10.0km s-min=3.6km az=33.4*

*MOS **26** 14:53:50.4±0.8, 49°.52N×156°.09E, h52km, mb4.2/5, Error ellipse: s-maj=16.7km s-min=4.4km az=73.9*

*IDC **26** 14:53:51.8±0.7, 49°.60N×155°.91E, h48km±7km, mb3.3/10, mb1 3.6/13, mb1mx3.4/53, mbtmp3.6/13, MS2.7/2, Ms1 2.7/2, ms1mx2.5/27, Error ellipse: s-maj=20.6km s-min=14.1km az=136.0*

*KRSC **26** 14:53:52.0±2.2, 49°.69N×156°.70E, h39km±30km, ML4.5*

ISC 26 14:53:52.1±0.6, **49°.54N**±0°.07×**156°.25E**±0°.07, **h54km, n75,** σ1s.58/93, **mb3.6**/12, **3C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.15	356	eP	Pn	14 54 10.2	-1.6
SKR				eS	Sn	14 54 24.2	-2.3
SKR	Severo-Kuril's	1.15	356	PN	Pn	14 54 10.2	-1.6
SKR				S	Sn	14 54 24.2	-2.3
ALID	Alaid	1.41	342	eP	Pn	14 54 14.4	-1.1
ALID				eS	Sn	14 54 32.7	-0.3
PAU	Pauzhetka	1.96	10	eP	Pn	14 54 22.2	-0.7
PAU				eS	Sn	14 54 45.7	-0.7
PAU	Pauzhetka	1.96	10	PN	Pn	14 54 22.2	-0.7
PAU				S	Sn	14 54 45.7	-0.7
KDTR	Khodutka, Kamc	2.56	26	eP	Pn	14 54 30.1	-0.9
KDTR				eS	Sn	14 54 57.2	-3.6
KDTR	Khodutka, Kamc	2.56	26	PN	Pn	14 54 30.1	-0.9
KDTR				S	Sn	14 54 57.2	-3.6
MTVR	Mutnovka	3.19	22	eP	Pn	14 54 40.5	+0.7
MTVR				eS	Sn	14 55 15.6	-1.1
MTVR	Mutnovka	3.19	22	PN	Pn	14 54 40.5	+0.7
MTVR				S	Sn	14 55 15.6	-1.1
RUS	Russkaya	3.23	25	eP	Pn	14 54 40.1	-0.1
RUS				eS	Sn	14 55 14.7	-2.8
RUS	Russkaya	3.23	25	PN	Pn	14 54 40.1	-0.1
RUS				S	Sn	14 55 14.7	-2.8
APC	Apacha	3.44	9	P	Pn	14 54 43.2	+0.1
APC	Apacha	3.44	9	PN	Pn	14 54 43.2	+0.1
KRMR	Karymshinskiy	3.50	19	eP	Pn	14 54 45.2	+1.3
KRMR				S	Sn	14 55 24.1	0.0
KRMR	Karymshinskiy	3.50	19	PN	Pn	14 54 45.2	+1.3
KRMR				S	Sn	14 55 24.1	0.0
PETK	Petropavlovsk-	3.69	14	P	Pn	14 54 47.5	+0.9
	2.0nm,0.3s,baz=212,slow=12,SNR=83						
PETK				LR	LR	14 56 22.0	
	comp=Z,102nm,19.3s,baz=203,slow=41						
PET	Petropavlovsk	3.80	22	eP	Pn	14 54 49.1	+1.1
PET	Petropavlovsk	3.80	22	PN	Pn	14 54 49.1	+1.1
PET				S	Sn	14 55 31.9	+0.5
DALK	Dalny	3.83	23	eP	Pn	14 54 48.5	0.0
DALK				eS	Sn	14 55 32.0	-0.2
DALK	Dalny	3.83	23	PN	Pn	14 54 48.5	0.0
DALK				S	Sn	14 55 32.0	-0.2
UGLR	Uglovaya	4.01	23	eP	Pn	14 54 52.2	+1.1
UGLR	Uglovaya	4.01	23	PN	Pn	14 54 52.2	+1.1
AVH	Avacha	4.04	22	eP	Pn	14 54 52.9	+1.5
AVH	Avacha	4.04	22	PN	Pn	14 54 52.9	+1.5
KOK	Koryaka	4.05	21	eP	Pn	14 54 53.4	+1.9
KOK	Koryaka	4.05	21	PN	Pn	14 54 53.4	+1.9
SMAR	Somma	4.06	22	eP	Pn	14 54 54.0	+2.2
SMAR	Somma	4.06	22	PN	Pn	14 54 54.0	+2.2
SDLR	Sedlovina	4.09	23	eP	Pn	14 54 52.7	+0.6
SDLR	Sedlovina	4.09	23	PN	Pn	14 54 52.7	+0.6
KRX	Arik	4.11	21	eP	Pn	14 54 54.5	+2.1
KRX	Arik	4.11	21	PN	Pn	14 54 54.5	+2.1
NLC	Nalytchevo	4.12	27	S	Sn	14 55 35.3	-4.0
SPN	Mys Shipunski	4.28	32	eP	Pn	14 54 54.6	0.0
SPN				eS	Sn	14 55 41.3	-1.9
SPN	Mys Shipunski	4.28	32	PN	Pn	14 54 54.6	0.0
GNL	Ganaly	4.29	14	eP	Pn	14 54 56.5	+1.6
GNL	Ganaly	4.29	14	PN	Pn	14 54 56.5	+1.6
KII	Karymskiy	4.92	23	eP	Pn	14 55 05.4	+1.9
KII	Karymskiy	4.92	23	PN	Pn	14 55 05.4	+1.9
MKZ	Mys Kozlova	6.06	32	eP	Pn	14 55 17.8	-1.1
MKZ				eS	Sn	14 56 24.4	-2.4
MKZ	Mys Kozlova	6.06	32	PN	Pn	14 55 17.8	-1.1
KZV	Kizimen	6.11	22	P	Pn	14 55 22.6	+2.8
KZV	Kizimen	6.11	22	PN	Pn	14 55 22.6	+2.8
KUR	Kuril'sk	7.13	236	⇑ePN	Pn	14 55 34.4	+0.7
SHO	Shikotan	8.60	232	c iPN	Pn	14 55 49.8	-4.0
SHO				pmax	pmax		
	comp=N,9.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,10.0nm,0.2s						
SHO				pmax	pmax		
	comp=Z,21nm,0.2s						
YUK	Yuzh-Kuril'sk	9.00	236	⇓iPN	Pn	14 55 58.5	-0.7
GLVR	Golovnino	9.38	236	ePN	Pn	14 56 03.3	-1.1
MA2	Magadan	10.54	345	⇓ePN	Pn	14 56 19.5	-0.8
MA2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MA2	Magadan	10.54	345	P	Pn	14 56 19.3	-1.0
	comp=Z,0.5nm,0.3s,baz=168,slow=8.2,SNR=12						
MA2				LR	LR	15 01 02.5	
	comp=Z,41nm,20.1s,baz=166,slow=41						
ASAJ	Asahikawa	10.80	245	P	Pn	14 56 23.6	-0.3
	comp=Z,0.7nm,0.3s,baz=59,slow=10,SNR=11						
ERM	Erimo	11.82	235	⇑ePN	Pn	14 56 38.2	+0.4
SEY	Seymchan	13.59	352	⇓eP	Pn	14 57 02.6	+0.8
SEY	Seymchan	13.59	352	P	Pn	14 57 02.0	+0.2
	comp=Z,0.0nm,0.3s,baz=108,slow=13,SNR=2.2						
KLR	Kul'dur	15.94	278	P	P	14 57 35.0	-0.3
	comp=Z,0.1nm,0.3s,baz=195,slow=20,SNR=2.9						
BILL	Bilibino	19.22	11	eP	P	14 58 10.2	-1.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSRS	Korea Array	23.68	250	P	P	14 58 57.2	-1.4
	comp=Z,0.3nm,0.5s,baz=36,slow=9.9,SNR=5.5						
H11N2	WAKE ISLAND Hy	30.94	160	T	T	15 33 00.0	
	baz=347,slow=77,SNR=18						
H11N1	WAKE ISLAND Hy	30.95	160	T	T	15 33 01.3	
	baz=347,slow=77,SNR=19						
H11N3	WAKE ISLAND Hy	30.95	160	T	T	15 32 59.3	
	baz=347,slow=77,SNR=24						
H11S1	WAKE ISLAND Hy	32.08	161	T	T	15 34 20.6	
	baz=347,slow=76,SNR=180						
H11S3	WAKE ISLAND Hy	32.09	161	T	T	15 34 20.4	
	baz=347,slow=76,SNR=258						
H11S2	WAKE ISLAND Hy	32.10	161	T	T	15 34 18.8	
	baz=347,slow=76,SNR=153						
ILAR	Eielson Array	33.06	41	P	P	15 00 22.4	+0.4
	comp=Z,0.5nm,0.7s,baz=265,slow=6.1,SNR=7.4						
YKA	Yellowknife Ar	47.43	39	P	P	15 02 21.6	+1.0
	comp=Z,0.3nm,0.7s,baz=295,slow=7.4,SNR=5.4						
YKA				pP	pP	15 02 34.5	0.0
	comp=Z,0.5nm,0.7s,baz=299,slow=7.7,SNR=6.9						
MKAR	Makanchi Array	47.55	297	P	P	15 02 19.2	-2.7
	comp=Z,0.2nm,0.4s,baz=46,slow=5.3,SNR=5.0						
MKAR				PcP	PcP	15 03 52.8	+1.8
	comp=Z,0.1nm,0.4s,baz=44,slow=2.9,SNR=2.5						
KURK	Kurchatov	47.59	303	P	P	15 02 20.7	-1.4
KURK						15 03 50.1	
KURBB	Kurchatov Arra	47.69	303	P	P	15 02 20.7	-2.1
	comp=Z,50nm,0.7s,baz=66,slow=7.7,SNR=4.0						
KURBB				PcP	PcP	15 03 50.1	-1.3
	comp=Z,0.5nm,0.7s,baz=71,slow=3.3,SNR=5.3						
BVAR	Borovoye Array	50.72	309	P	P	15 02 43.4	-2.6
	comp=Z,0.3nm,0.3s,baz=50,slow=8.6,SNR=4.8						
CMAR	Chiang Mai Arr	55.05	257	P	P	15 03 18.5	+0.2
	comp=Z,1.0nm,0.8s,baz=36,slow=6.2,SNR=7.2						
PDAR	Pinedale Array	61.43	57	P	P	15 04 04.6	+1.7
	comp=Z,0.6nm,1.0s,baz=335,slow=4.0,SNR=3.2						
PDAR				pP	pP	15 04 18.1	+0.9
	comp=Z,0.6nm,0.9s,baz=292,slow=4.7,SNR=3.6						
FINES	FINESS Array B	62.39	336	i P	P	15 04 11.1	+2.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OBN	Obninsk	64.17	326	eP	P	15 04 20.5	0.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	71.86	202	P	P	15 05 08.7	-0.4
	comp=Z,0.7nm,0.8s,baz=16,slow=6.5,SNR=6.4						
TXAR	Lajitas Array	74.33	63	P	P	15 05 24.9	+1.0
	comp=Z,0.6nm,0.8s,baz=271,slow=3.7,SNR=5.8						
TXAR				pP	PcP	15 05 38.5	+0.1
	comp=Z,0.3nm,0.7s,baz=280,slow=5.6,SNR=2.9						
ASAR	Alice Springs	75.54	201	P	P	15 05 31.4	+0.8
	comp=Z,0.4nm,0.6s,baz=15,slow=5.6,SNR=8.1						
ASAR				pP	PcP	15 05 44.8	+1.4
	comp=Z,0.3nm,0.9s,baz=15,slow=5.3,SNR=1.7						

MEX 26 15:03:04.1±0.5, **16°.00N×98°.77W, h16km**±23km, **MD4.0, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.73	57	eP	Pg	15 03 15.7	-2.8
PNIG				eS	Sg	15 03 24.7	-3.5

IDC 26 15:04:31.7±3.3, **30°.39S×178°.51W, h0km, mb3.5**/2, **mb1 3.8**/2, **mb1mx3.5**/19, **mbtmp3.5**/2, **Error ellipse: s-maj=217.7km s-min=52.1km az=168.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.67	267	P	P	15 12 29.7	-0.7
	0.3nm,0.6s,baz=107,slow=7.7,SNR=10						
WRA	Warramunga Arr	43.65	272	P	P	15 12 38.8	+0.4
	0.5nm,0.5s,baz=112,slow=7.9,SNR=13						
FINES	FINESS Array B	144.98	340	PKP	PKPbc	15 24 09.6	+0.2
	2.5nm,0.9s,baz=8.6,slow=6.4,SNR=4.9						
BRTR	Keskin Array B	152.20	298	PKPbc	PKPbc	15 24 29.2	-0.2
	0.2nm,0.3s,baz=64,slow=3.4,SNR=2.7						

MEX 26 15:12:16.8±0.5, **15°.34N×93°.68W, h17km**±9km, **MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	1.76	58	eP	Pn	15 12 43.7	-3.0
CCIG				eS	Sn	15 13 00.7	-8.2
CMIG	Matias Romero	2.09	327	eP	Pn	15 12 47.8	-3.4
CMIG				eS	Sn	15 13 07.5	-9.2

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*ISCJB **26** 15:21:55.9±0.7, 21°.26S±0°.04×68°.8W±0°.1, h118km±8km, mb3.6/2, Error ellipse: s-maj=15.4km s-min=7.2km az=0.9*

*IDC **26** 15:21:56.9±1.1, 21°.33S×68°.36W, h107km±12km, mb3.5/3, mb1 3.7/5, mb1mx3.4/29, mbtmp4.0/5, Error ellipse: s-maj=34.9km s-min=16.1km az=120.0*

*GUC **26** 15:21:56.1±0.6, 21°.24S×68°.78W, h111km±4km, ML3.7*

ISC 26 15:21:56.0±0.9, **21°.23S**±0°.05×**68°.69W**±0°.09, **h109km**±9km, **n18,** σ1s.08/28, **7C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.76	222	⇑iP	Pn	15 22 15.5	+0.6
PB09				eS	Sn	15 22 29.8	+0.5
PB09				IAML		15 22 32.3	
	comp=E,2μm,0.2s						
PB01	IPOC Station P	0.77	284	⇑iP	Pn	15 22 14.8	-0.1
PB01				i S	Sn	15 22 29.1	-0.2
PB01				IAML		15 22 30.6	
	comp=N,3μm,0.3s						
PB02	IPOC Station P	1.13	265	⇑iP	Pn	15 22 18.7	+0.1
PB02				i S	Sn	15 22 35.5	-0.2
PB07	IPOC Station P	1.22	246	⇑iP	Pn	15 22 19.7	+0.1
PB07				i S	Sn	15 22 37.5	0.0
PB07				IAML		15 22 39.6	
	comp=E,2μm,0.4s						
PB03	IPOC Station P	1.28	230	⇑iP	Pn	15 22 20.5	+0.2
PB03				i S	Sn	15 22 38.6	-0.1
PB03				IAML		15 22 39.3	
	comp=N,2μm,0.3s						
LVC	Limon Verde	1.38	188	P	Pn	15 22 22.7	+0.9
	comp=N,59nm,0.3s,baz=17,slow=8.4,SNR=535						
LVC				S	Sn	15 22 41.4	+0.2
	comp=N,80nm,0.3s,baz=276,slow=19,SNR=47						
PB06	IPOC Station P	1.68	209	⇑iP	Pn	15 22 25.5	+0.4
PB06				i S	Sn	15 22 47.5	+0.3
PB06				IAML		15 22 51.9	
	comp=N,1μm,0.3s						
PB11	IPOC Station P	1.72	328	⇑iP	Pn	15 22 26.1	+0.4
PB11				i S	Sn	15 22 48.8	+0.7
PB04	IPOC Station P	1.74	231	eP	Pn	15 22 25.4	-0.5
PB04				eS	Sn	15 22 49.1	+0.5
PB04				IAML		15 22 53.1	
	comp=E,893nm,0.3s						
PB05	IPOC Station P	2.13	221	eP	Pn	15 22 30.5	-0.3
PB05				i S	Sn	15 22 55.7	-1.7
PB05				IAML		15 23 05.1	
	comp=E,554nm,0.3s						
LPAZ	La Paz	4.95	6	P	Pn	15 23 11.1	+2.4
	comp=E,1.2nm,0.3s,baz=201,slow=5.7,SNR=19						
SIV	San Ignacio	8.91	55	P	Pn	15 23 59.7	-2.2
	comp=E,3.4nm,0.3s,baz=250,slow=13,SNR=72						
BDFB	Brasilia	20.38	78	P	P	15 26 21.4	-2.9
	comp=E,2.9nm,0.5s,baz=181,slow=20,SNR=3.8						
TORD	Torodi Ar. Bea	77.08	70	P	P	15 33 37.6	-0.1
	comp=E,0.6nm,0.6s,baz=259,slow=5.9,SNR=4.4						
YKA	Yellowknife Ar	91.00	341	P	P	15 34 48.0	+0.7
	comp=E,0.3nm,0.5s,baz=131,slow=4.5,SNR=7.7						
ASAR	Alice Springs	130.24	207	PKP	PKPdf	15 40 54.9	+0.7
	comp=E,0.1nm,0.5s,baz=125,slow=1.4,SNR=4.1						
WRA	Warramunga Arr	133.28	210	PKP	PKPdf	15 41 00.7	+0.8
	comp=E,0.2nm,0.7s,baz=158,slow=1.8,SNR=3.8						
MKAR	Makanchi Array	145.30	36	PKPbc	PKPab	15 41 22.2	+1.1
	comp=E,3.0nm,1.0s,baz=311,slow=3.0,SNR=12						

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*IDC **26** 15:27:06.6±1.9, 0°.58S×132°.62E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.6/28, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=85.4km s-min=19.9km az=67.0*

*DJA **26** 15:27:09.1±1.0, 0°S±11°×13°3E±°, h15km±7km, M4.2/6, MLv4.2/6*

*ISCJB **26** 15:27:10.2±0.9, 0°.5S±0°.1×132°.59E±0°.06, h33km, mb3.6/4, Error ellipse: s-maj=15.9km s-min=7.5km az=13.6*

ISC 26 15:27:11.6±1.0, **0°.6S**±0°.1×**132°.55E**±0°.06, **h33km, n9,** σ0s.83/11, **mb3.8**/4, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWI	Sorong	1.33	257	P	Pn	15 27 33.8	0.0
SWI				S	Sb	15 27 52.7	0.0
RKPI	Ransiki, Papua	1.88	120	P	Pn	15 27 41.5	0.0
RKPI				S	Sn	15 28 05.7	+1.6
FAKI	Fak Fak	2.37	187	P	Pn	15 27 48.7	+0.5
SRPI	Serui, Papua	3.91	110	P	Pn	15 28 08.9	-0.5
SRPI				Sg	Sb	15 29 19.0	+12
WRA	Warramunga Arr	19.35	175	P	P	15 31 33.9	-0.6
	0.1nm,0.3s,baz=355,slow=12,SNR=11						
ASAR	Alice Springs	23.02	177	P	P	15 32 13.3	-0.6
	1.3nm,0.6s,baz=355,slow=9.1,SNR=20						
STKA	Stephens Creek	32.31	166	P	P	15 33 36.5	-1.1
	1.8nm,1.0s,baz=348,slow=14,SNR=2.2						
CMAR	Chiang Mai Arr	38.05	302	P	P	15 34 27.3	0.0
	0.3nm,0.7s,baz=126,slow=6.0,SNR=4.1						
MKAR	Makanchi Array	64.39	324	P	P	15 37 45.2	+0.8
	0.9nm,0.6s,baz=116,slow=7.8,SNR=14						

IDC 26 15:35:39.4±4.0, **8°.34S×74°.22W, h132km**±56km, **mb3.0**/2, **mb1 3.4**/5, **mb1mx3.2**/30, **mbtmp3.7**/5, **Error ellipse: s-maj=115.8km s-min=17.5km az=34.0, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	4.30	286	P	Pn	15 36 44.2	+0.5
	21nm,0.3s,baz=104,slow=4.6,SNR=53						
ATAH				S	Sn	15 37 33.7	+0.2
	6.8nm,0.3s,baz=17,slow=22,SNR=4.6						
LPAZ	La Paz	9.89	144	P	Pn	15 37 57.9	-1.0
	0.1nm,0.3s,baz=191,slow=10,SNR=2.8						
SIV	San Ignacio	14.93	122	P	P	15 39 05.6	-0.7
	0.2nm,0.3s,baz=306,slow=14,SNR=10						
TXAR	Lajitas Array	46.98	324	P	P	15 43 58.7	+1.2
	0.4nm,0.8s,baz=159,slow=8.0,SNR=4.0						
YKA	Yellowknife Ar	77.15	342	P	P	15 47 17.1	-1.0
	0.2nm,0.4s,baz=140,slow=6.6,SNR=6.2						
WRA	Warramunga Arr	140.25	225	PKP	PKPdf	15 54 54.6	+1.0
	0.3nm,0.8s,baz=126,slow=2.6,SNR=3.9						

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*ISCJB **26** 15:40:01.1±1.3, 38°.93N±0°.04×142°.55E±0°.08, h24km±6km, Error ellipse: s-maj=10.2km s-min=6.1km az=15.9*

*JMA **26** 15:40:03.3±0.1, 38°.96N×142°.44E, h33km±2km, M3.4*

*IDC **26** 15:40:04.3±2.9, 39°.04N×142°.78E, h48km±27km, mb3.2/2, mb1 3.3/4, mb1mx3.0/47, mbtmp3.3/4, ML2.4/2, Error ellipse: s-maj=46.5km s-min=19.1km az=96.0*

ISC 26 15:40:02.2±1.3, **38°.98N**±0°.05×**142°.46E**±0°.09, **h21km**±4km, **n23,** σ0s.96/29, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.62	279	P	Pn	15 40 15.5	-0.3
OFUJ				S	Sn	15 40 24.0	-1.1
MIYJ	Miyakonagasawa	0.77	320	P	Pn	15 40 17.6	-0.3
MIYJ				S	Sb	15 40 27.8	+0.8
JKMT	Kesennumamotoy	0.79	258	P	Pn	15 40 17.6	-0.4
JKMT				S	Sb	15 40 27.6	+0.2
JMK	Ichinoseki	0.97	269	P	Pn	15 40 20.5	0.0
JMK				S	Sb	15 40 32.7	+0.2
JIO	Ouri	1.02	239	P	Pb	15 40 20.5	-0.5
JIO				S	Sb	15 40 32.6	-1.3
JOM	Ohasama	1.03	299	P	Pn	15 40 21.8	+0.4
JOM				S	Sn	15 40 35.1	-0.1
JTH	Tanohata	1.06	334	P	Pn	15 40 22.1	+0.3
JTH				eS	Sn	15 40 36.2	+0.3
JKZ	Kuzumaki	1.33	319	P	Pb	15 40 26.5	+0.1
JKZ				S	Sn	15 40 42.9	+0.3
JRG	Rokugo	1.48	287	P	Pb	15 40 28.9	0.0
JRG				S	Sb	15 40 47.8	+0.6
JOU	Okura	1.53	247	P	Pn	15 40 28.4	0.0
JOU				eS	Sn	15 40 47.7	0.0
JANG	Nango	1.57	333	P	Pb	15 40 29.8	-0.7
JANG				S	Sb	15 40 50.4	+0.6
JYK	Kaneyama	1.64	268	P	Pb	15 40 30.9	-0.8
MJAR	Matsushiro Arr	4.16	235	P	Pn	15 41 08.2	+3.8
	0.2nm,0.3s,baz=34,slow=13,SNR=11						
ASAJ	Asahikawa	5.13	1	P	Pn	15 41 18.1	+0.4
	0.1nm,0.3s,baz=121,slow=12,SNR=4.5						
ASAJ				S	Sn	15 42 15.7	-0.7
	0.2nm,0.3s,baz=338,slow=19,SNR=1.9						
H11N2	WAKE ISLAND Hy	28.52	125	T	T	16 15 58.8	
	baz=318,slow=75,SNR=17						
H11N1	WAKE ISLAND Hy	28.53	125	T	T	16 15 55.9	
	baz=318,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	28.53	125	T	T	16 16 02.9	
	baz=318,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	29.30	127	T	T	16 17 20.4	
	baz=319,slow=76,SNR=3.8						
H11S3	WAKE ISLAND Hy	29.30	127	T	T	16 17 20.7	
	baz=319,slow=76,SNR=6.0						
H11S2	WAKE ISLAND Hy	29.32	127	T	T	16 17 23.1	
	baz=319,slow=76,SNR=2.9						
MKAR	Makanchi Array	43.81	301	P	P	15 48 06.8	+0.3
	0.3nm,0.7s,baz=79,slow=7.5,SNR=4.4						
KURBB	Kurchatov Arra	45.48	307	P	P	15 48 20.0	+0.3
	46nm,0.6s,baz=82,slow=8.0,SNR=6.0						
WRA	Warramunga Arr	59.11	189	P	P	15 50 00.0	-1.1
	1.4nm,1.2s,baz=6.2,slow=6.8,SNR=7.6						

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*SOME **26** 15:46:11.4, 39°.12N×74°.52E, h5km*

*BJI **26** 15:46:12.5, 39°.12N×74°.41E, h11km, mb3.9/7, ML3.8/4, Ms3.4/2*

*KRNET **26** 15:46:12.7±0.1, 39°.18N×74°.46E, mb4.1*

*IDC **26** 15:46:12.6±1.1, 39°.03N×74°.49E, h0km, mb3.7/9, mb1 3.9/15, mb1mx3.7/43, mbtmp3.8/15, ML3.5/6, MS3.1/7, Ms1 3.1/7, ms1mx2.8/49, Error ellipse: s-maj=19.3km s-min=15.4km az=142.0*

*NNC **26** 15:46:14.9±1.5, 39°.23N×74°.41E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=11.8km s-min=5.3km az=12.0*

*NEIC **26** 15:46:19.5±0.8, 39°.20N×74°.58E, h48km±17km, mb4.2/2, Error ellipse: s-maj=11.6km s-min=7.7km az=142.0*

ISC 26 15:46:14.2±0.5, **39°.26N**±0°.03×**74°.45E**±0°.03, **h10km, n116,** σ2s.72/145, **mb3.8**/10, **MS3.4**/3, **43C-21D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.04	316	⇓P	Pg	15 46 33.7	-0.6
	161nm,0.4s						
SFK				⇑S	Sn	15 46 50.2	+0.3
	308nm,0.5s						
SFK	Sufi-Kurgan	1.04	316	Pg	Pg	15 46 33.7	-0.6
	162nm,0.3s						
SFK				Lg	Lg	15 46 50.4	
	201nm,0.3s						
SFK	Sufi-Kurgan	1.04	316	⇓iP	Pg	15 46 33.7	-0.6
	baz=19						
SFK				⇓iS	Sn	15 46 50.3	+0.3
	baz=19						
KSH	Kashi	1.21	77	Pg	Pb	15 46 28.0	-9.3
KSH				Sg	Sb	15 46 38.0	-15
KSH				smax	smax		
	comp=N,2μm,0.5s						
KSH				smax	smax		
	comp=E,4μm,1.1s						
DRK	Karamyk	2.06	277	⇑iP	Pb	15 46 51.3	-0.6
	baz=79						
DRK				⇑iS	Sg	15 47 19.4	-1.1
	baz=79						
ARSB	Arslanbob	2.34	332	⇑eP	Pb	15 46 56.1	-0.5
	baz=33						
ARSB				⇑iS	Sb	15 47 27.2	+1.5
	baz=33						
NRN	Naryn	2.47	28	⇑iP	Pb	15 46 57.3	-1.6
	baz=27						
NRN				⇑iS	Sb	15 47 30.0	+0.4
	baz=27						
ARLS	Aral	2.60	358	⇓iP	Pb	15 46 59.5	-1.5
	baz=58						
ARLS				⇓iS	Sb	15 47 33.6	+0.6
	baz=58						
KZA	Kyzart	2.88	12	P	Pb	15 47 04.4	-1.5
	SNR=18						
KZA	Kyzart	2.88	12	⇑iP	Pb	15 47 03.7	-2.2
	baz=11						
KZA				⇑iS	Sb	15 47 40.5	-0.8
	baz=11						
AML	Almayashu	2.92	349	P	Pb	15 47 05.5	-1.1
	SNR=139						
AML	Almayashu	2.92	349	⇑iP	Pb	15 47 04.3	-2.3
	baz=49						
AML				⇑iS	Sb	15 47 41.7	-0.9
	baz=49						
UCH	Uchtor	2.96	1	P	Pb	15 47 06.3	-1.1
	SNR=87						
UCH	Uchtor	2.96	1	⇑iP	Pb	15 47 04.7	-2.7
	baz=1.0						
UCH				⇑iS	Sb	15 47 42.5	-1.3
	baz=1.0						
ARK	Arkit	3.16	324	⇑iP	Pn	15 47 06.6	+2.5
	baz=25						
ARK				⇑iS	Sn	15 47 45.8	+3.8
	baz=25						
GAR	Garm	3.22	267	ePn	Pb	15 47 09.0	-2.6
ULHL	Ulahol	3.28	24	P	Pb	15 47 10.2	-2.4
	SNR=7.7						

ULHL	**Ulahol**	**3.28**	**24**	⇑*e*P	**Pb**	**15 47 08.8**	**-3.8**
	baz=23						
ULHL				⇑*i*S	**Sb**	**15 47 49.6**	**-3.0**
	baz=23						
AAK	**Ala-Archa**	**3.37**	**1**	P	**Pb**	**15 47 13.6**	**-0.5**
	SNR=32						
AAK	**Ala-Archa**	**3.37**	**1**	*e*Pn	**Pb**	**15 47 11.7**	**-2.5**
AAK	**Ala-Archa**	**3.37**	**1**	⇑Pn	**Pb**	**15 47 13.1**	**-1.0**
	22nm,0.4s						
AAK				⇑Lg	Lg	15 48 01.4	
	157nm,0.9s						
AAK	**Ala-Archa**	**3.37**	**1**	⇑*i*P	**Pn**	**15 47 10.2**	**+3.1**
	baz=0.0						
AAK				⇑*i*S	**Sb**	**15 47 52.2**	**-3.1**
	baz=0.0						
AAK	**Ala-Archa**	**3.37**	**1**	Pn	**Pb**	**15 47 12.2**	**-1.9**
	5.1nm,0.3s,baz=157,slow=7.0,SNR=77						
AAK				Lg	Lg	15 48 02.3	
	7.6nm,0.3s,baz=277,slow=23,SNR=10						
AAK				LR	LR	15 48 41.0	
	comp=Z,137nm,20.3s,baz=180,slow=41						
KBK	**Karagaybulak**	**3.41**	**6**	P	**Pb**	**15 47 12.4**	**-2.5**
	SNR=56						
KBK	**Karagaybulak**	**3.41**	**6**	⇑*e*P	**Pb**	**15 47 10.9**	**-4.0**
	baz=6.0						
KBK				⇑*i*S	**Sb**	**15 47 52.8**	**-3.7**
	baz=6.0						
BOOM	**Boomskoye usch**	**3.42**	**19**	⇑*i*P	**Pn**	**15 47 10.7**	**+3.0**
	baz=18						
BOOM				⇑*i*S	**Sb**	**15 47 53.1**	**-3.5**
	baz=18						
EKS2	**Erkin-Say**	**3.43**	**352**	P	**Pb**	**15 47 13.6**	**-1.6**
	SNR=26						
EKS2	**Erkin-Say**	**3.43**	**352**	⇑*i*P	**Pn**	**15 47 11.0**	**+3.1**
	baz=52						
EKS2				⇑*i*S	**Sb**	**15 47 53.6**	**-3.4**
	baz=52						
KDJ	**Kajisay**	**3.54**	**35**	⇓*e*P	**Pn**	**15 47 12.0**	**+2.6**
	baz=34						
KDJ				⇓*i*S	**Sb**	**15 47 55.6**	**-4.5**
	baz=34						
MNAS	**Manas**	**3.54**	**336**	⇑Pn	**Pb**	**15 47 13.6**	**-3.5**
	40nm,0.4s						
MNAS				⇑Lg	Lg	15 48 06.2	
	112nm,1.1s						
MNAS	**Manas**	**3.54**	**336**	Pg	**Pg**	**15 47 19.8**	**-2.3**
	35nm,0.3s						
MNAS				Lg	Lg	15 48 09.1	
	37nm,1.2s						
MNAS	**Manas**	**3.54**	**336**	⇓*e*P	**Pn**	**15 47 12.4**	**+3.0**
	baz=36						
MNAS				⇓*i*S	**Sb**	**15 47 56.3**	**-3.8**
	baz=36						
FRU1	**Bishkek**	**3.55**	**2**	⇑*e*P	**Pn**	**15 47 12.4**	**+3.0**
	baz=2.0						
FRU1				⇑*i*S	**Sb**	**15 47 56.3**	**-3.9**
	baz=2.0						
MRKS	**Merke**	**3.60**	**346**	Pg	**Pg**	**15 47 20.7**	**-2.5**
	95nm,0.3s						
MRKS				Lg	Lg	15 48 10.3	
	49nm,0.5s						
MRKS	**Merke**	**3.60**	**346**	*e*P	**Pg**	**15 47 20.7**	**-2.5**
	95nm,0.3s						
MRKS				*e*S	**Sg**	**15 48 10.3**	**+0.5**
	49nm,0.5s						
CHMS	**Chumysh**	**3.74**	**3**	P	**Pb**	**15 47 17.9**	**-2.4**
	SNR=14						
CHMS	**Chumysh**	**3.74**	**3**	⇓*e*P	**Pn**	**15 47 15.0**	**+3.0**
	baz=3.0						
CHMS				⇓*i*S	**Sn**	**15 48 00.9**	**+4.8**
	baz=3.0						
TKM2	**Tokmak 2**	**3.76**	**13**	P	**Pb**	**15 47 16.8**	**-3.9**
	SNR=42						
TKM2	**Tokmak 2**	**3.76**	**13**	⇑Pn	**Pb**	**15 47 16.7**	**-4.1**
	32nm,0.6s						
TKM2				⇑Sn	**Sb**	**15 48 02.9**	**-3.5**
	50nm,0.6s						
TKM2	**Tokmak 2**	**3.76**	**13**	⇓*e*P	**Pn**	**15 47 15.4**	**+3.0**
	baz=13						
TKM2				⇓*i*S	**Sn**	**15 48 01.6**	**+4.8**
	baz=13						
KST	**Kastek**	**3.95**	**16**	Pg	**Pb**	**15 47 25.9**	**+1.9**
	26nm,0.5s						
KST				Lg	Lg	15 48 18.8	
	94nm,0.6s						
KST	**Kastek**	**3.95**	**16**	*e*P	**Pb**	**15 47 25.9**	**+1.9**
	26nm,0.5s						
KST				*e*S	**Sg**	**15 48 18.9**	**-2.1**
	94nm,0.6s						
USP	**Ospenovka**	**4.00**	**1**	P	**Pb**	**15 47 22.1**	**-2.7**
	SNR=7.8						
USP	**Ospenovka**	**4.00**	**1**	⇑*i*P	**Pn**	**15 47 18.7**	**+3.1**
	baz=0.0						
USP				⇑*i*S	**Sn**	**15 48 07.2**	**+4.6**
	baz=0.0						
DGS	**Degeres**	**4.10**	**14**	Pg	**Pb**	**15 47 28.5**	**+2.0**
	82nm,0.5s						
DGS				Lg	Lg	15 48 23.5	
	140nm,0.7s						
DGS	**Degeres**	**4.10**	**14**	*e*P	**Pb**	**15 47 28.5**	**+2.0**
	82nm,0.5s						
DGS				*e*S	**Sg**	**15 48 23.4**	**-2.4**
	140nm,0.7s						
IZV	**Izvestkoviy**	**4.11**	**23**	Pg	**Pg**	**15 47 29.5**	**-3.4**
	39nm,0.9s						
IZV				Lg	Lg	15 48 26.9	
	112nm,0.8s						
IZV	**Izvestkoviy**	**4.11**	**23**	*e*P	**Pg**	**15 47 29.5**	**-3.4**
	39nm,0.9s						
IZV				*e*S	**Sg**	**15 48 26.9**	**+0.7**
	112nm,0.8s						
SGDS	**Sogindy**	**4.19**	**2**	Pg	**Pg**	**15 47 31.6**	**-2.9**
	42nm,0.6s						
SGDS				Lg	Lg	15 48 28.6	
	59nm,1.0s						
TNSS	**Tian-Shan**	**4.22**	**26**	*e*P	**Pg**	**15 47 32.2**	**-2.8**
	46nm,0.6s						
TNSS				*e*S	**Sg**	**15 48 29.5**	**-0.2**
	111nm,0.6s						
DZA	**Taraz**	**4.32**	**328**	Pg	**Pg**	**15 47 35.0**	**-2.0**
	75nm,0.4s						
DZA				Lg	Lg	15 48 34.8	
	93nm,0.7s						
AAA	**Alma-Ata**	**4.36**	**24**	Pg	**Pg**	**15 47 35.0**	**-2.8**
	56nm,0.1s						
AAA				Lg	Lg	15 48 35.2	
	86nm,0.6s						
AAA	**Alma-Ata**	**4.36**	**24**	*e*P	**Pg**	**15 47 35.0**	**-2.8**
	60nm,0.1s						
AAA				*e*S	**Sg**	**15 48 34.5**	**+0.3**
	48nm,0.6s						
MDOK	**Medeo**	**4.36**	**26**	Pn	Pb	15 47 25.3	-5.7
	4.1nm,0.5s						
MDOK				⇑Pg	**Pg**	**15 47 34.6**	**-3.2**
	42nm,0.9s						
MDOK				⇓Lg	Lg	15 48 32.1	
	87nm,0.7s						
MDOK	**Medeo**	**4.36**	**26**	*e*P	**Pg**	**15 47 34.0**	**-3.7**
	25nm,0.6s						
MDOK				*e*S	**Sg**	**15 48 33.4**	**-0.9**
	104nm,1.0s						
KNDC	**Almaty**	**4.38**	**25**	⇑Pg	**Pg**	**15 47 35.3**	**-2.9**
KNDC				⇑Lg	Lg	15 48 34.4	
IUG	**Iuzhnay**	**4.42**	**312**	Pg	**Pg**	**15 47 37.2**	**-1.6**
	180nm,1.0s						
IUG				Lg	Lg	15 48 38.8	
	120nm,0.7s						
IUG	**Iuzhnay**	**4.42**	**312**	*e*P	**Pg**	**15 47 37.2**	**-1.6**
	180nm,1.0s						
IUG				*e*S	**Sg**	**15 48 38.8**	**+2.6**
	120nm,0.7s						
KOTS	**Kotyrbulak**	**4.45**	**26**	Pg	**Pg**	**15 47 36.0**	**-3.4**
	35nm,0.5s						
KOTS				Lg	Lg	15 48 36.9	
	93nm,0.7s						
KOTS	**Kotyrbulak**	**4.45**	**26**	*e*P	**Pg**	**15 47 36.0**	**-3.4**
	35nm,0.5s						
KOTS				*e*S	**Sg**	**15 48 36.9**	**-0.1**
	93nm,0.7s						
KTBS	**Karatobe**	**4.75**	**20**	Pg	**Pb**	**15 47 40.5**	**+2.9**
	40nm,0.4s						
KTBS				Lg	Lg	15 48 45.8	
	84nm,0.7s						
KTBS	**Karatobe**	**4.75**	**20**	*e*P	**Pg**	**15 47 41.6**	**-3.6**
	27nm,0.7s						
KTBS				*e*S	**Sg**	**15 48 45.8**	**-0.9**
	84nm,0.7s						
KK31	**Karatay Array**	**4.85**	**324**	*e*Pn	**Pn**	**15 47 30.7**	**+3.5**
KK31	**Karatay Array**	**4.85**	**324**	⇓Pn	**Pn**	**15 47 31.1**	**+3.8**
	4.4nm,0.3s,baz=141,slow=13,SNR=71						
KK31				⇓Pg	**Pb**	**15 47 42.7**	**+3.4**
	9.3nm,0.5s						
KK31				⇑Sn	**Sb**	**15 48 31.0**	**-6.7**
	6.7nm,0.5s,baz=154,slow=14,SNR=8.1						
KK31				⇓Lg	Lg	15 48 49.5	
	24nm,0.7s,baz=149,slow=16,SNR=7.8						
KKAR	**Karatay Array**	**4.85**	**324**	*e*Pn	**Pn**	**15 47 30.8**	**+3.6**
PDGK	**Podgornoye**	**5.56**	**41**	⇓Pn	**Pn**	**15 47 39.4**	**+2.3**
	11nm,0.7s						
PDGK				⇓Pg	**Pb**	**15 47 55.0**	**+3.6**
	32nm,0.6s						
PDGK				⇑Lg	Lg	15 49 15.9	
	102nm,1.1s						
CHCP	**Chirah Chowk**	**5.67**	**190**	P	Pn	15 47 42.0	+3.4
NIL	**Nilore**	**5.68**	**190**	*e*Pn	**Pn**	**15 47 41.1**	**+2.4**
CEP	**Cherat**	**5.80**	**201**	P	**Pn**	**15 47 43.1**	**+2.7**
THW	**Thamme Wali**	**6.81**	**200**	P	Pn	15 47 57.6	+3.3
SARP	**Sargodha**	**7.47**	**192**	P	**Pn**	**15 48 05.0**	**+1.8**
OTUK	**Ortayu**	**9.11**	**351**	⇑Pn	**Pn**	**15 48 29.2**	**+3.5**
	2.0nm,0.6s						
OTUK				⇑Lg	Lg	15 51 04.5	
	23nm,0.8s						
MAKZ	**Makanchi**	**9.34**	**34**	*e*Pn	**Pn**	**15 48 32.0**	**+3.1**
MAKZ	**Makanchi**	**9.34**	**34**	⇓Pn	**Pn**	**15 48 32.9**	**+4.0**
	1.4nm,0.7s						
MK01	**Makanchi Array**	**9.45**	**35**	*e*Pn	**Pn**	**15 48 33.3**	**+2.9**
MK31	**Makanchi Array**	**9.46**	**35**	*e*Pn	**Pn**	**15 48 33.6**	**+3.1**
MK31	**Makanchi Array**	**9.46**	**35**	⇑Pn	**Pn**	**15 48 33.9**	**+3.3**
	1.9nm,0.6s,baz=83,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**9.46**	**35**	*e*Pn	**Pn**	**15 48 33.5**	**+2.9**
MKAR	**Makanchi Array**	**9.46**	**35**	Pn	**Pn**	**15 48 33.3**	**+2.7**
	0.3nm,0.3s,baz=222,slow=15,SNR=21						
MKAR				Lg	Lg	15 51 14.9	
	0.1nm,0.3s,baz=219,slow=27,SNR=4.0						
MKAR				LR	LR	15 52 12.7	
	comp=Z,50nm,18.4s,baz=217,slow=37						
WMQ	**Urumqi**	**10.92**	**61**	*e*P	**Pn**	**15 48 51.8**	**+1.2**
WMQ				LR	LR		
	comp=N,80nm,15.7s						
WMQ				LR	LR		
	comp=E,100nm,15.1s						
WMQ	**Urumqi**	**10.92**	**61**	*e*Pn	**Pn**	**15 48 51.3**	**+0.7**
KURBB	**Kurchatov Arra**	**11.72**	**13**	⇓Lg	Lg	15 52 25.6	
	19nm,0.8s						
KURBB	**Kurchatov Arra**	**11.72**	**13**	Pn	**Pn**	**15 49 03.6**	**+2.2**
	0.0nm,0.3s,baz=199,slow=12,SNR=3.6						
KURBB				Lg	Lg	15 52 25.6	
	0.0nm,0.3s,baz=200,slow=30,SNR=5.5						
GEYT	**Alibeck**	**12.85**	**269**	Pn	**Pn**	**15 49 15.5**	**-1.4**
	0.4nm,0.3s,baz=96,slow=10,SNR=4.2						
GEYT				Sn	**Sn**	**15 51 34.0**	**-5.9**
	0.2nm,0.3s,baz=102,slow=18,SNR=3.0						
GEYT				LR	LR	15 54 36.2	
	comp=Z,36nm,18.0s,baz=45,slow=39						
PYUN	**Piuthan**	**13.20**	**145**	*e*P	**Pn**	**15 49 18.9**	**-3.1**
	16nm,0.4s						
DANN	**Dangsing**	**13.35**	**142**	*e*P	**Pn**	**15 49 20.8**	**-3.2**
	11nm,0.5s						
KOLN	**Koldanda**	**13.76**	**144**	*e*P	**Pn**	**15 49 26.0**	**-3.6**
	8.2nm,0.6s						
BVAR	**Borovoye Array**	**14.05**	**350**	Pn	**Pn**	**15 49 34.5**	**+1.4**
	0.4nm,0.3s,baz=163,slow=15,SNR=11						
BVAR				Lg	Lg	15 53 39.2	
	0.2nm,0.3s,baz=163,slow=21,SNR=3.8						
ABKAR	**Akbulak array**	**14.39**	**319**	*e*Pn	**Pn**	**15 49 37.8**	**-0.1**
DMN	**Daman**	**14.62**	**139**	*e*P	**Pn**	**15 49 37.2**	**-4.2**
	5.6nm,0.5s						
GUN	**Gumba**	**14.78**	**137**	*e*P	**Pn**	**15 49 40.4**	**-3.3**
PKIN	**Phulchoki**	**14.80**	**139**	*e*P	**Pn**	**15 49 40.9**	**-2.9**
	3.1nm,0.4s						
PKI	**Pulchoki**	**14.81**	**139**	*e*P	**Pn**	**15 49 41.1**	**-2.9**
JIRN	**Jiri**	**15.15**	**136**	*e*P	**Pn**	**15 49 45.2**	**-3.4**
	12nm,0.4s						
RAMN	**Ramite**	**15.93**	**137**	*e*P	**Pn**	**15 49 53.3**	**-5.4**
AKTO	**Aktyubinsk**	**16.10**	**319**	Pn	**P**	**15 50 02.1**	**-1.7**
	0.2nm,0.3s,baz=125,slow=14,SNR=7.4						
AKTO				LR	LR	15 56 54.6	
	comp=Z,52nm,19.6s,baz=124,slow=39						
ZALV	**Zalesovo Beam**	**16.30**	**22**	*e*Pn	**Pn**	**15 50 03.4**	**+0.4**
ZALV	**Zalesovo Beam**	**16.30**	**22**	Pn	**Pn**	**15 50 03.8**	**+0.8**
	0.4nm,0.3s,baz=193,slow=13,SNR=4.1						
GTA	**Gaotai**	**19.61**	**81**	*e*P	**Pn**	**15 50 44.0**	**-0.1**
GTA				pP	sP	15 50 48.3	-0.3
GTA				sP	pP	15 50 51.3	+4.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARU	**Arti**	**20.13**	**334**	*e*P	Pn	15 50 51.3	+1.4
	8.1nm,0.9s						
WSAR	**Wadi Sarin**	**20.88**	**225**	P	Pn	15 50 57.8	-1.1
	12nm,0.9s,baz=81,slow=4.3,SNR=4.2						
GNI	**Garni**	**22.82**	**282**	*e*P	**P**	**15 51 19.6**	**+2.2**
	15nm,0.9s						
GNI	**Garni**	**22.82**	**282**	P	**P**	**15 51 18.2**	**+0.7**
	1.9nm,0.4s,baz=18,slow=6.4,SNR=2.3						
SONM	**Songino Array**	**24.55**	**59**	P	**P**	**15 51 35.8**	**+1.7**
	0.3nm,0.7s,baz=236,slow=12,SNR=2.6						
SONM				LR	LR	16 02 09.5	
	comp=Z,74nm,18.4s,baz=327,slow=39						
KMI	**Kunming**	**27.65**	**112**	P	**P**	**15 52 03.8**	**+1.4**
HHC	**Hu-ho-hao-te**	**28.32**	**75**	*e*P	**P**	**15 52 09.5**	**+1.3**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**31.30**	**284**	P	**P**	**15 52 36.8**	**+2.1**
	0.6nm,0.6s,baz=78,slow=7.8,SNR=4.4						
FINES	**FINESS Array B**	**36.81**	**323**	P	**P**	**15 53 22.7**	**+0.7**
	0.7nm,0.4s,baz=101,slow=9.9,SNR=4.2						
CN2	**Changchun**	**37.96**	**66**	*e*P	**P**	**15 53 34.5**	**+2.6**
ARCES	**ARCESS Array B**	**39.70**	**335**	P	**P**	**15 53 48.6**	**+2.4**
	2.6nm,0.7s,baz=96,slow=6.3,SNR=6.6						
NB2	**NORSAR Subarra**	**43.88**	**321**	P	**P**	**15 54 20.3**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=91,slow=8.6						
NOA	**NORSAR Array B**	**43.88**	**321**	P	**P**	**15 54 20.7**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=91,slow=7.8,SNR=4.7						
NOA				LR	LR	16 15 34.6	
	comp=Z,44nm,18.4s,baz=345,slow=40						
JHJ	**Hachijo jima 2**	**52.08**	**75**	LR	LR	16 19 40.0	
	comp=Z,74nm,18.8s,baz=355,slow=38						
TORD	**Torodi Ar. Bea**	**68.49**	**270**	P	**P**	**15 57 16.6**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=56,slow=6.1,SNR=6.7						
YKA	**Yellowknife Ar**	**78.33**	**4**	P	**P**	**15 58 14.7**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=349,slow=5.8,SNR=6.7						
WRA	**Warramunga Arr**	**81.22**	**125**	P	**P**	**15 58 29.8**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=322,slow=4.3,SNR=2.9						

ISCJB ***26*** *15:57:26.4±2.1,21°.63S±0°.05×174°.41W±0°.04, h15^{km}±15^{km},mb5.0/142,MS4.5/23,Error ellipse: s-maj=8.9km s-min=5.4km az=142.8*

IDC ***26*** *15:57:26.1±0.5,21°.66S×174°.56W,h0^{km},mb4.8/22, mb1 4.9/23,mb1mx4.8/33,mbtmp4.7/23,ML4.0/1,MS4.4/18, Ms1 4.4/18,ms1mx4.3/31,Error ellipse: s-maj=18.9km s-min=13.4km az=145.0*

NEIC ***26*** *15:57:29.0±2.7,21°.64S×174°.37W,h24^{km}±19^{km}, mb5.1/112,Error ellipse: s-maj=7.3km s-min=5.1km az=150.0*

WEL ***26*** *15:57:29.0,21°.64S×174°.37W,h24^{km}*

BJI ***26*** *15:57:31.0,21°.60S×174°.40W,h45^{km},mB5.7/26, mb5.1/44,Ms5.2/12,Ms7 4.9/11*

GCMT ***26*** *15:57:31.0±0.3,21°.92S±0°.02×173°.85W±0°.02,h18^{km}, MW5.0/78,Moment Tensor Solution. s47,c63; s78,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm;* M_{rr}*3.14±.15;* $M_{\theta\theta}$*-0.75±.10;* $M_{\phi\phi}$*-2.40±.10;* $M_{r\theta}$*2.51±.31;* $M_{\theta\phi}$*-1.01±.07;* $M_{\phi r}$*1.97±.23; Best double couple:* M_0*4.36600×10^{16} NP1:*ϕ_s*43.00000°,δ69.00000°,λ102.00000°. NP2:* ϕ_s*194.00000°,δ24.00000°,λ63.00000°. Principal axes: T 4.6380, Plg64.0000°, Azm333.0000°; N -0.5510, Plg11.0000°, Azm219.0000°; P -4.0940, Plg23.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***26*** *15:57:32.8±3.1,21°.09S×174°.60W,h33^{km},mb5.4/29 Error ellipse: s-maj=13.0km s-min=10.8km az=83.9*

ISC 26 15:57:30.6±0.5,**21°.77S**±0°.05×**174°.48W**±0°.07,**h31**^{km}±2^{km}, **h31**^{km}**:pP-P,n441,σ1§61**/454,**mb5.1**/140,**MS4.6**/23, **50C-30D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**8.07**	**202**	P	**Pn**	**15 59 26.9**	**+1.2**
RIZ				S	**Sn**	**16 00 54.4**	**-1.4**
RAO	**Raoul Island**	**8.07**	**202**	*e*Pn	**Pn**	**15 59 26.8**	**+1.1**
RAO				Sn	**Sn**	**16 00 54.9**	**-1.0**
RAO	**Raoul Island**	**8.07**	**202**	*e*P	**Pn**	**15 59 26.8**	**+1.1**
RAO	**Raoul Island**	**8.07**	**202**	Sn	**Sn**	**16 00 54.9**	**-1.0**
	124nm,0.3s,baz=72,slow=23,SNR=8.8						
GLKZ	**Green Lake**	**8.08**	**202**	P	**Pn**	**15 59 26.6**	**+0.8**
GLKZ				S	**Sn**	**16 00 53.4**	**-2.8**
MSVF	**Nonsavu**	**8.10**	**298**	*e*Pn	Pn	15 59 31.5	+5.2
RAR	**Rarotonga**	**13.70**	**90**	Pn	Pn	16 00 31.3	-12
	14nm,0.3s,baz=240,slow=7.5,SNR=25						
RAR				Sn	Sn	16 02 48.7	-25
	1.9nm,0.3s,baz=114,slow=19,SNR=4.3						
RAR				LR	LR	16 05 49.8	
	comp=Z,1µm,18.4s,baz=262,slow=37						
PINNC	**Pines Island,**	**16.77**	**264**	*e*Pn	**P**	**16 01 24.3**	**-0.9**
	140nm,1.1s						
MXZ	**Matakaoa Point**	**16.93**	**200**	*e*Pn	**P**	**16 01 30.9**	**+4.0**
	85nm,1.1s						
OUZ	**Omahuta**	**16.99**	**215**	*e*Pn	**P**	**16 01 29.8**	**+2.2**
	120nm,1.7s						
WMGZ	**Waiomatatini S**	**17.13**	**199**	P	**P**	**16 01 32.5**	**+3.4**
HAZ	**Te Kaha**	**17.28**	**201**	P	**Pn**	**16 01 30.0**	**+0.5**
HAZ				S	**Sn**	**16 04 31.3**	**-9.4**
PKGZ	**Pakihiroa**	**17.30**	**200**	P	**Pn**	**16 01 28.4**	**-1.4**
PKGZ				S	Sn	16 04 27.8	-14
PUZ	**Puketiti**	**17.41**	**199**	P	**P**	**16 01 32.7**	**+0.4**
PUZ				S	Sn	16 04 32.5	-12
DZM	**Mont Dzumac**	**17.71**	**265**	*e*P	**P**	**16 01 39.7**	**+4.0**
	109nm,1.1s						
DZM				*e*LR	LR	16 05 56.3	
	comp=Z,562nm,19.9s						
DZM	**Mont Dzumac**	**17.71**	**265**	*e*Pn	**P**	**16 01 37.1**	**+1.4**
	43nm,1.0s						
DZM	**Mont Dzumac**	**17.71**	**265**	P	**P**	**16 01 37.3**	**+1.5**
	0.6nm,0.3s,baz=89,slow=18,SNR=10						
CNGZ	**Carnagh Statio**	**17.81**	**199**	P	**P**	**16 01 39.9**	**+3.3**
CNGZ				S	Sn	16 04 41.1	-13
MWZ	**Matawai**	**17.89**	**201**	P	**P**	**16 01 38.8**	**+1.3**
MWZ				S	Sn	16 04 39.9	-16
URZ	**Urewera**	**17.96**	**202**	*e*P	**P**	**16 01 38.4**	**+0.1**
	26nm,0.9s						
URZ				S	Sn	16 04 41.5	-16
URZ	**Urewera**	**17.96**	**202**	P	**Pn**	**16 01 37.3**	**-0.6**
	0.5nm,0.3s,baz=76,slow=4.2,SNR=4.1						
URZ				S	Sn	16 04 41.5	-16
	0.5nm,0.3s,baz=18,slow=16,SNR=3.1						
URZ	**Urewera**	**17.96**	**202**	P	**P**	**16 01 40.6**	**+2.3**
URZ				S	Sn	16 04 43.8	-13
MTHZ	**Maungataniwha**	**18.59**	**202**	P	**Pn**	**16 01 45.5**	**-0.1**
BKZ	**Black Stump Fm**	**18.99**	**202**	*e*P	**Pn**	**16 01 50.9**	**+0.5**
	17nm,0.9s						
BKZ	**Black Stump Fm**	**18.99**	**202**	P	**Pn**	**16 01 52.3**	**+1.8**
HIZ	**Hauiti**	**19.04**	**206**	*e*P	**Pn**	**16 01 51.2**	**+0.1**
	30nm,0.9s						
HIZ	**Hauiti**	**19.04**	**206**	P	**Pn**	**16 01 54.6**	**+3.6**
RITZ	**Rihia Road**	**19.05**	**204**	P	Pn	16 02 00.6	+9.4
KAHZ	**Kahuranaki**	**19.42**	**200**	P	**Pn**	**16 01 59.3**	**+3.6**
BHHZ	**Black Hill Sta**	**19.43**	**202**	P	**Pn**	**16 01 57.4**	**+1.6**
TRVZ	**Turoa**	**19.45**	**204**	P	**P**	**16 01 48.9**	**-5.9**
PKVZ	**Pokaka**	**19.51**	**204**	P	**Pn**	**16 01 57.2**	**+0.4**
VRZ	**Vera Road**	**19.60**	**206**	P	**Pn**	**16 02 01.2**	**+3.5**
PXZ	**Pawanui**	**19.64**	**200**	P	**Pn**	**16 02 01.7**	**+3.5**
BFZ	**Birch Farm**	**20.43**	**201**	*e*P	**P**	**16 02 06.0**	**+0.7**
	49nm,0.8s						
BFZ	**Birch Farm**	**20.43**	**201**	P	Pn	16 02 09.3	+1.7
MRZ	**Mangatainoka R**	**20.64**	**202**	P	Pn	16 02 08.8	-1.2
THZ	**Tophouse**	**22.59**	**205**	*e*P	**P**	**16 02 28.1**	**-0.4**
	34nm,0.8s						
KHZ	**Kahutara**	**22.91**	**203**	*e*P	**P**	**16 02 31.2**	**-0.6**
	30nm,0.8s						
DSZ	**Denniston Nort**	**23.02**	**207**	P	**P**	**16 02 37.9**	**+4.8**
TBI	**Tubuai**	**23.15**	**99**	*e*LQ	LQ	16 06 46.8	
	1µm,24.8s						
TBI				*e*LR	LR	16 07 42.5	
	comp=Z,866nm,22.0s,baz=271						
TBI	**Tubuai**	**23.15**	**99**	*e*T	T	16 26 12.2	
	4.2nm,0.3s						
LTZ	**Lake Taylor**	**23.70**	**205**	*e*P	**P**	**16 02 40.7**	**+1.0**
	30nm,0.8s						
LTZ	**Lake Taylor**	**23.70**	**205**	P	**P**	**16 02 43.4**	**+3.7**
PPT2	**Papeete2**	**23.80**	**84**	*e*LQ	LQ	16 07 11.3	
	857nm,23.0s						
PPT2				*e*LR	LR	16 08 08.3	
	comp=Z,798nm,21.2s,baz=254						
PPT2	**Papeete2**	**23.80**	**84**	*e*T	T	16 26 53.2	
	2.1nm,0.3s						
PPT	**Papeete**	**23.80**	**84**	LR	LR	16 10 29.8	
	comp=Z,1µm,18.3s,baz=256,slow=33						
AMCZ	**Amberley**	**23.89**	**204**	P	**P**	**16 02 47.7**	**+6.2**
INZ	**Inchbonnie**	**23.98**	**206**	P	**P**	**16 02 46.3**	**+4.0**
OXZ	**Oxford**	**24.25**	**204**	*e*P	**P**	**16 02 41.1**	**-3.7**
	38nm,0.6s						
OXZ	**Oxford**	**24.25**	**204**	P	**P**	**16 02 44.8**	**0.0**
MQZ	**McQueen's Vall**	**24.35**	**203**	P	P	16 02 54.4	+8.8
WVZ	**Waitaha Valley**	**24.57**	**207**	P	**P**	**16 02 50.7**	**+3.1**
RPZ	**Rata Peaks**	**24.97**	**205**	*e*P	**P**	**16 02 50.3**	**-1.1**
	34nm,0.7s						
RPZ	**Rata Peaks**	**24.97**	**205**	P	**P**	**16 02 50.3**	**-1.1**
	30nm,0.6s,baz=8.0,slow=2.2,SNR=11						
RPZ	**Rata Peaks**	**24.97**	**205**	P	**P**	**16 02 53.3**	**+1.9**
FOZ	**Fox Glacier**	**25.33**	**207**	*e*P	**P**	**16 02 56.5**	**+1.9**
	71nm,0.8s						
FOZ	**Fox Glacier**	**25.33**	**207**	P	**P**	**16 02 57.3**	**+2.8**
LBZ	**Lake Benmore**	**25.87**	**206**	*e*P	**P**	**16 03 01.1**	**+1.5**
	51nm,1.5s						
JCZ	**Jackson Bay**	**26.21**	**208**	P	**P**	**16 03 06.7**	**+4.0**
ODZ	**Otahua Downs**	**26.24**	**204**	*e*P	**P**	**16 03 04.0**	**+1.2**
	86nm,1.9s						
ODZ	**Otahua Downs**	**26.24**	**204**	P	**P**	**16 03 09.1**	**+6.3**
WKZ	**Wanaka**	**26.71**	**207**	*e*P	**P**	**16 03 08.9**	**+1.7**
	34nm,0.9s						
WKZ	**Wanaka**	**26.71**	**207**	P	**P**	**16 03 10.3**	**+3.2**
HNR	**Honiara**	**27.47**	**293**	LR	LR	16 12 39.1	
	comp=Z,139nm,19.5s,baz=120,slow=33						
MLZ	**Mavora Lakes**	**27.52**	**207**	*e*P	**P**	**16 03 17.4**	**+2.9**
	42nm,1.2s						
WHZ	**Wether Hill Ro**	**28.02**	**207**	*e*P	**P**	**16 03 21.2**	**+2.4**
	60nm,1.3s						
DCZ	**Deep Cove**	**28.02**	**208**	*e*P	**P**	**16 03 22.2**	**+3.5**
	15nm,0.9s						
TAOE	**Nuku Hiva Isla**	**35.41**	**74**	*e*LR	LR	16 13 14.3	
	comp=Z,425nm,20.5s						
STKA	**Stephens Creek**	**40.24**	**246**	*e*P	**P**	**16 05 04.3**	**-0.3**
	3.7nm,1.2s						
STKA	**Stephens Creek**	**40.24**	**246**	*e*P	**P**	**16 05 04.4**	**-0.3**
STKA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
STKA	**Stephens Creek**	**40.24**	**246**	P	**P**	**16 05 04.8**	**+0.1**
	comp=Z,6.6nm,0.9s,baz=83,slow=10,SNR=9.2						
STKA				LR	LR	16 21 24.4	
	comp=Z,659nm,18.8s,baz=64,slow=36						
COEN	**Coen**	**40.95**	**274**	*e*P	**P**	**16 05 10.4**	**-0.4**
	comp=Z,15nm,0.9s						
BBOO	**Buckleboo**	**44.96**	**245**	*e*P	**P**	**16 05 42.5**	**-0.6**
	comp=Z,80nm,1.9s						
AS01	**Alice Springs**	**47.40**	**257**	*e*P	**P**	**16 06 01.4**	**-1.0**
AS31	**Alice Springs**	**47.44**	**257**	*e*P	**P**	**16 06 01.2**	**-1.5**
	comp=Z,6.6nm,0.9s						
ASAR	**Alice Springs**	**47.44**	**257**	P	**P**	**16 06 02.3**	**-0.4**
	comp=Z,23nm,0.9s,baz=90,slow=8.3,SNR=121						
ASAR				PcP	**PcP**	**16 07 33.5**	**+0.6**
	comp=Z,3.6nm,0.7s,baz=100,slow=3.4,SNR=4.7						
ASAR				S	**S**	**16 12 54.8**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=94,slow=19,SNR=6.4						
ASAR				LR	LR	16 26 22.6	
	comp=Z,830nm,18.0s,baz=96,slow=37						
WB2	**Warramunga Arr**	**47.68**	**262**	*e*P	**P**	**16 06 02.8**	**-1.8**
WRAB	**Tennant Creek**	**47.68**	**262**	*e*P	**P**	**16 06 02.7**	**-1.9**
	comp=Z,37nm,1.0s						
WRAB	**Tennant Creek**	**47.68**	**262**	⇓*i*P	**P**	**16 06 03.3**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,54nm,1.3s						
WRA	**Warramunga Arr**	**47.69**	**262**	P	**P**	**16 06 03.0**	**-1.7**
	comp=Z,26nm,1.0s,baz=94,slow=8.3,SNR=144						
WRA				S	**S**	**16 13 00.0**	**+1.1**
	comp=Z,1.7nm,1.1s,baz=97,slow=15,SNR=3.3						
WRA				LR	LR	16 26 19.8	
	comp=Z,718nm,18.2s,baz=100,slow=36						
FORT	**Forrest**	**51.83**	**247**	*e*P	**P**	**16 06 35.0**	**-1.0**
	comp=Z,36nm,0.8s						
FITZ	**Fitzroy Crossi**	**56.12**	**262**	*e*P	**P**	**16 07 06.8**	**-0.7**
	comp=Z,41nm,1.2s						
VNDA	**Vanda**	**56.97**	**186**	LR	LR	16 27 23.3	
	comp=Z,182nm,20.6s,baz=12,slow=32						
KCP	**Kidapawan**	**65.76**	**289**	⇓*i*P	**P**	**16 08 13.0**	**-0.1**
QSPA	**South Pole Qui**	**68.31**	**180**	*e*P	**P**	**16 08 30.1**	**+1.5**

	comp=Z,36nm,1.3s						
MJAR	Matsushiro Arr	73.21	322	P	P	16 08 57.9	-0.8
	comp=Z,17nm,0.9s,baz=164,slow=6.1,SNR=36						
MJAR				LR	LR	16 41 12.5	
	comp=Z,92nm,18.4s,baz=90,slow=36						
MAJO	Matsushiro	73.21	322	eP	P	16 08 58.1	-0.5
	comp=Z,29nm,1.0s						
MAJO	Matsushiro	73.21	322	c iP	P	16 08 58.1	-0.5
MAJO				pmax	pmax		
	comp=Z,34nm,1.1s						
MAT	Matsushiro	73.21	322	P	P	16 08 57.9	-0.7
MJB9	Matsu-Tunnel	73.21	322	eP	P	16 08 58.2	-0.5
	comp=Z,30nm,1.0s						
SBUM	Sibu	75.46	279	eP	P	16 09 11.1	-1.1
	comp=Z,19nm,1.4s						
SBUM	Sibu	75.46	279	P	P	16 09 12.4	+0.2
ASAJ	Asahikawa	76.44	330	P	P	16 09 18.0	+0.9
	comp=Z,7.2nm,0.8s,baz=191,slow=9.5,SNR=6.0						
KSM	Kuching	76.84	277	eP	P	16 09 19.3	-0.8
	comp=Z,25nm,0.9s						
KSM	Kuching	76.84	277	P	P	16 09 21.0	+0.9
LPIG	La Paz	77.27	57	LR	LR	16 38 41.5	
	comp=Z,490nm,18.2s,baz=211,slow=32						
KMRM	Mail Ridge	77.70	37	eP	P	16 09 24.9	+0.4
	comp=Z,47nm,1.2s						
EDW2	Edwards Air Fo	77.76	45	P	P	16 09 24.8	-0.1
	baz=232						
ISA	Isabella, Lake	77.92	44	P	P	16 09 27.9	+2.2
	baz=232						
CMB	Columbia Colle	78.21	41	eP	P	16 09 25.6	-1.7
	comp=Z,20nm,1.4s						
CMB	Columbia Colle	78.21	41	eP	P	16 09 25.6	-1.7
CMB				pmax	pmax		
	comp=Z,20nm,1.4s						
PEA0B	Petropavlovsk-	78.38	343	eP	P	16 09 27.0	-0.7
	comp=Z,51nm,1.3s						
PETK	Petropavlovsk-	78.38	343	eP	P	16 09 26.5	-1.3
PETK	Petropavlovsk-	78.38	343	eP	P	16 09 26.5	-1.3
PETK	Petropavlovsk-	78.38	343	P	P	16 09 27.0	-0.8
	comp=Z,18nm,0.8s,baz=134,slow=8.6,SNR=22						
PETK				LR	LR	16 38 52.7	
	comp=Z,160nm,19.6s,baz=135,slow=32						
ORV	Oroville	78.53	39	eP	P	16 09 27.6	-1.3
	comp=Z,26nm,1.5s						
YSS	Yuzh-Sakhalins	78.53	332	eP	P	16 09 27.1	-1.6
	comp=Z,33nm,0.9s						
YSS	Yuzh-Sakhalins	78.53	332	eP	P	16 09 28.6	-0.1
YSS				eS	S	16 19 20.0	-2.9
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YSS				MLR	MLR		
	comp=N,100nm,17.0s						
WDC	Whiskeytown Da	78.61	38	eP	P	16 09 28.4	-0.9
	comp=N,28nm,1.4s						
CWC	Cottonwood Cre	78.65	43	P	P	16 09 31.4	+1.5
	baz=232						
MDPB	Devils Postpil	78.76	42	eP	P	16 09 29.6	-1.0
	comp=N,11nm,1.2s						
N02D	Trinity Center	78.78	37	P	P	16 09 33.2	+2.8
	baz=228						
GSC	Goldstone, Bar	78.79	45	P	P	16 09 32.4	+1.8
	baz=233						
HEC	Hector,Ludlow	78.81	45	P	P	16 09 33.2	+2.5
	baz=234						
WAKR	Walker	79.09	41	eP	P	16 09 30.9	-1.4
	comp=N,26nm,1.3s						
YBH	Yreka Blue Hor	79.28	37	eP	P	16 09 32.5	-0.6
	comp=N,52nm,1.8s						
YBH	Yreka Blue Hor	79.28	37	eP	P	16 09 32.5	-0.6
YBH				pmax	pmax		
	comp=Z,52nm,1.8s						
PNTR	Pine Nut	79.36	40	eP	P	16 09 32.9	-0.9
	comp=Z,22nm,1.0s						
113A	Mohawk Valley,	79.37	48	eP	P	16 09 33.2	-0.5
	comp=Z,8.8nm,1.3s						
BEKR	Beckworth	79.40	39	eP	P	16 09 33.0	-1.0
	comp=Z,39nm,1.8s						
YERR	Yerington	79.51	41	eP	P	16 09 33.2	-1.4
	comp=Z,48nm,1.8s						
RYN	Ryan	79.72	41	eP	P	16 09 34.6	-1.1
	comp=Z,32nm,1.6s						
NV01	Mina Array Sit	79.74	42	eP	P	16 09 33.9	-2.0
NVAR	Mina Array Bea	79.74	42	P	P	16 09 35.5	-0.4
	comp=Z,5.2nm,0.8s,baz=222,slow=8.4,SNR=16						
NVAR				LR	LR	16 38 58.4	
	comp=Z,299nm,18.5s,baz=244,slow=31						
TJN	Taejon	79.75	316	⇓eP	P	16 09 36.8	+1.2
M04C	Macdoel	79.80	37	P	P	16 09 38.1	+2.1
	baz=228						
L04D	Klamath Falls	79.83	37	P	P	16 09 37.7	+1.6
	baz=228						
NV11	Mina Array Sit	79.83	42	eP	P	16 09 34.7	-1.6
	comp=Z,2.3nm,1.5s						
PAHR	Pah Rah Range	79.88	40	eP	P	16 09 35.0	-1.5
	comp=Z,15nm,1.2s						
PDMCI	Parker Dam,Lak	79.98	47	P	P	16 09 39.1	+2.1
	baz=235						
KSRS	Korea Array	80.04	317	P	P	16 09 38.4	+1.2
	comp=Z,8.1nm,1.0s,baz=142,slow=6.3,SNR=24						
KSAR	Wonju Array Be	80.05	317	P	P	16 09 38.4	+1.1
KS01	Wonju Array Si	80.07	317	eP	P	16 09 36.2	-1.1
KVN	Kaiserville	80.25	41	eP	P	16 09 37.5	-1.0
	comp=Z,20nm,1.6s						
KVN	Kaiserville	80.25	41	eP	P	16 09 37.5	-1.0
KVN				pmax	pmax		
	comp=Z,20nm,1.6s						
SHPR	Sheep Range	80.57	45	eP	P	16 09 39.5	-0.9
	comp=Z,28nm,1.8s						
MOD	Modoc Plateau	80.75	38	eP	P	16 09 40.0	-1.2
	comp=Z,16nm,1.1s						
J05D	Fort Rock, OR	81.12	36	P	P	16 09 42.9	-0.2
	baz=229						
TUC	Tucson	81.22	50	eP	P	16 09 42.1	-1.7
	comp=Z,8.2nm,1.2s						
TUC	Tucson	81.22	50	eP	P	16 09 42.1	-1.7
TUC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TUC	Tucson	81.22	50	P	P	16 09 44.0	+0.3
	baz=237						
R11A	Troy Canyon, C	81.39	43	P	P	16 09 44.1	-0.5
	baz=234						
MAW	Mawson	81.47	199	LR	LR	16 45 49.5	
	comp=Z,385nm,18.0s,baz=110,slow=36						
TYV	Tymovskoe	81.58	334	eP	P	16 09 44.7	-0.4
TYV				eS	S	16 19 53.3	-1.5
TYV				pmax	pmax		
	comp=Z,17nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,4.1s						
TYV				smax	smax		
	comp=N,400nm,6.8s						
PINE	Pine Mountain	81.62	36	eP	P	16 09 44.0	-1.7
	comp=N,29nm,1.1s						
USRK	Ussuriysk Ar.	81.89	324	P	P	16 09 48.2	+1.3
	comp=N,6.4nm,0.8s,baz=107,slow=2.8,SNR=13						
USRK				LR	LR	16 43 10.0	
	comp=N,325nm,19.4s,baz=131,slow=34						
X16A	Lo Mia Camp, P	81.89	48	eP	P	16 09 45.9	-1.5
	comp=N,4.3nm,0.9s						
WVOR	Wild Horse Val	82.04	38	eP	P	16 09 46.5	-1.4
	comp=N,27nm,1.6s						
WVOR	Wild Horse Val	82.04	38	eP	P	16 09 46.5	-1.4
WVOR				pmax	pmax		
	comp=Z,27nm,1.6s						
CCUT	Cedar City	82.35	45	eP	P	16 09 48.4	-1.4
	comp=Z,8.0nm,1.3s						
KNB	Kanab	82.40	45	eP	P	16 09 48.1	-1.9
	comp=Z,16nm,1.3s						
KNB	Kanab	82.40	45	eP	P	16 09 48.1	-1.9
KNB				pmax	pmax		
	comp=Z,16nm,1.3s						
U15A	North Rim	82.43	46	eP	P	16 09 48.0	-2.3
	comp=Z,8.0nm,1.1s						
SZCU	Shurtz Canyon	82.56	45	eP	P	16 09 49.1	-1.8
	comp=Z,32nm,1.7s						
PSUT	Pine Spring	82.60	44	eP	P	16 09 49.5	-1.5
	comp=Z,5.8nm,0.9s						
J08A	Circle Bar Ran	82.71	38	eP	P	16 09 49.9	-1.5
	comp=Z,24nm,1.3s						
ELK	Elko	83.02	41	eP	P	16 09 51.5	-1.7
	comp=Z,8.4nm,1.1s						
ELK	Elko	83.02	41	eP	P	16 09 51.5	-1.7
ELK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NJ2	Nanjing	83.23	308	eP	P	16 09 55.0	+0.8
NJ2				pmax	pmax		
	comp=Z,21nm,0.9s						
MTPU	Mount Pierson	83.40	45	eP	P	16 09 54.4	-1.0
	comp=Z,25nm,1.2s						
MDJ	Mudanjiang	83.47	323	P	P	16 09 56.0	+0.9
MDJ				pmax	pmax		
	comp=Z,38nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,300nm,3.5s						
MDJ	Mudanjiang	83.47	323	eP	P	16 09 54.8	-0.3
	comp=Z,38nm,1.1s						
KGM	Kluang	83.51	275	P	P	16 09 57.9	+1.9
G08A	Pilot Rock	83.67	36	eP	P	16 09 55.2	-1.1
	comp=Z,22nm,1.1s						
B05A	Bryant	83.98	32	P	P	16 09 57.1	-0.6
	baz=228						
HAWA	Hanford	84.06	35	eP	P	16 09 56.6	-1.5
	comp=Z,39nm,1.4s						
NKL	Nikolayevsk	84.11	335	eP	P	16 09 57.0	-1.1
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
GRNR	Gornyy	84.17	331	eP	P	16 10 00.2	+1.6
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
BMO	Blue Mountains	84.30	37	eP	P	16 09 57.4	-2.1
	comp=Z,8.6nm,1.0s						
BMO	Blue Mountains	84.30	37	eP	P	16 09 57.4	-2.1
BMO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NLU	North Lily Min	84.54	43	eP	P	16 09 59.2	-1.7
	comp=Z,3.7nm,0.9s						
Q16A	Castle Valley	84.55	44	eP	P	16 09 58.7	-2.3
	comp=Z,53nm,2.0s						
TMUT	Trail Mountain	84.73	44	eP	P	16 10 01.3	-0.7
	comp=Z,26nm,1.0s						
D08A	Wollman Farm,	84.81	34	eP	P	16 10 01.3	-0.7
	comp=Z,18nm,1.0s						
MNTX	Cornudas Mount	84.84	53	eP	P	16 10 01.2	-1.2
	comp=Z,6.9nm,1.3s						
MNTX	Cornudas Mount	84.84	53	P	P	16 10 01.3	-1.2
	baz=241						
MPU	Maple Canyon	84.86	43	eP	P	16 10 00.8	-1.7
	comp=Z,11nm,1.1s						
LENM	Lemitar	84.91	50	eP	P	16 10 01.9	-1.1
DL2	Dalian	84.93	315	P	P	16 10 04.5	+1.9
DL2				pP	pwP	16 10 18.5	+2.1
DL2				S	S	16 20 34.5	+5.2
DL2				pmax	pmax		
	comp=Z,35nm,1.3s						
DL2				LR	LR		
	comp=Z,230nm,15.1s						
DL2				LR	LR		
	comp=Z,250nm,11.1s						
DL2				LR	LR		
	comp=Z,290nm,16.6s						
TX31	Lajitas Ar. Si	85.00	56	eP	P	16 10 02.2	-1.2
TXAR	Lajitas Array	85.00	56	P	P	16 10 02.0	-1.4
	comp=Z,1.6nm,0.8s,baz=213,slow=9.0,SNR=12						
TXAR				LR	LR	16 41 28.5	
	comp=Z,253nm,19.3s,baz=0.0,slow=31						
F10A	Beach Ranch, E	85.04	36	eP	P	16 10 01.5	-1.7
	comp=Z,32nm,1.0s						
SRU	San Rafael Swe	85.07	45	eP	P	16 10 02.5	-1.1
	comp=Z,23nm,1.2s						
SRU	San Rafael Swe	85.07	45	eP	P	16 10 02.5	-1.1
SRU				pmax	pmax		
	comp=Z,23nm,1.2s						
P17A	Butcher Ranch,	85.13	44	eP	P	16 10 03.9	0.0
	comp=Z,23nm,1.2s						
BNM	Barren Site	85.14	50	eP	P	16 10 03.0	-1.2
CTU	Camp Tracy	85.16	43	eP	P	16 10 01.4	-2.7
	comp=Z,8.9nm,1.1s						
HLID	Hailey	85.18	39	eP	P	16 10 02.2	-1.8
	comp=Z,11nm,1.0s						
HLID	Hailey	85.18	39	P	P	16 10 03.8	-0.3
	baz=234						
GAMB	Gambell	85.29	1	eP	P	16 10 03.4	-0.5
	comp=Z,25nm,1.1s						
SNY	Shenyang	85.31	319	⇓P	P	16 10 04.0	-0.5
SNY				pmax	pmax		
	comp=Z,22nm,1.8s						
KLR	Kul'dur	85.32	328	⇑eP	P	16 10 04.7	+0.3
KLR	Kul'dur	85.32	328	P	P	16 10 04.0	-0.3
	comp=Z,5.3nm,0.9s,baz=112,slow=2.5,SNR=12						
CN2	Changchun	85.33	321	eP	P	16 10 05.0	+0.4
CN2				epP	pwP	16 10 18.3	0.0
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,270nm,20.0s						
CN2				LR	LR		
	comp=Z,310nm,20.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
TCUT	Toone Canyon	85.61	42	eP	P	16 10 05.0	-1.4
	comp=Z,46nm,1.3s						
PV09	Paradox Valley	85.66	46	eP	P	16 10 06.1	-0.6
ANMO	Albuquerque	85.67	50	eP	P	16 10 04.8	-2.0
	comp=Z,15nm,1.0s						
ANMO	Albuquerque	85.67	50	⇑eP	P	16 10 06.2	-0.5
ANMO				pmax	pmax		
	comp=Z,28nm,1.7s						
ANMO	Albuquerque	85.67	50	P	P	16 10 06.6	-0.2
	baz=240						
PV03	Paradox Valley	85.72	46	eP	P	16 10 05.0	-2.0
	comp=Z,22nm,1.7s						
GO06	Curarrehue	85.85	131	eP	P	16 10 06.1	-1.5
	comp=Z,11nm,1.1s						
MA2	Magadan	85.92	343	eP	P	16 10 05.9	-1.2
	comp=Z,50nm,1.9s						
MA2	Magadan	85.92	343	c eP	P	16 10 06.2	-0.9
MA2				pmax	pmax		
	comp=Z,17nm,1.3s						
MA2	Magadan	85.92	343	P	P	16 10 06.0	-1.1
	comp=Z,6.2nm,0.9s,baz=152,slow=4.5,SNR=10						
PLCA	Paso Flores	86.00	132	P	P	16 10 10.2	+1.8
	comp=Z,3.9nm,1.0s,baz=263,slow=9.8,SNR=4.0						
PLCA				LR	LR	16 42 49.1	
	comp=Z,323nm,18.0s,baz=260,slow=32						
SYO	Syowa Base	86.19	192	⇑iP	P	16 10 07.8	-0.7
SYO	Syowa Base	86.19	192	⇓epP	pP	16 10 17.2	+0.2
IPM	Ipoh	86.55	276	eP	P	16 10 10.1	-1.3
	comp=Z,36nm,1.0s						
SNAA	Sanae	86.63	177	eP	P	16 10 10.3	-0.4
	comp=Z,28nm,1.3s						
SNAA	Sanae	86.63	177	⇑eP	P	16 10 13.6	+2.8
CAST	Castle Rocks	86.72	10	eP	P	16 10 09.3	-1.7
	comp=Z,11nm,0.9s						
S22A	4UR Ranch, Cre	86.82	47	eP	P	16 10 09.1	-3.4
	comp=Z,9.7nm,1.0s						
S22A	4UR Ranch, Cre	86.82	47	P	P	16 10 12.1	-0.4
	baz=239						
TRF	Thorofare Moun	87.04	11	eP	P	16 10 11.3	-1.5
	comp=Z,24nm,1.0s						
KULM	Kulim	87.20	277	eP	P	16 10 14.2	-0.3
	comp=Z,19nm,0.9s						
KULM	Kulim	87.20	277	P	P	16 10 16.3	+1.9
TPAW	Teton Pass	87.21	41	eP	P	16 10 11.8	-2.4
	comp=Z,12nm,1.4s						
FXWY	Fox Creek	87.24	41	eP	P	16 10 12.2	-2.1
	comp=Z,5.2nm,1.3s						
RND	Reindeer	87.25	11	eP	P	16 10 13.0	-0.7
	comp=Z,57nm,1.3s						
RND	Reindeer	87.25	11	eP	P	16 10 13.0	-0.7
RND				pmax	pmax		
	comp=Z,57nm,1.3s						
MCK	McKinley	87.54	11	eP	P	16 10 13.2	-1.7
	comp=Z,52nm,1.3s						
MCK	McKinley	87.54	11	eP	P	16 10 13.3	-1.7
MCK				pmax	pmax		
	comp=Z,52nm,1.3s						
BW06	Boulder Array	87.67	42	eP	P	16 10 14.2	-2.2
	comp=Z,5.8nm,1.1s						
BW06	Boulder Array	87.67	42	P	P	16 10 14.9	-1.4
	baz=237						
PD31	Pinedale Array	87.67	42	eP	P	16 10 14.3	-2.0
PDAR	Pinedale Array	87.67	42	eP	P	16 10 14.7	-1.7
PDAR	Pinedale Array	87.67	42	P	P	16 10 14.9	-1.5
	comp=Z,3.9nm,0.9s,baz=214,slow=3.5,SNR=16						
PDAR				LR	LR	16 48 33.7	
	comp=Z,221nm,18.2s,baz=262,slow=35						
FLWY	Flagg Ranch	87.69	40	eP	P	16 10 13.6	-2.8
	comp=Z,28nm,2.0s						
SDCO	Great Sand Dun	87.73	48	P	P	16 10 16.0	-0.8
	baz=240						
MSTX	Muleshoe	87.85	52	P	P	16 10 16.3	-1.0
	baz=242						
PSI	Prapat	87.87	274	eP	P	16 10 16.9	-1.0
	comp=Z,28nm,1.0s						
PSI	Prapat	87.87	274	eP	P	16 10 16.9	-1.0
PSI				pmax	pmax		
	comp=Z,28nm,1.0s						
BOZ	Bozeman (W)	87.98	39	eP	P	16 10 17.0	-0.7
	comp=Z,4.0nm,0.9s						
BOZ	Bozeman (W)	87.98	39	P	P	16 10 16.7	-0.9
	baz=236						
EFI	East Falkland	88.22	146	⇑eP	P	16 10 21.6	+2.9
EFI				pmax	pmax		
	comp=Z,47nm,1.2s						
WRH	Wood River Hil	88.37	11	eP	P	16 10 17.9	-1.0
	comp=Z,33nm,1.2s						
SEY	Seymchan	88.39	346	P	P	16 10 18.6	-0.4
	comp=Z,15nm,0.9s,baz=145,slow=5.5,SNR=46						
HDA	Harding Lake	88.52	12	eP	P	16 10 18.2	-1.4
	comp=Z,16nm,1.0s						
HDA	Harding Lake	88.52	12	P	P	16 10 19.2	-0.4
	baz=205						
GSI	Gunungsitoli	88.57	272	eP	P	16 10 20.8	-0.3
	comp=Z,102nm,1.1s						
ISCO	Idaho Springs	88.67	46	P	P	16 10 18.8	-2.6
	baz=240						
SCRK	Sand Creek	88.72	13	eP	P	16 10 19.1	-1.5
	comp=Z,15nm,1.2s						
COLA	College	88.78	11	eP	P	16 10 19.6	-1.2
	comp=Z,26nm,1.1s						
COLA	College	88.78	11	⇓iP	P	16 10 19.9	-0.8
COLA				pmax	pmax		
	comp=Z,28nm,1.3s						
MDM	Murphy Dome	88.79	11	eP	P	16 10 19.6	-1.3
	comp=Z,41nm,1.6s						
ILAR	Eielson Array	88.86	11	P	P	16 10 20.9	-0.3
	comp=Z,3.2nm,0.9s,baz=213,slow=5.7,SNR=12						
ILB	Eielson Array	88.86	11	eP	P	16 10 20.5	-0.7
IL1	Eielson Array	88.86	11	eP	P	16 10 19.4	-1.8
IM3	Indian Mountai	88.89	8	eP	P	16 10 20.4	-1.0
POKR	Poker Plat Res	89.07	11	P	P	16 10 21.6	-0.6
	baz=205						
ENH	Enshi	89.48	303	eP	P	16 10 24.5	-0.5
	comp=Z,66nm,1.2s						
PRP	Porcupine Dome	89.79	12	eP	P	16 10 24.2	-1.5
	comp=Z,15nm,1.1s						
DAWY	Dawson	89.81	15	eP	P	16 10 22.5	-3.2
	comp=Z,22nm,1.4s						
GYA	Guiyang	90.14	298	eP	P	16 10 29.0	+0.7
GYA				pP	pwP	16 10 42.5	+0.5
GYA				PP	PP	16 14 05.8	+3.5
GYA				SKS	SKSac	16 20 54.5	-3.0
GYA				S	S	16 21 17.0	-3.1
GYA				sS	sS	16 21 39.3	+4.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.9s						
ZEA	Zeya	90.36	330	eP	P	16 10 18.7	-10
ZEA				pmax	pmax		
	comp=Z,37nm,1.4s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
BILL	Bilibino	90.67	353	eP	P	16 10 29.4	-0.2
BILL				e		16 14 00.2	
BILL				ePPP	PPP	16 15 59.6	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN	Xi'an	91.53	306	P	P	16 10 35.5	+1.1
XAN				pP	sP	16 10 46.0	-0.4
XAN				pmax	pmax		
	comp=Z,190nm,4.1s						
XAN	Xi'an	91.53	306	eP	P	16 10 33.4	-1.0
	comp=Z,35nm,1.0s						
U32A	Winter Ranch,	91.70	51	eP	P	16 10 31.6	-3.6
	comp=Z,30nm,1.0s						
RSSD	Black Hills	91.82	43	eP	P	16 10 33.0	-2.8
	comp=Z,5.6nm,1.0s						
RSSD	Black Hills	91.82	43	eP	P	16 10 33.0	-2.8
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC	Hu-ho-hao-te	92.61	313	eP	P	16 10 41.0	+1.6
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,6.9s						
KMI	Kunming	92.86	296	P	P	16 10 43.0	+2.0
KMI				pP	pwP	16 10 56.5	+1.7
KMI				sP	sP	16 11 02.0	+9.0
KMI				pmax	pmax		
	comp=Z,20nm,0.9s						
KMI				LR	LR		
	comp=Z,150nm,4.8s						
KMI				LR	LR		
	comp=Z,70nm,5.4s						
KMI				LR	LR		
	comp=Z,250nm,15.7s						
JTS	JuntasAbangare	93.31	80	c iP	P	16 10 46.3	+3.2
CM01	Chiang Mai Arr	93.61	288	eP	P	16 10 45.4	+1.0
CM31	Chiang Mai Arr	93.64	288	eP	P	16 10 45.5	+1.0
CMAR	Chiang Mai Arr	93.64	288	P	P	16 10 46.2	+1.7
	comp=Z,8.8nm,0.9s,baz=121,slow=2.9,SNR=62						
CMAR				LR	LR	16 52 56.6	
	comp=Z,55nm,18.6s,baz=210,slow=36						
CHTO	Chiang Mai	93.77	289	eP	P	16 10 45.9	+0.8
	comp=Z,13nm,0.9s						
CHTO	Chiang Mai	93.77	289	eP	P	16 10 45.9	+0.8
CHTO				pmax	pmax		
	comp=Z,13nm,0.9s						
CHTO	Chiang Mai	93.77	289	P	P	16 10 46.8	+1.7
DGMT	Dagmar	93.81	39	eP	P	16 10 43.8	-0.9
	comp=Z,30nm,0.9s						
DGMT	Dagmar	93.81	39	P	P	16 10 44.7	+0.1
	baz=241						
CD2	Chengdu	94.25	301	eP	P	16 10 46.0	-1.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YAK	Yakutsk	94.54	337	eP	P	16 10 45.6	-1.9
YAK				pmax	pmax		
	comp=Z,30nm,0.8s						
YAK				pmax	pmax		
	comp=N,11nm,0.9s						
INK	Inuvik	94.67	14	P	P	16 10 47.3	-0.7
	comp=N,1.4nm,0.8s,baz=203,slow=7.8,SNR=6.2						
LZH	Lanzhou	96.16	306	eP	P	16 10 57.5	+1.6
LZH				pP	pwP	16 11 10.5	+0.9
LZH				sP	sP	16 11 15.8	+8.0
LZH				pmax	pmax		
	comp=N,28nm,1.1s						
MDND	Maddock	96.27	41	eP	P	16 10 54.5	-1.4
	comp=N,18nm,0.9s						
MDND	Maddock	96.27	41	P	P	16 10 56.9	+1.0
	baz=244						
YKA	Yellowknife Ar	96.31	24	P	P	16 10 54.5	-1.1
	comp=N,1.2nm,0.8s,baz=235,slow=4.4,SNR=17						
YKA				LR	LR	16 52 43.0	
	comp=N,9.6nm,18.2s,baz=220,slow=34						
YKB5	Yellowknife Ar	96.31	24	eP	P	16 10 54.8	-0.9
ECSD	EROS Data Cent	96.45	45	eP	P	16 10 55.6	-1.2
	comp=N,18nm,1.1s						
ECSD	EROS Data Cent	96.45	45	P	P	16 10 55.9	-0.9
	baz=246						
ULN	Ulaanbaatar	98.48	318	⇓eP	P	16 11 05.2	-0.9
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
LPAZ	La Paz	98.53	111	P	Pdif	16 11 09.9	+2.2
	comp=Z,1.0nm,0.8s,baz=225,slow=4.8,SNR=3.5						
SONM	Songino Array	98.88	318	P	Pdif	16 11 08.8	+1.0
	comp=Z,0.5nm,1.0s,baz=119,slow=1.8,SNR=2.7						
SONM				LR	LR	16 54 46.7	
	comp=Z,51nm,18.0s,baz=176,slow=35						
GTA	Gaotai	100.33	308	eP	Pdif	16 11 15.5	+1.0
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WMQ	Urumqi	110.25	310	ePKP	PKiKP	16 15 58.8	-0.8
MKAR	Makanchi Array	114.47	313	PKP	PKiKP	16 16 08.8	+1.3
	comp=Z,0.7nm,0.9s,baz=72,slow=4.7,SNR=5.0						
KURK	Kurchatov	117.16	317	⇓iPKIKP	PKPdf	16 16 12.0	-0.4
KSH	Kashi	118.32	304	PKP	PKiKP	16 16 17.8	+2.6
KSH				PP	PP	16 17 36.0	+4.2
KSH				AMB	AMB		
	comp=Z,420nm,5.6s						
BRVK	Borovoye	122.23	320	⇑iPKIKP	PKiKP	16 16 22.5	+0.2
SUMG	Summit	123.58	15	i P	PKPdf	16 16 24.8	+0.1

	comp=Z,18nm,0.9s						
SUMG	**Summit**	**123.58**	**15**	iPKIKP	**PKPdf**	**16 16 24.8**	**+0.1**
SUMG				pmax	pmax		
	comp=Z,18nm,0.9s						
DAG	**Danmarks Havn**	**123.65**	**7**	iP	**PKPdf**	**16 16 22.2**	**-2.0**
	comp=Z,2.1nm,0.8s						
DAG	**Danmarks Havn**	**123.65**	**7**	iPKIKP	**PKPdf**	**16 16 22.2**	**-2.0**
DAG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**128.11**	**326**	⇑iPKIKP	**PKiKP**	**16 16 33.8**	**-0.1**
ARCES	**ARCESS Array B**	**130.73**	**351**	PKP	**PKPdf**	**16 16 37.4**	**-0.5**
	comp=Z,5.3nm,0.8s,baz=24,slow=2.5,SNR=5.0						
FINES	**FINESS Array B**	**137.87**	**345**	PKhKP	PKPpre	16 16 47.5	
	comp=Z,3.1nm,1.0s,baz=38,slow=7.0,SNR=2.5						
OBN	**Obninsk**	**139.41**	**333**	ePKIKP	**PKiKP**	**16 16 57.2**	**+0.5**
VSU	**Vasula**	**140.28**	**343**	⇓ePKIKP	**PKPdf**	**16 16 53.9**	**-2.0**
NOA	**NORSAR Array B**	**140.56**	**356**	PKhKP	PKPpre	16 16 49.1	
	comp=Z,1.5nm,0.9s,baz=15,slow=4.4,SNR=3.7						
KMBO	**Kilima Mbogo**	**141.56**	**238**	PKhKP	PKPpre	16 16 56.0	
	comp=Z,1.0nm,0.3s,baz=36,slow=5.0,SNR=7.1						
NCK	**Nalchik**	**141.76**	**314**	⇑ePKIKP	**PKPdf**	**16 16 58.3**	**-0.9**
GNI	**Garni**	**142.08**	**308**	⇑iPKIKP	**PKPdf**	**16 16 59.5**	**-0.5**
BCA	**Borcka**	**143.88**	**311**	⇓iP	**PKPdf**	**16 17 03.9**	**+0.9**
DRUM	**Mains of Drumt**	**144.41**	**8**	eP	**PKPab**	**16 17 00.3**	**-1.2**
LAWE	**Loch Awe, Argy**	**144.62**	**11**	eP	**PKPab**	**16 17 01.3**	**-1.0**
INVG	**Invergeldie, C**	**144.67**	**9**	eP	**PKPab**	**16 17 01.5**	**-1.1**
EDU	**Dundee**	**144.70**	**8**	eP	**PKPab**	**16 17 02.0**	**-0.6**
EAB	**Aberfoyle**	**144.86**	**10**	eP	**PKPab**	**16 17 02.5**	**-0.7**
SUW	**Suwalki**	**145.13**	**342**	ePKP	**PKPab**	**16 17 04.3**	**0.0**
SUW	**Suwalki**	**145.13**	**342**	ePKPbc	**PKPbc**	**16 17 03.5**	**-0.7**
SUW	**Suwalki**	**145.13**	**342**	ePKIKP	**PKPab**	**16 17 04.3**	**0.0**
MUD	**Monsted U'grnd**	**145.26**	**356**	iP	**PKPbc**	**16 17 04.5**	**0.0**
	comp=Z,87nm,1.2s						
MUD	**Monsted U'grnd**	**145.26**	**356**	iPKIKP	**PKPbc**	**16 17 04.5**	**0.0**
MUD				pmax	pmax		
	comp=Z,87nm,1.2s						
ESY	**Stoneypath**	**145.37**	**8**	eP	**PKPbc**	**16 17 04.2**	**-0.7**
KLNR	**Kaliningrad**	**145.39**	**345**	c iPKIKP	**PKPbc**	**16 17 04.4**	**-0.6**
EBL	**Broad Law**	**145.45**	**9**	eP	**PKPdf**	**16 17 04.5**	**-0.7**
AKASG	**Malin Array Be**	**145.67**	**333**	PKPbc	**PKPdf**	**16 17 05.3**	**-0.4**
	comp=Z,17nm,0.8s,baz=39,slow=4.2,SNR=52						
AKBB	**Malin Array Si**	**145.67**	**333**	ePKPdf	**PKPdf**	**16 17 05.0**	**-0.7**
KIEV	**Kiev**	**145.69**	**333**	ePKPdf	**PKPdf**	**16 17 04.9**	**-0.8**
KIEV	**Kiev**	**145.69**	**333**	⇑ePKP2	**PKPdf**	**16 17 05.4**	**-0.3**
AK11	**Malin Array Si**	**145.72**	**333**	ePKPdf	**PKPdf**	**16 17 04.9**	**-0.9**
EDMD	**Edmundbyers**	**146.51**	**8**	eP	**PKPdf**	**16 17 07.7**	**+0.7**
KESW	**Keswick, Cumbr**	**146.59**	**9**	eP	**PKPbc**	**16 17 08.2**	**-0.5**
MBAR	**Mbarara**	**146.83**	**231**	PKPbc	**PKPab**	**16 17 12.4**	**+0.2**
	comp=Z,5.1nm,0.2s,baz=90,slow=20,SNR=6.1						
SIM	**Simferopol'**	**147.06**	**321**	iPKP2	**PKPab**	**16 17 11.4**	**-0.5**
SIM				pmax	pmax		
	comp=Z,21nm,1.0s						
GKP	**Gorka Klasztor**	**147.30**	**347**	ePKP	**PKPbc**	**16 17 11.2**	**+0.4**
BEL	**Belsk**	**147.74**	**342**	ePKP	**PKPbc**	**16 17 12.6**	**+0.6**
BEL	**Belsk**	**147.74**	**342**	ePKP2	**PKPbc**	**16 17 12.6**	**+0.6**
LVV	**L'vov**	**148.42**	**337**	ePKP2	**PKPbc**	**16 17 13.8**	**-0.1**
KWP	**Kalwaria Pacla**	**149.05**	**338**	ePKP	**PKPbc**	**16 17 15.9**	**+0.4**
KWP	**Kalwaria Pacla**	**149.05**	**338**	ePKP2	**PKPbc**	**16 17 15.9**	**+0.4**
ILGA	**Ilgaz**	**149.41**	**315**	ePKPbc	**PKiKP**	**16 17 17.7**	**-0.5**
OJC	**Ojcow**	**149.46**	**342**	ePKP	**PKPbc**	**16 17 16.4**	**-0.1**
OJC	**Ojcow**	**149.46**	**342**	ePKP2	**PKPbc**	**16 17 16.4**	**-0.1**
PRAR	**RASCA**	**149.49**	**332**	⇓iP	**PKPbc**	**16 17 17.0**	**+0.3**
BUR08	**Bucovina Ar. S**	**149.71**	**333**	ePKPbc	**PKPbc**	**16 17 16.8**	**-0.6**
BUR04	**Bucovina Ar. S**	**149.73**	**333**	ePKPbc	**PKPbc**	**16 17 16.1**	**-1.3**
BURAR	**Bucovina Array**	**149.73**	**333**	⇓iP	**PKiKP**	**16 17 18.6**	**+0.2**
BURAR	**Bucovina Array**	**149.73**	**333**	⇓PKP2	**PKiKP**	**16 17 18.6**	**+0.2**
KSP	**Ksiaz**	**149.78**	**346**	ePKP	**PKPbc**	**16 17 17.7**	**+0.4**
KSP	**Ksiaz**	**149.78**	**346**	ePKP2	**PKPbc**	**16 17 17.7**	**+0.4**
TLCR		**149.83**	**326**	⇓iP	**PKiKP**	**16 17 20.4**	**+1.9**
TLCR		**149.83**	**326**	⇓PKP2	**PKiKP**	**16 17 20.4**	**+1.9**
BIZ	**Bicaz**	**149.87**	**331**	⇑iP	**PKiKP**	**16 17 18.9**	**+0.3**
TESR	**Tescani**	**149.94**	**330**	⇓iP	**PKiKP**	**16 17 19.2**	**+0.5**
CLL	**Collm**	**149.95**	**351**	ePKPbc	**PKPbc**	**16 17 17.1**	**-0.6**
CLL	**Collm**	**149.95**	**351**	⇑iPKPbc	**PKPbc**	**16 17 17.3**	**-0.4**
	comp=Z,22nm,0.9s						
CLL				i pPKPdf	**pPKPdf**	**16 17 20.2**	**-1.5**
	comp=Z,23nm,0.9s						
CLL				ePKPab	**PKPab**	**16 17 22.0**	**-1.3**
	comp=Z,19nm,0.9s						
CLL				epPKPab	**sPKPbc**	**16 17 28.0**	**-1.6**
NIE	**Niedzica**	**150.02**	**341**	ePKP	**PKiKP**	**16 17 19.2**	**+0.3**
NIE	**Niedzica**	**150.02**	**341**	ePKP2	**PKiKP**	**16 17 19.2**	**+0.3**
UZH	**Uzhgorod**	**150.04**	**337**	ePKP2	**PKPbc**	**16 17 18.3**	**+0.3**
BR131	**Keskin Array S**	**150.12**	**313**	ePKPbc	**PKPbc**	**16 17 17.9**	**-0.8**
BRTR	**Keskin Array B**	**150.12**	**313**	PKPbc	**PKPbc**	**16 17 18.9**	**+0.2**
	comp=Z,5.6nm,0.9s,baz=122,slow=3.2,SNR=26						
CFR	**Carcaliu**	**150.18**	**327**	⇓iP	**PKPbc**	**16 17 18.7**	**+0.3**
CFR	**Carcaliu**	**150.18**	**327**	⇓PKHKP	**PKPbc**	**16 17 18.7**	**+0.3**
BRG	**Berggiesshubel**	**150.21**	**349**	ePKP	**PKPbc**	**16 17 17.6**	**-0.7**
	comp=Z,105nm,2.1s						
DPC	**Dobruska-Polom**	**150.24**	**346**	⇑ePKP	**PKiKP**	**16 17 19.2**	**-0.1**
DPC				ePKPAB	**sPKPdf**	**16 17 25.4**	**+0.1**
DPC				ex	x	16 17 38.1	
DPC	**Dobruska-Polom**	**150.24**	**346**	ePKP2	**PKiKP**	**16 17 19.2**	**-0.1**
TRPA	**Tarpa**	**150.37**	**337**	⇓iP	**PKiKP**	**16 17 19.5**	**0.0**
VRI	**Vrincioaia**	**150.38**	**329**	⇓iP	**PKiKP**	**16 17 19.5**	**-0.2**
VRI	**Vrincioaia**	**150.38**	**329**	⇓PKP2	**PKiKP**	**16 17 19.5**	**-0.2**
KRLC	**Kraliky**	**150.39**	**345**	⇑ePKP	**PKiKP**	**16 17 19.4**	**-0.2**
KRLC				ePKPAB	**pPKPdf**	**16 17 21.9**	**-0.6**
KRLC				epPKP	**sPKPbc**	**16 17 30.7**	**-0.1**
KRLC	**Kraliky**	**150.39**	**345**	ePKP2	**PKiKP**	**16 17 19.4**	**-0.2**
PLOR	**Plostina**	**150.43**	**329**	⇑iP	**PKiKP**	**16 17 19.6**	**-0.2**
PLOR	**Plostina**	**150.43**	**329**	⇑PKHKP	**PKiKP**	**16 17 19.6**	**-0.2**
PVCC	**Panska Ves**	**150.43**	**348**	⇑ePKP	**PKiKP**	**16 17 19.4**	**-0.2**
PVCC				ePKPAB	**pPKPdf**	**16 17 22.1**	**-0.4**
PVCC	**Panska Ves**	**150.43**	**348**	ePKP2	**PKiKP**	**16 17 19.4**	**-0.2**
MORC	**Moravsky Berou**	**150.48**	**344**	ePKPbc	**PKPbc**	**16 17 18.6**	**-0.5**
MORC	**Moravsky Berou**	**150.48**	**344**	⇓iP	**PKiKP**	**16 17 19.8**	**0.0**
MORC	**Moravsky Berou**	**150.48**	**344**	ePKP	**PKPbc**	**16 17 19.1**	**0.0**
LANS	**Liptovska Anna**	**150.51**	**341**	ePKP	**PKiKP**	**16 17 20.1**	**+0.2**
ANTO	**Ankara**	**150.61**	**314**	ePKPbc	**PKPbc**	**16 17 19.7**	**-0.1**
ANTO	**Ankara**	**150.61**	**314**	⇓iP	**PKPbc**	**16 17 19.8**	**0.0**
ANTO	**Ankara**	**150.61**	**314**	⇓PKIKP	**PKPbc**	**16 17 19.8**	**0.0**
TLB	**Topalu**	**150.64**	**326**	⇑iP	**PKiKP**	**16 17 20.6**	**+0.4**
DOPR	**Dopca**	**150.93**	**331**	⇓iP	**PKiKP**	**16 17 21.4**	**+0.6**
PRU	**Pruhonice**	**150.95**	**348**	⇑ePKP	**PKPbc**	**16 17 20.2**	**+0.1**
PRU				ePKPAB	**pPKPdf**	**16 17 23.0**	**-0.3**
PRU	**Pruhonice**	**150.95**	**348**	ePKIKP	**PKPbc**	**16 17 20.2**	**+0.1**
PRU				e		16 17 23.0	
UCC	**Uccle**	**151.01**	**2**	⇑PKP	**PKPbc**	**16 17 20.2**	**0.0**
MLR	**Muntele Rosu**	**151.03**	**330**	ePKPbc	**PKPbc**	**16 17 19.4**	**-1.1**
MLR	**Muntele Rosu**	**151.03**	**330**	⇑iP	**PKPbc**	**16 17 20.6**	**0.0**
MLR	**Muntele Rosu**	**151.03**	**330**	ePKIKP	**PKPbc**	**16 17 19.5**	**-1.1**
NKC	**Novy Kostel**	**151.07**	**351**	⇑ePKP	**PKiKP**	**16 17 21.2**	**+0.2**
CJR	**Cluj-Napoca**	**151.12**	**334**	⇓iP	**PKiKP**	**16 17 22.0**	**+0.8**
VRAC	**Vranov**	**151.15**	**345**	⇑iP	**PKiKP**	**16 17 21.3**	**+0.1**
VRAC	**Vranov**	**151.15**	**345**	ePKP	**PKPbc**	**16 17 20.4**	**-0.2**
MEM	**Membach**	**151.22**	**359**	⇑PKPbc	**PKPbc**	**16 17 19.2**	**-1.4**
MEM				⇑PKPab	**sPKPdf**	**16 17 25.3**	**-1.5**
MEM				⇑pPKPbc	**pPKPbc**	**16 17 30.4**	**+0.8**
MEM				⇑pPKPab	**pPKPab**	**16 17 37.0**	**-0.3**
JAVC	**Velka Javorina**	**151.29**	**343**	ePKP	**PKiKP**	**16 17 22.2**	**+0.7**
VYHS	**Vyhne**	**151.29**	**341**	ePKP	**PKPbc**	**16 17 21.1**	**+0.1**
SECR		**151.31**	**329**	⇑iP	**PKiKP**	**16 17 21.7**	**+0.1**
BCLA	**Clavier**	**151.41**	**0**	⇑PKPbc	**PKiKP**	**16 17 22.8**	**+1.2**
BCLA				⇑PKPab	**sPKPdf**	**16 17 26.7**	**-0.3**
BCLA				⇑pPKPbc	**sPKPbc**	**16 17 33.3**	**+0.2**
BCLA				⇑pPKPab	**sPKPab**	**16 17 40.1**	**-1.1**
DRGR		**151.41**	**335**	⇑iP	**PKiKP**	**16 17 22.2**	**+0.3**
KRUC	**Moravsky**	**151.43**	**345**	ePKP	**PKPbc**	**16 17 21.3**	**+0.1**
PSZ	**Piszkesteto**	**151.47**	**340**	ePKPbc	**PKPbc**	**16 17 21.1**	**-0.4**
PSZ	**Piszkesteto**	**151.47**	**340**	⇑iP	**PKPab**	**16 17 30.3**	**+0.5**
PSZ	**Piszkesteto**	**151.47**	**340**	ePKIKP	**PKPbc**	**16 17 21.1**	**-0.4**
VOIR		**151.49**	**330**	⇑iP	**PKiKP**	**16 17 23.1**	**+1.0**
DOU	**Dourbes**	**151.72**	**1**	⇓PKP	**PKiKP**	**16 17 22.2**	**-0.1**
DOU				⇑pPKP	**PKPab**	**16 17 31.3**	**+0.7**
ARR	**Arges**	**151.73**	**331**	⇓iP	**PKiKP**	**16 17 23.4**	**+0.8**
SILT	**Sile**	**151.93**	**319**	⇑iP	**PKiKP**	**16 17 26.4**	**+3.4**
KHC	**Kasperske Hory**	**151.96**	**349**	ePKPbc	**PKPbc**	**16 17 21.8**	**-0.7**
KHC	**Kasperske Hory**	**151.96**	**349**	⇑ePKP	**PKPbc**	**16 17 22.1**	**-0.4**
KHC				ePKPAB	**PKPab**	**16 17 31.9**	**+0.1**
KHC	**Kasperske Hory**	**151.96**	**349**	ePKIKP	**PKPbc**	**16 17 22.1**	**-0.4**
KHC				e		16 17 31.9	
ZST	**Bratislava**	**152.05**	**343**	ePKP	**PKiKP**	**16 17 23.7**	**+0.7**
WLF	**Walferdange**	**152.16**	**359**	ePKPbc	**PKPbc**	**16 17 22.8**	**-0.1**
WLF	**Walferdange**	**152.16**	**359**	⇑PKPbc	**PKiKP**	**16 17 23.7**	**+0.5**
WLF				⇑PKPab	**sPKPdf**	**16 17 27.5**	**-0.7**
WLF				⇑pPKPbc	**PKPab**	**16 17 32.4**	**-0.1**
HUMR	**Humele**	**152.20**	**329**	⇑iP	**PKiKP**	**16 17 23.9**	**+0.4**
GERES	**GERESS Array B**	**152.21**	**348**	PKPbc	**PKiKP**	**16 17 23.4**	**0.0**
	comp=Z,4.6nm,0.9s,baz=40,slow=2.3,SNR=15						
GEA0	**GERESS Array S**	**152.22**	**348**	ePKPbc	**PKPbc**	**16 17 22.5**	**-0.7**
SIRR	**Siria**	**152.25**	**336**	⇓iP	**PKiKP**	**16 17 23.7**	**+0.2**
EIL	**Elat**	**152.40**	**293**	PKPbc	**PKPbc**	**16 17 23.6**	**-0.5**
	baz=5.6,slow=4.0						
GZR	**Gura Zlata**	**152.52**	**333**	⇑iP	**PKPbc**	**16 17 23.6**	**-0.3**
GZR	**Gura Zlata**	**152.52**	**333**	⇑PKIKP	**PKPbc**	**16 17 23.6**	**-0.3**
CONA	**Conrad Observa**	**152.61**	**345**	pPKPdf	**PKiKP**	**16 17 24.8**	**+0.5**
	comp=Z,11nm,0.9s						
BZS	**Buzias**	**152.81**	**335**	⇑iP	**PKiKP**	**16 17 24.6**	**-0.1**
MOA	**Molln**	**153.05**	**347**	PKiKP	**PKiKP**	**16 17 25.4**	**+0.3**
	comp=Z,12nm,1.7s						
ARSA	**Arzberg**	**153.33**	**345**	ePKiKP	**PKiKP**	**16 17 26.1**	**+0.4**
	comp=Z,2.7nm,0.6s						
BFO	**Black Forest**	**153.41**	**356**	ePKPbc	**PKPbc**	**16 17 24.8**	**-1.0**
MDVR	**Moldovita**	**153.46**	**334**	⇑iP	**PKiKP**	**16 17 26.5**	**+0.4**
KBA	**Koelnbreinsper**	**153.97**	**348**	pPKPdf	**PKPbc**	**16 17 25.7**	**-1.5**
	comp=Z,8.3nm,1.2s						
SOKA	**Soboth**	**153.98**	**345**	pPKPdf	**PKPbc**	**16 17 25.6**	**-1.5**
	comp=Z,9.7nm,1.2s						
RETA	**Reutte**	**154.00**	**352**	PKiKP	**PKiKP**	**16 17 27.9**	**+0.7**
	comp=Z,14nm,1.3s						
PERS	**Pernice**	**154.00**	**345**	iPKPdf	**PKPdf**	**16 17 20.2**	**+1.1**
WATA	**Walderalm**	**154.03**	**351**	PKiKP	**PKiKP**	**16 17 30.0**	**+2.7**
	comp=Z,2.5nm,0.6s						
MOTA	**Moosalm**	**154.09**	**351**	ePKiKP	**PKiKP**	**16 17 27.8**	**+0.3**
	comp=Z,4.8nm,1.0s						
WTTA	**Wattenberg**	**154.09**	**350**	PKiKP	**PKiKP**	**16 17 28.8**	**+1.2**
	comp=Z,12nm,1.2s						
SQTA	**Sankt Quirin**	**154.20**	**351**	PKiKP	**PKiKP**	**16 17 28.3**	**+0.7**
	comp=Z,6.1nm,0.8s						
DAVA	**Damuels**	**154.30**	**353**	PKiKP	**PKiKP**	**16 17 28.8**	**+0.9**
	comp=Z,11nm,1.5s						
ABTA	**Abfaltersbach**	**154.45**	**349**	PKiKP	**PKiKP**	**16 17 29.5**	**+1.4**
	comp=Z,4.7nm,0.8s						
FETA	**Feichten**	**154.46**	**352**	PKiKP	**PKiKP**	**16 17 30.2**	**+1.9**
	comp=Z,6.4nm,1.0s						
DIVS	**Divibare**	**154.72**	**335**	ePKPbc	**PKPbc**	**16 17 28.2**	**-0.6**
DIVS				ePKPab	**PKPab**	**16 17 43.2**	**-0.4**
EZN	**Ezine**	**154.75**	**320**	⇓iP	**PKPab**	**16 17 40.4**	**-3.4**
VISS	**Visnje**	**154.85**	**345**	iPKPdf	**PKPdf**	**16 17 19.8**	**-0.4**
JAVS	**Javornik**	**154.95**	**346**	iPKPdf	**PKPdf**	**16 17 22.9**	**+2.4**
BOJS	**Bojanci**	**155.02**	**344**	iPKPdf	**PKPdf**	**16 17 20.9**	**+0.4**
ESDC	**Sonseca Array**	**160.40**	**22**	PKP	**PKPdf**	**16 17 28.4**	**+1.0**
	comp=Z,0.1nm,0.2s,baz=347,slow=4.1,SNR=3.2						
ESDC				PKPab	**PKPab**	**16 18 07.7**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=308,slow=4.0,SNR=3.9						
KEST	**Kesra**	**165.69**	**347**	PKPab	**PKPab**	**16 18 32.5**	**+1.0**
	comp=Z,5.2nm,0.9s,baz=312,slow=9.8,SNR=4.5						
TOA0	**Torodi Ar. Sit**	**170.68**	**156**	ePKPdf	**PKPdf**	**16 17 34.7**	**-1.8**
TORD	**Torodi Ar. Bea**	**170.68**	**156**	PKP	**PKPdf**	**16 17 36.0**	**-0.5**
	comp=Z,1.1nm,1.0s,baz=292,slow=3.1,SNR=4.9						
TORD				PKPab	**PKPab**	**16 18 56.8**	**+2.8**
	comp=Z,1.8nm,0.8s,baz=251,slow=3.1,SNR=7.0						

GUC ***26*** *15:59:24.8±0.6, 31°.23S×70°.67W, h81^{km}±11^{km}, ML3.6*
ISCJB ***26*** *15:59:25.2±1.4, 31°.32S±0°.04×71°.16W±0°.09, h24^{km}±18^{km}, Error ellipse: s-maj=13.8km s-min=5.3km az=15.8*
SJA ***26*** *15:59:25.5±0.5, 31°.34S×71°.08W, h40^{km}±975^{km}, ML3.5, MW3.5*
ISC 26 15:59:22.6±2.4**, 31°.28S**±0°.03×**71°.03W**±0°.10**, h4**^{km}±14^{km}**, n19, σ1§17**/26**, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**1.12**	**10**	⇑iP	**Pn**	**15 59 46.5**	**+1.0**
GO04				iS	**Sn**	**16 00 02.1**	**+0.6**
RTLS	**Leoncito**	**1.56**	**110**	eP	**Pg**	**15 59 53.6**	**+1.0**
RTLS				IAML		16 00 19.1	
	comp=Z,605nm,0.2s						
AUSP	**Uspallata**	**1.68**	**124**	eP	**Pg**	**15 59 55.0**	**+0.1**
AUSP				eS	**Sg**	**16 00 16.6**	**-0.1**
ROCH	**El Roble**	**1.68**	**180**	IAML		16 00 18.0	
	comp=N,739nm,0.3s						
ROC1	**El Roble**	**1.69**	**180**	eP	**Pn**	**15 59 53.2**	**0.0**
AROD	**Rodeo**	**1.74**	**51**	eP	**Pg**	**15 59 56.7**	**+0.7**
AROD				eS	**Sg**	**16 00 19.7**	**+1.1**
ACCO	**Cerro Coronel**	**1.82**	**68**	eP	**Pg**	**15 59 57.9**	**+0.3**
ACCO				eS	**Sg**	**16 00 21.7**	**+0.5**
ACDV	**Cuesta del Vie**	**1.98**	**56**	eP	**Pb**	**15 59 59.8**	**+0.4**
ACDV				eS	**Sg**	**16 00 24.9**	**-1.4**
FCH	**Farellones**	**2.13**	**163**	⇑iP	**Pn**	**16 00 00.3**	**+1.0**
FCH				iS	**Sn**	**16 00 27.5**	**+1.1**
FCH				IAML		16 00 28.9	
	comp=E,517nm,0.2s						
CLCH	**Cerro Calan**	**2.15**	**169**	eP	**Pn**	**16 00 00.1**	**+0.8**
CLCH				IAML		16 00 42.4	
	comp=N,356nm,0.4s						
RTLL	**Cerro Villicun**	**2.18**	**92**	eP	**Pb**	**16 00 01.6**	**-1.2**
RTCV	**Cerro Valdivia**	**2.20**	**106**	eP	**Pb**	**16 00 02.1**	**-0.9**
RTCV				eS	**Sb**	**16 00 28.5**	**-2.1**
AMOG	**MOGNA**	**2.20**	**82**	eP	**Pb**	**16 00 02.4**	**-0.7**
ASAL	**Salagasta**	**2.27**	**126**	eP	**Pb**	**16 00 02.9**	**-1.4**
LCO	**Las Campanas**	**2.28**	**7**	eP	**Pn**	**16 00 01.2**	**-0.1**
ARCO	**CERRO ARCO**	**2.36**	**132**	eP	**Pn**	**16 00 04.0**	**+1.6**
ARCO				IAML		16 00 39.2	
	comp=Z,247nm,0.3s						
AAGR	**Agrelo**	**2.59**	**135**	eP	**Pn**	**16 00 07.3**	**+1.9**
LMEL	**Las Melosas**	**2.65**	**165**	eP	**Pn**	**16 00 07.2**	**+0.9**
LMEL				eS	**Sn**	**16 00 38.9**	**-0.1**
LMEL				IAML		16 00 41.0	
	comp=N,360nm,0.1s						
AGUA	**GUANDACOL**	**2.83**	**51**	eP	**Pb**	**16 00 11.6**	**-2.2**

KRSC ***26*** *16:01:35.5±1.1, 55°.51N×160°.35E, h191^{km}±9^{km}, ML3.9*
ISCJB ***26*** *16:01:36.5±0.3, 55°.50N±0°.03×160°.36E±0°.07, h189^{km}±2^{km}, mb3.3/11, Error ellipse: s-maj=6.7km s-min=3.4km az=23.7*
MOS ***26*** *16:01:36.5±0.6, 55°.55N×160°.32E, h188^{km}, mb3.9/1, Error ellipse: s-maj=15.7km s-min=4.7km az=76.9*
IDC ***26*** *16:01:38.3±1.6, 55°.64N×160°.17E, h192^{km}±15^{km}, mb3.0/11, mb1 3.2/16, mb1mx3.1/50, mbtmp3.6/16, Error ellipse: s-maj=17.5km s-min=12.1km az=136.0*
ISC 26 16:01:37.1±0.6**, 55°.49N**±0°.03×**160°.31E**±0°.04**, h189**^{km}±4^{km}**, n105, σ1§12**/158**, mb3.3**/11**, 3C, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**0.23**	**205**	eP	**Pn**	**16 02 02.8**	**+0.5**
TUMR				eS	**Sn**	**16 02 22.2**	**+0.6**
TUMR	**Tumrok**	**0.23**	**205**	PN	**Pn**	**16 02 02.5**	**+0.2**
TUMR				S	**Sn**	**16 02 21.6**	**0.0**
TUMD	**Tumrok D**	**0.29**	**170**	eP	**Pn**	**16 02 02.5**	**+0.2**
TUMD				eS	**Sn**	**16 02 21.6**	**-0.1**
KZV	**Kizimen**	**0.38**	**182**	eP	**Pn**	**16 02 02.9**	**+0.2**
KZV				eS	**Sn**	**16 02 22.0**	**-0.4**
KZV	**Kizimen**	**0.38**	**182**	PN	**Pn**	**16 02 02.9**	**+0.2**
KZV				S	**Sn**	**16 02 22.0**	**-0.4**
BZMR	**Bezymyannaya**	**0.46**	**12**	eP	**Pn**	**16 02 02.7**	**-0.2**
BZMR				S	**Sn**	**16 02 23.0**	**0.0**
BZMR	**Bezymyannaya**	**0.46**	**12**	PN	**Pn**	**16 02 02.7**	**-0.2**
BZMR				S	**Sn**	**16 02 23.0**	**0.0**
KIRR	**Kirishev**	**0.47**	**2**	eP	**Pn**	**16 02 02.7**	**-0.3**
KIRR				eS	**Sn**	**16 02 22.4**	**-0.7**
KIRR	**Kirishev**	**0.47**	**2**	PN	**Pn**	**16 02 02.7**	**-0.3**
KIRR				S	**Sn**	**16 02 22.4**	**-0.7**
BZWR	**Bezymyannyi-We**	**0.49**	**12**	eP	**Pn**	**16 02 02.9**	**-0.2**
BZWR				eS	**Sn**	**16 02 23.0**	**-0.3**
BZWR	**Bezymyannyi-We**	**0.49**	**12**	PN	**Pn**	**16 02 02.9**	**-0.2**
BZWR				S	**Sn**	**16 02 23.0**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**0.50**	**25**	eP	**Pn**	**16 02 02.9**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**0.50**	**25**	PN	**Pn**	**16 02 02.9**	**-0.1**
ZLN	**Zelenaya**	**0.60**	**27**	eP	**Pn**	**16 02 03.7**	**+0.3**
ZLN	**Zelenaya**	**0.60**	**27**	PN	**Pn**	**16 02 03.7**	**+0.3**
KOZ	**Kozyrevsk**	**0.62**	**337**	eP	**Pn**	**16 02 03.0**	**-0.5**
KOZ				eS	**Sn**	**16 02 22.6**	**-1.4**
KOZ	**Kozyrevsk**	**0.62**	**337**	PN	**Pn**	**16 02 03.0**	**-0.5**
KOZ				S	**Sn**	**16 02 22.6**	**-1.4**
LGNR	**Loginova**	**0.63**	**19**	eP	**Pn**	**16 02 04.1**	**+0.3**
LGNR				eS	**Sn**	**16 02 24.4**	**-0.2**
LGNR	**Loginova**	**0.63**	**19**	PN	**Pn**	**16 02 04.1**	**+0.3**
LGNR				S	**Sn**	**16 02 24.4**	**-0.2**
CIRR	**Tsirk**	**0.68**	**21**	eP	**Pn**	**16 02 04.1**	**+0.2**
CIRR				eS	**Sn**	**16 02 25.1**	**+0.4**
CIRR	**Tsirk**	**0.68**	**21**	PN	**Pn**	**16 02 04.1**	**+0.2**
CIRR				S	**Sn**	**16 02 25.1**	**+0.4**
KLY	**Klyuchi**	**0.85**	**13**	eP	**Pn**	**16 02 04.5**	**-0.1**
KLY				eS	**Sn**	**16 02 26.3**	**+0.2**
KLY	**Klyuchi**	**0.85**	**13**	PN	**Pn**	**16 02 04.5**	**-0.1**
KLY				S	**Sn**	**16 02 26.3**	**+0.2**
SRDR	**Sredinnyy**	**0.90**	**338**	eP	**Pn**	**16 02 04.2**	**-0.9**
SRDR				eS	**Sn**	**16 02 25.4**	**-1.4**
SRDR	**Sredinnyy**	**0.90**	**338**	PN	**Pn**	**16 02 04.2**	**-0.9**
SRDR				S	**Sn**	**16 02 25.4**	**-1.4**
ESO	**Esso**	**1.01**	**296**	eP	**Pn**	**16 02 05.2**	**-0.6**
ESO				eS	**Sn**	**16 02 25.6**	**-2.5**
ESO	**Esso**	**1.01**	**296**	PN	**Pn**	**16 02 05.2**	**-0.6**
ESO				S	**Sn**	**16 02 25.6**	**-2.5**
BDR	**Baidarnaya**	**1.20**	**24**	eP	**Pn**	**16 02 07.3**	**+0.1**
BDR	**Baidarnaya**	**1.20**	**24**	PN	**Pn**	**16 02 07.3**	**+0.1**
MKZ	**Mys Kozlova**	**1.24**	**138**	eP	**Pn**	**16 02 07.0**	**-0.5**
MKZ				eS	**Sn**	**16 02 29.4**	**-1.6**
MKZ	**Mys Kozlova**	**1.24**	**138**	PN	**Pn**	**16 02 07.0**	**-0.5**
MKZ				S	**Sn**	**16 02 29.4**	**-1.6**
SRKR	**Sorokina**	**1.26**	**22**	eP	**Pn**	**16 02 07.3**	**-0.5**
SRKR				eS	**Sn**	**16 02 31.2**	**-0.5**
SRKR	**Sorokina**	**1.26**	**22**	PN	**Pn**	**16 02 07.3**	**-0.5**
SRKR				S	**Sn**	**16 02 31.2**	**-0.5**
SMKR	**Semkarok**	**1.27**	**30**	eP	**Pn**	**16 02 07.1**	**-0.8**
SMKR				eS	**Sn**	**16 02 31.4**	**-0.5**
SMKR	**Semkarok**	**1.27**	**30**	PN	**Pn**	**16 02 07.1**	**-0.8**
SMKR				S	**Sn**	**16 02 31.4**	**-0.5**
KII	**Karymskiy**	**1.54**	**199**	eP	**Pn**	**16 02 11.1**	**+0.8**
KII	**Karymskiy**	**1.54**	**199**	PN	**Pn**	**16 02 11.1**	**+0.8**
KBG	**Krutoberegovo**	**1.55**	**59**	eP	**Pn**	**16 02 09.6**	**-0.6**
KBG				eS	**Sn**	**16 02 34.5**	**-1.5**
KBG	**Krutoberegovo**	**1.55**	**59**	PN	**Pn**	**16 02 09.6**	**-0.6**
KBG				S	**Sn**	**16 02 34.5**	**-1.5**
KBTR	**Krutoberegovo**	**1.59**	**62**	eP	**Pn**	**16 02 09.9**	**-0.7**
KBTR				eS	**Sn**	**16 02 34.7**	**-1.9**
KBTR	**Krutoberegovo**	**1.59**	**62**	PN	**Pn**	**16 02 09.9**	**-0.7**
KBTR				S	**Sn**	**16 02 34.7**	**-1.9**
GNL	**Ganaly**	**2.27**	**219**	eP	**Pn**	**16 02 18.7**	**+0.9**
GNL	**Ganaly**	**2.27**	**219**	PN	**Pn**	**16 02 18.7**	**+0.9**
KRX	**Arik**	**2.34**	**205**	eP	**Pn**	**16 02 20.0**	**+1.3**
KRX	**Arik**	**2.34**	**205**	PN	**Pn**	**16 02 20.0**	**+1.3**
SDLR	**Sedlovina**	**2.37**	**201**	eP	**Pn**	**16 02 19.9**	**+1.0**
SDLR	**Sedlovina**	**2.37**	**201**	PN	**Pn**	**16 02 19.9**	**+1.0**
NLC	**Nalytchevo**	**2.39**	**194**	eP	**Pn**	**16 02 18.6**	**-0.4**
NLC				eS	**Sn**	**16 02 50.9**	**-0.7**
NLC	**Nalytchevo**	**2.39**	**194**	PN	**Pn**	**16 02 18.6**	**-0.4**
NLC				S	**Sn**	**16 02 50.9**	**-0.7**
SMAR	**Somma**	**2.40**	**202**	eP	**Pn**	**16 02 20.4**	**+1.0**
SMAR	**Somma**	**2.40**	**202**	PN	**Pn**	**16 02 20.4**	**+1.0**
SPN	**Mys Shipunski**	**2.40**	**184**	eP	**Pn**	**16 02 18.1**	**-1.1**
SPN				eS	**Sn**	**16 02 49.0**	**-2.9**
SPN	**Mys Shipunski**	**2.40**	**184**	PN	**Pn**	**16 02 18.1**	**-1.1**
SPN				S	**Sn**	**16 02 49.0**	**-2.9**
KOK	**Koryaka**	**2.41**	**205**	eP	**Pn**	**16 02 21.1**	**+1.7**
KOK	**Koryaka**	**2.41**	**205**	PN	**Pn**	**16 02 21.1**	**+1.7**
AVH	**Avacha**	**2.41**	**203**	eP	**Pn**	**16 02 20.8**	**+1.4**
AVH	**Avacha**	**2.41**	**203**	PN	**Pn**	**16 02 20.8**	**+1.4**
UGLR	**Uglovaya**	**2.44**	**202**	eP	**Pn**	**16 02 20.9**	**+1.1**
UGLR	**Uglovaya**	**2.44**	**202**	PN	**Pn**	**16 02 20.9**	**+1.1**
DALK	**Dalny**	**2.62**	**201**	eP	**Pn**	**16 02 22.3**	**+0.6**
DALK				eS	**Sn**	**16 02 56.8**	**+0.3**
DALK	**Dalny**	**2.62**	**201**	PN	**Pn**	**16 02 22.3**	**+0.6**
DALK				S	**Sn**	**16 02 56.8**	**+0.3**
PET	**Petropavlovsk**	**2.65**	**202**	eP	**Pn**	**16 02 22.8**	**+0.7**
PET				eS	**Sn**	**16 02 57.4**	**+0.4**
PET	**Petropavlovsk**	**2.65**	**202**	ePN	**Pn**	**16 02 22.7**	**+0.7**
PET				eS	**Sn**	**16 02 57.1**	**+0.1**
PET				pmax	pmax		
	comp=Z,27nm,0.6s						
PET				smax	smax		
	comp=N,31nm,0.6s						
PET				smax	smax		
	comp=E,34nm,0.4s						
PETK	**Petropavlovsk-**	**2.83**	**214**	P	**Pn**	**16 02 25.1**	**+0.9**
	comp=E,2.3nm,0.3s,baz=59,slow=15,SNR=72						
KRMR	**Karymshinskiy**	**2.96**	**207**	eP	**Pn**	**16 02 26.6**	**+1.0**
KRMR	**Karymshinskiy**	**2.96**	**207**	PN	**Pn**	**16 02 26.6**	**+1.0**
APC	**Apacha**	**3.17**	**217**	eP	**Pn**	**16 02 29.8**	**+1.7**
APC	**Apacha**	**3.17**	**217**	PN	**Pn**	**16 02 29.8**	**+1.7**
RUS	**Russkaya**	**3.24**	**200**	eP	**Pn**	**16 02 27.9**	**-1.1**
RUS				eS	**Sn**	**16 03 07.7**	**-1.9**
RUS	**Russkaya**	**3.24**	**200**	PN	**Pn**	**16 02 27.9**	**-1.1**
RUS				S	**Sn**	**16 03 07.7**	**-1.9**
BKI	**Bering**	**3.24**	**93**	eP	**Pn**	**16 02 29.4**	**+0.4**
BKI				eS	**Sn**	**16 03 08.4**	**-1.2**
BKI	**Bering**	**3.24**	**93**	PN	**Pn**	**16 02 29.4**	**+0.4**
BKI				S	**Sn**	**16 03 08.4**	**-1.2**
MTVR	**Mutnovka**	**3.26**	**204**	eP	**Pn**	**16 02 30.2**	**+0.7**
MTVR				S	**Sn**	**16 03 10.1**	**-0.2**
MTVR	**Mutnovka**	**3.26**	**204**	PN	**Pn**	**16 02 30.2**	**+0.7**
MTVR				S	**Sn**	**16 03 10.1**	**-0.2**
PALN	**Palana**	**3.62**	**357**	eP	**Pn**	**16 02 32.7**	**-0.9**
PALN	**Palana**	**3.62**	**357**	PN	**Pn**	**16 02 32.7**	**-0.9**
KDTR	**Khodutka, Kamc**	**3.92**	**201**	eP	**Pn**	**16 02 36.6**	**-0.8**
KDTR				eS	**Sn**	**16 03 21.3**	**-3.3**
KDTR	**Khodutka, Kamc**	**3.92**	**201**	PN	**Pn**	**16 02 36.6**	**-0.8**
KDTR				S	**Sn**	**16 03 21.3**	**-3.3**
OSSR	**Ossora**	**4.06**	**20**	eP	**Pn**	**16 02 39.2**	**+0.2**
OSSR				eS	**Sn**	**16 03 28.0**	**+0.3**
OSSR	**Ossora**	**4.06**	**20**	PN	**Pn**	**16 02 39.2**	**+0.2**
OSSR				S	**Sn**	**16 03 28.0**	**+0.3**
SKR	**Severo-Kuril's**	**5.43**	**209**	P	**Pn**	**16 02 56.8**	**0.0**
SKR				S	**Sn**	**16 03 57.6**	**-2.0**
SKR	**Severo-Kuril's**	**5.43**	**209**	PN	**Pn**	**16 02 56.8**	**0.0**
SKR				S	**Sn**	**16 03 57.6**	**-2.0**
MA2	**Magadan**	**6.57**	**312**	⇑ePN	**Pn**	**16 03 10.5**	**-1.0**
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MA2	**Magadan**	**6.57**	**312**	P	**Pn**	**16 03 11.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=115,slow=11,SNR=9.9						
SEY	**Seymchan**	**8.50**	**335**	P	**Pn**	**16 03 37.2**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=130,slow=13,SNR=6.0						
NKL	**Nikolayevsk**	**11.70**	**267**	ePN	**P**	**16 04 21.5**	**-2.3**
BILL	**Bilibino**	**12.90**	**10**	ePN	**Pn**	**16 04 32.1**	**-1.2**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YUK	**Yuzh-Kuril'sk**	**14.75**	**225**	⇑eP	**Pn**	**16 04 56.7**	**+0.2**
ASAJ	**Asahikawa**	**16.08**	**232**	P	**Pn**	**16 05 14.0**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=40,slow=4.0,SNR=18						
ERM	**Erimo**	**17.53**	**227**	⇑eP	**Pn**	**16 05 29.9**	**-0.1**
KLR	**Kul'dur**	**18.45**	**262**	P	**Pn**	**16 05 39.3**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=82,slow=5.8,SNR=4.5						
USRK	**Ussuriysk Ar.**	**21.31**	**250**	P	**P**	**16 06 08.9**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=49,slow=14,SNR=3.9						
MJA0	**Matsu Arr-Jizo**	**24.18**	**228**	eP	**P**	**16 06 39.0**	**+3.0**
MJAR	**Matsushiro Arr**	**24.20**	**228**	P	**P**	**16 06 38.6**	**+2.4**
	comp=Z,0.5nm,0.6s,baz=6.4,slow=7.8,SNR=4.4						
ILAR	**Eielson Array**	**27.08**	**49**	P	**P**	**16 07 02.7**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=257,slow=8.0,SNR=4.5						
SONM	**Songino Array**	**33.55**	**280**	P	**P**	**16 07 59.5**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=71,slow=6.3,SNR=2.9						
MKAR	**Makanchi Array**	**47.27**	**294**	eP	**P**	**16 09 49.6**	**-1.5**
MKAR	**Makanchi Array**	**47.27**	**294**	P	**P**	**16 09 50.4**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=48,slow=6.0,SNR=6.4						
PDAR	**Pinedale Array**	**56.27**	**62**	P	**P**	**16 10 59.7**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=349,slow=3.7,SNR=4.4						
FINES	**FINESS Array B**	**57.98**	**336**	iP	**P**	**16 11 09.1**	**-0.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**57.98**	**336**	P	**P**	**16 11 08.0**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=29,slow=9.0,SNR=3.8						
SCHQ	**Schefferville**	**63.47**	**28**	P	**P**	**16 11 44.8**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=186,slow=18,SNR=3.2						
TXAR	**Lajitas Array**	**69.60**	**68**	P	**P**	**16 12 27.5**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=297,slow=6.0,SNR=3.3						
WRA	**Warramunga Arr**	**78.31**	**205**	P	**P**	**16 13 17.1**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=23,slow=5.9,SNR=3.1						
ASAR	**Alice Springs**	**82.00**	**204**	P	**P**	**16 13 37.5**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=21,slow=5.5,SNR=3.3						

SJA 26 16:05:48.7±0.3**, 31°.26S**×**68°.74W, h97**^{km}±2^{km}**, ML1.8, MW4.0, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMOG	**MOGNA**	**0.38**	**33**	eS	Sn	16 06 15.5	+1.0
CFA	**Coronel Fontan**	**0.55**	**129**	eP	Pn	16 06 05.2	+0.6
CFA				eS	Sn	16 06 17.7	+1.1
RTCV	**Cerro Valdivia**	**0.62**	**164**	eP	Pn	16 06 05.9	+0.6
RTLS	**Leoncito**	**0.72**	**222**	eP	Pn	16 06 07.5	+1.1
RTLS				IAML		16 06 22.9	
	comp=Z,20nm,0.2s						
ACCO	**Cerro Coronel**	**0.73**	**337**	eP	Pn	16 06 07.9	+1.4
AUSP	**Uspallata**	**1.11**	**210**	eP	Pn	16 06 11.7	+1.3
ACDV	**Cuesta del Vie**	**1.14**	**343**	eP	Pn	16 06 11.6	+1.0
AROD	**Rodeo**	**1.26**	**330**	eP	Pn	16 06 13.7	+1.5

ASAL	Salagasta	1.33	184	*e*P	Pn	16 06 14.0	+1.1
AGUA	GUANDACOL	1.78	7	*e*P	Pn	16 06 19.6	+1.1

IDC 26 16:14:32.8±2.0, 0°.74N×67°.28E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.4/49, mbtmp3.7/4, ML4.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/36, Error ellipse: s-maj=65.1km s-min=34.2km az=60.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N2	Diego Garcia H	7.94	152	T	T	16 24 39.0	
	baz=330,slow=75,SNR=48						
H08N3	Diego Garcia H	7.95	152	T	T	16 24 42.5	
	baz=330,slow=75,SNR=51						
H08N1	Diego Carcia H	7.96	152	T	T	16 24 40.7	
	baz=330,slow=75,SNR=44						
PALK	Pallekele	14.87	64	Pn	Pn	16 18 04.0	-0.6
	0.7nm,0.3s,baz=297,slow=8.7,SNR=5.1						
KMBO	Kilima Mbogo	30.09	267	LR	LR	16 32 33.9	
	comp=Z,76nm,18.3s,baz=92,slow=36						
MKAR	Makanchi Array	47.71	14	P	P	16 23 11.4	+0.1
	0.3nm,0.7s,baz=191,slow=5.9,SNR=3.5						
WRA	Warramunga Arr	68.75	112	P	P	16 25 39.5	+0.2
	0.9nm,0.8s,baz=291,slow=5.6,SNR=6.8						
ASAR	Alice Springs	68.98	116	P	P	16 25 40.5	-0.1
	0.5nm,0.7s,baz=287,slow=5.8,SNR=7.0						
TXAR	Lajitas Array	148.87	345	PKPbc	PKPbc	16 34 22.6	-0.8
	0.3nm,0.9s,baz=3.4,slow=4.5,SNR=2.8						

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*MDD **26** 16:24:05.3±2.1, 36°.78N×12°.37W, h0^{km}, mb4.1/2, Error ellipse: s-maj=19.2km s-min=16.1km az=39.0, PRXIMO*
*INMG **26** 16:24:05.9±1.2, 36°.53N×12°.77W, h10^{km}, ML2.1, Error ellipse: s-maj=8.6km s-min=5.8km az=79.0*
ISC 26 16:24:06.8±4.0, 36°.8N±0°.1×12°.2W±0°.2, h10^{km}, n32, σ0^{s}.93/50, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	2.73	82	⇑*e*Pn	Pn	16 24 50.7	0.0
PFVI				*e*Sn	Sn	16 25 24.3	+0.5
PFVI	Vila Bisbo	2.73	82	Pn	Pn	16 24 50.7	0.0
	3.0nm,0.1s,SNR=7.9						
PFVI				Sn	Sn	16 25 24.3	+0.5
	4.1nm,0.2s,SNR=7.9						
PTEO	Sao Teotonio	2.88	74	*e*Pn	Pn	16 24 52.6	-0.2
PTEO				*e*Sn	Sn	16 25 27.1	-0.5
PTEO				A	A	16 25 28.4	
	6.7nm,0.7s						
PTEO	Sao Teotonio	2.88	74	Pn	Pn	16 24 52.6	-0.2
PTEO				Sn	Sn	16 25 27.1	-0.5
	3.3nm,0.7s						
PMAFR	Mafra	3.16	46	*e*Pn	Pn	16 24 57.1	+0.5
PMAFR				*e*Sn	Sn	16 25 35.7	+1.3
PMAFR	Mafra	3.16	46	Pn	Pn	16 24 56.8	+0.2
	1.6nm,0.1s,SNR=7.9						
PMAFR				Sn	Sn	16 25 35.2	+0.8
	5.0nm,0.3s,SNR=7.9						
PNCL	Nicolau / Gran	3.21	65	*e*Pn	Pn	16 24 57.5	+0.2
PNCL				*e*Sn	Sn	16 25 36.5	+0.9
PNCL				A	A	16 25 47.3	
	3.0nm,0.8s						
PNCL	Nicolau / Gran	3.21	65	Pn	Pn	16 24 57.5	+0.2
PNCL				Sn	Sn	16 25 36.5	+0.9
	3.0nm,0.8s						
PBDV	Barranco-do-Ve	3.46	81	*e*Pn	Pn	16 25 02.1	+1.4
PBDV				*e*Sn	Sn	16 25 43.0	+1.3
PBDV	Barranco-do-Ve	3.46	81	Pn	Pn	16 25 02.1	+1.4
PBDV				Sn	Sn	16 25 43.0	+1.3
PVAQ	Vaqueiros	3.65	79	*e*Pn	Pn	16 25 04.2	+0.9
PVAQ				*e*Sn	Sn	16 25 46.5	+0.2
PVAQ				A	A	16 25 59.3	
	3.5nm,0.7s						
PVAQ	Vaqueiros	3.65	79	Pn	Pn	16 25 04.2	+0.9
PVAQ				Sn	Sn	16 25 46.5	+0.2
	3.5nm,0.7s						
PBEJ	Beja	3.67	69	*e*Pn	Pn	16 25 03.4	-0.2
PBEJ	Beja	3.67	69	Pn	Pn	16 25 03.4	-0.2
EGRO	El Granado	3.85	78	Pn	Pn	16 25 06.3	+0.2
	0.9nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	16 25 50.7	-0.6
	0.5nm,0.2s,SNR=7.9						
PMTG	Montargil	3.88	53	*e*Pn	Pn	16 25 06.6	+0.1
PMTG				*e*Sn	Sn	16 25 54.2	+2.1
PMTG	Montargil	3.88	53	Pn	Pn	16 25 06.6	+0.1
PMTG				Sn	Sn	16 25 54.2	+2.1
PCAS	Casmilo, Conde	4.36	41	*e*Pn	Pn	16 25 13.3	+0.2
PCAS	Casmilo, Conde	4.36	41	Pn	Pn	16 25 13.3	+0.2
EMIN	Mina Concepcio	4.52	76	Pn	Pn	16 25 14.8	-0.6
	0.6nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	16 26 06.6	-1.4
	0.1nm,0.3s,SNR=7.9						
EBAD	Badajoz	4.56	63	Pn	Pn	16 25 15.9	+0.1
	0.9nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	16 26 07.2	-1.6
	1.9nm,0.3s,SNR=7.9						
PMRV	Marv??o	4.62	54	*e*Pn	Pn	16 25 16.8	+0.1
PMRV				*e*Sn	Sn	16 26 10.6	+0.3
PMRV				A	A	16 26 32.8	
	1.6nm,0.7s						
PMRV	Marv??o	4.62	54	Pn	Pn	16 25 16.8	+0.1
PMRV				Sn	Sn	16 26 10.6	+0.3
	1.6nm,0.7s						
ESPR	Espera	5.10	87	Sn	Sn	16 26 21.5	-0.7
	4.5nm,0.3s,SNR=7.9						
ECAB	El Cabril	5.55	75	Pn	Pn	16 25 29.7	+0.1
	0.8nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	16 26 32.2	-1.3
	0.0nm,0.3s,SNR=7.9						
POLO	Lamas de Olo	5.71	36	*e*Sn	Sn	16 26 33.9	-3.5
POLO	Lamas de Olo	5.71	36	Sn	Sn	16 26 33.9	-3.5
PGAV	Gavieira, Arco	5.99	29	*e*Sn	Sn	16 26 40.7	-3.6
PGAV	Gavieira, Arco	5.99	29	Sn	Sn	16 26 40.7	-3.6
ELOB	Lobios	5.99	31	Pn	Pn	16 25 35.9	+0.3
	0.2nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	16 26 41.0	-3.3
	1.5nm,0.2s,SNR=7.9						
EADA	Adamuz	6.22	75	Pn	Pn	16 25 38.7	-0.1
	0.4nm,0.2s,SNR=7.9						
EADA				Sn	Sn	16 26 48.2	-1.8
	0.2nm,0.3s,SNR=7.9						
ECAL	Calabor	6.65	38	Pn	Pn	16 25 43.4	-1.3
	1.7nm,0.4s,SNR=4.0						
ECAL				Sn	Sn	16 26 58.5	-2.2
	0.2nm,0.3s,SNR=4.0						

IDC 26 16:24:53.8±8.3, 1°.67S×136°.26E, h0^{km}, mb3.6/2, mb1 3.7/3, mb1mx3.3/26, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=136.8km s-min=101.6km az=127.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.26	186	P	Pn	16 29 07.4	-1.4
	0.1nm,0.3s,baz=5.9,slow=12,SNR=6.6						
ASAR	Alice Springs	21.99	186	P	P	16 29 49.4	-0.3
	1.2nm,1.0s,baz=8.9,slow=11,SNR=9.4						
STKA	Stephens Creek	30.47	171	P	P	16 31 09.3	+0.8
	1.3nm,0.7s,baz=325,slow=9.1,SNR=2.8						

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*IDC **26** 16:27:03.6±2.3, 13°.99N×92°.80W, h0^{km}, mb3.8/1, mb1 3.8/4, mb1mx3.5/33, mbtmp3.5/4, ML3.3/3, MS4.1/2, Ms1 4.1/2, ms1mx3.0/38, Error ellipse: s-maj=33.8km s-min=17.2km az=9.0*
*NEIC **26** 16:27:06.1±0.0, 14°.06N×93°.08W, h9^{km}, MD4.0(MEX), After MEX.*
*MEX **26** 16:27:06.1±0.4, 14°.06N×93°.08W, h9^{km}±52^{km}, MD4.0*
ISC 26 16:27:09.5±1.7, 14°.1N±0°.1×92°.76W±0°.08, h37^{km}, n12, σ1^{s}.21/13, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	2.22	16	*e*P	Pn	16 27 42.8	-1.2
CCIG				*e*S	Sn	16 28 11.1	+0.8
CCIG	Comitan	2.22	16	*e*P	Pn	16 27 42.8	-1.2
CCIG				*e*S	Sn	16 28 11.1	+0.8
APG	El Apazote	2.39	68	Pn	Pn	16 27 45.9	-0.4
	4.5nm,0.3s,baz=267,slow=10,SNR=45						
APG				Lg	Lg	16 28 22.3	
	12nm,0.3s,baz=319,slow=15,SNR=4.2						
CMIG	Matias Romero	3.58	325	Pn	Pn	16 28 02.3	-0.2
CMIG				*e*S	Sn	16 28 42.2	-1.4
CMIG				Sn	Sn	16 28 45.7	+2.1
CMIG				Lg	Lg	16 29 00.2	
CMIG	Matias Romero	3.58	325	*e*P	Pn	16 27 57.9	-4.7
CMIG				*e*S	Sn	16 28 42.2	-1.4
CMIG	Matias Romero	3.58	325	Pn	Pn	16 28 02.3	-0.2
	1.7nm,0.3s,baz=148,slow=13,SNR=13						
CMIG				Sn	Sn	16 28 45.7	+2.1
	4.6nm,0.3s,baz=103,slow=12,SNR=4.6						
CMIG				Lg	Lg	16 29 00.2	
	6.5nm,0.3s,baz=304,slow=17,SNR=4.1						
JTS	JuntasAbangare	8.54	116	Lg	Lg	16 31 29.4	
	0.6nm,0.3s,baz=196,slow=16,SNR=4.3						
TXAR	Lajitas Array	18.18	328	P	P	16 31 20.4	+1.1
	0.0nm,0.3s,baz=144,slow=12,SNR=3.8						
ULM	Lac du Bonnet	36.11	357	LR	LR	16 51 40.0	
	comp=Z,354nm,19.1s,baz=264,slow=41						
RPN	Rapa Nui	44.06	201	LR	LR	16 50 13.5	
	comp=Z,158nm,18.3s,baz=202,slow=32						
YKA	Yellowknife Ar	50.73	347	P	P	16 36 05.6	+0.2
	1.1nm,0.8s,baz=149,slow=7.4,SNR=15						
CMAR	Chiang Mai Arr	145.62	340	PKPbc	PKPdf	16 46 44.5	-0.4
	0.6nm,0.8s,baz=337,slow=3.3,SNR=7.4						

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*NEIC **26** 16:43:41.5±0.0, 18°.28N×67°.81W, h124^{km}, MD3.3(RSPR), After RSPR.*
NEIC Felt at Mayaguez.
RSPR 26 16:43:41.5, 18°.28N×67°.81W, h124^{km}±1^{km}, MD3.3/15, 11C-11D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	Isla Desecheo	0.34	71	⇓*e*P	Pn	16 43 58.9	-0.1
IDE	Isla Desecheo	0.34	71	*e*S	Sn	16 44 12.1	-0.2
IDE	Isla Desecheo	0.34	71	⇓*e*P	Pn	16 43 58.9	-0.1
IDE				*e*S	Sn	16 44 12.1	-0.2
AGPR	Aguadilla, PR	0.69	74	⇓*e*P	Pn	16 44 00.9	-0.2
AGPR	Aguadilla, PR	0.69	74	*e*S	Sn	16 44 15.8	-0.2
AGPR	Aguadilla, PR	0.69	74	⇓*e*P	Pn	16 44 00.9	-0.2
AGPR				*e*S	Sn	16 44 15.8	-0.2
OBIP	Obispado Ponce	1.17	101	*e*S	Sn	16 44 23.3	-0.4
OBIP	Obispado Ponce	1.17	101	⇓*e*P	Pn	16 44 04.6	-0.9
OBIP	Obispado Ponce	1.17	101	⇓*e*P	Pn	16 44 04.6	-0.9
OBIP				*e*S	Sn	16 44 23.3	-0.4
CELP	Cerrillos	1.19	100	⇑*i*P	Pn	16 44 05.8	+0.1
CELP				*e*S	Sn	16 44 24.8	+0.7
CELP	Cerrillos	1.19	100	*i* Pu	Pn	16 44 05.8	+0.1
CELP				*e*S	Sn	16 44 24.8	+0.7
DR12	Loma Pena Alta	1.58	289	⇓*e*P	Pn	16 44 09.3	-0.8
DR12				*e*S	Sn	16 44 30.5	-1.4
DR12	Loma Pena Alta	1.58	289	⇓*e*P	Pn	16 44 09.3	-0.8
DR12				*e*S	Sn	16 44 30.5	-1.4
SJG	San Juan	1.59	96	*e*S	Sn	16 44 31.2	-0.7
SJG	San Juan	1.59	96	⇑*e*P	Pn	16 44 08.6	-1.6
SJG	San Juan	1.59	96	⇑*e*P	Pn	16 44 08.6	-1.6
SJG				*e*S	Sn	16 44 31.2	-0.7
CBYP	Canovanas	1.85	90	⇑*e*P	Pn	16 44 12.4	-1.0
CBYP	Canovanas	1.85	90	⇓*e*P	Pn	16 44 12.4	-1.0
CBYP				*e*S	Sn	16 44 36.4	-1.4
CBYP	Canovanas	1.85	90	⇑*e*P	Pn	16 44 12.4	-1.0
CBYP				*e*S	Sn	16 44 36.4	-1.4
HUMP	Col San Antoni	1.87	94	⇑*e*P	Pn	16 44 13.0	-0.5
HUMP	Col San Antoni	1.87	94	⇑*e*P	Pn	16 44 12.9	-0.5
HUMP				*e*S	Sn	16 44 37.0	-1.0
HUMP	Col San Antoni	1.87	94	⇑*e*P	Pn	16 44 12.9	-0.5
HUMP				*e*S	Sn	16 44 36.8	-1.2
HUMP				*e*S		16 44 37.0	
MTP	Monte Pirata	2.15	94	⇑*e*P	Pn	16 44 16.8	-0.2
MTP	Monte Pirata	2.15	94	*e*S	Sn	16 44 42.8	-1.4
MTP	Monte Pirata	2.15	94	⇑*e*P	Pn	16 44 16.8	-0.2
MTP				*e*S	Sn	16 44 42.8	-1.4
CUPR	Culebra, Puert	2.40	89	⇑*e*P	Pn	16 44 19.0	-1.2
CUPR	Culebra, Puert	2.40	89	*e*S	Sn	16 44 48.8	-1.1
CUPR	Culebra, Puert	2.40	89	⇑*e*P	Pn	16 44 19.0	-1.2
CUPR				*e*S	Sn	16 44 48.8	-1.1
STVI	Saint Thomas	2.71	88	⇓*e*P	Pn	16 44 24.0	-0.2
STVI	Saint Thomas	2.71	88	*e*S	Sn	16 44 55.6	-1.4
STVI	Saint Thomas	2.71	88	⇓*e*P	Pn	16 44 24.0	-0.2
STVI				*e*S	Sn	16 44 55.6	-1.4
SDDR	Presa de Saban	3.37	283	*e*Pn	Pn	16 44 32.4	-0.4

IDC 26 16:43:54.5±9.9, 17°.13S×179°.34W, h542^{km}±111^{km}, mb3.0/4, mb1 3.3/4, mb1mx2.9/30, mbtmp4.0/4, Error ellipse: s-maj=109.0km s-min=43.6km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.24	240	P	P	16 50 28.4	-0.2
	1.1nm,0.4s,baz=78,slow=7.4,SNR=7.5						
WRA	Warramunga Arr	43.91	259	P	P	16 51 13.1	-0.6
	0.7nm,0.8s,baz=94,slow=7.8,SNR=27						
ASAR	Alice Springs	44.16	254	P	P	16 51 15.9	+0.3
	3.9nm,0.4s,baz=89,slow=7.9,SNR=157						
ASAR				PcP	PcP	16 52 48.2	-0.5
	0.3nm,0.5s,baz=105,slow=4.0,SNR=6.2						
TXAR	Lajitas Array	86.33	58	P	P	16 55 39.7	0.0
	0.4nm,0.7s,baz=243,slow=6.0,SNR=3.9						

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*ISCJB **26** 17:07:30.3±0.7, 19°.17N±0°.02×67°.99W±0°.01, h1^{km}±4^{km}, mb5.0/279, MS4.2/31, Error ellipse: s-maj=3.0km s-min=1.7km az=36.4*
*IDC **26** 17:07:30.9±0.4, 19°.07N×68°.02W, h0^{km}, mb4.5/32, mb1 4.7/35, mb1mx4.6/48, mbtmp4.5/35, ML3.6/2, MS4.1/32, Ms1 4.1/32, ms1mx4.1/42, Error ellipse: s-maj=11.3km s-min=9.8km az=61.0*
*MOS **26** 17:07:32.1±0.9, 19°.16N×67°.98W, h14^{km}, mb5.1/64, Error ellipse: s-maj=6.6km s-min=4.8km az=122.0*
*RSPR **26** 17:07:34.9, 19°.25N×67°.97W, h8^{km}±4^{km}, MD5.1/12*
*NEIC **26** 17:07:35.3±0.1, 19°.09N×67°.98W, h27^{km}, mb5.0/247, MW4.9, ML5.0(RSPR), Error ellipse: s-maj=2.8km s-min=1.7km az=212.0, Moment Tensor Solution. s40 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.84; M$_{\theta\theta}$-0.05; M$_{\phi\phi}$-0.79; M$_{r\theta}$-0.82; M$_{\theta\phi}$1.48; M$_{\phi r}$2.53; Best double couple: M$_0$3.20000×10^{16} NP1:ϕ_s345.00000°, δ79.00000°, λ110.00000°. NP2:ϕ_s103.00000°, δ23.00000°, λ30.00000°. Principal axes: T 2.7000, Plg52.0000°, Azm279.0000°; N 0.7600, Plg20.0000°, Azm161.0000°; P -3.4700, Plg31.0000°, Azm59.0000°;*
NEIC Felt [II] at Santo Domingo. Also felt at Higuey. Felt [IV] at San Juan; [III] at Aguadilla, Mayaguez and Ponce; [II] at Isabela, Puerto Rico. Felt throughout Puerto Rico.
*BJI **26** 17:07:35.5, 19°.20N×67°.90W, h23^{km}, mB5.3/1, Ms5.1/1, Ms7 4.7/1*
*GCMT **26** 17:07:38.3±0.2, 19°.19N±0°.01×68°.00W±0°.02, h15^{km}, MW5.2/80, Moment Tensor Solution. s37,c42; s80,c113; Duration: 1^{s}.1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.86±.09; M$_{\theta\theta}$-1.21±.07; M$_{\phi\phi}$0.35±.07; M$_{r\theta}$-2.63±.27; M$_{\theta\phi}$1.73±.06; M$_{\phi r}$6.78±.22; Best double couple: M$_0$7.55000×10^{16} NP1:ϕ_s338.00000°, δ86.00000°, λ104.00000°. NP2:ϕ_s83.00000°, δ14.00000°, λ15.00000°. Principal axes: T 7.4500, Plg47.0000°, Azm263.0000°; N 0.2010, Plg14.0000°, Azm158.0000°; P -7.6510, Plg40.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*VAO **26** 17:07:44.6±0.5, 18°.44N×68°.34W, h10^{km}, mb4.9*
ISC 26 17:07:34.6±0.6, 19°.12N±0°.03×68°.02W±0°.03, h24^{km}±4^{km}, n987, σ1^{s}.37/992, mb5.0/279, MS4.2/31, 36C-26D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	Isla Desecheo	0.90	145	⇓*e*P	Pb	17 07 49.8	-1.7
AGPR	Aguadilla, PR	1.08	127	⇑*e*P	Pn	17 07 52.8	-1.4
AGPR	Aguadilla, PR	1.08	127	*e*S	Sn	17 08 08.3	-0.1
AGPR	Aguadilla, PR	1.08	127	⇑*e*P	Pn	17 07 52.8	-1.4
AGPR				*e*S	Sn	17 08 08.3	-0.1
AGP	Aguadilla	1.09	130	*e*Pn	Pn	17 07 52.7	-1.8
AGP				*e*Sn	Sn	17 08 08.8	-0.1
LSP	Las Mesas	1.29	137	⇑*e*P	Pn	17 07 56.2	-1.0
LSP	Las Mesas	1.29	137	*e*Pn	Pn	17 07 56.2	-1.0
DR12	Loma Pena Alta	1.33	256	⇑*i*P	Pn	17 07 57.8	0.0
DR12	Loma Pena Alta	1.33	256	*e*Pn	Pn	17 07 57.8	0.0
EMPR	Esperanza - Ma	1.55	114	⇑*e*P	Pn	17 08 00.6	-0.2
EMPR	Esperanza - Ma	1.55	114	*e*S	Sn	17 08 18.6	-1.5
EMPR	Esperanza - Ma	1.55	114	*e*Pn	Pn	17 08 00.6	-0.2
EMPR				*e*Sn	Sn	17 08 18.6	-1.5
GBPR	Guanica, Bosqu	1.57	136	⇑*e*P	Pn	17 08 01.4	+0.3
GBPR	Guanica, Bosqu	1.57	136	*e*Pn	Pn	17 08 01.4	+0.3
CELP	Cerrillos	1.72	127	⇑*e*P	Pn	17 08 02.6	-0.5
CELP	Cerrillos	1.72	127	*e*Pn	Pn	17 08 02.6	-0.5
OBIP	Obispado Ponce	1.72	129	⇑*e*P	Pn	17 08 02.2	-0.8
OBIP	Obispado Ponce	1.72	129	*e*S	Sn	17 08 25.1	+0.8
OBIP	Obispado Ponce	1.72	129	*e*Pn	Pn	17 08 01.9	-1.1
OBIP				*e*Sn	Sn	17 08 25.1	+0.8
SDD	Santo Domingo	1.91	250	*e*Pn	Pb	17 08 07.1	-1.7
SDD				*e*Sn	Sb	17 08 34.0	+1.6
SJG	San Juan	2.04	119	⇑*e*P	Pn	17 08 07.1	-0.3
SJG	San Juan	2.04	119	*e*S	Sn	17 08 31.5	-0.6
SJG	San Juan	2.04	119	*e*Pn	Pn	17 08 07.5	+0.1
SJG				*e*Sn	Sn	17 08 31.5	-0.6
SJG				*e*		17 08 57.6	
SJG	San Juan	2.04	119	⇓*e*P	Pn	17 08 07.6	+0.2
SJG	San Juan	2.04	119	*e*P	Pn	17 08 07.5	+0.1
SJG				*e*		17 08 31.5	
SJG	San Juan	2.04	119	⇓*e*P	Pn	17 08 07.6	+0.2
SJG	San Juan	2.04	119	Pn	Pn	17 08 07.7	+0.2
	777nm,0.3s,baz=304,slow=9.9,SNR=408						
SJG				Sn	Sn	17 08 32.7	+0.6
	2µm,0.3s,baz=311,slow=23,SNR=14						
SJG				LR	LR	17 08 57.6	
	comp=Z,9µm,18.4s,baz=166,slow=43						
CBYP	Canovanas	2.22	112	⇓*e*P	Pn	17 08 09.5	-0.5
CBYP	Canovanas	2.22	112	*e*Pn	Pn	17 08 09.4	-0.5
HUMP	Col San Antoni	2.28	115	⇓*e*P	Pn	17 08 10.5	-0.2
HUMP	Col San Antoni	2.28	115	*e*S	Sn	17 08 37.2	-0.8
HUMP	Col San Antoni	2.28	115	*e*Pn	Pn	17 08 10.4	-0.2
HUMP				*e*Sn	Sn	17 08 37.2	-0.8
BANI	BANI	2.33	252	*e*Pn	Pb	17 08 13.8	-2.3
MTP	Monte Pirata	2.55	113	⇓*e*P	Pn	17 08 14.2	-0.3
MTP	Monte Pirata	2.55	113	*e*S	Sn	17 08 44.6	-0.2
MTP	Monte Pirata	2.55	113	*e*Pn	Pn	17 08 14.1	-0.3
MTP				*e*Sn	Sn	17 08 44.6	-0.2
CUPR	Culebra, Puert	2.72	107	⇓*e*P	Pn	17 08 15.4	-1.3
CUPR	Culebra, Puert	2.72	107	*e*S	Sn	17 08 47.9	-1.0
CUPR	Culebra, Puert	2.72	107	*e*Pn	Pn	17 08 15.4	-1.3
STVI	Saint Thomas	3.00	104	⇓*e*P	Pn	17 08 19.6	-1.1
STVI	Saint Thomas	3.00	104	*e*S	Sn	17 08 54.7	-1.2
STVI	Saint Thomas	3.00	104	*e*Pn	Pn	17 08 19.3	-1.4
STVI				*e*Sn	Sn	17 08 54.7	-1.2
SDDR	Presa de Saban	3.10	268	*e*Pn	Pn	17 08 24.3	+2.3
SDDR	Presa de Saban	3.10	268	*e*P	Pn	17 08 24.4	+2.3
SDDR	Presa de Saban	3.10	268	*e*S	Sb	17 09 11.8	+5.3
TBVI	Tortola	3.30	102	⇑*e*P	Pn	17 08 23.8	-1.0
TBVI	Tortola	3.30	102	*e*Pn	Pn	17 08 23.8	-1.0
CDVI	St. Croix	3.38	113	*e*Pn	Pn	17 08 26.0	+0.1
ABVI	Anegada Island	3.51	96	*e*Pn	Pn	17 08 26.3	-1.4
ABV	Anegada	3.51	96	⇓*e*P	Pn	17 08 26.3	-1.4
GRTK	Grand Turk	3.77	310	*e*Pn	Pn	17 08 30.1	-1.1
LGNH	Logne	4.39	263	*e*Pn	Pn	17 08 42.0	+2.2
SMRT	St. Maarten	4.81	102	*e*Pn	Pn	17 08 44.4	-1.2
SMRT	St. Maarten	4.81	102	*e*P	Pn	17 08 44.5	-1.0
SMRT	St. Maarten	4.81	102	*e*S	Sn	17 09 37.3	-3.3
SEUS	St. Eustatius	5.05	108	*e*Pn	Pn	17 08 48.9	0.0
SEUS	St. Eustatius	5.05	108	*e*P	Pn	17 08 52.8	+3.9
SEUS	St. Eustatius	5.05	108	*e*S	Sb	17 09 58.1	-4.6
MLYT	Lee's Yard	6.04	112	*e*P	Pn	17 09 06.5	+4.0
MLYT	Lee's Yard	6.04	112	*e*S	Sn	17 10 16.1	+5.1
ANWB	Willy Bob	6.09	103	*e*Pn	Pn	17 09 01.7	-1.5
ANWB	Willy Bob	6.09	103	*e*P	Pn	17 09 03.2	0.0
ANWB	Willy Bob	6.09	103	*e*S	Sn	17 10 21.8	+10
BPA	Boggy Peak	6.21	108	*e*P	Pn	17 09 09.7	+4.7
BPA	Boggy Peak	6.21	108	*e*S	Sn	17 10 22.9	+7.6
TBG	Guadaloupe-3	6.90	117	*e*P	Pn	17 09 15.5	+1.2
MGG	Marie-Galante	7.14	115	*e*P	Pn	17 09 19.5	+1.8
MDPO	Dominica; Chan	7.20	118	*e*P	Pn	17 09 24.7	+6.4
MDPO	Dominica; Chan	7.20	118	*e*S	Sn	17 10 35.4	-4.0
H05N1	Guadeloupe/Mar	7.20	112	Pn	Pn	17 09 21.0	+2.6
H05N1				Sn	Sn	17 10 38.6	-0.9
BBL	Barber's Block	7.21	119	*e*P	Pn	17 09 19.8	+1.2
DWS	Wesley	7.32	118	*e*P	Pb	17 09 31.8	-9.1
DWS	Wesley	7.32	118	*e*S	Sn	17 10 48.8	+6.5
FDF	Fort de France	7.89	123	*e*Pn	Pn	17 09 28.0	0.0
FDF	Fort de France	7.89	123	*e*P	Pn	17 09 31.9	+3.9
FDF	Fort de France	7.89	123	*e*S	Sn	17 10 52.6	-4.0
FDF	Fort de France	7.89	123	*e*P	Pn	17 09 28.0	0.0
URIC	Uribia, Colomb	8.31	208	*e*P	Sn	17 11 05.2	-1.8
URIC	Uribia, Colomb	8.31	208	*e*P	Sn	17 11 05.2	-1.8
H05S1	Guadeloupe/Mar	8.31	123	Pn	Pn	17 09 37.0	+3.3
H05S1				Sn	Sn	17 11 05.6	-1.3
SLB	Belfond	8.52	127	*e*P	Pn	17 09 42.5	+5.9
MCLT	Moule a Chique	8.66	127	*e*P	Pn	17 09 44.0	+5.5
SVB	Belmont	8.72	131	*e*Pn	Pn	17 09 37.9	-1.5
SVB	Belmont	8.72	131	*e*P	Pn	17 09 37.1	-2.3
SVCV	St. Vincent, C	8.80	130	*e*P	Pn	17 09 32.1	-8.3
MTDJ	Mount Denham	9.06	266	*e*Pn	Pn	17 09 44.8	+0.6
GRSS	Sisters	9.17	137	*e*P	Pn	17 09 47.8	+2.4
GRHS	Sauteurs	9.21	137	*e*P	Pn	17 09 48.7	+2.8
GRHS	Sauteurs	9.21	137	*e*S	Sn	17 11 25.1	-3.7
GRGR	Grenville	9.27	138	*e*Pn	Pn	17 09 47.3	+0.5
SMRC	Santa Marta, M	9.92	218	*e*P	Pn	17 09 52.1	-3.7
SMRC	Santa Marta, M	9.92	218	*e*P	Pn	17 09 52.1	-3.7
BBGH	Gun Hill	10.07	125	*e*Pn	Pn	17 10 00.1	+2.3
SDV	Santo Domingo	10.49	194	*e*P	Pn	17 10 05.4	+1.6
SDV	Santo Domingo	10.49	194	*e*P	Pn	17 10 05.4	+1.6
SDV	Santo Domingo	10.49	194	Pn	Pn	17 10 05.4	+1.6
	12nm,0.3s,baz=14,slow=8.9,SNR=58						
SDV				Sn	Sn	17 11 54.6	-6.0
	baz=352,slow=15,SNR=2.0						
SDV	Santo Domingo	10.49	194	*e*P	Pn	17 10 05.5	+1.8
CODC	Agustn Codazz	10.54	211	*e*P	Pn	17 10 02.6	-1.7
CODC	Agustn Codazz	10.54	211	*e*P	Pn	17 10 02.6	-1.7
TPR	Prospect	10.54	137	*e*P	Pn	17 10 11.1	+6.8
TRN	Trinidad (W)	10.57	142	*e*P	Pn	17 10 08.0	+3.3
TRN	Trinidad (W)	10.57	142	*e*P	Pn	17 10 08.0	+3.3
TOSP	Speyside	10.61	136	*e*P	Pn	17 10 06.1	+0.9
TPP	Pointe-a-Pierr	10.81	143	*e*P	Pn	17 10 13.8	+5.7
TBH	Brigand Hill	10.90	141	*e*P	Pn	17 10 10.5	+1.3
SJCC	San Jacinto, C	11.49	218	*e*P	Pn	17 10 13.9	-3.5
SJCC	San Jacinto, C	11.49	218	*e*P	Pn	17 10 13.9	-3.5
SMLC	San Martn de	11.82	211	*e*P	Pn	17 10 20.3	-1.5
SMLC	San Martn de	11.82	211	*e*P	Pn	17 10 20.3	-1.5
FSCY	Frank Sound, G	12.44	273	*e*Pn	Pn	17 10 27.9	-2.4
PAMC	Pamplona, Colo	12.57	202	*e*P	Pn	17 10 32.1	-0.4
PAMC	Pamplona, Colo	12.57	202	*e*P	Pn	17 10 32.1	-0.4
WBCY	West Bay, Gran	12.64	273	*e*Pn	P	17 10 39.6	-4.6
TAMC	Tame, Arauca	13.14	197	*e*P	Pn	17 10 41.2	+1.3
TAMC	Tame, Arauca	13.14	197	*e*P	Pn	17 10 41.2	+1.3
BRRC	Barranca, Sant	13.16	206	*e*P	Pn	17 10 39.8	-0.4
BRRC	Barranca, Sant	13.16	206	*e*P	Pn	17 10 39.8	-0.4
ZARC	Zaragoza, Cauc	13.34	211	*e*P	Pn	17 10 43.2	+0.7
ZARC	Zaragoza, Cauc	13.34	211	*e*P	Pn	17 10 43.2	+0.7
UREC	San Jos de Ur	13.46	214	*e*P	Pn	17 10 45.0	+0.8
UREC	San Jos de Ur	13.46	214	*e*P	Pn	17 10 45.0	+0.8
BBSR	BB Station	13.53	12	*e*Pn	Pn	17 10 43.5	-1.5
061Z	Ochoppi	13.67	302	*e*Pn	Pn	17 10 44.3	-2.6
PTBC	PUERTO BERRIO,	13.99	207	*e*P	Pn	17 10 50.6	-0.8
PTBC	PUERTO BERRIO,	13.99	207	*e*P	Pn	17 10 50.6	-0.8
RUSC	La Rusia	14.05	201	*e*P	Pn	17 10 52.6	-0.1
RUSC	La Rusia	14.05	201	*e*P	Pn	17 10 52.6	-0.1
DBBC	Dabeiba	14.43	215	*e*P	Pn	17 10 57.3	-0.3
DBBC	Dabeiba	14.43	215	*e*P	Pn	17 10 57.3	-0.3
HELC	Santa Helena	14.79	211	*e*P	Pn	17 11 03.3	+0.5
HELC	Santa Helena	14.79	211	*e*P	Pn	17 11 03.3	+0.5
NORC	Norcasia	15.04	207	*e*P	Pn	17 11 06.2	+0.3
NORC	Norcasia	15.04	207	*e*P	Pn	17 11 06.2	+0.3
BCIP	Isla Barro Col	15.13	231	*e*Pn	Pn	17 11 06.6	-0.4
	52nm,0.7s						
BCIP	Isla Barro Col	15.13	231	*e*P	Pn	17 11 08.0	+1.0
BCIP	Isla Barro Col	15.13	231	*e*P	Pn	17 11 08.0	+1.0
DWPF	Disney Wildern	15.19	309	*e*Pn	Pn	17 11 07.7	0.0
	552nm,1.8s						
DWPF	Disney Wildern	15.19	309	*e*P	P	17 11 22.0	+10
CHIC	Chingaza	15.45	202	*e*P	Pn	17 11 11.3	-0.2
CHIC	Chingaza	15.45	202	*e*P	Pn	17 11 11.3	-0.2
ROSC	El Rosal	15.47	204	*e*Pn	Pn	17 11 13.1	+1.3
	62nm,0.8s						
ROSC	El Rosal	15.47	204	Pn	Pn	17 11 11.2	-0.6
	2.0nm,0.3s,baz=1.0,slow=6.2,SNR=4.5						
ROSC				Sn	Sn	17 14 05.0	+2.2
	1.5nm,0.3s,baz=323,slow=20,SNR=2.4						
ROSC				LR	LR	17 17 41.4	
	comp=Z,1µm,20.0s,baz=342,slow=40						

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SOLC  Bahia Solano      15.75 217  eP     Pn     17 11 16.1 +1.1
SOLC  Bahia Solano      15.75 217  eP     Pn     17 11 16.1 +1.1
658A  Bunnell           15.82 313  ePn    Pn     17 11 16.3 +0.4
      589nm,1.5s
658A  Bunnell           15.82 313   P     Pn     17 11 14.4 -1.4
      baz=128
RREF  El Recreo         15.84 208  eP     Pn     17 11 18.4 +1.6
RREF  El Recreo         15.84 208  eP     Pn     17 11 18.4 +1.6
857A  Zephyrhills       15.87 308   P     Pn     17 11 15.2 -1.2
      baz=122
VILC  Villavicencio,    15.92 201  eP     Pn     17 11 17.8 +0.4
VILC  Villavicencio,    15.92 201  eP     Pn     17 11 17.8 +0.4
ANIL  Santa Ana         16.23 207⇓eP      P      17 11 23.8 -0.7
ANIL  Santa Ana         16.23 207⇓eP      P      17 11 23.8 -0.7
PLMC  San Jos del P     16.27 211  eP     P      17 11 23.6 -1.0
PLMC  San Jos del P     16.27 211  eP     P      17 11 23.6 -1.0
657A  Interlachen       16.34 312   P     Pn     17 11 21.6 -1.0
      baz=127
656A  Willston          16.69 310  ePn    Pn     17 11 26.0 -1.0
      93nm,0.9s
656A  Willston          16.69 310   P     Pn     17 11 26.3 -0.7
      baz=124
556A  Lake Butler       16.97 312   P     Pn     17 11 29.8 -0.7
      baz=126
GUVC  San Jose del G    17.08 196  eP     Pn     17 11 32.0  0.0
GUVC  San Jose del G    17.08 196  eP     Pn     17 11 32.0  0.0
YOTC  Yotoco, Valle     17.11 209  eP     P      17 11 33.7 -0.3
YOTC  Yotoco, Valle     17.11 209  eP     P      17 11 33.7 -0.3
ESPN  Las Esperanzas    17.12 249  ePn    P      17 11 33.1 -0.8
      36nm,0.8s
456A  Hilliard          17.15 315  ePn    Pn     17 11 28.8 -3.9
      365nm,1.4s
257A  Skidaway Islan    17.34 320  ePn    Pn     17 11 35.4 +0.3
      905nm,1.4s
555A  McAlpin           17.43 312  ePn    Pn     17 11 35.4 -0.8
      300nm,1.4s
CSU   Charleston Sou    17.52 324  ePn    P      17 11 38.2 -0.1
RGRS  Roger Stewart     17.53 324  ePn    P      17 11 38.6 +0.2
      2µm,0.4s
RGRS                               eSn    Sn     17 14 44.3 -7.7
356A  Blackshear        17.60 316   P     Pn     17 11 37.3 -1.0
      baz=130
MARP  Paez Belalcaza    17.95 207  eP     P      17 11 46.0 +2.6
MARP  Paez Belalcaza    17.95 207  eP     P      17 11 46.0 +2.6
HDC   Heredia           18.01 242  ePn    P      17 11 45.6 +1.6
      206nm,1.5s
BOAB  BOACO BROADBAN18.23 251      eP     Pn     17 11 44.7 -1.4
      31nm,1.1s
CNNC  Cliffs of the     18.28 333  eP     Pn     17 11 45.4 -1.2
      57nm,0.4s
X58A  Rowland           18.37 329   P     P      17 11 47.4 -0.3
      baz=144
POPC  Popayan, Colom    18.53 208  eP     Pn     17 11 50.3 +0.2
POPC  Popayan, Colom    18.53 208  eP     Pn     17 11 50.3 +0.2
JTS   JuntasAbangare    18.57 244  eP     Pn     17 11 50.5 +0.1
      73nm,1.3s
JTS   JuntasAbangare    18.57 244diP      Pn     17 11 51.5 +1.1
JTS   JuntasAbangare    18.57 244   P     Pn     17 11 50.2 -0.1
      0.9nm,0.3s,baz=123,slow=8.3,SNR=12
JTS                                 LR    LR     17 19 40.4
      comp=Z,651nm,18.8s,baz=129,slow=39
PCON  Cinco Dias        18.60 207  eP     Pn     17 11 52.3 +1.1
PCON  Cinco Dias        18.60 207  eP     Pn     17 11 52.3 +1.1
ESTN  Estel             18.61 254  eP     P      17 11 49.1 -1.5
      23nm,0.7s
155A  Kite              18.67 319   P     P      17 11 50.8 -0.1
      baz=133
254A  Abbeville         18.76 316   P     P      17 11 51.8 -0.2
      baz=129
453A  Whigham           18.81 312   P     Pn     17 11 53.4 +0.3
      baz=125
GRGC  Isla de Gorgon    18.85 213  eP     Pn     17 11 54.5 +0.8
GRGC  Isla de Gorgon    18.85 213  eP     Pn     17 11 54.5 +0.8
SOTA  Rioblanco         18.86 207  eP     Pn     17 11 54.4  0.0
SOTA  Rioblanco         18.86 207  eP     Pn     17 11 54.4  0.0
Z55A  Blythe            18.88 321   P     P      17 11 53.2 -0.1
      baz=135
FLOC  Florencia         18.97 204  eP     Pn     17 11 55.5 +0.3
FLOC  Florencia         18.97 204  eP     Pn     17 11 55.5 +0.3
353A  Camilla           19.02 313   P     P      17 11 54.6 -0.3
      baz=126
154A  Montrose          19.07 318  eP     Pn     17 11 56.6 +0.4
      129nm,1.0s
154A  Montrose          19.07 318   P     P      17 11 55.3  0.0
      baz=131,SNR=7.0
TEIG  Tepich            19.11 277  eP     P      17 11 55.7 -0.2
      162nm,1.4s
TGUH  Tegucigalpa,Un    19.12 258  eP     P      17 11 55.0 -1.0
      198nm,2.0s
552A  Lynn Haven        19.12 308   P     P      17 11 55.0 -0.9
      baz=121
JSC   Jenkinsville      19.15 325  eP     Pn     17 11 56.7 -0.5
      32nm,0.9s
JSC   Jenkinsville      19.15 325  eP     Pn     17 11 56.7 -0.5
JSC                                 pmax  pmax
      comp=Z,32nm,0.9s
X56A  White Oak         19.18 326   P     P      17 11 55.8 -0.8
      baz=140
Y55A  Saluda            19.23 323   P     P      17 11 57.0 -0.1
      baz=137
Z54A  Sparta            19.32 320   P     Pn     17 11 58.7 -0.6
      baz=133
253A  Americus          19.39 315  eP     P      17 11 58.8 -0.1
      comp=Z,465nm,2.0s
X55A  Gracelyn & Ava    19.50 324   P     Pn     17 12 01.9 +0.5
      baz=138
CRUC  La Cruz           19.52 208  eP     Pn     17 12 01.8 -0.3
CRUC  La Cruz           19.52 208  eP     Pn     17 12 01.8 -0.3
352A  Blakely           19.59 312   P     P      17 12 01.6 +0.5
      baz=125
Y54A  Tignall           19.66 321   P     P      17 12 00.1 -1.7
      baz=135
HODGE Hodges            19.67 323  eP     Pn     17 12 03.4 -0.1
      comp=Z,192nm,2.0s
252A  Lumpkin           19.76 314   P     P      17 12 02.4 -0.6
      baz=127
Z53A  Monticello        19.80 318   P     P      17 12 02.5 -0.9
      baz=132
GOGA  Godfrey           19.82 319  eP     P      17 12 03.8 +0.2
      comp=Z,112nm,1.7s
GOGA  Godfrey           19.82 319  eP     P      17 12 03.8 +0.2
GOGA                                pmax  pmax
      comp=Z,112nm,1.7s
GOGA  Godfrey           19.82 319   P     P      17 12 03.8 +0.2
      baz=132
KMSC  Kings Mountain    19.84 326  eP     P      17 12 04.1 +0.3
      comp=Z,32nm,0.6s
KMSC  Kings Mountain    19.84 326   P     P      17 12 02.4 -1.4
      baz=140
PAULI Pauline           19.86 325  eP     Pn     17 12 05.4 -0.3
      comp=Z,29nm,0.6s
351A  Pinckard          19.96 311   P     P      17 12 04.1 -0.9
      baz=123
X54A  Belton            19.96 323   P     P      17 12 04.3 -0.8
      baz=137
PTLC  Puerto Leguiza    19.98 200  eP     P      17 12 03.0 -2.4
PTLC  Puerto Leguiza    19.98 200  eP     P      17 12 03.0 -2.4
GCUF  Volcan Galeras    20.00 208  eP     Pn     17 12 14.3 +6.3
GCUF  Volcan Galeras    20.00 208  eP     Pn     17 12 14.3 +6.3
152A  Waverly Hall      20.15 315  eP     Pn     17 12 08.2 -1.0
      comp=Z,124nm,1.4s
152A  Waverly Hall      20.15 315   P     P      17 12 07.1 -0.1
      baz=128,SNR=10
Y53A  Monroe            20.19 320   P     P      17 12 05.5 -2.2
      baz=133
W54A  Cherokee Point    20.25 325   P     P      17 12 08.2 -0.1
      baz=138
251A  Midway            20.28 313   P     P      17 12 08.6  0.0
      baz=126,SNR=10
Z52A  Williamson        20.28 317   P     P      17 12 08.8 +0.2
      baz=130
V55A  Taylorsville      20.33 328   P     P      17 12 08.9 -0.2
      baz=142
CMBC  Cumbal            20.47 209  eP     Pn     17 12 12.7 -0.7
CMBC  Cumbal            20.47 209  eP     Pn     17 12 12.7 -0.7
X53A  Estanollee        20.47 322   P     P      17 12 11.2 +0.6
      baz=135
MDP   Montagnes des     20.47 131   P     P      17 12 10.6 -0.2
      comp=Z,11nm,0.7s,baz=355,slow=8.2,SNR=4.2
MDP                                 LR    LR     17 22 20.9
      comp=Z,539nm,18.1s,baz=356,slow=44
151A  Opelika           20.48 314   P     P      17 12 11.1 +0.4
      baz=127,SNR=9.8
MYIG  Mrida             20.49 279  eP     P      17 12 10.9  0.0
      comp=Z,1µm,1.7s
Y52A  Lilburn           20.49 319  eP     P      17 12 11.8 +0.9
      comp=Z,45nm,1.2s
Y52A  Lilburn           20.49 319   P     P      17 12 11.4 +0.5
      baz=132
BG3   Lake Jocassee     20.60 323  eP     P      17 12 13.1 +1.0
      comp=Z,168nm,1.8s
R58B  Mineral           20.65 337  eP     P      17 12 13.1 +0.6
      comp=Z,39nm,0.9s
R58B  Mineral           20.65 337   P     P      17 12 12.9 +0.4
      baz=153
V54A  Nebo              20.65 326   P     P      17 12 13.6 +1.0
      baz=140
CBN   Corbin Frederi    20.68 339  eP     P      17 12 13.4 +0.5
      comp=Z,77nm,0.5s
U55A  TA2, Sparta       20.76 329   P     P      17 12 13.7 -0.2
      baz=143
250A  Grady             20.81 312  eP     Pn     17 12 15.7 -1.2
      comp=Z,490nm,1.6s
250A  Grady             20.81 312   P     P      17 12 14.7 +0.3
      baz=124,SNR=11
Z51A  Franklin          20.85 316   P     P      17 12 15.1 +0.3
      baz=128,SNR=5.8
W53A  Cullowhee         20.86 323   P     P      17 12 14.8 -0.2
      baz=136
BRAL  Brewton           20.95 309  eP     P      17 12 16.8 +0.9
      comp=Z,187nm,1.1s
BRAL  Brewton           20.95 309   P     P      17 12 14.6 -1.3
      baz=121
150A  Eclectic          21.00 313   P     P      17 12 15.1 -1.3
      baz=126,SNR=7.6
V53A  Saluda            21.03 325  eP     P      17 12 17.6 +0.8
      comp=Z,82nm,1.3s
V53A  Saluda            21.03 325   P     P      17 12 16.6 -0.2
      baz=138
BLA   Blacksburg        21.04 331  eP     P      17 12 18.5 +1.7
      comp=Z,80nm,0.8s
BLA   Blacksburg        21.04 331  eP     P      17 12 18.5 +1.7
BLA                                 pmax  pmax
      comp=Z,80nm,0.8s
Y51A  Rockmart          21.15 317   P     P      17 12 18.7 +0.7
      baz=130,SNR=10
349A  Repton            21.15 309   P     P      17 12 17.8 -0.2
      baz=121
PTGA  Pitinga           21.26 157  eP     P      17 12 18.2 -1.0
      comp=Z,71nm,1.3s
PTGA  Pitinga           21.26 157   P     P      17 12 18.0 -1.3
      comp=Z,7.8nm,0.5s,baz=330,slow=19,SNR=19
Z50A  Ashland           21.31 315  eP     P      17 12 20.9 +1.1
      comp=Z,161nm,1.5s
Z50A  Ashland           21.31 315   P     P      17 12 19.5 -0.2
      baz=127,SNR=12
OTAV  Otavalo           21.38 210  eP     P      17 12 21.6 +0.5
      comp=Z,353nm,1.7s
OTAV  Otavalo           21.38 210  eP     P      17 12 22.1 +1.0
OTAV  Otavalo           21.38 210  eP     P      17 12 21.6 +0.5
OTAV                                pmax  pmax
      comp=Z,353nm,1.7s
OTAV  Otavalo           21.38 210  eP     P      17 12 22.1 +1.0
249A  Camden            21.42 310   P     P      17 12 20.8 -0.1
      baz=122,SNR=7.0
U53A  Fall Branch       21.42 326   P     P      17 12 20.9 -0.1
      baz=140
X51A  Calhoun           21.45 319  eP     P      17 12 22.1 +0.8
      comp=Z,45nm,1.2s
149A  Jones             21.53 312   P     P      17 12 22.2 +0.2
      baz=124
TKL   Tuckaleechee C    21.56 323  eP     P      17 12 23.5 +1.1
      comp=Z,120nm,1.5s
TKL                                eS     S      17 16 15.2 -5.0
TKL   Tuckaleechee C    21.56 323  eP     P      17 12 23.5 +1.1
TKL                                eS     S      17 16 15.2 -5.0
TKL                                 pmax  pmax
      comp=Z,121nm,1.5s
TKL   Tuckaleechee C    21.56 323   P     P      17 12 23.8 +1.4
      comp=Z,15nm,0.8s,baz=158,slow=11,SNR=6.8
TKL                                 S     S      17 16 17.4 -2.9
      comp=Z,35nm,0.6s,baz=190,slow=16,SNR=6.3
TKL                                 LR    LR     17 21 19.5
      comp=Z,476nm,20.0s,baz=139,slow=38
Y50A  Piedmont          21.57 316   P     P      17 12 23.5 +1.0
      baz=129,SNR=10
V52A  Sevierville       21.59 324  eP     P      17 12 24.0 +1.3
      comp=Z,38nm,0.9s
V52A                               eS     S      17 16 18.9 -1.9
V52A  Sevierville       21.59 324   P     P      17 12 23.8 +1.0
      baz=136
SDMD  Soldier's Deli    21.61 341  eP     P      17 12 23.1 +0.2
      comp=Z,44nm,1.2s
Z49A  Columbiana        21.69 314   P     P      17 12 25.2 +1.4
      baz=126,SNR=12
W51A  Cleveland         21.79 321   P     P      17 12 25.8 +0.9
      baz=133,SNR=10.0
APG   El Apazote        21.84 263   P     P      17 12 27.2 +1.4
      comp=Z,24nm,0.8s,baz=58,slow=4.7,SNR=15
APG                                 LR    LR     17 21 50.9
      comp=Z,962nm,19.6s,baz=62,slow=39
CPCT  Cooper Cave       21.85 321  eP     P      17 12 26.1 +0.6
      comp=Z,102nm,1.6s
CPCT                               eS     S      17 16 23.7 -2.1
U52A  Thorn Hill        21.87 325   P     P      17 12 24.9 -0.8
      baz=138
T53A  Wise              21.88 327   P     P      17 12 25.7 -0.1
      baz=141
X50B  Fort Payne        21.88 318   P     P      17 12 25.7 -0.1
      baz=130,SNR=11
LRAL  Lakeview Retre    21.92 313  eP     P      17 12 26.8 +0.6
      comp=Z,139nm,1.4s
LRAL  Lakeview Retre    21.92 313   P     P      17 12 26.8 +0.6
      baz=125,SNR=11
V51A  Loudon            21.99 322  eP     P      17 12 27.5 +0.5
      comp=Z,119nm,1.4s
V51A  Loudon            21.99 322   P     P      17 12 25.8 -1.2
      baz=135
Y49A  Blount Mountai    22.00 315  eP     P      17 12 27.4 +0.3
Y49A  Blount Mountai    22.00 315   P     P      17 12 26.8 -0.3
      baz=127,SNR=7.9
TZTN  Tazewell          22.08 325  eP     P      17 12 28.6 +0.7
      comp=Z,64nm,1.3s
TZTN  Tazewell          22.08 325   P     P      17 12 27.8 -0.1
      baz=138
W50A  Signal Mountai    22.15 320  eP     P      17 12 29.4 +0.6
      comp=Z,145nm,1.6s
W50A  Signal Mountai    22.15 320   P     P      17 12 29.1 +0.3
      baz=132,SNR=7.1
U51A  La Follette       22.21 324   P     P      17 12 29.3 -0.1
      baz=136
V50A  Pikevile          22.34 321   P     P      17 12 30.7 -0.1
      baz=133,SNR=6.9
X49A  Woodville         22.34 317   P     P      17 12 30.3 -0.5
      baz=129
PAL   Palisades         22.39 348  eP     P      17 12 32.6 +1.4
      comp=Z,50nm,0.9s
PAL                                eS     S      17 16 32.5 -3.3
PAL   Palisades         22.39 348  eP     P      17 12 32.6 +1.4
PAL                                eS     S      17 16 32.5 -3.3
PAL                                 pmax  pmax
      comp=Z,50nm,0.9s
YLE   Yale              22.52 350  eP     P      17 12 32.3 -0.2
      comp=Z,63nm,0.6s
YLE                                eS     S      17 16 36.3 -1.9
Y48A  Jasper            22.54 315   P     P      17 12 32.1 -0.8
      baz=126,SNR=8.5
SWET  Sewanee           22.54 319  eP     P      17 12 33.0  0.0
      comp=Z,81nm,1.3s
T51A  Gray              22.60 325   P     P      17 12 32.7 -0.9
      baz=138
147A  Livingston        22.62 311  eP     P      17 12 35.0 +1.3
      comp=Z,338nm,1.6s
147A  Livingston        22.62 311   P     P      17 12 35.1 +1.3
      baz=122,SNR=9.2
W49A  Belvidere         22.69 318   P     P      17 12 35.2 +0.8
      baz=130,SNR=8.3
Q54A  Coxs Mills        22.69 333   P     P      17 12 34.8 +0.3
      baz=147
U50A  Jamestown         22.71 323   P     P      17 12 35.3 +0.6
      baz=135,SNR=10
N59A  State Game Lan    22.71 345  eP     P      17 12 36.8 +2.1
      comp=Z,51nm,0.7s
N59A  State Game Lan    22.71 345   P     P      17 12 36.5 +1.8
      baz=161
P55A  Reedsville        22.73 336   P     P      17 12 33.3 -1.6
      baz=150
X48A  Hartselle         22.78 316   P     P      17 12 35.0 -0.4
      baz=127,SNR=8.7
V49A  McMinnville       22.89 320   P     P      17 12 36.9 +0.4
      baz=132,SNR=5.8
S51A  Beattyville       22.92 327   P     P      17 12 37.9 +1.0
      baz=139
SSPA  Standing Stone    23.05 341  eP     P      17 12 38.1 -0.1
      comp=Z,109nm,1.4s
SSPA                               eS     S      17 16 46.7 -1.0
P54A  Burton            23.07 335   P     P      17 12 39.2 +0.8
      baz=149
W48A  Pulaski           23.12 317   P     P      17 12 39.5 +0.5
      baz=129,SNR=6.1
T50A  Nancy             23.13 324   P     P      17 12 40.5 +1.5
      baz=136,SNR=10
Q52A  Bidwell           23.31 331   P     P      17 12 40.9 +0.1
      baz=144
KSPA  Keystone Colle    23.32 345  eP     P      17 12 42.5 +1.6
      comp=Z,58nm,1.2s
KSPA                               eS     S      17 16 50.1 -1.9
U49A  Red Boiling Sp    23.32 322   P     P      17 12 41.0  0.0
      baz=133
X47A  Russelville       23.35 315   P     P      17 12 41.6 +0.2
      baz=126,SNR=18
WES   Weston            23.36 354  eP     P      17 12 42.5 +1.3
      comp=Z,78nm,1.4s
WES                                eS     S      17 16 51.0 -1.5
WES   Weston            23.36 354  eP     P      17 12 42.5 +1.3
WES                                eS     S      17 16 51.1 -1.5
WES                                 pmax  pmax
      comp=Z,78nm,1.4s
S50A  Richmond          23.37 326   P     P      17 12 43.0 +1.6
      baz=138
R51A  Hillsboro         23.42 328   P     P      17 12 43.5 +1.6
      baz=140
V48A  Smith Brothers    23.43 319  eP     P      17 12 43.3 +1.2
      comp=Z,165nm,1.6s
V48A  Smith Brothers    23.43 319   P     P      17 12 42.9 +0.8
      baz=130,SNR=7.7
HRV   Adam Dziewonsk    23.50 353  eP     P      17 12 43.7 +1.0
      comp=Z,51nm,1.0s
HRV                                eS     S      17 16 54.0 -1.0
HRV   Adam Dziewonsk    23.50 353  eP     P      17 12 43.7 +1.0
HRV                                eS     S      17 16 54.0 -1.0
HRV                                 pmax  pmax
      comp=Z,51nm,1.0s
O54A  Avella            23.53 336   P     P      17 12 42.5 -0.5
      baz=150
T49A  Edmonton          23.58 323  eP     P      17 12 44.9 +1.3
      comp=Z,29nm,1.0s
T49A  Edmonton          23.58 323   P     P      17 12 42.9 -0.6
      baz=135
W47A  Westpoint         23.62 317   P     P      17 12 43.6 -0.3
      baz=128,SNR=6.7
U48A  Cassie Pea, Po    23.77 321   P     P      17 12 46.5 +1.2
      baz=132
PLAL  Pickwick Lake     23.77 316  eP     P      17 12 46.1 +0.7
      comp=Z,141nm,1.5s
R50A  Paris             23.78 327   P     P      17 12 46.2 +0.8
      baz=139
P52A  Corning           23.79 332   P     P      17 12 46.4 +0.8
      baz=145
Q51A  Peebles           23.87 329  eP     P      17 12 47.0 +0.8
      comp=Z,41nm,0.6s
Q51A  Peebles           23.87 329   P     P      17 12 47.0 +0.8
      baz=142
O53A  New Philadelph    23.92 334   P     P      17 12 47.5 +0.8
      baz=148
V47A  Nunnelly          23.93 318   P     P      17 12 46.8 -0.1
      baz=129
S49A  Springfield       23.93 325   P     P      17 12 47.2 +0.4
      baz=136
BINY  Binghamton        23.98 345  eP     P      17 12 51.1 +3.8
      comp=Z,47nm,1.2s
BINY                               eSn    Sn     17 17 14.9  -12
TRY   Troy              24.02 350  eP     P      17 12 50.0 +2.4
      comp=Z,48nm,1.0s
TRY                                eS     S      17 17 07.2 +4.1
O52A  Adamsville        24.06 333  eP     P      17 12 49.5 +1.4
      comp=Z,36nm,0.8s
O52A  Adamsville        24.06 333   P     P      17 12 48.8 +0.8
      baz=146
T48A  Bowling Green     24.08 322   P     P      17 12 48.6 +0.3
      baz=133
P51A  Williamsport      24.09 331  eP     P      17 12 49.1 +0.8
      comp=Z,46nm,1.2s
U47A  Clarksville       24.18 319   P     P      17 12 49.1 -0.1
      baz=130
N53A  Lisbon            24.24 336   P     P      17 12 50.8 +1.1
      baz=149
S48A  Wiedeman Farm,    24.27 323   P     P      17 12 50.2 +0.2
      baz=135,SNR=5.3
V46A  Holladay          24.29 317   P     P      17 12 50.5 +0.3
      baz=128
WVT   Waverly           24.31 318  eP     P      17 12 50.2 -0.2
      comp=Z,17nm,0.8s
WVT   Waverly           24.31 318  eP     P      17 12 50.2 -0.2
WVT                                 pmax  pmax
      comp=Z,17nm,0.8s
WVT   Waverly           24.31 318   P     P      17 12 50.7 +0.3
      baz=129
OXF   Oxford            24.41 313   P     P      17 12 52.2 +0.9
      baz=124
O51A  Pataskala         24.42 332   P     P      17 12 52.1 +0.7
      baz=145
T47A  Sharon Grove      24.42 321   P     P      17 12 52.4 +1.0
      baz=132
P50A  Jamestown         24.54 330   P     P      17 12 53.5 +1.1
      baz=142
W45A  Hickory Valley    24.61 315   P     P      17 12 53.7 +0.6
      baz=125
ACSO  Alum Creek Sta    24.66 332  eP     P      17 12 54.3 +0.8
      comp=Z,30nm,0.8s
ACSO  Alum Creek Sta    24.66 332   P     P      17 12 52.8 -0.7
      baz=144
R48A  Northridge Ran    24.69 325   P     P      17 12 53.4 -0.4
      baz=136
WCI   Wyandotte Cave    24.80 324  eP     P      17 12 55.8 +1.0
      comp=Z,20nm,0.8s
WCI   Wyandotte Cave    24.80 324  eP     P      17 12 55.8 +1.0
WCI                                 pmax  pmax
      comp=Z,20nm,0.8s
O50A  Cable             24.88 331   P     P      17 12 55.9 +0.4
      baz=143
P49A  Miami Univ. Ec    24.93 328   P     P      17 12 56.0  0.0
      baz=140
T46A  Princeton         24.93 320   P     P      17 12 56.2 +0.1
      baz=130,SNR=6.9
N51A  Ashland           24.96 334   P     P      17 12 55.5 -0.7
      baz=146
MMNY  Mt. Morris Dam    24.98 343  eP     P      17 12 58.4 +2.0
      comp=Z,31nm,1.0s
Q48A  North Vernon      25.00 326   P     P      17 12 57.3 +0.7
      baz=137,SNR=7.5
UTMT  University of     25.10 317  eP     P      17 13 00.3 +2.7
      comp=Z,285nm,1.2s
N50A  Nevada            25.17 332   P     P      17 12 59.3 +1.2
      baz=145
P48A  Milroy            25.23 327   P     P      17 12 58.1 -0.6
      baz=138
S46A  Don Dixon Farm    25.25 321   P     P      17 12 59.4 +0.6
      baz=132,SNR=5.9
O49A  Covington         25.25 330   P     P      17 12 58.2 -0.7
      baz=142
NCB   Newcomb           25.32 349  eP     P      17 13 02.0 +2.6
      comp=Z,15nm,0.7s
Q47A  Bedord North L    25.38 325   P     P      17 13 01.9 +1.8
      baz=136
USIN  University of     25.41 322  eP     P      17 13 00.6 +0.4
      comp=Z,135nm,1.4s
R46A  Gibon Southern    25.48 322   P     P      17 13 02.8 +1.8
      baz=133
M50A  Fremont           25.64 333   P     P      17 13 04.3 +1.9
      baz=146
O48A  Farmland          25.70 329   P     P      17 13 04.8 +1.9
      baz=140
S45A  Carrier Mills     25.76 320   P     P      17 13 05.7 +2.2
      baz=130
R45A  Skylar, Fairfi    25.98 322   P     P      17 13 06.4 +0.9
      baz=132,SNR=11
LONY  Lake Ozonia       26.01 349  eP     P      17 13 06.2 +0.6
      comp=Z,26nm,1.4s
LONY  Lake Ozonia       26.01 349   P     P      17 13 06.1 +0.5
      baz=166
U43A  Rector            26.12 316   P     P      17 13 08.2 +1.4
      baz=125
OLIL  Olney             26.18 323  eP     P      17 13 07.9 +0.6
      comp=Z,39nm,0.9s
SIUC  Southern Illin    26.18 319  eP     P      17 13 07.9 +0.6
      comp=Z,158nm,1.4s
S44A  Carbondale        26.18 319   P     P      17 13 08.3 +1.0
      baz=129,SNR=15
P46A  Rosedale          26.29 325   P     P      17 13 08.6 +0.4
      baz=136
Q45A  Warren Harvey,    26.32 323   P     P      17 13 09.7 +1.1
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	baz=133,SNR=7.8						
R44A	Waltonville	26.43	321	P	P	17 13 10.6	+1.1
	baz=130,SNR=14						
N47A	Urbana	26.44	329	P	P	17 13 10.0	+0.4
	baz=140						
T43A	Greenville	26.46	317	P	P	17 13 10.1	+0.3
	baz=127,SNR=7.7						
H55A	Tweed	26.48	345	P	P	17 13 10.5	+0.5
	baz=160						
P45A	Graceland, Par	26.52	324	eP	P	17 13 11.2	+0.9
	comp=Z,108nm,1.5s						
P45A	Graceland, Par	26.52	324	P	P	17 13 11.6	+1.2
	baz=134,SNR=6.3						
S43A	Fulton Ridge,	26.62	318	P	P	17 13 11.7	+0.4
	baz=128,SNR=8.7						
U42A	Revenden	26.66	315	P	P	17 13 12.4	+0.7
	baz=124,SNR=9.3						
L48A	N Adams	26.69	332	P	P	17 13 13.0	+1.1
	baz=144						
W41B	Gary Mavity, V	26.74	312	eP	P	17 13 12.8	+0.4
	comp=Z,80nm,1.5s						
W41B	Gary Mavity, V	26.74	312	P	P	17 13 14.0	+1.6
	baz=120,SNR=5.5						
SFIN	Lafayette	26.78	326	P	P	17 13 14.2	+1.5
	baz=137						
X40A	Basin Creek Fa	26.82	310	eP	P	17 13 14.2	+1.1
	comp=Z,105nm,1.7s						
X40A	Basin Creek Fa	26.82	310	P	P	17 13 14.0	+0.9
	baz=118						
Q44A	Meyer Farm, Va	26.82	322	eP	P	17 13 14.1	+1.1
	comp=Z,145nm,1.4s						
Q44A	Meyer Farm, Va	26.82	322	P	P	17 13 14.2	+1.1
	baz=131,SNR=11						
WHAR	Wooly Hollow	26.82	312	eP	P	17 13 13.7	+0.6
	comp=Z,137nm,1.8s						
T42A	Van Buren	26.95	316	eP	P	17 13 13.7	-0.6
	comp=Z,56nm,1.9s						
T42A	Van Buren	26.95	316	P	P	17 13 14.9	+0.6
	baz=125						
R43A	Red Bud	26.96	320	P	P	17 13 15.4	+1.0
	baz=129						
P44A	Sand Creek, Wi	26.97	323	P	P	17 13 15.8	+1.4
	baz=133,SNR=5.3						
N46A	Monticello	26.97	328	P	P	17 13 15.5	+1.1
	baz=138						
NATX	Nacogdoches	27.07	303	eP	P	17 13 16.4	+1.0
	comp=Z,56nm,0.8s						
NATX	Nacogdoches	27.07	303	P	P	17 13 16.6	+1.2
	baz=111						
FVM	French Village	27.09	319	eP	P	17 13 16.0	+0.5
	comp=Z,66nm,1.5s						
FVM	French Village	27.09	319	eP	P	17 13 16.0	+0.5
FVM				pmax	pmax		
	comp=Z,66nm,1.5s						
U41A	Viola	27.12	314	P	P	17 13 16.6	+0.7
	baz=123,SNR=9.2						
M46A	Old House Fiel	27.16	329	P	P	17 13 16.9	+0.8
	baz=139						
S42A	Caledonia	27.19	318	P	P	17 13 16.5	+0.1
	baz=127,SNR=6.7						
SADO	Sadowa	27.20	343	eP	P	17 13 17.6	+1.2
	comp=Z,14nm,1.1s						
SADO	Sadowa	27.20	343	LR	LR	17 25 28.1	
	comp=Z,228nm,18.4s,baz=170,slow=40						
K48A	Perry	27.25	334	P	P	17 13 18.1	+1.2
	baz=145						
Q43A	New Douglas	27.25	321	P	P	17 13 17.7	+0.8
	baz=130,SNR=6.6						
N45A	Kentland	27.34	327	P	P	17 13 18.8	+1.1
	baz=137						
O44A	Mansfield	27.36	324	P	P	17 13 19.2	+1.3
	baz=134,SNR=5.3						
MIAR	Mount Ida	27.39	309	eP	P	17 13 18.8	+0.6
	comp=Z,64nm,1.8s						
MIAR	Mount Ida	27.39	309	eP	P	17 13 18.8	+0.6
MIAR				pmax	pmax		
	comp=Z,64nm,1.8s						
MIAR	Mount Ida	27.39	309	P	P	17 13 19.5	+1.3
	baz=118						
T41A	Mountain View	27.40	316	P	P	17 13 18.6	+0.3
	baz=124,SNR=22						
HKT	Hockley	27.43	298	eP	P	17 13 19.1	+0.5
	comp=Z,58nm,1.5s						
HKT	Hockley	27.43	298	eP	P	17 13 19.1	+0.5
HKT				pmax	pmax		
	comp=Z,58nm,1.5s						
R42A	Luebbering	27.50	319	P	P	17 13 20.0	+0.8
	baz=128,SNR=10						
P43A	Skaggs, Pawnee	27.60	322	P	P	17 13 21.1	+1.1
	baz=132,SNR=13						
N44A	Piper City	27.63	326	P	P	17 13 20.7	+0.4
	baz=136						
CCM	Cathedral Cave	27.65	318	eP	P	17 13 20.6	+0.1
	comp=Z,67nm,1.5s						
CCM	Cathedral Cave	27.65	318	eP	P	17 13 20.6	+0.1
CCM				pmax	pmax		
	comp=Z,67nm,1.5s						
CCM	Cathedral Cave	27.65	318	P	P	17 13 20.8	+0.3
	baz=127						
S41A	Jillco Farms,	27.70	317	P	P	17 13 21.6	+0.6
	baz=125,SNR=37						
Q42A	Golden Eagle	27.73	320	P	P	17 13 21.8	+0.5
	baz=129,SNR=6.6						
U40A	Yellville	27.77	313	P	P	17 13 22.1	+0.5
	baz=122						
W39A	Magazine	27.84	310	eP	P	17 13 23.3	+1.0
	comp=Z,74nm,1.8s						
W39A	Magazine	27.84	310	P	P	17 13 23.4	+1.1
	baz=118,SNR=5.6						
R41A	Rosebud	27.88	318	P	P	17 13 22.9	+0.3
	baz=127,SNR=10						
ALGO	Algonquin Park	28.01	345	P	P	17 13 23.8	+0.1
	baz=160						
ATAH	Atahualpa	28.03	202	P	P	17 13 23.4	-1.1
	comp=Z,4.0nm,0.7s,baz=45,slow=16,SNR=2.6						
ATAH				LR	LR	17 26 15.3	
	comp=Z,871nm,20.4s,baz=24,slow=40						
P42A	Winchester	28.05	321	eP	P	17 13 24.1	0.0
	comp=Z,95nm,1.4s						
P42A	Winchester	28.05	321	P	P	17 13 24.6	+0.6
	baz=130,SNR=14						
HDIL	Hopedale	28.09	324	P	P	17 13 24.4	0.0
	baz=133						
Q41A	Truxton	28.18	319	P	P	17 13 25.9	+0.6
	baz=128,SNR=9.4						
N43A	Stutzman Famil	28.29	325	P	P	17 13 25.1	-1.1
	baz=134						
O42A	Bath	28.29	323	P	P	17 13 24.0	-2.2
	baz=132						
HHAR	Hobbs	28.48	312	eP	P	17 13 28.4	+0.4
	comp=Z,55nm,1.8s						
F51A	Arnstein	28.48	342	P	P	17 13 28.0	+0.1
	baz=156						
M43A	Waltham Townsh	28.52	326	P	P	17 13 29.0	+0.7
	baz=135						
P41A	Barry, Barry	28.53	321	P	P	17 13 28.3	-0.1
	baz=129						
N42A	Yates City	28.69	324	P	P	17 13 30.8	+1.1
	baz=132						
O41A	Passleys Farm,	28.70	322	P	P	17 13 30.0	+0.1
	baz=130,SNR=8.8						
D54A	Lac Fusel, La	28.84	348	P	P	17 13 31.5	+0.5
	baz=163						
D53A	Lac Vacive, Po	28.99	346	P	P	17 13 33.2	+0.9
	baz=161						
N41A	Harden Midland	29.07	323	eP	P	17 13 33.6	+0.4
	comp=Z,52nm,1.1s						
N41A	Harden Midland	29.07	323	P	P	17 13 32.4	-0.8
	baz=131						
L42A	Oliver, Polo	29.30	326	eP	P	17 13 35.7	+0.5
	comp=Z,39nm,1.1s						
L42A	Oliver, Polo	29.30	326	P	P	17 13 34.9	-0.2
	baz=135						
N40A	Mertquake, Sal	29.61	322	P	P	17 13 38.2	+0.3
	baz=130,SNR=6.9						
TUL1	Leonard	29.62	310	eP	P	17 13 38.3	+0.1
	comp=Z,110nm,1.8s						
TUL1	Leonard	29.62	310	P	P	17 13 38.7	+0.5
	baz=117						
LNIG	Linares	29.67	287	eP	P	17 13 38.1	-0.6
	comp=Z,15nm,0.8s						
K42A	Prairie Point,	29.68	327	P	P	17 13 39.2	+0.7
	baz=136						
L41A	Preston	29.79	325	P	P	17 13 39.2	-0.4
	baz=133						
I43A	Langenfeld Bro	29.91	330	P	P	17 13 41.7	+1.2
	baz=139						
M40A	Post Highland	29.91	323	P	P	17 13 39.8	-0.8

	baz=131						
VLDQ	Val d'Or	29.92	347	eP	P	17 13 42.6	+2.1
	comp=Z,7.0nm,0.8s						
E47A	Iron Bridge	30.01	339	P	P	17 13 40.0	-1.4
	baz=150						
K41A	Shullsburg	30.05	326	P	P	17 13 41.7	-0.2
	baz=134						
L40A	Anamosa	30.18	324	eP	P	17 13 42.9	-0.1
	comp=Z,16nm,0.6s						
L40A	Anamosa	30.18	324	P	P	17 13 42.7	-0.2
	baz=132						
JFWS	Jewell Farm	30.24	327	eP	P	17 13 44.3	+0.8
	comp=Z,113nm,1.4s						
JFWS	Jewell Farm	30.24	327	eP	P	17 13 44.3	+0.8
JFWS				pmax	pmax		
	comp=Z,113nm,1.4s						
JFWS	Jewell Farm	30.24	327	P	P	17 13 43.9	+0.4
	baz=135,SNR=6.3						
I42A	Draeger Farm,	30.28	329	P	P	17 13 44.9	+1.1
	baz=138						
M39A	Webster	30.33	322	P	P	17 13 44.3	-0.1
	baz=130						
J41A	Loganville	30.44	327	P	P	17 13 45.3	0.0
	baz=136						
K40A	Colesburg	30.56	325	P	P	17 13 46.7	+0.3
	baz=133						
L39A	Vinton	30.65	324	P	P	17 13 47.1	-0.1
	baz=131,SNR=7.8						
D46A	Sault St. Mari	30.65	338	P	P	17 13 48.3	+1.2
	baz=149						
LSQQ	Lebel-sur-Quev	30.72	348	P	P	17 13 48.9	+1.2
	baz=163						
J40A	Soldiers Grove	30.84	327	P	P	17 13 49.2	+0.4
	baz=135,SNR=5.7						
I41A	Arkdale	30.87	328	P	P	17 13 50.1	+1.1
	baz=137						
JCT	Junction City	30.89	298	eP	P	17 13 49.7	+0.3
	comp=Z,48nm,1.4s						
JCT	Junction City	30.89	298	eP	P	17 13 49.7	+0.3
JCT				pmax	pmax		
	comp=Z,48nm,1.4s						
JCT	Junction City	30.89	298	P	P	17 13 49.8	+0.3
	baz=104,SNR=7.1						
K39A	Oelwein	30.98	325	P	P	17 13 50.3	+0.3
	baz=132						
F43A	Flat Rock, Esc	30.98	334	P	P	17 13 50.8	+0.8
	baz=143						
G42A	Mountain	31.07	331	P	P	17 13 51.6	+0.8
	baz=140						
E44A	Grand Marais A	31.12	336	P	P	17 13 53.1	+1.9
	baz=146						
I40A	Norwalk	31.12	327	P	P	17 13 51.9	+0.6
	baz=135,SNR=5.5						
CHGQ	Chibougamau	31.13	352	P	P	17 13 53.2	+1.9
	baz=168						
H41A	Junction City	31.17	329	eP	P	17 13 52.5	+0.8
	comp=Z,62nm,1.6s						
H41A	Junction City	31.17	329	P	P	17 13 52.8	+1.1
	baz=138						
SCIA	State Center	31.20	322	P	P	17 13 53.1	+1.0
	baz=129						
J39A	Decorah	31.30	326	P	P	17 13 53.9	+1.1
	baz=133						
ABTX	Abilene, Hawle	31.34	302	eP	P	17 13 53.4	0.0
	comp=Z,83nm,1.6s						
ABTX	Abilene, Hawle	31.34	302	P	P	17 13 54.1	+0.7
	baz=108,SNR=6.7						
WMOK	Wichita Mounta	31.37	306	eP	P	17 13 53.9	+0.3
	comp=Z,12nm,0.7s						
WMOK	Wichita Mounta	31.37	306	eP	P	17 13 53.9	+0.3
WMOK				pmax	pmax		
	comp=Z,12nm,0.7s						
WMOK	Wichita Mounta	31.37	306	P	P	17 13 53.7	0.0
	baz=112,SNR=19						
MATQ	Matagami	31.52	348	P	P	17 13 55.9	+1.2
	baz=162						
H40A	Chili	31.53	329	P	P	17 13 55.5	+0.6
	baz=137,SNR=6.9						
I39A	Houston	31.56	327	eP	P	17 13 55.8	+0.7
	comp=Z,86nm,1.5s						
I39A	Houston	31.56	327	P	P	17 13 55.9	+0.7
	baz=134						
KSU1	Kansas State U	31.73	315	eP	P	17 13 56.5	-0.2
	comp=Z,18nm,0.6s						
KSU1	Kansas State U	31.73	315	P	P	17 13 56.5	-0.2
	baz=121						
F41A	Three Lakes	31.76	331	P	P	17 13 56.9	0.0
	baz=140						
G40A	Rib Lake	31.91	330	eP	P	17 13 59.4	+1.2
	comp=Z,17nm,0.7s						
G40A	Rib Lake	31.91	330	P	P	17 13 59.1	+0.9
	baz=138,SNR=7.3						
H39A	Augusta	32.02	328	P	P	17 13 60.0	+0.8
	baz=135,SNR=6.4						
COWI	Conover	32.05	332	eP	P	17 14 00.3	+0.9
	comp=Z,56nm,1.0s						
NNA	Nana	32.12	196	LR	LR	17 30 08.8	
	comp=Z,386nm,18.2s,baz=333,slow=42						
U32A	Winter Ranch,	32.17	309	eP	P	17 14 01.5	+0.8
	comp=Z,80nm,1.8s						
E41A	Kenton	32.25	332	P	P	17 14 02.7	+1.5
	baz=141						
F40A	Park Falls	32.36	331	P	P	17 14 03.2	+1.1
	baz=138						
G39A	Holcombe	32.40	329	P	P	17 14 03.4	+0.9
	baz=136,SNR=10						
H38A	Maiden Rock	32.52	327	P	P	17 14 04.7	+1.0
	baz=134						
D41A	Chassel	32.55	334	eP	P	17 14 05.5	+1.7
	comp=Z,237nm,1.8s						
D41A	Chassel	32.55	334	P	P	17 14 03.8	0.0
	baz=142						
G38A	Ridgeland	32.65	328	P	P	17 14 04.7	0.0
	baz=135						
E40A	Wakefield	32.65	331	P	P	17 14 05.7	+0.9
	baz=139,SNR=12						
F39A	Loretta	32.73	330	P	P	17 14 06.0	+0.6
	baz=137,SNR=9.3						
E39A	Mellen	32.90	331	P	P	17 14 08.0	+1.1
	baz=138,SNR=13						
SPMN	Marine on St.	33.17	327	eP	P	17 14 09.0	-0.3
	comp=Z,33nm,1.3s						
SPMN	Marine on St.	33.17	327	P	P	17 14 09.9	+0.7
	baz=134						
F38A	Pierce - Schro	33.23	329	P	P	17 14 10.4	+0.6
	baz=136,SNR=11						
F37A	Hinrichs Farm,	33.43	328	P	P	17 14 12.5	+1.0
	baz=134						
C40A	Isle Royale Na	33.47	334	eP	P	17 14 12.5	+0.7
	comp=Z,40nm,0.9s						
C40A	Isle Royale Na	33.47	334	P	P	17 14 13.3	+1.5
	baz=142						
E38A	The Farm, Brul	33.54	330	eP	P	17 14 12.8	+0.3
	comp=Z,60nm,1.7s						
E38A	The Farm, Brul	33.54	330	P	P	17 14 13.5	+1.1
	baz=137						
AMTX	Amarillo	33.66	305	eP	P	17 14 13.7	-0.1
	comp=Z,64nm,1.8s						
AMTX	Amarillo	33.66	305	P	P	17 14 14.0	+0.2
	baz=109						
CBKS	Cedar Bluff	33.74	312	eP	P	17 14 15.2	+0.9
	comp=Z,135nm,1.8s						
CBKS	Cedar Bluff	33.74	312	eP	P	17 14 15.2	+0.9
CBKS				pmax	pmax		
	comp=Z,135nm,1.8s						
CBKS	Cedar Bluff	33.74	312	P	P	17 14 14.3	0.0
	baz=117						
BGNE	Belgrade	33.93	317	eP	P	17 14 15.9	-0.1
	comp=Z,27nm,0.7s						
BGNE	Belgrade	33.93	317	P	P	17 14 16.1	+0.1
	baz=122						
TXAR	Lajitas Array	33.94	294	P	P	17 14 17.1	+0.8
	comp=Z,9.1nm,0.6s,baz=113,slow=9.2,SNR=116						
TX31	Lajitas Ar. Si	33.94	294	eP	P	17 14 16.9	+0.6
MSTX	Muleshoe	34.24	303	eP	P	17 14 18.8	0.0
	comp=Z,77nm,1.5s						
MSTX	Muleshoe	34.24	303	P	P	17 14 18.9	0.0
	baz=107,SNR=12						
ECSD	EROS Data Cent	34.30	322	eP	P	17 14 18.9	-0.2
	comp=Z,36nm,0.9s						
ECSD	EROS Data Cent	34.30	322	P	P	17 14 19.5	+0.4
	baz=127,SNR=37						
EYMN	Ely	34.50	332	eP	P	17 14 21.4	+0.6
	comp=Z,14nm,1.0s						
EYMN	Ely	34.50	332	P	P	17 14 21.4	+0.6
	baz=138,SNR=5.8						
LPAZ	La Paz	35.19	180	eP	P	17 14 27.5	-0.2
LPAZ	La Paz	35.19	180	eP	P	17 14 27.5	-0.2

LPAZ	La Paz	35.19	180	P	P	17 14 28.1	+0.4
	comp=Z,1.8nm,0.5s,baz=200,slow=5.7,SNR=2.6						
SIV	San Ignacio	35.56	168	LR	LR	17 30 49.2	
	comp=Z,460nm,18.1s,baz=304,slow=39						
SCHQ	Schefferville	35.66	1	eP	P	17 14 31.1	+0.5
	comp=Z,9.9nm,0.7s						
SCHQ	Schefferville	35.66	1	P	P	17 14 31.2	+0.5
	comp=Z,7.5nm,0.6s,baz=189,slow=6.7,SNR=15						
SCHQ				LR	LR	17 27 35.3	
	comp=Z,256nm,21.2s,baz=180,slow=34						
MNTX	Cornudas Mount	35.82	298	eP	P	17 14 32.7	+0.3
	comp=Z,70nm,1.5s						
MNTX	Cornudas Mount	35.82	298	P	P	17 14 33.0	+0.6
	baz=101,SNR=26						
OGNE	Ogallala	36.27	314	P	P	17 14 35.8	-0.4
	baz=117						
T25A	Trinidad	36.49	307	eP	P	17 14 38.9	+0.6
	comp=Z,64nm,1.5s						
T25A	Trinidad	36.49	307	P	P	17 14 39.5	+1.2
	baz=110,SNR=13						
AGMN	Agassiz Nation	36.81	329	eP	P	17 14 40.5	-0.1
	comp=Z,16nm,0.8s						
AGMN	Agassiz Nation	36.81	329	P	P	17 14 40.6	+0.1
	baz=133,SNR=11						
BNM	Barren Site	37.37	302	eP	P	17 14 46.7	+0.9
ANMO	Albuquerque	37.43	303	eP	P	17 14 46.9	+0.6
	comp=Z,18nm,1.6s						
ANMO	Albuquerque	37.43	303⇑	eP	P	17 14 47.7	+1.4
ANMO				pmax	pmax		
	comp=Z,12nm,1.6s						
ANMO	Albuquerque	37.43	303	P	P	17 14 45.6	-0.7
	baz=105						
ANMO	Albuquerque	37.43	303	LR	LR	17 31 26.3	
	comp=Z,305nm,18.8s,baz=113,slow=38						
SDCO	Great Sand Dun	37.51	308	eP	P	17 14 47.8	+0.8
	comp=Z,20nm,0.6s						
SDCO	Great Sand Dun	37.51	308	P	P	17 14 47.6	+0.6
	baz=109,SNR=59						
LENM	Lemitar	37.66	301	eP	P	17 14 48.9	+0.6
Q24A	Divide	37.66	310	eP	P	17 14 49.1	+0.7
	comp=Z,14nm,0.9s						
Q24A	Divide	37.66	310	P	P	17 14 47.6	-0.8
	baz=111						
121A	Cookes Peak, D	37.98	299	P	P	17 14 52.0	+1.0
	baz=101						
ULM	Lac du Bonnet	38.16	331	eP	P	17 14 51.2	-0.8
	comp=Z,15nm,1.1s						
ULM	Lac du Bonnet	38.16	331	eP	P	17 14 51.2	-0.8
ULM				pmax	pmax		
	comp=Z,15nm,1.1s						
ULM	Lac du Bonnet	38.16	331	P	P	17 14 51.7	-0.2
	comp=Z,8.8nm,0.8s,baz=130,slow=6.8,SNR=10						
ULM				LR	LR	17 29 57.7	
	comp=Z,163nm,19.3s,baz=142,slow=35						
ISCO	Idaho Springs	38.30	311	eP	P	17 14 54.5	+0.7
	comp=Z,60nm,1.8s						
ISCO	Idaho Springs	38.30	311	eP	P	17 14 54.5	+0.7
ISCO				pmax	pmax		
	comp=Z,60nm,1.8s						
ISCO	Idaho Springs	38.30	311	P	P	17 14 54.7	+1.0
	baz=112,SNR=12						
MDND	Maddock	38.44	325	eP	P	17 14 54.9	+0.5
	comp=Z,107nm,1.5s						
MDND	Maddock	38.44	325	P	P	17 14 55.3	+0.9
	baz=127						
S22A	4UR Ranch, Cre	38.51	307	eP	P	17 14 56.1	+0.6
	comp=Z,25nm,1.4s						
S22A	4UR Ranch, Cre	38.51	307	P	P	17 14 56.6	+1.1
	baz=108,SNR=14						
PB11	IPOC Station P	38.68	182	eP	P	17 14 56.6	-0.2
	comp=Z,29nm,1.1s						
PHWY	Pilot Hill	38.76	313	eP	P	17 14 57.8	+0.2
	comp=Z,27nm,1.4s						
N23A	Red Feather La	38.94	312	P	P	17 14 59.4	+0.4
	baz=112						
RSSD	Black Hills	39.04	318	eP	P	17 15 00.3	+0.5
	comp=Z,12nm,1.4s						
RSSD	Black Hills	39.04	318	eP	P	17 15 00.3	+0.5
RSSD				pmax	pmax		
	comp=Z,13nm,1.4s						
RSSD	Black Hills	39.04	318	P	P	17 15 00.6	+0.9
	baz=118						
319A	Douglas	39.05	296	eP	P	17 15 01.6	+1.7
	comp=Z,42nm,1.5s						
SMCO	Snowmass	39.07	309	eP	P	17 15 00.7	+0.4
	comp=Z,18nm,1.2s						
NBPA	Parau_RN	39.21	126	eP	P	17 15 12.5	+11
MVCO	Mesa Verde	39.62	306	P	P	17 15 05.8	+1.0
	baz=106						
BDFB	Brasilia	39.76	149	P	P	17 15 06.6	+0.7
	comp=Z,3.1nm,0.6s,baz=308,slow=14,SNR=4.5						
BDFB				LR	LR	17 31 55.2	
	comp=Z,341nm,20.6s,baz=296,slow=37						
PV15	Paradox Valley	39.93	307	eP	P	17 15 08.5	+1.2
	comp=Z,48nm,1.2s						
PV01	Paradox Valley	39.94	307	eP	P	17 15 08.8	+1.5
	comp=Z,75nm,1.6s						
K22A	Casper	40.03	314	P	P	17 15 08.5	+0.5
	baz=114						
PV07	Paradox Valley	40.08	307	eP	P	17 15 09.8	+1.2
	comp=Z,47nm,1.4s						
PV02	Paradox Valley	40.08	307	eP	P	17 15 09.5	+0.9
	comp=Z,66nm,1.4s						
RWWY	Rawlins	40.13	313	eP	P	17 15 08.7	-0.2
	comp=Z,34nm,1.4s						
PV13	Radium Mtn., P	40.13	307	eP	P	17 15 09.9	+1.0
	comp=Z,62nm,1.3s						
PV12	Saucer Basin,	40.16	307	eP	P	17 15 11.0	+1.8
	comp=Z,136nm,1.6s						
PV03	Paradox Valley	40.18	307	eP	P	17 15 10.6	+1.2
	comp=Z,95nm,1.6s						
PV11	David Mesa, Pa	40.21	307	eP	P	17 15 10.8	+1.3
	comp=Z,124nm,1.5s						
PV16	Nyswonger Mesa	40.25	307	eP	P	17 15 11.0	+1.1
	comp=Z,78nm,1.3s						
PV04	Paradox Valley	40.26	307	eP	P	17 15 11.1	+1.1
	comp=Z,83nm,1.6s						
PV17	East Wray Mesa	40.27	307	eP	P	17 15 11.5	+1.4
	comp=Z,93nm,1.4s						
PV20	West Nyswonger	40.29	307	eP	P	17 15 11.4	+1.1
	comp=Z,122nm,1.7s						
PV19	Morning Glory	40.30	307	eP	P	17 15 11.6	+1.2
	comp=Z,85nm,1.5s						
O20A	White River Ci	40.31	310	eP	P	17 15 11.2	+0.8
	comp=Z,12nm,1.0s						
O20A	White River Ci	40.31	310	P	P	17 15 11.1	+0.7
	baz=109						
PV05	Paradox Valley	40.32	307	eP	P	17 15 11.4	+0.8
	comp=Z,115nm,1.7s						
PV10	Paradox Valley	40.36	307	eP	P	17 15 12.1	+1.3
	comp=Z,99nm,1.6s						
PV23	Carpenter Ridg	40.36	307	eP	P	17 15 12.1	+1.2
	comp=Z,62nm,1.5s						
TUC	Tucson	40.45	298	eP	P	17 15 13.2	+1.7
	comp=Z,20nm,1.5s						
TUC	Tucson	40.45	298	eP	P	17 15 13.2	+1.7
TUC				pmax	pmax		
	comp=Z,20nm,1.5s						
TUC	Tucson	40.45	298	P	P	17 15 12.6	+1.1
	baz=98						
PV09	Paradox Valley	40.46	307	eP	P	17 15 12.8	+1.0
C2SB	Chapadao do Su	40.50	158	eP	P	17 15 18.7	+6.9
AQDB	Aquidauana	41.16	162	eP	P	17 15 23.7	+6.5
DGMT	Dagmar	41.33	323	eP	P	17 15 19.3	+0.9
	comp=Z,23nm,0.9s						
DGMT	Dagmar	41.33	323	P	P	17 15 19.9	+1.5
	baz=122						
X16A	Lo Mia Camp, P	41.33	301	eP	P	17 15 20.6	+1.7
	comp=Z,18nm,1.6s						
WUAZ	Wupatki	41.48	302	eP	P	17 15 20.1	+0.1
	comp=Z,34nm,1.3s						
WUAZ	Wupatki	41.48	302	P	P	17 15 20.9	+0.8
	baz=102,SNR=8.6						
LVC	Limon Verde	41.49	181	P	P	17 15 18.1	-2.3
	comp=Z,4.3nm,0.5s,baz=18,slow=5.3,SNR=9.6						
LVC				LR	LR	17 33 10.3	
	comp=Z,269nm,21.1s,baz=351,slow=37						
SRU	San Rafael Swe	41.68	308	eP	P	17 15 22.2	+0.6
	comp=Z,7.1nm,0.8s						
SRU	San Rafael Swe	41.68	308	eP	P	17 15 22.3	+0.6
SRU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
P17A	Butcher Ranch,	41.94	308	eP	P	17 15 24.0	+0.2
	comp=Z,54nm,1.6s						
214A	Organ Pipe Nat	42.11	297	P	P	17 15 26.6	+1.5
	baz=97						
PD31	Pinedale Array	42.14	313	eP	P	17 15 26.0	+0.5
	comp=Z,15nm,1.4s						

PDAR	Pinedale Array	42.14	313	*e*P	P	17 15 25.2	-0.3
PDAR	Pinedale Array	42.14	313	P	P	17 15 26.1	+0.6
	comp=Z,1.2nm,0.5s,baz=109,slow=10,SNR=14						
PDAR				PcP	PcP	17 17 19.8	+0.1
	comp=Z,1.6nm,0.5s,baz=112,slow=4.6,SNR=8.6						
PDAR				LR	LR	17 34 26.9	
	comp=Z,255nm,18.0s,baz=121,slow=38						
BW06	Boulder Array	42.14	313	*e*P	P	17 15 25.7	+0.2
	comp=Z,16nm,1.4s						
BW06	Boulder Array	42.14	313	P	P	17 15 25.7	+0.2
	baz=111,SNR=5.2						
TMUT	Trail Mountain	42.24	308	*e*P	P	17 15 27.1	+0.7
	comp=Z,28nm,1.4s						
U15A	North Rim	42.39	303	*e*P	P	17 15 28.8	+1.2
	comp=Z,23nm,1.5s						
Y14A	Wickenburg	42.53	300	*e*P	P	17 15 29.4	+0.9
	comp=Z,27nm,1.6s						
MTPU	Mount Pierson	42.66	306	*e*P	P	17 15 30.8	+0.9
	comp=Z,53nm,1.9s						
MCI8	Montes Claros	42.73	145	*e*P	P	17 15 39.5	+9.2
MPU	Maple Canyon	42.75	309	*e*P	P	17 15 31.0	+0.6
	comp=Z,11nm,1.0s						
JLU	Jordanelle	42.78	310	*e*P	P	17 15 30.6	-0.2
	comp=Z,7.1nm,1.0s						
RLMT	Red Lodge	42.84	317	*e*P	P	17 15 31.3	+0.3
	comp=Z,17nm,0.7s						
RLMT	Red Lodge	42.84	317	P	P	17 15 32.2	+1.1
	baz=114						
TCUT	Toone Canyon	42.91	310	*e*P	P	17 15 32.7	+1.0
	comp=Z,42nm,1.5s						
KNB	Kanab	42.93	304	*e*P	P	17 15 33.3	+1.4
	comp=Z,22nm,1.4s						
KNB	Kanab	42.93	304	*e*P	P	17 15 33.3	+1.4
KNB				pmax	pmax		
	comp=Z,22nm,1.4s						
TCRU	Three Creeks R	43.00	306	*e*P	P	17 15 35.2	+2.8
	comp=Z,18nm,0.4s						
113A	Mohawk Valley,	43.01	298	*e*P	P	17 15 33.7	+1.4
	comp=Z,16nm,1.4s						
PMNB	Patos De Minas	43.01	149	*e*P	P	17 15 41.5	+9.0
CTU	Camp Tracy	43.03	310	*e*P	P	17 15 33.1	+0.4
	comp=Z,37nm,1.7s						
NLU	North Lily Min	43.06	308	*e*P	P	17 15 33.9	+0.9
	comp=Z,18nm,1.5s						
LOHW	Long Hollow	43.16	314	*e*P	P	17 15 34.0	+0.4
	comp=Z,30nm,1.3s						
HWUT	Hardware Ranch	43.17	311	*e*P	P	17 15 33.9	+0.2
	comp=Z,14nm,1.4s						
REDW	Red Top Meadow	43.24	314	*e*P	P	17 15 34.7	+0.4
	comp=Z,99nm,1.8s						
SZCU	Shurtz Canyon	43.26	305	*e*P	P	17 15 35.7	+1.1
	comp=Z,8.1nm,1.0s						
MOOW	Moose Ponds	43.30	314	*e*P	P	17 15 35.6	+0.8
	comp=Z,25nm,1.5s						
TPAW	Teton Pass	43.35	314	*e*P	P	17 15 34.6	-0.7
	comp=Z,36nm,1.4s						
LKWY	Lake	43.37	315	*e*P	P	17 15 36.1	+0.7
	comp=Z,18nm,1.4s						
LKWY	Lake	43.37	315	*e*P	P	17 15 36.1	+0.7
LKWY				pmax	pmax		
	comp=Z,18nm,1.4s						
FLWY	Flagg Ranch	43.39	315	*e*P	P	17 15 36.9	+1.4
	comp=Z,43nm,1.7s						
H17A	Grant Village	43.42	315	*e*P	P	17 15 37.1	+1.3
	comp=Z,28nm,1.8s						
H17A	Grant Village	43.42	315	P	P	17 15 38.5	+2.6
	baz=112						
W13A	Hualapai Mount	43.43	301	*e*P	P	17 15 37.5	+1.5
	comp=Z,39nm,1.5s						
FXWY	Fox Creek	43.45	314	*e*P	P	17 15 36.2	+0.1
	comp=Z,23nm,1.6s						
CCUT	Cedar City	43.47	305	*e*P	P	17 15 37.7	+1.5
	comp=Z,22nm,1.4s						
YPP	Pitchstone Pla	43.53	315	*e*P	P	17 15 37.2	+0.4
	comp=Z,15nm,1.5s						
DUG	Dugway, Tooele	43.67	309	*e*P	P	17 15 39.0	+1.2
	comp=Z,6.1nm,0.8s						
DUG	Dugway, Tooele	43.67	309	P	P	17 15 38.9	+1.1
	baz=105,SNR=6.3						
YHH	Holmes Hill	43.75	316	*e*P	P	17 15 39.4	+0.9
	comp=Z,5.8nm,1.0s						
YMR	Madison River	43.78	315	*e*P	P	17 15 39.8	+1.1
	comp=Z,13nm,1.2s						
FCC	Fort Churchill	43.90	341	*e*P	P	17 15 39.1	+0.1
	comp=Z,20nm,0.9s						
FFC	Flin Flon	43.93	332	*e*P	P	17 15 39.0	-0.4
	comp=Z,7.4nm,1.0s						
FFC	Flin Flon	43.93	332	*e*P	P	17 15 39.0	-0.4
FFC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YHB	Horse Butte	43.96	315	*e*P	P	17 15 41.8	+1.6
	comp=Z,13nm,1.1s						
GO02	Mina Guanaco	44.05	182	*e*P	P	17 15 45.5	+4.5
	comp=Z,53nm,1.8s						
PSUT	Pine Spring	44.05	306	*e*P	P	17 15 42.9	+1.9
	comp=Z,16nm,1.1s						
QLMT	Earthquake Lak	44.15	315	*e*P	P	17 15 43.5	+1.9
BB19B	Bebedouro	44.27	153	*e*P	P	17 15 50.3	+7.8
IRM	Iron Mountain	44.32	300	P	P	17 15 44.9	+2.0
	baz=97,SNR=15						
EGMT	Eagleton	44.36	320	*e*P	P	17 15 43.0	-0.1
	comp=Z,48nm,1.4s						
EGMT	Eagleton	44.36	320	P	P	17 15 43.7	+0.6
	baz=116						
BC3	Big Chuckawall	44.51	299	P	P	17 15 46.0	+1.4
	baz=97,SNR=5.8						
BOZ	Bozeman (W)	44.56	316	*e*P	P	17 15 45.3	+0.5
	comp=Z,22nm,1.4s						
BOZ	Bozeman (W)	44.56	316	*e*P	P	17 15 45.3	+0.5
BOZ				pmax	pmax		
	comp=Z,23nm,1.4s						
BOZ	Bozeman (W)	44.56	316	P	P	17 15 45.8	+1.0
	baz=112						
SHPR	Sheep Range	44.68	303	*e*P	P	17 15 47.3	+1.4
	comp=Z,27nm,1.5s						
SWSC	Sam W. Stewart	44.73	298	P	P	17 15 48.0	+1.9
	baz=96						
GMRC	Granite Mounta	44.82	300	P	P	17 15 48.9	+1.8
	baz=98,SNR=10						
IKP	In-Ko-Pah, Jac	44.96	297	P	P	17 15 49.1	+1.0
	baz=95						
MCMT	McKenzie Canyo	45.09	315	*e*P	P	17 15 50.1	+0.9
HRY	Holter Researc	45.11	318	*e*P	P	17 15 49.9	+0.8
DLMT	Dillon	45.11	316	*e*P	P	17 15 50.4	+1.2
	comp=Z,31nm,1.4s						
TUQ	Turquoise Moun	45.13	301	P	P	17 15 51.0	+1.6
	baz=98,SNR=6.5						
LRM	Limekiln Ridge	45.18	316	*e*P	P	17 15 50.8	+1.0
MONP2	Monument Peak	45.24	298	P	P	17 15 52.2	+1.7
	baz=95,SNR=11						
XPFO	Pion Flat	45.34	299	*e*P	P	17 15 53.2	+2.0
	comp=Z,59nm,1.8s						
PFO	Pinyon Flats O	45.34	299	*e*P	P	17 15 53.3	+2.1
	comp=Z,55nm,1.8s						
PFO	Pinyon Flats O	45.34	299	*e*P	P	17 15 53.3	+2.1
PFO				pmax	pmax		
	comp=Z,55nm,1.8s						
PFO	Pinyon Flats O	45.34	299	P	P	17 15 52.5	+1.3
	baz=96						
R11A	Troy Canyon, C	45.35	305	*e*P	P	17 15 52.6	+1.4
	comp=Z,17nm,1.5s						
R11A	Troy Canyon, C	45.35	305	P	P	17 15 52.9	+1.7
	baz=101,SNR=8.0						
HEC	Hector,Ludlow	45.38	300	P	P	17 15 53.2	+1.7
	baz=97,SNR=5.4						
ELK	Elko	45.60	309	*e*P	P	17 15 53.4	+0.1
	comp=Z,8.7nm,1.3s						
ELK	Elko	45.60	309	*e*P	P	17 15 53.4	+0.1
ELK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TPNV	Topopah Spring	45.62	303	*e*P	P	17 15 54.9	+1.5
	comp=Z,72nm,1.8s						
TPNV	Topopah Spring	45.62	303	*e*P	P	17 15 54.9	+1.5
TPNV				pmax	pmax		
	comp=Z,72nm,1.8s						
TPNV	Topopah Spring	45.62	303	P	P	17 15 54.7	+1.3
	baz=99						
HLID	Hailey	45.76	313	*e*P	P	17 15 55.4	+1.0
	comp=Z,16nm,1.4s						
HLID	Hailey	45.76	313	P	P	17 15 55.5	+1.0
	baz=107						
GSC	Goldstone, Bar	45.82	301	*e*P	P	17 15 56.7	+1.7
	comp=Z,51nm,1.5s						
GSC	Goldstone, Bar	45.82	301	*e*P	P	17 15 56.7	+1.7
GSC				pmax	pmax		
	comp=Z,51nm,1.5s						
GSC	Goldstone, Bar	45.82	301	P	P	17 15 56.6	+1.7
	baz=97,SNR=8.5						
FRTB	Fartura	45.89	156	*e*P	P	17 16 03.2	+7.8
SJMB	Sao Joao De Ma	45.90	143	*e*P	P	17 16 04.8	+9.2
MURC	Murrieta	45.95	299	P	P	17 15 57.4	+1.4
	baz=96						
CPUP	Villa Florida	46.36	167	*e*P	P	17 16 00.4	+1.4
	comp=Z,13nm,1.1s						
CPUP	Villa Florida	46.36	167	*e*P	P	17 16 00.4	+1.4
CPUP				pmax	pmax		
	comp=Z,13nm,1.1s						
CPUP	Villa Florida	46.36	167	P	P	17 15 59.9	+0.9
	comp=Z,1.8nm,0.8s,baz=0.0,slow=20,SNR=3.3						
CPUP	Villa Florida	46.36	167	*e*P	P	17 16 05.8	+6.8
BFSC	Mount Baldy Ra	46.40	299	P	P	17 16 00.5	+1.0
	baz=96						
MPMC	Manual Prospec	46.47	302	P	P	17 16 01.9	+1.7
	baz=98,SNR=8.2						
MSO	Missoula	46.50	317	P	P	17 16 00.2	+0.1
	baz=111						
LRMC	Laurel Mtn Rad	46.55	301	P	P	17 16 02.3	+1.5
	baz=97,SNR=11						
DAC	Darwin (Calif)	46.59	302	*e*P	P	17 16 02.4	+1.4
	comp=Z,19nm,1.0s						
DAC	Darwin (Calif)	46.59	302	*e*P	P	17 16 02.4	+1.4
DAC				pmax	pmax		
	comp=Z,19nm,1.0s						
EDW2	Edwards Air Fo	46.74	300	P	P	17 16 03.9	+1.8
	baz=96,SNR=14						
RIB01	Linhares ES	46.84	143	*e*P	P	17 16 12.2	+9.4
CIS	Catalina Islan	46.95	298	P	P	17 16 06.3	+2.5
	baz=95						
CWC	Cottonwood Cre	47.00	302	P	P	17 16 07.0	+2.8
	baz=98						
BMN	Battle Mountai	47.01	308	*e*P	P	17 16 05.0	+0.8
	comp=Z,20nm,1.5s						
BMN	Battle Mountai	47.01	308	*e*P	P	17 16 05.0	+0.8
BMN				pmax	pmax		
	comp=Z,21nm,1.5s						
ISA	Isabella, Lake	47.22	301	*e*P	P	17 16 07.5	+1.6
	comp=Z,29nm,1.6s						
ISA	Isabella, Lake	47.22	301	*e*P	P	17 16 07.5	+1.6
ISA				pmax	pmax		
	comp=Z,29nm,1.6s						
ISA	Isabella, Lake	47.22	301	P	P	17 16 07.6	+1.8
	baz=97						
NV11	Mina Array Sit	47.35	305	*e*P	P	17 16 07.7	+0.7
	comp=Z,6.3nm,1.8s						
KVN	Kaiserville	47.41	306	*e*P	P	17 16 08.8	+1.4
	comp=Z,7.1nm,1.1s						
KVN	Kaiserville	47.41	306	*e*P	P	17 16 08.8	+1.4
KVN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NV01	Mina Array Sit	47.46	305	*e*P	P	17 16 08.4	+0.5
NVAR	Mina Array Bea	47.46	305	P	P	17 16 09.2	+1.3
	comp=Z,3.4nm,0.5s,baz=93,slow=6.8,SNR=28						
NVAR				PcP	PcP	17 17 38.6	+0.6
	comp=Z,1.4nm,0.6s,baz=108,slow=5.8,SNR=2.2						
NVAR				LR	LR	17 37 34.4	
	comp=Z,253nm,20.6s,baz=100,slow=38						
RYN	Ryan	47.66	305	*e*P	P	17 16 10.3	+0.9
	comp=Z,45nm,1.8s						
VES	Vestal, Richgr	47.73	301	P	P	17 16 11.8	+2.1
	baz=96,SNR=5.0						
OMMB	Old Mammoth Mi	47.88	304	*e*P	P	17 16 12.5	+1.2
	comp=Z,50nm,1.9s						
LCO	Las Campanas	47.92	183	*e*P	P	17 16 18.1	+6.6
MDPB	Devils Postpil	47.95	304	*e*P	P	17 16 13.3	+1.6
	comp=Z,32nm,1.6s						
SCZ2	Santa Cruz Isl	48.01	299	P	P	17 16 13.1	+1.1
	baz=94						
BMO	Blue Mountains	48.12	314	*e*P	P	17 16 12.2	-0.6
	comp=Z,47nm,2.0s						
BMO	Blue Mountains	48.12	314	*e*P	P	17 16 12.2	-0.6
BMO				pmax	pmax		
	comp=Z,47nm,2.0s						
PKM	Mcpherson Peak	48.23	300	P	P	17 16 14.4	+0.5
	baz=95						
YERR	Yerington	48.27	306	*e*P	P	17 16 14.0	-0.1
	comp=Z,47nm,1.7s						
WAKR	Walker	48.35	305	*e*P	P	17 16 16.4	+1.6
	comp=Z,76nm,2.0s						
WVOR	Wild Horse Val	48.47	310	*e*P	P	17 16 15.5	0.0
	comp=Z,23nm,1.4s						
WVOR	Wild Horse Val	48.47	310	*e*P	P	17 16 15.5	0.0
WVOR				pmax	pmax		
	comp=Z,23nm,1.4s						
J08A	Circle Bar Ran	48.56	311	*e*P	P	17 16 16.2	0.0
	comp=Z,28nm,1.4s						
NEW	Newport	49.01	318	*e*P	P	17 16 19.3	-0.2
	comp=Z,28nm,1.3s						
NEW	Newport	49.01	318	*e*P	P	17 16 19.3	-0.2
NEW				pmax	pmax		
	comp=Z,28nm,1.3s						
NEW	Newport	49.01	318	P	P	17 16 20.0	+0.5
	baz=109						
SFJD	Kangerlussuaq	49.15	9	*e*P	P	17 16 20.0	-0.1
	comp=Z,24nm,1.1s						
SFJD	Kangerlussuaq	49.15	9	*i* P	P	17 16 19.8	-0.4
	comp=Z,11nm,0.5s						
SFJD	Kangerlussuaq	49.15	9	*e*P	P	17 16 20.0	-0.1
SFJD				pmax	pmax		
	comp=Z,24nm,1.1s						
SFJD	Kangerlussuaq	49.15	9	P	P	17 16 20.7	+0.5
	comp=Z,12nm,0.7s,baz=218,slow=5.1,SNR=12						
I07A	Izee	49.45	312	*e*P	P	17 16 23.5	+0.5
	comp=Z,38nm,1.8s						
ORV	Oroville	50.09	306	*e*P	P	17 16 28.5	+0.7
	comp=Z,6.9nm,0.7s						
ORV	Oroville	50.09	306	*e*P	P	17 16 28.5	+0.7
ORV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
M04C	Macdoel	50.68	309	P	P	17 16 30.9	-1.5
	baz=100						
I05D	Terrebonne, OR	50.80	312	P	P	17 16 33.6	+0.4
	baz=102						
L04D	Klamath Falls	51.10	309	P	P	17 16 35.8	+0.3
	baz=100						
M02C	Callahan	51.38	308	P	P	17 16 36.1	-1.5
	baz=98						
H04D	Lebanon	51.81	312	P	P	17 16 40.1	-0.6
	baz=101						
K02D	Willamette Mer	52.17	310	P	P	17 16 43.4	0.0
	baz=99						
YKA	Yellowknife Ar	53.83	335	P	P	17 16 55.0	-0.3
YKA	Yellowknife Ar	53.83	335	P	P	17 16 54.9	-0.3
	comp=Z,6.6nm,0.9s,baz=114,slow=7.3,SNR=36						
YKA				LR	LR	17 41 32.1	
	comp=Z,19nm,18.5s,baz=119,slow=38						
YKB5	Yellowknife Ar	53.83	335	*e*P	P	17 16 54.8	-0.5
YKW3	Yellowknife Ar	53.87	335	*e*P	P	17 16 54.6	-0.9
	comp=Z,7.8nm,1.0s						
PCAS	Casmilo, Conde	54.77	54	*e*P	P	17 17 03.5	+1.0
	comp=Z,43nm,0.9s						
PTOM	Tomar	54.81	55	*e*P	P	17 17 03.5	+0.7
	comp=Z,28nm,1.5s						
MESJ	Messejana	54.87	57	*e*P	P	17 17 04.6	+1.4
PGAV	Gavieira, Arco	55.10	52	*e*P	P	17 17 06.2	+1.2
PBEJ	Beja	55.15	57	*e*P	P	17 17 06.9	+1.6
POLO	Lamas de Olo	55.40	53	*e*P	P	17 17 07.8	+0.6
	comp=Z,16nm,1.9s						
PESTR	Estremoz	55.40	56	*e*P	P	17 17 09.1	+2.0
	comp=Z,27nm,2.4s						
PVRL	Vila Real	55.45	53	*e*P	P	17 17 09.2	+1.7
	comp=Z,41nm,1.4s						
MTE	Manteigas	55.52	54	*e*P	P	17 17 08.7	+0.7
	comp=Z,34nm,0.8s						
PCBR	Castelo Branco	55.54	54	*e*P	P	17 17 08.8	+0.7
	comp=Z,29nm,1.6s						
PMRV	Marv??o	55.59	55	*e*P	P	17 17 08.8	+0.4
	comp=Z,29nm,2.0s						
MVO	Moncorvo	55.96	53	*e*P	P	17 17 12.0	+0.8
	comp=Z,36nm,2.0s						
SUMG	Summit	56.06	10	*e*P	P	17 17 12.1	+0.4
	comp=Z,59nm,1.1s						
SUMG	Summit	56.06	10	*i* P	P	17 17 12.3	+0.6
	comp=Z,64nm,0.7s						
SUMG	Summit	56.06	10	*i* P	P	17 17 12.3	+0.6
SUMG				pmax	pmax		
	comp=Z,64nm,0.7s						
TULEG	Thule	57.45	360	*e*P	P	17 17 21.0	0.0
	comp=Z,33nm,1.4s						
RES	Resolute Bay	57.45	352	*e*P	P	17 17 22.1	+1.1
	comp=Z,19nm,1.8s						
RES	Resolute Bay	57.45	352	*e*P	P	17 17 22.1	+1.1
RES				pmax	pmax		
	comp=Z,19nm,1.8s						
MDT	Midelt	57.86	63	P	P	17 17 25.9	+1.1
	comp=Z,9.0nm,0.9s,baz=290,slow=9.0,SNR=10						
PAB	San Pablo	57.94	55	*e*P	P	17 17 26.0	+0.8
	comp=Z,25nm,1.3s						
PAB	San Pablo	57.94	55	*e*P	P	17 17 26.0	+0.8
PAB				pmax	pmax		
	comp=Z,25nm,1.3s						
ESDC	Sonseca Array	58.24	55	P	P	17 17 28.2	+0.9
	comp=Z,14nm,0.8s,baz=272,slow=7.0,SNR=54						
ESDC				LR	LR	17 40 16.5	
	comp=Z,160nm,19.1s,baz=330,slow=34						
ESLA	Sonseca Array	58.24	55	*e*P	P	17 17 27.7	+0.4
	comp=Z,22nm,0.9s						
ES19	SONSECA Array	58.29	55	*e*P	P	17 17 27.8	+0.2
PLCA	Paso Flores	59.59	182	P	P	17 17 33.7	-2.8
	comp=Z,1.3nm,0.5s,baz=12,slow=8.4,SNR=6.9						
ESK	Eskdalemuir	60.19	37	*i* P	P	17 17 41.6	+1.2
MFF	Saint Martin d	61.22	47	*e*P	P	17 17 47.7	+0.1
MFF				pmax	pmax		
	comp=Z,41nm,1.1s						
LFF	La Frestale	61.80	49	*e*P	P	17 17 51.5	-0.1
LFF				pmax	pmax		
	comp=Z,16nm,0.9s						
TIC	Toumodi	62.36	92	*e*P	P	17 17 56.6	+0.8
LIC	Lamto	62.49	93	*e*P	P	17 17 56.1	-0.5
	comp=Z,37nm,0.8s						
DBIC	Dimbokro	62.51	92	*e*P	P	17 17 56.5	-0.2
	comp=Z,31nm,1.3s						
DBIC	Dimbokro	62.51	92	*e*P	P	17 17 56.6	-0.2
DBIC				pmax	pmax		
	comp=Z,31nm,1.3s						
DBIC	Dimbokro	62.51	92	P	P	17 17 56.4	-0.4
	comp=Z,9.9nm,0.7s,baz=277,slow=6.3,SNR=21						
DBIC				LR	LR	17 40 24.2	
	comp=Z,389nm,21.7s,baz=260,slow=32						
DAG	Danmarks Havn	62.70	11	*i* P	P	17 17 57.1	+0.1
	comp=Z,12nm,0.8s						
DAG	Danmarks Havn	62.70	11	*i* P	P	17 17 57.1	+0.1
DAG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KIC	Kosan Boka	62.72	93	*e*P	P	17 17 57.8	-0.4
	comp=Z,29nm,0.7s						
CAF	Calviac	62.74	49	*e*P	P	17 17 57.7	-0.2
CAF				pmax	pmax		
	comp=Z,30nm,1.3s						
CLF	Chambon-Foret	62.90	45	*e*P	P	17 17 59.8	+0.9
	comp=Z,63nm,1.0s						
INK	Inuvik	63.38	338	*e*P	P	17 18 01.8	+0.2
	comp=Z,26nm,1.4s						
INK	Inuvik	63.38	338	*e*P	P	17 18 01.8	+0.2
INK				pmax	pmax		
	comp=Z,27nm,1.4s						
INK	Inuvik	63.38	338	P	P	17 18 01.5	-0.2
	comp=Z,5.9nm,0.9s,baz=95,slow=7.7,SNR=17						
INK				LR	LR	17 43 04.4	
	comp=Z,102nm,19.8s,baz=108,slow=34						
SSF	Saint Saulge	63.74	46	*e*P	P	17 18 03.8	-0.6
SSF				pmax	pmax		
	comp=Z,20nm,1.0s						
UCC	Uccle	64.32	42	⇑P	P	17 18 08.7	+0.5
DOU	Dourbes	64.46	43	⇑P	P	17 18 09.6	+0.5
DAWY	Dawson	64.83	333	*e*P	P	17 18 12.0	+0.6
	comp=Z,20nm,1.4s						
BEBN	Eben Emael	65.16	42	⇓P	P	17 18 14.2	+0.6
MEM	Membach	65.37	42	⇑P	P	17 18 15.8	+0.8
WLF	Walferdange	65.47	43	⇑P	P	17 18 16.3	+0.6
	comp=Z,10nm,0.9s						
WLF				⇓pP	pP	17 18 21.3	-0.5
WLF				⇑sP	sP	17 18 24.6	+0.6
EGAK	Eagle	65.69	333	*e*P	P	17 18 18.1	+1.2
	comp=Z,35nm,1.4s						
LPL	La Plagne	66.02	48	*e*P	P	17 18 19.7	+0.1
LPL				pmax	pmax		
	comp=Z,20nm,1.1s						
ECH	Echery	66.18	45	*e*P	P	17 18 20.1	-0.2
	comp=Z,21nm,1.1s						
ECH	Echery	66.18	45	*e*P	P	17 18 20.1	-0.2
ECH				pmax	pmax		
	comp=Z,21nm,1.1s						
SENIN	Lac Senin/Sane	66.37	47	*e*P	P	17 18 22.7	+0.9
	comp=Z,21nm,1.1s						
DOT	Dot Lake	66.85	332	*e*P	P	17 18 25.9	+1.6
	comp=Z,56nm,1.8s						
TOA1	Torodi Ar. Sit	66.86	84	*e*P	P	17 18 24.8	-0.4
TOA0	Torodi Ar. Sit	66.86	84	*e*P	P	17 18 22.9	-2.3
TORD	Torodi Ar. Bea	66.86	84	P	P	17 18 24.8	-0.5
	comp=Z,12nm,0.9s,baz=296,slow=6.9,SNR=45						
TORD				LR	LR	17 43 35.6	
	comp=Z,448nm,21.7s,baz=310,slow=32						
DAVA	Damuels	68.07	46	*e*P	P	17 18 33.6	+1.0
	comp=Z,13nm,1.0s						
TAM	Tamanrasset	68.12	73	*e*P	P	17 18 34.1	+0.8
	comp=Z,16nm,1.2s						
IL1	Eielson Array	68.13	333	*e*P	P	17 18 32.3	-0.1
ILAR	Eielson Array	68.13	333	P	P	17 18 32.3	-0.1
	comp=Z,1.5nm,0.5s,baz=96,slow=5.0,SNR=34						
ILB	Eielson Array	68.13	333	*e*P	P	17 18 32.0	-0.4
HDA	Harding Lake	68.15	333	P	P	17 18 30.8	-1.7
	baz=91						
NB2	NORSAR Subarra	68.26	31	P	P	17 18 33.4	+0.1
	comp=Z,1.5nm,0.7s,baz=269,slow=6.5						
NB200	NORSAR Array S	68.26	31	*e*P	P	17 18 34.2	+0.9
NOA	NORSAR Array B	68.26	31	P	P	17 18 34.2	+0.9
	comp=Z,3.3nm,0.9s,baz=270,slow=6.3,SNR=8.8						
NOA				LR	LR	17 45 03.8	
	comp=Z,52nm,20.3s,baz=265,slow=33						
POKR	Poker Plat Res	68.37	333	P	P	17 18 31.5	-2.4
	baz=91						
FUORN	Ofenpass-Fuorn	68.39	47	*e*P	P	17 18 34.9	+0.3
	comp=Z,25nm,1.1s						
COLA	College	68.55	333	⇑*e*P	P	17 18 36.9	+2.0
COLA				pmax	pmax		
	comp=Z,16nm,1.6s						
RETA	Reutte	68.65	46	*e*P	P	17 18 36.8	+0.8
	comp=Z,6.5nm,0.8s,SNR=8.0						
FETA	Feichten	68.67	46	*e*P	P	17 18 37.4	+1.1
	comp=Z,19nm,0.9s						
FETA				*e*P	P	17 18 37.5	+1.2
	SNR=5.6						
MDM	Murphy Dome	68.71	333	*e*P	P	17 18 37.2	+1.2
	comp=Z,20nm,1.3s						
MOTA	Moosalm	68.89	46	*e*P	P	17 18 38.2	+0.6
	comp=Z,15nm,1.2s						
SQTA	Sankt Quirin	68.98	46	*e*P	P	17 18 38.6	+0.4
	comp=Z,18nm,1.3s,SNR=4.4						
KEST	Kesra	69.05	58	*e*P	P	17 18 38.5	-0.2
	comp=Z,14nm,0.9s						
KEST	Kesra	69.05	58	P	P	17 18 39.3	+0.6
	comp=Z,9.8nm,1.0s,baz=278,slow=4.0,SNR=6.4						
KEST				LR	LR	17 46 47.4	
	comp=Z,179nm,18.4s,baz=228,slow=34						
WTTA	Wattenberg	69.26	46	*e*P	P	17 18 40.8	+0.8
	comp=Z,3.2nm,0.6s						
TOLK	Toolik Lake Re	69.28	337	P	P	17 18 36.0	-3.5
	baz=91						
COLD	Coldfoot	69.51	336	*e*P	P	17 18 43.1	+2.2
	comp=Z,12nm,1.3s						
CLL	Collm	69.75	41	*e*P	P	17 18 42.0	-0.7
CLL				*e*		17 18 59.0	
CLL				Lm	MLR	17 44 00.0	
	comp=Z,300nm,20.5s						
CLL	Collm	69.75	41	*e*P	P	17 18 42.0	-0.7
CLL				*e*		17 18 59.0	
CLL				MLR	MLR		
	comp=Z,300nm,20.5s						
ABTA	Abfaltersbach	69.92	46	*e*P	P	17 18 44.4	+0.4
	comp=Z,10.0nm,1.0s						
SPA0	Spitsbergen Ar	70.26	13	*e*P	P	17 18 46.9	+1.5
	comp=Z,103nm,1.5s						
SPITS	Spitsbergen Ar	70.26	13	P	P	17 18 46.4	+1.0
	comp=Z,5.3nm,0.8s,baz=169,slow=1.7,SNR=4.2						
KHC	Kasperske Hory	70.35	44	*e*P	P	17 18 47.1	+0.6
	comp=Z,6.0nm,1.2s						
KHC	Kasperske Hory	70.35	44	*e*P	P	17 18 47.2	+0.7
KHC				*e*sP	pwP	17 19 00.7	+1.6
KHC	Kasperske Hory	70.35	44	*e*P	P	17 18 47.1	+0.6
KHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRG	Berggiesshubel	70.38	42	*e*P	P	17 18 46.8	+0.2
	comp=Z,32nm,1.6s						
BRG	Berggiesshubel	70.38	42	*e*P	P	17 18 46.8	+0.2
BRG				pmax	pmax		
	comp=Z,32nm,1.6s						
KBA	Koelnbreinsper	70.44	46	*e*P	P	17 18 47.7	+0.4
	comp=Z,9.6nm,1.0s						
GEC2	GERESS Array S	70.46	44	*e*P	P	17 18 47.6	+0.4
	comp=Z,26nm,1.9s						
GEC2	GERESS Array S	70.46	44	*e*P	P	17 18 47.7	+0.4

GEC2				pmax	pmax		
	comp=Z,26nm,1.9s						
GERES	GERESS Array B	70.46	44	P	P	17 18 47.1	-0.1
	comp=Z,1.5nm,0.9s,baz=276,slow=6.4,SNR=11						
GERES				LR	LR	17 46 25.4	
	comp=Z,103nm,19.8s,baz=283,slow=33						
GEA0	GERESS Array S	70.46	44	*e*P	P	17 18 46.8	-0.4
MYKA	Terra Mystica	70.70	46	*e*P	P	17 18 49.0	+0.3
	comp=Z,8.0nm,1.1s						
MOA	Molln	70.96	45	*e*P	P	17 18 50.8	+0.6
	comp=Z,4.9nm,1.0s						
IM3	Indian Mountai	70.98	334	*e*P	P	17 18 49.5	-0.4
OBKA	Obir	71.34	46	*e*P	P	17 18 53.6	+1.0
	comp=Z,11nm,1.1s						
SOKA	Soboth	71.64	46	*e*P	P	17 18 56.4	+1.9
	comp=Z,1.9nm,0.8s						
ARSA	Arzberg	71.89	45	*e*P	P	17 18 56.2	+0.3
	comp=Z,6.8nm,1.0s						
DPC	Dobruska-Polom	71.95	42	*e*P	P	17 18 57.2	+1.0
DPC				*e*sP	pwP	17 19 09.9	+1.0
DPC	Dobruska-Polom	71.95	42	*e*P	P	17 18 57.2	+1.0
DPC				*e*		17 19 09.9	
CONA	Conrad Observa	72.01	45	*e*P	P	17 18 57.0	+0.4
	comp=Z,3.6nm,1.0s						
KRUC	Moravsky	72.19	43	*e*P	P	17 18 58.0	+0.4
VRAC	Vranov	72.28	43	⇑*i*P	P	17 18 59.0	+0.9
VRAC	Vranov	72.28	43	⇑P	P	17 18 59.0	+0.9
VRAC	Vranov	72.28	43	*e*P	P	17 18 58.5	+0.4
ZST	Bratislava	72.79	44	*e*P	P	17 19 00.9	-0.3
ZST	Bratislava	72.79	44	*e*P	P	17 19 00.9	-0.3
MORC	Moravsky Berou	72.82	43	*e*P	P	17 19 01.5	+0.1
	comp=Z,13nm,1.3s						
MORC	Moravsky Berou	72.82	43	⇑*i*P	P	17 19 02.5	+1.1
MORC	Moravsky Berou	72.82	43	*e*P	P	17 19 01.5	+0.1
MORC				pmax	pmax		
	comp=Z,13nm,1.3s						
MORC	Moravsky Berou	72.82	43	*e*P	P	17 19 01.4	+0.1
JAVC	Velka Javorina	73.05	44	*e*P	P	17 19 04.1	+1.3
ARA0	ARCESS Array S	73.48	21	*e*P	P	17 19 05.5	+0.6
ARCES	ARCESS Array B	73.48	21	P	P	17 19 05.5	+0.7
	comp=Z,8.7nm,0.8s,baz=286,slow=4.7,SNR=22						
VYHS	Vyhne	73.88	44	*e*P	P	17 19 08.8	+1.2
VYHS	Vyhne	73.88	44	*e*P	P	17 19 08.8	+1.2
PSZ	Piszkesteto	74.69	44	⇓*i*P	P	17 19 16.7	+4.3
PSZ	Piszkesteto	74.69	44	⇓P	P	17 19 16.7	+4.3
FIA0	FINESS Array S	75.34	30	*e*P	P	17 19 16.5	+0.8
FIA0	FINESS Array S	75.34	30	*e*P	P	17 19 16.5	+0.8
FINES	FINESS Array B	75.34	30	P	P	17 19 16.5	+0.8
	comp=Z,4.2nm,0.9s,baz=277,slow=4.7,SNR=12						
FINES				LR	LR	17 47 52.8	
	comp=Z,134nm,21.8s,baz=272,slow=32						
PDG	Podgorica	75.39	50	⇑*i*P	P	17 19 17.8	+1.4
DIVS	Divibare	75.55	48	*e*P	P	17 19 17.9	+0.5
	comp=Z,12nm,1.3s						
KWP	Kalwaria Pacla	76.14	42	*e*P	P	17 19 22.3	+1.7
	comp=Z,395nm,1.4s						
KWP	Kalwaria Pacla	76.14	42	*e*P	P	17 19 22.3	+1.7
SIRR	Siria	76.22	46	⇑*i*P	P	17 19 22.1	+1.0
TAOE	Nuku Hiva Isla	76.30	255	*e*LR	LR	17 42 54.9	
	comp=Z,386nm,24.3s						
BZS	Buzias	76.34	46	⇓*i*P	P	17 19 23.1	+1.3
BZS	Buzias	76.34	46	⇓P	P	17 19 23.2	+1.4
VSU	Vasula	76.36	33	⇑*i*P	P	17 19 21.8	+0.2
VSU				pmax	pmax		
	comp=Z,53nm,1.7s						
TRPA	Tarpa	76.37	44	⇑*i*P	P	17 19 23.7	+1.8
MDVR	Moldovita	76.60	47	⇑*i*P	P	17 19 24.4	+1.0
DRGR		76.80	45	⇑*i*P	P	17 19 25.7	+1.2
DRGR		76.80	45	⇑P	P	17 19 25.7	+1.2
GZR	Gura Zlata	77.18	46	⇓*i*P	P	17 19 27.7	+1.0
GZR	Gura Zlata	77.18	46	⇓P	P	17 19 27.7	+1.0
FNA	Florina	77.32	51	*e*P	P	17 19 28.0	+0.5
	comp=Z,15nm,0.9s						
FNA	Florina	77.32	51	*e*P	P	17 19 28.0	+0.5
FNA				pmax	pmax		
	comp=Z,15nm,0.9s						
CJR	Cluj-Napoca	77.41	45	⇑*i*P	P	17 19 35.7	+7.8
CJR	Cluj-Napoca	77.41	45	⇑P	P	17 19 35.7	+7.8
VTS	Vitosha	78.20	49	*e*P	P	17 19 33.3	+0.8
	comp=Z,7.9nm,0.7s						
VTS	Vitosha	78.20	49	⇓*i*P	P	17 19 34.3	+1.8
VTS	Vitosha	78.20	49	*e*P	P	17 19 33.3	+0.8
VTS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BUR08	Bucovina Ar. S	78.23	44	*e*P	P	17 19 33.7	+1.2
BUR04	Bucovina Ar. S	78.24	44	*e*P	P	17 19 33.7	+1.1
BURAR	Bucovina Array	78.25	44	⇑*i*P	P	17 19 34.2	+1.6
BURAR	Bucovina Array	78.25	44	⇑P	P	17 19 34.2	+1.6
ARR	Arges	78.45	46	⇑*i*P	P	17 19 34.9	+1.1
VOIR		78.72	46	⇑*i*P	P	17 19 36.2	+1.0
VOIR		78.72	46	⇑P	P	17 19 36.2	+1.0
BIZ	Bicaz	79.01	44	⇓*i*P	P	17 19 38.6	+1.9
MLR	Muntele Rosu	79.31	46	*e*P	P	17 19 39.9	+1.4
	comp=Z,18nm,0.8s						
MLR	Muntele Rosu	79.31	46	⇑*i*P	P	17 19 40.5	+2.0
MLR	Muntele Rosu	79.31	46	*e*P	P	17 19 39.9	+1.4
MLR				pmax	pmax		
	comp=Z,18nm,0.8s						
TESR	Tescani	79.49	44	⇑*i*P	P	17 19 40.8	+1.5
PLOR	Plostina	79.68	45	⇓*i*P	P	17 19 42.5	+2.1
PLOR	Plostina	79.68	45	⇓P	P	17 19 42.5	+2.1
AK11	Malin Array Si	79.86	40	*e*P	P	17 19 41.0	-0.3
KIEV	Kiev	79.88	40	⇓*e*P	P	17 19 40.8	-0.5
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AKASG	Malin Array Be	79.89	40	P	P	17 19 41.2	-0.2
	comp=Z,1.5nm,0.6s,baz=286,slow=4.7,SNR=8.1						
AKASG				LR	LR	17 51 14.1	
	comp=Z,296nm,21.3s,baz=285,slow=33						
AKBB	Malin Array Si	79.89	40	*e*P	P	17 19 40.8	-0.6
	comp=Z,25nm,1.8s						
AKBB	Malin Array Si	79.89	40	*e*P	P	17 19 40.8	-0.6
AKBB				pmax	pmax		
	comp=Z,25nm,1.8s						
KLMR	Klimovskoe	81.69	28	*e*P	P	17 19 50.3	-0.5
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
KLMR	Klimovskoe	81.69	28	*e*P	P	17 19 50.3	-0.5
KLMR				AMP		17 19 59.2	
	comp=Z,12nm,1.2s						
OBN	Obninsk	82.55	34	⇑*i*P	P	17 19 56.4	+1.0
OBN	Obninsk	82.55	34	*e*P	P	17 19 54.9	-0.5
OBN				*e*		17 20 01.8	
OBN				*e*		17 23 06.8	
OBN				*e*PPP	PPP	17 24 57.0	
OBN				pmax	pmax		
	comp=Z,49nm,1.7s						
BILL	Bilibino	84.60	342	*e*P	P	17 20 06.2	+0.5
	comp=Z,11nm,1.2s						
BILL	Bilibino	84.60	342	*e*P	P	17 20 05.8	+0.1
BILL				*e*		17 20 10.7	
BILL				*e*		17 23 20.5	
BILL				*e*PPP	PPP	17 25 14.0	
BILL				pmax	pmax		
	comp=Z,12nm,1.7s						
LPSR	Galich'ya Gora	84.84	36	*e*P	P	17 20 07.3	+0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	85.56	37	*e*P	P	17 20 11.3	+0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BR101	Keskin Array S	86.56	49	*e*P	P	17 20 17.1	+0.8
BRTR	Keskin Array B	86.56	49	P	P	17 20 17.1	+0.8
	comp=Z,1.0nm,0.4s,baz=336,slow=3.2,SNR=7.5						
BRTR				LR	LR	17 54 45.0	
	comp=Z,62nm,21.9s,baz=276,slow=33						
PPT	Papeete	88.01	251	LR	LR	17 52 28.5	
	comp=Z,142nm,20.9s,baz=51,slow=31						
PPT2	Papeete2	88.02	251	*e*S	S	17 31 07.6	+1.4
	comp=Z,78nm,25.8s						
PPT2	Papeete2	88.02	251	*e*LR	LR	17 48 21.6	
	comp=Z,325nm,24.0s						
TBI	Tubuai	89.94	245	*e*LR	LR	17 49 14.9	
	comp=Z,140nm,26.0s						
NRIK	Noril'sk	90.06	8	LR	LR	18 00 46.9	
	comp=Z,76nm,21.7s,baz=14,slow=36						
KBZ	Khabaz	91.17	43	P	P	17 20 38.7	+1.0
	comp=Z,1.0nm,0.8s,baz=291,slow=17,SNR=2.5						
KBZ				LR	LR	17 57 47.0	
	comp=Z,101nm,21.9s,baz=310,slow=33						
NEY	Neytrino	91.28	43	⇓*e*P	P	17 20 40.4	+1.9
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SEY	Seymchan	92.28	343	P	P	17 20 43.4	+0.9
	comp=Z,5.3nm,1.0s,baz=170,slow=1.2,SNR=9.0						
PET	Petropavlovsk	97.61	334	*e*P	Pdif	17 21 09.4	+2.3
PET				pmax	pmax		
	comp=Z,27nm,1.3s						
PETK	Petropavlovsk-	97.94	334	LR	LR	18 07 08.3	
	comp=Z,82nm,20.0s,baz=66,slow=36						
WMQ	Urumqi	113.52	19	*e*PKP	PKiKP	17 26 13.5	+2.4
WMQ				LR	LR		
	comp=Z,160nm,17.5s						
WMQ				LR	LR		
	comp=Z,170nm,20.9s						
WMQ				LR	LR		
	comp=Z,160nm,16.9s						
CN2	Changchun	116.18	349	*e*PKP	PKiKP	17 26 15.0	-1.1
HHC	Hu-ho-hao-te	120.33	0	*e*PKP	PKiKP	17 26 25.8	+1.4
LZH	Lanzhou	124.55	8	*e*PKP	PKPdf	17 26 23.3	-9.3
LZH				sPKP		17 27 01.0	
NJ2	Nanjing	128.69	353	*e*PKP	PKiKP	17 26 44.0	+3.0
DZM	Mont Dzumac	129.16	257	*e*LR	LR	18 07 25.2	
	comp=Z,453nm,23.9s						
CD2	Chengdu	129.63	9	PKP	PKPdf	17 26 40.5	-1.8
GYA	Guiyang	134.40	7	*e*Pdif	Pdif	17 23 51.0	-0.5
GYA				PKP	PKiKP	17 26 53.8	+0.9
GYA				PP	PP	17 29 27.5	+5.7
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
CMAR	Chiang Mai Arr	140.52	20	PKP	PKiKP	17 27 05.0	-0.3
	comp=Z,0.5nm,0.6s,baz=303,slow=3.5,SNR=4.8						
CMAR				SKP		17 30 36.5	
	comp=Z,0.5nm,0.5s,baz=319,slow=4.0,SNR=7.2						
CTA	Charters Tower	147.73	262	*e*PKPdf	PKPbc	17 27 17.0	-1.1
CTA	Charters Tower	147.73	262	*e*PKP2	PKPbc	17 27 17.0	-1.1
CTA	Charters Tower	147.73	262	PKPbc	PKPbc	17 27 17.0	-1.1
	comp=Z,5.1nm,0.6s,baz=128,slow=4.9,SNR=9.5						
STKA	Stephens Creek	150.51	239	*e*PKPdf	PKPdf	17 27 18.9	-0.5
STKA				*e*PKPbc	PKPbc	17 27 23.8	-1.0
STKA	Stephens Creek	150.51	239	*e*PKIKP	PKPdf	17 27 18.9	-0.5
STKA				*e*		17 27 23.8	
STKA	Stephens Creek	150.51	239	PKP	PKPdf	17 27 19.4	-0.1
	comp=Z,5.0nm,0.7s,baz=156,slow=12,SNR=3.6						
STKA				PKPbc	PKPbc	17 27 23.7	-1.2
	comp=Z,5.0nm,0.7s,baz=118,slow=4.3,SNR=7.5						
WB2	Warramunga Arr	158.90	264	*e*PKPdf	PKPdf	17 27 30.4	-0.9
WR1	Warramunga Arr	158.91	264	*e*PKPdf	PKPdf	17 27 30.4	-0.9
WR1				*e*PKPab	PKPab	17 28 05.0	-2.5
WRA	Warramunga Arr	158.91	264	PKP	PKPdf	17 27 30.4	-0.9
	comp=Z,2.5nm,1.0s,baz=62,slow=1.3,SNR=8.8						
WRA				PKPab	PKPab	17 28 05.1	-2.5
	comp=Z,1.3nm,0.8s,baz=88,slow=3.5,SNR=4.8						
AS01	Alice Springs	159.06	254	*e*PKPdf	PKPdf	17 27 29.9	-1.6
AS31	Alice Springs	159.10	254	*e*PKPab	PKPab	17 28 06.9	-1.5
ASAR	Alice Springs	159.10	254	PKP	PKPdf	17 27 30.8	-0.7
	comp=Z,1.4nm,0.9s,baz=100,slow=1.3,SNR=15						
ASAR				PKPab	PKPab	17 28 07.5	-0.9
	comp=Z,2.2nm,0.5s,baz=109,slow=4.4,SNR=24						

MEX 26 17:11:50.6±0.5**, 15°.74N**×**94°.07W, h26**^{km}±14^{km}**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	1.55	330	*e*P	Pn	17 12 14.3	-2.3
CMIG				*e*S	Sn	17 12 32.3	-3.6
THIG		1.93	115	*i* P	Pn	17 12 19.7	-2.1
CCIG	Comitan	1.94	74	*e*P	Pn	17 12 18.5	-3.6
CCIG				*i* S	Sn	17 12 41.4	-4.2
HUIG	Huatulco	1.96	271	*e*P	Pn	17 12 20.0	-2.2

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*IDC **26** 17:15:56.2±1.9, 14°.15N×92°.76W, h0^{km}, mb3.8/3, mb1 4.0/6, mb1mx3.6/44, mbtmp3.6/6, ML3.1/3, MS3.8/1, Ms1 3.8/1, ms1mx2.9/38, Error ellipse: s-maj=33.9km s-min=15.9km az=9.0*

*NEIC **26** 17:15:57.4±0.0, 14°.10N×93°.12W, h9^{km}, MD4.1(MEX), After MEX.*

*MEX **26** 17:15:57.4±0.6, 14°.10N×93°.12W, h9^{km}±999^{km}, MD4.1*

ISC 26 17:16:01.0±1.2**, 14°.1N**±0°.1×**92°.90W**±0°.07**, h37**^{km}**, n20,** σ**2**^{s}**.19**/19**, mb4.0**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.02	37	*e*Pg	Pn	17 16 15.6	-3.2
THIG		1.02	37	*e*P	Pn	17 16 15.6	-3.2
CCIG	Comitan	2.30	18	*e*Pn	Pn	17 16 34.3	-2.3
CCIG	Comitan	2.30	18	*e*P	Pn	17 16 36.3	-0.3
APG	El Apazote	2.53	69	Pn	Pn	17 16 37.4	-2.3
	3.7nm,0.3s,baz=249,slow=9.8,SNR=24						
APG				Lg	Lg	17 17 12.2	
	baz=342,slow=14						
HUIG	Huatulco	3.53	299	*e*Pn	Pn	17 16 50.1	-3.2
HUIG	Huatulco	3.53	299	*e*P	Pn	17 16 50.1	-3.2
CMIG	Matias Romero	3.55	328	*e*Pn	Pn	17 16 52.1	-1.4
CMIG				*e*Lg	Lg	17 17 48.4	
CMIG	Matias Romero	3.55	328	*e*P	Pn	17 16 52.1	-1.4
CMIG	Matias Romero	3.55	328	Pn	Pn	17 16 52.8	-0.8
	1.2nm,0.3s,baz=150,slow=14,SNR=8.9						
CMIG				Sn	Sn	17 17 35.1	+0.8
	2.7nm,0.3s,baz=108,slow=13,SNR=5.9						
CMIG				Lg	Lg	17 17 48.4	
	5.6nm,0.3s,baz=95,slow=10,SNR=4.2						
TEIG	Tepich	7.54	35	*e*Pn	Pn	17 17 45.5	-2.8
JTS	JuntasAbangare	8.63	115	*e*Pn	Pn	17 18 05.4	+1.9
JTS				Lg	Lg	17 20 18.9	
JTS	JuntasAbangare	8.63	115	Lg	Lg	17 20 18.9	
	0.4nm,0.3s,baz=93,slow=22,SNR=4.1						
TXAR	Lajitas Array	18.16	328	P	P	17 20 11.7	+1.3
	0.0nm,0.3s,baz=134,slow=13,SNR=3.2						
TX31	Lajitas Ar. Si	18.16	328	*e*Pn	P	17 20 11.6	+1.2
PFO	Pinyon Flats O	28.90	316	LR	LR	17 32 41.6	
	comp=Z,198nm,20.5s,baz=108,slow=35						
NVAR	Mina Array Bea	33.06	322	P	P	17 22 35.8	+2.4
	0.4nm,0.5s,baz=140,slow=7.1,SNR=3.4						
YKA	Yellowknife Ar	50.74	347	P	P	17 24 56.9	-0.1
	2.0nm,0.8s,baz=149,slow=7.4,SNR=25						
ILAR	Eielson Array	62.42	337	P	P	17 26 20.0	+0.1
	1.2nm,1.1s,baz=132,slow=5.4,SNR=5.4						
CMAR	Chiang Mai Arr	145.62	340	PKPbc	PKPdf	17 35 35.8	-0.6
	1.4nm,0.9s,baz=335,slow=4.1,SNR=11						

MAN 26 17:17:37.6, 16°.93N×**120°.57E, h91**^{km}**, mb4.3, ML3.1, MS2.8, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPP	San Manuel, Pa	0.79	172	*e*P	Pn	17 17 55.5	+0.4
SMPP				*e*S	Sn	17 18 09.7	+1.5
BOLP	Bolinao	0.83	229	*e*P	Pn	17 17 56.2	+0.7
BOLP				*e*S	Sn	17 18 11.7	+2.8
APYP	Conner	1.13	35	*e*P	Pn	17 17 59.0	+0.1
APYP				*e*S	Sn	17 18 16.0	+1.2
CAUP	Cauayan	1.20	89	*e*P	Pn	17 18 01.4	+1.7
BALP	Baler	1.53	141	*e*P	Pn	17 18 04.8	+1.0
PALP	Palanan	1.78	86	*e*P	Pn	17 18 07.9	+0.9
PALP				*e*S	Sn	17 18 33.2	+3.8
SGCP	Mt. Cagua	1.92	47	*e*P	Pn	17 18 08.7	-0.1
SGCP				*e*S	Sn	17 18 27.0	-5.6

IDC 26 17:17:44.6±3.2**, 32°.29S**×**178°.22W, h0**^{km}**, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.6**/45**, mbtmp3.7**/3**, ML3.2**/1**, Error ellipse: s-maj=71.0km s-min=36.7km az=113.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.07	211	Pn	Pn	17 19 29.3	0.0
	0.4nm,0.3s,baz=294,slow=5.6,SNR=5.3						
URZ				Sn	Sn	17 20 50.3	-0.1
	3.5nm,0.3s,baz=90,slow=19,SNR=20						
ASAR	Alice Springs	42.86	269	P	P	17 25 44.9	+0.1
	0.4nm,0.5s,baz=110,slow=8.0,SNR=11						
WRA	Warramunga Arr	44.02	274	P	P	17 25 54.0	-0.2
	0.8nm,0.3s,baz=112,slow=8.0,SNR=40						
FINES	FINESS Array B	146.85	339	PKPbc	PKPbc	17 37 27.2	-0.9
	0.6nm,0.5s,baz=48,slow=6.2,SNR=4.7						

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*ISCJB **26** 17:27:05.2±0.9, 16°.88S±0°.05×71°.36W±0°.08, h83^{km}, mb3.7/2, Error ellipse: s-maj=11.4km s-min=6.8km az=171.5*

*GUC **26** 17:27:06.5±0.5, 16°.88S×70°.91W, h137^{km}±8^{km}, ML3.7*

*IDC **26** 17:27:07.2±3.3, 16°.95S×71°.18W, h107^{km}±35^{km}, mb3.7/2, mb1 3.7/5, mb1mx3.4/29, mbtmp4.0/5, MS3.7/2, Ms1 3.7/2, ms1mx3.0/31, Error ellipse: s-maj=36.6km s-min=15.9km az=105.0*

ISC 26 17:27:05.1±1.1**, 16°.89S**±0°.06×**71°.4W**±0°.1**, h83**^{km}**, n16,** σ**1**^{s}**.79**/23**, 2C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	IPOC Station P	2.00	149	⇑*i*P	Pn	17 27 39.3	+2.1
PB12				*i* S	Sn	17 28 04.0	+2.4
PB12				IAML		17 28 11.4	
	comp=E,519nm,0.2s						
MNMC	Minye Minye	2.81	143	*e*P	Pn	17 27 49.8	+1.5
MNMC				*i* S	Sn	17 28 20.9	-0.6
MNMC				IAML		17 28 46.2	
	comp=E,454nm,0.3s						
PSGC	Pisagua	2.95	156	⇑*i*P	Pn	17 27 51.5	+1.5
PSGC				*i* S	Sn	17 28 25.7	+1.1
PSGC				IAML		17 28 28.0	
	comp=E,158nm,0.4s						
LPAZ	La Paz	3.19	80	P	Pn	17 27 55.4	+1.7
	comp=E,13nm,0.3s,baz=260,slow=10.0,SNR=262						
LPAZ				S	Sn	17 28 30.0	-1.1
	comp=E,1.6nm,0.3s,baz=341,slow=20,SNR=6.2						
PB11	IPOC Station P	3.30	150	*e*P	Pn	17 27 55.6	+0.9
PB11				*i* S	Sn	17 28 33.2	+0.2
PB11				IAML		17 28 58.8	
	comp=E,187nm,0.4s						
PB08	IPOC Station P	3.87	147	*e*P	Pn	17 28 04.2	+1.5
PB08				*i* S	Sn	17 28 46.6	-0.7
PB01	IPOC Station P	4.51	157	*e*P	Pn	17 28 12.1	+1.0
PB01				*i* S	Sn	17 28 58.9	-3.5
PB02	IPOC Station P	4.63	162	*e*P	Pn	17 28 14.2	+1.4
PB02				*i* S	Sn	17 29 01.8	-3.6
LVC	Limon Verde	6.16	158	P	Pn	17 28 35.3	+1.5
	comp=E,2.0nm,0.3s,baz=339,slow=10,SNR=16						
LVC				S	Sn	17 29 41.3	-1.7
	comp=E,9.0nm,0.3s,baz=191,slow=21,SNR=16						
SIV	San Ignacio	9.95	86	P	Pn	17 29 23.2	-2.1
	comp=E,0.8nm,0.3s,baz=280,slow=10,SNR=13						
ROSC	El Rosal	21.78	352	P	P	17 31 51.6	+0.9
	comp=E,5.8nm,0.3s,baz=82,slow=19,SNR=11						
SDV	Santo Domingo	25.62	2	LR	LR	17 42 53.9	
	comp=E,168nm,21.1s,baz=118,slow=37						
ELK	Elko	70.31	326	LR	LR	18 07 58.8	
	comp=E,60nm,18.3s,baz=282,slow=35						
YKA	Yellowknife Ar	86.08	341	P	P	17 39 35.4	-0.9
	comp=E,0.1nm,0.4s,baz=120,slow=4.4,SNR=4.9						
WRA	Warramunga Arr	135.51	216	PKP	PKPdf	17 46 16.8	+0.3
	comp=E,0.4nm,1.1s,baz=142,slow=1.8,SNR=5.1						
SONM	Songino Array	149.09	3	PKPbc	PKPbc	17 46 43.4	-0.6
	comp=E,0.5nm,0.5s,baz=344,slow=1.4,SNR=7.0						

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*NIED **26** 17:31:00, 40°.00N×142°.40E, h41^{km}, Mw4.1   Best double couple: M$_0$1.67000×10^{15} NP1:φ$_s$185.00000°, δ20.00000°, λ67.00000°.   NP2:φ$_s$29.00000°, δ72.00000°, λ98.00000°.*

*BJI **26** 17:31:16.3, 39°.74N×142°.74E, h57^{km}, mB4.9/9, mb4.4/32, Ms3.9/4, Ms7 3.6/4*

*ISCJB **26** 17:31:17.2±0.4, 39°.98N±0°.03×142°.46E±0°.04, h47^{km}±3^{km}, mb4.6/66, MS3.6/2, Error ellipse: s-maj=5.8km s-min=4.0km az=31.8*

*JMA **26** 17:31:17.7±0.1, 39°.97N×142°.43E, h38^{km}±1^{km}, M4.1*

JMA Felt I J1.

*MOS **26** 17:31:17.6±1.0, 40°.04N×142°.39E, h49^{km}, mb4.5/23, Error ellipse: s-maj=8.9km s-min=5.7km az=87.6*

*NEIC **26** 17:31:20.4±0.6, 40°.01N×142°.37E, h62^{km}±5^{km}, mb4.7/38, Error ellipse: s-maj=6.0km s-min=4.2km az=128.0*

NEIC Recorded [1 JMA] in Iwate.

*IDC **26** 17:31:20.4±2.4, 39°.95N×142°.39E, h61^{km}±21^{km}, mb3.7/17, mb1 3.9/20, mb1mx3.8/44, mbtmp4.0/20, ML3.1/3, MS3.1/6, Ms1 3.1/6, ms1mx2.8/45, Error ellipse: s-maj=19.7km s-min=13.9km az=121.0*

ISC 26 17:31:16.7±0.9**, 40°.01N**±0°.03×**142°.49E**±0°.04**, h28**^{km}±6^{km}**, n179,** σ**1**^{s}**.48**/188**, mb4.6**/72**, 16C-11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.48	261	P	Pn	17 31 27.5	-0.2
JTH				S	Sn	17 31 34.4	-0.8
JKEN	Kujiedanarisaw	0.62	288	P	Pn	17 31 29.4	-0.3
JKEN				*e*S	Sb	17 31 37.7	+0.2
MIYJ	Miyakonagasawa	0.67	230	P	Pb	17 31 29.7	-0.2
MIYJ				S	Sb	17 31 38.1	-0.8
JANG	Nango	0.82	296	P	Pb	17 31 32.3	-0.1
JKZ	Kuzumaki	0.89	268	P	Pb	17 31 33.7	+0.2
JKZ				*e*S	Sb	17 31 44.6	-0.4
JOM	Ohasama	1.07	240	P	Pn	17 31 35.5	-0.2
JOM				S	Sn	17 31 48.7	-0.9
OFUJ	Ofunato	1.13	214	P	Pn	17 31 36.3	-0.3
OFUJ				*e*S	Sn	17 31 50.6	-0.5
JTM	Tenmabayashi	1.33	306	P	Pb	17 31 40.2	-0.7
JTM				*e*S	Sb	17 31 57.1	-0.5
JAH	Hinai	1.43	278	P	Pb	17 31 41.6	-1.0
JAH				*e*S	Sb	17 31 59.7	-0.7
JMK	Ichinoseki	1.44	223	P	Pn	17 31 41.0	+0.1
JRG	Rokugo	1.56	247	P	Pb	17 31 43.6	-1.2
ERM	Erimo	2.06	14	*e*Pn	Pb	17 31 51.8	-1.7
ERM	Erimo	2.06	14	*ce*P	Pb	17 31 52.1	-1.3
ASAJ	Asahikawa	4.10	1	P	Pn	17 32 20.0	+2.6
	1.9nm,0.3s,baz=209,slow=16,SNR=22						
ASAJ				S	Sb	17 33 18.6	+1.4
	3.3nm,0.3s,baz=70,slow=32,SNR=6.4						
YUK	Yuzh-Kuril'sk	4.74	31	*c i*P	Pn	17 32 27.6	+1.4
YUK				*i* S	Sn	17 33 17.2	-3.0
YUK				pmax	pmax		
	comp=Z,140nm,0.1s						
YUK				smax	smax		
	comp=N,918nm,0.5s						
YUK				smax	smax		
	comp=E,583nm,0.5s						
MAJO	Matsushiro	4.83	226	*e*Pn	Pn	17 32 29.9	+2.4
MAJO	Matsushiro	4.83	226	*d i*P	Pn	17 32 30.6	+3.1
MAT	Matsushiro	4.83	226	P	Pn	17 32 30.3	+2.8
MAT				*e*S	Sn	17 33 24.8	+2.3
MJAR	Matsushiro Arr	4.83	225	P	Pn	17 32 30.5	+3.0
	comp=E,0.5nm,0.3s,baz=32,slow=12,SNR=59						
MJAR				S	Sb	17 33 31.9	-6.4
	comp=E,0.1nm,0.3s,baz=27,slow=14,SNR=4.2						
MJAR				LR	LR	17 34 35.6	
	comp=E,161nm,20.7s,baz=45,slow=41						
MJB9	Matsu-Tunnel	4.83	226	*e*Pn	Pn	17 32 29.8	+2.3
SHO	Shikotan	5.03	39	*d i*P	Pn	17 32 30.6	+0.3
SHO				*i* S	Sn	17 33 22.5	-5.0
SHO				pmax	pmax		
	comp=N,8.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,22nm,0.4s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.2s						
SHO				smax	smax		
	comp=E,350μm,0.3s						
SHO				smax	smax		
	comp=N,166nm,0.3s						
INU	Inuyama	6.36	225	*e*Pn	Pn	17 32 51.5	+3.0
KUR	Kuril'sk	6.55	35	*e*P	Pn	17 32 53.0	+1.9
KUR				*e*S	Sn	17 34 03.8	-1.1
KUR				pmax	pmax		
	comp=Z,38nm,0.4s						
KUR				pmax	pmax		
	comp=N,20nm,0.3s						
KUR				pmax	pmax		
	comp=E,28nm,0.3s						
KUR				smax	smax		
	comp=E,90nm,0.4s						
KUR				smax	smax		
	comp=N,20nm,0.3s						
YSS	Yuzh-Sakhalins	6.94	2	*e*Pn	Pn	17 32 57.7	+1.3
YSS	Yuzh-Sakhalins	6.94	2	⇑*e*P	Pn	17 32 58.6	+2.2
YSS				*e*S	Sn	17 34 12.4	-2.0
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,100nm,17.0s						
USA0B	Ussuriysk Arra	8.85	302	*e*Pn	Pn	17 33 26.1	+3.5
USRK	Ussuriysk Ar.	8.85	302	P	Pn	17 33 26.0	+3.3
	comp=Z,0.9nm,0.3s,baz=105,slow=15,SNR=14						
USRK				LR	LR	17 36 42.9	
	comp=Z,158nm,19.8s,baz=108,slow=37						
MDJ	Mudanjiang	10.60	300	*e*Pn	Pn	17 33 50.1	+3.5

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KSRS  Korea Array        11.66 262   P      Pn      17 34 07.0 +5.9
KSRS                                 MLR    MLR
      comp=Z,93nm,19.1s
KSRS  Korea Array        11.66 262   P      Pn      17 34 07.0 +5.9
      comp=Z,0.4nm,0.3s,baz=73,slow=14,SNR=5.1
KSRS                                 LR     LR      17 38 06.7
      comp=Z,93nm,19.1s,baz=90,slow=35
KS01  Wonju Array Si     11.67 262  ePn     Pn      17 34 02.2 +0.9
KLR   Kul'dur            11.96 324   LR     LR      17 38 25.2
      comp=Z,118nm,20.2s,baz=138,slow=36
JCJ   Chichijima         12.89 181   LR     LR      17 40 15.4
      comp=Z,20nm,19.5s,baz=333,slow=42
CN2   Changchun          13.24 292  eP      Pn      17 34 27.0 +4.3
BJT   Baijiatuau         20.14 279  eP      P       17 35 48.0 -0.4
      comp=Z,5.0nm,0.6s
BJT   Baijiatuau         20.14 279  eP      P       17 35 48.0 -0.4
BJT                                  pmax   pmax
      comp=Z,5.0nm,0.6s
MA2   Magadan            20.27  12  eP      P       17 35 50.7 +1.0
      comp=Z,6.1nm,1.1s
MA2   Magadan            20.27  12⇓eP      P       17 35 50.1 +0.4
MA2                                  pmax   pmax
      comp=Z,13nm,2.0s
MA2   Magadan            20.27  12   P      P       17 35 50.7 +1.0
      comp=Z,3.3nm,0.6s,baz=189,slow=8.1,SNR=6.9
NJ2   Nanjing            20.66 255  eP      P       17 35 54.8 +0.7
NJ2                                  pmax   pmax
      comp=Z,9.0nm,0.5s
YOJ   Yonaguni jima      22.55 232  eP      P       17 36 14.5  0.0
      comp=Z,219nm,1.6s
YOJ   Yonaguni jima      22.55 232  eP      P       17 36 14.5  0.0
YOJ                                  pmax   pmax
      comp=Z,219nm,1.6s
YAK   Yakutsk            23.38 345  eP      P       17 36 20.8 -1.9
YAK                                 e*PP    pP      17 36 28.0 -2.3
YAK                                 eS      S       17 40 30.0 -3.7
YAK                                  pmax   pmax
      comp=Z,40nm,0.9s
YAK                                  pmax   pmax
      comp=N,22nm,1.0s
YAK                                  pmax   pmax
      comp=E,8.0nm,0.9s
YAK                                  smax   smax
      comp=N,553nm,4.7s
YAK                                  smax   smax
      comp=E,486nm,4.4s
HHC   Hu-ho-hao-te       23.50 282  eP      P       17 36 23.0 -1.2
HHC                                  pmax   pmax
      comp=E,9.0nm,0.8s
HHC                                  pmax   pmax
      comp=E,79nm,6.9s
SEY   Seymchan           23.71  11   P      P       17 36 26.3 +0.4
      comp=E,4.0nm,0.9s,baz=198,slow=5.6,SNR=15
SSLB  Suanglung          24.31 235  eP      P       17 36 30.6 -1.3
      comp=E,7.5nm,1.1s
TPUB  Ta-pu              24.87 234  eP      P       17 36 37.1 +0.1
      comp=E,48nm,1.5s
TWG   Pinlang            24.95 233  eP      P       17 36 38.2 +0.5
      comp=E,327nm,2.0s
BOD   Bodaibo            25.54 324  eP      P       17 36 41.7 -1.0
BOD                                  pmax   pmax
      comp=Z,6.0nm,0.9s
ULN   Ulaanbaatar        26.51 299  eP      P       17 36 51.5 -0.2
      comp=Z,6.7nm,1.6s
ULN   Ulaanbaatar        26.51 299  eP      P       17 36 51.6 -0.2
ULN                                  pmax   pmax
      comp=Z,7.0nm,1.6s
SONA1 Songino Array      26.95 299  eP      P       17 36 54.1 -1.6
SONM  Songino Array      26.95 299   P      P       17 36 55.5 -0.2
      comp=Z,1.0nm,0.6s,baz=104,slow=8.8,SNR=8.9
SONM                                 LR     LR      17 48 08.4
      comp=Z,87nm,18.4s,baz=146,slow=38
XAN   Xi'an              27.34 268  eP      P       17 36 58.0 -1.3
      comp=Z,7.4nm,1.3s
XAN   Xi'an              27.34 268  eP      P       17 36 58.0 -1.3
XAN                                  pmax   pmax
      comp=Z,7.0nm,1.3s
ENH   Enshi              28.54 260  eP      P       17 37 08.9 -1.1
      comp=Z,25nm,1.8s
H11N2 WAKE ISLAND Hy 29.11 127   T      T       18 07 52.4
      baz=319,slow=75,SNR=145
H11N1 WAKE ISLAND Hy 29.11 127   T      T       18 07 55.5
      baz=319,slow=75,SNR=180
H11N3 WAKE ISLAND Hy 29.12 127   T      T       18 07 57.2
      baz=319,slow=75,SNR=144
WAKE  Wake Island        29.30 128  eP      P       17 37 18.2 +1.5
      comp=Z,266nm,1.4s
H11S1 WAKE ISLAND Hy 29.92 129   T      T       18 09 06.8
      baz=321,slow=76,SNR=33
H11S3 WAKE ISLAND Hy 29.92 129   T      T       18 09 10.8
      baz=321,slow=76,SNR=27
H11S2 WAKE ISLAND Hy 29.94 129   T      T       18 09 05.9
      baz=321,slow=76,SNR=28
LZH   Lanzhou            30.52 275  eP      P       17 37 29.0 +1.4
LZH                                  pP     sP      17 37 41.0 +2.0
LZH                                  sP     pP      17 37 47.3  +12
LZH                                  pmax   pmax
      comp=Z,20nm,1.1s
BILL  Bilibino           30.94  17  eP      P       17 37 33.0 +2.2
BILL                                e               17 38 35.4
BILL                                e               17 40 28.2
BILL                                 pmax   pmax
      comp=Z,10.0nm,3.2s
GTA   Gaotai             32.60 283  eP      P       17 37 46.3 +0.4
GTA                                  pmax   pmax
      comp=Z,3.0nm,0.9s
CD2   Chengdu            32.61 266  eP      P       17 37 45.5 -0.5
CD2                                  pmax   pmax
      comp=Z,10.0nm,0.5s
QIZ   Qiongzhong         34.98 243  eP      P       17 38 05.9 -0.7
      comp=Z,74nm,1.9s
MIDW  Midway             34.98  97  eP      P       17 38 07.7 +1.2
      comp=Z,58nm,0.8s
NIKH  Nikolski High      35.23  52  eP      P       17 38 08.7 +0.4
      comp=Z,310nm,1.5s
KMI   Kunming            36.32 258   P      P       17 38 18.0 -0.3
KMI                                  pmax   pmax
      comp=Z,15nm,0.7s
DGZ   Jazzator, Alta     39.40 303c iP      P       17 38 44.6 +0.6
DGZ                                  pmax   pmax
      comp=Z,3.0nm,0.6s
SDPT  Sand Point         40.15  48  eP      P       17 38 49.3 -0.6
      comp=Z,307nm,1.7s
WMQ   Urumqi             40.32 294  eP      P       17 38 52.5 +0.9
WMQ                                  LR     LR
      comp=Z,140nm,22.5s
WMQ                                  LR     LR
      comp=Z,150nm,25.1s
WMQ                                  LR     LR
      comp=Z,150nm,28.3s
WMQ   Urumqi             40.32 294  eP      P       17 38 51.5 -0.1
      comp=Z,12nm,1.4s
WMQ   Urumqi             40.32 294  eP      P       17 38 51.5 -0.1
WMQ                                  pmax   pmax
      comp=Z,12nm,1.4s
ZAA0  Zalesovo Array     40.59 310  eP      P       17 38 52.0 -1.6
      comp=Z,6.0nm,1.4s
ZALV  Zalesovo Beam      40.59 310  eP      P       17 38 53.2 -0.3
ZALV  Zalesovo Beam      40.59 310   P      P       17 38 53.5  0.0
      comp=Z,1.8nm,0.5s,baz=94,slow=7.9,SNR=6.4
TNTI  Ternate            41.41 203  eP      P       17 38 59.7 -1.1
      comp=Z,31nm,0.9s
CMMT  Chiang Mai         42.89 253   P      P       17 39 16.2 +3.4
      comp=Z,3.3nm,1.0s
CHTO  Chiang Mai         42.89 253  eP      P       17 39 11.6 -1.2
      comp=Z,2.7nm,0.9s
CHTO  Chiang Mai         42.89 253  eP      P       17 39 11.6 -1.2
CHTO                                 pmax   pmax
      comp=Z,3.0nm,0.9s
CHTO  Chiang Mai         42.89 253   P      P       17 39 15.8 +3.0
      comp=Z,15nm,1.0s
CM31  Chiang Mai Arr     43.12 253  eP      P       17 39 14.6 -0.1
CMAR  Chiang Mai Arr     43.12 253   P      P       17 39 14.0 -0.7
CMAR                                 pmax   pmax
      comp=Z,1.0nm,0.8s
CMAR  Chiang Mai Arr     43.12 253   P      P       17 39 13.9 -0.7
      comp=Z,0.8nm,0.8s,baz=48,slow=6.9,SNR=9.7
CM01  Chiang Mai Arr     43.13 253  eP      P       17 39 14.7  0.0
MK01  Makanchi Array     43.31 300  eP      P       17 39 15.0 -0.9
MK31  Makanchi Array     43.31 300  eP      P       17 39 15.7 -0.3
      comp=Z,3.3nm,0.9s
MK31  Makanchi Array     43.31 300  eP      P       17 39 15.7 -0.3
MK31                                 pmax   pmax
      comp=Z,3.0nm,0.9s
MKAR  Makanchi Array     43.31 300  eP      P       17 39 15.4 -0.5
      comp=Z,21nm,0.8s
MKAR  Makanchi Array     43.31 300  eP      P       17 39 15.4 -0.5
MKAR                                 pmax   pmax
      comp=Z,21nm,0.8s
MKAR  Makanchi Array     43.31 300   P      P       17 39 15.6 -0.4
      comp=Z,3.6nm,0.9s,baz=85,slow=9.9,SNR=13
MAKZ  Makanchi           43.52 300  eP      P       17 39 17.4 -0.2
      comp=Z,4.0nm,0.9s
MAKZ  Makanchi           43.52 300  eP      P       17 39 17.4 -0.2
MAKZ                                 pmax   pmax
      comp=Z,4.0nm,0.9s
IM3   Indian Mountai     43.67  32  eP      P       17 39 20.6 +2.0
FAKI  Fak Fak            43.74 195  eP      P       17 39 20.0 +0.4
      comp=Z,78nm,1.3s
KURK  Kurchatov          44.81 306  eP      P       17 39 27.3 -0.6
      comp=Z,6.1nm,0.9s
KURK  Kurchatov          44.81 306  eP      P       17 39 27.3 -0.6
KURK                                 pmax   pmax
      comp=Z,6.0nm,0.9s
RND   Reindeer           45.76  36  eP      P       17 39 37.0 +1.7
      comp=Z,68nm,1.9s
RND   Reindeer           45.76  36  eP      P       17 39 37.0 +1.7
RND                                  pmax   pmax
      comp=Z,68nm,1.9s
MDM   Murphy Dome        45.96  34  eP      P       17 39 39.2 +2.4
      comp=Z,30nm,1.8s
SML   Sawmill            46.11  38  eP      P       17 39 39.0 +0.9
      comp=Z,133nm,2.0s
SML   Sawmill            46.11  38  eP      P       17 39 39.0 +0.9
SBUM  Sibu               46.38 224  eP      P       17 39 40.9 +0.3
      comp=Z,22nm,1.8s
IL1   Eielson Array      46.54  34  eP      P       17 39 42.5 +1.2
ILAR  Eielson Array      46.54  34   P      P       17 39 42.7 +1.3
      comp=Z,0.7nm,0.7s,baz=259,slow=6.0,SNR=13
ILB   Eielson Array      46.54  34  eP      P       17 39 42.0 +0.6
JIRN  Jiri               47.64 273  eP      P       17 39 51.3 +0.4
      comp=Z,8.7nm,0.4s
GUN   Gumba              47.76 274  eP      P       17 39 51.4 -0.3
      comp=Z,18nm,0.6s
BMRM  Bremner River      48.00  39  eP      P       17 39 52.3 -0.5
      comp=Z,5.0nm,0.9s
KKN   Kakani             48.27 274  eP      P       17 39 55.6  0.0
      comp=Z,15nm,0.7s
PKIN  Phulchoki          48.29 273  eP      P       17 39 56.6 +0.8
DMN   Daman              48.50 274  eP      P       17 39 58.3 +0.9
DANN  Dangsing           49.16 275  eP      P       17 40 02.4 -0.1
      comp=Z,19nm,0.7s
BRVK  Borovoye           49.28 311  eP      P       17 40 02.3 -0.4
      comp=Z,3.7nm,0.9s
BRVK  Borovoye           49.28 311⇓eP      P       17 40 02.4 -0.4
BRVK                                 pmax   pmax
      comp=Z,4.0nm,1.0s
KOLN  Koldanda           49.57 275  eP      P       17 40 05.2 -0.3
      comp=Z,10nm,1.0s
AAK   Ala-Archa          49.86 297  eP      P       17 40 06.8 -0.7
      comp=Z,1.7nm,0.8s
AAK   Ala-Archa          49.86 297⇓iP      P       17 40 06.9 -0.6
AAK                                  pmax   pmax
      comp=Z,2.0nm,0.9s
PYUN  Piuthan            49.87 275  eP      P       17 40 07.5 -0.3
      comp=Z,17nm,1.0s
INK   Inuvik             51.36  28   P      P       17 40 19.4 +1.2
      comp=Z,1.5nm,0.8s,baz=252,slow=6.5,SNR=5.0
KK31  Karatay Array      52.40 298  eP      P       17 40 25.9 -0.5
      comp=Z,3.7nm,0.8s
KK31  Karatay Array      52.40 298  eP      P       17 40 25.9 -0.5
KK31                                 pmax   pmax
      comp=Z,4.0nm,0.8s
KKAR  Karatay Array      52.40 298  eP      P       17 40 25.5 -0.9
      comp=Z,3.7nm,0.8s
KKAR  Karatay Array      52.40 298  eP      P       17 40 25.5 -0.9
KKAR                                 pmax   pmax
      comp=Z,4.0nm,0.8s
NIL   Nilore             54.52 287  eP      P       17 40 42.1  0.0
      comp=Z,7.3nm,0.7s
NIL   Nilore             54.52 287  eP      P       17 40 42.1  0.0
NIL                                  pmax   pmax
      comp=Z,7.0nm,0.7s
ARU   Arti               54.71 317  eP      P       17 40 43.0 -0.1
      comp=Z,7.1nm,0.8s
ARU   Arti               54.71 317d iP      P       17 40 42.6 -0.5
ARU                                                 17 42 43.4
ARU                                  S      S       17 48 20.2 -1.2
ARU                                  SS     SS      17 52 00.7 -3.2
ARU                                  pmax   pmax
      comp=Z,63nm,3.9s
ABKAR Akbulak array      56.69 309  eP      P       17 40 56.9 -0.5
      comp=Z,5.5nm,0.6s
KBL   Kabul              57.17 290  eP      P       17 40 59.5 -1.8
      comp=Z,8.2nm,0.8s
KBL   Kabul              57.17 290  eP      P       17 40 59.5 -1.8
KBL                                  pmax   pmax
      comp=Z,8.0nm,0.8s
WRAB  Tennant Creek      60.12 189  eP      P       17 41 19.6 -1.9
      comp=Z,21nm,1.5s
WRAB  Tennant Creek      60.12 189  eP      P       17 41 19.6 -1.9
WRAB                                 pmax   pmax
      comp=Z,21nm,1.5s
WB2   Warramunga Arr     60.12 189  eP      P       17 41 20.4 -1.2
WRA   Warramunga Arr     60.13 189   P      P       17 41 20.3 -1.3
      comp=Z,1.5nm,0.8s,baz=4.7,slow=7.0,SNR=8.1
YKA   Yellowknife Ar     60.82  31   P      P       17 41 26.8 +1.0
      comp=Z,0.4nm,0.6s,baz=303,slow=6.5,SNR=7.5
GEYT  Alibeck            63.15 298   P      P       17 41 41.7 -0.3
      comp=Z,3.1nm,0.7s,baz=40,slow=2.5,SNR=9.0
AS01  Alice Springs      63.85 189  eP      P       17 41 46.0 -0.5
ASAR  Alice Springs      63.85 189   P      P       17 41 45.9 -0.7
      comp=Z,0.3nm,0.7s,baz=359,slow=4.8,SNR=4.1
OBN   Obninsk            66.22 323  eP      P       17 42 00.7 -0.9
OBN                                 e               17 44 24.8
OBN                                 ePPP    PPP     17 46 01.5
OBN                                  pmax   pmax
      comp=Z,10.0nm,0.7s
FIA1  FINESS Array S     66.58 332  eP      P       17 42 02.9 -0.9
FINES FINESS Array B     66.58 332   P      P       17 42 03.3 -0.5
      comp=Z,3.6nm,1.0s,baz=0.0,slow=3.8,SNR=5.4
SUMG  Summit             67.71   0  eP      P       17 42 11.6 +0.3
      comp=Z,29nm,1.8s
SUMG  Summit             67.71   0  eP      P       17 42 11.6 +0.3
SUMG                                 pmax   pmax
      comp=Z,29nm,1.8s
VSU   Vasula             68.32 329⇓eP      P       17 42 15.2 +0.4
VSU                                  pmax   pmax
      comp=Z,35nm,1.2s
KIV   Kislovodsk         69.60 311  eP      P       17 42 23.4 +0.2
      comp=Z,12nm,0.9s
KIV   Kislovodsk         69.60 311  eP      P       17 42 24.4 +1.2
KIV                                  pmax   pmax
      comp=Z,15nm,1.1s
KBZ   Khabaz             69.61 310   P      P       17 42 23.9 +0.7
      comp=Z,4.8nm,0.9s,baz=26,slow=3.0,SNR=11
AKASG Malin Array Be     72.46 322ceP      P       17 42 40.0 -0.3
AKASG                                pmax   pmax
      comp=Z,2.0nm,0.5s
AKASG Malin Array Be     72.46 322   P      P       17 42 40.0 -0.3
      comp=Z,1.9nm,0.5s,baz=46,slow=6.1,SNR=18
KIEV  Kiev               72.47 322⇑eP      P       17 42 39.9 -0.5
KIEV                                 pmax   pmax
      comp=Z,4.0nm,1.0s
KLNR  Kaliningrad        73.60 329⇑eP      P       17 42 44.5 -2.5
KLNR                                 pmax   pmax
      comp=Z,18nm,0.6s
TLCR                     76.42 318⇑iP      P       17 43 06.0 +2.6
TLCR                     76.42 318 ⇑P      P       17 43 06.0 +2.6
BUR08 Bucovina Ar. S     76.48 322  eP      P       17 43 04.0 +0.1
      comp=Z,24nm,1.8s
BUR04 Bucovina Ar. S     76.50 322  eP      P       17 43 04.1 +0.1
BURAR Bucovina Array     76.50 322⇓iP      P       17 43 04.7 +0.7
BURAR Bucovina Array     76.50 322 ⇓P      P       17 43 04.7 +0.7
BIZ   Bicaz              76.55 321⇑iP      P       17 43 04.9 +0.7
CFR   Carcaliu           76.78 319⇓iP      P       17 43 05.8 +0.4
CFR   Carcaliu           76.78 319 ⇓P      P       17 43 05.8 +0.4
TRPA  Tarpa              77.37 323⇑iP      P       17 43 10.1 +1.4
BRTR  Keskin Array B     77.51 312   P      P       17 43 08.9 -1.0
BRTR                                 pmax   pmax
      comp=Z,1.0nm,1.0s
BRTR  Keskin Array B     77.51 312   P      P       17 43 08.9 -1.0
      comp=Z,0.4nm,0.7s,baz=55,slow=6.0,SNR=4.5
MLR   Muntele Rosu       77.65 320⇑iP      P       17 43 12.3 +1.7
MLR   Muntele Rosu       77.65 320 ⇑P      P       17 43 12.3 +1.7
VOIR                     78.13 320⇑iP      P       17 43 14.1 +0.9
VOIR                     78.13 320 ⇑P      P       17 43 14.1 +0.9
ARR   Arges              78.39 320⇑iP      P       17 43 16.4 +1.8
VYHS  Vyhne              78.75 326  eP      P       17 43 17.5 +1.1
VYHS  Vyhne              78.75 326  eP      P       17 43 17.5 +1.1
CLL   Collm              78.93 330  eP      P       17 43 18.0 +0.7
CLL   Collm              78.93 330  eP      P       17 43 18.0 +0.7
KHC   Kasperske Hory     80.44 329  eP      P       17 43 25.8 +0.2
KHC   Kasperske Hory     80.44 329  eP      P       17 43 25.8 +0.2
GERES GERESS Array B     80.62 329   P      P       17 43 26.9 +0.3
      comp=Z,0.6nm,0.6s,baz=46,slow=4.2,SNR=5.1
```

IDC 26 17:33:52.2±1.5**, 2°.45S**×**140°.30E, h0^{km}, mb3.4**/4**, mb1 3.8**/5**, mb1mx3.6**/28**, mbtmp3.5**/5**, ML3.7**/1**, Error ellipse: s-maj=50.4km s-min=25.5km az=94.0, Near north coast of Irian Jaya**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s    ISC
WRA   Warramunga Arr     18.34 198   P      Pn      17 38 07.8 -0.3
      0.2nm,0.3s,baz=20,slow=12,SNR=10
ASAR  Alice Springs      21.98 196   P      P       17 38 48.3 +0.3
      1.0nm,0.8s,baz=27,slow=11,SNR=15
CMAR  Chiang Mai Arr     45.69 299   P      P       17 42 14.8 -0.4
      0.3nm,0.7s,baz=120,slow=6.5,SNR=5.4
MKAR  Makanchi Array     70.56 322   P      P       17 45 09.2  0.0
      0.3nm,0.6s,baz=108,slow=7.8,SNR=3.3
ILAR  Eielson Array      84.94  24   P      P       17 46 29.2 +0.2
      0.3nm,0.8s,baz=260,slow=3.2,SNR=3.6
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*IDC **26** 17:41:43.4±2.2, 1°.37N×127°.10E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.2/33, mbtmp3.2/3, Error ellipse: s-maj=174.2km s-min=26.1km az=66.0*

*ISCJB **26** 17:41:49.3±1.1, 1°.1N±0°.2×126°.17E±0°.05, h44^{km}, mb3.2/3, Error ellipse: s-maj=26.7km s-min=7.3km az=2.9*

*DJA **26** 17:41:49.2±1.8, 1°N±12°×12°6E±°, h25^{km}±18^{km}, M3.4/4, MLv3.4/4*

ISC 26 17:41:50.6±1.2**, 0°.9N**±0°.2×**126°.19E**±0°.06**, h44^{km}, n5, σ1^{s}.47**/7**, mb3.1**/3**, Northern Molucca Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s    ISC
TNTI  Ternate             1.19  96   P      Pn      17 42 10.3 -0.4
TNTI                                 S      Sn      17 42 26.8 +1.1
KMSI  Cibinong            2.23 262   P      Pn      17 42 24.6 -0.4
KMSI                                 S      Sn      17 42 52.2 +0.9
WRA   Warramunga Arr     22.19 159   P      P       17 46 41.5 -1.8
      0.4nm,0.6s,baz=340,slow=11,SNR=12
ASAR  Alice Springs      25.54 163   P      P       17 47 17.1 +1.7
      0.2nm,0.3s,baz=344,slow=10,SNR=9.2
MKAR  Makanchi Array     59.59 326   P      P       17 51 49.7 -0.2
      0.2nm,0.5s,baz=123,slow=7.7,SNR=4.9
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*ISK **26** 17:52:53.9, 38°.66N×43°.23E, h19^{km}, ML2.0/4*

*ISCJB **26** 17:52:55.6±0.5, 38°.69N±0°.03×43°.20E±0°.04, h11^{km}±7^{km}, Error ellipse: s-maj=6.0km s-min=5.0km az=39.5*

*DDA **26** 17:52:55.5, 38°.70N×43°.24E, h7^{km}±3^{km}, ML2.5*

ISC 26 17:52:54.9±1.4**, 38°.68N**±0°.03×**43°.23E**±0°.03**, h14^{km}**±13^{km}**, n11, σ0^{s}.77**/19**, Turkey**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s    ISC
VANB  Van                 0.15 124   PG     Pb      17 52 59.7 +0.1
VANB                                 SG     Sb      17 53 03.4 +0.7
TVAN  Van                 0.20 138  i P     Pb      17 53 00.8 +0.2
TVAN                                i S     Sb      17 53 04.2 -0.1
GEVA  Gevas               0.39 200  i P     Pg      17 53 02.6 -0.2
GEVA                                i S     Sb      17 53 10.9 +1.2
GEVA                                 IAML_P
      comp=Z,2μm,0.2s
AKDM  Akdamar-Van         0.40 209   PG     Pg      17 53 01.9 -1.2
VMUR  Van-Muradiye        0.41  41  i P     Pb      17 53 04.4 +0.4
VMUR                                i S     Sb      17 53 11.4 +1.2
VMUR                                 IAML_P
      comp=Z,765nm,0.1s
ADCV  BITLIS_Adilcev      0.42 288  i P     Pb      17 53 05.3 +1.1
ADCV                                 IAML_P
      comp=Z,414nm,0.1s
CLDR  Caldiran            0.71  49   PG     Pg      17 53 08.1 -0.7
CLDR                                 SG     Sb      17 53 18.9  0.0
CLDR  Caldiran            0.71  49  i P     Pb      17 53 09.3 +0.1
CLDR                                i S     Sb      17 53 19.6 +0.8
CLDR                                 IAML_P
      comp=Z,669nm,0.1s
TUTA  Tutak               0.79 336  i P     Pb      17 53 11.1 +0.5
TUTA                                i S     Sb      17 53 21.9 +0.6
AGRB  Hanur-Agry          0.91 348   PG     Pb      17 53 12.4 -0.3
AGRB                                 SG     Sn      17 53 25.9 -0.7
GURO  Guroymak-BITLI      0.95 263   PG     Pb      17 53 12.7 -0.5
```

IDC 26 17:56:11.6±46.0**, 19°.63S**×**179°.63W, h662^{km}**±415^{km}**, mb2.6**/2**, mb1 2.8**/2**, mb1mx2.5**/30**, mbtmp3.7**/2**, Error ellipse: s-maj=401.7km s-min=198.7km az=97.0, Fiji Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s    ISC
WRA   Warramunga Arr     43.20 261   P      P       18 03 18.1 +0.4
      0.4nm,0.5s,baz=96,slow=7.5,SNR=16
ASAR  Alice Springs      43.23 256   P      P       18 03 17.5 -0.3
      1.0nm,0.6s,baz=92,slow=8.1,SNR=20
ASAR                                 PcP    PcP     18 04 51.2 -0.1
      0.3nm,0.8s,baz=113,slow=4.2,SNR=4.3
AKASG Malin Array Be    141.50 330   PKP    PKPdf   18 14 28.1 -1.1
      0.4nm,0.5s,baz=47,slow=4.7,SNR=5.4
```

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*SOME **26** 17:57:43.5, 43°.72N×82°.17E, h0^{km}*

*NNC **26** 17:57:45.2±5.3, 43°.71N×82°.17E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=53.5km s-min=14.2km az=134.0*

ISC 26 17:57:42.8±2.4**, 43°.71N**±0°.08×**82°.27E**±0°.10**, h17^{km}**±12^{km}**, n10, σ1^{s}.34**/15**, 3C-1D, Northern Xinjiang**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s    ISC
KTMS  Ketmen              1.42 260  eP      Pg      17 58 10.4 +0.3
      40nm,0.1s
KTMS                                eS      Sg      17 58 30.1 +1.4
      93nm,0.1s
DJR   Jarkent             1.90 290  eP      Pg      17 58 18.6 -0.6
      0.3nm,0.2s
DJR                                 eS      Sg      17 58 44.4 +0.6
      26nm,0.3s
PDGK  Podgornoye          2.06 260  ⇑Pg     Pb      17 58 20.6 +0.9
      3.0nm,0.3s
PDGK                                ⇓Lg     Lg      17 58 47.4
      21nm,0.4s
SHLS  Shalkode            2.12 256  eP      Pn      17 58 17.6 +0.1
      31nm,0.2s
SHLS                                eS      Sn      17 58 42.6 -0.9
      346nm,0.3s
UZB   Uzynbulak           2.43 258  eP      Pb      17 58 26.8 +0.7
      3.4nm,0.3s
UZB                                 eS      Sg      17 58 57.6 -3.3
      22nm,0.2s
KAPS  Kapalarasan         2.61 308  eP      Pb      17 58 29.6 +0.4
      0.9nm,0.1s
KAPS                                eS      Sb      17 59 02.5 +1.5
      5.6nm,0.4s
MNBS  Baschi              2.82 279  eP      Pb      17 58 31.8 -0.9
      0.6nm,0.3s
MNBS                                eS      Sb      17 59 06.8 -0.3
      7.1nm,0.3s
MK31  Makanchi Array      3.08   0   Pg     Pg      17 58 41.5 -0.4
      0.3nm,0.3s,baz=176,slow=16,SNR=18
MK31                                ⇑Lg     Lg      17 59 22.8
      0.8nm,0.2s,baz=172,slow=28,SNR=15
MDOK  Medeo               3.84 264   Pg     Pg      17 58 56.9 +0.5
      0.8nm,0.3s
MDOK                                 Lg     Lg      17 59 45.2
      4.0nm,0.6s
TKM2  Tokmak 2            4.93 263  ⇑Lg     Lg      18 00 21.1
      2.0nm,0.6s
```

MEX 26 18:10:59.9±0.4**, 13°.80N**×**92°.80W, h15^{km}**±999^{km}**, MD3.9, Off coast of Chiapas**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s    ISC
CCIG  Comitan             2.54  14  eP      Pn      18 11 37.8 -3.0
CCIG                                eS      Sn      18 12 07.5 -4.1
```

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*IDC **26** 18:25:36.1±4.7, 23°.77S×179°.79W, h473^{km}±52^{km}, mb3.4/12, mb1 3.7/13, mb1mx3.5/25, mbtmp4.3/13, Error*

ellipse: s-maj=23.3km s-min=17.7km az=48.0

*ISCJB **26** 18:25:38.8±0.6, 23°.9S±0°.1×179°.9W±0°.2, h518^{km}, mb3.8/12, Error ellipse: s-maj=20.1km s-min=13.8km az=27.5*

ISC 26 18:25:39.7±0.7**, 23°.9S**±0°.1×**179°.8W**±0°.2**, h518**^{km}**, n15, σ1^{s}13**/15**, mb3.7**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	14.55	190	P	P	18 28 42.4	-2.4
	2.8nm,0.3s,baz=289,slow=2.3,SNR=9.1						
RPZ	**Rata Peaks**	21.14	199	P	P	18 29 48.2	+0.7
	6.1nm,0.6s,baz=37,slow=7.2,SNR=6.3						
STKA	**Stephens Creek**	34.87	248	P	P	18 31 47.8	+0.5
	2.9nm,0.5s,baz=90,slow=7.2,SNR=15						
ASAR	**Alice Springs**	42.19	261	P	P	18 32 46.8	-0.1
	7.5nm,0.7s,baz=94,slow=7.6,SNR=170						
WRA	**Warramunga Arr**	42.56	266	P	P	18 32 49.3	-0.6
	11nm,0.5s,baz=96,slow=8.5,SNR=394						
VNDA	**Vanda**	54.40	185	P	P	18 34 18.2	+1.1
	5.4nm,1.1s,baz=26,slow=5.9,SNR=3.5						
QSPA	**South Pole Qui**	66.19	180	P	P	18 35 36.3	+0.8
	3.8nm,0.6s,baz=342,slow=4.1,SNR=25						
PETK	**Petropavlovsk-**	79.13	346	P	P	18 36 48.6	-1.4
	2.7nm,0.9s,baz=161,slow=9.2,SNR=3.2						
NVAR	**Mina Array Bea**	84.64	44	P	P	18 37 20.3	+1.5
	0.4nm,0.5s,baz=213,slow=7.4,SNR=3.0						
CMAR	**Chiang Mai Arr**	89.67	290	P	P	18 37 43.7	+1.1
	0.5nm,0.7s,baz=116,slow=3.1,SNR=5.4						
TXAR	**Lajitas Array**	90.30	58	P	P	18 37 45.8	+0.3
	0.6nm,0.7s,baz=206,slow=6.3,SNR=8.1						
ILAR	**Eielson Array**	91.99	13	P	P	18 37 51.7	-0.6
	0.3nm,0.6s,baz=222,slow=6.6,SNR=4.1						
PDAR	**Pinedale Array**	92.58	44	P	P	18 37 54.9	-0.9
	0.3nm,0.6s,baz=208,slow=5.9,SNR=3.5						
BRTR	**Keskin Array B**	147.69	307	PKPbc	PKiKP	18 44 27.8	+0.1
	0.3nm,0.6s,baz=65,slow=3.3,SNR=2.6						
TORD	**Torodi Ar. Bea**	169.21	188	PKPab	PKPab	18 46 03.4	-0.1
	0.6nm,0.7s,baz=188,slow=2.9,SNR=4.6						

MEX 26 18:59:09.5±0.3**, 16°.76N**×**100°.36W, h1**^{km}±4^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.30	17	*e*P	Pg	18 59 15.1	-0.2
CAIG				*e*S	Sg	18 59 19.5	+0.4
ACP2	**Acapulco**	0.46	76	*i* P	Pg	18 59 18.0	-0.4
ACP2				*e*S	Sg	18 59 24.9	+0.5
ARIG	**Puente Sto Nin**	1.51	0	*e*P	Pn	18 59 34.0	-3.7
ARIG				*e*S	Sb	18 59 52.8	-5.2
PLIG	**Platanillo**	1.82	27	*e*P	Pn	18 59 38.8	-3.2

IDC 26 19:03:01.7±2.4**, 6°.21S**×**130°.05E, h0**^{km}**, mb3.5**/1**, mb1 3.4**/4**, mb1mx3.3**/34**, mbtmp3.3**/4**, ML2.9**/3**, Error ellipse: s-maj=106.3km s-min=29.2km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	12.58	200	Pn	Pn	19 06 04.0	+1.9
	0.1nm,0.3s,baz=23,slow=13,SNR=0.7						
FITZ				Sn	Sn	19 08 10.9	-12
	0.1nm,0.3s,baz=279,slow=19,SNR=0.9						
WRA	**Warramunga Arr**	14.28	163	Pn	Pn	19 06 24.9	-0.4
	0.1nm,0.3s,baz=333,slow=14,SNR=1.4						
WRA				Sn	Sn	19 08 50.4	-14
	0.1nm,0.3s,baz=335,slow=22,SNR=5.8						
ASAR	**Alice Springs**	17.75	168	P	Pn	19 07 09.4	-1.0
	0.1nm,0.3s,baz=352,slow=9.6,SNR=4.8						
MKAR	**Makanchi Array**	67.59	327	P	P	19 14 00.2	0.0
	0.2nm,0.4s,baz=118,slow=7.8,SNR=5.6						

MEX 26 19:09:18.0±0.7**, 16°.86N**×**100°.36W, h11**^{km}±4^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.21	26	*e*P	Pg	19 09 21.8	-0.7
CAIG				*i* S	Sg	19 09 25.5	0.0
ACP2	**Acapulco**	0.46	88	*i* P	Pg	19 09 26.7	-0.2
ACP2				*e*S	Sg	19 09 32.7	-0.3
MEIG	**Mezcala**	1.28	34	*e*P	Pn	19 09 37.6	-4.2
MEIG				*e*S	Sb	19 09 53.7	-4.9
ARIG	**Puente Sto Nin**	1.41	1	*e*P	Pn	19 09 40.6	-3.1
ARIG				*i* S	Sn	19 09 56.9	-5.5
PLIG	**Platanillo**	1.73	28	*e*P	Pn	19 09 44.2	-3.9

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*NIED **26** 19:12:00, 36°.60N×143°.90E, h8^{km}, Mw3.5 Best double couple: $M_0$2.25000×10^{14} NP1:ϕ_s10.00000°, δ27.00000°, λ-102.00000°. NP2:ϕ_s204.00000°, δ64.00000°, λ-84.00000°.*

*IDC **26** 19:12:42.3±3.3, 36°.58N×144°.21E, h0^{km}, mb3.3/3, mb1 3.6/5, mb1mx3.4/40, mbtmp3.4/5, ML3.2/2, MS2.5/2, Ms1 2.5/2, ms1mx2.2/21, Error ellipse: s-maj=75.3km s-min=30.7km az=163.0*

*ISCJB **26** 19:12:45.0±0.8, 36°.63N±0°.05×143°.99E±0°.06, h33^{km}, mb3.4/3, Error ellipse: s-maj=7.9km s-min=6.0km az=139.7*

*JMA **26** 19:12:45.8±0.2, 36°.59N×143°.95E, h56^{km}, M3.9*

ISC 26 19:12:46.7±1.3**, 36°.63N**±0°.07×**144°.04E**±0°.08**, h35**^{km}**, n21, σ1^{s}49**/27**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	2.64	287	P	Pn	19 13 26.2	-0.5
JFK				*e*S	Sn	19 13 56.1	-1.4
ONAJ	**Iwakimizuishiy**	2.64	281	P	Pn	19 13 26.3	-0.5
JIKH	**Ishinomakikobu**	2.65	310	P	Pn	19 13 26.6	-0.2
JIKH				*e*S	Sn	19 13 56.5	-1.1
CHOJ	**Chosi**	2.73	251	P	Pn	19 13 27.2	-0.8
JHYU	**Hitachinakayam**	2.80	265	P	Pn	19 13 28.3	-0.6
JHYU				*e*S	Sn	19 13 59.3	-2.1
JFT	**Otama**	3.09	288	*e*S	Sn	19 14 08.7	0.0
BSO1	**Boso 1**	3.18	233	P	Pn	19 13 32.6	-1.1
JMK	**Ichinoseki**	3.22	317	S	Sn	19 14 11.5	-0.2
JOM	**Ohasama**	3.57	323	P	Pn	19 13 39.8	+0.3
JOM				*e*S	Sn	19 14 19.3	-1.2
JAG	**Ashikaga**	3.70	268	P	Pn	19 13 41.1	-0.2
JRY	**Ryogami san**	4.19	263	P	Pn	19 13 47.5	-0.6
JRY				*e*S	Sn	19 14 33.6	-2.3
JOD2	**Odawara 2**	4.24	253	P	Pn	19 13 48.2	-0.6
JOD2				*e*S	Sn	19 14 34.7	-2.4
MJAR	**Matsushiro Arr**	4.69	271	Pn	Pn	19 13 55.9	+0.9
	0.3nm,0.3s,baz=89,slow=12,SNR=14						
MJAR				Sn	Sn	19 14 49.8	+1.6
	0.2nm,0.3s,baz=83,slow=20,SNR=2.3						
JKB	**Kayabe**	5.74	337	P	Pn	19 14 10.0	+0.6
JCH	**Churui**	6.00	355	P	Pn	19 14 11.5	-1.4
ASAJ	**Asahikawa**	7.56	352	Pn	Pn	19 14 34.5	+0.2
	0.7nm,0.3s,baz=175,slow=4.9,SNR=5.9						
ASAJ				Sn	Sn	19 15 54.3	-4.4
	0.1nm,0.3s,baz=284,slow=19,SNR=1.5						
USRK	**Ussuriysk Ar.**	11.88	313	LR	LR	19 20 44.4	
	comp=Z,30nm,18.6s,baz=153,slow=40						
KSRS	**Korea Array**	12.90	278	LR	LR	19 20 37.5	
	comp=Z,16nm,18.4s,baz=215,slow=36						
MKAR	**Makanchi Array**	46.11	303	P	P	19 21 09.1	+1.8
	0.4nm,0.7s,baz=84,slow=9.4,SNR=4.9						
ILAR	**Eielson Array**	48.71	32	P	P	19 21 27.5	+0.2
	0.3nm,0.7s,baz=255,slow=5.5,SNR=4.8						
YKA	**Yellowknife Ar**	63.09	31	P	P	19 23 11.3	+1.2
	0.2nm,0.7s,baz=292,slow=6.4,SNR=2.0						

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*ISCJB **26** 19:18:19.6±0.7, 12°.53N±0°.09×144°.3E±0°.2, h30^{km}, mb3.7/7, MS3.1/5, Error ellipse: s-maj=23.9km s-min=8.8km az=23.8*

*IDC **26** 19:18:23.5±1.6, 12°.62N×144°.59E, h56^{km}±20^{km}, mb3.4/7, mb1 3.7/7, mb1mx3.4/43, mbtmp3.7/7, MS3.2/5, Ms1 3.2/5, ms1mx2.9/23, Error ellipse: s-maj=36.6km s-min=16.3km az=90.0*

ISC 26 19:18:20.9±0.9**, 12°.6N**±0°.1×**144°.5E**±0°.2**, h30**^{km}**, n17, σ0^{s}76**/9**, mb3.7**/7**, MS3.0**/5**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	1.08	20	P	Pb	19 18 41.6	+0.5
	228nm,0.3s,baz=351,slow=17,SNR=93						
GUMO				S	Sb	19 18 55.0	+0.1
	439nm,0.3s,baz=349,slow=23,SNR=42						
H11S3	**WAKE ISLAND Hy**	22.18	72	T	T	19 46 22.9	
	baz=258,slow=75,SNR=58						
H11S1	**WAKE ISLAND Hy**	22.19	72	T	T	19 46 20.2	
	baz=258,slow=75,SNR=27						
H11S2	**WAKE ISLAND Hy**	22.19	72	T	T	19 46 24.1	
	baz=258,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hy**	22.65	69	T	T	19 46 58.1	
	baz=255,slow=75,SNR=53						
H11N2	**WAKE ISLAND Hy**	22.66	69	T	T	19 46 59.7	
	baz=255,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy**	22.67	69	T	T	19 46 56.5	
	baz=255,slow=75,SNR=57						
JNU	**Nakatsue**	23.95	331	LR	LR	19 31 14.4	
	comp=Z,37nm,18.5s,baz=184,slow=32						
MJAR	**Matsushiro Arr**	24.53	348	LR	LR	19 32 02.5	
	comp=Z,49nm,21.6s,baz=165,slow=34						
KSRS	**Korea Array**	28.88	332	LR	LR	19 36 31.6	
	comp=Z,28nm,18.1s,baz=123,slow=38						
WRA	**Warramunga Arr**	33.81	197	P	P	19 25 01.1	+0.4
	3.3nm,0.8s,baz=21,slow=9.6,SNR=21						
ASAR	**Alice Springs**	37.47	196	P	P	19 25 32.8	+0.7
	1.4nm,0.7s,baz=19,slow=11,SNR=19						
CMAR	**Chiang Mai Arr**	44.19	284	P	P	19 26 27.4	-0.2
	0.8nm,0.6s,baz=84,slow=7.2,SNR=7.8						
CMAR				LR	LR	19 42 33.4	
	comp=Z,27nm,19.8s,baz=126,slow=33						
STKA	**Stephens Creek**	44.28	184	P	P	19 26 27.9	-0.1
	0.8nm,0.5s,baz=0.0,slow=5.1,SNR=4.2						
SONM	**Songino Array**	47.35	326	P	P	19 26 53.0	+0.7
	0.3nm,0.7s,baz=144,slow=7.4,SNR=3.1						
SONM				LR	LR	19 47 29.3	
	comp=Z,52nm,18.4s,baz=209,slow=37						
MKAR	**Makanchi Array**	61.97	316	P	P	19 28 37.6	-0.6
	0.3nm,0.5s,baz=104,slow=6.2,SNR=4.8						
YKA	**Yellowknife Ar**	83.93	27	P	P	19 30 46.6	-1.3
	0.1nm,0.3s,baz=284,slow=5.2,SNR=4.1						

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*NEIC **26** 19:24:56.4±0.0, 19°.21N×67°.98W, h84^{km}, MD3.2(RSPR), After RSPR.*

RSPR 26 19:24:56.4, 19°.21N×**67°.98W, h84**^{km}±7^{km}**, MD3.2**/13**, 6C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	0.95	150⇑	*e*P	Pn	19 25 10.7	-4.5
IDE	**Isla Desecheo**	0.95	150	*e*S	Sn	19 25 28.8	-0.4
AGPR	**Aguadilla, PR**	1.11	132⇑	*e*P	Pn	19 25 16.1	-0.9
AGPR	**Aguadilla, PR**	1.11	132⇑	*e*P	Pn	19 25 16.1	-0.9
AGPR				*e*S	Sn	19 25 31.2	-1.3
AGP	**Aguadilla**	1.13	135	*e*Pn	Pn	19 25 14.5	-2.8
AGP				*e*Sn	Sn	19 25 31.2	-1.8
MPR	**Mayaguez**	1.27	141	*e*Pn	Pn	19 25 17.3	-1.8
MPR				*e*Sn	Sn	19 25 35.2	-0.9
LSP	**Las Mesas**	1.33	140⇓	*e*P	Pn	19 25 19.3	-0.6
LSP	**Las Mesas**	1.33	140	*e*S	Sn	19 25 37.6	+0.1
LSP	**Las Mesas**	1.33	140	*e*Pn	Pn	19 25 19.3	-0.6
LSP				*e*Sn	Sn	19 25 37.6	+0.1
DR12	**Loma Pena Alta**	1.39	253⇓	*e*P	Pn	19 25 19.6	-1.0
DR12				*e*S	Sn	19 25 38.9	0.0
DR12	**Loma Pena Alta**	1.39	253	*e*Pn	Pn	19 25 19.6	-1.0
DR12				*e*Sn	Sn	19 25 38.9	0.0
EMPR	**Esperanza - Ma**	1.56	118⇓	*e*P	Pn	19 25 22.7	0.0
EMPR	**Esperanza - Ma**	1.56	118	*e*S	Sn	19 25 42.7	+0.2
EMPR	**Esperanza - Ma**	1.56	118	*e*Pn	Pn	19 25 22.5	-0.1
EMPR				*e*Sn	Sn	19 25 42.7	+0.2
CELP	**Cerrillos**	1.74	130⇓	*i*P	Pn	19 25 24.9	-0.3
CELP				*e*S	Sn	19 25 47.7	+0.8
CELP	**Cerrillos**	1.74	130	*e*Pn	Pn	19 25 24.9	-0.3
CELP				*e*Sn	Sn	19 25 47.7	+0.8
OBIP	**Obispado Ponce**	1.75	131⇓	*e*P	Pn	19 25 24.3	-0.8
OBIP	**Obispado Ponce**	1.75	131	*e*S	Sn	19 25 46.4	-0.5
OBIP	**Obispado Ponce**	1.75	131	*e*Pn	Pn	19 25 23.1	-2.0
OBIP				*e*Sn	Sn	19 25 45.8	-1.1
SDD	**Santo Domingo**	1.98	248	*e*Pn	Pn	19 25 28.1	-0.1
SDD				*e*Sn	Sn	19 25 48.7	-3.6
SJG	**San Juan**	2.05	122⇑	*e*P	Pn	19 25 28.9	-0.3
SJG	**San Juan**	2.05	122	*e*S	Sn	19 25 54.4	+0.3
SJG	**San Juan**	2.05	122	*e*Pn	Pn	19 25 28.9	-0.3
SJG				*e*Sn	Sn	19 25 53.1	-1.0
SJG				*e*Sn	Sn	19 25 54.4	+0.3
CBYP	**Canovanas**	2.22	115⇓	*e*P	Pn	19 25 30.5	-0.9
CBYP	**Canovanas**	2.22	115	*e*S	Sn	19 25 57.2	-1.0
CBYP	**Canovanas**	2.22	115	*e*Pn	Pn	19 25 30.4	-1.1
CBYP				*e*Sn	Sn	19 25 57.2	-1.0
HUMP	**Col San Antoni**	2.28	117	*e*Pn	Pn	19 25 31.3	-0.9
BANI	**BANI**	2.39	251	*e*Pn	Pn	19 25 33.0	-0.9
MTP	**Monte Pirata**	2.56	115⇑	*e*P	Pn	19 25 35.5	-0.4
MTP	**Monte Pirata**	2.56	115	*e*S	Sn	19 26 04.9	-1.2
MTP	**Monte Pirata**	2.56	115	*e*Pn	Pn	19 25 35.0	-0.9
MTP				*e*Sn	Sn	19 26 04.9	-1.2
CUPR	**Culebra, Puert**	2.71	109⇑	*e*P	Pn	19 25 36.8	-1.1
CUPR	**Culebra, Puert**	2.71	109	*e*S	Sn	19 26 11.1	+1.2
CUPR	**Culebra, Puert**	2.71	109	*e*Pn	Pn	19 25 36.7	-1.2
CUPR				*e*Sn	Sn	19 26 07.5	-2.4
STVI	**Saint Thomas**	2.99	106	*e*Pn	Pn	19 25 39.9	-1.9
SDDR	**Presa de Saban**	3.13	266	*e*Pn	Pn	19 25 45.2	+1.4
GRTK	**Grand Turk**	3.74	308	*e*Pn	Pn	19 25 51.1	-0.8

MEX 26 19:31:33.3±0.6**, 16°.76N**×**100°.46W, h2**^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.34	33	*e*P	Pg	19 31 39.3	-0.6
CAIG				*i* S	Sg	19 31 45.0	+0.6
ACP2	**Acapulco**	0.56	78	*i* P	Pg	19 31 44.2	+0.1
ACP2				*e*S	Sg	19 31 52.1	+0.8
MEIG	**Mezcala**	1.41	35	*e*P	Pn	19 31 56.7	-3.5
MEIG				*i* S	Sg	19 32 15.0	-3.7
ARIG	**Puente Sto Nin**	1.52	4	*e*P	Pn	19 31 58.1	-3.5
ARIG				*i* S	Sn	19 32 16.1	-5.8
PLIG	**Platanillo**	1.86	29	*e*P	Pn	19 32 03.0	-3.4

MEX 26 19:34:21.4±0.6**, 16°.82N**×**100°.39W, h9**^{km}±4^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.26	26	*e*P	Pg	19 34 25.8	-0.8
CAIG				*i* S	Sg	19 34 30.3	+0.3
ACP2	**Acapulco**	0.48	83	*i* P	Pg	19 34 30.6	-0.2
ACP2				*e*S	Sg	19 34 37.0	-0.1
MEIG	**Mezcala**	1.32	33	*e*P	Pn	19 34 42.5	-3.6
MEIG				*i* S	Sb	19 34 58.6	-4.9
ARIG	**Puente Sto Nin**	1.46	1	*e*P	Pn	19 34 44.5	-3.4
ARIG				*e*S	Sn	19 35 01.9	-5.2
PLIG	**Platanillo**	1.78	28	*e*P	Pn	19 34 49.0	-3.4
PLIG				*e*S	Sn	19 35 10.1	-5.1

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*NIED **26** 19:38:00, 37°.50N×143°.70E, h5^{km}, Mw3.4 Best double couple: $M_0$1.58000×10^{14} NP1:ϕ_s67.00000°, δ29.00000°, λ-37.00000°. NP2:ϕ_s190.00000°, δ73.00000°, λ-114.00000°.*

JMA 26 19:38:18.7±0.3**, 37°.45N**×**143°.73E, h57**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	1.99	296	S	Sn	19 39 14.8	+1.1
JIO	**Ouri**	2.13	299	S	Sn	19 39 18.9	+1.7
JKMT	**Kesennumamotoy**	2.24	308	*e*S	Sn	19 39 21.0	+1.2
JFK	**Kawauchi**	2.27	269	P	Pn	19 38 54.9	+1.0
JFK				S	Sn	19 39 21.1	+0.3
ONAJ	**Iwakimizuishiy**	2.36	262	P	Pn	19 38 56.0	+0.9
ONAJ				S	Sn	19 39 22.9	-0.1
JFT	**Otama**	2.70	272	P	Pn	19 39 01.7	+2.0
JFT				*e*S	Sn	19 39 32.9	+1.7
JOM	**Ohasama**	2.78	317	S	Sn	19 39 35.1	+1.9
JANG	**Nango**	3.39	330	P	Pn	19 39 09.4	+0.3
JANG				*e*S	Sn	19 39 49.0	+0.9
JAG	**Ashikaga**	3.58	255	P	Pn	19 39 13.1	+1.4
JAG				*e*S	Sn	19 39 51.6	-1.0
JAH	**Hinai**	3.65	319	S	Sn	19 39 57.7	+3.3

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*MOS **26** 19:57:53.4±1.0, 21°.38S×179°.33W, h600^{km}, mb5.1/61, Error ellipse: s-maj=8.1km s-min=6.4km az=78.5*

*ISCJB **26** 19:57:53.1±0.3, 21°.46S±0°.02×179°.38W±0°.02, h599^{km}±4^{km}, mb5.2/397, Error ellipse: s-maj=3.7km s-min=2.7km az=152.2*

*BJI **26** 19:57:53.1, 21°.22S×178°.78W, h613^{km}, mB5.2/35, mb5.2/61*

*IDC **26** 19:57:54.1±0.6, 21°.40S×179°.30W, h598^{km}±5^{km}, mb4.7/43, mb1 4.7/45, mb1mx4.7/51, mbtmp5.6/45, Error ellipse: s-maj=7.6km s-min=7.2km az=64.0*

*NEIC **26** 19:57:55.8±0.1, 21°.50S×179°.39W, mb5.2/295, MW5.7, MW5.7, Error ellipse: s-maj=3.8km s-min=2.5km az=140.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^{17}Nm; M_{rr}0.33; $M_{\theta\theta}$-2.99; $M_{\phi\phi}$2.66; $M_{r\theta}$-2.02; $M_{\theta\phi}$2.59; $M_{\phi r}$0.53; Best double couple: $M_0$4.40000×10^{17} NP1: ϕ_s159.00000°, δ71.00000°, λ-168.00000°. NP2: ϕ_s65.00000°, δ78.00000°, λ-19.00000°. Principal axes: T 3.6900, Plg5.0000°, Azm113.0000°; N 1.1400, Plg67.0000°, Azm215.0000°; P -4.8400, Plg22.0000°, Azm21.0000°;*

*NEIC **26** 19:57:55.0±0.0, 21°.44S×179°.32W, h630^{km}, Moment Tensor Solution. s14 Moment tensor: Scale 10^{17}Nm; M_{rr}0.45; $M_{\theta\theta}$-3.34; $M_{\phi\phi}$2.90; $M_{r\theta}$-1.36; $M_{\theta\phi}$3.67; $M_{\phi r}$0.09; Best double couple: $M_0$5.00000×10^{17} NP1:ϕ_s69.00000°, δ86.00000°, λ-13.00000°. NP2:ϕ_s160.00000°, δ76.00000°, λ-176.00000°. Principal axes: T 4.6500, Plg6.0000°, Azm115.0000°; N 0.6700, Plg75.0000°, Azm234.0000°; P -5.3200, Plg12.0000°, Azm24.0000°;*

*GCMT **26** 19:57:57.8±0.2, 21°.48S±0°.01×179°.31W±0°.02, h626^{km}±1^{km}, MW5.8/107, Moment Tensor Solution. s107,c177; s16,c17; Duration: 1^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}0.47±.06; $M_{\theta\theta}$-4.14±.08; $M_{\phi\phi}$3.67±.09; $M_{r\theta}$-1.64±.08; $M_{\theta\phi}$3.62±.08; $M_{\phi r}$0.00±.08; Best double couple: $M_0$5.54800×10^{17} NP1:ϕ_s66.00000°, δ86.00000°, λ-15.00000°. NP2:ϕ_s157.00000°, δ75.00000°, λ-176.00000°. Principal axes: T 5.1690, Plg8.0000°, Azm112.0000°; N 0.7550, Plg74.0000°, Azm231.0000°; P -5.9270, Plg14.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*WEL **26** 19:58:00.2±1.1, 22°S±9°×17°8W±4°6, h696^{km}±16^{km}*

ISC 26 19:57:54.0±0.3**, 21°.45S**±0°.03×**179°.28W**±0°.03**, h604**^{km}±2^{km}**, h605**^{km}**:pP-P, n1263, σ1^{s}50**/1482**, mb5.2**/396**, 76C-41D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.47	325	*e*P	P	19 59 24.1	+0.8
MSVF	**Nonsavu**	4.47	325	*e*P	P	19 59 24.1	+0.8
RIZ	**Raoul Island**	7.86	171	P	P	19 59 52.4	+0.4
RIZ				S	S	20 01 28.0	-0.7
RAO	**Raoul Island**	7.87	171	*e*P	P	19 59 52.1	+0.1
RAO				*e*S	S	20 01 27.4	-1.4
RAO	**Raoul Island**	7.87	171	P	P	19 59 52.5	+0.4
	908nm,0.3s,baz=262,slow=23,SNR=14						
RAO				S	S	20 01 28.2	-0.7
	336nm,0.3s,baz=116,slow=22,SNR=16						
GLKZ	**Green Lake**	7.88	171	P	P	19 59 52.4	+0.3
GLKZ				S	S	20 01 27.0	-2.0
NIUE	**Niue**	9.09	77	*e*P	P	20 00 04.0	0.0
NIUE				*e*S	S	20 01 50.9	+0.4
MARNC	**Mare, Loyalty**	11.82	268	*e*P	P	20 00 30.3	-0.7
MARNC				*e*S	S	20 02 41.2	+1.3
PINNC	**Pines Island,**	12.37	262	*e*P	P	20 00 36.8	+0.4
OUENC	**Ouen Island, N**	12.92	263	*e*P	P	20 00 43.5	+1.5
DZM	**Mont Dzumac**	13.28	265	*e*P	P	20 00 45.7	-0.1
	423nm,0.8s						
DZM	**Mont Dzumac**	13.28	265	*e*P	P	20 00 44.1	-1.7
DZM				*e*S	S	20 03 04.5	-2.2
DZM				ScP	ScP	20 08 04.6	+2.8
DZM	**Mont Dzumac**	13.28	265	P	P	20 00 46.2	+0.4
	14nm,0.3s,baz=85,slow=14,SNR=131						
DZM				S	S	20 03 00.5	-6.2
	0.4nm,0.3s,baz=108,slow=20,SNR=1.1						
DZM				ScP	ScP	20 08 04.6	+2.8
	0.3nm,0.3s,baz=44,slow=20,SNR=5.8						
OUZ	**Omahuta**	15.08	203	*e*P	P	20 01 04.9	+2.3
	1μm,0.9s						
OUZ	**Omahuta**	15.08	203	P	P	20 01 05.2	+2.7
GRZ	**Great Barrier**	15.45	196	P	P	20 01 07.7	+1.8
WCZ	**Waipu Caves**	15.47	200	P	P	20 01 09.2	+3.0
KUZ	**Kuaotunu**	15.85	195	P	P	20 01 11.0	+1.4
MXZ	**Matakaoa Point**	16.19	187	*e*P	P	20 01 13.6	+0.8
	388nm,0.9s						
MXZ	**Matakaoa Point**	16.19	187	P	P	20 01 12.1	-0.6
MXZ				S	S	20 03 48.3	-6.4
MYRZ	**Mayor Island**	16.25	193	P	P	20 01 15.8	+2.5
WIZ	**White Island**	16.31	190	P	P	20 01 16.1	+2.3
WMGZ	**Waiomatatini S**	16.43	186	P	P	20 01 15.1	+0.1
HAZ	**Te Kaha**	16.45	188	P	P	20 01 13.9	-1.2
HAZ				S	S	20 03 52.6	-6.3
HAZ	**Te Kaha**	16.45	188	P	S	20 03 54.3	-4.5
PKGZ	**Pakihiroa**	16.54	187	P	P	20 01 15.0	-1.0
PKGZ				S	S	20 03 55.1	-5.4
PKGZ	**Pakihiroa**	16.54	187	P	S	20 03 56.0	-4.5
RUGZ	**Raukumara Rang**	16.67	188	P	P	20 01 15.2	-2.1
RUGZ				S	S	20 03 55.1	-7.6
RUGZ	**Raukumara Rang**	16.67	188	P	S	20 03 56.1	-6.6
WHRZ	**Whale Island**	16.67	190	P	P	20 01 18.9	+1.8
TGRZ	**Tauranga**	16.68	192	P	P	20 01 19.3	+2.1
PUZ	**Puketiti**	16.70	187	P	P	20 01 17.8	+0.4
PUZ				S	S	20 03 58.8	-4.2
PUZ	**Puketiti**	16.70	187	P	S	20 04 00.2	-2.9
OPRZ	**Ohinepanea**	16.73	192	P	P	20 01 18.5	+0.8
TWGZ	**Tauwhareparae**	16.84	187	P	P	20 01 17.7	-1.1
TWGZ				S	S	20 04 00.6	-4.7
TWGZ	**Tauwhareparae**	16.84	187	P	S	20 04 02.1	-3.2
MARZ	**Manawahe**	16.85	191	P	P	20 01 19.5	+0.7
KMRZ	**Kaimai**	16.85	193	P	P	20 01 21.2	+2.3
EDRZ	**Edgecumbe**	16.95	191	P	P	20 01 17.9	-1.9
KARZ	**Kaharoa**	16.96	192	P	P	20 01 21.5	+1.7
OMRZ	**Omania**	17.02	192	P	P	20 01 22.1	+1.7
URZ	**Urewera**	17.04	190	*e*P	P	20 01 18.2	-2.3
	443nm,0.8s						
URZ				*e*S	S	20 04 03.4	-5.1
URZ				*e*ScP	ScP	20 08 06.7	-1.6
URZ	**Urewera**	17.04	190	P	P	20 01 18.4	-2.1
	82nm,0.3s,baz=256,slow=2.5,SNR=112						
URZ				S	S	20 04 03.4	-5.1
	7.7nm,0.3s,baz=225,slow=23,SNR=6.3						
URZ				ScP	ScP	20 08 06.7	-1.6
	2.0nm,0.3s,baz=337,slow=6.9,SNR=5.3						
URZ	**Urewera**	17.04	190	P	P	20 01 18.0	-2.5
URZ				S	S	20 04 01.1	-7.4
MWZ	**Matawai**	17.05	189	P	P	20 01 19.7	-1.0
MWZ				S	S	20 04 01.6	-7.2
MWZ	**Matawai**	17.05	189	P	S	20 04 05.1	-3.7
TKGZ	**Te Karaka**	17.11	188	P	P	20 01 20.6	-0.5
TKGZ				S	S	20 04 04.1	-5.6
TKGZ	**Te Karaka**	17.11	188	P	S	20 04 07.3	-2.3
CNGZ	**Carnagh Statio**	17.11	187	P	P	20 01 20.9	-0.3
TARZ	**Mount Tarawera**	17.12	191	P	P	20 01 21.6	+0.2
HLRZ	**Highlands Stat**	17.16	192	P	P	20 01 23.1	+1.4
RRRZ	**Republican Roa**	17.22	191	P	P	20 01 22.9	+0.7
RAGZ	**Rawiri**	17.23	189	P	P	20 01 21.3	-1.0
GRRZ	**Galatos Road**	17.31	192	P	P	20 01 25.3	+2.3
MUGZ	**Murupara**	17.31	190	P	P	20 01 21.1	-1.9
RIGZ	**Rimuhau**	17.39	188	P	P	20 01 23.2	-0.5
RIGZ	**Rimuhau**	17.39	188	P	S	20 04 10.2	-3.9
PRRZ	**Plateau Road**	17.40	191	P	P	20 01 23.9	+0.1
TLZ	**Tolley Road**	17.41	194	P	P	20 01 25.8	+1.8
RTZ	**Ruatahuna**	17.41	190	P	P	20 01 21.8	-2.2
RTZ	**Ruatahuna**	17.41	190	P	S	20 04 11.5	-3.1
ALRZ	**Allen Road**	17.47	192	P	P	20 01 26.1	+1.6
SNGZ	**Shannon Statio**	17.52	189	P	P	20 01 23.9	-1.1
SNGZ	**Shannon Statio**	17.52	189	P	S	20 04 18.0	+1.7
MTHZ	**Maungataniwha**	17.66	190	P	S	20 04 17.2	-1.4
RAHZ	**Arahi**	17.69	189	P	S	20 04 17.1	-1.9
KNZ	**Kokohu**	17.71	188	P	S	20 04 19.1	-0.2
HIZ	**Hauiti**	17.74	195	*e*P	P	20 01 28.8	+1.9
	355nm,0.9s						
HIZ	**Hauiti**	17.74	195	P	P	20 01 29.2	+2.3
WHHZ	**Waihua**	17.82	189	P	S	20 04 15.9	-5.2
KATZ	**Kakaramea**	17.99	193	P	P	20 01 30.2	+0.8
BKZ	**Black Stump Fm**	18.03	191	*e*P	P	20 01 27.8	-1.8
	111nm,0.8s						
BKZ	**Black Stump Fm**	18.03	191	P	P	20 01 27.9	-1.7
KRVZ	**Karewarewa**	18.12	193	P	P	20 01 30.4	-0.1

TWVZ	Taurewa	18.14	193	P	P	20 01 30.6	0.0
RAR	Rarotonga	18.18	93	eP	P	20 01 31.5	+0.4
	216nm,0.9s						
RAR	Rarotonga	18.18	93	P	P	20 01 31.5	+0.4
	4.9nm,0.3s,baz=246,slow=6.6,SNR=36						
NGZ	Ngauruhoe	18.20	193	P	P	20 01 31.3	0.0
TUVZ	Tukino	18.28	193	P	P	20 01 31.3	-0.7
KWHZ	Kaweka Forest	18.29	191	P	S	20 04 24.7	-4.2
FWVZ	Far West T-bar	18.29	193	P	P	20 01 31.8	-0.4
DRZ	Dome Shelter	18.31	193	P	P	20 01 34.2	+1.8
WHVZ	Whangaehu Hut	18.31	193	P	P	20 01 31.5	-0.9
TRVZ	Turoa	18.34	193	P	P	20 01 34.1	+1.5
VRZ	Vera Road	18.34	195	P	P	20 01 35.0	+2.6
PKVZ	Pokaka	18.37	193	P	P	20 01 32.5	-0.2
MOVZ	Moawhango	18.40	192	P	P	20 01 32.4	-0.6
CKHZ	Cape Kidnapper	18.41	189	P	S	20 04 32.0	+1.3
BHHZ	Black Hill Sta	18.42	191	P	P	20 01 30.8	-2.4
BHHZ	Black Hill Sta	18.42	191	P	S	20 04 30.6	-0.3
MTVZ	Mangateitei	18.43	193	P	P	20 01 34.6	+1.3
KRHZ	Kereru	18.51	191	P	P	20 01 32.4	-1.6
KRHZ	Kereru	18.51	191	P	S	20 04 28.4	-4.0
KAHZ	Kahuranaki	18.58	189	P	P	20 01 33.7	-0.9
PKE	Pukeiti	18.61	197	P	P	20 01 38.0	+3.1
KHEZ	Kahui Hut	18.69	196	P	P	20 01 39.2	+3.6
NBEZ	Newall Road No	18.71	197	P	P	20 01 39.1	+3.4
LREZ	Lake Rotokare	18.75	195	P	P	20 01 38.3	+2.2
PNHZ	Pukenui	18.80	191	P	P	20 01 35.7	-0.9
PXZ	Pawanui	18.81	189	P	P	20 01 36.3	-0.3
PXZ	Pawanui	18.81	189	P	S	20 04 34.5	-2.5
NMEZ	Namu Road	18.84	197	P	P	20 01 40.3	+3.4
WPHZ	Waipukurau	18.91	190	P	P	20 01 39.0	+1.4
TSZ	Takapari Road	18.99	191	P	P	20 01 37.4	-0.9
PRHZ	Porangahau	19.08	190	P	P	20 01 38.7	-0.4
DVHZ	Dannevirke	19.19	191	P	P	20 01 39.5	-0.6
OHWZ	Ohakea	19.26	193	P	P	20 02 00.6	+20
ANWZ	Angora Road	19.29	190	P	P	20 01 41.7	+0.8
POWZ	Post Office Ro	19.35	191	P	P	20 01 41.4	-0.1
PRWZ	Pori Road	19.47	191	P	P	20 01 42.9	+0.3
BFZ	Birch Farm	19.55	190	eP	P	20 01 42.2	-1.1
	156nm,0.7s						
BFZ				eS	S	20 04 45.4	-3.4
BFZ	Birch Farm	19.55	190	P	P	20 01 41.8	-1.5
MRZ	Mangatainoka R	19.64	192	P	P	20 01 42.3	-1.9
TIWZ	Tintock	19.70	191	P	P	20 01 43.9	-0.8
KNTN	Kanton	19.97	23	eP	P	20 01 46.4	-1.0
	488nm,0.9s						
SNZO	South Karori	20.44	193	eP	P	20 01 50.3	-1.1
	358nm,0.8s						
SNZO				eS	S	20 05 01.9	-1.0
THZ	Tophouse	21.30	196	eP	P	20 01 57.7	-1.4
	231nm,0.8s						
DSZ	Denniston Nort	21.59	198	P	P	20 02 02.4	+0.7
KHZ	Kahutara	21.76	194	eP	P	20 02 01.1	-2.0
	206nm,0.8s						
LHI	Lord Howe Isla	21.79	238	eP	P	20 02 05.5	+1.9
	318nm,1.1s						
LTZ	Lake Taylor	22.42	196	eP	P	20 02 07.2	-1.8
	266nm,0.7s						
LTZ				eS	S	20 05 31.0	-3.1
LTZ	Lake Taylor	22.42	196	P	P	20 02 07.8	-1.3
LTZ				P	P	20 02 07.3	-1.7
INZ	Inchbonnie	22.59	198	P	P	20 02 09.3	-1.2
AMCZ	Amberley	22.69	195	P	P	20 02 10.3	-1.1
OXZ	Oxford	22.99	196	eP	P	20 02 12.5	-1.5
	267nm,0.7s						
OXZ				eS	S	20 05 38.6	-4.3
OXZ	Oxford	22.99	196	P	P	20 02 12.9	-1.2
OXZ				P	P	20 02 13.6	-0.4
CRLZ	Canterbury Las	23.07	195	eP	P	20 02 13.7	-1.0
	139nm,0.7s						
CRLZ	Canterbury Las	23.07	195	P	P	20 02 14.4	-0.3
OKCZ	Okains Bay	23.11	194	P	P	20 02 14.8	-0.4
WVZ	Waitaha Valley	23.12	199	P	P	20 02 14.8	-0.4
MQZ	McQueen's Vall	23.19	195	eP	P	20 02 14.5	-1.3
	92nm,0.7s						
MQZ				eS	S	20 05 43.2	-2.9
MQZ	McQueen's Vall	23.19	195	P	P	20 02 14.6	-1.1
MQZ				P	P	20 02 14.5	-1.3
HNR	Honiara	23.28	298	eP	P	20 02 12.0	-5.1
HNR	Honiara	23.28	298	P	P	20 02 16.5	-0.5
	547nm,0.7s,baz=354,slow=5.0,SNR=17						
AKCZ	Akaroa Harbour	23.28	194	P	P	20 02 16.7	0.0
AKCZ				P	P	20 02 16.7	0.0
RPZ	Rata Peaks	23.61	198	eP	P	20 02 18.7	-1.0
	121nm,0.7s						
RPZ				eScP	ScP	20 08 24.1	-0.2
RPZ	Rata Peaks	23.61	198	P	P	20 02 19.6	0.0
	62nm,0.5s,baz=2.8,slow=3.9,SNR=26						
RPZ				ScP	ScP	20 08 24.1	-0.2
	14nm,0.6s,baz=339,slow=2.1,SNR=5.1						
RPZ	Rata Peaks	23.61	198	P	P	20 02 19.6	0.0
FOZ	Fox Glacier	23.82	200	eP	P	20 02 21.0	-0.4
	416nm,0.8s						
FOZ	Fox Glacier	23.82	200	P	P	20 02 20.9	-0.5
TARA	Tarawa	23.91	340	eP	P	20 02 22.6	-0.1
	589nm,0.8s						
LBZ	Lake Benmore	24.48	198	eP	P	20 02 25.5	-1.8
	94nm,0.8s						
LBZ	Lake Benmore	24.48	198	P	P	20 02 25.9	-1.4
JCZ	Jackson Bay	24.64	201	P	P	20 02 28.5	-0.2
ODZ	Otahua Downs	24.95	197	eP	P	20 02 29.9	-1.5
	34nm,0.7s						
ODZ	Otahua Downs	24.95	197	P	P	20 02 30.5	-0.9
WKZ	Wanaka	25.24	200	eP	P	20 02 32.7	-1.2
	103nm,0.7s						
WKZ	Wanaka	25.24	200	P	P	20 02 33.0	-0.9
MSZ	Milford Sound	25.46	202	P	P	20 02 39.0	+3.2
EAZ	Earnscleugh	25.51	199	P	P	20 02 36.4	+0.1
MLZ	Mavora Lakes	26.01	201	eP	P	20 02 40.8	+0.1
	328nm,0.8s						
MLZ	Mavora Lakes	26.01	201	P	P	20 02 41.5	+0.8
TUZ	Tuapeka	26.07	198	P	P	20 02 41.6	+0.4
DCZ	Deep Cove	26.42	202	eP	P	20 02 44.6	+0.4
	301nm,0.8s						
DCZ	Deep Cove	26.42	202	P	P	20 02 44.8	+0.6
WHZ	Wether Hill Ro	26.53	200	eP	P	20 02 44.6	-0.6
	892nm,0.8s						
PYZ	Puysegur Point	27.19	202	eP	P	20 02 51.1	+0.1
	121nm,0.8s						
EIDS	Eidsvold	27.45	256	eP	P	20 02 54.1	+0.5
	136nm,0.8s						
EIDS				eS	S	20 06 53.4	+0.1
ARMA	Armidale	27.58	245	eP	P	20 02 56.2	+1.4
	42nm,0.7s						
TBI	Tubuai	27.61	100	eP	P	20 02 55.9	+0.9
	199nm,0.9s						
PAE	Paea	28.22	88	eP	P	20 03 00.2	-0.1
	27nm,1.1s						
PPT2	Papeete2	28.24	87	eP	P	20 03 01.0	+0.4
	183nm,1.3s						
PPT2				eScP	ScP	20 08 36.8	-1.7
	47nm,0.9s						
PPT	Papeete	28.24	87	eP	P	20 03 01.1	+0.5
PPT	Papeete	28.24	87	P	P	20 03 01.7	+1.1
	132nm,0.8s,baz=64,slow=5.1,SNR=12						
PPT				ScP	ScP	20 08 40.7	+2.2
	53nm,0.9s,baz=318,slow=8.1,SNR=5.4						
PPTF	Pamatai, Papee	28.25	87	eP	P	20 03 01.1	+0.4
	164nm,0.9s						
TIAR	Tiarei	28.46	87	eP	P	20 03 02.7	+0.2
	51nm,0.8s						
TVO	Taravao	28.50	88	eP	P	20 03 02.8	-0.1
	50nm,0.7s						
PMOR	Pomariorio Ree	30.45	83	eP	P	20 03 19.6	0.0
	354nm,1.1s						
PMOR				eScP	ScP	20 08 43.5	-2.2
	125nm,0.9s						
VAH	Vaihoa	30.64	84	eP	P	20 03 20.8	-0.4
	266nm,0.9s						
VAH				eScP	ScP	20 08 44.3	-2.0
	70nm,1.0s						
XMAS	Kiritimati	31.64	45	eP	P	20 03 29.8	0.0
	357nm,0.9s						
CTA	Charters Tower	32.22	266	P	P	20 03 34.9	+0.3
	244nm,0.6s,baz=94,slow=11,SNR=221						
CTA				ScP	ScP	20 08 53.9	+2.2
	9.4nm,0.6s,baz=112,slow=6.2,SNR=6.0						
CTAO	Charters Tower	32.22	266	eP	P	20 03 34.2	-0.4
	259nm,0.7s						
CTAO	Charters Tower	32.22	266	eP	P	20 03 34.3	-0.4
CTAO				pmax	pmax		
	comp=Z,259nm,0.7s						
RABL	Rabaul	32.60	298	eP	P	20 03 36.2	-1.7
	comp=Z,155nm,0.6s						
KWAJ	Kwajalein Atol	32.70	335	eP	P	20 03 38.8	+0.1
	comp=Z,570nm,0.9s						
KWAJ	Kwajalein Atol	32.70	335	eP	P	20 03 38.8	+0.1
TOO	Toolangi	34.37	234	eP	P	20 03 53.0	+0.5
	comp=Z,122nm,1.0s						
TOO	Toolangi	34.37	234	eP	P	20 03 53.0	+0.5
TOO				pmax	pmax		
	comp=Z,122nm,1.0s						
TAU	Tasmania Unive	35.11	225	eP	P	20 03 59.3	+0.9
	comp=Z,65nm,1.1s						
TAU	Tasmania Unive	35.11	225	eP	P	20 03 59.3	+0.9
TAU				pmax	pmax		
	comp=Z,65nm,1.1s						
PATS	Pohnpei	35.69	320	eP	P	20 04 04.7	+1.1
	comp=Z,821nm,1.7s						
STKA	Stephens Creek	36.30	245	eP	P	20 04 08.7	+0.2
	comp=Z,9.2nm,0.8s						
STKA				eS	S	20 09 07.5	-0.2
STKA	Stephens Creek	36.30	245	eP	P	20 04 08.7	+0.2
STKA				eS	S	20 09 07.5	-0.2
STKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STKA	Stephens Creek	36.30	245	P	P	20 04 09.2	+0.8
	comp=Z,35nm,0.7s,baz=93,slow=9.7,SNR=92						
STKA				ScP	S	20 09 07.0	-0.7
	comp=Z,11nm,0.8s,baz=232,slow=19,SNR=8.7						
COEN	Coen	36.47	275	eP	P	20 04 10.2	+0.3
	comp=Z,330nm,0.8s						
MCQ	Macquarie Isla	36.87	201	eP	P	20 04 12.3	-0.3
	comp=Z,255nm,0.9s						
MCQ	Macquarie Isla	36.87	201	eP	P	20 04 12.4	-0.3
MCQ				pmax	pmax		
	comp=Z,255nm,0.9s						
MANU	Manus Island	37.77	296	eP	P	20 04 21.3	+0.7
	comp=Z,200nm,0.9s						
JOHN	Johnston Islan	39.13	15	eP	P	20 04 31.9	+0.5
	comp=Z,248nm,0.9s						
TAOE	Nuku Hiva Isla	39.67	78	eP	P	20 04 35.3	-0.7
	comp=Z,479nm,0.9s						
TAOE	Nuku Hiva Isla	39.67	78	eP	P	20 04 36.5	+0.5
	comp=Z,215nm,0.9s						
BBOO	Buckleboo	41.06	244	eP	P	20 04 46.2	-0.5
	comp=Z,71nm,0.8s						
BBOO				eS	S	20 10 16.8	-0.3
WAKE	Wake Island	42.76	340	eP	P	20 05 00.3	+0.3
	comp=Z,398nm,0.9s						
H11N3	WAKE ISLAND Hy	43.09	341	P	P	20 05 03.2	+0.8
	baz=172,slow=9.2,SNR=3.9						
H11N1	WAKE ISLAND Hy	43.09	341	P	P	20 05 02.1	-0.2
	baz=172,slow=9.2,SNR=4.5						
AS01	Alice Springs	43.10	258	eP	P	20 05 02.0	-0.8
AS01				ePcP	PcP	20 06 38.9	+0.2
H11N2	WAKE ISLAND Hy	43.10	341	P	P	20 05 02.5	0.0
	baz=172,slow=9.2,SNR=4.0						
AS31	Alice Springs	43.14	258	eP	P	20 05 02.4	-0.8
	comp=Z,71nm,0.9s						
AS31				ePcP	PcP	20 06 39.5	+0.6
AS31				eScP	ScP	20 09 36.0	+2.6
AS31				eS	S	20 10 45.6	-1.7
AS31				eScS	ScS	20 13 57.8	+1.4
ASAR	Alice Springs	43.14	258	P	P	20 05 02.9	-0.3
	comp=Z,276nm,0.8s,baz=90,slow=8.2,SNR=722						
ASAR				PcP	PcP	20 06 39.8	+0.9
	comp=Z,16nm,0.7s,baz=115,slow=3.4,SNR=5.2						
ASAR				ScP	ScP	20 09 36.0	+2.6
	comp=Z,13nm,0.6s,baz=105,slow=4.5,SNR=8.9						
ASAR				S	S	20 10 45.6	-1.7
	comp=Z,75nm,0.9s,baz=95,slow=16,SNR=52						
ASAR				ScS	ScS	20 13 57.8	+1.4
	comp=Z,7.5nm,0.8s,baz=97,slow=7.3,SNR=13						
JAY	Jayapura	43.23	290	P	P	20 05 04.2	+0.3
	comp=Z,6µm,0.8s,comp=Z,41µm						
WC3	Warramunga Arr	43.26	263	eP	P	20 05 03.8	-0.3
	comp=Z,310nm,0.8s						
WB2	Warramunga Arr	43.28	263	eP	P	20 05 02.9	-1.4
WB2				ePcP	PcP	20 06 40.0	+0.7
WB2				eS	S	20 10 48.1	-1.1
WRAB	Tennant Creek	43.28	263	eP	P	20 05 03.2	-1.0
	comp=Z,310nm,0.9s						
WRAB	Tennant Creek	43.28	263	⇑eP	P	20 05 03.3	-1.0
WRAB				pmax	pmax		
	comp=Z,316nm,0.9s						
WR1	Warramunga Arr	43.29	263	eP	P	20 05 03.4	-0.9
	comp=Z,444nm,0.8s						
WR1				eScP	ScP	20 09 36.2	+2.3
WR1				eS	S	20 10 46.0	-3.4
WR1				eScS	ScS	20 13 58.4	+1.0
WR1				eSKKSdf	P3KPbc	20 34 00.1	
WRA	Warramunga Arr	43.29	263	P	P	20 05 03.4	-0.9
	comp=Z,284nm,0.8s,baz=94,slow=7.7,SNR=628						
WRA				ScP	ScP	20 09 36.2	+2.2
	comp=Z,9.6nm,0.8s,baz=90,slow=4.1,SNR=5.6						
WRA				S	S	20 10 46.0	-3.4
	comp=Z,14nm,0.7s,baz=97,slow=15,SNR=12						
WRA				ScS	ScS	20 13 58.4	+1.0
	comp=Z,2.6nm,0.9s,baz=104,slow=5.5,SNR=5.7						
WRA				P3KPbc		20 34 00.1	
	comp=Z,0.3nm,0.6s,baz=297,slow=2.9,SNR=8.5						
GENI	Genyem	43.66	290	P	P	20 05 07.6	+0.4
	comp=Z,827nm,0.8s,comp=Z,6µm						
KKH	Kailua Kona	46.76	31	eP	P	20 05 30.8	+0.2
KKH	Kailua Kona	46.76	31	eP	P	20 05 30.8	+0.2
KHLU	Kahalu`u	46.77	31	eP	P	20 05 30.5	-0.3
	comp=Z,180nm,0.8s						
AIN	Ainahou	46.79	32	eP	P	20 05 31.1	0.0
	comp=Z,310nm,1.2s						
HLP	Hilina Pali	46.80	32	eP	P	20 05 32.1	+1.1
	comp=Z,856nm,1.9s						
MWH	Moku'aweowe	46.82	31	eP	P	20 05 31.7	0.0
	comp=Z,193nm,1.2s						
MLOA	Mauna Loa Obse	46.87	31	eP	P	20 05 32.1	+0.2
	comp=Z,512nm,1.8s						
HUH	Hualalai	46.88	31	eP	P	20 05 32.0	+0.2
	comp=Z,359nm,1.5s						
PUH	Pauahi	46.91	32	eP	P	20 05 32.4	+0.6
	comp=Z,134nm,0.8s						
MLH	Mauna Loa	46.93	32	eP	P	20 05 30.9	-1.3
	comp=Z,224nm,0.9s						
MLH	Mauna Loa	46.93	32	eP	P	20 05 30.9	-1.3
MLH				pmax	pmax		
	comp=Z,224nm,0.9s						
STCH	Steam Cracks	46.96	32	eP	P	20 05 32.1	-0.2
	comp=Z,250nm,0.8s						
HMH	Humu'ula Sheep	46.97	31	eP	P	20 05 33.2	+0.6
	comp=Z,400nm,1.0s						
POHA	Pohakuloa	47.08	31	eP	P	20 05 34.1	+0.8
	comp=Z,175nm,0.9s						
KEKH	Kekaha	47.20	25	eP	P	20 05 34.2	+0.3
	comp=Z,391nm,1.2s						
HPAH	Hawaii Prepara	47.24	31	eP	P	20 05 34.8	+0.6
	comp=Z,505nm,0.9s						
MHA	Mahukona	47.27	30	eP	P	20 05 34.9	+0.5
MHA	Mahukona	47.27	30	eP	P	20 05 34.9	+0.5
HON	Honolulu	47.32	27	eP	P	20 05 35.7	+1.0
	comp=Z,281nm,0.8s						
KIP	Kipapa	47.40	27	eP	P	20 05 35.7	+0.3
	comp=Z,166nm,1.3s						
KIP	Kipapa	47.40	27	deP	P	20 05 34.1	-1.3
KIP				pmax	pmax		
	comp=Z,369nm,2.0s						
SRPI	Serui, Papua	47.46	288	P	P	20 05 36.5	+0.5
	comp=Z,483nm,0.7s,comp=Z,4µm						
HLK	Haleakala	47.60	30	eP	P	20 05 37.5	+0.3
	comp=Z,186nm,0.8s						
OPA	Opana	47.64	27	eP	P	20 05 36.9	-0.2
	comp=Z,184nm,0.9s						
OPA	Opana	47.64	27	eP	P	20 05 36.9	-0.2
OPA				pmax	pmax		
	comp=Z,184nm,0.9s						
KHLH	Kahului Airpor	47.64	29	eP	P	20 05 38.1	+0.9
	comp=Z,193nm,0.9s						
FORT	Forrest	47.82	247	eP	P	20 05 37.5	-1.0
	comp=Z,113nm,0.7s						
FORT				ePcP	PcP	20 06 49.9	-5.3
MTN	Manton Dam	47.99	272	eP	P	20 05 38.4	-1.5
	comp=Z,289nm,0.7s						
MIDW	Midway	49.41	2	eP	P	20 05 49.8	-0.3
	comp=Z,300nm,1.4s						
SAUI	Saumlaki	49.43	278	eP	P	20 05 52.1	+1.5
	comp=Z,875nm,0.9s						
SAUI	Saumlaki	49.43	278	P	P	20 05 50.5	-0.1
RKPI	Ransiki, Papua	49.46	287	P	P	20 05 51.3	+0.5
	comp=Z,232nm,0.8s,comp=Z,2µm						
GUMO	Guam	49.51	312	eP	P	20 05 51.3	+0.2
	comp=Z,463nm,0.8s						
GUMO	Guam	49.51	312	P	P	20 05 51.3	+0.2
	comp=Z,393nm,0.7s,baz=195,slow=9.9,SNR=10						
FAKI	Fak Fak	50.56	285	eP	P	20 05 58.5	-0.4
	comp=Z,200nm,0.9s						
FAKI	Fak Fak	50.56	285	P	P	20 05 59.5	+0.6
	comp=Z,231nm,1.0s						
FITZ	Fitzroy Crossi	51.72	263	eP	P	20 06 07.3	+0.2
	comp=Z,200nm,1.5s						
FITZ				eS	S	20 12 45.8	+0.6
FITZ	Fitzroy Crossi	51.72	263	S	S	20 12 45.8	+0.6
	comp=Z,16nm,1.1s,baz=335,slow=20,SNR=5.7						
SWI	Sorong	52.35	286	P	P	20 06 11.9	+0.2
	comp=Z,2µm,0.8s,comp=Z,11µm						
NLAI	Namlea	55.10	281	P	P	20 06 31.7	+0.6
	comp=Z,292nm,0.9s,comp=Z,2µm						
SOEI	Soe	55.34	273	eP	P	20 06 33.5	+0.7
	comp=Z,799nm,0.9s						
SOEI	Soe	55.34	273	P	P	20 06 33.6	+0.7
	comp=Z,1µm,0.9s,comp=Z,8µm						
BATI	Baumata	55.76	272	P	P	20 06 36.5	+0.9
	comp=Z,235nm,0.8s,comp=Z,2µm						
MBWA	Marble Bar	56.48	258	eP	P	20 06 40.3	-0.2
	comp=Z,180nm,0.8s						
TNTI	Ternate	56.56	286	eP	P	20 06 40.5	-0.6
	comp=Z,462nm,1.0s						
TNTI	Ternate	56.56	286	P	P	20 06 41.6	+0.5
	comp=Z,484nm,0.9s,comp=Z,3µm						
SANI	Sanana	56.60	282	P	P	20 06 41.4	0.0
SBA	Scott Base	56.85	184	eP	P	20 06 45.1	+3.1
	comp=Z,127nm,1.0s						
VNDA	Vanda	56.87	185	eP	P	20 06 43.6	+1.5
	comp=Z,32nm,0.8s						
VNDA	Vanda	56.87	185	eP	P	20 06 43.6	+1.5
VNDA				pmax	pmax		
	comp=Z,32nm,0.8s						
VNDA	Vanda	56.87	185	P	P	20 06 44.1	+2.0
	comp=Z,21nm,0.7s,baz=359,slow=6.3,SNR=45						
NWAO	Narrogin (SRO)	56.88	244	eP	P	20 06 42.8	-0.2
	comp=Z,89nm,1.5s						
NWAO	Narrogin (SRO)	56.88	244	eP	P	20 06 42.8	-0.2
NWAO				pmax	pmax		
	comp=Z,89nm,1.5s						
MMRI	Maumere	57.60	273	eP	P	20 06 48.1	-0.1
	comp=Z,246nm,0.8s						
MMRI	Maumere	57.60	273	P	P	20 06 49.1	+0.9
	comp=Z,322nm,0.8s						
EDFI	Ende, Flores	58.08	273	P	P	20 06 51.6	+0.1
	comp=Z,300nm,0.9s,comp=Z,2µm						
MORW	Morawa	58.37	248	eP	P	20 06 53.4	+0.3
	comp=Z,38nm,0.8s						
KDI	Kendari	58.93	279	P	P	20 06 57.7	+0.6
	comp=Z,126nm,0.9s,comp=Z,1µm						
WSI	Waingapu	59.07	271	P	P	20 06 58.8	+0.8
	comp=Z,1µm,1.0s						
KMSI	Cibinong	59.52	284	P	P	20 07 01.6	+0.6
	comp=Z,366nm,0.9s						
LUWI	Luwuk	59.94	282	eP	P	20 07 03.2	-0.6
	comp=Z,319nm,0.9s						
LUWI	Luwuk	59.94	282	P	P	20 07 04.5	+0.7
	comp=Z,385nm,1.0s,comp=Z,3µm						
MATI	Mati	60.41	292	eP	P	20 07 05.2	-1.6
JCJ	Chichijima	60.99	321	P	P	20 07 09.9	-0.5
	comp=Z,162nm,0.5s,baz=253,slow=5.1,SNR=22						
CBIJ	Chichi jima	60.99	321	eP	P	20 07 09.9	-0.5
DAV	Davao City (W)	61.05	291	eP	P	20 07 12.1	+1.1
	comp=Z,312nm,0.8s						
DAV	Davao City (W)	61.05	291	P	P	20 07 11.9	+0.8
	comp=Z,238nm,0.6s,baz=55,slow=4.4,SNR=12						
BNSI	Bone	61.09	277	P	P	20 07 12.1	+0.8
GIRL	Giralia	61.15	255	eP	P	20 07 11.7	0.0
	comp=Z,270nm,0.8s						
KCP	Kidapawan	61.45	291	⇓iP	P	20 07 14.0	+0.3
SKMP	Bagumbayan, Su	61.69	290	eP	P	20 07 14.3	-0.9
BUKP	Musuan	61.89	292	eP	P	20 07 17.6	+1.1
BUTP	Butuan	61.95	293	eP	P	20 07 17.6	+0.7
CASY	Casey	62.60	205	eP	P	20 07 20.5	+0.4
	comp=Z,140nm,1.0s						
MSLP	Maasin	63.18	294	eP	P	20 07 24.3	-0.5
PAGZ	Pagadian	63.34	291	eP	P	20 07 26.7	+0.9
BESP	Borongan	63.44	296	eP	P	20 07 26.2	-0.1
OCLP	Ormoc	63.85	295	eP	P	20 07 29.0	-0.1
JAGI	Jajag, Banyuwa	65.19	270	eP	P	20 07 35.9	-1.6
	comp=Z,228nm,0.9s						
PVCP	Virac	65.53	297	eP	P	20 07 40.0	+0.4
RCP	Roxas	65.69	294	⇑eP	P	20 07 40.4	-0.2
AUQP	San Andres	66.63	296	eP	P	20 07 48.3	+1.9
OTRP	Odiongan	66.70	295	eP	P	20 07 46.6	-0.2
CUYO	Cuyo Island	66.82	293	eP	P	20 07 48.2	+0.6
JHJ2	Mitsune	66.84	323	eP	P	20 07 47.5	+0.1
	comp=Z,662nm,1.2s						
JHJ	Hachijo jima 2	66.87	323	P	P	20 07 47.4	-0.1
	comp=Z,175nm,0.4s,baz=92,slow=19,SNR=9.2						
BOAC	Boac	67.39	296	eP	P	20 07 51.4	+0.3
SJMP	San Jose	67.51	294	eP	P	20 07 52.5	+0.7
BUSP	Coron	68.08	293	eP	P	20 07 55.4	+0.2
ENPP	El Nido	68.36	292	eP	P	20 07 56.7	-0.2
TGY	Tagaytay City	68.48	296	P	P	20 07 58.4	+0.7
	comp=Z,299nm,0.6s,baz=295,slow=1.6,SNR=15						
QSPA	South Pole Qui	68.62	180	eP	P	20 07 58.5	+0.7
	comp=Z,168nm,0.9s						
QSPA	South Pole Qui	68.62	180	P	P	20 07 59.4	+1.6
	comp=Z,194nm,1.0s,baz=253,slow=0.2,SNR=194						
BATP	Bataraza	68.66	289	eP	P	20 07 59.7	+0.9
UGM	Wanagama	68.76	270	eP	P	20 07 59.0	-0.4
	comp=Z,950nm,1.7s						
PALP	Palanan	68.76	299	eP	P	20 07 60.0	+0.7
BALP	Baler	68.77	298	eP	P	20 08 00.2	+0.8
KKM	Kota Kinabalu	68.86	286	eP	P	20 08 00.6	+0.6
	comp=Z,90nm,0.9s						
SMRI	Semarang	69.13	271	eP	P	20 08 02.4	+0.8
	comp=Z,135nm,0.9s						
CAUP	Cauayan	69.19	299	eP	P	20 08 03.3	+1.4
SGCP	Mt. Cagua	69.69	300	eP	P	20 08 06.3	+1.5
JOW	Kunigami	69.87	311	eP	P	20 08 06.4	+0.7
	comp=Z,54nm,0.8s						
JOW	Kunigami	69.87	311	P	P	20 08 06.7	+1.0
	comp=Z,15nm,0.9s,baz=150,slow=13,SNR=11						
INU	Inuyama	70.06	323	eP	P	20 08 05.9	-0.7
	comp=Z,63nm,1.0s						
APYP	Conner	70.14	299	eP	P	20 08 07.2	-0.2
MJAR	Matsushiro Arr	70.28	325	P	P	20 08 07.3	-0.6
	comp=Z,54nm,0.8s,baz=167,slow=6.0,SNR=90						
MAJO	Matsushiro	70.28	325	eP	P	20 08 07.1	-0.8
	comp=Z,100nm,1.0s						
MAJO	Matsushiro	70.28	325	d iP	P	20 08 08.0	+0.1
MAJO				pmax	pmax		
	comp=Z,112nm,1.1s						
MAT	Matsushiro	70.28	325	P	P	20 08 07.4	-0.5
MAT				S	S	20 16 29.8	-3.2
MJB9	Matsu-Tunnel	70.28	325	eP	P	20 08 07.4	-0.6
	comp=Z,97nm,1.0s						
SBUM	Sibu	70.99	281	eP	P	20 08 12.5	-0.1
	comp=Z,46nm,1.0s						
CISI	Cisompet, Garu	71.40	269	eP	P	20 08 14.1	-1.0
	comp=Z,108nm,0.9s						
ERM	Erimo	72.07	331	eP	P	20 08 17.3	-0.9
	comp=Z,45nm,1.1s						
ERM	Erimo	72.07	331	⇓eP	P	20 08 20.3	+2.1
ERM				pmax	pmax		
	comp=Z,56nm,1.2s						
JNU	Nakatsue	72.16	318	eP	P	20 08 19.5	+0.5
JNU	Nakatsue	72.16	318	P	P	20 08 19.6	+0.7
	comp=Z,93nm,1.0s,baz=74,slow=4.2,SNR=23						
YOJ	Yonaguni jima	72.31	306	eP	P	20 08 19.8	-0.2
	comp=Z,261nm,1.0s						
YOJ	Yonaguni jima	72.31	306	eP	P	20 08 19.8	-0.2
YOJ				pmax	pmax		
	comp=Z,261nm,1.0s						
KSM	Kuching	72.37	279	eP	P	20 08 20.3	-0.3
	comp=Z,131nm,0.8s						
YUK	Yuzh-Kuril'sk	72.57	334	c iP	P	20 08 22.7	+1.7
KUR	Kuril'sk	72.80	336	ceP	P	20 08 23.9	+1.6
TWG	Pinlang	72.90	304	eP	P	20 08 21.3	-2.1
	comp=Z,346nm,0.6s						
KIWB	Kanaga Island	73.01	1	eP	P	20 08 22.7	-0.7
YULB	Yu-li	73.03	304	eP	P	20 08 22.4	-1.8
	comp=Z,49nm,0.7s						
ADK	Adak	73.05	2	eP	P	20 08 23.1	-0.5
	comp=Z,86nm,0.6s						
ADK	Adak	73.05	2	eP	P	20 08 23.1	-0.5
ADK				pmax	pmax		
	comp=Z,86nm,0.6s						
TPUB	Ta-pu	73.50	304	eP	P	20 08 25.3	-1.5
	comp=Z,324nm,0.8s						
SSLB	Suanglung	73.51	304	eP	P	20 08 25.4	-1.5
	comp=Z,153nm,0.9s						
SSLB				eS	S	20 17 09.8	+0.4
YHNB	Yeheng	73.67	305	eP	P	20 08 27.1	-0.7

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      comp=Z,170nm,0.9s
TATO  Taipei           73.75 306  eP      P       20 08 27.9 -0.3
      comp=Z,223nm,0.9s
ASAJ  Asahikawa        74.00 332   P      P       20 08 31.1 +1.9
      comp=Z,35nm,0.6s,baz=215,slow=5.1,SNR=41
NIKH  Nikolski High    74.66   7  eP      P       20 08 32.2 -0.4
      comp=Z,185nm,0.9s
UNV   Unalaska Valle   75.79   8  eP      P       20 08 38.0 -0.9
      comp=Z,59nm,0.6s
QZH   Quanzhou         75.94 304⇑iP       P       20 08 41.0 +0.6
QZH                                S      S       20 17 36.5 +0.9
QZH                                pmax   pmax
      comp=Z,120nm,0.8s
YSS   Yuzh-Sakhalins   76.22 334  eP      P       20 08 41.2 -0.2
      comp=Z,113nm,1.2s
YSS   Yuzh-Sakhalins   76.22 334  eP      P       20 08 42.8 +1.4
YSS                                pmax   pmax
      comp=Z,60nm,1.2s
TJN   Taejon           76.47 318ceP       P       20 08 44.8 +1.8
PET   Petropavlovsk    76.60 347  eP      P       20 08 42.6 -0.7
      comp=Z,97nm,1.3s
PET   Petropavlovsk    76.60 347  eP      P       20 08 43.7 +0.4
PET                               eS      S       20 17 39.2 -2.2
PET                               eSS     SS      20 22 53.4 -1.8
PET                               eSSS    SSS     20 26 18.6
PET                                pmax   pmax
      comp=Z,64nm,1.2s
PET                                MLR    MLR
      comp=Z,300nm,24.0s
KSRS  Korea Array      76.82 319   P      P       20 08 46.0 +1.1
      comp=Z,23nm,1.0s,baz=142,slow=6.3,SNR=53
KS15  Wonju Array Si   76.83 319  eP      P       20 08 45.4 +0.4
KSAR  Wonju Array Be   76.83 319   P      P       20 08 46.0 +1.0
KS01  Wonju Array Si   76.85 319  eP      P       20 08 45.4 +0.3
PEA0B Petropavlovsk-   76.89 346  eP      P       20 08 44.1 -0.9
      comp=Z,219nm,1.4s
PETK  Petropavlovsk-   76.89 346  eP      P       20 08 44.7 -0.2
PETK  Petropavlovsk-   76.89 346   P      P       20 08 44.9 -0.1
      comp=Z,42nm,0.8s,baz=122,slow=6.8,SNR=45
PEA1  Petropavlovsk-   76.89 346  eP      P       20 08 44.9 -0.1
VLA   Vladivostok      78.38 326⇑eP       P       20 08 54.9 +1.7
VLA                                pmax   pmax
      comp=Z,79nm,1.3s
MSHR  Mys Shultsa      78.39 325ceP       P       20 08 55.3 +2.0
MYKOM Kota Tinggi      78.45 277  eP      P       20 08 54.8 +0.5
      comp=Z,48nm,0.9s
SNCC  San Nicolas Is   78.77  48  eP      P       20 08 57.1 +1.6
      comp=Z,55nm,0.9s
SNCC  San Nicolas Is   78.77  48   P      P       20 08 57.1 +1.6
      baz=235
USA0B Ussuriysk Arra   79.08 327  eP      P       20 08 58.0 +1.1
      comp=Z,120nm,1.1s
USRK  Ussuriysk Ar.    79.08 327   P      P       20 08 58.3 +1.4
      comp=Z,83nm,1.1s,baz=122,slow=3.0,SNR=54
SCZ2  Santa Cruz Isl   79.12  47   P      P       20 08 58.7 +1.3
      baz=235
SCI2  San Clemente I   79.29  48   P      P       20 08 59.8 +1.5
      baz=236
SBC   Santa Barbara    79.32  46   P      P       20 09 00.0 +1.6
      baz=235
TYV   Tymovskoe        79.42 337  eP      P       20 08 59.2 +0.7
TYV                                pmax   pmax
      comp=Z,400nm,1.9s
CHGN  Chignik          79.43  12  eP      P       20 08 58.6 +0.2
      comp=Z,244nm,1.7s
PKM   Mcpherson Peak   79.51  46   P      P       20 09 01.3 +1.6
      baz=235
SAO   San Andreas Ge   79.54  44  eP      P       20 09 01.0 +1.5
      comp=Z,22nm,0.9s
SAO   San Andreas Ge   79.54  44  eP      P       20 09 01.0 +1.5
SAO                                pmax   pmax
      comp=Z,23nm,0.9s
BLG   Laguna Peak, P   79.57  47   P      P       20 09 01.6 +1.8
      baz=235
NJ2   Nanjing          79.57 310 ⇓P       P       20 09 01.0 +1.3
NJ2                                pmax   pmax
      comp=Z,86nm,0.8s
CIS   Catalina Islan   79.62  48   P      P       20 09 01.6 +1.6
      baz=236
SMMC  Simmler          79.63  46   P      P       20 09 01.7 +1.6
      baz=234
HOPS  Hopland Field    79.87  41  eP      P       20 09 01.9 +0.8
      comp=Z,76nm,0.9s
FMP   Fort Macarthur   79.88  48   P      P       20 09 02.6 +1.3
      baz=236
GDXM  Geysers          79.92  41  eP      P       20 09 03.1 +1.6
      comp=Z,16nm,0.8s
KCPM  Cahto Peak       79.99  40  eP      P       20 09 03.9 +2.0
      comp=Z,40nm,0.9s
OSI   Osito Audit: C   80.09  47  eP      P       20 09 03.7 +1.3
      comp=Z,25nm,0.9s
OSI   Osito Audit: C   80.09  47   P      P       20 09 03.8 +1.3
      baz=235
DECC  Green Verdugo    80.15  47   P      P       20 09 04.3 +1.5
      baz=236
QIZ   Qiongzhong       80.16 295  eP      P       20 09 04.2 +1.1
      comp=Z,67nm,1.7s
PASC  Pasadena Art C   80.21  47  eP      P       20 09 04.3 +1.2
      comp=Z,25nm,0.8s
KMRM  Mail Ridge       80.25  40  eP      P       20 09 04.9 +1.7
      comp=Z,172nm,0.8s
109C  Camp Elliot, M   80.25  49   P      P       20 09 04.4 +1.2
      baz=237
CPE   Camp Elliot      80.25  49  eP      P       20 09 04.3 +1.0
      comp=Z,25nm,1.0s
MAW   Mawson           80.27 200  eP      P       20 09 03.4 +0.6
      comp=Z,88nm,1.6s
MAW   Mawson           80.27 200  eP      P       20 09 03.4 +0.6
MAW                                pmax   pmax
      comp=Z,89nm,1.6s
MAW   Mawson           80.27 200   P      P       20 09 03.1 +0.3
      comp=Z,77nm,1.1s,baz=138,slow=7.2,SNR=6.9
ARVC  Arvin            80.31  46   P      P       20 09 04.6 +1.1
      baz=235
MWC   Mount Wilson     80.32  47  eP      P       20 09 04.5 +0.7
      comp=Z,25nm,0.8s
MWC   Mount Wilson     80.32  47  eP      P       20 09 04.6 +0.7
MWC                                pmax   pmax
      comp=Z,25nm,0.8s
JCC   Jacoby Creek,    80.43  39  eP      P       20 09 05.5 +1.5
      comp=Z,139nm,1.4s
BAR   Barrett          80.44  49  eP      P       20 09 05.4 +1.1
      comp=Z,16nm,1.1s
BKNI  Bangkinang       80.51 274  eP      P       20 09 05.1  0.0
      comp=Z,78nm,0.9s
VES   Vestal, Richgr   80.54  46   P      P       20 09 05.7 +1.0
      baz=235,SNR=7.3
MURC  Murrieta         80.58  48   P      P       20 09 06.1 +1.1
      baz=236
BFSC  Mount Baldy Ra   80.61  48   P      P       20 09 06.1 +0.8
      baz=236,SNR=6.0
MDJ   Mudanjiang       80.62 326   P      P       20 09 05.8 +0.9
MDJ                                pmax   pmax
      comp=Z,64nm,1.0s
MDJ                                pmax   pmax
      comp=Z,200nm,2.7s
MDJ   Mudanjiang       80.62 326  eP      P       20 09 06.0 +1.1
      comp=Z,60nm,1.0s
KHMM  Horse Mountain   80.64  39  eP      P       20 09 06.9 +1.6
      comp=Z,57nm,0.9s
MONP2 Monument Peak    80.73  49   P      P       20 09 07.4 +1.3
      baz=237,SNR=28
EDW2  Edwards Air Fo   80.74  47   P      P       20 09 07.0 +1.2
      baz=236,SNR=34
O02D  Mt. Diablo Mer   80.77  40   P      P       20 09 07.9 +2.0
      baz=232,SNR=26
IKP   In-Ko-Pah, Jac   80.82  50   P      P       20 09 07.7 +1.4
      baz=237,SNR=10.0
ISA   Isabella, Lake   80.85  46  eP      P       20 09 06.9 +0.5
      comp=Z,38nm,0.9s
ISA   Isabella, Lake   80.85  46  eP      P       20 09 06.9 +0.5
ISA                                pmax   pmax
      comp=Z,38nm,0.9s
ISA   Isabella, Lake   80.85  46   P      P       20 09 07.8 +1.3
      baz=235,SNR=33
PMSA  Palmer Station   80.89 157   P      P       20 09 05.5 -0.5
      comp=Z,34nm,0.6s,baz=205,slow=2.8,SNR=7.6
KRMB  Red Mountain     80.94  39  eP      P       20 09 08.3 +1.5
SRIG  Santa Rosalia    80.95  56  eP      P       20 09 08.2 +1.2
      comp=Z,283nm,0.4s
CMB   Columbia Colle   80.97  43  eP      P       20 09 07.6 +0.7
      comp=Z,28nm,0.9s
CMB   Columbia Colle   80.97  43  eP      P       20 09 07.6 +0.7
CMB                                pmax   pmax
      comp=Z,28nm,0.9s
PFO   Pinyon Flats O   81.09  49  eP      P       20 09 07.8  0.0
      comp=Z,10nm,0.8s
PFO   Pinyon Flats O   81.09  49  eP      P       20 09 07.8  0.0
PFO                                pmax   pmax
      comp=Z,10.0nm,0.8s
PFO   Pinyon Flats O   81.09  49   P      P       20 09 09.0 +1.2
      baz=237,SNR=6.2
PFO   Pinyon Flats O   81.09  49   P      P       20 09 08.2 +0.5
      comp=Z,9.6nm,0.9s,baz=266,slow=3.1,SNR=11
XPFO  Pion Flat        81.10  49  eP      P       20 09 08.1 +0.3
      comp=Z,12nm,0.9s
AFDM  Forest Hills D   81.14  42  eP      P       20 09 08.6 +0.9
      comp=Z,30nm,1.0s
WDC   Whiskeytown Da   81.17  40  eP      P       20 09 08.4 +0.6
      comp=Z,48nm,0.9s
WDC   Whiskeytown Da   81.17  40  eP      P       20 09 08.4 +0.6
WDC                                pmax   pmax
      comp=Z,48nm,0.9s
ORV   Oroville         81.17  41  eP      P       20 09 08.5 +0.6
      comp=Z,32nm,0.9s
ORV   Oroville         81.17  41  eP      P       20 09 08.5 +0.6
ORV                                pmax   pmax
      comp=Z,33nm,0.9s
SWSC  Sam W. Stewart   81.20  50   P      P       20 09 09.2 +1.0
      baz=237,SNR=7.8
LRMC  Laurel Mtn Rad   81.28  47   P      P       20 09 09.8 +1.1
      baz=236,SNR=13
N02D  Trinity Center   81.31  40   P      P       20 09 10.6 +1.9
      baz=232,SNR=22
O03E  Paynes Creek     81.44  41   P      P       20 09 10.3 +0.9
      baz=232,SNR=13
M02C  Callahan         81.48  39   P      P       20 09 11.6 +2.1
      baz=232,SNR=31
L02E  Cave Junction    81.52  38   P      P       20 09 11.4 +1.8
      baz=231,SNR=7.6
CWC   Cottonwood Cre   81.55  46   P      P       20 09 11.3 +1.1
      baz=236
KEBM  Edson Butte      81.55  37  eP      P       20 09 12.1 +2.3
      comp=Z,77nm,1.1s
MDPB  Devils Postpil   81.58  44  eP      P       20 09 11.7 +1.3
      comp=Z,30nm,0.9s
DL2   Dalian           81.61 317   P      P       20 09 11.5 +1.4
DL2                                pP     pwP     20 11 24.5 +3.6
DL2                                S      S       20 18 35.5 +2.0
DL2                                pmax   pmax
      comp=Z,48nm,1.1s
OMMB  Old Mammoth Mi   81.62  44  eP      P       20 09 11.5 +0.9
      comp=Z,15nm,0.8s
BELC  Belle Mtn. Jos   81.63  49   P      P       20 09 11.6 +1.1
      baz=237,SNR=9.6
RUBR  Rubicon Trail    81.71  42  eP      P       20 09 11.0  0.0
      comp=Z,66nm,0.9s
MLAC  Mammoth, Mammo81.73  44   P      P       20 09 12.3 +1.2
      baz=235
MPMC  Manual Prospec   81.73  46   P      P       20 09 12.1 +1.0
      baz=236,SNR=32
YBH   Yreka Blue Hor   81.78  39  eP      P       20 09 12.3 +1.3
      comp=Z,40nm,0.8s
YBH   Yreka Blue Hor   81.78  39   P      P       20 09 12.8 +1.8
      comp=Z,33nm,0.8s,baz=177,slow=2.0,SNR=77
GSC   Goldstone, Bar   81.78  47  eP      P       20 09 11.9 +0.7
      comp=Z,24nm,0.8s
GSC   Goldstone, Bar   81.78  47   P      P       20 09 12.1 +0.9
      baz=236,SNR=18
DAC   Darwin (Calif)   81.79  46  eP      P       20 09 11.9 +0.6
      comp=Z,17nm,0.8s
TIN   Tinemaha, Big    81.80  45   P      P       20 09 12.4 +1.1
      baz=235
GRNR  Gornyy           81.81 333  eP      P       20 09 12.4 +1.6
GRNR                               pmax   pmax
      comp=N,25nm,1.0s
GRNR                               pmax   pmax
      comp=Z,62nm,1.0s
K02D  Willamette Mer   81.82  38   P      P       20 09 12.8 +1.6
      baz=231,SNR=6.1
BC3   Big Chuckawall   81.83  49   P      P       20 09 13.0 +1.5
      baz=238,SNR=8.2
HEC   Hector,Ludlow    81.84  48   P      P       20 09 12.7 +1.2
      baz=237,SNR=9.9
WAKR  Walker           81.85  43  eP      P       20 09 12.9 +1.3
      comp=Z,39nm,0.8s
GLA   Glamis           81.95  50  eP      P       20 09 11.8 -0.3
      comp=Z,54nm,0.8s
GLA   Glamis           81.95  50  eP      P       20 09 11.8 -0.3
GLA                                pmax   pmax
      comp=Z,54nm,0.8s
GLA   Glamis           81.95  50   P      P       20 09 13.8 +1.7
      baz=238,SNR=8.6
J01E  Myrtle Point     81.97  37   P      P       20 09 13.5 +1.7
      baz=231,SNR=7.0
NKL   Nikolayevsk      81.99 337  eP      P       20 09 11.0 -0.6
NKL                                pmax   pmax
      comp=Z,100nm,1.3s
KDAK  Kodiak Island    82.02  14  eP      P       20 09 11.9 +0.2
      comp=Z,281nm,1.6s
KDAK  Kodiak Island    82.02  14  eP      P       20 09 11.9 +0.2
KDAK                               pmax   pmax
      comp=Z,281nm,1.6s
KDAK  Kodiak Island    82.02  14   P      P       20 09 12.1 +0.4
      comp=Z,21nm,0.9s,baz=196,slow=7.4,SNR=4.4
WHN   Wuhan            82.05 307 ⇓P       P       20 09 13.5 +1.0
IPM   Ipoh             82.07 278  eP      P       20 09 12.8 -0.3
      comp=Z,133nm,0.8s
PNTR  Pine Nut         82.09  43  eP      P       20 09 13.7 +0.9
      comp=Z,98nm,0.8s
SNY   Shenyang         82.17 321 ⇑P       P       20 09 13.3 +0.4
SNY                                pmax   pmax
      comp=Z,34nm,0.9s
HUMO  Hull Mountain    82.17  38  eP      P       20 09 14.2 +1.2
      comp=Z,49nm,0.9s
VCNR  Virginia City    82.17  43  eP      P       20 09 13.8 +0.5
      comp=Z,27nm,0.9s
YERR  Yerington        82.25  43  eP      P       20 09 14.4 +0.8
      comp=Z,43nm,0.8s
GMRC  Granite Mounta   82.29  48   P      P       20 09 15.1 +1.2
      baz=237,SNR=15
IRM   Iron Mountain    82.31  49   P      P       20 09 15.2 +1.3
      baz=238,SNR=5.5
L04D  Klamath Falls    82.31  39   P      P       20 09 15.2 +1.4
      baz=232,SNR=22
M04C  Macdoel          82.32  39   P      P       20 09 15.2 +1.3
      baz=232,SNR=13
CN2   Changchun        82.33 323 ⇓P       P       20 09 14.5 +0.9
CN2                               eS      S       20 18 43.5 +3.0
CN2                                pmax   pmax
      comp=Z,90nm,1.2s
CN2                                pmax   pmax
      comp=Z,200nm,3.0s
GRAC  Grapevine Rang   82.34  45   P      P       20 09 15.2 +1.2
      baz=236
FURC  Furnace Creek,   82.38  46   P      P       20 09 15.2 +1.2
      baz=236,SNR=12
TUQ   Turquoise Moun   82.45  47   P      P       20 09 15.8 +1.1
      baz=237
SHOC  Shoshone, Teco   82.47  47   P      P       20 09 15.7 +1.2
      baz=237
RYN   Ryan             82.51  44  eP      P       20 09 15.7 +0.8
      comp=Z,16nm,0.9s
Y12C  Blythe           82.53  49  eP      P       20 09 16.5 +1.6
      comp=Z,28nm,0.8s
Y12C  Blythe           82.53  49   P      P       20 09 16.4 +1.6
      baz=238,SNR=11
NV01  Mina Array Sit   82.53  44  eP      P       20 09 15.2 +0.1
NVAR  Mina Array Bea   82.53  44   P      P       20 09 16.2 +1.1
      comp=Z,37nm,0.9s,baz=225,slow=8.4,SNR=101
NVAR                               pP     pwP     20 11 27.9 +2.7
      comp=Z,2.0nm,0.8s,baz=234,slow=7.7,SNR=2.5
NVAR                               PP     PP      20 12 33.4 -2.9
      comp=Z,2.5nm,0.8s,baz=225,slow=8.8,SNR=2.9
NVAR                               PKKPbc PKKPbc  20 27 38.0 +1.1
      comp=Z,1.0nm,0.8s,baz=87,slow=3.1,SNR=5.0
113A  Mohawk Valley,   82.56  51  eP      P       20 09 17.3 +2.2
      comp=Z,29nm,1.0s
PAHR  Pah Rah Range    82.58  42  eP      P       20 09 15.9 +0.7
      comp=Z,41nm,0.9s
I02D  Swisshome        82.61  37   P      P       20 09 16.7 +1.7
      baz=231
NV11  Mina Array Sit   82.63  44  eP      P       20 09 15.8 +0.3
      comp=Z,2.2nm,0.9s
I03D  Drain, OR        82.63  37   P      P       20 09 16.5 +1.3
      baz=231,SNR=6.8
KULM  Kulim            82.72 279  eP      P       20 09 17.1 +0.7
      comp=Z,79nm,0.9s
KLR   Kul'dur          82.74 330   P      P       20 09 16.2 +0.7
      comp=Z,17nm,0.9s,baz=99,slow=2.6,SNR=34
KLR                                PP     PP      20 12 36.8 -0.7
      comp=Z,3.7nm,0.9s,baz=116,slow=5.6,SNR=4.5
LDFC  Landfair         82.83  48  eP      P       20 09 18.0 +1.5
      comp=Z,78nm,0.9s
214A  Organ Pipe Nat   82.84  52   P      P       20 09 18.3 +1.7
      baz=239
K04D  Chiloquin, OR    82.89  39   P      P       20 09 17.5 +0.9
      baz=232,SNR=7.1
NEE2  Needles Airpor   83.00  49   P      P       20 09 18.6 +1.3
      baz=238
KVN   Kaiserville      83.02  43  eP      P       20 09 18.1 +0.6
      comp=Z,25nm,0.8s
KVN   Kaiserville      83.02  43  eP      P       20 09 18.1 +0.6
KVN                                pmax   pmax
      comp=Z,25nm,0.8s
TIA   Tai'an           83.04 313   P      P       20 09 18.3 +0.9
TIA                                pmax   pmax
      comp=Z,26nm,1.2s
J04D  Umpqua Nationa   83.06  38   P      P       20 09 19.0 +1.5
      baz=232,SNR=26
TPNV  Topopah Spring   83.06  46  eP      P       20 09 18.4 +0.7
      comp=Z,29nm,0.9s
TPNV  Topopah Spring   83.06  46  eP      P       20 09 18.4 +0.7
TPNV                               pmax   pmax
      comp=Z,29nm,0.9s
TPNV  Topopah Spring   83.06  46   P      P       20 09 18.8 +1.1
      baz=237,SNR=25
PDMCI Parker Dam,Lak   83.09  49   P      P       20 09 18.9 +1.3
      baz=238,SNR=10.0
COR   Corvallis        83.22  37  eP      P       20 09 20.0 +2.0
      comp=Z,313nm,1.8s
COR   Corvallis        83.22  37  eP      P       20 09 20.0 +2.0
COR                                pmax   pmax
      comp=Z,313nm,1.8s
I04A  Tendick Farm,    83.22  38   P      P       20 09 19.1 +1.0
      baz=232,SNR=11
MOD   Modoc Plateau    83.31  40  eP      P       20 09 19.4 +0.6
      comp=Z,29nm,0.9s
PSI   Prapat           83.39 276  eP      P       20 09 19.2 -0.6
      comp=Z,94nm,1.0s
PSI   Prapat           83.39 276  eP      P       20 09 19.2 -0.6
PSI                                pmax   pmax
      comp=Z,94nm,1.0s
GO10  Punta Arenas     83.41 145  eP      P       20 09 20.3 +1.3
      comp=Z,105nm,1.4s
SKLT  Songkhla         83.46 280   P      P       20 09 22.6 +2.6
      comp=Z,156nm,1.0s,comp=Z,1µm
H04D  Lebanon          83.49  37   P      P       20 09 20.9 +1.5
      baz=231,SNR=6.2
GO09  Cerro Castillo   83.55 143  eP      P       20 09 21.1 +1.4
      comp=Z,53nm,1.4s
SHPR  Sheep Range      83.55  47  eP      P       20 09 20.2 +0.1
      comp=Z,19nm,1.2s
J05D  Fort Rock, OR    83.59  39   P      P       20 09 21.6 +1.5
      baz=233,SNR=58
G03D  McMinnville, O   83.63  36   P      P       20 09 21.5 +1.4
      baz=231
W13A  Hualapai Mount   83.69  49  eP      P       20 09 21.9 +1.0
      comp=Z,15nm,0.8s
Y14A  Wickenburg       83.71  50  eP      P       20 09 21.8 +1.0
      comp=Z,18nm,0.8s
H04A  Detroit Lake     83.90  37  eP      P       20 09 21.9 +0.4
      comp=Z,27nm,0.8s
PINE  Pine Mountain    84.07  38  eP      P       20 09 23.7 +1.2
      comp=Z,61nm,0.9s
GSI   Gunungsitoli     84.09 274  eP      P       20 09 23.8 +0.6
      comp=Z,174nm,0.7s
I05D  Terrebonne, OR   84.17  38   P      P       20 09 24.2 +1.4
      baz=232,SNR=7.4
BRLK  Bradley Lake     84.19  14  eP      P       20 09 22.5 -0.1
      comp=Z,44nm,0.8s
R11A  Troy Canyon, C   84.26  45  eP      P       20 09 23.9 +0.3
      comp=Z,4.4nm,0.8s
R11A  Troy Canyon, C   84.26  45   P      P       20 09 24.6 +1.0
      baz=237,SNR=8.8
F04D  Rainier, OR      84.32  36   P      P       20 09 25.1 +1.7
      baz=231
SKNT  Sakolnakorn      84.32 291   P      P       20 09 24.9 +0.8
      comp=Z,128nm,1.0s,comp=Z,981nm
MA2   Magadan          84.39 345  eP      P       20 09 22.1 -1.3
      comp=Z,82nm,1.3s
MA2   Magadan          84.39 345d iP      P       20 09 22.7 -0.7
MA2                                pmax   pmax
      comp=Z,77nm,1.3s
MA2   Magadan          84.39 345   P      P       20 09 22.6 -0.9
      comp=Z,27nm,0.9s,baz=153,slow=5.1,SNR=30
SVW2  Sparrevohn       84.45  11  eP      P       20 09 23.3 -0.5
      comp=Z,112nm,2.0s
TUC   Tucson           84.50  52  eP      P       20 09 25.8 +1.0
      comp=Z,23nm,0.9s
TUC   Tucson           84.50  52  eP      P       20 09 25.8 +1.0
TUC                                pmax   pmax
      comp=Z,23nm,0.9s
TUC   Tucson           84.50  52   P      P       20 09 26.6 +1.8
      baz=240
TRTT  Trang            84.57 281   P      P       20 09 27.1 +1.7
      comp=Z,70nm,0.9s,comp=Z,755nm
WVOR  Wild Horse Val   84.62  40  eP      P       20 09 25.9 +0.7
      comp=Z,28nm,1.0s
WVOR  Wild Horse Val   84.62  40  eP      P       20 09 25.9 +0.7
WVOR                               pmax   pmax
      comp=Z,28nm,1.0s
DIB   Dawson Inlet,    84.65  26  eP      P       20 09 25.7 +0.9
      comp=Z,140nm,1.4s
NLWA  Neilton Lookou   84.69  34  eP      P       20 09 26.2 +0.9
      comp=Z,34nm,0.8s
G05D  Wamic, OR        84.73  37   P      P       20 09 26.9 +1.4
      baz=232
SRAK  Srakaew          84.83 287   P      P       20 09 26.4 -0.2
      comp=Z,102nm,1.2s,comp=Z,922nm
E04D  Cinebar          84.85  35   P      P       20 09 27.2 +1.2
      baz=231
F05D  White Salmon     85.04  36   P      P       20 09 27.9 +0.9
      baz=232
X16A  Lo Mia Camp, P   85.07  50  eP      P       20 09 28.7 +1.1
      comp=Z,13nm,0.8s
I07A  Izee             85.07  39  eP      P       20 09 27.9 +0.6
      comp=Z,30nm,0.9s
LCMT  Little Creek M   85.13  47  eP      P       20 09 28.8 +1.0
      comp=Z,15nm,0.8s
D04E  Lakebay          85.13  35   P      P       20 09 28.6 +1.3
      baz=231
GAMB  Gambell          85.15   3  eP      P       20 09 27.4 +0.4
      comp=Z,94nm,1.9s
319A  Douglas          85.17  54  eP      P       20 09 29.4 +1.3
      comp=Z,63nm,0.9s
D03D  Eldon            85.19  34   P      P       20 09 29.0 +1.4
      baz=231,SNR=5.3
J08A  Circle Bar Ran   85.25  40  eP      P       20 09 29.1 +0.9
      comp=Z,34nm,1.1s
CCUT  Cedar City       85.33  47  eP      P       20 09 30.2 +1.4
      comp=Z,172nm,1.0s
LON   Longmire         85.38  36  eP      P       20 09 29.4 +0.7
      comp=Z,11nm,0.9s
LON   Longmire         85.38  36  eP      P       20 09 29.4 +0.7
LON                                pmax   pmax
      comp=Z,11nm,0.9s
KNB   Kanab            85.42  47  eP      P       20 09 30.4 +1.2
      comp=Z,19nm,0.9s
PATY  Pattaya          85.46 286   P      P       20 09 32.8 +3.2
      comp=Z,33nm,0.9s,comp=Z,762nm
U15A  North Rim        85.48  48  eP      P       20 09 30.7 +1.0
      comp=Z,36nm,0.8s
PSUT  Pine Spring      85.51  46  eP      P       20 09 30.7 +1.0
      comp=Z,14nm,1.0s
SZCU  Shurtz Canyon    85.54  47  eP      P       20 09 30.7 +0.9
      comp=Z,19nm,0.6s
SYO   Syowa Base       85.54 193⇓iP       P       20 09 27.6 -1.4
SYO   Syowa Base       85.54 193⇓iP       P       20 09 32.6 +3.6
D05A  Enumclaw         85.56  35  eP      P       20 09 31.2 +1.8
      comp=Z,76nm,1.1s
ENH   Enshi            85.59 305  eP      P       20 09 30.4 +0.4
      comp=Z,125nm,0.9s
WUAZ  Wupatki          85.67  49  eP      P       20 09 31.4 +0.9
      comp=Z,14nm,0.8s
WUAZ  Wupatki          85.67  49   P      P       20 09 31.5 +1.1
      baz=240
PGC   Sidney           85.71  33  eP      P       20 09 30.4 +0.4
BJT   Baijiatuau       85.73 316  eP      P       20 09 30.4  0.0
BJT                               ePcP    P       20 09 31.2 +0.8
BJT   Baijiatuau       85.73 316  eP      P       20 09 30.4  0.0
BJI   Beijing          85.73 316   P      P       20 09 31.3 +0.9
BJI                                pmax   pmax
      comp=Z,36nm,1.2s
SUA   Susitna One      85.75  13  eP      P       20 09 29.4 -0.7
      comp=Z,47nm,0.6s
ELK   Elko             85.79  43  eP      P       20 09 31.3 +0.3
      comp=Z,14nm,0.9s
ELK   Elko             85.79  43   P      P       20 09 31.5 +0.5
      comp=Z,13nm,0.9s,baz=243,slow=4.8,SNR=9.0
BBB   Bella Bella      85.80  29  eP      P       20 09 31.8 +1.4
      comp=Z,401nm,1.6s
PKDT  Phuket           85.83 280   P      P       20 09 34.1 +2.6
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      comp=Z,32nm,1.0s
F07A  Phinny Hill Vi   85.90  37  eP      P       20 09 31.3 +0.2
      comp=Z,21nm,0.8s
HPIG                   85.94  59  eP      P       20 09 32.1 +0.1
      comp=Z,14nm,0.8s
PKCU  Pink Cliffs      85.99  47  eP      P       20 09 34.1 +2.0
      comp=Z,40nm,1.0s
GLI   Glacier Island   86.07  15  eP      P       20 09 31.0 -0.5
      comp=Z,85nm,0.9s
GYA   Guiyang          86.08 300⇓iP       P       20 09 33.8 +1.2
GYA                                pP     pwP     20 11 43.3 -1.7
GYA                                sP     sP      20 12 40.0 -0.3
GYA                                PP     PP      20 13 08.5 +3.7
GYA                                SKS    SKSac   20 19 01.5 -0.5
GYA                                S      S       20 19 18.0 +0.1
GYA                                pmax   pmax
      comp=Z,20nm,1.0s
GYA                                pmax   pmax
      comp=Z,100nm,4.3s
G08A  Pilot Rock       86.09  38  eP      P       20 09 32.5 +0.3
      comp=Z,36nm,0.9s
EYAK  Cordova Ski Ar   86.12  16  eP      P       20 09 32.2 +0.5
      comp=Z,258nm,1.8s
LHMI  Lhok Sumawe      86.12 277  eP      P       20 09 33.9 +1.1
      comp=Z,129nm,0.8s
A04D  Lummi Island     86.13  34   P      P       20 09 33.4 +1.4
      baz=231
B05A  Bryant           86.17  34   P      P       20 09 33.4 +1.1
      baz=232,SNR=6.7
X18A  Snowflake        86.19  51  eP      P       20 09 34.0 +1.0
      comp=Z,11nm,0.8s
KNK   Knik Glacier     86.21  14  eP      P       20 09 32.0 -0.2
      comp=Z,33nm,0.8s
PMR   Palmer           86.22  14  eP      P       20 09 31.5 -0.7
      comp=Z,47nm,1.1s
PMR   Palmer           86.22  14  eP      P       20 09 31.5 -0.7
PMR                                pmax   pmax
      comp=Z,47nm,1.1s
LTY   Liberty          86.31  36  eP      P       20 09 33.4 +0.3
      comp=Z,23nm,0.8s
HMT   Hamilton         86.33  17  eP      P       20 09 32.5 -0.3
      comp=Z,328nm,1.8s
E07A  Sunnyside        86.34  37  eP      P       20 09 34.1 +0.9
      comp=Z,50nm,0.8s
MTPU  Mount Pierson    86.38  47  eP      P       20 09 35.4 +1.4
      comp=Z,19nm,0.9s
ANM   Nome             86.41   6  eP      P       20 09 33.0  0.0
      comp=Z,5.5nm,0.8s
ANM   Nome             86.41   6  eP      P       20 09 33.0  0.0
ANM                                pmax   pmax
      comp=Z,6.0nm,0.8s
HAWA  Hanford          86.42  37  eP      P       20 09 34.1 +0.6
      comp=Z,52nm,0.8s
GHO   Glory Hole Cre   86.42  14  eP      P       20 09 32.9 -0.4
      comp=Z,81nm,0.6s
PHET  Kaeng Krachan    86.56 285   P      P       20 09 37.3 +2.4
      comp=Z,56nm,0.9s,comp=Z,414nm
SML   Sawmill          86.59  14  eP      P       20 09 33.6 -0.4
      comp=Z,83nm,1.6s
SML   Sawmill          86.59  14  eP      P       20 09 33.6 -0.4
SML                                pmax   pmax
      comp=Z,83nm,1.6s
C06D  Leavenworth      86.59  35   P      P       20 09 35.1 +0.7
      baz=233
DIV   Divide           86.61  16  eP      P       20 09 33.8 -0.3
      comp=Z,34nm,0.8s
MSU   Marysvale        86.62  46  eP      P       20 09 35.3 +0.4
W18A  Petrified Fore   86.64  50  eP      P       20 09 36.3 +1.3
      comp=Z,17nm,1.1s
W18A  Petrified Fore   86.64  50   P      P       20 09 36.1 +1.0
      baz=241
B06A  Marblemount      86.64  34  eP      P       20 09 35.3 +0.9
      comp=Z,26nm,0.9s
E08A  Dider Farm, El   86.74  37  eP      P       20 09 35.9 +0.9
      comp=Z,43nm,0.9s
PBKT  Sadao Pong       86.80 289   P      P       20 09 37.9 +2.0
      comp=Z,62nm,1.1s,comp=Z,775nm
BMO   Blue Mountains   86.80  39  eP      P       20 09 35.9 +0.4
      comp=Z,20nm,0.9s
121A  Cookes Peak, D   86.84  53   P      P       20 09 37.7 +1.6
      baz=242,SNR=7.6
SCM   Sheep Creek Mo   86.84  15  eP      P       20 09 34.8 -0.4
      comp=Z,124nm,1.1s
SCM   Sheep Creek Mo   86.84  15  eP      P       20 09 34.8 -0.4
SCM                                pmax   pmax
      comp=Z,124nm,1.1s
KLU   Klutina          86.89  15  eP      P       20 09 35.5 +0.1
      comp=Z,40nm,1.1s
TIY   Taiyuan          87.03 312  eP      P       20 09 38.5 +1.8
TIY                                S      S       20 19 31.0 +4.9
TIY                                pmax   pmax
      comp=Z,74nm,1.1s
SEY   Seymchan         87.03 347   P      P       20 09 36.2 +0.3
      comp=Z,32nm,0.9s,baz=150,slow=5.2,SNR=62
DUG   Dugway, Tooele   87.06  45  eP      P       20 09 37.7 +0.8
      comp=Z,3.2nm,0.8s
DUG   Dugway, Tooele   87.06  45  eP      P       20 09 37.7 +0.8
DUG                                pmax   pmax
      comp=Z,3.0nm,0.8s
DUG   Dugway, Tooele   87.06  45   P      P       20 09 37.6 +0.7
      baz=239
SNAA  Sanae            87.09 179   P      P       20 09 36.4  0.0
SNAA  Sanae            87.09 179  eP      P       20 09 35.3 -1.1
SNAA                              epP     pP      20 11 46.2 +0.9
SNAA  Sanae            87.09 179   P      P       20 09 36.4  0.0
      comp=Z,7.4nm,0.4s,baz=209,slow=8.2,SNR=69
D08A  Wollman Farm,    87.15  37  eP      P       20 09 37.3 +0.4
      comp=Z,48nm,0.8s
CAST  Castle Rocks     87.25  12  eP      P       20 09 35.5 -1.6
      comp=Z,39nm,0.7s
E09A  Wood Farm, Sta   87.27  37  eP      P       20 09 38.0 +0.5
      comp=Z,36nm,0.9s
VNA3  Neumayer Olymp   87.27 177   P      P       20 09 37.1 -0.1
BGU   Big Grassy Mou   87.30  44  eP      P       20 09 38.8 +0.8
      comp=Z,5.5nm,1.0s
NLU   North Lily Min   87.43  45  eP      P       20 09 39.6 +1.0
      comp=Z,4.6nm,0.9s
BALM  Baldy            87.43  17  eP      P       20 09 38.4 +0.3
      comp=Z,39nm,0.7s
BALM  Baldy            87.43  17  eP      P       20 09 38.4 +0.3
BALM                               pmax   pmax
      comp=Z,39nm,0.7s
F10A  Beach Ranch, E   87.48  38  eP      P       20 09 38.8 +0.2
      comp=Z,65nm,0.9s
Q16A  Castle Valley    87.51  46  eP      P       20 09 39.6 +0.6
      comp=Z,48nm,1.6s
SRDT  SRDT             87.57 286   P      P       20 09 42.4 +2.8
      comp=Z,52nm,1.1s
UTTA  Uttaradit        87.62 290   P      P       20 09 41.6 +1.8
      comp=Z,14nm,1.0s,comp=Z,132nm
TRF   Thorofare Moun   87.63  13  eP      P       20 09 38.1 -0.9
      comp=Z,92nm,0.8s
B08A  Colville Reser   87.69  35  eP      P       20 09 39.5 +0.1
      comp=Z,42nm,0.8s
VNA2  Neumayer--Watz   87.70 177   P      P       20 09 40.0 +0.8
      baz=191,slow=4.3
NVL   N'lazarevskaya   87.70 184⇓iP       P       20 09 38.6 -0.6
NVL                                pmax   pmax
      comp=Z,41nm,0.8s
LLLB  Lillooet         87.73  32  eP      P       20 09 39.9 +0.3
      comp=Z,37nm,1.0s
UTHA  Uthaitani        87.75 288   P      P       20 09 42.8 +2.4
      comp=Z,14nm,1.0s,comp=Z,121nm
MPU   Maple Canyon     87.75  45  eP      P       20 09 41.3 +1.1
      comp=Z,8.3nm,0.9s
XAN   Xi'an            87.76 308   P      P       20 09 41.3 +1.1
XAN                                sP     sP      20 12 48.8 +0.3
XAN                                PP     PP      20 13 21.3 +3.5
XAN                                SKS    SKSac   20 19 12.0 +0.4
XAN                                S      S       20 19 30.3 -2.7
XAN                                SS     SS      20 25 41.0 +1.7
XAN                                pmax   pmax
      comp=Z,68nm,1.2s
XAN                                pmax   pmax
      comp=Z,170nm,4.3s
XAN   Xi'an            87.76 308  eP      P       20 09 41.2 +1.0
      comp=Z,66nm,1.0s
HLID  Hailey           87.82  41  eP      P       20 09 41.2 +0.8
      comp=Z,24nm,0.8s
HLID  Hailey           87.82  41   P      P       20 09 41.5 +1.1
      baz=238
HARP  HAARP            87.86  15  eP      P       20 09 40.2 +0.3
      comp=Z,31nm,0.8s
ZEA   Zeya             87.88 331  eP      P       20 09 40.5 +0.3
ZEA                               eS      S       20 19 38.0 +4.9
ZEA                                pmax   pmax
      comp=N,36nm,1.2s
ZEA                                pmax   pmax
      comp=Z,60nm,1.2s
ZEA                                smax   smax
      comp=E,900nm,7.0s
ZEA                                smax   smax
      comp=N,700nm,6.0s
RND   Reindeer         87.89  13  eP      P       20 09 39.5 -0.6
      comp=N,80nm,0.9s
RND   Reindeer         87.89  13  eP      P       20 09 39.5 -0.6
RND                                pmax   pmax
      comp=Z,80nm,0.9s
NANT  Nan              87.91 291   P      P       20 09 42.7 +1.6
      comp=Z,19nm,1.1s,comp=Z,158nm
HVU   Hansel Valley    87.91  43  eP      P       20 09 42.0 +1.2
      comp=Z,22nm,0.8s
DHY   Denali Highway   87.92  14  eP      P       20 09 39.7 -0.6
      comp=Z,26nm,1.1s
VNA1  Neumayer--Stat   87.93 177   P      P       20 09 41.0 +0.8
C09A  Chrisman Ranch   87.94  36  eP      P       20 09 41.0 +0.4
      comp=Z,33nm,0.8s
CTU   Camp Tracy       88.02  45  eP      P       20 09 42.3 +0.9
      comp=Z,14nm,0.7s
SRU   San Rafael Swe   88.04  47  eP      P       20 09 42.1 +0.6
      comp=Z,31nm,0.9s
P17A  Butcher Ranch,   88.07  46  eP      P       20 09 42.4 +0.7
      comp=Z,21nm,1.1s
MCK   McKinley         88.16  13  eP      P       20 09 40.7 -0.6
      comp=Z,31nm,0.8s
MCK   McKinley         88.16  13  eP      P       20 09 40.7 -0.6
MCK                                pmax   pmax
      comp=Z,31nm,0.8s
JLU   Jordanelle       88.17  45  eP      P       20 09 42.0 -0.1
      comp=Z,7.8nm,0.8s
LAZ   Ladron           88.18  52  eP      P       20 09 43.6 +1.3
PAX   Paxson           88.27  15  eP      P       20 09 41.3 -0.6
      comp=Z,14nm,1.0s
PAX   Paxson           88.27  15  eP      P       20 09 41.3 -0.6
PAX                                pmax   pmax
      comp=Z,14nm,1.0s
MNTX  Cornudas Mount   88.27  55  eP      P       20 09 43.5 +1.0
      comp=Z,26nm,0.9s
MNTX  Cornudas Mount   88.27  55   P      P       20 09 43.9 +1.4
      baz=244,SNR=25
SUKH  Sukhothai        88.33 289   P      P       20 09 45.6 +2.5
      comp=Z,24nm,0.9s
BNM   Barren Site      88.44  52  eP      P       20 09 44.2 +0.6
TCUT  Toone Canyon     88.45  44  eP      P       20 09 44.4 +0.9
      comp=Z,71nm,0.9s
PV05  Paradox Valley   88.51  48  eP      P       20 09 44.7 +0.9
      comp=Z,12nm,0.9s
MVCO  Mesa Verde       88.52  49   P      P       20 09 44.1 +0.3
      baz=242
UMPA  Umpang Tak       88.52 288   P      P       20 09 46.6 +2.6
      comp=Z,14nm,1.0s,comp=Z,111nm
TX31  Lajitas Ar. Si   88.57  58  eP      P       20 09 44.8 +0.7
TXAR  Lajitas Array    88.57  58   P      P       20 09 45.7 +1.6
      comp=Z,22nm,0.9s,baz=219,slow=5.5,SNR=153
TXAR                               PKKPbc PKKPbc  20 27 22.9 +0.8
      comp=Z,1.1nm,0.6s,baz=157,slow=3.1,SNR=14
HWUT  Hardware Ranch   88.60  44  eP      P       20 09 44.3 +0.2
      comp=Z,12nm,0.8s
HYT   Haines Junctio   88.66  19  eP      P       20 09 44.5 +0.7
MENT  Mentasta         88.66  15  eP      P       20 09 43.6 -0.1
      comp=Z,14nm,0.7s
PV09  Paradox Valley   88.69  48  eP      P       20 09 45.7 +1.0
PV19  Morning Glory    88.70  48  eP      P       20 09 45.7 +1.1
      comp=Z,14nm,1.1s
PV17  East Wray Mesa   88.70  48  eP      P       20 09 45.6 +0.9
      comp=Z,26nm,0.6s
KMI   Kunming          88.72 298   P      P       20 09 47.0 +2.0
KMI                                pP     pwP     20 11 58.0 -0.6
KMI                                S      S       20 19 41.5 -1.0
KMI                                pmax   pmax
      comp=Z,43nm,1.3s
KMI   Kunming          88.72 298  eP      P       20 09 47.0 +2.0
      comp=Z,40nm,1.0s
LAMP  Lampang          88.73 290   P      P       20 09 46.9 +1.9
      comp=Z,45nm,1.0s,comp=Z,340nm
PV13  Radium Mtn., P   88.74  48  eP      P       20 09 45.6 +0.8
      comp=Z,18nm,1.4s
PV23  Carpenter Ridg   88.75  48  eP      P       20 09 45.8 +0.9
      comp=Z,16nm,0.8s
PV03  Paradox Valley   88.77  48  eP      P       20 09 45.5 +0.5
      comp=Z,11nm,1.1s
HIA   Hailar           88.78 325  eP      P       20 09 44.5 +0.1
      comp=Z,40nm,1.4s
HIA   Hailar           88.78 325  eP      P       20 09 44.6 +0.1
HIA                                pmax   pmax
      comp=Z,40nm,1.4s
PV04  Paradox Valley   88.80  48  eP      P       20 09 44.5 -0.6
      comp=Z,13nm,1.0s
PV02  Paradox Valley   88.82  48  eP      P       20 09 45.3 +0.1
      comp=Z,13nm,1.2s
PV12  Saucer Basin,    88.83  48  eP      P       20 09 46.0 +0.7
      comp=Z,19nm,1.2s
NEW   Newport          88.84  36  eP      P       20 09 45.2 +0.4
      comp=Z,8.3nm,0.9s
NEW   Newport          88.84  36  eP      P       20 09 45.2 +0.4
NEW                                pmax   pmax
      comp=Z,8.0nm,0.9s
NEW   Newport          88.84  36   P      P       20 09 45.1 +0.3
      baz=235,SNR=6.3
NEW   Newport          88.84  36   P      P       20 09 45.3 +0.5
      comp=Z,6.4nm,0.7s,baz=236,slow=4.1,SNR=13
PV01  Paradox Valley   88.91  48  eP      P       20 09 45.8 +0.2
      comp=Z,9.1nm,0.8s
ANMO  Albuquerque      88.93  52  eP      P       20 09 46.1 +0.3
      comp=Z,16nm,1.0s
ANMO  Albuquerque      88.93  52deP       P       20 09 46.6 +0.8
ANMO                               pmax   pmax
      comp=Z,15nm,0.9s
ANMO  Albuquerque      88.93  52   P      P       20 09 46.6 +0.8
      baz=243
ANMO  Albuquerque      88.93  52   P      P       20 09 46.8 +1.0
      comp=Z,15nm,1.0s,baz=208,slow=6.1,SNR=24
MLY   Manley           88.96  12  eP      P       20 09 43.9 -1.1
      comp=Z,15nm,0.6s
WRH   Wood River Hil   88.99  13  eP      P       20 09 43.9 -1.1
      comp=Z,38nm,0.8s
PV15  Paradox Valley   89.06  48  eP      P       20 09 47.2 +0.8
      comp=Z,11nm,0.9s
RIDG  Independ'e Rid   89.08  15  eP      P       20 09 45.6 +0.1
      comp=Z,31nm,1.0s
HHC   Hu-ho-hao-te     89.17 315  eP      P       20 09 48.0 +1.4
HHC                                sP     sP      20 12 59.3 +4.1
HHC                                S      S       20 19 50.0 +4.3
HHC                                pmax   pmax
      comp=Z,61nm,1.0s
HHC                                pmax   pmax
      comp=Z,140nm,6.0s
HDA   Harding Lake     89.18  13  eP      P       20 09 45.3 -0.7
      comp=Z,28nm,0.6s
HDA   Harding Lake     89.18  13   P      P       20 09 45.5 -0.4
      baz=210
DOT   Dot Lake         89.18  15  eP      P       20 09 46.0  0.0
      comp=Z,21nm,0.8s
GDL2  Guadalupe Moun   89.27  55  eP      P       20 09 49.0 +1.7
CM01  Chiang Mai Arr   89.28 290  eP      P       20 09 48.9 +1.4
IM3   Indian Mountai   89.29  10  eP      P       20 09 45.6 -0.9
CM31  Chiang Mai Arr   89.31 290  eP      P       20 09 48.7 +1.0
      comp=Z,96nm,1.0s
CMAR  Chiang Mai Arr   89.31 290   P      P       20 09 49.0 +1.4
      comp=Z,56nm,0.9s,baz=124,slow=2.8,SNR=174
CMAR                               PP     PP      20 13 27.4 -2.7
      comp=Z,4.0nm,0.9s,baz=121,slow=6.4,SNR=4.9
CMAR                               PKKPbc PKKPbc  20 27 20.7 +1.0
      comp=Z,0.8nm,0.4s,baz=265,slow=4.2,SNR=6.4
WHY   Whitehorse       89.35  20  eP      P       20 09 47.6 +0.6
      comp=Z,14nm,1.0s
MDM   Murphy Dome      89.39  13  eP      P       20 09 45.9 -1.1
      comp=Z,41nm,1.0s
TCOL  CIGO, UAF Yank   89.39  13   P      P       20 09 46.3 -0.6
      baz=209
COLA  College          89.39  13  eP      P       20 09 46.0 -0.9
      comp=Z,46nm,1.0s
COLA  College          89.39  13d iP      P       20 09 46.0 -0.9
COLA                               pmax   pmax
      comp=Z,40nm,1.0s
DLBC  Dease Lake       89.39  23  eP      P       20 09 48.4 +1.2
      comp=Z,63nm,1.8s
DLBC  Dease Lake       89.39  23   P      P       20 09 46.2 -1.0
      comp=Z,5.5nm,0.7s,baz=230,slow=8.9,SNR=8.6
GO06  Curarrehue       89.39 133  eP      P       20 09 49.3 +1.4
      comp=Z,33nm,1.2s
CMMT  Chiang Mai       89.44 290   P      P       20 09 49.3 +1.0
      comp=Z,79nm,1.1s,comp=Z,824nm
CHTO  Chiang Mai       89.45 290  eP      P       20 09 48.8 +0.5
      comp=Z,60nm,0.9s
CHTO  Chiang Mai       89.45 290   P      P       20 09 49.4 +1.1
      comp=Z,354nm,1.1s,comp=Z,4µm
MCMT  McKenzie Canyo   89.45  41  eP      P       20 09 49.1 +1.1
AHID  Auburn Hatcher   89.48  43  eP      P       20 09 49.3 +1.1
      comp=Z,32nm,0.9s
PLCA  Paso Flores      89.48 134  eP      P       20 09 49.6 +1.4
      comp=Z,20nm,1.0s
PLCA  Paso Flores      89.48 134   P      P       20 09 49.7 +1.5
      comp=Z,7.9nm,0.5s,baz=272,slow=5.6,SNR=43
IL1   Eielson Array    89.50  13  eP      P       20 09 46.5 -0.9
ILAR  Eielson Array    89.50  13   P      P       20 09 46.7 -0.7
      comp=Z,6.5nm,0.4s,baz=212,slow=5.1,SNR=180
ILAR                               pP     pP      20 11 59.9 +2.3
      comp=Z,2.6nm,0.9s,baz=227,slow=5.0,SNR=3.7
ILAR                               PP     PP      20 13 28.8 -1.9
      comp=Z,3.0nm,1.0s,baz=223,slow=6.4,SNR=3.1
ILAR                               PKKPbc PKKPdf  20 27 17.4 +0.8
      comp=Z,0.3nm,0.6s,baz=347,slow=2.6,SNR=6.4
ILB   Eielson Array    89.50  13  eP      P       20 09 46.3 -1.2
      comp=Z,55nm,1.5s
POKR  Poker Plat Res   89.69  13   P      P       20 09 47.6 -0.7
      baz=210
BILL  Bilibino         89.86 355  eP      P       20 09 48.8 -0.3
      comp=Z,100nm,1.9s
BILL  Bilibino         89.86 355d iP      P       20 09 49.1 +0.1
BILL                              e               20 13 34.9
BILL                              ePPP    PPP     20 15 33.7
BILL                               pmax   pmax
      comp=Z,20nm,0.9s
REDW  Red Top Meadow   89.94  43  eP      P       20 09 51.0 +0.7
      comp=Z,25nm,0.8s
S22A  4UR Ranch, Cre   89.94  49  eP      P       20 09 51.3 +0.8
      comp=Z,10nm,0.9s
S22A  4UR Ranch, Cre   89.94  49   P      P       20 09 51.6 +1.1
      baz=243,SNR=15
TPAW  Teton Pass       89.94  43  eP      P       20 09 50.3  0.0
      comp=Z,17nm,0.9s
FXWY  Fox Creek        89.97  42  eP      P       20 09 51.4 +1.0
      comp=Z,8.8nm,0.8s
SNOW  Snow King Moun   90.05  43  eP      P       20 09 52.3 +1.5
      comp=Z,30nm,0.8s
BTO   Baotou           90.07 314  eP      P       20 09 52.0 +1.2
O20A  White River Ci   90.08  46  eP      P       20 09 51.1 +0.1
      comp=Z,22nm,0.9s
O20A  White River Ci   90.08  46   P      P       20 09 51.7 +0.7
      baz=242,SNR=16
LNIG  Linares          90.15  63  eP      P       20 09 51.7 +0.3
      comp=Z,23nm,0.8s
MOOW  Moose Ponds      90.20  42  eP      P       20 09 52.1 +0.6
      comp=Z,5.9nm,0.9s
LRM   Limekiln Ridge   90.20  40  eP      P       20 09 52.3 +0.8
LOHW  Long Hollow      90.22  43  eP      P       20 09 52.0 +0.4
      comp=Z,8.8nm,0.8s
CD2   Chengdu          90.30 303   P      P       20 09 52.0  0.0
CD2                                S      S       20 19 59.3 +3.2
CD2                                pmax   pmax
      comp=Z,60nm,0.6s
CD2                                pmax   pmax
      comp=Z,140nm,5.0s
QLMT  Earthquake Lak   90.32  41  eP      P       20 09 53.1 +1.2
FLWY  Flagg Ranch      90.39  42  eP      P       20 09 53.6 +1.3
      comp=Z,12nm,0.8s
YHB   Horse Butte      90.42  41  eP      P       20 09 53.8 +1.3
      comp=Z,7.1nm,0.7s
YPP   Pitchstone Pla   90.42  42  eP      P       20 09 53.8 +1.2
      comp=Z,4.2nm,1.1s
BW06  Boulder Array    90.47  44  eP      P       20 09 52.9 +0.1
BW06  Boulder Array    90.47  44   P      P       20 09 53.1 +0.3
      baz=241,SNR=24
PD31  Pinedale Array   90.47  44  eP      P       20 09 52.5 -0.3
      comp=Z,12nm,0.8s
PDAR  Pinedale Array   90.47  44  eP      P       20 09 52.2 -0.6
PDAR  Pinedale Array   90.47  44   P      P       20 09 52.7 -0.1
      comp=Z,14nm,0.9s,baz=207,slow=2.9,SNR=74
YFT   Old Faithful     90.49  42  eP      P       20 09 54.9 +2.1
      comp=Z,7.7nm,0.7s
SMCO  Snowmass         90.50  48  eP      P       20 09 53.6 +0.4
      comp=Z,9.1nm,0.8s
BOZ   Bozeman (W)      90.58  40  eP      P       20 09 54.1 +1.0
      comp=Z,11nm,0.9s
BOZ   Bozeman (W)      90.58  40  eP      P       20 09 54.1 +1.0
BOZ                                pmax   pmax
      comp=Z,11nm,0.9s
BOZ   Bozeman (W)      90.58  40   P      P       20 09 54.1 +1.0
      baz=240,SNR=13
H17A  Grant Village    90.63  42  eP      P       20 09 55.0 +1.5
      comp=Z,8.6nm,0.8s
H17A  Grant Village    90.63  42   P      P       20 09 55.4 +2.0
      baz=240,SNR=7.3
YHH   Holmes Hill      90.65  41  eP      P       20 09 55.0 +1.3
      comp=Z,6.4nm,0.9s
DAWY  Dawson           90.70  16  eP      P       20 09 53.1 +0.1
LKWY  Lake             90.82  42  eP      P       20 09 56.3 +1.9
      comp=Z,8.7nm,0.8s
LKWY  Lake             90.82  42  eP      P       20 09 56.3 +1.9
LKWY                               pmax   pmax
      comp=Z,9.0nm,0.8s
EGAK  Eagle            90.83  15  eP      P       20 09 53.3 -0.2
      comp=Z,122nm,1.9s
SDCO  Great Sand Dun   90.88  50  eP      P       20 09 55.2 +0.3
      comp=Z,7.3nm,0.8s
SDCO  Great Sand Dun   90.88  50   P      P       20 09 55.5 +0.7
      baz=243,SNR=13
COLD  Coldfoot         91.03  11  eP      P       20 09 55.1 +0.6
      comp=Z,29nm,1.8s
WALA  Waterton Lakes   91.06  37  eP      P       20 09 55.7 +0.6
MSTX  Muleshoe         91.23  54  eP      P       20 09 56.8 +0.5
      comp=Z,15nm,0.8s
MSTX  Muleshoe         91.23  54   P      P       20 09 56.5 +0.1
      baz=245
T25A  Trinidad         91.39  51  eP      P       20 09 57.4 +0.3
      comp=Z,12nm,0.8s
T25A  Trinidad         91.39  51   P      P       20 09 57.8 +0.7
      baz=244,SNR=6.6
RWWY  Rawlins          91.50  45  eP      P       20 09 56.7 -0.9
      comp=Z,16nm,0.8s
833A  Chaparral WMA,   91.57  60  eP      P       20 09 58.9 +1.0
      comp=Z,20nm,0.8s
833A  Chaparral WMA,   91.57  60   P      P       20 09 58.9 +1.0
      baz=246
Q24A  Divide           91.67  49  eP      P       20 09 59.1 +0.6
      comp=Z,11nm,0.8s
Q24A  Divide           91.67  49   P      P       20 09 59.0 +0.5
      baz=244,SNR=5.4
ISCO  Idaho Springs    91.72  48  eP      P       20 09 59.0 +0.4
      comp=Z,4.1nm,0.8s
ISCO  Idaho Springs    91.72  48  eP      P       20 09 59.1 +0.4
ISCO                               pmax   pmax
      comp=Z,4.0nm,0.8s
ISCO  Idaho Springs    91.72  48   P      P       20 09 59.4 +0.7
      baz=243,SNR=6.6
RLMT  Red Lodge        91.80  42  eP      P       20 09 59.5 +0.8
      comp=Z,7.5nm,0.6s
RLMT  Red Lodge        91.80  42   P      P       20 09 59.9 +1.1
      baz=241,SNR=7.0
N23A  Red Feather La   91.98  47  eP      P       20 10 00.7 +0.8
      comp=Z,18nm,1.0s
N23A  Red Feather La   91.98  47   P      P       20 10 00.6 +0.8
      baz=243,SNR=6.6
JCT   Junction City    92.10  58  eP      P       20 10 00.8 +0.5
      comp=Z,9.3nm,0.8s
JCT   Junction City    92.10  58  eP      P       20 10 00.8 +0.5
JCT                                pmax   pmax
      comp=Z,9.0nm,0.8s
JCT   Junction City    92.10  58   P      P       20 10 00.7 +0.5
      baz=246
K22A  Casper           92.39  45  eP      P       20 10 01.9 +0.4
      comp=Z,26nm,0.4s
K22A  Casper           92.39  45   P      P       20 10 01.9 +0.4
      baz=243
LZH   Lanzhou          92.40 308  eP      P       20 10 03.5 +1.8
LZH                                pP     pwP     20 12 16.0 +0.6
LZH                                sP     sP      20 13 15.5 +4.8
LZH                                SKS    SKSac   20 19 41.5 +3.4
LZH                               eS      S       20 20 13.0 -1.6
LZH                                SS     SS      20 26 43.8 -1.7
LZH                                pmax   pmax
      comp=Z,90nm,1.2s
LZH                                pmax   pmax
      comp=Z,300nm,5.2s
TOLK  Toolik Lake Re   92.40  10  eP      P       20 10 01.6 +0.9
      comp=Z,67nm,1.9s
TOLK  Toolik Lake Re   92.40  10   P      P       20 10 01.0 +0.2
      baz=208
AMTX  Amarillo         92.44  53   P      P       20 10 02.3 +0.5
      baz=246
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PHWY	Pilot Hill	92.49	46	eP	P	20 10 02.5	+0.3
	comp=Z,9.4nm,1.0s						
YAK	Yakutsk	92.55	338	eP	P	20 10 01.0	-0.5
YAK				e		20 13 57.8	
YAK				e		20 19 33.6	
YAK				pmax	pmax		
	comp=N,30nm,0.9s						
YAK				pmax	pmax		
	comp=E,54nm,1.0s						
YAK				pmax	pmax		
	comp=Z,338nm,2.8s						
YAK				pmax	pmax		
	comp=N,102nm,2.3s						
YAK				smax	smax		
	comp=N,506nm,3.7s						
YAK				smax	smax		
	comp=E,550nm,3.7s						
ABTX	Abilene, Hawle	93.08	56	eP	P	20 10 05.3	+0.6
	comp=E,34nm,1.6s						
ABTX	Abilene, Hawle	93.08	56	P	P	20 10 04.9	+0.2
	baz=246						
KSCO	Kaye Shedlock'	93.46	49	eP	P	20 10 07.0	+0.6
	comp=E,23nm,0.8s						
KSCO	Kaye Shedlock'	93.46	49	P	P	20 10 06.9	+0.4
	baz=245						
APG	El Apazote	94.30	76	P	P	20 10 11.2	+0.3
	comp=E,5.6nm,0.9s,baz=328,slow=21,SNR=3.7						
LAO	LASA Array	94.41	41	P	P	20 10 11.5	+1.0
	baz=243						
RSSD	Black Hills	94.67	44	eP	P	20 10 11.7	-0.2
	comp=E,248nm,1.9s						
RSSD	Black Hills	94.67	44	eP	P	20 10 11.7	-0.2
RSSD	Black Hills	94.67	44	P	P	20 10 12.0	+0.1
	baz=245						
OGNE	Ogallala	94.68	48	P	P	20 10 12.7	+0.8
	baz=246						
ULN	Ulaanbaatar	95.30	320	eP	P	20 10 14.7	+0.1
	comp=E,7.3nm,1.0s						
ULN	Ulaanbaatar	95.30	320⇓	eP	P	20 10 14.8	+0.1
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
INK	Inuvik	95.50	16	eP	P	20 10 13.7	-1.1
	comp=Z,9.8nm,1.1s						
INK				S	SKSac	20 19 51.1	-1.6
INK	Inuvik	95.50	16	eP	P	20 10 13.7	-1.1
INK				S	SKSac	20 19 51.1	-1.6
INK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
INK	Inuvik	95.50	16	P	P	20 10 14.2	-0.6
	comp=Z,4.0nm,0.8s,baz=215,slow=4.6,SNR=13						
INK				S	SKSac	20 19 51.1	-1.6
	comp=Z,1.4nm,1.2s,baz=135,slow=2.9,SNR=8.0						
SONA0	Songino Array	95.69	319	eP	P	20 10 16.2	-0.1
SONA0				esP	sP	20 13 21.4	-4.3
SONA0				ePP	PP	20 14 16.0	-2.8
SONA0				ePKKPdf	PKKPbc	20 27 04.4	-0.3
SONA1	Songino Array	95.69	319	eP	P	20 10 16.2	-0.2
SONM	Songino Array	95.69	319	P	P	20 10 16.2	-0.1
	comp=Z,3.1nm,0.9s,baz=124,slow=4.2,SNR=13						
SONM				sP	sP	20 13 21.4	-4.3
	comp=Z,1.5nm,0.9s,baz=109,slow=1.4,SNR=3.2						
SONM				PP	PP	20 14 16.0	-2.8
	comp=Z,3.5nm,0.9s,baz=133,slow=7.1,SNR=5.2						
SONM				PKKPbc	PKKPbc	20 27 04.4	-0.3
	comp=Z,1.4nm,0.9s,baz=275,slow=4.2,SNR=6.7						
DGMT	Dagmar	96.42	40	eP	P	20 10 20.1	+0.7
	comp=Z,23nm,1.0s						
DGMT	Dagmar	96.42	40	P	P	20 10 20.1	+0.7
	baz=245						
GTA	Gaotai	96.65	310	eP	P	20 10 21.5	+0.6
GTA				pP	pwP	20 12 33.3	-1.6
GTA				sP	sP	20 13 29.3	-0.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BGNE	Belgrade	97.56	49	P	Pdif	20 10 24.6	-0.1
	baz=248						
YKA	Yellowknife Ar	97.87	25	P	P	20 10 25.6	+0.1
	comp=Z,1.9nm,0.7s,baz=244,slow=4.4,SNR=34						
YKA				pP	pP	20 12 41.0	+4.7
	comp=Z,1.8nm,1.1s,baz=246,slow=4.6,SNR=3.9						
YKA				sP	sP	20 13 30.5	-5.6
	comp=Z,1.0nm,0.9s,baz=238,slow=4.8,SNR=3.1						
YKA				PP	PP	20 14 27.8	-6.9
	comp=Z,2.0nm,1.0s,baz=236,slow=6.5,SNR=4.5						
YKA				PKKPbc	PKKPbc	20 26 56.1	-3.0
	comp=Z,0.5nm,0.4s,baz=33,slow=2.5,SNR=10						
YKA				PKKPab	PKKPab	20 27 27.7	
	comp=Z,0.9nm,0.9s,baz=52,slow=4.7,SNR=6.3						
YKB5	Yellowknife Ar	97.87	25	ePdif	Pdif	20 10 24.6	-1.0
TLY	Talaya	98.91	322⇑	eP	P	20 10 32.2	+1.7
TLY				pmax	pmax		
	comp=Z,29nm,3.9s						
ECSD	EROS Data Cent	99.45	47	ePdif	Pdif	20 10 32.8	-0.3
	comp=Z,11nm,1.4s						
ECSD	EROS Data Cent	99.45	47	P	Pdif	20 10 33.1	0.0
	baz=250						
LSA	Lhasa	99.97	298	ePdif	Pdif	20 10 37.8	+1.5
	comp=Z,2.7nm,0.8s						
LSA	Lhasa	99.97	298	eP	Pdif	20 10 37.8	+1.5
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PALK	Pallekele	101.92	273	PP	PKiKP	20 15 03.8	0.0
	comp=Z,9.0nm,0.8s,baz=116,slow=3.9,SNR=4.1						
ULM	Lac du Bonnet	102.13	41	PP	PKiKP	20 15 02.9	-0.2
	comp=Z,2.4nm,0.8s,baz=310,slow=7.6,SNR=3.6						
RES	Resolute Bay	109.04	16	PKiKP	PKiKP	20 15 14.4	-0.7
	comp=Z,2.2nm,0.7s,baz=273,slow=4.3,SNR=12						
RES				SKP		20 17 53.8	
	comp=Z,2.5nm,0.9s,baz=306,slow=4.8,SNR=5.2						
ZAA1	Zalesovo Array	110.48	321	ePKiKP	PKiKP	20 15 17.1	-1.3
ZAA1				ePP	PP	20 16 01.2	-5.6
ZALV	Zalesovo Beam	110.48	321	PKiKP	PKiKP	20 15 17.1	-1.3
	comp=Z,3.2nm,0.6s,baz=169,slow=1.6,SNR=12						
ZALV				PP	PP	20 16 01.2	-5.6
	comp=Z,1.6nm,0.7s,baz=103,slow=6.7,SNR=4.8						
MK01	Makanchi Array	110.97	313	ePdif	Pdif	20 11 25.7	+1.4
MK32	Makanchi Array	110.98	313	ePdif	Pdif	20 11 27.2	+3.0
MK32				e		20 14 35.2	
MK32				ePKiKP	PKiKP	20 15 18.8	-0.9
MK32				ePP	PP	20 16 03.0	-7.7
MK32				ePKKPbc	PKKPbc	20 26 19.5	-0.1
MK32				ePKKPab	PKKPab	20 26 31.6	+1.5
MKAR	Makanchi Array	110.98	313	Pdiff	Pdif	20 11 27.2	+3.0
	comp=Z,1.0nm,0.9s,baz=93,slow=5.2,SNR=8.6						
MKAR				sPdiff	sPdif	20 14 35.2	+1.6
	comp=Z,1.2nm,0.9s,baz=108,slow=5.7,SNR=4.0						
MKAR				PKiKP	PKiKP	20 15 18.8	-0.9
	comp=Z,3.3nm,0.7s,baz=169,slow=0.3,SNR=19						
MKAR				PP	PP	20 16 03.0	-7.7
	comp=Z,3.5nm,0.9s,baz=100,slow=10.0,SNR=6.4						
MKAR				PKKPbc	PKKPbc	20 26 19.5	-0.1
	comp=Z,3.1nm,0.8s,baz=270,slow=4.2,SNR=15						
MKAR				PKKP	PKKPab	20 26 31.6	+1.5
	comp=Z,0.8nm,0.5s,baz=325,slow=1.5,SNR=5.9						
NRIK	Noril'sk	110.99	338	PP	PP	20 16 07.1	-2.8
	comp=Z,1.8nm,0.2s,baz=92,slow=7.4,SNR=7.1						
NRIK				SKP		20 17 57.5	
	comp=Z,4.1nm,0.6s,baz=183,slow=0.9,SNR=4.4						
D52A	ZEK Kipawa Sen	112.66	47	P	PKiKP	20 15 22.2	-0.6
	baz=262						
E53A	Dumoine, Ponti	113.09	47	P	PKiKP	20 15 23.1	-0.6
	baz=263						
D53A	Lac Vacive, Po	113.15	47	P	PKiKP	20 15 22.9	-0.8
	baz=263						
E54A	Lac Daplat, Po	113.43	47	P	PKiKP	20 15 23.5	-0.9
	baz=263						
G55A	Calabogie	113.61	49	P	PKiKP	20 15 23.8	-0.9
	baz=263						
H56A	Elgin	113.85	50	P	PKiKP	20 15 23.9	-1.2
	baz=263						
LSQQ	Lebel-sur-Quev	113.85	45	P	PKiKP	20 15 24.1	-1.0
	baz=264						
D54A	Lac Fusel, La	113.87	47	P	PKiKP	20 15 24.1	-1.1
	baz=264						
KURK	Kurchatov	113.88	317	ePP	PP	20 16 30.1	-0.6
KURK	Kurchatov	113.88	317	i PKIKP	PKiKP	20 15 24.2	-0.8
KURK						20 16 30.1	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURBB	Kurchatov Arra	113.93	317	PKiKP	PKiKP	20 15 24.2	-0.9
	comp=Z,1.7nm,0.3s,baz=78,slow=2.2,SNR=8.2						
KURBB				PP	PP	20 16 30.1	-1.0
	comp=Z,7.5nm,1.0s,baz=99,slow=6.1,SNR=5.0						
KSH	Kashi	114.45	305	SS	SS	20 31 51.0	+7.3
KSH				AMB	AMB		
	comp=Z,370nm,5.0s						
KSH				LR	LR		
	comp=N,210nm,5.0s						
KSH				LR	LR		
	comp=E,220nm,4.3s						
KSH				LR	LR		
	comp=Z,720nm,5.5s						
KSH	Kashi	114.45	305	PKP	PKiKP	20 15 28.3	+1.6
KSH				PP	PP	20 16 36.0	+0.8
KSH				sPKP		20 18 43.3	
KSH				SKS	SKSdf	20 21 42.8	+0.4
KSH				SS	SS	20 31 51.0	+7.3
KSH				AMB	AMB		
	comp=Z,370nm,5.0s						
KSH	Kashi	114.45	305	PKP	PKiKP	20 15 28.3	+1.6
KSH				PP	PP	20 16 36.0	+0.8
KSH				sPKP		20 18 43.3	
KSH				SKS	SKSdf	20 21 42.8	+0.4
KSH				SKKS	SKKSac	20 22 43.5	+10
LONY	Lake Ozonia	115.04	50	P	PKPdf	20 15 26.1	-1.4
	baz=264						
CHGQ	Chibougamau	115.61	44	P	PKPdf	20 15 27.0	-1.5
	baz=267						
AAK	Ala-Archa	115.94	308	ePKPdf	PKPdf	20 15 28.5	-1.0
AAK				ePKPdf	PKiKP	20 15 29.0	-0.6
AAK	Ala-Archa	115.94	308	PKP	PKPdf	20 15 28.5	-1.0
	comp=Z,2.1nm,0.7s,baz=136,slow=4.7,SNR=10.0						
M65A	Busby, Falmout	117.62	53	P	PKiKP	20 15 32.6	0.0
	baz=265						
FRB	Frobisher Bay	118.18	28	PKP	PKPdf	20 15 31.5	-1.4
	comp=Z,5.1nm,0.5s,baz=277,slow=2.2,SNR=25						
FRB				SKP		20 18 12.4	
	comp=Z,1.4nm,0.6s,baz=303,slow=3.5,SNR=3.8						
FRB				PKKPbc	PKKPbc	20 25 55.1	-0.4
	comp=Z,1.3nm,0.4s,baz=94,slow=4.4,SNR=3.5						
PKME	Peaks-Kenny Pk	118.83	49	P	PKPdf	20 15 34.7	0.0
	baz=268						
KK31	Karatay Array	118.90	308	ePKPdf	PKPdf	20 15 33.2	-1.8
KK31	Karatay Array	118.90	308	ePKIKP	PKPdf	20 15 33.2	-1.8
KKAR	Karatay Array	118.90	308	ePKPdf	PKPdf	20 15 32.9	-2.1
KKAR	Karatay Array	118.90	308	ePKIKP	PKPdf	20 15 32.9	-2.1
BVAR	Borovoye Array	119.03	320	PKP	PKPdf	20 15 33.8	-1.1
	comp=Z,4.3nm,0.3s,baz=114,slow=2.0,SNR=45						
BVAR				PP	PP	20 17 03.6	-2.4
	comp=Z,6.1nm,1.0s,baz=81,slow=9.2,SNR=5.5						
BRVK	Borovoye	119.09	320	ePKPdf	PKPdf	20 15 33.8	-1.2
BRVK	Borovoye	119.09	320⇑	iPKIKP	PKPdf	20 15 34.5	-0.5
OPO	Ambohidratompo	119.57	232	PKP	PKiKP	20 15 37.7	+0.4
	comp=Z,4.9nm,0.6s,baz=271,slow=6.0,SNR=4.3						
BDFB	Brasilia	119.64	124	PKP	PKPdf	20 15 37.1	-0.3
	comp=Z,1.8nm,0.4s,baz=106,slow=1.1,SNR=4.1						
BDFB				SKP		20 18 15.2	
	comp=Z,4.3nm,0.8s,baz=199,slow=9.9,SNR=3.3						
BDFB				PKKPbc	PKKPbc	20 25 50.8	+0.7
	comp=Z,4.1nm,0.7s,baz=53,slow=15,SNR=2.7						
PQI	Presque Isle	119.75	48	ePKPdf	PKPdf	20 15 35.3	-1.1
SCHQ	Schefferville	120.15	38	ePKPdf	PKPdf	20 15 36.0	-1.0
SCHQ	Schefferville	120.15	38	PKP	PKPdf	20 15 36.5	-0.5
	comp=Z,1.4nm,0.5s,baz=251,slow=3.1,SNR=6.3						
LMN	Caledonia Moun	121.99	49	ePKPdf	PKPdf	20 15 40.2	-0.7
SPA0	Spitsbergen Ar	122.73	356	ePKPdf	PKPdf	20 15 40.7	-0.7
SPA0	Spitsbergen Ar	122.73	356	ePKPdf	PKPdf	20 15 41.0	-0.4
SPITS	Spitsbergen Ar	122.73	356	PKKPbc	PKKPbc	20 25 37.6	-1.7
	comp=Z,4.9nm,0.8s,baz=166,slow=5.2,SNR=10.0						
SUR	Sutherland	123.13	200	ePKPdf	PKPdf	20 15 43.9	+0.1
SUR				SKP		20 18 22.5	
SUR	Sutherland	123.13	200	PKP	PKiKP	20 15 44.6	+0.6
	comp=Z,21nm,0.7s,baz=174,slow=1.3,SNR=38						
SUR				SKP		20 18 22.5	
	comp=Z,6.0nm,0.8s,baz=182,slow=3.5,SNR=5.1						
DAG	Danmarks Havn	123.79	5	i P	PKPdf	20 15 41.6	-1.8
	comp=Z,7.4nm,0.7s						
DAG	Danmarks Havn	123.79	5	i PKIKP	PKPdf	20 15 41.6	-1.8
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HSPB	Hornsund (broa	123.92	356	ePdif	Pdif	20 12 21.3	+0.2
HSPB				ePKPdf	PKPdf	20 15 43.5	-0.1
SFJD	Kangerlussuaq	124.27	22	PKP	PKPdf	20 15 43.3	-1.2
	comp=Z,4.7nm,0.6s,baz=152,slow=8.5,SNR=5.2						
SUMG	Summit	124.35	13	i P	PKiKP	20 15 45.3	-0.2
SUMG	Summit	124.35	13	ePKIKP	PKiKP	20 15 45.3	-0.2
BOSA	Boshof	124.88	206	PKP	PKiKP	20 15 48.0	+0.5
	comp=Z,5.6nm,0.7s,baz=151,slow=5.3,SNR=8.3						
BOSA				PKKPbc	PKKPbc	20 25 30.3	-0.9
	comp=Z,3.9nm,0.8s,baz=0.3,slow=3.5,SNR=6.1						
ARU	Arti	125.29	325	ePKPdf	PKPdf	20 15 45.8	-1.0
ARU	Arti	125.29	325	i PKIKP	PKPdf	20 15 46.6	-0.2
ARU						20 17 46.8	
ARU						20 22 00.4	
ARU				SS	SS	20 33 55.7	-3.7
ABKAR	Akbulak array	125.94	316	ePKPdf	PKPdf	20 15 48.0	-0.2
AKTO	Aktyubinsk	126.97	318	PKP	PKPdf	20 15 50.4	+0.2
	comp=Z,5.3nm,0.7s,baz=83,slow=3.1,SNR=21						
AKTO				SKP		20 18 29.3	
	comp=Z,2.3nm,0.8s,baz=27,slow=7.4,SNR=3.7						
LBTB	Lobatse	127.87	209	ePKPdf	PKiKP	20 15 53.5	-0.1
LBTB	Lobatse	127.87	209	PKP	PKiKP	20 15 53.3	-0.3
	comp=Z,3.2nm,0.5s,baz=186,slow=4.2,SNR=12						
GEYT	Alibeck	128.28	302	PKP	PKiKP	20 15 53.8	-0.1
	comp=Z,9.0nm,0.7s,baz=202,slow=1.6,SNR=15						
GEYT				PP	PP	20 18 06.3	-1.3
	comp=Z,16nm,1.1s,baz=135,slow=0.6,SNR=12						
GEYT				SKPbc	SKPbc	20 18 17.6	
	comp=Z,14nm,1.0s,baz=180,slow=1.0,SNR=9.0						
GEYT				SKP		20 18 33.5	
	comp=Z,4.0nm,0.9s,baz=166,slow=1.2,SNR=3.5						
GYA0B	ALIBECK ARRAY	128.28	302	ePKPpre	PKPpre	20 15 41.5	
GYA0B				ePKPdf	PKPdf	20 15 53.2	0.0
ARA0	ARCESS Array S	129.63	349	ePKPpre	PKPpre	20 15 43.4	
ARA0				ePKPdf	PKPdf	20 15 54.3	-0.4
ARA0				eSKPbc	SKPab	20 18 21.8	+0.3
ARA0				eSKPdf	SKiKP	20 18 34.3	-0.8
ARA0				e		20 25 58.2	
ARCES	ARCESS Array B	129.63	349	PKhKP	PKPpre	20 15 43.4	
	comp=Z,2.2nm,0.8s,baz=17,slow=0.9,SNR=6.2						
ARCES				PKP	PKPdf	20 15 54.3	-0.4
	comp=Z,12nm,0.6s,baz=67,slow=1.3,SNR=27						
ARCES				SKPbc	SKPab	20 18 21.8	+0.3
	comp=Z,78nm,0.9s,baz=35,slow=4.4,SNR=43						
ARCES				SKP		20 18 34.3	
	comp=Z,10nm,0.7s,baz=21,slow=0.6,SNR=5.6						
ARCES				PKKP	PKKPdf	20 25 58.2	-2.8
	comp=Z,2.5nm,0.8s,baz=209,slow=2.2,SNR=5.3						
ARE0	ARCESS Array S	129.63	349	ePKPdf	PKPdf	20 15 54.8	0.0
MATP	Matopo	130.31	215	PKhKP	PKPpre	20 15 44.1	
	comp=Z,1.4nm,0.5s,baz=217,slow=2.2,SNR=4.9						
MATP				PKP	PKiKP	20 15 58.8	+0.1
	comp=Z,8.0nm,0.7s,baz=154,slow=2.0,SNR=22						
MATP				SKPbc	SKPbc	20 18 25.7	+0.1
	comp=Z,16nm,0.5s,baz=148,slow=3.4,SNR=29						
MATP				SKP		20 18 35.8	
	comp=Z,3.4nm,0.7s,baz=187,slow=6.1,SNR=3.5						
KTK1	Kautokeino	130.48	350	ePKPdf	PKPdf	20 15 55.9	-0.4
KTK1				ePP	PP	20 18 21.4	+1.2
TRO	Tromso	130.57	352	ePKPdf	PKPdf	20 15 56.6	+0.1
TRO				epPKPdf	PP	20 18 20.0	-0.7
KLMR	Klimovskoe	132.26	336	ePKIKP	PKiKP	20 16 00.9	-0.1
KLMR				e		20 18 29.1	
KLMR				pmax	pmax		
	comp=Z,19nm,1.4s						
KLMR	Klimovskoe	132.26	336	ePKPdf	PKiKP	20 16 01.0	-0.1
KLMR				AMP		20 16 02.8	
	comp=Z,19nm,1.4s						
KLMR				ePP	PP	20 18 29.2	-2.5
STEI	Steigen	132.64	353	ePKPdf	PKPdf	20 16 00.0	-0.4
MOR8	Moi Rana	134.42	352	ePKPdf	PKPdf	20 16 03.5	-0.4
LSZ	Lusaka	134.63	219	ePKPdf	PKPdf	20 16 06.1	+0.2
NSS	Namsos	136.29	353	ePKPdf	PKPdf	20 16 07.1	-0.3
FIA1	FINESS Array S	136.33	343	ePKPpre	PKPpre	20 15 57.7	
FIA1				ePKPdf	PKPdf	20 16 08.2	+0.7
FIA0	FINESS Array S	136.33	343	ePKPpre	PKPpre	20 15 53.2	
FIA0				ePKPdf	PKiKP	20 16 08.8	-0.6
FIA0				eSKPbc	SKPbc	20 18 43.6	-0.2
FIA0	FINESS Array S	136.33	343	ePKHKP	PKPpre	20 15 53.2	
FIA0				e		20 16 08.8	
FINES	FINESS Array B	136.33	343	PKhKP	PKPpre	20 15 53.2	
	comp=Z,1.2nm,0.5s,baz=24,slow=1.7,SNR=9.3						
FINES				PKP	PKiKP	20 16 08.8	-0.6
	comp=Z,6.3nm,0.6s,baz=88,slow=3.2,SNR=14						
FINES				SKPbc	SKPbc	20 18 43.6	-0.2
	comp=Z,43nm,0.9s,baz=64,slow=4.4,SNR=25						
TSUM	Tsumeb	136.36	203	ePKPpre	PKPpre	20 16 00.7	
TSUM				ePKPdf	PKPdf	20 16 09.6	+0.5
GROC	Groznyy	136.81	311	ePKHKP	PKPpre	20 16 02.2	
GROC				e		20 18 59.7	
GROC				e		20 22 22.5	
GROC				pmax	pmax		
	comp=Z,12nm,0.6s						
OBN	Obninsk	137.00	330	ePKIKP	PKPdf	20 16 09.0	+0.1
OBN				e		20 19 00.7	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR	Galich'ya Gora	137.27	326	ePKIKP	PKPdf	20 16 08.4	-1.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMBO	Kilima Mbogo	137.84	242	PKhKP	PKPpre	20 16 05.8	
	comp=Z,2.2nm,0.9s,baz=221,slow=2.6,SNR=5.5						
KMBO				PKP	PKPdf	20 16 12.8	+0.8
	comp=Z,2.0nm,0.6s,baz=52,slow=11,SNR=5.6						
KMBO				SKPbc	SKPbc	20 18 50.7	+0.5
	comp=Z,8.7nm,1.0s,baz=73,slow=2.7,SNR=9.5						
VSR	Storozhevoye	137.86	324	ePKIKP	PKPdf	20 16 10.5	-0.1
VSR				pmax	pmax		
	comp=Z,20nm,1.7s						
GNI	Garni	138.33	307	ePKPpre	PKPpre	20 16 00.8	
GNI				ePKPdf	PKPdf	20 16 12.1	0.0
GNI				ePKPdf	PKiKP	20 16 12.9	-1.4
GNI	Garni	138.33	307	PKP	PKPdf	20 16 12.1	0.0
	comp=Z,6.2nm,0.9s,baz=338,slow=2.7,SNR=5.3						
GNI				SKPbc	SKPbc	20 18 51.2	+0.7
	comp=Z,15nm,0.9s,baz=281,slow=2.6,SNR=5.6						
VSU	Vasula	138.53	340	i PKIKP	PKiKP	20 16 13.6	-0.3
VSU	Vasula	138.53	340	eP	PKPpre	20 16 02.1	
VSU				ePP	SKPbc	20 18 50.0	-0.2
ATD	Arta Tunnel	138.53	263	SKPbc	SKiKP	20 18 53.8	-1.2
	comp=Z,6.9nm,0.7s,baz=291,slow=18,SNR=3.8						
KBZ	Khabaz	138.67	313	PKP	PKiKP	20 16 13.6	-1.1
	comp=Z,2.9nm,0.8s,baz=248,slow=1.9,SNR=7.3						
KBZ				SKPbc	SKPbc	20 18 51.6	+0.5
	comp=Z,6.6nm,0.9s,baz=156,slow=2.1,SNR=5.5						
RAYN	Ar Rayn	138.69	282	ePKPpre	PKPpre	20 16 04.2	
RAYN				ePKPdf	PKPdf	20 16 13.5	+0.4
RAYN	Ar Rayn	138.69	282	ePKHKP	PKPpre	20 16 04.2	
RAYN				e		20 16 13.5	
KVAR	Kislovodsk Arr	138.73	313	SKPbc	SKPbc	20 18 52.2	+0.7
	comp=Z,5.8nm,1.0s,baz=102,slow=20,SNR=3.5						
NEY	Neytrino	138.94	312⇑	ePKIKP	PKPdf	20 16 11.2	-1.9
DOMB	Dombas	139.03	354	ePKPdf	PKPdf	20 16 12.0	-0.5
NC303	NORSAR Array S	139.57	352	ePKPpre	PKPpre	20 16 05.0	
NB2	NORSAR Subarra	139.77	352	PKP	PKPpre	20 16 06.5	
	comp=Z,2.8nm,0.6s,baz=10,slow=3.2						
NB200	NORSAR Array S	139.77	352	ePKPpre	PKPpre	20 16 06.4	
NB200				ePKPdf	PKPdf	20 16 14.5	+0.6
NB200				eSKPbc	SKPbc	20 18 53.5	-0.1
NB200				eSKPab	SKPab	20 19 06.7	+0.6
NOA	NORSAR Array B	139.77	352	PKhKP	PKPpre	20 16 06.4	
	comp=Z,4.4nm,0.7s,baz=16,slow=4.6,SNR=20						
NOA				PKP	PKPdf	20 16 14.5	+0.6
	comp=Z,2.5nm,0.8s,baz=14,slow=3.7,SNR=8.6						
NOA				SKPbc	SKPbc	20 18 53.5	-0.1
	comp=Z,11nm,0.8s,baz=14,slow=4.4,SNR=17						
NOA				SKPab	SKPab	20 19 06.7	+0.6
	comp=Z,1.5nm,0.8s,baz=13,slow=3.3,SNR=3.4						
NC602	NORSAR Array S	140.02	352	ePKPpre	PKPpre	20 16 05.8	
NC602	NORSAR Array S	140.02	352	ePKPdf	PKPpre	20 16 09.2	
SIRN	Sırnak	140.68	303	i P	PKPpre	20 16 10.7	
SIRN				IAML_P			
	comp=Z,249nm,0.4s						
IZAR	Zarasai	140.82	337	eP	PKPdf	20 16 13.7	-2.1
IZAR				ePP	SKPbc	20 18 56.7	+0.3
SOC	Sochi	140.88	314	i PKIKP	PKPdf	20 16 16.4	0.0
SOC				e		20 19 21.0	
SOC				ePPP	PPP	20 22 36.1	
SOC				eSS	SS	20 37 06.6	+0.9
SOC				eSSS	SSS	20 42 30.0	
IDID	Didziasalis	140.97	337	eP	PKPpre	20 16 10.9	
IDID				ePP	SKPbc	20 18 56.5	-0.3
ISAL	Salakas	141.00	337	eP	PKPpre	20 16 12.0	
ISAL				ePP	SKPbc	20 18 56.2	-0.7
IIGN	Ignalina	141.14	337	eP	PKPpre	20 16 11.7	
IIGN				ePP	SKPbc	20 18 57.4	+0.1
KONO	Kongsberg	141.32	353	ePKPpre	PKPpre	20 16 11.0	
KONO	Kongsberg	141.32	353	ePKHKP	PKPpre	20 16 11.0	
KONO	Kongsberg	141.32	353	ePKPdf	PKPpre	20 16 11.7	
KOPT	Kop Dagi	141.51	308	i P	PKPdf	20 16 16.4	-1.6
KOPT				IAML_P			
	comp=Z,93nm,0.2s						
BLS5	Blasjo	141.84	355	ePKPdf	PKPdf	20 16 14.9	-2.7
PBUR	Paburg	142.04	341	eP	PKPdf	20 16 14.5	-3.5
KMY	Karmoy	142.14	356	ePKPdf	PKPdf	20 16 14.5	-3.6
SHEL	Horse Pasture	142.29	170	ePKPdf	PKPdf	20 16 18.6	-1.2
SHEL	Horse Pasture	142.29	170	i PKIKP	PKPdf	20 16 19.2	-0.5
DIYA	Diyarbakir	142.35	305	i P	PKPdf	20 16 16.2	-3.1
DIYA				IAML_P			
	comp=Z,90nm,0.1s						
KELT	Kelkit	142.38	309	i P	PKPdf	20 16 17.6	-1.8
KELT				IAML_P			
	comp=Z,2µm,0.9s						
TNCL	Tunceli-Merkez	142.47	307	i P	PKiKP	20 16 21.4	-1.5
TNCL				IAML_P			
	comp=Z,299nm,1.0s						
HOMB	Homborsund	142.79	353	ePKPbc	PKPdf	20 16 16.2	-3.0
BIGH	Upper Bighouse	142.85	4	eP	PKPdf	20 16 15.2	-4.2
SNART	Snartemo	142.85	354	ePKPbc	PKPdf	20 16 16.6	-2.8
REFA	Refahiye_ERZN	142.97	308	i P	PKPdf	20 16 19.4	-1.0
REFA				IAML_P			
	comp=Z,1µm,0.8s						
ELZG	Elazig	143.06	306	i P	PKPdf	20 16 20.3	-0.4
ELZG				IAML_P			
	comp=Z,3µm,0.8s						
ORDU	Ordu-Boztepe	143.10	310	i P	PKPbc	20 16 19.2	+0.3
ORDU				IAML_P			
	comp=Z,979nm,0.8s						
KEMA	Kemaliye	143.21	307	i P	PKPdf	20 16 20.1	-0.7
KEMA				IAML_P			
	comp=Z,554nm,0.2s						
AKASG	Malin Array Be	143.24	330	PKhKP	PKPpre	20 16 17.4	
	comp=Z,42nm,0.6s,baz=44,slow=4.4,SNR=144						
AKASG				SKPbc	SKPbc	20 19 02.4	-0.1
	comp=Z,24nm,0.9s,baz=46,slow=2.7,SNR=21						
AKBB	Malin Array Si	143.24	330	ePKPdf	PKPab	20 16 17.4	-1.2
AKBB				eSKPbc	SKPbc	20 19 02.1	-0.5
KIEV	Kiev	143.25	330	ePKPdf	PKPab	20 16 17.4	-1.3
SUW	Suwalki	143.28	338	ePKP	PKPab	20 16 18.2	-0.4
SUW	Suwalki	143.28	338	ePKPbc	PKPab	20 16 17.7	-0.9
SUW	Suwalki	143.28	338	ePKIKP	PKPab	20 16 18.2	-0.4
AK11	Malin Array Si	143.28	330	ePKPbc	PKPab	20 16 17.3	-1.5
MBAR	Mbarara	143.40	237	ePKPbc	PKPdf	20 16 21.4	-0.5
MBAR				eSKPbc	SKiKP	20 19 05.3	0.0
MBAR	Mbarara	143.40	237	PKP	PKPdf	20 16 21.7	-0.3
	comp=Z,40nm,0.6s,baz=112,slow=5.0,SNR=92						
MBAR				SKPbc	SKiKP	20 19 05.6	+0.4
	comp=Z,3.2nm,0.2s,baz=118,slow=6.3,SNR=4.3						
SANL	SANLIURFA_Merk	143.41	304	i P	PKPbc	20 16 20.4	+0.5
SANL				IAML_P			
	comp=Z,5µm,0.8s						
CUZAR	Zara_SIVAS	143.54	309	i P	PKPdf	20 16 21.5	+0.1
HEKM	Malatya_Hekimh	143.72	307	i P	PKPdf	20 16 22.2	+0.4
HEKM				IAML_P			
	comp=Z,457nm,0.4s						
KAC	Achnashellach	143.72	5	eP	PKPbc	20 16 19.6	-0.5
KLNR	Kaliningrad	143.77	341	dePKIKP	PKPbc	20 16 19.3	-1.0
SURC	SANLIURFA_SURC	143.78	304	i P	PKPdf	20 16 22.0	+0.2
SURC				IAML_P			
	comp=Z,4.0nm,0.4s						
MCD	Coleburn Disti	143.79	4	eP	PKPbc	20 16 19.4	-1.0
KPL	Plockton	143.85	6	eP	PKPbc	20 16 19.6	-0.9
MDO	Dochfour	143.86	5	eP	PKPbc	20 16 20.4	-0.2
AKCD	Akcadag	143.92	306	i P	PKPdf	20 16 22.3	+0.2
AKCD				IAML_P			
	comp=Z,676nm,0.6s						
SIM	Simferopol'	143.93	318	i PKIKP	PKPab	20 16 21.4	0.0
SIM				pmax	pmax		
	comp=Z,123nm,0.8s						
CUKAN	kangal_SIVAS	143.95	308	i P	PKPdf	20 16 22.3	+0.1
ERBA	Erbaa	144.00	310	i P	PKPdf	20 16 22.4	+0.4
ERBA				IAML_P			
	comp=Z,3µm,0.8s						
CUGUR	Gurin_SVAS	144.28	307	i P	PKPab	20 16 24.5	+1.3
GZT	Gaziantep	144.46	305	i P	PKPab	20 16 24.1	+0.2
GZT				IAML_P			
	comp=Z,2µm,0.7s						
MUD	Monsted U'grnd	144.48	352	i P	PKPbc	20 16 22.5	0.0
	comp=Z,65nm,0.9s						
MUD	Monsted U'grnd	144.48	352	i PKIKP	PKPbc	20 16 22.5	0.0
MUD				pmax	pmax		
	comp=Z,65nm,0.9s						
CUALT	Altinyayla-SIV	144.49	308	i P	PKPab	20 16 24.8	+0.8
DRUM	Mains of Drumt	144.50	3	eP	PKPdf	20 16 21.6	-0.7

SNOP	Sinop	144.55	313	*e*PKPdf	PKPab	20 16 23.6	-0.3
SINO	SINOP_Merkez	144.56	313	*i* P	PKPab	20 16 24.1	+0.1
SINO				IAML_P			
	comp=Z,51nm,0.4s						
HAVZ	Havza	144.58	312	*i* P	PKPab	20 16 24.1	0.0
HAVZ				IAML_P			
	comp=Z,796nm,0.7s						
DIKM	Dikmen	144.67	313	⇑*i*P	PKPdf	20 16 22.7	-0.4
COP	Copenhagen	144.71	349	*i* P	PKPdf	20 16 22.5	-0.1
	comp=Z,29nm,0.5s						
COP	Copenhagen	144.71	349	*i* PKIKP	PKPdf	20 16 22.5	-0.1
COP				pmax	pmax		
	comp=Z,29nm,0.5s						
BSD	Bornholm Skovb	144.73	346	*i* P	PKPdf	20 16 22.0	-0.7
	comp=Z,54nm,0.6s						
BSD	Bornholm Skovb	144.73	346	*i* PKIKP	PKPdf	20 16 22.0	-0.7
BSD				pmax	pmax		
	comp=Z,54nm,0.6s						
CUSAR	Sarkisla-SIVAS	144.81	309	*i* P	PKPab	20 16 25.0	-0.2
INVG	Invergeldie, C	144.89	5	*e*P	PKPdf	20 16 23.2	+0.2
LAWE	Loch Awe, Argy	144.94	6	*e*P	PKPdf	20 16 23.3	+0.3
HCB	Kahramanmara	144.97	305	*i* P	PKPab	20 16 25.4	-0.4
HCB				IAML_P			
	comp=Z,7.9nm,0.4s						
KUZU	Kuzuini	145.00	304	*i* P	PKPab	20 16 25.6	-0.3
KUZU				IAML_P			
	comp=Z,14nm,0.4s						
EAB	Aberfoyle	145.11	5	*e*P	PKPdf	20 16 23.8	+0.5
ANDN	Andirin	145.32	306	*i* P	PKPbc	20 16 25.8	0.0
ANDN				IAML_P			
	comp=Z,2µm,0.8s						
BZK	Bozkurt	145.39	314	⇓*i*P	PKPbc	20 16 26.0	+0.3
CTAK	Corum_Osmancik	145.39	311	*i* P	PKPpre	20 16 13.2	
CTAK				IAML_P			
	comp=Z,468nm,0.7s						
SAIM	ADANA	145.40	306	*i* P	PKPbc	20 16 26.5	+0.5
SAIM				IAML_P			
	comp=Z,960nm,0.8s						
COAL	Corum-Alaca	145.41	311	*i* P	PKPab	20 16 26.8	-0.7
COAL				IAML_P			
	comp=Z,363nm,0.9s						
ESY	Stoneypath	145.49	3	*e*P	PKPbc	20 16 24.9	-0.6
EAU	Auchinoon	145.51	4	*e*P	PKPbc	20 16 25.3	-0.3
SIRC	Yozgat	145.63	309	*i* P	PKPdf	20 16 25.8	+0.8
SIRC				IAML_P			
	comp=Z,870nm,0.6s						
GKP	Gorka Klasztor	145.80	342	*e*PKP	PKPbc	20 16 26.3	-0.2
GKP	Gorka Klasztor	145.80	342	*e*PKIKP	PKPbc	20 16 26.3	-0.2
KIS	Kishinev	145.85	325	⇑*i*PKP	PKPdf	20 16 25.0	+0.1
KIS				M	M	20 16 25.5	
	comp=Z,300nm,2.0s						
KIS	Kishinev	145.85	325	⇑*i*PKIKP	PKPdf	20 16 25.0	+0.1
KIS				pmax	pmax		
	comp=Z,300nm,2.0s						
IDGL	Inch Island, C	145.86	8	*e*P	PKPbc	20 16 26.1	-0.5
BEL	Belsk	145.90	338	*e*PKP	PKPbc	20 16 27.1	+0.3
BEL	Belsk	145.90	338	*e*PKP2	PKPbc	20 16 27.1	+0.3
YAHY	KAYSERI_Yahyal	145.90	307	*i* P	PKPbc	20 16 27.4	0.0
YAHY				IAML_P			
	comp=Z,949nm,0.7s						
YAYL	Yayladag	145.95	303	*i* P	PKPbc	20 16 28.0	+0.4
YAYL				IAML_P			
	comp=Z,2µm,0.9s						
ILGA	Ilgaz	145.97	313	*e*PKPdf	PKPdf	20 16 26.4	+0.8
ILGA	Ilgaz	145.97	313	*i* P	PKPbc	20 16 28.6	+0.9
ILGA				IAML_P			
	comp=Z,129nm,0.4s						
AVNS	Nevsehir-Avano	146.04	308	*i* P	PKPbc	20 16 27.8	0.0
AVNS				IAML_P			
	comp=Z,2µm,0.7s						
ESK	Eskdalemuir	146.06	4	*e*PKPdf	PKPbc	20 16 26.3	-0.8
ESK	Eskdalemuir	146.06	4	*e*P	PKPbc	20 16 26.4	-0.8
ESK	Eskdalemuir	146.06	4	*e*PKIKP	PKPbc	20 16 26.3	-0.8
CDAG	Cicekdag	146.09	310	*i* P	PKPbc	20 16 28.4	+0.6
CDAG				IAML_P			
	comp=Z,44nm,0.1s						
YURE	YUREGIR	146.09	305	*i* P	PKPbc	20 16 28.5	+0.6
ASF	Jabal al Asfar	146.14	296	PKPbc	PKPbc	20 16 28.4	+0.2
	comp=Z,29nm,1.0s,baz=75,slow=3.6,SNR=39						
LVV	L'vov	146.22	333	*e*PKIKP	PKPbc	20 16 27.5	-0.2
DELI	KIRIKKALE	146.26	311	*i* P	PKPbc	20 16 27.2	-1.1
GAL1	Galloway	146.38	6	*e*P	PKPbc	20 16 27.3	-0.7
IAS	Iasi	146.38	326	⇓*i*P	PKPbc	20 16 28.4	+0.1
IAS	Iasi	146.38	326	⇓PKP2	PKPbc	20 16 28.4	+0.1
ELDT	Eldivan	146.41	312	*i* P	PKPbc	20 16 28.9	0.0
ELDT				IAML_P			
	comp=Z,1µm,0.8s						
BR101	Keskin Array S	146.57	310	*e*PKPdf	PKPdf	20 16 26.7	+0.1
BR101				*e*PKPbc	PKPbc	20 16 28.9	-0.3
BR101				*e*SKPbc	SKPbc	20 19 10.7	0.0
BR101				*e*PP	PP	20 19 55.6	-3.6
BR131	Keskin Array S	146.57	310	*e*PKPdf	PKPdf	20 16 26.7	+0.2
BRTR	Keskin Array B	146.57	310	PKP	PKPdf	20 16 26.7	+0.2
	comp=Z,22nm,0.7s,baz=142,slow=3.7,SNR=70						
BRTR				PKPbc	PKPbc	20 16 28.9	-0.3
	comp=Z,23nm,0.7s,baz=138,slow=4.0,SNR=83						
BRTR				SKPbc	SKPbc	20 19 10.7	0.0
	comp=Z,6.1nm,0.9s,baz=115,slow=1.9,SNR=4.8						
BRTR				PP	PP	20 19 55.6	-3.6
	comp=Z,6.5nm,1.0s,baz=104,slow=4.0,SNR=3.6						
GULE	Gulek	146.60	306	*i* P	PKPbc	20 16 30.1	+0.7
GULE				IAML_P			
	comp=Z,8µm,0.7s						
EDMD	Edmundbyers	146.61	3	*e*P	PKPbc	20 16 27.8	-0.8
KESW	Keswick, Cumbr	146.79	4	*e*P	PKPbc	20 16 28.5	-0.6
KWP	Kalwaria Pacla	146.92	334	*e*PKP	PKPbc	20 16 30.0	+0.3
KWP	Kalwaria Pacla	146.92	334	*e*PKP2	PKPbc	20 16 30.0	+0.3
BIR	Birlad	146.95	325	⇑*i*P	PKPab	20 16 35.9	+2.6
BIR	Birlad	146.95	325	⇑PKP2	PKPab	20 16 35.9	+2.6
PRAR	RASCA	146.95	328	⇓*i*P	PKPbc	20 16 30.4	+0.6
TLCR		146.95	322	⇑*i*P	PKPbc	20 16 29.7	-0.1
TLCR		146.95	322	⇑PKP2	PKPbc	20 16 29.7	-0.1
KERG	Konya-Eregli	147.05	306	*i* P	PKPbc	20 16 29.4	-1.2
KERG				IAML_P			
	comp=Z,289nm,0.3s						
WIM	Isle of Man	147.10	6	*e*P	PKPbc	20 16 29.4	-0.6
ANTO	Ankara	147.10	311	*e*PKPdf	PKPdf	20 16 26.9	-0.4
ANTO				*e*PKPbc	PKPbc	20 16 30.6	0.0
ANTO	Ankara	147.10	311	⇓*i*P	PKPbc	20 16 30.2	-0.4
ANTO	Ankara	147.10	311	*e*PKIKP	PKPdf	20 16 26.9	-0.4
GIUM	Giurgiulesti	147.11	323	⇑*i*P	PKPbc	20 16 30.3	0.0
BR231	Keskin MP Arra	147.13	311	*e*PKPdf	PKPdf	20 16 26.7	-0.7
BR231				*e*PKPbc	PKPbc	20 16 30.1	-0.6
IGLA	Glengowla, Co	147.16	11	*e*P	PKPbc	20 16 29.7	-0.4
MMAI	Mount Meron Ar	147.22	298	PKPbc	PKPbc	20 16 31.4	+0.3
	comp=Z,42nm,0.8s,baz=69,slow=4.6,SNR=66						
MMAI				SKP		20 19 01.4	
	comp=Z,8.3nm,0.9s,baz=66,slow=4.7,SNR=3.9						
BUR08	Bucovina Ar. S	147.26	329	*e*PKPdf	PKPdf	20 16 29.0	+1.6
BUR08				*e*PKPbc	PKiKP	20 16 32.4	0.0
BUR04	Bucovina Ar. S	147.27	329	*e*PKPdf	PKPdf	20 16 28.7	+1.3
BUR04				*e*PKPbc	PKiKP	20 16 32.1	-0.3
BURAR	Bucovina Array	147.27	329	⇑*i*P	PKiKP	20 16 32.0	-0.4
BIZ	Bicaz	147.30	327	⇑*i*P	PKPbc	20 16 31.4	+0.7
TESR	Tescani	147.30	326	⇑*i*P	PKPbc	20 16 30.3	-0.5
KIZK	Mersin	147.34	305	*i* P	PKPbc	20 16 31.2	+0.1
KIZK				IAML_P			
	comp=Z,78nm,0.1s						
CFR	Carcaliu	147.34	323	⇑*i*P	PKPbc	20 16 30.1	-0.8
CFR	Carcaliu	147.34	323	⇑PKIKP	PKPbc	20 16 30.1	-0.8
HPK	Haverah Park	147.50	3	*e*P	PKPbc	20 16 30.4	-0.6
PETR	Petresti	147.50	324	⇑*i*P	PKPbc	20 16 31.7	+0.4
OJC	Ojcow	147.59	337	*e*PKP	PKPbc	20 16 31.7	+0.3
OJC	Ojcow	147.59	337	*e*PKPdf	PKPdf	20 16 29.5	+1.8
OJC				*e*PKPbc	PKPbc	20 16 32.1	+0.7
OJC	Ojcow	147.59	337	*e*PKIKP	PKPdf	20 16 29.5	+1.8
TIRR	Tirgusor	147.61	322	⇑*i*P	PKPbc	20 16 32.0	+0.4
TIRR	Tirgusor	147.61	322	⇑PKP2	PKPbc	20 16 32.0	+0.4
VRI	Vrincioaia	147.68	325	⇑*i*P	PKPbc	20 16 31.5	-0.3
VRI	Vrincioaia	147.68	325	⇑PKIKP	PKPbc	20 16 31.5	-0.3
PLOR	Plostina	147.73	325	⇓*i*P	PKPbc	20 16 30.6	-1.3
PLOR	Plostina	147.73	325	⇓PKIKP	PKPbc	20 16 30.6	-1.3
TLB	Topalu	147.75	322	⇑*i*P	PKPbc	20 16 32.2	+0.3
TLB	Topalu	147.75	322	⇑PKP2	PKPbc	20 16 32.2	+0.3
HARR	Harsova	147.75	322	⇑*i*P	PKPbc	20 16 32.1	+0.2
HARR	Harsova	147.75	322	⇑PKP2	PKPbc	20 16 32.1	+0.2
MFTR	Murfatlar	147.77	321	⇑*i*P	PKPbc	20 16 32.3	+0.3
DSB	Dublin	147.79	8	*e*P	PKPbc	20 16 31.4	-0.4
UZH	Uzhgorod	147.86	333	⇓*i*PKIKP	PKPbc	20 16 31.3	-0.8
WME	Myndd Eilian	147.88	6	*e*P	PKPbc	20 16 31.8	-0.1
GULN	MERSIN_Gulnar	147.89	304	*i* P	PKPbc	20 16 31.9	-0.7
GULN				IAML_P			
	comp=Z,782nm,0.5s						
WLF1	Llynfaes	147.97	6	*e*P	PKPbc	20 16 30.4	-1.8
LMK	Market Rasen	148.04	1	*e*P	PKPbc	20 16 32.1	-0.2
BMR	Baia Mare	148.04	330	⇓*i*P	PKiKP	20 16 35.0	+1.2
BMR	Baia Mare	148.04	330	⇓PKP2	PKiKP	20 16 35.0	+1.2
LBWR	Ladybower, Pea	148.05	3	*e*P	PKPbc	20 16 32.0	-0.4
NIE	Niedzica	148.05	336	*e*PKP	PKiKP	20 16 33.3	-0.6
NIE	Niedzica	148.05	336	*e*PKP2	PKiKP	20 16 33.3	-0.6
ARCR	ARCALIA	148.06	329	⇑*i*P	PKPbc	20 16 33.0	+0.3
TRPA	Tarpa	148.13	332	⇑*i*P	PKiKP	20 16 33.4	-0.6
TRPA	Tarpa	148.13	332	⇓*e*PKiKP	PKiKP	20 16 34.1	+0.1
EIL	Elat	148.14	292	PKPbc	PKPbc	20 16 33.9	+0.5
	comp=Z,26nm,0.7s,baz=4.2,slow=1.2,SNR=32						
PGOR	Pogoanele	148.15	323	⇓*i*P	PKiKP	20 16 34.4	+0.3
ICOR	Ion Corvin	148.17	322	⇑*i*P	PKPbc	20 16 33.5	+0.5
KSP	Ksiaz	148.22	341	*e*PKP	PKPbc	20 16 33.3	+0.4
KSP	Ksiaz	148.22	341	*e*PKP2	PKPbc	20 16 33.3	+0.4
DOPR	Dopca	148.32	326	⇑*i*P	PKPbc	20 16 33.9	+0.5
MLR	Muntele Rosu	148.34	325	*e*PKPbc	PKPbc	20 16 33.7	+0.2
MLR	Muntele Rosu	148.34	325	⇑*i*P	PKPbc	20 16 33.8	+0.2
MLR	Muntele Rosu	148.34	325	⇑PKP2	PKPbc	20 16 33.8	+0.2
VAL	Valentia	148.40	13	*e*P	PKPbc	20 16 32.0	-1.3
CSS	Mathiatis	148.42	302	*e*PKPdf	PKPdf	20 16 29.8	+0.2
CSS				*e*PKPbc	PKPbc	20 16 34.4	+0.4
CSS	Mathiatis	148.42	302	P	PKPbc	20 16 34.3	+0.4
CSS	Mathiatis	148.42	302	P	PKPbc	20 16 33.0	-1.0
MAMC	Mammari	148.45	303	P	PKPbc	20 16 34.1	+0.1
FOEL	Foel Wylfa	148.47	5	*e*P	PKPbc	20 16 32.9	-0.6
LLW	Llanuwychllyn	148.47	5	*e*P	PKPbc	20 16 32.4	-1.0
RASA	Rasa	148.49	322	⇑*i*P	PKiKP	20 16 36.2	+1.4
OKC	Ostrava-Krasne	148.49	338	⇑*e*PKP	PKPbc	20 16 33.7	+0.1
SECR		148.57	324	⇑*i*P	PKPbc	20 16 33.5	-0.5
LANS	Liptovska Anna	148.59	336	*e*PKP	PKPdf	20 16 29.3	-0.1
LANS				*e*		20 16 34.9	
LANS				*e*		20 38 46.9	
IWEX	Carrickbyrne,	148.59	9	*e*P	PKPab	20 16 38.7	-1.0
UPC	Upice	148.60	341	⇑*e*PKP	PKPbc	20 16 34.2	+0.3
UPC				*e*PKPAB	PKPab	20 16 40.8	+0.9
DPC	Dobruska-Polom	148.65	341	⇑*e*PKP	PKPbc	20 16 34.4	+0.3
DPC				*e*PKPAB	PKPab	20 16 39.9	-0.2
DPC				*e*pPKP	pPKPab	20 18 58.2	+5.8
DPC	Dobruska-Polom	148.65	341	*e*PKP2	PKPbc	20 16 34.4	+0.3
CLL	Collm	148.69	345	*e*PKPbc	PKPbc	20 16 33.7	-0.3
CLL	Collm	148.69	345	*i* PKPbc	PKPbc	20 16 33.8	-0.3
	comp=Z,75nm,1.2s						
CLL				*i* PKPab	PKPab	20 16 40.0	-0.2
	comp=Z,37nm,0.9s						
CLL				*e*		20 16 49.0	
CLL				*e*pPKPab	pPKPab	20 18 59.0	+6.4
CLL				*e*SKPdf	SKPdf	20 19 05.0	-1.8
CLL				*e*PPS	PPS	20 33 12.0	
CLL				*e*SS	SS	20 38 27.0	-4.7
CLL				*e*SSP	SSP	20 39 24.0	
CLL				*e*(SSS)		20 43 48.0	
CLL				*e*		20 45 36.0	
CLL				*e*sSSS		20 47 36.0	
CLL				*e*SSSS		20 48 31.0	
CLL				*e*sSSSS		20 51 42.0	
CJR	Cluj-Napoca	148.69	329	⇑*i*P	PKPbc	20 16 34.4	+0.1
MORC	Moravsky Berou	148.75	339	*e*PKPbc	PKPbc	20 16 34.2	-0.1
MORC	Moravsky Berou	148.75	339	⇓*i*P	PKPbc	20 16 34.8	+0.5
MORC	Moravsky Berou	148.75	339	*e*PKP	PKPbc	20 16 34.6	+0.3
SZAC	Souni	148.83	302	P	PKPbc	20 16 34.6	-0.4
VOIR		148.85	326	⇑*i*P	PKPbc	20 16 34.1	-0.7
BRG	Berggiesshubel	148.85	344	*i* PKP	PKPbc	20 16 34.4	-0.1
	comp=Z,58nm,1.1s						
BRG				*e*pPKP	pPKPab	20 18 52.6	-0.7
	comp=Z,6.2nm,1.1s						
BRG				*i* SKP		20 19 15.7	
	comp=Z,9.4nm,0.9s						
BRG				*e*PP	PP	20 20 32.6	+21
	comp=Z,15nm,1.2s						
HLM1	Long Mynd	148.86	4	*e*P	PKPbc	20 16 33.8	-0.6
ALFC	Alefka	148.94	303	P	PKPbc	20 16 34.4	-0.8
LTVH	Ltavrtes, Hu	148.98	332	*e*PKiKP	PKiKP	20 16 37.0	+1.3
PVCC	Panska Ves	149.00	343	⇑*e*PKP	PKPbc	20 16 35.2	+0.4
PVCC				*e*PKPAB	PKPab	20 16 39.8	-1.7
DRGR		149.06	330	⇑*i*P	PKPbc	20 16 34.6	-0.6
ARR	Arges	149.12	326	⇑*i*P	PKiKP	20 16 36.4	+0.2
YLV	Yalova	149.12	315	⇑*i*P	PKPbc	20 16 35.0	-0.6
LPW	Lampeter	149.17	6	*e*P	PKPbc	20 16 34.5	-0.6
WTSB	Winterswijk	149.18	353	*e*PKPbc	PKPbc	20 16 35.0	-0.2
	comp=Z,112nm,0.8s						
WTSB				*e*PKPab	PKPab	20 16 42.9	+0.7
PPCY	Paphos	149.22	303	P	PKPbc	20 16 35.0	-0.8
VYHS	Vyhne	149.36	336	*e*PKIKP	PKPdf	20 16 29.1	-1.5
VYHS				*e*		20 16 43.4	
VYHS	Vyhne	149.36	336	*e*PKP	PKPdf	20 16 29.1	-1.5
VYHS				*e*		20 16 36.0	
VYHS				*e*		20 16 43.4	
MCH1	Michaelchurch	149.37	5	*e*P	PKPbc	20 16 35.5	-0.2
PSZ	Piszkesteto	149.42	334	*e*PKPbc	PKPbc	20 16 35.0	-1.0
PSZ	Piszkesteto	149.42	334	⇓*i*P	PKPbc	20 16 33.7	-2.3
PSZ	Piszkesteto	149.42	334	*e*PKiKP	PKPbc	20 16 36.0	0.0
KOLL	Kolacno	149.46	337	*e*PKP	PKPdf	20 16 31.0	+0.3
KOLL				*e*		20 16 36.4	
VRAC	Vranov	149.47	339	⇓*i*P	PKPbc	20 16 35.6	-0.4
VRAC	Vranov	149.47	339	*e*PKP	PKPbc	20 16 36.0	0.0
VRAC				*e*		20 16 43.8	
JAVC	Velka Javorina	149.49	338	*e*PKP	PKiKP	20 16 37.4	+0.5
HUMR	Humele	149.49	325	⇑*i*P	PKPbc	20 16 35.5	-0.7
PRU	Pruhonice	149.49	342	⇑*e*PKP	PKPbc	20 16 36.1	+0.1
PRU				*e*PKPAB	PKPab	20 16 44.7	+1.1
MONM	Monmouth	149.54	4	*e*P	PKPbc	20 16 35.2	-0.9
KRUC	Moravsky	149.75	339	*e*PKP	PKPbc	20 16 36.6	-0.1
KRUC				*e*		20 16 44.7	
PHSR	Pinarhisar	149.76	318	⇓*i*P	PKPbc	20 16 36.5	-0.5
NKC	Novy Kostel	149.82	345	⇑*e*PKP	PKPbc	20 16 36.9	+0.1
NKC				*e*PKPAB	PKPab	20 16 44.9	-0.1
TREC	Trest	149.83	341	⇑*e*PKP	PKPbc	20 16 37.0	+0.1
SWN1	Swindon	149.93	3	*e*P	PKPbc	20 16 36.0	-1.0
SIRR	Siria	149.93	330	⇑*i*P	PKPbc	20 16 36.6	-0.6
GZR	Gura Zlata	150.04	328	⇑*i*P	PKPbc	20 16 36.7	-0.9
GZR	Gura Zlata	150.04	328	⇑PKIKP	PKPbc	20 16 36.7	-0.9
BUD	Budapest	150.12	335	*e*PKiKP	PKPbc	20 16 37.0	-0.5
VLAD	Vladila	150.15	324	⇑*i*P	PKPbc	20 16 37.3	-0.5
WOL	Wolverton	150.16	2	*e*P	PKPbc	20 16 36.9	-0.6
ZST	Bratislava	150.25	338	*e*PKIKP	PKPbc	20 16 37.4	-0.5
ZST				*e*		20 16 47.6	
ZST	Bratislava	150.25	338	*e*PKP	PKPbc	20 16 37.4	-0.5
ZST				*e*		20 16 47.6	
SRE	Strehaia	150.34	327	⇑*i*P	PKPbc	20 16 38.2	0.0
SRE	Strehaia	150.34	327	⇑PKIKP	PKPbc	20 16 38.2	0.0
BEBN	Eben Emael	150.45	354	⇑PKPbc	PKPbc	20 16 37.2	-1.0
BEBN				⇑PKPab	PKPab	20 16 46.1	-1.4
HGN	Heimansgroeve	150.46	353	*e*PKPbc	PKPbc	20 16 38.0	-0.2
	comp=Z,49nm,0.9s						
HGN				*e*PKPab	PKPab	20 16 47.4	-0.1
KHC	Kasperske Hory	150.54	343	*e*PKPdf	PKPdf	20 16 33.2	+0.7
KHC				*e*PKPbc	PKPbc	20 16 38.4	-0.2
KHC				*e*PKPab	PKPab	20 16 48.6	+0.5
KHC	Kasperske Hory	150.54	343	*e*PKPDF	PKPdf	20 16 33.2	+0.7
KHC				⇑*e*PKP	PKPbc	20 16 38.6	0.0
KHC				*e*PKPAB	PKPab	20 16 48.3	+0.2
KHC				*e*SKP		20 19 09.1	
KHC	Kasperske Hory	150.54	343	*e*PKIKP	PKPdf	20 16 33.2	+0.7
KHC				*e*		20 16 48.3	
UCC	Uccle	150.57	355	*e*PKPbc	PKPbc	20 16 37.8	-0.7
UCC				*e*PKPab	PKPab	20 16 47.6	-0.5
UCC	Uccle	150.57	355	⇑PKPbc	PKPbc	20 16 38.1	-0.4
UCC				⇑PKPab	PKPab	20 16 47.7	-0.3
KULA	Kula-Manisa	150.59	312	*e*PKPbc	PKPbc	20 16 38.3	-0.8
KULA	Kula-Manisa	150.59	312	P	PKPbc	20 16 38.3	-0.8
MEM	Membach	150.60	353	⇑PKPbc	PKPbc	20 16 38.4	-0.2
MEM				⇑PKPab	PKPab	20 16 44.5	-3.7
GRA1	Grafenberg Arr	150.61	346	*e*PKPbc	PKiKP	20 16 38.9	-0.2
GRA1				*e*PKPab	PKPab	20 16 47.2	-1.1
GRFO	Grafenberg	150.61	346	*e*PKPbc	PKPbc	20 16 38.5	-0.2
GRFO				*e*PKPab	PKPab	20 16 47.5	-0.8
MANT	Manisa	150.67	312	*e*PKPbc	PKPbc	20 16 38.7	-0.7
PUNG	Punghina	150.74	326	⇑*i*P	PKiKP	20 16 39.4	-0.1
GEC2	GERESS Array S	150.76	342	*e*PKPdf	PKPdf	20 16 32.8	-0.1
GEC2				*e*PKPbc	PKPbc	20 16 38.7	-0.4
GEC2				*e*PKPab	PKPab	20 16 49.8	+0.7
GEC2	GERESS Array S	150.76	342	*e*PKIKP	PKPdf	20 16 32.8	-0.1
GEC2				*e*		20 16 49.8	
GERES	GERESS Array B	150.76	342	PKP	PKPdf	20 16 32.8	-0.1
	comp=Z,1.0nm,0.7s,baz=315,slow=0.4,SNR=7.8						
GERES				PKPbc	PKPbc	20 16 38.9	-0.3
	comp=Z,15nm,0.8s,baz=26,slow=2.4,SNR=64						
GERES				SKP		20 19 10.3	
	comp=Z,2.4nm,0.9s,baz=64,slow=3.1,SNR=3.6						
GEA0	GERESS Array S	150.77	342	*e*PKPdf	PKPdf	20 16 32.5	-0.4
GEA0				*e*PKPbc	PKPbc	20 16 38.5	-0.7
BANR	Banloc	150.84	330	⇑*i*P	PKiKP	20 16 39.8	+0.2
BCLA	Clavier	150.86	354	⇑PKPbc	PKPbc	20 16 38.6	-0.5
BCLA				⇑PKPab	PKPab	20 16 48.6	-0.7
SOP	Sopron	150.88	338	*e*PKiKP	PKiKP	20 16 40.0	+0.3
CONA	Conrad Observa	150.91	339	*e*PKiKP	PKiKP	20 16 39.7	-0.2
	comp=Z,34nm,0.8s,SNR=16						
CONA				*e*PKPab	PKPab	20 16 51.5	+1.8
	comp=Z,34nm,0.8s						
CONA				*e*pPKPab	pPKPab	20 19 07.8	+6.3
	comp=Z,6.0nm,0.9s						
KSL	Kastellorizon	150.91	307	*e*PKPbc	PKPbc	20 16 39.3	-0.5
KSL	Kastellorizon	150.91	307	P	PKPbc	20 16 39.3	-0.5
MDVR	Moldovita	151.00	328	⇑*i*P	PKPbc	20 16 39.2	-0.6
TIH	Tihany	151.04	335	*e*PKiKP	PKPbc	20 16 39.1	-0.6
FETY	Fethiye	151.09	308	*e*PKPbc	PKPbc	20 16 39.3	-0.9
FETY	Fethiye	151.09	308	P	PKPbc	20 16 39.3	-0.9
ALN	Alexandroupoli	151.10	318	*e*PKPbc	PKPbc	20 16 39.2	-0.8
DOU	Dourbes	151.25	355	⇓PKPbc	PKiKP	20 16 40.2	-0.1
DOU				⇓PKPab	PKPab	20 16 49.2	-1.7
RDO	Rodhopi	151.27	319	*e*PKPbc	PKPbc	20 16 38.1	-2.3
RDO	Rodhopi	151.27	319	P	PKPbc	20 16 38.1	-2.3
MORH	Mrgy, Hungar	151.29	334	*e*PKiKP	PKPbc	20 16 39.1	-1.2
MOA	Molln	151.49	341	*e*PKPbc	PKPbc	20 16 40.2	-0.5
	comp=Z,5.8nm,0.6s						
MOA				*e*PKPab	PKPab	20 16 53.7	+1.6
	comp=Z,38nm,1.3s						
EZN	Ezine	151.51	316	⇓*i*P	PKPbc	20 16 40.3	-0.7
EZN	Ezine	151.51	316	⇓PKIKP	PKPbc	20 16 40.3	-0.7
WLF	Walferdange	151.52	353	*e*PKPbc	PKiKP	20 16 41.2	+0.3
WLF				*e*PKPab	PKPab	20 16 51.7	-0.4
WLF	Walferdange	151.52	353	⇓PKPbc	PKiKP	20 16 41.0	+0.1
WLF				⇓PKPab	PKPab	20 16 52.3	+0.2
ARSA	Arzberg	151.61	339	*e*PKiKP	PKiKP	20 16 41.8	+0.5
	comp=Z,2.4nm,0.7s						
VTS	Vitosha	151.70	323	*e*PKPbc	PKPbc	20 16 40.7	-0.9
VTS				*e*PKPab	PKPab	20 16 54.0	+0.7
VTS	Vitosha	151.70	323	⇑*i*P	PKPbc	20 16 41.3	-0.3
VTS	Vitosha	151.70	323	P	PKPbc	20 16 41.1	-0.5
VTS	Vitosha	151.70	323	⇑PKIKP	PKPbc	20 16 41.3	-0.3
BEHE	Becsehely	151.82	336	*e*PKiKP	PKPbc	20 16 38.1	-3.4
STU	Stuttgart	151.91	348	*e*PKPbc	PKPbc	20 16 41.3	-0.3
STU				*e*PKPab	PKPab	20 16 53.7	-0.1
NVR	Nevrokopi	152.16	321	*e*PKPbc	PKPbc	20 16 41.7	-0.7
NVR	Nevrokopi	152.16	321	P	PKPbc	20 16 41.7	-0.7
SOKA	Soboth	152.27	339	*e*PKPbc	PKPbc	20 16 41.8	-0.8
	comp=Z,21nm,1.5s,SNR=8.8						
SOKA				*e*PKPab	PKPab	20 16 56.5	+0.9
	comp=Z,32nm,1.2s						
SOKA				*e*pPKPab	pPKPab	20 19 15.3	+8.4
	comp=Z,7.3nm,1.2s						
PERS	Pernice	152.28	338	*i* PKPdf	PKPdf	20 16 35.3	+0.2
PERS				*i* PKPbc	PKPbc	20 16 42.1	-0.4
PERS				*i* PKPab	PKPab	20 16 55.6	+0.1
DIVS	Divibare	152.34	329	*e*PKPbc	PKPbc	20 16 42.2	-0.7
DIVS				*e*PKPab	PKPab	20 16 55.4	-0.5
KBA	Koelnbreinsper	152.46	341	*e*PKiKP	PKPbc	20 16 42.8	-0.3
	comp=Z,13nm,0.8s,SNR=5.7						
KBA				*e*PKPab	PKPab	20 16 57.6	+1.2
	comp=Z,2.5nm,0.4s						
BFO	Black Forest	152.49	349	*e*PKPdf	PKPdf	20 16 36.4	+1.0
BFO				*e*PKPbc	PKPbc	20 16 42.1	-0.8
BFO				*e*PKPab	PKPab	20 16 55.9	-0.5
BFO	Black Forest	152.49	349	*e*PKIKP	PKPdf	20 16 36.4	+1.0
BFO				*e*		20 16 42.1	
BFO				*e*		20 16 55.9	
OBKA	Obir	152.58	339	*e*PKiKP	PKPbc	20 16 42.9	-0.4
	comp=Z,13nm,1.0s						
OBKA				*e*PKPab	PKPab	20 16 58.1	+1.2
	comp=Z,11nm,0.7s						
WATA	Walderalm	152.72	344	*e*PKiKP	PKPbc	20 16 43.5	-0.1
	comp=Z,5.1nm,0.6s						
WATA				*e*PKPab	PKPab	20 16 58.8	+1.4
	comp=Z,14nm,1.0s						
MYKA	Terra Mystica	152.77	340	*e*PKPbc	PKPbc	20 16 42.5	-1.2
	comp=Z,14nm,0.9s						
MYKA				*e*PKPab	PKPab	20 16 57.5	-0.1
	comp=Z,28nm,1.0s						
MYKA				*e*pPKPab	pPKPab	20 19 15.6	+6.5
	comp=Z,10.0nm,1.2s						
WTTA	Wattenberg	152.77	344	*e*PKiKP	PKPbc	20 16 43.4	-0.4
	comp=Z,9.5nm,0.8s,SNR=5.3						
WTTA				*e*PKPab	PKPab	20 16 58.5	+0.7
	comp=Z,53nm,1.4s						
RETA	Reutte	152.78	345	*e*PKiKP	PKPbc	20 16 43.7	0.0
	comp=Z,3.0nm,0.6s						
RETA				*e*PKPab	PKPab	20 16 58.2	+0.5
	comp=Z,18nm,1.1s						
ECH	Echery	152.80	351	*e*PKPdf	PKPdf	20 16 36.7	+0.9
ECH				*e*PKPbc	PKPbc	20 16 43.5	-0.1
ECH				*e*PKPab	PKPab	20 16 57.1	-0.5
ECH	Echery	152.80	351	*e*PKIKP	PKPdf	20 16 36.7	+0.9
ECH				*e*		20 16 57.1	
MOTA	Moosalm	152.83	344	*e*PKiKP	PKPbc	20 16 43.8	0.0
	comp=Z,16nm,0.8s						
MOTA				*e*PKPab	PKPab	20 16 58.7	+0.8
	comp=Z,20nm,1.0s						
STIP	Stip	152.90	323	*i* PKP	PKPab	20 16 58.2	-0.1
SQTA	Sankt Quirin	152.92	344	*e*PKPbc	PKPbc	20 16 43.2	-0.8
	comp=Z,8.4nm,0.7s						
SQTA				*e*PKPab	PKPab	20 16 58.3	-0.1
	comp=Z,21nm,1.2s						
VAY	Valandovo	152.93	322	*i* PKP	PKPab	20 16 59.3	+0.9
KARP	Karpathos	152.95	307	*e*PKPbc	PKPbc	20 16 43.9	-0.5
KARP				*e*PKPab	PKPab	20 16 59.2	+0.4
ABTA	Abfaltersbach	153.00	342	*e*PKPbc	PKPbc	20 16 43.3	-0.9
	comp=Z,9.6nm,0.6s,SNR=5.9						
ABTA				*e*PKPab	PKPab	20 16 58.5	-0.1
	comp=Z,14nm,0.6s						
BLY	Banja Luka	153.08	334	*e*PKPbc	PKPbc	20 16 44.2	-0.1
BLY				*e*PKPab	PKPab	20 16 59.6	+0.6
VISS	Visnje	153.10	338	*i* PKPbc	PKiKP	20 16 44.4	0.0
VISS				*i* PKPab	PKPab	20 16 58.8	-0.1
DAVA	Damuels	153.18	346	*i* PKiKP	PKiKP	20 16 45.2	+0.6
DAVA				*e*PKPab	PKPab	20 16 59.9	+0.5
	comp=Z,12nm,0.9s						
DAVA				*e*pPKiKP	pPKPab	20 19 07.4	-3.6
	comp=Z,9.0nm,1.3s						
BOJS	Bojanci	153.21	337	*i* PKPdf	PKPdf	20 16 37.7	+1.2
BOJS				*i* PKPbc	PKiKP	20 16 44.7	+0.2
BOJS				*i* PKPab	PKPab	20 16 59.5	+0.1
FETA	Feichten	153.23	345	*e*PKiKP	PKPbc	20 16 44.3	-0.4
	comp=Z,6.2nm,0.7s						
FETA				*e*PKPab	PKPab	20 17 00.1	+0.5
	comp=Z,12nm,1.0s						
FETA				*e*pPKiKP	pPKPab	20 19 09.7	-1.5
	comp=Z,7.8nm,0.9s						
JAVS	Javornik	153.28	339	*i* PKPbc	PKPbc	20 16 44.1	-0.7
JAVS				*i* PKPab	PKPab	20 16 59.2	-0.7
CLF	Chambon-Foret	153.46	358	*e*PKPdf	PKPdf	20 16 38.2	+1.5
CLF				*e*PKPbc	PKiKP	20 16 45.4	+0.4
CLF				*e*PKPab	PKPab	20 16 59.7	-0.7
FUORN	Ofenpass-Fuorn	153.72	345	*e*PKPbc	PKPbc	20 16 45.5	-0.4
FUORN				*e*PKPab	PKPab	20 17 02.0	+0.1
LIT	Litokhoron	153.75	320	*e*PKPdf	PKPdf	20 16 38.5	+1.0
LIT				*e*PKPab	PKPab	20 17 01.9	-0.1
LIT	Litokhoron	153.75	320	*e*PKIKP	PKPdf	20 16 38.5	+1.0
LIT				*e*		20 17 01.9	
PDG	Podgorica	153.94	328	⇓*i*P	PKPbc	20 16 45.9	-0.2
TTG	Podgorica	153.94	328	*e*PKPbc	PKPbc	20 16 45.2	-0.9
TTG				*e*PKPab	PKPab	20 17 03.0	+0.3
FNA	Florina	153.96	322	*e*PKPbc	PKPbc	20 16 44.9	-1.5
OHR	Ohrid	154.06	324	*i* PKP	PKPab	20 17 03.9	+0.6
ATAL	Atalanti	154.27	317	*e*PKPbc	PKiKP	20 16 46.1	-0.9
ATAL	Atalanti	154.27	317	P	PKiKP	20 16 46.1	-0.9
SENIN	Lac Senin/Sane	154.57	349	*e*PKPdf	PKPdf	20 16 38.5	-0.1
SENIN				*e*PKPab	PKPab	20 17 05.6	+0.1
ITM	Ithomi	155.84	315	*e*PKPdf	PKPdf	20 16 39.2	-1.1
ITM				*e*PKPab	PKPab	20 17 11.4	+0.2
AQU	L'Aquila	156.59	336	*e*PKPdf	PKPdf	20 16 39.9	-1.3
AQU				*e*PKPab	PKPab	20 17 14.0	-0.2
AQU	L'Aquila	156.59	336	*e*PKIKP	PKPdf	20 16 39.9	-1.3
TIP	Timpagrande	157.61	326	*e*PKPab	PKPab	20 17 19.2	+0.4
TIP	Timpagrande	157.61	326	⇓*i*P	PKPab	20 17 20.5	+1.7
PBRG	Braganca	158.75	16	*e*PKPdf	PKPab	20 17 23.8	+0.2
POLO	Lamas de Olo	158.87	18	*e*PKPdf	PKPab	20 17 24.5	+0.3
MVO	Moncorvo	159.28	17	*e*PKPdf	PKPab	20 17 26.2	+0.3
PMAFR	Mafra	160.55	24	*e*PKPdf	PKPab	20 17 31.5	0.0
ES19	SONSECA Array	161.38	11	*e*PKPdf	PKPdf	20 16 45.0	-1.7
ES19				*e*PKPab	PKPab	20 17 34.6	-0.5
ESDC	Sonseca Array	161.40	11	PKP	PKPdf	20 16 47.1	+0.3

	comp=Z,0.6nm,0.7s,baz=3.3,slow=2.0,SNR=4.0						
ESDC				PKPab	PKPab	20 17 35.1	0.0
	comp=Z,4.1nm,0.8s,baz=350,slow=4.4,SNR=17						
ESLA	Sonseca Array	161.40	11	ePKPab	PKPab	20 17 35.0	-0.2
PNCL	Nicolau / Gran	161.57	24	ePKPdf	PKPab	20 17 36.5	+0.6
PVAQ	Vaqueiros	162.50	23	ePKPdf	PKPab	20 17 40.3	+0.3
LIC	Lamto	163.87	159	ePKIKP	PKPdf	20 16 49.5	-0.4
	comp=Z,39nm,0.8s						
LIC	Lamto	163.87	159	ePKP2	PKPab	20 17 47.4	+0.8
	comp=Z,87nm,1.0s						
KEST	Kesra	163.89	334	ePKPdf	PKPdf	20 16 48.3	-1.1
KEST				ePKPab	PKPab	20 17 46.4	+0.1
KEST	Kesra	163.89	334	PKPab	PKPab	20 17 46.9	+0.6
	comp=Z,9.9nm,0.8s,baz=10,slow=3.3,SNR=9.9						
KIC	Kosan Boka	164.09	160	ePKIKP	PKPdf	20 16 49.5	-0.6
	comp=Z,25nm,0.7s						
KIC	Kosan Boka	164.09	160	ePKP2	PKPab	20 17 48.4	+0.8
	comp=Z,55nm,0.8s						
TIC	Toumodi	164.27	158	ePKIKP	PKPdf	20 16 49.9	-0.3
TIC	Toumodi	164.27	158	ePKP2	PKPab	20 17 49.1	+0.8
DBIC	Dimbokro	164.35	159	ePKPdf	PKPdf	20 16 49.8	-0.5
DBIC				ePKPab	PKPab	20 17 48.6	0.0
DBIC	Dimbokro	164.35	159	PKP	PKPdf	20 16 50.3	+0.1
	comp=Z,11nm,0.6s,baz=139,slow=1.5,SNR=16						
DBIC				PKPab	PKPab	20 17 49.5	+0.9
	comp=Z,8.7nm,0.6s,baz=172,slow=5.9,SNR=11						
TOA0	Torodi Ar. Sit	171.69	187	ePKPdf	PKPdf	20 16 53.3	-1.8
TOA0				ePKPdf	PKPdf	20 16 53.9	-1.3
TOA0				ePKPab	PKPab	20 18 19.6	-1.4
TOA0				ePKPab	PKPab	20 18 20.6	-0.5
TORD	Torodi Ar. Bea	171.69	187	PKP	PKPdf	20 16 53.7	-1.4
	comp=Z,4.3nm,0.8s,baz=347,slow=2.4,SNR=29						
TORD				PKPab	PKPab	20 18 21.3	+0.3
	comp=Z,14nm,1.2s,baz=168,slow=4.5,SNR=20						
TORD				pPKPab	pPKPab	20 20 34.3	+2.7
	comp=Z,1.6nm,1.0s,baz=207,slow=1.3,SNR=2.0						
TORD				PP	PP	20 22 12.4	+0.8
	comp=Z,4.0nm,1.0s,baz=201,slow=1.7,SNR=5.5						
TOA1	Torodi Ar. Sit	171.70	187	ePKPdf	PKPdf	20 16 53.7	-1.4
TOA1				ePKPab	PKPab	20 18 21.3	+0.2
TOA1				epPKPab	pPKPab	20 20 34.3	+2.7
TOA1				ePP	PP	20 22 12.4	+0.8
TAM	Tamanrasset	175.35	288	ePKPdf	PKPdf	20 16 57.1	+0.6
TAM				ePKPab	PKPab	20 18 39.2	+1.3
TAM	Tamanrasset	175.35	288	ePKIKP	PKPdf	20 16 57.1	+0.6

IDC ***26*** *20:12:12.1±0.6, 29°.15N×67°.53E, h0^{km}, mb4.0/25, mb1 4.1/27, mb1mx4.0/65, mbtmp4.0/27, ML3.7/2, MS3.4/5, Ms1 3.4/5, ms1mx3.0/63, Error ellipse: s-maj=14.3km s-min=13.0km az=142.0*

NEIC ***26*** *20:12:13.6±0.3, 29°.19N×67°.55E, h10^{km}, mb4.7/26, Error ellipse: s-maj=7.3km s-min=5.6km az=151.0*

ISCJB ***26*** *20:12:14.1±0.2, 29°.12N±0°.03×67°.64E±0°.03, h33^{km}, mb4.3/44, MS3.2/4, Error ellipse: s-maj=4.1km s-min=3.4km az=179.6*

ISC 26 20:12:16.4±0.4**, 29°.17N**±0°.05×**67°.67E**±0°.04**, h35**^{km}**, n110,** σ1^{s}.**72**/117**, mb4.3**/43**, MS3.2**/4**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	Thamme Wali	5.03	43	P	Pn	20 13 30.9	+1.5
KBL	Kabul	5.48	12	ePn	Pn	20 13 37.6	+1.8
KBL				eSn	Sn	20 14 35.9	-1.8
CEP	Cherat	5.88	37	P	Pn	20 13 42.7	+1.4
BHJ	Bhuj	6.16	163	eP	Pn	20 13 45.7	+0.8
BHJ				eS	Sn	20 14 52.9	-1.2
NIL	Nilore	6.54	46	ePn	Pn	20 13 51.5	+1.4
NIL				eSn	Sn	20 14 53.5	-10
CHCP	Chirah Chowk	6.55	46	P	Pn	20 13 51.6	+1.3
DHRM	DHARAMSHALA	8.04	65	eP	Pn	20 14 12.3	+1.3
DHRM				eS	Sn	20 15 40.7	-0.1
DHRM				IAML		20 15 46.7	
	comp=N,389nm,0.4s						
DHRM				IAML		20 15 47.6	
	comp=E,546nm,0.2s						
NDI	New Delhi	8.38	91	eP	Pn	20 14 16.0	+0.5
NDI				eS	Sn	20 15 46.0	-2.9
SMLA	Simla	8.45	74	eP	Pn	20 14 17.3	+0.9
SMLA				eS	Sn	20 15 48.9	-1.7
SMLA				IAML		20 15 54.7	
	comp=E,420nm,0.4s						
SMLA				IAML		20 15 55.5	
	comp=N,414nm,0.1s						
DDI	Dehra Dun	9.10	80	eP	Pn	20 14 26.2	+0.8
DDI				eS	Sn	20 16 06.0	-0.7
WSAR	Wadi Sarin	10.03	236	Pn	Pn	20 14 35.9	-2.3
	comp=N,2.6nm,0.3s,baz=72,slow=14,SNR=26						
WSAR				Sn	Sn	20 16 17.9	-12
	comp=N,1.8nm,0.3s,baz=217,slow=19,SNR=8.7						
WSAR				LR	LR	20 19 22.7	
	comp=N,279nm,20.4s,baz=88,slow=43						
BHPL	Bhopal	10.56	122	eP	Pn	20 14 45.7	+0.3
BHPL				eS	Sn	20 16 40.0	-2.5
BANOM	Banah	10.59	255	i P	Pn	20 14 44.0	-1.8
	SNR=6.2						
SHME	Shamm	10.68	256	P	Pn	20 14 45.3	-1.8
MDH	Madha	10.83	252	i P	Pn	20 14 46.2	-2.8
	SNR=6.7						
MSFE	Esma-Masafi	10.92	252	i P	Pn	20 14 49.5	-0.8
	SNR=7.1						
HATD	Hatta, Dubai	11.16	250	P	Pn	20 14 50.7	-2.8
ASHO	Ashiyiah	11.28	249	i P	Pn	20 14 53.7	-1.5
	SNR=7.8						
FAQ	Al Faqa, Dubai	11.64	251	i P	Pn	20 14 58.7	-1.3
	SNR=9.2						
ALNE	Al Ain	11.81	247	i P	Pn	20 15 02.1	-0.4
	SNR=6.9						
GEYT	Alibeck	11.81	320	Pn	Pn	20 15 01.8	-0.7
	comp=N,0.1nm,0.3s,baz=131,slow=14,SNR=5.4						
GYA0B	ALIBECK ARRAY	11.81	320	ePn	Pn	20 15 01.1	-1.4
POO	Poona	12.01	151	eP	Pn	20 15 04.2	-0.9
KSH	Kashi	12.38	31	Pn	Pn	20 15 05.3	-5.0
JBP	Jabalpur	12.57	116	eP	Pn	20 15 12.7	-0.1
JBP				eS	Sn	20 17 23.9	-7.7
PYUN	Piuthan	13.50	91	eP	Pn	20 15 24.7	-1.1
	comp=N,202nm,0.5s						
KOLN	Koldanda	14.09	92	eP	Pn	20 15 32.3	-1.4
	comp=N,68nm,0.5s						
KK31	Karatay Array	14.09	9	ePn	Pn	20 15 32.2	-1.3
KK31				eSn	Sn	20 18 00.3	-8.2
KKAR	Karatay Array	14.09	9	ePn	Pn	20 15 32.0	-1.5
KKAR				eSn	Sn	20 18 00.7	-7.8
DANN	Dangsing	14.14	89	eP	Pn	20 15 32.7	-1.9
	comp=N,109nm,0.6s						
AAK	Ala-Archa	14.52	20	P	Pn	20 15 38.6	-1.0
AAK	Ala-Archa	14.52	20	Pn	Pn	20 15 38.3	-1.3
	comp=N,1.2nm,0.3s,baz=121,slow=4.8,SNR=18						
AAK				Sn	Sn	20 18 09.9	-9.4
	comp=N,0.3nm,0.3s,baz=238,slow=13,SNR=2.8						
GOA	Goa	14.75	156	eP	Pn	20 15 43.1	+0.5
GOA				IAmb	IAmb	20 15 46.6	
	comp=Z,109nm,2.4s						
HYB	Hyderabad	15.38	137	i P	Pn	20 15 51.0	+0.1
HYB	Hyderabad	15.38	137	eP	Pn	20 15 51.3	+0.4
KKN	Kakani	15.55	91	eP	Pn	20 15 51.5	-1.8
	comp=Z,40nm,0.6s						
PKIN	Phulchoki	15.69	92	eP	Pn	20 15 53.7	-1.5
	comp=Z,34nm,0.5s						
PKI	Pulchoki	15.70	92	eP	Pn	20 15 53.8	-1.6
	comp=Z,48nm,0.7s						
GUN	Gumba	16.06	90	eP	Pn	20 15 57.9	-2.1
	comp=Z,102nm,0.5s						
JIRN	Jiri	16.37	91	eP	Pn	20 16 02.1	-1.8
	comp=Z,60nm,0.5s						
RAMN	Ramite	16.86	93	eP	Pn	20 16 08.7	-1.3
	comp=Z,39nm,0.5s						
BOK	Bokaro	17.16	104	ex	Pn	20 16 11.8	-1.8
MDRS	Chennai	19.83	141	eP	Pn	20 16 45.5	-0.5
MDRS				IAmb	IAmb	20 16 46.5	
	comp=Z,13nm,0.7s						
LSA	Lhasa	20.46	83	eP	Pn	20 16 53.8	0.0
	comp=Z,9.0nm,0.8s						
RAYN	Ar Rayn	20.63	259	eP	P	20 16 53.9	+0.9
	comp=Z,17nm,1.3s						
MAKZ	Makanchi	20.85	28	eP	P	20 16 55.7	+0.5
	comp=Z,11nm,1.0s						
ABKAR	Akbulak array	20.91	346	eP	P	20 16 55.5	-0.2
	comp=Z,14nm,1.2s						
MK01	Makanchi Array	20.96	29	eP	P	20 16 54.1	-2.2
MK31	Makanchi Array	20.97	29	eP	P	20 16 57.2	+0.7
	comp=Z,6.9nm,0.9s						
MK32	Makanchi Array	20.97	29	eP	P	20 16 56.8	+0.4
MKAR	Makanchi Array	20.97	29	eP	P	20 16 54.6	-1.9
	comp=Z,47nm,0.8s						
MKAR	Makanchi Array	20.97	29	P	P	20 16 56.8	+0.4
	comp=Z,2.7nm,0.7s,baz=215,slow=9.0,SNR=12						
MKAR				LR	LR	20 25 00.9	
	comp=Z,40nm,18.8s,baz=246,slow=36						
WMQ	Urumqi	21.67	42	eP	P	20 17 02.9	-1.1
	comp=Z,17nm,1.1s						
GNI	Garni	21.75	306	eP	P	20 17 06.3	+1.3
	comp=Z,14nm,0.9s						
SHL	Shillong	21.79	94	eP	P	20 17 06.2	+0.5
SHL				IAmb	IAmb	20 17 12.8	
	comp=Z,9.2nm,0.4s						
TBLG	Delisi	22.41	310	eP	P	20 17 11.2	-0.8
	comp=Z,48nm,1.8s						
AKTO	Aktyubinsk	22.46	344	P	P	20 17 13.2	+0.8
	comp=Z,2.9nm,0.8s,baz=139,slow=9.3,SNR=2.5						
SIRT	Sirnak	22.61	298	eP	P	20 17 12.4	-1.8
	comp=Z,101nm,1.6s						
KURBB	Kurchatov Arra	22.94	18	P	P	20 17 17.8	+0.4
	comp=Z,7.9nm,0.8s,baz=212,slow=9.4,SNR=8.3						
KURK	Kurchatov	23.05	18	eP	P	20 17 17.8	-0.7
BVAR	Borovoye Array	23.92	4	P	P	20 17 29.7	+2.8
	comp=Z,2.8nm,0.7s,baz=168,slow=8.0,SNR=4.9						
BRVK	Borovoye	23.94	4	eP	P	20 17 27.2	+0.1
	comp=Z,17nm,1.3s						
KBZ	Khabaz	24.54	313	P	P	20 17 33.7	+1.0
	comp=Z,1.1nm,0.6s,baz=151,slow=10,SNR=2.0						
ZALV	Zalesovo Beam	27.74	22	P	P	20 18 02.3	+0.8
	comp=Z,2.7nm,0.7s,baz=225,slow=9.1,SNR=5.8						
ZALV				LR	LR	20 28 56.4	
	comp=Z,63nm,20.4s,baz=62,slow=36						
ZAA1	Zalesovo Array	27.74	22	eP	P	20 18 02.3	+0.8
CMAR	Chiang Mai Arr	30.45	103	P	P	20 18 28.2	+2.3
	comp=Z,0.3nm,0.5s,baz=285,slow=10,SNR=3.7						
CMAR				LR	LR	20 34 15.5	
	comp=Z,46nm,18.2s,baz=195,slow=43						
SONA0	Songino Array	35.11	47	eP	P	20 19 08.8	+2.3
SONM	Songino Array	35.11	47	P	P	20 19 08.8	+2.3
	comp=Z,0.7nm,0.6s,baz=255,slow=8.9,SNR=4.5						
SONM				LR	LR	20 35 25.5	
	comp=Z,167nm,18.1s,baz=4.0,slow=40						
ULN	Ulaanbaatar	35.55	47	eP	P	20 19 12.8	+2.5
	comp=Z,14nm,1.9s						
AKASG	Malin Array Be	35.92	318	P	P	20 19 14.2	+1.0
	comp=Z,0.2nm,0.2s,baz=104,slow=7.0,SNR=5.3						
AKBB	Malin Array Si	35.92	318	eP	P	20 19 12.6	-0.6
	comp=Z,32nm,1.5s						
NRIK	Noril'sk	41.82	10	P	P	20 20 02.0	-0.4
	comp=Z,5.5nm,0.7s,baz=181,slow=5.2,SNR=3.5						
KMBO	Kilima Mbogo	41.88	229	eP	P	20 20 02.1	-1.7
	comp=Z,6.1nm,1.3s						
KMBO	Kilima Mbogo	41.88	229	P	P	20 20 02.6	-1.2
	comp=Z,1.3nm,0.3s,baz=72,slow=20,SNR=4.9						
FIA0	FINESS Array S	42.30	332	eP	P	20 20 06.7	+0.2
FINES	FINESS Array B	42.30	332	P	P	20 20 06.7	+0.2
	comp=Z,2.5nm,0.8s,baz=120,slow=8.2,SNR=3.5						
GERES	GERESS Array B	45.26	311	P	P	20 20 31.6	+1.1
	comp=Z,0.4nm,0.4s,baz=87,slow=5.2,SNR=4.2						
CLL	Collm	45.97	315	eP	P	20 20 37.0	+1.0
ARA0	ARCESS Array S	47.00	341	eP	P	20 20 44.4	+0.6
ARCES	ARCESS Array B	47.00	341	eP	P	20 20 44.2	+0.4
ARCES	ARCESS Array B	47.00	341	P	P	20 20 44.4	+0.6
	comp=Z,5.0nm,0.8s,baz=120,slow=7.2,SNR=7.4						
ARE0	ARCESS Array S	47.00	341	eP	P	20 20 44.2	+0.4
	comp=Z,9.2nm,1.9s						
VLC	Villacollemand	47.40	305	eP	P	20 20 46.5	-0.9
	comp=Z,75nm,2.0s						
DAVOX	Davos/Dischmat	47.73	308	P	P	20 20 49.8	-0.3
	comp=Z,4.3nm,1.0s,baz=60,slow=14						
KEST	Kesra	49.03	294	P	P	20 21 02.9	+2.8
	comp=Z,2.5nm,0.7s,baz=90,slow=8.1,SNR=2.8						
KS15	Wonju Array Si	50.26	64	eP	P	20 21 11.5	+2.2
	comp=Z,71nm,1.7s						
KSAR	Wonju Array Be	50.26	64	P	P	20 21 11.2	+1.9
KSRS	Korea Array	50.29	64	P	P	20 21 11.2	+1.7
	comp=Z,1.8nm,0.6s,baz=272,slow=8.0,SNR=8.9						
KLR	Kul'dur	51.92	49	P	P	20 21 23.7	+2.1
	comp=Z,1.1nm,0.5s,baz=288,slow=6.8,SNR=4.1						
CLF	Chambon-Foret	52.86	310	eP	P	20 21 29.2	+0.6
	comp=Z,124nm,2.0s						
ES19	SONSECA Array	58.54	301	eP	P	20 22 09.4	-0.2
ESDC	Sonseca Array	58.59	301	P	P	20 22 09.8	-0.1
	comp=Z,1.5nm,0.8s,baz=66,slow=6.8,SNR=8.3						
PAB	San Pablo	58.91	301	eP	P	20 22 09.9	-2.3
	comp=Z,20nm,1.5s						
MATP	Matopo	62.12	222	P	P	20 22 35.2	+1.0
	comp=Z,2.5nm,0.7s,baz=61,slow=8.5,SNR=4.6						
TOA0	Torodi Ar. Sit	62.84	270	eP	P	20 22 38.8	-0.3
	comp=Z,15nm,1.6s						
TOA1	Torodi Ar. Sit	62.84	270	eP	P	20 22 38.1	-1.0
TORD	Torodi Ar. Bea	62.84	270	P	P	20 22 38.1	-1.0
	comp=Z,1.7nm,0.8s,baz=50,slow=6.3,SNR=5.6						
LBTB	Lobatse	67.35	221	eP	P	20 23 08.8	+0.5
	comp=Z,49nm,1.9s						
BOSA	Boshof	70.33	219	eP	P	20 23 28.2	+1.4
	comp=Z,37nm,1.8s						
BOSA	Boshof	70.33	219	P	P	20 23 28.4	+1.6
	comp=Z,1.6nm,0.7s,baz=59,slow=3.3,SNR=6.2						
WR1	Warramunga Arr	80.71	119	eP	P	20 24 27.3	+0.9
	comp=Z,18nm,1.5s						
WRA	Warramunga Arr	80.71	119	P	P	20 24 27.3	+0.9
	comp=Z,0.9nm,1.0s,baz=317,slow=4.7,SNR=5.4						
INK	Inuvik	81.55	8	eP	P	20 24 30.8	+0.8
	comp=Z,15nm,1.6s						
INK	Inuvik	81.55	8	P	P	20 24 30.5	+0.5
	comp=Z,0.9nm,0.6s,baz=1.6,slow=8.1,SNR=3.1						
AS31	Alice Springs	82.56	122	eP	P	20 24 38.0	+1.9
	comp=Z,1.9nm,1.3s						
ASAR	Alice Springs	82.56	122	P	P	20 24 37.6	+1.6
	comp=Z,0.6nm,0.5s,baz=310,slow=5.5,SNR=11						
ILAR	Eielson Array	82.56	14	P	P	20 24 36.0	+0.6
	comp=Z,0.4nm,0.9s,baz=326,slow=5.2,SNR=4.7						
ILB	Eielson Array	82.56	14	eP	P	20 24 35.1	-0.3
	comp=Z,24nm,1.8s						
YKA	Yellowknife Ar	88.64	1	P	P	20 25 06.7	+1.1
	comp=Z,0.3nm,0.4s,baz=345,slow=4.9,SNR=6.7						
YKB5	Yellowknife Ar	88.64	1	eP	P	20 25 06.2	+0.6

ANF ***26*** *20:18:48.6±0.1, 34°.01N×117°.22W, h15^{km}, ML3.6/36, Error ellipse: s-maj=1.1km s-min=1.0km az=39.0*

ISCJB ***26*** *20:18:48.6±0.4, 34°.01N±0°.01×117°.20W±0°.01, h14^{km}±3^{km}, mb3.4/1, Error ellipse: s-maj=2.4km s-min=2.0km az=24.2*

SCEDC ***26*** *20:18:50.0, 34°.02N×117°.22W, h16^{km}*

PAS ***26*** *20:18:49.9, 34°.02N×117°.22W, h16^{km}, ML3.6*

NEIC ***26*** *20:18:49.9±0.0, 34°.02N×117°.22W, h16^{km}, ML3.6(PAS), After PAS.*

NEIC Felt [III] at Bloomington, Calimesa, Colton, Crestline, Fontana, Grand Terrace, Loma Linda, Mira Loma, Moreno Valley, Norco, Ontario, Perris, Redlands, Rialto, Riverside, San Bernardino, Sun City and Yucaipa. Felt widely in the eastern Los Angeles Basin from Apple Valley to Aguanga and Temecula.

IDC ***26*** *20:18:51.8±1.6, 34°.08N×116°.90W, h0^{km}, mb3.4/1, mb1 3.4/4, mb1mx3.3/52, mbtmp3.0/4, ML3.2/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/27, Error ellipse: s-maj=41.3km s-min=5.7km az=62.0*

ISC 26 20:18:47.8±1.1**, 33°.98N**±0°.02×**117°.23W**±0°.02**, h3**^{km}±9^{km}**, n109,** σ1^{s}.**79**/158**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBRC	Big Bear Solar	0.38	42	P	Pb	20 18 56.8	-0.5
	baz=226,SNR=199						
BBRC				S	Sg	20 19 01.7	+1.5
	baz=226						
MURC	Murrieta	0.38	176	P	Pb	20 18 57.9	+0.7
	baz=357,SNR=134						
MURC				S	Sb	20 19 03.9	+0.4
	baz=357						
BFSC	Mount Baldy Ra	0.44	306	P	Pb	20 18 57.8	-0.6
	baz=121,SNR=372						
BFSC				S	Sg	20 19 03.6	+1.5
	baz=121						
MWC	Mount Wilson	0.73	290	ePg	Pb	20 19 02.8	-0.5
MWC				eSn	Sb	20 19 12.7	-1.1
PFO	Pinyon Flats O	0.74	120	ePg	Pb	20 19 03.5	+0.3
PFO				eSn	Sb	20 19 12.9	-1.0
PFO	Pinyon Flats O	0.74	120	P	Pb	20 19 03.6	+0.3
	baz=303,SNR=593						
PFO				S	Sb	20 19 13.4	-0.5
	baz=303						
PFO	Pinyon Flats O	0.74	120	Pg	Pb	20 19 03.6	+0.3
	186nm,0.3s,baz=296,slow=18,SNR=1848						
PFO				Lg	Lg	20 19 13.3	
	367nm,0.3s,baz=204,slow=20,SNR=43						
XPFO	Pion Flat	0.74	120	ePg	Pb	20 19 03.6	+0.2
XPFO				eSn	Sb	20 19 12.8	-1.1
PASC	Pasadena Art C	0.82	284	ePg	Pb	20 19 04.3	-0.3
PASC				eSg	Sg	20 19 14.8	+0.7
RRX	Edison Barstow	0.91	12	P	Pg	20 19 06.0	+0.7
	baz=192,SNR=22						
RRX				S	Sg	20 19 18.0	+0.8
	baz=192						
FMP	Fort Macarthur	0.93	254	S	Sb	20 19 19.2	0.0
	baz=71						
DECC	Green Verdugo	0.96	287	P	Pb	20 19 07.0	-0.1
	baz=104,SNR=50						
DECC				S	Sb	20 19 19.7	-0.5
	baz=104						
BELC	Belle Mtn. Jos	1.02	88	P	Pb	20 19 08.5	+0.3
	baz=271,SNR=249						
BELC				S	Sb	20 19 21.9	-0.1
	baz=271						
109C	Camp Elliot, M	1.09	175	P	Pn	20 19 09.5	-0.5
	baz=355,SNR=27						
109C				S	Sn	20 19 24.3	-1.3
	baz=355						
CPE	Camp Elliot	1.09	175	ePn	Pb	20 19 09.0	-0.3
CPE				eSg	Sb	20 19 24.0	0.0
EDW2	Edwards Air Fo	1.10	325	P	Pg	20 19 09.3	+0.3
	baz=143,SNR=295						
EDW2				S	Sg	20 19 23.1	-0.1
	baz=143						
HEC	Hector,Ludlow	1.12	41	P	Pg	20 19 09.8	+0.4
	baz=222,SNR=24						
HEC				S	Sg	20 19 24.0	0.0
	baz=222						
CIS	Catalina Islan	1.15	240	P	Pn	20 19 10.5	-0.2
	baz=58,SNR=28						
CIS				S	Sn	20 19 26.5	-0.5
	baz=58						
MONP2	Monument Peak	1.28	148	P	Pn	20 19 13.1	+0.5
	baz=330,SNR=89						
MONP2				S	Sn	20 19 29.9	-0.5
	baz=330						
GSC	Goldstone, Bar	1.36	15	ePn	Pn	20 19 13.3	-0.5
GSC	Goldstone, Bar	1.36	15	P	Pn	20 19 13.4	-0.4
	baz=195,SNR=172						
GSC				S	Sg	20 19 30.3	-1.3
	baz=195						
BAR	Barrett	1.38	160	ePn	Pb	20 19 14.0	-0.2
BAR				eSn	Sn	20 19 32.1	-0.5
OSI	Osito Audit: C	1.39	297	ePn	Pn	20 19 13.5	-0.7
OSI	Osito Audit: C	1.39	297	P	Pn	20 19 13.6	-0.6
	baz=115,SNR=29						
OSI				S	Sg	20 19 32.0	-0.6
	baz=115						
SCI2	San Clemente I	1.49	228	Pg	Pg	20 19 17.9	+1.6
	baz=46						
BC3	Big Chuckawall	1.51	102	P	Pn	20 19 15.5	-0.4
	baz=284,SNR=139						
BC3				S	Sn	20 19 35.2	-0.9
	baz=284						
GMRC	Granite Mounta	1.52	58	P	Pn	20 19 15.2	-0.9
	baz=240,SNR=45						
GMRC				Sb	Sn	20 19 36.5	+0.1
	baz=240						
BLG	Laguna Peak, P	1.53	275	P	Pn	20 19 15.0	-1.0
	baz=93						
BLG				S	Sn	20 19 34.7	-1.8
	baz=93						
LRMC	Laurel Mtn Rad	1.54	346	P	Pn	20 19 15.8	-0.5
	baz=165,SNR=213						
LRMC				S	Sn	20 19 34.5	-2.4
	baz=165						
SWSC	Sam W. Stewart	1.58	130	P	Pn	20 19 15.9	-0.7
	baz=313,SNR=37						
SWSC				Sb	Sg	20 19 39.3	+0.8
	baz=313						
IKP	In-Ko-Pah, Jac	1.62	144	Pb	Pg	20 19 19.2	+0.3
	baz=326,SNR=56						
IKP				Sb	Sg	20 19 40.8	+0.8
	baz=326						
IRM	Iron Mountain	1.74	84	P	Pn	20 19 18.1	-0.8
	baz=266,SNR=32						
IRM				S	Sn	20 19 38.7	-2.8
	baz=266						
ARVC	Arvin	1.75	311	P	Pn	20 19 18.8	-0.3
	baz=129,SNR=34						
ARVC				Sb	Sb	20 19 43.2	+0.3
	baz=129						
TUQ	Turquoise Moun	1.81	36	Pg	Pg	20 19 23.1	+0.6
	baz=217						
TUQ				Sb	Sb	20 19 45.4	+0.8
	baz=217						
ISA	Isabella, Lake	1.97	329	ePn	Pn	20 19 21.6	-0.5
ISA	Isabella, Lake	1.97	329	P	Pn	20 19 21.6	-0.5
	baz=148,SNR=210						
ISA				Sb	Sb	20 19 49.8	+0.5
	baz=148						
SCZ2	Santa Cruz Isl	2.00	271	P	Pn	20 19 22.1	-0.4
	baz=89						
SCZ2				Sb	Sg	20 19 52.2	+0.1
	baz=89						
SNCC	San Nicolas Is	2.05	250	ePn	Pn	20 19 23.9	+0.7
LDFC	Landfair	2.06	57	ePn	Pn	20 19 23.3	-0.1
SHOC	Shoshone, Teco	2.07	22	Sb	Sb	20 19 54.0	+1.9
	baz=203						
MPMC	Manual Prospec	2.08	354	P	Pn	20 19 23.3	-0.5
	baz=174,SNR=38						
MPMC				Sb	Sb	20 19 54.0	+1.2
	baz=174						
GLA	Glamis	2.21	114	ePn	Pn	20 19 25.3	-0.1
GLA	Glamis	2.21	114	P	Pn	20 19 25.5	+0.1
	baz=297,SNR=19						
GLA				S	Sn	20 19 52.2	-1.0
	baz=297						
Y12C	Blythe	2.26	95	ePn	Pn	20 19 25.0	-1.1
Y12C	Blythe	2.26	95	P	Pn	20 19 25.4	-0.7
	baz=278,SNR=74						
Y12C				S	Sn	20 19 52.6	-1.8
	baz=278						
NEE2	Needles Airpor	2.29	69	P	Pn	20 19 26.1	-0.5
	baz=252,SNR=12						
NEE2				S	Sn	20 19 53.2	-2.1
	baz=252						
DAC	Darwin (Calif)	2.31	353	ePn	Pn	20 19 26.6	-0.3
PKM	Mcpherson Peak	2.32	294	P	Pn	20 19 27.2	+0.1
	baz=111,SNR=12						
VES	Vestal, Richgr	2.41	321	P	Pn	20 19 28.0	0.0
	baz=139,SNR=19						
PDMCI	Parker Dam,Lak	2.58	82	P	Pn	20 19 30.4	0.0
	baz=264,SNR=10						
W13A	Hualapai Mount	2.98	67	ePn	Pn	20 19 36.0	-0.1
SHPR	Sheep Range	3.04	33	ePn	Pn	20 19 36.9	0.0
PAGB	Antelope Grade	3.04	306	ePn	Pn	20 19 35.5	-1.3
TPNV	Topopah Spring	3.07	15	ePn	Pn	20 19 38.5	+1.1
TPNV	Topopah Spring	3.07	15	P	Pn	20 19 37.9	+0.6
	baz=195						
113A	Mohawk Valley,	3.14	112	ePn	Pn	20 19 40.7	+2.6
Y14A	Wickenburg	3.51	89	ePn	Pn	20 19 43.3	0.0
Y14A				ePg	Pg	20 19 53.2	-1.8
Y14A				eSg	Sb	20 20 35.6	+2.0
OMMB	Old Mammoth Mi	3.90	339	ePn	Pn	20 19 50.6	+1.6
MDPB	Devils Postpil	3.94	338	ePn	Pn	20 19 47.9	-1.6
SAO	San Andreas Ge	4.43	310	ePn	Pn	20 19 55.0	-0.9
LCMT	Little Creek M	4.44	46	ePn	Pn	20 19 56.4	+0.2
NV11	Mina Array Sit	4.51	351	ePn	Pn	20 19 54.8	-2.3
NV01	Mina Array Sit	4.53	349	ePn	Pn	20 19 56.5	-0.9
NV01				ePg	Pg	20 20 11.7	-2.9
NV01				eLg	Lg	20 21 13.6	
NVAR	Mina Array Bea	4.53	349	Pn	Pn	20 19 59.2	+1.8
	0.8nm,0.3s,baz=180,slow=15,SNR=7.4						
NVAR				Pg	Pg	20 20 11.7	-2.9
	1.3nm,0.3s,baz=176,slow=17,SNR=26						
NVAR				Lg	Lg	20 21 13.6	
	0.5nm,0.3s,baz=151,slow=23,SNR=2.7						
R11A	Troy Canyon, C	4.56	16	ePn	Pn	20 19 59.6	+1.8
KNB	Kanab	4.70	49	ePn	Pn	20 20 00.5	+0.7
KNB				eSg	Sg	20 21 16.4	-2.4
U15A	North Rim	4.72	57	ePn	Pn	20 20 00.7	+0.6
CCUT	Cedar City	4.75	40	ePn	Pn	20 20 01.8	+1.3
RYN	Ryan	4.76	348	ePn	Pn	20 20 02.5	+2.0
CMB	Columbia Colle	4.79	329	ePn	Pn	20 20 01.7	+0.9
X16A	Lo Mia Camp, P	4.81	83	ePn	Pn	20 20 02.0	+0.6
WAKR	Walker	4.86	339	ePn	Pn	20 20 01.9	0.0
SZCU	Shurtz Canyon	4.93	42	ePn	Pn	20 20 03.5	+0.5
WUAZ	Wupatki	5.06	71	ePn	Pn	20 20 06.3	+1.6
KVN	Kaiserville	5.11	352	ePn	Pn	20 20 06.5	+1.1
YERR	Yerington	5.25	343	ePn	Pn	20 20 08.7	+1.3

PKCU	Pink Cliffs	5.29	48	*e*Pn	Pn	20 20 08.4	+0.5
PSUT	Pine Spring	5.30	30	*e*Pn	Pn	20 20 09.1	+1.0
PNTR	Pine Nut	5.45	340	*e*Pn	Pn	20 20 11.8	+1.7
RUBR	Rubicon Trail	5.58	336	*e*Pn	Pn	20 20 12.6	+0.7
VCNR	Virginia City	5.65	341	*e*Pn	Pn	20 20 16.5	+3.6
TUC	Tucson	5.65	105	*e*Pn	Pn	20 20 12.0	-0.8
TUC				*e*Sg	Sg	20 21 45.4	-4.0
MTPU	Mount Pierson	5.75	44	*e*Pn	Pn	20 20 10.5	-3.9
AFDM	Forest Hills D	5.80	330	*e*Pn	Pn	20 20 12.4	-2.4
PAHR	Pah Rah Range	5.97	344	*e*Pn	Pn	20 20 14.0	-3.2
X18A	Snowflake	6.05	83	*e*Pn	Pn	20 20 19.2	+0.9
W18A	Petrified Fore	6.29	77	*e*Pn	Pn	20 20 20.8	-0.8
ELK	Elko	6.94	13	*e*Pn	Pn	20 20 27.4	-3.1
ELK				*e*Sg	Sb	20 22 19.1	+6.7
ELK	Elko	6.94	13	Pn	Pn	20 20 34.3	+3.8
	0.2nm,0.3s,baz=200,slow=15,SNR=3.2						
ELK				Lg	Lg	20 22 19.0	
	0.2nm,0.3s,baz=68,slow=11,SNR=8.0						
DUG	Dugway, Tooele	7.13	28	*e*Pn	Pn	20 20 32.2	-1.0
DUG				*e*Sn	Sn	20 21 54.4	-0.4
TMUT	Trail Mountain	7.18	41	*e*Pn	Pn	20 20 26.8	-7.2
TMUT				*e*Sn	Sn	20 21 58.0	+1.8
SRU	San Rafael Swe	7.44	45	*e*Pn	Pn	20 20 32.1	-5.2
SRU				*e*Sn	Sn	20 22 00.3	-2.0
PV09	Paradox Valley	7.94	53	*e*Pn	Pn	20 20 39.2	-5.2
PV09				*e*Sn	Sn	20 22 14.0	-0.9
PV19	Morning Glory	7.94	55	*e*Pn	Pn	20 20 40.9	-3.5
PV19				*e*Sn	Sn	20 22 14.2	-0.7
PV17	East Wray Mesa	7.95	55	*e*Pn	Pn	20 20 40.4	-4.0
PV17				*e*Sn	Sn	20 22 22.6	+7.8
PV20	West Nyswonger	7.97	55	*e*Sn	Sn	20 22 17.5	+2.1
PV16	Nyswonger Mesa	7.99	55	*e*Sn	Sn	20 22 15.8	-0.2
PV23	Carpenter Ridg	8.00	54	*e*Pn	Pn	20 20 42.1	-3.0
PV23				*e*Sn	Sn	20 22 17.1	+0.8
PV11	David Mesa, Pa	8.01	55	*e*Sn	Sn	20 22 18.8	+2.3
PV04	Paradox Valley	8.04	54	*e*Pn	Pn	20 20 45.2	-0.4
PV04				*e*Sn	Sn	20 22 18.9	+1.7
PV02	Paradox Valley	8.06	56	*e*Pn	Pn	20 20 45.4	-0.6
PV02				*e*Sn	Sn	20 22 24.1	+6.3
PV12	Saucer Basin,	8.07	55	*e*Pn	Pn	20 20 44.1	-2.0
PV12				*e*Sn	Sn	20 22 23.9	+6.0
PV21	Cone Mtn., Par	8.08	53	*e*Pn	Pn	20 20 44.6	-1.6
PV21				*e*Sn	Sn	20 22 15.9	-2.3
PV01	Paradox Valley	8.14	57	*e*Pn	Pn	20 20 45.3	-1.8
PV01				*e*Sn	Sn	20 22 20.9	+1.1
PV15	Paradox Valley	8.30	56	*e*Pn	Pn	20 20 50.5	+1.2
PV15				*e*Sn	Sn	20 22 20.9	-2.8
YBH	Yreka Blue Hor	8.87	332	LR	LR	20 24 54.9	
	comp=Z,103nm,19.4s,baz=232,slow=41						
ANMO	Albuquerque	8.95	81	Lg	Lg	20 23 30.2	
	0.2nm,0.3s,baz=26,slow=18,SNR=3.1						
TXAR	Lajitas Array	12.44	108	Pn	Pn	20 21 47.2	+1.3
	0.1nm,0.3s,baz=291,slow=12,SNR=5.1						
ILAR	Eielson Array	35.70	339	P	P	20 25 52.9	+5.8
	0.4nm,0.8s,baz=145,slow=7.5,SNR=4.5						

IDC ***26*** *20:21:02.1±1.6, 10°.85S×165°.61E, h0^{km}, mb3.9/4, mb1 4.2/6, mb1mx3.8/40, mbtmp4.2/6, ML4.4/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/29, Error ellipse: s-maj=41.6km s-min=26.9km az=135.0*

NEIC ***26*** *20:21:03.5±0.9, 10°.81S×165°.57E, h10^{km}, mb4.8/8, Error ellipse: s-maj=16.8km s-min=9.5km az=219.0*

ISCJB ***26*** *20:21:05.1±1.0, 11°.02S±0°.09×165°.5E±0°.1, h30^{km}, mb5.0/1, Error ellipse: s-maj=18.3km s-min=9.0km az=145.3*

ISC 26 20:21:06.9±1.3**, 10°.9S**±0°.1×**165°.5E**±0°.1**, h30^{km}, n25, σ0^{s}.79**/19**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.70	285	Pn	Pn	20 22 29.6	+0.1
	21nm,0.3s,baz=134,slow=5.9,SNR=5.6						
HNR				LR	LR	20 24 44.8	
	comp=Z,198nm,19.9s,baz=98,slow=39						
MARNC	Mare, Loyalty	10.76	167	*e*Pn	Pn	20 23 40.7	+1.7
DZM	Mont Dzumac	11.12	176	*e*Pn	Pn	20 23 44.7	+0.8
DZM				Sn	Sn	20 25 46.3	-1.0
DZM	Mont Dzumac	11.12	176	Pn	Pn	20 23 44.2	+0.2
	1.3nm,0.3s,baz=313,slow=17,SNR=12						
DZM				Sn	Sn	20 25 46.3	-1.0
	0.4nm,0.3s,baz=120,slow=20,SNR=1.9						
DZM				LR	LR	20 27 10.8	
	comp=Z,117nm,18.9s,baz=98,slow=33						
CTA	Charters Tower	20.68	242	P	P	20 25 45.4	+0.8
	2.5nm,0.4s,baz=90,slow=9.1,SNR=2.2						
CTAO	Charters Tower	20.68	242	*e*P	P	20 25 45.3	+0.8
	38nm,1.5s						
URZ	Urewera	29.12	161	*e*P	P	20 27 04.7	-0.5
	41nm,1.4s						
H11S2	WAKE ISLAND Hy	29.25	2	T	T	20 57 35.6	
	baz=185						
H11S3	WAKE ISLAND Hy	29.26	2	T	T	20 57 43.2	
	baz=185						
H11S1	WAKE ISLAND Hy	29.27	2	T	T	20 57 37.9	
	baz=185						
BKZ	Black Stump Fm	29.77	163	*e*P	P	20 27 11.2	+0.3
	23nm,1.5s						
STKA	Stephens Creek	30.39	223	*e*P	P	20 27 16.2	-0.3
	3.3nm,1.8s						
STKA	Stephens Creek	30.39	223	LR	LR	20 38 46.4	
	comp=Z,90nm,18.4s,baz=108,slow=35						
H11N1	WAKE ISLAND Hy	30.48	3	T	T	20 59 18.2	
	baz=186						
H11N3	WAKE ISLAND Hy	30.48	3	T	T	20 59 19.1	
	baz=186						
H11N2	WAKE ISLAND Hy	30.49	3	T	T	20 59 19.5	
	baz=186						
WRAB	Tennant Creek	31.32	250	*e*P	P	20 27 23.3	-1.6
	34nm,1.8s						
WB2	Warramunga Arr	31.32	250	*e*P	P	20 27 24.9	0.0
WR1	Warramunga Arr	31.33	250	*e*P	P	20 27 25.1	+0.1
	41nm,1.9s						
WRA	Warramunga Arr	31.33	250	P	P	20 27 25.1	+0.1
	1.2nm,0.8s,baz=81,slow=9.3,SNR=7.4						
AS31	Alice Springs	32.66	243	*e*P	P	20 27 36.8	+0.2
	1.9nm,1.3s						
ASAR	Alice Springs	32.66	243	P	P	20 27 36.7	0.0
	2.2nm,0.7s,baz=66,slow=10,SNR=32						
BBOO	Buckleboo	34.76	227	*e*P	P	20 27 54.3	-0.5
	34nm,1.6s						
ILAR	Eielson Array	83.47	19	P	P	20 33 30.8	-0.5
	0.6nm,0.6s,baz=237,slow=5.0,SNR=14						
UCC	Uccle	137.35	342	*e*PKPpre	PKPpre	20 40 19.4	

ISK ***26*** *20:26:40.3, 40°.95N×43°.00E, h11^{km}, ML2.2/5*

DDA ***26*** *20:26:41.2, 40°.84N×42°.97E, h7^{km}±2^{km}, ML2.6*

TIF ***26*** *20:26:41.2, 40°.85N×42°.99E, h14^{km}±1^{km}*

ISCJB ***26*** *20:26:42.6±0.4, 40°.83N±0°.03×42°.98E±0°.03, h19^{km}±7^{km}, Error ellipse: s-maj=5.0km s-min=3.9km az=175.3*

ISC 26 20:26:41.7±1.0**, 40°.85N**±0°.03×**42°.99E**±0°.02**, h15^{km}**±10^{km}**, n20, σ0^{s}.51**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EAK	Akyaka	0.49	109	*i* P	Pg	20 26 51.4	-0.2
EAK				IAML_P			
	comp=Z,5μm,0.1s						
DIGO	Kars	0.52	146	*i* P	Pg	20 26 52.2	+0.1
DIGO				*i* S	Sg	20 26 58.9	-0.3
DIGO				IAML_P			
	comp=Z,959nm,0.1s						
SENK	Senkaya-Erzuru	0.57	240	PG	Pg	20 26 52.9	-0.1
SENK				SG	Sb	20 27 02.1	+0.6
BGD	Bogdanovka	0.61	48	P	Pb	20 26 54.6	+0.3
BGD				S	Sb	20 27 03.7	+0.8
EPOS	Posof	0.68	343	*i* P	Pb	20 26 55.4	0.0
EPOS				*i* S	Sb	20 27 05.5	+0.9
DAGI	Agillar	0.85	286	*i* P	Pb	20 26 58.0	-0.2
DAGI				*i* S	Sg	20 27 10.1	+0.7
DAGI				IAML_P			
	comp=Z,850nm,0.2s						
ARTV	Artvin	0.87	293	*i* P	Pb	20 26 58.1	-0.5
ARTV				IAML_P			
	comp=Z,4μm,0.2s						
DDEM	Demirkent	0.94	273	*i* P	Pb	20 26 59.5	-0.3
DDEM				IAML_P			
	comp=Z,2μm,0.2s						
DBAD	Bademkaya	1.00	280	*i* P	Pb	20 27 00.8	0.0
DBAD				*i* S	Sg	20 27 14.6	+0.5
DBAD				IAML_P			
	comp=Z,1μm,0.2s						
TRLG	Trialeti	1.08	50	P	Pn	20 27 02.4	-0.1
TRLG				S	Sn	20 27 17.6	+0.3
HOMI	Horasan	1.16	226	*i* P	Pg	20 27 04.5	+0.5
HOMI				IAML_P			
	comp=Z,166nm,0.2s						
BCA	Borcka	1.19	300	PN	Pn	20 27 02.9	-1.0
BCA				SN	Sb	20 27 18.8	-0.5
KOPR	Koprukoy-ERZUR	1.22	226	PN	Pb	20 27 04.9	+0.3
AGRB	Hanur-Agry	1.27	180	PN	Pg	20 27 05.9	-0.4
TASB	TASBURUN-IGDIR	1.29	132	PN	Pb	20 27 05.4	-0.2
TUTA	Tutak	1.46	186	*i* P	Pg	20 27 09.3	-0.4
TUTA				IAML_P			
	comp=Z,358nm,0.3s						
GNI	Garni	1.51	117	PN	Pn	20 27 08.5	+0.2
TBLG	Delisi	1.58	56	PN	Pn	20 27 08.1	-1.1
TBLG	Delisi	1.58	56	P	Pg	20 27 11.9	-0.2
TBLG				S	Sg	20 27 32.4	-0.2
CHOM	Cayeli-Rize	1.71	279	PN	Pn	20 27 10.6	-0.3

NNC 26 20:29:51.9±3.3**, 43°.93N**×**84°.66E, h0^{km}, mb3.6, mpv3.4, 4C-2D, Error ellipse: s-maj=25.2km s-min=11.2km az=126.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.16	263	Pg	Pb	20 30 48.8	-0.3
	2.7nm,0.1s						
KTMS				Lg	Lg	20 31 31.2	
	16nm,0.3s						
MK31	Makanchi Array	3.32	331	⇑Pg	Pg	20 30 55.3	-0.2
	3.5nm,0.5s,baz=144,slow=16						
MK31				⇓Lg	Lg	20 31 35.3	
	0.5nm,0.2s,baz=134,slow=34						
MAKZ	Makanchi	3.45	328	⇓Pg	Pg	20 30 56.8	-1.2
	1.8nm,0.6s						
MAKZ				⇑Lg	Lg	20 31 41.5	
	5.2nm,0.5s						
ZSN	Zaisan	3.53	2	Pg	Pb	20 30 55.0	-0.2
	2.4nm,0.2s						
ZSN				Lg	Lg	20 31 41.7	
	5.3nm,0.4s						
DJR	Jarkent	3.53	278	Pg	Pb	20 30 56.1	+0.8
DJR				Lg	Lg	20 31 43.7	
SHLS	Shalkode	3.86	260	Pg	Pn	20 30 56.3	+3.7
	7.0nm,0.3s						
SHLS				Lg	Lg	20 31 44.6	
	31nm,0.5s						
KAPS	Kapalarasan	4.03	292	Pg	Pb	20 31 06.1	+2.4
	2.7nm,0.3s						
KAPS				Lg	Lg	20 32 00.2	
	14nm,0.4s						
KURBB	Kurchatov Arra	7.89	330	⇑Lg	Lg	20 34 00.5	
	12nm,0.7s						
KURK	Kurchatov	7.94	331	⇑Lg	Lg	20 33 59.0	
	2.3nm,0.6s						

IDC ***26*** *20:31:45.7±4.8, 79°.50N×4°.81E, h0^{km}, mb3.7/1, mb1 3.7/3, mb1mx3.2/60, mbtmp3.7/3, ML3.1/2, Error ellipse: s-maj=72.9km s-min=34.8km az=78.0*

BER ***26*** *20:31:45.8±3.3, 79°.45N×4°.11E, h15^{km}±226^{km}, ML2.6, Confirmed Earthquake*

NAO ***26*** *20:31:47.4±3.5, 79°.34N×5°.50E, ML3.0*

IEPN ***26*** *20:31:47.0, 79°.45N×4°.89E, h15^{km}, station ZFI2 has station magnitude of 2.98*

ISC 26 20:31:48.7±3.5**, 79°.45N**±0°.07×**5°.6E**±0°.1**, h29^{km}**±19^{km}**, n23, σ2^{s}.18**/36**, 2C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.31	110	Pg	Pn	20 32 10.9	-0.2
KBS				Lg	Lg	20 32 29.8	
KBS	Kingsbay	1.31	110	⇑*i*P	Pn	20 32 10.7	-0.4
KBS				*e*S	Sb	20 32 28.7	-0.4
KBS	Kingsbay	1.31	110	*e*P	Pn	20 32 10.8	-0.2
KBS				*e*S	Sb	20 32 29.6	+0.5
KBS				IAML		20 32 40.2	
	comp=Z,104nm,0.3s						
BRBA	Barentsburg A	2.20	125	Pn	Pn	20 32 22.9	-0.2
BRBA				Sn	Sn	20 32 51.3	+2.0
BRBA	Barentsburg A	2.20	125	Pn	Pn	20 32 22.9	-0.2
BRBA				Sn	Sn	20 32 51.3	+2.0
SPA0	Spitsbergen Ar	2.46	116	Pn	Pn	20 32 27.3	+0.5
	baz=307,slow=9.3						
SPA0				Sn	Sn	20 32 58.0	+2.2
	baz=315,slow=18						
SPA0	Spitsbergen Ar	2.46	116	⇑*i*P	Pn	20 32 27.4	+0.6
SPA0				*i* S	Sn	20 32 58.0	+2.2
SPA0	Spitsbergen Ar	2.46	116	Pn	Pn	20 32 27.3	+0.5
	baz=307,slow=9.3						
SPA0				Sn	Sn	20 32 58.0	+2.2
	baz=315,slow=18						
SPITS	Spitsbergen Ar	2.46	116	Pn	Pn	20 32 27.2	+0.3
	baz=302,slow=6.6						
HSP	Hornsund	3.19	135	Pn	Pn	20 32 36.0	-0.7
HSP				Sn	Sn	20 33 13.6	-0.1
HSPB	Hornsund (broa	3.19	135	*e*P	Pn	20 32 36.3	-0.5
HSPB				*e*S	Sn	20 33 13.5	-0.3
HSPB				IAML		20 33 18.4	
	comp=Z,44nm,0.3s						
HOPEN	Hopen	5.00	116	Pn	Pn	20 33 01.3	-0.2
HOPEN				Sn	Sn	20 33 58.3	+0.1
HOPEN	Hopen	5.00	116	*e*P	Pn	20 33 01.4	-0.1
HOPEN				*e*S	Sn	20 33 57.9	-0.3
HOPEN				IAML		20 34 04.3	
	comp=Z,22nm,0.2s						
DAG	Danmarks Havn	5.64	254	*i* P	Pn	20 32 58.7	-12
DAG				*i* S	Sn	20 33 52.1	-22
BJO1	Bjornoya	5.80	142	Pn	Pn	20 33 12.8	+0.1
BJO	Bjornoya	5.82	141	*e*P	Pn	20 33 12.9	+0.1
ZFI2	Zemlya Franca-	7.22	59	*e*P	Pn	20 33 31.4	-0.6
	comp=Z,2μm,1.0s						
ZFI2				*e*S	Sn	20 34 50.1	-2.8
ARA0	ARCESS Array S	11.18	142	Pn	Pn	20 34 25.8	-0.5
	baz=343,slow=11						
ARA0				Sn	Sn	20 36 22.9	-7.2
	baz=2.4,slow=22						
ARA0	ARCESS Array S	11.18	142	Pn	Pn	20 34 25.8	-0.5
	baz=343,slow=11						
ARA0				Sn	Sn	20 36 22.9	-7.2
	baz=2.4,slow=22						
ARCES	ARCESS Array B	11.18	142	Pn	Pn	20 34 25.9	-0.4
	comp=Z,0.4nm,0.3s,baz=345,slow=12,SNR=9.9						
ARCES				Sn	Sn	20 36 27.0	-3.1
	comp=Z,0.1nm,0.3s,baz=340,slow=28,SNR=1.3						
SUMG	Summit	12.27	260	*i* P	Pn	20 34 30.0	-12
FINES	FINESS Array B	19.11	149	P	Pn	20 36 10.1	+0.5
	comp=Z,0.1nm,0.3s,baz=344,slow=7.7,SNR=1.8						
MKAR	Makanchi Array	42.00	92	P	P	20 39 39.1	+2.4
	comp=Z,0.7nm,0.6s,baz=336,slow=7.0,SNR=5.6						

ISCJB ***26*** *20:37:54.8±0.8, 51°.38N±0°.03×16°.09E±0°.04, h0^{km}, Error ellipse: s-maj=5.2km s-min=3.0km az=23.6*

IPEC ***26*** *20:37:55.0±0.3, 51°.50N×16°.17E, h0^{km}, ML2.0/3, Error ellipse: s-maj=3.3km s-min=1.7km az=65.0*

PRU ***26*** *20:37:56.7±0.0, 51°.44N×16°.08E, h0^{km}*

VIE ***26*** *20:37:57.5±0.9, 51°.32N×16°.01E, h0^{km}, mb2.4/2, ml2.5/5, Error ellipse: s-maj=7.8km s-min=4.7km az=23.0, Suspected Mining induced.*

ISC 26 20:37:54.7±1.4**, 51°.51N**±0°.06×**16°.13E**±0°.03**, h0^{km}, n24, σ0^{s}.69**/51**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.68	171	*e*Pg	Pg	20 38 08.2	+0.5
KSP				*e*Sg	Sg	20 38 16.9	+0.4
UPC	Upice	1.01	184	*e*PG	Pg	20 38 14.3	+0.3
UPC				*e*SG	Sg	20 38 27.2	+0.1
	comp=Z,34nm,0.2s						
DPC	Dobruska-Polom	1.17	174	*e*PG	Pg	20 38 17.2	+0.1
DPC				*e*SG	Sg	20 38 31.6	-0.6
	comp=Z,14nm,0.3s						
PVCC	Panska Ves	1.39	226	*e*PG	Pb	20 38 21.9	+0.3
PVCC				*e*SG	Sb	20 38 39.8	-0.1
	comp=Z,72nm,0.2s						
KRLC	Kraliky	1.50	164	*e*PG	Pb	20 38 23.5	+0.1
KRLC				*e*SG	Sg	20 38 42.3	-0.4
	comp=Z,4.0nm,0.4s						
BRG	Berggiesshubel	1.52	246	PG	Pb	20 38 23.8	+0.1
BRG				SG	Sn	20 38 43.9	+0.4
	36nm,0.4s						
PRU	Pruhonice	1.83	214	*e*PG	Pb	20 38 29.1	+0.1
PRU				*e*x	x	20 38 45.3	
PRU				*e*SG	Sb	20 38 52.6	+0.2
	comp=Z,20nm,0.3s						
MORC	Moravsky Berou	1.96	152	*e*PN	Pn	20 38 29.2	0.0
MORC				*e*SG	Sb	20 38 55.7	-0.5
MORC	Moravsky Berou	1.96	152	*e*Pn	Pn	20 38 29.1	-0.1
	baz=334						
MORC				*e*Sg	Sb	20 38 55.6	-0.6
	9.3nm,0.3s,baz=334						
CLL	Collm	1.97	265	*e*Pn	Pn	20 38 29.0	-0.3
CLL				*e*Pg	Pg	20 38 33.0	+0.6
CLL				*e*Sg	Sg	20 38 58.0	0.0
	comp=Z,16nm,0.4s						
OKC	Ostrava-Krasne	2.11	142	*e*PG	Pb	20 38 34.1	+0.3
OKC				*e*SG	Sg	20 39 02.2	-0.3
VRAC	Vranov	2.23	172	*e*PN	Pn	20 38 33.2	+0.3
VRAC				*e*SG	Sb	20 39 04.4	+0.5
VRAC	Vranov	2.23	172	*e*Pn	Pn	20 38 33.1	+0.2
	baz=353						
VRAC				*e*Sg	Sb	20 39 04.4	+0.5
	comp=Z,5.8nm,0.3s,baz=353						
TREC	Trest	2.26	191	*e*PG	Pb	20 38 36.9	+0.6
TREC				*e*SG	Sb	20 39 05.3	+0.5
	comp=Z,12nm,0.3s						
KRUC	Moravsky	2.46	176	*e*PN	Pn	20 38 36.4	+0.4
KRUC				*e*PG	Pb	20 38 39.8	0.0
KRUC				*e*SG	Sb	20 39 11.7	+1.1
KRUC	Moravsky	2.46	176	*e*Pn	Pn	20 38 36.4	+0.4
	baz=357						
KRUC	Moravsky	2.46	176	*e*Pg	Pb	20 38 39.7	0.0
	baz=357						
KRUC				*e*Sg	Sb	20 39 11.7	+1.1
	comp=Z,6.5nm,0.4s,baz=357						
NKC	Novy Kostel	2.66	243	*e*PG	Pg	20 38 45.7	0.0
NKC				*e*SG	Sg	20 39 18.8	-1.4
	comp=Z,22nm,0.3s						
KHC	Kasperske Hory	2.89	215	*e*PN	Pn	20 38 42.1	+0.1
KHC				*e*PG	Pb	20 38 48.3	+1.1
KHC				*e*SN	Sn	20 39 15.3	-2.2
KHC				*e*SG	Sg	20 39 26.0	-1.5
LANS	Liptovska Anna	3.19	137	*e*PG	Pg	20 38 55.6	-0.2
LANS				*e*SG	Sg	20 39 35.8	-1.2
VYHS	Vyhne	3.49	149	*e*PG	Pg	20 39 02.0	+0.5
VYHS				*e*SG	Sg	20 39 46.5	-0.2
CONA	Conrad Observa	3.59	183	*e*Pn	Pn	20 38 52.8	+1.1
	comp=Z,0.1nm,0.1s						
CONA				*e*Pg	Pg	20 39 02.7	-0.8
	comp=Z,0.8nm,0.3s						
CONA				Sg	Sg	20 39 48.9	-1.1
	comp=Z,1.9nm,0.2s						
MOA	Molln	3.86	199	*e*Pn	Pn	20 38 56.2	+0.9
	comp=Z,0.1nm,0.1s						
MOA				Sg	Sg	20 39 58.6	0.0
	comp=Z,1.9nm,0.2s						
ARSA	Arzberg	4.28	186	Sg	Sg	20 40 12.0	-0.3
	comp=Z,1.6nm,0.3s						

IDC ***26*** *20:38:43.5±1.8, 24°.33N×121°.89E, h0^{km}, mb3.4/6, mb1 3.5/6, mb1mx3.3/62, mbtmp3.4/6, Error ellipse: s-maj=49.7km s-min=27.2km az=71.0*

TAP ***26*** *20:38:43.9, 24°.31N×121°.45E, h6^{km}, ML3.6, C*

JMA ***26*** *20:38:44.5±0.1, 24°.35N×121°.38E, h14^{km}, M3.0*

ISC 26 20:38:44.4±1.0**, 24°.33N**±0°.01×**121°.46E**±0°.01**, h2^{km}**±7^{km}**, n113, σ1^{s}.06**/181**, mb3.4**/6**, 30C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.12	170	P	Pg	20 38 47.2	+0.4
	baz=164						
ETLH				*i* S	Sg	20 38 49.0	+0.6
	baz=164						
NNSB	Datong	0.12	326	⇓P	Pg	20 38 47.3	+0.5
	baz=332						
NNSB				*i* S	Sg	20 38 49.0	+0.6
	baz=332						
NNS	Nan Shan	0.14	325	*i* P	Pg	20 38 47.5	+0.4
	baz=333						
NNS				*i* S	Sg	20 38 49.5	+0.6
	baz=333						
WHF	Hehuan Shan	0.25	224	⇑*i*P	Pg	20 38 49.3	0.0
	baz=223						
WHF				S	Sg	20 38 53.0	+0.4
	baz=223						
TWT	Tachien	0.27	254	⇑*i*P	Pb	20 38 50.1	-1.9
	baz=246						
TWT				S	Sg	20 38 53.9	+0.9
	baz=246						
ENA	Nanau	0.28	69	⇑*i*P	Pg	20 38 50.0	+0.3
	baz=68						
ENA				*e*S	Sg	20 38 53.7	+0.3
	baz=68						
TWD	Chiawan	0.28	153	⇓*i*P	Pg	20 38 50.1	+0.4
	baz=149						
TWD				S	Sg	20 38 54.0	+0.7
	baz=149						
NDT	Datong Townshi	0.28	10	⇑*i*P	Pb	20 38 50.4	-1.7
	baz=12						
NDT				*e*S	Sg	20 38 54.3	+0.9
	baz=12						
TDCB	Techi	0.28	255	⇑P	Pg	20 38 50.1	+0.3
	baz=247						
TDCB				S	Sg	20 38 53.7	+0.2
	baz=247						
NANB	Nanao	0.28	69	⇑P	Pg	20 38 50.0	+0.2
	baz=68						
NANB				*e*S	Sg	20 38 53.5	0.0
	baz=68						
ENTT	Nioudou	0.33	18	⇑*i*P	Pb	20 38 51.3	-1.7
	baz=11						
ENTT				*e*S	Sg	20 38 55.9	+0.9
	baz=11						
YHNB	Yeheng	0.35	348	⇑P	Pb	20 38 52.0	-1.4
	baz=349						
YHNB				*e*S	Sg	20 38 56.0	+0.3
	baz=349						
NSK	Sanguang	0.36	345	⇓*i*P	Pb	20 38 52.1	-1.4
	baz=332						
CHGB	Renai	0.37	224	⇑P	Pg	20 38 51.5	-0.1
	baz=224						
CHGB				S	Sg	20 38 57.5	+1.0
	baz=224						
HWA	Hwalien	0.37	159	*e*P	Pb	20 38 52.4	-1.3
	baz=157						
HWA				*e*S	Sg	20 38 57.5	+1.1
	baz=157						
TWE	Neicheng	0.44	26	⇑*i*P	Pb	20 38 53.4	-1.3
	baz=40						
TWE				*e*S	Sb	20 38 59.5	-2.3
	baz=40						
ENLB	Shoufeng	0.44	163	*e*P	Pb	20 38 53.4	-1.4
	baz=162						
ENLB				*e*S	Sg	20 38 59.4	+0.8
	baz=162						
NWLT	Wulai	0.45	5	P	Pb	20 38 53.8	-1.3
	baz=357						
OWD	Renai	0.45	215	⇑*i*P	Pg	20 38 52.6	-0.4
	baz=215						
OWD				*e*S	Sg	20 38 59.1	+0.2
	baz=215						
TWC	Suao	0.45	52	⇑*i*P	Pg	20 38 53.2	+0.1
	baz=52						
TWC				*e*S	Sg	20 38 59.3	+0.3
	baz=52						
WHP	Taichung City	0.47	264	⇑*i*P	Pb	20 38 54.3	-1.1
	baz=264						
WHP				*i* S	Sg	20 39 00.2	+0.7
	baz=264						
ILA	Ilan	0.51	31	*e*P	Pb	20 38 54.5	-1.5
	baz=34						
ESL	Shilin	0.51	183	⇑*i*P	Pg	20 38 54.1	-0.1
	baz=181						
ESL				*e*S	Sg	20 39 01.0	+0.2
	baz=181						
LIOB	Emei	0.51	308	⇑*i*P	Pb	20 38 54.4	-1.7
	baz=309						
LIOB				S	Sg	20 39 01.4	+0.5
	baz=309						
NSTT	Nanjuang	0.51	306	⇑*i*P	Pb	20 38 55.4	-0.7
	baz=307						
NSTT				S	Sb	20 39 02.2	-1.8
	baz=307						
NTC	Toucheng	0.62	33	*e*P	Pg	20 38 56.1	-0.2
	baz=47						
SBCB	Hsinchu	0.63	317	*e*P	Pn	20 38 58.3	-2.0

	baz=316						
NHDH	Xindian Distri	0.64	5	eP	Pb	20 38 57.6	-0.6
	baz=20						
NHDH				eS	Sb	20 39 06.2	-1.4
	baz=20						
VWDT	VWDT	0.64	207	⇑P	Pg	20 38 56.2	-0.5
	baz=212						
VWDT				eS	Sg	20 39 04.8	-0.2
	baz=212						
NSY	Sanyi	0.64	278	⇑P	Pn	20 38 58.4	-2.1
	baz=277						
NMLH	Miaoli	0.64	289	eP	Pb	20 38 58.2	-0.1
	baz=288						
HSN	Hsinchu	0.65	317	eP	Pn	20 38 58.8	-1.8
	baz=320						
EOS1	EOS1	0.65	70	⇑eP	Pb	20 38 57.5	-0.9
	baz=71						
EGFH	Guangfu	0.66	182	⇑eP	Pg	20 38 56.8	-0.2
	baz=182						
EGFH				eS	Sg	20 39 05.8	+0.3
	baz=182						
TWA	Mucha	0.66	10	⇑eP	Pb	20 38 58.0	-0.6
	baz=11						
TWA				eS	Sb	20 39 06.4	-1.8
	baz=11						
EGS		0.67	40	eP	Pb	20 38 57.8	-1.0
	baz=42						
SMLT	Sun Moon Lake	0.68	229	⇑iP	Pb	20 38 57.5	-1.4
	baz=228						
SMLT				eS	Sb	20 39 07.6	-1.1
	baz=228						
NCUH	Zhongli	0.68	339	eP	Pn	20 38 59.9	-1.1
	baz=339						
NCU	National Centr	0.69	339	eP	Pn	20 38 59.7	-1.3
	baz=340						
SSLB	Suanglung	0.71	221	⇑P	Pg	20 38 57.4	-0.5
	baz=220						
SSLB				S	Sg	20 39 06.3	-0.8
	baz=220						
TIPB	Shuangxi	0.72	27	⇑P	Pb	20 38 58.6	-1.1
	baz=15						
TIPB				eS	Sg	20 39 08.1	+0.4
	baz=15						
TCU	Taichung	0.74	256	eP	Pn	20 38 59.9	-1.8
	baz=255						
WDJ	Dajia District	0.75	272	eP	Pn	20 39 00.2	-1.7
	baz=271						
TWS1	Kuangyinshan	0.77	357	eP	Pn	20 39 00.9	-1.3
	baz=13						
NWF	Wu-fen Shan	0.80	22	eP	Pb	20 38 60.0	-1.0
	baz=23						
WFSB	Wu-fen Shan	0.80	22	eP	Pb	20 39 00.1	-0.8
	baz=22						
WFSB				eS	Sb	20 39 11.6	-0.6
	baz=22						
YM01	YM01	0.82	7	⇑P	Pb	20 39 01.3	-0.1
	baz=7.0						
YM01				S	Sb	20 39 12.2	-0.8
	baz=7.0						
YM04	YM04	0.83	5	eP	Pb	20 39 01.1	-0.4
	baz=21						
EHY	Hungye	0.83	189	eP	Pg	20 38 59.6	-0.6
	baz=181						
EHY				eS	Sb	20 39 11.9	-1.1
	baz=181						
HGSD	Ruisui	0.83	182	P	Pg	20 39 00.4	0.0
	baz=188						
HGSD				eS	Sb	20 39 12.8	-0.4
	baz=188						
TWB1	Santiao Chiao	0.83	35	eP	Pb	20 39 01.0	-0.5
	baz=38						
NTST	Danshui	0.83	359	eP	Pn	20 39 02.3	-0.8
	baz=9.0						
NTST				eS	Sn	20 39 16.0	0.0
	baz=9.0						
WJS	Zhushan	0.84	233	eP	Pb	20 39 00.8	-0.8
	baz=227						
WJS				eS	Sn	20 39 13.6	-2.4
	baz=227						
WHYT	Xinyi Township	0.84	221	eP	Pg	20 38 59.7	-0.8
	baz=220						
WNT	Mingjian	0.84	238	eP	Pn	20 39 01.5	-1.6
	baz=229						
WNT				eS	Sn	20 39 14.2	-1.7
	baz=229						
YM05	YM05	0.84	7	eP	Pb	20 39 01.5	-0.2
	baz=8.0						
ANP	Anpu	0.86	4	eP	Pn	20 39 02.2	-1.3
	baz=20						
YM08	YM08	0.86	8	eP	Pn	20 39 02.0	-1.6
	baz=9.0						
YULB	Yu-li	0.94	189	eP	Pg	20 39 01.7	-0.7
	baz=178						
YULB				eS	Sg	20 39 14.5	-0.2
	baz=178						
TWF1	Yuli	0.98	189	eP	Pg	20 39 02.5	-0.7
	baz=177						
TWF1				eS	Sg	20 39 15.9	0.0
	baz=177						
ALS	Alishan	1.01	216	⇑iP	Pg	20 39 03.4	-0.3
	baz=221						
ALS				eS	Sn	20 39 18.8	-1.9
	baz=221						
CHN5	Tsauling	1.02	225	⇑iP	Pb	20 39 04.3	-0.4
	baz=223						
CHN5				eS	Sn	20 39 20.7	+0.1
	baz=223						
WGK	Gukeng	1.04	232	eP	Pn	20 39 04.6	-1.3
	baz=231						
WGK				eS	Sn	20 39 19.9	-1.1
	baz=231						
WDLH	Douliu	1.05	233	eP	Pn	20 39 05.5	-0.6
	baz=232						
WDLH				eS	Sn	20 39 21.3	0.0
	baz=232						
RLNB	Erlin	1.09	247	eP	Pn	20 39 05.9	-0.8
	baz=259						
RLNB				eS	Sn	20 39 21.8	-0.5
	baz=259						
WTCT	Ta-ch'eng	1.17	247	eP	Pn	20 39 07.1	-0.6
	baz=245						
WTCT				eS	Sn	20 39 23.9	-0.4
	baz=245						
CHN2	Minshiung	1.20	229	eP	Pn	20 39 07.9	-0.2
	baz=228						
CHN2				S	Sn	20 39 25.3	+0.4
	baz=228						
ELDTW	Lidau	1.20	200	eP	Pg	20 39 06.5	-1.0
	baz=200						
ELDTW				eS	Sg	20 39 22.8	-0.3
	baz=200						
CHKT	Chengkung	1.23	184	eP	Pn	20 39 08.1	-0.4
	baz=171						
CHKT				eS	Sg	20 39 23.4	-0.3
	baz=171						
CHY	Chiayi	1.26	229	eP	Pn	20 39 08.3	-0.6
	baz=244						
TPUB	Ta-pu	1.27	217	⇑P	Pg	20 39 08.4	-0.4
	baz=216						
TPUB				S	Sn	20 39 27.3	+0.5
	baz=216						
WSF	Szhu	1.32	239	eP	Pg	20 39 09.4	-0.3
	baz=237						
WSF				S	Sn	20 39 28.6	+0.6
	baz=237						
STYT	Tauyuan	1.32	209	eP	Pn	20 39 08.6	-1.3
	baz=197						
STYT				eS	Sn	20 39 28.6	+0.5
	baz=197						
WTP	Ta-pu	1.32	216	⇑iP	Pg	20 39 09.4	-0.4
	baz=215						
WTP				eS	Sn	20 39 30.0	+1.8
	baz=215						
WLGB	Puzi	1.36	232	eP	Pg	20 39 10.4	0.0
	baz=229						
WLGB				eS	Sn	20 39 29.9	+1.1
	baz=229						
JYNG	Yonagunijimaku	1.36	85	P	Pg	20 39 10.3	-0.2
JYNG				eS	Sb	20 39 27.2	-1.2
TWK	Hsinying	1.38	220	P	Pg	20 39 10.8	0.0
	baz=219						
TWK				eS	Sn	20 39 30.5	+1.0
	baz=219						
PCYT	Pengchaiyu	1.41	23	eP	Pb	20 39 10.6	-0.8
	baz=6.0						
SNST	Tainan City	1.41	219	eP	Pg	20 39 11.3	-0.2
	baz=218						
SNST				eS	Sg	20 39 32.5	+2.7
	baz=218						
CHN1	Nanshi	1.42	217	P	Pg	20 39 11.8	+0.1
	baz=216						
CHN1				eS	Sg	20 39 30.3	+0.2
	baz=216						
YOJ	Yonaguni jima	1.42	84	eP	Pb	20 39 11.1	-0.5
	baz=73						
YOJ				S	Sg	20 39 29.8	-0.3
	baz=73						
YOJ	Yonaguni jima	1.42	84	P	Pg	20 39 11.4	-0.2
YOJ				eS	Sg	20 39 29.9	-0.2
SGST	Jiashian	1.48	213	⇑P	Pg	20 39 12.4	-0.3
	baz=203						
SGST				eS	Sg	20 39 33.5	+1.7
	baz=203						
CHN8	Yiju	1.50	230	eP	Pg	20 39 12.7	-0.5
	baz=240						
CHN8				eS	Sg	20 39 34.1	+1.4
	baz=240						
SLGT	Liugui	1.52	209	eP	Pg	20 39 13.3	-0.3
	baz=199						
TWG	Pinlang	1.54	193	eP	Pb	20 39 12.6	-1.1
	baz=173						
TWGBT	Beinan	1.54	193	eP	Pb	20 39 12.9	-0.7
	baz=173						
CHN3	Shinhua	1.60	219	eP	Pg	20 39 14.7	-0.3
	baz=218						
SSD	Sandimen	1.75	206	eP	Pb	20 39 16.7	-0.4
	baz=207						
SSD				eS	Sg	20 39 41.1	+0.5
	baz=207						
TWM1	Shoushan	1.77	213	eP	Pg	20 39 18.1	-0.3
	baz=211						
ECL	Taimali	1.78	195	eP	Pb	20 39 16.5	-1.3
	baz=178						
MASBT	Mashibuluo	1.87	204	eP	Pb	20 39 19.0	-0.2
	baz=206						
MASBT				eS	Sg	20 39 44.0	-0.4
	baz=206						
PNG	Penghu	1.90	247	eP	Pb	20 39 18.3	-1.4
	baz=247						
PHUB	P'eng-hu	1.91	245	eP	Pn	20 39 17.6	-0.2
	baz=242						
PHUB				eS	Sb	20 39 44.0	-0.1
	baz=242						
VWUC	VWUC	1.94	290	eP	Pn	20 39 16.8	-1.5
	baz=292						
WDGT	Dungji	1.96	238	eP	Pb	20 39 20.0	-0.8
	baz=235						
WDGT				eS	Sb	20 39 44.4	-1.2
	baz=235						
SSPT	Xinbi	2.01	204	eP	Pb	20 39 21.3	-0.3
	baz=205						
EAST	Anshuo	2.02	196	eP	Pb	20 39 21.5	-0.3
	baz=178						
IRIF	Iriomote-Funau	2.07	89	P	Pn	20 39 20.4	+0.3
IRIF				eS	Sb	20 39 46.9	-2.0
SCZT	Fangliau	2.09	202	eP	Pb	20 39 22.2	-0.9
	baz=219						
HATJ	Hateruma jima	2.16	97	eS	Sb	20 39 50.2	-1.2
VCHM	Qimei	2.17	239	eP	Pb	20 39 22.4	-1.9
	baz=240						
JKRS	Kuro-shima	2.33	92	P	Pb	20 39 24.9	-2.2
JKRS				eS	Sb	20 39 53.8	-2.5
JIJ	Ishigaki jima	2.45	89	P	Pn	20 39 26.3	+1.0
JIJ				eS	Sn	20 39 55.9	+0.1
JISG	Ishigakijimahi	2.61	84	P	Pn	20 39 27.7	+0.1
JISG				eS	Sn	20 40 00.0	+0.2
KNMB	Chin-men Tao	2.80	273	eP	Pn	20 39 28.9	-1.2
	baz=276						
JTJ	Tarama	2.97	83	P	Pn	20 39 31.4	-1.1
CMAR	Chiang Mai Arr	21.75	259	P	P	20 43 41.1	+3.8
	0.3nm,0.5s,baz=53,slow=9.2,SNR=3.9						
SONM	Songino Array	26.33	337	P	P	20 44 23.3	+1.6
	0.8nm,0.8s,baz=165,slow=11,SNR=6.8						
MKAR	Makanchi Array	38.41	316	P	P	20 46 08.7	+1.4
	0.5nm,0.7s,baz=102,slow=11,SNR=5.8						
ZALV	Zalesovo Beam	40.26	327	P	P	20 46 22.6	+0.1
	0.4nm,0.3s,baz=134,slow=12,SNR=2.0						
WRA	Warramunga Arr	45.76	163	P	P	20 47 05.9	-1.5
	0.3nm,0.8s,baz=345,slow=8.7,SNR=1.7						
BVAR	Borovoye Array	47.72	321	P	P	20 47 24.3	+1.8
	0.2nm,0.5s,baz=92,slow=10,SNR=1.6						

ISCJB ***26*** *20:40:37.7±1.1, 40°.42N±0°.03×72°.06E±0°.05, h3^{km}±7^{km}, Error ellipse: s-maj=6.2km s-min=4.9km az=174.2*

KRNET ***26*** *20:40:37.7±0.1, 40°.43N×71°.95E, h22^{km}, mb2.4*

SOME ***26*** *20:40:38.9, 40°.43N×71°.95E, h15^{km}*

NNC ***26*** *20:40:40.4±1.5, 40°.45N×72°.34E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=15.5km s-min=7.1km az=55.0*

ISC 26 20:40:38.1±1.8**, 40°.38N**±0°.03×**71°.95E**±0°.04**, h14**^{km}±14^{km}**, n23, σ0^{s}.82**/41**, 26C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.91	187	⇓iP	Pb	20 40 55.6	-0.2
	baz=87						
DRK				⇓iS	Sb	20 41 08.5	+0.7
	baz=87						
ARSB	Arslanbob	1.23	39	⇑iP	Pn	20 40 59.7	-1.2
	baz=41						
ARSB				⇑iS	Sb	20 41 15.5	-1.4
	baz=41						
SFK	Sufi-Kurgan	1.24	107	⇓Pn	Pn	20 41 00.9	-0.3
	1.2nm,0.2s						
SFK				⇑Sn	Sb	20 41 17.6	+0.1
	13nm,0.2s						
SFK	Sufi-Kurgan	1.24	107	⇑iP	Pn	20 41 00.6	-0.7
	baz=8.0						
SFK				⇑iS	Sb	20 41 17.6	+0.1
	baz=8.0						
ARK	Arkit	1.42	0	⇑iP	Pn	20 41 02.3	-1.3
	baz=1.0						
ARK				⇑iS	Sn	20 41 20.4	-1.7
	baz=1.0						
MNAS	Manas	2.15	11	⇑Pn	Pb	20 41 15.6	-1.2
	1.5nm,0.4s						
MNAS				⇑Sn	Sb	20 41 43.1	-0.2
	6.0nm,0.4s						
MNAS	Manas	2.15	11	Pg	Pb	20 41 16.1	-0.8
	1.6nm,0.2s						
MNAS				Lg	Lg	20 41 43.1	
	5.5nm,0.3s						
MNAS	Manas	2.15	11	⇑iP	Pn	20 41 13.8	+0.2
	baz=11						
MNAS				⇑iS	Sn	20 41 40.3	+0.2
	baz=11						
AML	Almayashu	2.19	36	⇓iP	Pn	20 41 14.8	+0.4
	baz=37						
AML				⇓iS	Sn	20 41 41.7	+0.2
	baz=37						
IUG	Iuzhnay	2.28	321	eP	Pb	20 41 18.6	-0.5
	8.9nm,0.1s						
IUG				eS	Sb	20 41 47.6	+0.3
	26nm,0.4s						
ARLS	Aral	2.32	50	⇑iP	Pn	20 41 16.5	+0.4
	baz=50						
ARLS				⇑iS	Sn	20 41 44.5	0.0
	baz=50						
MRKS	Merke	2.55	22	Pg	Pb	20 41 23.7	0.0
	3.8nm,0.3s						
MRKS				Lg	Lg	20 41 55.7	
	5.7nm,0.3s						
MRKS	Merke	2.55	22	eP	Pb	20 41 23.6	0.0
	1.0nm,0.2s						
MRKS				eS	Sb	20 41 55.6	+0.7
	6.5nm,0.3s						
DZA	Taraz	2.55	350	Pg	Pb	20 41 24.5	+0.8
	15nm,0.2s						
DZA				Lg	Lg	20 41 57.2	
	28nm,0.2s						
EKS2	Erkin-Say	2.66	30	⇑eP	Pn	20 41 21.2	+0.5
	baz=31						
EKS2				⇑eS	Sn	20 41 52.4	-0.4
	baz=31						
UCH	Uchtor	2.67	45	⇑eP	Pn	20 41 21.4	+0.3
	baz=46						
UCH				⇑iS	Sn	20 41 53.7	+0.2
	baz=46						
KK31	Karatay Array	2.93	339	Pn	Pb	20 41 30.6	+0.5
	0.8nm,0.3s,baz=149,slow=17,SNR=9.3						
KK31				⇑Sn	Sb	20 42 08.1	+2.4
	1.0nm,0.3s,baz=151,slow=25,SNR=5.0						
AAK	Ala-Archa	2.96	39	⇑Pg	Pg	20 41 34.4	-0.3
	0.8nm,0.4s						
AAK				⇑Lg	Lg	20 42 07.4	
	2.5nm,0.3s						
AAK	Ala-Archa	2.96	39	⇑eP	Pn	20 41 25.6	+0.9
	baz=40						
AAK				⇑iS	Sn	20 41 59.7	-0.4
	baz=40						
KZA	Kyzart	3.01	55	⇓eP	Pn	20 41 26.5	+0.8
	baz=55						
KZA				⇓iS	Sn	20 42 01.9	+0.1
	baz=55						
KBK	Karagaybulak	3.20	44	⇑iP	Pn	20 41 28.7	+0.6
	baz=44						
KBK				⇑iS	Sn	20 42 05.6	-0.5
	baz=44						
NRN	Naryn	3.24	70	⇓iP	Pn	20 41 29.5	+0.6
	baz=71						
NRN				⇓iS	Sn	20 42 06.7	-0.7
	baz=71						
TKM2	Tokmak 2	3.73	46	⇑Pg	Pb	20 41 45.2	+1.3
	0.7nm,0.5s						
TKM2				⇑Lg	Lg	20 42 31.1	
	0.9nm,0.3s						

NIED ***26*** *20:44:00, 26°.60N×129°.30E, h8^{km}, Mw4.3 Best double couple: M$_0$3.13000×10^{15} NP1:φ$_s$199.00000°, δ45.00000°, λ-100.00000°. NP2:φ$_s$33.00000°, δ46.00000°, λ-80.00000°.*

IDC ***26*** *20:44:53.6±0.5, 26°.68N×129°.15E, h0^{km}, mb4.3/29, mb1 4.4/32, mb1mx4.4/44, mbtmp4.3/32, ML2.1/2, MS3.5/3, Ms1 3.5/3, ms1mx2.8/46, Error ellipse: s-maj=12.3km s-min=11.0km az=71.0*

MOS ***26*** *20:44:54.2±1.0, 26°.63N×129°.19E, h16^{km}, mb4.8/58, Error ellipse: s-maj=8.1km s-min=5.1km az=107.8*

BJI ***26*** *20:44:55.2, 26°.53N×129°.19E, h26^{km}, mB4.6/26, mb4.5/35, Ms4.3/28, Ms7 4.2/29*

NEIC ***26*** *20:44:55.8±1.6, 26°.62N×129°.12E, h14^{km}±10^{km}, mb5.0/76, Error ellipse: s-maj=4.3km s-min=3.5km az=123.0*

ISCJB ***26*** *20:44:55.9±0.6, 26°.63N±0°.02×129°.23E±0°.02, h28^{km}±4^{km}, mb4.8/121, MS4.1/8, Error ellipse: s-maj=4.0km s-min=3.3km az=159.3*

JMA ***26*** *20:44:56.2±0.1, 26°.62N×129°.26E, h41^{km}±4^{km}, M4.2*

ISC 26 20:44:57.3±0.8**, 26°.63N**±0°.03×**129°.21E**±0°.03**, h24**^{km}±5^{km}**, n296, σ1^{s}.48**/329**, mb4.8**/121**, MS4.2**/9**, 24C-12D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYRO	Yoronjima	0.79	300	P	Pb	20 45 11.4	-0.9
JYRO				S	Sb	20 45 22.4	-0.2
JOW	Kunigami	0.86	284	ePn	Pb	20 45 13.0	-0.6
JOW				eSn	Sb	20 45 24.4	-0.3
JOW	Kunigami	0.86	284	P	Pb	20 45 13.0	-0.6
JOW				S	Sb	20 45 24.6	-0.1
JOW	Kunigami	0.86	284	Pn	Pb	20 45 13.1	-0.6
	62nm,0.3s,baz=106,slow=16,SNR=672						
JOW				Sn	Sb	20 45 23.9	-0.8
	290nm,0.3s,baz=217,slow=17,SNR=37						
JOKE	Okinoerabujima	0.93	322	P	Pn	20 45 13.6	-1.2
JOKE				eS	Sb	20 45 26.1	-0.6
JNTH	Nagotoyohara	1.07	265	P	Pn	20 45 15.8	-0.9
JNTH				S	Sn	20 45 29.4	-1.4
JTK	Tokunoshima	1.18	349	P	Pn	20 45 17.1	-1.2
JTK				S	Sn	20 45 31.7	-1.8
JIH	Iheya	1.18	290	P	Pn	20 45 17.5	-0.8
JIH				S	Sn	20 45 33.0	-0.7
JJT3	Tamagusuku3	1.37	250	P	Pn	20 45 20.3	-0.5
JJT3				eS	Sn	20 45 37.0	-1.2
JAMN	Amaminishikomi	1.61	359	P	Pn	20 45 23.2	-1.0
JAMN				S	Sn	20 45 42.9	-1.3
JAGN	Aguni-jima	1.76	269	P	Pn	20 45 25.9	-0.4
JAGN				S	Sn	20 45 47.3	-0.6
JAM	Amami Oshima	1.81	11	P	Pn	20 45 25.5	-1.5
JAM				eS	Sn	20 45 46.3	-2.9
JZK	Kikaishima	1.81	22	P	Pn	20 45 26.2	-0.8
JMZ	Minamidaito 2	1.98	114	P	Pn	20 45 27.1	-2.1
JMZ				S	Sn	20 45 49.1	-4.1
JKE	Kume jima 2	2.19	263	P	Pn	20 45 31.2	-1.0
JKE				eS	Sn	20 45 57.0	-1.6
YOJ	Yonaguni jima	6.00	250	ePn	Pn	20 46 21.9	-2.6
YOJ	Yonaguni jima	6.00	250	eP	Pn	20 46 21.9	-2.6
JNU	Nakatsue	6.63	12	ePn	Pn	20 46 33.1	-0.2
JNU				eSn	Sn	20 47 46.1	-2.0
JNU	Nakatsue	6.63	12	Pn	Pn	20 46 33.6	+0.3
	9.7nm,0.3s,baz=181,slow=6.4,SNR=114						
JNU				Sn	Sn	20 47 46.5	-1.7
	baz=315,slow=20,SNR=1.3						
YHNB	Yeheng	7.33	256	ePn	Pn	20 46 42.7	-0.3
YULB	Yu-li	7.87	248	ePn	Pn	20 46 46.0	-4.3
SSLB	Suanglung	7.99	251	ePn	Pn	20 46 48.8	-3.2
SSLB				eSn	Sn	20 48 17.7	-4.0
TWG	Pinlang	8.31	245	ePn	Pn	20 46 50.9	-5.4
TPUB	Ta-pu	8.46	249	ePn	Pn	20 46 56.0	-2.4
NJ2	Nanjing	10.53	303	eP	Pn	20 47 26.5	-0.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
NJ2				LR	LR		
	comp=N,550nm,10.3s						
NJ2				LR	LR		
	comp=E,900nm,12.5s						
NJ2				LR	LR		
	comp=Z,670nm,7.6s						
KS15	Wonju Array Si	10.84	354	ePn	Pn	20 47 32.9	+2.0
KSAR	Wonju Array Be	10.84	354	Pn	Pn	20 47 32.8	+1.9
KSAR	Wonju Array Be	10.84	354	P	Pn	20 47 32.8	+1.9
KSRS	Korea Array	10.85	355	Pn	Pn	20 47 32.8	+1.8
	comp=Z,0.3nm,0.3s,baz=175,slow=13,SNR=7.7						
KS01	Wonju Array Si	10.88	354	ePn	Pn	20 47 29.4	-2.0
CBIJ	Chichi jima	11.59	85	ePn	Pn	20 47 44.0	+2.8
JCJ	Chichijima	11.59	85	Pn	Pn	20 47 44.0	+2.8
	comp=Z,3.0nm,0.3s,baz=261,slow=19,SNR=2.7						
MAJO	Matsushiro	12.50	36	ePn	Pn	20 47 54.2	+0.6
MAJO	Matsushiro	12.50	36	eP	Pn	20 47 54.3	+0.6
MJAR	Matsushiro Arr	12.50	36	Pn	Pn	20 47 54.3	+0.6
	comp=Z,0.0nm,0.3s,baz=207,slow=11,SNR=2.4						
CN2	Changchun	17.41	351	eP	P	20 49 00.8	+1.2
USRK	Ussuriysk Ar.	17.68	7	P	Pn	20 48 59.5	-2.3
	comp=Z,0.1nm,0.3s,baz=197,slow=10,SNR=3.7						
ENH	Enshi	17.72	286	ePn	Pn	20 49 02.4	-0.1
	comp=Z,10nm,0.8s						
XAN	Xi'an	18.99	298	P	P	20 49 17.3	+0.1
XAN	Xi'an	18.99	298	eP	P	20 49 16.9	-0.3
	comp=Z,55nm,0.6s						
XAN	Xi'an	18.99	298	eP	P	20 49 16.9	-0.3
XAN				pmax	pmax		
	comp=Z,55nm,0.6s						
ERM	Erimo	19.15	33	eP	P	20 49 17.9	-0.8
	comp=Z,23nm,1.0s						
ERM	Erimo	19.15	33	eP	P	20 49 17.9	-0.8
ERM				pmax	pmax		
	comp=Z,23nm,1.0s						
QIZ	Qiongzhong	19.37	251	P	P	20 49 21.5	+0.1
QIZ				S	S	20 52 58.3	-0.9
QIZ				LR	LR		
	comp=Z,150nm,10.2s						
GUMO	Guam	19.58	128	LR	LR	20 56 48.7	
	comp=Z,65nm,18.2s,baz=102,slow=36						
GYA	Guiyang	20.17	275	eP	Pn	20 49 32.5	+0.3
GYA				pP	sP	20 49 39.8	+1.1
GYA				PP	PnPn	20 49 52.0	+5.1
GYA				sS	sS	20 53 22.5	-2.3
GYA				SS	SnSn	20 53 39.3	+6.1
GYA				pmax	pmax		
	comp=Z,20nm,0.6s						
GYA				pmax	pmax		
	comp=Z,130nm,4.6s						
GYA				LR	LR		
	comp=Z,490nm,12.6s						
GYA				LR	LR		
	comp=Z,440nm,14.4s						
GYA				LR	LR		
	comp=Z,590nm,11.9s						
HHC	Hu-ho-hao-te	20.36	319	eP	Pn	20 49 33.8	-0.4
HHC				S	S	20 53 15.3	-3.9
HHC				pmax	pmax		
	comp=Z,130nm,5.2s						
HHC				LR	LR		
	comp=Z,620nm,13.9s						
HHC				LR	LR		
	comp=Z,370nm,12.2s						
HHC				LR	LR		
	comp=Z,710nm,14.7s						
ASAJ	Asahikawa	20.54	28	P	P	20 49 33.5	-0.3

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       comp=Z,18nm,0.7s,baz=238,slow=9.9,SNR=20
BTO    Baotou            21.15 316 eP     P       20 49 40.8 +0.2
KLR    Kul'dur           22.65   4  P     P       20 49 53.1 -3.4
       comp=Z,1.4nm,0.5s,baz=205,slow=5.7,SNR=9.0
CD2    Chengdu           22.70 287 eP     P       20 49 56.0 -1.3
CD2                                 S     S       20 54 02.5 -1.9
CD2                                 pmax  pmax
       comp=Z,10.0nm,0.5s
CD2                                 pmax  pmax
       comp=Z,120nm,4.6s
CD2                                 LR    LR
       comp=Z,600nm,7.3s
CD2                                 LR    LR
       comp=Z,710nm,10.6s
CD2                                 LR    LR
       comp=Z,490nm,9.0s
YSS    Yuzh-Sakhalins    22.94  24 eP     P       20 49 59.7 +0.2
       comp=Z,115nm,1.5s
YSS    Yuzh-Sakhalins    22.94  24 eP     P       20 49 59.5 -0.1
YSS                                e              20 50 08.4
YSS                                 pmax  pmax
       comp=Z,20nm,0.7s
LZH    Lanzhou           23.57 300 eP     P       20 50 05.0 -1.2
LZH                                 pP    pP      20 50 11.5 -0.8
LZH                                 sP    sP      20 50 14.3 -0.6
LZH                                 PP    pwP     20 50 32.8 +17
LZH                                eS     S       20 54 12.8 -6.4
LZH                                 SS    SnSn    20 55 06.5 +10
LZH                                 pmax  pmax
       comp=Z,25nm,1.1s
LZH                                 pmax  pmax
       comp=Z,120nm,5.2s
LZH                                 LR    LR
       comp=Z,2µm,13.0s
LZH                                 LR    LR
       comp=Z,2µm,14.6s
LZH                                 LR    LR
       comp=Z,2µm,14.6s
HIA    Hailar            23.77 344⇓eP     P       20 50 08.5 +0.7
HIA                                 pmax  pmax
       comp=Z,3.0nm,1.0s
KMI    Kunming           23.85 272  P     P       20 50 10.8 +1.7
KMI                                 pP    sP      20 50 17.5 -0.3
KMI                                 sP    pwP     20 50 20.8 +1.4
KMI                                 pmax  pmax
       comp=Z,11nm,1.2s
KMI                                 LR    LR
       comp=Z,160nm,6.3s
KMI                                 LR    LR
       comp=Z,520nm,13.0s
KMI                                 LR    LR
       comp=Z,450nm,13.6s
TYV    Tymovskoe         26.29  19 eP     P       20 50 35.7 +5.0
TYV                                 pmax  pmax
       comp=Z,100nm,4.3s
TYV                                 pmax  pmax
       comp=Z,11nm,1.5s
ULN    Ulaanbaatar       27.40 327 eP     P       20 50 40.8 -0.2
       comp=Z,4.4nm,1.1s
ULN    Ulaanbaatar       27.40 327⇑eP     P       20 50 42.8 +1.8
ULN                                 pmax  pmax
       comp=Z,12nm,3.5s
GTA    Gaotai            27.62 305 eP     P       20 50 41.8 -1.2
GTA                                 pP    pP      20 50 48.8 -0.4
GTA                                 sP    sP      20 50 52.5 +0.7
GTA                                 S     S       20 55 21.0 -2.4
GTA                                 pmax  pmax
       comp=Z,12nm,0.9s
GTA                                 pmax  pmax
       comp=Z,61nm,8.3s
GTA                                 LR    LR
       comp=Z,290nm,10.8s
GTA                                 LR    LR
       comp=Z,420nm,14.9s
GTA                                 LR    LR
       comp=Z,470nm,12.7s
SONA0  Songino Array     27.71 326 eP     P       20 50 42.1 -1.6
SONA0                              ePcP   PcP     20 53 59.5 -0.7
SONM   Songino Array     27.71 326  P     P       20 50 42.1 -1.6
       comp=Z,1.5nm,0.8s,baz=138,slow=10,SNR=14
SONM                                PcP   PcP     20 53 59.5 -0.7
       comp=Z,0.6nm,1.0s,baz=180,slow=2.3,SNR=3.2
SONA1  Songino Array     27.71 326 eP     P       20 50 44.8 +1.0
CMMT   Chiang Mai        28.93 261  P     P       20 50 58.9 +4.2
CHTO   Chiang Mai        28.93 261 eP     P       20 50 55.5 +0.8
       comp=Z,3.0nm,0.8s
CHTO   Chiang Mai        28.93 261 eP     P       20 50 55.5 +0.8
CHTO                                pmax  pmax
       comp=Z,3.0nm,0.8s
CHTO   Chiang Mai        28.93 261  P     P       20 50 59.0 +4.3
       comp=Z,19nm,1.0s
CM01   Chiang Mai Arr    29.06 260 eP     P       20 50 57.1 +1.2
CMAR   Chiang Mai Arr    29.06 260  P     P       20 50 57.3 +1.4
       comp=Z,0.5nm,0.5s,baz=45,slow=7.7,SNR=5.9
CMAR                                PcP   PcP     20 54 04.8 +0.9
       comp=Z,0.8nm,0.7s,baz=82,slow=0.8,SNR=5.4
PETK   Petropavlovsk-    33.90  31  LR    LR      21 06 10.7
       comp=Z,49nm,18.0s,baz=70,slow=38
SAUI   Saumlaki          34.46 176 eP     P       20 51 44.3 +1.1
       comp=Z,218nm,0.7s
KULM   Kulim             34.54 237 eP     P       20 51 44.5 +0.4
       comp=Z,59nm,1.9s
IPM    Ipoh              34.79 236 eP     P       20 51 46.4 +0.2
       comp=Z,50nm,1.9s
MMRI   Maumere           35.70 192 eP     P       20 51 50.8 -3.1
       comp=Z,86nm,0.8s
MA2    Magadan           36.16  18 eP     P       20 51 57.6 +0.2
       comp=Z,32nm,2.0s
MA2    Magadan           36.16  18⇑eP     P       20 51 57.7 +0.2
MA2                                 pmax  pmax
       comp=Z,15nm,2.5s
MA2    Magadan           36.16  18  P     P       20 51 56.9 -0.5
       comp=Z,2.3nm,0.2s,baz=211,slow=9.2,SNR=5.0
WMQ    Urumqi            37.56 308 eP     P       20 52 09.8 +0.1
WMQ                                 pP    sP      20 52 19.0 +0.4
WMQ                                 pmax  pmax
       comp=Z,22nm,1.3s
WMQ                                 LR    LR
       comp=Z,170nm,16.3s
WMQ                                 LR    LR
       comp=Z,190nm,16.3s
JIRN   Jiri              38.16 282 eP     P       20 52 15.4 +0.1
GUN    Gumba             38.39 282 eP     P       20 52 17.4 +0.1
       comp=Z,26nm,0.6s
PKI    Pulchoki          38.85 282 eP     P       20 52 20.6 -0.5
       comp=Z,16nm,0.6s
PKIN   Phulchoki         38.86 282 eP     P       20 52 20.5 -0.6
       comp=Z,21nm,0.6s
KKN    Kakani            38.93 282 eP     P       20 52 21.5 -0.2
DMN    Daman             39.11 282 eP     P       20 52 22.9 -0.3
       comp=Z,25nm,1.0s
MTN    Manton Dam        39.28 177 eP     P       20 52 23.1 -1.1
       comp=Z,31nm,1.3s
SEY    Seymchan          39.39  16  P     P       20 52 24.4 -0.4
       comp=Z,3.7nm,0.7s,baz=217,slow=7.4,SNR=16
DANN   Dangsing          40.18 283 eP     P       20 52 32.4 +0.3
       comp=Z,44nm,0.6s
KOLN   Koldanda          40.41 282 eP     P       20 52 33.7 -0.2
       comp=Z,41nm,1.2s
PYUN   Piuthan           40.89 283 eP     P       20 52 38.1 +0.2
       comp=Z,91nm,1.3s
MK01   Makanchi Array    41.92 311 eP     P       20 52 44.6 -1.3
MK01                               ePcP   PcP     20 54 40.9 -0.3
MK31   Makanchi Array    41.93 311 eP     P       20 52 44.9 -1.1
       comp=Z,8.3nm,1.6s
MK31                               ePcP   PcP     20 54 41.1 -0.1
MK31   Makanchi Array    41.93 311 eP     P       20 52 44.9 -1.1
MK31                               e              20 54 41.1
MK31                                pmax  pmax
       comp=Z,8.0nm,1.6s
MK32   Makanchi Array    41.93 311 eP     P       20 52 44.8 -1.2
MK32                               ePcP   PcP     20 54 40.6 -0.6
MKAR   Makanchi Array    41.93 311 eP     P       20 52 45.1 -0.9
       comp=Z,18nm,0.6s
MKAR                               ePcP   PcP     20 54 40.8 -0.4
MKAR   Makanchi Array    41.93 311 eP     P       20 52 45.1 -0.9
MKAR                               e              20 54 40.8
MKAR                                pmax  pmax
       comp=Z,18nm,0.6s
MKAR   Makanchi Array    41.93 311  P     P       20 52 44.8 -1.2
       comp=Z,0.9nm,0.5s,baz=91,slow=9.6,SNR=15
MKAR                                PcP   PcP     20 54 40.6 -0.6
       comp=Z,0.9nm,0.6s,baz=98,slow=1.7,SNR=4.8
MAKZ   Makanchi          42.14 311 eP     P       20 52 46.3 -1.4
       comp=Z,12nm,1.6s
MAKZ                               ePcP   PcP     20 54 41.9  0.0
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MAKZ   Makanchi          42.14 311 eP     P       20 52 46.3 -1.4
MAKZ                               e              20 54 41.9
MAKZ                                pmax  pmax
       comp=Z,12nm,1.6s
ZAA0   Zalesovo Array    42.47 322 eP     P       20 52 48.1 -2.1
       comp=Z,2.5nm,0.7s
ZALV   Zalesovo Beam     42.47 322 eP     P       20 52 48.0 -2.2
ZALV                               ePcP   PcP     20 54 40.3 -2.4
ZALV   Zalesovo Beam     42.47 322  P     P       20 52 48.5 -1.7
       comp=Z,1.3nm,0.5s,baz=112,slow=9.3,SNR=5.7
ZALV                                PcP   PcP     20 54 41.3 -1.4
       comp=Z,2.8nm,1.0s,baz=114,slow=3.6,SNR=4.9
ZAA1   Zalesovo Array    42.47 322 eP     P       20 52 48.5 -1.7
ZAA1                               ePcP   PcP     20 54 41.3 -1.4
COEN   Coen              42.56 160 eP     P       20 52 51.6 +0.3
       comp=Z,18nm,1.4s
PDGK   Podgornoye        43.36 306  P     P       20 52 58.0 +0.2
PDGK                                pmax  pmax
       comp=Z,12nm,1.3s
FITZ   Fitzroy Crossi    44.59 185 eP     P       20 53 06.9 -0.7
       comp=Z,88nm,1.8s
FITZ   Fitzroy Crossi    44.59 185  P     P       20 53 07.3 -0.3
       comp=Z,3.2nm,0.6s,baz=64,slow=6.9,SNR=3.8
KURK   Kurchatov         45.14 316 eP     P       20 53 10.4 -1.3
       comp=Z,5.5nm,0.6s
KURK   Kurchatov         45.14 316  P     P       20 53 10.8 -0.9
KURK                                              20 54 51.7
KURK                                pmax  pmax
       comp=Z,2.0nm,0.5s
KURBB  Kurchatov Arra    45.18 316  P     P       20 53 10.8 -1.2
       comp=Z,2.0nm,0.5s,baz=101,slow=9.3,SNR=23
KURBB                               PcP   PcP     20 54 51.6 -0.4
       comp=Z,0.7nm,0.8s,baz=107,slow=3.6,SNR=3.1
KSH    Kashi             45.82 300  P     P       20 53 21.8 +4.3
KSH                                 sP    pwP     20 53 31.0 +2.9
KSH                                 PP    PP      20 55 07.5 +2.6
KSH                                 S     S       21 00 04.5 +4.4
KSH                                 sS    sS      21 00 16.0 +5.1
KSH                                 SS    SS      21 03 22.5 -2.1
KSH                                 LR    LR
       comp=Z,360nm,5.7s
KSH                                 LR    LR
       comp=Z,270nm,5.2s
KSH                                 LR    LR
       comp=Z,380nm,5.9s
WRAB   Tennant Creek     46.55 173 eP     P       20 53 22.9 -0.2
       comp=Z,6.2nm,0.6s
WRAB   Tennant Creek     46.55 173 eP     P       20 53 22.9 -0.2
WRAB                                pmax  pmax
       comp=Z,6.0nm,0.6s
WR1    Warramunga Arr    46.56 173 eP     P       20 53 23.1 -0.1
       comp=Z,68nm,2.0s
WR1                                ePcP   PcP     20 54 57.8 +0.6
WRA    Warramunga Arr    46.56 173  P     P       20 53 23.1 -0.1
       comp=Z,4.9nm,0.5s,baz=354,slow=8.5,SNR=57
WRA                                 PcP   PcP     20 54 57.8 +0.6
       comp=Z,0.4nm,0.6s,baz=348,slow=4.2,SNR=2.9
WB2    Warramunga Arr    46.56 173 eP     P       20 53 22.4 -0.9
AAK    Ala-Archa         46.97 305 eP     P       20 53 25.5 -1.0
       comp=Z,4.0nm,0.7s
AAK    Ala-Archa         46.97 305 eP     P       20 53 25.5 -1.0
AAK                                 pmax  pmax
       comp=Z,4.0nm,0.7s
BILL   Bilibino          47.02  18 eP     P       20 53 26.3  0.0
BILL                               e              20 53 35.5
BILL                               e              20 55 14.2
BILL                                pmax  pmax
       comp=Z,10.0nm,2.6s
SFK    Sufi-Kurgan       47.72 301  P     P       20 53 34.3 +1.9
SFK                                 pmax  pmax
       comp=Z,6.0nm,1.2s
NIL    Nilore            48.41 292 eP     P       20 53 37.2 -0.4
       comp=Z,16nm,0.7s
NIL    Nilore            48.41 292 eP     P       20 53 37.2 -0.4
NIL                                 pmax  pmax
       comp=Z,16nm,0.7s
OTUK   Ortayu            48.81 312  P     P       20 53 41.9 +1.4
OTUK                                pmax  pmax
       comp=Z,6.0nm,0.6s
NRIK   Noril'sk          49.15 342  P     P       20 53 41.7 -1.0
       comp=Z,0.8nm,0.4s,baz=170,slow=19,SNR=3.2
CTA    Charters Tower    49.29 159  P     P       20 53 45.2 +0.9
       comp=Z,7.7nm,0.7s,baz=330,slow=9.4,SNR=8.9
CTAO   Charters Tower    49.29 159 eP     P       20 53 45.0 +0.6
       comp=Z,49nm,1.6s
CTAO   Charters Tower    49.29 159 eP     P       20 53 45.0 +0.6
CTAO                                pmax  pmax
       comp=Z,49nm,1.6s
KK31   Karatay Array     49.90 305 eP     P       20 53 49.3 +0.4
       comp=Z,24nm,1.5s
KK31   Karatay Array     49.90 305 eP     P       20 53 49.3 +0.4
KK31                                pmax  pmax
       comp=Z,24nm,1.5s
KKAR   Karatay Array     49.90 305 eP     P       20 53 49.3 +0.4
       comp=Z,24nm,1.5s
KKAR   Karatay Array     49.90 305 eP     P       20 53 49.3 +0.4
KKAR                                pmax  pmax
       comp=Z,24nm,1.5s
AS31   Alice Springs     50.20 174 eP     P       20 53 51.0 -0.3
       comp=Z,3.4nm,1.3s
ASAR   Alice Springs     50.20 174  P     P       20 53 51.9 +0.6
       comp=Z,3.5nm,0.5s,baz=6.8,slow=14,SNR=48
AS01   Alice Springs     50.20 174 eP     P       20 53 51.4 +0.1
BVAR   Borovoye Array    50.57 318  P     P       20 53 53.4 -0.4
       comp=Z,0.9nm,0.5s,baz=94,slow=8.9,SNR=9.1
BVAR                                PcP   PcP     20 55 11.3  0.0
       comp=Z,2.5nm,0.8s,baz=102,slow=2.1,SNR=5.5
BRVK   Borovoye          50.63 318 eP     P       20 53 53.8 -0.5
       comp=Z,6.6nm,0.6s
BRVK   Borovoye          50.63 318 eP     P       20 53 53.8 -0.5
BRVK                                pmax  pmax
       comp=Z,7.0nm,0.6s
KBL    Kabul             51.74 294 eP     P       20 54 03.7 +0.6
       comp=Z,37nm,0.6s
KBL    Kabul             51.74 294 eP     P       20 54 03.7 +0.6
KBL                                 pmax  pmax
       comp=Z,37nm,0.6s
ABKAR  Akbulak array     57.02 313 eP     P       20 54 40.9 -0.1
FORT   Forrest           57.09 181 eP     P       20 54 41.6  0.0
       comp=Z,41nm,0.9s
ARU    Arti              57.63 322d iP    P       20 54 55.5 +10
ARU                                 S     S       21 03 03.1 +21
ARU                                 pmax  pmax
       comp=Z,16nm,1.7s
STKA   Stephens Creek    59.36 168 eP     P       20 54 57.5  0.0
       comp=Z,5.5nm,1.9s
STKA   Stephens Creek    59.36 168 eP     P       20 54 57.5  0.0
STKA                                pmax  pmax
       comp=Z,6.0nm,1.9s
STKA   Stephens Creek    59.36 168  P     P       20 54 57.4 -0.1
       comp=Z,2.6nm,1.0s,baz=343,slow=8.7,SNR=5.3
GEYT   Alibeck           59.85 300  P     P       20 55 00.4 -0.7
       comp=Z,1.2nm,0.6s,baz=47,slow=6.5,SNR=5.0
GYA0B  ALIBECK ARRAY     59.85 300 eP     P       20 55 01.4 +0.3
       comp=Z,4.9nm,0.8s
IM3    Indian Mountai    60.73  27 eP     P       20 55 07.3 +0.8
PPLA   Purkeypile        61.49  31 eP     P       20 55 13.0 +1.1
       comp=Z,36nm,1.4s
MLY    Manley            62.01  28 eP     P       20 55 16.0 +0.7
       comp=Z,8.4nm,1.1s
SUA    Susitna One       62.27  32 eP     P       20 55 16.6 -0.5
       comp=Z,99nm,2.0s
TOLK   Toolik Lake Re    62.30  24 eP     P       20 55 17.6 +0.5
       comp=Z,16nm,1.4s
TRF    Thorofare Moun    62.31  30 eP     P       20 55 18.7 +1.2
       comp=Z,86nm,2.0s
MCK    McKinley          62.89  30 eP     P       20 55 21.7 +0.6
       comp=Z,12nm,1.0s
RND    Reindeer          62.96  30 eP     P       20 55 21.6 -0.1
       comp=Z,16nm,0.8s
RND    Reindeer          62.96  30 eP     P       20 55 21.6 -0.1
RND                                 pmax  pmax
       comp=Z,16nm,0.8s
MDM    Murphy Dome       63.08  28 eP     P       20 55 23.4 +1.0
       comp=Z,12nm,0.8s
WRH    Wood River Hil    63.19  29 eP     P       20 55 24.1 +1.1
       comp=Z,51nm,2.0s
COLA   College           63.25  28⇑eP     P       20 55 25.1 +1.7
COLA                                pmax  pmax
       comp=Z,9.0nm,1.0s
CCB    Clear Creek Bu    63.29  29 eP     P       20 55 24.3 +0.5
       comp=Z,24nm,1.8s
KNK    Knik Glacier      63.37  32 eP     P       20 55 23.9 -0.4
       comp=Z,46nm,1.4s
SML    Sawmill           63.38  32 eP     P       20 55 24.7 +0.3
       comp=Z,79nm,1.6s
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SML    Sawmill           63.38  32 eP     P       20 55 24.7 +0.3
SML                                 pmax  pmax
       comp=Z,79nm,1.6s
DHY    Denali Highway    63.66  30 eP     P       20 55 26.0 -0.4
       comp=Z,29nm,1.6s
ILAR   Eielson Array     63.67  28  P     P       20 55 25.6 -0.6
       comp=Z,1.9nm,0.7s,baz=269,slow=5.9,SNR=19
ILB    Eielson Array     63.67  28 eP     P       20 55 25.8 -0.5
       comp=Z,27nm,1.8s
IL1    Eielson Array     63.67  28 eP     P       20 55 25.3 -1.0
HDA    Harding Lake      63.69  29 eP     P       20 55 25.9 -0.5
       comp=Z,9.6nm,0.9s
SCM    Sheep Creek Mo    63.85  32 eP     P       20 55 27.0 -0.6
       comp=Z,94nm,1.7s
SCM    Sheep Creek Mo    63.85  32 eP     P       20 55 27.0 -0.6
SCM                                 pmax  pmax
       comp=Z,94nm,1.7s
KNTN   Kanton            64.02 108 eP     P       20 55 28.5 -0.8
       comp=Z,231nm,1.4s
PAX    Paxson            64.54  30 eP     P       20 55 33.0 +0.9
       comp=Z,37nm,1.9s
PAX    Paxson            64.54  30 eP     P       20 55 33.0 +0.9
PAX                                 pmax  pmax
       comp=Z,37nm,1.9s
KLU    Klutina           64.56  32 eP     P       20 55 32.3 +0.1
       comp=Z,51nm,1.6s
DIV    Divide            64.69  32 eP     P       20 55 32.5 -0.6
       comp=Z,53nm,1.5s
RIDG   Independ'e Rid    64.70  29 eP     P       20 55 33.1  0.0
       comp=Z,69nm,2.0s
HARP   HAARP             64.77  31 eP     P       20 55 34.3 +0.7
       comp=Z,175nm,1.9s
SCRK   Sand Creek        65.03  29 eP     P       20 55 35.3 -0.1
       comp=Z,12nm,0.9s
DOT    Dot Lake          65.06  29 eP     P       20 55 35.5 +0.1
       comp=Z,53nm,1.8s
MENT   Mentasta          65.33  30 eP     P       20 55 38.3 +1.1
       comp=Z,12nm,1.1s
EGAK   Eagle             66.09  28 eP     P       20 55 42.4 +0.4
       comp=Z,16nm,1.5s
TMCR   Tamitsa           66.88 332 eP     P       20 55 46.9 -0.1
TMCR                                pmax  pmax
       comp=Z,26nm,1.1s
KLMR   Klimovskoe        66.98 328 eP     P       20 55 46.5 -1.2
KLMR                                pmax  pmax
       comp=Z,18nm,1.4s
KLMR   Klimovskoe        66.98 328 eP     P       20 55 46.5 -1.2
KLMR                                AMP           20 56 05.3
       comp=Z,18nm,1.4s
INK    Inuvik            68.18  23 eP     P       20 55 55.6 +0.5
       comp=Z,11nm,1.4s
INK    Inuvik            68.18  23 eP     P       20 55 55.6 +0.5
INK                                 pmax  pmax
       comp=Z,11nm,1.4s
INK    Inuvik            68.18  23  P     P       20 55 55.2 +0.1
       comp=Z,1.5nm,0.5s,baz=310,slow=7.2,SNR=11
SPA0   Spitsbergen Ar    68.62 348 eP     P       20 55 59.4 +1.6
SPITS  Spitsbergen Ar    68.62 348  P     P       20 55 58.0 +0.1
SPITS                               pmax  pmax
       comp=Z,12nm,1.1s
SPITS  Spitsbergen Ar    68.62 348  P     P       20 55 58.0 +0.1
       comp=Z,12nm,1.1s,baz=57,slow=5.3,SNR=6.2
ZEI    Tsey              69.17 308 eP     P       20 56 00.6 -1.5
ZEI                                 pmax  pmax
       comp=Z,9.0nm,0.6s
GNI    Garni             69.36 305 eP     P       20 56 04.8 +1.5
       comp=Z,6.5nm,0.8s
GNI    Garni             69.36 305⇓eP     P       20 56 04.0 +0.7
GNI                                 pmax  pmax
       comp=Z,23nm,1.5s
LPSR   Galich'ya Gora    69.48 319 eP     P       20 56 02.0 -1.5
LPSR                                pmax  pmax
       comp=Z,8.0nm,1.1s
KBZ    Khabaz            69.59 309  P     P       20 56 05.2 +0.8
       comp=Z,4.0nm,0.9s,baz=70,slow=3.6,SNR=9.8
KIV    Kislovodsk        69.67 310 eP     P       20 56 05.6 +0.5
       comp=Z,8.3nm,0.7s
KIV    Kislovodsk        69.67 310 eP     P       20 56 05.5 +0.5
KIV                                 pmax  pmax
       comp=Z,7.0nm,1.0s
VSR    Storozhevoye      69.75 318 eP     P       20 56 03.6 -1.6
VSR                                e*SP   sP      20 56 14.2 -0.2
VSR                                 pmax  pmax
       comp=Z,8.0nm,1.3s
NEY    Neytrino          69.86 309⇓eP     P       20 56 06.2 -0.1
NEY                                 pmax  pmax
       comp=Z,1.0nm,0.8s
ARA0   ARCESS Array S    69.96 339 eP     P       20 56 06.4 +0.2
ARCES  ARCESS Array B    69.96 339  P     P       20 56 06.4 +0.2
       comp=Z,2.6nm,0.9s,baz=61,slow=7.5,SNR=4.2
WHY    Whitehorse        69.97  31 eP     P       20 56 07.4 +0.9
       comp=Z,62nm,1.9s
OBN    Obninsk           70.05 322 eP     P       20 56 07.3 +0.3
OBN                                e              20 58 41.2
OBN                                 pmax  pmax
       comp=Z,4.0nm,0.9s
FIA1   FINESS Array S    72.95 331 eP     P       20 56 23.8 -0.6
FIA0   FINESS Array S    72.95 331 eP     P       20 56 24.3 -0.1
FIA0   FINESS Array S    72.95 331 eP     P       20 56 24.3 -0.1
FINES  FINESS Array B    72.95 331  P     P       20 56 24.3 -0.1
       comp=Z,3.9nm,0.4s,baz=67,slow=5.5,SNR=70
VSU    Vasula            73.89 328⇑iP     P       20 56 29.3 -0.6
VSU                                 pmax  pmax
       comp=Z,58nm,1.0s
RAYN   Ar Rayn           74.52 289 eP     P       20 56 34.6 +0.3
       comp=Z,12nm,0.9s
RAYN   Ar Rayn           74.52 289 eP     P       20 56 34.7 +0.3
RAYN                                pmax  pmax
       comp=Z,12nm,0.9s
RES    Resolute Bay      74.99  11 eP     P       20 56 36.2 +0.2
       comp=Z,4.5nm,0.7s
RES    Resolute Bay      74.99  11 eP     P       20 56 36.3 +0.2
RES                                 pmax  pmax
       comp=Z,4.0nm,0.7s
AKASG  Malin Array Be    75.80 320 i P    P       20 56 40.7 -0.5
AKASG                               pmax  pmax
       comp=Z,2.0nm,0.4s
AKASG  Malin Array Be    75.80 320  P     P       20 56 40.6 -0.6
       comp=Z,1.5nm,0.4s,baz=56,slow=6.5,SNR=7.5
AKBB   Malin Array Si    75.80 320 eP     P       20 56 40.6 -0.6
       comp=Z,24nm,1.6s
AKBB   Malin Array Si    75.80 320 eP     P       20 56 40.6 -0.6
AKBB                                pmax  pmax
       comp=Z,24nm,1.6s
KIEV   Kiev              75.81 320⇑eP     P       20 56 39.9 -1.3
KIEV                                pmax  pmax
       comp=Z,3.0nm,0.6s
BR101  Keskin Array S    77.48 308 eP     P       20 56 51.5 +0.3
BR131  Keskin Array S    77.48 308 eP     P       20 56 51.2 +0.1
       comp=Z,10nm,0.9s
BRTR   Keskin Array B    77.48 308  P     P       20 56 51.5 +0.3
       comp=Z,5.6nm,0.8s,baz=100,slow=4.8,SNR=28
HIZ    Hauiti            77.61 145 eP     P       20 56 53.0 +1.6
       comp=Z,23nm,1.1s
YKA    Yellowknife Ar    77.80  25  P     P       20 56 52.5 +0.3
       comp=Z,2.6nm,0.8s,baz=302,slow=5.5,SNR=30
YKB5   Yellowknife Ar    77.80  25 eP     P       20 56 51.7 -0.4
TLCR                     78.41 315⇑iP     P       20 57 07.1  +11
CFR    Carcaliu          78.84 315⇓iP     P       20 57 10.8  +12
NC405  NORSAR Array S    79.11 334 eP     P       20 56 59.0 -0.5
TLB    Topalu            79.17 314⇑iP     P       20 57 12.6  +13
TESR   Tescani           79.17 317⇑iP     P       20 57 00.2 +0.1
NC303  NORSAR Array S    79.17 334 eP     P       20 56 58.8 -1.1
BIZ    Bicaz             79.31 317⇓iP     P       20 57 03.3 +2.4
NB201  NORSAR Array S    79.31 334 eP     P       20 57 00.1 -0.5
NB2    NORSAR Subarra    79.34 334  P     P       20 57 00.2 -0.7
       comp=Z,6.6nm,0.8s,baz=52,slow=5.6
NB200  NORSAR Array S    79.34 334 eP     P       20 57 00.2 -0.7
NOA    NORSAR Array B    79.34 334  P     P       20 57 00.2 -0.7
       comp=Z,4.0nm,0.9s,baz=51,slow=5.5,SNR=11
NC204  NORSAR Array S    79.38 334 eP     P       20 57 00.9 -0.2
VRI    Vrincioaia        79.42 316⇑iP     P       20 57 02.7 +1.2
VRI    Vrincioaia        79.42 316 ⇑P     P       20 57 02.7 +1.2
PLOR   Plostina          79.47 316⇑iP     P       20 57 01.2 -0.6
PLOR   Plostina          79.47 316 ⇑P     P       20 57 01.2 -0.6
NBO00  NORSAR Array S    79.52 334 eP     P       20 57 01.2 -0.5
BUR08  Bucovina Ar. S    79.52 318 eP     P       20 57 02.5 +0.4
       comp=Z,14nm,1.4s
BURAR  Bucovina Array    79.53 318⇑iP     P       20 57 02.6 +0.4
BURAR  Bucovina Array    79.53 318 ⇑P     P       20 57 02.6 +0.4
BUR04  Bucovina Ar. S    79.53 318 eP     P       20 57 02.0 -0.2
CSS    Mathiatis         79.69 304 eP     P       20 57 03.2  0.0
       comp=Z,8.6nm,0.7s
KHZ    Kahutara          79.94 148 eP     P       20 57 03.9 -0.2
       comp=Z,90nm,1.7s
KWP    Kalwaria Pacla    80.02 321 eP     P       20 57 03.8 -0.9
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	comp=Z,368nm,1.5s						
KWP	**Kalwaria Pacla**	**80.02**	**321**	*e*P	**P**	**20 57 03.8**	**-0.9**
MLR	**Muntele Rosu**	**80.08**	**316**	*e*P	**P**	**20 57 04.8**	**-0.4**
	comp=Z,9.0nm,1.2s						
MLR	**Muntele Rosu**	**80.08**	**316**	*e*P	**P**	**20 57 04.8**	**-0.4**
MLR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
DOPR	**Dopca**	**80.20**	**317**	⇑*i*P	**P**	**20 57 06.6**	**+0.9**
VOIR		**80.66**	**316**	⇓*i*P	P	20 57 20.6	+12
SUMG	**Summit**	**80.70**	**356**	*e*P	**P**	**20 57 08.4**	**0.0**
	comp=Z,63nm,1.9s						
SUMG	**Summit**	**80.70**	**356**	*i* P	**P**	**20 57 08.9**	**+0.5**
SUMG	**Summit**	**80.70**	**356**	*e*P	**P**	**20 57 08.4**	**0.0**
SUMG				pmax	pmax		
	comp=Z,63nm,1.9s						
KONO	**Kongsberg**	**80.83**	**333**	*e*P	**P**	**20 57 08.7**	**-0.1**
	comp=Z,26nm,1.4s						
KONO	**Kongsberg**	**80.83**	**333**	*e*P	**P**	**20 57 08.7**	**-0.1**
KONO				pmax	pmax		
	comp=Z,26nm,1.4s						
TRPA	**Tarpa**	**80.86**	**319**	⇑*i*P	**P**	**20 57 09.5**	**+0.3**
ARR	**Arges**	**80.95**	**316**	⇑*i*P	**P**	**20 57 10.7**	**+0.9**
OJC	**Ojcow**	**81.34**	**322**	*e*P	**P**	**20 57 11.5**	**-0.2**
	comp=Z,22nm,1.1s						
OJC	**Ojcow**	**81.34**	**322**	*e*P	**P**	**20 57 11.5**	**-0.2**
OJC				pmax	pmax		
	comp=Z,22nm,1.1s						
DRGR		**81.42**	**318**	⇑*i*P	**P**	**20 57 12.5**	**+0.2**
DRGR		**81.42**	**318**	⇑P	**P**	**20 57 12.5**	**+0.2**
GZR	**Gura Zlata**	**82.08**	**317**	⇑*i*P	P	20 57 29.6	+14
GZR	**Gura Zlata**	**82.08**	**317**	⇑P	P	20 57 29.6	+14
VYHS	**Vyhne**	**82.79**	**321**	*e*P	**P**	**20 57 20.4**	**+1.0**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
VYHS	**Vyhne**	**82.79**	**321**	*e*P	**P**	**20 57 20.4**	**+1.0**
MORC	**Moravsky Berou**	**82.81**	**323**	⇑*i*P	**P**	**20 57 20.4**	**+0.9**
MORC	**Moravsky Berou**	**82.81**	**323**	⇑P	**P**	**20 57 20.4**	**+0.9**
MDVR	**Moldovita**	**83.04**	**317**	⇓*i*P	**P**	**20 57 21.6**	**+0.8**
VTS	**Vitosha**	**83.17**	**314**	*e*P	**P**	**20 57 22.1**	**+0.5**
	comp=Z,6.6nm,1.0s						
VTS	**Vitosha**	**83.17**	**314**	⇑*i*P	**P**	**20 57 22.6**	**+0.9**
VTS	**Vitosha**	**83.17**	**314**	*e*P	**P**	**20 57 22.2**	**+0.5**
VTS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VRAC	**Vranov**	**83.59**	**323**	⇓*i*P	**P**	**20 57 26.5**	**+3.0**
VRAC	**Vranov**	**83.59**	**323**	⇓P	**P**	**20 57 26.5**	**+3.0**
RAR	**Rarotonga**	**83.61**	**117**	LR	LR	21 27 36.3	
	comp=Z,83nm,21.5s,baz=80,slow=31						
BRG	**Berggiesshubel**	**84.10**	**325**	*e*P	**P**	**20 57 26.5**	**+0.4**
	comp=Z,5.5nm,1.1s						
BRG	**Berggiesshubel**	**84.10**	**325**	*e*P	**P**	**20 57 26.5**	**+0.4**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	**Collm**	**84.33**	**326**	*e*P	**P**	**20 57 27.8**	**+0.6**
	comp=Z,9.1nm,1.0s						
CLL	**Collm**	**84.33**	**326**	⇓*i*P	**P**	**20 57 27.3**	**+0.1**
	comp=Z,13nm,1.1s						
CLL				*i* sP	**PcP**	**20 57 32.7**	**+1.8**
CLL				*i* sPcP		20 57 38.2	
CLL	**Collm**	**84.33**	**326**	⇓*i*P	**P**	**20 57 27.3**	**+0.1**
CLL				*i*		20 57 32.7	
CLL				*i*		20 57 38.2	
CLL				pmax	pmax		
	comp=Z,13nm,1.1s						
KHC	**Kasperske Hory**	**85.31**	**324**	*e*P	**P**	**20 57 33.1**	**+0.8**
KHC	**Kasperske Hory**	**85.31**	**324**	*e*P	**P**	**20 57 33.1**	**+0.8**
GEC2	**GERESS Array S**	**85.41**	**323**	*e*P	**P**	**20 57 31.8**	**-1.0**
	comp=Z,3.7nm,1.0s						
GEC2	**GERESS Array S**	**85.41**	**323**	*e*P	**P**	**20 57 31.8**	**-1.0**
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	**GERESS Array B**	**85.41**	**323**	P	**P**	**20 57 32.5**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=51,slow=4.3,SNR=9.4						
GEA0	**GERESS Array S**	**85.42**	**323**	*e*P	**P**	**20 57 32.8**	**-0.1**
FCC	**Fort Churchill**	**87.66**	**21**	*e*P	**P**	**20 57 43.5**	**0.0**
	comp=Z,6.1nm,0.9s						
FCC	**Fort Churchill**	**87.66**	**21**	*e*P	**P**	**20 57 43.5**	**0.0**
FCC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FFC	**Flin Flon**	**87.84**	**27**	*e*P	**P**	**20 57 44.6**	**+0.1**
	comp=Z,9.7nm,0.8s						
FFC	**Flin Flon**	**87.84**	**27**	*e*P	**P**	**20 57 44.6**	**+0.1**
FFC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NV01	**Mina Array Sit**	**89.60**	**47**	*e*P	**P**	**20 57 55.0**	**+1.6**
NVAR	**Mina Array Bea**	**89.60**	**47**	P	**P**	**20 57 55.0**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=289,slow=5.6,SNR=3.3						
PDAR	**Pinedale Array**	**92.30**	**39**	P	**P**	**20 58 06.2**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=25,slow=3.0,SNR=2.1						
ULM	**Lac du Bonnet**	**93.67**	**27**	P	**P**	**20 58 12.2**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=329,slow=5.9,SNR=2.4						
TOA1	**Torodi Ar. Sit**	**115.48**	**301**	*e*PKPdf	**PKiKP**	**21 03 37.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**115.49**	**301**	PKP	**PKiKP**	**21 03 37.1**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=89,slow=2.6,SNR=2.6						

ROM 26 20:48:38.2±0.1, 37°.850N±0°.004×15°.032E±0°.006, h10^{km}, ML2.3/22, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESLN	**Serra La Nave**	**0.16**	**196**	P	Pg	20 48 42.1	+0.2
ESLN				AML	AML		
	comp=E,1080μm,0.8s						
ESLN				AML	AML		
	comp=N,938μm,0.3s						
ESLN				AML	AML		
	comp=E,1080μm,0.8s						
ESLN				AML	AML		
	comp=N,938μm,0.3s						
ESLN				AML	AML		
	comp=N,938μm,0.3s						
ESLN				AML	AML		
	comp=E,1080μm,0.8s						
MUCR	**Ucria**	**0.23**	**327**	P	Pg	20 48 43.8	+0.7
MUCR				S	Sg	20 48 47.8	+1.5
MUCR				AML	AML		
	comp=E,1180μm,0.3s						
MUCR				AML	AML		
	comp=N,808μm,0.5s						
MUCR				AML	AML		
	comp=E,1180μm,0.3s						
MUCR				AML	AML		
	comp=N,808μm,0.5s						
MUCR				AML	AML		
	comp=E,1180μm,0.3s						
MUCR				AML	AML		
	comp=N,808μm,0.5s						
MCSR	**Castroreale**	**0.28**	**39**	P	Pg	20 48 43.9	+0.1
MCSR				S	Sg	20 48 48.8	+1.2
MCSR				AML	AML		
	comp=E,1670μm,0.3s						
MCSR				AML	AML		
	comp=N,1820μm,0.3s						
MCSR				AML	AML		
	comp=E,1670μm,0.3s						
MCSR				AML	AML		
	comp=N,1820μm,0.3s						
MCSR				AML	AML		
	comp=N,1820μm,0.3s						
MCSR				AML	AML		
	comp=E,1670μm,0.3s						
MNO	**Monte Soro**	**0.28**	**287**	P	Pb	20 48 44.9	-0.5
MNO				S	Sg	20 48 48.7	+0.9
MNO				AML	AML		
	comp=E,1195μm,0.3s						
MNO				AML	AML		
	comp=N,1030μm,0.4s						
MNO				AML	AML		
	comp=E,1190μm,0.3s						
MNO				AML	AML		
	comp=N,1028μm,0.4s						
MNO				AML	AML		
	comp=E,1190μm,0.3s						
MNO				AML	AML		
	comp=N,1028μm,0.4s						
ECNV	**Catenanuova**	**0.36**	**225**	P	Pb	20 48 47.1	+0.5
MPNC	**Port Mandanici**	**0.39**	**41**	P	Pg	20 48 46.2	+0.3
MPNC				S	Sb	20 48 52.5	-0.8
MPNC				AML	AML		
	comp=E,950μm,0.6s						
MPNC				AML	AML		
	comp=N,743μm,1.3s						
MPNC				AML	AML		
	comp=E,950μm,0.6s						
MPNC				AML	AML		
	comp=N,743μm,1.3s						
GALF	**Gagliano Caste**	**0.39**	**249**	P	Pb	20 48 47.0	-0.4
GALF				S	Sb	20 48 52.4	-1.0
GALF				AML	AML		
	comp=E,506μm,0.4s						
GALF				AML	AML		
	comp=N,624μm,0.9s						
GALF				AML	AML		
	comp=E,506μm,0.4s						
GALF				AML	AML		
	comp=N,624μm,0.9s						
MSFR	**San Fratello**	**0.39**	**298**	P	Pg	20 48 46.5	+0.5
MSFR				AML	AML		
	comp=E,156μm,1.2s						
MSFR				AML	AML		
	comp=N,129μm,1.6s						
MSFR				AML	AML		
	comp=N,129μm,1.6s						
MSFR				AML	AML		
	comp=E,156μm,1.2s						
HLNI	**Lentini**	**0.52**	**194**	P	Pg	20 48 48.1	-0.2
HLNI				AML	AML		
	comp=E,117μm,1.0s						
HLNI				AML	AML		
	comp=N,115μm,0.9s						
HLNI				AML	AML		
	comp=E,117μm,1.0s						
HLNI				AML	AML		
	comp=N,115μm,0.9s						
VPL	**Vulcano Piano**	**0.53**	**356**	P	Pg	20 48 49.0	+0.5
VPL				S	Sg	20 48 56.1	+0.5
VPL				AML	AML		
	comp=E,1062μm,0.5s						
VPL				AML	AML		
	comp=N,1520μm,0.7s						
VPL				AML	AML		
	comp=N,1520μm,0.7s						
VPL				AML	AML		
	comp=E,1062μm,0.5s						
MTTG	**Motta San Giov**	**0.55**	**74**	P	Pg	20 48 49.3	+0.5
MTTG				S	Sb	20 48 57.2	-0.6
MTTG				AML	AML		
	comp=E,174μm,1.3s						
MTTG				AML	AML		
	comp=N,230μm,0.6s						
MTTG				AML	AML		
	comp=E,174μm,1.3s						
MTTG				AML	AML		
	comp=N,230μm,0.6s						
MTTG				AML	AML		
	comp=E,174μm,1.3s						
MTTG				AML	AML		
	comp=N,230μm,0.6s						
MSRU	**Castanea**	**0.56**	**42**	P	Pg	20 48 49.2	+0.1
MSRU				S	Sb	20 48 57.5	-0.7
MSRU				AML	AML		
	comp=E,306μm,0.3s						
MSRU				AML	AML		
	comp=N,254μm,1.2s						
MSRU				AML	AML		
	comp=N,254μm,1.2s						
MSRU				AML	AML		
	comp=E,306μm,0.3s						
HCRL	**Carlentini**	**0.57**	**180**	P	Pg	20 48 49.1	-0.1
HCRL				S	Sb	20 48 58.3	0.0
HCRL				AML	AML		
	comp=E,243μm,0.2s						
HCRL				AML	AML		
	comp=N,216μm,1.5s						
HCRL				AML	AML		
	comp=E,243μm,0.2s						
HCRL				AML	AML		
	comp=N,216μm,1.5s						
AGST	**Augusta-Monte**	**0.61**	**165**	P	Pg	20 48 49.8	-0.3
AGST				AML	AML		
	comp=E,296μm,1.2s						
AGST				AML	AML		
	comp=N,255μm,0.2s						
AGST				AML	AML		
	comp=E,296μm,1.2s						
AGST				AML	AML		
	comp=N,255μm,0.2s						
SSY	**Sortino**	**0.69**	**177**	P	Pg	20 48 51.3	-0.4
SSY				AML	AML		
	comp=E,354μm,0.4s						
SSY				AML	AML		
	comp=N,686μm,0.2s						
SSY				AML	AML		
	comp=N,686μm,0.2s						
SSY				AML	AML		
	comp=E,354μm,0.4s						
MSCL	**Scilla**	**0.71**	**57**	P	Pg	20 48 52.1	+0.1
MSCL				AML	AML		
	comp=E,208μm,0.6s						
MSCL				AML	AML		
	comp=N,190μm,0.4s						
MSCL				AML	AML		
	comp=E,208μm,0.6s						
MSCL				AML	AML		
	comp=N,190μm,0.4s						
HVZN	**Vizzini**	**0.72**	**201**	P	Pg	20 48 51.9	-0.2
HVZN				AML	AML		
	comp=E,480μm,0.6s						
HVZN				AML	AML		
	comp=N,486μm,1.6s						
HVZN				AML	AML		
	comp=N,486μm,1.6s						
HVZN				AML	AML		
	comp=E,480μm,0.6s						
MPAZ	**Palizzi**	**0.78**	**82**	P	Pg	20 48 53.4	+0.1
MPAZ				AML	AML		
	comp=E,79μm,1.0s						
MPAZ				AML	AML		
	comp=N,104μm,0.8s						
MPAZ				AML	AML		
	comp=E,79μm,1.0s						
MPAZ				AML	AML		
	comp=N,104μm,0.8s						
IFIL	**Filicudi I Eol**	**0.80**	**333**	P	Pg	20 48 53.9	+0.2
IFIL				AML	AML		
	comp=E,581μm,0.3s						
IFIL				AML	AML		
	comp=N,238μm,0.5s						
IFIL				AML	AML		
	comp=N,238μm,0.5s						
IFIL				AML	AML		
	comp=E,581μm,0.3s						
RAFF	**Raffo Rosso**	**0.82**	**221**	P	Pg	20 48 54.2	+0.2
HAVL	**Avola**	**0.89**	**175**	P	Pg	20 48 54.5	-0.9
HAVL				AML	AML		
	comp=E,344μm,0.2s						
HAVL				AML	AML		
	comp=N,410μm,1.6s						
HAVL				AML	AML		
	comp=E,344μm,0.2s						
HAVL				AML	AML		
	comp=N,410μm,1.6s						

ROM 26 20:49:37.9±0.1, 37°.846N±0°.004×15°.052E±0°.007, h14^{km}±1^{km}, ML1.7/5, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESLN	**Serra La Nave**	**0.16**	**202**	P	Pg	20 49 42.3	+0.3
MUCR	**Ucria**	**0.24**	**324**	P	Pg	20 49 43.4	+0.2
MUCR				S	Sg	20 49 47.4	+0.6
MUCR				AML	AML		
	comp=E,204μm,0.3s						
MUCR				AML	AML		
	comp=N,144μm,0.6s						
MUCR				AML	AML		
	comp=E,204μm,0.3s						
MUCR				AML	AML		
	comp=N,144μm,0.6s						
MUCR				AML	AML		
	comp=E,204μm,0.3s						
MUCR				AML	AML		
	comp=N,144μm,0.6s						
MCSR	**Castroreale**	**0.27**	**36**	P	Pg	20 49 43.8	+0.1
MCSR				S	Sb	20 49 48.4	-0.7
MCSR				AML	AML		
	comp=E,434μm,0.3s						
MCSR				AML	AML		
	comp=N,380μm,0.9s						
MCSR				AML	AML		
	comp=E,435μm,0.3s						
MCSR				AML	AML		
	comp=N,380μm,0.9s						
MCSR				AML	AML		
	comp=N,380μm,0.9s						
MCSR				AML	AML		
	comp=E,435μm,0.3s						
MNO	**Monte Soro**	**0.30**	**287**	P	Pg	20 49 44.5	+0.3
MNO				S	Sb	20 49 49.4	-0.5
MNO				AML	AML		
	comp=E,248μm,0.3s						
MNO				AML	AML		
	comp=N,181μm,0.4s						
MPNC	**Port Mandanici**	**0.38**	**38**	P	Pb	20 49 46.1	-0.3
MPNC				S	Sg	20 49 51.3	+0.5
MPNC				AML	AML		
	comp=E,208μm,0.6s						
MPNC				AML	AML		
	comp=N,165μm,0.9s						
MPNC				AML	AML		
	comp=E,208μm,0.6s						
MPNC				AML	AML		
	comp=N,166μm,0.9s						
MPNC				AML	AML		
	comp=E,208μm,0.6s						
MPNC				AML	AML		
	comp=N,166μm,0.9s						
GALF	**Gagliano Caste**	**0.41**	**251**	P	Pb	20 49 46.9	0.0
MSFR	**San Fratello**	**0.41**	**297**	P	Pg	20 49 46.1	0.0
MSFR				S	Sb	20 49 52.7	-0.4
HLNI	**Lentini**	**0.52**	**196**	P	Pg	20 49 47.8	-0.3
HLNI				S	Sb	20 49 55.8	-0.3
HCRL	**Carlentini**	**0.56**	**182**	P	Pg	20 49 49.0	+0.1
AGST	**Augusta-Monte**	**0.60**	**167**	P	Pg	20 49 49.1	-0.6
RAFF	**Raffo Rosso**	**0.83**	**222**	P	Pg	20 49 53.9	0.0
HAVL	**Avola**	**0.89**	**176**	P	Pb	20 49 54.1	-0.9

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*NEIC **26** 20:49:40.9±0.0, 16°.96N×99°.49W, h21^{km}, MD4.1(MEX), After MEX.*

MEX 26 20:49:40.9±0.5, 16°.96N×99°.50W, h23^{km}±14^{km}, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	**0.38**	**257**	*e*P	Pb	20 49 47.9	-1.2
ACP2				*e*S	Sb	20 49 53.1	-1.6
CAIG	**El Cayaco**	**0.74**	**277**	*e*P	Pb	20 49 52.7	-2.4
CAIG				*e*S	Sb	20 50 02.0	-2.9
PNIG	**Pinotepa**	**1.43**	**113**	*e*Sn	Sn	20 50 19.1	-4.6
PNIG	**Pinotepa**	**1.43**	**113**	*e*P	Pn	20 50 02.8	-2.7
PNIG				*e*S	Sn	20 50 19.1	-4.6
UNM	**Universidad Na**	**2.37**	**7**	*e*Pn	Pn	20 50 15.0	-3.7
VHO	**Vista Hermosa**	**2.65**	**87**	*e*Pn	Pn	20 50 19.9	-2.6
VHO	**Vista Hermosa**	**2.65**	**87**	*e*P	Pn	20 50 19.9	-2.6
MOIG	**Morelia**	**3.14**	**330**	*e*Pn	Pn	20 50 26.7	-2.5
LVIG	**Laguna Verde**	**4.01**	**46**	*e*Pn	Pn	20 50 39.7	-1.3
TEIG	**Tepich**	**11.12**	**71**	*e*Pn	Pn	20 52 20.6	+1.9

TAP 26 20:52:21.4, 23°.46N×121°.30E, h11^{km}±1^{km}, ML1.9, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHY	**Hungye**	**0.06**	**23**	P	Pg	20 52 24.5	+0.8
	baz=31						
EHY				S	Sg	20 52 26.1	+0.7
	baz=31						
YULB	**Yu-li**	**0.06**	**181**	P	Pg	20 52 24.1	+0.3
	baz=180						
YULB				S	Sg	20 52 25.6	+0.1
	baz=180						
TWF1	**Yuli**	**0.10**	**181**	P	Pg	20 52 24.5	+0.3
	baz=176						
TWF1				S	Sg	20 52 26.3	+0.1
	baz=176						
HGSD	**Ruisui**	**0.12**	**72**	P	Pb	20 52 25.8	+0.1
	baz=72						
HGSD				S	Sg	20 52 28.9	+2.3
	baz=72						
EGFH	**Guangfu**	**0.24**	**29**	P	Pb	20 52 27.1	-0.6
	baz=29						
EGFH				S	Sg	20 52 30.9	+1.0
	baz=29						
FULB	**Fuli**	**0.26**	**181**	P	Pb	20 52 27.5	-0.4
	baz=180						
FULB				S	Sb	20 52 32.5	+0.1
	baz=180						
VWDT	**VWDT**	**0.33**	**334**	P	Pb	20 52 29.8	+0.5
	baz=334						
VWDT				S	Sb	20 52 34.1	-0.4
	baz=334						
ELDTW	**Lidau**	**0.37**	**224**	⇑*i*P	Pg	20 52 28.8	0.0
	baz=223						
ELDTW				*e*S	Sg	20 52 33.3	-0.4
	baz=223						
ESL	**Shilin**	**0.38**	**19**	P	Pg	20 52 29.5	+0.6
	baz=20						
ESL				S	Sb	20 52 35.1	-0.9
	baz=20						
SSLB	**Suanglung**	**0.46**	**316**	P	Pb	20 52 31.3	-0.2
	baz=316						
SSLB				S	Sb	20 52 37.6	-0.7
	baz=316						
WHYT	**Xinyi Township**	**0.47**	**301**	P	Pb	20 52 32.1	+0.4
	baz=300						
WHYT				S	Sb	20 52 38.9	+0.2
	baz=300						
OWD	**Renai**	**0.51**	**347**	P	Pb	20 52 32.2	-0.2
	baz=347						
OWD				S	Sg	20 52 38.5	+0.3
	baz=347						
SMLT	**Sun Moon Lake**	**0.56**	**319**	*i* P	Pb	20 52 33.4	+0.1
	baz=319						
SMLT				S	Sb	20 52 41.2	-0.2
	baz=319						
STYT	**Tauyuan**	**0.58**	**240**	P	Pb	20 52 33.3	-0.2
	baz=239						
STYT				S	Sg	20 52 40.3	0.0
	baz=239						
CHN5	**Tsauling**	**0.59**	**284**	P	Pb	20 52 34.4	+0.8
	baz=283						
CHN5				S	Sb	20 52 42.9	+0.9
	baz=283						
TYC	**Yuchr**	**0.60**	**318**	P	Pb	20 52 34.1	+0.2
	baz=318						
TYC				S	Sb	20 52 42.4	0.0
	baz=318						
CHGB	**Renai**	**0.61**	**349**	P	Pb	20 52 34.2	0.0
	baz=349						
CHGB				*e*S	Sg	20 52 40.5	-1.0
	baz=349						
CHGB	**Renai**	**0.61**	**349**	*e*P	Pb	20 52 34.3	+0.1
	baz=223						
CHGB				*e*S	Sg	20 52 40.9	-0.6
	baz=223						
TPUB	**Ta-pu**	**0.63**	**256**	*e*P	Pb	20 52 34.6	+0.2
	baz=255						
TPUB				S	Sb	20 52 43.6	+0.3
	baz=255						
WJS	**Zhushan**	**0.64**	**305**	*e*P	Pn	20 52 35.7	-0.6
	baz=304						
WJS				*e*S	Sb	20 52 44.9	+1.5
	baz=304						
WTP	**Ta-pu**	**0.66**	**252**	*e*P	Pn	20 52 36.0	-0.7
	baz=251						
WTP				*e*S	Sb	20 52 44.4	+0.2
	baz=251						
TWG	**Pinlang**	**0.67**	**198**	*e*P	Pb	20 52 35.7	+0.7
	baz=197						
TWD	**Chiawan**	**0.68**	**24**	*e*P	Pn	20 52 37.6	+0.7
	baz=24						
TWD	**Chiawan**	**0.68**	**24**	*e*S	Pn	20 52 37.7	+0.8
	baz=149						
WDLH	**Douliu**	**0.73**	**289**	*e*S	Sb	20 52 47.5	+1.3
	baz=288						
SGST	**Jiashian**	**0.76**	**241**	*e*P	Pb	20 52 36.8	+0.3
	baz=240						
SGST				*e*S	Sb	20 52 47.6	+0.9
	baz=240						
SLGT	**Liugui**	**0.76**	**233**	*e*P	Pb	20 52 36.3	-0.2
	baz=232						
SLGT				*e*S	Sb	20 52 46.8	0.0
	baz=232						
CHN1	**Nanshi**	**0.76**	**249**	*e*P	Pn	20 52 37.4	-0.6
	baz=249						
CHN1				*e*S	Sn	20 52 48.3	-1.1

	baz=249						
TWK	Hsinying	0.77	256	*e*P	Pn	20 52 38.4	+0.2
	baz=255						
TWK				*e*S	Sn	20 52 48.5	-1.2
	baz=255						
SNST	Tainan City	0.77	253	*e*P	Pn	20 52 37.5	-0.6
	baz=252						
SNST				*e*S	Sb	20 52 48.0	+0.8
	baz=252						

TAP 26 20:52:26.7,24°.33N×121°.45E,h9^{km}±1^{km},ML1.6,2C-2D, B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.12	329	⇓P	Pg	20 52 30.6	+1.0
	baz=329						
NNSB				S	Sg	20 52 32.4	+0.7
	baz=329						
ETLH	Xiulin Townshi	0.12	166	P	Pg	20 52 30.8	+1.1
	baz=165						
ETLH				S	Sg	20 52 32.6	+0.9
	baz=165						
NNS	Nan Shan	0.13	328	⇓*i*P	Pg	20 52 30.9	+1.0
	baz=330						
NNS				*i* S	Sg	20 52 32.9	+0.9
	baz=330						
WHF	Hehuan Shan	0.25	223	*e*P	Pg	20 52 32.8	+0.9
	baz=221						
WHF				*e*S	Sg	20 52 36.5	+1.1
	baz=221						
TWT	Tachien	0.26	253	*e*P	Pb	20 52 33.5	-0.2
	baz=253						
TWT				*e*S	Sg	20 52 36.9	+1.3
	baz=253						
TDCB	Techi	0.28	254	*e*P	Pb	20 52 33.2	-0.7
	baz=254						
TDCB				*e*S	Sg	20 52 36.5	+0.4
	baz=254						
NDT	Datong Townshi	0.28	12	⇑P	Pb	20 52 33.8	-0.1
	baz=12						
NDT				S	Sb	20 52 37.8	-0.9
	baz=12						
ENA	Nanau	0.28	70	⇑P	Pb	20 52 33.6	-0.4
	baz=70						
ENA				*e*S	Sg	20 52 37.4	+1.1
	baz=70						
NANB	Nanao	0.29	70	P	Pb	20 52 33.5	-0.6
	baz=70						
NANB				S	Sb	20 52 38.6	-0.5
	baz=70						
ENTT	Nioudou	0.33	19	*e*P	Pg	20 52 32.7	-0.6
	baz=20						
ENTT				*e*S	Sb	20 52 39.4	-0.7
	baz=20						
YHNB	Yeheng	0.35	349	P	Pb	20 52 35.4	+0.3
	baz=349						
YHNB				S	Sb	20 52 39.6	-1.1
	baz=349						
TWE	Neicheng	0.44	27	*e*P	Pb	20 52 36.6	0.0
	baz=28						
NWLT	Wulai	0.45	6	P	Pb	20 52 37.2	+0.4
	baz=6.0						
NWLT				S	Sb	20 52 43.2	-0.5
	baz=6.0						
WHP	Taichung City	0.46	264	*e*P	Pb	20 52 37.3	+0.2
	baz=263						
WHP				*e*S	Sb	20 52 43.4	-0.6
	baz=263						
LIOB	Emei	0.51	309	*e*P	Pb	20 52 37.5	-0.3
	baz=308						
LIOB				*e*S	Sb	20 52 44.7	-0.5
	baz=308						
NSTT	Nanjuang	0.51	307	*e*P	Pb	20 52 37.3	-0.5
	baz=306						
NSTT				*e*S	Sb	20 52 45.7	+0.4
	baz=306						

*EAF **26** 20:56:22.5±2.2, 3°.72S×34°.95E, h59^{km}±999^{km}*

ISC 26 20:56:20.0±1.5**,3°.88S**±0°.08×**34°.94E**±0°.09**,h10**^{km}**,n5, σ1^s.76**/7**,Lake Victoria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBAT	Babati	0.88	112	*i* P	Pn	20 56 40.1	+1.5
BBAT				*i* S	Sn	20 56 51.6	+0.1
KIBA	Kibaya	2.16	131	*i* P	Pb	20 56 58.8	-0.5
KIBA				*i* S	Sn	20 57 21.6	-1.5
KMBO	Kilima Mbogo	3.58	40	*i* P	Pn	20 57 13.9	-1.9
KMBO				*i* S	Pg	20 57 29.8	+1.2
KMBO	Kilima Mbogo	3.58	40	*i* P	Pg	20 57 29.7	+1.1
KMBO				*i* S	Sg	20 58 16.8	+1.9
MBAR	Mbarara	5.31	308	*e*P	Pn	20 57 41.2	+1.5
MBAR				*e*S	Sn	20 58 41.7	+0.7

*IDC **26** 20:58:34.3±1.4, 4°.00N×126°.97E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.4/33, mbtmp3.6/5, MS3.1/1, Ms1 3.1/1, ms1mx2.5/30, Error ellipse: s-maj=122.6km s-min=21.1km az=69.0*

ISC 26 20:58:35.7±1.2**,4°.0N**±0°.1×**127°.1E**±0°.2**,h10**^{km}**,n10, σ1^s.63**/10**,mb3.6**/5**,1D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	3.01	344	*e*P	Pg	20 59 34.0	+0.5
MATI				*e*S	Sg	21 00 23.3	+11
SKMP	Bagumbayan, Su	3.53	315	*e*P	Pg	20 59 43.2	-0.2
SKMP				*e*S	Sg	21 00 45.9	+17
KCP	Kidapawan	3.56	326	⇓*e*P	Pg	20 59 43.1	-0.9
BUKP	Musuan	4.32	333	*e*P	Pg	20 59 55.8	-2.7
BUKP				*e*S	Sg	21 00 56.8	+2.2
FITZ	Fitzroy Crossi	22.03	184	LR	LR	21 12 02.5	
	comp=Z,46nm,20.1s,baz=156,slow=37						
WRA	Warramunga Arr	24.86	164	P	P	21 03 57.7	-1.0
	0.6nm,0.7s,baz=342,slow=10,SNR=8.1						
ASAR	Alice Springs	28.32	167	P	P	21 04 31.4	+1.6
	0.5nm,0.9s,baz=331,slow=9.5,SNR=2.0						
SONM	Songino Array	47.13	341	P	P	21 07 07.4	-0.9
	0.4nm,0.7s,baz=151,slow=11,SNR=4.1						
MKAR	Makanchi Array	57.51	325	P	P	21 08 26.1	+0.9
	0.7nm,0.7s,baz=128,slow=8.0,SNR=10						
ZALV	Zalesovo Beam	60.48	333	P	P	21 08 45.1	-0.6
	0.4nm,0.3s,baz=122,slow=14,SNR=2.3						

SJA 26 21:01:29.7±0.5**,31°.43S**×**68°.80W,h112**^{km}±4^{km}**,ML3.1, MW4.1,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.16	138	IAML		21 01 46.2	
	comp=Z,194nm,0.2s						
SJA	San Juan	0.23	115	*i* P	Pn	21 01 46.4	+1.0
RTLL	Cerro Villicun	0.30	70	*e*P	Pn	21 01 46.3	+0.6
RTLL				IAML		21 02 00.0	
	comp=Z,914nm,0.3s						
RTCV	Cerro Valdivia	0.48	153	*e*P	Pn	21 01 47.4	+0.7
AMOG	MOGNA	0.56	28	*e*P	Pn	21 01 47.8	+0.5
AMOG				*e*S	Sn	21 02 01.2	+0.8
RTLS	Leoncito	0.56	229	*e*P	Pn	21 01 48.9	+1.3
RTLS				IAML		21 01 49.3	
	comp=Z,462nm,0.2s						
ACCO	Cerro Coronel	0.87	345	*e*P	Pn	21 01 51.5	+1.4
ACCO				*e*S	Sn	21 02 07.4	+1.9
AUSP	Uspallata	0.94	212	*e*P	Pn	21 01 51.9	+1.2
AROD	Rodeo	1.39	335	*e*P	Pn	21 01 56.7	+1.0
ARCO	CERRO ARCO	1.41	184	IAML		21 02 19.1	
	comp=Z,144nm,0.3s						
ACAN	Cantantal	1.61	122	*e*P	Pn	21 01 59.0	+1.0
AAGR	Agrelo	1.65	181	*e*P	Pn	21 01 59.4	+0.8
AGUA	GUANDACOL	1.96	8	*e*P	Pn	21 02 03.6	+1.3
APLL	PUNTA DE LOS L	2.21	63	*i* P	Pn	21 02 06.5	+1.1
APLL				IAML		21 02 34.4	
	comp=Z,61nm,0.3s						

IDC 26 21:20:58.4±6.3**,6°.70S**×**156°.81E,h0**^{km}**,mb3.6**/3**, mb1 3.8**/3**,mb1mx3.5**/28**,mbtmp3.6**/3**,Error ellipse: s-maj=180.7km s-min=46.7km az=111.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.47	237	P	P	21 26 28.7	+0.3
	0.5nm,0.5s,baz=63,slow=9.1,SNR=14						
ASAR	Alice Springs	27.73	230	P	P	21 26 48.4	-0.4
	0.4nm,0.3s,baz=56,slow=9.5,SNR=2.9						
MKAR	Makanchi Array	84.38	318	P	P	21 33 32.7	0.0
	0.1nm,0.4s,baz=87,slow=6.8,SNR=2.3						

*ISN **26** 21:34:10.9±1.3, 36°.32N×41°.16E, h0^{km}±12^{km}, ML3.2*
*ISK **26** 21:34:14.8, 36°.27N×41°.16E, h4^{km}, ML3.1/6*
*DDA **26** 21:34:21.4, 36°.61N×41°.28E, h10^{km}±3^{km}, ML3.2*

ISC 26 21:34:16.6±2.2**,36°.20N**±0°.03×**41°.21E**±0°.03**,h10**^{km}±17^{km}**, n26,σ1^s.00**/40**,Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARD	Mardin	1.17	343	*i* P	Pn	21 34 38.1	-0.9
MARD				*i* S	Sb	21 34 53.8	-0.4
MARD				IAML_P			
	comp=Z,4µm,0.1s						
MAZI	Mazidag	1.40	334	PN	Pn	21 34 40.9	-1.4
MAZI				SN	Sn	21 34 59.3	-1.6
MSL	Mosul	1.55	82	*e*Pn	Pn	21 34 42.0	-2.1
MSL				*e*Sn	Sb	21 35 05.0	+0.1
SIRN	Sırnak	1.62	36	*i* P	Pn	21 34 46.0	+0.8
SIRN				*i* S	Sg	21 35 08.5	-0.1
SIRN				IAML_P			
	comp=Z,3µm,0.1s						
SRTM	Siirt_Merkez	1.88	17	*i* P	Pn	21 34 49.0	+0.2
SRTM				*i* S	Sb	21 35 15.3	+0.7
SRTM				IAML_P			
	comp=Z,813nm,0.3s						
DIYA	Diyarbakir	1.93	333	*i* P	Pb	21 34 51.4	-0.6
DIYA				*i* S	Sb	21 35 15.7	-0.4
DIYA				IAML_P			
	comp=Z,935nm,0.1s						
SANL	SANLIURFA_Merk	2.04	299	*i* P	Pn	21 34 50.4	-0.5
SANL				*i* S	Sn	21 35 16.6	+0.2
CUKT	Cukurca	2.19	61	PN	Pn	21 34 53.2	+0.1
CUKT				SN	Sn	21 35 21.1	+0.7
SURC	SANLIURFA_SURC	2.20	289	*i* P	Pn	21 34 53.7	+0.5
SURC				*i* S	Sb	21 35 22.9	-0.9
URFA	Urfa	2.29	304	PN	Pn	21 34 53.5	-0.9
GURO	Guroymak-BITLI	2.44	15	PN	Pn	21 34 55.2	-1.4
AKDM	Akdamar-Van	2.55	33	PN	Pn	21 34 56.8	-1.3
IKRK	Kirkuk	2.66	106	*e*Pn	Pn	21 34 58.0	-1.5
IKRK				*e*Sn	Sn	21 35 33.0	+1.2
ELZG	Elazig	2.90	323	*i* P	Pb	21 35 10.1	+1.6
ELZG				IAML_P			
	comp=Z,206nm,0.2s						
GZT	Gaziantep	3.15	293	*i* P	Pb	21 35 13.4	+0.7
GZT				IAML_P			
	comp=Z,314nm,0.2s						
RTB	Rutbah	3.25	194	*e*Pn	Pn	21 35 06.0	-1.5
RTB				*e*Sn	Sn	21 35 48.0	+1.8
YEDI	Yedisu-Bingol	3.28	351	PN	Pn	21 35 07.5	-0.6
AKCD	Akcadag	3.36	310	*i* P	Pn	21 35 11.1	+1.9
AKCD				IAML_P			
	comp=Z,159nm,0.1s						
GAZ	Gaziantep	3.36	288	PN	Pn	21 35 09.2	0.0
KUZU	Kuzuini	3.38	281	*i* P	Pb	21 35 17.0	+0.4
AGRB	Hanur-Agry	3.66	22	PN	Pn	21 35 13.3	0.0
BHD	Baghdad	3.91	137	*e*Pn	Pn	21 35 16.0	-0.7
BHD				*e*Sn	Sn	21 36 03.0	+0.4
TAHT	Tahtakopru-Hat	4.07	274	PN	Pn	21 35 18.6	-0.2
KOZT	Kozan	4.51	288	PN	Pn	21 35 24.8	0.0
IBDR	Badra	4.96	127	*e*Pn	Pn	21 35 31.0	0.0
IBDR				*e*Sn	Sn	21 36 29.0	+0.6
NSR	Nassriya	6.61	140	*e*Pn	Pn	21 35 54.0	+0.4
NSR				*e*Sn	Sn	21 37 08.0	-1.0

*BJI **26** 21:43:43.5, 53°.04N×158°.51E, h135^{km}, mB5.1/47, mb5.2/74*
*MOS **26** 21:43:47.1±1.0, 52°.94N×158°.05E, h140^{km}, mb5.3/118, Error ellipse: s-maj=5.7km s-min=2.9km az=80.2*
MOS Felt (II-III) at Petropavlovsk-Kamchatskiy.
*ISCJB **26** 21:43:47.4±0.1, 52°.99N±0°.02×158°.05E±0°.02, h141^{km}±1^{km}, mb5.3/559, Error ellipse: s-maj=2.9km s-min=1.6km az=157.0*
*KRSC **26** 21:43:47.0±0.9, 52°.83N×158°.53E, h132^{km}±8^{km}, ML5.6, FELT [III] at Viluchinsk, Petropavlovsk, Institute, Pionersky, lighthouse Krugliy.*
*NEIC **26** 21:43:48.5±0.3, 53°.08N×157°.94E, h134^{km}±2^{km}, mb5.6/299, MW5.3, Error ellipse: s-maj=2.9km s-min=1.5km az=163.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.18; M$_{\theta\theta}$-0.26; M$_{\phi\phi}$0.09; M$_{r\theta}$-0.33; M$_{\theta\phi}$-0.01; M$_{\phi r}$-1.02; Best double couple: M$_0$1.10000×10^{17} NP1:ϕ_s200.00000°, δ88.00000°, λ83.00000°. NP2:ϕ_s95.00000°, δ7.00000°, λ164.00000°. Principal axes: T 1.1900, Plg46.0000°, Azm104.0000°; N -0.2200, Plg7.0000°, Azm201.0000°; P -0.9700, Plg43.0000°, Azm297.0000°;*
*IDC **26** 21:43:48.4±0.3, 53°.05N×158°.05E, h132^{km}±2^{km}, mb4.9/30, mb1 5.1/32, mb1mx5.0/34, mbtmp5.3/32, MS3.9/17, Ms1 3.9/17, ms1mx3.6/39 Error ellipse: s-maj=9.5km s-min=6.6km az=147.0*
*GCMT **26** 21:43:50.5±0.1, 52°.99N±0°.01×158°.48E±0°.01, h139^{km}±1^{km}, MW5.3/118, Moment Tensor Solution. s90,c143; s118,c227; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.07±.02; M$_{\theta\theta}$-0.10±.02; M$_{\phi\phi}$0.16±.02; M$_{r\theta}$-0.38±.01; M$_{\theta\phi}$-0.17±.02; M$_{\phi r}$-0.98±.01; Best double couple: M$_0$1.07500×10^{17} NP1:ϕ_s20.00000°, δ89.00000°, λ-78.00000°. NP2:ϕ_s117.00000°, δ12.00000°, λ-173.00000°. Principal axes: T 1.0510, Plg42.0000°, Azm99.0000°; N 0.0480, Plg12.0000°, Azm200.0000°; P -1.0990, Plg45.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 26 21:43:48.2±0.3**,52°.95N**±0°.03×**158°.22E**±0°.03**,h136**^{km}±1^{km}**, h136**^{km}**:pP-P,n1738,σ1^s.21**/1869**,mb5.4**/596**,51C-84D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRMR	Karymshinskiy	0.13	206	*e*P	Pn	21 44 06.1	-0.6
KRMR				*e*S	Sn	21 44 20.1	-0.5
KRMR	Karymshinskiy	0.13	206	PN	Pn	21 44 06.1	-0.6
KRMR				S	Sn	21 44 20.1	-0.5
PET	Petropavlovsk	0.27	73	*e*Pn	Pn	21 44 06.0	-1.0
PET				*e*S	Sn	21 44 18.8	-2.3
PET	Petropavlovsk	0.27	73	PN	Pn	21 44 06.1	-0.9
PET				S	Sn	21 44 19.8	-1.3
DALK	Dalny	0.33	75	*e*P	Pn	21 44 06.4	-0.8
DALK				*e*S	Sn	21 44 20.2	-1.3
DALK	Dalny	0.33	75	PN	Pn	21 44 06.4	-0.8
DALK				S	Sn	21 44 20.2	-1.3
I44RU	PETROPAVLOVSK-	0.35	298	P	Pn	21 44 06.5	-0.7
	baz=96,slow=9.2,SNR=1.9						
I44RU				*i*		21 45 10.0	
	baz=144,slow=349,SNR=0.6						
PEA0B	Petropavlovsk-	0.35	298	*e*Pn	Pn	21 44 07.5	+0.2
PETK	Petropavlovsk-	0.35	298	P	Pn	21 44 07.4	+0.1
	3µm,0.3s,baz=115,slow=8.6						
PETK				S	Sn	21 44 22.2	+0.4
	376nm,0.3s,baz=90,slow=15,SNR=7.9						
GRL	Gorelyy	0.40	193	*e*P	Pn	21 44 07.5	-0.2
GRL	Gorelyy	0.40	193	PN	Pn	21 44 07.5	-0.2
KOK	Koryaka	0.43	36	*e*P	Pn	21 44 07.8	+0.1
KOK	Koryaka	0.43	36	PN	Pn	21 44 07.8	+0.1
AVH	Avacha	0.45	44	*e*P	Pn	21 44 07.8	0.0
AVH				*e*S	Sn	21 44 22.7	0.0
AVH	Avacha	0.45	44	PN	Pn	21 44 07.8	0.0
AVH				S	Sn	21 44 22.7	0.0
UGLR	Uglovaya	0.45	54	*e*P	Pn	21 44 07.6	-0.2
UGLR	Uglovaya	0.45	54	PN	Pn	21 44 07.6	-0.2
MTVR	Mutnovka	0.46	183	*e*P	Pn	21 44 07.3	-0.7
MTVR	Mutnovka	0.46	183	PN	Pn	21 44 07.3	-0.7
SMAR	Somma	0.47	47	*e*P	Pn	21 44 07.8	-0.3
SMAR	Somma	0.47	47	PN	Pn	21 44 07.8	-0.3
KRX	Arik	0.49	32	*e*P	Pn	21 44 08.0	-0.1
KRX	Arik	0.49	32	PN	Pn	21 44 08.0	-0.1
SDLR	Sedlovina	0.52	50	*e*P	Pn	21 44 07.7	-0.5
SDLR	Sedlovina	0.52	50	PN	Pn	21 44 07.7	-0.5
RUS	Russkaya	0.54	161	*e*S	Sn	21 44 21.2	-2.1
APC	Apacha	0.64	269	*e*P	Pn	21 44 09.5	+0.7
APC				*e*S	Sn	21 44 25.6	+1.2
APC	Apacha	0.64	269	PN	Pn	21 44 09.5	+0.7
APC				S	Sn	21 44 25.6	+1.2
NLC	Nalytchevo	0.71	71	*e*P	Pn	21 44 07.7	-1.6
NLC	Nalytchevo	0.71	71	PN	Pn	21 44 07.7	-1.6
GNL	Ganaly	0.77	348	*e*P	Pn	21 44 10.2	+0.3
GNL				*e*S	Sn	21 44 27.2	+0.8
GNL	Ganaly	0.77	348	PN	Pn	21 44 10.2	+0.3
GNL				S	Sn	21 44 27.2	+0.8
SPN	Mys Shipunski	1.10	81	*e*P	Pn	21 44 11.2	-1.4
SPN				*e*S	Sn	21 44 28.3	-2.8
SPN	Mys Shipunski	1.10	81	PN	Pn	21 44 11.2	-1.4
SPN				S	Sn	21 44 28.3	-2.8
KDTR	Khodutka, Kamc	1.14	185	*e*P	Pn	21 44 11.7	-1.3
KDTR				*e*S	Sn	21 44 29.6	-2.2
KDTR	Khodutka, Kamc	1.14	185	PN	Pn	21 44 11.7	-1.3
KDTR				S	Sn	21 44 29.6	-2.2
KII	Karymskiy	1.32	33	*e*P	Pn	21 44 15.2	+0.4
KII	Karymskiy	1.32	33	PN	Pn	21 44 15.2	+0.4
PAU	Pauzhetka	1.72	211	*e*P	Pn	21 44 19.6	+0.4
PAU				*e*S	Sn	21 44 42.7	-0.1
PAU	Pauzhetka	1.72	211	PN	Pn	21 44 19.6	+0.4
PAU				S	Sn	21 44 42.7	-0.1
KZV	Kizimen	2.49	29	*e*P	Pn	21 44 29.8	+1.1
KZV				*e*S	Sn	21 45 01.1	+1.3
KZV	Kizimen	2.49	29	PN	Pn	21 44 29.8	+1.1
KZV				S	Sn	21 45 01.1	+1.3
TUMD	Tumrok D	2.60	29	*e*P	Pn	21 44 31.0	+1.1
TUMD				*e*S	Sn	21 45 03.5	+1.4
TUMR	Tumrok	2.60	25	*e*P	Pn	21 44 31.8	+1.8
TUMR	Tumrok	2.60	25	PN	Pn	21 44 31.0	+1.0
TUMR				S	Sn	21 45 03.5	+1.3
SKR	Severo-Kuril’s	2.62	211	*e*P	Pn	21 44 30.6	+0.5
SKR				*e*S	Sn	21 45 02.6	+0.3
SKR	Severo-Kuril’s	2.62	211	⇑*i*PN	Pn	21 44 30.4	+0.3
SKR				*i*		21 44 59.6	
SKR				pmax	pmax		
	comp=Z,4µm,1.0s						
SKR				pmax	pmax		
	comp=Z,3µm,0.7s						
SKR				smax	smax		
	comp=N,12µm,0.9s						
SKR				smax	smax		
	comp=E,7µm,0.8s						
MKZ	Mys Kozlova	2.63	51	*e*P	Pn	21 44 29.6	-0.7
MKZ				*e*S	Sn	21 44 59.9	-2.8
MKZ	Mys Kozlova	2.63	51	PN	Pn	21 44 29.6	-0.7
MKZ				S	Sn	21 44 59.9	-2.8
ALID	Alaid	2.66	220	*e*P	Pn	21 44 30.8	0.0
ESO	Esso	3.00	5	*e*P	Pn	21 44 36.5	+1.5
ESO				*e*S	Sn	21 45 13.5	+2.4
ESO	Esso	3.00	5	PN	Pn	21 44 36.5	+1.5
ESO				S	Sn	21 45 13.5	+2.4
KPT	Kopyto	3.25	20	*e*P	Pn	21 44 39.6	+1.4
KPT	Kopyto	3.25	20	PN	Pn	21 44 39.6	+1.4
KIRR	Kirishev	3.26	21	*e*P	Pn	21 44 39.8	+1.3
KIRR	Kirishev	3.26	21	PN	Pn	21 44 39.8	+1.3
KOZ	Kozyrevsk	3.27	16	*e*P	Pn	21 44 39.6	+1.2
KOZ				*e*S	Sn	21 45 18.8	+1.5
KOZ	Kozyrevsk	3.27	16	PN	Pn	21 44 39.6	+1.2
KOZ				S	Sn	21 45 18.8	+1.5
BZMR	Bezymyannaya	3.28	23	*e*P	Pn	21 44 40.5	+1.8
BZMR	Bezymyannaya	3.28	23	PN	Pn	21 44 40.5	+1.8
BZWR	Bezymyannyi-We	3.30	23	*e*P	Pn	21 44 40.9	+1.8
BZWR	Bezymyannyi-We	3.30	23	PN	Pn	21 44 40.9	+1.8
BZGR	Bezymyannyi-Gr	3.33	25	*e*P	Pn	21 44 41.3	+1.9
BZGR	Bezymyannyi-Gr	3.33	25	PN	Pn	21 44 41.3	+1.9
ZLN	Zelenaya	3.43	25	*e*P	Pn	21 44 43.1	+2.5
ZLN	Zelenaya	3.43	25	PN	Pn	21 44 43.1	+2.5
LGNR	Loginova	3.46	24	*e*P	Pn	21 44 43.0	+1.8
LGNR	Loginova	3.46	24	PN	Pn	21 44 43.0	+1.8
SRDR	Sredinnyy	3.49	14	*e*P	Pn	21 44 42.7	+1.3
SRDR	Sredinnyy	3.49	14	PN	Pn	21 44 42.7	+1.3
CIRR	Tsirk	3.50	24	*e*P	Pn	21 44 43.5	+1.9
CIRR	Tsirk	3.50	24	PN	Pn	21 44 43.5	+1.9
KLY	Klyuchi	3.66	22	*e*P	Pn	21 44 45.6	+2.1
KLY				*e*S	Sn	21 45 27.0	+0.6
KLY	Klyuchi	3.66	22	PN	Pn	21 44 45.6	+2.1
KLY				S	Sn	21 45 27.0	+0.6
BDR	Baidarnaya	4.02	24	*e*P	Pn	21 44 50.4	+2.0
BDR	Baidarnaya	4.02	24	PN	Pn	21 44 50.4	+2.0
SRKR	Sorokina	4.09	23	*e*P	Pn	21 44 50.9	+1.6
SRKR	Sorokina	4.09	23	PN	Pn	21 44 50.9	+1.6
SMKR	Semkarok	4.10	26	*e*P	Pn	21 44 50.7	+1.3
SMKR	Semkarok	4.10	26	PN	Pn	21 44 50.7	+1.3
KBG	Krutoberegovo	4.22	36	*e*P	Pn	21 44 51.1	+0.2
KBG				*e*S	Sn	21 45 36.7	-2.9
KBG	Krutoberegovo	4.22	36	PN	Pn	21 44 51.1	+0.2
KBG				S	Sn	21 45 36.7	-2.9
KBTR	Krutoberegovo	4.22	37	*e*P	Pn	21 44 50.9	-0.1
KBTR				*e*S	Sn	21 45 36.5	-3.2
KBTR	Krutoberegovo	4.22	37	PN	Pn	21 44 50.9	-0.1
KBTR				S	Sn	21 45 36.5	-3.2
BKI	Bering	5.09	61	*e*P	Pn	21 45 01.3	-1.2
BKI				*e*S	Sn	21 45 53.0	-7.4
BKI	Bering	5.09	61	PN	Pn	21 45 01.3	-1.2
PALN	Palana	6.24	8	*e*P	Pn	21 45 19.3	+1.5
PALN	Palana	6.24	8	PN	Pn	21 45 19.3	+1.5
OSSR	Ossora	6.87	21	*e*P	Pn	21 45 26.4	+0.1
OSSR	Ossora	6.87	21	PN	Pn	21 45 26.4	+0.1
MA2	Magadan	7.83	331	*e*Pn	Pn	21 45 40.0	+0.9
MA2	Magadan	7.83	331	⇓*e*PN	Pn	21 45 38.4	-0.8
MA2				pmax	pmax		
	comp=Z,258nm,2.5s						
MA2	Magadan	7.83	331	P	Pn	21 45 40.6	+1.4
	comp=Z,2.2nm,0.3s,baz=143,slow=9.4,SNR=48						
TILK	Tilichiki	8.69	27	*e*P	Pn	21 45 51.3	+0.7
TILK	Tilichiki	8.69	27	PN	Pn	21 45 51.3	+0.7
OKH	Okha	9.19	280	*de*PN	Pn	21 45 59.6	+2.2
OKH				*e*S	Sn	21 47 42.8	+3.8
OKH				pmax	pmax		
	comp=Z,300nm,6.0s						
OKH				MLR	MLR		
	comp=Z,700nm,15.0s						
SMY	Shemya	9.62	85	*e*Pn	Pn	21 46 03.5	+0.4
SMY	Shemya	9.62	85	*e*PN	Pn	21 46 03.5	+0.4
TYV	Tymovskoe	9.85	264	*e*PN	Pn	21 46 09.7	+3.5
TYV				pmax	pmax		
	comp=Z,1µm,2.4s						
TYV				pmax	pmax		
	comp=Z,198nm,1.2s						
KUR	Kuril'sk	10.27	225	*e*PN	Pn	21 46 12.5	+0.6
KUR				*e*S	S	21 48 07.4	+2.1
KUR				pmax	pmax		
	comp=N,57nm,0.6s						
KUR				pmax	pmax		
	comp=Z,152nm,0.6s						
KUR				pmax	pmax		
	comp=Z,1µm,4.9s						
KUR				smax	smax		
	comp=N,1µm,6.2s						
KUR				MLR	MLR		
	comp=Z,881nm,5.0s						
KMSK	Kamenskaya	10.45	21	P	Pn	21 46 16.4	+2.2
KMSK	Kamenskaya	10.45	21	PN	Pn	21 46 16.4	+2.2
SEY	Seymchan	10.48	345	P	Pn	21 46 16.6	+2.0
	comp=Z,1.0nm,0.3s,baz=149,slow=11,SNR=63						
NKL	Nikolayevsk	10.57	278	*i* PN	Pn	21 46 19.0	+3.2
NKL				pmax	pmax		
	comp=E,800nm,5.0s						
NKL				pmax	pmax		
	comp=Z,1µm,4.0s						
NKL				pmax	pmax		
	comp=N,21nm,1.2s						
NKL				pmax	pmax		
	comp=E,170nm,1.2s						
NKL				pmax	pmax		
	comp=Z,310nm,1.2s						
NKL				MLR	MLR		
	comp=E,1µm,12.0s						
NKL				MLR	MLR		
	comp=Z,1µm,12.0s						
UGL	Uglegorsk	10.89	256	*e*PN	Pn	21 46 23.7	+3.6
UGL				pmax	pmax		
	comp=Z,1µm,3.2s						
UGL				pmax	pmax		
	comp=Z,213nm,1.3s						
UGL				MLR	MLR		
	comp=Z,1µm,11.0s						
UGL				MLR	MLR		
	comp=N,400nm,10.0s						
UGL				MLR	MLR		
	comp=E,2µm,7.0s						

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YSS    Yuzh-Sakhalins   11.62 245  ePn     Pn      21 46 32.1 +2.3
YSS    Yuzh-Sakhalins   11.62 245κePN      Pn      21 46 32.1 +2.3
YSS                               i S      Sn      21 48 36.5  -1.3
YSS                                 pmax   pmax
       comp=E,900nm,3.0s
YSS                                 pmax   pmax
       comp=Z,800nm,3.0s
YSS                                 pmax   pmax
       comp=N,500nm,4.0s
YSS                                 pmax   pmax
       comp=Z,140nm,1.2s
YSS                                 smax   smax
       comp=N,800nm,6.0s
YSS                                 smax   smax
       comp=E,700nm,8.0s
YSS                                 MLR    MLR
       comp=Z,1μm,16.0s
YSS                                 MLR    MLR
       comp=N,1μm,14.0s
YSS                                 MLR    MLR
       comp=E,700nm,11.0s
YUK    Yuzh-Kuril'sk    12.10 227⇑iPN      Pn      21 46 34.0  -2.0
YUK                               i S      Sn      21 48 50.5 +1.1
YUK                                 pmax   pmax
       comp=N,257nm,0.5s
YUK                                 pmax   pmax
       comp=E,210nm,0.5s
YUK                                 pmax   pmax
       comp=Z,599nm,0.5s
YUK                                 pmax   pmax
       comp=Z,593nm,2.1s
GRPR   Tuman            12.17 228c iPN     Pn      21 46 35.0  -2.0
GRPR                              eS       Sn      21 48 56.0 +4.9
GRPR                                pmax   pmax
       comp=N,487nm,0.5s
GRPR                                pmax   pmax
       comp=Z,371nm,0.5s
GRPR                                pmax   pmax
       comp=E,120nm,0.4s
GRPR                                pmax   pmax
       comp=N,538nm,2.3s
GLVR   Golovnino        12.48 228⇑iPN      Pn      21 46 39.0  -2.0
GLVR                              eS       Sn      21 49 03.2 +4.6
GLVR                                pmax   pmax
       comp=Z,202nm,0.6s
GLVR                                pmax   pmax
       comp=N,95nm,0.4s
GLVR                                pmax   pmax
       comp=E,62nm,0.2s
GLVR                                pmax   pmax
       comp=Z,606nm,2.4s
ASAJ   Asahikawa        13.58 236   P      Pn      21 46 56.1 +0.8
       comp=Z,13nm,0.3s,baz=70,slow=12,SNR=161
GRNR   Gornyy           13.64 270  eP      P       21 46 59.2  -0.9
GRNR                                pmax   pmax
       comp=Z,110nm,1.0s
ERM    Erimo            14.91 229  ePn     Pn      21 47 09.6  -2.4
ERM                               eS       Sn      21 49 45.0   -12
ERM    Erimo            14.91 229  eP      Pn      21 47 09.6  -2.4
ERM                               eS       Sn      21 49 45.0   -12
KIWB   Kanaga Island    15.06  84  ePn     Pn      21 47 15.2 +1.5
ADK    Adak             15.33  84  ePn     Pn      21 47 16.4  -0.7
       comp=Z,308nm,1.0s
ADK                               eS       Sn      21 50 01.6  -5.4
ADK    Adak             15.33  84  eP      Pn      21 47 16.4  -0.7
ADK                               eS       Sn      21 50 01.6  -5.4
ADK                                 pmax   pmax
       comp=Z,308nm,1.0s
BILL   Bilibino         15.63  11  ePn     Pn      21 47 21.6 +0.9
       comp=Z,61nm,1.0s
BILL   Bilibino         15.63  11  eP      Pn      21 47 21.4 +0.7
BILL                                pmax   pmax
       comp=Z,40nm,1.0s
TEY    Ternei           16.20 249⇑eP       P       21 47 31.2 +2.7
TEY                                 pmax   pmax
       comp=Z,130nm,0.7s
TEY                                 pmax   pmax
       comp=E,130nm,0.8s
TEY                                 pmax   pmax
       comp=N,130nm,0.7s
KLR    Kul'dur          17.00 268   P      Pn      21 47 39.4 +1.8
       comp=N,2.2nm,0.3s,baz=64,slow=11,SNR=155
KLR                                 PcP    PcP     21 52 16.1 +1.3
       comp=N,0.3nm,0.3s,baz=97,slow=3.5,SNR=4.1
YAK    Yakutsk          17.69 312d iP      P       21 47 44.9 +0.2
YAK                               eS       S       21 51 00.7  -0.6
YAK                                 pmax   pmax
       comp=Z,6μm,0.9s
YAK                                 pmax   pmax
       comp=E,4μm,1.1s
YAK                                 pmax   pmax
       comp=N,1μm,0.9s
YAK                                 smax   smax
       comp=N,1μm,1.6s
YAK                                 smax   smax
       comp=E,816nm,1.5s
ZEA    Zeya             18.44 285deP       P       21 47 53.8 +0.8
ZEA                                 pmax   pmax
       comp=E,140nm,1.2s
ZEA                                 pmax   pmax
       comp=Z,210nm,1.0s
ZEA                                 pmax   pmax
       comp=Z,1μm,8.0s
ZEA                                 MLR    MLR
       comp=Z,600nm,14.0s
ZEA                                 MLR    MLR
       comp=E,500nm,15.0s
SPIA   Saint Paul Isl   18.45  64  eP      P       21 47 54.8 +1.8
       comp=E,2μm,1.5s
GAMB   Gambell          18.94  43  eP      P       21 47 59.1 +0.9
       comp=E,96nm,0.7s
USA0B  Ussuriysk Arra   19.35 254  eP      P       21 48 02.0  -0.9
       comp=E,184nm,0.8s
USRK   Ussuriysk Ar.    19.35 254   P      P       21 48 03.0 +0.1
USRK   Ussuriysk Ar.    19.35 254   P      P       21 48 03.0 +0.1
       comp=E,1.2nm,0.3s,baz=59,slow=7.6,SNR=187
USRK                                PcP    PcP     21 52 20.0 +1.1
       comp=E,0.1nm,0.3s,baz=93,slow=5.8,SNR=4.1
USRK                                ScP    ScP     21 55 43.5 +1.6
       comp=E,0.2nm,0.3s,baz=20,slow=2.4,SNR=18
NIKH   Nikolski High    19.74  77  eP      P       21 48 07.8 +0.7
       comp=E,916nm,0.8s
VLA    Vladivostok      20.06 251d iP      P       21 48 10.4  -0.2
VLA                                 pmax   pmax
       comp=Z,70nm,0.8s
MDJ    Mudanjiang       20.51 258   P      P       21 48 15.0  -0.5
MDJ                                 pP     pP      21 48 43.0 +3.2
MDJ                                 S      S       21 51 56.8  -0.6
MDJ                                 ScP    ScP     21 55 45.5 +0.9
MDJ                                 pmax   pmax
       comp=Z,110nm,1.0s
MDJ                                 pmax   pmax
       comp=Z,290nm,3.2s
MDJ    Mudanjiang       20.51 258  eP      P       21 48 14.8  -0.7
       comp=Z,163nm,1.0s
MSHR   Mys Shultsa      20.82 251ceP       P       21 48 16.9  -1.8
UNV    Unalaska Valle   20.93  73  eP      P       21 48 20.6 +0.8
       comp=Z,257nm,1.1s
AKUT   Akutan           21.29  72  eP      P       21 48 23.9 +0.2
       comp=Z,429nm,0.8s
MJB9   Matsu-Tunnel     21.58 229  eP      P       21 48 27.1 +0.1
       comp=Z,379nm,0.8s
MAJO   Matsushiro       21.58 229  eP      P       21 48 27.0   0.0
       comp=Z,364nm,0.8s
MAJO   Matsushiro       21.58 229d iP      P       21 48 27.0   0.0
MAJO                                pmax   pmax
       comp=Z,458nm,0.9s
MAT    Matsushiro       21.58 229   P      P       21 48 27.0   0.0
MAT                                 S      S       21 52 16.0  -1.6
MJAR   Matsushiro Arr   21.58 229   P      P       21 48 27.1   0.0
       comp=Z,355nm,1.1s,baz=17,slow=10.0,SNR=433
MJAR                                ScP    ScP     21 55 49.1 +1.7
       comp=Z,3.4nm,0.9s,baz=237,slow=2.3,SNR=4.8
ANM    Nome             21.82  44  eP      P       21 48 29.9 +0.7
       comp=Z,139nm,0.8s
ANM    Nome             21.82  44  eP      P       21 48 29.9 +0.7
ANM                                 pmax   pmax
       comp=Z,139nm,0.8s
INU    Inuyama          23.11 229  eP      P       21 48 42.2 +0.1
       comp=Z,248nm,0.8s
CN2    Changchun        23.43 260⇑iP       P       21 48 43.3  -1.7
CN2                               epP      pP      21 49 11.8 +0.3
CN2                               eS       S       21 52 36.8   -11
CN2                                 pmax   pmax
       comp=Z,200nm,3.0s
RDOG   Red Dog Mine     23.82  36  eP      P       21 48 48.9 +0.6
       comp=Z,214nm,0.8s
JHJ    Hachijo jima 2   23.84 221   P      P       21 48 49.1 +0.4
       comp=Z,232nm,0.9s,baz=103,slow=22,SNR=3.7
HIA    Hailar           24.24 277  eP      P       21 48 51.4  -0.8
       comp=Z,155nm,0.8s
HIA    Hailar           24.24 277  eP      P       21 48 51.4  -0.8
HIA                                 pmax   pmax
       comp=Z,155nm,0.8s
BOD    Bodaibo          25.23 299  eP      P       21 49 00.2  -0.9
BOD                                 pmax   pmax
       comp=Z,56nm,1.0s
SNY    Shenyang         25.71 258 ⇓P       P       21 49 03.0  -2.5
SNY                                 pP     pP      21 49 35.0 +0.7
SNY                                 sP     sP      21 49 50.8 +0.8
SNY                                 sS     sS      21 54 13.0  -1.7
SNY                                 pmax   pmax
       comp=Z,29nm,1.2s
SNY                                 LR     LR
       comp=Z,250nm,11.8s
SNY                                 LR     LR
       comp=Z,450nm,12.1s
SNY                                 LR     LR
       comp=Z,570nm,15.3s
SVW2   Sparrevohn       25.93  53  eP      P       21 49 08.3 +0.9
       comp=Z,52nm,0.9s
KS01   Wonju Array Si   26.12 246  eP      P       21 49 08.2  -1.1
KS01                              ePcP     PcP     21 52 33.8 +0.8
KSRS   Korea Array      26.12 246   P      P       21 49 09.9 +0.7
       comp=Z,75nm,0.8s,baz=43,slow=9.3,SNR=90
KSRS                                PcP    PcP     21 52 32.6  -0.3
       comp=Z,10nm,0.8s,baz=4.5,slow=2.5,SNR=12
KSRS                                ScP    ScP     21 56 01.2 +1.5
       comp=Z,16nm,1.1s,baz=53,slow=3.2,SNR=22
KS15   Wonju Array Si   26.15 246  eP      P       21 49 09.4  -0.2
KS15                              ePcP     PcP     21 52 34.7 +1.7
KSAR   Wonju Array Be   26.15 246   P      P       21 49 09.9 +0.4
KSAR                                PcP    PcP     21 52 32.6  -0.4
KSAR                                ScP    ScP     21 56 01.2 +1.4
KSAR   Wonju Array Be   26.15 246   P      P       21 49 10.0 +0.4
KSAR                                               21 52 32.6
IM3    Indian Mountai   26.87  42  eP      P       21 49 15.7  -0.1
CIT    Chita            26.89 286  eP      P       21 49 15.8  -0.4
CIT                               e                21 49 45.8
CIT                               e                21 50 00.1
TJN    Taejon           27.21 245⇑eP       P       21 49 19.2 +0.2
RSO    Redoubt South    27.36  54  eP      P       21 49 22.5 +2.0
PPLA   Purkeypile       27.45  49  eP      P       21 49 22.3 +1.1
       comp=Z,57nm,0.8s
CAST   Castle Rocks     27.49  48  eP      P       21 49 22.1 +0.8
       comp=Z,45nm,0.8s
OHAK   Old Harbor       27.60  62  eP      P       21 49 21.8  -0.5
       comp=Z,126nm,1.0s
KDAK   Kodiak Island    27.86  60   P      P       21 49 23.9  -0.7
       comp=Z,16nm,1.5s
KDAK   Kodiak Island    27.86  60   P      P       21 49 23.9  -0.7
       comp=Z,24nm,0.4s,baz=290,slow=6.1,SNR=32
JNU    Nakatsue         27.86 236  eP      P       21 49 25.6 +0.7
       comp=Z,155nm,1.1s
JNU    Nakatsue         27.86 236   P      P       21 49 25.7 +0.7
       comp=Z,114nm,1.1s,baz=343,slow=1.7,SNR=32
MLY    Manley           28.07  45  eP      P       21 49 27.2 +0.6
       comp=Z,47nm,0.8s
TRF    Thorofare Moun   28.30  48  eP      P       21 49 29.2 +0.6
       comp=Z,102nm,1.0s
BRLK   Bradley Lake     28.38  56  eP      P       21 49 29.1  -0.2
       comp=Z,93nm,1.1s
COLD   Coldfoot         28.39  40  eP      P       21 49 30.0 +0.7
       comp=Z,43nm,1.2s
DL2    Dalian           28.71 256   P      P       21 49 32.5 +0.1
DL2                                 pP     pP      21 50 03.5 +2.1
DL2                               eS       S       21 54 11.3   0.0
DL2                                 sS     sS      21 55 01.3  -1.1
DL2                                 pmax   pmax
       comp=Z,72nm,1.0s
DL2                                 pmax   pmax
       comp=Z,200nm,4.8s
TOLK   Toolik Lake Re   28.76  37  eP      P       21 49 33.4 +0.7
       comp=Z,70nm,0.6s
TOLK   Toolik Lake Re   28.76  37   P      P       21 49 33.2 +0.6
       baz=264,SNR=59
MCK    McKinley         28.89  47  eP      P       21 49 33.9 +0.2
       comp=Z,97nm,0.9s
RND    Reindeer         28.94  48  eP      P       21 49 34.0  -0.3
       comp=Z,115nm,0.9s
PMR    Palmer           28.98  52  eP      P       21 49 33.3  -1.2
       comp=Z,53nm,0.6s
PMR    Palmer           28.98  52  eP      P       21 49 33.3  -1.2
PMR                                 pmax   pmax
       comp=Z,53nm,0.6s
SEW    Seward           29.04  55  eP      P       21 49 34.7  -0.4
       comp=Z,129nm,0.8s
MDM    Murphy Dome      29.14  45  eP      P       21 49 36.4 +0.4
       comp=Z,66nm,0.9s
WRH    Wood River Hil   29.22  46  eP      P       21 49 37.0 +0.3
       comp=Z,225nm,1.0s
TCOL   CIGO, UAF Yank   29.30  45   P      P       21 49 38.0 +0.7
       baz=272,SNR=27
COLA   College          29.30  45  eP      P       21 49 37.8 +0.5
       comp=Z,129nm,0.8s
COLA   College          29.30  45c iP      P       21 49 37.9 +0.5
COLA                                pmax   pmax
       comp=Z,118nm,0.8s
KNK    Knik Glacier     29.33  52  eP      P       21 49 37.8 +0.1
       comp=Z,271nm,0.7s
SML    Sawmill          29.34  51  eP      P       21 49 38.3 +0.6
       comp=Z,329nm,0.9s
SML    Sawmill          29.34  51  eP      P       21 49 38.3 +0.6
POKR   Poker Plat Res   29.47  44   P      P       21 49 39.6 +0.7
       baz=272,SNR=31
DHY    Denali Highway   29.64  48  eP      P       21 49 40.2  -0.3
       comp=Z,84nm,0.7s
HDA    Harding Lake     29.72  46  eP      P       21 49 40.7  -0.4
       comp=Z,101nm,0.6s
HDA    Harding Lake     29.72  46   P      P       21 49 40.6  -0.4
       baz=274,SNR=60
ILAR   Eielson Array    29.72  45   P      P       21 49 41.3 +0.2
       comp=Z,117nm,0.8s,baz=264,slow=7.6,SNR=702
ILAR                                pP     pP      21 50 09.9  -0.3
       comp=Z,16nm,0.7s,baz=270,slow=8.2,SNR=2.3
ILAR                                PP     PnPn    21 50 44.1 +1.2
       comp=Z,19nm,0.9s,baz=268,slow=7.9,SNR=4.4
ILAR                                S      S       21 54 25.9  -0.8
       comp=Z,5.6nm,1.0s,baz=261,slow=13,SNR=5.7
ILAR                                ScP    ScP     21 56 09.9  -0.4
       comp=Z,4.0nm,0.9s,baz=279,slow=4.1,SNR=8.0
ILAR                                LR     LR      22 01 41.9
       comp=Z,143nm,19.1s,baz=274,slow=36
ILB    Eielson Array    29.72  45  eP      P       21 49 40.4  -0.7
IL1    Eielson Array    29.72  45  eP      P       21 49 40.4  -0.7
SCM    Sheep Creek Mo   29.80  51  eP      P       21 49 42.3 +0.4
       comp=Z,242nm,0.7s
SCM    Sheep Creek Mo   29.80  51  eP      P       21 49 42.3 +0.4
SCM                                 pmax   pmax
       comp=Z,242nm,0.7s
GLI    Glacier Island   30.06  53  eP      P       21 49 44.4 +0.3
       comp=Z,85nm,0.8s
PRP    Porcupine Dome   30.26  43  eP      P       21 49 46.4 +0.4
       comp=Z,257nm,0.9s
FYU    Fort Yukon       30.34  41  eP      P       21 49 47.6 +1.2
       comp=Z,156nm,0.9s
PAX    Paxson           30.51  48  eP      P       21 49 48.0  -0.2
       comp=Z,26nm,0.8s
PAX    Paxson           30.51  48  eP      P       21 49 48.0  -0.2
PAX                                 pmax   pmax
       comp=Z,26nm,0.8s
KLU    Klutina          30.52  51  eP      P       21 49 48.6 +0.3
       comp=Z,107nm,1.2s
DIV    Divide           30.65  52  eP      P       21 49 49.7 +0.3
       comp=Z,97nm,0.7s
RIDG   Independ'e Rid   30.70  47  eP      P       21 49 49.2  -0.6
       comp=Z,113nm,0.9s
HARP   HAARP            30.73  50  eP      P       21 49 50.9 +0.8
       comp=Z,171nm,0.5s
EYAK   Cordova Ski Ar   30.77  53  eP      P       21 49 51.1 +0.8
       comp=Z,156nm,1.0s
SCRK   Sand Creek       31.05  46  eP      P       21 49 52.5  -0.4
       comp=Z,167nm,1.0s
DOT    Dot Lake         31.05  47  eP      P       21 49 52.2  -0.7
       comp=Z,53nm,0.6s
BJI    Beijing          31.22 263   P      P       21 49 53.5  -1.0
BJI                                 pmax   pmax
       comp=Z,13nm,1.7s
BJT    Baijiatuau       31.24 263  eP      P       21 49 53.1  -1.6
       comp=Z,21nm,1.0s
BJT    Baijiatuau       31.24 263  eP      P       21 49 53.1  -1.6
BJT                                 pmax   pmax
       comp=Z,21nm,1.0s
MENT   Mentasta         31.31  48  eP      P       21 49 55.6 +0.5
       comp=Z,51nm,0.8s
HMT    Hamilton         31.54  53  eP      P       21 49 58.3 +1.1
       comp=Z,124nm,1.1s
IRK    Irkutsk          32.13 291  eP      P       21 49 59.8  -2.6
IRK                               e                21 51 19.4
IRK                               e                21 52 48.3
EGAK   Eagle            32.16  45  eP      P       21 50 02.2  -0.3
       comp=Z,188nm,0.7s
BALM   Baldy            32.30  52  eP      P       21 50 04.6 +0.7
       comp=Z,56nm,1.1s
BALM   Baldy            32.30  52  eP      P       21 50 04.6 +0.7
BALM                                pmax   pmax
       comp=Z,56nm,1.1s
ULN    Ulaanbaatar      32.43 282  eP      P       21 50 04.6  -0.6
       comp=Z,57nm,1.3s
ULN                               ePcP     PcP     21 52 48.4  -0.7
ULN    Ulaanbaatar      32.43 282  eP      P       21 50 04.6  -0.6
ULN                               e                21 52 48.4
ULN                                 pmax   pmax
       comp=Z,57nm,1.3s
ULN    Ulaanbaatar      32.43 282   P      P       21 50 05.2   0.0
       SNR=16
TLY    Talaya           32.72 290  eP      P       21 50 07.6   0.0
       comp=Z,38nm,1.3s
TLY                               ePcP     PcP     21 52 50.8 +1.1
TLY    Talaya           32.72 290  eP      P       21 50 07.5   0.0
TLY                               ePPP     PPP     21 51 33.2
TLY                                 pmax   pmax
       comp=Z,78nm,1.3s
TLY                                 MLR    MLR
       comp=Z,539nm,14.0s
TLY    Talaya           32.72 290   P      P       21 50 08.0 +0.5
       SNR=13
SONA1  Songino Array    32.82 282  eP      P       21 50 08.2  -0.4
SONM   Songino Array    32.83 282   P      P       21 50 08.8 +0.2
       comp=Z,4.6nm,0.4s,baz=60,slow=8.2,SNR=64
SONM                                PcP    PcP     21 52 50.7 +0.5
       comp=Z,19nm,0.7s,baz=85,slow=1.4,SNR=22
SONM                                ScP    ScP     21 56 22.7 +1.4
       comp=Z,5.9nm,0.7s,baz=64,slow=2.8,SNR=13
SONM                                LR     LR      22 05 50.0
       comp=Z,101nm,21.3s,baz=24,slow=40
SONM                                P3KPbc         22 21 25.6
       comp=Z,0.6nm,0.7s,baz=235,slow=3.9,SNR=6.4
DAWY   Dawson           33.03  46  eP      P       21 50 10.4 +0.3
       comp=Z,58nm,0.6s
TIA    Tai'an           33.17 256   P      P       21 50 10.0  -1.6
TIA                                 pmax   pmax
       comp=Z,5.0nm,1.2s
TIA                                 LR     LR
       comp=Z,130nm,13.5s
TIA                                 LR     LR
       comp=Z,130nm,16.4s
TIA                                 LR     LR
       comp=Z,210nm,17.8s
ZAK    Zakamensk        33.48 288  eP      P       21 50 12.8  -1.4
ZAK                                 pmax   pmax
       comp=Z,22nm,1.4s
HHC    Hu-ho-hao-te     33.51 268  eP      P       21 50 14.0  -0.6
HHC                                 sP     sP      21 51 00.5 +0.9
HHC                                 S      S       21 55 23.5  -2.8
HHC                                 pmax   pmax
       comp=Z,11nm,1.1s
HHC                                 pmax   pmax
       comp=Z,150nm,5.2s
HHC                                 LR     LR
       comp=Z,510nm,13.8s
HHC                                 LR     LR
       comp=Z,400nm,12.1s
HHC                                 LR     LR
       comp=Z,250nm,13.0s
EPYK   Eagle Plains     33.76  41  eP      P       21 50 17.4 +1.1
       comp=Z,126nm,0.9s
MOY    Mondy            34.22 291  eP      P       21 50 20.1  -0.6
MOY                               e                21 50 51.8
MOY                               e                21 51 45.1
MOY                                 pmax   pmax
       comp=Z,58nm,1.8s
JOW    Kunigami         34.31 232  eP      P       21 50 22.3 +0.7
       comp=Z,69nm,0.7s
BTO    Baotou           34.59 269  eP      P       21 50 22.3  -1.6
HYT    Haines Junctio   34.64  51  eP      P       21 50 25.6 +1.4
       comp=Z,95nm,0.8s
INK    Inuvik           34.68  37  eP      P       21 50 25.4 +1.3
       comp=Z,88nm,1.1s
INK    Inuvik           34.68  37  eP      P       21 50 25.5 +1.3
INK                                 pmax   pmax
       comp=Z,87nm,1.1s
NJ2    Nanjing          35.14 249  eP      P       21 50 28.3  -0.3
NJ2                                 pmax   pmax
       comp=Z,46nm,0.8s
NRIK   Noril'sk         35.38 325   P      P       21 50 29.9  -0.3
       comp=Z,7.1nm,1.0s,baz=91,slow=8.2,SNR=11
NRIK                                PcP    PcP     21 52 57.9 +1.0
       comp=Z,27nm,0.6s,baz=81,slow=2.3,SNR=13
NRIK                                LR     LR      22 06 10.6
       comp=Z,375nm,18.4s,baz=74,slow=38
WHY    Whitehorse       35.92  51  eP      P       21 50 36.9 +1.7
       comp=Z,123nm,1.0s
SKAG   Skagway          36.10  53  eP      P       21 50 38.5 +2.0
       comp=Z,144nm,1.0s
BESE   Bessie Mountai   36.64  54  eP      P       21 50 43.1 +2.0
       comp=Z,136nm,1.3s
JIS    Juneau Island    36.98  54  eP      P       21 50 45.9 +1.9
       comp=Z,65nm,1.1s
WRAK   Wrangell Islan   38.74  56  eP      P       21 51 00.8 +2.1
       comp=Z,62nm,0.8s
WHN    Wuhan            38.84 252 ⇑P       P       21 50 59.8   0.0
WHN                                 S      S       21 56 43.8  -3.5
WHN                                 LR     LR
       comp=Z,2μm,20.6s
DLBC   Dease Lake       39.04  52  eP      P       21 51 03.6 +2.4
       comp=Z,79nm,0.9s
XAN    Xi'an            39.53 262   P      P       21 51 03.8  -1.9
XAN                                 pP     pP      21 51 33.3  -2.5
XAN                                 pmax   pmax
       comp=Z,19nm,1.4s
XAN                                 pmax   pmax
       comp=Z,240nm,8.8s
XAN    Xi'an            39.53 262  eP      P       21 51 04.3  -1.4
       comp=Z,281nm,1.4s
XAN    Xi'an            39.53 262  eP      P       21 51 04.3  -1.4
XAN                                 pmax   pmax
       comp=Z,281nm,1.4s
YHNB   Yeheng           39.55 239  eP      P       21 51 04.5  -1.4
       comp=Z,32nm,1.0s
SSLB   Suanglung        40.49 239  eP      P       21 51 13.1  -0.6
       comp=Z,127nm,1.6s
YULB   Yu-li            40.64 238  eP      P       21 51 15.1 +0.3
       comp=Z,32nm,0.9s
QZH    Quanzhou         40.80 242 ⇓P       P       21 51 14.3  -1.8
QZH                                 pP     pP      21 51 47.8 +1.4
QZH                                 S      S       21 57 22.3 +5.6
QZH                                 sS     sS      21 58 13.0 +3.7
TPUB   Ta-pu            41.06 239  eP      P       21 51 18.3   0.0
       comp=Z,41nm,0.8s
LZH    Lanzhou          41.20 268  eP      P       21 51 19.3  -0.2
LZH                                 pP     pP      21 51 51.3 +1.5
LZH                                 sP     sP      21 52 06.5 +1.3
LZH                                 PP     PP      21 52 59.5 +2.3
LZH                                 PcP    PcP     21 53 16.5 +0.6
LZH                                 ScP    ScP     21 56 54.0 +1.2
LZH                               eS       S       21 57 18.3  -4.6
LZH                                 sS     sS      21 58 14.8  -0.7
LZH                                 SS     SS      22 00 28.0  -3.0
LZH                                 pmax   pmax
       comp=Z,120nm,1.3s
LZH                                 pmax   pmax
       comp=Z,530nm,4.0s
LZH                                 LR     LR
       comp=Z,2μm,15.7s
LZH                                 LR     LR
       comp=Z,2μm,14.1s
LZH                                 LR     LR
       comp=Z,2μm,16.5s
TWG    Pinlang          41.23 238  eP      P       21 51 19.2  -0.4
       comp=Z,174nm,0.7s
GTA    Gaotai           41.50 275   P      P       21 51 21.5  -0.3
GTA                                 pP     pP      21 51 53.5 +1.4
GTA                                 sP     sP      21 52 09.0 +1.5
GTA                                 PcP    PcP     21 53 17.5 +0.7
GTA                                 ScP    ScP     21 56 54.8 +1.0
GTA                                 PcS    PcS     21 57 08.3  -0.1
GTA                                 S      S       21 57 24.0  -3.1
GTA                                 ScS    ScS     22 01 08.0  -2.7
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GTA				pmax	pmax		
	comp=Z,50nm,1.1s						
GTA				pmax	pmax		
	comp=Z,170nm,7.9s						
GTA				LR	LR		
	comp=Z,190nm,12.7s						
GTA				LR	LR		
	comp=Z,320nm,17.1s						
GTA				LR	LR		
	comp=Z,480nm,14.9s						
ENH	**Enshi**	**41.88**	**257**	*e*P	**P**	**21 51 23.5**	**-1.3**
	comp=Z,75nm,0.8s						
ZAA0	**Zalesovo Array**	**41.90**	**302**	*e*P	**P**	**21 51 23.1**	**-1.6**
	comp=Z,22nm,1.0s						
ZALV	**Zalesovo Beam**	**41.90**	**302**	P	**P**	**21 51 23.0**	**-1.7**
	comp=Z,5.4nm,0.7s,baz=62,slow=6.1,SNR=29						
ZALV				pP	**pP**	**21 51 55.4**	**+0.2**
	comp=Z,17nm,0.9s,baz=60,slow=5.8,SNR=9.3						
ZALV				PP	**PP**	**21 53 02.5**	**-1.6**
	comp=Z,7.5nm,0.9s,baz=54,slow=7.7,SNR=4.1						
ZALV				PcP	**PcP**	**21 53 17.8**	**+0.2**
	comp=Z,37nm,0.7s,baz=73,slow=3.2,SNR=12						
ZALV				ScP	**ScP**	**21 56 56.5**	**+1.5**
	comp=Z,4.2nm,0.8s,baz=70,slow=4.6,SNR=4.5						
ZALV				PKiKP	**PKiKP**	**22 00 22.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=135,slow=0.8,SNR=4.0						
NVS	**Novosibirsk**	**42.26**	**304**	*e*P	**P**	**21 51 27.5**	**-0.2**
NVS				*i* *PP	**pP**	**21 51 59.1**	**+0.9**
NVS				*i*		21 53 18.4	
NVS				*i* S	**S**	**21 57 33.2**	**-4.4**
NVS				pmax	pmax		
	comp=Z,128nm,1.1s						
NVS				pmax	pmax		
	comp=N,23nm,0.8s						
NVS				pmax	pmax		
	comp=E,84nm,1.2s						
NVS				smax	smax		
	comp=N,21nm,1.3s						
NVS				smax	smax		
	comp=E,7.0nm,0.7s						
DGZ	**Jazzator, Alta**	**42.71**	**295**	*d i*P	**P**	**21 51 31.5**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,25nm,1.0s						
RES	**Resolute Bay**	**43.88**	**22**	*e*P	**P**	**21 51 41.5**	**+1.1**
	comp=Z,23nm,0.6s						
RES				*e*PcP	**PcP**	**21 53 24.8**	**+0.8**
RES	**Resolute Bay**	**43.88**	**22**	*e*P	**P**	**21 51 41.5**	**+1.1**
RES				*e*		21 53 24.8	
RES				pmax	pmax		
	comp=Z,23nm,0.6s						
YKW3	**Yellowknife Ar**	**43.99**	**42**	*e*P	**P**	**21 51 42.4**	**+1.0**
	comp=Z,51nm,0.8s						
YKA	**Yellowknife Ar**	**44.03**	**42**	P	**P**	**21 51 42.7**	**+0.9**
	comp=Z,37nm,0.7s,baz=298,slow=7.9,SNR=411						
YKA				pP	**pP**	**21 52 11.9**	**-0.6**
	comp=Z,19nm,1.0s,baz=299,slow=7.9,SNR=3.4						
YKA				ScP	**ScP**	**21 57 04.0**	**+0.6**
	comp=Z,4.8nm,1.0s,baz=302,slow=4.0,SNR=10						
YKA				S	**S**	**21 58 05.6**	**+2.3**
	comp=Z,0.4nm,0.5s,baz=296,slow=14,SNR=4.3						
YKB5	**Yellowknife Ar**	**44.03**	**42**	*e*P	**P**	**21 51 41.6**	**-0.2**
CD2	**Chengdu**	**44.83**	**263**	P	**P**	**21 51 48.0**	**-0.6**
CD2				S	**S**	**21 58 14.5**	**-1.1**
CD2				pmax	pmax		
	comp=Z,120nm,0.7s						
CD2				pmax	pmax		
	comp=Z,560nm,7.9s						
CD2				LR	LR		
	comp=Z,500nm,19.6s						
CD2				LR	LR		
	comp=Z,540nm,17.6s						
KIP	**Kipapa**	**45.87**	**116**	*e*P	**P**	**21 51 58.1**	**+1.4**
	comp=Z,186nm,0.8s						
KIP	**Kipapa**	**45.87**	**116**	⇓*e*P	**P**	**21 51 58.3**	**+1.5**
KIP				pmax	pmax		
	comp=Z,195nm,0.8s						
WMQ	**Urumqi**	**45.95**	**288**	P	**P**	**21 51 57.5**	**+0.2**
WMQ				pP	pP	21 52 29.5	+1.3
WMQ				sP	sP	21 52 42.8	-0.6
WMQ				PcP	**PcP**	**21 53 31.8**	**+0.1**
WMQ				S	**S**	**21 58 31.5**	**0.0**
WMQ				sS	sS	21 59 25.0	+0.1
WMQ				pmax	pmax		
	comp=Z,260nm,1.3s						
WMQ				LR	LR		
	comp=Z,510nm,26.3s						
WMQ				LR	LR		
	comp=Z,670nm,33.1s						
WMQ				LR	LR		
	comp=Z,640nm,28.9s						
GYA	**Guiyang**	**46.36**	**256**	⇑*i*P	**P**	**21 52 01.0**	**+0.2**
GYA				pP	pP	21 52 32.3	+0.5
GYA				sP	sP	21 52 48.5	+1.4
GYA				PcP	**PcP**	**21 53 34.0**	**+0.5**
GYA				ScP	**ScP**	**21 57 15.0**	**+1.1**
GYA				S	**S**	**21 58 31.0**	**-6.9**
GYA				sS	sS	21 59 31.0	-0.4
GYA				SS	**SS**	**22 01 57.5**	**-7.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,4.6s						
GYA				LR	LR		
	comp=Z,470nm,12.3s						
GYA				LR	LR		
	comp=Z,480nm,13.9s						
GYA				LR	LR		
	comp=Z,420nm,11.9s						
KURK	**Kurchatov**	**46.84**	**301**	*e*P	**P**	**21 52 02.5**	**-1.6**
	comp=Z,311nm,1.4s						
KURK				*e*PcP	**PcP**	**21 53 34.7**	**0.0**
KURK	**Kurchatov**	**46.84**	**301**	*e*P	**P**	**21 52 02.5**	**-1.6**
KURK				*e*		21 53 34.7	
KURK				pmax	pmax		
	comp=Z,311nm,1.4s						
KURK	**Kurchatov**	**46.84**	**301**	P	**P**	**21 52 03.0**	**-1.0**
	SNR=47						
KBS	**Kingsbay**	**46.86**	**352**	⇓*e*P	**P**	**21 52 03.7**	**-0.1**
KBS				pmax	pmax		
	comp=Z,514nm,2.5s						
LLLB	**Lillooet**	**47.06**	**59**	*e*P	**P**	**21 52 07.3**	**+1.5**
	comp=Z,54nm,1.0s						
SPA0	**Spitsbergen Ar**	**47.09**	**350**	*e*P	**P**	**21 52 06.0**	**+0.3**
MK31	**Makanchi Array**	**47.19**	**295**	*e*P	**P**	**21 52 05.3**	**-1.6**
MK31	**Makanchi Array**	**47.19**	**295**	*e*P	**P**	**21 52 05.3**	**-1.6**
MKAR	**Makanchi Array**	**47.19**	**295**	P	**P**	**21 52 05.7**	**-1.2**
	comp=Z,835nm,1.5s						
MKAR				pP	**pP**	**21 52 38.6**	**+0.6**
MKAR				PcP	**PcP**	**21 53 35.6**	**-0.4**
MKAR				ScP	**ScP**	**21 57 17.8**	**+0.8**
MKAR	**Makanchi Array**	**47.19**	**295**	P	**P**	**21 52 05.7**	**-1.2**
	comp=Z,7.7nm,0.4s,baz=55,slow=6.6,SNR=248						
MKAR				pP	**pP**	**21 52 38.6**	**+0.6**
	comp=Z,39nm,1.0s,baz=59,slow=7.2,SNR=11						
MKAR				PcP	**PcP**	**21 53 35.6**	**-0.4**
	comp=Z,10nm,0.8s,baz=38,slow=4.6,SNR=5.2						
MKAR				ScP	**ScP**	**21 57 17.8**	**+0.8**
	comp=Z,2.8nm,0.9s,baz=60,slow=3.7,SNR=3.3						
MKAR				LR	LR	22 12 29.5	
	comp=Z,80nm,18.8s,baz=53,slow=37						
MK01	**Makanchi Array**	**47.20**	**295**	*e*P	**P**	**21 52 04.8**	**-2.2**
MAKZ	**Makanchi**	**47.36**	**295**	*e*P	**P**	**21 52 06.4**	**-1.7**
	comp=Z,84nm,1.0s						
MAKZ	**Makanchi**	**47.36**	**295**	*e*P	**P**	**21 52 06.4**	**-1.7**
MAKZ				pmax	pmax		
	comp=Z,84nm,1.0s						
TULEG	**Thule**	**47.37**	**13**	*e*P	**P**	**21 52 07.9**	**+0.1**
	comp=Z,136nm,1.4s						
A04D	**Lummi Island**	**47.74**	**61**	P	**P**	**21 52 12.3**	**+1.3**
	baz=307						
NLWA	**Neilton Lookou**	**47.91**	**64**	*e*P	**P**	**21 52 13.8**	**+1.3**
	comp=Z,70nm,0.9s						
D03D	**Eldon**	**48.25**	**63**	P	**P**	**21 52 16.3**	**+1.4**
	baz=308,SNR=9.7						
HPAH	**Hawaii Prepara**	**48.26**	**115**	*e*P	**P**	**21 52 17.0**	**+1.6**
	comp=Z,247nm,0.9s						
B05A	**Bryant**	**48.34**	**62**	P	**P**	**21 52 16.7**	**+1.1**
	baz=308,SNR=13						
B06A	**Marblemount**	**48.51**	**61**	*e*P	**P**	**21 52 17.9**	**+1.0**
	comp=Z,89nm,1.1s						
D04E	**Lakebay**	**48.64**	**63**	P	**P**	**21 52 19.0**	**+1.1**
	baz=308						
HMH	**Humu'ula Sheep**	**48.72**	**115**	*e*P	**P**	**21 52 20.8**	**+1.6**
	comp=Z,151nm,1.0s						
MLOA	**Mauna Loa Obse**	**48.73**	**115**	*e*P	**P**	**21 52 20.9**	**+1.5**
	comp=Z,186nm,1.0s						
MLH	**Mauna Loa**	**48.87**	**115**	*e*P	**P**	**21 52 21.6**	**+1.3**
	comp=Z,217nm,1.0s						
MLH	**Mauna Loa**	**48.87**	**115**	*e*P	**P**	**21 52 21.6**	**+1.3**
MLH				pmax	pmax		
	comp=Z,217nm,1.0s						
AIN	**Ainahou**	**48.92**	**115**	*e*P	**P**	**21 52 22.1**	**+1.5**
	comp=Z,358nm,1.1s						
D05A	**Enumclaw**	**49.05**	**63**	*e*P	**P**	**21 52 23.1**	**+2.0**
	comp=Z,60nm,0.8s						
PUH	**Pauahi**	**49.05**	**115**	*e*P	**P**	**21 52 23.1**	**+1.5**
	comp=Z,178nm,0.8s						
E04D	**Cinebar**	**49.13**	**64**	P	**P**	**21 52 23.3**	**+1.6**
	baz=308,SNR=14						
F04D	**Rainier, OR**	**49.18**	**64**	P	**P**	**21 52 23.2**	**+1.1**
	baz=309						
LON	**Longmire**	**49.42**	**63**	*e*P	**P**	**21 52 24.7**	**+0.7**
	comp=Z,21nm,1.1s						
LON	**Longmire**	**49.42**	**63**	*e*P	**P**	**21 52 24.7**	**+0.7**
LON				pmax	pmax		
	comp=Z,21nm,1.1s						
G03D	**McMinnville, O**	**49.59**	**65**	P	**P**	**21 52 26.3**	**+1.2**
	baz=309						
BRVK	**Borovoye**	**49.62**	**308**	*e*P	**P**	**21 52 23.7**	**-1.6**
	comp=Z,83nm,0.8s						
BRVK	**Borovoye**	**49.62**	**308**	*d i*P	**P**	**21 52 23.6**	**-1.7**
BRVK				pmax	pmax		
	comp=Z,82nm,0.7s						
BRVK	**Borovoye**	**49.62**	**308**	P	**P**	**21 52 24.2**	**-1.1**
	SNR=24						
KMI	**Kunming**	**49.68**	**258**	P	**P**	**21 52 26.8**	**+0.4**
KMI				pP	pP	21 52 58.5	+0.8
KMI				sP	sP	21 53 13.8	+0.9
KMI				pmax	pmax		
	comp=Z,46nm,0.9s						
KMI				LR	LR		
	comp=Z,120nm,5.3s						
KMI				LR	LR		
	comp=Z,200nm,4.4s						
KMI				LR	LR		
	comp=Z,160nm,11.9s						
LTY	**Liberty**	**49.72**	**62**	*e*P	**P**	**21 52 26.8**	**+0.6**
	comp=Z,90nm,1.4s						
OTRP	**Odiongan**	**49.72**	**229**	*e*P	**P**	**21 52 28.2**	**+1.8**
OCLP	**Ormoc**	**49.73**	**225**	*e*P	**P**	**21 52 27.9**	**+1.4**
B08A	**Colville Reser**	**49.74**	**60**	*e*P	**P**	**21 52 27.2**	**+0.8**
	comp=Z,79nm,1.0s						
COR	**Corvallis**	**49.96**	**66**	*e*P	**P**	**21 52 29.8**	**+1.8**
	comp=Z,74nm,0.8s						
COR	**Corvallis**	**49.96**	**66**	*e*P	**P**	**21 52 29.8**	**+1.8**
COR				pmax	pmax		
	comp=Z,74nm,0.8s						
I02D	**Swisshome**	**49.96**	**67**	P	**P**	**21 52 29.2**	**+1.3**
	baz=310						
SJMP	**San Jose**	**50.05**	**230**	*e*P	**P**	**21 52 30.2**	**+1.3**
F05D	**White Salmon**	**50.15**	**64**	P	**P**	**21 52 30.6**	**+1.1**
	baz=309						
H04D	**Lebanon**	**50.31**	**66**	P	**P**	**21 52 31.9**	**+1.3**
	baz=310,SNR=6.6						
QIZ	**Qiongzhong**	**50.34**	**247**	P	**P**	**21 52 31.3**	**+0.2**
QIZ				pP	**pP**	**21 53 01.8**	**-0.8**
QIZ				S	**S**	**21 59 34.5**	**+0.9**
QIZ				sS	**sS**	**22 00 27.3**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,17nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,260nm,2.9s						
QIZ				LR	LR		
	comp=Z,160nm,3.5s						
QIZ				LR	LR		
	comp=Z,97nm,5.1s						
QIZ				LR	LR		
	comp=Z,140nm,10.0s						
QIZ	**Qiongzhong**	**50.34**	**247**	*e*P	**P**	**21 52 31.2**	**+0.1**
	comp=Z,37nm,1.5s						
MSLP	**Maasin**	**50.45**	**225**	*e*P	**P**	**21 52 32.9**	**+0.9**
KEBM	**Edson Butte**	**50.48**	**68**	*e*P	**P**	**21 52 34.3**	**+2.3**
	comp=Z,124nm,1.0s						
I03D	**Drain, OR**	**50.50**	**67**	P	**P**	**21 52 33.8**	**+1.7**
	baz=310,SNR=7.4						
H04A	**Detroit Lake**	**50.51**	**65**	*e*P	**P**	**21 52 33.3**	**+1.1**
	comp=Z,70nm,1.1s						
J01E	**Myrtle Point**	**50.52**	**68**	P	**P**	**21 52 34.1**	**+1.9**
	baz=310,SNR=5.7						
DAG	**Danmarks Havn**	**50.54**	**359**	*i* P	**P**	**21 52 31.5**	**-0.4**
	comp=Z,107nm,1.5s						
DAG	**Danmarks Havn**	**50.54**	**359**	*i* P	**P**	**21 52 31.5**	**-0.4**
DAG				pmax	pmax		
	comp=Z,300nm,1.5s						
KULLO	**Kullorsuaq**	**50.57**	**12**	⇓*i*P	**P**	**21 52 32.4**	**+0.3**
	comp=Z,858nm,0.7s						
KULLO	**Kullorsuaq**	**50.57**	**12**	⇓*i*P	**P**	**21 52 32.4**	**+0.3**
G05D	**Wamic, OR**	**50.63**	**64**	P	**P**	**21 52 34.3**	**+1.2**
	baz=310,SNR=7.2						
C09A	**Chrisman Ranch**	**50.65**	**60**	*e*P	**P**	**21 52 33.8**	**+0.7**
	comp=Z,83nm,1.3s						
D08A	**Wollman Farm,**	**50.77**	**61**	*e*P	**P**	**21 52 34.6**	**+0.5**
	comp=Z,55nm,1.3s						
HAWA	**Hanford**	**50.87**	**62**	*e*P	**P**	**21 52 35.6**	**+0.8**
	comp=Z,50nm,1.1s						
PDGK	**Podgornoye**	**50.90**	**293**	*i* P	**P**	**21 52 33.9**	**-1.4**
PDGK				pmax	pmax		
	comp=Z,72nm,1.2s						
NEW	**Newport**	**50.95**	**59**	*e*P	**P**	**21 52 36.2**	**+0.7**
	comp=Z,50nm,1.0s						
NEW	**Newport**	**50.95**	**59**	*e*P	**P**	**21 52 36.2**	**+0.7**
NEW				pmax	pmax		
	comp=Z,50nm,1.0s						
NEW	**Newport**	**50.95**	**59**	P	**P**	**21 52 36.1**	**+0.7**
	baz=310,SNR=25						
I04A	**Tendick Farm,**	**50.96**	**66**	P	**P**	**21 52 36.8**	**+1.2**
	baz=310,SNR=16						
K02D	**Willamette Mer**	**50.97**	**68**	P	**P**	**21 52 37.3**	**+1.6**
	baz=311,SNR=7.9						
F07A	**Phinny Hill Vi**	**50.97**	**63**	*e*P	**P**	**21 52 36.9**	**+1.3**
	comp=Z,113nm,0.6s						
GUIM	**Jordan**	**50.99**	**227**	*e*P	**P**	**21 52 36.5**	**+0.4**
E08A	**Dider Farm, El**	**51.06**	**62**	*e*P	**P**	**21 52 37.0**	**+0.8**
	comp=Z,43nm,1.0s						
BUTP	**Butuan**	**51.17**	**223**	*e*P	**P**	**21 52 38.7**	**+1.4**
I05D	**Terrebonne, OR**	**51.20**	**65**	P	**P**	**21 52 38.4**	**+1.0**
	baz=310,SNR=8.7						
L02E	**Cave Junction**	**51.35**	**69**	P	**P**	**21 52 40.4**	**+1.9**
	baz=311,SNR=12						
HUMO	**Hull Mountain**	**51.42**	**68**	*e*P	**P**	**21 52 40.8**	**+1.8**
	comp=Z,45nm,1.1s						
HUMO				*e*PcP	**PcP**	**21 53 54.0**	**+2.4**
J04D	**Umpqua Nationa**	**51.48**	**67**	P	**P**	**21 52 41.4**	**+1.7**
	baz=311,SNR=26						
CUYO	**Cuyo Island**	**51.51**	**229**	*e*P	**P**	**21 52 40.9**	**+1.0**
OTUK	**Ortayu**	**51.60**	**302**	*i* P	**P**	**21 52 38.9**	**-1.4**
OTUK				pmax	pmax		
	comp=Z,55nm,0.9s						
PINE	**Pine Mountain**	**51.77**	**66**	*e*P	**P**	**21 52 43.5**	**+1.7**
	comp=Z,52nm,0.9s						
G08A	**Pilot Rock**	**51.88**	**63**	*e*P	**P**	**21 52 43.3**	**+0.8**
	comp=Z,14nm,0.7s						
J05D	**Fort Rock, OR**	**51.94**	**66**	P	**P**	**21 52 44.9**	**+1.9**
	baz=311,SNR=48						
L04D	**Klamath Falls**	**52.04**	**68**	P	**P**	**21 52 45.5**	**+1.8**
	baz=311,SNR=27						
K04D	**Chiloquin, OR**	**52.08**	**67**	P	**P**	**21 52 45.8**	**+1.7**
	baz=311						
WALA	**Waterton Lakes**	**52.09**	**56**	*e*P	**P**	**21 52 44.9**	**+0.9**
	comp=Z,100nm,0.8s						
WALA				*e*PcP	**PcP**	**21 53 53.7**	**-0.3**
KHMM	**Horse Mountain**	**52.12**	**70**	*e*P	**P**	**21 52 47.1**	**+2.7**
	comp=Z,148nm,1.3s						
YBH	**Yreka Blue Hor**	**52.13**	**69**	*e*P	**P**	**21 52 46.5**	**+2.1**
	comp=Z,36nm,0.7s						
M02C	**Callahan**	**52.28**	**69**	P	**P**	**21 52 47.7**	**+2.3**
	baz=312,SNR=15						
F10A	**Beach Ranch, E**	**52.37**	**61**	*e*P	**P**	**21 52 46.8**	**+0.7**
	comp=Z,30nm,0.9s						
I07A	**Izee**	**52.37**	**64**	*e*P	**P**	**21 52 47.3**	**+1.2**
	comp=Z,24nm,1.1s						
BUKP	**Musuan**	**52.39**	**223**	*e*P	**P**	**21 52 47.8**	**+1.3**
KMRM	**Mail Ridge**	**52.56**	**71**	*e*P	**P**	**21 52 50.4**	**+2.9**
	comp=Z,86nm,0.9s						
M04C	**Macdoel**	**52.59**	**68**	P	**P**	**21 52 49.6**	**+1.8**
	baz=312,SNR=19						
N02D	**Trinity Center**	**52.64**	**69**	P	**P**	**21 52 50.3**	**+2.2**
	baz=312,SNR=30						
ARU	**Arti**	**52.73**	**317**	*e*P	**P**	**21 52 46.4**	**-2.1**
	comp=Z,84nm,1.0s						
ARU	**Arti**	**52.73**	**317**	*d i*P	**P**	**21 52 47.1**	**-1.4**
ARU				*PP	**pP**	**21 53 20.3**	**+0.1**
ARU						21 53 55.5	
ARU						21 54 44.6	
ARU				S	**S**	**22 00 04.2**	**-1.3**
ARU				SS	**SS**	**22 03 40.5**	**-4.6**
ARU				pmax	pmax		
	comp=Z,49nm,0.8s						
MATI	**Mati**	**52.75**	**221**	*e*P	**P**	**21 52 48.7**	**-0.4**
WDC	**Whiskeytown Da**	**52.99**	**70**	*e*P	**P**	**21 52 52.4**	**+1.8**
	comp=Z,48nm,0.9s						
KCPM	**Cahto Peak**	**52.99**	**71**	*e*P	**P**	**21 52 53.1**	**+2.3**
	comp=Z,272nm,1.8s						
BMO	**Blue Mountains**	**53.05**	**62**	*e*P	**P**	**21 52 52.3**	**+1.1**
	comp=Z,59nm,1.3s						
BMO	**Blue Mountains**	**53.05**	**62**	*e*P	**P**	**21 52 52.3**	**+1.1**
BMO				pmax	pmax		
	comp=Z,59nm,1.3s						
ARCES	**ARCESS Array B**	**53.07**	**341**	P	**P**	**21 52 49.2**	**-1.5**
	comp=Z,22nm,0.9s,baz=37,slow=6.1,SNR=11						
ARCES				PcP	**PcP**	**21 53 57.8**	**+0.5**
	comp=Z,16nm,0.7s,baz=52,slow=4.8,SNR=8.7						
O02D	**Mt. Diablo Mer**	**53.12**	**70**	P	**P**	**21 52 53.8**	**+2.2**
	baz=312,SNR=25						
PAGZ	**Pagadian**	**53.12**	**225**	*e*P	**P**	**21 52 51.8**	**0.0**
KCP	**Kidapawan**	**53.16**	**223**	⇓*e*P	**P**	**21 52 53.0**	**+0.8**
LSA	**Lhasa**	**53.30**	**272**	*e*P	**P**	**21 52 53.4**	**-0.2**
	comp=Z,54nm,1.3s						
LSA	**Lhasa**	**53.30**	**272**	*i* P	**P**	**21 52 53.5**	**-0.2**
	SNR=32						
TKM2	**Tokmak 2**	**53.33**	**295**	P	**P**	**21 52 52.0**	**-1.3**
	SNR=32						
MOD	**Modoc Plateau**	**53.37**	**67**	*e*P	**P**	**21 52 55.3**	**+1.7**
	comp=Z,105nm,0.9s						
J08A	**Circle Bar Ran**	**53.41**	**64**	*e*P	**P**	**21 52 55.3**	**+1.5**
	comp=Z,18nm,0.8s						
ULHL	**Ulahol**	**53.42**	**294**	P	pP	21 53 27.2	+1.4
	SNR=5.7						
MSO	**Missoula**	**53.53**	**59**	*e*P	**P**	**21 52 55.4**	**+0.9**
	comp=Z,79nm,1.1s						
MSO	**Missoula**	**53.53**	**59**	P	**P**	**21 52 55.5**	**+0.9**
	baz=312,SNR=28						
O03E	**Paynes Creek**	**53.60**	**69**	P	**P**	**21 52 56.5**	**+1.3**
	baz=313,SNR=38						
USP	**Ospenovka**	**53.70**	**296**	P	**P**	**21 52 55.0**	**-0.8**
	SNR=65						
CHMS	**Chumysh**	**53.74**	**295**	P	**P**	**21 52 54.9**	**-1.2**
	SNR=40						
HOPS	**Hopland Field**	**53.75**	**71**	*e*P	**P**	**21 52 58.3**	**+2.1**
	comp=Z,93nm,1.3s						
SKMP	**Bagumbayan, Su**	**53.83**	**223**	*e*P	**P**	**21 52 57.7**	**+0.8**
KBK	**Karagaybulak**	**53.86**	**295**	P	**P**	**21 52 55.9**	**-1.2**
	SNR=45						
FFC	**Flin Flon**	**53.93**	**45**	*e*P	**P**	**21 52 58.1**	**+0.9**
	comp=Z,59nm,0.8s						
FFC	**Flin Flon**	**53.93**	**45**	*i* P	**P**	**21 52 58.1**	**+0.9**
WVOR	**Wild Horse Val**	**53.94**	**65**	*e*P	**P**	**21 52 59.2**	**+1.6**
	comp=Z,76nm,1.0s						
WVOR	**Wild Horse Val**	**53.94**	**65**	*e*P	**P**	**21 52 59.2**	**+1.6**
WVOR				pmax	pmax		
	comp=Z,76nm,1.0s						
GDXM	**Geysers**	**54.04**	**71**	*e*P	**P**	**21 53 01.0**	**+2.6**
	comp=Z,82nm,1.0s						
KZA	**Kyzart**	**54.08**	**294**	P	**P**	**21 52 58.5**	**-0.5**
	SNR=14						
AAK	**Ala-Archa**	**54.12**	**295**	P	**P**	**21 52 58.2**	**-0.8**
	SNR=58						
AAK	**Ala-Archa**	**54.12**	**295**	*e*P	**P**	**21 52 58.0**	**-1.0**
	comp=Z,100nm,1.1s						
AAK	**Ala-Archa**	**54.12**	**295**	*i* P	**P**	**21 52 57.9**	**-1.1**
	SNR=86						
AAK	**Ala-Archa**	**54.12**	**295**	*d i*P	**P**	**21 52 58.0**	**-1.0**
AAK				pmax	pmax		
	comp=Z,82nm,1.2s						
AAK	**Ala-Archa**	**54.12**	**295**	P	**P**	**21 52 58.5**	**-0.5**
	SNR=29						
SUMG	**Summit**	**54.23**	**6**	*e*P	**P**	**21 52 59.7**	**+0.1**
	comp=Z,170nm,1.0s						
SUMG	**Summit**	**54.23**	**6**	⇓*i*P	**P**	**21 53 00.5**	**+0.8**
	comp=Z,404nm,1.0s						
SUMG	**Summit**	**54.23**	**6**	⇓*i*P	**P**	**21 53 00.5**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,400nm,1.0s						
ORV	**Oroville**	**54.27**	**70**	*e*P	**P**	**21 53 01.0**	**+1.1**
	comp=Z,70nm,0.9s						
ORV	**Oroville**	**54.27**	**70**	*e*P	**P**	**21 53 01.0**	**+1.1**
ORV				pmax	pmax		
	comp=Z,70nm,0.9s						
FCC	**Fort Churchill**	**54.30**	**38**	*e*P	**P**	**21 53 00.5**	**+0.7**
	comp=Z,41nm,0.6s						
FCC	**Fort Churchill**	**54.30**	**38**	*e*P	**P**	**21 53 00.5**	**+0.7**
FCC				pmax	pmax		
	comp=Z,41nm,0.6s						
UCH	**Uchtor**	**54.38**	**295**	P	**P**	**21 53 00.9**	**-0.4**
	SNR=14						
TMCR	**Tamitsa**	**54.39**	**332**	*e*P	**P**	**21 52 59.5**	**-0.9**
TMCR				*e*S	**S**	**22 00 30.7**	**+3.1**
TMCR				pmax	pmax		
	comp=Z,55nm,1.0s						
EKS2	**Erkin-Say**	**54.50**	**296**	P	**P**	**21 53 00.7**	**-1.0**
	SNR=70						
BEKR	**Beckworth**	**54.71**	**69**	*e*P	**P**	**21 53 04.7**	**+1.4**
	comp=Z,96nm,1.0s						
EGMT	**Eagleton**	**54.85**	**55**	*e*P	**P**	**21 53 04.9**	**+0.8**
	comp=Z,74nm,1.0s						
EGMT	**Eagleton**	**54.85**	**55**	P	**P**	**21 53 04.7**	**+0.6**
	baz=313,SNR=20						
AML	**Almayashu**	**54.90**	**295**	P	P	21 52 52.5	-12
	SNR=6.0						
AFDM	**Forest Hills D**	**54.98**	**70**	*e*P	**P**	**21 53 06.4**	**+1.3**
	comp=Z,50nm,1.1s						
DLMT	**Dillon**	**55.20**	**59**	*e*P	**P**	**21 53 07.8**	**+1.1**
	comp=Z,45nm,1.0s						
SKNT	**Sakolnakorn**	**55.29**	**251**	P	**P**	**21 53 08.3**	**+0.8**
	comp=Z,21nm,0.9s						
MNAS	**Manas**	**55.31**	**296**	*i* P	**P**	**21 53 05.7**	**-1.8**
MNAS				pmax	pmax		
	comp=Z,25nm,0.8s						
PAHR	**Pah Rah Range**	**55.36**	**68**	*e*P	**P**	**21 53 09.5**	**+1.5**
	comp=Z,119nm,1.2s						
RUBR	**Rubicon Trail**	**55.38**	**69**	*e*P	**P**	**21 53 10.2**	**+2.1**
	comp=Z,65nm,0.9s						
KSH	**Kashi**	**55.41**	**291**	⇓*i*P	**P**	**21 53 11.0**	**+2.7**
KSH				pP	pP	21 53 44.5	+4.2
KSH				PP	**PP**	**21 55 19.0**	**+5.8**
KSH				S	**S**	**22 00 41.0**	**-1.3**
KSH				sS	sS	22 01 43.3	+5.8
KSH				SS	**SS**	**22 04 36.3**	**+8.1**
KSH				pmax	pmax		
	comp=Z,87nm,1.2s						
KSH				pmax	pmax		
	comp=Z,430nm,6.1s						
KSH				LR	LR		
	comp=Z,380nm,6.9s						
KSH				LR	LR		
	comp=Z,560nm,5.8s						
KSH				LR	LR		
	comp=Z,370nm,6.3s						
MCMT	**McKenzie Canyo**	**55.43**	**60**	*e*P	**P**	**21 53 09.3**	**+0.7**
HLID	**Hailey**	**55.46**	**62**	*e*P	**P**	**21 53 09.9**	**+1.2**
	comp=Z,34nm,1.2s						
HLID				*e*PcP	**PcP**	**21 54 08.5**	**+1.4**
HLID	**Hailey**	**55.46**	**62**	P	**P**	**21 53 10.0**	**+1.2**
	baz=313,SNR=35						
VCNR	**Virginia City**	**55.49**	**69**	*e*P	**P**	**21 53 11.0**	**+2.0**
	comp=Z,68nm,0.8s						
BOZ	**Bozeman (W)**	**55.54**	**58**	*e*P	**P**	**21 53 10.4**	**+1.2**
	comp=Z,60nm,0.8s						
BOZ	**Bozeman (W)**	**55.54**	**58**	*e*P	**P**	**21 53 10.4**	**+1.2**
BOZ				pmax	pmax		
	comp=Z,61nm,0.8s						
BOZ	**Bozeman (W)**	**55.54**	**58**	P	**P**	**21 53 10.4**	**+1.2**
	baz=313,SNR=75						
PNTR	**Pine Nut**	**55.67**	**69**	*e*P	**P**	**21 53 12.1**	**+1.9**
	comp=Z,105nm,0.8s						
SHL	**Shillong**	**55.87**	**268**	*e*P	**P**	**21 53 10.1**	**-1.7**
YERR	**Yerington**	**55.94**	**69**	*e*P	**P**	**21 53 14.0**	**+1.8**
	comp=Z,90nm,1.0s						
CMB	**Columbia Colle**	**55.95**	**70**	*e*P	**P**	**21 53 13.6**	**+1.5**
	comp=Z,81nm,1.3s						
KK31	**Karatay Array**	**55.96**	**298**	*e*P	**P**	**21 53 10.6**	**-1.4**
KK31	**Karatay Array**	**55.96**	**298**	*e*P	**P**	**21 53 10.6**	**-1.4**
KKAR	**Karatay Array**	**55.96**	**298**	*e*P	**P**	**21 53 10.6**	**-1.4**
KKAR	**Karatay Array**	**55.96**	**298**	*e*P	**P**	**21 53 10.6**	**-1.4**
BMN	**Battle Mountai**	**56.08**	**66**	*e*P	**P**	**21 53 14.8**	**+1.7**
	comp=Z,63nm,0.9s						
BMN	**Battle Mountai**	**56.08**	**66**	*e*P	**P**	**21 53 14.8**	**+1.7**
BMN				pmax	pmax		
	comp=Z,63nm,0.9s						
WAKR	**Walker**	**56.16**	**69**	*e*P	**P**	**21 53 15.8**	**+2.0**

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      comp=Z,92nm,1.0s
QLMT  Earthquake Lak   56.17  59 eP     P        21 53 15.2 +1.4
SAO   San Andreas Ge   56.22  72 eP     P        21 53 15.1 +1.2
      comp=Z,31nm,1.0s
SAO   San Andreas Ge   56.22  72 eP     P        21 53 15.1 +1.2
SAO                                pmax   pmax
      comp=Z,31nm,1.0s
ILULI Ilulissat        56.27  12 eP     P        21 53 12.9 -0.9
      comp=Z,114nm,0.7s
ILULI Ilulissat        56.27  12 i P    P        21 53 13.5 -0.3
      comp=Z,113nm,0.7s
ILULI Ilulissat        56.27  12 i P    P        21 53 13.5 -0.3
ILULI                              pmax   pmax
      comp=Z,110nm,0.7s
YHB   Horse Butte      56.34  59 eP     P        21 53 16.5 +1.5
      comp=Z,76nm,0.7s
GCMT  Greycliff        56.41  57 eP     P        21 53 17.1 +1.7
SFK   Sufi-Kurgan      56.45 293 i P    P        21 53 13.0 -2.8
SFK                                pmax   pmax
      comp=Z,29nm,1.2s
YHH   Holmes Hill      56.50  59 eP     P        21 53 17.5 +1.3
      comp=Z,53nm,0.7s
KLMR  Klimovskoe       56.50 329 eP     P        21 53 12.9 -2.6
KLMR                               pmax   pmax
      comp=Z,33nm,1.0s
KLMR  Klimovskoe       56.50 329 eP     P        21 53 12.9 -2.6
KLMR                               AMP           21 53 16.3
      comp=Z,33nm,1.1s
YMR   Madison River    56.52  59 eP     P        21 53 17.9 +1.7
      comp=Z,70nm,0.8s
KVN   Kaiserville      56.54  68 eP     P        21 53 18.2 +1.8
      comp=Z,134nm,1.2s
KVN   Kaiserville      56.54  68 eP     P        21 53 18.2 +1.8
KVN                                pmax   pmax
      comp=Z,135nm,1.2s
LAMP  Lampang          56.59 256  P     P        21 53 18.1 +1.4
      comp=Z,24nm,0.9s,comp=Z,168nm
RYN   Ryan             56.59  69 eP     P        21 53 18.6 +1.8
      comp=Z,61nm,0.9s
YNR   Norris Junctio   56.64  59 eP     P        21 53 19.4 +2.3
      comp=Z,43nm,0.9s
UTTA  Uttaradit        56.66 255  P     P        21 53 17.8 +0.6
      comp=Z,17nm,0.9s,comp=Z,112nm
YFT   Old Faithful     56.74  59 eP     P        21 53 20.8 +3.0
      comp=Z,74nm,0.8s
CMMT  Chiang Mai       56.77 257  P     P        21 53 17.7 -0.3
      comp=Z,64nm,0.9s,comp=Z,497nm
CHTO  Chiang Mai       56.77 257 eP     P        21 53 17.5 -0.5
      comp=Z,45nm,0.8s
CHTO  Chiang Mai       56.77 257 eP     P        21 53 17.5 -0.5
CHTO                               pmax   pmax
      comp=Z,45nm,0.8s
CHTO  Chiang Mai       56.77 257  P     P        21 53 18.2 +0.2
      SNR=17
CHTO  Chiang Mai       56.77 257  P     P        21 53 17.8 -0.2
      comp=Z,288nm,0.9s,comp=Z,2µm
NV01  Mina Array Sit   56.85  69 eP     P        21 53 19.6 +0.9
NVAR  Mina Array Bea   56.85  69  P     P        21 53 20.4 +1.8
      comp=Z,62nm,0.7s,baz=299,slow=7.3,SNR=277
NVAR                               pP     pP     21 53 50.8 +0.1
      comp=Z,20nm,0.8s,baz=297,slow=7.1,SNR=4.8
NVAR                               LR     LR     22 14 15.9
      comp=Z,64nm,20.7s,baz=270,slow=32
SCO   Scoresbysund     56.88   0 i P    P        21 53 19.2 +1.2
SCO   Scoresbysund     56.88   0 i P    P        21 53 19.2 +1.2
YPP   Pitchstone Pla   56.88  59 eP     P        21 53 21.3 +2.5
      comp=Z,101nm,1.7s
LKWY  Lake             56.88  59 eP     P        21 53 21.4 +2.6
      comp=Z,79nm,0.9s
H17A  Grant Village    56.91  59 eP     P        21 53 21.9 +2.9
      comp=Z,105nm,1.0s
H17A  Grant Village    56.91  59  P     P        21 53 22.0 +2.9
      baz=314,SNR=84
NV11  Mina Array Sit   56.94  69 eP     P        21 53 20.8 +1.7
      comp=Z,3.9nm,0.9s
ELK   Elko             56.95  65 eP     P        21 53 21.2 +1.9
      comp=Z,24nm,0.6s
ELK   Elko             56.95  65 eP     P        21 53 21.2 +1.9
ELK                                pmax   pmax
      comp=Z,24nm,0.6s
MDPB  Devils Postpil   56.97  70 eP     P        21 53 20.2 +0.7
      comp=Z,53nm,1.0s
AB31  Akbulak array    57.02 309 i P    P        21 53 17.7 -1.7
AB31                               pmax   pmax
      comp=Z,37nm,0.8s
ABKAR Akbulak array    57.02 309 eP     P        21 53 17.7 -1.7
OMMB  Old Mammoth Mi   57.03  70 eP     P        21 53 21.9 +1.9
      comp=Z,25nm,0.9s
CM31  Chiang Mai Arr   57.05 257 eP     P        21 53 18.5 -1.5
CMAR  Chiang Mai Arr   57.05 257  P     P        21 53 20.3 +0.3
      comp=Z,28nm,0.8s,baz=24,slow=7.2,SNR=103
CMAR                               PcP    PcP    21 54 13.8 +0.5
      comp=Z,12nm,0.7s,baz=23,slow=3.6,SNR=13
CMAR                               ScP    ScP    21 58 01.1 +1.1
      comp=Z,5.5nm,0.7s,baz=11,slow=4.0,SNR=13
FLWY  Flagg Ranch      57.06  59 eP     P        21 53 22.0 +1.9
      comp=Z,69nm,0.9s
CM01  Chiang Mai Arr   57.06 256 eP     P        21 53 19.4 -0.7
AKTO  Aktyubinsk       57.08 311 i P    P        21 53 17.6 -2.2
AKTO                               pmax   pmax
      comp=Z,56nm,1.3s
RLMT  Red Lodge        57.08  57 eP     P        21 53 22.0 +1.8
      comp=Z,115nm,0.9s
RLMT  Red Lodge        57.08  57  P     P        21 53 22.0 +1.8
      baz=314,SNR=108
MLAC  Mammoth, Mammo57.11  70  P     P        21 53 22.5 +2.0
      baz=315
FXWY  Fox Creek        57.20  60 eP     P        21 53 23.0 +1.9
      comp=Z,48nm,0.8s
DGMT  Dagmar           57.24  52 eP     P        21 53 22.0 +1.0
      comp=Z,105nm,1.1s
DGMT  Dagmar           57.24  52  P     P        21 53 22.0 +1.0
      baz=315,SNR=17
MOOW  Moose Ponds      57.27  59 eP     P        21 53 23.3 +1.8
      comp=Z,52nm,1.1s
TPAW  Teton Pass       57.34  60 eP     P        21 53 23.2 +1.1
      comp=Z,133nm,1.4s
PBKT  Sadao Pong       57.34 253 eP     P        21 53 22.4 +0.3
PBKT  Sadao Pong       57.34 253  P     P        21 53 23.0 +1.0
      comp=Z,20nm,1.0s,comp=Z,1µm
SUKH  Sukhothai        57.41 255  P     P        21 53 24.6 +2.1
      comp=Z,5.3nm,0.9s
LOHW  Long Hollow      57.44  59 eP     P        21 53 24.7 +2.0
      comp=Z,75nm,0.9s
SNOW  Snow King Moun   57.47  60 eP     P        21 53 25.2 +2.2
      comp=Z,63nm,0.9s
REDW  Red Top Meadow   57.48  60 eP     P        21 53 25.2 +2.1
      comp=Z,73nm,0.9s
LAO   LASA Array       57.51  54 eP     P        21 53 23.6 +0.6
      comp=Z,99nm,0.9s
LAO   LASA Array       57.51  54  P     P        21 53 24.5 +1.5
      baz=315,SNR=16
HVU   Hansel Valley    57.57  62 eP     P        21 53 25.4 +1.9
      comp=Z,58nm,1.1s
HVU   Hansel Valley    57.57  62 eP     P        21 53 25.5 +1.9
HVU                                pmax   pmax
      comp=Z,58nm,1.1s
PAGB  Antelope Grade   57.63  72 eP     P        21 53 25.9 +2.0
      comp=Z,46nm,0.9s
VOG   Valley Oaks Go   57.71  71  P     P        21 53 25.5 +1.1
      baz=315
AHID  Auburn Hatcher   57.77  61 eP     P        21 53 26.4 +1.4
      comp=Z,103nm,0.9s
JIRN  Jiri             57.78 274 eP     P        21 53 24.5 -1.0
      comp=Z,61nm,0.8s
TIN   Tinemaha, Big    57.86  70  P     P        21 53 27.5 +1.9
      baz=315,SNR=7.5
KKM   Kota Kinabalu    57.96 232 eP     P        21 53 28.0 +1.5
      comp=Z,50nm,0.9s
BGU   Big Grassy Mou   58.03  63 eP     P        21 53 28.5 +1.7
      comp=Z,19nm,0.8s
RAMN  Ramite           58.05 273 eP     P        21 53 26.1 -1.1
      comp=Z,75nm,0.4s
SMMC  Simmler          58.07  73  P     P        21 53 28.9 +1.9
      baz=316,SNR=6.3
VES   Vestal, Richgr   58.22  71  P     P        21 53 28.8 +0.8
      baz=315,SNR=14
KKN   Kakani           58.23 275 eP     P        21 53 27.6 -0.8
      comp=Z,46nm,0.5s
PKI   Pulchoki         58.31 275 eP     P        21 53 29.0 -0.1
PKIN  Phulchoki        58.32 275 eP     P        21 53 27.9 -1.2
      comp=Z,44nm,0.8s
HWUT  Hardware Ranch   58.34  62 eP     P        21 53 30.9 +1.9
      comp=Z,64nm,0.8s
CWC   Cottonwood Cre   58.37  70  P     P        21 53 30.8 +1.5
      baz=315
GRAC  Grapevine Rang   58.39  69  P     P        21 53 31.1 +1.9
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      baz=315,SNR=14
SFJD  Kangerlussuaq    58.42  13 eP     P        21 53 28.1 -0.7
      comp=Z,46nm,0.6s
SFJD  Kangerlussuaq    58.42  13⇓iP     P        21 53 28.9 +0.1
      comp=Z,49nm,0.7s
SFJD  Kangerlussuaq    58.42  13⇓iP     P        21 53 28.9 +0.1
SFJD                               pmax   pmax
      comp=Z,49nm,0.7s
R11A  Troy Canyon, C   58.43  67 eP     P        21 53 30.9 +1.2
      comp=Z,32nm,0.8s
R11A  Troy Canyon, C   58.43  67  P     P        21 53 30.9 +1.2
      baz=315,SNR=67
DMN   Daman            58.47 275 eP     P        21 53 29.4 -0.7
      comp=Z,78nm,0.8s
PKM   Mcpherson Peak   58.48  73  P     P        21 53 31.7 +1.7
      baz=316,SNR=12
BW06  Boulder Array    58.58  60 eP     P        21 53 32.2 +1.5
      comp=Z,116nm,0.8s
BW06  Boulder Array    58.58  60  P     P        21 53 32.1 +1.5
      baz=315,SNR=129
PD31  Pinedale Array   58.58  60 eP     P        21 53 32.2 +1.5
PDAR  Pinedale Array   58.58  60  P     P        21 53 32.0 +1.4
      comp=Z,102nm,0.8s,baz=312,slow=2.5,SNR=674
PDAR                               PcP    PcP    21 54 19.5  0.0
      comp=Z,6.3nm,0.7s,baz=300,slow=1.8,SNR=2.0
PDAR                               PKKP   PKKPdf 22 14 43.5 +1.3
      comp=Z,0.3nm,0.9s,baz=109,slow=8.1,SNR=2.1
DUG   Dugway, Tooele   58.66  64 eP     P        21 53 32.7 +1.5
      comp=Z,66nm,0.9s
DUG   Dugway, Tooele   58.66  64  P     P        21 53 32.9 +1.8
      baz=315,SNR=57
ISA   Isabella, Lake   58.70  71 eP     P        21 53 32.1 +0.6
      comp=Z,44nm,1.0s
ISA   Isabella, Lake   58.70  71 eP     P        21 53 32.1 +0.6
ISA                                pmax   pmax
      comp=Z,44nm,1.0s
ISA   Isabella, Lake   58.70  71  P     P        21 53 32.0 +0.6
      baz=316,SNR=38
DANN  Dangsing         58.74 277 eP     P        21 53 31.2 -0.8
      comp=Z,66nm,0.8s
TCUT  Toone Canyon     58.76  62 eP     P        21 53 33.8 +1.8
      comp=Z,65nm,0.8s
DAC   Darwin (Calif)   58.77  70 eP     P        21 53 33.9 +1.9
      comp=Z,24nm,0.8s
DAC   Darwin (Calif)   58.77  70 eP     P        21 53 33.9 +1.9
DAC                                pmax   pmax
      comp=Z,24nm,0.8s
SRAK  Srakaew          58.77 251  P     P        21 53 31.0 -1.0
      comp=Z,95nm,1.1s,comp=Z,897nm
SBC   Santa Barbara    58.85  73  P     P        21 53 33.9 +1.5
      baz=316
UMPA  Umpang Tak       58.86 255  P     P        21 53 35.4 +2.8
      comp=Z,20nm,0.9s,comp=Z,162nm
ARVC  Arvin            58.88  72  P     P        21 53 34.2 +1.6
      baz=316
CTU   Camp Tracy       58.88  63 eP     P        21 53 34.4 +1.7
      comp=Z,47nm,0.8s
MPMC  Manual Prospec   58.98  70  P     P        21 53 34.8 +1.3
      baz=316,SNR=58
UTHA  Uthaitani        59.03 254  P     P        21 53 35.5 +1.7
      comp=Z,10nm,0.9s,comp=Z,86nm
FURC  Furnace Creek,   59.05  69  P     P        21 53 35.5 +1.9
      baz=316,SNR=43
TPNV  Topopah Spring   59.05  69 eP     P        21 53 35.4 +1.5
      comp=Z,77nm,0.9s
TPNV  Topopah Spring   59.05  69 eP     P        21 53 35.4 +1.5
TPNV                               pmax   pmax
      comp=Z,77nm,0.9s
TPNV  Topopah Spring   59.05  69  P     P        21 53 35.5 +1.5
      baz=316,SNR=67
JLU   Jordanelle       59.11  63 eP     P        21 53 36.0 +1.7
      comp=Z,34nm,0.9s
SCZ2  Santa Cruz Isl   59.22  73  P     P        21 53 36.0 +1.1
      baz=316
NLU   North Lily Min   59.23  63 eP     P        21 53 36.8 +1.7
      comp=Z,72nm,0.9s
KOLN  Koldanda         59.26 276 eP     P        21 53 34.4 -1.1
PSUT  Pine Spring      59.26  66 eP     P        21 53 37.0 +1.6
      comp=Z,49nm,1.1s
LRMC  Laurel Mtn Rad   59.28  71  P     P        21 53 36.6 +1.1
      baz=316,SNR=43
OSI   Osito Audit: C   59.30  72 eP     P        21 53 37.3 +1.8
      comp=Z,77nm,0.6s
OSI   Osito Audit: C   59.30  72  P     P        21 53 37.0 +1.5
      baz=316
PYUN  Piuthan          59.38 277 eP     P        21 53 35.2 -1.2
MPU   Maple Canyon     59.42  63 eP     P        21 53 38.4 +1.9
      comp=Z,77nm,0.8s
BLG   Laguna Peak, P   59.47  73  P     P        21 53 37.7 +1.1
      baz=316,SNR=8.1
EDW2  Edwards Air Fo   59.53  71  P     P        21 53 38.5 +1.4
      baz=316,SNR=65
ULM   Lac du Bonnet    59.74  46 eP     P        21 53 39.0 +0.7
      comp=Z,44nm,0.7s
ULM                                PcP    PcP    21 54 23.1 -0.5
ULM   Lac du Bonnet    59.74  46  P     P        21 53 39.0 +0.7
      comp=Z,52nm,0.7s,baz=316,slow=7.0,SNR=102
ULM                                PcP    PcP    21 54 23.1 -0.5
      comp=Z,7.7nm,0.6s,baz=329,slow=4.1,SNR=3.0
ULM                                LR     LR     22 20 46.3
      comp=Z,129nm,18.6s,baz=335,slow=37
SHOC  Shoshone, Teco   59.78  70  P     P        21 53 39.8 +1.0
      baz=316
DECC  Green Verdugo    59.78  72  P     P        21 53 40.0 +1.1
      baz=316
FIA1  FINESS Array S   59.80 336 eP     P        21 53 37.5 -0.9
FINES FINESS Array B   59.80 336  P     P        21 53 37.8 -0.7
      comp=Z,11nm,0.8s,baz=38,slow=7.6,SNR=30
FINES                              PcP    PcP    21 54 23.1 -0.5
      comp=Z,17nm,0.7s,baz=60,slow=5.5,SNR=10
FINES                              LR     LR     22 22 35.8
      comp=Z,111nm,18.2s,baz=23,slow=39
SNCC  San Nicolas Is   59.82  74  P     P        21 53 40.4 +1.3
      baz=316
MDND  Maddock          59.84  50 eP     P        21 53 40.6 +1.6
      comp=Z,182nm,0.8s
MDND  Maddock          59.84  50  P     P        21 53 40.5 +1.6
      baz=317,SNR=28
GSC   Goldstone, Bar   59.91  70 eP     P        21 53 41.1 +1.3
      comp=Z,62nm,0.9s
GSC   Goldstone, Bar   59.91  70 eP     P        21 53 41.1 +1.3
GSC                                pmax   pmax
      comp=Z,62nm,0.9s
GSC   Goldstone, Bar   59.91  70  P     P        21 53 41.1 +1.3
      baz=316,SNR=45
PASC  Pasadena Art C   59.93  72 eP     P        21 53 41.3 +1.5
      comp=Z,71nm,0.8s
MWC   Mount Wilson     59.96  72 eP     P        21 53 41.6 +1.3
      comp=Z,93nm,1.0s
MWC   Mount Wilson     59.96  72 eP     P        21 53 41.6 +1.3
MWC                                pmax   pmax
      comp=Z,93nm,1.0s
SHPR  Sheep Range      59.98  68 eP     P        21 53 41.9 +1.6
      comp=Z,37nm,1.1s
PUL   Pulkovo          60.10 333⇓eP     P        21 53 40.7 +0.2
PUL                                pmax   pmax
      comp=Z,32nm,1.0s
RRX   Edison Barstow   60.11  71  P     P        21 53 42.0 +1.0
      baz=316
SRDT  SRDT             60.18 253  P     P        21 53 43.1 +1.4
      comp=Z,14nm,0.9s
BFSC  Mount Baldy Ra   60.18  72  P     P        21 53 42.8 +1.1
      baz=316,SNR=28
FMP   Fort Macarthur   60.20  73  P     P        21 53 42.8 +1.2
      baz=316
MSU   Marysvale        60.20  65 eP     P        21 53 43.9 +2.1
MSU   Marysvale        60.20  65 eP     P        21 53 43.9 +2.1
K22A  Casper           60.23  58 eP     P        21 53 43.4 +1.4
      comp=Z,41nm,0.8s
K22A  Casper           60.23  58  P     P        21 53 43.0 +1.0
      baz=316,SNR=26
CCUT  Cedar City       60.23  66 eP     P        21 53 43.9 +1.7
      comp=Z,37nm,0.8s
TUQ   Turquoise Moun   60.31  70  P     P        21 53 44.1 +1.5
      baz=316,SNR=15
DHRM  DHARAMSHALA      60.34 285 eP     P        21 53 41.3 -1.6
DHRM                               IAmb   IAmb   21 53 43.3
      comp=Z,55nm,0.6s
CIS   Catalina Islan   60.35  73  P     P        21 53 43.7 +1.0
      baz=317,SNR=11
RSSD  Black Hills      60.42  55 eP     P        21 53 44.6 +1.3
      comp=Z,238nm,0.7s
RSSD  Black Hills      60.42  55 eP     P        21 53 44.6 +1.3
RSSD                               pmax   pmax
      comp=Z,238nm,0.7s
RSSD  Black Hills      60.42  55  P     P        21 53 44.6 +1.3
      baz=317
Q16A  Castle Valley    60.46  64 eP     P        21 53 45.3 +1.7
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      comp=Z,59nm,0.9s
HEC   Hector,Ludlow    60.52  70  P     P        21 53 45.2 +1.4
      baz=316,SNR=29
MTPU  Mount Pierson    60.53  65 eP     P        21 53 46.3 +2.0
      comp=Z,38nm,0.9s
RWWY  Rawlins          60.57  59 eP     P        21 53 44.4  0.0
      comp=Z,44nm,0.8s
SCI2  San Clemente I   60.58  73  P     P        21 53 45.5 +1.3
      baz=317
BBRC  Big Bear Solar   60.59  71  P     P        21 53 45.8 +1.2
      baz=317
SMLA  Simla            60.65 284 eP     P        21 53 42.7 -2.0
SMLA                               IAmb   IAmb   21 53 43.6
      comp=Z,135nm,1.4s
SRU   San Rafael Swe   60.67  63 eP     P        21 53 46.7 +1.7
      comp=Z,149nm,0.8s
SRU   San Rafael Swe   60.67  63 eP     P        21 53 46.7 +1.7
SRU                                pmax   pmax
      comp=Z,149nm,0.8s
LCMT  Little Creek M   60.69  67 eP     P        21 53 44.3 -0.8
      comp=Z,61nm,1.0s
DDI   Dehra Dun        60.71 282 eP     P        21 53 43.6 -1.6
DDI                                IAmb   IAmb   21 53 44.5
      comp=Z,40nm,0.9s
BOK   Bokaro           60.82 271 eP     P        21 53 43.8 -2.1
BOK                                IAmb   IAmb   21 53 48.6
      comp=Z,237nm,3.0s
PKCU  Pink Cliffs      60.89  66 eP     P        21 53 48.9 +2.2
      comp=Z,54nm,0.8s
MURC  Murrieta         60.91  72  P     P        21 53 47.5 +1.0
      baz=317,SNR=15
KNB   Kanab            60.92  66 eP     P        21 53 48.6 +1.9
      comp=Z,54nm,1.0s
KNB   Kanab            60.92  66 eP     P        21 53 48.6 +1.9
KNB                                pmax   pmax
      comp=Z,55nm,1.0s
GMRC  Granite Mounta   60.93  70  P     P        21 53 48.1 +1.3
      baz=317,SNR=61
LDFC  Landfair         61.03  69 eP     P        21 53 48.9 +1.5
      comp=Z,126nm,0.8s
PHET  Kaeng Krachan    61.04 252  P     P        21 53 49.2 +1.7
      comp=Z,22nm,0.8s,comp=Z,168nm
NIL   Nilore           61.10 288 eP     P        21 53 46.9 -0.8
      comp=Z,316nm,1.0s
NIL   Nilore           61.10 288 eP     P        21 53 46.9 -0.8
NIL                                pmax   pmax
      comp=Z,316nm,1.0s
O20A  White River Ci   61.15  61 eP     P        21 53 49.6 +1.4
      comp=Z,88nm,0.8s
O20A  White River Ci   61.15  61  P     P        21 53 49.4 +1.2
      baz=317,SNR=49
MOS   Moscow           61.16 326 eP     P        21 53 45.3 -2.5
MOS                              e               21 54 19.2
MOS                              e               21 54 27.0
AGMN  Agassiz Nation   61.20  47 eP     P        21 53 48.3 +0.1
      comp=Z,39nm,0.8s
AGMN  Agassiz Nation   61.20  47  P     P        21 53 48.6 +0.5
      baz=319,SNR=17
BELC  Belle Mtn. Jos   61.31  71  P     P        21 53 50.1 +0.8
      baz=317,SNR=24
PFO   Pinyon Flats O   61.32  71 eP     P        21 53 49.9 +0.5
      comp=Z,26nm,0.7s
PFO   Pinyon Flats O   61.32  71 eP     P        21 53 49.9 +0.5
PFO                                pmax   pmax
      comp=Z,26nm,0.7s
PFO   Pinyon Flats O   61.32  71  P     P        21 53 50.3 +0.9
      baz=317,SNR=15
XPFO  Pion Flat        61.33  71 eP     P        21 53 50.3 +0.9
      comp=Z,29nm,0.8s
MPSI  Mapaga           61.35 225  P     P        21 53 50.4 +0.8
      comp=Z,22nm,1.2s,comp=Z,334nm
LUWI  Luwuk            61.41 221 eP     P        21 53 49.3 -0.7
      comp=Z,139nm,1.3s
109C  Camp Elliot, M   61.48  72  P     P        21 53 51.4 +1.1
      baz=317
CPE   Camp Elliot      61.48  72 eP     P        21 53 51.5 +1.3
      comp=Z,62nm,0.9s
NEE2  Needles Airpor   61.54  69  P     P        21 53 51.7 +1.1
      baz=317
U15A  North Rim        61.64  66 eP     P        21 53 53.3 +1.6
      comp=Z,47nm,1.2s
IRM   Iron Mountain    61.68  70  P     P        21 53 53.1 +1.4
      baz=317,SNR=33
W13A  Hualapai Mount   61.71  69 eP     P        21 53 53.5 +1.4
      comp=Z,37nm,0.9s
PHWY  Pilot Hill       61.75  58 eP     P        21 53 53.2 +0.8
      comp=Z,8.8nm,0.8s
N23A  Red Feather La   61.80  59 eP     P        21 53 54.1 +1.4
      comp=Z,85nm,0.8s
N23A  Red Feather La   61.80  59  P     P        21 53 54.1 +1.4
      baz=317,SNR=56
PV09  Paradox Valley   61.86  63 eP     P        21 53 54.6 +1.5
MONP2 Monument Peak    61.87  72  P     P        21 53 54.2 +1.0
      baz=317,SNR=16
BC3   Big Chuckawall   61.87  71  P     P        21 53 54.0 +1.0
      baz=317,SNR=31
BAR   Barrett          61.88  72 eP     P        21 53 54.0 +1.0
      comp=Z,45nm,1.0s
PV23  Carpenter Ridg   61.96  63 eP     P        21 53 55.1 +1.4
      comp=Z,100nm,0.9s
PV10  Paradox Valley   62.00  63 eP     P        21 53 55.9 +1.9
      comp=Z,133nm,0.8s
PV14  Lion Creek, Pa   62.01  63 eP     P        21 53 55.8 +1.7
      comp=Z,68nm,0.9s
OBN   Obninsk          62.02 326 eP     P        21 53 52.8 -0.7
OBN                              e               21 54 23.4
OBN                              e               21 54 30.5
OBN                              e               21 56 08.4
OBN                                pmax   pmax
      comp=Z,36nm,0.9s
PV04  Paradox Valley   62.06  63 eP     P        21 53 54.8 +0.5
      comp=Z,112nm,0.8s
PV20  West Nyswonger   62.06  63 eP     P        21 53 56.0 +1.6
      comp=Z,93nm,0.8s
PV19  Morning Glory    62.08  63 eP     P        21 53 55.8 +1.3
      comp=Z,91nm,0.8s
PV17  East Wray Mesa   62.11  63 eP     P        21 53 56.2 +1.5
      comp=Z,181nm,0.7s
PV16  Nyswonger Mesa   62.11  63 eP     P        21 53 56.1 +1.4
      comp=Z,99nm,0.8s
PDMCI Parker Dam,Lak   62.14  69  P     P        21 53 56.0 +1.3
      baz=317,SNR=12
PV11  David Mesa, Pa   62.15  63 eP     P        21 53 56.4 +1.5
      comp=Z,114nm,0.8s
PV07  Paradox Valley   62.17  62 eP     P        21 53 56.4 +1.3
      comp=Z,64nm,0.9s
PV12  Saucer Basin,    62.17  63 eP     P        21 53 56.9 +1.7
      comp=Z,72nm,0.7s
PV05  Paradox Valley   62.19  63 eP     P        21 53 56.8 +1.5
      comp=Z,205nm,0.7s
SWSC  Sam W. Stewart   62.19  72  P     P        21 53 55.9 +0.9
      baz=317,SNR=8.5
VSU   Vasula           62.19 334⇓eP     P        21 53 53.8 -0.8
VSU                                pmax   pmax
      comp=Z,83nm,1.2s
PV03  Paradox Valley   62.19  63 eP     P        21 53 56.6 +1.3
      comp=Z,91nm,0.9s
IKP   In-Ko-Pah, Jac   62.22  72  P     P        21 53 56.6 +1.2
      baz=317,SNR=15
PV13  Radium Mtn., P   62.28  63 eP     P        21 53 57.2 +1.3
      comp=Z,125nm,0.8s
PV02  Paradox Valley   62.29  63 eP     P        21 53 57.2 +1.3
      comp=Z,37nm,0.8s
PV15  Paradox Valley   62.33  62 eP     P        21 53 57.5 +1.3
      comp=Z,108nm,0.7s
Y12C  Blythe           62.33  70 eP     P        21 53 57.5 +1.6
      comp=Z,80nm,1.0s
Y12C  Blythe           62.33  70  P     P        21 53 57.5 +1.6
      baz=317,SNR=16
PV01  Paradox Valley   62.43  63 eP     P        21 53 58.1 +1.3
      comp=Z,128nm,1.6s
SMCO  Snowmass         62.52  61 eP     P        21 53 59.0 +1.3
      comp=Z,72nm,0.8s
SUSD  Miller           62.66  52  P     P        21 53 58.5 +0.5
      baz=319,SNR=7.2
GLA   Glamis           62.67  71 eP     P        21 54 00.2 +1.9
      comp=Z,106nm,1.0s
GLA   Glamis           62.67  71 eP     P        21 54 00.2 +1.9
GLA                                pmax   pmax
      comp=Z,106nm,1.0s
GLA   Glamis           62.67  71  P     P        21 53 59.7 +1.4
      baz=318,SNR=15
ISCO  Idaho Springs    62.77  59 eP     P        21 54 00.9 +1.7
      comp=Z,74nm,0.9s
ISCO  Idaho Springs    62.77  59 eP     P        21 54 00.9 +1.7
ISCO                               pmax   pmax
      comp=Z,74nm,0.9s
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ISCO	Idaho Springs	62.77	59	P	P	21 54 01.0	+1.7
	baz=318,SNR=62						
WUAZ	Wupatki	62.81	67	eP	P	21 54 00.8	+1.5
	comp=Z,113nm,1.3s						
WUAZ	Wupatki	62.81	67	P	P	21 54 01.1	+1.7
	baz=318,SNR=28						
Y14A	Wickenburg	63.05	69	eP	P	21 54 02.4	+1.6
	comp=Z,59nm,1.0s						
MVCO	Mesa Verde	63.14	63	eP	P	21 54 02.8	+1.2
	comp=Z,65nm,0.8s						
MVCO	Mesa Verde	63.14	63	P	P	21 54 02.8	+1.2
	baz=318,SNR=42						
NC303	NORSAR Array S	63.16	343	eP	P	21 54 00.7	-0.3
NC405	NORSAR Array S	63.20	343	eP	P	21 54 01.2	-0.1
NC204	NORSAR Array S	63.22	343	eP	P	21 54 01.0	-0.5
LPSR	Galich'ya Gora	63.24	323	eP	P	21 53 59.6	-2.0
LPSR				e		21 54 33.2	
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
NB201	NORSAR Array S	63.33	343	eP	P	21 54 01.6	-0.6
NB2	NORSAR Subarra	63.36	343	P	P	21 54 01.6	-0.8
	comp=Z,6.7nm,0.6s,baz=22,slow=6.9						
NOA	NORSAR Array B	63.36	343	P	P	21 54 01.8	-0.6
	comp=Z,8.1nm,0.6s,baz=21,slow=6.7,SNR=57						
NOA				pP	PcP	21 54 35.1	-3.1
	comp=Z,5.3nm,0.9s,baz=22,slow=6.8,SNR=2.2						
EYMN	Ely	63.37	45	eP	P	21 54 03.0	+0.3
	comp=Z,68nm,0.8s						
EYMN	Ely	63.37	45	P	P	21 54 02.9	+0.3
	baz=321,SNR=39						
NBO00	NORSAR Array S	63.44	343	eP	P	21 54 02.8	-0.1
113A	Mohawk Valley,	63.48	70	eP	P	21 54 04.8	+1.2
	comp=Z,36nm,1.0s						
BWNR	Bhubaneshwar	63.51	269	ex	P	21 53 56.9	-6.9
X16A	Lo Mia Camp, P	63.58	67	eP	P	21 54 06.3	+1.9
	comp=Z,51nm,0.9s						
Q24A	Divide	63.63	60	P	P	21 54 06.2	+1.3
	baz=318,SNR=24						
S22A	4UR Ranch, Cre	63.65	62	eP	P	21 54 06.8	+1.9
	comp=Z,52nm,0.9s						
S22A	4UR Ranch, Cre	63.65	62	P	P	21 54 06.6	+1.6
	baz=318,SNR=33						
OGNE	Ogallala	63.76	56	eP	P	21 54 06.3	+0.9
	comp=Z,122nm,0.8s						
OGNE	Ogallala	63.76	56	P	P	21 54 06.5	+1.0
	baz=319,SNR=28						
VORR	Voronezh	63.89	323	P	P	21 54 03.0	-2.9
VORR				pmax	pmax		
	comp=Z,250nm,0.8s						
W18A	Petrified Fore	64.01	66	eP	P	21 54 09.4	+2.1
	comp=Z,55nm,0.9s						
W18A	Petrified Fore	64.01	66	P	P	21 54 08.9	+1.7
	baz=318,SNR=6.8						
SLIT	Slitere, Latvi	64.08	335	eP	P	21 54 04.3	-2.7
SLIT				IAmb	IAmb	21 54 07.1	
	comp=Z,210nm,1.0s						
BKB	Balikpapan	64.09	227	P	P	21 54 07.5	-0.2
IVI	Ivigtut	64.27	14	eP	P	21 54 08.9	+0.7
	comp=Z,70nm,0.8s						
VSR	Storozhevoye	64.27	322	eP	P	21 54 06.4	-2.0
VSR				e		21 54 40.2	
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
ECSD	EROS Data Cent	64.30	51	eP	P	21 54 09.2	+0.5
	comp=Z,103nm,0.8s						
ECSD	EROS Data Cent	64.30	51	P	P	21 54 09.3	+0.5
	baz=320,SNR=69						
X18A	Snowflake	64.33	66	eP	P	21 54 11.2	+1.9
	comp=Z,89nm,0.9s						
SDCO	Great Sand Dun	64.35	61	eP	P	21 54 10.8	+1.3
	comp=Z,28nm,0.9s						
SDCO	Great Sand Dun	64.35	61	P	P	21 54 11.0	+1.4
	baz=318,SNR=39						
C40A	Isle Royale Na	64.38	44	eP	P	21 54 09.2	+0.1
	comp=Z,22nm,0.8s						
C40A	Isle Royale Na	64.38	44	P	P	21 54 08.8	-0.4
	baz=322						
E38A	The Farm, Brul	64.38	46	eP	P	21 54 09.5	+0.2
	comp=Z,97nm,0.6s						
E38A	The Farm, Brul	64.38	46	P	P	21 54 09.4	+0.2
	baz=321,SNR=19						
F37A	Hinrichs Farm,	64.59	47	P	P	21 54 11.0	+0.4
	baz=321						
214A	Organ Pipe Nat	64.62	70	P	P	21 54 12.4	+1.3
	baz=318,SNR=29						
NRS	Narsarsuaq	64.69	12	eP	P	21 54 11.1	+0.1
	comp=Z,215nm,2.0s						
NRS	Narsarsuaq	64.69	12	i P	P	21 54 10.3	-0.7
	comp=Z,74nm,1.0s						
NRS	Narsarsuaq	64.69	12	eP	P	21 54 11.1	+0.1
NRS				pmax	pmax		
	comp=Z,215nm,2.0s						
MTKI	Muara Teweh, K	64.71	229	P	P	21 54 12.4	+0.7
F38A	Pierce - Schro	64.74	46	P	P	21 54 12.3	+0.7
	baz=321,SNR=42						
KSM	Kuching	64.80	235	eP	P	21 54 14.0	+1.6
	comp=Z,145nm,0.9s						
SPMN	Marine on St.	64.90	48	eP	P	21 54 13.2	+0.5
	comp=Z,60nm,0.8s						
SPMN	Marine on St.	64.90	48	P	P	21 54 13.0	+0.4
	baz=321,SNR=13						
KSCO	Kaye Shedlock’	64.91	58	eP	P	21 54 14.1	+1.1
	comp=Z,88nm,1.3s						
KSCO	Kaye Shedlock’	64.91	58	P	P	21 54 13.8	+0.9
	baz=319,SNR=6.4						
IDID	Didziasalis	64.91	332	eP	P	21 54 12.1	-0.4
IDID				IAmb	IAmb	21 54 24.7	
	comp=Z,11nm,1.1s						
KONO	Kongsberg	64.95	343	eP	P	21 54 12.9	+0.2
	comp=Z,75nm,1.5s						
KONO	Kongsberg	64.95	343	eP	P	21 54 12.9	+0.2
KONO				pmax	pmax		
	comp=Z,75nm,1.5s						
E39A	Mellen	64.99	45	P	P	21 54 13.4	+0.2
	baz=322,SNR=53						
IIGN	Ignalina	65.03	332	eP	P	21 54 13.1	-0.2
IIGN				IAmb	IAmb	21 54 14.8	
	comp=Z,8.1nm,0.5s						
TRTT	Trang	65.11	249	P	P	21 54 15.5	+1.1
	comp=Z,23nm,1.3s						
SKLT	Songkhla	65.14	247	P	P	21 54 16.2	+1.7
	comp=Z,86nm,1.2s,comp=Z,1µmcomp=Z,90µm						
F39A	Loretta	65.19	46	P	P	21 54 14.9	+0.4
	baz=322,SNR=15						
E40A	Wakefield	65.22	45	P	P	21 54 15.5	+0.8
	baz=322,SNR=69						
D41A	Chassel	65.30	44	eP	P	21 54 15.4	+0.2
	comp=Z,48nm,0.6s						
D41A	Chassel	65.30	44	P	P	21 54 15.4	+0.2
	baz=323,SNR=7.7						
BGNE	Belgrade	65.33	54	eP	P	21 54 16.1	+0.5
	comp=Z,137nm,0.8s						
BGNE	Belgrade	65.33	54	P	P	21 54 16.0	+0.5
	baz=320,SNR=11						
G38A	Ridgeland	65.37	47	P	P	21 54 15.7	0.0
	baz=322,SNR=20						
T25A	Trinidad	65.38	61	eP	P	21 54 17.3	+1.1
	comp=Z,76nm,1.3s						
T25A	Trinidad	65.38	61	P	P	21 54 17.2	+1.1
	baz=319,SNR=22						
TUC	Tucson	65.51	68	eP	P	21 54 18.1	+1.2
	comp=Z,33nm,1.0s						
TUC	Tucson	65.51	68	eP	P	21 54 18.1	+1.2
TUC				pmax	pmax		
	comp=Z,33nm,1.0s						
TUC	Tucson	65.51	68	P	P	21 54 18.2	+1.3
	baz=319						
F40A	Park Falls	65.54	45	P	P	21 54 16.8	+0.1
	baz=322,SNR=14						
H38A	Maiden Rock	65.56	48	P	P	21 54 17.3	+0.4
	baz=322,SNR=5.5						
G39A	Holcombe	65.58	47	P	P	21 54 16.9	-0.1
	baz=322,SNR=6.6						
PBUR	Paburg	65.59	335	eP	P	21 54 15.8	-1.1
PBUR				IAmb	IAmb	21 54 17.0	
	comp=Z,86nm,1.3s						
E41A	Kenton	65.60	44	P	P	21 54 17.3	+0.2
	baz=323,SNR=15						
COWI	Conover	65.81	45	eP	P	21 54 18.6	0.0
	comp=Z,46nm,0.7s						
ANMO	Albuquerque	65.93	64	eP	P	21 54 20.8	+1.2
	comp=Z,38nm,0.8s						
ANMO	Albuquerque	65.93	64⇑	eP	P	21 54 19.8	+0.1
ANMO				pmax	pmax		
	comp=Z,42nm,0.9s						
ANMO	Albuquerque	65.93	64	P	P	21 54 21.1	+1.5
	baz=319						
LAZ	Ladron	65.97	64	eP	P	21 54 21.9	+1.9
H39A	Augusta	66.00	47	P	P	21 54 19.8	+0.1
	baz=322						
G40A	Rib Lake	66.01	46	eP	P	21 54 20.1	+0.2
	comp=Z,17nm,0.6s						
G40A	Rib Lake	66.01	46	P	P	21 54 20.0	+0.2
	baz=322,SNR=5.8						
PBA	Port Blair	66.06	257	eP	P	21 54 19.1	-1.3
E42A	Champion	66.07	44	P	P	21 54 20.3	+0.2
	baz=323,SNR=15						
F41A	Three Lakes	66.11	45	eP	P	21 54 20.9	+0.4
	comp=Z,66nm,0.8s						
F41A	Three Lakes	66.11	45	P	P	21 54 20.8	+0.3
	baz=323,SNR=18						
GEYT	Alibeck	66.21	302	P	P	21 54 20.2	-1.0
	comp=Z,36nm,0.9s,baz=5.4,slow=3.1,SNR=67						
GEYT				pP	pP	21 54 54.1	-0.1
	comp=Z,20nm,0.9s,baz=20,slow=4.7,SNR=5.7						
GEYT				LR	LR	22 27 30.1	
	comp=Z,98nm,18.3s,baz=35,slow=40						
GYA0B	ALIBECK ARRAY	66.21	302	eP	P	21 54 20.3	-0.9
	comp=Z,38nm,0.9s						
LENM	Lemitar	66.23	65	eP	P	21 54 23.4	+1.8
SCHQ	Schefferville	66.30	27	P	P	21 54 21.8	+0.3
	comp=Z,15nm,0.5s,baz=345,slow=6.0,SNR=35						
SCHQ				pP	PcP	21 54 53.8	+3.4
	comp=Z,11nm,0.7s,baz=356,slow=7.9,SNR=3.3						
LPM	Los Pinos Moun	66.31	64	eP	P	21 54 24.3	+2.2
BHPL	Bhopal	66.33	278	eP	P	21 54 20.0	-2.2
BHPL				IAmb	IAmb	21 54 22.8	
	comp=Z,119nm,1.7s						
BNM	Barren Site	66.44	64	eP	P	21 54 24.7	+1.7
H40A	Chili	66.44	47	P	P	21 54 22.6	+0.1
	baz=322,SNR=9.5						
E43A	Lone Tree Farm	66.50	43	eP	P	21 54 22.7	-0.1
	comp=Z,23nm,0.6s						
E43A	Lone Tree Farm	66.50	43	P	P	21 54 22.8	-0.1
	baz=324,SNR=6.1						
G41A	Antigo	66.50	45	P	P	21 54 23.1	+0.2
	baz=323						
F42A	Maple Grove Fa	66.51	44	P	P	21 54 23.2	+0.2
	baz=323						
CBKS	Cedar Bluff	66.53	56	eP	P	21 54 22.9	-0.3
	comp=Z,54nm,0.8s						
CBKS	Cedar Bluff	66.53	56	eP	P	21 54 22.9	-0.3
CBKS				pmax	pmax		
	comp=Z,54nm,0.8s						
CBKS	Cedar Bluff	66.53	56	P	P	21 54 23.2	0.0
	baz=320,SNR=11						
I39A	Houston	66.54	48	eP	P	21 54 23.1	-0.1
	comp=Z,67nm,0.8s						
I39A	Houston	66.54	48	P	P	21 54 23.1	-0.1
	baz=322,SNR=16						
KULM	Kulim	66.67	246	eP	P	21 54 25.1	+0.8
	comp=Z,196nm,1.7s						
E44A	Grand Marais A	66.74	42	P	P	21 54 24.6	+0.2
	baz=324,SNR=5.3						
H41A	Junction City	66.77	46	eP	P	21 54 24.8	+0.1
	comp=Z,34nm,0.6s						
H41A	Junction City	66.77	46	P	P	21 54 24.6	0.0
	baz=323,SNR=9.5						
G42A	Mountain	66.80	45	eP	P	21 54 25.4	+0.6
	comp=Z,26nm,0.8s						
G42A	Mountain	66.80	45	P	P	21 54 24.9	+0.1
	baz=323						
F43A	Flat Rock, Esc	66.86	44	P	P	21 54 25.3	+0.2
	baz=324						
J39A	Decorah	66.87	48	P	P	21 54 24.8	-0.5
	baz=322,SNR=20						
I40A	Norwalk	66.92	47	P	P	21 54 25.6	+0.1
	baz=322,SNR=13						
NGP	Nagpur	66.94	275	eP	P	21 54 23.4	-2.6
121A	Cookes Peak, D	67.02	66	P	P	21 54 28.4	+1.8
	baz=319,SNR=21						
SUW	Suwalki	67.05	333	eP	PcP	21 54 52.6	-0.8
319A	Douglas	67.05	68	eP	P	21 54 28.5	+1.7
	comp=Z,126nm,0.9s						
F44A	Big Bay de Noc	67.06	43	P	P	21 54 26.4	0.0
	baz=324						
G43A	Wallace	67.10	44	eP	P	21 54 27.4	+0.7
	comp=Z,81nm,0.7s						
G43A	Wallace	67.10	44	P	P	21 54 26.7	0.0
	baz=324,SNR=8.5						
I41A	Arkdale	67.11	47	eP	P	21 54 27.4	+0.5
	comp=Z,33nm,0.8s						
I41A	Arkdale	67.11	47	P	P	21 54 27.0	+0.2
	baz=323						
IPM	Ipoh	67.13	245	eP	P	21 54 27.4	+0.1
	comp=Z,244nm,1.7s						
J40A	Soldiers Grove	67.25	48	P	P	21 54 27.3	-0.4
	baz=323,SNR=6.2						
K39A	Oelwein	67.28	49	P	P	21 54 27.3	-0.6
	baz=322,SNR=7.1						
D46A	Sault St. Mari	67.28	41	P	P	21 54 27.1	-0.8
	baz=325,SNR=12						
SCIA	State Center	67.30	50	eP	P	21 54 28.7	+0.6
	comp=Z,263nm,0.6s						
SCIA	State Center	67.30	50	P	P	21 54 28.6	+0.6
	baz=322,SNR=20						
KLNR	Kaliningrad	67.31	335⇓	eP	P	21 54 26.5	-1.3
KLNR				pmax	pmax		
	comp=Z,67nm,1.5s						
MATQ	Matagami	67.31	36	P	P	21 54 27.5	-0.4
	baz=327,SNR=8.2						
H42A	Shiocton	67.34	45	P	P	21 54 27.7	-0.5
	baz=323						
J41A	Loganville	67.60	47	P	P	21 54 29.7	-0.2
	baz=323,SNR=9.4						
E46A	Sault Ste Mari	67.60	42	P	P	21 54 29.3	-0.5
	baz=325,SNR=11						
K40A	Colesburg	67.62	48	P	P	21 54 29.8	-0.2
	baz=323,SNR=10						
F45A	CMU Biological	67.67	43	P	P	21 54 30.1	-0.1
	baz=324						
I42A	Draeger Farm,	67.67	46	P	P	21 54 30.3	+0.1
	baz=323						
L39A	Vinton	67.69	49	P	P	21 54 30.5	+0.1
	baz=322,SNR=9.7						
H43A	Windswept, Lux	67.70	45	P	P	21 54 30.6	+0.2
	baz=324						
JFWS	Jewell Farm	67.86	48	eP	P	21 54 30.8	-0.7
	comp=Z,28nm,0.8s						
JFWS	Jewell Farm	67.86	48	eP	P	21 54 30.8	-0.7
JFWS				pmax	pmax		
	comp=Z,28nm,0.8s						
JFWS	Jewell Farm	67.86	48	P	P	21 54 30.8	-0.7
	baz=323						
KSU1	Kansas State U	67.86	54	eP	P	21 54 31.0	-0.6
	comp=Z,41nm,0.7s						
KSU1	Kansas State U	67.86	54	P	P	21 54 31.1	-0.5
	baz=321,SNR=9.0						
COEN	Coen	67.88	196	eP	P	21 54 32.8	+1.0
F46A	Macinaw City C	67.90	42	P	P	21 54 31.7	0.0
	baz=325,SNR=18						
E47A	Iron Bridge	67.94	41	P	P	21 54 31.2	-0.8
	baz=325,SNR=10						
I43A	Langenfeld Bro	68.00	46	P	P	21 54 32.2	-0.2
	baz=324						
GROC	Groznyy	68.02	313	eP	P	21 54 29.6	-2.9
GROC				e		21 54 56.8	
GROC				e*PP	pP	21 55 04.3	-1.4
GROC				e*SP	sP	21 55 18.5	-2.0
GROC				pmax	pmax		
	comp=Z,11nm,0.6s						
J42A	Columbus	68.03	47	P	P	21 54 32.3	-0.2
	baz=323,SNR=12						
MUD	Monsted U'grnd	68.04	342	i P	P	21 54 32.1	-0.2
	comp=Z,69nm,1.3s						
MUD	Monsted U'grnd	68.04	342	i P	P	21 54 32.1	-0.2
MUD				pmax	pmax		
	comp=Z,69nm,1.3s						
K41A	Shullsburg	68.07	48	P	P	21 54 32.6	-0.2
	baz=323,SNR=5.5						
L40A	Anamosa	68.09	49	eP	P	21 54 32.6	-0.3
	comp=Z,55nm,0.7s						
L40A	Anamosa	68.09	49	P	P	21 54 32.7	-0.3
	baz=323,SNR=12						
MLA1	Latheron	68.10	350	eP	P	21 54 33.2	+0.5
BSD	Bornholm Skovb	68.11	338	i P	P	21 54 33.0	+0.2
BSD	Bornholm Skovb	68.11	338	i P	P	21 54 33.0	+0.2
COP	Copenhagen	68.12	340	i P	P	21 54 33.0	+0.2
	comp=Z,30nm,0.9s						
COP	Copenhagen	68.12	340	i P	P	21 54 33.0	+0.2
COP				pmax	pmax		
	comp=Z,30nm,0.9s						
M39A	Webster	68.12	50	P	P	21 54 33.3	+0.2
	baz=322,SNR=35						
G45A	Suttons Bay	68.13	43	P	P	21 54 33.1	0.0
	baz=324						
LSQQ	Lebel-sur-Quev	68.13	36	P	P	21 54 32.8	-0.3
	baz=328						
AKASG	Malin Array Be	68.15	328	P	P	21 54 31.6	-1.6
	comp=Z,7.3nm,0.5s,baz=32,slow=6.4,SNR=54						
AKASG				pP	pP	21 55 05.3	-1.1
	comp=Z,8.7nm,0.7s,baz=32,slow=6.7,SNR=3.2						
AKASG				LR	LR	22 30 20.8	
	comp=Z,56nm,20.9s,baz=35,slow=41						
AKBB	Malin Array Si	68.15	328	eP	P	21 54 31.9	-1.2
	comp=Z,27nm,0.9s						
AKBB	Malin Array Si	68.15	328	eP	P	21 54 31.9	-1.2
AKBB				pmax	pmax		
	comp=Z,27nm,0.9s						
KIEV	Kiev	68.16	328	eP	P	21 54 32.4	-0.8
	comp=Z,60nm,1.4s						
KIEV	Kiev	68.16	328	i P	P	21 54 31.8	-1.4
	SNR=15						
KIEV	Kiev	68.16	328	eP	P	21 54 32.4	-0.8
KIEV				pmax	pmax		
	comp=Z,60nm,1.4s						
AK11	Malin Array Si	68.18	328	eP	P	21 54 32.2	-1.2
G46A	Petoskey	68.23	43	P	P	21 54 33.6	-0.2
	baz=325						
J43A	Natural Harves	68.29	46	P	P	21 54 34.5	+0.3
	baz=324						
CHGQ	Chibougamau	68.30	34	P	P	21 54 33.8	-0.3
	baz=329,SNR=15						
H45A	Beulah	68.31	44	P	P	21 54 34.4	+0.2
	baz=324						
E48A	Lockeyer	68.36	40	P	P	21 54 33.9	-0.7
	baz=326,SNR=5.6						
K42A	Prairie Point,	68.36	47	P	P	21 54 34.2	-0.4
	baz=323,SNR=9.1						
L41A	Preston	68.41	48	P	P	21 54 34.6	-0.3
	baz=323,SNR=7.6						
M40A	Post Highland	68.48	49	P	P	21 54 35.2	-0.2
	baz=323,SNR=10						
AMTX	Amarillo	68.53	60	eP	P	21 54 36.8	+0.8
	comp=Z,117nm,1.3s						
AMTX	Amarillo	68.53	60	P	P	21 54 36.6	+0.6
	baz=320						
MSTX	Muleshoe	68.65	62	eP	P	21 54 37.5	+0.8
	comp=Z,83nm,0.9s						
MSTX	Muleshoe	68.65	62	P	P	21 54 37.4	+0.7
	baz=320,SNR=22						
D50A	G1974 Best Tow	68.68	38	P	P	21 54 35.8	-0.8
	baz=327,SNR=9.0						
I45A	Fountain	68.70	44	P	P	21 54 37.1	+0.4
	baz=324						
F48A	Evansville	68.72	41	P	P	21 54 36.0	-0.7
	baz=326						
H46A	Fife Lake	68.72	43	P	P	21 54 36.8	-0.1
	baz=325,SNR=7.2						
GLMI	Grayling	68.73	43	P	P	21 54 36.9	-0.1
	baz=325						
NCK	Nalchik	68.75	315⇓	eP	P	21 54 36.2	-0.8
NCK				pmax	pmax		
	comp=Z,12nm,0.8s						
G47A	Hillman	68.76	42	P	P	21 54 36.8	-0.2
	baz=325						
KIV	Kislovodsk	68.76	316	eP	P	21 54 36.7	-0.5
	comp=Z,15nm,0.9s						
KIV	Kislovodsk	68.76	316	P	P	21 54 37.7	+0.5
KIV	Kislovodsk	68.76	316	eP	P	21 54 36.2	-1.0
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VLDQ	Val d'Or	68.77	36	eP	P	21 54 35.7	-1.3
	comp=Z,43nm,0.8s						
U32A	Winter Ranch,	68.77	58	eP	P	21 54 37.5	+0.2
LHMI	Lhok Sumawe	68.79	250	P	P	21 54 39.1	+1.5
	comp=Z,118nm,1.6s						
MCD	Coleburn Disti	68.80	349⇓	eP	P	21 54 37.2	+0.1
L42A	Oliver, Polo	68.84	48	eP	P	21 54 37.0	-0.6
	comp=Z,73nm,0.6s						
L42A	Oliver, Polo	68.84	48	P	P	21 54 37.2	-0.4
	baz=323,SNR=9.7						
KBZ	Khabaz	68.86	315	P	P	21 54 36.9	-0.7
	comp=Z,12nm,0.8s,baz=73,slow=3.0,SNR=26						
KBZ				LR	LR	22 31 04.0	
	comp=Z,72nm,18.1s,baz=24,slow=41						
N40A	Mertquake, Sal	68.86	50	P	P	21 54 37.9	+0.2
	baz=323,SNR=24						
K43A	Burlington	68.87	46	eP	P	21 54 37.9	+0.1
	comp=Z,110nm,0.8s						
K43A	Burlington	68.87	46	P	P	21 54 37.5	-0.3
	baz=324,SNR=5.3						
D51A	Lot 18 Range I	68.92	38	P	P	21 54 37.3	-0.7
	baz=327,SNR=6.5						
M41A	Milan	68.95	49	P	P	21 54 38.1	-0.2
	baz=323,SNR=11						
E50A	Wahnapitae	68.96	39	P	P	21 54 37.6	-0.7
	baz=327						
MNTX	Cornudas Mount	68.97	65	eP	P	21 54 40.1	+1.4
	comp=Z,72nm,0.9s						
MNTX	Cornudas Mount	68.97	65	P	P	21 54 40.0	+1.4
	baz=320,SNR=52						
F49A	Sandfield	69.00	41	P	P	21 54 37.9	-0.6
	baz=326						
MDO	Dochfour	69.06	350⇓	eP	P	21 54 38.7	0.0
CMBY	CAMPBELL BAY	69.08	253	eP	P	21 54 36.9	-2.5
CMBY				IAmb	IAmb	21 54 39.0	
	comp=Z,110nm,0.9s						
H47A	Mio	69.09	43	P	P	21 54 39.4	+0.3
	baz=325						
KAC	Achnashellach	69.09	351⇓	eP	P	21 54 38.8	-0.2
I46A	Reed City	69.11	44	P	P	21 54 39.5	+0.2
	baz=325						
L43A	Garden Prairie	69.11	47	P	P	21 54 38.8	-0.5
	baz=324						
J45A	Montague	69.12	45	P	P	21 54 39.4	0.0
	baz=324						
GKP	Gorka Klasztor	69.26	336	eP	P	21 54 40.0	0.0
GKP	Gorka Klasztor	69.26	336	eP	P	21 54 40.0	0.0
TSI	Tuntungan	69.30	247	P	P	21 54 41.9	+1.1
	comp=Z,96nm,0.8s						
N41A	Harden Midland	69.33	49	eP	P	21 54 41.0	+0.3
	comp=Z,107nm,0.6s						
N41A	Harden Midland	69.33	49	P	P	21 54 40.8	+0.1
	baz=323,SNR=9.4						
E51A	G1948 Merrick	69.34	39	P	P	21 54 39.8	-0.8
	baz=327,SNR=7.3						
DRUM	Mains of Drumt	69.37	349	eP	P	21 54 39.7	-0.9
D52A	ZEK Kipawa Sen	69.37	38	P	P	21 54 40.2	-0.6
	baz=328						
L44A	Lake County Fo	69.48	47	P	P	21 54 41.4	-0.1
	baz=324						
J46A	Howard City	69.51	44	P	P	21 54 42.0	+0.3
	baz=325						
MTN	Manton Dam	69.53	208	eP	P	21 54 43.1	+1.1
	comp=Z,89nm,0.8s						
D53A	Lac Vacive, Po	69.55	37	P	P	21 54 41.6	-0.3
	baz=328,SNR=11						
M43A	Waltham Townsh	69.61	48	P	P	21 54 42.0	-0.4
	baz=324						
N42A	Yates City	69.61	49	P	P	21 54 42.4	0.0
	baz=324,SNR=5.6						
BEL	Belsk	69.65	333	eP	P	21 54 42.4	0.0
BEL	Belsk	69.65	333	eP	P	21 54 42.4	0.0
TBLG	Delisi	69.67	313	eP	P	21 54 42.4	-0.4
	comp=Z,26nm,0.8s						
TBLG	Delisi	69.67	313	P	P	21 54 42.4	-0.4
TBLG				pmax	pmax		
	comp=Z,25nm,0.8s						
PSI	Prapat	69.68	246	eP	P	21 54 42.3	-1.0
	comp=Z,166nm,1.8s						
PSI	Prapat	69.68	246	eP	P	21 54 42.3	-1.0
PSI				pmax	pmax		
	comp=Z,166nm,1.8s						
F51A	Arnstein	69.69	39	P	P	21 54 41.9	-0.8
	baz=327						
TPI	Tanjungpandan	69.76	235	P	P	21 54 43.6	0.0
	comp=Z,79nm,1.1s,comp=Z,10µm						
EDU	Dundee	69.79	349⇓	eP	P	21 54 42.7	-0.4
O41A	Passleys Farm,	69.79	50	P	P	21 54 43.7	+0.2
	baz=323,SNR=26						
E52A	Mattawa	69.86	38	P	P	21 54 42.9	-0.9
	baz=328,SNR=5.6						
D54A	Lac Fusel, La	69.86	36	P	P	21 54 43.4	-0.5
	baz=328,SNR=12						
MLSI	Meulaboh, Aceh	69.89	249	P	P	21 54 43.9	-0.5
	comp=Z,66nm,1.2s						
N43A	Stutzman Famil	69.91	48	P	P	21 54 44.0	-0.2
	baz=324,SNR=5.2						
J47A	Sunmer	69.94	44	P	P	21 54 44.7	+0.4
	baz=325,SNR=5.4						

K46A	Dorr	69.99	45	P	P	21 54 44.7	0.0
	baz=325,SNR=9.6						
PPBI	Pangkal Pinang	70.02	237	P	P	21 54 45.9	+0.8
	comp=Z,76nm,1.1s,comp=Z,906nm						
F52A	Sundridge	70.03	39	P	P	21 54 44.3	-0.6
	baz=327,SNR=5.4						
M44A	Midewin, Midew	70.06	47	P	P	21 54 45.0	-0.1
	baz=324						
P41A	Barry, Barry	70.06	50	P	P	21 54 45.5	+0.4
	baz=323,SNR=44						
HYB	Hyderabad	70.09	273	i P	P	21 54 45.0	-0.7
HYB	Hyderabad	70.09	273	eP	P	21 54 44.1	-1.6
HYB				IAmb	IAmb	21 54 46.8	
	comp=Z,11nm,0.6s						
E53A	Dumoine, Ponti	70.15	38	P	P	21 54 45.1	-0.5
	baz=328,SNR=10						
WMOK	Wichita Mounta	70.15	59	eP	P	21 54 46.1	+0.3
	comp=Z,79nm,1.1s						
WMOK	Wichita Mounta	70.15	59	eP	P	21 54 46.2	+0.3
WMOK				pmax	pmax		
	comp=Z,79nm,1.1s						
WMOK	Wichita Mounta	70.15	59	P	P	21 54 46.4	+0.6
	baz=322,SNR=52						
HDIL	Hopedale	70.17	48	eP	P	21 54 45.7	-0.1
	comp=Z,89nm,0.6s						
HDIL	Hopedale	70.17	48	P	P	21 54 45.8	-0.1
	baz=324,SNR=8.8						
I49A	Point Hope	70.19	42	P	P	21 54 45.7	-0.2
	baz=326						
ANN	Anapa	70.21	319	eP	P	21 54 35.4	-11
ANN				e*PP	PcP	21 55 11.5	+4.6
ANN				e*SS	SKiKP	22 04 14.9	-1.9
ANN				pmax	pmax		
	comp=Z,37nm,1.5s						
E54A	Lac Daplat, Po	70.28	37	P	P	21 54 45.7	-0.7
	baz=328,SNR=9.1						
EAB	Aberfoyle	70.29	350	⇓eP	P	21 54 46.1	-0.1
BMRO	Meriville Lake	70.29	41	P	P	21 54 46.2	-0.3
	baz=327						
SOC	Sochi	70.30	317	eP	P	21 54 45.0	-1.6
SOC				e		21 57 20.0	
SOC				eS	S	22 03 47.0	-0.4
L46A	Eue Claire	70.32	46	P	P	21 54 46.7	+0.1
	baz=325						
LAWE	Loch Awe, Argy	70.33	350	eP	P	21 54 46.3	-0.1
LAWE				IAmb	IAmb	21 54 46.9	
	comp=Z,51nm,0.8s						
J48A	Bridge Port	70.33	43	P	P	21 54 46.8	+0.1
	baz=326						
K47A	Vermontville	70.33	44	P	P	21 54 46.8	0.0
	baz=325,SNR=8.8						
ESY	Stoneypath	70.36	349	⇓eP	P	21 54 46.6	-0.1
ALGO	Algonquin Park	70.37	38	P	P	21 54 46.1	-0.8
	baz=328,SNR=6.4						
O43A	Sugar Creek Fa	70.38	49	P	P	21 54 47.0	-0.1
	baz=324,SNR=5.4						
M45A	Boilermakers S	70.41	47	P	P	21 54 47.0	-0.2
	baz=325						
P42A	Winchester	70.47	50	eP	P	21 54 47.9	+0.2
	comp=Z,48nm,0.6s						
P42A	Winchester	70.47	50	P	P	21 54 47.8	+0.2
	baz=324,SNR=13						
N44A	Piper City	70.50	48	P	P	21 54 47.8	0.0
	baz=324,SNR=5.0						
EAU	Auchinoon	70.53	349	⇓eP	P	21 54 47.9	+0.2
LVV	L'vov	70.53	330	eP	P	21 54 46.9	-0.9
J49A	Marlette	70.54	43	P	P	21 54 48.1	+0.1
	baz=326						
EBL	Broad Law	70.55	349	⇓eP	P	21 54 47.6	-0.2
Q41A	Truxton	70.56	51	P	P	21 54 48.6	+0.5
	baz=323,SNR=43						
BKNI	Bangkinang	70.58	243	eP	P	21 54 49.5	+0.9
	comp=Z,282nm,1.1s						
BKNI	Bangkinang	70.58	243	P	P	21 54 49.9	+1.3
	comp=Z,241nm,1.1s,comp=Z,3µm						
K48A	Perry	70.60	44	P	P	21 54 48.8	+0.4
	baz=326,SNR=11						
PGBU	Glenifferbraes	70.67	350	eP	P	21 54 48.7	+0.1
PGBU				IAmb	IAmb	21 54 49.7	
	comp=Z,214nm,1.3s						
N45A	Kentland	70.73	47	P	P	21 54 49.1	-0.1
	baz=325						
TUL1	Leonard	70.76	56	eP	P	21 54 49.9	+0.4
	comp=Z,83nm,1.0s						
TUL1	Leonard	70.76	56	P	P	21 54 49.7	+0.2
	baz=322,SNR=14						
M46A	Old House Fiel	70.78	46	eP	P	21 54 49.7	+0.2
	comp=Z,72nm,1.0s						
M46A	Old House Fiel	70.78	46	P	P	21 54 49.6	0.0
	baz=325						
P43A	Skaggs, Pawnee	70.80	49	P	P	21 54 49.7	0.0
	baz=324,SNR=7.6						
L47A	Sherwood	70.82	45	P	P	21 54 49.7	0.0
	baz=325,SNR=13						
G53A	Haliburton	70.86	39	P	P	21 54 49.4	-0.5
	baz=328,SNR=8.8						
O44A	Mansfield	70.87	48	P	P	21 54 49.8	-0.2
	baz=324						
K49A	Clarkson	70.89	43	P	P	21 54 50.7	+0.5
	baz=326,SNR=12						
PEMO	Pembroke	70.90	38	P	P	21 54 49.4	-0.7
	baz=328						
Q42A	Golden Eagle	70.92	50	P	P	21 54 50.9	+0.6
	baz=324,SNR=31						
GNI	Garni	70.94	312	eP	P	21 54 50.1	-0.7
	comp=Z,24nm,0.9s						
GNI	Garni	70.94	312	i P	P	21 54 50.8	0.0
	SNR=7.8						
GNI	Garni	70.94	312	d iP	P	21 54 50.4	-0.3
GNI				pmax	pmax		
	comp=Z,74nm,1.1s						
GNI	Garni	70.94	312	P	P	21 54 51.1	+0.4
	SNR=7.5						
BHJ	Bhuj	70.95	283	eP	P	21 54 49.3	-1.4
BHJ				IAmb	IAmb	21 54 50.3	
	comp=Z,23nm,0.5s						
MNSI	Mandailing Nat	70.98	245	P	P	21 54 50.0	-1.0
	comp=Z,20nm,0.7s						
R41A	Rosebud	71.01	51	P	P	21 54 51.1	+0.1
	baz=324,SNR=19						
ESK	Eskdalemuir	71.02	349	eP	P	21 54 49.5	-1.1
	comp=Z,51nm,0.9s						
ESK	Eskdalemuir	71.02	349	eP	P	21 54 50.6	0.0
ESK				IAmb	IAmb	21 54 51.6	
	comp=Z,54nm,0.9s						
ESK	Eskdalemuir	71.02	349	eP	P	21 54 49.5	-1.1
ESK				pmax	pmax		
	comp=Z,51nm,0.9s						
LATQ	La Tuque	71.02	34	P	P	21 54 51.1	+0.3
	baz=330						
I51A	Listowel	71.03	41	P	P	21 54 51.2	+0.2
	baz=327,SNR=5.7						
N46A	Monticello	71.03	47	P	P	21 54 50.6	-0.4
	baz=325						
KWP	Kalwaria Pacla	71.09	331	eP	P	21 54 51.4	+0.1
KWP	Kalwaria Pacla	71.09	331	eP	P	21 54 51.4	+0.1
F55A	Otter Lake	71.10	37	P	P	21 54 50.6	-0.7
	baz=329						
O45A	Potomac	71.12	48	P	P	21 54 51.7	+0.1
	baz=325,SNR=18						
M47A	Cromwell	71.14	46	P	P	21 54 51.5	-0.2
	baz=325						
L48A	N Adams	71.17	44	P	P	21 54 52.1	+0.3
	baz=326,SNR=11						
AAM	Ann Arbor	71.20	44	eP	P	21 54 53.0	+1.0
	comp=Z,56nm,0.6s						
AAM	Ann Arbor	71.20	44	P	P	21 54 52.5	+0.5
	baz=326						
BANO	Bancroft	71.21	38	P	P	21 54 51.7	-0.3
	baz=328						
BHH	Howats Hill	71.24	349	⇓eP	P	21 54 52.0	0.0
BCA	Borcka	71.26	315	⇑iP	P	21 54 52.6	+0.2
CCM	Cathedral Cave	71.27	51	eP	P	21 54 52.1	-0.4
	comp=Z,47nm,1.0s						
CCM	Cathedral Cave	71.27	51	eP	P	21 54 52.1	-0.4
CCM				pmax	pmax		
	comp=Z,47nm,1.0s						
CCM	Cathedral Cave	71.27	51	P	P	21 54 52.5	0.0
	baz=324						
Q43A	New Douglas	71.28	50	P	P	21 54 52.7	+0.1
	baz=324						
SFIN	Lafayette	71.30	47	eP	P	21 54 52.8	+0.2
	comp=Z,49nm,0.6s						
SFIN	Lafayette	71.30	47	P	P	21 54 52.5	-0.1
	baz=325,SNR=9.0						
R42A	Luebbering	71.30	51	P	P	21 54 52.9	+0.2
	baz=324,SNR=20						
L49A	Milan	71.31	44	P	P	21 54 53.2	+0.5
	baz=326,SNR=10						
EDMD	Edmundbyers	71.34	348	eP	P	21 54 52.0	-0.6
EDMD				IAmb	IAmb	21 54 53.4	
	comp=Z,74nm,1.5s						
ABTX	Abilene, Hawle	71.35	61	eP	P	21 54 53.8	+0.6
	comp=Z,66nm,0.8s						
ABTX	Abilene, Hawle	71.35	61	P	P	21 54 53.7	+0.6
	baz=322,SNR=24						
P44A	Sand Creek, Wi	71.35	49	P	P	21 54 53.1	+0.2
	baz=324,SNR=7.5						
PMBI	Palembang	71.36	238	P	P	21 54 53.9	+0.6
OJC	Ojcow	71.38	333	eP	P	21 54 53.0	+0.1
OJC	Ojcow	71.38	333	eP	P	21 54 52.5	-0.4
	comp=Z,62nm,1.3s						
OJC	Ojcow	71.38	333	eP	P	21 54 53.0	+0.1
HHAR	Hobbs	71.38	54	eP	P	21 54 53.2	-0.1
	comp=Z,137nm,1.3s						
S41A	Jillco Farms,	71.41	52	P	P	21 54 53.3	-0.1
	baz=324,SNR=18						
TRQ	Mont Tremblant	71.41	36	eP	P	21 54 52.6	-0.7
M48A	Edgerton	71.43	45	P	P	21 54 53.3	-0.1
	baz=326,SNR=9.1						
SNSI	Sinabang, Aceh	71.45	248	P	P	21 54 54.3	+0.5
	comp=Z,199nm,1.3s						
G55A	Calabogie	71.46	38	P	P	21 54 52.9	-0.6
	baz=329,SNR=10						
N47A	Urbana	71.50	46	P	P	21 54 53.4	-0.4
	baz=325,SNR=6.1						
CLGH	Cloghs, Cushen	71.56	351	eP	P	21 54 53.8	-0.1
CLGH				IAmb	IAmb	21 54 54.9	
	comp=Z,140nm,1.4s						
I53A	Kortright Cn E	71.58	40	P	P	21 54 54.2	-0.1
	baz=328						
Q44A	Meyer Farm, Va	71.62	49	eP	P	21 54 55.1	+0.5
	comp=Z,30nm,0.6s						
Q44A	Meyer Farm, Va	71.62	49	P	P	21 54 54.4	-0.2
	baz=324						
GAL1	Galloway	71.63	350	eP	P	21 54 54.1	-0.2
GAL1				IAmb	IAmb	21 54 55.1	
	comp=Z,41nm,1.2s						
GSI	Gunungsitoli	71.67	247	eP	P	21 54 55.9	+0.8
	comp=Z,80nm,0.7s						
GSI	Gunungsitoli	71.67	247	P	P	21 54 55.9	+0.8
	comp=Z,164nm,0.8s,comp=Z,2µm						
P45A	Graceland, Par	71.70	48	eP	P	21 54 55.4	+0.3
	comp=Z,28nm,0.8s						
P45A	Graceland, Par	71.70	48	P	P	21 54 55.0	-0.1
	baz=325						
IDGL	Inch Island, C	71.70	351	i P	P	21 54 55.1	+0.3
R43A	Red Bud	71.71	50	P	P	21 54 55.1	0.0
	baz=324,SNR=15						
S42A	Caledonia	71.71	51	P	P	21 54 55.3	+0.1
	baz=324,SNR=19						
FVM	French Village	71.71	51	eP	P	21 54 55.5	+0.3
	comp=Z,44nm,0.7s						
FVM	French Village	71.71	51	eP	P	21 54 55.5	+0.3
FVM				pmax	pmax		
	comp=Z,44nm,0.7s						
KESW	Keswick, Cumbr	71.72	349	eP	P	21 54 55.0	+0.1
KESW				IAmb	IAmb	21 54 56.0	
	comp=Z,121nm,1.0s						
KSP	Ksiaz	71.72	336	eP	P	21 54 54.8	-0.2
KSP	Ksiaz	71.72	336	eP	P	21 54 54.8	-0.2
ORIO	Orleans, Innes	71.73	37	P	P	21 54 54.5	-0.6
	baz=329,SNR=6.7						
TX31	Lajitas Ar. Si	71.73	66	eP	P	21 54 55.1	-0.5
TXAR	Lajitas Array	71.73	66	P	P	21 54 56.7	+1.2
	comp=Z,91nm,0.8s,baz=298,slow=4.6,SNR=899						
TXAR				pP	pP	21 55 28.9	-0.1
	comp=Z,20nm,0.7s,baz=293,slow=4.1,SNR=3.9						
K51A	Iona Station	71.74	42	P	P	21 54 55.4	+0.2
	baz=327						
IAS	Iasi	71.74	327	⇑iP	P	21 54 55.3	+0.2
IAS	Iasi	71.74	327	⇑P	P	21 54 55.4	+0.3
M49A	Liberty Center	71.75	44	P	P	21 54 55.4	+0.1
	baz=326,SNR=7.1						
L50A	Kingsville	71.77	43	P	P	21 54 55.6	+0.1
	baz=326,SNR=5.8						
N48A	Decatur	71.81	45	P	P	21 54 55.4	-0.2
	baz=326,SNR=16						
O47A	Sheridan	71.82	47	P	P	21 54 55.0	-0.7
	baz=325						
T41A	Mountain View	71.83	52	P	P	21 54 55.7	-0.2
	baz=324,SNR=20						
U40A	Yellville	71.85	53	P	P	21 54 55.9	-0.1
	baz=323,SNR=40						
P46A	Rosedale	71.87	48	P	P	21 54 56.0	0.0
	baz=325,SNR=15						
DRWO	Darlington Wes	71.87	40	P	P	21 54 55.7	-0.3
	baz=328						
H55A	Tweed	71.89	38	P	P	21 54 55.7	-0.4
	baz=329,SNR=5.5						
PDSI	Padang	71.93	243	P	P	21 54 56.2	-0.5
	comp=Z,32nm,1.4s						
NIE	Niedzica	71.97	333	eP	P	21 54 56.8	+0.3
NIE	Niedzica	71.97	333	eP	P	21 54 56.8	+0.3
I55A	Frankford	71.98	39	P	P	21 54 56.0	-0.6
	baz=328						
K52A	Tillsonburg	72.01	42	P	P	21 54 56.4	-0.5
	baz=327						
Q45A	Warren Harvey,	72.03	49	P	P	21 54 57.1	+0.1
	baz=325,SNR=11						
POO	Poona	72.08	277	eP	P	21 54 56.7	-0.9
CLL	Collm	72.08	338	eP	P	21 54 56.5	-0.5
	comp=Z,41nm,1.1s						
CLL	Collm	72.08	338	⇓iP	P	21 54 56.3	-0.8
	comp=Z,50nm,1.2s						
CLL				ePcP	PcP	21 55 13.0	-1.7
CLL				epP	pP	21 55 31.0	+0.3
CLL				eS	S	22 04 02.0	-5.5
CLL				ePS	PnS	22 04 59.0	+2.6
CLL				e(SS)		22 08 24.0	
CLL				eSSS	SSS	22 12 18.0	
CLL				eSSSS		22 13 54.0	
CLL	Collm	72.08	338	⇓iP	P	21 54 56.3	-0.8
CLL				e		21 55 13.0	
CLL				e*PP	pP	21 55 31.0	+0.3
CLL				pmax	pmax		
	comp=Z,50nm,1.2s						
UPC	Upice	72.10	336	eP	P	21 54 57.2	-0.1
UPC	Upice	72.10	336	eP	P	21 54 57.2	-0.1
BUR08	Bucovina Ar. S	72.10	329	eP	P	21 54 56.6	-0.9
UZH	Uzhgorod	72.11	331	⇓iP	P	21 54 55.7	-1.6
UZH				e		21 55 10.0	
N49A	Columbus Grove	72.12	45	eP	P	21 54 57.7	+0.1
	comp=Z,41nm,0.6s						
N49A	Columbus Grove	72.12	45	P	P	21 54 57.6	+0.1
	baz=326,SNR=7.7						
BUR04	Bucovina Ar. S	72.12	329	eP	P	21 54 56.6	-1.0
BURAR	Bucovina Array	72.12	329	⇑iP	P	21 54 57.1	-0.5
BURAR	Bucovina Array	72.12	329	⇑P	P	21 54 57.1	-0.5
R44A	Waltonville	72.12	50	P	P	21 54 57.7	+0.1
	baz=324,SNR=20						
HPK	Haverah Park	72.15	348	eP	P	21 54 57.4	-0.1
HPK				IAmb	IAmb	21 54 58.6	
	comp=Z,117nm,0.9s						
T42A	Van Buren	72.16	52	eP	P	21 54 57.6	-0.2
	comp=Z,23nm,0.9s						
T42A	Van Buren	72.16	52	P	P	21 54 57.7	-0.2
	baz=324,SNR=9.6						
DPC	Dobruska-Polom	72.17	335	eP	P	21 54 57.8	+0.1
DPC				ex	x	21 55 05.0	
DPC				ePCP	PcP	21 55 15.7	+0.5
DPC	Dobruska-Polom	72.17	335	eP	P	21 54 57.8	+0.1
DPC				e		21 55 15.7	
OLIL	Olney	72.18	49	eP	P	21 54 58.5	+0.6
	comp=Z,66nm,1.3s						
H56A	Elgin	72.19	38	P	P	21 54 57.2	-0.7
	baz=329						
M50A	Fremont	72.20	44	P	P	21 54 57.8	-0.2
	baz=326						
S43A	Fulton Ridge,	72.21	51	P	P	21 54 58.2	+0.1
	baz=324,SNR=21						
O48A	Farmland	72.25	46	P	P	21 54 57.9	-0.4
	baz=326,SNR=8.4						
BRG	Berggiesshubel	72.26	337	eP	P	21 54 57.6	-0.6
	comp=Z,34nm,1.5s						
BRG	Berggiesshubel	72.26	337	eP	P	21 54 57.6	-0.6
BRG				pmax	pmax		
	comp=Z,34nm,1.5s						
Q46A	CEJHS Indians,	72.28	48	P	P	21 54 58.4	-0.1
	baz=325						
U41A	Viola	72.32	53	P	P	21 54 58.6	-0.2
	baz=324,SNR=11						
W39A	Magazine	72.32	55	eP	P	21 54 59.0	+0.2
	comp=Z,40nm,1.0s						
W39A	Magazine	72.32	55	P	P	21 54 59.0	+0.2
	baz=323,SNR=8.0						
WIM	Isle of Man	72.33	350	⇓eP	P	21 54 58.5	-0.1
GMM	Mts of Mourne	72.38	350	eP	P	21 54 58.8	0.0
KRJI	Kerinci	72.38	241	P	P	21 55 00.1	+0.6
	comp=Z,339nm,0.8s						
MORC	Moravsky Berou	72.38	334	eP	P	21 54 58.8	-0.2
	comp=Z,35nm,1.1s						
MORC	Moravsky Berou	72.38	334	⇑iP	P	21 54 59.3	+0.3
MORC	Moravsky Berou	72.38	334	eP	P	21 54 58.8	-0.2
MORC				pmax	pmax		
	comp=Z,35nm,1.1s						
MORC	Moravsky Berou	72.38	334	eP	P	21 54 58.8	-0.2
P47A	Martinsville	72.39	47	P	P	21 54 59.0	-0.2
	baz=325,SNR=18						
BIZ	Bicaz	72.44	328	⇓iP	P	21 54 59.7	+0.4
MDRS	Chennai	72.44	268	eP	P	21 54 58.8	-0.9
MDRS				IAmb	IAmb	21 55 00.5	
	comp=Z,78nm,1.7s						
LANS	Liptovska Anna	72.44	333	eP	P	21 55 00.1	+0.7
LANS	Liptovska Anna	72.44	333	eP	P	21 55 00.1	+0.7
R45A	Skylar, Fairfi	72.46	49	P	P	21 54 59.7	+0.2
	baz=325						
HPIG		72.47	69	eP	P	21 55 01.3	+1.2
	comp=Z,39nm,0.7s						
TRPA	Tarpa	72.48	331	⇑iP	P	21 54 59.8	+0.3
TRPA	Tarpa	72.48	331	eP	P	21 54 59.1	-0.4
S44A	Carbondale	72.49	50	P	P	21 55 00.1	+0.4
	baz=324,SNR=15						
SIUC	Southern Illin	72.49	50	eP	P	21 55 00.1	+0.4
	comp=Z,86nm,0.7s						
T43A	Greenville	72.50	51	P	P	21 55 00.0	+0.2
	baz=324						
BLO	Bloomington	72.53	47	eP	P	21 55 00.3	+0.3
	comp=Z,42nm,0.8s						
BLO	Bloomington	72.53	47	eP	P	21 55 00.3	+0.3
BLO				pmax	pmax		
	comp=Z,42nm,0.8s						
BMR	Baia Mare	72.60	330	⇑iP	P	21 55 00.5	+0.2
BMR	Baia Mare	72.60	330	⇑P	P	21 55 00.5	+0.2
M51A	Elyria	72.62	43	P	P	21 55 00.5	0.0
	baz=327,SNR=5.8						
TESR	Tescani	72.64	327	⇓iP	P	21 55 00.6	+0.1
U42A	Revenden	72.64	52	P	P	21 55 00.4	-0.3
	baz=324,SNR=5.1						
O49A	Covington	72.66	45	eP	P	21 55 01.1	+0.3
	comp=Z,33nm,0.8s						
O49A	Covington	72.66	45	P	P	21 55 00.6	-0.1
	baz=326,SNR=5.7						
PBMO	Poplar Bluff	72.68	52	eP	P	21 55 01.3	+0.4
	comp=Z,46nm,0.8s						
N50A	Nevada	72.68	44	P	P	21 55 01.0	+0.1
	baz=326,SNR=10						
LBWR	Ladybower, Pea	72.71	348	eP	P	21 55 00.4	-0.4
LBWR				IAmb	IAmb	21 55 01.8	
	comp=Z,86nm,0.9s						
J55A	Hilton	72.74	39	P	P	21 55 00.6	-0.5
	baz=329						
WTSB	Winterswijk	72.74	342	eP	P	21 55 01.2	+0.2
	comp=Z,114nm,1.2s						
Q47A	Bedord North L	72.77	48	P	P	21 55 01.5	+0.1
	baz=325,SNR=14						
LONY	Lake Ozonia	72.78	37	eP	P	21 55 00.5	-0.9
	comp=Z,12nm,0.6s						
LONY	Lake Ozonia	72.78	37	P	P	21 55 00.9	-0.5
	baz=330,SNR=5.3						
P48A	Milroy	72.78	47	P	P	21 55 01.3	-0.2
	baz=326,SNR=17						
M52A	Chesterland	72.79	43	P	P	21 55 01.7	+0.2
	baz=327,SNR=6.6						
S45A	Carrier Mills	72.82	50	P	P	21 55 02.0	+0.3
	baz=325,SNR=7.2						
T44A	Benton	72.83	51	P	P	21 55 02.1	+0.3
	baz=324,SNR=21						
ERPA	Erie	72.86	41	eP	P	21 55 02.4	+0.5
	comp=Z,45nm,0.8s						
ERPA	Erie	72.86	41	P	P	21 55 01.8	-0.1
	baz=328,SNR=5.3						
ARCR	ARCALIA	72.86	329	⇑iP	P	21 55 03.0	+1.2
R46A	Gibon Southern	72.87	49	P	P	21 55 02.3	+0.2
	baz=325						
N51A	Ashland	72.89	44	P	P	21 55 02.1	0.0
	baz=327,SNR=18						
L53A	Girard	72.89	42	P	P	21 55 02.1	+0.1
	baz=328,SNR=8.4						
JCT	Junction City	72.94	62	eP	P	21 55 03.2	+0.6
	comp=Z,42nm,0.8s						
JCT	Junction City	72.94	62	eP	P	21 55 03.2	+0.6
JCT				pmax	pmax		
	comp=Z,42nm,0.8s						
JCT	Junction City	72.94	62	P	P	21 55 03.2	+0.6
	baz=322,SNR=15						
MIAR	Mount Ida	72.94	55	eP	P	21 55 02.4	-0.1
	comp=Z,47nm,1.1s						
MIAR	Mount Ida	72.94	55	eP	P	21 55 02.4	-0.1
MIAR				pmax	pmax		
	comp=Z,47nm,1.1s						
MIAR	Mount Ida	72.94	55	P	P	21 55 02.9	+0.4
	baz=323,SNR=13						
PRU	Pruhonice	72.94	336	eP	P	21 55 02.2	0.0
PRU				ex	x	21 55 09.3	
PRU				ePCP	PcP	21 55 17.4	-1.1
PRU	Pruhonice	72.94	336	eP	P	21 55 02.2	0.0
PRU				e		21 55 17.4	
FRNY	Flat Rock	72.95	36	eP	P	21 55 02.1	-0.2
	comp=Z,10nm,0.8s						
WHAR	Wooly Hollow	72.98	54	eP	P	21 55 02.9	+0.1
	comp=Z,90nm,1.3s						
WHTX	Lake Whitney,	72.99	59	eP	P	21 55 03.4	+0.5
	comp=Z,57nm,1.1s						
WHTX	Lake Whitney,	72.99	59	P	P	21 55 03.2	+0.4
	baz=322,SNR=11						
MDSI	Maura Dua	73.00	238	P	P	21 55 02.4	-0.6
O50A	Cable	73.00	45	P	P	21 55 02.9	+0.2
	baz=326,SNR=7.1						
MOQ	Mont Orford	73.00	35	eP	P	21 55 03.4	+0.6
USIN	University of	73.00	49	eP	P	21 55 03.2	+0.4
	comp=Z,73nm,0.8s						
U43A	Rector	73.02	52	P	P	21 55 03.2	+0.3
	baz=324,SNR=6.5						
P49A	Miami Univ. Ec	73.03	46	P	P	21 55 02.8	-0.2
	baz=326,SNR=9.7						
VRAC	Vranov	73.06	335	⇑iP	P	21 55 03.6	+0.6
VRAC	Vranov	73.06	335	⇑P	P	21 55 03.6	+0.6
VRAC	Vranov	73.06	335	eP	P	21 55 03.1	+0.1
TLCR		73.07	325	⇑iP	P	21 55 02.9	-0.1
TLCR		73.07	325	⇑P	P	21 55 02.9	-0.1
Q48A	North Vernon	73.09	47	P	P	21 55 03.2	-0.1
	baz=326,SNR=6.7						
PARMO	Parma	73.09	51	eP	P	21 55 04.5	+1.2
	comp=Z,361nm,0.8s						
W41B	Gary Mavity, V	73.09	54	eP	P	21 55 03.4	+0.1
	comp=Z,53nm,0.8s						
W41B	Gary Mavity, V	73.09	54	P	P	21 55 03.5	+0.1
	baz=324,SNR=24						
K55A	Perry	73.10	40	P	P	21 55 03.1	-0.2
	baz=329,SNR=7.2						
M53A	WI Miller and	73.15	42	P	P	21 55 03.8	+0.2
	baz=328,SNR=9.0						
MMNY	Mt. Morris Dam	73.16	40	eP	P	21 55 03.7	+0.1
	comp=Z,36nm,0.7s						
VRI	Vrincioaia	73.18	327	⇑iP	P	21 55 03.9	+0.2
VRI	Vrincioaia	73.18	327	⇑P	P	21 55 03.9	+0.2
ALLY	Alegheny Colle	73.19	42	eP	P	21 55 04.5	+0.7
	comp=Z,86nm,1.3s						
JAVC	Velka Javorina	73.19	334	eP	P	21 55 04.9	+1.1
PQI	Presque Isle	73.20	31	eP	P	21 55 04.1	+0.3
	comp=Z,23nm,1.1s						
ACSO	Alum Creek Sta	73.20	44	eP	P	21 55 03.5	-0.4
	comp=Z,60nm,0.8s						
ACSO	Alum Creek Sta	73.20	44	P	P	21 55 04.1	+0.1
	baz=327,SNR=13						
NKC	Novy Kostel	73.21	338	eP	P	21 55 04.2	+0.4
NKC	Novy Kostel	73.21	338	eP	P	21 55 04.2	+0.4
S46A	Don Dixon Farm	73.21	49	P	P	21 55 04.2	+0.2
	baz=325						
VYHS	Vyhne	73.21	333	eP	P	21 55 04.0	+0.1
VYHS				e		21 55 12.8	
VYHS				pmax	pmax		
	comp=Z,21nm,1.4s						
VYHS	Vyhne	73.21	333	eP	P	21 55 04.0	+0.1
VYHS				ePCP	PcP	21 55 12.8	-6.9
PLOR	Plostina	73.22	327	⇓iP	P	21 55 04.3	+0.3
PLOR	Plostina	73.22	327	⇓P	P	21 55 04.3	+0.3
R47A	Wooly Knot Far	73.25	48	P	P	21 55 04.3	+0.1

	baz=326,SNR=7.7						
U44A	Portageville	73.25	51	P	P	21 55 04.8	+0.6
	baz=324						
BATG	Bathurst New B	73.26	30	eP	P	21 55 05.4	+1.2
	comp=Z,26nm,0.9s						
N52A	McGinn's Farm,	73.26	43	P	P	21 55 04.2	-0.1
	baz=327,SNR=6.1						
CWF	Charnwood Fore	73.30	347	eP	P	21 55 04.2	-0.1
CWF				IAmb	IAmb	21 55 05.9	
	comp=Z,143nm,1.3s						
CFR	Carcaliu	73.31	326	⇓iP	P	21 55 04.6	+0.1
CFR	Carcaliu	73.31	326	⇓P	P	21 55 04.6	+0.1
T45A	Paducah	73.32	50	P	P	21 55 05.3	+0.6
	baz=325,SNR=5.2						
KRUC	Moravsky	73.34	335	eP	P	21 55 04.6	0.0
LTVH	Ltavrtes, Hu	73.34	331	eP	P	21 55 06.1	+1.4
X40A	Basin Creek Fa	73.36	55	eP	P	21 55 05.5	+0.6
	comp=Z,28nm,1.0s						
X40A	Basin Creek Fa	73.36	55	P	P	21 55 05.2	+0.3
	baz=324,SNR=10						
W42A	Bald Knob	73.37	53	P	P	21 55 05.2	+0.2
	baz=324						
P50A	Jamestown	73.37	45	P	P	21 55 05.0	0.0
	baz=326,SNR=6.6						
FOEL	Foel Wylfa	73.40	348	eP	P	21 55 05.1	+0.2
FOEL				IAmb	IAmb	21 55 06.0	
	comp=Z,67nm,0.9s						
DSB	Dublin	73.40	350	iP	P	21 55 04.9	0.0
DSB	Dublin	73.40	350	eP	P	21 55 04.8	-0.1
	comp=Z,64nm,1.0s						
WCI	Wyandotte Cave	73.41	48	eP	P	21 55 05.5	+0.4
	comp=Z,62nm,0.7s						
WCI				ePP	PP	21 57 47.5	-2.5
WCI	Wyandotte Cave	73.41	48	eP	P	21 55 05.6	+0.4
WCI				e		21 57 47.5	
WCI				pmax	pmax		
	comp=Z,62nm,0.7s						
WCI	Wyandotte Cave	73.41	48	P	P	21 55 05.5	+0.4
	baz=326						
L55A	Hinsdale	73.42	40	P	P	21 55 05.1	-0.1
	baz=328,SNR=5.4						
V43A	Jonesboro	73.43	52	P	P	21 55 05.9	+0.6
	baz=324						
CJR	Cluj-Napoca	73.43	329	⇓iP	P	21 55 05.8	+0.6
CJR	Cluj-Napoca	73.43	329	⇓P	P	21 55 05.8	+0.6
O51A	Pataskala	73.43	44	P	P	21 55 05.5	+0.2
	baz=327,SNR=20						
PSZ	Piszkesteto	73.44	332	eP	P	21 55 05.7	+0.4
	comp=Z,55nm,1.3s						
PSZ	Piszkesteto	73.44	332	⇑iP	P	21 55 06.1	+0.8
PSZ	Piszkesteto	73.44	332	⇑P	P	21 55 06.1	+0.8
PSZ	Piszkesteto	73.44	332	eP	P	21 55 05.1	-0.2
R48A	Northridge Ran	73.46	47	P	P	21 55 05.8	+0.4
	baz=326,SNR=7.7						
CTAO	Charters Tower	73.46	192	eP	P	21 55 06.4	+0.9
	comp=Z,39nm,0.5s						
CTAO	Charters Tower	73.46	192	eP	P	21 55 06.4	+0.9
CTAO				pmax	pmax		
	comp=Z,39nm,0.5s						
NCB	Newcomb	73.47	37	eP	P	21 55 05.5	0.0
	comp=Z,9.9nm,0.8s						
LLW	Llanuwychllyn	73.49	349	eP	P	21 55 05.4	0.0
IGLA	Glengowla, Co	73.50	352	iP	P	21 55 05.0	-0.4
M54A	Oil Creek Stat	73.50	42	eP	P	21 55 05.8	0.0
	comp=Z,50nm,1.1s						
M54A	Oil Creek Stat	73.50	42	P	P	21 55 05.7	0.0
	baz=328,SNR=9.3						
DOPR	Dopca	73.53	328	⇓iP	P	21 55 06.5	+0.7
N53A	Lisbon	73.62	43	P	P	21 55 06.6	+0.2
	baz=328,SNR=9.2						
DRGR		73.63	330	⇓iP	P	21 55 06.9	+0.5
DRGR		73.63	330	⇓P	P	21 55 06.9	+0.5
T46A	Princeton	73.65	50	P	P	21 55 07.4	+0.8
	baz=325,SNR=15						
S47A	Hartford	73.67	49	P	P	21 55 07.0	+0.3
	baz=325,SNR=7.0						
VT1	Waterbury	73.68	36	eP	P	21 55 07.4	+0.7
	comp=Z,15nm,0.6s						
DIKM	Dikmen	73.72	319	⇑iP	P	21 55 06.8	-0.1
HLM1	Long Mynd	73.72	348	eP	P	21 55 06.9	+0.1
HLM1				IAmb	IAmb	21 55 07.8	
	comp=Z,85nm,1.1s						
MLR	Muntele Rosu	73.77	327	eP	P	21 55 06.5	-0.8
	comp=Z,25nm,0.9s						
MLR	Muntele Rosu	73.77	327	⇓iP	P	21 55 07.8	+0.5
MLR	Muntele Rosu	73.77	327	⇓P	P	21 55 07.8	+0.5
O52A	Adamsville	73.78	44	eP	P	21 55 07.5	+0.1
	comp=Z,95nm,0.8s						
O52A	Adamsville	73.78	44	P	P	21 55 07.4	+0.1
	baz=327,SNR=19						
P51A	Williamsport	73.79	45	eP	P	21 55 07.4	0.0
	comp=Z,38nm,0.7s						
P51A	Williamsport	73.79	45	P	P	21 55 07.3	-0.1
	baz=327,SNR=6.4						
U45A	Rockin P Farm,	73.81	51	P	P	21 55 08.1	+0.5
	baz=325						
N54A	Moraine State	73.83	42	eP	P	21 55 08.2	+0.5
	comp=Z,42nm,0.8s						
N54A	Moraine State	73.83	42	P	P	21 55 07.8	+0.1
	baz=328,SNR=10						
WLAR	White Oak Lake	73.86	55	eP	P	21 55 09.1	+1.2
	comp=Z,63nm,1.0s						
R49A	Shelbyville	73.86	47	P	P	21 55 08.2	+0.4
	baz=326,SNR=6.0						
435B	Jarrell	73.88	60	eP	P	21 55 09.0	+1.0
	comp=Z,96nm,1.5s						
435B	Jarrell	73.88	60	P	P	21 55 08.6	+0.5
	baz=323						
M55A	Ridgway	73.89	41	P	P	21 55 08.2	+0.2
	baz=328,SNR=12						
Q50A	Georgetown	73.93	46	P	P	21 55 08.5	+0.3
	baz=326,SNR=8.6						
O53A	New Philadelph	73.93	43	P	P	21 55 08.2	0.0
	baz=328,SNR=13						
ZST	Bratislava	73.95	334	eP	P	21 55 08.1	-0.1
ZST	Bratislava	73.95	334	eP	P	21 55 08.1	-0.1
KHC	Kasperske Hory	73.97	337	eP	P	21 55 08.5	+0.2
	comp=Z,16nm,1.1s						
KHC	Kasperske Hory	73.97	337	eP	P	21 55 08.7	+0.4
KHC				ex	x	21 55 16.4	
KHC	Kasperske Hory	73.97	337	eP	P	21 55 08.5	+0.2
KHC				pmax	pmax		
	comp=Z,16nm,1.1s						
SRO	Srobarova	73.97	333	eP	P	21 55 09.6	+1.3
SRO	Srobarova	73.97	333	eP	P	21 55 09.6	+1.3
S48A	Wiedeman Farm,	73.99	48	P	P	21 55 08.8	+0.2
	baz=326,SNR=8.1						
GRA1	Grafenberg Arr	73.99	338	eP	P	21 55 08.8	+0.4
	comp=Z,59nm,1.2s						
GRA1				ePcP	PcP	21 55 23.2	+0.1
GRF	Grafenberg Arr	73.99	338	eP	P	21 55 08.8	+0.4
GRF				e		21 55 23.2	
GRF				pmax	pmax		
	comp=Z,59nm,1.2s						
GRFO	Grafenberg	73.99	338	eP	P	21 55 08.6	+0.2
	comp=Z,54nm,1.2s						
GRFO	Grafenberg	73.99	338	eP	P	21 55 08.6	+0.2
GRFO				pmax	pmax		
	comp=Z,54nm,1.2s						
PKME	Peaks-Kenny Pk	74.04	33	eP	P	21 55 09.2	+0.5
	comp=Z,28nm,1.3s						
PKME	Peaks-Kenny Pk	74.04	33	P	P	21 55 09.0	+0.3
	baz=333						
Q51A	Peebles	74.05	45	eP	P	21 55 09.2	+0.2
	comp=Z,54nm,0.6s						
Q51A	Peebles	74.05	45	P	P	21 55 09.0	+0.1
	baz=327,SNR=9.2						
LBNH	Lisbon	74.05	35	P	P	21 55 09.0	+0.1
	baz=331						
HGN	Heimansgroeve	74.06	342	eP	P	21 55 08.8	+0.1
	comp=Z,160nm,1.2s						
T47A	Sharon Grove	74.06	49	eP	P	21 55 10.1	+1.1
	comp=Z,54nm,0.8s						
T47A	Sharon Grove	74.06	49	P	P	21 55 09.6	+0.6
	baz=326,SNR=13						
P52A	Corning	74.06	44	P	P	21 55 08.6	-0.4
	baz=327,SNR=7.2						
BEBN	Eben Emael	74.07	342	⇓P	P	21 55 08.9	+0.2
U46A	Springville	74.08	50	P	P	21 55 09.6	+0.5
	baz=325						
BUD	Budapest	74.08	333	eP	P	21 55 10.1	+1.2
VOIR		74.11	328	⇑iP	P	21 55 10.1	+0.8
VOIR		74.11	328	⇑P	P	21 55 10.1	+0.8
ACCN	Adirondack Com	74.18	37	eP	P	21 55 09.6	0.0
	comp=Z,21nm,0.8s						
MEM	Membach	74.19	342	⇓P	P	21 55 09.5	0.0
	comp=Z,73nm,1.1s						
GEC2	GERESS Array S	74.21	337	eP	P	21 55 10.0	+0.2
	comp=Z,17nm,1.0s						
GEC2	GERESS Array S	74.21	337	eP	P	21 55 10.0	+0.2
GEC2				pmax	pmax		
	comp=Z,17nm,1.0s						
GERES	GERESS Array B	74.21	337	P	P	21 55 09.5	-0.3
	comp=Z,6.8nm,0.8s,baz=41,slow=4.3,SNR=39						
GERES				LR	LR	22 31 44.6	
	comp=Z,61nm,20.2s,baz=2.0,slow=39						
V45A	Humboldt	74.22	51	P	P	21 55 10.3	+0.4
	baz=325,SNR=6.5						
GEA0	GERESS Array S	74.22	337	eP	P	21 55 09.4	-0.4
S49A	Springfield	74.22	47	P	P	21 55 10.4	+0.5
	baz=326,SNR=12						
R50A	Paris	74.24	47	P	P	21 55 10.3	+0.3
	baz=326,SNR=9.1						
MCH1	Michaelchurch	74.25	348	eP	P	21 55 10.1	+0.3
MCH1				IAmb	IAmb	21 55 10.7	
	comp=Z,39nm,0.9s						
LPW	Lampeter	74.26	349	eP	P	21 55 09.4	-0.5
LPW				IAmb	IAmb	21 55 10.7	
	comp=Z,42nm,1.1s						
T48A	Bowling Green	74.28	49	P	P	21 55 10.6	+0.3
	baz=326						
X43A	Marvell	74.29	53	P	P	21 55 11.0	+0.6
	baz=324						
MTUR	Matau	74.29	328	⇓iP	P	21 55 10.0	-0.3
MTUR	Matau	74.29	328	⇓P	P	21 55 10.0	-0.3
IWEX	Carrickbyrne,	74.30	351	iP	P	21 55 10.6	+0.5
ARR	Arges	74.31	328	⇑iP	P	21 55 10.9	+0.5
UCC	Uccle	74.31	343	⇓P	P	21 55 10.2	+0.1
O54A	Avella	74.33	43	P	P	21 55 10.8	+0.2
	baz=328,SNR=11						
BINY	Binghamton	74.35	39	P	P	21 55 10.2	-0.5
	baz=330						
ICOR	Ion Corvin	74.36	325	⇓iP	P	21 55 11.5	+0.9
STRD	Stroud	74.36	347	eP	P	21 55 10.4	0.0
STRD				IAmb	IAmb	21 55 11.5	
	comp=Z,190nm,1.2s						
MONM	Monmouth	74.38	348	eP	P	21 55 10.7	+0.1
MONM				IAmb	IAmb	21 55 11.6	
	comp=Z,84nm,1.0s						
SULR		74.39	327	⇓iP	P	21 55 11.3	+0.6
N55A	Marion Center	74.39	42	P	P	21 55 11.0	+0.1
	baz=328,SNR=14						
HNH	Hanover	74.39	36	eP	P	21 55 11.8	+1.0
	comp=Z,30nm,1.0s						
SIRR	Siria	74.42	330	⇓iP	P	21 55 10.8	-0.2
U47A	Clarksville	74.42	50	P	P	21 55 11.6	+0.5
	baz=326,SNR=8.5						
WVT	Waverly	74.43	50	eP	P	21 55 11.8	+0.7
	comp=Z,41nm,0.8s						
WVT	Waverly	74.43	50	eP	P	21 55 11.8	+0.7
WVT				pmax	pmax		
	comp=Z,41nm,0.8s						
WVT	Waverly	74.43	50	P	P	21 55 11.8	+0.7
	baz=325						
GOA	Goa	74.44	275	eP	P	21 55 10.2	-1.2
P53A	Whipple	74.50	44	P	P	21 55 11.6	+0.1
	baz=328,SNR=6.0						
BCLA	Clavier	74.50	342	⇓P	P	21 55 11.4	+0.1
	comp=Z,47nm,1.4s						
CONA	Conrad Observa	74.52	335	eP	P	21 55 12.2	+0.6
	comp=Z,22nm,0.9s,SNR=11						
WVL	Waterville	74.54	33	eP	P	21 55 12.8	+1.2
	comp=Z,129nm,1.8s						
R51A	Hillsboro	74.55	46	P	P	21 55 12.3	+0.5
	baz=327,SNR=8.5						
V46A	Holladay	74.56	51	P	P	21 55 12.2	+0.3
	baz=325,SNR=11						
Q52A	Bidwell	74.56	45	P	P	21 55 11.8	-0.1
	baz=327,SNR=6.3						
SOP	Sopron	74.57	334	eP	P	21 55 10.1	-1.6
SWN1	Swindon	74.57	347	eP	P	21 55 12.1	+0.5
SWN1				IAmb	IAmb	21 55 13.1	
	comp=Z,233nm,0.9s						
W45A	Hickory Valley	74.58	52	P	P	21 55 12.5	+0.5
	baz=325						
PSN	Preselentsi	74.61	325	P	P	21 55 13.9	+1.9
NATX	Nacogdoches	74.62	58	eP	P	21 55 13.3	+1.0
	comp=Z,64nm,0.8s						
NATX	Nacogdoches	74.62	58	P	P	21 55 13.1	+0.8
	baz=324						
T49A	Edmonton	74.68	48	P	P	21 55 12.9	+0.3
	baz=326,SNR=5.8						
WOL	Wolverton	74.68	347	eP	P	21 55 12.1	-0.3
WOL				IAmb	IAmb	21 55 13.2	
	comp=Z,143nm,0.9s						
S50A	Richmond	74.71	47	P	P	21 55 13.1	+0.3
	baz=326						
U48A	Cassie Pea, Po	74.71	49	P	P	21 55 13.2	+0.4
	baz=326,SNR=8.2						
O55A	Ligonier	74.75	42	P	P	21 55 13.1	+0.1
	baz=328,SNR=8.6						
P54A	Burton	74.78	43	P	P	21 55 13.4	+0.3
	baz=328,SNR=15						
V47A	Nunnelly	74.82	50	P	P	21 55 13.7	+0.3
	baz=326,SNR=8.8						
ILGA	Ilgaz	74.84	320	eP	P	21 55 14.1	+0.3
	comp=Z,33nm,0.9s						
833A	Chaparral WMA,	74.85	63	eP	P	21 55 15.0	+1.3
	comp=Z,56nm,0.8s						
833A	Chaparral WMA,	74.85	63	P	P	21 55 14.9	+1.2
	baz=323,SNR=13						
GZR	Gura Zlata	74.87	329	⇓iP	P	21 55 13.0	-0.6
GZR	Gura Zlata	74.87	329	⇓P	P	21 55 13.0	-0.6
LMN	Caledonia Moun	74.92	30	eP	P	21 55 14.4	+0.6
	comp=Z,25nm,0.8s						
R52A	Catlettsburg	74.93	45	P	P	21 55 14.1	+0.1
	baz=327,SNR=10.0						
TIH	Tihany	74.93	333	eP	P	21 55 13.0	-0.8
DOU	Dourbes	74.94	343	⇓P	P	21 55 14.0	+0.1
	comp=Z,36nm,1.6s						
SSPA	Standing Stone	74.95	41	eP	P	21 55 14.0	-0.1
	comp=Z,74nm,1.3s						
SSPA	Standing Stone	74.95	41	P	P	21 55 14.2	+0.1
	baz=329						
GGN	Saint George	74.96	31	eP	P	21 55 14.8	+0.8
	comp=Z,21nm,0.6s						
KSPA	Keystone Colle	74.98	39	eP	P	21 55 14.1	-0.2
	comp=Z,17nm,0.8s						
MCWV	Mont Chateau	74.99	43	P	P	21 55 14.8	+0.5
	baz=328,SNR=7.8						
O56A	Blue Knob Stat	74.99	42	eP	P	21 55 14.9	+0.5
	comp=Z,41nm,0.7s						
O56A	Blue Knob Stat	74.99	42	P	P	21 55 14.6	+0.2
	baz=329,SNR=7.2						
MOA	Molln	75.00	336	eP	P	21 55 14.4	+0.1
	comp=Z,12nm,0.9s,SNR=5.9						
OXF	Oxford	75.00	52	eP	P	21 55 15.0	+0.5
	comp=Z,102nm,1.1s						
OXF	Oxford	75.00	52	eP	P	21 55 15.0	+0.5
OXF				pmax	pmax		
	comp=Z,102nm,1.1s						
OXF	Oxford	75.00	52	P	P	21 55 14.9	+0.5
	baz=325,SNR=7.6						
BZS	Buzias	75.02	330	⇑iP	P	21 55 13.9	-0.5
BZS	Buzias	75.02	330	⇑P	P	21 55 13.9	-0.5
VAL	Valentia	75.04	353	iP	P	21 55 14.9	+0.6
U49A	Red Boiling Sp	75.05	49	P	P	21 55 14.9	+0.2
	baz=326,SNR=8.7						
T50A	Nancy	75.06	48	P	P	21 55 15.1	+0.4
	baz=326,SNR=5.6						
WLF	Walferdange	75.06	342	eP	P	21 55 15.4	+0.8
	comp=Z,132nm,1.1s						
WLF	Walferdange	75.06	342	⇑P	P	21 55 14.8	+0.3
S51A	Beattyville	75.09	46	P	P	21 55 15.2	+0.2
	baz=327						
EMMW	East Machias	75.13	32	eP	P	21 55 15.7	+0.7
	comp=Z,23nm,0.8s						
P55A	Reedsville	75.13	43	P	P	21 55 15.7	+0.5
	baz=328,SNR=12						
Q54A	Coxs Mills	75.15	44	P	P	21 55 15.6	+0.3
	baz=328,SNR=7.1						
V48A	Smith Brothers	75.21	50	eP	P	21 55 16.2	+0.5
	comp=Z,50nm,0.8s						
V48A	Smith Brothers	75.21	50	P	P	21 55 16.0	+0.3
	baz=326,SNR=12						
R53A	Hurricane	75.23	45	P	P	21 55 16.0	+0.3
	baz=327,SNR=5.3						
ARSA	Arzberg	75.23	335	eP	P	21 55 16.1	+0.5
	comp=Z,16nm,0.9s,SNR=9.1						
PLAL	Pickwick Lake	75.25	51	eP	P	21 55 16.4	+0.5
	comp=Z,43nm,0.8s						
W47A	Westpoint	75.25	51	P	P	21 55 16.2	+0.3
	baz=326,SNR=6.2						
S52A	Salyersville	75.29	46	P	P	21 55 16.4	+0.3
	baz=327,SNR=7.8						
PRD	Provadia	75.30	325	P	P	21 55 15.9	-0.1
MORH	Mrgy, Hungar	75.35	332	⇓iP	P	21 55 15.0	-1.2
MORH	Mrgy, Hungar	75.35	332	eP	P	21 55 15.0	-1.2
X46A	Booneville	75.36	52	P	P	21 55 16.6	+0.1
	baz=325						
BANR	Banloc	75.38	330	⇓iP	P	21 55 16.8	+0.4
HKT	Hockley	75.45	60	eP	P	21 55 18.3	+1.3
	comp=Z,17nm,1.0s						
HKT	Hockley	75.45	60	eP	P	21 55 18.0	+1.0
HKT				pmax	pmax		
	comp=Z,22nm,1.1s						
Q55A	Buckhannon	75.45	43	P	P	21 55 17.5	+0.4
	baz=328						
WRAB	Tennant Creek	75.47	203	eP	P	21 55 17.6	+0.4
	comp=Z,55nm,0.8s						
WRAB	Tennant Creek	75.47	203	d iP	P	21 55 17.5	+0.4
WRAB				pmax	pmax		
	comp=Z,72nm,1.0s						
WB2	Warramunga Arr	75.48	203	eP	P	21 55 16.8	-0.5
WRA	Warramunga Arr	75.48	203	P	P	21 55 17.6	+0.3
	comp=Z,39nm,0.7s,baz=19,slow=6.2,SNR=194						
WRA				pP	pP	21 55 49.4	-1.8
	comp=Z,37nm,0.7s,baz=17,slow=6.2,SNR=13						
WRA				PKKP	PKKPdf	22 14 23.4	+0.8
	comp=Z,0.7nm,0.4s,baz=155,slow=4.9,SNR=6.7						
T51A	Gray	75.50	47	P	P	21 55 17.6	+0.3
	baz=327						
N59A	State Game Lan	75.53	39	eP	P	21 55 17.6	+0.1
	comp=Z,83nm,1.4s						
N59A	State Game Lan	75.53	39	P	P	21 55 17.5	0.0
	baz=330,SNR=8.2						
U50A	Jamestown	75.56	48	P	P	21 55 18.0	+0.4
	baz=326,SNR=12						
V49A	McMinnville	75.61	49	P	P	21 55 18.1	+0.2
	baz=326						
BEHE	Becsehely	75.63	334	eP	P	21 55 12.1	-5.8
W48A	Pulaski	75.66	50	P	P	21 55 18.6	+0.4
	baz=326,SNR=16						
S53A	Williamson	75.70	45	P	P	21 55 18.8	+0.4
	baz=328						
HRV	Adam Dziewonsk	75.70	36	eP	P	21 55 19.3	+1.0
	comp=Z,32nm,1.1s						
HRV	Adam Dziewonsk	75.70	36	P	P	21 55 18.7	+0.4
	baz=332						
X47A	Russelville	75.73	51	P	P	21 55 18.5	-0.2
	baz=326,SNR=5.8						
SZH	Strazhica	75.74	326	P	P	21 55 16.8	-1.8
MDVR	Moldovita	75.75	330	⇑iP	P	21 55 17.9	-0.7
R54A	Victor	75.76	44	P	P	21 55 19.0	+0.2
	baz=328,SNR=7.2						
PUNG	Punghina	75.82	329	⇑iP	P	21 55 18.9	-0.1
ODNJ	Ogdensburg	75.83	38	eP	P	21 55 19.4	+0.3
	comp=Z,54nm,1.6s						
WES	Weston	75.89	36	eP	P	21 55 20.4	+1.0
	comp=Z,25nm,0.7s						
WES	Weston	75.89	36	eP	P	21 55 20.4	+1.0
WES				pmax	pmax		
	comp=Z,25nm,0.7s						
SOKA	Soboth	75.89	335	eP	P	21 55 19.7	+0.2
	comp=Z,22nm,0.8s,SNR=18						
BFO	Black Forest	75.90	340	eP	P	21 55 19.0	-0.4
	comp=Z,20nm,1.1s						
BFO	Black Forest	75.90	340	eP	P	21 55 19.0	-0.4
BFO				pmax	pmax		
	comp=Z,20nm,1.1s						
PERS	Pernice	75.91	335	iP	P	21 55 19.6	+0.1
KBA	Koelnbreinsper	75.94	336	eP	P	21 55 20.6	+0.7
	comp=Z,115nm,1.0s,SNR=51						
U51A	La Follette	75.96	47	P	P	21 55 19.9	0.0
	baz=327						
LUPA	Lehigh Univers	75.96	39	eP	P	21 55 20.1	+0.3
	comp=Z,3.4nm,1.2s						
FRGS	Fruska Gora	75.97	331	⇓iP	P	21 55 19.2	-0.7
W49A	Belvidere	75.98	50	P	P	21 55 20.3	+0.2
	baz=326,SNR=8.3						
PVL	Pavlikeni	75.99	326	P	P	21 55 19.2	-0.7
BR131	Keskin Array S	76.00	319	eP	P	21 55 19.7	-0.6
BR131	Keskin Array S	76.00	319	P	P	21 55 20.0	-0.3
	SNR=8.8						
BRTR	Keskin Array B	76.00	319	P	P	21 55 19.1	-1.2
	comp=Z,5.2nm,0.6s,baz=49,slow=3.8,SNR=28						
BRTR				LR	LR	22 35 39.2	
	comp=Z,33nm,18.1s,baz=32,slow=41						
TZTN	Tazewell	76.03	47	P	P	21 55 20.7	+0.4
	baz=327						
R55A	Marlinton	76.04	44	P	P	21 55 20.9	+0.5
	baz=328,SNR=7.3						
SWET	Sewanee	76.05	49	eP	P	21 55 20.4	-0.1
	comp=Z,98nm,0.7s						
V50A	Pikevile	76.06	49	P	P	21 55 20.7	+0.2
	baz=326,SNR=7.4						
MVL	Millersville	76.10	40	eP	P	21 55 21.2	+0.6
	comp=Z,18nm,0.8s						
T53A	Wise	76.11	46	P	P	21 55 21.5	+0.6
	baz=327						
WATA	Walderalm	76.13	337	eP	P	21 55 21.1	+0.2
	comp=Z,22nm,1.0s,SNR=15						
FITZ	Fitzroy Crossi	76.16	212	eP	P	21 55 22.4	+1.4
PAL	Palisades	76.16	38	eP	P	21 55 21.4	+0.4
	comp=Z,39nm,0.6s						
PAL	Palisades	76.16	38	eP	P	21 55 21.4	+0.4
PAL				pmax	pmax		
	comp=Z,39nm,0.6s						
PAL	Palisades	76.16	38	P	P	21 55 20.9	0.0
	baz=331,SNR=5.8						
X48A	Hartselle	76.17	51	eP	P	21 55 21.3	+0.2
	comp=Z,36nm,1.0s						
X48A	Hartselle	76.17	51	P	P	21 55 21.1	0.0
	baz=326						
RETA	Reutte	76.17	338	eP	P	21 55 21.1	+0.1
	comp=Z,20nm,1.1s,SNR=5.4						
OBKA	Obir	76.17	335	eP	P	21 55 21.1	0.0
	comp=Z,62nm,1.4s,SNR=14						
WTTA	Wattenberg	76.18	337	iP	P	21 55 21.8	+0.6
	comp=Z,66nm,1.1s,SNR=21						
ANTO	Ankara	76.21	320	eP	P	21 55 20.9	-0.5
	comp=Z,19nm,0.9s						
ANTO	Ankara	76.21	320	⇓iP	P	21 55 22.0	+0.6
ANTO	Ankara	76.21	320	eP	P	21 55 20.9	-0.5
ANTO				pmax	pmax		
	comp=Z,19nm,0.9s						
ANTO	Ankara	76.21	320	P	P	21 55 21.8	+0.4
	SNR=6.6						
MOTA	Moosalm	76.23	338	eP	P	21 55 21.4	0.0
	comp=Z,46nm,1.1s,SNR=31						
U52A	Thorn Hill	76.23	47	P	P	21 55 21.9	+0.4
	baz=327,SNR=7.3						
ECH	Echery	76.25	341	eP	P	21 55 21.0	-0.4
	comp=Z,57nm,1.2s						
ECH	Echery	76.25	341	eP	P	21 55 21.0	-0.4
ECH				pmax	pmax		
	comp=Z,57nm,1.2s						
V51A	Loudon	76.29	48	P	P	21 55 21.9	+0.2
	baz=327,SNR=9.4						
145A	Houston Renfro	76.30	54	P	P	21 55 22.5	+0.6
	baz=325						
S55A	Lewisburg	76.31	44	P	P	21 55 22.0	0.0
	baz=328						
SQTA	Sankt Quirin	76.32	338	eP	P	21 55 22.4	+0.4
	comp=Z,61nm,1.2s,SNR=18						
CPNY	Central Park	76.33	38	eP	P	21 55 22.4	+0.5
	comp=Z,40nm,0.6s						
W50A	Signal Mountai	76.35	49	eP	P	21 55 22.6	+0.4
	comp=Z,64nm,0.8s						
W50A	Signal Mountai	76.35	49	P	P	21 55 22.4	+0.2
	baz=326,SNR=7.0						
X49A	Woodville	76.45	50	P	P	21 55 23.0	+0.2
	baz=326,SNR=12						
T54A	Tazewell	76.45	45	P	P	21 55 23.3	+0.5
	baz=328,SNR=5.4						
ABTA	Abfaltersbach	76.46	337	eP	P	21 55 22.6	0.0
	comp=Z,54nm,1.0s,SNR=18						
SHME	Shamm	76.48	295	P	P	21 55 21.4	-1.6
BANOM	Banah	76.49	295	iP	P	21 55 22.7	-0.4
	SNR=9.1						
CPCT	Cooper Cave	76.50	48	eP	P	21 55 23.6	+0.6
	comp=Z,46nm,0.8s						
Y48A	Jasper	76.55	51	P	P	21 55 23.6	+0.4
	baz=326,SNR=5.2						
DAVA	Damuels	76.56	338	eP	P	21 55 23.5	+0.2
	comp=Z,32nm,1.1s,SNR=7.5						
CRES	Cresnjev	76.57	334	⇓iP	P	21 55 22.8	-0.4
V52A	Sevierville	76.59	47	eP	P	21 55 24.3	+0.8
	comp=Z,38nm,0.8s						
V52A	Sevierville	76.59	47	P	P	21 55 23.9	+0.4

	baz=327,SNR=8.1						
U53A	**Fall Branch**	**76.61**	**46**	P	**P**	**21 55 23.8**	**+0.2**
	baz=327,SNR=6.9						
FETA	**Feichten**	**76.62**	**338**	*i* P	**P**	**21 55 24.2**	**+0.5**
	comp=Z,35nm,1.0s,SNR=14						
W51A	**Cleveland**	**76.64**	**49**	P	**P**	**21 55 23.9**	**+0.1**
	baz=327						
PHSR	**Pinarhisar**	**76.64**	**324**	⇑*i*P	**P**	**21 55 24.0**	**+0.3**
TKL	**Tuckaleechee C**	**76.67**	**48**	*e*P	**P**	**21 55 24.6**	**+0.6**
	comp=Z,25nm,0.7s						
TKL	**Tuckaleechee C**	**76.67**	**48**	*e*P	**P**	**21 55 24.6**	**+0.6**
TKL				pmax	pmax		
	comp=Z,25nm,0.7s						
PALK	**Pallekele**	**76.71**	**264**	*e*P	**P**	**21 55 23.7**	**-0.7**
	comp=Z,44nm,1.0s						
PALK	**Pallekele**	**76.71**	**264**	*i* P	**P**	**21 55 23.8**	**-0.7**
	SNR=8.1						
PALK	**Pallekele**	**76.71**	**264**	*e*P	**P**	**21 55 23.7**	**-0.7**
PALK				pmax	pmax		
	comp=Z,44nm,1.0s						
VISS	**Visnje**	**76.75**	**335**	*i* P	**P**	**21 55 23.7**	**-0.5**
X50B	**Fort Payne**	**76.81**	**50**	P	**P**	**21 55 24.9**	**+0.1**
	baz=326,SNR=9.7						
BLA	**Blacksburg**	**76.82**	**44**	*e*P	**P**	**21 55 25.1**	**+0.3**
	comp=Z,44nm,1.0s						
BLA	**Blacksburg**	**76.82**	**44**	*e*P	**P**	**21 55 25.1**	**+0.3**
BLA				pmax	pmax		
	comp=Z,44nm,1.0s						
BLA	**Blacksburg**	**76.82**	**44**	P	**P**	**21 55 25.2**	**+0.3**
	baz=328						
JAVS	**Javornik**	**76.87**	**335**	*e*P	**P**	**21 55 24.6**	**-0.4**
DIVS	**Divibare**	**76.89**	**330**	*e*P	**P**	**21 55 23.6**	**-1.4**
	comp=Z,31nm,0.9s						
DIVS	**Divibare**	**76.89**	**330**	⇓*i*P	**P**	**21 55 23.7**	**-1.4**
YLV	**Yalova**	**76.91**	**322**	⇑*i*P	**P**	**21 55 25.1**	**-0.2**
YLV	**Yalova**	**76.91**	**322**	⇑P	**P**	**21 55 25.1**	**-0.2**
CEY	**Cerknica**	**76.92**	**335**	⇓*i*P	**P**	**21 55 24.4**	**-0.8**
BOJS	**Bojanci**	**76.92**	**334**	*i* P	**P**	**21 55 25.4**	**+0.2**
Y49A	**Blount Mountai**	**76.95**	**51**	*e*P	**P**	**21 55 25.9**	**+0.3**
	comp=Z,31nm,0.8s						
Y49A	**Blount Mountai**	**76.95**	**51**	P	**P**	**21 55 25.6**	**0.0**
	baz=326						
DIM	**Dimitrovgrad**	**76.96**	**326**	P	**P**	**21 55 25.1**	**-0.3**
PGB	**Panagyurishte**	**76.97**	**327**	P	**P**	**21 55 24.9**	**-0.7**
MDH	**Madha**	**76.99**	**295**	P	**P**	**21 55 24.1**	**-1.8**
MSFE	**Esma-Masafi**	**77.02**	**295**	P	**P**	**21 55 25.1**	**-0.9**
147A	**Livingston**	**77.05**	**53**	*e*P	**P**	**21 55 26.8**	**+0.7**
	comp=Z,93nm,0.8s						
147A	**Livingston**	**77.05**	**53**	P	**P**	**21 55 26.5**	**+0.4**
	baz=326,SNR=12						
W52A	**Murphy**	**77.07**	**48**	*e*P	**P**	**21 55 26.9**	**+0.6**
	comp=Z,43nm,0.9s						
W52A	**Murphy**	**77.07**	**48**	P	**P**	**21 55 26.5**	**+0.3**
	baz=327,SNR=5.8						
V53A	**Saluda**	**77.08**	**47**	*e*P	**P**	**21 55 26.4**	**0.0**
	comp=Z,32nm,0.8s						
V53A	**Saluda**	**77.08**	**47**	P	**P**	**21 55 26.6**	**+0.3**
	baz=327						
X51A	**Calhoun**	**77.08**	**49**	P	**P**	**21 55 26.8**	**+0.5**
	baz=327						
BLY	**Banja Luka**	**77.10**	**333**	⇑*i*P	**P**	**21 55 25.5**	**-0.7**
BLY	**Banja Luka**	**77.10**	**333**	*e*P	**P**	**21 55 25.2**	**-1.0**
FUORN	**Ofenpass-Fuorn**	**77.10**	**338**	*e*P	**P**	**21 55 27.2**	**+0.7**
	comp=Z,33nm,1.0s						
U55A	**TA2, Sparta**	**77.15**	**45**	P	**P**	**21 55 27.0**	**+0.2**
	baz=328,SNR=5.8						
HAPS	**Han Pijesak,BI**	**77.20**	**331**	*e*P	**P**	**21 55 25.9**	**-1.0**
VTS	**Vitosha**	**77.22**	**328**	*e*P	**P**	**21 55 26.8**	**-0.3**
	comp=Z,39nm,1.1s						
VTS	**Vitosha**	**77.22**	**328**	⇑*i*P	**P**	**21 55 26.8**	**-0.3**
VTS	**Vitosha**	**77.22**	**328**	P	**P**	**21 55 26.1**	**-1.0**
VTS	**Vitosha**	**77.22**	**328**	⇑P	**P**	**21 55 26.8**	**-0.3**
VTS	**Vitosha**	**77.22**	**328**	P	**P**	**21 55 26.3**	**-0.8**
R58B	**Mineral**	**77.24**	**42**	P	**P**	**21 55 27.4**	**+0.4**
	baz=329						
Y50A	**Piedmont**	**77.24**	**50**	P	**P**	**21 55 27.2**	**+0.1**
	baz=326,SNR=8.0						
BBLS	**Lazići**	**77.27**	**331**	⇓*i*P	**P**	**21 55 26.9**	**-0.4**
CLF	**Chambon-Foret**	**77.34**	**344**	*e*P	**P**	**21 55 27.6**	**+0.2**
	comp=Z,224nm,1.3s						
W53A	**Cullowhee**	**77.35**	**47**	P	**P**	**21 55 28.3**	**+0.4**
	baz=327,SNR=6.4						
LRAL	**Lakeview Retre**	**77.36**	**51**	*e*P	**P**	**21 55 27.5**	**-0.3**
	comp=Z,24nm,0.6s						
LRAL	**Lakeview Retre**	**77.36**	**51**	P	**P**	**21 55 27.6**	**-0.3**
	baz=326						
V54A	**Nebo**	**77.37**	**46**	P	**P**	**21 55 28.4**	**+0.5**
	baz=328,SNR=6.4						
Z49A	**Columbiana**	**77.44**	**51**	P	**P**	**21 55 28.3**	**0.0**
	baz=326,SNR=5.7						
TUE	**Stuetta**	**77.45**	**339**	*e*P	**P**	**21 55 28.5**	**+0.2**
	comp=Z,35nm,0.9s						
HATD	**Hatta, Dubai**	**77.45**	**294**	*i* P	**P**	**21 55 27.0**	**-1.5**
	SNR=12						
HATD	**Hatta, Dubai**	**77.45**	**294**	P	**P**	**21 55 29.0**	**+0.5**
	SNR=7.1						
LNIG	**Linares**	**77.52**	**65**	*e*P	**P**	**21 55 29.1**	**+0.3**
	comp=Z,13nm,0.9s						
Y51A	**Rockmart**	**77.54**	**50**	P	**P**	**21 55 28.8**	**-0.1**
	baz=327,SNR=9.1						
RZN	**Rozhen**	**77.56**	**326**	P	**P**	**21 55 28.2**	**-0.8**
NAZ	**Nazwa, Dubai**	**77.58**	**295**	P	**P**	**21 55 27.7**	**-1.4**
ASHO	**Ashiyiah**	**77.61**	**294**	*i* P	**P**	**21 55 28.7**	**-0.7**
	SNR=12						
ASHO	**Ashiyiah**	**77.61**	**294**	P	**P**	**21 55 29.7**	**+0.3**
	SNR=8.2						
V55A	**Taylorsville**	**77.63**	**46**	P	**P**	**21 55 29.6**	**+0.3**
	baz=328						
Z50A	**Ashland**	**77.68**	**51**	*e*P	**P**	**21 55 29.2**	**-0.4**
	comp=Z,80nm,0.9s						
Z50A	**Ashland**	**77.68**	**51**	P	**P**	**21 55 29.6**	**0.0**
	baz=326,SNR=13						
RDO	**Rodhopi**	**77.76**	**325**	P	**P**	**21 55 29.2**	**-0.7**
RDO	**Rodhopi**	**77.76**	**325**	P	**P**	**21 55 29.2**	**-0.7**
SOHO	**SOHO**	**77.78**	**294**	P	**P**	**21 55 31.0**	**+0.7**
	SNR=7.0						
ALN	**Alexandroupoli**	**77.81**	**325**	*e*P	**P**	**21 55 29.9**	**-0.3**
	comp=Z,19nm,1.0s						
ALN	**Alexandroupoli**	**77.81**	**325**	*e*P	**P**	**21 55 29.9**	**-0.3**
ALN				pmax	pmax		
	comp=Z,19nm,1.0s						
149A	**Jones**	**77.81**	**52**	P	**P**	**21 55 30.5**	**+0.1**
	baz=326,SNR=5.5						
FAQ	**Al Faqa, Dubai**	**77.81**	**295**	P	**P**	**21 55 28.8**	**-1.6**
X53A	**Estanollee**	**77.84**	**48**	P	**P**	**21 55 31.1**	**+0.6**
	baz=327,SNR=9.9						
W54A	**Cherokee Point**	**77.85**	**47**	P	**P**	**21 55 30.6**	**+0.1**
	baz=328,SNR=5.1						
KKB	**Krupnik**	**77.94**	**327**	P	**P**	**21 55 30.6**	**-0.3**
MMB	**Musomiste**	**77.98**	**327**	P	**P**	**21 55 30.6**	**-0.6**
Z51A	**Franklin**	**77.98**	**50**	P	**P**	**21 55 31.1**	**-0.1**
	baz=327,SNR=5.4						
SENIN	**Lac Senin/Sane**	**77.99**	**340**	*e*P	**P**	**21 55 31.4**	**+0.1**
	comp=Z,14nm,1.1s						
TRD	**Trivandrum**	**78.00**	**268**	*e*P	**P**	**21 55 31.2**	**-0.4**
TRD				IAmb	IAmb	21 55 31.7	
	comp=Z,40nm,1.1s						
Y52A	**Lilburn**	**78.03**	**49**	*e*P	**P**	**21 55 32.4**	**+0.8**
	comp=Z,37nm,0.9s						
Y52A	**Lilburn**	**78.03**	**49**	P	**P**	**21 55 31.7**	**+0.1**
	baz=327,SNR=5.7						
SSF	**Saint Saulge**	**78.06**	**343**	*e*P	**P**	**21 55 30.9**	**-0.6**
SSF				pmax	pmax		
	comp=Z,42nm,1.0s						
NVR	**Nevrokopi**	**78.15**	**327**	P	**P**	**21 55 31.4**	**-0.7**
NVR	**Nevrokopi**	**78.15**	**327**	P	**P**	**21 55 31.4**	**-0.7**
150A	**Eclectic**	**78.17**	**51**	P	**P**	**21 55 32.4**	**+0.1**
	baz=326,SNR=7.0						
249A	**Camden**	**78.17**	**52**	P	**P**	**21 55 33.1**	**+0.8**
	baz=326,SNR=7.1						
KMSC	**Kings Mountain**	**78.18**	**46**	*e*P	**P**	**21 55 32.5**	**+0.1**
	comp=Z,41nm,0.6s						
KMSC	**Kings Mountain**	**78.18**	**46**	P	**P**	**21 55 32.4**	**+0.1**
	baz=328,SNR=7.6						
X54A	**Belton**	**78.22**	**47**	P	**P**	**21 55 33.0**	**+0.4**
	baz=328,SNR=6.3						
Y53A	**Monroe**	**78.26**	**49**	P	**P**	**21 55 33.2**	**+0.4**
	baz=327,SNR=6.2						
STIP	**Stip**	**78.39**	**328**	*i* P	**P**	**21 55 31.7**	**-1.7**
BRY	**Bratogost**	**78.41**	**331**	⇑*i*P	**P**	**21 55 32.4**	**-1.2**
Z52A	**Williamson**	**78.43**	**49**	P	**P**	**21 55 33.9**	**+0.1**
	baz=327,SNR=8.2						
SRS	**Serrai**	**78.44**	**327**	P	**P**	**21 55 32.8**	**-0.9**
SRS	**Serrai**	**78.44**	**327**	P	**P**	**21 55 32.8**	**-0.9**
151A	**Opelika**	**78.56**	**51**	P	**P**	**21 55 34.3**	**-0.2**
	baz=327						
250A	**Grady**	**78.58**	**51**	*e*P	**P**	**21 55 35.1**	**+0.6**
	comp=Z,31nm,0.6s						
250A	**Grady**	**78.58**	**51**	P	**P**	**21 55 34.9**	**+0.4**
	baz=326						
VAY	**Valandovo**	**78.60**	**328**	*i* P	**P**	**21 55 34.1**	**-0.4**
X55A	**Gracelyn & Ava**	**78.61**	**47**	P	**P**	**21 55 34.9**	**+0.1**
	baz=328						
PDG	**Podgorica**	**78.63**	**330**	⇓*i*P	**P**	**21 55 34.5**	**-0.1**
PDG	**Podgorica**	**78.63**	**330**	*e*P	**P**	**21 55 33.8**	**-0.8**
TTG	**Podgorica**	**78.63**	**330**	*e*P	**P**	**21 55 32.5**	**-2.1**
	comp=Z,59nm,0.9s						
TTG	**Podgorica**	**78.63**	**330**	*e*P	**P**	**21 55 32.5**	**-2.1**
TTG				pmax	pmax		
	comp=Z,59nm,0.9s						
KNT	**Kendrikon**	**78.63**	**327**	P	**P**	**21 55 34.0**	**-0.7**
KNT	**Kendrikon**	**78.63**	**327**	P	**P**	**21 55 34.0**	**-0.7**
KNT	**Kendrikon**	**78.63**	**327**	P	**P**	**21 55 34.0**	**-0.7**
349A	**Repton**	**78.65**	**53**	P	**P**	**21 55 36.3**	**+1.4**
	baz=326						
Y54A	**Tignall**	**78.66**	**48**	P	**P**	**21 55 35.4**	**+0.5**
	baz=328,SNR=24						
EZN	**Ezine**	**78.66**	**324**	⇑*i*P	**P**	**21 55 34.2**	**-0.7**
EZN	**Ezine**	**78.66**	**324**	⇑P	**P**	**21 55 34.2**	**-0.7**
448A	**Bay Minette**	**78.68**	**53**	P	**P**	**21 55 36.6**	**+1.5**
	baz=326						
STON	**Ston**	**78.68**	**332**	*e*P	**P**	**21 55 33.4**	**-1.5**
GOGA	**Godfrey**	**78.68**	**49**	P	**P**	**21 55 35.4**	**+0.3**
	baz=327						
152A	**Waverly Hall**	**78.73**	**50**	*e*P	**P**	**21 55 35.8**	**+0.4**
	comp=Z,17nm,0.7s						
152A	**Waverly Hall**	**78.73**	**50**	P	**P**	**21 55 35.3**	**-0.1**
	baz=327						
Z53A	**Monticello**	**78.74**	**49**	P	**P**	**21 55 35.7**	**+0.3**
	baz=327,SNR=5.2						
HCY	**Herceg Novi**	**78.84**	**331**	⇑*i*P	**P**	**21 55 34.6**	**-1.2**
X56A	**White Oak**	**78.86**	**46**	P	**P**	**21 55 36.2**	**+0.1**
	baz=328,SNR=6.0						
DRME	**Dracevica, Mon**	**78.87**	**330**	⇓*i*P	**P**	**21 55 35.0**	**-1.0**
251A	**Midway**	**78.89**	**51**	P	**P**	**21 55 36.5**	**+0.2**
	baz=327,SNR=5.5						
LPG	**La Plagne**	**78.93**	**340**	*e*P	**P**	**21 55 36.9**	**+0.2**
LPG				pmax	pmax		
	comp=Z,87nm,1.2s						
JSC	**Jenkinsville**	**78.94**	**47**	*e*P	**P**	**21 55 37.0**	**+0.6**
	comp=Z,26nm,0.8s						
Y55A	**Saluda**	**78.96**	**47**	P	**P**	**21 55 37.2**	**+0.6**
	baz=328						
KULA	**Kula-Manisa**	**78.97**	**322**	P	**P**	**21 55 35.5**	**-1.2**
KULA	**Kula-Manisa**	**78.97**	**322**	P	**P**	**21 55 35.5**	**-1.2**
350A	**Dozier**	**79.00**	**52**	P	**P**	**21 55 37.7**	**+0.8**
	baz=326						
MANT	**Manisa**	**79.03**	**322**	*e*P	**P**	**21 55 36.6**	**-0.6**
	comp=Z,144nm,1.0s						
Z54A	**Sparta**	**79.11**	**48**	P	**P**	**21 55 38.0**	**+0.5**
	baz=328,SNR=7.3						
449A	**Pace**	**79.13**	**53**	P	**P**	**21 55 38.7**	**+1.1**
	baz=326						
153A	**Fort Valley**	**79.15**	**49**	P	**P**	**21 55 38.1**	**+0.4**
	baz=327						
AS01	**Alice Springs**	**79.16**	**203**	*e*P	**P**	**21 55 38.0**	**+0.4**
PLG	**Polygyros**	**79.16**	**326**	P	**P**	**21 55 35.6**	**-2.1**
PLG	**Polygyros**	**79.16**	**326**	P	**P**	**21 55 35.6**	**-2.1**
PLG	**Polygyros**	**79.16**	**326**	P	**P**	**21 55 35.6**	**-2.1**
AS31	**Alice Springs**	**79.17**	**203**	*e*P	**P**	**21 55 38.9**	**+1.1**
	comp=Z,10.0nm,0.8s						
ASAR	**Alice Springs**	**79.17**	**203**	P	**P**	**21 55 38.8**	**+1.0**
	comp=Z,36nm,0.9s,baz=16,slow=5.2,SNR=172						
ASAR				pP	**pP**	**21 56 11.0**	**-0.9**
	comp=Z,18nm,0.7s,baz=16,slow=5.4,SNR=9.0						
ASAR				S	**S**	**22 05 29.1**	**+3.1**
	comp=Z,1.2nm,1.0s,baz=19,slow=8.8,SNR=6.0						
252A	**Lumpkin**	**79.28**	**50**	P	**P**	**21 55 38.5**	**+0.2**
	baz=327						
X57A	**Johnson Farm,**	**79.29**	**46**	P	**P**	**21 55 38.8**	**+0.4**
	baz=329						
OHR	**Ohrid**	**79.35**	**329**	*i* P	**P**	**21 55 38.0**	**-0.7**
BNI	**Bardonecchia**	**79.37**	**340**	*e*P	**P**	**21 55 39.2**	**+0.3**
	comp=Z,29nm,1.1s						
450A	**Crestview**	**79.40**	**52**	P	**P**	**21 55 40.0**	**+0.9**
	baz=326						
VLC	**Villacollemand**	**79.40**	**337**	*e*P	**P**	**21 55 38.9**	**+0.1**
	comp=Z,49nm,1.0s						
TIR	**Tirane**	**79.43**	**329**	*e*P	**P**	**21 55 38.8**	**-0.3**
	comp=Z,59nm,0.9s						
TIR	**Tirane**	**79.43**	**329**	⇓*i*P	**P**	**21 55 39.3**	**+0.2**
TIR	**Tirane**	**79.43**	**329**	⇓P	**P**	**21 55 39.3**	**+0.2**
Z55A	**Blythe**	**79.44**	**48**	P	**P**	**21 55 39.8**	**+0.6**
	baz=328						
MHTO	**MHTO**	**79.47**	**291**	P	**P**	**21 55 39.0**	**-0.5**
	SNR=9.1						
FNA	**Florina**	**79.47**	**328**	P	**P**	**21 55 37.0**	**-2.4**
FNA	**Florina**	**79.47**	**328**	P	**P**	**21 55 37.0**	**-2.4**
FNA	**Florina**	**79.47**	**328**	P	**P**	**21 55 37.0**	**-2.4**
351A	**Pinckard**	**79.47**	**51**	P	**P**	**21 55 40.0**	**+0.6**
	baz=327						
PAIG	**Paliouri**	**79.48**	**326**	P	**P**	**21 55 37.9**	**-1.5**
PAIG	**Paliouri**	**79.48**	**326**	P	**P**	**21 55 37.9**	**-1.5**
PAIG	**Paliouri**	**79.48**	**326**	P	**P**	**21 55 37.9**	**-1.5**
154A	**Montrose**	**79.52**	**49**	P	**P**	**21 55 40.1**	**+0.5**
	baz=328						
X58A	**Rowland**	**79.54**	**45**	P	**P**	**21 55 40.1**	**+0.4**
	baz=329						
SSB	**Saint Sauveur**	**79.58**	**341**	*e*P	**P**	**21 55 40.4**	**+0.6**
	comp=Z,109nm,1.4s						
352A	**Blakely**	**79.62**	**51**	P	**P**	**21 55 40.7**	**+0.4**
	baz=327						
KZN	**Kozani**	**79.77**	**328**	P	**P**	**21 55 39.7**	**-1.3**
KZN	**Kozani**	**79.77**	**328**	P	**P**	**21 55 39.7**	**-1.3**
KZN	**Kozani**	**79.77**	**328**	P	**P**	**21 55 39.7**	**-1.3**
155A	**Kite**	**79.80**	**48**	P	**P**	**21 55 41.6**	**+0.5**
	baz=328						
X59A	**McDuffie Farm,**	**79.84**	**45**	P	**P**	**21 55 41.6**	**+0.3**
	baz=329						
254A	**Abbeville**	**79.99**	**49**	P	**P**	**21 55 42.8**	**+0.6**
	baz=328						
Z57A	**Bowman**	**80.02**	**47**	P	**P**	**21 55 42.6**	**+0.2**
	baz=329						
CHOS	**Chios island**	**80.03**	**324**	P	**P**	**21 55 41.2**	**-1.3**
CHOS	**Chios island**	**80.03**	**324**	P	**P**	**21 55 41.2**	**-1.3**
353A	**Camilla**	**80.06**	**50**	P	**P**	**21 55 43.5**	**+0.9**
	baz=327						
PENT	**Pentalofos**	**80.08**	**328**	P	**P**	**21 55 41.5**	**-1.2**
XOR	**Xorichti**	**80.15**	**326**	P	**P**	**21 55 41.1**	**-1.9**
XOR	**Xorichti**	**80.15**	**326**	P	**P**	**21 55 41.1**	**-1.9**
FYTO	**Fytoko, Volos**	**80.20**	**326**	P	**P**	**21 55 41.8**	**-1.4**
FYTO	**Fytoko, Volos**	**80.20**	**326**	P	**P**	**21 55 41.8**	**-1.4**
156A	**Sylvania**	**80.21**	**48**	P	**P**	**21 55 44.3**	**+0.9**
	baz=328						
CSS	**Mathiatis**	**80.22**	**317**	*e*P	**P**	**21 55 42.3**	**-1.1**
	comp=Z,139nm,1.8s						
CSS	**Mathiatis**	**80.22**	**317**	P	**P**	**21 55 42.2**	**-1.3**
KPRO	**Kipourio**	**80.22**	**328**	P	**P**	**21 55 42.6**	**-0.8**
TIGA	**Tifton**	**80.28**	**50**	P	**P**	**21 55 44.5**	**+0.7**
	baz=328,SNR=6.3						
YER	**Yerkesik**	**80.32**	**322**	P	**P**	**21 55 43.2**	**-0.8**
YER	**Yerkesik**	**80.32**	**322**	P	**P**	**21 55 43.2**	**-0.8**
YER	**Yerkesik**	**80.32**	**322**	P	**P**	**21 55 43.2**	**-0.8**
AQU	**L'Aquila**	**80.34**	**334**	*e*P	**P**	**21 55 44.4**	**+0.4**
	comp=Z,118nm,1.2s						
AQU	**L'Aquila**	**80.34**	**334**	*e*P	**P**	**21 55 44.4**	**+0.4**
AQU				pmax	pmax		
	comp=Z,118nm,1.2s						
AQU	**L'Aquila**	**80.34**	**334**	⇓*i*P	**P**	**21 55 44.2**	**+0.2**
Z58A	**St. Stephen**	**80.37**	**46**	P	**P**	**21 55 44.6**	**+0.4**
	baz=329						
255A	**Hazlehurst**	**80.38**	**49**	P	**P**	**21 55 45.0**	**+0.7**
	baz=328						
CAF	**Calviac**	**80.38**	**343**	*e*P	**P**	**21 55 44.4**	**+0.2**
CAF				pmax	pmax		
	comp=Z,137nm,1.1s						
453A	**Whigham**	**80.43**	**51**	P	**P**	**21 55 45.4**	**+0.9**
	baz=327						
552A	**Lynn Haven**	**80.57**	**52**	P	**P**	**21 55 46.1**	**+0.8**
	baz=327						
LFF	**La Frestale**	**80.59**	**344**	*e*P	**P**	**21 55 45.5**	**+0.3**
LFF				pmax	pmax		
	comp=Z,90nm,0.9s						
256A	**Glennville**	**80.60**	**48**	P	**P**	**21 55 46.3**	**+0.8**
	baz=328						
JAN	**Janina**	**80.66**	**328**	P	**P**	**21 55 45.2**	**-0.5**
JAN	**Janina**	**80.66**	**328**	P	**P**	**21 55 45.2**	**-0.5**
355A	**Pearson**	**80.70**	**49**	P	**P**	**21 55 46.8**	**+0.8**
	baz=328						
SRN	**Sarande**	**80.72**	**329**	P	**P**	**21 55 44.6**	**-1.4**
SRN	**Sarande**	**80.72**	**329**	P	**P**	**21 55 44.6**	**-1.4**
AGG	**Agios Georgios**	**80.75**	**327**	*e*P	**P**	**21 55 44.8**	**-1.4**
	comp=Z,24nm,1.0s						
AGG	**Agios Georgios**	**80.75**	**327**	*e*P	**P**	**21 55 44.8**	**-1.4**
AGG				pmax	pmax		
	comp=Z,24nm,1.0s						
ATAL	**Atalanti**	**80.82**	**326**	P	**P**	**21 55 44.2**	**-2.3**
ATAL	**Atalanti**	**80.82**	**326**	P	**P**	**21 55 44.2**	**-2.3**
LKR	**Lokris**	**80.86**	**326**	P	**P**	**21 55 42.5**	**-4.3**
LKR	**Lokris**	**80.86**	**326**	P	**P**	**21 55 42.5**	**-4.3**
356A	**Blackshear**	**81.05**	**49**	P	**P**	**21 55 48.6**	**+0.7**
	baz=328						
455A	**Stateville**	**81.12**	**50**	P	**P**	**21 55 48.9**	**+0.7**
	baz=328						
LAKA	**Lakka**	**81.57**	**327**	P	**P**	**21 55 47.9**	**-2.7**
LAKA	**Lakka**	**81.57**	**327**	P	**P**	**21 55 47.9**	**-2.7**
555A	**McAlpin**	**81.67**	**50**	P	**P**	**21 55 52.4**	**+1.2**
	baz=328						
KLV	**Kalavryta, Ach**	**81.69**	**326**	P	**P**	**21 55 48.9**	**-2.4**
KLV	**Kalavryta, Ach**	**81.69**	**326**	P	**P**	**21 55 48.9**	**-2.4**
GUR	**Goura**	**81.73**	**326**	P	**P**	**21 55 49.4**	**-2.1**
GUR	**Goura**	**81.73**	**326**	P	**P**	**21 55 49.4**	**-2.1**
DRO	**Drossia**	**81.92**	**327**	P	**P**	**21 55 51.3**	**-1.1**
PMOR	**Pomariorio Ree**	**81.96**	**128**	*e*T	T	23 25 58.3	
	comp=Z,15nm,0.2s						
556A	**Lake Butler**	**82.03**	**50**	P	**P**	**21 55 54.3**	**+1.3**
	baz=328,SNR=8.0						
VLS	**Valsamata**	**82.09**	**328**	P	**P**	**21 55 51.6**	**-1.7**
VLS	**Valsamata**	**82.09**	**328**	P	**P**	**21 55 51.6**	**-1.7**
VLS	**Valsamata**	**82.09**	**328**	P	**P**	**21 55 51.6**	**-1.7**
KARP	**Karpathos**	**82.15**	**322**	*e*P	**P**	**21 55 51.2**	**-2.5**
	comp=Z,49nm,0.8s						
AMT	**Artemida-Makis**	**82.31**	**326**	P	**P**	**21 55 53.3**	**-1.1**
557A	**Orange Park**	**82.33**	**49**	P	**P**	**21 55 55.8**	**+1.2**
	baz=328,SNR=5.7						
TIP	**Timpagrande**	**82.36**	**331**	*e*P	**P**	**21 55 54.6**	**-0.1**
	comp=Z,116nm,1.2s						
TIP	**Timpagrande**	**82.36**	**331**	⇓*i*P	**P**	**21 55 54.5**	**-0.3**
TIP	**Timpagrande**	**82.36**	**331**	P	**P**	**21 55 54.4**	**-0.3**
656A	**Willston**	**82.51**	**50**	P	**P**	**21 55 56.7**	**+1.2**
	baz=328						
ITM	**Ithomi**	**82.55**	**326**	*e*P	**P**	**21 55 54.7**	**-1.0**
	comp=Z,49nm,1.0s						
657A	**Interlachen**	**82.64**	**50**	P	**P**	**21 55 57.4**	**+1.2**
	baz=328						
658A	**Bunnell**	**83.05**	**49**	P	**P**	**21 55 59.5**	**+1.2**
	baz=329						
757A	**Oxford**	**83.09**	**50**	P	**P**	**21 55 59.3**	**+0.8**
	baz=328						
LAST	**Lasithi**	**83.11**	**323**	P	**P**	**21 55 56.9**	**-1.8**
LAST	**Lasithi**	**83.11**	**323**	P	**P**	**21 55 56.9**	**-1.8**
IDI	**Anoyia**	**83.22**	**323**	*e*P	**P**	**21 55 57.0**	**-2.3**
	comp=Z,22nm,0.8s						
IDI	**Anoyia**	**83.22**	**323**	⇑*i*P	**P**	**21 55 56.9**	**-2.3**
COCO	**West Island**	**83.32**	**240**	*i* P	**P**	**21 56 01.0**	**+1.3**
PPT	**Papeete**	**83.40**	**131**	LR	LR	22 27 29.1	
	comp=Z,48nm,19.8s,baz=5.5,slow=31						
PPT2	**Papeete2**	**83.42**	**131**	*e*S	S	22 06 27.4	+17
	comp=Z,104nm,28.8s						
PPT2	**Papeete2**	**83.42**	**131**	*e*LR	LR	22 22 06.5	
	comp=Z,512nm,32.8s						
758A	**Lake Helen**	**83.47**	**49**	P	**P**	**21 56 01.7**	**+1.2**
	baz=329						
857A	**Zephyrhills**	**83.58**	**51**	P	**P**	**21 56 02.1**	**+1.0**
	baz=328						
858A	**St. Cloud**	**84.03**	**50**	P	**P**	**21 56 04.6**	**+1.2**
	baz=329						
DWPF	**Disney Wildern**	**84.08**	**50**	P	**P**	**21 56 04.3**	**+0.7**
	baz=329						
RAYN	**Ar Rayn**	**84.18**	**302**	*e*P	**P**	**21 56 03.1**	**-1.2**
	comp=Z,56nm,1.1s						
RAYN	**Ar Rayn**	**84.18**	**302**	*i* P	**P**	**21 56 03.1**	**-1.2**
	SNR=50						
RAYN	**Ar Rayn**	**84.18**	**302**	*e*P	**P**	**21 56 03.1**	**-1.2**
RAYN				pmax	pmax		
	comp=Z,56nm,1.1s						
958A	**Wauchula**	**84.38**	**51**	P	**P**	**21 56 06.6**	**+1.4**
	baz=329						
RAO	**Raoul Island**	**84.46**	**159**	LR	LR	22 30 08.2	
	comp=Z,567nm,19.5s,baz=141,slow=33						
PBRG	**Braganca**	**84.74**	**349**	*e*P	**P**	**21 56 06.3**	**-0.5**
	comp=Z,107nm,1.6s						
PGAV	**Gavieira, Arco**	**84.75**	**350**	*e*P	**P**	**21 56 08.3**	**+1.4**
	comp=Z,99nm,1.7s						
058A	**Arcadia**	**84.80**	**51**	P	**P**	**21 56 08.5**	**+1.2**
	baz=329						
PCAB	**Cabril**	**84.97**	**350**	*e*P	**P**	**21 56 08.9**	**+0.9**
	comp=Z,91nm,1.6s						
POLO	**Lamas de Olo**	**85.28**	**349**	*e*P	**P**	**21 56 10.2**	**+0.6**
	comp=Z,57nm,1.5s						
PVRL	**Vila Real**	**85.37**	**349**	*e*P	**P**	**21 56 10.6**	**+0.7**
	comp=Z,156nm,1.6s						
MVO	**Moncorvo**	**85.40**	**349**	*e*P	**P**	**21 56 10.6**	**+0.5**
	comp=Z,93nm,1.2s						
PTO	**Porto**	**85.60**	**350**	*e*P	**P**	**21 56 11.9**	**+0.9**
STKA	**Stephens Creek**	**85.70**	**194**	P	**P**	**21 56 11.6**	**+0.2**
	comp=Z,9.0nm,0.8s,baz=347,slow=7.0,SNR=17						
STKA				pP	**pP**	**21 56 44.7**	**-1.4**
	comp=Z,13nm,0.8s,baz=356,slow=7.6,SNR=8.1						
PVIS	**Viseu**	**85.94**	**349**	*e*P	**P**	**21 56 13.1**	**+0.3**
	comp=Z,67nm,1.4s						
WDD	**Wied Dalam**	**86.11**	**331**	*e*P	**P**	**21 56 13.5**	**-0.1**
	comp=Z,249nm,1.0s						
MTE	**Manteigas**	**86.22**	**349**	*e*P	**P**	**21 56 14.4**	**+0.3**
	comp=Z,93nm,1.1s						
MTE	**Manteigas**	**86.22**	**349**	*e*P	**P**	**21 56 14.5**	**+0.3**
	comp=Z,69nm,1.0s						
ES19	**SONSECA Array**	**86.44**	**346**	*e*P	**P**	**21 56 14.9**	**-0.3**
ESDC	**Sonseca Array**	**86.47**	**346**	P	**P**	**21 56 15.2**	**-0.2**
	comp=Z,42nm,1.0s,baz=5.8,slow=4.7,SNR=80						
ESDC				pP	**pP**	**21 56 50.0**	**0.0**
	comp=Z,16nm,1.0s,baz=5.7,slow=4.9,SNR=4.7						
ESLA	**Sonseca Array**	**86.47**	**346**	*e*P	**P**	**21 56 15.3**	**-0.1**
	comp=Z,60nm,1.1s						
PAB	**San Pablo**	**86.65**	**347**	*e*P	**P**	**21 56 15.8**	**-0.5**
	comp=Z,34nm,1.1s						
PAB	**San Pablo**	**86.65**	**347**	*e*P	**P**	**21 56 15.8**	**-0.5**
PAB				pmax	pmax		
	comp=Z,34nm,1.1s						
PCAS	**Casmilo, Conde**	**86.66**	**350**	*e*P	**P**	**21 56 17.6**	**+1.3**
	comp=Z,88nm,1.1s						
PCBR	**Castelo Branco**	**86.76**	**349**	*e*P	**P**	**21 56 16.6**	**-0.1**
	comp=Z,59nm,1.5s						
PMRV	**Marv??o**	**87.16**	**349**	*e*P	**P**	**21 56 19.4**	**+0.7**
CMAH	**Djebel Manchou**	**87.25**	**337**	P	**P**	**21 56 17.0**	**-2.3**
FORT	**Forrest**	**87.42**	**206**	*e*P	**P**	**21 56 20.4**	**+0.7**
	comp=Z,82nm,0.8s						
ABSA	**Djebel Ababsia**	**87.58**	**337**	P	**P**	**21 56 18.3**	**-2.5**
PMTG	**Montargil**	**87.61**	**349**	*e*P	**P**	**21 56 20.3**	**-0.5**
	comp=Z,44nm,1.6s						
KEST	**Kesra**	**87.63**	**335**	P	**P**	**21 56 20.4**	**-0.6**
	comp=Z,61nm,1.1s,baz=316,slow=1.6,SNR=48						
KEST				LR	LR	22 41 48.0	
	comp=Z,46nm,18.8s,baz=292,slow=40						
CKFL	**Kef-Lekhel**	**87.63**	**337**	P	**P**	**21 56 20.5**	**-0.7**
PESTR	**Estremoz**	**87.73**	**349**	*e*P	**P**	**21 56 20.9**	**-0.6**
PESTR	**Estremoz**	**87.73**	**349**	*e*P	**P**	**21 56 21.2**	**-0.3**
	comp=Z,41nm,1.8s						
TBI	**Tubuai**	**88.50**	**133**	*e*S	S	22 07 14.2	+15
	comp=Z,151nm,29.0s						
TBI	**Tubuai**	**88.50**	**133**	*e*LR	LR	22 24 11.9	
	comp=Z,243nm,38.2s						
TBI	**Tubuai**	**88.50**	**133**	*e*T	T	23 34 05.2	
	comp=Z,9.3nm,0.3s						
TOO	**Toolangi**	**90.82**	**190**	*e*P	**P**	**21 56 37.4**	**+1.8**
	comp=Z,24nm,1.3s						
TOO	**Toolangi**	**90.82**	**190**	*e*P	**P**	**21 56 37.4**	**+1.8**
TOO				pmax	pmax		
	comp=Z,24nm,1.3s						
URZ	**Urewera**	**92.30**	**165**	LR	LR	22 31 12.6	
	comp=Z,54nm,20.2s,baz=4.0,slow=31						
ATD	**Arta Tunnel**	**95.51**	**297**	LR	LR	22 44 02.3	
	comp=Z,58nm,19.3s,baz=22,slow=38						
TORD	**Torodi Ar. Bea**	**111.15**	**335**	PKiKP	**PKiKP**	**22 02 05.3**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=6.9,slow=1.8,SNR=14						
TORD				PP	**PP**	**22 02 42.8**	**-3.1**
	comp=Z,2.7nm,0.9s,baz=357,slow=9.1,SNR=7.5						
TORD				PKKPbc	**PKKPbc**	**22 13 00.9**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=153,slow=0.7,SNR=3.7						
DBIC	**Dimbokro**	**118.90**	**341**	PKP	**PKiKP**	**22 02 20.8**	**+0.1**
	comp=Z,10nm,0.7s,baz=273,slow=1.0,SNR=13						
DBIC				pPKP	**pPKPdf**	**22 02 55.7**	**-1.4**
	comp=Z,3.0nm,0.6s,baz=300,slow=3.4,SNR=2.6						
TIC	**Toumodi**	**118.95**	**341**	*e*PKIKP	**PKiKP**	**22 02 20.8**	**-0.1**
PTGA	**Pitinga**	**119.06**	**45**	PP	PP	22 03 40.8	-1.1
	comp=Z,7.7nm,0.8s,baz=343,slow=7.9,SNR=8.7						
KIC	**Kosan Boka**	**119.17**	**341**	*e*PKIKP	**PKPdf**	**22 02 21.0**	**-0.2**
	comp=Z,35nm,1.1s						

LIC	**Lamto**	**119.36**	**341**	*e*PKIKP	**PKPdf**	**22 02 21.4**	**-0.2**
	comp=Z,44nm,1.1s						
LSZ	**Lusaka**	**125.74**	**294**	*e*PKPdf	**PKiKP**	**22 02 34.3**	**+0.1**
LSZ	**Lusaka**	**125.74**	**294**	*e*PKIKP	**PKiKP**	**22 02 34.3**	**+0.1**
LPAZ	**La Paz**	**128.54**	**63**	PKP	**PKiKP**	**22 02 40.4**	**0.0**
	comp=Z,1.6nm,0.6s,baz=322,slow=1.5,SNR=4.2						
LPAZ				pPKP	**pPKPdf**	**22 03 14.8**	**-1.2**
	comp=Z,2.1nm,0.8s,baz=4.3,slow=3.9,SNR=3.1						
LPAZ				SKP		22 06 04.0	
	comp=Z,1.5nm,0.8s,baz=348,slow=7.0,SNR=3.8						
VNDA	**Vanda**	**130.22**	**179**	SKPbc	**SKPbc**	**22 05 49.7**	**-0.9**
	comp=Z,4.8nm,1.0s,baz=1.4,slow=3.5,SNR=5.5						
SIV	**San Ignacio**	**131.94**	**55**	PKP	**PKPdf**	**22 02 46.0**	**+0.5**
	comp=Z,3.0nm,1.1s,baz=294,slow=3.7,SNR=6.7						
SIV				pPKP	**pPKPdf**	**22 03 20.7**	**-1.0**
	comp=Z,4.7nm,0.9s,baz=349,slow=1.0,SNR=5.9						
SIV				SKPbc	**SKPab**	**22 05 59.1**	**-0.6**
	comp=Z,36nm,0.9s,baz=354,slow=3.1,SNR=45						
LVC	**Limon Verde**	**133.22**	**68**	SKPbc	**SKPab**	**22 06 04.1**	**-1.5**
	comp=Z,12nm,0.9s,baz=275,slow=5.6,SNR=7.1						
BDFB	**Brasilia**	**137.41**	**39**	SKPbc	**SKiKP**	**22 06 17.5**	**-3.4**
	comp=Z,3.4nm,0.6s,baz=246,slow=7.6,SNR=5.2						
BOSA	**Boshof**	**137.90**	**286**	PKhKP	PKPpre	22 02 48.0	
	comp=Z,3.2nm,0.7s,baz=19,slow=4.2,SNR=6.7						
BOSA				PKP	**PKPdf**	**22 02 55.5**	**-0.9**
	comp=Z,9.0nm,0.7s,baz=93,slow=1.4,SNR=9.6						
BOSA				SKPbc	**SKiKP**	**22 06 19.6**	**-1.9**
	comp=Z,18nm,0.9s,baz=42,slow=1.7,SNR=17						
CPUP	**Villa Florida**	**142.47**	**59**	PKhKP	PKPpre	22 03 01.1	
	comp=Z,3.1nm,0.7s,baz=315,slow=4.7,SNR=4.8						
CPUP				SKPbc	**SKiKP**	**22 06 30.6**	**-0.3**
	comp=Z,13nm,1.0s,baz=345,slow=3.1,SNR=9.1						
QSPA	**South Pole Qui**	**142.69**	**180**	*e*PKPpre	PKPpre	22 02 59.4	
SUR	**Sutherland**	**143.25**	**287**	*e*PKPdf	PKPbc	22 03 04.5	+1.1
PLCA	**Paso Flores**	**145.14**	**89**	PKPbc	**PKPab**	**22 03 09.5**	**+0.5**
	comp=Z,57nm,0.8s,baz=323,slow=3.8,SNR=99						
PLCA				pPKPbc	pPKPab	22 03 42.7	-1.6
	comp=Z,18nm,0.8s,baz=307,slow=6.2,SNR=3.4						
PLCA				SKPbc	**SKiKP**	**22 06 37.2**	**+1.2**
	comp=Z,12nm,1.0s,baz=312,slow=3.9,SNR=7.6						
SYO	**Syowa Base**	**147.90**	**217**	⇑*e*PKPdf	**PKPbc**	**22 03 14.2**	**-1.5**
SYO	**Syowa Base**	**147.90**	**217**	⇓*e*PKPbc	**PKiKP**	**22 03 17.5**	**+0.1**
SYO	**Syowa Base**	**147.90**	**217**	⇓*e*pPKPdf	pPKPdf	22 03 48.0	-0.9
USHA	**Ushuaia**	**152.83**	**113**	PKPbc	**PKiKP**	**22 03 28.6**	**+0.6**
	comp=Z,5.9nm,0.7s,baz=306,slow=5.5,SNR=4.6						

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*NEIC **26** 21:50:15.6±0.0, 17°.18N×94°.86W, h130^{km}, MD4.0(MEX), After MEX.*

MEX 26 21:50:15.6±0.8, 17°.18N×94°.86W, h130^{km}±8^{km}, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.09**	**197**	*i* P	Pn	21 50 31.7	-1.6
CMIG				*i* S	Sn	21 50 44.5	-2.2
CMIG	**Matias Romero**	**0.09**	**197**	*i* P	Pn	21 50 31.7	-1.6
CMIG				*i* S	Sn	21 50 44.5	-2.2
VHO	**Vista Hermosa**	**1.80**	**267**	*e*P	Pn	21 50 46.5	-0.8
VHO				*e*S	Sn	21 51 10.6	-1.0
VHO	**Vista Hermosa**	**1.80**	**267**	*e*P	Pn	21 50 46.5	-0.8
VHO				*e*S	Sn	21 51 10.6	-1.0
HUIG	**Huatulco**	**1.85**	**221**	*e*P	Pn	21 50 44.5	-3.2
HUIG				*i* S	Sn	21 51 10.6	-1.7
HUIG	**Huatulco**	**1.85**	**221**	*e*P	Pn	21 50 44.5	-3.2
HUIG				*i* S	Sn	21 51 10.6	-1.7
CCIG	**Comitan**	**2.75**	**109**	*e*Pn	Pn	21 50 53.4	-5.9
CCIG				*e*Sn	Sn	21 51 26.5	-6.2

ATH 26 21:54:08.6, 34°.48N×23°.79E, h17^{km}±5^{km}, ML2.3/2, Error ellipse: s-maj=9.1km s-min=3.1km az=23.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.44**	**34**	P	Pb	21 54 17.8	-0.1
GVD				S	Sg	21 54 23.1	-0.5
GVD				AML	AML	21 54 23.9	
	comp=E,1574µm,0.3s						
GVD				AML	AML	21 54 25.3	
	comp=N,1199µm,0.4s						
VAM	**Vamos**	**0.99**	**20**	P	Pb	21 54 27.3	0.0
IMMV	**Iera Moni Meta**	**1.00**	**9**	P	Pb	21 54 27.3	-0.2
IMMV				S	Sn	21 54 42.2	+0.7
IMMV				AML	AML	21 54 42.2	
	comp=N,251µm,0.9s						
IMMV				AML	AML	21 54 46.6	
	comp=E,315µm,0.8s						
LAST	**Lasithi**	**1.55**	**63**	P	Pb	21 54 37.6	+0.7

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*IDC **26** 22:09:08.3±2.0, 22°.44S×65°.75W, h240^{km}±20^{km}, mb3.4/2, mb1 3.3/5, mb1mx3.0/33, mbtmp3.6/5, Error ellipse: s-maj=30.8km s-min=24.6km az=122.0*

*GUC **26** 22:09:11.6±0.6, 22°.58S×66°.64W, h289^{km}±7^{km}, MW4.5*

ISC 26 22:09:08.1±1.1, 22°.58S±0°.07×66°.01W±0°.08, h251^{km}, n22, σ1^{s}86/39, 5C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.68**	**269**	*e*P	**Pn**	**22 09 59.9**	**+2.2**
LVC				*i* S	**S**	**22 10 36.8**	**0.0**
LVC	**Limon Verde**	**2.68**	**269**	P	**Pn**	**22 09 59.9**	**+2.2**
	23nm,0.3s,baz=93,slow=6.2,SNR=171						
LVC				S	**S**	**22 10 37.5**	**+0.6**
	8.0nm,0.3s,baz=259,slow=21,SNR=9.4						
PB09	**IPOC Station P**	**3.10**	**284**	*e*P	**Pn**	**22 10 04.3**	**+2.4**
PB09				*e*S	**S**	**22 10 43.7**	**-0.8**
PB15	**IPOC Station P**	**3.25**	**258**	*e*P	**Pn**	**22 10 05.4**	**+1.7**
PB15				*e*S	**S**	**22 10 46.3**	**-1.4**
PB06	**IPOC Station P**	**3.30**	**267**	*e*P	**Pn**	**22 10 06.0**	**+1.9**
PB06				*e*S	**S**	**22 10 47.0**	**-1.4**
PB03	**IPOC Station P**	**3.51**	**278**	⇑*i*P	**Pn**	**22 10 07.9**	**+1.4**
PB03				*i* S	**S**	**22 10 50.7**	**-2.0**
PB01	**IPOC Station P**	**3.58**	**295**	⇑*i*P	**Pn**	**22 10 09.0**	**+1.7**
PB01				*e*S	**S**	**22 10 52.6**	**-1.4**
PB07	**IPOC Station P**	**3.70**	**283**	⇑*i*P	**Pn**	**22 10 10.2**	**+1.6**
PB07				*i* S	**S**	**22 10 54.4**	**-2.2**
PB08	**IPOC Station P**	**3.81**	**309**	*e*P	**Pn**	**22 10 12.8**	**+2.6**
PB08				*e*S	**S**	**22 10 59.8**	**+0.4**
PB02	**IPOC Station P**	**3.82**	**288**	⇑*i*P	**Pn**	**22 10 11.3**	**+1.2**
PB02				*i* S	**S**	**22 10 57.0**	**-2.1**
PB04	**IPOC Station P**	**3.84**	**273**	⇑*i*P	**Pn**	**22 10 11.7**	**+1.4**
PB04				*i* S	**S**	**22 10 56.9**	**-2.7**
PB05	**IPOC Station P**	**3.88**	**265**	*e*P	**Pn**	**22 10 11.8**	**+1.0**
PB05				*e*S	**S**	**22 10 57.7**	**-2.7**
PB10	**IPOC Station P**	**4.29**	**257**	*e*P	**Pn**	**22 10 16.1**	**+0.8**
PB10				*e*S	**S**	**22 11 05.2**	**-3.6**
PB11	**IPOC Station P**	**4.42**	**309**	*e*P	**Pn**	**22 10 18.2**	**+1.1**
PB11				*i* S	**S**	**22 11 09.6**	**-2.3**
PB14	**IPOC Station P**	**4.52**	**242**	*e*P	**Pn**	**22 10 19.2**	**+0.8**
PB14				*i* S	**S**	**22 11 11.3**	**-3.0**
MNMC	**Minye Minye**	**4.80**	**315**	*e*P	**Pn**	**22 10 23.6**	**+1.7**
MNMC				*i* S	**S**	**22 11 19.7**	**-0.8**
LPAZ	**La Paz**	**6.58**	**342**	P	**Pn**	**22 10 41.6**	**-2.5**
	0.1nm,0.3s,baz=142,slow=12,SNR=2.5						
LPAZ				S	**S**	**22 12 00.3**	**-0.6**
	0.2nm,0.3s,baz=284,slow=22,SNR=6.4						
SIV	**San Ignacio**	**8.04**	**36**	P	**Pn**	**22 11 00.0**	**-2.1**
	0.5nm,0.3s,baz=227,slow=19,SNR=7.3						
TORD	**Torodi Ar. Bea**	**75.21**	**69**	P	**P**	**22 20 23.2**	**-0.5**
	0.7nm,0.4s,baz=228,slow=5.5,SNR=20						
YKA	**Yellowknife Ar**	**93.12**	**340**	P	**P**	**22 21 54.5**	**+1.5**
	0.2nm,0.5s,baz=125,slow=5.7,SNR=3.1						
WRA	**Warramunga Arr**	**133.30**	**207**	PKP	**PKiKP**	**22 27 56.2**	**0.0**
	0.6nm,1.0s,baz=153,slow=1.9,SNR=7.7						
MKAR	**Makanchi Array**	**144.85**	**39**	PKP	**PKPdf**	**22 28 16.1**	**+0.9**
	0.4nm,0.7s,baz=323,slow=3.3,SNR=4.5						

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*IDC **26** 22:22:28.9±1.2, 19°.11N×67°.94W, h0^{km}, mb3.6/5, mb1 4.0/6, mb1mx3.6/47, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=35.3km s-min=25.1km az=6.0*

*ISCJB **26** 22:22:30.8±0.4, 19°.35N±0°.07×67°.96W±0°.05, h20^{km}, mb3.6/5, Error ellipse: s-maj=11.0km s-min=3.7km az=32.6*

*RSPR **26** 22:22:32.9, 19°.16N×68°.06W, h86^{km}±4^{km}, MD3.8/14*

*NEIC **26** 22:22:32.9±0.0, 19°.16N×68°.06W, h86^{km}, MD3.8(RSPR), After RSPR.*

ISC 26 22:22:32.0±0.7, 19°.16N±0°.06×68°.04W±0°.04, h20^{km}, n46, σ1^{s}27/57, mb3.8/5, 29C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.11**	**128**	⇑*e*P	**Pb**	**22 22 53.2**	**+0.6**
AGPR	**Aguadilla, PR**	**1.11**	**128**	*e*S	**Sn**	**22 23 08.4**	**+1.2**
AGPR	**Aguadilla, PR**	**1.11**	**128**	⇑*e*P	**Pb**	**22 22 53.2**	**+0.6**
AGPR				*e*S	**Sn**	**22 23 08.4**	**+1.2**
MPR	**Mayaguez**	**1.27**	**138**	⇑*e*P	**Pn**	**22 22 55.1**	**+0.5**
MPR	**Mayaguez**	**1.27**	**138**	⇑*e*P	**Pn**	**22 22 55.1**	**+0.5**
DR12	**Loma Pena Alta**	**1.33**	**254**	⇑*e*P	**Pn**	**22 22 55.8**	**+0.4**
DR12	**Loma Pena Alta**	**1.33**	**254**	⇑*e*P	**Pn**	**22 22 55.8**	**+0.4**
LSP	**Las Mesas**	**1.33**	**137**	⇑*e*P	**Pn**	**22 22 56.0**	**+0.5**
LSP	**Las Mesas**	**1.33**	**137**	⇑*e*P	**Pn**	**22 22 56.0**	**+0.5**
EMPR	**Esperanza - Ma**	**1.58**	**115**	⇑*e*P	**Pn**	**22 22 59.4**	**+0.5**
EMPR	**Esperanza - Ma**	**1.58**	**115**	*e*S	**Sn**	**22 23 19.6**	**+0.9**
EMPR	**Esperanza - Ma**	**1.58**	**115**	⇑*e*P	**Pn**	**22 22 59.4**	**+0.5**
EMPR				*e*S	**Sn**	**22 23 19.6**	**+0.9**
GBPR	**Guanica, Bosqu**	**1.61**	**137**	⇑*e*P	**Pn**	**22 22 59.9**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.61**	**137**	⇑*e*P	**Pn**	**22 22 59.9**	**+0.7**
CELP	**Cerrillos**	**1.75**	**128**	⇑*e*P	**Pn**	**22 23 01.4**	**+0.1**
CELP				*e*S	**Sn**	**22 23 23.6**	**+0.6**
CELP	**Cerrillos**	**1.75**	**128**	⇑*e*P	**Pn**	**22 23 01.4**	**+0.1**
CELP				*e*S	**Sn**	**22 23 23.6**	**+0.6**
OBIP	**Obispado Ponce**	**1.75**	**129**	⇑*e*P	**Pn**	**22 23 01.4**	**+0.2**
OBIP	**Obispado Ponce**	**1.75**	**129**	*e*S	**Sn**	**22 23 23.5**	**+0.5**
OBIP	**Obispado Ponce**	**1.75**	**129**	⇑*e*P	**Pn**	**22 23 01.4**	**+0.2**
OBIP				*e*S	**Sn**	**22 23 23.5**	**+0.5**
SJG	**San Juan**	**2.07**	**120**	*e*S	**Sn**	**22 23 31.2**	**+0.4**
SJG	**San Juan**	**2.07**	**120**	⇑*e*P	**Pn**	**22 23 05.8**	**+0.2**
SJG	**San Juan**	**2.07**	**120**	*e*Pn	**Pn**	**22 23 05.5**	**-0.1**
SJG				*e*S	**Sn**	**22 23 30.6**	**-0.2**
CBYP	**Canovanas**	**2.25**	**113**	⇑*e*P	**Pn**	**22 23 07.8**	**-0.3**
CBYP	**Canovanas**	**2.25**	**113**	⇑*e*P	**Pn**	**22 23 07.8**	**-0.3**
HUMP	**Col San Antoni**	**2.31**	**116**	*e*S	**Sn**	**22 23 37.3**	**+0.6**
HUMP	**Col San Antoni**	**2.31**	**116**	⇑*e*P	**Pn**	**22 23 09.1**	**+0.2**
HUMP	**Col San Antoni**	**2.31**	**116**	⇑*e*P	**Pn**	**22 23 09.1**	**+0.2**
HUMP				*e*S	**Sn**	**22 23 37.3**	**+0.6**
MTP	**Monte Pirata**	**2.58**	**114**	⇑*e*P	**Pn**	**22 23 12.8**	**+0.1**
MTP	**Monte Pirata**	**2.58**	**114**	*e*S	**Sn**	**22 23 43.7**	**+0.2**
MTP	**Monte Pirata**	**2.58**	**114**	⇑*e*P	**Pn**	**22 23 12.8**	**+0.1**
MTP				*e*S	**Sn**	**22 23 43.7**	**+0.2**
CUPR	**Culebra, Puert**	**2.74**	**108**	⇑*e*P	**Pn**	**22 23 14.1**	**-0.8**
CUPR	**Culebra, Puert**	**2.74**	**108**	*e*S	**Sn**	**22 23 48.1**	**+0.7**
CUPR	**Culebra, Puert**	**2.74**	**108**	⇑*e*P	**Pn**	**22 23 14.1**	**-0.8**
CUPR				*e*S	**Sn**	**22 23 48.1**	**+0.7**
STVI	**Saint Thomas**	**3.03**	**105**	⇑*e*P	**Pn**	**22 23 18.4**	**-0.4**
STVI	**Saint Thomas**	**3.03**	**105**	⇑*e*P	**Pn**	**22 23 18.4**	**-0.4**
SDDR	**Presa de Saban**	**3.08**	**267**	*e*Pn	**Pn**	**22 23 22.9**	**+3.3**
ABVI	**Anegada Island**	**3.53**	**96**	⇑*e*P	**Pn**	**22 23 25.3**	**-0.4**
ABV	**Anegada**	**3.53**	**96**	⇑*e*P	**Pn**	**22 23 25.3**	**-0.4**
GRTK	**Grand Turk**	**3.73**	**309**	*e*Pn	**Pn**	**22 23 28.0**	**-0.5**
GRTK				*e*S	**Sn**	**22 24 09.5**	**-2.4**
SDV	**Santo Domingo**	**10.52**	**194**	Pn	**Pn**	**22 25 02.7**	**+0.8**
	1.9nm,0.3s,baz=320,slow=22,SNR=5.8						
SDV				Sn	**Sn**	**22 26 52.5**	**-6.9**
	0.6nm,0.3s,baz=302,slow=15,SNR=2.1						
TXAR	**Lajitas Array**	**33.91**	**294**	P	**P**	**22 29 15.6**	**+1.6**
	0.8nm,0.7s,baz=114,slow=9.0,SNR=11						
NVAR	**Mina Array Bea**	**47.43**	**305**	P	**P**	**22 31 06.6**	**+1.0**
	0.5nm,0.6s,baz=102,slow=7.5,SNR=3.2						
YKA	**Yellowknife Ar**	**53.80**	**335**	P	**P**	**22 31 52.9**	**0.0**
	0.2nm,0.5s,baz=114,slow=7.9,SNR=3.8						
ESDC	**Sonseca Array**	**58.23**	**55**	P	**P**	**22 32 25.7**	**+0.5**
	0.6nm,0.6s,baz=278,slow=7.6,SNR=5.3						
TORD	**Torodi Ar. Bea**	**66.87**	**84**	P	**P**	**22 33 22.4**	**-0.9**
	0.8nm,1.0s,baz=273,slow=5.5,SNR=3.3						
ASAR	**Alice Springs**	**159.09**	**254**	PKPab	**PKPab**	**22 43 04.4**	**-1.9**
	0.5nm,0.7s,baz=111,slow=5.1,SNR=3.5						

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*ISCJB **26** 22:30:14.6±0.7, 26°.31S±0°.04×28°.31E±0°.07, h20^{km}±4^{km}, mb3.5/4, Error ellipse: s-maj=11.6km s-min=4.5km az=23.2*

*PRE **26** 22:30:14.1±2.1, 26°.33S×28°.33E, h2^{km}, ML3.4*

*IDC **26** 22:30:17.1±1.2, 26°.17S×28°.14E, h0^{km}, mb3.5/4, mb1 3.7/10, mb1mx3.6/47, mbtmp3.7/10, ML3.6/5, Error ellipse: s-maj=21.1km s-min=17.3km az=149.0*

ISC 26 22:30:15.8±0.9, 26°.28S±0°.04×28°.16E±0°.06, h10^{km}±7^{km}, n24, σ2^{s}41/42, mb3.6/4, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERPM	**east rand prop**	**0.10**	**132**	*e*P	**Pg**	**22 30 19.0**	**+0.4**
ERPM				*e*S	**Sg**	**22 30 19.4**	**-1.2**
ERPM				AML	AML	22 30 19.7	
	comp=Z,66µm,0.3s						
SLR	**Silverton**	**0.55**	**12**	*e*P	**Pg**	**22 30 26.4**	**0.0**
SLR				*e*S	**Sg**	**22 30 33.0**	**-0.8**
SLR				AML	AML	22 30 39.7	
	comp=Z,775nm,0.6s						
WDLM	**Western Deep L**	**0.68**	**257**	*e*P	**Pn**	**22 30 30.7**	**-1.0**
WDLM				*e*S	**Sn**	**22 30 40.3**	**-2.0**
WDLM				AML	AML	22 30 47.5	
	comp=Z,1µm,0.9s						
LBTB	**Lobatse**	**2.63**	**298**	*e*P	**Pb**	**22 31 01.7**	**-1.4**
LBTB				*e*S	**Sb**	**22 31 35.8**	**+0.3**
LBTB				AML	AML	22 31 40.5	
	comp=Z,191nm,0.3s						
LBTB	**Lobatse**	**2.63**	**298**	Pn	**Pb**	**22 31 01.4**	**-1.6**
	comp=Z,13nm,0.3s,baz=122,slow=13,SNR=119						
LBTB				Lg	Lg	22 31 38.6	
	comp=Z,65nm,0.3s,baz=19,slow=21,SNR=26						
BOSA	**Boshof**	**3.47**	**227**	*e*P	**Pn**	**22 31 12.1**	**+2.1**
BOSA				*e*S	**Sn**	**22 31 51.5**	**+0.1**
BOSA				AML	AML	22 32 09.8	
	comp=Z,154nm,0.6s						
BOSA	**Boshof**	**3.47**	**227**	Pn	**Pn**	**22 31 13.2**	**+3.1**
	comp=Z,1.5nm,0.3s,baz=49,slow=13,SNR=27						
BOSA				Pg	**Pg**	**22 31 22.0**	**-0.4**
	comp=Z,15nm,0.3s,baz=45,slow=18,SNR=65						
BOSA				Lg	Lg	22 32 04.8	
	comp=Z,31nm,0.3s,baz=313,slow=16,SNR=21						
MSNA	**Messina**	**4.27**	**24**	*e*P	**Pn**	**22 31 18.4**	**-2.5**
MSNA				*e*S	**Sn**	**22 32 06.1**	**-4.7**
MSNA				AML	AML	22 32 30.0	
	comp=Z,151nm,0.6s						
HVD	**Gariep Dam**	**4.91**	**208**	*e*P	**Pn**	**22 31 31.2**	**+1.4**
HVD				*e*S	**Sn**	**22 32 25.8**	**-1.0**
HVD				AML	AML	22 32 57.5	
	comp=Z,62nm,0.5s						
MATP	**Matopo**	**5.83**	**3**	Pn	**Pn**	**22 31 44.8**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=185,slow=12,SNR=34						
MATP				Sn	**Sn**	**22 32 48.8**	**-0.7**
	comp=Z,1.9nm,0.3s,baz=113,slow=18,SNR=6.2						
MATP				Lg	Lg	22 33 15.0	
	comp=Z,14nm,0.3s,baz=107,slow=19,SNR=14						
BUFB	**Buffelsbos**	**8.39**	**200**	*e*P	**Pn**	**22 32 18.4**	**+1.0**
BUFB				*e*S	**Sn**	**22 33 47.5**	**-4.7**
BUFB				AML	AML	22 34 21.9	
	comp=Z,5.9nm,0.6s						
ROSN	**Rosenhof**	**8.41**	**201**	*e*P	**Pn**	**22 32 19.1**	**+1.4**
ROSN				*e*S	**Sn**	**22 33 48.7**	**-4.0**
ROSN				AML	AML	22 34 42.2	
	comp=Z,168nm,0.7s						
KROM	**Kromhout**	**8.42**	**200**	*e*P	**Pn**	**22 32 17.1**	**-0.7**
KROM				*e*S	**Sn**	**22 33 49.3**	**-3.6**
KROM				AML	AML	22 34 47.8	
	comp=Z,95nm,0.4s						
SUR	**Sutherland**	**8.84**	**225**	Pn	**Pn**	**22 32 26.3**	**+2.5**
	comp=Z,1.0nm,0.3s,baz=27,slow=9.5,SNR=48						
SUR				Sn	**Sn**	**22 34 03.3**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=133,slow=20,SNR=6.4						
SUR				Lg	Lg	22 34 51.5	
	comp=Z,2.2nm,0.3s,baz=335,slow=17,SNR=4.1						
CVNA	**Calvinia**	**9.00**	**233**	*e*P	**Pn**	**22 32 27.9**	**+1.9**
CVNA				*e*S	**Sn**	**22 34 03.9**	**-3.6**
CVNA				AML	AML	22 35 06.0	
	comp=Z,34nm,0.5s						
KOMG	**Komaggas**	**10.06**	**247**	*e*P	**Pn**	**22 32 41.8**	**+1.4**
KOMG				*e*S	**Sn**	**22 34 31.0**	**-2.3**
KOMG				AML	AML	22 35 29.8	
	comp=Z,12nm,0.5s						
LSZ	**Lusaka**	**10.94**	**0**	Pn	**Pn**	**22 32 52.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=196,slow=15,SNR=3.8						
LSZ				Sn	**Sn**	**22 34 51.2**	**-4.1**
	comp=Z,0.5nm,0.3s,baz=178,slow=9.5,SNR=5.3						
LSZ				Lg	Lg	22 35 52.7	
	comp=Z,0.4nm,0.3s,baz=253,slow=19,SNR=4.5						
ELIM	**Elim**	**11.02**	**219**	*e*P	**Pn**	**22 32 54.8**	**+1.3**
ELIM				*e*S	**Sn**	**22 34 51.3**	**-5.5**
ELIM				AML	AML	22 35 42.3	
	comp=Z,7.4nm,0.7s						
TSUM	**Tsumeb**	**12.03**	**304**	Pn	**Pn**	**22 33 07.6**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=122,slow=13,SNR=8.3						
TSUM				Sn	**Sn**	**22 35 20.3**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=232,slow=19,SNR=3.1						
TSUM				Lg	Lg	22 36 31.2	
	comp=Z,0.4nm,0.3s,baz=66,slow=20,SNR=5.2						
KMBO	**Kilima Mbogo**	**26.49**	**21**	P	**P**	**22 35 54.9**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=221,slow=20,SNR=3.2						
TORD	**Torodi Ar. Bea**	**46.88**	**324**	P	**P**	**22 38 48.0**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=140,slow=9.1,SNR=4.9						
ESDC	**Sonseca Array**	**72.13**	**334**	P	**P**	**22 41 43.2**	**+2.7**
	comp=Z,0.3nm,0.5s,baz=156,slow=5.7,SNR=5.0						
MKAR	**Makanchi Array**	**87.62**	**34**	P	**P**	**22 43 07.3**	**+3.1**
	comp=Z,0.2nm,0.6s,baz=211,slow=1.7,SNR=3.2						
NVAR	**Mina Array Bea**	**149.35**	**302**	PKPbc	**PKiKP**	**22 50 07.9**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=96,slow=5.0,SNR=4.0						

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*ISCJB **26** 22:33:40.8±0.6, 59°.42N±0°.02×142°.72W±0°.03, h4^{km}±4^{km}, mb4.1/39, MS4.0/30, Error ellipse: s-maj=3.3km s-min=2.8km az=17.5*

*IDC **26** 22:33:42.7±0.7, 59°.58N×142°.62W, h0^{km}, mb3.9/17, mb1 4.0/23, mb1mx3.9/62, mbtmp3.9/23, ML3.7/6, MS3.9/33, Ms1 3.9/33, ms1mx3.9/43, Error ellipse: s-maj=14.6km s-min=9.5km az=34.0*

*PGC **26** 22:33:42.1±2.5, 59°.43N×142°.68W, h1^{km}, ML4.5/10, Mw4.8, 181km west of Yakutat, Ak Gulf Of Alaska*

*MOS **26** 22:33:43.0±1.2, 59°.53N×142°.74W, h15^{km}, mb4.3/24, Error ellipse: s-maj=13.5km s-min=5.8km az=102.7*

*NEIC **26** 22:33:43.5±0.0, 59°.48N×142°.66W, h13^{km}, mb4.3/15, ML4.3(AEIC), MW4.8(OTT), After AEIC.*

ISC 26 22:33:42.5±1.5, 59°.45N±0°.04×142°.68W±0°.03, h2^{km}±9^{km}, n223, σ1^{s}83/226, mb4.3/39, MS4.0/30, 2C-6D, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGLC	**Bering Glacier**	**0.74**	**336**	P	**Pb**	**22 33 57.5**	**-0.5**
KULT	**Kultieth River**	**0.80**	**358**	P	**Pg**	**22 33 57.8**	**+0.1**
KULT				S	**Sb**	**22 34 10.4**	**0.0**
SUCK	**Suckling Hills**	**0.83**	**319**	P	**Pb**	**22 33 59.6**	**-0.1**
SUCK				S	**Sb**	**22 34 12.0**	**+0.6**
NICHA	**Nichawak Mount**	**1.02**	**321**	P	**Pg**	**22 34 02.2**	**+0.2**
NICHA				S	**Sn**	**22 34 18.0**	**-0.8**
RKAV	**Rock Avalanche**	**1.08**	**38**	P	**Pg**	**22 34 02.8**	**-0.4**
RKAV				S	**Sn**	**22 34 19.0**	**-1.4**
SAMH	**Samovar Hills**	**1.17**	**54**	P	**Pg**	**22 34 04.8**	**-0.1**
HMT	**Hamilton**	**1.19**	**319**	P	**Pg**	**22 34 04.9**	**-0.4**
HMT				S	**Sn**	**22 34 22.3**	**-0.8**
TGL	**Tana Glacier**	**1.31**	**357**	P	**Pg**	**22 34 06.0**	**-1.6**
TGL				S	**Sb**	**22 34 24.6**	**-0.5**
KIAG	**Kiagna River**	**1.48**	**6**	P	**Pn**	**22 34 08.5**	**-1.8**
YKU2	**Yakutat**	**1.53**	**87**	P	**Pn**	**22 34 10.3**	**-0.5**
BALM	**Baldy**	**1.60**	**6**	P	**Pn**	**22 34 10.0**	**-1.8**
BALM				S	**Sn**	**22 34 31.4**	**-1.7**
BALM	**Baldy**	**1.60**	**6**	Pn	**Pn**	**22 34 10.0**	**-1.8**
BALM				Sn	**Sn**	**22 34 32.1**	**-1.0**
BALM	**Baldy**	**1.60**	**6**	P	**Pn**	**22 34 10.0**	**-1.8**
BALM				S	**Sn**	**22 34 31.4**	**-1.7**
CTGM	**Chitina Glacie**	**1.66**	**23**	P	**Pn**	**22 34 11.1**	**-1.6**
CTGM				S	**Sn**	**22 34 33.7**	**-0.9**
CTGM	**Chitina Glacie**	**1.66**	**23**	Pn	**Pn**	**22 34 11.1**	**-1.6**
CTGM				Sn	**Sb**	**22 34 34.1**	**-1.1**
PNL	**Peninsula**	**1.68**	**81**	P	**Pn**	**22 34 11.4**	**-1.6**
PNL	**Peninsula**	**1.68**	**81**	Pn	**Pn**	**22 34 10.9**	**-2.0**
PNL				Sn	**Sn**	**22 34 33.7**	**-1.3**
PTPK	**Patty Peak**	**1.74**	**3**	P	**Pn**	**22 34 12.5**	**-1.5**
MID	**Middleton Isla**	**1.87**	**271**	*e*Pn	**Pn**	**22 34 14.7**	**-0.7**
MID	**Middleton Isla**	**1.87**	**271**	*e*P	**Pn**	**22 34 14.7**	**-0.7**
EYAK	**Cordova Ski Ar**	**1.90**	**307**	P	**Pn**	**22 34 14.9**	**-0.9**
EYAK				S	**Sn**	**22 34 39.3**	**-0.9**
MCARA	**McCarthy VSAT**	**1.94**	**355**	P	**Pn**	**22 34 15.1**	**-1.4**
MCARA				S	**Sn**	**22 34 40.7**	**-0.8**
HIN	**Hinchinbrook I**	**2.15**	**298**	P	**Pn**	**22 34 19.5**	**+0.2**
DIV	**Divide**	**2.28**	**319**	P	**Pn**	**22 34 20.0**	**-1.2**
DIV	**Divide**	**2.28**	**319**	Pn	**Pn**	**22 34 20.0**	**-1.2**
YUK2	**White River**	**2.51**	**20**	P	**Pn**	**22 34 24.2**	**-0.1**
YUK2	**White River**	**2.51**	**20**	Pn	**Pn**	**22 34 24.2**	**-0.1**
YUK2				Sn	**Sn**	**22 34 55.8**	**+0.2**
YUK7	**Dusty Glacier**	**2.52**	**63**	P	**Pn**	**22 34 24.5**	**-0.2**
YUK7	**Dusty Glacier**	**2.52**	**63**	Pn	**Pn**	**22 34 24.1**	**-0.5**
YUK7				Sn	**Sn**	**22 34 57.1**	**+1.1**
JPK	**Jack Peak**	**2.53**	**311**	P	**Pn**	**22 34 24.7**	**+0.1**
YUK3	**Moose Creek**	**2.57**	**24**	P	**Pn**	**22 34 25.6**	**+0.2**
YUK3	**Moose Creek**	**2.57**	**24**	Pn	**Pn**	**22 34 25.2**	**-0.1**
YUK3				Sn	**Sn**	**22 34 58.5**	**+1.2**
KLU	**Klutina**	**2.60**	**323**	P	**Pn**	**22 34 24.1**	**-1.5**
YUK6	**Outpost Mounta**	**2.62**	**53**	P	**Pn**	**22 34 25.8**	**-0.2**
YUK6	**Outpost Mounta**	**2.62**	**53**	Pn	**Pn**	**22 34 25.8**	**-0.2**
YUK6				Sn	**Sn**	**22 34 58.0**	**-0.5**
GLI	**Glacier Island**	**2.63**	**305**	P	**Pn**	**22 34 24.3**	**-1.6**
YUK4	**Talbot Arm**	**2.76**	**45**	P	**Pn**	**22 34 29.6**	**+1.7**
YUK4	**Talbot Arm**	**2.76**	**45**	Pn	**Pn**	**22 34 29.4**	**+1.5**
HYT	**Haines Junctio**	**2.93**	**60**	P	**Pn**	**22 34 30.1**	**-0.1**
HYT	**Haines Junctio**	**2.93**	**60**	Pn	**Pn**	**22 34 29.3**	**-0.8**
HYT				Sn	**Sn**	**22 35 05.8**	**-0.2**
YUK5	**Granite Creek**	**2.93**	**53**	P	**Pn**	**22 34 30.1**	**-0.1**
YUK5	**Granite Creek**	**2.93**	**53**	Pn	**Pn**	**22 34 30.1**	**-0.1**
PS11	**TAPS Pump St11**	**2.97**	**334**	P	**Pn**	**22 34 30.2**	**-0.4**
BVCY	**Beaver Creek**	**3.10**	**16**	P	**Pn**	**22 34 32.5**	**+0.1**
BVCY	**Beaver Creek**	**3.10**	**16**	Pn	**Pn**	**22 34 32.1**	**-0.3**
BVCY				Sn	**Sn**	**22 35 09.1**	**-0.9**
PWL	**Port Wells**	**3.16**	**299**	P	**Pn**	**22 34 31.2**	**-2.1**
HARP	**HAARP**	**3.20**	**339**	P	**Pn**	**22 34 33.1**	**-0.7**
HARP	**HAARP**	**3.20**	**339**	Pn	**Pn**	**22 34 33.0**	**-0.8**
HARP				Sn	**Sn**	**22 35 11.4**	**-1.1**
SCM	**Sheep Creek Mo**	**3.31**	**318**	P	**Pn**	**22 34 35.5**	**+0.2**
SCM	**Sheep Creek Mo**	**3.31**	**318**	P	**Pn**	**22 34 35.5**	**+0.2**
KNK	**Knik Glacier**	**3.47**	**307**	P	**Pn**	**22 34 37.5**	**0.0**
SEW	**Seward**	**3.49**	**284**	*e*Pn	**Pn**	**22 34 36.2**	**-1.4**
MENT	**Mentasta**	**3.53**	**352**	*e*Pn	**Pn**	**22 34 34.9**	**-3.5**
BCA3	**Beaver Creek A**	**3.65**	**6**	P	**Pn**	**22 34 39.0**	**-1.0**
SML	**Sawmill**	**3.65**	**313**	P	**Pn**	**22 34 39.0**	**-1.0**
SML	**Sawmill**	**3.65**	**313**	P	**Pn**	**22 34 39.0**	**-1.0**
SKAG	**Skagway**	**3.75**	**87**	*e*Pn	**Pn**	**22 34 39.7**	**-1.5**
PAX	**Paxson**	**3.78**	**340**	P	**Pn**	**22 34 41.0**	**-0.8**
PAX	**Paxson**	**3.78**	**340**	Pn	**Pn**	**22 34 40.8**	**-0.9**
PAX				Sn	**Sb**	**22 35 34.6**	**-1.5**
PAX	**Paxson**	**3.78**	**340**	P	**Pn**	**22 34 41.0**	**-0.8**
PMR	**Palmer**	**3.84**	**307**	*e*Pn	**Pn**	**22 34 42.5**	**0.0**
SLKM	**Skilak Lake**	**3.94**	**289**	P	**Pn**	**22 34 41.9**	**-2.0**
SLKM	**Skilak Lake**	**3.94**	**289**	P	**Pn**	**22 34 41.9**	**-2.0**
WHY	**Whitehorse**	**4.09**	**69**	P	**Pn**	**22 34 45.2**	**-0.8**
WHY	**Whitehorse**	**4.09**	**69**	Pn	**Pn**	**22 34 45.2**	**-0.8**
WHY				Sn	**Sn**	**22 35 31.1**	**-3.4**
BESE	**Bessie Mountai**	**4.14**	**99**	*e*Pn	**Pn**	**22 34 49.2**	**+2.5**
BESE	**Bessie Mountai**	**4.14**	**99**	Pn	**Pn**	**22 34 45.0**	**-1.7**
BRLK	**Bradley Lake**	**4.18**	**278**	P	**Pn**	**22 34 47.3**	**0.0**
DOT	**Dot Lake**	**4.26**	**352**	P	**Pn**	**22 34 48.2**	**-0.2**
DOT	**Dot Lake**	**4.26**	**352**	Pn	**Pn**	**22 34 47.9**	**-0.5**
DHY	**Denali Highway**	**4.28**	**330**	P	**Pn**	**22 34 48.5**	**-0.3**
RIDG	**Independ'e Rid**	**4.42**	**347**	P	**Pn**	**22 34 50.7**	**+0.1**
JIS	**Juneau Island**	**4.46**	**102**	P	**Pn**	**22 34 50.8**	**-0.3**
SIT	**Sitka**	**4.56**	**119**	P	**Pn**	**22 34 50.6**	**-1.8**
SIT	**Sitka**	**4.56**	**119**	P	**Pn**	**22 34 50.6**	**-1.8**
HOM	**Homer**	**4.57**	**276**	*e*Pn	**Pn**	**22 34 53.1**	**+0.6**
SCRK	**Sand Creek**	**4.58**	**353**	*e*Pn	**Pn**	**22 34 49.0**	**-3.9**
DAWY	**Dawson**	**4.88**	**17**	P	**Pn**	**22 34 57.0**	**+0.1**
DAWY	**Dawson**	**4.88**	**17**	Pn	**Pn**	**22 34 56.2**	**-0.7**
RND	**Reindeer**	**4.95**	**326**	P	**Pn**	**22 34 57.5**	**-0.4**
RND	**Reindeer**	**4.95**	**326**	P	**Pn**	**22 34 57.5**	**-0.4**
RSO	**Redoubt South**	**5.17**	**286**	*e*Pn	**Pn**	**22 35 01.6**	**+0.6**
MCK	**McKinley**	**5.23**	**328**	P	**Pn**	**22 35 01.5**	**-0.1**
MCK	**McKinley**	**5.23**	**328**	P	**Pn**	**22 35 01.5**	**-0.1**
HDA	**Harding Lake**	**5.37**	**340**	*e*Pn	**Pn**	**22 35 03.6**	**+0.1**
EGAK	**Eagle**	**5.39**	**7**	P	**Pn**	**22 35 03.8**	**0.0**
TRF	**Thorofare Moun**	**5.42**	**321**	P	**Pn**	**22 35 03.8**	**-0.6**
KDAK	**Kodiak Island**	**5.44**	**256**	*e*Pn	**Pn**	**22 35 03.6**	**-0.9**
KDAK				*e*S	Sn	22 35 59.5	-8.1
KDAK	**Kodiak Island**	**5.44**	**256**	*e*P	**Pn**	**22 35 03.6**	**-0.9**
KDAK				*e*S	Sn	22 35 59.5	-8.1
KDAK	**Kodiak Island**	**5.44**	**256**	Pn	**Pn**	**22 35 03.8**	**-0.7**
	9.3nm,0.3s,baz=67,slow=5.4,SNR=102						
KDAK				Sn	**Sn**	**22 36 03.1**	**-4.5**
	7.5nm,0.3s,baz=102,slow=24,SNR=11						
WRH	**Wood River Hil**	**5.64**	**335**	*e*Pn	**Pn**	**22 35 06.4**	**-0.9**
IL1	**Eielson Array**	**5.69**	**341**	P	**Pn**	**22 35 07.0**	**-0.9**
ILAR	**Eielson Array**	**5.69**	**341**	Pn	**Pn**	**22 35 06.8**	**-1.2**
	3.2nm,0.3s,baz=172,slow=13,SNR=149						
ILAR				Lg	Lg	22 36 32.5	
	2.2nm,0.3s,baz=166,slow=26,SNR=7.0						

ILAR				LR	LR	22 37 28.1	
	comp=Z,955nm,18.4s,baz=162,slow=40						
ILB	Eielson Array	5.69	341	*e*Pn	Pn	22 35 07.2	-0.8
CCB	Clear Creek Bu	5.74	337	P	Pn	22 35 07.3	-1.3
PPLA	Purkeypile	5.75	311	*e*Pn	Pn	22 35 10.1	+1.2
COLA	College	5.95	338	*e*Pn	Pn	22 35 11.5	0.0
COLA	College	5.95	338	*e*P	Pn	22 35 11.5	0.0
CAST	Castle Rocks	6.01	315	P	Pn	22 35 11.6	-0.8
OHAK	Old Harbor	6.02	253	P	Pn	22 35 10.8	-1.6
MDM	Murphy Dome	6.10	337	P	Pn	22 35 12.3	-1.3
PRP	Porcupine Dome	6.23	349	P	Pn	22 35 15.0	-0.4
CRAG	Craig	6.52	124	P	Pn	22 35 17.8	-1.4
DLBC	Dease Lake	6.62	93	*e*Pn	Pn	22 35 20.9	0.0
DLBC				*e*S	Sn	22 36 37.4	+0.5
DLBC				Lg	Lg	22 37 10.9	
DLBC	Dease Lake	6.62	93	Pn	Pn	22 35 19.0	-1.8
DLBC	Dease Lake	6.62	93	Pn	Pn	22 35 20.2	-0.6
	1.3nm,0.3s,baz=220,slow=12,SNR=15						
DLBC				Sn	Sn	22 36 31.4	-5.4
	2.6nm,0.3s,baz=331,slow=13,SNR=4.2						
DLBC				Lg	Lg	22 37 10.9	
	2.8nm,0.3s,baz=171,slow=8.2,SNR=5.1						
DLBC				LR	LR	22 38 15.4	
	comp=Z,3µm,18.3s,baz=255,slow=41						
SVW2	Sparrevohn	6.63	290	*e*Pn	Pn	22 35 20.9	+0.1
CAHL	Cahill	6.72	263	P	Pn	22 35 21.9	-0.1
MLY	Manley	6.74	330	P	Pn	22 35 21.6	-0.8
SII	Sitkinak Islan	6.77	250	P	Pn	22 35 22.2	-0.5
FYU	Fort Yukon	7.23	352	*e*Pn	Pn	22 35 30.1	+1.0
TT01	Tatalina	7.32	304	P	Pn	22 35 29.3	-0.9
BM3	Burnt Mountain	8.04	355	P	Pn	22 35 39.9	-0.4
IM3	Indian Mountai	8.28	327	P	Pn	22 35 42.2	-1.2
DIB	Dawson Inlet,	8.44	133	*e*Pn	Pn	22 35 44.3	-1.3
DIB	Dawson Inlet,	8.44	133	Pn	Pn	22 35 43.2	-2.4
DIB				Sn	Sn	22 37 14.4	-7.0
COLD	Coldfoot	8.50	340	*e*Pn	Pn	22 35 46.8	+0.4
COLD	Coldfoot	8.50	340	Pn	Pn	22 35 45.6	-0.7
MOBC	Moresby Island	8.68	132	Pn	Pn	22 35 48.0	-0.9
CHGN	Chignik	8.96	256	*e*Pn	Pn	22 35 52.6	-0.1
BNB	Barry Inlet	9.21	134	Pn	Pn	22 35 55.2	-0.9
TOLK	Toolik Lake Re	9.70	345	*e*Pn	Pn	22 36 04.2	+1.4
INK	Inuvik	9.74	20	*e*Pn	Pn	22 36 03.3	-0.1
INK				*e*S	Sn	22 37 54.7	+1.4
INK				Lg	Lg	22 38 46.0	
INK	Inuvik	9.74	20	Pn	Pn	22 36 05.0	+1.5
INK	Inuvik	9.74	20	*e*P	Pn	22 36 03.3	-0.1
INK				*e*S	Sn	22 37 54.7	+1.4
INK	Inuvik	9.74	20	Pn	Pn	22 36 02.4	-1.1
	1.0nm,0.3s,baz=196,slow=14,SNR=27						
INK				Sn	Sn	22 37 46.9	-6.4
	0.6nm,0.3s,baz=186,slow=18,SNR=2.6						
INK				Lg	Lg	22 38 46.0	
	0.4nm,0.3s,baz=309,slow=27,SNR=3.6						
INK				LR	LR	22 40 14.7	
	comp=Z,1µm,21.4s,baz=214,slow=41						
BBB	Bella Bella	10.94	125	Sn	Sn	22 38 17.8	-4.9
	0.5nm,0.3s,baz=150,slow=20,SNR=2.5						
BBB				LR	LR	22 40 11.0	
	comp=Z,725nm,18.3s,baz=340,slow=35						
ANM	Nome	11.79	305	*e*Pn	Pn	22 36 32.5	+1.1
ANM	Nome	11.79	305	*e*P	Pn	22 36 32.5	+1.1
DHRN	Dharma Camp	12.83	44	Pn	Pn	22 36 44.5	-1.1
YKW3	Yellowknife Ar	13.90	65	*e*Pn	Pn	22 37 00.8	+0.6
YKW3	Yellowknife Ar	13.90	65	Pn	Pn	22 36 59.9	-0.3
YKA	Yellowknife Ar	13.91	65	Pn	Pn	22 36 59.3	-0.9
	0.1nm,0.3s,baz=268,slow=13,SNR=13						
YKA				Lg	Lg	22 40 56.5	
	0.1nm,0.3s,baz=87,slow=19,SNR=5.0						
YKA				LR	LR	22 42 32.1	
	comp=Z,57nm,18.6s,baz=266,slow=38						
YKB5	Yellowknife Ar	13.91	65	*e*Pn	Pn	22 36 58.8	-1.5
GAMB	Gambell	14.39	300	*e*Pn	Pn	22 37 10.1	+3.3
NEW	Newport	18.64	116	P	P	22 38 01.2	-0.1
	0.1nm,0.3s,baz=225,slow=1.4,SNR=2.3						
NEW				LR	LR	22 45 11.8	
	comp=Z,895nm,18.8s,baz=307,slow=37						
PINE	Pine Mountain	20.53	130	*e*P	Pn	22 38 27.8	+3.5
	55nm,1.9s						
I07A	Izee	20.86	127	*e*P	Pn	22 38 28.6	+0.6
	12nm,1.1s						
BMO	Blue Mountains	21.16	122	*e*P	P	22 38 31.2	+2.5
	24nm,1.8s						
BMO	Blue Mountains	21.16	122	*e*P	P	22 38 31.3	+2.5
BMO				pmax	pmax		
	comp=Z,24nm,1.8s						
YBH	Yreka Blue Hor	21.65	136	P	P	22 38 36.9	+2.9
	comp=Z,0.9nm,0.4s,baz=284,slow=8.1,SNR=3.7						
YBH				LR	LR	22 45 21.7	
	comp=Z,104nm,20.7s,baz=324,slow=32						
J08A	Circle Bar Ran	21.88	127	*e*P	P	22 38 39.0	+2.4
	comp=Z,24nm,1.6s						
EGMT	Eagleton	22.33	106	*e*P	P	22 38 41.8	+0.5
	comp=Z,17nm,1.1s						
FFC	Flin Flon	22.34	84	*e*P	P	22 38 42.0	+0.7
	comp=Z,26nm,1.6s						
FFC	Flin Flon	22.34	84	*e*P	P	22 38 42.0	+0.7
FFC				pmax	pmax		
	comp=Z,26nm,1.6s						
MOD	Modoc Plateau	22.39	132	*e*P	P	22 38 48.8	+6.8
	comp=Z,18nm,1.5s						
DLMT	Dillon	22.88	115	*e*P	P	22 38 50.6	+3.4
	comp=Z,13nm,1.3s						
RES	Resolute Bay	23.07	30	*e*P	P	22 38 48.9	+0.1
	comp=Z,3.3nm,0.7s						
RES	Resolute Bay	23.07	30	*e*P	P	22 38 48.9	+0.1
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RES	Resolute Bay	23.07	30	P	P	22 38 48.3	-0.5
	comp=Z,1.8nm,0.7s,baz=251,slow=11,SNR=9.6						
RES				LR	LR	22 48 14.1	
	comp=Z,587nm,21.9s,baz=268,slow=38						
MCMT	McKenzie Canyo	23.17	116	*e*P	P	22 38 53.9	+3.6
BILL	Bilibino	23.46	313	*e*P	P	22 38 54.6	+1.8
BILL				*e*		22 39 16.3	
BILL				*e*PPP	PPP	22 39 29.0	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,756nm,16.0s						
FCC	Fort Churchill	24.52	70	*e*P	P	22 39 05.0	+2.1
	comp=Z,29nm,2.0s						
FCC	Fort Churchill	24.52	70	*e*P	P	22 39 05.0	+2.1
FCC				pmax	pmax		
	comp=Z,29nm,2.0s						
FXWY	Fox Creek	24.92	115	*e*P	P	22 39 12.3	+5.3
	comp=Z,6.8nm,1.3s						
MOOW	Moose Ponds	24.97	115	*e*P	P	22 39 12.2	+4.9
	comp=Z,11nm,1.4s						
ELK	Elko	25.39	125	*e*P	P	22 39 13.6	+2.4
	comp=Z,6.7nm,1.2s						
ELK	Elko	25.39	125	*e*P	P	22 39 13.6	+2.4
ELK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ELK	Elko	25.39	125	P	P	22 39 12.8	+1.6
	comp=Z,2.1nm,0.8s,baz=296,slow=8.3,SNR=9.1						
ELK				LR	LR	22 50 10.6	
	comp=Z,139nm,20.8s,baz=330,slow=39						
NV01	Mina Array Sit	26.16	133	*e*P	P	22 39 21.8	+3.6
NVAR	Mina Array Bea	26.16	133	P	P	22 39 19.5	+1.3
	comp=Z,2.6nm,1.1s,baz=325,slow=7.4,SNR=4.4						
NVAR				LR	LR	22 48 01.4	
	comp=Z,244nm,20.7s,baz=349,slow=33						
PDAR	Pinedale Array	26.28	115	P	P	22 39 17.1	-2.1
	comp=Z,0.2nm,0.5s,baz=310,slow=5.1,SNR=4.1						
PDAR				LR	LR	22 49 47.9	
	comp=Z,407nm,19.6s,baz=330,slow=37						
R11A	Troy Canyon, C	27.28	129	*e*P	P	22 39 34.5	+6.2
	comp=Z,6.5nm,1.5s						
ULM	Lac du Bonnet	27.92	88	LR	LR	22 51 15.0	
	comp=Z,823nm,18.3s,baz=312,slow=38						
SEY	Seymchan	30.29	305	⇓*e*P	P	22 39 54.3	-0.3
PV13	Radium Mtn., P	30.31	120	*e*P	P	22 39 58.4	+3.2
	comp=Z,20nm,1.7s						
MA2	Magadan	32.49	300	⇓*e*P	P	22 40 16.5	+2.5
MA2				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PETK	Petropavlovsk-	32.69	286	LR	LR	22 54 28.1	
	comp=Z,236nm,18.9s,baz=68,slow=38						
FRB	Frobisher Bay	33.68	50	P	P	22 40 24.2	0.0
	comp=Z,1.9nm,0.8s,baz=321,slow=10,SNR=4.3						
SCHQ	Schefferville	39.33	62	LR	LR	22 57 42.8	
	comp=Z,305nm,19.9s,baz=352,slow=37						
TX31	Lajitas Ar. Si	40.04	121	*e*P	P	22 41 20.8	+2.0
TXAR	Lajitas Array	40.04	121	P	P	22 41 19.8	+0.9
	comp=Z,0.6nm,0.9s,baz=349,slow=3.8,SNR=5.1						
TXAR				LR	LR	23 00 07.2	
	comp=Z,230nm,20.4s,baz=0.0,slow=40						
HKT	Hockley	43.09	112	*e*P	P	22 41 48.2	+4.6
NRIK	Noril'sk	46.55	338	P	P	22 42 09.1	-1.7
	comp=Z,5.1nm,1.0s,baz=38,slow=6.6,SNR=6.2						
NRIK				LR	LR	23 04 57.2	
	comp=Z,159nm,19.6s,baz=44,slow=40						
BOD	Bodaibo	48.45	316	*e*P	P	22 42 21.7	-4.0
USRK	Ussuriysk Ar.	51.16	293	LR	LR	23 05 30.3	
	comp=Z,202nm,19.0s,baz=34,slow=37						
H11N2	WAKE ISLAND Hy	53.48	245	T	T	23 41 39.9	
	baz=36,SNR=166						
H11N3	WAKE ISLAND Hy	53.49	245	T	T	23 41 36.0	
	baz=36,slow=74,SNR=176						
H11N1	WAKE ISLAND Hy	53.50	245	T	T	23 41 35.9	
	baz=36,slow=74,SNR=94						
MJAR	Matsushiro Arr	54.03	282	LR	LR	23 07 14.0	
	comp=Z,104nm,21.2s,baz=65,slow=37						
H11S1	WAKE ISLAND Hy	54.64	244	T	T	23 43 01.1	
	baz=24,slow=80						
H11S2	WAKE ISLAND Hy	54.65	244	T	T	23 43 05.7	
	baz=24,slow=80						
H11S3	WAKE ISLAND Hy	54.66	244	T	T	23 43 03.8	
	baz=24,slow=80						
NOA	NORSAR Array B	58.14	15	LR	LR	23 10 10.2	
	comp=Z,84nm,19.6s,baz=345,slow=38						
KSRS	Korea Array	58.34	291	LR	LR	23 08 09.0	
	comp=Z,100nm,21.9s,baz=40,slow=35						
ULN	Ulaanbaatar	58.91	312	⇑*e*P	P	22 43 42.9	+0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
FINES	FINESS Array B	59.12	6	P	P	22 43 42.8	-1.0
	comp=Z,1.1nm,0.4s,baz=356,slow=7.8,SNR=15						
FINES				LR	LR	23 10 40.2	
	comp=Z,60nm,19.9s,baz=349,slow=38						
SONM	Songino Array	59.18	313	P	P	22 43 45.1	+0.5
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,381nm,18.4s						
SONM	Songino Array	59.18	313	P	P	22 43 45.1	+0.5
	comp=Z,1.0nm,0.6s,baz=41,slow=9.5,SNR=11						
SONM				LR	LR	23 11 42.8	
	comp=Z,381nm,18.4s,baz=22,slow=39						
HFS	Hagfors	59.33	13	P	P	22 43 44.3	-1.0
	comp=Z,1.0nm,0.7s,baz=98,slow=11,SNR=4.6						
ZALV	Zalesovo Beam	60.70	330	P	P	22 43 54.5	-0.1
	comp=Z,0.7nm,0.4s,baz=18,slow=6.6,SNR=6.2						
ZALV				LR	LR	23 14 31.3	
	comp=Z,98nm,18.1s,baz=46,slow=40						
EKA	Eskdalemuir Ar	61.08	25	P	P	22 43 57.7	+0.4
	comp=Z,1.2nm,0.7s,baz=353,slow=5.2,SNR=4.9						
HHC	Hu-ho-hao-te	62.94	305	*e*P	P	22 44 10.5	+0.3
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,6.9s						
DGZ	Jazzator, Alta	63.82	326	⇓*e*P	P	22 44 17.9	+2.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRVK	Borovoye	64.74	339	⇓*e*P	P	22 44 22.8	+1.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	65.19	332	*e*P	P	22 44 24.5	-0.1
KURK	Kurchatov	65.19	332	⇓*e*P	P	22 44 25.0	+0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KLNR	Kaliningrad	65.47	11	⇑*e*P	P	22 44 27.8	+1.5
OBN	Obninsk	65.78	0	*e*P	P	22 44 28.5	+0.2
OBN				*e*		22 45 05.2	
OBN				*e*		22 46 51.0	
OBN				*e*PPP	PPP	22 48 29.1	
CLL	Collm	67.84	16	*e*P	P	22 44 37.0	-4.6
MKAR	Makanchi Array	67.89	328	P	P	22 44 41.4	-0.6
	comp=Z,0.9nm,0.5s,baz=37,slow=5.9,SNR=19						
MKAR				LR	LR	23 15 34.2	
	comp=Z,128nm,19.6s,baz=18,slow=37						
TAOE	Nuku Hiva Isla	68.11	177	*e*T	T	23 59 03.0	
	comp=Z,56nm,0.2s						
WMQ	Urumqi	69.06	323	*e*P	P	22 44 53.5	+4.1
WMQ				LR	LR		
	comp=N,330nm,17.5s						
WMQ				LR	LR		
	comp=E,420nm,20.1s						
WMQ				LR	LR		
	comp=Z,230nm,18.3s						
AKTO	Aktyubinsk	69.18	346	P	P	22 44 49.9	-0.1
	comp=Z,1.2nm,0.6s,baz=355,slow=4.5,SNR=5.1						
AKASG	Malin Array Be	70.00	5	P	P	22 44 54.8	-0.2
	comp=Z,0.2nm,0.3s,baz=355,slow=6.2,SNR=4.4						
AKASG				LR	LR	23 18 45.2	
	comp=Z,80nm,18.3s,baz=330,slow=39						
GERES	GERESS Array B	70.35	16	LR	LR	23 18 40.2	
	comp=Z,49nm,18.2s,baz=311,slow=38						
VYHS	Vyhne	71.36	13	*e*P	P	22 45 05.1	+1.8
VYHS	Vyhne	71.36	13	*e*P	P	22 45 05.1	+1.8
AAK	Ala-Archa	73.75	332	⇓*e*P	P	22 45 18.8	+0.9
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PMOR	Pomariorio Ree	74.31	185	*e*T	T	00 06 47.8	
	comp=Z,85nm,0.3s						
VAH	Vaihoa	74.53	185	*e*T	T	00 07 05.2	
	comp=Z,13nm,0.4s						
ESDC	Sonseca Array	75.49	32	P	P	22 45 29.6	+1.6
	comp=Z,1.1nm,0.9s,baz=342,slow=7.9,SNR=3.9						
ESDC				LR	LR	23 18 24.9	
	comp=Z,85nm,21.0s,baz=315,slow=36						
TIAR	Tiarei	76.93	187	*e*T	T	00 10 04.2	
	comp=Z,11nm,0.2s						
PPT2	Papeete2	76.97	187	*e*LR	LR	23 09 26.4	
	comp=Z,62nm,23.0s						
TVO	Taravao	77.14	186	*e*T	T	00 10 20.7	
	comp=Z,4.6nm,0.3s						
KMI	Kunming	80.19	303	P	P	22 45 57.3	+2.8
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KMI				LR	LR		
	comp=N,350nm,15.4s						
KMI				LR	LR		
	comp=E,560nm,16.6s						
KMI				LR	LR		
	comp=Z,210nm,16.2s						
BRTR	Keskin Array B	81.13	3	P	P	22 45 58.4	-0.9
	comp=Z,0.8nm,0.9s,baz=57,slow=4.6,SNR=4.2						
BRTR				LR	LR	23 23 49.5	
	comp=Z,27nm,20.2s,baz=316,slow=37						
GEYT	Alibeck	81.45	344	LR	LR	23 26 51.7	
	comp=Z,38nm,18.4s,baz=25,slow=39						
KEST	Kesra	82.37	23	LR	LR	23 24 09.5	
	comp=Z,104nm,18.1s,baz=298,slow=37						
TBI	Tubuai	82.68	186	*e*T	T	00 17 15.6	
	comp=Z,54nm,0.3s						
CMAR	Chiang Mai Arr	87.70	303	P	P	22 46 31.9	-0.8
	comp=Z,1.0nm,0.3s,baz=9.8,slow=5.1,SNR=6.1						
CMAR				LR	LR	23 29 27.7	
	comp=Z,105nm,19.1s,baz=27,slow=38						
NNA	Nana	88.44	117	LR	LR	23 27 39.1	
	comp=Z,8.7nm,20.9s,baz=289,slow=37						
LPAZ	La Paz	96.25	111	LR	LR	23 35 57.1	
	comp=Z,63nm,18.2s,baz=350,slow=39						

BEO 26 22:40:53.8±0.3**, 43°.53N×20°.35E, h0km**±3km**, ML1.5**/7**,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVAS	Ivanjica	0.15	287	*e*Pg	Pg	22 40 56.0	-0.7
IVAS				*e*Sg	Sg	22 40 57.9	-0.7
SJES	Sjenica	0.39	225	*e*Pg	Pg	22 41 00.9	-0.3
SJES				*e*Sg	Sg	22 41 05.7	-0.5
GRUS	Gruza	0.44	37	*e*Pg	Pg	22 41 01.2	-1.1
GRUS				*e*Sg	Sg	22 41 08.4	+0.4
DIVS	Divibare	0.62	335	*e*Pg	Pg	22 41 04.5	-1.2
DIVS				*e*Sg	Sg	22 41 14.3	+0.5
SELS	Selova	0.64	119	*e*Pg	Pg	22 41 04.6	-1.5
SELS				*e*Sg	Sg	22 41 15.1	+0.7
TRUS	Trudelj	0.69	3	*e*Pg	Pg	22 41 06.9	-0.1
TRUS				*e*Sg	Sg	22 41 15.2	-0.8
SVIS	Svilajnac	0.96	40	*e*Pg	Pg	22 41 11.3	-1.0
SVIS				*e*Sg	Sg	22 41 24.1	-0.6
HAPS	Han Pijesak,BI	1.15	299	*e*Pg	Pg	22 41 15.2	-0.7
HAPS				*e*Sg	Sg	22 41 31.0	+0.2
BARS	Barje	1.29	123	*e*Pg	Pg	22 41 16.4	-2.1
BARS				*e*Sg	Sg	22 41 35.0	-0.2
BZS	Buzias	2.27	23	*e*Sg	Sb	22 42 05.0	+0.7
BZS	Buzias	2.27	23	S	Sb	22 42 05.5	+1.2

IDC 26 23:26:48.1±1.7**, 2°.53N×127°.74E, h0km, mb3.7**/4**,**
mb1 3.8/4**, mb1mx3.4**/42**, mbtmp3.7**/4**, Error ellipse:**
s-maj=159.6km s-min=19.1km az=67.0, Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.25	164	P	P	23 31 57.9	+0.5
	0.7nm,0.3s,baz=342,slow=10,SNR=31						
ASAR	Alice Springs	26.72	167	P	P	23 32 29.8	+0.3
	0.4nm,0.4s,baz=351,slow=7.6,SNR=6.2						
STKA	Stephens Creek	36.66	160	P	P	23 33 55.3	-1.3
	0.6nm,0.4s,baz=344,slow=11,SNR=4.2						
MKAR	Makanchi Array	59.12	325	P	P	23 36 51.2	+0.7
	0.4nm,0.5s,baz=115,slow=7.4,SNR=9.4						
KURBB	Kurchatov Arra	63.29	327	P	P	23 37 18.1	-0.6
	47nm,0.8s,baz=109,slow=7.9,SNR=6.7						

IDC 26 23:31:32.9±28.0**, 21°.58S×177°.58W, h404km**±255km**,**
mb3.6/4**, mb1 3.8**/4**, mb1mx3.1**/37**, mbtmp4.3**/4**, MS4.2**/1**,**
Ms1 4.2/1**, ms1mx2.9**/25**, Error ellipse: s-maj=181.8km**
s-min=139.0km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	7.64	182	LR	LR	23 35 39.5	
	comp=Z,2µm,21.2s,baz=154,slow=32						
CTA	Charters Tower	33.79	266	P	P	23 37 39.3	+0.1
	1.8nm,0.3s,baz=98,slow=10,SNR=5.7						
ASAR	Alice Springs	44.66	258	P	P	23 39 08.4	+0.5
	2.8nm,0.8s,baz=95,slow=7.9,SNR=24						
WRA	Warramunga Arr	44.85	263	P	P	23 39 08.3	-1.0
	1.3nm,0.7s,baz=96,slow=7.6,SNR=61						
CMAR	Chiang Mai Arr	90.84	289	P	P	23 43 52.6	+0.4
	0.7nm,0.3s,baz=134,slow=3.9,SNR=3.7						
AKASG	Malin Array Be	144.14	331	PKP	PKPbc	23 50 19.8	-0.4
	2.2nm,0.5s,baz=45,slow=4.5,SNR=11						
BRTR	Keskin Array B	147.85	311	PKPbc	PKPbc	23 50 30.7	-0.8
	0.3nm,0.6s,baz=79,slow=3.3,SNR=3.0						
GERES	GERESS Array B	151.34	344	PKPbc	PKPbc	23 50 39.7	+0.2
	0.2nm,0.4s,baz=325,slow=1.2,SNR=2.6						

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*NNC **26** 23:38:20.4±4.4, 43°.86N×87°.88E, h0km, mb3.6, mpv3.2,*
Error ellipse: s-maj=39.5km s-min=29.8km az=119.0
*ISCJB **26** 23:38:21.9±1.0, 44°.0N±0°.1×87°.9E±0°.2, h18km, mb3.3/2,*
Error ellipse: s-maj=21.6km s-min=10.3km az=39.1
*IDC **26** 23:38:21.2±1.3, 44°.02N×88°.00E, h0km, mb3.5/2,*
mb1 3.5/4, mb1mx3.2/41, mbtmp3.3/4, ML2.5/2, Error
ellipse: s-maj=59.1km s-min=17.4km az=43.0
ISC 26 23:38:23.5±1.4**, 44°.1N**±0°.1×**87°.9E**±0°.1**, h18km, n9,**
σ2^{s}00/11**, 4C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.77	307	Pn	Pn	23 39 36.4	+1.9
	0.6nm,0.4s,baz=122,slow=15,SNR=36						
MK31				Pg	Pg	23 39 52.1	-2.6
	1.5nm,0.6s,baz=117,slow=16,SNR=4.6						
MK31				⇑Lg	Lg	23 40 56.0	
	3.8nm,0.7s,baz=128,slow=27,SNR=3.8						
MKAR	Makanchi Array	4.77	307	Pn	Pn	23 39 36.8	+2.4
	0.5nm,0.3s,baz=122,slow=14,SNR=33						
MKAR				Sn	Sn	23 40 31.8	+2.5
	0.5nm,0.3s,baz=115,slow=25,SNR=5.1						
MKAR				Lg	Lg	23 40 56.2	
	0.7nm,0.3s,baz=129,slow=27,SNR=6.6						
MAKZ	Makanchi	4.96	305	⇑Pn	Pn	23 39 38.8	+1.8
	2.6nm,0.6s						
MAKZ				⇓Lg	Lg	23 41 02.3	
	8.8nm,0.9s						
PDGK	Podgornoye	6.12	266	⇓Pn	Pn	23 39 53.3	+0.3
	2.9nm,0.6s						
PDGK				⇓Lg	Lg	23 41 34.0	
	17nm,1.3s						
KURBB	Kurchatov Arra	9.10	319	⇓Pn	Pn	23 40 32.8	-1.1
	1.0nm,0.6s						
KURBB				⇓Lg	Lg	23 43 15.3	
	7.4nm,1.2s						
KURK	Kurchatov	9.12	320	⇑Pn	Pn	23 40 32.8	-1.3
	0.3nm,0.4s						
KURK				⇑Lg	Lg	23 43 18.3	
	8.7nm,1.1s						
ZALV	Zalesovo Beam	10.07	350	Pn	Pn	23 40 48.8	+1.7
	0.1nm,0.3s,baz=173,slow=13,SNR=2.4						
WRA	Warramunga Arr	76.59	135	P	P	23 50 13.1	+0.3
	0.4nm,0.8s,baz=338,slow=5.2,SNR=5.1						
ASAR	Alice Springs	79.52	138	P	P	23 50 28.9	-0.1
	0.2nm,0.5s,baz=343,slow=5.8,SNR=3.2						

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*ISCJB **26** 23:56:27.9±0.6, 59°.94N±0°.03×141°.68W±0°.03, h11km±4km,*
mb3.6/10, Error ellipse: s-maj=5.0km s-min=2.6km az=5.9
*IDC **26** 23:56:27.6±0.8, 60°.08N×141°.58W, h0km, mb3.7/10,*
mb1 3.9/15, mb1mx3.7/51, mbtmp3.7/15, ML3.2/4, MS3.2/1,
Ms1 3.2/1, ms1mx2.5/40, Error ellipse: s-maj=17.5km
s-min=10.2km az=37.0
*PGC **26** 23:56:28.4±1.4, 59°.92N×141°.64W, h1km, ML3.8/10,*
140km Wnw of Yakutat, Ak Southeastern Alaska
*NEIC **26** 23:56:29.8±0.0, 60°.05N×141°.65W, h12km, ML3.6(AEIC),*
After AEIC.
ISC 26 23:56:27.7±1.2**, 60°.01N**±0°.03×**141°.65W**±0°.02**, h4km**±8km**,**
n91, σ1^{s}19/113**, mb3.8**/10**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKAV	Rock Avalanche	0.33	27	P	Pb	23 56 35.8	-0.5
RKAV				S	Sb	23 56 40.8	-1.2
SAMH	Samovar Hills	0.45	74	P	Pb	23 56 38.6	+0.3
SAMH				S	Sb	23 56 46.5	+1.0
KULT	Kultieth River	0.59	294	P	Pb	23 56 41.2	+0.6
KULT				S	Sb	23 56 48.7	-0.6
PCA	Pinnacle	0.70	82	P	Pg	23 56 42.3	+1.1
PCA				S	Sb	23 56 53.2	+0.6
BGLC	Bering Glacier	0.83	278	P	Pb	23 56 45.5	+0.9
TGL	Tana Glacier	0.95	322	P	Pb	23 56 46.8	0.0
TGL				S	Sb	23 57 00.2	+0.4
CTGM	Chitina Glacie	0.97	9	P	Pb	23 56 46.8	-0.4
CTGM	Chitina Glacie	0.97	9	Pn	Pb	23 56 46.9	-0.4
CTGM				Sn	Sb	23 57 00.7	+0.3
KIAG	Kiagna River	0.98	339	P	Pb	23 56 47.2	-0.2
SUCK	Suckling Hills	1.07	274	P	Pn	23 56 50.4	+0.9
BALM	Baldy	1.08	342	P	Pg	23 56 48.7	+0.2
BALM	Baldy	1.08	342	Pn	Pg	23 56 48.6	+0.1
BALM				Sn	Sn	23 57 06.0	+0.6
NICHA	Nichawak Mount	1.18	282	P	Pb	23 56 51.4	+0.6
NICHA				S	Sn	23 57 08.2	+0.5
PNL	Peninsula	1.19	106	P	Pg	23 56 49.3	-1.2
PNL				S	Sg	23 57 06.4	+0.6
PNL	Peninsula	1.19	106	Pn	Pg	23 56 49.2	-1.2
PNL				Sn	Sg	23 57 05.2	-0.7
HMT	Hamilton	1.35	285	P	Pg	23 56 53.9	+0.4
HMT				S	Sn	23 57 14.5	+2.8
MCARA	McCarthy VSAT	1.54	334	P	Pn	23 56 55.8	-0.1
YUK2	White River	1.82	12	P	Pn	23 57 01.1	+1.1
YUK2	White River	1.82	12	Pn	Pb	23 57 01.5	-0.3
YUK2				Sn	Sg	23 57 25.9	-0.4
YUK7	Dusty Glacier	1.82	72	P	Pn	23 57 00.8	+0.8
YUK7				S	Sg	23 57 26.1	-0.2
YUK7	Dusty Glacier	1.82	72	Pn	Pn	23 57 00.8	+0.8
YUK7				Sn	Sb	23 57 25.1	0.0
YUK3	Moose Creek	1.86	18	P	Pb	23 57 02.1	-0.4
YUK3	Moose Creek	1.86	18	Pn	Pb	23 57 01.9	-0.6
YUK3				Sn	Sg	23 57 28.3	+0.8
YUK6	Outpost Mounta	1.88	59	P	Pn	23 57 02.0	+1.1
YUK6	Outpost Mounta	1.88	59	Pn	Pn	23 57 01.9	+1.1
YUK6				Sn	Sb	23 57 27.2	+0.7
YUK4	Talbot Arm	1.99	47	P	Pg	23 57 05.5	-0.4
YUK4	Talbot Arm	1.99	47	Pn	Pg	23 57 05.5	-0.4
EYAK	Cordova Ski Ar	2.11	287	P	Pn	23 57 03.9	+0.1
YUK5	Granite Creek	2.18	57	P	Pn	23 57 06.3	+1.3
YUK5	Granite Creek	2.18	57	Pn	Pn	23 57 06.1	+1.2
YUK5				Sn	Sn	23 57 33.4	+0.9
HYT	Haines Junctio	2.21	67	P	Pn	23 57 06.7	+1.3
HYT				S	Sn	23 57 34.7	+1.5
HYT	Haines Junctio	2.21	67	Pn	Pn	23 57 06.3	+1.0
HYT				Sn	Sn	23 57 34.0	+0.9
DIV	Divide	2.33	301	P	Pn	23 57 07.1	+0.2

DIV	**Divide**	**2.33**	**301**	Pn	**Pn**	**23 57 07.0**	**+0.2**
DIV				Sn	**Sb**	**23 57 38.3**	**-1.0**
BVCY	**Beaver Creek**	**2.44**	**9**	P	**Pn**	**23 57 10.0**	**+1.6**
BVCY	**Beaver Creek**	**2.44**	**9**	Pn	**Pn**	**23 57 10.0**	**+1.6**
HIN	**Hinchinbrook I**	**2.45**	**281**	P	**Pn**	**23 57 08.6**	**+0.1**
HIN				S	**Sn**	**23 57 41.3**	**+2.3**
KLU	**Klutina**	**2.57**	**307**	P	**Pn**	**23 57 10.7**	**+0.5**
JPK	**Jack Peak**	**2.66**	**295**	P	**Pn**	**23 57 11.8**	**+0.3**
PS11	**TAPS Pump St11**	**2.79**	**320**	P	**Pn**	**23 57 14.8**	**+1.7**
GLI	**Glacier Island**	**2.84**	**290**	P	**Pn**	**23 57 13.3**	**-0.5**
HARP	**HAARP**	**2.94**	**326**	P	**Pn**	**23 57 16.7**	**+1.5**
HARP	**HAARP**	**2.94**	**326**	Pn	**Pn**	**23 57 16.7**	**+1.5**
BCA3	**Beaver Creek A**	**3.07**	**359**	P	**Pn**	**23 57 17.6**	**+0.7**
MENT	**Mentasta**	**3.10**	**342**	P	**Pn**	**23 57 19.1**	**+1.7**
SKAG	**Skagway**	**3.25**	**97**	P	**Pn**	**23 57 21.9**	**+2.5**
SCM	**Sheep Creek Mo**	**3.32**	**306**	P	**Pn**	**23 57 21.5**	**+1.0**
PWL	**Port Wells**	**3.42**	**287**	P	**Pn**	**23 57 21.8**	**0.0**
WHY	**Whitehorse**	**3.43**	**76**	P	**Pn**	**23 57 22.3**	**+0.3**
WHY	**Whitehorse**	**3.43**	**76**	Pn	**Pn**	**23 57 22.3**	**+0.3**
WHY				Sn	**Sn**	**23 58 03.4**	**+0.4**
PAX	**Paxson**	**3.49**	**330**	P	**Pn**	**23 57 24.1**	**+1.3**
PAX	**Paxson**	**3.49**	**330**	Pn	**Pn**	**23 57 24.0**	**+1.1**
KNK	**Knik Glacier**	**3.63**	**296**	P	**Pn**	**23 57 25.7**	**+1.0**
SML	**Sawmill**	**3.73**	**302**	P	**Pn**	**23 57 27.3**	**+1.2**
BESE	**Bessie Mountai**	**3.77**	**109**	Pn	**Pn**	**23 57 25.9**	**-0.7**
DOT	**Dot Lake**	**3.83**	**344**	Pn	**Pn**	**23 57 28.8**	**+1.4**
DHY	**Denali Highway**	**4.12**	**321**	P	**Pn**	**23 57 33.4**	**+1.8**
DAWY	**Dawson**	**4.21**	**14**	P	**Pn**	**23 57 33.9**	**+1.2**
DAWY	**Dawson**	**4.21**	**14**	Pn	**Pn**	**23 57 33.9**	**+1.2**
SLKM	**Skilak Lake**	**4.30**	**280**	P	**Pn**	**23 57 33.4**	**-0.5**
BRLK	**Bradley Lake**	**4.66**	**271**	P	**Pn**	**23 57 40.4**	**+1.5**
SUA	**Susitna One**	**4.70**	**292**	P	**Pn**	**23 57 39.7**	**+0.3**
EGAK	**Eagle**	**4.79**	**3**	*e*Pn	**Pn**	**23 57 41.9**	**+1.3**
RND	**Reindeer**	**4.83**	**318**	P	**Pn**	**23 57 43.0**	**+1.8**
ILAR	**Eielson Array**	**5.36**	**335**	Pn	**Pn**	**23 57 48.6**	**+0.2**
	0.8nm,0.3s,baz=159,slow=12,SNR=28						
ILAR				Sn	**Sn**	**23 58 46.5**	**-4.1**
	0.5nm,0.3s,baz=150,slow=26,SNR=4.5						
TRF	**Thorofare Moun**	**5.36**	**314**	P	**Pn**	**23 57 50.6**	**+2.0**
CCB	**Clear Creek Bu**	**5.46**	**331**	P	**Pn**	**23 57 50.5**	**+0.7**
COLA	**College**	**5.67**	**332**	*e*Pn	**Pn**	**23 57 52.5**	**-0.1**
	38nm,0.9s						
KDAK	**Kodiak Island**	**6.09**	**253**	Pn	**Pn**	**23 57 57.7**	**-0.7**
	1.4nm,0.3s,baz=67,slow=10,SNR=32						
KDAK				Sn	**Sn**	**23 59 03.9**	**-4.6**
	0.6nm,0.3s,baz=228,slow=15,SNR=4.7						
DLBC	**Dease Lake**	**6.17**	**100**	Pn	**Pn**	**23 58 00.0**	**+0.4**
DLBC	**Dease Lake**	**6.17**	**100**	Pn	**Pn**	**23 57 59.7**	**+0.1**
	0.3nm,0.3s,baz=292,slow=19,SNR=4.2						
DLBC				Lg	Lg	23 59 33.3	
	2.4nm,0.3s,baz=266,slow=25,SNR=4.4						
TT01	**Tatalina**	**7.47**	**299**	P	**Pn**	**23 58 18.6**	**+1.2**
BM3	**Burnt Mountain**	**7.55**	**351**	P	**Pn**	**23 58 19.9**	**+1.4**
IM3	**Indian Mountai**	**8.13**	**323**	P	**Pn**	**23 58 27.7**	**+1.4**
INK	**Inuvik**	**9.04**	**20**	Pn	**Pn**	**23 58 40.3**	**+1.5**
INK	**Inuvik**	**9.04**	**20**	Pn	**Pn**	**23 58 38.6**	**-0.2**
	0.1nm,0.3s,baz=196,slow=15,SNR=12						
INK				Sn	**Sn**	**00 00 20.8**	**-0.2**
	0.1nm,0.3s,baz=355,slow=18,SNR=2.8						
INK				Lg	Lg	00 01 07.8	
	0.1nm,0.3s,baz=193,slow=10,SNR=2.5						
INK				LR	LR	00 02 16.7	
	comp=Z,149nm,21.5s,baz=230,slow=39						
YKA	**Yellowknife Ar**	**13.21**	**68**	Pn	**Pn**	**23 59 33.6**	**-2.1**
	0.0nm,0.3s,baz=83,slow=9.3,SNR=2.8						
RES	**Resolute Bay**	**22.32**	**31**	P	**P**	**00 01 25.0**	**-0.9**
	0.9nm,0.6s,baz=246,slow=13,SNR=4.3						
PDAR	**Pinedale Array**	**26.05**	**117**	P	**P**	**00 02 02.9**	**+0.7**
	0.7nm,1.0s,baz=316,slow=3.8,SNR=2.0						
NVAR	**Mina Array Bea**	**26.17**	**135**	P	**P**	**00 02 05.0**	**+1.8**
	0.2nm,0.4s,baz=339,slow=9.8,SNR=3.0						
NRIK	**Noril'sk**	**46.22**	**338**	P	**P**	**00 04 53.5**	**+0.3**
	1.2nm,0.4s,baz=75,slow=20,SNR=2.6						
H11N2	**WAKE ISLAND Hy**	**54.19**	**245**	T	T	01 04 43.5	
	baz=34						
H11N3	**WAKE ISLAND Hy**	**54.20**	**245**	T	T	01 04 46.4	
	baz=34						
H11N1	**WAKE ISLAND Hy**	**54.21**	**245**	T	T	01 04 48.6	
	baz=34						
FINES	**FINESS Array B**	**58.51**	**7**	P	**P**	**00 06 24.0**	**-0.4**
	1.3nm,0.9s,baz=262,slow=2.8,SNR=2.1						
SONM	**Songino Array**	**59.18**	**313**	P	**P**	**00 06 31.1**	**+1.6**
	0.8nm,0.8s,baz=37,slow=7.6,SNR=4.8						
MKAR	**Makanchi Array**	**67.68**	**329**	P	**P**	**00 07 24.5**	**-1.1**
	0.3nm,0.7s,baz=52,slow=7.9,SNR=4.4						
AKASG	**Malin Array Be**	**69.40**	**6**	P	**P**	**00 07 35.2**	**-1.0**
	0.2nm,0.4s,baz=358,slow=6.6,SNR=5.4						
ESDC	**Sonseca Array**	**74.75**	**33**	P	**P**	**00 08 08.8**	**+0.2**
	0.8nm,0.8s,baz=344,slow=6.3,SNR=5.0						
CMAR	**Chiang Mai Arr**	**87.83**	**304**	P	**P**	**00 09 18.9**	**+0.8**
	0.7nm,0.3s,baz=9.4,slow=6.8,SNR=4.9						
BOSA	**Boshof**	**147.37**	**22**	PKPbc	**PKPdf**	**00 16 09.5**	**-0.4**
	1.2nm,0.7s,baz=310,slow=10,SNR=2.0						

DDA ***27*** *00:26:37.5, 38°.46N×39°.29E, h7^{km}±3^{km}, ML2.5*
ISCJB ***27*** *00:26:38.4±0.7, 38°.43N±0°.02×39°.35E±0°.03, h6^{km}±6^{km}, Error ellipse: s-maj=4.6km s-min=4.0km az=155.9*
ISK ***27*** *00:26:38.9, 38°.38N×39°.40E, h14^{km}, ML2.2/8*
ISC 27 00:26:37.3±1.3**, 38°.44N**±0°.03×**39°.34E**±0°.03**, h1**^{km}±12^{km}**, n19, σ0^{s}.56**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.28**	**282**	*i* P	**Pg**	**00 26 43.0**	**+0.3**
ELZG				IAML_P			
	comp=Z,13μm,0.1s						
TNCL	**Tunceli-Merkez**	**0.69**	**13**	*i* P	**Pn**	**00 26 53.9**	**-0.4**
TNCL				*i* S	**Sb**	**00 27 02.4**	**0.0**
TNCL				IAML_P			
	comp=Z,195nm,0.2s						
DIYA	**Diyarbakir**	**0.80**	**130**	*i* P	**Pb**	**00 26 54.1**	**+0.1**
DIYA				*i* S	**Sb**	**00 27 05.3**	**0.0**
KEMA	**Kemaliye**	**1.06**	**322**	*i* P	**Pg**	**00 26 57.0**	**-0.6**
KEMA				*i* S	**Sg**	**00 27 11.1**	**-0.2**
URFA	**Urfa**	**1.07**	**202**	PG	**Pn**	**00 26 59.4**	**-0.1**
URFA				SG	**Sn**	**00 27 14.3**	**-0.8**
AKCD	**Akcadag**	**1.12**	**263**	*i* P	**Pg**	**00 26 58.9**	**+0.1**
AKCD				*i* S	**Sb**	**00 27 14.7**	**+0.1**
HEKM	**Malatya_Hekimh**	**1.17**	**293**	*i* P	**Pg**	**00 26 59.6**	**0.0**
HEKM				*i* S	**Sn**	**00 27 17.5**	**0.0**
HEKM				IAML_P			
	comp=Z,524nm,0.2s						
BNGB	**Bingl**	**1.19**	**62**	PN	**Pn**	**00 27 01.5**	**+0.4**
SANL	**SANLIURFA_Merk**	**1.29**	**192**	*i* P	**Pn**	**00 27 03.2**	**+0.8**
SANL				*i* S	**Sn**	**00 27 21.3**	**+0.9**
SANL				IAML_P			
	comp=Z,730nm,0.2s						
EUZM	**Uzumlu**	**1.30**	**12**	*i* P	**Pg**	**00 27 02.0**	**-0.1**
EUZM				IAML_P			
	comp=Z,331nm,0.3s						
MAZI	**Mazidag**	**1.31**	**138**	PN	**Pg**	**00 27 02.0**	**-0.4**
MAZI				SN	**Sb**	**00 27 19.4**	**-0.7**
YEDI	**Yedisu-Bingol**	**1.37**	**43**	PN	**Pb**	**00 27 03.9**	**+0.1**
DARE	**Darende-Malaty**	**1.46**	**276**	PN	**Pg**	**00 27 05.6**	**+0.3**
CUKAN	**kangal_SIVAS**	**1.70**	**302**	*i* P	**Pg**	**00 27 10.2**	**+0.3**
CUKAN				*i* S	**Sg**	**00 27 33.1**	**+1.1**
KELT	**Kelkit**	**1.71**	**358**	*i* P	**Pb**	**00 27 09.0**	**-0.6**
KELT				IAML_P			
	comp=Z,108nm,0.3s						
VRTB	**Varto-Mus**	**1.81**	**66**	PN	**Pb**	**00 27 10.7**	**-0.5**
BAYT	**Aydıntepe-Bayb**	**2.05**	**17**	PN	**Pb**	**00 27 15.3**	**-0.1**
GAZ	**Gaziantep**	**2.10**	**234**	PN	**Pb**	**00 27 15.1**	**-1.1**
GURO	**Guroymak-BITLI**	**2.12**	**86**	PN	**Pn**	**00 27 14.6**	**+0.7**

ISCJB ***27*** *00:32:08.7±1.1, 11°.0S±0°.1×165°.9E±0°.1, h10^{km}, mb3.9/6, MS3.5/6, Error ellipse: s-maj=21.3km s-min=16.7km az=160.6*
IDC ***27*** *00:32:08.8±1.6, 10°.85S×166°.00E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.9/34, mbtmp4.1/8, ML4.5/2, MS3.4/8, Ms1 3.4/8, ms1mx3.2/30, Error ellipse: s-maj=40.0km s-min=25.7km az=124.0*
ISC 27 00:32:10.3±1.3**, 10°.9S**±0°.1×**166°.0E**±0°.2**, h10**^{km}**, n18, σ0^{s}.67**/8**, mb4.0**/6**, MS3.5**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.10**	**283**	Pn	**Pn**	**00 33 40.1**	**-0.6**
	32nm,0.3s,baz=158,slow=6.0,SNR=6.1						
HNR				LR	LR	00 35 54.9	
	comp=Z,246nm,21.4s,baz=22,slow=37						
DZM	**Mont Dzumac**	**11.15**	**178**	Pn	**Pn**	**00 34 49.4**	**-0.6**
	1.1nm,0.3s,baz=7.4,slow=10,SNR=8.2						
DZM				LR	LR	00 37 55.2	
	comp=Z,88nm,21.3s,baz=1.0,slow=31						
CTA	**Charters Tower**	**21.08**	**242**	P	**P**	**00 36 55.2**	**+0.2**
	3.6nm,0.5s,baz=64,slow=13,SNR=2.5						
URZ	**Urewera**	**29.04**	**162**	LR	LR	00 46 46.5	
	comp=Z,111nm,18.6s,baz=220,slow=30						
H11S2	**WAKE ISLAND Hy**	**29.18**	**1**	T	T	01 08 37.4	
	baz=181,slow=76,SNR=33						
H11S3	**WAKE ISLAND Hy**	**29.19**	**1**	T	T	01 08 37.1	
	baz=181,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**29.20**	**1**	T	T	01 08 38.7	
	baz=181,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy**	**30.40**	**2**	T	T	01 10 08.0	
	baz=182,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**30.41**	**2**	T	T	01 10 08.8	
	baz=182,slow=76,SNR=10						
H11N2	**WAKE ISLAND Hy**	**30.42**	**2**	T	T	01 10 10.3	
	baz=182,slow=76,SNR=13						
STKA	**Stephens Creek**	**30.72**	**223**	P	**P**	**00 38 26.8**	**+1.1**
	1.0nm,0.5s,baz=27,slow=11,SNR=2.5						
STKA				LR	LR	00 49 49.1	
	comp=Z,82nm,18.3s,baz=29,slow=34						
WRA	**Warramunga Arr**	**31.75**	**250**	P	**P**	**00 38 35.4**	**+0.4**
	1.4nm,0.7s,baz=82,slow=9.0,SNR=10						
WRA				LR	LR	00 51 47.2	
	comp=Z,50nm,18.4s,baz=215,slow=37						
ASAR	**Alice Springs**	**33.07**	**243**	P	**P**	**00 38 46.1**	**-0.4**
	2.9nm,0.8s,baz=72,slow=9.5,SNR=19						
MJAR	**Matsushiro Arr**	**53.92**	**332**	LR	LR	01 04 15.8	
	comp=Z,13nm,19.1s,baz=310,slow=36						
ILAR	**Eielson Array**	**83.28**	**18**	P	**P**	**00 44 37.0**	**+0.1**
	0.4nm,0.7s,baz=232,slow=4.6,SNR=5.3						
YBH	**Yreka Blue Hor**	**83.61**	**46**	LR	LR	01 19 42.5	
	comp=Z,46nm,18.5s,baz=352,slow=34						
DLBC	**Dease Lake**	**86.15**	**28**	LR	LR	01 18 47.2	
	comp=Z,104nm,20.7s,baz=160,slow=32						
MKAR	**Makanchi Array**	**93.55**	**317**	P	**P**	**00 45 26.5**	**-0.1**
	0.2nm,0.7s,baz=104,slow=5.0,SNR=2.6						

SOME ***27*** *00:42:22.1, 42°.55N×79°.63E, h20^{km}*
KRNET ***27*** *00:42:22.4±0.1, 42°.61N×79°.58E, h16^{km}, mb2.3*
NNC 27 00:42:22.5±0.6**, 42°.62N**×**79°.61E, h0**^{km}**, mb2.5, mpv2.3, 13C-5D, Error ellipse: s-maj=3.9km s-min=2.3km az=133.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.55**	**349**	P	Pg	00 42 34.0	+1.0
	4.6nm,0.2s						
SHLS				S	Sb	00 42 42.8	-0.8
	12nm,0.3s						
SHLS	**Shalkode**	**0.55**	**349**	*e*P	Pg	00 42 34.0	+1.0
	baz=22						
SHLS				*e*S	Sb	00 42 42.9	-0.7
	baz=22						
SHLS	**Shalkode**	**0.55**	**349**	*e*P	Pg	00 42 34.0	+1.0
	7.6nm,0.2s						
SHLS				*e*S	Sb	00 42 42.8	-0.8
	9.2nm,0.3s						
UZB	**Uzynbulak**	**0.68**	**321**	P	Pg	00 42 35.9	+0.3
	1.4nm,0.1s						
UZB				S	Sg	00 42 45.9	+1.4
	12nm,0.3s						
UZB	**Uzynbulak**	**0.68**	**321**	*e*P	Pg	00 42 35.9	+0.3
	baz=23						
UZB				*e*S	Sg	00 42 45.9	+1.5
	baz=23						
UZB	**Uzynbulak**	**0.68**	**321**	*e*P	Pg	00 42 35.9	+0.3
	1.4nm,0.1s						
UZB				*e*S	Sg	00 42 45.9	+1.4
	12nm,0.3s						
PDGK	**Podgornoye**	**0.72**	**353**	P	Pg	00 42 36.3	+0.1
	1.5nm,0.1s						
PDGK				S	Sg	00 42 46.6	+1.1
	3.0nm,0.2s						
PDGK	**Podgornoye**	**0.72**	**353**	⇓P	Pg	00 42 36.2	-0.1
	0.4nm,0.3s						
PDGK				⇑S	Sg	00 42 46.5	+1.0
	4.9nm,0.6s						
PDGK	**Podgornoye**	**0.72**	**353**	⇑*i*P	Pg	00 42 36.1	-0.1
	baz=54						
PDGK				⇑*i*S	Sg	00 42 46.9	+1.4
	baz=54						
PRZ	**Przheval'sk**	**0.90**	**262**	⇑*e*P	Pg	00 42 39.7	-0.1
	baz=62						
PRZ				⇑*i*S	Sg	00 42 52.2	+0.7
	baz=62						
SATY	**Saty**	**0.99**	**297**	P	Pg	00 42 41.6	+0.1
	1.2nm,0.2s						
SATY				S	Sb	00 42 55.7	-0.6
	8.0nm,0.1s						
SATY	**Saty**	**0.99**	**297**	*e*P	Pg	00 42 41.5	+0.1
	0.8nm,0.1s						
SATY				*e*S	Sb	00 42 55.7	-0.6
	3.0nm,0.2s						
DJR	**Jarkent**	**1.72**	**4**	P	Pn	00 42 54.3	+0.5
	0.4nm,0.2s						
DJR				S	Sb	00 43 17.4	+0.2
	1.2nm,0.2s						
DJR	**Jarkent**	**1.72**	**4**	*e*P	Pb	00 42 54.4	-0.6
	0.3nm,0.1s						
DJR				*e*S	Sg	00 43 17.5	-0.2
	0.8nm,0.2s						
KDJ	**Kajisay**	**1.86**	**256**	⇑*i*P	Pb	00 42 56.8	-0.7
	baz=56						
KDJ				⇑*i*S	Sg	00 43 22.3	-0.1
	baz=56						
KOTS	**Kotyrbulak**	**1.94**	**289**	Pg	Pb	00 42 57.9	-0.8
	1.0nm,0.2s						
KOTS				Lg	Lg	00 43 23.7	
	4.9nm,0.3s						
KOTS	**Kotyrbulak**	**1.94**	**289**	*e*P	Pb	00 42 57.9	-0.8
	baz=90						
KOTS				*e*S	Sb	00 43 23.6	+0.1
	baz=90						
KOTS	**Kotyrbulak**	**1.94**	**289**	*e*P	Pb	00 42 57.9	-0.8
	0.6nm,0.3s						
KOTS				*e*S	Sb	00 43 23.7	+0.2
	4.9nm,0.3s						
TNSS	**Tian-Shan**	**2.00**	**283**	*e*P	Pn	00 42 58.9	+0.9
	baz=83						
TNSS				*e*S	Sb	00 43 25.3	-0.4
	baz=83						
TNSS	**Tian-Shan**	**2.00**	**283**	*e*P	Pn	00 42 58.9	+0.9
	0.3nm,0.2s						
TNSS				*e*S	Sb	00 43 25.3	-0.4
	1.5nm,0.3s						
ULHL	**Ulahol**	**2.52**	**263**	⇑*i*P	Pn	00 43 06.2	+1.3
	baz=63						
ULHL				⇑*i*S	Sb	00 43 38.7	-1.7
	baz=63						
BOOM	**Boomskoye usch**	**2.71**	**269**	⇑*i*P	Pn	00 43 09.2	+1.7
	baz=69						
BOOM				⇑*i*S	Sn	00 43 43.4	+2.3
	baz=69						
NRN	**Naryn**	**2.94**	**247**	⇓*i*P	Pn	00 43 12.5	+1.8
	baz=47						
NRN				⇓*i*S	Sn	00 43 49.4	+2.5
	baz=47						
TKM2	**Tokmak 2**	**2.97**	**277**	⇑Pg	Pb	00 43 16.5	+0.1
	0.6nm,0.8s						
TKM2				⇑Lg	Lg	00 43 57.7	
	0.5nm,0.7s						
TKM2	**Tokmak 2**	**2.97**	**277**	⇓*e*P	Pn	00 43 12.1	+1.0
	baz=77						
TKM2				⇓*i*S	Sn	00 43 49.9	+2.4
	baz=77						

MEX 27 00:57:41.7±0.3**, 17°.01N**×**94°.99W, h133**^{km}±3^{km}**, MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.13**	**51**	*i* P	Pn	00 57 58.6	-1.2
CMIG				*i* S	Sn	00 58 11.2	-2.3
TUIG	**Tuzandepetl**	**1.15**	**28**	*i* P	Pn	00 58 05.2	-1.1
HUIG	**Huatulco**	**1.64**	**221**	*e*P	Pn	00 58 10.1	-1.5
HUIG				*e*S	Sn	00 58 32.9	-1.5
VHO	**Vista Hermosa**	**1.67**	**272**	*e*P	Pn	00 58 10.9	-1.2
VHO				*e*S	Sn	00 58 33.5	-1.8

GUC 27 01:08:43.9±0.7**, 19°.00S**×**70°.19W, h46**^{km}±2^{km}**, ML3.7, 4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**0.40**	**341**	⇓*i*P	Pn	01 08 54.2	+0.3
PB12				*e*S	Sn	01 09 01.2	+0.3
MNMC	**Minye Minye**	**0.58**	**103**	*e*P	Pn	01 08 56.5	+0.3
MNMC				*e*S	Sn	01 09 06.0	+0.9
PSGC	**Pisagua**	**0.60**	**174**	⇓*e*P	Pn	01 08 56.7	+0.4
PSGC				*e*S	Sn	01 09 05.8	+0.6
PSGC				IAML		01 09 06.6	
	comp=E,4μm,0.3s						
PB11	**IPOC Station P**	**0.91**	**146**	⇓*e*P	Pn	01 09 01.1	+0.6
PB11				*e*S	Sn	01 09 14.3	+1.6
PB11				IAML		01 09 14.7	
	comp=E,3μm,0.3s						
PB08	**IPOC Station P**	**1.50**	**139**	*i* P	Pn	01 09 10.0	+1.2
PB08				*e*S	Sn	01 09 29.5	+2.2
PB08				IAML		01 09 30.6	
	comp=E,2μm,0.1s						
PB01	**IPOC Station P**	**2.14**	**162**	*e*P	Pn	01 09 18.1	+0.9
PB01				*e*S	Sn	01 09 44.8	+2.1
PB01				IAML		01 09 57.5	
	comp=N,543nm,0.3s						
PB02	**IPOC Station P**	**2.33**	**173**	*e*P	Pn	01 09 21.1	+1.3
PB02				IAML		01 10 01.7	
	comp=E,608nm,0.6s						
PB07	**IPOC Station P**	**2.73**	**174**	*e*P	Pn	01 09 26.9	+1.4
PB07				*e*S	Sn	01 10 00.2	+2.9
PB07				IAML		01 10 15.1	
	comp=E,290nm,0.3s						
PB09	**IPOC Station P**	**2.92**	**162**	*e*P	Pn	01 09 30.6	+2.6
PB09				*e*S	Sn	01 10 04.5	+2.4
PB09				IAML		01 10 24.4	
	comp=N,302nm,0.5s						
PB03	**IPOC Station P**	**3.06**	**172**	⇓*e*P	Pn	01 09 31.7	+1.7
PB03				*e*S	Sn	01 10 07.8	+2.3
PB03				IAML		01 10 26.5	
	comp=E,157nm,0.3s						

TIR ***27*** *01:52:00.2, 40°.80N×21°.66E, h7^{km}, Md2.8/3*
SKO ***27*** *01:52:02.8, 40°.72N×21°.38E, h15^{km}, M1.8, ML2.2*
ISCJB ***27*** *01:52:03.8±0.3, 40°.77N±0°.02×21°.38E±0°.03, h5^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=2.8km az=169.0*
ATH ***27*** *01:52:03.6, 40°.77N×21°.37E, h8^{km}±2^{km}, ML2.2/5, Error ellipse: s-maj=3.5km s-min=1.4km az=327.0*
THE ***27*** *01:52:03.8, 40°.79N×21°.38E, h6^{km}, ML2.1/7, Error ellipse: s-maj=1.0km s-min=0.8km az=259.0*
BEO ***27*** *01:52:05.5±0.3, 40°.84N×21°.45E, h0^{km}, ML2.0/5*
ISC 27 01:52:03.8±0.8**, 40°.76N**±0°.02×**21°.38E**±0°.02**, h4**^{km}±4^{km}**, n36, σ1^{s}.43**/65**, 2C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	**Florina**	**0.02**	**359**	P	**Pg**	**01 52 05.0**	**+0.2**
FNA				S	**Sg**	**01 52 05.7**	**+0.2**
FNA				AML	AML	01 52 06.0	
	comp=N,31066μm,0.1s						
FNA				AML	AML	01 52 06.1	
	comp=E,51333μm,0.2s						
FNA	**Florina**	**0.02**	**359**	P	**Pg**	**01 52 05.2**	**+0.4**
FNA				S	**Sg**	**01 52 05.8**	**+0.2**
FNA	**Florina**	**0.02**	**359**	⇓*i*Pg	**Pg**	**01 52 05.1**	**+0.2**
FNA				*i* Sg	**Sg**	**01 52 05.9**	**+0.3**
BIA	**Bitola**	**0.26**	**351**	⇑*i*Pg	**Pg**	**01 52 09.5**	**+0.5**
BIA				*i* Sg	**Sg**	**01 52 13.7**	**+1.3**
BIA				*e*Lg	Lg	01 52 14.8	
	comp=E,257nm,0.3s						
BIA				*e*Lg	Lg	01 52 15.0	
	comp=N,281nm,0.3s						
NEST	**Nestorio**	**0.42**	**216**	P	**Pg**	**01 52 11.8**	**-0.2**
NEST				S	**Sg**	**01 52 18.1**	**+0.5**
NEST				AML	AML	01 52 21.7	
	comp=N,749μm,0.3s						
NEST				AML	AML	01 52 22.2	
	comp=E,645μm,0.4s						
NEST	**Nestorio**	**0.42**	**216**	P	**Pg**	**01 52 11.8**	**-0.2**
NEST				S	**Sg**	**01 52 18.7**	**+1.1**
KZN	**Kozani**	**0.54**	**146**	P	**Pg**	**01 52 14.4**	**+0.1**
KZN				S	**Sb**	**01 52 22.3**	**-1.8**
KZN				AML	AML	01 52 24.6	
	comp=E,773μm,0.2s						
KZN				AML	AML	01 52 24.9	
	comp=N,666μm,0.2s						
KZN	**Kozani**	**0.54**	**146**	P	**Pg**	**01 52 14.3**	**+0.1**
KZN				S	**Sb**	**01 52 22.1**	**-2.0**
OHR	**Ohrid**	**0.56**	**309**	*i* Pg	**Pg**	**01 52 14.6**	**0.0**
OHR				*i* Sg	**Sg**	**01 52 22.9**	**+0.9**
OHR				*e*Lg	Lg	01 52 23.4	
	comp=N,88nm,0.4s						
OHR				*e*Lg	Lg	01 52 23.5	
	comp=E,120nm,0.5s						
PENT	**Pentalofos**	**0.59**	**198**	P	**Pg**	**01 52 15.1**	**-0.1**
PENT	**Pentalofos**	**0.59**	**198**	P	**Pg**	**01 52 15.1**	**-0.1**
PENT				S	**Sb**	**01 52 24.1**	**-1.4**
KPRO	**Kipourio**	**0.80**	**181**	P	**Pg**	**01 52 19.2**	**0.0**
KPRO				S	**Sb**	**01 52 31.1**	**-0.5**
KPRO				AML	AML	01 52 36.6	
	comp=E,310μm,0.3s						
KPRO				AML	AML	01 52 39.1	
	comp=N,294μm,0.4s						
KPRO	**Kipourio**	**0.80**	**181**	P	**Pg**	**01 52 19.4**	**+0.2**
KPRO				S	**Sb**	**01 52 32.3**	**+0.7**
VAY	**Valandovo**	**1.06**	**58**	⇑*i*Pg	**Pg**	**01 52 23.9**	**-0.3**
VAY				*i* Sg	**Sb**	**01 52 38.2**	**-0.8**
VAY				*e*Lg	Lg	01 52 42.5	
	comp=N,33nm,0.5s						
VAY				*e*Lg	Lg	01 52 42.7	
	comp=E,62nm,0.6s						
LIT	**Litokhoron**	**1.07**	**127**	P	**Pb**	**01 52 24.2**	**-0.8**
LIT	**Litokhoron**	**1.07**	**127**	P	**Pn**	**01 52 24.7**	**-0.9**
LIT				S	**Sn**	**01 52 40.4**	**-0.6**
LIT	**Litokhoron**	**1.07**	**127**	*e*Pg	**Pg**	**01 52 24.0**	**-0.4**
STIP	**Stip**	**1.12**	**33**	*i* Pg	**Pn**	**01 52 27.9**	**+1.7**
STIP				*i* Sg	**Sn**	**01 52 45.6**	**+3.6**
STIP				*e*Lg	Lg	01 52 48.6	
	comp=E,11nm,0.5s						
STIP				*e*Lg	Lg	01 52 48.8	
	comp=N,5.8nm,0.3s						
PHP	**Peshkopia**	**1.16**	**323**	P	**Pg**	**01 52 24.6**	**-1.5**
PHP				S	**Sg**	**01 52 42.2**	**+1.0**
PHP	**Peshkopia**	**1.16**	**323**	*i* PN	**Pg**	**01 52 24.5**	**-1.7**
PHP				*i* SN	**Sn**	**01 52 43.2**	**0.0**
JAN	**Janina**	**1.17**	**200**	P	**Pg**	**01 52 25.9**	**-0.4**
JAN				S	**Sn**	**01 52 43.6**	**+0.2**
KNT	**Kendrikon**	**1.22**	**70**	P	**Pg**	**01 52 26.7**	**-0.5**
KNT	**Kendrikon**	**1.22**	**70**	P	**Pg**	**01 52 26.7**	**-0.5**
KNT				S	**Sb**	**01 52 43.0**	**-0.5**
TIR	**Tirane**	**1.29**	**298**	P	**Pn**	**01 52 27.5**	**-1.0**
THL	**Klokotos Trika**	**1.29**	**158**	P	**Pn**	**01 52 27.5**	**-1.1**
THL				S	**Sn**	**01 52 46.4**	**+0.1**
THL				AML	AML	01 52 52.1	
	comp=E,139μm,0.6s						
THL				AML	AML	01 52 52.6	
	comp=N,107μm,0.5s						
THL	**Klokotos Trika**	**1.29**	**158**	P	**Pn**	**01 52 27.4**	**-1.1**
THL				S	**Sn**	**01 52 47.2**	**+1.0**
IGT	**Igoumenitsa**	**1.46**	**213**	*e*Pn	**Pg**	**01 52 35.2**	**+3.3**
IGT				*e*Sn	**Sg**	**01 52 55.6**	**+4.8**
PUK	**Puka**	**1.70**	**319**	*i* PN	**Pn**	**01 52 31.4**	**-2.9**
PUK				*i* PN	**Pb**	**01 52 35.0**	**-0.7**
PUK				*i* SN	**Sn**	**01 52 52.8**	**-3.7**
PUK				*i* SN	**Sg**	**01 53 02.1**	**+3.6**
SRS	**Serrai**	**1.72**	**77**	*e*Pn	**Pb**	**01 52 34.9**	**-1.0**
SRS				*e*Sn	**Sb**	**01 52 57.3**	**-0.5**
VTS	**Vitosha**	**2.29**	**36**	*e*Pn	**Pn**	**01 52 43.7**	**+1.2**
VTS				*e*Sn	**Sn**	**01 53 10.8**	**-0.3**
ZAPS	**Zavoj**	**2.68**	**20**	*e*Pn	**Pn**	**01 52 49.1**	**+1.3**
ZAPS				*e*Sn	**Sn**	**01 53 21.2**	**+0.5**
SJES	**Sjenica**	**2.71**	**338**	*e*Pn	**Pn**	**01 52 50.0**	**+1.8**
IVAS	**Ivanjica**	**2.96**	**342**	*e*Pn	**Pn**	**01 52 51.7**	**+0.1**
GRUS	**Gruza**	**3.17**	**351**	*e*Pn	**Pn**	**01 52 55.3**	**+0.9**
DIVS	**Divibare**	**3.49**	**343**	*e*Pn	**Pn**	**01 52 59.1**	**+0.2**
DIVS				*e*Sn	**Sn**	**01 53 41.4**	**+0.7**
TRUS	**Trudelj**	**3.54**	**349**	*e*Pn	**Pn**	**01 53 00.1**	**+0.6**

JMA 27 02:07:12.5±0.2**, 30°.87N**×**129°.67E, h242**^{km}±2^{km}**, M3.7, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.81**	**3**	P	Pn	02 07 45.4	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JSJ				*e*S	S	02 08 11.3	-0.5
JSU	**Suzuyama**	**0.92**	**47**	P	Pn	02 07 46.5	+0.2
JYAK	**Yakushimahirau**	**0.96**	**131**	P	Pn	02 07 46.6	+0.1
JYAK				S	S	02 08 11.7	-1.4
JTSR	**Tashiro 2**	**1.11**	**74**	P	Pn	02 07 47.4	0.0
JTSR				S	S	02 08 13.4	-1.3
JTN	**Tanegashima 3**	**1.15**	**100**	P	Pn	02 07 47.8	+0.2
JTN				S	S	02 08 14.7	-0.3
JMTN	**Minamitane**	**1.16**	**114**	*e*S	S	02 08 15.1	-0.1
JTZ	**Takazaki**	**1.59**	**49**	P	Pn	02 07 51.1	+0.4
JTZ				S	S	02 08 20.8	0.0
JAM	**Amami Oshima**	**2.45**	**181**	P	Pn	02 07 58.8	+0.1
JAM				*e*S	S	02 08 32.2	-2.9
JAMN	**Amaminishikomi**	**2.65**	**189**	P	Pn	02 08 00.6	-0.2
JAMN				S	S	02 08 36.8	-2.1
JTK	**Tokunoshima**	**3.14**	**192**	S	S	02 08 45.6	-2.8
JTO	**Tosashimizu**	**3.32**	**53**	P	Pn	02 08 06.4	-1.6
JTO				S	S	02 08 48.3	-3.6

IDC 27 02:30:49.8±2.1**, 4°.41S**×**151°.97E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.6**/4**, Error ellipse: s-maj=96.6km s-min=26.7km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.09**	**227**	P	P	02 35 57.3	-0.2
	0.5nm,0.5s,baz=52,slow=9.4,SNR=7.7						
ASAR	**Alice Springs**	**25.89**	**221**	P	P	02 36 24.4	+0.8
	1.2nm,0.7s,baz=57,slow=9.2,SNR=4.9						
ILAR	**Eielson Array**	**82.11**	**22**	P	P	02 43 13.2	+1.1
	0.5nm,0.8s,baz=244,slow=5.8,SNR=5.6						
KURBB	**Kurchatov Arra**	**82.98**	**322**	P	P	02 43 17.1	+0.3
	0.4nm,0.7s,baz=100,slow=5.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**149.39**	**288**	PKPbc	PKPdf	02 50 39.1	+1.6
	0.6nm,0.8s,baz=60,slow=3.3,SNR=4.2						

MEX 27 02:35:30.1±0.4**, 14°.06N**×**93°.15W, h30^{km}**±31^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.20**	**45**	*e*P	Pn	02 35 47.7	-3.2
CCIG	**Comitan**	**2.42**	**24**	*e*P	Pn	02 36 07.9	+0.1
CCIG				*e*S	Sn	02 36 34.0	-2.5
CMIG	**Matias Romero**	**3.45**	**331**	*e*P	Pn	02 36 20.1	-1.7
CMIG				*e*S	Sn	02 37 00.0	-1.7

RSNC 27 02:45:34.0±1.2**, 6°.84N**×**73°.09W, h152^{km}**±5^{km}**, ML3.1, Mw3.6, 1C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.26**	**201**	*i* P	Pn	02 45 54.3	-0.7
BARC				*e*S	Sn	02 46 10.0	-1.1
BARC				*i*		02 46 11.0	
	comp=Z,258nm,0.4s						
PAMC	**Pamplona, Colo**	**0.63**	**38**	*e*P	Pn	02 45 57.1	+0.1
PAMC				*e*S	Sn	02 46 14.4	-0.1
PAMC				*i*		02 46 17.2	
	comp=N,73nm,0.2s						
BRRC	**Barranca, Sant**	**0.67**	**294**	⇑*i*P	Pn	02 45 56.2	-0.4
BRRC				*i*		02 45 56.5	
	comp=Z,213nm,0.2s						
BRRC				*e*S	Sn	02 46 13.6	-0.2
RUSC	**La Rusia**	**0.94**	**180**	⇓*i*P	Pn	02 45 58.1	-1.0
RUSC				*e*S	Sn	02 46 17.1	-1.1
RUSC				*i*		02 46 17.5	
	comp=N,155nm,0.3s						
TAMC	**Tame, Arauca**	**1.35**	**107**	⇓*i*P	Pn	02 46 02.4	+0.2
TAMC				*i*		02 46 02.6	
	comp=Z,72nm,0.3s						
TAMC				*e*S	Sn	02 46 23.8	-0.1
PTBC	**PUERTO BERRIO,**	**1.39**	**258**	*e*P	Pn	02 46 00.8	-1.8
PTBC				*e*S	Sn	02 46 22.1	-2.4
PTBC				*i*		02 46 27.8	
	comp=N,492nm,0.6s						
OCAC	**Ocana**	**1.41**	**351**	*e*P	Pn	02 46 02.7	-0.4
OCAC				*e*S	Sn	02 46 25.1	-0.3
ZARC	**Zaragoza, Cauc**	**1.87**	**290**	*e*P	Pn	02 46 06.7	-1.1
ZARC				*e*S	Sn	02 46 33.1	-0.7
ZARC				*i*		02 46 38.2	
	comp=N,263nm,0.3s						
CTAU	**Tausa, Cundina**	**1.88**	**210**	*e*P	Pn	02 46 11.1	+2.6
CTAU				*e*S	Sn	02 46 36.1	+1.3
CTAU				*i*		02 46 39.7	
	comp=Z,112nm,0.4s						
CTAB	**Cerro Tablazo,**	**2.12**	**212**	*e*P	Pn	02 46 12.6	+1.4
CTAB				*e*S	Sn	02 46 40.4	+0.6
CTAB				*i*		02 46 45.4	
	comp=Z,132nm,0.3s						
SMLC	**San Martn de**	**2.18**	**334**	*e*P	Pn	02 46 10.8	-0.7
SMLC				*e*S	Sn	02 46 39.6	-0.7
CHIC	**Chingaza**	**2.28**	**196**	*e*P	Pn	02 46 11.9	-1.1
	comp=Z,47nm,0.3s						
CHIC				*i*		02 46 15.0	
	comp=Z,47nm,0.3s						
CHIC				*e*S	Sn	02 46 42.5	-0.6
ROSC	**El Rosal**	**2.33**	**212**	⇓*e*P	Pn	02 46 13.9	+0.3
ROSC				*e*S	Sn	02 46 44.2	+0.1
ROSC				*i*		02 46 49.2	
	comp=Z,119nm,0.4s						
HELC	**Santa Helena**	**2.51**	**255**	*e*P	Pn	02 46 15.6	-0.1
HELC				*e*S	Sn	02 46 48.7	+0.9
HELC				*i*		02 46 56.1	
	comp=N,62nm,0.2s						
VILC	**Villavicencio,**	**2.77**	**193**	*e*P	Pn	02 46 18.6	-0.1
VILC				*e*S	Sn	02 46 52.2	-1.2
RREF	**El Recreo**	**2.96**	**230**	*e*P	Pn	02 46 21.4	-0.2
RREF				*e*S	Sn	02 46 58.7	+0.5
RREF				*i*		02 47 02.9	
	comp=Z,72nm,0.3s						
CODC	**Agustn Codazz**	**3.10**	**354**	*e*P	Pn	02 46 21.6	-1.1
CODC				*i*		02 47 04.4	
	comp=N,30nm,0.2s						
DBBC	**Dabeiba**	**3.10**	**274**	*e*P	Pn	02 46 21.8	-1.0
DBBC				*i*		02 47 00.2	
	comp=Z,48nm,0.4s						
ANIL	**Santa Ana**	**3.27**	**225**	*e*P	Pn	02 46 25.6	+0.3
ANIL				*e*S	Sn	02 47 05.1	+0.2
PLMC	**San Jos del P**	**3.71**	**239**	*e*P	Pn	02 46 29.9	-0.8
PLMC				*e*S	Sn	02 47 12.9	-1.7
YOTC	**Yotoco, Valle**	**4.30**	**229**	*e*P	Pn	02 46 37.7	-0.8
SMRC	**Santa Marta, M**	**4.44**	**345**	*e*P	Pn	02 46 39.5	-0.6
SMRC				*i*		02 47 30.7	
	comp=N,28nm,0.3s						

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*IDC **27** 03:00:53.1±0.8, 25°.37N×127°.34E, h0^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.8/46, mbtmp3.9/15, ML4.2/1, Error ellipse: s-maj=24.0km s-min=18.2km az=84.0*

*ISCJB **27** 03:00:55.1±0.4, 25°.37N±0°.04×127°.56E±0°.04, h27^{km}, mb3.8/17, Error ellipse: s-maj=6.8km s-min=4.0km az=42.0*

*NEIC **27** 03:00:58.2±0.4, 25°.39N×127°.41E, h35^{km}, mb4.2/5, Error ellipse: s-maj=12.5km s-min=8.1km az=79.0*

*JMA **27** 03:00:59.1±0.3, 25°.58N×127°.54E, h54^{km}±3^{km}, M3.1*

ISC 27 03:00:57.0±0.7**, 25°.43N**±0°.07×**127°.45E**±0°.06**, h27^{km}, n51, σ1^{s}.10**/54**, mb3.9**/17**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**0.78**	**23**	P	**Pb**	**03 01 11.9**	**-0.1**
JJT3				*e*S	**Sb**	**03 01 20.9**	**-1.3**
JKE	**Kume jima 2**	**1.08**	**327**	P	**Pn**	**03 01 17.2**	**+0.8**
JAGN	**Aguni-jima**	**1.17**	**351**	P	**Pn**	**03 01 18.2**	**+0.5**
JAGN				*e*S	**Sn**	**03 01 31.2**	**-1.6**
JNTH	**Nagotoyohara**	**1.21**	**25**	P	**Pn**	**03 01 17.2**	**-0.9**
JOW	**Kunigami**	**1.59**	**28**	*e*Pn	**Pn**	**03 01 22.7**	**-0.7**
JOW				*e*Sn	**Sn**	**03 01 40.8**	**-2.2**
JOW	**Kunigami**	**1.59**	**28**	P	**Pn**	**03 01 22.5**	**-0.9**
JOW	**Kunigami**	**1.59**	**28**	Pn	**Pn**	**03 01 22.6**	**-0.7**
	1.4nm,0.3s,baz=172,slow=13,SNR=39						
JIH	**Iheya**	**1.67**	**16**	P	**Pn**	**03 01 24.6**	**+0.1**
JYRO	**Yoronjima**	**1.83**	**29**	P	**Pn**	**03 01 26.4**	**-0.3**
JOGS	**Gusukube**	**1.97**	**251**	P	**Pn**	**03 01 29.1**	**+0.5**
JOGS				*e*S	**Sb**	**03 01 53.6**	**-2.6**
JMJ	**Miyako jima 2**	**2.05**	**253**	*e*S	**Sb**	**03 01 56.6**	**-1.9**
JIKM	**Ikemajima**	**2.06**	**256**	*e*S	**Sb**	**03 01 56.2**	**-2.6**
JOKE	**Okinoerabujima**	**2.18**	**27**	P	**Pn**	**03 01 30.8**	**-0.7**
JTJ	**Tarama**	**2.61**	**253**	P	**Pn**	**03 01 37.5**	**+0.1**
JTK	**Tokunoshima**	**2.71**	**29**	P	**Pn**	**03 01 38.4**	**-0.4**
JMZ	**Minamidaito 2**	**3.43**	**83**	P	Pn	03 01 44.4	-4.3
JMZ				*e*S	Sn	03 02 20.0	-8.4
JNU	**Nakatsue**	**8.23**	**21**	Pn	**Pn**	**03 02 54.9**	**+0.2**
	2.4nm,0.3s,baz=237,slow=3.0,SNR=13						
SONA0	**Songino Array**	**27.86**	**329**	*e*P	**P**	**03 06 43.9**	**-0.6**
SONM	**Songino Array**	**27.86**	**329**	P	**P**	**03 06 43.9**	**-0.6**
	1.1nm,0.8s,baz=139,slow=9.0,SNR=5.1						
SONA1	**Songino Array**	**27.86**	**329**	*e*P	**P**	**03 06 45.3**	**+0.8**
MK01	**Makanchi Array**	**41.54**	**313**	*e*P	**P**	**03 08 41.9**	**-0.3**
MK31	**Makanchi Array**	**41.55**	**313**	*e*P	**P**	**03 08 42.4**	**+0.1**
	1.4nm,0.6s						
MK32	**Makanchi Array**	**41.55**	**313**	*e*P	**P**	**03 08 42.4**	**+0.1**
MKAR	**Makanchi Array**	**41.55**	**313**	P	**P**	**03 08 42.4**	**+0.1**
	1.9nm,0.5s,baz=97,slow=10,SNR=36						
ZALV	**Zalesovo Beam**	**42.47**	**324**	*e*P	**P**	**03 08 47.9**	**-1.7**
ZALV	**Zalesovo Beam**	**42.47**	**324**	P	**P**	**03 08 49.0**	**-0.6**
	1.1nm,0.5s,baz=106,slow=8.9,SNR=4.3						
ZAA1	**Zalesovo Array**	**42.47**	**324**	*e*P	**P**	**03 08 49.0**	**-0.6**
KURK	**Kurchatov**	**44.92**	**317**	*e*P	**P**	**03 09 09.4**	**0.0**
KURBB	**Kurchatov Arra**	**44.96**	**317**	P	**P**	**03 09 09.4**	**-0.2**
	0.2nm,0.3s,baz=103,slow=8.9,SNR=5.3						
WR1	**Warramunga Arr**	**45.59**	**171**	*e*P	**P**	**03 09 13.6**	**-1.3**
	5.0nm,1.2s						
WRA	**Warramunga Arr**	**45.59**	**171**	P	**P**	**03 09 13.6**	**-1.3**
	0.9nm,1.0s,baz=352,slow=8.4,SNR=3.1						
WB2	**Warramunga Arr**	**45.59**	**171**	*e*P	**P**	**03 09 13.7**	**-1.3**
AS31	**Alice Springs**	**49.20**	**172**	*e*P	**P**	**03 09 43.5**	**+0.5**
	0.9nm,1.0s						
ASAR	**Alice Springs**	**49.20**	**172**	P	**P**	**03 09 43.5**	**+0.5**
	0.3nm,0.6s,baz=359,slow=14,SNR=4.5						
ILAR	**Eielson Array**	**65.48**	**28**	P	**P**	**03 11 39.9**	**+2.5**
	0.3nm,0.7s,baz=266,slow=5.3,SNR=3.1						
ILB	**Eielson Array**	**65.48**	**28**	*e*P	**P**	**03 11 39.9**	**+2.5**
INK	**Inuvik**	**69.90**	**23**	*e*P	**P**	**03 12 06.5**	**+1.3**
	7.0nm,1.3s						
INK	**Inuvik**	**69.90**	**23**	P	**P**	**03 12 06.5**	**+1.3**
	2.8nm,1.0s,baz=284,slow=8.0,SNR=6.5						
FIA0	**FINESS Array S**	**73.22**	**331**	*e*P	**P**	**03 12 25.1**	**-0.2**
FINES	**FINESS Array B**	**73.22**	**331**	P	**P**	**03 12 25.1**	**-0.2**
	0.6nm,0.4s,baz=64,slow=5.3,SNR=8.4						
AKASG	**Malin Array Be**	**75.68**	**319**	P	**P**	**03 12 40.5**	**+0.6**
	0.6nm,0.4s,baz=60,slow=6.6,SNR=4.0						
AKBB	**Malin Array Si**	**75.68**	**319**	*e*P	**P**	**03 12 40.5**	**+0.6**
BR101	**Keskin Array S**	**76.97**	**308**	*e*P	**P**	**03 12 48.4**	**+0.8**
BRTR	**Keskin Array B**	**76.97**	**308**	P	**P**	**03 12 48.4**	**+0.8**
	1.3nm,0.9s,baz=71,slow=5.4,SNR=6.3						
YKA	**Yellowknife Ar**	**79.55**	**25**	P	**P**	**03 13 01.3**	**+0.1**
	0.4nm,0.8s,baz=295,slow=5.4,SNR=6.6						
YKB5	**Yellowknife Ar**	**79.55**	**25**	*e*P	**P**	**03 13 01.3**	**+0.1**
NB2	**NORSAR Subarra**	**79.72**	**334**	P	**P**	**03 13 02.7**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=54,slow=5.6						
NB200	**NORSAR Array S**	**79.72**	**334**	*e*P	**P**	**03 13 01.9**	**-0.3**
NOA	**NORSAR Array B**	**79.72**	**334**	P	**P**	**03 13 01.9**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=59,slow=5.2,SNR=5.9						
GEC2	**GERESS Array S**	**85.41**	**323**	*e*P	**P**	**03 13 33.1**	**+0.9**
	comp=Z,2.5nm,1.2s						
GERES	**GERESS Array B**	**85.41**	**323**	P	**P**	**03 13 33.1**	**+0.9**
	comp=Z,1.1nm,1.1s,baz=107,slow=4.5,SNR=3.5						

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*ISCJB **27** 03:09:49.7±0.5, 36°.52N±0°.04×71°.03E±0°.05, h188^{km}, mb2.9/2, Error ellipse: s-maj=6.1km s-min=5.2km az=36.0*

*NNC **27** 03:09:53.0±2.7, 36°.79N×70°.79E, h142^{km}±51^{km}, mb3.2, mpv4.0, Error ellipse: s-maj=26.5km s-min=18.4km az=150.0*

*IDC **27** 03:09:53.8±3.2, 36°.69N×71°.43E, h183^{km}±29^{km}, mb2.8/2, mb1 3.1/7, mb1mx2.8/44, mbtmp3.6/7, MS3.1/1, Ms1 3.1/1, ms1mx2.4/15, Error ellipse: s-maj=32.0km s-min=23.6km az=150.0*

ISC 27 03:09:50.5±0.7**, 36°.59N**±0°.07×**70°.96E**±0°.06**, h188^{km}, n29, σ2^{s}.23**/38**, 13C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.96**	**30**	⇑P	**Pn**	**03 10 51.4**	**-0.1**
	17nm,0.5s						
SFK				⇑S	**Sn**	**03 11 37.3**	**-2.2**
	20nm,0.4s						
AML	**Almayashu**	**5.93**	**20**	P	**Pn**	**03 11 16.9**	**0.0**
	SNR=34						
MNAS	**Manas**	**6.01**	**11**	⇑P	**Pn**	**03 11 18.1**	**+0.3**
	6.3nm,0.6s						
MNAS				⇓S	**Sn**	**03 12 23.2**	**-3.5**
	23nm,0.6s						
UCH	**Uchtor**	**6.27**	**25**	P	**Pn**	**03 11 23.4**	**+1.9**
	SNR=8.3						
KZA	**Kyzart**	**6.41**	**30**	P	**Pn**	**03 11 24.2**	**+0.9**
	SNR=9.1						
EKS2	**Erkin-Say**	**6.44**	**19**	P	**Pn**	**03 11 24.7**	**+1.3**
	SNR=11						
KK31	**Karatay Array**	**6.51**	**357**	⇑P	**Pn**	**03 11 24.9**	**+0.6**
	3.0nm,0.3s,baz=176,slow=12,SNR=81						
KK31				⇑S	**Sn**	**03 12 35.5**	**-2.9**
	14nm,0.6s,baz=171,slow=23,SNR=17						
AAK	**Ala-Archa**	**6.63**	**23**	P	**Pn**	**03 11 28.0**	**+2.1**
	SNR=18						
AAK	**Ala-Archa**	**6.63**	**23**	⇑P	**Pn**	**03 11 26.5**	**+0.7**
	5.3nm,0.4s						
AAK				⇑S	**Sn**	**03 12 39.8**	**-1.5**
	11nm,0.8s						
AAK	**Ala-Archa**	**6.63**	**23**	P	**Pn**	**03 11 25.9**	**0.0**
	4.2nm,0.3s,baz=159,slow=6.4,SNR=33						
AAK				S	**Sn**	**03 12 38.8**	**-2.5**
	1.1nm,0.3s,baz=349,slow=18,SNR=11						
CHMS	**Chumysh**	**7.04**	**23**	P	**Pn**	**03 11 33.1**	**+2.0**
	SNR=5.3						
TKM2	**Tokmak 2**	**7.26**	**28**	P	**Pn**	**03 11 35.8**	**+1.6**
	SNR=14						
TKM2	**Tokmak 2**	**7.26**	**28**	⇑P	**Pn**	**03 11 35.9**	**+1.6**
	7.6nm,0.6s						
TKM2				⇑S	**Sn**	**03 12 56.0**	**-0.4**
	4.0nm,0.7s						
GEYT	**Alibeck**	**10.32**	**281**	P	**P**	**03 12 22.4**	**+0.3**
	0.4nm,0.3s,baz=90,slow=16,SNR=2.4						
GEYT				S	**S**	**03 14 09.9**	**+0.2**
	1.0nm,0.3s,baz=93,slow=15,SNR=5.2						
GYA0B	**ALIBECK ARRAY**	**10.32**	**281**	⇓P	**Pn**	**03 12 12.5**	**-1.6**
	2.0nm,0.4s						
GYA0B				⇑S	**Sn**	**03 14 07.7**	**-1.4**
	9.2nm,0.7s						
PYUN	**Piuthan**	**13.22**	**126**	*e*P	**Pn**	**03 12 47.7**	**-3.8**
	9.4nm,0.3s						
PYUN				*e*S	Sn	03 14 58.7	-20
MKAR	**Makanchi Array**	**13.24**	**36**	P	**Pn**	**03 12 52.6**	**+1.4**
	0.1nm,0.3s,baz=214,slow=9.3,SNR=4.6						
DANN	**Dangsing**	**13.57**	**124**	*e*P	**Pn**	**03 12 52.7**	**-3.1**
	8.3nm,0.3s						
DANN				*e*S	Sn	03 15 07.8	-19
KOLN	**Koldanda**	**13.85**	**126**	*e*P	**Pn**	**03 12 56.2**	**-3.0**
	5.3nm,0.3s						
AB31	**Akbulak array**	**14.99**	**331**	⇑P	**P**	**03 13 14.0**	**+0.2**
	0.7nm,0.5s,baz=144,slow=12,SNR=32						
AB31				⇑S	**Sn**	**03 15 54.9**	**-5.4**
	0.8nm,0.5s,baz=152,slow=23,SNR=7.5						
PKIN	**Phulchoki**	**15.17**	**122**	*e*P	**Pn**	**03 13 14.3**	**-1.3**
	10nm,0.5s						
PKI	**Pulchoki**	**15.18**	**122**	*e*P	**P**	**03 13 15.2**	**-1.4**
	14nm,0.5s						
JIRN	**Jiri**	**15.66**	**120**	*e*P	**P**	**03 13 22.0**	**+0.1**
BVAR	**Borovoye Array**	**16.44**	**359**	LR	LR	03 20 04.2	
	comp=Z,69nm,19.0s,baz=26,slow=37						
AKTO	**Aktyubinsk**	**16.68**	**330**	⇑P	**Pn**	**03 13 38.0**	**+4.5**
	1.3nm,0.7s						
AKTO	**Aktyubinsk**	**16.68**	**330**	P	**Pn**	**03 13 36.1**	**+2.7**
	0.1nm,0.3s,baz=125,slow=12,SNR=3.6						
AKTO				S	**S**	**03 16 37.5**	**+0.6**
	0.1nm,0.3s,baz=176,slow=15,SNR=3.3						
ZALV	**Zalesovo Beam**	**19.85**	**25**	P	**P**	**03 14 07.9**	**+1.0**
	0.4nm,0.3s,baz=226,slow=11,SNR=6.5						
YKA	**Yellowknife Ar**	**81.16**	**3**	P	**P**	**03 21 48.2**	**+3.6**
	0.1nm,0.4s,baz=354,slow=5.4,SNR=3.5						
WRA	**Warramunga Arr**	**82.07**	**122**	P	**P**	**03 21 52.1**	**+2.1**
	0.4nm,0.8s,baz=326,slow=4.7,SNR=3.4						

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*IDC **27** 03:13:13.4±8.1, 37°.64N×71°.89E, h101^{km}±56^{km}, mb3.3/1, mb1 3.2/5, mb1mx2.9/41, mbtmp3.5/5, Error ellipse: s-maj=99.1km s-min=62.4km az=107.0*

*NNC **27** 03:13:16.7±2.1, 37°.86N×71°.74E, h128^{km}±32^{km}, mb2.9, mpv3.7, Error ellipse: s-maj=20.2km s-min=16.7km az=71.0*

ISC 27 03:13:14.4±2.2**, 37°.7N**±0°.1×**71°.67E**±0°.10**, h100^{km}, n18, σ1^{s}.55**/25**, 7C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**2.69**	**32**	⇓P	**Pn**	**03 13 57.4**	**+1.1**
	12nm,0.3s						
SFK				⇑S	**Sn**	**03 14 30.1**	**+1.8**
	21nm,0.3s						
AML	**Almayashu**	**4.66**	**19**	P	**Pn**	**03 14 23.6**	**+0.8**
	SNR=13						
MNAS	**Manas**	**4.79**	**7**	⇑P	**Pn**	**03 14 25.9**	**+1.5**
	3.5nm,0.4s						
MNAS				⇑S	**Sn**	**03 15 18.9**	**+0.1**
	9.4nm,0.5s						
UCH	**Uchtor**	**4.99**	**25**	P	**Pn**	**03 14 27.8**	**+0.4**
	SNR=7.0						
KZA	**Kyzart**	**5.14**	**31**	P	**Pn**	**03 14 29.0**	**-0.3**
	SNR=15						
EKS2	**Erkin-Say**	**5.18**	**18**	P	**Pn**	**03 14 30.9**	**+1.3**
	SNR=8.2						
AAK	**Ala-Archa**	**5.35**	**23**	P	**Pn**	**03 14 32.9**	**+0.8**
	SNR=9.7						
AAK	**Ala-Archa**	**5.35**	**23**	⇑P	**Pn**	**03 14 32.5**	**+0.5**
	5.0nm,0.4s						
AAK				⇓S	**Sn**	**03 15 32.1**	**-0.4**
	6.1nm,0.8s						
AAK	**Ala-Archa**	**5.35**	**23**	P	**Pn**	**03 14 31.8**	**-0.2**
	3.4nm,0.3s,baz=182,slow=9.9,SNR=14						
AAK				S	**Sn**	**03 15 32.0**	**-0.4**
	0.6nm,0.3s,baz=5.4,slow=11,SNR=4.8						
KK31	**Karatay Array**	**5.43**	**351**	⇓P	**Pn**	**03 14 35.3**	**+2.3**
	9.9nm,0.5s,baz=167,slow=12,SNR=68						
KK31				⇑S	**Sn**	**03 15 35.4**	**+1.3**
	6.1nm,0.5s,baz=171,slow=24,SNR=10						
CHMS	**Chumysh**	**5.76**	**23**	P	**Pn**	**03 14 38.2**	**+0.8**
	SNR=8.7						
TKM2	**Tokmak 2**	**5.99**	**29**	P	**Pn**	**03 14 41.6**	**+0.9**
	SNR=7.5						
TKM2	**Tokmak 2**	**5.99**	**29**	⇑P	**Pn**	**03 14 40.8**	**+0.1**
	3.1nm,0.5s						
TKM2				⇓S	**Sn**	**03 15 49.1**	**+1.2**
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**11.98**	**38**	P	**Pn**	**03 15 59.1**	**-2.6**
	0.1nm,0.3s,baz=223,slow=18,SNR=4.7						
AB31	**Akbulak array**	**14.29**	**327**	⇓P	**Pn**	**03 16 33.4**	**+1.4**
	0.6nm,0.7s,baz=128,slow=12,SNR=2.8						
AB31				⇑S	**Sn**	**03 19 04.7**	**-4.6**
	0.4nm,0.6s,baz=148,slow=23,SNR=5.6						
BVAR	**Borovoye Array**	**15.31**	**357**	P	**Pn**	**03 16 45.0**	**+0.1**
	0.2nm,0.3s,baz=178,slow=13,SNR=3.3						
ZALV	**Zalesovo Beam**	**18.57**	**25**	P	**P**	**03 17 24.2**	**+0.9**
	0.3nm,0.3s,baz=226,slow=7.2,SNR=2.9						
YKA	**Yellowknife Ar**	**79.99**	**3**	P	**P**	**03 25 11.1**	**-1.1**
	0.3nm,0.5s,baz=350,slow=5.5,SNR=6.6						

KRSC 27 03:21:15.8±1.1**, 50°.41N**×**157°.31E, h79^{km}**±15^{km}**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.81**	**290**	*e*P	Pn	03 21 33.6	+1.1
SKR				*e*S	Sn	03 21 46.1	+1.2
PAU	**Pauzhetka**	**1.10**	**344**	*e*P	Pn	03 21 37.9	+2.0
PAU				*e*S	Sn	03 21 53.6	+2.5
ALID	**Alaid**	**1.21**	**293**	*e*P	Pn	03 21 38.1	+0.7
KDTR	**Khodutka, Kamc**	**1.48**	**19**	*e*P	Pn	03 21 42.7	+2.0
KDTR				*e*S	Sn	03 22 01.6	+2.0
MTVR	**Mutnovka**	**2.14**	**14**	*e*P	Pn	03 21 51.8	+2.2
MTVR				*e*S	Sn	03 22 17.7	+2.2
RUS	**Russkaya**	**2.16**	**20**	*e*P	Pn	03 21 51.3	+1.6
RUS				*e*S	Sn	03 22 16.8	+1.2
KRMR	**Karymshinskiy**	**2.47**	**12**	*e*P	Pn	03 21 56.6	+2.7
KRMR				*e*S	Sn	03 22 25.8	+2.6
DALK	**Dalny**	**2.77**	**18**	*e*P	Pn	03 22 00.1	+2.2
DALK				*e*S	Sn	03 22 32.1	+1.8
UGLR	**Uglovaya**	**2.95**	**18**	*e*P	Pn	03 22 03.1	+2.6
AVH	**Avacha**	**2.99**	**17**	*e*P	Pn	03 22 04.0	+3.0
KOK	**Koryaka**	**3.00**	**15**	*e*P	Pn	03 22 04.1	+3.0
SMAR	**Somma**	**3.00**	**17**	*e*P	Pn	03 22 03.1	+1.9
SDLR	**Sedlovina**	**3.03**	**18**	*e*P	Pn	03 22 03.5	+1.9
KRX	**Arik**	**3.06**	**15**	*e*P	Pn	03 22 05.1	+3.1
SPN	**Mys Shipunski**	**3.17**	**31**	*e*P	Pn	03 22 05.3	+1.9
SPN				*e*S	Sn	03 22 42.0	+1.9
GNL	**Ganaly**	**3.31**	**7**	*e*P	Pn	03 22 07.6	+2.3
KZV	**Kizimen**	**5.04**	**20**	*e*P	Pn	03 22 31.7	+2.8

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*IDC **27** 03:35:14.4±1.1, 25°.31N×127°.47E, h0^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.5/29, mbtmp3.4/6, ML3.4/1, Error ellipse: s-maj=44.0km s-min=21.5km az=75.0*

*ISCJB **27** 03:35:16.6±0.8, 25°.30N±0°.06×127°.6E±0°.1, h27^{km}, mb3.3/5, Error ellipse: s-maj=13.4km s-min=8.3km az=6.3*

*JMA **27** 03:35:21.7±0.4, 25°.66N×127°.51E, h52^{km}±4^{km}, M2.6*

ISC 27 03:35:17.9±1.0**, 25°.38N**±0°.08×**127°.64E**±0°.08**, h27^{km}, n15, σ1^{s}.39**/16**, mb3.4**/5**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**0.77**	**10**	P	**Pn**	**03 35 33.4**	**+0.3**
JJT3				*e*S	**Sn**	**03 35 42.3**	**-1.5**
JNTH	**Nagotoyohara**	**1.18**	**17**	P	**Pn**	**03 35 38.7**	**0.0**
JKE	**Kume jima 2**	**1.21**	**321**	P	**Pb**	**03 35 38.8**	**-1.5**
JAGN	**Aguni-jima**	**1.25**	**344**	P	**Pb**	**03 35 38.8**	**-2.1**
JOW	**Kunigami**	**1.55**	**21**	P	**Pb**	**03 35 45.1**	**-1.0**
JIH	**Iheya**	**1.67**	**10**	P	**Pb**	**03 35 46.4**	**-1.7**
JYRO	**Yoronjima**	**1.79**	**24**	P	**Pb**	**03 35 48.7**	**-1.4**
JOKE	**Okinoerabujima**	**2.14**	**23**	P	**Pn**	**03 35 53.3**	**+1.4**
JMZ	**Minamidaito 2**	**3.26**	**82**	P	**Pn**	**03 36 05.8**	**-1.5**
MJAR	**Matsushiro Arr**	**14.34**	**37**	Pn	**Pn**	**03 38 40.9**	**+1.7**
	0.2nm,0.3s,baz=192,slow=14,SNR=6.9						
SONM	**Songino Array**	**27.99**	**329**	P	**P**	**03 41 07.3**	**+0.8**
	0.2nm,0.4s,baz=139,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**41.71**	**313**	P	**P**	**03 43 03.9**	**-0.6**
	0.4nm,0.5s,baz=99,slow=9.4,SNR=7.1						
WRA	**Warramunga Arr**	**45.52**	**171**	P	**P**	**03 43 35.0**	**-0.4**
	0.4nm,0.8s,baz=355,slow=9.2,SNR=3.4						
ASAR	**Alice Springs**	**49.13**	**172**	P	**P**	**03 44 04.0**	**+0.6**
	0.3nm,0.5s,baz=358,slow=14,SNR=4.2						
YKA	**Yellowknife Ar**	**79.52**	**25**	P	**P**	**03 47 23.3**	**+1.4**
	0.1nm,0.4s,baz=298,slow=5.4,SNR=2.8						

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*NIED **27** 03:45:00, 33°.00N×130°.70E, h8^{km}, Mw3.5 Best double couple: $M_0$1.76000×10^{14} NP1:ϕ_s247.00000°, δ51.00000°, λ-143.00000°. NP2:ϕ_s131.00000°, δ62.00000°, λ-46.00000°.*

JMA 27 03:45:51.6, 33°.02N×**130°.72E, h12^{km}**±1^{km}**, M3.5, 1C-1D Broadband fault plane solution: P waves. NP1:** ϕ_s127.00000°**,** δ65.00000°**,** λ-51.00000°. **NP2:** ϕ_s245.00000°**,** δ46.00000°**,** λ-143.00000°. **Principal axes:** T Plg11.0000°**,** Azm190.0000°**;** N Plg35.0000°**,** Azm288.0000°**;** P Plg53.0000°**,** Azm85.0000°**; Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**0.17**	**53**	⇑P	Pg	03 45 55.6	+0.1
JNU				S	Sg	03 45 58.3	+0.1
JTA	**Tamana**	**0.17**	**250**	⇓P	Pg	03 45 55.6	+0.2
JTA				*e*S	Sg	03 45 58.4	+0.3

MEX 27 03:46:41.4±0.8**, 18°.25N**×**97°.96W, h12^{km}**±10^{km}**, MD3.6, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPIG	**Tehuac#an**	**0.59**	**74**	*e*P	Pg	03 46 52.1	-1.0
TPIG				*e*S	Sg	03 47 00.2	-0.7
YAIG	**Yautepec**	**1.21**	**300**	*i* S	Sb	03 47 15.1	-4.9

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*TEH **27** 03:55:14.6, 34°.53N×62°.02E, h10^{km}, ML4.4*

*ISCJB **27** 03:55:15.6±0.2, 34°.56N±0°.03×61°.98E±0°.03, h10^{km}, mb4.2/40, MS3.3/5, Error ellipse: s-maj=4.7km s-min=2.9km az=152.8*

*IDC **27** 03:55:15.1±0.6, 34°.33N×61°.87E, h0^{km}, mb4.1/27, mb1 4.2/33, mb1mx4.1/57, mbtmp4.1/33, ML3.9/5, MS3.1/11, Ms1 3.2/11, ms1mx2.9/40, Error ellipse: s-maj=15.0km s-min=10.4km az=6.0*

*NEIC **27** 03:55:16.5±0.3, 34°.37N×61°.86E, h10^{km}, mb4.4/11, Error ellipse: s-maj=8.2km s-min=4.6km az=5.0*

*MOS **27** 03:55:17.1±1.5, 34°.51N×62°.00E, h19^{km}, mb4.3/25, Error*

ellipse: s-maj=6.7km s-min=5.4km az=86.4

*NNC **27** 03:55:24.1±2.1, 35°.20N×62°.21E, h0^{km}, mb4.3, mpv4.2, Error ellipse: s-maj=19.6km s-min=13.4km az=178.0*

ISC 27 03:55:17.7±0.5, **34°.57N**±0°.04×**61°.97E**±0°.05, **h10^{km}, n165,** σ**2^{s}.10**/166, **mb4.2**/40, **MS3.4**/5, **27C-21D, Northwestern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRKH	**Jarkhoshk**	**1.89**	**316**	*e*Pg	**Pn**	**03 55 50.6**	**+0.6**
JRKH				IAMB	IAmb	03 56 20.0	
	comp=Z,0.0nm,0.5s						
IMYA	**Miami**	**2.34**	**320**	*e*Pn	**Pn**	**03 55 57.0**	**+0.7**
IMYA				IAMB	IAmb	03 56 37.1	
	comp=Z,33µm,0.3s						
IDAH	**Dahanechah**	**2.53**	**224**	*e*Pn	**Pn**	**03 55 58.4**	**-0.7**
IDAH				IAMB	IAmb	03 56 47.8	
	comp=Z,21µm,0.5s						
IPAY	**Payeh**	**3.07**	**309**	*e*Pn	**Pn**	**03 56 06.9**	**+0.5**
IPAY				IAMB	IAmb	03 57 01.2	
	comp=Z,21µm,0.3s						
ITEG	**Tejag**	**3.16**	**239**	*e*Pn	**Pn**	**03 56 06.4**	**-1.3**
ITEG				IAMB	IAmb	03 57 10.6	
	comp=Z,10µm,0.6s						
IKOO	**Kooshah**	**3.27**	**230**	*e*Pn	**Pn**	**03 56 08.1**	**-1.2**
IKOO				IAMB	IAmb	03 57 06.0	
	comp=Z,7µm,0.9s						
IAKL	**Akhelmad**	**3.31**	**309**	*e*Pn	**Pn**	**03 56 11.0**	**+1.1**
IAKL				IAMB	IAmb	03 57 17.5	
	comp=Z,17µm,0.3s						
IKRD	**Kardeh**	**3.57**	**309**	*e*Pn	Pn	03 56 05.8	-7.6
IKRD				IAMB	IAmb	03 57 04.0	
	comp=Z,28µm,0.8s						
IEMG	**Emamgholi**	**3.91**	**318**	*e*Pn	**Pn**	**03 56 18.9**	**+0.8**
IEMG				IAMB	IAmb	03 57 35.0	
	comp=Z,13µm,0.8s						
TKDS	**Koohdasht(Taba**	**4.14**	**258**	*e*Pn	**Pn**	**03 56 19.8**	**-1.2**
TKDS				IAMB	IAmb	03 57 44.8	
	comp=Z,0.0nm,0.5s						
TNSJ	**Nastanj**	**4.48**	**264**	*e*Pn	**Pn**	**03 56 24.5**	**-1.2**
TNSJ				IAMB	IAmb	03 57 53.1	
	comp=Z,0.0nm,0.8s						
GEYT	**Alibeck**	**4.58**	**318**	Pn	**Pn**	**03 56 27.3**	**+0.3**
	comp=Z,4.3nm,0.3s,baz=122,slow=16,SNR=13						
GEYT				Pg	**Pb**	**03 56 41.0**	**+2.9**
	comp=Z,15nm,0.3s,baz=128,slow=13,SNR=30						
GEYT				Lg	Lg	03 57 45.4	
	comp=Z,15nm,0.3s,baz=163,slow=32,SNR=9.7						
GEYT				LR	LR	03 58 33.2	
	comp=Z,142nm,19.0s,baz=45,slow=42						
GYA0B	**ALIBECK ARRAY**	**4.58**	**318**	*e*Pn	**Pn**	**03 56 27.7**	**+0.7**
GYA0B				*e*Sn	**Sn**	**03 57 19.8**	**-0.5**
GYA0B	**ALIBECK ARRAY**	**4.58**	**318**	⇑Pn	**Pn**	**03 56 31.3**	**+4.3**
	comp=Z,6.3nm,0.4s						
GYA0B				⇓Pg	**Pb**	**03 56 42.6**	**+4.5**
	comp=Z,101nm,0.7s						
GYA0B				⇑Lg	Lg	03 57 40.2	
	comp=Z,294nm,0.7s						
TPRV	**Parvadeh(Tabas**	**4.66**	**252**	*e*Pn	**Pn**	**03 56 27.2**	**-1.0**
TPRV				IAMB	IAmb	03 57 60.0	
	comp=Z,0.0nm,0.6s						
KBL	**Kabul**	**5.83**	**88**	*e*Pn	Pn	03 56 42.7	-1.7
KBL	**Kabul**	**5.83**	**88**	*e*PN	Pn	03 56 42.7	-1.7
CHMN	**Cheshme madani**	**6.01**	**220**	*e*Pn	**Pn**	**03 56 46.5**	**-0.5**
CHMN				IAMB	IAmb	03 58 27.9	
	comp=Z,0.0nm,1.4s						
KHGB	**Koh Gabri**	**6.25**	**230**	*e*Pn	**Pn**	**03 56 50.0**	**-0.1**
KHGB				IAMB	IAmb	03 59 09.6	
	comp=Z,0.0nm,1.1s						
TVBK	**TV Kerman**	**6.35**	**225**	*e*Pn	**Pn**	**03 56 51.9**	**+0.2**
TVBK				IAMB	IAmb	03 58 45.4	
	comp=Z,0.0nm,0.6s						
NGRK	**Negar Kerman**	**6.62**	**224**	*e*Pn	**Pn**	**03 56 55.7**	**+0.3**
IANJ	**Anjilo**	**6.67**	**280**	*e*Pn	**Pn**	**03 56 56.0**	**0.0**
IANJ				IAMB	IAmb	03 59 09.2	
	comp=Z,697nm,0.8s						
ICHK	**Chekchek**	**6.74**	**252**	*e*Pn	**Pn**	**03 56 56.0**	**-0.8**
ICHK				IAMB	IAmb	03 59 06.2	
	comp=Z,1µm,0.5s						
IMEH	**Mehriz**	**6.95**	**245**	*e*Pn	**Pn**	**03 56 59.1**	**-0.7**
IMEH				IAMB	IAmb	03 59 46.2	
	comp=Z,878nm,1.0s						
ANAR	**Anarak**	**6.99**	**261**	*e*Pn	**Pn**	**03 56 59.4**	**-0.9**
ANAR				IAMB	IAmb	03 59 18.1	
	comp=Z,0.0nm,1.2s						
ISHM	**Shahmirzad**	**7.21**	**282**	*e*Pn	**Pn**	**03 57 04.1**	**+0.7**
ISHM				IAMB	IAmb	03 59 24.6	
	comp=Z,840nm,0.7s						
ISAD	**Sadrabad**	**7.43**	**251**	*e*Pn	**Pn**	**03 57 05.7**	**-0.7**
ISAD				IAMB	IAmb	03 59 40.5	
	comp=Z,980nm,0.8s						
ISFB	**Sefidab**	**8.04**	**271**	*e*Pn	**Pn**	**03 57 13.8**	**-0.8**
ISFB				IAMB	IAmb	03 59 58.4	
	comp=Z,340nm,0.6s						
KRSH	**Karshahi**	**8.16**	**269**	*e*Pn	**Pn**	**03 57 15.4**	**-1.0**
IZEF	**Zefreh**	**8.20**	**261**	*e*Pn	**Pn**	**03 57 16.2**	**-0.8**
IZEF				IAMB	IAmb	04 00 16.0	
	comp=Z,229nm,0.6s						
IDMV	**Damavand**	**8.21**	**280**	*e*Pn	**Pn**	**03 57 16.6**	**-0.5**
IDMV				IAMB	IAmb	03 59 52.6	
	comp=Z,436nm,1.2s						
SFK	**Sufi-Kurgan**	**10.67**	**56**	⇓Pn	**Pn**	**03 57 51.6**	**+0.9**
	comp=Z,17nm,0.8s						
SFK				⇓Sn	**Sn**	**03 59 49.7**	**-0.7**
	comp=Z,13nm,0.7s						
SFK	**Sufi-Kurgan**	**10.67**	**56**	P	**Pn**	**03 57 51.6**	**+0.9**
SFK				SN	**Sn**	**03 59 49.7**	**-0.7**
SFK	**Sufi-Kurgan**	**10.67**	**56**	*e*Pn	**Pn**	**03 57 51.0**	**+0.2**
KK31	**Karatay Array**	**10.81**	**35**	⇓Pn	**Pn**	**03 57 52.7**	**+0.2**
	comp=Z,3.8nm,0.5s,baz=222,slow=15,SNR=3.5						
KK31				⇑Sn	Sn	03 59 47.4	-6.1
	comp=Z,6.4nm,0.6s,baz=213,slow=23,SNR=5.2						
KK31	**Karatay Array**	**10.81**	**35**	P	**Pn**	**03 57 52.7**	**+0.2**
KK31				SN	Sn	03 59 47.4	-6.1
KK31	**Karatay Array**	**10.81**	**35**	*e*Pn	**Pn**	**03 57 51.0**	**-1.5**
MNAS	**Manas**	**11.42**	**43**	⇓Pn	**Pn**	**03 58 00.1**	**-0.9**
	comp=Z,8.0nm,0.6s						
MNAS				⇓Sn	**Sn**	**04 00 03.0**	**-5.5**
	comp=Z,14nm,0.7s						
MNAS	**Manas**	**11.42**	**43**	P	**Pn**	**03 58 00.8**	**-0.1**
MNAS				SN	**Sn**	**04 00 03.3**	**-5.3**
MNAS	**Manas**	**11.42**	**43**	*e*Pn	**Pn**	**03 58 00.0**	**-0.9**
WSAR	**Wadi Sarin**	**11.66**	**195**	LR	LR	04 02 26.9	
	comp=Z,31nm,21.8s,baz=56,slow=38						
KSH	**Kashi**	**12.22**	**62**	P	Pn	03 58 09.5	-2.4
KSH				pP		03 58 15.5	
KSH				S	Sn	04 00 21.8	-6.5
KSH				sS		04 00 29.0	
KSH				pmax	pmax		
	comp=Z,14nm,0.5s						
KSH				pmax	pmax		
	comp=Z,450nm,6.0s						
KSH				LR	LR		
	comp=N,680nm,5.6s						
KSH				LR	LR		
	comp=E,370nm,5.9s						
KSH				LR	LR		
	comp=Z,680nm,6.1s						
AAK	**Ala-Archa**	**12.67**	**47**	⇓Pn	**Pn**	**03 58 17.7**	**-0.4**
	comp=Z,5.7nm,0.5s						
AAK				⇑Sn	**Sn**	**04 00 38.6**	**-0.7**
	comp=Z,9.3nm,0.8s						
AAK	**Ala-Archa**	**12.67**	**47**	Pn	**Pn**	**03 58 18.2**	**+0.1**
	comp=Z,2.5nm,0.3s,baz=204,slow=4.3,SNR=15						
AAK				Sn	**Sn**	**04 00 38.7**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=53,slow=20,SNR=4.0						
AAK				LR	LR	04 03 54.5	
	comp=Z,52nm,19.1s,baz=240,slow=40						
TKM2	**Tokmak 2**	**13.50**	**48**	⇓Pn	**Pn**	**03 58 27.8**	**-1.6**
	comp=Z,3.8nm,0.5s						
TKM2				⇓Sn	**Sn**	**04 00 57.2**	**-2.4**
	comp=Z,2.5nm,0.8s						
TKM2	**Tokmak 2**	**13.50**	**48**	P	**Pn**	**03 58 27.8**	**-1.6**
TKM2				SN	**Sn**	**04 00 57.2**	**-2.4**
AB31	**Akbulak array**	**14.75**	**355**	⇑Pn	Pn	03 58 43.3	-3.0
	comp=Z,2.9nm,0.5s						
AB31				⇑Sn	Sn	04 01 20.7	-9.0
	comp=Z,4.1nm,0.6s						
AB31	**Akbulak array**	**14.75**	**355**	P	Pn	03 58 43.3	-3.0
GNI	**Garni**	**14.79**	**297**	*e*Pn	Pn	03 58 44.5	-2.5
GNI	**Garni**	**14.79**	**297**	⇑*e*P	**Pn**	**03 58 48.9**	**+1.9**
GNI				pmax	pmax		
	comp=Z,121nm,1.0s						
GNI	**Garni**	**14.79**	**297**	Pn	**Pn**	**03 58 48.3**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=90,slow=10,SNR=4.3						
TBLG	**Delisi**	**15.31**	**303**	*e*Pn	**Pn**	**03 58 49.4**	**-4.5**
	comp=Z,6.4nm,0.9s						
TBLG	**Delisi**	**15.31**	**303**	*e*P	**Pn**	**03 58 49.4**	**-4.5**
TBLG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OTUK	**Ortayu**	**15.70**	**26**	⇑Pn	**Pn**	**03 58 57.6**	**-1.3**
	comp=Z,6.2nm,0.9s						
OTUK				⇓Sn	**Sn**	**04 01 45.8**	**-7.0**
	comp=Z,8.7nm,0.9s						
OTUK	**Ortayu**	**15.70**	**26**	P	**Pn**	**03 58 57.6**	**-1.3**
OTUK						04 01 45.8	
OTUK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OTUK				smax	smax		
	comp=N,9.0nm,0.9s						
SIRT	**Sirnak**	**16.07**	**286**	*e*Pn	**Pn**	**03 59 00.0**	**-3.8**
	comp=N,63nm,0.9s						
AKTO	**Aktyubinsk**	**16.12**	**351**	⇑Pn	**Pn**	**03 59 00.0**	**-4.2**
	comp=N,14nm,1.1s						
AKTO				⇓Sn	**Sn**	**04 01 56.4**	**-6.6**
	comp=N,8.6nm,0.8s						
AKTO	**Aktyubinsk**	**16.12**	**351**	Pn	**Pn**	**03 59 02.1**	**-2.1**
	comp=N,0.7nm,0.3s,baz=165,slow=13,SNR=13						
AKTO				Sn	**Sn**	**04 01 55.6**	**-7.4**
	comp=N,0.4nm,0.3s,baz=270,slow=20,SNR=5.5						
AKTO				LR	LR	04 05 47.3	
	comp=N,92nm,18.4s,baz=190,slow=39						
PDGK	**Podgornoye**	**16.17**	**52**	⇑P	**Pn**	**03 59 01.3**	**-3.8**
	comp=N,4.3nm,0.9s						
PDGK	**Podgornoye**	**16.17**	**52**	P	**Pn**	**03 59 01.3**	**-3.8**
ZEI	**Tsey**	**16.30**	**306**	*e*P	**Pn**	**03 59 10.1**	**+3.3**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NCK	**Nalchik**	**16.80**	**307**	⇓*e*P	**Pn**	**03 59 15.5**	**+2.5**
NEY	**Neytrino**	**17.28**	**306**	⇓*e*P	**Pn**	**03 59 21.9**	**+2.7**
KBZ	**Khabaz**	**17.36**	**307**	P	**Pn**	**03 59 18.0**	**-2.0**
KBZ	**Khabaz**	**17.36**	**307**	P	**Pn**	**03 59 17.9**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=43,slow=16,SNR=4.2						
KIV	**Kislovodsk**	**17.60**	**308**	*e*P	**Pn**	**03 59 24.4**	**+1.4**
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
BVA0	**Borovoye Array**	**19.40**	**15**	⇑Pn	**P**	**03 59 44.9**	**+1.2**
	comp=Z,3.1nm,0.7s,baz=186,slow=9.4,SNR=24						
BVA0				⇓Sn	Sn	04 03 14.0	-8.3
	comp=Z,4.5nm,0.9s,baz=201,slow=19,SNR=4.2						
BVA0	**Borovoye Array**	**19.40**	**15**	*e*P	**P**	**03 59 45.3**	**+1.6**
BVA0				*i*		04 03 14.1	
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BVA0				smax	smax		
	comp=Z,5.0nm,1.0s						
BVAR	**Borovoye Array**	**19.40**	**15**	P	**P**	**03 59 44.4**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=182,slow=9.9,SNR=12						
BVAR				Sn	**Sn**	**04 03 15.0**	**-7.3**
	comp=Z,0.4nm,0.3s,baz=202,slow=17,SNR=4.3						
BVAR				LR	LR	04 08 31.8	
	comp=Z,78nm,20.8s,baz=202,slow=40						
BRVK	**Borovoye**	**19.41**	**15**	⇑Pn	**P**	**03 59 44.9**	**+1.1**
	comp=Z,3.6nm,0.7s						
BRVK				Sn	**Sn**	**04 03 16.3**	**-6.2**
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	**19.41**	**15**	P	**P**	**03 59 44.9**	**+1.1**
BRVK				SN	**Sn**	**04 03 16.3**	**-6.2**
MAKZ	**Makanchi**	**19.42**	**45**	⇑P	**P**	**03 59 46.3**	**+2.2**
	comp=Z,7.4nm,0.9s						
MAKZ	**Makanchi**	**19.42**	**45**	P	**P**	**03 59 46.2**	**+2.2**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK31	**Makanchi Array**	**19.59**	**45**	⇑P	**P**	**03 59 48.2**	**+2.3**
	comp=Z,2.3nm,0.7s,baz=227,slow=9.4,SNR=17						
MK31	**Makanchi Array**	**19.59**	**45**	P	**P**	**03 59 48.2**	**+2.3**
MK32	**Makanchi Array**	**19.59**	**45**	*e*P	**P**	**03 59 47.0**	**+1.1**
MKAR	**Makanchi Array**	**19.59**	**45**	P	**P**	**03 59 47.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=234,slow=9.6,SNR=18						
MKAR				LR	LR	04 07 41.8	
	comp=Z,35nm,20.0s,baz=304,slow=38						
KURBB	**Kurchatov Arra**	**20.07**	**32**	P	**P**	**03 59 52.1**	**+1.0**
	comp=Z,4.4nm,1.0s,baz=278,slow=14,SNR=17						
KURK	**Kurchatov**	**20.18**	**32**	*e*P	**P**	**03 59 52.1**	**-0.1**
KURK	**Kurchatov**	**20.18**	**32**	⇑P	**P**	**03 59 53.6**	**+1.4**
	comp=Z,6.9nm,1.1s						
KURK	**Kurchatov**	**20.18**	**32**	⇓*e*P	**P**	**03 59 55.2**	**+3.0**
KURK				pmax	pmax		
	comp=Z,16nm,1.7s						
ASF	**Jabal al Asfar**	**21.07**	**271**	P	**P**	**04 00 01.5**	**-0.6**
	comp=Z,5.6nm,0.9s,baz=85,slow=4.8,SNR=9.0						
WMQ	**Urumqi**	**21.90**	**57**	*e*P	**P**	**04 00 11.2**	**+0.3**
	comp=Z,12nm,0.8s						
WMQ	**Urumqi**	**21.90**	**57**	*e*P	**P**	**04 00 11.3**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,12nm,0.8s						
ARU	**Arti**	**21.99**	**355**	*c* *i*P	**P**	**04 00 13.9**	**+2.3**
ARU						04 00 33.5	
ARU				S	**S**	**04 04 16.7**	**+2.6**
ARU				pmax	pmax		
	comp=Z,17nm,1.4s						
BR101	**Keskin Array S**	**23.11**	**291**	*e*P	**P**	**04 00 23.4**	**-0.5**
BRTR	**Keskin Array B**	**23.11**	**291**	P	**P**	**04 00 23.4**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=109,slow=9.4,SNR=5.4						
VSR	**Storozhevoye**	**23.43**	**322**	*e*P	**P**	**04 00 26.8**	**0.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
DGZ	**Jazzator, Alta**	**24.03**	**43**	*ce*P	**P**	**04 00 34.5**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LPSR	**Galich'ya Gora**	**24.39**	**325**	*e*P	**P**	**04 00 35.4**	**-0.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZALV	**Zalesovo Beam**	**25.16**	**33**	P	**P**	**04 00 43.8**	**+0.9**
	comp=Z,8.9nm,0.7s,baz=237,slow=10,SNR=21						
ZAA1	**Zalesovo Array**	**25.17**	**33**	*e*P	**P**	**04 00 43.8**	**+0.8**
KIRV	**Kirov**	**25.44**	**345**	P	**P**	**04 00 45.5**	**+0.1**
	comp=Z,9.2nm,0.5s,baz=145,slow=20,SNR=4.4						
OBN	**Obninsk**	**27.06**	**327**	*e*P	**P**	**04 01 02.5**	**+2.5**
OBN				*e*		04 01 47.3	
OBN				*e*PPP	PPP	04 01 54.6	
OBN				*e*		04 04 19.5	
OBN				pmax	pmax		
	comp=Z,17nm,1.1s						
LEHL	**Lehliu**	**28.67**	**301**	⇑*i*P	**P**	**04 01 13.3**	**-1.3**
AKASG	**Malin Array Be**	**28.69**	**314**	P	**P**	**04 01 14.2**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=100,slow=7.6,SNR=6.6						
AKBB	**Malin Array Si**	**28.69**	**314**	*e*P	**P**	**04 01 14.2**	**-0.4**
	comp=Z,1.0nm,0.3s						
AKBB	**Malin Array Si**	**28.69**	**314**	*e*P	**P**	**04 01 14.2**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KIEV	**Kiev**	**28.69**	**314**	⇓*i*P	**P**	**04 01 13.9**	**-0.8**
KIEV	**Kiev**	**28.69**	**314**	⇓*e*P	**P**	**04 01 14.3**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AK11	**Malin Array Si**	**28.71**	**314**	*e*P	**P**	**04 01 13.4**	**-1.5**
MLR	**Muntele Rosu**	**29.44**	**303**	⇓*i*P	**P**	**04 01 22.7**	**+1.2**
MLR	**Muntele Rosu**	**29.44**	**303**	P	**P**	**04 01 21.7**	**+0.1**
	comp=Z,5.0nm,0.9s,baz=141,slow=4.2,SNR=8.4						
DOPR	**Dopca**	**29.90**	**303**	⇑*i*P	**P**	**04 01 25.3**	**-0.2**
BURAR	**Bucovina Array**	**30.32**	**307**	⇑*i*P	**P**	**04 01 29.0**	**-0.3**
BURAR	**Bucovina Array**	**30.32**	**307**	⇑P	**P**	**04 01 29.0**	**-0.3**
BUR04	**Bucovina Ar. S**	**30.32**	**307**	*e*P	P	04 01 26.1	-3.2
KNGR	**Kungurtug, Tuv**	**30.33**	**47**	⇓*e*P	**P**	**04 01 31.7**	**+2.3**
ARR	**Arges**	**30.33**	**302**	⇑*i*P	**P**	**04 01 30.0**	**+0.6**
VTS	**Vitosha**	**31.11**	**297**	⇑*i*P	**P**	**04 01 36.8**	**+0.4**
VTS	**Vitosha**	**31.11**	**297**	⇑P	**P**	**04 01 36.9**	**+0.5**
DRGR		**31.86**	**305**	⇑*i*P	**P**	**04 01 43.7**	**+0.9**
DRGR		**31.86**	**305**	⇑P	**P**	**04 01 43.7**	**+0.9**
TRPA	**Tarpa**	**32.19**	**307**	⇑*i*P	P	04 01 38.9	-6.7
MDVR	**Moldovita**	**32.33**	**301**	⇓*i*P	**P**	**04 01 47.4**	**+0.4**
MOY	**Mondy**	**32.73**	**46**	*e*P	**P**	**04 01 53.6**	**+3.1**
FIA0	**FINESS Array S**	**35.26**	**331**	*e*P	**P**	**04 02 12.8**	**+0.7**
FIA0	**FINESS Array S**	**35.26**	**331**	*e*P	**P**	**04 02 12.9**	**+0.7**
FINES	**FINESS Array B**	**35.26**	**331**	P	**P**	**04 02 12.8**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=124,slow=8.8,SNR=11						
FINES				LR	LR	04 18 33.3	
	comp=Z,97nm,19.2s,baz=294,slow=40						
SONA0	**Songino Array**	**35.47**	**54**	*e*P	**P**	**04 02 16.0**	**+1.7**
SONM	**Songino Array**	**35.47**	**54**	P	**P**	**04 02 16.0**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=270,slow=9.7,SNR=6.8						
SONM				LR	LR	04 19 00.9	
	comp=Z,92nm,19.8s,baz=16,slow=40						
ULN	**Ulaanbaatar**	**35.91**	**54**	⇓*e*P	**P**	**04 02 21.9**	**+3.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CM31	**Chiang Mai Arr**	**36.53**	**106**	*e*P	**P**	**04 02 23.6**	**+0.1**
	comp=Z,4.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**36.53**	**106**	P	**P**	**04 02 23.6**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=303,slow=8.7,SNR=6.0						
NRIK	**Noril'sk**	**37.61**	**15**	LR	LR	04 20 55.0	
	comp=Z,55nm,18.5s,baz=33,slow=41						
GEC2	**GERESS Array S**	**38.11**	**307**	*e*P	**P**	**04 02 36.2**	**-0.5**
GEC2	**GERESS Array S**	**38.11**	**307**	*e*P	**P**	**04 02 36.2**	**-0.5**
GERES	**GERESS Array B**	**38.11**	**307**	P	**P**	**04 02 36.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=72,slow=9.6,SNR=3.2						
HFS	**Hagfors**	**40.20**	**325**	P	**P**	**04 02 54.4**	**+0.5**
	comp=Z,2.8nm,0.5s,baz=113,slow=9.8,SNR=25						
ARA0	**ARCESS Array S**	**40.35**	**341**	*e*P	**P**	**04 02 56.1**	**+1.0**
ARCES	**ARCESS Array B**	**40.35**	**341**	P	**P**	**04 02 56.1**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=135,slow=8.8,SNR=9.6						
NB2	**NORSAR Subarra**	**41.63**	**325**	P	**P**	**04 03 05.5**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=106,slow=8.6						
NB200	**NORSAR Array S**	**41.63**	**325**	*e*P	**P**	**04 03 05.7**	**0.0**
NOA	**NORSAR Array B**	**41.63**	**325**	P	**P**	**04 03 05.7**	**0.0**
	comp=Z,2.2nm,0.6s,baz=107,slow=7.8,SNR=14						
NOA				LR	LR	04 23 50.5	
	comp=Z,20nm,19.7s,baz=350,slow=41						
KEST	**Kesra**	**42.61**	**287**	*e*P	**P**	**04 03 14.3**	**+0.1**
	comp=Z,8.1nm,1.1s						
KEST	**Kesra**	**42.61**	**287**	P	**P**	**04 03 14.3**	**+0.1**
	comp=Z,5.4nm,1.1s,baz=348,slow=11,SNR=4.1						
WHN	**Wuhan**	**43.93**	**80**	P	P	04 03 15.5	-9.3
SPA0	**Spitsbergen Ar**	**47.80**	**349**	*e*P	**P**	**04 03 55.8**	**+1.1**
	comp=Z,52nm,1.3s						
SPITS	**Spitsbergen Ar**	**47.80**	**349**	P	**P**	**04 03 55.8**	**+1.1**
SPITS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SPITS	**Spitsbergen Ar**	**47.80**	**349**	P	**P**	**04 03 55.8**	**+1.1**
	comp=Z,9.0nm,0.9s,baz=125,slow=7.2,SNR=5.7						
ESDC	**Sonseca Array**	**51.77**	**296**	P	**P**	**04 04 24.9**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=68,slow=7.6,SNR=22						
KLR	**Kul'dur**	**52.16**	**51**	P	**P**	**04 04 28.7**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=288,slow=9.3,SNR=11						
KS15	**Wonju Array Si**	**52.41**	**66**	*e*P	**P**	**04 04 30.9**	**+0.7**
	comp=Z,9.5nm,1.4s						
KSAR	**Wonju Array Be**	**52.41**	**66**	P	**P**	**04 04 30.9**	**+0.7**
KSAR	**Wonju Array Be**	**52.41**	**66**	P	**P**	**04 04 31.0**	**+0.7**
KSRS	**Korea Array**	**52.44**	**66**	*e*P	**P**	**04 04 33.4**	**+3.0**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSRS	**Korea Array**	**52.44**	**66**	P	**P**	**04 04 30.9**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=281,slow=7.2,SNR=8.6						
KSRS				LR	LR	04 29 35.2	
	comp=Z,18nm,19.4s,baz=10.0,slow=39						
TOA1	**Torodi Ar. Sit**	**58.25**	**264**	*e*P	P	04 05 09.3	-3.3
TOA0	**Torodi Ar. Sit**	**58.25**	**264**	*e*P	**P**	**04 05 10.9**	**-1.7**
	comp=Z,6.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**58.25**	**264**	P	P	04 05 09.3	-3.3
	comp=Z,5.3nm,0.8s,baz=46,slow=7.3,SNR=37						
YSS	**Yuzh-Sakhalins**	**59.87**	**51**	*e*P	**P**	**04 05 22.2**	**-1.2**
SEY	**Seymchan**	**60.03**	**32**	P	**P**	**04 05 24.9**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=290,slow=15,SNR=10.0						
BILL	**Bilibino**	**63.47**	**24**	*e*P	**P**	**04 05 50.3**	**+2.9**
BILL				*e*		04 06 26.7	
BILL				*e*		04 08 09.0	
BILL				*e*PPP	PPP	04 09 36.9	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BOSA	**Boshof**	**71.79**	**214**	P	P	04 06 38.1	-2.3
	comp=Z,3.1nm,1.0s,baz=16,slow=6.5,SNR=5.0						
INK	**Inuvik**	**76.78**	**6**	*e*P	**P**	**04 07 09.6**	**+0.7**
	comp=Z,3.3nm,1.1s						
INK	**Inuvik**	**76.78**	**6**	P	**P**	**04 07 09.6**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=13,slow=8.8,SNR=4.6						
ILAR	**Eielson Array**	**78.43**	**12**	P	**P**	**04 07 18.7**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=328,slow=3.2,SNR=4.2						
ILB	**Eielson Array**	**78.43**	**12**	*e*P	**P**	**04 07 18.7**	**+0.4**
	comp=Z,7.7nm,1.4s						
YKA	**Yellowknife Ar**	**83.24**	**358**	P	**P**	**04 07 43.6**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=357,slow=5.3,SNR=12						
YKB5	**Yellowknife Ar**	**83.24**	**358**	*e*P	**P**	**04 07 43.6**	**-0.3**
WR1	**Warramunga Arr**	**87.50**	**116**	*e*P	**P**	**04 08 04.4**	**-1.5**
WRA	**Warramunga Arr**	**87.50**	**116**	*e*P	**P**	**04 08 05.9**	**0.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**87.50**	**116**	P	**P**	**04 08 04.4**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=321,slow=4.4,SNR=14						
AS31	**Alice Springs**	**89.47**	**119**	*e*P	P	04 08 13.4	-1.8
	comp=Z,0.8nm,0.9s						
ASAR	**Alice Springs**	**89.47**	**119**	P	P	04 08 13.4	-1.8
	comp=Z,0.7nm,0.7s,baz=308,slow=4.6,SNR=5.1						

IDC 27 03:58:13.2±1.7, **65°.44N**×**112°.03E, h0^{km}, mb3.4**/5, **mb1 3.6**/6, **mb1mx3.3**/54, **mbtmp3.4**/6, **ML2.6**/1, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.4**/30, **Error ellipse: s-maj=57.4km s-min=19.6km az=142.0, Northern and central Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**17.73**	**243**	P	P	04 02 22.8	+0.6
	0.1nm,0.3s,baz=40,slow=16,SNR=2.6						
KURBB	**Kurchatov Arra**	**22.73**	**245**	P	P	04 03 15.3	-1.1
	0.5nm,0.6s,baz=37,slow=11,SNR=3.8						
MKAR	**Makanchi Array**	**24.57**	**235**	P	P	04 03 34.9	+0.3
	0.3nm,0.6s,baz=33,slow=8.3,SNR=2.9						
AKTO	**Aktyubinsk**	**31.19**	**268**	LR	LR	04 18 09.0	
	comp=Z,32nm,18.8s,baz=336,slow=38						
FINES	**FINESS Array B**	**35.81**	**305**	P	P	04 05 13.6	-0.1
	1.3nm,0.8s,baz=46,slow=14,SNR=2.9						
ILAR	**Eielson Array**	**38.15**	**43**	P	P	04 05 33.2	-0.4
	0.6nm,0.8s,baz=310,slow=7.1,SNR=3.2						
YKA	**Yellowknife Ar**	**47.83**	**27**	P	P	04 06 52.1	+0.2
	0.2nm,0.5s,baz=336,slow=8.2,SNR=4.3						

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*DRS **27** 04:24:21.7±0.0, 40°.72N×46°.40E, h10^{km}, ML3.0/4*
*NSSP **27** 04:24:27.5, 40°.82N×46°.70E, h10^{km}, Ms3.5*
*NORS **27** 04:24:27.8±0.0, 40°.92N×46°.76E, h8^{km}, MPVA4.3*
*AZER **27** 04:24:28.6±0.0, 40°.90N×46°.71E, h25^{km}, ml3.3/28, Error ellipse: s-maj=0.6km s-min=0.3km az=352.0*
*TIF **27** 04:24:29.0, 40°.87N×46°.76E, h19^{km}±1^{km}*
*TEH **27** 04:24:29.5, 40°.88N×46°.74E, h18^{km}, ML3.3*
*MOS **27** 04:24:29.4±0.9, 40°.81N×46°.81E, h15^{km}, mb3.9/1, Error ellipse: s-maj=8.0km s-min=4.7km az=91.7*

ISC 27 04:24:28.5±0.9, **40°.88N**±0°.01×**46°.74E**±0°.01, **h18^{km}**±3^{km}, **n138,** σ**1^{s}.64**/217, **38C-39D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNGR	**Mingechevir, A**	**0.28**	**112**	PG	**Pn**	**04 24 36.8**	**-0.8**
MNGR	**Mingechevir, A**	**0.28**	**112**	*e*Pg	**Pn**	**04 24 36.8**	**-0.8**
MNGR	**Mingechevir, A**	**0.28**	**112**	⇓P	**Pn**	**04 24 36.8**	**-0.8**
	SNR=77						
MNGR				⇑S	**Sn**	**04 24 43.2**	**-0.2**
GANJ	**Ganja**	**0.39**	**234**	PG	**Pb**	**04 24 37.8**	**+0.8**
GANJ	**Ganja**	**0.39**	**234**	*e*Pg	**Pb**	**04 24 37.8**	**+0.8**
GANJ	**Ganja**	**0.39**	**234**	⇑P	**Pb**	**04 24 37.8**	**+0.8**
	SNR=443						
GANJ				⇓S	**Sb**	**04 24 43.8**	**+1.1**
SEKA	**Sheki**	**0.48**	**46**	PG	**Pb**	**04 24 39.4**	**+1.0**
SEKA	**Sheki**	**0.48**	**46**	*e*Pg	**Pb**	**04 24 39.4**	**+1.0**
SEKA	**Sheki**	**0.48**	**46**	P	**Pb**	**04 24 39.5**	**+1.0**
	SNR=319						
SEKA				⇓S	**Sn**	**04 24 47.2**	**-1.3**
BRDA	**Brd**	**0.70**	**151**	*e*Pg	**Pn**	**04 24 43.6**	**+0.2**
BRDA	**Brd**	**0.70**	**151**	⇑P	**Pn**	**04 24 43.6**	**+0.2**
	SNR=28						
BRDA				⇑S	**Sn**	**04 24 55.5**	**+1.8**
ZKTA	**Zakatala**	**0.77**	**353**	PG	**Pn**	**04 24 44.7**	**+0.3**
ZKTA	**Zakatala**	**0.77**	**353**	*e*Pg	**Pn**	**04 24 44.7**	**+0.3**
ZKTA	**Zakatala**	**0.77**	**353**	⇓P	**Pn**	**04 24 44.7**	**+0.3**
	SNR=54						
ZKTA				⇑S	**Sn**	**04 24 56.5**	**+1.0**
GDB	**GEDABAY**	**0.77**	**259**	*e*Pn	**Pg**	**04 24 43.8**	**+0.3**
GDB	**GEDABAY**	**0.77**	**259**	P	**Pg**	**04 24 43.8**	**+0.3**
	SNR=427						
GDB				⇓S	**Sg**	**04 24 54.3**	**+0.6**
QBL	**Gabala**	**0.83**	**85**	*e*Pg	**Pn**	**04 24 45.2**	**-0.1**
QBL	**Gabala**	**0.83**	**85**	⇓P	**Pn**	**04 24 45.3**	**-0.1**
	SNR=32						
QBL				⇓S	**Sn**	**04 24 57.8**	**+0.6**
ZRD	**Zardab**	**0.93**	**129**	*e*Pg	**Pn**	**04 24 47.4**	**+0.8**
ZRD	**Zardab**	**0.93**	**129**	⇑P	**Pn**	**04 24 47.4**	**+0.8**
	SNR=5.6						
ZRD				⇑S	**Sn**	**04 25 02.2**	**+2.8**
AKT	**Akhty**	**0.96**	**51**	⇓*i*PG	**Pn**	**04 24 47.5**	**+0.3**
AKT				*e*S	**Sn**	**04 25 00.6**	**+0.3**
AKT	**Akhty**	**0.96**	**51**	⇓*e*Pg	**Pn**	**04 24 47.4**	**+0.3**
	164nm,0.2s						
AKT				⇓*e*Sg	**Sn**	**04 25 00.3**	**0.0**
	959nm,0.4s						
VADZ	**Vardenis**	**1.04**	**228**	⇓*i*P	**Pg**	**04 24 48.7**	**+0.1**

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VADZ                               ⇓iS     Sn    04 25 03.5 +1.1
QZX   Qazax, Azerbai      1.05 280  ePg    Pg    04 24 48.9 -0.1
QZX   Qazax, Azerbai      1.05 280 ⇑P      Pg    04 24 48.9 -0.1
      SNR=93
QZX                                ⇓S      Sg    04 25 04.0 +1.2
IML   Ismayilli           1.09  94  ePg    Pg    04 24 49.4 -0.3
IML   Ismayilli           1.09  94 ⇑P      Pg    04 24 49.5 -0.3
      SNR=16
IML                                ⇓S      Sg    04 25 04.9 +0.8
XNQ   Khinaliq            1.10  74  ePg    Pn    04 24 49.2 +0.1
XNQ   Khinaliq            1.10  74 ⇓P      Pn    04 24 49.3 +0.2
      SNR=245
XNQ                                ⇓S      Sg    04 25 04.8 +0.6
KDMR  Kurdemir            1.21 114 ⇓P      Pg    04 24 51.4 -0.4
KDMR                               ⇑S      Sg    04 25 09.2 +1.7
KSMR  Kasumkent           1.27  55  ePG    Pg    04 24 54.0 +0.9
KSMR                                eS     Sg    04 25 14.0 +4.3
KSMR                                 pmax  pmax
      comp=Z,151nm,0.2s
KSMR  Kasumkent           1.27  55  ePg    Pg    04 24 54.0 +0.9
KSMR                                eSg    Sg    04 25 14.0 +4.3
KMKR  Kumukh              1.28  12 ⇓iPG    Pg    04 24 53.0 -0.3
KMKR                                eS     Sg    04 25 12.0 +1.9
KMKR                                 pmax  pmax
      comp=Z,88nm,0.2s
KMKR  Kumukh              1.28  12  i Pg   Pg    04 24 53.0 -0.3
KMKR                                eSg    Sg    04 25 12.0 +1.9
QSAR  Qusar               1.31  60  ePg    Pg    04 24 54.0 +0.2
QSAR  Qusar               1.31  60 ⇑P      Pg    04 24 53.8  0.0
      SNR=96
QSAR                               ⇑S      Sg    04 25 12.0 +1.0
QUB   Quba                1.32  67  ePg    Pg    04 24 55.3 +1.3
PQL   Pirkuli             1.41  93  ePn    Pb    04 24 54.4 +0.2
PQL   Pirkuli             1.41  93   Pn    Pb    04 24 54.4 +0.2
      SNR=73
PQL                                ⇓Sn     Sg    04 25 13.7 -0.3
QUBA  Quba, Azerbaij      1.41  70 ⇑Pg     Pg    04 24 55.3 -0.3
      SNR=18
QUBA                               ⇓Sn     Sg    04 25 13.0 -1.0
URKR  Urkarakh            1.45  27⇑ePG     Pg    04 24 57.0 +0.5
URKR                                e            04 25 17.3
URKR  Urkarakh            1.45  27  ePg    Pn    04 24 54.5 +0.6
URKR                                eSg    Sb    04 25 14.2 +1.0
GNBR  Gunib               1.52   6⇓iPG     Pg    04 24 57.8  0.0
GNBR                                eS     Sg    04 25 18.9 +1.3
GNBR  Gunib               1.52   6  i Pg   Pg    04 24 57.7  0.0
      comp=Z,71nm,0.6s
GNBR                               ⇑eSg    Sg    04 25 18.6 +1.0
      comp=Z,200nm,0.6s
SAAT  Saatly              1.64 128 ⇓Pn     Pn    04 24 56.1 -0.2
SAAT                               ⇑Sn     Sb    04 25 17.8 -0.5
SIZA  Siyzn               1.64  82  ePn    Pb    04 24 59.0 +0.7
SIZA  Siyzn               1.64  82 ⇑Pg     Pb    04 24 58.8 +0.6
      SNR=19
SIZA                               ⇓Sn     Sg    04 25 21.0 -0.5
DRN   Derbent             1.66  45  ePN    Pg    04 25 01.8 +1.4
DRN                                 eS     Sg    04 25 24.1 +2.1
DRN                                  pmax  pmax
      comp=Z,64nm,0.6s
DRN   Derbent             1.66  45  ePg    Pg    04 25 01.9 +1.4
      comp=Z,64nm,0.8s
DRN                                ⇑eSg    Sg    04 25 24.1 +2.1
      comp=Z,187nm,1.6s
ATGJ  Altiaghaj           1.66  90  ePn    Pb    04 24 59.2 +0.6
ATGJ  Altiaghaj           1.66  90 ⇑Pg     Pb    04 24 59.2 +0.6
      SNR=20
ATGJ                               ⇑Sn     Sg    04 25 22.2  0.0
XNZR  Khunzakh            1.66 359  ePN    Pg    04 25 00.4 -0.1
XNZR  Khunzakh            1.66 359  ePg    Pg    04 25 00.5 -0.1
XNZR                                eSg    Sg    04 25 22.0 -0.3
BTNK  Botanikuri          1.67 299   P     Pb    04 24 58.9 +0.2
BTNK                                 S     Sg    04 25 21.4 -1.0
BTNK  Botanikuri          1.67 299  i P    Pb    04 24 59.4 +0.7
BTNK                                i S    Sg    04 25 21.8 -0.6
BTNK                                 IAML_P
      comp=Z,11µm,0.1s
GNI   Garni               1.69 245   P     Pg    04 25 00.3 -0.8
GNI                                  S     Sg    04 25 22.6 -0.4
GNI   Garni               1.69 245c iPN    Pb    04 25 00.1 +1.0
GNI   Garni               1.69 245⇑iP      Pg    04 25 00.2 -0.8
GNI                                ⇓iS     Sg    04 25 23.2 +0.2
GBS   Qobustan            1.71 101  ePn    Pb    04 25 00.2 +0.9
GBS   Qobustan            1.71 101 ⇓Pg     Pg    04 25 00.6 -0.7
      SNR=6.8
GBS                                ⇓Sn     Sg    04 25 22.7 -0.8
SEAG  Tbilisi Sea         1.71 302   P     Pg    04 25 00.7 -0.6
SEAG                                 S     Sg    04 25 23.2 -0.4
SEAG  Tbilisi Sea         1.71 302  ePn    Pg    04 25 00.5 -0.9
ARKR  Arakani             1.73   6  ePN    Pb    04 25 00.0 +0.2
ARKR                                eS     Sg    04 25 27.0 +2.5
ARKR                                 pmax  pmax
      comp=Z,40nm,0.2s
ARKR  Arakani             1.73   6  ePg    Pb    04 25 00.0 +0.2
ARKR                                eSg    Sg    04 25 27.0 +2.5
TBLG  Delisi              1.73 300   P     Pb    04 25 00.1 +0.3
TBLG                                 S     Sb    04 25 22.8 +1.6
TBLG  Delisi              1.73 300   P     Pb    04 24 59.9 +0.1
TBLG                                 S     Sg    04 25 23.3 -1.2
TBLG  Delisi              1.73 300  ePN    Pb    04 24 59.9 +0.1
TBLG  Delisi              1.73 300  i P    Pb    04 25 00.6 +0.8
TBLG                                i S    Sg    04 25 23.1 -1.3
TBLG                                 IAML_P
      comp=Z,6µm,0.1s
TBLG  Delisi              1.73 300  ePn    Pb    04 24 59.7 -0.1
TBLG  Delisi              1.73 300  ePg    Pb    04 24 59.9 +0.1
TBLG                                eSg    Sg    04 25 23.3 -1.2
SBZ   Shahbuz             1.74 212  ePn    Pb    04 25 00.4 +0.5
SBZ   Shahbuz             1.74 212 ⇓Pg     Pb    04 25 00.6 +0.7
SBZ                                ⇓Sg     Sg    04 25 24.7 +0.2
BTLR  Botlikh             1.83 348⇑ePN     Pg    04 25 02.6 -1.0
BTLR                                 pmax  pmax
      comp=Z,67nm,0.8s
BTLR  Botlikh             1.83 348  ePg    Pg    04 25 02.6 -1.0
      comp=Z,67nm,0.8s
BTLR                               ⇑eSg    Sg    04 25 25.8 -1.6
      comp=Z,28nm,0.6s
HYR   Heyderabad          1.85 232  ePn    Pb    04 25 02.3 +0.5
HYR   Heyderabad          1.85 232 ⇑Pg     Pb    04 25 02.7 +0.9
HYR                                ⇑Sg     Sg    04 25 28.2 +0.1
NAX   Nakhchivan          1.95 210   PN    Pb    04 25 04.0 +0.5
NAX   Nakhchivan          1.95 210  ePn    Pb    04 25 04.0 +0.5
NAX   Nakhchivan          1.95 210 ⇑Pg     Pg    04 25 05.2 -0.8
      SNR=9.9
NAX                                ⇓Sg     Sg    04 25 31.7 +0.4
ALIB  &Auml;li-Bayra      1.96 117  ePn    Pb    04 25 03.0 -0.5
ALIB  &Auml;li-Bayra      1.96 117 ⇓Pn     Pb    04 25 03.0 -0.5
      SNR=4.7
ALIB                               ⇑Sg     Sg    04 25 32.8 +1.3
ORD   Ordubad             2.03 197  ePn    Pb    04 25 04.5 -0.3
ORD   Ordubad             2.03 197 ⇑Pn     Pb    04 25 04.2 -0.6
ORD                                ⇑Sn     Sb    04 25 30.1 +0.4
GLBA  Clilabad            2.07 142  ePn    Pb    04 25 04.7 -0.7
GLBA  Clilabad            2.07 142   Pn    Pb    04 25 04.8 -0.7
      SNR=12
GLBA                               ⇑Sn     Sb    04 25 30.2 -0.5
TRLG  Trialeti            2.10 289   P     Pb    04 25 05.7 -0.4
TRLG                                 S     Sb    04 25 32.9 +1.0
TASB  TASBURUN-IGDIR      2.11 246  eP     Pb    04 25 06.1 -0.1
DVE   Vedeno              2.13 348  ePN    Pb    04 25 07.0 +0.5
DVE                                 eS     Sg    04 25 35.3 -1.7
DVE   Vedeno              2.13 348  ePg    Pb    04 25 07.0 +0.5
DVE                                 eSg    Sg    04 25 35.3 -1.7
DBC   Dubki               2.14   2  ePN    Pb    04 25 06.9 +0.1
DBC                                 eS     Sg    04 25 35.5 -2.0
DBC   Dubki               2.14   2  ePg    Pb    04 25 06.9 +0.1
DBC                                 eSg    Sg    04 25 35.5 -2.0
MAK   Makhachkala         2.16  15  ePN    Pb    04 25 05.9 -1.0
MAK                                 e            04 25 10.0
MAK                                 eS     Sb    04 25 35.3 +1.9
MAK                                 e            04 25 43.8
MAK                                  pmax  pmax
      comp=Z,87nm,0.2s
MAK                                  smax  smax
      comp=N,204nm,0.6s
MAK                                  smax  smax
      comp=N,205nm,0.4s
MAK   Makhachkala         2.16  15  ePg    Pb    04 25 06.0 -1.0
MAK                                 eSg    Sb    04 25 35.3 +1.9
IGDI  IGDIR               2.27 245  i P    Pb    04 25 09.2 +0.3
IGDI                                i S    Sb    04 25 39.0 +2.3
IGDI                                 IAML_P
      comp=Z,151nm,0.1s
IMRD  Marand              2.30 201   IAMB  IAmb  04 25 12.4
      comp=Z,3µm,0.2s
IMRD                                ePn    Pb    04 25 09.3 -0.3
EAK   Akyaka              2.39 266  i P    Pb    04 25 12.4 +1.4
EAK                                 i S    Sg    04 25 44.8 -0.6
EAK                                  IAML_P
      comp=Z,1µm,0.3s
BGD   Bogdanovka          2.41 280   P     Pb    04 25 13.0 +1.6
BGD                                  S     Sb    04 25 43.1 +2.3
GROC  Groznyy             2.43 343  ePN    Pb    04 25 12.8 +1.2
GROC                                e            04 25 16.7
GROC                                eS     Sg    04 25 44.2 -2.4
GROC                                 pmax  pmax
      comp=Z,46nm,0.6s
GROC                                 smax  smax
      comp=E,62nm,0.9s
GROC                                 smax  smax
      comp=E,140nm,1.0s
GROC  Groznyy             2.43 343  ePn    Pb    04 25 11.9 +0.3
GROC                                eSn    Sb    04 25 42.9 +1.7
LRK   Lerik               2.55 151  ePn    Pn    04 25 10.9 +1.9
LRK   Lerik               2.55 151 ⇓Pn     Pn    04 25 10.9 +1.9
      SNR=14
LRK                                ⇓Sn     Sb    04 25 42.5 -2.3
IHRS  Heris               2.56 175  ePn    Pb    04 25 11.9 -2.2
IHRS                                 IAMB  IAmb  04 25 53.5
      comp=Z,1µm,0.2s
LACR  Lac                 2.67 318  ePN    Pb    04 25 14.2 -1.6
LACR                                eS     Sb    04 25 48.8 +0.5
LACR  Lac                 2.67 318  ePn    Pb    04 25 14.2 -1.6
LACR                                eSn    Sb    04 25 48.8 +0.5
LKRN  Lenkeran, Azer      2.67 143 ⇓Pn     Pn    04 25 13.1 +2.6
LKRN                               ⇓Sn     Sn    04 25 45.0 +2.6
ITBZ  Tabriz              2.68 190  ePn    Pb    04 25 16.7 +0.7
ITBZ                                 IAMB  IAmb  04 25 53.2
      comp=E,599nm,0.4s
ASTR  Astara              2.80 145  ePn    Pn    04 25 14.1 +1.8
ASTR  Astara              2.80 145 ⇓Pn     Pn    04 25 14.2 +1.8
ASTR                               ⇑Sn     Sn    04 25 48.2 +2.6
ZEI   Tsey                2.86 313  ePN    Pb    04 25 16.8 -2.2
ZEI                                 eS     Sb    04 25 52.3 -1.4
ZEI   Tsey                2.86 313  ePn    Pb    04 25 16.8 -2.2
ZEI                                 eSn    Sb    04 25 52.3 -1.4
KORR  Kora                2.98 319  ePN    Pn    04 25 17.8 +3.1
KORR                                eS     Sb    04 25 56.3 -0.6
KORR  Kora                2.98 319  ePn    Pn    04 25 17.8 +3.1
KORR                                eSn    Sb    04 25 56.3 -0.6
EPOS  Posof               3.09 283  i P    Pb    04 25 24.2 +1.1
EPOS                                i S    Sg    04 26 06.5 -1.4
DIGR  Digorskoe uzhe      3.11 312  ePN    Pb    04 25 20.4 -2.9
DIGR                                eS     Sb    04 25 58.4 -2.5
DIGR  Digorskoe uzhe      3.11 312  ePn    Pb    04 25 20.4 -2.9
DIGR                                eSn    Sb    04 25 58.4 -2.5
ISRB  Sarab               3.13 166  ePn    Pn    04 25 19.5 +2.4
ISRB                                 IAMB  IAmb  04 26 06.6
      comp=Z,567nm,0.2s
AGRB  Hanur-Agry          3.15 247  eP     Pb    04 25 21.2 -2.8
IAZR  Azarshahr           3.25 191  ePn    Pb    04 25 25.8 +0.1
IAZR                                 IAMB  IAmb  04 25 37.0
      comp=Z,762nm,0.3s
SENK  Senkaya-Erzuru      3.35 266  eP     Pn    04 25 20.3 +0.2
DAGI  Agillar             3.66 275  i P    Pb    04 25 35.1 +2.5
DAGI                                 IAML_P
      comp=Z,82nm,0.3s
DDEM  Demirkent           3.79 272  i P    Pb    04 25 37.9 +3.2
DDEM                                 IAML_P
      comp=Z,167nm,0.3s
NEY   Neytrino            3.82 310⇓ePN     Pb    04 25 32.1 -3.3
NEY                                  pmax  pmax
      comp=Z,21nm,0.7s
NEY   Neytrino            3.82 310  ePn    Pn    04 25 30.7 +4.2
NEY                                 eSn    Sn    04 26 15.0 +4.0
DBAD  Bademkaya           3.83 274  i P    Pb    04 25 38.5 +3.1
DBAD                                i S    Sg    04 26 28.2 -3.2
DBAD                                 IAML_P
      comp=Z,156nm,0.2s
DBOC  Borcka              3.86 279  i P    Pb    04 25 38.9 +2.8
DBOC                                i S    Sg    04 26 27.9 -4.6
DBOC                                 IAML_P
      comp=Z,246nm,0.3s
BCA   Borcka              3.91 280  eP     Pn    04 25 30.1 +2.5
SHA1  Shidzhatmaz         4.17 315  ePN    Pn    04 25 34.7 +3.4
SHA1  Shidzhatmaz         4.17 315  ePn    Pn    04 25 34.5 +3.2
SHA1                                eSn    Sn    04 26 23.0 +3.4
KIV   Kislovodsk          4.30 317  ePN    Pn    04 25 37.6 +4.6
DOMR  Dombai              4.51 304⇑ePN     Pn    04 25 41.5 +5.5
RPOR  Krasnaya Polya      5.57 303⇓eP      Pn    04 25 56.0 +5.6
AKTO  Aktyubinsk         12.38  36 ⇑Pn     Pn    04 27 20.8 -2.8
      comp=Z,0.7nm,0.6s
AKTO                               ⇑Sn     Sn    04 29 35.6 -5.4
      comp=Z,1.2nm,0.6s
AKTO  Aktyubinsk         12.38  36   P     Pn    04 27 20.8 -2.8
AB31  Akbulak array      12.53  44 ⇓Pn     Pn    04 27 24.2 -1.4
      comp=Z,0.1nm,0.5s,baz=229,slow=11,SNR=9.2
AB31                               ⇑Sn     Sn    04 29 40.9 -3.7
      comp=Z,0.6nm,0.6s,baz=238,slow=24,SNR=3.0
AB31  Akbulak array      12.53  44  P      Pn    04 27 24.2 -1.4
AB31                                SN     Sn    04 29 40.9 -3.7
ARU   Arti               17.37  22⇑eP      P     04 28 32.1 +1.2
ARU                                 pmax   pmax
      comp=Z,20nm,3.3s
AAK   Ala-Archa          20.75  76⇓eP      P     04 29 09.3 +1.1
KURK  Kurchatov          24.14  55⇑eP      P     04 29 44.1 +1.0
KURK                                pmax   pmax
      comp=Z,5.0nm,1.6s
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WEL ***27*** *04:27:04.2±1.2, 31°S±3°×17°7W±1°4, h33^{km}, ML5.7/3*

IDC ***27*** *04:27:05.4±0.5, 30°.87S×177°.39W, h0^{km}, mb4.6/12, mb1 4.8/13, mb1mx4.7/22, mbtmp4.6/13, ML3.6/1, MS4.7/25, Ms1 4.7/25, ms1mx4.5/47, Error ellipse: s-maj=19.1km s-min=18.3km az=150.0*

ISCJB ***27*** *04:27:07.8±0.2, 31°.12S±0°.03×177°.55W±0°.05, h27^{km}, mb4.9/74, MS4.8/24, Error ellipse: s-maj=6.8km s-min=2.5km az=27.6*

NEIC ***27*** *04:27:08.9±2.2, 31°.20S×177°.40W, h25^{km}±16^{km}, mb4.8/64, Error ellipse: s-maj=8.5km s-min=6.0km az=169.0*

ISC 27 04:27:09.1±0.3**, 31°.01S**±0°.05×**177°.34W**±0°.07**, h27**^{km}**, n261,** σ**2**^{s}**.21**/255**, mb4.9**/73**, MS4.8**/24**, 1C-1D, Kermadec Islands region**

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Code  Station Name         Δ°   AZ°   Phase ID           Time      Res
                                      Op     ISC      h  m  s     ISC
GLKZ  Green Lake          1.81 344  P      Pn    04 27 35.8 -2.7
GLKZ                                S      Sn    04 27 56.7 -3.9
RAO   Raoul Island        1.82 344  Pn     Pn    04 27 35.8 -2.8
      387nm,0.3s,baz=269,slow=3.9,SNR=18
RAO                                 Sn     Sn    04 27 57.8 -3.0
      691nm,0.3s,baz=164,slow=24,SNR=10
RIZ   Raoul Island        1.83 344  P      Pn    04 27 36.7 -2.1
RIZ                                 S      Sn    04 27 60.0 -1.1
MXZ   Matakaoa Point      7.46 208  ePn    Pn    04 28 54.5 -1.7
MXZ   Matakaoa Point      7.46 208  S      Sn    04 30 19.6 -0.4
WMGZ  Waiomatatini S      7.65 206  P      Pn    04 28 57.8 -0.9
WMGZ  Waiomatatini S      7.65 206  P      Pn    04 28 57.8 -0.9
WMGZ  Waiomatatini S      7.65 206  S      Sn    04 30 24.9 +0.4
WMGZ  Waiomatatini S      7.65 206  P      Sn    04 30 28.6 +4.2
PKGZ  Pakihiroa           7.84 208  P      Pn    04 28 59.2 -2.2
PKGZ  Pakihiroa           7.84 208  P      Pn    04 28 59.2 -2.2
PKGZ  Pakihiroa           7.84 208  S      Sn    04 30 28.1 -1.2
PKGZ  Pakihiroa           7.84 208  P      Sn    04 30 28.7 -0.6
HAZ   Te Kaha             7.85 210  P      Pn    04 28 59.7 -1.7
HAZ   Te Kaha             7.85 210  P      Pn    04 28 59.7 -1.7
HAZ   Te Kaha             7.85 210  S      Sn    04 30 31.7 +2.4
HAZ   Te Kaha             7.85 210  P      Sn    04 30 32.6 +3.3
PUZ   Puketiti            7.93 206  P      Pn    04 28 59.1 -3.5
PUZ   Puketiti            7.93 206  P      Pn    04 28 59.1 -3.5
PUZ   Puketiti            7.93 206  S      Sn    04 30 31.1 -0.3
PUZ   Puketiti            7.93 206  P      Sn    04 30 27.9 -3.5
RUGZ  Raukumara Rang      8.07 209  P      Pn    04 29 02.0 -2.6
RUGZ  Raukumara Rang      8.07 209  P      Pn    04 29 02.0 -2.6
RUGZ  Raukumara Rang      8.07 209  S      Sn    04 30 34.9 -0.1
RUGZ  Raukumara Rang      8.07 209  P      Sn    04 30 38.3 +3.3
TWGZ  Tauwhareparae       8.12 207  P      Pn    04 28 58.0 -7.3
TWGZ  Tauwhareparae       8.12 207  S      Sn    04 30 36.3  0.0
TWGZ  Tauwhareparae       8.12 207  P      Sn    04 30 32.4 -3.9
CNGZ  Carnagh Statio      8.31 205  P      Pn    04 29 04.4 -3.4
CNGZ  Carnagh Statio      8.31 205  P      Pn    04 29 04.4 -3.4
CNGZ  Carnagh Statio      8.31 205  S      Sn    04 30 42.8 +2.1
CNGZ  Carnagh Statio      8.31 205  P      Sn    04 30 41.7 +1.0
TKGZ  Te Karaka           8.40 207  P      Sn    04 30 43.2 +0.1
MWZ   Matawai             8.44 209  P      Pn    04 29 08.0 -1.7
MWZ   Matawai             8.44 209  P      Pn    04 29 08.0 -1.7
MWZ   Matawai             8.44 209  P      Sn    04 30 44.9 +0.8
URZ   Urewera             8.56 211  ePn    Pn    04 29 06.7 -4.5
URZ                                 eSn    Sn    04 30 43.7 -3.1
URZ                                 eSn    Sn    04 30 46.2 -0.6
URZ   Urewera             8.56 211  Pn     Pn    04 29 06.7 -4.5
      2.9nm,0.3s,baz=25,slow=16,SNR=10.0
URZ                                 Sn     Sn    04 30 46.2 -0.6
      25nm,0.3s,baz=284,slow=21,SNR=14
URZ   Urewera             8.56 211  P      Pn    04 29 06.3 -4.9
URZ   Urewera             8.56 211  P      Pn    04 29 06.3 -4.9
URZ   Urewera             8.56 211  P      Sn    04 30 47.8 +1.0
RIGZ  Rimuhau             8.67 206  P      Pn    04 29 09.8 -3.0
PRGZ  Paritu Road         8.81 205  P      Pn    04 29 11.3 -3.5
PRGZ  Paritu Road         8.81 205  P      Sn    04 30 50.3 -2.9
RTZ   Ruatahuna           8.91 210  P      Pn    04 29 14.2 -1.9
RTZ   Ruatahuna           8.91 210  P      Pn    04 29 14.2 -1.9
TOZ   Tahuroa Road        8.94 219  P      Pn    04 29 17.8 +1.4
KNZ   Kokohu              8.98 206  P      Pn    04 29 12.4 -4.6
MHGZ  Mahia Peninsul      9.01 204  P      Pn    04 29 13.9 -3.6
RAHZ  Arahi               9.12 209  P      Pn    04 29 18.6 -0.3
MTHZ  Maungataniwha       9.17 210  P      Pn    04 29 18.1 -1.5
NMHZ  Naumai              9.39 209  P      Pn    04 29 24.5 +1.8
ARHZ  Aropaoanui          9.45 208  P      Pn    04 29 22.9 -0.6
BKZ   Black Stump Fm      9.58 210  ePn    Pn    04 29 22.9 -2.4
BKZ   Black Stump Fm      9.58 210  P      Pn    04 29 23.6 -1.7
BKZ   Black Stump Fm      9.58 210  P      Pn    04 29 22.8 -2.5
HIZ   Hauiti              9.86 218  ePn    Pn    04 29 28.3 -0.7
HIZ   Hauiti              9.86 218  P      Pn    04 29 31.5 +2.4
HIZ   Hauiti              9.86 218  P      Pn    04 29 29.7 +0.6
KAHZ  Kahuranaki          9.95 207  P      Pn    04 29 25.0 -5.4
NGZ   Ngauruhoe           9.99 213  P      Pn    04 29 32.4 +1.4
NGZ   Ngauruhoe           9.99 213  P      Pn    04 29 29.3 -1.7
KRHZ  Kereru             10.03 209  P      Pn    04 29 31.2 -0.2
BHHZ  Black Hill Sta     10.03 211  P      Pn    04 29 31.0 -0.5
PXZ   Pawanui            10.16 206  P      Pn    04 29 29.9 -3.3
BFZ   Birch Farm         10.96 207  ePn    Pn    04 29 42.0 -2.2
BFZ                                 eSn    Sn    04 31 40.2 -5.7
BFZ   Birch Farm         10.96 207  P      Pn    04 29 39.5 -4.7
BFZ   Birch Farm         10.96 207  P      Pn    04 29 39.5 -4.7
KIW   Kapiti Island      11.66 210  P      Pn    04 29 49.6 -4.1
DUWZ  D’Urville Isla     12.06 213  P      Pn    04 29 57.8 -1.5
DUWZ                                P      Pn    04 29 57.9 -1.3
PLWZ  Palliser           12.11 207  P      Pn    04 30 03.6 +3.7
SNZO  South Karori       12.12 210  ePn    Pn    04 29 58.5 -1.5
SNZO                                eSn    Sn    04 32 06.9 -7.2
BHW   Baring Head        12.13 209  P      Pn    04 29 57.7 -2.4
QRZ   Quartz Range       12.77 217  P      Pn    04 30 06.5 -2.4
THZ   Tophouse           13.29 213  ePn    Pn    04 30 14.2 -1.9
THZ                                 eSn    Sn    04 32 29.9  -13
THZ   Tophouse           13.29 213  P      Pn    04 30 13.8 -2.2
KHZ   Kahutara           13.52 210  ePn    Pn    04 30 16.9 -2.2
KHZ                                 eSn    Sn    04 32 39.5 -8.9
NIUE  Niue               13.64  31  P      Pn    04 30 17.5 -3.3
      baz=14
LTZ   Lake Taylor        14.38 212  ePn    Pn    04 30 28.2 -2.7
LTZ                                 eSn    Sn    04 32 57.5  -12
LTZ   Lake Taylor        14.38 212  P      Pn    04 30 28.5 -2.4
AMCZ  Amberley           14.52 210  P      Pn    04 30 29.9 -2.9
INZ   Inchbonnie         14.72 214  P      Pn    04 30 33.0 -2.6
OXZ   Oxford             14.91 212  ePn    Pn    04 30 33.2 -4.9
OXZ                                 eSn    Sn    04 33 05.5  -17
OXZ   Oxford             14.91 212  P      Pn    04 30 34.2 -3.8
OXZ                                 P      Pn    04 30 34.2 -3.8
MQZ   McQueen’s Vall     14.95 209  ePn    Pn    04 30 34.4 -4.2
MQZ                                 eSn    Sn    04 33 09.0  -14
MQZ   McQueen’s Vall     14.95 209  P      Pn    04 30 33.4 -5.1
RPZ   Rata Peaks         15.66 213  ePn    Pn    04 30 44.5 -3.4
RPZ                                 eSn    Sn    04 33 30.4  -10
RPZ   Rata Peaks         15.66 213  Pn     Pn    04 30 44.5 -3.4
      2.7nm,0.3s,baz=34,slow=1.8,SNR=17
RPZ                                 Sn     Sn    04 33 26.7  -14
      1.7nm,0.3s,baz=46,slow=18,SNR=6.4
RPZ                                 LR     LR    04 37 37.8
      comp=Z,6µm,18.0s,baz=34,slow=40
RPZ   Rata Peaks         15.66 213  P      Pn    04 30 44.7 -3.3
FOZ   Fox Glacier        16.12 216  ePn    Pn    04 30 49.4 -4.4
      20nm,0.7s
LBZ   Lake Benmore       16.58 213  ePn    Pn    04 30 54.7 -5.0
      6.0nm,0.8s
ODZ   Otahua Downs       16.88 211  ePn    Pn    04 30 59.3 -4.2
      15nm,0.8s
DZM   Mont Dzumac        17.01 298  eP     P     04 31 10.0 +3.1
      55nm,0.8s
DZM                                 eLR    LR    04 34 58.2
      comp=Z,4µm,21.6s
DZM   Mont Dzumac        17.01 298  Pn     P     04 31 08.2 +1.3
      0.8nm,0.3s,baz=105,slow=12,SNR=6.4
DZM                                 LR     LR    04 36 38.4
      comp=Z,6µm,18.6s,baz=138,slow=34
WKZ   Wanaka             17.46 214  ePn    Pn    04 31 06.7 -4.0
      10nm,0.9s
MLZ   Mavora Lakes       18.29 214  ePn    P     04 31 20.8 -0.1
      13nm,1.0s
RAR   Rarotonga          18.53  62  eP     P     04 31 22.1 -1.5
      63nm,0.9s
RAR   Rarotonga          18.53  62  P      P     04 31 21.4 -2.1
      2.0nm,0.3s,baz=251,slow=5.3,SNR=9.2
RAR                                 LR     LR    04 38 02.9
      comp=Z,1µm,19.4s,baz=264,slow=36
WHZ   Wether Hill Ro     18.76 213  eP     P     04 31 25.4 -0.6
      37nm,1.1s
TBI   Tubuai             25.90  80  eLR    LR    04 39 00.8
      comp=Z,1µm,21.5s,baz=246
CNB   Canberra Magne     28.12 252  P      P     04 33 01.0 +2.0
      baz=28
PAE   Paea               28.48  69  eT     T     05 02 30.5
      1.3nm,0.3s
PPT2  Papeete2           28.52  69  eLR    LR    04 40 10.9
      comp=Z,1µm,22.0s,baz=231
PPT   Papeete            28.53  68  LR     LR    04 43 44.7
      comp=Z,1µm,18.3s,baz=256,slow=35
MCQ   Macquarie Isla     28.96 209  P      P     04 33 07.1 +1.0
      baz=29
VAH   Vaihoa             31.38  67  eT     T     05 06 08.1
      7.6nm,0.3s
CTAO  Charters Tower     34.46 280  eP     P     04 33 55.8 +1.0
      17nm,0.6s
STKA  Stephens Creek     34.90 258  eP     P     04 33 59.7 +1.3
      2.6nm,0.8s
STKA  Stephens Creek     34.90 258  P      P     04 33 58.5  0.0
      4.5nm,0.4s,baz=103,slow=11,SNR=17
STKA                                LR     LR    04 47 34.7
      comp=Z,2µm,18.2s,baz=75,slow=35
RKT   Rikitea            38.36  89  eLR    LR    04 45 02.9
      comp=Z,643nm,22.0s
BBOO  Buckleboo          39.35 255  eP     P     04 34 35.9 -0.4
      9.1nm,0.6s
TAOE  Nuku Hiva Isla     41.03  66  eLR    LR    04 45 52.4
      comp=Z,534nm,22.0s,baz=241
PTCN  Pitcairn Islan     41.87  94  eP     P     04 34 56.8 -0.4
      221nm,0.6s
AS01  Alice Springs      43.61 267  eP     P     04 35 11.5 +0.2
AS31  Alice Springs      43.65 267  eP     P     04 35 11.6  0.0
      2.4nm,0.6s
AS31                                eScP   ScP   04 40 52.8 +4.3
ASAR  Alice Springs      43.65 267  P      P     04 35 11.2 -0.4
      5.6nm,0.6s,baz=104,slow=7.2,SNR=74
ASAR                                ScP    ScP   04 40 52.8 +4.3
      1.6nm,0.7s,baz=115,slow=4.6,SNR=7.6
WB2   Warramunga Arr     44.68 272  eP     P     04 35 19.8 -0.1
      19nm,0.8s
WRAB  Tennant Creek      44.68 272  eP     P     04 35 19.3 -0.6
      20nm,0.8s
WR1   Warramunga Arr     44.69 272  eP     P     04 35 19.6 -0.4
      20nm,1.0s
WR1                                 eScP   ScP   04 40 57.1 +4.4
WR1                                 eS     S     04 41 53.0 -2.1
WRA   Warramunga Arr     44.69 272  P      P     04 35 19.6 -0.4
      13nm,0.8s,baz=113,slow=7.8,SNR=93
WRA                                 ScP    ScP   04 40 57.1 +4.4
      2.6nm,1.0s,baz=105,slow=3.8,SNR=7.1
WRA                                 S      S     04 41 53.0 -2.1
      1.3nm,0.9s,baz=108,slow=14,SNR=3.6
WRA                                 LR     LR    04 53 42.5
      comp=Z,2µm,18.3s,baz=105,slow=36
VNDA  Vanda              47.55 186  LR     LR    04 52 09.6
      comp=Z,461nm,20.7s,baz=15,slow=32
KDU   Kakadu             49.58 280  P      P     04 35 59.8 +1.6
      baz=50
MTN   Manton Dam         50.64 279  eP     P     04 36 05.7 -0.6
      9.7nm,0.8s
FITZ  Fitzroy Crossi     52.93 270  LR     LR    04 59 10.0
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	comp=Z,1µm,18.5s,baz=108,slow=36						
CASY	Casey	54.87	208	eP	P	04 36 35.5	-1.3
	16nm,1.0s						
BATI	Baumata	58.29	277	LR	LR	05 00 27.5	
	comp=Z,790nm,21.8s,baz=119,slow=34						
QSPA	South Pole Qui	59.11	180	P	P	04 37 08.9	+1.9
	18nm,1.0s,baz=16,slow=1.3,SNR=37						
JCJ	Chichijima	69.51	322	LR	LR	05 03 28.5	
	comp=Z,313nm,19.6s,baz=150,slow=32						
MAW	Mawson	71.94	200	LR	LR	05 10 45.7	
	comp=Z,1µm,18.0s,baz=118,slow=36						
SYO	Syowa Base	76.65	193	⇓eP	P	04 38 57.2	+0.2
SYO	Syowa Base	76.65	193	⇑epP	pP	04 39 04.0	+0.2
SNAA	Sanae	77.53	178	P	P	04 39 03.0	+0.9
VNA3	Neumayer Olymp	77.66	176	P	P	04 39 08.4	+5.7
VNA2	Neumayer--Watz	78.10	177	P	P	04 39 06.3	+1.1
	baz=177,slow=2.9						
PLCA	Paso Flores	81.68	133	eP	P	04 39 26.8	+1.6
	6.8nm,0.8s						
PLCA	Paso Flores	81.68	133	P	P	04 39 26.8	+1.6
	3.6nm,0.7s,baz=247,slow=7.5,SNR=6.8						
PLCA				LR	LR	05 09 41.7	
	comp=Z,176nm,18.5s,baz=253,slow=31						
LPIG	La Paz	84.38	58	LR	LR	05 11 14.2	
	comp=Z,930nm,18.3s,baz=200,slow=31						
KSRS	Korea Array	85.18	319	P	P	04 39 42.9	0.0
	0.9nm,0.6s,baz=146,slow=6.1,SNR=4.4						
KS15	Wonju Array Si	85.19	319	eP	P	04 39 42.9	-0.1
	4.4nm,0.8s						
KSAR	Wonju Array Be	85.19	319	P	P	04 39 42.9	-0.1
PEL	Peldehue	85.84	126	eP	P	04 39 46.9	+0.3
	18nm,0.7s						
PSI	Prapat	86.06	276	LR	LR	05 20 01.0	
	comp=Z,451nm,18.9s,baz=93,slow=37						
ISA	Isabella, Lake	86.33	44	eP	P	04 39 49.6	+0.9
	10nm,1.0s						
PETK	Petropavlovsk-	86.54	345	P	P	04 39 49.0	-0.2
	6.1nm,0.7s,baz=148,slow=7.7,SNR=7.6						
PEA1	Petropavlovsk-	86.55	345	eP	P	04 39 49.0	-0.3
CMB	Columbia Colle	86.83	42	eP	P	04 39 52.4	+1.2
	8.3nm,0.9s						
NJ2	Nanjing	87.07	310	eP	P	04 39 53.5	+1.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GSC	Goldstone, Bar	87.10	45	eP	P	04 39 53.2	+0.7
	10nm,1.1s						
AFDM	Forest Hills D	87.14	41	eP	P	04 39 53.3	+0.7
	9.4nm,1.2s						
OMMB	Old Mammoth Mi	87.34	43	eP	P	04 39 55.2	+1.3
	4.1nm,1.0s						
WDC	Whiskeytown Da	87.43	39	eP	P	04 39 54.4	+0.5
	8.8nm,1.0s						
WAKR	Walker	87.70	42	eP	P	04 39 56.5	+1.0
	10nm,1.0s						
USRK	Ussuriysk Ar.	87.98	326	P	P	04 39 56.2	-0.2
	3.6nm,0.7s,baz=129,slow=5.3,SNR=8.7						
USRK				LR	LR	05 13 18.8	
	comp=Z,222nm,21.7s,baz=138,slow=32						
PNTR	Pine Nut	88.01	41	eP	P	04 39 57.8	+0.8
	13nm,0.9s						
BEKR	Beckworth	88.12	40	eP	P	04 39 58.6	+1.1
	3.7nm,0.9s						
VCNR	Virginia City	88.12	41	eP	P	04 39 58.8	+1.3
	5.8nm,1.0s						
YERR	Yerington	88.14	41	eP	P	04 39 58.8	+1.2
	7.1nm,1.0s						
NV01	Mina Array Sit	88.30	42	eP	P	04 39 59.2	+0.8
NVAR	Mina Array Bea	88.30	42	P	P	04 39 59.2	+0.8
	5.0nm,0.8s,baz=222,slow=8.5,SNR=32						
NVAR				LR	LR	05 13 03.4	
	comp=Z,448nm,18.9s,baz=204,slow=31						
NV11	Mina Array Sit	88.39	42	eP	P	04 40 00.0	+1.3
	0.4nm,1.0s						
TPNV	Topopah Spring	88.53	45	eP	P	04 40 00.4	+0.9
	6.9nm,0.8s						
PAHR	Pah Rah Range	88.55	41	eP	P	04 40 00.7	+1.2
	4.4nm,0.9s						
Y14A	Wickenburg	88.61	49	eP	P	04 40 01.1	+1.3
	6.0nm,1.0s						
W13A	Hualapai Mount	88.78	47	eP	P	04 40 01.9	+1.1
	3.3nm,0.8s						
KVN	Kaiserville	88.84	42	eP	P	04 40 02.0	+1.1
	5.5nm,0.9s						
SHPR	Sheep Range	88.90	45	eP	P	04 40 02.3	+1.1
	5.2nm,1.1s						
TUC	Tucson	89.05	51	eP	P	04 40 02.8	+0.9
	4.6nm,1.1s						
MOD	Modoc Plateau	89.56	39	eP	P	04 40 05.2	+1.1
	5.5nm,0.9s						
X16A	Lo Mia Camp, P	89.92	49	eP	P	04 40 07.0	+1.0
	6.0nm,0.9s						
LCMT	Little Creek M	90.40	46	eP	P	04 40 09.5	+1.3
	5.5nm,0.9s						
PINE	Pine Mountain	90.54	37	eP	P	04 40 09.8	+1.1
	9.0nm,0.9s						
U15A	North Rim	90.63	47	eP	P	04 40 10.8	+1.4
	11nm,0.9s						
WUAZ	Wupatki	90.64	48	eP	P	04 40 10.1	+0.7
	8.4nm,0.9s						
KNB	Kanab	90.67	46	eP	P	04 40 10.5	+1.1
	10nm,1.0s						
CCUT	Cedar City	90.67	46	eP	P	04 40 10.7	+1.2
	3.8nm,1.0s						
WVOR	Wild Horse Val	90.83	39	eP	P	04 40 11.2	+1.2
	5.1nm,1.1s						
SZCU	Shurtz Canyon	90.87	46	eP	P	04 40 11.8	+1.4
	5.7nm,1.1s						
KDAK	Kodiak Island	90.87	13	LR	LR	05 17 22.6	
	comp=Z,390nm,18.3s,baz=209,slow=33						
X18A	Snowflake	90.96	50	eP	P	04 40 11.7	+0.8
	5.2nm,1.1s						
CN2	Changchun	90.97	322	eP	P	04 40 10.8	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSUT	Pine Spring	91.00	45	eP	P	04 40 11.6	+0.6
	4.5nm,1.0s						
I07A	Izee	91.49	38	eP	P	04 40 13.9	+0.9
	5.3nm,1.0s						
J08A	Circle Bar Ran	91.54	39	eP	P	04 40 13.6	+0.4
	5.8nm,1.1s						
ELK	Elko	91.61	42	eP	P	04 40 14.6	+0.8
	2.1nm,0.8s						
ELK	Elko	91.61	42	LR	LR	05 15 45.7	
	comp=Z,424nm,18.5s,baz=244,slow=32						
MTPU	Mount Pierson	91.70	46	eP	P	04 40 15.8	+1.3
	6.3nm,1.0s						
TX31	Lajitas Ar. Si	92.24	57	eP	P	04 40 17.7	+0.8
TXAR	Lajitas Array	92.24	57	P	P	04 40 17.4	+0.5
	0.9nm,1.0s,baz=211,slow=4.4,SNR=6.1						
TXAR				LR	LR	05 16 28.9	
	comp=Z,539nm,18.4s,baz=0.0,slow=32						
CMIG	Matias Romero	92.40	72	LR	LR	05 14 09.7	
	comp=Z,128nm,19.4s,baz=227,slow=31						
G08A	Pilot Rock	92.60	37	eP	P	04 40 19.2	+1.1
	9.3nm,1.1s						
BMO	Blue Mountains	93.17	38	eP	P	04 40 21.6	+0.9
	1.2nm,0.7s						
SRU	San Rafael Swe	93.39	46	eP	P	04 40 23.1	+1.1
	3.9nm,0.8s						
ANMO	Albuquerque	93.51	51	LR	LR	05 17 08.8	
	comp=Z,576nm,18.0s,baz=234,slow=32						
HVU	Hansel Valley	93.69	43	eP	P	04 40 24.6	+1.3
	5.0nm,0.9s						
HLID	Hailey	93.89	40	eP	P	04 40 25.2	+1.0
	5.6nm,0.9s						
F10A	Beach Ranch, E	93.96	37	eP	P	04 40 24.8	+0.4
	5.1nm,0.9s						
KMI	Kunming	94.60	296	P	P	04 40 29.0	+1.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TPAW	Teton Pass	95.81	42	eP	P	04 40 33.4	+0.2
	1.9nm,0.8s						
FXWY	Fox Creek	95.86	42	eP	P	04 40 34.5	+1.1
	1.5nm,0.8s						
PD31	Pinedale Array	96.18	43	eP	P	04 40 35.0	+0.2
	0.6nm,0.8s						
PDAR	Pinedale Array	96.18	43	P	P	04 40 35.0	+0.2
	0.6nm,0.8s,baz=176,slow=4.3,SNR=6.2						
PDAR				LR	LR	05 19 49.2	
	comp=Z,443nm,18.1s,baz=297,slow=33						
YHH	Holmes Hill	96.66	41	eP	P	04 40 38.8	+1.7
	1.4nm,1.0s						
BOZ	Bozeman (W)	96.72	40	eP	P	04 40 37.7	+0.6
	2.8nm,1.0s						
CD2	Chengdu	96.89	302	eP	P	04 40 39.5	+1.4
HHC	Hu-ho-hao-te	97.06	314	eP	Pdif	04 40 41.3	+2.5
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
LPAZ	La Paz	97.38	114	LR	LR	05 16 23.4	
	comp=Z,90nm,20.2s,baz=204,slow=30						
ILAR	Eielson Array	98.39	13	P	P	04 40 43.3	-0.6
	0.4nm,0.8s,baz=212,slow=7.9,SNR=5.2						
ILAR				LR	LR	05 20 49.1	
	comp=Z,198nm,18.3s,baz=165,slow=33						
ILB	Eielson Array	98.39	13	eP	P	04 40 43.3	-0.6
	2.9nm,1.1s						
ESPN	Las Esperanzas	98.75	81	eP	Pdif	04 40 48.5	+1.8
	129nm,0.4s						
CPUP	Villa Florida	99.17	128	LR	LR	05 21 37.4	
	comp=Z,201nm,18.1s,baz=226,slow=33						
LZH	Lanzhou	99.54	306	eP	Pdif	04 40 49.5	-0.5
LZH				ePP	PP	04 44 56.0	+1.7
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,76nm,6.3s						
LZH				LR	LR		
	comp=N,190nm,17.3s						
LZH				LR	LR		
	comp=E,200nm,17.5s						
LZH				LR	LR		
	comp=Z,250nm,19.2s						
YKA	Yellowknife Ar	105.75	25	PKKPbc	PKKPbc	04 56 52.6	-2.2
	0.1nm,0.4s,baz=44,slow=3.0,SNR=3.7						
WMQ	Urumqi	114.05	308	ePKP	PKiKP	04 45 47.0	+1.3
WMQ				LR	LR		
	comp=N,94nm,19.1s						
WMQ				LR	LR		
	comp=E,90nm,22.9s						
WMQ				LR	LR		
	comp=Z,210nm,19.1s						
RES	Resolute Bay	117.66	17	ePKPdf	PKPdf	04 45 51.2	-0.4
MK01	Makanchi Array	118.58	310	ePKPdf	PKPdf	04 45 53.2	-1.0
MK32	Makanchi Array	118.60	310	ePKPdf	PKPdf	04 45 53.7	-0.6
MKAR	Makanchi Array	118.60	310	PKP	PKPdf	04 45 53.7	-0.6
	0.7nm,0.6s,baz=223,slow=1.5,SNR=9.3						
KURK	Kurchatov	121.88	313	ePKPdf	PKiKP	04 46 01.0	+0.5
AAK	Ala-Archa	122.92	303	ePKPdf	PKPdf	04 46 03.0	+0.1
KK31	Karatay Array	125.88	303	ePKPdf	PKiKP	04 46 08.9	+0.1
KKAR	Karatay Array	125.88	303	ePKPdf	PKiKP	04 46 08.9	+0.1
BRVK	Borovoye	127.30	315	ePKPdf	PKPdf	04 46 10.0	-0.7
KMBO	Kilima Mbogo	134.16	232	SKPbc	SKiKP	04 49 58.7	-2.2
	1.1nm,0.6s,baz=89,slow=5.8,SNR=4.3						
GEYT	Alibeck	134.33	294	SKPbc	SKiKP	04 49 57.9	-2.3
	4.5nm,1.0s,baz=131,slow=4.0,SNR=3.5						
ARA0	ARCESS Array S	139.30	348	ePKPdf	PKPdf	04 46 33.4	+0.6
ARCES	ARCESS Array B	139.30	348	PKP	PKPdf	04 46 33.4	+0.6
	2.2nm,0.7s,baz=8.6,slow=1.2,SNR=5.1						
GNI	Garni	144.85	297	ePKPdf	PKPdf	04 46 44.0	+0.3
FIA1	FINESS Array S	145.91	340	ePKPdf	PKPdf	04 46 44.5	-0.1
FIA1				ePKPdf	PKPbc	04 46 45.4	0.0
FIA0	FINESS Array S	145.91	340	ePKPdf	PKPbc	04 46 45.1	-0.2
FINES	FINESS Array B	145.91	340	PKPbc	PKPbc	04 46 45.1	-0.2
	16nm,0.7s,baz=49,slow=3.3,SNR=51						
KBZ	Khabaz	145.92	303	PKPbc	PKPab	04 46 46.7	+0.2
	6.5nm,0.8s,baz=70,slow=4.7,SNR=9.0						
NC303	NORSAR Array S	149.23	352	ePKPbc	PKPbc	04 46 55.0	+0.5
NB2	NORSAR Subarra	149.43	352	PKP	PKPbc	04 46 54.8	-0.3
	comp=Z,1.9nm,0.7s,baz=9.2,slow=2.5						
NB200	NORSAR Array S	149.43	352	ePKPbc	PKPbc	04 46 54.8	-0.3
NOA	NORSAR Array B	149.43	352	PKPbc	PKPbc	04 46 54.8	-0.3
	comp=Z,3.1nm,0.8s,baz=12,slow=4.1,SNR=16						
AKASG	Malin Array Be	152.12	323	PKPbc	PKPbc	04 47 01.3	-0.3
	comp=Z,5.0nm,0.7s,baz=51,slow=2.7,SNR=25						
AKBB	Malin Array Si	152.12	323	ePKPbc	PKiKP	04 47 02.0	0.0
KIEV	Kiev	152.14	323	ePKPbc	PKPbc	04 47 01.3	-0.3
AK11	Malin Array Si	152.17	323	ePKPbc	PKPbc	04 47 01.6	-0.2
BR101	Keskin Array S	153.38	298	ePKPbc	PKPbc	04 47 04.8	-0.2
BR131	Keskin Array S	153.38	298	ePKPbc	PKiKP	04 47 05.2	+0.1
BRTR	Keskin Array B	153.38	298	PKPbc	PKPbc	04 47 04.8	-0.2
	comp=Z,1.2nm,0.9s,baz=129,slow=4.0,SNR=7.6						
DBIC	Dimbokro	154.78	162	PKPbc	PKPbc	04 47 08.1	-0.5
	comp=Z,6.4nm,1.1s,baz=197,slow=1.4,SNR=3.8						
BUR08	Bucovina Ar. S	156.05	320	ePKPab	PKPab	04 47 28.4	+0.1
KWP	Kalwaria Pacla	156.05	327	ePKPab	PKPab	04 47 28.2	+0.1
BUR04	Bucovina Ar. S	156.06	320	ePKPdf	PKPdf	04 47 02.9	+2.0
BUR04				ePKPab	PKPab	04 47 27.9	-0.4
CLL	Collm	158.32	342	ePKPab	PKPab	04 47 37.0	-0.7
CLL				esPKPab	sPKPab	04 47 49.0	+2.0
CLL				LmH		06 13 00.0	
	comp=N,100nm,18.6s						
CLL				LmH		06 13 00.0	
	comp=E,200nm,18.3s						
CLL				LmV		06 16 00.0	
	comp=Z,200nm,18.4s						
BRG	Berggiesshubel	158.45	340	ePKP	PKPab	04 47 38.1	-0.2
	comp=Z,10nm,1.7s						
VYHS	Vyhne	158.64	329	ePKP	PKPab	04 47 37.9	-1.3
KHC	Kasperske Hory	160.10	339	ePKPAB	PKPab	04 47 43.3	-2.3
GEC2	GERESS Array S	160.31	338	ePKPab	PKPab	04 47 48.5	+1.9
GERES	GERESS Array B	160.31	338	PKPab	PKPab	04 47 48.5	+1.9
	comp=Z,0.9nm,0.8s,baz=36,slow=2.5,SNR=4.1						
TOA0	Torodi Ar. Sit	162.20	177	ePKPdf	PKPdf	04 47 08.8	0.0
TOA0				ePKPab	PKPab	04 47 56.2	+0.7
TORD	Torodi Ar. Bea	162.20	177	PKP	PKPdf	04 47 10.5	+1.7
	comp=Z,1.0nm,1.1s,baz=197,slow=1.5,SNR=3.8						
TORD				PKPab	PKPab	04 47 55.8	+0.3
	comp=Z,1.7nm,0.9s,baz=178,slow=2.4,SNR=9.8						
TOA1	Torodi Ar. Sit	162.21	177	ePKPdf	PKPdf	04 47 10.5	+1.7
TOA1				ePKPab	PKPab	04 47 55.8	+0.3
WTTA	Wattenberg	162.36	339	PKPab	PKPab	04 47 53.6	-2.0
	comp=Z,2.8nm,0.5s						
RETA	Reutte	162.40	342	ePKPab	PKPab	04 47 55.9	+0.2
	comp=Z,2.8nm,1.0s						
MOTA	Moosalm	162.44	341	epPKPab	PKPab	04 48 00.8	+4.8
	comp=Z,9.4nm,1.2s						
SQTA	Sankt Quirin	162.52	340	PKPab	PKPab	04 48 00.3	+4.0
	comp=Z,2.3nm,0.7s						
DAVA	Damuels	162.82	343	ePKPab	PKPab	04 47 57.2	-0.5
	comp=Z,2.7nm,0.7s						
FUORN	Ofenpass-Fuorn	163.34	341	ePKPab	PKPab	04 48 00.9	+0.8

NNC 27 04:34:10.3±2.0**, 36°.90N**×**70°.28E, h195**^{km}±35^{km}**, mb2.5, mpv3.6, 5C-5D, Error ellipse: s-maj=22.5km s-min=16.4km az=65.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.00	38	⇓P	Pn	04 35 12.1	-0.1
	4.1nm,0.4s						
SFK				⇓S	Sn	04 36 01.3	+0.5
	21nm,0.4s						
MNAS	Manas	5.83	16	⇑P	Pn	04 35 35.8	+0.4
	1.9nm,0.5s						
MNAS				⇓S	Sn	04 36 43.8	+1.1
	5.2nm,0.4s						
AML	Almayashu	5.85	26	P	Pn	04 35 36.0	+0.2
	SNR=42						
KK31	Karatay Array	6.20	2	⇓P	Pn	04 35 40.7	+0.8
	1.2nm,0.5s,baz=182,slow=13,SNR=13						
KK31				⇑S	Sn	04 36 50.7	-0.2
	3.4nm,0.6s,baz=190,slow=26,SNR=6.4						
UCH	Uchtor	6.24	30	P	Pn	04 35 41.0	0.0
	SNR=25						
KZA	Kyzart	6.44	35	P	Pn	04 35 44.3	+0.8
	SNR=7.4						
AAK	Ala-Archa	6.58	28	P	Pn	04 35 46.6	+1.5
	SNR=6.6						
AAK	Ala-Archa	6.58	28	⇑P	Pn	04 35 44.8	-0.3
	2.6nm,0.6s						
AAK				⇓S	Sn	04 37 01.1	+0.9
	11nm,0.7s						
USP	Ospenovka	7.13	26	P	Pn	04 35 52.1	0.0
	SNR=5.4						
TKM2	Tokmak 2	7.27	33	P	Pn	04 35 53.8	-0.2
	SNR=14						
TKM2	Tokmak 2	7.27	33	⇑P	Pn	04 35 53.5	-0.6
	7.8nm,0.5s						
TKM2				⇑S	Sn	04 37 16.4	0.0
	3.5nm,0.7s						

MEX 27 04:36:28.7±0.3**, 13°.88N**×**91°.82W, h16**^{km}±113^{km}**, MD3.8, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.11	337	eP	Pb	04 36 45.9	-3.7
CCIG	Comitan	2.41	353	eP	Pn	04 37 06.5	-1.2
CCIG				eS	Sn	04 37 33.0	-4.0
CMIG	Matias Romero	4.35	318	eP	Pn	04 37 32.4	-1.9

DRS ***27*** *04:42:18.8±0.0, 42°.47N×45°.48E, h10^{km}*
NORS ***27*** *04:42:20.4±0.0, 42°.59N×45°.50E, h13^{km}, MPVA3.4*
MOS ***27*** *04:42:20.5±0.0, 42°.57N×45°.50E, h17^{km}, MPVA3.4*
ISC 27 04:42:22.0±1.0**, 42°.57N**±0°.03×**45°.50E**±0°.02**, h16**^{km}±9^{km}**, n25,** σ**0^{s}.92**/49**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	Botlikh	0.54	80	ePg	Pb	04 42 32.7	-0.5
BTLR				eSg	Sb	04 42 41.6	+0.9
DVE	Vedeno	0.60	50	ePg	Pg	04 42 32.9	-1.1
DVE				eSg	Sb	04 42 41.9	-0.6
GROC	Groznyy	0.67	19	ePg	Pb	04 42 35.4	+0.1
GROC				eSg	Sn	04 42 45.7	-1.3
KMGR	Komgaron	0.67	316	ePg	Pb	04 42 35.3	-0.1
KMGR				eSg	Sn	04 42 45.4	-1.7
VLKR	Vladikavkaz	0.77	308	ePg	Pb	04 42 37.0	-0.1
VLKR				eSg	Sb	04 42 47.3	0.0
XNZR	Khunzakh	0.89	91	ePg	Pb	04 42 38.3	-0.9
XNZR				eSg	Sg	04 42 51.2	+0.1
LACR	Lac	0.92	287	i Pg	Pb	04 42 38.8	-0.9
LACR				eSg	Sn	04 42 53.2	-0.2
KRNR	Karanay	1.07	76	ePg	Pn	04 42 42.0	-0.4
KRNR				eSg	Sn	04 42 56.7	-0.3
DBC	Dubki	1.08	65	ePg	Pg	04 42 43.3	+0.4
DBC				eSg	Sn	04 42 59.3	+2.1
ARNR	Ardon	1.08	305	ePg	Pg	04 42 42.9	-0.1
ARNR				eSg	Sn	04 42 58.6	+1.4
GNBR	Gunib	1.10	99	i Pg	Pg	04 42 43.2	-0.1
GNBR				eSg	Sn	04 42 59.1	+1.4
KORR	Kora	1.17	297	i Pg	Pg	04 42 44.8	+0.2
KORR				eSg	Sg	04 43 01.2	+1.2
ZEI	Tsey	1.20	281	ePg	Pb	04 42 44.3	-0.2
ZEI				eSg	Sg	04 43 01.3	+0.4
KMKR	Kumukh	1.26	110	ePg	Pg	04 42 46.0	-0.4
KMKR				eSg	Sg	04 43 04.0	+1.0
STDR	Stavd-Durt	1.32	308	ePg	Pg	04 42 47.6	+0.1
STDR				eSg	Sg	04 43 06.8	+2.0
LSNR	Lesken	1.42	300	ePg	Pg	04 42 48.7	-0.6
LSNR				eSg	Sg	04 43 08.9	+1.1
KZRT	Kazreti	1.44	215	P	Pg	04 42 49.4	-0.3
KZRT				S	Sg	04 43 09.0	+0.5
DIGR	Digorskoe uzhe	1.45	284	i Pg	Pb	04 42 48.3	-0.5
DIGR				eSg	Sg	04 43 08.0	-0.9
TRLG	Trialeti	1.47	226	P	Pg	04 42 50.1	-0.1
TRLG				S	Sg	04 43 10.7	+1.4
PRTR	Priterechnaya	1.48	323	ePg	Pg	04 42 50.5	0.0
PRTR				eSg	Sg	04 43 10.2	+0.5
BGD	Bogdanovka	1.93	228	P	Sg	04 43 23.8	-0.3
KBTC	Kuba-Taba	1.97	310	ePg	Pb	04 42 56.1	-1.4
KBTC				eSg	Sb	04 43 22.8	+0.9
NEY	Neytrino	2.15	289	ePg	Pb	04 42 59.8	-0.9
NEY				eSg	Sb	04 43 28.4	+1.2
SHA1	Shidzhatmaz	2.38	300	ePn	Pb	04 43 03.8	-1.0
SHA1				eSn	Sb	04 43 34.1	+0.2
KIV	Kislovodsk	2.48	305	ePn	Pb	04 43 04.9	-1.3
KIV				eSn	Sb	04 43 37.4	+0.9

IDC 27 04:48:28.0±2.0**, 0°.97N**×**126°.09E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.4**/40**, mbtmp3.6**/3**, Error ellipse: s-maj=186.2km s-min=25.2km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.30	159	P	P	04 53 26.2	-1.0
	1.0nm,0.4s,baz=337,slow=10,SNR=12						
ASAR	Alice Springs	25.64	163	P	P	04 54 00.4	+0.9
	0.4nm,0.4s,baz=342,slow=8.9,SNR=4.8						
MKAR	Makanchi Array	59.47	326	P	P	04 58 32.8	0.0
	0.3nm,0.4s,baz=121,slow=7.3,SNR=7.5						

RSPR 27 05:15:15.2, 19°.40N×**69°.00W, h139**^{km}±4^{km}**, MD3.8**/8**, 5C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	2.02	117	⇑eP	Pn	05 15 49.9	0.0
AGPR				eS	Sn	05 16 16.9	+0.5
LSP	Las Mesas	2.19	123	⇑eP	Pn	05 15 51.8	-0.1
LSP	Las Mesas	2.19	123	eS	Sn	05 16 20.2	+0.1
EMPR	Esperanza - Ma	2.51	111	eS	Sn	05 16 28.1	+0.8
OBIP	Obispado Ponce	2.64	120	⇑eP	Pn	05 15 57.5	-0.1
OBIP	Obispado Ponce	2.64	120	eS	Sn	05 16 30.6	+0.4
SJG	San Juan	2.99	115	⇑eP	Pn	05 16 02.4	+0.4
SJG	San Juan	2.99	115	eS	Sn	05 16 38.6	+0.4
HUMP	Col San Antoni	3.24	112	eS	Sn	05 16 44.5	+0.7
MTP	Monte Pirata	3.52	111	eS	Sn	05 16 51.0	+0.7
MTP	Monte Pirata	3.52	111	⇓eP	Pn	05 16 09.4	+0.5
STVI	Saint Thomas	3.97	104	⇑eP	Pn	05 16 15.5	+0.7
STVI	Saint Thomas	3.97	104	eS	Sn	05 17 02.5	+1.4

BJI ***27*** *05:33:42.2, 46°.95N×90°.88E, h8^{km}, ML3.4/6*
NNC ***27*** *05:33:43.5±3.5, 47°.14N×90°.79E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=29.1km s-min=24.9km az=169.0*
IDC ***27*** *05:33:44.6±3.4, 47°.05N×90°.60E, h0^{km}, mb1 3.4/2, mb1mx3.0/48, mbtmp3.4/2, ML3.2/2, Error ellipse: s-maj=34.6km s-min=25.8km az=152.0*
ASRS ***27*** *05:33:48.8±3.3, 46°.83N×90°.22E, h15^{km}, Ms3.3/1*
ISC 27 05:33:47.3±1.7**, 47°.08N**±0°.06×**90°.55E**±0°.10**, h10**^{km}**, n16,** σ**2^{s}.49**/24**, 8C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	3.83	213	ePn	Pn	05 34 45.3	-1.1
WMQ				Sn	Sn	05 35 30.5	-1.0
WMQ				smax	smax		
	comp=N,180nm,0.7s						
WMQ				smax	smax		
	comp=E,150nm,0.7s						
ARTR	Artybash	5.18	337	ePg	Pg	05 35 26.8	+0.3
UKR	Ust'-Kan	5.42	318	ePg	Pg	05 35 28.4	-2.6
UKR				eSg	Sg	05 36 38.0	-3.1
MK31	Makanchi Array	5.67	270	⇑Pn	Pn	05 35 11.3	-0.2
	0.4nm,0.3s,baz=92,slow=14,SNR=21						
MK31				⇑Pg	Pb	05 35 29.4	+3.2
	0.8nm,0.3s,baz=90,slow=16,SNR=3.6						
MK31				⇑Sn	Sn	05 36 22.2	+5.6
	2.3nm,0.4s,baz=40,slow=2.9,SNR=4.1						
MK31				⇑Lg	Lg	05 36 46.5	
	3.7nm,0.3s,baz=86,slow=28,SNR=4.7						
MKAR	Makanchi Array	5.67	270	Pn	Pn	05 35 11.8	+0.2
	0.6nm,0.3s,baz=91,slow=16,SNR=20						
MKAR				Pg	Pb	05 35 24.3	-1.9
	0.8nm,0.3s,baz=88,slow=16,SNR=14						
MKAR				Sn	Sn	05 36 18.6	+2.0
	1.8nm,0.3s,baz=85,slow=24,SNR=5.3						
MKAR				Lg	Lg	05 36 42.2	
	3.1nm,0.3s,baz=83,slow=34,SNR=5.1						
CERR	Cheremushki	5.81	5	ePg	Pg	05 35 38.3	-0.1
MAKZ	Makanchi	5.88	270	⇓Pn	Pn	05 35 14.4	-0.1
	2.5nm,0.9s						
MAKZ				⇓Pg	Pb	05 35 30.8	+0.9
	2.4nm,0.4s						
MAKZ				⇑Sn	Sn	05 36 25.8	+3.9
	4.6nm,1.0s						
MAKZ				⇓Lg	Lg	05 36 52.3	
	4.7nm,0.6s						
TASR	Tashtagol	5.94	344	ePg	Pg	05 35 39.0	-2.0
TASR				eSg	Sg	05 37 02.8	+4.9
ELT	Eltsovka	6.78	337	ePg	Pg	05 35 56.6	-0.4
ELT				eSg	Sg	05 37 20.7	-4.0
ZALV	Zalesovo Beam	7.78	334	Pg	Pb	05 36 07.8	+5.6
	0.2nm,0.3s,baz=156,slow=14,SNR=2.8						
ZALV				Lg	Lg	05 37 53.0	
	0.5nm,0.3s,baz=148,slow=27,SNR=8.1						
KURK	Kurchatov	8.66	299	⇓Pn	Pn	05 35 51.4	-1.1
	3.3nm,0.8s						
KURK				⇓Sn	Sn	05 37 30.1	-0.1
	4.1nm,0.5s						
KURK				⇑Lg	Lg	05 38 21.8	
	8.0nm,0.5s						
PDGK	Podgornoye	8.66	248	⇓Pn	Pn	05 35 53.3	+0.6
	2.6nm,0.9s						
PDGK				⇑Sn	Sn	05 37 30.8	+0.2
	9.8nm,1.1s						
PDGK				⇑Lg	Lg	05 38 26.9	
	13nm,0.9s						
KURBB	Kurchatov Arra	8.68	298	Pn	Pn	05 35 52.1	-0.8
	0.3nm,0.3s,baz=108,slow=14,SNR=5.5						

NVS	Novosibirsk	9.03	332	eSg	Sn	05 38 36.5	+57
GTA	Gaotai	10.21	135	eP	Pn	05 36 53.5	+40
GTA				pP		05 36 57.5	
GTA				sP		05 37 00.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SONM	Songino Array	10.76	80	Pg	Pn	05 36 59.5	+38
	comp=Z,0.1nm,0.3s,baz=276,slow=17,SNR=3.9						
SONM				Lg	Lg	05 39 12.1	
	comp=Z,0.1nm,0.3s,baz=275,slow=24,SNR=3.0						

*NEIC **27** 05:42:18.5±0.0, 17°.27N×94°.36W, h27^{km}, MD4.0(MEX), After MEX.*

MEX 27 05:42:18.5±0.6**, 17°.27N×94°.36W, h27**^{km}±8^{km}**, MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.54	251	i P	Pb	05 42 27.6	-1.7
CMIG				i S	Sb	05 42 34.7	-2.1
CMIG	Matias Romero	0.54	251	i P	Pb	05 42 27.6	-1.7
CMIG				i S	Sb	05 42 34.7	-2.1
TUIG	Tuzandepetl	0.76	355	eP	Pb	05 42 32.9	-0.3
TUIG	Tuzandepetl	0.76	355	eP	Pb	05 42 32.9	-0.3
HUIG	Huatulco	2.25	229	eP	Pn	05 42 52.3	-1.7
HUIG				eS	Sn	05 43 17.8	-3.1
HUIG	Huatulco	2.25	229	eP	Pn	05 42 52.3	-1.7
HUIG				eS	Sn	05 43 17.8	-3.1
VHO	Vista Hermosa	2.28	265	eP	Pn	05 42 52.7	-1.9
VHO				eS	Sn	05 43 19.1	-2.9
VHO	Vista Hermosa	2.28	265	eP	Pn	05 42 52.7	-1.9
VHO				eS	Sn	05 43 19.1	-2.9
CCIG	Comitan	2.34	114	eP	Pn	05 42 53.0	-2.5
CCIG	Comitan	2.34	114	eP	Pn	05 42 53.0	-2.5

TRN 27 06:35:03.1, 11°.52N×60°.23W, h43^{km}**, MD3.7, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOSP	Speyside	0.38	234	eP	Pn	06 35 12.7	+0.3
TOSP				eS	Sn	06 35 21.6	+2.6
GRGR	Grenville	1.52	294	eP	Pn	06 35 29.9	+2.0
GRGR				eS	Sn	06 35 47.8	+1.3
SVCV	St. Vincent, C	1.96	333	eP	Pn	06 35 34.9	+1.0
SVCV				eS	Sn	06 36 00.0	+2.8
SVB	Belmont	2.01	330	eP	Pn	06 35 35.7	+1.1
SVB				eS	Sn	06 35 59.4	+0.9
SSV	Crater Summit	2.03	332	eP	Pn	06 35 36.0	+1.1
SSV				eS	Sn	06 36 00.9	+1.8
SVV	Soufriere Volc	2.03	332	eP	Pn	06 35 37.0	+2.2
SVV				eS	Sn	06 36 00.6	+1.6
MCLT	Moule a Chique	2.29	342	eP	Pn	06 35 39.4	+1.1
SLB	Belfond	2.43	341	eP	Pn	06 35 42.5	+2.2
SLB				eS	Sn	06 36 09.0	+0.2
TRMF	Trois Ilets	3.10	345	eP	Pn	06 35 50.7	+1.2
LPMF	Morne Lapointe	3.12	347	eP	Pn	06 35 50.9	+1.1
PML	Morne Lenard	3.37	344	eP	Pn	06 35 55.2	+1.9
GBMF	Grand Be	3.38	344	eP	Pn	06 35 55.6	+2.1
BAMF	Morne Balai	3.40	345	eP	Pn	06 35 55.6	+2.0
PCM	Pelee Case Pet	3.41	344	eP	Pn	06 35 55.4	+1.6

IDC 27 06:47:43.7±3.0**, 29°.53S×177°.95W, h0**^{km}**, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.8**/30**, mbtmp3.9**/3**, Error ellipse: s-maj=86.0km s-min=36.4km az=39.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.20	266	P	P	06 55 46.8	0.0
	0.5nm,0.5s,baz=105,slow=7.7,SNR=8.8						
WRA	Warramunga Arr	44.11	271	P	P	06 55 54.0	-0.1
	1.0nm,0.5s,baz=112,slow=8.0,SNR=14						
QSPA	South Pole Qui	60.58	180	P	P	06 57 55.9	0.0
	0.9nm,0.6s,baz=33,slow=1.8,SNR=7.7						
FINES	FINESS Array B	144.34	340	PKP	PKPdf	07 07 20.3	-0.8
	1.4nm,0.4s,baz=47,slow=4.2,SNR=17						

IDC 27 06:48:52.2±2.6**, 2°.49S×128°.27E, h0**^{km}**, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.3**/35**, mbtmp3.3**/3**, ML2.9**/1**, Error ellipse: s-maj=217.0km s-min=27.6km az=68.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.34	162	P	Pn	06 53 06.3	-1.9
	0.0nm,0.3s,baz=344,slow=13,SNR=2.9						
ASAR	Alice Springs	21.75	166	P	P	06 53 46.9	+1.4
	0.4nm,0.5s,baz=346,slow=10.0,SNR=3.5						
MKAR	Makanchi Array	63.53	327	P	P	06 59 24.3	-0.2
	0.4nm,0.6s,baz=133,slow=8.0,SNR=4.6						

*WEL **27** 06:49:48.0±1.3, 31°S±23°×17°7W±5°0, h141^{km}±64^{km}*

*IDC **27** 06:49:49.9±0.5, 30°.84S×177°.45W, h0^{km}, mb4.8/15, mb1 5.0/15, mb1mx4.8/31, mbtmp4.8/15, MS4.2/16, Ms1 4.2/16, ms1mx4.1/27, Error ellipse: s-maj=20.9km s-min=18.0km az=1.0*

*NEIC **27** 06:49:50.8±2.0, 31°.07S×177°.56W, h4^{km}±12^{km}, mb5.1/71, Error ellipse: s-maj=6.2km s-min=4.7km az=114.0*

*ISCJB **27** 06:49:53.1±0.2, 31°.11S±0°.02×177°.64W±0°.04, h27^{km}, mb5.0/89, MS4.3/16, Error ellipse: s-maj=5.5km s-min=2.3km az=26.0*

*MOS **27** 06:49:53.3±1.0, 30°.82S×177°.60W, h23^{km}, mb5.3/40, MS4.6/5, Error ellipse: s-maj=11.7km s-min=9.3km az=101.6*

*BJI **27** 06:49:53.9, 30°.33S×176°.89W, h31^{km}, mB5.4/8, mb5.3/29, Ms5.1/5, Ms7 4.7/4*

*GCMT **27** 06:49:54.8±0.3, 30°.81S±0°.04×177°.18W±0°.02, h19^{km}±1^{km}, MW5.0/68, Moment Tensor Solution. s33,c41; s68,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.94±.18; M$_{\theta\theta}$-0.42±.12; M$_{\phi\phi}$-2.52±.11; M$_{r\theta}$-0.29±.33; M$_{\theta\phi}$-0.97±.10; M$_{\phi r}$1.73±.24; Best double couple: M$_0$3.40100×10^{16} NP1:ϕ_s7.00000°, δ60.00000°, λ76.00000°. NP2: ϕ_s214.00000°, δ33.00000°, λ114.00000°. Principal axes: T 3.5200, Plg71.0000°, Azm244.0000°; N -0.2350, Plg12.0000°, Azm14.0000°; P -3.2820, Plg14.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 06:49:54.2±0.3**, 31°.05S**±0°.04×**177°.52W**±0°.07**, h27**^{km}**, n412,** $\sigma 1^{s}.65$/425**, mb5.1**/89**, MS4.3**/16**, 14C-8D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.82	349	P	Pn	06 50 21.0	-2.7
GLKZ				S	Sn	06 50 44.6	-1.3
RAO	Raoul Island	1.83	349	ePn	Pn	06 50 21.1	-2.8
RAO	Raoul Island	1.83	349	eP	Pn	06 50 21.1	-2.8
RIZ	Raoul Island	1.84	349	P	Pn	06 50 21.4	-2.6
RIZ				S	Sn	06 50 45.0	-1.3
MXZ	Matakaoa Point	7.35	207	ePn	Pn	06 51 38.8	-1.0
MXZ				eSn	Sn	06 53 02.9	+0.6
MXZ	Matakaoa Point	7.35	207	S	Sn	06 53 04.2	+1.9
WMGZ	Waiomatatini S	7.54	205	P	Pn	06 51 40.5	-1.8
WMGZ				S	Sn	06 53 09.8	+3.0
PKGZ	Pakihiroa	7.73	207	S	Sn	06 53 13.3	+1.7
HAZ	Te Kaha	7.73	209	P	Pn	06 51 43.2	-1.7
HAZ				S	Sn	06 53 15.3	+3.7
PUZ	Puketiti	7.82	205	P	Pn	06 51 44.3	-1.9
PUZ				S	Sn	06 53 15.4	+1.5
RUGZ	Raukumara Rang	7.95	209	P	Pn	06 51 46.0	-2.1
RUGZ				S	Sn	06 53 20.2	+3.0
TWGZ	Tauwhareparae	8.02	206	P	Pn	06 51 46.0	-2.9
TWGZ				S	Sn	06 53 19.9	+1.2
CNGZ	Carnagh Statio	8.20	204	P	Pn	06 51 48.1	-3.4
CNGZ				S	Sn	06 53 23.7	+0.5
TKGZ	Te Karaka	8.29	206	P	Pn	06 51 49.7	-3.0
TKGZ				S	Sn	06 53 26.7	+1.2
MWZ	Matawai	8.33	208	P	Pn	06 51 50.4	-2.8
MWZ				S	Sn	06 53 27.1	+0.7
WCZ	Waipu Caves	8.36	232	P	Pn	06 52 02.8	+9.2
URZ	Urewera	8.44	210	ePn	Pn	06 51 51.6	-3.1
URZ				ePn	Pn	06 51 52.2	-2.4
URZ				eSn	Sn	06 53 28.9	-0.1
URZ				eSn	Sn	06 53 29.6	+0.6
URZ	Urewera	8.44	210	Pn	Pn	06 51 51.6	-3.1
	2.3nm,0.3s,baz=328,slow=23,SNR=3.6						
URZ				Sn	Sn	06 53 28.9	-0.1
	18nm,0.3s,baz=294,slow=20,SNR=9.9						
URZ	Urewera	8.44	210	S	Sn	06 53 29.9	+0.9
RAGZ	Rawiri	8.51	208	S	Sn	06 53 29.9	-1.0
OUZ	Omahuta	8.53	239	ePn	Pn	06 52 02.5	+6.6
OUZ	Omahuta	8.53	239	P	Pn	06 52 02.6	+6.7
RIGZ	Rimuhau	8.56	206	P	Pn	06 51 52.2	-4.2
RIGZ				S	Sn	06 53 34.1	+2.0
BKZ	Black Stump Fm	9.46	210	ePn	Pn	06 52 09.2	+0.5
BKZ				eSn	Sn	06 53 54.0	-0.3
HIZ	Hauiti	9.73	218	ePn	Pn	06 52 13.2	+0.8
BFZ	Birch Farm	10.85	206	ePn	Pn	06 52 26.4	-1.3
BFZ				eSn	Sn	06 54 15.6	-13
SNZO	South Karori	12.00	209	ePn	Pn	06 52 41.8	-1.6
SNZO				eSn	Sn	06 54 50.4	-6.0
THZ	Tophouse	13.17	213	ePn	Pn	06 52 58.6	-0.9
THZ				eSn	Sn	06 55 17.6	-7.4
KHZ	Kahutara	13.41	210	ePn	Pn	06 52 59.1	-3.5
KHZ				eSn	Sn	06 55 22.2	-8.5
MSVF	Nonsavu	13.86	342	ePn	Pn	06 53 06.7	-2.3
MSVF				e		06 53 08.2	
MSVF	Nonsavu	13.86	342	eP	Pn	06 53 06.7	-2.3
LTZ	Lake Taylor	14.26	212	ePn	Pn	06 53 13.4	-0.9
LTZ				eSn	Sn	06 55 45.0	-6.6
OXZ	Oxford	14.79	211	ePn	Pn	06 53 19.6	-1.9
OXZ				eSn	Sn	06 55 52.0	-13
MQZ	McQueen's Vall	14.84	209	ePn	Pn	06 53 20.7	-1.4
MQZ				eSn	Sn	06 55 56.5	-9.0
RPZ	Rata Peaks	15.54	212	ePn	Pn	06 53 26.1	-5.3
RPZ				ePn	Pn	06 53 27.6	-3.9
RPZ				eSn	Sn	06 56 11.0	-12
RPZ				eSn	Sn	06 56 14.6	-8.1
RPZ	Rata Peaks	15.54	212	Pn	Pn	06 53 26.1	-5.3
	1.2nm,0.3s,baz=84,slow=1.3,SNR=10						
RPZ				Sn	Sn	06 56 11.0	-12
	0.9nm,0.3s,baz=34,slow=17,SNR=5.7						
RPZ				LR	LR	07 00 02.8	
	comp=Z,1μm,18.2s,baz=36,slow=39						
PINNC	Pines Island,	15.82	298	ePn	Pn	06 53 35.0	-0.2
	146nm,1.1s						
FOZ	Fox Glacier	16.00	215	ePn	Pn	06 53 36.3	-1.0
	32nm,0.8s						
OUENC	Ouen Island, N	16.39	298	ePn	Pn	06 53 43.5	+1.0
	132nm,1.1s						
LBZ	Lake Benmore	16.46	213	ePn	Pn	06 53 42.5	-0.7
	91nm,1.7s						
ODZ	Otahua Downs	16.77	210	ePn	Pn	06 53 45.7	-1.4
	38nm,0.8s						
DZM	Mont Dzumac	16.89	298	eP	P	06 53 53.0	+2.3
	269nm,1.1s						
DZM				eLR	LR	06 57 54.4	
	comp=Z,3μm,24.9s						
DZM	Mont Dzumac	16.89	298	Pn	P	06 53 51.9	+1.2
	0.9nm,0.3s,baz=106,slow=13,SNR=12						
DZM				LR	LR	06 59 10.2	
	comp=Z,2μm,18.5s,baz=141,slow=33						
WKZ	Wanaka	17.34	214	ePn	Pn	06 53 51.9	-2.3
	44nm,1.1s						
MLZ	Mavora Lakes	18.17	214	ePn	Pn	06 54 00.8	-3.7
	113nm,1.5s						
WHZ	Wether Hill Ro	18.64	213	eP	P	06 54 07.9	-1.8
	22nm,0.9s						
RAR	Rarotonga	18.68	63	P	P	06 54 09.5	-0.9
RAR				pmax	pmax		
	comp=Z,86nm,1.4s						
RAR	Rarotonga	18.68	63	LR	LR	07 00 56.9	
	comp=Z,468nm,18.4s,baz=266,slow=36						
DCZ	Deep Cove	18.71	215	eP	P	06 54 09.8	-0.7
	comp=Z,52nm,1.4s						
TBI	Tubuai	26.06	80	eLQ	LQ	07 00 22.0	
	comp=Z,632nm,25.2s						
TBI				eLR	LR	07 01 26.5	
	comp=Z,703nm,31.0s,baz=230						
TBI	Tubuai	26.06	80	eT	T	07 22 25.5	
	comp=Z,16nm,0.4s						
ARMA	Armidale	26.49	263	P	P	06 55 33.3	+3.8
	baz=27,SNR=8.0						
ARMA	Armidale	26.49	263	eP	P	06 55 29.5	0.0
	comp=Z,66nm,1.4s						
MGCD	Mangrove Creek	26.61	257	P	P	06 55 34.3	+3.9
	baz=27,SNR=4.4						
CNB	Canberra Magne	27.97	252	P	P	06 55 42.9	+0.3
	baz=28,SNR=4.6						
PAE	Paea	28.64	69	eT	T	07 25 36.0	
	comp=Z,2.7nm,0.3s						
PPT2	Papeete2	28.68	69	eLQ	LQ	07 01 20.2	
	comp=Z,544nm,24.5s						
PPT2				eLR	LR	07 02 38.9	
	comp=Z,390nm,21.0s,baz=231						
PPT2	Papeete2	28.68	69	eT	T	07 25 39.8	
	comp=Z,2.1nm,0.3s						
PPT	Papeete	28.69	69	LR	LR	07 06 30.1	
	comp=Z,465nm,18.1s,baz=244,slow=35						
YNG	Young	28.80	254	P	P	06 55 53.4	+3.4
	baz=29,SNR=5.5						
RMQ	Roma	29.84	270	P	P	06 56 02.5	+3.2
	baz=30,SNR=21						
HNR	Honiara	30.04	311	LR	LR	07 06 08.2	
	comp=Z,271nm,20.0s,baz=153,slow=33						
TOO	Toolangi	31.09	248	P	P	06 56 12.7	+2.4
	baz=31,SNR=4.1						
CMSA	Cobar Meteorol	31.35	259	P	P	06 56 15.2	+2.7
	baz=32,SNR=26						
VAH	Vaihoa	31.54	67	eT	T	07 29 13.0	
	comp=Z,9.0nm,0.3s						
ARPS	Mount Arapiles	34.02	249	P	P	06 56 38.0	+2.1
	baz=34,SNR=5.9						
CTA	Charters Tower	34.32	280	P	P	06 56 39.2	+0.6
	comp=Z,77nm,0.9s,baz=103,slow=12,SNR=50						
CTAO	Charters Tower	34.32	280	eP	P	06 56 40.0	+1.4
	comp=Z,73nm,0.9s						
CTAO	Charters Tower	34.32	280	eP	P	06 56 40.0	+1.4
CTAO				pmax	pmax		
	comp=Z,73nm,0.9s						
STKA	Stephens Creek	34.74	258	P	P	06 56 44.4	+2.2
	baz=35,SNR=28						
STKA	Stephens Creek	34.74	258	eP	P	06 56 44.6	+2.4
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	34.74	258	P	P	06 56 43.9	+1.7
	comp=Z,41nm,0.9s,baz=91,slow=9.4,SNR=44						
STKA				LR	LR	07 10 14.8	
	comp=Z,768nm,18.3s,baz=64,slow=35						
HTT	Hallett	36.72	255	P	P	06 57 00.7	+1.4
	baz=37,SNR=12						
MTSU	Mount Surprise	36.83	281	P	P	06 57 01.8	+1.6
	baz=37,SNR=22						
RKT	Rikitea	38.51	89	eLR	LR	07 07 21.7	
	comp=Z,579nm,31.0s						
BBOO	Buckleboo	39.20	255	P	P	06 57 20.7	+0.7
	baz=39,SNR=14						
BBOO	Buckleboo	39.20	255	eP	P	06 57 20.8	+0.7
	comp=Z,36nm,0.9s						
COEN	Coen	39.85	286	P	P	06 57 27.5	+1.8
	baz=40,SNR=6.5						
COEN	Coen	39.85	286	eP	P	06 57 25.8	+0.1
	comp=Z,16nm,0.9s						
TAOE	Nuku Hiva Isla	41.19	66	eLR	LR	07 08 21.7	
	comp=Z,324nm,31.4s						
AS01	Alice Springs	43.45	267	eP	P	06 57 54.9	-0.3
AS31	Alice Springs	43.49	267	eP	P	06 57 56.1	+0.6
	comp=Z,5.1nm,0.6s						
ASAR	Alice Springs	43.49	267	P	P	06 57 55.9	+0.4
	comp=Z,6.8nm,0.7s,baz=103,slow=7.4,SNR=43						
ASAR				PcP	PcP	06 59 42.7	-0.6
	comp=Z,8.5nm,0.9s,baz=119,slow=4.1,SNR=6.9						
ASAR				ScP	ScP	07 03 37.6	+4.7
	comp=Z,3.1nm,0.9s,baz=123,slow=4.1,SNR=6.5						
ASAR				LR	LR	07 16 10.4	
	comp=Z,910nm,18.1s,baz=110,slow=36						
WB2	Warramunga Arr	44.53	273	eP	P	06 58 03.0	-0.8
	comp=Z,50nm,1.0s						
WB2				eP	P	06 58 03.6	-0.2
WRAB	Tennant Creek	44.53	273	eP	P	06 58 03.8	-0.1
	comp=Z,47nm,1.0s						
WRAB	Tennant Creek	44.53	273	d iP	P	06 58 04.6	+0.8
WRAB				pmax	pmax		
	comp=Z,40nm,0.8s						
WR1	Warramunga Arr	44.54	273	eP	P	06 58 03.0	-0.9
	comp=Z,59nm,1.0s						
WRA	Warramunga Arr	44.54	273	P	P	06 58 03.0	-0.9
WRA				pmax	pmax		
	comp=Z,36nm,0.8s						
WRA				MLR	MLR		
	comp=Z,973nm,18.2s						
WRA	Warramunga Arr	44.54	273	P	P	06 58 03.0	-0.9
	comp=Z,36nm,0.8s,baz=113,slow=7.6,SNR=90						
WRA				LR	LR	07 16 04.5	
	comp=Z,973nm,18.1s,baz=110,slow=35						
FORT	Forrest	46.28	256	P	P	06 58 17.5	0.0
	baz=46,SNR=8.0						
FORT	Forrest	46.28	256	eP	P	06 58 17.4	-0.2
	comp=Z,41nm,0.8s						
WRKA	Warakurna	47.81	263	P	P	06 58 29.2	-0.4
	baz=48,SNR=19						
KDU	Kakadu	49.44	280	P	P	06 58 41.4	-0.7
	baz=50,SNR=3.3						
FITZ	Fitzroy Crossi	52.77	270	LR	LR	07 21 31.9	
	comp=Z,735nm,18.3s,baz=94,slow=36						
CASY	Casey	54.76	208	eP	P	06 59 22.0	+1.0
	comp=Z,39nm,0.9s						
KIP	Kipapa	55.43	22⇑	eP	P	06 59 26.1	-0.3
KIP				pmax	pmax		
	comp=Z,82nm,1.1s						
MEEK	Meekatharra	55.44	257	P	P	06 59 26.6	-0.1
	baz=56,SNR=3.5						
QSPA	South Pole Qui	59.06	180	eP	P	06 59 53.7	+2.0
QSPA				eP	P	06 59 54.2	+2.5
QSPA	South Pole Qui	59.06	180	P	P	06 59 53.7	+2.0
	comp=Z,19nm,1.0s,baz=38,slow=4.8,SNR=21						
DAV	Davao City (W)	66.28	295	LR	LR	07 28 57.7	
	comp=Z,53nm,19.9s,baz=164,slow=35						
SYO	Syowa Base	76.57	193⇑	eP	P	07 01 41.5	-0.2
SYO	Syowa Base	76.57	193⇑	ePcP	PcP	07 01 53.6	+0.5
SNAA	Sanae	77.49	178	P	P	07 01 45.9	-1.0
SNAA	Sanae	77.49	178	eP	P	07 01 48.2	+1.3
	comp=Z,31nm,1.1s						
SNAA	Sanae	77.49	178	eP	P	07 01 48.2	+1.3
SNAA				pmax	pmax		
	comp=Z,31nm,1.1s						
VNA3	Neumayer Olymp	77.63	176	P	P	07 01 48.3	+0.6
VNA2	Neumayer--Watz	78.07	177	P	P	07 01 51.3	+1.2
	baz=166,slow=4.5						
NVL	N'lazarevskaya	78.25	183	eP	P	07 01 58.0	+7.0
NVL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VNA1	Neumayer--Stat	78.29	176	P	P	07 01 52.2	+0.9
MJAR	Matsushiro Arr	79.01	325	P	P	07 01 53.9	-1.8
	comp=Z,8.6nm,0.9s,baz=169,slow=5.3,SNR=11						
MJAR				LR	LR	07 32 58.4	
	comp=Z,58nm,20.8s,baz=180,slow=33						
MAJO	Matsushiro	79.02	325⇓	iP	P	07 01 54.5	-1.2
MAJO				pmax	pmax		
	comp=Z,21nm,1.2s						
JNU	Nakatsue	80.32	318	LR	LR	07 33 53.1	
	comp=Z,50nm,18.7s,baz=103,slow=33						
ERM	Erimo	81.23	331	eP	P	07 02 08.1	+0.7
	comp=Z,25nm,1.0s						
ERM	Erimo	81.23	331	deP	P	07 02 08.8	+1.4
ERM				pmax	pmax		
	comp=Z,31nm,1.3s						
PLCA	Paso Flores	81.76	133	eP	P	07 02 11.6	+0.9
	comp=Z,33nm,1.7s						
PLCA	Paso Flores	81.76	133	eP	P	07 02 11.6	+0.9
PLCA				pmax	pmax		
	comp=Z,33nm,1.7s						
PLCA	Paso Flores	81.76	133	P	P	07 02 11.1	+0.4
	comp=Z,4.5nm,1.0s,baz=282,slow=3.1,SNR=5.6						
TJN	Taejon	84.67	318⇓	eP	P	07 02 25.5	+0.1
IPM	Ipoh	84.99	278	eP	P	07 02 27.8	+0.1
	comp=Z,16nm,0.9s						
KSRS	Korea Array	85.11	319	P	P	07 02 28.1	+0.5
	comp=Z,4.2nm,0.9s,baz=146,slow=5.4,SNR=15						
KSRS				LR	LR	07 41 00.5	
	comp=Z,31nm,18.2s,baz=120,slow=36						
KSAR	Wonju Array Be	85.13	319	P	P	07 02 28.1	+0.4
KSAR	Wonju Array Be	85.13	319	P	P	07 02 28.1	+0.4
KS01	Wonju Array Si	85.14	319	eP	P	07 02 27.7	0.0
YSS	Yuzh-Sakhalins	85.51	334	eP	P	07 02 29.8	+0.4
	comp=Z,42nm,1.0s						
YSS	Yuzh-Sakhalins	85.51	334⇓	eP	P	07 02 30.2	+0.8
YSS				e		07 02 41.6	
YSS				eS	S	07 12 59.3	+0.4
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				pmax	pmax		
	comp=E,20nm,0.8s						
YSS				pmax	pmax		
	comp=Z,100nm,4.5s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
KULM	Kulim	85.73	279	eP	P	07 02 31.8	+0.5
	comp=E,22nm,1.1s						
MURC	Murrieta	85.88	47	P	P	07 02 32.3	+0.8
	baz=228						
MONP2	Monument Peak	85.89	48	P	P	07 02 32.4	+0.5
	baz=229						
PSI	Prapat	85.91	276	eP	P	07 02 30.6	-1.8
	comp=E,20nm,1.3s						
PSI	Prapat	85.91	276	P	P	07 02 30.6	-1.8
	comp=E,4.2nm,0.5s,baz=180,slow=9.9,SNR=5.1						
BFSC	Mount Baldy Ra	86.01	46	P	P	07 02 33.2	+0.8
	baz=228						
VES	Vestal, Richgr	86.23	44	P	P	07 02 33.3	+0.1
	baz=227						
EDW2	Edwards Air Fo	86.24	45	P	P	07 02 34.0	+0.6
	baz=228						
GSI	Gunungsitoli	86.30	274	eP	P	07 02 34.2	+0.1
	comp=E,58nm,1.0s						
TPFO	Pinon Flats	86.34	47	P	P	07 02 34.9	+0.8
	baz=229						
PFO	Pinyon Flats O	86.34	47	eP	P	07 02 34.3	+0.3
	comp=E,7.7nm,1.0s						
PFO	Pinyon Flats O	86.34	47	P	P	07 02 34.1	+0.1
	baz=229						
XPFO	Pion Flat	86.35	47	eP	P	07 02 34.4	+0.4
	comp=E,8.9nm,1.1s						
ISA	Isabella, Lake	86.47	44	eP	P	07 02 35.2	+0.6
	comp=E,20nm,1.4s						
ISA	Isabella, Lake	86.47	44	P	P	07 02 36.0	+1.5
ISA				pmax	pmax		
	comp=Z,20nm,1.4s						
ISA	Isabella, Lake	86.47	44	P	P	07 02 36.0	+1.5
	baz=227						
PETK	Petropavlovsk-	86.55	345	P	P	07 02 32.6	-1.8
	comp=Z,9.7nm,0.9s,baz=183,slow=3.0,SNR=5.4						
PETK				LR	LR	07 38 50.0	
	comp=Z,90nm,19.4s,baz=121,slow=34						
PEA1	Petropavlovsk-	86.55	345	eP	P	07 02 32.6	-1.8
LRMC	Laurel Mtn Rad	86.83	45	P	P	07 02 37.9	+1.6
	baz=228						
BELC	Belle Mtn. Jos	86.89	47	P	P	07 02 37.8	+1.1
	baz=229						
CMB	Columbia Colle	86.97	42	eP	P	07 02 37.3	+0.4
	comp=Z,11nm,1.3s						
CMB	Columbia Colle	86.97	42	eP	P	07 02 37.3	+0.4
CMB				pmax	pmax		
	comp=Z,11nm,1.3s						
NJ2	Nanjing	86.98	310	eP	P	07 02 37.0	0.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BC3	Big Chuckawall	87.01	48	P	P	07 02 39.1	+1.9
	baz=229						
MSHR	Mys Shultsa	87.13	325⇑	iP	P	07 02 37.4	0.0
O02D	Mt. Diablo Mer	87.14	39	P	P	07 02 39.6	+1.9
	baz=224						
VLA	Vladivostok	87.17	325⇑	eP	P	07 02 36.2	-1.4
VLA				pmax	pmax		
	comp=Z,25nm,1.0s						
CWC	Cottonwood Cre	87.23	44	P	P	07 02 39.0	+0.7
	baz=228						
GSC	Goldstone, Bar	87.24	46	eP	P	07 02 39.3	+1.0
	comp=Z,16nm,1.2s						
GSC	Goldstone, Bar	87.24	46	eP	P	07 02 39.3	+1.0
GSC				pmax	pmax		
	comp=Z,16nm,1.2s						
GSC	Goldstone, Bar	87.24	46	P	P	07 02 39.2	+0.8
	baz=228						
AFDM	Forest Hills D	87.27	41	eP	P	07 02 39.2	+0.9
	comp=Z,22nm,1.8s						
MPMC	Manual Prospec	87.33	45	P	P	07 02 39.6	+0.7
	baz=228						
OMMB	Old Mammoth Mi	87.48	43	eP	P	07 02 40.2	+0.5
	comp=Z,16nm,1.6s						
IRM	Iron Mountain	87.53	47	P	P	07 02 40.9	+1.3
	baz=229						
WAKR	Walker	87.83	42	eP	P	07 02 41.2	0.0
	comp=Z,56nm,2.0s						

TRTT	Trang	87.87	280	P	P	07 02 44.2	+2.5
USA0B	Ussuriysk Arra	87.93	326	eP	P	07 02 42.0	+0.8
	comp=Z,15nm,1.0s						
USRK	Ussuriysk Ar.	87.93	326	P	P	07 02 41.2	-0.1
	comp=Z,11nm,0.9s,baz=132,slow=3.3,SNR=19						
M02C	Callahan	87.97	38	P	P	07 02 42.2	+0.6
	baz=224						
GRAC	Grapevine Rang	88.03	44	P	P	07 02 42.7	+0.7
	baz=228						
PNTR	Pine Nut	88.14	41	eP	P	07 02 43.2	+0.5
	comp=Z,18nm,1.3s						
LDFC	Landfair	88.14	47	eP	P	07 02 43.4	+0.8
	comp=Z,28nm,1.1s						
VCNR	Virginia City	88.26	41	eP	P	07 02 43.6	+0.4
	comp=Z,6.5nm,1.2s						
NV01	Mina Array Sit	88.44	42	eP	P	07 02 44.4	+0.2
NVAR	Mina Array Bea	88.44	42	P	P	07 02 43.7	-0.4
	comp=Z,3.3nm,0.8s,baz=221,slow=6.5,SNR=14						
RYN	Ryan	88.44	42	eP	P	07 02 45.1	+1.0
	comp=Z,11nm,1.4s						
NV11	Mina Array Sit	88.53	43	eP	P	07 02 45.1	+0.6
	comp=Z,0.8nm,1.3s						
TPNV	Topopah Spring	88.67	45	eP	P	07 02 46.3	+1.1
	comp=Z,14nm,1.3s						
TPNV	Topopah Spring	88.67	45	eP	P	07 02 46.3	+1.1
TPNV				pmax	pmax		
	comp=Z,14nm,1.3s						
TPNV	Topopah Spring	88.67	45	P	P	07 02 45.5	+0.3
	baz=229						
PAHR	Pah Rah Range	88.69	41	eP	P	07 02 45.6	+0.5
	comp=Z,9.4nm,1.3s						
Y14A	Wickenburg	88.75	49	eP	P	07 02 46.6	+1.1
	comp=Z,7.7nm,1.1s						
TYV	Tymovskoe	88.82	336	eP	P	07 02 46.2	+0.9
TYV				e		07 13 31.9	
TYV				pmax	pmax		
	comp=Z,17nm,1.2s						
W13A	Hualapai Mount	88.93	47	eP	P	07 02 47.1	+0.6
	comp=Z,10nm,1.3s						
KVN	Kaiserville	88.97	42	eP	P	07 02 47.0	+0.5
	comp=Z,24nm,1.7s						
KVN	Kaiserville	88.97	42	eP	P	07 02 47.1	+0.5
KVN				pmax	pmax		
	comp=Z,24nm,1.7s						
SHPR	Sheep Range	89.04	46	eP	P	07 02 47.7	+0.8
	comp=Z,12nm,1.4s						
TUC	Tucson	89.20	51	eP	P	07 02 48.8	+1.2
	comp=Z,15nm,1.4s						
TUC	Tucson	89.20	51	eP	P	07 02 48.8	+1.2
TUC				pmax	pmax		
	comp=Z,15nm,1.4s						
TUC	Tucson	89.20	51	P	P	07 02 48.3	+0.7
	baz=232						
MDJ	Mudanjiang	89.40	325	P	P	07 02 48.3	+0.1
MDJ				pmax	pmax		
	comp=Z,17nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,180nm,6.8s						
X16A	Lo Mia Camp, P	90.06	49	eP	P	07 02 52.8	+1.0
	comp=Z,19nm,1.4s						
LCMT	Little Creek M	90.54	46	eP	P	07 02 54.9	+1.0
	comp=Z,7.4nm,1.1s						
PINE	Pine Mountain	90.67	37	eP	P	07 02 55.3	+0.9
	comp=Z,19nm,1.2s						
TIA	Tai'an	90.72	313	P	P	07 02 55.0	+0.4
TIA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
U15A	North Rim	90.77	47	eP	P	07 02 56.4	+1.2
	comp=Z,15nm,1.3s						
WUAZ	Wupatki	90.78	48	eP	P	07 02 55.5	+0.4
	comp=Z,10nm,1.1s						
WUAZ	Wupatki	90.78	48	P	P	07 02 56.6	+1.4
	baz=232						
KNB	Kanab	90.81	46	eP	P	07 02 56.4	+1.2
	comp=Z,20nm,1.3s						
KNB	Kanab	90.81	46	eP	P	07 02 56.4	+1.2
KNB				pmax	pmax		
	comp=Z,20nm,1.3s						
CCUT	Cedar City	90.81	46	eP	P	07 02 56.8	+1.5
	comp=Z,16nm,1.7s						
CN2	Changchun	90.91	323	eP	P	07 02 55.5	+0.2
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
WVOR	Wild Horse Val	90.96	39	eP	P	07 02 56.6	+1.0
	comp=Z,18nm,1.6s						
WVOR	Wild Horse Val	90.96	39	eP	P	07 02 56.7	+1.0
WVOR				pmax	pmax		
	comp=Z,18nm,1.6s						
SZCU	Shurtz Canyon	91.01	46	eP	P	07 02 57.5	+1.3
	comp=Z,12nm,1.5s						
X18A	Snowflake	91.10	50	eP	P	07 02 58.1	+1.5
	comp=Z,18nm,1.6s						
PSUT	Pine Spring	91.14	45	eP	P	07 02 57.5	+0.8
	comp=Z,7.1nm,1.2s						
PBKT	Sadao Pong	91.38	288	eP	P	07 02 58.9	+0.8
PBKT	Sadao Pong	91.38	288	P	P	07 03 00.5	+2.5
PKCU	Pink Cliffs	91.39	46	eP	P	07 02 59.1	+1.0
	comp=Z,25nm,1.5s						
NKL	Nikolayevsk	91.40	336	eP	P	07 02 57.0	-0.2
NKL				pmax	pmax		
	comp=Z,22nm,1.1s						
W18A	Petrified Fore	91.60	49	eP	P	07 02 59.5	+0.5
	comp=Z,10nm,1.2s						
I07A	Izee	91.62	38	eP	P	07 02 59.8	+1.1
	comp=Z,38nm,1.8s						
J08A	Circle Bar Ran	91.67	39	eP	P	07 03 00.0	+1.0
	comp=Z,13nm,1.4s						
SRDT	SRDT	91.73	286	P	P	07 03 02.8	+3.1
ELK	Elko	91.74	42	eP	P	07 02 59.8	+0.3
	comp=Z,2.6nm,1.0s						
ELK	Elko	91.74	42	eP	P	07 02 59.8	+0.3
ELK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KLR	Kul'dur	91.81	329	⇓iP	P	07 02 59.9	+0.6
MTPU	Mount Pierson	91.84	46	eP	P	07 03 01.7	+1.4
	comp=Z,14nm,1.4s						
UTHA	Uthaitani	92.09	287	P	P	07 03 04.6	+3.2
UTTA	Uttaradit	92.33	289	P	P	07 03 03.0	+0.6
TX31	Lajitas Ar. Si	92.39	57	eP	P	07 03 02.8	+0.2
TX31				eP	P	07 03 03.2	+0.6
TXAR	Lajitas Array	92.39	57	P	P	07 03 02.6	0.0
	comp=Z,1.5nm,1.1s,baz=211,slow=4.4,SNR=7.7						
G08A	Pilot Rock	92.73	37	eP	P	07 03 04.3	+0.5
	comp=Z,8.1nm,1.1s						
SRU	San Rafael Swe	93.53	46	eP	P	07 03 08.0	+0.2
	comp=Z,6.2nm,1.1s						
SRU	San Rafael Swe	93.53	46	eP	P	07 03 08.0	+0.2
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	93.66	51	⇑eP	P	07 03 09.5	+1.0
ANMO				pmax	pmax		
	comp=Z,12nm,3.1s						
SPUT	South Promonto	93.73	43	eP	P	07 03 09.6	+1.0
	comp=Z,9.9nm,1.3s						
HVU	Hansel Valley	93.83	43	eP	P	07 03 09.6	+0.6
	comp=Z,8.2nm,1.2s						
HVU	Hansel Valley	93.83	43	eP	P	07 03 09.6	+0.6
HVU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CMAR	Chiang Mai Arr	94.01	289	LR	LR	07 49 45.5	
	comp=Z,49nm,18.2s,baz=144,slow=38						
HLID	Hailey	94.03	41	eP	P	07 03 10.5	+0.6
	comp=Z,3.6nm,1.0s						
HLID	Hailey	94.03	41	P	P	07 03 10.5	+0.6
	baz=230						
MA2	Magadan	94.03	344	⇑eP	P	07 03 10.5	+1.2
MA2				pmax	pmax		
	comp=Z,5.0nm,1.4s						
CHTO	Chiang Mai	94.19	289	P	P	07 03 00.7	-10
KMI	Kunming	94.48	297	P	P	07 03 14.0	+1.5
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
SNOW	Snow King Moun	96.04	42	eP	P	07 03 20.1	+0.9
	comp=Z,27nm,1.9s						
PDAR	Pinedale Array	96.32	43	P	P	07 03 19.6	-0.9
	comp=Z,0.5nm,0.9s,baz=218,slow=4.2,SNR=3.2						
SEY	Seymchan	96.71	347	⇑eP	P	07 03 20.8	-0.6
CD2	Chengdu	96.78	302	eP	P	07 03 24.0	+1.3
BOZ	Bozeman (W)	96.86	40	P	P	07 03 23.7	+0.9
	baz=232						
HHC	Hu-ho-hao-te	96.98	314	eP	P	07 03 25.5	+2.1
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
ILAR	Eielson Array	98.47	13	P	P	07 03 28.0	-1.3
	comp=Z,0.4nm,0.9s,baz=236,slow=4.9,SNR=3.8						
CPUP	Villa Florida	99.25	128	LR	LR	07 44 57.8	
	comp=Z,166nm,18.0s,baz=227,slow=33						
LZH	Lanzhou	99.44	306	eP	Pdif	07 03 34.5	-0.1
LZH				pP	sP	07 03 44.5	+0.2
LZH				sP	pwP	07 03 48.0	-0.6
LZH				ePP	PP	07 07 41.3	+2.6
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				pmax	pmax		
	comp=Z,97nm,9.5s						
LZH				LR	LR		
	comp=Z,250nm,17.0s						
LZH				LR	LR		
	comp=Z,260nm,17.3s						
LZH				LR	LR		
	comp=Z,320nm,19.6s						
BILL	Bilibino	99.53	354	eP	Pdif	07 03 35.3	+1.3
BILL				ePPP	PPP	07 09 42.7	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKA	Yellowknife Ar	105.85	25	PKKPbc	PKKPbc	07 19 39.3	-0.3
	comp=Z,0.3nm,0.8s,baz=51,slow=3.3,SNR=4.4						
WMQ	Urumqi	113.95	308	ePKP	PKiKP	07 08 30.8	+0.2
WMQ				sPKP		07 08 42.5	
WMQ				LR	LR		
	comp=Z,120nm,18.3s						
WMQ				LR	LR		
	comp=Z,180nm,27.3s						
WMQ				LR	LR		
	comp=Z,130nm,19.5s						
DGZ	Jazzator, Alta	116.07	314	⇑iPKIKP	PKPdf	07 08 33.0	-1.5
RES	Resolute Bay	117.75	17	ePKPdf	PKPdf	07 08 36.3	-0.5
RES	Resolute Bay	117.75	17	ePKIKP	PKPdf	07 08 36.3	-0.5
MK01	Makanchi Array	118.50	310	ePKPdf	PKPdf	07 08 38.4	-0.8
MK31	Makanchi Array	118.51	310	ePKPdf	PKPdf	07 08 38.8	-0.4
MK31	Makanchi Array	118.51	310	ePKIKP	PKPdf	07 08 38.8	-0.4
MK32	Makanchi Array	118.51	310	ePKPdf	PKPdf	07 08 38.2	-1.0
MKAR	Makanchi Array	118.51	310	PKP	PKPdf	07 08 38.2	-1.0
	comp=Z,0.9nm,0.6s,baz=240,slow=0.5,SNR=8.5						
NRIK	Noril'sk	120.40	336	PKP	PKPdf	07 08 41.0	-1.0
	comp=Z,0.8nm,0.3s,baz=128,slow=5.3,SNR=4.5						
KSH	Kashi	120.93	300	PKP	PKPdf	07 08 42.3	-1.9
KSH				PP	PP	07 10 17.3	+3.4
KURK	Kurchatov	121.80	313	ePKPdf	PKPdf	07 08 44.8	-0.6
KURK	Kurchatov	121.80	313	⇓iPKIKP	PKPdf	07 08 44.7	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AAK	Ala-Archa	122.82	303	ePKPdf	PKPdf	07 08 47.8	0.0
AAK	Ala-Archa	122.82	303	⇓iPKIKP	PKPdf	07 08 47.6	-0.2
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBL	Kabul	124.86	293	ePKPdf	PKiKP	07 08 52.5	+0.2
GAR	Garm	125.03	298	ePKPdf	PKiKP	07 08 52.5	+0.1
GAR	Garm	125.03	298	ePKIKP	PKiKP	07 08 52.5	+0.1
KK31	Karatay Array	125.78	303	ePKPdf	PKPdf	07 08 53.1	-0.2
KK31	Karatay Array	125.78	303	ePKIKP	PKPdf	07 08 53.1	-0.2
KKAR	Karatay Array	125.78	303	ePKPdf	PKPdf	07 08 53.0	-0.3
KKAR	Karatay Array	125.78	303	ePKIKP	PKPdf	07 08 53.0	-0.3
BRVK	Borovoye	127.23	315	ePKPdf	PKPdf	07 08 55.4	-0.2
BRVK	Borovoye	127.23	315	i PKIKP	PKPdf	07 08 55.0	-0.6
ABKAR	Akbulak array	133.65	310	ePKPdf	PKiKP	07 09 08.9	-0.3
ARU	Arti	133.86	320	⇑ePKIKP	PKPdf	07 09 06.4	-1.7
KMBO	Kilima Mbogo	134.01	232	PKP	PKiKP	07 09 11.6	+0.2
	comp=Z,3.1nm,0.2s,baz=47,slow=4.8,SNR=3.7						
GEYT	Alibeck	134.21	294	PKP	PKiKP	07 09 10.6	-0.2
	comp=Z,1.9nm,0.7s,baz=129,slow=2.1,SNR=3.8						
ARA0	ARCESS Array S	139.31	348	ePKPpre	PKPpre	07 09 13.9	
ARCES	ARCESS Array B	139.31	348	PKhKP	PKPpre	07 09 14.0	
	comp=Z,11nm,1.1s,baz=68,slow=4.3,SNR=4.0						
RAYN	Ar Rayn	141.23	270	ePKPdf	PKiKP	07 09 24.4	-1.2
RAYN	Ar Rayn	141.23	270	ePKIKP	PKiKP	07 09 24.4	-1.2
KLMR	Klimovskoe	141.53	332	ePKIKP	PKPdf	07 09 22.3	+0.2
KLMR				pmax	pmax		
	comp=Z,11nm,1.2s						
KLMR	Klimovskoe	141.53	332	ePKPdf	PKPdf	07 09 22.3	+0.2
KLMR				AMP		07 09 36.5	
	comp=Z,11nm,1.2s						
GROC	Groznyy	143.78	302	ePKIKP	PKPbc	07 09 24.5	+0.2
GROC				e		07 12 39.6	
GROC				pmax	pmax		
	comp=Z,16nm,0.7s						
TBLG	Delisi	144.67	299	ePKPdf	PKPdf	07 09 27.8	-0.5
TBLG	Delisi	144.67	299	ePKIKP	PKPdf	07 09 27.8	-0.5
GNI	Garni	144.74	297	eP	PKPdf	07 09 28.8	+0.1
GNI	Garni	144.74	297	ePKPdf	PKPbc	07 09 28.0	+0.4
GNI	Garni	144.74	297	ePKIKP	PKPbc	07 09 28.0	+0.3
MOS	Moscow	145.11	325	ePKIKP	PKPbc	07 09 26.4	-1.7
MOS				e		07 09 35.3	
MOS				pmax	pmax		
	comp=Z,83nm,1.0s						
TASB	TASBURUN-IGDIR	145.13	296	eP	PKPdf	07 09 29.6	+0.4
ZEI	Tsey	145.20	301	i PKP2	PKPbc	07 09 27.6	-1.5
ZEI				pmax	pmax		
	comp=Z,36nm,0.9s						
IGDI	IGDIR	145.25	296	i P	PKPdf	07 09 30.9	+1.5
CLDR	Caldiran	145.39	295	eP	PKPab	07 09 30.5	+0.4
CLDR	Caldiran	145.39	295	i P	PKPab	07 09 31.6	+1.6
GOF	Gofitskoye	145.51	306	ePKIKP	PKPab	07 09 30.2	+0.2
GOF				pmax	pmax		
	comp=Z,100nm,1.0s						
DYDN	Diyadin	145.56	296	i P	PKPab	07 09 32.4	+1.7
EAK	Akyaka	145.58	298	i P	PKPab	07 09 31.4	+0.8
CUKT	Cukurca	145.61	292	eP	PKPab	07 09 30.8	0.0
CUKT	Cukurca	145.61	292	i P	PKPab	07 09 31.1	+0.3
VANB	Van	145.81	294	eP	PKiKP	07 09 34.7	+0.1
KBZ	Khabaz	145.82	303	PKPbc	PKPdf	07 09 30.4	+0.2
	comp=Z,22nm,1.0s,baz=106,slow=0.8,SNR=27						
LPSR	Galich'ya Gora	145.88	320	ePKP2	PKPbc	07 09 30.5	-0.1
LPSR				pmax	pmax		
	comp=Z,130nm,1.0s						
FIA1	FINESS Array S	145.90	340	ePKPdf	PKPdf	07 09 29.0	-0.7
FIA1				ePKPdf	PKPbc	07 09 29.4	-0.9
FIA0	FINESS Array S	145.90	340	ePKPdf	PKPdf	07 09 29.6	-0.1
FIA0	FINESS Array S	145.90	340	ePKP2	PKPdf	07 09 29.6	-0.1
FINES	FINESS Array B	145.90	340	PKPbc	PKPdf	07 09 29.6	-0.1
	comp=Z,32nm,0.8s,baz=54,slow=3.5,SNR=72						
KIV	Kislovodsk	145.94	304	ePKPdf	PKPab	07 09 31.8	0.0
KIV	Kislovodsk	145.94	304	i PKP2	PKPab	07 09 32.4	+0.6
KIV				pmax	pmax		
	comp=Z,42nm,1.1s						
OBN	Obninsk	145.94	325	ePKPdf	PKPbc	07 09 30.7	0.0
OBN	Obninsk	145.94	325	ePKIKP	PKPdf	07 09 29.4	-0.6
OBN				e		07 12 58.8	
OBN				ePPP	PPP	07 16 06.5	
OBN				pmax	pmax		
	comp=Z,66nm,1.1s						
NEY	Neytrino	146.01	302	⇑ePKP2	PKPab	07 09 32.3	+0.1
AGRB	Hanur-Agry	146.10	296	eP	PKPab	07 09 32.8	+0.1
AKDM	Akdamar-Van	146.13	294	eP	PKPab	07 09 32.8	0.0
EPOS	Posof	146.19	299	i P	PKPab	07 09 33.3	+0.4
VSR	Storozhevoye	146.30	317	ePKP2	PKPbc	07 09 31.5	-0.4
VSR				pmax	pmax		
	comp=Z,80nm,1.0s						
MLAZ	Malazgirt-MUS	146.46	295	eP	PKiKP	07 09 36.5	+0.5
SENK	Senkaya-Erzuru	146.54	298	eP	PKPbc	07 09 33.3	0.0
DAGI	Agillar	146.84	299	i P	PKPbc	07 09 34.5	+0.5
GURO	Guroymak-BITLI	146.87	294	eP	PKPbc	07 09 34.9	+0.7
HOMI	Horasan	146.92	297	i P	PKPab	07 09 35.6	-0.3
KOPR	Koprukoy-ERZUR	146.96	297	eP	PKPbc	07 09 34.5	0.0
DBOC	Borcka	147.00	299	i P	PKPab	07 09 35.7	-0.2
DBAD	Bademkaya	147.01	299	i P	PKPab	07 09 35.3	-0.7
BCA	Borcka	147.02	299	eP	PKPbc	07 09 33.9	-0.5
VRTB	Varto-Mus	147.31	295	eP	PKiKP	07 09 37.8	+0.1
SVAN	Silvan-Diyarba	147.53	293	eP	PKPbc	07 09 35.9	-0.1
CHOM	Cayeli-Rize	147.70	299	eP	PKPbc	07 09 36.5	+0.2
BNGB	Bingl	147.92	295	eP	PKPbc	07 09 37.1	0.0
VSU	Vasula	147.99	336	⇑ePKIKP	PKPdf	07 09 34.5	+1.2
VSU	Vasula	147.99	336	eP	PKPbc	07 09 36.0	-0.4
VSU				IAmb	IAmb	07 09 39.6	
	comp=Z,52nm,0.7s						
YEDI	Yedisu-Bingol	148.00	296	eP	PKiKP	07 09 39.0	-0.1
SOC	Sochi	148.12	304	i PKP2	PKPbc	07 09 36.5	-0.8
SOC				e		07 13 03.2	
SOC				ePPP	PPP	07 16 23.2	
SOC				eSSS	SSS	07 37 43.6	
MAZI	Mazidag	148.13	292	eP	PKPbc	07 09 37.5	-0.2
BAYB	BAYBURT	148.16	297	i P	PKiKP	07 09 39.4	-0.1
BAYT	Aydıntepe-Bayb	148.24	298	eP	PKPbc	07 09 38.2	+0.2
ERZN	Erzincan	148.62	296	eP	PKPbc	07 09 38.4	-0.5
KELT	Kelkit	148.94	297	i P	PKiKP	07 09 41.0	-0.1
NC303	NORSAR Array S	149.26	352	ePKPdf	PKPdf	07 09 35.9	+0.6
NC303				ePKPbc	PKPbc	07 09 39.0	-0.6
NC405	NORSAR Array S	149.32	351	ePKPbc	PKiKP	07 09 40.7	-0.2
URFA	Urfa	149.43	292	eP	PKPbc	07 09 40.9	0.0
NB200	NORSAR Array S	149.46	352	ePKPbc	PKPbc	07 09 40.0	-0.2
NOA	NORSAR Array B	149.46	352	PKP2	PKPbc	07 09 40.0	-0.2
NOA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NOA	NORSAR Array B	149.46	352	PKPbc	PKPbc	07 09 40.0	-0.2
	comp=Z,4.3nm,0.9s,baz=27,slow=3.8,SNR=14						
NBO00	NORSAR Array S	149.52	352	ePKPbc	PKPbc	07 09 40.2	-0.1
KEMA	Kemaliye	149.60	296	i P	PKiKP	07 09 43.0	+0.6
NAO01	NORSAR Array S	149.69	352	ePKPbc	PKPbc	07 09 41.0	+0.3
NC602	NORSAR Array S	149.71	351	ePKPbc	PKPbc	07 09 40.2	-0.6
CUZAR	Zara_SIVAS	150.10	297	i P	PKiKP	07 09 44.6	+1.2
IDID	Didziasalis	150.28	332	eP	PKiKP	07 09 43.1	+0.1
IDID				IAmb	IAmb	07 09 44.9	
	comp=Z,11nm,0.5s						
ISAL	Salakas	150.34	333	eP	PKPbc	07 09 42.2	-0.2
ISAL				IAmb	IAmb	07 09 50.4	
	comp=Z,19nm,1.1s						
CUKAN	kangal_SIVAS	150.39	296	i P	PKiKP	07 09 44.6	+0.6
DARE	Darende-Malaty	150.43	294	eP	PKPbc	07 09 43.4	0.0
IIGN	Ignalina	150.46	332	eP	PKPbc	07 09 42.6	-0.1
IIGN				IAmb	IAmb	07 09 50.8	
	comp=Z,17nm,1.2s						
SVSK	Karacayir	150.68	297	eP	PKiKP	07 09 45.2	+0.8
GAZ	Gaziantep	150.72	292	eP	PKiKP	07 09 44.8	+0.1
KONO	Kongsberg	151.00	353	ePKPbc	PKPbc	07 09 43.5	-0.4
KONO	Kongsberg	151.00	353	c iPKIKP	PKiKP	07 09 44.2	-0.2
KONO				pmax	pmax		
	comp=Z,65nm,2.5s						
CUSAR	Sarkisla-SIVAS	151.32	296	i P	PKiKP	07 09 46.7	+0.7
ANDN	Andirin	151.39	292	i P	PKiKP	07 09 46.4	+0.3
TAHT	Tahtakopru-Hat	151.56	290	eP	PKPdf	07 09 33.7	-6.0
SIM	Simferopol'	151.68	308	PKIKP	PKPbc	07 09 44.7	-1.2
SIM				pmax	pmax		
	comp=Z,28nm,1.0s						
DIKM	Dikmen	151.72	301	eP	PKPbc	07 09 45.6	-0.5
KOZT	Kozan	151.81	292	eP	PKPbc	07 09 46.6	+0.1
CEYT	Ceyhan	151.89	291	eP	PKiKP	07 09 47.1	+0.1
YURE	YUREGIR	151.99	291	eP	PKiKP	07 09 47.4	+0.1
YOZ	Yozgat	152.00	297	eP	PKPbc	07 09 46.2	-0.8
AKASG	Malin Array Be	152.07	322	PKPbc	PKPbc	07 09 46.2	-0.3
	comp=Z,11nm,0.8s,baz=48,slow=2.6,SNR=8.7						
AKBB	Malin Array Si	152.07	322	ePKPbc	PKPbc	07 09 46.2	-0.3
KIEV	Kiev	152.08	322	ePKPbc	PKPbc	07 09 46.2	-0.4
KIEV	Kiev	152.08	322	⇑ePKIKP	PKPdf	07 09 39.4	-0.6
CTAK	Corum_Osmancik	152.25	299	i P	PKPdf	07 09 34.7	-6.2
GULE	Gulek	152.65	292	i P	PKiKP	07 09 49.0	+0.2
MERS	Mersin	152.88	291	eP	PKiKP	07 09 49.5	+0.3
ILGA	Ilgaz	152.97	300	ePKPdf	PKPdf	07 09 42.5	+0.5
ILGA				ePKPbc	PKiKP	07 09 50.1	+0.7
ILGA	Ilgaz	152.97	300	i P	PKiKP	07 09 50.5	+1.1
DELI	KIRIKKALE	153.01	298	i P	PKPbc	07 09 49.3	0.0
KIZK	Mersin	153.20	290	eP	PKPbc	07 09 48.3	-1.3
YAYX	Yaylak	153.25	296	eP	PKPbc	07 09 49.0	-0.8
BR101	Keskin Array S	153.27	297	ePKPbc	PKPbc	07 09 49.5	-0.3
BR131	Keskin Array S	153.27	297	ePKPdf	PKPdf	07 09 43.0	+0.7
BR131				ePKPbc	PKiKP	07 09 50.3	+0.3
BRTR	Keskin Array B	153.27	297	PKPbc	PKPbc	07 09 49.5	-0.3
	comp=Z,4.2nm,1.0s,baz=66,slow=1.5,SNR=3.7						
IKL	Isikli	153.58	290	eP	PKPbc	07 09 50.3	-0.1
KULU	Kulu	153.86	296	eP	PKPbc	07 09 49.3	-1.8
BERE	Bereket-Mersin	153.95	290	eP	PKPbc	07 09 51.0	-0.4
TEKE	Tekeli-Mersin	154.05	290	eP	PKiKP	07 09 51.8	+0.3
DBIC	Dimbokro	154.79	163	PKP	PKPdf	07 09 43.5	-1.6
	comp=Z,3.2nm,1.0s,baz=327,slow=7.7,SNR=2.4						
DBIC				PKPbc	sPKPdf	07 09 55.0	0.0
	comp=Z,2.5nm,0.7s,baz=339,slow=3.9,SNR=4.7						
ANTB	Antalya	155.97	292	eP	PKPdf	07 09 49.4	+3.5
KWP	Kalwaria Pacla	156.01	326	ePKP	PKPab	07 10 13.1	+0.2
KWP	Kalwaria Pacla	156.01	326	ePKP2	PKPab	07 10 13.1	+0.2
UZH	Uzhgorod	156.89	325	ePKP2	PKPab	07 10 13.5	-3.2
DPC	Dobruska-Polom	158.12	336	ePKPAB	PKPab	07 10 23.1	+1.1
DPC	Dobruska-Polom	158.12	336	ePKP2	PKPab	07 10 23.1	+1.1
CLL	Collm	158.31	342	i PKPab	PKPab	07 10 21.9	-0.8
CLL				e(sPKPab)		07 10 33.0	
	comp=Z,25nm,1.7s						
CLL	Collm	158.31	342	i PKP2	PKPab	07 10 21.9	-0.8
BRG	Berggiesshubel	158.44	340	ePKP	PKPab	07 10 23.2	-0.1
	comp=Z,18nm,1.6s						
BRG	Berggiesshubel	158.44	340	ePKP	PKPab	07 10 35.2	+12
	comp=Z,33nm,1.7s						
BRG	Berggiesshubel	158.44	340	ePKP2	PKPab	07 10 23.2	-0.1
BRG				pmax	pmax		
	comp=Z,18nm,1.6s						
VYHS	Vyhne	158.60	329	ePKP2	PKPab	07 10 24.5	+0.4
VYHS	Vyhne	158.60	329	ePKP	PKPab	07 10 24.5	+0.4
VRAC	Vranov	158.88	334	ePKP	PKPab	07 10 25.7	+0.4
KRUC	Moravsky	159.16	334	ePKP	PKPab	07 10 26.0	-0.5
KHC	Kasperske Hory	160.09	338	ePKPAB	PKPab	07 10 31.5	+0.9
KHC	Kasperske Hory	160.09	338	ePKP2	PKPab	07 10 31.5	+0.9
CONA	Conrad Observa	160.29	333	ePKPab	PKPab	07 10 32.0	+0.4
	comp=Z,8.8nm,1.1s						
GERES	GERESS Array B	160.30	338	PKP	PKPdf	07 09 50.7	-0.3
	comp=Z,0.2nm,0.3s,baz=159,slow=1.7,SNR=2.2						
GERES				PKPab	PKPab	07 10 31.0	-0.6
	comp=Z,3.5nm,1.1s,baz=358,slow=4.0,SNR=9.2						
MOA	Molln	160.96	335	ePKPab	PKPab	07 10 34.9	+0.5
	comp=Z,4.6nm,1.2s						
SOKA	Soboth	161.63	332	ePKPab	PKPab	07 10 37.4	-0.1
	comp=Z,8.4nm,1.4s						
TOA0	Torodi Ar. Sit	162.16	177	ePKPdf	PKPdf	07 09 53.8	0.0
TOA0				ePKPdf	PKPdf	07 09 54.1	+0.2
TORD	Torodi Ar. Bea	162.16	177	PKP	PKPdf	07 09 52.3	-1.5
	comp=Z,1.8nm,1.1s,baz=167,slow=5.2,SNR=6.5						
TORD				PKPab	PKPab	07 10 39.8	-0.6
	comp=Z,2.8nm,0.7s,baz=178,slow=4.0,SNR=9.6						
TOA1	Torodi Ar. Sit	162.17	177	ePKPdf	PKPdf	07 09 52.3	-1.5
TOA1				ePKPab	PKPab	07 10 39.8	-0.6
WTTA	Wattenberg	162.35	339	ePKPab	PKPab	07 10 41.1	+0.4
	comp=Z,6.3nm,1.0s						
RETA	Reutte	162.40	341	ePKPab	PKPab	07 10 40.8	0.0
	comp=Z,3.6nm,0.8s						
MOTA	Moosalm	162.43	340	epPKPab	PKPab	07 10 42.0	+1.0
	comp=Z,8.4nm,1.1s						
SQTA	Sankt Quirin	162.51	340	ePKPab	PKPab	07 10 41.6	+0.3
	comp=Z,11nm,1.5s						
ABTA	Abfaltersbach	162.52	337	ePKPab	PKPab	07 10 40.7	-0.7
	comp=Z,3.6nm,0.8s						
DAVA	Damuels	162.82	343	ePKPab	PKPab	07 10 42.8	+0.1
	comp=Z,3.6nm,0.6s						
FETA	Feichten	162.83	341	ePKPab	PKPab	07 10 43.1	+0.3
	comp=Z,6.4nm,1.4s						

NNC 27 07:05:00.3±1.1, 41°.87N×78°.17E, h0km, mb2.9, mpv2.9, 5C-3D, Error ellipse: s-maj=7.2km s-min=4.0km az=172.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SATY	Saty	1.20	8	P	Pg	07 05 23.3	-0.1
	4.5nm,0.1s						
SATY				S	Sb	07 05 40.7	+0.5
	9.2nm,0.2s						
UZB	Uzynbulak	1.43	26	P	Pn	07 05 25.4	-2.3
	2.9nm,0.4s						
UZB				S	Sg	07 05 44.0	-2.2
	2.2nm,0.3s						
MDOK	Medeo	1.53	328	⇑P	Pn	07 05 28.1	-1.0
	2.7nm,0.6s						
MDOK				⇓S	Sn	07 05 50.0	+0.1
	2.0nm,0.4s						
MDOK	Medeo	1.53	328	Pg	Pn	07 05 28.6	-0.5
	2.8nm,0.2s						
MDOK				Lg	Lg	07 05 49.5	
	5.8nm,0.4s						
KOTS	Kotyrbulak	1.57	331	P	Pn	07 05 29.3	-0.3
	2.3nm,0.3s						
KOTS				S	Sn	07 05 50.7	0.0
	5.4nm,0.3s						
KURS	Kuram	1.62	0	P	Pn	07 05 29.4	-0.8
	2.1nm,0.5s						
KURS				S	Sn	07 05 51.1	-0.6
	3.0nm,0.4s						
IZV	Izvestkoviy	1.64	316	P	Pn	07 05 30.4	-0.1
	3.2nm,0.1s						
IZV				S	Sg	07 05 52.8	-0.1
	11nm,0.2s						
PDGK	Podgornoye	1.76	33	P	Pb	07 05 33.4	-0.1
	1.3nm,0.4s						
PDGK				S	Sg	07 05 57.8	+1.1
	2.1nm,0.4s						
PDGK	Podgornoye	1.76	33	⇓Pg	Pn	07 05 31.3	-0.8
	2.6nm,0.7s						
PDGK				⇑Lg	Lg	07 05 59.0	

	4.6nm,0.6s						
MTBS	Maitube	1.80	315	P	Pb	07 05 33.9	-0.3
	5.1nm,0.2s						
MTBS				S	Sg	07 05 58.3	+0.2
	12nm,0.3s						
KST	Kastek	2.01	306	Pg	Pn	07 05 36.3	+0.7
	8.8nm,2.7s						
KST				Lg	Lg	07 06 03.1	
	7.8nm,0.5s						
KTBS	Karatobe	2.14	330	Pg	Pb	07 05 39.3	-0.6
	4.8nm,0.2s						
KTBS				Lg	Lg	07 06 08.0	
	8.7nm,0.5s						
CHKK	Chushkaly	2.16	337	Pg	Pb	07 05 39.3	-1.0
CHKK				Lg	Lg	07 06 08.1	
TKM2	Tokmak 2	2.17	300	⇓Pg	Pb	07 05 39.7	-1.0
	2.0nm,0.5s						
TKM2				⇑Lg	Lg	07 06 09.6	
	2.5nm,0.5s						
MNBS	Baschi	2.22	4	Pg	Pb	07 05 40.5	-0.8
	4.5nm,0.4s						
MNBS				Lg	Lg	07 06 09.9	
	10nm,0.3s						
DGS	Degeres	2.24	309	Pg	Pb	07 05 40.3	-1.4
	6.1nm,0.4s						
DGS				Lg	Lg	07 06 09.8	
	12nm,0.3s						
KTMS	Ketmen	2.25	45	Pg	Pb	07 05 41.6	-0.4
	3.1nm,0.2s						
KTMS				Lg	Lg	07 06 12.2	
	3.8nm,0.3s						
ARXS	Arharly	2.36	354	Pg	Pb	07 05 42.5	-1.1
	6.9nm,0.7s						
ARXS				Lg	Lg	07 06 13.3	
	8.1nm,0.5s						
KUU	Kurty	2.43	327	Pg	Pb	07 05 43.9	-1.0
	3.6nm,0.3s						
KUU				Lg	Lg	07 06 15.9	
	5.4nm,0.4s						
DJR	Jarkent	2.73	25	Pg	Pb	07 05 50.6	+0.5
	0.8nm,0.2s						
DJR				Lg	Lg	07 06 26.9	
	2.5nm,0.7s						
AAK	Ala-Archa	2.83	287	⇑Pg	Pb	07 05 53.1	+1.3
	1.0nm,0.4s						
AAK				⇑Lg	Lg	07 06 29.9	
	2.5nm,0.6s						

NNC 27 07:06:37.5±1.4**, 41°.83N×78°.05E, h0km, mb2.7, mpv2.5, 3C-3D, Error ellipse: s-maj=10.4km s-min=5.5km az=166.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	1.26	12	P	Pg	07 07 00.7	-1.0
	1.6nm,0.2s						
SATY				S	Sg	07 07 18.2	+0.2
	2.4nm,0.2s						
PDGK	Podgornoye	1.84	35	⇑Pn	Pn	07 07 11.0	+0.5
	0.8nm,0.6s						
PDGK				⇓Sn	Sb	07 07 35.4	-0.3
	0.4nm,0.5s						
TKM2	Tokmak 2	2.12	302	⇑Pg	Pb	07 07 16.7	-0.3
	2.2nm,0.9s						
TKM2				⇓Lg	Lg	07 07 46.9	
	0.8nm,0.3s						
KTBS	Karatobe	2.14	332	Pg	Pb	07 07 16.7	-0.4
	1.6nm,0.3s						
KTBS				Lg	Lg	07 07 45.4	
	2.9nm,0.3s						
CHKK	Chushkaly	2.17	339	Pg	Pb	07 07 17.2	-0.5
	3.4nm,0.2s						
CHKK				Lg	Lg	07 07 46.2	
	5.7nm,0.4s						
AAK	Ala-Archa	2.77	288	⇑Pg	Pb	07 07 25.6	-2.3
	1.6nm,1.1s						
AAK				⇓Lg	Lg	07 08 06.6	
	2.3nm,0.9s						

TRN 27 07:14:09.0, 10°.69N×62°.35W, h102km, MD3.6, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.93	92	⇓iP	Pn	07 14 28.7	-0.1
TRN				eS	Sn	07 14 42.8	-0.8
TPP	Pointe-a-Pierr	0.95	113	eP	Pn	07 14 28.8	-0.2
TPP				eS	Sn	07 14 43.5	-0.7
TBH	Brigand Hill	1.27	99	eP	Pn	07 14 33.4	+0.8
TBH				eS	Sn	07 14 50.5	0.0
GRGR	Grenville	1.59	25	e	Pn	07 14 35.1	-1.4
GRGR	Grenville	1.59	25	eP	Pn	07 14 36.4	-0.1
GRGR				eS	Sn	07 14 57.0	-0.3
TPR	Prospect	1.62	72	eP	Pn	07 14 36.2	-0.6
TPR				eS	Sn	07 14 57.8	-0.2
GRHS	Sauteurs	1.68	24	eP	Pn	07 14 38.1	+0.6
GRHS				eS	Sn	07 14 58.0	-1.2
GRSS	Sisters	1.75	24	eP	Pn	07 14 39.3	+0.8
GRSS				eS	Sn	07 15 00.6	-0.4
TOSP	Speyside	1.88	71	eP	Pn	07 14 39.9	-0.1
TOSP				eS	Sn	07 15 03.3	-0.5
FCV	Fort Charlotte	2.68	24	eP	Pn	07 14 50.1	-0.5
FCV				eS	Sn	07 15 20.9	-1.7
SVB	Belmont	2.78	22	eP	Pn	07 14 51.9	0.0
SVB				eS	Sn	07 15 24.1	-0.9
SVCV	St. Vincent, C	2.83	24	eP	Pn	07 14 52.4	-0.1
SVCV				eS	Sn	07 15 25.1	-0.8
SVV	Soufriere Volc	2.84	23	eP	Pn	07 14 53.6	+0.9
SVV				eS	Sn	07 15 24.8	-1.5
SSV	Crater Summit	2.86	23	eP	Pn	07 14 53.6	+0.7
SSV				eS	Sn	07 15 25.4	-1.4
MCLT	Moule a Chique	3.30	24	eP	Pn	07 14 58.4	-0.5
MCLT				eS	Sn	07 15 36.2	-1.2
SLB	Belfond	3.37	22	eP	Pn	07 15 00.1	+0.2
SLB				eS	Sn	07 15 37.3	-1.8
BBGH	Gun Hill	3.66	48	eP	Pn	07 15 03.6	0.0
BBGH				eS	Sn	07 15 43.7	-2.3
BBSP	Saint Philip	3.71	49	eP	Pn	07 15 04.6	+0.3
BBSP				eS	Sn	07 15 45.0	-2.1

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*ISCJB **27** 07:22:32.6±0.8, 12°.9N±0°.2×144°.1E±0°.2, h10km, mb3.4/6, Error ellipse: s-maj=29.9km s-min=9.9km az=43.1*

*IDC **27** 07:22:32.8±0.9, 12°.95N×144°.20E, h0km, mb3.4/6, mb1 3.7/6, mb1mx3.4/50, mbtmp3.4/6, Error ellipse: s-maj=35.8km s-min=15.8km az=126.0*

ISC 27 07:22:34.1±0.9**, 12°.9N**±0°.2×**144°.2E**±0°.2**, h10km, n14, σ0s.87**/9**, mb3.5**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.92	43	Pn	Pn	07 22 53.5	+0.4
	142nm,0.3s,baz=5.0,slow=5.3,SNR=43						
GUMO				Sn	Sn	07 23 06.0	-0.4
	273nm,0.3s,baz=17,slow=19,SNR=35						
GUMO				LR	LR	07 23 24.5	
	comp=Z,224nm,20.9s,baz=106,slow=57						
H11S3	WAKE ISLAND Hy	22.31	73	T	T	07 50 30.4	
	baz=258,slow=75,SNR=8.2						
H11S1	WAKE ISLAND Hy	22.33	73	T	T	07 50 26.9	
	baz=258,slow=75,SNR=8.3						
H11S2	WAKE ISLAND Hy	22.33	73	T	T	07 50 40.3	
	baz=258,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	22.77	70	T	T	07 50 58.8	
	baz=255,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	22.77	70	T	T	07 51 00.8	
	baz=255,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	22.78	70	T	T	07 51 00.7	
	baz=255,slow=75,SNR=14						
WRA	Warramunga Arr	34.07	197	P	P	07 29 18.9	0.0
	0.5nm,0.7s,baz=22,slow=10,SNR=6.1						
ASAR	Alice Springs	37.73	196	P	P	07 29 50.4	+0.1
	0.2nm,0.6s,baz=24,slow=13,SNR=5.2						
MKAR	Makanchi Array	61.54	316	P	P	07 32 51.8	+0.2
	0.1nm,0.2s,baz=112,slow=7.6,SNR=1.8						
ILAR	Eielson Array	69.44	25	P	P	07 33 41.3	-1.0
	0.2nm,0.5s,baz=255,slow=6.4,SNR=2.6						
YKA	Yellowknife Ar	83.75	27	P	P	07 35 03.4	+0.2
	0.1nm,0.4s,baz=284,slow=5.2,SNR=4.3						
NVAR	Mina Array Bea	87.83	51	P	P	07 35 25.6	+1.2
	0.3nm,0.6s,baz=278,slow=6.3,SNR=2.6						
LPAZ	La Paz	148.53	100	PKPbc	PKiKP	07 42 23.3	-1.3
	1.0nm,0.6s,baz=292,slow=3.2,SNR=6.6						

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*IDC **27** 07:31:39.6±0.7, 9°.47S×114°.31E, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.2/39, mbtmp4.3/13, MS3.4/4, Ms1 3.4/4, ms1mx3.0/39, Error ellipse: s-maj=37.0km s-min=15.0km az=50.0*

*ISCJB **27** 07:31:42.5±0.3, 9°.84S±0°.04×114°.14E±0°.04, h35km, mb4.3/21, MS3.3/3, Error ellipse: s-maj=6.7km s-min=4.9km az=38.0*

*NEIC **27** 07:31:43.9±2.1, 9°.72S×114°.23E, h32km±15km, mb4.3/7, Error ellipse: s-maj=12.5km s-min=6.2km az=222.0*

NEIC Felt [II] at Kuta.

*DJA **27** 07:31:45.0±0.4, 10°S±4°×11°4E±°, h10km, M4.7/17, mb4.7/4, mB5.5/1, MLv4.7/17, Mw(mB)5.0/1*

ISC 27 07:31:44.1±0.5**, 9°.80S**±0°.06×**114°.24E**±0°.05**, h35km, n74, σ1s.61**/72**, mb4.3**/20**, MS3.1**/3**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.33	356	ePn	Pn	07 32 06.7	+0.5
JAGI				eSn	Sn	07 32 21.3	-1.3
JAGI	Jajag, Banyuwa	1.33	356	P	Pn	07 32 06.7	+0.5
JAGI				S	Sn	07 32 22.9	+0.3
DNP	Denpasar	1.48	41	P	Pn	07 32 09.0	+0.8
DNP				S	Sn	07 32 28.1	+1.8
SRBI	Singaraja	1.96	30	P	Pn	07 32 17.0	+2.1
KMMI	Kalianget	2.75	354	P	Pn	07 32 29.1	+3.4
PWJI	Pagerwojo	2.98	306	P	Pn	07 32 29.9	+0.9
GRJI	Gresik	3.36	329	P	Pn	07 32 36.4	+2.3
PCJI	Pacitan	3.42	298	P	Pn	07 32 36.6	+1.7
PLAI	Plampang	3.63	75	P	Pn	07 32 40.8	+3.0
NGJI	Ngawi	3.66	311	P	Pn	07 32 43.3	+5.0
WOJI	Wonogiri, Jawa	3.81	301	P	Pn	07 32 43.1	+2.7
UGM	Wanagama	4.12	297	ePn	Pn	07 32 46.6	+1.9
UGM	Wanagama	4.12	297	P	Pn	07 32 46.3	+1.6
CMJI	Cimerak	6.06	289	P	Pn	07 33 13.4	+2.1
CISI	Cisompet, Garu	6.73	289	ePn	Pn	07 33 20.4	-0.2
EDFI	Ende, Flores	7.43	83	P	Pn	07 33 44.6	+14
SOEI	Soe	9.89	91	ePn	Pn	07 34 03.9	0.0
MPSI	Mapaga	11.54	30	P	Pn	07 34 24.5	-2.0
MBWA	Marble Bar	12.47	156	ePn	Pn	07 34 35.7	-3.4
GIRL	Giralia	12.77	180	ePn	Pn	07 34 42.3	-1.0
FITZ	Fitzroy Crossi	13.79	128	Pn	Pn	07 34 55.2	-2.1
	0.4nm,0.3s,baz=314,slow=9.7,SNR=14						
FITZ				Sn	Sn	07 37 21.2	-8.1
	0.5nm,0.3s,baz=114,slow=20,SNR=5.7						
FITZ				LR	LR	07 39 36.8	
	comp=Z,134nm,19.8s,baz=316,slow=34						
FAKI	Fak Fak	19.15	70	eP	P	07 36 04.8	+0.2
	29nm,0.9s						
DAV	Davao City (W)	20.21	34	LR	LR	07 45 11.9	
	comp=Z,50nm,20.3s,baz=144,slow=41						
WRA	Warramunga Arr	21.86	120	P	P	07 36 34.9	+0.8
	4.4nm,0.7s,baz=293,slow=12,SNR=25						
WRA				S	S	07 40 30.1	-3.8
	0.4nm,0.7s,baz=276,slow=23,SNR=2.8						
WRA				LR	LR	07 45 56.7	
	comp=Z,87nm,20.8s,baz=180,slow=39						
WR1	Warramunga Arr	21.86	120	eP	P	07 36 34.9	+0.8
	6.7nm,0.8s						
WR1				eS	S	07 40 30.1	-3.8
ASAR	Alice Springs	23.30	129	P	P	07 36 50.2	+1.2
	3.5nm,0.6s,baz=304,slow=9.4,SNR=49						
ASAR				PcP	PcP	07 40 36.8	+0.9
	0.7nm,0.6s,baz=323,slow=2.0,SNR=5.0						
ASAR				S	Sn	07 41 10.0	-9.0
	1.1nm,0.8s,baz=313,slow=25,SNR=4.2						
AS31	Alice Springs	23.30	129	eP	P	07 36 50.5	+1.5
	1.9nm,0.6s						
AS01	Alice Springs	23.33	129	eP	P	07 36 51.2	+1.8
UTHA	Uthaitani	29.15	330	P	P	07 37 44.2	+2.1
	2.6nm,0.8s						
UTTA	Uttaradit	30.53	334	P	P	07 37 56.5	+2.2
	2.4nm,0.8s						
CM01	Chiang Mai Arr	31.84	332	eP	P	07 38 05.7	-0.2
CMAR	Chiang Mai Arr	31.88	332	P	P	07 38 06.2	-0.1
	2.8nm,0.7s,baz=163,slow=8.7,SNR=16						
CTA	Charters Tower	32.52	112	P	P	07 38 14.3	+2.3
	2.5nm,0.6s,baz=284,slow=12,SNR=4.6						
STKA	Stephens Creek	33.53	135	eP	P	07 38 22.4	+1.8
	1.2nm,0.7s						
STKA	Stephens Creek	33.53	135	P	P	07 38 22.2	+1.6
	5.7nm,0.4s,baz=314,slow=8.6,SNR=13						
H08S2	Diego Garcia H	41.30	270	T	T	08 23 29.4	
	baz=95						
H08S3	Diego Garcia H	41.31	270	T	T	08 23 29.1	
	baz=95						
H08S1	Diego Carcia H	41.32	270	T	T	08 23 39.7	
	baz=95						
LSA	Lhasa	45.13	331	eP	P	07 39 56.8	-1.1
	8.6nm,1.0s						
JIRN	Jiri	46.10	325	eP	P	07 40 05.1	-0.4
GUN	Gumba	46.47	325	eP	P	07 40 07.9	-0.4
	59nm,0.5s						
PKI	Pulchoki	46.48	324	eP	P	07 40 07.4	-1.0
	8.0nm,0.3s						
PKIN	Phulchoki	46.49	324	eP	P	07 40 07.5	-1.0
	11nm,0.4s						
DMN	Daman	46.69	324	eP	P	07 40 09.3	-0.7
	38nm,0.4s						
KKN	Kakani	46.72	324	eP	P	07 40 09.4	-0.8
KOLN	Koldanda	47.70	322	eP	P	07 40 17.0	-0.8
	35nm,0.4s						
DANN	Dangsing	48.03	323	eP	P	07 40 19.6	-0.9
	57nm,0.5s						
PYUN	Piuthan	48.31	322	eP	P	07 40 21.5	-1.0
	17nm,0.4s						
USRK	Ussuriysk Ar.	56.11	15	P	P	07 41 17.8	-2.1
	4.1nm,0.9s,baz=195,slow=5.2,SNR=4.7						
SONA0	Songino Array	57.80	354	eP	P	07 41 30.8	-1.3
SONM	Songino Array	57.80	354	P	P	07 41 30.8	-1.3
	1.7nm,0.5s,baz=172,slow=9.3,SNR=7.2						
MK01	Makanchi Array	63.12	336	eP	P	07 42 07.2	-1.1
MK31	Makanchi Array	63.15	336	eP	P	07 42 07.8	-0.6
	2.3nm,1.0s						
MK32	Makanchi Array	63.15	336	eP	P	07 42 07.3	-1.1
MKAR	Makanchi Array	63.15	336	eP	P	07 42 07.8	-0.6
	18nm,0.9s						
MKAR	Makanchi Array	63.15	336	P	P	07 42 07.3	-1.2
	1.0nm,0.3s,baz=145,slow=6.7,SNR=27						
ZALV	Zalesovo Beam	68.22	342	eP	P	07 42 39.5	-1.4
ZALV	Zalesovo Beam	68.22	342	P	P	07 42 39.4	-1.6
	1.3nm,0.4s,baz=163,slow=5.6,SNR=4.4						
ZAA1	Zalesovo Array	68.22	342	eP	P	07 42 39.4	-1.6
GEYT	Alibeck	70.67	316	P	P	07 42 55.8	-0.7
	1.2nm,0.3s,baz=114,slow=15,SNR=4.3						
ABKAR	Akbulak array	75.58	327	eP	P	07 43 24.7	-0.5
	3.8nm,0.6s						
KBZ	Khabaz	83.56	316	P	P	07 44 09.6	+0.8
	1.6nm,0.7s,baz=130,slow=6.0,SNR=4.0						
BOSA	Boshof	84.49	242	LR	LR	08 18 26.2	
	comp=Z,44nm,18.2s,baz=124,slow=33						
BR101	Keskin Array S	89.06	310	eP	P	07 44 36.0	-0.1
BRTR	Keskin Array B	89.06	310	P	P	07 44 36.0	-0.1
	1.7nm,0.7s,baz=127,slow=5.4,SNR=9.2						
LPH	Laupahoehoe	93.63	70	eP	P	07 44 59.8	+2.4
AKASG	Malin Array Be	94.36	321	P	P	07 44 59.2	-0.9
	1.1nm,0.6s,baz=86,slow=4.6,SNR=4.4						
FIA0	FINESS Array S	97.65	331	eP	Pdif	07 45 14.4	-0.5
FINES	FINESS Array B	97.65	331	P	Pdif	07 45 14.4	-0.5
	1.8nm,0.8s,baz=74,slow=5.1,SNR=3.8						
YKA	Yellowknife Ar	116.81	23	PKP	PKiKP	07 50 24.8	+0.3
	0.2nm,0.5s,baz=310,slow=1.8,SNR=4.6						
YKB5	Yellowknife Ar	116.81	23	ePKPdf	PKiKP	07 50 24.8	+0.3
WVT	Waverly	147.01	34	ePKPdf	PKPdf	07 51 21.7	+0.1
BDFB	Brasilia	149.21	215	PKPbc	PKiKP	07 51 32.2	+0.8
	4.5nm,0.9s,baz=134,slow=2.5,SNR=4.6						
LPAZ	La Paz	153.97	175	PKPbc	PKiKP	07 51 43.5	+1.7
	0.7nm,0.8s,baz=195,slow=12,SNR=2.2						
LPAZ				PKPab	sPKPbc	07 51 57.2	+1.6
	1.5nm,0.5s,baz=158,slow=1.6,SNR=12						

IDC 27 07:32:22.5±13.0**, 12°.22S×167°.28E, h170km**±124km**, mb3.7**/9**, mb1 4.0**/9**, mb1mx3.6**/36**, mbtmp4.1**/9**, Error ellipse: s-maj=47.9km s-min=33.3km az=163.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.53	252	P	P	07 38 36.7	-0.9
	0.7nm,0.7s,baz=87,slow=9.3,SNR=3.0						
ASAR	Alice Springs	33.65	246	P	P	07 38 46.5	-0.8
	0.6nm,0.7s,baz=69,slow=10,SNR=3.5						
SONM	Songino Array	80.50	323	P	P	07 44 16.8	+1.1
	0.3nm,0.5s,baz=132,slow=4.1,SNR=3.4						
ILAR	Eielson Array	84.15	18	P	P	07 44 33.9	-0.2
	4.2nm,0.6s,baz=245,slow=5.1,SNR=79						
NVAR	Mina Array Bea	85.63	49	P	P	07 44 43.0	+0.6
	0.6nm,0.7s,baz=240,slow=9.1,SNR=5.1						
TXAR	Lajitas Array	95.07	61	P	P	07 45 26.3	-0.3
	0.3nm,0.8s,baz=231,slow=5.7,SNR=3.3						
YKA	Yellowknife Ar	95.32	27	P	P	07 45 26.1	-0.7
	0.4nm,0.5s,baz=258,slow=4.5,SNR=11						
MKAR	Makanchi Array	95.41	317	P	P	07 45 27.7	0.0
	1.1nm,0.6s,baz=95,slow=6.0,SNR=8.9						
ARCES	ARCESS Array B	117.84	346	PKP	PKPdf	07 50 47.0	-1.1
	3.3nm,0.9s,baz=79,slow=2.6,SNR=5.7						
FINES	FINESS Array B	123.41	339	PKP	PKPdf	07 50 58.4	-0.6
	1.8nm,0.8s,baz=357,slow=3.1,SNR=3.6						

JMA 27 07:40:01.5, 37°.03N×138°.68E, h12km±1km**, M1.0, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	Hiroka	0.35	51	P	Pg	07 40 08.4	-0.1
JHK				S	Sg	07 40 13.4	+0.2
JKT	Katashina	0.53	120	S	Sg	07 40 18.7	-0.1
MAT	Matsushiro	0.62	218	P	Pg	07 40 13.3	-0.2
MAT				S	Sg	07 40 20.9	-0.8
MAT	Matsushiro	0.62	218	P	Pg	07 40 13.2	-0.3
MAT				S	Sg	07 40 20.9	-0.8

IDC 27 07:44:23.1±8.1**, 4°.17S×147°.06E, h0km, mb3.4**/2**, mb1 3.8**/3**, mb1mx3.4**/31**, mbtmp3.6**/3**, ML3.4**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.5**/24**, Error ellipse: s-maj=264.8km s-min=32.1km az=100.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	13.82	113	LR	LR	07 53 25.4	
	comp=Z,31nm,18.3s,baz=342,slow=39						
WRA	Warramunga Arr	19.99	217	P	P	07 48 57.2	-0.1
	0.1nm,0.3s,baz=40,slow=11,SNR=9.5						
ASAR	Alice Springs	23.17	212	P	P	07 49 31.4	-0.1
	0.8nm,0.8s,baz=44,slow=7.2,SNR=7.9						
MKAR	Makanchi Array	76.14	320	P	P	07 56 13.2	+0.1
	0.1nm,0.3s,baz=119,slow=5.6,SNR=3.3						

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*IDC **27** 07:54:01.4±1.7, 33°.16N×140°.53E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/36, mbtmp3.5/4, ML2.8/1, Error ellipse: s-maj=31.0km s-min=19.5km az=26.0*

*JMA **27** 07:54:03.0±0.2, 33°.34N×140°.71E, h30km, M3.8*

ISC 27 07:54:02.1±2.1**, 33°.37N**±0°.09×**140°.71E**±0°.08**, h13km**±14km**, n21, σ1s.25**/23**, mb3.6**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.79	251	P	Pg	07 54 17.7	+0.3
JHJ	Hachijo jima 2	0.81	253	Pn	Pg	07 54 17.8	-0.1
	180nm,0.3s,baz=62,slow=23,SNR=59						
JHJ				Sn	Sg	07 54 27.6	-1.0
	683nm,0.3s,baz=75,slow=20,SNR=60						
JHJ				LR	LR	07 54 35.1	
	comp=Z,221nm,20.2s,baz=98,slow=56						
JMKN	Mikurajimanish	1.07	300	P	Pb	07 54 22.5	0.0
JMKN				eS	Sb	07 54 35.7	-0.7
BSO1	Boso 1	1.30	10	P	Pn	07 54 25.7	+0.2
BSO1				eS	Sn	07 54 42.3	-0.2
BSO3	Boso 3	1.44	353	P	Pn	07 54 27.8	+0.1
JIM2	Oshima 3	1.71	322	P	Pn	07 54 31.7	0.0
JIM2				eS	Sn	07 54 52.1	-1.4
JIZS	Izushimoda	2.03	312	P	Pn	07 54 37.0	+1.0
JOD2	Odawara 2	2.32	325	P	Pn	07 54 40.1	+0.1
JOD2				eS	Sn	07 55 07.1	-1.3
SHZ3	Shizuoka 3	2.68	310	P	Pn	07 54 46.8	+1.8
JHU	Hanno	2.74	335	P	Pn	07 54 46.6	+0.8
JHU				S	Sn	07 55 17.3	-1.6
MJAR	Matsushiro Arr	3.77	328	Pn	Pn	07 55 02.7	+2.6
	0.7nm,0.3s,baz=143,slow=11,SNR=21						
MJAR				Sn	Sn	07 55 44.7	+0.3
	0.6nm,0.3s,baz=132,slow=31,SNR=6.2						
MAT	Matsushiro	3.78	328	P	Pn	07 55 03.0	+3.0
MAT				S	Sn	07 55 44.6	+0.2
H11N2	WAKE ISLAND Hy	26.98	114	T	T	08 28 21.0	
	baz=306,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	26.99	114	T	T	08 28 22.1	
	baz=306,slow=75,SNR=34						
H11N3	WAKE ISLAND Hy	27.00	114	T	T	08 28 18.3	
	baz=306,slow=75,SNR=26						
H11S3	WAKE ISLAND Hy	27.56	116	T	T	08 29 10.6	
	baz=307						
H11S1	WAKE ISLAND Hy	27.56	116	T	T	08 29 18.5	
	baz=307						
H11S2	WAKE ISLAND Hy	27.57	116	T	T	08 29 12.5	
	baz=307						
MKAR	Makanchi Array	45.66	305	P	P	08 02 22.8	+0.4
	0.4nm,0.6s,baz=82,slow=8.8,SNR=5.4						
WRA	Warramunga Arr	53.36	187	P	P	08 03 20.3	-1.0
	0.4nm,0.4s,baz=4.3,slow=7.6,SNR=7.0						
ASAR	Alice Springs	57.09	187	P	P	08 03 48.3	+0.1
	0.2nm,0.5s,baz=6.1,slow=11,SNR=5.3						

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*ISCJB **27** 08:05:28.5±0.7, 33°.09S±0°.03×70°.29W±0°.04, h113km±6km, Error ellipse: s-maj=6.3km s-min=4.9km az=43.4*

*GUC **27** 08:05:28.7±1.0, 33°.07S×70°.46W, h109km±4km, ML3.8*

*SJA **27** 08:05:28.8±1.0, 33°.06S×70°.28W, h103km±5km, ML3.2, MW3.6*

ISC 27 08:05:28.7±1.5**, 33°.10S**±0°.04×**70°.30W**±0°.04**, h111km**±9km**, n25, σ0s.88**/46**, 14D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	0.23	178	eP	Pn	08 05 44.5	-0.4
FCH				i S	Sn	08 05 56.4	-0.5
FCH				IAML		08 05 57.1	
	comp=E,5µm,0.2s						
PEL	Peldehue	0.33	261	⇓eP	Pn	08 05 44.8	0.0
PEL				eS	Sn	08 05 56.4	-0.5
PEL	Peldehue	0.33	261	eP	Pn	08 05 44.2	-0.6
PEL				i S	Sn	08 05 56.5	-0.5
PEL				IAML		08 05 57.5	
	comp=N,6µm,0.2s						
CLCH	Cerro Calan	0.36	213	eP	Pn	08 05 45.3	+0.3
CLCH				i S	Sn	08 05 57.6	+0.3
CLCH				IAML		08 05 58.4	
	comp=E,5µm,0.4s						
ROCH	El Roble	0.61	281	eP	Pn	08 05 46.8	+0.1
ROCH				i S	Sn	08 05 60.0	-0.4
ROCH				IAML		08 06 01.6	
	comp=N,4µm,0.5s						
ROC1	El Roble	0.61	281	eP	Pn	08 05 47.0	+0.2
ROC1				eS	Sn	08 05 60.0	-0.4
LMEL	Las Melosas	0.76	174	eP	Pn	08 05 48.4	+0.5
LMEL				i S	Sn	08 06 04.1	+1.8
AUSP	Uspallata	1.16	42	⇓eP	Pn	08 05 52.3	+0.2
AUSP				eS	Sn	08 06 09.1	-0.6
ARCO	CERRO ARCO	1.18	78	⇓eP	Pn	08 05 52.4	+0.3
ARCO				⇓eS	Sn	08 06 09.8	0.0
ARCO				IAML		08 06 10.5	
	comp=Z,390nm,0.3s						
AAGR	Agrelo	1.24	90	eP	Pn	08 05 53.3	+0.7
AAGR				eS	Sn	08 06 10.5	-0.3
ASAL	Salagasta	1.33	68	⇓eP	Pn	08 05 54.0	+0.3
ASAL				⇓eS	Sn	08 06 12.8	+0.1
AVIZ	Vizcacheras	1.54	105	⇓eP	Pn	08 05 56.8	+0.7
AVIZ				eS	Sn	08 06 17.8	+0.7
RTLS	Leoncito	1.55	34	⇓eP	Pn	08 05 57.4	+0.9
RTLS				⇓eS	Sn	08 06 18.0	+0.5
RTLS				IAML		08 06 20.1	
	comp=Z,378nm,0.5s						
RTCV	Cerro Valdivia	1.93	51	eP	Pn	08 06 01.2	+0.3
RTCV				⇓eS	Sn	08 06 25.2	-0.3
CMCH	Combarbala	2.01	343	eP	Pn	08 06 02.2	+0.3
CMCH				i S	Sn	08 06 27.0	-0.3
SJA	San Juan	2.15	44	eP	Pn	08 06 04.7	+1.0
SJA				eS	Sn	08 06 09.6	-21
GO05	Huala	2.34	215	eP	Pn	08 06 05.9	-0.2
GO05				i S	Sn	08 06 34.9	+0.1
RTLL	Cerro Villicun	2.34	42	⇓eP	Pn	08 06 06.5	+0.3
RTLL				eS	Sn	08 06 34.9	-0.1
RTLL				IAML		08 06 39.0	
	comp=Z,95nm,0.3s						
AMOG	MOGNA	2.64	36	eP	Pn	08 06 10.6	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACCO	Cerro Coronel	2.71	23	eP	Pn	08 06 11.7	+0.4
ACCO				⇓eS	Sn	08 06 44.0	0.0
ACAN	Cantantal	2.75	74	eP	Pn	08 06 11.5	0.0
ACAN				eS	Sn	08 06 41.5	-2.9
AROD	Rodeo	3.00	14	⇓eP	Pn	08 06 16.3	+1.2
AROD				eS	Sn	08 06 52.3	+1.5
ACDV	Cuesta del Vie	3.08	19	eP	Pn	08 06 17.0	+0.9
ACDV				eS	Sn	08 06 49.6	-2.9
AGUA	GUANDACOL	3.92	24	⇓eP	Pn	08 06 27.5	+0.4
MRA	San Martin	3.92	81	eP	Pn	08 06 26.3	-0.8
MRA				IAML		08 07 12.9	
	comp=Z,25nm,0.4s						

NNC ***27*** *08:07:17.1±3.0, 53°.42N×87°.75E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=25.5km s-min=11.5km az=64.0, Suspected Mining explosion.*

KRAR 27 08:07:16.0±0.1**, 53°.56N×87°.61E, M2.3, 7C-6D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.70	284	⇑Pn	Pg	08 07 49.0	+0.4
	3.9nm,0.3s						
ZAA0				⇑Sn	Sg	08 08 14.9	+4.2
	56nm,0.9s						
KURK	Kurchatov	6.22	246	⇓Pn	Pn	08 08 46.4	-2.6
	1.1nm,0.3s						
KURK				⇓Lg	Lg	08 10 33.9	
	2.2nm,0.7s						
KURBB	Kurchatov Arra	6.32	246	⇓Pn	Pn	08 08 53.3	+3.0
	4.4nm,0.7s						
KURBB				⇑Sn	Sn	08 10 04.3	+1.1
	5.4nm,0.7s						
KURBB				⇑Lg	Lg	08 10 37.8	
	16nm,1.0s						
MK31	Makanchi Array	7.58	209	⇑Pn	Pn	08 09 09.6	+1.9
	0.3nm,0.5s,baz=28,slow=14,SNR=11						
MK31				⇑Sn	Sn	08 10 33.7	-0.6
	1.7nm,0.8s,baz=27,slow=23,SNR=3.9						
MK31				⇓Lg	Lg	08 11 16.4	
	3.6nm,0.8s,baz=36,slow=30,SNR=4.6						
MAKZ	Makanchi	7.66	210	⇑Pn	Pn	08 09 11.3	+2.5
	1.6nm,0.8s						
MAKZ				⇓Sn	Sn	08 10 38.3	+2.0
	2.7nm,0.9s						
MAKZ				⇓Lg	Lg	08 11 17.8	
	2.2nm,0.8s						

IDC ***27*** *08:14:54.3±1.0, 26°.65N×99°.88E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.3/47, mbtmp3.5/5, Error ellipse: s-maj=42.7km s-min=17.2km az=70.0*

ISC 27 08:14:56.4±1.0**, 26°.8N**±0°.1×**100°.1E**±0°.3**, h10**^{km}**, n7, σ1^{s}37**/7**, mb3.6**/6**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.38	187	Pg	Pb	08 17 22.4	+0.8
	baz=0.2,slow=18,SNR=2.3						
CMAR				Lg	Lg	08 19 17.3	
	0.3nm,0.3s,baz=5.8,slow=28,SNR=3.3						
SONM	Songino Array	21.57	12	P	P	08 19 47.8	+1.6
	0.9nm,1.0s,baz=194,slow=12,SNR=4.7						
MKAR	Makanchi Array	24.39	330	P	P	08 20 16.2	+1.3
	0.8nm,0.8s,baz=143,slow=8.3,SNR=4.6						
KURBB	Kurchatov Arra	28.90	331	P	P	08 20 54.9	-0.5
	103nm,0.9s,baz=148,slow=9.1,SNR=3.4						
WRA	Warramunga Arr	57.15	141	P	P	08 24 42.9	-0.6
	0.7nm,0.7s,baz=328,slow=7.8,SNR=6.2						
AKASG	Malin Array Be	57.80	315	P	P	08 24 46.8	-1.0
	0.1nm,0.3s,baz=79,slow=7.7,SNR=7.0						
ASAR	Alice Springs	59.91	144	P	P	08 25 01.8	-1.0
	0.3nm,0.4s,baz=327,slow=7.2,SNR=5.0						

BJI ***27*** *08:21:47.0, 3°.30S×146°.90E, h10^{km}, mB5.0/5, mb4.6/8, Ms4.7/3, Ms7 4.4/2*

IDC ***27*** *08:21:48.8±1.0, 3°.28S×146°.85E, h0^{km}, mb4.1/11, mb1 4.3/12, mb1mx4.1/36, mbtmp4.1/12, ML3.6/1, MS3.9/21, Ms1 3.9/21, ms1mx3.9/28, Error ellipse: s-maj=35.3km s-min=16.3km az=100.0*

NEIC ***27*** *08:21:49.6±0.6, 3°.29S×146°.94E, h10^{km}, mb4.5/7, Error ellipse: s-maj=21.0km s-min=7.4km az=98.0*

GCMT ***27*** *08:21:53.6±0.3, 3°.26S±0°.02×146°.91E±0°.03, h16^{km}±1^{km}, MW4.9/75, Moment Tensor Solution. s12,c12; s75,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.48±.12; $M_{\theta\theta}$-0.23±.11; $M_{\phi\phi}$-0.24±.12; $M_{r\theta}$-1.75±.42; $M_{\theta\phi}$2.18±.09; $M_{\phi r}$-0.85±.28; Best double couple: $M_0$2.90300×10^{16} NP1:ϕ_s273.00000°, δ77.00000°, λ37.00000°. NP2: ϕ_s174.00000°, δ54.00000°, λ164.00000°. Principal axes: T 3.2140, Plg35.0000°, Azm140.0000°; N -0.6220, Plg51.0000°, Azm289.0000°; P -2.5930, Plg15.0000°, Azm39.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 08:21:52.0±0.8**, 3°.26S**±0°.09×**147°.0E**±0°.2**, h25**^{km}**, n48, σ1^{s}20**/34**, mb4.2**/13**, MS4.0**/19**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.28	18	ePn	Pn	08 22 11.3	-3.0
COEN	Coen	11.27	199	ePn	Pn	08 24 30.6	-1.0
HNR	Honiara	14.28	116	LR	LR	08 29 59.9	
	comp=Z,413nm,20.9s,baz=300,slow=34						
CTA	Charters Tower	16.74	182	Pn	Pn	08 25 45.1	+0.1
	0.1nm,0.3s,baz=23,slow=13,SNR=2.0						
CTAO	Charters Tower	16.74	182	ePn	Pn	08 25 44.6	-0.4
	19nm,1.1s						
GUMO	Guam	16.87	353	LR	LR	08 30 11.8	
	comp=Z,138nm,20.8s,baz=72,slow=30						
WRAB	Tennant Creek	20.64	216	eP	P	08 26 28.2	-1.7
	29nm,0.8s						
WB2	Warramunga Arr	20.65	216	eP	P	08 26 27.5	-2.5
WB2				eP	P	08 26 29.2	-0.8
WR1	Warramunga Arr	20.66	216	eP	P	08 26 28.9	-1.3
	31nm,0.9s						
WRA	Warramunga Arr	20.66	216	P	P	08 26 28.9	-1.3
	14nm,0.8s,baz=39,slow=11,SNR=56						
WRA				LR	LR	08 35 01.9	
	comp=Z,502nm,18.1s,baz=40,slow=39						
DAV	Davao City (W)	23.68	296	LR	LR	08 34 25.7	
	comp=Z,196nm,21.4s,baz=98,slow=32						
AS01	Alice Springs	23.87	211	eP	P	08 27 02.6	-1.1
ASAR	Alice Springs	23.89	211	P	P	08 27 03.4	-0.6
	12nm,1.0s,baz=44,slow=7.2,SNR=40						
ASAR				LR	LR	08 37 14.9	
	comp=Z,768nm,18.5s,baz=44,slow=39						
FITZ	Fitzroy Crossi	25.57	233	eP	P	08 27 17.6	-1.7
	22nm,1.1s						
FITZ	Fitzroy Crossi	25.57	233	P	P	08 27 17.7	-1.6
	16nm,1.0s,baz=42,slow=8.1,SNR=7.0						
FITZ				LR	LR	08 38 06.5	
	comp=Z,505nm,19.3s,baz=52,slow=38						
STKA	Stephens Creek	28.91	189	P	P	08 27 50.6	+1.5
	1.1nm,0.7s,baz=0.0,slow=18,SNR=2.8						
STKA				LR	LR	08 40 24.4	
	comp=Z,273nm,18.1s,baz=13,slow=39						
H11S3	WAKE ISLAND Hy	29.07	41	T	T	08 58 33.4	
	baz=222,slow=76,SNR=5.9						
H11S2	WAKE ISLAND Hy	29.07	41	T	T	08 58 36.3	
	baz=222,slow=76,SNR=4.6						
H11S1	WAKE ISLAND Hy	29.08	41	T	T	08 58 30.3	
	baz=222,slow=76,SNR=4.5						
JCJ	Chichijima	30.53	352	LR	LR	08 37 45.1	
	comp=Z,69nm,18.6s,baz=111,slow=31						
KSRS	Korea Array	44.21	338	P	P	08 29 58.9	-0.3
	1.2nm,0.9s,baz=153,slow=9.5,SNR=3.2						
KSRS				LR	LR	08 45 20.8	
	comp=Z,137nm,21.0s,baz=164,slow=32						
KSAR	Wonju Array Be	44.21	338	P	P	08 29 58.9	-0.3
KS01	Wonju Array Si	44.24	338	eP	P	08 30 00.2	+0.8
RPZ	Rata Peaks	45.59	156	LR	LR	08 46 03.9	
	comp=Z,246nm,20.7s,baz=328,slow=32						
CM01	Chiang Mai Arr	51.94	296	eP	P	08 30 58.5	-0.8
CMAR	Chiang Mai Arr	51.97	296	P	P	08 31 00.4	+0.8
	1.3nm,0.3s,baz=113,slow=5.3,SNR=15						
CMAR				LR	LR	08 50 08.1	
	comp=Z,49nm,21.6s,baz=106,slow=33						
PETK	Petropavlovsk-	56.89	8	LR	LR	08 51 39.1	
	comp=Z,109nm,21.8s,baz=173,slow=32						
SONA0	Songino Array	62.02	330	eP	P	08 32 12.1	+1.7
SONM	Songino Array	62.02	330	P	P	08 32 12.1	+1.7
	0.5nm,0.8s,baz=141,slow=4.8,SNR=3.4						
SONM				LR	LR	08 57 48.7	
	comp=Z,148nm,21.1s,baz=162,slow=35						
PPT	Papeete	63.73	108	LR	LR	08 56 30.4	
	comp=Z,52nm,19.5s,baz=282,slow=33						
VNDA	Vanda	74.63	177	LR	LR	09 04 49.6	
	comp=Z,86nm,18.1s,baz=252,slow=35						
MK01	Makanchi Array	75.37	320	eP	P	08 33 33.9	+0.3
MK31	Makanchi Array	75.38	320	eP	P	08 33 34.1	+0.5
	2.9nm,1.1s						
MK31				epP	pP	08 33 42.0	+0.8
MK32	Makanchi Array	75.38	320	eP	P	08 33 34.1	+0.5
MKAR	Makanchi Array	75.38	320	P	P	08 33 34.1	+0.5
	2.1nm,0.9s,baz=111,slow=6.8,SNR=13						
MKAR				LR	LR	09 06 19.1	
	comp=Z,69nm,20.0s,baz=52,slow=36						
MAKZ	Makanchi	75.59	320	eP	P	08 33 35.5	+0.7
	3.0nm,0.9s						
ZALV	Zalesovo Beam	76.69	328	LR	LR	09 06 07.6	
	comp=Z,73nm,21.3s,baz=76,slow=35						
NIL	Nilore	78.32	305	eP	P	08 33 50.5	0.0
	5.7nm,0.7s						
KURK	Kurchatov	79.01	323	eP	P	08 33 53.7	-0.1
KURBB	Kurchatov Arra	79.04	323	P	P	08 33 53.7	-0.3
	1.0nm,0.9s,baz=103,slow=5.4,SNR=5.4						
NRIK	Noril'sk	82.68	342	LR	LR	09 12 46.4	
	comp=Z,47nm,18.4s,baz=53,slow=37						
ILAR	Eielson Array	83.00	23	P	P	08 34 15.4	+0.6
	1.5nm,0.9s,baz=254,slow=4.8,SNR=10						
MAW	Mawson	84.75	203	LR	LR	09 11 33.1	
	comp=Z,153nm,18.4s,baz=124,slow=35						
GEYT	Alibeck	91.07	308	LR	LR	09 17 36.2	
	comp=Z,101nm,21.0s,baz=315,slow=37						
NVAR	Mina Array Bea	95.72	52	LR	LR	09 13 06.9	
	comp=Z,116nm,18.4s,baz=317,slow=32						
YKA	Yellowknife Ar	96.78	28	P	P	08 35 21.7	+1.4
	0.2nm,0.8s,baz=271,slow=4.9,SNR=3.3						
TORD	Torodi Ar. Bea	144.30	288	PKP	PKPab	08 41 24.8	-0.2
	1.3nm,0.9s,baz=32,slow=4.7,SNR=8.5						
TOA1	Torodi Ar. Sit	144.30	288	ePKPdf	PKPab	08 41 24.8	-0.2

IDC 27 08:28:49.7±3.5**, 11°.50S×164°.93E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/33**, mbtmp3.6**/4**, Error ellipse: s-maj=144.4km s-min=32.9km az=136.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.58	250	P	P	08 35 05.8	+0.3
	0.5nm,0.5s,baz=80,slow=9.0,SNR=5.0						
ASAR	Alice Springs	31.87	244	P	P	08 35 15.9	-1.1
	0.7nm,0.8s,baz=66,slow=9.2,SNR=6.7						
ILAR	Eielson Array	84.20	19	P	P	08 41 21.8	-0.9
	0.2nm,0.6s,baz=242,slow=6.0,SNR=4.9						
MKAR	Makanchi Array	93.31	317	P	P	08 42 08.1	+1.5
	0.1nm,0.2s,baz=120,slow=5.2,SNR=3.2						

SOME ***27*** *08:36:19.8, 42°.57N×79°.67E, h10^{km}*

KRNET ***27*** *08:36:19.4±0.1, 42°.55N×79°.64E, h15^{km}, mb2.2*

NNC 27 08:36:20.2±1.5**, 42°.58N×79°.61E, h0**^{km}**, mb2.3, mpv2.2, 13C-5D, Error ellipse: s-maj=9.2km s-min=5.7km az=133.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.58	349	P	Pb	08 36 32.7	-0.7
	4.1nm,0.3s						
SHLS				S	Sb	08 36 42.0	-0.4
	34nm,0.3s						
SHLS	Shalkode	0.58	349	eP	Pg	08 36 31.4	0.0
	baz=16						
SHLS				eS	Sg	08 36 40.0	+1.0
	baz=16						
SHLS	Shalkode	0.58	349	eP	Pg	08 36 31.4	0.0
	2.2nm,0.2s						
SHLS				eS	Sg	08 36 40.0	+1.0
	38nm,0.2s						
UZB	Uzynbulak	0.71	323	P	Pg	08 36 33.9	+0.1
	3.1nm,0.1s						
UZB				S	Sg	08 36 44.2	+1.2
	5.5nm,0.3s						
UZB	Uzynbulak	0.71	323	eP	Pg	08 36 33.9	+0.1
	baz=23						
UZB				eS	Sg	08 36 44.3	+1.3
	baz=23						
UZB	Uzynbulak	0.71	323	eP	Pg	08 36 33.9	+0.1
	3.7nm,0.2s						
UZB				eS	Sg	08 36 44.2	+1.2
	6.0nm,0.3s						
PDGK	Podgornoye	0.75	353	P	Pg	08 36 34.5	-0.1
	0.8nm,0.2s						
PDGK				S	Sg	08 36 45.2	+0.8
	4.3nm,0.3s						
PDGK	Podgornoye	0.75	353	⇓P	Pg	08 36 34.3	-0.3
	0.6nm,0.5s						
PDGK				⇓S	Sg	08 36 45.3	+1.0
	4.3nm,0.4s						
PDGK	Podgornoye	0.75	353	⇑iP	Pg	08 36 34.4	-0.2
	baz=52						
PDGK				⇑iS	Sg	08 36 45.3	+0.9
	baz=52						
PRZ	Przheval'sk	0.90	264	⇑iP	Pg	08 36 36.5	-0.9
	baz=66						
PRZ				⇑iS	Sg	08 36 48.8	-0.3
	baz=66						
SATY	Saty	1.01	299	P	Pg	08 36 39.5	0.0
	1.1nm,0.3s						
SATY				S	Sb	08 36 53.6	-0.9
	4.6nm,0.1s						
SATY	Saty	1.01	299	eP	Pg	08 36 39.5	0.0
	0.7nm,0.1s						
SATY				eS	Sb	08 36 53.6	-0.9
	5.3nm,0.1s						
DJR	Jarkent	1.75	4	P	Pb	08 36 53.0	-0.3
	0.4nm,0.2s						
DJR				S	Sg	08 37 16.7	+0.2
	1.5nm,0.4s						
DJR	Jarkent	1.75	4	eP	Pb	08 36 53.0	-0.3
	0.3nm,0.2s						
DJR				eS	Sg	08 37 16.7	+0.1
	0.4nm,0.2s						
KDJ	Kajisay	1.86	257	⇑iP	Pn	08 36 53.8	+0.4
	baz=58						
KDJ				⇑iS	Sb	08 37 18.7	-0.3
	baz=58						
ULHL	Ulahol	2.52	263	⇑eP	Pn	08 37 03.7	+1.2
	baz=64						
ULHL				⇑iS	Sn	08 37 35.5	+1.5
	baz=64						
BOOM	Boomskoye usch	2.71	269	⇑iP	Pn	08 37 06.0	+0.8
	baz=70						
BOOM				⇑iS	Sn	08 37 39.9	+1.1
	baz=70						
NRN	Naryn	2.92	248	⇓iP	Pn	08 37 09.0	+0.8
	baz=49						
NRN				⇓iS	Sn	08 37 45.0	+0.7
	baz=49						
TKM2	Tokmak 2	2.98	278	⇓Pg	Pb	08 37 13.0	-1.2
	0.7nm,0.6s						
TKM2				⇑Lg	Lg	08 37 53.3	
	1.5nm,0.8s						
TKM2	Tokmak 2	2.98	278	⇑iP	Pn	08 37 09.7	+0.9
	baz=78						
TKM2				⇑iS	Sn	08 37 46.2	+0.9
	baz=78						

SOME ***27*** *08:40:15.4, 44°.20N×77°.72E*

NNC 27 08:40:15.1±0.8**, 44°.26N×77°.76E, h0**^{km}**, mb2.7, mpv2.8, 6C-4D, Error ellipse: s-maj=6.8km s-min=3.8km az=162.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARXS	Arharly	0.07	134	P	Pg	08 40 17.2	+0.7
	56nm,0.1s						
ARXS				S	Sg	08 40 19.0	+1.6
	1µm,0.5s						
MNBS	Baschi	0.50	111	P	Pg	08 40 25.5	+0.8
	3.8nm,0.2s						
MNBS				S	Sb	08 40 33.0	-1.7
	14nm,0.7s						
CHKK	Chushkaly	0.69	234	P	Pg	08 40 27.9	-0.4
	9.1nm,0.3s						
CHKK				S	Sg	08 40 36.6	-0.6
	12nm,0.3s						
KURS	Kuram	0.83	159	P	Pg	08 40 30.9	-0.1
	3.9nm,0.3s						
KURS				S	Sg	08 40 41.9	+0.1
	8.0nm,0.6s						
KTBS	Karatobe	0.95	235	P	Pg	08 40 32.2	-1.1
	4.5nm,0.5s						
KTBS				S	Sg	08 40 44.6	-1.1
	10nm,0.3s						
KUU	Kurty	1.09	251	P	Pg	08 40 34.8	-1.1
	3.9nm,0.1s						
KUU				S	Sg	08 40 48.8	-1.2
	4.7nm,0.3s						
KOTS	Kotyrbulak	1.13	205	P	Pg	08 40 35.9	-0.9
	1.7nm,0.1s						
KOTS				S	Sg	08 40 50.8	-0.6
	7.5nm,0.5s						
MDOK	Medeo	1.21	205	P	Pg	08 40 36.9	-1.5
	2.6nm,0.6s						
MDOK				S	Sn	08 40 57.7	+1.0
	2.7nm,0.4s						
MDOK	Medeo	1.21	205	Pg	Pg	08 40 36.3	-2.1
	1.9nm,0.3s						
MDOK				Lg	Lg	08 40 51.0	
	3.5nm,0.3s						
SATY	Saty	1.29	158	P	Pg	08 40 39.1	-0.8
	4.2nm,0.1s						
SATY				S	Sg	08 40 56.5	-0.2
	35nm,0.2s						
UZB	Uzynbulak	1.45	140	P	Pn	08 40 42.3	-0.4
	2.0nm,0.1s						
UZB				S	Sg	08 41 01.6	+0.1
	4.7nm,0.4s						
DJR	Jarkent	1.46	87	P	Pb	08 40 43.7	+0.4
	1.3nm,0.3s						
DJR				S	Sn	08 41 04.3	+1.5
	5.0nm,0.4s						
IZV	Izvestkoviy	1.48	214	P	Pn	08 40 42.2	-1.0
	3.9nm,0.3s						
IZV				S	Sg	08 41 01.5	-1.2
	8.0nm,0.5s						
MTBS	Maitube	1.49	221	P	Pb	08 40 44.4	+0.7
	5.0nm,0.2s						
MTBS				S	Sn	08 41 05.2	+1.9
	19nm,0.3s						
KAPS	Kapalarasan	1.53	48	P	Pg	08 40 44.7	+0.2
	1.9nm,0.4s						
KAPS				S	Sn	08 41 06.0	+1.6
	6.3nm,0.3s						
PDGK	Podgornoye	1.57	126	P	Pn	08 40 44.4	+0.1
	1.8nm,0.3s						
PDGK				S	Sn	08 41 05.3	-0.1
	2.7nm,0.4s						
PDGK	Podgornoye	1.57	126	⇓P	Pn	08 40 44.1	-0.2
	2.0nm,0.5s						
PDGK				⇓S	Sn	08 41 04.6	-0.7
	3.9nm,0.6s						
DGS	Degeres	1.76	235	P	Pn	08 40 46.4	-0.7
	5.2nm,0.4s						
DGS				S	Sn	08 41 09.3	-0.9
	18nm,0.5s						
KST	Kastek	1.78	227	P	Pb	08 40 48.7	0.0
	5.4nm,0.3s						
KST				S	Sg	08 41 12.7	+0.3
	9.3nm,0.5s						
TKM2	Tokmak 2	2.06	230	⇓Pn	Pn	08 40 51.5	+0.3
	6.0nm,0.8s						
TKM2				⇑Sn	Sb	08 41 19.8	-0.1
	5.0nm,0.7s						
AAK	Ala-Archa	2.88	237	⇑Pg	Pn	08 41 04.6	+2.2
	0.8nm,0.5s						
AAK				⇑Lg	Lg	08 41 46.8	
	4.0nm,0.8s						
MAKZ	Makanchi	3.91	48	⇓Pg	Pb	08 41 26.0	+1.1
	1.0nm,0.8s						
MAKZ				⇑Lg	Lg	08 42 20.0	
	1.3nm,1.0s						
MK31	Makanchi Array	4.07	50	⇑Pg	Pb	08 41 29.9	+2.2
	0.9nm,0.7s,baz=223,slow=15,SNR=3.7						
MK31				⇑Lg	Lg	08 42 23.1	
	0.5nm,0.5s,baz=229,slow=29,SNR=5.1						

UCR 27 08:40:45.8±2.1**, 9°.01N×84°.18W, h8**^{km}±7^{km}**, MD4.3, 3C-4D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.40	53	⇓iP	Pg	08 40 53.7	+0.2
EDDO				eS	Sb	08 41 00.3	-1.0
EDLM	Las Mercedes	0.64	66	⇓eP	Pg	08 40 57.9	-0.3
EDLM				eS	Sb	08 41 07.9	-0.6
EDPN	Palmar Norte	0.72	94	⇑eP	Pg	08 40 59.3	-0.3
EDPN				eS	Sb	08 41 10.9	+0.4
LCR2	La Lucha 2	0.75	14	⇓eP	Pg	08 40 59.5	-0.8
LCR2				eS	Sb	08 41 11.1	-0.4
EDBA	Buenos Aires	0.91	80	⇓eP	Pg	08 41 02.3	-1.0
EDBA				eS	Sg	08 41 15.3	+0.2
SJS	Escuela Geolog	0.93	8	⇑eP	Pg	08 41 03.1	-0.6
HDC	Heredia	0.98	4	i P	Pg	08 41 03.8	-1.0
HDC				i S	Sb	08 41 19.0	+0.6
EDSV	San Vito	1.21	99	eP	Pb	08 41 08.0	-1.1
JTS	JuntasAbangare	1.48	329	i P	Pn	08 41 10.8	-2.0
JTS				i S	Sn	08 41 30.4	-1.9
BRU2	Volcan	1.49	98	⇑eP	Pn	08 41 11.7	-1.3
BRU2				eS	Sg	08 41 33.4	-0.4
CASO	Castillo	1.51	339	i P	Pn	08 41 12.1	-1.1
FORC	Fortuna	1.52	342	i P	Pn	08 41 12.6	-0.8
FORC				i S	Sg	08 41 35.1	+0.3
TBS2		1.52	98	i P	Pn	08 41 12.4	-1.0
TBS2				eS	Sg	08 41 34.9	0.0
ARE1	Arenal 1	1.53	340	eP	Pn	08 41 12.8	-0.7
CEDE	Laguna Cedeo	1.55	341	i P	Pn	08 41 13.7	-0.1
PLVR	Palo Verde	1.76	319	eP	Pn	08 41 15.0	-1.7
AMAS	Alto Masis	1.78	333	i P	Pn	08 41 17.7	+0.8
DVD	David	1.81	108	eP	Pn	08 41 16.4	-0.8
DVD				eS	Sn	08 41 39.6	-0.7
ACAL	Aguas Claras	1.82	333	i P	Pn	08 41 17.7	+0.2
PTEN	Parque Tenorio	1.87	335	i P	Pn	08 41 17.8	-0.4
CUI	Cuipilapa	1.90	329	i P	Pn	08 41 17.1	-1.5
MESS	Mesas	1.98	330	eP	Pn	08 41 20.8	+1.1
BUEV	Buena Vista	2.15	326	eP	Pn	08 41 22.3	+0.4
GB1A	Borinquen Arri	2.16	326	eP	Pn	08 41 22.0	-0.2
ACON	Acoyapa	3.09	342	eP	Pn	08 41 35.8	+0.9

IDC 27 08:59:00.2±1.8**, 10°.75S×164°.66E, h0**^{km}**, mb3.4**/3**, mb1 3.9**/5**, mb1mx3.6**/32**, mbtmp3.8**/5**, ML4.3**/2**, Error ellipse: s-maj=40.4km s-min=32.7km az=134.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.82	285	Pn	Pn	09 00 16.2	+2.1
	14nm,0.3s,baz=180,slow=16,SNR=4.4						
DZM	Mont Dzumac	11.38	172	Pn	Pn	09 01 45.7	+1.4
	1.9nm,0.3s,baz=282,slow=12,SNR=27						
WRA	Warramunga Arr	30.59	249	P	P	09 05 15.7	-0.3
	0.2nm,0.5s,baz=80,slow=9.0,SNR=4.3						
ASAR	Alice Springs	31.97	242	P	P	09 05 27.6	-0.7
	0.5nm,0.8s,baz=63,slow=10,SNR=6.1						
ILAR	Eielson Array	83.58	19	P	P	09 11 30.0	0.0
	0.3nm,0.8s,baz=224,slow=5.0,SNR=4.8						

ISCJB ***27*** *09:03:41.6±0.2, 17°.84S±0°.08×178°.54W±0°.06, h579^{km}, mb4.3/80, Error ellipse: s-maj=12.7km s-min=4.9km az=148.7*

IDC ***27*** *09:03:43.8±2.5, 18°.23S×178°.40W, h609^{km}±33^{km}, mb3.8/11, mb1 4.1/12, mb1mx3.7/27, mbtmp4.7/12, Error ellipse: s-maj=30.7km s-min=12.7km az=159.0*

NEIC ***27*** *09:03:43.0±0.6, 17°.83S×178°.55W, h588^{km}±7^{km}, mb4.3/67, Error ellipse: s-maj=9.6km s-min=4.3km az=154.0*

ISC 27 09:03:41.9±0.5**, 17°.9S**±0°.1×**178°.48W**±0°.09**, h579**^{km}**, n107, σ1^{s}06**/108**, mb4.3**/80**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	8.21	100	eP	P	09 05 43.4	+0.9
MARNC	Mare, Loyalty	13.20	252	eP	P	09 06 33.5	+0.6
PINNC	Pines Island,	14.02	248	eP	P	09 06 42.1	+0.9
DZM	Mont Dzumac	14.77	251	P	P	09 06 48.7	+0.1

	1.4nm,0.3s,baz=104,slow=21,SNR=9.4						
ONTNC	Ouen Toro	14.82	250	eP	P	09 06 50.1	+1.1
KNTN	Kanton	16.41	25	eP	P	09 07 04.4	+0.2
	180nm,1.1s						
RAR	Rarotonga	17.94	104	eP	P	09 07 26.1	+8.1
	55nm,1.6s						
OUZ	Omahuta	18.66	201	eP	P	09 07 26.4	+2.2
	164nm,1.9s						
URZ	Urewera	20.67	190	P	P	09 07 39.0	-3.5
	3.2nm,0.5s,baz=332,slow=5.1,SNR=5.1						
THZ	Tophouse	24.92	195	eP	P	09 08 19.8	-0.5
	7.3nm,1.0s						
EIDS	Eidsvold	29.21	250	eP	P	09 08 58.9	+0.9
	18nm,0.8s						
MLZ	Mavora Lakes	29.60	199	eP	P	09 09 01.7	+0.5
	69nm,2.0s						
KWAJ	Kwajalein Atol	29.86	332	eP	P	09 09 05.1	+1.4
	234nm,0.8s						
ARMA	Armidale	29.89	240	eP	P	09 09 05.0	+1.0
	14nm,0.8s						
CTA	Charters Tower	33.38	260	P	P	09 09 34.0	+0.4
	11nm,0.4s,baz=94,slow=11,SNR=42						
CTAO	Charters Tower	33.38	260	eP	P	09 09 34.2	+0.5
	19nm,0.8s						
COEN	Coen	37.03	270	eP	P	09 10 05.3	+1.3
	49nm,0.7s						
TOO	Toolangi	37.13	231	eP	P	09 10 05.2	+0.7
	31nm,1.2s						
STKA	Stephens Creek	38.58	241	eP	P	09 10 17.0	+0.7
	6.5nm,1.0s						
STKA	Stephens Creek	38.58	241	P	P	09 10 16.7	+0.3
	13nm,0.6s,baz=95,slow=9.8,SNR=23						
WB2	Warramunga Arr	44.56	260	eP	P	09 11 03.1	-0.5
WRAB	Tennant Creek	44.56	260	eP	P	09 11 03.0	-0.6
	17nm,0.6s						
WRA	Warramunga Arr	44.57	260	P	P	09 11 03.0	-0.7
	13nm,0.5s,baz=96,slow=7.2,SNR=383						
AS01	Alice Springs	44.69	254	eP	P	09 11 04.6	0.0
AS31	Alice Springs	44.73	254	eP	P	09 11 05.0	+0.1
	25nm,0.4s						
ASAR	Alice Springs	44.73	254	P	P	09 11 04.9	0.0
	72nm,0.6s,baz=87,slow=8.6,SNR=890						
ASAR				S	S	09 16 58.2	-2.3
	1.0nm,0.8s,baz=77,slow=17,SNR=5.6						
MWC	Mount Wilson	77.37	48	eP	P	09 14 38.9	+0.6
	7.8nm,0.6s						
ISA	Isabella, Lake	77.85	46	eP	P	09 14 41.8	+1.1
	9.5nm,0.9s						
CMB	Columbia Colle	77.87	43	eP	P	09 14 41.4	+0.7
	7.0nm,1.0s						
AFDM	Forest Hills D	78.00	42	eP	P	09 14 41.7	+0.3
	6.3nm,1.0s						
MDPB	Devils Postpil	78.50	44	eP	P	09 14 45.2	+0.8
	6.3nm,0.8s						
OMMB	Old Mammoth Mi	78.55	44	eP	P	09 14 45.5	+0.9
	6.8nm,1.1s						
YBH	Yreka Blue Hor	78.55	39	eP	P	09 14 44.7	+0.4
	6.8nm,0.8s						
WAKR	Walker	78.75	43	eP	P	09 14 46.6	+1.0
	7.8nm,0.9s						
BEKR	Beckworth	78.92	42	eP	P	09 14 47.3	+0.8
	18nm,1.5s						
PNTR	Pine Nut	78.97	43	eP	P	09 14 48.0	+1.2
	15nm,0.9s						
VCNR	Virginia City	79.05	43	eP	P	09 14 48.0	+0.8
	5.1nm,0.9s						
YERR	Yerington	79.14	43	eP	P	09 14 48.8	+1.1
	13nm,1.1s						
PAHR	Pah Rah Range	79.45	42	eP	P	09 14 49.9	+0.7
	11nm,1.4s						
NV01	Mina Array Sit	79.45	44	eP	P	09 14 50.1	+0.8
NVAR	Mina Array Bea	79.45	44	P	P	09 14 50.0	+0.7
	5.4nm,0.8s,baz=223,slow=9.0,SNR=34						
NV11	Mina Array Sit	79.55	44	eP	P	09 14 50.2	+0.5
	0.7nm,1.1s						
113A	Mohawk Valley,	79.73	51	eP	P	09 14 51.0	+0.4
	5.3nm,1.0s						
KVN	Kaiserville	79.92	43	eP	P	09 14 52.1	+0.4
	5.2nm,0.8s						
TPNV	Topopah Spring	80.05	46	eP	P	09 14 53.3	+0.8
	14nm,1.5s						
MOD	Modoc Plateau	80.11	40	eP	P	09 14 53.2	+0.7
	8.8nm,0.7s						
SHPR	Sheep Range	80.58	47	eP	P	09 14 56.0	+0.8
	3.7nm,1.0s						
W13A	Hualapai Mount	80.78	49	eP	P	09 14 56.6	+0.3
	13nm,1.9s						
PINE	Pine Mountain	80.81	38	eP	P	09 14 57.5	+1.2
	15nm,0.9s						
WVOR	Wild Horse Val	81.43	40	eP	P	09 14 60.0	+0.6
	9.4nm,1.0s						
TUC	Tucson	81.74	52	eP	P	09 15 02.4	+1.2
	8.2nm,1.1s						
J08A	Circle Bar Ran	82.04	40	eP	P	09 15 03.4	+1.0
	14nm,1.2s						
LCMT	Little Creek M	82.16	47	eP	P	09 15 03.6	+0.3
	4.4nm,0.8s						
CCUT	Cedar City	82.34	47	eP	P	09 15 04.8	+0.6
	7.1nm,1.0s						
KNB	Kanab	82.46	47	eP	P	09 15 06.0	+1.2
	6.5nm,0.9s						
PSUT	Pine Spring	82.49	46	eP	P	09 15 05.4	+0.5
	4.4nm,0.7s						
U15A	North Rim	82.55	48	eP	P	09 15 07.0	+1.6
	11nm,0.8s						
SZCU	Shurtz Canyon	82.56	47	eP	P	09 15 05.8	+0.5
	3.8nm,1.0s						
ELK	Elko	82.68	43	eP	P	09 15 06.3	+0.4
	3.2nm,0.9s						
WUAZ	Wupatki	82.78	49	eP	P	09 15 07.6	+1.2
	6.6nm,1.1s						
E07A	Sunnyside	83.03	36	eP	P	09 15 07.5	+0.2
	8.8nm,0.9s						
HAWA	Hanford	83.12	37	eP	P	09 15 07.9	+0.3
	9.8nm,1.0s						
MTPU	Mount Pierson	83.40	47	eP	P	09 15 10.7	+1.0
	4.9nm,0.9s						
CAST	Castle Rocks	83.61	12	eP	P	09 15 08.3	-1.4
	10nm,0.5s						
TRF	Thorofare Moun	84.00	12	eP	P	09 15 10.4	-1.4
	12nm,0.9s						
F10A	Beach Ranch, E	84.22	38	eP	P	09 15 13.5	+0.3
	8.1nm,0.9s						
RND	Reindeer	84.26	13	eP	P	09 15 12.9	-0.1
	9.3nm,0.8s						
C09A	Chrisman Ranch	84.63	36	eP	P	09 15 15.0	0.0
	33nm,0.2s						
HLID	Hailey	84.65	41	eP	P	09 15 15.7	+0.2
	4.7nm,0.8s						
TMUT	Trail Mountain	84.66	46	eP	P	09 15 16.5	+0.7
	3.8nm,0.9s						
TCUT	Toone Canyon	85.39	44	eP	P	09 15 19.5	+0.3
	7.2nm,0.8s						
IL1	Eielson Array	85.87	13	eP	P	09 15 20.1	-0.6
ILAR	Eielson Array	85.87	13	P	P	09 15 19.7	-1.0
	1.7nm,0.4s,baz=220,slow=5.1,SNR=51						
ILB	Eielson Array	85.87	13	eP	P	09 15 19.6	-1.0
TX31	Lajitas Ar. Si	86.04	58	eP	P	09 15 23.6	+1.3
TXAR	Lajitas Array	86.04	58	P	P	09 15 23.8	+1.4
	5.1nm,0.7s,baz=229,slow=5.8,SNR=18						
ANMO	Albuquerque	86.13	52	eP	P	09 15 23.1	+0.3
	3.3nm,0.9s						
XAN	Xi'an	86.19	307	P	P	09 15 24.5	+1.6
XAN				pP	PcP	09 15 32.8	+8.2
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MCMT	McKenzie Canyo	86.26	41	eP	P	09 15 23.8	+0.5
DLMT	Dillon	86.68	40	eP	P	09 15 25.8	+0.7
	comp=Z,4.1nm,0.8s						
TPAW	Teton Pass	86.81	42	eP	P	09 15 25.3	-0.6
	comp=Z,5.2nm,1.0s						
REDW	Red Top Meadow	86.81	42	eP	P	09 15 26.0	+0.1
	comp=Z,7.7nm,1.1s						
SNOW	Snow King Moun	86.92	42	eP	P	09 15 26.8	+0.4
	comp=Z,9.4nm,1.1s						
SNOW				epP	pwP	09 17 46.5	+13
LOHW	Long Hollow	87.09	42	eP	P	09 15 27.2	0.0
	comp=Z,18nm,1.7s						
HHC	Hu-ho-hao-te	87.20	314	eP	P	09 15 28.5	+0.9
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FLWY	Flagg Ranch	87.25	42	eP	P	09 15 28.5	+0.6
	comp=Z,7.1nm,0.9s						
YHB	Horse Butte	87.25	41	eP	P	09 15 29.0	+1.1
	comp=Z,7.1nm,0.7s						
YFT	Old Faithful	87.34	42	eP	P	09 15 30.5	+2.2
	comp=Z,4.7nm,0.6s						
YMR	Madison River	87.36	41	eP	P	09 15 27.3	-1.1
	comp=Z,5.7nm,1.0s						
BW06	Boulder Array	87.38	43	eP	P	09 15 28.1	-0.4
	comp=Z,3.3nm,0.7s						
PD31	Pinedale Array	87.38	43	eP	P	09 15 28.3	-0.3
PDAR	Pinedale Array	87.38	43	eP	P	09 15 28.3	-0.3
PDAR	Pinedale Array	87.38	43	P	P	09 15 28.4	-0.1
	comp=Z,2.7nm,0.6s,baz=221,slow=3.5,SNR=27						
YHH	Holmes Hill	87.49	41	eP	P	09 15 29.1	0.0
	comp=Z,9.8nm,1.7s						
KMI	Kunming	87.75	297	P	P	09 15 28.5	-2.2
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
LNIG	Linares	87.88	63	eP	P	09 15 31.5	+0.5
	comp=Z,11nm,1.0s						
MSTX	Muleshoe	88.53	54	eP	P	09 15 34.1	+0.1
	comp=Z,20nm,1.6s						
CMAR	Chiang Mai Arr	88.81	290	P	P	09 15 36.4	+0.9
	comp=Z,1.1nm,0.3s,baz=124,slow=2.8,SNR=9.8						
LZH	Lanzhou	90.82	308	⇓P	P	09 15 44.5	-0.1
LZH				pP	pP	09 18 07.5	+17
LZH				sP	PP	09 19 12.8	-18
LZH				PP	sP	09 19 35.8	+47
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,53nm,9.5s						
YKA	Yellowknife Ar	94.33	25	P	P	09 15 59.5	-0.3
	comp=Z,0.5nm,0.5s,baz=242,slow=4.2,SNR=13						
YKB5	Yellowknife Ar	94.33	25	eP	P	09 15 59.1	-0.7
ARCES	ARCESS Array B	126.27	350	PKP	PKPdf	09 21 37.9	-0.9
	comp=Z,4.0nm,1.0s,baz=294,slow=0.9,SNR=4.2						
BRTR	Keskin Array B	144.71	315	PKPbc	PKPdf	09 22 13.9	+0.1
	comp=Z,0.7nm,0.5s,baz=64,slow=2.7,SNR=3.4						
CLL	Collm	145.42	347	ePKPbc	PKPdf	09 22 15.0	+0.6
BRG	Berggiesshubel	145.62	346	ePKP	PKPbc	09 22 16.2	-0.2
	comp=Z,2.8nm,0.7s						
GERES	GERESS Array B	147.56	345	PKPbc	PKPbc	09 22 20.9	-0.9
	comp=Z,0.8nm,0.5s,baz=20,slow=4.3,SNR=6.5						
TTG	Podgorica	151.24	332	ePKPdf	PKPdf	09 22 20.8	-3.2
TTG				ePKPbc	PKPbc	09 22 26.4	-4.2

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*ISCJB **27** 09:16:44.8±0.4, 5°.33S±0°.04×29°.72E±0°.07, h10km, mb4.0/12, MS3.8/4, Error ellipse: s-maj=10.5km s-min=5.4km az=10.6*

*IDC **27** 09:16:45.9±0.8, 5°.29S×29°.51E, h0km, mb3.9/10, mb1 4.1/13, mb1mx3.9/35, mbtmp4.0/13, ML2.4/1, MS3.8/7, Ms1 3.8/7, ms1mx3.3/40, Error ellipse: s-maj=33.2km s-min=15.6km az=102.0*

*NEIC **27** 09:16:47.2±0.4, 5°.29S×29°.65E, h10km, mb4.4/3, Error ellipse: s-maj=14.2km s-min=8.1km az=106.0*

ISC 27 09:16:46.8±0.5**, 5°.30S**±0°.05×**29°.84E**±0°.07**, h10km, n42, σ1ˢ.79**/48**, mb4.1**/12**, MS3.8**/5**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	4.76	11	ePn	Pn	09 17 59.8	+1.0
MBAR				eLg	Lg	09 19 12.5	
MBAR	Mbarara	4.76	11	eP	Pn	09 17 59.7	+0.9
MBAR				eS	Sb	09 19 08.4	+0.5
MBAR	Mbarara	4.76	11	Pn	Pn	09 17 59.2	+0.4
	24nm,0.3s,baz=240,slow=0.2,SNR=24						
MBAR				Lg	Lg	09 19 12.5	
	268nm,0.3s,baz=294,slow=22,SNR=13						
KIBA	Kibaya	6.71	90	i P	Pn	09 18 26.2	+0.6
KIBA				i S	Sn	09 19 41.0	-1.3
KMBO	Kilima Mbogo	8.48	61	i P	Pn	09 18 51.1	+0.9
KMBO				i S	Sn	09 20 09.6	-17
KMBO	Kilima Mbogo	8.48	61	ePn	Pn	09 18 50.3	+0.2
KMBO				eSn	Sn	09 20 20.8	-5.3
KMBO				eLg	Lg	09 21 12.7	
KMBO	Kilima Mbogo	8.48	61	i P	Pn	09 18 52.6	+2.5
KMBO	Kilima Mbogo	8.48	61	Pn	Pn	09 18 49.9	-0.2
	1.5nm,0.3s,baz=229,slow=15,SNR=15						
KMBO				Sn	Sn	09 20 22.3	-3.9
	12nm,0.3s,baz=339,slow=20,SNR=8.5						
KMBO				Lg	Lg	09 21 12.7	
	16nm,0.3s,baz=332,slow=20,SNR=5.4						
KMBO				LR	LR	09 22 31.7	
	comp=Z,356nm,21.8s,baz=282,slow=40						
LSZ	Lusaka	10.04	189	ePn	Pn	09 19 12.8	+1.5
LSZ				eSn	Sn	09 21 04.0	-0.2
LSZ				eLg	Lg	09 22 04.0	
LSZ	Lusaka	10.04	189	Pn	Pn	09 19 11.8	+0.5
	11nm,0.3s,baz=12,slow=10,SNR=49						
LSZ				Sn	Sn	09 21 02.9	-1.4
	6.7nm,0.3s,baz=286,slow=5.8,SNR=5.6						
LSZ				Lg	Lg	09 22 04.0	
	8.1nm,0.3s,baz=273,slow=17,SNR=7.2						
LSZ				LR	LR	09 23 32.0	
	comp=Z,488nm,19.3s,baz=2.0,slow=41						
BLWY	Bulawayo	14.79	185	i P	Pn	09 20 16.0	-0.5
BLWY	Bulawayo	14.79	185	i P	Pn	09 20 10.0	-6.4
MATP	Matopo	15.09	185	Pn	Pn	09 20 17.8	-2.6
	2.4nm,0.3s,baz=4.1,slow=14,SNR=29						
MATP				Sn	Sn	09 23 08.6	+0.9
	1.3nm,0.3s,baz=49,slow=11,SNR=3.3						
MATP				Lg	Lg	09 24 41.3	
	1.2nm,0.3s,baz=275,slow=16,SNR=6.5						
TSUM	Tsumeb	18.26	220	eP	Pn	09 21 00.0	-0.7
TSUM				eSn	Sn	09 24 12.1	-13
TSUM	Tsumeb	18.26	220	P	Pn	09 20 57.7	-3.0
	0.7nm,0.3s,baz=52,slow=9.6,SNR=9.0						
TSUM				S	Sn	09 24 12.0	-13
	1.2nm,0.3s,baz=291,slow=17,SNR=3.9						
TSUM				Lg	Lg	09 26 21.3	
	0.8nm,0.3s,baz=111,slow=17,SNR=3.3						
LBTB	Lobatse	20.02	191	eP	P	09 21 22.4	+2.3
	7.6nm,0.8s						
LBTB				eS	S	09 25 04.9	-0.4
LBTB				e		09 27 18.3	
LBTB	Lobatse	20.02	191	P	P	09 21 20.5	+0.4
	1.2nm,0.3s,baz=11,slow=14,SNR=14						
LBTB				S	S	09 25 04.9	-0.4
	0.3nm,0.3s,baz=11,slow=10,SNR=2.5						
LBTB				Lg	Lg	09 27 18.3	
	0.4nm,0.3s,baz=296,slow=18,SNR=3.8						
LBTB				LR	LR	09 29 41.1	
	comp=Z,191nm,21.0s,baz=15,slow=39						
BOSA	Boshof	23.59	190	i P	P	09 22 02.1	+4.1
BOSA	Boshof	23.59	190	P	P	09 21 57.7	-0.3
	5.4nm,1.0s,baz=359,slow=8.6,SNR=7.3						
BOSA				LR	LR	09 31 38.8	
	comp=Z,317nm,18.9s,baz=14,slow=38						
SUR	Sutherland	28.23	196	LR	LR	09 34 21.0	
	comp=Z,309nm,19.5s,baz=14,slow=38						
TOA0	Torodi Ar. Sit	33.43	303	eP	P	09 23 24.5	-1.7
TORD	Torodi Ar. Bea	33.43	303	P	P	09 23 25.0	-1.1
	1.8nm,0.9s,baz=116,slow=8.1,SNR=9.2						
TORD				LR	LR	09 37 34.0	
	comp=Z,188nm,18.8s,baz=280,slow=38						
TOA1	Torodi Ar. Sit	33.44	303	eP	P	09 23 25.1	-1.2
DBIC	Dimbokro	36.62	289	eP	P	09 23 51.2	-2.5
DBIC	Dimbokro	36.62	289	LR	LR	09 37 44.4	
	comp=Z,108nm,20.4s,baz=80,slow=35						
BRTR	Keskin Array B	44.94	4	P	P	09 25 02.0	-0.3
	1.4nm,0.9s,baz=175,slow=5.4,SNR=3.7						
BR101	Keskin Array S	44.94	4	eP	P	09 25 02.0	-0.3
GEC2	GERESS Array S	55.74	347	eP	P	09 26 23.8	0.0
	16nm,2.0s						
GERES	GERESS Array B	55.74	347	P	P	09 26 23.8	0.0
	0.4nm,0.5s,baz=161,slow=6.2,SNR=2.7						
AKASG	Malin Array Be	55.78	360	P	P	09 26 25.5	+1.6
	2.9nm,0.7s,baz=184,slow=7.0,SNR=6.4						
AKBB	Malin Array Si	55.78	360	eP	P	09 26 25.5	+1.6
	31nm,1.9s						
FIA0	FINESS Array S	66.61	358	eP	P	09 27 37.5	+0.4
FINES	FINESS Array B	66.61	358	P	P	09 27 37.5	+0.4
	1.4nm,0.9s,baz=145,slow=8.5,SNR=2.6						
NB200	NORSAR Array S	67.73	350	eP	P	09 27 43.6	-0.8
NOA	NORSAR Array B	67.73	350	P	P	09 27 43.6	-0.8
	0.3nm,0.7s,baz=312,slow=24,SNR=2.1						
MK32	Makanchi Array	69.50	36	eP	P	09 27 56.8	+1.1
MKAR	Makanchi Array	69.50	36	P	P	09 27 56.8	+1.1
	0.2nm,0.3s,baz=242,slow=3.1,SNR=2.6						
KURK	Kurchatov	69.74	31	eP	P	09 27 56.5	-0.6
	2.4nm,0.9s						
ZALV	Zalesovo Beam	74.71	30	P	P	09 28 28.9	+2.2
	1.3nm,0.7s,baz=250,slow=7.5,SNR=2.3						
ZAA1	Zalesovo Array	74.71	30	eP	P	09 28 28.9	+2.2
SONA0	Songino Array	84.94	41	eP	P	09 29 25.3	+2.7
SONM	Songino Array	84.94	41	P	P	09 29 25.3	+2.7
	0.2nm,0.6s,baz=166,slow=3.1,SNR=2.5						

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*ISCJB **27** 09:44:39.2±0.6, 3°.39N±0°.06×128°.39E±0°.05, h10km, mb4.3/11, Error ellipse: s-maj=8.8km s-min=6.9km az=38.5*

*IDC **27** 09:44:39.5±1.2, 3°.19N×128°.33E, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.7/39, mbtmp4.2/5, MS2.5/1, Ms1 2.5/1, ms1mx2.4/35, Error ellipse: s-maj=97.2km s-min=17.2km az=71.0*

*NEIC **27** 09:44:44.2±0.4, 3°.28N×128°.37E, h35km, mb4.4/8, Error ellipse: s-maj=10.6km s-min=7.1km az=63.0*

*DJA **27** 09:44:48.2±0.8, 3°N±7°×12°8E±°, h10km, M4.5/9, mb4.5/8, mB4.9/3, MLv4.5/9, Mw(mB)4.2/3*

ISC 27 09:44:41.5±1.1**, 3°.39N**±0°.09×**128°.46E**±0°.08**, h10km, n39, σ2ˢ.35**/29**, mb4.4**/11**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.83	203	ePn	Pn	09 45 25.5	-1.2
TNTI	Ternate	2.83	203	P	Pn	09 45 30.7	+4.0
DAV	Davao City (W)	4.64	322	LR	LR	09 47 31.1	
	comp=Z,63nm,21.5s,baz=108,slow=36						
KMSI	Cibinong	5.28	238	P	Pg	09 46 24.5	+1.8
SANI	Sanana	5.95	205	P	Pn	09 46 11.3	+1.7
MRSI	Marisa	7.13	246	P	Pn	09 46 28.3	+2.4
LUWI	Luwuk	7.20	232	ePn	Pn	09 46 24.9	-1.9
LUWI				eSn	Sn	09 47 47.5	-1.2
LUWI	Luwuk	7.20	232	P	Pn	09 46 29.7	+2.9
FAKI	Fak Fak	7.33	149	ePn	Pn	09 46 35.6	+7.0
FAKI				eSn	Sn	09 47 54.9	+3.0
FAKI	Fak Fak	7.33	149	P	Pn	09 46 35.8	+7.2
MPSI	Mapaga	9.08	251	P	Pn	09 46 56.9	+4.2
TTSI	Tana Toraja	10.75	234	P	Pn	09 47 15.4	-0.2
SPSI	Sidrap Palu	11.35	230	P	Pn	09 47 24.9	+1.0
EDFI	Ende, Flores	13.82	209	P	Pn	09 47 55.4	-2.4
MTN	Manton Dam	16.35	171	ePn	Pn	09 48 35.3	+4.0
	43nm,1.3s						
KSM	Kuching	18.24	264	ePn	Pn	09 48 53.6	-1.3
	31nm,1.5s						
SSLB	Suanglung	21.53	341	eP	P	09 49 31.7	+0.7
	73nm,1.8s						
FITZ	Fitzroy Crossi	21.54	187	eP	P	09 49 27.9	-3.1
	40nm,1.6s						
FITZ	Fitzroy Crossi	21.54	187	P	P	09 49 30.1	-0.9
	5.3nm,1.0s,baz=20,slow=15,SNR=3.5						
WRAB	Tennant Creek	23.89	166	eP	P	09 49 54.0	-1.6
	25nm,1.4s						
WR1	Warramunga Arr	23.90	166	eP	P	09 49 55.0	-0.6
	80nm,1.9s						
WR1				ePcP	PcP	09 53 37.2	-1.3
WR1				eS	S	09 54 07.9	-4.2
WRA	Warramunga Arr	23.90	166	P	P	09 49 55.0	-0.6
	4.8nm,0.5s,baz=343,slow=10,SNR=109						
WRA				PcP	PcP	09 53 37.2	-1.3
	0.5nm,0.7s,baz=339,slow=2.4,SNR=4.3						
WRA				S	S	09 54 07.9	-4.2
	0.7nm,0.9s,baz=347,slow=18,SNR=3.7						
WB2	Warramunga Arr	23.90	166	eP	P	09 49 54.6	-1.1
RABL	Rabaul	24.85	107	eP	P	09 50 03.5	-1.0
	42nm,0.6s						
KLSI		25.03	251	P	P	09 50 04.2	-1.9
IPM	Ipoh	27.39	273	eP	P	09 50 25.2	-2.3
	16nm,1.4s						
AS31	Alice Springs	27.41	169	eP	P	09 50 25.4	-2.1
	1.1nm,0.6s						
AS31				ePcP	PcP	09 53 44.6	-1.9
ASAR	Alice Springs	27.41	169	P	P	09 50 26.9	-0.6
	2.1nm,0.5s,baz=353,slow=7.9,SNR=53						
ASAR				PcP	PcP	09 53 44.6	-1.9
	1.4nm,0.6s,baz=351,slow=2.3,SNR=14						
AS01	Alice Springs	27.42	169	eP	P	09 50 26.3	-1.3
STKA	Stephens Creek	37.23	161	eP	P	09 51 51.9	-1.5
	0.8nm,0.6s						
STKA				ePcP	PcP	09 54 12.8	-0.3
STKA	Stephens Creek	37.23	161	P	P	09 51 53.0	-0.3
	2.1nm,0.3s,baz=337,slow=9.1,SNR=18						
STKA				PcP	PcP	09 54 12.8	-0.3
	1.1nm,0.6s,baz=352,slow=6.8,SNR=3.2						
H11S3	WAKE ISLAND Hy	40.29	65	T	T	10 35 45.0	
	baz=253,slow=75,SNR=4.8						
H11S1	WAKE ISLAND Hy	40.31	65	T	T	10 35 38.3	
	baz=253,slow=75,SNR=4.5						
H11S2	WAKE ISLAND Hy	40.31	65	T	T	10 35 37.7	
	baz=253,slow=75,SNR=8.5						
MK32	Makanchi Array	58.82	325	eP	P	09 54 40.2	0.0
MKAR	Makanchi Array	58.82	325	P	P	09 54 40.2	0.0
	0.5nm,0.5s,baz=120,slow=8.5,SNR=6.6						
TORD	Torodi Ar. Bea	124.67	288	PKP	PKPdf	10 03 40.2	-2.3
	0.5nm,0.8s,baz=29,slow=3.3,SNR=3.2						
TOA1	Torodi Ar. Sit	124.67	288	ePKPdf	PKPdf	10 03 40.2	-2.3
PLCA	Paso Flores	139.06	158	PKP	PKPdf	10 04 10.2	+1.1
	1.1nm,0.9s,baz=296,slow=5.3,SNR=3.3						

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*TEH **27** 09:47:11.5, 30°.31N×57°.52E, h10km, ML3.3*

*ISCJB **27** 09:47:12.3±0.6, 30°.28N±0°.04×57°.48E±0°.06, h15km, Error ellipse: s-maj=7.6km s-min=4.9km az=24.1*

*THR **27** 09:47:12.9, 30°.31N×57°.47E, h18km, ML3.5*

ISC 27 09:47:12.3±1.0**, 30°.33N**±0°.05×**57°.49E**±0°.06**, h15km, n15, σ1ˢ.87**/18**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMN	Cheshme madani	0.47	175	ePg	Pg	09 47 20.7	-1.1
CHMN				eSg	Sg	09 47 27.5	-0.6
TVBK	TV Kerman	0.72	242	ePg	Pg	09 47 25.9	-0.5
TVBK				IAMB	IAmb	09 47 37.1	
	comp=Z,0.0nm,0.2s						
KRBR	Kerman	0.72	242	eAML	AML	09 47 37.1	
	comp=N,2μm,0.2s						
KRBR				ePg	Pb	09 47 26.6	-0.2
KRBR				eSg	Sb	09 47 36.7	+0.1
KRBR				eAML	AML	09 47 37.4	
	comp=E,2μm,0.2s						
KHGB	Koh Gabri	0.88	273	ePg	Pb	09 47 27.8	-1.6
KHGB				IAMB	IAmb	09 47 48.0	
	comp=Z,0.0nm,0.2s						
NGRK	Negar Kerman	0.95	224	ePg	Pg	09 47 30.2	-0.6
NGRK				IAMB	IAmb	09 47 45.7	
	comp=Z,0.0nm,0.3s						
IKOO	Kooshah	2.46	31	ePn	Pn	09 47 53.2	+1.0
IKOO				IAMB	IAmb	09 48 33.3	
	comp=Z,2μm,0.4s						
ITEG	Tejag	2.78	22	ePn	Pn	09 47 56.5	0.0
ITEG				IAMB	IAmb	09 48 45.3	
	comp=Z,986nm,0.3s						
TPRV	Parvadeh(Tabas	2.78	346	ePn	Pn	09 47 58.5	+2.1
TPRV				IAMB	IAmb	09 48 46.5	
	comp=Z,0.0nm,0.4s						
YZKH	Yazd	3.22	310	ePn	Pn	09 48 04.9	+2.4
YZKH	Yazd	3.22	310	ePn	Pn	09 48 04.9	+2.4
TKDS	Koohdasht(Taba	3.29	355	ePn	Pn	09 48 05.0	+1.5
TKDS				IAMB	IAmb	09 49 05.4	
	comp=Z,0.0nm,0.4s						
TABS	Tabas	3.33	355	ePn	Pn	09 48 05.9	+1.9
TABS	Tabas	3.33	355	ePn	Pn	09 48 05.9	+1.9
TABS				eSg	Sg	09 48 57.1	-2.2
SHRT	Shahrakht	4.08	35	ePn	Pn	09 48 17.1	+2.9
SHRT	Shahrakht	4.08	35	ePn	Pn	09 48 17.1	+2.9

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*ISCJB **27** 09:55:23.8±0.4, 6°.99S±0°.04×128°.12E±0°.04, h250km, mb4.4/7, Error ellipse: s-maj=5.3km s-min=4.9km az=27.8*

*NEIC **27** 09:55:24.5±0.6, 6°.96S×128°.23E, h258km±11km, mb4.3/3, Error ellipse: s-maj=10.0km s-min=9.9km az=172.0*

*DJA **27** 09:55:25.4±0.3, 7°S±4°×12°8E±°, h240km±6km, M4.6/8, mB5.2/4, mb4.5/8, MLv4.8/7, Mw(mB)4.5/4*

*IDC **27** 09:55:26.1±7.7, 7°.08S×127°.98E, h245km±84km, mb2.9/1, mb1 3.6/4, mb1mx3.1/34, mbtmp4.1/4, Error ellipse: s-maj=89.6km s-min=22.3km az=45.0*

ISC 27 09:55:24.9±0.6**, 7°.12S**±0°.06×**128°.12E**±0°.05**, h250km, n31, σ1ˢ.50**/38**, mb4.5**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.27	105	ePn	Pn	09 56 19.9	-0.5
SAUI				eS	S	09 57 01.7	-2.6
SAUI	Saumlaki	3.27	105	P	Pn	09 56 22.6	+2.2
SAUI				S	S	09 57 06.8	+2.5
SOEI	Soe	4.62	235	ePn	Pn	09 56 37.2	+0.9
SOEI				eS	S	09 57 32.8	-0.2
SOEI	Soe	4.62	235	P	Pn	09 56 37.4	+1.2
SOEI				S	S	09 57 31.4	-1.6

BATI	**Baumata**	**5.37**	**235**	P	**Pn**	**09 56 46.2**	**+1.0**
BATI	**Baumata**	**5.37**	**235**	P	**Pn**	**09 56 46.4**	**+1.2**
	163nm,0.3s,baz=86,slow=3.5,SNR=63						
BATI				S	**S**	**09 57 48.5**	**-0.9**
	81nm,0.3s,baz=101,slow=17,SNR=9.8						
FAKI	**Fak Fak**	**5.86**	**45**	ePn	Pn	09 56 48.6	-2.8
FAKI				eS	S	09 57 55.0	-5.5
FAKI	**Fak Fak**	**5.86**	**45**	P	**Pn**	**09 56 50.5**	**-0.9**
MTN	**Manton Dam**	**6.42**	**153**	ePn	**Pn**	**09 56 59.7**	**+1.4**
MTN				eS	**S**	**09 58 14.9**	**+1.8**
EDFI	**Ende, Flores**	**6.57**	**255**	P	**Pn**	**09 57 02.0**	**+1.7**
	28nm,0.7s,0.1nm						
SWI	**Sorong**	**6.96**	**27**	P	**Pn**	**09 57 04.4**	**-0.8**
	95nm,0.6s,4μm0.4nm						
RKPI	**Ransiki, Papua**	**8.22**	**48**	P	**Pn**	**09 57 20.9**	**-0.2**
PLAI	**Plampang**	**10.38**	**260**	P	**Pn**	**09 57 48.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**11.18**	**192**	ePn	**P**	**09 58 00.7**	**-1.7**
FITZ	**Fitzroy Crossi**	**11.18**	**192**	P	**Pn**	**09 57 58.9**	**+0.7**
	6.0nm,0.3s,baz=20,slow=12,SNR=122						
WRA	**Warramunga Arr**	**14.11**	**155**	P	**Pn**	**09 58 35.0**	**+0.6**
	0.7nm,0.3s,baz=334,slow=13,SNR=37						
WRA				S	**S**	**10 01 06.2**	**-4.5**
	0.6nm,0.3s,baz=336,slow=22,SNR=3.4						
WB2	**Warramunga Arr**	**14.11**	**155**	ePn	**P**	**09 58 36.0**	**+1.0**
WB2				eS	**S**	**10 01 11.5**	**+0.7**
WB2				eS	S	10 01 13.1	+2.3
COEN	**Coen**	**16.28**	**116**	eP	**Pn**	**09 59 01.5**	**+1.0**
	41nm,1.8s						
AS31	**Alice Springs**	**17.37**	**162**	eP	**P**	**09 59 09.8**	**-0.9**
	1.2nm,0.6s						
ASAR	**Alice Springs**	**17.37**	**162**	P	**Pn**	**09 59 14.1**	**+0.9**
	0.4nm,0.3s,baz=334,slow=9.2,SNR=27						
ASAR				S	**S**	**10 02 18.3**	**-0.2**
	0.1nm,0.3s,baz=328,slow=16,SNR=2.9						
SMRI	**Semarang**	**17.54**	**269**	eP	**P**	**09 59 12.9**	**+0.2**
	491nm,1.4s						
MANU	**Manus Island**	**19.84**	**76**	eP	**P**	**09 59 34.8**	**-2.5**
	149nm,1.5s						
PSI	**Prapat**	**30.76**	**288**	eP	**P**	**10 01 17.0**	**-0.6**
	5.8nm,0.5s						
TPUB	**Ta-pu**	**31.11**	**347**	eP	**P**	**10 01 19.5**	**-0.9**
	86nm,1.7s						
JOW	**Kunigami**	**33.75**	**0**	eP	P	10 01 39.1	-4.1
	106nm,1.5s						
NJ2	**Nanjing**	**39.94**	**348**	eP	**P**	**10 02 34.3**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KMI	**Kunming**	**40.46**	**323**	P	**P**	**10 02 42.0**	**+2.1**
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
HHC	**Hu-ho-hao-te**	**50.10**	**344**	eP	**P**	**10 03 55.0**	**+0.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ	**Urumqi**	**62.49**	**328**	eP	**P**	**10 05 22.3**	**+0.2**
WMQ				LR	LR		
	comp=N,110nm,16.3s						
WMQ				LR	LR		
	comp=E,80nm,16.3s						
WMQ				LR	LR		
	comp=Z,61nm,13.9s						
KSH	**Kashi**	**66.85**	**318**	P	P	10 05 46.8	-3.6
KSH				pP	pP	10 06 50.0	+3.9
KSH				PP	**PP**	**10 08 22.5**	**+1.2**
MKAR	**Makanchi Array**	**67.31**	**328**	P	**P**	**10 05 54.0**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=123,slow=5.5,SNR=4.2						

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*ISK **27** 10:05:09.1, 40°.74N × 40°.62E, $h14^{km}$, ML2.0/3*

*ISCJB **27** 10:05:10.3±0.6, 40°.84N±0°.05 × 40°.48E±0°.06, $h21^{km}\pm10^{km}$, Error ellipse: s-maj=10.9km s-min=4.1km az=142.0*

*DDA **27** 10:05:10.2, 40°.81N × 40°.59E, $h7^{km}\pm1^{km}$, ML2.3*

ISC 27 10:05:09.7±1.1, 40°.81N±0°.06 × 40°.53E±0°.06, $h16^{km}\pm10^{km}$, n10, $\sigma0^{s}.48$/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOM	**Cayeli-Rize**	**0.34**	**31**	PG	**Pg**	**10 05 16.9**	**+0.2**
CHOM				SG	**Sb**	**10 05 22.9**	**+0.3**
BAYT	**Aydıntepe-Bayb**	**0.51**	**216**	PG	**Pg**	**10 05 19.7**	**-0.2**
BAYT				SG	**Sg**	**10 05 26.9**	**+0.1**
BAYB	**BAYBURT**	**0.59**	**201**	i P	**Pb**	**10 05 21.9**	**+0.1**
BAYB				i S	**Sb**	**10 05 30.5**	**+0.5**
MACK	**Trabzon**	**0.59**	**283**	i P	**Pg**	**10 05 21.2**	**-0.2**
DBAD	**Bademkaya**	**0.91**	**76**	i P	**Pn**	**10 05 27.7**	**-0.2**
DBAD				i S	**Sn**	**10 05 39.8**	**-1.0**
BCA	**Borcka**	**1.04**	**52**	PG	**Pg**	**10 05 29.3**	**-0.5**
DAGI	**Agillar**	**1.08**	**75**	i P	**Pn**	**10 05 30.4**	**+0.1**
DAGI				i S	**Sn**	**10 05 45.7**	**+0.6**
DAGI				IAML_P			
	comp=Z,241nm,0.1s						
ARTV	**Artvin**	**1.12**	**70**	i P	**Pn**	**10 05 31.3**	**+0.3**
ARTV				i S	**Sn**	**10 05 46.0**	**-0.2**
ARTV				IAML_P			
	comp=Z,372nm,0.1s						
KELT	**Kelkit**	**1.18**	**236**	i P	**Pb**	**10 05 31.3**	**-0.5**
KELT				i S	**Sb**	**10 05 47.5**	**+0.6**
BATM	**Batumi**	**1.18**	**47**	PN	**Pb**	**10 05 31.9**	**+0.1**

MEX 27 10:12:24.4±0.6, 16°.73N × 99°.70W, $h11^{km}\pm3^{km}$, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	**0.23**	**309**	eP	Pg	10 12 28.6	-0.6
ACP2				eS	Sg	10 12 32.5	+0.1
CAIG	**El Cayaco**	**0.62**	**300**	eP	Pg	10 12 34.9	-1.7
CAIG				eS	Sg	10 12 43.3	-1.5
MEIG	**Mezcala**	**1.19**	**4**	eP	Pb	10 12 43.1	-3.9
MEIG				eS	Sb	10 12 57.7	-4.7
ARIG	**Puente Sto Nin**	**1.66**	**338**	eP	Pn	10 12 50.6	-2.8
ARIG				eS	Sn	10 13 09.8	-5.0
PLIG	**Platanillo**	**1.66**	**7**	eP	Pn	10 12 50.4	-3.2
PLIG				eS	Sn	10 13 10.0	-5.0

RSNC 27 10:21:25.4±0.8, 6°.79N × 73°.15W, $h150^{km}\pm5^{km}$, ML3.2, Mw3.5, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.20**	**188**	eP	Pn	10 21 45.7	-0.3
BARC				eS	Sn	10 22 01.0	-0.7
BARC				i		10 22 04.0	
	comp=Z,382nm,0.4s						
BRRC	**Barranca, Sant**	**0.64**	**300**	eP	Pn	10 21 47.6	+0.1
BRRC				eS	Sn	10 22 04.6	+0.2
BRRC				i		10 22 10.8	
	comp=Z,149nm,0.2s						
PAMC	**Pamplona, Colo**	**0.71**	**40**	eP	Pn	10 21 48.5	-0.1
PAMC				eS	Sn	10 22 05.7	-0.5
PAMC				i		10 22 08.0	
	comp=Z,157nm,0.5s						
RUSC	**La Rusia**	**0.90**	**175**	⇓eP	Pn	10 21 49.5	-0.4
RUSC				eS	Sn	10 22 08.3	-0.4
RUSC				i		10 22 11.0	
	comp=Z,132nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.32**	**259**	eP	Pn	10 21 52.2	-0.9
PTBC				eS	Sn	10 22 13.5	-0.8
PTBC				i		10 22 15.9	
	comp=Z,248nm,0.4s						
TAMC	**Tame, Arauca**	**1.40**	**105**	⇑iP	Pn	10 21 53.9	-0.1
TAMC				eS	Sn	10 22 15.5	-0.4
TAMC				i		10 22 16.2	
	comp=Z,89nm,0.3s						
OCAC	**Ocana**	**1.45**	**354**	eP	Pn	10 21 53.9	-0.7
OCAC				eS	Sn	10 22 16.2	-0.8
OCAC				i		10 22 20.7	
	comp=Z,205nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.83**	**292**	eP	Pn	10 21 58.0	-0.6
ZARC				eS	Sn	10 22 23.8	-0.2
ZARC				i		10 22 30.6	
	comp=Z,189nm,0.5s						
SMLC	**San Martn de**	**2.19**	**336**	eP	Pn	10 22 02.1	-0.8
SMLC				eS	Sn	10 22 31.7	0.0
SMLC				i		10 22 36.1	
	comp=Z,228nm,0.1s						
CHIC	**Chingaza**	**2.22**	**195**	eP	Pn	10 22 03.6	0.0
CHIC				eS	Sn	10 22 32.1	-0.9
CHIC				i		10 22 40.9	
	comp=Z,60nm,0.6s						
ROSC	**El Rosal**	**2.26**	**211**	eP	Pn	10 22 05.1	+1.1
ROSC				eS	Sn	10 22 36.5	+2.8
ROSC				i		10 22 43.5	
	comp=Z,154nm,0.5s						
HELC	**Santa Helena**	**2.43**	**256**	eP	Pn	10 22 05.6	-0.5
HELC				eS	Sn	10 22 36.3	-1.1
HELC				i		10 22 43.9	
	comp=Z,86nm,0.3s						
UREC	**San Jos de Ur**	**2.54**	**292**	e	Pn	10 22 05.5	-1.7
UREC				eP	Pn	10 22 05.5	-1.7
UREC				eS	Sn	10 22 35.7	-3.6
VILC	**Villavicencio,**	**2.71**	**191**	eP	Pn	10 22 08.1	-1.3
VILC				i		10 22 52.9	
	comp=Z,81nm,0.4s						
RREF	**El Recreo**	**2.88**	**229**	eP	Pn	10 22 12.3	+0.4
RREF				eS	Sn	10 22 49.1	+1.4
RREF				i		10 22 56.7	
	comp=Z,109nm,0.2s						
CODC	**Agustn Codazz**	**3.14**	**355**	eP	Pn	10 22 13.8	-0.7
CODC				eS	Sn	10 22 51.6	-1.1
CODC				i		10 22 58.5	
	comp=Z,28nm,0.4s						
ANIL	**Santa Ana**	**3.20**	**225**	eP	Pn	10 22 16.9	+1.2
ANIL				eS	Sn	10 22 56.1	+1.7
ANIL				i		10 22 59.7	
	comp=Z,59nm,0.3s						

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*NIED **27** 10:24:00, 41°.50N × 142°.00E, $h62^{km}$, Mw4.4 Best double couple: $M_0 4.18000\times10^{15}$ NP1: ϕ_s207.00000°, δ20.00000°, λ98.00000°. NP2: ϕ_s19.00000°, δ70.00000°, λ87.00000°.*

*BJI **27** 10:24:08.9, 41°.42N × 142°.22E, $h74^{km}$, mB5.0/24, mb4.6/45, Ms4.1/6, Ms7 3.9/4*

*MOS **27** 10:24:09.2±1.0, 41°.51N × 142°.02E, $h58^{km}$, mb4.8/36, Error ellipse: s-maj=6.8km s-min=4.9km az=102.0*

*JMA **27** 10:24:10.6±0.1, 41°.47N × 142°.02E, $h66^{km}\pm2^{km}$, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s23.00000°, δ76.00000°, λ98.00000°. NP2: ϕ_s173.00000°, δ16.00000°, λ61.00000°. Principal axes: T Plg58.0000°, Azm304.0000°; N Plg8.0000°, Azm202.0000°; P Plg31.0000°, Azm107.0000°;*

JMA Felt II J1.

*ISCJB **27** 10:24:10.4±0.2, 41°.50N±0°.02 × 142°.04E±0°.03, $h70^{km}\pm2^{km}$, mb4.5/71 Error ellipse: s-maj=4.4km s-min=2.7km az=43.6*

*IDC **27** 10:24:12.4±1.4, 41°.49N × 141°.99E, $h75^{km}\pm12^{km}$, mb4.0/19, mb1 4.2/26, mb1mx4.1/40, mbtmp4.3/26, MS3.3/15, Ms1 3.3/15, ms1mx3.1/41, Error ellipse: s-maj=14.5km s-min=9.3km az=124.0*

*NEIC **27** 10:24:12.6±0.4, 41°.54N × 142°.05E, $h75^{km}\pm3^{km}$, mb4.6/28, Error ellipse: s-maj=5.6km s-min=3.8km az=137.0*

NEIC Recorded [2 JMA] in Aomori, Honshu.

ISC 27 10:24:12.0±0.5, 41°.48N±0°.03 × 142°.07E±0°.03, $h73^{km}\pm4^{km}$, n207, $\sigma1^{s}.54$/232, mb4.6/78, 13C-21D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	**Aomorihigashid**	**0.59**	**249**	⇓P	**Pn**	**10 24 24.0**	**-1.9**
JAHD				S	**Sn**	**10 24 33.7**	**-2.4**
JARK	**Aomorirokkasho**	**0.70**	**229**	P	**Pn**	**10 24 25.0**	**-2.1**
JARK				S	**Sn**	**10 24 35.2**	**-3.1**
JOT	**Ohata**	**0.77**	**263**	⇓P	**Pn**	**10 24 25.7**	**-2.2**
JOT				eS	**Sn**	**10 24 36.7**	**-2.9**
JKB	**Kayabe**	**0.88**	**298**	⇓P	**Pn**	**10 24 26.7**	**-2.4**
JKB				eS	**Sn**	**10 24 39.6**	**-2.2**
JNBK	**Urakawa-nobuka**	**0.95**	**32**	⇑P	**Pn**	**10 24 28.1**	**-1.9**
ERM	**Erimo**	**0.98**	**56**	ePn	**Pn**	**10 24 29.2**	**-1.1**
ERM				eSn	**Sn**	**10 24 42.5**	**-1.5**
ERM				eSn	Sn	10 24 43.6	-0.4
ERM	**Erimo**	**0.98**	**56**	eP	**Pn**	**10 24 29.2**	**-1.1**
ERM				e		10 24 42.5	
JEM	**Erimo**	**0.98**	**56**	⇑P	**Pn**	**10 24 29.0**	**-1.3**
JEM				eS	**Sn**	**10 24 42.6**	**-1.4**
JTM	**Tenmabayashi**	**1.02**	**228**	⇓P	**Pn**	**10 24 29.3**	**-1.5**
JTM				S	**Sn**	**10 24 42.7**	**-2.2**
JIAM	**Iburiatsuma**	**1.15**	**355**	P	**Pn**	**10 24 31.7**	**-0.8**
JIAM				eS	**Sn**	**10 24 47.4**	**-0.4**
JANG	**Nango**	**1.18**	**201**	P	**Pn**	**10 24 31.1**	**-1.8**
JANG				eS	**Sn**	**10 24 45.8**	**-2.7**
JSR	**Shiriuchi**	**1.24**	**273**	⇓P	**Pn**	**10 24 31.9**	**-1.7**
JSR				eS	**Sn**	**10 24 47.6**	**-2.2**
JNB	**Noboribetsu**	**1.25**	**323**	⇓P	**Pn**	**10 24 31.5**	**-2.3**
JNB				S	**Sn**	**10 24 47.3**	**-2.9**
JBT2	**Biratori 2**	**1.32**	**10**	⇓P	**Pn**	**10 24 33.6**	**-1.1**
JBT2				eS	**Sn**	**10 24 51.5**	**-0.2**
JYM2	**Yakumo 2**	**1.42**	**297**	⇓P	**Pn**	**10 24 34.7**	**-1.2**
JYM2				eS	**Sn**	**10 24 52.3**	**-1.7**
JEW	**Eniwo**	**1.44**	**342**	⇓P	**Pn**	**10 24 35.0**	**-1.2**
JEW				S	**Sn**	**10 24 53.0**	**-1.5**
JCH	**Churui**	**1.49**	**40**	⇓P	**Pn**	**10 24 36.4**	**-0.5**
JCH				eS	**Sn**	**10 24 55.7**	**0.0**
JFR	**Furan**	**1.73**	**13**	⇓P	**Pn**	**10 24 39.0**	**-1.1**
JOSM	**Okushiri--Mats**	**2.03**	**288**	P	**Pn**	**10 24 42.2**	**-1.8**
JOSM				eS	**Sn**	**10 25 06.2**	**-2.3**
ASAJ	**Asahikawa**	**2.67**	**8**	P	**Pn**	**10 24 52.8**	**+0.2**
	15nm,0.3s,baz=222,slow=10,SNR=120						
ASAJ				S	**Sn**	**10 25 24.8**	**+0.9**
	14nm,0.3s,baz=337,slow=30,SNR=12						
ASAJ				LR	LR	10 26 15.5	
	comp=Z,370nm,21.3s,baz=224,slow=46						
YUK	**Yuzh-Kuril'sk**	**3.79**	**46**	d iP	**Pn**	**10 25 06.6**	**-1.3**
YUK				i S	**Sn**	**10 25 47.4**	**-3.8**
YUK				pmax	pmax		
	comp=E,52nm,0.4s						
YUK				pmax	pmax		
	comp=Z,273nm,0.4s						
YUK				pmax	pmax		
	comp=N,30nm,0.5s						
YUK				smax	smax		
	comp=N,793nm,0.4s						
YUK				smax	smax		
	comp=E,183nm,0.6s						
TEY	**Ternei**	**5.34**	**314**	⇓eP	**Pn**	**10 25 28.5**	**-0.6**
TEY				e		10 26 18.9	
TEY				pmax	pmax		
	comp=Z,30nm,0.7s						
TEY				pmax	pmax		
	comp=N,20nm,0.7s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
YSS	**Yuzh-Sakhalins**	**5.50**	**5**	ePn	**Pn**	**10 25 31.0**	**-0.2**
YSS	**Yuzh-Sakhalins**	**5.50**	**5**	eP	**Pn**	**10 25 31.7**	**+0.5**
YSS				eS	**Sn**	**10 26 32.9**	**-0.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				MLR	MLR		
	comp=N,100nm,17.0s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
KUR	**Kuril'sk**	**5.66**	**46**	eP	**Pn**	**10 25 34.0**	**+0.7**
KUR				eS	**Sn**	**10 26 35.4**	**-1.5**
KUR				pmax	pmax		
	comp=Z,60nm,0.4s						
KUR				smax	smax		
	comp=E,35nm,0.3s						
KUR				smax	smax		
	comp=N,89nm,0.5s						
MJB9	**Matsu-Tunnel**	**5.77**	**213**	ePn	**Pn**	**10 25 36.6**	**+1.6**
MAJO	**Matsushiro**	**5.77**	**213**	ePn	**Pn**	**10 25 36.5**	**+1.5**
MAJO	**Matsushiro**	**5.77**	**213**	eP	**Pn**	**10 25 36.5**	**+1.5**
MAT	**Matsushiro**	**5.77**	**213**	P	**Pn**	**10 25 36.8**	**+1.8**
MAT				eS	**Sn**	**10 26 42.2**	**+2.4**
MJAR	**Matsushiro Arr**	**5.77**	**213**	P	**Pn**	**10 25 36.4**	**+1.4**
	comp=N,0.4nm,0.3s,baz=24,slow=14,SNR=32						
MJAR				LR	LR	10 28 00.5	
	comp=N,160nm,19.3s,baz=45,slow=40						
INU	**Inuyama**	**7.29**	**215**	ePn	**Pn**	**10 25 58.0**	**+2.3**
VLA	**Vladivostok**	**7.72**	**286**	⇓eP	**Pn**	**10 26 01.7**	**+0.1**
USA0B	**Ussuriysk Arra**	**7.89**	**294**	ePn	**Pn**	**10 26 04.4**	**+0.6**
USRK	**Ussuriysk Ar.**	**7.89**	**294**	P	**Pn**	**10 26 03.1**	**-0.8**
	comp=N,0.6nm,0.3s,baz=102,slow=14,SNR=18						
USRK				LR	LR	10 28 57.9	
	comp=N,222nm,21.2s,baz=93,slow=36						
MSHR	**Mys Shultsa**	**8.20**	**281**	⇑eP	**Pn**	**10 26 07.6**	**-0.4**
TYV	**Tymovskoe**	**9.40**	**2**	eP	**Pn**	**10 26 25.5**	**+1.1**
TYV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ	**Mudanjiang**	**9.65**	**293**	P	**Pn**	**10 26 29.0**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,30nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,250nm,3.9s						
MDJ	**Mudanjiang**	**9.65**	**293**	ePn	**Pn**	**10 26 28.3**	**+0.3**
	comp=Z,19nm,0.8s						
KLR	**Kul'dur**	**10.61**	**320**	c iP	**Pn**	**10 26 42.4**	**+1.4**
KLR	**Kul'dur**	**10.61**	**320**	P	**Pn**	**10 26 41.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=122,slow=14,SNR=23						
KLR				LR	LR	10 30 47.5	
	comp=Z,193nm,19.2s,baz=104,slow=37						
KSRS	**Korea Array**	**11.64**	**254**	P	**Pn**	**10 26 56.3**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=64,slow=14,SNR=39						
KSRS				S	**Sn**	**10 29 09.8**	**+6.5**
	comp=Z,0.6nm,0.3s,baz=68,slow=24,SNR=11						
KSRS				LR	LR	10 30 46.6	
	comp=Z,136nm,22.0s,baz=56,slow=34						
KS01	**Wonju Array Si**	**11.65**	**255**	ePn	**Pn**	**10 26 56.9**	**+1.6**
KS15	**Wonju Array Si**	**11.68**	**254**	ePn	**Pn**	**10 26 57.2**	**+1.6**
KS15				eSn	Sn	10 29 11.2	+7.1
KSAR	**Wonju Array Be**	**11.68**	**254**	P	**Pn**	**10 26 56.3**	**+0.7**
KSAR				S	**Sn**	**10 29 09.8**	**+5.7**
KSAR	**Wonju Array Be**	**11.68**	**254**	P	**Pn**	**10 26 56.3**	**+0.7**
KSAR				S	**Sn**	**10 29 09.8**	**+5.7**
NKL	**Nikolayevsk**	**11.72**	**356**	eP	**Pn**	**10 26 54.8**	**-1.2**
JNU	**Nakatsue**	**12.19**	**230**	ePn	**Pn**	**10 27 03.6**	**+0.9**
JNU	**Nakatsue**	**12.19**	**230**	P	**Pn**	**10 27 03.1**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=18,slow=16,SNR=3.4						
JNU				LR	LR	10 30 54.8	
	comp=Z,60nm,19.5s,baz=34,slow=33						
SKR	**Severo-Kuril's**	**13.39**	**42**	⇑eP	**Pn**	**10 27 16.9**	**-1.8**
PETK	**Petropavlovsk-**	**15.70**	**37**	ePn	**Pn**	**10 27 47.8**	**-0.8**
PETK	**Petropavlovsk-**	**15.70**	**37**	eP	**Pn**	**10 27 47.8**	**-0.8**
ZEA	**Zeya**	**15.78**	**326**	eP	**Pn**	**10 27 47.7**	**-1.8**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
PET	**Petropavlovsk**	**16.09**	**38**	eP	**Pn**	**10 27 51.9**	**-1.5**
HIA	**Hailar**	**17.47**	**304**	⇓eP	**P**	**10 28 09.8**	**-1.0**
MA2	**Magadan**	**18.92**	**14**	eP	**P**	**10 28 26.1**	**-0.5**
	comp=Z,9.8nm,0.9s						
MA2	**Magadan**	**18.92**	**14**	⇓iP	**P**	**10 28 26.0**	**-0.5**
MA2				pmax	pmax		
	comp=Z,11nm,1.7s						
MA2	**Magadan**	**18.92**	**14**	P	**P**	**10 28 25.0**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=203,slow=9.5,SNR=9.1						
MA2				LR	LR	10 35 52.2	
	comp=Z,45nm,21.3s,baz=163,slow=37						
BJI	**Beijing**	**19.65**	**274**	P	**P**	**10 28 33.3**	**-1.3**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BJT	**Baijiatuau**	**19.66**	**274**	eP	**P**	**10 28 33.7**	**-1.1**
	comp=Z,18nm,0.8s						
BJT	**Baijiatuau**	**19.66**	**274**	eP	**P**	**10 28 33.7**	**-1.1**
BJT				pmax	pmax		
	comp=Z,18nm,0.8s						
NJ2	**Nanjing**	**20.79**	**251**	eP	Pn	10 28 48.0	-2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YAK	**Yakutsk**	**21.89**	**344**	eP	**P**	**10 28 55.3**	**-3.2**
YAK				e*PP	**pP**	**10 29 15.6**	**+2.0**
YAK				eS	**S**	**10 32 48.7**	**-7.3**
YAK				e		10 32 53.3	
YAK				e*SS	**sS**	**10 33 25.7**	**+5.1**
YAK				e		10 40 10.9	
YAK				pmax	pmax		
	comp=Z,68nm,0.9s						
YAK				pmax	pmax		
	comp=N,41nm,0.9s						
YAK				pmax	pmax		
	comp=E,10.0nm,0.9s						
YAK				smax	smax		
	comp=E,450nm,2.9s						
YAK				smax	smax		
	comp=N,240nm,2.8s						
SEY	**Seymchan**	**22.34**	**12**	⇑eP	**P**	**10 29 01.3**	**-2.2**
SEY	**Seymchan**	**22.34**	**12**	P	**P**	**10 29 00.8**	**-2.6**
	comp=N,2.8nm,0.7s,baz=204,slow=7.7,SNR=15						
HHC	**Hu-ho-hao-te**	**22.92**	**279**	eP	**P**	**10 29 10.0**	**+0.2**
HHC				pmax	pmax		
	comp=N,9.0nm,1.2s						
YHNB	**Yeheng**	**24.02**	**232**	eP	**P**	**10 29 21.3**	**+1.2**
	comp=N,240nm,2.0s						
BOD	**Bodaibo**	**24.18**	**322**	eP	**P**	**10 29 19.3**	**-1.9**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WHN	**Wuhan**	**24.83**	**253**	P	**P**	**10 29 28.8**	**+1.5**
ULN	**Ulaanbaatar**	**25.55**	**296**	eP	**P**	**10 29 33.5**	**-0.4**
	comp=Z,5.0nm,0.8s						
ULN	**Ulaanbaatar**	**25.55**	**296**	⇑eP	**P**	**10 29 33.7**	**-0.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TWG	**Pinlang**	**25.61**	**230**	eP	**P**	**10 29 36.3**	**+1.8**
	comp=Z,221nm,1.3s						
SONA1	**Songino Array**	**25.98**	**296**	eP	**P**	**10 29 37.5**	**-0.4**
SONM	**Songino Array**	**25.99**	**296**	P	**P**	**10 29 37.4**	**-0.4**
	comp=Z,5.4nm,0.7s,baz=87,slow=8.4,SNR=30						
SONM				LR	LR	10 40 44.2	
	comp=Z,76nm,18.6s,baz=32,slow=38						
XAN	**Xi'an**	**27.11**	**265**	P	**P**	**10 29 48.3**	**+0.3**
XAN				pP	pP	10 30 03.0	-2.2
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GUMO	**Guam**	**27.89**	**174**	LR	LR	10 40 33.8	
	comp=Z,53nm,21.3s,baz=96,slow=35						
TLY	**Talaya**	**28.01**	**305**	eP	**P**	**10 29 56.2**	**+0.4**
	comp=Z,4.4nm,0.9s						
TLY	**Talaya**	**28.01**	**305**	eP	**P**	**10 29 56.3**	**+0.5**
TLY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAK	**Zakamensk**	**28.13**	**302**	eP	**P**	**10 29 55.8**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BILL	**Bilibino**	**29.64**	**18**	⇓iP	**P**	**10 30 10.7**	**+0.7**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LZH	**Lanzhou**	**30.10**	**272**	eP	**P**	**10 30 14.5**	**-0.2**
LZH				pP	pP	10 30 31.8	-0.2
LZH				sP	sP	10 30 40.5	-0.1
LZH				ePP	**PnPn**	**10 31 15.0**	**+0.4**
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,75nm,4.9s						
LZH				LR	LR		
	comp=Z,250nm,12.8s						
LZH				LR	LR		
	comp=Z,250nm,13.1s						
LZH				LR	LR		
	comp=Z,330nm,16.8s						
H11N2	**WAKE ISLAND Hy**	**30.25**	**128**	T	T	11 02 50.0	
	baz=321,slow=76,SNR=145						
H11N1	**WAKE ISLAND Hy**	**30.26**	**128**	T	T	11 02 50.8	
	baz=321,slow=76,SNR=151						
H11N3	**WAKE ISLAND Hy**	**30.27**	**128**	T	T	11 02 51.4	
	baz=321,slow=76,SNR=81						
WAKE	**Wake Island**	**30.46**	**129**	eP	**P**	**10 30 17.4**	**-0.3**
	comp=Z,579nm,1.4s						
H11S1	**WAKE ISLAND Hy**	**31.09**	**130**	T	T	11 02 52.9	
	baz=324,slow=76,SNR=84						
H11S3	**WAKE ISLAND Hy**	**31.10**	**130**	T	T	11 03 03.1	
	baz=324,slow=76,SNR=47						
H11S2	**WAKE ISLAND Hy**	**31.11**	**130**	T	T	11 03 02.4	
	baz=324,slow=76,SNR=66						
KNGR	**Kungurtug, Tuv**	**31.82**	**302**	⇓iP	**P**	**10 30 29.2**	**-0.4**
GTA	**Gaotai**	**31.99**	**281**	eP	P	10 30 22.0	-9.2
GTA				pP	pP	10 30 26.5	-22
GTA				sP	sP	10 30 29.3	-28
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CD2	**Chengdu**	**32.43**	**263**	eP	**P**	**10 30 35.0**	**0.0**
KMI	**Kunming**	**36.34**	**256**	P	**P**	**10 31 10.3**	**+1.2**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DGZ	**Jazzator, Alta**	**38.35**	**301**	c iP	**P**	**10 31 26.6**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ZAA0	**Zalesovo Array**	**39.42**	**308**	eP	**P**	**10 31 34.2**	**-0.2**
	comp=Z,9.9nm,0.8s						
ZALV	**Zalesovo Beam**	**39.42**	**308**	P	**P**	**10 31 33.9**	**-0.5**
	comp=Z,10nm,0.7s,baz=89,slow=7.6,SNR=34						
ZALV				PcP	**PcP**	**10 33 41.8**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=92,slow=2.1,SNR=5.6						
WMQ	**Urumqi**	**39.46**	**292**	P	**P**	**10 31 35.8**	**+0.8**
WMQ				pP	sP	10 31 56.0	-5.1
WMQ				ScP	**ScP**	**10 37 18.8**	**-4.7**
WMQ				pmax	pmax		
	comp=Z,44nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.7s						
WMQ				LR	LR		
	comp=Z,88nm,15.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WMQ				LR	LR		
	comp=Z,100nm,18.7s						
WMQ				LR	LR		
	comp=Z,100nm,19.3s						
WMQ	Urumqi	39.46	292	eP	P	10 31 35.6	+0.6
	comp=Z,15nm,0.7s						
WMQ	Urumqi	39.46	292	eP	P	10 31 35.6	+0.6
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
NRIK	Noril'sk	39.49	333	P	P	10 31 34.0	-0.8
	comp=Z,3.1nm,0.5s,baz=107,slow=9.9,SNR=6.2						
NRIK				LR	LR	10 48 46.5	
	comp=Z,88nm,21.5s,baz=36,slow=37						
NVS	Novosibirsk	40.25	310	eP	P	10 31 41.4	+0.1
MK01	Makanchi Array	42.33	298	eP	P	10 31 58.4	-0.1
MK31	Makanchi Array	42.33	298	eP	P	10 31 58.1	-0.4
MK31	Makanchi Array	42.33	298	eP	P	10 31 58.1	-0.4
MKAR	Makanchi Array	42.33	298	eP	P	10 31 58.3	-0.2
	comp=Z,54nm,0.6s						
MKAR				PcP	PcP	10 33 51.1	+0.4
MKAR	Makanchi Array	42.33	298	P	P	10 31 58.2	-0.3
	comp=Z,16nm,1.0s,baz=84,slow=9.9,SNR=23						
MKAR				PcP	PcP	10 33 51.1	+0.4
	comp=Z,0.6nm,0.4s,baz=61,slow=3.8,SNR=3.6						
MKAR				LR	LR	10 50 31.5	
	comp=Z,41nm,19.1s,baz=28,slow=37						
MAKZ	Makanchi	42.53	298	eP	P	10 32 00.5	+0.4
	comp=Z,11nm,0.8s						
MAKZ	Makanchi	42.53	298	eP	P	10 32 00.5	+0.4
MAKZ				pmax	pmax		
	comp=Z,11nm,0.8s						
IM3	Indian Mountai	42.61	33	eP	P	10 32 01.1	+0.6
CMMT	Chiang Mai	43.02	252	P	P	10 32 08.4	+4.0
	comp=Z,6.1nm,0.8s						
CHTO	Chiang Mai	43.03	252	eP	P	10 32 05.2	+0.8
	comp=Z,4.1nm,0.6s						
CHTO	Chiang Mai	43.03	252	eP	P	10 32 05.2	+0.8
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CHTO	Chiang Mai	43.03	252	P	P	10 32 08.5	+4.1
	comp=Z,27nm,0.8s						
CMAR	Chiang Mai Arr	43.26	251	P	P	10 32 05.7	-0.6
	comp=Z,1.3nm,0.4s,baz=40,slow=8.5,SNR=8.6						
CMAR				LR	LR	10 49 23.4	
	comp=Z,20nm,20.3s,baz=18,slow=35						
KURK	Kurchatov	43.71	305	eP	P	10 32 09.2	-0.3
	comp=Z,11nm,0.7s						
KURK	Kurchatov	43.71	305	P	P	10 32 10.0	+0.5
KURK				pmax	pmax		
	comp=Z,41nm,0.6s						
KURBB	Kurchatov Arra	43.78	305	P	P	10 32 10.0	-0.1
	comp=Z,41nm,0.6s,baz=78,slow=8.8,SNR=75						
MLY	Manley	43.86	34	eP	P	10 32 12.7	+2.1
	comp=Z,9.9nm,1.1s						
MDM	Murphy Dome	44.93	34	eP	P	10 32 20.4	+1.4
	comp=Z,6.2nm,0.8s						
COLA	College	45.09	35	eP	P	10 32 22.0	+1.7
	comp=Z,12nm,0.8s						
COLA	College	45.09	35	eP	P	10 32 22.0	+1.7
COLA				pmax	pmax		
	comp=Z,12nm,0.8s						
PDGK	Podgornoye	45.27	294	P	P	10 32 22.3	0.0
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
IL1	Eielson Array	45.52	35	eP	P	10 32 24.0	+0.3
IL1				epP	pP	10 32 42.9	+1.4
ILAR	Eielson Array	45.52	35	P	P	10 32 24.7	+1.0
	comp=Z,6.1nm,1.0s,baz=275,slow=7.7,SNR=39						
ILB	Eielson Array	45.52	35	eP	P	10 32 24.1	+0.4
JIRN	Jiri	47.27	271	eP	P	10 32 38.8	+0.5
	comp=Z,30nm,0.8s						
RAMN	Ramite	47.34	270	eP	P	10 32 38.9	+0.1
	comp=Z,44nm,0.8s						
GUN	Gumba	47.37	272	eP	P	10 32 39.4	+0.3
	comp=Z,95nm,0.9s						
KKN	Kakani	47.88	272	eP	P	10 32 43.4	+0.5
PKI	Pulchoki	47.90	272	eP	P	10 32 43.0	-0.2
	comp=Z,12nm,0.5s						
PKIN	Phulchoki	47.91	272	eP	P	10 32 42.9	-0.3
TKM2	Tokmak 2	48.08	295	P	P	10 32 45.1	+0.8
	SNR=21						
BRVK	Borovoye	48.10	310	eP	P	10 32 44.2	+0.2
	comp=Z,5.2nm,0.7s						
BRVK	Borovoye	48.10	310	eP	P	10 32 44.2	+0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DMN	Daman	48.11	272	eP	P	10 32 44.9	+0.2
	comp=Z,32nm,1.0s						
OTUK	Ortayu	48.33	303	P	P	10 32 46.2	+0.3
OTUK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBK	Karagaybulak	48.62	295	P	P	10 32 48.9	+0.5
	SNR=13						
KZA	Kyzart	48.64	294	P	P	10 32 50.4	+1.5
	SNR=7.0						
USP	Ospenovka	48.69	296	P	P	10 32 49.1	+0.3
	SNR=6.2						
DANN	Dangsing	48.73	274	eP	P	10 32 50.0	+0.5
	comp=Z,106nm,0.6s						
AAK	Ala-Archa	48.94	295	eP	P	10 32 50.6	-0.2
	comp=Z,5.8nm,1.3s						
AAK	Ala-Archa	48.94	295	eP	P	10 32 50.6	-0.2
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PYUN	Piuthan	49.43	274	eP	P	10 32 55.4	+0.6
	comp=Z,42nm,0.9s						
AML	Almayashu	49.68	295	P	P	10 32 57.8	+1.0
	SNR=5.8						
INK	Inuvik	50.23	29	eP	P	10 33 01.3	+1.2
	comp=Z,6.9nm,0.7s						
INK	Inuvik	50.23	29	P	P	10 33 01.2	+1.2
	comp=Z,8.8nm,0.8s,baz=300,slow=7.1,SNR=52						
MNAS	Manas	50.35	296	P	P	10 33 01.9	+0.4
MNAS				pmax	pmax		
	comp=Z,11nm,0.9s						
SFK	Sufi-Kurgan	50.69	292	P	P	10 33 04.4	+0.2
SFK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KK31	Karatay Array	51.44	297	eP	P	10 33 09.6	+0.1
KK31	Karatay Array	51.44	297	eP	P	10 33 09.6	+0.1
KKAR	Karatay Array	51.44	297	eP	P	10 33 09.3	-0.2
KKAR	Karatay Array	51.44	297	eP	P	10 33 09.3	-0.2
GAR	Garm	53.35	293	eP	P	10 33 23.3	-0.6
	comp=Z,9.7nm,1.1s						
GAR	Garm	53.35	293	eP	P	10 33 23.3	-0.6
GAR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ARU	Arti	53.43	317c	iP	P	10 33 24.0	0.0
ARU						10 35 21.8	
ARU				S	S	10 40 52.3	+1.8
ARU				SS	SS	10 44 29.3	-1.5
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ABKAR	Akbulak array	55.53	308	eP	P	10 33 39.6	+0.3
KBL	Kabul	56.39	289	eP	P	10 33 45.5	-0.5
	comp=Z,4.6nm,0.9s						
KBL	Kabul	56.39	289	eP	P	10 33 45.5	-0.5
KBL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RES	Resolute Bay	58.18	15	eP	P	10 33 57.7	0.0
	comp=Z,9.2nm,0.7s						
RES	Resolute Bay	58.18	15	eP	P	10 33 57.7	0.0
RES				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LVZ	Lovozero	58.29	335	⇓eP	P	10 33 59.9	+1.3
LVZ				pmax	pmax		
	comp=Z,37nm,1.2s						
YKA	Yellowknife Ar	59.74	32	P	P	10 34 09.0	+0.4
YKA	Yellowknife Ar	59.74	32	P	P	10 34 09.0	+0.4
	comp=Z,0.9nm,0.8s,baz=302,slow=6.3,SNR=17						
KLMR	Klimovskoe	60.30	327	eP	P	10 34 10.5	-1.9
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
KLMR	Klimovskoe	60.30	327	eP	P	10 34 10.6	-1.9
KLMR				AMP		10 34 14.4	
	comp=Z,12nm,1.2s						
TULEG	Thule	60.64	8	eP	P	10 34 14.0	-0.6
	comp=Z,14nm,1.0s						
WRAB	Tennant Creek	61.51	188	⇑eP	P	10 34 20.6	-0.5
WRAB				pmax	pmax		
	comp=Z,2.0nm,1.2s						
WRA	Warramunga Arr	61.52	188	iP	P	10 34 19.8	-1.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	Warramunga Arr	61.52	188	P	P	10 34 20.6	-0.6
	comp=Z,1.6nm,0.6s,baz=6.6,slow=7.0,SNR=34						
GEYT	Alibeck	62.19	297	P	P	10 34 24.6	-1.2
	comp=Z,7.6nm,0.8s,baz=46,slow=4.3,SNR=9.8						
GYA0B	ALIBECK ARRAY	62.19	297	eP	P	10 34 25.7	0.0
	comp=Z,6.6nm,0.9s						
OBN	Obninsk	64.87	322	⇑eP	P	10 34 43.2	+0.2
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FIA1	FINESS Array S	65.14	332	eP	P	10 34 44.0	-0.7
FINES	FINESS Array B	65.14	332	P	P	10 34 44.7	+0.1
	comp=Z,6.0nm,0.7s,baz=46,slow=8.2,SNR=22						
FINES				LR	LR	11 04 51.4	
	comp=Z,84nm,19.1s,baz=346,slow=38						
ASAR	Alice Springs	65.25	188	P	P	10 34 45.9	+0.1
	comp=Z,0.7nm,0.8s,baz=14,slow=13,SNR=10						
VSU	Vasula	66.90	329	⇑eP	P	10 34 54.6	-1.4
VSU				pmax	pmax		
	comp=Z,15nm,0.9s						
ZEI	Tsey	68.41	308	eP	P	10 35 04.6	-1.4
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIV	Kislovodsk	68.41	310	eP	P	10 35 06.9	+1.0
	comp=Z,25nm,1.1s						
KIV	Kislovodsk	68.41	310	eP	P	10 35 06.9	+1.0
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
KBZ	Khabaz	68.43	310	P	P	10 35 07.2	+1.4
	comp=Z,5.5nm,0.9s,baz=30,slow=4.4,SNR=13						
GNI	Garni	69.49	306	⇑eP	P	10 35 14.9	+2.2
GNI				pmax	pmax		
	comp=Z,25nm,1.4s						
FFC	Flin Flon	69.72	34	iP	P	10 35 15.5	+1.8
NOA	NORSAR Array B	70.30	337	LR	LR	11 09 07.7	
	comp=Z,25nm,20.6s,baz=350,slow=38						
AKASG	Malin Array Be	71.11	322	P	P	10 35 22.2	0.0
	comp=Z,5.3nm,0.6s,baz=45,slow=6.1,SNR=23						
AKBB	Malin Array Si	71.11	322	eP	P	10 35 21.5	-0.7
	comp=Z,5.1nm,0.7s						
AKBB	Malin Array Si	71.11	322	eP	P	10 35 21.5	-0.7
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KIEV	Kiev	71.12	322	eP	P	10 35 21.6	-0.6
	comp=Z,4.9nm,0.7s						
KIEV	Kiev	71.12	322	⇓iP	P	10 35 22.2	-0.1
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NVAR	Mina Array Bea	71.96	55	P	P	10 35 28.9	+1.0
	comp=Z,0.5nm,0.6s,baz=300,slow=5.4,SNR=6.0						
PDAR	Pinedale Array	74.22	47	P	P	10 35 41.6	+0.5
	comp=Z,0.5nm,0.6s,baz=241,slow=2.4,SNR=6.5						
BUR08	Bucovina Ar. S	75.14	321	eP	P	10 35 46.9	+0.7
BUR04	Bucovina Ar. S	75.15	321	eP	P	10 35 46.8	+0.6
ILGA	Ilgaz	75.36	312	eP	P	10 35 49.8	+2.0
	comp=Z,14nm,0.9s						
BR131	Keskin Array S	76.30	311	eP	P	10 35 53.7	+0.7
BRTR	Keskin Array B	76.30	311	P	P	10 35 53.5	+0.6
	comp=Z,1.9nm,0.7s,baz=63,slow=4.5,SNR=7.7						
BRTR				LR	LR	11 12 27.5	
	comp=Z,17nm,18.7s,baz=284,slow=38						
LANS	Liptovska Anna	76.59	325	eP	P	10 35 54.3	0.0
LANS	Liptovska Anna	76.59	325	eP	P	10 35 54.3	0.0
MORC	Moravsky Berou	76.92	327	eP	P	10 35 56.8	+0.6
	comp=Z,4.1nm,0.8s						
MORC	Moravsky Berou	76.92	327	eP	P	10 35 56.8	+0.6
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	Collm	77.50	330	eP	P	10 35 59.0	-0.3
	comp=Z,5.0nm,1.0s						
CLL				ePcP	PcP	10 36 08.0	-1.4
CLL	Collm	77.50	330	eP	P	10 35 59.0	-0.3
CLL				e		10 36 07.0	
CLL				e*SP	sP	10 36 24.0	-2.5
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KHC	Kasperske Hory	79.03	328	eP	P	10 36 09.1	+1.2
KHC	Kasperske Hory	79.03	328	eP	P	10 36 09.1	+1.2
GERES	GERESS Array B	79.21	328	P	P	10 36 08.3	-0.6
	comp=Z,0.6nm,0.6s,baz=39,slow=8.6,SNR=7.7						
VTS	Vitosha	79.77	319	eP	P	10 36 12.3	+0.2
	comp=Z,4.7nm,0.7s						
VTS	Vitosha	79.77	319	eP	P	10 36 12.3	+0.2
VTS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SCHQ	Schefferville	80.94	16	P	P	10 36 16.9	-1.1
	comp=Z,2.4nm,0.8s,baz=227,slow=15,SNR=4.4						
ANMO	Albuquerque	81.36	51	⇓eP	P	10 36 20.2	-0.7
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
FUORN	Ofenpass-Fuorn	82.37	329	eP	P	10 36 26.6	+0.6
	comp=Z,8.9nm,0.8s						

*JMA **27** 10:33:36.3±0.4,44°.02N×148°.00E,h0^{km},M4.0*
*SKHL **27** 10:33:36.8±0.3,44°.38N×148°.25E,h40^{km}±3^{km},mb4.4/5*
ISC 27 10:33:33.4±2.9,**44°.3N**±0°.1×**148°.1E**±0°.1,**h0^{km}**±16^{km},**n17,**
σ**1^{s}.41**/27,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.98	350	iP	Pg	10 33 52.2	0.0
KUR				AMB	AMB	10 33 52.3	
	120nm,0.2s						
KUR				iS	Sg	10 34 03.8	-1.1
KUR				A	A	10 34 05.1	
	880nm,0.2s						
KUR				A	A	10 34 05.1	
	1µm,0.2s						
SHO	Shikotan	1.01	247	iP	Pn	10 33 55.6	+0.8
SHO				AMB	AMB	10 33 55.9	
	40nm,0.3s						
SHO				AMB	AMB	10 33 55.9	
	50nm,0.3s						
SHO				AMB	AMB	10 33 55.9	
	110nm,0.3s						
SHO				iS	Sn	10 34 09.5	-0.1
SHO				A	A	10 34 10.2	
	210nm,0.2s						
SHO				A	A	10 34 10.2	
	470nm,0.2s						
YUK	Yuzh-Kuril'sk	1.64	262	iP	Pb	10 34 04.5	0.0
YUK				AMB	AMB	10 34 04.9	
	150nm,0.3s						
YUK				iS	Sb	10 34 25.5	-0.1
YUK				A	A	10 34 35.0	
	600nm,0.4s						
YUK				A	A	10 34 35.0	
	420nm,0.4s						
LAGR	Lagunnoye	1.69	263	eS	Sb	10 34 27.0	-0.1
GRPR	Tuman	1.71	261	eP	Pn	10 34 05.0	+0.6
GRPR				AMB	AMB	10 34 08.0	
	30nm,0.3s						
GRPR				AMB	AMB	10 34 08.0	
	40nm,0.3s						
GRPR				AMB	AMB	10 34 08.0	
	150nm,0.3s						
GRPR				eS	Sg	10 34 28.0	-0.3
GRPR				A	A	10 34 34.0	
	430nm,0.3s						
NEM2	Nemuro 2	1.94	243	P	Pn	10 34 08.3	+0.7
NEM2				eS	Sn	10 34 32.0	-0.6
GLVR	Golovnino	1.95	255	eP	Pb	10 34 09.0	-0.7
GLVR				AMB	AMB	10 34 11.0	
	7.0nm,0.4s						
GLVR				AMB	AMB	10 34 11.0	
	20nm,0.4s						
GLVR				AMB	AMB	10 34 11.0	
	80nm,0.4s						
GLVR				eS	Sg	10 34 36.0	0.0
GLVR				A	A	10 34 41.0	
	360nm,0.4s						
GLVR				A	A	10 34 41.0	
	480nm,0.4s						
JRA	Rausu	2.18	262	P	Pb	10 34 13.0	-0.7
JKHN	Kushirohamanak	2.45	242	P	Pn	10 34 15.8	+1.2
JKHN				eS	Sn	10 34 45.2	0.0
JNK	Nakash	2.55	256	P	Pn	10 34 17.8	+1.9
JAK	Akkeshi	2.79	244	P	Pn	10 34 20.5	+1.3
JAK				eS	Sn	10 34 53.3	-0.3
JAR	Ashorobuto	3.29	254	P	Pn	10 34 28.8	+2.6
JCH	Churui	3.84	246	P	Pn	10 34 35.1	+1.4
JNBK	Urakawa-nobuka	4.39	245	P	Pn	10 34 42.8	+1.5
JKB	Kayabe	5.71	248	P	Pn	10 35 01.5	+2.2
JKB				eS	Sn	10 36 05.3	-0.2
JOT	Ohata	5.94	243	P	Pn	10 35 04.3	+1.7
JANG	Nango	6.25	234	P	Pn	10 35 07.6	+0.7
JANG				eS	Sn	10 36 15.0	-4.0

IDC 27 10:36:36.9±56.0,**20°.64S**×**174°.96W,h0^{km},mb4.0**/3,
mb1 4.2/3,**mb1mx3.7**/24,**mbtmp4.0**/3,**MS3.3**/1,**Ms1 3.3**/1,
ms1mx2.7/33,**Error ellipse: s-maj=1051.0km**
s-min=180.3km az=84.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	25.80	204	LR	LR	10 52 02.9	
	comp=Z,64nm,20.5s,baz=326,slow=36						
STKA	Stephens Creek	40.30	245	P	P	10 44 15.6	-0.5
	1.9nm,0.6s,baz=90,slow=9.1,SNR=3.2						
ASAR	Alice Springs	47.25	256	P	P	10 45 11.9	-0.3
	1.6nm,0.7s,baz=96,slow=6.9,SNR=18						
WRA	Warramunga Arr	47.40	262	P	P	10 45 13.6	+0.2
	0.5nm,0.3s,baz=97,slow=8.2,SNR=44						

*KRNET **27** 10:46:56.1±0.1,42°.69N×75°.59E,h30^{km},mb1.4*
*SOME **27** 10:47:03.5,42°.65N×75°.63E*
*ISCJB **27** 10:47:04.1±0.4,42°.67N±0°.03×75°.68E±0°.03,h0^{km},Error*
ellipse: s-maj=4.7km s-min=2.8km az=156.7
*NNC **27** 10:47:04.1±0.6,42°.66N×75°.67E,h0^{km},mb3.1,mpv2.9,*
Error ellipse: s-maj=3.7km s-min=2.9km az=164.0,
Suspected Mining explosion.
*KNET **27** 10:47:04.4±0.2,42°.69N×75°.68E,h10^{km}±3^{km},ml1.3,Error*
ellipse: s-maj=2.2km s-min=1.0km az=53.0
ISC 27 10:47:02.2±0.8,**42°.63N**±0°.02×**75°.70E**±0°.02,**h0^{km},n33,**
σ**1^{s}.85**/49,**24C-6D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM	Boomskoye usch	0.22	128	⇑iP	Pg	10 47 03.5	-3.0
	baz=27						
BOOM				⇑iS	Sg	10 47 08.6	-0.8
	baz=27						
TKM2	Tokmak 2	0.30	345	⇑P	Pb	10 47 09.7	-1.0
	21nm,0.1s,SNR=19						
TKM2				⇓S	Sg	10 47 13.4	+1.4
	67nm,0.2s						
TKM2	Tokmak 2	0.30	345	⇑P	Pb	10 47 09.5	-1.2
	4.8nm,0.3s						
TKM2				⇑S	Sg	10 47 13.6	+1.6
	16nm,0.3s						
TKM2	Tokmak 2	0.30	345	⇑iP	Pg	10 47 02.8	-5.2
	baz=1.0						
TKM2				⇑iS	Sg	10 47 06.7	-5.3
	baz=1.0						
KST	Kastek	0.46	25	P	Pb	10 47 12.7	-0.6
	26nm,0.2s						
KST				S	Sb	10 47 19.1	-1.6
	25nm,0.3s						
ULHL	Ulahol	0.55	134	⇑P	Pb	10 47 16.3	+1.3
	16nm,0.2s,SNR=22						
ULHL				⇓S	Sb	10 47 25.8	+2.3
	9.5nm,0.2s						
ULHL	Ulahol	0.55	134	⇑eP	Pg	10 47 09.2	-3.6
	baz=32						
ULHL				⇑iS	Sg	10 47 18.1	-1.9
	baz=32						
KBK	Karagaybulak	0.56	273	⇑P	Pb	10 47 15.6	+0.5
	10nm,0.1s,SNR=12						
KBK	Karagaybulak	0.56	273	⇑iP	Pg	10 47 06.0	-6.9
	baz=66						
KBK				⇑iS	Sg	10 47 13.4	-6.7
	baz=66						
DGS	Degeres	0.61	5	P	Pg	10 47 12.8	-1.2
	8.5nm,0.2s						
DGS				S	Sg	10 47 19.0	-3.0
	11nm,0.2s						
KZA	Kyzart	0.65	212	⇑P	Pb	10 47 18.2	+1.6
	11nm,0.2s,SNR=21						
MTBS	Maitube	0.73	47	P	Pb	10 47 18.2	+0.3
	11nm,0.3s						
MTBS				S	Sb	10 47 28.5	-0.1
	22nm,0.4s						
CHMS	Chumysh	0.79	298	⇑P	Pb	10 47 18.8	-0.1
	3.7nm,0.2s,SNR=7.2						
CHMS	Chumysh	0.79	298	⇑iP	Pg	10 47 09.4	-8.0
	baz=97						
CHMS				⇑iS	Pb	10 47 18.8	-0.1
	baz=97						
AAK	Ala-Archa	0.89	271	⇑P	Pb	10 47 21.3	+0.6
	3.8nm,0.2s,SNR=10						
AAK	Ala-Archa	0.89	271	P	Pb	10 47 21.3	+0.6
	1.4nm,0.3s						
AAK				S	Sb	10 47 32.5	-0.7
	1.7nm,0.3s						
UCH	Uchtor	0.97	246	⇑P	Pn	10 47 23.1	-0.4
	4.0nm,0.3s,SNR=5.7						
USP	Ospenovka	1.09	306	⇓P	Pb	10 47 24.1	+0.1
	4.0nm,0.2s,SNR=9.2						
MDOK	Medeo	1.12	61	P	Pn	10 47 25.5	+0.1
	1.8nm,0.4s						
MDOK				S	Sb	10 47 40.0	+0.1
	4.3nm,0.6s						
MDOK	Medeo	1.12	61	Pg	Pn	10 47 25.9	+0.5
	7.3nm,0.3s						
MDOK				Lg	Lg	10 47 42.0	
	6.0nm,0.5s						
SGDS	Sogindy	1.14	317	P	Pg	10 47 23.9	-0.2
	2.5nm,0.2s						
SGDS				S	Sg	10 47 38.2	-0.6
	4.6nm,0.2s						
KOTS	Kotyrbulak	1.20	59	P	Pn	10 47 27.5	+1.0
	5.1nm,0.2s						
KOTS				S	Sn	10 47 44.3	+0.8
	6.7nm,0.4s						
KTBS	Karatobe	1.30	33	P	Pn	10 47 28.7	+1.0
	6.8nm,0.2s						
KTBS				S	Sn	10 47 46.4	+0.6
	7.8nm,0.2s						
KUU	Kurty	1.35	20	P	Pn	10 47 29.0	+0.7
	4.3nm,0.2s						
KUU				S	Sn	10 47 46.8	-0.1
	5.9nm,0.2s						
EKS2	Erkin-Say	1.42	272	⇓P	Pb	10 47 31.4	+1.8
	15nm,0.2s,SNR=40						
CHKK	Chushkaly	1.54	37	P	Pg	10 47 33.4	+1.6
	4.7nm,0.2s						
CHKK				S	Sn	10 47 54.6	+2.8
	22nm,0.3s						
AML	Almayashu	1.57	252	⇑P	Pb	10 47 34.0	+1.6
	4.9nm,0.2s,SNR=6.1						
MRKS	Merke	1.83	274	P	Pg	10 47 38.0	+0.7
	14nm,0.2s						
MRKS				S	Sg	10 48 02.4	+1.4
	8.6nm,0.2s						
SATY	Saty	2.04	77	Pg	Pg	10 47 43.0	+1.7
	11nm,0.2s						
SATY				Lg	Lg	10 48 10.9	
	7.2nm,0.2s						
MNAS	Manas	2.37	268	⇓Pn	Pg	10 47 47.5	-0.1
	1.2nm,0.4s						
MNAS				⇑Lg	Lg	10 48 18.9	
	0.8nm,0.5s						
PDGK	Podgornoye	2.87	75	Pg	Pg	10 47 57.8	+0.6
	1.7nm,0.3s						
PDGK				Lg	Lg	10 48 36.6	
	1.2nm,0.3s						
PDGK	Podgornoye	2.87	75	⇓Pn	Pb	10 47 54.1	-0.2
	1.0nm,0.4s						
PDGK				⇑Lg	Lg	10 48 35.4	
	3.0nm,0.7s						
KK31	Karatay Array	3.84	279	⇑Pg	Pg	10 48 15.8	-0.2
	0.8nm,0.6s,baz=92,slow=15,SNR=13						
KK31				⇑Lg	Lg	10 49 03.3	
	0.4nm,0.7s,baz=96,slow=30						

*ISCJB **27** 11:01:20.0±0.3,22°.26S±0°.04×171°.67E±0°.04,h98^{km},*
mb4.6/45,Error ellipse: s-maj=6.2km s-min=4.5km
az=36.2
*BJI **27** 11:01:20.8,22°.06S×172°.10E,h115^{km},mB5.0/18,*
mb4.7/36
*IDC **27** 11:01:22.7±2.9,22°.40S×171°.58E,h114^{km}±23^{km},*
mb4.3/17,mb1 4.4/19,mb1mx4.2/39,mbtmp4.7/19,MS3.5/5,
Ms1 3.5/5,ms1mx3.2/22,Error ellipse: s-maj=18.8km
s-min=15.9km az=82.0
*NEIC **27** 11:01:23.8±0.8,22°.30S×171°.59E,h121^{km}±6^{km},mb4.8/24,*
Error ellipse: s-maj=8.8km s-min=4.2km az=58.0
ISC 27 11:01:20.9±0.5,**22°.25S**±0°.07×**171°.70E**±0°.07,**h98^{km},n96,**
σ**1^{s}.38**/106,**mb4.7**/45,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.50	282	*e*Pn	Pn	11 02 14.7	+1.4
MARNC				*e*Sn	Sn	11 02 54.1	+0.4
PINNC	Pines Island,	3.95	264	*e*Pn	Pn	11 02 20.9	+1.5
PINNC				*e*Sn	Sn	11 03 05.3	+0.5
ONTNC	Ouen Toro	4.86	268	*e*Pn	Pn	11 02 33.3	+1.6
ONTNC				*e*Sn	Sn	11 03 26.4	-0.5
DZM	Mont Dzumac	4.88	271	P	Pn	11 02 34.1	+2.1
	44nm,0.3s,baz=118,slow=12,SNR=993						
DZM				S	Sn	11 03 26.8	-0.6
	173nm,0.3s,baz=356,slow=20,SNR=23						
DZM				LR	LR	11 04 12.8	
	comp=Z,281nm,22.0s,baz=60,slow=36						
OUZ	Omahuta	13.02	173	*e*Pn	Pn	11 04 24.2	+2.1
MXZ	Matakaoa Point	16.29	161	*e*Pn	Pn	11 05 03.2	-0.5
	112nm,1.1s						
HIZ	Hauiti	16.43	171	*e*Pn	P	11 05 06.4	-0.1
	65nm,1.2s						
URZ	Urewera	16.62	165	*e*Pn	P	11 05 10.4	+1.8
	69nm,1.1s						
URZ	Urewera	16.62	165	P	Pn	11 05 06.5	-1.3
	0.1nm,0.3s,baz=90,slow=4.0,SNR=2.6						
HNR	Honiara	17.03	317	*e*Pn	P	11 05 14.1	+0.8
	163nm,0.9s						
HNR	Honiara	17.03	317	P	Pn	11 05 11.9	-1.1
	14nm,0.3s,baz=212,slow=8.5,SNR=3.5						
BKZ	Black Stump Fm	17.35	167	*e*P	Pn	11 05 18.8	+2.0
	94nm,1.3s						
BFZ	Birch Farm	18.77	169	*e*P	P	11 05 32.8	+0.6
	48nm,0.9s						
EIDS	Eidsvold	19.12	257	*e*P	Pn	11 05 38.5	+0.4
	42nm,0.8s						
SNZO	South Karori	19.17	173	*e*P	P	11 05 37.2	+0.7
	66nm,1.3s						
THZ	Tophouse	19.48	177	*e*P	Pn	11 05 41.6	-0.5
	30nm,0.8s						
KHZ	Kahutara	20.16	176	*e*P	P	11 05 47.7	+0.4
	47nm,0.9s						
LTZ	Lake Taylor	20.48	179	*e*P	P	11 05 52.0	+1.2
	74nm,0.8s						
OXZ	Oxford	21.02	179	*e*P	P	11 05 56.5	0.0
	31nm,0.9s						
FOZ	Fox Glacier	21.28	184	*e*P	P	11 06 00.8	+1.5
	50nm,1.1s						
RPZ	Rata Peaks	21.41	181	*e*P	P	11 06 01.8	+1.1
	78nm,1.3s						
RPZ	Rata Peaks	21.41	181	P	P	11 05 59.6	-1.2
	32nm,1.1s,baz=353,slow=3.1,SNR=8.8						
RPZ				LR	LR	11 12 06.2	
	comp=Z,212nm,21.2s,baz=10,slow=30						
LBZ	Lake Benmore	22.11	183	*e*P	P	11 06 09.3	+1.2
	47nm,1.5s						
ODZ	Otahua Downs	22.75	182	*e*P	P	11 06 16.5	+1.7
CTA	Charters Tower	23.82	270	P	P	11 06 25.4	+0.3
	11nm,0.8s,baz=104,slow=10,SNR=10						
CTAO	Charters Tower	23.82	270	*e*P	P	11 06 25.5	+0.4
	92nm,1.6s						
COEN	Coen	28.30	282	*e*P	P	11 07 05.5	+0.1
	28nm,1.2s						
STKA	Stephens Creek	28.39	244	*e*P	P	11 07 05.7	-0.4
	6.9nm,1.8s						
STKA	Stephens Creek	28.39	244	P	P	11 07 04.7	-1.4
	6.8nm,0.8s,baz=96,slow=7.8,SNR=8.5						
BBOO	Buckleboo	33.17	244	*e*P	P	11 07 47.5	-0.7
	28nm,1.3s						
AS01	Alice Springs	34.73	260	*e*P	P	11 08 01.0	-0.8
AS31	Alice Springs	34.77	260	*e*P	P	11 08 01.6	-0.6
ASAR	Alice Springs	34.77	260	P	P	11 08 01.4	-0.8
	23nm,0.8s,baz=85,slow=8.9,SNR=143						
ASAR				PcP	PcP	11 10 33.0	-0.7
	0.9nm,0.6s,baz=116,slow=3.4,SNR=5.6						
WRAB	Tennant Creek	34.87	267	*e*P	P	11 08 01.3	-1.7
	47nm,1.8s						
WRA	Warramunga Arr	34.88	267	P	P	11 08 01.6	-1.6
	3.9nm,0.5s,baz=97,slow=8.6,SNR=80						
WRA				PcP	PcP	11 10 33.6	-0.5
	1.6nm,0.9s,baz=100,slow=2.9,SNR=4.1						
MTN	Manton Dam	39.69	277	*e*P	P	11 08 43.2	-0.6
	30nm,0.8s						
FITZ	Fitzroy Crossi	43.31	267	*e*P	P	11 09 13.8	+0.5
	46nm,0.8s						
SANI	Sanana	48.72	288	P	P	11 09 56.0	+0.2
CASY	Casey	58.33	205	*e*P	P	11 11 04.6	-0.7
JHJ	Hachijo jima 2	62.93	330	LR	LR	11 38 11.0	
	comp=Z,40nm,18.8s,baz=84,slow=35						
MJAR	Matsushiro Arr	66.49	331	P	P	11 11 60.0	-0.1
	6.4nm,0.9s,baz=170,slow=7.3,SNR=9.6						
PPBI	Pangkal Pinang	66.61	278	P	P	11 11 57.4	-3.9
JNU	Nakatsue	67.45	324	P	P	11 12 06.3	+0.1
	14nm,0.9s,baz=88,slow=4.4,SNR=6.4						
MDSI	Maura Dua	67.52	274	P	P	11 12 05.7	-1.4
QSPA	South Pole Qui	67.81	180	*e*P	P	11 12 07.8	-0.4
	36nm,0.9s						
KSRS	Korea Array	72.29	325	P	P	11 12 36.4	+0.7
	8.4nm,0.9s,baz=143,slow=6.3,SNR=28						
KSRS				LR	LR	11 43 46.2	
	comp=Z,19nm,18.0s,baz=90,slow=35						
KSAR	Wonju Array Be	72.30	325	P	P	11 12 36.4	+0.6
YSS	Yuzh-Sakhalins	73.68	340	*e*P	P	11 12 45.4	+1.7
	7.9nm,0.7s						
MNSI	Mandailing Nat	73.79	278	P	P	11 12 44.9	-0.3
NJ2	Nanjing	73.97	315	*e*P	P	11 12 46.5	+0.8
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USRK	Ussuriysk Ar.	75.47	332	P	P	11 12 55.2	+1.1
	4.9nm,1.0s,baz=180,slow=4.2,SNR=6.0						
PETK	Petropavlovsk-	76.03	351	P	P	11 12 57.5	+0.4
	5.0nm,0.8s,baz=164,slow=6.0,SNR=4.9						
PETK				LR	LR	11 44 00.1	
	comp=Z,27nm,18.6s,baz=101,slow=34						
TRTT	Trang	76.56	284	P	P	11 13 02.3	+1.3
	7.8nm,1.0s						
CN2	Changchun	78.22	328	*e*P	P	11 13 10.3	+0.7
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
PHET	Kaeng Krachan	78.79	289	P	P	11 13 15.6	+2.2
	7.0nm,1.0s						
GYA	Guiyang	79.42	304	*e*P	P	11 13 18.0	+1.2
GYA				pP	sP	11 13 48.5	-3.0
GYA				sP	pwP	11 14 01.0	+16
GYA				PP	PP	11 16 21.5	+3.0
GYA				S	S	11 23 09.0	-1.2
GYA				SKS	SKSac	11 23 18.3	-6.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	Kul'dur	79.56	335	P	P	11 13 17.9	+1.1
	1.4nm,1.0s,baz=151,slow=4.8,SNR=4.0						
SRDT	SRDT	79.86	290	P	P	11 13 21.6	+2.4
	20nm,1.3s						
BJT	Baijiatuau	80.71	320	*e*P	P	11 13 23.5	+0.2
	8.4nm,0.9s						
BJI	Beijing	80.72	320	P	P	11 13 23.5	+0.3
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
UMPA	Umpang Tak	80.90	292	P	P	11 13 26.8	+2.0
	5.1nm,1.0s						
LAMP	Lampang	81.28	294	P	P	11 13 29.8	+3.1
	2.4nm,0.8s						
KMI	Kunming	81.81	301	P	P	11 13 28.5	-1.2
KMI				pP	pwP	11 14 00.0	+2.1
KMI				sP	sP	11 14 14.5	+10
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMAR	Chiang Mai Arr	81.83	294	P	P	11 13 29.9	+0.2
	4.8nm,0.9s,baz=136,slow=4.0,SNR=26						
XAN	Xi'an	81.83	312	P	P	11 13 30.3	+0.9
XAN				pP	pwP	11 13 57.5	-0.1
XAN				pmax	pmax		
	comp=Z,15nm,1.2s						
XAN				pmax	pmax		
	comp=Z,130nm,6.4s						
CMMT	Chiang Mai	81.98	294	P	P	11 13 32.0	+1.5
	7.3nm,1.4s						
CHTO	Chiang Mai	81.99	294	P	P	11 13 32.1	+1.6
	32nm,1.4s						
CD2	Chengdu	83.89	307	*e*P	P	11 13 41.0	+0.9
HHC	Hu-ho-hao-te	84.00	319	*e*P	P	11 13 42.8	+2.3
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
SEY	Seymchan	86.27	351	P	P	11 13 50.9	-0.3
	6.2nm,0.9s,baz=132,slow=5.0,SNR=16						
CMB	Columbia Colle	87.47	47	*e*P	P	11 13 58.7	+1.0
	33nm,1.2s						
YBH	Yreka Blue Hor	87.89	43	P	P	11 14 01.1	+1.6
	3.9nm,0.8s,baz=48,slow=8.9,SNR=11						
NVAR	Mina Array Bea	89.09	48	P	P	11 14 07.0	+1.5
	5.9nm,0.8s,baz=224,slow=8.8,SNR=41						
ULN	Ulaanbaatar	90.65	323	*e*P	P	11 14 11.9	-0.5
	12nm,1.3s						
GTA	Gaotai	90.86	313	*e*P	P	11 14 14.3	+0.7
GTA				pP	pwP	11 14 44.0	+1.7
GTA				sP	sP	11 14 56.3	+7.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	Songino Array	91.00	322	P	P	11 14 14.3	+0.2
	8.0nm,1.1s,baz=139,slow=4.3,SNR=23						
ILAR	Eielson Array	92.43	16	P	P	11 14 19.1	-1.0
	1.5nm,0.9s,baz=236,slow=5.3,SNR=11						
WMQ	Urumqi	100.94	313	*e*P	Pdif	11 15 00.0	+0.7
WMQ				LR	LR		
	comp=N,110nm,16.3s						
WMQ				LR	LR		
	comp=E,88nm,16.3s						
WMQ				LR	LR		
	comp=Z,74nm,17.5s						
MKAR	Makanchi Array	105.49	315	Pdiff	Pdif	11 15 20.7	+1.3
	0.4nm,0.6s,baz=94,slow=6.0,SNR=5.8						
BOSA	Boshof	119.96	214	PKP	PKPdf	11 20 00.1	-0.6
	0.6nm,0.3s,baz=175,slow=11,SNR=3.6						
MATP	Matopo	124.41	223	PKP	PKPdf	11 20 08.9	-0.5
	3.3nm,0.9s,baz=32,slow=2.9,SNR=5.3						
TSUM	Tsumeb	131.65	214	PKP	PKPdf	11 20 23.2	-0.1
	3.5nm,1.0s,baz=214,slow=7.3						
LANS	Liptovska Anna	145.31	327	*e*PKP	PKPbc	11 20 46.6	-0.5
MORC	Moravsky Berou	145.81	330	*e*PKP	PKPbc	11 20 48.4	-0.3
DPC	Dobruska-Polom	145.96	332	*e*PKP	PKPbc	11 20 48.9	-0.2
UPC	Upice	145.98	332	*e*PKP	PKPab	11 20 49.6	-0.2
VYHS	Vyhne	146.06	327	*e*PKP	PKPbc	11 20 49.5	+0.1
JAVC	Velka Javorina	146.39	329	*e*PKP	PKPab	11 20 51.1	-0.3
BRG	Berggiesshubel	146.57	334	*e*PKP	PKPbc	11 20 50.3	-0.5
	6.3nm,1.0s						
BRG				*e*		11 21 23.3	
	5.0nm,1.0s						
VRAC	Vranov	146.59	330	*e*PKP	PKPbc	11 20 51.1	+0.2
CLL	Collm	146.61	336	*e*PKPbc	PKPdf	11 20 49.0	-0.2
CLL				*e*pPKPdf	sPKPdf	11 21 22.0	-3.2
CLL				Lm	MLR	13 12 00.0	
	comp=Z,100nm,21.0s						
KRUC	Moravsky	146.85	330	*e*PKP	PKPbc	11 20 51.6	-0.1
PRU	Pruhonice	147.00	333	*e*PKP	PKPbc	11 20 51.5	-0.5
KHC	Kasperske Hory	148.06	332	*e*PKP	PKiKP	11 20 56.8	+0.1
GERES	GERESS Array B	148.22	332	PKPbc	PKPbc	11 20 54.7	-0.8
	comp=Z,2.3nm,0.9s,baz=40,slow=2.3,SNR=11						
TORD	Torodi Ar. Bea	166.87	228	PKP	PKPdf	11 21 14.2	-1.6
	comp=Z,1.0nm,1.0s,baz=322,slow=4.1,SNR=3.9						
TORD				PKPab	PKPab	11 22 17.7	-1.8
	comp=Z,2.5nm,0.9s,baz=77,slow=2.3,SNR=12						

MEX 27 11:14:55.7±0.5**,19°.49N**×**104°.36W,h4**^{km}±3^{km}**,MD3.6,**
Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		0.47	132	*e*P	Pg	11 15 04.3	-0.5
R15V				*e*S	Sg	11 15 11.3	+0.3
CJM	Chamela	0.65	271	*e*P	Pg	11 15 07.4	-0.8
CJM				*e*S	Sg	11 15 16.3	-0.3

NNC 27 11:19:11.6±9.5**,36°.94N**×**69°.85E,h0**^{km}**,mb3.5,mpv3.1,**
4C-5D,Error ellipse: s-maj=82.4km s-min=64.9km
az=143.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAS	Manas	5.91	19	⇑Pn	Pn	11 20 41.9	+1.3
	0.7nm,0.5s						
MNAS				⇓Sn	Sn	11 21 50.1	+1.1
	1.7nm,0.5s						
KK31	Karatay Array	6.18	4	⇑Pn	Pn	11 20 45.6	+1.4
	1.2nm,0.6s,baz=193,slow=14,SNR=5.9						
KK31				⇑Sn	Sn	11 21 59.9	+4.3
	1.4nm,0.4s,baz=195,slow=23						
AAK	Ala-Archa	6.72	31	⇓Pn	Pn	11 20 50.7	-1.0
	1.2nm,0.8s						
AAK				⇓Sn	Sn	11 22 07.6	-1.5
	2.2nm,0.9s						
TKM2	Tokmak 2	7.43	35	⇓Pn	Pn	11 21 01.0	-0.5
	0.6nm,0.6s						
TKM2				⇑Sn	Sn	11 22 25.1	-1.4
	1.0nm,0.7s						
AB31	Akbulak array	14.27	333	⇓Pn	Pn	11 22 34.9	+0.1
	1.7nm,0.7s,baz=157,slow=12,SNR=29						

AZER ***27*** *11:21:23.9±0.0,37°.96N×48°.40E,h4^{km},ml3.3/21,Error ellipse: s-maj=1.1km s-min=0.6km az=312.0*
TEH ***27*** *11:21:24.7,37°.88N×48°.35E,h18^{km},ML3.3*
THR ***27*** *11:21:26.1,37°.98N×48°.43E,h14^{km},ML3.2*
ISC 27 11:21:25.1±1.2**,37°.93N**±0°.03×**48°.38E**±0°.03**,h6**^{km}±10^{km}**,**
n41,σ**2ˢ00**/57**,19C-17D,Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRB	Sarab	0.57	260	*e*Pg	Pg	11 21 35.7	-0.5
ISRB				*e*Sg	Sg	11 21 43.9	+0.2
ISRB				IAMB	IAmb	11 21 45.0	
	comp=Z,43µm,0.4s						
ASTR	Astara	0.71	27	⇑P	Pb	11 21 39.4	-0.4
ASTR				⇓S	Sn	11 21 50.6	-2.3
LRK	Lerik	0.71	357	⇑P	Pg	11 21 39.2	+0.3
LRK				⇓S	Sn	11 21 50.3	-3.0
LKRN	Lenkeran, Azer	0.84	22	⇑P	Pb	11 21 41.9	-0.2
LKRN				⇓S	Sn	11 21 54.2	-2.0
GRMI	Germi	0.96	337	*e*Pg	Pb	11 21 43.7	-0.5
GRMI	Germi	0.96	337	*e*Pg	Pb	11 21 43.6	-0.5
GRMI				*e*Sg	Sb	11 21 56.7	-0.5
IHRS	Heris	1.13	291	*e*Pg	Pb	11 21 45.7	-1.4
IHRS				IAMB	IAmb	11 21 50.0	
	comp=Z,6µm,0.2s						
IBST	Bostanabad	1.20	260	*e*Pg	Pn	11 21 46.0	-2.6
IBST				IAMB	IAmb	11 22 09.7	
	comp=N,5µm,0.3s						
ZNJK	Zanjan	1.28	169	*e*AML	AML	11 22 12.4	
	comp=E,338nm,0.4s						
GLBA	Clilabad	1.31	0	⇓P	Pg	11 21 51.1	+0.9
GLBA				⇑S	Sg	11 22 10.7	+3.5
ITBZ	Tabriz	1.79	280	*e*Pn	Pn	11 21 57.9	+1.2
ITBZ				IAMB	IAmb	11 21 59.5	
	comp=Z,3µm,0.3s						
IAZR	Azarshahr	1.92	263	*e*Pn	Pn	11 22 00.1	+1.6
SAAT	Saatly	1.93	1	⇓S	Sg	11 22 29.4	+2.4
ALIB	Äli-Bayra	2.08	13	⇑S	Sg	11 22 31.8	-0.3
ORD	Ordubad	2.12	299	⇓P	Pb	11 22 03.6	-0.4
ORD				⇑S	Sg	11 22 33.5	+0.2
IMRD	Marand	2.25	291	IAMB	IAmb	11 22 08.3	
	comp=Z,3µm,0.4s						
IMRD				*e*Pn	Pb	11 22 05.4	-0.8
ZRD	Zardab	2.41	347	⇑S	Sg	11 22 41.5	-1.0
BRDA	Brd	2.51	339	⇑S	Sg	11 22 43.4	-2.3
NAX	Nakhchivan	2.58	300	⇓P	Pb	11 22 10.1	-1.7
NAX				⇓S	Sb	11 22 45.6	+1.7
GBS	Qobustan	2.64	9	⇑P	Pb	11 22 11.1	-1.7
GBS				⇑S	Sg	11 22 47.6	-2.2
SBZ	Shahbuz	2.66	304	⇓P	Pb	11 22 11.3	-1.8
SBZ				⇑S	Sb	11 22 48.1	+2.0
THKV	Tehran--Karaj	2.84	134	*e*Pn	Pn	11 22 13.1	+2.0
THKV	Tehran--Karaj	2.84	134	*e*AML	AML	11 22 58.6	
	comp=N,96nm,0.6s						
THKV	Tehran--Karaj	2.84	134	*e*Pn	Pn	11 22 13.1	+2.0
PQL	Pirkuli	2.86	3	⇓P	Pb	11 22 14.2	-2.5
PQL				⇑S	Sb	11 22 53.2	+1.2
SNGE	Sanandaj	2.95	197	*e*Pn	Pn	11 22 15.5	+2.8
SNGE	Sanandaj	2.95	197	*e*Pn	Pn	11 22 15.5	+2.8
ATGJ	Altiaghaj	2.96	8	⇓P	Pb	11 22 15.2	-3.1
ATGJ				⇓S	Sb	11 22 55.2	+0.4
CHTH	Charan	2.98	132	*e*Pn	Pn	11 22 15.5	+2.3
CHTH	Charan	2.98	132	*e*Pn	Pn	11 22 15.5	+2.3
CHTH				*e*Sg	Sg	11 22 59.5	-1.5
GANJ	Ganja	3.15	330	⇓P	Pn	11 22 17.6	+2.4
GANJ				⇓S	Sb	11 22 59.2	-0.9
SIZA	Siyzn	3.17	7	⇓P	Pn	11 22 17.8	+2.2
XNQ	Khinaliq	3.25	357	⇓P	Pn	11 22 19.1	+2.4
XNQ				⇑S	Sb	11 23 02.4	-0.7
SEKA	Sheki	3.40	345	⇓P	Pn	11 22 20.8	+2.1
SEKA				⇑S	Sb	11 23 04.8	-2.7
GDB	GEDABAY	3.45	325	⇑P	Pn	11 22 21.5	+1.9
GDB				⇑S	Sb	11 23 06.6	-2.4
QSAR	Qusar	3.58	359	⇑P	Pn	11 22 24.0	+2.7
IPRN	Peran	3.58	117	*e*Pn	Pn	11 22 21.6	+0.3
ASAO	Ashtian	3.63	158	*e*Pn	Pn	11 22 24.5	+2.5
ASAO	Ashtian	3.63	158	*e*Pn	Pn	11 22 24.5	+2.5
QZX	Qazax, Azerbai	3.90	324	⇑P	Pn	11 22 28.3	+2.8
QZX				⇑S	Sn	11 23 15.0	+3.4
IALA	Alasht	3.99	116	*e*Pn	Pn	11 22 27.5	+0.4
IALA				IAMB	IAmb	11 23 25.9	
	comp=Z,402nm,0.3s						

NIED ***27*** *11:24:00,23°.80N×122°.50E,h20^{km},Mw3.8 Best double couple: M$_0$6.07000×10^{14} NP1:φ$_s$305.00000°,δ34.00000°, λ153.00000°. NP2:φ$_s$58.00000°,δ75.00000°,λ59.00000°.*
ISCJB ***27*** *11:24:17.5±0.3,23°.76N±0°.02×122°.52E±0°.01,h17^{km}±2^{km}, mb3.5/6,Error ellipse: s-maj=2.8km s-min=2.0km az=149.1*
TAP ***27*** *11:24:17.0,23°.78N×122°.46E,h10^{km}±1^{km},ML3.9,D*
JMA ***27*** *11:24:18.2±0.1,23°.84N×122°.47E,h26^{km},M3.7*
IDC ***27*** *11:24:28.5±7.4,23°.94N×122°.39E,h114^{km}±72^{km},mb3.3/6, mb1 3.5/7,mb1mx3.3/34,mbtmp3.8/7,Error ellipse: s-maj=46.4km s-min=17.6km az=68.0*
ISC 27 11:24:17.8±0.7**,23°.80N**±0°.02×**122°.50E**±0°.02**,h21**^{km}±3^{km}**,**
n111,σ**0ˢ75**/177**,mb3.6**/6**,1C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.77	32	P	Pb	11 24 32.3	-0.2
JYNG				S	Sb	11 24 41.3	-1.2
YOJ	Yonaguni jima	0.81	35	*e*P	Pb	11 24 33.2	-0.1
	baz=35						
YOJ				*e*S	Sb	11 24 42.9	-0.9
	baz=35						
YOJ	Yonaguni jima	0.81	35	P	Pb	11 24 33.1	-0.1
YOJ				S	Sb	11 24 42.5	-1.2
EOS1	EOS1	0.82	336	*e*P	Pb	11 24 33.5	+0.2
	baz=338						
EOS1				*e*S	Sn	11 24 45.6	+0.1
	baz=338						
ENLB	Shoufeng	0.83	277	*e*P	Pb	11 24 33.4	0.0
	baz=279						
ENLB				*e*S	Sn	11 24 44.9	-0.9
	baz=279						
HWA	Hwalien	0.83	282	P	Pb	11 24 33.8	+0.2
	baz=284						
HWA				S	Sn	11 24 45.8	-0.2
	baz=284						
TWD	Chiawan	0.87	289	P	Pb	11 24 33.7	-0.5
	baz=291						
TWD				S	Sb	11 24 45.2	-0.3
	baz=291						
NANB	Nanao	0.93	313	*e*P	Pb	11 24 35.0	-0.1
	baz=314						
NANB				*e*S	Sn	11 24 48.5	+0.2
	baz=314						
ENA	Nanau	0.93	312	P	Pb	11 24 35.3	0.0
	baz=314						
ENA				*e*S	Sn	11 24 47.7	-0.7
	baz=314						
ESL	Shilin	0.97	271	⇑*i*P	Pb	11 24 35.1	-0.9
	baz=272						
ESL				*e*S	Sn	11 24 48.8	-0.7
	baz=272						
EGFH	Guangfu	0.99	263	*e*P	Pn	11 24 36.5	0.0
	baz=263						
EGFH				*e*S	Sn	11 24 49.4	-0.4
	baz=263						
TWC	Suao	1.00	324	P	Pb	11 24 36.0	-0.5
	baz=326						
ETLH	Xiulin Townshi	1.01	294	*e*P	Pb	11 24 36.1	-0.6
	baz=295						
ETLH				*e*S	Sn	11 24 49.9	-0.7
	baz=295						
HGSD	Ruisui	1.03	253	*e*P	Pn	11 24 36.2	-0.8
	baz=253						
HGSD				*e*S	Sb	11 24 49.6	-0.4
	baz=253						
EHY	Hungye	1.12	255	P	Pn	11 24 37.9	-0.3
	baz=255						
EHY				*e*S	Sn	11 24 53.1	+0.2
	baz=255						
EGS		1.16	334	P	Pb	11 24 39.1	-0.1
	baz=335						
YULB	Yu-li	1.17	250	*e*P	Pn	11 24 38.7	-0.3
	baz=250						
YULB				*e*S	Sb	11 24 54.1	0.0
	baz=250						
WHF	Hehuan Shan	1.18	287	P	Pn	11 24 38.7	-0.7
	baz=288						
WHF				*e*S	Sn	11 24 54.9	-0.2
	baz=288						
ILA	Ilan	1.18	325	P	Pb	11 24 39.9	+0.4
	baz=326						
ILA				*e*S	Sn	11 24 56.1	+1.6
	baz=326						
TWF1	Yuli	1.19	248	P	Pn	11 24 39.1	-0.1
	baz=248						
TWF1				*e*S	Sn	11 24 54.8	0.0
	baz=248						
TWE	Neicheng	1.19	321	*e*P	Pb	11 24 39.4	-0.3
	baz=322						
TWE				*e*S	Sn	11 24 56.2	+1.4
	baz=322						
ENTT	Nioudou	1.19	315	*e*P	Pb	11 24 39.5	-0.3
	baz=316						
NNSB	Datong	1.20	302	*e*P	Pn	11 24 39.1	-0.3
	baz=303						
NDT	Datong Townshi	1.20	312	P	Pb	11 24 39.7	-0.3
	baz=313						
NDT				*e*S	Sb	11 24 57.0	+2.0
	baz=313						
NNS	Nan Shan	1.21	302	*e*P	Pn	11 24 39.5	-0.1
	baz=303						
NNS				*e*S	Sb	11 24 54.9	-0.5
	baz=303						
HATJ	Hateruma jima	1.23	78	P	Pb	11 24 40.3	0.0
HATJ				S	Sn	11 24 55.7	+0.1
CHGB	Renai	1.24	282	*e*P	Pn	11 24 39.8	-0.3
	baz=283						
CHGB				*e*S	Sn	11 24 55.6	-0.7
	baz=283						
VWDT	VWDT	1.24	268	P	Pn	11 24 40.0	0.0
	baz=268						
VWDT				*e*S	Sn	11 24 55.5	-0.6
	baz=268						
IRIF	Iriomote-Funau	1.25	64	P	Pb	11 24 41.0	+0.3
IRIF				S	Sb	11 24 56.6	+0.3
CHKT	Chengkung	1.25	236	*e*P	Pn	11 24 39.5	-0.5
	baz=236						
CHKT				*e*S	Sn	11 24 54.5	-1.8
	baz=236						
FULB	Fuli	1.25	242	*e*P	Pn	11 24 40.0	-0.2
	baz=241						
FULB				*e*S	Sn	11 24 55.4	-1.0
	baz=241						
TWB1	Santiao Chiao	1.29	339	P	Pb	11 24 41.7	+0.3
	baz=340						
TWB1				*e*S	Sb	11 24 58.8	+1.2
	baz=340						
TWT	Tachien	1.29	291	P	Pb	11 24 41.1	-0.4
	baz=291						
TDCB	Techi	1.30	291	*e*P	Pn	11 24 41.0	+0.1
	baz=291						
TIPB	Shuangxi	1.32	332	*e*P	Pn	11 24 41.0	0.0
	baz=334						
TIPB				*e*S	Sb	11 24 59.3	+1.0
	baz=334						
NWLT	Wulai	1.33	317	*e*P	Pb	11 24 41.9	-0.2
	baz=318						
YHNB	Yeheng	1.34	311	*e*P	Pn	11 24 41.6	+0.2
	baz=311						
YHNB				*e*S	Sb	11 25 00.8	+1.7
	baz=311						
NSK	Sanguang	1.36	310	P	Pn	11 24 41.9	+0.3
	baz=311						
NSK				*e*S	Sb	11 25 00.1	+0.6
	baz=311						
SSLB	Suanglung	1.41	270	*e*P	Pn	11 24 42.2	-0.1
	baz=270						
SSLB				*e*S	Sn	11 24 59.7	-0.6
	baz=270						
JKRS	Kuro-shima	1.45	72	P	Pb	11 24 43.8	-0.3
JKRS				S	Sn	11 25 02.0	+0.8
NHDH	Xindian Distri	1.46	323	*e*P	Pb	11 24 44.1	-0.1
	baz=324						
NHDH				*e*S	Sb	11 25 03.2	+0.8

	baz=324						
SMLT	Sun Moon Lake	1.46	274	P	Pn	11 24 43.5	+0.4
	baz=274						
SMLT				eS	Sn	11 25 01.9	+0.2
	baz=274						
ELDTW	Lidau	1.49	246	eP	Pn	11 24 43.2	-0.3
	baz=246						
ELDTW				eS	Sn	11 25 01.4	-0.9
	baz=246						
TATO	Taipei	1.49	322	P	Pb	11 24 44.4	-0.4
	baz=323						
TATO				eS	Sb	11 25 04.3	+1.0
	baz=323						
WHP	Taichung City	1.50	289	eP	Pb	11 24 46.3	+1.4
	baz=289						
TYC	Yuchr	1.50	274	P	Pn	11 24 44.1	+0.6
	baz=275						
WLTB	Daxi	1.55	313	P	Pb	11 24 45.5	-0.3
	baz=314						
WLTB				eS	Sb	11 25 06.1	+1.2
	baz=314						
YM01	YM01	1.58	328	eP	Pb	11 24 45.9	-0.6
	baz=329						
LIOB	Emei	1.59	302	eP	Pn	11 24 45.2	+0.4
	baz=303						
LIOB				eS	Sb	11 25 05.4	-0.8
	baz=303						
NSTT	Nanjuang	1.60	302	P	Pb	11 24 46.3	-0.4
	baz=302						
NSTT				eS	Sb	11 25 06.3	0.0
	baz=302						
YM11	YM11	1.60	328	eP	Pb	11 24 46.2	-0.5
	baz=329						
YM05	YM05	1.60	328	eP	Pb	11 24 46.1	-0.7
	baz=329						
JIJ	Ishigaki jima	1.61	69	P	Pn	11 24 45.4	+0.4
JIJ				S	Sb	11 25 06.3	-0.3
YM04	YM04	1.61	327	eP	Pb	11 24 46.0	-0.9
	baz=328						
YM08	YM08	1.61	329	eP	Pb	11 24 46.0	-0.9
	baz=330						
TTN	Taitung	1.62	230	eP	Pn	11 24 45.0	-0.1
	baz=229						
TTN				eS	Sn	11 25 05.5	+0.1
	baz=229						
WJS	Zhushan	1.62	271	eP	Pb	11 24 47.0	0.0
	baz=271						
TWS1	Kuangyinshan	1.63	323	P	Pb	11 24 46.1	-1.0
	baz=324						
TWS1				eS	Sb	11 25 06.7	-0.5
	baz=324						
TWGBT	Beinan	1.63	233	eP	Pn	11 24 45.3	+0.1
	baz=233						
TWGBT				eS	Sn	11 25 05.3	-0.3
	baz=233						
TWG	Pinlang	1.63	234	P	Pn	11 24 45.4	0.0
	baz=233						
TWG				S	Sn	11 25 05.4	-0.3
	baz=233						
ANP	Anpu	1.64	327	eP	Pn	11 24 46.4	+0.8
	baz=328						
WNT	Mingjian	1.66	273	P	Pb	11 24 47.5	-0.2
	baz=273						
WNT				S	Sb	11 25 08.4	+0.2
	baz=273						
TWQ1	Liyutan	1.67	289	eP	Pb	11 24 47.6	-0.2
	baz=290						
TWQ1				eS	Sb	11 25 09.2	+0.8
	baz=290						
CHN5	Tsauling	1.68	263	P	Pb	11 24 47.4	-0.6
	baz=263						
CHN5				eS	Sb	11 25 08.4	-0.4
	baz=263						
TWY	Chenhua	1.68	331	eP	Pb	11 24 47.8	-0.3
	baz=332						
TWY				eS	Sb	11 25 08.7	-0.1
	baz=332						
SBCB	Hsinchu	1.70	306	eP	Pb	11 24 47.6	-0.7
	baz=306						
NSY	Sanyi	1.70	292	eP	Pb	11 24 48.1	-0.3
	baz=292						
TCU	Taichung	1.70	282	eP	Pb	11 24 48.6	+0.2
	baz=282						
TCU				eS	Sb	11 25 10.2	+0.8
	baz=282						
STYT	Tauyuan	1.72	249	eP	Pn	11 24 47.4	+0.8
	baz=248						
STYT				S	Sn	11 25 08.6	+0.7
	baz=248						
NMLH	Miaoli	1.72	296	eP	Pb	11 24 48.5	-0.2
	baz=296						
PTSB	Yuanli	1.76	292	eP	Pb	11 24 48.8	-0.6
	baz=292						
WGK	Gukeng	1.78	267	eP	Pb	11 24 50.3	+0.6
	baz=267						
WGK				eS	Sb	11 25 11.8	+0.3
	baz=267						
WDJ	Dajia District	1.78	288	P	Pb	11 24 49.0	-0.7
	baz=288						
TPUB	Ta-pu	1.78	254	eP	Pb	11 24 49.1	-0.7
	baz=254						
TPUB				eS	Sb	11 25 11.6	-0.1
	baz=254						
WCHH	Zhanghua	1.79	279	eP	Pb	11 24 49.6	-0.4
	baz=279						
CHN4	Tsaushan	1.80	256	P	Pb	11 24 49.6	-0.6
	baz=256						
CHN4				eS	Sb	11 25 13.2	+0.9
	baz=256						
WTP	Ta-pu	1.81	253	P	Pb	11 24 49.4	-0.9
	baz=252						
WTP				eS	Sb	11 25 12.7	+0.1
	baz=252						
JISG	Ishigakijimahi	1.83	64	P	Pn	11 24 48.3	+0.2
JISG				S	Sn	11 25 10.0	-0.6
ECL	Taimali	1.86	230	eP	Pn	11 24 47.8	-0.6
	baz=229						
PCYT	Pengchaiyu	1.86	348	eP	Pn	11 24 48.8	+0.3
	baz=349						
CHN2	Minshiung	1.87	262	eP	Pb	11 24 51.5	+0.1
	baz=262						
SGST	Jiashian	1.90	248	eP	Pb	11 24 51.2	-0.6
	baz=248						
CHN1	Nanshi	1.91	252	eP	Pb	11 24 51.4	-0.6
	baz=251						
TWK	Hsinying	1.92	254	P	Pb	11 24 51.1	-1.0
	baz=254						
SNST	Tainan City	1.92	253	eP	Pb	11 24 51.5	-0.7
	baz=252						
LAY	Lan-yu	1.96	207	eP	Pn	11 24 49.0	-0.8
	baz=205						
LAY				eS	Sn	11 25 12.8	-0.9
	baz=205						
SSD	Sandimen	2.01	239	eP	Pn	11 24 51.5	+1.0
	baz=238						
SSD				eS	Sn	11 25 15.0	0.0
	baz=238						
TAW	Tawu	2.06	226	eP	Pn	11 24 51.7	+0.6
	baz=225						
EAST	Anshuo	2.07	227	P	Pn	11 24 51.5	+0.1
	baz=226						
MASBT	Mashibuluo	2.08	236	eP	Pn	11 24 52.4	+0.8
	baz=235						
MASBT				eS	Sn	11 25 17.1	+0.3
	baz=235						
JTJ	Tarama	2.18	67	P	Pn	11 24 53.2	+0.3
SCZT	Fangliau	2.24	231	eP	Pn	11 24 55.7	+2.0
	baz=230						
HEN	Hengchun	2.41	223	eS	Sn	11 25 25.7	+0.8
	baz=221						
TWKBT	Hengchun	2.42	220	eP	Pn	11 24 57.4	+1.3
	baz=219						
TWKBT				eS	Sn	11 25 25.9	+0.9
	baz=219						
TWK1	Hengchun	2.42	221	eP	Pn	11 24 57.4	+1.3
	baz=219						
TWK1				eS	Sn	11 25 25.9	+0.8
	baz=219						
WDGT	Dungji	2.66	259	eP	Pn	11 25 00.4	+1.0
	baz=258						
WDGT				eS	Sn	11 25 31.7	+0.7
	baz=258						
PHUB	P'eng-hu	2.70	265	eP	Pn	11 25 01.2	+1.3
	baz=264						
PHUB				eS	Sn	11 25 33.2	+1.3
	baz=264						
PNG	Penghu	2.71	266	eP	Pn	11 25 01.4	+1.3
	baz=265						
PNG				eS	Sn	11 25 33.6	+1.4
	baz=265						
VCHM	Qimei	2.88	259	eP	Pn	11 25 03.7	+1.2
	baz=258						
VCHM				eS	Sn	11 25 36.4	0.0
	baz=258						
VWUC	VWUC	3.02	294	eP	Pn	11 25 04.5	+0.1
	baz=293						
VWUC				eS	Sn	11 25 38.0	-2.0
	baz=293						
MATB	Ma-tsu	3.29	316	eP	Pn	11 25 07.1	-1.1
	baz=315						
PTMZ	Houxiangcun	3.32	293	eP	Pn	11 25 08.8	+0.3
	baz=292						
XPSS	Dashiqiu	3.75	327	eP	Pn	11 25 14.5	0.0
	baz=326						
ZPLA	Ao Xicun	4.35	273	eP	Pn	11 25 23.3	+0.6
	baz=272						
KSRS	Korea Array	14.38	18	P	P	11 27 46.0	-1.0
	0.2nm,0.3s,baz=197,slow=12,SNR=8.6						
SONM	Songino Array	27.20	336	P	P	11 29 59.4	-0.7
	0.5nm,0.4s,baz=153,slow=14,SNR=4.0						
MKAR	Makanchi Array	39.45	316	P	P	11 31 46.7	+0.2
	1.5nm,0.9s,baz=110,slow=9.7,SNR=8.9						
ZALV	Zalesovo Beam	41.22	327	P	P	11 31 59.7	-1.3
	1.1nm,0.8s,baz=116,slow=6.6,SNR=3.9						
WRA	Warramunga Arr	44.98	164	P	P	11 32 32.6	+0.9
	0.7nm,0.8s,baz=345,slow=8.9,SNR=4.0						
ASAR	Alice Springs	48.47	166	P	P	11 33 02.1	+3.1
	0.3nm,0.5s,baz=355,slow=15,SNR=4.1						
YKA	Yellowknife Ar	82.85	23	P	P	11 36 39.6	-0.9
	0.2nm,0.5s,baz=312,slow=4.5,SNR=5.5						

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*ISCJB **27** 11:41:37.8±0.6, 37°.12N±0°.06×28°.48E±0°.06, h13^{km}±9^{km}, Error ellipse: s-maj=12.2km s-min=5.6km az=32.8*

*DDA **27** 11:41:37.0, 37°.12N×28°.43E, h7^{km}±1^{km}, ML2.5*

*ISK **27** 11:41:37.2, 37°.11N×28°.51E, h11^{km}±3^{km}, ML1.9/7*

ISC 27 11:41:37.5±1.0, **37°.15N**±0°.03×**28°.51E**±0°.04, **h12**^{km}±9^{km}, **n11, σ0^{s}.97**/18, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.18	266	PG	Pg	11 41 41.7	+0.1
YER				SG	Sg	11 41 44.8	+0.4
TURN	Turunc	0.28	164	PG	Pb	11 41 44.9	+0.4
TURN				SG	Sb	11 41 51.6	+2.4
TURN	Turunc	0.28	164	i P	Pb	11 41 45.2	+0.7
TURN				i S	Sb	11 41 51.1	+1.9
TURN				IAML_P			
	comp=Z,2μm,0.2s						
DALY	Dalyan (Mula)	0.35	160	PG	Pg	11 41 44.3	-0.2
DALY				SG	Sg	11 41 48.7	-0.6
DALY	Dalyan (Mula)	0.35	160	i P	Pb	11 41 44.6	-1.1
DALY				i S	Sb	11 41 50.5	-0.6
DALY				IAML_P			
	comp=Z,3μm,0.1s						
TAVA	DENIZLI_Tavas	0.46	45	i P	Pb	11 41 47.8	+0.3
TAVA				i S	Sb	11 41 54.6	+0.3
TAVA				IAML_P			
	comp=Z,674nm,0.1s						
FETY	Fethiye	0.69	138	PG	Pg	11 41 50.4	-0.5
AYDN	Tasoluk	0.71	316	i P	Pb	11 41 52.2	+0.3
AYDN				i S	Sb	11 42 01.8	+0.1
DAT	Datca	0.85	241	PG	Pb	11 41 53.9	-0.4
AYDB	Zeytinkoy-Aydi	0.94	329	PG	Pn	11 41 56.3	-0.3
BODT	Bodrum	0.96	265	PG	Pn	11 41 56.1	-0.7

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*BEO **27** 11:56:00.8±0.3, 42°.06N×19°.90E, h0^{km}, ML1.9/10*

*TIR **27** 11:56:01.2, 42°.03N×19°.73E, h15^{km}, Md2.7/4*

*PDG **27** 11:56:01.4±0.2, 42°.04N×19°.66E, h16^{km}, ML2.2/10, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

ISC 27 11:56:00.5±1.1, **42°.07N**±0°.02×**19°.77E**±0°.02, **h2**^{km}±10^{km}, **n28, σ0^{s}.83**/56, **9C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCI	Bajram Curri	0.37	36	i PG	Pb	11 56 10.1	+0.2
BCI				i SG	Sb	11 56 16.1	0.0
ULC	Ulcinj	0.41	256	⇑iPg	Pg	11 56 08.3	0.0
ULC				i Sg	Sg	11 56 13.2	-0.4
DRME	Dracevica, Mon	0.45	286	⇑iPg	Pg	11 56 09.3	+0.1
DRME				eSg	Sg	11 56 15.2	+0.1
PDG	Podgorica	0.53	314	ePg	Pg	11 56 11.4	+0.7
PDG				eSg	Sb	11 56 19.4	-1.2
TTG	Podgorica	0.53	314	⇓iPg	Pg	11 56 10.7	0.0
TTG				i Sg	Sg	11 56 18.8	+1.3
PVY	Plav	0.55	15	⇓iPg	Pb	11 56 12.7	-0.2
PVY				i Sg	Sb	11 56 22.5	+1.2
PHP	Peshkopia	0.63	127	i PG	Pb	11 56 14.3	+0.1
PHP				i SG	Sb	11 56 23.5	0.0
BUM	Brajici-Budva	0.69	290	⇑iPg	Pg	11 56 13.9	+0.1
BUM				i Sg	Sg	11 56 23.2	+0.4
TIR	Tirane	0.72	174	ePg	Pg	11 56 13.1	-1.2
TIR				eSg	Sg	11 56 23.5	-0.1
TIR	Tirane	0.72	174	i PG	Pg	11 56 14.8	+0.5
TIR				i SG	Sb	11 56 25.6	-0.5
CEME	Cevo	0.80	308	⇑iPg	Pg	11 56 15.8	0.0
CEME				eSg	Sb	11 56 27.1	-1.2
KOME	Kolasin	0.81	347	⇑iPg	Pg	11 56 16.6	+0.6
KOME				eSg	Sb	11 56 29.9	+1.2
IVA	Berane	0.81	6	⇑iPg	Pb	11 56 17.2	-0.2
IVA				i Sg	Sn	11 56 30.7	-1.0
NKME	Niksic	0.93	319	⇑iPg	Pg	11 56 18.1	-0.2
NKME				eSg	Sb	11 56 32.3	+0.2
HCY	Herceg Novi	1.02	292	⇑iPg	Pg	11 56 19.1	-1.0
HCY				i Sg	Sb	11 56 34.0	-0.8
SJES	Sjenica	1.21	7	ePg	Pg	11 56 22.5	-1.1
SJES				eSg	Sg	11 56 38.1	-1.1
BRY	Bratogost	1.24	313	⇑iPg	Pg	11 56 23.4	-0.8
BRY				i Sg	Sn	11 56 42.2	-0.1
TREB	Trebinje	1.24	302	ePg	Pb	11 56 24.4	-0.2
TREB				eSg	Sn	11 56 43.4	+1.3
PLE	Pljevlja	1.29	348	⇓iPg	Pg	11 56 25.3	-0.1
PLE				i Sg	Sn	11 56 45.6	+1.9
SELS	Selova	1.52	40	ePn	Pn	11 56 28.5	-0.3
SELS				eSg	Sn	11 56 47.0	-2.2
IVAS	Ivanjica	1.54	10	ePn	Pn	11 56 29.5	+0.5
IVAS				eSg	Sn	11 56 48.9	-0.7
STON	Ston	1.73	298	ePn	Pn	11 56 31.8	+0.2
STON				Sn	Sg	11 56 56.0	-0.1
FNA	Florina	1.76	136	i PN	Pg	11 56 34.2	0.0
FNA				i SN	Sg	11 56 59.1	+2.1
GRUS	Gruza	1.95	20	ePn	Pn	11 56 35.4	+0.8
GRUS				eSg	Sb	11 57 02.4	+0.9
DIVS	Divibare	2.04	4	ePn	Pn	11 56 36.3	+0.4
DIVS				eSg	Sg	11 57 05.4	-0.6
HAPS	Han Pijesak,Bl	2.11	344	ePn	Pn	11 56 37.7	+0.8
HAPS				eSn	Sb	11 57 05.7	-0.5
TRUS	Trudelj	2.21	12	ePn	Pn	11 56 38.8	+0.6
TRUS				eSn	Sn	11 57 06.4	+0.4
ZAPS	Zavoj	2.43	59	ePn	Pn	11 56 40.5	-0.8
ZAPS				eSg	Sb	11 57 15.5	+0.1

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*ISCJB **27** 11:57:19.8±0.8, 23°.7S±0°.1×180°.0E±0°.2, h518^{km}, mb3.4/6, Error ellipse: s-maj=20.0km s-min=13.0km az=16.7*

*IDC **27** 11:57:22.6±5.3, 23°.90S×179°.95W, h547^{km}±66^{km}, mb2.9/6, mb1 3.3/7, mb1mx3.1/27, mbtmp3.9/7, Error ellipse: s-maj=53.5km s-min=23.5km az=180.0*

ISC 27 11:57:20.2±0.9, **23°.8S**±0°.1×**179°.9W**±0°.2, **h518**^{km}, **n9, σ1^{s}.04**/10, **mb3.4**/6, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	14.63	189	P	P	12 00 27.4	+1.3
	1.3nm,0.3s,baz=350,slow=3.1,SNR=12						
URZ				S	S	12 02 58.0	-1.5
	0.1nm,0.3s,baz=356,slow=19,SNR=3.2						
CTA	Charters Tower	31.55	270	P	P	12 03 00.8	+0.8
	1.6nm,0.4s,baz=89,slow=11,SNR=10						
ASAR	Alice Springs	42.12	260	P	P	12 04 26.8	-0.2
	0.6nm,0.9s,baz=93,slow=7.7,SNR=5.5						
WRA	Warramunga Arr	42.49	266	P	P	12 04 29.4	-0.5
	0.2nm,0.3s,baz=92,slow=8.4,SNR=22						
NVAR	Mina Array Bea	84.63	44	P	P	12 08 59.0	-0.3
	0.5nm,0.7s,baz=228,slow=6.7,SNR=3.0						
TXAR	Lajitas Array	90.32	58	P	P	12 09 27.1	+0.9
	0.4nm,0.6s,baz=213,slow=9.0,SNR=3.5						
PDAR	Pinedale Array	92.57	44	P	P	12 09 35.6	-0.7
	0.3nm,0.7s,baz=224,slow=5.0,SNR=2.8						
AKASG	Malin Array Be	144.93	327	PKP	PKPdf	12 15 57.2	-0.7
	0.7nm,0.3s,baz=44,slow=4.0,SNR=10						
BRTR	Keskin Array B	147.58	307	PKPbc	PKPbc	12 16 05.5	-0.9
	0.8nm,0.6s,baz=64,slow=4.5,SNR=2.3						

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*NEIC **27** 12:01:36.6±0.2, 3°.32S×146°.94E, h10^{km}, mb4.7/15, Error ellipse: s-maj=6.7km s-min=4.8km az=103.0*

*BJI **27** 12:01:36.2, 3°.57S×147°.17E, h33^{km}, mB5.1/23, mb4.7/37, Ms4.7/13, Ms7 4.4/14*

*ISCJB **27** 12:01:38.3±0.3, 3°.41S±0°.04×147°.00E±0°.05, h33^{km}, mb4.6/41, MS4.2/27, Error ellipse: s-maj=7.6km s-min=5.3km az=5.3*

*GCMT **27** 12:01:41.6±0.2, 3°.21S±0°.01×146°.76E±0°.02, h16^{km}±1^{km}, MW4.9/79, Moment Tensor Solution. s19,c23; s79,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.22±.11; $M_{\theta\theta}$-1.05±.10; $M_{\phi\phi}$1.27±.11; $M_{r\theta}$-1.22±.35; $M_{\theta\phi}$2.64±.09; $M_{\phi r}$0.13±.27; Best double couple: $M_0$3.13800×10^{16} NP1:ϕ_s77.00000°,δ83.00000°,λ-22.00000°. NP2: ϕ_s170.00000°,δ68.00000°,λ-172.00000°. Principal axes: T 3.0950, Plg10.0000°, Azm125.0000°; N 0.0890, Plg67.0000°, Azm240.0000°; P -3.1820, Plg21.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **27** 12:01:45.3±5.5, 3°.38S×146°.80E, h75^{km}±55^{km}, mb4.0/11, mb1 4.2/13, mb1mx4.1/29, mbtmp4.4/13, ML4.4/2, MS4.1/24, Ms1 4.1/24, ms1mx4.0/31 Error ellipse: s-maj=29.1km s-min=19.6km az=118.0*

ISC 27 12:01:40.3±0.4, **3°.35S**±0°.06×**147°.03E**±0°.07, **h35**^{km}, **n94, σ1^{s}.11**/75, **mb4.7**/41, **MS4.2**/27, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	1.34	15	ePn	Pn	12 01 59.5	-3.1
MANU				eSn	Sn	12 02 19.9	+0.7
RABL	Rabaul	5.20	99	ePn	Pn	12 02 56.6	+1.0
COEN	Coen	11.20	200	ePn	Pn	12 04 18.1	0.0
HNR	Honiara	14.19	116	Pn	Pn	12 04 58.7	-0.2
HNR	Honiara	14.19	116	P	P	12 05 06.5	+0.6
	3.5nm,0.3s,baz=78,slow=7.5,SNR=3.9						
HNR				LR	LR	12 10 46.0	
	comp=Z,591nm,18.9s,baz=293,slow=38						
CTA	Charters Tower	16.65	183	P	P	12 05 35.5	+2.3
	0.6nm,0.3s,baz=359,slow=15,SNR=6.5						
GUMO	Guam	16.96	353	LR	LR	12 12 03.5	
	comp=Z,346nm,18.2s,baz=176,slow=36						
WRAB	Tennant Creek	20.61	216	eP	P	12 06 16.1	-0.6
	40nm,0.8s						
WB2	Warramunga Arr	20.61	216	eP	P	12 06 15.9	-0.8
WRA	Warramunga Arr	20.62	216	P	P	12 06 16.3	-0.5
	27nm,0.8s,baz=39,slow=11,SNR=101						
WRA				LR	LR	12 15 49.8	
	comp=Z,515nm,18.9s,baz=45,slow=41						
EIDS	Eidsvold	22.24	170	eP	P	12 06 33.7	-0.4
	82nm,1.6s						
SOEI	Soe	23.48	253	eP	P	12 06 45.6	-1.6
	60nm,1.0s						
DAV	Davao City (W)	23.78	296	LR	LR	12 15 50.8	
	comp=Z,524nm,18.3s,baz=108,slow=36						
AS01	Alice Springs	23.82	211	eP	P	12 06 48.7	-1.6
AS31	Alice Springs	23.85	211	eP	P	12 06 50.0	-0.5
	6.9nm,1.2s						
ASAR	Alice Springs	23.85	211	P	P	12 06 50.7	+0.1
	9.4nm,0.9s,baz=45,slow=7.2,SNR=62						
ASAR				LR	LR	12 16 53.1	
	comp=Z,791nm,19.8s,baz=42,slow=38						
LUWI	Luwuk	24.34	275	eP	P	12 06 54.7	-0.4
	63nm,0.7s						
FITZ	Fitzroy Crossi	25.57	233	eP	P	12 07 05.2	-1.0
	12nm,0.8s						
FITZ	Fitzroy Crossi	25.57	233	P	P	12 07 05.0	-1.3
	13nm,0.9s,baz=48,slow=10,SNR=9.6						
FITZ				LR	LR	12 16 55.3	
	comp=Z,355nm,21.3s,baz=53,slow=36						
DZM	Mont Dzumac	26.49	136	eS	S	12 11 44.0	-2.6
	285nm,25.2s						
DZM				eLR	LR	12 13 54.5	
	comp=Z,1μm,23.1s						
DZM	Mont Dzumac	26.49	136	LR	LR	12 16 37.8	
	comp=Z,821nm,20.4s,baz=327,slow=34						
STKA	Stephens Creek	28.83	190	P	P	12 07 39.6	+4.2
	5.9nm,0.8s,baz=49,slow=11,SNR=2.8						
STKA				LR	LR	12 20 02.2	
	comp=Z,307nm,19.3s,baz=7.2,slow=38						
H11S3	WAKE ISLAND Hy	29.09	41	T	T	12 38 15.9	
	baz=223,slow=76,SNR=8.0						
H11S2	WAKE ISLAND Hy	29.10	41	T	T	12 38 23.5	
	baz=223,slow=76,SNR=9.5						
H11S1	WAKE ISLAND Hy	29.11	41	T	T	12 38 16.5	
	baz=223,slow=76,SNR=9.1						
BBOO	Buckleboo	31.06	198	eP	P	12 07 54.3	-0.9
	19nm,1.1s						
TGY	Tagaytay City	31.14	304	LR	LR	12 18 13.9	
	comp=Z,340nm,19.9s,baz=124,slow=32						
FORT	Forrest	32.64	211	eP	P	12 08 09.1	+0.1
	30nm,0.8s						
JNU	Nakatsue	39.36	338	LR	LR	12 22 05.8	
	comp=Z,262nm,21.9s,baz=148,slow=31						
MJAR	Matsushiro Arr	40.53	349	P	P	12 09 16.8	+0.6
	3.8nm,1.1s,baz=159,slow=7.3,SNR=4.0						
QIZ	Qiongzhong	42.81	303	P	P	12 09 34.5	-0.6
QIZ				S	S	12 15 57.5	+0.2
QIZ				pmax	pmax		
	comp=Z,18nm,1.1s						
QIZ				LR	LR		
	comp=N,160nm,9.6s						
QIZ				LR	LR		
	comp=E,210nm,20.2s						
QIZ				LR	LR		
	comp=Z,400nm,19.8s						
NJ2	Nanjing	44.22	325	eP	P	12 09 46.5	+0.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSRS	Korea Array	44.31	338	P	P	12 09 46.6	-0.3
	2.8nm,1.0s,baz=150,slow=9.5,SNR=8.1						
KSRS				LR	LR	12 26 18.9	
	comp=Z,187nm,19.0s,baz=154,slow=33						
KSAR	Wonju Array Be	44.31	338	P	P	12 09 46.6	-0.3
WHN	Wuhan	45.92	320	P	P	12 10 00.5	+0.7
WHN				LR	LR		
	comp=Z,2μm,18.2s						
SKNT	Sakolnakorn	47.05	297	P	P	12 10 08.6	-0.3
	8.4nm,0.9s						
CHBT	CHBT	47.18	291	P	P	12 10 20.5	+11
USRK	Ussuriysk Ar.	49.22	346	P	P	12 10 25.1	-0.2
	2.4nm,0.7s,baz=130,slow=7.7,SNR=5.1						
UTTA	Uttaradit	50.38	296	P	P	12 10 34.7	+0.2
	7.2nm,0.8s,61nm						
NANT	Nan	50.62	298	P	P	12 10 36.1	-0.2
	7.2nm,0.8s,112nm						
UTHA	Uthaitani	50.69	293	P	P	12 10 37.6	+0.8
	2.7nm,1.0s						
SUKH	Sukhothai	51.12	296	P	P	12 10 41.2	+1.1
	4.7nm,1.0s						
KMI	Kunming	51.44	306	P	P	12 10 43.8	+1.1
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
LAMP	Lampang	51.47	297	P	P	12 10 43.4	+0.7
	5.6nm,0.9s						
XAN	Xi'an	51.69	319	P	P	12 10 43.3	-0.8
XAN				pP	pwP	12 10 53.0	-3.3
XAN				S	S	12 18 05.3	+1.9
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
XAN				pmax	pmax		
	comp=Z,140nm,4.7s						
XAN				LR	LR		
	comp=N,150nm,17.9s						
XAN				LR	LR		
	comp=E,210nm,16.8s						
XAN				LR	LR		
	comp=Z,230nm,19.5s						
CM01	Chiang Mai Arr	52.04	296	eP	P	12 10 47.0	+0.1
CMAR	Chiang Mai Arr	52.06	296	P	P	12 10 47.8	+0.6
	7.2nm,0.8s,baz=115,slow=5.9,SNR=43						
CMAR				LR	LR	12 33 17.1	
	comp=Z,68nm,18.1s,baz=110,slow=36						
CMMT	Chiang Mai	52.18	297	P	P	12 10 48.5	+0.5
	8.6nm,1.2s						
CHTO	Chiang Mai	52.18	297	eP	P	12 10 47.6	-0.5
	8.7nm,1.1s						
CHTO	Chiang Mai	52.18	297	P	P	12 10 48.6	+0.6
	38nm,1.2s						

CD2	**Chengdu**	**53.48**	**313**	*e*P	**P**	**12 10 57.0**	**-0.5**
HHC	**Hu-ho-hao-te**	**54.62**	**327**	*e*P	P	12 11 08.3	+2.6
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH	**Lanzhou**	**56.25**	**318**	*e*P	**P**	**12 11 19.0**	**+1.4**
LZH				pP	sP	12 11 30.5	-1.1
LZH				sP	pwP	12 11 36.0	+6.1
LZH				*e*PP	**PP**	**12 13 27.0**	**+3.8**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,6.5s						
LZH				LR	LR		
	comp=N,260nm,15.0s						
LZH				LR	LR		
	comp=E,270nm,15.3s						
LZH				LR	LR		
	comp=Z,350nm,18.2s						
PETK	**Petropavlovsk-**	**56.97**	**8**	LR	LR	12 31 26.0	
	comp=Z,95nm,22.0s,baz=179,slow=31						
GTA	**Gaotai**	**60.75**	**319**	*e*P	**P**	**12 11 49.5**	**+0.6**
GTA				pP	sP	12 11 59.8	-3.0
GTA				sP	pwP	12 12 04.0	+2.6
ULN	**Ulaanbaatar**	**61.82**	**331**	*e*P	**P**	**12 11 55.7**	**-0.3**
	9.9nm,1.5s						
SONM	**Songino Array**	**62.12**	**330**	LR	LR	12 37 56.4	
	comp=Z,181nm,20.1s,baz=180,slow=35						
SONA1	**Songino Array**	**62.13**	**330**	*e*P	**P**	**12 11 58.0**	**0.0**
MA2	**Magadan**	**62.80**	**2**	*e*P	**P**	**12 12 02.3**	**+0.2**
	3.0nm,0.8s						
PPT	**Papeete**	**63.65**	**108**	LR	LR	12 36 07.2	
	comp=Z,69nm,20.0s,baz=291,slow=32						
PPT2	**Papeete2**	**63.65**	**108**	*e*LR	LR	12 31 05.7	
	comp=Z,132nm,24.2s						
TBI	**Tubuai**	**64.40**	**114**	*e*S	**S**	**12 20 47.7**	**-2.2**
	263nm,29.8s						
TBI	**Tubuai**	**64.40**	**114**	*e*LR	LR	12 31 22.8	
	comp=Z,416nm,35.0s						
WMQ	**Urumqi**	**70.82**	**319**	P	**P**	**12 12 53.8**	**+0.2**
WMQ				pP	pP	12 13 01.5	-2.4
WMQ				sP	PcP	12 13 10.3	-3.9
WMQ				pmax	pmax		
	comp=Z,24nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ				LR	LR		
	comp=N,97nm,23.9s						
WMQ				LR	LR		
	comp=E,150nm,22.5s						
WMQ				LR	LR		
	comp=Z,180nm,17.9s						
VNDA	**Vanda**	**74.54**	**177**	LR	LR	12 44 55.8	
	comp=Z,148nm,18.1s,baz=298,slow=35						
MK01	**Makanchi Array**	**75.47**	**320**	*e*P	**P**	**12 13 20.7**	**-0.3**
MK31	**Makanchi Array**	**75.49**	**320**	*e*P	**P**	**12 13 20.7**	**-0.4**
MKAR	**Makanchi Array**	**75.49**	**320**	*e*P	**P**	**12 13 20.5**	**-0.6**
	31nm,1.0s						
MKAR	**Makanchi Array**	**75.49**	**320**	P	**P**	**12 13 21.7**	**+0.6**
	7.7nm,1.1s,baz=107,slow=7.0,SNR=27						
MKAR				LR	LR	12 46 07.2	
	comp=Z,127nm,19.9s,baz=70,slow=35						
MAKZ	**Makanchi**	**75.69**	**320**	*e*P	**P**	**12 13 21.3**	**-1.0**
	10nm,1.1s						
ZALV	**Zalesovo Beam**	**76.80**	**328**	*e*P	**P**	**12 13 27.2**	**-1.2**
ZALV	**Zalesovo Beam**	**76.80**	**328**	P	**P**	**12 13 27.6**	**-0.7**
	2.2nm,1.0s,baz=116,slow=3.4,SNR=4.7						
ZALV				LR	LR	12 45 44.5	
	comp=Z,130nm,21.7s,baz=72,slow=34						
RKT	**Rikitea**	**77.66**	**113**	*e*LR	LR	12 37 35.0	
	comp=Z,318nm,31.8s						
NIL	**Nilore**	**78.42**	**305**	*e*P	**P**	**12 13 38.0**	**0.0**
	17nm,0.7s						
TKM2	**Tokmak 2**	**78.80**	**315**	P	**P**	**12 13 40.6**	**+0.5**
	SNR=5.9						
KZA	**Kyzart**	**78.83**	**314**	P	**P**	**12 13 41.9**	**+1.4**
	SNR=15						
KURK	**Kurchatov**	**79.12**	**323**	*e*P	**P**	**12 13 39.7**	**-1.6**
	7.4nm,1.1s						
UCH	**Uchtor**	**79.40**	**314**	P	**P**	**12 13 44.7**	**+1.0**
	SNR=7.2						
AAK	**Ala-Archa**	**79.52**	**314**	*e*P	**P**	**12 13 43.9**	**0.0**
	4.7nm,1.0s						
USP	**Ospenovka**	**79.67**	**315**	P	**P**	**12 13 44.9**	**+0.3**
	SNR=8.0						
AML	**Almayashu**	**79.97**	**314**	P	**P**	**12 13 47.5**	**+0.9**
	SNR=9.7						
EKS2	**Erkin-Say**	**80.03**	**314**	P	**P**	**12 13 47.6**	**+0.9**
	SNR=7.0						
NRIK	**Noril'sk**	**82.78**	**342**	LR	LR	12 49 42.9	
	comp=Z,47nm,20.8s,baz=70,slow=35						
HARP	**HAARP**	**82.87**	**26**	*e*P	**P**	**12 14 00.7**	**-0.4**
	86nm,1.4s						
ILAR	**Eielson Array**	**83.05**	**23**	P	**P**	**12 14 02.5**	**+0.6**
	2.3nm,0.9s,baz=255,slow=4.7,SNR=17						
ILAR				LR	LR	12 44 47.0	
	comp=Z,76nm,20.2s,baz=224,slow=31						
BVAR	**Borovoye Array**	**84.66**	**324**	LR	LR	12 52 56.1	
	comp=Z,88nm,18.2s,baz=75,slow=36						
MAW	**Mawson**	**84.69**	**203**	LR	LR	12 49 12.9	
	comp=Z,101nm,19.4s,baz=83,slow=34						
BRVK	**Borovoye**	**84.73**	**324**	*e*P	**P**	**12 14 10.4**	**-0.3**
	9.1nm,1.3s						
DAWY	**Dawson**	**85.88**	**25**	*e*P	**P**	**12 14 17.2**	**+0.9**
	7.2nm,1.1s						
ABKAR	**Akbulak array**	**90.61**	**319**	*e*P	**P**	**12 14 37.9**	**-1.2**
GEYT	**Alibeck**	**91.17**	**308**	LR	LR	12 57 24.7	
	comp=Z,184nm,20.7s,baz=85,slow=37						
NVAR	**Mina Array Bea**	**95.73**	**52**	LR	LR	12 50 53.2	
	comp=Z,120nm,19.9s,baz=330,slow=31						
YKA	**Yellowknife Ar**	**96.83**	**28**	P	**P**	**12 15 08.8**	**+1.4**
	0.2nm,0.8s,baz=282,slow=3.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**144.38**	**288**	PKP	**PKPdf**	**12 21 11.3**	**-2.6**
	2.1nm,0.9s,baz=25,slow=4.0,SNR=11						

ISCJB ***27*** *12:13:34.1±0.4, 6°.61S±0°.04×147°.03E±0°.08, h100*^{km}*, mb4.6/38, Error ellipse: s-maj=11.1km s-min=5.0km az=6.9*

BJI ***27*** *12:13:35.5, 6°.48S×147°.41E, h128*^{km}*, mB5.0/13, mb4.6/22*

IDC ***27*** *12:13:36.5±5.6, 6°.62S×146°.97E, h108*^{km}*±50*^{km}*, mb4.2/15, mb1 4.3/16, mb1mx4.1/32, mbtmp4.5/16, Error ellipse: s-maj=31.6km s-min=14.3km az=103.0*

NEIC ***27*** *12:13:39.2±0.8, 6°.54S×146°.84E, h129*^{km}*±8*^{km}*, mb4.6/16, Error ellipse: s-maj=9.7km s-min=5.4km az=109.0*

NEIC Felt at Lae.

ISC 27 12:13:36.9±0.5**, 6°.59S**±0°.05×**146°.82E**±0°.09**, h100**^{km}**, n75, σ1**^{s}**.52**/77**, mb4.7**/43**, 1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**4.54**	**7**	*e*Pn	**Pn**	**12 14 45.6**	**+2.0**
RABL	**Rabaul**	**5.83**	**66**	*e*Pn	**Pn**	**12 15 02.3**	**+1.3**
COEN	**Coen**	**8.16**	**206**	*e*Pn	**Pn**	**12 15 33.7**	**+1.1**
COEN				*e*Sn	**Sn**	**12 17 01.8**	**-1.4**
CTA	**Charters Tower**	**13.43**	**182**	P	**Pn**	**12 16 47.6**	**+4.0**
	6.1nm,0.3s,baz=359,slow=14,SNR=56						
CTAO	**Charters Tower**	**13.43**	**182**	*e*Pn	**Pn**	**12 16 47.8**	**+4.2**
CTAO				*e*Sn	**Sn**	**12 19 09.9**	**-1.6**
FAKI	**Fak Fak**	**14.97**	**283**	*e*Pn	**Pn**	**12 17 05.1**	**+1.6**
	23nm,0.8s						
MTN	**Manton Dam**	**16.66**	**247**	*e*Pn	**Pn**	**12 17 25.6**	**+1.0**
	34nm,1.3s						
WRAB	**Tennant Creek**	**17.96**	**221**	*e*P	**P**	**12 17 39.4**	**-0.2**
	21nm,0.7s						
WB2	**Warramunga Arr**	**17.97**	**221**	*e*P	**P**	**12 17 39.8**	**+0.1**
	25nm,0.6s						
WRA	**Warramunga Arr**	**17.98**	**221**	P	**P**	**12 17 39.5**	**-0.2**
	3.4nm,0.3s,baz=41,slow=12,SNR=185						
AS01	**Alice Springs**	**21.01**	**215**	*e*P	**P**	**12 18 12.7**	**0.0**
AS31	**Alice Springs**	**21.04**	**215**	*e*P	**P**	**12 18 13.0**	**0.0**
	6.6nm,0.4s						
ASAR	**Alice Springs**	**21.04**	**215**	P	**P**	**12 18 13.2**	**+0.2**
	14nm,0.6s,baz=48,slow=8.9,SNR=232						
FITZ	**Fitzroy Crossi**	**23.61**	**239**	*e*P	**P**	**12 18 38.6**	**-0.5**
	38nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.61**	**239**	P	**P**	**12 18 38.6**	**-0.5**
	28nm,0.5s,baz=57,slow=7.4,SNR=82						
ARMA	**Armidale**	**24.14**	**170**	*e*P	**P**	**12 18 44.7**	**+0.9**
STKA	**Stephens Creek**	**25.63**	**190**	*e*P	**P**	**12 18 56.7**	**-0.6**
	2.9nm,1.3s						
STKA	**Stephens Creek**	**25.63**	**190**	P	**P**	**12 18 56.6**	**-0.7**
	1.6nm,0.3s,baz=7.9,slow=11,SNR=2.9						
LHI	**Lord Howe Isla**	**27.32**	**157**	*e*P	**P**	**12 19 09.4**	**-3.1**
	113nm,1.1s						
BBOO	**Buckleboo**	**27.95**	**200**	*e*P	**P**	**12 19 17.5**	**-0.5**
	30nm,1.4s						
FORT	**Forrest**	**29.82**	**214**	*e*P	**P**	**12 19 35.1**	**+0.5**
	33nm,1.1s						
NWAO	**Narrogin (SRO)**	**37.98**	**222**	P	**P**	**12 20 43.5**	**-1.7**
	3.9nm,0.5s,baz=312,slow=12,SNR=6.0						
TWG	**Pinlang**	**38.59**	**320**	*e*P	**P**	**12 20 49.4**	**-1.0**
	203nm,1.4s						
MJAR	**Matsushiro Arr**	**43.65**	**350**	P	**P**	**12 21 29.8**	**-2.0**
	2.5nm,0.7s,baz=188,slow=10,SNR=5.3						
NJ2	**Nanjing**	**46.77**	**327**	*e*P	**P**	**12 21 55.3**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSRS	**Korea Array**	**47.23**	**339**	P	**P**	**12 21 59.0**	**-1.0**
	15nm,0.4s,baz=157,slow=8.4,SNR=15						
KSAR	**Wonju Array Be**	**47.24**	**339**	P	**P**	**12 21 59.0**	**-1.0**
SKNT	**Sakolnakorn**	**48.39**	**300**	P	**P**	**12 22 09.6**	**+0.4**
	17nm,0.7s						
ASAJ	**Asahikawa**	**50.61**	**356**	P	**P**	**12 22 25.0**	**-0.6**
	2.4nm,0.4s,baz=240,slow=10,SNR=16						
PBKT	**Sadao Pong**	**50.85**	**297**	*e*P	**P**	**12 22 27.4**	**-0.6**
	4.9nm,1.1s						
UTTA	**Uttaradit**	**51.68**	**299**	P	**P**	**12 22 35.1**	**+1.0**
	12nm,0.7s,86nm						
UTHA	**Uthaitani**	**51.83**	**296**	P	**P**	**12 22 36.7**	**+1.5**
	4.6nm,0.7s						
NANT	**Nan**	**51.99**	**300**	P	**P**	**12 22 37.4**	**+1.0**
	12nm,0.8s						
USRK	**Ussuriysk Ar.**	**52.30**	**347**	P	**P**	**12 22 37.4**	**-0.8**
	1.9nm,0.5s,baz=175,slow=8.0,SNR=10						
SUKH	**Sukhothai**	**52.39**	**298**	P	**P**	**12 22 41.5**	**+2.1**
	4.0nm,0.8s						
UMPA	**Umpang Tak**	**52.59**	**296**	P	**P**	**12 22 42.1**	**+1.2**
	8.5nm,0.8s,192nm						
LAMP	**Lampang**	**52.80**	**299**	P	**P**	**12 22 43.8**	**+1.4**
	7.1nm,0.8s						
KMI	**Kunming**	**53.22**	**308**	P	**P**	**12 22 47.5**	**+1.9**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
CM01	**Chiang Mai Arr**	**53.34**	**299**	*e*P	**P**	**12 22 47.2**	**+0.8**
CM31	**Chiang Mai Arr**	**53.37**	**299**	*e*P	**P**	**12 22 47.7**	**+1.1**
CMAR	**Chiang Mai Arr**	**53.37**	**299**	P	**P**	**12 22 47.9**	**+1.3**
	11nm,0.6s,baz=123,slow=5.8,SNR=83						
CMMT	**Chiang Mai**	**53.51**	**299**	P	**P**	**12 22 48.6**	**+1.0**
CHTO	**Chiang Mai**	**53.51**	**299**	*e*P	**P**	**12 22 48.6**	**+1.0**
	9.8nm,0.8s						
CHTO	**Chiang Mai**	**53.51**	**299**	P	**P**	**12 22 48.7**	**+1.1**
	56nm,1.0s						
HHC	**Hu-ho-hao-te**	**57.24**	**329**	*e*P	**P**	**12 23 16.3**	**+2.2**
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH	**Lanzhou**	**58.54**	**320**	⇓P	**P**	**12 23 23.8**	**+0.4**
LZH				pP	pP	12 23 55.3	+6.8
LZH				sP	PcP	12 24 09.5	-3.3
LZH				PP	**PP**	**12 25 36.8**	**+2.7**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,7.2s						
PETK	**Petropavlovsk-**	**60.18**	**8**	P	**P**	**12 23 33.8**	**-0.3**
	2.7nm,0.9s,baz=175,slow=7.6,SNR=8.3						
GTA	**Gaotai**	**63.08**	**321**	*e*P	**P**	**12 23 53.8**	**-0.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ODAN	**Odare**	**66.41**	**303**	*e*P	**P**	**12 24 16.4**	**+0.3**
	22nm,0.8s						
JIRN	**Jiri**	**67.69**	**303**	*e*P	**P**	**12 24 24.5**	**+0.1**
	5.4nm,0.3s						
GUN	**Gumba**	**68.04**	**303**	*e*P	**P**	**12 24 26.2**	**-0.3**
PKI	**Pulchoki**	**68.31**	**303**	*e*P	**P**	**12 24 27.7**	**-0.5**
	11nm,0.8s						
DMN	**Daman**	**68.58**	**303**	*e*P	**P**	**12 24 30.1**	**+0.3**
	32nm,0.7s						
KOLN	**Koldanda**	**69.89**	**303**	*e*P	**P**	**12 24 37.3**	**-0.5**
DANN	**Dangsing**	**69.95**	**303**	*e*P	**P**	**12 24 37.8**	**-0.5**
	18nm,0.5s						
PYUN	**Piuthan**	**70.51**	**303**	*e*P	**P**	**12 24 41.2**	**-0.4**
	25nm,0.4s						
WMQ	**Urumqi**	**73.12**	**320**	*e*P	**P**	**12 24 56.5**	**-0.2**
WMQ				pP	pP	12 25 28.5	+6.0
WMQ				LR	LR		
	comp=N,88nm,20.7s						
WMQ				LR	LR		
	comp=E,180nm,17.9s						
WMQ				LR	LR		
	comp=Z,180nm,18.9s						
MK01	**Makanchi Array**	**77.82**	**321**	*e*P	**P**	**12 25 22.4**	**-1.1**
MK31	**Makanchi Array**	**77.83**	**321**	*e*P	**P**	**12 25 22.6**	**-1.0**
MKAR	**Makanchi Array**	**77.83**	**321**	*e*P	**P**	**12 25 22.7**	**-0.8**
	16nm,1.2s						
MKAR	**Makanchi Array**	**77.83**	**321**	P	**P**	**12 25 22.9**	**-0.7**
	1.0nm,0.5s,baz=98,slow=8.0,SNR=22						
MAKZ	**Makanchi**	**78.04**	**321**	*e*P	**P**	**12 25 23.0**	**-1.6**
	2.2nm,0.8s						
ZAA0	**Zalesovo Array**	**79.41**	**328**	*e*P	**P**	**12 25 30.0**	**-1.9**
	2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**79.41**	**328**	P	**P**	**12 25 30.0**	**-2.0**
	1.9nm,0.5s,baz=107,slow=6.4,SNR=9.3						
KNK	**Knik Glacier**	**84.02**	**26**	*e*P	**P**	**12 25 58.7**	**+2.6**
	47nm,1.5s						
IM3	**Indian Mountai**	**84.10**	**21**	*e*P	**P**	**12 25 55.5**	**-0.8**
CHGR	**Chuyangaron**	**84.53**	**310**	*e*P	**P**	**12 25 58.1**	**-1.2**
	9.3nm,0.6s						
NRIK	**Noril'sk**	**85.78**	**342**	P	**P**	**12 26 03.9**	**-0.8**
	2.9nm,0.6s,baz=158,slow=3.5,SNR=4.6						
IL1	**Eielson Array**	**86.09**	**23**	*e*P	P	12 26 03.4	-2.9
ILAR	**Eielson Array**	**86.09**	**23**	P	**P**	**12 26 04.1**	**-2.2**
	3.1nm,0.6s,baz=253,slow=5.0,SNR=50						
ILB	**Eielson Array**	**86.09**	**23**	*e*P	**P**	**12 26 04.0**	**-2.4**
YKA	**Yellowknife Ar**	**99.77**	**28**	P	**Pdif**	**12 27 09.0**	**-0.5**
	0.1nm,0.5s,baz=276,slow=5.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**145.06**	**283**	PKPbc	**PKPbc**	**12 33 01.6**	**-1.7**
	16nm,0.9s,baz=66,slow=3.7,SNR=67						
DBIC	**Dimbokro**	**151.87**	**272**	PKPbc	**PKPdf**	**12 33 19.6**	**+4.8**
	3.4nm,0.6s,baz=311,slow=1.0,SNR=5.3						
BDFB	**Brasilia**	**153.47**	**146**	PKPbc	**PKPbc**	**12 33 24.1**	**-0.8**
	1.8nm,0.3s,baz=96,slow=2.6,SNR=3.2						

ISK ***27*** *12:23:39.4, 39°.24N×25°.49E, h6*^{km}*, ML2.7/11*

ISCJB ***27*** *12:23:40.2±0.5, 39°.22N±0°.02×25°.52E±0°.03, h7*^{km}*±3*^{km}*, Error ellipse: s-maj=3.3km s-min=3.1km az=21.6*

DDA ***27*** *12:23:40.4, 39°.20N×25°.60E, h7*^{km}*±2*^{km}*, ML2.9*

THE ***27*** *12:23:40.8, 39°.21N×25°.56E, h18*^{km}*±2*^{km}*, ML2.4/5, Error ellipse: s-maj=2.6km s-min=1.1km az=98.0*

ATH ***27*** *12:23:41.1, 39°.20N×25°.57E, h15*^{km}*±5*^{km}*, ML2.4/5, Error ellipse: s-maj=5.4km s-min=0.9km az=65.0*

ISC 27 12:23:40.7±0.9**, 39°.21N**±0°.02×**25°.56E**±0°.02**, h17**^{km}±8^{km}**, n39, σ0**^{s}**.60**/66**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.23**	**90**	PG	**Pg**	**12 23 45.7**	**-0.2**
SIGR				SG	**Sb**	**12 23 49.7**	**-0.4**
SIGR	**SIGRI**	**0.23**	**90**	P	**Pg**	**12 23 45.7**	**-0.2**
SIGR				S	**Sb**	**12 23 49.7**	**-0.4**
SIGR				AML	AML	12 23 49.8	
	comp=E,2265µm,0.3s						
SIGR				AML	AML	12 23 50.0	
	comp=N,3784µm,0.3s						
SIGR	**SIGRI**	**0.23**	**90**	P	**Pg**	**12 23 45.7**	**-0.2**
SIGR				S	**Sb**	**12 23 49.7**	**-0.4**
PRK	**Paraskevi**	**0.55**	**86**	P	**Pb**	**12 23 52.0**	**+0.1**
PRK				S	**Sb**	**12 23 59.4**	**-0.1**
PRK				AML	AML	12 24 01.0	
	comp=N,776µm,0.5s						
PRK				AML	AML	12 24 01.0	
	comp=E,777µm,0.4s						
PRK	**Paraskevi**	**0.55**	**86**	P	**Pb**	**12 23 52.5**	**+0.6**
PRK				S	**Sb**	**12 24 00.1**	**+0.6**
EFSA	**Agios Efstrati**	**0.55**	**307**	P	**Pb**	**12 23 52.4**	**+0.5**
EFSA				S	**Sb**	**12 24 00.3**	**+0.8**
PSRA	**Psara**	**0.67**	**180**	P	**Pg**	**12 23 53.8**	**-0.1**
PSRA				S	**Sb**	**12 24 03.2**	**+0.4**
BOZC	**Bozcaada**	**0.73**	**31**	PG	**Pg**	**12 23 54.4**	**-0.7**
BOZC				SG	**Sb**	**12 24 05.3**	**+0.5**
BOZC	**Bozcaada**	**0.73**	**31**	*i* P	**Pg**	**12 23 55.0**	**0.0**
BOZC				*i* S	**Sn**	**12 24 07.0**	**-0.1**
LIA	**Limnos Island**	**0.74**	**337**	P	**Pg**	**12 23 55.4**	**+0.1**
LIA				S	**Sb**	**12 24 05.8**	**+0.7**
LIA				AML	AML	12 24 08.7	
	comp=E,359µm,0.3s						
LIA				AML	AML	12 24 08.7	
	comp=N,474µm,0.3s						
LIA	**Limnos Island**	**0.74**	**337**	P	**Pg**	**12 23 55.3**	**0.0**
LIA				S	**Sg**	**12 24 04.4**	**-0.8**
EZN	**Ezine**	**0.85**	**44**	PG	**Pb**	**12 23 56.0**	**-1.0**
EZN				SG	**Sb**	**12 24 08.7**	**+0.6**
EZN	**Ezine**	**0.85**	**44**	P	**Pb**	**12 23 56.4**	**-0.6**
EZN				S	**Sb**	**12 24 08.6**	**+0.5**
SKY	**Skiros Island**	**0.86**	**247**	P	**Pb**	**12 23 57.3**	**+0.2**
SKY				S	**Sg**	**12 24 09.8**	**+1.1**
SKY				AML	AML	12 24 10.2	
	comp=N,501µm,0.2s						
SKY				AML	AML	12 24 11.1	
	comp=E,562µm,0.2s						
SKY	**Skiros Island**	**0.86**	**247**	P	**Pg**	**12 23 57.6**	**+0.2**
SKY				S	**Sb**	**12 24 08.7**	**+0.4**
AYVA	**Ayvalik**	**0.88**	**83**	*i* P	**Pg**	**12 23 58.0**	**+0.2**
AYVA				*i* S	**Sg**	**12 24 09.4**	**0.0**
CHOS	**Chios island**	**0.91**	**155**	PG	**Pb**	**12 23 58.1**	**0.0**
CHOS	**Chios island**	**0.91**	**155**	P	**Pb**	**12 23 58.1**	**0.0**
CHOS				S	**Sg**	**12 24 10.2**	**-0.2**
CHOS				AML	AML	12 24 11.6	
	comp=N,512µm,0.3s						
CHOS				AML	AML	12 24 11.6	
	comp=E,873µm,0.3s						
CHOS	**Chios island**	**0.91**	**155**	P	**Pb**	**12 23 57.9**	**-0.1**
CHOS				S	**Sb**	**12 24 09.5**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.93**	**55**	*i* P	**Pb**	**12 23 58.5**	**+0.1**
BAYC				*i* S	**Sb**	**12 24 10.3**	**0.0**
BAYC				IAML_P			
	comp=Z,1µm,0.1s						
FOCM	**Foa**	**1.04**	**118**	PN	**Pg**	**12 24 01.2**	**+0.4**
URLA	**Izmir**	**1.17**	**136**	PN	**Pg**	**12 24 04.1**	**+0.7**
URLA	**Izmir**	**1.17**	**136**	*i* P	**Pg**	**12 24 03.2**	**-0.1**
URLA				*i* S	**Sg**	**12 24 18.5**	**-0.2**
ZEDA	**zmir-Bergama**	**1.20**	**101**	*i* P	**Pn**	**12 24 02.5**	**-0.2**
ZEDA				*i* S	**Sg**	**12 24 20.4**	**+0.7**
ZEY	**zmir**	**1.22**	**143**	*i* P	**Pb**	**12 24 03.8**	**+0.6**
ZEY				*i* S	**Sg**	**12 24 19.9**	**-0.3**
ZEY				IAML_P			
	comp=Z,791nm,0.2s						
SMTH	**Samothraki Isl**	**1.26**	**359**	P	**Pn**	**12 24 03.2**	**-0.3**
AOS	**Alonnisos**	**1.31**	**269**	PN	**Pn**	**12 24 03.6**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.38**	**30**	PN	**Pn**	**12 24 05.5**	**+0.4**
LPK	**Lapseki**	**1.48**	**38**	PN	**Pn**	**12 24 07.2**	**+0.7**
EREA	**Eretria**	**1.50**	**239**	P	**Pn**	**12 24 06.0**	**-0.8**
EREA				S	**Sn**	**12 24 24.4**	**-1.6**
ERIK	**Erikli-Kesan**	**1.63**	**26**	PN	**Pn**	**12 24 09.1**	**+0.5**
BALY	**Balya**	**1.68**	**71**	*i* P	**Pg**	**12 24 12.4**	**-0.6**
BALY				*i* S	**Sg**	**12 24 35.1**	**+0.4**
BALY				IAML_P			
	comp=Z,446nm,0.2s						
STEP	**BALIKESIR_Sava**	**1.68**	**84**	*i* P	**Pb**	**12 24 10.5**	**-0.7**
STEP				*i* S	**Sg**	**12 24 35.7**	**+0.9**
ALN	**Alexandroupoli**	**1.72**	**12**	PN	**Pn**	**12 24 09.5**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.93**	**40**	PN	**Pb**	**12 24 14.4**	**-1.0**
SART	**Tekirdag**	**1.93**	**40**	*i* P	**Pn**	**12 24 13.4**	**+0.6**
SART				*i* S	**Sb**	**12 24 39.5**	**+0.2**
RDO	**Rodhopi**	**1.93**	**359**	PN	**Pn**	**12 24 12.9**	**+0.2**
SBT4	**Kumbag-Tekirda**	**2.21**	**43**	PN	**Pn**	**12 24 17.9**	**+1.5**
DURS	**Dursunbey**	**2.29**	**79**	*i* P	**Pb**	**12 24 23.1**	**+1.5**
DURS				*i* S	**Sg**	**12 24 53.8**	**-0.5**

NDI 27 12:27:13.4±2.4**, 25°.65N**×**90°.67E, h10**^{km}**, ML3.6, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURI	**Tura**	**0.32**	**252**	*e*P	Pb	12 27 20.9	-0.3
TURI				*e*S	Sb	12 27 26.7	+0.2
TURI				IAML		12 27 27.5	
	comp=N,6µm,0.1s						
TURI				IAML		12 27 27.9	
	comp=E,5µm,0.2s						
DHUB	**DHUBRI**	**0.71**	**302**	*e*P	Pg	12 27 26.2	-1.0
DHUB				*e*S	Sg	12 27 36.7	+0.1
DHUB				IAML		12 27 37.5	
	comp=E,2µm,0.1s						
DHUB				IAML		12 27 37.6	
	comp=N,3µm,0.1s						
SHL	**Shillong**	**1.10**	**94**	*e*P	Pg	12 27 31.0	-3.5
SHL				*e*S	Sg	12 27 44.4	-4.4
SHL				IAML		12 27 46.2	
	comp=N,656nm,0.2s						
SHL				IAML		12 27 46.5	
	comp=E,983nm,0.2s						
AGT	**Agartala**	**1.83**	**163**	*e*P	Pn	12 27 45.5	+0.5
AGT				*e*S	Sb	12 28 09.3	-0.7
AGT				IAML		12 28 12.3	
	comp=N,917nm,0.4s						
AGT				IAML		12 28 12.3	
	comp=E,667nm,0.5s						
TEZP	**TEZPUR**	**2.14**	**63**	*e*P	Pn	12 27 49.5	+0.2
TEZP				*e*S	Sn	12 28 16.1	+0.2
TEZP				IAML		12 28 19.4	
	comp=E,958nm,0.1s						
TEZP				IAML		12 28 19.7	
	comp=N,970nm,0.1s						
TAWA	**Tawang**	**2.21**	**29**	*e*P	Pn	12 27 51.8	+1.2
TAWA				*e*S	Sn	12 28 17.6	-0.6
TAWA				*e*S	Sb	12 28 20.2	-1.2
BELO	**BELONIA**	**2.49**	**163**	*e*S	Sn	12 28 25.3	+0.8
GTK	**Tadong**	**2.49**	**312**	*e*P	Pn	12 27 56.1	+1.9
GTK				*e*S	Sn	12 28 26.0	+1.3
GTK				IAML		12 28 30.9	
	comp=N,226nm,0.3s						
GTK				IAML		12 28 31.2	
	comp=E,226nm,0.1s						
KOHI	**KOHIMA**	**3.10**	**88**	*e*P	Pb	12 28 08.2	-0.6
KOHI				*e*S	Sb	12 28 47.2	+0.4
KOHI				IAML		12 28 52.6	
	comp=E,271nm,0.5s						
KOHI				IAML		12 28 52.8	
	comp=N,180nm,0.1s						
ZIRO	**ZIRO**	**3.41**	**56**	*e*P	Pn	12 28 07.7	+0.9
ZIRO				*e*S	Sn	12 28 46.5	-0.9
MOKO	**MOKOCHONG**	**3.52**	**78**	*e*P	Pn	12 28 06.9	-1.5
MOKO				*e*S	Sn	12 28 47.3	-3.0
MOKO				IAML		12 29 09.4	
	comp=E,391nm,0.6s						
SAIH	**SAIHA**	**3.79**	**146**	*e*P	Pn	12 28 12.0	0.0

IDC ***27*** *12:30:02.3±0.7, 45°.39N×24°.23E, h0*^{km}*, mb3.7/7, mb1 3.6/11, mb1mx3.5/34, mbtmp3.5/11, ML3.2/4, Error ellipse: s-maj=12.1km s-min=7.9km az=7.0*

SIGU ***27*** *12:30:03.8±0.1, 45°N±1°×2°4E±°, h5*^{km}*, mb2.9/10*

SOF ***27*** *12:30:03.5, 45°.41N×24°.30E, h6*^{km}

ISCJB ***27*** *12:30:04.1±0.4, 45°.41N±0°.01×24°.31E±0°.02, h10*^{km}*±3*^{km}*, mb3.6/7, Error ellipse: s-maj=2.0km s-min=1.9km az=11.9*

BUC ***27*** *12:30:04.2±0.3, 45°.47N×24°.33E, h6*^{km}*±2*^{km}*, MD4.0/5, Error ellipse: s-maj=2.7km s-min=2.2km az=4.0*

BEO ***27*** *12:30:05.8±0.6, 45°.38N×24°.16E, h0*^{km}*±3*^{km}*, ML3.6/14*

PRU ***27*** *12:30:07.7±0.0, 45°.30N×24°.34E, h32*^{km}

THE ***27*** *12:30:08.8, 45°.14N×24°.45E, h13*^{km}*±13*^{km}*, ML3.2/2, Error ellipse: s-maj=17.4km s-min=2.0km az=2.0*

ISC 27 12:30:04.1±0.9**, 45°.45N**±0°.01×**24°.31E**±0°.01**, h10**^{km}±6^{km}**, n219, σ1**^{s}**.47**/300**, mb3.9**/7**, 64C-26D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARR	**Arges**	**0.24**	**109**	⇑*i*P	**Pg**	**12 30 09.1**	**-0.1**
ARR				S	**Sg**	**12 30 12.2**	**-0.4**
ARR	**Arges**	**0.24**	**109**	⇑*i*P	**Pg**	**12 30 09.1**	**-0.1**
ARR				*i* S	**Sg**	**12 30 12.2**	**-0.4**
LOT	**Lotru**	**0.38**	**270**	⇑*i*P	**Pb**	**12 30 12.9**	**0.0**
LOT	**Lotru**	**0.38**	**270**	⇑*i*P	**Pb**	**12 30 12.9**	**0.0**
LOT				*i* S	**Sb**	**12 30 18.4**	**-0.5**
VOIR		**0.52**	**91**	⇑*i*P	**Pg**	**12 30 14.0**	**-0.3**
VOIR		**0.52**	**91**	⇑*i*P	**Pg**	**12 30 14.0**	**-0.3**
MTUR	**Matau**	**0.58**	**112**	⇑*i*P	**Pg**	**12 30 15.4**	**0.0**
MTUR	**Matau**	**0.58**	**112**	⇑*i*P	**Pg**	**12 30 15.4**	**0.0**
MDB	**Medias**	**0.69**	**4**	⇓*i*P	**Pb**	**12 30 19.4**	**+1.1**
MDB	**Medias**	**0.69**	**4**	⇓*i*P	**Pb**	**12 30 19.4**	**+1.1**
MDB				*i* S	**Sb**	**12 30 27.9**	**0.0**
GOLR		**0.77**	**142**	⇓*i*P	**Pn**	**12 30 20.7**	**-0.2**
GOLR		**0.77**	**142**	⇓*i*P	**Pn**	**12 30 20.7**	**-0.2**
DOPR	**Dopca**	**0.92**	**55**	⇑*i*P	**Pg**	**12 30 21.5**	**-0.3**
DOPR	**Dopca**	**0.92**	**55**	⇑*i*P	**Pg**	**12 30 21.5**	**-0.3**
HUMR	**Humele**	**1.04**	**152**	⇑*i*P	**Pn**	**12 30 24.7**	**0.0**
HUMR	**Humele**	**1.04**	**152**	⇑*i*P	**Pn**	**12 30 24.7**	**0.0**
HUMR				*i* S	**Sn**	**12 30 39.0**	**-0.2**
DEV	**Deva**	**1.07**	**294**	⇑*i*P	**Pg**	**12 30 25.2**	**+0.5**
DEV	**Deva**	**1.07**	**294**	⇑*i*P	**Pg**	**12 30 25.2**	**+0.5**

DEV				iS	Sn	12 30 40.4	+0.3
GZR	Gura Zlata	1.08	268	⇑iP	Pg	12 30 25.2	+0.4
GZR	Gura Zlata	1.08	268	⇑iP	Pg	12 30 25.2	+0.4
GZR				iS	Sn	12 30 40.4	+0.1
SRE	Strehaia	1.11	225	⇑iP	Pn	12 30 27.8	+2.2
SRE	Strehaia	1.11	225	⇑iP	Pn	12 30 27.8	+2.2
MLR	Muntele Rosu	1.15	87	⇓iP	Pg	12 30 26.5	+0.2
MLR	Muntele Rosu	1.15	87	⇓iP	Pg	12 30 26.5	+0.2
MLR				iS	Sn	12 30 44.3	+2.0
MLR	Muntele Rosu	1.15	87	Pg	Pn	12 30 26.3	-0.1
	76nm,0.3s,baz=302,slow=7.4,SNR=109						
MLR				Lg	Lg	12 30 43.9	
	83nm,0.3s,baz=120,slow=20,SNR=24						
MLR				LR	LR	12 31 13.9	
	comp=Z,151nm,19.9s,baz=264,slow=59						
CRAR	CRAIOVA	1.18	198	⇑iP	Pg	12 30 28.0	+1.2
CRAR	CRAIOVA	1.18	198	⇑iP	Pg	12 30 28.0	+1.2
CRAR				iS	Sn	12 30 45.5	+2.8
OZUR		1.22	58	⇓iP	Pn	12 30 27.1	-0.1
OZUR		1.22	58	⇓iP	Pn	12 30 27.1	-0.1
OZUR				iS	Sn	12 30 44.3	+0.5
SECR		1.31	108	⇑iP	Pg	12 30 31.0	+1.7
SECR		1.31	108	⇑iP	Pg	12 30 31.0	+1.7
PLAR	PLOIESTI	1.33	113	⇑iP	Pg	12 30 31.3	+1.7
PLAR	PLOIESTI	1.33	113	⇑iP	Pg	12 30 31.3	+1.7
CJR	Cluj-Napoca	1.36	339	⇓iP	Pb	12 30 29.7	+0.1
CJR	Cluj-Napoca	1.36	339	⇓iP	Pb	12 30 29.7	+0.1
CJR				iS	Sg	12 30 48.7	+0.9
HERR	Herculane	1.45	248	⇑iP	Pg	12 30 32.4	+0.4
HERR				S	Sg	12 30 52.5	+1.7
HERR	Herculane	1.45	248	⇑iP	Pg	12 30 32.4	+0.4
HERR				iS	Sg	12 30 52.5	+1.7
VLAD	Vladila	1.45	177	⇓iP	Pg	12 30 32.6	+0.6
VLAD	Vladila	1.45	177	⇓iP	Pg	12 30 32.6	+0.6
VLAD				iS	Sg	12 30 52.4	+1.6
DJES	Djerdap	1.49	239	ePg	Pn	12 30 30.9	0.0
DJES				eSn	Sb	12 30 51.2	+0.5
JOSR	Joseni	1.51	33	⇑iP	Pg	12 30 33.6	+0.5
JOSR	Joseni	1.51	33	⇑iP	Pg	12 30 33.6	+0.5
JOSR				iS	Sg	12 30 54.2	+1.4
PUNG	Punghina	1.52	220	⇑iP	Pb	12 30 32.5	+0.1
PUNG	Punghina	1.52	220	⇑iP	Pb	12 30 32.5	+0.1
PUNG				iS	Sg	12 30 53.2	+0.1
SULR		1.58	118	⇑iP	Pg	12 30 34.5	+0.1
SULR		1.58	118	⇑iP	Pg	12 30 34.5	+0.1
ISR	Istrita	1.61	101	S	Sg	12 30 57.6	+1.6
ISR	Istrita	1.61	101	iS	Sg	12 30 57.6	+1.6
ARCR	ARCALIA	1.64	1	⇑iP	Pb	12 30 34.3	0.0
ARCR	ARCALIA	1.64	1	⇑iP	Pb	12 30 34.3	0.0
ARCR				iS	Sb	12 30 56.3	+1.3
BUC1	Bucharest	1.65	131	⇓iP	Pg	12 30 35.5	-0.2
BUC1	Bucharest	1.65	131	⇓iP	Pg	12 30 35.5	-0.2
BUC1				iS	Sg	12 30 58.5	+1.5
PLOR	Plostina	1.69	75	⇑iP	Pb	12 30 34.8	-0.5
PLOR	Plostina	1.69	75	⇑iP	Pb	12 30 34.8	-0.5
SGRR	Singureni	1.71	135	⇑iP	Pb	12 30 35.0	-0.5
SGRR	Singureni	1.71	135	⇑iP	Pb	12 30 35.0	-0.5
DRGR		1.74	321	ePn	Pb	12 30 36.5	+0.3
DRGR				eSg	Sg	12 31 00.1	0.0
DRGR		1.74	321	⇑iP	Pn	12 30 35.2	+0.8
DRGR		1.74	321	⇑iP	Pn	12 30 35.2	+0.8
DRGR				iS	Sg	12 30 59.8	-0.3
VRI	Vrincioaia	1.75	75	⇓iP	Pb	12 30 36.2	-0.1
VRI	Vrincioaia	1.75	75	⇓iP	Pb	12 30 36.2	-0.1
BZS	Buzias	1.90	276	ePn	Pb	12 30 38.1	-0.7
BZS				eSg	Sb	12 31 02.9	+0.4
BZS	Buzias	1.90	276	⇑iP	Pb	12 30 38.6	-0.2
BZS	Buzias	1.90	276	⇑iP	Pb	12 30 38.6	-0.2
BZS				iS	Sb	12 31 02.3	-0.2
BIZ	Bicaz	1.94	39	⇓iP	Pn	12 30 38.5	+1.4
BIZ	Bicaz	1.94	39	⇓iP	Pn	12 30 38.5	+1.4
BIZ				iS	Sb	12 31 04.6	+0.7
ZIMR		1.95	157	⇑iP	Pb	12 30 38.4	-1.2
ZIMR		1.95	157	⇑iP	Pb	12 30 38.4	-1.2
MDVR	Moldovita	1.95	251	⇓iP	Pb	12 30 40.0	+0.2
MDVR	Moldovita	1.95	251	⇓iP	Pb	12 30 40.0	+0.2
MDVR				iS	Sg	12 31 06.3	-0.6
ODBI	Odobesti	1.96	80	⇑iP	Pb	12 30 40.3	+0.5
ODBI	Odobesti	1.96	80	⇑iP	Pb	12 30 40.3	+0.5
SIRR	Siria	2.02	295	⇑iP	Pn	12 30 39.3	+1.1
SIRR	Siria	2.02	295	⇑iP	Pn	12 30 39.3	+1.1
KUBS	Kucevo	2.14	242	ePn	Pn	12 30 40.6	+0.8
KUBS				eSg	Sb	12 31 09.3	-0.1
ZAGS	Zajecar	2.21	223	ePn	Pn	12 30 41.6	+0.9
ZAGS				eSn	Sn	12 31 08.2	+0.2
BANR	Banloc	2.23	269	⇑iP	Pb	12 30 43.1	-1.4
BANR	Banloc	2.23	269	⇑iP	Pb	12 30 43.1	-1.4
BANR				iS	Sb	12 31 11.3	-0.9
BURAR	Bucovina Array	2.25	16	⇓iP	Pn	12 30 43.3	+1.8
BURAR	Bucovina Array	2.25	16	⇓iP	Pn	12 30 43.3	+1.8
BURAR				iS	Sb	12 31 12.6	-0.3
BMR	Baia Mare	2.29	346	⇓iP	Pn	12 30 43.0	+1.1
BMR	Baia Mare	2.29	346	⇓iP	Pn	12 30 43.0	+1.1
PVL	Pavlikeni	2.35	161	P	Pg	12 30 48.6	-0.5
RASA	Rasa	2.37	120	⇑iP	Pb	12 30 45.1	-1.7
RASA	Rasa	2.37	120	⇑iP	Pb	12 30 45.1	-1.7
RASA				iS	Sb	12 31 14.3	-1.8
SZH	Strazhica	2.48	151	P	Pn	12 30 44.5	+0.1
ZAPS	Zavoj	2.48	209	ePn	Pn	12 30 45.6	+1.0
ZAPS				eSn	Sn	12 31 15.4	+0.4
LTVH	Ltavrtes, Hu	2.55	320	ePn	Pb	12 30 50.1	+0.2
LTVH				Sn	Sg	12 31 26.1	0.0
CEI	Carei	2.57	331	⇑iP	Pn	12 30 46.3	+0.5
CEI	Carei	2.57	331	⇑iP	Pn	12 30 46.3	+0.5
RAKU	Rahkiv	2.58	358	eP	Pn	12 30 46.9	+1.0
RAKU				Pm		12 31 05.3	
RAKU				eS	Sn	12 31 19.0	+1.7
RAKU				Sm		12 31 24.6	
NSLU	Nyzhne Selyshc	2.75	2	eP	Pn	12 30 50.2	+2.0
NSLU				Pm		12 31 04.0	
NSLU				eS	Sn	12 31 24.3	+2.8
NSLU				Sm		12 31 41.0	
TLB	Topalu	2.79	107	⇑iP	Pn	12 30 49.6	+0.9
TLB	Topalu	2.79	107	⇑iP	Pn	12 30 49.6	+0.9
TRSU	Trosnyk	2.80	341	eP	Pn	12 30 49.5	+0.6
TRSU				Pm		12 31 08.0	
TRSU				eS	Sb	12 31 26.9	-1.7
TRSU				Sm		12 31 44.9	
ICOR	Ion Corvin	2.82	117	⇑iP	Pn	12 30 50.0	+0.8
ICOR	Ion Corvin	2.82	117	⇑iP	Pn	12 30 50.0	+0.8
KORU	Korolevo	2.83	344	eP	Pn	12 30 49.8	+0.6
KORU				Pm		12 31 00.1	
KORU				eS	Sb	12 31 28.0	-1.2
KORU				Sm		12 31 51.8	
PGB	Panagyurishte	2.90	182	P	Pn	12 30 51.4	+1.1
KSV	Kosov	2.91	10	eP	Pn	12 30 52.0	+1.5
KSV				Pm		12 31 04.0	
KSV				eS	Sn	12 31 25.5	0.0
KSV				Sm		12 31 49.0	
VTS	Vitosha	2.93	196	ePn	Pn	12 30 51.9	+1.0
VTS				eSn	Sn	12 31 27.7	+1.5
VTS	Vitosha	2.93	196	P	Pn	12 30 51.4	+0.5
VTS				S	Sn	12 31 25.6	-0.6
VTS	Vitosha	2.93	196	P	Pn	12 30 51.1	+0.2
TRPA	Tarpa	2.94	336	⇑iP	Pn	12 30 51.2	+0.4
TRPA	Tarpa	2.94	336	⇑iP	Pn	12 30 51.2	+0.4
TRPA	Tarpa	2.94	336	ePn	Pn	12 30 49.1	-1.8
TRPA				Sn	Sn	12 31 26.0	-0.2
GRUS	Gruza	3.00	240	ePn	Pn	12 30 53.4	+1.8
GRUS				eSn	Sn	12 31 28.2	+0.6
BERU	Beregovo	3.01	338	eP	Pn	12 30 52.2	+0.5
BERU				eS	Sb	12 31 32.3	-2.2
BRIU	Brid	3.02	344	eP	Pb	12 30 57.0	-0.9
BRIU				Pm		12 31 09.7	
BRIU				eS	Sb	12 31 34.5	-0.3
BRIU				Sm		12 31 49.1	
TRUS	Trudelj	3.03	248	ePn	Pn	12 30 53.8	+1.7
CHRU	Chernivtsi	3.06	21	eP	Pn	12 30 54.7	+2.3
TIRR	Tirgusor	3.08	107	⇑iP	Pn	12 30 53.5	+0.8
TIRR	Tirgusor	3.08	107	⇑iP	Pn	12 30 53.5	+0.8
MEZ	Mezhgor'ye	3.11	350	eP	Pn	12 30 55.1	+1.9
MEZ				Pm		12 31 06.5	
MEZ				eS	Sn	12 31 33.2	+2.8
MEZ				Sm		12 31 53.3	
BARS	Barje	3.19	215	ePn	Pn	12 30 55.2	+1.0
BARS				eSn	Pg	12 31 05.8	+0.7
BARS				eSn	Sn	12 31 32.7	+0.5
FRGS	Fruska Gora	3.19	266	ePn	Pn	12 30 56.4	+2.2
FRGS				eSn	Sn	12 31 33.3	+1.1
FRGS	Fruska Gora	3.19	266	ePn	Pn	12 30 57.2	+3.0
TLCR		3.19	93	⇓iP	Pn	12 30 56.0	+1.7
TLCR		3.19	93	⇓iP	Pn	12 30 56.0	+1.7
SELS	Selova	3.19	227	ePn	Pn	12 30 55.3	+1.0
SELS				eSn	Sn	12 31 32.0	-0.4
MUKU	Mukachevo	3.20	340	eP	Pn	12 30 55.1	+0.7
MUKU				Pm		12 31 12.3	
MUKU				eS	Sn	12 31 31.9	-0.7
MUKU				Sm		12 32 01.9	
PSN	Preselentsi	3.29	121	P	Pn	12 30 57.2	+1.6
DIVS	Divibare	3.36	248	ePn	Pn	12 30 58.4	+1.8
DIVS	Divibare	3.36	248	ePn	Pn	12 30 58.2	+1.6
PLD	Plovdiv	3.36	175	P	Pn	12 30 57.5	+1.0
JMB	Yambol	3.41	150	P	Pn	12 30 56.4	-0.8
KMPD	K-Podol'skiy	3.45	25	eP	Pn	12 30 59.6	+1.9
KMPD				eS	Sn	12 31 38.9	+0.3
MILM	Milestii Mici	3.46	63	⇑iP	Pn	12 30 59.9	+2.0
MILM	Milestii Mici	3.46	63	⇑iP	Pn	12 30 59.9	+2.0
UZH	Uzhgorod	3.47	337	eP	Pn	12 31 00.1	+2.1
KIS	Kishinev	3.49	62	eP	Pn	12 30 58.0	-0.4
KIS				eS	Sn	12 31 42.0	+2.2
	500nm,1.2s						
KIS	Kishinev	3.49	62	eP	Pn	12 30 58.0	-0.4
KIS				eS	Sn	12 31 42.0	+2.2
TEKS	Tekeris	3.51	257	ePn	Pn	12 30 59.4	+0.8
TEKS	Tekeris	3.51	257	ePn	Pn	12 31 00.0	+1.4
IVAS	Ivanjica	3.51	239	ePn	Pn	12 30 59.7	+1.0
IVAS				eSn	Sn	12 31 40.4	+0.1
MORS	Morshin	3.70	356	eP	Pn	12 31 02.5	+1.3
MORS				eS	Sn	12 31 48.5	+3.7
NDNU	Novodnistrovsk	3.78	33	eP	Pn	12 31 03.1	+0.8
NDNU				Pm		12 31 19.4	
NDNU				eS	Sn	12 31 49.5	+2.7
NDNU				Sm		12 32 10.7	
SJES	Sjenica	3.80	236	ePn	Pn	12 31 04.0	+1.3
SHIU	Shidnytsya	3.83	351	eP	Pn	12 31 06.3	+3.2
BBLS	Lazići	3.84	247	ePn	Pn	12 31 04.2	+1.0
BBLS				eSn	Sn	12 31 45.9	-2.5
BBLS	Lazići	3.84	247	ePn	Pn	12 31 05.4	+2.2
MMB	Musomiste	3.88	186	P	Pn	12 31 05.0	+1.2
EDRB	Edirne	4.01	153	P	Pn	12 31 05.2	-0.4
EDRB	Edirne	4.01	153	P	Pn	12 31 05.6	0.0
HORU	Horodok	4.03	20	eP	Pb	12 31 12.4	-2.8
HORU				eS	Sb	12 32 01.9	-2.0
HAPS	Han Pijesak,BI	4.05	252	ePn	Pn	12 31 07.8	+1.6
HAPS				eSn	Sn	12 31 53.4	-0.3
HAPS	Han Pijesak,BI	4.05	252	ePn	Pn	12 31 07.1	+0.9
STIP	Stip	4.06	203	i Pn	Pn	12 31 04.6	-1.6
NVR	Nevrokopi	4.11	185	P	Pn	12 31 08.1	+1.1
BUD	Budapest	4.18	301	ePn	Pn	12 31 08.0	+0.2
BUD				Sn	Sn	12 31 56.0	-0.6
VAY	Valandovo	4.32	198	i Pn	Pn	12 31 10.2	+0.5
SRS	Serrai	4.36	187	P	Pn	12 31 10.8	+0.4
RDO	Rodhopi	4.39	168	P	Pn	12 31 11.5	+0.7
RDO	Rodhopi	4.39	168	P	Pn	12 31 11.1	+0.3
KNT	Kendrikon	4.41	194	P	Pn	12 31 11.8	+0.8
KAVA	Kavala	4.45	178	P	Pn	12 31 12.2	+0.6
KAVA				S	Sn	12 32 01.8	-1.7
SOH	Sokhos	4.68	189	P	Pn	12 31 15.5	+0.7
TIH	Tihany	4.68	290	ePn	Pn	12 31 19.1	+4.3
TIH				Sn	Sn	12 32 09.0	-0.1
PHP	Peshkopia	4.70	218	P	Pn	12 31 16.8	+1.8
ALN	Alexandroupoli	4.72	164	P	Pn	12 31 15.6	+0.3
ALN	Alexandroupoli	4.72	164	P	Pn	12 31 15.6	+0.3
SRO	Srobarova	4.76	302	ePN	Pn	12 31 17.2	+1.4
SRO				eSN	Sn	12 32 10.1	-0.8
VYHS	Vyhne	4.83	311	ePN	Pn	12 31 17.6	+0.9
VYHS				eSN	Sn	12 32 11.4	-1.2
VYHS				eSG	Sg	12 32 40.8	+1.9
THAS	Thassos island	4.85	176	P	Pn	12 31 17.1	0.0
BRY	Bratogost	4.87	240	ePn	Pn	12 31 19.1	+1.7
CTYL	Yalikoy Yolu	4.92	142	eP	Pn	12 31 18.2	+0.2
HORT	Hortiatis	4.93	191	P	Pn	12 31 18.8	+0.6
DRME	Dracevica, Mon	4.94	230	ePn	Pn	12 31 22.8	+4.5
LANS	Liptovska Anna	4.95	320	ePN	Pn	12 31 20.4	+1.9
LANS				eSN	Sn	12 32 14.1	-1.7
ERIK	Erikli-Kesan	5.04	161	eP	Pn	12 31 19.7	0.0
SMTH	Samothraki Isl	5.06	169	P	Pn	12 31 19.8	-0.1
SMTH				S	Sn	12 32 15.3	-3.1
TREB	Trebinje	5.09	240	ePn	Pn	12 31 21.6	+1.3
TREB				eSn	Sn	12 32 18.0	-1.1
TREB	Trebinje	5.09	240	ePn	Pn	12 31 23.2	+2.9
SLVT	Silivri	5.09	145	eP	Pn	12 31 20.6	+0.3
KOLL	Kolacno	5.11	310	ePN	Pn	12 31 21.5	+0.9
KOLL				eSN	Sn	12 32 20.4	+0.8
PLG	Polygyros	5.11	187	P	Pn	12 31 21.5	+0.8
OUR	Ouranopolis	5.12	183	P	Pn	12 31 21.2	+0.5
OUR				S	Sn	12 32 16.6	-3.2
HCY	Herceg Novi	5.16	236	ePn	Pn	12 31 24.2	+2.9
SBT4	Kumbag-Tekirda	5.19	152	eP	Pn	12 31 20.6	-0.9
RKY	Sarkoy-Tekirda	5.20	155	eP	Pn	12 31 20.9	-1.1
CTKS	Kestanelik-??a	5.21	142	eP	Pn	12 31 21.8	-0.1
GELI	Tayfur-Gelibol	5.29	162	eP	Pn	12 31 23.5	+0.3
STON	Ston	5.41	244	ePn	Pn	12 31 27.9	+3.2
PAIG	Paliouri	5.54	185	P	Pn	12 31 26.9	+0.4
ISK	Istanbul-Kandi	5.59	140	eP	Pn	12 31 27.2	0.0
ISK	Istanbul-Kandi	5.59	140	P	Pn	12 31 28.2	+1.0
ZST	Bratislava	5.66	302	ePN	Pn	12 31 27.7	-0.4
ZST				eSN	Sn	12 32 29.4	-3.6
JAVC	Velka Javorina	5.67	309	ePN	Pn	12 31 29.6	+1.3
BOZC	Bozcaada	5.75	166	eP	Pn	12 31 30.4	+1.0
SILT	Sile	5.80	136	eP	Pn	12 31 30.9	+0.8
EZN	Ezine	5.81	164	eP	Pn	12 31 30.7	+0.4
SBT5	Esenkoy-Cinarc	5.87	144	eP	Pn	12 31 30.9	-0.1
ARMT	Armutlu	5.91	144	eP	Pn	12 31 31.8	+0.1
KCTX	Karacabey (Bur	5.97	149	eP	Pn	12 31 32.7	+0.2
OKC	Ostrava-Krasne	6.05	319	ePN	Pn	12 31 35.8	+2.3
YLV	Yalova	6.13	141	eP	Pn	12 31 34.9	+0.2
AKASG	Malin Array Be	6.20	30	Pn	Pn	12 31 35.9	+0.3
	3.0nm,0.3s,baz=219,slow=13,SNR=7.7						
AKASG				Sn	Sn	12 32 44.5	-1.9
	2.3nm,0.3s,baz=206,slow=21,SNR=4.5						
CRES	Cresnjev	6.22	277	ePn	Pn	12 31 37.6	+1.8
MORC	Moravsky Berou	6.29	316	ePN	Pn	12 31 38.9	+2.0
MORC				eSN	Sn	12 32 46.2	-2.7
CONA	Conrad Observa	6.32	296	ePn	Pn	12 31 40.3	+3.0
	0.5nm,0.2s						
CONA				eSn	Sn	12 32 46.2	-3.2
	11nm,0.7s						
ARSA	Arzberg	6.34	290	Pn	Pn	12 31 41.6	+4.1
	2.2nm,0.3s						
ARSA				eSn	Sn	12 32 48.6	-1.4
	3.8nm,0.5s						
KRUC	Moravsky	6.48	307	ePN	Pn	12 31 41.1	+1.6
KRUC				eSN	Sn	12 32 50.4	-3.0
VRAC	Vranov	6.50	309	ePN	Pn	12 31 41.6	+1.8
VRAC				eSN	Sn	12 32 51.7	-2.3
VRAC	Vranov	6.50	309	Sn	Sn	12 32 52.1	-1.9
	1.3nm,0.3s,baz=221,slow=20,SNR=3.9						
SOKA	Soboth	6.57	284	ePn	Pn	12 31 42.9	+2.2
	0.8nm,0.2s						
SOKA				Sn	Sn	12 32 52.4	-3.2
	2.8nm,0.4s						
SEV	Sevastopol'	6.70	94	eP	Pn	12 31 43.1	+0.7
SEV				Pm		12 31 55.6	
SEV				eS	Sn	12 32 56.8	-2.0
SEV				Sm		12 33 56.8	
DPC	Dobruska-Polom	7.27	315	ePN	Pn	12 31 53.3	+3.0
MOA	Molln	7.32	293	Pn	Pn	12 31 55.7	+4.8
	0.1nm,0.3s						
MOA				Sn	Sn	12 33 12.5	-1.5
	6.8nm,1.0s						
GERES	GERESS Array B	7.99	299	Pn	Pn	12 32 01.2	+1.0
	0.1nm,0.3s,baz=117,slow=17,SNR=2.9						
GERES				Sn	Sn	12 33 28.1	-2.4
	0.8nm,0.3s,baz=105,slow=26,SNR=7.6						
KHC	Kasperske Hory	8.17	301	ePN	Pn	12 32 04.0	+1.4
KHC				eSN	Sn	12 33 31.6	-3.4
BRTR	Keskin Array B	8.95	126	Pn	Pn	12 32 12.7	-0.7
	0.2nm,0.3s,baz=357,slow=6.1,SNR=2.6						
FINES	FINESS Array B	16.06	3	Pn	Pn	12 33 44.2	-5.5
	0.2nm,0.3s,baz=177,slow=12,SNR=6.0						
TORD	Torodi Ar. Bea	37.48	218	P	P	12 37 17.4	-0.5
	1.1nm,0.5s,baz=22,slow=8.7,SNR=8.4						
ZALV	Zalesovo Beam	38.95	55	P	P	12 37 31.9	+2.1
	0.9nm,0.7s,baz=292,slow=7.8,SNR=4.5						
MKAR	Makanchi Array	39.42	67	P	P	12 37 35.5	+1.5
	0.2nm,0.5s,baz=309,slow=4.6,SNR=3.5						
DBIC	Dimbokro	46.17	222	P	P	12 38 29.1	+0.2
	0.7nm,0.4s,baz=353,slow=7.4,SNR=3.0						
SONM	Songino Array	53.83	56	P	P	12 39 28.9	+1.9
	0.7nm,0.4s,baz=316,slow=6.0,SNR=2.3						
CMAR	Chiang Mai Arr	66.39	87	P	P	12 40 52.9	-0.4
	0.4nm,0.5s,baz=311,slow=8.2,SNR=4.3						
YKA	Yellowknife Ar	67.50	341	P	P	12 40 58.3	-1.4
	0.3nm,0.8s,baz=27,slow=6.0,SNR=3.5						

ZUR 27 12:30:31.4, 46°.57N×7°.95E, h8^{km}±3^{km}, MLh1.1/13, 5C-3D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIESA	Fiescheralp	0.17	139	⇓Pg	Pg	12 30 35.4	+0.4
FIESA				Sg	Sg	12 30 38.0	+0.4
HASLI	Hasliberg/Brie	0.24	36	⇑Pg	Pg	12 30 36.4	+0.2
WIMIS	Wimmis	0.24	294	Pg	Pg	12 30 36.7	+0.4
WIMIS				Sg	Sg	12 30 40.3	+0.7
GRIMS	Grimsel Gerste	0.26	87	⇓Pg	Pg	12 30 36.8	+0.3
LKBD2	Leukerbad 2	0.28	228	⇑Pg	Pg	12 30 37.3	+0.2
LKBD	Leukerbad	0.29	231	⇑Pg	Pg	12 30 37.2	+0.1
SIMPL	Simplonpass	0.33	171	⇓Pg	Pg	12 30 38.3	+0.3
EMBD	Embd, Matterta	0.36	193	Pg	Pg	12 30 38.7	+0.2
VANNI	Vissoie, Val d	0.43	215	⇑Pg	Pg	12 30 40.0	+0.1
BNALP	Bannalp	0.45	47	Pg	Pg	12 30 40.6	+0.4
SENIN	Lac Senin/Sane	0.49	246	Pg	Pg	12 30 40.9	-0.1
FUSIO	Fusio	0.51	102	Pg	Pg	12 30 41.5	+0.3
MMK	Mattmark	0.52	179	Pg	Pg	12 30 41.6	+0.2
MMK				Sg	Sg	12 30 48.1	-0.1
NALPS	Val Nalps	0.55	87	⇑Pg	Pg	12 30 42.4	+0.3
DIX	Grande Dixence	0.61	218	Pg	Pg	12 30 43.2	-0.1

ISCJB ***27*** *12:38:33.5±1.2, 67°.99N±0°.04×33°.1E±0°.2, h0^{km}, Error ellipse: s-maj=9.5km s-min=5.2km az=4.1*

HEL ***27*** *12:38:36.0±0.4, 68°.08N×33°.17E, h0^{km}, ML2.0, Explosion*

KOLA ***27*** *12:38:36.5, 68°.17N×32°.91E, M1.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC ***27*** *12:38:37.4±2.4, 68°.21N×33°.25E, h0^{km}, mb1 3.7/3, mb1mx3.1/41, mbtmp3.7/3, ML2.3/3, Error ellipse: s-maj=28.9km s-min=16.2km az=71.0*

ISC 27 12:38:35.4±1.8**, 68°.16N**±0°.05×**33°.1E**±0°.1**, h0^{km}, n17,** σ1^{s}10/26**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRF	Varrio	1.37	254	PG	Pg	12 39 00.9	-0.8
	baz=71						
VRF				MSG		12 39 17.7	
	comp=Z,16nm,0.2s						
VRF				SG	Sb	12 39 19.3	-0.6
KU6	Riekki	2.48	212	PG	Pb	12 39 19.2	-1.6
KU6				MSG		12 39 47.8	
	comp=Z,3.1nm,0.2s						
KU6				SG	Sn	12 39 49.7	+1.7
SGF	Sodankyl	2.59	257	PN	Pn	12 39 19.0	+0.5
SGF				SB	Sb	12 39 53.6	-1.3
KEV	Kevo	2.71	309	PN	Pn	12 39 21.6	+1.5
KEV				SN	Sb	12 39 56.9	-1.5
KEV				MSG		12 39 58.1	
	comp=Z,7.5nm,0.2s						
MSF	Maaselka	2.76	217	PG	Pb	12 39 25.1	-0.4
MSF				SG	Sb	12 39 59.5	-0.3
ARCES	ARCESS Array B	3.07	300	Pn	Pn	12 39 25.8	+0.7
	comp=Z,0.3nm,0.3s,baz=116,slow=14,SNR=25						
ARCES				Pg	Pg	12 39 33.9	-0.2
	comp=Z,0.8nm,0.3s,baz=110,slow=16,SNR=23						
ARCES				Sn	Sn	12 40 03.2	+0.7
	comp=Z,0.8nm,0.3s,baz=116,slow=25,SNR=6.0						
ARE0	ARCESS Array S	3.07	300	PG	Pg	12 39 34.0	-0.2
	baz=116						
ARE0				SN	Sn	12 40 03.4	+0.9
RNF	Rovaniemi	3.14	244	SN	Sn	12 40 05.2	+1.1
HEF	Hetta	3.51	278	PN	Pn	12 39 32.1	+1.0
TOF	Tornio	4.00	243	PG	Pb	12 39 48.8	+2.1
TOF				SN	Sn	12 40 24.4	-1.0
LANU	Lannavaara	4.15	274	PN	Pn	12 39 40.7	+0.7
KALU	Kalix	4.45	243	SN	Sn	12 40 36.9	+0.3
ERTU	Ertsjaerv	4.50	254	PN	Pn	12 39 45.6	+0.8
	baz=61						
ERTU				SN	Sn	12 40 37.2	-0.6
KIF	Kilpisjarvi	4.58	286	PN	Pn	12 39 46.3	+0.5
FINES	FINESS Array B	7.37	207	Pn	Pn	12 40 25.3	+1.2
	comp=Z,0.1nm,0.3s,baz=25,slow=23,SNR=1.8						
SPITS	Spitsbergen Ar	11.09	342	Pn	Pn	12 41 13.7	-1.3
	baz=148,slow=17,SNR=2.2						
I43RU	DUBNA INFRASON	11.64	169	i		13 43 10.0	
	baz=358,slow=330,SNR=1.2						

UCR ***27*** *13:06:23.5±1.3, 12°.33N×88°.99W, h7^{km}±6^{km}, ML3.7, mb4.6(NEIC)*

ISCJB ***27*** *13:06:24.9±0.8, 12°.28N±0°.07×88°.96W±0°.05, h51^{km}±6^{km}, mb4.4/20, MS3.4/4, Error ellipse: s-maj=12.7km s-min=5.2km az=33.3*

IDC ***27*** *13:06:25.3±1.1, 13°.14N×88°.37W, h0^{km}, mb3.8/7, mb1 4.1/10, mb1mx3.8/33, mbtmp3.8/10, ML3.1/3, MS3.4/5, Ms1 3.4/5, ms1mx2.9/48, Error ellipse: s-maj=40.4km s-min=19.3km az=54.0*

NEIC ***27*** *13:06:30.2±1.3, 12°.64N×88°.63W, h64^{km}±13^{km}, mb4.6/16, Error ellipse: s-maj=18.6km s-min=10.4km az=46.0*

ISC 27 13:06:28.6±1.5**, 12°.48N**±0°.08×**88°.92W**±0°.05**, h49^{km}**±13^{km}**, n72,** σ1^{s}**78**/76**, mb4.4**/20**, MS3.4**/4**, 3C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECA	Tecapa	1.09	22	eP	Pn	13 06 46.5	-1.2
LCY	Lacayo	1.12	33	eP	Pn	13 06 47.1	-0.9
VSM	San Miguel	1.13	34	eP	Pn	13 06 47.5	-0.9
PACA	Pacayal	1.14	31	⇑iP	Pn	13 06 47.4	-1.0
LFRS	El Faro	1.15	353	⇑iP	Pn	13 06 46.8	-1.6
PAVA	Las Pavas	1.23	359	⇑eP	Pn	13 06 48.2	-1.4
PAVA				IAML		13 07 09.3	
	comp=Z,1μm,0.4s						
SNET	Serv Nac Est T	1.24	346	eP	Pn	13 06 48.1	-1.5
SNET				eS	Sn	13 07 06.4	+1.1
SNET				IAML		13 07 07.9	
	comp=Z,1μm,0.3s						
LBRS	Las Brisas	1.26	355	eP	Pn	13 06 49.0	-0.9
LFU	La Fuente	1.27	352	eP	Pn	13 06 48.9	-1.2
BOQS	Boqueron	1.30	344	eP	Pn	13 06 49.4	-1.2
LCND	La Caada	1.30	51	eP	Pn	13 06 49.0	-1.4
LCND				eS	Sn	13 07 08.8	+2.2
LCND				IAML		13 07 20.5	
	comp=Z,1μm,0.3s						
CNCH	Conchagua	1.32	53	eP	Pn	13 06 49.9	-0.9
CAHU	Cacacuatique	1.46	28	eP	Pn	13 06 52.6	-0.2
VICT	Victoria	1.50	11	eP	Pn	13 06 53.0	-0.2
VICT				eS	Sn	13 07 15.5	+3.9
VICT				IAML		13 07 17.9	
	comp=Z,947nm,0.4s						
CEVE	Cerro Verde	1.50	333	eP	Pn	13 06 52.2	-1.3
CEVE				eS	Sn	13 07 15.8	+3.7
CEVE				IAML		13 07 23.3	
	comp=Z,3μm,0.3s						
SBLS	San Blas	1.51	333	eP	Pn	13 06 52.3	-1.3
SNJE	San Jose	1.53	334	eP	Pn	13 06 52.5	-1.3
RTR	El Retiro	1.58	333	eP	Pn	13 06 53.4	-0.9
CRIN	San Cristobal	1.84	83	eP	Pn	13 06 57.4	-0.4
CRIN				eS	Sn	13 07 23.5	+3.5
MTO3	Montecristo	1.96	347	eP	Pn	13 06 59.2	-0.4
TEL3	Telica 3	2.03	87	eP	Pn	13 06 58.2	-2.2
TELN	Telica	2.04	86	eP	Pn	13 06 59.2	-1.5
CNGN	Cerro Negro	2.17	89	eP	Pn	13 07 01.4	-1.0
TGUH	Tegucigalpa,Un	2.24	45	ePn	Pn	13 07 02.5	-0.8
IXG	Ixpaco	2.25	319	eP	Pn	13 07 02.1	-1.5
COPN	Copaltepe	2.30	97	eP	Pn	13 07 01.8	-2.3
MOMN	Momotombo	2.33	91	eP	Pn	13 07 01.9	-2.6
ESTN	Estel	2.56	76	ePn	Pn	13 07 05.4	-2.4
ESTN	Estel	2.56	76	eP	Pn	13 07 06.9	-0.9
APG	El Apazote	2.92	329	Pn	Pn	13 07 13.2	+0.3
	comp=Z,1.2nm,0.3s,baz=149,slow=18,SNR=3.0						
MATN	Matagalpa	2.96	81	eP	Pn	13 07 11.4	-1.8
BOAB	BOACO BROADBAN	3.18	90	ePn	Pn	13 07 13.6	-2.6
BOAB	BOACO BROADBAN	3.18	90	eP	Pn	13 07 13.5	-2.6
ACON	Acoyapa	3.70	98	eP	Pn	13 07 20.7	-2.6
JTS	JuntasAbangare	4.46	119	ePn	Pn	13 07 33.2	-0.6
JTS	JuntasAbangare	4.46	119	Pn	Pn	13 07 33.7	-0.1
	comp=Z,1.1nm,0.3s,baz=24,slow=20,SNR=4.4						
JTS				LR	LR	13 09 36.9	

	comp=Z,180nm,20.5s,baz=18,slow=44						
ESPN	**Las Esperanzas**	**4.52**	**93**	*e*Pn	**Pn**	**13 07 31.2**	**-3.5**
CMIG	**Matias Romero**	**7.37**	**309**	Pn	**Pn**	**13 08 13.4**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=130,slow=8.8,SNR=4.9						
CMIG				Sn	**Sn**	**13 09 34.0**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=114,slow=20,SNR=1.6						
435B	**Jarrell**	**19.90**	**338**	*e*P	**P**	**13 10 56.2**	**+0.1**
	comp=Z,31nm,0.6s						
JCT	**Junction City**	**20.55**	**332**	*e*P	**P**	**13 11 02.7**	**-0.5**
	comp=Z,12nm,0.6s						
TXAR	**Lajitas Array**	**21.66**	**323**	P	**P**	**13 11 16.7**	**+1.5**
	comp=Z,4.9nm,0.7s,baz=147,slow=12,SNR=42						
TX31	**Lajitas Ar. Si**	**21.66**	**323**	*e*P	**P**	**13 11 16.5**	**+1.3**
ABTX	**Abilene, Hawle**	**22.33**	**336**	*e*P	**P**	**13 11 20.7**	**-1.6**
	comp=Z,6.3nm,0.8s						
MIAR	**Mount Ida**	**22.37**	**350**	*e*P	**P**	**13 11 21.9**	**-0.8**
	comp=Z,15nm,0.8s						
SJG	**San Juan**	**22.66**	**73**	LR	LR	13 20 49.2	
	comp=Z,147nm,19.3s,baz=270,slow=39						
W39A	**Magazine**	**23.04**	**350**	*e*P	**P**	**13 11 29.1**	**-0.6**
	comp=Z,68nm,1.9s						
LPIG	**La Paz**	**23.33**	**303**	LR	LR	13 21 25.3	
	comp=Z,99nm,20.5s,baz=7.0,slow=38						
TKL	**Tuckaleechee C**	**23.54**	**11**	*e*P	**P**	**13 11 33.7**	**-0.9**
	comp=Z,105nm,2.0s						
TKL	**Tuckaleechee C**	**23.54**	**11**	P	**P**	**13 11 34.6**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=176,slow=13,SNR=4.5						
TKL				LR	LR	13 20 24.4	
	comp=Z,136nm,18.9s,baz=260,slow=37						
HHAR	**Hobbs**	**24.13**	**350**	*e*P	**P**	**13 11 40.3**	**+0.3**
	comp=Z,8.0nm,0.7s						
T47A	**Sharon Grove**	**24.46**	**4**	*e*P	**P**	**13 11 41.6**	**-1.3**
	comp=Z,8.6nm,0.6s						
MSTX	**Muleshoe**	**24.84**	**332**	*e*P	**P**	**13 11 46.0**	**-0.6**
	comp=Z,9.5nm,0.9s						
CCM	**Cathedral Cave**	**25.55**	**356**	*e*P	**P**	**13 11 51.8**	**-1.1**
	comp=Z,22nm,0.7s						
PV12	**Saucer Basin,**	**31.23**	**329**	*e*P	**P**	**13 12 44.9**	**+1.1**
	comp=Z,28nm,1.9s						
PV17	**East Wray Mesa**	**31.29**	**329**	*e*P	**P**	**13 12 44.4**	**+0.2**
	comp=Z,13nm,1.7s						
SPMN	**Marine on St.**	**32.80**	**355**	*e*P	**P**	**13 12 55.6**	**-1.6**
	comp=Z,20nm,0.6s						
PDAR	**Pinedale Array**	**35.08**	**333**	P	**P**	**13 13 17.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=117,slow=8.8,SNR=3.9						
REDW	**Red Top Meadow**	**36.13**	**332**	*e*P	**P**	**13 13 25.6**	**-0.7**
	comp=Z,26nm,1.9s						
AGMN	**Agassiz Nation**	**36.17**	**352**	*e*P	**P**	**13 13 24.6**	**-1.8**
	comp=Z,35nm,1.9s						
NV01	**Mina Array Sit**	**36.74**	**320**	*e*P	**P**	**13 13 31.5**	**-0.1**
NV01				*e*PcP	**PcP**	**13 15 55.0**	**+1.7**
NVAR	**Mina Array Bea**	**36.74**	**320**	P	**P**	**13 13 34.0**	**+2.3**
	comp=Z,0.6nm,0.7s,baz=131,slow=5.7,SNR=4.1						
NVAR				PcP	**PcP**	**13 15 55.1**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=164,slow=4.5,SNR=4.1						
ULM	**Lac du Bonnet**	**38.09**	**353**	P	**P**	**13 13 40.9**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=144,slow=13,SNR=4.0						
SCHQ	**Schefferville**	**45.67**	**18**	*e*P	**P**	**13 14 41.9**	**-2.5**
	comp=Z,30nm,1.8s						
SCHQ	**Schefferville**	**45.67**	**18**	P	**P**	**13 14 42.3**	**-2.2**
	comp=Z,2.7nm,0.7s,baz=227,slow=8.0,SNR=5.9						
YKA	**Yellowknife Ar**	**53.21**	**345**	P	**P**	**13 15 40.8**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=139,slow=7.9,SNR=22						
YKB5	**Yellowknife Ar**	**53.21**	**345**	*e*P	**P**	**13 15 39.7**	**-2.1**
PLCA	**Paso Flores**	**55.61**	**163**	P	P	13 16 06.9	+7.3
	comp=Z,2.2nm,1.0s,baz=25,slow=17,SNR=3.1						
NOA	**NORSAR Array B**	**84.03**	**29**	LR	LR	13 52 24.0	
	comp=Z,15nm,22.0s,baz=290,slow=33						
WRA	**Warramunga Arr**	**137.90**	**254**	PKP	**PKiKP**	**13 25 54.3**	**+3.6**
	comp=Z,0.5nm,0.6s,baz=73,slow=1.8,SNR=5.5						
ASAR	**Alice Springs**	**137.94**	**249**	PKP	**PKiKP**	**13 25 55.5**	**+4.8**
	comp=Z,0.3nm,0.6s,baz=123,slow=1.5,SNR=5.4						
CM31	**Chiang Mai Arr**	**148.29**	**346**	*e*PKPbc	**PKPbc**	**13 26 10.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**148.29**	**346**	PKPbc	**PKPbc**	**13 26 11.6**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=341,slow=3.6,SNR=9.1						

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*ISCJB **27** 13:10:19.4±0.7, 38°.54N±0°.05×27°.63E±0°.04, h11^{km}, Error ellipse: s-maj=8.1km s-min=4.6km az=163.4*
*DDA **27** 13:10:19.8, 38°.53N×27°.74E, h7^{km}±2^{km}, ML2.5*
*ISK **27** 13:10:19.3, 38°.52N×27°.62E, h13^{km}±2^{km}, ML2.0/4*
ISC 27 13:10:19.2±1.1**, 38°.54N**±0°.06×**27°.65E**±0°.04**, h11^{km}, n6, σ0^{s}.38**/10**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.51**	**252**	PG	**Pg**	**13 10 29.1**	**0.0**
BLCB				SG	**Sg**	**13 10 36.2**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**0.62**	**163**	PG	**Pg**	**13 10 31.7**	**+0.3**
AYDB				SG	**Sb**	**13 10 40.7**	**-0.4**
MANT	**Manisa**	**0.71**	**94**	*i* P	**Pn**	**13 10 34.9**	**-0.5**
MANT				*i* S	**Sg**	**13 10 42.1**	**-0.3**
MANT				IAML_P			
	comp=Z,1μm,0.2s						
KULA	**Kula-Manisa**	**0.79**	**92**	PG	**Pb**	**13 10 35.5**	**+0.4**
URLA	**Izmir**	**0.85**	**258**	PG	**Pg**	**13 10 35.5**	**-0.1**
DEMI	**Demirci**	**0.97**	**59**	*i* P	**Pg**	**13 10 38.0**	**+0.1**
DEMI				*i* S	**Sb**	**13 10 51.1**	**+0.1**
DEMI				IAML_P			
	comp=Z,435nm,0.1s						

IDC 27 13:22:41.4±3.0**, 2°.72N×91°.40E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.4**/44**, mbtmp3.6**/4**, ML4.2**/1**, Error ellipse: s-maj=101.6km s-min=29.2km az=60.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.30**	**25**	P	Pn	13 26 44.0	-0.5
	0.3nm,0.3s,baz=223,slow=13,SNR=4.7						
MKAR	**Makanchi Array**	**44.61**	**351**	P	P	13 30 55.8	+0.3
	0.5nm,0.7s,baz=170,slow=7.9,SNR=6.9						
WRA	**Warramunga Arr**	**47.78**	**120**	P	P	13 31 20.7	-0.2
	0.5nm,0.8s,baz=294,slow=8.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**51.35**	**355**	P	P	13 31 47.2	-0.3
	0.4nm,0.5s,baz=180,slow=6.7,SNR=2.6						

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*IDC **27** 13:26:53.1±2.5, 23°.61S×66°.67W, h222^{km}±23^{km}, mb3.2/1, mb1 3.4/4, mb1mx3.1/29, mbtmp3.9/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/11, Error ellipse: s-maj=55.0km s-min=30.1km az=172.0*
*ISCJB **27** 13:26:54.1±0.9, 23°.51S±0°.08×66°.9W±0°.2, h259^{km}±20^{km}, mb3.2/1, Error ellipse: s-maj=29.2km s-min=13.3km az=0.7*
*GUC **27** 13:26:54.3±0.5, 23°.56S×67°.04W, h246^{km}±8^{km}, ML3.7*
ISC 27 13:26:54.1±1.2**, 23°.52S**±0°.08×**66°.8W**±0°.2**, h243^{km}**±18^{km}**, n17, σ0^{s}.83**/26**, 8C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.11**	**295**	⇓*i*P	**Pn**	**13 27 38.0**	**+0.5**
LVC				*i* S	**S**	**13 28 11.4**	**-0.2**
LVC	**Limon Verde**	**2.11**	**295**	P	**Pn**	**13 27 38.0**	**+0.5**
	15nm,0.3s,baz=103,slow=6.7,SNR=49						
LVC				S	**S**	**13 28 10.5**	**-1.1**
	6.7nm,0.3s,baz=324,slow=22,SNR=8.8						
PB15	**IPOC Station P**	**2.44**	**277**	⇑*i*P	**Pn**	**13 27 41.3**	**+0.8**
PB15				*i* S	**S**	**13 28 16.6**	**-0.4**
PB06	**IPOC Station P**	**2.65**	**287**	⇑*i*P	**Pn**	**13 27 43.5**	**+0.9**
PB06				*i* S	**S**	**13 28 20.4**	**-0.3**
PB06				IAML		13 28 21.2	
	comp=E,176nm,0.3s						
PB09	**IPOC Station P**	**2.81**	**307**	⇑*i*P	**Pn**	**13 27 45.4**	**+1.2**
PB09				*i* S	**S**	**13 28 24.1**	**+0.3**
PB09				IAML		13 28 25.9	
	comp=E,69nm,0.6s						
GO02	**Mina Guanaco**	**3.00**	**236**	⇑*i*P	**Pn**	**13 27 47.0**	**+0.5**
GO02				*i* S	**S**	**13 28 27.4**	**-0.4**
PB03	**IPOC Station P**	**3.06**	**298**	⇑*i*P	**Pn**	**13 27 47.8**	**+0.8**
PB03				*i* S	**S**	**13 28 27.3**	**-1.5**
PB05	**IPOC Station P**	**3.17**	**281**	⇑*i*P	**Pn**	**13 27 48.9**	**+0.8**
PB05				*i* S	**S**	**13 28 30.3**	**-0.4**
PB04	**IPOC Station P**	**3.27**	**290**	*e*P	**Pn**	**13 27 50.4**	**+1.0**
PB04				*i* S	**S**	**13 28 32.8**	**-0.2**
PB07	**IPOC Station P**	**3.33**	**302**	⇑*i*P	**Pn**	**13 27 50.8**	**+0.7**
PB07				*i* S	**S**	**13 28 32.7**	**-1.6**
PB01	**IPOC Station P**	**3.48**	**315**	⇓*i*P	**Pn**	**13 27 52.2**	**+0.5**
PB02	**IPOC Station P**	**3.58**	**307**	⇑*i*P	**Pn**	**13 27 53.4**	**+0.6**
LPAZ	**La Paz**	**7.30**	**350**	P	**Pn**	**13 28 40.0**	**+0.9**
	comp=E,0.8nm,0.3s,baz=159,slow=7.1,SNR=18						
CPUP	**Villa Florida**	**9.07**	**110**	LR	LR	13 32 23.8	
	comp=E,91nm,20.6s,baz=220,slow=37						
BDFB	**Brasilia**	**19.38**	**70**	P	**P**	**13 31 01.5**	**-0.6**
	comp=E,0.3nm,0.3s,baz=221,slow=12,SNR=4.5						
TORD	**Torodi Ar. Bea**	**76.26**	**69**	P	**P**	**13 38 16.3**	**-0.1**
	comp=E,0.3nm,0.4s,baz=236,slow=5.9,SNR=6.4						
MKAR	**Makanchi Array**	**146.06**	**39**	PKPbc	**PKPab**	**13 46 06.4**	**0.0**
	comp=E,0.1nm,0.6s,baz=280,slow=1.7,SNR=2.9						

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*IDC **27** 13:31:24.2±1.6, 32°.25S×177°.97W, h0^{km}, mb4.0/3, mb1 4.2/4, mb1mx3.8/36, mbtmp4.0/4, ML3.6/1, MS3.2/2, Ms1 3.1/2, ms1mx2.8/25, Error ellipse: s-maj=49.3km s-min=31.3km az=138.0*
*ISCJB **27** 13:31:27.3±2.3, 32°.24S±0°.07×178°.4W±0°.3, h24^{km}, mb4.1/6, MS3.2/1, Error ellipse: s-maj=36.6km s-min=10.0km az=179.8*
*NEIC **27** 13:31:34.6±3.7, 32°.55S×178°.39W, h73^{km}±29^{km}, mb4.7/7, Error ellipse: s-maj=35.7km s-min=19.7km az=212.0*
ISC 27 13:31:27.9±1.3**, 32°.18S**±0°.09×**178°.2W**±0°.2**, h24^{km}, n24, σ1^{s}.31**/24**, mb4.2**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.18**	**211**	*e*Pn	**Pn**	**13 33 10.6**	**-0.8**
URZ				*e*Sn	**Sn**	**13 34 32.2**	**0.0**
URZ	**Urewera**	**7.18**	**211**	Pn	**Pn**	**13 33 12.6**	**+1.2**
	1.0nm,0.3s,baz=80,slow=15,SNR=5.0						
URZ				Sn	**Sn**	**13 34 32.2**	**0.0**
	1.8nm,0.3s,baz=217,slow=20,SNR=3.3						
OUZ	**Omahuta**	**7.49**	**244**	*e*Pn	**Pn**	**13 33 16.4**	**+0.7**
BKZ	**Black Stump Fm**	**8.21**	**210**	*e*Pn	**Pn**	**13 33 27.3**	**+1.8**
KHZ	**Kahutara**	**12.15**	**210**	*e*Pn	**Pn**	**13 34 18.9**	**-0.5**
WKZ	**Wanaka**	**16.09**	**215**	*e*Pn	**Pn**	**13 35 11.7**	**-0.8**
	86nm,1.7s						
ONTNC	**Ouen Toro**	**16.82**	**302**	*e*Pn	**Pn**	**13 35 20.1**	**-1.7**
	46nm,1.1s						
DZM	**Mont Dzumac**	**16.97**	**303**	LR	LR	13 40 27.0	
	comp=Z,63nm,21.4s,baz=107,slow=32						
PYZ	**Puysegur Point**	**18.20**	**216**	*e*Pn	**Pn**	**13 35 36.2**	**-2.6**
	165nm,1.6s						
LHI	**Lord Howe Isla**	**19.34**	**266**	*e*P	**P**	**13 35 50.7**	**-0.9**
	186nm,1.3s						
STKA	**Stephens Creek**	**33.96**	**260**	*e*P	**P**	**13 38 09.5**	**0.0**
	8.1nm,1.8s						
STKA	**Stephens Creek**	**33.96**	**260**	LR	LR	13 50 09.2	
	comp=Z,43nm,18.3s,baz=19,slow=33						
CTA	**Charters Tower**	**33.97**	**282**	P	**P**	**13 38 12.4**	**+2.7**
	3.6nm,0.8s,baz=114,slow=8.4,SNR=7.0						
AS31	**Alice Springs**	**42.89**	**269**	*e*P	**P**	**13 39 22.8**	**-1.9**
	3.2nm,1.5s						
ASAR	**Alice Springs**	**42.89**	**269**	P	**P**	**13 39 25.5**	**+0.8**
	0.7nm,0.6s,baz=104,slow=7.5,SNR=18						
WR1	**Warramunga Arr**	**44.04**	**274**	*e*P	**P**	**13 39 34.7**	**+0.7**
	36nm,1.8s						
WRA	**Warramunga Arr**	**44.04**	**274**	P	**P**	**13 39 34.7**	**+0.7**
	0.9nm,0.4s,baz=112,slow=7.9,SNR=30						
MK32	**Makanchi Array**	**118.79**	**309**	*e*PKPdf	**PKiKP**	**13 50 13.8**	**-0.1**
MKAR	**Makanchi Array**	**118.79**	**309**	PKP	**PKiKP**	**13 50 13.8**	**-0.1**
	0.2nm,0.4s,baz=90,slow=1.4,SNR=4.1						
FIA0	**FINESS Array S**	**146.75**	**339**	*e*PKPdf	**PKPab**	**13 51 06.8**	**-1.5**
FINES	**FINESS Array B**	**146.75**	**339**	PKPbc	**PKPab**	**13 51 06.8**	**-1.5**
	6.5nm,0.9s,baz=48,slow=2.8,SNR=10						
AKASG	**Malin Array Be**	**152.59**	**321**	PKPbc	**PKiKP**	**13 51 22.5**	**+0.4**
	0.5nm,0.5s,baz=56,slow=1.8,SNR=2.5						
BR101	**Keskin Array S**	**153.26**	**295**	*e*PKPbc	**PKiKP**	**13 51 25.0**	**+0.9**
BRTR	**Keskin Array B**	**153.26**	**295**	PKPbc	**PKiKP**	**13 51 25.0**	**+0.9**
	0.7nm,0.5s,baz=46,slow=6.2,SNR=3.0						

IDC 27 13:31:52.0±2.0**, 2°.45S×128°.60E, h0^{km}, mb3.4**/2**, mb1 3.9**/4**, mb1mx3.5**/44**, mbtmp3.7**/4**, ML3.5**/2**, Error ellipse: s-maj=108.0km s-min=24.3km az=71.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.82**	**190**	Pn	P	13 35 38.4	-1.8
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=2.9						
WRA	**Warramunga Arr**	**18.27**	**163**	P	Pn	13 36 07.1	0.0
	0.2nm,0.3s,baz=340,slow=12,SNR=18						
ASAR	**Alice Springs**	**21.71**	**167**	P	P	13 36 43.9	-1.0
	1.0nm,0.4s,baz=346,slow=12,SNR=29						
MKAR	**Makanchi Array**	**63.68**	**326**	P	P	13 42 25.5	+0.1
	0.2nm,0.5s,baz=111,slow=7.2,SNR=3.1						

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*JMA **27** 13:34:57.5±0.1, 23°.84N×122°.46E, h19^{km}, M3.2*
*TAP **27** 13:34:58.3, 23°.84N×122°.47E, h27^{km}, ML3.5, D*
ISC 27 13:34:55.5±1.1**, 23°.79N**±0°.02×**122°.48E**±0°.02**, h9^{km}**±9^{km}**, n116, σ0^{s}.72**/216**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.79**	**33**	P	**Pb**	**13 35 11.9**	**+0.5**
JYNG				S	**Sg**	**13 35 21.0**	**0.0**
ENLB	**Shoufeng**	**0.81**	**278**	*e*P	**Pn**	**13 35 13.1**	**-0.1**
	baz=273						
ENLB				*e*S	**Sb**	**13 35 24.1**	**+1.3**
	baz=273						
HWA	**Hwalien**	**0.82**	**283**	P	**Pb**	**13 35 12.7**	**+0.7**
	baz=266						
HWA				*e*S	**Sb**	**13 35 24.1**	**+1.0**
	baz=266						
EOS1	**EOS1**	**0.82**	**337**	*e*P	**Pn**	**13 35 13.0**	**-0.3**
	baz=326						
EOS1				*e*S	**Sn**	**13 35 24.8**	**-0.8**
	baz=326						
YOJ	**Yonaguni jima**	**0.83**	**36**	*e*P	**Pb**	**13 35 12.7**	**+0.6**
	baz=38						
YOJ	**Yonaguni jima**	**0.83**	**36**	P	**Pb**	**13 35 12.6**	**+0.5**
YOJ				S	**Sg**	**13 35 22.1**	**-0.2**
TWD	**Chiawan**	**0.85**	**290**	*i* P	**Pb**	**13 35 13.2**	**+0.6**
	baz=272						
TWD				*i* S	**Sb**	**13 35 24.7**	**+0.5**
	baz=272						
NANB	**Nanao**	**0.92**	**314**	*e*P	**Pn**	**13 35 14.5**	**-0.2**
	baz=309						
NANB				*e*S	**Sn**	**13 35 27.3**	**-0.7**
	baz=309						
ENA	**Nanau**	**0.93**	**314**	P	**Pn**	**13 35 14.6**	**-0.2**
	baz=309						
ENA				S	**Sn**	**13 35 27.2**	**-1.0**
	baz=309						
EGFH	**Guangfu**	**0.97**	**263**	*e*P	**Pn**	**13 35 15.3**	**0.0**
	baz=258						
EGFH				*e*S	**Sb**	**13 35 27.3**	**-0.1**
	baz=258						
TWC	**Suao**	**1.00**	**325**	*i* P	**Pn**	**13 35 15.5**	**-0.2**
	baz=322						
TWC				S	**Sb**	**13 35 27.7**	**-0.5**
	baz=322						
ETLH	**Xiulin Townshi**	**1.00**	**295**	*e*P	**Pb**	**13 35 15.4**	**+0.3**
	baz=290						
ETLH				*e*S	**Sb**	**13 35 28.4**	**0.0**
	baz=290						
HGSD	**Ruisui**	**1.01**	**253**	*e*P	**Pn**	**13 35 15.8**	**-0.1**
	baz=249						
HGSD				*e*S	**Sb**	**13 35 29.0**	**+0.4**
	baz=249						
EHY	**Hungye**	**1.09**	**255**	P	**Pn**	**13 35 17.3**	**+0.2**
	baz=250						
EHY				S	**Sg**	**13 35 31.0**	**+0.2**
	baz=250						
YULB	**Yu-li**	**1.15**	**250**	P	**Pn**	**13 35 18.4**	**+0.6**
	baz=246						
YULB				*e*S	**Sg**	**13 35 32.2**	**-0.4**
	baz=246						
EGS		**1.16**	**335**	*e*P	**Pn**	**13 35 18.5**	**+0.5**
	baz=319						
EGS				S	**Sn**	**13 35 33.9**	**-0.1**
	baz=319						
WHF	**Hehuan Shan**	**1.16**	**288**	*i* P	**Pn**	**13 35 18.4**	**0.0**
	baz=271						
WHF				*e*S	**Sg**	**13 35 31.8**	**-1.2**
	baz=271						
TWF1	**Yuli**	**1.17**	**248**	*i* P	**Pn**	**13 35 18.7**	**+0.6**
	baz=244						
TWF1				S	**Sg**	**13 35 32.9**	**-0.2**
	baz=244						
ILA	**Ilan**	**1.18**	**326**	*e*P	**Pn**	**13 35 19.4**	**+1.2**
	baz=322						
ILA				*e*S	**Sn**	**13 35 34.8**	**+0.4**
	baz=322						
NNSB	**Datong**	**1.18**	**303**	*e*P	**Pn**	**13 35 18.9**	**+0.4**
	baz=290						
ENTT	**Nioudou**	**1.19**	**316**	*e*P	**Pn**	**13 35 18.9**	**+0.6**
	baz=298						
ENTT				*e*S	**Sn**	**13 35 34.5**	**-0.1**
	baz=298						
TWE	**Neicheng**	**1.19**	**322**	⇓*i*P	**Pn**	**13 35 19.1**	**+0.7**
	baz=318						
TWE				*i* S	**Sn**	**13 35 34.9**	**+0.3**
	baz=318						
NDT	**Datong Townshi**	**1.20**	**313**	P	**Pn**	**13 35 19.3**	**+0.8**
	baz=308						
NDT				*e*S	**Sb**	**13 35 33.9**	**-0.1**
	baz=308						
NNS	**Nan Shan**	**1.20**	**303**	P	**Pn**	**13 35 19.0**	**+0.3**
	baz=287						
NNS				*e*S	**Sg**	**13 35 33.7**	**-0.4**
	baz=287						
OWD	**Renai**	**1.20**	**278**	*e*P	**Pb**	**13 35 18.7**	**+0.1**
	baz=273						
OWD				*e*S	**Sg**	**13 35 33.9**	**-0.3**
	baz=273						
NTC	**Toucheng**	**1.21**	**331**	*e*P	**Pn**	**13 35 19.6**	**+0.9**
	baz=329						
CHGB	**Renai**	**1.22**	**283**	*e*P	**Pn**	**13 35 19.2**	**+0.2**
	baz=269						
CHGB				*e*S	**Sg**	**13 35 33.6**	**-1.3**
	baz=269						
VWDT	**VWDT**	**1.22**	**269**	*e*P	**Pn**	**13 35 19.4**	**+0.6**
	baz=264						
VWDT				*e*S	**Sg**	**13 35 34.9**	**0.0**
	baz=264						
CHKT	**Chengkung**	**1.23**	**236**	*e*P	**Pb**	**13 35 19.1**	**+0.1**
	baz=221						
CHKT				*e*S	**Sg**	**13 35 33.7**	**-1.4**
	baz=221						
SLBB	**Yuanshan**	**1.23**	**322**	P	**Pn**	**13 35 20.0**	**+1.0**
	baz=318						
SLBB				*e*S	**Sb**	**13 35 35.1**	**+0.1**
	baz=318						
FULB	**Fuli**	**1.23**	**242**	P	**Pb**	**13 35 19.1**	**+0.1**
	baz=226						
FULB				*e*S	**Sg**	**13 35 34.8**	**-0.4**
	baz=226						
HATJ	**Hateruma jima**	**1.25**	**77**	P	**Pg**	**13 35 20.1**	**+0.6**
HATJ				S	**Sn**	**13 35 36.1**	**0.0**
IRIF	**Iriomote-Funau**	**1.27**	**64**	P	**Pg**	**13 35 20.8**	**+0.9**
IRIF				S	**Sb**	**13 35 36.3**	**+0.2**
TWT	**Tachien**	**1.27**	**292**	*e*P	**Pn**	**13 35 19.7**	**0.0**
	baz=286						
TWT				*e*S	**Sg**	**13 35 36.0**	**-0.6**
	baz=286						
TDCB	**Techi**	**1.29**	**291**	*e*P	**Pg**	**13 35 20.7**	**+0.4**
	baz=276						
TDCB				*e*S	**Sg**	**13 35 36.8**	**-0.3**
	baz=276						
TWB1	**Santiao Chiao**	**1.29**	**340**	P	**Pg**	**13 35 20.8**	**+0.4**
	baz=355						
TWB1				*e*S	**Sn**	**13 35 37.9**	**+0.7**
	baz=355						
TIPB	**Shuangxi**	**1.32**	**333**	*e*P	**Pn**	**13 35 20.1**	**-0.1**
	baz=330						
TIPB				*e*S	**Sg**	**13 35 37.7**	**-0.3**
	baz=330						
NWLT	**Wulai**	**1.32**	**318**	*e*P	**Pg**	**13 35 21.0**	**0.0**
	baz=314						
NWLT				*e*S	**Sn**	**13 35 38.3**	**+0.2**
	baz=314						
YHNB	**Yeheng**	**1.33**	**311**	*e*P	**Pb**	**13 35 20.8**	**0.0**
	baz=307						
YHNB				*e*S	**Sg**	**13 35 38.1**	**-0.3**
	baz=307						
NSK	**Sanguang**	**1.35**	**311**	P	**Pb**	**13 35 21.0**	**-0.1**
	baz=307						
NSK				*e*S	**Sb**	**13 35 38.1**	**-0.4**
	baz=307						
SSLB	**Suanglung**	**1.39**	**270**	*e*P	**Pb**	**13 35 21.8**	**0.0**
	baz=265						
SSLB				*e*S	**Sb**	**13 35 39.0**	**-0.7**
	baz=265						
NWF	**Wu-fen Shan**	**1.43**	**334**	P	**Pb**	**13 35 22.4**	**0.0**
	baz=331						
NWF				*e*S	**Sg**	**13 35 41.1**	**-0.3**
	baz=331						
WFSB	**Wu-fen Shan**	**1.43**	**334**	*e*P	**Pb**	**13 35 22.4**	**+0.1**
	baz=330						
WFSB				*e*S	**Sg**	**13 35 41.0**	**-0.4**
	baz=330						
TWA	**Mucha**	**1.44**	**326**	P	**Pg**	**13 35 23.5**	**+0.4**
	baz=321						
TWA				*e*S	**Sg**	**13 35 42.5**	**+0.7**
	baz=321						
SMLT	**Sun Moon Lake**	**1.45**	**274**	P	**Pb**	**13 35 22.9**	**+0.1**
	baz=269						
SMLT				S	**Sb**	**13 35 39.9**	**-1.4**
	baz=269						
NHDH	**Xindian Distri**	**1.46**	**324**	*e*P	**Pg**	**13 35 23.1**	**-0.4**
	baz=319						
NHDH				*e*S	**Sg**	**13 35 42.4**	**+0.1**
	baz=319						
ELDTW	**Lidau**	**1.47**	**246**	P	**Pn**	**13 35 22.5**	**+0.2**
	baz=242						
ELDTW				S	**Sn**	**13 35 40.5**	**-1.2**
	baz=242						
JKRS	**Kuro-shima**	**1.47**	**72**	P	**Pg**	**13 35 23.6**	**-0.2**
JKRS				S	**Sg**	**13 35 42.6**	**-0.3**
WHP	**Taichung City**	**1.48**	**290**	*e*P	**Pg**	**13 35 25.3**	**+1.3**
	baz=285						
WHP				*e*S	**Sb**	**13 35 42.5**	**+0.3**
	baz=285						
TATO	**Taipei**	**1.48**	**323**	*e*P	**Pg**	**13 35 24.2**	**+0.2**
	baz=318						
TATO				*e*S	**Sg**	**13 35 43.9**	**+0.6**
	baz=318						
TYC	**Yuchr**	**1.49**	**275**	P	**Pb**	**13 35 23.6**	**+0.3**
	baz=270						
TYC				S	**Sn**	**13 35 41.9**	**-0.1**
	baz=270						
WHYT	**Xinyi Township**	**1.49**	**267**	*e*P	**Pb**	**13 35 23.8**	**+0.4**
	baz=262						
WHYT				*e*S	**Sn**	**13 35 41.8**	**-0.4**
	baz=262						
WLTB	**Daxi**	**1.54**	**314**	*e*P	**Pg**	**13 35 24.7**	**-0.4**
	baz=297						
WLTB				*e*S	**Sg**	**13 35 44.3**	**-0.7**
	baz=297						
ALS	**Alishan**	**1.56**	**260**	P	**Pb**	**13 35 25.1**	**+0.4**
	baz=255						
ALS				*e*S	**Sn**	**13 35 42.8**	**-1.4**
	baz=255						
LIOB	**Emei**	**1.58**	**303**	P	**Pb**	**13 35 25.0**	**0.0**
	baz=287						
LIOB				*e*S	**Sb**	**13 35 45.3**	**+0.1**
	baz=287						
YM01	**YM01**	**1.58**	**329**	*e*P	**Pg**	**13 35 25.6**	**-0.3**
	baz=342						
YM01				*e*S	**Sb**	**13 35 45.3**	**0.0**
	baz=342						
NSTT	**Nanjuang**	**1.59**	**302**	*i* P	**Pg**	**13 35 26.1**	**+0.1**
	baz=286						
NSTT				*e*S	**Sb**	**13 35 45.6**	**+0.4**
	baz=286						
YM11	**YM11**	**1.60**	**329**	*e*P	**Pb**	**13 35 24.9**	**-0.4**
	baz=327						
WJS	**Zhushan**	**1.60**	**272**	*e*P	**Pb**	**13 35 25.8**	**+0.5**
	baz=256						
WJS				*e*S	**Sg**	**13 35 47.5**	**+0.5**
	baz=256						
YM05	**YM05**	**1.60**	**329**	*e*P	**Pb**	**13 35 25.4**	**0.0**
	baz=342						
YM05				*e*S	**Sb**	**13 35 45.9**	**+0.2**
	baz=342						
TWGBT	**Beinan**	**1.61**	**233**	*e*P	**Pn**	**13 35 24.8**	**+0.6**
	baz=220						
TWGBT				*e*S	**Sn**	**13 35 44.5**	**-0.5**
	baz=220						
TWG	**Pinlang**	**1.61**	**234**	P	**Pn**	**13 35 24.7**	**+0.5**
	baz=220						
TWG				S	**Sn**	**13 35 44.6**	**-0.5**
	baz=220						
YM08	**YM08**	**1.61**	**330**	*e*P	**Pb**	**13 35 25.1**	**-0.3**
	baz=328						
TWS1	**Kuangyinshan**	**1.62**	**324**	*e*P	**Pb**	**13 35 25.6**	**-0.1**
	baz=319						
TWS1				*e*S	**Sg**	**13 35 47.5**	**-0.3**
	baz=319						
JIJ	**Ishigaki jima**	**1.63**	**69**	P	**Pb**	**13 35 25.7**	**-0.1**
JIJ				S	**Sb**	**13 35 46.3**	**-0.1**
ANP	**Anpu**	**1.64**	**328**	*e*P	**Pg**	**13 35 27.0**	**-0.1**
	baz=326						
WNT	**Mingjian**	**1.64**	**273**	*e*P	**Pg**	**13 35 26.9**	**-0.2**
	baz=268						

WNT				*e*S	Sg	13 35 47.9	-0.5
	baz=268						
TWQ1	Liyutan	1.65	290	P	Pg	13 35 27.0	-0.2
	baz=284						
TWQ1				*e*S	Sg	13 35 48.0	-0.7
	baz=284						
CHN5	Tsauling	1.66	264	P	Pg	13 35 27.1	-0.3
	baz=259						
CHN5				*e*S	Sn	13 35 47.2	+0.7
	baz=259						
TWY	Chenhua	1.68	332	*e*P	Pb	13 35 26.1	-0.6
	baz=327						
TWY				*e*S	Sb	13 35 47.7	-0.3
	baz=327						
TCU	Taichung	1.68	283	*e*P	Pg	13 35 27.7	-0.2
	baz=277						
TCU				*e*S	Sg	13 35 49.2	-0.5
	baz=277						
NSY	Sanyi	1.69	292	P	Pg	13 35 27.4	-0.4
	baz=286						
NSY				*e*S	Sb	13 35 48.9	+0.7
	baz=286						
SBCB	Hsinchu	1.69	307	*e*P	Pb	13 35 27.0	+0.2
	baz=303						
STYT	Tauyuan	1.70	249	P	Pb	13 35 27.3	+0.3
	baz=244						
STYT				S	Sn	13 35 47.8	+0.5
	baz=244						
NMLH	Miaoli	1.71	296	P	Pg	13 35 28.1	-0.2
	baz=290						
NMLH				*e*S	Sg	13 35 50.0	-0.5
	baz=290						
PTSB	Yuanli	1.75	292	P	Pb	13 35 28.1	+0.4
	baz=286						
PTSB				*e*S	Sg	13 35 51.2	-0.5
	baz=286						
WGK	Gukeng	1.76	267	*e*P	Pg	13 35 28.8	-0.5
	baz=262						
WGK				*e*S	Sb	13 35 50.4	+0.2
	baz=262						
TPUB	Ta-pu	1.76	254	*e*P	Pb	13 35 28.8	+0.8
	baz=241						
TPUB				*e*S	Sb	13 35 50.9	+0.6
	baz=241						
WDJ	Dajia District	1.77	289	P	Pb	13 35 28.4	+0.2
	baz=283						
WDJ				*e*S	Sb	13 35 50.9	+0.5
	baz=283						
WCHH	Zhanghua	1.78	280	*e*P	Pg	13 35 29.1	-0.6
	baz=274						
WCHH				*e*S	Sb	13 35 51.5	+0.8
	baz=274						
CHN4	Tsaushan	1.78	256	*e*P	Pb	13 35 29.1	+0.8
	baz=242						
CHN4				*e*S	Sb	13 35 51.5	+0.6
	baz=242						
WTP	Ta-pu	1.79	253	*e*P	Pb	13 35 29.1	+0.6
	baz=248						
WTP				*e*S	Sb	13 35 51.2	0.0
	baz=248						
ECL	Taimali	1.83	230	*e*P	Pn	13 35 27.7	+0.4
	baz=238						
ECL				*e*S	Sn	13 35 48.6	-2.0
	baz=238						
JISG	Ishigakijimahi	1.85	64	P	Pn	13 35 28.2	+0.7
JISG				*e*S	Sn	13 35 49.7	-1.4
SLGT	Liugui	1.86	245	*e*P	Pb	13 35 30.0	+0.3
	baz=234						
SLGT				*e*S	Sb	13 35 52.8	-0.3
	baz=234						
CHN1	Nanshi	1.89	252	*e*P	Pb	13 35 30.4	+0.3
	baz=247						
CHN1				*e*S	Sb	13 35 54.0	+0.1
	baz=247						
TWK	Hsinying	1.90	254	*e*P	Pb	13 35 30.4	+0.1
	baz=249						
TWK				*e*S	Sb	13 35 54.6	+0.4
	baz=249						
SNST	Tainan City	1.90	253	*e*P	Pb	13 35 31.0	+0.5
	baz=248						
SNST				*e*S	Sb	13 35 54.5	+0.2
	baz=248						
CHY	Chiayi	1.90	262	*e*P	Pb	13 35 30.9	+0.5
	baz=256						
CHY				*e*S	Sb	13 35 54.4	+0.1
	baz=256						
LAY	Lan-yu	1.94	206	P	Pn	13 35 28.1	-0.6
	baz=204						
LAY				*e*S	Sn	13 35 51.4	-1.9
	baz=204						
RLNB	Erlin	1.94	273	*e*P	Pb	13 35 30.2	-0.8
	baz=257						
RLNB				*e*S	Sb	13 35 55.7	+0.3
	baz=257						
SSD	Sandimen	1.99	239	*e*P	Pb	13 35 31.1	-0.7
	baz=229						
SSD				*e*S	Sn	13 35 53.6	-0.8
	baz=229						
WTCT	Ta-ch'eng	2.01	273	*e*P	Pb	13 35 32.1	-0.2
	baz=267						
WTCT				*e*S	Sb	13 35 57.7	+0.3
	baz=267						
TAW	Tawu	2.04	226	*e*P	Pn	13 35 30.7	+0.7
	baz=232						
TAW				*e*S	Sn	13 35 54.9	-0.7
	baz=232						
EAST	Anshuo	2.05	227	*e*P	Pn	13 35 30.9	+0.6
	baz=224						
MASBT	Mashibuluo	2.06	236	*e*P	Pn	13 35 31.8	+1.4
	baz=225						
MASBT				*e*S	Sn	13 35 56.0	-0.2
	baz=225						
CHN8	Yiju	2.12	258	*e*S	Sn	13 35 58.7	+0.9
	baz=253						
JTJ	Tarama	2.20	67	P	Pb	13 35 34.2	-1.4
SCZT	Fangliau	2.21	231	*e*P	Pn	13 35 34.2	+1.7
	baz=220						
SCZT				*e*S	Sn	13 36 00.4	+0.4
	baz=220						
HEN	Hengchun	2.39	222	*e*P	Pb	13 35 38.5	-0.3
	baz=219						
HEN				*e*S	Sn	13 36 05.0	+0.6
	baz=219						
TWKBT	Hengchun	2.40	220	*e*P	Pn	13 35 36.6	+1.6
	baz=217						
TWKBT				*e*S	Sn	13 36 04.5	+0.1
	baz=217						
TWK1	Hengchun	2.40	220	*e*P	Pn	13 35 36.7	+1.7
	baz=217						
TWK1				*e*S	Sn	13 36 04.8	+0.2
	baz=217						
WLCH	Liuqiu	2.40	234	*e*P	Pb	13 35 37.6	-1.4
	baz=225						
PHUB	P'eng-hu	2.68	265	*e*P	Pn	13 35 41.0	+2.2
	baz=274						
PNG	Penghu	2.69	266	*e*P	Pn	13 35 39.7	+0.7
	baz=261						
PTTC	Pingtan	2.99	305	*e*P	Pn	13 35 43.3	+0.1
	baz=298						
PTTC				*e*S	Sn	13 36 17.9	-1.3
	baz=298						
VWUC	VWUC	3.01	294	*e*P	Pn	13 35 44.0	+0.6
	baz=287						
VWUC				*e*S	Sn	13 36 17.5	-2.1
	baz=287						
MATB	Ma-tsu	3.29	316	*e*P	Pn	13 35 48.0	+0.7
	baz=309						
MATB				*e*S	Sn	13 36 24.8	-1.7
	baz=309						
PTMZ	Houxiangcun	3.30	293	*e*P	Pn	13 35 48.3	+0.8
	baz=286						
PTMZ				*e*S	Sn	13 36 24.8	-2.0
	baz=286						
LYJJ	Jianjiangzhen	3.69	319	*e*P	Pn	13 35 52.8	0.0
	baz=317						
KNM	Kinmen	3.75	280	*e*P	Pn	13 35 56.0	+2.5
	baz=273						
KNM				*e*S	Sn	13 36 39.9	+2.1
	baz=273						
XPSS	Dashiqiu	3.75	327	*e*P	Pn	13 35 54.0	+0.4
	baz=336						
KNMB	Chin-men Tao	3.79	281	*e*P	Pn	13 35 54.9	+0.7
	baz=274						
KNMB				*e*S	Sn	13 36 38.8	-0.2
	baz=274						
MHZQ	Yeshan	3.88	307	*e*P	Pn	13 35 55.5	+0.1
	baz=304						
AXDP	Jialang	4.25	286	*e*P	Pn	13 36 01.3	+0.8
	baz=278						
AXDP				*e*S	Sn	13 36 50.1	-0.3
	baz=278						
ZPLA	Ao Xicun	4.33	273	*e*P	Pn	13 36 02.8	+1.3
	baz=265						
ZPLA				*e*S	Sn	13 36 51.1	-1.0
	baz=265						

MEX 27 13:46:36.3±0.7**, 16°.04N×98°.07W, h2^{km}, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.35	351	*i* P	Pg	13 46 42.8	-0.4
PNIG				*i* S	Sg	13 46 47.7	0.0

WEL 27 13:48:27.4±0.5**, 42°S**±3°×**17°4E**±°**, h24^{km}**±4^{km}**, ML3.5**/18**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.38	15	P	Pn	13 48 37.7	+0.2
CMWZ				S	Sn	13 48 45.1	+1.0
BSWZ	Blackbirch Sta	0.43	339	P	Pn	13 48 37.6	-0.6
BSWZ				S	Sb	13 48 43.8	+1.2
KHZ	Kahutara	0.50	234	P	Pn	13 48 38.5	-0.6
KHZ				S	Sn	13 48 45.8	-1.2
TUWZ	Tuamarina	0.70	351	P	Pn	13 48 41.9	+0.1
TUWZ				S	Sn	13 48 51.8	-0.1
TCW	Tory Channel	0.92	9	P	Pn	13 48 45.1	+0.2
TCW				S	Sn	13 48 57.4	0.0
BHW	Baring Head	0.93	40	P	Pn	13 48 45.3	+0.3
BHW				S	Sn	13 48 57.4	0.0
THZ	Tophouse	0.95	292	P	Pb	13 48 45.3	0.0
THZ				S	Sn	13 48 58.8	+0.6
PLWZ	Palliser	1.03	58	P	Pn	13 48 46.5	0.0
NNZ	Nelson	1.05	330	P	Pb	13 48 46.8	-0.1
NNZ				S	Sn	13 49 00.7	+0.3
MSWZ	Moikau Station	1.12	51	P	Pn	13 48 47.7	0.0
MSWZ				S	Sn	13 49 02.4	0.0
PAWZ	Paruwai Farm	1.25	54	P	Pn	13 48 49.2	-0.2
CAW	Cannon Point	1.25	36	P	Pn	13 48 49.8	+0.3
CAW				S	Sn	13 49 05.6	0.0
DUWZ	D'Urville Isla	1.32	355	P	Pn	13 48 50.9	+0.4
TRWZ	Traveller	1.40	60	P	Pn	13 48 51.1	-0.5
KIW	Kapiti Island	1.40	27	P	Pn	13 48 52.1	+0.6
MTW	Mount Morrison	1.43	48	P	Pn	13 48 51.7	-0.3
AMCZ	Amberley	1.49	225	P	Pn	13 48 52.6	-0.2
LTZ	Lake Taylor	1.50	243	P	Pn	13 48 53.0	+0.1
OGWZ	Otaki Gorge	1.54	32	P	Pn	13 48 53.7	+0.3
HOWZ	Holdsworth Sta	1.63	42	P	Pn	13 48 54.5	-0.1
TMWZ	Te Maipa	1.69	54	P	Pn	13 48 55.1	-0.5
DSZ	Denniston Nort	1.74	282	P	Pb	13 48 57.8	-0.9
QRZ	Quartz Range	1.74	317	P	Pn	13 48 57.4	+1.2
OKCZ	Okains Bay	1.77	205	P	Pn	13 48 56.0	-0.6
CRLZ	Canterbury Las	1.81	216	P	Pn	13 48 56.4	-0.7
MRZ	Mangatainoka R	1.84	38	P	Pn	13 48 57.4	-0.2
MQZ	McQueen's Vall	1.90	213	P	Pn	13 48 57.2	-1.2
TIWZ	Tintock	1.91	46	P	Pn	13 48 58.0	-0.6
OXZ	Oxford	1.93	231	P	Pn	13 48 57.9	-0.8
AKCZ	Akaroa Harbour	1.95	206	P	Pn	13 48 58.4	-0.7
INZ	Inchbonnie	2.04	252	P	Pn	13 49 01.0	+0.6
PRWZ	Pori Road	2.11	43	P	Pn	13 49 00.8	-0.5
OHWZ	Ohakea	2.13	26	P	Pn	13 49 03.2	+1.8
POWZ	Post Office Ro	2.14	37	P	Pn	13 49 01.6	-0.2
BFZ	Birch Farm	2.17	49	P	Pn	13 49 01.2	-1.0
DVHZ	Dannevirke	2.41	42	P	Pn	13 49 04.3	-1.1
WAZ	Wanganui	2.46	16	P	Pn	13 49 08.3	+2.2
TSZ	Takapari Road	2.50	35	P	Pn	13 49 06.3	-0.4
WVZ	Waitaha Valley	2.65	248	P	Pn	13 49 08.9	+0.3
PNHZ	Pukenui	2.73	37	P	Pn	13 49 09.0	-0.8
RPZ	Rata Peaks	2.74	233	P	Pn	13 49 09.2	-0.7
MTVZ	Mangateitei	2.93	22	P	Pn	13 49 14.2	+1.6
PKVZ	Pokaka	2.99	19	P	Pn	13 49 15.2	+1.8
MOVZ	Moawhango	2.99	26	P	Pn	13 49 13.9	+0.4
KRHZ	Kereru	3.02	36	P	Pn	13 49 12.9	-1.0
BHHZ	Black Hill Sta	3.03	30	P	Pn	13 49 14.1	+0.2
TRVZ	Turoa	3.03	22	P	Pn	13 49 15.6	+1.4
VRZ	Vera Road	3.04	10	P	Pn	13 49 16.2	+2.2
FWVZ	Far West T-bar	3.07	22	P	Pn	13 49 16.1	+1.4
TUVZ	Tukino	3.09	23	P	Pn	13 49 15.9	+1.0
COVZ	Chateau Observ	3.12	21	P	Pn	13 49 16.8	+1.5
NGZ	Ngauruhoe	3.16	22	P	Pn	13 49 17.3	+1.4
WTVZ	West Tongariro	3.21	21	P	Pn	13 49 18.0	+1.4
KWHZ	Kaweka Forest	3.23	34	P	Pn	13 49 15.8	-0.8
KRVZ	Karewarewa	3.25	22	P	Pn	13 49 18.3	+1.3
FOZ	Fox Glacier	3.44	244	P	Pn	13 49 21.0	+1.5
BKZ	Black Stump Fm	3.48	33	P	Pn	13 49 19.1	-1.0
HIZ	Hauiti	3.65	10	P	Pn	13 49 24.3	+1.8
ODZ	Otahua Downs	3.84	219	P	Pn	13 49 24.1	-1.0
TLZ	Tolley Road	3.95	17	P	Pn	13 49 27.2	+0.6
JCZ	Jackson Bay	4.34	242	P	Pn	13 49 32.0	0.0
TOZ	Tahuroa Road	4.52	14	P	Pn	13 49 34.8	+0.4
EAZ	Earnscleugh	4.65	226	P	Pn	13 49 35.9	-0.3
TUZ	Tuapeka	5.00	218	P	Pn	13 49 40.3	-0.6
CTZ	Chatham Island	7.01	106	P	Pn	13 50 07.2	-1.4

IDC 27 13:58:18.6±7.3**, 6°.03S×128°.97E, h534^{km}**±102^{km}**, mb2.5**/2**, mb1 2.8**/5**, mb1mx2.5**/40**, mbtmp3.6**/5**, Error ellipse: s-maj=100.5km s-min=42.1km az=54.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.43	195	P	P	14 01 02.5	+0.9
	0.1nm,0.3s,baz=11,slow=10,SNR=2.6						
WRA	Warramunga Arr	14.78	160	P	P	14 01 24.4	-1.7
	0.3nm,0.3s,baz=338,slow=10,SNR=36						
ASAR	Alice Springs	18.17	165	P	P	14 01 59.2	+0.3
	0.3nm,0.3s,baz=342,slow=12,SNR=16						
MKAR	Makanchi Array	66.86	327	P	P	14 08 17.3	-0.3
	0.1nm,0.4s,baz=124,slow=7.8,SNR=4.8						
KURBB	Kurchatov Arra	71.16	329	P	P	14 08 43.6	+0.3
	0.2nm,0.4s,baz=112,slow=5.2,SNR=2.8						

ISCJB ***27*** *14:17:58.0±0.8, 27°.81S±0°.03×69°.17W±0°.07, h121^{km}±15^{km}, Error ellipse: s-maj=9.6km s-min=5.4km az=170.0*

GUC ***27*** *14:17:57.3±0.5, 27°.89S×69°.27W, h145^{km}±10^{km}, ML3.7*

SJA ***27*** *14:17:58.1±0.5, 27°.89S×69°.05W, h139^{km}±8^{km}, ML3.4, MW3.5*

ISC 27 14:17:58.2±1.9**, 27°.83S**±0°.04×**69°.21W**±0°.06**, h125^{km}**±29^{km}**, n14, σ1^s.18**/23**, 1C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	Las Campanas	1.77	228	⇓*i*P	Pn	14 18 28.9	-0.5
LCO				*i* S	Sn	14 18 51.9	-1.2
LCO				IAML		14 18 56.0	
	comp=E,452nm,0.3s						
AGUA	GUANDACOL	1.77	159	*e*P	Pn	14 18 29.6	+0.4
AGUA				*e*S	Sn	14 18 52.7	-0.2
ACDV	Cuesta del Vie	2.34	178	*e*P	Pn	14 18 37.6	+1.3
ACDV				*e*S	Sn	14 19 06.3	+0.8
AROD	Rodeo	2.34	186	*e*P	Pn	14 18 37.9	+1.4
AROD				*e*S	Sn	14 19 07.5	+1.6
GO02	Mina Guanaco	2.68	353	⇑*i*P	Pn	14 18 41.9	+1.1
GO02				*e*S	Sn	14 19 13.8	+0.4
GO02				IAML		14 19 21.9	
	comp=E,245nm,0.2s						
GO04	Tololo Observa	2.72	210	*e*P	Pn	14 18 40.6	-0.6
GO04				*i* S	Sn	14 19 11.6	-2.7
ACCO	Cerro Coronel	2.75	177	*e*P	Pn	14 18 42.7	+0.9
ACCO				*e*S	Sn	14 19 16.3	+1.0
CYA	Choya	3.07	102	*e*P	Pn	14 18 45.2	-0.5
CYA	Choya	3.07	102	⇓*i*P	Pn	14 18 46.1	+0.5
CYA				*i* S	Sn	14 19 20.1	-2.1
AMOG	MOGNA	3.16	169	*e*P	Pn	14 18 47.1	+0.2
PB14	IPOC Station P	3.36	341	*e*P	Pn	14 18 50.2	+0.4
PB14				*i* S	Sn	14 19 28.9	-0.6
PB14				IAML		14 19 35.4	
	comp=E,136nm,0.3s						
APLL	PUNTA DE LOS L	3.47	138	*e*P	Pn	14 18 50.4	-0.5
RTLS	Leoncito	3.96	181	*e*P	Pn	14 18 58.5	+0.9
RTLS				IAML		14 19 43.1	
	comp=Z,48nm,0.4s						
RTCV	Cerro Valdivia	4.06	172	*e*P	Pn	14 18 58.9	+0.1

ISK ***27*** *14:22:08.6, 38°.74N×43°.49E, h15^{km}, ML2.6/10*

ISCJB ***27*** *14:22:09.6±0.5, 38°.75N±0°.03×43°.53E±0°.05, h20^{km}±5^{km}, Error ellipse: s-maj=6.7km s-min=3.9km az=24.0*

DDA ***27*** *14:22:09.0, 38°.76N×43°.51E, h7^{km}±6^{km}, ML3.0*

ISC 27 14:22:09.4±0.9**, 38°.76N**±0°.03×**43°.52E**±0°.03**, h16^{km}**±8^{km}**, n22, σ1^s.02**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.19	212	PG	Pb	14 22 14.4	-0.3
VMUR	Van-Muradiye	0.24	10	*i* P	Pg	14 22 14.5	-0.4
VMUR				*i* S	Sg	14 22 19.2	+0.6
TVAN	Van	0.24	201	*i* P	Pg	14 22 14.1	-0.9
TVAN				*i* S	Sg	14 22 19.9	+1.1
TVAN				IAML_P			
	comp=Z,25μm,0.2s						
ERCV	ERCIS-VAN	0.30	332	PG	Pg	14 22 15.3	-0.6
CLDR	Caldiran	0.49	39	PG	Pg	14 22 18.5	-0.9
CLDR				SG	Sb	14 22 27.8	+0.7
CLDR	Caldiran	0.49	39	*i* P	Pg	14 22 18.7	-0.7
CLDR				*i* S	Sb	14 22 27.6	+0.5
CLDR				IAML_P			
	comp=Z,6μm,0.1s						
GEVA	Gevas	0.57	219	*i* P	Pb	14 22 20.6	-0.6
GEVA				*i* S	Sb	14 22 30.4	+1.2
AKDM	Akdamar-Van	0.60	225	PG	Pg	14 22 20.6	-0.7
AKDM				SG	Sg	14 22 28.8	-0.6
ADCV	BITLIS_Adilcev	0.62	275	*i* P	Pb	14 22 21.5	-0.6
ADCV				*i* S	Sb	14 22 31.7	+1.0
DYDN	Diyadin	0.80	9	*i* P	Pb	14 22 24.8	-0.3
DYDN				*i* S	Sb	14 22 37.0	+1.3
DYDN				IAML_P			
	comp=Z,2μm,0.1s						
BASK	Baskale_VAN	0.80	151	*i* P	Pb	14 22 24.8	-0.3
BASK				IAML_P			
	comp=Z,3μm,0.2s						
TUTA	Tutak	0.85	320	*i* P	Pg	14 22 24.4	-1.5
TUTA				*i* S	Sb	14 22 36.6	-0.6
MLAZ	Malazgirt-MUS	0.85	297	PG	Pb	14 22 25.8	-0.1
AGRB	Hanur-Agry	0.92	334	PG	Pg	14 22 26.2	-1.0
GURO	Guroymak-BITLI	1.18	260	PN	Pb	14 22 30.4	-1.2
TASB	TASBURUN-IGDIR	1.35	24	PN	Pn	14 22 33.2	-0.5
SRTM	Siirt_Merkez	1.47	239	*i* P	Pg	14 22 37.1	-0.6
SRTM				*i* S	Sg	14 23 00.1	+3.3
SRTM				IAML_P			
	comp=Z,467nm,0.2s						
CUKT	Cukurca	1.51	177	PN	Pn	14 22 35.2	-0.7
GNI	Garni	1.68	34	PN	Pn	14 22 38.9	+0.5
KOPR	Koprukoy-ERZUR	1.79	314	PN	Pn	14 22 39.9	+0.1
SENK	Senkaya-Erzuru	2.02	334	PN	Pn	14 22 43.6	+0.6
BNGB	Bingl	2.23	277	PN	Pn	14 22 45.9	+0.1

NEIC ***27*** *14:40:55.5±0.8, 10°.73S×165°.36E, h10^{km}, mb4.5/4, Error ellipse: s-maj=18.2km s-min=13.0km az=117.0*

ISCJB ***27*** *14:40:56.2±0.8, 10°.95S±0°.07×165°.44E±0°.08, h30^{km}, mb4.2/8, MS3.6/5, Error ellipse: s-maj=12.9km s-min=8.0km az=148.8*

IDC ***27*** *14:41:01.3±3.9, 10°.84S×165°.28E, h56^{km}±34^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.7/39, mbtmp4.2/8, ML4.8/2, MS3.6/7, Ms1 3.6/7, ms1mx3.3/31, Error ellipse: s-maj=35.2km s-min=28.0km az=116.0*

ISC 27 14:40:58.2±0.9**, 10°.85S**±0°.09×**165°.50E**±0°.10**, h30^{km}, n26, σ1^s.48**/23**, mb4.0**/8**, MS3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.65	284	*e*P	Pn	14 42 19.0	-1.1
HNR				*e*S	Sn	14 43 26.0	+2.0
HNR	Honiara	5.65	284	*e*Pn	Pn	14 42 19.6	-0.6
HNR				*e*Sn	Sn	14 43 25.3	+1.3
HNR				*e*		14 44 34.0	
HNR	Honiara	5.65	284	P	Pn	14 42 20.0	-0.1
	72nm,0.3s,baz=143,slow=4.3,SNR=22						
HNR				S	Sn	14 43 25.3	+1.3
	11nm,0.3s,baz=204,slow=20,SNR=2.0						
HNR				LR	LR	14 44 34.0	
	comp=Z,647nm,18.5s,baz=116,slow=39						
DZM	Mont Dzumac	11.20	175	*e*Pn	Pn	14 43 38.1	+1.8
	19nm,0.5s						
DZM				*e*LR	LR	14 45 31.0	
	comp=Z,231nm,23.9s						
DZM	Mont Dzumac	11.20	175	P	Pn	14 43 38.4	+2.0
	2.3nm,0.3s,baz=315,slow=14,SNR=27						
DZM				S	Sn	14 45 38.7	-1.9
	0.2nm,0.3s,baz=18,slow=20,SNR=1.9						
DZM				LR	LR	14 47 27.3	
	comp=Z,211nm,18.6s,baz=33,slow=34						
ONTNC	Ouen Toro	11.43	176	*e*Pn	Pn	14 43 41.9	+2.4
EIDS	Eidsvold	19.88	221	*e*P	P	14 45 27.2	0.0
	85nm,1.8s						
CTA	Charters Tower	20.68	241	P	P	14 45 36.5	+0.6
	17nm,0.8s,baz=73,slow=13,SNR=11						
CTA				LR	LR	14 53 03.3	
	comp=Z,273nm,19.5s,baz=60,slow=35						
CTAO	Charters Tower	20.68	241	*e*P	P	14 45 36.1	+0.2
	20nm,0.8s						
H11S2	WAKE ISLAND Hy	29.18	2	T	T	15 17 24.4	
	baz=183,slow=76,SNR=65						
H11S3	WAKE ISLAND Hy	29.18	2	T	T	15 17 21.4	
	baz=183,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	29.19	2	T	T	15 17 25.7	
	baz=183,slow=76,SNR=51						
H11N1	WAKE ISLAND Hy	30.40	3	T	T	15 19 03.3	
	baz=182,slow=76,SNR=39						
H11N3	WAKE ISLAND Hy	30.41	3	T	T	15 18 56.3	
	baz=182,slow=76,SNR=32						
H11N2	WAKE ISLAND Hy	30.42	3	T	T	15 19 06.9	
	baz=182,slow=76,SNR=30						
STKA	Stephens Creek	30.42	223	P	P	14 47 08.3	+0.3
	0.9nm,0.4s,baz=49,slow=9.3,SNR=2.8						
STKA				LR	LR	14 58 54.3	
	comp=Z,141nm,18.1s,baz=26,slow=35						
WR1	Warramunga Arr	31.33	249	*e*P	P	14 47 13.9	-2.3
	78nm,2.0s						
WRA	Warramunga Arr	31.33	249	P	P	14 47 13.9	-2.3
	1.8nm,0.8s,baz=80,slow=9.0,SNR=14						
WRA				LR	LR	15 00 05.7	
	comp=Z,106nm,19.0s,baz=235,slow=37						
AS31	Alice Springs	32.67	243	*e*P	P	14 47 26.6	-1.4
	2.3nm,1.1s						
ASAR	Alice Springs	32.67	243	P	P	14 47 25.9	-2.0
	2.2nm,0.7s,baz=65,slow=10,SNR=25						
ASAR				LR	LR	14 58 49.1	
	comp=Z,59nm,21.9s,baz=88,slow=33						
BILL	Bilibino	78.68	0	*e*P	P	14 52 57.3	+0.2
	3.6nm,0.9s						
ILAR	Eielson Array	83.40	19	P	P	14 53 22.8	+0.6
	0.1nm,0.5s,baz=238,slow=5.4,SNR=4.8						
ILB	Eielson Array	83.40	19	*e*P	P	14 53 22.6	+0.4
	16nm,1.6s						
MK32	Makanchi Array	93.22	317	*e*P	P	14 54 09.1	-0.7
MKAR	Makanchi Array	93.22	317	P	P	14 54 09.1	-0.7
	0.3nm,0.6s,baz=90,slow=6.5,SNR=3.9						
TXAR	Lajitas Array	95.94	61	LR	LR	15 31 01.1	
	comp=Z,53nm,20.0s,baz=0.0,slow=31						

IDC ***27*** *14:50:12.3±3.5, 29°.84N×79°.90E, h0^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.3/33, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=123.2km s-min=23.6km az=70.0*

ISC 27 14:50:14.2±1.1**, 29°.9N**±0°.2×**79°.8E**±0°.1**, h16^{km}, n7, σ0^s.50**/6**, mb3.5**/3**, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDI	New Delhi	2.57	243	*e*P	Pb	14 51 00.0	0.0
MKAR	Makanchi Array	16.99	6	P	P	14 54 13.4	+0.4
	0.1nm,0.3s,baz=201,slow=14,SNR=6.4						
KURBB	Kurchatov Arra	20.74	358	P	Pn	14 54 56.1	-0.3
	34nm,0.4s,baz=181,slow=9.9,SNR=5.2						
CMAR	Chiang Mai Arr	20.79	119	P	P	14 54 54.5	-0.3
	0.6nm,0.8s,baz=304,slow=6.4,SNR=4.1						
ZALV	Zalesovo Beam	24.32	7	P	P	14 55 30.3	-0.6
	0.7nm,0.6s,baz=188,slow=8.7,SNR=3.3						
WRA	Warramunga Arr	72.17	126	P	P	15 01 38.8	+0.3
	0.4nm,0.8s,baz=320,slow=6.1,SNR=5.3						
ASAR	Alice Springs	74.38	130	P	P	15 01 51.8	+0.2
	0.1nm,0.5s,baz=315,slow=6.4,SNR=4.8						

NNC ***27*** *14:50:49.7±14.0, 43°.30N×79°.77E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=110.7km s-min=65.6km az=147.0*

*SOME **27** 14:50:50.1, 45°.78N×76°.65E, h15^{km}*

ISC 27 14:50:49.8±3.3**, 45°.8N**±0°.1×**76°.6E**±0°.1**, h10**^{km}**, n8, σ0^{s}.64**/14**, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARXS	**Arharly**	**1.79**	**151**	P	**Pb**	**14 51 22.8**	**+0.1**
	0.6nm,0.4s						
ARXS				S	**Sg**	**14 51 46.4**	**-0.9**
	4.8nm,0.3s						
ARXS	**Arharly**	**1.79**	**151**	*e*P	**Pb**	**14 51 22.8**	**+0.1**
	0.6nm,0.4s						
ARXS				*e*S	**Sg**	**14 51 46.4**	**-0.9**
	4.8nm,0.3s						
KUU	**Kurty**	**1.91**	**186**	P	**Pb**	**14 51 24.4**	**-0.3**
	1.3nm,0.3s						
KUU				S	**Sb**	**14 51 49.1**	**+0.5**
	5.5nm,0.3s						
KUU	**Kurty**	**1.91**	**186**	*e*P	**Pb**	**14 51 24.4**	**-0.3**
	0.4nm,0.1s						
KUU				*e*S	**Sb**	**14 51 49.0**	**+0.5**
	3.0nm,0.1s						
CHKK	**Chushkaly**	**1.95**	**173**	Pg	**Pb**	**14 51 25.5**	**+0.1**
	1.2nm,0.2s						
CHKK				Lg	Lg	14 51 51.1	
	4.4nm,0.2s						
CHKK	**Chushkaly**	**1.95**	**173**	*e*P	**Pb**	**14 51 25.5**	**+0.1**
	1.2nm,0.2s						
CHKK				*e*S	**Sb**	**14 51 51.1**	**+1.2**
	4.4nm,0.2s						
KAPS	**Kapalarasan**	**1.98**	**104**	Pg	**Pb**	**14 51 25.8**	**-0.2**
	1.3nm,0.3s						
KAPS				Lg	Lg	14 51 51.4	
	2.5nm,0.4s						
KAPS	**Kapalarasan**	**1.98**	**104**	*e*P	**Pb**	**14 51 25.8**	**-0.2**
	0.2nm,0.2s						
KAPS				*e*S	**Sb**	**14 51 51.4**	**+0.8**
	3.0nm,0.4s						

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*SOME **27** 14:53:49.7, 42°.62N×79°.58E, h10^{km}*

*KRNET **27** 14:53:49.9±0.1, 42°.62N×79°.58E, h19^{km}, mb3.0*

*NNC **27** 14:53:50.1±0.7, 42°.63N×79°.57E, h0^{km}, mb3.3, mpv3.1, Error ellipse: s-maj=5.0km s-min=2.5km az=133.0*

ISC 27 14:53:50.2±1.5**, 42°.60N**±0°.05×**79°.57E**±0°.04**, h19**^{km}±3^{km}**, n55, σ1^{s}.70**/95**, 25C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.56**	**352**	P	**Pg**	**14 54 01.3**	**-0.2**
	109nm,0.1s						
SHLS				S	**Sn**	**14 54 10.2**	**-1.9**
	441nm,0.2s						
SHLS	**Shalkode**	**0.56**	**352**	*e*P	**Pg**	**14 54 01.3**	**-0.2**
	baz=22						
SHLS				*e*S	**Sg**	**14 54 09.6**	**+0.4**
	baz=22						
SHLS	**Shalkode**	**0.56**	**352**	*e*P	**Pg**	**14 54 01.3**	**-0.2**
	109nm,0.1s						
SHLS				*e*S	**Sg**	**14 54 09.6**	**+0.4**
	441nm,0.2s						
UZB	**Uzynbulak**	**0.68**	**324**	P	**Pb**	**14 54 02.9**	**-0.6**
	30nm,0.1s						
UZB				S	**Sg**	**14 54 13.0**	**+0.2**
	35nm,0.2s						
UZB	**Uzynbulak**	**0.68**	**324**	*e*P	**Pb**	**14 54 02.9**	**-0.6**
	baz=22						
UZB				*e*S	**Sg**	**14 54 12.5**	**-0.3**
	baz=22						
UZB	**Uzynbulak**	**0.68**	**324**	*e*P	**Pb**	**14 54 02.9**	**-0.6**
	30nm,0.1s						
UZB				*e*S	**Sg**	**14 54 12.5**	**-0.3**
	35nm,0.2s						
PDGK	**Podgornoye**	**0.73**	**355**	P	**Pb**	**14 54 03.4**	**-1.0**
	3.2nm,0.1s						
PDGK				S	**Sg**	**14 54 13.8**	**-0.6**
	29nm,0.2s						
PDGK	**Podgornoye**	**0.73**	**355**	⇑P	**Pb**	**14 54 03.2**	**-1.2**
	1.0nm,0.3s						
PDGK				⇑S	**Sg**	**14 54 13.5**	**-0.8**
	21nm,0.5s						
PDGK	**Podgornoye**	**0.73**	**355**	⇑*i*P	**Pb**	**14 54 03.4**	**-1.0**
	baz=54						
PDGK				⇑*i*S	**Sg**	**14 54 14.0**	**-0.4**
	baz=54						
PRZ	**Przheval'sk**	**0.87**	**263**	⇑*i*P	**Pb**	**14 54 06.7**	**-0.2**
	baz=62						
PRZ				⇑*i*S	**Sg**	**14 54 19.1**	**+0.2**
	baz=62						
SATY	**Saty**	**0.97**	**298**	P	Pg	14 54 18.7	+10
	14nm,0.1s						
SATY				S	Sn	14 54 32.2	+10
	38nm,0.1s						
KURS	**Kuram**	**1.35**	**311**	P	**Pb**	**14 54 15.2**	**+0.2**
	4.4nm,0.3s						
KURS				S	**Sg**	**14 54 33.8**	**-0.4**
	14nm,0.4s						
KURS	**Kuram**	**1.35**	**311**	*e*P	**Pb**	**14 54 15.2**	**+0.2**
	baz=11						
KURS				*e*S	**Sg**	**14 54 33.8**	**-0.4**
	baz=11						
KURS	**Kuram**	**1.35**	**311**	*e*P	**Pb**	**14 54 15.2**	**+0.2**
	4.4nm,0.3s						
KURS				*e*S	**Sg**	**14 54 33.8**	**-0.4**
	14nm,0.4s						
DJR	**Jarkent**	**1.74**	**5**	P	**Pb**	**14 54 21.2**	**-0.3**
	3.3nm,0.3s						
DJR				S	**Sg**	**14 54 45.0**	**-1.3**
	22nm,0.3s						
DJR	**Jarkent**	**1.74**	**5**	*e*P	**Pb**	**14 54 21.3**	**-0.2**
	3.3nm,0.2s						
DJR				*e*S	**Sg**	**14 54 44.1**	**-2.2**
	21nm,0.3s						
KDJ	**Kajisay**	**1.83**	**256**	⇑*i*P	**Pb**	**14 54 23.8**	**+0.5**
	baz=55						
KDJ				⇑*i*S	**Sg**	**14 54 49.1**	**-0.3**
	baz=55						
KOTS	**Kotyrbulak**	**1.91**	**290**	P	**Pb**	**14 54 24.8**	**+0.2**
	17nm,0.2s						
KOTS				S	**Sg**	**14 54 49.8**	**-2.1**
	33nm,0.4s						
KOTS	**Kotyrbulak**	**1.91**	**290**	*e*P	**Pb**	**14 54 24.8**	**+0.2**
	baz=90						
KOTS				*e*S	**Sg**	**14 54 50.3**	**-1.6**
	baz=90						
KOTS	**Kotyrbulak**	**1.91**	**290**	*e*P	**Pb**	**14 54 24.8**	**+0.2**
	12nm,0.2s						
KOTS				*e*S	**Sg**	**14 54 50.3**	**-1.6**
	33nm,0.4s						
MDOK	**Medeo**	**1.94**	**288**	Pn	**Pb**	**14 54 24.8**	**-0.2**
	7.7nm,0.5s						
MDOK				Sn	**Sb**	**14 54 49.8**	**+1.0**
	6.6nm,0.5s						
MDOK	**Medeo**	**1.94**	**288**	Pg	**Pb**	**14 54 24.9**	**-0.2**
	11nm,0.3s						
MDOK				Lg	Lg	14 54 50.8	
	9.9nm,0.4s						
MDOK	**Medeo**	**1.94**	**288**	⇑*i*P	**Pb**	**14 54 24.9**	**-0.1**
	baz=87						
MDOK				⇑*e*S	**Sb**	**14 54 50.2**	**+1.3**
	baz=87						
MDOK	**Medeo**	**1.94**	**288**	⇑*i*P	**Pb**	**14 54 24.9**	**-0.1**
	5.3nm,0.4s						
MDOK				*e*S	**Sb**	**14 54 50.1**	**+1.3**
	7.7nm,0.4s						
ARXS	**Arharly**	**2.05**	**322**	Pg	**Pb**	**14 54 27.8**	**+0.8**
	9.2nm,0.3s						
ARXS				Lg	Lg	14 54 54.8	
	23nm,0.4s						
ARXS	**Arharly**	**2.05**	**322**	*e*P	**Pb**	**14 54 27.6**	**+0.7**
	9.2nm,0.3s						
ARXS				*e*S	**Sg**	**14 54 54.7**	**-1.5**
	23nm,0.4s						
CHKK	**Chushkaly**	**2.26**	**304**	Pg	**Pb**	**14 54 30.5**	**-0.1**
	3.6nm,0.2s						
CHKK				Lg	Lg	14 55 00.7	
	12nm,0.2s						
CHKK	**Chushkaly**	**2.26**	**304**	*e*P	**Pb**	**14 54 31.2**	**+0.7**
	baz=4.0						
CHKK				*e*S	**Sg**	**14 55 00.8**	**-2.3**
	baz=4.0						
CHKK	**Chushkaly**	**2.26**	**304**	*e*P	**Pb**	**14 54 31.1**	**+0.7**
	1.5nm,0.3s						
CHKK				*e*S	**Sg**	**14 55 00.8**	**-2.3**
	12nm,0.2s						
MTBS	**Maitube**	**2.37**	**284**	Pg	**Pb**	**14 54 32.9**	**+0.6**
	18nm,0.3s						
MTBS				Lg	Lg	14 55 04.7	
	14nm,0.4s						
MTBS	**Maitube**	**2.37**	**284**	*e*P	**Pb**	**14 54 33.3**	**+0.9**
	baz=84						
MTBS				*e*S	**Sg**	**14 55 04.4**	**-2.1**
	baz=84						
MTBS	**Maitube**	**2.37**	**284**	*e*P	**Pb**	**14 54 33.2**	**+0.9**
	18nm,0.3s						
MTBS				*e*S	**Sg**	**14 55 04.3**	**-2.1**
	14nm,0.4s						
KTBS	**Karatobe**	**2.39**	**299**	Pg	**Pb**	**14 54 33.9**	**+1.3**
	3.1nm,0.2s						
KTBS				Lg	Lg	14 55 05.3	
	11nm,0.2s						
KTBS	**Karatobe**	**2.39**	**299**	*e*P	**Pb**	**14 54 33.9**	**+1.3**
	baz=97						
KTBS				*e*S	**Sg**	**14 55 05.3**	**-1.7**
	baz=97						
KTBS	**Karatobe**	**2.39**	**299**	*e*P	**Pb**	**14 54 33.9**	**+1.3**
	3.1nm,0.2s						
KTBS				*e*S	**Sg**	**14 55 05.3**	**-1.7**
	11nm,0.2s						
ULHL	**Ulahol**	**2.49**	**263**	⇓*i*P	**Pb**	**14 54 33.0**	**-1.5**
	baz=63						
ULHL				⇓*i*S	**Sb**	**14 55 04.9**	**+0.1**
	baz=63						
BOOM	**Boomskoye usch**	**2.68**	**269**	⇑*i*P	**Pb**	**14 54 35.8**	**-2.0**
	baz=69						
BOOM				⇑*i*S	**Sb**	**14 55 09.6**	**-0.8**
	baz=69						
KAPS	**Kapalarasan**	**2.69**	**357**	Pg	**Pb**	**14 54 38.2**	**+0.5**
	1.2nm,0.2s						
KAPS				Lg	Lg	14 55 13.1	
	19nm,0.3s						
KAPS	**Kapalarasan**	**2.69**	**357**	*e*P	**Pb**	**14 54 38.2**	**+0.5**
	1.2nm,0.2s						
KAPS				⇓*e*S	**Sg**	**14 55 13.1**	**-3.5**
	19nm,0.3s						
KST	**Kastek**	**2.69**	**281**	Pg	**Pb**	**14 54 38.8**	**+1.0**
	5.1nm,0.3s						
KST				Lg	Lg	14 55 14.0	
	9.3nm,0.6s						
KST	**Kastek**	**2.69**	**281**	*e*P	**Pb**	**14 54 39.4**	**+1.5**
	baz=80						
KST				*e*S	**Sg**	**14 55 14.8**	**-1.9**
	baz=80						
KST	**Kastek**	**2.69**	**281**	*e*P	**Pb**	**14 54 39.4**	**+1.5**
	5.1nm,0.3s						
KST				*e*S	**Sg**	**14 55 14.8**	**-1.9**
	9.3nm,0.6s						
KUU	**Kurty**	**2.69**	**300**	Pg	**Pb**	**14 54 37.8**	**0.0**
	1.5nm,0.1s						
KUU				Lg	Lg	14 55 12.3	
	8.1nm,0.3s						
DGS	**Degeres**	**2.86**	**284**	Pg	**Pb**	**14 54 40.3**	**-0.4**
	4.4nm,0.4s						
DGS				Lg	Lg	14 55 17.1	
	10nm,0.5s						
NRN	**Naryn**	**2.91**	**247**	⇓*e*P	**Pb**	**14 54 38.9**	**-2.7**
	baz=47						
NRN				⇓*i*S	**Sb**	**14 55 15.3**	**-1.6**
	baz=47						
TKM2	**Tokmak 2**	**2.94**	**278**	⇑Pn	**Pb**	**14 54 41.9**	**-0.3**
	0.9nm,0.5s						
TKM2				⇑Lg	Lg	14 55 22.1	
	4.1nm,0.5s						
TKM2	**Tokmak 2**	**2.94**	**278**	⇑*e*P	**Pb**	**14 54 39.4**	**-2.8**
	baz=77						
TKM2				⇑*i*S	**Sb**	**14 55 16.2**	**-1.7**
	baz=77						
KZA	**Kyzart**	**3.25**	**262**	⇓*e*P	**Pn**	**14 54 43.8**	**+3.3**
	baz=62						
KZA				⇓*i*S	**Sb**	**14 55 23.6**	**-3.1**
	baz=62						
CHMS	**Chumysh**	**3.57**	**278**	⇑*i*P	**Pn**	**14 54 48.0**	**+3.4**
	baz=78						
CHMS				⇑*i*S	**Sb**	**14 55 31.0**	**-4.7**
	baz=78						
AAK	**Ala-Archa**	**3.75**	**272**	Pg	**Pg**	**14 54 59.4**	**-2.6**
	1.5nm,0.8s						
AAK				Lg	Lg	14 55 48.9	
	3.0nm,0.6s						
AAK	**Ala-Archa**	**3.75**	**272**	⇓*e*P	**Pn**	**14 54 50.7**	**+3.5**
	baz=72						
AAK				⇓*i*S	**Sb**	**14 55 35.8**	**-5.1**
	baz=72						
ARLS	**Aral**	**3.97**	**261**	⇑*i*P	**Pn**	**14 54 53.5**	**+3.3**
	baz=61						
ARLS				⇑*i*S	**Sn**	**14 55 40.8**	**+4.6**
	baz=61						
MAKZ	**Makanchi**	**4.54**	**21**	⇑Pn	**Pn**	**14 54 59.5**	**+1.6**
	0.3nm,0.3s						
MAKZ				⇓Lg	Lg	14 56 10.8	
	0.3nm,0.5s						
MK31	**Makanchi Array**	**4.62**	**24**	⇑Pn	**Pn**	**14 55 00.5**	**+1.5**
	0.4nm,0.4s,baz=202,slow=13,SNR=14						
MK31				⇑Pg	**Pb**	**14 55 11.4**	**+0.8**
	0.2nm,0.3s						
MK31				⇓Lg	Lg	14 56 13.8	
	0.5nm,0.5s,baz=209,slow=27,SNR=5.1						
MNAS	**Manas**	**5.22**	**271**	⇓Pg	**Pb**	**14 55 23.3**	**+2.3**
	1.1nm,1.0s						
MNAS				⇑Lg	Lg	14 56 32.7	
	0.7nm,0.5s						

GUC 27 15:00:03.5±0.3**, 22°.23S**×**66°.47W, h292**^{km}±22^{km}**, MW4.6, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**2.91**	**260**	*e*P	Pn	15 01 01.0	+3.0
PB15	**IPOC Station P**	**2.94**	**250**	*e*P	Pn	15 01 01.4	+3.0
PB15				*i* S	S	15 01 45.1	+3.1
PB01	**IPOC Station P**	**3.05**	**292**	*e*P	Pn	15 01 02.1	+2.7
PB01				*i* S	S	15 01 47.5	+3.6
PB03	**IPOC Station P**	**3.05**	**273**	*e*P	Pn	15 01 02.4	+3.0
PB03				*i* S	S	15 01 47.2	+3.1
PB07	**IPOC Station P**	**3.21**	**278**	*e*P	Pn	15 01 04.3	+3.2
PB07				*i* S	S	15 01 50.0	+2.9
PB02	**IPOC Station P**	**3.32**	**285**	*e*P	Pn	15 01 05.0	+2.9
PB02				*i* S	S	15 01 52.0	+3.1
PB04	**IPOC Station P**	**3.41**	**268**	*e*P	Pn	15 01 06.3	+3.1
PB04				*i* S	S	15 01 54.3	+3.5
PB05	**IPOC Station P**	**3.51**	**259**	*e*P	Pn	15 01 07.0	+2.9
PB05				*i* S	S	15 01 55.1	+2.5
PB11	**IPOC Station P**	**3.87**	**309**	*e*P	Pn	15 01 10.3	+2.3
PB11				*i* S	S	15 02 02.3	+2.7
GO02	**Mina Guanaco**	**4.09**	**224**	*e*P	Pn	15 01 12.4	+1.8
GO02				*i* S	S	15 02 05.9	+1.7
MNMC	**Minye Minye**	**4.26**	**316**	*e*P	Pn	15 01 15.2	+2.7
MNMC				*i* S	S	15 02 10.8	+3.0

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*NEIC **27** 15:48:12.5±0.0, 19°.10N×68°.02W, h103^{km}, MD3.4(RSPR), After RSPR.*

RSPR 27 15:48:12.5, 19°.10N×**68°.02W, h103**^{km}±5^{km}**, MD3.4**/11**, 10C-10D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.88**	**144**	⇑*e*P	Pn	15 48 27.8	-4.1
IDE	**Isla Desecheo**	**0.88**	**144**	⇑*e*P	Pn	15 48 27.8	-4.1
AGPR	**Aguadilla, PR**	**1.07**	**126**	⇑*e*P	Pn	15 48 32.8	-1.1
AGPR	**Aguadilla, PR**	**1.07**	**126**	*e*S	Sn	15 48 48.7	-1.3
AGPR	**Aguadilla, PR**	**1.07**	**126**	⇑*e*P	Pn	15 48 32.8	-1.1
AGPR				*e*S	Sn	15 48 48.7	-1.3
LSP	**Las Mesas**	**1.28**	**136**	⇓*e*P	Pn	15 48 36.6	+0.3
LSP	**Las Mesas**	**1.28**	**136**	*e*S	Sn	15 48 54.4	+0.1
LSP	**Las Mesas**	**1.28**	**136**	⇓*e*P	Pn	15 48 36.6	+0.3
LSP				*e*S	Sn	15 48 54.4	+0.1
DR12	**Loma Pena Alta**	**1.33**	**257**	⇑*e*P	Pn	15 48 36.1	-0.8
DR12				*e*S	Sn	15 48 55.6	+0.2
DR12	**Loma Pena Alta**	**1.33**	**257**	⇑*e*P	Pn	15 48 36.1	-0.8
DR12				*e*S	Sn	15 48 55.6	+0.2
EMPR	**Esperanza - Ma**	**1.54**	**114**	⇓*e*P	Pn	15 48 39.3	-0.1
EMPR	**Esperanza - Ma**	**1.54**	**114**	*e*S	Sn	15 49 00.5	+0.6
EMPR	**Esperanza - Ma**	**1.54**	**114**	⇓*e*P	Pn	15 48 39.3	-0.1
EMPR				*e*S	Sn	15 49 00.5	+0.6
OBIP	**Obispado Ponce**	**1.70**	**128**	⇓*e*P	Pn	15 48 41.0	-0.5
OBIP	**Obispado Ponce**	**1.70**	**128**	*e*S	Sn	15 49 03.4	-0.1
OBIP	**Obispado Ponce**	**1.70**	**128**	⇓*e*P	Pn	15 48 41.0	-0.5
OBIP				*e*S	Sn	15 49 03.4	-0.1
SJG	**San Juan**	**2.03**	**119**	Pn	Pn	15 48 45.5	0.0
CBYP	**Canovanas**	**2.21**	**112**	⇓*e*P	Pn	15 48 47.4	-0.6
CBYP	**Canovanas**	**2.21**	**112**	*e*S	Sn	15 49 15.6	+0.5
CBYP	**Canovanas**	**2.21**	**112**	⇓*e*P	Pn	15 48 47.4	-0.6
CBYP				*e*S	Sn	15 49 15.6	+0.5
HUMP	**Col San Antoni**	**2.27**	**115**	⇓*e*P	Pn	15 48 48.8	+0.1
HUMP	**Col San Antoni**	**2.27**	**115**	*e*S	Sn	15 49 16.2	-0.2
HUMP	**Col San Antoni**	**2.27**	**115**	⇓*e*P	Pn	15 48 48.8	+0.1
HUMP				*e*S	Sn	15 49 16.2	-0.2
MTP	**Monte Pirata**	**2.54**	**113**	⇑*e*P	Pn	15 48 52.4	+0.1
MTP	**Monte Pirata**	**2.54**	**113**	⇑*e*P	Pn	15 48 52.4	+0.1
CUPR	**Culebra, Puert**	**2.71**	**106**	⇑*e*P	Pn	15 48 53.5	-1.0
CUPR	**Culebra, Puert**	**2.71**	**106**	⇑*e*P	Pn	15 48 53.5	-1.0
SDDR	**Presa de Saban**	**3.10**	**268**	*e*Pn	Pn	15 49 00.3	+0.6

IDC 27 15:51:13.8±2.6**, 19°.28S**×**176°.26W, h0**^{km}**, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.7**/41**, mbtmp3.8**/4**, Error ellipse: s-maj=253.9km s-min=31.2km az=161.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.26**	**262**	P	P	15 58 11.3	+0.8
	3.3nm,0.9s,baz=79,slow=8.7,SNR=2.2						
ASAR	**Alice Springs**	**46.40**	**255**	P	P	15 59 42.1	-0.3
	0.6nm,0.4s,baz=91,slow=8.7,SNR=38						
WRA	**Warramunga Arr**	**46.40**	**261**	P	P	15 59 41.9	-0.6
	0.5nm,0.9s,baz=96,slow=7.4,SNR=7.9						
TXAR	**Lajitas Array**	**85.02**	**57**	P	P	16 03 51.8	0.0
	0.9nm,0.8s,baz=232,slow=5.6,SNR=4.6						

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*ISCJB **27** 15:56:09.7±0.3, 3°.50S±0°.02×78°.78W±0°.04, h107^{km}±3^{km}, mb4.3/22, Error ellipse: s-maj=7.4km s-min=3.9km az=12.1*

*IGQ **27** 15:56:09.0±0.3, 4°S±3°×7°9W±°, h12^{km}, mb5.2, mB5.2, MLv5.1, Mw(mB)4.5*

*NEIC **27** 15:56:10.0±0.3, 3°.51S×78°.67W, mb4.5/15, MW4.6(IGQ), Error ellipse: s-maj=11.8km s-min=4.8km az=76.0*

NEIC Felt at Cuenca, Loja and Zamora, Ecuador.

*IDC **27** 15:56:10.8±0.6, 3°.40S×78°.65W, h94^{km}±5^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.9/33, mbtmp4.3/16, MS3.1/1, Ms1 3.1/1, ms1mx2.7/33, Error ellipse: s-maj=18.3km s-min=11.5km az=66.0*

ISC 27 15:56:09.7±0.5**, 3°.52S**±0°.04×**78°.74W**±0°.05**, h89**^{km}±5^{km}**, n177, σ1^{s}.54**/186**, mb4.4**/22**, 10C, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GONZ	**Gonzanam**	**0.97**	**222**	P	**Pn**	**15 56 31.1**	**+1.7**
GONZ				S	**Sn**	**15 56 46.9**	**+2.7**
COHC	**Cochancay**	**1.16**	**334**	P	**Pn**	**15 56 31.6**	**+0.4**
COHC				S	**Sn**	**15 56 47.3**	**-0.1**
COHC	**Cochancay**	**1.16**	**334**	P	**Pn**	**15 56 31.6**	**+0.4**
COHC				S	**Sn**	**15 56 47.7**	**+0.2**
MILO	**Milagro-Astudi**	**1.47**	**326**	P	**Pn**	**15 56 36.4**	**+1.3**
MCRA	**Macar, Loja**	**1.48**	**235**	P	**Pn**	**15 56 35.2**	**0.0**
MCRA				S	**Sn**	**15 56 55.0**	**+0.5**
MCRA	**Macar, Loja**	**1.48**	**235**	P	**Pn**	**15 56 35.2**	**0.0**
MCRA				S	**Sn**	**15 56 55.0**	**+0.5**
MORR	**Playas El Morr**	**1.82**	**299**	P	**Pn**	**15 56 40.4**	**+0.9**
IGUA	**Igualata**	**2.02**	**3**	P	**Pn**	**15 56 43.3**	**+0.7**
ARRY	**Arrayan**	**2.02**	**8**	P	**Pn**	**15 56 42.8**	**+0.3**
BMAS	**Trigal station**	**2.02**	**7**	P	**Pn**	**15 56 43.2**	**+0.7**
PAT1	**Patacocha**	**2.02**	**9**	P	**Pn**	**15 56 43.5**	**+0.9**
BPAT	**Tungurahua Vol**	**2.02**	**9**	P	**Pn**	**15 56 43.3**	**+0.6**
BIL2	**Estacion Bilba**	**2.06**	**7**	P	**Pn**	**15 56 44.5**	**+1.5**
BBIL	**Ulba Tungurahu**	**2.07**	**7**	P	**Pn**	**15 56 43.9**	**+0.7**
RETU	**Refugio**	**2.07**	**8**	P	**Pn**	**15 56 44.3**	**+0.9**
BULB	**Ulba Tungurahu**	**2.09**	**9**	P	**Pn**	**15 56 44.1**	**+0.6**
JUI6	**Juive**	**2.10**	**7**	P	**Pn**	**15 56 44.3**	**+0.8**
POND	**Pondoa**	**2.10**	**8**	P	**Pn**	**15 56 44.3**	**+0.7**
BRUN	**Tungurahua Vol**	**2.11**	**9**	P	**Pn**	**15 56 44.2**	**+0.5**
RUN5	**Runtun**	**2.11**	**9**	P	**Pn**	**15 56 44.5**	**+0.8**
PUYO	**Puyo, Santa Ro**	**2.13**	**20**	P	**Pn**	**15 56 44.6**	**+0.7**
PUYO				S	**Sn**	**15 57 12.9**	**+3.1**
APUY	**Puyo**	**2.17**	**20**	P	**Pn**	**15 56 45.0**	**+0.7**
SAGO	**Sagoatoa**	**2.35**	**2**	P	**Pn**	**15 56 48.4**	**+1.3**
PIS1	**Pisayambo**	**2.47**	**8**	P	**Pn**	**15 56 49.4**	**+0.8**
PISA	**Pisayambo**	**2.47**	**8**	P	**Pn**	**15 56 49.3**	**+0.7**
AQUE	**Quevedo**	**2.56**	**343**	P	**Pn**	**15 56 49.6**	**+0.2**
SALI	**Salinas**	**2.61**	**300**	P	**Pn**	**15 56 50.2**	**+0.2**
SALI				P	**Pn**	**15 56 50.4**	**+0.4**
ARDO	**Archidona, Ten**	**2.67**	**21**	P	**Pn**	**15 56 50.4**	**-0.6**
BMOR	**Cotopaxi Volca**	**2.78**	**6**	P	**Pn**	**15 56 53.8**	**+0.9**
ILLI	**Illinizas Sur**	**2.78**	**0**	P	**Pn**	**15 56 53.6**	**+0.8**
PAST	**Pastocalle**	**2.81**	**2**	P	**Pn**	**15 56 54.4**	**+1.4**
BREF	**Cotopaxi Volca**	**2.84**	**6**	P	**Pn**	**15 56 55.0**	**+1.2**
BTAM	**Cotopaxi Volca**	**2.84**	**7**	P	**Pn**	**15 56 54.9**	**+1.2**
BVC2	**Cotopaxi Volca**	**2.86**	**7**	P	**Pn**	**15 56 55.0**	**+1.1**
COV1	**Cotopaxi Volc**	**2.86**	**8**	P	**Pn**	**15 56 55.1**	**+1.1**
NAS2	**Nasa**	**2.87**	**5**	P	**Pn**	**15 56 55.6**	**+1.6**
VC1	**Cotopaxi 1**	**2.88**	**7**	P	**Pn**	**15 56 55.3**	**+1.2**
PITA	**Cotopaxi Volc**	**2.95**	**6**	P	**Pn**	**15 56 56.4**	**+1.3**
ANTM	**Antisana-La Mi**	**3.00**	**10**	P	**Pn**	**15 56 56.8**	**+0.9**
ANTG	**Antisana-Guama**	**3.03**	**9**	P	**Pn**	**15 56 57.2**	**+1.0**
ANTS	**Antisana-Sarah**	**3.05**	**11**	P	**Pn**	**15 56 57.8**	**+1.3**
ANTI	**Antisana**	**3.10**	**11**	P	**Pn**	**15 56 58.2**	**+1.0**
NINA	**Atacazo Ninahu**	**3.11**	**2**	P	**Pn**	**15 56 58.3**	**+1.1**
GGPC	**Guagua Pichinc**	**3.32**	**2**	P	**Pn**	**15 57 00.7**	**+0.6**
PINO	**Pino**	**3.34**	**2**	P	**Pn**	**15 57 01.3**	**+0.9**
YANA	**Yana**	**3.38**	**3**	P	**Pn**	**15 57 01.5**	**+0.7**
JAMA	**Jama**	**3.55**	**336**	P	**Pn**	**15 57 02.0**	**-0.8**
MAG1	**Magdalena**	**3.57**	**343**	P	**Pn**	**15 57 02.5**	**-0.5**
ATAH	**Atahualpa**	**3.61**	**175**	P	**Pn**	**15 57 06.4**	**+2.5**
	72nm,0.3s,baz=6.0,slow=8.7,SNR=433						
ATAH				S	**Sn**	**15 57 43.7**	**-2.0**
	40nm,0.3s,baz=158,slow=9.7,SNR=4.9						
CAYA	**Cayambe**	**3.64**	**12**	P	Pn	15 56 58.5	-5.9
GOLV	**Golondrinas**	**3.72**	**354**	P	**Pn**	**15 57 01.4**	**-3.6**
OTAV	**Otavalo**	**3.74**	**4**	*e*Pn	**Pn**	**15 57 05.5**	**-0.2**
OTAV	**Otavalo**	**3.74**	**4**	*e*P	**Pn**	**15 57 06.1**	**+0.5**
OTAV	**Otavalo**	**3.74**	**4**	*e*P	**Pn**	**15 57 06.1**	**+0.5**
OTAV	**Otavalo**	**3.74**	**4**	P	**Pn**	**15 57 06.2**	**+0.5**
PAC1	**Pacto, Paraso**	**3.76**	**359**	P	**Pn**	**15 57 06.4**	**+0.7**
IMBA	**Imbabura, San**	**3.81**	**8**	P	**Pn**	**15 57 08.3**	**+1.7**
CUIC	**Cuicocha-Domo**	**3.81**	**6**	P	**Pn**	**15 57 07.1**	**+0.5**
COTA	**Cotacachi**	**3.85**	**6**	P	**Pn**	**15 57 10.7**	**+3.5**
YAHU	**Yahuarcocha**	**3.92**	**10**	P	**Pn**	**15 57 09.1**	**+1.1**
URCU	**Urcuqui**	**3.96**	**7**	P	**Pn**	**15 57 09.7**	**+1.1**
TULM	**Tulcn-Chalpat**	**4.31**	**13**	P	**Pn**	**15 57 14.3**	**+0.9**
CMBC	**Cumbal**	**4.52**	**12**	*e*P	**Pn**	**15 57 17.7**	**+1.4**
CMBC	**Cumbal**	**4.52**	**12**	*e*P	**Pn**	**15 57 17.7**	**+1.4**
GCUF	**Volcan Galeras**	**4.91**	**17**	⇑*e*P	**Pn**	**15 57 22.7**	**+1.0**
GCUF	**Volcan Galeras**	**4.91**	**17**	⇑*e*P	**Pn**	**15 57 22.7**	**+1.0**
TUMC	**Tumaco**	**5.30**	**0**	*e*P	**Pn**	**15 57 27.0**	**+0.4**
TUMC	**Tumaco**	**5.30**	**0**	*e*P	**Pn**	**15 57 27.0**	**+0.4**
CRUC	**La Cruz**	**5.36**	**20**	*e*P	**Pn**	**15 57 27.7**	**+0.1**
CRUC	**La Cruz**	**5.36**	**20**	*e*P	**Pn**	**15 57 27.7**	**+0.1**
PTLC	**Puerto Leguiza**	**5.38**	**47**	⇑*i*P	Pn	15 57 21.9	-5.7
PTLC	**Puerto Leguiza**	**5.38**	**47**	⇑*i*P	Pn	15 57 21.9	-5.7
FLOC	**Florencia**	**5.93**	**31**	*e*P	**Pn**	**15 57 32.2**	**-2.9**
FLOC	**Florencia**	**5.93**	**31**	*e*P	**Pn**	**15 57 32.2**	**-2.9**
SOTA	**Rioblanco**	**6.00**	**21**	⇑*e*P	**Pn**	**15 57 36.6**	**+0.1**
SOTA	**Rioblanco**	**6.00**	**21**	⇑*e*P	**Pn**	**15 57 36.6**	**+0.1**
PCON	**Cinco Dias**	**6.26**	**22**	*e*P	**Pn**	**15 57 41.2**	**+1.2**
PCON	**Cinco Dias**	**6.26**	**22**	*e*P	**Pn**	**15 57 41.2**	**+1.2**
POPC	**Popayan, Colom**	**6.36**	**19**	⇑*e*P	**Pn**	**15 57 40.2**	**-0.9**
POPC	**Popayan, Colom**	**6.36**	**19**	⇑*e*P	**Pn**	**15 57 40.2**	**-0.9**
GRGC	**Isla de Gorgon**	**6.50**	**5**	*e*P	**Pn**	**15 57 40.2**	**-2.6**
GRGC	**Isla de Gorgon**	**6.50**	**5**	*e*P	**Pn**	**15 57 40.2**	**-2.6**
MARP	**Paez Belalcaza**	**6.90**	**24**	⇑*e*P	**Pn**	**15 57 49.1**	**+0.5**
MARP	**Paez Belalcaza**	**6.90**	**24**	⇑*e*P	**Pn**	**15 57 49.1**	**+0.5**
BETC	**Betania**	**6.98**	**28**	*e*P	**Pn**	**15 57 49.4**	**-0.1**
BETC	**Betania**	**6.98**	**28**	*e*P	**Pn**	**15 57 49.4**	**-0.1**
MALC	**Bahia Malaga**	**7.61**	**11**	*e*P	**Pn**	**15 57 54.7**	**-3.3**
MALC	**Bahia Malaga**	**7.61**	**11**	*e*P	**Pn**	**15 57 54.7**	**-3.3**
YOTC	**Yotoco, Valle**	**7.83**	**18**	*e*P	**Pn**	**15 57 58.1**	**-2.9**
YOTC	**Yotoco, Valle**	**7.83**	**18**	*e*P	**Pn**	**15 57 58.1**	**-2.9**
NNA	**Nana**	**8.62**	**168**	*e*Pn	**Pn**	**15 58 11.9**	**+0.1**
NNA				*e*Sn	**Sn**	**15 59 41.6**	**-5.9**
NNA	**Nana**	**8.62**	**168**	P	**Pn**	**15 58 12.4**	**+0.6**
	26nm,0.3s,baz=342,slow=12,SNR=36						
NNA				S	**Sn**	**15 59 41.6**	**-5.9**
	3.4nm,0.3s,baz=320,slow=17,SNR=2.5						
NNA	**Nana**	**8.62**	**168**	P	**Pn**	**15 58 12.2**	**+0.3**
RREF	**El Recreo**	**9.02**	**22**	*e*P	**Pn**	**15 58 18.2**	**+0.5**
RREF	**El Recreo**	**9.02**	**22**	*e*P	**Pn**	**15 58 18.2**	**+0.5**
VILC	**Villavicencio,**	**9.10**	**34**	*e*P	**Pn**	**15 58 18.2**	**-0.2**
VILC	**Villavicencio,**	**9.10**	**34**	*e*P	**Pn**	**15 58 18.2**	**-0.2**
ROSC	**El Rosal**	**9.40**	**28**	P	**Pn**	**15 58 22.1**	**-0.7**
	1.5nm,0.3s,baz=288,slow=20,SNR=3.3						

ROSC				LR	LR	16 02 43.1	
	comp=Z,114nm,18.4s,baz=253,slow=42						
NORC	Norcasia	9.81	23	eP	Pn	15 58 29.4	+1.4
NORC	Norcasia	9.81	23	eP	Pn	15 58 29.4	+1.4
PTBC	PUERTO BERRIO,	10.87	23	eP	Pn	15 58 44.4	+2.0
PTBC	PUERTO BERRIO,	10.87	23	eP	Pn	15 58 44.4	+2.0
RUSC	La Rusia	10.92	31	eP	Pn	15 58 43.8	+0.3
RUSC	La Rusia	10.92	31	eP	Pn	15 58 43.8	+0.3
UREC	San Jos de Ur	11.64	16	eP	Pn	15 58 50.9	-2.0
UREC	San Jos de Ur	11.64	16	eP	Pn	15 58 50.9	-2.0
TAMC	Tame, Arauca	12.08	35	eP	P	15 59 08.7	+0.8
TAMC	Tame, Arauca	12.08	35	eP	P	15 59 08.7	+0.8
BCIP	Isla Barro Col	12.65	355	ePn	Pn	15 59 06.2	-0.2
SMLC	San Martn de	13.09	21	eP	Pn	15 59 09.8	-2.5
SMLC	San Martn de	13.09	21	eP	Pn	15 59 09.8	-2.5
SDV	Santo Domingo	14.73	33	ePn	Pn	15 59 30.0	-3.9
JTS	JuntasAbangare	15.05	336	eP	Pn	15 59 36.6	-1.0
JTS	JuntasAbangare	15.05	336	P	P	15 59 40.6	-0.3
	0.9nm,0.3s,baz=193,slow=14,SNR=4.7						
LPAZ	La Paz	16.43	141	ePn	Pn	15 59 52.9	-2.7
	13nm,0.8s						
LPAZ	La Paz	16.43	141	P	Pn	15 59 53.6	-1.9
	0.3nm,0.3s,baz=335,slow=17,SNR=5.6						
MNMC	Minye Minye	17.91	151	eP	Pn	16 00 13.2	-0.1
	20nm,0.8s						
MNMC	Minye Minye	17.91	151	P	Pn	16 00 14.3	+1.0
PB11	IPOC Station P	18.42	152	eP	P	16 00 17.8	-0.5
	16nm,0.8s						
PB08	IPOC Station P	18.99	151	P	Pn	16 00 31.7	+5.4
PB01	IPOC Station P	19.61	153	eP	P	16 00 30.9	-0.3
	18nm,0.6s						
PB01	IPOC Station P	19.61	153	P	Pn	16 00 37.8	+4.4
PB07	IPOC Station P	20.04	155	P	Pn	16 00 38.4	-0.1
PB09	IPOC Station P	20.38	154	P	Pn	16 00 42.5	0.0
PB03	IPOC Station P	20.38	155	P	Pn	16 00 46.1	+3.7
PB05	IPOC Station P	20.93	157	P	Pn	16 00 48.1	-0.7
LVC	Limon Verde	21.24	154	eP	P	16 00 51.5	+2.5
	4.3nm,0.8s						
LVC	Limon Verde	21.24	154	P	P	16 00 51.5	+2.5
	5.3nm,0.6s,baz=325,slow=8.1,SNR=6.0						
LVC	Limon Verde	21.24	154	P	P	16 00 52.3	+3.3
LVC				P	P	16 00 52.3	+3.3
SIV	San Ignacio	21.35	127	P	P	16 00 50.5	+0.6
	8.6nm,1.0s,baz=302,slow=6.8,SNR=21						
SJG	San Juan	24.82	30	eP	P	16 01 22.6	-1.1
	13nm,0.6s						
SJG	San Juan	24.82	30	P	P	16 01 22.6	-1.1
	20nm,0.5s,baz=187,slow=3.3,SNR=7.3						
MDP	Montagnes des	27.44	72	P	P	16 01 48.3	+0.8
	10nm,0.5s,baz=252,slow=9.2,SNR=11						
BDFB	Brasilia	32.55	114	P	P	16 02 33.2	+0.4
	8.2nm,0.8s,baz=268,slow=13,SNR=8.2						
PLCA	Paso Flores	37.78	170	eP	P	16 03 17.4	+0.1
	22nm,1.7s						
PLCA	Paso Flores	37.78	170	P	P	16 03 18.1	+0.7
	1.1nm,0.6s,baz=12,slow=9.9,SNR=6.3						
WMOK	Wichita Mounta	42.46	335	eP	P	16 03 55.6	-0.5
	7.5nm,1.1s						
ANMO	Albuquerque	46.28	328	eP	P	16 04 26.0	-0.7
	3.6nm,1.0s						
PV13	Radium Mtn., P	49.95	329	eP	P	16 04 55.5	+0.5
	7.1nm,1.2s						
PDAR	Pinedale Array	53.84	332	P	P	16 05 24.1	+0.3
	0.3nm,0.5s,baz=134,slow=11,SNR=3.9						
PDAR				pP	pP	16 05 47.6	+0.9
	0.6nm,0.7s,baz=127,slow=7.5,SNR=3.7						
NV01	Mina Array Sit	55.48	323	eP	P	16 05 35.9	+0.1
NVAR	Mina Array Bea	55.48	323	P	P	16 05 36.1	+0.4
	0.5nm,0.6s,baz=126,slow=7.2,SNR=4.7						
NVAR				pP	pP	16 06 00.4	+1.6
	1.2nm,0.8s,baz=135,slow=7.0,SNR=5.4						
ULM	Lac du Bonnet	55.55	347	P	P	16 05 35.2	-0.5
	1.5nm,0.8s,baz=139,slow=9.3,SNR=2.8						
ULM				pP	pP	16 05 58.0	-0.7
	2.0nm,0.6s,baz=150,slow=6.8,SNR=3.2						
WVOR	Wild Horse Val	58.27	326	eP	P	16 05 55.4	+0.1
	4.7nm,1.0s						
SCHQ	Schefferville	58.98	8	P	P	16 06 03.5	+3.8
	2.3nm,0.6s,baz=211,slow=6.2,SNR=5.6						
YKA	Yellowknife Ar	71.24	343	P	P	16 07 18.6	-0.3
	0.3nm,0.5s,baz=138,slow=5.9,SNR=6.0						
YKA				pP	pP	16 07 42.5	-0.5
	0.6nm,0.6s,baz=140,slow=5.7,SNR=5.0						
LIC	Lamto	74.23	83	eP	P	16 07 37.4	-0.3
	57nm,1.7s						
TIC	Toumodi	74.28	82	eP	P	16 07 37.4	-0.6
DBIC	Dimbokro	74.44	82	eP	P	16 07 37.8	-1.1
	41nm,2.0s						
DBIC	Dimbokro	74.44	82	P	P	16 07 38.8	-0.2
	3.5nm,0.5s,baz=247,slow=7.9,SNR=7.0						
KIC	Kosan Boka	74.53	82	eP	P	16 07 39.3	-0.1
	8.4nm,0.5s						
TOA1	Torodi Ar. Sit	81.50	76	eP	P	16 08 17.6	-0.4
TOA0	Torodi Ar. Sit	81.50	76	eP	P	16 08 16.1	-1.9
	7.4nm,1.3s						
TORD	Torodi Ar. Bea	81.50	76	P	P	16 08 17.6	-0.4
	1.1nm,0.4s,baz=274,slow=5.9,SNR=18						
ILAR	Eielson Array	84.02	336	P	P	16 08 30.2	+0.2
	0.9nm,0.9s,baz=132,slow=3.1,SNR=8.2						
ILAR				pP	pP	16 08 54.4	-0.3
	1.4nm,0.9s,baz=134,slow=3.8,SNR=8.1						
ILB	Eielson Array	84.02	336	eP	P	16 08 29.3	-0.7
	20nm,1.9s						
QSPA	South Pole Qui	86.56	180	eP	P	16 08 43.7	+0.9
	8.6nm,0.8s						
ZAA1	Zalesovo Array	127.95	12	ePKPdf	PKPdf	16 15 05.3	+0.1
ZALV	Zalesovo Beam	127.95	12	PKP	PKPdf	16 15 05.3	+0.1
	1.6nm,0.5s,baz=308,slow=2.9,SNR=9.1						
STKA	Stephens Creek	127.97	224	ePKPdf	PKiKP	16 15 06.6	+0.1
STKA	Stephens Creek	127.97	224	PKP	PKiKP	16 15 07.0	+0.5
	2.0nm,0.6s,baz=301,slow=5.9,SNR=4.5						
CTA	Charters Tower	129.99	240	PKP	PKiKP	16 15 10.8	-0.1
	3.7nm,1.0s,baz=135,slow=2.9,SNR=4.5						
MK32	Makanchi Array	133.85	18	ePKPdf	PKPdf	16 15 16.8	+0.1
MKAR	Makanchi Array	133.85	18	PKP	PKPdf	16 15 16.8	+0.1
	0.5nm,0.4s,baz=295,slow=2.5,SNR=14						
ASAR	Alice Springs	138.27	228	PKhKP	PKPpre	16 15 17.2	
	0.4nm,0.5s,baz=122,slow=3.5,SNR=10						
ASAR				PKP	PKPdf	16 15 25.6	+0.1
	1.4nm,0.8s,baz=113,slow=2.1,SNR=11						
KSRS	Korea Array	138.31	328	PKP	PKPdf	16 15 25.5	+0.4
	0.9nm,0.7s,baz=6.3,slow=2.1,SNR=4.5						
KSAR	Wonju Array Be	138.34	328	PKP	PKPdf	16 15 25.5	+0.3
WR1	Warramunga Arr	140.01	233	ePKPpre	PKPpre	16 15 21.9	
WR1				ePKPdf	PKPdf	16 15 29.0	+0.3
WRA	Warramunga Arr	140.01	233	PKhKP	PKPpre	16 15 21.9	
	0.3nm,0.4s,baz=114,slow=2.9,SNR=13						
WRA				PKP	PKPdf	16 15 29.0	+0.2
	1.9nm,0.8s,baz=114,slow=2.1,SNR=14						
FITZ	Fitzroy Crossi	147.77	227	ePKPbc	PKPbc	16 15 45.8	+0.6
FITZ	Fitzroy Crossi	147.77	227	PKPbc	PKiKP	16 15 46.3	-0.9
	5.7nm,0.6s,baz=189,slow=3.1,SNR=11						
KKN	Kakani	151.45	31	eP	PKPbc	16 15 54.5	+0.2
	10nm,0.7s						
DMN	Daman	151.51	31	eP	PKPbc	16 15 54.7	+0.2
	3.0nm,0.3s						
PKIN	Phulchoki	151.68	31	eP	PKPbc	16 15 54.4	-0.6
	5.1nm,0.6s						
PKI	Pulchoki	151.69	31	eP	PKPbc	16 15 54.7	-0.4
JIRN	Jiri	152.01	29	eP	PKPbc	16 15 55.3	-0.5
	5.4nm,0.5s						
RAMN	Ramite	152.80	30	eP	PKPbc	16 15 57.0	-0.5
	8.0nm,0.5s						

IDC 27 15:57:14.2±2.2**, 6°.19S×129°.97E, h0^{km}, mb3.6**/1**, mb1 3.6**/4**, mb1mx3.4**/44**, mbtmp3.4**/4**, ML3.0**/3**, Error ellipse: s-maj=94.8km s-min=27.9km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.57	199	Pn	Pn	16 00 16.2	+1.7
	0.1nm,0.3s,baz=23,slow=15,SNR=3.7						
FITZ				Sn	Sn	16 02 21.6	-14
	0.1nm,0.3s,baz=74,slow=18,SNR=4.0						
WRA	Warramunga Arr	14.32	163	Pn	Pn	16 00 37.8	-0.7
	0.1nm,0.3s,baz=343,slow=13,SNR=4.2						
WRA				Sn	Sn	16 03 04.3	-14
	0.1nm,0.3s,baz=336,slow=23,SNR=8.3						
ASAR	Alice Springs	17.79	168	P	Pn	16 01 22.7	-0.8
	0.1nm,0.3s,baz=345,slow=9.5,SNR=17						
MKAR	Makanchi Array	67.53	327	P	P	16 08 12.4	0.0
	0.2nm,0.3s,baz=115,slow=7.8,SNR=7.2						

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*IDC **27** 16:00:57.7±2.1, 3°.46N×126°.75E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.4/47, mbtmp3.7/3, MS2.3/1, Ms1 2.3/1, ms1mx2.2/35, Error ellipse: s-maj=182.6km s-min=24.4km az=66.0*

*ISCJB **27** 16:01:16.7±1.3, 2°.40N±0°.06×125°.3E±0°.1, h100^{km}, mb3.6/3, Error ellipse: s-maj=20.7km s-min=7.6km az=172.2*

*DJA **27** 16:01:16.0±1.5, 3°N±9°×12°6E±1°0, h151^{km}±15^{km}, M3.7/5, MLv3.7/5*

ISC 27 16:01:16.7±1.4**, 2°.44N**±0°.06×**125°.3E**±0°.2**, h100^{km}, n7, σ2^{s}.50**/8**, mb3.9**/3**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.26	11	P	Pn	16 01 41.0	+1.0
SGSI				S	Sn	16 01 59.1	+1.4
TNTI	Ternate	2.66	129	P	Pn	16 01 59.1	+1.2
TNTI				S	Sn	16 02 30.0	+0.5
SANI	Sanana	4.52	171	P	Pn	16 02 25.3	+2.4
SANI				S	Sn	16 03 15.0	+0.7
DAV	Davao City (W)	4.61	4	LR	LR	16 03 39.8	
	comp=Z,45nm,21.4s,baz=296,slow=43						
WRA	Warramunga Arr	23.95	159	P	P	16 06 18.4	-3.4
	2.4nm,0.5s,baz=342,slow=10,SNR=18						
ASAR	Alice Springs	27.27	163	P	P	16 06 49.0	-2.9
	0.5nm,0.8s,baz=340,slow=7.4,SNR=5.3						
MKAR	Makanchi Array	57.81	326	P	P	16 10 50.7	-7.0
	0.5nm,0.4s,baz=123,slow=8.1,SNR=13						

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*ISCJB **27** 16:06:28.5±0.9, 10°.93S±0°.09×166°.0E±0°.1, h10^{km}, mb4.0/1, MS3.5/2, Error ellipse: s-maj=19.1km s-min=11.6km az=153.1*

*IDC **27** 16:06:28.4±1.3, 10°.85S×166°.06E, h0^{km}, mb4.1/7, mb1 4.2/9, mb1mx3.9/40, mbtmp4.1/9, ML4.4/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/32, Error ellipse: s-maj=29.1km s-min=25.4km az=100.0*

*NEIC **27** 16:06:30.1±0.8, 10°.83S×165°.99E, h10^{km}, mb4.4/4, Error ellipse: s-maj=17.6km s-min=11.0km az=62.0*

ISC 27 16:06:30.2±1.2**, 10°.9S**±0°.1×**166°.0E**±0°.2**, h10^{km}, n25, σ1^{s}.29**/18**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.17	283	ePn	Pn	16 08 02.4	+1.0
HNR	Honiara	6.17	283	Pn	Pn	16 08 02.2	+0.8
	16nm,0.3s,baz=168,slow=8.5,SNR=7.6						
HNR				LR	LR	16 10 32.4	
	comp=Z,519nm,18.4s,baz=146,slow=40						
DZM	Mont Dzumac	11.11	178	Pn	Pn	16 09 10.8	+1.5
	1.4nm,0.3s,baz=40,slow=1.6,SNR=26						
DZM				Sn	Sn	16 11 11.0	-2.6
	0.2nm,0.3s,baz=127,slow=20,SNR=2.3						
DZM				LR	LR	16 13 13.2	
	comp=Z,162nm,18.7s,baz=39,slow=36						
PINNC	Pines Island,	11.72	174	ePn	Pn	16 09 20.1	+2.7
H11S2	WAKE ISLAND Hy	29.22	1	T	T	16 42 55.6	
	baz=181,slow=76,SNR=45						
H11S3	WAKE ISLAND Hy	29.23	1	T	T	16 42 56.0	
	baz=181,slow=76,SNR=19						
H11S1	WAKE ISLAND Hy	29.24	1	T	T	16 42 57.0	
	baz=181,slow=76,SNR=20						
H11N1	WAKE ISLAND Hy	30.44	2	T	T	16 44 27.3	
	baz=182,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	30.45	2	T	T	16 44 26.3	
	baz=182,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.46	2	T	T	16 44 27.3	
	baz=182,slow=76,SNR=11						
STKA	Stephens Creek	30.73	224	eP	P	16 12 44.9	-0.7
	3.2nm,1.4s						
STKA	Stephens Creek	30.73	224	P	P	16 12 47.0	+1.4
	1.8nm,0.8s,baz=67,slow=7.7,SNR=2.1						
WR1	Warramunga Arr	31.80	250	eP	P	16 12 55.2	+0.1
	20nm,1.4s						
WRA	Warramunga Arr	31.80	250	P	P	16 12 55.2	+0.1
	4.3nm,0.7s,baz=81,slow=8.9,SNR=21						
RPZ	Rata Peaks	32.97	173	P	P	16 13 04.9	-0.3
	8.8nm,1.0s,baz=24,slow=12,SNR=3.5						
AS31	Alice Springs	33.10	243	eP	P	16 13 06.0	-0.7
	2.2nm,1.4s						
ASAR	Alice Springs	33.10	243	P	P	16 13 05.8	-0.9
	0.8nm,0.6s,baz=65,slow=10,SNR=12						
FITZ	Fitzroy Crossi	39.69	255	eP	P	16 14 01.8	-1.0
	40nm,1.4s						
FITZ	Fitzroy Crossi	39.69	255	P	P	16 14 03.0	+0.1
	5.5nm,0.9s,baz=94,slow=13,SNR=2.9						
FITZ				LR	LR	16 29 33.3	
	comp=Z,66nm,18.2s,baz=106,slow=35						
PETK	Petropavlovsk-	64.16	354	LR	LR	16 37 33.5	
	comp=Z,30nm,21.5s,baz=78,slow=29						
BKNI	Bangkinang	65.54	275	eP	P	16 17 13.2	-1.4
	137nm,0.5s						
RPN	Rapa Nui	80.38	116	LR	LR	16 45 30.2	
	comp=Z,41nm,20.6s,baz=228,slow=29						
ILAR	Eielson Array	83.30	18	P	P	16 18 56.6	-0.2
	0.3nm,0.5s,baz=236,slow=5.4,SNR=6.6						
MK32	Makanchi Array	93.62	317	eP	P	16 19 46.6	-0.2
MKAR	Makanchi Array	93.62	317	P	P	16 19 46.6	-0.3
	0.4nm,0.6s,baz=96,slow=5.0,SNR=4.2						

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*JMA **27** 16:10:01.4, 22°.69N×121°.47E, h0^{km}, M3.3*

*ISCJB **27** 16:10:03.1±0.3, 22°.62N±0°.02×121°.32E±0°.02, h26^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.5km az=30.8*

*TAP **27** 16:10:03.8, 22°.65N×121°.22E, h32^{km}, ML3.2, C*

ISC 27 16:10:02.6±1.0**, 22°.65N**±0°.02×**121°.32E**±0°.02**, h16^{km}**±8^{km}**, n82, σ0^{s}.96**/143**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	Taitung	0.19	304	P	Pb	16 10 10.7	+3.0
	baz=321						
TTN				eS	Sb	16 10 16.2	+5.2
	baz=321						
TWGBT	Beinan	0.27	308	P	Pb	16 10 10.3	+1.1
	baz=317						
TWGBT				S	Sb	16 10 14.9	+1.2
	baz=317						
TWG	Pinlang	0.28	307	i P	Pb	16 10 10.3	+1.0
	baz=317						
TWG				i S	Sb	16 10 14.8	+1.0
	baz=317						
ECL	Taimali	0.34	261	P	Pb	16 10 10.3	+0.1
	baz=262						
ECL				i S	Sg	16 10 15.1	+0.6
	baz=262						
CHKT	Chengkung	0.45	6	P	Pn	16 10 13.7	-0.7
	baz=18						
CHKT				S	Sn	16 10 20.8	-1.4
	baz=18						
TAW	Tawu	0.48	233	P	Pg	16 10 12.6	+0.3
	baz=227						
TAW				S	Sg	16 10 18.6	-0.3
	baz=227						
EAST	Anshuo	0.51	238	P	Pg	16 10 12.8	0.0
	baz=227						
EAST				S	Sg	16 10 19.2	-0.4
	baz=227						
FULB	Fuli	0.55	358	P	Pn	16 10 14.8	-1.0
	baz=358						
FULB				eS	Sn	16 10 23.6	-1.0
	baz=358						
ELDTW	Lidau	0.60	333	eP	Pg	16 10 14.5	-0.1
	baz=344						
ELDTW				eS	Sg	16 10 22.1	-0.6
	baz=344						
MASBT	Mashibuluo	0.63	267	eP	Pg	16 10 14.9	-0.2
	baz=265						
MASBT				eS	Sg	16 10 23.4	-0.1
	baz=265						
SSD	Sandimen	0.64	279	eP	Pg	16 10 14.9	-0.3
	baz=280						
SSD				S	Sg	16 10 22.6	-1.1
	baz=280						
LAY	Lan-yu	0.65	160	eP	Pb	16 10 15.9	+0.3
	baz=153						
LAY				S	Sn	16 10 26.1	-1.0
	baz=153						
TWF1	Yuli	0.70	359	eP	Pg	16 10 16.0	-0.4
TWF1				eS	Sb	16 10 26.4	+0.5
SCZT	Fangliau	0.70	247	P	Pg	16 10 16.2	-0.1
	baz=242						
SCZT				S	Sg	16 10 24.6	-1.0
	baz=242						
SLGT	Liugui	0.70	299	eP	Pg	16 10 16.2	-0.2
	baz=303						
SLGT				S	Sb	16 10 26.2	+0.1
	baz=303						
SSPT	Xinbi	0.71	257	P	Pb	16 10 16.7	+0.1
	baz=254						
SSPT				S	Sg	16 10 26.1	+0.1
	baz=254						
STYT	Tauyuan	0.72	315	P	Pg	16 10 16.9	0.0
	baz=327						
STYT				eS	Sg	16 10 26.2	-0.3
	baz=327						
YULB	Yu-li	0.74	359	eP	Pg	16 10 16.2	-0.9
	baz=360						
YULB				eS	Sb	16 10 26.8	-0.2
	baz=360						
SGLT	Jiouru	0.77	276	eP	Pg	16 10 17.8	+0.2
	baz=269						
SGLT				S	Sb	16 10 28.0	+0.3
	baz=269						
SGST	Jiashian	0.80	303	P	Pg	16 10 18.7	+0.4
	baz=312						
SGST				eS	Sg	16 10 29.8	+0.9
	baz=312						
TSEB	Hengchuen, Pin	0.84	207	eP	Pg	16 10 19.1	+0.1
	baz=193						
TSEB				eS	Sb	16 10 29.3	-0.6
	baz=193						
TWM1	Shoushan	0.84	282	eP	Pn	16 10 20.2	+0.3
	baz=277						
TWM1				eS	Sn	16 10 31.3	-0.6
	baz=277						
HGSD	Ruisui	0.84	7	P	Pg	16 10 19.1	0.0
	baz=1.0						
HGSD				eS	Sn	16 10 32.5	+0.5
	baz=1.0						
TWKBT	Hengchun	0.84	213	eP	Pb	16 10 18.7	-0.2
	baz=197						
TWKBT				eS	Sb	16 10 29.7	-0.4
	baz=197						
TWK1	Hengchun	0.85	214	eP	Pb	16 10 18.7	-0.3
	baz=197						
TWK1				S	Sb	16 10 29.4	-0.7
	baz=197						
EHY	Hungye	0.85	0	P	Pb	16 10 17.9	-1.2
	baz=7.0						
EHY				eS	Sg	16 10 30.3	-0.2
	baz=7.0						
WTP	Ta-pu	0.88	313	P	Pn	16 10 20.1	-0.2
	baz=324						
WTP				eS	Sg	16 10 32.0	+0.7
	baz=324						
CHN1	Nanshi	0.90	306	P	Pn	16 10 20.6	-0.1
	baz=317						
CHN1				S	Sn	16 10 32.9	-0.5
	baz=317						
SNJT	Kaohsiung City	0.91	277	eP	Pg	16 10 20.5	+0.1
	baz=276						
SNJT				S	Sn	16 10 33.5	0.0
	baz=276						
WLCH	Liuqiu	0.92	251	eP	Pn	16 10 21.4	+0.6
	baz=234						
KAU	Kaohsiung	0.93	265	eP	Pn	16 10 21.0	-0.1
	baz=263						
KAU				eS	Sg	16 10 33.7	+0.7
	baz=263						
SNST	Tainan City	0.94	307	P	Pg	16 10 21.0	0.0
	baz=310						
SNST				eS	Sn	16 10 34.5	+0.1
	baz=310						
CHN4	Tsaushan	0.96	317	P	Pn	16 10 21.7	+0.2
	baz=327						
CHN4				eS	Sn	16 10 34.7	-0.2
	baz=327						
ALS	Alishan	0.98	331	P	Pg	16 10 21.6	-0.1
	baz=336						
ALS				eS	Sn	16 10 35.4	-0.3
	baz=336						
TWK	Hsinying	0.98	309	P	Pn	16 10 21.9	+0.1
	baz=312						
TWK				eS	Sn	16 10 35.9	+0.6
	baz=312						
CHN5	Tsauling	1.11	328	P	Pg	16 10 24.2	+0.1
	baz=332						
CHN5				eS	Sg	16 10 40.0	+1.3
	baz=332						
VWDT	VWDT	1.11	352	eP	Pb	16 10 22.6	-0.9
	baz=4.0						
VWDT				eS	Sb	16 10 37.0	-0.7
	baz=4.0						
WHYT	Xinyi Township	1.12	338	P	Pg	16 10 24.3	-0.1
	baz=353						
WHYT				eS	Sg	16 10 40.4	+1.2
	baz=353						
SCLT	Jiali	1.16	297	S	Sb	16 10 38.5	-0.6
	baz=298						
ESL	Shilin	1.16	5	eP	Pn	16 10 23.7	-0.6
	baz=12						
CHN2	Minshiung	1.17	319	eS	Sg	16 10 40.4	-0.2
	baz=321						
CHY	Chiayi	1.18	316	eS	Sb	16 10 39.1	-0.5
	baz=319						
SSLB	Suanglung	1.18	344	P	Pg	16 10 25.0	-0.5
	baz=348						
SSLB				eS	Sn	16 10 40.2	-0.1
	baz=348						
CHN8	Yiju	1.23	304	eS	Sb	16 10 41.0	-0.1
	baz=306						
WGK	Gukeng	1.24	326	P	Pn	16 10 25.3	-0.1
	baz=330						
WGK				S	Sn	16 10 41.9	+0.1
	baz=330						
WDLH	Douliu	1.26	325	eP	Pb	16 10 26.2	+0.2
	baz=328						
WDLH				eS	Sn	16 10 42.1	-0.1
	baz=328						
SMLT	Sun Moon Lake	1.28	343	P	Pb	16 10 26.7	+0.1
	baz=347						
SMLT				eS	Sg	16 10 44.3	0.0
	baz=347						
WJS	Zhushan	1.29	335	P	Pg	16 10 26.9	-0.6
	baz=338						
WJS				eS	Sg	16 10 44.3	+0.1
	baz=338						
OWD	Renai	1.30	354	eP	Pn	16 10 25.3	-1.1
	baz=14						
TYC	Yuchr	1.32	341	P	Pb	16 10 27.1	+0.1
	baz=345						
TYC				eS	Sg	16 10 45.0	-0.2
	baz=345						
WNT	Mingjian	1.35	335	P	Pg	16 10 28.3	-0.5
	baz=338						
WNT				S	Sg	16 10 45.7	-0.7
	baz=338						
CHGB	Renai	1.41	355	eP	Pn	16 10 27.5	-0.4
	baz=12						
TWD	Chiawan	1.45	10	eP	Pn	16 10 26.7	-1.5
	baz=14						
TWD				eS	Sn	16 10 45.8	-1.0
	baz=14						
WHF	Hehuan Shan	1.49	358	eP	Pn	16 10 28.6	-0.5
	baz=11						
WHF				eS	Sn	16 10 48.2	-0.2
	baz=11						
RLNB	Erlin	1.52	325	eS	Sn	16 10 48.0	-0.5
	baz=327						
ETLH	Xiulin Townshi	1.56	6	eP	Pn	16 10 28.4	-1.4
	baz=21						
WDGT	Dungji	1.64	292	P	Pn	16 10 28.9	-1.9
	baz=291						
WHP	Taichung City	1.66	348	P	Pb	16 10 32.4	-0.4
	baz=351						
WHP				eS	Sb	16 10 53.6	0.0
	baz=351						
TWQ1	Liyutan	1.76	344	P	Pn	16 10 33.4	+0.9
	baz=346						
TWQ1				S	Sb	16 10 56.3	-0.2
	baz=346						
NNS	Nan Shan	1.78	2	P	Pn	16 10 33.2	+0.2
	baz=13						
NNS				eS	Sn	16 10 55.6	+0.3
	baz=13						
ENA	Nanau	1.81	12	eP	Pn	16 10 33.0	-0.2
	baz=15						
ENA				eS	Sn	16 10 55.7	-0.1
	baz=15						
NANB	Nanao	1.81	13	eP	Pn	16 10 32.3	-1.0
	baz=15						
NANB				eS	Sn	16 10 55.6	-0.3
	baz=15						

PHUB	P'eng-hu	1.82	299	eS	Sn	16 10 51.4	-4.7
	baz=298						
NDT	Datong Townshi	1.95	5	eP	Pn	16 10 36.3	+1.1
	baz=22						
NSTT	Nanjuang	1.99	352	P	Pb	16 10 37.7	-0.9
	baz=342						
ENTT	Nioudou	1.99	7	P	Pn	16 10 35.1	-0.6
	baz=23						
LIOB	Emei	2.01	352	eP	Pn	16 10 36.5	+0.6
	baz=342						
TWC	Suao	2.01	14	P	Pb	16 10 37.4	-1.5
	baz=7.0						
TWC				eS	Sn	16 11 00.9	+0.1
	baz=7.0						
YHNB	Yeheng	2.01	2	eP	Pn	16 10 36.0	0.0
	baz=21						
NSK	Sanguang	2.02	1	eP	Pn	16 10 36.6	+0.5
	baz=16						
NSK				eS	Sn	16 11 00.5	-0.5
	baz=16						
EOS1	EOS1	2.03	21	eP	Pn	16 10 37.2	+1.0
	baz=37						
TWE	Neicheng	2.09	9	eP	Pn	16 10 38.2	+1.2
	baz=25						
NWLT	Wulai	2.12	5	eP	Pn	16 10 37.2	-0.4
	baz=16						
NWLT				eS	Sn	16 11 02.2	-1.4
	baz=16						
JYNG	Yonagunijimaku	2.33	40	P	Pn	16 10 40.8	+0.4
JYNG				eS	Sn	16 11 09.0	+0.2
TIPB	Shuangxi	2.36	11	eP	Pn	16 10 42.3	+1.6
	baz=18						
YOJ	Yonaguni jima	2.38	40	P	Pn	16 10 42.1	+1.1
HATJ	Hateruma jima	2.68	58	P	Pn	16 10 45.6	+0.4
HATJ				eS	Sn	16 11 18.3	+1.0
IRIF	Iriomote-Funau	2.78	52	P	Pn	16 10 48.1	+1.6
IRIF				eS	Sn	16 11 21.6	+1.9
JKRS	Kuro-shima	2.94	57	P	Pn	16 10 49.6	+1.0
JKRS				eS	Sn	16 11 25.0	+1.4
JIJ	Ishigaki jima	3.11	56	P	Pn	16 10 51.7	+0.7
JIJ				eS	Sn	16 11 28.8	+1.0
JISG	Ishigakijimahi	3.36	54	P	Pn	16 10 54.7	+0.3
JISG				eS	Sn	16 11 35.0	+1.0
JTJ	Tarama	3.68	57	P	Pn	16 10 59.7	+0.8
JTJ				eS	Sn	16 11 41.8	-0.2

KRNET **27** *16:17:13.6±0.1, 42°.56N×79°.67E, mb2.2*
NNC **27** *16:17:18.0±3.7, 42°.71N×79°.54E, h0^{km}, mb2.4, mpv2.1, Error ellipse: s-maj=26.6km s-min=10.8km az=125.0*
SOME **27** *16:17:24.5, 42°.90N×79°.35E, h15^{km}*
ISC 27 16:17:14.2±1.7**, 42°.52N**±0°.06×**79°.66E**±0°.07**, h10^{km}, n20, σ1^{s}.83**/37**, 6C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	0.82	351	⇓P	Pg	16 17 28.3	-1.6
	0.5nm,0.3s						
PDGK				⇓S	Sg	16 17 39.5	-1.3
	1.5nm,0.4s						
PDGK	Podgornoye	0.82	351	⇓iP	Pg	16 17 28.6	-1.4
	baz=50						
PDGK				⇓iS	Sg	16 17 39.4	-1.3
	baz=50						
PRZ	Przheval'sk	0.93	268	⇑iP	Pg	16 17 30.9	-1.2
	baz=66						
PRZ				⇑iS	Sb	16 17 44.6	-0.4
	baz=66						
DJR	Jarkent	1.81	3	P	Pg	16 17 51.4	+2.5
	0.7nm,0.5s						
DJR				S	Sg	16 18 11.1	-1.4
	2.0nm,0.4s						
DJR	Jarkent	1.81	3	eP	Pg	16 17 51.6	+2.7
	0.2nm,0.2s						
DJR				eS	Sg	16 18 11.1	-1.4
	2.0nm,0.3s						
KOTS	Kotyrbulak	2.00	292	P	Pg	16 17 55.5	+2.9
	1.8nm,0.6s						
KOTS				S	Sg	16 18 17.9	-0.7
	3.9nm,0.5s						
KOTS	Kotyrbulak	2.00	292	eP	Pg	16 17 55.5	+2.9
	1.8nm,0.6s						
KOTS				eS	Sg	16 18 17.9	-0.7
	3.9nm,0.5s						
MDOK	Medeo	2.02	289	⇓Pn	Pg	16 17 54.2	+1.2
	1.3nm,0.7s						
MDOK				⇓Sn	Sb	16 18 15.9	-0.6
	1.9nm,0.7s						
ARXS	Arharly	2.16	322	P	Pg	16 17 56.2	+0.7
	0.7nm,0.7s						
ARXS				S	Sb	16 18 19.2	-1.0
	5.0nm,0.6s						
ARXS	Arharly	2.16	322	eP	Pg	16 17 56.2	+0.7
	0.7nm,0.7s						
ARXS				eS	Sb	16 18 19.2	-1.0
	5.0nm,0.6s						
CHKK	Chushkaly	2.37	305	Pg	Pg	16 18 00.8	+1.3
	0.6nm,0.1s						
CHKK				Lg	Lg	16 18 26.8	
	4.8nm,0.4s						
CHKK	Chushkaly	2.37	305	eP	Pg	16 18 00.8	+1.3
	0.6nm,0.1s						
CHKK				eS	Sb	16 18 26.8	+0.6
	4.8nm,0.4s						
KTBS	Karatobe	2.48	300	Pg	Pg	16 18 02.1	+0.3
	0.6nm,0.6s						
KTBS				Lg	Lg	16 18 29.1	
	6.4nm,0.3s						
KTBS	Karatobe	2.48	300	eP	Pg	16 18 02.1	+0.3
	0.6nm,0.6s						
KTBS				eS	Sb	16 18 29.1	-0.5
	6.4nm,0.3s						
ULHL	Ulahol	2.55	265	⇓iP	Pb	16 17 58.4	-1.7
	baz=64						
ULHL				⇓iS	Sb	16 18 30.7	-0.8
	baz=64						
BOOM	Boomskoye usch	2.75	271	⇑iP	Pb	16 18 01.3	-2.2
	baz=70						
BOOM				⇑iS	Sb	16 18 35.5	-1.9
	baz=70						
NRN	Naryn	2.94	250	⇑eP	Pb	16 18 04.0	-2.8
	baz=49						
NRN				⇑iS	Sb	16 18 40.8	-2.1
	baz=49						
TKM2	Tokmak 2	3.02	279	⇓Pg	Pg	16 18 13.3	+1.2
	1.2nm,0.8s						
TKM2				⇓Lg	Lg	16 18 47.0	
	1.2nm,0.6s						
TKM2	Tokmak 2	3.02	279	⇓iP	Pn	16 18 04.4	+2.1
	baz=78						
TKM2				⇓iS	Sb	16 18 41.7	-3.5
	baz=78						
KZA	Kyzart	3.30	264	⇓eP	Pn	16 18 08.9	+2.6
	baz=63						
KZA				⇓iS	Sn	16 18 49.1	+3.3
	baz=63						

NIED **27** *16:18:00, 36°.70N×141°.10E, h5^{km}, Mw3.8 Best double couple: $M_0$4.73000×10^{14} NP1:ϕ_s311.00000°, δ63.00000°, λ-171.00000°. NP2:ϕ_s217.00000°, δ82.00000°, λ-27.00000°.*
IDC **27** *16:18:17.6±1.8, 36°.72N×141°.24E, h0^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.4/49, mbtmp3.7/6, ML3.3/2, MS2.6/4, Ms1 2.6/4, ms1mx2.5/43, Error ellipse: s-maj=37.6km s-min=21.7km az=64.0*
ISCJB **27** *16:18:18.0±1.1, 36°.65N±0°.03×141°.20E±0°.07, h7^{km}±5^{km}, mb3.5/4, Error ellipse: s-maj=9.2km s-min=5.1km az=3.2*
JMA **27** *16:18:20.4, 36°.66N×141°.05E, h16^{km}±1^{km}, M4.1*
JMA Felt I J1.
ISC 27 16:18:20.5±1.7**, 36°.69N**±0°.04×**141°.04E**±0°.08**, h12^{km}**±10^{km}**, n24, σ0^{s}.75**/24**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.39	258	P	Pg	16 18 28.1	-0.1
ONAJ	Iwakimizuishiy	0.45	335	P	Pb	16 18 30.0	-0.5
ONAJ				S	Sb	16 18 37.2	0.0
JHYU	Hitachinakayam	0.50	226	P	Pg	16 18 30.1	-0.2
JHYU				S	Sg	16 18 37.3	+0.3
JFFD	Fukushimafurud	0.55	316	P	Pg	16 18 31.5	+0.2
JFFD				S	Sg	16 18 39.5	+0.9
JFK	Kawauchi	0.69	349	P	Pb	16 18 33.8	-0.7
JFK				S	Sb	16 18 43.8	-0.2
JYT	Yasato	0.82	236	P	Pg	16 18 35.6	-0.8
JYT				S	Sg	16 18 46.8	-0.3
JSB	Shiboa	0.94	288	P	Pb	16 18 38.9	+0.2
JFT	Otama	1.00	326	P	Pg	16 18 39.6	-0.1
JFT				S	Sb	16 18 53.5	+0.6
MJAR	Matsushiro Arr	2.28	267	Pn	Pn	16 18 58.2	+0.1
	3.0nm,0.3s,baz=79,slow=9.7,SNR=157						
MJAR				Sn	Sb	16 19 29.6	-0.2
	5.7nm,0.3s,baz=201,slow=28,SNR=6.9						
MJAR				LR	LR	16 20 14.9	
	comp=Z,133nm,20.1s,baz=100,slow=48						
MAT	Matsushiro	2.28	267	P	Pn	16 18 58.6	+0.6
MAT				S	Sb	16 19 29.0	-0.8
JHJ	Hachijo jima 2	3.71	196	Pn	Pn	16 19 19.1	+1.5
	14nm,0.3s,baz=270,slow=7.1,SNR=3.5						
JHJ				Sn	Sn	16 20 03.0	+1.7
	5.1nm,0.3s,baz=73,slow=20,SNR=3.0						
ASAJ	Asahikawa	7.51	9	LR	LR	16 23 43.6	
	comp=Z,37nm,21.5s,baz=288,slow=44						
JNU	Nakatsue	9.07	250	LR	LR	16 24 52.5	
	comp=Z,42nm,18.9s,baz=36,slow=43						
KSRS	Korea Array	10.51	278	LR	LR	16 24 01.3	
	comp=Z,35nm,18.1s,baz=78,slow=32						
H11N2	WAKE ISLAND Hy	28.24	120	T	T	16 53 43.5	
	baz=312,slow=75,SNR=226						
H11N1	WAKE ISLAND Hy	28.24	120	T	T	16 53 43.7	
	baz=312,slow=75,SNR=211						
H11N3	WAKE ISLAND Hy	28.25	120	T	T	16 53 44.6	
	baz=312,slow=75,SNR=163						
H11S1	WAKE ISLAND Hy	28.93	122	T	T	16 54 40.0	
	baz=314,slow=75,SNR=817						
H11S3	WAKE ISLAND Hy	28.93	122	T	T	16 54 35.9	
	baz=314,slow=75,SNR=521						
H11S2	WAKE ISLAND Hy	28.95	122	T	T	16 54 37.0	
	baz=314,slow=75,SNR=306						
ZALV	Zalesovo Beam	41.92	313	P	P	16 26 11.1	+0.3
	1.3nm,0.5s,baz=92,slow=6.8,SNR=6.3						
MKAR	Makanchi Array	44.05	302	P	P	16 26 27.6	-0.5
	0.3nm,0.6s,baz=90,slow=9.3,SNR=5.3						
WRA	Warramunga Arr	56.68	188	P	P	16 28 02.8	-1.1
	0.8nm,0.8s,baz=5.6,slow=7.5,SNR=9.4						
ASAR	Alice Springs	60.41	188	P	P	16 28 28.9	-0.9
	0.2nm,0.7s,baz=1.9,slow=6.6,SNR=4.9						

ISCJB **27** *16:20:08.9±0.5, 40°.29N±0°.02×36°.47E±0°.02, h1^{km}±4^{km}, Error ellipse: s-maj=3.4km s-min=2.9km az=137.2*
ISK **27** *16:20:08.5, 40°.29N×36°.47E, h5^{km}, ML3.5/30*
DDA **27** *16:20:08.2, 40°.30N×36°.46E, h13^{km}±1^{km}, ML3.9*
ISC 27 16:20:09.3±0.8**, 40°.32N**±0°.02×**36°.49E**±0°.02**, h9^{km}**±5^{km}**, n57, σ1^{s}.10**/70**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOKA	Tokat	0.01	288	iP	Pg	16 20 11.2	+0.3
TOKT	Tokat	0.04	90	PG	Pg	16 20 10.7	-0.4
TOKT				SG	Sg	16 20 11.9	-0.5
ERBA	Erbaa	0.41	29	iP	Pb	16 20 18.1	-0.7
ERBA				iS	Sb	16 20 24.7	-0.6
ERBA				IAML_P			
	comp=Z,154μm,0.1s						
SVSK	Karacayir	0.56	136	PG	Pg	16 20 19.1	-1.0
SVSK				SG	Sg	16 20 27.8	+0.4
RSDY	Resadiye-TOKAT	0.64	83	PG	Pg	16 20 21.1	-0.6
RSDY				SG	Sb	16 20 31.2	-0.6
SCER	sogukcermik	0.67	133	iP	Pg	16 20 21.1	-1.1
SCER				iS	Sg	16 20 31.2	+0.2
SCER				IAML_P			
	comp=Z,30μm,0.2s						
KVT	Kavak	0.83	336	PG	Pb	16 20 25.1	-0.8
KVT				SG	Sn	16 20 37.2	-2.5
CUSAR	Sarkisla-SIVAS	0.92	192	iP	Pb	16 20 26.3	-1.2
CUSAR				iS	Sb	16 20 38.6	-1.3
HAVZ	Havza	0.95	322	iP	Pg	16 20 27.9	+0.3
HAVZ				iS	Sn	16 20 42.5	-0.2
HAVZ				IAML_P			
	comp=Z,12μm,0.1s						
CUALT	Altinyayla-SIV	1.06	169	iP	Pn	16 20 29.2	-1.4
CUALT				iS	Sb	16 20 45.9	+1.9
SAMS	Samsun-Alacam	1.06	348	iP	Pg	16 20 30.4	+0.6
SAMS				iS	Sn	16 20 44.3	-1.1
SAMS				IAML_P			
	comp=Z,5μm,0.2s						
CUZAR	Zara_SIVAS	1.07	113	iP	Pb	16 20 29.5	-0.6
CUZAR				iS	Sg	16 20 45.9	+2.1
YOZ	Yozgat	1.13	233	PN	Pn	16 20 29.2	-2.2
COAL	Corum-Alaca	1.15	267	iP	Pn	16 20 30.1	-1.6
COAL				iS	Sb	16 20 46.9	+0.4
COAL				IAML_P			
	comp=Z,4μm,0.1s						
ORDU	Ordu-Boztepe	1.24	57	iP	Pg	16 20 32.8	-0.3
ORDU				IAML_P			
	comp=Z,3μm,0.2s						
CUKAN	kangal_SIVAS	1.25	143	iP	Pn	16 20 32.2	-1.0
CTAK	Corum_Osmancik	1.34	285	iP	Pn	16 20 22.1	-12
CTAK				iS	Sn	16 20 41.1	-11
SIRC	Yozgat	1.43	227	iP	Pn	16 20 34.9	-0.6
SIRC				iS	Sn	16 20 54.4	0.0
SIRC				IAML_P			
	comp=Z,8μm,0.2s						
BNN	Bunyan	1.55	199	PN	Pn	16 20 36.6	-0.6
GUNE	Kayseri	1.57	206	iP	Pn	16 20 37.8	+0.4
DIKM	Dikmen	1.62	325	PN	Pb	16 20 39.1	-0.3
CUGUR	Gurin_SVAS	1.71	159	iP	Pn	16 20 41.0	+1.7
CDAG	Cicekdag	1.77	248	iP	Pn	16 20 41.0	+0.8
CDAG				iS	Sb	16 21 06.2	+1.8
CDAG				IAML_P			
	comp=Z,8μm,0.2s						
HEKM	Malatya_Hekimh	1.83	141	iP	Pn	16 20 42.7	+1.6
KEMA	Kemaliye	1.87	124	iP	Pb	16 20 43.0	-0.6
DARE	Darende-Malaty	1.91	156	PN	Pn	16 20 42.5	+0.4
SNOP	Sinop	1.96	331	PN	Pb	16 20 43.4	-1.7
SINO	SINOP_Merkez	1.96	331	iP	Pb	16 20 44.6	-0.5
SINO				IAML_P			
	comp=Z,2μm,0.1s						
AVNS	Nevsehir-Avano	1.97	221	iP	Pn	16 20 44.0	+0.9
REFA	Refahiye_ERZN	1.98	117	iP	Pn	16 20 41.6	-1.5
REFA				IAML_P			
	comp=Z,2μm,0.2s						
DELI	KIRIKKALE	2.00	262	iP	Pn	16 20 44.2	+0.9
ELBS	KAHRAMANMARAS	2.05	166	iP	Pb	16 20 47.1	+0.3
KELT	Kelkit	2.12	94	iP	Pn	16 20 45.9	+0.8
KELT				IAML_P			
	comp=Z,920nm,0.3s						
YAYX	Yaylak	2.49	237	PN	Pn	16 20 50.4	+0.3
KTUT	Trabzon	2.58	74	PN	Pn	16 20 52.8	+1.6
ERZN	Erzincan	2.59	105	PN	Pn	16 20 52.8	+1.3
SERE	Sereflikochisa	2.64	240	PN	Pn	16 20 52.9	+0.7
AFSR	Afar-Bala (An	2.77	253	PN	Pn	16 20 54.7	+0.7
BAYT	Aydıntepe-Bayb	2.79	87	PN	Pn	16 20 54.9	+0.6
KMRS	Kahramanmaras	2.83	173	PN	Pn	16 20 55.6	+0.9
ANTO	Ankara	2.87	262	PN	Pn	16 20 56.1	+0.8
KOZT	Kozan	2.88	191	PN	Pn	16 20 56.6	+1.2
KULU	Kulu	2.98	246	PN	Pn	16 20 57.6	+0.8
SULT	Sultanhani-AKS	3.13	228	PN	Pn	16 20 59.8	+0.9
GAZ	Gaziantep	3.19	170	PN	Pn	16 21 00.8	+1.1
KURC	Kurucasile-Bar	3.22	299	PN	Pn	16 21 01.3	+1.3
YEDI	Yedisu-Bingol	3.24	104	PN	Pn	16 21 01.8	+1.3
KARA	Karaisali	3.25	201	PN	Pn	16 21 01.8	+1.3
CHBY	Cihanbeyli	3.28	239	PN	Pn	16 21 01.3	+0.3
CHOM	Cayeli-Rize	3.34	75	PN	Pn	16 21 02.9	+1.2
CEYT	Ceyhan	3.36	190	PN	Pn	16 21 02.9	+1.0
URFA	Urfa	3.40	147	PN	Pn	16 21 03.6	+1.0
BNGB	Bingl	3.50	111	PN	Pn	16 21 05.6	+1.7
MERS	Mersin	3.78	205	PN	Pn	16 21 08.5	+0.8
LADK	Ladik-KONYA	3.84	238	PN	Pn	16 21 10.0	+1.3
SVRH	Sivrihisar-ESK	3.92	259	PN	Pn	16 21 10.8	+1.1
KONT	Konya--Tatoy	3.99	235	PN	Pn	16 21 11.6	+0.9

MEX 27 16:38:04.9±0.4**, 14°.75N**×**93°.31W, h11^{km}**±166^{km}**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.02	81	iP	Pg	16 38 21.8	-2.8
CCIG	Comitan	1.90	36	eP	Pn	16 38 32.9	-4.6
CCIG				eS	Sn	16 38 56.9	-4.7

IDC 27 16:39:16.1±11.0**, 24°.14S**×**176°.91W, h0^{km}, mb4.2**/3**, mb1 4.4**/4**, mb1mx3.9**/30**, mbtmp4.2**/4**, ML3.4**/1**, Error ellipse: s-maj=205.6km s-min=123.8km az=54.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.45	274	Pn	Pn	16 42 55.4	-0.2
	0.1nm,0.3s,baz=156,slow=20,SNR=6.6						
STKA	Stephens Creek	37.26	249	P	P	16 46 29.2	-0.5
	2.6nm,0.6s,baz=101,slow=11,SNR=8.5						
ASAR	Alice Springs	44.78	260	P	P	16 47 31.7	-0.1
	1.6nm,0.4s,baz=91,slow=7.7,SNR=78						
WRA	Warramunga Arr	45.21	265	P	P	16 47 35.5	+0.3
	1.7nm,0.5s,baz=104,slow=8.0,SNR=15						

ISK **27** *16:40:02.6, 39°.72N×30°.63E, h6^{km}, ML2.2/9*
ISCJB **27** *16:40:03.1±0.5, 39°.74N±0°.03×30°.63E±0°.03, h0^{km}±7^{km}, Error ellipse: s-maj=4.9km s-min=4.0km az=40.8*
DDA **27** *16:40:03.1, 39°.75N×30°.62E, h7^{km}±3^{km}, ML2.7*
ISC 27 16:40:03.1±1.0**, 39°.72N**±0°.03×**30°.63E**±0°.03**, h9^{km}**±9^{km}**, n18, σ0^{s}.45**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORA	Eskisehir	0.21	319	iP	Pg	16 40 07.2	-0.2
BORA				iS	Sg	16 40 10.9	+0.6
BORA				IAML_P			
	comp=Z,20μm,0.1s						
ESKT	Eskisehir	0.27	140	PG	Pg	16 40 08.1	-0.4
ESKT				SG	Sg	16 40 12.6	+0.6
AUKIR	Kırka- Seyitga	0.45	190	iP	Pb	16 40 12.8	-0.6
AUKIR				iS	Sb	16 40 19.9	-0.3
AUMIH	MIHALICIK	0.67	77	iP	Pb	16 40 17.0	-0.1
GULT	Gulveren	0.71	353	PG	Pg	16 40 16.5	-0.4
SVRH	Sivrihisar-ESK	0.74	112	PG	Pg	16 40 17.1	-0.3
AUSIV	SIVRIHISAR	0.76	112	iP	Pb	16 40 18.1	-0.4
AUSIV				iS	Sg	16 40 28.0	+0.4
CAVI	Cavuskoy	0.77	308	PG	Pb	16 40 18.3	-0.4
GEYV	SAKARYA_Geyve	0.80	341	iP	Pg	16 40 18.1	-0.5
GEYV				IAML_P			
	comp=Z,907nm,0.1s						
MDUB	Mudurnu	0.86	30	PG	Pb	16 40 20.5	+0.2
TVSB	Tavsanli	0.94	254	PG	Pb	16 40 21.4	-0.3
TVSB				SG	Sb	16 40 34.4	0.0
BOLV	Bolvadin	1.03	166	iP	Pn	16 40 24.1	+0.3
BOLV				IAML_P			
	comp=Z,877nm,0.2s						
GDZ	Gediz	1.09	235	iP	Pn	16 40 25.7	+0.9
SAHE	Sakarya_HENDEK	1.14	8	iP	Pn	16 40 25.1	-0.2
SAHE				IAML_P			
	comp=Z,93nm,0.1s						
KIBS	BOLU	1.17	53	iP	Pn	16 40 25.8	+0.1
KIBS				iS	Sn	16 40 42.1	+0.3
SHUT	Suhut-Afyon	1.17	183	PN	Pg	16 40 25.3	-0.3
YLV	Yalova	1.28	311	PN	Pg	16 40 27.8	+0.1
ARMT	Armutlu	1.60	302	PN	Pb	16 40 32.0	-0.8

IDC 27 16:41:17.8±2.6**, 3°.19N**×**129°.52E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/32**, mbtmp3.2**/3**, Error ellipse: s-maj=177.0km s-min=24.1km az=70.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.47	169	P	P	16 46 28.7	-0.5
	0.8nm,0.7s,baz=346,slow=9.2,SNR=14						
ASAR	Alice Springs	27.03	171	P	P	16 47 00.6	-1.4
	0.2nm,0.5s,baz=353,slow=7.7,SNR=9.2						
MKAR	Makanchi Array	59.60	324	P	P	16 51 24.9	+1.3
	0.1nm,0.4s,baz=114,slow=6.5,SNR=2.5						

ISCJB **27** *17:02:24.3±0.5, 45°.04S±0°.04×167°.59E±0°.06, h134^{km}±4^{km}, mb3.0/2, Error ellipse: s-maj=8.2km s-min=5.6km az=43.1*
WEL **27** *17:02:26.1, 45°S±2°×16°8E±°, h126^{km}±3^{km}*
IDC **27** *17:02:26.6±4.4, 44°.87S×167°.70E, h141^{km}±41^{km}, mb2.9/2, mb1 3.2/3, mb1mx3.1/24, mbtmp3.5/3, Error ellipse: s-maj=70.2km s-min=28.6km az=16.0*
ISC 27 17:02:25.1±0.9**, 45°.04S**±0°.05×**167°.53E**±0°.05**, h134^{km}**±6^{km}**, n57, σ1^{s}.05**/68**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.46	38	P	Pn	17 02 45.1	+0.8
MSZ				S	Sn	17 02 58.8	0.0
DCZ	Deep Cove	0.50	212	P	Pn	17 02 44.0	-0.5
DCZ				S	Sn	17 02 57.2	-2.1
MLZ	Mavora Lakes	0.53	128	P	Pn	17 02 45.2	+0.4
MLZ				S	Sn	17 02 59.3	-0.5
WHZ	Wether Hill Ro	0.90	161	P	Pn	17 02 47.7	+0.2
WHZ				S	Sn	17 03 03.5	-1.0
WKZ	Wanaka	1.08	79	P	Pn	17 02 50.4	+1.4
WKZ				S	Sn	17 03 07.6	+0.3
EAZ	Earnscleugh	1.27	99	P	Pn	17 02 52.1	+1.1
EAZ				S	Sn	17 03 09.9	-0.8
PYZ	Puysegur Point	1.27	208	P	Pn	17 02 50.5	-0.5
PYZ				S	Sn	17 03 08.2	-2.6
JCZ	Jackson Bay	1.32	43	P	Pn	17 02 52.4	+0.8
JCZ				S	Sn	17 03 11.4	-0.3
TUZ	Tuapeka	1.74	123	P	Pn	17 02 57.1	+1.1
TUZ				S	Sn	17 03 18.2	-1.6
SYZ	Scrubby Hill	1.88	144	P	Pn	17 02 58.4	+0.7
SYZ				S	Sn	17 03 21.3	-1.3
LBZ	Lake Benmore	2.00	72	P	Pn	17 02 59.4	+0.2
LBZ				S	Sn	17 03 24.2	-1.3
ODZ	Otahua Downs	2.21	91	P	Pn	17 03 02.3	+0.6
ODZ				S	Sn	17 03 28.0	-1.9
FOZ	Fox Glacier	2.23	48	P	Pn	17 03 01.8	-0.2
FOZ				S	Sn	17 03 29.6	-0.7
HHSZ	Highcliff Hill	2.32	112	P	Pn	17 03 04.1	+1.0
HHSZ				S	Sn	17 03 30.4	-2.0
RPZ	Rata Peaks	2.85	64	P	Pn	17 03 09.4	-0.5
	23nm,0.3s,baz=221,slow=7.7,SNR=130						
RPZ				S	Sn	17 03 42.9	-1.6
	79nm,0.3s,baz=25,slow=16,SNR=34						
RPZ	Rata Peaks	2.85	64	P	Pn	17 03 09.6	-0.3
RPZ				S	Sn	17 03 42.7	-1.8
WVZ	Waitaha Valley	3.03	51	P	Pn	17 03 11.8	-0.4
WVZ				S	Sn	17 03 46.7	-1.8
INZ	Inchbonnie	3.66	52	P	Pn	17 03 19.8	-0.5
OXZ	Oxford	3.67	64	P	Pn	17 03 19.4	-1.1
MQZ	McQueen's Vall	3.91	72	P	Pn	17 03 23.5	-0.1
CRLZ	Canterbury Las	3.94	70	P	Pn	17 03 25.1	+1.1
AKCZ	Akaroa Harbour	4.03	75	P	Pn	17 03 25.9	+0.7
LTZ	Lake Taylor	4.10	58	P	Pn	17 03 25.4	-0.9
AMCZ	Amberley	4.13	65	P	Pn	17 03 26.3	-0.3
OKCZ	Okains Bay	4.18	74	P	Pn	17 03 28.2	+1.0
DSZ	Denniston Nort	4.53	45	P	Pn	17 03 31.4	-0.6
KHZ	Kahutara	5.08	61	P	Pn	17 03 39.2	-0.1
THZ	Tophouse	5.11	52	P	Pn	17 03 38.5	-1.2
QRZ	Quartz Range	5.58	43	P	Pn	17 03 45.6	-0.5
BSWZ	Blackbirch Sta	5.69	57	P	Pn	17 03 47.8	+0.4
NNZ	Nelson	5.74	50	P	Pn	17 03 48.5	+0.5
TUWZ	Tuamarina	5.91	55	P	Pn	17 03 49.7	-0.7
TCW	Tory Channel	6.25	55	P	Pn	17 03 55.0	+0.1
DUWZ	D'Urville Isla	6.32	50	P	Pn	17 03 55.9	0.0
BHW	Baring Head	6.47	58	P	Pn	17 03 58.2	+0.2
PLWZ	Palliser	6.62	61	P	Pn	17 03 59.3	-0.6
MSWZ	Moikau Station	6.70	60	P	Pn	17 04 00.5	-0.5
PAWZ	Paruwai Farm	6.83	60	P	Pn	17 04 02.7	0.0
KIW	Kapiti Island	6.84	55	P	Pn	17 04 02.0	-0.8
MTW	Mount Morrison	7.01	59	P	Pn	17 04 04.5	-0.6
OGWZ	Otaki Gorge	7.02	56	P	Pn	17 04 03.9	-1.3
HOWZ	Holdsworth Sta	7.17	58	P	Pn	17 04 06.1	-1.2
MRZ	Mangatainoka R	7.36	56	P	Pn	17 04 07.6	-2.2
PKE	Pukeiti	7.56	42	P	Pn	17 04 13.3	+0.7
PKE	Pukeiti	7.56	42	P	Pn	17 04 13.3	+0.7
BFZ	Birch Farm	7.74	59	P	Pn	17 04 13.8	-1.2
BFZ	Birch Farm	7.74	59	P	Pn	17 04 13.8	-1.2
ASAR	Alice Springs	34.63	297	P	P	17 09 02.9	+1.3
	0.3nm,0.8s,baz=136,slow=5.6,SNR=9.4						
WRA	Warramunga Arr	37.13	301	P	P	17 09 23.4	+0.7
	0.2nm,0.6s,baz=139,slow=7.6,SNR=7.3						
H01W1	Cape Leeuwin H	41.47	265	T	T	17 53 57.1	
	baz=121,slow=75,SNR=11						
H01W2	Cape Leeuwin H	41.48	265	T	T	17 53 46.9	
	baz=121,slow=75,SNR=7.9						
H01W3	Cape Leeuwin H	41.49	265	T	T	17 53 58.1	
	baz=121,slow=75,SNR=8.2						
H08S2	Diego Garcia H	88.19	261	T	T	18 52 52.2	
	baz=135,slow=76,SNR=11						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	88.21	261	T	T	18 52 53.3	
	baz=135,slow=76,SNR=3.1						
H08S3	Diego Garcia H	88.21	261	T	T	18 52 54.4	
	baz=135,slow=76,SNR=10						
TORD	Torodi Ar. Bea	146.00	205	PKPbc	PKPdf	17 21 49.9	+1.5
	0.7nm,0.7s,baz=144,slow=2.8,SNR=4.3						
ARCES	ARCESS Array B	148.95	335	PKPbc	PKPbc	17 21 55.6	-0.2
	3.6nm,0.9s,baz=64,slow=3.1,SNR=3.0						

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*WEL **27** 17:02:44.8±1.0, 34°S±7°×18°0E±1°6, h33^{km}, ML4.7/23*
*IDC **27** 17:02:44.1±8.0, 34°.86S×179°.80W, h211^{km}±84^{km}, mb3.1/2, mb1 3.5/3, mb1mx3.2/26, mbtmp3.9/3, Error ellipse: s-maj=113.4km s-min=43.9km az=179.0*
ISC 27 17:02:39.0±1.9**, 34°.23S**±0°.10×**179°.8W**±0°.2**, h150^{km}, n53, σ1^{s}97**/64**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.65	204	P	Pn	17 03 37.3	+2.6
MXZ				S	Sn	17 04 17.8	-0.1
WMGZ	Waiomatatini S	3.85	201	P	Pn	17 03 40.5	+3.3
WMGZ				S	Sn	17 04 24.3	+1.7
HAZ	Te Kaha	4.02	208	P	Pn	17 03 41.2	+1.8
HAZ				S	Sn	17 04 26.9	+0.5
PKGZ	Pakihiroa	4.03	204	P	Pn	17 03 42.0	+2.4
PKGZ				S	Sn	17 04 27.1	+0.4
WIZ	White Island	4.09	216	P	Pn	17 03 42.9	+2.7
PUZ	Puketiti	4.13	202	P	Pn	17 03 43.3	+2.3
PUZ				S	Sn	17 04 29.3	+0.1
RUGZ	Raukumara Rang	4.24	208	P	Pn	17 03 44.1	+1.7
RUGZ				S	Sn	17 04 30.2	-1.7
TWGZ	Tauwhareparae	4.32	204	P	Pn	17 03 45.8	+2.4
TWGZ				S	Sn	17 04 34.9	+1.4
KUZ	Kuaotunu	4.42	234	P	Pn	17 03 45.6	+0.9
WHRZ	Whale Island	4.45	215	P	Pn	17 03 48.5	+3.4
CNGZ	Carnagh Statio	4.53	200	P	Pn	17 03 48.8	+2.7
TKGZ	Te Karaka	4.60	204	P	Pn	17 03 48.7	+1.7
TKGZ				S	Sn	17 04 39.5	-0.6
MWZ	Matawai	4.62	207	P	Pn	17 03 49.0	+1.6
MWZ				S	Sn	17 04 39.1	-1.6
MARZ	Manawahe	4.70	216	P	Pn	17 03 50.5	+2.1
URZ	Urewera	4.72	211	P	Pn	17 03 49.7	+1.1
	17nm,0.3s,baz=18,slow=6.4,SNR=172						
URZ				S	Sn	17 04 39.5	-3.5
	18nm,0.3s,baz=334,slow=22,SNR=9.6						
URZ	Urewera	4.72	211	P	Pn	17 03 49.7	+1.1
URZ				S	Sn	17 04 39.9	-3.1
EDRZ	Edgecumbe	4.76	215	P	Pn	17 03 52.0	+2.8
RAGZ	Rawiri	4.80	207	P	Pn	17 03 51.4	+1.6
RAGZ				S	Sn	17 04 43.6	-1.4
RIGZ	Rimuhau	4.87	203	P	Pn	17 03 52.2	+1.5
RIGZ				S	Sn	17 04 46.2	-0.4
MKRZ	Makatiti	4.92	217	P	Pn	17 03 55.2	+3.9
TARZ	Mount Tarawera	4.98	216	P	Pn	17 03 55.8	+3.7
PRGZ	Paritu Road	5.03	201	P	Pn	17 03 54.3	+1.6
MUGZ	Murupara	5.05	212	P	Pn	17 03 53.5	+0.5
HLRZ	Highlands Stat	5.07	217	P	Pn	17 03 56.5	+3.3
RTZ	Ruatahuna	5.08	210	P	Pn	17 03 53.7	+0.2
SNGZ	Shannon Statio	5.08	206	P	Pn	17 03 54.6	+1.2
UTU	Utuhina	5.09	218	P	Pn	17 03 56.9	+3.4
TOZ	Tahuroa Road	5.16	226	P	Pn	17 03 57.0	+2.6
KNZ	Kokohu	5.19	202	P	Pn	17 03 55.3	+0.6
MHGZ	Mahia Peninsul	5.24	200	P	Pn	17 03 56.9	+1.4
PRRZ	Plateau Road	5.24	215	P	Pn	17 03 57.9	+2.4
RAHZ	Arahi	5.29	207	P	Pn	17 03 56.9	+0.7
ALRZ	Allen Road	5.31	215	P	Pn	17 03 57.3	+0.8
MTHZ	Maungataniwha	5.34	209	P	Pn	17 03 57.7	+0.8
WPRZ	Whakapapatarin	5.37	216	P	Pn	17 03 59.6	+2.4
WHHZ	Waihua	5.38	205	P	Pn	17 03 58.6	+1.2
MRHZ	Matea Rd	5.50	212	P	Pn	17 03 59.5	+0.5
TLZ	Tolley Road	5.55	221	P	Pn	17 04 01.7	+2.1
NMHZ	Naumai	5.56	208	P	Pn	17 04 00.4	+0.6
WHTZ	Whakaora	5.58	216	P	Pn	17 04 01.8	+1.7
HATZ	Hinemaiaia	5.70	214	P	Pn	17 04 03.1	+1.5
BKZ	Black Stump Fm	5.75	210	P	Pn	17 04 01.8	-0.5
HIZ	Hauiti	6.06	224	P	Pn	17 04 08.5	+2.1
NGZ	Ngauruhoe	6.15	215	P	Pn	17 04 07.2	-0.6
PXZ	Pawanui	6.36	204	P	Pn	17 04 09.1	-1.3
VRZ	Vera Road	6.54	220	P	Pn	17 04 14.2	+1.4
TSZ	Takapari Road	6.72	209	P	Pn	17 04 13.2	-2.1
WAZ	Wanganui	6.90	216	P	Pn	17 04 15.2	-2.5
NEZ	North Egmont	7.01	222	P	Pn	17 04 13.3	-5.8
RPZ	Rata Peaks	11.83	214	S	Sn	17 07 18.5	-15
	0.5nm,0.3s,baz=126,slow=19,SNR=6.7						
ASAR	Alice Springs	41.54	272	P	P	17 10 11.7	-0.1
	0.6nm,0.6s,baz=110,slow=7.6,SNR=12						
WRA	Warramunga Arr	42.88	277	P	P	17 10 22.2	-0.4
	0.6nm,0.4s,baz=117,slow=7.5,SNR=12						
FINES	FINESS Array B	148.13	337	PKPbc	PKPbc	17 22 04.7	-1.5
	0.6nm,0.7s,baz=72,slow=4.5,SNR=3.1						

IDC 27 17:13:08.2±1.9**, 2°.73S×130°.69E, h0^{km}, mb3.6**/2**, mb1 3.9**/4**, mb1mx3.5**/31**, mbtmp3.7**/4**, ML3.5**/2**, Error ellipse: s-maj=113.7km s-min=25.6km az=75.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.06	198	Pn	Pn	17 16 55.9	+0.3
	0.1nm,0.3s,baz=25,slow=12,SNR=2.7						
WRA	Warramunga Arr	17.48	168	P	Pn	17 17 13.6	0.0
	0.2nm,0.3s,baz=348,slow=11,SNR=14						
ASAR	Alice Springs	21.05	172	P	P	17 17 53.2	-0.8
	3.4nm,0.6s,baz=351,slow=11,SNR=105						
ASAR				PcP	PcP	17 22 01.3	0.0
	0.4nm,0.8s,baz=4.8,slow=1.1,SNR=2.7						
MKAR	Makanchi Array	65.08	325	P	P	17 23 50.8	0.0
	0.2nm,0.6s,baz=122,slow=8.0,SNR=3.4						

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*IDC **27** 17:26:46.3±0.9, 15°.30S×173°.79W, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.7/29, mbtmp3.8/6, Error ellipse: s-maj=38.1km s-min=23.1km az=126.0*
*ISCJB **27** 17:26:56.7±0.9, 15°.3S±0°.2×174°.0W±0°.2, h94^{km}, mb3.6/6, Error ellipse: s-maj=34.5km s-min=20.4km az=33.6*
ISC 27 17:26:58.2±1.0**, 15°.3S**±0°.2×**173°.9W**±0°.3**, h94^{km}, n13, σ0^{s}40**/7**, mb3.7**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	24.19	197	P	P	17 32 06.2	+0.4
	7.1nm,0.8s,baz=320,slow=19,SNR=4.3						
H11S2	WAKE ISLAND Hy	38.66	330	T	T	18 14 45.1	
	baz=146,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	38.67	330	T	T	18 14 49.3	
	baz=146,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	38.67	330	T	T	18 14 48.9	
	baz=146,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	39.61	331	T	T	18 15 52.6	
	baz=147,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	39.62	331	T	T	18 15 54.7	
	baz=147,slow=76,SNR=6.3						
H11N2	WAKE ISLAND Hy	39.63	331	T	T	18 15 54.0	
	baz=147,slow=76,SNR=6.7						
WRA	Warramunga Arr	49.40	257	P	P	17 35 38.4	-0.4
	0.4nm,0.6s,baz=96,slow=8.2,SNR=9.8						
ASAR	Alice Springs	49.69	252	P	P	17 35 41.0	0.0
	2.0nm,0.7s,baz=87,slow=8.1,SNR=35						
NVAR	Mina Array Bea	74.58	42	P	P	17 38 27.0	-0.3
	0.3nm,0.7s,baz=208,slow=8.9,SNR=2.9						
QSPA	South Pole Qui	74.72	180	P	P	17 38 27.4	-0.2
	1.4nm,0.9s,baz=9.2,slow=2.0,SNR=4.7						
ILAR	Eielson Array	82.46	11	P	P	17 39 10.1	+0.3
	0.2nm,0.6s,baz=204,slow=5.6,SNR=4.5						
BRTR	Keskin Array B	145.80	321	PKPbc	PKPab	17 46 27.8	+0.3
	1.4nm,0.8s,baz=118,slow=1.3,SNR=9.9						

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*MDD **27** 17:43:28.2±1.5, 37°.24N×12°.65W, h0^{km}, mb4.3/14, Error ellipse: s-maj=13.8km s-min=11.2km az=68.0, PRXIMO*
*ISCJB **27** 17:43:28.7±0.8, 37°.37N±0°.03×12°.44W±0°.05, h10^{km}, Error ellipse: s-maj=6.0km s-min=4.6km az=168.5*
*LDG **27** 17:43:28.4±0.5, 37°.08N×12°.96W, h30^{km}, Md3.9/3, Ml3.4/3, Error ellipse: s-maj=9.3km s-min=7.7km az=71.0*
*IGIL **27** 17:43:28.0, 37°.20N×12°.86W, h20^{km}, ML2.6*
*INMG **27** 17:43:29.3±1.3, 37°.05N×13°.07W, h10^{km}, ML2.7, Error ellipse: s-maj=6.3km s-min=4.9km az=85.0*
*CNRM **27** 17:43:31.2, 37°.06N×12°.58W, h135^{km}*
ISC 27 17:43:26.5±1.6**, 37°.30N**±0°.04×**12°.57W**±0°.07**, h10^{km}, n79, σ2^{s}51**/104**, 1C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.00	92	*e*Pn	Pb	17 44 15.9	-4.0
PFVI				*e*Sn	Sn	17 44 51.6	+1.6
PFVI				A	A	17 44 55.7	
	7.6nm,0.2s						
PFVI	Vila Bisbo	3.00	92	⇑Pn	Pb	17 44 16.0	-4.0
	4.0nm,0.1s,SNR=18						
PFVI				Sn	Sn	17 44 51.2	+1.2
	16nm,0.3s,SNR=6.4						
PMST	Lisbon--Monsan	3.04	61	*e*Sn	Sb	17 44 55.0	-2.8
PTEO	Sao Teotonio	3.07	84	*e*Pn	Pb	17 44 16.9	-4.3
PTEO				*e*Sn	Sn	17 44 53.2	+1.3
PTEO				A	A	17 45 00.3	
	8.6nm,0.5s						
PTEO	Sao Teotonio	3.07	84	Pn	Pb	17 44 16.9	-4.3
PTEO				Sn	Sn	17 44 53.2	+1.3
	4.3nm,0.5s						
PMAFR	Mafra	3.08	56	*e*Pn	Pb	17 44 18.1	-3.2
PMAFR				*e*Sn	Sb	17 44 55.9	-3.0
PMAFR				A	A	17 44 56.8	
	32nm,0.2s						
PMAFR	Mafra	3.08	56	Pn	Pb	17 44 18.1	-3.2
	15nm,0.1s,SNR=24						
PMAFR				Sn	Sb	17 44 55.0	-3.9
	22nm,0.1s,SNR=7.2						
MORF	Marmelete	3.13	89	*e*P	Pb	17 44 18.0	-4.2
MORF				*e*S	Sn	17 44 54.5	+1.2
MORF				AML	AML	17 45 00.8	
	comp=N,20nm,0.4s						
MORF	Marmelete	3.13	89	*e*Pn	Pb	17 44 18.0	-4.2
MORF				*e*Sn	Sb	17 44 58.8	-1.6
MORF				A	A	17 45 03.5	
	comp=N,12nm,0.1s						
MORF	Marmelete	3.13	89	Pn	Pb	17 44 18.0	-4.2
MORF				Sn	Sb	17 44 58.8	-1.6
	comp=N,12nm,0.1s						
PNCL	Nicolau / Gran	3.31	75	*e*Pn	Pb	17 44 20.9	-4.3
PNCL				*e*Sn	Sn	17 45 00.2	+2.5
PNCL				A	A	17 45 01.3	
	comp=N,12nm,0.5s						
PNCL	Nicolau / Gran	3.31	75	Pn	Pb	17 44 20.9	-4.3
PNCL				Sn	Sn	17 45 00.2	+2.5
	comp=N,12nm,0.5s						
MESJ	Messejana	3.50	80	*e*S	Sn	17 45 03.5	+1.1
MESJ				AML	AML	17 45 08.1	
	comp=E,14nm,0.5s						
MESJ	Messejana	3.50	80	*e*Pn	Pb	17 44 24.6	-3.9
MESJ				*e*Sn	Sn	17 45 04.3	+1.9
MESJ				A	A	17 45 11.7	
	comp=E,6.6nm,0.4s						
MESJ	Messejana	3.50	80	Pn	Pb	17 44 24.6	-3.9
MESJ				Sn	Sn	17 45 04.3	+1.9
	comp=E,6.6nm,0.4s						
PBDV	Barranco-do-Ve	3.70	89	*e*Pn	Pb	17 44 27.0	-5.0
PBDV				*e*Sn	Sn	17 45 09.0	+1.5
PBDV				A	A	17 45 16.3	
	comp=E,6.3nm,0.3s						
PBDV	Barranco-do-Ve	3.70	89	Pn	Pb	17 44 27.0	-5.0
PBDV				Sn	Sn	17 45 09.0	+1.5
	comp=E,6.3nm,0.3s						
PBEJ	Beja	3.81	78	*e*Pn	Pb	17 44 29.5	-4.2
PBEJ				*e*Sn	Sn	17 45 12.6	+2.7
PBEJ				A	A	17 45 18.4	
	comp=E,13nm,0.2s						
PBEJ	Beja	3.81	78	Pn	Pb	17 44 29.5	-4.2
PBEJ				Sn	Sn	17 45 12.6	+2.7
	comp=E,6.7nm,0.2s						
PMTG	Montargil	3.85	61	*e*Pn	Pb	17 44 28.8	-5.7
PMTG				*e*Sn	Sn	17 45 14.6	+3.5
PMTG				A	A	17 45 19.9	
	comp=E,6.9nm,0.2s						
PMTG	Montargil	3.85	61	Pn	Pb	17 44 28.8	-5.7
PMTG				Sn	Sn	17 45 14.6	+3.5
	comp=E,6.9nm,0.2s						
PVAQ	Vaqueiros	3.87	87	*e*Pn	Pb	17 44 29.2	-5.6
PVAQ				*e*Sn	Sn	17 45 13.2	+1.6
PVAQ				A	A	17 45 17.0	
	comp=E,11nm,0.1s						
PVAQ	Vaqueiros	3.87	87	Pn	Pb	17 44 29.2	-5.6
PVAQ				Sn	Sn	17 45 13.2	+1.6
	comp=E,11nm,0.1s						
PVAQ	Vaqueiros	3.87	87	P	Pb	17 44 29.2	-5.6
PVAQ				S	Sn	17 45 14.5	+3.0
PTOM	Tomar	4.00	53	*e*Pn	Pb	17 44 31.1	-6.0
PTOM				*e*Sn	Sn	17 45 18.2	+3.4
PTOM				A	A	17 45 24.4	
	comp=E,18nm,0.2s						
PTOM	Tomar	4.00	53	Pn	Pb	17 44 31.1	-6.0
PTOM				Sn	Sn	17 45 18.2	+3.4
	comp=E,9.1nm,0.2s						
EGRO	El Granado	4.06	85	Pn	Pb	17 44 31.5	-6.5
	comp=E,5.0nm,0.1s,SNR=26						
EGRO				Sn	Sn	17 45 17.8	+1.6
	comp=E,6.5nm,0.3s,SNR=4.8						
PCAS	Casmilo, Conde	4.21	48	*e*Pn	Pb	17 44 33.9	-6.7
PCAS				*e*Sn	Sn	17 45 22.1	+2.2
PCAS				A	A	17 45 28.8	
	comp=E,8.6nm,0.4s						
PCAS	Casmilo, Conde	4.21	48	Pn	Pb	17 44 33.9	-6.7
PCAS				Sn	Sn	17 45 22.1	+2.2
	comp=E,8.6nm,0.4s						
PESTR	Estremoz	4.23	67	*e*Pn	Pb	17 44 34.3	-6.7
PESTR				*e*Sn	Sn	17 45 23.1	+2.6
PESTR				A	A	17 45 23.7	
	comp=E,5.5nm,0.6s						
PESTR	Estremoz	4.23	67	P	Pb	17 44 35.4	-5.6
PESTR				S	Sb	17 45 26.1	-6.0
PMRV	Marv??o	4.59	61	*e*Pn	Pn	17 44 39.1	+3.1
PMRV				*e*Sn	Sn	17 45 31.3	+1.9
PMRV				A	A	17 45 35.6	
	comp=E,8.5nm,0.2s						
PMRV	Marv??o	4.59	61	Pn	Pn	17 44 39.1	+3.1
PMRV				Sn	Sn	17 45 31.3	+1.9
	comp=E,8.5nm,0.2s						
EBAD	Badajoz	4.62	70	Pn	Pn	17 44 39.6	+3.2
	comp=E,3.5nm,0.1s,SNR=14						
EBAD				Sn	Sn	17 45 31.1	+1.0
	comp=E,8.5nm,0.2s,SNR=4.7						
EMIN	Mina Concepcio	4.71	83	Pn	Pn	17 44 40.3	+2.7
	comp=E,2.0nm,0.1s,SNR=7.3						
EMIN				Sn	Sn	17 45 33.1	+0.8
	comp=E,2.5nm,0.1s						
PCBR	Castelo Branco	4.73	56	*e*Pn	Pn	17 44 41.3	+3.5
PCBR				*e*Sn	Sn	17 45 34.5	+1.7
PCBR				A	A	17 45 39.5	
	comp=E,7.3nm,0.3s						
PCBR	Castelo Branco	4.73	56	Pn	Pn	17 44 41.3	+3.5
PCBR				Sn	Sn	17 45 34.5	+1.7
	comp=E,3.7nm,0.3s						
PVIS	Viseu	4.99	45	*e*Pn	Pn	17 44 43.9	+2.4
PVIS				*e*Sn	Sn	17 45 39.7	+0.4
PVIS				A	A	17 45 45.8	
	comp=E,9.1nm,0.1s						
PVIS	Viseu	4.99	45	Pn	Pn	17 44 43.9	+2.4
PVIS				Sn	Sn	17 45 39.7	+0.4
	comp=E,4.6nm,0.1s						
MTE	Manteigas	5.00	50	*e*Pn	Pn	17 44 44.8	+3.2
MTE				*e*Sn	Sn	17 45 41.3	+1.8
MTE				A	A	17 45 47.2	
	comp=E,11nm,0.3s						
MTE	Manteigas	5.00	50	Pn	Pn	17 44 44.8	+3.2
MTE				Sn	Sn	17 45 41.3	+1.8
	comp=E,5.7nm,0.3s						
PVRL	Vila Real	5.47	42	*e*Sn	Sn	17 45 53.0	+1.9
PVRL	Vila Real	5.47	42	Sn	Sn	17 45 53.0	+1.9
POLO	Lamas de Olo	5.50	41	*e*Pn	Pn	17 44 51.5	+3.0
POLO				*e*Sn	Sn	17 45 52.5	+0.6
POLO				A	A	17 45 53.9	
	comp=E,1.4nm,0.3s						
POLO	Lamas de Olo	5.50	41	Pn	Pn	17 44 51.5	+3.0
POLO				Sn	Sn	17 45 52.5	+0.6
	comp=E,1.4nm,0.3s						
PCAB	Cabril	5.64	37	*e*Sn	Sn	17 45 56.9	+1.8
PCAB	Cabril	5.64	37	Sn	Sn	17 45 56.9	+1.8
EZAM	Zamans	5.69	30	Sn	Sn	17 45 55.4	-1.0
	comp=E,2.8nm,0.1s,SNR=7.9						
PGAV	Gavieira, Arco	5.72	34	*e*Pn	Pn	17 44 54.2	+2.6
PGAV				*e*Sn	Sn	17 45 57.1	-0.2
PGAV				A	A	17 46 11.2	
	comp=E,5.7nm,0.8s						
PGAV	Gavieira, Arco	5.72	34	Pn	Pn	17 44 54.2	+2.6
PGAV				Sn	Sn	17 45 57.1	-0.2
	comp=E,5.7nm,0.8s						
ECAB	El Cabril	5.73	80	Pn	Pn	17 44 54.4	+2.8
	comp=E,3.6nm,0.2s,SNR=43						
ECAB				Sn	Sn	17 45 57.3	-0.1
	comp=E,1.7nm,0.2s						
ELOB	Lobios	5.74	36	Pn	Pn	17 44 54.3	+2.5
	comp=E,0.9nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	17 45 57.2	-0.6
	comp=E,0.6nm,0.3s,SNR=5.8						
MVO	Moncorvo	5.78	46	*e*Pn	Pn	17 44 54.8	+2.5
MVO				*e*Sn	Sn	17 45 58.5	-0.2
MVO				A	A	17 46 02.7	
	comp=E,7.1nm,0.4s						
MVO	Moncorvo	5.78	46	Pn	Pn	17 44 54.9	+2.5
	comp=E,4.2nm,0.3s,SNR=6.6						
MVO				Sn	Sn	17 45 58.1	-0.6
	comp=E,2.2nm,0.1s,SNR=6.4						
HORN	Hornachuelos	5.84	82	P	Pn	17 44 54.6	+1.5
HORN				S	Sn	17 46 01.3	+1.2
RSA	Sarsar	5.97	112	P	Pn	17 44 58.2	+3.2
RSA				S	Sn	17 46 05.7	+2.2
ZHG	ZHG	6.18	127	P	Pn	17 44 59.6	+1.7
ZHG				S	Sn	17 46 09.2	+0.5
EMAZ	Mazaricos	6.28	25	Sn	Sn	17 46 07.4	-3.5
	comp=E,6.1nm,0.1s,SNR=7.9						
PBRG	Braganca	6.37	43	*e*Pn	Pn	17 45 02.9	+2.5
PBRG				*e*Sn	Sn	17 46 13.1	-0.1
PBRG	Braganca	6.37	43	Pn	Pn	17 45 02.9	+2.5
PBRG				Sn	Sn	17 46 13.1	-0.1
EADA	Adamuz	6.40	80	Pn	Pn	17 45 03.7	+2.9
	comp=E,3.5nm,0.2s,SNR=7.9						
EADA				Sn	Sn	17 46 14.3	+0.4
	comp=E,1.6nm,0.1s,SNR=7.9						
ECAL	Calabor	6.46	42	Pn	Pn	17 45 04.6	+2.9
	comp=E,5.7nm,0.4s,SNR=7.9						
ECAL				Sn	Sn	17 46 15.8	+0.2
	comp=E,3.8nm,0.3s,SNR=7.9						
EAGO	Agolada(Pontev	6.48	31	Pn	Pn	17 45 03.6	+1.7
	comp=E,1.1nm,0.1s,SNR=7.9						
EAGO				Sn	Sn	17 46 12.1	-3.8
	comp=E,0.5nm,0.2s,SNR=7.9						
PAB	San Pablo	6.84	68	Pn	Pn	17 45 09.3	+2.5
	comp=E,1.4nm,0.3s,SNR=7.9						
PAB				Sn	Sn	17 46 23.2	-1.5
	comp=E,0.7nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	7.16	68	Pn	Pn	17 45 13.6	+2.4
	comp=E,10nm,0.2s,baz=254,slow=13,SNR=26						
ESDC				Sn	Sn	17 46 31.4	-1.3
	baz=256,slow=23,SNR=7.9						
OUK	Oukaimeden	7.22	146	P	Pn	17 45 12.0	-0.4
OUK				S	Sn	17 46 28.8	-5.8
GUD	Guadarrama	7.36	60	Pn	Pn	17 45 16.7	+2.6
	comp=E,1.4nm,0.4s,SNR=8.4						
GUD				Sn	Sn	17 46 37.1	-0.7
	comp=E,0.7nm,0.2s						
EQES	Quesada	7.57	83	Pn	Pn	17 45 20.0	+3.2
	comp=E,1.6nm,0.3s,SNR=7.9						
MD31	MD31	7.78	122	P	Pn	17 45 20.3	+0.5
MD31				S	Sn	17 46 45.1	-3.0
MDT	Midelt	7.92	122	P	Pn	17 45 22.5	+0.8
MDT				S	Sn	17 46 48.3	-3.1
OUZM	OUZ	7.99	141	P	Pn	17 45 21.8	-0.9
OUZM				S	Sn	17 46 49.6	-3.7
ETOB	Tobarra	8.81	78	Pn	Pn	17 45 36.6	+2.7
	comp=E,1.2nm,0.2s,SNR=7.9						
ETOR	Torete	8.90	64	Pn	Pn	17 45 38.2	+2.9
	comp=E,1.7nm,0.2s,SNR=13						
SJPF	Ste Jean	10.44	53	*e*Pn	Pn	17 45 59.6	+3.4
SJPF				*e*Sn	Sn	17 47 54.5	+1.3
	comp=E,1.7nm,0.6s						
SJPF	Ste Jean	10.44	53	Pn	Pn	17 45 59.6	+3.4
SJPF				Sn	Sn	17 47 54.5	+1.3
	comp=E,0.9nm,0.6s						
ETSF	Etsaut	10.77	55	*e*Pn	Pn	17 46 04.4	+3.7
ETSF				*e*Sn	Sn	17 48 00.9	-0.3
	comp=E,0.6nm,0.3s						
ETSF	Etsaut	10.77	55	Pn	Pn	17 46 04.4	+3.7
ETSF				Sn	Sn	17 48 00.9	-0.3
	comp=E,0.3nm,0.3s						
EPF	Esparros	11.41	56	*e*Pn	Pn	17 46 13.4	+3.8
EPF				*e*Sn	Sn	17 48 17.7	+0.6
	comp=E,1.5nm,0.4s						
EPF	Esparros	11.41	56	Pn	Pn	17 46 13.4	+3.8
EPF				Sn	Sn	17 48 17.7	+0.6
	comp=E,0.8nm,0.4s						

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*IGIL **27** 17:47:29.9, 37°.26N×12°.73W, h1^{km}*
*MDD **27** 17:47:30.6±2.3, 37°.33N×12°.73W, h0^{km}, mb3.6/2, Error ellipse: s-maj=19.9km s-min=19.6km az=168.0, PRXIMO*
*INMG **27** 17:47:32.0±1.4, 37°.13N×13°.11W, h10^{km}, ML2.2, Error ellipse: s-maj=11.0km s-min=8.3km az=103.0*
ISC 27 17:47:31.2±3.2**, 37°.41N**±0°.08×**12°.5W**±0°.1**, h10^{km}, n29, σ2^{s}39**/51**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.94	94	*e*Pn	Pn	17 48 18.6	+0.7
PFVI	Vila Bisbo	2.94	94	Pn	Pn	17 48 18.9	+1.0
	1.5nm,0.2s,SNR=7.9						
PFVI				Sn	Sn	17 48 54.6	+1.4
	0.4nm,0.1s,SNR=7.9						
PMAFR	Mafra	2.96	58	*e*Pn	Pb	17 48 21.5	-2.5
PMAFR				*e*Sn	Sb	17 48 57.5	-2.8
PMAFR				A	A	17 49 00.0	
	21nm,0.6s						
PMAFR	Mafra	2.96	58	Pn	Pn	17 48 20.3	+2.1
	4.7nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	17 48 56.7	+2.8
	3.8nm,0.2s,SNR=7.9						
PTEO	Sao Teotonio	3.00	86	*e*Pn	Pn	17 48 20.9	+2.1
PTEO				*e*Sn	Sn	17 48 58.2	+3.4
PTEO	Sao Teotonio	3.00	86	Pn	Pn	17 48 20.9	+2.1
PTEO				Sn	Sn	17 48 58.2	+3.4
MORF	Marmelete	3.06	91	*e*P	Pn	17 48 20.3	+0.7
MORF	Marmelete	3.06	91	*e*Pn	Pb	17 48 22.8	-3.0
MORF				*e*Sn	Sb	17 49 01.3	-1.9
MORF	Marmelete	3.06	91	Pn	Pb	17 48 22.8	-3.0
MORF				Sn	Sb	17 49 01.3	-1.9
PNCL	Nicolau / Gran	3.22	76	*e*Pn	Pb	17 48 25.0	-3.4
PNCL				*e*Sn	Sn	17 49 02.4	+2.3
PNCL				A	A	17 49 13.7	
	2.5nm,0.7s						
PNCL	Nicolau / Gran	3.22	76	Pn	Pb	17 48 25.0	-3.4
PNCL				Sn	Sn	17 49 02.4	+2.3
	2.5nm,0.7s						
MESJ	Messejana	3.42	82	*e*Pn	Pn	17 48 27.4	+2.9
MESJ	Messejana	3.42	82	Pn	Pn	17 48 27.4	+2.9
PBDV	Barranco-do-Ve	3.64	91	*e*Pn	Pn	17 48 29.9	+2.3
PBDV				*e*Sn	Sn	17 49 14.3	+3.7
PBDV				A	A	17 49 15.3	
	4.2nm,0.7s						
PBDV	Barranco-do-Ve	3.64	91	Pn	Pn	17 48 29.9	+2.3
PBDV				Sn	Sn	17 49 14.3	+3.7
	4.2nm,0.7s						
PMTG	Montargil	3.75	62	*e*Pn	Pn	17 48 31.2	+2.2
PMTG				*e*Sn	Sn	17 49 16.5	+3.4
PMTG				A	A	17 49 24.5	
	3.2nm,0.8s						
PMTG	Montargil	3.75	62	Pn	Pn	17 48 31.2	+2.2
PMTG				Sn	Sn	17 49 16.5	+3.4
	3.2nm,0.8s						
PVAQ	Vaqueiros	3.80	89	*e*Pn	Pn	17 48 31.7	+1.9
PVAQ				*e*Sn	Sn	17 49 17.1	+2.5
PVAQ				A	A	17 49 19.5	
	3.5nm,0.9s						
EGRO	El Granado	3.99	87	Pn	Pn	17 48 33.7	+1.4
	1.7nm,0.3s,SNR=7.9						
EGRO				Sn	Sn	17 49 21.1	+2.0
	0.7nm,0.2s,SNR=7.9						
PESTR	Estremoz	4.13	68	*e*Pn	Pn	17 48 36.9	+2.6
PESTR				*e*Sn	Sn	17 49 24.5	+1.9
PMRV	Marv??o	4.48	62	*e*Pn	Pn	17 48 41.5	+2.3
PMRV				*e*Sn	Sn	17 49 33.6	+2.2
PMRV				A	A	17 49 38.1	
	2.3nm,0.3s						
PMRV	Marv??o	4.48	62	Pn	Pn	17 48 41.5	+2.3
PMRV				Sn	Sn	17 49 33.6	+2.2
	2.3nm,0.3s						
EBAD	Badajoz	4.53	71	Pn	Pn	17 48 41.6	+1.9
	0.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	17 49 34.3	+1.9
	1.8nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	4.64	84	Pn	Pn	17 48 42.7	+1.5
	0.4nm,0.1s,SNR=7.9						

EMIN				Sn	Sn	17 49 36.0	+0.9
	0.3nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	5.59	34	eSn	Sn	17 49 59.5	+0.7
PGAV	Gavieira, Arco	5.59	34	Sn	Sn	17 49 59.5	+0.7
ELOB	Lobios	5.61	36	Sn	Sn	17 50 00.3	+1.0
	1.1nm,0.2s,SNR=7.9						
ECAB	El Cabril	5.64	81	Pn	Pn	17 48 56.7	+1.5
	0.6nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	17 50 00.4	+0.3
	0.5nm,0.2s,SNR=7.9						
EADA	Adamuz	6.31	81	Pn	Pn	17 49 05.9	+1.5
	0.7nm,0.2s,SNR=7.9						
EADA				Sn	Sn	17 50 18.0	+1.4
	1.3nm,0.4s,SNR=7.9						

IDC 27 17:50:16.5±2.3, 0°.78N×126°.22E, h0^{km}, mb3.0/3, mb1 3.2/3, mb1mx3.1/34, mbtmp3.0/3, Error ellipse: s-maj=229.5km s-min=25.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.08	159	P	P	17 55 13.2	-0.2
	0.7nm,1.0s,baz=338,slow=11,SNR=4.7						
ASAR	Alice Springs	25.42	163	P	P	17 55 46.1	+0.1
	0.3nm,0.8s,baz=340,slow=11,SNR=4.1						
MKAR	Makanchi Array	59.70	326	P	P	18 00 22.9	-0.1
	0.1nm,0.3s,baz=126,slow=7.5,SNR=2.5						

IDC 27 17:51:03.0±4.2, 55°.36S×141°.80W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx4.0/23, mbtmp4.2/3, Error ellipse: s-maj=550.7km s-min=83.1km az=165.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	57.05	261	P	P	18 00 51.7	+1.2
	3.6nm,0.9s,baz=132,slow=12,SNR=4.2						
ASAR	Alice Springs	67.69	260	P	P	18 02 01.4	-0.6
	1.9nm,0.7s,baz=140,slow=6.5,SNR=30						
H01W1	Cape Leeuwin H	69.30	238	T	T	19 17 58.3	
	baz=144,slow=76,SNR=6.8						
H01W2	Cape Leeuwin H	69.30	238	T	T	19 17 51.7	
	baz=144,slow=76,SNR=6.4						
H01W3	Cape Leeuwin H	69.31	238	T	T	19 17 56.6	
	baz=144,slow=76,SNR=5.9						
WRA	Warramunga Arr	70.38	263	P	P	18 02 18.5	-0.2
	2.0nm,0.8s,baz=146,slow=5.6,SNR=8.9						
MKAR	Makanchi Array	151.44	271	PKPbc	PKPbc	18 10 57.8	0.0
	1.6nm,0.9s,baz=125,slow=4.0,SNR=13						

IDC 27 17:55:49.6±2.5, 7°.14S×132°.20E, h0^{km}, mb3.2/1, mb1 3.5/4, mb1mx3.3/28, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=93.8km s-min=29.2km az=82.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.63	210	Pn	Pn	17 58 50.6	0.0
	0.1nm,0.3s,baz=37,slow=10,SNR=2.5						
WRA	Warramunga Arr	12.89	171	Pn	Pn	17 58 54.5	+0.1
	0.1nm,0.3s,baz=352,slow=14,SNR=5.6						
WRA				Sn	Sn	18 01 12.8	-6.0
	0.1nm,0.3s,baz=356,slow=24,SNR=3.6						
ASAR	Alice Springs	16.51	174	Pn	Pn	17 59 42.8	-0.1
	0.1nm,0.3s,baz=360,slow=14,SNR=7.5						
MKAR	Makanchi Array	69.55	326	P	P	18 07 00.5	0.0
	0.1nm,0.5s,baz=117,slow=6.2,SNR=2.6						

MEX 27 18:04:47.9±0.5, 16°.03N×98°.12W, h2^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.36	358	i P	Pg	18 04 54.6	-0.2
PNIG				i S	Sg	18 04 59.6	0.0
VHO	Vista Hermosa	1.68	52	eP	Pn	18 05 15.7	-2.9

BJI ***27*** *18:23:32.5, 67°.60N×142°.94E, h8^{km}, mB4.9/15, mb4.5/29, Ms4.2/2, Ms7 4.2/2*

IDC ***27*** *18:23:33.3±0.5, 67°.60N×142°.84E, h0^{km}, mb4.2/27, mb1 4.3/31, mb1mx4.3/37, mbtmp4.2/31, ML4.2/4, MS3.4/12, Ms1 3.4/12, ms1mx3.1/61, Error ellipse: s-maj=12.6km s-min=11.0km az=161.0*

ISCJB ***27*** *18:23:33.2±0.1, 67°.63N±0°.03×142°.80E±0°.06, h10^{km}, mb4.5/122, MS3.5/12, Error ellipse: s-maj=3.9km s-min=2.7km az=149.9*

MOS ***27*** *18:23:33.1±1.0, 67°.59N×142°.84E, h11^{km}, mb4.6/53, Error ellipse: s-maj=11.9km s-min=4.9km az=88.0*

YARS ***27*** *18:23:33.7±0.2, 67°.610N±0°.007×142°.89E±0°.02, h14^{km}±7^{km}*

NEIC ***27*** *18:23:35.5±1.5, 67°.63N×142°.74E, h14^{km}±4^{km}, mb4.6/90, Error ellipse: s-maj=17.5km s-min=12.8km az=151.0*

ISC 27 18:23:34.7±0.3, 67°.60N±0°.03×142°.86E±0°.04, h10^{km}, n268, σ0^{s}.98/268, mb4.6/134, MS3.3/12, 7C-6D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.14	173	eP	Pb	18 23 54.7	-1.8
MOMR				eS	Sb	18 24 09.5	-1.9
MOMR	Moma	1.14	173	eP	Pb	18 23 54.7	-1.8
MOMR				eS	Sb	18 24 09.5	-1.9
YBGR	Belaya Gora	1.57	52	eP	Pn	18 24 00.8	-1.8
YBGR				eS	Sn	18 24 21.5	-1.4
YBGR	Belaya Gora	1.57	52	eP	Pn	18 24 00.8	-1.8
YBGR				eS	Sn	18 24 21.5	-1.4
DEPR	Deputatskiy	2.11	330	eP	Pb	18 24 12.2	-0.8
DEPR				eS	Sb	18 24 38.9	-0.3
DEPR	Deputatskiy	2.11	330	eP	Pb	18 24 12.2	-0.8
DEPR				eS	Sb	18 24 38.9	-0.3
ATKR	Artyk	3.56	164	eP	Pn	18 24 29.1	-0.8
ATKR	Artyk	3.56	164	eP	Pn	18 24 29.1	-0.8
ATKR				eP	Pb	18 24 37.1	-0.6
ATKR				eS	Sb	18 25 24.4	+3.6
SEY	Seymchan	6.15	135	eP	Pn	18 25 05.0	-0.5
SEY	Seymchan	6.15	135	Pn	Pn	18 25 05.0	-0.5
	1.7nm,0.3s,baz=316,slow=12,SNR=88						
SEY				Lg	Lg	18 26 43.1	
	2.7nm,0.3s,baz=17,slow=19,SNR=6.0						
YAK	Yakutsk	7.91	231	eP	Pn	18 25 28.6	-1.0
YAK				e		18 26 55.0	
YAK				pmax	pmax		
	comp=Z,75nm,0.4s						
YAK				pmax	pmax		
	comp=E,22nm,0.4s						
YAK				pmax	pmax		
	comp=N,33nm,0.4s						
YAK				smax	smax		
	comp=N,172nm,0.4s						
YAK				smax	smax		
	comp=E,280nm,0.4s						
YAK	Yakutsk	7.91	231	eP	Pn	18 25 29.0	-0.6
YAK				eS	Sb	18 27 38.0	+12
USMR	Ust'-Maya	8.07	211	eP	Pn	18 25 32.3	+0.5
USMR	Ust'-Maya	8.07	211	eP	Pn	18 25 32.3	+0.5
USMR				eP	Pb	18 26 00.8	+6.4
USMR				eS	Sg	18 27 45.6	-7.7
MA2	Magadan	8.78	153	ePn	Pn	18 25 42.5	+1.0
MA2	Magadan	8.78	153	⇓eP	Pn	18 25 42.6	+1.0
MA2	Magadan	8.78	153	Pn	Pn	18 25 42.3	+0.7
	comp=E,0.7nm,0.3s,baz=346,slow=10,SNR=6.4						
MA2				Lg	Lg	18 28 07.7	
	comp=E,1.1nm,0.3s,baz=307,slow=20,SNR=6.2						
MA2				LR	LR	18 29 28.3	
	comp=E,46nm,20.4s,baz=350,slow=40						
BILL	Bilibino	8.85	76	ePn	Pn	18 25 44.0	+1.5
BILL	Bilibino	8.85	76	eP	Pn	18 25 44.2	+1.7
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,174nm,20.0s						
CGD	Chagda	10.43	218	eP	Pn	18 26 04.0	-0.1
CGD	Chagda	10.43	218	eP	Pn	18 26 04.0	-0.1
CGD				eS	Sn	18 28 56.7	+56
ALDR	Aldan	11.93	229	eS		18 29 43.6	
OLMR	Olekminsk	12.14	244	eS		18 29 49.5	
YCRN	Chernyshevskiy	13.39	264	eS	S	18 30 27.5	+50
IENR	Iengra	14.13	225	eP	Pn	18 26 56.0	+1.3
IENR	Iengra	14.13	225	eP	Pn	18 26 56.0	+1.3
IENR				eS	S	18 30 51.2	+59
YKLR	Yuktali	14.73	232	eP	Pn	18 27 04.9	+2.0
YKLR	Yuktali	14.73	232	eP	Pn	18 27 04.9	+2.0
YKLR				eS	S	18 31 08.8	+64
KHN	Khani	15.04	236	eS	S	18 31 16.3	+65
TNDR	Tynda	15.12	223	eS	S	18 31 21.8	+69
ZEA	Zeya	15.78	216	eP	P	18 27 20.2	-0.5
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				MLR	MLR		
	comp=N,500nm,6.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,6.0s						
PEA1	Petropavlovsk-	16.20	146	ePn	P	18 27 27.0	+1.7
PETK	Petropavlovsk-	16.20	146	ePn	Pn	18 27 23.5	+1.3
PETK	Petropavlovsk-	16.20	146	Pn	P	18 27 27.0	+1.7
	comp=Z,0.5nm,0.3s,baz=343,slow=3.5,SNR=9.4						
BOD	Bodaibo	16.28	247	eP	Pn	18 27 21.1	-2.0
BOD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PET	Petropavlovsk	16.49	145	eP	P	18 27 28.2	-0.3
TYV	Tymovskoe	16.79	180	eP	Pn	18 27 19.7	-10
TYV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GAMB	Gambell	18.75	80	eP	Pn	18 27 54.7	+1.0
	comp=Z,5.2nm,0.8s						
KLR	Kul'dur	19.26	203	P	P	18 27 59.9	+0.9
	comp=Z,0.3nm,0.3s,baz=12,slow=12,SNR=11						
KLR				Lg	Lg	18 33 34.5	
	comp=Z,0.0nm,0.3s,baz=336,slow=20,SNR=3.0						
KLR				LR	LR	18 35 51.3	
	comp=Z,66nm,20.6s,baz=22,slow=38						
NRIK	Noril'sk	19.79	300	P	P	18 28 05.8	+1.1
	comp=Z,0.9nm,0.3s,baz=91,slow=5.9,SNR=6.1						
RDOG	Red Dog Mine	19.93	63	eP	P	18 28 06.5	+0.2
	comp=Z,11nm,0.9s						
ANM	Nome	20.69	74	eP	P	18 28 15.0	+0.5
	comp=Z,5.7nm,1.0s						
ANM	Nome	20.69	74	eP	P	18 28 15.0	+0.5
ANM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YSS	Yuzh-Sakhalins	20.70	180	eP	Pn	18 28 18.3	+1.3
YSS				e		18 28 31.0	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
HIA	Hailar	21.75	224	eP	P	18 28 25.1	-0.9
	comp=Z,16nm,0.8s						
HIA	Hailar	21.75	224	eP	P	18 28 25.1	-0.9
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
KUR	Kuril'sk	22.57	171	⇑eP	P	18 28 35.3	+0.5
ASAJ	Asahikawa	23.54	180	P	P	18 28 44.7	-0.1
	comp=Z,8.6nm,0.9s,baz=26,slow=8.7,SNR=5.6						
ASAJ				LR	LR	18 38 07.5	
	comp=Z,100nm,18.4s,baz=24,slow=37						
TOLK	Toolik Lake Re	24.08	56	eP	P	18 28 50.0	+0.1
	comp=Z,41nm,1.4s						
IM3	Indian Mountai	24.08	64	eP	P	18 28 50.1	+0.3
MDJ	Mudanjiang	24.08	204	eP	P	18 28 49.9	-0.1
	comp=Z,30nm,1.4s						
IRK	Irkutsk	24.13	250	eP	P	18 28 51.3	+0.9
USRK	Ussuriysk Ar.	24.16	199	P	P	18 28 50.8	+0.1
	comp=Z,4.2nm,0.7s,baz=9.9,slow=10,SNR=10						
USRK				LR	LR	18 38 55.8	
	comp=Z,153nm,19.6s,baz=11,slow=38						
COLD	Coldfoot	24.61	59	eP	P	18 28 56.0	+1.4
	comp=Z,18nm,1.1s						
VLA	Vladivostok	25.23	199	⇓eP	P	18 29 00.6	+0.2
VLA				pmax	pmax		
	comp=Z,12nm,1.2s						
ERM	Erimo	25.64	179	⇑eP	P	18 29 03.7	-0.4
ERM				pmax	pmax		
	comp=Z,40nm,1.4s						
MLY	Manley	25.66	64	eP	P	18 29 04.5	+0.3
	comp=Z,7.0nm,0.9s						
MOY	Mondy	25.79	253	eP	P	18 29 07.4	+1.8
MOY				pmax	pmax		
	comp=Z,22nm,1.7s						
ZAK	Zakamensk	26.02	248	eP	P	18 29 07.2	-0.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MDM	Murphy Dome	26.56	63	eP	P	18 29 12.7	+0.4
	comp=Z,8.7nm,0.8s						
COLA	College	26.74	63	eP	P	18 29 13.5	-0.3
	comp=Z,9.4nm,0.8s						
COLA	College	26.74	63	d iP	P	18 29 14.5	+0.6
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TRF	Thorofare Moun	26.77	67	eP	P	18 29 15.3	+0.9
	comp=Z,49nm,1.8s						
ULN	Ulaanbaatar	26.85	241	eP	P	18 29 15.2	0.0
	comp=Z,5.6nm,1.3s						
ULN	Ulaanbaatar	26.85	241	⇑eP	P	18 29 15.3	0.0
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
WRH	Wood River Hil	26.90	63	eP	P	18 29 15.8	+0.5
	comp=Z,11nm,1.2s						
MCK	McKinley	27.07	65	eP	P	18 29 17.5	+0.6
	comp=Z,38nm,1.6s						
MCK	McKinley	27.07	65	eP	P	18 29 17.5	+0.6
MCK				pmax	pmax		
	comp=Z,38nm,1.6s						
SONA1	Songino Array	27.09	242	eP	P	18 29 17.8	+0.5
SONA0	Songino Array	27.10	242	eP	P	18 29 18.1	+0.6
SONM	Songino Array	27.10	242	P	P	18 29 18.1	+0.6
	comp=Z,2.1nm,0.7s,baz=26,slow=7.9,SNR=4.4						
IL1	Eielson Array	27.13	62	eP	P	18 29 17.4	0.0
ILAR	Eielson Array	27.13	62	P	P	18 29 17.8	+0.3
	comp=Z,8.5nm,0.9s,baz=299,slow=7.9,SNR=68						
ILB	Eielson Array	27.13	62	eP	P	18 29 17.4	0.0
	comp=Z,10.0nm,0.9s						
INK	Inuvik	29.16	49	P	P	18 29 37.0	+1.5
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK				MLR	MLR		
	comp=Z,150nm,18.5s						
INK	Inuvik	29.16	49	P	P	18 29 37.0	+1.5
	comp=Z,0.7nm,0.5s,baz=302,slow=4.6,SNR=3.9						
INK				LR	LR	18 44 15.0	
	comp=Z,150nm,18.5s,baz=153,slow=43						
ZAA1	Zalesovo Array	30.12	272	eP	P	18 29 44.6	+0.5
ZALV	Zalesovo Beam	30.12	272	P	P	18 29 44.6	+0.4
	comp=Z,0.9nm,0.4s,baz=39,slow=7.6,SNR=5.2						
MJAR	Matsushiro Arr	31.21	187	LR	LR	18 42 02.8	
	comp=Z,51nm,19.4s,baz=75,slow=36						
BJT	Baijiatuau	31.29	222	eP	P	18 29 54.5	0.0
	comp=Z,6.6nm,0.8s						
BJT	Baijiatuau	31.29	222	eP	P	18 29 54.5	0.0
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSRS	Korea Array	31.35	203	LR	LR	18 42 36.5	
	comp=Z,67nm,20.6s,baz=14,slow=36						
DGZ	Jazzator, Alta	32.47	265	⇓eP	P	18 30 04.5	-0.5
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.7s						
RES	Resolute Bay	33.27	24	eP	P	18 30 11.8	+0.2
	comp=Z,6.0nm,1.2s						
RES	Resolute Bay	33.27	24	eP	P	18 30 11.8	+0.2
RES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
JHJ	Hachijo jima 2	34.56	185	LR	LR	18 44 46.3	
	comp=Z,44nm,20.0s,baz=96,slow=37						
SKAG	Skagway	34.72	63	eP	P	18 30 24.2	0.0
	comp=Z,31nm,1.4s						
KURK	Kurchatov	35.03	274	eP	P	18 30 27.1	+0.1
	comp=Z,9.3nm,1.3s						
KURK	Kurchatov	35.03	274	⇑eP	P	18 30 27.4	+0.4
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JNU	Nakatsue	35.22	198	LR	LR	18 45 11.9	
	comp=Z,36nm,18.5s,baz=35,slow=37						
BRVK	Borovoye	36.32	284	eP	P	18 30 38.2	+0.1
	comp=Z,4.2nm,0.8s						
BRVK	Borovoye	36.32	284	⇓iP	P	18 30 38.5	+0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARA0	ARCESS Array S	36.61	328	eP	P	18 30 40.5	0.0
ARA0				ePcP	PcP	18 33 02.9	-0.2
ARCES	ARCESS Array B	36.61	328	P	P	18 30 40.5	0.0
	comp=Z,3.2nm,0.7s,baz=45,slow=10,SNR=3.1						
ARCES				PcP	PcP	18 33 02.9	-0.2
	comp=Z,4.3nm,0.9s,baz=43,slow=4.1,SNR=7.9						
MK31	Makanchi Array	36.82	267	eP	P	18 30 42.2	-0.3
	comp=Z,3.3nm,0.8s						
MK31	Makanchi Array	36.82	267	eP	P	18 30 42.2	-0.3
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK32	Makanchi Array	36.82	267	eP	P	18 30 42.0	-0.5
MKAR	Makanchi Array	36.82	267	eP	P	18 30 42.5	0.0
	comp=Z,30nm,1.0s						
MKAR	Makanchi Array	36.82	267	eP	P	18 30 42.5	0.0
MKAR				pmax	pmax		
	comp=Z,31nm,1.0s						
MKAR	Makanchi Array	36.82	267	P	P	18 30 42.0	-0.5
	comp=Z,4.4nm,0.8s,baz=40,slow=6.6,SNR=42						
MK01	Makanchi Array	36.84	267	eP	P	18 30 42.1	-0.5
MAKZ	Makanchi	36.93	267	eP	P	18 30 43.1	-0.3
	comp=Z,2.5nm,0.8s						
MAKZ	Makanchi	36.93	267	eP	P	18 30 43.1	-0.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	Urumqi	37.27	259	eP	P	18 30 45.5	-0.9
	comp=Z,18nm,1.6s						
WMQ	Urumqi	37.27	259	eP	P	18 30 45.5	-0.9
WMQ				pmax	pmax		
	comp=Z,18nm,1.6s						
TMCR	Tamitsa	38.07	317	eP	P	18 30 53.7	+0.9
TMCR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YKW3	Yellowknife Ar	38.74	46	eP	P	18 30 57.9	-0.5
	comp=Z,6.2nm,1.2s						
YKA	Yellowknife Ar	38.80	46	P	P	18 30 59.1	+0.1
	comp=Z,2.5nm,0.7s,baz=322,slow=8.0,SNR=42						
YKB5	Yellowknife Ar	38.80	46	eP	P	18 30 58.5	-0.4
OTUK	Ortayu	39.43	277	P	P	18 31 05.5	+1.1
OTUK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PDGK	Podgornoye	40.81	266	P	P	18 31 17.7	+1.7
PDGK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ABKAR	Akbulak array	43.22	288	eP	P	18 31 35.5	0.0
	comp=Z,4.4nm,0.9s						
CD2	Chengdu	43.30	232	eP	P	18 31 37.0	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AAK	Ala-Archa	43.31	271	eP	P	18 31 37.9	+1.4
	comp=Z,5.1nm,0.6s						
AAK	Ala-Archa	43.31	271	⇓eP	P	18 31 37.0	+0.5
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FIA0	FINESS Array S	43.36	321	eP	P	18 31 36.5	0.0
FIA0	FINESS Array S	43.36	321	eP	P	18 31 36.5	0.0
FINES	FINESS Array B	43.36	321	P	P	18 31 36.5	0.0
	comp=Z,2.5nm,0.5s,baz=37,slow=8.8,SNR=18						
MNAS	Manas	44.20	272	P	P	18 31 45.6	+1.9
MNAS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN	Obninsk	46.04	310	eP	P	18 31 56.6	-1.2
OBN				e		18 33 36.0	
OBN				e		18 33 46.9	
OBN				ePPP	PPP	18 34 22.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,75nm,16.0s						
NB2	NORSAR Subarra	46.93	330	P	P	18 32 04.5	-0.3
	comp=Z,0.9nm,0.6s,baz=23,slow=7.9						
NB200	NORSAR Array S	46.93	330	eP	P	18 32 04.6	-0.3
NOA	NORSAR Array B	46.93	330	P	P	18 32 04.6	-0.3
	comp=Z,3.5nm,0.9s,baz=24,slow=7.8,SNR=5.5						
NOA				LR	LR	18 56 45.7	
	comp=Z,25nm,18.0s,baz=10.0,slow=42						
FCC	Fort Churchill	47.21	37	eP	P	18 32 06.5	-0.5
	comp=Z,15nm,1.4s						
FCC	Fort Churchill	47.21	37	eP	P	18 32 06.5	-0.5
FCC				pmax	pmax		
	comp=Z,15nm,1.4s						
GAR	Garm	48.05	272	eP	P	18 32 14.8	+0.9
	comp=Z,15nm,0.8s						
GAR	Garm	48.05	272	eP	P	18 32 14.9	+0.9
GAR				pmax	pmax		
	comp=Z,15nm,0.8s						
LSA	Lhasa	48.55	246	eP	P	18 32 18.2	-0.1
	comp=Z,3.8nm,0.9s						
LSA	Lhasa	48.55	246	eP	P	18 32 18.2	-0.1
LSA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VSR	Storozhevoye	48.62	305	eP	P	18 32 16.6	-1.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CHGR	Chuyangaron	48.79	273	eP	P	18 32 20.1	+0.5
FFC	Flin Flon	48.87	44	eP	P	18 32 19.5	-0.4
	comp=Z,6.8nm,0.8s						
FFC	Flin Flon	48.87	44	eP	P	18 32 19.5	-0.4
FFC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NEW	Newport	50.02	59	LR	LR	18 53 38.4	
	comp=Z,273nm,20.4s,baz=188,slow=36						
SUW	Suwalki	50.68	318	eP	P	18 32 33.6	-0.1
	comp=Z,25nm,0.9s						
SUW	Suwalki	50.68	318	eP	P	18 32 33.6	-0.1
SUW				pmax	pmax		
	comp=Z,25nm,0.9s						
NIL	Nilore	51.62	266	eP	P	18 32 39.4	-1.7
	comp=Z,5.8nm,0.4s						
NIL	Nilore	51.62	266	eP	P	18 32 39.4	-1.7
NIL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AKASG	Malin Array Be	52.04	312	P	P	18 32 43.5	-0.5
	comp=Z,4.8nm,0.6s,baz=28,slow=8.4,SNR=9.6						
AKBB	Malin Array Si	52.04	312	eP	P	18 32 43.2	-0.6
	comp=Z,5.2nm,0.8s						
AKBB	Malin Array Si	52.04	312	eP	P	18 32 43.3	-0.6
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GUN	Gumba	52.05	250	eP	P	18 32 45.8	+1.1
	comp=Z,10.0nm,0.6s						
KIEV	Kiev	52.05	312	eP	P	18 32 43.2	-0.7
	comp=Z,5.0nm,0.8s						
KIEV	Kiev	52.05	312	eP	P	18 32 43.3	-0.7
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JIRN	Jiri	52.17	250	eP	P	18 32 46.9	+1.3
	comp=Z,34nm,0.8s						
KKN	Kakani	52.38	251	eP	P	18 32 48.3	+1.3
	comp=Z,20nm,0.6s						
DANN	Dangsing	52.42	253	eP	P	18 32 48.7	+1.3
	comp=Z,19nm,0.6s						
PKIN	Phulchoki	52.53	251	eP	P	18 32 49.0	+0.8
	comp=Z,5.4nm,0.5s						
PKI	Pulchoki	52.53	251	eP	P	18 32 49.1	+0.9
	comp=Z,5.1nm,0.5s						
DMN	Daman	52.61	251	eP	P	18 32 50.2	+1.5
	comp=Z,8.5nm,0.5s						
PINE	Pine Mountain	52.63	65	eP	P	18 32 49.5	+0.9
	comp=Z,6.0nm,0.8s						
RAMN	Ramite	52.67	249	eP	P	18 32 50.0	+0.8
	comp=Z,12nm,0.6s						
PYUN	Piuthan	52.93	253	eP	P	18 32 51.7	+0.6
KOLN	Koldanda	53.01	252	eP	P	18 32 52.7	+1.1
GEYT	Alibeck	53.62	282	P	P	18 32 57.0	+1.2
	comp=Z,3.8nm,0.8s,baz=35,slow=5.4,SNR=5.7						
YBH	Yreka Blue Hor	53.82	68	LR	LR	18 57 38.4	
	comp=Z,132nm,18.5s,baz=278,slow=38						
KIV	Kislovodsk	53.85	298	eP	P	18 32 55.9	-1.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBZ	Khabaz	53.98	298	P	P	18 32 59.1	+0.8
	comp=Z,6.9nm,0.8s,baz=87,slow=1.3,SNR=13						
DLMT	Dillon	54.05	57	eP	P	18 32 58.5	-0.5
	comp=Z,8.7nm,1.2s						
ULM	Lac du Bonnet	54.52	42	P	P	18 33 01.3	-0.9
	comp=Z,1.0nm,0.3s,baz=3.6,slow=8.8,SNR=4.6						
ULM				PcP	PcP	18 34 04.3	-1.0
	comp=Z,1.8nm,0.5s,baz=338,slow=5.4,SNR=3.5						
KWP	Kalwaria Pacla	54.79	317	eP	P	18 33 04.7	+0.5
	comp=Z,103nm,0.9s						
KWP	Kalwaria Pacla	54.79	317	eP	P	18 33 04.7	+0.5
ESK	Eskdalemuir	54.83	337	i P	P	18 33 06.1	+1.8
OJC	Ojcow	55.00	319	eP	P	18 33 05.4	-0.3
	comp=Z,9.4nm,0.9s						
OJC	Ojcow	55.00	319	eP	P	18 33 05.4	-0.3
OJC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HLID	Hailey	55.05	60	eP	P	18 33 06.4	+0.1
	comp=Z,2.8nm,1.0s						
YHH	Holmes Hill	55.12	56	eP	P	18 33 08.6	+1.7
	comp=Z,4.7nm,0.9s						
RLMT	Red Lodge	55.32	55	eP	P	18 33 09.6	+1.3

	comp=Z,9.9nm,0.8s						
YFT	Old Faithful	55.42	57	eP	P	18 33 10.4	+1.3
	comp=Z,6.6nm,0.9s						
H17A	Grant Village	55.56	56	eP	P	18 33 09.7	-0.4
	comp=Z,4.7nm,0.9s						
YPP	Pitchstone Pla	55.59	57	eP	P	18 33 10.3	-0.1
	comp=Z,3.3nm,0.9s						
CLL	Collm	55.61	324	eP	P	18 33 09.8	-0.3
	comp=Z,8.8nm,0.8s						
CLL	Collm	55.61	324	⇑iP	P	18 33 10.0	0.0
	comp=Z,11nm,0.9s						
CLL				i pP	pP	18 33 12.8	-0.5
CLL	Collm	55.61	324	⇑iP	P	18 33 10.0	0.0
CLL				i		18 33 12.8	
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
DPC	Dobruska-Polom	55.74	321	eP	P	18 33 11.4	+0.4
DPC	Dobruska-Polom	55.74	321	eP	P	18 33 11.4	+0.4
FLWY	Flagg Ranch	55.80	57	eP	P	18 33 13.1	+1.3
	comp=Z,8.6nm,0.8s						
BRG	Berggiesshubel	55.80	323	eP	P	18 33 11.7	+0.2
	comp=Z,1.6nm,0.6s						
BRG	Berggiesshubel	55.80	323	eP	P	18 33 11.6	+0.2
BRG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KRLC	Kraliky	55.88	321	eP	P	18 33 11.7	-0.4
KRLC	Kraliky	55.88	321	eP	P	18 33 11.7	-0.4
SCHQ	Schefferville	55.90	20	eP	P	18 33 10.9	-1.1
	comp=Z,55nm,1.9s						
SCHQ	Schefferville	55.90	20	P	P	18 33 11.0	-1.1
	comp=Z,4.3nm,0.7s,baz=352,slow=9.3,SNR=9.2						
BUR08	Bucovina Ar. S	55.94	314	eP	P	18 33 12.0	-0.5
BUR04	Bucovina Ar. S	55.96	314	eP	P	18 33 12.3	-0.4
LANS	Liptovska Anna	56.07	319	eP	P	18 33 15.1	+1.7
LANS	Liptovska Anna	56.07	319	eP	P	18 33 15.1	+1.7
MOOW	Moose Ponds	56.08	57	eP	P	18 33 14.3	+0.5
	comp=Z,4.4nm,0.9s						
LOHW	Long Hollow	56.25	57	eP	P	18 33 17.0	+2.0
	comp=Z,10nm,1.7s						
BEKR	Beckworth	56.30	67	eP	P	18 33 15.9	+0.6
	comp=Z,4.1nm,0.7s						
REDW	Red Top Meadow	56.39	57	eP	P	18 33 16.8	+0.8
	comp=Z,6.3nm,0.8s						
CMAR	Chiang Mai Arr	56.44	232	P	P	18 33 15.9	-0.5
	comp=Z,0.9nm,0.8s,baz=27,slow=8.1,SNR=6.8						
GNI	Garni	56.52	295	⇑iP	P	18 33 17.9	+1.0
GNI				pmax	pmax		
	comp=Z,55nm,1.4s						
VYHS	Vyhne	56.84	319	eP	P	18 33 19.5	+0.6
VYHS				pmax	pmax		
	comp=Z,77nm,3.0s						
VYHS	Vyhne	56.84	319	eP	P	18 33 19.5	+0.6
ELK	Elko	57.29	62	eP	P	18 33 22.1	-0.3
	comp=Z,4.4nm,1.3s						
ELK	Elko	57.29	62	eP	P	18 33 22.1	-0.3
ELK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BW06	Boulder Array	57.34	56	eP	P	18 33 23.0	+0.2
	comp=Z,3.6nm,0.7s						
PD31	Pinedale Array	57.34	56	eP	P	18 33 23.0	+0.2
	comp=Z,3.2nm,0.7s						
PDAR	Pinedale Array	57.34	56	eP	P	18 33 22.3	-0.5
PDAR	Pinedale Array	57.34	56	P	P	18 33 23.1	+0.2
	comp=Z,3.0nm,0.7s,baz=2.0,slow=2.8,SNR=35						
PDAR				PcP	PcP	18 34 16.6	-0.1
	comp=Z,0.8nm,0.6s,baz=5.7,slow=0.9,SNR=4.4						
KHC	Kasperske Hory	57.52	323	eP	P	18 33 24.7	+1.0
KHC	Kasperske Hory	57.52	323	eP	P	18 33 24.7	+1.0
PBKT	Sadao Pong	57.62	229	eP	P	18 33 25.3	+0.6
GEC2	GERESS Array S	57.76	323	eP	P	18 33 25.8	+0.3
	comp=Z,15nm,1.9s						
GEC2	GERESS Array S	57.76	323	eP	P	18 33 25.8	+0.3
GEC2				pmax	pmax		
	comp=Z,15nm,1.9s						
GERES	GERESS Array B	57.76	323	P	P	18 33 25.8	+0.3
	comp=Z,1.5nm,0.7s,baz=32,slow=5.3,SNR=9.3						
GEA0	GERESS Array S	57.77	323	eP	P	18 33 23.7	-1.7
KVN	Kaiserville	57.82	65	eP	P	18 33 27.2	+1.1
	comp=Z,3.4nm,0.8s						
KVN	Kaiserville	57.82	65	eP	P	18 33 27.2	+1.1
KVN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WAKR	Walker	57.84	67	eP	P	18 33 27.5	+1.2
	comp=Z,5.2nm,1.0s						
CONA	Conrad Observa	58.10	321	i pP	P	18 33 28.6	+0.8
	comp=Z,7.1nm,1.5s						
TCUT	Toone Canyon	58.23	59	eP	P	18 33 30.4	+1.3
	comp=Z,7.6nm,0.9s						
NV01	Mina Array Sit	58.30	66	eP	P	18 33 30.5	+0.9
NVAR	Mina Array Bea	58.30	66	P	P	18 33 31.0	+1.5
	comp=Z,3.7nm,0.9s,baz=320,slow=5.4,SNR=17						
K22A	Casper	58.41	54	eP	P	18 33 29.7	-0.4
	comp=Z,9.1nm,1.0s						
MOA	Molln	58.56	322	i pP	P	18 33 31.7	+0.7
	comp=Z,3.8nm,0.8s						
DUG	Dugway, Tooele	58.60	60	eP	P	18 33 32.7	+1.2
	comp=Z,5.3nm,0.9s						
DUG	Dugway, Tooele	58.60	60	eP	P	18 33 32.7	+1.2
DUG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JLU	Jordanelle	58.68	59	eP	P	18 33 33.7	+1.5
	comp=Z,6.0nm,0.9s						
MDPB	Devils Postpil	58.74	67	eP	P	18 33 34.4	+1.7
	comp=Z,5.1nm,0.8s						
OMMB	Old Mammoth Mi	58.79	67	eP	P	18 33 35.0	+1.9
	comp=Z,4.1nm,0.9s						
NLU	North Lily Min	59.06	60	eP	P	18 33 36.2	+1.4
	comp=Z,7.1nm,1.1s						
R11A	Troy Canyon, C	59.32	64	eP	P	18 33 37.5	+0.9
	comp=Z,4.9nm,1.1s						
KBA	Koelnbreinsper	59.50	322	i pP	P	18 33 38.1	+0.5
	comp=Z,8.0nm,1.1s						
WTTA	Wattenberg	59.72	324	eP	P	18 33 38.9	-0.3
	comp=Z,5.1nm,0.7s						
PSUT	Pine Spring	59.74	62	eP	P	18 33 40.9	+1.4
	comp=Z,5.7nm,0.8s						
OBKA	Obir	59.75	321	i P	P	18 33 38.4	-0.9
	comp=Z,9.6nm,1.2s						
ECH	Echery	59.79	327	eP	P	18 33 39.7	+0.2
	comp=Z,34nm,1.9s						
ECH	Echery	59.79	327	eP	P	18 33 39.7	+0.2
ECH				pmax	pmax		
	comp=Z,34nm,1.9s						
P17A	Butcher Ranch,	59.93	59	eP	P	18 33 42.0	+1.3
	comp=Z,4.6nm,0.8s						
FETA	Feichten	60.15	324	eP	P	18 33 40.4	-1.8
	comp=Z,3.1nm,1.0s						
Q16A	Castle Valley	60.29	60	eP	P	18 33 43.7	+0.4
	comp=Z,5.3nm,0.7s						
ECSD	EROS Data Cent	60.32	46	eP	P	18 33 42.4	-0.8
	comp=Z,28nm,1.9s						
SRU	San Rafael Swe	60.33	59	eP	P	18 33 44.4	+0.8
	comp=Z,5.2nm,0.7s						
SRU	San Rafael Swe	60.33	59	eP	P	18 33 44.4	+0.8
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BR101	Keskin Array S	60.62	303	eP	P	18 33 45.8	+0.4
BR131	Keskin Array S	60.62	303	eP	P	18 33 44.9	-0.5
BRTR	Keskin Array B	60.62	303	P	P	18 33 45.8	+0.4
	comp=Z,1.9nm,0.9s,baz=46,slow=4.4,SNR=8.7						
MTPU	Mount Pierson	60.75	61	eP	P	18 33 47.9	+1.3
	comp=Z,16nm,1.9s						
SMCO	Snowmass	61.42	56	eP	P	18 33 51.0	-0.2
	comp=Z,5.8nm,0.9s						
PV23	Carpenter Ridg	61.42	58	eP	P	18 33 51.6	+0.6
	comp=Z,19nm,1.3s						
KNB	Kanab	61.46	62	eP	P	18 33 52.8	+1.6
	comp=Z,13nm,1.6s						
KNB	Kanab	61.46	62	eP	P	18 33 52.8	+1.6
KNB				pmax	pmax		
	comp=Z,13nm,1.6s						
PV14	Lion Creek, Pa	61.49	58	eP	P	18 33 52.1	+0.6
	comp=Z,7.5nm,0.9s						
PV17	East Wray Mesa	61.60	58	eP	P	18 33 52.8	+0.6
	comp=Z,8.6nm,1.0s						
PV15	Paradox Valley	61.70	58	eP	P	18 33 52.5	-0.4
	comp=Z,6.9nm,0.8s						
PV01	Paradox Valley	61.86	58	eP	P	18 33 54.8	+0.9
	comp=Z,3.3nm,0.7s						
O49A	Covington	66.79	38	eS	S	18 43 22.1	+4.3
T42A	Van Buren	68.08	44	eP	P	18 34 32.5	-1.6
	comp=Z,4.3nm,0.6s						
MNTX	Cornudas Mount	68.79	58	eP	P	18 34 39.0	+0.3
	comp=Z,1.7nm,0.8s						
W41B	Gary Mavity, V	69.51	46	eP	P	18 34 41.5	-1.6
	comp=Z,11nm,0.7s						
WVT	Waverly	69.78	42	eP	P	18 34 43.3	-1.4
	comp=Z,9.5nm,0.8s						
WVT	Waverly	69.78	42	eP	P	18 34 43.3	-1.4
WVT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ES19	SONSECA Array	70.11	333	eP	P	18 34 46.0	-0.7
ESDC	Sonseca Array	70.14	333	P	P	18 34 46.6	-0.4
	comp=Z,0.7nm,0.5s,baz=8.3,slow=6.4,SNR=9.1						
KEST	Kesra	71.20	321	P	P	18 34 53.6	+0.1
	comp=Z,1.9nm,0.6s,baz=346,slow=0.8,SNR=3.9						
RAYN	Ar Rayn	71.25	286	eP	P	18 34 54.0	+0.1
	comp=Z,4.6nm,0.9s						
RAYN	Ar Rayn	71.25	286	eP	P	18 34 54.0	+0.1
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TX31	Lajitas Ar. Si	71.53	58	eP	P	18 34 55.4	-0.2
TXAR	Lajitas Array	71.53	58	P	P	18 34 55.6	0.0
	comp=Z,0.5nm,0.4s,baz=5.3,slow=4.0,SNR=10						
WR1	Warramunga Arr	87.51	188	eP	P	18 36 21.0	-1.2
	comp=Z,48nm,1.8s						
WRA	Warramunga Arr	87.51	188	P	P	18 36 21.0	-1.2
	comp=Z,0.8nm,0.9s,baz=0.2,slow=5.8,SNR=5.8						
ASAR	Alice Springs	91.23	188	P	P	18 36 38.0	-1.6
	comp=Z,0.2nm,0.6s,baz=2.6,slow=5.2,SNR=4.2						
TOA1	Torodi Ar. Sit	94.70	322	eP	P	18 36 55.3	-0.7
TORD	Torodi Ar. Bea	94.71	322	P	P	18 36 55.3	-0.7
	comp=Z,0.6nm,0.8s,baz=31,slow=3.4,SNR=3.4						
PLCA	Paso Flores	147.51	51	ePKPdf	PKPdf	18 43 16.1	+0.7
PLCA	Paso Flores	147.51	51	PKPbc	PKPbc	18 43 17.9	-0.1
	comp=Z,2.8nm,0.6s,baz=346,slow=5.3,SNR=10.0						

SOME ***27*** *18:25:07.3, 43°.45N×79°.85E, h0^{km}*

NNC 27 18:25:11.2±9.2**, 43°.03N×79°.73E, h2**^{km}±29^{km}**, mb2.2, mpv2.1, Error ellipse: s-maj=126.4km s-min=22.8km az=165.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.23	304	P	Pg	18 25 15.6	-0.2
	3.4nm,0.1s						
SHLS				S	Sg	18 25 17.4	-1.4
	16nm,0.3s						
SHLS	Shalkode	0.23	304	eP	Pg	18 25 13.2	-2.5
	3.2nm,0.1s						
SHLS				eS	Sg	18 25 17.4	-1.4
	13nm,0.2s						
UZB	Uzynbulak	0.53	284	P	Pg	18 25 20.6	-0.8
	0.7nm,0.3s						
UZB				S	Sb	18 25 30.2	-1.3
	2.5nm,0.2s						
UZB	Uzynbulak	0.53	284	eP	Pg	18 25 20.6	-0.8
	0.5nm,0.1s						
UZB				eS	Sb	18 25 30.2	-1.3
	5.2nm,0.1s						
SATY	Saty	0.97	272	P	Pn	18 25 36.3	+4.3
	1.8nm,0.2s						
SATY				S	Sn	18 25 53.9	+7.6
	7.9nm,0.1s						

ISCJB ***27*** *18:48:07.9±0.8, 75°.89N±0°.07×7°.0E±0°.3, h10^{km}, Error ellipse: s-maj=11.3km s-min=7.2km az=144.3*

BER ***27*** *18:48:14.9±3.6, 75°.78N×8°.14E, h15^{km}±66^{km}, ML2.0, ML2.9(NAO), Confirmed Earthquake*

NAO ***27*** *18:48:15.9±2.2, 75°.84N×9°.59E, ML2.9*

IEPN ***27*** *18:48:16.0, 76°.10N×7°.15E, h15^{km}, station ZFI2 has station magnitude of 3.00*

ISC 27 18:48:09.8±1.2**, 75°.86N**±0°.09×**7°.37E**±0°.08**, h10**^{km}**, n15,** σ**2^{s}.08**/22**, 1C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	2.24	55	eP	Pn	18 48 48.1	+1.3
HSPB				eS	Sn	18 49 13.0	-1.5
HSPB				IAML		18 49 24.2	
	comp=Z,9.0nm,0.5s						
HSP	Hornsund	2.25	55	Pn	Pn	18 48 48.3	+1.3
HSP				Lg	Lg	18 49 12.7	
SPA0	Spitsbergen Ar	3.09	37	Pn	Pn	18 49 00.8	+2.4
	baz=205,slow=14						
SPA0				Sn	Sn	18 49 35.2	-0.2
	baz=210,slow=16						
SPA0	Spitsbergen Ar	3.09	37	⇑iP	Pn	18 49 01.0	+2.5
SPA0				eS	Sn	18 49 34.6	-0.7
SPA0	Spitsbergen Ar	3.09	37	Pn	Pn	18 49 00.8	+2.4
	baz=205,slow=14						
SPA0				Sn	Sn	18 49 35.2	-0.2
	baz=210,slow=16						
SPA0				IAML		18 49 41.3	
	comp=Z,9.2nm,0.5s						
KBS	Kingsbay	3.24	16	Pn	Pn	18 49 02.3	+1.8
KBS	Kingsbay	3.24	16	eP	Pn	18 49 02.3	+1.8
KBS				eS	Sn	18 49 37.4	-1.7
KBS	Kingsbay	3.24	16	eP	Pn	18 49 02.4	+1.8
KBS				IAML		18 49 42.6	
	comp=Z,8.8nm,0.3s						
HOPEN	Hopen	4.27	73	Pn	Pn	18 49 16.6	+1.9
HOPEN				Sn	Sn	18 50 01.2	-3.3
HOPEN	Hopen	4.27	73	eP	Pn	18 49 16.5	+1.8
HOPEN				IAML		18 50 05.0	
	comp=Z,34nm,0.4s						
DAG	Danmarks Havn	6.21	291	i P	Pn	18 49 39.5	-1.8
DAG				i S	Sn	18 50 42.0	-10
ARA0	ARCESS Array S	8.29	131	Pn	Pn	18 50 10.3	+0.5
	baz=333,slow=14						
ARA0				Sn	Sn	18 51 36.0	-7.4
	baz=330,slow=22						
ARA0	ARCESS Array S	8.29	131	Pn	Pn	18 50 10.3	+0.5
	baz=333,slow=14						
ARA0				Sn	Sn	18 51 36.0	-7.4
	baz=330,slow=22						
ZFI2	Zemlya Franca-	9.30	40	eP	Pn	18 50 26.0	+2.4
	comp=Z,1μm,1.0s						
ZFI2				eS	Sn	18 52 03.7	-4.4
SCO	Scoresbysund	9.95	252	i P	Pn	18 50 32.6	+0.1

ISCJB ***27*** *18:49:17.6±0.5, 11°.91N±0°.02×71°.96W±0°.04, h63^{km}±4^{km}, mb4.3/47, Error ellipse: s-maj=7.3km s-min=3.9km az=2.0*

NEIC ***27*** *18:49:18.6±0.5, 11°.96N×71°.95W, h50^{km}±5^{km}, mb4.4/29, Error ellipse: s-maj=10.0km s-min=6.3km az=79.0*

IDC ***27*** *18:49:18.4±0.7, 11°.96N×71°.93W, h58^{km}±6^{km}, mb3.8/18, mb1 4.0/21, mb1mx3.9/43, mbtmp4.1/21, MS3.2/4, Ms1 3.2/4, ms1mx2.8/42, Error ellipse: s-maj=16.8km s-min=13.7km az=72.0*

RSNC ***27*** *18:49:19.3±0.5, 11°.98N×72°.02W, h54^{km}±4^{km}, ML4.5, Mw4.3*

ISC 27 18:49:18.5±0.6**, 11°.97N**±0°.05×**71°.98W**±0°.06**, h59**^{km}±5^{km}**, h60**^{km}**:pP-P, n99,** σ**1^{s}.16**/121**, mb4.3**/49**, MS3.1**/3**, 1C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URIC	Uribia, Colomb	0.26	182	⇓iP	Pn	18 49 28.2	-0.1
URIC				eS	Sn	18 49 35.0	-0.3
URIC				i		18 49 35.5	
	comp=Z,14μm,0.1s						
SMRC	Santa Marta, M	2.34	250	⇑iP	Pn	18 49 53.7	-0.9
SMRC				eS	Sn	18 50 21.6	-0.6
SMRC				i		18 50 29.6	
	comp=Z,1μm,0.6s						
CODC	Agustn Codazz	2.48	216	eP	Pn	18 49 57.1	+0.6
CODC				eS	Sn	18 50 25.6	0.0
CODC				i		18 50 52.2	
	comp=Z,1μm,0.4s						
SDV	Santo Domingo	3.34	156	ePn	Pn	18 50 08.5	+0.1
SMLC	San Martn de	3.76	213	eP	Pn	18 50 13.8	-0.3
SMLC				eS	Sn	18 50 57.1	+0.1
SMLC				i		18 50 59.8	
	comp=Z,457nm,0.2s						
OCAC	Ocana	3.93	200	eP	Pn	18 50 16.7	+0.1
OCAC				eS	Sn	18 51 00.8	-0.7
OCAC				i		18 51 07.7	
	comp=Z,1μm,0.3s						
PAMC	Pamplona, Colo	4.65	189	eP	Pn	18 50 27.0	+0.2
PAMC				eS	Sn	18 51 19.4	-0.3
PAMC				i		18 51 24.0	
	comp=Z,266nm,0.2s						
BRRC	Barranca, Sant	5.12	200	⇓eP	Pn	18 50 33.3	+0.6
BRRC				eS	Sn	18 51 29.4	-1.2
BRRC				i		18 51 39.6	
	comp=Z,218nm,0.3s						
ZARC	Zaragoza, Cauc	5.27	213	eP	Pn	18 50 34.9	+0.1
ZARC				eS	Sn	18 51 34.1	-0.2
ZARC				i		18 51 41.2	
	comp=Z,365nm,0.3s						
UREC	San Jos de Ur	5.46	220	eP	Pn	18 50 38.2	+0.9
UREC				i		18 51 50.5	
	comp=Z,188nm,0.3s						
BARC	Barichara	5.47	193	eP	Pn	18 50 38.5	+0.8
BARC				eS	Sn	18 51 39.4	-0.1
BARC				i		18 51 44.9	
	comp=Z,587nm,0.5s						
TAMC	Tame, Arauca	5.50	178	eP	Pn	18 50 38.1	+0.2
TAMC				eS	Sn	18 51 38.7	-1.2
TAMC				i		18 51 46.4	
	comp=Z,266nm,0.3s						
PTBC	PUERTO BERRIO,	5.92	205	eP	Pn	18 50 43.7	0.0
PTBC				eS	Sn	18 51 49.9	-0.4
PTBC				i		18 52 01.6	
	comp=Z,394nm,0.5s						
RUSC	La Rusia	6.13	190	eP	Pn	18 50 48.1	+1.0
RUSC				eS	Sn	18 51 55.4	-0.8
HELC	Santa Helena	6.72	212	eP	Pn	18 50 56.8	+1.8
HELC				i		18 52 23.4	
	comp=Z,163nm,0.5s						
NORC	Norcasia	6.97	204	eP	Pn	18 50 58.9	+0.8
NORC				eS	Sn	18 52 16.2	+0.1
NORC				i		18 52 32.0	
	comp=Z,131nm,0.6s						
ROSC	El Rosal	7.45	198	ePn	Pn	18 51 06.3	+1.4
ROSC	El Rosal	7.45	198	eP	Pn	18 51 05.7	+0.7
ROSC				eS	Sn	18 52 28.3	0.0
ROSC				i		18 52 34.8	
	comp=Z,62nm,0.2s						
ROSC	El Rosal	7.45	198	P	Pn	18 51 06.9	+1.9
	comp=Z,35nm,0.3s,baz=48,slow=8.5,SNR=33						
ROSC				S	Sn	18 52 28.8	+0.5
	comp=Z,4.4nm,0.3s,baz=156,slow=20,SNR=2.7						
ROSC				LR	LR	18 54 35.3	
	comp=Z,160nm,21.3s,baz=82,slow=42						
CHIC	Chingaza	7.49	193	eP	Pn	18 51 06.3	+0.8
CHIC				eS	Sn	18 52 29.4	0.0
CHIC				i		18 52 37.4	
	comp=Z,52nm,0.6s						
GWJ	Greenwich	7.61	324	i P	Pn	18 51 05.7	-1.2
GWJ				i S	Sn	18 52 21.8	-10
STH	Stony Hill	7.66	323	i P	Pn	18 51 07.1	-0.4
RREF	El Recreo	7.77	206	eP	Pn	18 51 11.5	+1.9
RREF				eS	Sn	18 52 33.2	-3.3
RREF				i		18 52 52.4	
	comp=Z,83nm,0.4s						
VILC	Villavicencio,	7.99	192	eP	Pn	18 51 12.8	+0.7
VILC				eS	Sn	18 52 41.0	-0.1
VILC				i		18 52 54.0	
	comp=Z,111nm,0.4s						
MCJ	Malvern	8.09	318	i S	Sn	18 52 33.1	-10
ANIL	Santa Ana	8.16	205	eP	Pn	18 51 16.7	+2.1
ANIL				i		18 51 38.7	
	comp=Z,60nm,0.4s						
BBJ	Bamboo Saint A	8.17	322	i P	Pn	18 51 14.7	+0.2
BCIP	Isla Barro Col	8.21	251	ePn	Pn	18 51 13.7	-1.4
MTDJ	Mount Denham	8.21	320	ePn	Pn	18 51 13.8	-1.3
GTBY	Guantanamo Bay	8.47	340	ePn	Pn	18 51 18.4	-0.1
YOTC	Yotoco, Valle	9.03	209	eP	Pn	18 51 27.1	+0.7
YOTC				eS	Sn	18 53 05.9	-0.9
SOTA	Rioblanco	10.79	205	eP	Pn	18 51 52.1	+1.3
SOTA				i		18 51 59.0	
	comp=Z,40nm,0.8s						
JTS	JuntasAbangare	12.84	264	P	Pn	18 52 21.8	+3.5
	comp=Z,0.6nm,0.3s,baz=158,slow=18,SNR=3.2						
OTAV	Otavalo	13.31	209	ePn	Pn	18 52 24.6	-0.5
PTGA	Pitinga	17.36	136	P	Pn	18 53 16.4	-0.6
	comp=Z,1.0nm,0.3s,baz=311,slow=17,SNR=8.9						
APG	El Apazote	18.22	282	P	Pn	18 53 28.7	+1.1
	comp=Z,0.4nm,0.3s,baz=78,slow=19,SNR=3.7						
ATAH	Atahualpa	20.02	199	P	P	18 53 47.8	+0.7
	comp=Z,14nm,0.8s,baz=16,slow=7.5,SNR=8.1						
MDP	Montagnes des	20.30	108	LR	LR	19 02 00.2	
	comp=Z,96nm,19.4s,baz=46,slow=38						
CMIG	Matias Romero	22.74	286	P	P	18 54 13.4	-2.5
	comp=Z,2.0nm,0.4s,baz=87,slow=9.8,SNR=5.0						
LPAZ	La Paz	28.33	172	LR	LR	19 08 24.3	
	comp=Z,48nm,20.9s,baz=54,slow=40						
TXAR	Lajitas Array	34.16	305	P	P	18 55 58.9	+0.6
	comp=Z,0.4nm,0.5s,baz=124,slow=8.6,SNR=10						
TXAR				PcP	PcP	18 58 35.2	+0.8
	comp=Z,0.6nm,0.7s,baz=123,slow=3.3,SNR=5.4						
PV01	Paradox Valley	41.73	315	eP	P	18 57 04.3	+2.1
	comp=Z,6.3nm,0.9s						
PV02	Paradox Valley	41.88	315	eP	P	18 57 05.5	+2.2
	comp=Z,11nm,0.8s						
PV13	Radium Mtn., P	41.91	315	eP	P	18 57 05.7	+2.0
	comp=Z,12nm,0.8s						
PV07	Paradox Valley	41.93	315	eP	P	18 57 05.5	+1.7
	comp=Z,5.3nm,0.9s						
PV12	Saucer Basin,	41.98	315	eP	P	18 57 05.7	+1.6
	comp=Z,14nm,0.8s						
PV03	Paradox Valley	41.98	315	eP	P	18 57 05.9	+1.8
	comp=Z,7.1nm,0.8s						
PV11	David Mesa, Pa	42.02	315	eP	P	18 57 06.4	+2.0
	comp=Z,9.4nm,0.8s						
WUAZ	Wupatki	42.60	310	eP	P	18 57 11.2	+2.0
	comp=Z,5.7nm,0.9s						
ULM	Lac du Bonnet	42.92	338	P	P	18 57 10.8	-0.5
	comp=Z,3.5nm,0.6s,baz=152,slow=8.1,SNR=7.2						
SCHQ	Schefferville	42.95	4	P	P	18 57 10.7	-0.8
	comp=Z,3.2nm,0.8s,baz=217,slow=10,SNR=3.2						
SRU	San Rafael Swe	43.54	315	eP	P	18 57 18.3	+1.6
	comp=Z,4.1nm,0.7s						
U15A	North Rim	43.65	311	eP	P	18 57 19.9	+2.1
	comp=Z,6.0nm,1.0s						
P17A	Butcher Ranch,	43.86	316	eP	P	18 57 20.9	+1.7
	comp=Z,11nm,1.1s						
MTPU	Mount Pierson	44.23	313	eP	P	18 57 24.5	+2.0
	comp=Z,3.9nm,0.8s						
KNB	Kanab	44.27	311	eP	P	18 57 24.7	+2.0
	comp=Z,5.8nm,0.9s						
MPU	Maple Canyon	44.72	316	eP	P	18 57 27.7	+1.5
	comp=Z,12nm,1.3s						
PD31	Pinedale Array	44.73	320	eP	P	18 57 26.4	+0.2
	comp=Z,5.5nm,0.6s						
PDAR	Pinedale Array	44.73	320	P	P	18 57 26.2	0.0
	comp=Z,0.9nm,0.6s,baz=109,slow=11,SNR=9.7						
PDAR				PcP	PcP	18 59 07.7	-0.1
	comp=Z,1.1nm,0.5s,baz=116,slow=5.1,SNR=2.2						
NLU	North Lily Min	44.99	316	eP	P	18 57 30.1	+1.7
	comp=Z,5.5nm,0.8s						
HWUT	Hardware Ranch	45.42	318	eP	P	18 57 32.8	+1.0
	comp=Z,4.5nm,0.7s						
DUG	Dugway, Tooele	45.61	316	eP	P	18 57 34.4	+1.2
	comp=Z,4.7nm,0.7s						
PSUT	Pine Spring	45.63	313	eP	P	18 57 35.1	+1.6
	comp=Z,4.7nm,1.0s						
MOOW	Moose Ponds	45.98	321	eP	P	18 57 36.8	+0.7
	comp=Z,14nm,1.8s						
BGU	Big Grassy Mou	46.08	316	eP	P	18 57 37.9	+1.0
	comp=Z,4.4nm,1.2s						
FXWY	Fox Creek	46.10	321	eP	P	18 57 37.9	+0.8
	comp=Z,3.7nm,0.9s						
HVU	Hansel Valley	46.30	317	eP	P	18 57 39.4	+0.7
	comp=Z,3.9nm,1.0s						
TPNV	Topopah Spring	46.79	310	eP	P	18 57 44.6	+2.1
	comp=Z,3.7nm,0.8s						
ELK	Elko	47.51	315	P	P	18 57 48.8	+0.6
	comp=Z,1.3nm,0.6s,baz=119,slow=11,SNR=6.3						
MCMT	McKenzie Canyo	47.83	321	eP	P	18 57 51.5	+0.9
HLID	Hailey	48.20	319	eP	P	18 57 54.3	+0.9
	comp=Z,2.2nm,0.6s						
NV01	Mina Array Sit	48.83	311	eP	P	18 57 59.0	+0.7
NVAR	Mina Array Bea	48.83	311	P	P	18 57 59.5	+1.2
	comp=Z,1.8nm,0.6s,baz=118,slow=7.3,SNR=13						
NVAR				PcP	PcP	18 59 23.4	+1.0
	comp=Z,1.0nm,0.6s,baz=131,slow=4.1,SNR=5.8						
YERR	Yerington	49.71	311	eP	P	18 58 06.4	+1.4
	comp=Z,8.2nm,1.1s						
PNTR	Pine Nut	50.01	311	eP	P	18 58 08.9	+1.6
	comp=Z,6.3nm,0.7s						
G08A	Pilot Rock	51.89	319	eP	P	18 58 22.3	+1.1
	comp=Z,3.7nm,1.0s						
NEW	Newport	52.09	323	P	P	18 58 22.8	+0.2
	comp=Z,2.5nm,0.5s,baz=117,slow=8.8,SNR=5.7						
PLCA	Paso Flores	52.45	179	P	P	18 58 23.4	-1.9
	comp=Z,1.0nm,0.5s,baz=1.3,slow=10.0,SNR=4.2						
C09A	Chrisman Ranch	52.55	322	eP	P	18 58 26.5	+0.5
	comp=Z,38nm,0.2s						
YBH	Yreka Blue Hor	53.11	314	P	P	18 58 29.6	-0.7
	comp=Z,3.1nm,0.5s,baz=94,slow=4.0,SNR=11						
B08A	Colville Reser	53.44	322	eP	P	18 58 32.9	+0.3

	comp=Z,5.7nm,0.8s						
YKA	Yellowknife Ar	58.88	338	P	P	18 59 10.6	-0.4
	comp=Z,1.6nm,0.5s,baz=125,slow=7.4,SNR=28						
YKA				LR	LR	19 25 10.9	
	comp=Z,9.8nm,18.1s,baz=212,slow=36						
YKB5	Yellowknife Ar	58.88	338	*e*P	P	18 59 10.5	-0.5
DLBC	Dease Lake	63.41	330	P	P	18 59 42.6	+0.8
	comp=Z,2.3nm,0.7s,baz=96,slow=9.2,SNR=4.3						
RES	Resolute Bay	64.02	353	P	P	18 59 45.0	-0.5
	comp=Z,0.8nm,0.7s,baz=175,slow=12,SNR=3.9						
DBIC	Dimbokro	66.32	88	pP	pP	19 00 16.4	-1.3
	comp=Z,2.5nm,0.7s,baz=220,slow=7.5,SNR=2.6						
INK	Inuvik	68.61	339	P	P	19 00 14.2	-0.8
	comp=Z,1.0nm,0.6s,baz=100,slow=6.2,SNR=6.5						
TOA1	Torodi Ar. Sit	71.67	80	*e*P	P	19 00 34.3	-0.4
TOA1				*e*pP	pP	19 00 50.1	-0.8
TORD	Torodi Ar. Bea	71.67	80	P	P	19 00 34.3	-0.4
	comp=Z,0.5nm,0.7s,baz=284,slow=7.3,SNR=3.3						
TORD				pP	pP	19 00 50.1	-0.9
	comp=Z,1.1nm,0.8s,baz=291,slow=6.2,SNR=4.5						
ILAR	Eielson Array	72.82	334	P	P	19 00 40.0	-0.6
	comp=Z,0.5nm,0.7s,baz=96,slow=4.7,SNR=5.6						
NB200	NORSAR Array S	76.33	30	*e*P	P	19 01 02.0	+1.0
NOA	NORSAR Array B	76.33	30	P	P	19 01 02.0	+1.0
	comp=Z,1.0nm,0.9s,baz=289,slow=4.7,SNR=3.1						
GERES	GERESS Array B	78.27	42	P	P	19 01 13.0	+0.8
	comp=Z,1.0nm,0.7s,baz=262,slow=4.0,SNR=7.2						
GERES				pP	pP	19 01 29.1	+0.3
	comp=Z,0.5nm,0.6s,baz=321,slow=1.9,SNR=2.5						
BR101	Keskin Array S	94.13	48	*e*pP	pP	19 02 48.0	-0.1
BRTR	Keskin Array B	94.13	48	pP	pP	19 02 48.0	-0.1
	comp=Z,0.8nm,0.7s,baz=267,slow=4.1,SNR=4.5						
CMAR	Chiang Mai Arr	148.47	17	PKPbc	PKPbc	19 08 59.2	-0.3
	comp=Z,1.3nm,0.7s,baz=326,slow=3.4,SNR=10						
ASAR	Alice Springs	152.80	241	PKPbc	PKPbc	19 09 09.2	-0.5
	comp=Z,0.6nm,0.5s,baz=107,slow=2.4,SNR=11						
ASAR				PKPab	pPKPdf	19 09 20.2	+0.2
	comp=Z,1.1nm,0.6s,baz=111,slow=3.8,SNR=13						
WR1	Warramunga Arr	153.51	249	*e*PKPbc	PKPbc	19 09 10.8	-0.5
WR1				*e*pPKPdf	pPKPbc	19 09 28.1	-0.6
WRA	Warramunga Arr	153.51	249	PKPbc	PKPbc	19 09 10.8	-0.5
	comp=Z,0.6nm,0.4s,baz=96,slow=3.1,SNR=20						
WRA				pPKPbc	pPKPbc	19 09 28.1	-0.6
	comp=Z,0.5nm,0.6s,baz=100,slow=3.2,SNR=2.1						

IDC 27 18:50:32.0±2.3, 8°.48S×121°.52E, h0^{km}, mb3.3/1, mb1 3.4/3, mb1mx3.2/35, mbtmp3.2/3, ML2.6/2, Error ellipse: s-maj=273.9km s-min=29.0km az=54.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.84	134	Pn	Pn	18 54 28.1	-1.4
	0.0nm,0.3s,baz=306,slow=15,SNR=2.4						
ASAR	Alice Springs	19.20	143	P	Pn	18 54 58.5	0.0
	0.0nm,0.3s,baz=326,slow=11,SNR=4.8						
MKAR	Makanchi Array	65.16	331	P	P	19 01 15.0	0.0
	0.2nm,0.7s,baz=127,slow=7.2,SNR=2.7						

ISCJB 27 18:51:25.8±0.4, 6°.47S±0°.05×129°.90E±0°.09, h10^{km}, mb4.2/11, MS3.1/4, Error ellipse: s-maj=13.9km s-min=5.8km az=161.5

IDC 27 18:51:27.5±0.9, 6°.32S×129°.94E, h0^{km}, mb3.9/7, mb1 4.0/9, mb1mx3.8/35, mbtmp3.9/9, ML3.7/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/26, Error ellipse: s-maj=42.1km s-min=17.7km az=67.0

NEIC 27 18:51:27.8±1.0, 6°.51S×129°.90E, h13^{km}±8^{km}, mb4.6/8, Error ellipse: s-maj=31.2km s-min=13.0km az=84.0

ISC 27 18:51:27.8±0.7, 6°.56S±0°.06×130°.0E±0°.1, h10^{km}, n31, σ2^{s}.14/32, mb4.5/11, MS3.1/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.93	137	*e*Pn	Pn	18 52 01.4	+0.6
FAKI	Fak Fak	4.27	32	*e*Pn	Pn	18 52 32.5	-0.5
FITZ	Fitzroy Crossi	12.22	200	Pn	Pn	18 54 24.2	+2.1
	0.3nm,0.3s,baz=30,slow=9.4,SNR=8.4						
FITZ				Sn	Sn	18 56 34.6	-3.9
	0.3nm,0.3s,baz=72,slow=20,SNR=2.6						
FITZ				LR	LR	18 59 35.3	
	comp=Z,102nm,19.6s,baz=15,slow=39						
WRAB	Tennant Creek	13.96	163	*e*Pn	Pn	18 54 47.9	+2.1
WR1	Warramunga Arr	13.96	163	*e*Pn	Pn	18 54 46.9	+1.0
WR1				*e*Sn	Sn	18 57 16.8	-4.3
WRA	Warramunga Arr	13.96	163	Pn	Pn	18 54 46.9	+0.9
	0.5nm,0.3s,baz=334,slow=15,SNR=19						
WRA				Sn	Sn	18 57 16.8	-4.3
	0.6nm,0.3s,baz=336,slow=23,SNR=5.3						
WB2	Warramunga Arr	13.97	163	*e*Pn	Pn	18 54 46.9	+0.9
COEN	Coen	14.92	121	*e*Pn	Pn	18 54 59.7	+0.6
	38nm,1.4s						
AS31	Alice Springs	17.42	168	*e*Pn	Pn	18 55 32.3	+1.1
	1.8nm,0.8s						
ASAR	Alice Springs	17.42	168	P	P	18 55 34.8	+2.3
	0.3nm,0.3s,baz=346,slow=9.7,SNR=20						
ASAR				S	Sn	18 58 40.7	-4.6
	0.1nm,0.3s,baz=349,slow=24,SNR=3.9						
ASAR				LR	LR	19 02 43.9	
	comp=Z,96nm,18.7s,baz=276,slow=38						
AS01	Alice Springs	17.43	168	*e*Pn	Pn	18 55 31.8	+0.4
CTA	Charters Tower	20.75	132	P	Pn	18 56 11.8	+0.5
	2.6nm,0.8s,baz=305,slow=12,SNR=2.5						
STKA	Stephens Creek	27.43	158	P	P	18 57 18.4	+4.5
	1.8nm,0.6s,baz=333,slow=9.0,SNR=3.3						
STKA				LR	LR	19 08 22.9	
	comp=Z,74nm,19.4s,baz=22,slow=37						
HNR	Honiara	29.81	97	LR	LR	19 10 27.9	
	comp=Z,51nm,18.3s,baz=114,slow=38						
CMAR	Chiang Mai Arr	39.43	310	P	P	18 58 59.1	+0.7
	0.2nm,0.6s,baz=120,slow=6.4,SNR=3.0						
CMAR				LR	LR	19 17 49.1	
	comp=Z,25nm,18.1s,baz=178,slow=40						
MAJO	Matsushiro	43.56	10	*e*P	P	18 59 30.8	-1.3
MJAR	Matsushiro Arr	43.56	10	P	P	18 59 30.8	-1.3
	2.1nm,0.8s,baz=191,slow=11,SNR=5.1						
KSRS	Korea Array	43.83	358	LR	LR	19 15 43.5	
	comp=Z,13nm,21.9s,baz=65,slow=33						
ULN	Ulaanbaatar	57.84	342	*e*P	P	19 01 18.1	-1.7
	6.9nm,1.5s						
SONA0	Songino Array	58.02	341	*e*P	P	19 01 21.9	+0.9
SONM	Songino Array	58.02	341	P	P	19 01 21.9	+0.9
	0.3nm,0.4s,baz=161,slow=6.1,SNR=2.6						
MK01	Makanchi Array	67.83	327	*e*P	P	19 02 25.3	-1.0
MK31	Makanchi Array	67.84	327	*e*P	P	19 02 25.0	-1.4
	2.9nm,0.9s						
MK32	Makanchi Array	67.84	327	*e*P	P	19 02 25.5	-0.8
MKAR	Makanchi Array	67.84	327	*e*P	P	19 02 25.4	-0.9
	20nm,0.9s						
MKAR	Makanchi Array	67.84	327	P	P	19 02 25.5	-0.9
	1.5nm,0.7s,baz=128,slow=7.6,SNR=18						
MAKZ	Makanchi	68.03	327	*e*P	P	19 02 26.1	-1.4
	6.3nm,1.3s						
ZAA0	Zalesovo Array	71.18	334	*e*P	P	19 02 45.5	-1.2
	6.3nm,1.0s						
ZALV	Zalesovo Beam	71.18	334	P	P	19 02 45.5	-1.2
	1.6nm,0.8s,baz=92,slow=4.5,SNR=7.1						
ZAA1	Zalesovo Array	71.18	334	*e*P	P	19 02 45.5	-1.2
KURK	Kurchatov	72.13	329	*e*P	P	19 02 52.1	-0.5
	15nm,1.0s						

KRNET 27 18:53:53.0±0.1, 41°.73N×79°.10E, h22^{km}, mb2.9

NNC 27 18:53:53.8±1.0, 41°.76N×79°.08E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=6.9km s-min=3.7km az=153.0

ISC 27 18:53:50.7±2.4, 41°.51N±0°.08×79°.16E±0°.06, h6^{km}±11^{km}, n43, σ2^{s}.12/62, 24C-24D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.13	330	⇑*e*P	Pg	18 54 09.9	-2.5
	baz=26						
PRZ				⇑*i*S	Sg	18 54 22.6	-4.5
	baz=26						
KDJ	Kajisay	1.61	293	⇑*i*P	Pn	18 54 19.9	+0.1
	baz=86						
KDJ				⇑*i*S	Sn	18 54 39.5	-1.4
	baz=86						
UZB	Uzynbulak	1.64	356	P	Pn	18 54 19.6	-0.6
	15nm,0.3s						
UZB				S	Sn	18 54 39.5	-2.2
	103nm,0.4s						
SATY	Saty	1.65	340	P	Pg	18 54 25.9	+3.6
	32nm,0.3s						
SATY				S	Sg	18 54 49.9	+6.2
	120nm,0.3s						
SHLS	Shalkode	1.66	8	P	Pn	18 54 22.2	+1.7
	36nm,0.2s						
SHLS				S	Sb	18 54 44.0	+0.9
	188nm,0.7s						
PDGK	Podgornoye	1.84	7	P	Pn	18 54 22.8	-0.1
	9.0nm,0.3s						
PDGK				S	Sn	18 54 45.1	-1.4
	43nm,0.6s						
PDGK	Podgornoye	1.84	7	⇓P	Pn	18 54 22.9	0.0
	4.5nm,0.3s						
PDGK				⇑S	Sn	18 54 44.6	-1.9
	31nm,0.5s						
PDGK	Podgornoye	1.84	7	⇑*i*P	Pn	18 54 22.2	-0.7
	baz=10.0						
PDGK				⇑*i*S	Sn	18 54 43.6	-2.9
	baz=10.0						
KURS	Kuram	2.11	340	Pg	Pn	18 54 27.9	+1.3
	12nm,0.5s						
KURS				Lg	Lg	18 54 53.0	
	54nm,0.6s						
MDOK	Medeo	2.28	317	Pn	Pn	18 54 29.8	+0.8
	6.5nm,0.5s						
MDOK				Sn	Sn	18 54 58.3	+0.8
	83nm,0.6s						
MDOK	Medeo	2.28	317	Pg	Pn	18 54 30.2	+1.2
	8.5nm,0.3s						
MDOK				Lg	Lg	18 54 57.8	
	65nm,0.6s						
KOTS	Kotyrbulak	2.30	319	Pg	Pn	18 54 30.8	+1.6
	21nm,0.2s						
KOTS				Lg	Lg	18 54 59.7	
	84nm,0.4s						
ULHL	Ulahol	2.30	290	⇓*i*P	Pn	18 54 30.3	+0.9
	baz=84						
ULHL				⇓*i*S	Sn	18 54 57.4	-0.7
	baz=84						
KNDC	Almaty	2.36	317	⇓Pn	Pn	18 54 30.7	+0.7
	10nm,0.6s						
KNDC				⇑Sn	Sn	18 55 00.9	+1.6
	87nm,0.8s						
NRN	Naryn	2.38	269	⇑*e*P	Pn	18 54 32.8	+2.3
	baz=64						
NRN				⇑*i*S	Sn	18 55 01.9	+1.8
	baz=64						
AAA	Alma-Ata	2.38	316	Pg	Pn	18 54 32.8	+2.5
	24nm,0.3s						
AAA				Lg	Lg	18 55 02.7	
	89nm,0.3s						
BOOM	Boomskoye usch	2.59	293	⇑*i*P	Pn	18 54 34.6	+1.3
	baz=89						
BOOM				⇑*i*S	Sn	18 55 04.6	-0.6
	baz=89						
MTBS	Maitube	2.60	310	Pg	Pn	18 54 36.6	+3.3
	14nm,0.4s						
MTBS				Lg	Lg	18 55 08.8	
	66nm,0.5s						
KST	Kastek	2.83	304	Pg	Pn	18 54 39.3	+2.8
	8.7nm,0.6s						
KST				Lg	Lg	18 55 13.5	
	94nm,0.7s						
CHKK	Chushkaly	2.84	326	Pg	Pn	18 54 39.0	+2.4
	7.4nm,0.2s						
CHKK				Lg	Lg	18 55 14.9	
	298nm,0.6s						
DJR	Jarkent	2.86	9	Pg	Pn	18 54 40.8	+3.9
	3.8nm,0.8s						
DJR				Lg	Lg	18 55 16.3	
	20nm,0.5s						
KTBS	Karatobe	2.87	321	Pg	Pb	18 54 41.0	-1.2
	6.0nm,0.3s						
KTBS				Lg	Lg	18 55 17.0	
	98nm,0.6s						
ARXS	Arharly	2.88	340	Pg	Pn	18 54 40.7	+3.5
	5.0nm,0.6s						
ARXS				Lg	Lg	18 55 16.2	
	20nm,0.6s						
TKM2	Tokmak 2	3.00	299	⇓Pn	Pn	18 54 40.5	+1.6
	1.9nm,0.3s						
TKM2				⇑Lg	Lg	18 55 23.6	
	9.1nm,0.3s						
TKM2	Tokmak 2	3.00	299	⇓*i*P	Pn	18 54 39.9	+0.9
	baz=96						
TKM2				⇓*i*S	Sn	18 55 13.5	-1.8
	baz=96						
KUU	Kurty	3.17	320	Pg	Pb	18 54 46.0	-1.3
	5.9nm,1.0s						
KUU				Lg	Lg	18 55 25.1	
	60nm,0.7s						
KBK	Karagaybulak	3.34	292	⇓*i*P	Pn	18 54 44.7	+1.1
	baz=88						
KBK				⇓*i*S	Sn	18 55 22.8	-0.8
	baz=88						
UCH	Uchtor	3.55	283	⇓*i*P	Pn	18 54 48.0	+1.3
	baz=80						
UCH				⇓*i*S	Sn	18 55 28.2	-0.9
	baz=80						
CHMS	Chumysh	3.60	296	⇓*i*P	Pn	18 54 48.0	+1.0
	baz=93						
CHMS				⇓*i*S	Sn	18 55 28.3	-1.5
	baz=93						
ARLS	Aral	3.64	277	⇑*i*P	Pn	18 54 49.2	+1.5
	baz=74						
ARLS				⇑*i*S	Sn	18 55 30.0	-1.0
	baz=74						
AAK	Ala-Archa	3.65	290	⇑Pn	Pn	18 54 51.6	+3.7
	3.8nm,0.9s						
AAK				⇑Lg	Lg	18 55 45.2	
	13nm,0.7s						
AAK	Ala-Archa	3.65	290	⇓*i*P	Pn	18 54 49.2	+1.3
	baz=86						
AAK				⇓*i*S	Sn	18 55 30.0	-1.3
	baz=86						
KAPS	Kapalarasan	3.78	2	Pg	Pb	18 54 56.7	-1.1
	1.3nm,0.4s						
KAPS				Lg	Lg	18 55 43.5	
	7.5nm,0.4s						
SGDS	Sogindy	3.88	302	Pg	Pb	18 54 58.9	-0.6
	2.7nm,0.6s						
SGDS				Lg	Lg	18 55 47.0	
	8.7nm,0.6s						
AML	Almayashu	4.13	280	⇑*i*P	Pn	18 54 56.6	+1.9
	baz=77						
AML				⇑*i*S	Sn	18 55 43.0	-0.5
	baz=77						
EKS2	Erkin-Say	4.17	288	⇓*e*P	Pn	18 54 56.2	+1.3
	baz=85						
EKS2				⇓*i*S	Sn	18 55 42.6	-1.4
	baz=85						
MNAS	Manas	5.06	283	⇑Pn	Pn	18 55 11.6	+4.4
	0.5nm,0.6s						
MNAS				⇑Lg	Lg	18 56 34.4	
	2.5nm,0.8s						
MAKZ	Makanchi	5.67	20	⇓Pn	Pn	18 55 17.0	+1.5
	1.1nm,0.8s						
MAKZ				⇑Lg	Lg	18 56 44.3	
	1.6nm,0.6s						
MK31	Makanchi Array	5.74	22	⇑Pn	Pn	18 55 17.2	+0.7
	0.2nm,0.3s,baz=206,slow=14,SNR=12						
MK31				⇓Lg	Lg	18 56 45.0	
	0.4nm,0.3s,baz=212,slow=27,SNR=4.0						
KK31	Karatay Array	6.61	287	⇓Pg	Pg	18 55 54.3	-3.0
	0.7nm,0.7s						
KK31				⇓Lg	Lg	18 57 21.4	
	1.3nm,0.5s						
OTUK	Ortayu	8.29	327	⇓Pn	Pn	18 55 52.3	+0.8
	1.0nm,0.8s						
OTUK				⇑Lg	Lg	18 58 07.2	
	4.6nm,0.8s						
KURBB	Kurchatov Arra	9.13	357	⇓Lg	Lg	18 58 34.6	
	7.5nm,0.8s						
KURK	Kurchatov	9.22	358	⇓Lg	Lg	18 58 36.9	
	2.6nm,0.9s						

MEX 27 18:57:31.7±0.7, 16°.22N×98°.71W, h1^{km}±7^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.58	73	*i* P	Pg	18 57 42.2	-0.7
PNIG				*e*S	Sg	18 57 51.1	+0.6

ISCJB 27 19:15:16.6±0.5, 37°.40N±0°.04×36°.47E±0°.03, h5^{km}±6^{km}, Error ellipse: s-maj=7.0km s-min=3.8km az=24.9

DDA 27 19:15:16.2, 37°.41N×36°.48E, h7^{km}±2^{km}, ML3.2

ISK 27 19:15:16.0, 37°.36N×36°.47E, h7^{km}, ML1.9/7

ISC 27 19:15:16.3±1.0, 37°.39N±0°.04×36°.47E±0°.03, h11^{km}±9^{km}, n17, σ0^{s}.43/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANDN	Andirin	0.22	332	*i* P	Pg	19 15 21.0	0.0
ANDN				*i* S	Sg	19 15 24.3	+0.1
ANDN				IAML_P			
	comp=Z,9μm,0.1s						
HCB	Kahramanmara	0.35	97	*i* P	Pb	19 15 24.0	-0.6
HCB				*i* S	Sg	19 15 28.2	+0.2
HCB				IAML_P			
	comp=Z,7μm,0.1s						
KMRS	Kahramanmaras	0.36	71	PG	Pg	19 15 23.4	-0.1
KOZT	Kozan	0.52	280	PG	Pg	19 15 26.8	+0.2
KOZT				SG	Sb	19 15 34.6	-0.5
GAZ	Gaziantep	0.63	110	PG	Pg	19 15 28.7	+0.2
GAZ				SG	Sb	19 15 37.6	-0.5
SAIM	ADANA	0.67	332	*i* P	Pg	19 15 29.1	-0.2
SAIM				IAML_P			
	comp=Z,1μm,0.1s						
CEYT	Ceyhan	0.69	237	PG	Pg	19 15 29.3	-0.4
KUZU	Kuzuini	0.78	142	*i* P	Pn	19 15 33.3	0.0
KUZU				*i* S	Sb	19 15 43.2	+0.7
KUZU				IAML_P			
	comp=Z,3μm,0.1s						
AKO	Adana	0.82	276	*i* P	Pb	19 15 32.9	+0.3
GZT	Gaziantep	0.87	92	*i* P	Pg	19 15 33.1	0.0
GZT				IAML_P			
	comp=Z,3μm,0.1s						
ELBS	KAHRAMANMARAS	1.07	29	*i* P	Pb	19 15 37.0	+0.1
ELBS				IAML_P			
	comp=Z,226nm,0.1s						
YAHY	KAYSERI_Yahyal	1.13	309	*i* P	Pg	19 15 37.2	-0.9
DARE	Darende-Malaty	1.43	34	PN	Pg	19 15 43.5	-0.2
AKCD	Akcadag	1.46	51	*i* P	Pb	19 15 43.4	-0.2
AKCD				*i* S	Sn	19 16 02.5	+0.5
AKCD				IAML_P			
	comp=Z,907nm,0.1s						
BNN	Bunyan	1.54	341	PN	Pb	19 15 45.4	+0.4
SURC	SANLIURFA_SURC	1.78	106	*i* P	Pg	19 15 50.1	-0.5
SURC				IAML_P			
	comp=Z,346nm,0.1s						
URFA	Urfa	1.87	88	PN	Pn	19 15 48.5	+0.2

IDC 27 19:22:41.6±2.7, 6°.95S×125°.38E, h531^{km}±30^{km}, mb3.0/3, mb1 3.3/6, mb1mx2.8/35, mbtmp4.2/6, Error ellipse: s-maj=45.1km s-min=16.1km az=62.0

ISC 27 19:22:39.9±1.3, 6°.9S±0°.2×125°.5E±0°.3, h511^{km}, n6, σ0^{s}.79/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.19	179	P	P	19 25 10.0	+0.1
	2.4nm,0.3s,baz=3.6,slow=8.7,SNR=143						
WRA	Warramunga Arr	15.60	147	P	P	19 25 55.9	-0.5
	1.1nm,0.3s,baz=324,slow=11,SNR=86						
WRA				S	S	19 28 37.9	-0.3
	0.1nm,0.3s,baz=322,slow=16,SNR=4.6						
ASAR	Alice Springs	18.58	155	P	P	19 26 26.0	+0.9
	0.9nm,0.3s,baz=328,slow=8.2,SNR=65						
ASAR				S	S	19 29 27.6	-1.0
	0.1nm,0.3s,baz=339,slow=21,SNR=6.4						
ASAR				PcP	PcP	19 30 27.1	-0.8
	0.0nm,0.3s,baz=349,slow=1.9,SNR=2.8						
NWAO	Narrogin (SRO)	27.06	195	P	P	19 27 40.3	-0.7
	9.1nm,1.0s,baz=47,slow=19,SNR=3.0						
STKA	Stephens Creek	29.09	151	P	P	19 27 59.5	+0.8
	1.7nm,0.8s,baz=335,slow=8.4,SNR=4.3						
MKAR	Makanchi Array	65.71	329	P	P	19 32 33.7	+0.1
	0.2nm,0.5s,baz=121,slow=8.0,SNR=5.1						

MEX 27 19:23:11.0±0.3, 16°.28N×97°.99W, h4^{km}±8^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.17	311	*i* P	Pg	19 23 14.1	-0.3
PNIG				*i* S	Sg	19 23 16.7	+0.1

ISCJB 27 19:23:40.4±0.2, 41°.73N±0°.02×110°.65W±0°.04, h0^{km}, Error ellipse: s-maj=4.7km s-min=2.9km az=178.6

NEIC 27 19:23:41.0±0.3, 41°.72N×110°.64W, h0^{km}, ML2.6, Error ellipse: s-maj=5.0km s-min=3.3km az=87.0, Suspected Mining explosion.

NEIC 11 km [7 miles] SW of Kemmerer.

IDC 27 19:23:41.2±1.5, 41°.80N×110°.73W, h0^{km}, mb2.5/1, mb1 3.2/2, mb1mx3.1/40, mbtmp2.8/2, Error ellipse: s-maj=32.7km s-min=6.1km az=146.0

ISC 27 19:23:40.7±0.9, 41°.77N±0°.02×110°.68W±0°.03, h0^{km}, n71, σ1^{s}.10/71, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWUT	Hardware Ranch	0.68	256	*e*Pg	Pg	19 23 53.9	+0.2
TCUT	Toone Canyon	0.85	220	*e*Pg	Pg	19 23 56.8	-0.1
AHID	Auburn Hatcher	1.04	343	*e*Pg	Pn	19 24 02.5	-0.2
BW06	Boulder Array	1.30	40	*e*Pg	Pg	19 24 05.5	0.0
PD31	Pinedale Array	1.30	40	*e*Pg	Pg	19 24 05.3	-0.3
PDAR	Pinedale Array	1.30	40	*e*Pg	Pg	19 24 05.1	-0.4
PDAR				Lg	Lg	19 24 23.4	
PDAR	Pinedale Array	1.30	40	Pg	Pg	19 24 05.8	+0.2
	2.6nm,0.3s,baz=212,slow=15,SNR=110						
PDAR				Lg	Lg	19 24 23.4	
	2.1nm,0.3s,baz=220,slow=25,SNR=7.9						
JLU	Jordanelle	1.30	207	*e*Pg	Pg	19 24 04.3	-1.3
CTU	Camp Tracy	1.34	217	*e*Pg	Pg	19 24 05.0	-1.4
SPUT	South Promonto	1.40	251	*e*Pn	Pg	19 24 07.5	0.0
HVU	Hansel Valley	1.56	271	*e*Pn	Pn	19 24 09.8	-0.1
REDW	Red Top Meadow	1.59	356	*e*Pn	Pb	19 24 11.2	0.0
SNOW	Snow King Moun	1.69	358	*e*Pn	Pg	19 24 14.0	+0.9
TPAW	Teton Pass	1.73	354	*e*Pn	Pn	19 24 12.6	+0.3
LOHW	Long Hollow	1.84	2	*e*Pn	Pn	19 24 13.9	+0.1
FXWY	Fox Creek	1.88	352	*e*Pn	Pn	19 24 14.7	+0.4
MPU	Maple Canyon	1.90	203	*e*Pn	Pn	19 24 13.6	-0.9
BGU	Big Grassy Mou	1.96	245	*e*Pn	Pn	19 24 14.9	-0.4
MOOW	Moose Ponds	1.98	359	*e*Pn	Pn	19 24 16.1	+0.5
NLU	North Lily Min	2.10	211	*e*Pn	Pn	19 24 17.3	+0.1
DUG	Dugway, Tooele	2.25	226	*e*Pn	Pn	19 24 19.0	-0.4
P17A	Butcher Ranch,	2.30	181	*e*Pn	Pn	19 24 20.5	+0.6
FLWY	Flagg Ranch	2.31	360	*e*Pn	Pb	19 24 22.9	-0.4
O20A	White River Ci	2.47	131	*e*Pn	Pn	19 24 23.3	+1.0
YPP	Pitchstone Pla	2.50	358	*e*Pn	Pn	19 24 24.4	+1.5
TMUT	Trail Mountain	2.50	189	*e*Pn	Pn	19 24 23.5	+0.6
RWWY	Rawlins	2.60	91	*e*Pn	Pn	19 24 23.2	-1.0
H17A	Grant Village	2.62	2	*e*Pn	Pn	19 24 25.9	+1.4
SRU	San Rafael Swe	2.66	177	*e*Pn	Pn	19 24 26.5	+1.6
YFT	Old Faithful	2.68	358	*e*Pn	Pn	19 24 25.7	+0.4
LKWY	Lake	2.80	4	*e*Pn	Pn	19 24 28.0	+1.1
Q16A	Castle Valley	2.88	188	*e*Pn	Pn	19 24 28.2	+0.3
YMR	Madison River	2.90	356	*e*Pn	Pb	19 24 31.9	-1.5
YNR	Norris Junctio	2.94	0	*e*Pn	Pn	19 24 27.7	-1.3
YHB	Horse Butte	3.00	353	*e*Pn	Pn	19 24 30.8	+1.1
QLMT	Earthquake Lak	3.11	350	*e*Pn	Pn	19 24 31.1	0.0
K22A	Casper	3.21	73	*e*Pn	Pn	19 24 33.8	+1.2
HLID	Hailey	3.28	304	*e*Pn	Pb	19 24 37.0	-2.9
MCMT	McKenzie Canyo	3.44	333	*e*Pn	Pn	19 24 35.9	+0.2
MSU	Marysvale	3.45	200	*e*Pn	Pn	19 24 36.4	+0.5
PV21	Cone Mtn., Par	3.46	157	*e*Pn	Pn	19 24 36.2	+0.2
PV09	Paradox Valley	3.48	160	*e*Pn	Pn	19 24 36.0	-0.3
PV23	Carpenter Ridg	3.55	158	*e*Pn	Pn	19 24 37.5	+0.2
ELK	Elko	3.58	255	*e*Pg	Pb	19 24 46.1	+1.1
ELK				Lg	Lg	19 25 33.4	
ELK	Elko	3.58	255	Pg	Pb	19 24 44.4	-0.7
	0.2nm,0.3s,baz=76,slow=16,SNR=7.9						
ELK				Lg	Lg	19 25 33.4	
	0.2nm,0.3s,baz=306,slow=19,SNR=2.8						
PV14	Lion Creek, Pa	3.62	159	*e*Pn	Pn	19 24 37.5	-0.8
PV04	Paradox Valley	3.64	157	*e*Pn	Pn	19 24 39.5	+1.1
PV20	West Nyswonger	3.67	158	*e*Pn	Pn	19 24 39.4	+0.5
N23A	Red Feather La	3.67	102	*e*Pn	Pn	19 24 39.6	+0.6
PV07	Paradox Valley	3.68	154	*e*Pn	Pn	19 24 40.5	+1.6
PV19	Morning Glory	3.69	159	*e*Pn	Pn	19 24 38.5	-0.7
PV16	Nyswonger Mesa	3.71	158	*e*Pn	Pn	19 24 38.9	-0.6
PV17	East Wray Mesa	3.73	159	*e*Pn	Pn	19 24 40.6	+0.9
PV11	David Mesa, Pa	3.74	158	*e*Pn	Pn	19 24 40.1	+0.4
PV12	Saucer Basin,	3.74	157	*e*Pn	Pn	19 24 40.0	+0.2

PV03	Paradox Valley	3.79	158	ePg	Pb	19 24 49.7	+1.3
PV15	Paradox Valley	3.82	153	ePg	Pb	19 24 50.0	+1.0
SMCO	Snowmass	3.84	131	ePg	Pb	19 24 47.1	-2.3
PV02	Paradox Valley	3.86	157	ePn	Pn	19 24 40.5	-1.0
PV13	Radium Mtn., P	3.88	158	ePn	Pn	19 24 41.9	+0.1
PV05	Paradox Valley	3.88	161	ePn	Pn	19 24 41.0	-0.8
BOZ	Bozeman (W)	3.89	350	ePn	Pn	19 24 43.3	+1.5
MTPU	Mount Pierson	3.90	198	ePn	Pn	19 24 42.4	+0.2
PV01	Paradox Valley	3.98	155	ePn	Pn	19 24 42.1	-1.0
PSUT	Pine Spring	4.04	218	ePn	Pn	19 24 44.6	+0.6
ISCO	Idaho Springs	4.32	115	ePg	Pb	19 24 58.9	+1.2
MVCO	Mesa Verde	4.86	159	ePg	Pb	19 25 08.4	+1.6
S22A	4UR Ranch, Cre	5.00	142	ePg	Pg	19 25 13.7	-2.7
U15A	North Rim	5.48	194	ePg	Pb	19 25 19.6	+2.3
NVAR	Mina Array Bea	6.73	243	Pn	Pn	19 25 24.1	+3.3
	baz=68,slow=12,SNR=5.3						
YKA	Yellowknife Ar	20.89	355	P	P	19 28 24.4	+0.3
	0.2nm,0.7s,baz=171,slow=9.8,SNR=2.7						

IDC 27 19:45:17.2±48.0, 16°.75S×177°.02W, h0^{km}, mb3.9/3, mb1 4.0/3, mb1mx3.6/27, mbtmp3.9/3, Error ellipse: s-maj=887.5km s-min=159.1km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.34	240	P	P	19 52 57.6	+0.7
	2.8nm,1.0s,baz=74,slow=7.4,SNR=3.4						
WRA	Warramunga Arr	46.15	258	P	P	19 53 43.1	-0.8
	0.1nm,0.3s,baz=98,slow=7.8,SNR=8.7						
ASAR	Alice Springs	46.38	253	P	P	19 53 45.5	-0.3
	1.8nm,0.5s,baz=88,slow=8.1,SNR=41						

ISCJB **27** *19:51:12.9±0.5, 35°.51N±0°.03×97°.36W±0°.03, h22^{km}±5^{km}, Error ellipse: s-maj=5.3km s-min=3.5km az=164.8*

NEIC **27** *19:51:12.8±0.3, 35°.46N×97°.34W, h5^{km}, MN3.5, Error ellipse: s-maj=4.7km s-min=3.4km az=160.0*

NEIC Felt [IV] at Jones and Oklahoma City; [III] at Choctaw, Harrah, Newalla and Spencer; [II] at Edmond and Luther. Also felt at Arcadia, Bixby, Broken Arrow, Jenks, Norman, Shawnee, Stillwater, Tulsa, Wagoner and Yukon. Felt at Winfield, Kansas.

IDC **27** *19:51:13.8±2.3, 35°.57N×97°.41W, h0^{km}, mb1 3.5/3, mb1mx3.3/54, mbtmp3.2/3, ML3.2/3, Error ellipse: s-maj=33.5km s-min=13.1km az=105.0*

ANF **27** *19:51:15.8±1.3, 35°.48N×97°.37W, h28^{km}±11^{km}, ML4.3/12, Error ellipse: s-maj=4.8km s-min=3.0km az=152.0*

ISC 27 19:51:13.4±1.1, 35°.52N±0°.06×97°.37W±0°.04, h14^{km}±7^{km}, n72, σ1^{s}.37/77, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK001	Jones High Sch	0.07	56	ePg	Pg	19 51 16.2	-0.1
OK002	Wilshire Harra	0.14	78	ePg	Pg	19 51 17.4	+0.3
OK005	Luther M Schoo	0.20	46	ePg	Pg	19 51 18.5	+0.6
TUL1	Leonard	1.34	73	ePn	Pn	19 51 37.5	-0.3
TUL1	Leonard	1.34	73	P	Pn	19 51 37.5	-0.3
	baz=252						
TUL1				S	Sn	19 51 56.3	+0.9
	baz=252						
WMOK	Wichita Mounta	1.40	236	ePn	Pn	19 51 38.4	-0.2
WMOK	Wichita Mounta	1.40	236	P	Pn	19 51 38.4	-0.2
	baz=57						
WMOK				S	Sn	19 51 57.0	+0.1
	baz=57						
U32A	Winter Ranch,	1.58	303	ePn	Pb	19 51 42.4	-0.1
HHAR	Hobbs	2.88	74	ePn	Pn	19 52 00.5	+1.5
W39A	Magazine	2.94	95	ePn	Pn	19 52 00.9	+1.0
W39A	Magazine	2.94	95	P	Pn	19 52 00.8	+1.0
	baz=277						
MIAR	Mount Ida	3.26	106	ePn	Pn	19 52 04.7	+0.5
MIAR	Mount Ida	3.26	106	P	Pn	19 52 05.9	+1.7
	baz=288						
MIAR				S	Sn	19 52 45.2	+2.5
	baz=288						
ABTX	Abilene, Hawle	3.45	214	ePn	Pn	19 52 07.2	+0.3
WHTX	Lake Whitney,	3.52	181	ePn	Pn	19 52 08.5	+0.7
WHTX	Lake Whitney,	3.52	181	P	Pn	19 52 08.6	+0.8
	baz=1.1						
AMTX	Amarillo	3.59	261	ePn	Pn	19 52 11.3	+2.5
AMTX	Amarillo	3.59	261	P	Pn	19 52 11.3	+2.5
	baz=79						
KSU1	Kansas State U	3.62	9	ePn	Pn	19 52 10.0	+0.8
KSU1	Kansas State U	3.62	9	P	Pn	19 52 10.9	+1.7
	baz=190						
KSU1				S	Sn	19 52 53.6	+1.8
	baz=190						
CBKS	Cedar Bluff	3.79	331	ePn	Pn	19 52 13.6	+2.0
CBKS	Cedar Bluff	3.79	331	P	Pn	19 52 13.6	+2.0
	baz=150						
X40A	Basin Creek Fa	3.86	104	ePn	Pn	19 52 13.3	+0.9
X40A	Basin Creek Fa	3.86	104	P	Pn	19 52 13.7	+1.3
	baz=286						
WHAR	Wooly Hollow	4.15	92	ePn	Pn	19 52 17.3	+0.8
UALR	University of	4.18	99	ePn	Pn	19 52 17.3	+0.5
W41B	Gary Mavity, V	4.20	93	ePn	Pn	19 52 18.1	+1.0
W41B	Gary Mavity, V	4.20	93	P	Pn	19 52 18.4	+1.3
	baz=276						
W41B				S	Sn	19 53 06.7	+0.8
	baz=276						
MSTX	Muleshoe	4.71	252	ePn	Pn	19 52 23.9	-0.4
435B	Jarrell	4.73	182	ePn	Pn	19 52 23.2	-1.2
T41A	Mountain View	4.77	70	P	Pn	19 52 26.2	+1.2
	baz=253						
U42A	Revenden	5.04	79	P	Pn	19 52 29.4	+0.7
	baz=262						
T42A	Van Buren	5.29	72	ePn	Pn	19 52 31.4	-0.7
JCT	Junction City	5.43	203	ePn	Pn	19 52 33.1	-1.0
KSCO	Kaye Shedlock'	5.45	311	ePn	Pn	19 52 34.8	+0.3
CCM	Cathedral Cave	5.53	61	ePn	Pn	19 52 35.0	-0.3
R41A	Rosebud	5.54	58	P	Pn	19 52 36.5	+1.0
	baz=241						
S42A	Caledonia	5.74	65	P	Pn	19 52 39.3	+1.0
	baz=249						
PBMO	Poplar Bluff	5.75	75	ePn	Pn	19 52 38.6	+0.2
BGNE	Belgrade	5.91	354	ePn	Pn	19 52 42.2	+1.6
T25A	Trinidad	5.91	288	ePn	Pn	19 52 42.3	+1.4
CPRX	Cap Rock	5.93	247	ePn	Pn	19 52 40.1	-0.9
Q41A	Truxton	5.97	53	P	Pn	19 52 41.9	+0.5
	baz=236						
FVM	French Village	6.09	64	ePn	Pn	19 52 43.0	-0.1
P41A	Barry, Barry	6.50	48	P	Pn	19 52 49.3	+0.6
	baz=232						
OGNE	Ogallala	6.54	327	ePn	Pn	19 52 50.5	+1.1
OXF	Oxford	6.61	96	ePn	Pn	19 52 49.6	-0.5
OXF	Oxford	6.61	96	P	Pn	19 52 50.8	+0.7
	baz=281						
W45A	Hickory Valley	6.70	91	P	Pn	19 52 51.9	+0.5
	baz=275						
P42A	Winchester	6.90	52	ePn	Pn	19 52 53.5	-0.6
P42A				eSn	Sn	19 54 09.8	-2.6
SIUC	Southern Illin	6.91	69	ePn	Pn	19 52 53.8	-0.5
SDCO	Great Sand Dun	6.91	291	ePn	Pn	19 52 56.9	+2.3
SDCO	Great Sand Dun	6.91	291	P	Pn	19 52 57.0	+2.4
	baz=107						
Q24A	Divide	7.10	301	ePn	Pn	19 52 57.5	+0.3
N41A	Harden Midland	7.29	43	ePn	Pn	19 53 01.4	+1.9
833A	Chaparral WMA,	7.38	194	ePn	Pn	19 53 01.1	+0.3
ANMO	Albuquerque	7.46	268	ePn	Pn	19 53 00.6	-1.6
PLAL	Pickwick Lake	7.62	91	ePn	Pn	19 53 01.7	-2.4
MNTX	Cornudas Mount	7.70	243	ePn	Pn	19 53 05.9	+0.7
BNM	Barren Site	7.74	262	ePn	Pn	19 53 07.1	+1.2
ISCO	Idaho Springs	7.81	306	ePn	Pn	19 53 08.6	+1.6
LENM	Lemitar	8.02	263	ePn	Pn	19 53 05.1	-4.6
L40A	Anamosa	8.10	34	ePn	Pn	19 53 09.2	-1.5
HDIL	Hopedale	8.11	49	ePn	Pn	19 53 10.9	+0.1
TX31	Lajitas Ar. Si	8.15	223	ePn	Pn	19 53 09.4	-2.0
TXAR	Lajitas Array	8.15	223	Pn	Pn	19 53 12.5	+1.0
	0.2nm,0.3s,baz=48,slow=11,SNR=5.8						
TXAR				Lg	Lg	19 55 24.4	
	1.7nm,0.3s,baz=40,slow=28,SNR=3.9						
ECSD	EROS Data Cent	8.22	4	ePn	Pn	19 53 11.9	-0.5
N23A	Red Feather La	8.62	311	ePn	Pn	19 53 20.2	+2.1
L42A	Oliver, Polo	8.83	41	ePn	Pn	19 53 21.5	+0.8
I39A	Houston	9.46	27	ePn	Pn	19 53 28.9	-0.4
PDAR	Pinedale Array	11.91	311	Pn	Pn	19 54 05.4	+2.4
	0.1nm,0.3s,baz=127,slow=13,SNR=2.5						
PDAR				Lg	Lg	19 57 23.8	
	0.3nm,0.3s,baz=108,slow=29,SNR=3.1						
ULM	Lac du Bonnet	14.76	4	Pn	Pn	19 54 37.4	-4.4
	0.3nm,0.3s,baz=191,slow=12,SNR=3.0						
ULM				Sn	Sn	19 57 13.6	-11
	0.3nm,0.3s,baz=109,slow=18,SNR=2.4						
ULM				Lg	Lg	19 58 47.4	
	0.4nm,0.3s,baz=254,slow=18,SNR=2.9						

ISCJB **27** *19:54:04.5±0.2, 67°.68N±0°.04×142°.90E±0°.08, h10^{km}, mb4.1/43, MS3.2/3, Error ellipse: s-maj=5.8km s-min=3.9km az=149.3*

MOS **27** *19:54:04.7±1.3, 67°.68N×143°.07E, h12^{km}, mb4.4/21, Error ellipse: s-maj=15.8km s-min=6.6km az=84.9*

IDC **27** *19:54:04.7±0.5, 67°.74N×142°.83E, h0^{km}, mb3.9/22, mb1 4.1/25, mb1mx3.9/67, mbtmp3.9/25, ML4.0/3, MS3.2/5, Ms1 3.2/5, ms1mx2.8/49, Error ellipse: s-maj=14.9km s-min=12.0km az=167.0*

YARS **27** *19:54:05.4±0.2, 67°.580N±0°.007×143°.13E±0°.02, h14^{km}±4^{km}*

NEIC **27** *19:54:06.2±0.9, 67°.73N×142°.76E, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=15.4km s-min=12.5km az=81.0*

ISC 27 19:54:05.9±0.4, 67°.64N±0°.03×143°.01E±0°.05, h10^{km}, n106, σ1^{s}.56/112, mb4.2/43, MS3.2/3, 1C-1D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.18	176	eP	Pb	19 54 25.7	-2.7
MOMR				eS	Sb	19 54 39.8	-3.9
MOMR	Moma	1.18	176	eP	Pb	19 54 25.7	-2.7
MOMR				eS	Sb	19 54 39.8	-3.9
YBGR	Belaya Gora	1.49	52	eP	Pn	19 54 31.7	-1.0
YBGR				eS	Sb	19 54 51.6	-1.1
YBGR	Belaya Gora	1.49	52	eP	Pn	19 54 31.7	-1.0
YBGR				eS	Sb	19 54 51.6	-1.1
DEPR	Deputatskiy	2.10	328	eP	Pg	19 54 45.1	-1.1
DEPR				eS	Sg	19 55 12.7	-0.6
DEPR	Deputatskiy	2.10	328	eP	Pg	19 54 45.1	-1.1
DEPR				eS	Sg	19 55 12.7	-0.6
ATKR	Artyk	3.58	165	eP	Pb	19 55 08.7	-0.6
ATKR				eS	Sb	19 55 53.8	+1.0
ATKR	Artyk	3.58	165	eP	Pb	19 55 08.7	-0.6
ATKR				eS	Sb	19 55 53.8	+1.0
SEY	Seymchan	6.14	136	Pn	Pn	19 55 36.1	-0.4
	0.6nm,0.3s,baz=322,slow=12,SNR=26						
SEY				Lg	Lg	19 57 18.7	
	4.4nm,0.3s,baz=227,slow=19,SNR=8.7						
YAK	Yakutsk	7.98	232	eP	Pn	19 55 58.1	-3.7
YAK				pmax	pmax		
	comp=Z,35nm,0.3s						
YAK				pmax	pmax		
	comp=E,17nm,0.4s						
YAK				pmax	pmax		
	comp=N,19nm,0.4s						
YAK	Yakutsk	7.98	232	eS	Sg	19 58 11.9	-10
USMR	Ust'-Maya	8.13	211	eP	Pn	19 56 04.9	+1.0
USMR	Ust'-Maya	8.13	211	eP	Pn	19 56 04.9	+1.0
USMR				eP	Pb	19 56 33.2	+6.5
USMR				eS	Sg	19 58 17.5	-9.2
BILL	Bilibino	8.78	77⇓	eP	Pn	19 56 12.3	-0.4
MA2	Magadan	8.79	153	Pn	Pn	19 56 14.4	+1.5
	comp=N,0.4nm,0.3s,baz=335,slow=17,SNR=3.3						
MA2				Lg	Lg	19 58 44.1	
	comp=N,1.0nm,0.3s,baz=16,slow=19,SNR=6.5						
MA2				LR	LR	20 00 17.3	
	comp=N,41nm,20.6s,baz=112,slow=42						
CGD	Chagda	10.50	218	eS	Sn	19 59 29.9	+56
ALDR	Aldan	12.00	230	eP	Pn	19 56 57.8	+0.9
ALDR	Aldan	12.00	230	eP	Pn	19 56 57.8	+0.9
ALDR				eS		20 00 15.4	
OLMR	Olekminsk	12.21	244	eP	Pn	19 57 00.2	+0.6
OLMR	Olekminsk	12.21	244	eP	Pn	19 57 00.2	+0.6
OLMR				eS		20 00 22.5	
IENR	Iengra	14.20	225	eS	S	20 01 23.7	+58
YKLR	Yuktali	14.81	232	eP	Pn	19 57 35.9	+0.8
YKLR	Yuktali	14.81	232	eP	Pn	19 57 35.9	+0.8
YKLR				eS	S	20 01 43.3	+66
ZEA	Zeya	15.85	216	eP	Pn	19 57 50.1	+1.2
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,8.0s						
PEA1	Petropavlovsk-	16.20	147	ePn	P	19 57 58.8	+2.2
PETK	Petropavlovsk-	16.21	147	Pn	P	19 57 58.8	+2.2
	comp=Z,0.2nm,0.3s,baz=18,slow=5.0,SNR=3.9						
BOD	Bodaibo	16.35	247	eP	Pn	19 57 50.0	-5.2
BOD				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PET	Petropavlovsk	16.49	145	eP	P	19 57 58.8	-0.9
GAMB	Gambell	18.68	80	eP	Pn	19 58 25.0	+0.9
	comp=Z,4.3nm,1.0s						
KLR	Kul'dur	19.32	203	P	Pn	19 58 32.2	+0.3
	comp=Z,0.2nm,0.3s,baz=12,slow=11,SNR=6.8						
KLR				Lg	Lg	20 04 16.3	
	comp=Z,0.0nm,0.3s,baz=254,slow=20,SNR=3.8						
KLR				LR	LR	20 06 11.5	
	comp=Z,63nm,19.2s,baz=20,slow=38						
ANM	Nome	20.62	74	eP	Pn	19 58 47.1	-0.1
	comp=Z,30nm,1.9s						
ANM	Nome	20.62	74	eP	Pn	19 58 47.1	-0.2
ANM				pmax	pmax		
	comp=Z,30nm,1.9s						
HIA	Hailar	21.82	224	eP	P	19 59 01.2	+3.2
HIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TOLK	Toolik Lake Re	24.01	56	eP	P	19 59 20.8	+0.5
	comp=Z,29nm,1.6s						
IM3	Indian Mountai	24.01	64	eP	P	19 59 20.9	+0.6
USRK	Ussuriysk Ar.	24.21	200	P	P	19 59 22.8	+0.4
	comp=Z,1.7nm,0.7s,baz=10,slow=12,SNR=4.3						
USRK				LR	LR	20 09 26.2	
	comp=Z,88nm,20.1s,baz=50,slow=38						
COLD	Coldfoot	24.53	60	eP	P	19 59 25.8	+0.7
	comp=Z,8.8nm,1.0s						
VLA	Vladivostok	25.29	199	iP	P	19 59 34.8	+2.7
VLA				pmax	pmax		
	comp=Z,23nm,1.5s						
MLY	Manley	25.58	64	eP	P	19 59 35.1	+0.4
	comp=Z,7.0nm,1.1s						
MOY	Mondy	25.86	253	eP	P	19 59 39.0	+1.6
MOY				pmax	pmax		
	comp=Z,19nm,1.5s						
MDM	Murphy Dome	26.49	63	eP	P	19 59 43.2	+0.4
	comp=Z,8.2nm,1.0s						
COLA	College	26.67	63	eP	P	19 59 45.0	+0.6
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	26.92	241	iP	P	19 59 49.9	+2.8
ULN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
IL1	Eielson Array	27.06	62	eP	P	19 59 48.4	+0.4
ILAR	Eielson Array	27.06	62	P	P	19 59 48.5	+0.6
	comp=Z,4.3nm,0.8s,baz=296,slow=7.8,SNR=49						
ILB	Eielson Array	27.06	62	eP	P	19 59 48.4	+0.4
	comp=Z,9.1nm,1.1s						
SONA0	Songino Array	27.17	242	eP	P	19 59 50.6	+1.3
SONM	Songino Array	27.17	242	P	P	19 59 50.6	+1.3
	comp=Z,0.7nm,0.6s,baz=29,slow=6.6,SNR=5.0						
SONM				LR	LR	20 11 20.3	
	comp=Z,93nm,19.0s,baz=75,slow=38						
MAJO	Matsushiro	31.26	187	eP	P	20 00 26.2	+0.6
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSRS	Korea Array	31.41	203	LR	LR	20 13 29.9	
	comp=Z,46nm,20.8s,baz=26,slow=37						
DGZ	Jazzator, Alta	32.53	265	eP	P	20 00 40.2	+3.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURK	Kurchatov	35.08	274	eP	P	20 00 59.0	+0.3
KURK	Kurchatov	35.08	274	eP	P	20 00 59.0	+0.3
KURBB	Kurchatov Arra	35.19	274	P	P	20 00 59.0	-0.6
	comp=Z,0.7nm,0.6s,baz=38,slow=8.6,SNR=7.6						
BVAR	Borovoye Array	36.36	283	P	P	20 01 08.8	-0.8
	comp=Z,1.4nm,0.7s,baz=45,slow=8.6,SNR=6.4						
BRVK	Borovoye	36.37	284	eP	P	20 01 11.9	+2.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK31	Makanchi Array	36.88	267	eP	P	20 01 12.9	-1.3
	comp=Z,1.4nm,0.9s						
MK31	Makanchi Array	36.88	267	eP	P	20 01 12.9	-1.3
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK32	Makanchi Array	36.88	267	eP	P	20 01 12.5	-1.7
MK32				ePP	PP	20 02 38.0	0.0
MKAR	Makanchi Array	36.88	267	eP	P	20 01 12.2	-2.0
	comp=Z,8.9nm,0.8s						
MKAR	Makanchi Array	36.88	267	eP	P	20 01 12.2	-2.0
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MKAR	Makanchi Array	36.88	267	P	P	20 01 12.5	-1.7
	comp=Z,0.7nm,0.6s,baz=31,slow=7.5,SNR=14						
MKAR				PP	PP	20 02 38.0	0.0
	comp=Z,0.8nm,0.7s,baz=46,slow=10,SNR=4.9						
MK01	Makanchi Array	36.90	267	eP	P	20 01 12.8	-1.6
ARU	Arti	37.93	296c	iP	P	20 01 25.5	+2.6
ARU						20 02 48.8	
ARU				S	S	20 07 19.9	+5.8
ARU				pmax	pmax		
	comp=Z,18nm,2.0s						
YKA	Yellowknife Ar	38.72	46	P	P	20 01 29.9	+0.4
	comp=Z,1.2nm,0.7s,baz=322,slow=8.0,SNR=18						
YKB5	Yellowknife Ar	38.72	46	eP	P	20 01 29.8	+0.3
WHN	Wuhan	40.81	219	P	P	20 01 45.8	-1.4
AKTO	Aktyubinsk	42.98	291	P	P	20 02 03.9	-0.8
	comp=Z,1.1nm,0.5s,baz=49,slow=8.2,SNR=4.9						
ABKAR	Akbulak array	43.26	288	eP	P	20 02 06.3	-0.7
FIA0	FINESS Array S	43.37	321	eP	P	20 02 07.0	-0.7
FIA0	FINESS Array S	43.37	321	eP	P	20 02 07.0	-0.7
FINES	FINESS Array B	43.37	321	P	P	20 02 07.0	-0.7
	comp=Z,1.2nm,0.5s,baz=30,slow=8.8,SNR=9.5						
AAK	Ala-Archa	43.37	271	eP	P	20 02 08.6	+0.4
	comp=Z,8.0nm,1.4s						
AAK	Ala-Archa	43.37	271	eP	P	20 02 08.6	+0.4
AAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
AAK	Ala-Archa	43.37	271	P	P	20 02 08.8	+0.6
	comp=Z,1.6nm,0.5s,baz=76,slow=2.4,SNR=11						
OBN	Obninsk	46.05	310	eP	P	20 02 28.0	-1.2
OBN				e		20 04 16.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NB2	NORSAR Subarra	46.92	330	P	P	20 02 35.4	-0.6
	comp=Z,0.7nm,0.8s,baz=26,slow=7.9						
NB200	NORSAR Array S	46.92	330	eP	P	20 02 34.5	-1.5
NOA	NORSAR Array B	46.92	330	P	P	20 02 34.5	-1.5
	comp=Z,1.1nm,0.8s,baz=25,slow=7.7,SNR=4.0						
GAR	Garm	48.11	272	eP	P	20 02 45.4	-0.2
	comp=Z,4.9nm,0.9s						
GAR	Garm	48.11	272	eP	P	20 02 45.4	-0.2
GAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VSR	Storozhevoye	48.65	306	eP	P	20 02 48.9	-0.5
CHGR	Chuyangaron	48.85	273	eP	P	20 02 51.1	-0.2
AKASG	Malin Array Be	52.06	312	P	P	20 03 13.9	-1.3
	comp=Z,1.7nm,0.6s,baz=28,slow=8.3,SNR=3.8						
KIV	Kislovodsk	53.88	298	eP	P	20 03 31.9	+3.0
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	54.01	298	P	P	20 03 29.9	+0.2
	comp=Z,1.8nm,0.7s,baz=41,slow=11,SNR=4.8						
CLL	Collm	55.61	324	iP	P	20 03 40.9	-0.3
CLL				ipP	pP	20 03 43.0	-1.5
CLL	Collm	55.61	324	iP	P	20 03 40.9	-0.3
CLL				i		20 03 43.0	
SCHQ	Schefferville	55.84	20	P	P	20 03 41.9	-0.9
	comp=Z,2.6nm,0.7s,baz=6.0,slow=12,SNR=4.6						
CMAR	Chiang Mai Arr	56.52	232	P	P	20 03 48.4	+0.4
	comp=Z,0.4nm,0.6s,baz=6.4,slow=8.7,SNR=3.8						
PDAR	Pinedale Array	57.27	57	P	P	20 03 53.8	+0.3
	comp=Z,1.4nm,0.6s,baz=9.1,slow=3.8,SNR=5.2						
MLR	Muntele Rosu	57.71	312	P	P	20 03 57.6	+1.2
	comp=Z,2.1nm,0.7s,baz=61,slow=19,SNR=4.3						
GERES	GERESS Array B	57.76	323	P	P	20 03 55.4	-1.3
	comp=Z,0.7nm,0.8s,baz=32,slow=9.3,SNR=3.1						
NV01	Mina Array Sit	58.23	66	eP	P	20 04 01.3	+1.1
NVAR	Mina Array Bea	58.23	66	P	P	20 04 01.4	+1.1
	comp=Z,1.5nm,0.8s,baz=315,slow=5.4,SNR=8.6						
R11A	Troy Canyon, C	59.24	64	eP	P	20 04 08.2	+0.9
	comp=Z,3.7nm,1.1s						
PSUT	Pine Spring	59.67	62	eP	P	20 04 11.6	+1.4
	comp=Z,2.9nm,0.9s						
SRU	San Rafael Swe	60.26	59	eP	P	20 04 14.9	+0.7
	comp=Z,2.9nm,0.7s						
SRU	San Rafael Swe	60.26	59	eP	P	20 04 14.9	+0.7
SRU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BR101	Keskin Array S	60.64	303	eP	P	20 04 16.6	-0.1
BRTR	Keskin Array B	60.64	303	P	P	20 04 16.6	-0.2
	comp=Z,0.5nm,0.8s,baz=64,slow=3.4,SNR=3.7						
ESDC	Sonseca Array	70.13	333	P	P	20 05 17.7	-0.4
	comp=Z,0.9nm,0.7s,baz=6.3,slow=6.4,SNR=3.7						
TXAR	Lajitas Array	71.46	58	P	P	20 05 25.9	-0.5
	comp=Z,0.2nm,0.4s,baz=8.3,slow=3.5,SNR=4.1						
WR1	Warramunga Arr	87.56	188	eP	P	20 06 54.2	+0.6
	comp=Z,33nm,1.8s						
WRA	Warramunga Arr	87.56	188	P	P	20 06 54.2	+0.6
	comp=Z,0.4nm,1.0s,baz=8.7,slow=6.1,SNR=2.6						
PLCA	Paso Flores	147.44	51	PKPbc	PKPbc	20 13 49.1	+0.1
	comp=Z,1.1nm,0.7s,baz=342,slow=5.2,SNR=4.2						

IDC 27 20:03:37.9±2.1, 5°.37S×125°.56E, h0^{km}, mb3.4/2, mb1 3.8/4, mb1mx3.5/31, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=112.2km s-min=25.4km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.65	180	Pn	Pn	20 06 38.0	-1.2
	0.1nm,0.3s,baz=359,slow=12,SNR=3.1						
WRA	Warramunga Arr	16.82	150	Pn	Pn	20 07 31.1	-3.9
	0.2nm,0.3s,baz=317,slow=14,SNR=8.1						
WRA				Sn	Sn	20 10 30.1	-12
	baz=329,slow=22,SNR=3.6						
ASAR	Alice Springs	19.89	157	P	P	20 08 11.7	+0.6
	0.1nm,0.3s,baz=336,slow=12,SNR=6.9						
CMAR	Chiang Mai Arr	35.34	313	P	P	20 10 35.3	0.0
	0.4nm,0.7s,baz=138,slow=7.2,SNR=3.2						
MKAR	Makanchi Array	64.50	329	P	P	20 14 16.4	-0.1
	0.2nm,0.6s,baz=139,slow=7.5,SNR=3.3						

MEX 27 20:22:17.1±0.5, 14°.05N×92°.45W, h15^{km}±999^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	2.24	8	eP	Pn	20 22 52.1	-1.8

MOS **27** *20:33:33.9±1.2, 67°.56N×142°.95E, h11^{km}, mb4.2/16, Error ellipse: s-maj=15.8km s-min=6.4km az=81.7*

ISCJB **27** *20:33:34.1±0.2, 67°.59N±0°.03×142°.87E±0°.09, h10^{km}, mb4.0/34, MS3.1/4, Error ellipse: s-maj=5.6km s-min=3.9km az=137.1*

YARS **27** *20:33:34.2±0.2, 67°.590N±0°.009×143°.01E±0°.03, h10^{km}±8^{km}*

IDC **27** *20:33:34.0±0.6, 67°.61N×142°.94E, h0^{km}, mb3.8/16, mb1 4.0/19, mb1mx3.8/50, mbtmp3.8/19, ML3.8/3, MS3.2/5, Ms1 3.2/5, ms1mx2.8/43, Error ellipse: s-maj=18.3km s-min=12.8km az=164.0*

NEIC **27** *20:33:36.1±0.3, 67°.58N×142°.75E, h10^{km}, mb4.5/10, Error ellipse: s-maj=11.3km s-min=6.6km az=168.0*

ISC 27 20:33:35.5±0.4, 67°.51N±0°.04×142°.96E±0°.05, h10^{km}, n93, σ1^{s}.59/99, mb4.0/34, MS3.1/4, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.05	174	eP	Pb	20 33 55.6	-0.2
MOMR				eS	Sb	20 34 10.2	+0.7
MOMR	Moma	1.05	174	eP	Pb	20 33 55.6	-0.2
MOMR				eS	Sb	20 34 10.2	+0.7
YBGR	Belaya Gora	1.59	48	eP	Pn	20 34 01.0	-2.7
YBGR				eS	Sn	20 34 21.6	-2.7
YBGR	Belaya Gora	1.59	48	eP	Pn	20 34 01.0	-2.7
YBGR				eS	Sn	20 34 21.6	-2.7
DEPR	Deputatskiy	2.20	331	eP	Pn	20 34 13.0	+0.9
DEPR				eS	Sn	20 34 40.6	+1.2
DEPR	Deputatskiy	2.20	331	eP	Pn	20 34 13.0	+0.9
DEPR				eS	Sn	20 34 40.6	+1.2
ATKR	Artyk	3.46	164	eP	Pb	20 34 37.2	+0.4
ATKR	Artyk	3.46	164	eP	Pb	20 34 37.2	+0.4
ATKR				eS	Sb	20 35 22.7	+3.8
SEY	Seymchan	6.06	135	Pn	Pn	20 35 05.9	+0.9
	2.3nm,0.3s,baz=329,slow=17,SNR=36						
SEY				Lg	Lg	20 36 47.2	
	1.6nm,0.3s,baz=212,slow=19,SNR=5.4						
YAK	Yakutsk	7.88	232	eP	Pn	20 35 30.0	0.0
YAK				eS	Sn	20 36 56.2	-3.0

YAK	Yakutsk	7.88	232	eP	Pn	20 35 30.0	0.0
YAK				eS	Sn	20 36 56.2	-3.0
YAK				eS	Sb	20 37 39.4	+13
USMR	Ust'-Maya	8.01	211	eP	Pn	20 35 33.2	+1.4
USMR	Ust'-Maya	8.01	211	eP	Pn	20 35 33.2	+1.4
USMR				eP	Pb	20 36 00.6	+6.3
USMR				eS	Sg	20 37 46.2	-6.1
MA2	Magadan	8.68	153	eP	Pn	20 35 40.7	-0.3
MA2	Magadan	8.68	153	Lg	Lg	20 38 10.3	
	0.2nm,0.3s,baz=209,slow=19,SNR=4.3						
BILL	Bilibino	8.83	76	eP	Pn	20 35 46.3	+3.3
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
CGD	Chagda	10.39	218	eP	Pn	20 36 05.3	+1.0
CGD				eS	Sn	20 37 56.2	-4.4
CGD	Chagda	10.39	218	eP	Pn	20 36 05.3	+1.0
CGD				eS	Sn	20 37 56.2	-4.4
CGD				eS		20 38 57.5	
ALDR	Aldan	11.90	230	eS		20 39 44.7	
OLMR	Olekminsk	12.14	245	eS	Sn	20 38 37.1	-6.2
OLMR				eS		20 39 49.7	
YCRN	Chernyshevskiy	13.43	265	eS	S	20 40 30.1	+51
IENR	Iengra	14.10	225	eP	Pn	20 36 57.7	+2.7
IENR				eS	Sn	20 39 26.0	-5.3
IENR	Iengra	14.10	225	eP	Pn	20 36 57.7	+2.7
IENR				eS	Sn	20 39 26.0	-5.3
IENR				eS	S	20 40 52.5	+60
YKLR	Yuktali	14.71	232	eP	Pn	20 37 05.9	+2.5
YKLR	Yuktali	14.71	232	eP	Pn	20 37 05.9	+2.5
YKLR				eS	S	20 41 10.0	+65
KHNR	Khani	14.96	236	eP	Pn	20 37 09.1	+2.3
KHN	Khani	15.02	236	eP	Pn	20 37 09.1	+1.5
KHN				eS	S	20 41 18.8	+67
TNDR	Tynda	15.08	224	eP	Pn	20 37 09.5	+1.1
TNDR	Tynda	15.08	224	eP	Pn	20 37 09.5	+1.1
TNDR				eS	S	20 41 22.6	+70
ZEA	Zeya	15.74	216	eP	Pn	20 37 18.2	+1.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,300nm,9.0s						
ZEA				MLR	MLR		
	comp=N,400nm,7.0s						
BOD	Bodaibo	16.28	248	eP	Pn	20 37 21.0	-3.0
BOD				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KLR	Kul'dur	19.19	203	P	P	20 38 00.5	+1.4
	comp=Z,0.1nm,0.3s,baz=4.9,slow=11,SNR=7.1						
KLR				Lg	Lg	20 43 45.3	
	comp=Z,0.1nm,0.3s,baz=336,slow=20,SNR=4.0						
KLR				LR	LR	20 45 40.6	
	comp=Z,31nm,20.7s,baz=35,slow=38						
NRIK	Noril'sk	19.87	301	P	P	20 38 07.1	+0.7
	comp=Z,0.4nm,0.3s,baz=82,slow=9.0,SNR=4.0						
HIA	Hailar	21.71	224	i P	P	20 38 26.2	-0.3
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ASAJ	Asahikawa	23.45	181	LR	LR	20 48 07.4	
	comp=Z,55nm,19.0s,baz=238,slow=37						
IM3	Indian Mountai	24.08	64	eP	P	20 38 51.6	+0.9
USRK	Ussuriysk Ar.	24.09	200	P	P	20 38 51.2	+0.4
	comp=Z,2.0nm,0.6s,baz=20,slow=13,SNR=5.4						
COLD	Coldfoot	24.62	59	eP	P	20 38 57.1	+1.6
	comp=Z,7.8nm,1.2s						
MOY	Mondy	25.80	253	eP	P	20 39 07.7	+1.2
MOY				pmax	pmax		
	comp=Z,20nm,2.1s						
ZAK	Zakamensk	26.02	249	eP	P	20 39 06.8	-1.7
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
COLA	College	26.74	62	i P	P	20 39 15.4	+0.7
COLA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ULN	Ulaanbaatar	26.84	241	eP	P	20 39 15.7	-0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
SONA0	Songino Array	27.09	242	eP	P	20 39 19.7	+1.5
SONM	Songino Array	27.09	242	P	P	20 39 19.7	+1.5
	comp=Z,0.4nm,0.5s,baz=27,slow=9.7,SNR=3.9						
IL1	Eielson Array	27.14	62	eP	P	20 39 18.8	+0.5
ILAR	Eielson Array	27.14	62	P	P	20 39 18.4	+0.1
	comp=Z,2.4nm,0.8s,baz=301,slow=8.1,SNR=32						
ILB	Eielson Array	27.14	62	eP	P	20 39 19.5	+1.3
	comp=Z,13nm,1.6s						
KDAK	Kodiak Island	29.74	77	LR	LR	20 52 42.3	
	comp=Z,146nm,21.0s,baz=236,slow=39						
ZAA1	Zalesovo Array	30.17	273	eP	P	20 39 46.0	+0.7
ZALV	Zalesovo Beam	30.17	273	P	P	20 39 46.0	+0.7
ZALV				MLR	MLR		
	comp=Z,52nm,18.8s						
ZALV	Zalesovo Beam	30.17	273	P	P	20 39 46.0	+0.7
	comp=Z,0.2nm,0.3s,baz=56,slow=8.8,SNR=3.0						
ZALV				LR	LR	20 51 44.1	
	comp=Z,52nm,18.8s,baz=76,slow=36						
KSRS	Korea Array	31.28	203	LR	LR	20 52 36.2	
	comp=Z,21nm,20.6s,baz=36,slow=36						
DGZ	Jazzator, Alta	32.50	265	i P	P	20 40 07.2	+1.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURK	Kurchatov	35.07	274	eP	P	20 40 27.1	-1.0
	comp=Z,2.7nm,0.9s						
KURK	Kurchatov	35.07	274	eP	P	20 40 27.2	-1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	36.38	284	i P	P	20 40 39.0	-0.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	36.86	267	eP	P	20 40 42.5	-1.1
	comp=Z,1.4nm,0.8s						
MK31	Makanchi Array	36.86	267	eP	P	20 40 42.5	-1.1
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK32	Makanchi Array	36.86	267	eP	P	20 40 43.0	-0.5
MK32				ePP	PP	20 42 10.2	+2.9
MKAR	Makanchi Array	36.86	267	P	P	20 40 43.0	-0.5
	comp=Z,1.2nm,0.6s,baz=38,slow=6.8,SNR=19						
MKAR				PP	PP	20 42 10.2	+2.9
	comp=Z,1.1nm,0.8s,baz=44,slow=9.1,SNR=4.6						
MK01	Makanchi Array	36.87	267	eP	P	20 40 42.7	-1.0
YKA	Yellowknife Ar	38.83	46	P	P	20 40 59.6	-0.4
	comp=Z,0.8nm,0.7s,baz=322,slow=7.9,SNR=17						
YKB5	Yellowknife Ar	38.83	46	eP	P	20 40 59.6	-0.4
ABKAR	Akbulak array	43.29	288	eP	P	20 41 36.0	-0.8
	comp=Z,5.7nm,1.8s						
AAK	Ala-Archa	43.35	271	eP	P	20 41 38.3	+0.7
	comp=Z,16nm,1.7s						
AAK	Ala-Archa	43.35	271	i P	P	20 41 38.7	+1.1
AAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
FIA0	FINESS Array S	43.46	321	eP	P	20 41 37.0	-1.0
FIA0	FINESS Array S	43.46	321	eP	P	20 41 37.0	-1.0
FINES	FINESS Array B	43.46	321	P	P	20 41 37.0	-1.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	43.46	321	P	P	20 41 37.0	-1.0
	comp=Z,1.7nm,0.9s,baz=21,slow=10,SNR=6.6						
OBN	Obninsk	46.12	310	eP	P	20 42 00.0	+0.7
OBN				ePPP	PPP	20 44 30.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NB200	NORSAR Array S	47.03	330	eP	P	20 42 05.0	-1.5
NOA	NORSAR Array B	47.03	330	P	P	20 42 05.0	-1.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	47.03	330	P	P	20 42 05.0	-1.5
	comp=Z,0.8nm,0.8s,baz=24,slow=7.7,SNR=3.2						
GAR	Garm	48.09	272	eP	P	20 42 15.5	+0.4
	comp=Z,6.4nm,0.8s						
GAR	Garm	48.09	272	eP	P	20 42 15.5	+0.4
GAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHGR	Chuyangaron	48.84	273	eP	P	20 42 21.0	+0.2
	comp=Z,24nm,1.5s						
AKASG	Malin Array Be	52.13	312	P	P	20 42 44.1	-1.3
	comp=Z,1.8nm,0.7s,baz=29,slow=8.6,SNR=3.6						
KIV	Kislovodsk	53.92	298	eP	P	20 42 58.9	+0.1
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	54.05	298	P	P	20 43 00.1	+0.5
	comp=Z,1.9nm,1.0s,baz=102,slow=2.3,SNR=5.4						
CLL	Collm	55.71	324	i P	P	20 43 10.7	-0.8
CMAR	Chiang Mai Arr	56.42	232	P	P	20 43 16.3	-0.7
	comp=Z,0.3nm,0.6s,baz=2.5,slow=6.3,SNR=3.3						
PDAR	Pinedale Array	57.36	57	P	P	20 43 23.9	+0.2
	comp=Z,0.9nm,0.8s,baz=20,slow=3.0,SNR=2.4						
GERES	GERESS Array B	57.85	323	P	P	20 43 25.9	-1.0
	comp=Z,0.2nm,0.3s,baz=20,slow=3.2,SNR=2.8						
NV01	Mina Array Sit	58.30	66	eP	P	20 43 30.8	+0.4
NVAR	Mina Array Bea	58.30	66	P	P	20 43 29.7	-0.6
	comp=Z,1.1nm,0.9s,baz=321,slow=7.1,SNR=4.2						
BR101	Keskin Array S	60.70	303	eP	P	20 43 46.8	0.0
BRTR	Keskin Array B	60.70	303	P	P	20 43 46.8	0.0
	comp=Z,0.4nm,0.5s,baz=43,slow=8.7,SNR=3.1						
S51A	Beattyville	69.44	38	eP	P	20 44 43.6	+0.2
	comp=Z,50nm,0.9s						
TZTN	Tazewell	70.49	38	eP	P	20 44 51.3	+1.4
	comp=Z,26nm,0.9s						
V53A	Saluda	71.50	38	eP	P	20 44 58.7	+2.6
	comp=Z,14nm,0.6s						
TXAR	Lajitas Array	71.54	58	P	P	20 44 56.4	-0.1
	comp=Z,0.2nm,0.6s,baz=350,slow=4.6,SNR=3.2						
PLCA	Paso Flores	147.54	51	PKPbc	PKPdf	20 53 16.9	+0.7
	comp=Z,1.0nm,0.6s,baz=352,slow=4.0,SNR=5.1						

IDC ***27*** *20:37:02.7±2.4, 36°.98N×141°.42E, h0^{km}, mb3.2/2, mb1 3.3/3, mb1mx3.1/38, mbtmp3.0/3, ML1.5/1, Error ellipse: s-maj=50.3km s-min=32.6km az=38.0*

ISCJB ***27*** *20:37:04.0±1.4, 36°.88N±0°.04×141°.41E±0°.09, h18^{km}±9^{km}, mb3.2/2, Error ellipse: s-maj=11.9km s-min=6.1km az=9.6*

JMA ***27*** *20:37:05.5±0.1, 36°.90N×141°.31E, h27^{km}±1^{km}, M2.8*

ISC 27 20:37:03.0±2.3**, 36°.93N**±0°.05×**141°.40E**±0°.09**, h4**^{km}±13^{km}**, n17,** σ**0^{s}79**/20**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.51	290	P	Pb	20 37 15.0	+0.4
ONAJ				S	Sb	20 37 21.5	-0.9
JFK	Kawauchi	0.60	317	P	Pb	20 37 16.8	+0.6
JFK				S	Sb	20 37 24.8	-0.3
JFFD	Fukushimafurud	0.69	284	P	Pb	20 37 17.6	0.0
JFFD				S	Sg	20 37 26.1	+1.0
JHO	Hitachi	0.73	245	P	Pb	20 37 18.1	-0.3
JHO				S	Sg	20 37 27.4	+0.8
JHYU	Hitachinakayam	0.88	228	P	Pg	20 37 20.4	+0.6
JHYU				eS	Sg	20 37 31.3	+0.2
JFT	Otama	1.03	305	P	Pn	20 37 24.1	-0.2
JFT				S	Sb	20 37 37.3	-0.1
JMM	Marumori	1.05	333	P	Pn	20 37 24.4	-0.2
JMM				S	Sn	20 37 38.4	-1.3
JYT	Yasato	1.19	235	P	Pg	20 37 24.8	-1.1
JYT				S	Sg	20 37 39.7	-1.6
MJAR	Matsushiro Arr	2.59	262	Pn	Pn	20 37 46.4	+0.7
	0.1nm,0.3s,baz=89,slow=14,SNR=6.8						
MJAR				Sn	Sn	20 38 18.2	+0.6
	0.2nm,0.3s,baz=61,slow=24,SNR=4.4						
H11N2	WAKE ISLAND Hy	28.11	121	T	T	21 12 24.9	
	baz=313,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	28.11	121	T	T	21 12 25.4	
	baz=313,slow=75,SNR=54						
H11N3	WAKE ISLAND Hy	28.12	121	T	T	21 12 26.0	
	baz=313,slow=75,SNR=35						
H11S1	WAKE ISLAND Hy	28.81	123	T	T	21 13 17.0	
	baz=315,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	28.82	123	T	T	21 13 17.1	
	baz=315,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	28.83	123	T	T	21 13 18.3	
	baz=315,slow=76,SNR=15						
MKAR	Makanchi Array	44.16	302	P	P	20 45 12.8	0.0
	0.1nm,0.6s,baz=85,slow=8.8,SNR=2.1						
WRA	Warramunga Arr	56.95	188	P	P	20 46 50.1	+0.5
	0.7nm,1.0s,baz=4.5,slow=7.3,SNR=3.5						

ISC 27 20:41:43.1±1.4**, 51°.65N**±0°.08×**6°.5E**±0°.2**, h12**^{km}±11^{km}**, n8,** σ**0^{s}58**/16**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTSB	Winterswijk	0.37	30	ePg	Pg	20 41 50.6	+0.2
WTSB				eSg	Sb	20 41 56.9	-0.5
HGN	Heimansgroeve	0.95	202	ePg	Pn	20 42 02.5	+0.2
HGN				eSg	Sn	20 42 16.2	+0.5
BEBN	Eben Emael	0.99	212	P	Pg	20 42 02.5	+0.3
BEBN				S	Sn	20 42 17.9	+1.1
MEM	Membach	1.08	197	P	Pg	20 42 03.2	-0.7
MEM				S	Sn	20 42 18.9	-0.1
	comp=E,17nm,0.4s						
BHOU	Houvegnez	1.33	194	P	Pb	20 42 08.0	0.0
BHOU				S	Sg	20 42 26.1	+0.3
BCLA	Clavier	1.44	212	P	Pn	20 42 07.8	-1.2
BCLA				S	Sn	20 42 28.2	+0.4
	comp=N,2.7nm,0.1s						
LKLB	Kalborn	1.57	189	P	Pn	20 42 10.8	+0.1
LKLB				S	Sb	20 42 31.6	-0.2
LVIA	Vianden	1.72	186	P	Pn	20 42 13.2	+0.3
LVIA				S	Sn	20 42 34.6	-0.2

SOME ***27*** *21:20:21.8, 42°.55N×79°.72E, h15^{km}*

KRNET ***27*** *21:20:22.7±0.1, 42°.61N×79°.66E, h17^{km}, mb2.8*

NNC ***27*** *21:20:23.4±1.1, 42°.65N×79°.66E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=7.6km s-min=4.0km az=128.0*

ISC 27 21:20:21.4±1.8**, 42°.57N**±0°.05×**79°.69E**±0°.05**, h3**^{km}±11^{km}**, n41,** σ**1^{s}53**/73**, 18C-17D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	0.60	344	P	Pb	21 20 34.3	-0.4
	53nm,0.1s						
SHLS				S	Sn	21 20 43.6	-3.8
	142nm,0.3s						
SHLS	Shalkode	0.60	344	eP	Pg	21 20 33.4	+0.4
	baz=17						
SHLS				eS	Sb	21 20 42.0	-1.7
	baz=17						
SHLS	Shalkode	0.60	344	eP	Pg	21 20 33.4	+0.4
	53nm,0.1s						
SHLS				eS	Sb	21 20 42.0	-1.7
	142nm,0.3s						
UZB	Uzynbulak	0.75	320	P	Pg	21 20 36.0	+0.2
	5.3nm,0.2s						
UZB				S	Sb	21 20 46.4	-1.5
	52nm,0.3s						
UZB	Uzynbulak	0.75	320	eP	Pg	21 20 36.0	+0.2
	baz=19						
UZB				eS	Sb	21 20 46.5	-1.5
	baz=19						
UZB	Uzynbulak	0.75	320	eP	Pg	21 20 36.0	+0.2
	5.3nm,0.2s						
UZB				eS	Sb	21 20 46.4	-1.5
	52nm,0.3s						
PDGK	Podgornoye	0.77	349	P	Pg	21 20 36.4	+0.3
	2.8nm,0.4s						
PDGK				S	Sb	21 20 47.2	-1.2
	7.3nm,0.4s						
PDGK	Podgornoye	0.77	349	⇓P	Pg	21 20 36.3	+0.1
	1.2nm,0.4s						
PDGK				⇑S	Sg	21 20 46.5	+0.3
	5.4nm,0.4s						
PDGK	Podgornoye	0.77	349	⇓iP	Pg	21 20 36.6	+0.5
	baz=50						
PDGK				⇓iS	Sb	21 20 47.0	-1.4
	baz=50						
PRZ	Przheval'sk	0.95	265	⇑iP	Pb	21 20 40.7	0.0
	baz=63						
PRZ				⇑iS	Sb	21 20 53.0	-0.8
	baz=63						
KURS	Kuram	1.44	310	P	Pb	21 20 48.0	-0.9
	1.5nm,0.3s						
KURS				S	Sg	21 21 07.1	-0.4
	6.8nm,0.4s						
KURS	Kuram	1.44	310	eP	Pb	21 20 48.0	-0.9
	baz=9.0						
KURS				eS	Sg	21 21 07.2	-0.4
	baz=9.0						
KURS	Kuram	1.44	310	eP	Pb	21 20 48.0	-0.9
	1.5nm,0.3s						
KURS				eS	Sg	21 21 07.1	-0.4
	6.8nm,0.4s						
DJR	Jarkent	1.76	2	P	Pb	21 20 54.5	+0.1
	4.5nm,0.3s						
DJR				S	Sg	21 21 18.3	+0.4
	3.8nm,0.4s						
KDJ	Kajisay	1.91	257	⇑iP	Pb	21 20 57.2	+0.2
	baz=56						
KDJ				⇑eS	Sg	21 21 22.3	-0.4
	baz=56						
KOTS	Kotyrbulak	2.00	290	Pg	Pb	21 20 58.5	0.0
	9.8nm,0.3s						
KOTS				Lg	Lg	21 21 25.7	
	19nm,0.5s						
KOTS	Kotyrbulak	2.00	290	eP	Pb	21 20 59.0	+0.5
	baz=89						
KOTS				eS	Sg	21 21 25.8	+0.1
	baz=89						
KOTS	Kotyrbulak	2.00	290	eP	Pb	21 20 59.0	+0.5
	4.5nm,0.1s						
KOTS				eS	Sg	21 21 25.8	+0.1
	19nm,0.5s						
MDOK	Medeo	2.03	288	Pn	Pb	21 20 58.2	-0.8
	3.6nm,0.5s						
MDOK				Sn	Sg	21 21 25.3	-1.1
	15nm,0.6s						
MDOK	Medeo	2.03	288	Pg	Pb	21 20 58.7	-0.3
	5.3nm,0.3s						
MDOK				Lg	Lg	21 21 25.4	
	9.6nm,0.4s						
MDOK	Medeo	2.03	288	eP	Pb	21 20 58.7	-0.3
	baz=87						
MDOK				eS	Sg	21 21 25.5	-1.0
	baz=87						
MDOK	Medeo	2.03	288	eP	Pb	21 20 58.7	-0.3
	4.5nm,0.2s						
MDOK				eS	Sg	21 21 25.4	-1.1
	18nm,0.6s						
KNDC	Almaty	2.10	289	⇓Pn	Pb	21 21 00.0	-0.1
	4.1nm,0.3s						
KNDC				⇑Sn	Sg	21 21 29.3	+0.5
	12nm,0.4s						
ARXS	Arharly	2.13	321	Pg	Pb	21 21 00.2	-0.4
	1.4nm,0.2s						
ARXS				Lg	Lg	21 21 28.1	
	26nm,0.4s						
ARXS	Arharly	2.13	321	eP	Pb	21 21 00.1	-0.4
	1.4nm,0.2s						
ARXS				eS	Sb	21 21 27.7	+0.3
	26nm,0.4s						
KTBS	Karatobe	2.48	298	Pg	Pb	21 21 05.6	-0.9
	1.6nm,0.3s						
KTBS				Lg	Lg	21 21 37.6	
	13nm,0.6s						
KTBS	Karatobe	2.48	298	eP	Pb	21 21 06.3	-0.3
	baz=97						
KTBS				eS	Sb	21 21 38.3	+0.8
	baz=97						
KTBS	Karatobe	2.48	298	eP	Pb	21 21 06.3	-0.3
	1.6nm,0.3s						
KTBS				eS	Sb	21 21 38.3	+0.8
	13nm,0.6s						
ULHL	Ulahol	2.57	264	⇑eP	Pb	21 21 06.4	-1.9
	baz=63						
ULHL				⇑iS	Sb	21 21 38.3	-2.1
	baz=63						
BOOM	Boomskoye usch	2.77	270	⇓iP	Pb	21 21 09.3	-2.3
	baz=69						
BOOM				⇓iS	Sb	21 21 42.5	-3.5
	baz=69						
NRN	Naryn	2.97	249	⇑iP	Pb	21 21 12.6	-2.6
	baz=48						
NRN				⇑iS	Sb	21 21 48.6	-3.4
	baz=48						
TKM2	Tokmak 2	3.03	278	⇑Pn	Pb	21 21 14.2	-1.9
	14nm,0.9s						
TKM2				Lg	Lg	21 21 59.4	
	2.6nm,0.5s						
TKM2	Tokmak 2	3.03	278	⇑iP	Pb	21 21 13.0	-3.1
	baz=77						
TKM2				⇑iS	Sb	21 21 49.3	-4.3
	baz=77						
KZA	Kyzart	3.33	263	⇓iP	Pn	21 21 16.9	+2.2
	baz=62						
KZA				⇓iS	Sn	21 21 56.5	+1.6
	baz=62						
KBK	Karagaybulak	3.50	273	⇓iP	Pn	21 21 19.4	+2.6
	baz=72						
KBK				⇓iS	Sn	21 22 00.7	+1.9
	baz=72						
AAK	Ala-Archa	3.83	273	⇓Pg	Pb	21 21 30.5	+0.8
	0.6nm,0.4s						
AAK				⇓Lg	Lg	21 22 24.1	
	1.7nm,0.5s						
UCH	Uchtor	3.85	267	⇓eP	Pn	21 21 24.0	+2.1
	baz=66						
UCH				⇓iS	Sn	21 22 08.7	+0.9
	baz=66						
ARLS	Aral	4.05	262	⇑iP	Pn	21 21 26.5	+2.1
	baz=61						
ARLS				⇑iS	Sn	21 22 12.8	+0.5
	baz=61						
MAKZ	Makanchi	4.54	20	⇑Pn	Pn	21 21 31.7	+0.7
	0.7nm,0.9s						
MAKZ				⇓Lg	Lg	21 22 41.6	
	1.0nm,0.8s						
MK31	Makanchi Array	4.61	23	⇑Pn	Pn	21 21 32.9	+0.9
	0.1nm,0.3s,baz=199,slow=13,SNR=4.3						
MK31				⇓Lg	Lg	21 22 43.7	
	0.7nm,0.6s,baz=198,slow=26,SNR=5.2						
MNAS	Manas	5.31	271	⇑Pg	Pb	21 21 58.3	+3.4
	1.2nm,1.0s						
MNAS				⇓Lg	Lg	21 23 14.8	
	0.8nm,0.9s						

IDC ***27*** *21:45:09.0±1.3, 34°.26N×85°.72E, h0^{km}, mb3.5/3, mb1 3.7/5, mb1mx3.3/35, mbtmp3.5/5, ML2.5/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/36, Error ellipse: s-maj=42.8km s-min=26.5km az=56.0*

ISCJB ***27*** *21:45:12.8±0.7, 34°.42N±0°.06×85°.6E±0°.2, h33^{km}, mb3.4/3, MS3.5/1, Error ellipse: s-maj=27.1km s-min=8.0km az=179.4*

ISC 27 21:45:14.9±0.9**, 34°.40N**±0°.09×**85°.4E**±0°.2**, h35**^{km}**, n13,** σ**1^{s}45**/12**, mb3.3**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	6.20	194	eP	Pn	21 46 45.5	+1.2
	10nm,0.5s						
GUN	Gumba	6.49	176	eP	Pn	21 46 50.2	+2.0
	14nm,0.7s						
PYUN	Piuthan	6.62	199	eP	Pn	21 46 48.6	-1.3
	3.7nm,0.5s						
JIRN	Jiri	6.76	174	eP	Pn	21 46 53.0	+1.0
	4.7nm,0.3s						
KOLN	Koldanda	6.79	194	eP	Pn	21 46 51.3	-1.0
PKIN	Phulchoki	6.81	180	eP	Pn	21 46 53.9	+1.3
	7.0nm,0.5s						
PKI	Pulchoki	6.81	180	eP	Pn	21 46 53.8	+1.1
	6.4nm,0.6s						
MKAR	Makanchi Array	12.60	350	Pn	Pn	21 48 12.4	+0.7
	0.0nm,0.3s,baz=166,slow=15,SNR=7.4						
ZALV	Zalesovo Beam	19.54	359	P	Pn	21 49 40.4	-0.4
	0.1nm,0.3s,baz=180,slow=11,SNR=4.4						
BRTR	Keskin Array B	41.19	293	P	P	21 52 57.6	+1.3
	0.4nm,0.6s,baz=78,slow=6.6,SNR=2.7						
EIL	Elat	42.69	278	LR	LR	22 12 24.0	
	comp=Z,54nm,18.9s,baz=114,slow=38						
WRA	Warramunga Arr	71.31	132	P	P	21 56 29.2	-2.0
	1.0nm,1.1s,baz=328,slow=6.6,SNR=9.3						
ILAR	Eielson Array	73.05	21	P	P	21 56 40.4	-0.6
	0.3nm,1.0s,baz=321,slow=6.2,SNR=2.9						

ISK ***27*** *21:53:47.3, 42°.31N×40°.76E, h11^{km}±1^{km}, ML2.2/3*

DDA ***27*** *21:53:50.3, 42°.32N×41°.39E, h5^{km}±4^{km}, ML2.6*

NORS ***27*** *21:53:50.8±0.0, 42°.53N×41°.34E, h7^{km}, MPVA2.9*

ISC 27 21:53:46.5±1.7**, 42°.41N**±0°.04×**41°.01E**±0°.08**, h4**^{km}±12^{km}**, n16,** σ**0^{s}86**/28**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	Batumi	0.96	147	PG	Pn	21 54 06.9	+0.2
BATM				SG	Sn	21 54 21.2	+0.4
BATM	Batumi	0.96	147	P	Pn	21 54 07.1	+0.4
BATM				S	Sn	21 54 21.2	+0.4
BCA	Borcka	1.07	154	PG	Pn	21 54 08.2	-0.1
BCA				SG	Sn	21 54 23.0	-0.6
DBOC	Borcka	1.17	155	i P	Pn	21 54 10.9	+1.1
DBOC				i S	Sn	21 54 26.4	+0.2
DBOC				IAML_P			
	comp=Z,1μm,0.1s						
CHOM	Cayeli-Rize	1.33	188	PN	Pn	21 54 10.9	-0.9
ARTV	Artvin	1.41	150	i P	Pg	21 54 14.0	+0.5
ARTV				i S	Sg	21 54 33.0	+1.3
ARTV				IAML_P			
	comp=Z,794nm,0.2s						

DBAD	**Bademkaya**	1.48	159	*i* P	Pg	21 54 15.2	+0.2
DBAD				*i* S	Sg	21 54 33.9	-0.3
DBAD				IAML_P			
	comp=Z,408nm,0.1s						
DAGI	**Agillar**	1.50	153	*i* P	Pg	21 54 15.2	0.0
DAGI				*i* S	Sg	21 54 34.4	-0.2
DAGI				IAML_P			
	comp=Z,128nm,0.2s						
NEY	**Neytrino**	1.51	56	*e*Pg	Pg	21 54 16.0	+0.5
NEY				*e*Sg	Sb	21 54 34.9	-0.1
EPOS	**Posof**	1.57	125	*i* P	Pg	21 54 17.0	+0.4
SHA1	**Shidzhatmaz**	1.79	42	*e*Pg	Pg	21 54 21.4	+0.4
SHA1				*e*Sg	Sg	21 54 44.9	+0.7
DIGR	**Digorskoe uzhe**	1.96	75	*e*Pg	Pg	21 54 24.1	-0.1
DIGR				*e*Sg	Sg	21 54 48.9	-0.7
KIV	**Kislovodsk**	1.97	38	PN	Pb	21 54 24.1	+1.1
BAYT	**Aydıntepe-Bayb**	2.12	198	PN	Pn	21 54 21.2	-1.7
ZEI	**Tsey**	2.17	79	*e*Pg	Pg	21 54 27.6	-0.5
ZEI				*e*Sg	Sg	21 54 55.0	-1.3
LACR	**Lac**	2.46	79	*e*Pg	Pb	21 54 31.3	-0.1
LACR				*e*Sg	Sg	21 55 03.4	-2.3

IDC ***27*** *21:58:42.2±1.2, 11.°60S×165.°44E, h0^{km}, mb3.9/5, mb1 4.3/7, mb1mx3.8/42, mbtmp4.1/7, ML4.3/2, MS3.0/1, Ms1 3.0/1, ms1mx2.7/28, Error ellipse: s-maj=35.9km s-min=25.0km az=146.0*

ISCJB ***27*** *21:58:44.3±0.9, 11.°75S±0.°08×165.°3E±0.°1, h24^{km}, mb3.9/5, Error ellipse: s-maj=16.4km s-min=8.5km az=144.9*

ISC 27 21:58:46.1±1.0**, 11.°6S**±0.°1×**165.°4E**±0.°1**, h24^{km}, n7, σ1^{s}34**/9**, mb3.9**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.75	292	Pn	Pn	22 00 10.6	+0.6
	26nm,0.3s,baz=108,slow=4.3,SNR=3.3						
HNR				Sn	Sn	22 01 14.0	-1.3
	14nm,0.3s,baz=72,slow=3.2,SNR=5.2						
HNR				LR	LR	22 02 40.9	
	comp=Z,147nm,18.7s,baz=108,slow=41						
DZM	**Mont Dzumac**	10.43	174	Pn	Pn	22 01 15.5	+1.3
	0.7nm,0.3s,baz=78,slow=20,SNR=8.0						
DZM				Sn	Sn	22 03 09.0	-1.4
	0.1nm,0.3s,baz=319,slow=20,SNR=2.7						
WRA	**Warramunga Arr**	30.92	251	P	P	22 05 02.0	+0.6
	3.4nm,0.7s,baz=82,slow=9.1,SNR=22						
ASAR	**Alice Springs**	32.19	244	P	P	22 05 11.1	-1.3
	0.9nm,0.9s,baz=64,slow=9.6,SNR=6.1						
CMAR	**Chiang Mai Arr**	72.00	294	P	P	22 10 09.8	+1.4
	0.8nm,0.7s,baz=122,slow=5.0,SNR=5.4						
ILAR	**Eielson Array**	84.19	19	P	P	22 11 14.8	-0.3
	0.4nm,0.5s,baz=258,slow=5.0,SNR=9.2						
NVAR	**Mina Array Bea**	86.70	50	P	P	22 11 27.5	-1.0
	0.9nm,0.9s,baz=229,slow=6.6,SNR=5.5						

ISCJB ***27*** *22:05:55.6±0.1, 36.°53N±0.°01×26.°49E±0.°01, h155^{km}±1^{km}, mb3.9/18, Error ellipse: s-maj=2.3km s-min=1.6km az=17.1*

IDC ***27*** *22:05:56.3±1.0, 36.°60N×26.°38E, h150^{km}±10^{km}, mb3.6/15, mb1 3.8/29, mb1mx3.6/52, mbtmp4.2/29, Error ellipse: s-maj=12.1km s-min=9.7km az=2.0*

ATH ***27*** *22:05:56.3, 36.°58N×26.°45E, h150^{km}±2^{km}, ML4.6/14, Error ellipse: s-maj=2.2km s-min=0.9km az=143.0*

NEIC ***27*** *22:05:56.3±0.0, 36.°58N×26.°45E, h150^{km}, mb4.1/10, ML4.3(THE), ML4.6(ATH), After ATH.*

NEIC Felt at Irakleio.

HLW ***27*** *22:05:56.4, 36.°50N×26.°68E, h22^{km}±40^{km}, Md4.8*

DDA ***27*** *22:05:57.6, 36.°73N×26.°51E, h140^{km}±1^{km}, ML4.1*

PDG ***27*** *22:05:57.1±0.5, 36.°57N×26.°47E, h160^{km}±2^{km}, ML4.4/2, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*

GII ***27*** *22:05:58.0±0.2, 36.°41N×26.°63E, h161^{km}, mb4.3/5, MD4.2/5*

ISK ***27*** *22:05:58.6, 36.°63N×26.°44E, h98^{km}±3^{km}, ML4.1/27*

THE ***27*** *22:05:58.9, 36.°57N×26.°47E, h161^{km}±2^{km}, ML4.2/6, Error ellipse: s-maj=2.0km s-min=0.6km az=321.0*

NIC ***27*** *22:05:58.2±0.2, 36.°93N×26.°95E, h17^{km}, mb4.5, ML4.0*

ISC 27 22:05:55.9±0.5**, 36.°58N**±0.°03×**26.°36E**±0.°03**, h149^{km}**±4^{km}**, n398, σ1^{s}86**/484**, mb3.9**/19**, 33C-32D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMGA	**Amorgos Island**	0.46	304	P	Pn	22 06 18.1	+1.2
AMGA				S	Sn	22 06 33.4	+0.3
AMGA				AML	AML	22 06 33.8	
	comp=E,13242μm,0.6s						
AMGA				AML	AML	22 06 33.9	
	comp=N,9794μm,0.9s						
AMGA	**Amorgos Island**	0.46	304	P	Pn	22 06 18.2	+1.2
AMGA				S	Sn	22 06 33.3	+0.3
ANAF	**Anafi Island**	0.52	246	P	Pn	22 06 19.0	+1.7
ANAF	**Anafi Island**	0.52	246	P	Pn	22 06 19.0	+1.7
NISR	**Nisiros**	0.62	86	P	Pn	22 06 18.3	+0.5
THR8	**Santorini-Mono**	0.73	257	P	Pn	22 06 20.1	+1.6
THR8	**Santorini-Mono**	0.73	257	P	Pn	22 06 20.1	+1.6
SANT	**Santorini**	0.76	255	PG	Pn	22 06 19.5	+0.8
SANT	**Santorini**	0.76	255	*e*Pn	Pn	22 06 20.1	+1.4
SANT	**Santorini**	0.76	255	P	Pn	22 06 20.4	+1.6
SANT	**Santorini**	0.76	255	⇓*i*P	Pn	22 06 20.5	+1.8
SANT	**Santorini**	0.76	255	P	Pn	22 06 20.3	+1.6
SAP2K	**Karterados**	0.76	258	P	Pn	22 06 20.5	+1.8
THR2	**Thira island,**	0.76	261	P	Pn	22 06 20.5	+1.8
THR2	**Thira island,**	0.76	261	P	Pn	22 06 20.5	+1.8
THR2	**Thira island,**	0.76	261	P	Pn	22 06 20.5	+1.8
SFIR	**Foira Santorin**	0.77	259	P	Pn	22 06 20.6	+1.8
THR7	**Fira-Santorini**	0.77	259	P	Pn	22 06 20.6	+1.8
THR7	**Fira-Santorini**	0.77	259	P	Pn	22 06 20.7	+1.9
THT1	**Athinios (Pele**	0.78	256	P	Pn	22 06 20.4	+1.6
THT1	**Athinios (Pele**	0.78	256	P	Pn	22 06 20.4	+1.6
THT1				S	Sn	22 06 36.9	+0.7
THR3	**Thira Island,**	0.79	258	P	Pn	22 06 20.7	+1.8
THR3	**Thira Island,**	0.79	258	P	Pn	22 06 20.8	+1.8
THR3	**Thira Island,**	0.79	258	P	Pn	22 06 20.7	+1.8
THR6	**Thira Island,**	0.81	255	P	Pn	22 06 20.9	+1.9
THR6	**Thira Island,**	0.81	255	P	Pn	22 06 20.9	+1.9
THR6	**Thira Island,**	0.81	255	P	Pn	22 06 20.9	+1.9
APE	**Apeiranthos**	0.83	307	PG	Pn	22 06 19.9	+0.7
APE	**Apeiranthos**	0.83	307	P	Pn	22 06 20.7	+1.5
APE				S	Sn	22 06 37.4	+0.3
APE	**Apeiranthos**	0.83	307	P	Pn	22 06 20.7	+1.5
APE	**Apeiranthos**	0.83	307	⇑*i*P	Pn	22 06 20.7	+1.5
APE	**Apeiranthos**	0.83	307	P	Pn	22 06 20.7	+1.5
APE				S	Sn	22 06 37.4	+0.3
THR5	**Thira Island,**	0.83	259	P	Pn	22 06 21.1	+1.9
THR9	**Santorini-Faro**	0.84	255	P	Pn	22 06 21.3	+2.0
THR9	**Santorini-Faro**	0.84	255	P	Pn	22 06 21.2	+2.0
BODT	**Bodrum**	0.90	57	PG	Pn	22 06 19.5	-0.3
DAT	**Datca**	0.99	81	PG	Pn	22 06 19.8	-0.8
DAT	**Datca**	0.99	81	⇑*i*P	Pn	22 06 21.9	+1.3
DAT				*i* S	Sn	22 06 39.8	+0.4
BDRM	**Kayabasi**	1.00	60	⇑*i*P	Pn	22 06 21.9	+1.4
BDRM				*i* S	Sn	22 06 38.7	-0.7
DIDI	**Didim-Aydin**	1.06	41	PG	Pn	22 06 21.3	+0.2
SMG	**Samos**	1.19	18	P	Pn	22 06 22.6	+0.3
SMG				S	Sn	22 06 41.7	-0.9
SMG	**Samos**	1.19	18	P	Pn	22 06 22.6	+0.3
SMG	**Samos**	1.19	18	P	Pn	22 06 22.6	+0.3
SMG				S	Sn	22 06 41.7	-0.9
KARP	**Karpathos**	1.21	148	PN	Pn	22 06 22.7	+0.1
KARP	**Karpathos**	1.21	148	*e*Pn	Pn	22 06 22.9	+0.3
KARP				*e*Sn	Sn	22 06 36.9	-6.0
KARP	**Karpathos**	1.21	148	P	Pn	22 06 23.4	+0.8
KARP				S	Sn	22 06 42.4	-0.5
KARP				AML	AML	22 06 44.0	
	comp=N,27277μm,0.3s						
KARP				AML	AML	22 06 46.1	
	comp=E,21281μm,0.2s						
KARP	**Karpathos**	1.21	148	P	Pn	22 06 23.4	+0.8
GCAM	**G?zelcaml?**	1.32	32	PN	Pn	22 06 22.1	-1.4
GCAM	**G?zelcaml?**	1.32	32	⇓*i*P	Pn	22 06 24.0	+0.5
GCAM				*i* S	Sn	22 06 43.3	-1.4
GCAM				IAML_P			
	comp=Z,13μm,0.3s						
MLSB	**Milas**	1.34	57	PN	Pn	22 06 23.1	-0.7
TNSA	**Tinos**	1.36	315	P	Pn	22 06 26.2	+2.4
STIA	**Sitia Lasithi**	1.39	189	P	Pn	22 06 25.9	+1.7
STIA				S	Sn	22 06 46.4	+0.5
NPS	**Neapolis**	1.44	205	P	Pn	22 06 26.3	+1.5
NPS				S	Sn	22 06 47.0	+0.1
NPS	**Neapolis**	1.44	205	P	Pn	22 06 26.3	+1.5
NPS				S	Sn	22 06 47.4	+0.4
NPS				AML	AML	22 06 47.9	
	comp=N,22326μm,0.3s						
NPS				AML	AML	22 06 48.8	
	comp=E,19730μm,0.2s						
NPS	**Neapolis**	1.44	205	P	Pn	22 06 26.3	+1.5
NPS				S	Sn	22 06 47.0	+0.1
ZKR	**Zakros**	1.46	185	PN	Pn	22 06 26.4	+1.4
ZKR	**Zakros**	1.46	185	P	Pn	22 06 26.8	+1.8
ZKR				S	Sn	22 06 47.5	+0.2
ZKR	**Zakros**	1.46	185	P	Pn	22 06 26.8	+1.8
ZKR				S	Sn	22 06 48.0	+0.7
ZKR				AML	AML	22 06 50.8	
	comp=E,31666μm,0.4s						
ZKR				AML	AML	22 06 52.1	
	comp=N,7979μm,0.4s						
ZKR	**Zakros**	1.46	185	P	Pn	22 06 26.8	+1.8
ZKR				S	Sn	22 06 47.5	+0.2
ARG	**Arkhangelos**	1.47	104	PN	Pn	22 06 24.7	-0.3
ARG	**Arkhangelos**	1.47	104	P	Pn	22 06 25.6	+0.6
ARG				S	Sn	22 06 46.1	-1.2
ARG	**Arkhangelos**	1.47	104	P	Pn	22 06 25.6	+0.6
ARG				S	Sn	22 06 46.2	-1.1
ARG				AML	AML	22 06 47.2	
	comp=N,7376μm,0.5s						
ARG				AML	AML	22 06 47.5	
	comp=E,14569μm,0.5s						
ARG	**Arkhangelos**	1.47	104	P	Pn	22 06 25.6	+0.6
ARG				S	Sn	22 06 46.1	-1.2
MRSB	**Marmaris-Mugla**	1.48	84	PN	Pn	22 06 25.3	+0.1
DGB	**zmir**	1.53	16	⇓*i*P	Pn	22 06 26.2	+0.6
DGB				*i* S	Sn	22 06 47.9	-0.7
MHLA	**Plaka, Milos I**	1.57	277	P	Pn	22 06 28.4	+2.3
MHLO	**Agia Marina, M**	1.58	275	P	Pn	22 06 28.9	+2.7
LAST	**Lasithi**	1.58	207	P	Pn	22 06 27.8	+1.4
LAST				S	Sn	22 06 50.3	+0.6
LAST	**Lasithi**	1.58	207	P	Pn	22 06 27.9	+1.6
LAST				S	Sn	22 06 50.2	+0.5
LAST				AML	AML	22 06 51.9	
	comp=N,7609μm,0.3s						
LAST				AML	AML	22 06 53.5	
	comp=E,5196μm,0.3s						
LAST	**Lasithi**	1.58	207	P	Pn	22 06 27.8	+1.4
LAST				S	Sn	22 06 50.3	+0.6
SERI	**Serifos**	1.61	292	P	Pn	22 06 28.5	+1.9
AYDN	**Tasoluk**	1.63	48	⇓*i*P	Pn	22 06 28.4	+1.6
AYDN				*i* S	Sn	22 06 49.7	-0.8
YER	**Yerkesik**	1.64	69	PN	Pn	22 06 26.3	-0.6
IACM	**Heraklion**	1.64	220	P	Pn	22 06 28.7	+1.8
IACM				S	Sn	22 06 51.8	+1.2
ZEY	**zmir**	1.67	4	⇓*i*P	Pn	22 06 28.0	+0.9
ZEY				*i* S	Sn	22 06 50.2	-0.9
IDI	**Anoyia**	1.75	223	PN	Pn	22 06 29.1	+0.9
IDI	**Anoyia**	1.75	223	*e*Pn	Pn	22 06 29.8	+1.6
IDI				*e*Sn	Sn	22 06 52.8	-0.2
IDI	**Anoyia**	1.75	223	⇑*i*P	Pn	22 06 30.0	+1.8
IDI	**Anoyia**	1.75	223	P	Pn	22 06 29.7	+1.4
	comp=E,603nm,0.3s,baz=67,slow=5.7,SNR=2976						
IDI				S	Sn	22 06 52.1	-0.9
	comp=E,634nm,0.3s,baz=347,slow=19,SNR=22						
URLA	**Izmir**	1.79	6	PN	Pn	22 06 28.1	-0.5
URLA	**Izmir**	1.79	6	⇓*i*P	Pn	22 06 30.0	+1.4
URLA				*i* S	Sn	22 06 52.2	-1.6
TURN	**Turunc**	1.82	80	PN	Pn	22 06 24.8	-4.1
TURN	**Turunc**	1.82	80	⇑*i*P	Pn	22 06 26.8	-2.1
TURN				*i* S	Sn	22 06 47.6	-6.6
CHOS	**Chios island**	1.82	352	PN	Pn	22 06 29.8	+0.8
CHOS	**Chios island**	1.82	352	P	Pn	22 06 29.7	+0.8
AYDB	**Zeytinkoy-Aydi**	1.83	41	PN	Pn	22 06 28.8	-0.3
DALY	**Dalyan (Mula)**	1.86	82	PN	Pn	22 06 30.6	+1.4
DALY	**Dalyan (Mula)**	1.86	82	⇑*i*P	Pn	22 06 31.0	+1.8
DALY				*i* S	Sn	22 06 54.8	0.0
BLCB	**Balcova**	1.89	16	PN	Pn	22 06 30.2	+0.6
KRBN	**Karaburun**	2.02	4	PN	Pn	22 06 31.3	+0.2
PSRA	**Psara**	2.06	342	P	Pn	22 06 33.3	+1.7
VAM	**Vamos**	2.11	237	P	Pn	22 06 34.0	+1.8
VAM				S	Sn	22 07 01.3	+1.2
VAM				AML	AML	22 07 02.4	
	comp=N,33676μm,0.2s						
VAM				AML	AML	22 07 02.7	
	comp=E,24645μm,0.2s						
FOCM	**Foa**	2.15	8	PN	Pn	22 06 32.9	+0.2
FETY	**Fethiye**	2.19	88	PN	Pn	22 06 33.4	+0.2
FETY	**Fethiye**	2.19	88	⇑*i*P	Pn	22 06 33.6	+0.4
FETY				*i* S	Sn	22 06 59.9	-2.0
TAVA	**DENIZLI_Tavas**	2.23	66	⇑*i*P	Pn	22 06 34.6	+0.9
TAVA				*i* S	Sn	22 07 01.7	-1.1
IMMV	**Iera Moni Meta**	2.23	241	PN	Pn	22 06 35.9	+2.3
IMMV	**Iera Moni Meta**	2.23	241	P	Pn	22 06 35.6	+2.0
IMMV				S	Sn	22 07 03.9	+1.2
IMMV				AML	AML	22 07 05.5	
	comp=E,16334μm,0.3s						
IMMV				AML	AML	22 07 05.9	
	comp=N,20297μm,0.3s						
VLY	**Voula,Athens**	2.41	303	P	Pn	22 06 38.2	+2.3
DENT	**Denizli**	2.44	60	PN	Pn	22 06 36.8	+0.6
YDRA	**Hydra**	2.45	289	P	Pn	22 06 38.5	+2.3
GOMA	**Golmarmara-Man**	2.46	30	PN	Pn	22 06 36.8	+0.4
PTL	**Penteli**	2.48	307	P	Pn	22 06 39.0	+2.4
ATHU	**Athens Univers**	2.48	305	P	Pn	22 06 39.0	+2.4
ATH	**Athens Observa**	2.53	304	P	Pn	22 06 39.8	+2.5
GVD	**Gavdhos**	2.54	228	PN	Pn	22 06 39.9	+2.5
GVD				SN	Sn	22 07 09.8	+0.4
GVD	**Gavdhos**	2.54	228	P	Pn	22 06 39.9	+2.5
GVD				S	Sn	22 07 10.4	+1.0
GVD				AML	AML	22 07 16.5	
	comp=E,15960μm,0.4s						
GVD				AML	AML	22 07 16.5	
	comp=N,15917μm,0.4s						
AKHS	**Akhisar**	2.57	26	⇓*i*P	Pn	22 06 38.8	+1.0
AKHS				*i* S	Sn	22 07 10.2	0.0
AKS	**Akhisar**	2.57	26	PN	Pn	22 06 38.5	+0.7
ANKY	**Antikythira Is**	2.57	255	P	Pn	22 06 40.0	+2.2
ANKY				AML	AML	22 07 15.9	
	comp=E,5782μm,0.5s						
ANKY				AML	AML	22 07 18.5	
	comp=N,4982μm,0.5s						
KERA	**Keramoti**	2.57	243	P	Pn	22 06 40.5	+2.7
KERA				AML	AML	22 07 14.1	
	comp=E,16823μm,0.4s						
KERA				AML	AML	22 07 15.4	
	comp=N,34328μm,0.3s						
MANT	**Manisa**	2.59	42	*e*Pn	Pn	22 06 38.7	+0.5
MANT				*e*Sn	Sn	22 07 10.7	-0.2
MANT	**Manisa**	2.59	42	⇓*i*P	Pn	22 06 39.4	+1.2
MANT				*i* S	Sn	22 07 09.4	-1.6
MANT				IAML_P			
	comp=Z,6μm,0.4s						
KSL	**Kastellorizon**	2.63	98	P	Pn	22 06 39.1	+0.6
KSL				AML	AML	22 07 11.6	
	comp=N,3887μm,0.5s						
KSL				AML	AML	22 07 11.6	
	comp=E,8416μm,0.5s						
AKAS	**Kas**	2.64	96	PN	Pn	22 06 39.5	+0.8
AKAS	**Kas**	2.64	96	⇑*i*P	Pn	22 06 39.5	+0.8
AKAS				*i* S	Sn	22 07 09.5	-2.4
GOLH	**Golhisar**	2.65	75	⇑*i*P	Pn	22 06 40.7	+1.9
GOLH				*i* S	Sn	22 07 11.8	-0.2
KULA	**Kula-Manisa**	2.66	43	PN	Pn	22 06 39.2	+0.2
SIGR	**SIGRI**	2.66	351	PN	Pn	22 06 39.4	+0.5
SIGR	**SIGRI**	2.66	351	P	Pn	22 06 39.6	+0.7
DID	**Didima**	2.67	291	P	Pn	22 06 41.2	+2.2
PRK	**Paraskevi**	2.67	358	P	Pn	22 06 40.7	+1.8
EREA	**Eretria**	2.67	314	P	Pn	22 06 41.3	+2.3
MNVA	**Monemvasia**	2.68	273	P	Pn	22 06 41.2	+2.2
MNVA				AML	AML	22 07 15.5	
	comp=N,3747μm,0.4s						
MNVA				AML	AML	22 07 16.3	
	comp=E,3301μm,0.5s						
KYTH	**Kithira**	2.69	264	P	Pn	22 06 41.5	+2.2
KYTH				AML	AML	22 07 16.6	
	comp=N,4744μm,0.4s						
KYTH				AML	AML	22 07 18.1	
	comp=E,5745μm,0.3s						
KRND	**KRANIDI**	2.70	288	P	Pn	22 06 41.8	+2.5
AYVA	**Ayvalik**	2.74	5	⇓*i*P	Pn	22 06 40.2	+0.3
AYVA				IAML_P			
	comp=Z,2μm,0.3s						
VLI	**Veliai**	2.76	274	P	Pn	22 06 41.9	+1.8
ELL	**Elmali**	2.86	85	PN	Pn	22 06 42.3	+0.8
VIL2	**Platees**	2.96	304	P	Pn	22 06 44.4	+1.8
STEP	**BALIKESIR_Sava**	3.00	21	⇓*i*P	Pn	22 06 44.5	+1.4
STEP				*i* S	Sn	22 07 19.8	0.0
USAK	**Uak-Merkez**	3.00	44	⇓*i*P	Pn	22 06 44.0	+0.8
USAK				*i* S	Sn	22 07 19.6	-0.3
LOUT	**Loutraki**	3.05	299	P	Pn	22 06 46.1	+2.4
MRKA	**Markates**	3.06	315	P	Pn	22 06 46.2	+2.2
KHAL	**Karahalli**	3.07	53	⇓*i*P	Pn	22 06 45.9	+1.8
KHAL				*i* S	Sn	22 07 20.4	-1.0
LTK	**Loutraki**	3.07	299	P	Pn	22 06 46.4	+2.3
DEMI	**Demirci**	3.09	36	⇓*i*P	Pn	22 06 45.9	+1.5
DEMI				*i* S	Sn	22 07 19.0	-3.0
BRDR	**BURDUR-Merkez**	3.16	68	⇑*i*P	Pn	22 06 46.2	+0.9
BRDR				*i* S	Sn	22 07 23.4	-0.1
BAYC	**CANAKKALE_Bayr**	3.17	3	⇓*i*P	Pn	22 06 46.4	+1.1
BAYC				*i* S	Sn	22 07 21.9	-1.7
AKUM	**Antalya-Kumluc**	3.22	93	⇑*i*P	Pn	22 06 46.5	+0.6
AKUM				*i* S	Sn	22 07 22.0	-2.7
PROD	**Prodromos**	3.23	302	P	Pn	22 06 48.4	+2.4
KORT	**Korkueli**	3.23	81	PN	Pn	22 06 47.3	+1.1
KORT	**Korkueli**	3.23	81	⇑*i*P	Pn	22 06 47.6	+1.4
KORT				*i* S	Sn	22 07 25.7	+0.5
EZN	**Ezine**	3.25	359	PN	Pn	22 06 46.8	+0.6
EZN	**Ezine**	3.25	359	⇓*i*P	Pn	22 06 47.0	+0.8
AOS	**Alonnisos**	3.25	324	P	Pn	22 06 47.9	+1.6
VLX	**Vlachokerasia**	3.29	285	P	Pn	22 06 49.1	+2.2
BALY	**Balya**	3.31	17	⇓*i*P	Pn	22 06 48.6	+1.5
BALY				*i* S	Sn	22 07 28.5	+1.5
KEMT	**Kemer-ANTALYA**	3.38	88	PN	Pn	22 06 48.8	+0.9
ATAL	**Atalanti**	3.39	310	P	Pn	22 06 50.5	+2.4
SMIA	**Simia**	3.40	314	P	Pn	22 06 51.0	+2.8
TRIP	**Tripoli**	3.41	287	P	Pn	22 06 50.8	+2.4
KZIL	**AFYON_Kizioren**	3.44	60	*i* P	Pn	22 06 50.9	+2.0
KZIL				*i* S	Sn	22 07 30.1	-0.1
KZIL				IAML_P			
	comp=Z,2μm,0.3s						
LIA	**Limnos Island**	3.44	345	P	Pn	22 06 50.1	+1.3
DURS	**Dursunbey**	3.45	28	⇓*i*P	Pn	22 06 49.8	+0.8
GEDZ	**Gediz**	3.45	43	PN	Pn	22 06 49.8	+0.8
SKIA	**Skiathos**	3.46	319	P	Pn	22 06 51.4	+2.4
ANTB	**Antalya**	3.46	83	PN	Pn	22 06 50.2	+1.2
GUR	**Goura**	3.48	294	P	Pn	22 06 51.8	+2.4
BCK	**Bucak**	3.50	74	PN	Pn	22 06 50.5	+0.9
GDZ	**Gediz**	3.52	44	⇓*i*P	Pn	22 06 51.4	+1.4
GDZ				*i* S	Sn	22 07 30.1	-1.8
ISP	**Isparta**	3.55	68	PN	Pn	22 06 50.8	+0.5
ISP	**Isparta**	3.55	68	*e*Pn	Pn	22 06 50.8	+0.5
ISP				*e*Sn	Sn	22 07 31.6	-0.8
ISP	**Isparta**	3.55	68	P	Pn	22 06 50.8	+0.5
ISP	**Isparta**	3.55	68	⇑*i*P	Pn	22 06 50.8	+0.5
ISP	**Isparta**	3.55	68	Pn	Pn	22 06 50.6	+0.3
ISP				Sn	Sn	22 07 31.6	-0.8
DSF	**Desfina**	3.56	302	P	Pn	22 06 52.7	+2.4
ITM	**Ithomi**	3.61	281	*e*Pn	Pn	22 06 53.7	+2.7
ITM				*e*Sn	Sn	22 07 34.5	+0.8
ITM	**Ithomi**	3.61	281	P	Pn	22 06 53.6	+2.7
KLV	**Kalavryta, Ach**	3.66	295	P	Pn	22 06 53.9	+2.1
NEO	**Neokhori**	3.69	319	P	Pn	22 06 54.4	+2.4
PYL	**PYLOS**	3.73	276	P	Pn	22 06 54.0	+1.5
XOR	**Xorichti**	3.75	319	P	Pn	22 06 54.8	+2.1
BAGO	**Egridir - ISPA**	3.80	67	⇑*i*P	Pn	22 06 54.8	+1.2
BAGO				*i* S	Sn	22 07 36.7	-1.7
KALE	**Kalithea**	3.82	300	P	Pn	22 06 56.2	+2.5
AMT	**Artemida-Makis**	3.84	286	P	Pn	22 06 56.9	+2.8
TRIZ	**Trizonia**	3.85	299	P	Pn	22 06 57.0	+2.9
LAKA	**Lakka**	3.87	297	P	Pn	22 06 57.1	+2.8
SHUT	**Suhut-Afyon**	3.87	58	PN	Pn	22 06 55.9	+1.4
SERG	**Sergoula**	3.88	299	P	Pn	22 06 57.2	+2.6
FYTO	**Fytoko, Volos**	3.91	317	P	Pn	22 06 57.4	+2.5
DRO	**Drossia**	3.96	292	P	Pn	22 06 58.2	+2.7
EFP	**Efpalio**	4.00	299	P	Pn	22 06 58.8	+2.8
AGG	**Agios Georgios**	4.02	309	*e*Pn	Pn	22 06 59.4	+3.0
RLS	**Riolos of Patr**	4.17	292	P	Pn	22 07 01.6	+3.3
EVR	**Evrytania**	4.30	304	P	Pn	22 07 03.0	+3.0
ALN	**Alexandroupoli**	4.32	357	*e*Pn	Pn	22 07 00.9	+0.6
VTN	**Vitineika**	4.34	290	P	Pn	22 07 03.7	+3.2
PVO	**Paravola**	4.35	299	P	Pn	22 07 04.6	+4.0
THL	**Klokotos Trika**	4.55	312	P	Pn	22 07 05.7	+2.5
RDO	**Rodhopi**	4.61	352	P	Pn	22 07 05.3	+1.3
YLV	**Yalova**	4.63	30	⇑*i*P	Pn	22 07 04.8	+0.4
LIT	**Litokhoron**	4.65	320	*e*Pn	Pn	22 07 07.0	+2.4
AKMC	**Akamas**	5.09	106	P	Pn	22 07 09.4	-1.1
	baz=295						
PHSR	**Pinarhisar**	5.13	10	⇑*i*P	Pn	22 07 11.4	+0.5
PPCY	**Paphos**	5.15	107	P	Pn	22 07 10.0	-1.2
	baz=296						
ALFC	**Alefka**	5.26	104	P	Pn	22 07 11.1	-1.6
	baz=292						
ALFC				S	Sn	22 08 08.4	-4.3
LEF	**Lefka**	5.50	103	⇑*i*P	Pn	22 07 14.1	-1.7
VAY	**Valandovo**	5.58	329	*i* Pn	Pn	22 07 25.4	+8.4
SZAC	**Souni**	5.61	107	P	Pn	22 07 16.4	-1.0
	baz=295						
SZAC				S	Sn	22 08 17.7	-3.3
FNA	**Florina**	5.73	319	*e*Pn	Pn	22 07 21.6	+2.6
MAMC	**Mammari**	5.74	102	P	Pn	22 07 17.8	-1.3
	baz=290						
CSS	**Mathiatis**	5.89	104	*e*Pn	Pn	22 07 19.7	-1.3
CSS	**Mathiatis**	5.89	104	P	Pn	22 07 19.8	-1.3
	baz=292						
CSS				S	Sn	22 08 23.8	-3.9
CSS	**Mathiatis**	5.89	104	P	Pn	22 07 19.5	-1.6
	comp=Z,42nm,0.7s,comp=Z,0.2nm						
CSS	**Mathiatis**	5.89	104	Pn	Pn	22 07 19.5	-1.6
CSS				Sn	Sn	22 08 26.0	-1.7
BIA	**Bitola**	5.93	320	*i* Pn	Pn	22 07 25.6	+3.9
BR231	**Keskin MP Arra**	6.01	55	*e*Pn	Pn	22 07 25.1	+2.3
ANTO	**Ankara**	6.04	55	*e*Pn	Pn	22 07 24.7	+1.7
ANTO				*e*S	Sn	22 08 34.7	+3.5
STIP	**Stip**	6.05	329	*e*Pn	Pn	22 07 28.9	+5.7
OHR	**Ohrid**	6.27	318	*i* Pn	Pn	22 07 28.3	+2.1
VTS	**Vitosha**	6.50	339	⇓*i*P	Pn	22 07 42.7	+13
BR131	**Keskin Array S**	6.54	59	*e*Pn	Pn	22 07 31.5	+1.7
BR131				*e*Sn	Sn	22 08 43.1	-0.3
BRTR	**Keskin Array B**	6.54	59	P	Pn	22 07 31.4	+1.7
	comp=Z,1.7nm,0.3s,baz=213,slow=12,SNR=51						
BRTR				S	Sn	22 08 44.0	+0.6
	comp=Z,1.6nm,0.3s,baz=213,slow=18,SNR=10						
TIR	**Tirane**	6.95	315	*e*Pn	Pn	22 07 36.6	+1.5
TIR	**Tirane**	6.95	315	⇑*i*P	Pn	22 07 37.8	+2.6
ILGA	**Ilgaz**	7.28	50	*e*Pn	Pn	22 07 40.2	+0.5
ULC	**Ulcinj**	7.71	316	⇓*i*Pn	Pn	22 07 46.7	+1.4
PVY	**Plav**	7.78	323	⇑*i*Pn	Pn	22 07 47.9	+1.5
DRME	**Dracevica, Mon**	7.89	317	⇑*i*Pn	Pn	22 07 48.9	+1.2
DRME	**Dracevica, Mon**	7.89	317	*e*Pn	Pn	22 07 48.4	+0.7
PDG	**Podgorica**	8.02	319	⇑*i*P	Pn	22 07 50.4	+1.0
PDG	**Podgorica**	8.02	319	*e*Pn	Pn	22 07 50.3	+0.9
TTG	**Podgorica**	8.02	319	⇓*i*Pn	Pn	22 07 50.9	+1.5
TTG	**Podgorica**	8.02	319	*e*Pn	Pn	22 07 50.0	+0.6
IVA	**Berane**	8.02	324	⇓*i*Pn	Pn	22 07 51.6	+2.1
TIP	**Timpagrande**	8.03	292	*e*Pn	Pn	22 07 48.4	-1.2
TIP				*e*Sn	Sn	22 09 11.1	-7.9
TIP	**Timpagrande**	8.03	292	⇑*i*P	Pn	22 07 49.6	0.0
HNTI	**Hanita**	8.04	113	Pn	Pn	22 07 48.3	-1.5
HNTI				Sn	Sn	22 09 16.2	-3.1
BHL	**Bhannes**	8.05	107	*e*P	Pn	22 07 46.9	-3.1
DQRL	**Deir Qamar**	8.07	108	*e*P	Pn	22 07 47.7	-2.5
BUM	**Brajici-Budva**	8.13	317	⇑*i*Pn	Pn	22 07 51.8	+0.9
OFRI	**`Ofer**	8.13	117	Pn	Pn	22 07 49.5	-1.5
HWQ	**Hawqa**	8.15	104	*e*P	Pn	22 07 49.7	-1.6
KOME	**Kolasin**	8.19	322	⇑*i*Pn	Pn	22 07 53.4	+1.6
QRWL	**Qaraoun**	8.22	109	*e*P	Pn	22 07 50.4	-1.8
BLGI	**Bet Lehem HaGe**	8.22	115	Pn	Pn	22 07 50.8	-1.4
BLGI				Sn	Sn	22 09 21.4	-2.3
MMA0B	**Mount Meron ar**	8.24	113	Pn	Pn	22 07 50.7	-1.8
MMAI	**Mount Meron Ar**	8.24	113	P	Pn	22 07 51.0	-1.5
	comp=Z,96nm,0.3s,baz=296,slow=12,SNR=517						
MMAI				S	Sn	22 09 17.6	-6.6
	comp=Z,21nm,0.3s,baz=307,slow=29,SNR=7.2						
CEME	**Cevo**	8.28	318	⇓*i*Pn	Pn	22 07 53.9	+0.9
KSDI	**Kefar Szold**	8.35	111	P	Pn	22 07 52.6	-1.3
	comp=Z,391nm,0.6s,comp=Z,1.6nm						
KSDI	**Kefar Szold**	8.35	111	Pn	Pn	22 07 52.6	-1.3
KSDI				Sn	Sn	22 09 23.9	-2.9
RCY	**Rachaya**	8.35	109	*e*P	Pn	22 07 52.7	-1.4
SLTI	**Sal'it**	8.37	119	Pn	Pn	22 07 52.2	-2.0
NATI	**Neve Ativ**	8.38	110	Pn	Pn	22 07 52.7	-1.5
NATI				Sn	Sn	22 09 26.0	-1.4
NKME	**Niksic**	8.42	320	⇑*i*Pn	Pn	22 07 56.4	+1.6
NKY	**Niksic**	8.43	320	⇑*i*Pn	Pn	22 07 56.9	+1.9

HCY	Herceg Novi	8.45	316	⇓iPn	Pn	22 07 55.0	-0.1
HCY	Herceg Novi	8.45	316	ePn	Pn	22 07 54.8	-0.3
CEL	Celeste	8.50	285	ePn	Pn	22 07 54.4	-1.5
CEL				eSn	Sn	22 09 23.4	-7.0
MMLI	Mount Malkishu	8.54	116	P	Pn	22 07 55.6	-0.9
	comp=Z,38nm,0.8s,comp=Z,0.2nm						
MMLI	Mount Malkishu	8.54	116	Pn	Pn	22 07 55.0	-1.5
KSHT	Keshet	8.56	112	Pn	Pn	22 07 56.2	-0.5
MATE	Matera	8.58	301	⇑iP	Pn	22 07 56.0	-0.9
PLE	Pljevlja	8.61	324	⇑iPn	Pn	22 07 59.1	+1.7
PLE				i Sn	Sn	22 09 30.5	-2.6
SHMJ	Saham	8.64	114	P	Pn	22 07 57.4	-0.4
	comp=Z,222nm,0.5s,comp=Z,1.0nm						
AMAZ	Amatzia	8.70	123	P	Pn	22 07 57.4	-1.2
	comp=Z,180nm,0.9s,comp=Z,1.6nm						
AMAZ	Amatzia	8.70	123	Pn	Pn	22 07 57.4	-1.2
TREB	Trebinje	8.70	317	ePn	Pn	22 07 58.5	0.0
HMDT	Nahal Hemdat	8.71	117	Pn	Pn	22 07 57.6	-1.1
BRY	Bratogost	8.73	319	⇓iPn	Pn	22 07 59.9	+0.9
BRY				i Sn	Sn	22 09 33.7	-2.3
BRY	Bratogost	8.73	319	ePn	Pn	22 07 59.8	+0.8
KZIT	Kziot	8.76	128	P	Pn	22 07 58.2	-1.2
	comp=Z,290nm,0.5s,comp=Z,2.2nm						
KZIT	Kziot	8.76	128	Pn	Pn	22 07 58.1	-1.3
ARR	Arges	8.88	352	⇓iP	Pn	22 08 01.2	+0.3
VOIR		8.91	354	⇓iP	Pn	22 08 01.7	+0.4
MLR	Muntele Rosu	8.91	358	ePn	Pn	22 08 02.6	+1.2
MLR	Muntele Rosu	8.91	358	⇓iP	Pn	22 08 02.2	+0.8
MLR	Muntele Rosu	8.91	358	P	Pn	22 08 02.2	+0.8
	comp=Z,0.3nm,0.3s,baz=193,slow=6.7,SNR=9.1						
YTIR	Yattir	8.94	123	Pn	Pn	22 08 00.6	-1.2
DIVS	Divibare	8.95	329	ePn	Pn	22 08 04.0	+2.2
DIVS	Divibare	8.95	329	ePn	Pn	22 08 06.1	+4.2
DSI	Dead Sea	8.99	121	Pn	Pn	22 08 01.0	-1.5
DSI				Sn	Sn	22 09 38.7	-3.5
BBLS	Lazići	9.02	326	ePn	Pn	22 08 03.8	+1.0
MZDA	Masada	9.13	122	Pn	Pn	22 08 03.3	-1.0
MZDA				Sn	Sn	22 09 40.6	-5.0
STON	Ston	9.17	316	ePn	Pn	22 08 03.7	-1.0
STON				Sn	Sn	22 09 40.2	-6.1
STON	Ston	9.17	316	ePn	Pn	22 08 03.6	-1.0
RMNI	Mount Ramon	9.20	128	Pn	Pn	22 08 03.9	-1.4
GZR	Gura Zlata	9.22	344	⇓iP	Pn	22 08 05.8	+0.4
LISJ	El Lisan	9.26	122	P	Pn	22 08 05.8	-0.1
PLOR	Plostina	9.27	1	⇓iP	Pn	22 08 07.0	+0.9
GHAJ	Ghor Haditha	9.28	122	P	Pn	22 08 06.9	+0.7
	comp=Z,89nm,0.5s						
GHAJ	Ghor Haditha	9.28	122	Pn	Pn	22 08 05.3	-0.9
WALJ	Wala	9.29	120	P	Pn	22 08 07.0	+0.5
	comp=Z,127nm,0.4s						
HAPS	Han Pijesak,BI	9.39	325	ePn	Pn	22 08 07.8	0.0
DOPR	Dopca	9.41	356	⇑iP	Pn	22 08 06.3	-1.7
ZFRI	Zfri	9.49	127	Pn	Pn	22 08 07.1	-2.0
PRNI	Paran	9.52	128	Pn	Pn	22 08 07.7	-1.8
WDD	Wied Dalam	9.60	269	ePn	Pn	22 08 11.7	+1.3
WDD				eSn	Sn	22 09 51.1	-5.7
VAE	Valguarnera	9.60	279	P	Pn	22 08 12.4	+1.8
	comp=Z,6.1nm,0.3s,baz=154,slow=8.8,SNR=26						
VAE				S	Sn	22 09 50.5	-6.4
	comp=Z,9.8nm,0.3s,baz=0.0,slow=6.1,SNR=7.8						
JDRJ	Daraweish	9.70	124	P	Pn	22 08 12.0	0.0
	comp=Z,120nm,0.5s						
ASF	Jabal al Asfar	9.75	114	P	Pn	22 08 12.6	0.0
	comp=Z,37nm,0.7s						
ASF	Jabal al Asfar	9.75	114	P	Pn	22 08 11.9	-0.7
	comp=Z,3.7nm,0.3s,baz=259,slow=4.4,SNR=38						
ASF				S	Sn	22 09 56.3	-4.3
	comp=Z,0.5nm,0.3s,baz=72,slow=19,SNR=2.1						
HRFI	Mount Harif	9.75	129	P	Pn	22 08 11.1	-1.5
HRFI	Mount Harif	9.75	129	Pn	Pn	22 08 11.2	-1.4
MBRI	Mt Berech	9.85	131	Pn	Pn	22 08 12.3	-1.6
MBRI				Sn	Sn	22 09 59.4	-3.7
FRGS	Fruska Gora	9.90	332	ePn	Pn	22 08 18.2	+3.7
EIL	Elat	9.96	131	Pn	Pn	22 08 13.7	-1.6
EIL	Elat	9.96	131	P	Pn	22 08 13.9	-1.5
	comp=Z,7.6nm,0.3s,baz=312,slow=2.5,SNR=86						
EIL				S	Sn	22 09 53.9	-12
	comp=Z,3.9nm,0.3s,baz=310,slow=17,SNR=3.8						
AQBJ	Aqaba	9.98	131	P	Pn	22 08 15.0	-0.6
	comp=Z,92nm,0.5s						
HSNJ	Maan	10.02	126	P	Pn	22 08 16.4	+0.2
CLTB	Caltabellotta	10.55	279	ePn	Pn	22 08 24.8	+1.6
CLTB				eSn	Sn	22 10 13.7	-6.2
BLY	Banja Luka	10.73	322	ePn	Pn	22 08 26.6	+1.2
BLY	Banja Luka	10.73	322	⇑iP	Pn	22 08 26.7	+1.3
BLY	Banja Luka	10.73	322	ePn	Pn	22 08 25.2	-0.2
BUR04	Bucovina Ar. S	11.07	356	ePn	Pn	22 08 30.3	+0.4
BUR08	Bucovina Ar. S	11.10	356	ePn	Pn	22 08 31.7	+1.4
UDBI	Udbina	11.31	318	ePn	Pn	22 08 34.1	+1.1
NVLJ	Novalja	11.82	316	i Pn	Pn	22 08 39.7	0.0
OZLJ	Ozalj	12.20	321	i Pn	Pn	22 08 45.4	+0.9
CRES	Cresnjev	12.35	322	ePn	Pn	22 08 46.3	-0.3
CEY	Cerknica	12.82	319	ePn	Pn	22 08 52.6	0.0
VYHS	Vyhne	13.13	337	ePN	Pn	22 08 58.5	+1.9
SOKA	Soboth	13.16	324	Pn	Pn	22 08 58.9	+1.8
	comp=Z,5.1nm,0.7s						
OBKA	Obir	13.28	322	ePn	Pn	22 08 59.9	+1.3
	comp=Z,6.5nm,0.6s						
ARSA	Arzberg	13.36	326	Pn	Pn	22 09 01.2	+1.6
	comp=Z,4.3nm,0.7s						
LANS	Liptovska Anna	13.54	340	ePN	Pn	22 09 01.6	-0.2
CONA	Conrad Observa	13.74	329	eP	P	22 09 06.9	-1.1
	comp=Z,6.6nm,1.9s						
KEST	Kesra	13.78	272	ePn	P	22 09 07.1	-1.4
KEST	Kesra	13.78	272	P	Pn	22 09 05.8	+0.8
	comp=Z,0.2nm,0.3s,baz=90,slow=3.0,SNR=4.7						
KEST				S	Sn	22 11 30.5	-7.2
	comp=Z,0.8nm,0.3s,baz=255,slow=20,SNR=6.3						
AK11	Malin Array Si	14.24	7	ePn	Pn	22 09 10.7	0.0
KIEV	Kiev	14.26	7	ePn	P	22 09 13.9	+0.2
AKASG	Malin Array Be	14.27	7	P	Pn	22 09 10.3	-0.6
	comp=Z,6.6nm,0.3s,baz=193,slow=10,SNR=15						
AKASG				S	Sn	22 11 48.3	-0.7
	baz=227,slow=49,SNR=2.4						
AKBB	Malin Array Si	14.27	7	ePn	Pn	22 09 11.0	0.0
KBA	Koelnbreinsper	14.27	321	Pn	P	22 09 13.2	-0.9
	comp=Z,12nm,0.5s,SNR=5.6						
MOA	Molln	14.38	325	ePn	P	22 09 14.1	-0.9
	comp=Z,5.2nm,1.0s						
KIV	Kislovodsk	14.47	54	ePn	P	22 09 17.6	+1.5
KVAR	Kislovodsk Arr	14.47	54	P	P	22 09 15.6	-0.6
	baz=252,slow=20,SNR=17						
ABTA	Abfaltersbach	14.49	319	Pn	P	22 09 15.4	-0.9
	comp=Z,9.9nm,0.5s						
KBZ	Khabaz	14.51	55	P	Pn	22 09 14.1	+0.1
	comp=Z,0.0nm,0.3s,baz=107,slow=5.9,SNR=2.7						
VRAC	Vranov	14.58	334	P	Pn	22 09 14.6	-0.3
	comp=Z,0.2nm,0.3s,baz=158,slow=16,SNR=2.5						
WTTA	Wattenberg	15.28	319	P	P	22 09 25.6	+0.4
	comp=Z,14nm,0.9s						
WATA	Walderalm	15.35	319	P	P	22 09 27.2	+1.2
	comp=Z,24nm,0.9s						
GEA0	GERESS Array S	15.36	327	ePn	P	22 09 26.9	+0.9
GEC2	GERESS Array S	15.37	327	ePn	P	22 09 27.5	+1.4
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	15.37	327	P	P	22 09 26.7	+0.6
	comp=Z,0.4nm,0.3s,baz=134,slow=11,SNR=12						
SQTA	Sankt Quirin	15.48	318	eP	P	22 09 29.1	+1.7
	comp=Z,13nm,0.5s,SNR=7.6						
DPC	Dobruska-Polom	15.56	335	eP	P	22 09 30.8	+2.7
MOTA	Moosalm	15.61	318	eP	P	22 09 30.5	+1.7
	comp=Z,5.3nm,0.5s						
FETA	Feichten	15.62	317	P	P	22 09 30.2	+1.2
	comp=Z,32nm,0.8s,SNR=23						
KHC	Kasperske Hory	15.63	327	ePn	P	22 09 29.9	+0.9
	comp=Z,2.6nm,0.8s						
KHC	Kasperske Hory	15.63	327	eP	P	22 09 30.2	+1.2
KHC				ex	x	22 09 32.8	
FUORN	Ofenpass-Fuorn	15.65	315	ePn	P	22 09 30.9	+1.5
	comp=Z,14nm,0.7s						
RETA	Reutte	15.88	318	eP	P	22 09 33.4	+1.6
	comp=Z,3.8nm,0.5s						
PRU	Pruhonice	15.90	331	eP	P	22 09 34.3	+2.4
PRU				ex	x	22 09 38.7	
DAVOX	Davos/Dischmat	15.96	315	P	P	22 09 33.9	+1.1
	comp=Z,1.8nm,0.3s,baz=139,slow=13,SNR=22						
DAVA	Damuels	16.24	316	eP	P	22 09 38.1	+2.2
	comp=Z,12nm,0.7s,SNR=6.1						
SURF	Saint Ours	16.80	304	P	Pn	22 09 46.1	+3.6
OGAG	Argentiere	16.98	304	P	Pn	22 09 48.1	+3.7
GRFO	Grafenberg	17.10	325	ePn	Pn	22 09 48.1	+2.3
BNI	Bardonecchia	17.11	306	eP	Pn	22 09 48.9	+2.8
	comp=Z,9.1nm,1.0s						
SENIN	Lac Senin/Sane	17.27	310	eP	Pn	22 09 49.3	+1.2
	comp=Z,14nm,0.7s						
CLL	Collm	17.55	331	e(P)	Pn	22 09 53.0	+1.9
CLL				e		22 10 02.0	
ORIF	Oris-en-Rattie	17.58	305	P	Pn	22 09 53.0	+1.3
BFO	Black Forest	17.70	317	eP	Pn	22 09 54.9	+1.9
	comp=Z,10nm,0.7s						
OG02	Monnetier-Morn	17.85	309	P	Pn	22 09 55.1	+0.4
OGSM	Saint Maurice	17.96	307	P	Pn	22 09 55.8	-0.3
OG35	Corcelles	18.22	308	P	P	22 09 58.1	+0.7
IDID	Didziasalis	18.75	1	eP	P	22 10 03.6	+0.6
IDID				IAmb	IAmb	22 10 04.7	
	comp=Z,8.8nm,0.8s						
IIGN	Ignalina	18.78	360	eP	P	22 10 04.0	+0.6
IIGN				IAmb	IAmb	22 10 04.6	
	comp=Z,8.6nm,0.7s						
ISAL	Salakas	19.00	360	eP	P	22 10 06.3	+0.6
ISAL				IAmb	IAmb	22 10 07.6	
	comp=Z,11nm,0.8s						
WLF	Walferdange	19.64	318	⇓P	P	22 10 13.9	+1.2
PBUR	Paburg	19.68	353	eP	P	22 10 13.5	+0.3
PBUR				IAmb	IAmb	22 10 14.4	
	comp=Z,18nm,0.6s						
OBN	Obninsk	19.82	17	P	P	22 10 13.7	-0.9
	comp=Z,2.0nm,0.3s,baz=158,slow=5.4,SNR=2.9						
BSD	Bornholm Skovb	20.13	341	i P	Pn	22 10 19.8	-1.6
MEM	Membach	20.26	320	⇑P	Pn	22 10 21.5	-1.5
	comp=Z,9.4nm,0.8s						
DOU	Dourbes	20.72	318	⇓P	P	22 10 23.8	-0.4
RAYN	Ar Rayn	21.02	123	eP	P	22 10 30.5	+2.7
	comp=Z,3.7nm,0.7s						
UCC	Uccle	21.23	319	⇑P	P	22 10 31.6	+1.9
ESDC	Sonseca Array	24.00	287	P	P	22 10 58.6	+1.9
	comp=Z,1.1nm,0.4s,baz=83,slow=9.8,SNR=18						
FIA1	FINESS Array S	24.89	360	eP	P	22 11 06.4	+2.0
FINES	FINESS Array B	24.89	360	P	P	22 11 03.7	-0.8
	comp=Z,6.3nm,0.4s,baz=150,slow=13,SNR=70						
FINES				PcP	PcP	22 14 36.7	+0.8
	comp=Z,0.7nm,0.4s,baz=154,slow=2.8,SNR=5.5						
HFS	Hagfors	24.94	345	P	P	22 11 05.2	+0.2
	comp=Z,1.3nm,0.5s,baz=153,slow=10.0,SNR=12						
GEYT	Alibeck	25.25	77	P	P	22 11 08.8	+0.7
	comp=Z,1.8nm,0.5s,baz=273,slow=9.8,SNR=5.5						
NB2	NORSAR Subarra	26.30	343	P	P	22 11 16.9	-0.4
	comp=Z,0.2nm,0.5s,baz=152,slow=9.3						
NOA	NORSAR Array B	26.30	343	P	P	22 11 16.8	-0.4
	comp=Z,0.4nm,0.7s,baz=163,slow=11,SNR=2.9						
AKTO	Aktyubinsk	26.58	49	P	P	22 11 19.3	-0.5
	comp=Z,1.4nm,0.4s,baz=263,slow=8.7,SNR=6.5						
ABKAR	Akbulak array	27.43	52	eP	P	22 11 27.8	+0.4
EKA	Eskdalemuir Ar	27.48	322	P	P	22 11 27.6	-0.2
	comp=Z,1.5nm,0.9s,baz=119,slow=9.5,SNR=3.4						
TORD	Torodi Ar. Bea	32.15	230	P	P	22 12 09.2	-0.2
	comp=Z,0.6nm,0.3s,baz=36,slow=9.0,SNR=17						
ARCES	ARCESS Array B	33.02	359	P	P	22 12 15.8	-0.6
	comp=Z,1.9nm,0.8s,baz=168,slow=7.2,SNR=9.8						
CHGR	Chuyangaron	33.74	73	eP	P	22 12 25.1	+2.0
	comp=Z,8.8nm,0.7s						
KURK	Kurchatov	39.54	52	eP	P	22 13 12.5	+0.6
	comp=Z,4.8nm,0.9s						
MAKZ	Makanchi	41.97	58	eP	P	22 13 33.0	+1.0
	comp=Z,1.5nm,0.8s						
MK31	Makanchi Array	42.19	58	eP	P	22 13 34.8	+1.1
MKAR	Makanchi Array	42.19	58	P	P	22 13 34.8	+1.0
	comp=Z,2.5nm,0.4s,baz=268,slow=8.0,SNR=59						
MKAR				PcP	PcP	22 15 24.9	-0.2
	comp=Z,0.7nm,0.6s,baz=277,slow=3.3,SNR=2.6						
MKAR				ScP	ScP	22 19 01.5	0.0
	comp=Z,0.3nm,0.6s,baz=266,slow=4.2,SNR=4.6						
MK01	Makanchi Array	42.20	58	eP	P	22 13 34.7	+0.9
ZALV	Zalesovo Beam	43.33	47	P	P	22 13 42.9	+0.2
	comp=Z,2.0nm,0.4s,baz=270,slow=8.5,SNR=9.2						
PYUN	Piuthan	48.00	83	eP	P	22 14 21.6	+1.6
DANN	Dangsing	48.51	82	eP	P	22 14 25.8	+1.8
	comp=Z,13nm,0.4s						
PKIN	Phulchoki	50.14	83	eP	P	22 14 38.0	+1.6
	comp=Z,2.1nm,0.3s						
JIRN	Jiri	50.74	82	eP	P	22 14 42.2	+1.2
	comp=Z,5.5nm,0.4s						
GTA	Gaotai	56.44	63	eP	P	22 15 34.5	+12
GTA				pP	pP	22 15 38.8	-18
GTA				sP	sP	22 15 41.8	-31
SONM	Songino Array	57.84	52	P	P	22 15 32.8	+1.0
	comp=Z,0.9nm,0.4s,baz=287,slow=7.3,SNR=5.6						
LZH	Lanzhou	60.71	65	eP	P	22 15 52.3	+0.6
LZH				pP	pP	22 16 28.0	+1.1
LZH				sP	sP	22 16 45.0	+1.8
LZH				ePP	PP	22 18 09.5	+2.6
CMAR	Chiang Mai Arr	65.45	85	P	P	22 16 23.9	+0.9
	comp=Z,0.8nm,0.7s,baz=305,slow=7.8,SNR=6.0						
KSRS	Korea Array	76.65	53	P	P	22 17 30.7	+0.5
	comp=Z,1.5nm,0.5s,baz=308,slow=4.3,SNR=5.9						
PDAR	Pinedale Array	91.40	329	P	P	22 18 43.7	-1.5
	comp=Z,0.2nm,0.4s,baz=25,slow=7.0,SNR=4.3						

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*GEN **27** 22:06:39.7, 44°.20N×10°.51E, h14^{km}±1^{km}, Ml0.9*

ROM 27 22:06:39.4±0.1**, 44°.188N**±0°.004×**10°.500E**±0°.005**,**
h15^{km}, ML1.4/6**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARO	Sassorosso	0.07	267	P	Pg	22 06 42.6	+0.2
SARO				S	Sg	22 06 44.8	+0.4
SARO	Sassorosso	0.07	267	P	Pg	22 06 42.6	+0.2
SARO				S	Sg	22 06 44.8	+0.4
SARO				AML	AML		
	comp=E,270µm,0.3s						
SARO				AML	AML		
	comp=N,368µm,0.4s						
SARO				AML	AML		
	comp=E,270µm,0.3s						
SARO				AML	AML		
	comp=N,368µm,0.4s						
SARO				AML	AML		
	comp=E,270µm,0.3s						
SARO				AML	AML		
	comp=N,368µm,0.4s						
VLC	Villacollemand	0.09	251	P	Pg	22 06 42.9	+0.4
VLC				S	Sg	22 06 45.2	+0.7
VLC				AML	AML		
	comp=E,138µm,0.1s						
VLC				AML	AML		
	comp=N,160µm,0.7s						
VLC				AML	AML		
	comp=E,150µm,0.1s						
VLC				AML	AML		
	comp=N,171µm,0.7s						
VLC				AML	AML		
	comp=E,139µm,0.1s						
VLC				AML	AML		
	comp=N,160µm,0.7s						
VLC				AML	AML		
	comp=E,150µm,0.1s						
VLC				AML	AML		
	comp=N,172µm,0.7s						
VLC				AML	AML		
	comp=E,139µm,0.1s						
VLC				AML	AML		
	comp=N,160µm,0.7s						
VLC				AML	AML		
	comp=N,172µm,0.7s						
VLC				AML	AML		
	comp=E,150µm,0.1s						
BDI	Bagni Di Lucca	0.14	151	P	Pg	22 06 43.4	+0.2
BDI				S	Sg	22 06 46.2	+0.5
BDI				AML	AML		
	comp=E,344µm,0.4s						
BDI				AML	AML		
	comp=N,148µm,0.4s						
BDI				AML	AML		
	comp=E,336µm,0.3s						
BDI				AML	AML		
	comp=N,206µm,0.3s						
BDI				AML	AML		
	comp=E,336µm,0.3s						
BDI				AML	AML		
	comp=E,344µm,0.4s						
BDI				AML	AML		
	comp=N,206µm,0.3s						
BDI				AML	AML		
	comp=N,148µm,0.4s						
CARD	Cardoso	0.16	185	P	Pg	22 06 43.7	+0.3
CARD				S	Sb	22 06 46.9	-0.4
POPM	Popiglio	0.23	128	P	Pg	22 06 44.8	+0.2
POPM				S	Sg	22 06 48.7	+0.7
POPM	Popiglio	0.23	128	P	Pg	22 06 44.8	+0.3
POPM				S	Sb	22 06 48.8	-0.6
POPM				AML	AML		
	comp=E,257µm,0.1s						
POPM				AML	AML		
	comp=N,307µm,0.2s						
POPM				AML	AML		
	comp=E,257µm,0.1s						
POPM				AML	AML		
	comp=N,307µm,0.2s						
POPM				AML	AML		
	comp=N,307µm,0.2s						
POPM				AML	AML		
	comp=E,257µm,0.1s						
ERBM	Eremo	0.24	345	P	Pg	22 06 44.9	+0.3
ERBM				S	Sg	22 06 48.7	+0.4
EQUI	Equi	0.25	265	P	Pg	22 06 44.9	+0.1
EQUI				S	Sg	22 06 48.3	-0.2
EQUI	Equi	0.25	265	P	Pg	22 06 45.0	+0.2
EQUI				S	Sg	22 06 48.9	+0.4
EQUI				AML	AML		
	comp=E,47µm,1.2s						
EQUI				AML	AML		
	comp=N,49µm,0.7s						
EQUI				AML	AML		
	comp=E,47µm,1.2s						
EQUI				AML	AML		
	comp=N,49µm,0.7s						
EQUI				AML	AML		
	comp=N,49µm,0.7s						
EQUI				AML	AML		
	comp=E,47µm,1.2s						
MAIM	Mastiano	0.27	181	P	Pg	22 06 45.2	0.0
MAIM				S	Sg	22 06 49.7	+0.6
MAIM	Mastiano	0.27	181	P	Pb	22 06 45.6	-0.4
MAIM				S	Sb	22 06 49.9	-0.5
GRAM	Graiana	0.43	314	P	Pg	22 06 48.3	+0.2
GRAM				S	Sb	22 06 54.8	-0.4
GRAM	Graiana	0.43	314	P	Pg	22 06 48.4	+0.3
GRAM				S	Sb	22 06 55.0	-0.3
PLMA	Palmaria, Port	0.49	254	P	Pb	22 06 49.4	-0.2
PLMA				S	Sg	22 06 56.0	+0.5

UCR 27 22:21:49.8±1.7**, 9°.32N**×**83°.51W, h19^{km}**±5^{km}**, MD4.1,**
1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.64	311	⇓eP	Pb	22 22 01.7	-0.7
LCR2				eS	Sb	22 22 10.8	-0.2
HDC	Heredia	0.90	319	⇓iP	Pb	22 22 06.6	-0.3
HDC				eS	Sb	22 22 18.9	+0.3
BRU2	Volcan	0.97	123	eP	Pb	22 22 07.6	-0.5
BRU2				eS	Sn	22 22 21.7	-0.1
TBS2		0.99	122	eP	Pb	22 22 08.0	-0.5
TBS2				eS	Sg	22 22 22.3	0.0
DVD	David	1.37	130	eS	Sn	22 22 31.0	-0.6
FORC	Fortuna	1.61	315	i P	Pn	22 22 17.4	+0.1
ARE1	Arenal 1	1.64	314	⇑iP	Pn	22 22 18.5	+0.8
CEDE	Laguna Cedeo	1.65	315	i P	Pn	22 22 18.3	+0.4
CEDE				i S	Sb	22 22 40.0	-0.1
JTS	JuntasAbangare	1.71	304	eP	Pn	22 22 18.7	-0.1
JTS				eS	Sn	22 22 40.7	+0.5
PLVR	Palo Verde	2.08	300	eP	Pn	22 22 23.9	+0.1
CUI	Cuipilapa	2.10	309	i P	Pn	22 22 24.5	+0.5
MESS	Mesas	2.17	311	eP	Pn	22 22 26.6	+1.5

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*KRNET **27** 22:22:11.7±0.1, 42°.62N×79°.65E, h10^{km}, mb2.8*

*NNC **27** 22:22:11.4±1.2, 42°.65N×79°.63E, h1^{km}±5^{km}, mb3.1,*
mpv2.8, Error ellipse: s-maj=8.1km s-min=5.6km az=147.0

*SOME **27** 22:22:13.2, 42°.67N×79°.48E, h0^{km}*

ISC 27 22:22:10.4±1.8**, 42°.64N**±0°.05×**79°.70E**±0°.05**, h1^{km}**±11^{km}**,**
n43, σ1^{s}.25/74**, 20C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.55	341	P	Pb	22 22 22.9	-0.1
	58nm,0.1s						
SHLS				S	Sb	22 22 29.8	-1.5
	134nm,0.4s						
SHLS	Shalkode	0.55	341	eP	Pb	22 22 22.9	-0.1
	baz=18						
SHLS				eS	Sb	22 22 29.9	-1.5
	baz=18						
SHLS	Shalkode	0.55	341	eP	Pb	22 22 22.9	-0.1
	58nm,0.1s						
SHLS				eS	Sb	22 22 29.8	-1.5
	134nm,0.4s						
PDGK	Podgornoye	0.71	347	P	Pg	22 22 25.0	+1.0
	3.1nm,0.3s						
PDGK				S	Sg	22 22 33.5	+0.3
	4.3nm,0.2s						
PDGK	Podgornoye	0.71	347	⇑P	Pg	22 22 24.5	+0.5
	1.3nm,0.4s						
PDGK				⇑S	Sb	22 22 35.1	-0.9
	7.8nm,0.5s						
PDGK	Podgornoye	0.71	347	⇑iP	Pg	22 22 25.0	+1.0
	baz=51						
PDGK				⇑iS	Sb	22 22 35.6	-0.4
	baz=51						
UZB	Uzynbulak	0.71	316	P	Pb	22 22 25.8	0.0
	4.1nm,0.2s						
UZB				S	Sb	22 22 34.8	-1.3
	58nm,0.3s						
UZB	Uzynbulak	0.71	316	eP	Pb	22 22 25.8	0.0
	baz=19						
UZB				eS	Sb	22 22 34.8	-1.3
	baz=19						
UZB	Uzynbulak	0.71	316	eP	Pb	22 22 25.8	0.0
	3.3nm,0.1s						
UZB				eS	Sb	22 22 34.8	-1.3
	58nm,0.3s						
PRZ	Przheval'sk	0.97	261	⇑iP	Pg	22 22 28.6	-0.5
	baz=62						
PRZ				⇑iS	Sg	22 22 41.9	+0.2
	baz=62						
KURS	Kuram	1.41	308	P	Pg	22 22 37.6	+0.2
	1.5nm,0.5s						
KURS				S	Sn	22 22 55.6	-0.9
	4.2nm,0.5s						
KURS	Kuram	1.41	308	eP	Pg	22 22 37.9	+0.5
	baz=9.0						
KURS				eS	Sn	22 22 55.5	-1.0
	baz=9.0						
KURS	Kuram	1.41	308	eP	Pg	22 22 37.9	+0.5
	0.2nm,0.1s						
KURS				eS	Sn	22 22 55.4	-1.0
	7.8nm,0.5s						
DJR	Jarkent	1.70	2	P	Pg	22 22 42.9	0.0
	3.6nm,0.2s						
DJR				S	Sb	22 23 04.4	0.0
	3.1nm,0.2s						
KOTS	Kotyrbulak	1.99	288	Pg	Pg	22 22 48.7	+0.1
	8.3nm,0.2s						
KOTS				Lg	Lg	22 23 14.5	
	25nm,0.5s						
KOTS	Kotyrbulak	1.99	288	eP	Pg	22 22 49.1	+0.5
	baz=89						
KOTS				eS	Sg	22 23 14.6	+0.1
	baz=89						
KOTS	Kotyrbulak	1.99	288	eP	Pg	22 22 49.1	+0.5
	5.0nm,0.3s						
KOTS				eS	Sg	22 23 14.6	+0.1
	30nm,0.5s						
MDOK	Medeo	2.02	286	Pn	Pn	22 22 46.1	+0.4
	3.9nm,0.5s						
MDOK				Sn	Sb	22 23 13.6	-0.1
	14nm,0.6s						
ARXS	Arharly	2.08	320	Pg	Pb	22 22 49.7	+0.6
	1.3nm,0.2s						
ARXS				Lg	Lg	22 23 16.2	
	20nm,0.7s						
ARXS	Arharly	2.08	320	eP	Pg	22 22 50.1	-0.3
	0.9nm,0.1s						
ARXS				eS	Sg	22 23 16.2	-1.2
	20nm,0.7s						
CHKK	Chushkaly	2.33	302	Pg	Pb	22 22 53.1	-0.1
	2.3nm,0.2s						
CHKK				Lg	Lg	22 23 21.9	
	9.2nm,0.3s						
CHKK	Chushkaly	2.33	302	eP	Pb	22 22 53.7	+0.5
	baz=3.0						
CHKK				eS	Sb	22 23 22.4	0.0
	baz=3.0						
CHKK	Chushkaly	2.33	302	eP	Pb	22 22 53.6	+0.5

	2.3nm,0.2s						
CHKK				eS	Sb	22 23 22.3	0.0
	9.2nm,0.3s						
MTBS	Maitube	2.46	283	Pg	Pb	22 22 55.1	-0.3
	7.1nm,0.3s						
MTBS				Lg	Lg	22 23 25.2	
	11nm,0.5s						
MTBS	Maitube	2.46	283	eP	Pg	22 22 57.3	-0.2
	baz=83						
MTBS				eS	Sg	22 23 28.7	-0.6
	baz=83						
MTBS	Maitube	2.46	283	eP	Pg	22 22 57.3	-0.2
	0.8nm,0.1s						
MTBS				eS	Sg	22 23 28.6	-0.6
	11nm,0.2s						
KTBS	Karatobe	2.46	297	Pg	Pb	22 22 55.8	+0.4
	1.3nm,0.3s						
KTBS				Lg	Lg	22 23 26.7	
	10nm,0.5s						
KTBS	Karatobe	2.46	297	eP	Pb	22 22 56.3	+0.9
	baz=97						
KTBS				eS	Sb	22 23 26.9	+0.7
	baz=97						
KTBS	Karatobe	2.46	297	eP	Pb	22 22 56.2	+0.9
	1.1nm,0.2s						
KTBS				eS	Sb	22 23 26.9	+0.7
	13nm,0.3s						
ULHL	Ulahol	2.59	262	⇑iP	Pb	22 22 55.3	-2.5
	baz=63						
ULHL				⇑iS	Sb	22 23 27.8	-2.4
	baz=63						
KAPS	Kapalarasan	2.66	355	Pg	Pb	22 22 59.4	+0.5
	0.8nm,0.3s						
KAPS				Lg	Lg	22 23 32.6	
	2.8nm,0.5s						
KUU	Kurty	2.76	298	Pg	Pb	22 22 58.9	-1.7
	1.3nm,0.3s						
KUU				Lg	Lg	22 23 31.6	
	3.0nm,0.9s						
KST	Kastek	2.78	280	Pg	Pb	22 22 59.1	-1.8
	6.5nm,0.2s						
KST				Lg	Lg	22 23 32.1	
	5.4nm,1.3s						
BOOM	Boomskoye usch	2.78	268	⇑iP	Pn	22 22 57.9	+1.6
	baz=69						
BOOM				⇑iS	Sb	22 23 32.7	-3.0
	baz=69						
NRN	Naryn	3.01	248	⇑iP	Pn	22 23 01.0	+1.5
	baz=48						
NRN				⇑iS	Sn	22 23 37.9	+1.6
	baz=48						
TKM2	Tokmak 2	3.04	277	⇑Pn	Pn	22 23 01.7	+2.0
	1.7nm,0.8s						
TKM2				⇑Lg	Lg	22 23 43.6	
	2.7nm,0.6s						
TKM2	Tokmak 2	3.04	277	⇑iP	Pn	22 23 01.7	+2.0
	baz=77						
TKM2				⇑iS	Sb	22 23 39.0	-4.0
	baz=77						
KZA	Kyzart	3.35	262	⇓iP	Pn	22 23 05.7	+1.5
	baz=62						
KZA				⇓iS	Sn	22 23 46.2	+1.4
	baz=62						
KBK	Karagaybulak	3.51	272	⇓iP	Pn	22 23 08.0	+1.8
	baz=72						
KBK				⇓iS	Sn	22 23 50.0	+1.6
	baz=72						
AAK	Ala-Archa	3.84	272	⇓Pg	Pb	22 23 21.2	+2.1
	1.6nm,0.8s						
AAK				⇑Lg	Lg	22 24 13.7	
	1.4nm,0.5s						
ARLS	Aral	4.07	261	⇓iP	Pn	22 23 15.3	+1.4
	baz=61						
ARLS				⇓iS	Sn	22 24 02.5	+0.3
	baz=61						
MAKZ	Makanchi	4.47	20	⇑Pn	Pn	22 23 16.6	-2.8
	0.2nm,0.3s						
MAKZ				⇑Lg	Lg	22 24 33.2	
	0.5nm,0.6s						
MK31	Makanchi Array	4.55	23	⇓Pn	Pn	22 23 21.6	+1.2
	0.2nm,0.5s,baz=212,slow=15						
MK31				⇑Lg	Lg	22 24 32.4	
	0.4nm,0.4s,baz=203,slow=26						

IDC **27** 22:25:40.4±0.5, 43°.15N×126°.45W, h0^{km}, mb4.3/27, mb1 4.4/36, mb1mx4.4/56, mbtmp4.3/36, ML4.1/8, MS4.5/32, Ms1 4.5/32, ms1mx4.4/50, Error ellipse: s-maj=14.1km s-min=6.6km az=37.0

BJI **27** 22:25:41.5, 43°.20N×126°.50W, h10^{km}, mB5.4/25, mb4.9/40, Ms5.1/16, Ms7 4.8/17

ANF **27** 22:25:42.4±1.6, 43°.09N×126°.30W, ML4.3/8, Error ellipse: s-maj=18.4km s-min=6.8km az=80.0

MOS **27** 22:25:42.5±1.4, 43°.23N×126°.48W, h13^{km}, mb5.1/50, MS4.8/6, Error ellipse: s-maj=6.2km s-min=4.2km az=124.0

GCMT **27** 22:25:42.9±0.2, 43°.03N±0°.01×126°.80W±0°.01, h12^{km}, MW5.2/120, Moment Tensor Solution. s67,c89; s120,c210; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.07±.01; $M_{\theta\theta}$-0.56±.01; $M_{\phi\phi}$0.62±.01; $M_{r\theta}$-0.25±.03; $M_{\theta\phi}$-0.49±.01; $M_{\phi r}$-0.12±.03; Best double couple: $M_0$0.82400×10^{17} NP1:ϕ_s23.00000°,δ78.00000°, λ-16.00000°. NP2:ϕ_s117.00000°,δ75.00000°, λ-168.00000°. Principal axes: T 0.8080, Plg2.0000°, Azm71.0000°; N 0.0310, Plg70.0000°, Azm167.0000°; P -0.8390, Plg20.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISCJB **27** 22:25:43.3±0.6, 43°.21N±0°.02×126°.45W±0°.02, h18^{km}±4^{km}, mb4.9/175, MS4.5/39 Error ellipse: s-maj=3.1km s-min=2.1km az=140.1

NEIC **27** 22:25:43.9±0.2, 43°.22N×126°.56W, h10^{km}, mb5.1/133, MW5.2, MW5.2, Error ellipse: s-maj=4.6km s-min=2.3km az=42.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.15; $M_{\theta\theta}$-3.42; $M_{\phi\phi}$3.57; $M_{r\theta}$-3.06; $M_{\theta\phi}$-5.41; $M_{\phi r}$-0.45; Best double couple: $M_0$7.20000×10^{16} NP1:ϕ_s14.00000°,δ68.00000°,λ-9.00000°. NP2: ϕ_s108.00000°,δ82.00000°,λ-157.00000°. Principal axes: T 6.7000, Plg10.0000°, Azm239.0000°; N 0.8200, Plg66.0000°, Azm126.0000°; P -7.5200, Plg22.0000°, Azm333.0000°;

NEIC Felt [III] at Dallas. Also felt at Brookings, Dundee, Hillsboro, Independence, Newport, Portland, Salem and Sheridan. Felt at Crescent City, California and at Vancouver and Woodland, Washington.

NEIC **27** 22:25:44.0±0.0, 43°.15N×126°.47W, h11^{km}, Moment Tensor Solution. s27 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.40; $M_{\theta\theta}$-5.35; $M_{\phi\phi}$6.75; $M_{r\theta}$-0.75; $M_{\theta\phi}$-3.99; $M_{\phi r}$-2.68; Best double couple: $M_0$7.90000×10^{16} NP1: ϕ_s27.00000°,δ88.00000°,λ-21.00000°. NP2:ϕ_s118.00000°, δ69.00000°,λ-178.00000°. Principal axes: T 8.5200, Plg13.0000°, Azm74.0000°; N -1.5400, Plg68.0000°, Azm203.0000°; P -6.9700, Plg15.0000°, Azm340.0000°;

SEA **27** 22:25:44.3±0.0, 43°.10N×126°.85W, h5^{km}

ISC 27 22:25:44.7±0.9**, 43°.17N**±0°.04×**126°.54W**±0°.04**, h20**^{km}±4^{km}**, n888, σ1^{s}41**/891**, mb5.0**/178**, MS4.6**/39**, 21C-10D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	1.64	100	ePn	Pn	22 26 09.5	-3.1
J01E	Myrtle Point	1.91	89	P	Pn	22 26 13.2	-2.8
	baz=273						
J01E				S	Sn	22 26 37.1	-2.4
	baz=273						
K02D	Willamette Mer	2.16	102	P	Pn	22 26 16.9	-2.8
	baz=285						
K02D				S	Sn	22 26 43.2	-2.8
	baz=285						
I02D	Swisshome	2.17	63	P	Pn	22 26 17.5	-2.1
	baz=247						
I03D	Drain, OR	2.38	76	P	Pn	22 26 20.5	-2.1
	baz=260						
I03D				S	Sn	22 26 49.4	-1.8
	baz=260						
L02E	Cave Junction	2.39	114	P	Pn	22 26 20.3	-2.4
	baz=297						
KRMB	Red Mountain	2.55	129	ePn	Pn	22 26 20.8	-4.2
HUMO	Hull Mountain	2.69	101	ePn	Pn	22 26 24.5	-2.4
HUMO				eS	Sn	22 26 57.2	-1.7
COR	Corvallis	2.74	58	ePn	Pn	22 26 26.1	-1.3
COR				eS	Sn	22 26 58.1	-1.9
COR	Corvallis	2.74	58	eP	Pn	22 26 26.1	-1.3
COR				eS	Sn	22 26 58.1	-1.9
JCC	Jacoby Creek,	3.00	141	ePn	Pn	22 26 29.8	-1.3
H04D	Lebanon	3.07	62	P	Pn	22 26 31.1	-1.0
	baz=246						
I04A	Tendick Farm,	3.07	77	P	Pn	22 26 31.0	-1.1
	baz=261						
KHMM	Horse Mountain	3.10	137	ePn	Pn	22 26 29.6	-3.0
G03D	McMinnville, O	3.12	48	P	Pn	22 26 31.4	-1.4
	baz=231						
G03D				S	Sn	22 27 09.9	+0.5
	baz=231						
YBH	Yreka Blue Hor	3.17	116	Pn	Pn	22 26 32.3	-1.3
	14nm,0.3s,baz=319,slow=14,SNR=138						
YBH				Sn	Sn	22 27 10.5	-0.5
	16nm,0.3s,baz=256,slow=20,SNR=9.6						
YBH				LR	LR	22 27 12.5	
	comp=Z,637nm,20.9s,baz=298,slow=30						
J04D	Umpqua Nationa	3.24	87	P	Pn	22 26 34.2	-0.4
	baz=271						
M02C	Callahan	3.26	122	P	Pn	22 26 32.6	-2.1
	baz=305						
L04D	Klamath Falls	3.26	105	P	Pn	22 26 33.9	-0.9
	baz=289						
F03A	Seaside	3.49	37	ePn	Pn	22 26 36.6	-1.3
K04D	Chiloquin, OR	3.56	97	P	Pn	22 26 37.5	-1.3
	baz=281						
N02D	Trinity Center	3.60	126	P	Pn	22 26 37.2	-2.2
	baz=309						
KMRM	Mail Ridge	3.62	143	ePn	Pn	22 26 38.4	-1.4
M04C	Macdoel	3.74	110	P	Pn	22 26 40.3	-1.2
	baz=294						
F04D	Rainier, OR	3.85	40	P	Pn	22 26 42.1	-0.7
	baz=223						
F04D				S	Sn	22 27 28.2	+0.7
	baz=223						
J05D	Fort Rock, OR	3.88	86	P	Pn	22 26 42.1	-1.2
	baz=271						
I05D	Terrebonne, OR	3.95	71	P	Pn	22 26 43.3	-0.8
	baz=255						
WDC	Whiskeytown Da	3.95	130	ePn	Pn	22 26 42.1	-2.0
WDC	Whiskeytown Da	3.95	130	eP	Pn	22 26 42.1	-2.0
O02D	Mt. Diablo Mer	4.10	135	P	Pn	22 26 44.1	-2.2
	baz=318						
PINE	Pine Mountain	4.12	79	ePn	Pn	22 26 45.7	-1.0
KCPM	Cahto Peak	4.13	146	ePn	Pn	22 26 45.2	-1.5
G05D	Wamic, OR	4.29	59	P	Pn	22 26 48.5	-0.4
	baz=244						
E04D	Cinebar	4.41	38	P	Pn	22 26 49.8	-0.7
	baz=222						
E04D				S	Sn	22 27 41.8	+0.5
	baz=222						
F05D	White Salmon	4.54	51	P	Pn	22 26 52.2	0.0
	baz=236						
F05D				S	Sn	22 27 45.2	+0.8
	baz=236						
O03E	Paynes Creek	4.56	127	P	Pn	22 26 51.8	-0.8
	baz=311						
NLWA	Neilton Lookou	4.63	23	ePn	Pn	22 26 52.8	-0.7
NLWA				eS	Sn	22 27 44.7	-1.9
MOD	Modoc Plateau	4.78	103	ePn	Pn	22 26 54.2	-1.5
MOD				ePg	Pb	22 27 11.1	+3.3
MOD				eS	Sn	22 27 52.6	+2.0
D04E	Lakebay	4.82	32	P	Pn	22 26 55.8	-0.2
	baz=215						
LON	Longmire	4.91	41	ePn	Pn	22 26 57.5	+0.1
LON	Longmire	4.91	41	eP	Pn	22 26 57.5	+0.1
HOPS	Hopland Field	4.92	147	ePn	Pn	22 26 56.3	-1.2
HOPS				eS	Sb	22 28 05.3	-3.7
D03D	Eldon	5.00	28	P	Pn	22 26 58.4	-0.2
	baz=211						
I07A	Izee	5.19	77	ePn	Pn	22 27 00.6	-0.7
GDXM	Geysers	5.19	146	ePn	Pn	22 27 03.5	+2.2
ORV	Oroville	5.23	132	ePn	Pn	22 27 01.5	-0.3
ORV	Oroville	5.23	132	eP	Pn	22 27 01.5	-0.3
F07A	Phinny Hill Vi	5.46	58	ePn	Pn	22 27 04.6	-0.2
BEKR	Beckworth	5.69	123	ePn	Pn	22 27 11.0	+2.7
MCCM	Marconi Confer	5.74	150	ePn	Pn	22 27 06.9	-1.8
LTY	Liberty	5.83	43	ePn	Pn	22 27 10.0	0.0
G08A	Pilot Rock	5.85	66	ePn	Pn	22 27 09.8	-0.5
WVOR	Wild Horse Val	5.86	94	ePn	Pn	22 27 08.6	-1.9
WVOR	Wild Horse Val	5.86	94	eP	Pn	22 27 08.6	-1.9
J08A	Circle Bar Ran	5.89	85	ePn	Pn	22 27 09.6	-1.4
PGC	Sidney	5.89	20	ePn	Pn	22 27 09.8	-1.0
PGC				eS	Sn	22 28 12.3	-5.4
HAWA	Hanford	5.94	55	ePn	Pn	22 27 11.0	-0.5
HAWA				eS	Sn	22 28 25.1	+6.2
AFDM	Forest Hills D	5.95	133	ePn	Pn	22 27 12.4	+0.7
B05A	Bryant	5.97	30	P	Pn	22 27 11.4	-0.5
	baz=213						
B05A				S	Sn	22 28 20.0	+0.3
	baz=213						
A04D	Lummi Island	6.16	24	P	Pn	22 27 14.4	-0.1
	baz=207						
C06D	Leavenworth	6.19	38	P	Pn	22 27 14.9	-0.1
	baz=222						
E08A	Dider Farm, El	6.27	55	ePn	Pn	22 27 15.6	-0.5
RUBR	Rubicon Trail	6.33	128	ePn	Pn	22 27 23.3	+6.2
PAHR	Pah Rah Range	6.39	120	ePn	Pn	22 27 19.6	+1.7
VCNR	Virginia City	6.47	124	ePn	Pn	22 27 23.0	+3.9
PNTR	Pine Nut	6.63	126	ePn	Pn	22 27 23.4	+2.1
D08A	Wollman Farm,	6.65	52	ePn	Pn	22 27 20.7	-0.5
E09A	Wood Farm, Sta	6.84	58	ePn	Pn	22 27 21.9	-1.9
BMO	Blue Mountains	6.87	73	ePn	Pn	22 27 23.4	-0.9
BMO	Blue Mountains	6.87	73	eP	Pn	22 27 23.4	-0.9
YERR	Yerington	6.92	125	ePn	Pn	22 27 26.9	+1.8
CMB	Columbia Colle	6.94	136	ePn	Pn	22 27 27.9	+2.6
CMB				eS	Sn	22 28 45.5	+1.8
CMB	Columbia Colle	6.94	136	eP	Pn	22 27 27.9	+2.6
CMB				eS	Sn	22 28 45.5	+1.8
WAKR	Walker	7.12	128	ePn	Pn	22 27 29.6	+1.8
F10A	Beach Ranch, E	7.22	64	ePn	Pn	22 27 28.2	-1.0
B08A	Colville Reser	7.24	42	ePn	Pn	22 27 29.0	-0.3
C09A	Chrisman Ranch	7.43	49	ePn	Pn	22 27 31.7	-0.3
SAO	San Andreas Ge	7.49	147	ePn	Pn	22 27 34.6	+1.8
SAO				eS	Sn	22 28 47.6	-10
SAO	San Andreas Ge	7.49	147	eP	Pn	22 27 34.7	+1.8
RYN	Ryan	7.58	124	ePn	Pn	22 27 36.1	+2.0
KVN	Kaiserville	7.58	120	ePn	Pn	22 27 36.3	+2.1
KVN	Kaiserville	7.58	120	eP	Pn	22 27 36.3	+2.1
NV01	Mina Array Sit	7.83	124	ePn	Pn	22 27 39.2	+1.5
NVAR	Mina Array Bea	7.83	124	Pn	Pn	22 27 36.1	-1.6
	1.7nm,0.3s,baz=296,slow=14,SNR=50						
NVAR				LR	LR	22 30 33.1	
	comp=Z,1µm,19.1s,baz=300,slow=37						
NV11	Mina Array Sit	7.92	124	ePn	Pn	22 27 40.4	+1.5
MDPB	Devils Postpil	7.93	132	ePn	Pn	22 27 43.2	+4.1
OMMB	Old Mammoth Mi	7.99	131	ePn	Pn	22 27 44.1	+4.2
LLLB	Lillooet	8.10	22	ePn	Pn	22 27 42.2	+1.1
NEW	Newport	8.33	49	ePn	Pn	22 27 43.6	-0.6
NEW				eS	Sn	22 29 16.8	-0.9
NEW	Newport	8.33	49	eP	Pn	22 27 43.6	-0.6
NEW				eS	Sn	22 29 16.8	-0.9
NEW	Newport	8.33	49	P	Pn	22 27 43.7	-0.6
	baz=236						
NEW	Newport	8.33	49	Pn	Pn	22 27 43.7	-0.6
	2.1nm,0.3s,baz=228,slow=10,SNR=50						
NEW				LR	LR	22 31 01.6	
	comp=Z,7µm,21.2s,baz=238,slow=39						
ELK	Elko	8.76	102	ePn	Pn	22 27 52.2	+1.8
ELK	Elko	8.76	102	eP	Pn	22 27 52.2	+1.8
ELK	Elko	8.76	102	Pn	Pn	22 27 49.4	-1.1
	0.7nm,0.3s,baz=294,slow=15,SNR=21						
HLID	Hailey	8.85	83	ePn	Pn	22 27 52.0	+0.5
HLID				eS	Sn	22 29 32.7	+2.0
HLID	Hailey	8.85	83	P	Pn	22 27 51.7	+0.1
	baz=272						
PAGB	Antelope Grade	8.87	145	ePn	Pn	22 27 53.0	+1.2
BBB	Bella Bella	9.09	354	ePn	Pn	22 27 57.3	+2.7
BBB	Bella Bella	9.09	354	Pn	Pn	22 27 54.4	-0.1
	2.7nm,0.3s,baz=153,slow=14,SNR=8.6						
BBB				LR	LR	22 30 45.1	
	comp=Z,5µm,19.1s,baz=180,slow=34						
VES	Vestal, Richgr	9.31	139	P	Pn	22 27 58.1	+0.4
	baz=324						
CWC	Cottonwood Cre	9.35	133	P	Pn	22 27 59.2	+0.7
	baz=319						
R11A	Troy Canyon, C	9.60	116	ePn	Pn	22 28 04.8	+2.9
R11A	Troy Canyon, C	9.60	116	P	Pn	22 28 02.4	+0.5
	baz=304						
MSO	Missoula	9.65	63	ePn	Pn	22 28 01.6	-0.8
MSO	Missoula	9.65	63	P	Pn	22 28 01.8	-0.6
	baz=252						
ISA	Isabella, Lake	9.75	138	ePn	Pn	22 28 06.5	+2.7
ISA	Isabella, Lake	9.75	138	eP	Pn	22 28 06.5	+2.7
ISA	Isabella, Lake	9.75	138	P	Pn	22 28 04.5	+0.7
	baz=323						
PKM	Mcpherson Peak	9.78	145	P	Pn	22 28 04.8	+0.5
	baz=330						
MPMC	Manual Prospec	9.95	132	P	Pn	22 28 07.5	+0.8
	baz=318						
MCMT	McKenzie Canyo	10.01	76	ePn	Pn	22 28 08.4	+0.9
ARVC	Arvin	10.01	141	P	Pn	22 28 07.3	0.0
	baz=326						
TPNV	Topopah Spring	10.03	125	ePn	Pn	22 28 12.0	+4.2
TPNV	Topopah Spring	10.03	125	eP	Pn	22 28 12.0	+4.2
TPNV	Topopah Spring	10.03	125	P	Pn	22 28 09.0	+1.2
	baz=312						
DLMT	Dillon	10.24	73	ePn	Pn	22 28 11.8	+1.2
HVU	Hansel Valley	10.27	93	ePn	Pn	22 28 12.4	+1.4
HVU	Hansel Valley	10.27	93	eP	Pn	22 28 12.4	+1.4
LRMC	Laurel Mtn Rad	10.29	135	P	Pn	22 28 12.9	+1.6
	baz=321						
BGU	Big Grassy Mou	10.30	98	ePn	Pn	22 28 12.5	+1.1
LRM	Limekiln Ridge	10.41	70	ePn	Pn	22 28 13.2	+0.1
OSI	Osito Audit: C	10.48	142	ePn	Pn	22 28 16.0	+2.1
OSI	Osito Audit: C	10.48	142	P	Pn	22 28 14.6	+0.7
	baz=327						
WALA	Waterton Lakes	10.56	52	ePn	Pn	22 28 15.3	+0.4
EDW2	Edwards Air Fo	10.61	138	P	Pn	22 28 16.7	+1.2
	baz=324						
SPUT	South Promonto	10.61	95	ePn	Pn	22 28 17.1	+1.4
PSUT	Pine Spring	10.66	111	ePn	Pn	22 28 18.4	+2.0
DUG	Dugway, Tooele	10.69	101	ePn	Pn	22 28 17.6	+0.8
DUG	Dugway, Tooele	10.69	101	eP	Pn	22 28 17.6	+0.8
DUG	Dugway, Tooele	10.69	101	P	Pn	22 28 17.9	+1.1
	baz=291						
DIB	Dawson Inlet,	10.79	341	ePn	Pn	22 28 20.7	+2.7
GSC	Goldstone, Bar	10.89	133	ePn	Pn	22 28 24.7	+5.3
GSC	Goldstone, Bar	10.89	133	P	Pn	22 28 20.7	+1.3
	baz=319						
BOZ	Bozeman (W)	10.95	72	ePn	Pn	22 28 20.4	+0.1
BOZ	Bozeman (W)	10.95	72	eP	Pn	22 28 20.4	+0.1
BOZ	Bozeman (W)	10.95	72	P	Pn	22 28 20.2	0.0
	baz=262						
SHPR	Sheep Range	10.98	123	ePn	Pn	22 28 24.1	+3.3
HRY	Holter Researc	11.01	66	ePn	Pn	22 28 20.7	-0.4
QLMT	Earthquake Lak	11.02	76	ePn	Pn	22 28 22.6	+1.3
MWC	Mount Wilson	11.11	141	ePn	Pn	22 28 24.3	+1.7
MWC	Mount Wilson	11.11	141	eP	Pn	22 28 24.3	+1.7
YHB	Horse Butte	11.18	77	ePn	Pn	22 28 25.0	+1.5
HWUT	Hardware Ranch	11.19	93	ePn	Pn	22 28 24.4	+0.8
TUQ	Turquoise Moun	11.27	130	P	Pn	22 28 26.1	+1.4
	baz=317						
BFSC	Mount Baldy Ra	11.29	139	P	Pn	22 28 25.7	+0.8
	baz=325						
FXWY	Fox Creek	11.30	82	ePn	Pn	22 28 27.1	+1.9
NLU	North Lily Min	11.30	102	ePn	Pn	22 28 26.0	+0.8
YMR	Madison River	11.34	77	ePn	Pn	22 28 27.6	+1.9
IMW	Indian Meadow	11.35	81	ePn	Pn	22 28 27.8	+1.8
TPAW	Teton Pass	11.36	83	ePn	Pn	22 28 26.9	+0.8
TCUT	Toone Canyon	11.42	95	ePn	Pn	22 28 28.4	+1.6
YFT	Old Faithful	11.42	78	ePn	Pn	22 28 30.2	+3.3
YHH	Holmes Hill	11.42	76	ePn	Pn	22 28 28.5	+1.6
REDW	Red Top Meadow	11.45	84	ePn	Pn	22 28 29.0	+1.8
YPP	Pitchstone Pla	11.45	79	ePn	Pn	22 28 29.4	+2.2
HEC	Hector,Ludlow	11.49	133	P	Pn	22 28 29.2	+1.5
	baz=320						
MOOW	Moose Ponds	11.50	82	ePn	Pn	22 28 30.1	+2.2
CCUT	Cedar City	11.51	115	ePn	Pn	22 28 30.9	+2.8
SNOW	Snow King Moun	11.51	83	ePn	Pn	22 28 30.5	+2.4
FLWY	Flagg Ranch	11.52	80	ePn	Pn	22 28 30.4	+2.2
JLU	Jordanelle	11.54	98	ePn	Pn	22 28 29.2	+0.8
YNR	Norris Junctio	11.54	77	ePn	Pn	22 28 30.8	+2.2
MPU	Maple Canyon	11.60	101	ePn	Pn	22 28 30.9	+1.7
LOHW	Long Hollow	11.61	82	ePn	Pn	22 28 26.2	-3.1
H17A	Grant Village	11.61	78	ePn	Pn	22 28 32.6	+3.2
H17A	Grant Village	11.61	78	P	Pn	22 28 30.2	+0.8
	baz=270						
SZCU	Shurtz Canyon	11.67	114	ePn	Pn	22 28 32.8	+2.6
LKWY	Lake	11.74	78	ePn	Pn	22 28 34.0	+2.8
	162nm,1.4s						
LKWY				eS	Sn	22 30 31.0	-11
MSU	Marysvale	11.83	108	ePn	Pn	22 28 33.8	+1.4
MSU	Marysvale	11.83	108	eP	Pn	22 28 33.8	+1.4
LCMT	Little Creek M	11.89	117	ePn	Pn	22 28 35.9	+2.7
GMRC	Granite Mounta	11.89	131	P	Pn	22 28 33.9	+0.6
	baz=318						
MURC	Murrieta	12.03	139	P	Pn	22 28 37.1	+2.0
	baz=326						
MTPU	Mount Pierson	12.05	110	ePn	Pn	22 28 37.5	+1.9
KNB	Kanab	12.16	116	ePn	Pn	22 28 39.8	+2.8
KNB	Kanab	12.16	116	eP	Pn	22 28 39.8	+2.8
TMUT	Trail Mountain	12.17	103	ePn	Pn	22 28 33.8	-3.4
PKCU	Pink Cliffs	12.27	113	ePn	Pn	22 28 41.2	+2.7
BELC	Belle Mtn. Jos	12.31	135	P	Pn	22 28 39.2	+0.3
	baz=321						
GCMT	Greycliff	12.34	72	ePn	Pn	22 28 40.0	+0.8
Q16A	Castle Valley	12.35	105	ePn	Pn	22 28 41.9	+2.3
PFO	Pinyon Flats O	12.38	137	ePn	Pn	22 28 41.6	+1.7
PFO	Pinyon Flats O	12.38	137	eP	Pn	22 28 41.6	+1.7
PFO	Pinyon Flats O	12.38	137	P	Pn	22 28 40.1	+0.2
	baz=324						
PFO	Pinyon Flats O	12.38	137	Pn	Pn	22 28 40.4	+0.5
	0.1nm,0.3s,baz=342,slow=11,SNR=7.9						
PFO				LR	LR	22 33 23.3	
	comp=Z,5µm,19.8s,baz=320,slow=38						
XPFO	Pion Flat	12.38	137	ePn	Pn	22 28 42.7	+2.7
P17A	Butcher Ranch,	12.44	102	ePn	Pn	22 28 42.2	+1.5
BW06	Boulder Array	12.45	86	ePn	Pn	22 28 41.8	+0.9
BW06	Boulder Array	12.45	86	P	Pn	22 28 41.9	+1.0
	baz=278						
PD31	Pinedale Array	12.45	86	ePn	Pn	22 28 42.4	+1.4
PDAR	Pinedale Array	12.45	86	ePn	Pn	22 28 40.9	0.0
PDAR	Pinedale Array	12.45	86	Pn	Pn	22 28 41.3	+0.4
	0.3nm,0.3s,baz=270,slow=11,SNR=71						
PDAR				LR	LR	22 33 54.8	
	comp=Z,6µm,19.1s,baz=281,slow=40						
RLMT	Red Lodge	12.56	75	ePn	Pn	22 28 43.2	+0.8
RLMT	Red Lodge	12.56	75	P	Pn	22 28 42.6	+0.2
	baz=267						
IRM	Iron Mountain	12.64	132	P	Pn	22 28 43.8	+0.4
	baz=319						
W13A	Hualapai Mount	12.69	125	ePn	Pn	22 28 47.7	+3.4
EGMT	Eagleton	12.71	62	ePn	Pn	22 28 43.6	-0.8
EGMT	Eagleton	12.71	62	P	Pn	22 28 43.2	-1.1
	baz=254						
SRU	San Rafael Swe	12.73	103	ePn	Pn	22 28 46.6	+1.8
SRU	San Rafael Swe	12.73	103	eP	Pn	22 28 46.6	+1.8
U15A	North Rim	12.85	117	ePn	Pn	22 28 49.4	+3.0
BC3	Big Chuckawall	12.86	134	P	Pn	22 28 47.5	+1.1
	baz=321						
MONP2	Monument Peak	12.98	139	P	Pn	22 28 48.9	+0.7
	baz=325						
CRAG	Craig	13.03	343	ePn	Pn	22 28 51.0	+2.5
BAR	Barrett	13.04	140	ePn	Pn	22 28 51.7	+2.9
PDMCI	Parker Dam,Lak	13.10	128	P	Pn	22 28 50.0	+0.4
	baz=316						
SWSC	Sam W. Stewart	13.24	137	P	Pn	22 28 52.6	+1.0
	baz=324						
Y12C	Blythe	13.29	131	ePn	Pn	22 28 55.8	+3.6
Y12C	Blythe	13.29	131	P	Pn	22 28 53.6	+1.4
	baz=319						
IKP	In-Ko-Pah, Jac	13.33	139	P	Pn	22 28 53.4	+0.6
	baz=325						
GLA	Glamis	13.66	134	ePn	Pn	22 29 00.5	+3.2
GLA	Glamis	13.66	134	eP	Pn	22 29 00.5	+3.2
GLA	Glamis	13.66	134	P	Pn	22 28 57.3	0.0
	baz=321						
PV09	Paradox Valley	13.97	104	ePn	Pn	22 29 02.8	+0.9
WUAZ	Wupatki	13.99	118	ePn	Pn	22 29 04.1	+2.2
WUAZ	Wupatki	13.99	118	P	Pn	22 29 01.2	-0.7
	baz=308						
O20A	White River Ci	14.01	96	ePn	Pn	22 29 02.2	-0.1
O20A	White River Ci	14.01	96	P	Pn	22 29 01.9	-0.3
	baz=289						
PV21	Cone Mtn., Par	14.06	103	ePn	Pn	22 29 04.5	+1.6
PV23	Carpenter Ridg	14.08	104	ePn	Pn	22 29 04.0	+0.8
PV14	Lion Creek, Pa	14.11	104	ePn	Pn	22 29 04.4	+0.9
PV20	West Nyswonger	14.16	104	ePn	Pn	22 29 06.7	+2.5
PV19	Morning Glory	14.16	104	ePn	Pn	22 29 06.7	+2.4
PV04	Paradox Valley	14.18	104	ePn	Pn	22 29 05.9	+1.4
PV05	Paradox Valley	14.18	105	ePn	Pn	22 29 06.1	+1.6
PV17	East Wray Mesa	14.19	104	ePn	Pn	22 29 05.4	+0.7
PV16	Nyswonger Mesa	14.21	104	ePn	Pn	22 29 05.5	+0.6

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PV11  David Mesa, Pa    14.24 104 ePn     Pn     22 29 06.5 +1.1
PV03  Paradox Valley    14.28 104 ePn     Pn     22 29 06.4 +0.5
PV12  Saucer Basin,     14.29 104 ePn     Pn     22 29 07.3 +1.2
PV13  Radium Mtn., P    14.34 104 ePn     Pn     22 29 07.1 +0.3
PV07  Paradox Valley    14.35 103 ePn     Pn     22 29 07.3 +0.5
RWWY  Rawlins           14.36  89 ePn     Pn     22 29 04.6 -2.4
PV02  Paradox Valley    14.38 104 ePn     Pn     22 29 09.6 +2.3
PV15  Paradox Valley    14.51 103 ePn     Pn     22 29 10.0 +0.9
PV01  Paradox Valley    14.53 104 ePn     Pn     22 29 09.7 +0.3
K22A  Casper            14.68  85 ePn     Pn     22 29 09.8 -1.5
K22A  Casper            14.68  85  P      Pn     22 29 09.6 -1.7
      baz=279
LAO   LASA Array        14.81  69 ePn     Pn     22 29 10.9 -2.1
LAO   LASA Array        14.81  69  P      Pn     22 29 11.5 -1.4
      baz=264
MVCO  Mesa Verde        15.01 107 ePn     Pn     22 29 16.0 +0.2
MVCO  Mesa Verde        15.01 107  P      Pn     22 29 15.0 -0.8
      baz=299
SMCO  Snowmass          15.26  98 ePn     Pn     22 29 18.1 -1.2
      44nm,1.5s
W18A  Petrified Fore    15.30 116 ePn     Pn     22 29 20.2 +0.6
      62nm,0.9s
W18A  Petrified Fore    15.30 116  P      Pn     22 29 19.3 -0.3
      baz=307
DLBC  Dease Lake        15.45 353 ePn     Pn     22 29 23.0 +1.7
      278nm,1.5s
DLBC  Dease Lake        15.45 353  Pn     Pn     22 29 20.7 -0.6
      baz=180,slow=20,SNR=3.1
DLBC                               LR     LR     22 34 36.1
      comp=Z,2µm,19.6s,baz=169,slow=35
N23A  Red Feather La    15.47  91 ePn     Pn     22 29 20.9 -1.1
      78nm,1.4s
N23A  Red Feather La    15.47  91  P      Pn     22 29 20.9 -1.1
      baz=286
214A  Organ Pipe Nat    15.59 131  P      Pn     22 29 23.2 -0.1
      baz=320
PHWY  Pilot Hill        15.72  90 ePn     Pn     22 29 21.9 -3.3
      93nm,2.0s
JIS   Juneau Island     15.90 345 ePn     Pn     22 29 26.4 -0.7
      121nm,1.0s
S22A  4UR Ranch, Cre    15.94 103 ePn     Pn     22 29 28.4 +0.3
      52nm,1.4s
S22A  4UR Ranch, Cre    15.94 103  P      Pn     22 29 27.6 -0.4
      baz=296
ISCO  Idaho Springs     16.03  95 ePn     Pn     22 29 28.1 -1.2
      38nm,1.0s
ISCO  Idaho Springs     16.03  95 eP      Pn     22 29 28.1 -1.2
ISCO                               pmax   pmax
      comp=Z,38nm,1.0s
ISCO  Idaho Springs     16.03  95  P      Pn     22 29 28.4 -0.8
      baz=289
BESE  Bessie Mountai    16.28 344 ePn     Pn     22 29 30.8 -1.3
      comp=Z,161nm,1.2s
RSSD  Black Hills       16.31  79 ePn     Pn     22 29 29.3 -3.4
      comp=Z,40nm,1.5s
RSSD  Black Hills       16.31  79 eP      Pn     22 29 29.3 -3.4
RSSD                               pmax   pmax
      comp=Z,40nm,1.5s
RSSD  Black Hills       16.31  79  P      Pn     22 29 31.4 -1.3
      baz=275
DGMT  Dagmar            16.43  63 ePn     Pn     22 29 33.3 -0.7
      comp=Z,655nm,1.5s
DGMT  Dagmar            16.43  63  P      Pn     22 29 32.6 -1.4
      baz=260
TUC   Tucson            16.49 126 ePn     Pn     22 29 36.5 +1.7
      comp=Z,36nm,1.1s
TUC   Tucson            16.49 126 eP      Pn     22 29 36.5 +1.7
TUC                                pmax   pmax
      comp=Z,36nm,1.1s
TUC   Tucson            16.49 126  P      Pn     22 29 34.3 -0.6
      baz=316
Q24A  Divide            16.66  97  P      Pn     22 29 36.3 -0.9
      baz=292
SDCO  Great Sand Dun    16.89 102 ePn     Pn     22 29 40.1  0.0
      comp=Z,118nm,1.4s
SDCO  Great Sand Dun    16.89 102  P      Pn     22 29 39.8 -0.3
      baz=296
LAZ   Ladron            17.45 114 ePn     P      22 29 48.7 +0.6
ANMO  Albuquerque       17.60 111 ePn     Pn     22 29 49.1 +0.3
      comp=Z,55nm,1.3s
ANMO  Albuquerque       17.60 111c iP     Pn     22 29 49.3 +0.4
ANMO                               pmax   pmax
      comp=Z,60nm,1.7s
ANMO  Albuquerque       17.60 111  P      Pn     22 29 48.7 -0.2
      baz=304
ANMO  Albuquerque       17.60 111  P      Pn     22 29 46.7 -2.1
      comp=Z,0.3nm,0.3s,baz=309,slow=11,SNR=29
LENM  Lemitar           17.69 114 ePn     P      22 29 51.5 +0.7
LPM   Los Pinos Moun    17.84 113 ePn     P      22 29 53.9 +1.4
T25A  Trinidad          17.93 102 ePn     Pn     22 29 53.1 +0.1
      comp=Z,50nm,1.4s
T25A  Trinidad          17.93 102  P      Pn     22 29 52.1 -0.9
      baz=297
BNM   Barren Site       17.93 113 ePn     P      22 29 54.6 +1.0
121A  Cookes Peak, D    18.18 119  P      Pn     22 29 55.5 -0.6
      baz=311
WHY   Whitehorse        18.23 347 ePn     Pn     22 29 55.3 -1.1
      comp=Z,78nm,1.8s
OGNE  Ogallala          18.32  89 ePn     Pn     22 29 55.4 -2.2
      comp=Z,95nm,1.4s
OGNE  Ogallala          18.32  89  P      Pn     22 29 56.0 -1.6
      baz=285
KSCO  Kaye Shedlock’    18.48  95 eP      P      22 29 58.2 -1.2
      comp=Z,116nm,1.1s
KSCO  Kaye Shedlock’    18.48  95  P      P      22 29 58.3 -1.2
      baz=291
HYT   Haines Junctio    18.88 343 eP      P      22 30 01.9 -1.8
      comp=Z,43nm,1.1s
MDND  Maddock           19.41  67 eP      P      22 30 08.1 -1.3
      comp=Z,604nm,1.7s
MDND  Maddock           19.41  67  P      P      22 30 08.6 -0.8
      baz=266
FFC   Flin Flon         19.73  46 eP      P      22 30 12.5 -0.4
      comp=Z,126nm,1.1s
FFC   Flin Flon         19.73  46 i P     P      22 30 12.9  0.0
SUSD  Miller            19.92  77  P      P      22 30 15.0  0.0
      baz=276
BALM  Baldy             20.26 337 eP      Pn     22 30 20.0 -0.7
      comp=Z,146nm,1.6s
BALM  Baldy             20.26 337 eP      Pn     22 30 20.0 -0.7
BALM                               pmax   pmax
      comp=Z,146nm,1.6s
MNTX  Cornudas Mount    20.27 117 eP      P      22 30 21.0 +2.0
      comp=Z,72nm,1.8s
MNTX  Cornudas Mount    20.27 117  P      P      22 30 19.8 +0.9
      baz=311
YKA   Yellowknife Ar    20.59  16  P      P      22 30 20.9 -1.3
      comp=Z,18nm,1.1s,baz=204,slow=11,SNR=56
YKA                                LR     LR     22 38 06.6
      comp=Z,100nm,18.7s,baz=206,slow=36
CBKS  Cedar Bluff       20.66  93 eP      P      22 30 24.1 +1.0
      comp=Z,112nm,1.1s
CBKS  Cedar Bluff       20.66  93 eP      P      22 30 24.1 +1.0
CBKS                               pmax   pmax
      comp=Z,112nm,1.1s
CBKS  Cedar Bluff       20.66  93  P      P      22 30 23.0 -0.2
      baz=291
MSTX  Muleshoe          20.67 108 eP      P      22 30 25.0 +1.6
      comp=Z,104nm,1.5s
MSTX  Muleshoe          20.67 108  P      P      22 30 23.1 -0.3
      baz=304
AMTX  Amarillo          20.95 105 eP      P      22 30 27.6 +1.2
      comp=Z,171nm,1.4s
AMTX  Amarillo          20.95 105  P      P      22 30 26.6 +0.1
      baz=301
BGNE  Belgrade          21.04  85  P      P      22 30 26.8 -0.4
      baz=284
DIV   Divide            21.36 334 eP      P      22 30 32.1 +1.5
      comp=Z,100nm,1.2s
ECSD  EROS Data Cent    21.68  78 eP      P      22 30 33.8 -0.4
      comp=Z,86nm,1.1s
ECSD  EROS Data Cent    21.68  78  P      P      22 30 34.0 -0.1
      baz=279
KLU   Klutina           21.69 334 eP      P      22 30 35.7 +1.6
      comp=Z,61nm,1.1s
KDAK  Kodiak Island     21.91 321 i P     P      22 30 37.1 +0.7
KDAK  Kodiak Island     21.91 321  P      P      22 30 36.2 -0.2
      comp=Z,20nm,0.7s,baz=119,slow=5.2,SNR=9.1
KDAK                               LR     LR     22 36 53.6
      comp=Z,3µm,21.1s,baz=133,slow=31
AGMN  Agassiz Nation    21.93  66 eP      P      22 30 37.3 +0.6
      comp=Z,318nm,1.4s
AGMN  Agassiz Nation    21.93  66  P      P      22 30 36.9 +0.2
      baz=268
SEW   Seward            21.94 329 eP      P      22 30 37.7 +1.1
      comp=Z,326nm,1.8s
ULM   Lac du Bonnet     22.08  61 eP      P      22 30 36.8 -1.5
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      comp=Z,200nm,1.3s
ULM   Lac du Bonnet     22.08  61 eP      P      22 30 36.8 -1.5
ULM                                pmax   pmax
      comp=Z,201nm,1.3s
ULM   Lac du Bonnet     22.08  61  P      P      22 30 36.5 -1.8
      comp=Z,74nm,1.1s,baz=269,slow=11,SNR=47
ULM                                LR     LR     22 39 31.3
      comp=Z,2µm,20.8s,baz=264,slow=38
HARP  HAARP             22.16 337 eP      P      22 30 42.4 +3.3
      comp=Z,146nm,1.4s
MENT  Mentasta          22.20 339 eP      P      22 30 40.9 +1.5
      comp=Z,90nm,1.2s
DAWY  Dawson            22.20 345 eP      P      22 30 40.0 +0.5
      comp=Z,102nm,1.4s
BRLK  Bradley Lake      22.29 327 eP      P      22 30 41.0 +0.5
      comp=Z,238nm,1.6s
SCM   Sheep Creek Mo    22.39 334 eP      P      22 30 43.1 +1.5
      comp=Z,457nm,1.8s
SCM   Sheep Creek Mo    22.39 334 eP      P      22 30 43.1 +1.5
SCM                                pmax   pmax
      comp=Z,457nm,1.8s
KNK   Knik Glacier      22.47 332 eP      P      22 30 43.7 +1.4
      comp=Z,138nm,1.3s
PAX   Paxson            22.70 337 eP      P      22 30 46.5 +1.6
      comp=Z,21nm,1.2s
PAX   Paxson            22.70 337  P      P      22 30 46.5 +1.6
PAX                                pmax   pmax
      comp=Z,21nm,1.2s
SML   Sawmill           22.70 333 eP      P      22 30 46.5 +1.6
      comp=Z,87nm,1.2s
SML   Sawmill           22.70 333 eP      P      22 30 46.5 +1.6
SML                                pmax   pmax
      comp=Z,87nm,1.2s
PMR   Palmer            22.82 332 eP      P      22 30 46.8 +0.7
      comp=Z,60nm,1.3s
PMR   Palmer            22.82 332 eP      P      22 30 46.8 +0.7
PMR                                pmax   pmax
      comp=Z,60nm,1.3s
KSU1  Kansas State U    22.84  90 eP      P      22 30 46.4 -0.2
      comp=Z,166nm,1.2s
KSU1  Kansas State U    22.84  90  P      P      22 30 46.4 -0.2
      baz=290
DOT   Dot Lake          22.87 340 eP      P      22 30 48.3 +1.7
      comp=Z,132nm,2.0s
TX31  Lajitas Ar. Si    22.94 119 eP      P      22 30 49.3 +1.6
TXAR  Lajitas Array     22.94 119  P      P      22 30 47.2 -0.6
      comp=Z,5.8nm,1.0s,baz=297,slow=5.5,SNR=27
TXAR                               PcP    PcP    22 34 37.6  0.0
      comp=Z,0.7nm,0.8s,baz=259,slow=1.5,SNR=4.4
TXAR                               LR     LR     22 39 33.3
      comp=Z,459nm,20.9s,baz=0.0,slow=36
WMOK  Wichita Mounta    23.09 102 eP      P      22 30 49.8 +0.6
      comp=Z,65nm,1.1s
WMOK  Wichita Mounta    23.09 102 eP      P      22 30 49.8 +0.6
WMOK                               pmax   pmax
      comp=Z,65nm,1.1s
WMOK  Wichita Mounta    23.09 102  P      P      22 30 49.2 +0.1
      baz=300
SCRK  Sand Creek        23.12 340 eP      P      22 30 50.5 +1.2
      comp=Z,57nm,1.7s
RIDG  Independ’e Rid    23.15 339 eP      P      22 30 50.5 +1.1
      comp=Z,110nm,1.8s
EGAK  Eagle             23.18 344 eP      P      22 30 50.0 +0.2
      comp=Z,18nm,1.0s
LPIG  La Paz            23.25 140 LR      LR     22 39 14.7
      comp=Z,2µm,19.8s,baz=331,slow=35
DHY   Denali Highway    23.33 336 eP      P      22 30 52.6 +1.1
      comp=Z,168nm,1.6s
HPIG                    23.44 127 eP      P      22 30 54.5 +1.6
      comp=Z,24nm,0.9s
ABTX  Abilene, Hawle    23.60 108 eP      P      22 30 54.3 +0.1
      comp=Z,225nm,1.8s
ABTX  Abilene, Hawle    23.60 108  P      P      22 30 53.9 -0.3
      baz=304
EPYK  Eagle Plains      23.92 350 eP      P      22 30 57.5 +0.5
      comp=Z,142nm,1.5s
EPYK  Eagle Plains      23.92 350  P      P      22 30 57.4 +0.5
      baz=161
RND   Reindeer          24.03 335 eP      P      22 30 59.2 +1.1
      comp=Z,113nm,1.8s
RND   Reindeer          24.03 335 eP      P      22 30 59.2 +1.1
RND                                pmax   pmax
      comp=Z,113nm,1.8s
CHGN  Chignik           24.18 314 eP      P      22 30 59.7 +0.3
      comp=Z,38nm,0.9s
SPMN  Marine on St.     24.18  73 eP      P      22 31 01.4 +1.9
      comp=Z,280nm,1.8s
SPMN  Marine on St.     24.18  73  P      P      22 30 59.2 -0.4
      baz=277
HDA   Harding Lake      24.24 338 eP      P      22 31 01.8 +1.9
      comp=Z,68nm,1.9s
HDA   Harding Lake      24.24 338  P      P      22 31 01.0 +1.0
      baz=142
F37A  Hinrichs Farm,    24.24  72  P      P      22 31 00.6 +0.5
      baz=276
MCK   McKinley          24.29 336 eP      P      22 31 01.5 +1.1
      comp=Z,82nm,1.6s
MCK   McKinley          24.29 336 eP      P      22 31 01.5 +1.1
MCK                                pmax   pmax
      comp=Z,82nm,1.6s
SCIA  State Center      24.50  81 eP      P      22 31 04.2 +1.7
      comp=Z,217nm,1.5s
SCIA  State Center      24.50  81  P      P      22 31 02.8 +0.3
      baz=284
TRF   Thorofare Moun    24.51 334 eP      P      22 31 03.2 +0.6
      comp=Z,127nm,1.6s
IL1   Eielson Array     24.51 339 eP      P      22 31 02.0 -0.4
ILAR  Eielson Array     24.51 339  P      P      22 31 02.6 +0.2
      comp=Z,6.8nm,0.8s,baz=155,slow=7.7,SNR=48
ILAR                               PcP    PcP    22 34 40.4 +0.2
      comp=Z,3.9nm,1.1s,baz=184,slow=0.6,SNR=4.3
ILAR                               LR     LR     22 39 11.4
      comp=Z,1µm,21.4s,baz=148,slow=33
ILB   Eielson Array     24.51 339 eP      P      22 31 03.0 +0.5
WRH   Wood River Hil    24.60 338 eP      P      22 31 04.1 +0.9
      comp=Z,70nm,1.6s
H38A  Maiden Rock       24.62  75  P      P      22 31 03.7 +0.1
      baz=279
TUL1  Leonard           24.70  97 eP      P      22 31 05.5 +1.1
      comp=Z,29nm,0.8s
TUL1  Leonard           24.70  97  P      P      22 31 04.3 -0.1
      baz=297
F38A  Pierce - Schro    24.74  71  P      P      22 31 05.0 +0.3
      baz=276
JCT   Junction City     24.75 112 eP      P      22 31 05.9 +1.0
      comp=Z,27nm,1.0s
JCT   Junction City     24.75 112 eP      P      22 31 05.9 +1.0
JCT                                pmax   pmax
      comp=Z,27nm,1.0s
JCT   Junction City     24.75 112  P      P      22 31 05.4 +0.5
      baz=308
PPLA  Purkeypile        24.76 332 eP      P      22 31 04.6 -0.2
      comp=Z,91nm,1.1s
PRP   Porcupine Dome    24.77 341 eP      P      22 31 06.2 +1.3
      comp=Z,33nm,1.2s
COLA  College           24.85 338 eP      P      22 31 06.0 +0.6
      comp=Z,15nm,0.9s
COLA  College           24.85 338 eP      P      22 31 06.0 +0.6
COLA                               pmax   pmax
      comp=Z,15nm,0.9s
G38A  Ridgeland         24.85  73  P      P      22 31 05.9 +0.2
      baz=278
EYMN  Ely               24.86  67 eP      P      22 31 07.3 +1.5
      comp=Z,116nm,1.3s
EYMN  Ely               24.86  67  P      P      22 31 05.2 -0.6
      baz=272
E38A  The Farm, Brul    24.90  70 eP      P      22 31 07.8 +1.7
      comp=Z,85nm,1.3s
E38A  The Farm, Brul    24.90  70  P      P      22 31 05.0 -1.1
      baz=275
POKR  Poker Plat Res    24.93 339  P      P      22 31 06.8 +0.6
      baz=142
SVW2  Sparrevohn        24.96 326 eP      P      22 31 06.5  0.0
      comp=Z,111nm,1.8s
SDPT  Sand Point        25.01 311 eP      P      22 31 07.3 +0.4
      comp=Z,124nm,1.1s
MDM   Murphy Dome       25.02 338 eP      P      22 31 07.6 +0.6
      comp=Z,65nm,1.7s
CAST  Castle Rocks      25.07 333 eP      P      22 31 07.8 +0.3
      comp=Z,35nm,1.2s
J39A  Decorah           25.27  78  P      P      22 31 08.8 -0.6
      baz=282
K39A  Oelwein           25.27  79  P      P      22 31 09.3 -0.2
      baz=283
I39A  Houston           25.30  76 eP      P      22 31 10.8 +1.1
      comp=Z,46nm,0.6s
I39A  Houston           25.30  76  P      P      22 31 09.0 -0.7
      baz=281
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G39A  Holcombe          25.31  73  P      P      22 31 09.1 -0.7
      baz=278
H39A  Augusta           25.32  74  P      P      22 31 10.3 +0.3
      baz=279
L39A  Vinton            25.32  80  P      P      22 31 09.4 -0.6
      baz=284
M39A  Webster           25.36  82  P      P      22 31 10.2 -0.2
      baz=286
FCC   Fort Churchill    25.37  41 eP      P      22 31 10.9 +0.7
      comp=Z,90nm,1.0s
FCC   Fort Churchill    25.37  41 eP      P      22 31 10.9 +0.7
FCC                                pmax   pmax
      comp=Z,90nm,1.0s
F39A  Loretta           25.41  71  P      P      22 31 10.8 +0.1
      baz=277
INK   Inuvik            25.47 354 eP      P      22 31 11.0  0.0
      comp=Z,26nm,1.2s
INK   Inuvik            25.47 354 eP      P      22 31 11.0  0.0
INK                                pmax   pmax
      comp=Z,26nm,1.2s
INK   Inuvik            25.47 354  P      P      22 31 10.6 -0.4
      comp=Z,6.5nm,0.9s,baz=163,slow=11,SNR=18
INK                                LR     LR     22 40 51.9
      comp=Z,2µm,19.6s,baz=160,slow=36
WHTX  Lake Whitney,     25.48 106 eP      P      22 31 15.9 +4.4
      comp=Z,137nm,1.4s
WHTX  Lake Whitney,     25.48 106  P      P      22 31 11.5  0.0
      baz=304
FYU   Fort Yukon        25.58 343 eP      P      22 31 13.7 +1.6
E39A  Mellen            25.61  70  P      P      22 31 12.4 -0.2
      baz=276
MLY   Manley            25.78 336 eP      P      22 31 15.0 +1.0
      comp=Z,130nm,1.7s
K40A  Colesburg         25.81  79  P      P      22 31 14.5 +0.2
      baz=283
M40A  Post Highland     25.86  82  P      P      22 31 14.9 +0.1
      baz=286
HHAR  Hobbs             25.89  94 eP      P      22 31 16.2 +1.0
      comp=Z,27nm,1.0s
L40A  Anamosa           25.90  80 eP      P      22 31 16.2 +1.0
      comp=Z,207nm,1.3s
L40A  Anamosa           25.90  80  P      P      22 31 15.2  0.0
      baz=285
I40A  Norwalk           25.93  76  P      P      22 31 14.9 -0.6
      baz=281
J40A  Soldiers Grove    25.94  77  P      P      22 31 15.4 -0.2
      baz=282
N40A  Mertquake, Sal    25.96  83  P      P      22 31 15.6 -0.2
      baz=287
F40A  Park Falls        25.96  71  P      P      22 31 15.3 -0.4
      baz=277
H40A  Chili             25.96  74  P      P      22 31 15.7 -0.1
      baz=280
G40A  Rib Lake          25.99  73 eP      P      22 31 18.6 +2.5
      comp=Z,32nm,1.0s
G40A  Rib Lake          25.99  73  P      P      22 31 16.0  0.0
      baz=279
E40A  Wakefield         26.05  70  P      P      22 31 15.8 -0.8
      baz=276
435B  Jarrell           26.09 109  P      P      22 31 17.3 +0.3
      baz=307
833A  Chaparral WMA,    26.40 115  P      P      22 31 20.1 +0.3
      baz=312
JFWS  Jewell Farm       26.40  78 eP      P      22 31 20.8 +1.1
      comp=Z,103nm,1.4s
JFWS  Jewell Farm       26.40  78 eP      P      22 31 20.8 +1.1
JFWS                               pmax   pmax
      comp=Z,103nm,1.4s
JFWS  Jewell Farm       26.40  78  P      P      22 31 19.3 -0.4
      baz=283
L41A  Preston           26.42  80  P      P      22 31 19.9  0.0
      baz=285
I41A  Arkdale           26.43  75  P      P      22 31 20.0 +0.1
      baz=281
K41A  Shullsburg        26.43  79  P      P      22 31 19.2 -0.8
      baz=284
C40A  Isle Royale Na    26.43  67 eP      P      22 31 21.1 +1.2
      comp=Z,275nm,1.7s
C40A  Isle Royale Na    26.43  67  P      P      22 31 20.2 +0.2
      baz=274
J41A  Loganville        26.47  77  P      P      22 31 20.5 +0.2
      baz=282
H41A  Junction City     26.48  74 eP      P      22 31 25.2 +4.7
      comp=Z,62nm,1.4s
H41A  Junction City     26.48  74  P      P      22 31 20.0 -0.5
      baz=280
W39A  Magazine          26.48  96 eP      P      22 31 21.5 +1.0
      comp=Z,58nm,0.9s
W39A  Magazine          26.48  96  P      P      22 31 21.1 +0.6
      baz=298
N41A  Harden Midland    26.54  83 eP      P      22 31 21.4 +0.4
      comp=Z,30nm,1.0s
N41A  Harden Midland    26.54  83  P      P      22 31 20.6 -0.4
      baz=287
M41A  Milan             26.57  81  P      P      22 31 21.4 +0.1
      baz=286
COWI  Conover           26.62  71 eP      P      22 31 22.2 +0.5
      comp=Z,55nm,1.2s
U40A  Yellville         26.65  93  P      P      22 31 22.2 +0.2
      baz=295
E41A  Kenton            26.69  70  P      P      22 31 22.4 +0.1
      baz=277
O41A  Passleys Farm,    26.70  84  P      P      22 31 22.3 -0.2
      baz=288
P41A  Barry, Barry      26.71  85  P      P      22 31 22.3 -0.2
      baz=289
Q41A  Truxton           26.83  87  P      P      22 31 23.5 -0.1
      baz=291
D41A  Chassel           26.90  68  P      P      22 31 24.5 +0.3
      baz=276
MIAR  Mount Ida         26.94  97 eP      P      22 31 25.6 +1.0
      comp=Z,139nm,2.0s
MIAR  Mount Ida         26.94  97 eP      P      22 31 25.6 +1.0
MIAR                               pmax   pmax
      comp=Z,139nm,2.0s
MIAR  Mount Ida         26.94  97  P      P      22 31 25.2 +0.5
      baz=299
R41A  Rosebud           26.95  88  P      P      22 31 24.7 -0.1
      baz=292
S41A  Jillco Farms,     26.96  90  P      P      22 31 24.7 -0.1
      baz=293
L42A  Oliver, Polo      27.04  80 eP      P      22 31 26.2 +0.8
      comp=Z,95nm,1.0s
L42A  Oliver, Polo      27.04  80  P      P      22 31 25.3 -0.2
      baz=285
K42A  Prairie Point,    27.08  78  P      P      22 31 25.8  0.0
      baz=284
N42A  Yates City        27.10  82  P      P      22 31 25.0 -1.0
      baz=287
J42A  Columbus          27.11  77  P      P      22 31 25.2 -0.9
      baz=283
M42A  Sheffield         27.12  81  P      P      22 31 25.9 -0.3
      baz=286
I42A  Draeger Farm,     27.14  75  P      P      22 31 25.7 -0.7
      baz=282
CCM   Cathedral Cave    27.14  89 eP      P      22 31 26.6 +0.1
      comp=Z,115nm,1.6s
CCM   Cathedral Cave    27.14  89 eP      P      22 31 26.6 +0.1
CCM                                pmax   pmax
      comp=Z,115nm,1.6s
CCM   Cathedral Cave    27.14  89  P      P      22 31 26.0 -0.5
      baz=292
T41A  Mountain View     27.16  91  P      P      22 31 26.9 +0.3
      baz=294
G42A  Mountain          27.23  72 eP      P      22 31 28.6 +1.3
      comp=Z,189nm,1.6s
G42A  Mountain          27.23  72  P      P      22 31 27.3 +0.1
      baz=280
O42A  Bath              27.26  84  P      P      22 31 27.3 -0.1
      baz=288
P42A  Winchester        27.26  85 eP      P      22 31 27.8 +0.3
      comp=Z,36nm,0.9s
P42A  Winchester        27.26  85  P      P      22 31 27.2 -0.3
      baz=290
COLD  Coldfoot          27.28 340 eP      P      22 31 27.3 -0.1
      comp=Z,16nm,1.4s
H42A  Shiocton          27.29  74  P      P      22 31 27.5 -0.2
      baz=281
U41A  Viola             27.33  93  P      P      22 31 28.1 -0.1
      baz=295
IM3   Indian Mountai    27.34 336 eP      P      22 31 28.3 +0.3
Q42A  Golden Eagle      27.35  87  P      P      22 31 28.1 -0.2
      baz=291
F42A  Maple Grove Fa    27.36  71  P      P      22 31 28.4 +0.1
      baz=279
R42A  Luebbering        27.39  88  P      P      22 31 28.5 -0.2
      baz=292
E42A  Champion          27.42  70  P      P      22 31 28.4 -0.5
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	baz=278					
X40A	Basin Creek Fa	27.50	97	*e*P	P	22 31 31.3 +1.6
	comp=Z,56nm,1.6s					
X40A	Basin Creek Fa	27.50	97	P	P	22 31 29.4 -0.3
	baz=299					
WHAR	Wooly Hollow	27.53	95	*e*P	P	22 31 31.0 +1.0
	comp=Z,89nm,1.4s					
S42A	Caledonia	27.58	89	P	P	22 31 29.1 -1.3
	baz=293					
NATX	Nacogdoches	27.59	104	*e*P	P	22 31 30.7 +0.2
	comp=Z,90nm,1.3s					
NATX	Nacogdoches	27.59	104	P	P	22 31 30.1 -0.4
	baz=304					
J43A	Natural Harves	27.60	76	P	P	22 31 29.5 -1.0
	baz=283					
W41B	Gary Mavity, V	27.61	95	*e*P	P	22 31 31.7 +1.0
	comp=Z,73nm,1.5s					
W41B	Gary Mavity, V	27.61	95	P	P	22 31 30.9 +0.3
	baz=297					
T42A	Van Buren	27.66	91	*e*P	P	22 31 31.4 +0.3
	comp=Z,60nm,1.6s					
T42A	Van Buren	27.66	91	P	P	22 31 30.8 -0.2
	baz=294					
L43A	Garden Prairie	27.66	79	P	P	22 31 30.7 -0.3
	baz=285					
I43A	Langenfeld Bro	27.68	75	P	P	22 31 31.1 -0.2
	baz=282					
N43A	Stutzman Famil	27.69	82	P	P	22 31 31.0 -0.3
	baz=287					
WLAR	White Oak Lake	27.69	99	*e*P	P	22 31 33.6 +2.3
	comp=Z,178nm,1.1s					
M43A	Waltham Townsh	27.70	81	P	P	22 31 31.3 -0.1
	baz=286					
HDIL	Hopedale	27.72	83	*e*P	P	22 31 31.8 +0.3
	comp=Z,64nm,1.0s					
HDIL	Hopedale	27.72	83	P	P	22 31 31.7 +0.1
	baz=288					
G43A	Wallace	27.75	72	P	P	22 31 31.5 -0.3
	baz=280					
FVM	French Village	27.77	88	*e*P	P	22 31 32.3 +0.2
	comp=Z,25nm,0.9s					
FVM	French Village	27.77	88	*e*P	P	22 31 32.3 +0.2
FVM				pmax	pmax	
	comp=Z,25nm,0.9s					
O43A	Sugar Creek Fa	27.79	83	P	P	22 31 32.4 +0.2
	baz=288					
HKT	Hockley	27.80	108	*e*P	P	22 31 34.8 +2.5
	comp=Z,78nm,1.8s					
HKT	Hockley	27.80	108	*e*P	P	22 31 34.8 +2.5
HKT				pmax	pmax	
	comp=Z,78nm,1.8s					
K43A	Burlington	27.82	78	P	P	22 31 32.4 -0.1
	baz=284					
U42A	Revenden	27.83	92	P	P	22 31 32.7 +0.1
	baz=295					
P43A	Skaggs, Pawnee	27.84	85	P	P	22 31 32.6 -0.1
	baz=290					
Q43A	New Douglas	27.95	86	P	P	22 31 33.4 -0.3
	baz=291					
F43A	Flat Rock, Esc	28.02	71	P	P	22 31 33.9 -0.3
	baz=279					
R43A	Red Bud	28.02	87	P	P	22 31 34.7 +0.4
	baz=292					
Z41A	Richland Creek	28.13	99	P	P	22 31 35.4 +0.1
	baz=301					
S43A	Fulton Ridge,	28.18	89	P	P	22 31 35.5 -0.3
	baz=293					
UNV	Unalaska Valle	28.19	306	*e*P	P	22 31 36.7 +1.1
	comp=Z,89nm,1.1s					
PBMO	Poplar Bluff	28.24	91	*e*P	P	22 31 37.1 +0.8
	comp=Z,96nm,1.7s					
TOLK	Toolik Lake Re	28.24	342	*e*P	P	22 31 37.7 +1.6
	comp=Z,25nm,1.2s					
TOLK	Toolik Lake Re	28.24	342	P	P	22 31 36.4 +0.3
	baz=143					
L44A	Lake County Fo	28.25	79	P	P	22 31 35.8 -0.5
	baz=285					
M44A	Midewin, Midew	28.38	80	P	P	22 31 37.2 -0.2
	baz=287					
U43A	Rector	28.43	91	P	P	22 31 37.8 -0.2
	baz=295					
O44A	Mansfield	28.44	83	P	P	22 31 38.0 0.0
	baz=289					
Q44A	Meyer Farm, Va	28.46	86	*e*P	P	22 31 42.2 +3.9
	comp=Z,104nm,1.6s					
Q44A	Meyer Farm, Va	28.46	86	P	P	22 31 38.0 -0.3
	baz=291					
N44A	Piper City	28.48	81	P	P	22 31 38.1 -0.3
	baz=288					
P44A	Sand Creek, Wi	28.56	84	P	P	22 31 39.3 +0.2
	baz=290					
R44A	Waltonville	28.65	87	P	P	22 31 40.2 +0.2
	baz=292					
LNIG	Linares	28.71	121	*e*P	P	22 31 41.2 +0.6
	comp=Z,21nm,1.2s					
S44A	Carbondale	28.74	88	P	P	22 31 40.8 +0.1
	baz=293					
SIUC	Southern Illin	28.76	88	*e*P	P	22 31 41.3 +0.5
	comp=Z,32nm,0.9s					
N45A	Kentland	28.92	81	P	P	22 31 42.5 +0.2
	baz=288					
Q45A	Warren Harvey,	29.09	85	P	P	22 31 44.0 +0.1
	baz=291					
P45A	Graceland, Par	29.17	84	*e*P	P	22 31 45.1 +0.6
	comp=Z,30nm,0.8s					
P45A	Graceland, Par	29.17	84	P	P	22 31 44.7 +0.1
	baz=290					
F45A	CMU Biological	29.18	71	P	P	22 31 44.4 -0.2
	baz=280					
OLIL	Olney	29.19	85	*e*P	P	22 31 45.8 +1.1
	comp=Z,100nm,1.6s					
G45A	Suttons Bay	29.20	72	P	P	22 31 45.0 +0.3
	baz=281					
R45A	Skylar, Fairfi	29.22	86	P	P	22 31 45.0 +0.1
	baz=292					
E45A	Wooded Hills,	29.30	69	P	P	22 31 45.6 0.0
	baz=279					
SFIN	Lafayette	29.36	82	*e*P	P	22 31 47.1 +0.8
	comp=Z,28nm,0.9s					
SFIN	Lafayette	29.36	82	P	P	22 31 46.2 0.0
	baz=289					
N46A	Monticello	29.46	81	P	P	22 31 47.5 +0.4
	baz=288					
P46A	Rosedale	29.53	83	P	P	22 31 48.0 +0.3
	baz=290					
J46A	Howard City	29.57	75	P	P	22 31 48.5 +0.5
	baz=284					
I46A	Reed City	29.58	74	P	P	22 31 47.9 -0.2
	baz=283					
Q46A	CEJHS Indians,	29.63	85	P	P	22 31 48.8 +0.2
	baz=291					
F46A	Macinaw City C	29.69	70	P	P	22 31 49.2 +0.1
	baz=280					
USIN	University of	29.79	87	*e*P	P	22 31 50.5 +0.5
	comp=Z,67nm,1.0s					
R46A	Gibon Southern	29.81	86	P	P	22 31 50.6 +0.3
	baz=292					
W45A	Hickory Valley	29.85	93	P	P	22 31 50.6 0.0
	baz=297					
S46A	Don Dixon Farm	29.87	87	P	P	22 31 50.8 +0.1
	baz=293					
E46A	Sault Ste Mari	29.90	69	P	P	22 31 51.0 +0.1
	baz=280					
OXF	Oxford	29.98	94	*e*P	P	22 31 51.7 -0.1
	comp=Z,112nm,1.3s					
OXF	Oxford	29.98	94	*e*P	P	22 31 51.7 -0.1
OXF				pmax	pmax	
	comp=Z,112nm,1.3s					
OXF	Oxford	29.98	94	P	P	22 31 52.1 +0.3
	baz=298					
D46A	Sault St. Mari	30.00	68	P	P	22 31 52.2 +0.4
	baz=279					
O47A	Sheridan	30.08	82	P	P	22 31 52.9 +0.3
	baz=289					
BLO	Bloomington	30.18	84	*e*P	P	22 31 54.2 +0.7
	comp=Z,36nm,0.7s					
BLO	Bloomington	30.18	84	*e*P	P	22 31 54.2 +0.7
BLO				pmax	pmax	
	comp=Z,36nm,0.7s					
J47A	Sunmer	30.18	75	P	P	22 31 53.2 -0.3
	baz=285					
I47A	Gladwin	30.22	74	P	P	22 31 54.1 +0.3
	baz=283					
N47A	Urbana	30.22	80	P	P	22 31 54.1 +0.3
	baz=288					
P47A	Martinsville	30.26	83	P	P	22 31 54.4 +0.2
	baz=290					
H47A	Mio	30.30	72	P	P	22 31 54.4 -0.1
	baz=283					
Q47A	Bedord North L	30.34	84	P	P	22 31 55.0 +0.2
	baz=291					
V46A	Holladay	30.35	91	P	P	22 31 55.3 +0.3
	baz=296					
WVT	Waverly	30.42	90	*e*P	P	22 31 56.1 +0.5
	comp=Z,30nm,0.9s					
WVT	Waverly	30.42	90	*e*P	P	22 31 56.1 +0.5
WVT				pmax	pmax	
	comp=Z,30nm,0.9s					
WVT	Waverly	30.42	90	P	P	22 31 55.8 +0.2
	baz=296					
R47A	Wooly Knot Far	30.50	85	P	P	22 31 56.6 +0.3
	baz=292					
S47A	Hartford	30.51	87	P	P	22 31 56.4 0.0
	baz=293					
X46A	Booneville	30.57	93	P	P	22 31 57.0 0.0
	baz=298					
ANM	Nome	30.58	328	*e*P	P	22 31 59.1 +2.4
	comp=Z,23nm,1.6s					
ANM	Nome	30.58	328	*e*P	P	22 31 59.1 +2.4
ANM				pmax	pmax	
	comp=Z,23nm,1.6s					
E47A	Iron Bridge	30.59	69	P	P	22 31 57.4 +0.5
	baz=280					
T47A	Sharon Grove	30.59	88	*e*P	P	22 31 57.7 +0.6
T47A	Sharon Grove	30.59	88	P	P	22 31 57.1 0.0
	baz=294					
WCI	Wyandotte Cave	30.70	85	*e*P	P	22 32 02.0 +4.0
	comp=Z,17nm,0.7s					
WCI	Wyandotte Cave	30.70	85	*e*P	P	22 32 02.0 +4.0
WCI				pmax	pmax	
	comp=Z,17nm,0.7s					
WCI	Wyandotte Cave	30.70	85	P	P	22 31 57.7 -0.4
	baz=292					
N48A	Decatur	30.71	80	P	P	22 31 57.4 -0.7
	baz=288					
M48A	Edgerton	30.74	79	P	P	22 31 58.0 -0.4
	baz=288					
PLAL	Pickwick Lake	30.74	92	*e*P	P	22 31 59.1 +0.7
	comp=Z,24nm,0.9s					
K48A	Perry	30.79	76	P	P	22 31 59.2 +0.3
	baz=286					
L48A	N Adams	30.81	78	P	P	22 31 58.9 -0.1
	baz=287					
O48A	Farmland	30.81	81	P	P	22 31 58.4 -0.6
	baz=289					
Q48A	North Vernon	30.85	84	P	P	22 31 59.2 -0.2
	baz=291					
P48A	Milroy	30.88	83	P	P	22 31 58.9 -0.8
	baz=291					
W47A	Westpoint	30.97	92	P	P	22 32 00.5 0.0
	baz=297					
T48A	Bowling Green	31.06	87	P	P	22 32 01.6 +0.3
	baz=294					
S48A	Wiedeman Farm,	31.09	86	P	P	22 32 01.5 0.0
	baz=293					
F48A	Evansville	31.15	70	P	P	22 32 02.0 +0.1
	baz=281					
L49A	Milan	31.24	77	P	P	22 32 03.0 +0.2
	baz=287					
K49A	Clarkson	31.27	76	P	P	22 32 03.3 +0.3
	baz=286					
M49A	Liberty Center	31.27	78	P	P	22 32 03.1 0.0
	baz=288					
N49A	Columbus Grove	31.30	79	*e*P	P	22 32 03.8 +0.5
	comp=Z,38nm,1.2s					
N49A	Columbus Grove	31.30	79	P	P	22 32 03.3 0.0
	baz=289					
V48A	Smith Brothers	31.32	90	*e*P	P	22 32 04.2 +0.6
	comp=Z,97nm,0.6s					
V48A	Smith Brothers	31.32	90	P	P	22 32 04.0 +0.4
	baz=296					
E48A	Lockeyer	31.34	68	P	P	22 32 03.7 +0.1
	baz=280					
P49A	Miami Univ. Ec	31.37	82	P	P	22 32 03.6 -0.4
	baz=291					
RDOG	Red Dog Mine	31.45	335	*e*P	P	22 32 05.9 +1.5
D48A	Paudash Townsh	31.46	67	P	P	22 32 05.1 +0.4
	baz=280					
U49A	Red Boiling Sp	31.75	88	P	P	22 32 07.7 +0.3
	baz=295					
L50A	Kingsville	31.94	77	P	P	22 32 09.0 +0.1
	baz=287					
O50A	Cable	31.95	81	P	P	22 32 09.4 +0.2
	baz=290					
M50A	Fremont	31.96	78	P	P	22 32 08.8 -0.4
	baz=288					
V49A	McMinnville	31.98	89	P	P	22 32 08.8 -0.6
	baz=296					
W49A	Belvidere	32.01	91	P	P	22 32 08.9 -0.7
	baz=297					
P50A	Jamestown	32.01	82	P	P	22 32 09.4 -0.2
	baz=291					
N50A	Nevada	32.09	79	P	P	22 32 09.9 -0.4
	baz=289					
R50A	Paris	32.11	84	P	P	22 32 10.2 -0.3
	baz=292					
SWET	Sewanee	32.20	90	*e*P	P	22 32 12.3 +0.8
	comp=Z,36nm,0.7s					
X49A	Woodville	32.24	92	P	P	22 32 12.1 +0.5
	baz=298					
S50A	Richmond	32.29	85	P	P	22 32 12.4 +0.3
	baz=293					
E50A	Wahnapitae	32.32	68	P	P	22 32 12.0 -0.2
	baz=281					
ACSO	Alum Creek Sta	32.38	80	*e*P	P	22 32 13.4 +0.5
	comp=Z,20nm,0.8s					
ACSO	Alum Creek Sta	32.38	80	P	P	22 32 12.6 -0.3
	baz=290					
Y49A	Blount Mountai	32.48	93	P	P	22 32 13.8 0.0
	baz=299					
BWLO	Walkerton	32.55	72	P	P	22 32 13.2 -1.1
	baz=285					
P51A	Williamsport	32.59	81	*e*P	P	22 32 15.1 +0.4
	comp=Z,22nm,0.6s					
P51A	Williamsport	32.59	81	P	P	22 32 14.2 -0.4
	baz=291					
N51A	Ashland	32.59	79	P	P	22 32 14.8 +0.1
	baz=289					
M51A	Elyria	32.60	78	P	P	22 32 14.9 +0.2
	baz=288					
V50A	Pikevile	32.61	89	P	P	22 32 15.3 +0.4
	baz=296					
R51A	Hillsboro	32.64	84	P	P	22 32 14.7 -0.4
	baz=293					
W50A	Signal Mountai	32.67	90	*e*P	P	22 32 16.1 +0.7
W50A	Signal Mountai	32.67	90	P	P	22 32 15.9 +0.5
	baz=297					
ELFO	Elginfield	32.67	74	P	P	22 32 14.7 -0.6
	baz=286					
O51A	Pataskala	32.69	80	P	P	22 32 16.0 +0.4
	baz=290					
I51A	Listowel	32.71	73	P	P	22 32 16.3 +0.5
	baz=285					
X50B	Fort Payne	32.76	91	P	P	22 32 16.4 +0.1
	baz=298					
149A	Jones	32.82	95	P	P	22 32 16.8 0.0
	baz=301					
GAMB	Gambell	32.87	325	*e*P	P	22 32 17.5 +0.7
KLBO	Killbear Provi	32.90	70	P	P	22 32 17.8 +0.5
	baz=283					
249A	Camden	32.90	97	P	P	22 32 17.5 +0.1
	baz=301					
T51A	Gray	32.91	86	P	P	22 32 17.5 0.0
	baz=294					
Y50A	Piedmont	32.96	92	P	P	22 32 18.3 +0.3
	baz=299					
F51A	Arnstein	32.98	69	P	P	22 32 18.4 +0.4
	baz=282					
W51A	Cleveland	33.09	90	P	P	22 32 19.5 +0.4
	baz=297					
U51A	La Follette	33.10	87	P	P	22 32 19.7 +0.5
	baz=295					
D51A	Lot 18 Range I	33.11	67	P	P	22 32 19.5 +0.3
	baz=281					
N52A	McGinn's Farm,	33.12	78	P	P	22 32 19.2 -0.1
	baz=289					
M52A	Chesterland	33.12	77	P	P	22 32 19.3 0.0
	baz=288					
Z50A	Ashland	33.13	94	*e*P	P	22 32 18.4 -1.1
	comp=Z,21nm,1.0s					
Z50A	Ashland	33.13	94	P	P	22 32 19.6 +0.1
	baz=300					
CPCT	Cooper Cave	33.13	89	*e*P	P	22 32 20.8 +1.3
	comp=Z,44nm,1.4s					
E51A	G1948 Merrick	33.14	68	P	P	22 32 19.5 +0.1
	baz=282					
349A	Repton	33.18	98	P	P	22 32 20.4 +0.5
	baz=302					
K52A	Tillsonburg	33.21	75	P	P	22 32 20.4 +0.3
	baz=287					
X51A	Calhoun	33.29	91	*e*P	P	22 32 22.0 +1.2
X51A	Calhoun	33.29	91	P	P	22 32 21.2 +0.4
	baz=298					
R52A	Catlettsburg	33.31	83	P	P	22 32 21.0 0.0
	baz=293					
Q52A	Bidwell	33.35	82	P	P	22 32 20.9 -0.5
	baz=292					
TZTN	Tazewell	33.37	87	P	P	22 32 21.3 -0.2
	baz=295					
150A	Eclectic	33.38	95	P	P	22 32 21.8 +0.1
	baz=300					
F52A	Sundridge	33.41	69	P	P	22 32 21.7 -0.1
	baz=283					
Y51A	Rockmart	33.45	92	P	P	22 32 22.5 +0.2
	baz=299					
250A	Grady	33.52	96	*e*P	P	22 32 24.6 +1.7
250A	Grady	33.52	96	P	P	22 32 22.1 -0.8
	baz=301					
U52A	Thorn Hill	33.57	87	P	P	22 32 22.7 -0.6
	baz=295					
V52A	Sevierville	33.64	88	P	P	22 32 24.1 +0.2
	baz=296					
M53A	WI Miller and	33.64	77	P	P	22 32 23.3 -0.6
	baz=289					
Z51A	Franklin	33.65	93	P	P	22 32 24.3 +0.3
	baz=299					
O53A	New Philadelph	33.65	79	P	P	22 32 23.6 -0.4
	baz=290					
W52A	Murphy	33.73	89	*e*P	P	22 32 30.1 +5.4
W52A	Murphy	33.73	89	P	P	22 32 24.8 +0.1
	baz=297					
N53A	Lisbon	33.73	78	P	P	22 32 24.6 -0.1
	baz=290					
E52A	Mattawa	33.76	68	P	P	22 32 24.8 0.0
	baz=282					
L53A	Girard	33.78	76	P	P	22 32 24.5 -0.5
	baz=288					
D52A	ZEK Kipawa Sen	33.78	67	P	P	22 32 24.8 -0.2
	baz=282					
T53A	Wise	33.93	85	P	P	22 32 26.6 +0.1
	baz=295					
ALLY	Alegheny Colle	33.95	76	*e*P	P	22 32 27.6 +1.0
	comp=Z,105nm,1.5s					
G53A	Haliburton	34.05	70	P	P	22 32 27.3 -0.1
	baz=284					
U53A	Fall Branch	34.16	86	P	P	22 32 28.8 +0.3
	baz=295					
Y52A	Lilburn	34.20	91	*e*P	P	22 32 29.6 +0.9
Y52A	Lilburn	34.20	91	P	P	22 32 28.9 +0.1
	baz=299					
W53A	Cullowhee	34.25	89	P	P	22 32 29.5 +0.2
	baz=297					
Z52A	Williamson	34.26	93	P	P	22 32 29.5 +0.1
	baz=300					
O54A	Avella	34.27	79	P	P	22 32 29.3 -0.1
	baz=291					
V53A	Saluda	34.29	88	P	P	22 32 29.5 -0.1
	baz=296					
N54A	Moraine State	34.29	77	*e*P	P	22 32 30.3 +0.8
N54A	Moraine State	34.29	77	P	P	22 32 29.3 -0.2
	baz=290					
152A	Waverly Hall	34.30	94	P	P	22 32 29.8 +0.2
	baz=300					
M54A	Oil Creek Stat	34.34	76	P	P	22 32 29.6 -0.3
	baz=289					
LSQQ	Lebel-sur-Quev	34.35	63	P	P	22 32 29.5 -0.5
	baz=279					
Q54A	Coxs Mills	34.38	81	P	P	22 32 30.5 +0.3
	baz=292					
P54A	Burton	34.41	80	P	P	22 32 30.2 -0.3
	baz=291					
X53A	Estanollee	34.45	90	P	P	22 32 31.6 +0.6
	baz=298					
BG3	Lake Jocassee	34.50	89	*e*P	P	22 32 32.9 +1.5
	comp=Z,78nm,1.8s					
Y53A	Monroe	34.55	91	P	P	22 32 32.5 +0.7
	baz=299					
T54A	Tazewell	34.60	85	P	P	22 32 33.0 +0.7
	baz=295					
252A	Lumpkin	34.63	95	P	P	22 32 33.1 +0.6
	baz=301					
RES	Resolute Bay	34.65	14	P	P	22 32 30.2 -1.9
	comp=Z,3.3nm,0.7s,baz=206,slow=13,SNR=5.5					
RES				LR	LR	22 46 04.5
	comp=Z,484nm,19.9s,baz=238,slow=35					
E54A	Lac Daplat, Po	34.72	67	P	P	22 32 33.4 +0.2
	baz=283					
Z53A	Monticello	34.84	92	P	P	22 32 34.4 +0.1
	baz=299					
MCWV	Mont Chateau	34.84	79	P	P	22 32 34.7 +0.4
	baz=291					
GOGA	Godfrey	34.85	92	*e*P	P	22 32 34.6 +0.2
	comp=Z,15nm,0.9s					
GOGA	Godfrey	34.85	92	*e*P	P	22 32 34.6 +0.2
GOGA				pmax	pmax	
	comp=Z,15nm,0.9s					
GOGA	Godfrey	34.85	92	P	P	22 32 34.5 +0.1
	baz=299					
PEMO	Pembroke	34.85	68	P	P	22 32 34.4 +0.1
	baz=284					
V54A	Nebo	34.87	87	P	P	22 32 34.8 +0.2
	baz=296					
DELO	Deloro Mine	34.89	71	P	P	22 32 34.5 -0.1
	baz=286					
P55A	Reedsville	34.91	80	P	P	22 32 34.9 0.0
	baz=292					
D54A	Lac Fusel, La	34.92	66	P	P	22 32 34.8 -0.1
	baz=282					
Q55A	Buckhannon	34.92	81	P	P	22 32 35.0 -0.1
	baz=292					
M55A	Ridgway	34.99	76	P	P	22 32 35.9 +0.3
	baz=289					
L55A	Hinsdale	35.00	75	P	P	22 32 35.8 +0.2
	baz=288					
W54A	Cherokee Point	35.00	88	P	P	22 32 35.9 +0.2
	baz=297					
O55A	Ligonier	35.04	78	P	P	22 32 36.4 +0.4
	baz=291					
253A	Americus	35.04	94	P	P	22 32 35.5 -0.5
	baz=301					
N55A	Marion Center	35.06	77	P	P	22 32 36.5 +0.3
	baz=290					
S55A	Lewisburg	35.09	83	P	P	22 32 37.0 +0.5
	baz=294					
X54A	Belton	35.11	89	P	P	22 32 37.0 +0.3
	baz=298					
R55A	Marlinton	35.16	82	P	P	22 32 37.3 +0.2
	baz=293					
H55A	Tweed	35.18	70	P	P	22 32 37.2 +0.1
	baz=286					
Y54A	Tignall	35.20	90	P	P	22 32 37.6 +0.2
	baz=299					
U55A	TA2, Sparta	35.22	85	P	P	22 32 37.9 +0.2
	baz=295					
353A	Camilla	35.34	95	P	P	22 32 39.1 +0.5
	baz=302					
V55A	Taylorsville	35.37	86	P	P	22 32 39.3 +0.4
	baz=296					
Z54A	Sparta	35.39	91	P	P	22 32 39.5 +0.4
	baz=299					
PAULI	Pauline	35.40	88	*e*P	P	22 32 40.3 +1.2
F55A	Otter Lake	35.42	68	P	P	22 32 38.7 -0.5
	baz=284					
O56A	Blue Knob Stat	35.54	78	*e*P	P	22 32 41.6 +1.3
O56A	Blue Knob Stat	35.54	78	P	P	22 32 40.2 -0.2
	baz=291					
KMSC	Kings Mountain	35.60	87	P	P	22 32 40.8 -0.1
	baz=297					
X55A	Gracelyn & Ava	35.69	89	P	P	22 32 41.7 +0.1
	baz=298					
254A	Abbeville	35.71	94	P	P	22 32 42.5 +0.7
	baz=301					
Y55A	Saluda	35.77	90	P	P	22 32 42.2 -0.2
	baz=299					
H56A	Elgin	35.81	70	P	P	22 32 43.0 +0.5
	baz=286					
SSPA	Standing Stone	35.90	77	P	P	22 32 43.9 +0.5
	baz=291					
155A	Kite	35.97	92	P	P	22 32 44.5 +0.4
	baz=300					
JSC	Jenkinsville	36.05	89	*e*P	P	22 32 49.7 +5.0
JSC	Jenkinsville	36.05	89	*e*P	P	22 32 49.7 +5.0
ORIO	Orleans, Innes	36.09	68	P	P	22 32 45.5 +0.5
	baz=285					

454A	**Quitman**	**36.10**	**96**	P	**P**	**22 32 46.1**	**+1.0**
	baz=302						
X56A	**White Oak**	**36.12**	**88**	P	**P**	**22 32 45.4**	**+0.1**
	baz=298						
355A	**Pearson**	**36.34**	**94**	P	**P**	**22 32 47.6**	**+0.5**
	baz=302						
ALFO	**Alfred**	**36.47**	**68**	P	**P**	**22 32 48.2**	**+0.1**
	baz=285						
455A	**Stateville**	**36.53**	**95**	P	**P**	**22 32 49.6**	**+0.8**
	baz=302						
256A	**Glennville**	**36.72**	**93**	P	**P**	**22 32 49.7**	**-0.7**
	baz=301						
LONY	**Lake Ozonia**	**36.95**	**69**	P	**P**	**22 32 52.8**	**+0.5**
	baz=287						
N59A	**State Game Lan**	**37.30**	**76**	P	**P**	**22 32 55.5**	**+0.1**
	baz=291						
LATQ	**La Tuque**	**37.44**	**64**	P	**P**	**22 32 56.6**	**+0.3**
	baz=284						
PAL	**Palisades**	**38.59**	**75**	P	**P**	**22 33 06.2**	**0.0**
	baz=291						
LBNH	**Lisbon**	**38.88**	**69**	P	**P**	**22 33 09.0**	**+0.4**
	baz=288						
SCHQ	**Schefferville**	**39.69**	**51**	P	**P**	**22 33 14.0**	**-1.2**
	comp=Z,6.3nm,1.2s,baz=0.0,slow=14,SNR=2.3						
SCHQ				LR	LR	22 49 49.1	
	comp=Z,2µm,19.0s,baz=286,slow=36						
BILL	**Bilibino**	**42.41**	**329**	*e*P	**P**	**22 33 36.7**	**-0.7**
	comp=Z,10nm,1.3s						
BILL	**Bilibino**	**42.41**	**329**	*e*P	**P**	**22 33 36.6**	**-0.8**
BILL				*e*		22 33 41.8	
BILL				*e*		22 35 22.1	
BILL				pmax	pmax		
	comp=Z,21nm,2.5s						
BILL				MLR	MLR		
	comp=Z,931nm,16.0s						
PET	**Petropavlovsk**	**48.77**	**309**	*e*P	**P**	**22 34 25.8**	**-2.1**
PET				*e*S	**S**	**22 41 24.9**	**-4.6**
PET				pmax	pmax		
	comp=Z,53nm,2.3s						
SEY	**Seymchan**	**48.85**	**323**⇑	*e*P	**P**	**22 34 27.7**	**-0.6**
SEY	**Seymchan**	**48.85**	**323**	P	**P**	**22 34 27.4**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=356,slow=14,SNR=7.8						
SUMG	**Summit**	**48.90**	**24**	*i* P	**P**	**22 34 30.6**	**+1.5**
	comp=Z,51nm,0.9s						
SUMG	**Summit**	**48.90**	**24**	*e*P	**P**	**22 34 30.6**	**+1.5**
SUMG				pmax	pmax		
	comp=Z,51nm,0.9s						
PETK	**Petropavlovsk-**	**49.28**	**310**	P	**P**	**22 34 30.7**	**-1.1**
	comp=Z,4.4nm,0.6s,baz=89,slow=9.5,SNR=7.6						
PETK				LR	LR	22 51 43.7	
	comp=Z,164nm,21.7s,baz=74,slow=32						
MA2	**Magadan**	**50.64**	**319**⇑	*e*P	**P**	**22 34 41.8**	**-0.3**
MA2				pmax	pmax		
	comp=Z,13nm,1.7s						
MA2	**Magadan**	**50.64**	**319**	P	**P**	**22 34 41.4**	**-0.7**
	comp=Z,2.6nm,0.3s,baz=83,slow=11,SNR=4.6						
DAG	**Danmarks Havn**	**52.30**	**16**	*i* P	**P**	**22 34 53.6**	**-0.6**
	comp=Z,7.4nm,0.9s						
DAG	**Danmarks Havn**	**52.30**	**16**	*e*P	**P**	**22 34 53.6**	**-0.6**
DAG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TAOE	**Nuku Hiva Isla**	**53.24**	**197**	*e*T	T	23 31 58.0	
	comp=Z,69nm,0.3s						
NKL	**Nikolayevsk**	**58.48**	**315**	*e*P	P	22 35 33.3	-5.7
ROSC	**El Rosal**	**59.75**	**114**	P	**P**	**22 35 46.4**	**-2.4**
	comp=Z,3.0nm,0.4s,baz=143,slow=20,SNR=1.8						
ROSC				LR	LR	23 06 02.5	
	comp=Z,112nm,18.0s,baz=20,slow=41						
H11N3	**WAKE ISLAND Hy**	**59.81**	**269**	T	T	23 40 20.5	
	baz=51,slow=75,SNR=793						
H11N2	**WAKE ISLAND Hy**	**59.81**	**269**	T	T	23 40 19.7	
	baz=51,slow=75,SNR=693						
H11N1	**WAKE ISLAND Hy**	**59.82**	**269**	T	T	23 40 21.9	
	baz=51,slow=75,SNR=1073						
OTAV	**Otavalo**	**60.56**	**121**	*e*P	**P**	**22 35 54.5**	**+0.1**
	comp=Z,16nm,1.2s						
OTAV	**Otavalo**	**60.56**	**121**	*e*P	**P**	**22 35 54.5**	**+0.1**
OTAV				pmax	pmax		
	comp=Z,16nm,1.2s						
YSS	**Yuzh-Sakhalins**	**60.63**	**308**⇓	*e*P	**P**	**22 35 52.8**	**-1.1**
YSS				*e*		22 36 02.8	
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
H11S1	**WAKE ISLAND Hy**	**60.72**	**268**	T	T	23 41 26.2	
	baz=51,slow=76,SNR=4293						
H11S2	**WAKE ISLAND Hy**	**60.73**	**268**	T	T	23 41 27.2	
	baz=51,slow=76,SNR=3013						
H11S3	**WAKE ISLAND Hy**	**60.74**	**268**	T	T	23 41 30.2	
	baz=51,slow=76,SNR=2627						
PMOR	**Pomariorio Ree**	**61.11**	**204**	*e*T	T	23 41 51.1	
	comp=E,22nm,0.3s						
VAH	**Vaihoa**	**61.25**	**203**	*e*T	T	23 42 02.2	
	comp=E,11nm,0.3s						
ERM	**Erimo**	**63.15**	**303**⇑	*e*P	**P**	**22 36 12.1**	**+1.1**
ERM				pmax	pmax		
	comp=Z,23nm,1.2s						
TIAR	**Tiarei**	**63.96**	**204**	*e*T	T	23 45 25.0	
	comp=Z,16nm,0.3s						
PPT2	**Papeete2**	**64.06**	**205**	*e*LQ	LQ	22 52 08.2	
	comp=Z,2µm,30.0s						
PPT2				*e*LR	LR	22 54 57.3	
	comp=Z,134nm,21.0s						
ZEA	**Zeya**	**64.72**	**321**	*e*P	P	22 36 37.0	+16
ZEA				*e*		22 45 07.0	
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=E,400nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
NRIK	**Noril'sk**	**65.02**	**347**	P	**P**	**22 36 21.2**	**-1.6**
	comp=Z,3.3nm,0.8s,baz=10,slow=4.2,SNR=6.0						
NRIK				LR	LR	23 06 21.7	
	comp=Z,213nm,19.3s,baz=44,slow=38						
KLR	**Kul'dur**	**65.33**	**315**⇑	*i*P	**P**	**22 36 25.6**	**+0.4**
KLR	**Kul'dur**	**65.33**	**315**	P	**P**	**22 36 24.0**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=39,slow=7.1,SNR=4.1						
RKT	**Rikitea**	**66.41**	**188**	*e*LQ	LQ	22 53 03.9	
	comp=Z,775nm,30.8s						
RKT				*e*LR	LR	22 55 56.3	
	comp=Z,571nm,28.5s						
RKT	**Rikitea**	**66.41**	**188**	*e*T	T	23 48 20.6	
	comp=Z,5.4nm,0.3s						
BOD	**Bodaibo**	**67.46**	**330**	*e*P	**P**	**22 36 36.6**	**-2.1**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.6s						
USRK	**Ussuriysk Ar.**	**68.35**	**311**	P	**P**	**22 36 43.6**	**-0.8**
	comp=Z,5.1nm,0.9s,baz=47,slow=5.2,SNR=7.6						
USRK				LR	LR	23 05 56.3	
	comp=Z,163nm,19.4s,baz=32,slow=35						
MDJ	**Mudanjiang**	**69.40**	**312**	P	**P**	**22 36 52.5**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.9s						
TBI	**Tubuai**	**69.47**	**202**	*e*LQ	LQ	22 54 29.0	
	comp=Z,572nm,28.8s						
MJAR	**Matsushiro Arr**	**69.50**	**301**	P	**P**	**22 36 50.6**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=38,slow=4.5,SNR=3.7						
MAJO	**Matsushiro**	**69.50**	**301**⇓	*e*P	**P**	**22 36 52.9**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NB2	**NORSAR Subarra**	**70.62**	**20**	P	**P**	**22 36 59.9**	**+1.6**
	comp=Z,14nm,1.4s,baz=328,slow=6.2						
NOA	**NORSAR Array B**	**70.62**	**20**	P	**P**	**22 36 56.4**	**-1.9**
	comp=Z,2.9nm,1.0s,baz=329,slow=6.1,SNR=4.8						
NOA				LR	LR	23 07 13.5	
	comp=Z,241nm,19.0s,baz=330,slow=35						
HIA	**Hailar**	**71.20**	**321**⇑	*i*P	**P**	**22 37 01.8**	**-0.2**
HIA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CN2	**Changchun**	**72.16**	**314**	*e*P	**P**	**22 37 07.8**	**0.0**
CN2				*e*S	**S**	**22 46 28.0**	**-1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,20nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
FINES	**FINESS Array B**	**73.40**	**13**	P	**P**	**22 37 14.3**	**-0.6**
	comp=Z,5.4nm,0.9s,baz=316,slow=5.3,SNR=7.6						
FINES				LR	LR	23 10 05.1	
	comp=Z,542nm,19.9s,baz=342,slow=36						
KSRS	**Korea Array**	**75.12**	**308**	P	**P**	**22 37 24.3**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=69,slow=8.5,SNR=6.2						
KSAR	**Wonju Array Be**	**75.15**	**308**	P	**P**	**22 37 24.3**	**-1.2**
KSAR	**Wonju Array Be**	**75.15**	**308**	P	**P**	**22 37 24.3**	**-1.2**
KLMR	**Klimovskoe**	**75.71**	**7**	*e*P	**P**	**22 37 29.3**	**+1.0**
KLMR				pmax	pmax		
	comp=Z,39nm,1.5s						
KLMR	**Klimovskoe**	**75.71**	**7**	*e*P	**P**	**22 37 29.4**	**+1.1**
KLMR				AMP		22 37 36.3	
	comp=Z,39nm,1.4s						
TLY	**Talaya**	**76.01**	**330**	*e*P	**P**	**22 37 30.6**	**+0.4**
	comp=Z,20nm,1.2s						
TLY	**Talaya**	**76.01**	**330**	*e*P	**P**	**22 37 30.2**	**0.0**
TLY				*e*S	**S**	**22 47 07.5**	**-4.6**
TLY				pmax	pmax		
	comp=Z,22nm,1.3s						
TLY				MLR	MLR		
	comp=Z,803nm,17.0s						
MOY	**Mondy**	**76.96**	**332**	*e*P	**P**	**22 37 33.8**	**-1.9**
MOY				pmax	pmax		
	comp=Z,19nm,2.3s						
ZAK	**Zakamensk**	**77.21**	**330**	*e*P	**P**	**22 37 33.8**	**-3.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ULN	**Ulaanbaatar**	**77.79**	**326**	*e*P	**P**	**22 37 38.8**	**-1.7**
	comp=Z,4.1nm,1.1s						
ULN	**Ulaanbaatar**	**77.79**	**326**⇓	*i*P	**P**	**22 37 40.6**	**+0.1**
ULN				pmax	pmax		
	comp=Z,11nm,2.5s						
SONM	**Songino Array**	**78.08**	**327**	P	**P**	**22 37 41.1**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=54,slow=2.6,SNR=8.9						
SONM				LR	LR	23 11 54.8	
	comp=Z,370nm,21.0s,baz=18,slow=36						
NVS	**Novosibirsk**	**79.12**	**343**	*e*P	**P**	**22 37 46.6**	**-0.9**
NVS				pmax	pmax		
	comp=N,13nm,1.4s						
NVS				pmax	pmax		
	comp=Z,35nm,1.4s						
NVS				pmax	pmax		
	comp=E,14nm,1.3s						
CLL	**Collm**	**79.56**	**24**	*e*P	**P**	**22 37 52.0**	**+2.1**
	comp=Z,11nm,1.3s						
CLL				*i* PcP	**PcP**	**22 38 00.3**	**+2.5**
CLL				*e*		22 38 08.0	
CLL				*e*S	**S**	**22 47 54.0**	**+3.6**
CLL				*e*SS	**SS**	**22 52 54.0**	**-3.0**
CLL				*e*		22 57 36.0	
CLL				*e*SSSS		22 58 30.0	
CLL	**Collm**	**79.56**	**24**	*e*P	**P**	**22 37 52.0**	**+2.1**
CLL				*i*		22 38 00.3	
CLL				*e*S	**S**	**22 47 47.0**	**-3.4**
CLL				pmax	pmax		
	comp=Z,11nm,1.3s						
ZALV	**Zalesovo Beam**	**79.60**	**342**	*i* P	**P**	**22 37 49.4**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**79.60**	**342**	P	**P**	**22 37 48.7**	**-1.4**
	comp=Z,1.0nm,0.4s,baz=24,slow=5.9,SNR=6.6						
ZALV				LR	LR	23 15 16.6	
	comp=Z,140nm,20.0s,baz=66,slow=37						
LPAZ	**La Paz**	**79.74**	**124**	P	**P**	**22 37 49.2**	**-2.9**
	comp=Z,3.8nm,0.8s,baz=330,slow=3.7,SNR=12						
SVE	**Sverdlovsk**	**80.19**	**356**	*e*P	P	22 37 59.2	+6.0
SVE				pmax	pmax		
	comp=Z,29nm,1.4s						
BRG	**Berggiesshubel**	**80.23**	**24**	*e*P	**P**	**22 37 54.5**	**+1.0**
	comp=Z,13nm,1.4s comp=N,333nm,17.9s comp=E,322nm,19.5s comp=Z,525nm,16.8s						
BRG	**Berggiesshubel**	**80.23**	**24**	*e*P	**P**	**22 37 54.5**	**+1.0**
BRG				pmax	pmax		
	comp=Z,13nm,1.4s						
BRG				MLR	MLR		
	comp=N,333nm,17.9s						
BRG				MLR	MLR		
	comp=E,322nm,19.5s						
BRG				MLR	MLR		
	comp=Z,525nm,16.8s						
MOS	**Moscow**	**80.56**	**9**	*e*P	**P**	**22 37 53.9**	**-1.3**
MOS				*e*		22 38 00.5	
BFO	**Black Forest**	**80.61**	**29**	*i* P	**P**	**22 37 59.0**	**+3.3**
ARU	**Arti**	**80.68**	**357**	*e*P	**P**	**22 37 55.0**	**-0.9**
	comp=Z,68nm,1.2s						
ARU	**Arti**	**80.68**	**357***c*	*i*P	**P**	**22 37 57.3**	**+1.4**
ARU						22 41 00.2	
ARU				S	**S**	**22 48 06.1**	**+4.1**
ARU				SS	**SS**	**22 53 17.0**	**+3.6**
ARU				pmax	pmax		
	comp=Z,45nm,3.2s						
OBN	**Obninsk**	**81.04**	**10**	*e*P	**P**	**22 37 58.5**	**+0.7**
OBN				*e*		22 38 02.0	
OBN				*e*		22 41 01.2	
OBN				*e*PPP	PPP	22 42 53.3	
OBN				pmax	pmax		
	comp=Z,43nm,1.3s						
OBN				MLR	MLR		
	comp=Z,246nm,17.0s						
HHC	**Hu-ho-hao-te**	**81.32**	**319**	*e*P	**P**	**22 38 00.3**	**+0.5**
HHC				S	**S**	**22 48 09.0**	**-0.5**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,98nm,5.2s						
HHC				LR	LR		
	comp=Z,210nm,13.9s						
HHC				LR	LR		
	comp=Z,300nm,14.5s						
HHC				LR	LR		
	comp=Z,440nm,14.7s						
GERES	**GERESS Array B**	**81.94**	**25**	P	**P**	**22 38 01.1**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=316,slow=6.9,SNR=3.2						
GERES				LR	LR	23 17 51.6	
	comp=Z,256nm,18.3s,baz=338,slow=38						
DAVA	**Damuels**	**82.04**	**28**	*e*P	**P**	**22 38 06.6**	**+3.1**
	comp=Z,9.3nm,1.3s						
RETA	**Reutte**	**82.17**	**28**	*e*P	**P**	**22 38 07.1**	**+3.1**
	comp=Z,9.3nm,1.4s						
MOTA	**Moosalm**	**82.41**	**28**	P	**P**	**22 38 04.6**	**-0.8**
	comp=Z,5.0nm,1.0s						
SQTA	**Sankt Quirin**	**82.55**	**28**	*e*P	**P**	**22 38 04.9**	**-1.2**
	comp=Z,11nm,1.4s						
FETA	**Feichten**	**82.56**	**28**	*e*P	**P**	**22 38 05.7**	**-0.5**
	comp=Z,8.0nm,1.4s						
ESDC	**Sonseca Array**	**82.56**	**41**	P	**P**	**22 38 06.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=328,slow=6.5,SNR=2.7						
ESDC				LR	LR	23 12 14.4	
	comp=Z,235nm,18.7s,baz=275,slow=34						
WATA	**Walderalm**	**82.58**	**27**	*e*P	**P**	**22 38 05.2**	**-1.0**
	comp=Z,2.9nm,0.6s						
WTTA	**Wattenberg**	**82.66**	**27**	*e*P	**P**	**22 38 06.7**	**-0.1**
	comp=Z,4.9nm,1.1s						
DGZ	**Jazzator, Alta**	**82.85**	**339***d*	*i*P	**P**	**22 38 07.4**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MOA	**Molln**	**83.00**	**25**	P	**P**	**22 38 08.3**	**0.0**
	comp=Z,9.6nm,1.6s						
BRVK	**Borovoye**	**83.06**	**350**	*e*P	**P**	**22 38 08.7**	**+0.2**
	comp=Z,50nm,0.9s						
BRVK	**Borovoye**	**83.06**	**350**	*e*P	**P**	**22 38 08.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,51nm,0.9s						
LANS	**Liptovska Anna**	**83.35**	**22**	*e*P	**P**	**22 38 12.0**	**+1.9**
LANS				*e*		22 38 18.3	
LANS	**Liptovska Anna**	**83.35**	**22**	*e*P	**P**	**22 38 12.0**	**+1.9**
LANS				*e*sP	**pwP**	**22 38 18.3**	**-1.3**
KBA	**Koelnbreinsper**	**83.39**	**26**	*e*P	**P**	**22 38 14.5**	**+4.0**
	comp=Z,8.4nm,1.1s						
ABTA	**Abfaltersbach**	**83.40**	**27**	P	**P**	**22 38 10.4**	**-0.1**
	comp=Z,14nm,1.4s						
CONA	**Conrad Observa**	**83.42**	**24**	*e*pP	**P**	**22 38 11.7**	**+1.2**
	comp=Z,8.3nm,1.3s						
ZST	**Bratislava**	**83.55**	**24**	*e*sP	P	22 38 18.1	+7.0
VYHS	**Vyhne**	**83.77**	**22**	*e*P	**P**	**22 38 12.9**	**+0.6**
VYHS				*e*		22 38 19.1	
VYHS				pmax	pmax		
	comp=Z,24nm,2.4s						
VYHS	**Vyhne**	**83.77**	**22**	*e*P	**P**	**22 38 12.9**	**+0.6**
VYHS				*e*sP	**pwP**	**22 38 19.1**	**-2.6**
LPSR	**Galich'ya Gora**	**83.79**	**9**	*e*P	**P**	**22 38 15.8**	**+3.6**
LPSR				pmax	pmax		
	comp=Z,20nm,1.4s						
LVV	**L'vov**	**83.88**	**19**	*e*P	P	22 38 20.1	+7.3
ARSA	**Arzberg**	**83.92**	**25**	*e*pP	**P**	**22 38 14.3**	**+1.2**
	comp=Z,15nm,1.6s						
KURK	**Kurchatov**	**83.96**	**344**	*e*P	**P**	**22 38 12.6**	**-0.5**
	comp=Z,56nm,0.8s						
KURK	**Kurchatov**	**83.96**	**344***c*	*e*P	**P**	**22 38 11.6**	**-1.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**84.16**	**15***c*	*e*P	**P**	**22 38 15.8**	**+1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**84.16**	**15**	P	**P**	**22 38 11.5**	**-2.6**
	comp=Z,1.4nm,0.5s,baz=344,slow=4.2,SNR=5.8						
AKASG				LR	LR	23 16 28.6	
	comp=Z,267nm,20.3s,baz=345,slow=36						
KIEV	**Kiev**	**84.16**	**15**⇑	*e*P	**P**	**22 38 15.7**	**+1.6**
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NJ2	**Nanjing**	**84.19**	**309**	*e*P	**P**	**22 38 17.0**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBKA	**Obir**	**84.28**	**26**	*e*P	**P**	**22 38 15.0**	**0.0**
	comp=Z,14nm,1.5s						
SOKA	**Soboth**	**84.28**	**25**	*e*pP	**P**	**22 38 16.1**	**+1.1**
	comp=Z,11nm,1.3s						
UZH	**Uzhgorod**	**84.56**	**20**	*e*P	**P**	**22 38 15.0**	**-1.2**
UZH				*e*		22 38 20.0	
PSZ	**Piszkesteto**	**84.59**	**22**⇓	*i*P	**P**	**22 38 20.2**	**+3.7**
PSZ	**Piszkesteto**	**84.59**	**22**	⇓P	**P**	**22 38 20.2**	**+3.7**
VSR	**Storozhevoye**	**85.18**	**9**⇓	*e*P	**P**	**22 38 20.2**	**+0.9**
VSR				pmax	pmax		
	comp=Z,104nm,4.0s						
BURAR	**Bucovina Array**	**86.22**	**19**⇑	*i*P	P	22 38 32.1	+7.4
BURAR	**Bucovina Array**	**86.22**	**19**	⇑P	P	22 38 32.1	+7.4
DRGR		**86.38**	**21**⇓	*i*P	**P**	**22 38 30.2**	**+4.8**
DRGR		**86.38**	**21**	⇓P	**P**	**22 38 30.2**	**+4.8**
SIRR	**Siria**	**86.58**	**21**⇑	*i*P	P	22 38 32.1	+5.7
AKTO	**Aktyubinsk**	**86.70**	**357**	*i* P	**P**	**22 38 27.0**	**+0.2**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	**Makanchi Array**	**86.85**	**341**	P	**P**	**22 38 26.7**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=25,slow=4.9,SNR=7.1						
MKAR				LR	LR	23 20 14.7	
	comp=Z,198nm,18.4s,baz=19,slow=38						
BIZ	**Bicaz**	**87.07**	**18**⇓	*i*P	**P**	**22 38 29.9**	**+1.2**
BZS	**Buzias**	**87.17**	**22**⇑	*i*P	**P**	**22 38 31.5**	**+2.3**
BZS	**Buzias**	**87.17**	**22**	⇑P	**P**	**22 38 31.5**	**+2.3**
AB31	**Akbulak array**	**87.79**	**356**	*i* P	**P**	**22 38 30.9**	**-1.2**
AB31				pmax	pmax		
	comp=Z,20nm,1.2s						
XAN	**Xi'an**	**87.97**	**317**	P	**P**	**22 38 34.5**	**+1.1**
XAN				pP	pwP	22 38 39.5	-3.4
XAN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
XAN				LR	LR		
	comp=Z,180nm,16.7s						
XAN				LR	LR		
	comp=Z,160nm,26.0s						
XAN				LR	LR		
	comp=Z,250nm,20.6s						
WMQ	**Urumqi**	**88.14**	**336**	P	**P**	**22 38 35.5**	**+1.5**
WMQ				pP	pwP	22 38 40.0	-3.5
WMQ				sP	sP	22 38 43.8	+2.3
WMQ				pmax	pmax		
	comp=Z,15nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.8s						
WMQ				LR	LR		
	comp=Z,530nm,27.7s						
WMQ				LR	LR		
	comp=Z,520nm,24.5s						
WMQ				LR	LR		
	comp=Z,450nm,27.7s						
VOIR		**88.23**	**20**⇑	*i*P	**P**	**22 38 36.3**	**+1.9**
VOIR		**88.23**	**20**	⇑P	**P**	**22 38 36.3**	**+1.9**
LZH	**Lanzhou**	**88.75**	**321**	*e*P	**P**	**22 38 34.3**	**-2.8**
LZH				*e*PP	**PP**	**22 42 04.5**	**-0.8**
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,95nm,4.3s						
LZH				LR	LR		
	comp=Z,810nm,15.7s						
LZH				LR	LR		
	comp=Z,820nm,16.3s						
LZH				LR	LR		
	comp=Z,1µm,17.3s						
CFR	**Carcaliu**	**89.19**	**18**⇑	*i*P	**P**	**22 38 40.8**	**+2.0**
CFR	**Carcaliu**	**89.19**	**18**	⇑P	**P**	**22 38 40.8**	**+2.0**
DZM	**Mont Dzumac**	**89.41**	**239**	*e*LR	LR	23 06 50.2	
	comp=Z,736nm,21.9s						
ENH	**Enshi**	**90.68**	**314**	*e*P	**P**	**22 38 48.6**	**+2.5**
	comp=Z,15nm,1.2s						
KEST	**Kesra**	**91.78**	**35**	LR	LR	23 18 04.6	
	comp=Z,301nm,20.8s,baz=226,slow=34						
BDFB	**Brasilia**	**92.43**	**109**	LR	LR	23 24 24.2	
	comp=Z,296nm,19.2s,baz=291,slow=38						
AAK	**Ala-Archa**	**92.52**	**345**⇑	*e*P	**P**	**22 38 56.4**	**+1.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KIV	**Kislovodsk**	**92.73**	**8**	*e*P	**P**	**22 38 57.2**	**+1.8**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,227nm,20.0s						
KBZ	**Khabaz**	**92.97**	**8**	LR	LR	23 23 24.2	
	comp=Z,253nm,19.2s,baz=340,slow=37						
CD2	**Chengdu**	**93.05**	**319**	*e*P	**P**	**22 38 57.0**	**-0.1**
CPUP	**Villa Florida**	**93.88**	**123**	LR	LR	23 22 59.7	
	comp=Z,110nm,18.8s,baz=352,slow=37						
GYA	**Guiyang**	**95.21**	**314**	*e*P	**P**	**22 39 08.0**	**+0.8**
GYA				PP	**PP**	**22 42 59.8**	**+3.4**
GYA				SKS	**SKSac**	**22 49 42.3**	**+0.1**
GYA				S	**S**	**22 50 19.5**	**-2.2**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.8s						
KSH	**Kashi**	**95.21**	**343**	P	**P**	**22 39 11.5**	**+4.5**
KSH				pmax	pmax		
	comp=Z,190nm,4.2s						
BRTR	**Keskin Array B**	**95.56**	**15***c*	*e*P	**P**	**22 39 11.5**	**+2.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**95.56**	**15**	P	**P**	**22 39 08.0**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=349,slow=5.2,SNR=3.9						
BRTR				LR	LR	23 25 16.4	
	comp=Z,201nm,19.8s,baz=334,slow=37						
KMI	**Kunming**	**98.33**	**316**	P	**P**	**22 39 22.0**	**+0.6**
KMI				pP	sP	22 39 25.5	-3.5
KMI				sP	pwP	22 39 27.0	-4.0
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GEYT	**Alibeck**	**99.17**	**356**	LR	LR	23 30 27.2	
	comp=Z,88nm,18.3s,baz=350,slow=39						
QSPA	**South Pole Qui**	**132.97**	**180**	PKP	**PKPdf**	**22 44 55.9**	**-1.5**
	comp=Z,2.1nm,1.0s,baz=323,slow=0.6,SNR=4.3						
LSZ	**Lusaka**	**144.79**	**46**	*e*PKPdf	PKPbc	22 45 20.4	+0.8
LSZ	**Lusaka**	**144.79**	**46**	*e*PKIKP	PKPbc	22 45 20.4	+0.8
LSZ	**Lusaka**	**144.79**	**46**	PKP	**PKPab**	**22 45 20.1**	**+0.6**
	comp=Z,18nm,0.9s,baz=349,slow=2.9,SNR=24						
NVL	**N'lazarevskaya**	**145.53**	**157**	*e*PKIKP	**PKPdf**	**22 45 19.3**	**-0.7**
NVL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MATP	**Matopo**	**149.16**	**51**	PKPbc	**PKPdf**	**22 45 30.6**	**+2.8**
	comp=Z,1.9nm,0.7s,baz=334,slow=6.7,SNR=4.3						
LBTB	**Lobatse**	**150.87**	**61**	PKPbc	**PKPdf**	**22 45 33.0**	**+2.7**
	comp=Z,3.6nm,1.0s,baz=295,slow=4.9,SNR=3.1						
SUR	**Sutherland**	**152.20**	**78**	PKPbc	**PKPbc**	**22 45 38.9**	**-0.1**
	comp=Z,12nm,1.1s,baz=257,slow=2.7,SNR=2.4						
BOSA	**Boshof**	**153.09**	**67**	PKPbc	**PKPbc**	**22 45 39.9**	**-1.1**
	comp=Z,6.1nm,1.1s,baz=309,slow=3.9,SNR=4.1						
BOSA				PKPab	**PKPab**	**22 45 52.3**	**-0.2**
	comp=Z,9.6nm,1.0s,baz=312,slow=7.3,SNR=5.1						

ISCJB ***27*** *22:32:35.3±0.7, 30.°15S±0.°05×177.°3W±0.°1, h10*^{km}*, mb4.5/13, MS3.9/3, Error ellipse: s-maj=14.3km s-min=5.9km az=12.8*

IDC ***27*** *22:32:35.2±0.7, 29.°99S×177.°16W, h0*^{km}*, mb4.6/9, mb1 4.6/12, mb1mx4.3/36, mbtmp4.5/12, ML3.8/3, MS3.7/5, Ms1 3.7/5, ms1mx3.4/29, Error ellipse: s-maj=21.8km s-min=18.9km az=166.0*

NEIC ***27*** *22:32:40.4±0.5, 30.°06S×177.°28W, h35*^{km}*, mb4.2/10,*

Error ellipse: s-maj=12.6km s-min=6.9km az=105.0

ISC 27 22:32:36.9±0.5, 30.°02S±0.°06×177.°27W±0.°08, h10km, n64, σ1.s89/58, mb4.7/13, MS3.9/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.95	323	Pn	Pg	22 32 54.3	-0.9
	6µm,0.3s,baz=93,slow=12,SNR=109						
RAO				Sn	Sg	22 33 04.7	-3.0
	16µm,0.3s,baz=74,slow=19,SNR=30						
OUZ	Omahuta	9.28	234	ePn	Pn	22 35 00.5	+10
URZ	Urewera	9.44	208	Pn	Pn	22 34 52.9	-0.1
	0.7nm,0.3s,baz=241,slow=19,SNR=3.5						
URZ				Sn	Sn	22 36 36.8	-2.4
	1.8nm,0.3s,baz=338,slow=18,SNR=2.5						
BKZ	Black Stump Fm	10.47	208	ePn	Pn	22 35 09.6	+2.5
BFZ	Birch Farm	11.88	205	ePn	Pn	22 35 24.7	-1.6
BFZ				eSn	Sn	22 37 29.1	-10
THZ	Tophouse	14.15	211	ePn	Pn	22 36 01.1	+3.7
THZ				eSn	Sn	22 38 31.8	-2.7
KHZ	Kahutara	14.41	208	ePn	Pn	22 36 00.6	-0.3
KHZ				eSn	Sn	22 38 34.9	-5.8
OXZ	Oxford	15.79	210	ePn	Pn	22 36 18.2	-1.0
	14nm,0.5s						
OXZ				eSn	Sn	22 39 01.4	-13
MQZ	McQueen's Vall	15.84	208	ePn	Pn	22 36 22.3	+2.4
	29nm,1.1s						
MQZ				eSn	Sn	22 39 05.0	-11
RPZ	Rata Peaks	16.53	211	Pn	Pn	22 36 28.5	-0.3
	0.7nm,0.3s,baz=305,slow=16,SNR=3.4						
RPZ				Sn	Sn	22 39 20.1	-12
	0.4nm,0.3s,baz=335,slow=19,SNR=3.1						
DZM	Mont Dzumac	16.63	295	eLR	LR	22 40 39.2	
	comp=Z,599nm,24.4s						
DZM	Mont Dzumac	16.63	295	Pn	Pn	22 36 30.1	-0.1
	0.2nm,0.3s,baz=301,slow=9.2,SNR=3.3						
DZM				LR	LR	22 41 42.9	
	comp=Z,389nm,18.7s,baz=56,slow=33						
FOZ	Fox Glacier	16.97	214	ePn	Pn	22 36 33.1	-1.2
	7.8nm,1.0s						
ODZ	Otahua Downs	17.77	209	ePn	Pn	22 36 45.2	+0.9
	8.8nm,0.9s						
RAR	Rarotonga	18.04	65	LR	LR	22 44 59.3	
	comp=Z,69nm,18.1s,baz=312,slow=42						
WKZ	Wanaka	18.32	212	eP	Pn	22 36 50.1	-1.0
	15nm,1.1s						
MLZ	Mavora Lakes	19.14	213	eP	P	22 36 58.5	-1.8
	13nm,1.1s						
TBI	Tubuai	25.68	82	eLQ	LQ	22 43 08.1	
	511nm,28.8s						
TBI				eLR	LR	22 44 16.1	
	comp=Z,192nm,24.5s						
TBI	Tubuai	25.68	82	eT	T	23 04 00.9	
	13nm,0.3s						
PAE	Paea	28.07	70	eT	T	23 07 01.4	
	7.0nm,0.4s						
PPT2	Papeete2	28.11	70	eLR	LR	22 45 33.8	
	comp=Z,138nm,24.5s						
PPT	Papeete	28.13	70	P	P	22 38 28.9	-0.3
	29nm,0.5s,baz=236,slow=15,SNR=3.3						
TVO	Taravao	28.28	71	eT	T	23 07 17.0	
	1.5nm,0.2s						
VAH	Vaihoa	30.95	68	eT	T	23 10 35.7	
	9.4nm,0.2s						
CTA	Charters Tower	34.37	278	P	P	22 39 26.0	+1.7
	6.5nm,0.4s,baz=103,slow=11						
STKA	Stephens Creek	35.18	256	P	P	22 39 33.1	+2.0
	11nm,0.8s,baz=99,slow=8.0,SNR=11						
STKA				LR	LR	22 51 32.1	
	comp=Z,136nm,20.6s,baz=54,slow=32						
RKT	Rikitea	38.28	90	eS	S	22 45 46.3	-5.6
	326nm,29.5s						
RKT				eLR	LR	22 50 04.7	
	comp=Z,624nm,38.8s						
AS01	Alice Springs	43.72	266	eP	P	22 40 43.1	+0.5
AS31	Alice Springs	43.76	266	eP	P	22 40 43.4	+0.5
	1.7nm,1.0s						
ASAR	Alice Springs	43.76	266	P	P	22 40 43.4	+0.5
	3.2nm,0.7s,baz=99,slow=6.4,SNR=23						
ASAR				PcP	PcP	22 42 29.4	-0.3
	0.8nm,0.8s,baz=111,slow=5.1,SNR=2.5						
WB2	Warramunga Arr	44.71	271	eP	P	22 40 50.5	+0.1
WRAB	Tennant Creek	44.71	271	eP	P	22 40 50.8	+0.3
	8.8nm,0.8s						
WR1	Warramunga Arr	44.72	271	eP	P	22 40 50.1	-0.4
	13nm,0.9s						
WR1				ePcP	PcP	22 42 34.6	+1.6
WRA	Warramunga Arr	44.72	271	P	P	22 40 50.1	-0.4
	11nm,0.8s,baz=110,slow=8.0,SNR=64						
WRA				PcP	PcP	22 42 34.6	+1.6
	1.1nm,0.8s,baz=131,slow=3.6,SNR=3.7						
QSPA	South Pole Qui	60.09	180	eP	P	22 42 47.4	+3.2
	5.7nm,0.9s						
MJAR	Matsushiro Arr	78.30	325	P	P	22 44 37.0	-0.1
MJAR	Matsushiro Arr	78.30	325	P	P	22 44 37.0	-0.1
	0.6nm,0.4s,baz=168,slow=5.3,SNR=3.4						
MAJO	Matsushiro	78.30	325	eP	P	22 44 37.0	-0.1
KSRS	Korea Array	84.47	319	P	P	22 45 10.8	+1.1
	0.5nm,0.4s,baz=132,slow=4.0,SNR=3.3						
KSAR	Wonju Array Be	84.49	319	P	P	22 45 10.8	+1.0
PETK	Petropavlovsk-	85.61	345	P	P	22 45 15.0	-0.1
	4.3nm,0.8s,baz=156,slow=7.4,SNR=2.4						
PEA1	Petropavlovsk-	85.61	345	eP	P	22 45 15.0	-0.1
KLR	Kul'dur	91.03	329	P	P	22 45 41.8	+0.7
	1.5nm,0.8s,baz=150,slow=0.7,SNR=4.8						
NNA	Nana	92.91	106	LR	LR	23 19 49.8	
	comp=Z,40nm,18.5s,baz=22,slow=30						
ATAH	Atahualpa	94.09	101	LR	LR	23 20 21.9	
	comp=Z,73nm,19.2s,baz=63,slow=30						
MK32	Makanchi Array	118.02	310	ePKPdf	PKPdf	22 51 22.1	-1.7
MKAR	Makanchi Array	118.02	310	PKP	PKPdf	22 51 22.1	-1.7
	0.1nm,0.5s,baz=157,slow=0.6,SNR=4.3						
ARA0	ARCESS Array S	138.35	348	ePKPpre	PKPpre	22 51 56.0	
ARCES	ARCESS Array B	138.35	348	PKhKP	PKPpre	22 51 56.0	
	4.4nm,0.9s,baz=35,slow=2.2,SNR=6.0						
FIA1	FINESS Array S	145.00	341	ePKPdf	PKPbc	22 52 12.8	-0.3
FIA0	FINESS Array S	145.00	341	ePKPdf	PKPbc	22 52 12.6	-0.5
FINES	FINESS Array B	145.00	341	PKPbc	PKPbc	22 52 12.6	-0.5
	7.6nm,0.8s,baz=52,slow=3.8,SNR=27						
KBZ	Khabaz	145.42	305	PKPbc	PKPbc	22 52 15.1	+0.2
	2.3nm,1.0s,baz=54,slow=7.4,SNR=3.5						
NB2	NORSAR Subarra	148.47	352	PKP	PKPbc	22 52 23.6	+0.4
	comp=Z,0.4nm,0.4s,baz=34,slow=3.6						
NB200	NORSAR Array S	148.47	352	ePKPbc	PKPdf	22 52 23.1	+3.5
NOA	NORSAR Array B	148.47	352	PKPbc	PKPdf	22 52 23.1	+3.5
	comp=Z,1.6nm,1.0s,baz=13,slow=4.1,SNR=3.5						
AKASG	Malin Array Be	151.38	324	PKPbc	PKPbc	22 52 30.4	-0.1
	comp=Z,6.5nm,0.9s,baz=49,slow=2.6,SNR=8.4						
AKBB	Malin Array Si	151.38	324	ePKPdf	PKPdf	22 52 22.6	-1.9
AKBB				ePKPbc	sPKPdf	22 52 29.8	+2.8
AK11	Malin Array Si	151.42	324	ePKPbc	PKPbc	22 52 30.9	+0.3
BR101	Keskin Array S	152.97	299	ePKPdf	PKPdf	22 52 26.4	-1.0
BR101				ePKPbc	PKPbc	22 52 34.1	-0.6
BRTR	Keskin Array B	152.97	299	PKP	PKPdf	22 52 26.4	-1.0
	comp=Z,0.4nm,0.6s,baz=2.3,slow=14,SNR=2.5						
BRTR				PKPbc	PKPbc	22 52 34.1	-0.6
	comp=Z,1.1nm,0.9s,baz=75,slow=1.6,SNR=5.0						
CLL	Collm	157.40	343	ePKPab	PKPab	22 53 03.0	-1.2
TORD	Torodi Ar. Bea	163.18	177	PKPab	PKPab	22 53 31.0	+0.8
	comp=Z,0.5nm,1.0s,baz=204,slow=3.2,SNR=3.2						
TOA1	Torodi Ar. Sit	163.19	176	ePKPab	PKPab	22 53 31.0	+0.8

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*ISCJB **27** 22:35:04.6±0.7, 47.°1N±0.°1×147.°3E±0.°2, h346km, mb3.2/10, Error ellipse: s-maj=22.5km s-min=8.7km az=135.1*

*IDC **27** 22:35:06.6±1.9, 47.°08N×147.°18E, h358km±22km, mb3.0/10, mb1 3.2/13, mb1mx3.0/36, mbtmp3.7/13, Error ellipse: s-maj=20.8km s-min=14.6km az=137.0*

ISC 27 22:35:05.6±0.8, 47.°1N±0.°1×147.°2E±0.°1, h346km, n14, σ0.s80/15, mb3.2/10, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	4.42	229	P	Pn	22 36 19.1	+0.4
	1.3nm,0.3s,baz=142,slow=5.8,SNR=5.2						
ASAJ				S	S	22 37 16.6	-1.1
	0.5nm,0.3s,baz=142,slow=19,SNR=2.3						
USRK	Ussuriysk Ar.	11.05	260	P	P	22 37 37.8	+1.0
	0.5nm,0.3s,baz=57,slow=14,SNR=5.8						
SEY	Seymchan	16.11	9	P	Pn	22 38 33.8	-1.2
	0.2nm,0.3s,baz=210,slow=20,SNR=2.8						
ILAR	Eielson Array	38.78	39	P	P	22 41 57.6	+0.2
	0.9nm,0.6s,baz=253,slow=6.1,SNR=14						
MKAR	Makanchi Array	43.14	294	P	P	22 42 33.4	+0.5
	0.2nm,0.5s,baz=80,slow=9.4,SNR=4.2						
INK	Inuvik	43.49	32	P	P	22 42 35.1	-0.3
	0.8nm,0.4s,baz=284,slow=7.6,SNR=12						
RES	Resolute Bay	51.73	17	P	P	22 43 37.3	-0.6
	0.4nm,0.4s,baz=333,slow=8.9,SNR=5.8						
YKA	Yellowknife Ar	52.99	35	P	P	22 43 47.3	+0.1
	0.4nm,0.5s,baz=302,slow=6.9,SNR=7.1						
FINES	FINESS Array B	61.90	332	P	P	22 44 48.4	-0.4
	1.6nm,0.5s,baz=38,slow=8.2,SNR=11						
NB2	NORSAR Subarra	66.47	338	P	P	22 45 18.0	-0.3
	comp=Z,0.4nm,0.6s,baz=47,slow=6.9						
NOA	NORSAR Array B	66.47	338	P	P	22 45 18.1	-0.3
	comp=Z,0.7nm,0.5s,baz=32,slow=6.7,SNR=6.0						
PDAR	Pinedale Array	67.72	51	P	P	22 45 27.6	+0.9
	comp=Z,0.8nm,0.8s,baz=310,slow=3.4,SNR=4.1						
WRA	Warramunga Arr	67.76	193	P	P	22 45 25.7	-1.0
	comp=Z,0.2nm,0.4s,baz=9.4,slow=6.6,SNR=4.9						
TXAR	Lajitas Array	80.75	57	P	P	22 46 42.2	+0.9
	comp=Z,0.4nm,0.5s,baz=295,slow=3.7,SNR=6.9						

KRSC 27 22:35:20.4±0.6, 56.°10N×161.°27E, h103km±4km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.27	253	eP	Pn	22 35 36.4	+1.0
CIRR	Tsirk	0.29	274	eP	Pn	22 35 36.3	+0.8
CIRR				eS	Sn	22 35 49.0	+2.1
LGNR	Loginova	0.33	268	eP	Pn	22 35 36.8	+0.9
LGNR				eS	Sn	22 35 49.5	+2.1
BZGR	Bezymyannyi-Gr	0.36	244	eP	Pn	22 35 36.8	+1.0
BZGR				eS	Sn	22 35 49.3	+2.0
KLY	Klyuchi	0.41	302	eP	Pn	22 35 36.1	+0.2
KLY				eS	Sn	22 35 48.0	+0.5
BZWR	Bezymyannyi-We	0.46	253	eP	Pn	22 35 37.3	+0.8
BZWR				eS	Sn	22 35 50.3	+1.8
BZMR	Bezymyannaya	0.47	250	eP	Pn	22 35 37.3	+0.8
BDR	Baidarnaya	0.47	356	eP	Pn	22 35 37.4	+0.9
BDR				eS	Sn	22 35 50.2	+1.7
SMKR	Semkarok	0.50	13	eP	Pn	22 35 37.7	+1.1
SMKR				eS	Sn	22 35 50.2	+1.4
KIRR	Kirishev	0.54	255	eP	Pn	22 35 37.5	+0.5
SRKR	Sorokina	0.56	354	eP	Pn	22 35 38.1	+1.0
SRKR				eS	Sn	22 35 51.0	+1.4
KPT	Kopyto	0.60	258	eP	Pn	22 35 38.1	+0.7
KPT				eS	Sn	22 35 51.7	+1.5
KOZ	Kozyrevsk	0.78	268	eP	Pn	22 35 39.7	+0.8
KOZ				eS	Sn	22 35 54.7	+1.9
KBG	Krutoberegovo	0.82	78	eP	Pn	22 35 40.0	+0.8
KBG				eS	Sn	22 35 54.9	+1.6
KBTR	Krutoberegovo	0.87	82	eP	Pn	22 35 40.4	+0.7
KBTR				eS	Sn	22 35 55.7	+1.4
SRDR	Sredinnyy	0.90	285	eP	Pn	22 35 40.7	+0.6
SRDR				eS	Sn	22 35 55.7	+0.9
TUMD	Tumrok D	1.02	209	eP	Pn	22 35 42.3	+0.9
TUMD				eS	Sn	22 35 57.5	+0.4
TUMR	Tumrok	1.03	218	eP	Pn	22 35 43.0	+1.4
TUMR				eS	Sn	22 35 59.4	+1.9
KZV	Kizimen	1.13	210	eP	Pn	22 35 43.9	+1.2
KZV				eS	Sn	22 36 00.4	+0.9
ESO	Esso	1.45	264	eP	Pn	22 35 47.3	+1.0
ESO				eS	Sn	22 36 07.3	+1.4
MKZ	Mys Kozlova	1.57	170	eS	Sn	22 36 08.9	+0.6
KII	Karymskiy	2.32	208	eP	Pn	22 35 58.7	+1.4
GNL	Ganaly	3.08	220	eP	Pn	22 36 09.0	+1.6
SPN	Mys Shipunski	3.09	194	eP	Pn	22 36 08.8	+1.4
SPN				eS	Sn	22 36 45.7	+2.0
KRX	Arik	3.14	210	eP	Pn	22 36 10.8	+2.6
SDLR	Sedlovina	3.15	207	eP	Pn	22 36 11.0	+2.7
SMAR	Somma	3.18	208	eP	Pn	22 36 11.0	+2.2
AVH	Avacha	3.20	208	eP	Pn	22 36 11.7	+2.8
KOK	Koryaka	3.20	210	eP	Pn	22 36 11.4	+2.4
UGLR	Uglovaya	3.22	207	eP	Pn	22 36 12.1	+2.8
OSSR	Ossora	3.31	16	eP	Pn	22 36 13.5	+3.3
DALK	Dalny	3.40	207	eP	Pn	22 36 13.5	+1.9
KRMR	Karymshinskiy	3.75	211	eP	Pn	22 36 18.2	+2.0

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*IDC **27** 22:40:07.6±4.0, 18.°83S×168.°87E, h72km±34km, mb3.8/10, mb1 4.0/11, mb1mx3.8/33, mbtmp4.1/11, ML4.7/1, Error ellipse: s-maj=26.4km s-min=24.3km az=102.0*

*NEIC **27** 22:40:11.4±1.1, 19.°21S×168.°98E, h119km±11km, mb4.1/3, Error ellipse: s-maj=17.7km s-min=8.8km az=162.0*

*ISCJB **27** 22:40:12.6±0.5, 19.°45S±0.°06×169.°02E±0.°07, h147km, mb3.9/13, Error ellipse: s-maj=11.3km s-min=6.4km az=39.1*

ISC 27 22:40:13.8±0.5, 19.°43S±0.°08×169.°04E±0.°09, h147km, n48, σ1.s45/53, mb4.0/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.25	205	ePn	Pn	22 40 50.0	-1.7
MARNC				eSn	Sn	22 41 16.5	-4.4
PINNC	Pines Island,	3.50	205	ePn	Pn	22 41 07.6	+0.1
PINNC				eSn	Sn	22 41 52.8	+3.6
DZM	Mont Dzumac	3.58	222	P	Pn	22 41 07.0	-1.6
	48nm,0.3s,baz=163,slow=16,SNR=163						
DZM				S	Sn	22 41 50.6	-0.5
	76nm,0.3s,baz=119,slow=21,SNR=12						
ONTNC	Ouen Toro	3.75	220	ePn	Pn	22 41 09.8	-0.8
ONTNC				eSn	Sn	22 41 54.5	-0.3
MSVF	Nonsavu	8.71	80	ePn	Pn	22 42 15.6	-1.2
LHI	Lord Howe Isla	15.03	215	ePn	Pn	22 43 37.1	-1.5
RAO	Raoul Island	15.38	132	ePn	Pn	22 43 43.0	0.0
CTA	Charters Tower	21.45	264	P	P	22 44 50.1	-0.5
	1.5nm,0.3s,baz=72,slow=13,SNR=2.5						
STKA	Stephens Creek	27.59	238	P	P	22 45 50.7	+3.4
	3.0nm,0.8s,baz=80,slow=10,SNR=6.7						
WR1	Warramunga Arr	32.64	263	eP	P	22 46 30.9	-1.0
WR1				ePcP	PcP	22 49 16.7	+2.0
WRA	Warramunga Arr	32.64	263	P	P	22 46 31.0	-1.1
	0.5nm,0.8s,baz=82,slow=6.1,SNR=7.7						
WRA				PcP	PcP	22 49 16.7	+2.0
	0.5nm,0.9s,baz=91,slow=3.2,SNR=3.4						
AS31	Alice Springs	32.90	256	eP	P	22 46 35.3	+1.0
	1.9nm,0.4s						
ASAR	Alice Springs	32.90	256	P	P	22 46 34.8	+0.6
	2.2nm,0.4s,baz=82,slow=8.5,SNR=25						
MJAR	Matsushiro Arr	62.83	332	P	P	22 50 21.5	-2.4
	3.2nm,0.8s,baz=168,slow=8.0,SNR=8.4						
MAJO	Matsushiro	62.83	332	eP	P	22 50 21.5	-2.4
QSPA	South Pole Qui	70.63	180	P	P	22 51 19.7	+6.6
	2.2nm,0.9s,baz=336,slow=4.2,SNR=6.9						
CM01	Chiang Mai Arr	78.38	294	eP	P	22 51 59.1	+0.6
CM31	Chiang Mai Arr	78.41	294	eP	P	22 52 00.1	+1.4
	2.1nm,0.9s						
CMAR	Chiang Mai Arr	78.41	294	P	P	22 52 00.1	+1.4
	0.7nm,0.5s,baz=126,slow=4.2,SNR=6.7						
ULN	Ulaanbaatar	86.90	323	eP	P	22 52 41.1	-1.0
	2.4nm,1.0s						
SONA0	Songino Array	87.25	323	eP	P	22 52 43.7	0.0
SONM	Songino Array	87.25	323	P	P	22 52 43.7	0.0
	2.2nm,0.9s,baz=145,slow=3.9,SNR=7.8						
SONA1	Songino Array	87.26	323	eP	P	22 52 43.3	-0.5
NV01	Mina Array Sit	89.06	49	eP	P	22 52 54.1	+1.5
NVAR	Mina Array Bea	89.06	49	P	P	22 52 54.1	+1.5
	0.5nm,0.6s,baz=221,slow=8.1,SNR=5.0						
ILAR	Eielson Array	90.46	17	P	P	22 52 57.5	-0.8
	0.4nm,0.5s,baz=238,slow=4.6,SNR=7.7						
YKA	Yellowknife Ar	100.92	27	P	Pdif	22 53 46.8	+1.1
	0.6nm,0.7s,baz=254,slow=4.7,SNR=11						
YKB5	Yellowknife Ar	100.92	27	ePdif	Pdif	22 53 46.9	+1.1
ARA0	ARCESS Array S	125.20	345	ePKPdf	PKiKP	22 58 57.2	+0.6
ARCES	ARCESS Array B	125.20	345	PKP	PKiKP	22 58 57.2	+0.6
	1.8nm,0.8s,baz=60,slow=1.9,SNR=12						
CLL	Collm	143.00	335	ePKPdf	PKiKP	22 59 33.0	-0.2
CONA	Conrad Observa	144.20	329	ePKPdf	PKPdf	22 59 32.6	+0.4
	2.8nm,0.9s						
GEC2	GERESS Array S	144.56	332	ePKPdf	PKPdf	22 59 32.8	0.0
GERES	GERESS Array B	144.56	332	PKP	PKPdf	22 59 32.8	0.0
	1.4nm,0.7s,baz=35,slow=3.3,SNR=10						
MOA	Molln	145.03	330	ePKPdf	PKPdf	22 59 34.8	+1.2
	5.1nm,0.6s						
SOKA	Soboth	145.47	328	ePKiKP	PKPab	22 59 36.7	+1.6
	11nm,1.2s						
OBKA	Obir	145.83	328	ePKiKP	PKPab	22 59 37.8	+1.2
	4.9nm,0.7s						
KBA	Koelnbreinsper	146.01	330	ePKPab	PKPab	22 59 38.0	+0.7
	7.6nm,1.0s						
WATA	Walderalm	146.64	332	ePKiKP	PKiKP	22 59 40.6	-0.4
	3.5nm,0.6s						
ABTA	Abfaltersbach	146.65	330	ePKPab	PKPbc	22 59 38.4	+0.1
	3.4nm,0.6s						
WTTA	Wattenberg	146.67	332	PKPdf	PKPdf	22 59 35.1	-1.5
	5.8nm,0.8s						
MOTA	Moosalm	146.84	332	ePKPab	PKPab	22 59 40.5	0.0
	7.5nm,0.8s						
RETA	Reutte	146.88	333	PKPab	PKPab	22 59 40.2	-0.4
	3.3nm,0.6s						
SQTA	Sankt Quirin	146.89	332	ePKPab	PKPab	22 59 40.1	-0.6
	8.7nm,0.6s						
FETA	Feichten	147.26	332	ePKPab	PKPab	22 59 41.4	-0.8
	7.4nm,0.7s						
DAVA	Damuels	147.42	333	ePKPbc	PKPbc	22 59 39.4	-1.1
	3.9nm,0.7s						
TORD	Torodi Ar. Bea	166.34	245	PKP	PKPdf	23 00 03.5	+1.2
	0.8nm,1.0s,baz=324,slow=0.7,SNR=4.3						
TOA1	Torodi Ar. Sit	166.35	245	ePKPdf	PKPdf	23 00 03.5	+1.2

IDC 27 22:56:02.9±2.9, 21.°42S×169.°38E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/37, mbtmp3.7/6, ML3.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.8/24, Error ellipse: s-maj=163.1km s-min=22.7km az=159.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.80	256	Pn	Pn	22 56 49.1	0.0
	3.7nm,0.3s,baz=122,slow=18,SNR=22						
DZM				Sn	Sn	22 57 20.6	-3.1
	14nm,0.3s,baz=88,slow=18,SNR=4.1						
DZM				LR	LR	22 57 28.1	
	comp=Z,446nm,18.5s,baz=96,slow=30						
CTA	Charters Tower	21.66	269	P	P	23 00 55.2	-0.1
	2.9nm,0.8s,baz=86,slow=13,SNR=2.1						
WRA	Warramunga Arr	32.77	266	P	P	23 02 37.5	-0.6
	0.4nm,0.5s,baz=97,slow=8.2,SNR=6.3						
ASAR	Alice Springs	32.79	259	P	P	23 02 38.2	+0.1
	1.5nm,1.0s,baz=87,slow=8.7,SNR=6.6						
NVAR	Mina Array Bea	90.14	48	P	P	23 09 05.0	-0.5
	0.2nm,0.3s,baz=213,slow=6.5,SNR=3.2						
ILAR	Eielson Array	92.27	17	P	P	23 09 13.9	-0.5
	0.1nm,0.4s,baz=232,slow=5.3,SNR=3.2						
ARCES	ARCESS Array B	127.20	345	PKP	PKPdf	23 15 08.6	-0.1
	2.9nm,1.0s,baz=48,slow=1.3,SNR=2.7						
GERES	GERESS Array B	146.46	330	PKPbc	PKPbc	23 15 46.5	+0.4
	0.4nm,0.5s,baz=28,slow=3.5,SNR=4.6						

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*ROM **27** 23:00:34.6±0.2, 46.°38N±0.°01×9.°874E±0.°009, h6km±1km, ML2.1/9*

*ISCJB **27** 23:00:35.0±0.3, 46.°41N±0.°02×9.°88E±0.°02, h2km±3km, Error ellipse: s-maj=2.9km s-min=1.9km az=165.5*

*VIE **27** 23:00:35.5±0.3, 46.°39N×9.°91E, h5km±2km, mb2.1/10, ml2.3/13, Error ellipse: s-maj=2.1km s-min=1.2km az=13.0*

*PRU **27** 23:00:37.0±0.0, 46.°38N×9.°90E, h0km*

*LDG **27** 23:00:37.1±0.1, 46.°43N×10.°00E, h5km, Ml2.6/10, Error ellipse: s-maj=2.8km s-min=2.1km az=167.0*

ISC 27 23:00:36.1±0.9, 46.°40N±0.°02×9.°92E±0.°02, h5km±7km, n50, σ1.s11/87, 1C-1D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BERNI	Berninapass	0.07	80	P	Pg	23 00 37.7	-0.2
BERNI				S	Sg	23 00 39.0	-0.2
FUORN	Ofenpass-Fuorn	0.32	47	P	Pg	23 00 42.6	+0.2
FUORN				S	Sg	23 00 48.4	+1.6
FUORN				AML	AML		
	comp=E,366µm,1.6s						
FUORN				AML	AML		
	comp=N,465µm,0.9s						
FUORN				AML	AML		
	comp=E,366µm,1.6s						
FUORN				AML	AML		
	comp=N,465µm,0.9s						
FUORN				AML	AML		
	comp=N,465µm,0.9s						
FUORN				AML	AML		
	comp=E,366µm,1.6s						
DAVOX	Davos/Dischmat	0.38	356	P	Pg	23 00 43.5	-0.1
DAVOX				AML	AML		
	comp=E,214µm,0.5s						
DAVOX				AML	AML		
	comp=N,358µm,1.6s						
DAVOX				AML	AML		
	comp=E,214µm,0.5s						
DAVOX				AML	AML		
	comp=N,358µm,1.6s						
DAVOX				AML	AML		
	comp=E,214µm,0.5s						
DAVOX				AML	AML		
	comp=N,358µm,1.6s						
TUE	Stuetta	0.40	280	P	Pg	23 00 42.6	-1.4
TUE				S	Sg	23 00 49.3	0.0
MOSI	Grossmontoni	0.48	63	P	Pg	23 00 45.4	0.0
MOSI				S	Sb	23 00 53.5	-1.3
MOSI				AML	AML		
	comp=E,666µm,1.2s						
MOSI				AML	AML		
	comp=N,994µm,1.5s						
MOSI				AML	AML		
	comp=E,666µm,1.2s						
MOSI				AML	AML		
	comp=N,994µm,1.5s						
MOSI				AML	AML		
	comp=N,994µm,1.5s						
MOSI				AML	AML		
	comp=E,666µm,1.2s						
CARE	Lago del Cares	0.54	87	ePg	Pg	23 00 45.9	-0.6
CARE				eSg	Sg	23 00 53.6	+0.1
MABI	Malga Bissina	0.54	130	P	Pg	23 00 46.0	-0.5
MABI				S	Sg	23 00 53.5	0.0
MABI				AML	AML		
	comp=E,142µm,1.6s						
MABI				AML	AML		
	comp=N,109µm,1.4s						
MABI				AML	AML		
	comp=E,142µm,1.6s						
MABI				AML	AML		
	comp=N,109µm,1.4s						
MABI				AML	AML		
	comp=E,142µm,1.6s						
MABI				AML	AML		
	comp=N,109µm,1.4s						
RNI	Roncone	0.64	131⇓	ePg	Pg	23 00 48.2	-0.4
OZOL	Ozolo	0.78	89	ePg	Pg	23 00 50.7	-0.4
OZOL				eSg	Sg	23 01 02.2	+0.9
MAGA	Magasa	0.80	142	P	Pg	23 00 51.1	-0.3
MAGA				AML	AML		
	comp=E,296µm,0.6s						
MAGA				AML	AML		
	comp=N,205µm,1.3s						
MAGA				AML	AML		
	comp=E,296µm,0.6s						
MAGA				AML	AML		
	comp=N,205µm,1.3s						
MAGA				AML	AML		
	comp=E,296µm,0.6s						
MAGA				AML	AML		
	comp=N,205µm,1.3s						
FETA	Feichten	0.83	42	ePg	Pg	23 00 52.1	-0.1
	comp=N,14nm,0.5s,SNR=22						
FETA				eSg	Sb	23 01 04.0	-0.7
	comp=N,19nm,0.5s						
DAVA	Damuels	0.89	358	ePg	Pg	23 00 53.0	-0.2
	comp=N,1.4nm,0.2s						
DAVA				Sg	Sg	23 01 04.9	+0.2
	comp=N,25nm,0.5s						
APPI	Appiano	0.91	85	P	Pg	23 00 52.8	-0.8
APPI				AML	AML		
	comp=E,111µm,0.8s						
APPI				AML	AML		
	comp=N,142µm,1.5s						
APPI				AML	AML		
	comp=E,111µm,0.8s						
APPI				AML	AML		
	comp=N,142µm,1.5s						
APPI				AML	AML		
	comp=N,142µm,1.5s						
APPI				AML	AML		
	comp=E,111µm,0.8s						
KOSI	Kohlern	1.01	86	P	Pg	23 00 55.0	-0.5
KOSI				AML	AML		
	comp=E,137µm,1.4s						
KOSI				AML	AML		
	comp=N,81µm,1.1s						
KOSI				AML	AML		
	comp=E,137µm,1.4s						
KOSI				AML	AML		

	comp=N,81µm,1.1s						
ABSI	Aberstueckl	1.02	71	P	Pg	23 00 54.8	-0.8
ABSI				AML	AML		
	comp=E,120µm,1.1s						
ABSI				AML	AML		
	comp=N,97µm,0.9s						
ABSI				AML	AML		
	comp=N,97µm,0.9s						
ABSI				AML	AML		
	comp=E,120µm,1.1s						
DOSS	Dosso del Somm	1.02	120	ePg	Pg	23 00 56.1	+0.3
DOSS				eSg	Sb	23 01 09.8	-0.5
ROSI	Rosskopf	1.15	62	P	Pb	23 00 57.2	-1.4
ROSI				AML	AML		
	comp=E,83µm,1.1s						
ROSI				AML	AML		
	comp=N,110µm,1.6s						
ROSI				AML	AML		
	comp=E,83µm,1.1s						
ROSI				AML	AML		
	comp=N,110µm,1.6s						
MARN	Marana (Italy)	1.18	130	ePg	Pb	23 00 57.8	-1.2
SQTA	Sankt Quirin	1.21	47	ePg	Pb	23 00 59.0	-0.6
	comp=N,5.6nm,0.3s,SNR=12						
SQTA				Sg	Sn	23 01 17.0	+0.4
	comp=N,3.3nm,0.2s						
RETA	Reutte	1.23	28	ePg	Pb	23 00 59.6	-0.3
	comp=N,0.2nm,0.1s						
RETA				eSg	Sn	23 01 16.5	-0.7
	comp=N,31nm,0.8s						
MOTA	Moosalm	1.24	40	ePg	Pn	23 00 59.7	-0.6
	comp=N,3.1nm,0.4s,SNR=7.6						
MOTA				eSg	Sn	23 01 18.0	+0.4
	comp=N,12nm,0.5s						
CGRP	Cima Grappa	1.41	111	⇑ePg	Pg	23 01 03.0	0.0
WTTA	Wattenberg	1.46	53	ePg	Pb	23 01 03.7	-0.2
	comp=N,1.5nm,0.2s						
WTTA				eSg	Sg	23 01 25.5	+2.5
	comp=N,12nm,0.5s						
WATA	Walderalm	1.47	50	ePg	Pn	23 01 03.1	-0.4
	comp=N,1.1nm,0.2s						
WATA				Sn	Sg	23 01 23.9	+0.5
	comp=N,2.2nm,0.2s						
SATI	Passo dei Sala	1.52	251	P	Pb	23 01 04.9	-0.1
SATI				S	Sn	23 01 22.0	-2.7
VARN	Col Varnada, M	1.57	104	ePg	Pb	23 01 05.5	-0.2
RISI	Rein	1.58	69	P	Pn	23 01 05.1	+0.1
ABTA	Abfaltersbach	1.82	78	ePn	Pb	23 01 09.3	-0.7
	comp=N,2.1nm,0.2s,SNR=13						
ABTA				Sn	Sb	23 01 32.3	-0.8
	comp=N,2.2nm,0.2s						
LPG	La Plagne	2.39	249	eP	Pb	23 01 19.2	-0.6
LPG	La Plagne	2.39	249	ePg	Pg	23 01 23.1	+1.2
LPG				eSn	Sn	23 01 45.1	-0.9
	comp=N,11nm,0.5s						
LPG				eSg	Sg	23 01 54.9	+2.0
	comp=N,11nm,0.5s						
LPL	La Plagne	2.40	249	eP	Pb	23 01 19.2	-0.7
LPL	La Plagne	2.40	249	ePg	Pg	23 01 23.2	+1.2
LPL				eSn	Sn	23 01 44.3	-1.8
LPL				eSg	Sg	23 01 54.8	+1.7
	comp=N,8.3nm,0.5s						
HINF	Hinteralfeld	2.53	305	eP	Pb	23 01 20.3	-1.8
HINF	Hinteralfeld	2.53	305	ePg	Pg	23 01 25.1	+0.5
HINF				eSg	Sg	23 01 58.0	+0.6
	comp=N,10nm,0.5s						
CABF	La Chapelle	2.66	276	ePn	Pn	23 01 20.3	+0.6
CABF				eSn	Sn	23 01 52.1	-0.2
CABF				eSg	Sg	23 02 02.5	+1.0
	comp=N,8.1nm,0.5s						
CDF	Champ du Feu	2.70	319	ePn	Pn	23 01 20.0	-0.3
CDF	Champ du Feu	2.70	319	ePg	Pg	23 01 27.6	-0.2
CDF				eSg	Sg	23 02 03.0	+0.2
	comp=N,7.8nm,0.5s						
MBDF	Montbardon	2.77	234	ePn	Pn	23 01 22.2	+0.8
MBDF	Montbardon	2.77	234	ePg	Pg	23 01 30.1	+0.8
MBDF				eSn	Sn	23 01 54.2	-1.1
MBDF				eSg	Sg	23 02 07.1	+1.8
	comp=N,6.7nm,0.6s						
HAU	Haudompre	2.92	305	ePn	Pn	23 01 23.1	-0.1
HAU				eSn	Sn	23 01 56.6	-2.1
	comp=N,9.3nm,0.5s						
HAU				eSg	Sg	23 02 09.9	+0.1
	comp=N,7.0nm,0.4s						
SBF	Sospel	3.09	216	ePn	Pn	23 01 27.6	+2.0
SBF				eSn	Sn	23 02 03.1	+0.1
ORIF	Oris-en-Rattie	3.20	244	ePn	Pn	23 01 27.1	-0.1
ORIF				eSn	Sn	23 02 04.4	-1.3
ORIF				eSg	Sg	23 02 19.4	+0.5
	comp=N,6.9nm,0.6s						
PAGF	Fort de Pagny	3.57	309	ePn	Pn	23 01 33.6	+1.4
	baz=121						
KHC	Kasperske Hory	3.68	41	ePN	Pn	23 01 35.0	+1.3
KHC				ePG	Pg	23 01 47.3	+0.7
KHC				eSN	Sn	23 02 20.2	+2.7
KHC				eSG	Sg	23 02 34.6	+0.4
MEZF	Maizieres J'vi	3.92	304	ePn	Pn	23 01 36.3	-0.6
	baz=126						
NKC	Novy Kostel	4.19	23	ePG	Pg	23 01 57.4	+1.1
NKC				eSG	Sg	23 02 50.2	-0.4
LOR	Lormes	4.25	284	eP	Pn	23 01 44.4	+2.9
	baz=108						
BRG	Berggiesshubel	5.21	29	SG	Sg	23 03 23.3	0.0
	comp=N,10nm,1.4s						
BAIF	Baives	5.29	316	ePn	Pn	23 01 55.1	-0.7
CLL	Collm	5.31	21	ePg	Pg	23 02 19.0	+1.1
CLL				eSg	Sg	23 03 30.0	+3.3
	comp=Z,17nm,1.7s						

KRSC 27 23:19:12.7±0.9, 54°.56N×162°.19E, h40km±6km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.27	269	eP	Pn	23 19 21.3	+0.7
MKZ				eS	Sn	23 19 26.7	+0.6
TUMD	Tumrok D	1.22	303	eP	Pn	23 19 34.1	+0.8
TUMD				eS	Sn	23 19 50.0	+1.5
KZV	Kizimen	1.23	297	eP	Pn	23 19 34.3	+0.8
KZV				eS	Sn	23 19 50.1	+1.2
TUMR	Tumrok	1.38	302	eP	Pn	23 19 37.1	+1.5
ZLN	Zelenaya	1.66	332	eP	Pn	23 19 41.2	+1.8
ZLN				eS	Sn	23 20 02.5	+3.0
KBTR	Krutoberegovo	1.69	12	eP	Pn	23 19 40.9	+1.2
KII	Karymskiy	1.69	253	eP	Pn	23 19 42.2	+2.4
KII				eS	Sn	23 20 03.2	+3.0
KBG	Krutoberegovo	1.72	10	eS	Sn	23 20 03.8	+3.0
LGNR	Loginova	1.75	331	eP	Pn	23 19 42.8	+2.0
LGNR				eS	Sn	23 20 05.0	+3.1
CIRR	Tsirk	1.76	333	eP	Pn	23 19 42.8	+2.0
SPN	Mys Shipunski	1.95	222	eP	Pn	23 19 44.6	+1.3
SPN				eS	Sn	23 20 06.9	+0.4
KLY	Klyuchi	1.96	334	eP	Pn	23 19 44.8	+1.4
KLY				eS	Sn	23 20 08.4	+1.7
SMKR	Semkarok	2.06	349	eP	Pn	23 19 47.3	+2.4
BDR	Baidarnaya	2.08	345	eP	Pn	23 19 47.7	+2.5
SRKR	Sorokina	2.17	345	eP	Pn	23 19 48.8	+2.4
NLC	Nalytchevo	2.19	231	eP	Pn	23 19 48.2	+1.7
NLC				eS	Sn	23 20 14.5	+2.2
SDLR	Sedlovina	2.34	238	eP	Pn	23 19 51.8	+3.0
SDLR				eS	Sn	23 20 19.8	+3.5
SMAR	Somma	2.39	238	eP	Pn	23 19 52.6	+3.1
UGLR	Uglovaya	2.41	237	eP	Pn	23 19 52.9	+3.2
KRX	Arik	2.41	241	eP	Pn	23 19 52.8	+3.0
ESO	Esso	2.42	306	eP	Pn	23 19 52.2	+2.4
AVH	Avacha	2.42	239	eP	Pn	23 19 53.3	+3.5
KOK	Koryaka	2.46	240	eP	Pn	23 19 53.7	+3.4
DALK	Dalny	2.55	234	eP	Pn	23 19 54.4	+2.9
DALK				eS	Sn	23 20 24.4	+3.1
PET	Petropavlovsk	2.60	235	eP	Pn	23 19 55.9	+3.7
PET				eS	Sn	23 20 25.8	+3.2
GNL	Ganaly	2.65	253	eP	Pn	23 19 56.2	+3.2
KRMR	Karymshinskiy	2.97	236	eP	Pn	23 20 01.1	+3.8
KRMR				eS	Sn	23 20 35.2	+3.5
MTVR	Mutnovka	3.17	231	eP	Pn	23 20 03.8	+3.6

VAO 27 23:28:51.9±0.2, 18°.69S×45°.52W, h0km, mb4.4, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMNB	Patos De Minas	0.88	280	eP	Pg	23 29 09.0	+0.2
PMNB				eS	Sb	23 29 21.4	-1.1
BSCB	Bom Sucesso	2.40	163	eP	Pn	23 29 32.8	+0.2
BSCB				eS	Sn	23 30 03.4	+0.7
MCI6	Montes Claros	2.44	40	eP	Pn	23 29 32.9	-0.2
MCI6				eS	Sn	23 30 03.5	-0.1
MCI9	Montes Claros	2.52	38	eP	Pn	23 29 34.7	+0.5
MCI9				eS	Sn	23 30 06.0	+0.3
MCI8	Montes Claros	2.54	37	eP	Pn	23 29 34.7	+0.3
MCI8				eS	Sn	23 30 07.1	+1.0
IPMB	Ipameri, GO	2.65	285	eP	Pn	23 29 35.4	-0.5
IPMB				eS	Sn	23 30 09.3	+0.4
BB19B	Bebedouro	3.68	230	eP	Pn	23 29 51.0	+0.8
BB19B				eS	Sn	23 30 35.3	+0.9
JANB	Januaria	3.80	18	eP	Pn	23 29 51.2	-0.5
JANB				eS	Sn	23 30 38.0	+0.8
SJMB	Sao Joao De Ma	4.11	91	eP	Pn	23 29 55.9	-0.2
SJMB				eS	Sn	23 30 46.1	+1.2
BSFB	Barra de Sao F	4.43	93	eP	Pn	23 30 00.3	-0.2
BSFB				eS	Sn	23 30 53.8	+0.9
ITRB	Iturama	4.68	257	eP	Pn	23 30 04.2	+0.3
ITRB				eS	Sn	23 31 00.0	+1.1
FRTB	Fartura	5.97	219	eP	Pn	23 30 21.8	+0.1
FRTB				eS	Sn	23 31 32.7	+1.9
C2SB	Chapadao do Su	6.93	268	eP	Pn	23 30 34.6	-0.2
C2SB				eS	Sn	23 31 56.1	+1.7
TRCB	Terra Rica	7.80	237	eP	Pn	23 30 46.6	-0.2
PTGB	Pitanga	8.54	224	eP	Pn	23 30 57.2	+0.3
AQDB	Aquidauana	9.76	258	eP	Pn	23 31 13.5	-0.1
ITAB	Concordia	10.45	214	eP	Pn	23 31 23.9	+0.8
CNLB	Canela	11.64	204	eP	Pn	23 31 39.3	0.0
CPSB	Cacapava Do Su	13.70	210	eP	Pn	23 32 07.5	+0.1
CPSB				eS	Sn	23 34 42.2	+1.7
RCBR	Riachuelo	15.86	37	eP	Pn	23 32 36.2	-0.6

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*IDC **27** 23:34:09.2±20.0, 1°.93S×96°.78E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/44, mbtmp3.5/3, Error ellipse: s-maj=538.7km s-min=121.8km az=125.0*

*ISCJB **27** 23:34:15.0±1.0, 1°.51S±0°.05×97°.16E±0°.06, h33km, mb3.6/2, Error ellipse: s-maj=9.1km s-min=5.9km az=140.1*

*DJA **27** 23:34:17.1±0.7, 1°S±5°×9°7E±°, h66km±29km, M4.3/9, mb4.7/2, MLv4.1/9*

ISC 27 23:34:16.5±1.5**, 1°.49S**±0°.07×**97°.13E**±0°.10**, h35km, n16, σ1s.01**/21**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	1.83	39	P	Pn	23 34 45.3	-0.2
PBSI				S	Sn	23 35 07.6	+0.1
SISI	Saibi	1.97	85	P	Pn	23 34 47.5	+0.2
SISI				S	Sn	23 35 10.4	-0.4
GSI	Gunungsitoli	2.81	9	P	Pn	23 34 57.5	-1.5
GSI				S	Sn	23 35 30.8	-0.9
PPSI	Pulau Pagai	3.14	114	P	Pn	23 35 03.3	-0.2
PPSI				S	Sn	23 35 38.3	-1.5
MNSI	Mandailing Nat	3.34	47	P	Pn	23 35 06.9	+0.7
MNSI				S	Sn	23 35 45.2	+0.5
PDSI	Padang	3.38	80	P	Pn	23 35 06.9	+0.1
PDSI				S	Sn	23 35 43.6	-2.2
PPI	Padang Panjang	3.42	73	P	Pn	23 35 07.8	+0.4
PPI				S	Sn	23 35 44.7	-2.1
KRJI	Kerinci	4.37	98	P	Pn	23 35 21.6	+1.1
KRJI				S	Sn	23 36 10.6	+0.3
MNAI	Manna	6.48	116	P	Pn	23 35 48.9	-0.5
	193nm,0.6s						
MDSI	Maura Dua	7.64	113	P	Pn	23 36 05.3	-0.1
CMAR	Chiang Mai Arr	19.90	5	P	Pn	23 38 47.6	+0.7
	0.6nm,0.3s,baz=196,slow=9.4,SNR=3.5						
H08S2	Diego Garcia H	25.30	255	T	T	00 05 40.0	
	baz=76,slow=74						
H08S3	Diego Garcia H	25.30	255	T	T	00 05 41.2	
	baz=76,slow=74						
H08S1	Diego Carcia H	25.31	255	T	T	00 05 42.5	
	baz=76						
MKAR	Makanchi Array	49.82	347	P	P	23 43 06.4	+0.4
	0.1nm,0.4s,baz=150,slow=7.7,SNR=3.5						
ZALV	Zalesovo Beam	56.19	351	P	P	23 43 53.5	+0.7
	0.6nm,0.4s,baz=177,slow=6.1,SNR=3.8						

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*IDC **27** 23:34:18.7±0.7, 6°.66S×148°.15E, h0km, mb4.3/11, mb1 4.5/13, mb1mx4.2/36, mbtmp4.3/13, ML3.9/2, MS4.2/14, Ms1 4.2/14, ms1mx4.0/26, Error ellipse: s-maj=21.5km s-min=9.7km az=119.0*

*ISCJB **27** 23:34:23.9±0.4, 6°.68S±0°.06×148°.13E±0°.08, h51km, mb4.3/14, MS4.1/11, Error ellipse: s-maj=12.7km s-min=6.5km az=30.6*

*NEIC **27** 23:34:23.8±2.0, 6°.63S×148°.12E, h31km±14km, mb4.4/6, Error ellipse: s-maj=8.9km s-min=5.7km az=126.0*

ISC 27 23:34:25.6±0.5**, 6°.72S**±0°.08×**148°.1E**±0°.1**, h51km, n38, σ1s.82**/40**, mb4.2**/14**, MS4.2**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.75	58	ePn	Pn	23 35 33.5	-1.3
RABL				eSn	Sn	23 36 14.0	-15
COEN	Coen	8.68	214	ePn	Pn	23 36 28.4	-0.2
COEN				eSn	Sn	23 37 59.7	-5.4
HNR	Honiara	12.02	104	LR	LR	23 41 23.3	
	comp=Z,686nm,19.9s,baz=273,slow=35						
CTA	Charters Tower	13.41	188	Pn	Pn	23 37 33.3	0.0
	0.2nm,0.3s,baz=25,slow=14,SNR=2.4						
CTA				LR	LR	23 43 02.1	
	comp=Z,1µm,18.4s,baz=8.0,slow=39						
WRAB	Tennant Creek	18.73	224	eP	P	23 38 41.0	+0.7
	19nm,0.8s						
WB2	Warramunga Arr	18.74	224	eP	P	23 38 40.5	0.0
	14nm,0.8s						
WB2				eSn	Sn	23 42 06.4	-3.9
WR1	Warramunga Arr	18.75	224	eP	P	23 38 41.3	+0.8
	18nm,0.8s						
WR1				eSn	S	23 42 12.5	+1.1
WRA	Warramunga Arr	18.75	224	P	P	23 38 41.3	+0.8
	0.6nm,0.3s,baz=49,slow=12,SNR=32						
WRA				S	S	23 42 12.5	+1.1
	0.0nm,0.3s,baz=44,slow=21,SNR=3.4						
WRA				LR	LR	23 46 43.5	
	comp=Z,2µm,18.1s,baz=50,slow=40						
GUMO	Guam	20.43	351	LR	LR	23 45 10.9	
	comp=Z,515nm,19.0s,baz=134,slow=32						
AS01	Alice Springs	21.66	217	eP	P	23 39 12.5	+0.5
AS31	Alice Springs	21.68	218	eP	P	23 39 12.8	+0.5
	5.8nm,0.6s						
AS31				eS	S	23 43 15.8	+6.0
ASAR	Alice Springs	21.69	218	P	P	23 39 13.1	+0.7
	16nm,0.9s,baz=52,slow=9.4,SNR=61						
ASAR				S	S	23 43 14.3	+4.5
	11nm,1.0s,baz=29,slow=21,SNR=12						
ASAR				LR	LR	23 48 13.9	
	comp=Z,820nm,18.1s,baz=44,slow=38						
DZM	Mont Dzumac	23.37	133	P	P	23 39 29.0	-0.9
	7.3nm,0.9s,baz=297,slow=11,SNR=3.2						
DZM				LR	LR	23 47 27.1	
	comp=Z,1µm,19.5s,baz=346,slow=34						
BATI	Baumata	24.42	260	P	P	23 39 41.0	+1.2
	64nm,0.8s,baz=114,slow=12,SNR=1.8						
BATI				LR	LR	23 51 47.5	
	comp=Z,805nm,18.8s,baz=84,slow=43						
FITZ	Fitzroy Crossi	24.65	241	P	P	23 39 43.5	+1.8
	54nm,1.0s,baz=46,slow=7.2,SNR=35						
FITZ				LR	LR	23 49 52.9	
	comp=Z,678nm,21.7s,baz=60,slow=38						
STKA	Stephens Creek	25.76	193	P	P	23 39 51.8	+0.1
	6.9nm,0.9s,baz=352,slow=9.4,SNR=8.2						
STKA				LR	LR	23 50 06.4	
	comp=Z,216nm,21.1s,baz=4.7,slow=37						
MJAR	Matsushiro Arr	44.03	349	P	P	23 42 27.4	-1.0
	2.3nm,0.8s,baz=176,slow=8.0,SNR=3.3						
MJAR				LR	LR	23 58 15.2	
	comp=Z,147nm,21.3s,baz=165,slow=33						
MAJO	Matsushiro	44.03	349	eP	P	23 42 27.4	-1.0
KSRS	Korea Array	47.82	338	LR	LR	00 01 23.7	
	comp=Z,282nm,20.7s,baz=148,slow=34						
USRK	Ussuriysk Ar.	52.73	345	P	P	23 43 34.7	-0.6
	1.5nm,0.6s,baz=183,slow=8.5,SNR=3.1						
USRK				LR	LR	00 04 02.3	
	comp=Z,80nm,19.0s,baz=147,slow=34						
KLR	Kul'dur	57.52	347	P	P	23 44 09.8	+0.1
	1.7nm,0.7s,baz=200,slow=5.4,SNR=2.7						
SONM	Songino Array	65.57	330	LR	LR	00 13 47.9	
	comp=Z,377nm,19.8s,baz=167,slow=36						
MK32	Makanchi Array	78.75	320	eP	P	23 46 22.6	-0.3
MKAR	Makanchi Array	78.75	320	P	P	23 46 22.6	-0.3
	0.6nm,0.9s,baz=100,slow=6.6,SNR=2.3						
ZALV	Zalesovo Beam	80.21	328	P	P	23 46 30.3	-0.3
	0.5nm,0.3s,baz=122,slow=5.2,SNR=2.4						
ZALV				LR	LR	00 22 10.9	
	comp=Z,104nm,19.6s,baz=74,slow=36						
ZAA1	Zalesovo Array	80.21	328	eP	P	23 46 30.3	-0.3
NIL	Nilore	81.24	305	eP	P	23 46 36.8	+0.2
	6.0nm,0.9s						
QSPA	South Pole Qui	83.25	180	eP	P	23 46 48.6	+2.0
	4.9nm,1.0s						
NV01	Mina Array Sit	96.94	52	eP	P	23 47 52.9	+0.8
NVAR	Mina Array Bea	96.94	52	P	P	23 47 52.9	+0.7
	0.9nm,0.8s,baz=249,slow=6.7,SNR=5.3						
GERES	GERESS Array B	123.12	326	PKP	PKPdf	23 53 16.8	0.0
	0.4nm,0.6s,baz=145,slow=3.3,SNR=4.6						
SDV	Santo Domingo	141.57	84	ePKPdf	PKiKP	23 53 54.5	-0.9
TOA0	Torodi Ar. Sit	146.34	284	ePKPdf	PKPab	23 54 02.3	-0.4
TORD	Torodi Ar. Bea	146.34	284	PKPbc	PKPbc	23 54 02.0	+0.2
	3.9nm,0.9s,baz=35,slow=3.1,SNR=19						
TOA1	Torodi Ar. Sit	146.34	284	ePKPdf	PKPbc	23 54 02.0	+0.1
PTGA	Pitinga	151.02	104	ePKPbc	PKiKP	23 54 15.4	+0.8
BDFB	Brasilia	152.64	144	PKPbc	PKiKP	23 54 18.3	+0.2
	3.7nm,0.8s,baz=224,slow=3.5,SNR=5.0						
DBIC	Dimbokro	153.15	271	PKPbc	PKiKP	23 54 19.2	+0.2
	2.5nm,0.7s,baz=303,slow=5.4,SNR=4.3						

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*DDA **27** 23:37:43.7, 39°.28N×39°.99E, h7km±2km, ML2.5*

*ISK **27** 23:37:43.2, 39°.28N×40°.01E, h3km, ML2.1/9*

*ISCJB **27** 23:37:44.8±0.5, 39°.33N±0°.04×40°.06E±0°.03, h12km±5km, Error ellipse: s-maj=6.2km s-min=4.1km az=7.4*

ISC 27 23:37:43.6±1.4**, 39°.28N**±0°.04×**40°.00E**±0°.03**, h9km**±13km**, n16, σ0s.76**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZN	Erzincan	0.37	324	PG	Pg	23 37 51.3	+0.3
ERZN				SG	Sb	23 37 57.3	-1.2
TNCL	Tunceli-Merkez	0.40	245	iP	Pn	23 37 55.3	-0.4
TNCL				iS	Sb	23 38 01.1	+2.0
TNCL				IAML_P			
	comp=Z,284nm,0.1s						
YEDI	Yedisu-Bingol	0.45	70	PG	Pg	23 37 52.8	+0.5
YEDI				SG	Sb	23 37 59.7	-0.9
EUZM	Uzumlu	0.48	331	iP	Pb	23 37 54.4	0.0
EUZM				IAML_P			
	comp=Z,3µm,0.1s						
BGOL	Bingol	0.60	119	iP	Pg	23 37 55.6	+0.4
BGOL				IAML_P			
	comp=Z,388nm,0.1s						
BNGB	Bingl	0.60	119	PG	Pg	23 37 54.9	-0.3
BNGB				SG	Sb	23 38 04.7	-0.3
KELT	Kelkit	1.04	326	iP	Pb	23 38 03.8	-0.1
BAYT	Aydıntepe-Bayb	1.11	5	PN	Pb	23 38 05.3	+0.1
ELZG	Elazig	1.12	226	iP	Pn	23 38 05.7	0.0
ELZG				iS	Sn	23 38 22.4	+1.2
ELZG				IAML_P			
	comp=Z,654nm,0.1s						
VRTB	Varto-Mus	1.14	96	PN	Pb	23 38 05.5	0.0
KEMA	Kemaliye	1.17	270	iP	Pn	23 38 06.6	+0.3
KEMA				iS	Sn	23 38 22.4	-0.1
KEMA				IAML_P			
	comp=Z,650nm,0.1s						
KOPR	Koprukoy-ERZUR	1.59	63	PN	Pb	23 38 13.5	+0.1
SUSE	Susehri	1.67	304	iP	Pg	23 38 15.2	-0.4
SUSE				IAML_P			
	comp=Z,169nm,0.3s						
GURO	Guroymak-BITLI	1.74	114	PN	Pb	23 38 15.9	0.0
MAZI	Mazidag	1.85	169	PN	Pb	23 38 17.0	-0.8
DARE	Darende-Malaty	2.09	251	PN	Pb	23 38 20.8	-1.0

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*NIED **27** 23:37:00, 28°.80N×128°.40E, h5km, Mw4.7 Best double couple: $M_0$1.31000×10^{16} NP1:ϕ_s232.00000°, δ68.00000°, λ-170.00000°. NP2:ϕ_s138.00000°, δ81.00000°, λ-22.00000°.*

*JMA **27** 23:37:50.2±0.3, 28°.78N×128°.35E, h11km±4km, M4.7*

*BJI **27** 23:37:51.2, 28°.67N×128°.27E, h11km, mB4.8/37, mb4.5/52, Ms4.8/52, Ms7 4.5/50*

*ISCJB **27** 23:37:51.6±0.6, 28°.75N±0°.02×128°.39E±0°.03, h18km±5km, mb4.5/66, MS4.3/26, Error ellipse: s-maj=4.3km s-min=3.4km az=19.4*

*MOS **27** 23:37:52.5±1.3, 28°.69N×128°.40E, h30km, mb4.7/30, MS4.4/6, Error ellipse: s-maj=8.3km s-min=5.7km az=101.1*

*GCMT **27** 23:37:52.7±0.3, 28°.73N±0°.02×128°.38E±0°.02, h16km±1km, MW4.9/81, Moment Tensor Solution. s13,c17; s81,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.63±.15; $M_{\theta\theta}$2.63±.12; $M_{\phi\phi}$-2.00±.10; $M_{r\theta}$-0.05±.27; $M_{\theta\phi}$-0.22±.10; $M_{\phi r}$-0.58±.33; Best double couple: $M_0$2.43200×10^{16} NP1:ϕ_s50.00000°, δ76.00000°, λ-165.00000°. NP2: ϕ_s316.00000°, δ76.00000°, λ-14.00000°. Principal axes: T 2.6410, Plg0.0000°, Azm183.0000°; N -0.4210, Plg70.0000°, Azm92.0000°; P -2.2230, Plg20.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **27** 23:37:55.4±1.8, 28°.65N×128°.43E, h50km±18km, mb3.9/16, mb1 4.1/20, mb1mx3.9/44, mbtmp4.2/20, ML3.2/4, MS4.1/24, Ms1 4.1/24, ms1mx4.0/41 Error ellipse: s-maj=19.6km s-min=11.7km az=86.0*

*NEIC **27** 23:37:55.7±0.6, 28°.62N×128°.37E, h44km±6km, mb4.7/42, Error ellipse: s-maj=6.8km s-min=5.1km az=122.0*

ISC 27 23:37:53.9±1.0**, 28°.69N**±0°.03×**128°.48E**±0°.04**, h27km**±7km**, n186, σ1s.90**/205**, mb4.6**/66**, MS4.4**/27**, 11C-10D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMN	Amaminishikomi	0.76	126	⇓P	Pb	23 38 07.4	-1.0
JAMN				eS	Sn	23 38 19.7	+0.4
JTAJ	Takarajima	0.79	54	⇓P	Pb	23 38 06.1	-2.9
JTAJ				S	Sb	23 38 16.6	-2.7
JTK	Tokunoshima	0.99	155	⇑P	Pn	23 38 10.7	-1.3
JTK				S	Sn	23 38 25.2	+0.1
JAM	Amami Oshima	1.03	105	⇓P	Pn	23 38 11.2	-1.3
JAM				eS	Sb	23 38 27.0	+0.9
JOKE	Okinoerabujima	1.32	176	P	Pn	23 38 15.7	-0.9
JOKE				eS	Sb	23 38 34.4	-0.2
JZK	Kikaishima	1.36	105	⇓P	Pn	23 38 17.9	+0.7
JZK				eS	Sb	23 38 39.4	+3.6
JYRO	Yoronjima	1.65	181	P	Pn	23 38 20.4	-0.8
JYRO				eS	Sb	23 38 43.4	-0.7
JNN	Nakanoshima	1.68	46	P	Pn	23 38 20.1	-1.4
JNN				eS	Sn	23 38 42.0	-0.2
JIH	Iheya	1.71	196	P	Pn	23 38 21.7	-0.2
JOW	Kunigami	1.85	186	⇑P	Pn	23 38 23.5	-0.4
JOW	Kunigami	1.85	186	P	Pn	23 38 23.6	-0.4
	7.7nm,0.3s,baz=102,slow=17,SNR=83						
JOW				S	Sb	23 38 49.5	-0.3
	29nm,0.3s,baz=234,slow=27,SNR=11						
JYAK	Yakushimahirau	2.35	48	P	Pn	23 38 29.7	-1.1
JAGN	Aguni-jima	2.36	208	P	Pn	23 38 30.8	-0.1
JMTN	Minamitane	2.71	50	P	Pn	23 38 35.9	+0.1
JMZ	Minamidaito 2	3.76	139	P	Pn	23 38 50.3	+0.2
JNU	Nakatsue	4.88	24	P	Pn	23 39 07.3	+1.7
	3.3nm,0.3s,baz=281,slow=14,SNR=26						
JNU				LR	LR	23 41 08.4	
	comp=Z,4µm,18.8s,baz=224,slow=39						
YOJ	Yonaguni jima	6.45	231	ePn	Pn	23 39 25.2	-1.9
YOJ	Yonaguni jima	6.45	231	eP	Pn	23 39 25.2	-1.9
YHNB	Yeheng	7.51	239	ePn	Pn	23 39 46.2	+4.4
SSLB	Suanglung	8.33	236	ePn	Pn	23 39 55.4	+2.4
YULB	Yu-li	8.34	232	ePn	Pn	23 39 52.5	-0.5
KS15	Wonju Array Si	8.75	357	ePn	Pn	23 40 00.6	+1.9
KSAR	Wonju Array Be	8.75	357	P	Pn	23 39 58.6	+0.1
KSAR	Wonju Array Be	8.75	357	P	Pn	23 39 58.7	+0.1
KSRS	Korea Array	8.76	357	P	Pn	23 39 58.6	-0.1
	0.4nm,0.3s,baz=179,slow=14,SNR=23						
KSRS				LR	LR	23 43 25.3	
	comp=Z,2µm,19.9s,baz=180,slow=38						
KS01	Wonju Array Si	8.78	357	ePn	Pn	23 40 00.6	+1.5
NJ2	Nanjing	8.96	294	eP	Pn	23 40 03.3	+1.7
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=N,5µm,10.3s						
NJ2				LR	LR		

	comp=E,4µm,12.5s						
NJ2				LR	LR		
	comp=Z,3µm,10.8s						
INU	**Inuyama**	**9.83**	**45**	*e*Pn	**Pn**	**23 40 15.0**	**+1.5**
JHJ	**Hachijo jima 2**	**10.67**	**63**	LR	LR	23 44 30.9	
	comp=Z,509nm,18.2s,baz=262,slow=37						
MAJO	**Matsushiro**	**11.34**	**44**	*e*Pn	**Pn**	**23 40 37.9**	**+3.8**
MAJO	**Matsushiro**	**11.34**	**44**	*e*P	**Pn**	**23 40 37.9**	**+3.8**
MJAR	**Matsushiro Arr**	**11.34**	**44**	P	**Pn**	**23 40 35.2**	**+1.1**
	0.1nm,0.3s,baz=240,slow=15,SNR=4.1						
MJAR				LR	LR	23 45 30.8	
	comp=Z,1µm,18.5s,baz=225,slow=40						
MJB9	**Matsu-Tunnel**	**11.34**	**44**	*e*Pn	**Pn**	**23 40 30.5**	**-3.7**
JCJ	**Chichijima**	**12.23**	**94**	LR	LR	23 45 02.3	
	comp=Z,328nm,21.7s,baz=307,slow=35						
WHN	**Wuhan**	**12.43**	**282**	P	**P**	**23 41 04.0**	**+3.3**
WHN				S	Sn	23 43 20.0	+13
WHN				LR	LR		
	comp=N,10µm,8.4s						
WHN				LR	LR		
	comp=E,8µm,9.0s						
WHN				LR	LR		
	comp=Z,9µm,8.8s						
BJT	**Baijiatuau**	**15.19**	**321**	*e*Pn	**Pn**	**23 41 26.7**	**+0.2**
	comp=Z,32nm,1.0s						
BJT	**Baijiatuau**	**15.19**	**321**	*e*P	**Pn**	**23 41 26.7**	**+0.2**
BJT				pmax	pmax		
	comp=Z,32nm,1.0s						
BJI	**Beijing**	**15.20**	**321**	P	**Pn**	**23 41 26.3**	**-0.3**
BJI				S	**Sn**	**23 44 11.5**	**-2.6**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJI				LR	LR		
	comp=Z,2µm,19.2s						
BJI				LR	LR		
	comp=Z,2µm,19.0s						
BJI				LR	LR		
	comp=Z,550nm,17.1s						
CN2	**Changchun**	**15.28**	**352**	*e*P	**P**	**23 41 33.0**	**+0.7**
CN2				*e*S	**Sn**	**23 44 19.0**	**+2.9**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,1µm,12.0s						
CN2				LR	LR		
	comp=Z,2µm,12.0s						
CN2				LR	LR		
	comp=Z,700nm,12.0s						
USA0B	**Ussuriysk Arra**	**15.74**	**9**	*e*Pn	**P**	**23 41 37.8**	**+0.5**
	comp=Z,17nm,1.0s						
USRK	**Ussuriysk Ar.**	**15.74**	**9**	P	**Pn**	**23 41 35.2**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=202,slow=8.4,SNR=4.2						
USRK				LR	LR	23 47 23.9	
	comp=Z,748nm,18.5s,baz=183,slow=36						
MDJ	**Mudanjiang**	**15.93**	**3**	P	**P**	**23 41 41.8**	**+2.3**
MDJ				pP	pP	23 41 44.3	-2.1
MDJ				sP	sP	23 41 46.5	-3.2
MDJ				PP	Pn	23 41 49.5	+13
MDJ				S	**Sn**	**23 44 35.3**	**+3.6**
MDJ				sS	S	23 44 40.3	-5.0
MDJ				SS	**SnSn**	**23 44 50.3**	**+5.3**
MDJ				pmax	pmax		
	comp=Z,49nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,550nm,8.7s						
MDJ				LR	LR		
	comp=Z,700nm,10.0s						
MDJ				LR	LR		
	comp=Z,1µm,11.2s						
MDJ				LR	LR		
	comp=Z,2µm,11.9s						
MDJ	**Mudanjiang**	**15.93**	**3**	*e*Pn	**P**	**23 41 39.1**	**-0.3**
	comp=Z,26nm,1.0s						
ENH	**Enshi**	**16.62**	**280**	*e*Pn	**P**	**23 41 46.5**	**-0.7**
	comp=Z,12nm,0.9s						
XAN	**Xi'an**	**17.53**	**293**	P	**P**	**23 41 57.8**	**+0.4**
XAN				pP	pP	23 42 03.0	-1.3
XAN				S	**Sn**	**23 45 06.8**	**-4.1**
XAN				SS	**SnSn**	**23 45 27.0**	**+2.7**
XAN				pmax	pmax		
	comp=Z,25nm,1.3s						
XAN				pmax	pmax		
	comp=Z,200nm,5.2s						
XAN				LR	LR		
	comp=Z,3µm,11.4s						
XAN				LR	LR		
	comp=Z,1µm,11.4s						
XAN				LR	LR		
	comp=Z,1µm,11.4s						
XAN	**Xi'an**	**17.53**	**293**	*e*Pn	**Pn**	**23 41 56.8**	**+0.4**
XAN	**Xi'an**	**17.53**	**293**	*e*P	**Pn**	**23 41 56.8**	**+0.4**
ERM	**Erimo**	**17.86**	**38**	⇑*e*P	**P**	**23 42 01.6**	**+0.7**
HHC	**Hu-ho-hao-te**	**18.41**	**316**	*e*P	**P**	**23 42 07.0**	**-0.1**
HHC				S	**Sn**	**23 45 28.3**	**-3.9**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,5.4s						
HHC				LR	LR		
	comp=Z,2µm,18.6s						
HHC				LR	LR		
	comp=Z,2µm,18.0s						
HHC				LR	LR		
	comp=Z,520nm,17.1s						
MSLP	**Maasin**	**18.77**	**191**	*e*P	**Pn**	**23 42 13.7**	**+2.1**
SCPH	**Surigao**	**19.01**	**189**	⇑*i*P	Pn	23 42 32.4	+18
BTO	**Baotou**	**19.24**	**313**	*e*P	**P**	**23 42 13.3**	**-3.0**
GYA	**Guiyang**	**19.46**	**269**	P	**Pn**	**23 42 19.8**	**-0.3**
GYA				PP	sP	23 42 37.8	+8.7
GYA				S	**Sn**	**23 45 59.5**	**+1.6**
GYA				SS	**SnSn**	**23 46 17.0**	**+4.9**
GYA				pmax	pmax		
	comp=Z,20nm,0.4s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=Z,2µm,11.9s						
GYA				LR	LR		
	comp=Z,890nm,10.0s						
GYA				LR	LR		
	comp=Z,2µm,11.2s						
QIZ	**Qiongzhong**	**19.55**	**245**	P	**P**	**23 42 18.5**	**-1.1**
QIZ				S	**S**	**23 45 57.3**	**-1.6**
QIZ				LR	LR		
	comp=Z,1µm,14.9s						
QIZ				LR	LR		
	comp=Z,1µm,17.3s						
QIZ				LR	LR		
	comp=Z,840nm,14.7s						
KLR	**Kul'dur**	**20.67**	**6**	*d* *i*P	**P**	**23 42 31.7**	**+0.1**
KLR	**Kul'dur**	**20.67**	**6**	P	**P**	**23 42 31.5**	**-0.1**
	comp=Z,18nm,0.9s,baz=190,slow=8.6,SNR=46						
YSS	**Yuzh-Sakhalins**	**21.38**	**28**	*e*P	**P**	**23 42 37.2**	**-2.0**
YSS				*e*		23 42 45.7	
YSS				*e*		23 42 59.1	
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,12.0s						
CD2	**Chengdu**	**21.56**	**282**	P	**P**	**23 42 42.5**	**+1.1**
CD2				pP	pP	23 42 45.8	-2.6
CD2				S	**S**	**23 46 38.8**	**-0.3**
CD2				sS	Sn	23 46 45.8	-2.3
CD2				pmax	pmax		
	comp=E,90nm,0.9s						
CD2				pmax	pmax		
	comp=E,200nm,4.7s						
CD2				LR	LR		
	comp=E,6µm,9.4s						
CD2				LR	LR		
	comp=E,4µm,12.2s						
CD2				LR	LR		
	comp=E,5µm,10.8s						
HIA	**Hailar**	**21.62**	**344**	⇓*e*P	**P**	**23 42 41.1**	**-0.7**
HIA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
LZH	**Lanzhou**	**22.04**	**296**	*e*P	**P**	**23 42 47.0**	**+0.4**
LZH				pP	pP	23 42 50.0	-3.6
LZH				sP	sP	23 42 52.0	-4.9
LZH				PP	**PnPn**	**23 43 12.3**	**+3.5**
LZH				*e*S	**S**	**23 46 43.3**	**-5.2**
LZH				sS	pS	23 46 49.8	-8.0
LZH				pmax	pmax		
	comp=Z,42nm,1.3s						
LZH				pmax	pmax		
	comp=Z,230nm,4.5s						
LZH				LR	LR		
	comp=Z,3µm,11.9s						
LZH				LR	LR		
	comp=Z,2µm,12.5s						
LZH				LR	LR		
	comp=Z,2µm,14.1s						
KUR	**Kuril'sk**	**22.55**	**38**	⇓*e*P	**P**	**23 42 52.5**	**+0.7**
KMI	**Kunming**	**23.21**	**267**	P	**P**	**23 43 00.5**	**+1.4**
KMI				pP	pP	23 43 02.5	-3.7
KMI				sP	sP	23 43 04.3	-5.2
KMI				PP		23 43 26.3	
KMI				S	**S**	**23 47 13.0**	**+3.3**
KMI				sS	pS	23 47 16.5	-1.3
KMI				pmax	pmax		
	comp=Z,16nm,1.0s						
KMI				pmax	pmax		
	comp=Z,140nm,4.1s						
KMI				LR	LR		
	comp=Z,1µm,12.4s						
KMI				LR	LR		
	comp=Z,730nm,10.4s						
KMI				LR	LR		
	comp=Z,900nm,10.8s						
KMI	**Kunming**	**23.21**	**267**	*e*P	**P**	**23 42 59.4**	**+0.3**
	comp=Z,13nm,0.9s						
KMI	**Kunming**	**23.21**	**267**	*e*P	**P**	**23 42 59.4**	**+0.3**
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
ZEA	**Zeya**	**25.05**	**358**	*e*P	**P**	**23 43 15.0**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,46nm,1.4s						
ZEA				MLR	MLR		
	comp=Z,1µm,13.0s						
ZEA				MLR	MLR		
	comp=N,1µm,12.0s						
ZEA				MLR	MLR		
	comp=E,1µm,12.0s						
ULN	**Ulaanbaatar**	**25.34**	**325**	*e*P	**P**	**23 43 18.2**	**-0.5**
	comp=E,8.5nm,1.1s						
ULN	**Ulaanbaatar**	**25.34**	**325**	*ce*P	**P**	**23 43 18.1**	**-0.5**
ULN				pmax	pmax		
	comp=Z,19nm,1.3s						
SONM	**Songino Array**	**25.66**	**324**	P	**P**	**23 43 21.0**	**-0.5**
	comp=Z,16nm,1.2s,baz=133,slow=7.0,SNR=41						
SONA1	**Songino Array**	**25.66**	**324**	*e*P	**P**	**23 43 21.6**	**+0.1**
GTA	**Gaotai**	**25.95**	**302**	*e*P	**P**	**23 43 23.8**	**-0.4**
GTA				pP	pP	23 43 28.0	-3.7
GTA				sP	sP	23 43 31.0	-3.9
GTA				S	**S**	**23 47 49.0**	**-4.1**
GTA				sS	pS	23 47 59.0	-2.3
GTA				SS	**SnSn**	**23 48 53.0**	**+2.2**
GTA				pmax	pmax		
	comp=Z,16nm,1.0s						
GTA				pmax	pmax		
	comp=Z,57nm,6.0s						
GTA				LR	LR		
	comp=Z,2µm,15.5s						
GTA				LR	LR		
	comp=Z,990nm,12.1s						
GTA				LR	LR		
	comp=Z,2µm,14.0s						
CHTO	**Chiang Mai**	**28.70**	**257**	*e*P	**P**	**23 43 47.0**	**-1.9**
CHTO	**Chiang Mai**	**28.70**	**257**	*e*P	**P**	**23 43 47.0**	**-1.9**
CMAR	**Chiang Mai Arr**	**28.85**	**256**	P	**P**	**23 43 50.5**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=79,slow=4.7,SNR=5.6						
CMAR				LR	LR	23 57 00.1	
	comp=Z,731nm,18.3s,baz=73,slow=40						
CM01	**Chiang Mai Arr**	**28.85**	**256**	*e*P	**P**	**23 43 49.9**	**-0.5**
ZAK	**Zakamensk**	**28.86**	**326**	*e*P	**P**	**23 43 47.2**	**-3.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
TLY	**Talaya**	**29.53**	**328**	*e*P	**P**	**23 43 54.9**	**-1.2**
	comp=Z,2.0nm,0.8s						
TLY	**Talaya**	**29.53**	**328**	*e*P	**P**	**23 43 54.8**	**-1.2**
TLY				*e*S	**S**	**23 48 52.4**	**+3.4**
TLY				pmax	pmax		
	comp=Z,19nm,1.4s						
TLY				MLR	MLR		
	comp=Z,1µm,14.0s						
FAKI	**Fak Fak**	**31.63**	**173**	*e*P	**P**	**23 44 13.1**	**-1.8**
	comp=Z,21nm,0.9s						
PETK	**Petropavlovsk-**	**32.51**	**33**	LR	LR	23 57 53.0	
	comp=Z,200nm,20.7s,baz=226,slow=37						
WMQ	**Urumqi**	**35.80**	**306**	P	**P**	**23 44 51.3**	**+0.3**
WMQ				pP	pP	23 44 58.3	-0.4
WMQ				sP	sP	23 45 02.8	+1.0
WMQ				pmax	pmax		
	comp=Z,28nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,270nm,4.5s						
WMQ				LR	LR		
	comp=Z,2µm,22.1s						
WMQ				LR	LR		
	comp=Z,720nm,16.9s						
WMQ				LR	LR		
	comp=Z,860nm,15.7s						
DGZ	**Jazzator, Alta**	**37.49**	**316**	⇑*e*P	**P**	**23 45 04.0**	**-1.4**
SEY	**Seymchan**	**37.62**	**18**	⇑*e*P	**P**	**23 45 06.0**	**-0.1**
MK01	**Makanchi Array**	**40.09**	**310**	*e*P	**P**	**23 45 26.5**	**-0.6**
MK31	**Makanchi Array**	**40.10**	**310**	*e*P	**P**	**23 45 26.0**	**-1.2**
MK31	**Makanchi Array**	**40.10**	**310**	*e*P	**P**	**23 45 26.0**	**-1.2**
MKAR	**Makanchi Array**	**40.10**	**310**	P	**P**	**23 45 26.5**	**-0.7**
	comp=Z,22nm,0.8s						
MKAR	**Makanchi Array**	**40.10**	**310**	P	**P**	**23 45 26.5**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,22nm,0.8s						
MKAR	**Makanchi Array**	**40.10**	**310**	P	**P**	**23 45 26.5**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=100,slow=9.5,SNR=32						
MAKZ	**Makanchi**	**40.32**	**310**	*e*P	**P**	**23 45 27.7**	**-1.3**
	comp=Z,3.9nm,1.1s						
MAKZ	**Makanchi**	**40.32**	**310**	*e*P	**P**	**23 45 27.7**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZAA0	**Zalesovo Array**	**40.46**	**321**	*e*P	**P**	**23 45 29.1**	**-0.8**
	comp=Z,6.1nm,0.9s						
ZALV	**Zalesovo Beam**	**40.46**	**321**	P	**P**	**23 45 29.4**	**-0.6**
	comp=Z,3.7nm,0.8s,baz=100,slow=7.3,SNR=16						
NVS	**Novosibirsk**	**41.64**	**322**	*e*P	**P**	**23 45 39.6**	**-0.1**
NVS				pmax	pmax		
	comp=Z,28nm,2.9s						
PDGK	**Podgornoye**	**41.65**	**304**	P	**P**	**23 45 41.1**	**+1.0**
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	**Kurchatov**	**43.22**	**315**	*e*P	**P**	**23 45 52.4**	**-0.3**
	comp=Z,17nm,1.0s						
KURK	**Kurchatov**	**43.22**	**315**	*ce*P	**P**	**23 45 53.2**	**+0.6**
KURK				pmax	pmax		
	comp=Z,29nm,1.7s						
KSH	**Kashi**	**44.25**	**298**	P	**P**	**23 45 57.3**	**-3.9**
KSH				pP	pP	23 46 07.5	-1.5
KSH				PP	**PcP**	**23 47 48.8**	**+3.3**
KSH				S	**S**	**23 52 27.5**	**-5.9**
KSH				sS	sS	23 52 45.5	-0.7
KSH				SS	**SS**	**23 55 51.5**	**-0.4**
KSH				pmax	pmax		
	comp=Z,250nm,7.0s						
KSH				LR	LR		
	comp=N,610nm,8.5s						
KSH				LR	LR		
	comp=E,530nm,6.1s						
KSH				LR	LR		
	comp=Z,430nm,7.8s						
BILL	**Bilibino**	**45.28**	**19**	*e*P	**P**	**23 46 06.9**	**-2.0**
BILL				*e*		23 47 51.4	
BILL				*e*PPP	PPP	23 48 31.4	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
AAK	**Ala-Archa**	**45.29**	**303**	*e*P	**P**	**23 46 08.5**	**-1.0**
	comp=Z,1.1nm,0.6s						
AAK	**Ala-Archa**	**45.29**	**303**	⇑*e*P	**P**	**23 46 10.6**	**+1.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
FITZ	**Fitzroy Crossi**	**46.59**	**184**	P	**P**	**23 46 17.7**	**-2.0**
	comp=Z,7.7nm,0.9s,baz=7.1,slow=8.1,SNR=3.8						
OTUK	**Ortayu**	**46.97**	**311**	P	**P**	**23 46 23.0**	**+0.5**
OTUK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
NRIK	**Noril'sk**	**47.00**	**341**	LR	LR	00 07 51.4	
	comp=Z,429nm,18.4s,baz=130,slow=38						
KK31	**Karatay Array**	**48.21**	**304**	*e*P	**P**	**23 46 32.8**	**+0.6**
KK31				*e*S	**S**	**23 53 32.7**	**+2.8**
KK31	**Karatay Array**	**48.21**	**304**	*e*P	**P**	**23 46 32.8**	**+0.6**
KK31				*e*S	**S**	**23 53 32.7**	**+2.8**
KKAR	**Karatay Array**	**48.21**	**304**	*e*P	**P**	**23 46 32.5**	**+0.3**
KKAR				*e*S	**S**	**23 53 32.7**	**+2.8**
KKAR	**Karatay Array**	**48.21**	**304**	*e*P	**P**	**23 46 32.5**	**+0.3**
KKAR				*e*S	**S**	**23 53 32.7**	**+2.8**
WRAB	**Tennant Creek**	**48.66**	**173**	*e*P	**P**	**23 46 36.0**	**+0.3**
WRAB	**Tennant Creek**	**48.66**	**173**	⇓*e*P	**P**	**23 46 35.6**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GAR	**Garm**	**48.67**	**298**	*e*P	**P**	**23 46 35.5**	**-0.4**
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	**48.67**	**173**	*i* P	**P**	**23 46 36.2**	**+0.3**
WRA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRA	**Warramunga Arr**	**48.67**	**173**	P	**P**	**23 46 34.2**	**-1.6**
	comp=Z,6.7nm,1.0s,baz=353,slow=8.4,SNR=17						
WRA				LR	LR	00 06 50.2	
	comp=Z,114nm,21.2s,baz=50,slow=36						
WB2	**Warramunga Arr**	**48.67**	**173**	*e*P	**P**	**23 46 37.3**	**+1.4**
BRVK	**Borovoye**	**48.68**	**317**	*e*P	**P**	**23 46 35.7**	**+0.1**
	comp=Z,18nm,1.0s						
BRVK	**Borovoye**	**48.68**	**317**	⇓*e*P	**P**	**23 46 35.5**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,20nm,1.0s						
CHGR	**Chuyangaron**	**49.60**	**298**	*e*P	**P**	**23 46 42.2**	**-0.8**
	comp=Z,7.8nm,0.9s						
KBL	**Kabul**	**50.33**	**293**	*e*P	**P**	**23 46 49.2**	**+0.4**
	comp=Z,12nm,1.0s						
KBL	**Kabul**	**50.33**	**293**	*e*P	**P**	**23 46 49.2**	**+0.4**
KBL				pmax	pmax		
	comp=Z,12nm,1.0s						
ASAR	**Alice Springs**	**52.31**	**174**	P	**P**	**23 47 02.1**	**-1.3**
	comp=Z,2.1nm,1.0s,baz=355,slow=6.9,SNR=7.7						
AS01	**Alice Springs**	**52.31**	**174**	*e*P	**P**	**23 47 01.4**	**-2.0**
ANM	**Nome**	**54.26**	**29**	*e*P	**P**	**23 47 17.9**	**+0.7**
	comp=Z,6.9nm,1.1s						
ANM	**Nome**	**54.26**	**29**	*e*P	**P**	**23 47 17.9**	**+0.7**
ANM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ABKAR	**Akbulak array**	**55.15**	**312**	*e*P	**P**	**23 47 23.1**	**-0.9**
ARU	**Arti**	**55.62**	**321**	*d* *i*P	**P**	**23 47 27.1**	**-0.1**
ARU				S	**S**	**23 55 14.5**	**+3.2**
ARU				SS	**SS**	**23 58 56.1**	**-0.1**
ARU				pmax	pmax		
	comp=Z,20nm,1.9s						
GEYT	**Alibeck**	**58.28**	**299**	P	**P**	**23 47 44.1**	**-2.3**
	comp=Z,1.6nm,0.7s,baz=72,slow=9.3,SNR=4.1						
SUA	**Susitna One**	**60.89**	**33**	*e*P	**P**	**23 48 05.1**	**+1.0**
	comp=Z,20nm,1.2s						
MDM	**Murphy Dome**	**61.59**	**29**	*e*P	**P**	**23 48 09.4**	**+0.8**
	comp=Z,12nm,1.0s						
ILAR	**Eielson Array**	**62.18**	**29**	LR	LR	00 15 40.6	
	comp=Z,118nm,20.6s,baz=259,slow=36						
MENT	**Mentasta**	**63.89**	**31**	*e*P	**P**	**23 48 24.0**	**-0.1**
	comp=Z,12nm,1.2s						
MAK	**Makhachkala**	**64.82**	**307**	*e*P	P	23 48 25.5	-4.9
MAK				*e*S	**S**	**23 57 03.3**	**-6.4**
MAK				*e*SS	**SS**	**00 01 19.1**	**-1.7**
MAK				MLR	MLR		
	comp=Z,356nm,17.0s						
KLMR	**Klimovskoe**	**64.90**	**327**	*e*P	**P**	**23 48 30.6**	**0.0**
KLMR				pmax	pmax		
	comp=Z,15nm,1.5s						
KLMR	**Klimovskoe**	**64.90**	**327**	*e*P	**P**	**23 48 30.7**	**+0.1**
KLMR				AMP		23 48 36.0	
	comp=Z,15nm,1.6s						
INK	**Inuvik**	**66.56**	**24**	*e*P	**P**	**23 48 41.2**	**+0.1**
	comp=Z,3.5nm,1.0s						
INK	**Inuvik**	**66.56**	**24**	*e*P	**P**	**23 48 41.2**	**+0.1**
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	**Khabaz**	**67.79**	**309**	P	**P**	**23 48 47.8**	**-1.5**
	comp=Z,1.6nm,0.8s,baz=56,slow=7.3,SNR=3.7						
VSR	**Storozhevoye**	**67.80**	**317**	⇑*e*P	**P**	**23 48 50.5**	**+1.2**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIV	**Kislovodsk**	**67.86**	**309**	*e*P	**P**	**23 48 47.1**	**-2.9**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FINES	**FINESS Array B**	**70.85**	**330**	P	**P**	**23 49 06.4**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=34,slow=5.4,SNR=3.4						
FINES				LR	LR	00 21 46.4	
	comp=Z,239nm,21.4s,baz=76,slow=37						
RES	**Resolute Bay**	**73.10**	**11**	*e*P	**P**	**23 49 21.0**	**-0.3**
	comp=Z,3.0nm,0.9s						
RES	**Resolute Bay**	**73.10**	**11**	*e*P	**P**	**23 49 21.0**	**-0.3**
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**73.82**	**319**	*i* P	**P**	**23 49 24.5**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**73.82**	**319**	P	**P**	**23 49 23.0**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=57,slow=6.1,SNR=6.0						
AKASG				LR	LR	00 23 22.7	
	comp=Z,280nm,18.1s,baz=60,slow=37						
BRTR	**Keskin Array B**	**75.71**	**308**	*ce*P	**P**	**23 49 37.7**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**75.71**	**308**	P	**P**	**23 49 34.8**	**-2.5**
	comp=Z,0.8nm,0.8s,baz=93,slow=7.4,SNR=4.7						
BRTR				LR	LR	00 26 31.8	
	comp=Z,113nm,19.5s,baz=42,slow=38						
YKW3	**Yellowknife Ar**	**76.17**	**25**	*e*P	**P**	**23 49 39.4**	**+0.1**
	comp=Z,6.3nm,1.1s						
YKA	**Yellowknife Ar**	**76.22**	**25**	P	**P**	**23 49 39.0**	**-0.5**
YKA	**Yellowknife Ar**	**76.22**	**25**	P	**P**	**23 49 39.0**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=297,slow=5.9,SNR=24						
YKA				LR	LR	00 27 21.2	
	comp=Z,16nm,18.2s,baz=298,slow=39						
YKB5	**Yellowknife Ar**	**76.22**	**25**	*e*P	**P**	**23 49 38.6**	**-0.9**
HFS	**Hagfors**	**76.76**	**332**	LR	LR	00 25 19.3	
	comp=Z,154nm,18.7s,baz=47,slow=37						
LVV	**L'vov**	**77.19**	**320**	*e*P	P	23 49 37.2	-8.1
NOA	**NORSAR Array B**	**77.22**	**334**	LR	LR	00 28 19.0	
	comp=Z,72nm,19.2s,baz=40,slow=39						
VYHS	**Vyhne**	**80.79**	**321**	*e*P	**P**	**23 50 07.3**	**+2.2**
VYHS	**Vyhne**	**80.79**	**321**	*e*P	**P**	**23 50 07.3**	**+2.2**
VRAC	**Vranov**	**81.57**	**322**	LR	LR	00 29 36.2	
	comp=Z,207nm,18.2s,baz=56,slow=38						
RPZ	**Rata Peaks**	**81.93**	**150**	LR	LR	00 28 11.4	
	comp=Z,55nm,18.1s,baz=310,slow=37						
B08A	**Colville Reser**	**82.27**	**39**	*e*P	**P**	**23 50 13.9**	**+1.0**
	comp=Z,3.5nm,0.9s						
GERES	**GERESS Array B**	**83.38**	**323**	LR	LR	00 30 44.2	
	comp=Z,238nm,18.1s,baz=60,slow=38						
NEW	**Newport**	**83.53**	**38**	*e*P	**P**	**23 50 21.0**	**+1.5**
	comp=Z,3.9nm,1.0s						
NEW	**Newport**	**83.53**	**38**	*e*P	**P**	**23 50 21.0**	**+1.5**
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PINE	**Pine Mountain**	**83.94**	**43**	*e*P	**P**	**23 50 23.0**	**+1.1**
	comp=Z,11nm,1.0s						
RAR	**Rarotonga**	**85.12**	**117**	LR	LR	00 20 25.8	
	comp=Z,74nm,20.3s,baz=312,slow=30						
MOD	**Modoc Plateau**	**85.39**	**44**	*e*P	P	23 50 34.2	+5.1
	comp=Z,7.8nm,1.1s						
BMO	**Blue Mountains**	**85.45**	**41**	*e*P	**P**	**23 50 30.5**	**+1.1**
	comp=Z,4.4nm,1.1s						
BMO	**Blue Mountains**	**85.45**	**41**	*e*P	**P**	**23 50 30.5**	**+1.1**
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
J08A	**Circle Bar Ran**	**85.65**	**42**	*e*P	**P**	**23 50 31.5**	**+1.1**
FFC	**Flin Flon**	**86.30**	**27**	*e*P	**P**	**23 50 33.2**	**0.0**
	comp=Z,7.2nm,0.9s						
FFC	**Flin Flon**	**86.30**	**27**	*e*P	**P**	**23 50 33.2**	**0.0**
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
EGMT	**Eagleton**	**87.51**	**35**	*e*P	**P**	**23 50 40.3**	**+0.9**
	comp=Z,6.0nm,0.9s						
HLID	**Hailey**	**87.89**	**40**	*e*P	**P**	**23 50 42.6**	**+1.3**
	comp=Z,4.9nm,0.9s						
RYN	**Ryan**	**88.40**	**46**	*e*P	**P**	**23 50 48.5**	**+4.6**
	comp=Z,5.7nm,0.3s						
KVN	**Kaiserville**	**88.41**	**46**	*e*P	P	23 50 48.9	+4.9
	comp=Z,3.2nm,1.0s						
KVN	**Kaiserville**	**88.41**	**46**	*e*P	P	23 50 48.9	+4.9
KVN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NV11	**Mina Array Sit**	**88.74**	**46**	*e*P	**P**	**23 50 43.3**	**-2.2**
	comp=Z,0.3nm,0.5s						
IMW	**Indian Meadow**	**89.61**	**38**	*e*P	**P**	**23 50 51.9**	**+2.2**
	comp=Z,3.2nm,1.1s						
LAO	**LASA Array**	**90.18**	**34**	*e*P	**P**	**23 50 53.9**	**+1.9**
	comp=Z,8.3nm,1.0s						
DUG	**Dugway, Tooele**	**90.93**	**42**	*e*P	**P**	**23 50 56.4**	**+0.7**
	comp=Z,4.3nm,1.0s						

DUG	Dugway, Tooele	90.93	42	eP	P	23 50 56.4	+0.7
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PD31	Pinedale Array	91.11	39	eP	P	23 51 00.3	+3.7
PDAR	Pinedale Array	91.11	39	P	P	23 50 55.6	-1.0
	comp=Z,0.5nm,0.9s,baz=290,slow=2.6,SNR=3.9						
PDAR				LR	LR	00 32 43.6	
	comp=Z,85nm,20.0s,baz=290,slow=36						
GSC	Goldstone, Bar	91.48	48	eP	P	23 50 59.1	+0.9
	comp=Z,5.7nm,0.4s						
GSC	Goldstone, Bar	91.48	48	eP	P	23 50 59.1	+0.9
GSC				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ULM	Lac du Bonnet	92.13	27	P	P	23 50 59.8	-1.1
	comp=Z,2.0nm,0.8s,baz=262,slow=7.1,SNR=4.0						
ULM				LR	LR	00 36 54.2	
	comp=Z,198nm,18.2s,baz=343,slow=38						
P17A	Butcher Ranch,	92.62	42	eP	P	23 51 05.4	+1.8
	comp=Z,8.8nm,1.2s						
KNB	Kanab	92.95	45	eP	P	23 51 07.7	+2.6
	comp=Z,5.5nm,0.9s						
KNB	Kanab	92.95	45	eP	P	23 51 07.7	+2.6
KNB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SCHQ	Schefferville	95.79	9	LR	LR	00 39 27.8	
	comp=Z,135nm,18.1s,baz=325,slow=38						

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*NEIC **27** 23:41:49.7±0.0, 15°.69N×94°.79W, h34^{km}, MD4.0(MEX), After MEX.*

MEX 27 23:41:49.7±0.9**, 15°.68N×94°.79W, h34**^{km}±328^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.27	274	eP	Pn	23 42 09.8	-1.3
HUIG				eS	Sn	23 42 24.0	-3.0
HUIG	Huatulco	1.27	274	eP	Pn	23 42 09.8	-1.3
HUIG				eS	Sn	23 42 24.0	-3.0
CMIG	Matias Romero	1.40	356	eP	Pn	23 42 11.7	-1.1
CMIG				i S	Sn	23 42 27.2	-3.0
CMIG	Matias Romero	1.40	356	eP	Pn	23 42 11.7	-1.1
CMIG				i S	Sn	23 42 27.2	-3.0
VHO	Vista Hermosa	2.32	307	eP	Pn	23 42 23.7	-2.0
VHO				eS	Sn	23 42 48.3	-4.9
VHO	Vista Hermosa	2.32	307	eP	Pn	23 42 23.7	-2.0
VHO				eS	Sn	23 42 51.4	-1.8
CCIG	Comitan	2.62	77	Pn	Pn	23 42 26.3	-3.5
TEIG	Tepich	7.67	53	Pn	Pn	23 43 38.8	-0.2
TEIG				Sn	Sb	23 46 08.4	+36

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*IDC **27** 23:52:48.3±1.1, 41°.03N×72°.52E, h0^{km}, mb3.7/9, mb1 3.8/14, mb1mx3.6/54, mbtmp3.7/14, ML3.2/6, MS4.0/1, Ms1 4.0/1, ms1mx2.6/60, Error ellipse: s-maj=20.0km s-min=11.1km az=154.0*

*MOS **27** 23:52:50.7±2.3, 41°.16N×72°.26E, h17^{km}, mb4.0/6, Error ellipse: s-maj=10.2km s-min=5.9km az=82.5*

MOS Felt (III) at Mayluu-Suu; (II-III) at Kyok-Tash.

*KRNET **27** 23:52:51.1±0.1, 41°.26N×72°.47E, h14^{km}, mb3.9*

*SOME **27** 23:52:54.5, 41°.33N×72°.63E, h15^{km}*

*NNC **27** 23:52:56.3±1.9, 41°.34N×72°.55E, h29^{km}±13^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=11.3km s-min=9.5km az=65.0*

ISC 27 23:52:51.9±0.9**, 41°.29N**±0°.02×**72°.53E**±0°.02**, h17**^{km}±6^{km}**, n110,** σ1^{s}**93**/152**, mb3.7**/9**, 38C-31D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.34	84	⇓iP	Pg	23 52 58.4	-0.8
	baz=81						
ARSB				⇓iS	Sg	23 53 04.3	+0.1
	baz=81						
ARK	Arkit	0.66	320	⇑iP	Pg	23 53 03.6	-1.5
	baz=25						
ARK				⇑iS	Sg	23 53 12.2	-1.7
	baz=25						
MNAS	Manas	1.20	359	⇓P	Pn	23 53 13.8	-0.3
	32nm,0.3s						
MNAS				⇓S	Sb	23 53 29.2	-0.3
	194nm,0.6s						
MNAS	Manas	1.20	359	PG	Pn	23 53 13.8	-0.3
MNAS	Manas	1.20	359	⇑iP	Pn	23 53 14.0	-0.1
	baz=1.0						
MNAS				⇑iS	Sn	23 53 30.4	+0.4
	baz=1.0						
AML	Almayashu	1.21	46	P	Pb	23 53 14.7	0.0
	SNR=160						
AML	Almayashu	1.21	46	⇑iP	Pb	23 53 14.7	0.0
	baz=46						
AML				⇑iS	Sg	23 53 32.2	+0.9
	baz=46						
ARLS	Aral	1.46	66	⇓iP	Pb	23 53 19.0	+0.2
	baz=66						
ARLS				⇓iS	Sg	23 53 40.0	+0.8
	baz=66						
SFK	Sufi-Kurgan	1.47	150	⇓P	Pn	23 53 18.1	+0.2
	131nm,0.5s						
SFK				⇑S	Sg	23 53 39.8	+0.2
	310nm,0.4s						
SFK	Sufi-Kurgan	1.47	150	PG	Pn	23 53 18.1	+0.2
SFK				S	Sg	23 53 39.8	+0.2
SFK	Sufi-Kurgan	1.47	150	⇓iP	Pn	23 53 18.1	+0.2
	baz=47						
SFK				⇓iS	Sg	23 53 38.6	-1.0
	baz=47						
MRKS	Merke	1.54	19	P	Pg	23 53 22.8	+1.1
	272nm,0.7s						
MRKS				S	Sn	23 53 36.4	-2.2
	293nm,0.6s						
MRKS	Merke	1.54	19	eP	Pg	23 53 22.7	+1.0
	272nm,0.7s						
MRKS				eS	Sg	23 53 42.2	+0.4
	293nm,0.6s						
EKS2	Erkin-Say	1.66	34	P	Pb	23 53 22.5	+0.3
	SNR=68						
EKS2	Erkin-Say	1.66	34	⇑iP	Pb	23 53 22.4	+0.3
	baz=35						
EKS2				⇑iS	Sg	23 53 45.5	+0.1
	baz=35						
UCH	Uchtor	1.76	57	P	Pb	23 53 24.5	+0.5
	SNR=210						
UCH	Uchtor	1.76	57	⇓iP	Pb	23 53 24.4	+0.5
	baz=57						
UCH				⇓iS	Sg	23 53 49.0	+0.4
	baz=57						
DRK	Karamyk	1.89	197	⇑iP	Pb	23 53 24.9	-1.3
	baz=96						
DRK				⇑iS	Sb	23 53 50.0	+0.4
	baz=96						
AAK	Ala-Archa	1.99	47	P	Pb	23 53 28.1	+0.3
	SNR=217						
AAK	Ala-Archa	1.99	47	⇓Pn	Pg	23 53 29.0	-1.3
	129nm,0.8s						
AAK				⇓Sn	Sg	23 53 56.3	+0.2
	236nm,0.6s						
AAK	Ala-Archa	1.99	47	⇓iP	Pb	23 53 28.0	+0.2
	baz=47						
AAK				⇓eS	Sg	23 53 55.0	-1.1
	baz=47						
AAK	Ala-Archa	1.99	47	Pn	Pg	23 53 28.9	-1.3
	38nm,0.3s,baz=156,slow=3.7,SNR=625						
AAK				Lg	Lg	23 53 56.1	
	45nm,0.3s,baz=3.2,slow=18,SNR=6.0						
FRU1	Bishkek	2.18	45	⇑iP	Pb	23 53 30.5	-0.5
	baz=45						
FRU1				⇑eS	Sb	23 53 59.4	+1.6
	baz=45						
KZA	Kyzart	2.19	68	P	Pb	23 53 32.2	+1.0
	SNR=61						
KZA	Kyzart	2.19	68	⇓iP	Pb	23 53 30.8	-0.5
	baz=68						
KZA				⇓iS	Sb	23 53 59.8	+1.6
	baz=68						
KBK	Karagaybulak	2.26	52	P	Pb	23 53 33.6	+1.1
	SNR=165						
KBK	Karagaybulak	2.26	52	⇑iP	Pb	23 53 32.0	-0.4
	baz=52						
KBK				⇑iS	Sb	23 54 01.5	+1.3
	baz=52						
KK31	Karatay Array	2.35	321	⇓Pn	Pb	23 53 34.0	+0.1
	24nm,0.3s,baz=132,slow=13,SNR=464						
KK31				⇓Sn	Sb	23 54 04.6	+2.0
	201nm,0.4s,baz=137,slow=29,SNR=23						
KK31	Karatay Array	2.35	321	PN	Pb	23 53 34.3	+0.4
KK31				SN	Sb	23 54 04.6	+2.0
KKAR	Karatay Array	2.35	321	PN	Pb	23 53 32.0	-1.9
CHMS	Chumysh	2.38	43	P	Pb	23 53 34.4	0.0
	SNR=63						
CHMS	Chumysh	2.38	43	⇑eP	Pb	23 53 32.9	-1.4
	baz=44						
CHMS				⇑iS	Sb	23 54 04.1	+0.7
	baz=44						
TAS	Tashkent	2.44	272	⇓iP	Pn	23 53 32.4	+1.3
	baz=73						
TAS				⇓iS	Sn	23 54 02.3	+1.7
	baz=73						
USP	Ospenovka	2.46	36	P	Pb	23 53 35.5	-0.3
	SNR=174						
USP	Ospenovka	2.46	36	⇑iP	Pb	23 53 34.9	-0.8
	baz=36						
USP				⇑iS	Sb	23 54 06.8	+1.1
	baz=36						
NRN	Naryn	2.62	86	⇑iP	Pb	23 53 36.3	-2.3
	baz=85						
NRN				⇑iS	Sb	23 54 10.0	-0.5
	baz=85						
SGDS	Sogindy	2.66	35	P	Pb	23 53 38.6	-0.6
	138nm,0.5s						
SGDS				S	Sn	23 54 03.9	-2.2
	119nm,0.7s						
TKM2	Tokmak 2	2.81	53	P	Pb	23 53 40.5	-1.1
	SNR=21						
TKM2	Tokmak 2	2.81	53	⇑Pn	Pb	23 53 40.6	-1.1
	32nm,0.4s						
TKM2				⇑Sn	Sb	23 54 14.9	-1.0
	228nm,0.5s						
TKM2	Tokmak 2	2.81	53	PN	Pb	23 53 40.6	-1.1
TKM2				SN	Sg	23 54 19.4	-2.7
TKM2	Tokmak 2	2.81	53	⇑iP	Pb	23 53 39.3	-2.4
	baz=54						
TKM2				⇑iS	Sb	23 54 14.7	-1.2
	baz=54						
BOOM	Boomskoye usch	2.81	64	⇑iP	Pb	23 53 39.5	-2.4
	baz=64						
BOOM				⇑iS	Sb	23 54 14.9	-1.2
	baz=64						
ULHL	Ulahol	2.94	70	P	Pb	23 53 44.5	+0.5
	SNR=14						
ULHL	Ulahol	2.94	70	⇑iP	Pb	23 53 41.6	-2.4
	baz=70						
ULHL				⇑iS	Sb	23 54 18.0	-1.6
	baz=70						
KST	Kastek	3.10	54	Pg	Pg	23 53 54.5	+3.2
	57nm,0.6s						
KST				Lg	Lg	23 54 30.8	
	283nm,0.9s						
KST	Kastek	3.10	54	eP	Pg	23 53 51.7	+0.4
	85nm,0.6s						
KST				eS	Sg	23 54 30.3	-1.1
	283nm,0.9s						
KSH	Kashi	3.17	123	Pn	Pn	23 53 43.5	+2.3
KSH				Sn	Sb	23 54 24.8	-1.5
KSH				smax	smax		
	comp=N,420nm,0.5s						
KSH				smax	smax		
	comp=E,370nm,1.0s						
MTBS	Maitube	3.43	56	Pg	Pg	23 54 01.0	+3.3
	comp=E,27nm,0.7s						
MTBS				Lg	Lg	23 54 41.9	
	comp=E,130nm,0.8s						
MTBS	Maitube	3.43	56	eP	Pg	23 53 56.2	-1.5
	comp=E,8.5nm,0.3s						
MTBS				eS	Sg	23 54 40.1	-2.0
	comp=E,130nm,0.8s						
KDJ	Kajisay	3.58	75	⇑iP	Pn	23 53 49.8	+2.9
	baz=75						
KDJ				⇑iS	Sn	23 54 33.3	+4.4
	baz=75						
AAA	Alma-Ata	3.78	58	ePN	Pb	23 54 00.0	+1.8
AAA				eS	Sg	23 54 52.5	-0.8
KNDC	Almaty	3.81	58	⇓Pn	Pn	23 53 51.4	+1.5
	comp=E,32nm,0.5s						
KNDC				⇓Lg	Lg	23 54 54.3	
	comp=E,565nm,1.1s						
KUU	Kurty	3.83	46	Pg	Pg	23 54 07.0	+1.7
	comp=E,14nm,0.6s						
KUU				Lg	Lg	23 54 52.2	
	comp=E,196nm,0.8s						
KUU	Kurty	3.83	46	eP	Pg	23 54 03.7	-1.6
	comp=E,13nm,0.4s						
KUU				eS	Sg	23 54 52.2	-2.7
	comp=E,196nm,0.8s						
MDOK	Medeo	3.84	59	Pg	Pg	23 54 07.9	+2.3
	comp=E,27nm,0.6s						
MDOK				Lg	Lg	23 54 53.7	
	comp=E,132nm,1.2s						
MDOK	Medeo	3.84	59	eP	Pg	23 54 03.0	-2.6
	comp=E,22nm,0.7s						
MDOK				eS	Sg	23 54 53.7	-1.7
	comp=E,132nm,1.2s						
KTBS	Karatobe	3.91	50	Pg	Pg	23 54 07.6	+0.8
	comp=E,14nm,0.5s						
KTBS				Lg	Lg	23 54 54.4	
	comp=E,137nm,0.8s						
KTBS	Karatobe	3.91	50	eP	Pg	23 54 05.3	-1.5
	comp=E,9.2nm,0.3s						
KTBS				eS	Sg	23 54 54.1	-3.4
	comp=E,137nm,0.8s						
KOTS	Kotyrbulak	3.92	59	Pg	Pg	23 54 09.3	+2.3
	comp=E,24nm,0.6s						
KOTS				Lg	Lg	23 54 57.0	
	comp=E,123nm,1.2s						
KOTS	Kotyrbulak	3.92	59	eP	Pg	23 54 06.1	-0.9
	comp=E,24nm,0.6s						
KOTS				eS	Sg	23 54 56.2	-1.5
	comp=E,123nm,1.2s						
CHKK	Chushkaly	4.17	51	Pg	Pg	23 54 12.9	+1.1
	comp=E,11nm,0.8s						
CHKK				Lg	Lg	23 55 02.8	
	comp=E,93nm,0.5s						
CHKK	Chushkaly	4.17	51	eP	Pg	23 54 10.4	-1.4
	comp=E,7.5nm,0.4s						
CHKK				eS	Sg	23 55 02.8	-3.1
	comp=E,132nm,0.5s						
SATY	Saty	4.71	66	Pg	Pg	23 54 28.9	+6.7
	comp=E,35nm,0.8s						
SATY				Lg	Lg	23 55 29.6	
	comp=E,36nm,1.3s						
KURS	Kuram	4.72	60	Pg	Pg	23 54 21.1	-1.2
	comp=E,8.9nm,0.8s						
KURS				Lg	Lg	23 55 16.4	
	comp=E,37nm,1.1s						
KURS	Kuram	4.72	60	eP	Pg	23 54 20.4	-1.9
	comp=E,6.3nm,0.5s						
KURS				eS	Sg	23 55 20.9	-2.6
	comp=E,72nm,1.2s						
ARXS	Arharly	4.87	51	Pg	Pg	23 54 25.7	+0.4
	comp=E,15nm,0.7s						
ARXS				Lg	Lg	23 55 24.8	
	comp=E,66nm,0.6s						
ARXS	Arharly	4.87	51	eP	Pg	23 54 22.2	-3.0
	comp=E,15nm,0.7s						
ARXS				eS	Sg	23 55 23.3	-5.0
	comp=E,66nm,0.6s						
UZB	Uzynbulak	5.17	67	Pg	Pg	23 54 31.7	+0.8
	comp=E,8.2nm,0.9s						
UZB				Lg	Lg	23 55 34.4	
	comp=E,34nm,1.2s						
UZB	Uzynbulak	5.17	67	eP	Pg	23 54 28.7	-2.1
	comp=E,5.9nm,0.7s						
UZB				eS	Sg	23 55 34.2	-3.5
	comp=E,34nm,1.2s						
PDGK	Podgornoye	5.55	66	Pg	Pg	23 54 38.2	0.0
	comp=E,3.7nm,0.5s						
PDGK				Lg	Lg	23 55 45.5	
	comp=E,13nm,0.7s						
PDGK	Podgornoye	5.55	66	⇑Pn	Pn	23 54 17.1	+3.2
	comp=E,11nm,0.7s						
PDGK				⇑Lg	Lg	23 55 50.0	
	comp=E,46nm,0.8s						
PDGK	Podgornoye	5.55	66	PN	Pn	23 54 17.7	+3.9
PDGK				LG	Lg	23 55 50.4	
TDK	Taldyqorghan	5.68	47	Pg	Pg	23 54 40.3	-0.3
	comp=E,26nm,0.6s						
TDK				Lg	Lg	23 55 49.2	
	comp=E,115nm,1.1s						
DJR	Jarkent	6.14	58	Pg	Pg	23 54 49.8	+0.3
	comp=E,3.4nm,0.7s						
DJR				Lg	Lg	23 56 05.9	
	comp=E,13nm,0.9s						
KAPS	Kapalarasan	6.38	49	Pg	Pg	23 54 49.4	-4.7
	comp=E,3.2nm,0.6s						
KAPS				Lg	Lg	23 56 05.1	
	comp=E,15nm,1.2s						
OTUK	Ortayu	6.96	359	⇓Pn	Pn	23 54 36.8	+3.7
	comp=E,5.5nm,0.5s						
OTUK				⇓Lg	Lg	23 56 31.7	
	comp=E,27nm,0.6s						
OTUK	Ortayu	6.96	359	PN	Pn	23 54 36.8	+3.7
MAKZ	Makanchi	8.76	48	⇓Pn	Pn	23 55 01.5	+3.7
	comp=E,1.9nm,0.9s						
MAKZ				⇑Lg	Lg	23 57 32.1	
	comp=E,9.1nm,1.0s						
MAKZ	Makanchi	8.76	48	P	Pn	23 55 01.5	+3.7
MK31	Makanchi Array	8.92	49	⇓Pn	Pn	23 55 03.7	+3.7
	comp=E,0.7nm,0.5s						
MK31				⇓Lg	Lg	23 57 39.5	
	comp=E,9.7nm,0.8s						
MK31	Makanchi Array	8.92	49	P	Pn	23 55 03.7	+3.7
MKAR	Makanchi Array	8.92	49	i P	Pn	23 55 03.5	+3.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	8.92	49	Pn	Pn	23 55 03.4	+3.4
	comp=Z,0.4nm,0.3s,baz=235,slow=14,SNR=30						
MKAR				Lg	Lg	23 57 31.0	
	comp=Z,0.3nm,0.3s,baz=247,slow=22,SNR=3.8						
KURBB	Kurchatov Arra	10.22	22	⇓P	Pn	23 55 17.1	-0.6
	comp=Z,2.1nm,0.6s						
KURBB	Kurchatov Arra	10.22	22	Pn	Pn	23 55 17.9	+0.1
	comp=Z,0.1nm,0.3s,baz=213,slow=12,SNR=11						
KURBB				Sn	Sn	23 57 07.7	-4.2
	comp=Z,0.0nm,0.3s,baz=200,slow=30,SNR=2.5						
KURBB				Lg	Lg	23 58 14.3	
	comp=Z,0.1nm,0.3s,baz=205,slow=28,SNR=4.9						
KURK	Kurchatov	10.33	22	⇑P	Pn	23 55 21.2	+1.9
	comp=Z,0.7nm,0.5s						
KURK	Kurchatov	10.33	22	P	Pn	23 55 21.2	+1.9
GEYT	Alibeck	11.61	258	Pn	Pn	23 55 39.1	+2.2
	comp=Z,0.3nm,0.3s,baz=70,slow=15,SNR=5.3						
GEYT				Sn	Sn	23 57 43.2	-2.9
	comp=Z,0.2nm,0.3s,baz=84,slow=13,SNR=2.7						
BVA0	Borovoye Array	11.83	354	⇑P	Pn	23 55 45.8	+6.1
	comp=Z,3.6nm,0.9s,baz=156,slow=12,SNR=4.2						
BVA0	Borovoye Array	11.83	354	P	Pn	23 55 45.8	+6.0
BVAR	Borovoye Array	11.83	354	Pn	Pn	23 55 41.8	+2.0
	comp=Z,0.1nm,0.3s,baz=161,slow=14,SNR=2.7						
BVAR				Sn	Sn	23 57 51.8	+0.5
	comp=Z,0.3nm,0.3s,baz=170,slow=17,SNR=2.7						
BVAR				Lg	Lg	23 59 02.4	
	comp=Z,0.3nm,0.3s,baz=238,slow=40,SNR=2.5						
BRVK	Borovoye	11.87	353	⇓P	Pn	23 55 46.3	+6.0
	comp=Z,3.8nm,1.0s						
BRVK	Borovoye	11.87	353	P	Pn	23 55 46.3	+6.0
AB31	Akbulak array	11.91	316	⇑P	Pn	23 55 39.8	-1.0
	comp=Z,1.0nm,0.4s						
AB31	Akbulak array	11.91	316	P	Pn	23 55 39.8	-1.0
DGZ	Jazzator, Alta	13.40	46	⇑eP	Pn	23 56 05.4	+4.1
AKTO	Aktyubinsk	13.61	317	⇓P	Pn	23 56 06.9	+2.8
	comp=Z,2.8nm,0.8s						
AKTO	Aktyubinsk	13.61	317	Pn	Pn	23 56 03.7	-0.4
	comp=Z,0.2nm,0.3s,baz=126,slow=18,SNR=4.2						
AKTO				Sn	Sn	23 58 30.1	-4.7
	comp=Z,0.1nm,0.3s,baz=94,slow=19,SNR=1.9						
ZALV	Zalesovo Beam	15.10	29	Pn	Pn	23 56 24.3	-0.1
	comp=Z,0.1nm,0.3s,baz=226,slow=14,SNR=2.6						
GNI	Garni	21.06	276	P	P	23 57 34.8	-0.5
	comp=Z,3.0nm,0.9s,baz=197,slow=19,SNR=1.7						
SONM	Songino Array	24.86	63	P	P	23 58 14.7	+1.1
	comp=Z,0.8nm,1.1s,baz=272,slow=9.9,SNR=2.5						
FINES	FINESS Array B	34.31	322	P	P	23 59 37.6	+0.5
	comp=Z,1.8nm,0.9s,baz=116,slow=13,SNR=3.8						
HFS	Hagfors	40.16	318	P	P	00 00 26.8	+0.1
	comp=Z,1.6nm,0.7s,baz=73,slow=11,SNR=5.1						
NOA	NORSAR Array B	41.38	320	P	P	00 00 37.0	+0.2
	comp=Z,0.4nm,0.6s,baz=90,slow=8.1,SNR=3.3						
BORG	Borgarnes	55.11	329	LR	LR	00 24 42.2	
	comp=Z,122nm,19.5s,baz=22,slow=35						
TORD	Torodi Ar. Bea	67.07	268	P	P	00 03 43.2	-1.4
	comp=Z,0.4nm,0.7s,baz=45,slow=6.4,SNR=3.5						
INK	Inuvik	68.99	10	P	P	00 03 57.0	+1.2
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	Inuvik	68.99	10	P	P	00 03 57.0	+1.2
	comp=Z,0.8nm,0.5s,baz=348,slow=6.2,SNR=4.6						
ILAR	Eielson Array	69.85	17	P	P	00 04 00.6	-0.6
	comp=Z,0.5nm,0.8s,baz=337,slow=4.0,SNR=5.7						
YKA	Yellowknife Ar	76.41	3	P	P	00 04 40.5	+0.6
	comp=Z,0.5nm,0.6s,baz=351,slow=5.9,SNR=12						

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*SOME **28** 00:09:28.7, 42°.00N×81°.00E, h5^{km}*

NNC 28 00:09:30.6±0.7**, 41°.81N×80°.68E, h0**^{km}**, mb2.7, mpv2.5, 3C-1D, Error ellipse: s-maj=6.9km s-min=4.4km az=65.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	1.62	327	eP	Pn	00 09 54.5	-6.1
	2.5nm,0.3s						
SHLS				eS	Sn	00 10 13.1	-9.2
	8.4nm,0.3s						
PDGK	Podgornoye	1.75	330	P	Pn	00 10 02.0	-0.5
	0.4nm,0.3s						
PDGK				S	Sb	00 10 26.0	-0.4
	1.2nm,0.2s						
PDGK	Podgornoye	1.75	330	⇓P	Pn	00 10 02.4	-0.1
	4.3nm,1.2s						
PDGK				⇑S	Sn	00 10 26.0	+0.4
	1.6nm,0.4s						
UZB	Uzynbulak	1.81	318	P	Pn	00 10 03.2	-0.1
	0.9nm,0.2s						
UZB				S	Sb	00 10 28.0	-0.2
	1.2nm,0.2s						
UZB	Uzynbulak	1.81	318	eP	Pn	00 10 03.2	-0.1
	0.5nm,0.2s						
UZB				eS	Sb	00 10 28.0	-0.2
	1.2nm,0.2s						
MDOK	Medeo	3.01	298	⇑Pg	Pb	00 10 25.1	-0.1
	8.6nm,1.3s						
MDOK				⇑Lg	Lg	00 11 05.8	
	6.6nm,1.4s						

IDC 28 00:14:25.3±3.0**, 32°.28S×178°.15W, h0**^{km}**, mb3.8**/2**, mb1 4.0**/3**, mb1mx3.8**/28**, mbtmp3.8**/3**, ML3.5**/1**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.9**/29**, Error ellipse: s-maj=71.0km s-min=36.1km az=115.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.11	212	Pn	Pn	00 16 10.5	-0.1
	0.8nm,0.3s,baz=346,slow=8.3,SNR=4.9						
URZ				Sn	Sn	00 17 30.9	-1.2
	0.8nm,0.3s,baz=168,slow=19,SNR=5.1						
ASAR	Alice Springs	42.91	269	P	P	00 22 26.4	+0.4
	0.8nm,0.7s,baz=102,slow=7.9,SNR=5.8						
WRA	Warramunga Arr	44.07	274	P	P	00 22 35.0	-0.3
	0.8nm,0.5s,baz=114,slow=7.9,SNR=12						
WRA				LR	LR	00 38 48.1	
	comp=Z,101nm,21.7s,baz=225,slow=33						
FINES	FINESS Array B	146.85	339	PKPbc	PKPdf	00 34 07.8	+0.8
	1.1nm,0.6s,baz=35,slow=5.1,SNR=6.6						

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*ISCJB **28** 00:16:03.0±0.6, 36°.96N±0°.03×140°.66E±0°.06, h11^{km}±4^{km}, Error ellipse: s-maj=7.8km s-min=4.5km az=10.6*

*JMA **28** 00:16:03.4, 36°.96N×140°.63E, h10^{km}±1^{km}, M3.3*

JMA Felt I J1.

*IDC **28** 00:16:11.7±3.9, 36°.73N×140°.34E, h75^{km}±35^{km}, mb3.0/3, mb1 3.3/3, mb1mx3.0/46, mbtmp3.3/3, Error ellipse: s-maj=34.4km s-min=22.7km az=91.0*

ISC 28 00:16:03.5±1.0**, 36°.96N**±0°.03×**140°.62E**±0°.04**, h9**^{km}±7^{km}**, n20,** σ0^{s}**99**/23**, 9C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFFD	Fukushimafurud	0.14	340	⇑P	Pg	00 16 06.7	0.0
JFFD				S	Sg	00 16 09.0	0.0
ONAJ	Iwakimizuishiy	0.20	44	⇑P	Pg	00 16 07.5	-0.2
JHO	Hitachi	0.35	187	⇑P	Pg	00 16 10.2	-0.2
JHO				S	Sg	00 16 15.2	+0.2
JFK	Kawauchi	0.46	26	⇑P	Pg	00 16 11.9	-0.6
JFK				S	Sg	00 16 18.1	-0.4
JSB	Shiboa	0.56	272	⇑P	Pb	00 16 15.2	-0.4
JSB				S	Sb	00 16 23.5	-0.2
JFT	Otama	0.61	338	⇑P	Pg	00 16 15.2	-0.1
JFT				S	Sg	00 16 23.5	+0.2
JYT	Yasato	0.80	206	⇑P	Pg	00 16 18.5	-0.5
JYT				S	Sg	00 16 29.8	+0.3

JFY	**Yanaizu**	0.86	302	⇑P	Pg	00 16 20.1	0.0
JFY				S	Sg	00 16 31.4	+0.1
JMM	**Marumori**	0.92	8	⇑P	Pg	00 16 20.1	-1.1
MJAR	**Matsushiro Arr**	1.98	259	P	Pn	00 16 38.0	+0.8
	2.8nm,0.3s,baz=76,slow=16,SNR=33						
MJAR				S	Sn	00 17 00.8	-1.5
	3.2nm,0.3s,baz=86,slow=27,SNR=20						
MAT	**Matsushiro**	1.98	259	P	Pn	00 16 38.2	+0.9
MAT				S	Sb	00 17 04.8	+0.2
H11N2	**WAKE ISLAND Hy**	28.66	120	T	T	00 51 46.1	
	baz=312,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	28.66	120	T	T	00 51 49.9	
	baz=312,slow=75,SNR=47						
H11N3	**WAKE ISLAND Hy**	28.67	120	T	T	00 51 50.5	
	baz=312,slow=75,SNR=45						
H11S1	**WAKE ISLAND Hy**	29.35	122	T	T	00 52 38.6	
	baz=314,slow=75,SNR=76						
H11S3	**WAKE ISLAND Hy**	29.35	122	T	T	00 52 38.9	
	baz=314,slow=75,SNR=47						
H11S2	**WAKE ISLAND Hy**	29.37	122	T	T	00 52 40.1	
	baz=314,slow=75,SNR=41						
MKAR	**Makanchi Array**	43.62	302	P	P	00 24 07.3	-0.8
	0.1nm,0.5s,baz=89,slow=7.4,SNR=2.5						
ILAR	**Eielson Array**	49.90	32	P	P	00 25 00.0	+3.0
	0.3nm,0.6s,baz=264,slow=5.3,SNR=5.0						
WRA	**Warramunga Arr**	56.90	187	P	P	00 25 47.2	-1.6
	0.8nm,0.7s,baz=3.6,slow=7.2,SNR=7.7						

MOS ***28*** *00:33:12.7±0.9, 67°.60N×142°.45E, h11^{km}, mb5.0/64, Error ellipse: s-maj=10.6km s-min=3.9km az=95.5*

BJI ***28*** *00:33:12.1, 67°.52N×142°.41E, h9^{km}, mB5.0/30, mb4.7/41, Ms4.8/26, Ms7 4.5/24*

IDC ***28*** *00:33:12.4±0.4, 67°.58N×142°.39E, h0^{km}, mb4.4/33, mb1 4.6/38, mb1mx4.5/47, mbtmp4.4/38, ML4.1/5, MS3.8/24, Ms1 3.8/24, ms1mx3.6/48, Error ellipse: s-maj=10.7km s-min=9.9km az=137.0*

ISCJB ***28*** *00:33:12.5±1.5, 67°.62N±0°.02×142°.33E±0°.05, h7^{km}±9^{km}, mb4.6/176, MS3.9/30, Error ellipse: s-maj=3.8km s-min=3.1km az=159.3*

YARS ***28*** *00:33:14.4±0.1, 67°.580N±0°.004×142°.52E±0°.01, h13^{km}±9^{km}*

NEIC ***28*** *00:33:14.6±0.2, 67°.55N×142°.26E, h10^{km}, mb4.7/97, Error ellipse: s-maj=4.6km s-min=3.3km az=171.0*

ISC 28 00:33:14.8±0.6, **67°.57N**±0°.03×**142°.45E**±0°.03, **h12**^{km}±3^{km}, **h13**^{km}**:pP-P, n406,** σ1^{s}**33**/435, **mb4.7**/191, **MS3.8**/30, **33C-24D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	**Moma**	1.14	164	*e*P	Pn	00 33 35.3	-1.3
MOMR				*e*S	Sb	00 33 50.4	-0.8
MOMR	**Moma**	1.14	164	*e*P	Pn	00 33 35.3	-1.3
MOMR				*e*S	Sb	00 33 50.4	-0.8
YBGR	**Belaya Gora**	1.71	54	*e*P	Pn	00 33 43.9	-0.4
YBGR				*e*S	Sn	00 34 05.8	-0.2
YBGR	**Belaya Gora**	1.71	54	*e*P	Pn	00 33 43.9	-0.4
YBGR				*e*P	Pb	00 33 44.3	-1.8
YBGR				*e*S	Sn	00 34 05.8	-0.2
DEPR	**Deputatskiy**	2.06	334	*e*P	Pn	00 33 49.1	-0.1
DEPR				*e*S	Sb	00 34 17.9	+0.2
DEPR	**Deputatskiy**	2.06	334	*e*P	Pn	00 33 49.1	-0.1
DEPR				*e*P	Pb	00 33 51.3	-0.8
DEPR				*e*S	Sb	00 34 17.9	+0.2
BTGS	**Batagay**	2.99	275	*e*P	Pn	00 34 02.8	+0.8
BTGS				*e*S	Sn	00 34 38.0	+0.3
BTGS	**Batagay**	2.99	275	*e*P	Pn	00 34 02.8	+0.8
BTGS				*e*P	Pb	00 34 08.8	+0.9
BTGS				*e*S	Sn	00 34 38.0	+0.3
BTGS				*e*S	Sb	00 34 47.9	+3.5
ATKR	**Artyk**	3.57	161	*e*P	Pn	00 34 10.9	+0.9
ATKR				*e*S	Sn	00 34 51.5	-0.6
ATKR	**Artyk**	3.57	161	*e*P	Pn	00 34 10.9	+0.9
ATKR				*e*P	Pb	00 34 19.0	+1.1
ATKR				*e*S	Sn	00 34 51.5	-0.6
ATKR				*e*S	Sb	00 35 05.1	+3.9
SEY	**Seymchan**	6.24	133	Pn	Pn	00 34 46.0	-0.5
	3.4nm,0.3s,baz=313,slow=11,SNR=42						
SEY				Lg	Lg	00 36 24.1	
	8.2nm,0.3s,baz=39,slow=17,SNR=5.1						
YAK	**Yakutsk**	7.77	230	*e*P	Pn	00 35 08.8	+1.3
YAK				*e*S	Sn	00 36 33.2	-2.0
YAK	**Yakutsk**	7.77	230	*e*P	Pn	00 35 08.8	+1.3
YAK				*e*P	Pb	00 35 34.2	+5.0
YAK				*e*S	Sn	00 36 33.2	-2.0
YAK				*e*S	Sg	00 37 15.3	-8.5
USMR	**Ust'-Maya**	7.96	210	*e*P	Pn	00 35 10.3	+0.1
USMR				*e*S	Sn	00 36 38.9	-1.1
USMR	**Ust'-Maya**	7.96	210	*e*P	Pn	00 35 10.3	+0.1
USMR				*e*P	Pb	00 35 39.6	+7.1
USMR				*e*S	Sn	00 36 38.9	-1.1
USMR				*e*S	Sg	00 37 22.8	-7.2
MA2	**Magadan**	8.82	151	*e*Pn	Pn	00 35 23.9	+1.9
MA2				*e*S	Sn	00 37 01.1	-0.1
MA2				Lg	Lg	00 37 46.0	
MA2	**Magadan**	8.82	151	*e*P	Pn	00 35 23.9	+1.9
MA2				*e*S	Sn	00 37 01.1	-0.1
MA2	**Magadan**	8.82	151	Pn	Pn	00 35 22.1	+0.1
	1.0nm,0.3s,baz=345,slow=10,SNR=21						
MA2				Lg	Lg	00 37 46.0	
	2.2nm,0.3s,baz=54,slow=19,SNR=2.4						
BILL	**Bilibino**	9.01	76	*e*Pn	Pn	00 35 26.1	+1.7
BILL				*e*Sn	Sn	00 37 01.0	-4.6
BILL	**Bilibino**	9.01	76	*e*P	Pn	00 35 26.1	+1.7
BILL				*e*		00 37 01.0	
NKL	**Nikolayevsk**	14.49	184	*e*P	Pn	00 36 39.7	+0.3
NKL				pmax	pmax		
	comp=Z,12nm,0.8s						
ZEA	**Zeya**	15.67	215	*e*P	Pn	00 36 55.2	+0.1
ZEA				pmax	pmax		
	comp=N,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=N,1µm,9.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,9.0s						
BOD	**Bodaibo**	16.13	247	*e*P	Pn	00 36 55.9	-5.1
BOD				*e*		00 40 07.9	
BOD				pmax	pmax		
	comp=Z,11nm,1.1s						
PEA0B	**Petropavlovsk-**	16.27	146	*e*Pn	Pn	00 37 02.1	-0.6
	comp=Z,48nm,1.0s						
PETK	**Petropavlovsk-**	16.27	146	Pn	Pn	00 37 02.9	+0.1
	comp=Z,0.8nm,0.3s,baz=330,slow=8.6,SNR=14						
PETK				LR	LR	00 43 42.3	
	comp=Z,524nm,21.8s,baz=323,slow=39						
PET	**Petropavlovsk**	16.55	144	*e*Pn	P	00 37 12.1	+3.1
	comp=Z,348nm,0.9s						
PET	**Petropavlovsk**	16.55	144	*e*P	P	00 37 12.1	+3.1
PET				pmax	pmax		
	comp=Z,348nm,0.9s						
GRNR	**Gornyy**	17.11	193	*e*P	P	00 37 15.0	-0.2
GRNR				pmax	pmax		
	comp=Z,42nm,1.2s						
SKR	**Severo-Kuril's**	18.25	151	⇓*e*P	P	00 37 28.9	+1.3
GAMB	**Gambell**	18.91	80	*e*P	P	00 37 34.7	-0.1
	comp=Z,14nm,0.8s						
KLR	**Kul'dur**	19.17	202	P	P	00 37 38.4	+0.6
	comp=Z,0.1nm,0.3s,baz=8.0,slow=8.7,SNR=12						
KLR				Lg	Lg	00 43 13.0	
	comp=Z,0.1nm,0.3s,baz=312,slow=19,SNR=3.8						
NRIK	**Noril'sk**	19.67	300	P	P	00 37 43.2	0.0
	comp=Z,0.4nm,0.3s,baz=68,slow=12,SNR=13						
NRIK				S	S	00 41 12.3	-12
	comp=Z,0.4nm,0.3s,baz=268,slow=16,SNR=2.2						
NRIK				Lg	Lg	00 43 27.3	
	comp=Z,0.3nm,0.3s,baz=202,slow=19,SNR=3.3						
NRIK				LR	LR	00 45 50.9	
	comp=Z,289nm,19.6s,baz=62,slow=39						
RDOG	**Red Dog Mine**	20.09	63	*e*P	P	00 37 47.7	0.0
	comp=Z,32nm,1.0s						
YSS	**Yuzh-Sakhalins**	20.67	179	*e*P	P	00 37 52.7	-1.4
	comp=Z,26nm,1.1s						
YSS	**Yuzh-Sakhalins**	20.67	179	⇓*e*P	P	00 37 52.8	-1.3
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=N,400nm,17.0s						
YSS				MLR	MLR		
	comp=Z,600nm,17.0s						
ANM	**Nome**	20.85	73	*e*P	Pn	00 37 57.3	-1.2
	comp=Z,14nm,0.6s						
ANM	**Nome**	20.85	73	*e*P	Pn	00 37 57.3	-1.2
ANM				pmax	pmax		
	comp=Z,14nm,0.6s						
SMY	**Shemya**	21.29	119	*e*P	P	00 38 01.8	+1.0
SMY	**Shemya**	21.29	119	*e*P	P	00 38 01.8	+1.0
HIA	**Hailar**	21.62	223	*e*P	P	00 38 04.8	+0.4
	comp=Z,19nm,0.8s						
HIA	**Hailar**	21.62	223	*e*P	P	00 38 04.8	+0.4
HIA				pmax	pmax		
	comp=Z,19nm,0.8s						
KUR	**Kuril'sk**	22.57	170	⇑*e*P	P	00 38 13.7	-0.8
ASAJ	**Asahikawa**	23.50	180	P	P	00 38 23.0	-1.2
ASAJ				pmax	pmax		
	comp=Z,14nm,0.7s						
ASAJ				MLR	MLR		
	comp=Z,206nm,19.9s						
ASAJ	**Asahikawa**	23.50	180	P	P	00 38 23.0	-1.2
	comp=Z,14nm,0.7s,baz=346,slow=9.9,SNR=7.7						
ASAJ				LR	LR	00 47 56.7	
	comp=Z,206nm,19.9s,baz=50,slow=38						
SPIA	**Saint Paul Isl**	23.62	93	*e*P	P	00 38 24.9	-0.4
	comp=Z,34nm,0.9s						
MDJ	**Mudanjiang**	23.99	203	P	P	00 38 29.0	+0.1
MDJ				pmax	pmax		
	comp=Z,56nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,250nm,3.4s						
MDJ	**Mudanjiang**	23.99	203	*e*P	P	00 38 28.9	0.0
	comp=Z,62nm,1.2s						
USA0B	**Ussuriysk Arra**	24.07	199	*e*P	P	00 38 30.0	+0.3
	comp=Z,30nm,0.9s						
USRK	**Ussuriysk Ar.**	24.07	199	P	P	00 38 29.6	0.0
	comp=Z,18nm,0.8s,baz=4.0,slow=9.0,SNR=31						
USRK				LR	LR	00 48 48.6	
	comp=Z,298nm,18.3s,baz=1.4,slow=39						
TOLK	**Toolik Lake Re**	24.23	56	*e*P	P	00 38 30.8	-0.1
IM3	**Indian Mountai**	24.23	63	*e*P	P	00 38 30.8	-0.2
TLY	**Talaya**	24.66	249	*e*P	P	00 38 34.0	-1.0
	comp=Z,1.8nm,0.9s						
TLY	**Talaya**	24.66	249	*e*P	P	00 38 36.8	+1.8
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,552nm,17.0s						
COLD	**Coldfoot**	24.75	59	*e*P	P	00 38 37.2	+1.6
	comp=Z,15nm,1.0s						
KIWB	**Kanaga Island**	25.09	109	*e*P	P	00 38 38.5	-0.3
VLA	**Vladivostok**	25.15	198	⇑*e*P	P	00 38 39.8	+0.4
VLA				pmax	pmax		
	comp=Z,29nm,0.6s						
CN2	**Changchun**	25.49	209	⇓P	P	00 38 42.3	-0.2
CN2				*e*sP	sP	00 38 49.5	+1.6
CN2				*e*S	S	00 43 06.5	-2.7
CN2				pmax	pmax		
	comp=Z,30nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,1µm,10.0s						
CN2				LR	LR		
	comp=Z,800nm,10.0s						
CN2				LR	LR		
	comp=Z,2µm,11.0s						
ERM	**Erimo**	25.61	179	⇑*e*P	P	00 38 43.9	+0.3
ERM				pmax	pmax		
	comp=Z,17nm,1.2s						
MOY	**Mondy**	25.63	252	*e*P	P	00 38 45.6	+1.7
MOY				*e*		00 44 13.5	
MOY				pmax	pmax		
	comp=Z,39nm,1.3s						
MLY	**Manley**	25.81	64	*e*P	P	00 38 45.7	+0.4
	comp=Z,7.7nm,0.8s						
ZAK	**Zakamensk**	25.86	248	*e*P	P	00 38 46.2	+0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CAST	**Castle Rocks**	26.31	67	*e*P	P	00 38 50.7	+0.9
	comp=Z,7.9nm,0.8s						
ULN	**Ulaanbaatar**	26.70	240	*e*P	P	00 38 55.3	+1.7
	comp=Z,1.0nm,0.8s						
ULN	**Ulaanbaatar**	26.70	240	*e*P	P	00 38 55.3	+1.7
MDM	**Murphy Dome**	26.71	62	*e*P	P	00 38 53.2	-0.2
	comp=Z,8.8nm,0.9s						
FYU	**Fort Yukon**	26.75	58	*e*P	P	00 38 55.5	+1.7
	comp=Z,27nm,1.2s						
COLA	**College**	26.89	62	*e*P	P	00 38 57.2	+2.3
	comp=Z,12nm,0.9s						
COLA	**College**	26.89	62	⇑*e*P	P	00 38 56.3	+1.3
COLA				pmax	pmax		
	comp=Z,34nm,2.7s						
TRF	**Thorofare Moun**	26.93	66	*e*P	P	00 38 57.2	+1.6
	comp=Z,22nm,1.1s						
SONA1	**Songino Array**	26.93	241	*e*P	P	00 38 54.6	-1.1
SONM	**Songino Array**	26.95	241	P	P	00 38 55.7	-0.2
	comp=Z,1.3nm,0.7s,baz=29,slow=9.7,SNR=9.8						
SONM				Lg	Lg	00 47 24.6	
	comp=Z,1.3nm,0.9s,baz=28,slow=26,SNR=5.6						
SONM				LR	LR	00 51 26.0	
	comp=Z,205nm,18.0s,baz=355,slow=41						
WRH	**Wood River Hil**	27.05	63	*e*P	P	00 38 56.1	-0.4
	comp=Z,5.0nm,1.0s						
MCK	**McKinley**	27.22	65	*e*P	P	00 39 00.2	+2.2
	comp=Z,9.9nm,1.0s						
IL1	**Eielson Array**	27.28	62	*e*P	P	00 38 58.7	+0.2
ILAR	**Eielson Array**	27.28	62	P	P	00 38 58.4	-0.1
	comp=Z,5.7nm,0.8s,baz=301,slow=7.9,SNR=48						
ILB	**Eielson Array**	27.28	62	*e*P	P	00 38 58.6	+0.1
SNY	**Shenyang**	27.75	211	⇑P	P	00 39 02.5	-0.4
SNY				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SNY				pmax	pmax		
	comp=Z,170nm,4.8s						
SNY				LR	LR		
	comp=Z,570nm,7.2s						
SNY				LR	LR		
	comp=Z,880nm,10.8s						
SNY				LR	LR		
	comp=Z,2µm,10.1s						
SUA	**Susitna One**	28.05	70	*e*P	P	00 39 05.5	-0.1
	comp=Z,9.3nm,0.6s						
INK	**Inuvik**	29.30	49	P	P	00 39 17.1	+0.7
	comp=Z,0.6nm,0.5s,baz=333,slow=11,SNR=3.4						
NVS	**Novosibirsk**	29.90	275	*e*P	P	00 39 20.7	-1.2
KDAK	**Kodiak Island**	29.92	77	P	P	00 39 20.2	-1.8
	comp=Z,8.9nm,1.0s,baz=137,slow=3.6,SNR=4.1						
KDAK				LR	LR	00 51 28.2	
	comp=Z,240nm,20.9s,baz=224,slow=37						
ZAA0	**Zalesovo Array**	29.97	272	*e*P	P	00 39 22.9	+0.4
	comp=Z,5.5nm,1.1s						
ZALV	**Zalesovo Beam**	29.97	272	P	P	00 39 21.0	-1.5
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV				MLR	MLR		
	comp=Z,48nm,21.6s						
ZALV	**Zalesovo Beam**	29.97	272	P	P	00 39 21.0	-1.5
	comp=Z,2.3nm,0.7s,baz=46,slow=6.4,SNR=8.5						
ZALV				LR	LR	00 51 17.2	
	comp=Z,48nm,21.6s,baz=68,slow=36						
DAWY	**Dawson**	30.23	59	*e*P	P	00 39 24.1	-0.7
	comp=Z,1.9nm,0.8s						
SPA0	**Spitsbergen Ar**	31.02	341	*e*P	P	00 39 31.9	+0.2
SPITS	**Spitsbergen Ar**	31.02	341	P	P	00 39 30.9	-0.8
	comp=Z,25nm,0.8s,baz=60,slow=11,SNR=13						
SPITS				PcP	PcP	00 42 26.8	-0.1
	comp=Z,16nm,1.0s,baz=81,slow=6.0,SNR=4.6						
SPITS				LR	LR	00 52 56.9	
	comp=Z,188nm,18.3s,baz=185,slow=38						
BJI	**Beijing**	31.14	221	*e*P	P	00 39 34.5	+1.6
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJI				LR	LR		
	comp=Z,600nm,9.1s						
BJI				LR	LR		
	comp=Z,1µm,7.4s						
MJAR	**Matsushiro Arr**	31.16	187	P	P	00 39 32.1	-1.2
	comp=Z,0.9nm,0.3s,baz=48,slow=7.1,SNR=3.3						
MJAR				LR	LR	00 52 05.2	
	comp=Z,87nm,19.1s,baz=0.0,slow=36						
KSRS	**Korea Array**	31.26	203	P	P	00 39 33.4	-0.6
	comp=Z,7.3nm,0.3s,baz=5.6,slow=7.9,SNR=7.2						
KSRS				LR	LR	00 52 42.6	
	comp=Z,195nm,21.1s,baz=10.0,slow=37						
KSAR	**Wonju Array Be**	31.27	203	P	P	00 39 33.4	-0.7
KSAR	**Wonju Array Be**	31.27	203	P	P	00 39 33.4	-0.7
HHC	**Hu-ho-hao-te**	31.62	228	*e*P	P	00 39 38.8	+1.5
HHC				S	S	00 44 39.3	-6.6
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,4.1s						
HHC				LR	LR		
	comp=Z,530nm,8.8s						
HHC				LR	LR		
	comp=Z,640nm,7.7s						
HHC				LR	LR		
	comp=Z,500nm,13.1s						
DGZ	**Jazzator, Alta**	32.31	264	⇑*e*P	P	00 39 44.3	+0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
RES	**Resolute Bay**	33.37	24	*e*P	P	00 39 51.8	-0.3
	comp=Z,4.9nm,0.7s						
RES	**Resolute Bay**	33.37	24	*e*P	P	00 39 51.8	-0.3
RES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RES	**Resolute Bay**	33.37	24	P	P	00 39 51.5	-0.7
	comp=Z,4.0nm,0.7s,baz=299,slow=9.0,SNR=20						
TULEG	**Thule**	34.83	12	*e*P	P	00 40 03.7	-1.1
	comp=Z,8.7nm,0.9s						
KURK	**Kurchatov**	34.88	274	*e*P	P	00 40 05.2	-0.3
	comp=Z,6.1nm,0.8s						
KURK	**Kurchatov**	34.88	274	⇑*i*P	P	00 40 05.6	+0.1
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DAG	**Danmarks Havn**	35.42	353	*i* P	P	00 40 09.1	-0.8
	comp=Z,18nm,0.8s						
DAG	**Danmarks Havn**	35.42	353	*i* P	P	00 40 09.1	-0.8
DAG				pmax	pmax		
	comp=Z,13nm,0.8s						
BVAR	**Borovoye Array**	36.17	283	LR	LR	00 56 05.0	
	comp=Z,132nm,19.8s,baz=38,slow=38						
BRVK	**Borovoye**	36.18	283	*e*P	P	00 40 16.8	+0.1
	comp=Z,7.9nm,0.9s						
BRVK	**Borovoye**	36.18	283	⇑*i*P	P	00 40 16.6	0.0
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARCES	**ARCESS Array B**	36.56	328	P	P	00 40 18.7	-1.0
	comp=Z,7.2nm,0.8s,baz=36,slow=7.8,SNR=9.4						
ARCES				PcP	PcP	00 42 42.7	+0.1
	comp=Z,5.2nm,1.1s,baz=14,slow=6.4,SNR=4.0						
MK31	**Makanchi Array**	36.66	266	*e*P	P	00 40 20.4	-0.4
MK31	**Makanchi Array**	36.66	266	*e*P	P	00 40 20.5	-0.4
MKAR	**Makanchi Array**	36.66	266	P	P	00 40 20.4	-0.4
	comp=Z,9.1nm,0.7s,baz=48,slow=7.1,SNR=67						
MKAR				PP	PP	00 41 44.3	+0.1
	comp=Z,3.0nm,0.8s,baz=52,slow=9.7,SNR=3.6						
MKAR				LR	LR	00 56 14.7	
	comp=Z,79nm,19.0s,baz=26,slow=38						
MK01	**Makanchi Array**	36.68	266	*e*P	P	00 40 20.4	-0.6
SVE	**Sverdlovsk**	36.74	295	*e*P	P	00 40 22.4	+1.0
SVE				pmax	pmax		
	comp=Z,12nm,0.8s						
MAKZ	**Makanchi**	36.77	267	*e*P	P	00 40 21.5	-0.3
	comp=Z,6.6nm,0.8s						
MAKZ	**Makanchi**	36.77	267	*e*P	P	00 40 21.5	-0.3
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WMQ	**Urumqi**	37.11	258	*e*P	P	00 40 26.8	+2.0
WMQ				pP	pP	00 40 30.3	+1.6
WMQ				sP	sP	00 40 33.3	+3.1
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,530nm,5.1s						
WMQ				LR	LR		
	comp=Z,350nm,15.3s						
WMQ				LR	LR		
	comp=Z,140nm,15.9s						
DLBC	**Dease Lake**	37.43	60	P	P	00 40 27.9	+0.6
	comp=Z,5.5nm,1.0s,baz=276,slow=10,SNR=3.4						
ARU	**Arti**	37.77	296	*e*P	P	00 40 29.8	-0.3
	comp=Z,18nm,1.0s						
ARU	**Arti**	37.77	296	*d i*P	P	00 40 29.6	-0.5
ARU				S	S	00 46 20.1	+0.1
ARU				SS	SnSn	00 49 00.8	+1.2
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TMCR	**Tamitsa**	37.98	316	*e*P	P	00 40 31.3	-0.5
TMCR				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2	**Nanjing**	38.15	213	*e*P	P	00 40 35.8	+2.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
LZH	**Lanzhou**	38.33	235	*e*P	P	00 40 36.3	+1.1
LZH				pP	sP	00 40 41.3	+0.6
LZH				sP	pP	00 40 43.8	+4.7
LZH				*e*PP	PnPn	00 42 07.3	+2.9
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,5.4s						
LZH				LR	LR		
	comp=Z,330nm,13.4s						
LZH				LR	LR		
	comp=Z,340nm,13.6s						
LZH				LR	LR		
	comp=Z,410nm,16.9s						
YKA	**Yellowknife Ar**	38.93	46	P	P	00 40 39.7	0.0
	comp=Z,1.9nm,0.7s,baz=323,slow=8.0,SNR=37						
YKB5	**Yellowknife Ar**	38.93	46	*e*P	P	00 40 39.6	-0.2
OTUK	**Ortayu**	39.28	277	P	P	00 40 43.1	+0.2
OTUK				pmax	pmax		
	comp=Z,11nm,2.1s						
SUMG	**Summit**	40.10	0	*i* P	P	00 40 49.5	-0.4
	comp=Z,18nm,0.7s						
SUMG	**Summit**	40.10	0	*i* P	P	00 40 49.5	-0.4
SUMG				pmax	pmax		
	comp=Z,18nm,0.7s						
KLMR	**Klimovskoe**	40.26	312	*e*P	P	00 40 50.0	-0.9
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	**Klimovskoe**	40.26	312	*e*P	P	00 40 50.0	-0.9
KLMR				AMP		00 40 52.1	
	comp=Z,18nm,1.2s						
JOF	**Joensuu**	40.74	319	P	P	00 40 54.9	+0.1
SCO	**Scoresbysund**	41.80	352	*i* P	P	00 41 03.4	0.0
	comp=Z,34nm,1.2s						
SCO	**Scoresbysund**	41.80	352	*i* P	P	00 41 03.4	0.0
SCO				pmax	pmax		
	comp=Z,34nm,1.2s						
USP	**Ospenovka**	42.62	271	P	P	00 41 11.7	+1.1
	SNR=6.8						
VAF	**Ylistaro**	42.69	324	P	P	00 41 11.1	+0.4
VAF				pmax	pmax		
	comp=Z,49nm,2.3s						
CHMS	**Chumysh**	42.75	270	P	P	00 41 13.2	+1.7
	SNR=8.0						
KBK	**Karagaybulak**	42.97	270	P	P	00 41 14.8	+1.3
	SNR=6.4						
ABKAR	**Akbulak array**	43.08	288	*e*P	P	00 41 14.0	-0.1
AAK	**Ala-Archa**	43.16	270	P	P	00 41 16.4	+1.3
	SNR=9.4						
AAK	**Ala-Archa**	43.16	270	*e*P	P	00 41 16.3	+1.3
	comp=Z,14nm,0.8s						
AAK	**Ala-Archa**	43.16	270	*d i*P	P	00 41 16.2	+1.2
AAK				pmax	pmax		
	comp=Z,13nm,0.6s						
AAK	**Ala-Archa**	43.16	270	LR	LR	00 58 25.9	
	comp=Z,104nm,18.3s,baz=0.5,slow=35						
CD2	**Chengdu**	43.16	232	*e*P	P	00 41 14.5	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FIA1	**FINESS Array S**	43.29	321	*e*P	P	00 41 15.1	-0.5
FINES	**FINESS Array B**	43.29	321	*i* P	P	00 41 15.3	-0.3
FINES				pmax	pmax		
	comp=Z,12nm,0.7s						
FINES	**FINESS Array B**	43.29	321	P	P	00 41 15.0	-0.6
	comp=Z,12nm,0.7s,baz=32,slow=9.1,SNR=50						
FINES				LR	LR	01 05 23.9	
	comp=Z,188nm,18.3s,baz=51,slow=45						
AML	**Almayashu**	43.90	271	P	P	00 41 23.2	+1.9
	SNR=7.3						
MNAS	**Manas**	44.05	272	P	P	00 41 23.7	+1.5
MNAS				pmax	pmax		
	comp=Z,16nm,1.0s						
KK31	**Karatay Array**	44.29	274	*e*P	P	00 41 24.8	+0.9
KK31	**Karatay Array**	44.29	274	*e*P	P	00 41 24.8	+0.9
KKAR	**Karatay Array**	44.29	274	*e*P	P	00 41 24.8	+0.9
KKAR	**Karatay Array**	44.29	274	*e*P	P	00 41 24.8	+0.9
KSH	**Kashi**	45.27	267	P	P	00 41 41.5	+10
KSH				pmax	pmax		
	comp=Z,350nm,7.9s						
SFJD	**Kangerlussuaq**	45.40	7	LR	LR	01 00 07.0	
	comp=Z,102nm,20.6s,baz=340,slow=36						

VSU	Vasula	45.73	319	⇑eP	P	00 41 35.3	+0.2
VSU				pmax	pmax		
	comp=Z,126nm,2.5s						
OBN	Obninsk	45.94	310	⇑eP	P	00 41 36.5	-0.3
OBN				e		00 43 22.2	
OBN				eS	S	00 48 10.8	-10
OBN				pmax	pmax		
	comp=Z,21nm,1.7s						
OBN				MLR	MLR		
	comp=Z,175nm,16.0s						
NC405	NORSAR Array S	46.72	330	eP	P	00 41 42.7	-0.2
NC204	NORSAR Array S	46.75	330	eP	P	00 41 42.9	-0.4
NB2	NORSAR Subarra	46.88	330	P	P	00 41 43.1	-1.1
	comp=Z,6.8nm,0.8s,baz=24,slow=7.9						
NOA	NORSAR Array B	46.88	330	P	P	00 41 43.2	-1.1
	comp=Z,11nm,0.8s,baz=24,slow=7.8,SNR=27						
NOA				LR	LR	01 06 30.3	
	comp=Z,108nm,18.2s,baz=20,slow=43						
NBO00	NORSAR Array S	46.97	330	eP	P	00 41 49.0	+4.1
FRB	Frobisher Bay	47.10	18	LR	LR	01 01 46.8	
	comp=Z,102nm,20.6s,baz=360,slow=36						
NC602	NORSAR Array S	47.10	330	eP	P	00 41 45.2	-0.7
NAO01	NORSAR Array S	47.12	330	eP	P	00 41 45.6	-0.5
FCC	Fort Churchill	47.33	36	eP	P	00 41 47.0	-0.6
	comp=Z,6.6nm,1.0s						
FCC	Fort Churchill	47.33	36	eP	P	00 41 47.1	-0.6
FCC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LPSR	Galich'ya Gora	47.39	306	eP	P	00 41 47.7	-0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRH	Novokhopyorsk	47.72	303	eP	P	00 41 49.6	-1.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GAR	Garm	47.89	272	eP	P	00 41 53.4	+0.9
	comp=Z,25nm,0.8s						
GAR	Garm	47.89	272	eP	P	00 41 53.4	+0.9
GAR				pmax	pmax		
	comp=Z,25nm,0.8s						
KONO	Kongsberg	48.48	330	⇓eP	P	00 41 56.0	-0.6
KONO				pmax	pmax		
	comp=Z,38nm,2.5s						
VSR	Storozhevoye	48.52	305	c iP	P	00 41 56.7	-0.3
VSR				pmax	pmax		
	comp=Z,22nm,0.9s						
CHGR	Chuyangaron	48.64	272	eP	P	00 41 59.0	+0.8
	comp=Z,35nm,0.7s						
KMI	Kunming	48.89	230	P	P	00 42 02.5	+2.1
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,87nm,4.1s						
FFC	Flin Flon	49.00	44	eP	P	00 41 59.8	-0.9
	comp=Z,12nm,0.8s						
FFC	Flin Flon	49.00	44	eP	P	00 41 59.8	-0.9
FFC				pmax	pmax		
	comp=Z,12nm,0.8s						
SUW	Suwalki	50.60	318	eP	P	00 42 12.2	-0.6
SUW	Suwalki	50.60	318	eP	P	00 42 12.3	-0.6
SUW	Suwalki	50.60	318	eP	P	00 42 12.3	-0.6
AKASG	Malin Array Be	51.95	312	P	P	00 42 21.8	-1.1
	comp=Z,8.5nm,0.7s,baz=28,slow=8.4,SNR=16						
AKASG				LR	LR	01 06 59.3	
	comp=Z,85nm,19.5s,baz=330,slow=39						
AKBB	Malin Array Si	51.95	312	eP	P	00 42 22.4	-0.6
	comp=Z,8.9nm,0.9s						
KIEV	Kiev	51.96	312	eP	P	00 42 21.6	-1.3
	comp=Z,10.0nm,1.0s						
KIEV	Kiev	51.96	312	eP	P	00 42 21.7	-1.3
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AK11	Malin Array Si	51.98	312	eP	P	00 42 22.4	-0.8
JIRN	Jiri	52.01	249	eP	P	00 42 25.5	+1.3
	comp=Z,70nm,0.8s						
KKN	Kakani	52.22	250	eP	P	00 42 27.0	+1.4
	comp=Z,43nm,0.8s						
DANN	Dangsing	52.27	252	eP	P	00 42 27.4	+1.4
	comp=Z,40nm,0.6s						
KBL	Kabul	52.29	270	eP	P	00 42 25.6	-0.4
	comp=Z,4.4nm,0.6s						
KBL	Kabul	52.29	270	eP	P	00 42 25.6	-0.4
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PKI	Pulchoki	52.37	250	eP	P	00 42 28.1	+1.3
	comp=Z,28nm,0.9s						
DMN	Daman	52.45	250	eP	P	00 42 28.9	+1.6
	comp=Z,17nm,0.7s						
PYUN	Piuthan	52.77	253	eP	P	00 42 30.5	+0.9
	comp=Z,51nm,1.0s						
PINE	Pine Mountain	52.78	65	eP	P	00 42 29.9	+0.3
	comp=Z,6.1nm,0.8s						
KOLN	Koldanda	52.85	252	eP	P	00 42 31.4	+1.2
	comp=Z,43nm,0.8s						
GEYT	Alibeck	53.47	282	P	P	00 42 34.9	+0.4
	comp=Z,6.5nm,0.9s,baz=35,slow=5.3,SNR=14						
GEYT				LR	LR	01 08 06.0	
	comp=Z,183nm,18.6s,baz=85,slow=39						
GYA0B	ALIBECK ARRAY	53.47	282	eP	P	00 42 35.8	+1.3
	comp=Z,8.3nm,0.9s						
KIV	Kislovodsk	53.72	298	eP	P	00 42 36.5	+0.3
	comp=Z,20nm,0.9s						
KIV	Kislovodsk	53.72	298	⇓iP	P	00 42 36.6	+0.3
KIV	Kislovodsk	53.72	298	i P	P	00 42 36.6	+0.3
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KBZ	Khabaz	53.85	298	P	P	00 42 37.4	+0.3
	comp=Z,12nm,0.9s,baz=49,slow=5.8,SNR=24						
KBZ				LR	LR	01 08 46.6	
	comp=Z,108nm,19.7s,baz=19,slow=40						
SHA1	Shidzhatmaz	53.93	298	i P	P	00 42 38.8	+0.9
NEY	Neytrino	54.34	298	⇓eP	P	00 42 40.8	-0.1
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZEI	Tsey	54.34	296	eP	P	00 42 39.7	-1.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZKTA	Zakatala	54.41	294	P	P	00 42 41.4	+0.2
SEKA	Sheki	54.58	293	P	P	00 42 42.5	-0.1
ULM	Lac du Bonnet	54.65	42	P	P	00 42 40.7	-2.1
	comp=Z,2.3nm,0.7s,baz=1.9,slow=11,SNR=3.0						
KWP	Kalwaria Pacla	54.71	316	eP	P	00 42 43.9	+0.6
KWP	Kalwaria Pacla	54.71	316	eP	P	00 42 43.9	+0.6
ESK	Eskdalemuir	54.80	337	eP	P	00 42 43.8	0.0
	comp=Z,15nm,0.8s						
ESK	Eskdalemuir	54.80	337	eP	P	00 42 43.8	0.0
ESK				pmax	pmax		
	comp=Z,15nm,0.8s						
OJC	Ojcow	54.92	319	eP	P	00 42 45.1	+0.2
OJC	Ojcow	54.92	319	eP	P	00 42 44.8	0.0
	comp=Z,16nm,0.9s						
OJC	Ojcow	54.92	319	eP	P	00 42 44.8	0.0
OJC				pmax	pmax		
	comp=Z,16nm,0.9s						
TBLG	Delisi	54.99	295	eP	P	00 42 46.3	+0.9
	comp=Z,13nm,1.1s						
TBLG	Delisi	54.99	295	eP	P	00 42 46.3	+0.9
TBLG				pmax	pmax		
	comp=Z,13nm,1.1s						
PAYA	Payao	55.17	231	P	P	00 42 45.8	-1.2
	comp=Z,8µm,0.8s,comp=Z,458µm						
YHB	Horse Butte	55.19	56	eP	P	00 42 51.5	+4.4
	comp=Z,6.8nm,0.9s						
KSP	Ksiaz	55.21	321	eP	P	00 42 47.0	+0.1
KSP	Ksiaz	55.21	321	eP	P	00 42 47.0	+0.1
YHH	Holmes Hill	55.26	56	eP	P	00 42 49.2	+1.4
	comp=Z,5.2nm,0.9s						
GANJ	Ganja	55.39	293	P	P	00 42 48.6	+0.2
RLMT	Red Lodge	55.47	55	eP	P	00 42 50.0	+0.9
	comp=Z,12nm,0.8s						
MILM	Milestii Mici	55.47	310	⇓iP	P	00 42 46.9	-1.9
NIE	Niedzica	55.53	318	eP	P	00 42 49.8	+0.5
NIE	Niedzica	55.53	318	eP	P	00 42 49.8	+0.5
CLL	Collm	55.55	324	eP	P	00 42 48.1	-1.1
	comp=Z,23nm,0.8s						
CLL	Collm	55.55	324	⇓iP	P	00 42 48.6	-0.7
	comp=Z,26nm,0.8s						
CLL				epP	pP	00 42 52.0	-1.3
CLL				esP	sP	00 42 53.0	-1.8
CLL				LmV		01 08 00.0	
	comp=Z,100nm,21.0s						
CLL	Collm	55.55	324	⇓iP	P	00 42 48.6	-0.7
CLL				pmax	pmax		
	comp=Z,26nm,0.8s						
YFT	Old Faithful	55.57	56	eP	P	00 42 54.1	+4.2
	comp=Z,6.3nm,0.8s						
UPC	Upice	55.59	321	eP	P	00 42 49.3	-0.3
UPC	Upice	55.59	321	eP	P	00 42 49.3	-0.3
DPC	Dobruska-Polom	55.66	321	eP	P	00 42 50.4	+0.2
DPC				ex	x	00 43 01.9	
DPC	Dobruska-Polom	55.66	321	eP	P	00 42 50.4	+0.2
OKC	Ostrava-Krasne	55.69	320	eP	P	00 42 50.6	+0.2
OKC	Ostrava-Krasne	55.69	320	eP	P	00 42 50.6	+0.2
H17A	Grant Village	55.70	56	eP	P	00 42 54.2	+3.3
	comp=Z,8.1nm,1.0s						
BRG	Berggiesshubel	55.74	323	eP	P	00 42 50.3	-0.4
	comp=Z,7.1nm,1.0s						
BRG				e		00 43 02.3	
	comp=Z,10.0nm,1.4s						
BRG	Berggiesshubel	55.74	323	eP	P	00 42 50.3	-0.4
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YPP	Pitchstone Pla	55.74	56	eP	P	00 42 56.1	+4.9
	comp=Z,3.7nm,0.9s						
KRLC	Kraliky	55.81	321	eP	P	00 42 51.4	+0.1
KRLC				epP	sP	00 42 57.7	+0.9
KRLC	Kraliky	55.81	321	eP	P	00 42 51.4	+0.1
KRLC				e		00 42 57.7	
BUR08	Bucovina Ar. S	55.84	313	eP	P	00 42 51.5	-0.1
BUR04	Bucovina Ar. S	55.87	313	eP	P	00 42 51.2	-0.6
BURAR	Bucovina Array	55.87	313	⇑iP	P	00 42 51.3	-0.5
BURAR	Bucovina Array	55.87	313	⇑P	P	00 42 51.4	-0.4
MORC	Moravsky Berou	55.90	320	eP	P	00 42 52.1	+0.2
	comp=Z,11nm,0.8s						
MORC	Moravsky Berou	55.90	320	⇑iP	P	00 42 51.8	-0.1
MORC	Moravsky Berou	55.90	320	eP	P	00 42 52.1	+0.2
MORC				pmax	pmax		
	comp=Z,11nm,0.8s						
MORC	Moravsky Berou	55.90	320	eP	P	00 42 52.0	+0.1
PVCC	Panska Ves	55.91	323	eP	P	00 42 51.9	0.0
PVCC	Panska Ves	55.91	323	eP	P	00 42 51.9	0.0
FLWY	Flagg Ranch	55.94	56	eP	P	00 42 54.4	+1.9
	comp=Z,10.0nm,0.8s						
SCHQ	Schefferville	55.98	20	P	P	00 42 50.5	-1.9
	comp=Z,7.2nm,0.7s,baz=2.3,slow=7.5,SNR=17						
LANS	Liptovska Anna	55.99	318	eP	P	00 42 53.6	+1.0
LANS	Liptovska Anna	55.99	318	eP	P	00 42 53.6	+1.0
IMW	Indian Meadow	56.03	57	eP	P	00 42 56.6	+3.3
	comp=Z,2.7nm,0.9s						
LAMP	Lampang	56.03	231	P	P	00 42 56.1	+3.0
	comp=Z,9.1nm,0.7s,comp=Z,76nm						
TRPA	Tarpa	56.13	316	⇓iP	P	00 42 53.5	0.0
MOOW	Moose Ponds	56.23	57	eP	P	00 42 56.0	+1.4
	comp=Z,4.6nm,0.9s						
BIZ	Bicaz	56.23	312	⇑iP	P	00 42 54.0	-0.3
FXWY	Fox Creek	56.24	57	eP	P	00 42 57.0	+2.3
	comp=Z,2.5nm,0.8s						
SKNT	Sakolnakorn	56.25	226	P	P	00 42 57.9	+3.2
	comp=Z,3.9nm,1.6s						
BMR	Baia Mare	56.29	315	⇑iP	P	00 42 53.8	-0.9
BMR	Baia Mare	56.29	315	⇑P	P	00 42 53.8	-0.9
CMAR	Chiang Mai Arr	56.30	232	P	P	00 42 53.7	-1.4
	comp=Z,0.8nm,0.3s,baz=9.6,slow=8.4,SNR=5.9						
CMAR				LR	LR	01 07 17.1	
	comp=Z,53nm,18.0s,baz=50,slow=36						
GNI	Garni	56.39	294	⇓eP	P	00 42 56.3	+0.6
GNI				pmax	pmax		
	comp=Z,67nm,1.7s						
TPAW	Teton Pass	56.39	57	eP	P	00 42 56.7	+0.9
	comp=Z,11nm,1.1s						
LOHW	Long Hollow	56.40	57	eP	P	00 42 58.2	+2.4
	comp=Z,3.7nm,1.0s						
PRU	Pruhonice	56.42	322	eP	P	00 42 55.6	0.0
PRU				epP	pP	00 43 00.5	+0.9
PRU	Pruhonice	56.42	322	eP	P	00 42 55.6	0.0
PRU				e		00 43 00.5	
TESR	Tescani	56.47	312	⇑iP	P	00 42 55.5	-0.5
MOX	Moxa	56.48	325	P	P	00 42 56.8	+0.8
MOX				pmax	pmax		
	comp=Z,21nm,1.0s						
UTTA	Uttaradit	56.50	230	P	P	00 42 57.9	+1.5
	comp=Z,6.1nm,0.7s,comp=Z,51nm						
REDW	Red Top Meadow	56.54	57	eP	P	00 42 58.5	+1.7
	comp=Z,9.5nm,0.9s						
VRAC	Vranov	56.56	321	⇑iP	P	00 42 56.1	-0.5
VRAC	Vranov	56.56	321	⇑P	P	00 42 56.1	-0.5
VRAC	Vranov	56.56	321	eP	P	00 42 56.7	+0.1
NKC	Novy Kostel	56.68	324	eP	P	00 42 57.6	+0.2
NKC	Novy Kostel	56.68	324	eP	P	00 42 57.6	+0.2
JAVC	Velka Javorina	56.72	320	eP	P	00 42 58.7	+0.9
VYHS	Vyhne	56.76	319	eP	P	00 42 58.4	+0.4
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VYHS	Vyhne	56.76	319	eP	P	00 42 58.4	+0.4
KRUC	Moravsky	56.84	321	eP	P	00 42 58.6	0.0
TREC	Trest	56.84	321	eP	P	00 42 58.1	-0.5
TREC	Trest	56.84	321	eP	P	00 42 58.1	-0.5
SUKH	Sukhothai	57.02	231	P	P	00 43 04.0	+3.9
	comp=Z,3.5nm,0.8s						
PSZ	Piszkesteto	57.02	317	eP	P	00 43 00.2	+0.3
	comp=Z,15nm,0.9s						
PSZ	Piszkesteto	57.02	317	⇑iP	P	00 43 00.4	+0.4
PSZ	Piszkesteto	57.02	317	eP	P	00 43 00.2	+0.3
PSZ				pmax	pmax		
	comp=Z,15nm,0.9s						
PLOR	Plostina	57.07	311	⇓iP	P	00 43 00.0	-0.3
PLOR	Plostina	57.07	311	⇓P	P	00 43 00.0	-0.3
SMOL	Smolenice	57.10	320	eP	P	00 43 01.1	+0.7
SMOL	Smolenice	57.10	320	eP	P	00 43 01.1	+0.7
CFR	Carcaliu	57.25	310	⇓iP	P	00 43 00.8	-0.7
CFR	Carcaliu	57.25	310	⇓P	P	00 43 00.8	-0.7
DRGR		57.31	315	⇑iP	P	00 43 02.0	0.0
DRGR		57.31	315	⇑P	P	00 43 02.0	0.0
DOPR	Dopca	57.32	312	⇓iP	P	00 43 02.3	+0.2
HVU	Hansel Valley	57.33	59	eP	P	00 43 04.1	+1.7
	comp=Z,4.6nm,0.8s						
ELK	Elko	57.44	62	eP	P	00 43 06.6	+3.4
	comp=Z,1.6nm,0.9s						
KHC	Kasperske Hory	57.45	323	eP	P	00 43 02.4	-0.5
	comp=Z,2.0nm,0.9s						
KHC	Kasperske Hory	57.45	323	eP	P	00 43 02.5	-0.5
KHC				epP	pP	00 43 07.7	+0.8
KHC	Kasperske Hory	57.45	323	eP	P	00 43 02.4	-0.5
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PBKT	Sadao Pong	57.49	229	P	P	00 43 06.6	+3.2
	comp=Z,6.7nm,0.8s						
BW06	Boulder Array	57.49	56	eP	P	00 43 04.2	+0.6
	comp=Z,3.8nm,0.7s						
PD31	Pinedale Array	57.49	56	eP	P	00 43 03.9	+0.4
PDAR	Pinedale Array	57.49	56	eP	P	00 43 03.8	+0.2
PDAR	Pinedale Array	57.49	56	P	P	00 43 03.3	-0.2
	comp=Z,3.1nm,0.6s,baz=3.2,slow=2.6,SNR=17						
MLR	Muntele Rosu	57.60	312	eP	P	00 43 05.0	+0.8
	comp=Z,11nm,0.8s						
MLR	Muntele Rosu	57.60	312	⇓iP	P	00 43 04.9	+0.8
MLR	Muntele Rosu	57.60	312	⇓P	P	00 43 04.9	+0.8
GEC2	GERESS Array S	57.69	322	eP	P	00 43 04.8	+0.1
	comp=Z,8.4nm,0.9s						
GEC2	GERESS Array S	57.69	322	eP	P	00 43 04.8	+0.1
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GERES	GERESS Array B	57.69	322	P	P	00 43 03.9	-0.8
	comp=Z,5.7nm,0.8s,baz=29,slow=6.4,SNR=29						
GERES				LR	LR	01 12 53.2	
	comp=Z,123nm,20.1s,baz=26,slow=41						
MEM	Membach	57.69	329	⇑P	P	00 43 04.5	0.0
	comp=Z,15nm,1.0s						
GEA0	GERESS Array S	57.70	322	eP	P	00 43 04.4	-0.4
VOIR		57.90	312	⇑iP	P	00 43 06.7	+0.5
VOIR		57.90	312	⇑P	P	00 43 06.7	+0.5
KVN	Kaiserville	57.97	65	eP	P	00 43 08.3	+1.4
	comp=Z,4.2nm,0.9s						
KVN	Kaiserville	57.97	65	eP	P	00 43 08.3	+1.4
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WAKR	Walker	57.99	66	eP	P	00 43 08.1	+1.0
	comp=Z,6.6nm,1.1s						
BCLA	Clavier	58.01	329	⇓P	P	00 43 06.4	-0.3
	comp=Z,11nm,1.0s						
CONA	Conrad Observa	58.03	320	i pP	P	00 43 07.5	+0.5
	comp=Z,8.0nm,1.4s						
SIRR	Siria	58.08	315	⇑iP	P	00 43 07.5	+0.2
ARR	Arges	58.09	313	⇑iP	P	00 43 08.4	+0.9
NV01	Mina Array Sit	58.46	65	eP	P	00 43 11.2	+0.8
NVAR	Mina Array Bea	58.46	65	P	P	00 43 10.9	+0.5
	comp=Z,1.9nm,0.8s,baz=316,slow=5.4,SNR=10						
DOU	Dourbes	58.46	330	⇓P	P	00 43 09.9	0.0
MOA	Molln	58.49	322	i P	P	00 43 09.0	-1.2
	comp=Z,6.6nm,0.8s						
WLF	Walferdange	58.56	328	⇑P	P	00 43 10.0	-0.6
BZS	Buzias	58.69	315	⇑iP	P	00 43 11.2	-0.4
BZS	Buzias	58.69	315	⇑P	P	00 43 11.2	-0.4
ARSA	Arzberg	58.74	320	i pP	P	00 43 12.6	+0.6
	comp=Z,3.1nm,0.7s						
JLU	Jordanelle	58.83	59	eP	P	00 43 16.3	+3.3
	comp=Z,9.4nm,1.1s						
UTHA	Uthaitani	58.89	230	P	P	00 43 17.4	+4.1
MDPB	Devils Postpil	58.90	67	eP	P	00 43 15.3	+1.8
	comp=Z,4.7nm,0.9s						
OMMB	Old Mammoth Mi	58.94	66	eP	P	00 43 16.0	+2.2
	comp=Z,2.2nm,0.8s						
NLU	North Lily Min	59.21	60	eP	P	00 43 17.1	+1.5
	comp=Z,7.8nm,1.1s						
BFO	Black Forest	59.38	326	eP	P	00 43 15.8	-0.5
	comp=Z,11nm,0.9s						
BFO	Black Forest	59.38	326	eP	P	00 43 15.9	-0.5
BFO				pmax	pmax		
	comp=Z,11nm,0.9s						
SOKA	Soboth	59.40	321	i pP	P	00 43 16.6	0.0
	comp=Z,5.1nm,1.2s						
KBA	Koelnbreinsper	59.43	322	i pP	P	00 43 17.7	+0.8
	comp=Z,14nm,1.1s						
MDVR	Moldovita	59.43	315	⇓iP	P	00 43 15.5	-1.3
R11A	Troy Canyon, C	59.47	63	eP	P	00 43 18.3	+0.9
	comp=Z,2.9nm,0.8s						
WATA	Walderalm	59.60	323	i pP	P	00 43 18.3	+0.2
	comp=Z,6.7nm,0.6s						
RETA	Reutte	59.64	324	i P	P	00 43 17.8	-0.4
	comp=Z,3.8nm,1.0s						
WTTA	Wattenberg	59.65	323	i pP	P	00 43 18.7	+0.2
	comp=Z,14nm,0.7s,SNR=8.9						
OBKA	Obir	59.67	321	i pP	P	00 43 19.1	+0.5
	comp=Z,22nm,0.9s,SNR=8.5						
MOTA	Moosalm	59.70	324	i P	P	00 43 18.4	-0.3
	comp=Z,4.1nm,0.8s						
ECH	Echery	59.73	327	eP	P	00 43 17.4	-1.4
	comp=Z,12nm,0.9s						
ECH	Echery	59.73	327	eP	P	00 43 17.4	-1.4
ECH				pmax	pmax		
	comp=Z,12nm,0.9s						
SQTA	Sankt Quirin	59.79	324	i pP	P	00 43 19.4	+0.1
	comp=Z,9.1nm,0.8s,SNR=7.0						
PSUT	Pine Spring	59.89	62	eP	P	00 43 21.7	+1.4
	comp=Z,4.9nm,0.8s						
ABTA	Abfaltersbach	59.94	322	i P	P	00 43 18.4	-1.9
	comp=Z,3.0nm,0.6s						
DAVA	Damuels	60.03	325	i P	P	00 43 20.4	-0.6
	comp=Z,6.6nm,1.1s						
FETA	Feichten	60.09	324	i P	P	00 43 21.1	-0.3
	comp=Z,5.2nm,1.0s,SNR=7.5						
ECSD	EROS Data Cent	60.46	46	eP	P	00 43 26.1	+2.3
	comp=Z,6.0nm,0.8s						
SRU	San Rafael Swe	60.48	59	eP	P	00 43 25.7	+1.4
	comp=Z,5.1nm,0.7s						
SRU	San Rafael Swe	60.48	59	eP	P	00 43 25.7	+1.4
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BR131	Keskin Array S	60.51	303	eP	P	00 43 24.6	+0.2
BRTR	Keskin Array B	60.51	303	ceP	P	00 43 24.5	+0.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	Keskin Array B	60.51	303	P	P	00 43 23.9	-0.4
	comp=Z,3.8nm,0.8s,baz=44,slow=3.6,SNR=21						
BRTR				LR	LR	01 12 00.6	
	comp=Z,47nm,19.4s,baz=16,slow=38						
FUORN	Ofenpass-Fuorn	60.57	324	eP	P	00 43 25.5	+0.6
	comp=Z,11nm,1.1s						
LDF	La Druitiere	60.78	332	eP	P	00 43 24.7	-1.2
LDF				pmax	pmax		
	comp=Z,22nm,1.0s						
CLF	Chambon-Foret	60.89	331	eP	P	00 43 26.5	-0.2
	comp=Z,21nm,0.9s						
VTS	Vitosha	61.01	313	eP	P	00 43 27.3	-0.5
	comp=Z,4.7nm,0.8s						
VTS	Vitosha	61.01	313	⇓iP	P	00 43 27.1	-0.7
VTS	Vitosha	61.01	313	eP	P	00 43 27.3	-0.5
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SHPR	Sheep Range	61.27	64	eP	P	00 43 34.0	+4.3
	comp=Z,3.4nm,1.0s						
SMCO	Snowmass	61.57	56	eP	P	00 43 34.6	+2.6
	comp=Z,4.3nm,0.9s						
SSF	Saint Saulge	61.57	329	eP	P	00 43 30.2	-1.2
SSF				pmax	pmax		
	comp=Z,12nm,1.0s						
PV02	Paradox Valley	61.88	58	eP	P	00 43 38.3	+4.4
	comp=Z,5.9nm,0.7s						
PV01	Paradox Valley	62.00	58	eP	P	00 43 37.6	+2.9
	comp=Z,3.9nm,0.7s						
LPL	La Plagne	62.39	326	eP	P	00 43 36.8	-0.3
LPL				pmax	pmax		
	comp=Z,11nm,1.0s						
BNI	Bardonecchia	62.85	326	eP	P	00 43 40.4	+0.3
	comp=Z,7.7nm,1.0s						
BNI	Bardonecchia	62.85	326	eP	P	00 43 40.4	+0.3
BNI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CAF	Calviac	63.91	330	eP	P	00 43 46.6	-0.4
CAF				pmax	pmax		
	comp=Z,17nm,0.9s						
LFF	La Frestale	64.14	331	eP	P	00 43 47.9	-0.6
LFF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSU1	Kansas State U	64.76	48	eP	P	00 43 53.1	+0.5
	comp=Z,12nm,0.8s						
TIP	Timpagrande	65.99	316	⇑iP	P	00 44 00.5	-0.1
P42A	Winchester	66.00	42	eP	P	00 44 02.1	+1.5
	comp=Z,8.4nm,0.8s						
CCM	Cathedral Cave	67.20	44	eP	P	00 44 08.2	-0.1
	comp=Z,13nm,1.1s						
CCM	Cathedral Cave	67.20	44	eP	P	00 44 08.2	-0.1
CCM				pmax	pmax		
	comp=Z,13nm,1.1s						
T42A	Van Buren	68.21	44	eP	P	00 44 15.9	+1.3
	comp=Z,5.7nm,0.8s						
MNTX	Cornudas Mount	68.94	58	eP	P	00 44 21.8	+2.5
	comp=Z,3.6nm,0.9s						
W41B	Gary Mavity, V	69.64	45	eP	P	00 44 22.1	-1.5
	comp=Z,11nm,0.8s						
ABTX	Abilene, Hawle	69.89	53	eP	P	00 44 27.7	+2.5
	comp=Z,8.6nm,1.0s						
ES19	SONSECA Array	70.06	333	eP	P	00 44 25.6	-0.6
ESDC	Sonseca Array	70.10	333	P	P	00 44 25.6	-0.9
	comp=Z,5.3nm,0.7s,baz=6.5,slow=6.4,SNR=30						
X40A	Basin Creek Fa	70.13	46	eP	P	00 44 27.2	+0.6
	comp=Z,6.0nm,0.6s						
RAYN	Ar Rayn	71.11	286	eP	P	00 44 33.1	+0.3
	comp=Z,7.1nm,0.8s						
RAYN	Ar Rayn	71.11	286	P	P	00 44 33.1	+0.3
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KEST	Kesra	71.13	321	P	P	00 44 32.1	-0.6
	comp=Z,3.9nm,0.9s,baz=325,slow=2.8,SNR=5.6						
KEST				LR	LR	01 19 48.7	
	comp=Z,99nm,19.7s,baz=307,slow=39						
PSI	Prapat	71.17	227	eP	P	00 44 32.5	-0.7
	comp=Z,7.4nm,0.9s						
PSI	Prapat	71.17	227	eP	P	00 44 32.5	-0.7
PSI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TX31	Lajitas Ar. Si	71.68	57	eP	P	00 44 36.4	+0.2
TXAR	Lajitas Array	71.68	57	P	P	00 44 35.7	-0.5
	comp=Z,0.5nm,0.5s,baz=324,slow=3.5,SNR=7.4						
JCT	Junction City	71.83	54	eP	P	00 44 37.5	+0.4
	comp=Z,13nm,1.0s						
JCT	Junction City	71.83	54	eP	P	00 44 37.5	+0.4
JCT				pmax	pmax		
	comp=Z,13nm,1.0s						
PALK	Pallekele	72.76	246	i P	P	00 44 42.6	-0.1
TAM	Tamanrasset	84.44	321	eP	P	00 45 46.9	-0.2
	comp=Z,2.2nm,1.0s						
TAM	Tamanrasset	84.44	321	eP	P	00 45 46.9	-0.2
TAM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WB2	Warramunga Arr	87.45	188	eP	P	00 46 00.9	-0.7
WRA	Warramunga Arr	87.46	188	i P	P	00 46 02.2	+0.5
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	87.46	188	P	P	00 45 60.0	-1.7
	comp=Z,1.5nm,0.7s,baz=2.9,slow=6.0,SNR=12						
ASAR	Alice Springs	91.18	188	P	P	00 46 18.3	-0.8
	comp=Z,0.4nm,0.6s,baz=10,slow=5.0,SNR=3.2						
TOA0	Torodi Ar. Sit	94.64	322	eP	P	00 46 35.2	-0.2
TORD	Torodi Ar. Bea	94.64	322	P	P	00 46 33.8	-1.6
	comp=Z,1.4nm,1.0s,baz=12,slow=3.7,SNR=6.4						
PLCA	Paso Flores	147.66	51	PKPbc	PKPbc	00 52 58.0	-0.1
	comp=Z,5.3nm,0.8s,baz=9.3,slow=2.5,SNR=12						

NNC 28 00:35:03.1±1.8, 37°.05N×70°.81E, h0^{km}, mb3.7, mpv3.4, 4C-4D, Error ellipse: s-maj=14.2km s-min=12.4km az=143.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.64**	**35**	⇓Pn	Pn	00 36 01.2	+0.3
	3.7nm,0.3s						
SFK				⇓Sn	Sn	00 36 46.2	+1.5
	2.1nm,0.4s						
MNAS	**Manas**	**5.59**	**13**	⇑Pn	Pn	00 36 27.7	+0.2
	1.7nm,0.6s						
MNAS				⇑Sn	Sn	00 37 33.5	+0.9
	1.8nm,0.3s						
KK31	**Karatay Array**	**6.05**	**358**	⇓Pn	Pn	00 36 34.0	+0.1
	0.7nm,0.2s,baz=179,slow=12,SNR=18						
KK31				⇑Sn	Sn	00 37 45.6	+1.8
	0.4nm,0.3s,baz=178,slow=22,SNR=3.8						
AAK	**Ala-Archa**	**6.26**	**26**	⇑Pn	Pn	00 36 35.8	-1.0
	3.5nm,0.9s						
AAK				⇓Sn	Sn	00 37 49.4	+0.2
	3.3nm,1.2s						

ROM 28 00:40:56.7±0.1, 43°.397N±0°.003×12°.496E±0°.004, h9^{km}, ML1.1/8, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.07**	**257**	P	Pg	00 40 59.1	+0.3
ATVO				S	Sg	00 41 00.5	+0.1
ATVO				AML	AML		
	comp=E,178µm,0.4s						
ATVO				AML	AML		
	comp=N,158µm,1.0s						
ATVO				AML	AML		
	comp=E,178µm,0.4s						
ATVO				AML	AML		
	comp=N,158µm,1.0s						
ATPI	**Pietralunga -**	**0.09**	**308**	P	Pg	00 40 59.5	+0.4
ATPI				S	Sg	00 41 01.2	+0.3
ATPI				AML	AML		
	comp=E,120µm,0.3s						
ATPI				AML	AML		
	comp=N,166µm,0.4s						
ATPI				AML	AML		
	comp=E,120µm,0.3s						
ATPI				AML	AML		
	comp=N,166µm,0.4s						
ATPI				AML	AML		
	comp=N,166µm,0.4s						
ATPI				AML	AML		
	comp=E,120µm,0.3s						
ATPC	**Poggio Castell**	**0.09**	**341**	P	Pg	00 40 59.6	+0.5
ATPC				S	Sg	00 41 01.6	+0.8
ATPC				AML	AML		
	comp=E,189µm,0.3s						
ATPC				AML	AML		
	comp=N,166µm,1.5s						
ATPC				AML	AML		
	comp=E,189µm,0.3s						
ATPC				AML	AML		
	comp=N,166µm,1.5s						
ATPC				AML	AML		
	comp=E,189µm,0.3s						
ATPC				AML	AML		
	comp=N,166µm,1.5s						
MURB	**Monte Urbino**	**0.14**	**171**	P	Pg	00 41 00.5	+0.7
MURB				S	Sg	00 41 03.1	+1.1
MURB				AML	AML		
	comp=E,130µm,1.4s						
MURB				AML	AML		
	comp=N,85µm,0.8s						
MURB				AML	AML		
	comp=E,130µm,1.4s						
MURB				AML	AML		
	comp=N,86µm,0.8s						
MURB				AML	AML		
	comp=E,130µm,1.4s						
MURB				AML	AML		
	comp=N,86µm,0.8s						
PIEI	**Pieia**	**0.14**	**11**	P	Pg	00 41 00.5	+0.6
PIEI				S	Sg	00 41 03.4	+1.2
PIEI				AML	AML		
	comp=E,96µm,0.3s						
PIEI				AML	AML		
	comp=N,71µm,0.3s						
PIEI				AML	AML		
	comp=E,96µm,0.3s						
PIEI				AML	AML		
	comp=N,71µm,0.3s						
PIEI				AML	AML		
	comp=E,96µm,0.3s						
PIEI				AML	AML		
	comp=N,71µm,0.3s						
FRON	**Frontone**	**0.21**	**54**	P	Pg	00 41 01.6	+0.6
FRON				S	Sg	00 41 05.1	+1.2
SSFR	**Montelago di S**	**0.21**	**79**	P	Pg	00 41 01.7	+0.6
SSFR				S	Sg	00 41 05.2	+1.1
SSFR				AML	AML		
	comp=E,111µm,0.1s						
SSFR				AML	AML		
	comp=N,63µm,0.6s						
SSFR				AML	AML		
	comp=N,63µm,0.6s						
SSFR				AML	AML		
	comp=E,111µm,0.1s						
BADI	**Badiali**	**0.21**	**302**	P	Pg	00 41 01.9	+0.7
BADI				S	Sg	00 41 05.8	+1.6
ATTE	**AVT- Monte Tez**	**0.23**	**208**	P	Pg	00 41 02.0	+0.7
ATTE				S	Sg	00 41 05.5	+1.0
ATMC	**Monte Cedrone**	**0.23**	**283**	P	Pg	00 41 02.0	+0.6
ATMC				S	Sg	00 41 05.8	+1.2
ATCC	**AVT- Casa Cast**	**0.24**	**154**	P	Pg	00 41 02.5	+1.0
ATCC				S	Sg	00 41 06.9	+2.1
PE3	**Peglio**	**0.30**	**0**	P	Pb	00 41 03.8	-0.5
MPAG	**Monte Paganucc**	**0.30**	**39**	P	Pg	00 41 03.2	+0.5
MPAG				S	Sb	00 41 08.1	-1.3
ARVD	**Arcevia**	**0.34**	**73**	P	Pg	00 41 04.0	+0.6
ARVD				S	Sb	00 41 09.8	-0.7

ROM 28 00:41:31.3±0.1, 42°.590N±0°.003×12°.908E±0°.004, h11^{km}, ML1.3/4, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.10**	**83**	P	Pg	00 41 34.5	+0.5
LNSS				S	Sg	00 41 36.7	+0.6
LNSS				AML	AML		
	comp=E,246µm,0.4s						
LNSS				AML	AML		
	comp=N,220µm,0.9s						
LNSS				AML	AML		
	comp=E,246µm,0.4s						
LNSS				AML	AML		
	comp=N,220µm,0.9s						
LNSS				AML	AML		
	comp=E,246µm,0.4s						
LNSS				AML	AML		
	comp=N,220µm,0.9s						
ARRO	**Arrone**	**0.11**	**264**	P	Pg	00 41 34.7	+0.6
ARRO				S	Sg	00 41 36.7	+0.6
ARRO				AML	AML		
	comp=E,132µm,0.3s						
ARRO				AML	AML		
	comp=N,153µm,0.1s						
ARRO				AML	AML		
	comp=E,133µm,0.3s						
ARRO				AML	AML		
	comp=N,153µm,0.1s						
ARRO				AML	AML		
	comp=N,153µm,0.1s						
ARRO				AML	AML		
	comp=E,133µm,0.3s						
CESX	**Cesi**	**0.24**	**275**	P	Pg	00 41 36.8	+0.5
CESX				S	Sg	00 41 40.5	+0.8
NRCA	**Norcia**	**0.29**	**32**	P	Pg	00 41 37.5	+0.3
NRCA				S	Sg	00 41 41.8	+0.7
NRCA				AML	AML		
	comp=E,196µm,0.1s						
NRCA				AML	AML		
	comp=N,108µm,0.1s						
NRCA				AML	AML		
	comp=E,196µm,0.1s						
NRCA				AML	AML		
	comp=N,108µm,0.1s						
MOMA	**Monte Martano**	**0.33**	**311**	P	Pg	00 41 38.5	+0.5
MOMA				S	Sb	00 41 43.5	-1.1
MOMA				AML	AML		
	comp=E,66µm,1.0s						
MOMA				AML	AML		
	comp=N,60µm,1.2s						
MOMA				AML	AML		
	comp=E,66µm,1.0s						
MOMA				AML	AML		
	comp=N,60µm,1.2s						
MOMA				AML	AML		
	comp=E,66µm,1.0s						
MOMA				AML	AML		
	comp=N,60µm,1.2s						
FIAM	**Fiamignano**	**0.36**	**154**	P	Pg	00 41 38.9	+0.5
FIAM				S	Sb	00 41 44.5	-0.9
CESI	**CESI - Serrava**	**0.41**	**360**	P	Pg	00 41 39.8	+0.3
CESI				S	Sb	00 41 46.2	-0.8
FDMO	**Fiordimonte**	**0.47**	**16**	P	Pg	00 41 40.6	+0.2
FDMO				S	Sb	00 41 47.6	-0.9
TERO	**Teramo**	**0.52**	**86**	P	Pg	00 41 41.2	-0.1
TERO				S	Sg	00 41 48.8	+0.6

MAN 28 00:55:06.2, 6°.20N×126°.75E, h87^{km}, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.03**	**265**	*e*P	Pn	00 55 26.9	+0.9
DDMP				*e*S	Sn	00 55 42.2	+1.2
DMPH	**Davao City--Mi**	**1.51**	**305**	⇑*e*P	Pn	00 55 28.1	-3.8
DMPH				*e*S	Sn	00 55 53.9	+2.5
KCP	**Kidapawan**	**1.83**	**296**	⇓*e*P	Pn	00 55 36.6	+0.5
KCP				*i* S	Sn	00 55 59.7	+0.8
SKMP	**Bagumbayan, Su**	**2.21**	**278**	*e*P	Pn	00 55 41.9	+0.8
SKMP				*e*S	Sn	00 56 08.1	+0.3
BUKP	**Musuan**	**2.36**	**315**	*e*P	Pn	00 55 43.9	+0.8
BUKP				*e*S	Sn	00 56 12.5	+1.1

IDC 28 01:06:17.7±266.0, 1°.53S×38°.14E, h0^{km}, Error ellipse: s-maj=106.3km s-min=42.8km az=99.0, Kenya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I32KE	**NAIROBI INFRAS**	**1.34**	**282**	*i*		01 13 29.8	
	baz=102,slow=290,SNR=1.7						
I19DJ	**I19DJ**	**13.85**	**21**	*i*		02 33 20.0	
	baz=200,slow=319,SNR=0.7						
I33MG	**ANTANANARIVO I**	**19.56**	**153**	*i*		03 10 10.0	
	baz=331,slow=327,SNR=1.8						
I35NA	**TSUMEB INFRASO**	**26.71**	**228**	*i*		03 50 53.2	
	baz=58,slow=308,SNR=1.4						

IDC 28 01:31:07.5±8.2, 4°.14S×142°.75E, h0^{km}, mb3.4/2, mb1 3.5/3, mb1mx3.3/25, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=332.8km s-min=31.6km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.73**	**207**	P	Pn	01 35 14.1	-1.9
	0.1nm,0.3s,baz=32,slow=12,SNR=5.5						
ASAR	**Alice Springs**	**21.21**	**203**	P	P	01 35 56.3	+1.2
	0.6nm,0.8s,baz=35,slow=10,SNR=5.1						
ZALV	**Zalesovo Beam**	**75.21**	**329**	P	P	01 42 52.0	0.0
	0.5nm,0.5s,baz=101,slow=7.5,SNR=2.4						

*ISCJB **28** 01:41:33.8±1.4, 2°.8N±0°.2×128°.4E±0°.1, h150^{km}, Error ellipse: s-maj=26.6km s-min=10.5km az=40.3*

*IDC **28** 01:41:35.5±10.0, 2°.43N×127°.91E, h139^{km}±89^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.2/39, mbtmp4.0/4, Error ellipse: s-maj=133.9km s-min=23.6km az=64.0*

*DJA **28** 01:41:39.5±1.0, 3°N±7°×12°8E±1°0, h162^{km}±18^{km}, M4.2/5, mb3.9/2, MLv4.3/5*

ISC 28 01:41:35.7±1.2, 2°.7N±0°.1×128°.4E±0°.2, h150^{km}, n7, σ0^{s}.95/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.98**	**289**	P	**Pn**	**01 42 23.6**	**+0.7**
SGSI				S	**Sn**	**01 42 58.1**	**-1.3**
SANI	**Sanana**	**5.30**	**207**	P	**Pn**	**01 42 54.3**	**+1.1**
	20nm,0.9s,0.1nm						
WRA	**Warramunga Arr**	**23.28**	**166**	P	**P**	**01 46 29.4**	**-0.8**
	4.6nm,0.6s,baz=344,slow=11,SNR=84						
ASAR	**Alice Springs**	**26.78**	**169**	P	**P**	**01 47 01.0**	**-0.9**
	0.6nm,0.5s,baz=353,slow=8.0,SNR=7.7						
ASAR				PcP	**PcP**	**01 50 21.1**	**-0.1**
	0.4nm,0.5s,baz=344,slow=2.7,SNR=4.1						
STKA	**Stephens Creek**	**36.64**	**161**	P	**P**	**01 48 27.5**	**-0.3**
	1.8nm,0.3s,baz=325,slow=9.6,SNR=8.3						
MKAR	**Makanchi Array**	**59.30**	**325**	P	**P**	**01 51 22.6**	**+0.8**
	0.2nm,0.4s,baz=122,slow=7.9,SNR=8.0						
TORD	**Torodi Ar. Bea**	**124.78**	**288**	PKP	**PKPdf**	**02 00 18.8**	**0.0**
	0.5nm,1.0s,baz=105,slow=3.0,SNR=2.7						

*NIED **28** 02:04:00, 37°.30N×141°.60E, h14^{km}, Mw3.4 Best double couple: $M_0$1.44000×10^{14} NP1:ϕ_s251.00000°, δ23.00000°, λ-44.00000°. NP2:ϕ_s22.00000°, δ74.00000°, λ-107.00000°.*

*ISCJB **28** 02:04:31.7±1.2, 37°.28N±0°.04×141°.59E±0°.07, h20^{km}±6^{km}, mb3.4/5, Error ellipse: s-maj=10.2km s-min=5.8km az=25.9*

*JMA **28** 02:04:33.8±0.1, 37°.30N×141°.47E, h33^{km}±1^{km}, M3.8*
JMA Felt I J1.

*IDC **28** 02:04:41.3±4.8, 37°.18N×141°.18E, h83^{km}±42^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.1/34, mbtmp3.5/6, Error ellipse: s-maj=40.5km s-min=30.1km az=57.0*

ISC 28 02:04:32.5±1.7, 37°.31N±0°.04×141°.38E±0°.07, h13^{km}±9^{km}, n16, σ1^{s}.14/27, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.41**	**279**	P	**Pn**	**02 04 43.6**	**-0.5**
JFK				S	**Sn**	**02 04 50.5**	**-1.0**
ONAJ	**Iwakimizuishiy**	**0.51**	**246**	P	**Pn**	**02 04 45.0**	**-0.4**
ONAJ				S	**Sn**	**02 04 52.8**	**-1.2**
JFFD	**Fukushimafurud**	**0.69**	**252**	P	**Pn**	**02 04 48.0**	**+0.1**
JFFD				S	**Sn**	**02 04 57.7**	**-0.7**
JMM	**Marumori**	**0.73**	**320**	P	**Pn**	**02 04 48.0**	**-0.4**
JMM				S	**Sn**	**02 04 58.4**	**-1.0**
JFT	**Otama**	**0.86**	**285**	P	**Pn**	**02 04 51.2**	**+1.0**
JFT				S	**Sn**	**02 05 03.4**	**+0.8**
JHO	**Hitachi**	**0.95**	**223**	P	**Pg**	**02 04 51.0**	**+0.1**
JHO				S	**Sb**	**02 05 03.3**	**0.0**
JIO	**Ouri**	**1.15**	**359**	P	**Pn**	**02 04 53.7**	**-0.5**
JIO				S	**Sb**	**02 05 08.0**	**-0.9**
JOU	**Okura**	**1.20**	**332**	P	**Pg**	**02 04 55.7**	**+0.1**
JOU				S	**Sg**	**02 05 12.2**	**+1.0**
JFY	**Yanaizu**	**1.34**	**275**	P	**Pg**	**02 04 58.5**	**+0.3**
JFY				S	**Sg**	**02 05 16.8**	**+1.1**
MJAR	**Matsushiro Arr**	**2.65**	**254**	P	**Pb**	**02 05 17.3**	**-2.5**
	0.6nm,0.3s,baz=58,slow=15,SNR=8.2						
MJAR				S	**Sn**	**02 05 49.4**	**+2.4**
	1.4nm,0.3s,baz=130,slow=15,SNR=6.9						
MAT	**Matsushiro**	**2.66**	**254**	P	**Pb**	**02 05 18.7**	**-1.2**
MAT				S	**Sb**	**02 05 52.2**	**-0.1**
SONM	**Songino Array**	**27.61**	**304**	P	**P**	**02 10 19.9**	**+0.3**
	0.6nm,0.8s,baz=111,slow=6.5,SNR=3.8						
MKAR	**Makanchi Array**	**43.95**	**302**	P	**P**	**02 12 39.1**	**+0.1**
	0.5nm,0.6s,baz=86,slow=9.2,SNR=7.1						
WRA	**Warramunga Arr**	**57.33**	**188**	P	**P**	**02 14 19.2**	**-0.9**
	0.5nm,1.1s,baz=5.6,slow=7.4,SNR=3.5						
AKASG	**Malin Array Be**	**74.06**	**322**	P	**P**	**02 16 07.8**	**-0.1**
	0.5nm,0.4s,baz=53,slow=6.5,SNR=3.3						
PDAR	**Pinedale Array**	**77.49**	**45**	P	**P**	**02 16 30.3**	**+2.4**
	0.1nm,0.5s,baz=308,slow=3.3,SNR=3.1						

*IDC **28** 02:25:35.4±1.6, 11°.08S×164°.57E, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.7/40, mbtmp3.8/6, ML4.0/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/33, Error ellipse: s-maj=46.6km s-min=27.1km az=121.0*

*ISCJB **28** 02:25:37.8±1.2, 11°.2S±0°.1×164°.6E±0°.2, h29^{km}, mb3.5/4, MS3.9/1, Error ellipse: s-maj=25.5km s-min=19.5km az=1.9*

ISC 28 02:25:39.7±1.3, 11°.2S±0°.1×164°.6E±0°.2, h29^{km}, n8, σ0^{s}.53/6, mb3.6/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.84**	**290**	LR	LR	02 29 00.1	
	comp=Z,178nm,19.1s,baz=132,slow=42						
DZM	**Mont Dzumac**	**11.01**	**171**	Pn	**Pn**	**02 28 15.5**	**+0.2**
	0.4nm,0.3s,baz=29,slow=8.4,SNR=3.8						
CTA	**Charters Tower**	**19.72**	**241**	P	**Pn**	**02 30 08.8**	**+0.1**
	0.6nm,0.3s,baz=60,slow=14,SNR=5.4						
WRA	**Warramunga Arr**	**30.34**	**250**	P	**P**	**02 31 49.1**	**-0.1**
	0.7nm,0.7s,baz=80,slow=9.2,SNR=5.4						
ASAR	**Alice Springs**	**31.70**	**243**	P	**P**	**02 32 00.7**	**-0.5**
	1.0nm,0.7s,baz=64,slow=10.0,SNR=9.3						
SONM	**Songino Array**	**78.06**	**324**	P	**P**	**02 37 36.5**	**+0.6**
	0.2nm,0.6s,baz=115,slow=6.5,SNR=3.0						
RPN	**Rapa Nui**	**81.58**	**116**	LR	LR	03 10 48.9	
	comp=Z,43nm,18.2s,baz=181,slow=33						
ILAR	**Eielson Array**	**83.99**	**19**	P	**P**	**02 38 06.5**	**-0.4**
	0.3nm,0.7s,baz=222,slow=5.2,SNR=4.4						

KRSC 28 02:34:06.6±2.0, 54°.02N×162°.95E, h61^{km}±22^{km}, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZV	**Kizimen**	**1.89**	**306**	*e*P	Pn	02 34 40.0	+3.3
SPN	**Mys Shipunski**	**1.97**	**243**	*e*P	Pn	02 34 39.3	+1.6
SPN				*e*S	Sn	02 35 02.3	+1.0
KII	**Karymskiy**	**2.06**	**272**	*e*P	Pn	02 34 41.9	+2.9
KBTR	**Krutoberegovo**	**2.19**	**358**	*e*P	Pn	02 34 41.4	+0.8
KBTR				*e*S	Sn	02 35 08.5	+1.9
KBG	**Krutoberegovo**	**2.24**	**357**	*e*S	Sn	02 35 10.3	+2.5
SDLR	**Sedlovina**	**2.53**	**255**	*e*P	Pn	02 34 48.2	+2.9
SMAR	**Somma**	**2.58**	**255**	*e*P	Pn	02 34 49.6	+3.5
UGLR	**Uglovaya**	**2.59**	**253**	*e*P	Pn	02 34 49.1	+3.0
AVH	**Avacha**	**2.62**	**255**	*e*P	Pn	02 34 49.7	+3.2
AVH				*e*S	Sn	02 35 20.6	+3.5
KRX	**Arik**	**2.64**	**257**	*e*P	Pn	02 34 49.8	+2.9
KRX				*e*S	Sn	02 35 20.8	+3.0
KOK	**Koryaka**	**2.67**	**256**	*e*P	Pn	02 34 50.4	+3.2
KOK				*e*S	Sn	02 35 21.8	+3.4
DALK	**Dalny**	**2.69**	**250**	*e*S	Sn	02 35 21.3	+2.5
PET	**Petropavlovsk**	**2.75**	**250**	*e*S	Sn	02 35 23.8	+3.6
GNL	**Ganaly**	**2.98**	**266**	*e*P	Pn	02 34 55.8	+4.3
RUS	**Russkaya**	**3.10**	**241**	*e*S	Sn	02 35 30.3	+1.4
KRMR	**Karymshinskiy**	**3.12**	**249**	*e*P	Pn	02 34 56.2	+2.9
KRMR				*e*S	Sn	02 35 32.0	+2.7
MTVR	**Mutnovka**	**3.25**	**244**	*e*P	Pn	02 34 57.8	+2.6
MTVR				*e*S	Sn	02 35 34.7	+2.0

IDC 28 02:41:14.5±6.5, 6°.47S×148°.31E, h0^{km}, mb3.8/3, mb1 3.8/4, mb1mx3.5/39, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=99.2km s-min=64.6km az=34.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.06**	**224**	P	Pn	02 45 39.4	0.0
	0.1nm,0.3s,baz=50,slow=11,SNR=12						
ASAR	**Alice Springs**	**22.00**	**218**	P	P	02 46 12.4	+1.8
	0.4nm,0.5s,baz=49,slow=8.9,SNR=9.9						
FITZ	**Fitzroy Crossi**	**24.95**	**240**	P	P	02 46 39.0	-0.8
	6.3nm,1.1s,baz=45,slow=9.8,SNR=4.6						
STKA	**Stephens Creek**	**26.04**	**193**	P	P	02 46 48.5	-1.1
	2.8nm,0.8s,baz=34,slow=11,SNR=4.5						

*IDC **28** 02:42:52.0±8.9, 36°.58N×71°.08E, h122^{km}±66^{km}, mb3.2/1, mb1 3.0/5, mb1mx2.7/54, mbtmp3.4/5, MS3.3/1, Ms1 3.3/1, ms1mx2.3/27, Error ellipse: s-maj=80.3km s-min=52.3km az=164.0*

*NNC **28** 02:42:52.9±6.2, 37°.00N×70°.64E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=48.8km s-min=42.2km az=152.0*

ISC 28 02:42:50.6±2.3, 36°.5N±0°.2×70°.9E±0°.1, h100^{km}, n10, σ1^{s}.36/14, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**4.05**	**30**	⇓Pn	**Pn**	**02 43 52.5**	**+1.8**
	3.6nm,0.3s						
SFK				⇑Sn	**Sn**	**02 44 38.2**	**+0.9**
	6.4nm,0.2s						
MNAS	**Manas**	**6.09**	**12**	⇓Pn	**Pn**	**02 44 19.0**	**+0.9**
	4.8nm,0.7s						
MNAS				⇑Sn	**Sn**	**02 45 27.3**	**+0.8**
	5.0nm,0.6s						
KK31	**Karatay Array**	**6.57**	**358**	Pn	**Pn**	**02 44 25.8**	**+1.1**
	2.1nm,0.4s,baz=183,slow=13,SNR=57						
KK31				⇑Sn	**Sn**	**02 45 36.4**	**-1.7**
	1.8nm,0.5s,baz=187,slow=22						
AAK	**Ala-Archa**	**6.72**	**24**	⇑Pn	**Pn**	**02 44 27.4**	**+0.7**
	1.8nm,0.4s						
AAK				⇑Sn	**Sn**	**02 45 41.1**	**-0.7**
	3.4nm,0.6s						
AAK	**Ala-Archa**	**6.72**	**24**	P	**Pn**	**02 44 26.6**	**-0.1**
	1.4nm,0.3s,baz=159,slow=4.0,SNR=15						
AAK				S	**Sn**	**02 45 40.5**	**-1.3**
	0.4nm,0.3s,baz=336,slow=20,SNR=2.8						
MKAR	**Makanchi Array**	**13.34**	**36**	P	**Pn**	**02 45 54.2**	**-1.6**
	0.0nm,0.3s,baz=216,slow=13,SNR=2.2						
AKTO	**Aktyubinsk**	**16.70**	**330**	P	**P**	**02 46 41.0**	**+2.0**
	0.1nm,0.3s,baz=147,slow=8.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**19.94**	**25**	P	**P**	**02 47 13.8**	**-0.6**
	0.2nm,0.3s,baz=218,slow=9.1,SNR=4.3						
KIRV	**Kirov**	**26.17**	**334**	LR	LR	02 58 40.2	
	comp=Z,64nm,19.6s,baz=170,slow=36						
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**02 50 48.9**	**-1.2**
	0.7nm,0.9s,baz=104,slow=7.6,SNR=3.4						

*IDC **28** 02:49:34.6±0.9, 4°.65S×138°.51E, h0^{km}, mb4.2/8, mb1 4.3/10, mb1mx4.1/28, mbtmp4.2/10, ML4.4/2, MS3.8/7, Ms1 3.8/7, ms1mx3.5/37, Error ellipse: s-maj=29.5km s-min=21.5km az=85.0*

*ISCJB **28** 02:49:36.5±0.3, 4°.93S±0°.03×138°.59E±0°.04, h33^{km}, mb4.7/1, MS3.1/1, Error ellipse: s-maj=5.3km s-min=3.5km az=12.7*

*DJA **28** 02:49:37.6±0.5, 4°S±7°×13°9E±°, h234^{km}±11^{km}, M4.9/5, mb4.5/5, MLv5.1/5*

*NEIC **28** 02:49:40.7±1.3, 4°.95S×138°.44E, h56^{km}±13^{km}, mb4.4/13, Error ellipse: s-maj=11.9km s-min=7.7km az=68.0*

ISC 28 02:49:39.1±0.5, 4°.88S±0°.05×138°.62E±0°.05, h35^{km}, n49, σ1^{s}.91/57, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**2.75**	**34**	P	**Pn**	**02 50 20.0**	**-0.7**
GENI				S	**Sn**	**02 50 54.1**	**+1.4**
JAY	**Jayapura**	**3.14**	**42**	P	**Pn**	**02 50 25.8**	**-0.3**
JAY				S	**Sn**	**02 51 02.3**	**-0.1**
SRPI	**Serui, Papua**	**3.81**	**321**	P	**Pn**	**02 50 37.4**	**+2.0**
SRPI				S	**Sn**	**02 51 18.9**	**-0.2**
BAKI	**Biak**	**4.44**	**326**	P	**Pn**	**02 50 44.2**	**+0.2**
FAKI	**Fak Fak**	**6.64**	**287**	*e*Pn	**Pn**	**02 51 14.6**	**+0.2**
FAKI				*e*Sn	**Sn**	**02 52 28.5**	**-0.5**
FAKI	**Fak Fak**	**6.64**	**287**	P	**Pn**	**02 51 16.9**	**+2.5**
	47nm,0.9s						
BNDI	**Bandanaira**	**8.69**	**272**	P	**Pn**	**02 51 44.8**	**+2.3**
COEN	**Coen**	**10.08**	**154**	*e*Pn	**Pn**	**02 52 03.5**	**+2.0**
COEN				*e*Sn	**Sn**	**02 53 52.4**	**-1.1**
MTN	**Manton Dam**	**10.83**	**223**	*e*Pn	**Pn**	**02 52 12.5**	**+0.8**
MTN				*e*Sn	**Sn**	**02 54 12.5**	**+0.7**
SOEI	**Soe**	**15.03**	**250**	*e*Pn	**Pn**	**02 53 06.8**	**-2.4**
SOEI				*e*Sn	**Sn**	**02 55 59.7**	**+4.9**
WRAB	**Tennant Creek**	**15.53**	**195**	*e*Pn	**Pn**	**02 53 13.8**	**-1.8**
	21nm,1.2s						
WB2	**Warramunga Arr**	**15.54**	**195**	*e*Pn	**Pn**	**02 53 13.2**	**-2.6**
	11nm,0.5s						
WB2				*e*Sn	**Sn**	**02 56 03.7**	**-3.2**
WR1	**Warramunga Arr**	**15.54**	**195**	*e*Pn	**Pn**	**02 53 14.2**	**-1.6**
	21nm,1.1s						
WR1				*e*Sn	**Sn**	**02 56 04.5**	**-2.5**
WRA	**Warramunga Arr**	**15.54**	**195**	Pn	**Pn**	**02 53 14.2**	**-1.6**
	0.6nm,0.3s,baz=12,slow=13,SNR=6.5						
WRA				Sn	**Sn**	**02 56 04.5**	**-2.5**
	0.7nm,0.3s,baz=7.7,slow=22,SNR=4.6						
WRA				Lg	Lg	02 57 56.6	
	0.6nm,0.3s,baz=17,slow=32,SNR=2.3						
WRA				LR	LR	02 59 46.4	

	comp=Z,1μm,20.2s,baz=15,slow=39						
CTA	Charters Tower	16.85	154	P	P	02 53 39.9	+5.6
	0.3nm,0.3s,baz=324,slow=11,SNR=5.1						
DAV	Davao City (W)	17.61	312	LR	LR	03 00 21.3	
	comp=Z,102nm,21.2s,baz=187,slow=37						
FITZ	Fitzroy Crossi	18.27	223	eP	P	02 53 47.9	-2.0
	12nm,1.1s						
FITZ				Lg	Lg	02 59 21.4	
FITZ	Fitzroy Crossi	18.27	223	P	P	02 53 49.9	0.0
	0.5nm,0.3s,baz=31,slow=11,SNR=13						
FITZ				S	Sn	02 57 01.0	-12
	0.5nm,0.3s,baz=139,slow=9.6,SNR=4.3						
FITZ				Lg	Lg	02 59 21.4	
	0.3nm,0.3s,baz=318,slow=12,SNR=1.9						
FITZ				LR	LR	03 01 29.3	
	comp=Z,451nm,20.7s,baz=43,slow=39						
AS01	Alice Springs	19.21	193	eP	Pn	02 54 03.2	+1.7
AS31	Alice Springs	19.23	193	eP	Pn	02 54 03.9	+2.3
	8.8nm,0.6s						
AS31				eS	Sn	02 57 33.3	-2.9
ASAR	Alice Springs	19.23	193	P	Pn	02 54 03.9	+2.3
	2.8nm,0.3s,baz=23,slow=10,SNR=70						
ASAR				S	Sn	02 57 33.3	-2.9
	0.2nm,0.3s,baz=12,slow=28,SNR=3.5						
ASAR				Lg	Lg	02 59 49.1	
	0.1nm,0.3s,baz=12,slow=30,SNR=2.5						
ASAR				LR	LR	03 02 00.9	
	comp=Z,872nm,18.6s,baz=26,slow=38						
GUMO	Guam	19.37	19	LR	LR	03 01 17.2	
	comp=Z,117nm,19.3s,baz=169,slow=37						
HNR	Honiara	21.64	103	LR	LR	03 02 45.6	
	comp=Z,66nm,18.9s,baz=288,slow=36						
MBWA	Marble Bar	24.45	227	eP	P	02 54 53.8	-1.1
	26nm,1.2s						
FORT	Forrest	27.62	200	eP	P	02 55 20.7	-2.7
	23nm,0.9s						
ARMA	Armidale	28.21	156	eP	P	02 55 28.2	-0.6
	8.4nm,1.4s						
MJAR	Matsushiro Arr	41.20	360	P	P	02 57 19.9	-0.7
	1.0nm,0.6s,baz=180,slow=7.4,SNR=3.3						
MAJO	Matsushiro	41.20	359	eP	P	02 57 19.9	-0.7
KS15	Wonju Array Si	43.27	348	eP	P	02 57 37.0	-0.4
	4.4nm,1.2s						
KSAR	Wonju Array Be	43.27	348	P	P	02 57 37.0	-0.4
KSRS	Korea Array	43.28	348	P	P	02 57 37.0	-0.4
	1.0nm,0.7s,baz=158,slow=7.9,SNR=2.3						
CM31	Chiang Mai Arr	45.46	302	eP	P	02 57 54.8	-0.4
	7.1nm,0.4s						
CMAR	Chiang Mai Arr	45.46	302	P	P	02 57 54.8	-0.4
	1.3nm,0.4s,baz=130,slow=6.0,SNR=5.5						
FOZ	Fox Glacier	47.32	149	eP	P	02 58 10.7	+1.3
	18nm,1.4s						
PETK	Petropavlovsk-	59.98	13	P	P	02 59 42.1	+0.1
	7.0nm,0.9s,baz=228,slow=8.7,SNR=5.9						
PEA1	Petropavlovsk-	59.98	13	eP	P	02 59 42.1	+0.1
RAR	Rarotonga	61.81	111	eP	P	02 59 57.3	+2.3
	19nm,0.9s						
RAR	Rarotonga	61.81	111	P	P	02 59 57.3	+2.3
	13nm,0.6s,baz=203,slow=7.7,SNR=3.4						
MK01	Makanchi Array	71.43	323	eP	P	03 00 55.2	-0.8
MK32	Makanchi Array	71.44	323	eP	P	03 00 55.4	-0.7
MKAR	Makanchi Array	71.44	323	P	P	03 00 55.4	-0.7
	0.5nm,0.4s,baz=113,slow=6.7,SNR=8.5						
ZALV	Zalesovo Beam	73.75	330	P	P	03 01 07.8	-1.8
	0.5nm,0.4s,baz=140,slow=7.4,SNR=3.0						
ZAA1	Zalesovo Array	73.76	330	eP	P	03 01 07.8	-1.8
GEYT	Alibeck	85.51	309	LR	LR	03 43 39.8	
	comp=Z,102nm,18.4s,baz=85,slow=38						
ILAR	Eielson Array	87.83	24	P	P	03 02 23.0	-1.5
	1.3nm,1.0s,baz=253,slow=4.8,SNR=8.5						
ILB	Eielson Array	87.83	24	eP	P	03 02 23.0	-1.5
	6.8nm,1.4s						
TORD	Torodi Ar. Bea	136.73	284	PKP	PKPdf	03 08 58.2	-0.8
	0.2nm,0.6s,baz=61,slow=2.2,SNR=3.1						
TOA1	Torodi Ar. Sit	136.73	284	ePKPdf	PKPdf	03 08 58.2	-0.8
LPAZ	La Paz	146.20	129	PKPbc	PKPab	03 09 19.1	+0.8
	0.9nm,0.6s,baz=225,slow=5.7,SNR=4.2						

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*IDC **28** 02:59:48.6±6.1, 20°.87S×178°.39W, h582^{km}±63^{km}, mb3.2/8, mb1 3.4/8, mb1mx3.2/25, mbtmp4.1/8, Error ellipse: s-maj=84.0km s-min=30.6km az=148.0*

ISC 28 02:59:48.8±1.9**, 20°.9S**±0°.6×**178°.4W**±0°.3**, h587**^{km}**, n11, σ1^{s}.21**/12**, mb3.9**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.11	265	P	P	03 05 37.8	-0.2
	2.2nm,0.4s,baz=94,slow=14,SNR=4.3						
STKA	Stephens Creek	37.31	245	P	P	03 06 12.8	+0.3
	0.9nm,0.4s,baz=86,slow=9.1,SNR=3.4						
ASAR	Alice Springs	44.10	257	P	P	03 07 06.2	-0.2
	4.4nm,0.5s,baz=97,slow=7.7,SNR=49						
ASAR				PcP	PcP	03 08 38.7	+0.2
	0.4nm,0.6s,baz=102,slow=4.2,SNR=3.8						
WRA	Warramunga Arr	44.21	263	P	P	03 07 06.5	-0.8
	2.4nm,0.5s,baz=97,slow=7.8,SNR=57						
ILAR	Eielson Array	88.78	13	P	P	03 11 39.6	-0.8
	0.4nm,0.7s,baz=223,slow=5.6,SNR=6.0						
PDAR	Pinedale Array	89.49	43	P	P	03 11 45.6	+1.0
	0.3nm,0.6s,baz=179,slow=4.5,SNR=3.0						
CMAR	Chiang Mai Arr	89.93	290	P	P	03 11 48.8	+2.0
	0.6nm,0.3s,baz=128,slow=5.8,SNR=3.2						
YKA	Yellowknife Ar	97.02	25	P	P	03 12 18.3	+0.2
	0.1nm,0.5s,baz=250,slow=4.2,SNR=2.7						
AKASG	Malin Array Be	143.19	331	PKP	PKPdf	03 18 14.2	-2.5
	2.4nm,0.5s,baz=44,slow=4.3,SNR=14						
BRTR	Keskin Array B	146.85	312	PKPbc	PKPbc	03 18 26.1	-0.4
	0.9nm,0.8s,baz=116,slow=3.4,SNR=4.9						
GERES	GERESS Array B	150.49	344	PKPbc	PKPbc	03 18 34.6	-0.4
	0.9nm,0.8s,baz=26,slow=4.7,SNR=3.3						

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*BJI **28** 03:09:40.8, 17°.71S×167°.38E, h10^{km}, mB5.9/63, mb5.5/56, Ms5.7/90, Ms7 5.5/78*

*IDC **28** 03:09:41.4±0.3, 17°.71S×167°.42E, h0^{km}, mb5.4/31, mb1 5.5/33, mb1mx5.4/39, mbtmp5.5/33, ML6.3/2, MS5.3/30, Ms1 5.3/30, ms1mx5.2/36, Error ellipse: s-maj=11.0km s-min=8.6km az=89.0*

*NEIC **28** 03:09:44.0±0.0, 17°.57S×167°.13E, h25^{km}, Moment Tensor Solution. s33 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.93; M$_{\theta\theta}$-1.90; M$_{\phi\phi}$-3.03; M$_{r\theta}$-1.57; M$_{\theta\phi}$4.04; M$_{\phi r}$-5.45; Best double couple: M$_{0}$8.20000×10^{17} NP1:ϕ_s171.00000°, δ68.00000°, λ122.00000°. NP2:ϕ_s292.00000°, δ38.00000°, λ37.00000°. Principal axes: T 8.7400, Plg55.0000°, Azm122.0000°; N -1.2400, Plg29.0000°, Azm338.0000°; P -7.5000, Plg17.0000°, Azm238.0000°;*

*WEL **28** 03:09:44.0, 17°.72S×167°.34E, h18^{km}*

*NEIC **28** 03:09:44.5±0.1, 17°.72S×167°.34E, h18^{km}, mb6.0/270, ME5.8, MS5.7/299, MW5.7, MW5.9, Error ellipse: s-maj=3.1km s-min=2.7km az=119.0, Moment Tensor Solution. s42 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.13; M$_{\theta\theta}$-1.05; M$_{\phi\phi}$-2.08; M$_{r\theta}$-0.18; M$_{\theta\phi}$4.06; M$_{\phi r}$-2.12; Best double couple: M$_{0}$5.30000×10^{17} NP1:ϕ_s169.00000°, δ64.00000°, λ131.00000°. NP2:ϕ_s285.00000°, δ48.00000°, λ36.00000°. Principal axes: T 4.5200, Plg52.0000°, Azm128.0000°; N 1.3900, Plg36.0000°, Azm328.0000°; P -5.9000, Plg10.0000°, Azm230.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s350.00000°, δ20.00000°, λ90.00000°. NP2:ϕ_s170.00000°, δ70.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm80.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm260.0000°; Apparent Stress 0.32 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [III] at Port-Vila.

*ISCJB **28** 03:09:44.4±1.1, 17°.67S±0°.02×167°.29E±0°.02, h25^{km}±8^{km}, mb5.8/346, MS5.6/595 Error ellipse: s-maj=3.7km s-min=3.1km az=14.5*

*MOS **28** 03:09:45.4±1.1, 17°.65S×167°.28E, h31^{km}, mb6.0/64, MS5.5/59, Error ellipse: s-maj=7.5km s-min=6.2km az=111.2*

*GCMT **28** 03:09:49.5±0.1, 17°.75S±0°.01×167°.18E±0°.01, h37^{km}, MW5.9/140, Moment Tensor Solution. s135,c279; s140,c393; Duration: 2^{s}.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$5.14±.06; M$_{\theta\theta}$-3.00±.06; M$_{\phi\phi}$-2.14±.06; M$_{r\theta}$0.06±.07; M$_{\theta\phi}$4.94±.04; M$_{\phi r}$-4.46±.08; Best double couple: M$_{0}$8.00400×10^{17} NP1:ϕ_s160.00000°, δ65.00000°, λ122.00000°. NP2:ϕ_s284.00000°, δ40.00000°, λ41.00000°. Principal axes: T 7.7290, Plg57.0000°, Azm114.0000°; N 0.5500, Plg29.0000°, Azm325.0000°; P -8.2790, Plg14.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 28 03:09:44.9±0.5**, 17°.73S**±0°.03×**167°.41E**±0°.04**, h22**^{km}±3^{km}**, h23**^{km}**:pP-P, n1624, σ1^{s}.50**/1318**, mb5.9**/348**, MS5.7**/597**, 64C-15D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	3.78	171	ePn	Pn	03 10 40.0	-1.8
DZM	Mont Dzumac	4.41	192	ePn	Pn	03 10 49.8	-0.9
	14μm,1.4s						
DZM				eSn	Sn	03 11 36.5	-4.9
	17μm,1.2s						
DZM				eLR	LR	03 11 53.9	
	comp=Z,75μm,23.2s						
DZM	Mont Dzumac	4.41	192	Pn	Pn	03 10 50.6	0.0
	2μm,0.3s,baz=41,slow=13,SNR=4799						
DZM				Sn	Sn	03 11 39.0	-2.4
	162nm,0.3s,baz=312,slow=23,SNR=10						
DZM				LR	LR	03 12 19.1	
	comp=Z,54μm,19.0s,baz=52,slow=36						
PINNC	Pines Island,	4.86	180	ePn	Pn	03 10 56.5	-0.2
MSVF	Nonsavu	10.14	92	ePn	Pn	03 12 14.7	+5.3
	5μm,1.6s						
MSVF	Nonsavu	10.14	92	eP	Pn	03 12 14.7	+5.3
MSVF				pmax	pmax		
	comp=Z,5μm,1.6s						
HNR	Honiara	10.98	318	ePn	Pn	03 12 21.4	+0.6
HNR				eSn	Sn	03 14 18.5	-4.5
HNR	Honiara	10.98	318	eP	Pn	03 12 21.4	+0.6
HNR				e		03 14 18.5	
HNR	Honiara	10.98	318	Pn	Pn	03 12 21.0	+0.2
	comp=Z,212nm,0.3s,baz=193,slow=1.2,SNR=66						
HNR				Sn	Sn	03 14 18.5	-4.5
	comp=Z,38nm,0.3s,baz=218,slow=19,SNR=3.4						
HNR				LR	LR	03 15 42.7	
	comp=Z,31μm,21.9s,baz=124,slow=33						
NFK	Norfolk Island	11.27	178	P	Pn	03 12 28.1	+3.4
	baz=11,SNR=9.6						
LHI	Lord Howe Isla	15.67	207	P	Pn	03 13 25.0	+0.5
	baz=16,SNR=3.6						
LHI	Lord Howe Isla	15.67	207	ePn	Pn	03 13 23.3	-1.2
	comp=Z,1μm,1.6s						
EIDS	Eidsvold	16.97	241	P	P	03 13 42.7	-0.1
	baz=17,SNR=6.5						
EIDS	Eidsvold	16.97	241	ePn	Pn	03 13 41.2	+0.1
	comp=Z,2μm,1.6s						
RAO	Raoul Island	17.66	133	P	P	03 13 51.2	+0.8
	comp=Z,67nm,0.3s,baz=208,slow=15,SNR=4.7						
RAO				LR	LR	03 19 24.0	
	comp=Z,22μm,20.8s,baz=296,slow=33						
OUZ	Omahuta	18.27	164	ePn	P	03 13 58.7	+1.7
	comp=Z,784nm,1.6s						
OUZ	Omahuta	18.27	164	P	P	03 13 58.6	+1.6
ARMA	Armidale	19.13	226	eP	Pn	03 14 09.0	+1.4
	comp=Z,905nm,1.5s						
WCZ	Waipu Caves	19.15	163	P	Pn	03 14 09.8	+2.1
RMQ	Roma	19.33	240	P	Pn	03 14 11.6	+1.6
	baz=19,SNR=232						
TARA	Tarawa	19.73	17	eP	Pn	03 14 16.0	+1.2
	comp=Z,1μm,1.1s						
GRZ	Great Barrier	19.77	160	P	Pn	03 14 16.0	+0.8
ABAZ	Army Bay	19.91	162	P	Pn	03 14 18.9	+2.2
RVAZ	Riverhead Bore	19.99	163	P	Pn	03 14 22.1	+4.4
MBAZ	Motutapu North	20.08	162	P	Pn	03 14 20.6	+1.8
RABL	Rabaul	20.10	310	eP	Pn	03 14 24.5	+5.3
	comp=Z,1μm,1.1s						
RABL				LR	LR		
	comp=Z,15μm,22.0s						
CTA	Charters Tower	20.15	260	P	Pn	03 14 19.2	-0.5
	comp=Z,136nm,1.0s,baz=82,slow=12,SNR=60						
CTA				S	S	03 18 03.0	-0.3
	comp=Z,7.8nm,0.9s,baz=323,slow=20,SNR=1.8						
CTA				LR	LR	03 21 09.7	
	comp=Z,29μm,20.1s,baz=84,slow=34						
CTAO	Charters Tower	20.15	260	eP	Pn	03 14 19.3	-0.5
	comp=Z,2μm,1.9s						
CTAO				LR	LR		
	comp=Z,31μm,20.0s						
CTAO	Charters Tower	20.15	260	eP	Pn	03 14 19.3	-0.5
CTAO				pmax	pmax		
	comp=Z,2μm,1.9s						
CTAO				MLR	MLR		
	comp=Z,31μm,20.0s						
WIAZ	Waiheke Island	20.18	162	P	Pn	03 14 21.0	+1.1
KUZ	Kuaotunu	20.31	160	P	Pn	03 14 21.5	0.0
TOZ	Tahuroa Road	21.15	162	P	P	03 14 30.3	+1.8
NIUE	Niue	21.55	97	P	P	03 14 34.5	+1.6
	baz=22,SNR=3.8						
NIUE	Niue	21.55	97	eP	P	03 14 34.5	+1.6
	comp=Z,847nm,1.5s						
HIZ	Hauiti	21.70	164	eP	P	03 14 35.7	+1.3
	comp=Z,1μm,1.4s						
HIZ				LR	LR		
	comp=Z,17μm,18.0s						
HIZ	Hauiti	21.70	164	P	P	03 14 37.0	+2.6
TLZ	Tolley Road	21.72	163	P	P	03 14 37.5	+2.8
HAZ	Te Kaha	21.93	158	P	P	03 14 39.5	+2.6
MXZ	Matakaoa Point	21.95	156	eP	P	03 14 37.8	+0.7
	comp=Z,847nm,1.6s						
MTSU	Mount Surprise	21.97	265	P	P	03 14 39.1	+1.5
	baz=22,SNR=102						
RUGZ	Raukumara Rang	22.08	158	P	P	03 14 41.4	+2.8
URZ	Urewera	22.14	159	eP	P	03 14 40.2	+1.1
URZ				eS	S	03 18 45.4	+3.3
URZ				LR	LR		
	comp=Z,12μm,20.0s						
URZ	Urewera	22.14	159	P	P	03 14 40.2	+1.1
	comp=Z,232nm,1.1s,baz=353,slow=4.9,SNR=28						
URZ				S	S	03 18 45.4	+3.3
	comp=Z,16nm,1.1s,baz=87,slow=19,SNR=2.3						
URZ				LR	LR	03 21 41.8	
	comp=Z,11μm,19.6s,baz=348,slow=32						
PKGZ	Pakihiroa	22.16	157	P	P	03 14 42.3	+3.0
WMGZ	Waiomatatini S	22.22	156	P	P	03 14 43.1	+3.1
MWZ	Matawai	22.36	159	P	P	03 14 44.0	+2.6
TWGZ	Tauwhareparae	22.38	158	P	P	03 14 44.0	+2.3
PUZ	Puketiti	22.38	157	P	P	03 14 43.5	+1.8
RTZ	Ruatahuna	22.43	160	P	P	03 14 45.6	+3.3
RAGZ	Rawiri	22.46	159	P	P	03 14 46.4	+3.8
WTVZ	West Tongariro	22.47	163	P	P	03 14 46.2	+3.4
COVZ	Chateau Observ	22.53	163	P	P	03 14 48.2	+4.7
TKGZ	Te Karaka	22.56	158	P	P	03 14 46.3	+2.7
FWVZ	Far West T-bar	22.59	163	P	P	03 14 47.6	+3.5
MTHZ	Maungataniwha	22.60	161	P	P	03 14 48.4	+4.3
TRVZ	Turoa	22.63	163	P	P	03 14 47.8	+3.2
CNGZ	Carnagh Statio	22.73	158	P	P	03 14 48.0	+2.6
RIGZ	Rimuhau	22.77	159	P	P	03 14 47.7	+1.8
BKZ	Black Stump Fm	22.77	162	eP	P	03 14 46.7	+0.8
	comp=Z,592nm,1.4s						
BKZ				LR	LR		
	comp=Z,7μm,21.0s						
BKZ	Black Stump Fm	22.77	162	P	P	03 14 47.7	+1.8
MOVZ	Moawhango	22.78	163	P	P	03 14 48.4	+2.3
BHHZ	Black Hill Sta	22.95	163	P	P	03 14 50.6	+2.8
KWHZ	Kaweka Forest	22.99	162	P	P	03 14 50.3	+2.1
KNZ	Kokohu	23.02	159	P	P	03 14 49.4	+1.0
KRHZ	Kereru	23.18	162	P	P	03 14 51.4	+1.3
COEN	Coen	23.61	276	P	P	03 14 55.9	+1.4
	baz=24,SNR=20						
COEN	Coen	23.61	276	PFAKE		03 15 00.0	+5.5
COEN				LR	LR		
	comp=Z,17μm,21.0s						
CAN	Canberra	23.97	219	PFAKE		03 15 10.0	+12
CAN				LR	LR		
	comp=Z,18μm,22.0s						
BFZ	Birch Farm	24.11	163	eP	P	03 14 59.4	+0.4
	comp=Z,1μm,1.9s						
BFZ				LR	LR		
	comp=Z,20μm,18.0s						
SNZO	South Karori	24.32	167	eP	P	03 15 00.1	-0.9
SNZO				LR	LR		
	comp=Z,13μm,19.0s						
SNZO	South Karori	24.32	167	eP	P	03 15 01.7	+0.8
THZ	Tophouse	24.41	170	eP	P	03 15 02.8	+0.9
	comp=Z,328nm,1.1s						
THZ				LR	LR		
	comp=Z,7μm,18.0s						
MANU	Manus Island	25.11	306	eP	P	03 15 09.3	+1.0
	comp=Z,991nm,1.7s						
MANU				LR	LR		
	comp=Z,11μm,21.0s						
KHZ	Kahutara	25.15	169	eP	P	03 15 08.6	+0.1
	comp=Z,932nm,1.7s						
KHZ				LR	LR		
	comp=Z,12μm,19.0s						
KNTN	Kanton	25.30	56	PFAKE		03 15 20.0	+10
KNTN				LR	LR		
	comp=Z,9μm,21.0s						
LTZ	Lake Taylor	25.31	172	eP	P	03 15 10.4	+0.4
	comp=Z,681nm,1.3s						
LTZ				LR	LR		
	comp=Z,7μm,20.0s						
FOZ	Fox Glacier	25.80	176	eP	P	03 15 15.3	+1.0
	comp=Z,164nm,1.2s						
FOZ				LR	LR		
	comp=Z,13μm,19.0s						
OXZ	Oxford	25.81	172	eP	P	03 15 15.0	+0.6
	comp=Z,190nm,1.0s						
OXZ				LR	LR		
	comp=Z,7μm,18.0s						
PATS	Pohnpei	26.01	339	P	P	03 15 21.0	+4.5
	baz=26,SNR=5.0						
PATS	Pohnpei	26.01	339	eP	P	03 15 21.0	+4.5
	comp=Z,435nm,1.1s						
RPZ	Rata Peaks	26.09	174	eP	P	03 15 17.8	+0.9
RPZ				eS	S	03 19 51.0	+4.0
RPZ				LR	LR		
	comp=Z,9μm,18.0s						
RPZ	Rata Peaks	26.09	174	P	P	03 15 17.3	+0.3
	comp=Z,62nm,0.9s,baz=2.2,slow=3.4,SNR=19						
RPZ				S	S	03 19 51.0	+4.0
	comp=Z,9.8nm,0.9s,baz=49,slow=20,SNR=2.2						
RPZ				LR	LR	03 25 15.8	
	comp=Z,8μm,18.4s,baz=347,slow=36						
CRLZ	Canterbury Las	26.14	171	eP	P	03 15 19.5	+2.2
	comp=Z,1μm,1.9s						
MQZ	McQueen's Vall	26.27	171	eP	P	03 15 18.4	-0.2
	comp=Z,456nm,1.6s						
MQZ				LR	LR		
	comp=Z,6μm,20.0s						
KWAJ	Kwajalein Atol	26.36	0	PFAKE		03 15 30.0	+10
KWAJ				LR	LR		
	comp=Z,8μm,21.0s						
QIS	Mount Isa	26.40	259	P	P	03 15 20.3	+0.2
	baz=26,SNR=43						
LBZ	Lake Benmore	26.68	176	eP	P	03 15 22.1	-0.1
	comp=Z,138nm,1.5s						
LBZ				LR	LR		
	comp=Z,14μm,19.0s						
WKZ	Wanaka	27.05	177	eP	P	03 15 27.2	+1.6
	comp=Z,268nm,1.4s						
WKZ				LR	LR		
	comp=Z,19μm,21.0s						
STKA	Stephens Creek	27.25	234	P	P	03 15 28.3	+0.7
	baz=27,SNR=121						
STKA	Stephens Creek	27.25	234	eP	P	03 15 28.1	+0.5
	comp=Z,94nm,1.0s						
STKA				eS	S	03 20 08.1	+2.4
STKA				LR	LR		
	comp=Z,3μm,19.0s						
STKA	Stephens Creek	27.25	234	eP	P	03 15 28.1	+0.5
STKA				eS	S	03 20 08.1	+2.4
STKA				pmax	pmax		
	comp=Z,94nm,1.0s						
STKA				MLR	MLR		
	comp=Z,3μm,19.0s						
STKA	Stephens Creek	27.25	234	P	P	03 15 28.1	+0.5
	comp=Z,222nm,0.9s,baz=60,slow=6.9,SNR=164						
STKA				S	S	03 20 08.1	+2.4
	comp=Z,8.2nm,1.0s,baz=119,slow=19,SNR=1.9						
STKA				LR	LR	03 26 02.6	
	comp=Z,15μm,19.2s,baz=77,slow=36						
ODZ	Otahua Downs	27.37	175	eP	P	03 15 28.5	0.0
	comp=Z,73nm,1.2s						
ODZ				LR	LR		
	comp=Z,10μm,18.0s						
MLZ	Mavora Lakes	27.56	179	eP	P	03 15 31.4	+1.2
	comp=Z,232nm,1.5s						
MLZ				LR	LR		
	comp=Z,14μm,21.0s						
TOO	Toolangi	27.58	220	eP	P	03 15 31.8	+1.2
	comp=Z,355nm,1.5s						
TOO				LR	LR		
	comp=Z,19μm,22.0s						
TOO	Toolangi	27.58	220	eP	P	03 15 31.8	+1.2
TOO				pmax	pmax		
	comp=Z,355nm,1.5s						
TOO				MLR	MLR		
	comp=Z,19μm,22.0s						
DCZ	Deep Cove	27.65	180	eP	P	03 15 31.8	+0.8
	comp=Z,113nm,1.1s						
DCZ				LR	LR		
	comp=Z,5μm,22.0s						
WHZ	Wether Hill Ro	28.08	179	eP	P	03 15 35.1	+0.3
	comp=Z,92nm,1.3s						
WHZ				LR	LR		
	comp=Z,9μm,22.0s						
PYZ	Puysegur Point	28.36	181	PFAKE		03 15 50.0	+13
PYZ				LR	LR		
	comp=Z,3μm,20.0s						
ARPS	Mount Arapiles	29.45	225	P	P	03 15 48.5	+1.3
	baz=29,SNR=6.2						
HTT	Hallett	29.94	233	P	P	03 15 52.2	+0.6
	baz=30,SNR=18						
TAU	Tasmania Unive	30.35	210	PFAKE		03 16 10.0	+15
TAU				LR	LR		
	comp=Z,11μm,21.0s						
RAR	Rarotonga	31.10	102	LR	LR	03 26 01.0	
	comp=Z,5μm,21.6s,baz=263,slow=32						
WR0	Warramunga Arr	31.16	261	PFAKE		03 16 10.0	+7.5
WR0				LR	LR		
	comp=Z,17μm,21.0s						
WR9	Warramunga Arr	31.18	261	PFAKE		03 16 10.0	+7.3
WR9				LR	LR		
	comp=Z,16μm,21.0s						
WR8	Warramunga Arr	31.20	261	PFAKE		03 16 10.0	+7.2
WR8				LR	LR		
	comp=Z,16μm,20.0s						
WR7	Warramunga Arr	31.22	261	PFAKE		03 16 10.0	+7.0
WR7				LR	LR		
	comp=Z,16μm,21.0s						
WR6	Warramunga Arr	31.24	261	PFAKE		03 16 20.0	+17
WR6				LR	LR		
	comp=Z,16μm,20.0s						
WR5	Warramunga Arr	31.26	261	PFAKE		03 16 20.0	+17
WR5				LR	LR		
	comp=Z,16μm,20.0s						
WR4	Warramunga Arr	31.28	261	PFAKE		03 16 20.0	+16
WR4				LR	LR		
	comp=Z,16μm,20.0s						
WB0	Warramunga Arr	31.30	261	PFAKE		03 16 20.0	+16
WB0				LR	LR		
	comp=Z,18μm,21.0s						
WR3	Warramunga Arr	31.30	261	PFAKE		03 16 20.0	+16
WR3				LR	LR		
	comp=Z,17μm,20.0s						
WB9	Warramunga Arr	31.31	261	PFAKE		03 16 20.0	+16
WB9				LR	LR		
	comp=Z,34μm,20.0s						
WB8	Warramunga Arr	31.31	261	PFAKE		03 16 20.0	+16
WB8				LR	LR		
	comp=Z,17μm,20.0s						
WC3	Warramunga Arr	31.32	261	PFAKE		03 16 20.0	+16
WC3				LR	LR		
	comp=Z,17μm,19.0s						
WC2	Warramunga Arr	31.32	261	PFAKE		03 16 20.0	+16
WC2				LR	LR		
	comp=Z,18μm,19.0s						
WB5	Warramunga Arr	31.32	261	PFAKE		03 16 20.0	+16
WB5				LR	LR		
	comp=Z,16μm,20.0s						
WB6	Warramunga Arr	31.32	261	PFAKE		03 16 20.0	+16
WB6				LR	LR		
	comp=Z,17μm,20.0s						
WR2	Warramunga Arr	31.32	261	PFAKE		03 16 20.0	+16
WR2				LR	LR		
	comp=Z,16μm,20.0s						
WB4	Warramunga Arr	31.33	261	PFAKE		03 16 20.0	+16
WB4				LR	LR		
	comp=Z,16μm,20.0s						
WB3	Warramunga Arr	31.33	261	PFAKE		03 16 20.0	+16
WB3				LR	LR		
	comp=Z,16μm,20.0s						
WRAB	Tennant Creek	31.34	261	eP	P	03 16 03.5	-0.5
WRAB				LR	LR		
	comp=Z,19μm,21.0s						
WRAB	Tennant Creek	31.34	261	deP	P	03 16 02.6	-1.4
WRAB				pmax	pmax		

	comp=Z,108nm,1.0s						
WC4	Warramunga Arr	31.35	261	PFAKE		03 16 20.0	+16
WC4				LR	LR		
	comp=Z,17µm,20.0s						
WR1	Warramunga Arr	31.35	261	*e*P	P	03 16 03.4	-0.8
	comp=Z,170nm,1.0s						
WR1				*e*S	S	03 21 06.7	-3.6
WR1				LR	LR		
	comp=Z,18µm,20.0s						
WC1	Warramunga Arr	31.35	261	PFAKE		03 16 20.0	+16
WC1				LR	LR		
	comp=Z,13µm,20.0s						
WRA	Warramunga Arr	31.35	261	P	P	03 16 03.4	-0.8
	comp=Z,71nm,0.9s,baz=90,slow=9.1,SNR=52						
WRA				S	S	03 21 06.7	-3.7
	comp=Z,11nm,0.8s,baz=130,slow=27,SNR=2.2						
WRA				PKiKP	PKiKP	03 26 26.2	-1.5
	comp=Z,0.6nm,0.5s,baz=350,slow=0.1,SNR=5.7						
WRA				LR	LR	03 27 39.5	
	comp=Z,19µm,20.9s,baz=95,slow=34						
WRA				P3KPbc		03 47 44.5	
	comp=Z,16nm,1.1s,baz=293,slow=2.6,SNR=31						
AS01	Alice Springs	31.80	254	*e*P	P	03 16 05.4	-2.7
AS31	Alice Springs	31.84	254	*e*P	P	03 16 06.7	-1.8
	comp=Z,44nm,0.6s						
AS31				LR	LR		
	comp=Z,400nm,20.0s						
ASAR	Alice Springs	31.84	254	P	P	03 16 07.8	-0.7
	comp=Z,118nm,0.7s,baz=80,slow=8.3,SNR=713						
ASAR				LR	LR	03 28 22.5	
	comp=Z,31µm,20.4s,baz=88,slow=35						
ASAR				P3KPbc		03 47 40.1	
	comp=Z,3.8nm,1.1s,baz=276,slow=5.5,SNR=9.4						
BBOO	Buckleboo	31.93	236	P	P	03 16 09.7	+0.6
	baz=32,SNR=42						
BBOO	Buckleboo	31.93	236	*e*P	P	03 16 09.7	+0.6
	comp=Z,277nm,0.9s						
BBOO				LR	LR		
	comp=Z,9µm,21.0s						
MTN	Manton Dam	35.29	273	PFAKE		03 16 50.0	+11
MTN				LR	LR		
	comp=Z,10µm,20.0s						
RKPI	Ransiki, Papua	36.40	293	P	P	03 16 50.1	+2.0
	comp=Z,334nm,1.1s,comp=Z,9µm						
SAUI	Saumlaki	36.45	281	PFAKE		03 17 00.0	+12
SAUI				LR	LR		
	comp=Z,8µm,21.0s						
KNRA	Kununurra	37.03	267	P	P	03 16 52.6	-0.8
	baz=37,SNR=4.5						
MCQ	Macquarie Isla	37.27	188	PFAKE		03 17 10.0	+15
MCQ				LR	LR		
	comp=Z,4µm,20.0s						
FAKI	Fak Fak	37.48	289	*e*P	P	03 16 56.9	-0.4
	comp=Z,352nm,0.9s						
FAKI				LR	LR		
	comp=Z,13µm,22.0s						
FAKI	Fak Fak	37.48	289	P	P	03 16 57.0	-0.3
	comp=Z,417nm,1.3s,comp=Z,6µm						
FORT	Forrest	37.96	243	P	P	03 17 01.6	+0.5
	baz=38,SNR=14						
FORT	Forrest	37.96	243	*e*P	P	03 17 01.4	+0.3
	comp=Z,350nm,0.9s						
FORT				LR	LR		
	comp=Z,18µm,21.0s						
GUMO	Guam	38.25	323	PFAKE		03 17 20.0	+16
GUMO				LR	LR		
	comp=Z,9µm,22.0s						
FITZ	Fitzroy Crossi	39.68	263	P	P	03 17 16.6	+0.9
	baz=40,SNR=23						
FITZ	Fitzroy Crossi	39.68	263	*e*P	P	03 17 16.1	+0.3
	comp=Z,473nm,1.3s						
FITZ				*e*S	S	03 23 21.6	+3.4
FITZ				LR	LR		
	comp=Z,18µm,20.0s						
FITZ	Fitzroy Crossi	39.68	263	P	P	03 17 15.8	0.0
	comp=Z,248nm,1.1s,baz=85,slow=11,SNR=34						
FITZ				S	S	03 23 21.6	+3.4
	comp=Z,14nm,1.0s,baz=151,slow=19,SNR=1.8						
ANA2	Anatahan	40.04	327	PFAKE		03 17 30.0	+11
ANA2				LR	LR		
	comp=Z,3µm,20.0s						
SARN	Sarigan	40.30	327	PFAKE		03 17 30.0	+9.2
SARN				LR	LR		
	comp=Z,2µm,19.0s						
TBI	Tubuai	40.66	105	*e*S	S	03 23 36.0	+3.2
	comp=Z,2µm,28.0s						
TBI				*e*LQ	LQ	03 26 53.3	
	comp=Z,15µm,28.8s						
TBI				*e*LR	LR	03 28 33.3	
	comp=Z,13µm,28.8s,baz=268						
PAE	Paea	40.91	97	*e*P	P	03 17 25.6	-0.3
	comp=Z,8.4nm,0.9s						
PPT2	Papeete2	40.92	97	*e*P	P	03 17 26.2	+0.1
	comp=Z,69nm,1.4s						
PPT2				*e*S	S	03 23 38.4	+1.5
	comp=Z,2µm,25.0s						
PPT2				*e*LQ	LQ	03 26 57.3	
	comp=Z,20µm,32.0s						
PPT2				*e*LR	LR	03 28 44.5	
	comp=Z,20µm,25.2s,baz=254						
PPT	Papeete	40.92	97	LR	LR	03 30 36.4	
	comp=Z,6µm,21.6s,baz=256,slow=31						
TIAR	Tiarei	41.14	97	*e*P	P	03 17 27.8	-0.1
	comp=Z,13nm,0.9s						
TVO	Taravao	41.21	97	*e*P	P	03 17 28.0	-0.4
	comp=Z,12nm,0.9s						
NLAI	Namlea	42.04	285	P	P	03 17 37.0	+1.8
	comp=Z,476nm,1.7s,comp=Z,9µm						
BATI	Baumata	43.02	274	P	P	03 17 43.2	0.0
	comp=Z,133nm,0.9s,baz=45,slow=14,SNR=4.1						
BATI				S	S	03 24 00.8	-7.2
	comp=Z,29nm,0.7s,baz=96,slow=9.2,SNR=1.7						
TNTI	Ternate	43.48	291	PFAKE		03 18 00.0	+13
TNTI				LR	LR		
	comp=Z,3µm,22.0s						
TNTI	Ternate	43.48	291	P	P	03 17 49.9	+3.0
SANI	Sanana	43.53	286	P	P	03 17 47.0	-0.3
	comp=Z,514nm,1.6s,comp=Z,8µm						
MMRI	Maumere	44.80	276	PFAKE		03 18 10.0	+12
MMRI				LR	LR		
	comp=Z,3µm,19.0s						
MBWA	Marble Bar	44.96	258	*e*P	P	03 17 59.2	+0.5
	comp=Z,263nm,1.0s						
MBWA				LR	LR		
	comp=Z,12µm,20.0s						
EDFI	Ende, Flores	45.29	275	P	P	03 18 01.1	-0.4
	comp=Z,88nm,2.0s,comp=Z,3µm						
BBSI	Bau Bau	45.45	280	P	P	03 18 14.9	+12
MEEK	Meekatharra	45.82	250	P	P	03 18 05.0	-0.5
	baz=46,SNR=49						
KMSI	Cibinong	46.44	288	P	P	03 18 16.5	+6.0
KLBR	Kellerberrin	46.81	243	P	P	03 18 12.4	-0.9
	baz=47,SNR=6.1						
LUWI	Luwuk	46.88	286	*e*P	P	03 18 14.6	+0.7
	comp=Z,738nm,1.2s						
LUWI	Luwuk	46.88	286	P	P	03 18 15.5	+1.6
	comp=Z,554nm,1.2s,comp=Z,10µm						
NWAO	Narrogin (SRO)	47.38	241	P	P	03 18 17.1	-0.6
	baz=47,SNR=11						
NWAO	Narrogin (SRO)	47.38	241	*e*P	P	03 18 17.0	-0.6
	comp=Z,319nm,1.1s						
NWAO				LR	LR		
	comp=Z,10µm,20.0s						
NWAO	Narrogin (SRO)	47.38	241	P	P	03 18 23.6	+5.9
	SNR=6.9						
NWAO	Narrogin (SRO)	47.38	241	P	P	03 18 17.1	-0.6
	comp=Z,85nm,0.9s,baz=314,slow=7.3,SNR=24						
NWAO				S	S	03 25 10.4	-0.2
	comp=Z,7.7nm,0.9s,baz=38,slow=17,SNR=2.1						
DDMP	Don Marcelino,	47.49	296	*e*P	P	03 18 33.8	+15
BLDU	Ballidu	47.64	245	P	P	03 18 19.1	-0.6
	baz=48,SNR=4.9						
RKGY	Rocky Gully	47.78	239	P	P	03 18 21.1	+0.4
	baz=48,SNR=5.0						
BKSI	Bulukumba	47.80	279	P	P	03 18 21.5	+0.4
	comp=Z,52nm,1.3s,comp=Z,1µm						
DAV	Davao City (W)	48.10	297	PFAKE		03 18 40.0	+17
DAV				LR	LR		
	comp=Z,3µm,19.0s						
DAV	Davao City (W)	48.10	297	⇓*i*P	P	03 18 26.9	+3.5
DAV	Davao City (W)	48.10	297	*e*P	P	03 18 24.6	+1.2
BNSI	Bone	48.12	280	P	P	03 18 24.5	+0.9
	comp=Z,313nm,1.5s,comp=Z,6µm						
MORW	Morawa	48.15	247	PFAKE		03 18 40.0	+16
MORW				LR	LR		
	comp=Z,25µm,20.0s						
MUN	Mundaring	48.16	243	P	P	03 18 23.5	-0.2
	baz=48,SNR=9.1						
MRSI	Marisa	48.25	287	P	P	03 18 25.2	+0.6
	comp=Z,86nm,1.1s,comp=Z,1µm						
KAPI	Kappang	48.25	279	PFAKE		03 18 40.0	+15
KAPI				LR	LR		
	comp=Z,4µm,21.0s						
KCP	Kidapawan	48.48	297	⇓*i*P	P	03 18 26.6	+0.1
SPSI	Sidrap Palu	48.59	281	P	P	03 18 26.8	-0.4
	comp=Z,83nm,1.3s,comp=Z,1µm						
SKMP	Bagumbayan, Su	48.70	296	*e*P	P	03 18 32.4	+4.3
TTSI	Tana Toraja	48.86	282	P	P	03 18 31.1	+1.8
	comp=Z,95nm,1.0s,comp=Z,3µm						
BUKP	Musuan	48.96	298	*e*P	P	03 18 36.5	+6.5
PLAI	Plampang	48.98	274	P	P	03 18 31.3	+1.0
	comp=Z,167nm,1.1s,comp=Z,3µm						
CTBH	Cotabato--PC H	49.31	296	⇑*i*P	P	03 18 38.5	+5.8
PCI	Palu	49.63	284	P	P	03 18 37.6	+2.4
GIRL	Giralia	49.94	255	P	P	03 18 38.6	+1.1
	baz=50,SNR=5.0						
GIRL	Giralia	49.94	255	PFAKE		03 18 50.0	+13
GIRL				LR	LR		
	comp=Z,12µm,18.0s						
MPSI	Mapaga	50.06	286	P	P	03 18 38.1	-0.3
	comp=Z,378nm,0.9s,comp=Z,4µm						
MSLP	Maasin	50.33	300	*e*P	P	03 18 46.3	+5.9
PAGZ	Pagadian	50.36	297	*e*P	P	03 18 44.9	+4.2
JCJ	Chichijima	50.84	331	P	P	03 18 43.7	-0.4
	comp=Z,93nm,0.9s,baz=102,slow=9.3,SNR=3.5						
CBIJ	Chichi jima	50.84	331	*e*P	P	03 18 43.7	-0.4
IPIL	Ipil	51.03	296	*e*P	P	03 18 51.7	+6.0
OCLP	Ormoc	51.03	301	*e*P	P	03 18 51.4	+5.6
KIP	Kipapa	51.59	42	⇑*e*P	P	03 18 49.4	-0.4
KIP				pmax	pmax		
	comp=Z,127nm,1.3s						
SRBI	Singaraja	51.63	274	P	P	03 18 51.3	+1.0
	comp=Z,169nm,1.9s,comp=Z,4µm						
TAOE	Nuku Hiva Isla	51.66	87	*e*P	P	03 18 50.7	+0.1
	comp=Z,363nm,1.3s						
TAOE				*e*S	S	03 26 11.0	-0.1
	comp=Z,3µm,24.7s						
TAOE				*e*LQ	LQ	03 31 29.2	
	comp=Z,2µm,27.7s						
TAOE				*e*LR	LR	03 33 40.7	
	comp=Z,19µm,24.6s,baz=257						
KHLU	Kahalu\`u	51.72	46	PFAKE		03 19 00.0	+9.1
KHLU				LR	LR		
	comp=Z,4µm,20.0s						
SGKI	Sangatta, Kali	51.84	284	P	P	03 19 04.0	+12
MWH	Moku‘aweowe	51.85	46	PFAKE		03 19 10.0	+18
MWH				LR	LR		
	comp=Z,4µm,18.0s						
HLP	Hilina Pali	51.92	47	PFAKE		03 19 10.0	+18
HLP				LR	LR		
	comp=Z,5µm,20.0s						
SDHHI	Sand Hill	51.99	47	PFAKE		03 19 10.0	+17
SDHHI				LR	LR		
	comp=Z,4µm,20.0s						
MLH	Mauna Loa	52.00	46	PFAKE		03 19 10.0	+17
MLH				LR	LR		
	comp=Z,4µm,19.0s						
UWE	Uwekahuna	52.01	47	PFAKE		03 19 10.0	+17
UWE				LR	LR		
	comp=Z,4µm,20.0s						
UWB	Uwekahuna B	52.02	47	PFAKE		03 19 10.0	+17
UWB				LR	LR		
	comp=Z,5µm,20.0s						
PUH	Pauahi	52.03	47	PFAKE		03 19 10.0	+17
PUH				LR	LR		
	comp=Z,4µm,21.0s						
POHA	Pohakuloa	52.08	46	PFAKE		03 19 10.0	+16
POHA				LR	LR		
	comp=Z,5µm,22.0s						
STCH	Steam Cracks	52.10	47	PFAKE		03 19 10.0	+16
STCH				LR	LR		
	comp=Z,5µm,20.0s						
JCUZ	Jacuzzi	52.12	47	PFAKE		03 19 10.0	+16
JCUZ				LR	LR		
	comp=Z,4µm,20.0s						
HPAH	Hawaii Prepara	52.15	46	*e*P	P	03 18 55.0	+0.9
	comp=Z,377nm,1.3s						
BKB	Balikpapan	52.23	283	P	P	03 19 04.1	+9.4
KHLH	Kahului Airpor	52.26	44	*e*P	P	03 18 56.0	+1.3
	comp=Z,517nm,1.4s						
JAGI	Jajag, Banyuwa	52.53	273	*e*P	P	03 18 55.9	-1.2
	comp=Z,346nm,1.3s						
JAGI				LR	LR		
	comp=Z,4µm,21.0s						
JAGI	Jajag, Banyuwa	52.53	273	P	P	03 19 02.3	+5.3
PVCP	Virac	52.83	303	*e*P	P	03 19 03.5	+4.5
RCP	Roxas	52.84	300	⇓*e*P	P	03 18 59.8	+0.5
TSM	Tawau	53.54	289	P	P	03 19 06.5	+2.1
OTRP	Odiongan	53.87	301	*e*P	P	03 19 12.7	+5.9
CUYO	Cuyo Island	53.90	298	*e*P	P	03 19 13.2	+6.1
RKT	Rikitea	53.98	106	*e*P	P	03 19 07.9	+0.4
	comp=Z,212nm,1.3s						
MTKI	Muara Teweh, K	54.20	282	P	P	03 19 11.1	+1.8
	comp=Z,128nm,1.0s						
SJMP	San Jose	54.66	300	*e*P	P	03 19 18.6	+6.0
SDKM	Sandakan	54.73	290	P	P	03 19 14.9	+1.7
BUSP	Coron	55.18	299	*e*P	P	03 19 20.5	+4.2
NGJI	Ngawi	55.40	273	P	P	03 19 33.1	+15
ENPP	El Nido	55.42	298	*e*P	P	03 19 17.5	-0.6
PCJI	Pacitan	55.44	272	P	P	03 19 20.1	+1.9
	comp=Z,231nm,1.3s,comp=Z,7µm						
KDM	Kudat	55.62	292	P	P	03 19 26.8	+7.3
TGY	Tagaytay City	55.70	302	P	P	03 19 20.4	+0.3
	comp=Z,176nm,0.3s,baz=16,slow=1.9,SNR=4.6						
WOJI	Wonogiri, Jawa	55.78	273	P	P	03 19 27.9	+7.2
KKM	Kota Kinabalu	55.78	290	*e*P	P	03 19 21.3	+0.5
	comp=Z,987nm,1.8s						
KKM	Kota Kinabalu	55.78	290	P	P	03 19 27.0	+6.2
UGM	Wanagama	56.14	272	PFAKE		03 19 40.0	+17
UGM				LR	LR		
	comp=Z,7µm,19.0s						
CAUP	Cauayan	56.58	305	*e*P	P	03 19 37.6	+11
JHJ	Hachijo jima 2	57.04	332	LR	LR	03 44 30.7	
	comp=Z,2µm,19.5s,baz=140,slow=37						
BTM	Bintulu	57.44	286	P	P	03 19 39.4	+6.9
KPJI	Karang Pucung	57.81	272	P	P	03 19 35.8	+0.6
	comp=Z,191nm,1.0s,comp=Z,3µm						
SBUM	Sibu	57.94	285	*e*P	P	03 19 37.0	+0.9
	comp=Z,531nm,1.9s						
SBUM	Sibu	57.94	285	P	P	03 19 37.5	+1.4
JOW	Kunigami	58.35	319	LR	LR	03 44 05.5	
	comp=Z,240nm,18.9s,baz=67,slow=35						
JCJI	Jatiwangi	58.68	273	P	P	03 19 47.2	+6.0
CISI	Cisompet, Garu	58.81	272	*e*P	P	03 19 41.6	-0.6
	comp=Z,1µm,1.6s						
CISI				LR	LR		
	comp=Z,3µm,21.0s						
CISI	Cisompet, Garu	58.81	272	P	P	03 19 43.0	+0.8
	comp=Z,394nm,1.7s,comp=Z,6µm						
KSM	Kuching	59.35	283	*e*P	P	03 19 45.5	-0.4
	comp=Z,291nm,1.1s						
KSM				LR	LR		
	comp=Z,1µm,20.0s						
KSM	Kuching	59.35	283	P	P	03 19 46.4	+0.6
VNDA	Vanda	59.88	181	P	P	03 19 48.5	-0.1
	comp=Z,7.0nm,0.6s,baz=11,slow=8.4,SNR=5.1						
VNDA				S	S	03 27 56.7	-2.0
	comp=Z,9.6nm,1.3s,baz=31,slow=5.9,SNR=1.8						
VNDA				LR	LR	03 43 58.8	
	comp=Z,2µm,18.1s,baz=16,slow=34						
DBJI	Dramaga	60.11	273	P	P	03 19 51.6	+0.5
	comp=Z,509nm,1.8s						
XMIS	Christmas Isla	60.11	268	PFAKE		03 20 00.0	+8.9
XMIS				LR	LR		
	comp=Z,5µm,20.0s						
INU	Inuyama	60.15	332	*e*P	P	03 19 50.7	-0.2
	comp=Z,132nm,1.3s						
INU				LR	LR		
	comp=Z,2µm,21.0s						
YOJ	Yonaguni jima	60.27	313	PFAKE		03 20 00.0	+8.1
YOJ				LR	LR		
	comp=Z,3µm,20.0s						
MJAR	Matsushiro Arr	60.62	333	P	P	03 19 53.2	-0.9
	comp=Z,11nm,1.0s,baz=167,slow=7.7,SNR=17						
MJAR				LR	LR	03 45 43.9	
	comp=Z,879nm,19.9s,baz=155,slow=36						
MJAR				PKPPKP		03 49 13.3	
	comp=Z,0.4nm,0.3s,baz=303,slow=6.9,SNR=5.4						
MAJO	Matsushiro	60.62	333	*e*P	P	03 19 53.5	-0.7
	comp=Z,120nm,1.5s						
MAJO	Matsushiro	60.62	333	*e*P	P	03 19 53.5	-0.7
MAJO				pmax	pmax		
	comp=Z,120nm,1.5s						
MAJO	Matsushiro	60.62	333	*e*P	P	03 19 52.9	-1.2
MAT	Matsushiro	60.62	333	P	P	03 19 53.0	-1.2
MAT				S	S	03 28 08.0	-1.3
MJB9	Matsu-Tunnel	60.63	333	*e*P	P	03 19 53.6	-0.6
	comp=Z,128nm,1.5s						
TWG	Pinlang	60.63	310	PFAKE		03 20 10.0	+16
TWG				LR	LR		
	comp=Z,7µm,21.0s						
YULB	Yu-li	60.82	311	PFAKE		03 20 10.0	+14
YULB				LR	LR		
	comp=Z,2µm,22.0s						
CASY	Casey	60.82	203	PFAKE		03 20 10.0	+15
CASY				LR	LR		
	comp=Z,3µm,20.0s						
SSLB	Suanglung	61.31	311	*e*P	P	03 19 57.8	-1.3
	comp=Z,28nm,0.8s						
SSLB				LR	LR		
	comp=Z,3µm,22.0s						
JNU	Nakatsue	61.44	325	*e*P	P	03 19 59.2	-0.6
	comp=Z,206nm,1.3s						
JNU				LR	LR		
	comp=Z,2µm,22.0s						
JNU	Nakatsue	61.44	325	P	P	03 19 59.6	-0.2
	comp=Z,19nm,0.8s,baz=159,slow=0.7,SNR=12						
JNU				LR	LR	03 45 06.8	
	comp=Z,1µm,20.3s,baz=142,slow=35						
YHNB	Yeheng	61.55	312	*e*P	P	03 20 00.8	0.0
	comp=Z,79nm,0.8s						
YHNB				LR	LR		
	comp=Z,3µm,20.0s						
TATO	Taipei	61.66	312	PFAKE		03 20 10.0	+8.6
TATO				LR	LR		
	comp=Z,4µm,20.0s						
PPBI	Pangkal Pinang	62.02	277	P	P	03 20 05.0	+0.9
	comp=Z,89nm,1.6s,comp=Z,12µm						
KASI	Kota Agung	62.55	273	P	P	03 20 06.9	-0.7
	comp=Z,442nm,0.9s,comp=Z,4µm						
LWLI	Liwa	63.12	273	P	P	03 20 13.5	+1.9
MDSI	Maura Dua	63.16	274	P	P	03 20 10.3	-1.4
ERM	Erimo	63.53	340	PFAKE		03 20 30.0	+17
ERM				LR	LR		
	comp=Z,3µm,20.0s						
QZH	Quanzhou	63.72	310	⇑*i*P	P	03 20 15.5	+0.4
QZH				S	S	03 28 50.3	+1.6
QZH				ScS	ScS	03 30 09.0	+1.3
QZH				pmax	pmax		
	comp=Z,830nm,6.5s						
QZH				LR	LR		
	comp=Z,810nm,15.5s						
QZH				LR	LR		
	comp=Z,2µm,18.8s						
QZH				LR	LR		
	comp=Z,2µm,20.2s						
LHSI	Lahat	63.98	274	P	P	03 20 23.1	+6.0
YUK	Yuzh-Kuril'sk	64.55	343	⇑*i*P	P	03 20 19.1	-1.1
YUK				*i* S	S	03 28 54.4	-3.9
YUK				MLR	MLR		
	comp=Z,4µm,14.0s						
TPRI	Tanjung Pinang	64.56	280	P	P	03 20 29.0	+8.1
KUR	Kuril'sk	65.14	345	*e*P	P	03 20 25.0	+1.1
KUR				*i* S	S	03 29 07.9	+2.5
KUR				SS	SS	03 33 16.2	-2.3
KUR				pmax	pmax		
	comp=Z,1µm,4.9s						
KUR				pmax	pmax		
	comp=Z,373nm,1.3s						
KUR				MLR	MLR		
	comp=Z,1µm,16.0s						
KUR				MLR	MLR		
	comp=N,1µm,14.0s						
MASI	Maura Aman, Be	65.41	275	P	P	03 20 28.0	+1.5
	comp=N,253nm,1.1s,comp=N,4µm						
MYKOM	Kota Tinggi	65.49	280	*e*P	P	03 20 27.2	+0.2
	comp=N,295nm,1.7s						
MYKOM				LR	LR		
	comp=Z,3µm,20.0s						
MYKOM	Kota Tinggi	65.49	280	P	P	03 20 33.7	+6.7
ASAJ	Asahikawa	65.60	341	P	P	03 20 27.3	+0.3
	comp=Z,8.8nm,0.7s,baz=247,slow=5.3,SNR=6.7						
SSE	Sheshan	65.79	317	P	P	03 20 29.5	+1.0
SSE				S	S	03 29 14.0	0.0
SSE				pmax	pmax		
	comp=Z,37nm,1.1s						
SSE				pmax	pmax		
	comp=Z,330nm,6.5s						
SSE				LR	LR		
	comp=Z,510nm,17.9s						
SSE				LR	LR		
	comp=Z,640nm,19.0s						
SSE	Sheshan	65.79	317	PFAKE		03 20 40.0	+12
SSE				LR	LR		
	comp=Z,2µm,22.0s						
TJN	Taejon	65.79	325	*ce*P	P	03 20 28.1	-0.3
KGM	Kluang	66.07	280	P	P	03 20 31.8	+1.1
KSRS	Korea Array	66.29	326	P	P	03 20 31.6	+0.1
	comp=Z,3.5nm,0.8s,baz=142,slow=7.3,SNR=14						
KSRS				PKPPKP		03 49 04.7	
	comp=Z,2.4nm,1.0s,baz=324,slow=2.4,SNR=10						
KS15	Wonju Array Si	66.30	326	*e*P	P	03 20 31.6	0.0
	comp=Z,55nm,1.3s						
KSAR	Wonju Array Be	66.30	326	P	P	03 20 31.6	0.0
KSAR	Wonju Array Be	66.30	326	P	P	03 20 31.7	0.0
KS01	Wonju Array Si	66.32	326	*e*P	P	03 20 31.1	-0.7
GZH	Guangzhou	66.61	306	P	P	03 20 35.0	+1.1
GZH				S	S	03 29 28.3	+4.1
GZH				LR	LR		
	comp=Z,1µm,18.4s						
GZH				LR	LR		
	comp=Z,2µm,18.8s						
QIZ	Qiongzhong	67.33	300	P	P	03 20 39.5	+0.9
QIZ				PP	PP	03 23 08.0	+0.7
QIZ				S	S	03 29 36.0	+2.9
QIZ				SS	SS	03 33 57.3	+3.8
QIZ				LR	LR		
	comp=Z,470nm,24.1s						
QIZ				LR	LR		
	comp=Z,1µm,16.7s						
QIZ				LR	LR		
	comp=Z,2µm,26.0s						
QIZ	Qiongzhong	67.33	300	*e*P	P	03 20 39.8	+1.2
	comp=Z,93nm,1.0s						
QIZ				LR	LR		
	comp=Z,2µm,20.0s						
BKNI	Bangkinang	67.64	278	*e*P	P	03 20 41.2	+0.4
	comp=Z,1µm,1.4s						
BKNI				LR	LR		
	comp=Z,4µm,20.0s						
BKNI	Bangkinang	67.64	278	P	P	03 20 42.4	+1.6
	comp=Z,598nm,1.3s,comp=Z,10µm						
PDSI	Padang	67.79	276	P	P	03 20 46.4	+4.7
NJ2	Nanjing	67.92	317	*e*P	P	03 20 43.0	+0.9
NJ2				pP	pP	03 20 47.3	+0.1
NJ2				sP	sP	03 20 49.8	+0.7
NJ2				S	S	03 29 39.3	-0.5
NJ2				SS	SS	03 33 57.0	-5.3
NJ2				pmax	pmax		
	comp=Z,63nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,600nm,6.4s						
NJ2				LR	LR		
	comp=Z,2µm,19.1s						
NJ2				LR	LR		
	comp=Z,2µm,20.6s						
NJ2				LR	LR		
	comp=Z,2µm,22.6s						
COCO	West Island	68.07	264	PFAKE		03 21 00.0	+17
COCO				LR	LR		
	comp=Z,7µm,20.0s						
YSS	Yuzh-Sakhalins	68.11	342	*e*P	P	03 20 44.5	+1.6
	comp=Z,259nm,1.2s						
YSS				LR	LR		
	comp=Z,2µm,19.0s						
YSS	Yuzh-Sakhalins	68.11	342	*αe*P	P	03 20 44.1	+1.2
YSS				*e**SP	sP	03 20 50.5	+0.6
YSS				*e*		03 21 10.0	
YSS				*e*PPP	PPP	03 24 48.0	
YSS				*e*S	S	03 29 43.3	+2.0
YSS				*e*PPS	PPS	03 30 19.0	
YSS				*e*SS	SS	03 34 09.0	+4.4
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,300nm,4.0s						
YSS				smax	smax		

	comp=N,2µm,10.6s						
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
MSHR	Mys Shultsa	68.68	332	⇓eP	P	03 20 45.6	-1.0
VLA	Vladivostok	68.79	333	⇑eP	P	03 20 48.8	+1.6
VLA				pmax	pmax		
	comp=Z,158nm,2.0s						
SKR	Severo-Kuril's	68.84	352	⇑eP	P	03 20 48.4	+1.0
IPM	Ipoh	69.07	282	eP	P	03 20 49.6	-0.1
	comp=Z,371nm,1.4s						
IPM				LR	LR		
	comp=Z,2µm,22.0s						
IPM	Ipoh	69.07	282	P	P	03 20 50.0	+0.3
MNSI	Mandailing Nat	69.18	278	P	P	03 20 49.7	-0.7
	comp=Z,245nm,1.6s,comp=Z,5µm						
USA0B	Ussuriysk Arra	69.61	334	eP	P	03 20 53.5	+1.1
	comp=Z,218nm,1.4s						
USA0B				LR	LR		
	comp=Z,1µm,20.0s						
USRK	Ussuriysk Ar.	69.61	334	P	P	03 20 52.7	+0.3
	comp=Z,40nm,1.2s,baz=134,slow=5.5,SNR=18						
USRK				LR	LR	03 51 42.0	
	comp=Z,692nm,19.1s,baz=140,slow=36						
KULM	Kulim	69.71	283	eP	P	03 20 53.5	-0.2
	comp=Z,300nm,1.3s						
KULM				LR	LR		
	comp=Z,2µm,19.0s						
KULM	Kulim	69.71	283	P	P	03 20 54.0	+0.4
KULM	Kulim	69.71	283	P	P	03 20 54.0	+0.4
WHN	Wuhan	70.06	313	⇓P	P	03 20 54.5	-0.9
WHN				S	S	03 30 03.0	-2.1
WHN				LR	LR		
	comp=Z,9µm,23.3s						
WHN				LR	LR		
	comp=Z,8µm,22.6s						
WHN				LR	LR		
	comp=Z,15µm,24.2s						
SMY	Shemya	70.40	4	eP	P	03 20 57.8	+0.8
	comp=Z,649nm,1.5s						
SMY	Shemya	70.40	4	eP	P	03 20 57.8	+0.8
SMY				pmax	pmax		
	comp=Z,649nm,1.5s						
SKLT	Songkhla	70.41	285	P	P	03 20 59.3	+1.4
	comp=Z,239nm,1.1s,comp=Z,3µm						
PSI	Prapat	70.46	280	eP	P	03 20 57.1	-1.3
	comp=Z,363nm,1.2s						
PSI				LR	LR		
	comp=Z,5µm,20.0s						
PSI	Prapat	70.46	280	eP	P	03 20 57.1	-1.3
PSI				pmax	pmax		
	comp=Z,363nm,1.2s						
PSI				MLR	MLR		
	comp=Z,5µm,20.0s						
ADK	Adak	70.70	10	eP	P	03 20 59.2	+0.4
	comp=Z,364nm,1.5s						
ADK	Adak	70.70	10	eP	P	03 20 59.2	+0.4
ADK				pmax	pmax		
	comp=Z,364nm,1.5s						
DL2	Dalian	70.78	324	P	P	03 20 59.5	-0.1
DL2				S	S	03 30 13.8	+0.7
DL2				pmax	pmax		
	comp=Z,150nm,0.9s						
DL2				pmax	pmax		
	comp=Z,570nm,5.4s						
DL2				LR	LR		
	comp=Z,2µm,22.6s						
DL2				LR	LR		
	comp=Z,1µm,19.8s						
DL2				LR	LR		
	comp=Z,3µm,23.0s						
PET	Petropavlovsk	70.87	354	eP	P	03 21 00.7	+0.9
	comp=Z,232nm,1.4s						
PET				LR	LR		
	comp=Z,2µm,20.0s						
PET	Petropavlovsk	70.87	354	c iP	P	03 21 00.4	+0.6
PET				i S	S	03 30 15.0	+1.4
PET				ePS		03 30 38.3	
PET				eSS	SS	03 34 43.1	-3.8
PET				pmax	pmax		
	comp=Z,900nm,11.8s						
PET				pmax	pmax		
	comp=Z,129nm,1.4s						
MDJ	Mudanjiang	70.98	332	P	P	03 21 01.3	+0.6
MDJ				pP	pP	03 21 06.3	+0.4
MDJ				sP	sP	03 21 07.8	0.0
MDJ				PcP	PcP	03 21 22.8	+1.8
MDJ				PP	PP	03 23 40.8	+2.3
MDJ				S	S	03 30 18.5	+3.1
MDJ				SS	SS	03 34 54.8	+5.7
MDJ				pmax	pmax		
	comp=Z,64nm,1.7s						
MDJ				LR	LR		
	comp=Z,2µm,20.0s						
MDJ				LR	LR		
	comp=Z,970nm,17.5s						
MDJ				LR	LR		
	comp=Z,3µm,16.9s						
MDJ	Mudanjiang	70.98	332	eP	P	03 21 01.4	+0.6
	comp=Z,99nm,1.0s						
MDJ				LR	LR		
	comp=Z,2µm,21.0s						
PEA0B	Petropavlovsk-	71.04	354	eP	P	03 21 01.9	+1.0
	comp=Z,703nm,1.5s						
PEA0B				LR	LR		
	comp=Z,3µm,21.0s						
PETK	Petropavlovsk-	71.04	354	eP	P	03 21 00.8	-0.1
PETK	Petropavlovsk-	71.04	354	P	P	03 21 01.2	+0.3
	comp=Z,14nm,0.6s,baz=158,slow=6.8,SNR=20						
PETK				LR	LR	03 48 51.7	
	comp=Z,2µm,19.4s,baz=160,slow=33						
PEA1	Petropavlovsk-	71.05	354	eP	P	03 21 01.2	+0.2
GSI	Gunungsitoli	71.24	278	eP	P	03 21 03.5	+0.5
	comp=Z,381nm,1.0s						
GSI				LR	LR		
	comp=Z,6µm,22.0s						
SKNT	Sakolnakorn	71.33	295	P	P	03 21 03.9	+0.5
	comp=Z,119nm,1.7s,comp=Z,2µm						
TRTT	Trang	71.51	285	P	P	03 21 05.3	+0.7
	comp=Z,81nm,1.2s,comp=Z,1µm						
TIA	Tai'an	71.67	319	P	P	03 21 04.8	-0.3
TIA				S	S	03 30 20.3	-3.4
TIA				pmax	pmax		
	comp=Z,350nm,6.7s						
TIA				LR	LR		
	comp=Z,410nm,22.6s						
TIA				LR	LR		
	comp=Z,400nm,23.3s						
TYV	Tymovskoe	71.68	344	eP	P	03 21 05.5	+0.7
TYV				eS	S	03 30 26.7	+3.6
TYV				pmax	pmax		
	comp=Z,28nm,1.6s						
TYV				pmax	pmax		
	comp=Z,600nm,5.4s						
TYV				smax	smax		
	comp=E,600nm,6.2s						
SRAK	Srakaew	71.77	292	P	P	03 21 10.4	+4.3
	comp=E,78nm,1.6s,comp=E,1µm						
SNY	Shenyang	71.78	327	⇑P	P	03 21 05.5	-0.1
SNY				S	S	03 30 26.5	+1.9
SNY				pmax	pmax		
	comp=E,850nm,8.2s						
SNY				LR	LR		
	comp=E,1µm,18.4s						
SNY				LR	LR		
	comp=E,1µm,16.7s						
SNY				LR	LR		
	comp=E,3µm,18.2s						
CN2	Changchun	72.28	329	⇑P	P	03 21 08.5	-0.1
CN2				esP	sP	03 21 15.5	-0.1
CN2				eS	S	03 30 30.5	+0.2
CN2				pmax	pmax		
	comp=E,700nm,4.0s						
CN2				LR	LR		
	comp=E,1µm,19.0s						
CN2				LR	LR		
	comp=E,1µm,19.0s						
CN2				LR	LR		
	comp=E,2µm,21.0s						
QSPA	South Pole Qui	72.31	180	eP	P	03 21 09.0	+0.3
	comp=E,184nm,1.0s						
QSPA				LR	LR		
	comp=Z,2µm,19.0s						
QSPA	South Pole Qui	72.31	180	P	P	03 21 09.0	+0.3
	comp=Z,112nm,0.9s,baz=13,slow=1.8,SNR=169						
QSPA				LR	LR	03 49 52.9	
	comp=Z,2µm,20.1s,baz=29,slow=33						
PATY	Pattaya	72.38	290	P	P	03 21 17.1	+7.3
PKDT	Phuket	72.78	284	P	P	03 21 19.2	+7.0
LHMI	Lhok Sumawe	73.14	281	PFAKE		03 21 30.0	+16
LHMI				LR	LR		
	comp=Z,4µm,21.0s						
ENH	Enshi	73.38	310	eP	P	03 21 15.1	-0.3
	comp=Z,88nm,0.9s						
ENH				LR	LR		
	comp=Z,2µm,21.0s						
GRNR	Gornyy	73.44	340	eP	P	03 21 16.7	+1.4
GRNR				pmax	pmax		
	comp=Z,63nm,1.0s						
PHET	Kaeng Krachan	73.48	290	P	P	03 21 20.4	+4.1
	comp=Z,20nm,1.1s,comp=Z,304nm						
GYA	Guiyang	73.54	305	⇑iP	P	03 21 17.0	+0.4
GYA				pP	sP	03 21 23.0	-0.6
GYA				PP	PP	03 24 04.8	+3.9
GYA				S	S	03 30 45.5	-0.1
GYA				SKS	SKSac	03 31 20.5	-1.8
GYA				SS	SS	03 35 33.3	+4.2
GYA				LR	LR		
	comp=Z,950nm,26.5s						
GYA				LR	LR		
	comp=Z,1µm,23.3s						
GYA				LR	LR		
	comp=Z,2µm,23.3s						
PBKT	Sadao Pong	73.77	294	P	P	03 21 19.0	+1.1
	comp=Z,175nm,1.6s,comp=Z,3µm						
KLR	Kul'dur	73.80	337	c iP	P	03 21 17.9	+0.5
KLR	Kul'dur	73.80	337	P	P	03 21 15.2	-2.2
	comp=Z,41nm,1.2s,baz=137,slow=4.9,SNR=33						
KLR				LR	LR	03 50 27.8	
	comp=Z,1µm,21.9s,baz=151,slow=33						
NKL	Nikolayevsk	74.27	344	i P	P	03 21 21.0	+0.9
NKL				eS	S	03 30 55.0	+2.5
NKL				e		03 35 34.0	
NKL				pmax	pmax		
	comp=Z,130nm,1.4s						
NKL				pmax	pmax		
	comp=Z,1µm,8.0s						
NKL				smax	smax		
	comp=E,2µm,11.0s						
SRDT	SRDT	74.50	291	P	P	03 21 24.2	+1.9
	comp=E,183nm,1.7s,comp=E,3µm						
UTTA	Uttaradit	74.61	295	P	P	03 21 24.2	+1.3
	comp=E,30nm,1.2s,comp=E,340nm						
BJT	Baijiatuau	74.67	322	eP	P	03 21 23.2	+0.4
BJT				LR	LR		
	comp=Z,2µm,21.0s						
BJT	Baijiatuau	74.67	322	eP	P	03 21 23.2	+0.4
BJT				MLR	MLR		
	comp=Z,2µm,21.0s						
BJI	Beijing	74.68	322	⇑iP	P	03 21 23.0	+0.2
BJI				S	S	03 30 58.5	+0.8
BJI				SS	SS	03 35 42.3	-3.5
BJI				LR	LR		
	comp=Z,1µm,19.8s						
BJI				LR	LR		
	comp=Z,1µm,20.0s						
UTHA	Uthaitani	74.69	292	P	P	03 21 24.8	+1.4
	comp=Z,35nm,1.3s,comp=Z,404nm						
NANT	Nan	74.93	296	P	P	03 21 25.8	+1.1
	comp=Z,42nm,1.2s,comp=Z,454nm						
SUKH	Sukhothai	75.31	294	P	P	03 21 28.2	+1.3
	comp=Z,30nm,0.9s,comp=Z,375nm						
UMPA	Umpang Tak	75.47	293	P	P	03 21 29.4	+1.5
	comp=Z,48nm,1.1s						
TIY	Taiyuan	75.56	318	eP	P	03 21 28.8	+0.8
TIY				S	S	03 31 08.8	+1.1
TIY				pmax	pmax		
	comp=Z,100nm,1.1s						
TIY				LR	LR		
	comp=Z,2µm,21.1s						
TIY				LR	LR		
	comp=Z,410nm,14.5s						
TIY				LR	LR		
	comp=Z,990nm,21.2s						
LAMP	Lampang	75.73	295	P	P	03 21 30.8	+1.5
	comp=Z,59nm,1.0s,comp=Z,549nm						
XAN	Xi'an	75.82	313	P	P	03 21 29.5	0.0
XAN				S	S	03 31 10.8	+0.1
XAN				pmax	pmax		
	comp=Z,65nm,0.9s						
XAN				pmax	pmax		
	comp=Z,1µm,3.1s						
XAN				LR	LR		
	comp=Z,2µm,23.0s						
XAN				LR	LR		
	comp=Z,2µm,22.5s						
XAN				LR	LR		
	comp=Z,3µm,22.8s						
XAN	Xi'an	75.82	313	eP	P	03 21 29.6	0.0
	comp=Z,55nm,0.8s						
XAN				LR	LR		
	comp=Z,2µm,21.0s						
XAN	Xi'an	75.82	313	eP	P	03 21 29.6	0.0
XAN				pmax	pmax		
	comp=Z,55nm,0.8s						
XAN				MLR	MLR		
	comp=Z,2µm,21.0s						
KMI	Kunming	76.00	302	P	P	03 21 32.5	+1.5
KMI				pP	sP	03 21 37.5	-0.6
KMI				sP	pP	03 21 39.5	+3.3
KMI				PP	PP	03 24 25.5	+3.5
KMI				S	S	03 31 16.0	+2.5
KMI				sS	sS	03 31 25.5	+3.2
KMI				SS	SS	03 36 06.5	-0.4
KMI				pmax	pmax		
	comp=Z,82nm,1.4s						
KMI				pmax	pmax		
	comp=Z,490nm,3.9s						
KMI				LR	LR		
	comp=Z,1µm,17.4s						
KMI				LR	LR		
	comp=Z,1µm,20.5s						
KMI				LR	LR		
	comp=Z,2µm,20.1s						
KMI	Kunming	76.00	302	eP	P	03 21 31.9	+0.9
	comp=Z,354nm,1.4s						
KMI				LR	LR		
	comp=Z,2µm,20.0s						
KMI	Kunming	76.00	302	eP	P	03 21 31.9	+0.9
KMI				pmax	pmax		
	comp=Z,354nm,1.4s						
KMI				MLR	MLR		
	comp=Z,2µm,20.0s						
CM01	Chiang Mai Arr	76.27	295	eP	P	03 21 32.6	+0.2
RPN	Rapa Nui	76.29	114	eP	P	03 21 34.3	+1.9
	comp=Z,492nm,1.4s						
RPN	Rapa Nui	76.29	114	eP	P	03 21 34.3	+1.9
RPN				pmax	pmax		
	comp=Z,492nm,1.4s						
CM31	Chiang Mai Arr	76.30	295	eP	P	03 21 34.4	+1.8
CMAR	Chiang Mai Arr	76.30	295	P	P	03 21 33.5	+0.9
	comp=Z,14nm,0.7s,baz=127,slow=4.4,SNR=34						
CMAR				PKPPKP		03 48 42.4	
	comp=Z,0.9nm,0.4s,baz=305,slow=5.0,SNR=4.2						
CMAR				LR	LR	03 54 28.2	
	comp=Z,387nm,21.1s,baz=162,slow=35						
CMMT	Chiang Mai	76.44	295	P	P	03 21 34.3	+0.9
	comp=Z,172nm,2.0s,comp=Z,3µm						
CHTO	Chiang Mai	76.44	295	eP	P	03 21 34.5	+1.1
	comp=Z,637nm,1.8s						
CHTO				LR	LR		
	comp=Z,1µm,21.0s						
CHTO	Chiang Mai	76.44	295	eP	P	03 21 34.5	+1.1
CHTO				pmax	pmax		
	comp=Z,637nm,1.8s						
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
CHTO	Chiang Mai	76.44	295	P	P	03 21 34.8	+1.4
	SNR=86						
CHTO				P	P	03 21 34.8	+1.4
	SNR=86						
CHTO	Chiang Mai	76.44	295	P	P	03 21 34.4	+1.1
	comp=Z,766nm,2.0s,comp=Z,13µm						
CHTO	Chiang Mai	76.44	295	eP	P	03 21 34.5	+1.1
SPIA	Saint Paul Isl	76.92	12	eP	P	03 21 35.7	+0.5
	comp=Z,469nm,1.5s						
SDPT	Sand Point	77.73	18	eP	P	03 21 40.7	+0.9
	comp=Z,65nm,1.1s						
SDPT				LR	LR		
	comp=Z,5µm,20.0s						
CD2	Chengdu	77.94	308	⇑P	P	03 21 42.0	+0.4
CD2				pP	pP	03 21 47.0	+0.2
CD2				S	S	03 31 35.0	+1.0
CD2				sS	pS	03 31 41.8	+1.1
CD2				pmax	pmax		
	comp=Z,80nm,0.6s						
CD2				pmax	pmax		
	comp=Z,2µm,5.1s						
CD2				LR	LR		
	comp=Z,5µm,18.1s						
CD2				LR	LR		
	comp=Z,6µm,22.1s						
CD2				LR	LR		
	comp=Z,7µm,24.0s						
HHC	Hu-ho-hao-te	77.95	320	eP	P	03 21 42.0	+0.5
HHC				sP	sP	03 21 48.8	+0.2
HHC				S	S	03 31 36.3	+2.4
HHC				SS	SS	03 36 39.5	+3.9
HHC				pmax	pmax		
	comp=Z,46nm,1.4s						
HHC				pmax	pmax		
	comp=Z,910nm,7.5s						
HHC				LR	LR		
	comp=Z,2µm,18.6s						
HHC				LR	LR		
	comp=Z,1µm,18.0s						
HHC				LR	LR		
	comp=Z,3µm,18.9s						
MA2	Magadan	78.22	351	eP	P	03 21 41.5	-0.9
	comp=Z,113nm,1.7s						
MA2				LR	LR		
	comp=Z,2µm,20.0s						
MA2	Magadan	78.22	351	c iP	P	03 21 41.6	-0.9
MA2				pmax	pmax		
	comp=Z,169nm,2.2s						
MA2	Magadan	78.22	351	P	P	03 21 42.6	+0.2
	comp=Z,3.1nm,0.3s,baz=166,slow=6.3,SNR=21						
MA2				LR	LR	03 51 35.0	
	comp=Z,2µm,21.5s,baz=175,slow=32						
BTO	Baotou	78.76	319	eP	P	03 21 44.0	-2.0
BTO				S	S	03 31 43.8	+1.2
HIA	Hailar	78.95	330	eP	P	03 21 46.7	0.0
	comp=Z,80nm,1.1s						
HIA				LR	LR		
	comp=Z,2µm,22.0s						
HIA	Hailar	78.95	330	eP	P	03 21 46.7	0.0
HIA				pmax	pmax		
	comp=Z,80nm,1.1s						
HIA				MLR	MLR		
	comp=Z,2µm,22.0s						
ZEA	Zeya	79.09	337	c eP	P	03 21 48.0	+0.7
ZEA				eS	S	03 31 50.0	+4.7
ZEA				eSS	SS	03 36 52.0	0.0
ZEA				pmax	pmax		
	comp=N,120nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,220nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,1µm,8.0s						
ZEA				smax	smax		
	comp=Z,600nm,14.0s						
ZEA				smax	smax		
	comp=N,2µm,15.0s						
CHGN	Chignik	79.15	19	eP	P	03 21 47.9	+0.3
	comp=N,92nm,1.5s						
CHGN				LR	LR		
	comp=Z,4µm,20.0s						
MAW	Mawson	79.17	202	eP	P	03 21 48.1	+0.4
	comp=Z,35nm,1.4s						
MAW				LR	LR		
	comp=Z,800nm,22.0s						
MAW	Mawson	79.17	202	eP	P	03 21 48.1	+0.4
MAW				pmax	pmax		
	comp=Z,35nm,1.4s						
MAW				MLR	MLR		
	comp=Z,800nm,22.0s						
MAW	Mawson	79.17	202	P	P	03 21 48.1	+0.4
	comp=Z,35nm,1.1s,baz=135,slow=3.2,SNR=2.2						
MAW				LR	LR	03 51 49.9	
	comp=Z,3µm,21.8s,baz=90,slow=32						
PBA	Port Blair	79.27	286	eP	P	03 21 50.2	+1.0
PBA				IAmb	IAmb	03 21 56.3	
	comp=Z,232nm,1.4s						
LZH	Lanzhou	80.43	313	⇑P	P	03 21 56.5	+1.2
LZH				pP	sP	03 22 03.3	+0.9
LZH				sP	pwP	03 22 07.8	-1.1
LZH				PP	PP	03 25 03.3	+4.5
LZH				S	S	03 32 02.0	+1.4
LZH				sS	SKKSac	03 32 15.0	+0.6
LZH				pmax	pmax		
	comp=Z,110nm,1.4s						
LZH				pmax	pmax		
	comp=Z,2µm,7.6s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,16.3s						
LZH				LR	LR		
	comp=Z,4µm,17.4s						
SEY	Seymchan	81.26	353	P	P	03 21 59.0	+0.2
	comp=Z,28nm,1.2s,baz=153,slow=5.9,SNR=14						
SEY				LR	LR	03 53 48.5	
	comp=Z,2µm,21.1s,baz=165,slow=33						
OHAK	Old Harbor	81.54	20	eP	P	03 22 00.8	+0.4
	comp=Z,75nm,1.0s						
KDAK	Kodiak Island	82.22	20	eP	P	03 22 06.2	+2.2
	comp=Z,190nm,1.4s						
KDAK	Kodiak Island	82.22	20	eP	P	03 22 06.2	+2.2
KDAK				pmax	pmax		
	comp=Z,190nm,1.4s						
KDAK	Kodiak Island	82.22	20	P	P	03 22 04.7	+0.8
	comp=Z,51nm,1.1s,baz=240,slow=4.2,SNR=7.2						
GAMB	Gambell	82.85	9	eP	P	03 22 07.8	+0.6
	comp=Z,161nm,1.3s						
CIT	Chita	83.72	330	eP	P	03 22 12.8	+0.8
CIT				e		03 22 18.6	
CIT				e		03 22 26.4	
CIT				pmax	pmax		
	comp=Z,145nm,1.9s						
SVW2	Sparrevohn	83.96	17	eP	P	03 22 13.7	+0.7
	comp=Z,426nm,1.7s						
SVW2				LR	LR		
	comp=Z,4µm,20.0s						
HOM	Homer	83.99	20	eP	P	03 22 14.1	+1.0
	comp=Z,1µm,1.4s						
RSO	Redoubt South	84.28	19	eP	P	03 22 14.6	-0.2
BRLK	Bradley Lake	84.32	20	eP	P	03 22 15.3	+0.5
	comp=Z,320nm,1.5s						
ULN	Ulaanbaatar	84.63	324	eP	P	03 22 17.0	+0.2
	comp=Z,207nm,1.4s						
ULN				LR	LR		
	comp=Z,1µm,21.0s						
ULN	Ulaanbaatar	84.63	324	eP	P	03 22 17.0	+0.2
ULN				pmax	pmax		
	comp=Z,207nm,1.4s						
ULN				MLR	MLR		
	comp=Z,1µm,21.0s						
ULN	Ulaanbaatar	84.63	324	P	P	03 22 17.2	+0.3
	SNR=30						
ANM	Nome	84.67	11	eP	P	03 22 17.5	+1.1
	comp=Z,420nm,1.6s						
ANM				LR	LR		
	comp=Z,1µm,19.0s						
ANM	Nome	84.67	11	eP	P	03 22 17.5	+1.1
ANM				pmax	pmax		
	comp=Z,420nm,1.6s						
ANM				MLR	MLR		
	comp=Z,1µm,19.0s						
GTA	Gaotai	84.83	314	⇑P	P	03 22 18.3	+0.2
GTA				pP	pP	03 22 23.0	-0.3
GTA				sP	sP	03 22 26.0	+0.8
GTA				SKS	S	03 32 39.8	-5.5
GTA				S	SKSac	03 32 44.0	+2.7
GTA				SS	SS	03 38 20.3	+2.0
GTA				pmax	pmax		
	comp=Z,51nm,1.3s						
GTA				pmax	pmax		
	comp=Z,850nm,8.9s						
GTA				LR	LR		
	comp=Z,990nm,24.1s						
GTA				LR	LR		
	comp=Z,1µm,20.9s						
GTA				LR	LR		
	comp=Z,2µm,20.6s						
YAK	Yakutsk	84.93	343	c iP	P	03 22 18.0	+0.2
YAK				e		03 22 23.7	
YAK				e*PP	pwP	03 22 30.0	-1.4
YAK				e		03 25 40.9	
YAK				ePPP	PPP	03 27 26.4	

YAK				*e*S	**S**	**03 32 38.7**	**-6.2**
YAK				pmax	pmax		
	comp=N,520nm,1.1s						
YAK				pmax	pmax		
	comp=E,322nm,1.0s						
YAK				pmax	pmax		
	comp=Z,395nm,2.2s						
YAK				pmax	pmax		
	comp=N,266nm,2.2s						
YAK				pmax	pmax		
	comp=E,180nm,2.2s						
YAK				smax	smax		
	comp=N,1µm,4.3s						
YAK				smax	smax		
	comp=E,623nm,3.2s						
YAK				MLR	MLR		
	comp=Z,5µm,14.0s						
YAK				MLR	MLR		
	comp=N,4µm,14.0s						
YAK				MLR	MLR		
	comp=E,1µm,12.0s						
SONA0	**Songino Array**	**84.98**	**324**	*e*P	**P**	**03 22 18.7**	**+0.1**
SONM	**Songino Array**	**84.98**	**324**	P	**P**	**03 22 18.7**	**+0.1**
	comp=E,19nm,1.2s,baz=151,slow=4.1,SNR=40						
SONM				PKKPbc	**PKKPbc**	**03 40 26.6**	**-1.6**
	comp=E,2.5nm,1.0s,baz=256,slow=2.1,SNR=12						
SONM				PKPPKP		03 48 25.7	
	comp=E,2.2nm,1.2s,baz=257,slow=3.0,SNR=5.1						
SONM				LR	LR	04 00 24.8	
	comp=E,714nm,19.2s,baz=128,slow=36						
SONA1	**Songino Array**	**84.98**	**324**	*e*P	**P**	**03 22 17.9**	**-0.7**
SHL	**Shillong**	**85.11**	**299⇑**	*i*P	**P**	**03 22 20.0**	**+0.2**
SHL				*e*S	**S**	**03 32 43.0**	**-5.7**
BILL	**Bilibino**	**85.53**	**360**	*e*P	**P**	**03 22 20.8**	**+0.1**
	comp=E,382nm,1.3s						
BILL	**Bilibino**	**85.53**	**360**	*e*P	**P**	**03 22 20.8**	**+0.1**
BILL				pmax	pmax		
	comp=Z,382nm,1.3s						
SUA	**Susitna One**	**85.68**	**19**	PFAKE		03 22 30.0	+8.3
SUA				LR	LR		
	comp=Z,2µm,21.0s						
MCCM	**Marconi Confer**	**85.73**	**48**	PFAKE		03 22 30.0	+7.6
MCCM				LR	LR		
	comp=Z,5µm,19.0s						
SYO	**Syowa Base**	**85.88**	**197⇑**	*i*P	P	03 22 12.0	-11
SYO	**Syowa Base**	**85.88**	**197⇓**	*i*P	**P**	**03 22 19.0**	**-3.6**
SYO	**Syowa Base**	**85.88**	**197⇓**	*i*PcP	**P**	**03 22 23.8**	**+1.2**
KCPM	**Cahto Peak**	**85.93**	**46**	*e*P	**P**	**03 22 24.6**	**+1.0**
	comp=Z,160nm,1.0s						
KCPM				LR	LR		
	comp=Z,5µm,20.0s						
HOPS	**Hopland Field**	**85.98**	**47**	*e*P	**P**	**03 22 24.7**	**+1.1**
	comp=Z,113nm,1.2s						
HOPS				LR	LR		
	comp=Z,6µm,20.0s						
GDXM	**Geysers**	**86.09**	**47**	*e*P	**P**	**03 22 25.6**	**+1.3**
	comp=Z,78nm,1.3s						
GDXM				LR	LR		
	comp=Z,6µm,20.0s						
KMRM	**Mail Ridge**	**86.09**	**46**	*e*P	**P**	**03 22 25.8**	**+1.6**
	comp=Z,189nm,1.2s						
KMRM				LR	LR		
	comp=Z,4µm,20.0s						
SNCC	**San Nicolas Is**	**86.13**	**53**	P	**P**	**03 22 25.1**	**+0.5**
	baz=246						
SAO	**San Andreas Ge**	**86.16**	**50**	*e*P	**P**	**03 22 25.7**	**+1.1**
	comp=Z,99nm,1.2s						
SAO				LR	LR		
	comp=Z,4µm,21.0s						
PMR	**Palmer**	**86.28**	**19**	*e*P	**P**	**03 22 24.7**	**+0.2**
	comp=Z,106nm,1.7s						
PMR				LR	LR		
	comp=Z,2µm,21.0s						
PMR	**Palmer**	**86.28**	**19**	*e*P	**P**	**03 22 24.7**	**+0.2**
PMR				pmax	pmax		
	comp=Z,106nm,1.7s						
PMR				MLR	MLR		
	comp=Z,2µm,21.0s						
KNK	**Knik Glacier**	**86.35**	**20**	*e*P	**P**	**03 22 26.0**	**+1.1**
	comp=Z,54nm,1.2s						
KNK				LR	LR		
	comp=Z,2µm,18.0s						
SCZ2	**Santa Cruz Isl**	**86.35**	**53**	P	**P**	**03 22 26.1**	**+0.4**
	baz=246						
PPLA	**Purkeypile**	**86.37**	**17**	*e*P	**P**	**03 22 25.0**	**-0.2**
	comp=Z,119nm,1.8s						
PPLA				LR	LR		
	comp=Z,3µm,20.0s						
KHMM	**Horse Mountain**	**86.37**	**45**	*e*P	**P**	**03 22 27.3**	**+1.6**
	comp=Z,138nm,1.2s						
SBC	**Santa Barbara**	**86.48**	**52**	P	**P**	**03 22 26.8**	**+0.6**
	baz=246						
KRMB	**Red Mountain**	**86.55**	**44**	*e*P	**P**	**03 22 27.7**	**+1.2**
	comp=Z,244nm,1.7s						
PKM	**Mcpherson Peak**	**86.58**	**52**	P	**P**	**03 22 27.5**	**+0.6**
	baz=246,SNR=10.0						
PAGB	**Antelope Grade**	**86.61**	**51**	PFAKE		03 22 40.0	+13
PAGB				LR	LR		
	comp=Z,5µm,19.0s						
EYAK	**Cordova Ski Ar**	**86.62**	**21**	*e*P	**P**	**03 22 28.7**	**+2.5**
	comp=Z,154nm,1.4s						
SMMC	**Simmler**	**86.62**	**51**	P	**P**	**03 22 27.8**	**+0.9**
	baz=246,SNR=6.6						
SML	**Sawmill**	**86.69**	**19**	*e*P	**P**	**03 22 28.5**	**+1.9**
	comp=Z,174nm,1.6s						
SML				LR	LR		
	comp=Z,1µm,21.0s						
SML	**Sawmill**	**86.69**	**19**	*e*P	**P**	**03 22 28.5**	**+1.9**
SML				pmax	pmax		
	comp=Z,174nm,1.6s						
SML				MLR	MLR		
	comp=Z,1µm,21.0s						
O02D	**Mt. Diablo Mer**	**86.70**	**46**	P	**P**	**03 22 28.2**	**+0.9**
	baz=244,SNR=43						
SCI2	**San Clemente I**	**86.78**	**54**	P	**P**	**03 22 28.2**	**+0.5**
	baz=247						
CAST	**Castle Rocks**	**86.81**	**17**	*e*P	**P**	**03 22 25.9**	**-1.2**
	comp=Z,87nm,1.2s						
CAST				LR	LR		
	comp=Z,3µm,20.0s						
BLG	**Laguna Peak, P**	**86.83**	**53**	P	**P**	**03 22 27.9**	**0.0**
	baz=246						
HMT	**Hamilton**	**86.99**	**22**	PFAKE		03 22 40.0	+12
HMT				LR	LR		
	comp=Z,3µm,18.0s						
DIV	**Divide**	**87.03**	**21**	*e*P	**P**	**03 22 28.3**	**0.0**
	comp=Z,55nm,1.4s						
SCM	**Sheep Creek Mo**	**87.03**	**20**	*e*P	**P**	**03 22 29.6**	**+1.3**
	comp=Z,118nm,1.6s						
L02E	**Cave Junction**	**87.04**	**44**	P	**P**	**03 22 29.3**	**+0.5**
	baz=243						
CIS	**Catalina Islan**	**87.05**	**54**	P	**P**	**03 22 29.0**	**-0.1**
	baz=247						
WDC	**Whiskeytown Da**	**87.05**	**46**	*e*P	**P**	**03 22 29.5**	**+0.7**
	comp=Z,225nm,1.5s						
WDC				LR	LR		
	comp=Z,5µm,21.0s						
WDC	**Whiskeytown Da**	**87.05**	**46**	*e*P	**P**	**03 22 29.5**	**+0.7**
WDC				pmax	pmax		
	comp=Z,225nm,1.5s						
WDC				MLR	MLR		
	comp=Z,5µm,21.0s						
N02D	**Trinity Center**	**87.11**	**45**	P	**P**	**03 22 30.1**	**+0.8**
	baz=244,SNR=45						
M02C	**Callahan**	**87.19**	**45**	P	**P**	**03 22 30.7**	**+1.1**
	baz=244,SNR=28						
BOD	**Bodaibo**	**87.23**	**335**	*e*P	**P**	**03 22 28.1**	**-1.2**
BOD				*e*		03 22 42.4	
BOD				pmax	pmax		
	comp=Z,75nm,1.9s						
KLU	**Klutina**	**87.24**	**20**	*e*P	**P**	**03 22 29.5**	**+0.1**
	comp=Z,39nm,1.2s						
K02D	**Willamette Mer**	**87.24**	**44**	P	**P**	**03 22 30.2**	**+0.3**
	baz=243,SNR=8.6						
FMP	**Fort Macarthur**	**87.26**	**53**	P	**P**	**03 22 30.2**	**+0.2**
	baz=247						
LSA	**Lhasa**	**87.26**	**302**	P	**P**	**03 22 31.0**	**+0.3**
LSA				pmax	pmax		
	comp=Z,61nm,1.0s						
LSA				LR	LR		
	comp=Z,1µm,27.5s						
LSA	**Lhasa**	**87.26**	**302**	*e*P	**P**	**03 22 31.1**	**+0.3**
	comp=Z,43nm,0.9s						
LSA				LR	LR		
	comp=Z,998nm,21.0s						
J01E	**Myrtle Point**	**87.28**	**43**	P	**P**	**03 22 30.6**	**+0.7**
	baz=243						
OSI	**Osito Audit: C**	**87.29**	**52**	*e*P	**P**	**03 22 32.3**	**+2.1**
	comp=Z,210nm,1.6s						
OSI				LR	LR		
	comp=Z,4µm,19.0s						
OSI	**Osito Audit: C**	**87.29**	**52**	P	**P**	**03 22 30.7**	**+0.5**
	baz=246						
ORV	**Oroville**	**87.32**	**47**	*e*P	**P**	**03 22 30.5**	**+0.3**
	comp=Z,116nm,1.3s						
ORV				LR	LR		
	comp=Z,4µm,20.0s						
ORV	**Oroville**	**87.32**	**47**	*e*P	**P**	**03 22 30.5**	**+0.3**
ORV				pmax	pmax		
	comp=Z,116nm,1.3s						
ORV				MLR	MLR		
	comp=Z,4µm,20.0s						
TRF	**Thorofare Moun**	**87.34**	**18**	*e*P	**P**	**03 22 29.1**	**-0.9**
	comp=Z,56nm,1.3s						
TRF				LR	LR		
	comp=Z,3µm,19.0s						
ARVC	**Arvin**	**87.42**	**52**	P	**P**	**03 22 31.3**	**+0.6**
	baz=246,SNR=8.4						
O03E	**Paynes Creek**	**87.43**	**46**	P	**P**	**03 22 30.9**	**+0.1**
	baz=244,SNR=63						
AFDM	**Forest Hills D**	**87.43**	**48**	*e*P	**P**	**03 22 31.2**	**+0.4**
	comp=Z,98nm,1.1s						
AFDM				LR	LR		
	comp=Z,3µm,20.0s						
YBH	**Yreka Blue Hor**	**87.44**	**45**	*e*P	**P**	**03 22 31.6**	**+0.7**
	comp=Z,178nm,1.5s						
YBH	**Yreka Blue Hor**	**87.44**	**45**	P	**P**	**03 22 31.3**	**+0.5**
	comp=Z,60nm,1.2s,baz=170,slow=3.0,SNR=24						
DECC	**Green Verdugo**	**87.44**	**53**	P	**P**	**03 22 31.1**	**+0.1**
	baz=247						
CMB	**Columbia Colle**	**87.46**	**49**	*e*P	**P**	**03 22 31.3**	**+0.3**
	comp=Z,180nm,1.4s						
CMB				LR	LR		
	comp=Z,2µm,21.0s						
VOG	**Valley Oaks Go**	**87.49**	**51**	P	**P**	**03 22 31.0**	**0.0**
	baz=246						
VES	**Vestal, Richgr**	**87.51**	**51**	P	**P**	**03 22 31.2**	**0.0**
	baz=246,SNR=9.3						
PASC	**Pasadena Art C**	**87.53**	**53**	*e*P	**P**	**03 22 32.0**	**+0.7**
	comp=Z,66nm,1.3s						
PASC				LR	LR		
	comp=Z,4µm,20.0s						
MWC	**Mount Wilson**	**87.64**	**53**	*e*P	**P**	**03 22 30.6**	**-1.5**
	comp=Z,208nm,1.5s						
MWC				LR	LR		
	comp=Z,4µm,19.0s						
MWC	**Mount Wilson**	**87.64**	**53**	*e*P	**P**	**03 22 30.6**	**-1.5**
MWC				pmax	pmax		
	comp=Z,208nm,1.5s						
MWC				MLR	MLR		
	comp=Z,4µm,19.0s						
HUMO	**Hull Mountain**	**87.67**	**44**	*e*P	**P**	**03 22 32.6**	**+0.8**
	comp=Z,229nm,1.6s						
RND	**Reindeer**	**87.73**	**18**	*e*P	**P**	**03 22 31.1**	**-0.6**
	comp=Z,83nm,1.4s						
RND				LR	LR		
	comp=Z,3µm,21.0s						
RND	**Reindeer**	**87.73**	**18**	*e*P	**P**	**03 22 31.1**	**-0.6**
RND				pmax	pmax		
	comp=Z,83nm,1.4s						
RND				MLR	MLR		
	comp=Z,3µm,21.0s						
I02D	**Swisshome**	**87.77**	**42**	P	**P**	**03 22 33.1**	**+0.9**
	baz=243						
109C	**Camp Elliot, M**	**87.86**	**55**	P	**P**	**03 22 33.4**	**+0.5**
	baz=247						
CPE	**Camp Elliot**	**87.86**	**55**	*e*P	**P**	**03 22 33.7**	**+0.8**
	comp=Z,99nm,1.4s						
CPE				LR	LR		
	comp=Z,4µm,21.0s						
ISA	**Isabella, Lake**	**87.90**	**52**	*e*P	**P**	**03 22 33.5**	**+0.4**
	comp=Z,260nm,1.6s						
ISA				LR	LR		
	comp=Z,5µm,18.0s						
ISA	**Isabella, Lake**	**87.90**	**52**	P	**P**	**03 22 33.7**	**+0.6**
	baz=246,SNR=49						
I03D	**Drain, OR**	**87.90**	**43**	P	**P**	**03 22 33.4**	**+0.6**
	baz=243						
L04D	**Klamath Falls**	**87.93**	**44**	P	**P**	**03 22 33.6**	**+0.4**
	baz=244,SNR=17						
DHY	**Denali Highway**	**87.93**	**19**	*e*P	**P**	**03 22 32.3**	**-0.5**
	comp=Z,62nm,1.6s						
DHY				LR	LR		
	comp=Z,2µm,20.0s						
EDW2	**Edwards Air Fo**	**87.95**	**52**	P	**P**	**03 22 34.0**	**+0.6**
	baz=247,SNR=40						
MCK	**McKinley**	**87.95**	**18**	*e*P	**P**	**03 22 31.9**	**-0.8**
	comp=Z,25nm,1.1s						
MCK				LR	LR		
	comp=Z,3µm,20.0s						
MCK	**McKinley**	**87.95**	**18**	*e*P	**P**	**03 22 31.9**	**-0.8**
MCK				pmax	pmax		
	comp=Z,25nm,1.1s						
MCK				MLR	MLR		
	comp=Z,3µm,20.0s						
BFSC	**Mount Baldy Ra**	**87.95**	**53**	P	**P**	**03 22 33.6**	**+0.1**
	baz=247,SNR=23						
M04C	**Macdoel**	**88.05**	**45**	P	**P**	**03 22 34.4**	**+0.6**
	baz=244,SNR=23						
RUBR	**Rubicon Trail**	**88.05**	**48**	*e*P	**P**	**03 22 35.4**	**+1.4**
	comp=Z,303nm,1.5s						
RUBR				LR	LR		
	comp=Z,3µm,20.0s						
MURC	**Murrieta**	**88.06**	**54**	P	**P**	**03 22 34.2**	**+0.3**
	baz=247,SNR=13						
BAR	**Barrett**	**88.12**	**55**	*e*P	**P**	**03 22 34.8**	**+0.6**
	comp=Z,186nm,1.8s						
BAR				LR	LR		
	comp=Z,3µm,20.0s						
BWN	**Browne**	**88.13**	**17**	PFAKE		03 22 50.0	+17
BWN				LR	LR		
	comp=Z,3µm,20.0s						
BALM	**Baldy**	**88.15**	**22**	*e*P	**P**	**03 22 33.9**	**+0.1**
	comp=Z,133nm,1.6s						
BALM	**Baldy**	**88.15**	**22**	*e*P	**P**	**03 22 33.9**	**+0.1**
BALM				pmax	pmax		
	comp=Z,133nm,1.6s						
RDOG	**Red Dog Mine**	**88.24**	**11**	*e*P	**P**	**03 22 35.0**	**+1.1**
	comp=Z,243nm,1.6s						
MDPB	**Devils Postpil**	**88.24**	**50**	*e*P	**P**	**03 22 35.4**	**+0.4**
	comp=Z,105nm,1.2s						
MDPB				LR	LR		
	comp=Z,3µm,19.0s						
BEKR	**Beckworth**	**88.25**	**47**	*e*P	**P**	**03 22 35.2**	**+0.4**
	comp=Z,409nm,2.0s						
BEKR				LR	LR		
	comp=Z,4µm,19.0s						
OMMB	**Old Mammoth Mi**	**88.29**	**50**	*e*P	**P**	**03 22 35.8**	**+0.5**
	comp=Z,147nm,1.4s						
OMMB				LR	LR		
	comp=Z,3µm,20.0s						
WAKR	**Walker**	**88.34**	**49**	*e*P	**P**	**03 22 35.8**	**+0.4**
	comp=Z,393nm,1.6s						
WAKR				LR	LR		
	comp=Z,3µm,20.0s						
MONP2	**Monument Peak**	**88.39**	**55**	P	**P**	**03 22 36.3**	**+0.6**
	baz=248,SNR=24						
IM3	**Indian Mountai**	**88.42**	**15**	*e*P	**P**	**03 22 34.4**	**-0.4**
MLAC	**Mammoth, Mammo**	**88.42**	**50**	P	**P**	**03 22 36.3**	**+0.5**
	baz=246,SNR=8.3						
LRMC	**Laurel Mtn Rad**	**88.42**	**52**	P	**P**	**03 22 36.4**	**+0.7**
	baz=247,SNR=55						
MLY	**Manley**	**88.44**	**16**	*e*P	**P**	**03 22 34.1**	**-0.9**
	comp=Z,36nm,1.5s						
MLY				LR	LR		
	comp=Z,2µm,19.0s						
PAX	**Paxson**	**88.45**	**20**	*e*P	**P**	**03 22 34.3**	**-0.8**
	comp=Z,46nm,1.5s						
PAX				LR	LR		
	comp=Z,1µm,21.0s						
PAX	**Paxson**	**88.45**	**20**	*e*P	**P**	**03 22 34.3**	**-0.8**
PAX				pmax	pmax		
	comp=Z,46nm,1.5s						
PAX				MLR	MLR		
	comp=Z,1µm,21.0s						
PNTR	**Pine Nut**	**88.46**	**48**	*e*P	**P**	**03 22 36.1**	**+0.1**
	comp=Z,261nm,1.5s						
PNTR				LR	LR		
	comp=Z,3µm,21.0s						
K04D	**Chiloquin, OR**	**88.47**	**44**	P	**P**	**03 22 36.4**	**+0.6**
	baz=244						
BWNR	**Bhubaneshwar**	**88.49**	**292**	*e*x	P	03 22 30.9	-5.3
BWNR				IAmb	IAmb	03 22 38.7	
	comp=Z,45nm,0.7s						
CWC	**Cottonwood Cre**	**88.50**	**51**	P	**P**	**03 22 36.7**	**+0.6**
	baz=247						
IRK	**Irkutsk**	**88.50**	**327**	*e*P	**P**	**03 22 34.4**	**-1.1**
IRK				pmax	pmax		
	comp=Z,109nm,3.3s						
J04D	**Umpqua Nationa**	**88.51**	**44**	P	**P**	**03 22 36.8**	**+0.8**
	baz=244,SNR=9.5						
VCNR	**Virginia City**	**88.51**	**48**	*e*P	**P**	**03 22 37.0**	**+0.8**
	comp=Z,156nm,1.6s						
VCNR				LR	LR		
	comp=Z,3µm,21.0s						
BBRC	**Big Bear Solar**	**88.53**	**53**	P	**P**	**03 22 36.7**	**+0.3**
	baz=247						
TLY	**Talaya**	**88.54**	**326**	*e*P	**P**	**03 22 34.4**	**-1.3**
	comp=Z,61nm,1.0s						
TLY	**Talaya**	**88.54**	**326**	*e*P	**P**	**03 22 35.5**	**-0.2**
TLY				*e*S	**SKSac**	**03 32 59.8**	**-3.6**
TLY				pmax	pmax		
	comp=Z,109nm,1.7s						
TLY				MLR	MLR		
	comp=Z,2µm,19.0s						
TLY	**Talaya**	**88.54**	**326**	P	**P**	**03 22 35.6**	**-0.1**
	SNR=16						
TLY				P	**P**	**03 22 35.6**	**-0.1**
	SNR=16						
IKP	**In-Ko-Pah, Jac**	**88.55**	**55**	P	**P**	**03 22 36.9**	**+0.6**
	baz=248,SNR=16						
I04A	**Tendick Farm,**	**88.55**	**43**	P	**P**	**03 22 36.6**	**+0.5**
	baz=244,SNR=8.1						
TIN	**Tinemaha, Big**	**88.63**	**50**	P	**P**	**03 22 37.2**	**+0.5**
	baz=247,SNR=6.0						
PFO	**Pinyon Flats O**	**88.63**	**54**	*e*P	**P**	**03 22 37.1**	**+0.3**
	comp=Z,146nm,1.5s						
PFO				LR	LR		
	comp=Z,5µm,19.0s						
PFO	**Pinyon Flats O**	**88.63**	**54**	*i* P	**P**	**03 22 37.5**	**+0.7**
PFO	**Pinyon Flats O**	**88.63**	**54**	P	**P**	**03 22 37.5**	**+0.7**
	baz=248,SNR=19						
XPFO	**Pion Flat**	**88.64**	**54**	*e*P	**P**	**03 22 37.0**	**+0.3**
	comp=Z,143nm,1.5s						
XPFO				LR	LR		
	comp=Z,6µm,19.0s						
G03D	**McMinnville, O**	**88.64**	**41**	P	**P**	**03 22 37.3**	**+1.0**
	baz=243						
H04D	**Lebanon**	**88.67**	**42**	P	**P**	**03 22 36.9**	**+0.4**
	baz=244,SNR=9.4						
YERR	**Yerington**	**88.67**	**48**	*e*P	**P**	**03 22 37.4**	**+0.5**
	comp=Z,347nm,1.8s						
YERR				LR	LR		
	comp=Z,3µm,20.0s						
RRX	**Edison Barstow**	**88.70**	**53**	P	**P**	**03 22 37.0**	**+0.1**
	baz=247						
WRH	**Wood River Hil**	**88.75**	**18**	*e*P	**P**	**03 22 35.2**	**-1.2**
	comp=Z,23nm,0.8s						
WRH				LR	LR		
	comp=Z,3µm,20.0s						
MPMC	**Manual Prospec**	**88.79**	**52**	P	**P**	**03 22 37.9**	**+0.4**
	baz=247,SNR=31						
DAC	**Darwin (Calif)**	**88.80**	**51**	*e*P	**P**	**03 22 38.9**	**+1.4**
	comp=Z,247nm,1.8s						
DAC				LR	LR		
	comp=Z,4µm,20.0s						
PAHR	**Pah Rah Range**	**88.87**	**48**	*e*P	**P**	**03 22 38.3**	**+0.5**
	comp=Z,331nm,1.6s						
PAHR				LR	LR		
	comp=Z,3µm,20.0s						
SWSC	**Sam W. Stewart**	**88.90**	**55**	P	**P**	**03 22 38.5**	**+0.7**
	baz=248,SNR=18						
PMSA	**Palmer Station**	**88.91**	**160**	*e*P	**P**	**03 22 38.1**	**+0.8**
	comp=Z,174nm,1.3s						
PMSA	**Palmer Station**	**88.91**	**160**	*e*P	**P**	**03 22 37.9**	**+0.6**
CCB	**Clear Creek Bu**	**88.97**	**18**	PFAKE		03 22 50.0	+13
CCB				LR	LR		
	comp=Z,2µm,20.0s						
MENT	**Mentasta**	**89.00**	**20**	*e*P	**P**	**03 22 37.4**	**-0.2**
	comp=Z,79nm,1.5s						
GSC	**Goldstone, Bar**	**89.01**	**52**	*e*P	**P**	**03 22 38.9**	**+0.4**
	comp=Z,306nm,1.8s						
GSC				LR	LR		
	comp=Z,4µm,20.0s						
GSC	**Goldstone, Bar**	**89.01**	**52**	P	**P**	**03 22 39.1**	**+0.6**
	baz=248,SNR=31						
HDA	**Harding Lake**	**89.04**	**18**	*e*P	**P**	**03 22 36.9**	**-0.9**
	comp=Z,160nm,1.3s						
HDA				LR	LR		
	comp=Z,3µm,20.0s						
HDA	**Harding Lake**	**89.04**	**18**	P	**P**	**03 22 36.9**	**-0.9**
	baz=223						
RYN	**Ryan**	**89.04**	**49**	PFAKE		03 22 50.0	+11
RYN				LR	LR		
	comp=Z,3µm,20.0s						
PALK	**Pallekele**	**89.07**	**278**	*e*P	**P**	**03 22 39.3**	**+0.2**
	comp=Z,100nm,1.4s						
PALK				LR	LR		
	comp=Z,2µm,21.0s						
MDM	**Murphy Dome**	**89.08**	**17**	*e*P	**P**	**03 22 36.7**	**-1.3**
	comp=Z,95nm,1.3s						
MDM				LR	LR		
	comp=Z,2µm,20.0s						
H04A	**Detroit Lake**	**89.09**	**42**	*e*P	**P**	**03 22 39.1**	**+0.6**
	comp=Z,387nm,1.6s						
J05D	**Fort Rock, OR**	**89.10**	**44**	P	**P**	**03 22 39.7**	**+0.9**
	baz=245,SNR=56						
TCOL	**CIGO, UAF Yank**	**89.12**	**17**	P	**P**	**03 22 36.9**	**-1.2**
	baz=222						
NV01	**Mina Array Sit**	**89.12**	**49**	*e*P	**P**	**03 22 39.5**	**+0.5**
NVAR	**Mina Array Bea**	**89.12**	**49**	P	**P**	**03 22 39.5**	**+0.5**
	comp=Z,17nm,0.9s,baz=229,slow=7.9,SNR=50						
NVAR				PKKPbc	**PKKPbc**	**03 40 17.8**	**0.0**
	comp=Z,0.1nm,0.4s,baz=50,slow=2.8,SNR=2.8						
NVAR				LR	LR	03 53 50.7	
	comp=Z,2µm,21.6s,baz=251,slow=30						
COLA	**College**	**89.12**	**17**	*e*P	**P**	**03 22 37.0**	**-1.1**
	comp=Z,60nm,0.9s						
COLA				LR	LR		
	comp=Z,2µm,20.0s						
COLA	**College**	**89.12**	**17**	*e*P	**P**	**03 22 37.0**	**-1.1**
COLA				pmax	pmax		
	comp=Z,60nm,0.9s						
COLA				MLR	MLR		
	comp=Z,2µm,20.0s						
COLA	**College**	**89.12**	**17**	*e*P	**P**	**03 22 37.0**	**-1.1**
BELC	**Belle Mtn. Jos**	**89.14**	**54**	P	**P**	**03 22 39.7**	**+0.6**
	baz=248,SNR=21						
MOD	**Modoc Plateau**	**89.14**	**45**	*e*P	**P**	**03 22 39.4**	**+0.5**
	comp=Z,262nm,1.6s						
MOD				LR	LR		
	comp=Z,3µm,20.0s						
HEC	**Hector,Ludlow**	**89.19**	**53**	P	**P**	**03 22 39.3**	**0.0**
	baz=248						
F04D	**Rainier, OR**	**89.19**	**41**	P	**P**	**03 22 39.7**	**+0.8**
	baz=243						
RIDG	**Independ'e Rid**	**89.20**	**19**	*e*P	**P**	**03 22 38.0**	**-0.6**
	comp=Z,110nm,1.4s						
RIDG				LR	LR		
	comp=Z,2µm,21.0s						
NV11	**Mina Array Sit**	**89.23**	**49**	PFAKE		03 22 50.0	+11
NV11				LR	LR		
	comp=Z,300nm,20.0s						
GRAC	**Grapevine Rang**	**89.24**	**51**	P	**P**	**03 22 40.0**	**+0.6**
	baz=247,SNR=22						
NLWA	**Neilton Lookou**	**89.26**	**39**	*e*P	**P**	**03 22 40.7**	**+1.5**
	comp=Z,433nm,2.0s						
ILAR	**Eielson Array**	**89.33**	**18**	P	**P**	**03 22 38.1**	**-1.0**
	comp=Z,15nm,0.6s,baz=238,slow=5.0,SNR=256						
ILAR				PKKPbc	**PKKPbc**	**03 40 18.1**	**0.0**
	comp=Z,0.3nm,0.9s,baz=27,slow=2.2,SNR=3.0						
ILAR				LR	LR	03 58 18.9	
	comp=Z,3µm,19.7s,baz=238,slow=33						
ILB	**Eielson Array**	**89.33**	**18**	*e*P	**P**	**03 22 37.7**	**-1.4**
IL1	**Eielson Array**	**89.33**	**18**	*e*P	**P**	**03 22 36.7**	**-2.4**
DOT	**Dot Lake**	**89.38**	**20**	*e*P	**P**	**03 22 38.7**	**-0.7**
	comp=Z,108nm,1.6s						
DOT				LR	LR		
	comp=Z,2µm,20.0s						
FURC	**Furnace Creek,**	**89.41**	**51**	P	**P**	**03 22 40.8**	**+0.7**
	baz=247,SNR=20						
POKR	**Poker Plat Res**	**89.42**	**17**	P	**P**	**03 22 38.1**	**-1.5**
	baz=223						
BC3	**Big Chuckawall**	**89.43**	**54**	P	**P**	**03 22 41.2**	**+0.7**
	baz=248,SNR=14						
I05D	**Terrebonne, OR**	**89.49**	**43**	P	**P**	**03 22 41.1**	**+0.6**
	baz=244,SNR=22						
BESE	**Bessie Mountai**	**89.50**	**26**	*e*P	**P**	**03 22 41.2**	**+1.1**
	comp=Z,94nm,1.4s						
PINE	**Pine Mountain**	**89.51**	**43**	*e*P	**P**	**03 22 41.6**	**+0.9**
	comp=Z,337nm,1.4s						
KVN	**Kaiserville**	**89.51**	**49**	*e*P	**P**	**03 22 41.1**	**+0.3**
	comp=Z,122nm,1.3s						

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KVN                                LR     LR
      comp=Z,3µm,20.0s
KVN   Kaiserville      89.51  49  eP     P        03 22 41.1 +0.3
KVN                                pmax   pmax
      comp=Z,122nm,1.3s
KVN                                MLR    MLR
      comp=Z,3µm,20.0s
BOK   Bokaro           89.58 295  eP     P        03 22 41.3  0.0
BOK                                IAmb   IAmb     03 22 48.5
      comp=Z,31nm,0.6s
SCRK  Sand Creek       89.64  19  eP     P        03 22 40.0 -0.7
      comp=Z,115nm,1.5s
SCRK                               LR     LR
      comp=Z,1µm,20.0s
SHOC  Shoshone, Teco   89.64  52   P     P        03 22 41.6 +0.4
      baz=248,SNR=12
E04D  Cinebar          89.68  40   P     P        03 22 42.0 +0.8
      baz=244,SNR=16
GMRC  Granite Mounta   89.69  53   P     P        03 22 42.3 +0.6
      baz=248,SNR=40
GLA   Glamis           89.70  55  eP     P        03 22 43.2 +1.5
      comp=Z,285nm,1.6s
GLA                                LR     LR
      comp=Z,3µm,18.0s
GLA   Glamis           89.70  55  eP     P        03 22 43.2 +1.5
GLA                                pmax   pmax
      comp=Z,285nm,1.6s
GLA                                MLR    MLR
      comp=Z,3µm,18.0s
GLA   Glamis           89.70  55   P     P        03 22 42.8 +1.1
      baz=249,SNR=9.1
TUQ   Turquoise Moun   89.73  53   P     P        03 22 42.3 +0.4
      baz=248,SNR=38
SRIG  Santa Rosalia    89.78  61   PFAKE           03 22 50.0 +7.9
SRIG                               LR     LR
      comp=Z,3µm,18.0s
D03D  Eldon            89.80  39   P     P        03 22 42.9 +1.2
      baz=243,SNR=12
HYT   Haines Junctio   89.81  24  eP     P        03 22 41.2 -0.3
      comp=Z,22nm,1.1s
SKAG  Skagway          89.83  25  eP     P        03 22 41.8 +0.3
      comp=Z,54nm,1.4s
D04E  Lakebay          89.83  40   P     P        03 22 43.0 +1.2
      baz=243
IRM   Iron Mountain    89.85  54   P     P        03 22 43.3 +1.0
      baz=248,SNR=42
G05D  Wamic, OR        89.89  42   P     P        03 22 42.8 +0.6
      baz=244,SNR=9.7
MOY   Mondy            89.96 325  eP     P        03 22 42.4 -0.1
MOY                                pmax   pmax
      comp=Z,94nm,3.3s
TPNV  Topopah Spring   90.05  51  eP     P        03 22 43.9 +0.5
      comp=Z,324nm,1.8s
TPNV                               LR     LR
      comp=Z,5µm,19.0s
TPNV  Topopah Spring   90.05  51  eP     P        03 22 43.9 +0.5
TPNV                               pmax   pmax
      comp=Z,324nm,1.8s
TPNV                               MLR    MLR
      comp=Z,5µm,19.0s
TPNV  Topopah Spring   90.05  51   P     P        03 22 43.9 +0.5
      baz=248,SNR=48
F05D  White Salmon     90.08  41   P     P        03 22 43.8 +0.7
      baz=244,SNR=12
PGC   Sidney           90.09  38  eP     P        03 22 44.2 +1.2
NVL   N'lazarevskaya   90.11 188⇓iP     P        03 22 41.1 -1.8
NVL                                pmax   pmax
      comp=Z,83nm,1.3s
Y12C  Blythe           90.19  55  eP     P        03 22 44.7 +0.8
      comp=Z,324nm,1.9s
Y12C                               LR     LR
      comp=Z,3µm,20.0s
Y12C  Blythe           90.19  55   P     P        03 22 44.9 +1.1
      baz=249,SNR=16
LDFC  Landfair         90.22  53  eP     P        03 22 45.2 +1.1
      comp=Z,153nm,1.2s
LDFC                               LR     LR
      comp=Z,4µm,19.0s
LON   Longmire         90.23  40  eP     P        03 22 44.4 +0.6
      comp=Z,210nm,1.8s
LON   Longmire         90.23  40  eP     P        03 22 44.4 +0.6
LON                                pmax   pmax
      comp=Z,210nm,1.8s
PRP   Porcupine Dome   90.27  18  eP     P        03 22 42.9 -0.8
      comp=Z,28nm,1.4s
PRP                                LR     LR
      comp=Z,3µm,20.0s
COLD  Coldfoot         90.28  15  eP     P        03 22 44.7 +1.2
      comp=Z,45nm,1.4s
COLD                               LR     LR
      comp=Z,3µm,20.0s
D05A  Enumclaw         90.31  40  eP     P        03 22 45.8 +1.7
      comp=Z,731nm,1.5s
113A  Mohawk Valley,   90.43  56  eP     P        03 22 46.3 +1.3
      comp=Z,327nm,1.9s
NEE2  Needles Airpor   90.48  54   P     P        03 22 46.1 +0.9
      baz=249
WVOR  Wild Horse Val   90.49  45  eP     P        03 22 45.8 +0.5
      comp=Z,403nm,1.7s
WVOR                               LR     LR
      comp=Z,2µm,21.0s
A04D  Lummi Island     90.56  38   P     P        03 22 46.0 +0.8
      baz=244,SNR=18
SNAA  Sanae            90.58 183   P     P        03 22 44.5 -0.6
SNAA  Sanae            90.58 183  eP     P        03 22 44.7 -0.5
      comp=Z,234nm,1.5s
SNAA                               LR     LR
      comp=Z,3µm,20.0s
SNAA  Sanae            90.58 183  eP     P        03 22 44.7 -0.5
SNAA                               pmax   pmax
      comp=Z,234nm,1.5s
SNAA                               MLR    MLR
      comp=Z,3µm,20.0s
I07A  Izee             90.58  44  eP     P        03 22 46.3 +0.7
      comp=Z,85nm,0.9s
BMN   Battle Mountai   90.68  48   PFAKE           03 23 00.0  +14
BMN                                LR     LR
      comp=Z,3µm,18.0s
PDMCI Parker Dam,Lak   90.68  54   P     P        03 22 46.8 +0.7
      baz=249,SNR=9.5
SHPR  Sheep Range      90.70  52  eP     P        03 22 47.2 +0.7
      comp=Z,301nm,1.9s
SHPR                               LR     LR
      comp=Z,4µm,20.0s
B05A  Bryant           90.72  39   P     P        03 22 46.9 +1.0
      baz=244,SNR=29
214A  Organ Pipe Nat   90.90  57   P     P        03 22 48.1 +0.8
      baz=250
J08A  Circle Bar Ran   90.97  45  eP     P        03 22 47.9 +0.5
      comp=Z,75nm,0.9s
J08A                               LR     LR
      comp=Z,2µm,19.0s
F07A  Phinny Hill Vi   91.05  42  eP     P        03 22 48.5 +0.9
      comp=Z,214nm,1.6s
R11A  Troy Canyon, C   91.06  50  eP     P        03 22 48.3 +0.2
      comp=Z,77nm,1.8s
R11A                               LR     LR
      comp=Z,3µm,18.0s
R11A  Troy Canyon, C   91.06  50   P     P        03 22 48.5 +0.4
      baz=248,SNR=28
EGAK  Eagle            91.08  20  eP     P        03 22 46.6 -0.6
      comp=Z,56nm,1.3s
EGAK                               LR     LR
      comp=Z,2µm,20.0s
FYU   Fort Yukon       91.10  17  eP     P        03 22 47.4 +0.1
      comp=Z,64nm,1.5s
FYU                                LR     LR
      comp=Z,2µm,20.0s
LTY   Liberty          91.16  40  eP     P        03 22 48.4 +0.2
      comp=Z,227nm,1.6s
W13A  Hualapai Mount   91.16  54  eP     P        03 22 49.1 +0.5
      comp=Z,249nm,2.0s
W13A                               LR     LR
      comp=Z,4µm,19.0s
DAWY  Dawson           91.19  21  eP     P        03 22 47.6 -0.3
      comp=Z,44nm,1.3s
B06A  Marblemount      91.20  39  eP     P        03 22 49.0 +0.8
      comp=Z,201nm,1.5s
VNA3  Neumayer Olymp   91.23 181   P     P        03 22 47.9 -0.2
MDRS  Chennai          91.26 283  eP     P        03 22 48.7 -0.5
MDRS                               IAmb   IAmb     03 22 57.6
      comp=Z,181nm,1.9s
C06D  Leavenworth      91.30  40   P     P        03 22 49.0 +0.3
      baz=245,SNR=7.4
E07A  Sunnyside        91.37  41  eP     P        03 22 49.9 +0.8
      comp=Z,239nm,1.5s
KNGR  Kungurtug, Tuv   91.40 323⇑eP     P        03 22 47.9 -1.4
G08A  Pilot Rock       91.42  43  eP     P        03 22 49.9 +0.4
      comp=Z,88nm,0.9s
Y14A  Wickenburg       91.43  55  eP     P        03 22 50.4 +0.7
      comp=Z,179nm,1.9s
Y14A                               LR     LR
      comp=Z,3µm,21.0s
VNA2  Neumayer--Watz   91.50 182   P     P        03 22 49.4 +0.1
      baz=164,slow=3.9
HAWA  Hanford          91.51  41  eP     P        03 22 50.4 +0.7
      comp=Z,367nm,1.6s
TOLK  Toolik Lake Re   91.51  14  eP     P        03 22 49.7 +0.5
      comp=Z,62nm,1.5s
TOLK                               LR     LR
      comp=Z,4µm,20.0s
TOLK  Toolik Lake Re   91.51  14   P     P        03 22 49.8 +0.5
      baz=221
DLBC  Dease Lake       91.52  28  eP     P        03 22 49.1 -0.5
      comp=Z,93nm,1.4s
VNA1  Neumayer--Stat   91.80 181   P     P        03 22 50.9 +0.2
E08A  Dider Farm, El   91.84  42  eP     P        03 22 51.9 +0.6
      comp=Z,451nm,1.7s
LLLB  Lillooet         91.87  37  eP     P        03 22 52.4 +1.1
      comp=Z,148nm,1.4s
D08A  Wollman Farm,    92.16  41  eP     P        03 22 53.1 +0.4
      comp=Z,260nm,1.7s
ELK   Elko             92.19  48  eP     P        03 22 53.6 +0.2
      comp=Z,112nm,1.6s
ELK                                LR     LR
      comp=Z,3µm,18.0s
LCMT  Little Creek M   92.32  52  eP     P        03 22 54.5 +0.6
      comp=Z,175nm,1.8s
LCMT                               LR     LR
      comp=Z,4µm,20.0s
BMO   Blue Mountains   92.33  44  eP     P        03 22 53.8 +0.1
      comp=Z,202nm,1.8s
BMO                                LR     LR
      comp=Z,1µm,19.0s
PSUT  Pine Spring      92.40  50  eP     P        03 22 55.1 +0.8
      comp=Z,30nm,1.3s
PSUT                               LR     LR
      comp=Z,2µm,21.0s
CCUT  Cedar City       92.42  51  eP     P        03 22 55.4 +1.0
      comp=Z,246nm,2.0s
CCUT                               LR     LR
      comp=Z,5µm,19.0s
E09A  Wood Farm, Sta   92.43  42  eP     P        03 22 54.8 +0.8
      comp=Z,247nm,1.7s
B08A  Colville Reser   92.43  40  eP     P        03 22 54.0  0.0
      comp=Z,168nm,1.5s
DGAR  Diego Garcia     92.46 261   PFAKE           03 23 10.0  +15
DGAR                               LR     LR
      comp=Z,7µm,21.0s
KNB   Kanab            92.64  52  eP     P        03 22 51.3 -4.1
      comp=Z,322nm,1.8s
KNB                                LR     LR
      comp=Z,4µm,20.0s
KNB   Kanab            92.64  52  eP     P        03 22 51.3 -4.1
KNB                                pmax   pmax
      comp=Z,322nm,1.8s
KNB                                MLR    MLR
      comp=Z,4µm,20.0s
SZCU  Shurtz Canyon    92.64  51  eP     P        03 22 56.2 +0.8
      comp=Z,218nm,1.9s
SZCU                               LR     LR
      comp=Z,4µm,21.0s
TUC   Tucson           92.64  57  eP     P        03 22 56.3 +0.9
      comp=Z,186nm,1.6s
TUC                                LR     LR
      comp=Z,2µm,18.0s
TUC   Tucson           92.64  57  eP     P        03 22 56.3 +0.9
TUC                                pmax   pmax
      comp=Z,186nm,1.6s
TUC                                MLR    MLR
      comp=Z,2µm,18.0s
TUC   Tucson           92.64  57   P     P        03 22 56.2 +0.9
      baz=251
F10A  Beach Ranch, E   92.81  42  eP     P        03 22 55.8 -0.1
      comp=Z,337nm,1.8s
X16A  Lo Mia Camp, P   92.81  55  eP     P        03 22 57.2 +0.9
      comp=Z,130nm,1.5s
X16A                               LR     LR
      comp=Z,2µm,19.0s
U15A  North Rim        92.84  53  eP     P        03 22 57.3 +0.8
      comp=Z,290nm,1.9s
U15A                               LR     LR
      comp=Z,3µm,19.0s
C09A  Chrisman Ranch   92.86  41  eP     P        03 22 56.7 +0.7
      comp=Z,144nm,1.7s
TRD   Trivandrum       92.97 278  eP     P        03 22 56.4 -0.8
PKCU  Pink Cliffs      93.17  52  eP     P        03 22 59.9 +1.8
      comp=Z,381nm,2.0s
PKCU                               LR     LR
      comp=Z,4µm,20.0s
WUAZ  Wupatki          93.23  54  eP     P        03 22 59.0 +0.8
      comp=Z,192nm,1.8s
WUAZ                               LR     LR
      comp=Z,3µm,20.0s
WUAZ  Wupatki          93.23  54   P     P        03 22 59.0 +0.8
      baz=251
GO10  Punta Arenas     93.36 149  eP     P        03 23 00.2 +1.9
      comp=Z,327nm,1.2s
TCRU  Three Creeks R   93.46  51  eP     P        03 23 00.9 +1.7
      comp=Z,24nm,0.4s
TCRU                               LR     LR
      comp=Z,5µm,18.0s
MTPU  Mount Pierson    93.46  51  eP     P        03 23 00.6 +1.2
      comp=Z,92nm,1.9s
MTPU                               LR     LR
      comp=Z,5µm,20.0s
EPYK  Eagle Plains     93.53  20  eP     P        03 22 58.4 -0.3
      comp=Z,121nm,1.4s
EPYK                               LR     LR
      comp=Z,2µm,20.0s
EPYK  Eagle Plains     93.53  20   P     P        03 22 58.0 -0.7
      baz=232
319A  Douglas          93.55  58  eP     P        03 23 00.7 +1.0
      comp=Z,168nm,1.4s
319A                               LR     LR
      comp=Z,2µm,18.0s
MSU   Marysvale        93.62  51  eP     P        03 23 00.8 +0.8
DUG   Dugway, Tooele   93.73  49  eP     P        03 23 00.8 +0.5
      comp=Z,79nm,1.9s
DUG                                LR     LR
      comp=Z,3µm,18.0s
DUG   Dugway, Tooele   93.73  49   P     P        03 23 00.6 +0.3
      baz=250
NEW   Newport          93.75  40  eP     P        03 23 00.5 +0.4
      comp=Z,70nm,1.6s
NEW   Newport          93.75  40  eP     P        03 23 00.5 +0.4
NEW                                pmax   pmax
      comp=Z,70nm,1.6s
NEW   Newport          93.75  40   P     P        03 23 00.4 +0.3
      baz=248
HLID  Hailey           93.78  45  eP     P        03 23 01.4 +0.9
      comp=Z,12nm,1.0s
HLID                               LR     LR
      comp=Z,3µm,20.0s
HLID  Hailey           93.78  45   P     P        03 23 01.0 +0.5
      baz=249
GO09  Cerro Castillo   93.79 147  eP     P        03 23 01.4 +1.1
      comp=Z,216nm,1.7s
BGU   Big Grassy Mou   93.83  48  eP     P        03 23 01.0 +0.2
      comp=Z,94nm,1.9s
BGU                                LR     LR
      comp=Z,2µm,19.0s
X18A  Snowflake        94.02  55  eP     P        03 23 03.1 +1.2
      comp=Z,136nm,1.6s
X18A                               LR     LR
      comp=Z,2µm,18.0s
HYB   Hyderabad        94.12 287  i P    P        03 23 02.0 -0.5
HYB   Hyderabad        94.12 287  eP     P        03 23 01.4 -1.0
HYB                                IAmb   IAmb     03 23 10.5
      comp=Z,32nm,0.8s
NLU   North Lily Min   94.18  49  eP     P        03 23 02.9 +0.4
      comp=Z,69nm,1.8s
NLU                                LR     LR
      comp=Z,3µm,18.0s
HVU   Hansel Valley    94.30  48  eP     P        03 23 03.4 +0.5
      comp=Z,66nm,1.4s
HVU                                LR     LR
      comp=Z,2µm,21.0s
HVU   Hansel Valley    94.30  48  eP     P        03 23 03.4 +0.5
HVU                                pmax   pmax
      comp=Z,66nm,1.4s
HVU                                MLR    MLR
      comp=Z,2µm,21.0s
SPUT  South Promonto   94.37  48  eP     P        03 23 04.0 +0.8
      comp=Z,101nm,1.8s
SPUT                               LR     LR
      comp=Z,1µm,20.0s
W18A  Petrified Fore   94.37  55  eP     P        03 23 04.5 +1.1
      comp=Z,116nm,1.6s
W18A                               LR     LR
      comp=Z,2µm,21.0s
W18A  Petrified Fore   94.37  55   P     P        03 23 04.0 +0.6
      baz=252
Q16A  Castle Valley    94.50  51  eP     P        03 23 05.2 +1.2
      comp=Z,136nm,1.9s
Q16A                               LR     LR
      comp=Z,4µm,18.0s
MPU   Maple Canyon     94.52  50  eP     P        03 23 05.0 +1.0
      comp=Z,72nm,1.9s
MPU                                LR     LR
      comp=Z,2µm,22.0s
JBP   Jabalpur         94.53 293⇑eP     P        03 23 04.5 +0.3
TMUT  Trail Mountain   94.60  50  eP     P        03 23 05.7 +1.2
      comp=Z,72nm,2.0s
TMUT                               LR     LR
      comp=Z,3µm,18.0s
CTU   Camp Tracy       94.66  49  eP     P        03 23 05.5 +0.8
      comp=Z,113nm,2.0s
CTU                                LR     LR
      comp=Z,3µm,20.0s
NGP   Nagpur           94.77 291  eP     P        03 23 04.4 -0.9
NGP                                IAmb   IAmb     03 23 12.4
      comp=Z,268nm,2.2s
JLU   Jordanelle       94.85  49  eP     P        03 23 06.3 +0.8
      comp=Z,98nm,1.9s
JLU                                LR     LR
      comp=Z,4µm,20.0s
WMQ   Urumqi           94.91 314   P     P        03 23 05.8 +0.2
WMQ                                pP     sP       03 23 12.3 -0.4
WMQ                                sP     pwP      03 23 17.8 -1.4
WMQ                                SKS    SKSac    03 33 39.3 -0.7
WMQ                                S      S        03 34 18.8 +0.2
WMQ                                SS     SS       03 40 44.0 -0.1
WMQ                                pmax   pmax
      comp=Z,60nm,1.7s
WMQ                                pmax   pmax
      comp=Z,380nm,3.8s
WMQ                                LR     LR
      comp=Z,2µm,21.5s
WMQ                                LR     LR
      comp=Z,2µm,22.5s
WMQ                                LR     LR
      comp=Z,3µm,23.7s
WMQ   Urumqi           94.91 314  eP     P        03 23 06.0 +0.4
      comp=Z,64nm,1.3s
WMQ                                LR     LR
      comp=Z,2µm,22.0s
WMQ   Urumqi           94.91 314  eP     P        03 23 06.0 +0.4
WMQ                                pmax   pmax
      comp=Z,64nm,1.3s
WMQ                                MLR    MLR
      comp=Z,2µm,22.0s
P17A  Butcher Ranch,   95.00  50  eP     P        03 23 07.0 +0.8
      comp=Z,34nm,1.7s
P17A                               LR     LR
      comp=Z,3µm,19.0s
SRU   San Rafael Swe   95.04  51  eP     P        03 23 06.3 -0.1
      comp=Z,11nm,1.1s
SRU                                LR     LR
      comp=Z,4µm,19.0s
SRU   San Rafael Swe   95.04  51  eP     P        03 23 06.3 -0.1
SRU                                pmax   pmax
      comp=Z,11nm,1.1s
SRU                                MLR    MLR
      comp=Z,4µm,19.0s
TCUT  Toone Canyon     95.05  49  eP     P        03 23 07.3 +0.8
      comp=Z,142nm,1.9s
TCUT                               LR     LR
      comp=Z,3µm,20.0s
121A  Cookes Peak, D   95.11  58   P     P        03 23 07.5 +0.6
      baz=252
HPIG                   95.21  64  eP     P        03 23 08.2 +0.7
      comp=Z,76nm,1.7s
HPIG                               LR     LR
      comp=Z,3µm,19.0s
MSO   Missoula         95.24  43   PFAKE           03 23 20.0  +13
MSO                                LR     LR
      comp=Z,2µm,18.0s
MSO   Missoula         95.24  43   P     P        03 23 06.5 -0.5
      baz=250
MCMT  McKenzie Canyo   95.27  45  eP     P        03 23 07.5  0.0
DLMT  Dillon           95.62  44  eP     P        03 23 09.8 +1.0
      comp=Z,54nm,1.7s
INK   Inuvik           95.68  19  eP     P        03 23 07.2 -1.1
      comp=Z,146nm,1.9s
INK                                LR     LR
      comp=Z,3µm,20.0s
INK   Inuvik           95.68  19  eP     P        03 23 07.2 -1.1
INK                                pmax   pmax
      comp=Z,146nm,1.9s
INK                                MLR    MLR
      comp=Z,3µm,20.0s
INK   Inuvik           95.68  19   P     P        03 23 07.5 -0.8
      comp=Z,11nm,1.1s,baz=232,slow=5.0,SNR=18
AHID  Auburn Hatcher   95.79  47   PFAKE           03 23 20.0  +10
AHID                               LR     LR
      comp=Z,2µm,21.0s
PV09  Paradox Valley   95.88  52  eP     P        03 23 11.4 +0.9
PV10  Paradox Valley   95.92  52   PFAKE           03 23 20.0 +9.5
PV10                               LR     LR
      comp=Z,3µm,20.0s
PV14  Lion Creek, Pa   95.93  52  eP     P        03 23 10.7 +0.2
      comp=Z,31nm,1.4s
PV14                               LR     LR
      comp=Z,4µm,21.0s
PV19  Morning Glory    95.94  52  eP     P        03 23 11.4 +0.9
      comp=Z,70nm,1.9s
PV19                               LR     LR
      comp=Z,3µm,20.0s
PV17  East Wray Mesa   95.94  52  eP     P        03 23 12.0 +1.4
      comp=Z,30nm,1.4s
PV20  West Nyswonger   95.96  52  eP     P        03 23 12.1 +1.4
      comp=Z,50nm,1.6s
PV23  Carpenter Ridg   95.96  52  eP     P        03 23 11.7 +1.0
      comp=Z,122nm,1.8s
MVCO  Mesa Verde       95.97  53  eP     P        03 23 11.4 +0.7
      comp=Z,31nm,1.8s
MVCO                               LR     LR
      comp=Z,4µm,20.0s
MVCO  Mesa Verde       95.97  53   P     P        03 23 10.6 -0.2
      baz=252
PV16  Nyswonger Mesa   95.99  52  eP     P        03 23 11.4 +0.6
      comp=Z,78nm,1.9s
PV16                               LR     LR
      comp=Z,2µm,20.0s
PV13  Radium Mtn., P   96.01  52  eP     P        03 23 11.7 +0.8
      comp=Z,71nm,1.9s
PV13                               LR     LR
      comp=Z,2µm,20.0s
PV11  David Mesa, Pa   96.02  52  eP     P        03 23 12.4 +1.5
      comp=Z,112nm,2.0s
PV21  Cone Mtn., Par   96.02  52  eP     P        03 23 11.8 +0.8
      comp=Z,109nm,1.8s
PV21                               LR     LR
      comp=Z,3µm,20.0s
PV04  Paradox Valley   96.02  52  eP     P        03 23 11.2 +0.2
      comp=Z,36nm,1.4s
PV04                               LR     LR
      comp=Z,3µm,20.0s
PV03  Paradox Valley   96.02  52  eP     P        03 23 11.6 +0.6
      comp=Z,82nm,2.0s
PV03                               LR     LR
      comp=Z,3µm,19.0s
WALA  Waterton Lakes   96.02  40  eP     P        03 23 12.3 +1.7
      comp=Z,64nm,1.9s
PV12  Saucer Basin,    96.07  52  eP     P        03 23 12.1 +0.9
      comp=Z,48nm,1.5s
FXWY  Fox Creek        96.12  46  eP     P        03 23 11.8 +0.5
      comp=Z,47nm,1.8s
TPAW  Teton Pass       96.13  46  eP     P        03 23 10.8 -0.6
      comp=Z,73nm,1.9s
TPAW                               LR     LR
      comp=Z,3µm,20.0s
REDW  Red Top Meadow   96.16  47  eP     P        03 23 11.4  0.0
      comp=Z,109nm,1.9s
REDW                               LR     LR
      comp=Z,3µm,20.0s
LAZ   Ladron           96.19  56  eP     P        03 23 12.7 +0.9
PV01  Paradox Valley   96.19  52  eP     P        03 23 12.4 +0.6
      comp=Z,28nm,1.6s
PV01                               LR     LR
      comp=Z,2µm,21.0s
PV07  Paradox Valley   96.23  52  eP     P        03 23 12.6 +0.7
      comp=Z,73nm,1.8s
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PV07                                  LR       LR
      comp=Z,2µm,20.0s
QLMT  Earthquake Lak     96.23  45  eP       P        03 23 13.1 +1.4
LENM  Lemitar            96.25  56  eP       P        03 23 12.1 +0.1
SNOW  Snow King Moun     96.25  46  eP       P        03 23 12.7 +0.7
      comp=Z,9.4nm,0.9s
SNOW                                LR       LR
      comp=Z,3µm,20.0s
Y22D  IRIS PASSCAL I     96.26  56  PFAKE             03 23 20.0 +7.9
Y22D                                LR       LR
      comp=Z,2µm,21.0s
Y22D  IRIS PASSCAL I     96.26  56  P        P        03 23 12.5 +0.4
      baz=253
IMW   Indian Meadow      96.27  46  eP       P        03 23 12.7 +0.7
      comp=Z,33nm,1.4s
IMW                                 LR       LR
      comp=Z,3µm,20.0s
PV15  Paradox Valley     96.32  52  eP       P        03 23 13.0 +0.6
      comp=Z,48nm,1.6s
PV15                                LR       LR
      comp=Z,2µm,20.0s
BOZ   Bozeman (W)        96.34  44  eP       P        03 23 13.1 +1.0
      comp=Z,36nm,1.6s
BOZ   Bozeman (W)        96.34  44  eP       P        03 23 13.1 +1.0
BOZ                                 pmax     pmax
      comp=Z,36nm,1.6s
BOZ   Bozeman (W)        96.34  44  P        P        03 23 12.5 +0.3
      baz=251
MOOW  Moose Ponds        96.35  46  eP       P        03 23 12.6 +0.3
      comp=Z,46nm,1.8s
MOOW                                LR       LR
      comp=Z,3µm,20.0s
YHB   Horse Butte        96.36  45  eP       P        03 23 14.5 +2.1
      comp=Z,45nm,1.8s
YHB                                 LR       LR
      comp=Z,3µm,18.0s
LOHW  Long Hollow        96.41  46  PFAKE             03 23 20.0 +7.4
LOHW                                LR       LR
      comp=Z,2µm,20.0s
YPP   Pitchstone Pla     96.48  46  PFAKE             03 23 20.0 +7.0
YPP                                 LR       LR
      comp=Z,4µm,19.0s
FLWY  Flagg Ranch        96.49  46  PFAKE             03 23 20.0 +7.1
FLWY                                LR       LR
      comp=Z,3µm,21.0s
YMR   Madison River      96.49  45  eP       P        03 23 14.5 +1.6
      comp=Z,28nm,1.4s
YMR                                 LR       LR
      comp=Z,3µm,21.0s
YFT   Old Faithful       96.51  46  PFAKE             03 23 20.0 +6.9
YFT                                 LR       LR
      comp=Z,5µm,20.0s
BNM   Barren Site        96.52  56  eP       P        03 23 12.4  -0.9
HRY   Holter Researc     96.57  43  eP       P        03 23 13.9 +0.8
YHH   Holmes Hill        96.61  45  eP       P        03 23 15.4 +1.9
      comp=Z,18nm,1.7s
YHH                                 LR       LR
      comp=Z,3µm,18.0s
H17A  Grant Village      96.67  46  eP       P        03 23 15.6 +1.8
      comp=Z,17nm,1.2s
H17A                                LR       LR
      comp=Z,4µm,20.0s
H17A  Grant Village      96.67  46  P        P        03 23 14.9 +1.1
      baz=252
YNR   Norris Junctio     96.70  45  eP       P        03 23 16.6 +2.6
      comp=Z,19nm,1.4s
YNR                                 LR       LR
      comp=Z,3µm,21.0s
ZAIG  Zacatecas          96.71  68  PFAKE             03 23 30.0  +15
ZAIG                                LR       LR
      comp=Z,4µm,21.0s
BHPL  Bhopal             96.81 292  eP       P        03 23 13.9  -0.7
BHPL                                IAmb     IAmb     03 23 21.4
      comp=Z,90nm,1.7s
MNTX  Cornudas Mount     96.82  59  eP       P        03 23 14.6 +0.1
      comp=Z,66nm,1.8s
MNTX                                LR       LR
      comp=Z,2µm,18.0s
MNTX  Cornudas Mount     96.82  59  P        P        03 23 14.6 +0.1
      baz=253
LKWY  Lake               96.84  46  eP       P        03 23 16.6 +2.0
      comp=Z,26nm,1.7s
LKWY                                LR       LR
      comp=Z,5µm,19.0s
BW06  Boulder Array      96.87  47  eP       P        03 23 14.4  -0.3
      comp=Z,28nm,1.5s
BW06                                LR       LR
      comp=Z,1µm,20.0s
BW06  Boulder Array      96.87  47  P        P        03 23 14.4  -0.3
      baz=252
PD31  Pinedale Array     96.87  47  eP       P        03 23 15.2 +0.5
PD31                                ePP      PP       03 27 10.0  -0.4
PDAR  Pinedale Array     96.87  47  eP       P        03 23 13.8  -0.9
PDAR  Pinedale Array     96.87  47  P        P        03 23 14.4  -0.3
      comp=Z,2.0nm,0.9s,baz=263,slow=2.4,SNR=17
PDAR                                PP       PP       03 27 10.0  -0.4
      comp=Z,0.8nm,1.0s,baz=236,slow=4.9,SNR=4.1
PDAR                                PKKPbc   PKKPbc   03 39 56.6  -1.1
      comp=Z,0.4nm,0.8s,baz=96,slow=4.1,SNR=2.9
PDAR                                LR       LR       04 00 08.0
      comp=Z,940nm,20.4s,baz=252,slow=31
ANMO  Albuquerque        96.88  56  eP       P        03 23 14.7  -0.2
      comp=Z,41nm,1.6s
ANMO                                LR       LR
      comp=Z,2µm,21.0s
ANMO  Albuquerque        96.88  56  eP       P        03 23 14.7  -0.2
ANMO                                pmax     pmax
      comp=Z,41nm,1.6s
ANMO                                MLR      MLR
      comp=Z,2µm,21.0s
ANMO  Albuquerque        96.88  56  P        P        03 23 14.7  -0.2
      baz=253
O20A  White River Ci     97.03  50  eP       P        03 23 15.5   0.0
      comp=Z,58nm,1.8s
O20A                                LR       LR
      comp=Z,4µm,21.0s
O20A  White River Ci     97.03  50  P        P        03 23 15.5   0.0
      baz=253
DGZ   Jazzator, Alta     97.04 320deP        P        03 23 15.1  -0.1
DGZ                                 pmax     pmax
      comp=Z,13nm,1.2s
MOIG  Morelia            97.08  72  PFAKE             03 23 30.0  +14
MOIG                                LR       LR
      comp=Z,2µm,21.0s
S22A  4UR Ranch, Cre     97.39  53  eP       Pdif     03 23 18.3 +0.9
      comp=Z,58nm,1.8s
S22A                                LR       LR
      comp=Z,4µm,20.0s
S22A  4UR Ranch, Cre     97.39  53  P        Pdif     03 23 17.8 +0.4
      baz=253
TX31  Lajitas Ar. Si     97.58  62  eP       Pdif     03 23 18.6 +0.4
TXAR  Lajitas Array      97.58  62  P        Pdif     03 23 18.4 +0.3
      comp=Z,33nm,1.4s,baz=226,slow=3.3,SNR=38
TXAR                                LR       LR       04 02 11.3
      comp=Z,2µm,18.1s,baz=0.0,slow=32
SMCO  Snowmass           97.69  51  eP       Pdif     03 23 19.5 +0.7
      comp=Z,7.4nm,1.2s
SMCO                                LR       LR
      comp=Z,4µm,20.0s
RLMT  Red Lodge          97.78  45  eP       Pdif     03 23 20.3 +1.5
      comp=Z,51nm,1.9s
RLMT                                LR       LR
      comp=Z,3µm,20.0s
RLMT  Red Lodge          97.78  45  P        Pdif     03 23 18.9 +0.1
      baz=253
GDL2  Guadalupe Moun     97.79  59  eP       Pdif     03 23 21.3 +2.3
GOA   Goa                97.92 284  eP       P        03 23 18.6  -1.2
DDI   Dehra Dun          98.21 299  eP       P        03 23 19.5  -1.3
RWWY  Rawlins            98.23  49  eP       P        03 23 20.7  -0.2
      comp=Z,30nm,1.5s
RWWY                                LR       LR
      comp=Z,2µm,19.0s
EGMT  Eagleton           98.31  42  eP       P        03 23 20.6  -0.3
      comp=Z,53nm,1.9s
EGMT  Eagleton           98.31  42  Pdiff    Pdif     03 23 21.0   0.0
      baz=253
SDCO  Great Sand Dun     98.41  53  eP       Pdif     03 23 22.3 +0.4
      comp=Z,28nm,1.8s
SDCO                                LR       LR
      comp=Z,3µm,19.0s
SDCO  Great Sand Dun     98.41  53  Pdiff    P        03 23 21.7  -0.1
      baz=254
POO   Poona              98.73 287  eP       P        03 23 22.2  -1.2
UNM   Universidad Na     98.81  73  PFAKE             03 23 40.0  +16
UNM                                 LR       LR
      comp=Z,3µm,20.0s
ISCO  Idaho Springs      98.88  51  PFAKE             03 23 40.0  +16
ISCO                                LR       LR
      comp=Z,3µm,20.0s
ISCO  Idaho Springs      98.88  51  Pdiff    Pdif     03 23 24.0 +0.1
      baz=254
N23A  Red Feather La     98.93  50  eP       Pdif     03 23 25.7 +1.6
N23A                                LR       LR
      comp=Z,4µm,20.0s
N23A  Red Feather La     98.93  50  Pdiff    P        03 23 24.0   0.0
      baz=254
K22A  Casper             98.98  48  eP       Pdif     03 23 25.1 +1.0
K22A                                LR       LR
      comp=Z,1µm,19.0s
K22A  Casper             98.98  48  Pdiff    P        03 23 24.0  -0.1
      baz=254
Q24A  Divide             99.00  52  PFAKE             03 23 40.0  +15
Q24A                                LR       LR
      comp=Z,3µm,21.0s
Q24A  Divide             99.00  52  Pdiff    Pdif     03 23 24.4  -0.2
      baz=255
T25A  Trinidad           99.08  54  PFAKE             03 23 40.0  +15
T25A                                LR       LR
      comp=Z,2µm,21.0s
T25A  Trinidad           99.08  54  Pdiff    Pdif     03 23 24.5  -0.3
      baz=255
SMLA  Simla              99.16 300  eP       Pdif     03 23 24.0  -0.9
SMLA                                IAmb     IAmb     03 23 31.4
      comp=Z,58nm,1.5s
PHWY  Pilot Hill         99.39  50  PFAKE             03 23 40.0  +14
PHWY                                LR       LR
      comp=Z,4µm,18.0s
MK01  Makanchi Array     99.44 316  eP       Pdif     03 23 23.9  -2.0
MK32  Makanchi Array     99.45 316  eP       Pdif     03 23 25.5  -0.5
MK32                                ePP      PP       03 27 29.9 +0.1
MKAR  Makanchi Array     99.45 316ceP        Pdif     03 23 25.8  -0.1
MKAR                                pmax     pmax
      comp=Z,2.0nm,0.6s
MKAR  Makanchi Array     99.45 316  P        Pdif     03 23 25.5  -0.5
      comp=Z,1.6nm,0.6s,baz=106,slow=6.9,SNR=8.4
MKAR                                PP       PP       03 27 29.9 +0.1
      comp=Z,1.2nm,0.9s,baz=108,slow=6.7,SNR=2.5
MKAR                                PKKPbc   PKKPbc   03 39 48.0  -2.4
      comp=Z,8.0nm,1.1s,baz=299,slow=2.5,SNR=28
MKAR                                PKPPKP            03 47 50.2
      comp=Z,0.1nm,0.2s,baz=318,slow=1.9,SNR=2.6
MKAR                                LR       LR       04 05 20.5
      comp=Z,540nm,21.9s,baz=97,slow=34
MSTX  Muleshoe           99.55  57  PFAKE             03 23 40.0  +13
MSTX                                LR       LR
      comp=Z,2µm,18.0s
MSTX  Muleshoe           99.55  57  Pdiff    Pdif     03 23 26.5  -0.3
      baz=255
MAKZ  Makanchi           99.66 316  PFAKE             03 23 40.0  +13
MAKZ                                LR       LR
      comp=Z,1µm,22.0s
BOM   Bombay             99.77 287  eS       SKSac    03 34 03.9  -1.9
ZAA0  Zalesovo Array     99.87 323  PFAKE             03 23 40.0  +12
ZAA0                                LR       LR
      comp=Z,1µm,21.0s
ZALV  Zalesovo Beam      99.87 323  PP       PP       03 27 32.4  -0.4
      comp=Z,0.4nm,0.5s,baz=50,slow=4.5,SNR=2.5
ZALV                                PKKPbc   PKKPbc   03 39 40.1  -9.3
      comp=Z,0.4nm,0.4s,baz=311,slow=2.1,SNR=2.4
ZALV                                PKPPKP            03 48 01.3
      comp=Z,0.5nm,0.6s,baz=316,slow=4.0,SNR=4.4
ZALV                                LR       LR       04 08 32.6
      comp=Z,855nm,20.8s,baz=82,slow=35
ZAA1  Zalesovo Array     99.88 323  ePP      PP       03 27 32.4  -0.4
LNIG  Linares           100.02  67  ePdif    Pdif     03 23 29.1 +0.1
LNIG                                LR       LR
      comp=Z,3µm,20.0s
YKA   Yellowknife Ar    100.14  27  P        Pdif     03 23 28.4  -0.1
      comp=Z,12nm,1.0s,baz=251,slow=4.6,SNR=78
YKA                                 PP       PP       03 27 33.1  -1.4
      comp=Z,3.6nm,1.2s,baz=249,slow=7.6,SNR=4.1
YKA                                 PKKPbc   PKKPbc   03 39 45.2  -3.7
      comp=Z,0.5nm,0.8s,baz=53,slow=3.1,SNR=4.9
YKB5  Yellowknife Ar    100.14  27  ePdif    Pdif     03 23 27.1  -1.5
YKB5                                ePP      PP       03 27 33.1  -1.4
YKW3  Yellowknife Ar    100.15  27  ePdif    Pdif     03 23 28.2  -0.4
YKW3                                LR       LR
      comp=Z,1µm,19.0s
DHRM  DHARAMSHALA       100.16 301  eP       Pdif     03 23 28.2  -1.5
DHRM                                IAmb     IAmb     03 23 34.0
      comp=Z,49nm,1.7s
LAO   LASA Array        100.25  44  PFAKE             03 23 40.0  +10
LAO                                 LR       LR
      comp=Z,2µm,18.0s
LAO   LASA Array        100.25  44  Pdiff    Pdif     03 23 30.1 +0.5
      baz=255
AMTX  Amarillo          100.65  57  PFAKE             03 23 40.0 +8.3
AMTX                                LR       LR
      comp=Z,2µm,19.0s
AMTX  Amarillo          100.65  57  Pdiff    Pdif     03 23 31.4  -0.2
      baz=256
PLCA  Paso Flores       100.81 139  ePdif    Pdif     03 23 33.0 +0.6
PLCA  Paso Flores       100.81 139  P        Pdif     03 23 32.5 +0.2
      comp=Z,3.9nm,1.2s,baz=285,slow=6.7,SNR=5.1
PLCA                                PP       PP       03 27 36.7  -2.8
      comp=Z,7.5nm,1.1s,baz=259,slow=6.6,SNR=7.2
GO06  Curarrehue        100.87 138  ePdif    Pdif     03 23 33.4 +0.7
GO06                                LR       LR
      comp=Z,900nm,19.0s
KSCO  Kaye Shedlock'    100.91  53  PFAKE             03 23 40.0 +7.2
KSCO                                LR       LR
      comp=Z,3µm,20.0s
KSCO  Kaye Shedlock'    100.91  53  Pdiff    Pdif     03 23 32.9 +0.1
      baz=256
833A  Chaparral WMA,    100.94  64  PFAKE             03 23 40.0 +7.0
833A                                LR       LR
      comp=Z,4µm,19.0s
833A  Chaparral WMA,    100.94  64  Pdiff    Pdif     03 23 32.8  -0.1
      baz=256
NVS   Novosibirsk       101.01 324  eP       Pdif     03 23 29.4  -3.2
NVS                                 e                 03 34 08.7
NVS                                 eS       Sdif     03 34 59.4   -10
NVS                                 pmax     pmax
      comp=Z,36nm,2.0s
NVS                                 pmax     pmax
      comp=N,7.0nm,1.7s
NVS                                 pmax     pmax
      comp=E,9.0nm,1.6s
NVS                                 smax     smax
      comp=E,26nm,2.2s
RSSD  Black Hills       101.11  47  PFAKE             03 23 50.0  +16
RSSD                                LR       LR
      comp=Z,2µm,18.0s
RSSD  Black Hills       101.11  47  Pdiff    Pdif     03 23 33.5  -0.2
      baz=256
JCT   Junction City     101.12  61  ePdif    Pdif     03 23 33.8   0.0
JCT                                 LR       LR
      comp=Z,2µm,21.0s
JCT   Junction City     101.12  61  eP       Pdif     03 23 33.8   0.0
JCT                                 MLR      MLR
      comp=Z,2µm,21.0s
JCT   Junction City     101.12  61  Pdiff    Pdif     03 23 33.3  -0.5
      baz=256
LVIG  Laguna Verde      101.43  73  PFAKE             03 23 50.0  +15
LVIG                                LR       LR
      comp=Z,2µm,20.0s
MRIV  Mauritius Mete    101.55 244  PFAKE             03 23 50.0  +14
MRIV                                LR       LR
      comp=Z,800nm,18.0s
ABTX  Abilene, Hawle    101.76  59  ePdif    Pdif     03 23 36.7 +0.2
ABTX                                LR       LR
      comp=Z,2µm,19.0s
ABTX  Abilene, Hawle    101.76  59  Pdiff    Pdif     03 23 36.3  -0.2
      baz=256
OGNE  Ogallala          101.81  51  PFAKE             03 23 50.0  +13
OGNE                                LR       LR
      comp=Z,2µm,22.0s
OGNE  Ogallala          101.81  51  Pdiff    Pdif     03 23 37.0 +0.3
      baz=257
DGMT  Dagmar            102.02  43  Pdiff    Pdif     03 23 37.7 +0.4
      baz=257
KSH   Kashi             102.14 308  P        Pdif     03 23 41.0 +2.8
KSH                                 pP       sPdif    03 23 47.3 +1.9
KSH                                 PP       PP       03 27 53.0 +2.5
KSH                                 SKS               03 34 19.5
KSH                                 S        Sdif     03 35 20.3 +0.1
KSH                                 sS       sS       03 35 29.5 +0.2
KSH                                 SS       SS       03 42 29.3 +3.4
KSH                                 LR       LR
      comp=Z,780nm,6.9s
KSH                                 LR       LR
      comp=Z,610nm,7.1s
KSH                                 LR       LR
      comp=Z,2µm,16.4s
KURK  Kurchatov         102.76 319  PFAKE             03 23 50.0  +10
KURK                                LR       LR
      comp=Z,2µm,22.0s
KURBB Kurchatov Arra    102.79 319  PKPPKP   P'P'df   03 47 57.9 +1.0
      comp=Z,1.1nm,0.2s,baz=294,slow=3.0,SNR=4.3
NRIK  Noril'sk          102.91 339  P        Pdif     03 23 40.4  -0.4
      comp=Z,4.3nm,0.4s,baz=116,slow=4.8,SNR=26
NRIK                                PKKPab   PKKPdf   03 39 59.2  +10
      comp=Z,2.0nm,0.4s,baz=280,slow=5.5,SNR=6.1
WMOK  Wichita Mounta    102.94  57  PFAKE             03 23 50.0 +8.3
WMOK                                LR       LR
      comp=Z,2µm,18.0s
NIL   Nilore            102.98 301  PFAKE             03 23 50.0 +8.0
NIL                                 LR       LR
      comp=Z,899nm,20.0s
435B  Jarrell           103.05  62  PFAKE             03 23 50.0 +7.7
435B                                LR       LR
      comp=Z,2µm,19.0s
435B  Jarrell           103.05  62  Pdiff    Pdif     03 23 42.3   0.0
      baz=257
CBKS  Cedar Bluff       103.06  53  PFAKE             03 23 50.0 +7.8
CBKS                                LR       LR
      comp=Z,2µm,20.0s
CBKS  Cedar Bluff       103.06  53  Pdiff    Pdif     03 23 42.0  -0.2
      baz=258
GO05  Huala             103.07 134  PFAKE             03 23 50.0 +7.6
GO05                                LR       LR
      comp=Z,1µm,21.0s
U32A  Winter Ranch,     103.12  56  PFAKE             03 23 50.0 +7.5
U32A                                LR       LR
      comp=Z,2µm,21.0s
WHTX  Lake Whitney,     103.42  60  PFAKE             03 24 00.0  +16
WHTX                                LR       LR
      comp=Z,2µm,19.0s
WHTX  Lake Whitney,     103.42  60  Pdiff    Pdif     03 23 43.8  -0.1
      baz=257
BHJ   Bhuj              103.72 290  eP       Pdif     03 23 44.3  -1.1
BHJ                                 IAmb     IAmb     03 23 46.8
      comp=Z,47nm,0.2s
AAK   Ala-Archa         103.89 311  PFAKE             03 24 00.0  +14
AAK                                 LR       LR
      comp=Z,900nm,20.0s
HKT   Hockley           104.34  63  PFAKE             03 24 00.0  +12
HKT                                 LR       LR
      comp=Z,4µm,19.0s
CCIG  Comitan           104.50  77  PFAKE             03 24 00.0  +11
CCIG                                LR       LR
      comp=Z,2µm,22.0s
FFC   Flin Flon         104.63  37  PFAKE             03 24 00.0  +11
FFC                                 LR       LR
      comp=Z,2µm,18.0s
SUSD  Miller            104.75  48  Pdiff    Pdif     03 23 49.0  -0.5
      baz=260
BGNE  Belgrade          104.77  51  PFAKE             03 24 00.0  +10
BGNE                                LR       LR
      comp=Z,3µm,21.0s
MDND  Maddock           104.91  44  PFAKE             03 24 00.0  +10
MDND                                LR       LR
      comp=Z,2µm,18.0s
PEL   Peldehue          104.95 133  PFAKE             03 28 20.0  +14
PEL                                 LR       LR
      comp=Z,2µm,18.0s
HOPE  Hope Point        105.41 166  PFAKE             03 28 20.0  +14
HOPE                                LR       LR
      comp=Z,2µm,20.0s
KSU1  Kansas State U    105.51  53  PFAKE             03 28 20.0  +13
KSU1                                LR       LR
      comp=Z,2µm,20.0s
KSU1  Kansas State U    105.51  53  PKiKP    PKiKP    03 28 05.8  -0.8
      baz=260
TUL1  Leonard           105.57  57  PFAKE             03 28 20.0  +13
TUL1                                LR       LR
      comp=Z,2µm,19.0s
NATX  Nacogdoches       105.70  61  PFAKE             03 28 20.0  +13
NATX                                LR       LR
      comp=Z,2µm,18.0s
ECSD  EROS Data Cent    106.29  49  PFAKE             03 28 20.0  +12
ECSD                                LR       LR
      comp=Z,3µm,18.0s
ECSD  EROS Data Cent    106.29  49  PKiKP    PKiKP    03 28 07.3  -0.5
      baz=261
GAR   Garm              106.34 306  eP       Pdif     03 23 44.0   -13
KBL   Kabul             106.58 302  PFAKE             03 28 20.0  +11
KBL                                 LR       LR
      comp=Z,800nm,22.0s
W39A  Magazine          107.05  58  PFAKE             03 28 20.0  +11
W39A                                LR       LR
      comp=Z,2µm,18.0s
MIAR  Mount Ida         107.11  59  PFAKE             03 28 20.0  +10
MIAR                                LR       LR
      comp=Z,2µm,19.0s
HHAR  Hobbs             107.11  57  PFAKE             03 28 20.0  +10
HHAR                                LR       LR
      comp=Z,2µm,20.0s
LCO   Las Campanas      107.16 129  PFAKE             03 28 20.0  +10
LCO                                 LR       LR
      comp=Z,2µm,22.0s
WLAR  White Oak Lake    107.34  59  PFAKE             03 28 20.0  +10
WLAR                                LR       LR
      comp=Z,2µm,19.0s
AGMN  Agassiz Nation    107.45  44  PFAKE             03 28 20.0  +10
AGMN                                LR       LR
      comp=Z,2µm,18.0s
Z41A  Richland Creek    107.52  60  PFAKE             03 28 20.0  +10
Z41A                                LR       LR
      comp=Z,3µm,19.0s
ULM   Lac du Bonnet     107.68  42  PFAKE             03 28 20.0  +10
ULM                                 LR       LR
      comp=Z,2µm,18.0s
TRQA  Tornquist         107.69 141  PFAKE             03 28 20.0 +9.2
TRQA                                LR       LR
      comp=Z,2µm,19.0s
X40A  Basin Creek Fa    107.70  59  PFAKE             03 28 20.0 +9.3
X40A                                LR       LR
      comp=Z,2µm,19.0s
MYIG  Mrida             107.81  73  PFAKE             03 28 20.0 +8.7
MYIG                                LR       LR
      comp=Z,2µm,21.0s
UALR  University of     108.15  58  PFAKE             03 28 20.0 +8.5
UALR                                LR       LR
      comp=Z,2µm,18.0s
BRVK  Borovoye          108.22 321  PFAKE             03 28 20.0 +8.9
BRVK                                LR       LR
      comp=Z,1µm,19.0s
WHAR  Wooly Hollow      108.27  58  PFAKE             03 28 20.0 +8.2
WHAR                                LR       LR
      comp=Z,2µm,18.0s
W41B  Gary Mavity, V    108.29  58  PFAKE             03 28 20.0 +8.2
W41B                                LR       LR
      comp=Z,2µm,20.0s
W41B  Gary Mavity, V    108.29  58  PKiKP    PKiKP    03 28 10.8  -1.0
      baz=261
CCAR  Cane Creek        108.48  59  PFAKE             03 28 20.0 +7.8
CCAR                                LR       LR
      comp=Z,3µm,18.0s
SCIA  State Center      108.50  51  PFAKE             03 28 20.0 +8.0
SCIA                                LR       LR
      comp=Z,3µm,21.0s
TGUH  Tegucigalpa,Un    108.51  81  PFAKE             03 28 20.0 +7.3
TGUH                                LR       LR
      comp=Z,1µm,19.0s
TEIG  Tepich            108.99  74  PFAKE             03 28 30.0  +17
TEIG                                LR       LR
      comp=Z,1µm,20.0s
RES   Resolute Bay      109.01  16  ePKKPbc  PKKPbc   03 39 20.8  -1.3
RES                                 LR       LR
      comp=Z,1µm,18.0s
RES   Resolute Bay      109.01  16  PKKPbc   PKKPbc   03 39 20.8  -1.3
      comp=Z,1.1nm,0.7s,baz=80,slow=2.9,SNR=5.1
S41A  Jillco Farms,     109.05  56  PKiKP    PKiKP    03 28 11.8  -1.4
      baz=262
SPMN  Marine on St.     109.19  48  PFAKE             03 28 30.0  +17
SPMN                                LR       LR
      comp=Z,2µm,20.0s
VBMS  Vicksburg         109.25  61  PFAKE             03 28 30.0  +16
VBMS                                LR       LR
      comp=Z,1µm,20.0s
X43A  Marvell           109.30  59  PFAKE             03 28 30.0  +16
X43A                                LR       LR
      comp=Z,2µm,19.0s
R41A  Rosebud           109.43  55  PKiKP    PKiKP    03 28 12.5  -1.4
      baz=262
T42A  Van Buren         109.49  56  PFAKE             03 28 30.0  +16
T42A                                LR       LR
      comp=Z,2µm,18.0s
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T42A	**Van Buren**	**109.49**	**56**	PKiKP	**PKiKP**	**03 28 12.7**	**-1.3**
	baz=262						
CCM	**Cathedral Cave**	**109.50**	**55**	PFAKE		03 28 30.0	+16
CCM				LR	LR		
	comp=Z,3µm,18.0s						
CCM	**Cathedral Cave**	**109.50**	**55**	PKiKP	**PKiKP**	**03 28 12.7**	**-1.3**
	baz=262						
Q41A	**Truxton**	**109.63**	**54**	PKiKP	**PKiKP**	**03 28 13.1**	**-1.1**
	baz=263						
HBAR	**Harrisburg**	**109.63**	**58**	PFAKE		03 28 30.0	+16
HBAR				LR	LR		
	comp=Z,2µm,19.0s						
JTS	**JuntasAbangare**	**109.75**	**85**	PFAKE		03 28 30.0	+15
JTS				LR	LR		
	comp=Z,2µm,19.0s						
J39A	**Decorah**	**109.78**	**50**	PKiKP	**PKiKP**	**03 28 13.3**	**-1.1**
	baz=264						
S42A	**Caledonia**	**109.82**	**56**	PKiKP	**PKiKP**	**03 28 13.8**	**-0.8**
	baz=263						
R42A	**Luebbering**	**109.88**	**55**	PKiKP	**PKiKP**	**03 28 13.6**	**-1.1**
	baz=263						
I39A	**Houston**	**109.96**	**49**	PFAKE		03 28 30.0	+15
I39A				LR	LR		
	comp=Z,3µm,19.0s						
PBMO	**Poplar Bluff**	**109.98**	**57**	PFAKE		03 28 30.0	+15
PBMO				LR	LR		
	comp=Z,2µm,19.0s						
L40A	**Anamosa**	**110.00**	**51**	PFAKE		03 28 30.0	+15
L40A				LR	LR		
	comp=Z,2µm,20.0s						
NNA	**Nana**	**110.04**	**110**	PFAKE		03 28 30.0	+14
NNA				LR	LR		
	comp=Z,2µm,19.0s						
N41A	**Harden Midland**	**110.12**	**52**	PFAKE		03 28 30.0	+15
N41A				LR	LR		
	comp=Z,3µm,22.0s						
N41A	**Harden Midland**	**110.12**	**52**	PKiKP	**PKiKP**	**03 28 13.7**	**-1.4**
	baz=264						
K40A	**Colesburg**	**110.12**	**50**	PKiKP	**PKiKP**	**03 28 14.0**	**-1.0**
	baz=264						
FVM	**French Village**	**110.14**	**55**	PFAKE		03 28 30.0	+15
FVM				LR	LR		
	comp=Z,3µm,18.0s						
E38A	**The Farm, Brul**	**110.19**	**46**	PFAKE		03 28 30.0	+15
E38A				LR	LR		
	comp=Z,3µm,22.0s						
GNAR	**Gosnell**	**110.20**	**58**	PFAKE		03 28 30.0	+15
GNAR				LR	LR		
	comp=Z,2µm,19.0s						
EYMN	**Ely**	**110.33**	**45**	PFAKE		03 28 30.0	+15
EYMN				LR	LR		
	comp=Z,2µm,18.0s						
G39A	**Holcombe**	**110.34**	**48**	PKiKP	**PKiKP**	**03 28 14.7**	**-0.7**
	baz=265						
S43A	**Fulton Ridge,**	**110.36**	**56**	PKiKP	**PKiKP**	**03 28 14.5**	**-1.2**
	baz=263						
SLM	**Saint Louis**	**110.36**	**55**	PFAKE		03 28 30.0	+14
SLM				LR	LR		
	comp=Z,2µm,19.0s						
P42A	**Winchester**	**110.39**	**54**	PFAKE		03 28 30.0	+14
P42A				LR	LR		
	comp=Z,3µm,18.0s						
P42A	**Winchester**	**110.39**	**54**	PKiKP	**PKiKP**	**03 28 14.5**	**-1.1**
	baz=264						
HDC	**Heredia**	**110.47**	**86**	PFAKE		03 28 30.0	+13
HDC				LR	LR		
	comp=Z,2µm,18.0s						
OXF	**Oxford**	**110.50**	**59**	PFAKE		03 28 30.0	+14
OXF				LR	LR		
	comp=Z,2µm,19.0s						
PARMO	**Parma**	**110.50**	**57**	PFAKE		03 28 30.0	+14
PARMO				LR	LR		
	comp=Z,1µm,18.0s						
PVMO	**Portageville**	**110.52**	**57**	PFAKE		03 28 30.0	+14
PVMO				LR	LR		
	comp=Z,1µm,18.0s						
F39A	**Loretta**	**110.57**	**47**	PKiKP	**PKiKP**	**03 28 14.9**	**-0.9**
	baz=266						
HALT	**Halls**	**110.74**	**58**	PFAKE		03 28 30.0	+14
HALT				LR	LR		
	comp=Z,2µm,19.0s						
JFWS	**Jewell Farm**	**110.80**	**50**	PFAKE		03 28 30.0	+14
JFWS				LR	LR		
	comp=Z,5µm,22.0s						
ABPO	**Ambohimpanom**	**110.81**	**241**	PFAKE		03 28 30.0	+13
ABPO				LR	LR		
	comp=Z,4µm,21.0s						
GLAT	**Glass**	**110.83**	**57**	PFAKE		03 28 30.0	+13
GLAT				LR	LR		
	comp=Z,2µm,21.0s						
ESPN	**Las Esperanzas**	**110.86**	**83**	PFAKE		03 28 30.0	+13
ESPN				LR	LR		
	comp=Z,2µm,18.0s						
S44A	**Carbondale**	**111.02**	**56**	PKiKP	**PKiKP**	**03 28 15.8**	**-1.0**
	baz=264						
G40A	**Rib Lake**	**111.02**	**48**	PFAKE		03 28 30.0	+13
G40A				LR	LR		
	comp=Z,2µm,18.0s						
SIUC	**Southern Illin**	**111.05**	**56**	PFAKE		03 28 30.0	+13
SIUC				LR	LR		
	comp=Z,2µm,19.0s						
L42A	**Oliver, Polo**	**111.14**	**51**	PFAKE		03 28 30.0	+13
L42A				LR	LR		
	comp=Z,2µm,21.0s						
I41A	**Arkdale**	**111.17**	**49**	PFAKE		03 28 30.0	+13
I41A				LR	LR		
	comp=Z,3µm,18.0s						
147A	**Livingston**	**111.19**	**61**	PFAKE		03 28 30.0	+13
147A				LR	LR		
	comp=Z,2µm,20.0s						
HDIL	**Hopedale**	**111.29**	**53**	PFAKE		03 28 30.0	+13
HDIL				LR	LR		
	comp=Z,2µm,22.0s						
Q44A	**Meyer Farm, Va**	**111.34**	**55**	PFAKE		03 28 30.0	+13
Q44A				LR	LR		
	comp=Z,2µm,19.0s						
H41A	**Junction City**	**111.36**	**48**	PFAKE		03 28 30.0	+13
H41A				LR	LR		
	comp=Z,3µm,19.0s						
T45A	**Paducah**	**111.43**	**57**	PFAKE		03 28 30.0	+12
T45A				LR	LR		
	comp=Z,1µm,19.0s						
PLAL	**Pickwick Lake**	**111.65**	**59**	PFAKE		03 28 30.0	+12
PLAL				LR	LR		
	comp=Z,3µm,18.0s						
P44A	**Sand Creek, Wi**	**111.70**	**54**	PKiKP	**PKiKP**	**03 28 17.6**	**-0.5**
	baz=265						
COWI	**Conover**	**111.82**	**47**	PFAKE		03 28 30.0	+12
COWI				LR	LR		
	comp=Z,3µm,21.0s						
F41A	**Three Lakes**	**111.82**	**47**	PFAKE		03 28 30.0	+12
F41A				LR	LR		
	comp=Z,2µm,21.0s						
I42A	**Draeger Farm,**	**111.84**	**49**	PFAKE		03 28 30.0	+12
I42A				LR	LR		
	comp=Z,3µm,18.0s						
LVC	**Limon Verde**	**111.88**	**124**	PFAKE		03 28 30.0	+11
LVC				LR	LR		
	comp=Z,2µm,19.0s						
C40A	**Isle Royale Na**	**111.90**	**45**	PFAKE		03 28 30.0	+12
C40A				LR	LR		
	comp=Z,2µm,18.0s						
C40A	**Isle Royale Na**	**111.90**	**45**	PKiKP	**PKiKP**	**03 28 18.5**	**+0.3**
	baz=268						
WVT	**Waverly**	**111.98**	**58**	PFAKE		03 28 30.0	+11
WVT				LR	LR		
	comp=Z,2µm,18.0s						
BRAL	**Brewton**	**112.01**	**63**	PFAKE		03 28 30.0	+11
BRAL				LR	LR		
	comp=Z,2µm,20.0s						
OLIL	**Olney**	**112.04**	**55**	PFAKE		03 28 30.0	+11
OLIL				LR	LR		
	comp=Z,2µm,18.0s						
H42A	**Shiocton**	**112.16**	**49**	PFAKE		03 28 30.0	+11
H42A				LR	LR		
	comp=Z,3µm,20.0s						
K43A	**Burlington**	**112.19**	**50**	PFAKE		03 28 30.0	+11
K43A				LR	LR		
	comp=Z,4µm,22.0s						
V47A	**Nunnelly**	**112.20**	**58**	PKiKP	**PKiKP**	**03 28 18.2**	**-1.0**
	baz=264						
D41A	**Chassel**	**112.26**	**46**	PFAKE		03 28 30.0	+11
D41A				LR	LR		
	comp=Z,2µm,18.0s						
G42A	**Mountain**	**112.27**	**48**	PFAKE		03 28 30.0	+11
G42A				LR	LR		
	comp=Z,2µm,18.0s						
LRAL	**Lakeview Retre**	**112.30**	**61**	PFAKE		03 28 30.0	+11
LRAL				LR	LR		
	comp=Z,2µm,21.0s						
USIN	**University of**	**112.30**	**56**	PFAKE		03 28 30.0	+11
USIN				LR	LR		
	comp=Z,2µm,19.0s						
M44A	**Midewin, Midew**	**112.31**	**52**	PFAKE		03 28 30.0	+11
M44A				LR	LR		
	comp=Z,3µm,19.0s						
P45A	**Graceland, Par**	**112.38**	**54**	PFAKE		03 28 30.0	+11
P45A				LR	LR		
	comp=Z,2µm,18.0s						
X48A	**Hartselle**	**112.43**	**59**	PFAKE		03 28 30.0	+10
X48A				LR	LR		
	comp=Z,2µm,19.0s						
W48A	**Pulaski**	**112.60**	**59**	PKiKP	**PKiKP**	**03 28 18.8**	**-1.1**
	baz=264						
T47A	**Sharon Grove**	**112.65**	**57**	PFAKE		03 28 30.0	+10
T47A				LR	LR		
	comp=Z,2µm,21.0s						
T47A	**Sharon Grove**	**112.65**	**57**	PKiKP	**PKiKP**	**03 28 18.6**	**-1.4**
	baz=264						
H43A	**Windswept, Lux**	**112.70**	**49**	PFAKE		03 28 30.0	+10
H43A				LR	LR		
	comp=Z,3µm,20.0s						
Z49A	**Columbiana**	**112.71**	**61**	PKiKP	**PKiKP**	**03 28 19.4**	**-0.8**
	baz=263						
PB11	**IPOC Station P**	**112.73**	**121**	PFAKE		03 28 30.0	+9.1
PB11				LR	LR		
	comp=Z,2µm,21.0s						
V48A	**Smith Brothers**	**112.75**	**58**	PFAKE		03 28 30.0	+10
V48A				LR	LR		
	comp=Z,2µm,18.0s						
250A	**Grady**	**112.78**	**62**	PFAKE		03 28 30.0	+10
250A				LR	LR		
	comp=Z,1µm,20.0s						
G43A	**Wallace**	**112.80**	**48**	PFAKE		03 28 30.0	+10
G43A				LR	LR		
	comp=Z,2µm,19.0s						
Y49A	**Blount Mountai**	**112.89**	**60**	PFAKE		03 28 30.0	+9.4
Y49A				LR	LR		
	comp=Z,2µm,20.0s						
SFIN	**Lafayette**	**112.95**	**53**	PFAKE		03 28 30.0	+10
SFIN				LR	LR		
	comp=Z,2µm,19.0s						
OTAV	**Otavalo**	**113.02**	**97**	PFAKE		03 28 30.0	+8.0
OTAV				LR	LR		
	comp=Z,1µm,20.0s						
U48A	**Cassie Pea, Po**	**113.06**	**57**	PKiKP	**PKiKP**	**03 28 19.6**	**-1.2**
	baz=265						
150A	**Eclectic**	**113.06**	**62**	PKiKP	**PKiKP**	**03 28 19.6**	**-1.3**
	baz=263						
Z50A	**Ashland**	**113.22**	**61**	PFAKE		03 28 30.0	+8.8
Z50A				LR	LR		
	comp=Z,2µm,18.0s						
Z50A	**Ashland**	**113.22**	**61**	PKiKP	**PKiKP**	**03 28 20.4**	**-0.9**
	baz=264						
351A	**Pinckard**	**113.25**	**63**	PKiKP	**PKiKP**	**03 28 20.3**	**-1.0**
	baz=263						
BLO	**Bloomington**	**113.30**	**54**	PFAKE		03 28 30.0	+8.8
BLO				LR	LR		
	comp=Z,2µm,19.0s						
E43A	**Lone Tree Farm**	**113.32**	**47**	PFAKE		03 28 30.0	+9.0
E43A				LR	LR		
	comp=Z,3µm,20.0s						
Q47A	**Bedord North L**	**113.36**	**55**	PKiKP	**PKiKP**	**03 28 20.6**	**-0.6**
	baz=266						
WCI	**Wyandotte Cave**	**113.40**	**55**	PFAKE		03 28 30.0	+8.6
WCI				LR	LR		
	comp=Z,3µm,19.0s						
SWET	**Sewanee**	**113.42**	**59**	PFAKE		03 28 30.0	+8.4
SWET				LR	LR		
	comp=Z,2µm,21.0s						
V49A	**McMinnville**	**113.50**	**58**	PKiKP	**PKiKP**	**03 28 21.1**	**-0.6**
	baz=265						
251A	**Midway**	**113.52**	**62**	PKiKP	**PKiKP**	**03 28 20.4**	**-1.4**
	baz=263						
S48A	**Wiedeman Farm,**	**113.54**	**56**	PKiKP	**PKiKP**	**03 28 21.3**	**-0.4**
	baz=265						
M46A	**Old House Fiel**	**113.58**	**52**	PFAKE		03 28 30.0	+8.4
M46A				LR	LR		
	comp=Z,2µm,18.0s						
151A	**Opelika**	**113.64**	**62**	PKiKP	**PKiKP**	**03 28 21.2**	**-0.9**
	baz=264						
U49A	**Red Boiling Sp**	**113.67**	**57**	PKiKP	**PKiKP**	**03 28 21.0**	**-1.0**
	baz=265						
352A	**Blakely**	**113.85**	**63**	PKiKP	**PKiKP**	**03 28 21.8**	**-0.6**
	baz=263						
Q48A	**North Vernon**	**113.89**	**55**	PKiKP	**PKiKP**	**03 28 22.2**	**-0.1**
	baz=266						
T49A	**Edmonton**	**113.91**	**57**	PFAKE		03 28 30.0	+7.6
T49A				LR	LR		
	comp=Z,2µm,18.0s						
T49A	**Edmonton**	**113.91**	**57**	PKiKP	**PKiKP**	**03 28 21.7**	**-0.7**
	baz=265						
W50A	**Signal Mountai**	**113.93**	**59**	PFAKE		03 28 30.0	+7.5
W50A				LR	LR		
	comp=Z,2µm,18.0s						
Y51A	**Rockmart**	**114.00**	**60**	PKiKP	PKPdf	03 28 21.9	-0.7
	baz=264						
E44A	**Grand Marais A**	**114.06**	**46**	PFAKE		03 28 30.0	+7.6
E44A				LR	LR		
	comp=Z,3µm,20.0s						
252A	**Lumpkin**	**114.08**	**62**	PKiKP	PKPdf	03 28 21.7	-1.1
	baz=264						
V50A	**Pikevile**	**114.14**	**58**	PKiKP	PKPdf	03 28 22.3	-0.6
	baz=265						
S49A	**Springfield**	**114.16**	**56**	PKiKP	PKPdf	03 28 21.6	-1.2
	baz=266						
152A	**Waverly Hall**	**114.16**	**62**	PFAKE		03 28 40.0	+17
152A				LR	LR		
	comp=Z,1µm,19.0s						
152A	**Waverly Hall**	**114.16**	**62**	PKiKP	PKPdf	03 28 21.9	-1.1
	baz=264						
P48A	**Milroy**	**114.17**	**54**	PKiKP	PKPdf	03 28 21.9	-0.9
	baz=266						
X51A	**Calhoun**	**114.24**	**60**	PFAKE		03 28 40.0	+17
X51A				LR	LR		
	comp=Z,2µm,18.0s						
BCIP	**Isla Barro Col**	**114.33**	**88**	PFAKE		03 28 40.0	+16
BCIP				LR	LR		
	comp=Z,900nm,19.0s						
I46A	**Reed City**	**114.35**	**49**	PKiKP	PKPdf	03 28 22.2	-0.9
	baz=268						
U50A	**Jamestown**	**114.41**	**58**	PKiKP	PKPdf	03 28 22.4	-1.0
	baz=266						
O48A	**Farmland**	**114.42**	**53**	PKiKP	PKPdf	03 28 22.7	-0.6
	baz=267						
353A	**Camilla**	**114.44**	**63**	PKiKP	PKPdf	03 28 22.4	-1.1
	baz=264						
T50A	**Nancy**	**114.46**	**57**	PKiKP	PKPdf	03 28 22.2	-1.3
	baz=266						
Z52A	**Williamson**	**114.47**	**61**	PKiKP	PKPdf	03 28 22.5	-1.1
	baz=264						
Q49A	**Aurora**	**114.55**	**55**	PKiKP	PKPdf	03 28 22.9	-0.6
	baz=267						
CPCT	**Cooper Cave**	**114.59**	**59**	PFAKE		03 28 40.0	+16
CPCT				LR	LR		
	comp=Z,2µm,21.0s						
253A	**Americus**	**114.59**	**62**	PFAKE		03 28 40.0	+16
253A				LR	LR		
	comp=Z,2µm,18.0s						
253A	**Americus**	**114.59**	**62**	PKiKP	PKPdf	03 28 23.0	-0.9
	baz=264						
P49A	**Miami Univ. Ec**	**114.72**	**54**	PKiKP	PKPdf	03 28 23.0	-0.9
	baz=267						
V51A	**Loudon**	**114.76**	**58**	PFAKE		03 28 40.0	+16
V51A				LR	LR		
	comp=Z,2µm,19.0s						
V51A	**Loudon**	**114.76**	**58**	PKiKP	PKPdf	03 28 22.5	-1.6
	baz=266						
M48A	**Edgerton**	**114.81**	**52**	PFAKE		03 28 40.0	+16
M48A				LR	LR		
	comp=Z,2µm,18.0s						
Y52A	**Lilburn**	**114.83**	**60**	PFAKE		03 28 40.0	+16
Y52A				LR	LR		
	comp=Z,2µm,18.0s						
Y52A	**Lilburn**	**114.83**	**60**	PKiKP	PKPdf	03 28 23.4	-0.8
	baz=265						
S50A	**Richmond**	**114.86**	**56**	PKiKP	PKPdf	03 28 23.5	-0.7
	baz=266						
R50A	**Paris**	**114.95**	**56**	PKiKP	PKPdf	03 28 23.4	-0.9
	baz=267						
GLMI	**Grayling**	**114.96**	**48**	PFAKE		03 28 40.0	+16
GLMI				LR	LR		
	comp=Z,3µm,19.0s						
TIGA	**Tifton**	**114.98**	**63**	PFAKE		03 28 40.0	+15
TIGA				LR	LR		
	comp=Z,2µm,19.0s						
ARU	**Arti**	**115.01**	**325**	*i* PKIKP	**PKiKP**	**03 28 23.5**	**-0.4**
ARU						03 29 20.7	
ARU						03 35 35.1	
ARU				SS	SS	03 45 11.5	-6.6
L48A	**N Adams**	**115.03**	**51**	PKiKP	**PKiKP**	**03 28 23.8**	**-0.6**
	baz=268						
O49A	**Covington**	**115.04**	**53**	PFAKE		03 28 40.0	+16
O49A				LR	LR		
	comp=Z,3µm,18.0s						
O49A	**Covington**	**115.04**	**53**	PKiKP	**PKiKP**	**03 28 24.1**	**-0.4**
	baz=268						
W52A	**Murphy**	**115.05**	**59**	PFAKE		03 28 40.0	+15
W52A				LR	LR		
	comp=Z,2µm,18.0s						
W52A	**Murphy**	**115.05**	**59**	PKiKP	**PKPdf**	**03 28 23.6**	**-1.1**
	baz=265						
T51A	**Gray**	**115.17**	**57**	PKiKP	**PKPdf**	**03 28 23.3**	**-1.5**
	baz=266						
Z53A	**Monticello**	**115.18**	**61**	PKiKP	**PKPdf**	**03 28 23.6**	**-1.4**
	baz=265						
N49A	**Columbus Grove**	**115.19**	**53**	PFAKE		03 28 40.0	+15
N49A				LR	LR		
	comp=Z,2µm,21.0s						
N49A	**Columbus Grove**	**115.19**	**53**	PKiKP	**PKiKP**	**03 28 24.1**	**-0.6**
	baz=268						
TKL	**Tuckaleechee C**	**115.22**	**58**	*e*PKPdf	**PKPdf**	**03 28 24.2**	**-0.8**
TKL				LR	LR		
	comp=Z,2µm,19.0s						
TKL	**Tuckaleechee C**	**115.22**	**58**	*e*PKIKP	**PKPdf**	**03 28 24.2**	**-0.8**
TKL				MLR	MLR		
	comp=Z,2µm,19.0s						
TKL	**Tuckaleechee C**	**115.22**	**58**	PKP	**PKPdf**	**03 28 24.1**	**-0.8**
	comp=Z,17nm,1.2s,baz=216,slow=2.7,SNR=3.5						
Y53A	**Monroe**	**115.23**	**60**	PKiKP	**PKPdf**	**03 28 23.7**	**-1.4**
	baz=265						
GOGA	**Godfrey**	**115.28**	**61**	PFAKE		03 28 40.0	+15
GOGA				LR	LR		
	comp=Z,2µm,21.0s						
GOGA	**Godfrey**	**115.28**	**61**	PKiKP	**PKPdf**	**03 28 24.0**	**-1.1**
	baz=265						
254A	**Abbeville**	**115.29**	**63**	PKiKP	**PKPdf**	**03 28 24.1**	**-1.1**
	baz=264						
D46A	**Sault St. Mari**	**115.36**	**46**	PKiKP	**PKiKP**	**03 28 24.3**	**-0.6**
	baz=271						
555A	**McAlpin**	**115.37**	**65**	PFAKE		03 28 40.0	+15
555A				LR	LR		
	comp=Z,1µm,20.0s						
V52A	**Sevierville**	**115.38**	**58**	*e*PKPdf	**PKPdf**	**03 28 24.6**	**-0.6**
V52A				LR	LR		
	comp=Z,2µm,19.0s						
V52A	**Sevierville**	**115.38**	**58**	PKiKP	**PKPdf**	**03 28 24.2**	**-1.0**
	baz=266						
TZTN	**Tazewell**	**115.46**	**57**	PKiKP	**PKPdf**	**03 28 24.6**	**-0.8**
	baz=266						
S51A	**Beattyville**	**115.49**	**56**	*e*PKPdf	**PKPdf**	**03 28 25.3**	**-0.2**
S51A				LR	LR		
	comp=Z,2µm,20.0s						
S51A	**Beattyville**	**115.49**	**56**	PKiKP	**PKPdf**	**03 28 24.9**	**-0.5**
	baz=267						
154A	**Montrose**	**115.51**	**62**	PFAKE		03 28 40.0	+14
154A				LR	LR		
	comp=Z,1µm,19.0s						
154A	**Montrose**	**115.51**	**62**	PKiKP	**PKPdf**	**03 28 25.0**	**-0.6**
	baz=265						
X53A	**Estanollee**	**115.51**	**60**	PKiKP	**PKPdf**	**03 28 24.2**	**-1.3**
	baz=265						
L49A	**Milan**	**115.54**	**51**	PKiKP	**PKiKP**	**03 28 24.5**	**-0.8**
	baz=269						
R51A	**Hillsboro**	**115.54**	**56**	PKiKP	**PKPdf**	**03 28 24.3**	**-1.2**
	baz=267						
O50A	**Cable**	**115.59**	**53**	PKiKP	**PKPdf**	**03 28 24.9**	**-0.7**
	baz=268						
U52A	**Thorn Hill**	**115.60**	**58**	PKiKP	**PKPdf**	**03 28 24.9**	**-0.8**
	baz=266						
AAM	**Ann Arbor**	**115.62**	**51**	PFAKE		03 28 40.0	+14
AAM				LR	LR		
	comp=Z,2µm,22.0s						
656A	**Willston**	**115.66**	**65**	PFAKE		03 28 40.0	+14
656A				LR	LR		
	comp=Z,1µm,22.0s						
W53A	**Cullowhee**	**115.68**	**59**	PKiKP	**PKPdf**	**03 28 25.1**	**-0.9**
	baz=266						
SOHO	**SOHO**	**115.68**	**289**	P	**PKPdf**	**03 28 26.0**	**-0.2**
	SNR=6.5						
LPAZ	**La Paz**	**115.69**	**119**	*e*PKPdf	**PKPdf**	**03 28 27.3**	**+0.1**
LPAZ				*e*PKKPbc	**PKKPbc**	**03 38 59.0**	**-0.2**
LPAZ	**La Paz**	**115.69**	**119**	PKP	**PKiKP**	**03 28 26.8**	**-0.4**
	comp=Z,9.4nm,1.2s,baz=228,slow=2.5,SNR=14						
LPAZ				PKKPbc	**PKKPbc**	**03 38 59.0**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=57,slow=5.3,SNR=1.5						
GEYT	**Alibeck**	**115.74**	**304**	PKP	**PKPdf**	**03 28 25.5**	**-0.4**
GEYT	**Alibeck**	**115.74**	**304**	PKP	**PKPdf**	**03 28 25.5**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=282,slow=2.9,SNR=8.8						
GEYT				PP	**PP**	**03 29 31.2**	**+1.9**
	comp=Z,4.0nm,1.0s,baz=120,slow=2.3,SNR=2.5						
GEYT				PKKPbc	**PKKPbc**	**03 38 57.7**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=247,slow=10,SNR=6.2						
GYA0B	**ALIBECK ARRAY**	**115.74**	**304**	PFAKE		03 28 40.0	+14
GYA0B				LR	LR		
	comp=Z,1µm,22.0s						
Q51A	**Peebles**	**115.76**	**55**	PFAKE		03 28 40.0	+14
Q51A				LR	LR		
	comp=Z,2µm,20.0s						
Q51A	**Peebles**	**115.76**	**55**	PKiKP	**PKPdf**	**03 28 25.2**	**-0.7**
	baz=268						
Z54A	**Sparta**	**115.79**	**61**	PKiKP	**PKPdf**	**03 28 25.8**	**-0.3**
	baz=265						
556A	**Lake Butler**	**115.84**	**65**	PKiKP	**PKPdf**	**03 28 25.6**	**-0.7**
	baz=264						
BG3	**Lake Jocassee**	**115.86**	**59**	*e*PKPdf	**PKiKP**	**03 28 26.5**	**+0.3**
BG3				LR	LR		
	comp=Z,2µm,18.0s						
N50A	**Nevada**	**115.97**	**53**	PKiKP	**PKPdf**	**03 28 25.6**	**-0.6**
	baz=269						
Y54A	**Tignall**	**115.97**	**60**	PKiKP	**PKPdf**	**03 28 25.9**	**-0.6**
	baz=265						
255A	**Hazlehurst**	**115.98**	**63**	PFAKE		03 28 40.0	+14
255A				LR	LR		
	comp=Z,1µm,18.0s						
D47A	**Chapleau**	**116.00**	**46**	PKiKP	**PKPdf**	**03 28 25.7**	**-0.5**
	baz=272						
P51A	**Williamsport**	**116.00**	**54**	PFAKE		03 28 40.0	+14
P51A				LR	LR		
	comp=Z,3µm,18.0s						
P51A	**Williamsport**	**116.00**	**54**	PKiKP	**PKPdf**	**03 28 25.9**	**-0.4**
	baz=268						
V53A	**Saluda**	**116.00**	**58**	PFAKE		03 28 40.0	+13
V53A				LR	LR		
	comp=Z,2µm,19.0s						
V53A	**Saluda**	**116.00**	**58**	PKiKP	**PKPdf**	**03 28 25.9**	**-0.6**
	baz=266						
155A	**Kite**	**116.05**	**62**	PKiKP	**PKPdf**	**03 28 25.8**	**-0.9**
	baz=265						
M50A	**Fremont**	**116.06**	**52**	PFAKE		03 28 40.0	+14
M50A				LR	LR		
	comp=Z,2µm,19.0s						
ACSO	**Alum Creek Sta**	**116.08**	**53**	PFAKE		03 28 40.0	+14
ACSO				LR	LR		
	comp=Z,2µm,18.0s						
U53A	**Fall Branch**	**116.23**	**58**	PKiKP	**PKPdf**	**03 28 26.1**	**-0.8**
	baz=267						
L50A	**Kingsville**	**116.25**	**51**	PKiKP	**PKPdf**	**03 28 26.2**	**-0.6**
	baz=269						
X54A	**Belton**	**116.28**	**60**	PKiKP	**PKPdf**	**03 28 26.4**	**-0.6**
	baz=266						
T53A	**Wise**	**116.30**	**57**	PKiKP	**PKPdf**	**03 28 26.8**	**-0.3**
	baz=267						
HODGE	**Hodges**	**116.35**	**60**	PFAKE		03 28 40.0	+13
HODGE				LR	LR		
	comp=Z,2µm,18.0s						
W54A	**Cherokee Point**	**116.47**	**59**	PKiKP	**PKPdf**	**03 28 26.6**	**-0.8**
	baz=266						
DWPF	**Disney Wildern**	**116.47**	**67**	PFAKE		03 28 40.0	+12
DWPF				LR	LR		
	comp=Z,1µm,22.0s						
N51A	**Ashland**	**116.56**	**53**	PFAKE		03 28 40.0	+13
N51A				LR	LR		
	comp=Z,2µm,19.0s						
N51A	**Ashland**	**116.56**	**53**	PKiKP	**PKPdf**	**03 28 27.0**	**-0.4**
	baz=269						
059A	**Moore Haven**	**116.59**	**68**	PFAKE		03 28 40.0	+12
059A				LR	LR		
	comp=Z,2µm,21.0s						
Q52A	**Bidwell**	**116.59**	**55**	PKiKP	**PKPdf**	**03 28 27.1**	**-0.4**

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      baz=268
Y55A  Saluda            116.66  60  PKiKP     PKPdf     03 28 27.2 -0.6
      baz=266
V54A  Nebo              116.71  58  PKiKP     PKPdf     03 28 27.6 -0.3
      baz=267
PAULI Pauline           116.76  59 ePKPdf     PKPdf     03 28 27.6 -0.3
PAULI                               LR        LR
      comp=Z,2µm,20.0s
658A  Bunnell           116.77  66  PFAKE               03 28 40.0 +12
658A                                LR        LR
      comp=Z,900nm,19.0s
R53A  Hurricane         116.82  56  PKiKP     PKPdf     03 28 26.8 -1.2
      baz=268
X55A  Gracelyn & Ava    116.89  60  PKiKP     PKPdf     03 28 27.7 -0.5
      baz=266
O52A  Adamsville        116.96  54  PFAKE               03 28 40.0 +12
O52A                                LR        LR
      comp=Z,3µm,18.0s
O52A  Adamsville        116.96  54  PKiKP     PKPdf     03 28 27.5 -0.7
      baz=269
Z56A  Williston         117.03  61  PKiKP     PKPdf     03 28 27.6 -0.8
      baz=266
T54A  Tazewell          117.07  57  PKiKP     PKPdf     03 28 27.7 -0.9
      baz=268
N52A  McGinn’s Farm,    117.08  53  PKiKP     PKPdf     03 28 28.3 -0.1
      baz=270
KMSC  Kings Mountain    117.17  59 ePKPdf     PKPdf     03 28 28.7  0.0
KMSC                                LR        LR
      comp=Z,2µm,21.0s
KMSC  Kings Mountain    117.17  59  PKiKP     PKPdf     03 28 28.2 -0.5
      baz=267
JSC   Jenkinsville      117.18  60  PFAKE               03 28 40.0 +11
JSC                                 LR        LR
      comp=Z,2µm,19.0s
P53A  Whipple           117.29  54 ePKPdf     PKPdf     03 28 28.0 -0.8
P53A                                LR        LR
      comp=Z,2µm,18.0s
P53A  Whipple           117.29  54  PKiKP     PKPdf     03 28 28.4 -0.4
      baz=269
V55A  Taylorsville      117.31  58  PKiKP     PKPdf     03 28 27.9 -1.1
      baz=267
M52A  Chesterland       117.33  52  PKiKP     PKPdf     03 28 28.2 -0.6
      baz=270
ELFO  Elginfield        117.35  50  PKiKP     PKPdf     03 28 28.5 -0.3
      baz=271
X56A  White Oak         117.38  60  PKiKP     PKPdf     03 28 29.1  0.0
      baz=267
U55A  TA2, Sparta       117.47  58  PKiKP     PKPdf     03 28 28.9 -0.5
      baz=268
Z57A  Bowman            117.58  61  PKiKP     PKPdf     03 28 29.2 -0.3
      baz=266
Q54A  Coxs Mills        117.71  55  PKiKP     PKPdf     03 28 28.9 -0.7
      baz=269
N53A  Lisbon            117.72  53  PKiKP     PKPdf     03 28 29.1 -0.6
      baz=270
M53A  WI Miller and     117.84  52  PKiKP     PKPdf     03 28 29.2 -0.6
      baz=270
P54A  Burton            117.99  54  PKiKP     PKPdf     03 28 29.5 -0.7
      baz=270
BLA   Blacksburg        118.00  57 ePKPdf     PKPdf     03 28 29.6 -0.7
BLA                                 LR        LR
      comp=Z,1µm,19.0s
BLA   Blacksburg        118.00  57 ePKIKP     PKPdf     03 28 29.6 -0.7
BLA                                 MLR       MLR
      comp=Z,1µm,19.0s
BLA   Blacksburg        118.00  57  PKiKP     PKPdf     03 28 29.2 -1.1
      baz=268
NHSC  New Hope          118.01  62  PFAKE               03 28 40.0 +10
NHSC                                LR        LR
      comp=Z,2µm,20.0s
O54A  Avella            118.07  53  PKiKP     PKPdf     03 28 29.1 -1.2
      baz=270
L53A  Girard            118.15  51  PKiKP     PKPdf     03 28 29.8 -0.6
      baz=271
D50A  G1974 Best Tow    118.22  46  PKiKP     PKPdf     03 28 29.6 -0.7
      baz=274
ALLY  Alegheny Colle    118.24  52  PFAKE               03 28 40.0 +9.4
ALLY                                LR        LR
      comp=Z,4µm,19.0s
R55A  Marlinton         118.26  56  PKiKP     PKPdf     03 28 29.2 -1.6
      baz=269
CPUP  Villa Florida     118.30 134  PKP       PKPdf     03 28 30.6 -0.6
      comp=Z,6.5nm,1.1s,baz=265,slow=2.3,SNR=6.2
CPUP                                PP        PP        03 29 42.0 -4.4
      comp=Z,34nm,1.3s,baz=245,slow=6.7,SNR=14
Q55A  Buckhannon        118.30  55  PKiKP     PKPdf     03 28 30.3 -0.5
      baz=270
ERPA  Erie              118.35  51  PFAKE               03 28 40.0 +9.2
ERPA                                LR        LR
      comp=Z,2µm,18.0s
N54A  Moraine State     118.37  53  PFAKE               03 28 40.0 +9.1
N54A                                LR        LR
      comp=Z,2µm,20.0s
N54A  Moraine State     118.37  53  PKiKP     PKPdf     03 28 29.9 -0.9
      baz=271
ROSC  El Rosal          118.37  94 ePKPdf     PKPdf     03 28 31.6 -0.6
ROSC                                LR        LR
      comp=Z,1µm,22.0s
ROSC  El Rosal          118.37  94  PKP       PKPdf     03 28 31.6 -0.6
      comp=Z,4.2nm,0.6s,baz=250,slow=9.5,SNR=3.8
MCWV  Mont Chateau      118.48  54  PFAKE               03 28 40.0 +8.8
MCWV                                LR        LR
      comp=Z,1µm,18.0s
P55A  Reedsville        118.50  54  PKiKP     PKPdf     03 28 30.7 -0.5
      baz=270
E51A  G1948 Merrick     118.50  46  PKiKP     PKPdf     03 28 30.4 -0.5
      baz=274
M54A  Oil Creek Stat    118.60  52 ePKPdf     PKPdf     03 28 30.4 -0.9
M54A                                LR        LR
      comp=Z,2µm,19.0s
M54A  Oil Creek Stat    118.60  52  PKiKP     PKPdf     03 28 30.6 -0.7
      baz=271
X58A  Rowland           118.78  60  PKiKP     PKPdf     03 28 30.5 -1.4
      baz=268
SADO  Sadowa            118.86  48 ePKPdf     PKPdf     03 28 31.4 -0.2
SADO                                LR        LR
      comp=Z,4µm,20.0s
SADO  Sadowa            118.86  48  PKP       PKPdf     03 28 31.4 -0.2
      comp=Z,3.0nm,0.6s,baz=90,slow=2.8,SNR=3.2
O55A  Ligonier          118.90  53  PKiKP     PKPdf     03 28 31.5 -0.5
      baz=271
E52A  Mattawa           119.09  46  PKiKP     PKPdf     03 28 31.0 -1.0
      baz=275
G53A  Haliburton        119.20  48  PKiKP     PKPdf     03 28 31.0 -1.3
      baz=274
D52A  ZEK Kipawa Sen    119.20  46  PKiKP     PKPdf     03 28 31.3 -1.0
      baz=275
M55A  Ridgway           119.28  52  PKiKP     PKPdf     03 28 31.9 -0.7
      baz=272
MATQ  Matagami          119.42  42  PKiKP     PKPdf     03 28 31.8 -0.8
      baz=277
O56A  Blue Knob Stat    119.46  53 ePKPdf     PKPdf     03 28 32.9 -0.1
O56A                                LR        LR
      comp=Z,2µm,19.0s
O56A  Blue Knob Stat    119.46  53  PKiKP     PKPdf     03 28 31.9 -1.1
      baz=271
L55A  Hinsdale          119.50  51  PKiKP     PKPdf     03 28 32.4 -0.7
      baz=272
ALGO  Algonquin Park    119.54  47  PKiKP     PKPdf     03 28 31.9 -1.0
      baz=275
D53A  Lac Vacive, Po    119.68  46  PKiKP     PKPdf     03 28 32.2 -1.0
      baz=276
BANO  Bancroft          119.70  48  PKiKP     PKPdf     03 28 32.7 -0.6
      baz=274
VLDQ  Val d'Or          119.74  44 ePKPdf     PKPdf     03 28 32.1 -1.1
K55A  Perry             119.75  51  PKiKP     PKPdf     03 28 32.0 -1.5
      baz=273
E53A  Dumoine, Ponti    119.77  46  PKiKP     PKPdf     03 28 32.6 -0.8
      baz=275
J55A  Hilton            119.90  50  PKiKP     PKPdf     03 28 32.6 -1.1
      baz=274
LSQQ  Lebel-sur-Quev    119.94  43  PKiKP     PKPdf     03 28 32.6 -1.0
      baz=278
SSPA  Standing Stone    119.97  53  PFAKE               03 28 50.0 +16
SSPA                                LR        LR
      comp=Z,3µm,19.0s
SSPA  Standing Stone    119.97  53  PKiKP     PKPdf     03 28 33.0 -1.0
      baz=272
CNNC  Cliffs of the     119.99  59  PFAKE               03 28 50.0 +16
CNNC                                LR        LR
      comp=Z,2µm,18.0s
CNNC  Cliffs of the     119.99  59  PKiKP     PKPdf     03 28 33.0 -1.1
      baz=269
R58B  Mineral           120.03  56 ePKPdf     PKPdf     03 28 33.3 -0.8
R58B                                LR        LR
      comp=Z,2µm,20.0s
R58B  Mineral           120.03  56  PKiKP     PKPdf     03 28 33.1 -1.0
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      baz=270
E54A  Lac Daplat, Po    120.09  46  PKiKP     PKPdf     03 28 32.7 -1.3
      baz=276
PEMO  Pembroke          120.13  47  PKiKP     PKPdf     03 28 33.0 -1.0
      baz=275
D54A  Lac Fusel, La     120.38  45  PKiKP     PKPdf     03 28 33.3 -1.2
      baz=277
CBN   Corbin Frederi    120.42  56  PFAKE               03 28 50.0 +15
CBN                                 LR        LR
      comp=Z,1µm,18.0s
G55A  Calabogie         120.53  48  PKiKP     PKPdf     03 28 34.3 -0.5
      baz=275
FRB   Frobisher Bay     120.56  25  PKP       PKPdf     03 28 33.5 -0.8
      comp=Z,8.1nm,0.5s,baz=285,slow=3.1,SNR=21
SDMD  Soldier’s Deli    120.81  54  PFAKE               03 28 50.0 +14
SDMD                                LR        LR
      comp=Z,1µm,19.0s
DAG   Danmarks Havn     120.85   2 i P        PKPdf     03 28 33.0 -1.6
DAG   Danmarks Havn     120.85   2 i PKIKP    PKPdf     03 28 33.0 -1.6
H56A  Elgin             120.92  48  PKiKP     PKPdf     03 28 35.3 -0.3
      baz=275
BOSA  Boshof            121.16 219 ePKIKP     PKiKP     03 28 37.0  0.0
BOSA  Boshof            121.16 219  PKP       PKiKP     03 28 37.0  0.0
      comp=Z,11nm,1.2s,baz=180,slow=2.0,SNR=3.9
BINY  Binghamton        121.32  51  PFAKE               03 28 50.0 +13
BINY                                LR        LR
      comp=Z,2µm,18.0s
BINY  Binghamton        121.32  51  PKiKP     PKPdf     03 28 35.2 -1.3
      baz=274
ORIO  Orleans, Innes    121.36  47  PKiKP     PKPdf     03 28 35.4 -1.0
      baz=276
CHGQ  Chibougamau       121.48  42  PKiKP     PKPdf     03 28 35.4 -1.2
      baz=280
N59A  State Game Lan    121.56  53  PFAKE               03 28 50.0 +13
N59A                                LR        LR
      comp=Z,3µm,19.0s
N59A  State Game Lan    121.56  53  PKiKP     PKPdf     03 28 36.1 -0.9
      baz=274
LUPA  Lehigh Univers    121.88  53  PFAKE               03 28 50.0 +12
LUPA                                LR        LR
      comp=Z,200nm,20.0s
LONY  Lake Ozonia       122.11  48  PFAKE               03 28 50.0 +12
LONY                                LR        LR
      comp=Z,3µm,20.0s
LONY  Lake Ozonia       122.11  48  PKiKP     PKPdf     03 28 37.2 -0.8
      baz=277
APA   Apatity           122.25 341⇓iPKIKP     PKPdf     03 28 36.4 -1.1
APA                                i                    03 32 45.7
APA                                 pmax      pmax
      comp=Z,17nm,1.1s
ODNJ  Ogdensburg        122.43  52  PFAKE               03 28 50.0 +11
ODNJ                                LR        LR
      comp=Z,3µm,19.0s
NCB   Newcomb           122.44  49 ePKPdf     PKPdf     03 28 38.0 -0.6
NCB                                 LR        LR
      comp=Z,3µm,21.0s
TMCR  Tamitsa           122.48 336 ePKIKP     PKPdf     03 28 36.1 -1.9
TMCR                                pmax      pmax
      comp=Z,36nm,1.3s
FRNY  Flat Rock         122.79  48  PFAKE               03 28 50.0 +11
FRNY                                LR        LR
      comp=Z,3µm,19.0s
PTGB  Pitanga           122.90 136 eP         PKiKP     03 28 40.5  0.0
ACCN  Adirondack Com    122.91  49  PFAKE               03 28 50.0 +10
ACCN                                LR        LR
      comp=Z,4µm,21.0s
LATQ  La Tuque          122.96  45  PKiKP     PKPdf     03 28 38.9 -0.5
      baz=280
PAL   Palisades         122.96  52  PFAKE               03 28 50.0 +10
PAL                                 LR        LR
      comp=Z,3µm,18.0s
SDV   Santo Domingo     123.02  91 ePKPdf     PKPdf     03 28 39.8 -1.0
SDV                                 LR        LR
      comp=Z,900nm,18.0s
SDV   Santo Domingo     123.02  91 eP         PKPdf     03 28 40.0 -0.8
SUMG  Summit            123.16   9 ePKPdf     PKPdf     03 28 39.1 -0.5
SUMG  Summit            123.16   9 i P        PKPdf     03 28 39.6 -0.1
      comp=Z,211nm,1.6s
SUMG  Summit            123.16   9 i PKIKP    PKPdf     03 28 39.6 -0.1
SUMG                                pmax      pmax
      comp=Z,210nm,1.6s
AQDB  Aquidauana        123.17 130 eP         PKPdf     03 28 40.0 -0.7
ARA0  ARCESS Array S    123.17 345 ePKPdf     PKPdf     03 28 38.9 -0.3
ARCES ARCESS Array B    123.17 345  PKP       PKPdf     03 28 38.9 -0.3
      comp=Z,3.9nm,0.5s,baz=57,slow=1.7,SNR=30
ILULI Ilulissat         123.30  15 ePKPdf     PKPdf     03 28 38.9 -0.5
ILULI Ilulissat         123.30  15 i P        PKPdf     03 28 38.6 -0.8
ILULI Ilulissat         123.30  15 ePKIKP     PKPdf     03 28 38.9 -0.5
KLMR  Klimovskoe        123.40 332 ePKIKP     PKPdf     03 28 38.1 -1.8
KLMR                                pmax      pmax
      comp=Z,65nm,1.5s
KLMR  Klimovskoe        123.40 332 ePKPdf     PKPdf     03 28 38.1 -1.8
KLMR                                AMP                 03 28 56.5
      comp=Z,65nm,1.4s
KLMR                               ePKKPab    PKKPab    03 38 27.7 -0.3
KLMR                               eSKKPbc    SKKPbc    03 42 15.9 -5.5
YLE   Yale              123.66  52  PFAKE               03 28 50.0 +8.8
YLE                                 LR        LR
      comp=Z,3µm,18.0s
MAK   Makhachkala       123.67 310 i P        Pdif      03 25 11.8 -1.8
MAK                                i                    03 28 39.0
MAK                                e                    03 30 19.6
MAK                                ePPP       PPP       03 32 57.9
MAK                                e                    03 35 40.9
MAK                                ePS        PS        03 40 17.1 -4.2
MAK                                eSS        SS        03 47 08.6 -1.9
MAK                                eSSS       SSS       03 51 41.4
MAK                                 pmax      pmax
      comp=Z,31nm,0.4s
TRCB  Terra Rica        123.83 134 eP         PKPdf     03 28 42.1 +0.1
LBNH  Lisbon            124.05  48 ePKPdf     PKiKP     03 28 42.2 +0.2
LBNH                                LR        LR
      comp=Z,3µm,20.0s
LBNH  Lisbon            124.05  48  PKiKP     PKPdf     03 28 41.3 -0.4
      baz=278
SDDR  Presa de Saban    124.51  79 ePKPdf     PKPdf     03 28 42.9 -0.4
SDDR                                LR        LR
      comp=Z,2µm,20.0s
MATP  Matopo            124.66 229  PKKPab    PKKPab    03 38 25.4 -1.0
      comp=Z,11nm,1.1s,baz=305,slow=4.8,SNR=7.1
SCHQ  Schefferville     124.69  35 ePKPdf     PKPdf     03 28 41.9 -0.7
SCHQ                                LR        LR
      comp=Z,3µm,21.0s
SCHQ  Schefferville     124.69  35  PKP       PKPdf     03 28 41.8 -0.7
      comp=Z,15nm,1.2s,baz=27,slow=2.4,SNR=7.2
SFJD  Kangerlussuaq     124.99  17 ePKPdf     PKPdf     03 28 41.9 -0.9
SFJD                               ePKPdf     PKPdf     03 28 42.0 -0.7
SFJD  Kangerlussuaq     124.99  17 i P        PKPdf     03 28 41.9 -0.9
      comp=Z,42nm,1.4s
SFJD  Kangerlussuaq     124.99  17  PKP       PKPdf     03 28 41.8 -0.9
      comp=Z,8.8nm,0.7s,baz=148,slow=1.5,SNR=5.4
SFJD  Kangerlussuaq     124.99  17 eP         PKPdf     03 28 42.1 -0.7
DAMY  Dhamar            125.34 276 ePKPdf     PKiKP     03 28 45.9 +0.2
DAMY                                LR        LR
      comp=Z,2µm,20.0s
FRTB  Fartura           125.49 137 eP         PKiKP     03 28 46.4 +0.9
RAYN  Ar Rayn           125.62 287 ePKPdf     PKPdf     03 28 45.5 +0.1
RAYN                                LR        LR
      comp=Z,1µm,19.0s
RAYN  Ar Rayn           125.62 287 ePKIKP     PKPdf     03 28 45.5 +0.1
RAYN                                MLR       MLR
      comp=Z,1µm,19.0s
PKME  Peaks-Kenny Pk    125.72  47  PKiKP     PKPdf     03 28 44.4 -0.4
      baz=281
VRH   Novokhopyorsk     125.81 321 ePKIKP     PKPdf     03 28 43.9 -0.9
VRH                                 pmax      pmax
      comp=Z,50nm,1.5s
TBLG  Delisi            125.86 309 ePKPdf     PKiKP     03 28 46.1 +0.5
TBLG  Delisi            125.86 309 ePKIKP     PKiKP     03 28 46.2 +0.5
SALV  Santo Antonio     125.96 126 eP         PKiKP     03 28 46.9 +0.3
GNI   Garni             126.07 307 ePKPdf     PKiKP     03 28 46.8 +0.5
GNI                                 LR        LR
      comp=Z,600nm,21.0s
GNI   Garni             126.07 307c iPKIKP    PKiKP     03 28 46.4 +0.1
GNI                                 pmax      pmax
      comp=Z,386nm,1.7s
GNI   Garni             126.07 307  P         PKiKP     03 28 47.3 +1.0
      SNR=9.5
ATD   Arta Tunnel       126.16 271  PFAKE               03 29 00.0 +13
ATD                                 LR        LR
      comp=Z,3µm,21.0s
ZEI   Tsey              126.31 310 i PKIKP    PKPdf     03 28 44.9 -1.4
ZEI                                 pmax      pmax
      comp=Z,60nm,2.0s
C2SB  Chapadao do Su    126.33 131 eP         PKiKP     03 28 47.4 +0.2
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MOS   Moscow            126.48 327 i PKIKP    PKPdf     03 28 44.2 -1.7
MOS                                e                    03 29 00.0
MOS                                e                    03 30 40.2
MOS                                e                    03 35 59.0
MOS                                 pmax      pmax
      comp=Z,61nm,1.4s
GOF   Gofitskoye        126.50 313⇑iPKIKP     PKPdf     03 28 45.5 -0.8
GOF                                 pmax      pmax
      comp=Z,60nm,1.0s
SPB   Sao Paulo         126.67 139 eP         PKiKP     03 28 48.2 +0.3
KBZ   Khabaz            126.87 312  PKP       PKPdf     03 28 47.2 +0.2
      comp=Z,7.1nm,1.1s,baz=136,slow=2.8,SNR=9.5
SCO   Scoresbysund      126.95   4 ePKPdf     PKiKP     03 28 46.8 -0.1
SCO   Scoresbysund      126.95   4 i P        PKPdf     03 28 46.4  0.0
SCO   Scoresbysund      126.95   4 ePKIKP     PKiKP     03 28 46.8 -0.1
KIV   Kislovodsk        126.97 312 ePKPdf     PKiKP     03 28 47.8 -0.1
KIV   Kislovodsk        126.97 312 i PKIKP    PKiKP     03 28 47.7 -0.2
KIV                                e                    03 30 44.6
KIV                                eSS        SS        03 47 51.8 -0.4
KIV                                 pmax      pmax
      comp=Z,38nm,1.1s
KIV   Kislovodsk        126.97 312  P         PKPdf     03 28 47.5 +0.1
      SNR=11
LPSR  Galich'ya Gora    126.98 323 ePKIKP     PKPdf     03 28 46.9 -0.1
LPSR                                pmax      pmax
      comp=Z,70nm,1.6s
VORR  Voronezh          127.15 322 ePKIKP     PKPdf     03 28 44.0 -3.3
VORR                                pmax      pmax
      comp=Z,250nm,1.8s
OBN   Obninsk           127.29 327⇓iPKIKP     PKPdf     03 28 47.7 +0.2
OBN                                e                    03 30 51.8
OBN                                ePPP       PPP       03 33 28.6
OBN                                e                    03 35 53.7
OBN                                eSS        SS        03 47 54.7 -0.2
OBN                                 pmax      pmax
      comp=Z,65nm,1.7s
VSR   Storozhevoye      127.33 322 ePKIKP     PKPdf     03 28 46.6 -1.1
VSR                                 pmax      pmax
      comp=Z,50nm,1.5s
BATG  Bathurst New B    127.45  44 ePKPdf     PKPdf     03 28 47.6 -0.5
ITRB  Iturama           127.47 133 eP         PKiKP     03 28 49.3 -0.2
KMBO  Kilima Mbogo      127.49 254 ePKPdf     PKiKP     03 28 50.2 +0.2
KMBO                                LR        LR
      comp=Z,3µm,20.0s
KMBO  Kilima Mbogo      127.49 254c iPKIKP    PKiKP     03 28 50.2 +0.2
KMBO                                pmax      pmax
      comp=Z,4.0nm,0.9s
KMBO  Kilima Mbogo      127.49 254  P         PKiKP     03 28 50.6 +0.6
      SNR=8.4
KMBO  Kilima Mbogo      127.49 254  PKP       PKPdf     03 28 49.7 +0.2
      comp=Z,3.9nm,0.9s,baz=154,slow=2.5,SNR=14
BB19B Bebedouro         127.78 136 eP         PKiKP     03 28 50.0 -0.1
LSZ   Lusaka            128.12 233 ePKPdf     PKiKP     03 28 50.8 -0.2
LSZ                                 LR        LR
      comp=Z,2µm,21.0s
LSZ   Lusaka            128.12 233  P         PKiKP     03 28 51.4 +0.3
      SNR=5.9
SIRT  Sirnak            128.16 304 ePKPdf     PKiKP     03 28 50.4 -0.1
SIRT                                LR        LR
      comp=Z,3µm,22.0s
BCA   Borcka            128.21 309⇑iP         PKPdf     03 28 49.5 -0.3
MPR   Mayaguez          128.28  81 ePKPdf     PKPdf     03 28 49.9 -0.6
FIA1  FINESS Array S    128.54 337 ePKPdf     PKPdf     03 28 49.0 -0.7
FIA1                               ePKPdf     PKiKP     03 28 49.6 -0.7
FIA0  FINESS Array S    128.54 337 ePKPdf     PKPdf     03 28 49.6 -0.1
FIA0  FINESS Array S    128.54 337 ePKIKP     PKPdf     03 28 49.6 -0.1
FINES FINESS Array B    128.54 337c iPKIKP    PKPdf     03 28 49.5 -0.2
FINES                               pmax      pmax
      comp=Z,12nm,1.1s
FINES FINESS Array B    128.54 337  PKP       PKPdf     03 28 49.6 -0.1
      comp=Z,12nm,1.1s,baz=29,slow=3.2,SNR=15
LMN   Caledonia Moun    128.66  45 ePKPdf     PKPdf     03 28 49.8 -0.6
LMN                                 LR        LR
      comp=Z,4µm,21.0s
OBIP  Obispado Ponce    128.76  81 ePKPdf     PKPdf     03 28 49.3 -2.1
ESAR  Angra dos Reis    128.92 141 eP         PKiKP     03 28 52.4  0.0
SOC   Sochi             129.15 312 i PKIKP    PKPdf     03 28 47.1 -4.3
SOC                                e                    03 30 55.3
SOC                                ePPP       PPP       03 33 49.9
SOC                                 MLR       MLR
      comp=Z,806nm,20.0s
SJG   San Juan          129.20  81 ePKPdf     PKPdf     03 28 51.5 -0.7
SJG   San Juan          129.20  81 ePKIKP     PKPdf     03 28 51.5 -0.7
ANGG  Ammassalik, Gr    129.34  13  PFAKE               03 29 00.0 +8.2
ANGG                                LR        LR
      comp=Z,2µm,21.0s
FURI  Furi              129.47 267  PFAKE               03 29 10.0 +16
FURI                                LR        LR
      comp=Z,3µm,20.0s
HUMP  Col San Antoni    129.48  81 ePKPdf     PKPdf     03 28 52.0 -0.7
CBYP  Canovanas         129.50  81 ePKPdf     PKPdf     03 28 52.8 -0.1
IVI   Ivigtut           129.80  22 ePKPdf     PKPdf     03 28 51.2 -0.8
HAL   Halifax           129.81  46 ePKPdf     PKPdf     03 28 52.8 +0.2
HAL   Halifax           129.81  46 ePKIKP     PKPdf     03 28 52.8 +0.2
PTGA  Pitinga           129.91 106 ePKPdf     PKPdf     03 28 53.4 -0.4
PTGA                                LR        LR
      comp=Z,1µm,21.0s
PTGA  Pitinga           129.91 106 eP         PKPdf     03 28 53.8  0.0
CUPR  Culebra, Puert    130.04  81 ePKPdf     PKPdf     03 28 53.0 -0.8
VAS01 Vassouras-RJ      130.07 142 eP         PKiKP     03 28 54.5 -0.2
IPMB  Ipameri, GO       130.13 134 eP         PKPdf     03 28 54.4 +0.2
VSU   Vasula            130.17 334⇑iPKIKP     PKiKP     03 28 53.6 -0.1
VSU                                 pmax      pmax
      comp=Z,89nm,1.7s
BSCB  Bom Sucesso       130.23 139 eP         PKiKP     03 28 54.8 -0.3
STVI  Saint Thomas      130.35  81 ePKPdf     PKPdf     03 28 53.8 -0.6
ANN   Anapa             130.43 314 i PKIKP    PKiKP     03 28 54.5 -0.1
ANN                                e                    03 28 59.1
ANN                                e                    03 31 03.7
ANN                                 pmax      pmax
      comp=Z,78nm,1.4s
ANN                                 MLR       MLR
      comp=N,1µm,21.0s
ANN                                 MLR       MLR
      comp=Z,1µm,21.0s
NRS   Narsarsuaq        130.77  20 ePKPdf     PKPdf     03 28 53.0 -0.9
NRS                                 LR        LR
      comp=Z,1µm,18.0s
NRS   Narsarsuaq        130.77  20 i P        PKPdf     03 28 52.7 -1.2
NRS   Narsarsuaq        130.77  20 ePKIKP     PKPdf     03 28 53.0 -0.9
NRS                                 MLR       MLR
      comp=Z,1µm,18.0s
PMNB  Patos De Minas    130.95 136 eP         PKiKP     03 28 56.4 -0.2
GBN   Guysborough       131.00  45 ePKPdf     PKPdf     03 28 55.0 +0.2
CAM01 Campos-RJ         131.47 143 eP         PKiKP     03 28 57.1 -0.3
BDFB  Brasilia          131.85 131 ePKPdf     PKPdf     03 28 57.0 -0.5
BDFB                               ePKPdf     PKiKP     03 28 57.2 -1.4
BDFB                               ePP        PP        03 31 15.9 -1.5
BDFB                                LR        LR
      comp=Z,1µm,19.0s
BDFB  Brasilia          131.85 131 ePKIKP     PKPdf     03 28 57.0 -0.5
BDFB                               e                    03 31 15.9
BDFB                                MLR       MLR
      comp=Z,1µm,19.0s
BDFB  Brasilia          131.85 131  PKP       PKPdf     03 28 57.0 -0.5
      comp=Z,21nm,1.1s,baz=262,slow=1.5,SNR=16
BDFB                                PP        PP        03 31 15.9 -1.5
      comp=Z,15nm,1.2s,baz=244,slow=5.8,SNR=4.2
SMRT  St. Maarten       132.08  81  PFAKE               03 29 10.0 +11
SMRT                                LR        LR
      comp=Z,900nm,21.0s
SEUS  St. Eustatius     132.09  82  PFAKE               03 29 10.0 +11
SEUS                                LR        LR
      comp=Z,800nm,18.0s
NACGM Naroch            132.27 330 e          PKPdf     03 28 54.0 -3.0
NACGM                              eLR        LR        04 22 44.0
SNOP  Sinop             132.76 311  PFAKE               03 29 10.0 +11
SNOP                                LR        LR
      comp=Z,1µm,22.0s
TSUM  Tsumeb            132.82 220 ePKPdf     PKiKP     03 29 00.8 +0.3
TSUM                                LR        LR
      comp=Z,2µm,18.0s
ALF01 Guarapari-ES      132.95 143 eP         PKPdf     03 28 57.7 -1.6
AKASG Malin Array Be    133.26 324  PKP       PKPdf     03 28 58.5 -0.4
      comp=Z,2.2nm,0.5s,baz=63,slow=2.3,SNR=20
AKASG                               PP        PP        03 31 20.5 -5.4
      comp=Z,0.1nm,0.3s,baz=40,slow=9.0,SNR=5.4
AKASG                               SKPbc     SKPab     03 32 28.0 +0.3
      comp=Z,0.3nm,0.4s,baz=36,slow=2.5,SNR=2.9
AKBB  Malin Array Si    133.26 324 ePKPdf     PKPdf     03 28 58.8 -0.2
AKBB                               ePP        PP        03 31 20.5 -5.4
AKBB                               eSKPbc     SKPab     03 32 28.0 +0.2
ASF   Jabal al Asfar    133.27 298  PP        PP        03 31 29.3 +2.2
      comp=Z,1.0nm,0.4s,baz=65,slow=3.9,SNR=3.2
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KIEV  Kiev              133.27 324  ePKPdf    PKPdf   03 28 58.3 -0.7
KIEV  Kiev              133.27 324  ePKIKP    PKPdf   03 28 58.3 -0.7
AK11  Malin Array Si    133.30 324  ePKPdf    PKPdf   03 28 58.5 -0.6
NC303 NORSAR Array S    133.34 344  ePKPdf    PKiKP   03 28 59.8 -0.3
FDF   Fort de France    133.38  86  ePKPdf    PKPdf   03 28 59.8 -0.4
NB2   NORSAR Subarra    133.54 344   PKPdf    PKPdf   03 28 59.5 +0.2
      comp=Z,3.8nm,0.7s,baz=35,slow=2.1
NB2   NORSAR Subarra    133.54 344   PKPdf    PKPdf   03 28 59.5 +0.2
      baz=35,slow=2.1
NB200 NORSAR Array S    133.54 344  ePKPdf    PKPdf   03 28 59.4 +0.1
NB200                               ePP       PP      03 31 27.1 -0.1
NOA   NORSAR Array B    133.54 344   PKP      PKPdf   03 28 59.4 +0.1
      comp=Z,2.1nm,0.7s,baz=37,slow=2.1,SNR=11
NOA                                  PP       PP      03 31 27.1 -0.1
      comp=Z,1.3nm,0.9s,baz=34,slow=5.9,SNR=2.7
HFS   Hagfors           133.61 342   PKP      PKPdf   03 28 59.6 +0.2
      comp=Z,3.9nm,0.8s,baz=108,slow=4.7,SNR=2.9
MBAR  Mbarara           133.64 251   PFAKE            03 29 10.0 +7.7
MBAR                                 LR       LR
      comp=Z,4µm,20.0s
NBO00 NORSAR Array S    133.66 345  ePKPdf    PKPdf   03 28 59.5  0.0
MCI6  Montes Claros     133.87 136  eP        PKiKP   03 29 02.2 -0.4
MCI9  Montes Claros     133.95 136  eP        PKPdf   03 29 01.9 +0.5
MCI8  Montes Claros     133.96 136  eP        PKPdf   03 29 01.8 +0.3
ILGA  Ilgaz             134.10 310  ePKPdf    PKiKP   03 29 03.6 +1.1
ILGA                                 LR       LR
      comp=Z,900nm,19.0s
RIB01 Linhares ES       134.16 142  eP        PKPdf   03 29 00.6 -1.1
SJMB  Sao Joao De Ma    134.16 141  eP        PKPdf   03 29 01.6 -0.1
KSDI  Kefar Szold       134.19 299   PKP      PKiKP   03 29 02.0 -0.6
BSFB  Barra de Sao F    134.27 141  eP        PKPdf   03 29 01.9  0.0
MMLI  Mount Malkishu    134.48 298   PKP      PKPdf   03 29 02.6 +0.7
BR101 Keskin Array S    134.52 309  ePKPdf    PKPdf   03 29 01.7 -0.2
BR101                               ePP       PP      03 31 35.4 +0.6
BR131 Keskin Array S    134.52 309  ePKPdf    PKiKP   03 29 02.9 -0.4
BR131 Keskin Array S    134.52 309   P        PKiKP   03 29 03.1 -0.3
      SNR=6.3
BRTR  Keskin Array B    134.52 309c iPKIKP    PKiKP   03 29 03.0 -0.3
BRTR                                 pmax     pmax
      comp=Z,5.0nm,0.9s
BRTR  Keskin Array B    134.52 309   PKP      PKPdf   03 29 01.7 -0.2
      comp=Z,4.9nm,0.9s,baz=132,slow=1.8,SNR=20
BRTR                                 PP       PP      03 31 35.4 +0.6
      comp=Z,0.8nm,0.8s,baz=86,slow=6.1,SNR=2.8
HRFI  Mount Harif       135.05 295   PKP      PKPdf   03 29 03.3 +0.3
ANTO  Ankara            135.11 309  ePKPdf    PKiKP   03 29 04.0 -0.4
ANTO                                 LR       LR
      comp=Z,700nm,20.0s
ANTO  Ankara            135.11 309  ePKIKP    PKiKP   03 29 04.0 -0.4
ANTO                                 MLR      MLR
      comp=Z,700nm,20.0s
ANTO  Ankara            135.11 309   P        PKiKP   03 29 05.4 +1.0
      SNR=10
ANTO  Ankara            135.11 309  eP        PKiKP   03 29 04.7 +0.3
BR231 Keskin MP Arra    135.13 309  ePKPdf    PKiKP   03 29 05.5 +1.0
EIL   Elat              135.15 294   PKP      PKPdf   03 29 03.6 +0.4
EIL   Elat              135.15 294   PP       PP      03 31 43.7 +4.7
      comp=Z,12nm,1.1s,baz=188,slow=4.2,SNR=4.3
KZIT  Kziot             135.52 296   PKP      PKPdf   03 29 04.1 +0.2
CSS   Mathiatis         135.82 302  ePKPdf    PKPdf   03 29 05.1 +0.8
CSS                                  LR       LR
      comp=Z,1µm,21.0s
CSS   Mathiatis         135.82 302   PKP      PKPdf   03 29 04.3  0.0
LVV   L'vov             136.56 326  ePKIKP    PKPdf   03 29 01.8 -3.4
LVV                                  MLR      MLR
      comp=Z,900nm,22.0s
TIRR  Tirgusor          136.58 317   PFAKE            03 29 20.0  +13
TIRR                                 LR       LR
      comp=Z,1µm,22.0s
BIZ   Bicaz             136.90 321⇓iP         PKPdf   03 29 06.6 +0.7
BEL   Belsk             136.99 330  ePKP      PKiKP   03 29 07.0 -0.7
BEL   Belsk             136.99 330  ePKIKP    PKiKP   03 29 07.0 -0.7
BUR08 Bucovina Ar. S    137.08 323  ePKPdf    PKiKP   03 29 08.1 -0.2
BURAR Bucovina Array    137.08 322⇑iP         PKPdf   03 29 05.7 -0.7
BURAR Bucovina Array    137.08 322 ⇑PKIKP     PKPdf   03 29 05.7 -0.7
BUR04 Bucovina Ar. S    137.09 322  ePKPdf    PKiKP   03 29 07.6 -0.6
KWP   Kalwaria Pacla    137.37 326  ePKP      PKPdf   03 29 07.5 +0.7
KWP   Kalwaria Pacla    137.37 326  ePKPdf    PKPdf   03 29 07.4 +0.7
KWP   Kalwaria Pacla    137.37 326  ePKIKP    PKPdf   03 29 07.5 +0.7
ISP   Isparta           137.38 307   PFAKE            03 29 20.0  +11
ISP                                  LR       LR
      comp=Z,1µm,19.0s
MLR   Muntele Rosu      137.69 319  ePKPdf    PKPdf   03 29 07.0 -0.6
MLR                                 ePKPdf    PKPdf   03 29 07.2 -0.4
MLR   Muntele Rosu      137.69 319⇑iP         PKPdf   03 29 05.3 -2.3
MLR   Muntele Rosu      137.69 319   PKP      PKPdf   03 29 07.2 -0.4
      comp=Z,11nm,1.1s,baz=96,slow=3.6,SNR=4.5
DOPR  Dopca             137.81 320⇑iP         PKPpre  03 29 03.7
UZH   Uzhgorod          138.17 325  ePKIKP    PKPdf   03 29 06.5 -1.7
UZH                                 e                 03 29 14.1
UZH                                 e                 03 29 21.3
TRPA  Tarpa             138.32 325⇑iP         PKPdf   03 29 08.3 -0.2
TRPA  Tarpa             138.32 325  ePKiKP    PKPdf   03 29 07.0 -1.4
OJC   Ojcow             138.50 329  ePKP      PKPdf   03 29 09.3 +0.6
OJC   Ojcow             138.50 329  ePKPdf    PKiKP   03 29 10.9  0.0
OJC   Ojcow             138.50 329  ePKIKP    PKPdf   03 29 09.4 +0.6
ARR   Arges             138.56 320⇑iP         PKPdf   03 29 09.8 +0.7
MANT  Manisa            138.66 309  ePKPdf    PKPdf   03 29 10.8 +1.0
MANT                                 LR       LR
      comp=Z,3µm,21.0s
NIE   Niedzica          138.75 327  ePKP      PKPdf   03 29 10.4 +1.1
NIE   Niedzica          138.75 327  ePKIKP    PKPdf   03 29 10.4 +1.1
MDP   Montagnes des     138.89 103   PKP      PKPdf   03 29 10.5 -0.1
      comp=Z,41nm,1.2s,baz=216,slow=2.5
DRGR                    138.97 323⇑iP         PKPpre  03 29 01.5
DRGR                    138.97 323 ⇑PKHKP     PKPpre  03 29 01.5
PVL   Pavlikeni         139.13 317  eP        PKPdf   03 29 10.1  0.0
OKC   Ostrava-Krasne    139.56 329   AMS      AMS     04 34 50.0
      comp=Z,1µm,16.7s
ALN   Alexandroupoli    139.62 313   PFAKE            03 29 20.0 +6.6
ALN                                  LR       LR
      comp=Z,500nm,21.0s
GZR   Gura Zlata        139.68 321⇑iP         PKPpre  03 29 03.8
GZR   Gura Zlata        139.68 321 ⇑PKHKP     PKPpre  03 29 03.8
KSP   Ksiaz             139.74 332  ePKP      PKPdf   03 29 07.2 -3.8
KSP   Ksiaz             139.74 332  ePKIKP    PKPdf   03 29 07.2 -3.8
SIRR  Siria             139.87 323⇑iP         PKPpre  03 29 05.3
PSZ   Piszkesteto       139.89 326  ePKPdf    PKPdf   03 29 11.7 +0.3
PSZ   Piszkesteto       139.89 326⇑iP         PKPdf   03 29 08.7 -2.8
PSZ   Piszkesteto       139.89 326  ePKiKP    PKPpre  03 29 07.1
PSZ   Piszkesteto       139.89 326 ⇑PKIKP     PKPdf   03 29 08.7 -2.8
MORC  Moravsky Berou    139.89 330  ePKPpre   PKPpre  03 29 05.5
MORC  Moravsky Berou    139.89 330  ePKHKP    PKPpre  03 29 05.5
MORC  Moravsky Berou    139.89 330  ePKP      PKPpre  03 29 06.8
PLD   Plovdiv           140.03 315  eP        PKPdf   03 29 10.4 -1.4
DPC   Dobruska-Polom    140.08 331  ePKP      PKPdf   03 29 12.1 +0.4
DPC                                 eSS       SS      03 50 48.4  +19
DPC                                  AMS      AMS     04 34 50.0
      comp=Z,1µm,16.9s
DPC   Dobruska-Polom    140.08 331  ePKIKP    PKPdf   03 29 12.1 +0.4
DPC                                  MLR      MLR
      comp=Z,1µm,16.9s
VYHS  Vyhne             140.09 327  ePKIKP    PKPdf   03 29 08.8 -2.9
VYHS  Vyhne             140.09 327  ePKP      PKPdf   03 29 08.8 -2.9
UPC   Upice             140.11 332   AMS      AMS     04 36 20.0
      comp=Z,1µm,19.8s
PGB   Panagyurishte     140.19 316  eP        PKPdf   03 29 11.6 -0.6
BZS   Buzias            140.25 322⇑iP         PKPpre  03 29 06.5
BZS   Buzias            140.25 322 ⇑PKIKP     PKPpre  03 29 06.5
JAVC  Velka Javorina    140.44 328  ePKP      PKPpre  03 29 07.8
MDVR  Moldovita         140.64 321⇑iP         PKPpre  03 29 07.9
VRAC  Vranov            140.67 330⇑iP         PKPdf   03 29 12.1 -0.7
VRAC  Vranov            140.67 330  ePKP      PKPpre  03 29 07.6
VRAC  Vranov            140.67 330   PKP      PKPdf   03 29 12.7 -0.1
      comp=Z,3.9nm,1.0s,baz=95,slow=3.5,SNR=3.0
VRAC                                 PP       PP      03 32 13.6 +1.6
      comp=Z,1.5nm,0.6s,baz=129,slow=6.5,SNR=1.9
PVCC  Panska Ves        140.74 333   AMS      AMS     04 34 20.0
      comp=Z,1µm,25.2s
BRG   Berggiesshubel    140.75 333  ePKP      PKPpre  03 29 07.8
      comp=Z,29nm,1.6s
BRG                                 i                 03 29 28.2
      comp=Z,64nm,1.7s
BRG                                  PP       PP      03 32 13.0 +0.6
BRG                                  SS       SS      03 50 39.0 +2.0
      comp=N,932nm,22.7s
      comp=E,569nm,19.2s
      comp=Z,2µm,24.9s
BRG   Berggiesshubel    140.75 333  ePKIKP    PKPpre  03 29 07.8
BRG                                                   03 32 13.0
BRG                                  SS       SS      03 50 39.0 +2.0
BRG                                  pmax     pmax
      comp=Z,29nm,1.6s
BRG                                  MLR      MLR
      comp=N,932nm,22.7s
BRG                                  MLR      MLR
      comp=E,569nm,19.2s
BRG                                  MLR      MLR
      comp=Z,2µm,24.9s
VTS   Vitosha           140.77 317  ePKPdf    PKPdf   03 29 12.4 -0.9
VTS                                  LR       LR
      comp=Z,900nm,20.0s
VTS   Vitosha           140.77 317⇑iP         PKPdf   03 29 12.7 -0.7
VTS   Vitosha           140.77 317 ⇑PKIKP     PKPdf   03 29 12.7 -0.7
VTS   Vitosha           140.77 317  eP        PKPdf   03 29 13.6 +0.2
CLL   Collm             140.82 335   PFAKE            03 29 20.0 +4.4
CLL                                  LR       LR
      comp=Z,2µm,22.0s
CLL   Collm             140.82 335  i PKPpre  PKPpre  03 29 10.0
CLL                                 i PKPdf   PKPdf   03 29 12.6 -0.3
      comp=Z,110nm,2.5s
CLL                                 i (PKiKP)         03 29 17.3
CLL                                 esPKiKP   sPKPdf  03 29 24.0 +3.8
CLL                                 e                 03 31 59.0
CLL                                 ePP       PP      03 32 19.0 +6.2
CLL                                 ePKSdf    PKSdf   03 32 48.0 -0.7
CLL                                 e                 03 33 14.0
CLL                                 e                 03 34 36.0
CLL                                 ePPP      PPP     03 35 24.0
CLL                                 eSKSac    SKSac   03 36 26.0 -1.5
CLL                                 eSKKSac   SKKSac  03 39 06.0 +0.5
CLL                                 esSdiff   sSdif   03 40 54.0 +3.1
CLL                                 e                 03 41 40.0
CLL                                 ePSKS             03 42 20.0
CLL                                 e(PPS)            03 44 18.0
CLL                                 eSKKSdf   SKKSdf  03 45 48.0 +0.2
CLL                                 eSS       SS      03 50 49.0  +11
CLL                                 eSKSSKSac         03 52 23.0
CLL                                 eSSS      SSS     03 55 51.0
CLL                                 e                 03 58 24.0
CLL                                  Lm       MLR     04 35 00.0
      comp=Z,1µm,20.4s
CLL   Collm             140.82 335  i PKIKP   PKPdf   03 29 10.0 -2.9
CLL                                 i                 03 29 17.3
CLL                                  pmax     pmax
      comp=Z,110nm,2.5s
CLL                                  MLR      MLR
      comp=Z,1µm,20.4s
KRUC  Moravsky          140.93 330  ePKP      PKPpre  03 29 08.2
GOPC  GO Pecny, Ondr    141.08 332   AMS      AMS     04 27 10.0
      comp=Z,2µm,26.7s
PRU   Pruhonice         141.14 332  ePKP      PKPdf   03 29 13.5 -0.1
PRU                                  AMS      AMS     04 26 40.0
      comp=Z,2µm,26.4s
PRU   Pruhonice         141.14 332  ePKIKP    PKPdf   03 29 13.5 -0.1
PRU                                  MLR      MLR
      comp=Z,2µm,26.4s
ZST   Bratislava        141.16 328  ePKIKP    PKPdf   03 29 13.0 -0.7
ZST   Bratislava        141.16 328  ePKP      PKPdf   03 29 13.0 -0.7
TREC  Trest             141.20 331   AMS      AMS     04 36 00.0
      comp=Z,1µm,22.3s
FRGS  Fruska Gora       141.56 322  eP        PKPdf   03 29 13.5 -1.0
SOP   Sopron            141.77 328  ePKiKP    PKPdf   03 29 14.1 -0.7
EKA   Eskdalemuir Ar    141.78 351   PKhKP    PKPpre  03 29 08.4
      comp=Z,0.8nm,0.4s,baz=350,slow=2.1,SNR=12
EKA                                  PP       PP      03 32 11.8 -6.5
      comp=Z,1.7nm,1.0s,baz=40,slow=4.6,SNR=2.8
VAY   Valandovo         141.81 315  i Pn      PKPpre  03 29 10.4
NKC   Novy Kostel       141.87 334  ePKP      PKPdf   03 29 12.4 -2.5
NKC                                  AMS      AMS     04 34 50.0
      comp=Z,1µm,20.3s
NKC   Novy Kostel       141.87 334  ePKIKP    PKPdf   03 29 12.4 -2.5
NKC                                  MLR      MLR
      comp=Z,1µm,20.3s
STIP  Stip              141.89 316  ePn       PKPpre  03 29 09.0
CONA  Conrad Observa    141.96 329  i PKPdf   PKPdf   03 29 11.9 -3.3
      comp=Z,19nm,1.4s,SNR=9.4
DIVS  Divibare          142.05 321  ePKPdf    PKPdf   03 29 16.7 +1.2
DIVS                                 LR       LR
      comp=Z,1µm,22.0s
DIVS  Divibare          142.05 321  eP        PKPdf   03 29 10.5 -5.0
KHC   Kasperske Hory    142.19 332  ePKPpre   PKPpre  03 29 11.3
KHC                                  LR       LR
      comp=Z,700nm,20.0s
KHC   Kasperske Hory    142.19 332  ePKP      PKPdf   03 29 12.5 -3.1
KHC                                 ex        x       03 29 17.3
KHC                                 ex        x       03 29 25.5
KHC                                 eSS       SS      03 51 05.9  +12
KHC                                  AMS      AMS     04 36 50.0
      comp=Z,2µm,15.9s
KHC   Kasperske Hory    142.19 332  ePKIKP    PKPdf   03 29 12.5 -3.1
KHC                                 e                 03 29 17.3
KHC                                 e                 03 29 25.5
KHC                                  MLR      MLR
      comp=Z,2µm,15.9s
GEC2  GERESS Array S    142.35 331  ePKPpre   PKPpre  03 29 12.7
GEC2                                 LR       LR
      comp=Z,1µm,20.0s
GERES GERESS Array B    142.35 331   PKHKP    PKPpre  03 29 11.0
GERES GERESS Array B    142.35 331   PKhKP    PKPpre  03 29 11.0
      comp=Z,3.5nm,0.8s,baz=74,slow=5.7,SNR=24
GEA0  GERESS Array S    142.35 331  ePKPpre   PKPpre  03 29 11.1
LIT   Litokhoron        142.41 314   PFAKE            03 29 30.0  +11
LIT                                  LR       LR
      comp=Z,600nm,20.0s
IDI   Anoyia            142.45 305   PKhKP    PKPpre  03 29 09.2
      comp=Z,6.3nm,0.9s,baz=72,slow=6.4,SNR=2.3
BEHE  Becsehely         142.45 326  eP        PKiKP   03 29 21.5 +2.4
IDGL  Inch Island, C    142.53 355  ePKP      PKiKP   03 29 17.6 -1.3
BBLS  Lazi&#263;i       142.53 321  eP        PKPdf   03 29 14.1 -2.3
WTSB  Winterswijk       142.56 340  ePKP      PKPdf   03 29 13.2 -2.8
      comp=Z,492nm,2.8s
WTSB                                eX                03 29 26.5
ARSA  Arzberg           142.59 328  i PKPdf   PKPdf   03 29 12.7 -3.6
      comp=Z,10nm,1.3s
BIA   Bitola            142.78 316  ePn       PKPdf   03 29 14.0 -2.9
GRA1  Grafenberg Arr    142.79 334   PFAKE            03 29 30.0  +10
GRA1                                 LR       LR
      comp=Z,2µm,22.0s
MOA   Molln             142.79 330  i PKPdf   PKPdf   03 29 13.0 -3.6
      comp=Z,36nm,1.4s,SNR=12
GRFO  Grafenberg        142.79 334   PFAKE            03 29 30.0  +10
GRFO                                 LR       LR
      comp=Z,2µm,22.0s
FNA   Florina           142.86 315  ePKPdf    PKPdf   03 29 15.2 -1.8
FNA                                  LR       LR
      comp=Z,900nm,21.0s
FNA   Florina           142.86 315  ePKIKP    PKPdf   03 29 15.2 -1.8
FNA                                  MLR      MLR
      comp=Z,900nm,21.0s
AGG   Agios Georgios    142.99 312   PFAKE            03 29 30.0  +10
AGG                                  LR       LR
      comp=Z,800nm,19.0s
OHR   Ohrid             143.09 316  i Pn      PKPab   03 29 12.0 -0.8
PERS  Pernice           143.21 328  ePKPdf    PKPbc   03 29 13.8 -0.6
SOKA  Soboth            143.22 328  i PKPdf   PKPbc   03 29 14.4 -0.1
      comp=Z,26nm,1.5s,SNR=9.2
BLY   Banja Luka        143.31 324  ePKPpre   PKPpre  03 29 15.1
BLY                                  LR       LR
      comp=Z,1µm,22.0s
BLY   Banja Luka        143.31 324⇑iP         PKPab   03 29 13.3 -0.2
BLY   Banja Luka        143.31 324  eP        PKPab   03 29 12.4 -1.1
PDG   Podgorica         143.41 319⇓iP         PKPbc   03 29 15.2 +0.2
TTG   Podgorica         143.41 319   PFAKE            03 29 30.0 +8.9
TTG                                  LR       LR
      comp=Z,900nm,19.0s
CRES  Cresnjev          143.57 326⇑iP         PKPab   03 29 14.9 +0.4
OBKA  Obir              143.58 328  i PKPdf   PKPbc   03 29 15.4 -0.1
      comp=Z,28nm,1.6s
TIR   Tirane            143.58 317   PFAKE            03 29 30.0 +8.4
TIR                                  LR       LR
      comp=Z,800nm,21.0s
BRY   Bratogost         143.59 320  eP        PKPbc   03 29 15.3 -0.4
OZLJ  Ozalj             143.70 326   P        PKPbc   03 29 15.6 -0.1
KBA   Koelnbreinsper    143.78 330  i PKPdf   PKPbc   03 29 16.0 -0.2
      comp=Z,86nm,1.4s,SNR=20
HCY   Herceg Novi       143.87 320  eP        PKPbc   03 29 16.1 -0.3
HGN   Heimansgroeve     143.88 340  ePKP      PKPbc   03 29 16.0 -0.1
      comp=Z,736nm,2.1s
HGN                                 eX                03 29 31.3
      comp=Z,600nm,2.3s
BOJS  Bojanci           143.89 326  ePKPdf    PKPab   03 29 15.6 -0.1
LJU   Ljubljana         143.91 327⇑iP         PKPab   03 29 15.8  0.0
VISS  Visnje            143.91 327  ePKPdf    PKPab   03 29 14.6 -1.2
BEBN  Eben Emael        143.93 340 ⇑PKiKP     PKPab   03 29 15.6 -0.1
MEM   Membach           143.98 340 ⇑PKiKP     PKPbc   03 29 16.4  0.0
ITM   Ithomi            144.03 310  ePKPdf    PKPbc   03 29 17.4 +0.3
ITM                                  LR       LR
      comp=Z,600nm,21.0s
STON  Ston              144.12 321   P        PKPab   03 29 16.0 -0.6
STON  Ston              144.12 321⇑iP         PKPab   03 29 15.5 -1.1
CEY   Cerknica          144.16 327⇑iP         PKPab   03 29 16.9 +0.1
UDBI  Udbina            144.24 324   P        PKPbc   03 29 17.6 +0.1
JAVS  Javornik          144.25 328  ePKPdf    PKPab   03 29 16.6 -0.5
IGLA  Glengowla, Co     144.30 357  i PKP     PKPab   03 29 16.5 -0.4
STU   Stuttgart         144.34 335  ePKPdf    PKPbc   03 29 18.2 +0.6
UCC   Uccle             144.34 341  ePKPdf    PKPbc   03 29 18.0 +0.5
UCC                                  LR       LR
      comp=Z,1µm,20.0s
UCC   Uccle             144.34 341  ePKIKP    PKPbc   03 29 18.0 +0.5
UCC                                  MLR      MLR
      comp=Z,1µm,20.0s
UCC   Uccle             144.34 341 ⇑PKiKP     PKPab   03 29 16.3 -0.9
BCLA  Clavier           144.38 340 ⇑PKiKP     PKPbc   03 29 17.7 +0.1
RIY   Rijeka            144.41 327  eP        PKPab   03 29 17.5 -0.2
ABTA  Abfaltersbach     144.41 330  i PKPdf   PKPab   03 29 17.7 -0.1
      comp=Z,77nm,0.8s,SNR=35
WATA  Walderalm         144.42 331  i PKPdf   PKPbc   03 29 18.4 +0.3
      comp=Z,13nm,0.5s,SNR=21
WTTA  Wattenberg        144.45 331  i PKPdf   PKPbc   03 29 18.9 +0.6
      comp=Z,165nm,1.7s,SNR=35
MOTA  Moosalm           144.63 332  i PKPdf   PKPbc   03 29 19.3 +0.5
      comp=Z,132nm,1.2s,SNR=53
RETA  Reutte            144.68 332  i PKPdf   PKPbc   03 29 19.1 +0.2
      comp=Z,171nm,1.5s,SNR=37
SQTA  Sankt Quirin      144.68 332  i PKPdf   PKPdf   03 29 19.6 -0.5
      comp=Z,153nm,1.2s,SNR=52
NVLJ  Novalja           144.71 325   P        PKPab   03 29 18.4 -0.4
WLF   Walferdange       144.74 339  ePKPdf    PKPdf   03 29 19.6 -0.3
WLF                                  LR       LR
      comp=Z,5µm,19.0s
WLF   Walferdange       144.74 339 ⇓PKiKP     PKPdf   03 29 19.5 -0.4
DOU   Dourbes           144.88 341 ⇑PKiKP     PKPab   03 29 19.2  0.0
BFO   Black Forest      145.04 335  ePKPbc    PKPbc   03 29 19.4 -0.5
BFO                                  LR       LR
      comp=Z,1µm,21.0s
BFO   Black Forest      145.04 335  ePKIKP    PKPbc   03 29 19.4 -0.5
BFO                                  MLR      MLR
      comp=Z,1µm,21.0s
FETA  Feichten          145.04 332  i PKPdf   PKPab   03 29 20.3 +0.2
      comp=Z,224nm,1.1s,SNR=83
IWEX  Carrickbyrne,     145.13 354  i PKP     PKPbc   03 29 20.0  0.0
DAVA  Damuels           145.22 333  i PKPdf   PKPdf   03 29 21.2 +0.1
      comp=Z,383nm,1.4s,SNR=78
NBLI  Livramento-PB     145.35 134  eP        PKPbc   03 29 21.4 -0.5
FUORN Ofenpass-Fuorn    145.55 332  ePKPdf    PKPbc   03 29 21.9  0.0
FUORN                                LR       LR
      comp=Z,2µm,20.0s
ECH   Echery            145.59 336  ePKPdf    PKPbc   03 29 21.7  0.0
ECH                                  LR       LR
      comp=Z,1µm,22.0s
ECH   Echery            145.59 336  ePKIKP    PKPbc   03 29 21.7  0.0
ECH                                  MLR      MLR
      comp=Z,1µm,22.0s
DAVOX Davos/Dischmat    145.60 332  ePKIKP    PKPbc   03 29 22.0  0.0
DAVOX Davos/Dischmat    145.60 332   PKPbc    PKPbc   03 29 21.9  0.0
      comp=Z,85nm,0.5s,baz=309,slow=0.3,SNR=322
VAL   Valentia          145.82 357  i PKP     PKPbc   03 29 22.3 +0.1
SHEL  Horse Pasture     145.85 192  ePKPdf    PKPab   03 29 25.0 +1.2
SHEL  Horse Pasture     145.85 192  ePKP2     PKPab   03 29 25.0 +1.2
MATE  Matera            145.98 318⇑iP         PKPbc   03 29 23.2 +0.1
TUE   Stuetta           146.08 332   PFAKE            03 29 30.0 +3.2
TUE                                  LR       LR
      comp=Z,2µm,19.0s
NBPA  Parau_RN          146.38 132  eP        PKPbc   03 29 24.6 -0.4
TIP   Timpagrande       146.74 316  ePKPdf    PKPdf   03 29 23.2 -0.6
TIP                                  LR       LR
      comp=Z,1µm,22.0s
TIP   Timpagrande       146.74 316⇑iP         PKPdf   03 29 22.2 -1.6
AQU   L'Aquila          146.95 323  ePKPdf    PKPbc   03 29 26.3 +0.3
AQU                                  LR       LR
      comp=Z,1µm,20.0s
AQU   L'Aquila          146.95 323  eP        PKPbc   03 29 25.8 -0.2
SENIN Lac Senin/Sane    147.04 334  ePKPdf    PKPdf   03 29 24.4 +0.1
SENIN                                LR       LR
      comp=Z,1µm,19.0s
RCBR  Riachuelo         147.17 133  ePKPdf    PKPdf   03 29 26.0 +0.7
RCBR                                ePKPdf    PKPbc   03 29 26.8 -0.6
RCBR  Riachuelo         147.17 133   PKPbc    PKPbc   03 29 26.8 -0.6
      comp=Z,106nm,0.9s,baz=206,slow=4.0,SNR=6.6
RCBR  Riachuelo         147.17 133  eP        PKPbc   03 29 26.4 -1.0
VLC   Villacollemand    147.32 329  ePKPdf    PKPdf   03 29 25.7 +1.1
VLC                                  LR       LR
      comp=Z,900nm,19.0s
CLF   Chambon-Foret     147.43 341  ePKPdf    PKPbc   03 29 25.9 -1.1
CLF                                  LR       LR
      comp=Z,1µm,20.0s
CEL   Celeste           147.79 315  ePKPdf    PKPbc   03 29 27.9 -0.5
CEL                                  LR       LR
      comp=Z,600nm,22.0s
BNI   Bardonecchia      148.35 334  ePKPdf    PKPdf   03 29 26.2 -0.1
BNI                                  LR       LR
      comp=Z,2µm,20.0s
BNI   Bardonecchia      148.35 334  ePKIKP    PKPdf   03 29 26.3 -0.1
BNI                                  MLR      MLR
      comp=Z,2µm,20.0s
SSB   Saint Sauveur     149.03 336  ePKPbc    PKPbc   03 29 31.1 -0.3
SSB                                  LR       LR
      comp=Z,800nm,18.0s
SSB   Saint Sauveur     149.03 336  ePKP2     PKPbc   03 29 31.1 -0.3
SSB                                  MLR      MLR
      comp=Z,800nm,18.0s
VAE   Valguarnera       149.20 315   PKPbc    PKPbc   03 29 31.5 -0.6
      comp=Z,19nm,1.2s,baz=354,slow=0.8,SNR=10
WDD   Wied Dalam        149.97 312  ePKPbc    PKPbc   03 29 33.6 -0.4
WDD                                  LR       LR
      comp=Z,1µm,20.0s
KEST  Kesra             153.54 317  ePKPdf    PKPdf   03 29 36.8 +2.2
KEST                                ePKPbc    PKPbc   03 29 42.1 -0.2
KEST                                 LR       LR
      comp=Z,1µm,21.0s
KEST  Kesra             153.54 317   PKPbc    PKPbc   03 29 42.1 -0.2
      comp=Z,21nm,1.1s,baz=105,slow=1.6,SNR=13
CMAH  Djebel Manchou    154.19 321   P        PKPbc   03 29 43.6  0.0
ASCN  Ascension         154.44 176   PFAKE            03 29 50.0 +5.2
ASCN                                 LR       LR
      comp=Z,155µm,19.0s
DFRA  Djebel Bou Aff    155.16 323   P        PKPdf   03 29 47.1  +10
PBRG  Braganca          155.49 349  ePKPdf    PKPab   03 30 03.4 +0.8
PBRG  Braganca          155.49 349  ePKPab    PKPab   03 30 18.4  +16
PGAV  Gavieira, Arco    155.56 352  ePKPdf    PKPab   03 30 03.6 +0.6
PGAV  Gavieira, Arco    155.56 352  ePKPab    PKPab   03 30 19.1  +16
PGAV  Gavieira, Arco    155.56 352  eLR       LR      04 34 43.9
      comp=Z,1µm,18.0s
SET   Setif             155.67 323   P        PKPdf   03 29 50.0  +12
POLO  Lamas de Olo      156.08 351  ePKPdf    PKPab   03 30 03.7 -1.5
POLO  Lamas de Olo      156.08 351  ePKPab    PKPab   03 30 21.4  +16
MVO   Moncorvo          156.16 350  ePKPdf    PKPab   03 30 03.5 -2.1
MVO   Moncorvo          156.16 350  ePKPab    PKPab   03 30 21.4  +16
MVO   Moncorvo          156.16 350  eLR       LR      04 33 58.1
      comp=Z,940nm,20.0s
PVRL  Vila Real         156.16 351  ePKPdf    PKPab   03 30 07.3 +1.8
PVRL  Vila Real         156.16 351  ePKPab    PKPab   03 30 21.6  +16
PTO   Porto             156.42 352  ePKPab    PKPab   03 30 22.3  +16
PVIS  Viseu             156.74 351  ePKPab    PKPab   03 30 24.1  +16
ES19  SONSECA Array     156.84 343  ePKPdf    PKPdf   03 29 39.1 +0.1
ESDC  Sonseca Array     156.89 343   PKP      PKPdf   03 29 38.6 -0.4
      comp=Z,0.7nm,0.9s,baz=64,slow=3.0,SNR=4.7
ESDC                                 PKPab    PKPab   03 30 08.7  0.0
      comp=Z,2.9nm,0.6s,baz=16,slow=4.0,SNR=20
ESDC                                 PP       PP      03 33 47.4 +1.3
      comp=Z,1.2nm,0.9s,baz=4.3,slow=4.7,SNR=3.6
ESLA  Sonseca Array     156.89 343  ePKPab    PKPab   03 30 09.4 +0.7
ESLA                                 LR       LR
      comp=Z,2µm,22.0s
MTE   Manteigas         156.99 350  ePKPdf    PKPab   03 30 10.0 +0.9
MTE   Manteigas         156.99 350  ePKPab    PKPab   03 30 25.6  +16
MTE   Manteigas         156.99 350  eLR       LR      04 30 04.0
      comp=Z,1µm,20.0s
MTE   Manteigas         156.99 350   PFAKE            03 29 50.0  +11
MTE                                  LR       LR
      comp=Z,2µm,21.0s
PAB   San Pablo         157.11 343  ePKPab    PKPab   03 30 10.8 +1.1
PAB                                  LR       LR
      comp=Z,1µm,20.0s
PCAS  Casmilo, Conde    157.48 352  ePKPdf    PKPab   03 30 11.6 +0.5
PCAS  Casmilo, Conde    157.48 352  ePKPab    PKPab   03 30 27.3  +16
PCBR  Castelo Branco    157.53 350  ePKPdf    PKPab   03 30 10.6 -0.7
PCBR  Castelo Branco    157.53 350  ePKPab    PKPab   03 30 27.5  +16
CART  Cartagena         157.75 335   PFAKE            03 29 50.0  +10
CART                                 LR       LR
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	comp=Z,1μm,20.0s						
PTOM	Tomar	157.89	351	ePKPdf	PKPab	03 30 06.0	-6.9
PTOM	Tomar	157.89	351	ePKPab	PKPab	03 30 29.2	+16
PMRV	Marv??o	157.91	349	ePKPdf	PKPab	03 30 13.8	+0.7
PMRV	Marv??o	157.91	349	ePKPab	PKPab	03 30 29.3	+16
PMRV	Marv??o	157.91	349	eLR	LR	04 31 05.5	
	comp=Z,980nm,20.0s						
PMTG	Montargil	158.40	351	ePKPdf	PKPab	03 30 16.9	+1.8
PMTG	Montargil	158.40	351	ePKPab	PKPab	03 30 30.8	+16
PESTR	Estremoz	158.49	349	ePKPdf	PKPab	03 30 17.2	+1.6
PESTR	Estremoz	158.49	349	ePKPab	PKPab	03 30 31.4	+16
PESTR	Estremoz	158.49	349	ePKPab	PKPab	03 30 16.7	+1.1
PESTR				LR	LR		
	comp=Z,800nm,20.0s						
PMAFR	Mafra	158.66	353	ePKPab	PKPab	03 30 18.0	+1.7
LIS	Lisbon	158.88	353	ePKPdf	PKPdf	03 29 40.7	-0.6
LIS				AMS	AMS	04 38 58.4	
	comp=E,2μm,18.8s						
LIS	Lisbon	158.88	353	ePKIKP	PKPdf	03 29 40.7	-0.6
PBEJ	Beja	159.36	349	ePKPdf	PKPab	03 30 21.9	+2.6
PBEJ	Beja	159.36	349	ePKPab	PKPab	03 30 36.9	+18
PNCL	Nicolau / Gran	159.38	351	ePKPab	PKPab	03 30 35.6	+16
MESJ	Messejana	159.60	350	ePKPdf	PKPdf	03 29 41.5	-0.7
MESJ				AMS	AMS	04 53 44.4	
	comp=Z,1μm,16.7s						
MESJ	Messejana	159.60	350	ePKPdf	PKPab	03 30 21.4	+1.0
MESJ	Messejana	159.60	350	ePKPab	PKPab	03 30 36.9	+17
MESJ	Messejana	159.60	350	ePKIKP	PKPdf	03 29 41.5	-0.7
PVAQ	Vaqueiros	159.94	349	ePKPab	PKPab	03 30 38.0	+16
PVAQ	Vaqueiros	159.94	349	eLR	LR	04 33 58.1	
	comp=Z,1μm,20.0s						
PTEO	Sao Teotonio	159.97	351	ePKPdf	PKPab	03 30 22.8	+0.8
PTEO	Sao Teotonio	159.97	351	ePKPab	PKPab	03 30 38.2	+16
PBDV	Barranco-do-Ve	160.13	349	ePKPdf	PKPab	03 30 25.5	+2.7
PBDV	Barranco-do-Ve	160.13	349	ePKPab	PKPab	03 30 39.5	+17
MORF	Marmelete	160.19	351	ePKPdf	PKPdf	03 29 42.2	-0.8
MORF				AMS	AMS	04 43 30.4	
	comp=Z,1μm,18.9s						
MORF	Marmelete	160.19	351	ePKPdf	PKPab	03 30 24.8	+1.8
MORF	Marmelete	160.19	351	ePKPab	PKPab	03 30 39.7	+17
MORF	Marmelete	160.19	351	ePKIKP	PKPdf	03 29 42.2	-0.8
PFVI	Vila Bisbo	160.39	351	ePKPdf	PKPab	03 30 24.3	+0.5
PFVI	Vila Bisbo	160.39	351	ePKPab	PKPab	03 30 40.2	+16
TAM	Tamanrasset	162.28	289	ePKPdf	PKPdf	03 29 45.9	+0.2
TAM	Tamanrasset	162.28	289	ePKIKP	PKPdf	03 29 45.9	+0.2
MDT	Midelt	163.35	336	PKP	PKPdf	03 29 46.5	0.0
	comp=Z,15nm,1.2s,baz=60,slow=0.8,SNR=12						
MDT				PKPab	PKPab	03 30 36.9	-0.2
	comp=Z,20nm,1.3s,baz=46,slow=5.3,SNR=7.3						
MDT				PP	PP	03 34 21.6	+0.4
	comp=Z,2.4nm,0.9s,baz=22,slow=5.4,SNR=3.1						
PMOZ	Porto Moniz, M	164.41	15	eLR	LR	04 33 07.2	
	comp=Z,1μm,18.0s						
TOA0	Torodi Ar. Sit	165.49	254	ePKPdf	PKPdf	03 29 46.6	-2.1
TOA0				ePKPdf	pPKPdf	03 29 47.9	-6.2
TOA0	Torodi Ar. Sit	165.49	254	P	PKPdf	03 29 48.4	-0.3
	SNR=17						
TORD	Torodi Ar. Bea	165.49	254	PKP	PKPdf	03 29 47.3	-1.4
	comp=Z,14nm,1.1s,baz=130,slow=6.0,SNR=54						
TORD				PKPab	PKPab	03 30 46.6	-0.4
	comp=Z,5.9nm,0.9s,baz=120,slow=3.9,SNR=5.5						
TORD				PP	PP	03 34 35.1	+0.9
	comp=Z,5.0nm,1.2s,baz=114,slow=7.1,SNR=4.0						
TOA1	Torodi Ar. Sit	165.50	254	ePKPdf	PKPdf	03 29 47.3	-1.4
TOA1				ePKPab	PKPab	03 30 46.6	-0.5
TOA1				ePP	PP	03 34 35.1	+0.9
DBIC	Dimbokro	166.66	215	ePKPdf	PKPdf	03 29 49.4	-0.3
DBIC				ePKPab	PKPab	03 30 51.7	-0.3
DBIC				ePP	PP	03 34 38.1	-0.7
DBIC	Dimbokro	166.66	215	PKP	PKPdf	03 29 49.0	-0.7
	comp=Z,17nm,1.1s,baz=111,slow=2.7,SNR=12						
DBIC				PKPab	PKPab	03 30 51.7	-0.3
	comp=Z,15nm,1.0s,baz=125,slow=4.6,SNR=5.2						
DBIC				PP	PP	03 34 38.1	-0.7
	comp=Z,1.9nm,0.7s,baz=142,slow=7.1,SNR=2.5						

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*IDC **28** 03:11:48.2±0.6, 4°.70S×138°.60E, h0^{km}, mb4.4/13, mb1 4.5/16, mb1mx4.4/39, mbtmp4.4/16, ML4.3/3, Error ellipse: s-maj=24.9km s-min=10.2km az=89.0*

*ISCJB **28** 03:11:51.1±0.3, 4°.86S±0°.03×138°.58E±0°.04, h33^{km}, mb4.5/33, Error ellipse: s-maj=6.4km s-min=3.8km az=10.3*

*BJI **28** 03:11:52.7, 4°.70S×138°.69E, h41^{km}, mB5.1/11, mb4.8/24, Ms4.9/4, Ms7 4.5/3*

*NEIC **28** 03:11:53.5±0.3, 4°.78S×138°.52E, h35^{km}, mb4.6/19, Error ellipse: s-maj=8.8km s-min=5.1km az=89.0*

*DJA **28** 03:11:53.2±0.4, 5°S±7°×13°9E±°, h178^{km}±16^{km}, M4.8/2, mB5.8/1, mb4.8/2, Mw(mB)5.4/1*

ISC 28 03:11:53.5±0.4, **4°.84S**±0°.04×**138°.55E**±0°.05, **h35**^{km}, **n80, σ2^{s}.16**/92, **mb4.6**/33, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	2.75	36	P	Pn	03 12 34.6	-0.6
JAY	Jayapura	3.15	43	P	Pn	03 12 39.4	-1.3
JAY				S	Sn	03 13 15.7	-1.5
SRPI	Serui, Papua	3.74	322	P	Pn	03 12 49.6	+0.8
BAKI	Biak	4.37	326	P	Pn	03 12 58.3	+0.9
RKPI	Ransiki, Papua	5.47	307	P	Pn	03 13 13.2	+0.6
FAKI	Fak Fak	6.57	287	ePn	Pn	03 13 27.2	-0.5
FAKI				eSn	Sn	03 14 38.8	-2.7
FAKI	Fak Fak	6.57	287	P	Pn	03 13 28.5	+0.8
SAUI	Saumlaki	7.85	246	P	Pn	03 13 49.2	+3.9
COEN	Coen	10.15	154	ePn	Pn	03 14 17.9	+1.1
COEN				eSn	Sn	03 16 08.0	-1.5
MTN	Manton Dam	10.81	222	ePn	Pn	03 14 27.3	+1.4
MTN				eSn	Sn	03 16 26.4	+0.6
SANI	Sanana	12.84	282	P	Pn	03 14 51.1	-2.6
SOEI	Soe	14.98	250	eSn	Sn	03 17 56.2	-12
SOEI				LR	LR		
	comp=Z,6μm,20.0s						
SOEI	Soe	14.98	250	ePn	Pn	03 15 23.4	+0.4
SOEI	Soe	14.98	250	P	Pn	03 15 19.7	-3.2
WRAB	Tennant Creek	15.55	195	ePn	Pn	03 15 30.0	-0.3
	comp=Z,60nm,0.7s						
WRAB				eSn	Sn	03 18 18.6	-3.1
WB2	Warramunga Arr	15.56	195	ePn	Pn	03 15 29.8	-0.6
WB2				eSn	Sn	03 18 18.9	-2.9
WR1	Warramunga Arr	15.57	195	ePn	Pn	03 15 29.1	-1.4
	comp=Z,60nm,0.6s						
WR1				eSn	Sn	03 18 16.2	-5.7
WRA	Warramunga Arr	15.57	195	Pn	Pn	03 15 29.1	-1.4
	comp=Z,0.5nm,0.3s,baz=18,slow=13,SNR=37						
WRA				Sn	Sn	03 18 16.2	-5.7
	comp=Z,0.8nm,0.3s,baz=18,slow=20,SNR=5.0						
WRA				Lg	Lg	03 20 07.3	
	comp=Z,1.1nm,0.3s,baz=4.7,slow=29,SNR=4.1						
CTA	Charters Tower	16.91	154	Lg	Lg	03 20 49.0	
	comp=Z,0.6nm,0.3s,baz=255,slow=20,SNR=2.8						
FITZ	Fitzroy Crossi	18.25	223	eP	Pn	03 16 04.4	+0.2
	comp=Z,18nm,1.0s						
FITZ				eSn	Sn	03 19 18.1	-8.9
FITZ	Fitzroy Crossi	18.25	223	P	Pn	03 16 04.8	+0.6
	comp=Z,0.8nm,0.3s,baz=36,slow=11,SNR=14						
FITZ				S	Sn	03 19 18.1	-8.9
	comp=Z,2.3nm,0.3s,baz=124,slow=12,SNR=4.6						
AS31	Alice Springs	19.25	193	eP	Pn	03 16 16.6	+0.3
	comp=Z,22nm,0.6s						
AS31				eS	S	03 19 56.0	+4.7
ASAR	Alice Springs	19.25	193	P	Pn	03 16 16.6	+0.3
	comp=Z,5.7nm,0.3s,baz=26,slow=10,SNR=42						
ASAR				S	S	03 19 56.0	+4.6
	comp=Z,0.2nm,0.3s,baz=14,slow=27,SNR=4.4						
ASAR				Lg	Lg	03 22 04.1	
	baz=14,slow=31,SNR=3.8						
WRKA	Warakurna	22.37	205	P	P	03 16 50.1	+1.3
	baz=37,SNR=67						
MORW	Morawa	32.18	219	P	P	03 18 19.9	+1.7
	baz=48,SNR=20						
MORW	Morawa	32.18	219	eP	P	03 18 20.0	+1.7
	comp=Z,97nm,1.0s						
JNU	Nakatsue	38.44	350	eP	P	03 19 11.8	-0.3
	comp=Z,24nm,1.2s						
JNU	Nakatsue	38.44	350	P	P	03 19 10.4	-1.7
	comp=Z,12nm,0.9s,baz=168,slow=5.4,SNR=6.1						
MJAR	Matsushiro Arr	41.16	360	P	P	03 19 33.0	-1.6
	comp=Z,1.6nm,0.5s,baz=185,slow=8.4,SNR=6.0						
MAJO	Matsushiro	41.16	360	eP	P	03 19 33.0	-1.6
NJ2	Nanjing	41.20	334	eP	P	03 19 35.3	+0.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
KS15	Wonju Array Si	43.22	348	eP	P	03 19 50.4	-0.9
	comp=Z,14nm,1.2s						
KSAR	Wonju Array Be	43.22	348	P	P	03 19 50.4	-0.9
KSRS	Korea Array	43.22	348	P	P	03 19 50.4	-0.9
	comp=Z,1.5nm,0.6s,baz=167,slow=9.7,SNR=8.3						
CM01	Chiang Mai Arr	45.35	302	eP	P	03 20 08.0	-0.7
CM31	Chiang Mai Arr	45.38	302	eP	P	03 20 08.8	-0.1
	comp=Z,6.5nm,0.9s						
CMAR	Chiang Mai Arr	45.38	302	P	P	03 20 08.8	-0.1
	comp=Z,2.6nm,0.5s,baz=122,slow=5.8,SNR=13						
KMI	Kunming	45.80	312	P	P	03 20 14.5	+2.1
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,4.3s						
ERM	Erimo	46.82	5	eP	P	03 20 19.6	-0.2
	comp=Z,37nm,0.9s						
RPZ	Rata Peaks	48.16	148	P	P	03 20 31.9	+1.5
	comp=Z,18nm,0.9s,baz=60,slow=1.8,SNR=3.6						
URZ	Urewera	48.31	139	P	P	03 20 31.9	+0.3
	comp=Z,2.5nm,0.2s,baz=294,slow=23,SNR=7.5						
USRK	Ussuriysk Ar.	49.17	354	P	P	03 20 37.0	-0.9
	comp=Z,0.8nm,0.5s,baz=157,slow=7.8,SNR=3.4						
BJI	Beijing	49.17	337	eP	P	03 20 38.0	-0.1
BJI				S	S	03 27 42.8	+1.5
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
BJI				LR	LR		
	comp=Z,1μm,14.7s						
BJI				LR	LR		
	comp=Z,1μm,17.6s						
BJI				LR	LR		
	comp=Z,490nm,19.1s						
CN2	Changchun	49.84	348	eP	P	03 20 45.3	+2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	51.75	334	eP	P	03 20 58.5	+0.7
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,6.7s						
LZH	Lanzhou	52.09	324	eP	P	03 21 01.5	+1.1
LZH				pP	sP	03 21 13.3	-1.8
LZH				sP	pP	03 21 17.3	+6.3
LZH				ePP	PP	03 23 01.3	+2.3
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,89nm,6.5s						
LZH				LR	LR		
	comp=Z,340nm,15.2s						
LZH				LR	LR		
	comp=Z,370nm,15.5s						
LZH				LR	LR		
	comp=Z,480nm,18.7s						
GTA	Gaotai	56.69	325	eP	P	03 21 33.8	0.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	Ulaanbaatar	59.32	336	eP	P	03 21 52.3	+0.2
	comp=Z,6.6nm,1.2s						
SONA0	Songino Array	59.57	335	eP	P	03 21 53.7	-0.1
SONM	Songino Array	59.57	335	P	P	03 21 53.7	-0.1
	comp=Z,1.2nm,0.6s,baz=150,slow=6.8,SNR=9.9						
SONA1	Songino Array	59.57	335	eP	P	03 21 53.6	-0.2
WMQ	Urumqi	66.57	322	eP	P	03 22 42.0	+1.7
WMQ				pP	pP	03 22 51.0	-0.2
WMQ				sP	sP	03 22 57.0	+1.8
WMQ				LR	LR		
	comp=Z,330nm,31.5s						
WMQ				LR	LR		
	comp=Z,590nm,20.5s						
MK01	Makanchi Array	71.35	323	eP	P	03 23 09.4	-0.5
MK31	Makanchi Array	71.37	323	eP	P	03 23 09.9	-0.1
	comp=Z,2.7nm,1.0s						
MK32	Makanchi Array	71.37	323	eP	P	03 23 09.8	-0.3
MKAR	Makanchi Array	71.37	323	P	P	03 23 09.8	-0.3
	comp=Z,2.4nm,0.8s,baz=112,slow=7.5,SNR=23						
MAKZ	Makanchi	71.57	323	eP	P	03 23 10.9	-0.3
	comp=Z,3.0nm,0.8s						
ZAA0	Zalesovo Array	73.69	330	eP	P	03 23 26.8	+3.2
	comp=Z,22nm,1.5s						
ZALV	Zalesovo Beam	73.69	330	eP	P	03 23 22.1	-1.5
ZALV	Zalesovo Beam	73.69	330	P	P	03 23 22.3	-1.3
	comp=Z,1.2nm,0.5s,baz=124,slow=5.5,SNR=5.7						
ZAA1	Zalesovo Array	73.69	330	eP	P	03 23 22.3	-1.3
GAR	Garm	76.38	312	eP	P	03 23 39.6	-0.1
	comp=Z,7.4nm,1.0s						
KK31	Karatay Array	77.53	316	eP	P	03 23 45.7	-0.2
	comp=Z,1.7nm,0.8s						
KKAR	Karatay Array	77.53	316	eP	P	03 23 45.7	-0.2
	comp=Z,1.7nm,0.8s						
BRVK	Borovoye	81.03	325	eP	P	03 24 04.7	0.0
	comp=Z,5.9nm,0.8s						
QSPA	South Pole Qui	85.12	180	P	P	03 24 26.6	+0.8
	comp=Z,5.4nm,0.8s,baz=292,slow=1.3,SNR=4.4						
GEYT	Alibeck	85.43	309	P	P	03 24 27.8	0.0
	comp=Z,0.9nm,0.4s,baz=163,slow=5.6,SNR=4.9						
GEYT	Alibeck	85.43	309	P	P	03 24 27.8	0.0
ABKAR	Akbulak array	86.23	320	eP	P	03 24 30.6	-0.9
	comp=Z,2.2nm,0.8s						
ILAR	Eielson Array	87.82	24	P	P	03 24 37.6	-1.3
	comp=Z,3.7nm,0.9s,baz=262,slow=4.0,SNR=4.1						
ILB	Eielson Array	87.82	24	eP	P	03 24 37.5	-1.3
	comp=Z,12nm,1.4s						
CLL	Collm	115.39	326	epPKiKP	PKPdf	03 30 45.0	+13
CLL				ePP	PP	03 31 32.0	-0.8
CLL				epPP		03 31 44.0	
PLCA	Paso Flores	127.39	152	ePdif	Pdif	03 27 38.9	+1.6
GO06	Curarrehue	127.85	151	ePdif	Pdif	03 27 37.3	-2.2
CPUP	Villa Florida	145.41	154	ePKPdf	PKPab	03 31 29.5	+0.8
CPUP	Villa Florida	145.41	154	PKPbc	PKPbc	03 31 28.2	-0.3
	comp=Z,6.9nm,1.0s,baz=245,slow=3.4,SNR=6.6						
LPAZ	La Paz	146.28	129	ePKPdf	PKPab	03 31 34.0	+0.9
LPAZ	La Paz	146.28	129	PKPbc	PKPbc	03 31 32.5	+0.2
	comp=Z,4.5nm,0.7s,baz=343,slow=0.6,SNR=10						
SDV	Santo Domingo	150.76	80	ePKPbc	PKPbc	03 31 43.4	-0.1
EMPR	Esperanza - Ma	152.00	59	ePKPab	PKPab	03 31 56.3	+1.0

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*ISK **28** 03:31:19.3, 38°.93N×43°.53E, h5^{km}, ML1.9/5*

*ISCJB **28** 03:31:20.5±0.6, 38°.94N±0°.03×43°.51E±0°.05, h15^{km}±7^{km}, Error ellipse: s-maj=7.1km s-min=5.4km az=27.6*

*DDA **28** 03:31:20.1, 38°.93N×43°.50E, h7^{km}±2^{km}, ML2.5*

ISC 28 03:31:20.1±1.0, **38°.93N**±0°.04×**43°.53E**±0°.04, **h10**^{km}±7^{km}, **n9, σ0^{s}.79**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.07	32	iP	Pg	03 31 22.2	-0.3
VMUR				iS	Sg	03 31 25.0	+0.6
VMUR				IAML_P			
	comp=Z,4μm,0.1s						
ERCV	ERCIS-VAN	0.17	301	PG	Pg	03 31 23.8	-0.2
VANB	Van	0.35	198	PG	Pb	03 31 28.3	-0.2
VANB				SG	Sb	03 31 36.0	+1.8
CLDR	Caldiran	0.37	55	PG	Pg	03 31 27.6	+0.1
CLDR				SG	Sb	03 31 34.6	-0.2
CLDR	Caldiran	0.37	55	iP	Pg	03 31 28.1	+0.5
CLDR				iS	Sb	03 31 34.2	-0.6
CLDR				IAML_P			
	comp=Z,3μm,0.2s						
TVAN	Van	0.41	193	iP	Pg	03 31 28.0	-0.3
TVAN				iS	Sb	03 31 35.3	-0.7
TVAN				IAML_P			
	comp=Z,1μm,0.1s						
ADCV	BITLIS_Adilcev	0.64	259	iP	Pb	03 31 32.9	-0.6
ADCV				IAML_P			
	comp=Z,251nm,0.1s						
AGRB	Hanur-Agry	0.76	327	PG	Pb	03 31 35.1	-0.5
AGRB				SG	Sb	03 31 47.1	+1.0
MLAZ	Malazgirt-MUS	0.79	286	PG	Pb	03 31 35.6	-0.4

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*NNC **28** 03:38:13.7±2.5, 43°.92N×78°.29E, h0^{km}, mb1.9, mpv2.5, Error ellipse: s-maj=20.8km s-min=10.7km az=6.0*

SOME 28 03:38:14.3, 43°.95N×78°.37E, h15^{km}, **3C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARXS	Arharly	0.47	304	P	Pg	03 38 23.1	-0.6
	4.3nm,0.1s						
ARXS				S	Sg	03 38 29.6	-0.5
	4.5nm,0.1s						
ARXS	Arharly	0.47	304	eP	Pg	03 38 23.1	-0.6
	4.3nm,0.1s						
ARXS				eS	Sg	03 38 29.6	-0.5
	4.5nm,0.1s						
KURS	Kuram	0.48	197	P	Pg	03 38 24.1	+0.2
	0.7nm,0.0s						
KURS				S	Sg	03 38 30.8	+0.3
	3.5nm,0.1s						
KURS	Kuram	0.48	197	eP	Pg	03 38 24.1	+0.2
	0.7nm,0.0s						
KURS				eS	Sb	03 38 31.1	-0.4
	3.5nm,0.1s						
PDGK	Podgornoye	1.02	127	⇑P	Pn	03 38 36.3	+2.0
	1.4nm,0.6s						
PDGK				⇓S	Sb	03 38 46.9	-0.3
	1.4nm,0.6s						
DJR	Jarkent	1.09	69	eP	Pb	03 38 33.8	-1.2
	0.2nm,0.2s						
DJR				eS	Sb	03 38 47.7	-1.4
	1.1nm,0.4s						
MDOK	Medeo	1.24	231	⇑P	Pn	03 38 37.4	+0.1
	3.3nm,0.5s						
MDOK				⇑S	Sb	03 38 50.8	-2.6
	4.1nm,0.6s						

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*ISCJB **28** 03:53:55.0±0.5, 16°.43S±0°.05×72°.02W±0°.09, h150^{km}, mb3.9/9, Error ellipse: s-maj=13.3km s-min=4.8km az=153.2*

*IDC **28** 03:53:55.9±1.5, 16°.51S×72°.21W, h122^{km}±15^{km}, mb3.6/7, mb1 3.7/10, mb1mx3.5/28, mbtmp4.0/10, MS4.4/1, Ms1 4.4/1, ms1mx3.3/21, Error ellipse: s-maj=24.0km s-min=11.8km az=54.0*

*NEIC **28** 03:53:55.5±0.8, 16°.43S×72°.12W, h121^{km}±7^{km}, mb4.2/5, Error ellipse: s-maj=12.8km s-min=8.8km az=71.0*

ISC 28 03:53:56.0±0.7, **16°.36S**±0°.05×**71°.90W**±0°.07, **h150**^{km}, **n31, σ2^{s}.76**/35, **mb3.9**/9, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	Minye Minye	3.53	142	ePn	Pn	03 54 50.4	0.0
MNMC				eSn	Sn	03 55 32.5	0.0
LPAZ	La Paz	3.62	89	ePn	Pn	03 54 54.1	+2.1
LPAZ				eSn	Sn	03 55 27.8	-7.4
LPAZ	La Paz	3.62	89	P	Pn	03 54 55.6	+3.7
	4.6nm,0.3s,baz=310,slow=5.0,SNR=83						
LPAZ				S	Sn	03 55 27.8	-7.4
	3.3nm,0.3s,baz=268,slow=5.8,SNR=13						
PB11	IPOC Station P	4.00	148	ePn	Pn	03 54 55.8	-0.6
PB11				eSn	Sn	03 55 41.5	-2.0
PB01	IPOC Station P	5.19	154	ePn	Pn	03 55 11.0	-1.1
PB01				eSn	Sn	03 56 08.5	-3.0
PB04	IPOC Station P	6.17	165	ePn	Pn	03 55 24.1	-1.1
PB04				eSn	Sn	03 56 31.0	-4.0
NNA	Nana	6.47	312	P	Pn	03 55 27.3	-1.8
	1.4nm,0.3s,baz=137,slow=12,SNR=3.9						
NNA				S	Sn	03 56 39.0	-2.9
	1.6nm,0.3s,baz=248,slow=18,SNR=3.2						
LVC	Limon Verde	6.83	156	ePn	Pn	03 55 34.3	+0.2
LVC				eSn	Sn	03 56 46.7	-4.3
LVC	Limon Verde	6.83	156	P	Pn	03 55 34.2	0.0
	5.0nm,0.3s,baz=335,slow=6.6,SNR=48						
LVC				S	Sn	03 56 50.0	-1.0
	4.0nm,0.3s,baz=251,slow=22,SNR=10.0						
GO02	Mina Guanaco	9.02	167	ePn	Pn	03 56 02.9	-0.5
GO02				eSn	Sn	03 57 44.2	+0.5
PTGA	Pitinga	19.48	38	eP	Pn	03 58 13.1	-1.3
	7.7nm,1.1s						
PTGA	Pitinga	19.48	38	P	Pn	03 58 12.7	-1.6
	1.0nm,0.3s,baz=217,slow=16,SNR=8.9						
ROSC	El Rosal	21.20	353	LR	LR	04 08 40.2	
	comp=Z,1μm,20.9s,baz=240,slow=42						
BDFB	Brasilia	22.97	92	P	P	03 58 52.4	+4.6
	1.2nm,0.4s,baz=215,slow=0.9,SNR=3.4						
GO06	Curarrehue	23.15	179	eP	P	03 58 50.9	+1.7
	23nm,1.9s						
PLCA	Paso Flores	24.32	178	eP	P	03 59 00.8	+1.0
	20nm,1.8s						
PLCA	Paso Flores	24.32	178	P	P	03 59 00.8	+1.0
	0.9nm,0.8s,baz=25,slow=11,SNR=2.2						
SDV	Santo Domingo	25.11	3	eP	P	03 59 07.1	-0.2
	8.4nm,1.4s						
SDV	Santo Domingo	25.11	3	P	P	03 59 11.1	+3.8
	1.2nm,0.4s,baz=193,slow=9.2,SNR=2.7						
SJG	San Juan	34.72	10	eP	P	04 00 31.1	-0.6
	56nm,1.7s						
ULM	Lac du Bonnet	69.60	344	P	P	04 04 51.2	+2.5
	2.3nm,0.5s,baz=152,slow=7.4,SNR=6.1						
TOA1	Torodi Ar. Sit	78.41	73	eP	P	04 05 45.3	+4.6
TORD	Torodi Ar. Bea	78.41	73	P	P	04 05 45.3	+4.6
	0.6nm,0.5s,baz=248,slow=4.8,SNR=18						
ESDC	Sonseca Array	84.24	46	P	P	04 06 16.2	+5.2
	1.5nm,0.8s,baz=256,slow=4.9,SNR=5.7						
YKA	Yellowknife Ar	85.43	342	P	P	04 06 19.7	+3.5
	0.6nm,0.6s,baz=135,slow=5.1,SNR=16						
ZAA1	Zalesovo Array	138.33	21	ePKPdf	PKiKP	04 13 06.7	+1.3
ZALV	Zalesovo Beam	138.33	21	PKP	PKiKP	04 13 06.7	+1.3
	0.7nm,0.6s,baz=299,slow=3.1,SNR=4.0						
MK32	Makanchi Array	142.86	30	ePKPdf	PKPdf	04 13 13.3	+1.5
MKAR	Makanchi Array	142.86	30	PKP	PKPdf	04 13 13.3	+1.5
	0.1nm,0.2s,baz=323,slow=3.3,SNR=2.6						
SONA0	Songino Array	148.58	2	ePKPbc	PKPab	04 13 30.0	+0.7
SONM	Songino Array	148.58	2	PKPbc	PKPab	04 13 30.0	+0.7
	0.8nm,0.7s,baz=326,slow=1.4,SNR=4.6						

IDC 28 04:00:56.0±4.6, **4°.65S**×**147°.67E, h0**^{km}, **mb3.3**/1, **mb1 3.6**/2, **mb1mx3.2**/25, **mbtmp3.3**/2, **ML3.4**/1, **Error ellipse: s-maj=161.2km s-min=50.2km az=107.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.99	219	P	P	04 05 30.6	+0.4
	0.1nm,0.3s,baz=44,slow=11,SNR=5.2						
ASAR	Alice Springs	23.10	214	P	P	04 06 03.3	-0.4
	0.3nm,0.3s,baz=37,slow=10,SNR=5.1						
TORD	Torodi Ar. Bea	145.38	286	PKPbc	PKPbc	04 20 36.1	-0.8
	0.2nm,0.4s,baz=79,slow=2.6,SNR=4.5						

UCR 28 04:30:48.4±1.5, **11°.56N**×**86°.46W, h56**^{km}±22^{km}, **MD3.9, ML3.3, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XAVN	Gruta Xavier	0.60	12	eP	Pn	04 31 02.1	+0.8
MGAN	Managua	0.62	19	eP	Pn	04 31 01.9	+0.3
COPN	Copaltepe	0.63	348	eP	Pn	04 31 02.0	+0.3
CONN	Concepcion	0.81	89	eP	Pn	04 31 04.1	+0.2
MOMN	Momotombo	0.85	355	eP	Pn	04 31 04.5	+0.1
CNGN	Cerro Negro	0.97	346	eP	Pn	04 31 04.2	-1.7
CNGN				eS	Sn	04 31 19.4	+0.5
CNGN				IAML		04 31 24.2	
	comp=N,320nm,0.1s						
BOAB	BOACO BROADBAN	1.18	41	eP	Pn	04 31 08.7	0.0
GBS3	Finca Las Img	1.25	128	iP	Pn	04 31 09.4	-0.3
GB1A	Borinquen Arri	1.27	125	iP	Pn	04 31 10.1	0.0
CRIN	San Cristobal	1.27	333	eP	Pn	04 31 10.4	+0.3
CRIN				eS	Sn	04 31 26.7	+0.4
CRIN				IAML		04 31 28.6	
	comp=E,849nm,0.3s						
LAPC	Finca la Perla	1.27	128	iP	Pn	04 31 10.0	0.0
LAPC				iS	Sn	04 31 25.7	-0.4
BUEV	Buena Vista	1.28	126	iP	Pn	04 31 09.7	-0.4
NY14	Universidad de	1.28	135	iP	Pn	04 31 11.3	+1.2
BUAI	Buenos Aires	1.29	121	iP	Pn	04 31 10.6	+0.3
ACON	Acoyapa	1.32	72	eP	Pn	04 31 10.3	-0.3
MATN	Matagalpa	1.46	21	eP	Pn	04 31 12.7	+0.1
ESTN	Estel	1.54	3	eP	Pn	04 31 14.2	+0.5
PTEN	Parque Tenorio	1.67	120	iP	Pn	04 31 15.7	+0.3
ACAL	Aguas Claras	1.67	123	iP	Pn	04 31 15.9	+0.4
JTS	JuntasAbangare	1.94	130	eP	Pn	04 31 19.2	+0.2

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*JMA **28** 04:42:06.5±0.2, 36°.87N×141°.86E, h26^{km}±3^{km}, M2.7*

*IDC **28** 04:42:07.8±3.1, 37°.30N×141°.52E, h0^{km}, mb3.5/2, mb1 3.6/3, mb1mx3.3/30, mbtmp3.4/3, ML2.0/1, Error ellipse: s-maj=68.7km s-min=36.5km az=52.0*

ISC 28 04:42:09.7±2.6, **36°.95N**±0°.09×**141°.7E**±0°.1, **h33**^{km}, **n16, σ0^{s}.95**/11, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.70	283	P	Pn	04 42 23.0	-0.3
JFK	Kawauchi	0.75	304	P	Pn	04 42 23.4	-0.6

JFK				eS	Sb	04 42 35.8	+1.5
JHO	Hitachi	0.93	249	P	Pn	04 42 25.6	-0.8
JMM	Marumori	1.15	324	P	Pn	04 42 28.9	-0.5
JFT	Otama	1.19	299	P	Pb	04 42 31.1	-0.7
JIO	Ouri	1.52	351	P	Pn	04 42 35.0	+0.4
JOU	Okura	1.62	331	P	Pn	04 42 36.6	+0.7
JOU				eS	Sb	04 42 58.2	-0.8
MJAR	Matsushiro Arr	2.79	263	Pn	Pn	04 42 53.5	+1.4
	0.3nm,0.3s,baz=89,slow=12,SNR=11						
H11N2	WAKE ISLAND Hy	27.94	121	T	T	05 17 05.2	
	baz=313						
H11N1	WAKE ISLAND Hy	27.95	121	T	T	05 17 05.2	
	baz=313						
H11N3	WAKE ISLAND Hy	27.96	121	T	T	05 17 05.8	
	baz=313						
SONM	Songino Array	27.99	304	P	P	04 47 57.7	+0.2
	0.5nm,0.7s,baz=92,slow=9.0,SNR=3.5						
H11S1	WAKE ISLAND Hy	28.65	123	T	T	05 17 58.2	
	baz=315						
H11S3	WAKE ISLAND Hy	28.65	123	T	T	05 18 06.1	
	baz=315						
H11S2	WAKE ISLAND Hy	28.67	123	T	T	05 18 08.6	
	baz=315						
WRA	Warramunga Arr	57.00	188	P	P	04 51 57.6	+5.4
	0.7nm,1.0s,baz=2.6,slow=7.8,SNR=2.7						

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*JMA **28** 04:44:01.1±0.1, 38°.89N×142°.68E, h40^{km}±2^{km}, M3.7*
*IDC **28** 04:44:03.2±4.9, 38°.81N×142°.80E, h59^{km}±47^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.2/30, mbtmp3.5/6, ML2.7/1, Error ellipse: s-maj=34.3km s-min=24.9km az=102.0*
ISC 28 04:43:58.0±2.0**, 38°.88N**±0°.05×**142°.75E**±0°.07**, h13**^{km}±11^{km}**, n26, σ0^{s}.98**/29**, mb3.5**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.87	284	P	Pn	04 44 16.4	+0.5
OFUJ				S	Sb	04 44 27.0	+0.5
JKMT	Kesennumamotoy	1.00	267	P	Pn	04 44 18.2	+0.5
JKMT				S	Sb	04 44 30.0	-0.3
MIYJ	Miyakonagasawa	1.01	314	P	Pn	04 44 18.2	+0.4
MIYJ				S	Sb	04 44 30.8	+0.4
JIO	Ouri	1.18	249	P	Pg	04 44 20.6	-0.1
JIO				S	Sb	04 44 34.3	-1.1
JMK	Ichinoseki	1.20	274	P	Pg	04 44 21.2	+0.1
JMK				S	Sb	04 44 35.7	-0.3
JTH	Tanohata	1.26	327	P	Pg	04 44 22.3	0.0
JTH				eS	Sb	04 44 38.5	+0.7
JOM	Ohasama	1.28	298	P	Pg	04 44 22.5	-0.1
JOM				eS	Sb	04 44 38.3	-0.1
JKZ	Kuzumaki	1.56	315	P	Pb	04 44 26.6	-0.2
JKZ				S	Sn	04 44 45.8	+0.2
JOU	Okura	1.71	253	P	Pb	04 44 28.5	-0.9
JOU				S	Sn	04 44 49.1	-0.3
JRG	Rokugo	1.73	288	P	Pb	04 44 29.0	-0.6
JANG	Nango	1.77	328	P	Pn	04 44 28.9	+0.5
JMM	Marumori	1.84	237	P	Pn	04 44 29.9	+0.6
JYK	Kaneyama	1.87	272	P	Pb	04 44 31.0	-1.0
MJAR	Matsushiro Arr	4.29	238	P	Pn	04 45 05.8	+2.8
	0.4nm,0.3s,baz=45,slow=10,SNR=9.1						
MAT	Matsushiro	4.29	239	P	Pn	04 45 06.0	+2.9
SONM	Songino Array	27.69	301	P	P	04 49 46.0	+0.1
	0.5nm,0.6s,baz=104,slow=9.8,SNR=4.4						
H11N2	WAKE ISLAND Hy	28.27	126	T	T	05 20 25.7	
	baz=317,slow=75,SNR=8.9						
H11N1	WAKE ISLAND Hy	28.28	126	T	T	05 20 25.2	
	baz=317,slow=75,SNR=24						
H11N3	WAKE ISLAND Hy	28.29	126	T	T	05 20 25.9	
	baz=317,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	29.06	128	T	T	05 21 22.1	
	baz=318,slow=76,SNR=3.0						
H11S3	WAKE ISLAND Hy	29.06	128	T	T	05 21 24.3	
	baz=318,slow=76,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.07	128	T	T	05 21 25.2	
	baz=318,slow=76,SNR=3.5						
MKAR	Makanchi Array	44.06	301	P	P	04 52 06.1	+0.6
	0.1nm,0.2s,baz=88,slow=9.4,SNR=4.2						
ILAR	Eielson Array	47.37	33	P	P	04 52 30.9	-0.5
	0.4nm,0.8s,baz=262,slow=6.3,SNR=4.2						
INK	Inuvik	52.26	28	P	P	04 53 08.4	-0.1
	0.4nm,0.7s,baz=269,slow=2.7,SNR=2.0						
WRA	Warramunga Arr	59.04	189	P	P	04 53 56.5	-1.2
	0.6nm,0.7s,baz=6.6,slow=7.0,SNR=10.0						

MEX 28 04:47:33.5±0.5**, 16°.04N**×**98°.79W, h20**^{km}±48^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.72	61	iP	Pb	04 47 45.2	-2.3
PNIG				iS	Sb	04 47 54.4	-2.6

IDC 28 04:59:30.0±2.1**, 22°.74S**×**175°.95W, h0**^{km}**, mb3.8**/6**, mb1 4.1**/6**, mb1mx3.9**/25**, mbtmp3.8**/6**, Error ellipse: s-maj=107.0km s-min=26.5km az=156.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.91	259	P	P	05 07 55.0	+0.3
	0.9nm,0.9s,baz=88,slow=7.5,SNR=5.6						
WRA	Warramunga Arr	46.22	264	P	P	05 07 56.5	-0.7
	0.8nm,0.3s,baz=95,slow=8.5,SNR=120						
NVAR	Mina Array Bea	81.37	42	P	P	05 11 47.9	-1.0
	0.8nm,0.8s,baz=233,slow=8.8,SNR=5.4						
USRK	Ussuriysk Ar.	81.89	325	P	P	05 11 51.6	+0.4
	2.0nm,0.9s,baz=122,slow=5.4,SNR=3.1						
TXAR	Lajitas Array	86.68	56	P	P	05 12 16.9	+0.8
	0.3nm,0.8s,baz=237,slow=5.0,SNR=1.5						
ILAR	Eielson Array	90.08	12	P	P	05 12 31.6	+0.3
	0.4nm,0.9s,baz=232,slow=5.6,SNR=3.5						
AKASG	Malin Array Be	145.89	331	PKPbc	PKPdf	05 19 09.9	-0.7
	1.4nm,0.6s,baz=41,slow=4.0,SNR=8.2						
BRTR	Keskin Array B	149.75	311	PKPbc	PKPbc	05 19 22.4	+0.2
	0.4nm,0.7s,baz=270,slow=1.0,SNR=3.4						

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*IDC **28** 05:10:56.7±0.9, 7°.81N×127°.71E, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.7/38, mbtmp3.8/8, ML4.4/1, Error ellipse: s-maj=28.6km s-min=17.9km az=76.0*
*ISCJB **28** 05:10:57.5±2.4, 7°.85N±0°.06×127°.78E±0°.05, h16^{km}±18^{km}, mb3.7/7, Error ellipse: s-maj=10.9km s-min=8.0km az=19.0*
ISC 28 05:10:56.9±3.6**, 7°.80N**±0°.06×**127°.60E**±0°.07**, h1**^{km}±22^{km}**, n20, σ1^{s}.47**/27**, mb3.7**/7**, 3C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	1.29	287	⇑iP	Pn	05 11 20.9	-1.2
BIPH				iS	Sb	05 11 36.2	-2.8
MATI	Mati	1.58	238	eP	Pn	05 11 26.5	+0.3
MATI				eS	Sn	05 11 45.5	-1.8
DAV	Davao City (W)	2.13	250	Pn	Pn	05 11 35.6	+1.8
	101nm,0.3s,baz=60,slow=20,SNR=2.9						
DAV				Sn	Sb	05 12 04.8	+1.3
	70nm,0.3s,baz=251,slow=22,SNR=21						
DMPH	Davao City--Mi	2.20	251	⇑eP	Pg	05 11 48.0	+8.9
DMPH				eS	Sb	05 12 05.5	+0.2
BUTP	Butuan	2.28	301	eP	Pn	05 11 36.5	+0.8
BUTP				eS	Sn	05 12 06.2	+1.7
BUKP	Musuan	2.52	272	eP	Pn	05 11 41.2	+2.1
BUKP				eS	Sb	05 12 14.4	-0.2
DDMP	Don Marcelino,	2.52	228	eP	Pb	05 11 42.6	-0.5
KCP	Kidapawan	2.61	253	⇓iP	Pn	05 11 42.8	+2.3
KCP				iS	Sn	05 11 56.5	-16
CGP	Cagayan de Oro	2.95	283	⇓eP	Pb	05 11 49.1	-1.3
CGP				eS	Sn	05 12 22.7	+1.6
SKMP	Bagumbayan, Su	3.29	247	eP	Pb	05 11 56.0	-0.2
SKMP				eS	Sn	05 12 28.1	-1.5
CTBH	Cotabato--PC H	3.38	260	⇑iP	Pn	05 11 52.7	+1.8
MSLP	Maasin	3.56	311	eP	Pn	05 11 55.2	+1.8
FITZ	Fitzroy Crossi	25.81	184	P	P	05 16 30.2	+0.3
	2.8nm,0.8s,baz=10,slow=11,SNR=3.1						
WRA	Warramunga Arr	28.36	167	P	P	05 16 52.2	-0.6
	0.7nm,0.5s,baz=349,slow=9.7,SNR=10.0						
ASAR	Alice Springs	31.88	169	P	P	05 17 23.8	-0.2
	0.5nm,0.6s,baz=355,slow=9.7,SNR=6.5						
STKA	Stephens Creek	41.66	162	P	P	05 18 47.1	0.0
	2.2nm,0.5s,baz=333,slow=9.2,SNR=4.6						
SONM	Songino Array	43.78	339	P	P	05 19 04.8	+0.5
	1.0nm,0.7s,baz=158,slow=8.5,SNR=6.4						
MKAR	Makanchi Array	54.78	323	P	P	05 20 28.7	+0.3
	0.6nm,0.6s,baz=122,slow=8.5,SNR=6.2						
ILAR	Eielson Array	81.08	26	P	P	05 23 13.8	+0.1
	0.2nm,0.6s,baz=230,slow=5.3,SNR=4.1						
TORD	Torodi Ar. Bea	122.39	291	PKP	PKPdf	05 29 53.1	-2.0
	0.4nm,0.6s,baz=119,slow=2.3,SNR=4.4						

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*IDC **28** 05:18:18.0±1.0, 3°.27S×146°.83E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.1/30, mbtmp4.1/11, ML3.9/1, MS3.6/9, Ms1 3.6/9, ms1mx3.4/26, Error ellipse: s-maj=36.3km s-min=17.3km az=101.0*
*NEIC **28** 05:18:18.6±0.4, 3°.28S×146°.92E, h10^{km}, mb4.5/8, Error ellipse: s-maj=12.7km s-min=7.4km az=105.0*
*ISCJB **28** 05:18:19.2±0.4, 3°.32S±0°.05×146°.91E±0°.08, h25^{km}, mb4.4/22, MS3.6/7, Error ellipse: s-maj=11.1km s-min=6.6km az=12.1*
ISC 28 05:18:20.7±0.5**, 3°.27S**±0°.07×**146°.93E**±0°.10**, h25**^{km}**, n48, σ1^{s}.38**/40**, mb4.4**/22**, MS3.6**/7**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	1.29	20	ePn	Pn	05 18 41.1	-2.1
COEN	Coen	11.25	199	ePn	Pn	05 21 02.0	+2.0
HNR	Honiara	14.31	116	ePn	Pn	05 21 42.2	+0.2
HNR	Honiara	14.31	116	LR	LR	05 27 35.4	
	comp=Z,132nm,18.5s,baz=328,slow=39						
CTA	Charters Tower	16.73	182	Pn	Pn	05 22 13.9	+0.3
	0.3nm,0.3s,baz=6.8,slow=15,SNR=2.2						
GUMO	Guam	16.87	353	LR	LR	05 28 26.2	
	comp=Z,152nm,18.0s,baz=126,slow=36						
WRAB	Tennant Creek	20.62	216	eP	Pn	05 22 59.0	-1.8
	26nm,0.8s						
WB2	Warramunga Arr	20.62	216	eP	P	05 22 58.6	+0.1
WR1	Warramunga Arr	20.63	216	eP	P	05 22 58.6	0.0
	26nm,0.8s						
WRA	Warramunga Arr	20.63	216	P	P	05 22 58.6	0.0
	17nm,0.7s,baz=40,slow=11,SNR=40						
WRA				LR	LR	05 32 24.6	
	comp=Z,174nm,18.1s,baz=25,slow=41						
DAV	Davao City (W)	23.65	296	LR	LR	05 32 23.3	
	comp=Z,108nm,19.2s,baz=20,slow=36						
AS01	Alice Springs	23.84	211	eP	P	05 23 33.3	+1.1
KWAJ	Kwajalein Atol	23.86	60	eP	P	05 23 31.7	-0.7
	259nm,0.9s						
AS31	Alice Springs	23.87	211	eP	P	05 23 30.7	-1.8
	2.1nm,0.6s						
ASAR	Alice Springs	23.87	211	P	P	05 23 32.9	+0.4
	7.8nm,1.0s,baz=44,slow=7.8,SNR=30						
ASAR				LR	LR	05 32 51.2	
	comp=Z,146nm,18.4s,baz=40,slow=37						
FITZ	Fitzroy Crossi	25.54	233	eP	P	05 23 47.0	-0.6
	19nm,1.0s						
FITZ	Fitzroy Crossi	25.54	233	P	P	05 23 47.4	-0.3
	11nm,0.8s,baz=40,slow=10,SNR=9.9						
FITZ				LR	LR	05 34 25.9	
	comp=Z,203nm,19.1s,baz=36,slow=38						
DZM	Mont Dzumac	26.61	136	LR	LR	05 33 20.1	
	comp=Z,268nm,20.2s,baz=256,slow=34						
ARMA	Armidale	27.37	171	eP	P	05 24 03.7	-0.6
	69nm,1.9s						
STKA	Stephens Creek	28.90	189	eP	P	05 24 18.1	+0.3
	2.2nm,1.1s						
STKA	Stephens Creek	28.90	189	P	P	05 24 19.4	+1.6
	1.8nm,0.6s,baz=355,slow=11,SNR=2.5						
BBOO	Buckleboo	31.11	198	eP	P	05 24 36.0	-1.2
	100nm,1.8s						
MBWA	Marble Bar	31.88	234	eP	P	05 24 42.2	-2.0
	69nm,1.4s						
KKM	Kota Kinabalu	32.03	287	eP	P	05 24 43.2	-2.6
	33nm,1.4s						
FORT	Forrest	32.66	211	eP	P	05 24 48.0	-2.9
	76nm,1.4s						
KSRS	Korea Array	44.20	338	LR	LR	05 42 32.0	
	comp=Z,79nm,21.6s,baz=328,slow=33						
XAN	Xi'an	51.56	319	P	P	05 27 25.0	0.0
XAN				pP	sP	05 27 38.0	+2.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
CM31	Chiang Mai Arr	51.94	296	eP	P	05 27 28.5	+0.5
	comp=Z,5.7nm,0.9s						
CMAR	Chiang Mai Arr	51.94	296	P	P	05 27 28.5	+0.5
	comp=Z,2.2nm,0.6s,baz=117,slow=6.1,SNR=15						
GTA	Gaotai	60.62	319	eP	P	05 28 32.5	+2.7
GTA				pP	pP	05 28 37.0	-0.2
GTA				sP	sP	05 28 40.5	+0.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONA0	Songino Array	62.00	330	eP	P	05 28 40.0	+0.9
SONM	Songino Array	62.00	330	P	P	05 28 40.0	+0.9
	comp=Z,0.4nm,0.6s,baz=134,slow=4.3,SNR=3.8						
MK01	Makanchi Array	75.35	320	eP	P	05 30 02.5	+0.4
MK31	Makanchi Array	75.36	320	eP	P	05 30 03.0	+0.8
	comp=Z,5.5nm,1.5s						
MK32	Makanchi Array	75.36	320	eP	P	05 30 03.5	+1.2
MKAR	Makanchi Array	75.36	320	P	P	05 30 03.5	+1.2
	comp=Z,0.9nm,0.7s,baz=106,slow=7.7,SNR=11						
MAKZ	Makanchi	75.57	320	eP	P	05 30 03.5	+0.1
	comp=Z,5.2nm,1.3s						
ZALV	Zalesovo Beam	76.68	328	P	P	05 30 10.9	+1.4
	comp=Z,0.5nm,0.5s,baz=116,slow=9.9,SNR=2.7						
ZALV				LR	LR	06 02 03.4	
	comp=Z,40nm,21.8s,baz=72,slow=34						
ZAA1	Zalesovo Array	76.68	328	eP	P	05 30 10.9	+1.4
SCM	Sheep Creek Mo	81.67	26	eP	P	05 30 34.8	-2.0
	comp=Z,24nm,0.7s						
ILAR	Eielson Array	83.02	23	P	P	05 30 44.5	+0.9
	comp=Z,0.7nm,0.9s,baz=260,slow=5.5,SNR=5.6						
ILB	Eielson Array	83.02	23	eP	P	05 30 44.7	+1.0
	comp=Z,21nm,1.9s						
YKA	Yellowknife Ar	96.80	28	P	P	05 31 51.0	+1.8
	comp=Z,0.1nm,0.6s,baz=272,slow=4.6,SNR=3.5						
YKB5	Yellowknife Ar	96.80	28	eP	P	05 31 50.6	+1.5
TORD	Torodi Ar. Bea	144.26	288	PKP	PKPbc	05 37 54.0	0.0
	comp=Z,1.5nm,0.9s,baz=71,slow=2.6,SNR=9.0						
TOA1	Torodi Ar. Sit	144.27	288	ePKPdf	PKPbc	05 37 54.0	0.0
DBIC	Dimbokro	151.69	278	ePKPbc	PKPbc	05 38 12.3	-1.9
DBIC	Dimbokro	151.69	278	PKPbc	PKiKP	05 38 15.2	+0.6
	comp=Z,2.1nm,0.8s,baz=45,slow=2.9,SNR=3.3						

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*SOME **28** 05:20:32.2, 42°.20N×82°.28E, h10^{km}*
*NNC **28** 05:20:36.0±4.6, 42°.23N×82°.19E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=37.9km s-min=18.7km az=158.0*
ISC 28 05:20:33.9±3.3**, 42°.0N**±0°.2×**82°.1E**±0°.1**, h14**^{km}**, n7, σ2^{s}.12**/13**, 4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	2.27	301	eP	Pn	05 21 09.8	-1.3
	14nm,0.2s						
SHLS				eS	Sn	05 21 36.8	-2.2
	79nm,0.5s						
PDGK	Podgornoye	2.34	305	⇑Pn	Pn	05 21 14.4	+2.3
	3.1nm,0.6s						
PDGK				⇓Sn	Sb	05 21 45.2	+0.4
	36nm,0.6s						
DJR	Jarkent	2.87	324	eP	Pb	05 21 22.1	-2.8
	1.2nm,0.4s						
DJR				eS	Sb	05 21 58.1	-1.8
	2.6nm,0.5s						
KAPS	Kapalarasan	3.83	329	eP	Pb	05 21 40.3	-0.9
	1.6nm,0.5s						
KAPS				eS	Sb	05 22 29.1	+1.6
	3.5nm,0.4s						
ARXS	Arharly	3.83	306	eP	Pb	05 21 41.7	+0.4
	1.9nm,0.4s						
ARXS				eS	Sb	05 22 31.7	+4.1
	4.6nm,0.3s						
MK31	Makanchi Array	4.77	1	⇓Pn	Pn	05 21 46.0	+0.8
	0.1nm,0.3s,baz=197,slow=14,SNR=4.2						
MK31				⇑Lg	Lg	05 23 00.5	
	1.5nm,0.6s,baz=186,slow=29,SNR=4.6						
MAKZ	Makanchi	4.78	359	⇑Pn	Pn	05 21 46.3	+0.8
	2.3nm,1.1s						
MAKZ				⇓Sn	Sn	05 22 41.3	+0.6
	1.3nm,0.6s						
MAKZ				⇑Lg	Lg	05 23 01.2	
	1.5nm,0.9s						

NEIC 28 05:42:27.2±0.0**, 66°.92N**×**156°.95W, h18**^{km}**, ML3.5**(AEIC)**, After AEIC., Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IM3	Indian Mountai	1.59	125	P	Pn	05 42 54.2	-0.1
GCSA	Galena City Sc	2.18	179	P	Pn	05 43 02.7	+0.4
GCSA				S	Sn	05 43 29.0	+0.2
PS05	TAPS Pump Stn5	2.48	90	P	Pn	05 43 06.5	-0.1
PS05				S	Sb	05 43 39.8	-1.5
RDOG	Red Dog Mine	2.56	299	P	Pn	05 43 08.4	+0.7
RDOG				S	Sb	05 43 41.1	-2.5
COLD	Coldfoot	2.66	80	P	Pn	05 43 09.7	+0.6
PS06	TAPS Pump Stn6	3.09	107	P	Pn	05 43 15.3	+0.3
PS06				S	Sn	05 43 53.7	+2.4
MLY	Manley	3.17	124	P	Pn	05 43 15.8	-0.2
TOLK	Toolik Lake Re	3.29	55	P	Pn	05 43 19.2	+1.5
TT01	Tatalina	4.04	174	P	Pn	05 43 28.6	+0.5
CAST	Castle Rocks	4.07	147	P	Pn	05 43 29.5	+1.2
MDM	Murphy Dome	4.07	115	P	Pn	05 43 28.9	+0.5
BWN	Browne	4.15	128	P	Pn	05 43 30.7	+1.2
ANM	Nome	4.20	240	P	Pn	05 43 30.0	-0.1
COLA	College	4.26	115	P	Pn	05 43 31.5	+0.6
CCB	Clear Creek Bu	4.40	117	P	Pn	05 43 33.5	+0.6
WRH	Wood River Hil	4.41	120	P	Pn	05 43 33.7	+0.7
TRF	Thorofare Moun	4.47	138	P	Pn	05 43 35.6	+1.6
PPLA	Purkeypile	4.51	151	P	Pn	05 43 36.0	+1.4
MCK	McKinley	4.63	130	P	Pn	05 43 36.5	+0.4
IL1	Eielson Array	4.66	113	P	Pn	05 43 36.9	+0.5
PRP	Porcupine Dome	4.83	102	P	Pn	05 43 39.3	+0.3
BM3	Burnt Mountain	4.83	78	P	Pn	05 43 39.3	+0.4
RND	Reindeer	4.90	132	P	Pn	05 43 40.7	+0.8
DHY	Denali Highway	5.59	129	P	Pn	05 43 50.8	+1.3
SVW2	Sparrevohn	5.87	174	P	Pn	05 43 54.1	+1.0
SPWE	Spurr West	5.98	159	P	Pn	05 43 55.9	+1.2
SCRK	Sand Creek	6.15	113	P	Pn	05 43 57.6	+0.5
PAX	Paxson	6.28	124	P	Pn	05 43 59.5	+0.8
BCA3	Beaver Creek A	7.49	114	P	Pn	05 44 16.4	+1.0

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*NIC **28** 05:52:40.3±0.1, 34°.62N×33°.13E, h10^{km}, ML3.0*
*ISCJB **28** 05:52:41.4±1.0, 34°.66N±0°.06×33°.10E±0°.04, h12^{km}±5^{km}, Error ellipse: s-maj=9.8km s-min=6.0km az=175.1*
*ISK **28** 05:52:41.4, 34°.68N×33°.09E, h13^{km}, ML2.4/9*
ISC 28 05:52:42.0±1.2**, 34°.72N**±0°.06×**33°.10E**±0°.04**, h13**^{km}±9^{km}**, n17, σ0^{s}.65**/23**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SZAC	Souni	0.18	282	P	Pg	05 52 45.8	-0.4
	baz=123						
SZAC				S	Sg	05 52 49.9	+0.8
CSS	Mathiatis	0.31	38	PG	Pg	05 52 48.6	+0.1
CSS				SG	Sb	05 52 54.4	-0.1
CSS	Mathiatis	0.31	38	P	Pg	05 52 48.1	-0.4
	baz=205						
CSS				S	Sb	05 52 53.9	-0.6
AKIN	Akıncılar- Kıb	0.42	45	PG	Pb	05 52 50.9	-0.5
AKIN				SG	Sb	05 52 57.6	-0.1
LEF	Lefka	0.44	337	PG	Pb	05 52 51.2	-0.4
LEF				SG	Sb	05 52 58.6	+0.6
MAMC	Mammari	0.46	12	P	Pg	05 52 51.1	-0.1
	baz=187						
ALFC	Alefka	0.60	317	P	Pg	05 52 53.8	0.0
	baz=140						
ALFC				S	Sb	05 53 03.8	+1.0
PPCY	Paphos	0.64	285	P	Pg	05 52 53.6	-0.9
	baz=111						
LFK	Lefkose	0.67	32	PG	Pb	05 52 55.6	+0.1
AKMC	Akamas	0.70	296	P	Pg	05 52 55.0	-0.7
	baz=121						
AKKU	Akkuyu-Mersin	1.49	14	PN	Pb	05 53 08.9	-0.6
IKL	Isikli	1.59	17	PN	Pn	05 53 10.4	+0.5
BERE	Bereket-Mersin	1.63	4	PN	Pn	05 53 10.9	+0.4
TEVE	Tevekalti-Mers	1.74	9	PN	Pn	05 53 12.5	+0.5
KEBE	Keben-Mersin	1.80	16	PN	Pn	05 53 13.1	+0.3
KIZK	Mersin	1.96	26	PN	Pb	05 53 16.1	-1.4
MMLI	Mount Malkishu	2.99	139	PN	Pn	05 53 29.9	+0.8

NNC 28 06:32:22.4±2.0**, 54°.14N**×**86°.45E, h0**^{km}**, mb3.6, mpv3.0, 8C-2D, Error ellipse: s-maj=19.1km s-min=8.7km az=9.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	0.98	259	⇑P	Pg	06 32 41.0	-0.2
	2.0nm,0.6s						
ZAA0				⇓S	Sb	06 32 54.8	-0.8
	20nm,1.1s						
KURK	Kurchatov	5.89	238	⇑Pn	Pn	06 33 53.5	+2.7
	2.9nm,1.2s						
KURK				⇓Lg	Lg	06 35 32.1	
	4.9nm,0.7s						
MK31	Makanchi Array	7.82	201	⇑Pn	Pn	06 34 19.6	+2.3
	1.0nm,0.8s,baz=19,slow=13,SNR=8.4						
MK31				⇑Sn	Sn	06 35 47.4	+0.9
	0.3nm,0.4s,baz=24,slow=27,SNR=5.1						
MK31				⇑Lg	Lg	06 36 31.0	
	1.5nm,0.7s,baz=28,slow=32,SNR=6.3						
MAKZ	Makanchi	7.87	203	⇑Pn	Pn	06 34 16.1	-2.0
	2.3nm,1.4s						
MAKZ				⇑Sn	Sn	06 35 48.3	+0.5
	1.4nm,0.7s						
MAKZ				⇑Lg	Lg	06 36 30.3	
	3.4nm,1.2s						

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*ISK **28** 06:57:25.3, 39°.37N×37°.70E, h5^{km}, ML3.5/12*
*DDA **28** 06:57:26.5, 39°.38N×37°.75E, h7^{km}±2^{km}, ML3.8*
ISC 28 06:57:27.0±1.0**, 39°.39N**±0°.02×**37°.76E**±0°.02**, h11**^{km}±9^{km}**, n31, σ1^{s}.21**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUKAN	kangal_SIVAS	0.23	252	iP	Pg	06 57 31.6	-0.4
CUKAN				iS	Sg	06 57 35.4	+0.1
CUZAR	Zara_SIVAS	0.50	1	iP	Pb	06 57 37.5	-0.4
HEKM	Malatya_Hekimh	0.53	163	iP	Pg	06 57 37.3	-0.1
HEKM				iS	Sb	06 57 45.8	-0.4
HEKM				IAML_P			
	comp=Z,24μm,0.1s						
KEMA	Kemaliye	0.58	102	iP	Pb	06 57 38.1	-1.2
KEMA				IAML_P			
	comp=Z,86μm,0.1s						
SCER	sogukcermik	0.68	314	iP	Pb	06 57 40.3	-0.5
SCER				iS	Sb	06 57 50.8	+0.5
CUGUR	Gurin_SVAS	0.76	210	iP	Pg	06 57 41.1	-0.7
CUGUR				iS	Sb	06 57 53.5	+0.8
REFA	Refahiye_ERZN	0.78	89	iP	Pn	06 57 45.7	+1.6
REFA				IAML_P			
	comp=Z,5μm,0.2s						
CUALT	Altinyayla-SIV	0.79	262	iP	Pg	06 57 41.9	-0.3
CUALT				iS	Sb	06 57 53.5	+0.1
SVSK	Karacayir	0.79	312	PG	Pg	06 57 41.4	-0.8
SVSK				SG	Sb	06 57 53.2	-0.1
DARE	Darende-Malaty	0.84	195	PG	Pg	06 57 42.2	-1.1
DARE				SG	Sg	06 57 54.5	+0.2
RSDY	Resadiye-TOKAT	1.06	342	PG	Pb	06 57 46.5	-0.8
AKCD	Akcadag	1.10	173	iP	Pb	06 57 47.5	-0.6
AKCD				iS	Sn	06 58 03.4	-0.2
ELBS	KAHRAMANMARAS	1.17	205	iP	Pg	06 57 49.5	0.0
ELBS				iS	Sg	06 58 06.9	+2.3
CUSAR	Sarkisla-SIVAS	1.17	272	iP	Pn	06 57 48.1	-1.3
CUSAR				iS	Sg	06 58 06.8	+2.1
ELZG	Elazig	1.31	132	iP	Pg	06 57 51.8	-0.4
ELZG				iS	Sg	06 58 10.8	+1.6
TOKT	Tokat	1.32	315	PN	Pb	06 57 51.1	-0.6
TOKA	Tokat	1.35	314	iP	Pg	06 57 53.2	+0.2
TOKA				IAML_P			
	comp=Z,11μm,0.2s						
KELT	Kelkit	1.38	56	iP	Pg	06 57 53.8	+0.2
KELT				IAML_P			
	comp=Z,6μm,0.2s						
TNCL	Tunceli-Merkez	1.42	101	iP	Pg	06 57 56.9	+2.7
ERBA	Erbaa	1.50	330	iP	Pg	06 57 55.9	+0.1
ERBA				IAML_P			
	comp=Z,4μm,0.2s						
ERZN	Erzincan	1.54	82	PN	Pg	06 57 55.3	-1.1
BNN	Bunyan	1.58	251	PN	Pn	06 57 54.5	-0.5
BNN				SN	Sb	06 58 16.6	+0.4
ORDU	Ordu-Boztepe	1.60	3	iP	Pg	06 57 57.4	-0.4
ORDU				IAML_P			
	comp=Z,2μm,0.2s						
GUNE	Kayseri	1.73	254	iP	Pb	06 57 58.9	+0.2
YOZ	Yozgat	1.90	278	PN	Pn	06 57 59.9	+0.5
SAIM	ADANA	1.92	223	iP	Pb	06 58 02.5	+0.5
SAIM				IAML_P			

	comp=Z,3µm,0.3s						
URFA	**Urfa**	2.12	156	PN	Pb	06 58 03.6	-1.8
KVT	**Kavak**	2.14	323	PN	Pb	06 58 03.5	-2.2
KTUT	**Trabzon**	2.22	43	PN	Pb	06 58 05.6	-1.4
KOZT	**Kozan**	2.43	219	PN	Pn	06 58 07.5	+0.9
MAZI	**Mazidag**	2.86	132	PN	Pb	06 58 14.5	-3.6

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*SOME **28** 07:04:06.5, 42.°52N×79.°68E, h20^{km}*
*KRNET **28** 07:04:06.6±0.1, 42.°57N×79.°64E, h11^{km}, mb3.0*
*NNC **28** 07:04:06.7±0.7, 42.°58N×79.°62E, h0^{km}, mb3.0, mpv3.0, Error ellipse: s-maj=4.5km s-min=2.8km az=136.0*
ISC 28 07:04:07.2±1.1**, 42.°55N**±0.°04×**79.°64E**±0.°04**, h10^{km}, n49, σ1^{s}30**/89**, 20C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	0.62	348	eP	Pb	07 04 19.2	-1.0
	baz=17						
SHLS				eS	Sb	07 04 28.7	-0.4
	baz=17						
SHLS	**Shalkode**	0.62	348	eP	Pb	07 04 19.2	-1.0
	29nm,0.1s						
SHLS				eS	Sb	07 04 28.7	-0.4
	330nm,0.2s						
UZB	**Uzynbulak**	0.75	323	P	Pg	07 04 20.7	-1.0
	4.4nm,0.1s						
UZB				S	Sg	07 04 30.6	-1.0
	65nm,0.1s						
UZB	**Uzynbulak**	0.75	323	eP	Pg	07 04 20.7	-1.0
	baz=22						
UZB				eS	Sg	07 04 30.7	-0.8
	baz=22						
UZB	**Uzynbulak**	0.75	323	eP	Pg	07 04 20.7	-1.0
	4.4nm,0.1s						
UZB				eS	Sg	07 04 30.8	-0.8
	65nm,0.1s						
PDGK	**Podgornoye**	0.79	352	P	Pg	07 04 21.3	-1.1
	11nm,0.1s						
PDGK				S	Sg	07 04 32.0	-0.7
	24nm,0.2s						
PDGK	**Podgornoye**	0.79	352	⇓P	Pg	07 04 21.2	-1.2
	2.7nm,0.2s						
PDGK				⇑S	Sg	07 04 32.0	-0.7
	32nm,0.4s						
PDGK	**Podgornoye**	0.79	352	⇓iP	Pg	07 04 21.3	-1.1
	baz=51						
PDGK				⇓iS	Sg	07 04 32.0	-0.7
	baz=51						
PRZ	**Przheval'sk**	0.92	266	⇑eP	Pg	07 04 24.4	-0.5
	baz=65						
PRZ				⇑iS	Sb	07 04 37.2	-0.5
	baz=65						
KTMS	**Ketmen**	1.04	30	P	Pg	07 04 25.9	-1.2
	14nm,0.1s						
KTMS				S	Sb	07 04 40.7	-0.3
	7.5nm,0.1s						
KTMS	**Ketmen**	1.04	30	eP	Pg	07 04 25.9	-1.2
	baz=30						
KTMS				eS	Sb	07 04 39.8	-1.2
	baz=30						
KTMS	**Ketmen**	1.04	30	eP	Pg	07 04 25.9	-1.2
	14nm,0.1s						
KTMS				eS	Sb	07 04 39.8	-1.2
	23nm,0.2s						
KURS	**Kuram**	1.43	311	P	Pg	07 04 33.8	-0.9
	2.3nm,0.4s						
KURS				S	Sg	07 04 52.9	-0.3
	6.0nm,0.3s						
KURS	**Kuram**	1.43	311	eP	Pg	07 04 33.6	-1.0
	baz=11						
KURS				eS	Sg	07 04 52.9	-0.3
	baz=11						
KURS	**Kuram**	1.43	311	eP	Pg	07 04 33.6	-1.0
	2.3nm,0.4s						
KURS				eS	Sg	07 04 52.9	-0.3
	6.0nm,0.3s						
MNBS	**Baschi**	1.78	330	eP	Pb	07 04 39.2	-0.7
	baz=30						
MNBS				eS	Sg	07 05 02.6	-1.8
	baz=30						
MNBS	**Baschi**	1.78	330	eP	Pb	07 04 39.2	-0.7
	6.9nm,0.2s						
MNBS				eS	Sg	07 05 02.6	-1.8
	30nm,0.2s						
DJR	**Jarkent**	1.79	3	P	Pb	07 04 39.0	-1.1
	2.4nm,0.2s						
DJR				S	Sb	07 05 02.3	-0.3
	14nm,0.2s						
DJR	**Jarkent**	1.79	3	eP	Pb	07 04 38.9	-1.1
	1.6nm,0.2s						
DJR				eS	Sb	07 05 02.2	-0.3
	9.8nm,0.3s						
KDJ	**Kajisay**	1.87	258	⇓iP	Pb	07 04 41.2	-0.4
	baz=57						
KDJ				⇓iS	Sg	07 05 06.1	-1.3
	baz=57						
MDOK	**Medeo**	2.00	289	⇑Pg	Pb	07 04 43.6	-0.2
	2.6nm,0.3s						
MDOK				⇑Lg	Lg	07 05 09.7	
	14nm,0.7s						
MDOK	**Medeo**	2.00	289	Pg	Pb	07 04 43.5	-0.3
	3.6nm,0.2s						
MDOK				Lg	Lg	07 05 10.2	
	8.9nm,0.2s						
MDOK	**Medeo**	2.00	289	eP	Pb	07 04 43.5	-0.3
	baz=88						
MDOK				eS	Sg	07 05 10.2	-1.4
	baz=88						
MDOK	**Medeo**	2.00	289	eP	Pb	07 04 43.5	-0.3
	3.6nm,0.2s						
MDOK				eS	Sg	07 05 10.2	-1.4
	8.9nm,0.2s						
ARXS	**Arharly**	2.13	322	Pg	Pb	07 04 44.5	-1.3
	5.4nm,0.3s						
ARXS				Lg	Lg	07 05 11.8	
	37nm,0.4s						
ARXS	**Arharly**	2.13	322	eP	Pb	07 04 44.5	-1.3
	5.4nm,0.3s						
ARXS				eS	Sb	07 05 11.8	-0.5
	37nm,0.4s						
IZV	**Izvestkoviy**	2.28	283	Pg	Pb	07 04 47.6	-0.9
	12nm,0.2s						
IZV				Lg	Lg	07 05 18.2	
	12nm,0.2s						
IZV	**Izvestkoviy**	2.28	283	eP	Pb	07 04 48.2	-0.4
	baz=83						
IZV				eS	Sg	07 05 18.3	-2.2
	baz=83						
IZV	**Izvestkoviy**	2.28	283	eP	Pb	07 04 48.2	-0.4
	12nm,0.2s						
IZV				eS	Sg	07 05 18.3	-2.2
	12nm,0.2s						
MTBS	**Maitube**	2.43	285	Pg	Pb	07 04 50.2	-0.9
	18nm,0.2s						
MTBS				Lg	Lg	07 05 21.7	
	8.9nm,0.2s						
MTBS	**Maitube**	2.43	285	eP	Pb	07 04 50.2	-0.9
	baz=84						
MTBS				eS	Sb	07 05 21.7	+0.5
	baz=84						
MTBS	**Maitube**	2.43	285	eP	Pb	07 04 50.2	-0.9
	18nm,0.2s						
MTBS				eS	Sb	07 05 21.7	+0.5
	8.9nm,0.2s						
KTBS	**Karatobe**	2.46	299	Pg	Pb	07 04 50.2	-1.3
	3.6nm,0.2s						
KTBS				Lg	Lg	07 05 21.6	
	32nm,0.2s						
KTBS	**Karatobe**	2.46	299	eP	Pb	07 04 50.2	-1.3
	baz=98						
KTBS				eS	Sb	07 05 21.6	-0.3
	baz=98						
KTBS	**Karatobe**	2.46	299	eP	Pb	07 04 50.2	-1.3
	3.6nm,0.2s						
KTBS				eS	Sb	07 05 21.6	-0.3
	32nm,0.2s						
ULHL	**Ulahol**	2.54	264	⇑iP	Pb	07 04 50.7	-2.2
	baz=64						
ULHL				⇑iS	Sb	07 05 22.6	-1.7
	baz=64						
BOOM	**Boomskoye usch**	2.74	270	⇑iP	Pn	07 04 52.9	+1.6
	baz=70						
BOOM				⇑iS	Sn	07 05 26.4	+1.8
	baz=70						
KAPS	**Kapalarasan**	2.74	356	Pg	Pb	07 04 54.8	-1.6
	0.8nm,0.2s						
KAPS				Lg	Lg	07 05 29.8	
	7.2nm,0.5s						
KAPS	**Kapalarasan**	2.74	356	eP	Pb	07 04 55.7	-0.7
	0.8nm,0.2s						
KAPS				eS	Sb	07 05 31.3	+1.3
	7.2nm,0.5s						
KST	**Kastek**	2.75	282	eP	Pb	07 04 55.2	-1.4
	baz=81						
KST				eS	Sb	07 05 30.1	-0.3
	baz=81						
KST	**Kastek**	2.75	282	eP	Pb	07 04 55.1	-1.4
	8.6nm,0.3s						
KST				eS	Sb	07 05 30.0	-0.3
	10.0nm,0.4s						
NRN	**Naryn**	2.94	249	⇑eP	Pn	07 04 56.1	+1.9
	baz=49						
NRN				⇑iS	Sb	07 05 32.5	-3.3
	baz=49						
TKM2	**Tokmak 2**	3.00	278	⇓Pg	Pb	07 04 59.0	-1.9
	1.1nm,0.5s						
TKM2				⇑Lg	Lg	07 05 40.1	
	6.8nm,0.7s						
TKM2	**Tokmak 2**	3.00	278	⇑iP	Pn	07 04 56.8	+1.8
	baz=78						
TKM2				⇑iS	Sn	07 05 33.7	+2.5
	baz=78						
KZA	**Kyzart**	3.29	263	⇓iP	Pn	07 05 01.3	+2.1
	baz=63						
KZA				⇓iS	Sn	07 05 40.6	+2.0
	baz=63						
AAK	**Ala-Archa**	3.80	273	⇓Pg	Pb	07 05 15.7	+1.3
	3.2nm,1.1s						
AAK				⇑Lg	Lg	07 06 04.4	
	5.6nm,1.1s						
UCH	**Uchtor**	3.81	267	⇑iP	Pn	07 05 08.2	+1.8
	baz=67						
UCH				⇑eS	Sn	07 05 53.2	+1.7
	baz=67						
MAKZ	**Makanchi**	4.57	21	⇓Pn	Pn	07 05 18.8	+2.4
	0.5nm,0.5s						
MAKZ				⇑Sn	Sn	07 06 10.9	+1.3
	1.3nm,0.9s						
MAKZ				⇓Lg	Lg	07 06 28.6	
	3.8nm,1.5s						
MK31	**Makanchi Array**	4.64	23	⇑Pn	Pn	07 05 19.3	+1.9
	0.1nm,0.3s,baz=209,slow=13						
MK31				⇓Sn	Sn	07 06 13.5	+2.1
	0.2nm,0.2s,baz=202,slow=25,SNR=3.3						
MK31				⇑Lg	Lg	07 06 33.3	
	0.2nm,0.4s						

MEX 28 07:10:48.2±0.8**, 17.°50N×103.°06W, h5^{km}, MD3.9, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	1.53	86	eP	Pn	07 11 12.7	-3.5
ZIIG				i S	Sn	07 11 31.2	-5.2
R15V		1.88	332	eP	Pb	07 11 23.1	+0.1
R15V				i S	Sn	07 11 40.6	-4.6
EZ5V		2.03	346	eP	Pn	07 11 20.8	-2.6
ARIG	**Puente Sto Nin**	2.70	73	eP	Pn	07 11 24.7	-7.6
CAIG	**El Cayaco**	2.71	99	eP	Pn	07 11 31.0	-1.5
MEIG	**Mezcala**	3.31	82	eP	Pn	07 11 38.5	-2.3

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*IDC **28** 07:15:46.8±1.1, 11.°31N×126.°03E, h0^{km}, mb3.9/9, mb1 4.1/9, mb1mx3.8/33, mbtmp3.9/9, Error ellipse: s-maj=56.7km s-min=16.2km az=70.0*
*ISCJB **28** 07:15:49.4±0.7, 11.°44N±0.°07×126.°31E±0.°07, h33^{km}, mb3.8/9, Error ellipse: s-maj=10.6km s-min=8.5km az=136.0*
ISC 28 07:15:51.9±0.9**, 11.°39N**±0.°06×**126.°09E**±0.°08**, h33^{km}, n18, σ1^{s}23**/20**, mb3.8**/9**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	**Palo**	1.11	258	⇓eP	Pn	07 16 09.5	-1.6
PLP				eS	Sn	07 16 23.7	-1.7
OCLP	**Ormoc**	1.49	257	eP	Pn	07 16 16.8	+0.5
OCLP				eS	Sb	07 16 38.0	+0.4
MSLP	**Maasin**	1.74	224	eP	Pn	07 16 21.2	+1.4
MSLP				eS	Sb	07 16 45.2	+0.5
BUTP	**Butuan**	2.45	191	eP	Pn	07 16 29.7	0.0
BUTP				eS	Sb	07 17 07.1	+1.9
RCP	**Roxas**	3.28	273	⇑eP	Pn	07 16 42.8	+1.8
BUKP	**Musuan**	3.63	196	eP	Pb	07 16 57.0	+1.4
BUKP				eS	Sb	07 17 37.0	-2.2
CMAR	**Chiang Mai Arr**	27.13	288	P	P	07 21 31.5	-0.7
	0.5nm,0.3s,baz=97,slow=7.6,SNR=2.4						
FITZ	**Fitzroy Crossi**	29.31	181	P	P	07 21 50.6	-1.0
	5.3nm,1.1s,baz=350,slow=11,SNR=2.3						
WRA	**Warramunga Arr**	32.18	165	P	P	07 22 15.7	-1.3
	0.2nm,0.4s,baz=345,slow=9.2,SNR=7.5						
ASAR	**Alice Springs**	35.67	168	P	P	07 22 46.5	-0.8
	0.2nm,0.4s,baz=347,slow=7.1,SNR=3.6						
SONM	**Songino Array**	39.91	339	P	P	07 23 23.4	+0.4
	0.4nm,0.4s,baz=154,slow=9.0,SNR=3.8						
H11N1	**WAKE ISLAND Hy**	40.09	73	T	T	08 06 47.3	
	baz=265,slow=74,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	40.10	73	T	T	08 06 47.7	
	baz=265,slow=74,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	40.11	73	T	T	08 06 48.5	
	baz=265,slow=74,SNR=6.3						
MKAR	**Makanchi Array**	51.03	322	P	P	07 24 51.1	+0.2
	1.0nm,0.6s,baz=115,slow=8.5,SNR=13						
ZALV	**Zalesovo Beam**	53.56	331	P	P	07 25 09.9	+0.4
	0.3nm,0.3s,baz=104,slow=6.1,SNR=2.2						
ARCES	**ARCESS Array B**	83.08	340	P	P	07 28 14.1	+0.1
	5.9nm,0.9s,baz=79,slow=5.9,SNR=4.3						
FINES	**FINESS Array B**	84.82	332	P	P	07 28 22.9	-0.1
	0.8nm,0.5s,baz=343,slow=1.5,SNR=4.4						

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*IDC **28** 07:21:19.1±0.7, 11.°41N×126.°45E, h0^{km}, mb3.9/12, mb1 4.0/12, mb1mx3.8/38, mbtmp3.9/12, MS3.8/1, Ms1 3.8/1, ms1mx2.6/37, Error ellipse: s-maj=38.2km s-min=13.7km az=75.0*
*MAN **28** 07:21:24.4, 11.°44N×125.°96E, h18^{km}, MS3.7*
ISC 28 07:21:20.0±2.0**, 11.°42N**±0.°05×**126.°16E**±0.°06**, h3^{km}**±12^{km}**, n27, σ1^{s}19**/30**, mb3.8**/12**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	0.73	284	eP	Pb	07 21 35.0	-0.4
BESP				eS	Sb	07 21 46.9	+0.9
PLP	**Palo**	1.19	258	⇓iP	Pg	07 21 42.5	-0.3
PLP				eS	Sg	07 21 57.2	-1.0
OCLP	**Ormoc**	1.57	257	eP	Pg	07 21 49.9	-0.2
OCLP				eS	Sn	07 22 07.8	-1.9
MSLP	**Maasin**	1.81	225	eP	Pb	07 21 53.7	-0.1
MSLP				eS	Sg	07 22 18.4	+0.2
LLP	**Lapu-Lapu**	2.42	243	eP	Pn	07 22 01.2	+0.7
LLP				eS	Sb	07 22 34.3	-0.2
BUTP	**Butuan**	2.49	192	eP	Pg	07 22 07.5	-0.4
BUTP				eS	Sg	07 22 39.8	-0.4
PVCP	**Virac**	2.92	318	eP	Pn	07 22 08.7	+1.2
RCP	**Roxas**	3.35	273	⇑eP	Pn	07 22 15.8	+2.3
BUKP	**Musuan**	3.68	197	eP	Pn	07 22 21.0	+3.0
BUKP				eS	Sb	07 23 11.2	+0.3
PAGZ	**Pagadian**	4.48	218	eP	Pn	07 22 31.1	+2.1
JHJ	**Hachijo jima 2**	24.95	28	LR	LR	07 34 14.6	
	comp=Z,195nm,19.9s,baz=308,slow=31						
KSRS	**Korea Array**	25.97	3	P	P	07 26 53.4	-0.7
	0.3nm,0.3s,baz=180,slow=12,SNR=2.9						
CMAR	**Chiang Mai Arr**	27.19	288	P	P	07 27 07.3	+2.0
	0.6nm,0.3s,baz=95,slow=8.2,SNR=2.0						
FITZ	**Fitzroy Crossi**	29.33	181	P	P	07 27 24.1	-0.1
	4.0nm,0.9s,baz=352,slow=7.1,SNR=2.9						
WRA	**Warramunga Arr**	32.19	165	P	P	07 27 48.6	-1.0
	0.5nm,0.8s,baz=347,slow=9.0,SNR=5.3						
ASAR	**Alice Springs**	35.68	168	P	P	07 28 18.8	-1.1
	0.1nm,0.3s,baz=358,slow=7.5,SNR=2.7						
KLR	**Kul'dur**	37.98	6	P	P	07 28 39.0	-0.2
	0.6nm,0.7s,baz=210,slow=8.1,SNR=2.2						
SONM	**Songino Array**	39.91	339	P	P	07 28 55.8	+0.3
	0.7nm,0.4s,baz=158,slow=10.0,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	40.01	73	T	T	08 12 23.6	
	baz=265,slow=74,SNR=9.0						
H11N2	**WAKE ISLAND Hy**	40.02	73	T	T	08 12 24.1	
	baz=265,slow=74,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	40.03	73	T	T	08 12 25.0	
	baz=265,slow=74,SNR=7.8						
STKA	**Stephens Creek**	45.52	161	P	P	07 29 39.7	-1.4
	2.6nm,0.9s,baz=345,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	51.06	322	P	P	07 30 24.4	+0.6
	1.8nm,0.6s,baz=116,slow=8.4,SNR=24						
ZALV	**Zalesovo Beam**	53.58	331	P	P	07 30 43.0	+0.6
	0.3nm,0.3s,baz=132,slow=6.4,SNR=2.3						
ARCES	**ARCESS Array B**	83.09	340	P	P	07 33 46.9	0.0
	3.7nm,0.9s,baz=80,slow=6.8,SNR=5.9						
FINES	**FINESS Array B**	84.84	332	P	P	07 33 55.7	-0.3
	1.7nm,0.9s,baz=69,slow=7.6,SNR=4.2						
PLCA	**Paso Flores**	147.29	156	PKPbc	PKPdf	07 41 02.9	-0.4
	0.6nm,0.6s,baz=217,slow=5.1,SNR=2.3						

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*IDC **28** 07:33:57.4±4.2, 23.°59S×179.°94E, h504^{km}±48^{km}, mb3.4/8, mb1 3.6/10, mb1mx3.4/25, mbtmp4.2/10, Error ellipse: s-maj=25.4km s-min=20.7km az=32.0*
*ISCJB **28** 07:33:59.0±0.8, 23.°70S±0.°09×179.°8E±0.°1, h535^{km}, mb3.8/8, Error ellipse: s-maj=16.8km s-min=12.2km az=12.5*
ISC 28 07:33:59.7±0.8**, 23.°8S**±0.°1×**179.°9E**±0.°1**, h535^{km}, n12, σ1^{s}11**/13**, mb3.8**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	12.48	275	P	P	07 36 42.3	-1.1
	0.1nm,0.3s,baz=180,slow=20,SNR=2.4						
URZ	**Urewera**	14.61	189	P	P	07 37 05.0	-0.1
	2.1nm,0.3s,baz=319,slow=3.1,SNR=14						
URZ				S	S	07 39 35.8	-2.2
	0.4nm,0.3s,baz=39,slow=22,SNR=5.8						
RPZ	**Rata Peaks**	21.15	198	P	P	07 38 07.7	+1.0
	3.7nm,0.5s,baz=342,slow=20,SNR=5.1						
STKA	**Stephens Creek**	34.64	248	P	P	07 40 05.2	+0.7
	1.3nm,0.5s,baz=108,slow=14,SNR=4.2						
ASAR	**Alice Springs**	41.93	261	P	P	07 41 04.4	+0.6
	3.8nm,0.7s,baz=98,slow=7.3,SNR=55						
WRA	**Warramunga Arr**	42.29	266	P	P	07 41 06.9	+0.2
	4.4nm,0.3s,baz=94,slow=8.5,SNR=246						
VNDA	**Vanda**	54.47	185	P	P	07 42 38.2	+1.8
	3.0nm,0.6s,baz=22,slow=9.7,SNR=4.0						
NVAR	**Mina Array Bea**	84.77	44	P	P	07 45 37.5	-0.4
	0.2nm,0.3s,baz=226,slow=7.4,SNR=3.5						
TXAR	**Lajitas Array**	90.48	58	P	P	07 46 04.6	-0.2
	0.7nm,0.7s,baz=216,slow=5.7,SNR=5.7						
PDAR	**Pinedale Array**	92.70	44	P	P	07 46 14.3	-0.6
	0.4nm,0.7s,baz=199,slow=4.1,SNR=4.0						
ARCES	**ARCESS Array B**	131.76	348	PKP	PKPdf	07 52 11.1	-0.2
	4.5nm,1.0s,baz=29,slow=2.1,SNR=2.9						
AKASG	**Malin Array Be**	144.82	327	PKP	PKPdf	07 52 35.2	-0.3
	0.7nm,0.5s,baz=45,slow=4.4,SNR=7.6						

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*IDC **28** 07:48:27.9±1.3, 46.°64N×152.°33E, h0^{km}, mb3.4/6, mb1 3.9/8, mb1mx3.6/37, mbtmp3.5/8, ML5.0/1, Error ellipse: s-maj=44.7km s-min=21.7km az=105.0*
ISC 28 07:48:38.7±3.0**, 46.°9N**±0.°3×**153.°0E**±0.°3**, h52^{km}, n15, σ0^{s}21**/8**, mb3.5**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	6.88	24	Pn	Pn	07 50 16.9	0.0
	0.7nm,0.3s,baz=179,slow=14,SNR=6.8						
MA2	**Magadan**	12.74	355	Pn	Pn	07 51 36.7	-0.1
	0.7nm,0.3s,baz=174,slow=10,SNR=9.5						
SEY	**Seymchan**	16.04	359	Pn	P	07 52 23.5	+0.3
	0.2nm,0.3s,baz=200,slow=13,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	29.41	153	T	T	08 26 26.8	
	baz=340,slow=76,SNR=111						
H11N1	**WAKE ISLAND Hy**	29.43	153	T	T	08 26 30.4	
	baz=340,slow=76,SNR=86						
H11N3	**WAKE ISLAND Hy**	29.43	153	T	T	08 26 28.3	
	baz=340,slow=76,SNR=76						
H11S1	**WAKE ISLAND Hy**	30.50	154	T	T	08 27 38.2	
	baz=341,slow=76,SNR=87						
H11S3	**WAKE ISLAND Hy**	30.51	154	T	T	08 27 43.4	
	baz=341,slow=76,SNR=49						
H11S2	**WAKE ISLAND Hy**	30.52	154	T	T	08 27 49.9	
	baz=341,slow=76,SNR=68						
ILAR	**Eielson Array**	36.45	39	P	P	07 55 38.0	-0.1
	0.3nm,0.7s,baz=260,slow=5.9,SNR=4.1						
YKA	**Yellowknife Ar**	50.82	37	P	P	07 57 33.2	-0.2
	0.3nm,0.8s,baz=294,slow=7.5,SNR=4.4						
NVAR	**Mina Array Bea**	62.41	62	P	P	07 58 56.6	+0.2
	0.3nm,0.5s,baz=274,slow=7.1,SNR=2.5						
PDAR	**Pinedale Array**	64.70	54	P	P	07 59 11.5	+0.1
	0.3nm,0.6s,baz=330,slow=3.2,SNR=3.4						
WRA	**Warramunga Arr**	68.66	199	P	P	07 59 30.3	-6.1
	0.6nm,1.1s,baz=341,slow=7.3,SNR=3.8						
TXAR	**Lajitas Array**	77.47	61	P	P	08 00 28.6	-0.1
	0.4nm,0.5s,baz=264,slow=2.5,SNR=3.5						

IDC 28 07:56:38.4±7.3**, 23.°02S×176.°10W, h0^{km}, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.6**/25**, mbtmp3.6**/2**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.6**/25**, Error ellipse: s-maj=291.5km s-min=54.7km az=146.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	26.62	297	LR	LR	08 11 57.4	
	comp=Z,37nm,21.2s,baz=348,slow=34						
ASAR	**Alice Springs**	45.72	259	P	P	08 05 01.9	+0.3
	0.4nm,0.7s,baz=97,slow=7.6,SNR=3.9						
WRA	**Warramunga Arr**	46.05	264	P	P	08 05 03.8	-0.5
	0.6nm,0.3s,baz=103,slow=8.5,SNR=24						
AKASG	**Malin Array Be**	146.07	331	PKPbc	PKPdf	08 16 18.5	-0.8
	0.3nm,0.3s,baz=45,slow=4.3,SNR=4.4						
BRTR	**Keskin Array B**	149.83	310	PKPab	PKPab	08 16 36.8	+0.6
	0.9nm,0.7s,baz=52,slow=2.4,SNR=2.0						

KRSC 28 08:05:35.6±0.4**, 53.°73N×161.°05E, h40^{km}**±8^{km}**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	0.88	225	eP	Pn	08 05 52.4	+0.9
SPN				eS	Sn	08 06 03.9	+0.8
MKZ	**Mys Kozlova**	0.92	26	eP	Pn	08 05 53.2	+1.2
MKZ				eS	Sn	08 06 05.2	+1.2
NLC	**Nalytchevo**	1.16	242	eP	Pn	08 05 56.4	+1.1
NLC				eS	Sn	08 06 11.5	+1.6
SDLR	**Sedlovina**	1.37	252	eP	Pn	08 05 59.8	+1.5
SMAR	**Somma**	1.42	252	eP	Pn	08 06 00.6	+1.5
UGLR	**Uglovaya**	1.43	249	eP	Pn	08 06 00.7	+1.6
AVH	**Avacha**	1.46	252	eP	Pn	08 06 01.4	+2.0
KRX	**Arik**	1.48	256	eP	Pn	08 06 01.5	+1.7
KOK	**Koryaka**	1.51	254	eP	Pn	08 06 01.9	+1.8
TUMD	**Tumrok D**	1.52	346	eP	Pn	08 06 01.8	+1.5
TUMD				eS	Sn	08 06 20.7	+1.8
PET	**Petropavlovsk**	1.60	245	eP	Pn	08 06 02.9	+1.6
PET				eS	Sn	08 06 22.3	+1.6
TUMR	**Tumrok**	1.64	342	eP	Pn	08 06 04.4	+2.4
GNL	**Ganaly**	1.85	270	eP	Pn	08 06 07.1	+2.3
KRMR	**Karymshinskiy**	1.97	244	eP	Pn	08 06 08.4	+2.0
RUS	**Russkaya**	2.01	231	eP	Pn	08 06 09.4	+2.5
MTVR	**Mutnovka**	2.13	235	eP	Pn	08 06 10.8	+2.0
KDTR	**Khodutka, Kamc**	2.64	224	eP	Pn	08 06 18.7	+3.1
KDTR				eS	Sn	08 06 50.4	+4.1
KBTR	**Krutoberegovo**	2.69	22	eP	Pn	08 06 18.8	+2.6

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*DDA **28** 08:09:19.9, 38.°78N×43.°55E, h7^{km}±4^{km}, ML2.8*
*ISK **28** 08:09:19.1, 38.°80N×43.°54E, h5^{km}, ML2.7/13*
ISC 28 08:09:20.8±1.0**, 38.°81N**±0.°03×**43.°57E**±0.°03**, h17^{km}**±7^{km}**, n22, σ1^{s}34**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	0.18	0	i P	Pg	08 09 24.4	-1.1
VMUR				i S	Sg	08 09 29.5	+0.9
VANB	**Van**	0.26	214	PG	Pg	08 09 26.7	+0.2
ERCV	**ERCIS-VAN**	0.28	320	PG	Pg	08 09 25.9	-1.1
CLDR	**Caldiran**	0.43	39	PG	Pg	08 09 28.9	-0.7
CLDR	**Caldiran**	0.43	39	i P	Pg	08 09 28.8	-0.9
CLDR				i S	Sb	08 09 37.8	+1.4
CLDR				IAML_P			
	comp=Z,7µm,0.1s						
GEVA	**Gevas**	0.64	219	i P	Pb	08 09 32.6	-1.0
GEVA				IAML_P			
	comp=Z,1µm,0.1s						
AKDM	**Akdamar-Van**	0.67	224	PG	Pb	08 09 32.6	-1.4
DYDN	**Diyadin**	0.74	7	i P	Pg	08 09 34.3	-1.0
DYDN				i S	Sb	08 09 46.9	+1.5
BASK	**Baskale_VAN**	0.83	156	i P	Pb	08 09 36.0	-0.9

BASK				iS	Sb	08 09 47.6	-0.2
TUTA	Tutak	0.84	316	iP	Pg	08 09 34.8	-2.4
TUTA				iS	Sb	08 09 48.1	+0.1
MLAZ	Malazgirt-MUS	0.86	293	PG	Pg	08 09 36.3	-1.3
AGRB	Hanur-Agry	0.89	330	PG	Pb	08 09 37.3	-0.6
GURO	Guroymak-BITLI	1.23	258	PN	Pg	08 09 42.8	-1.7
SRTM	Siirt_Merkez	1.53	238	iP	Pg	08 09 51.1	+0.9
SRTM				iS	Sg	08 10 11.4	+1.3
CUKT	Cukurca	1.56	179	PN	Pg	08 09 48.8	-1.9
SIRT	Sirnak	1.58	215	PN	Pg	08 09 49.2	-2.0
GNI	Garni	1.62	34	PN	Pg	08 09 50.7	-1.2
VRTB	Varto-Mus	1.69	283	PN	Pb	08 09 50.8	-0.6
KOPR	Koprukoy-ERZUR	1.78	312	PN	Pb	08 09 52.2	-0.9
SENK	Senkaya-Erzuru	1.99	332	PN	Pb	08 09 55.2	-1.4
BNGB	Bingl	2.26	276	PN	Pn	08 09 58.9	+1.4
MAZI	Mazidag	2.81	242	PN	Pn	08 10 06.6	+1.6

*IDC **28** 08:10:12.8±0.9, 53.°44N×165.°90W, h0^{km}, mb3.9/17, mb1 4.1/19, mb1mx3.9/57, mbtmp3.9/19, ML3.8/2, MS3.5/2, Ms1 3.5/2, ms1mx2.6/39, Error ellipse: s-maj=27.1km s-min=12.4km az=175.0*

*ISCJB **28** 08:10:17.7±0.6, 53.°30N±0.°06×165.°62W±0.°05, h68^{km}±4^{km}, mb3.8/20, Error ellipse: s-maj=10.8km s-min=3.6km az=161.6*

*NEIC **28** 08:10:18.3±0.0, 53.°26N×165.°73W, h40^{km}, mb3.8/17, ML3.8(AEIC), After AEIC.*

NEIC Felt at Unalaska.

ISC 28 08:10:18.4±1.3, **53.°30N**±0.°09×**165.°71W**±0.°04, **h48**^{km}±11^{km}, **n111**, σ**2.^{s}02**/120, **mb3.9**/20, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNV	Unalaska Valle	0.73	320	ePn	Pn	08 10 32.6	+0.2
UNV				eSn	Sn	08 10 40.7	-1.8
MREP	Makushin Rep't	0.80	310	P	Pn	08 10 33.7	+0.2
ZRO	Akutan Zero	0.81	349	P	Pn	08 10 34.1	+0.5
AKMO	Akutan Morgan	0.82	348	P	Pn	08 10 34.0	+0.4
AKMO				S	Sn	08 10 46.6	+1.8
AHB	Akutan Harbor	0.82	356	P	Pn	08 10 34.2	+0.5
AKUT	Akutan	0.84	358	ePn	Pn	08 10 34.2	+0.3
AKUT				eSn	Sn	08 10 41.2	-4.1
MGOD	Makushin Gods	0.85	306	P	Pn	08 10 34.5	+0.3
AKRB	Akutan Reef Bi	0.86	346	P	Pn	08 10 35.0	+0.8
AKRB				S	Sn	08 10 47.9	+2.0
MTBL	Makushin Table	0.89	320	P	Pn	08 10 35.4	+0.8
MSW	Makushin Switc	0.89	315	P	Pn	08 10 35.0	+0.4
MSW				S	Sn	08 10 48.0	+1.5
AKGG	Akutan Green G	0.92	350	P	Pn	08 10 35.6	+0.6
AKGG				S	Sn	08 10 49.6	+2.4
MCIR	Makushin Cirqu	0.96	314	P	Pn	08 10 36.4	+0.8
WESP	Westdahl Peak	1.34	26	P	Pn	08 10 42.1	+1.4
WESP				S	Sn	08 11 00.5	+3.1
OKTU	Okmok Mt. Tuli	1.40	275	P	Pn	08 10 41.8	+0.2
OKRE	Okmok R'deer P	1.48	280	P	Pn	08 10 43.1	+0.5
OKAK	Okmok	1.61	281	P	Pn	08 10 44.3	0.0
SSBA	Shishaldin	1.75	32	P	Pn	08 10 47.6	+1.2
NIKH	Nikolski High	1.92	262	ePn	Pn	08 10 49.2	+0.7
NIKH				eSn	Sn	08 11 12.2	+0.7
FALS	False Pass	2.07	40	ePn	Pn	08 10 51.5	+0.8
FALS				eSn	Sn	08 11 12.9	-2.3
DRIA	Deer Island	2.63	49	P	Pn	08 10 59.4	+1.1
DT1	Dutton Round H	2.71	47	P	Pn	08 11 00.6	+1.2
DOL	Dolgoi Island	2.92	49	P	Pn	08 11 03.5	+1.1
PS4A	Pavlof South-4	3.05	46	P	Pn	08 11 05.8	+1.7
PVV	Pavlof Volcano	3.10	46	P	Pn	08 11 06.5	+1.8
SDPT	Sand Point	3.69	54	ePn	Pn	08 11 13.9	+1.0
SDPT				eSn	Sn	08 11 55.2	+0.2
VNSS	Veniaminof 8	4.67	48	P	Pn	08 11 28.1	+1.7
SPIA	Saint Paul Isl	4.68	328	P	Pn	08 11 27.3	+0.9
CHGN	Chignik	5.19	52	ePn	Pn	08 11 34.3	+1.0
CHGN				eSn	Sn	08 12 32.3	+0.6
ADK	Adak	6.83	262	ePn	Pn	08 11 58.8	+2.9
ADK				eSn	Sn	08 13 11.3	-1.0
SII	Sitkinak Islan	7.40	59	ePn	Pn	08 12 03.5	-0.3
SII				eSn	Sn	08 13 23.0	-3.3
CAHL	Cahill	7.57	47	P	Pn	08 12 08.8	+2.8
OHAK	Old Harbor	8.11	56	ePn	Pn	08 12 13.0	-0.4
FONW	Fourpeaked Sta	8.62	45	P	Pn	08 12 22.6	+2.2
KDAK	Kodiak Island	8.69	54	ePn	Pn	08 12 21.1	-0.2
KDAK				Sn	Sn	08 13 51.7	-6.1
KDAK	Kodiak Island	8.69	54	Pn	Pn	08 12 20.3	-1.1
	2.2nm,0.3s,baz=196,slow=5.2,SNR=53						
KDAK				Sn	Sn	08 13 51.7	-6.1
	baz=294,slow=19,SNR=4.1						
SPWE	Spurr West	10.69	36	P	Pn	08 12 52.2	+3.5
GAMB	Gambell	10.96	346	ePn	Pn	08 12 55.0	+2.7
SEW	Seward	11.22	46	ePn	Pn	08 12 55.6	-0.3
SEW				eSn	Sn	08 14 50.1	-10
SUA	Susitna One	11.47	39	ePn	Pn	08 13 00.0	+0.5
PMR	Palmer	12.17	40	ePn	Pn	08 13 08.0	-0.8
KNK	Knik Glacier	12.33	42	ePn	Pn	08 13 09.8	-1.3
KNK				eSn	Sn	08 15 20.2	-6.7
CAST	Castle Rocks	12.38	30	ePn	Pn	08 13 11.0	-0.8
SML	Sawmill	12.60	41	ePn	Pn	08 13 12.7	-2.1
GLI	Glacier Island	12.62	46	ePn	Pn	08 13 12.6	-2.4
TRF	Thorofare Moun	12.96	32	ePn	Pn	08 13 21.1	+1.3
SCM	Sheep Creek Mo	13.01	42	ePn	Pn	08 13 17.6	-2.8
EYAK	Cordova Ski Ar	13.06	48	ePn	Pn	08 13 19.0	-2.0
DIV	Divide	13.31	46	ePn	Pn	08 13 22.4	-2.0
RND	Reindeer	13.40	34	ePn	Pn	08 13 24.6	-1.1
KLU	Klutina	13.42	44	ePn	Pn	08 13 23.7	-2.2
HMT	Hamilton	13.66	50	ePn	Pn	08 13 27.3	-1.9
DHY	Denali Highway	13.71	37	ePn	Pn	08 13 27.2	-2.8
BMRM	Bremner River	13.75	48	ePn	Pn	08 13 28.4	-2.0
MLY	Manley	14.00	27	ePn	Pn	08 13 34.1	+0.3
IM3	Indian Mountai	14.05	20	ePn	Pn	08 13 35.2	+0.8
HARP	HAARP	14.19	42	ePn	Pn	08 13 34.4	-2.0
PAX	Paxson	14.36	40	ePn	Pn	08 13 36.2	-2.5
WRH	Wood River Hil	14.37	32	ePn	Pn	08 13 37.1	-1.6
CCB	Clear Creek Bu	14.58	32	ePn	Pn	08 13 38.5	-3.0
MDM	Murphy Dome	14.67	30	ePn	Pn	08 13 41.2	-1.4
BALM	Baldy	14.79	49	ePn	Pn	08 13 43.1	-1.3
IL1	Eielson Array	14.96	32	ePn	Pn	08 13 44.7	-1.7
ILAR	Eielson Array	14.96	32	Pn	Pn	08 13 42.5	-3.9
	0.2nm,0.3s,baz=207,slow=13,SNR=9.3						
ILB	Eielson Array	14.96	32	ePn	Pn	08 13 43.9	-2.6
MENT	Mentasta	15.03	41	ePn	Pn	08 13 45.4	-2.0
RIDG	Independ'e Rid	15.03	38	ePn	Pn	08 13 44.8	-2.6
DOT	Dot Lake	15.27	39	ePn	Pn	08 13 47.2	-3.3
	1.9nm,0.4s						
SCRK	Sand Creek	15.47	38	ePn	Pn	08 13 49.1	-4.1
	3.6nm,0.7s						
COLD	Coldfoot	15.87	22	ePn	Pn	08 13 56.8	-1.5
	1.6nm,1.1s						
FYU	Fort Yukon	16.68	29	ePn	P	08 14 09.5	-0.6
	1.8nm,0.8s						
EGAK	Eagle	16.94	38	ePn	Pn	08 14 11.2	-0.5
	4.8nm,1.0s						
HYT	Haines Junctio	16.98	52	ePn	Pn	08 14 12.0	-0.4
	3.3nm,0.8s						
TOLK	Toolik Lake Re	17.17	20	ePn	P	08 14 14.5	-1.1
	1.6nm,0.7s						
DAWY	Dawson	17.27	41	ePn	P	08 14 15.5	-1.3
	4.2nm,0.4s						
SKAG	Skagway	17.81	58	ePn	P	08 14 24.2	+1.6
	11nm,0.7s						
WHY	Whitehorse	18.21	54	eP	Pn	08 14 29.2	+1.8
	9.9nm,0.9s						
EPYK	Eagle Plains	19.34	36	eP	P	08 14 38.8	-0.6
	7.5nm,0.6s						
DLBC	Dease Lake	20.50	61	eP	Pn	08 14 55.3	+0.6
	9.9nm,1.0s						
DLBC	Dease Lake	20.50	61	P	P	08 14 52.6	+0.4
	3.3nm,0.9s,baz=288,slow=3.2,SNR=2.5						
INK	Inuvik	21.36	33	eP	P	08 14 59.4	-1.7
	2.6nm,0.8s						
INK	Inuvik	21.36	33	P	P	08 14 59.5	-1.7
	1.5nm,0.3s,baz=230,slow=10,SNR=29						
INK				LR	LR	08 24 05.4	
	comp=Z,94nm,19.3s,baz=108,slow=39						
PEA0B	Petropavlovsk-	21.77	284	eP	P	08 15 05.4	-0.4
	11nm,1.1s						
PETK	Petropavlovsk-	21.77	284	P	P	08 15 05.7	0.0
	2.1nm,0.4s,baz=88,slow=13,SNR=11						
SEY	Seymchan	23.71	311	P	P	08 15 25.4	-0.1
	0.7nm,0.3s,baz=124,slow=8.4,SNR=4.6						
MA2	Magadan	24.50	302	P	P	08 15 33.5	+0.8
	1.1nm,0.3s,baz=169,slow=22,SNR=3.7						
YKW3	Yellowknife Ar	27.94	50	eP	P	08 16 06.2	+2.5
	1.5nm,0.6s						
YKA	Yellowknife Ar	27.95	50	P	P	08 16 06.0	+2.2
	1.1nm,0.5s,baz=275,slow=8.5,SNR=38						
YKB5	Yellowknife Ar	27.95	50	eP	P	08 16 05.1	+1.3
PAHR	Pah Rah Range	34.04	95	eP	P	08 17 01.4	+3.5
	2.1nm,0.9s						
PNTR	Pine Nut	34.30	96	eP	P	08 17 04.2	+4.0
	2.6nm,0.7s						
RES	Resolute Bay	34.57	26	eP	P	08 17 01.6	-0.3
NVAR	Mina Array Bea	35.50	95	P	P	08 17 13.1	+2.6
	1.4nm,0.8s,baz=297,slow=8.4,SNR=9.5						
PDAR	Pinedale Array	38.07	83	P	P	08 17 34.4	+2.1
	0.4nm,0.7s,baz=264,slow=5.4,SNR=4.3						
H11N2	WAKE ISLAND Hy	39.60	223	T	T	08 59 50.6	
	baz=25,slow=76,SNR=189						
H11N3	WAKE ISLAND Hy	39.61	223	T	T	08 59 52.3	
	baz=25,slow=76,SNR=179						
H11N1	WAKE ISLAND Hy	39.62	223	T	T	08 59 52.0	
	baz=25,slow=76,SNR=137						
H11S1	WAKE ISLAND Hy	40.78	222	T	T	09 01 22.6	
	baz=25,slow=76,SNR=136						
H11S2	WAKE ISLAND Hy	40.80	222	T	T	09 01 22.1	
	baz=25,slow=76,SNR=118						
H11S3	WAKE ISLAND Hy	40.80	222	T	T	09 01 21.5	
	baz=25,slow=76,SNR=86						
KSRS	Korea Array	47.48	278	P	P	08 18 46.7	-1.5
	1.9nm,0.8s,baz=52,slow=6.9,SNR=4.6						
KSAR	Wonju Array Be	47.51	278	P	P	08 18 46.7	-1.8
JNU	Nakatsue	48.67	272	P	P	08 18 56.1	-1.4
	2.9nm,0.5s,baz=356,slow=16,SNR=3.1						
TXAR	Lajitas Array	50.54	93	P	P	08 19 12.7	+0.7
	1.0nm,0.7s,baz=304,slow=6.3,SNR=6.2						
SONM	Songino Array	52.71	302	P	P	08 19 28.7	+0.8
	0.2nm,0.4s,baz=32,slow=6.1,SNR=3.1						
SONM				PcP	PcP	08 20 38.3	+1.3
	0.5nm,0.6s,baz=55,slow=2.9,SNR=3.5						
ARCES	ARCESS Array B	57.21	355	LR	LR	08 44 38.7	
	comp=Z,46nm,19.5s,baz=188,slow=36						
KURK	Kurchatov	63.12	320	P	P	08 20 40.8	+0.2
KURBB	Kurchatov Arra	63.23	320	P	P	08 20 40.8	-0.5
	0.5nm,0.4s,baz=36,slow=4.9,SNR=3.6						
MKAR	Makanchi Array	64.75	315	P	P	08 20 51.6	+0.2
	0.8nm,0.6s,baz=48,slow=6.1,SNR=5.9						
FINES	FINESS Array B	65.22	354	P	P	08 20 54.0	-0.2
	2.6nm,1.0s,baz=12,slow=7.1,SNR=2.2						
AKASG	Malin Array Be	75.62	350	P	P	08 21 56.4	-1.4
	0.1nm,0.2s,baz=12,slow=5.6,SNR=1.7						
CMAR	Chiang Mai Arr	78.54	285	P	P	08 22 14.8	0.0
	0.6nm,0.3s,baz=35,slow=6.6,SNR=4.9						

*IDC **28** 08:15:11.4±1.1, 32.°53N×75.°87E, h0^{km}, mb3.7/11, mb1 3.9/14, mb1mx3.7/47, mbtmp3.8/14, ML3.6/3, Error ellipse: s-maj=28.4km s-min=19.9km az=56.0*

*ISCJB **28** 08:15:13.7±0.6, 32.°69N±0.°05×76.°42E±0.°08, h20^{km}, mb3.7/11, Error ellipse: s-maj=11.5km s-min=3.9km az=141.6*

ISC 28 08:15:15.7±0.8, **32.°71N**±0.°07×**76.°31E**±0.°09, **h20**^{km}, **n27**, σ**1.^{s}57**/36, **mb3.6**/11, **Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDI	New Delhi	4.09	169	eP	Pn	08 16 08.0	-9.2
NDI				eS	Sn	08 17 03.0	-1.5
PYUN	Piuthan	7.38	127	ePn	Pn	08 17 02.9	+0.4
PYUN				eSn	Sn	08 18 25.2	-0.6
	86nm,0.5s						
DANN	Dangsing	7.76	122	ePn	Pn	08 17 09.4	+1.6
DANN				eSn	Sn	08 18 34.5	-0.8
	40nm,0.4s						
KOLN	Koldanda	8.00	126	ePn	Pn	08 17 12.6	+1.5
KOLN				eSn	Sn	08 18 40.2	-1.0
	33nm,0.6s						
DMN	Daman	9.16	121	ePn	Pn	08 17 27.8	+0.8
DMN				eSn	Sn	08 19 08.0	-1.6
	20nm,0.4s						
KKN	Kakani	9.18	120	eSn	Sn	08 19 08.6	-1.5
	25nm,0.4s						
PKIN	Phulchoki	9.39	121	ePn	Pn	08 17 30.5	+0.4
PKIN				eSn	Sn	08 19 13.5	-1.7
	30nm,0.5s						
PKI	Pulchoki	9.40	121	ePn	Pn	08 17 30.8	+0.5
PKI				eSn	Sn	08 19 13.6	-2.0
	56nm,0.8s						
GUN	Gumba	9.56	118	ePn	Pn	08 17 33.1	+0.6
JIRN	Jiri	9.92	118	ePn	Pn	08 17 37.7	+0.1
JIRN				eSn	Sn	08 19 25.7	-2.9
	37nm,0.3s						
AAK	Ala-Archa	10.01	352	Pn	Pn	08 17 39.2	+0.7
	0.3nm,0.3s,baz=169,slow=16,SNR=2.1						
AAK				Sn	Sn	08 19 28.9	-1.4
	0.2nm,0.3s,baz=58,slow=14,SNR=1.2						
RAMN	Ramite	10.62	120	ePn	Pn	08 17 46.8	-0.2
RAMN				eSn	Sn	08 19 42.0	-3.5
	25nm,0.3s						
MKAR	Makanchi Array	14.79	16	Pn	Pn	08 18 44.5	+0.8
	0.6nm,0.3s,baz=204,slow=13,SNR=20						
MKAR				Sn	Sn	08 21 24.1	-2.8
	0.1nm,0.3s,baz=199,slow=21,SNR=2.4						
KURBB	Kurchatov Arra	17.97	5	P	Pn	08 19 23.1	-1.1
	0.1nm,0.3s,baz=192,slow=11,SNR=8.1						
GTA	Gaotai	20.12	64	eP	Pn	08 19 51.8	+1.5
GTA				pP	pP	08 19 56.3	+1.1
GTA				sP	sP	08 19 59.5	+1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BVAR	Borovoye Array	20.75	350	P	P	08 19 55.1	+0.1
	comp=Z,6.7nm,0.7s,baz=162,slow=11,SNR=32						
ZALV	Zalesovo Beam	22.08	13	P	P	08 20 09.9	+0.7
	comp=Z,1.2nm,0.4s,baz=212,slow=11,SNR=4.6						
AKTO	Aktyubinsk	22.27	328	P	P	08 20 09.3	-2.2
	comp=Z,0.7nm,0.4s,baz=158,slow=10.0,SNR=3.1						
CMAR	Chiang Mai Arr	24.80	119	P	P	08 20 37.8	+1.3
	comp=Z,0.8nm,0.3s,baz=296,slow=8.6,SNR=2.4						
SONM	Songino Array	27.26	48	P	P	08 21 01.3	+2.6
	comp=Z,0.2nm,0.3s,baz=270,slow=4.4,SNR=3.8						
FINES	FINESS Array B	43.04	327	P	P	08 23 12.1	-1.6
	comp=Z,2.3nm,0.9s,baz=108,slow=8.9,SNR=2.4						
ARCES	ARCESS Array B	46.30	338	P	P	08 23 39.5	-0.2
	comp=Z,5.8nm,1.1s,baz=109,slow=7.7,SNR=3.2						
SEY	Seymchan	55.17	33	P	P	08 24 48.5	+1.9
	comp=Z,4.6nm,0.3s,baz=233,slow=20,SNR=24						
TORD	Torodi Ar. Bea	70.15	273	P	P	08 26 24.0	-3.3
	comp=Z,0.2nm,0.4s,baz=56,slow=5.1,SNR=2.4						
WRA	Warramunga Arr	76.26	125	P	P	08 27 02.3	-0.8
	comp=Z,0.4nm,0.8s,baz=323,slow=5.5,SNR=3.9						
ILAR	Eielson Array	77.14	18	P	P	08 27 08.9	+1.3
	comp=Z,0.6nm,1.1s,baz=316,slow=5.0,SNR=2.8						
YKA	Yellowknife Ar	84.72	5	P	P	08 27 46.8	-1.2
	comp=Z,0.2nm,0.9s,baz=341,slow=5.5,SNR=2.7						

MEX 28 08:16:55.1±0.3, **14.°45N**×**92.°43W**, **h62**^{km}±7^{km}, **MD3.7**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.49	19	iP	Pn	08 17 07.0	-0.1
THIG				eS	Sn	08 17 13.9	-1.8
CCIG	Comitan	1.85	9	eP	Pn	08 17 23.4	-1.3
CCIG				iS	Sn	08 17 44.6	-2.6
CMIG	Matias Romero	3.53	318	eP	Pn	08 17 46.9	-0.7

*IDC **28** 08:25:27.3±2.7, 34.°92S×179.°01E, h0^{km}, mb4.2/2, mb1 4.4/3, mb1mx3.9/26, mbtmp4.1/3, ML3.3/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/28, Error ellipse: s-maj=58.5km s-min=33.4km az=102.0*

*WEL **28** 08:25:28.7±1.0, 35.°S±9.°×18.°0E±1.°1, h133^{km}±29^{km}*

*ISCJB **28** 08:25:35.3±0.9, 35.°49S±0.°05×179.°3E±0.°1, h103^{km}±8^{km}, mb4.2/6, Error ellipse: s-maj=14.8km s-min=8.9km az=4.7*

*NEIC **28** 08:25:37.7±2.6, 35.°51S×178.°96E, h92^{km}±18^{km}, mb4.3/4, Error ellipse: s-maj=31.9km s-min=13.2km az=50.0*

ISC 28 08:25:38.5±1.9, **35.°47S**±0.°09×**179.°2E**±0.°1, **h114**^{km}±13^{km}, **n58**, σ**2.^{s}60**/74, **mb4.2**/6, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.20	198	ePn	Pn	08 26 10.4	-3.8
MXZ				eSn	Sn	08 26 39.1	-2.4
MXZ	Matakaoa Point	2.20	198	P	Pn	08 26 09.9	-4.3
MXZ				S	Sn	08 26 45.8	+4.2
WMGZ	Waiomatatini S	2.42	194	P	Pn	08 26 14.3	-2.7
WMGZ				S	Sn	08 26 50.1	+3.6
HAZ	Te Kaha	2.54	206	P	Pn	08 26 16.8	-1.7
PKGZ	Pakihiroa	2.57	200	P	Pn	08 26 16.3	-2.7
PKGZ				S	Sn	08 26 53.5	+3.4
PUZ	Puketiti	2.70	196	P	Pn	08 26 17.1	-3.6
PUZ				S	Sn	08 26 57.5	+4.4
RUGZ	Raukumara Rang	2.76	205	P	Pn	08 26 19.8	-1.8
RUGZ				S	Sn	08 26 59.8	+5.0
TWGZ	Tauwhareparae	2.87	199	P	Pn	08 26 20.3	-2.5
TWGZ				S	Sn	08 27 01.4	+4.3
KUZ	Kuaotunu	3.07	245	P	Pn	08 26 22.6	-2.9
CNGZ	Carnagh Statio	3.10	194	P	Pn	08 26 23.0	-3.0
TKGZ	Te Karaka	3.15	199	P	Pn	08 26 24.2	-2.3
TKGZ				S	Sn	08 27 06.8	+3.3
MWZ	Matawai	3.15	204	P	Pn	08 26 24.0	-2.6
OPRZ	Ohinepanea	3.17	221	P	Pn	08 26 26.9	+0.1
MARZ	Manawahe	3.21	218	P	Pn	08 26 27.3	-0.1
URZ	Urewera	3.24	210	ePn	Pn	08 26 25.6	-2.1
URZ				eSn	Sn	08 27 02.9	-2.8
URZ	Urewera	3.24	210	Pn	Pn	08 26 25.6	-2.1
	2.4nm,0.3s,baz=86,slow=19,SNR=36						
URZ				Sn	Sn	08 27 09.2	+3.5
	9.9nm,0.3s,baz=80,slow=23,SNR=6.6						
TGRZ	Tauranga	3.25	225	P	Pn	08 26 28.0	+0.1
RIGZ	Rimuhau	3.42	199	P	Pn	08 26 27.2	-3.0
RIGZ				S	Sn	08 27 12.7	+2.6
KARZ	Kaharoa	3.46	222	P	Pn	08 26 31.3	+0.5
WIAZ	Waiheke Island	3.52	247	P	Pn	08 26 29.6	-2.0
MUGZ	Murupara	3.56	212	P	Pn	08 26 29.7	-2.4
MUGZ				S	Sn	08 27 19.0	+5.5
RTZ	Ruatahuna	3.59	209	P	Pn	08 26 30.8	-1.8
SNGZ	Shannon Statio	3.61	203	P	Pn	08 26 31.0	-1.7
SNGZ				S	Sn	08 27 17.4	+2.7
TOZ	Tahuroa Road	3.72	232	P	Pn	08 26 34.1	0.0
KNZ	Kokohu	3.74	198	P	Pn	08 26 30.0	-4.4
RAHZ	Arahi	3.82	205	P	Pn	08 26 33.9	-1.6
RAHZ				S	Sn	08 27 23.9	+4.2
ALRZ	Allen Road	3.83	215	P	Pn	08 26 34.6	-1.0
MTHZ	Maungataniwha	3.85	208	P	Pn	08 26 34.5	-1.5
MTHZ				S	Sn	08 27 24.1	+3.5
WCZ	Waipu Caves	3.96	262	P	Pn	08 26 35.7	-1.7
NMHZ	Naumai	4.08	207	P	Pn	08 26 37.6	-1.4
BKZ	Black Stump Fm	4.26	209	ePn	Pn	08 26 38.8	-2.6
BKZ				eSn	Sn	08 27 28.2	-2.1
BKZ	Black Stump Fm	4.26	209	P	Pn	08 26 39.0	-2.5
OUZ	Omahuta	4.57	272	ePn	Pn	08 26 42.7	-2.7
OUZ	Omahuta	4.57	272	P	Pn	08 26 42.6	-2.9
HIZ	Hauiti	4.60	227	ePn	Pn	08 26 42.1	-3.8
HIZ	Hauiti	4.60	227	P	Pn	08 26 46.4	+0.5
NGZ	Ngauruhoe	4.67	217	P	Pn	08 26 46.2	-0.8
PXZ	Pawanui	4.91	201	P	Pn	08 26 46.3	-3.7
BFZ	Birch Farm	5.69	203	ePn	Pn	08 26 57.2	-3.5
BFZ				eSn	Sn	08 28 04.0	-0.7
BFZ	Birch Farm	5.69	203	P	Pn	08 26 55.6	-5.0
MRZ	Mangatainoka R	5.91	208	P	Pn	08 26 58.1	-5.5
SNZO	South Karori	6.80	210	ePn	Pn	08 27 13.6	-2.1
SNZO				eSn	Sn	08 28 30.6	-1.0
THZ	Tophouse	7.97	216	ePn	Pn	08 27 29.1	-2.4
THZ				eSn	Sn	08 28 59.8	-0.2
KHZ	Kahutara	8.21	211	ePn	Pn	08 27 33.7	-1.0
KHZ				eSn	Sn	08 29 06.1	+0.5
OXZ	Oxford	9.59	213	ePn	Pn	08 27 49.8	-3.6
OXZ				eSn	Sn	08 29 37.5	-1.7
MQZ	McQueen's Vall	9.64	209	ePn	Pn	08 27 52.5	-1.5
MQZ				eSn	Sn	08 29 35.7	-4.6
DZM	Mont Dzumac	17.38	317	LR	LR	08 33 22.8	
	comp=Z,22nm,21.4s,baz=348,slow=28						
AS01	Alice Springs	40.74	274	eP	P	08 33 09.8	+1.4
AS31	Alice Springs	40.77	274	eP	P	08 33 08.1	-0.6
	1.0nm,0.5s						
ASAR	Alice Springs	40.77	274	P	P	08 33 09.2	+0.4
	2.4nm,0.6s,baz=115,slow=7.7,SNR=41						
WB2	Warramunga Arr	42.22	279	eP	P	08 33 20.2	-0.4
WRAB	Tennant Creek	42.23	279	eP	P	08 33 18.4	-2.2
	3.6nm,0.6s						
WR1	Warramunga Arr	42.23	279	eP	P	08 33 20.2	-0.4
	4.0nm,0.6s						
WRA	Warramunga Arr	42.23	279	P	P	08 33 20.2	-0.4
	2.7nm,0.6s,baz=120,slow=7.7,SNR=43						
QSPA	South Pole Qui	54.65	180	eP	P	08 34 56.9	+1.5
	2.6nm,1.0s						
JNU	Nakatsue	81.86	321	LR	LR	09 12 28.4	
	comp=Z,99nm,18.4s,baz=32,slow=35						
FIA0	FINESS Array S	148.91	335	ePKPbc	PKPbc	08 45 14.1	+2.0
FINES	FINESS Array B	148.91	335	PKPbc	PKPbc	08 45 14.1	+2.0
	5.9nm,1.1s,baz=45,slow=4.1,SNR=3.3						

*NNC **28** 08:29:19.2±2.1, 41.°78N×78.°29E, h0^{km}, mb2.8, mpv2.9, Error ellipse: s-maj=14.4km s-min=12.5km az=16.0, Suspected Mining explosion.*

*KRNET **28** 08:29:20.9±0.1, 41.°83N×78.°11E, h13^{km}, mb2.2*

*ISCJB **28** 08:29:21.2±1.4, 41.°82N±0.°06×78.°17E±0.°07, h0^{km}, Error ellipse: s-maj=10.6km s-min=5.6km az=141.0*

ISC 28 08:29:20.1±1.8, **41.°85N**±0.°09×**78.°20E**±0.°06, **h0**^{km}, **n12**, σ**0.^{s}73**/20, **13C-4D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.65	13	⇑iP	Pb	08 29 34.4	-0.1
	baz=19						
PRZ				⇑iS	Sb	08 29 44.3	+0.1
	baz=19						
KDJ	Kajisay	0.81	290	⇑eP	Pg	08 29 35.5	-0.2
	baz=94						
KDJ				⇑iS	Sg	08 29 46.1	-0.1
	baz=94						
ULHL	Ulahol	1.51	286	⇑iP	Pn	08 29 48.2	-0.5
	baz=87						
ULHL				⇑iS	Sg	08 30 08.2	-0.6
	baz=87						
MDOK	Medeo	1.56	327	⇓P	Pn	08 29 49.4	0.0
	4.8nm,0.9s						
MDOK				S	Sb	08 30 12.2	+1.7
	6.9nm,0.9s						
NRN	Naryn	1.70	257	⇑iP	Pn	08 29 52.2	+0.8
	baz=56						
NRN				⇑iS	Sb	08 30 14.7	+0.1
	baz=56						
BOOM	Boomskoye usch	1.80	292	⇑iP	Pn	08 29 53.1	+0.5
	baz=93						
BOOM				⇑iS	Sb	08 30 17.5	+0.2
	baz=93						
KTBS	Karatobe	2.17	329	Pg	Pb	08 30 00.3	0.0
	4.0nm,0.2s						
KTBS				Lg	Lg	08 30 29.4	
	6.3nm,0.2s						
TKM2	Tokmak 2	2.21	300	⇑Pg	Pb	08 30 00.7	-0.3
	1.7nm,0.5s						
TKM2				⇓Lg	Lg	08 30 30.1	
	3.6nm,0.6s						
TKM2	Tokmak 2	2.21	300	⇑iP	Pb	08 30 00.4	-0.7
	baz=1.0						
TKM2				⇑iS	Sb	08 30 29.1	+0.1
	baz=1.0						
KZA	Kyzart	2.21	277	⇓iP	Pn	08 30 00.2	+1.7
	baz=78						
KZA				⇓iS	Sb	08 30 28.8	-0.6
	baz=78						
ARXS	Arharly	2.38	353	Pg	Pb	08 30 03.4	-0.5
	3.7nm,0.1s						
ARXS				Lg	Lg	08 30 34.8	
	2.5nm,0.3s						
DJR	Jarkent	2.74	25	Pg	Pb	08 30 09.4	-0.7
	0.8nm,0.2s						
DJR				Lg	Lg	08 30 45.3	
	1.3nm,0.2s						

*IDC **28** 08:58:18.1±3.8, 11.°24N×125.°86E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/32, mbtmp3.5/4, Error ellipse: s-maj=335.7km s-min=22.2km az=66.0*

*MAN **28** 08:58:19.1, 11.°66N×126.°20E, h24^{km}, MS2.9*

*ISCJB **28** 08:58:20.4±1.1, 11.°5N±0.°1×126.°14E±0.°07, h33^{km}, mb3.5/4, Error ellipse: s-maj=15.3km s-min=10.2km az=2.5*

ISC 28 08:58:22.0±1.4, **11.°46N**±0.°09×**126.°02E**±0.°09, **h33**^{km}, **n8**, σ**1.^{s}45**/12, **mb3.5**/4, **1D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.59	283	eP	Pn	08 58 33.3	-0.7
BESP				eS	Sb	08 58 41.8	-0.4
PLP	Palo	1.07	254	⇓eP	Pn	08 58 40.3	-0.3
PLP				eS	Sn	08 58 53.2	-1.1
OCLP	Ormoc	1.45	254	eP	Pb	08 58 47.6	-0.7

OCLP				eS	Sb	08 59 08.3	+1.9
MSLP	Maasin	1.75	221	eP	Pb	08 58 52.3	-1.2
MSLP				eS	Sb	08 59 17.3	+2.2
WRA	Warramunga Arr	32.27	165	P	P	09 04 46.8	-1.0
	0.7nm,1.0s,baz=346,slow=9.2,SNR=3.1						
ASAR	Alice Springs	35.76	168	P	P	09 05 17.6	-0.5
	0.2nm,0.7s,baz=345,slow=6.0,SNR=3.1						
MKAR	Makanchi Array	50.94	322	P	P	09 07 22.0	+1.7
	0.3nm,0.5s,baz=119,slow=8.9,SNR=5.1						
KURBB	Kurchatov Arra	54.96	325	P	P	09 07 51.4	+1.6
	0.5nm,0.5s,baz=126,slow=7.4,SNR=5.7						

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*ISCJB **28** 09:00:09.7±0.9, 64°.70N±0°.04×30°.8E±0°.2, h0^{km}, Error ellipse: s-maj=11.7km s-min=5.2km az=164.7*

*MOS **28** 09:00:10.9, 64°.70N×30°.90E, M3.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*HEL **28** 09:00:11.2±0.3, 64°.69N×30°.77E, h0^{km}, ML1.8, Explosion*

*IDC **28** 09:00:11.6±2.7, 64°.62N×30°.86E, h0^{km}, mb1 3.1/3, mb1mx2.9/38, mbtmp3.0/3, ML2.0/3, Error ellipse: s-maj=38.4km s-min=9.5km az=103.0*

ISC 28 09:00:09.2±1.2, **64°.70N**±0°.04×**30°.77E**±0°.09, **h0^{km}, n9, σ1^{s}.08**/12, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.38	345	eP	Pb	09 00 36.0	+0.2
KU6				eS	Sn	09 00 54.9	+0.2
MSF	Maaselka	1.42	330	eP	Pb	09 00 36.5	0.0
MSF				eS	Sb	09 00 54.9	-0.2
JOF	Joensuu	1.80	172	eP	Pb	09 00 42.4	-0.6
JOF				eS	Sg	09 01 06.7	-0.3
JOF				MSG		09 01 12.6	
	comp=Z,5.5nm,0.1s						
OUL	Oulu	2.11	283	eP	Pb	09 00 48.1	-0.2
OUL				eSB	Sb	09 01 15.1	0.0
OUF	Merijarvi	2.63	265	MSG		09 01 37.4	
	comp=Z,5.8nm,0.1s						
SUF	Sumiainen	2.86	228	MSG		09 01 43.9	
	comp=Z,2.8nm,0.1s						
FINES	FINESS Array B	3.90	215	Pn	Pn	09 01 11.9	+1.7
	comp=Z,0.1nm,0.3s,baz=35,slow=17,SNR=3.1						
FINES				Lg	Lg	09 02 10.6	
	comp=Z,0.7nm,0.3s,baz=34,slow=28,SNR=11						
ARCES	ARCESS Array B	5.27	339	Pn	Pn	09 01 30.5	+1.4
	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=11						
ARCES				Sn	Sn	09 02 28.2	-2.3
	comp=Z,0.2nm,0.3s,baz=151,slow=25,SNR=2.6						
ARCES				Lg	Lg	09 02 51.1	
	comp=Z,0.4nm,0.3s,baz=157,slow=29,SNR=4.2						
NOA	NORSAR Array B	9.64	257	Pn	Pn	09 02 28.8	-0.2
	comp=Z,0.0nm,0.3s,baz=70,slow=15,SNR=2.5						

IDC 28 09:14:51.6±2.7, **1°.85S×133°.85E, h0^{km}, mb3.1**/2, **mb1 3.3**/3, **mb1mx3.1**/39, **mbtmp3.1**/3, **ML3.0**/1, **Error ellipse: s-maj=129.8km s-min=27.7km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.99	179	P	Pn	09 19 02.3	-1.0
	0.1nm,0.3s,baz=358,slow=12,SNR=4.6						
ASAR	Alice Springs	21.69	180	P	P	09 19 44.8	+0.5
	0.5nm,0.7s,baz=4.0,slow=13,SNR=6.4						
MKAR	Makanchi Array	66.19	324	P	P	09 25 41.3	0.0
	0.1nm,0.4s,baz=122,slow=5.4,SNR=2.3						

MEX 28 09:27:48.5±0.7, **17°.21N×99°.88W, h38^{km}**±20^{km}, **MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.40	246	eP	Pn	09 27 55.9	-1.6
CAIG				eS	Sn	09 28 02.4	-1.9
MEIG	Mezcala	0.75	19	eP	Pn	09 28 01.3	-1.4
MEIG				eS	Sn	09 28 10.5	-2.4
ARIG	Puente Sto Nin	1.15	338	eP	Pn	09 28 07.3	-0.9
ARIG				eS	Sn	09 28 20.1	-2.5
PLIG	Platanillo	1.23	17	i P	Pn	09 28 06.8	-2.4
PLIG				eS	Sn	09 28 22.4	-2.3

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*KRNET **28** 09:36:50.7±0.1, 42°.59N×79°.62E, h22^{km}, mb3.0*

*SOME **28** 09:36:50.6, 42°.60N×79°.53E, h10^{km}*

*NNC **28** 09:36:50.1±1.2, 42°.58N×79°.58E, h0^{km}, mb3.4, mpv3.3, Error ellipse: s-maj=9.4km s-min=4.3km az=157.0*

ISC 28 09:36:51.3±1.1, **42°.60N**±0°.04×**79°.61E**±0°.04, **h10^{km}, n37, σ1^{s}.48**/67, **18C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.57	349	P	Pb	09 37 02.7	-0.8
	160nm,0.1s						
SHLS				S	Sb	09 37 11.6	-0.2
	324nm,0.2s						
SHLS	Shalkode	0.57	349	eP	Pb	09 37 02.7	-0.8
	baz=18						
SHLS				eS	Sb	09 37 11.5	-0.2
	baz=18						
SHLS	Shalkode	0.57	349	eP	Pb	09 37 02.7	-0.8
	160nm,0.1s						
SHLS				eS	Sb	09 37 11.6	-0.2
	324nm,0.2s						
UZB	Uzynbulak	0.70	322	P	Pg	09 37 04.2	-0.7
	18nm,0.1s						
UZB				S	Sg	09 37 14.1	0.0
	94nm,0.1s						
UZB	Uzynbulak	0.70	322	eP	Pg	09 37 04.2	-0.7
	baz=22						
UZB				eS	Sg	09 37 14.1	0.0
	baz=22						
UZB	Uzynbulak	0.70	322	eP	Pg	09 37 04.2	-0.7
	13nm,0.2s						
UZB				eS	Sg	09 37 14.1	0.0
	94nm,0.1s						
PRZ	Przheval'sk	0.90	263	⇑iP	Pg	09 37 07.6	-1.1
	baz=64						
PRZ				⇑iS	Sg	09 37 19.9	-0.6
	baz=64						
KTMS	Ketmen	1.01	32	P	Pg	09 37 09.3	-1.4
	18nm,0.1s						
KTMS				S	Sg	09 37 23.0	-0.9
	20nm,0.2s						
KTMS	Ketmen	1.01	32	eP	Pg	09 37 09.3	-1.4
	baz=31						
KTMS				eS	Sg	09 37 23.0	-0.9
	baz=31						
KTMS	Ketmen	1.01	32	eP	Pg	09 37 09.3	-1.4
	18nm,0.1s						
KTMS				eS	Sg	09 37 23.0	-0.9
	20nm,0.2s						
KURS	Kuram	1.38	311	P	Pn	09 37 16.3	-0.4
	4.5nm,0.2s						
KURS				S	Sb	09 37 34.8	-0.2
	19nm,0.3s						
KURS	Kuram	1.38	311	eP	Pn	09 37 16.3	-0.4
	baz=11						
KURS				eS	Sb	09 37 34.8	-0.2
	baz=11						
KURS	Kuram	1.38	311	eP	Pn	09 37 16.3	-0.4
	4.5nm,0.2s						
KURS				eS	Sb	09 37 34.8	-0.2
	19nm,0.3s						
MNBS	Baschi	1.73	330	eP	Pb	09 37 22.5	-0.6
	29nm,0.2s						
MNBS				eS	Sg	09 37 45.8	-1.0
	54nm,0.1s						
DJR	Jarkent	1.74	4	eP	Pb	09 37 22.4	-1.0
	2.7nm,0.2s						
DJR				eS	Sb	09 37 45.2	-0.1
	17nm,0.3s						
KDJ	Kajisay	1.86	256	⇑iP	Pb	09 37 24.5	-1.0
	baz=57						
KDJ				⇑iS	Sb	09 37 48.5	-0.4
	baz=57						
MDOK	Medeo	1.97	288	Pn	Pn	09 37 25.6	+0.8
	11nm,0.5s						
MDOK				Lg	Lg	09 37 52.5	
	16nm,0.5s						
MDOK	Medeo	1.97	288	eP	Pb	09 37 26.1	-1.2
	baz=88						
MDOK				eS	Sb	09 37 51.9	-0.1
	baz=88						
MDOK	Medeo	1.97	288	eP	Pb	09 37 26.1	-1.2
	21nm,0.2s						
MDOK				eS	Sb	09 37 51.8	-0.1
	22nm,0.5s						
TNSS	Tian-Shan	2.01	284	Pg	Pn	09 37 25.9	+0.3
	19nm,0.2s						
TNSS				Lg	Lg	09 37 51.4	
	15nm,0.2s						
TNSS	Tian-Shan	2.01	284	eP	Pn	09 37 25.9	+0.3
	19nm,0.2s						
TNSS				eS	Sn	09 37 51.4	+0.3
	15nm,0.2s						
IZV	Izvestkoviy	2.25	282	Pg	Pb	09 37 30.6	-1.6
IZV				Lg	Lg	09 37 59.4	
IZV	Izvestkoviy	2.25	282	eP	Pb	09 37 30.6	-1.6
	31nm,0.1s						
IZV				eS	Sb	09 37 59.4	-0.6
	34nm,0.2s						
ULHL	Ulahol	2.52	263	⇑iP	Pb	09 37 34.7	-2.0
	baz=63						
ULHL				⇑iS	Sb	09 38 06.1	-1.8
	baz=63						
KAPS	Kapalarasan	2.69	356	eP	Pb	09 37 39.8	+0.2
	1.1nm,0.1s						
KAPS				eS	Sb	09 38 14.8	+2.1
	20nm,0.4s						
BOOM	Boomskoye usch	2.71	269	⇑iP	Pb	09 37 37.2	-2.9
	baz=69						
BOOM				⇑iS	Sb	09 38 11.7	-1.8
	baz=69						
NRN	Naryn	2.93	248	⇓iP	Pn	09 37 39.7	+1.5
	baz=48						
NRN				⇓iS	Sn	09 38 15.2	+1.5
	baz=48						
TKM2	Tokmak 2	2.97	278	⇓Pg	Pb	09 37 41.4	-3.1
	1.6nm,0.3s						
TKM2				⇓Lg	Lg	09 38 22.9	
	9.4nm,0.5s						
TKM2	Tokmak 2	2.97	278	⇑iP	Pb	09 37 41.6	-2.9
	baz=78						
TKM2				⇑iS	Sb	09 38 18.8	-2.2
	baz=78						
KZA	Kyzart	3.27	262	⇑iP	Pn	09 37 45.0	+1.9
	baz=63						
KZA				⇑iS	Sn	09 38 24.6	+2.3
	baz=63						
KBK	Karagaybulak	3.44	273	⇓iP	Pn	09 37 47.6	+2.5
	baz=73						
KBK				⇓iS	Sn	09 38 29.2	+3.1
	baz=73						
AAK	Ala-Archa	3.78	272	⇓Pg	Pb	09 38 00.5	+2.3
	2.8nm,0.8s						
AAK				⇑Lg	Lg	09 38 46.7	
	4.3nm,0.7s						
UCH	Uchtor	3.79	266	⇑iP	Pn	09 37 52.4	+2.2
	baz=66						
UCH				⇑iS	Sn	09 38 37.4	+2.3
	baz=66						
ARLS	Aral	3.99	261	⇑iP	Pn	09 37 54.6	+1.9
	baz=61						
ARLS				⇑iS	Sn	09 38 41.5	+1.8
	baz=61						
AML	Almayashu	4.41	266	⇓iP	Pn	09 38 01.4	+2.8
	baz=66						
AML				⇓eS	Sn	09 38 52.0	+1.8
	baz=66						
MAKZ	Makanchi	4.54	21	⇓Pn	Pn	09 38 00.4	+0.4
	1.3nm,0.8s						
MAKZ				⇓Lg	Lg	09 39 12.7	
	2.4nm,1.2s						
MK31	Makanchi Array	4.61	24	⇑Pn	Pn	09 38 03.2	+2.1
	0.1nm,0.2s,baz=204,slow=12,SNR=7.1						
MK31				⇓Lg	Lg	09 39 13.9	
	0.2nm,0.2s,baz=208,slow=26,SNR=3.6						

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*ISCJB **28** 10:15:42.2±0.6, 60°.4S±0°.1×31°.7W±0°.3, h10^{km}, mb4.3/9, MS3.5/8, Error ellipse: s-maj=21.4km s-min=9.4km az=145.1*

*IDC **28** 10:15:42.7±0.6, 60°.30S×31°.81W, h0^{km}, mb4.4/10, mb1 4.5/11, mb1mx4.2/35, mbtmp4.4/11, ML4.4/1, MS3.6/9, Ms1 3.6/9, ms1mx3.4/20, Error ellipse: s-maj=25.1km s-min=19.3km az=70.0*

ISC 28 10:15:44.0±0.6, **60°.5S**±0°.1×**31°.4W**±0°.1, **h10^{km}, n37, σ2^{s}.01**/28, **mb4.3**/8, **MS3.5**/8, **Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.87	147	P	Pn	10 19 03.1	+2.9
VNA1	Neumayer--Stat	13.87	147	S	Sn	10 21 32.2	-1.7
VNA3	Neumayer Olymp	13.87	150	P	Pn	10 19 01.8	+1.5
VNA3	Neumayer Olymp	13.87	150	S	Sn	10 21 31.7	-2.3
VNA2	Neumayer--Watz	14.26	147	P	Pn	10 19 07.5	+1.9
	baz=308,slow=15						
VNA2	Neumayer--Watz	14.26	147	S	Sn	10 21 41.2	-2.5
	baz=301,slow=26						
SNAA	Sanae	15.90	146	P	P	10 19 30.6	-0.7
SNAA	Sanae	15.90	146	Pn	P	10 19 30.4	-0.9
	1.3nm,0.3s,baz=300,slow=13,SNR=29						
SNAA				Sn	Sn	10 22 17.9	-5.7
	0.1nm,0.3s,baz=250,slow=20,SNR=2.5						
SNAA				LR	LR	10 24 19.4	
	comp=Z,295nm,19.6s,baz=313,slow=32						
USHA	Ushuaia	20.38	270	P	P	10 20 18.4	-2.1
	9.9nm,0.7s,baz=113,slow=10,SNR=5.7						
USHA				LR	LR	10 26 10.8	
	comp=Z,263nm,19.0s,baz=112,slow=31						
QSPA	South Pole Qui	29.75	180	P	P	10 21 52.7	+2.4
	1.3nm,0.6s,baz=204,slow=1.6,SNR=9.4						
QSPA				LR	LR	10 33 49.0	
	comp=Z,88nm,21.8s,baz=163,slow=36						
PLCA	Paso Flores	31.06	292	LR	LR	10 32 52.9	
	comp=Z,98nm,19.0s,baz=165,slow=33						
CPUP	Villa Florida	38.46	321	LR	LR	10 41 45.1	
	comp=Z,48nm,18.1s,baz=169,slow=41						
BDFB	Brasilia	46.37	338	LR	LR	10 43 05.2	
	comp=Z,102nm,21.1s,baz=284,slow=36						
SIV	San Ignacio	49.33	321	P	P	10 24 30.8	-2.4
	2.0nm,0.9s,baz=161,slow=8.7,SNR=6.6						
LPAZ	La Paz	51.43	313	P	P	10 24 48.5	-1.3
	2.8nm,0.8s,baz=150,slow=5.3,SNR=7.4						
LPAZ				LR	LR	10 47 39.2	
	comp=Z,19nm,19.9s,baz=147,slow=38						
H10S2	ASCENSION HYDR	52.93	21	T	T	11 22 21.3	
	baz=191,slow=75,SNR=284						
H10S3	ASCENSION HYDR	52.93	21	T	T	11 22 21.5	
	baz=191,slow=75,SNR=341						
H10S1	ASCENSION HYDR	52.95	21	T	T	11 22 37.8	
	baz=191,slow=75,SNR=285						
H10N1	ASCENSION HYDR	54.05	21	T	T	11 23 46.0	
	baz=190,slow=75,SNR=89						
H10N3	ASCENSION HYDR	54.05	21	T	T	11 23 41.3	
	baz=190,slow=75,SNR=266						
H10N2	ASCENSION HYDR	54.06	21	T	T	11 24 07.1	
	baz=190,slow=75,SNR=149						
DBIC	Dimbokro	70.14	28	P	P	10 26 55.4	-1.0
	1.9nm,0.8s,baz=180,slow=8.1,SNR=2.5						
ROSC	El Rosal	73.22	315	LR	LR	11 04 04.8	
	comp=Z,28nm,18.1s,baz=201,slow=40						
SDV	Santo Domingo	75.77	320	P	P	10 27 28.9	-1.1
	3.5nm,1.0s,baz=263,slow=10,SNR=3.1						
TORD	Torodi Ar. Bea	78.02	33	P	P	10 27 43.3	+1.0
	4.0nm,0.8s,baz=206,slow=4.6,SNR=24						
STKA	Stephens Creek	87.80	174	LR	LR	11 06 18.6	
	comp=Z,56nm,19.5s,baz=203,slow=34						
RAR	Rarotonga	88.52	227	P	P	10 28 37.1	+0.6
	11nm,0.6s,baz=162,slow=9.6,SNR=2.1						
ASAR	Alice Springs	95.30	167	P	P	10 29 08.9	+0.9
	0.8nm,0.7s,baz=182,slow=4.1,SNR=12						
WRA	Warramunga Arr	99.03	166	P	Pdif	10 29 25.2	+0.2
	0.8nm,0.8s,baz=194,slow=4.1,SNR=4.2						
CMAR	Chiang Mai Arr	125.30	118	PKP	PKiKP	10 34 45.4	+0.4
	0.8nm,0.6s,baz=241,slow=3.5,SNR=6.0						
FINES	FINESS Array B	129.35	32	PKP	PKPdf	10 34 50.8	-0.2
	2.9nm,0.8s,baz=186,slow=3.8,SNR=5.9						
YKA	Yellowknife Ar	137.92	317	PKP	PKPdf	10 35 06.6	-0.4
	1.1nm,0.8s,baz=131,slow=2.1,SNR=14						
YKA				PP	PP	10 37 59.7	+3.8
	0.2nm,0.7s,baz=122,slow=5.9,SNR=3.7						
MKAR	Makanchi Array	140.18	79	PKP	PKPdf	10 35 11.5	-0.3
	0.2nm,0.3s,baz=240,slow=4.1,SNR=3.8						
ZALV	Zalesovo Beam	146.12	72	PKPbc	PKPbc	10 35 23.5	+0.6
	1.8nm,0.6s,baz=249,slow=5.0,SNR=7.1						
INK	Inuvik	147.68	317	PKPbc	PKPbc	10 35 26.1	-0.9
	5.5nm,1.0s,baz=105,slow=4.3,SNR=9.4						
ILAR	Eielson Array	151.19	307	PKPbc	PKPbc	10 35 35.1	-0.6
	4.3nm,0.7s,baz=141,slow=1.4,SNR=48						
SONM	Songino Array	152.78	99	PKPbc	PKiKP	10 35 41.1	+0.9
	0.9nm,0.7s,baz=197,slow=3.1,SNR=6.1						

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*SJA **28** 10:16:12.6±1.1, 33°.07S×70°.32W, h107^{km}±5^{km}, ML3.7, MW3.7*

*ISCJB **28** 10:16:13.1±0.3, 33°.08S±0°.03×70°.29W±0°.03, h110^{km}±2^{km}, mb4.1/12, Error ellipse: s-maj=5.3km s-min=3.6km az=37.3*

*NEIC **28** 10:16:13.0±0.0, 33°.00S×70°.27W, h91^{km}, mb4.2/5, ML4.2(GUC), After GUC.*

NEIC Felt [III] at Zapallar and [II] at Quillota, San Antonio and Valparaiso.

*GUC **28** 10:16:13.8±0.7, 33°.00S×70°.27W, h91^{km}±5^{km}, ML4.2*

*IDC **28** 10:16:14.1±0.8, 33°.02S×70°.10W, h100^{km}±7^{km}, mb3.9/12, mb1 3.9/15, mb1mx3.8/34, mbtmp4.2/15, MS2.6/1, Ms1 2.6/1, ms1mx2.5/16, Error ellipse: s-maj=22.0km s-min=14.5km az=90.0*

ISC 28 10:16:13.7±0.5, **33°.06S**±0°.03×**70°.32W**±0°.04, **h104^{km}**±4^{km}, **n79, σ1^{s}.03**/101, **mb4.2**/12, **26D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	0.27	174	eP	Pn	10 16 28.8	-0.3
FCH				i S	Sn	10 16 40.3	-0.3
FCH				IAML		10 16 41.3	
	comp=E,16µm,0.3s						
PEL	Peldehue	0.31	255	ePn	Pn	10 16 28.9	0.0
PEL				eSn	Sn	10 16 40.1	-0.2
PEL	Peldehue	0.31	255	eP	Pn	10 16 28.9	0.0
PEL				⇓eS	Sn	10 16 40.3	0.0
PEL	Peldehue	0.31	255	eP	Pn	10 16 28.6	-0.3
PEL				i S	Sn	10 16 39.8	-0.5
PEL				IAML		10 16 41.3	
	comp=N,16µm,0.2s						
CLCH	Cerro Calan	0.38	208	eP	Pn	10 16 29.3	0.0
CLCH				i S	Sn	10 16 41.2	+0.3
CLCH				IAML		10 16 42.2	
	comp=N,27µm,0.5s						
ANTU	Antumapu	0.57	207	eP	Pn	10 16 30.6	+0.1
ANTU				i S	Sn	10 16 43.0	-0.1
ROCH	El Roble	0.58	279	eP	Pn	10 16 30.9	0.0
ROCH				i S	Sn	10 16 44.2	+0.5
ROCH				IAML		10 16 45.0	
	comp=N,14µm,0.2s						
ROC1	El Roble	0.59	278	ePn	Pn	10 16 30.7	-0.1
ROC1				eSn	Sn	10 16 43.8	+0.1
ROC1	El Roble	0.59	278	⇓eP	Pn	10 16 30.9	0.0
ROC1				eS	Sn	10 16 44.2	+0.5
LMEL	Las Melosas	0.79	173	eP	Pn	10 16 32.6	+0.1
LMEL				i S	Sn	10 16 47.5	+0.9
LMEL				IAML		10 16 52.4	
	comp=N,6µm,0.2s						
AUSP	Uspallata	1.15	44	⇓eP	Pn	10 16 36.9	+0.5
AUSP				⇓eS	Sn	10 16 53.9	+0.5
ARCO	CERRO ARCO	1.19	80	⇓eP	Pn	10 16 37.0	+0.3
ARCO				⇓eS	Sn	10 16 54.6	+0.6
ARCO				IAML		10 16 56.4	
	comp=Z,1µm,0.5s						
AAGR	Agrelo	1.26	92	⇓eP	Pn	10 16 37.7	+0.3
AAGR				⇓eS	Sn	10 16 55.3	0.0
ASAL	Salagasta	1.34	70	⇓eP	Pn	10 16 39.1	+0.7
ASAL				⇓eS	Sn	10 16 57.7	+0.8
RTLS	Leoncito	1.53	35	⇓eP	Pn	10 16 41.8	+1.0
RTLS				eS	Sn	10 17 02.4	+1.0
RTLS				IAML		10 17 04.5	
	comp=Z,398nm,0.5s						
AVIZ	Vizcacheras	1.57	106	⇓eP	Pn	10 16 41.2	+0.1
AVIZ				⇓eS	Sn	10 17 02.6	+0.7
RTCV	Cerro Valdivia	1.92	52	⇓eP	Pn	10 16 45.8	+0.2
RTCV				eS	Sn	10 17 10.0	+0.2
CMCH	Combarbala	1.97	343	eP	Pn	10 16 46.4	+0.2
CMCH				i S	Sn	10 17 10.7	-0.2
ZON	Zonda	2.06	43	⇓eP	Pn	10 16 47.2	0.0
ZON				eS	Sn	10 17 13.3	+0.5
ZON				IAML		10 17 16.0	
	comp=Z,153nm,0.7s						
CFA	Coronel Fontan	2.29	51	⇓eP	Pn	10 16 50.1	-0.1
CFA				⇓eS	Sn	10 17 17.6	-0.5
RTLL	Cerro Villicun	2.33	43	⇓eP	Pn	10 16 51.1	+0.3
RTLL				eS	Sn	10 17 19.6	+0.3
RTLL				IAML		10 17 20.9	
	comp=Z,331nm,0.5s						
GO05	Huala	2.36	214	ePn	Pn	10 16 51.1	0.0
GO05				eSn	Sn	10 17 16.1	-3.6
AMOG	MOGNA	2.63	37	⇓eP	Pn	10 16 55.1	+0.5
ACCO	Cerro Coronel	2.69	24	⇓eP	Pn	10 16 56.5	+0.8
ACCO				eS	Sn	10 17 29.6	+1.5
ACAN	Cantantal	2.76	74	⇓eP	Pn	10 16 56.1	-0.3
ACAN				eS	Sn	10 17 26.6	-2.6
GO04	Tololo Observa	2.91	352	ePn	Pn	10 16 58.4	-0.2
GO04				eSn	Sn	10 17 29.0	-4.1
ACDV	Cuesta del Vie	3.06	20	⇓eP	Pn	10 17 01.3	+0.8
AGUA	GUANDACOL	3.89	24	⇓eP	Pn	10 17 11.9	+0.3
MRA	San Martin	3.94	82	⇓eP	Pn	10 17 11.0	-1.2
MRA				IAML		10 17 58.9	
	comp=Z,113nm,0.5s						
LCO	Las Campanas	4.05	355	ePn	Pn	10 17 13.0	-0.9
LCO	Las Campanas	4.05	355	⇓eP	Pn	10 17 13.6	-0.3
APLL	PUNTA DE LOS L	4.19	52	⇓eP	Pn	10 17 14.2	-1.3
APLL				eS	Sn	10 18 01.4	-2.1
APLL				IAML		10 18 03.3	
	comp=Z,78nm,0.4s						
TCA	Tanti	5.15	72	eP	Pn	10 17 26.6	-1.9
TCA				IAML		10 18 38.9	
	comp=Z,73nm,0.6s						
GO06	Curarrehue	6.58	188	ePn	Pn	10 17 47.9	0.0
PLCA	Paso Flores	7.66	181	P	Pn	10 18 02.5	-0.1
	comp=Z,0.2nm,0.3s,baz=20,slow=13,SNR=8.7						
PLCA				LR	LR	10 21 04.9	
	comp=Z,46nm,21.2s,baz=194,slow=38						
GO02	Mina Guanaco	7.90	5	ePn	Pn	10 18 02.8	-3.3
TRQA	Tornquist	8.43	129	ePn	Pn	10 18 11.9	-1.1
GO07	Milladeo Hill,	10.38	194	ePn	Pn	10 18 33.2	-6.1
LVC	Limon Verde	10.49	7	Lg	Lg	10 21 04.5	
	comp=Z,0.3nm,0.3s,baz=343,slow=19,SNR=2.8						
CPUP	Villa Florida	13.13	63	P	Pn	10 19 14.8	-1.4
	comp=Z,0.2nm,0.3s,baz=225,slow=13,SNR=3.6						
CPUP				Lg	Lg	10 22 18.4	
	comp=Z,0.2nm,0.3s,baz=159,slow=20,SNR=1.9						
PB11	IPOC Station P	13.26	3	ePn	Pn	10 19 18.2	+0.1
MNMC	Minye Minye	13.89	3	ePn	Pn	10 19 26.5	+0.1
LPAZ	La Paz	16.82	7	ePn	Pn	10 20 03.4	-0.1
	comp=Z,3.0nm,0.9s						
LPAZ	La Paz	16.82	7	P	Pn	10 20 03.4	-0.1
	comp=Z,0.2nm,0.3s,baz=170,slow=8.3,SNR=6.6						
GO09	Cerro Castillo	18.26	184	eP	Pn	10 20 19.9	-0.1
	comp=Z,6.9nm,1.1s						
SIV	San Ignacio	18.95	28	P	P	10 20 24.7	-2.0
	comp=Z,0.5nm,0.3s,baz=221,slow=8.8,SNR=6.8						
EFI	East Falkland	20.64	158	eP	P	10 20 44.3	-0.4
	comp=Z,28nm,1.0s						
USHA	Ushuaia	21.81	177	P	P	10 20 57.8	+0.6
	comp=Z,8.6nm,0.7s,baz=360,slow=8.7,SNR=3.5						
BDFB	Brasilia	26.62	55	eP	P	10 21 41.5	-1.2
BDFB				eP	P	10 21 42.0	-0.8
BDFB	Brasilia	26.62	55	P	P	10 21 41.5	-1.2
	comp=Z,3.9nm,0.6s,baz=232,slow=6.2,SNR=8.4						
VNA3	Neumayer Olymp	49.69	158	P	P	10 24 43.0	-12
VNA1	Neumayer--Stat	49.98	157	P	P	10 24 44.8	-12
VNA2	Neumayer--Watz	50.33	158	P	P	10 24 53.2	-6.1
	baz=270,slow=10						
SNAA	Sanae	51.92	158	P	P	10 25 12.0	+0.7
SNAA	Sanae	51.92	158	eP	P	10 25 11.7	+0.4
	comp=Z,5.0nm,0.9s						
SNAA	Sanae	51.92	158	P	P	10 25 11.7	+0.4
	comp=Z,3.8nm,0.8s,baz=274,slow=8.8,SNR=6.7						
QSPA	South Pole Qui	57.17	180	P	P	10 25 51.0	+1.5
	comp=Z,3.2nm,0.8s,baz=90,slow=2.3,SNR=4.8						
TXAR	Lajitas Array	69.64	329	P	P	10 27 13.1	+1.1
	comp=Z,0.7nm,0.7s,baz=132,slow=6.9,SNR=5.2						
TXAR				pP	pP	10 27 39.3	+0.9
	comp=Z,0.3nm,0.6s,baz=143,slow=7.9,SNR=2.1						
DBIC	Dimbokro	73.52	70	P	P	10 27 35.4	-0.1
	comp=Z,2.8nm,0.6s,baz=224,slow=3.6,SNR=3.7						
SUR	Sutherland	74.02	118	P	P	10 27 39.5	+1.0
	comp=Z,9.7nm,1.0s,baz=250,slow=12,SNR=2.8						
BOSA	Boshof	79.23	117	P	P	10 28 07.5	-0.3
	comp=Z,4.0nm,1.0s,baz=225,slow=4.3,SNR=2.9						
LBTB	Lobatse	81.39	114	eP	P	10 28 19.0	-0.5

LBTB	**Lobatse**	**81.39**	**114**	P	**P**	**10 28 19.9**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=212,slow=9.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**82.54**	**69**	P	**P**	**10 28 25.6**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=271,slow=4.2,SNR=5.6						
TOA1	**Torodi Ar. Sit**	**82.54**	**69**	*e*P	**P**	**10 28 25.6**	**+0.3**
PDAR	**Pinedale Array**	**83.59**	**332**	P	**P**	**10 28 31.7**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=151,slow=8.2,SNR=2.4						
NV01	**Mina Array Sit**	**83.95**	**324**	*e*P	**P**	**10 28 33.6**	**+1.3**
NVAR	**Mina Array Bea**	**83.95**	**324**	P	**P**	**10 28 33.6**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=165,slow=5.6,SNR=5.8						
ECH	**Echery**	**106.38**	**43**	*e*Pdif	**Pdif**	**10 30 15.3**	**+0.2**
WR1	**Warramunga Arr**	**122.27**	**208**	*e*PKPdf	**PKiKP**	**10 34 57.1**	**-0.1**
WRA	**Warramunga Arr**	**122.27**	**208**	PKP	**PKiKP**	**10 34 57.1**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=157,slow=1.5,SNR=5.1						
WRA				pPKP	**pPKPdf**	**10 35 24.9**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=162,slow=1.3,SNR=1.8						
H11S2	**WAKE ISLAND Hy**	**127.22**	**269**	T	T	12 54 44.9	
	baz=117,slow=75,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**127.23**	**269**	T	T	12 54 48.1	
	baz=117,slow=75,SNR=4.0						
H11S3	**WAKE ISLAND Hy**	**127.24**	**269**	T	T	12 54 46.4	
	baz=117,slow=75,SNR=6.4						
GAR	**Garm**	**147.81**	**68**	*e*PKPbc	**PKiKP**	**10 35 47.4**	**-1.1**
ZAA1	**Zalesovo Array**	**152.66**	**33**	*e*PKPbc	**PKiKP**	**10 35 58.5**	**+0.7**
ZALV	**Zalesovo Beam**	**152.67**	**33**	PKPbc	**PKiKP**	**10 35 58.5**	**+0.7**
	comp=Z,1.7nm,0.4s,baz=283,slow=2.9,SNR=5.1						
ZALV				pPKPbc	**pPKPbc**	**10 36 25.2**	**-1.9**
	comp=Z,1.5nm,0.6s,baz=299,slow=3.9,SNR=2.8						
MK32	**Makanchi Array**	**155.07**	**49**	*e*PKPab	**PKPab**	**10 36 18.5**	**-0.7**
MKAR	**Makanchi Array**	**155.07**	**49**	PKPab	**PKPab**	**10 36 18.5**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=305,slow=5.1,SNR=2.9						

IDC 28 10:17:25.9±4.3, 20°.46S×177°.34W, h0^{km}, mb4.0/4, mb1 4.1/4, mb1mx3.7/29, mbtmp4.0/4, Error ellipse: s-maj=114.8km s-min=39.7km az=29.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.37**	**244**	P	P	10 24 47.4	-1.5
	1.2nm,0.4s,baz=80,slow=8.5,SNR=4.9						
ASAR	**Alice Springs**	**45.13**	**257**	P	P	10 25 44.7	+0.2
	0.9nm,0.5s,baz=92,slow=6.6,SNR=14						
ASAR				PcP	PcP	10 27 24.0	-1.1
	0.5nm,0.9s,baz=92,slow=6.5,SNR=2.7						
WRA	**Warramunga Arr**	**45.22**	**262**	P	P	10 25 45.9	+0.7
	0.4nm,0.3s,baz=97,slow=8.2,SNR=20						
QSPA	**South Pole Qui**	**69.61**	**180**	P	P	10 28 37.2	+0.3
	1.2nm,0.6s,baz=51,slow=17,SNR=7.5						

ISCJB ***28*** *10:37:19.4±1.1, 67°.73N±0°.04×34°.5E±0°.1, h0^{km}, Error ellipse: s-maj=8.3km s-min=6.2km az=19.3*

KOLA ***28*** *10:37:24.1, 67°.76N×34°.15E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NAO ***28*** *10:37:25.3±1.2, 67°.74N×33°.95E, ML2.8*

IDC ***28*** *10:37:25.5±1.7, 67°.77N×34°.02E, h0^{km}, mb1 3.6/5, mb1mx3.2/44, mbtmp3.6/5, ML2.8/5, Error ellipse: s-maj=18.0km s-min=8.7km az=85.0*

ISC 28 10:37:22.0±1.6, 67°.74N±0°.04×34°.33E±0°.09, h0^{km}, n28, σ2^{s}46/54, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.39**	**245**	P	**Pg**	**10 37 30.2**	**+0.7**
APA				S	**Sg**	**10 37 34.6**	**0.0**
APZ9	**Apatity**	**0.39**	**245**	Pg	**Pg**	**10 37 30.1**	**+0.5**
APZ9				Lg	Lg	10 37 34.8	
APZ9	**Apatity**	**0.39**	**245**	Pg	**Pg**	**10 37 30.1**	**+0.5**
APZ9				Sg	**Sg**	**10 37 34.8**	**+0.2**
APA0	**Apatity Array**	**0.53**	**256**	Pg	**Pg**	**10 37 32.4**	**+0.3**
APA0				Lg	Lg	10 37 37.7	
APA0				Rg	Rg	10 37 41.4	
APA0	**Apatity Array**	**0.53**	**256**	P	**Pg**	**10 37 32.4**	**+0.3**
APA0				S	**Sg**	**10 37 38.5**	**-0.4**
APA0	**Apatity Array**	**0.53**	**256**	Pg	**Pg**	**10 37 32.4**	**+0.3**
APA0				Sg	**Sg**	**10 37 37.7**	**-1.3**
APA0				Rg	Rg	10 37 41.4	
KEV	**Kevo**	**3.35**	**311**	Pn	**Pn**	**10 38 18.0**	**+2.5**
KEV				Sn	**Sn**	**10 38 57.7**	**+1.8**
KEV				Lg	Lg	10 39 07.5	
KEV	**Kevo**	**3.35**	**311**	*e*P	**Pn**	**10 38 18.0**	**+2.5**
KEV				*e*S	**Sn**	**10 38 57.3**	**+1.4**
ARA0	**ARCESS Array S**	**3.70**	**303**	Pn	**Pn**	**10 38 21.7**	**+1.3**
	baz=120,slow=16						
ARA0				Pg	**Pb**	**10 38 28.6**	**+0.5**
	baz=113,slow=18						
ARA0				Sn	**Sn**	**10 39 05.0**	**+0.4**
	baz=123,slow=28						
ARA0				Lg	Lg	10 39 16.0	
	baz=117,slow=37						
ARA0	**ARCESS Array S**	**3.70**	**303**	Pg	**Pb**	**10 38 28.6**	**+0.5**
	baz=113,slow=18						
ARA0				Sg	**Sb**	**10 39 16.0**	**+2.5**
	baz=117,slow=37						
ARCES	**ARCESS Array B**	**3.70**	**303**	Pn	**Pn**	**10 38 21.8**	**+1.4**
	2.5nm,0.3s,baz=120,slow=15,SNR=140						
ARCES				Pg	**Pb**	**10 38 30.6**	**+2.4**
	2.2nm,0.3s,baz=116,slow=16,SNR=20						
ARCES				Sn	**Sn**	**10 39 04.8**	**+0.2**
	3.2nm,0.3s,baz=117,slow=30,SNR=8.7						
ARCES				Lg	Lg	10 39 15.9	
	15nm,0.3s,baz=114,slow=32,SNR=13						
ARE0	**ARCESS Array S**	**3.70**	**303**	*e*P	**Pn**	**10 38 21.9**	**+1.5**
ARE0				*e*S	**Sn**	**10 39 04.8**	**+0.2**
ARE0				IAML		10 39 20.3	
	comp=Z,0.9nm,0.3s						
HEF	**Hetta**	**4.06**	**284**	Pn	**Pn**	**10 38 26.1**	**+0.7**
HEF				Pg	**Pb**	**10 38 35.7**	**+1.4**
HEF				Sn	**Sn**	**10 39 13.4**	**-0.1**
HEF				Lg	Lg	10 39 26.3	
HEF	**Hetta**	**4.06**	**284**	*e*P	**Pn**	**10 38 26.0**	**+0.7**
HEF				Pg	**Pb**	**10 38 35.7**	**+1.4**
HEF				*e*S	**Sn**	**10 39 13.4**	**-0.1**
HEF				Sg	**Sb**	**10 39 26.3**	**+2.5**
KTK1	**Kautokeino**	**4.30**	**292**	*e*P	**Pn**	**10 38 30.5**	**+1.9**
KTK1				*e*S	**Sn**	**10 39 19.2**	**-0.2**
KIF	**Kilpisjarvi**	**5.16**	**290**	Pn	**Pn**	**10 38 41.4**	**+1.0**
KIF				Sn	**Sn**	**10 39 39.0**	**-1.6**
KIF				Lg	Lg	10 39 57.7	
KIF	**Kilpisjarvi**	**5.16**	**290**	*e*P	**Pn**	**10 38 40.5**	**0.0**
KIF				*e*S	**Sn**	**10 39 38.4**	**-2.2**
FIA0	**FINESS Array S**	**7.24**	**213**	Pn	**Pn**	**10 39 09.4**	**+0.5**
	baz=24,slow=14						
FIA0				Sn	**Sn**	**10 40 27.4**	**-4.3**
	baz=40,slow=28						
FIA0				Lg	Lg	10 41 03.5	
	baz=27,slow=28						
FIA0	**FINESS Array S**	**7.24**	**213**	Pn	**Pn**	**10 39 09.4**	**+0.5**
	baz=24,slow=14						
FIA0				Sn	**Sn**	**10 40 27.4**	**-4.3**
	baz=40,slow=28						
FIA0				Sg	**Sb**	**10 41 03.5**	**+8.2**
	baz=27,slow=28						
FINES	**FINESS Array B**	**7.24**	**213**	Pn	**Pn**	**10 39 10.2**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=24,slow=12,SNR=7.0						
FINES				Sn	**Sn**	**10 40 27.4**	**-4.3**
	comp=Z,0.6nm,0.3s,baz=29,slow=21,SNR=6.9						
FINES				Lg	Lg	10 41 02.2	
	comp=Z,1.0nm,0.3s,baz=34,slow=25,SNR=6.1						
SPA0	**Spitsbergen Ar**	**11.64**	**342**	Pn	**Pn**	**10 40 09.3**	**+0.1**
	baz=148,slow=14						
SPITS	**Spitsbergen Ar**	**11.64**	**342**	Pn	**Pn**	**10 40 07.7**	**-1.4**
	baz=141,slow=16,SNR=11						
SPITS				Sn	**Sn**	**10 42 12.6**	**-7.0**
	baz=141,slow=50,SNR=1.3						
HFS	**Hagfors**	**11.79**	**240**	Pn	**Pn**	**10 40 09.9**	**-1.4**
	baz=45,slow=14						
HFS	**Hagfors**	**11.79**	**240**	Pn	**Pn**	**10 40 09.2**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=34,slow=16,SNR=4.1						
HFS				Sn	**Sn**	**10 42 15.9**	**-7.4**
	comp=Z,0.1nm,0.3s,baz=41,slow=31,SNR=2.1						
HFS	**Hagfors**	**11.79**	**240**	Pn	**Pn**	**10 40 09.9**	**-1.4**
	baz=45,slow=14						
NOA	**NORSAR Array B**	**11.98**	**247**	Pn	**Pn**	**10 40 12.1**	**-1.8**
	comp=Z,0.0nm,0.3s,baz=47,slow=12,SNR=1.9						
NRA0	**NORESS Array S**	**12.08**	**245**	Pn	**Pn**	**10 40 13.8**	**-1.3**
	baz=62,slow=14						
NRA0	**NORESS Array S**	**12.08**	**245**	Pn	**Pn**	**10 40 13.8**	**-1.3**
	baz=62,slow=14						

NNC ***28*** *11:06:00.7±0.9, 38°.16N×57°.52E, h0^{km}, mb4.8, mpv5.7, Error ellipse: s-maj=7.3km s-min=2.6km az=57.0*

TEH ***28*** *11:06:00.6, 38°.17N×57°.58E, h10^{km}, ML4.5*

IDC ***28*** *11:06:01.4±0.5, 38°.03N×57°.46E, h0^{km}, mb4.1/26, mb1 4.3/33, mb1mx4.2/47, mbtmp4.2/33, ML3.9/5, MS3.9/35, Ms1 3.9/35, ms1mx3.8/51, Error ellipse: s-maj=14.2km s-min=5.6km az=13.0*

ISCJB ***28*** *11:06:02.4±0.1, 38°.18N±0°.02×57°.54E±0°.02, h18^{km}, mb4.3/54, MS4.0/35, Error ellipse: s-maj=2.5km s-min=2.0km az=11.2*

THR ***28*** *11:06:02.4, 38°.15N×57°.45E, h16^{km}, ML4.2*

NEIC ***28*** *11:06:03.0±0.3, 38°.09N×57°.57E, h10^{km}, mb4.5/20, Error ellipse: s-maj=7.2km s-min=3.9km az=183.0*

NEIC Felt at Ashgabat.

BJI ***28*** *11:06:03.6, 38°.20N×57°.91E, h10^{km}, mB4.8/22, mb4.5/28, Ms4.7/18, Ms7 4.4/17*

MOS ***28*** *11:06:04.6±2.3, 38°.22N×57°.55E, h33^{km}, mb4.7/17, Error ellipse: s-maj=5.3km s-min=4.0km az=39.5*

ISC 28 11:06:04.4±0.3, 38°.18N±0°.04×57°.55E±0°.03, h18^{km}, n307, σ2^{s}33/338, mb4.5/65, MS4.0/35, 27C-21D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJRD	**Bojnurd**	**0.49**	**193**	*e*Pg	**Pg**	**11 06 11.6**	**-2.7**
BJRD	**Bojnurd**	**0.49**	**193**	*e*AML	AML	11 06 20.3	
	comp=E,8µm,0.4s						
BJRD	**Bojnurd**	**0.49**	**193**	*e*Pg	**Pg**	**11 06 11.6**	**-2.7**
GEYT	**Alibeck**	**0.51**	**119**	Pg	**Pg**	**11 06 11.3**	**-3.4**
	comp=E,4µm,0.3s,baz=280,slow=19						
GEYT				Lg	Lg	11 06 18.1	
	comp=E,7µm,0.3s,baz=282,slow=40,SNR=60						
GYA0	**ALIBECK ARRAY**	**0.51**	**119**	*e*Pg	**Pg**	**11 06 11.1**	**-3.6**
GYA0B	**ALIBECK ARRAY**	**0.51**	**119**	*e*Pg	**Pg**	**11 06 11.1**	**-3.6**
GYA0B				*e*Sg	**Sg**	**11 06 18.9**	**-2.7**
GYA0B	**ALIBECK ARRAY**	**0.51**	**119**	⇑P	**Pg**	**11 06 11.0**	**-3.6**
	comp=E,12µm,0.5s						
GYA0B				⇓S	**Sg**	**11 06 18.4**	**-3.2**
	comp=E,39µm,0.6s						
ASHT	**Ashkhabad**	**0.70**	**109**	P	**Pb**	**11 06 16.1**	**-1.9**
ASHT	**Ashkhabad**	**0.70**	**109**	*e*Pn	**Pb**	**11 06 16.1**	**-1.9**
IEMG	**Emamgholi**	**1.16**	**131**	*e*Pg	**Pn**	**11 06 22.0**	**-3.9**
IEMG				IAMB	IAmb	11 06 24.9	
	comp=Z,100µm,0.4s						
ISFR	**Sfrayin**	**1.18**	**162**	*e*Pg	**Pn**	**11 06 22.2**	**-4.0**
ISFR				IAMB	IAmb	11 06 45.6	
	comp=Z,90µm,0.4s						
MRVT	**Maraveh tapeh**	**1.26**	**246**	*e*Pg	**Pn**	**11 06 24.4**	**-2.8**
MRVT	**Maraveh tapeh**	**1.26**	**246**	*e*AML	AML	11 06 49.1	
	comp=N,5µm,0.7s						
MRVT	**Maraveh tapeh**	**1.26**	**246**	*e*Pg	**Pn**	**11 06 24.4**	**-2.8**
IKRD	**Kardeh**	**1.59**	**151**	*e*Pn	**Pg**	**11 06 38.1**	**+3.0**
IKRD				IAMB	IAmb	11 07 15.6	
	comp=Z,77µm,0.6s						
SBZV	**Sabzevar**	**1.79**	**178**	*e*Pn	**Pn**	**11 06 33.0**	**-1.5**
SBZV				IAMB	IAmb	11 06 35.3	
	comp=Z,0.0nm,0.5s						
IAKL	**Akhelmad**	**1.84**	**148**	*e*Pn	**Pn**	**11 06 34.0**	**-1.3**
IAKL				IAMB	IAmb	11 07 12.0	
	comp=Z,98µm,0.8s						
IPAY	**Payeh**	**2.07**	**146**	*e*Pn	**Pn**	**11 06 37.7**	**-0.8**
IPAY				IAMB	IAmb	11 07 15.0	
	comp=Z,81µm,0.7s						
SHRO	**Shahrood**	**2.50**	**210**	*e*Pn	**Pn**	**11 06 43.7**	**-0.6**
SHRO	**Shahrood**	**2.50**	**210**	*e*AML	AML	11 07 23.0	
	comp=N,1µm,0.9s						
SHRO	**Shahrood**	**2.50**	**210**	*e*Pn	**Pn**	**11 06 43.7**	**-0.6**
SHRO				*e*Sg	**Sb**	**11 07 18.5**	**-0.9**
IMYA	**Miami**	**2.74**	**131**	*e*Pn	**Pn**	**11 06 46.8**	**-0.8**
IMYA				IAMB	IAmb	11 07 45.3	
	comp=Z,43µm,0.6s						
ISHM	**Shahmirzad**	**4.15**	**237**	*e*Pn	**Pn**	**11 07 07.8**	**+0.8**
ISHM				IAMB	IAmb	11 08 33.8	
	comp=Z,9µm,0.8s						
TNSJ	**Nastanj**	**4.27**	**191**	*e*Pn	**Pn**	**11 07 07.4**	**-1.2**
TNSJ				IAMB	IAmb	11 08 24.4	
	comp=Z,0.0nm,1.4s						
IALA	**Alasht**	**4.32**	**243**	*e*Pn	**Pn**	**11 07 09.9**	**+0.4**
TABS	**Tabas**	**4.53**	**185**	*e*Pn	**Pn**	**11 07 11.9**	**-0.3**
TABS	**Tabas**	**4.53**	**185**	*e*Pn	**Pn**	**11 07 11.9**	**-0.3**
TKDS	**Koohdasht(Taba**	**4.57**	**184**	*e*Pn	**Pn**	**11 07 11.5**	**-1.1**
TKDS				IAMB	IAmb	11 08 35.2	
	comp=Z,0.0nm,3.2s						
IPRN	**Peran**	**4.58**	**247**	*e*Pn	**Pn**	**11 07 13.1**	**+0.2**
IPRN				IAMB	IAmb	11 08 38.3	
	comp=Z,9µm,0.7s						
IFIR	**Firoozkooh**	**4.60**	**238**	*e*Pn	**Pn**	**11 07 14.5**	**+1.3**
IFIR				IAMB	IAmb	11 07 35.3	
	comp=Z,2µm,0.4s						
ILAS	**Lasjerd**	**4.62**	**234**	*e*Pn	**Pn**	**11 07 14.2**	**+0.7**
ILAS				IAMB	IAmb	11 08 48.3	
	comp=Z,5µm,0.8s						
IDMV	**Damavand**	**5.13**	**241**	*e*Pn	**Pn**	**11 07 20.9**	**+0.4**
IDMV				IAMB	IAmb	11 09 03.4	
	comp=Z,14µm,1.7s						
TPRV	**Parvadeh(Tabas**	**5.18**	**188**	*e*Pn	**Pn**	**11 07 19.9**	**-1.2**
TPRV				IAMB	IAmb	11 10 11.2	
	comp=Z,0.0nm,2.8s						
IMON	**Monand**	**5.26**	**160**	*e*Pn	**Pn**	**11 07 22.5**	**+0.2**
IMON				IAMB	IAmb	11 07 28.0	
	comp=Z,2µm,0.3s						
ITEG	**Tejag**	**5.36**	**169**	*e*Pn	**Pn**	**11 07 22.9**	**-0.7**
ITEG				IAMB	IAmb	11 07 41.2	
	comp=Z,4µm,1.0s						
ISFB	**Sefidab**	**5.74**	**230**	*e*Pn	**Pn**	**11 07 28.3**	**-0.4**
ISFB				IAMB	IAmb	11 09 24.7	
	comp=Z,1µm,1.0s						
IDAH	**Dahanechah**	**5.75**	**160**	*e*Pn	**Pn**	**11 07 29.0**	**0.0**
IDAH				IAMB	IAmb	11 08 41.2	
	comp=N,3µm,0.7s						
IKOO	**Kooshah**	**5.86**	**168**	*e*Pn	**Pn**	**11 07 29.6**	**-1.0**
IKOO				IAMB	IAmb	11 07 58.7	
	comp=Z,1µm,0.5s						
GOBA	**Gobu**	**6.46**	**293**	*e*Pn	**Pn**	**11 07 42.5**	**+4.0**
IZEF	**Zefreh**	**6.77**	**220**	*e*Pn	**Pn**	**11 07 44.7**	**+1.6**
IZEF				IAMB	IAmb	11 09 54.3	
	comp=Z,722nm,1.0s						
ALIB	**Äli-Bayra**	**6.88**	**288**	*e*Pn	**Pn**	**11 07 46.4**	**+2.1**
ASTR	**Astara**	**6.89**	**276**	*e*Pn	**Pn**	**11 07 42.9**	**-1.6**
LKRN	**Lenkeran, Azer**	**6.90**	**277**	P	**Pn**	**11 07 43.1**	**-1.5**
LKRN	**Lenkeran, Azer**	**6.90**	**277**	*e*Pn	**Pn**	**11 07 43.1**	**-1.5**
GBS	**Qobustan**	**7.07**	**292**	*e*Pn	**Pn**	**11 07 48.8**	**+1.8**
ATGJ	**Altiaghaj**	**7.18**	**295**	*e*Pn	**Pn**	**11 07 48.6**	**+0.1**
IMEH	**Mehriz**	**7.19**	**200**	*e*Pn	**Pn**	**11 07 49.8**	**+1.0**
IMEH				IAMB	IAmb	11 10 04.5	
	comp=Z,840nm,0.9s						
GLBA	**Clilabad**	**7.24**	**281**	*e*Pn	**Pn**	**11 07 47.9**	**-1.3**
LRK	**Lerik**	**7.25**	**277**	*e*Pn	**Pn**	**11 07 47.1**	**-2.4**
SIZA	**Siyzn**	**7.28**	**296**	*e*Pn	**Pn**	**11 07 50.2**	**+0.4**
IGAR	**Gharneh**	**7.31**	**220**	*e*Pn	**Pn**	**11 07 51.2**	**+0.8**
IGAR				IAMB	IAmb	11 07 54.7	
	comp=Z,488nm,0.4s						
PQL	**Pirkuli**	**7.40**	**293**	*e*Pn	**Pn**	**11 07 51.7**	**+0.1**
KDMR	**Kurdemir**	**7.59**	**290**	*e*Pn	**Pn**	**11 07 55.0**	**+1.0**
IRAM	**Ramesheh**	**7.63**	**215**	*e*Pn	**Pn**	**11 07 55.3**	**+0.4**
IRAM				IAMB	IAmb	11 10 54.1	
	comp=Z,1µm,1.4s						
IML	**Ismayilli**	**7.70**	**293**	*e*Pn	**Pn**	**11 07 55.9**	**+0.3**
QUB	**Quba**	**7.76**	**297**	*e*Pn	**Pn**	**11 07 56.0**	**-0.5**
KHGB	**Koh Gabri**	**7.83**	**187**	*e*Pn	**Pn**	**11 07 57.8**	**+0.2**
KHGB				IAMB	IAmb	11 10 25.9	
	comp=Z,0.0nm,1.8s						
XNQ	**Khinaliq**	**7.85**	**295**	*e*Pn	**Pn**	**11 07 57.9**	**+0.1**
QSAR	**Qusar**	**7.88**	**298**	*e*Pn	**Pn**	**11 08 00.0**	**+1.9**
ZRD	**Zardab**	**7.94**	**288**	*e*Pn	**Pn**	**11 07 58.5**	**-0.3**
QBL	**Gabala**	**8.00**	**293**	*e*Pn	**Pn**	**11 07 59.0**	**-0.7**
ZNGN	**Zangian**	**8.16**	**224**	*e*Pn	**Pn**	**11 08 04.2**	**+2.0**
ZNGN				IAMB	IAmb	11 11 02.0	
	comp=Z,0.0nm,4.2s						
AKT	**Akhty**	**8.24**	**297**	*i* P	**Pn**	**11 08 02.0**	**-1.1**
AKT	**Akhty**	**8.24**	**297**	*e*Pn	**Pn**	**11 08 02.0**	**-1.1**
BRDA	**Brd**	**8.31**	**288**	*e*Pn	**Pn**	**11 08 04.8**	**+0.8**
MNGR	**Mingechevir, A**	**8.50**	**291**	P	**Pn**	**11 08 05.6**	**-0.9**
MNGR	**Mingechevir, A**	**8.50**	**291**	*e*Pn	**Pn**	**11 08 05.6**	**-0.9**
SEKA	**Sheki**	**8.54**	**294**	P	**Pn**	**11 08 07.2**	**+0.1**
SEKA	**Sheki**	**8.54**	**294**	*e*Pn	**Pn**	**11 08 07.2**	**+0.1**
MAK	**Makhachkala**	**9.01**	**305**	*e*P	**Pn**	**11 08 10.2**	**-3.3**
MAK				*e*S	**Sn**	**11 09 50.8**	**-3.7**
MAK				pmax	pmax		
	comp=Z,62nm,0.5s						
MAK				MLR	MLR		
	comp=Z,2µm,18.0s						
GANJ	**Ganja**	**9.03**	**289**	P	**Pn**	**11 08 11.6**	**-2.3**
GANJ	**Ganja**	**9.03**	**289**	*e*Pn	**Pn**	**11 08 11.6**	**-2.3**
ZKTA	**Zakatala**	**9.08**	**296**	P	**Pn**	**11 08 14.8**	**+0.3**
GNBR	**Gunib**	**9.12**	**301**	*i* P	**Pn**	**11 08 13.8**	**-1.2**
CHGR	**Chuyangaron**	**9.13**	**83**	*e*Pn	**Pn**	**11 08 12.6**	**-2.6**
NAX	**Nakhchivan**	**9.48**	**280**	P	**Pn**	**11 08 19.5**	**-0.5**
TAS	**Tashkent**	**9.57**	**67**	P	**Pn**	**11 08 19.4**	**-1.8**
QZX	**Qazax, Azerbai**	**9.83**	**291**	*e*Pn	**Pn**	**11 08 23.4**	**-1.3**
KBL	**Kabul**	**9.95**	**108**	*e*Pn	**Pn**	**11 08 26.3**	**-0.4**
KBL	**Kabul**	**9.95**	**108**	P	**Pn**	**11 08 26.3**	**-0.4**
HYR	**Heyderabad**	**10.01**	**283**	*e*Pn	**Pn**	**11 08 26.9**	**-0.4**
GAR	**Garm**	**10.03**	**81**	*e*Pn	**Pn**	**11 08 26.3**	**-1.4**
GAR	**Garm**	**10.03**	**81**	*e*P	**Pn**	**11 08 26.3**	**-1.4**
GNI	**Garni**	**10.14**	**285**	*e*Pn	**Pn**	**11 08 28.9**	**-0.3**
GNI				*e*Pn	Pn	11 08 29.1	0.0
GNI				*e*Sn	**Sn**	**11 10 21.8**	**-0.7**
GNI	**Garni**	**10.14**	**285**	*e*Pn	**Pn**	**11 08 29.4**	**+0.2**
GNI	**Garni**	**10.14**	**285**	Pn	**Pn**	**11 08 29.1**	**0.0**
	comp=Z,1.0nm,0.3s,baz=147,slow=8.5,SNR=7.0						
GNI				Sn	**Sn**	**11 10 21.8**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=240,slow=21,SNR=1.6						
GNI				LR	LR	11 14 14.4	
	comp=Z,410nm,20.4s,baz=105,slow=49						
GROC	**Groznyy**	**10.24**	**303**	*e*P	**Pn**	**11 08 25.9**	**-4.4**
GROC				*e*S	**Sn**	**11 10 25.8**	**+1.2**
GROC				pmax	pmax		
	comp=Z,19nm,0.4s						
TBLG	**Delisi**	**10.46**	**294**	*e*Pn	**Pn**	**11 08 32.3**	**-1.0**
TBLG	**Delisi**	**10.46**	**294**	*e*P	**Pn**	**11 08 32.3**	**-1.0**
TBLG	**Delisi**	**10.46**	**294**	*e*Pn	**Pn**	**11 08 32.6**	**-0.7**
KK31	**Karatay Array**	**11.01**	**59**	*e*Pn	**Pn**	**11 08 40.8**	**-0.1**
KK31	**Karatay Array**	**11.01**	**59**	⇓Pn	**Pn**	**11 08 40.0**	**-1.0**
	comp=Z,31nm,0.6s,baz=241,slow=16,SNR=46						
KK31				⇑Sn	**Sn**	**11 10 46.3**	**+2.8**
	comp=Z,40nm,0.6s,baz=176,slow=34,SNR=5.3						
KK31	**Karatay Array**	**11.01**	**59**	P	**Pn**	**11 08 39.9**	**-1.0**
KK31				SN	**Sn**	**11 10 46.3**	**+2.8**
KK31	**Karatay Array**	**11.01**	**59**	*e*Pn	**Pn**	**11 08 40.8**	**-0.1**
KKAR	**Karatay Array**	**11.01**	**59**	*e*Pn	**Pn**	**11 08 40.8**	**-0.1**
KKAR	**Karatay Array**	**11.01**	**59**	*e*P	**Pn**	**11 08 40.8**	**-0.1**
AB31	**Akbulak array**	**11.21**	**8**	Pn	**Pn**	**11 08 41.9**	**-1.7**
	comp=Z,29nm,0.6s,baz=188,slow=13,SNR=405						
AB31				⇓Sn	**Sn**	**11 10 48.8**	**+0.5**
	comp=Z,43nm,0.5s,baz=190,slow=23,SNR=10						
AB31	**Akbulak array**	**11.21**	**8**	P	**Pn**	**11 08 41.9**	**-1.7**
AB31				SN	**Sn**	**11 10 48.8**	**+0.5**
ABKAR	**Akbulak array**	**11.21**	**8**	*e*Pn	**Pn**	**11 08 42.0**	**-1.6**
ZEI	**Tsey**	**11.37**	**298**	*e*P	**Pn**	**11 08 44.5**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,15nm,0.6s						
SIRT	**Sirnak**	**11.97**	**271**	*e*Pn	**Pn**	**11 08 52.0**	**-2.2**
AKTO	**Aktyubinsk**	**12.26**	**1**	⇓Pn	**Pn**	**11 08 56.5**	**-1.5**
	comp=Z,28nm,0.5s						
AKTO				⇓Sn	**Sn**	**11 11 13.1**	**-1.0**
	comp=Z,61nm,0.7s						
AKTO	**Aktyubinsk**	**12.26**	**1**	P	**Pn**	**11 08 56.5**	**-1.5**
AKTO				SN	**Sn**	**11 11 13.1**	**-1.0**
AKTO	**Aktyubinsk**	**12.26**	**1**	Pn	**Pn**	**11 08 56.7**	**-1.2**
	comp=Z,13nm,0.3s,baz=166,slow=8.4,SNR=155						
AKTO				Sn	**Sn**	**11 11 10.2**	**-3.9**
	comp=Z,6.3nm,0.3s,baz=78,slow=13,SNR=6.7						
AKTO				Lg	Lg	11 12 43.1	
	comp=Z,0.8nm,0.3s,baz=55,slow=5.7,SNR=1.2						
AKTO				LR	LR	11 14 42.9	
	comp=Z,873nm,19.9s,baz=174,slow=42						
NEY	**Neytrino**	**12.34**	**299**	*i* P	**Pn**	**11 08 57.6**	**-1.6**
KBZ	**Khabaz**	**12.38**	**301**	Pn	**Pn**	**11 08 56.7**	**-2.9**
	comp=Z,0.7nm,0.3s,baz=96,slow=4.4,SNR=17						
KBZ				Sn	**Sn**	**11 11 10.6**	**-6.5**
	comp=Z,1.2nm,0.3s,baz=86,slow=15,SNR=1.5						
KBZ				Lg	Lg	11 12 23.9	
	baz=252,slow=23,SNR=1.1						
CEP	**Cherat**	**12.41**	**106**	P	**Pn**	**11 08 59.5**	**-0.7**
SHA1	**Shidzhatmaz**	**12.55**	**301**	*i* P	**Pn**	**11 09 00.1**	**-2.0**
KVAR	**Kislovodsk Arr**	**12.60**	**302**	Pn	**Pn**	**11 09 01.3**	**-1.5**
	baz=90,slow=20,SNR=5.7						
KVAR				Sn	**Sn**	**11 11 15.9**	**-6.7**
	baz=259,slow=4.8,SNR=3.5						
KVAR				Lg	Lg	11 12 38.6	
	baz=326,slow=4.2,SNR=2.3						
KIV	**Kislovodsk**	**12.61**	**302**	*e*Pn	**Pn**	**11 08 60.0**	**-2.9**
KIV				*e*Sn	**Sn**	**11 11 15.9**	**-6.9**
KIV	**Kislovodsk**	**12.61**	**302**	*e*P	**Pn**	**11 09 00.1**	**-2.7**
KIV				*e*S	**Sn**	**11 11 20.3**	**-2.5**
KIV				pmax	pmax		
	comp=Z,26nm,0.9s						
KIV				MLR	MLR		
	comp=Z,136nm,11.0s						
AML	**Almayashu**	**12.97**	**67**	P	**Pn**	**11 09 06.7**	**-1.3**
	SNR=15						
DOMR	**Dombai**	**13.11**	**298**	*i* P	**Pn**	**11 09 08.5**	**-1.2**
EKS2	**Erkin-Say**	**13.15**	**65**	P	**Pn**	**11 09 08.8**	**-1.5**
	SNR=26						
NIL	**Nilore**	**13.50**	**105**	*e*Pn	**Pn**	**11 09 13.8**	**-1.2**
NIL	**Nilore**	**13.50**	**105**	*e*P	**Pn**	**11 09 13.8**	**-1.2**
UCH	**Uchtor**	**13.58**	**67**	P	**Pn**	**11 09 15.7**	**-0.7**
	SNR=19						
AAK	**Ala-Archa**	**13.66**	**66**	P	**Pn**	**11 09 15.2**	**-2.0**
	SNR=22						
AAK	**Ala-Archa**	**13.66**	**66**	⇑Pn	**Pn**	**11 09 14.8**	**-2.4**
	comp=Z,37nm,0.8s						
AAK				⇓Sn	**Sn**	**11 11 47.9**	**-0.6**
	comp=Z,97nm,1.0s						
AAK	**Ala-Archa**	**13.66**	**66**	P	**Pn**	**11 09 14.8**	**-2.4**
AAK				SN	**Sn**	**11 11 47.9**	**-0.6**
AAK	**Ala-Archa**	**13.66**	**66**	Pn	**Pn**	**11 09 15.2**	**-2.0**
	comp=Z,2.7nm,0.3s,baz=251,slow=4.3,SNR=31						
AAK				Sn	Sn	11 11 35.6	-13
	comp=Z,0.5nm,0.3s,baz=248,slow=19,SNR=2.6						
AAK				Lg	Lg	11 13 33.4	
	comp=Z,0.6nm,0.3s,baz=118,slow=24,SNR=2.6						
AAK				LR	LR	11 15 45.5	
	comp=Z,534nm,20.2s,baz=256,slow=42						
USP	**Ospenovka**	**13.82**	**63**	P	**Pn**	**11 09 16.2**	**-3.1**
	SNR=26						
CHMS	**Chumysh**	**13.93**	**64**	P	**Pn**	**11 09 20.7**	**-0.1**
	SNR=8.6						
KBK	**Karagaybulak**	**13.99**	**66**	P	**Pn**	**11 09 20.5**	**-1.2**
	SNR=23						
KZA	**Kyzart**	**14.09**	**68**	P	**Pn**	**11 09 22.4**	**-1.0**
	SNR=15						
RPOR	**Krasnaya Polya**	**14.17**	**298**	*i* P	**Pn**	**11 09 25.2**	**+1.0**
KSH	**Kashi**	**14.42**	**79**	P	Pn	11 09 21.0	-6.7
KSH				pP	P	11 09 27.3	-7.2
KSH				PP	**PnPn**	**11 09 38.5**	**+3.0**
KSH				S	Sn	11 11 56.8	-10
KSH				sS	S	11 12 03.5	-23
KSH				SS	**SnSn**	**11 12 15.8**	**-3.7**
KSH				pmax	pmax		
	comp=Z,63nm,0.6s						
KSH				LR	LR		
	comp=Z,1µm,6.1s						
TKM2	**Tokmak 2**	**14.51**	**65**	P	**Pn**	**11 09 25.9**	**-3.0**
	SNR=9.7						
TKM2	**Tokmak 2**	**14.51**	**65**	⇑Pn	**Pn**	**11 09 25.3**	**-3.7**
	comp=Z,11nm,0.6s						
TKM2				⇓Sn	**Sn**	**11 12 10.2**	**+0.8**
	comp=Z,51nm,1.1s						
TKM2	**Tokmak 2**	**14.51**	**65**	P	**Pn**	**11 09 25.3**	**-3.7**
TKM2				SN	**Sn**	**11 12 10.2**	**+0.8**
SOC	**Sochi**	**14.52**	**297**	*e*P	Pn	11 09 17.7	-11
SOC				MLR	MLR		
	comp=Z,155nm,17.0s						
WSAR	**Wadi Sarin**	**14.92**	**176**	LR	LR	11 16 39.0	
	comp=Z,305nm,18.7s,baz=20,slow=43						
VRH	**Novokhopyorsk**	**17.16**	**324**	*e*P	**P**	**11 10 04.8**	**+0.2**
VRH				*e*S	**Sn**	**11 13 07.7**	**-5.7**
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
VRH				smax	smax		
	comp=E,110nm,0.8s						
BRVK	**Borovoye**	**17.30**	**27**	*e*Pn	**Pn**	**11 10 03.5**	**-1.3**
	comp=E,29nm,0.6s						
BRVK	**Borovoye**	**17.30**	**27**	⇓Pn	**Pn**	**11 10 02.5**	**-2.3**
	comp=E,26nm,0.7s						
BRVK				⇑Sn	**Sn**	**11 13 20.7**	**+3.9**
	comp=E,58nm,1.0s						
BRVK	**Borovoye**	**17.30**	**27**	P	**Pn**	**11 10 02.5**	**-2.3**
BRVK				SN	**Sn**	**11 13 20.7**	**+3.9**
BVA0	**Borovoye Array**	**17.31**	**27**	⇑Pn	**Pn**	**11 10 03.1**	**-1.9**
	comp=E,50nm,0.8s,baz=205,slow=13,SNR=215						
BVA0				⇓Sn	**Sn**	**11 13 20.7**	**+3.6**
	comp=E,68nm,0.9s						
BVA0	**Borovoye Array**	**17.31**	**27**	P	**Pn**	**11 10 03.6**	**-1.4**
BVA0				SN	**Sn**	**11 13 20.7**	**+3.6**

BVAR	Borovoye Array	17.31	27	Pn	Pn	11 10 02.9	-2.0
	comp=E,3.2nm,0.3s,baz=212,slow=12,SNR=64						
BVAR				Sn	Sn	11 13 04.1	-13
	comp=E,1.0nm,0.3s,baz=196,slow=21,SNR=3.5						
BVAR				Lg	Lg	11 15 09.0	
	baz=234,slow=31,SNR=2.7						
BVAR				LR	LR	11 17 38.1	
	comp=E,302nm,19.7s,baz=216,slow=40						
RAYN	Ar Rayn	17.87	219	ePn	Pn	11 10 09.5	-2.6
	comp=E,8.6nm,0.8s						
RAYN	Ar Rayn	17.87	219	eP	Pn	11 10 09.5	-2.6
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	Arti	18.28	2	ePn	Pn	11 10 15.4	-1.4
	comp=Z,34nm,0.7s						
ARU	Arti	18.28	2	d iP	Pn	11 10 14.5	-2.3
ARU				S	Sn	11 13 38.2	-2.0
ARU				pmax	pmax		
	comp=Z,33nm,1.8s						
VSR	Storozhevoye	18.39	321	eP	P	11 10 16.6	-1.6
VSR				eS	Sn	11 13 38.4	-4.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR				smax	smax		
	comp=N,30nm,0.7s						
BR101	Keskin Array S	18.65	282	eP	Pn	11 10 23.3	+1.6
BR131	Keskin Array S	18.65	282	eP	Pn	11 10 22.5	+0.8
BRTR	Keskin Array B	18.65	282	Pn	Pn	11 10 23.3	+1.6
	comp=N,0.1nm,0.3s,baz=96,slow=11,SNR=9.8						
BRTR				LR	LR	11 19 28.2	
	comp=N,263nm,20.3s,baz=78,slow=43						
VORR	Voronezh	18.66	322	P	P	11 10 19.0	-2.1
VORR				pmax	pmax		
	comp=Z,300nm,0.8s						
MMAI	Mount Meron Ar	18.72	261	LR	LR	11 18 31.8	
	comp=Z,137nm,21.4s,baz=45,slow=40						
SIM	Simferopol'	18.76	299	eP	Pn	11 10 26.2	+3.4
SIM				pmax	pmax		
	comp=Z,28nm,0.6s						
SIM				MLR	MLR		
	comp=Z,250nm,15.5s						
SVE	Sverdlovsk	18.77	5	eP	Pn	11 10 24.9	+2.1
SVE				eS	Sn	11 13 47.1	-5.2
SVE				pmax	pmax		
	comp=Z,66nm,1.5s						
LPSR	Galich'ya Gora	19.39	324	eP	Pn	11 10 29.6	-0.6
LPSR				eS	Sn	11 14 00.3	-6.8
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
LPSR				smax	smax		
	comp=N,40nm,0.7s						
KURBB	Kurchatov Arra	19.40	43	⇑Pn	Pn	11 10 31.6	+1.2
	comp=N,9.3nm,0.8s						
KURBB				⇑Sn	S	11 14 09.6	+1.8
	comp=N,101nm,0.8s						
KURBB	Kurchatov Arra	19.40	43	P	Pn	11 10 32.0	+1.6
	comp=N,0.3nm,0.3s,baz=245,slow=12,SNR=12						
KURBB				S	Sn	11 14 00.1	-7.4
	comp=N,0.2nm,0.3s,baz=274,slow=32,SNR=4.3						
KURBB				Lg	Lg	11 16 18.6	
	baz=247,slow=27,SNR=2.5						
KURK	Kurchatov	19.50	43	eP	P	11 10 30.2	-0.1
	comp=N,13nm,1.0s						
KURK				eP	Pn	11 10 32.0	+0.4
KURK				eS	S	11 14 00.1	-10
KURK	Kurchatov	19.50	43	⇑Pn	Pn	11 10 31.4	-0.2
	comp=N,15nm,1.0s						
KURK				⇑Sn	Sn	11 14 12.0	+2.1
	comp=N,46nm,1.0s						
KURK	Kurchatov	19.50	43	P	Pn	11 10 31.4	-0.2
KURK				SN	Sn	11 14 11.9	+2.1
MAKZ	Makanchi	19.91	57	eP	Pn	11 10 35.8	-0.8
	comp=N,10nm,0.7s						
MAKZ	Makanchi	19.91	57	⇓Pn	P	11 10 34.8	-0.1
	comp=N,9.2nm,0.8s						
MAKZ				⇑Sn	Sn	11 14 21.6	+1.7
	comp=N,14nm,1.1s						
MAKZ	Makanchi	19.91	57	P	P	11 10 34.8	-0.1
MAKZ				SN	Sn	11 14 21.6	+1.7
MK01	Makanchi Array	20.11	57	eP	P	11 10 37.8	+0.7
MK31	Makanchi Array	20.11	57	eP	P	11 10 38.0	+0.9
MK31	Makanchi Array	20.11	57	Pn	P	11 10 37.8	+0.7
	comp=N,8.1nm,0.7s,baz=245,slow=10,SNR=62						
MK31				⇓Sn	Sn	11 14 24.6	-0.2
	comp=N,17nm,0.8s						
MK31	Makanchi Array	20.11	57	P	P	11 10 37.8	+0.7
MK31				SN	Sn	11 14 24.6	-0.2
MK32	Makanchi Array	20.11	57	eP	Pn	11 10 38.1	-0.9
MK32				eS	S	11 14 16.9	-5.4
MK32				e		11 16 37.2	
MKAR	Makanchi Array	20.11	57	P	Pn	11 10 38.1	-0.9
	comp=N,5.3nm,0.6s,baz=245,slow=10,SNR=30						
MKAR				S	S	11 14 16.9	-5.4
	comp=N,2.5nm,0.8s,baz=244,slow=23,SNR=3.0						
MKAR				Lg	Lg	11 16 37.2	
	comp=N,7.8nm,0.9s,baz=264,slow=23,SNR=3.3						
MKAR				LR	LR	11 17 59.6	
	comp=N,161nm,19.4s,baz=252,slow=36						
EIL	Elat	20.55	252	LR	LR	11 20 23.5	
	comp=N,449nm,18.1s,baz=74,slow=42						
KIRV	Kirov	21.10	348	P	P	11 10 48.9	+1.4
	comp=N,35nm,0.7s,baz=111,slow=3.8,SNR=4.6						
KIRV				LR	LR	11 20 44.3	
	comp=N,671nm,18.2s,baz=191,slow=42						
ISP	Isparta	21.28	277	eP	P	11 10 50.7	+0.8
	comp=N,25nm,0.9s						
ISP	Isparta	21.28	277	eP	P	11 10 50.7	+0.8
ISP				pmax	pmax		
	comp=Z,25nm,0.9s						
YLV	Yalova	21.88	285	⇓iP	P	11 10 59.8	+3.6
YLV	Yalova	21.88	285	P	P	11 10 59.8	+3.6
MOS	Moscow	22.08	329	eP	P	11 11 03.1	+5.0
MOS				e		11 11 31.7	
MOS				e		11 15 35.3	
MOS				eSS	Sn	11 15 47.6	+36
MOS				pmax	pmax		
	comp=Z,46nm,0.8s						
OBN	Obninsk	22.09	327	eP	P	11 10 58.8	+0.5
	comp=Z,85nm,1.1s						
OBN	Obninsk	22.09	327	⇑iP	P	11 10 59.4	+1.1
OBN	Obninsk	22.09	327	⇑eP	P	11 10 57.8	-0.5
OBN				e		11 11 20.3	
OBN				pmax	pmax		
	comp=Z,70nm,1.1s						
OBN				MLR	MLR		
	comp=Z,287nm,18.0s						
OBN	Obninsk	22.09	327	P	P	11 10 58.4	+0.1
	comp=Z,12nm,0.4s,baz=129,slow=14,SNR=6.1						
OBN				LR	LR	11 20 46.2	
	comp=Z,71nm,18.2s,baz=176,slow=40						
MANT	Manisa	22.71	280	eP	P	11 11 06.8	+1.5
	comp=Z,41nm,0.9s						
MILM	Milestii Mici	22.80	302	⇓iP	P	11 11 09.8	+3.9
KIS	Kishinev	22.81	302	eP	P	11 11 09.0	+2.9
KIS				LRM	MLR	11 21 54.0	
	comp=Z,700nm,14.0s						
KIS	Kishinev	22.81	302	eP	P	11 11 09.0	+2.9
KIS				e		11 11 21.0	
KIS				e		11 11 36.0	
KIS				e		11 11 50.0	
KIS				MLR	MLR		
	comp=Z,700nm,14.0s						
TLB	Topalu	22.97	296	⇑iP	P	11 11 10.2	+2.5
TLB	Topalu	22.97	296	P	P	11 11 10.2	+2.5
CFR	Carcaliu	22.97	297	⇑iP	P	11 11 10.4	+2.7
CFR	Carcaliu	22.97	297	P	P	11 11 10.1	+2.4
ICOR	Ion Corvin	23.10	294	⇑iP	P	11 11 12.6	+3.5
WMQ	Urumqi	23.36	66	eP	P	11 11 15.3	+3.5
WMQ				pP	sP	11 11 19.5	-0.5
WMQ				PP	PnPn	11 11 46.0	+8.0
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.5s						
WMQ				LR	LR		
	comp=Z,670nm,16.7s						
WMQ				LR	LR		
	comp=Z,730nm,18.3s						
WMQ				LR	LR		
	comp=Z,620nm,20.9s						
WMQ	Urumqi	23.36	66	eP	P	11 11 13.1	+1.2
	comp=Z,13nm,0.9s						
WMQ	Urumqi	23.36	66	eP	P	11 11 13.1	+1.2
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
PYUN	Piuthan	23.49	108	eP	P	11 11 12.3	-1.1
	comp=Z,54nm,0.8s						
AKASG	Malin Array Be	23.62	311	P	P	11 11 14.3	+0.1
	comp=Z,6.2nm,0.7s,baz=106,slow=9.1,SNR=18						
AKASG				LR	LR	11 21 40.0	
	comp=Z,216nm,18.9s,baz=310,slow=40						
AKBB	Malin Array Si	23.62	311	eP	P	11 11 15.2	+1.0
	comp=Z,14nm,0.8s						
KIEV	Kiev	23.63	311	eP	P	11 11 14.6	+0.4
	comp=Z,13nm,0.8s						
KIEV	Kiev	23.63	311	⇓iP	P	11 11 16.0	+1.7
KIEV	Kiev	23.63	311	i P	P	11 11 14.2	-0.1
KIEV				pmax	pmax		
	comp=Z,13nm,0.9s						
AK11	Malin Array Si	23.65	311	eP	P	11 11 16.2	+1.7
DANN	Dangsing	23.94	106	eP	P	11 11 17.1	-0.7
	comp=Z,71nm,0.8s						
VRI	Vrincioaia	24.04	299	⇑iP	P	11 11 21.1	+2.8
VRI	Vrincioaia	24.04	299	P	P	11 11 21.1	+2.8
NVS	Novosibirsk	24.09	38	eP	P	11 11 23.6	+5.0
NVS				pmax	pmax		
	comp=N,9.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,12nm,1.0s						
PLOR	Plostina	24.09	298	⇑iP	P	11 11 21.9	+3.1
PLOR	Plostina	24.09	298	P	P	11 11 21.9	+3.1
KOLN	Koldanda	24.12	108	eP	P	11 11 18.1	-1.3
	comp=Z,44nm,0.9s						
TESR	Tescani	24.19	300	⇑iP	P	11 11 21.3	+1.7
DGZ	Jazzator, Alta	24.24	52	i P	P	11 11 21.1	+0.8
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAA0	Zalesovo Array	24.42	41	eP	P	11 11 22.6	+1.0
	comp=Z,7.5nm,0.8s						
ZALV	Zalesovo Beam	24.42	41	eP	P	11 11 23.2	+1.5
ZALV	Zalesovo Beam	24.42	41	P	P	11 11 22.7	+1.0
	comp=Z,4.2nm,0.5s,baz=259,slow=12,SNR=22						
ZAA1	Zalesovo Array	24.42	41	eP	P	11 11 22.7	+1.0
MLR	Muntele Rosu	24.54	297	eP	P	11 11 23.9	+0.9
MLR				eP	P	11 11 24.4	+1.4
MLR	Muntele Rosu	24.54	297	⇑iP	P	11 11 25.7	+2.7
MLR	Muntele Rosu	24.54	297	P	P	11 11 23.9	+0.9
	comp=Z,10nm,0.8s,baz=124,slow=6.1,SNR=9.9						
MLR				LR	LR	11 23 37.0	
	comp=Z,296nm,18.8s,baz=358,slow=43						
BIZ	Bicaz	24.63	301	⇑iP	P	11 11 26.1	+2.5
DOPR	Dopca	24.98	298	⇓iP	P	11 11 29.3	+2.4
VOIR		25.16	297	⇑iP	P	11 11 30.9	+2.3
VOIR		25.16	297	P	P	11 11 30.2	+1.6
VOIR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BURAR	Bucovina Array	25.34	302	⇑iP	P	11 11 32.2	+2.0
BURAR	Bucovina Array	25.34	302	P	P	11 11 32.2	+2.0
DMN	Daman	25.34	106	eP	P	11 11 30.7	+0.2
	comp=Z,65nm,0.9s						
BUR04	Bucovina Ar. S	25.34	302	eP	P	11 11 31.7	+1.5
BUR08	Bucovina Ar. S	25.35	302	eP	P	11 11 31.0	+0.7
	comp=Z,4.9nm,0.9s						
KLMR	Klimovskoe	25.37	339	eP	P	11 11 29.6	-0.5
KLMR				pmax	pmax		
	comp=Z,23nm,1.0s						
KLMR	Klimovskoe	25.37	339	eP	P	11 11 29.7	-0.4
KLMR				AMP		11 11 36.8	
	comp=Z,23nm,1.1s						
KKN	Kakani	25.38	106	eP	P	11 11 31.9	+1.1
	comp=Z,60nm,0.8s						
ARR	Arges	25.45	297	⇓iP	P	11 11 33.6	+2.4
PKIN	Phulchoki	25.58	106	eP	P	11 11 33.5	+0.8
	comp=Z,81nm,0.7s						
PKI	Pulchoki	25.59	106	eP	P	11 11 33.3	+0.4
	comp=Z,114nm,0.8s						
GUN	Gumba	25.77	105	eP	P	11 11 35.1	+0.6
	comp=Z,146nm,1.2s						
ARCR	ARCALIA	25.83	301	⇓iP	P	11 11 37.6	+3.0
LOT	Lotru	26.06	297	⇑iP	P	11 11 39.4	+2.6
JIRN	Jiri	26.14	105	eP	P	11 11 39.5	+1.6
	comp=Z,134nm,0.9s						
IDI	Anoyia	26.26	274	eP	P	11 11 36.7	-1.9
	comp=Z,32nm,1.0s						
IDI	Anoyia	26.26	274	⇑iP	P	11 11 43.4	+4.8
IDI	Anoyia	26.26	274	P	P	11 11 36.7	-1.9
	comp=Z,6.4nm,0.8s,baz=58,slow=15,SNR=3.5						
GZR	Gura Zlata	26.76	297	⇓iP	P	11 11 44.8	+1.8
RAMN	Ramite	26.82	106	eP	P	11 11 45.9	+2.0
	comp=Z,57nm,0.6s						
DRGR		26.92	300	⇑iP	P	11 11 46.9	+2.5
DRGR		26.92	300	P	P	11 11 46.7	+2.3
DRGR				pmax	pmax		
	comp=Z,17nm,0.8s						
KWP	Kalwaria Pacla	27.35	306	P	P	11 11 50.7	+2.5
ODAN	Odare	27.46	105	eP	P	11 11 52.0	+2.3
	comp=Z,84nm,1.2s						
MDVR	Moldovita	27.49	295	⇓iP	P	11 11 51.7	+2.2
BZS	Buzias	27.58	297	⇑iP	P	11 11 53.1	+2.8
FIA0	FINESS Array S	30.37	330	eP	P	11 12 18.4	+3.6
FIA0	FINESS Array S	30.37	330	eP	P	11 12 18.5	+3.6
FINES	FINESS Array B	30.37	330	P	P	11 12 18.4	+3.6
	comp=Z,1.3nm,0.5s,baz=134,slow=9.9,SNR=3.0						
FINES				LR	LR	11 25 58.3	
	comp=Z,236nm,18.3s,baz=128,slow=39						
KNGR	Kungurtug, Tuv	30.77	53	i P	P	11 12 19.6	+0.9
APA	Apatity	32.40	343	⇓iP	P	11 12 31.0	-1.6
APA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
APA				MLR	MLR		
	comp=Z,1µm,10.0s						
GEC2	GERESS Array S	33.12	303	eP	P	11 12 39.9	+0.6
	comp=Z,1.9nm,0.6s						
GEC2	GERESS Array S	33.12	303	eP	P	11 12 39.9	+0.6
GEC2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GERES	GERESS Array B	33.12	303	P	P	11 12 39.9	+0.6
	comp=Z,0.8nm,0.6s,baz=90,slow=9.3,SNR=5.9						
GERES				LR	LR	11 27 36.0	
	comp=Z,118nm,19.2s,baz=88,slow=39						
KHC	Kasperske Hory	33.21	304	eP	P	11 12 44.0	+4.0
KHC				ex	x	11 13 24.5	
KHC				ePP	PP	11 14 03.5	+8.4
KHC	Kasperske Hory	33.21	304	eP	P	11 12 44.0	+4.0
KHC				e		11 14 03.5	
CLL	Collm	33.72	308	eP	P	11 12 42.0	-2.4
CLL				eS	S	11 18 16.0	+9.2
CLL				Lm	MLR	11 26 00.0	
	comp=Z,300nm,19.4s						
CLL	Collm	33.72	308	eP	P	11 12 42.0	-2.4
CLL				MLR	MLR		
	comp=Z,300nm,19.4s						
NRIK	Noril'sk	35.15	18	LR	LR	11 29 35.1	
	comp=Z,224nm,18.3s,baz=214,slow=40						
HFS	Hagfors	35.18	323	P	P	11 12 59.1	+2.1
	comp=Z,1.2nm,0.5s,baz=92,slow=10,SNR=4.8						
DAVOX	Davos/Dischmat	35.72	300	P	P	11 13 02.1	+0.1
	comp=Z,2.5nm,0.7s,baz=126,slow=9.3,SNR=3.9						
ARA0	ARCESS Array S	35.79	341	eP	P	11 13 04.3	+2.2
ARCES	ARCESS Array B	35.79	341	P	P	11 13 04.3	+2.2
	comp=Z,7.7nm,0.9s,baz=134,slow=5.2,SNR=7.8						
SONA0	Songino Array	36.46	59	eP	P	11 13 09.9	+1.7
SONM	Songino Array	36.46	59	P	P	11 13 09.9	+1.7
	comp=Z,2.1nm,0.7s,baz=266,slow=10.0,SNR=12						
SONM				LR	LR	11 29 15.9	
	comp=Z,308nm,19.8s,baz=275,slow=38						
NB200	NORSAR Array S	36.63	324	eP	P	11 13 10.2	+0.8
NOA	NORSAR Array B	36.63	324	P	P	11 13 10.2	+0.8
	comp=Z,1.4nm,0.8s,baz=108,slow=8.3,SNR=3.0						
NOA				LR	LR	11 29 55.5	
	comp=Z,203nm,20.5s,baz=110,slow=39						
LZH	Lanzhou	36.67	79	eP	P	11 13 08.8	-1.4
LZH				pP	pP	11 13 11.8	-4.2
LZH				ePP	PnPn	11 14 33.3	-0.3
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,72nm,5.4s						
LZH				LR	LR		
	comp=Z,260nm,12.9s						
LZH				LR	LR		
	comp=Z,280nm,13.2s						
LZH				LR	LR		
	comp=Z,370nm,16.7s						
ULN	Ulaanbaatar	36.90	59	eP	P	11 13 12.8	+0.9
	comp=Z,12nm,0.8s						
ULN	Ulaanbaatar	36.90	59	eP	P	11 13 12.9	+0.9
ULN				pmax	pmax		
	comp=Z,12nm,0.8s						
KEST	Kesra	38.26	282	eP	P	11 13 23.2	-0.3
	comp=Z,8.4nm,1.0s						
KEST	Kesra	38.26	282	P	P	11 13 23.2	-0.3
	comp=Z,5.4nm,0.9s,baz=112,slow=9.6,SNR=3.8						
KEST				LR	LR	11 31 50.5	
	comp=Z,111nm,19.8s,baz=264,slow=40						
CD2	Chengdu	38.43	87	eP	P	11 13 24.5	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	Kunming	40.24	95	P	P	11 13 40.0	-0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,95nm,4.4s						
CMAR	Chiang Mai Arr	40.98	107	P	P	11 13 46.5	+0.2
	comp=Z,0.9nm,0.6s,baz=294,slow=8.9,SNR=7.8						
CMAR				LR	LR	11 32 38.5	
	comp=Z,115nm,20.5s,baz=321,slow=39						
BOD	Bodaibo	41.15	43	eP	P	11 13 48.9	+1.7
BOD				pmax	pmax		
	comp=Z,8.0nm,1.8s						
HHC	Hu-ho-hao-te	41.21	69	eP	P	11 13 47.0	-1.1
HHC				S	S	11 19 58.3	-2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.6s						
HHC				LR	LR		
	comp=Z,540nm,13.0s						
HHC				LR	LR		
	comp=Z,450nm,13.0s						
HHC				LR	LR		
	comp=Z,600nm,12.9s						
XAN	Xi'an	41.28	80	P	P	11 13 52.0	+3.3
XAN				pP	sP	11 13 56.5	-0.2
XAN				S	S	11 20 05.8	+3.8
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,70nm,4.3s						
XAN				LR	LR		
	comp=Z,450nm,14.3s						
XAN				LR	LR		
	comp=Z,430nm,16.5s						
XAN				LR	LR		
	comp=Z,450nm,16.2s						
EKA	Eskdalemuir Ar	43.49	314	P	P	11 14 05.4	-1.0
	comp=Z,1.4nm,0.7s,baz=94,slow=9.3,SNR=3.3						
ESDC	Sonseca Array	47.04	292	LR	LR	11 38 48.8	
	comp=Z,50nm,18.1s,baz=340,slow=42						
NJ2	Nanjing	49.73	77	eP	P	11 14 56.8	+1.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KLR	Kul'dur	52.74	52	i P	P	11 15 20.6	+2.7
KSAR	Wonju Array Be	54.29	67	P	P	11 15 30.1	+0.7
KSAR	Wonju Array Be	54.29	67	P	P	11 15 30.1	+0.7
KSRS	Korea Array	54.31	67	P	P	11 15 30.1	+0.5
	comp=Z,0.9nm,0.7s,baz=284,slow=6.4,SNR=4.4						
KSRS				LR	LR	11 39 45.6	
	comp=Z,183nm,19.5s,baz=294,slow=37						
USRK	Ussuriysk Ar.	54.57	58	P	P	11 15 32.9	+1.5
	comp=Z,2.0nm,0.8s,baz=284,slow=5.8,SNR=3.0						
TOA1	Torodi Ar. Sit	55.24	259	eP	P	11 15 35.6	-1.0
TOA0	Torodi Ar. Sit	55.25	259	eP	P	11 15 36.0	-0.6
TORD	Torodi Ar. Bea	55.25	259	P	P	11 15 35.6	-1.0
	comp=Z,1.6nm,1.0s,baz=45,slow=7.3,SNR=7.9						
TORD				LR	LR	11 45 14.6	
	comp=Z,67nm,18.8s,baz=350,slow=43						
MA2	Magadan	59.52	36	i P	P	11 16 08.6	+2.5
MA2				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YSS	Yuzh-Sakhalins	60.43	52	i P	P	11 16 15.9	+3.3
YSS				pmax	pmax		
	comp=Z,16nm,1.1s						
BILL	Bilibino	61.63	24	i P	P	11 16 22.5	+2.1
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJAR	Matsushiro Arr	62.10	64	LR	LR	11 45 14.3	
	comp=Z,102nm,19.4s,baz=300,slow=38						
DBIC	Dimbokro	64.30	258	LR	LR	11 48 50.7	
	comp=Z,79nm,18.5s,baz=42,slow=40						
RES	Resolute Bay	65.94	352	LR	LR	11 49 05.7	
	comp=Z,132nm,20.6s,baz=351,slow=39						
PETK	Petropavlovsk-	65.96	41	LR	LR	11 46 38.8	
	comp=Z,174nm,19.0s,baz=298,slow=37						
DAV	Davao City (W)	68.41	98	LR	LR	11 50 53.2	
	comp=Z,82nm,18.8s,baz=326,slow=39						
TOLK	Toolik Lake Re	71.59	10	eP	P	11 17 26.6	+2.5
	comp=Z,7.3nm,1.0s						
BOSA	Boshof	72.99	209	P	P	11 17 32.4	-0.6
	comp=Z,3.4nm,0.8s,baz=37,slow=3.1,SNR=4.3						
BOSA				LR	LR	11 49 06.3	
	comp=Z,107nm,21.8s,baz=28,slow=36						
IM3	Indian Mountai	73.38	13	eP	P	11 17 35.9	+1.2
COLA	College	75.37	11	i P	P	11 17 47.7	+1.4
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	75.61	11	P	P	11 17 49.0	+1.3
	comp=Z,0.9nm,0.8s,baz=335,slow=5.1,SNR=2.5						
ILAR				LR	LR	11 55 13.9	
	comp=Z,72nm,18.6s,baz=314,slow=39						
SCHQ	Schefferville	75.85	330	eP	P	11 17 50.1	+0.9
	comp=Z,4.7nm,0.9s						
SCHQ	Schefferville	75.85	330	P	P	11 17 50.1	+0.9
	comp=Z,0.9nm,0.7s,baz=39,slow=6.5,SNR=2.2						
SCHQ				LR	LR	11 50 30.1	
	comp=Z,100nm,21.4s,baz=343,slow=35						
YKA	Yellowknife Ar	79.48	356	P	P	11 18 09.8	+0.5
	comp=Z,1.1nm,0.9s,baz=1.7,slow=6.2,SNR=12						
YKA				LR	LR	12 00 44.4	
	comp=Z,7.0nm,18.1s,baz=20,slow=41						
YKB5	Yellowknife Ar	79.48	356	eP	P	11 18 09.8	+0.5
ULM	Lac du Bonnet	88.89	343	P	P	11 18 57.6	+0.3
	comp=Z,1.9nm,1.0s,baz=0.0,slow=10,SNR=2.2						
ULM				LR	LR	12 00 37.6	
	comp=Z,120nm,19.2s,baz=24,slow=37						
WR1	Warramunga Arr	92.25	114	eP	P	11 19 13.1	-0.3
	comp=Z,3.2nm,1.0s						
WRA	Warramunga Arr	92.25	114	P	P	11 19 13.1	-0.3
	comp=Z,0.5nm,1.0s,baz=322,slow=4.2,SNR=2.7						
ASAR	Alice Springs	94.31	117	P	P	11 19 23.3	+0.4
	comp=Z,0.4nm,0.8s,baz=324,slow=4.6,SNR=2.6						
ASAR				LR	LR	12 05 15.6	
	comp=Z,32nm,20.1s,baz=292,slow=38						
PDAR	Pinedale Array	98.59	350	LR	LR	12 08 51.5	
	comp=Z,82nm,19.3s,baz=25,slow=38						

MAN 28 11:07:02.7, 16.°49N × 120.°58E, h19^{km}, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SMPP	San Manuel, Pa	0.35	164	eP	Pg	11 07 10.2	-0.1
SMPP				eS	Sb	11 07 15.8	+0.1
BOLP	Bolinao	0.65	260	eP	Pn	11 07 16.4	-0.5
BOLP				eS	Sn	11 07 27.3	+0.7
ABRA	Dolores	1.16	6	eP	Pn	11 07 22.9	-1.1
ABRA				eS	Sb	11 07 38.1	-0.8
BALP	Baler	1.22	128	eP	Pn	11 07 24.5	-0.2
BALP				eS	Sg	11 07 41.4	-0.8
CAUP	Cauayan	1.28	69	eP	Pb	11 07 26.5	+0.3
APYP	Conner	1.51	25	eP	Pn	11 07 28.6	-0.1
APYP				eS	Sb	11 07 48.4	-0.4

IDC 28 11:10:18.7±1.7, 10.°93S × 165.°41E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.6/24, mbtmp3.8/4, ML4.2/1, Error ellipse: s-maj=53.5km s-min=30.5km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.13	175	Pn	Pn	11 12 58.8	-0.5
	1.6nm,0.3s,baz=358,slow=12,SNR=14						
H11S2	WAKE ISLAND Hy	29.26	3	T	T	11 47 10.9	
	baz=181						
H11S3	WAKE ISLAND Hy	29.26	2	T	T	11 47 08.4	
	baz=181						
H11S1	WAKE ISLAND Hy	29.27	3	T	T	11 47 11.9	
	baz=181						
H11N1	WAKE ISLAND Hy	30.48	3	T	T	11 48 42.1	
	baz=182						
H11N3	WAKE ISLAND Hy	30.48	3	T	T	11 48 42.4	
	baz=182						
H11N2	WAKE ISLAND Hy	30.50	3	T	T	11 48 43.4	
	baz=182						
WRA	Warramunga Arr	31.22	250	P	P	11 16 40.0	-0.1
	1.3nm,1.0s,baz=80,slow=10,SNR=4.4						

ASAR	Alice Springs	32.55	243	P	P	11 16 52.1	+0.2
	0.3nm,0.6s,baz=63,slow=9.8,SNR=4.5						
ILAR	Eielson Array	83.50	19	P	P	11 22 48.1	0.0
	0.4nm,0.7s,baz=236,slow=4.9,SNR=9.4						

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*ISCJB **28** 11:39:11.1±0.5, 30.°72N±0.°05×141.°0E±0.°1, h91^{km}, mb3.5/9, Error ellipse: s-maj=17.3km s-min=4.3km az=163.0*

*IDC **28** 11:39:13.0±1.8, 30.°65N×140.°86E, h92^{km}±17^{km}, mb3.3/9, mb1 3.4/14, mb1mx3.3/38, mbtmp3.6/14, Error ellipse: s-maj=28.1km s-min=14.4km az=75.0*

*JMA **28** 11:39:16.1±0.2, 31.°06N×141.°13E, h99^{km}, M3.8*

ISC 28 11:39:12.7±0.8, **30.°72N**±0.°07×**141.°0E**±0.°1, **h91**^{km}, **n28**, σ**1.^{s}52**/32, **mb3.5**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	2.04	329	*e*S	Sn	11 40 09.4	-1.0
JHCJ	Hachijojimakas	2.56	336	P	Pn	11 39 52.8	+0.5
JHCJ				*e*S	Sn	11 40 20.9	-1.9
JHJ2	Mitsune	2.59	337	P	Pn	11 39 53.1	+0.4
JHJ2				*e*S	Sn	11 40 21.4	-2.1
JHJ	Hachijo jima 2	2.61	337	P	Pn	11 39 53.2	+0.2
	9.9nm,0.3s,baz=334,slow=22,SNR=10						
JHJ				S	Sn	11 40 21.8	-2.1
	64nm,0.3s,baz=103,slow=22,SNR=10						
JMKN	Mikurajimanish	3.38	339	P	Pn	11 40 04.4	+1.0
JMKN				*e*S	Sn	11 40 41.8	-0.7
JCJ	Chichijima	3.76	164	P	Pn	11 40 09.0	+0.6
	9.5nm,0.3s,baz=88,slow=23,SNR=11						
JCJ				S	Sn	11 40 49.6	-2.0
	11nm,0.3s,baz=270,slow=22,SNR=1.7						
BSO1	Boso 1	3.92	360	P	Pn	11 40 11.1	+1.0
BSO1				*e*S	Sn	11 40 53.8	-0.9
JOD2	Odawara 2	4.81	341	P	Pn	11 40 23.7	+1.0
JOD2				*e*S	Sn	11 41 15.6	-1.6
JRY	Ryogami san	5.57	342	P	Pn	11 40 34.0	+1.0
JRY				*e*S	Sn	11 41 33.4	-2.3
JHO	Hitachi	5.89	356	P	Pn	11 40 37.0	-0.3
JHO				*e*S	Sn	11 41 40.0	-3.3
MJAR	Matsushiro Arr	6.26	339	P	Pn	11 40 43.3	+0.9
	0.3nm,0.3s,baz=154,slow=33,SNR=19						
MJAR				S	Sn	11 41 56.4	+3.9
	0.1nm,0.3s,baz=224,slow=8.3,SNR=4.1						
USRK	Ussuriysk Ar.	15.23	335	P	Pn	11 42 42.7	+0.2
	0.2nm,0.3s,baz=150,slow=9.9,SNR=4.6						
KLR	Kul'dur	19.77	342	P	P	11 43 35.5	+0.1
	0.2nm,0.3s,baz=142,slow=4.7,SNR=4.8						
H11N2	WAKE ISLAND Hy	25.78	109	T	T	12 12 27.9	
	baz=301						
H11N1	WAKE ISLAND Hy	25.79	109	T	T	12 12 36.5	
	baz=301						
H11N3	WAKE ISLAND Hy	25.80	109	T	T	12 12 32.3	
	baz=301						
H11S3	WAKE ISLAND Hy	26.25	112	T	T	12 13 44.0	
	baz=304,slow=74						
H11S1	WAKE ISLAND Hy	26.26	112	T	T	12 13 53.0	
	baz=304,slow=74						
H11S2	WAKE ISLAND Hy	26.27	112	T	T	12 13 45.7	
	baz=304						
SONM	Songino Array	31.45	313	P	P	11 45 23.9	-1.6
	0.2nm,0.4s,baz=123,slow=7.2,SNR=2.4						
ZALV	Zalesovo Beam	46.12	317	P	P	11 47 27.8	+0.2
	0.3nm,0.3s,baz=81,slow=11,SNR=2.3						
MKAR	Makanchi Array	47.43	307	P	P	11 47 37.4	-0.6
	0.1nm,0.3s,baz=82,slow=8.6,SNR=1.9						
WRA	Warramunga Arr	50.78	188	P	P	11 48 03.0	-0.7
	0.2nm,0.4s,baz=5.8,slow=7.8,SNR=6.1						
ASAR	Alice Springs	54.51	188	P	P	11 48 30.2	-1.0
	0.4nm,1.0s,baz=358,slow=4.6,SNR=4.4						
ILAR	Eielson Array	55.06	30	P	P	11 48 36.1	+1.4
	0.3nm,0.8s,baz=271,slow=7.8,SNR=3.6						
KBZ	Khabaz	74.81	312	P	P	11 50 44.2	+1.2
	1.1nm,0.7s,baz=74,slow=7.4,SNR=4.2						
AKASG	Malin Array Be	79.10	323	P	P	11 51 08.1	+1.0
	0.4nm,0.4s,baz=51,slow=5.7,SNR=3.6						
ULM	Lac du Bonnet	84.97	33	P	P	11 51 37.6	-0.1
	0.5nm,0.4s,baz=240,slow=8.1,SNR=2.4						

IDC 28 11:51:50.0±1.5, **11.°98S**×**165.°07E**, **h0**^{km}, **mb3.7**/3, **mb1 3.9**/5, **mb1mx3.6**/28, **mbtmp3.8**/5, **ML3.7**/2, **Error ellipse: s-maj=48.6km s-min=37.3km az=61.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.63	296	Pn	Pn	11 53 14.8	-0.2
	6.6nm,0.3s,baz=292,slow=17,SNR=2.4						
DZM	Mont Dzumac	10.12	173	Pn	Pn	11 54 16.7	-0.1
	0.2nm,0.3s,baz=29,slow=13,SNR=5.8						
ILAR	Eielson Array	84.60	19	P	P	12 04 25.1	+0.1
	0.4nm,0.7s,baz=236,slow=6.3,SNR=5.1						
MKAR	Makanchi Array	93.74	317	P	P	12 05 09.0	+0.1
	0.2nm,0.7s,baz=100,slow=4.8,SNR=3.0						
YKA	Yellowknife Ar	96.10	27	P	P	12 05 18.9	-0.4
	0.1nm,0.6s,baz=266,slow=5.5,SNR=3.8						

IDC 28 12:24:17.8±2.2, **8.°52S**×**127.°72E**, **h0**^{km}, **mb3.7**/1, **mb1 3.8**/4, **mb1mx3.5**/32, **mbtmp3.6**/4, **ML3.7**/3, **Error ellipse: s-maj=94.5km s-min=29.6km az=72.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	9.73	192	Pn	Pn	12 26 39.3	+0.1
	0.6nm,0.3s,baz=21,slow=10.0,SNR=22						
FITZ				Sn	Sn	12 28 23.2	-6.0
	0.6nm,0.3s,baz=3.0,slow=22,SNR=1.8						
WRA	Warramunga Arr	13.04	151	Pn	Pn	12 27 24.0	-0.5
	0.3nm,0.3s,baz=329,slow=13,SNR=20						
WRA				Sn	Sn	12 29 42.9	-7.5
	0.3nm,0.3s,baz=332,slow=23,SNR=2.6						
ASAR	Alice Springs	16.18	159	Pn	Pn	12 28 07.3	+0.5
	0.2nm,0.3s,baz=332,slow=10.0,SNR=15						
ASAR				Sn	Sn	12 30 57.9	-9.2
	0.1nm,0.3s,baz=325,slow=25,SNR=1.0						
MKAR	Makanchi Array	68.28	328	P	P	12 35 20.7	0.0
	0.1nm,0.5s,baz=127,slow=7.5,SNR=1.4						

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*ISCJB **28** 12:29:56.6±1.5, 36.°86N±0.°04×141.°43E±0.°08, h11^{km}±10^{km}, mb3.2/3, MS3.0/1, Error ellipse: s-maj=10.8km s-min=7.5km az=178.3*

*IDC **28** 12:29:56.4±2.5, 36.°70N×141.°50E, h0^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.2/36, mbtmp3.2/4, ML2.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/21, Error ellipse: s-maj=48.9km s-min=32.5km az=48.0*

*JMA **28** 12:29:58.4±0.1, 36.°87N×141.°33E, h29^{km}±1^{km}, M3.0*

ISC 28 12:29:57.8±2.0, **36.°87N**±0.°05×**141.°35E**±0.°09, **h11**^{km}±10^{km}, **n20**, σ**1.^{s}13**/21, **mb3.2**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.50	298	P	Pg	12 30 08.1	+0.5
JFK	Kawauchi	0.63	323	P	Pg	12 30 10.2	+0.2
JFK				S	Sg	12 30 18.8	+0.6
JFFD	Fukushimafurud	0.67	290	P	Pg	12 30 10.7	-0.1
JFFD				S	Sg	12 30 19.5	-0.1
JHO	Hitachi	0.68	248	P	Pg	12 30 10.9	-0.1
JHO				S	Sg	12 30 20.2	+0.3
JFT	Otama	1.04	309	P	Pb	12 30 17.5	-0.3
JFT				S	Sb	12 30 30.7	-0.7
JMM	Marumori	1.09	336	P	Pn	12 30 17.7	-1.3
JMM				S	Sb	12 30 32.1	-0.8
JYT	Yasato	1.13	236	P	Pb	12 30 18.1	-1.3
JFY	Yanaizu	1.42	293	P	Pn	12 30 23.4	-0.2
JFY				S	Sn	12 30 41.6	-0.7
MJAR	Matsushiro Arr	2.55	264	Pn	Pn	12 30 39.4	+0.3
	0.4nm,0.3s,baz=90,slow=15,SNR=20						
MJAR				Sn	Sb	12 31 15.3	+0.5
	0.4nm,0.3s,baz=86,slow=10,SNR=5.5						
MAT	Matsushiro	2.55	264	P	Pn	12 30 39.9	+0.8
MAT				*e*S	Sb	12 31 13.3	-1.6
SONM	Songino Array	27.84	304	P	P	12 35 50.7	+3.4
	0.2nm,0.4s,baz=96,slow=8.9,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.11	120	T	T	13 05 16.3	
	baz=313,slow=75,SNR=115						
H11N1	WAKE ISLAND Hy	28.11	120	T	T	13 05 17.5	
	baz=313,slow=75,SNR=80						
H11N3	WAKE ISLAND Hy	28.12	120	T	T	13 05 17.8	
	baz=313,slow=75,SNR=80						
H11S1	WAKE ISLAND Hy	28.81	123	T	T	13 06 08.7	
	baz=315,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	28.81	123	T	T	13 06 07.0	
	baz=315,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	28.83	123	T	T	13 06 09.7	
	baz=315,slow=76,SNR=20						
DAV	Davao City (W)	32.97	210	LR	LR	12 50 23.9	
	comp=Z,31nm,19.5s,baz=294,slow=37						
MKAR	Makanchi Array	44.16	302	P	P	12 38 06.6	+0.1
	0.2nm,0.6s,baz=82,slow=12,SNR=2.6						
WRA	Warramunga Arr	56.89	188	P	P	12 39 42.4	-0.4
	0.5nm,0.9s,baz=5.5,slow=7.4,SNR=1.8						

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*ISCJB **28** 12:33:47.9±0.7, 27.°13N±0.°09×103.°0E±0.°2, h10^{km}, mb3.6/8, MS3.0/2, Error ellipse: s-maj=19.4km s-min=12.2km az=172.1*

*IDC **28** 12:33:48.5±0.9, 27.°15N×103.°05E, h0^{km}, mb3.6/9, mb1 3.6/10, mb1mx3.4/40, mbtmp3.5/10, MS2.9/4, Ms1 2.9/4, ms1mx2.6/32, Error ellipse: s-maj=32.4km s-min=18.0km az=63.0*

ISC 28 12:33:50.0±0.9, **27.°2N**±0.°1×**103.°1E**±0.°2, **h10**^{km}, **n12**, σ**0.^{s}60**/9, **mb3.7**/8, **Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	9.51	205	Pn	Pn	12 36 07.3	+0.3
	baz=12,slow=13,SNR=2.5						
CMAR				Pg		12 36 44.0	
	baz=6.3,slow=16,SNR=6.9						
CMAR				Lg	Lg	12 38 43.4	
	0.0nm,0.3s,baz=16,slow=29,SNR=3.0						
CMAR				LR	LR	12 40 12.7	
	comp=Z,59nm,19.2s,baz=9.5,slow=41						
BRDH	Bariadhala	11.33	249	LR	LR	12 40 53.0	
	comp=Z,29nm,20.4s,baz=85,slow=38						
SONM	Songino Array	20.76	6	P	Pn	12 38 32.4	-1.1
	0.9nm,0.6s,baz=187,slow=11,SNR=8.0						
KSRS	Korea Array	23.27	58	P	P	12 38 58.4	+0.6
	0.6nm,0.6s,baz=248,slow=9.9,SNR=3.6						
KSRS				LR	LR	12 48 22.0	
	comp=Z,41nm,19.1s,baz=318,slow=38						
MKAR	Makanchi Array	25.53	325	P	P	12 39 19.2	+0.4
	0.8nm,0.6s,baz=131,slow=9.9,SNR=12						
ZALV	Zalesovo Beam	29.93	338	P	P	12 39 57.4	-0.7
	0.3nm,0.3s,baz=133,slow=8.1,SNR=2.9						
KURBB	Kurchatov Arra	29.95	328	P	P	12 39 58.5	+0.2
	0.9nm,0.6s,baz=137,slow=9.4,SNR=11						
MJAR	Matsushiro Arr	31.09	64	LR	LR	12 54 12.4	
	comp=Z,32nm,18.9s,baz=215,slow=39						
WRA	Warramunga Arr	55.79	144	P	P	12 43 27.2	-0.3
	0.5nm,0.7s,baz=334,slow=8.4,SNR=6.2						
ASAR	Alice Springs	58.67	147	P	P	12 43 47.5	-0.3
	0.2nm,0.3s,baz=330,slow=6.9,SNR=3.7						
AKASG	Malin Array Be	59.46	315	P	P	12 43 52.3	-0.7
	0.3nm,0.4s,baz=71,slow=6.7,SNR=2.3						
FINES	FINESS Array B	60.34	327	P	P	12 43 59.5	+0.6
	0.7nm,0.6s,baz=101,slow=7.2,SNR=1.6						

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*ISCJB **28** 12:36:24.9±0.4, 24.°72N±0.°02×122.°20E±0.°02, h85^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.5km az=164.8*

*JMA **28** 12:36:24.6±0.2, 24.°71N×122.°17E, h88^{km}±3^{km}, M2.5*

*TAP **28** 12:36:25.3, 24.°73N×122.°16E, h85^{km}, ML3.3, B*

ISC 28 12:36:24.6±1.3, **24.°72N**±0.°03×**122.°19E**±0.°02, **h90**^{km}±6^{km}, **n98**, σ**0.^{s}94**/177, **8C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.18	199	P	Pn	12 36 38.1	+0.6
	baz=188						
EOS1				*e*S	Sn	12 36 47.6	+0.6
	baz=188						
EGS		0.27	298	*e*P	Pn	12 36 37.6	-0.3
	baz=290						
TWC	Suao	0.33	251	P	Pn	12 36 38.2	0.0
	baz=245						
TWC				*e*S	Sn	12 36 47.7	-0.5
	baz=245						
TWB1	Santiao Chiao	0.34	327	P	Pn	12 36 38.3	+0.1
	baz=333						
TWB1				*e*S	Sn	12 36 47.5	-0.8
	baz=333						
NTC	Toucheng	0.36	292	*e*P	Pn	12 36 38.2	-0.1
	baz=288						
TIPB	Shuangxi	0.42	307	*e*P	Pn	12 36 38.9	+0.2
	baz=309						
TIPB				*e*S	Sn	12 36 48.6	-0.7
	baz=309						
TWE	Neicheng	0.48	270	⇑*i*P	Pn	12 36 39.5	+0.4
	baz=274						
TWE				*e*S	Sn	12 36 49.2	-0.7
	baz=274						
NANB	Nanao	0.50	234	⇑*e*P	Pn	12 36 39.8	+0.5
	baz=228						
NANB				*e*S	Sn	12 36 50.0	-0.2
	baz=228						
ENA	Nanau	0.50	235	P	Pn	12 36 39.9	+0.5
	baz=227						
ENA				*e*S	Sn	12 36 50.2	-0.1
	baz=227						
NWF	Wu-fen Shan	0.51	313	P	Pn	12 36 39.7	+0.2
	baz=307						
NWF				*e*S	Sn	12 36 49.8	-0.8
	baz=307						
WFSB	Wu-fen Shan	0.51	313	*e*P	Pn	12 36 39.7	+0.3
	baz=307						
WFSB				*e*S	Sn	12 36 49.8	-0.6
	baz=307						
ENTT	Nioudou	0.58	262	P	Pn	12 36 40.6	+0.7
	baz=262						
ENTT				*e*S	Sn	12 36 51.4	0.0
	baz=262						
TWA	Mucha	0.61	295	P	Pn	12 36 40.4	+0.1
	baz=295						
TWA				*e*S	Sn	12 36 51.0	-0.9
	baz=295						
NDT	Datong Townshi	0.63	259	*e*P	Pn	12 36 41.4	+0.9
	baz=259						
NDT				*e*S	Sn	12 36 52.6	+0.3
	baz=259						
NWLT	Wulai	0.63	275	*e*P	Pn	12 36 40.7	+0.2
	baz=280						
NWLT				*e*S	Sn	12 36 51.7	-0.6
	baz=280						
NHDH	Xindian Distri	0.65	292	P	Pn	12 36 40.9	+0.2
	baz=292						
NHDH				*e*S	Sn	12 36 51.9	-0.7
	baz=292						
TATO	Taipei	0.69	292	*e*P	Pn	12 36 40.9	-0.1
	baz=292						
TATO				*e*S	Sn	12 36 52.0	-1.2
	baz=292						
TAP	Taipei	0.70	297	*e*P	Pn	12 36 41.1	+0.1
	baz=297						
YM01	YM01	0.71	307	*e*P	Pn	12 36 41.4	+0.2
	baz=302						
YM01				*e*S	Sn	12 36 52.9	-0.7
	baz=302						
YM11	YM11	0.72	308	*e*P	Pn	12 36 41.4	+0.1
	baz=303						
YM11				*e*S	Sn	12 36 52.6	-1.2
	baz=303						
YM08	YM08	0.72	311	*e*P	Pn	12 36 41.2	-0.1
	baz=306						
YM08				*e*S	Sn	12 36 52.4	-1.4
	baz=306						
YM05	YM05	0.72	308	*e*P	Pn	12 36 41.5	+0.1
	baz=303						
YM05				*e*S	Sn	12 36 52.8	-1.1
	baz=303						
JYNG	Yonagunijimaku	0.74	111	P	Pn	12 36 41.7	+0.3
JYNG				S	Sn	12 36 53.7	-0.3
YM04	YM04	0.74	306	*e*P	Pn	12 36 41.5	0.0
	baz=301						
YM04				*e*S	Sn	12 36 52.9	-1.2
	baz=301						
YHNB	Yeheng	0.74	266	*e*P	Pn	12 36 42.3	+0.7
	baz=271						
YHNB				*e*S	Sn	12 36 54.4	0.0
	baz=271						
NSK	Sanguang	0.76	267	⇑P	Pn	12 36 42.4	+0.6
	baz=273						
NSK				*e*S	Sn	12 36 54.7	+0.1
	baz=273						
TWY	Chenhua	0.77	316	*e*P	Pn	12 36 42.1	+0.3
	baz=310						
TWY				*e*S	Sn	12 36 54.7	+0.1
	baz=310						
YOJ	Yonaguni jima	0.79	109	*e*P	Pn	12 36 42.3	+0.3
	baz=113						
YOJ				*e*S	Sn	12 36 54.9	0.0
	baz=113						
YOJ	Yonaguni jima	0.79	109	P	Pn	12 36 42.3	+0.3
YOJ				*e*S	Sn	12 36 55.0	0.0
NNSB	Datong	0.79	249	⇑*e*P	Pn	12 36 42.8	+0.7
	baz=238						
NNSB				*e*S	Sn	12 36 55.5	+0.2
	baz=238						
NNS	Nan Shan	0.80	250	⇑P	Pn	12 36 42.9	+0.7
	baz=239						
NNS				*e*S	Sn	12 36 55.6	+0.2
	baz=239						
TWS1	Kuangyinshan	0.80	298	⇑P	Pn	12 36 42.5	+0.4
	baz=306						
TWS1				*e*S	Sn	12 36 54.8	-0.4
	baz=306						
NTST	Danshui	0.81	303	*e*P	Pn	12 36 42.6	+0.5
	baz=304						
NTST				*e*S	Sn	12 36 55.5	+0.2
	baz=304						
ETLH	Xiulin Townshi	0.82	232	*e*P	Pn	12 36 42.8	+0.4
	baz=235						
ETLH				*e*S	Sn	12 36 55.8	0.0
	baz=235						
TWD	Chiawan	0.84	221	P	Pn	12 36 42.8	+0.3
	baz=211						
TWD				*e*S	Sn	12 36 55.9	+0.1
	baz=211						
WLTB	Daxi	0.86	279	⇑*e*P	Pn	12 36 43.8	+1.0
	baz=278						
WLTB				*e*S	Sn	12 36 57.5	+1.2
	baz=278						
PCYT	Pengchaiyu	0.91	353	*e*P	Pn	12 36 44.0	+0.6
	baz=350						
HWA	Hwalien	0.91	216	*e*P	Pn	12 36 43.8	+0.4
	baz=205						
NCU	National Centr	0.95	285	P	Pn	12 36 44.5	+0.9
	baz=276						
NCU				*e*S	Sn	12 36 59.2	+1.2
	baz=276						
NCUH	Zhongli	0.95	285	*e*P	Pn	12 36 44.6	+0.9
	baz=276						
NCUH				*e*S	Sn	12 36 59.0	+1.0
	baz=276						
ENLB	Shoufeng	0.98	214	*e*P	Pn	12 36 44.3	+0.2
	baz=204						
ENLB				*e*S	Sn	12 36 58.8	+0.2
	baz=204						
WHF	Hehuan Shan	1.02	236	P	Pn	12 36 45.4	+0.4
	baz=228						
WHF				*e*S	Sn	12 37 00.1	-0.1
	baz=228						
TWT	Tachien	1.04	244	*e*P	Pn	12 36 46.2	+1.3
	baz=234						
TWT				*e*S	Sn	12 37 00.9	+0.8
	baz=234						
TDCB	Techi	1.05	244	⇑*e*P	Pn	12 36 46.1	+1.1
	baz=235						
TDCB				*e*S	Sn	12 37 00.7	+0.3
	baz=235						
LIOB	Emei	1.07	266	*e*P	Pn	12 36 44.6	-0.6
	baz=264						
LIOB				*e*S	Sn	12 36 59.4	-1.2
	baz=264						
NSTT	Nanjuang	1.09	266	P	Pn	12 36 46.0	+0.7
	baz=264						
NSTT				*e*S	Sn	12 37 01.1	+0.3
	baz=264						
SBCB	Hsinchu	1.10	274	*e*P	Pn	12 36 46.4	+0.9
	baz=272						
SBCB				*e*S	Sn	12 37 01.8	+0.7
	baz=272						
CHGB	Renai	1.14	235	*e*P	Pn	12 36 46.9	+0.7
	baz=225						
CHGB				*e*S	Sn	12 37 02.0	-0.3
	baz=225						
ESL	Shilin	1.14	218	P	Pn	12 36 45.5	-0.5
	baz=222						
ESL				*e*S	Sn	12 37 00.8	-1.1
	baz=222						
OWD	Renai	1.20	231	*e*P	Pn	12 36 47.5	+0.6
	baz=222						
OWD				*e*S	Sn	12 37 03.8	+0.3
	baz=222						
WHP	Taichung City	1.22	249	P	Pn	12 36 48.4	+1.4
	baz=247						
WHP				*e*S	Sn	12 37 04.7	+1.0
	baz=247						
EGFH	Guangfu	1.26	214	*e*P	Pn	12 36 47.1	-0.2
	baz=218						
EGFH				*e*S	Sn	12 37 03.1	-1.4
	baz=218						
NMLH	Miaoli	1.29	262	P	Pn	12 36 48.7	+0.9
	baz=260						
NMLH				*e*S	Sn	12 37 06.0	+0.8
	baz=260						
NSY	Sanyi	1.34	257	P	Pn	12 36 49.5	+1.1
	baz=255						
NSY				*e*S	Sn	12 37 07.0	+0.7
	baz=255						
TWQ1	Liyutan	1.34	254	P	Pn	12 36 49.2	+0.8
	baz=252						
TWQ1				*e*S	Sn	12 37 06.1	-0.3
	baz=252						
VWDT	VWDT	1.36	225	*e*P	Pn	12 36 49.4	+0.8
	baz=217						
VWDT				*e*S	Sn	12 37 06.6	0.0
	baz=217						
PTSB	Yuanli	1.38	259	*e*P	Pn	12 36 49.8	+0.9
	baz=257						
HGSD	Ruisui	1.41	210	*e*P	Pn	12 36 49.3	+0.1
	baz=216						
HGSD				*e*S	Sn	12 37 07.8	0.0
	baz=216						
SMLT	Sun Moon Lake	1.44	235	P	Pn	12 36 51.3	+1.5
	baz=232						
SMLT				*e*S	Sn	12 37 10.2	+1.4
	baz=232						
EHY	Hungye	1.45	214	*e*P	Pn	12 36 49.1	-0.7
	baz=210						
EHY				*e*S	Sn	12 37 06.7	-2.0
	baz=210						
IRIF	Iriomote-Funau	1.45	105	P	Pn	12 36 49.9	+0.2
IRIF				*e*S	Sn	12 37 09.0	+0.3
WDJ	Dajia District	1.46	256	*e*P	Pn	12 36 50.9	+1.0
	baz=253						
WDJ				*e*S	Sn	12 37 09.6	+0.6
	baz=253						
SSLB	Suanglung	1.46	231	*e*P	Pn	12 36 51.1	+1.1
	baz=223						
SSLB				*e*S	Sn	12 37 09.7	+0.7
	baz=223						
TYC	Yuchr	1.47	237	*e*P	Pn	12 36 51.3	+1.4
	baz=229						
TYC				*e*S	Sn	12 37 09.9	+0.9
	baz=229						
YULB	Yu-li	1.56	212	*e*P	Pn	12 36 50.3	-0.8
	baz=215						
YULB				*e*S	Sn	12 37 10.2	-0.9
	baz=215						
TWF1	Yuli	1.59	211	*e*P	Pn	12 36 50.9	-0.7
	baz=215						
TWF1				*e*S	Sn	12 37 10.6	-1.3
	baz=215						
WHYT	Xinyi Township	1.59	230	*e*P	Pn	12 36 53.3	+1.7
	baz=237						
WJS	Zhushan	1.61	237	*e*P	Pn	12 36 53.3	+1.6
	baz=244						
HATJ	Hateruma jima	1.61	114	*e*S	Sn	12 37 12.7	+0.3
WNT	Mingjian	1.61	239	*e*P	Pn	12 36 52.9	+1.1
	baz=247						
WNT				*e*S	Sn	12 37 13.9	+1.5
	baz=247						
FULB	Fuli	1.72	209	*e*P	Pn	12 36 53.5	+0.2
	baz=213						
FULB				*e*S	Sn	12 37 15.5	+0.5
	baz=213						
JKRS	Kuro-shima	1.72	106	P	Pn	12 36 54.1	+0.9
JKRS				S	Sn	12 37 15.5	+0.6
CHN5	Tsauling	1.78	231	P	Pn	12 36 55.5	+1.4
	baz=239						
CHN5				*e*S	Sn	12 37 18.1	+1.7
	baz=239						

CHKT	Chengkung	1.78	205	eP	Pn	12 36 53.5	-0.5
	baz=196						
CHKT				eS	Sn	12 37 14.0	-2.3
	baz=196						
JIJ	Ishigaki jima	1.81	101	P	Pn	12 36 54.8	+0.4
JIJ				S	Sn	12 37 16.3	-0.7
WDLH	Douliu	1.83	236	eP	Pn	12 36 55.8	+1.2
	baz=233						
ELDTW	Lidau	1.87	215	eP	Pn	12 36 55.4	+0.2
	baz=212						
ELDTW				eS	Sn	12 37 17.5	-1.0
	baz=212						
JISG	Ishigakijimahi	1.93	93	P	Pn	12 36 56.6	+0.7
JISG				S	Sn	12 37 20.0	+0.2
CHN4	Tsaushan	2.00	227	eP	Pn	12 36 58.3	+1.5
	baz=235						
CHN4				eS	Sn	12 37 22.4	+1.0
	baz=235						
STYT	Tauyuan	2.03	221	eP	Pn	12 36 59.0	+1.7
	baz=209						
STYT				eS	Sn	12 37 23.7	+1.5
	baz=209						
TWK	Hsinying	2.13	227	eP	Pn	12 36 59.7	+1.2
	baz=236						
TWK				eS	Sn	12 37 26.0	+1.5
	baz=236						
TWGBT	Beinan	2.15	209	eP	Pn	12 36 58.1	-0.8
	baz=199						
TWGBT				eS	Sn	12 37 23.4	-1.6
	baz=199						
TWG	Pinlang	2.15	209	eP	Pn	12 36 58.7	-0.1
	baz=199						
TWG				eS	Sn	12 37 23.1	-1.8
	baz=199						
CHN1	Nanshi	2.16	225	eP	Pn	12 37 00.5	+1.5
	baz=233						
CHN1				eS	Sn	12 37 26.3	+1.2
	baz=233						
SGST	Jiashian	2.20	222	eP	Pn	12 37 00.6	+1.1
	baz=219						
SLGT	Liugui	2.23	220	eP	Pn	12 37 01.8	+1.9
	baz=217						
JTJ	Tarama	2.28	91	eS	Sn	12 37 28.8	+0.7
PTTC	Pingtan	2.33	290	eP	Pn	12 37 01.3	+0.1
	baz=288						
MATB	Ma-tsu	2.48	306	eP	Pn	12 37 03.0	-0.2
	baz=304						
VWUC	VWUC	2.51	277	eP	Pn	12 37 03.6	+0.1
	baz=275						
VWUC				eS	Sn	12 37 31.4	-2.0
	baz=275						
MASBT	Mashibuluo	2.54	215	eP	Pn	12 37 05.0	+1.0
	baz=210						
MASBT				eS	Sn	12 37 34.5	+0.3
	baz=210						
EAST	Anshuo	2.63	208	eP	Pn	12 37 05.3	0.0
	baz=202						
PHUB	P'eng-hu	2.68	244	eP	Pn	12 37 05.2	-0.6
	baz=242						
PHUB				eS	Sn	12 37 35.1	-2.4
	baz=242						
JIRB	Irabujima	2.71	87	eS	Sn	12 37 38.9	+0.6
LAY	Lan-yu	2.73	193	eP	Pn	12 37 05.8	-0.8
	baz=196						
LAY				eS	Sn	12 37 34.8	-4.1
	baz=196						
WDGT	Dungji	2.73	238	eP	Pn	12 37 07.2	+0.6
	baz=236						
PTMZ	Houxiangcun	2.81	277	eP	Pn	12 37 07.5	-0.1
	baz=275						
AXDP	Jialang	3.84	274	eP	Pn	12 37 21.8	+0.3
	baz=271						
AXDP				eS	Sn	12 38 02.9	-2.7
	baz=271						

*ECX **28** 12:39:19.9±0.5, 31°.27N×115°.89W, h5^{km}, MD2.3, ML2.5*
*MEX **28** 12:39:21.0±0.5, 31°.19N×115°.89W, h15^{km}±69^{km}, MD3.5*
ISC 28 12:39:18.0±1.3**, 31°.3N**±0°.1×**115°.9W**±0°.1**, h14**^{km}±12^{km}**, n10,**
σ0ˢ.37/17**, 4C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIG	San Pedro Mart	0.43	124	eP	Pb	12 39 27.9	+0.3
SPIG				eS	Sb	12 39 33.8	-0.3
SPIG	San Pedro Mart	0.43	124	⇓eP	Pb	12 39 27.9	+0.3
SPX	San Pedro Mart	0.43	124	eP	Pg	12 39 26.4	-0.4
SPX				eS	Sg	12 39 32.3	-0.4
SPX	San Pedro Mart	0.43	124	⇓eP	Pg	12 39 26.9	+0.2
SPX				eS	Sg	12 39 32.9	+0.2
SPX				IAML		12 39 33.3	
	comp=N,351nm,0.1s						
SPX				e		12 39 33.3	
SPX				⇓e		12 39 33.5	
SPX				IAML		12 39 33.5	
	comp=E,282nm,0.1s						
ECBX	El Chinero	0.74	75	⇑iP	Pn	12 39 34.3	+0.4
ECBX				eS	Sn	12 39 44.4	-0.5
CBX	Cerro Bola	1.22	327	eP	Pn	12 39 40.8	0.0
CBX				eS	Sb	12 39 56.2	-0.3
CBX	Cerro Bola	1.22	327	⇑eP	Pb	12 39 41.3	+0.4
RMX	La Rumorosa	1.32	353	eP	Pn	12 39 42.3	+0.2
RMX				eS	Sn	12 39 59.9	+0.2
RMX				IAML		12 40 00.5	
	comp=N,58nm,0.3s						
RMX				⇑e		12 40 00.5	
TJIG	Tijuana	1.33	330	iP	Pb	12 39 43.0	+0.3
TJIG				iS	Sn	12 39 59.1	-0.4
BAR	Barrett	1.54	334	⇑eP	Pb	12 39 46.5	+0.1

*ATH **28** 12:44:31.0, 39°.49N×25°.94E, h25^{km}±1^{km}, ML2.4/6, Error ellipse: s-maj=2.0km s-min=0.8km az=226.0*
*ISCJB **28** 12:44:31.3±0.4, 39°.52N±0°.02×25°.98E±0°.03, h6^{km}±3^{km}, Error ellipse: s-maj=3.5km s-min=2.6km az=174.3*
*DDA **28** 12:44:31.0, 39°.51N×26°.02E, h7^{km}±3^{km}, ML3.1*
*THE **28** 12:44:31.7, 39°.52N×25°.99E, h2^{km}±1^{km}, ML2.4/8, Error ellipse: s-maj=1.5km s-min=0.5km az=141.0*
*ISK **28** 12:44:31.7, 39°.54N×26°.03E, h8^{km}, ML3.0/17*
ISC 28 12:44:31.5±0.9**, 39°.51N**±0°.02×**25°.99E**±0°.02**, h10**^{km}±8^{km}**,**
n49, σ0ˢ.56/79**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.31	200	P	Pg	12 44 37.9	+0.1
SIGR				S	Sg	12 44 42.8	+0.9
SIGR				AML	AML	12 44 44.7	
	comp=E,1149μm,0.3s						
SIGR				AML	AML	12 44 45.3	
	comp=N,1613μm,0.4s						
SIGR	SIGRI	0.31	200	P	Pg	12 44 37.7	-0.1
SIGR				S	Sg	12 44 42.7	+0.8
BOZC	Bozcaada	0.34	8	PG	Pg	12 44 37.9	-0.4
BOZC				SG	Sg	12 44 42.9	+0.1
BOZC	Bozcaada	0.34	8	iP	Pg	12 44 38.8	+0.5
BOZC				iS	Sg	12 44 43.3	+0.5
BOZC				IAML_P			
	comp=Z,12μm,0.2s						
PRK	Paraskevi	0.34	140	P	Pb	12 44 39.3	-0.4
PRK				S	Sb	12 44 44.5	-0.7
PRK				AML	AML	12 44 45.0	
	comp=N,1920μm,0.4s						
PRK				AML	AML	12 44 46.1	
	comp=E,2844μm,0.6s						
PRK	Paraskevi	0.34	140	P	Pb	12 44 39.2	-0.5
PRK				S	Sb	12 44 44.5	-0.7
EZN	Ezine	0.41	39	PG	Pg	12 44 39.1	-0.5
EZN				SG	Sg	12 44 45.1	0.0
EZN	Ezine	0.41	39	P	Pg	12 44 38.9	-0.7
EZN				S	Sg	12 44 45.1	0.0
BAYC	CANAKKALE_Bayr	0.49	61	iP	Pg	12 44 41.0	-0.1
BAYC				iS	Sg	12 44 47.1	-0.4
BAYC				IAML_P			
	comp=Z,8μm,0.1s						
AYVA	Ayvalik	0.58	110	iP	Pg	12 44 42.5	-0.2
AYVA				iS	Sn	12 44 57.6	+2.2
AYVA				IAML_P			
	comp=Z,467nm,0.1s						
LIA	Limnos Island	0.74	302	P	Pg	12 44 45.5	-0.2
LIA				S	Sg	12 44 55.3	-0.1
LIA				AML	AML	12 44 59.3	
	comp=E,706μm,0.4s						
LIA				AML	AML	12 45 01.8	
	comp=N,427μm,0.3s						
LIA	Limnos Island	0.74	302	P	Pg	12 44 45.9	+0.2
LIA				S	Sb	12 44 56.6	0.0
GELI	Tayfur-Gelibol	0.96	23	PG	Pg	12 44 49.4	-0.7
GELI				SG	Sb	12 45 03.2	0.0
ZEDA	zmir-Bergama	1.00	122	iP	Pb	12 44 50.9	-0.1
ZEDA				iS	Sb	12 45 04.9	+0.7
ZEDA				IAML_P			
	comp=Z,621nm,0.1s						
SMTH	Samothraki Isl	1.03	340	P	Pg	12 44 50.7	-0.6
SMTH				S	Sg	12 45 04.2	-0.5
SMTH				AML	AML	12 45 06.2	
	comp=N,353μm,0.4s						
SMTH				AML	AML	12 45 06.3	
	comp=E,199μm,0.2s						
SMTH	Samothraki Isl	1.03	340	P	Pg	12 44 50.6	-0.7
SMTH				S	Sb	12 45 05.5	+0.5
LPK	Lapseki	1.05	34	PG	Pg	12 44 50.9	-0.8
LPK				SG	Sb	12 45 05.6	0.0
CHOS	Chios island	1.12	177	P	Pg	12 44 51.9	-1.2
CHOS				S	Sg	12 45 07.3	-0.3
CHOS				AML	AML	12 45 12.7	
	comp=E,893μm,0.4s						
CHOS				AML	AML	12 45 14.1	
	comp=N,606μm,0.6s						
CHOS	Chios island	1.12	177	P	Pg	12 44 52.8	-0.2
CHOS				S	Sn	12 45 09.8	+0.9
ERIK	Erikli-Kesan	1.23	19	PN	Pn	12 44 53.8	-1.0
ERIK				SN	Sb	12 45 10.7	-0.2
ENEZ	Enez	1.23	6	PN	Pn	12 44 54.7	-0.2
URLA	Izmir	1.24	157	iP	Pn	12 44 54.2	-0.8
URLA				iS	Sn	12 45 11.8	0.0
URLA				IAML_P			
	comp=Z,2μm,0.3s						
KRBG	Karabiga-Canak	1.34	48	PN	Pn	12 44 56.5	+0.2
KRBG				SN	Sb	12 45 13.9	-0.1
STEP	BALIKESIR_Sava	1.34	95	iP	Pn	12 44 56.5	0.0
STEP				iS	Sg	12 45 15.2	+0.4
STEP				IAML_P			
	comp=Z,2μm,0.3s						
BLCB	Balcova	1.39	143	PN	Pb	12 44 57.9	+0.3
ALN	Alexandroupoli	1.39	2	PN	Pb	12 44 57.6	0.0
ALN	Alexandroupoli	1.39	2	P	Pn	12 44 56.9	-0.2
ALN				S	Sn	12 45 15.8	+0.3
ALN				AML	AML	12 45 17.3	
	comp=N,233μm,0.4s						
ALN				AML	AML	12 45 17.6	
	comp=E,204μm,0.3s						
ALN	Alexandroupoli	1.39	2	P	Pn	12 44 56.9	-0.2
ALN				S	Sg	12 45 16.1	-0.2
KNL	Balıkesir	1.41	57	iP	Pg	12 44 58.3	-0.2
KNL				iS	Sg	12 45 17.7	+0.9
KNL				IAML_P			
	comp=Z,3μm,0.3s						
GONE	Gonen-Balikesi	1.41	67	PN	Pn	12 44 57.4	0.0
BALB	Balikesir	1.47	84	PN	Pn	12 44 57.7	-0.4
THAS	Thassos island	1.47	319	P	Pn	12 44 57.5	-0.7
THAS	Thassos island	1.47	319	P	Pn	12 44 57.8	-0.3
THAS				S	Sg	12 45 18.7	-0.1
RKY	Sarkoy-Tekirda	1.49	37	PN	Pn	12 44 58.5	0.0
RKY				SN	Sn	12 45 17.7	-0.4
SART	Tekirdag	1.49	37	iP	Pn	12 44 58.3	-0.2
SART				iS	Sg	12 45 19.2	-0.4
SART				IAML_P			
	comp=Z,3μm,0.2s						
EDC	Edincik	1.67	59	PN	Pn	12 45 01.5	+0.6
AOS	Alonnisos	1.67	259	P	Pn	12 45 00.4	-0.5
AOS	Alonnisos	1.67	259	P	Pn	12 45 01.3	+0.4
RDO	Rodhopi	1.67	348	P	Pn	12 45 00.9	-0.1
SBT4	Kumbag-Tekirda	1.77	41	PN	Pn	12 45 02.9	+0.7
PAIG	Paliouri	1.83	284	P	Pn	12 45 03.1	0.0
KAVA	Kavala	1.87	323	P	Pn	12 45 03.1	-0.5
SMG	Samos	1.91	159	P	Pn	12 45 03.7	-0.5
SMG	Samos	1.91	159	P	Pn	12 45 03.9	-0.4
SMG				S	Sb	12 45 29.9	-0.6
KCTX	Karacabey (Bur	1.97	67	PN	Pn	12 45 05.6	+0.5
EDRB	Edirne	2.41	14	PN	Pn	12 45 11.9	+0.9
SLVT	Silivri	2.42	44	PN	Pn	12 45 11.9	+0.7
NVR	Nevrokopi	2.46	319	P	Pn	12 45 12.3	+0.6
KNT	Kendrikon	2.88	306	P	Pn	12 45 18.2	+0.6

*SOME **28** 13:12:25.7, 41°.03N×71°.20E, h0^{km}*
*KRNET **28** 13:12:29.1±0.1, 40°.79N×71°.13E, mb2.6*
ISC 28 13:12:26.9±3.5**, 40°.8N**±0°.2×**70°.9E**±0°.1**, h15**^{km}**, n10,**
σ1ˢ.43/18**, 13C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	1.48	336	eP	Pn	13 12 53.2	0.0
	5.0nm,0.1s						
IUG				eS	Sb	13 13 13.6	+0.8
	18nm,0.2s						
ARSB	Arslanbob	1.69	71	⇑iP	Pn	13 12 56.2	+0.1
	baz=68						
ARSB				⇑iS	Sn	13 13 15.9	-1.6
	baz=68						
KK31	Karatay Array	2.31	354	Pn	Pn	13 13 04.5	0.0
	5.6nm,0.3s,baz=158,slow=12,SNR=66						
KK31				⇑Lg	Lg	13 13 30.9	
	2.8nm,0.3s,baz=161,slow=28,SNR=11						
AML	Almayashu	2.51	57	⇑eP	Pn	13 13 08.0	+0.4
	baz=54						
AML				⇑iS	Sn	13 13 37.1	-1.1
	baz=54						
EKS2	Erkin-Say	2.87	49	⇑iP	Pn	13 13 13.7	+1.4
	baz=46						
EKS2				⇑iS	Sn	13 13 46.2	-0.4
	baz=46						
UCH	Uchtor	3.10	61	⇑eP	Pn	13 13 16.5	+0.9
	baz=59						
UCH				⇑iS	Sn	13 13 51.0	-1.6
	baz=59						
AAK	Ala-Archa	3.29	55	⇓Pn	Pn	13 13 21.2	+3.2
	1.1nm,0.5s						
AAK				⇓Lg	Lg	13 14 00.2	
	1.1nm,0.5s						
AAK	Ala-Archa	3.29	55	⇑iP	Pn	13 13 19.1	+1.1
	baz=53						
AAK				⇑iS	Sn	13 13 55.9	-1.0
	baz=53						
KZA	Kyzart	3.54	67	⇑eP	Pn	13 13 22.6	+0.9
	baz=66						
KZA				⇑iS	Sn	13 14 01.7	-1.9
	baz=66						
KBK	Karagaybulak	3.58	57	⇓iP	Pn	13 13 23.4	+1.3
	baz=56						
KBK				⇓iS	Sn	13 14 02.8	-1.4
	baz=56						

IDC 28 13:15:30.3±5.0**, 11°.14S**×**165°.43E, h38**^{km}±41^{km}**, mb3.5**/3**,**
mb1 3.9/5**, mb1mx3.4**/42**, mbtmp4.0**/5**, ML4.2**/2**, MS3.0**/1**,**
Ms1 3.0/1**, ms1mx2.6**/26**, Error ellipse: s-maj=35.0km**
s-min=34.0km az=26.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.66	287	Pn	Pn	13 16 52.5	+0.7
	10nm,0.3s,baz=143,slow=5.1,SNR=5.2						
HNR				Sn	Sn	13 17 57.4	+1.8
	1.7nm,0.3s,baz=82,slow=22,SNR=1.8						
HNR				LR	LR	13 19 08.7	
	comp=Z,145nm,19.6s,baz=70,slow=39						
DZM	Mont Dzumac	10.91	175	Pn	Pn	13 18 04.1	0.0
	1.4nm,0.3s,baz=323,slow=15,SNR=35						
WRA	Warramunga Arr	31.16	250	P	P	13 21 45.3	-0.6
	1.6nm,1.0s,baz=81,slow=9.2,SNR=5.7						
ASAR	Alice Springs	32.47	243	P	P	13 21 56.9	-0.6
	0.7nm,0.7s,baz=64,slow=10,SNR=7.7						
ASAR				PcP	PcP	13 24 45.4	+1.3
	0.3nm,0.7s,baz=72,slow=3.0,SNR=3.1						
ILAR	Eielson Array	83.70	19	P	P	13 27 54.4	-0.5
	0.3nm,0.7s,baz=241,slow=5.8,SNR=6.0						

IDC 28 13:21:37.3±2.2**, 6°.65S**×**129°.47E, h0**^{km}**, mb3.5**/1**,**
mb1 3.8/4**, mb1mx3.4**/44**, mbtmp3.7**/4**, ML3.7**/3**, Error**
ellipse: s-maj=88.5km s-min=28.9km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.98	198	Pn	Pn	13 24 30.1	+0.6
	0.4nm,0.3s,baz=27,slow=12,SNR=23						
FITZ				Sn	Sn	13 26 31.4	-13
	0.3nm,0.3s,baz=242,slow=15,SNR=3.8						
WRA	Warramunga Arr	14.04	161	Pn	Pn	13 24 57.4	-0.3
	0.3nm,0.3s,baz=342,slow=13,SNR=20						
WRA				Sn	Sn	13 27 21.3	-13
	0.6nm,0.3s,baz=333,slow=22,SNR=12						
ASAR	Alice Springs	17.45	166	Pn	Pn	13 25 42.0	-0.4
	0.2nm,0.3s,baz=344,slow=9.9,SNR=32						
ASAR				Sn	Sn	13 28 44.7	-13
	0.1nm,0.3s,baz=349,slow=26,SNR=6.2						
MKAR	Makanchi Array	67.64	327	P	P	13 32 36.2	0.0
	0.2nm,0.4s,baz=124,slow=8.1,SNR=5.0						

*KRNET **28** 13:26:15.7±0.1, 40°.14N×75°.16E, h18^{km}, mb3.3*
*SOME **28** 13:26:16.0, 40°.22N×75°.05E, h0^{km}*
*NNC **28** 13:26:20.7±1.6, 40°.33N×75°.20E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=11.9km s-min=8.1km az=165.0*
ISC 28 13:26:15.1±2.1**, 40°.16N**±0°.08×**75°.13E**±0°.03**, h7**^{km}±16^{km}**,**
n55, σ1ˢ.73/83**, 20C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn	1.43	27	⇓iP	Pb	13 26 42.7	+0.4
	baz=25						
NRN				⇓iS	Sg	13 27 01.9	+0.7
	baz=25						
ARLS	Aral	1.80	341	⇑iP	Pg	13 26 49.9	+0.3
	baz=40						
ARLS				⇑iS	Sg	13 27 14.7	+1.7
	baz=40						
KZA	Kyzart	1.91	3	P	Pg	13 26 52.3	+0.5
	SNR=16						
KZA	Kyzart	1.91	3	⇑iP	Pb	13 26 51.7	+1.1
	baz=2.0						
KZA				⇑iS	Sg	13 27 17.9	+1.2
	baz=2.0						
ARSB	Arslanbob	2.00	306	⇑eP	Pb	13 26 53.2	+1.3
	baz=6.0						
ARSB				⇑iS	Sg	13 27 20.7	+1.4
	baz=6.0						
UCH	Uchtor	2.11	348	P	Pg	13 26 56.5	+0.9
	SNR=50						
UCH	Uchtor	2.11	348	⇓eP	Pb	13 26 54.8	+0.8
	baz=47						
UCH				⇓iS	Sg	13 27 22.8	-0.2
	baz=47						
AML	Almayashu	2.24	332	P	Pg	13 26 59.7	+1.6
	SNR=43						
AML	Almayashu	2.24	332	⇑iP	Pb	13 26 56.2	0.0
	baz=31						
AML				⇑iS	Sb	13 27 26.5	+2.2
	baz=31						
ULHL	Ulahol	2.24	22	P	Pg	13 26 58.3	+0.1
	SNR=11						
ULHL	Ulahol	2.24	22	⇑iP	Pb	13 26 56.2	+0.1
	baz=21						
ULHL				⇑iS	Sb	13 27 25.8	+1.6
	baz=21						
KBK	Karagaybulak	2.49	357	P	Pg	13 27 02.6	-0.3
	SNR=20						
KBK	Karagaybulak	2.49	357	⇑iP	Pb	13 26 59.6	-0.8
	baz=56						
KBK				⇑iS	Sb	13 27 32.2	+0.8
	baz=56						
KDJ	Kajisay	2.50	38	⇑eP	Pb	13 26 59.4	-1.1
	baz=37						
KDJ				⇑iS	Sb	13 27 31.7	+0.1
	baz=37						
AAK	Ala-Archa	2.52	349	P	Pg	13 27 03.0	-0.3
	SNR=33						
AAK	Ala-Archa	2.52	349	⇑Pn	Pg	13 27 02.9	-0.5
	26nm,0.9s						
AAK				⇓Lg	Lg	13 27 35.8	
	44nm,1.0s						
AAK	Ala-Archa	2.52	349	⇑iP	Pb	13 27 00.2	-0.5
	baz=49						
AAK				⇑iS	Sb	13 27 32.7	+0.7
	baz=49						
EKS2	Erkin-Say	2.69	338	P	Pg	13 27 06.3	-0.4
	SNR=31						
EKS2	Erkin-Say	2.69	338	⇓iP	Pb	13 27 02.7	-1.0
	baz=38						
EKS2				⇓iS	Sb	13 27 36.9	-0.1
	baz=38						
TKM2	Tokmak 2	2.78	7	P	Pb	13 27 06.5	+1.3
	SNR=14						
TKM2	Tokmak 2	2.78	7	⇑Pn	Pb	13 27 06.0	+0.8
	5.5nm,0.3s						
TKM2				⇓Lg	Lg	13 27 42.1	
	16nm,0.5s						
TKM2	Tokmak 2	2.78	7	⇓iP	Pb	13 27 03.5	-1.7
	baz=7.0						
TKM2				⇓iS	Sb	13 27 39.0	-0.5
	baz=7.0						
CHMS	Chumysh	2.85	354	P	Pg	13 27 10.9	+1.3
	SNR=18						
CHMS	Chumysh	2.85	354	⇑iP	Pb	13 27 04.7	-1.6
	baz=54						
CHMS				⇑iS	Sb	13 27 40.2	-1.1
	baz=54						
ARK	Arkit	2.90	305	⇓iP	Pb	13 27 05.3	-1.9
	baz=5.0						
ARK				⇓iS	Sb	13 27 41.3	-1.6
	baz=5.0						
KST	Kastek	2.94	12	Pg	Pb	13 27 09.9	+1.9
	11nm,0.4s						
KST				Lg	Lg	13 27 49.1	
	46nm,0.7s						
KST	Kastek	2.94	12	eP	Pb	13 27 09.9	+1.9
	11nm,0.4s						
KST				eS	Sg	13 27 49.1	-0.6
	46nm,0.7s						
MRKS	Merke	2.95	332	Pg	Pb	13 27 10.3	+2.3
	20nm,0.4s						
MRKS				Lg	Lg	13 27 49.6	
	11nm,0.9s						
MRKS	Merke	2.95	332	eP	Pb	13 27 10.3	+2.3
	20nm,0.4s						
MRKS				eS	Sg	13 27 49.6	-0.2
	11nm,0.9s						
IZV	Izvestkoviy	3.08	21	Pg	Pg	13 27 13.2	-0.9
	6.5nm,0.6s						
IZV				Lg	Lg	13 27 55.4	
	42nm,0.6s						
IZV	Izvestkoviy	3.08	21	eP	Pg	13 27 13.6	-0.5
	6.5nm,0.6s						
IZV				eS	Sg	13 27 55.1	+1.1
	42nm,0.6s						
DGS	Degeres	3.11	9	Pg	Pg	13 27 13.6	-1.2
	14nm,0.4s						
DGS				Lg	Lg	13 27 53.9	
	28nm,0.8s						
DGS	Degeres	3.11	9	eP	Pb	13 27 12.5	+1.6
	14nm,0.4s						
DGS				eS	Sg	13 27 53.3	-1.8
	28nm,0.8s						
USP	Ospenovka	3.14	352	P	Pb	13 27 12.2	+0.9
	SNR=20						
TNSS	Tian-Shan	3.18	25	Pg	Pg	13 27 16.0	0.0
	9.9nm,0.5s						
TNSS				Lg	Lg	13 27 58.8	
	17nm,0.5s						
TNSS	Tian-Shan	3.18	25	eP	Pg	13 27 16.0	0.0
	9.9nm,0.5s						
TNSS				eS	Sg	13 27 58.8	+1.5
	17nm,0.5s						
MDOK	Medeo	3.33	25	Pg	Pg	13 27 17.4	-1.4
	5.4nm,0.6s						
MDOK				Lg	Lg	13 28 01.7	
	12nm,0.5s						
MDOK	Medeo	3.33	25	eP	Pg	13 27 17.4	-1.4
	5.4nm,0.6s						
MDOK				eS	Sg	13 28 01.7	-0.2
	12nm,0.5s						
KOTS	Kotyrbulak	3.41	25	Pg	Pg	13 27 19.0	-1.4
	5.3nm,0.5s						
KOTS				Lg	Lg	13 28 04.7	
	24nm,0.5s						
KOTS	Kotyrbulak	3.41	25	eP	Pg	13 27 19.1	-1.4
	5.3nm,0.5s						
KOTS				eS	Sg	13 28 04.7	+0.1
	24nm,0.5s						
KTBS	Karatobe	3.73	18	Pg	Pg	13 27 25.0	-1.5
	12nm,0.4s						
KTBS				Lg	Lg	13 28 15.4	
	17nm,0.7s						
KTBS	Karatobe	3.73	18	eP	Pg	13 27 25.0	-1.5

	12nm,0.4s						
KTBS				eS	Sg	13 28 14.9	0.0
	17nm,0.7s						
SATY	Saty	3.80	39	Pg	Pg	13 27 26.2	-1.6
	6.7nm,0.7s						
SATY				Lg	Lg	13 28 16.4	
	18nm,0.3s						
SATY	Saty	3.80	39	eP	Pg	13 27 26.2	-1.6
	6.7nm,0.7s						
SATY				eS	Sg	13 28 16.4	-0.7
	18nm,0.3s						
KURS	Kuram	4.03	33	Pg	Pb	13 27 28.7	+2.4
	1.7nm,0.5s						
KURS				Lg	Lg	13 28 20.6	
	8.2nm,0.9s						
KURS	Kuram	4.03	33	eP	Pb	13 27 28.7	+2.4
	1.7nm,0.5s						
KURS				eS	Sg	13 28 20.6	-3.8
	8.2nm,0.9s						
UZB	Uzynbulak	4.17	43	Pg	Pg	13 27 32.7	-2.3
	1.3nm,0.6s						
UZB				Lg	Lg	13 28 27.8	
	5.2nm,0.7s						
UZB	Uzynbulak	4.17	43	eP	Pg	13 27 32.7	-2.3
	1.3nm,0.6s						
UZB				eS	Sg	13 28 27.8	-1.3
	5.2nm,0.7s						
SHLS	Shalkode	4.42	46	Pg	Pg	13 27 42.2	+2.6
	5.5nm,0.3s						
SHLS				Lg	Lg	13 28 43.8	
	8.7nm,0.7s						
SHLS	Shalkode	4.42	46	eP	Pg	13 27 42.2	+2.6
	5.5nm,0.3s						
SHLS				eS	Sg	13 28 43.8	+6.9
	8.7nm,0.7s						
ARXS	Arharly	4.52	25	Pg	Pg	13 27 39.4	-2.2
	2.3nm,0.6s						
ARXS				Lg	Lg	13 28 39.0	
	8.6nm,0.5s						
ARXS	Arharly	4.52	25	eP	Pg	13 27 39.4	-2.2
	2.3nm,0.6s						
ARXS				eS	Sg	13 28 39.0	-1.1
	8.6nm,0.5s						
KK31	Karatay Array	4.54	312	⇓Pg	Pg	13 27 39.8	-2.2
	1.0nm,0.5s,baz=116,slow=14,SNR=4.9						
KK31				⇓Lg	Lg	13 28 41.6	
	1.8nm,0.5s,baz=126,slow=28,SNR=4.1						
KAPS	Kapalarasan	5.99	30	Pg	Pg	13 28 06.2	-3.6
	0.9nm,0.5s						
KAPS				Lg	Lg	13 29 25.7	
	2.2nm,0.7s						
KAPS	Kapalarasan	5.99	30	eP	Pg	13 28 06.2	-3.6
	0.9nm,0.5s						
KAPS				eS	Sg	13 29 25.7	-1.7
	2.2nm,0.7s						

*ISCJB **28** 13:28:05.5±0.3, 11°.35S±0°.04×166°.20E±0°.07, h10^{km}, mb4.5/35, MS3.8/6, Error ellipse: s-maj=9.4km s-min=6.3km az=9.0*

*NEIC **28** 13:28:06.8±0.3, 11°.35S×166°.29E, h10^{km}, mb4.8/15, Error ellipse: s-maj=11.3km s-min=7.3km az=120.0*

*IDC **28** 13:28:08.4±4.3, 11°.33S×166°.33E, h19^{km}±26^{km}, mb4.4/20, mb1 4.5/22, mb1mx4.3/45, mbtmp4.5/22, ML4.5/2, MS3.8/8, Ms1 3.8/8, ms1mx3.7/30, Error ellipse: s-maj=20.2km s-min=13.4km az=115.0*

*BJI **28** 13:28:11.2, 11°.12S×166°.53E, h51^{km}, mB5.0/13, mb4.7/19, Ms4.9/2, Ms7 4.5/1*

ISC 28 13:28:07.1±0.5**, 11°.29S**±0°.07×**166°.29E**±0°.08**, h10**^{km}**, n70,** σ**1^{s}29**/67**, mb4.7**/35**, MS3.9**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.50	286	eP	Pn	13 29 47.0	+4.1
HNR				eS	Sn	13 30 57.0	-0.2
HNR	Honiara	6.50	286	Pn	Pn	13 29 45.5	+2.6
	43nm,0.3s,baz=166,slow=2.5,SNR=32						
HNR				Sn	Sn	13 30 52.9	-4.3
	baz=163,slow=17,SNR=1.0						
HNR				LR	LR	13 32 37.1	
	comp=Z,2µm,19.1s,baz=120,slow=41						
DZM	Mont Dzumac	10.72	179	ePn	Pn	13 30 43.3	+2.4
	18nm,0.6s						
DZM				eLR	LR	13 33 19.6	
	comp=Z,1µm,24.2s						
DZM	Mont Dzumac	10.72	179	Pn	Pn	13 30 42.2	+1.4
	0.7nm,0.3s,baz=342,slow=20,SNR=17						
DZM				Sn	Sn	13 32 41.0	-0.1
	0.2nm,0.3s,baz=343,slow=20,SNR=2.3						
DZM				LR	LR	13 33 13.4	
	comp=Z,79nm,22.0s,baz=28,slow=29						
CTA	Charters Tower	21.16	243	P	P	13 32 52.9	+0.3
	16nm,0.8s,baz=74,slow=11,SNR=13						
CTA				LR	LR	13 40 11.5	
	comp=Z,602nm,21.0s,baz=90,slow=34						
ARMA	Armidale	23.40	213	eP	P	13 33 15.0	-1.4
	19nm,0.8s						
H11S2	WAKE ISLAND Hy	29.59	1	T	T	14 04 55.9	
	baz=181,slow=76,SNR=45						
H11S3	WAKE ISLAND Hy	29.60	1	T	T	14 04 56.2	
	baz=181,slow=76,SNR=38						
H11S1	WAKE ISLAND Hy	29.61	1	T	T	14 04 57.1	
	baz=181,slow=76,SNR=38						
STKA	Stephens Creek	30.63	224	eP	P	13 34 21.8	+0.2
	1.3nm,0.8s						
STKA				PcP	PcP	13 37 19.6	-0.5
STKA	Stephens Creek	30.63	224	P	P	13 34 21.8	+0.2
	1.7nm,0.6s,baz=25,slow=11,SNR=7.5						
STKA				PcP	PcP	13 37 19.6	-0.5
	3.1nm,0.9s,baz=52,slow=12,SNR=2.9						
STKA				LR	LR	13 46 12.2	
	comp=Z,312nm,18.1s,baz=34,slow=35						
H11N1	WAKE ISLAND Hy	30.81	1	T	T	14 06 27.5	
	baz=182,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	30.82	1	T	T	14 06 27.3	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.83	1	T	T	14 06 27.5	
	baz=182,slow=76,SNR=12						
WRAB	Tennant Creek	31.89	250	eP	P	13 34 25.4	-7.5
	13nm,1.0s						
WB2	Warramunga Arr	31.89	250	eP	P	13 34 32.4	-0.5
	18nm,1.0s						
WR1	Warramunga Arr	31.90	250	eP	P	13 34 32.7	-0.3
	24nm,1.0s						
WRA	Warramunga Arr	31.90	250	P	P	13 34 32.7	-0.3
	12nm,0.9s,baz=83,slow=8.9,SNR=41						
WRA				PcP	PcP	13 37 23.4	-0.2
	2.5nm,1.0s,baz=82,slow=3.0,SNR=6.7						
WRA				LR	LR	13 46 25.1	
	comp=Z,211nm,20.7s,baz=75,slow=34						
RPZ	Rata Peaks	32.57	174	P	P	13 34 38.6	+0.1
	11nm,1.0s,baz=18,slow=2.6,SNR=6.8						
GUMO	Guam	32.59	319	LR	LR	13 45 54.9	
	comp=Z,106nm,21.3s,baz=136,slow=33						
AS01	Alice Springs	33.12	244	eP	P	13 34 40.9	-2.7
AS31	Alice Springs	33.16	244	eP	P	13 34 42.3	-1.7
	3.6nm,0.8s						
ASAR	Alice Springs	33.16	244	P	P	13 34 43.2	-0.8
	12nm,0.7s,baz=69,slow=9.8,SNR=121						
ASAR				PcP	PcP	13 37 26.6	-0.5
	2.2nm,0.9s,baz=80,slow=2.4,SNR=8.1						
ASAR				ScP	ScP	13 41 10.8	-0.8
	0.9nm,0.9s,baz=66,slow=5.2,SNR=3.8						
ASAR				LR	LR	13 47 09.1	
	comp=Z,285nm,21.6s,baz=78,slow=34						
RAR	Rarotonga	33.98	111	LR	LR	13 45 54.4	
	comp=Z,180nm,21.4s,baz=268,slow=31						
FITZ	Fitzroy Crossi	39.83	255	eP	P	13 35 41.0	0.0
	8.4nm,0.7s						
FITZ	Fitzroy Crossi	39.83	255	P	P	13 35 41.2	+0.2
	6.9nm,0.6s,baz=105,slow=6.1,SNR=16						
PPT2	Papeete2	43.12	104	eS	S	13 42 53.5	+19
	86nm,25.0s						
PPT2				eLR	LR	13 48 31.5	
	comp=Z,443nm,29.0s						
TBI	Tubuai	43.75	112	eLR	LR	13 48 57.4	
	comp=Z,492nm,29.2s,baz=293						
NWAO	Narrogin (SRO)	49.77	236	P	P	13 36 59.4	-0.7
	13nm,0.8s,baz=90,slow=12,SNR=5.5						
TAOE	Nuku Hiva Isla	52.74	93	eLR	LR	13 53 01.2	
	comp=Z,176nm,26.2s						
MJAR	Matsushiro Arr	54.43	332	P	P	13 37 33.9	-0.7
	3.5nm,0.7s,baz=170,slow=8.8,SNR=10						
MAJO	Matsushiro	54.43	332	eP	P	13 37 33.9	-0.7
MAT	Matsushiro	54.43	332	P	P	13 37 34.3	-0.4
KSRS	Korea Array	60.38	325	P	P	13 38 17.4	+0.8
	1.4nm,0.7s,baz=140,slow=7.1,SNR=4.8						
KSAR	Wonju Array Be	60.39	325	P	P	13 38 17.4	+0.7
USRK	Ussuriysk Ar.	63.40	333	P	P	13 38 37.9	+1.1
	4.8nm,0.9s,baz=150,slow=8.4,SNR=8.7						
PETK	Petropavlovsk-	64.56	354	P	P	13 38 45.6	+1.3
	4.4nm,0.9s,baz=170,slow=10,SNR=4.3						
PEA1	Petropavlovsk-	64.57	354	eP	P	13 38 45.6	+1.3
XAN	Xi'an	70.68	312	P	P	13 39 24.0	+0.6
XAN				pP	PcP	13 39 38.3	-6.0
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	Hu-ho-hao-te	72.36	319	eP	P	13 39 35.0	+1.5
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,240nm,5.2s						
CMAR	Chiang Mai Arr	72.70	293	P	P	13 39 37.5	+1.7
	5.1nm,0.9s,baz=116,slow=4.5,SNR=29						
CHTO	Chiang Mai	72.81	294	eP	P	13 39 36.2	-0.3
	12nm,1.3s						
CHTO	Chiang Mai	72.81	294	P	P	13 39 38.1	+1.6
	36nm,1.2s						
SEY	Seymchan	74.78	353	P	P	13 39 45.5	-1.6
	1.0nm,0.9s,baz=163,slow=19,SNR=3.6						
QSPA	South Pole Qui	78.72	180	eP	P	13 40 08.7	-0.9
	20nm,1.1s						
ULN	Ulaanbaatar	78.81	324	eP	P	13 40 10.5	+0.1
	11nm,1.2s						
BILL	Bilibino	79.12	360	eP	P	13 40 11.3	-0.1
	2.6nm,0.8s						
SONA0	Songino Array	79.18	324	eP	P	13 40 12.9	+0.5
SONM	Songino Array	79.18	324	P	P	13 40 12.9	+0.5
	3.1nm,1.0s,baz=134,slow=5.5,SNR=15						
CAST	Castle Rocks	81.02	18	eP	P	13 40 24.3	+2.5
	5.7nm,0.8s						
IM3	Indian Mountai	82.52	15	eP	P	13 40 30.2	+0.5
HDA	Harding Lake	83.30	19	eP	P	13 40 34.1	+0.3
	9.9nm,0.8s						
IL1	Eielson Array	83.58	18	eP	P	13 40 34.2	-0.9
ILAR	Eielson Array	83.58	18	P	P	13 40 35.1	0.0
	2.1nm,0.9s,baz=226,slow=6.5,SNR=16						
SCRK	Sand Creek	83.97	20	eP	P	13 40 38.2	+0.9
	6.0nm,0.8s						
EGAK	Eagle	85.42	20	eP	P	13 40 45.1	+0.6
	5.3nm,0.8s						
NVAR	Mina Array Bea	85.78	50	P	P	13 40 47.9	+0.7
	2.0nm,0.9s,baz=242,slow=6.9,SNR=11						
PDAR	Pinedale Array	93.33	47	P	P	13 41 22.6	-0.2
	0.4nm,0.8s,baz=282,slow=1.8,SNR=3.8						
MK01	Makanchi Array	94.05	317	eP	P	13 41 24.4	-1.3
MK32	Makanchi Array	94.06	317	eP	P	13 41 25.8	0.0
MKAR	Makanchi Array	94.06	317	P	P	13 41 25.8	0.0
	5.4nm,0.9s,baz=110,slow=5.8,SNR=32						
ZALV	Zalesovo Beam	94.06	324	P	P	13 41 24.4	-1.2
	1.6nm,0.6s,baz=108,slow=4.8,SNR=10.0						
ZAA1	Zalesovo Array	94.06	324	eP	P	13 41 24.4	-1.2
YKA	Yellowknife Ar	94.95	27	P	P	13 41 28.2	-1.1
	0.3nm,0.6s,baz=257,slow=4.5,SNR=8.6						
BVAR	Borovoye Array	102.47	322	Pdiff	Pdif	13 42 02.9	-0.5
	0.3nm,0.4s,baz=339,slow=6.2,SNR=3.6						
ARCES	ARCESS Array B	116.70	346	PKP	PKPdf	13 46 50.3	-0.8
	2.9nm,0.8s,baz=64,slow=3.1,SNR=4.7						
AKASG	Malin Array Be	127.36	327	PKP	PKPdf	13 47 11.1	-0.9
	0.3nm,0.4s,baz=32,slow=2.2,SNR=4.4						
GERES	GERESS Array B	136.16	334	PKP	PKPdf	13 47 28.3	-0.6
	1.0nm,0.5s,baz=14,slow=16,SNR=12						
TORD	Torodi Ar. Bea	164.83	279	PKP	PKPdf	13 48 11.2	-1.3
	1.1nm,1.1s,baz=11,slow=1.5,SNR=4.5						
TORD				PKPab	PKPab	13 49 07.3	-1.1
	1.5nm,1.1s,baz=101,slow=5.8,SNR=4.8						
TOA1	Torodi Ar. Sit	164.83	279	ePKPdf	PKPdf	13 48 11.2	-1.3

*IDC **28** 13:33:35.5±1.3, 1°.93S×137°.47E, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.6/40, mbtmp3.8/6, ML3.9/2, Error ellipse: s-maj=53.7km s-min=21.9km az=95.0*

*ISCJB **28** 13:33:38.1±0.5, 2°.08S±0°.08×137°.43E±0°.04, h26^{km}, mb3.6/4, Error ellipse: s-maj=11.1km s-min=4.7km az=12.1*

*DJA **28** 13:33:39.6±1.3, 2°S±8°×13°7E±°, h29^{km}±11^{km}, M4.3/7, mb4.1/1, MLv4.4/7*

ISC 28 13:33:39.3±0.8**, 1°.99S**±0°.09×**137°.42E**±0°.04**, h26**^{km}**, n12,** σ**0^{s}82**/18**, mb3.7**/4**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	1.19	276	P	Pn	13 34 00.3	0.0
SRPI				S	Sb	13 34 16.7	+0.5
BAKI	Biak	1.54	301	P	Pn	13 34 04.4	-0.7
BAKI				S	Sb	13 34 25.2	-1.0
GENI	Genyem	2.81	102	P	Pn	13 34 22.8	+0.3
RKPI	Ransiki, Papua	3.28	278	P	Pn	13 34 28.7	-0.3
RKPI				S	Sn	13 35 08.2	+0.9
JAY	Jayapura	3.32	99	P	Pn	13 34 29.5	-0.1
JAY				S	Sn	13 35 08.6	+0.3
FAKI	Fak Fak	5.25	260	P	Pn	13 34 56.6	+0.4
FAKI				S	Sn	13 35 56.1	+0.2
WRA	Warramunga Arr	18.09	189	P	Pn	13 37 47.8	-1.3
	0.6nm,0.3s,baz=9.6,slow=12,SNR=19						
WRA				S	Sn	13 40 57.6	-13
	0.3nm,0.3s,baz=16,slow=22,SNR=9.1						
FITZ	Fitzroy Crossi	19.75	215	P	Pn	13 38 08.6	-0.4
	0.2nm,0.3s,baz=37,slow=10,SNR=4.8						
FITZ				S	S	13 41 37.8	-11
	0.1nm,0.3s,baz=82,slow=15,SNR=1.9						
ASAR	Alice Springs	21.82	189	P	P	13 38 30.7	+1.0
	1.6nm,0.3s,baz=18,slow=11,SNR=76						
ASAR				S	S	13 42 28.2	-1.6
	3.5nm,1.0s,baz=13,slow=22,SNR=8.0						
MKAR	Makanchi Array	68.44	323	P	P	13 44 39.2	+0.1
	0.2nm,0.5s,baz=104,slow=6.1,SNR=2.6						
BVAR	Borovoye Array	77.99	325	P	P	13 45 36.5	+1.2
	0.6nm,0.7s,baz=116,slow=6.8,SNR=4.4						
ILAR	Eielson Array	85.72	25	P	P	13 46 15.1	-0.6
	0.3nm,0.8s,baz=271,slow=5.2,SNR=3.3						

*IDC **28** 13:38:45.2±13.0, 37°.86N×75°.86E, h94^{km}±75^{km}, mb3.4/4, mb1 3.4/10, mb1mx3.2/44, mbtmp3.7/10, ML3.4/6, Error ellipse: s-maj=140.5km s-min=29.0km az=8.0*

*ISCJB **28** 13:38:47.3±0.6, 38°.05N±0°.06×75°.9E±0°.1, h135^{km}, mb3.4/4, Error ellipse: s-maj=16.3km s-min=4.9km az=156.1*

*NNC **28** 13:38:51.9±5.0, 38°.52N×75°.32E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=40.8km s-min=32.4km az=113.0*

ISC 28 13:38:48.6±1.0**, 38°.07N**±0°.09×**75°.8E**±0°.1**, h135**^{km}**, n26,** σ**1^{s}92**/30**, mb3.5**/4**, 6C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZA	Kyzart	4.02	355	P	Pn	13 39 48.7	-0.4
	SNR=5.7						
ULHL	Ulahol	4.18	5	P	Pn	13 39 50.9	-0.2
	SNR=26						
UCH	Uchtor	4.26	347	P	Pn	13 39 52.0	-0.3
	SNR=6.3						
AML	Almayashu	4.35	339	P	Pn	13 39 53.6	+0.2
	SNR=9.9						
AAK	Ala-Archa	4.66	348	⇑Pn	Pn	13 39 57.5	+0.1
	2.3nm,0.4s						
AAK				⇓Sn	Sn	13 40 48.1	-2.8
	23nm,0.9s						
AAK				⇑Lg	Lg	13 41 03.5	
	20nm,0.9s						
AAK	Ala-Archa	4.66	348	P	Pn	13 39 56.8	-0.5
	1.1nm,0.3s,baz=148,slow=9.1,SNR=14						
AAK				S	Sn	13 40 48.6	-2.2
	3.0nm,0.3s,baz=173,slow=17,SNR=12						
EKS2	Erkin-Say	4.83	342	P	Pn	13 40 00.6	+1.0
	SNR=5.2						
TKM2	Tokmak 2	4.84	359	P	Pn	13 40 00.1	+0.2
	SNR=14						
TKM2	Tokmak 2	4.84	359	⇑Pn	Pn	13 39 59.7	-0.1
	3.9nm,0.6s						
TKM2				⇑Sn	Sn	13 40 52.8	-2.5
	17nm,0.8s						
TKM2				⇑Lg	Lg	13 41 14.2	
	6.3nm,0.5s						
KK31	Karatay Array	6.42	323	⇑Pn	Pn	13 40 19.3	-1.5
	1.8nm,0.3s,baz=129,slow=12,SNR=57						
KK31				⇓Sn	Sn	13 41 27.9	-4.8
	4.8nm,0.3s,baz=137,slow=21,SNR=11						
MKAR	Makanchi Array	9.96	27	P	Pn	13 41 07.7	-0.5
	0.5nm,0.3s,baz=206,slow=14,SNR=23						
PYUN	Piuthan	11.64	147	eP	Pn	13 41 29.3	-1.6
DANN	Dangsing	11.78	143	eP	Pn	13 41 30.3	-2.4
KOLN	Koldanda	12.20	145	eP	Pn	13 41 37.3	-0.8
KURBB	Kurchatov Arra	12.70	8	P	Pn	13 41 43.6	-0.7
	0.1nm,0.3s,baz=191,slow=14,SNR=2.6						
PKIN	Phulchoki	13.22	140	eP	Pn	13 41 49.6	-1.9
	6.7nm,0.4s						
PKI	Pulchoki	13.24	139	eP	Pn	13 41 49.6	-2.1
	3.2nm,0.2s						
JIRN	Jiri	13.58	137	eP	Pn	13 41 53.5	-2.6
	13nm,0.3s						
RAMN	Ramite	14.36	137	eP	Pn	13 42 03.5	-2.5
	9.5nm,0.5s						
BVAR	Borovoye Array	15.41	348	P	P	13 42 21.7	+1.5
	0.2nm,0.3s,baz=159,slow=13,SNR=4.9						
ZALV	Zalesovo Beam	17.05	18	P	Pn	13 42 39.1	+0.4
	0.6nm,0.3s,baz=205,slow=13,SNR=7.5						
AKTO	Aktyubinsk	17.67	320	P	Pn	13 42 45.7	-0.5
	0.3nm,0.3s,baz=134,slow=13,SNR=5.4						
SONM	Songino Array	24.31	57	P	P	13 43 54.7	+1.1
	0.7nm,0.6s,baz=252,slow=11,SNR=5.0						
FINES	FINESS Array B	38.38	324	P	P	13 45 58.7	+2.4
	0.5nm,0.3s,baz=114,slow=9.4,SNR=6.3						
ARCES	ARCESS Array B	41.21	336	P	P	13 46 22.4	+2.9
	3.2nm,1.0s,baz=106,slow=9.5,SNR=3.6						
YKA	Yellowknife Ar	79.43	5	P	P	13 50 41.6	+2.2
	0.1nm,0.5s,baz=346,slow=5.7,SNR=4.1						

*IDC **28** 14:05:26.1±2.1, 10°.54S×113°.20E, h0^{km}, mb4.0/4, mb1 4.3/5, mb1mx4.1/30, mbtmp4.1/5, ML4.0/1, Error ellipse: s-maj=94.0km s-min=22.2km az=48.0*

*ISCJB **28** 14:05:28.1±0.7, 10°.47S±0°.05×113°.07E±0°.04, h28^{km}, mb4.0/4, Error ellipse: s-maj=7.6km s-min=5.0km az=22.5*

*DJA **28** 14:05:30.9±1.0, 10°S±10°×11°3E±°, h15^{km}±14^{km}, M4.3/13, mb4.5/2, MLv4.2/13*

ISC 28 14:05:28.4±0.9**, 10°.56S**±0°.08×**113°.12E**±0°.04**, h28**^{km}**, n14,** σ**2^{s}18**/24**, mb4.0**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	2.31	26	P	Pn	14 06 04.5	-0.2
JAGI				S	Sn	14 06 31.1	-1.2
DNP	Denpasar	2.79	48	P	Pn	14 06 12.2	+1.0
DNP				S	Sn	14 06 43.8	-0.1
PWJI	Pagerwojo	2.83	333	P	Pn	14 06 11.4	-0.5
PWJI				S	Sn	14 06 43.3	-1.8
PCJI	Pacitan	3.03	321	P	Pn	14 06 16.5	+2.0
PCJI				S	Sn	14 06 46.6	-3.3
SRBI	Singaraja	3.21	40	P	Pn	14 06 18.5	+1.4
SRBI				S	Sn	14 06 54.5	0.0
UGM	Wanagama	3.67	316	P	Pn	14 06 24.5	+1.1
UGM				S	Sn	14 07 04.1	-1.7
GRJI	Gresik	3.67	350	P	Pn	14 06 23.8	+0.4
GRJI				S	Sn	14 07 06.0	+0.1
PLAI	Plampang	4.91	70	P	Pn	14 06 43.3	+2.9
PLAI				S	Sn	14 07 33.1	-3.2
KPJI	Karang Pucung	5.23	307	P	Pn	14 06 45.9	+1.1
KPJI				S	Sn	14 07 43.3	-1.0
FITZ	Fitzroy Crossi	14.26	123	Pn	Pn	14 08 46.5	-2.1
	0.5nm,0.3s,baz=296,slow=9.6,SNR=16						
FITZ				Sn	Sn	14 11 13.3	-13
	0.2nm,0.3s,baz=0.0,slow=20,SNR=4.3						
WRA	Warramunga Arr	22.48	117	P	P	14 10 26.8	+1.0
	5.2nm,0.8s,baz=290,slow=12,SNR=22						
WRA				S	S	14 14 24.9	-6.2
	0.6nm,0.9s,baz=296,slow=22,SNR=2.5						
ASAR	Alice Springs	23.72	126	P	P	14 10 39.5	+1.1
	2.4nm,0.7s,baz=305,slow=9.6,SNR=34						
CMAR	Chiang Mai Arr	32.05	334	P	P	14 11 54.8	+1.8
	1.2nm,0.8s,baz=169,slow=8.4,SNR=8.4						
STKA	Stephens Creek	33.80	133	P	P	14 12 10.1	+1.9
	1.2nm,0.3s,baz=292,slow=9.6,SNR=5.1						

*KRSC **28** 14:05:48.3±1.9, 50°.68N×157°.86E, h47^{km}±23^{km}, ML6.9, FELT [V-VI] at cape Lopatka, lighthouse Kurbatova, Severo-Kurilsk, lighthouse Krugliy; [IV-V] at Paujetka, lighthouse Chibuiny, Ozernovskiy, Nikolaevka, Petropavlovsk; [IV] at GMS Vodopadnay, Zaporojye, MGeoES-I, Viluchinsk, state-farm Termalniy, Ribac.*

*BJI **28** 14:05:49.0, 50°.84N×157°.46E, h55^{km}, mB6.4/63, mb6.2/74, Ms6.6/95, Ms7 6.5/86*

*NEIC **28** 14:05:50.2±0.1, 50°.95N×157°.28E, h41^{km}, mb6.4/29, ME6.3, MS6.7/114, MW6.8, MW6.8, MW6.9, Error ellipse: s-maj=3.6km s-min=1.9km az=158.0, Moment Tensor Solution. s128 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.86; M$_{\theta\theta}$-0.88; M$_{\phi\phi}$-0.98; M$_{r\theta}$0.75; M$_{\theta\phi}$-0.77; M$_{\phi r}$0.58; Best double couple: M$_0$2.00000×10^{19} NP1:ϕ_s220.00000°, δ31.00000°, λ84.00000°. NP2:ϕ_s47.00000°, δ59.00000°, λ94.00000°. Principal axes: T 2.1000, Plg76.0000°, Azm329.0000°; N -0.1600, Plg3.0000°, Azm225.0000°; P -1.9400, Plg14.0000°, Azm135.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s220.00000°, δ25.00000°, λ90.00000°. NP2:ϕ_s40.00000°, δ65.00000°, λ90.00000°. Principal axes: T Plg70.0000°, Azm310.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm130.0000°; Complex earthquake with at least two events occurring about 5 seconds apart, observed on broadband displacement seismograms. Depth from synthetics of broadband displacement seismograms based on first event. Apparent Stress 0.22 MPa. Energy computed from BB mechanism.*

NEIC Felt [IV] at Petropavlovsk-Kamchatskiy.

*ISCJB **28** 14:05:51.3±0.2, 50°.85N±0°.01×157°.44E±0°.01, h67^{km}±1^{km}, mb6.1/304 Error ellipse: s-maj=2.3km s-min=1.4km az=156.9*

*MOS **28** 14:05:51.0±1.0, 50°.82N×157°.41E, h68^{km}, mb6.3/78, MS6.8/67, Error ellipse: s-maj=5.2km s-min=2.5km az=82.5 Broadband fault plane solution: P waves. M$_0$4.20000×10^{19} NP1:ϕ_s30.00000°, δ58.00000°, λ96.00000°. NP2:ϕ_s199.00000°, δ32.00000°, λ81.00000°. Principal axes: T Plg76.0000°, Azm316.0000°; N Plg5.0000°, Azm207.0000°; P Plg13.0000°, Azm115.0000°;*

MOS Fault plane solution: P-wave C212, D17 . Felt (V-VI) at Severo-Kuril'sk; (V) at Petropavlovsk-Kamchatskiy.

*NEIC **28** 14:05:51.0±0.0, 51°.03N×157°.50E, h45^{km}, Moment Tensor Solution. s102 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.81; M$_{\theta\theta}$-0.56; M$_{\phi\phi}$-1.24; M$_{r\theta}$1.15; M$_{\theta\phi}$-0.80; M$_{\phi r}$1.19; Best double couple: M$_0$2.40000×10^{19} NP1:ϕ_s40.00000°, δ66.00000°, λ95.00000°. NP2:ϕ_s207.00000°, δ24.00000°, λ78.00000°. Principal axes: T 2.4600, Plg68.0000°, Azm320.0000°; N -0.0600, Plg5.0000°, Azm218.0000°; P -2.4100, Plg21.0000°, Azm126.0000°;*

*IDC **28** 14:05:53.5±1.4, 50°.93N×157°.42E, h72^{km}±11^{km}, mb5.7/36, mb1 5.7/43, mb1mx5.7/43, mbtmp5.9/43, MS6.6/35, Ms1 6.6/35, ms1mx6.3/46 Error ellipse: s-maj=10.3km s-min=6.5km az=137.0*

*GCMT **28** 14:05:58.3±0.0, 50°.83N×157°.93E, h45^{km}, MW6.8/145, Moment Tensor Solution. s145,c393; s143,c692; Duration: 6^{s}2 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.88±.01; M$_{\theta\theta}$-0.58±.01; M$_{\phi\phi}$-1.30±.01; M$_{r\theta}$0.59±.01; M$_{\theta\phi}$-0.88±.00; M$_{\phi r}$0.73±.01; Best double couple: M$_0$2.10700×10^{19} NP1:ϕ_s36.00000°, δ58.00000°, λ92.00000°. NP2:ϕ_s212.00000°, δ32.00000°, λ86.00000°. Principal axes: T 2.1030, Plg77.0000°, Azm313.0000°; N 0.0090, Plg2.0000°, Azm215.0000°; P -2.1100, Plg13.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 14:06:07.1±0.0, 50°.37N×157°.78E, h48^{km}, Moment Tensor Solution. s108 Moment tensor: Scale 10^{19}Nm; M$_{rr}$2.07; M$_{\theta\theta}$-0.72; M$_{\phi\phi}$-1.34; M$_{r\theta}$0.82; M$_{\theta\phi}$-0.84; M$_{\phi r}$0.90; Best double couple: M$_0$2.30000×10^{19} NP1:ϕ_s212.00000°, δ30.00000°, λ84.00000°. NP2:ϕ_s39.00000°, δ61.00000°, λ94.00000°. Principal axes: T 2.4100, Plg74.0000°, Azm318.0000°; N -0.1500, Plg3.0000°, Azm217.0000°; P -2.2700, Plg16.0000°, Azm126.0000°;*

ISC 28 14:05:50.9±0.3**, 50°.79N**±0°.03×**157°.49E**±0°.02**, h53**^{km}±2^{km}**, h52**^{km}**:pP-P, n2704,** σ**1^{s}66**/2882**, mb6.3**/359**, MS6.7**/271**, 258C-55D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.80	328	eP	Pn	14 06 07.6	+1.6
PAU				eS	Sn	14 06 20.7	+3.6
PAU	Pauzhetka	0.80	328	PN	Pn	14 06 07.6	+1.6
PAU				S	Sn	14 06 20.7	+3.6
SKR	Severo-Kuril's	0.88	264	eP	Pn	14 06 08.0	+1.1
SKR				eS	Sn	14 06 21.3	+2.5
SKR	Severo-Kuril's	0.88	264	⇓ iPN	Pn	14 06 08.1	+1.1
SKR				i S	Sn	14 06 21.3	+2.5
SKR				pmax	pmax		
	comp=Z,426µm,1.1s						
SKR				pmax	pmax		
	comp=Z,261µm,1.0s						
SKR				smax	smax		
	comp=E,816µm,0.9s						
KDTR	Khodutka, Kamc	1.09	20	eP	Pn	14 06 09.3	-0.5
KDTR				eS	Sn	14 06 25.1	+1.2
KDTR	Khodutka, Kamc	1.09	20	PN	Pn	14 06 09.3	-0.5
KDTR				S	Sn	14 06 25.1	+1.2
ALID	Alaid	1.23	275	i P	Pn	14 06 14.1	+2.2
ALID	Alaid	1.23	275	PN	Pn	14 06 14.1	+2.2
MTVR	Mutnovka	1.75	14	eP	Pn	14 06 19.2	+0.2
MTVR	Mutnovka	1.75	14	PN	Pn	14 06 19.2	+0.2
RUS	Russkaya	1.77	21	i P	Pn	14 06 18.4	-0.6
RUS	Russkaya	1.77	21	PN	Pn	14 06 18.4	-0.6
GRL	Gorelyy	1.81	11	i P	Pn	14 06 20.6	+0.9
GRL	Gorelyy	1.81	11	PN	Pn	14 06 20.6	+0.9
KRMR	Karymshinskiy	2.08	11	eP	Pn	14 06 24.5	+1.1
KRMR				eS	Sn	14 06 51.3	+3.2
KRMR	Karymshinskiy	2.08	11	PN	Pn	14 06 24.5	+1.1
KRMR				S	Sn	14 06 51.3	+3.2
APC	Apacha	2.15	355	eP	Pn	14 06 26.4	+2.1
APC				eS	Sn	14 06 53.1	+3.4
APC	Apacha	2.15	355	PN	Pn	14 06 26.4	+2.1
APC				S	Sn	14 06 53.1	+3.4
I44RU	PETROPAVLOVSK-	2.33	3	P	Pn	14 06 29.0	+2.3
	baz=146,slow=20,SNR=7.6						
I44RU				i		14 13 40.0	
	baz=185,slow=333,SNR=1.7						
PEA0B	Petropavlovsk-	2.33	3	ePn	Pn	14 06 28.5	+1.8
PETK	Petropavlovsk-	2.33	3	ePn	Pn	14 06 27.7	+1.0
PETK	Petropavlovsk-	2.33	3	P	Pn	14 06 28.3	+1.6
	comp=E,710nm,0.3s,baz=160,slow=15,SNR=1809						
PET	Petropavlovsk	2.35	17	ePn	Pn	14 06 27.5	+0.5
PET	Petropavlovsk	2.35	17	i P	Pn	14 06 27.5	+0.5
PET	Petropavlovsk	2.35	17	κ iPN	Pn	14 06 27.4	+0.4
PET				eS	Sn	14 06 56.1	+1.4
PET				pmax	pmax		
	comp=Z,26µm,1.5s						
PET				pmax	pmax		
	comp=Z,25µm,0.6s						
PET				smax	smax		
	comp=E,2030µm,3.1s						
PET				smax	smax		
	comp=N,365µm,0.7s						
PET				smax	smax		
	comp=E,492µm,0.7s						
PET				MLR	MLR		
	comp=Z,2374µm,16.0s						
PET				MLR	MLR		
	comp=Z,2338µm,19.0s						
DALK	Dalny	2.38	19	eP	Pn	14 06 27.8	+0.4
DALK				eS	Sn	14 06 55.4	0.0
DALK	Dalny	2.38	19	PN	Pn	14 06 27.8	+0.4
DALK				S	Sn	14 06 55.4	0.0
UGLR	Uglovaya	2.56	18	i P	Pn	14 06 31.0	+1.0
UGLR	Uglovaya	2.56	18	PN	Pn	14 06 31.0	+1.0
AVH	Avacha	2.60	17	i P	Pn	14 06 32.0	+1.5
AVH	Avacha	2.60	17	PN	Pn	14 06 32.0	+1.5
KOK	Koryaka	2.61	15	i P	Pn	14 06 32.5	+1.9
KOK	Koryaka	2.61	15	PN	Pn	14 06 32.5	+1.9
SMAR	Somma	2.61	18	i P	Pn	14 06 31.6	+0.8
SMAR	Somma	2.61	18	PN	Pn	14 06 31.6	+0.8
SDLR	Sedlovina	2.64	19	eP	Pn	14 06 31.4	+0.3
SDLR	Sedlovina	2.64	19	PN	Pn	14 06 31.4	+0.3
NLC	Nalytchevo	2.65	25	eP	Pn	14 06 30.1	-1.0
NLC	Nalytchevo	2.65	25	PN	Pn	14 06 30.1	-1.0
KRX	Arik	2.67	15	eP	Pn	14 06 33.2	+1.6
KRX	Arik	2.67	15	PN	Pn	14 06 33.2	+1.6
SPN	Mys Shipunski	2.80	33	eP	Pn	14 06 32.9	-0.2
SPN				eS	Sn	14 07 04.2	-1.4
SPN	Mys Shipunski	2.80	33	PN	Pn	14 06 32.9	-0.2
SPN				S	Sn	14 07 04.2	-1.4
GNL	Ganaly	2.93	5	i P	Pn	14 06 36.8	+1.8
GNL	Ganaly	2.93	5	PN	Pn	14 06 36.8	+1.8
KII	Karymskiy	3.47	20	eP	Pn	14 06 43.5	+1.1
KII	Karymskiy	3.47	20	PN	Pn	14 06 43.5	+1.1
MKZ	Mys Kozlova	4.57	33	eP	Pn	14 06 56.8	-0.6
MKZ	Mys Kozlova	4.57	33	PN	Pn	14 06 56.8	-0.6
KZV	Kizimen	4.66	20	eP	Pn	14 07 01.2	+2.5
KZV	Kizimen	4.66	20	PN	Pn	14 07 01.2	+2.5
TUMD	Tumrok D	4.76	21	eP	Pn	14 07 03.0	+3.0
TUMR	Tumrok	4.78	19	i P	Pn	14 07 03.3	+2.9
TUMR	Tumrok	4.78	19	PN	Pn	14 07 03.0	+2.6
ESO	Esso	5.20	8	eP	Pn	14 07 09.0	+3.0
ESO				eS	Sn	14 08 07.7	+3.1
ESO	Esso	5.20	8	PN	Pn	14 07 09.0	+3.0
ESO				S	Sn	14 08 07.7	+3.1
KMNR	Kamenistaya	5.25	17	eP	Pn	14 07 12.7	+6.0
KMNR	Kamenistaya	5.25	17	PN	Pn	14 07 12.7	+6.0
KPT	Kopyto	5.44	16	eP	Pn	14 07 12.3	+2.9
KPT	Kopyto	5.44	16	PN	Pn	14 07 12.3	+2.9
KIRR	Kirishev	5.45	17	eP	Pn	14 07 12.3	+2.7
KIRR	Kirishev	5.45	17	PN	Pn	14 07 12.3	+2.7
BZMR	Bezymyannaya	5.46	18	eP	Pn	14 07 12.7	+3.0
BZMR	Bezymyannaya	5.46	18	PN	Pn	14 07 12.7	+3.0
KOZ	Kozyrevsk	5.47	14	eP	Pn	14 07 12.6	+2.9
KOZ	Kozyrevsk	5.47	14	PN	Pn	14 07 12.6	+2.9
BZWR	Bezymyannyi-We	5.49	18	eP	Pn	14 07 12.9	+2.8
BZWR	Bezymyannyi-We	5.49	18	PN	Pn	14 07 12.9	+2.8
BZGR	Bezymyannyi-Gr	5.51	19	eP	Pn	14 07 13.7	+3.4
BZGR	Bezymyannyi-Gr	5.51	19	PN	Pn	14 07 13.7	+3.4
ZLN	Zelenaya	5.60	19	eP	Pn	14 07 14.5	+2.9
ZLN	Zelenaya	5.60	19	PN	Pn	14 07 14.5	+2.9
LGNR	Loginova	5.64	19	eP	Pn	14 07 14.9	+2.6
LGNR	Loginova	5.64	19	PN	Pn	14 07 14.9	+2.6
CIRR	Tsirk	5.68	19	eP	Pn	14 07 15.7	+2.9
CIRR	Tsirk	5.68	19	PN	Pn	14 07 15.7	+2.9
SRDR	Sredinnyy	5.70	13	eP	Pn	14 07 15.5	+2.6
SRDR	Sredinnyy	5.70	13	PN	Pn	14 07 15.5	+2.6
KRSR	Krestovskiy	5.74	17	eP	Pn	14 07 17.1	+3.6
KRSR	Krestovskiy	5.74	17	PN	Pn	14 07 17.1	+3.6
KLY	Klyuchi	5.85	18	eP	Pn	14 07 17.7	+2.8
KLY	Klyuchi	5.85	18	PN	Pn	14 07 17.7	+2.8
BDR	Baidarnaya	6.20	19	eP	Pn	14 07 22.0	+2.2
BDR	Baidarnaya	6.20	19	PN	Pn	14 07 22.0	+2.2
SMKR	Semkarok	6.27	21	eP	Pn	14 07 22.0	+1.3
SMKR	Semkarok	6.27	21	PN	Pn	14 07 22.0	+1.3
SRKR	Sorokina	6.27	19	eP	Pn	14 07 22.9	+2.2
SRKR	Sorokina	6.27	19	PN	Pn	14 07 22.9	+2.2
KBTR	Krutoberegovo	6.29	28	eP	Pn	14 07 21.5	+0.5
KBTR	Krutoberegovo	6.29	28	PN	Pn	14 07 21.5	+0.5
KBG	Krutoberegovo	6.30	28	eP	Pn	14 07 23.7	+2.7
KBG				eS	Sn	14 08 34.4	+2.9
KBG	Krutoberegovo	6.30	28	PN	Pn	14 07 23.7	+2.7
KBG				S	Sn	14 08 34.4	+2.9
PALN	Palana	8.44	9	eP	Pn	14 07 52.6	+2.3
PALN	Palana	8.44	9	PN	Pn	14 07 52.6	+2.3
KUR	Kuril'sk	8.51	233	d ePN	Pn	14 07 53.5	+2.2
KUR				eS	Sn	14 09 28.7	+2.9
KUR				pmax	pmax		
	comp=Z,5µm,0.8s						
KUR				pmax	pmax		
	comp=N,1µm,1.0s						
KUR				pmax	pmax		
	comp=E,1µm,0.9s						
KUR				pmax	pmax		
	comp=Z,37µm,1.4s						
KUR				smax	smax		
	comp=N,59µm,4.5s						
KUR				smax	smax		
	comp=E,19µm,4.7s						
KUR				smax	smax		
	comp=N,3µm,1.0s						
KUR				smax	smax		
	comp=E,2µm,0.7s						
OSSR	Ossora	9.06	18	eP	Pn	14 07 58.7	-0.1
OSSR	Ossora	9.06	18	PN	Pn	14 07 58.7	-0.1
OKH	Okha	9.36	293	d iPN	Pn	14 08 04.8	+1.9
OKH				i S	Sn	14 09 48.7	+2.1
TYV	Tymovskoe	9.39	276	ePN	Pn	14 08 07.5	+4.1
TYV				eS	Sn	14 09 50.8	+3.4
TYV				pmax	pmax		
	comp=Z,2µm,1.2s						
TYV				pmax	pmax		
	comp=Z,20µm,2.9s						
TYV				smax	smax		
	comp=E,420nm,1.2s						
MA2	Magadan	9.60	339	ePn	Pn	14 08 06.9	+0.7
MA2	Magadan	9.60	339	P	Pn	14 08 07.6	+1.4
	comp=E,20nm,0.3s,baz=152,slow=10,SNR=289						
MA2				S	Sn	14 10 12.1	+20
	baz=158,slow=16,SNR=1.6						
MA2				LR	LR	14 12 15.9	
	comp=E,347µm,21.1s,baz=178,slow=40						
SHO	Shikotan	10.00	230	ePN	Pn	14 08 09.6	-2.2
SHO				pmax	pmax		
	comp=Z,1µm,0.5s						
SHO				pmax	pmax		
	comp=N,470nm,0.3s						
SHO				pmax	pmax		
	comp=E,202nm,0.3s						
SHO				pmax	pmax		
	comp=Z,2µm,2.2s						
SHO				MLR	MLR		
	comp=Z,5µm,15.0s						
UGL	Uglegorsk	10.09	266	⇓ ePN	Pn	14 08 18.3	+5.4
UGL				eS	Sn	14 10 17.6	+13
UGL				pmax	pmax		
	comp=Z,8µm,0.9s						
UGL				MLR	MLR		
	comp=Z,93µm,14.0s						
UGL				MLR	MLR		
	comp=N,86µm,13.0s						
UGL				MLR	MLR		
	comp=E,120µm,16.0s						
YUK	Yuzh-Kuril'sk	10.37	234	ePN	Pn	14 08 18.1	+1.3
YUK				pmax	pmax		
	comp=Z,5µm,0.5s						
YUK				pmax	pmax		
	comp=N,1µm,0.4s						
YUK				pmax	pmax		
	comp=E,1µm,0.4s						
YUK				pmax	pmax		
	comp=Z,10µm,2.3s						
LAGR	Lagunnoye	10.39	234	ePN	Pn	14 08 16.3	-0.8
LAGR				pmax	pmax		
	comp=N,3µm,0.5s						
LAGR				pmax	pmax		
	comp=Z,4µm,0.5s						
LAGR				pmax	pmax		
	comp=E,2µm,0.4s						
LAGR				pmax	pmax		
	comp=Z,15µm,1.5s						
YSS	Yuzh-Sakhalins	10.43	254	ePn	Pn	14 08 22.0	+4.4
YSS	Yuzh-Sakhalins	10.43	254	κ iPN	Pn	14 08 21.6	+4.0
YSS				pmax	pmax		
	comp=N,630nm,1.1s						
YSS				pmax	pmax		
	comp=E,1µm,1.1s						
YSS				pmax	pmax		
	comp=Z,950nm,1.1s						
YSS				pmax	pmax		
	comp=Z,5µm,1.7s						
YSS				pmax	pmax		
	comp=N,4µm,1.8s						
GRPR	Tuman	10.45	234	ePN	Pn	14 08 18.2	+0.4
GRPR				pmax	pmax		
	comp=Z,2µm,0.5s						
GRPR				pmax	pmax		
	comp=N,2µm,0.6s						
GRPR				pmax	pmax		
	comp=E,982nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,6µm,1.6s						
SMY	Shemya	10.48	73	ePn	Pn	14 08 16.3	-2.0
SMY	Shemya	10.48	73	ePN	Pn	14 08 16.3	-2.0
NKL	Nikolayevsk	10.64	289	i PN	Pn	14 08 24.0	+3.6
NKL				pmax	pmax		
	comp=E,220nm,1.0s						
NKL				pmax	pmax		
	comp=Z,390nm,1.0s						
NKL				pmax	pmax		
	comp=E,28µm,7.0s						
NKL				pmax	pmax		
	comp=Z,23µm,5.0s						
GLVR	Golovnino	10.75	234	ePN	Pn	14 08 22.4	+0.4
GLVR				pmax	pmax		
	comp=E,1µm,0.5s						
GLVR				pmax	pmax		
	comp=Z,2µm,0.5s						
GLVR				pmax	pmax		
	comp=N,745nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,7µm,1.6s						
GLVR				MLR	MLR		
	comp=Z,11µm,14.0s						
TILK	Tilichiki	10.84	23	eP	Pn	14 08 23.2	+0.1
TILK	Tilichiki	10.84	23	PN	Pn	14 08 23.2	+0.1
ASAJ	Asahikawa	12.07	242	P	Pn	14 08 42.1	+2.0
	comp=Z,23nm,0.3s,baz=73,slow=9.6,SNR=158						
ASAJ				S	S	14 11 08.6	-11
	comp=Z,10nm,0.3s,baz=83,slow=18,SNR=3.0						
SEY	Seymchan	12.49	349	P	Pn	14 08 48.0	+2.5
	comp=Z,2.3nm,0.3s,baz=150,slow=11,SNR=140						
ERM	Erimo	13.20	234	ePn	Pn	14 08 54.6	-0.8
ERM	Erimo	13.20	234	ePN	Pn	14 08 54.6	-0.8
GRNR	Gornyy	13.33	278	ePN	P	14 09 02.0	-3.2
GRNR				pmax	pmax		
	comp=N,130nm,1.2s						
GRNR				pmax	pmax		
	comp=E,460nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,710nm,1.2s						
TEY	Ternei	15.12	256	⇑ eP	P	14 09 23.5	-1.6
TEY				eS	Sn	14 12 10.2	+3.1
TEY				pmax	pmax		
	comp=Z,290nm,1.2s						
TEY				pmax	pmax		
	comp=N,100nm,1.2s						
TEY				pmax	pmax		
	comp=E,270nm,1.2s						
TEY				smax	smax		
	comp=E,280nm,1.1s						
TEY				MLR	MLR		
	comp=E,60µm,26.0s						
TEY				MLR	MLR		
	comp=N,76µm,24.0s						
KIWB	Kanaga Island	15.87	76	ePn	Pn	14 09 29.0	-1.6
ADK	Adak	16.16	76	ePn	Pn	14 09 32.0	-2.2
ADK	Adak	16.16	76	eP	Pn	14 09 32.0	-2.2
KLR	Kul'dur	16.59	275	P	P	14 09 42.6	+1.2
	comp=N,1.6nm,0.3s,baz=72,slow=12,SNR=176						
KLR				S	S	14 12 52.6	+0.6
	comp=N,0.7nm,0.3s,baz=76,slow=4.2,SNR=1.8						
BILL	Bilibino	17.84	11	ePn	Pn	14 09 54.0	-1.0
BILL	Bilibino	17.84	11	c iP	Pn	14 09 53.6	-1.3
USA0B	Ussuriysk Arra	18.39	259	eP	P	14 10 01.1	-0.2
USRK	Ussuriysk Ar.	18.39	259	P	P	14 10 00.8	-0.5
	comp=N,1.8nm,0.3s,baz=68,slow=10,SNR=56						
USRK				S	S	14 13 28.6	+0.1
	baz=94,slow=20,SNR=1.7						
USRK				LR	LR	14 17 22.0	
	comp=N,119µm,21.7s,baz=54,slow=38						
ZEA	Zeya	18.67	291	c eP	Pn	14 10 05.2	+0.1
ZEA				eS	Sn	14 13 26.0	-6.9
ZEA				pmax	pmax		
	comp=E,810nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,1µm,1.0s						
ZEA				pmax	pmax		
	comp=Z,13µm,8.0s						
ZEA				pmax	pmax		
	comp=E,8µm,6.0s						
ZEA				smax	smax		
	comp=E,19µm,9.0s						
ZEA				smax	smax		
	comp=N,30µm,8.0s						
YAK	Yakutsk	18.89	317	c iP	P	14 10 06.8	+0.2
YAK				eS	S	14 13 39.6	+1.4
YAK				pmax	pmax		
	comp=Z,7µm,0.9s						
YAK				pmax	pmax		
	comp=N,2µm,1.1s						
YAK				pmax	pmax		
	comp=E,3µm,1.1s						
YAK				smax	smax		
	comp=N,22µm,2.5s						
YAK				smax	smax		
	comp=E,24µm,2.5s						
YAK				MLR	MLR		
	comp=Z,764µm,17.0s						
YAK				MLR	MLR		
	comp=N,284µm,18.0s						
YAK				MLR	MLR		
	comp=E,1195µm,18.0s						
VLA	Vladivostok	19.02	256	i P	P	14 10 06.6	-1.5
VLA				pmax	pmax		
	comp=Z,309nm,1.1s						
MDJ	Mudanjiang	19.69	263	P	P	14 10 15.0	-0.5
MDJ				sP	pP	14 10 30.3	+3.0
MDJ				LR	LR		
	comp=Z,182µm,21.6s						
MDJ				LR	LR		
	comp=Z,119µm,20.8s						
MDJ				LR	LR		
	comp=Z,173µm,29.0s						
MDJ	Mudanjiang	19.69	263	eP	P	14 10 14.8	-0.7
	comp=Z,1µm,1.0s						
MSHR	Mys Shultsa	19.76	256	i P	P	14 10 15.0	-1.3
MJB9	Matsu-Tunnel	19.84	232	eP	P	14 10 18.2	+0.9
MAJO	Matsushiro	19.84	232	eP	P	14 10 17.7	+0.4
MAJO	Matsushiro	19.84	232	c iP	P	14 10 18.0	+0.7
MAJO				pmax	pmax		
	comp=Z,725nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,89µm,23.0s						
MAJO	Matsushiro	19.84	232	eP	P	14 10 17.8	+0.4
MAT	Matsushiro	19.84	232	P	P	14 10 17.4	+0.1
MAT				S	Sn	14 14 02.2	+0.7
MJAR	Matsushiro Arr	19.84	232	P	P	14 10 18.1	+0.8
	comp=Z,2.7nm,0.3s,baz=21,slow=8.8,SNR=445						
MJAR				P3KPbc		14 44 36.2	
	comp=Z,0.0nm,0.3s,baz=216,slow=4.6,SNR=7.6						
SPIA	Saint Paul Isl	19.89	59	eP	Pn	14 10 18.7	-0.8
NIKH	Nikolski High	20.79	71	eP	Pn	14 10 30.1	-0.1
GAMB	Gambell	20.86	40	eP	P	14 10 28.2	+0.2
INU	Inuyama	21.38	232	eP	P	14 10 34.5	+0.7
JHJ2	Mitsune	21.92	223	eP	P	14 10 40.1	+0.6
JHJ	Hachijo jima 2	21.92	223	P	P	14 10 40.5	+0.8
	comp=Z,2µm,0.9s,baz=90,slow=20,SNR=23						
JHJ				S	S	14 14 36.0	-2.7
	comp=Z,140nm,0.8s,baz=16,slow=19,SNR=2.5						
UNV	Unalaska Valle	22.08	68	eP	P	14 10 44.0	+2.9
AKUT	Akutan	22.47	67	eP	P	14 10 47.6	+2.3
CN2	Changchun	22.70	265	⇑P	P	14 10 45.0	-2.8
CN2				esP	sP	14 11 04.0	-2.4
CN2				eS	S	14 14 45.0	-7.2
CN2				pmax	pmax		
	comp=Z,4µm,5.0s						
CN2				LR	LR		
	comp=Z,151µm,22.0s						
CN2				LR	LR		
	comp=Z,112µm,22.0s						
CN2				LR	LR		
	comp=Z,90µm,22.0s						
ANM	Nome	23.73	40	eP	P	14 10 58.2	+0.5
ANM	Nome	23.73	40	eP	P	14 10 58.2	+0.5
HIA	Hailar	24.13	281	eP	P	14 11 00.7	-0.9
	comp=Z,776nm,1.1s						
HIA				LR	LR		
	comp=Z,92µm,20.0s						
HIA	Hailar	24.13	281	eP	P	14 11 00.7	-0.9
HIA				pmax	pmax		
	comp=Z,776nm,1.1s						
HIA				MLR	MLR		
	comp=Z,92µm,20.0s						
KSRS	Korea Array	24.86	249	P	P	14 11 09.5	+1.2
KSRS						14 14 44.6	
KSRS				S	S	14 15 30.8	+3.3
KSRS				pmax	pmax		
	comp=Z,307nm,0.9s						
KSRS				smax	smax		
	comp=N,9.0nm,1.0s						
KSRS				MLR	MLR		
	comp=Z,27µm,20.4s						
KSRS	Korea Array	24.86	249	P	P	14 11 09.4	+1.2
	comp=Z,116nm,0.9s,baz=52,slow=7.4,SNR=132						
KSRS				PcP	PcP	14 14 44.6	+1.7
	comp=Z,47nm,1.0s,baz=48,slow=1.4,SNR=5.6						
KSRS				S	S	14 15 30.8	+3.3
	comp=Z,8.5nm,1.0s,baz=56,slow=8.9,SNR=2.2						
KSRS				LR	LR	14 19 43.0	
	comp=Z,27µm,20.4s,baz=49,slow=33						
KSRS				P3KPbc		14 44 10.6	
	comp=Z,2.7nm,1.0s,baz=246,slow=3.2,SNR=7.0						
KS01	Wonju Array Si	24.87	249	eP	P	14 11 08.5	+0.2
SNY	Shenyang	24.89	262	⇑P	P	14 11 07.5	-1.0
SNY				S	S	14 15 26.5	-1.3
SNY				pmax	pmax		
	comp=Z,6µm,4.5s						
SNY				LR	LR		
	comp=Z,142µm,24.5s						
SNY				LR	LR		
	comp=Z,104µm,24.7s						
SNY				LR	LR		
	comp=Z,129µm,20.9s						
KS15	Wonju Array Si	24.90	249	eP	P	14 11 10.2	+1.6
KSAR	Wonju Array Be	24.90	249	P	P	14 11 09.4	+0.9
KSAR				S	S	14 15 30.8	+2.8
KSAR	Wonju Array Be	24.90	249	P	P	14 11 09.5	+0.9
KSAR				S	S	14 15 30.8	+2.8
RDOG	Red Dog Mine	25.86	33	eP	P	14 11 17.1	+0.1
TJN	Taejon	25.92	248	c iP	P	14 11 19.0	+1.1
BOD	Bodaibo	25.94	303	eP	P	14 11 17.9	0.0
BOD				pmax	pmax		
	comp=Z,953nm,1.4s						
JNU	Nakatsue	26.30	238	eP	P	14 11 23.3	+1.9
JNU				S	S	14 15 46.1	-4.2
JNU	Nakatsue	26.30	238	P	P	14 11 23.0	+1.6
	comp=Z,1µm,1.0s,baz=33,slow=6.6,SNR=121						
JNU				S	S	14 15 46.1	-4.2
	comp=Z,15nm,0.9s,baz=37,slow=20,SNR=1.6						
CBIJ	Chichi jima	26.38	212	P	P	14 11 22.4	+0.3
CBIJ				PcP	PcP	14 14 47.0	+0.5
JCJ	Chichijima	26.38	212	P	P	14 11 22.4	+0.3
	comp=Z,371nm,1.0s,baz=47,slow=8.2,SNR=6.9						
JCJ				PcP	PcP	14 14 47.0	+0.5
	comp=Z,162nm,0.8s,baz=235,slow=3.1,SNR=3.7						
CHGN	Chignik	26.41	61	eP	P	14 11 21.1	-1.0
CIT	Chita	27.13	290	eP	P	14 11 29.7	+1.0
CIT				e		14 11 43.6	
CIT				e		14 11 55.8	
CIT				e		14 12 18.6	
CIT				e		14 12 31.1	
CIT				pmax	pmax		
	comp=Z,769nm,1.6s						
SVW2	Sparrevohn	27.63	50	eP	P	14 11 33.7	+0.7
DL2	Dalian	27.78	259	⇑ iP	P	14 11 34.5	-0.1
DL2				PcP	PcP	14 14 51.0	+1.3
DL2				S	S	14 16 11.5	-2.0
DL2				pmax	pmax		
	comp=Z,240nm,1.2s						
DL2				pmax	pmax		
	comp=Z,10µm,11.7s						
DL2				LR	LR		
	comp=Z,72µm,24.5s						
DL2				LR	LR		
	comp=Z,26µm,23.1s						
DL2				LR	LR		
	comp=Z,94µm,27.0s						
IM3	Indian Mountai	28.80	40	eP	P	14 11 43.3	-0.2
OHAK	Old Harbor	29.09	58	eP	P	14 11 44.9	-1.1
PPLA	Purkeypile	29.25	46	eP	P	14 11 48.4	+0.8
CAST	Castle Rocks	29.31	45	eP	P	14 11 48.4	+0.4
KDAK	Kodiak Island	29.38	57	eP	P	14 11 47.5	-1.1
KDAK				S	S	14 16 34.1	-4.2
KDAK				LR	LR		
	comp=Z,104µm,22.0s						
KDAK	Kodiak Island	29.38	57	eP	P	14 11 47.5	-1.1
KDAK				S	S	14 16 34.1	-4.2
KDAK				MLR	MLR		
	comp=Z,104µm,22.0s						
KDAK	Kodiak Island	29.38	57	P	P	14 11 47.5	-1.1
	comp=Z,216nm,0.8s,baz=297,slow=5.1,SNR=55						
KDAK				S	S	14 16 34.1	-4.2
	baz=252,slow=6.4,SNR=0.9						
MIDW	Midway	29.48	130	PFAKE		14 12 00.0	+10
MIDW				LR	LR		
	comp=Z,171µm,22.0s						
SUA	Susitna One	29.96	49	eP	P	14 11 53.3	-0.5
MLY	Manley	29.96	42	eP	P	14 11 53.9	+0.1

BRLK	Bradley Lake	30.02	52	*e*P	P	14 11 53.8	-0.5
TRF	Thorofare Moun	30.11	45	*e*P	P	14 11 55.5	+0.2
COLD	Coldfoot	30.36	38	*e*P	P	14 11 57.4	+0.2
BJI	Beijing	30.55	266	⇑*i*P	P	14 11 58.5	-0.6
BJI				S	S	14 17 04.3	+7.3
BJT	Baijiatuau	30.57	266	*e*P	P	14 11 56.8	-2.5
	comp=Z,182nm,1.3s						
BJT				LR	LR		
	comp=Z,84µm,22.0s						
BJT	Baijiatuau	30.57	266	*e*P	P	14 11 56.8	-2.5
BJT				pmax	pmax		
	comp=Z,182nm,1.3s						
BJT				MLR	MLR		
	comp=Z,84µm,22.0s						
SEW	Seward	30.70	52	*e*P	P	14 11 59.4	-0.8
MCK	McKinley	30.72	45	*e*P	P	14 12 00.2	-0.3
PMR	Palmer	30.72	49	*e*P	P	14 11 59.8	-0.6
PMR	Palmer	30.72	49	*e*P	P	14 11 59.8	-0.6
RND	Reindeer	30.76	45	*e*P	P	14 12 00.3	-0.6
RND	Reindeer	30.76	45	*e*P	P	14 12 00.3	-0.6
TOLK	Toolik Lake Re	30.78	35	*e*P	P	14 12 01.1	+0.2
TOLK	Toolik Lake Re	30.78	35	P	P	14 12 01.2	+0.2
	baz=262						
TOLK				S	S	14 17 00.5	+0.3
	baz=262						
MDM	Murphy Dome	31.02	42	*e*P	P	14 12 03.1	0.0
KNK	Knik Glacier	31.05	49	*e*P	P	14 12 03.0	-0.5
SML	Sawmill	31.08	48	*e*P	P	14 12 03.3	-0.4
SML	Sawmill	31.08	48	*e*P	P	14 12 03.3	-0.4
WRH	Wood River Hil	31.08	43	*e*P	P	14 12 03.6	0.0
I53US	FAIRBANKS INFR	31.18	42	*i*		17 02 10.0	
	baz=269,slow=328,SNR=0.4						
TCOL	CIGO, UAF Yank	31.18	42	P	P	14 12 04.8	+0.4
	baz=270						
COLA	College	31.19	42	*e*P	P	14 12 04.7	+0.3
COLA				LR	LR		
	comp=Z,104µm,19.0s						
COLA	College	31.19	42	*e*P	P	14 12 04.7	+0.3
COLA				MLR	MLR		
	comp=Z,104µm,19.0s						
CCB	Clear Creek Bu	31.21	43	*e*P	P	14 12 04.5	-0.1
POKR	Poker Plat Res	31.36	42	P	P	14 12 06.7	+0.6
	baz=270						
DHY	Denali Highway	31.44	46	*e*P	P	14 12 06.3	-0.7
SCM	Sheep Creek Mo	31.55	48	*e*P	P	14 12 07.9	0.0
HDA	Harding Lake	31.58	43	*e*P	P	14 12 07.1	-0.9
HDA	Harding Lake	31.58	43	P	P	14 12 07.3	-0.7
	baz=272						
ILAR	Eielson Array	31.60	42	P	P	14 12 07.5	-0.6
	comp=Z,202nm,0.9s,baz=260,slow=7.7,SNR=253						
ILAR				S	S	14 17 14.4	+1.4
	comp=Z,5.0nm,1.0s,baz=263,slow=14,SNR=2.6						
ILAR				LR	LR	14 26 17.6	
	comp=Z,128µm,19.7s,baz=274,slow=39						
ILAR				P3KPbc		14 43 45.0	
	comp=Z,5.2nm,0.9s,baz=97,slow=3.2,SNR=30						
ILAR				P3KP		14 45 00.2	
	comp=Z,2.4nm,1.1s,baz=323,slow=34,SNR=4.1						
ILB	Eielson Array	31.60	42	*e*P	P	14 12 07.6	-0.6
IL1	Eielson Array	31.60	42	*e*P	P	14 12 07.2	-1.0
GLI	Glacier Island	31.77	50	*e*P	P	14 12 09.6	-0.1
H11N2	WAKE ISLAND Hy	31.87	163	T	T	14 46 14.5	
	baz=350,slow=76,SNR=5638						
H11N1	WAKE ISLAND Hy	31.89	163	T	T	14 46 15.7	
	baz=350,slow=76,SNR=4443						
H11N3	WAKE ISLAND Hy	31.89	163	T	T	14 46 16.2	
	baz=350,slow=76,SNR=7649						
PRP	Porcupine Dome	32.16	41	*e*P	P	14 12 13.3	+0.1
KLU	Klutina	32.26	49	*e*P	P	14 12 13.9	-0.2
TIA	Tai'an	32.26	259	P	P	14 12 14.0	-0.2
TIA				S	S	14 17 22.5	-1.3
TIA				LR	LR		
	comp=Z,13µm,23.3s						
TIA				LR	LR		
	comp=Z,27µm,25.1s						
TIA				LR	LR		
	comp=Z,48µm,26.4s						
FYU	Fort Yukon	32.28	39	*e*P	P	14 12 14.9	+0.9
PAX	Paxson	32.32	46	*e*P	P	14 12 14.3	-0.2
PAX	Paxson	32.32	46	*e*P	P	14 12 14.3	-0.2
DIV	Divide	32.38	49	*e*P	P	14 12 15.1	0.0
EYAK	Cordova Ski Ar	32.47	50	*e*P	P	14 12 16.6	+0.8
ULN	Ulaanbaatar	32.48	285	*e*P	P	14 12 16.0	-0.3
ULN	Ulaanbaatar	32.48	285	*c i*P	P	14 12 16.3	+0.1
ULN				pmax	pmax		
	comp=Z,273nm,1.0s						
ULN				MLR	MLR		
	comp=Z,156µm,23.0s						
ULN	Ulaanbaatar	32.48	285	P	P	14 12 16.3	+0.1
	SNR=154						
ULN				P	P	14 12 16.3	+0.1
	SNR=154						
ULN				P	P	14 12 16.3	+0.1
	SNR=154						
HARP	HAARP	32.52	47	*e*P	P	14 12 17.3	+1.1
IRK	Irkutsk	32.53	294	*e*P	P	14 12 16.9	+0.4
IRK				pmax	pmax		
	comp=Z,481nm,3.0s						
RIDG	Independ'e Rid	32.54	44	*e*P	P	14 12 15.6	-0.9
JOW	Kunigami	32.65	234	*e*P	P	14 12 19.3	+1.6
JOW	Kunigami	32.65	234	LR	LR	14 24 35.5	
	comp=Z,2µm,20.6s,baz=58,slow=34						
SONA1	Songino Array	32.89	285	*e*P	P	14 12 18.9	-0.9
DOT	Dot Lake	32.89	44	*e*P	P	14 12 19.0	-0.5
SCRK	Sand Creek	32.90	44	*e*P	P	14 12 15.5	-4.2
SONM	Songino Array	32.90	285	P	P	14 12 19.8	-0.1
	comp=Z,178nm,1.2s,baz=60,slow=7.5,SNR=232						
SONM				PcP	PcP	14 15 04.3	+1.2
	comp=Z,104nm,0.9s,baz=74,slow=1.6,SNR=9.2						
SONM				S	S	14 17 36.8	+3.0
	comp=Z,14nm,0.9s,baz=70,slow=1.7,SNR=2.8						
SONM				LR	LR	14 26 48.1	
	comp=Z,163µm,21.5s,baz=64,slow=38						
SONM				P3KPbc		14 43 37.7	
	comp=Z,1.0nm,0.8s,baz=246,slow=4.5,SNR=7.9						
SONM				P3KP		14 45 04.4	
	comp=Z,1.6nm,1.1s,baz=173,slow=1.2,SNR=2.6						
HHC	Hu-ho-hao-te	33.02	271	*e*P	P	14 12 20.8	-0.2
HHC				pP	pP	14 12 30.5	-4.0
HHC				sP	sP	14 12 38.0	-2.7
HHC				S	S	14 17 35.5	-0.3
HHC				SS	SnSn	14 19 36.3	-1.4
HHC				pmax	pmax		
	comp=Z,100nm,1.1s						
HHC				pmax	pmax		
	comp=Z,2µm,5.3s						
HHC				LR	LR		
	comp=Z,42µm,15.3s						
HHC				LR	LR		
	comp=Z,68µm,16.0s						
HHC				LR	LR		
	comp=Z,66µm,14.6s						
H11S1	WAKE ISLAND Hy	33.03	164	T	T	14 47 27.0	
	baz=350,slow=76,SNR=4563						
H11S3	WAKE ISLAND Hy	33.04	164	T	T	14 47 45.1	
	baz=350,slow=76,SNR=4321						
H11S2	WAKE ISLAND Hy	33.05	164	T	T	14 47 35.8	
	baz=350,slow=76,SNR=3358						
TLY	Talaya	33.09	293	*e*P	P	14 12 21.5	+0.2
TLY				LR	LR		
	comp=Z,91µm,22.0s						
TLY	Talaya	33.09	293	*c i*P	P	14 12 21.7	+0.4
TLY				*e*		14 13 56.0	
TLY				*e*S	S	14 17 37.8	+1.4
TLY				pmax	pmax		
	comp=Z,722nm,1.0s						
TLY				MLR	MLR		
	comp=Z,77µm,15.0s						
TLY	Talaya	33.09	293	P	P	14 12 21.9	+0.5
	SNR=144						
TLY				P	P	14 12 21.9	+0.5
	SNR=144						
TLY				P	P	14 12 21.9	+0.5
	SNR=144						
MENT	Mentasta	33.12	46	*e*P	P	14 12 21.7	+0.3
HMT	Hamilton	33.23	51	*e*P	P	14 12 23.7	+1.2
SSE	Sheshan	33.28	248	P	P	14 12 23.5	+0.3
SSE				S	S	14 17 40.0	+0.3
SSE				pmax	pmax		
	comp=Z,180nm,1.1s						
SSE				pmax	pmax		
	comp=Z,2µm,4.6s						
SSE	Sheshan	33.28	248	*e*P	P	14 12 24.5	+1.3
	comp=Z,339nm,1.1s						
ZAK	Zakamensk	33.77	291	*e*P	P	14 12 27.9	+0.5
ZAK				*e*		14 15 04.3	
ZAK				pmax	pmax		
	comp=Z,235nm,1.1s						
NJ2	Nanjing	33.99	252	⇑P	P	14 12 30.0	+0.7
NJ2				pP	pP	14 12 43.3	+0.5
NJ2				sP	sP	14 12 49.0	0.0
NJ2				S	S	14 17 49.0	-1.6
NJ2				sS	sS	14 18 12.5	-0.9
NJ2				pmax	pmax		
	comp=Z,170nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,5µm,4.9s						
NJ2				LR	LR		
	comp=Z,39µm,23.5s						
NJ2				LR	LR		
	comp=Z,41µm,24.5s						
NJ2				LR	LR		
	comp=Z,50µm,24.0s						
BALM	Baldy	34.04	49	*e*P	P	14 12 29.8	+0.2
BALM	Baldy	34.04	49	*e*P	P	14 12 29.8	+0.2
EGAK	Eagle	34.05	42	*e*P	P	14 12 28.7	-0.8
EGAK				LR	LR		
	comp=Z,92µm,20.0s						
BTO	Baotou	34.14	271	*e*P	P	14 12 30.0	-0.7
BTO				S	S	14 17 53.8	+0.8
TIY	Taiyuan	34.28	265	*e*P	P	14 12 33.0	+1.1
TIY				S	S	14 17 55.5	+0.3
TIY				pmax	pmax		
	comp=Z,390nm,1.1s						
TIY				pmax	pmax		
	comp=Z,1µm,4.0s						
TIY				LR	LR		
	comp=Z,8µm,11.6s						
TIY				LR	LR		
	comp=Z,18µm,13.8s						
TIY				LR	LR		
	comp=Z,70µm,28.0s						
MOY	Mondy	34.63	294	*e*P	P	14 12 35.2	+0.3
MOY				pmax	pmax		
	comp=Z,566nm,2.3s						
DAWY	Dawson	34.90	43	*e*P	P	14 12 37.0	0.0
SARN	Sarigan	35.28	200	*e*P	P	14 12 42.0	+1.4
EPYK	Eagle Plains	35.70	39	*e*P	P	14 12 44.2	+0.4
EPYK	Eagle Plains	35.70	39	P	P	14 12 44.3	+0.4
	baz=278						
HYT	Haines Junctio	36.39	48	*e*P	P	14 12 51.0	+1.2
INK	Inuvik	36.69	36	*e*P	P	14 12 52.8	+0.7
INK	Inuvik	36.69	36	*e*P	P	14 12 52.8	+0.7
INK	Inuvik	36.69	36	P3KPbc		14 43 21.4	
	comp=Z,3.2nm,0.9s,baz=122,slow=5.2,SNR=7.1						
NRIK	Noril'sk	36.90	326	P	P	14 12 52.1	-1.8
	comp=Z,33nm,0.8s,baz=88,slow=8.5,SNR=38						
NRIK				PcP	PcP	14 15 16.0	+1.8
	comp=Z,48nm,0.6s,baz=90,slow=4.3,SNR=3.6						
NRIK				S	S	14 18 22.4	-12
	comp=Z,17nm,1.0s,baz=98,slow=6.4,SNR=1.6						
NRIK				LR	LR	14 29 17.0	
	comp=Z,154µm,19.0s,baz=66,slow=38						
KNGR	Kungurtug, Tuv	37.06	294	*c i*P	P	14 12 55.6	-0.1
YOJ	Yonaguni jima	37.34	238	*e*P	P	14 12 56.9	-1.2
YOJ	Yonaguni jima	37.34	238	*e*P	P	14 12 56.9	-1.2
WHY	Whitehorse	37.68	48	*e*P	P	14 13 02.2	+1.5
TATO	Taipei	37.76	241	*e*P	P	14 12 59.5	-2.1
	comp=Z,355nm,1.0s						
WHN	Wuhan	37.78	254	⇑P	P	14 13 01.8	0.0
WHN				pmax	pmax		
	comp=Z,1µm,0.8s						
WHN				LR	LR		
	comp=Z,83µm,15.3s						
WHN				LR	LR		
	comp=Z,182µm,15.8s						
SKAG	Skagway	37.81	50	*e*P	P	14 13 03.2	+1.6
BESE	Bessie Mountai	38.32	51	*e*P	P	14 13 08.2	+2.1
GUMO	Guam	38.49	200	LR	LR	14 27 20.1	
	comp=Z,7µm,21.2s,baz=24,slow=33						
SIT	Sitka	38.59	54	*e*P	P	14 13 10.9	+2.7
JIS	Juneau Island	38.65	52	*e*P	P	14 13 10.5	+1.7
XAN	Xi'an	38.80	263	P	P	14 13 09.8	-0.6
XAN				pP	pP	14 13 22.0	-2.0
XAN				S	S	14 19 00.5	-3.6
XAN				LR	LR		
	comp=Z,52µm,24.0s						
XAN				LR	LR		
	comp=Z,49µm,27.0s						
XAN				LR	LR		
	comp=Z,47µm,24.2s						
XAN	Xi'an	38.80	263	*e*P	P	14 13 09.6	-0.7
	comp=Z,2µm,1.3s						
XAN	Xi'an	38.80	263	*e*P	P	14 13 09.6	-0.7
XAN				pmax	pmax		
	comp=Z,2µm,1.3s						
SSLB	Suanglung	39.00	240	*e*P	P	14 13 12.7	+0.6
YULB	Yu-li	39.13	239	*e*P	P	14 13 12.6	-0.5
QZH	Quanzhou	39.41	244	⇑*i*P	P	14 13 17.0	+1.5
QZH				pP	sP	14 13 32.8	-2.5
QZH				sP	pP	14 13 37.3	+8.1
QZH				S	S	14 19 14.5	+1.1
QZH				pmax	pmax		
	comp=Z,310nm,1.0s						
QZH				pmax	pmax		
	comp=Z,7µm,5.2s						
QZH				LR	LR		
	comp=Z,14µm,21.9s						
QZH				LR	LR		
	comp=Z,12µm,20.9s						
QZH				LR	LR		
	comp=Z,16µm,17.4s						
TWG	Pinlang	39.71	239	*e*P	P	14 13 18.2	+0.2
WRAK	Wrangell Islan	40.35	54	*e*P	P	14 13 25.3	+2.3
	comp=Z,490nm,1.1s						
LZH	Lanzhou	40.72	270	⇑P	P	14 13 27.3	+0.9
LZH				pP	pP	14 13 39.5	-0.7
LZH				sP	sP	14 13 45.3	-1.0
LZH				PP	PnPn	14 15 05.3	0.0
LZH				PcP	PcP	14 15 28.0	+1.0
LZH				S	S	14 19 32.5	-0.5
LZH				sS	sS	14 19 54.5	-1.6
LZH				SS	SS	14 22 29.0	-5.9
LZH				pmax	pmax		
	comp=Z,990nm,1.3s						
LZH				LR	LR		
	comp=Z,109µm,16.3s						
LZH				LR	LR		
	comp=Z,188µm,28.0s						
DLBC	Dease Lake	40.74	50	*e*P	P	14 13 28.2	+2.0
ENH	Enshi	40.97	259	*e*P	P	14 13 28.1	-0.3
	comp=Z,302nm,0.8s						
ENH				LR	LR		
	comp=Z,36µm,20.0s						
GTA	Gaotai	41.27	277	⇑P	P	14 13 31.0	+0.1
GTA				pP	pP	14 13 43.3	-1.4
GTA				sP	sP	14 13 48.3	-2.5
GTA				PcS	PcS	14 19 21.0	+1.0
GTA				S	S	14 19 46.8	+5.7
GTA				pmax	pmax		
	comp=Z,160nm,1.4s						
GTA				pmax	pmax		
	comp=Z,4µm,11.0s						
GTA				LR	LR		
	comp=Z,51µm,20.3s						
GTA				LR	LR		
	comp=Z,54µm,24.4s						
GTA				LR	LR		
	comp=Z,75µm,24.0s						
ZALV	Zalesovo Beam	42.69	304	P	P	14 13 41.0	-1.1
	comp=Z,120nm,0.9s,baz=60,slow=5.8,SNR=242						
ZALV				PcP	PcP	14 15 34.2	+1.2
	comp=Z,154nm,0.9s,baz=54,slow=2.8,SNR=11						
ZALV				LR	LR	14 32 23.6	
	comp=Z,55µm,21.0s,baz=54,slow=37						
SGCP	Mt. Cagua	42.95	234	*e*P	P	14 13 44.5	-0.1
JOHN	Johnston Islan	43.01	130	PFAKE		14 14 00.0	+15
JOHN				LR	LR		
	comp=Z,8µm,21.0s						
NVS	Novosibirsk	43.12	305	⇓*i*P	P	14 13 45.6	+0.1
NVS				*e*S	S	14 20 07.4	-0.2
NVS				*e*		14 23 44.4	
NVS				pmax	pmax		
	comp=N,154nm,1.0s						
NVS				pmax	pmax		
	comp=Z,674nm,1.0s						
NVS				pmax	pmax		
	comp=E,460nm,1.1s						
NVS				smax	smax		
	comp=N,244nm,2.1s						
DGZ	Jazzator, Alta	43.26	297	*c i*P	P	14 13 47.1	+0.1
DGZ				pmax	pmax		
	comp=Z,151nm,0.9s						
DGZ				MLR	MLR		
	comp=Z,121µm,21.0s						
APYP	Conner	43.69	235	*e*P	P	14 13 49.5	-1.0
PALP	Palanan	43.75	233	*e*P	P	14 13 52.3	+1.3
GZH	Guangzhou	43.88	248	⇑*i*P	P	14 13 48.5	-3.6
GZH				pP	pP	14 14 04.3	-1.6
GZH				PP	PP	14 15 31.5	-3.4
GZH				PcP	PcP	14 15 38.5	+1.1
GZH				ScP	ScP	14 19 22.5	-1.9
GZH				PcS	PcS	14 19 30.0	-0.6
GZH				S	S	14 20 10.8	-8.7
GZH				LR	LR		
	comp=Z,17µm,24.1s						
GZH				LR	LR		
	comp=Z,21µm,24.1s						
HKC	Hong Kong Obse	44.00	246	⇑P	P	14 13 55.0	+2.0
CD2	Chengdu	44.13	264	⇑P	P	14 13 54.3	+0.2
CD2				pP	pP	14 14 08.0	+0.1
CD2				sP	sP	14 14 14.5	+0.4
CD2				S	S	14 20 23.0	-0.1
CD2				SS	SS	14 23 35.5	-6.4
CD2				pmax	pmax		
	comp=Z,830nm,0.8s						
CD2				pmax	pmax		
	comp=Z,14µm,9.3s						
CD2				LR	LR		
	comp=Z,128µm,32.4s						
CD2				LR	LR		
	comp=Z,100µm,22.6s						
ABRA	Dolores	44.14	235	*e*P	P	14 13 54.6	+0.5
CAUP	Cauayan	44.16	233	*e*P	P	14 13 55.5	+1.2
MCO	Taipa Grande	44.50	247	P	P	14 13 58.0	+1.0
BALP	Baler	45.30	233	*e*P	P	14 14 04.0	+0.6
KIP	Kipapa	45.38	113	PFAKE		14 14 20.0	+16
KIP				LR	LR		
	comp=Z,117µm,21.0s						
KIP	Kipapa	45.38	113	*i* P	P	14 14 03.1	-0.9
KIP				pmax	pmax		
	comp=Z,167nm,1.1s						
SMPP	San Manuel, Pa	45.41	234	*e*P	P	14 14 03.8	-0.5
GYA	Guiyang	45.42	257	⇑*i*P	P	14 14 05.0	+0.6
GYA				pP	pP	14 14 20.0	+1.6
GYA				sP	sP	14 14 28.0	+3.5
GYA				PP	PP	14 15 53.8	+2.4
GYA				S	S	14 20 40.0	-2.0
GYA				sS	sS	14 21 06.3	+0.9
GYA				SS	ScS	14 23 57.5	+1.3
GYA				pmax	pmax		
	comp=Z,530nm,0.9s						
GYA				pmax	pmax		
	comp=Z,3µm,5.5s						
GYA				LR	LR		
	comp=Z,44µm,31.0s						
GYA				LR	LR		
	comp=Z,20µm,30.3s						
GYA				LR	LR		
	comp=Z,33µm,26.2s						
BOLP	Bolinao	45.61	235	*e*P	P	14 14 04.3	-1.6
PVCP	Virac	45.88	228	*e*P	P	14 14 09.1	+1.2
YKA	Yellowknife Ar	45.96	40	P	P	14 14 08.5	+0.4
	comp=Z,198nm,0.8s,baz=298,slow=7.5,SNR=519						
YKA				PcP	PcP	14 15 45.3	+1.3
	comp=Z,42nm,0.9s,baz=299,slow=3.6,SNR=2.9						
YKA				LR	LR	14 35 40.8	
	comp=Z,6µm,20.8s,baz=296,slow=39						
YKA				P3KP		14 44 29.5	
	comp=Z,0.7nm,0.9s,baz=39,slow=1.7,SNR=5.0						
YKA				PKPPKP		14 45 20.9	
	comp=Z,1.2nm,0.8s,baz=151,slow=2.8,SNR=5.4						
POLP	Polilio Island	45.98	231	*e*P	P	14 14 10.3	+1.6
RES	Resolute Bay	46.06	21	*e*P	P	14 14 09.3	+0.6
RES	Resolute Bay	46.06	21	*e*P	P	14 14 09.3	+0.6
SCZP	Santa Cruz	46.12	235	*e*P	P	14 14 10.3	+0.4
WMQ	Urumqi	46.22	290	⇑*i*P	P	14 14 11.0	+0.5
WMQ				pP	pP	14 14 26.5	+2.0
WMQ				sP	sP	14 14 31.5	+0.9
WMQ				PcS	PcS	14 19 40.3	+0.4
WMQ				S	S	14 20 52.3	-0.8
WMQ				sS	sS	14 21 16.3	-0.2
WMQ				SS	ScS	14 24 09.3	+8.5
WMQ				pmax	pmax		
	comp=Z,1µm,1.3s						
WMQ				pmax	pmax		
	comp=Z,10µm,6.1s						
WMQ				LR	LR		
	comp=Z,66µm,25.1s						
WMQ				LR	LR		
	comp=Z,120µm,26.7s						
WMQ				LR	LR		
	comp=Z,61µm,23.7s						
WMQ	Urumqi	46.22	290	*e*P	P	14 14 11.3	+0.8
	comp=Z,566nm,1.0s						
WMQ	Urumqi	46.22	290	*e*P	P	14 14 11.3	+0.8
WMQ				pmax	pmax		
	comp=Z,566nm,1.0s						
GQP	Guinayangan	46.43	230	⇑*i*P	P	14 14 13.5	+1.2
TGY	Tagaytay City	47.01	232	P	P	14 14 19.1	+2.1
	comp=Z,3µm,1.0s,baz=68,slow=19,SNR=61						
BESP	Borongan	47.03	225	*e*P	P	14 14 19.6	+2.6
KURK	Kurchatov	47.59	302	*e*P	P	14 14 20.4	-0.6
KURK	Kurchatov	47.59	302	*c i*P	P	14 14 20.2	-0.8
KURK				pmax	pmax		
	comp=Z,1µm,1.2s						
KURK				MLR	MLR		
	comp=Z,36µm,18.0s						
KURK	Kurchatov	47.59	302	P	P	14 14 20.6	-0.4
	SNR=492						
KURK				P	P	14 14 20.6	-0.4
	SNR=492						
PLP	Palo	47.63	226	⇑*e*P	P	14 14 23.3	+1.7
KURBB	Kurchatov Arra	47.69	302	PKPPKP	P'P'df	14 45 11.9	-27
	comp=Z,1.2nm,0.3s,baz=277,slow=3.2,SNR=6.7						
KURBB				P4KPbc		14 52 04.2	
	comp=Z,0.5nm,0.2s,baz=43,slow=3.1,SNR=5.4						
MK31	Makanchi Array	47.71	296	*e*P	P	14 14 21.4	-0.6
MK31	Makanchi Array	47.71	296	*i* P	P	14 14 21.7	-0.3
MK31				pmax	pmax		
	comp=Z,449nm,1.3s						
MKAR	Makanchi Array	47.71	296	P	P	14 14 21.5	-0.5
	comp=Z,164nm,0.9s,baz=59,slow=6.1,SNR=416						
MKAR				PcP	PcP	14 15 49.8	-0.8
	comp=Z,26nm,0.6s,baz=43,slow=6.2,SNR=1.9						
MKAR				LR	LR	14 35 17.5	
	comp=Z,175µm,21.8s,baz=46,slow=37						
MKAR				P3KP		14 44 21.3	
	comp=Z,0.5nm,0.9s,baz=230,slow=3.6,SNR=2.6						
MKAR				PKPPKP		14 45 11.2	
	comp=Z,0.9nm,0.9s,baz=276,slow=3.5,SNR=3.8						
MKAR				P4KPbc		14 52 01.7	
	comp=Z,0.6nm,0.7s,baz=48,slow=2.1,SNR=4.0						
MK01	Makanchi Array	47.72	296	*e*P	P	14 14 21.6	-0.5
MAKZ	Makanchi	47.88	296	*e*P	P	14 14 22.7	-0.7
MAKZ	Makanchi	47.88	296	P	P	14 14 22.6	-0.7
MAKZ				pmax	pmax		
	comp=Z,338nm,1.2s						
OCLP	Ormoc	47.89	226	*e*P	P	14 14 25.6	+1.9
OTRP	Odiongan	47.97	230	*e*P	P	14 14 26.3	+2.0
POHA	Pohakuloa	48.12	112	*e*P	P	14 14 26.4	+0.6
	comp=Z,3µm,1.2s						
POHA				LR	LR		
	comp=Z,76µm,20.0s						
RCP	Roxas	48.32	228	⇑*e*P	P	14 14 28.5	+1.5
SJMP	San Jose	48.32	231	*e*P	P	14 14 28.1	+1.1
MSLP	Maasin	48.59	225	*e*P	P	14 14 30.2	+1.2
LLLB	Lillooet	48.59	57	*e*P	P	14 14 30.1	+1.2
KMI	Kunming	48.82	260	P	P	14 14 32.3	+1.2
KMI				pP	pP	14 14 46.3	+1.2
KMI				sP	sP	14 14 52.3	+1.1
KMI				PP	PP	14 16 27.8	+3.3
KMI				S	S	14 21 29.0	-1.7
KMI				SS	SS	14 24 56.3	-5.2
KMI				pmax	pmax		
	comp=Z,640nm,1.3s						
KMI				pmax	pmax		
	comp=Z,6µm,4.5s						
KMI				LR	LR		
	comp=Z,28µm,27.1s						
KMI				LR	LR		
	comp=Z,27µm,26.6s						
KMI				LR	LR		
	comp=Z,51µm,30.0s						
LLP	Lapu-Lapu	48.83	226	⇑*e*P	P	14 14 31.7	+0.7

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LLP                                eS        S         14 21 40.1  +10
PGC    Sidney             48.84  60 eP        P         14 14 32.0 +1.4
KBS    Kingsbay           48.93 352 eP        P         14 14 31.7 +0.8
KBS                                  LR       LR
       comp=Z,89µm,20.0s
KBS    Kingsbay           48.93 352 i P       P         14 14 30.6 -0.4
KBS                                  pmax     pmax
       comp=Z,416nm,0.9s
KBS                                  MLR      MLR
       comp=Z,353µm,20.0s
KBS    Kingsbay           48.93 352 eP        P         14 14 32.1 +1.1
KBS                                  IVmB_BB            14 14 37.2
       comp=Z,6µm,3.6s
KBS                                eS        S         14 21 28.2 -2.3
KBS                                  IVMsBB             14 34 55.8
       comp=Z,30µm,19.0s
QIZ    Qiongzhong         49.08 248  P        P         14 14 33.8 +1.0
QIZ                                  PP       PP        14 16 27.8 +1.1
QIZ                                  S        S         14 21 35.3 +1.4
QIZ                                  pmax     pmax
       comp=Z,320nm,1.6s
QIZ                                  pmax     pmax
       comp=Z,5µm,3.7s
QIZ                                  LR       LR
       comp=Z,19µm,26.0s
QIZ                                  LR       LR
       comp=Z,17µm,24.5s
QIZ                                  LR       LR
       comp=Z,22µm,39.2s
QIZ    Qiongzhong         49.08 248 eP        P         14 14 34.6 +1.8
       comp=Z,316nm,1.2s
QIZ                                  LR       LR
       comp=Z,2µm,20.0s
SPA0   Spitsbergen Ar     49.14 350 eP        P         14 14 32.9 +0.3
SPA0   Spitsbergen Ar     49.14 350 eP        P         14 14 32.5  0.0
SPA0                                 IVmB_BB            14 14 37.7
       comp=Z,4µm,1.6s
SPA0                               eS        S         14 21 33.6 +0.1
SPA0                                 IVMsBB             14 37 15.0
       comp=Z,31µm,15.6s
BUSP   Coron              49.17 232 eP        P         14 14 34.8 +1.2
GUIM   Jordan             49.20 228 eP        P         14 14 34.9 +1.2
A04D   Lummi Island       49.20  59  P        P         14 14 34.7 +1.3
       baz=305,SNR=11
BUTP   Butuan             49.29 223 eP        P         14 14 35.4 +1.0
NLWA   Neilton Lookou     49.32  61  PFAKE              14 14 50.0  +16
NLWA                                 LR       LR
       comp=Z,40µm,20.0s
HOPEN  Hopen              49.42 347 eP        P         14 14 34.9 +0.2
HOPEN                                IVmB_BB            14 14 40.0
       comp=Z,6µm,4.8s
HOPEN                              eS        S         14 21 35.0 -2.4
HOPEN                              eScS      ScS       14 24 20.3 -0.5
HOPEN                                IVMsBB             14 37 47.1
       comp=Z,31µm,18.9s
TULEG  Thule              49.57  13 eP        P         14 14 35.6 -0.3
D03D   Eldon              49.67  61  P        P         14 14 38.2 +1.2
       baz=305,SNR=70
B05A   Bryant             49.80  60  P        P         14 14 38.7 +0.7
       baz=305,SNR=90
B05A                                 S        S         14 21 45.7 +2.3
       baz=305
B06A   Marblemount        49.99  59 eP        P         14 14 40.0 +0.6
D04E   Lakebay            50.05  61  P        P         14 14 41.7 +1.8
       baz=306,SNR=15
CGP    Cagayan de Oro     50.15 224 eP        P         14 14 42.9 +1.9
ENPP   El Nido            50.24 232 eP        P         14 14 43.0 +1.4
HSPB   Hornsund (broa     50.24 350 eP        P         14 14 39.6 -1.4
HSPB                               eS        S         14 21 44.2 -4.7
HSPB   Hornsund (broa     50.24 350 eP        P         14 14 41.1 +0.2
HSPB                                 IVmB_BB            14 14 46.8
       comp=Z,6µm,4.2s
HSPB                               eS        S         14 21 49.9 +1.1
HSPB                                 IVMsBB             14 35 44.6
       comp=Z,27µm,21.3s
D05A   Enumclaw           50.48  61 eP        P         14 14 45.2 +2.1
BUKP   Musuan             50.50 224 eP        P         14 14 44.4 +0.7
E04D   Cinebar            50.53  62  P        P         14 14 44.8 +1.2
       baz=306,SNR=61
F04D   Rainier, OR        50.56  62  P        P         14 14 44.8 +1.0
       baz=306,SNR=8.0
BVA0   Borovoye Array     50.56 309 i P       P         14 14 42.5 -1.2
BVA0                                 pmax     pmax
       comp=Z,191nm,1.1s
BVAR   Borovoye Array     50.56 309  PKPPKP P'P'df      14 44 56.3  -39
       comp=Z,0.6nm,0.6s,baz=325,slow=1.8,SNR=4.1
BVAR                                 P4KPbc             14 52 14.5
       comp=Z,2.7nm,0.8s,baz=70,slow=4.9,SNR=12
BRVK   Borovoye           50.60 309 eP        P         14 14 42.9 -1.0
BRVK                                 LR       LR
       comp=Z,107µm,22.0s
BRVK   Borovoye           50.60 309c iP       P         14 14 42.8 -1.1
BRVK                                 pmax     pmax
       comp=Z,155nm,1.0s
BRVK                                 MLR      MLR
       comp=Z,179µm,22.0s
BRVK   Borovoye           50.60 309  P        P         14 14 43.3 -0.7
       SNR=115
BRVK                                 P        P         14 14 43.3 -0.7
       SNR=115
BRVK                                 P        P         14 14 43.3 -0.7
       SNR=115
C06D   Leavenworth        50.65  59  P        P         14 14 45.1 +0.7
       baz=306,SNR=35
MATI   Mati               50.83 222 eP        P         14 14 45.6 -0.4
LON    Longmire           50.84  61 eP        P         14 14 47.1 +1.2
LON    Longmire           50.84  61 eP        P         14 14 47.1 +1.2
G03D   McMinnville, O     50.93  63  P        P         14 14 47.9 +1.3
       baz=307
TDK    Taldyqorghan       50.96 296deP        P         14 14 43.9 -2.9
TDK                                i S       S         14 21 57.1 -2.5
TDK                                  smax     smax
       comp=E,3µm,4.5s
TDK                                  MLR      MLR
       comp=Z,117µm,24.0s
TDK    Taldyqorghan       50.96 296⇓eP        P         14 14 44.0 -2.9
       comp=Z,6µm,0.8s
TDK                               ⇑iS        S         14 21 57.2 -2.5
       comp=Z,3µm,4.5s
TDK                                eLR       LR        14 35 12.9
       comp=Z,117µm,24.3s
TARA   Tarawa             50.96 160  PFAKE              14 15 00.0  +13
TARA                                 LR       LR
       comp=Z,4µm,22.0s
DAV    Davao City (W)     51.00 222  P        P         14 14 48.5 +1.1
DAV                                  LR       LR
       comp=Z,8µm,22.0s
DAV    Davao City (W)     51.00 222⇑eP        P         14 14 45.1 -2.3
DAV    Davao City (W)     51.00 222  P        P         14 14 49.8 +2.4
       SNR=16
DAV    Davao City (W)     51.00 222  P        P         14 14 48.5 +1.1
       comp=Z,184nm,0.4s,baz=64,slow=4.0,SNR=19
DAV                                  S        S         14 22 05.0 +4.4
       comp=Z,176nm,0.4s,baz=135,slow=7.1,SNR=2.0
DAV    Davao City (W)     51.00 222 eP        P         14 14 49.4 +2.0
LTY    Liberty            51.17  60 eP        P         14 14 48.7 +0.3
B08A   Colville Reser     51.24  58 eP        P         14 14 49.4 +0.4
I02D   Swisshome          51.26  65  P        P         14 14 50.1 +1.0
       baz=307,SNR=10
KCP    Kidapawan          51.27 223⇑iP        P         14 14 51.0 +1.6
PAGZ   Pagadian           51.28 225 eP        P         14 14 49.6 +0.2
COR    Corvallis          51.28  64 eP        P         14 14 51.3 +2.1
COR    Corvallis          51.28  64 eP        P         14 14 51.3 +2.1
CTBH   Cotabato--PC H     51.45 224⇑iP        P         14 14 52.7 +2.0
SHLS   Shalkode           51.46 294 eP        P         14 14 45.8 -5.0
SHLS                               i S       S         14 22 01.8 -5.0
SHLS                                 pmax     pmax
       comp=Z,2µm,1.5s
SHLS                                 smax     smax
       comp=E,4µm,5.6s
SHLS                                 MLR      MLR
       comp=Z,17µm,21.0s
SHLS   Shalkode           51.46 294 eP        P         14 14 45.8 -4.9
       comp=Z,2µm,1.5s
SHLS                              ⇓iS        S         14 22 01.9 -5.0
       comp=Z,4µm,5.6s
SHLS                               eLR       LR        14 36 06.3
       comp=Z,17µm,21.1s
F05D   White Salmon       51.55  62  P        P         14 14 52.2 +1.0
       baz=307,SNR=32
LKP    Lekhapani          51.60 267 eP        P         14 14 51.6 -0.2
H04D   Lebanon            51.64  64  P        P         14 14 53.0 +1.1
       baz=308,SNR=39
IPIL   Ipil               51.70 226 eP        P         14 14 53.4 +0.8
UZB    Uzynbulak          51.72 294c iP       P         14 14 49.7 -3.0
UZB                                eS        S         14 22 09.6 -0.9
UZB                                  pmax     pmax
       comp=Z,1µm,0.7s
UZB                                  MLR      MLR
       comp=Z,23µm,24.0s
UZB    Uzynbulak          51.72 294⇑iP        P         14 14 49.7 -3.0
       comp=Z,1µm,0.7s
UZB                                eS        S         14 22 09.6 -0.9
UZB                                eLR       LR        14 36 46.9
       comp=Z,23µm,24.3s
KEBM   Edson Butte        51.73  66 eP        P         14 14 55.1 +2.5
J01E   Myrtle Point       51.78  66  P        P         14 14 54.9 +2.0
       baz=308,SNR=11
I03D   Drain, OR          51.79  65  P        P         14 14 54.3 +1.2
       baz=308,SNR=19
DDMP   Don Marcelino,     51.81 222 eP        P         14 14 55.7 +2.2
H04A   Detroit Lake       51.86  63 eP        P         14 14 54.9 +1.3
BJO    Bjornoya           51.91 347 eP        P         14 14 54.4 +0.9
BJO                                e                   14 16 54.1
BJO                                eS        S         14 22 15.1 +3.2
BJO                                  IVMs_BB IVMs_BB    14 40 32.0
       comp=Z,24µm,17.6s
SKMP   Bagumbayan, Su     51.94 223 eP        P         14 14 55.9 +1.4
G05D   Wamic, OR          52.01  62  P        P         14 14 55.8 +1.1
       baz=308,SNR=39
E07A   Sunnyside          52.03  60 eP        P         14 14 55.6 +0.8
ZHN    Zhinishke          52.05 294ceP        P         14 14 52.0 -3.1
ZHN                                i S       S         14 22 12.2 -2.7
ZHN                                  pmax     pmax
       comp=Z,1µm,0.9s
ZHN                                  smax     smax
       comp=E,144nm,5.0s
ZHN                                  MLR      MLR
       comp=Z,21µm,21.0s
ZHN    Zhinishke          52.05 294⇑eP        P         14 14 52.0 -3.1
       comp=Z,1µm,0.9s
ZHN                               ⇓iS        S         14 22 12.3 -2.7
       comp=Z,144nm,5.0s
ZHN                                eLR       LR        14 36 46.9
       comp=Z,21µm,21.1s
SATY   Saty               52.13 294ceP        P         14 14 53.0 -2.7
SATY                               i S       S         14 22 15.2 -0.8
SATY                                 smax     smax
       comp=E,3µm,5.6s
SATY                                 MLR      MLR
       comp=Z,25µm,23.0s
SATY   Saty               52.13 294⇑eP        P         14 14 53.0 -2.7
       comp=Z,4µm,1.5s
SATY                              ⇓iS        S         14 22 15.3 -0.8
       comp=Z,3µm,5.6s
SATY                               eLR       LR        14 36 55.0
       comp=Z,25µm,22.7s
C09A   Chrisman Ranch     52.15  58 eP        P         14 14 56.1 +0.5
K02D   Willamette Mer     52.22  66  P        P         14 14 57.9 +1.5
       baz=308,SNR=17
I04A   Tendick Farm,      52.27  64  P        P         14 14 57.8 +1.1
       baz=308,SNR=41
HAWA   Hanford            52.31  60 eP        P         14 14 57.5 +0.6
HAWA                                 LR       LR
       comp=Z,43µm,22.0s
F07A   Phinny Hill Vi     52.39  61 eP        P         14 14 58.4 +0.9
CHKK   Chushkaly          52.46 296⇓eP        P         14 14 54.9 -3.1
CHKK                               eS        S         14 22 20.8 +0.5
CHKK                                 pmax     pmax
       comp=Z,2µm,1.5s
CHKK   Chushkaly          52.46 296⇓eP        P         14 14 54.9 -3.1
       comp=Z,2µm,1.4s
CHKK                               eS        S         14 22 20.8 +0.5
NEW    Newport            52.48  57 eP        P         14 14 58.6 +0.4
NEW                                  LR       LR
       comp=Z,41µm,22.0s
NEW    Newport            52.48  57 eP        P         14 14 58.6 +0.4
NEW                                  MLR      MLR
       comp=Z,41µm,22.0s
NEW    Newport            52.48  57  P        P         14 14 58.6 +0.4
       baz=307,SNR=158
NEW    Newport            52.48  57  PKPPKP P'P'df      14 45 24.9 -7.3
       comp=Z,5.3nm,1.0s,baz=161,slow=5.6,SNR=3.9
I05D   Terrebonne, OR     52.55  63  P        P         14 14 59.7 +1.0
       baz=308,SNR=38
L02E   Cave Junction      52.59  67  P        P         14 15 00.7 +1.7
       baz=309,SNR=20
HUMO   Hull Mountain      52.69  66 eP        P         14 15 01.5 +1.7
DAG    Danmarks Havn      52.69 359⇑iP        P         14 14 58.9 -0.3
       comp=Z,456nm,1.2s
       comp=Z,40µm,17.0s
DAG    Danmarks Havn      52.69 359 i                P'P'df      14 44 58.3  -35
DAG    Danmarks Havn      52.69 359⇑iP        P         14 14 58.9 -0.3
DAG                                  pmax     pmax
       comp=Z,710nm,1.2s
DAG                                  MLR      MLR
       comp=Z,41µm,17.0s
ZIRO   ZIRO               52.73 269 eP        P         14 15 01.2 +0.8
KULLO  Kullorsuaq         52.78  11⇑iP        P         14 14 59.6 -0.3
       comp=Z,542nm,1.2s
KULLO  Kullorsuaq         52.78  11⇑iP        P         14 14 59.6 -0.3
KULLO                                pmax     pmax
       comp=Z,540nm,1.2s
J04D   Umpqua Nationa     52.79  65  P        P         14 15 02.3 +1.6
       baz=309,SNR=28
MDOK   Medeo              52.85 295d iP       P         14 14 58.0 -3.1
MDOK                               eS        S         14 22 23.2 -2.7
MDOK                                 pmax     pmax
       comp=Z,1µm,1.4s
MDOK                                 MLR      MLR
       comp=Z,65µm,24.0s
MDOK   Medeo              52.85 295⇓iP        P         14 14 58.0 -3.1
       comp=Z,1µm,1.4s
MDOK                               eS        S         14 22 23.2 -2.7
       comp=Z,3µm,4.6s
MDOK                               eLR       LR        14 36 14.4
       comp=Z,65µm,24.3s
SVE    Sverdlovsk         52.85 317d iP       P         14 14 59.9 -0.8
SVE                                e                   14 17 01.7
SVE                                eS        S         14 22 25.4 +0.2
SVE                                eSS       SS        14 26 00.5 -3.3
SVE                                  pmax     pmax
       comp=Z,402nm,1.1s
SVE                                  pmax     pmax
       comp=Z,13µm,25.5s
SVE                                  MLR      MLR
       comp=N,49µm,19.0s
SVE                                  MLR      MLR
       comp=E,74µm,20.0s
SVE                                  MLR      MLR
       comp=Z,129µm,19.0s
AAA    Alma-Ata           52.90 295 eP        P         14 15 05.0 +3.6
AAA                                eS        S         14 22 22.2 -4.2
AAA                                  pmax     pmax
       comp=Z,3µm,15.3s
AAA                                  smax     smax
       comp=E,3µm,9.1s
AAA    Alma-Ata           52.90 295⇓iP        P         14 14 59.5 -1.8
       comp=E,863nm,1.3s
AAA                                eS        S         14 22 20.6 -5.8
       comp=E,2µm,7.6s
AAA                                eLR       LR        14 36 37.1
       comp=E,29µm,24.3s
LSA    Lhasa              52.95 273  P        P         14 15 04.0 +1.7
LSA                                  S        S         14 22 27.0 -1.1
LSA                                  pmax     pmax
       comp=E,160nm,1.3s
LSA                                  LR       LR
       comp=E,17µm,29.0s
LSA                                  LR       LR
       comp=E,47µm,31.4s
LSA    Lhasa              52.95 273 eP        P         14 15 03.1 +0.8
       comp=E,166nm,1.1s
LSA                                  LR       LR
       comp=Z,47µm,19.0s
LSA    Lhasa              52.95 273  P        P         14 15 03.6 +1.2
LSA    Lhasa              52.95 273 eP        P         14 15 03.1 +0.8
LSA                                  pmax     pmax
       comp=Z,166nm,1.1s
LSA                                  MLR      MLR
       comp=Z,47µm,19.0s
TNSS   Tian-Shan          52.99 295⇑eP        P         14 15 01.0 -1.4
TNSS                                 pmax     pmax
       comp=Z,820nm,1.4s
TNSS   Tian-Shan          52.99 295⇑eP        P         14 15 01.0 -1.4
       comp=Z,820nm,1.4s
E09A   Wood Farm, Sta     53.00  59 eP        P         14 15 02.5 +0.6
JORH   JORHAT             53.02 268 eP        P         14 15 00.9 -1.5
BATP   Bataraza           53.11 232 eP        P         14 15 04.7 +1.6
PINE   Pine Mountain      53.11  64 eP        P         14 15 04.6 +1.5
MOKO   MOKOCHONG          53.15 267 eP        P         14 15 03.8 +0.3
MTBS   Maitube            53.23 295⇓iP        P         14 15 02.7 -1.1
MTBS                                 pmax     pmax
       comp=Z,1µm,1.2s
MTBS   Maitube            53.23 295⇓iP        P         14 15 02.7 -1.1
       comp=Z,1µm,1.2s
J05D   Fort Rock, OR      53.26  64  P        P         14 15 05.8 +1.7
       baz=309,SNR=89
L04D   Klamath Falls      53.31  66  P        P         14 15 06.0 +1.5
       baz=309,SNR=90
KHMM   Horse Mountain     53.32  68 eP        P         14 15 07.2 +2.6
K04D   Chiloquin, OR      53.37  65  P        P         14 15 06.4 +1.5
       baz=309,SNR=36
YBH    Yreka Blue Hor     53.38  67 eP        P         14 15 06.6 +1.7
YBH    Yreka Blue Hor     53.38  67 eP        P         14 15 06.6 +1.7
BTLS   Baital             53.39 299c iP       P         14 15 01.3 -3.5
BTLS                               eS        S         14 22 30.2 -2.6
BTLS                                 pmax     pmax
       comp=Z,1µm,1.5s
BTLS                                 smax     smax
       comp=E,1µm,5.8s
BTLS                                 MLR      MLR
       comp=Z,19µm,23.0s
BTLS   Baital             53.39 299⇑iP        P         14 15 01.4 -3.5
       comp=Z,1µm,1.5s
BTLS                              ⇓eS        S         14 22 30.2 -2.6
       comp=Z,1µm,5.8s
BTLS                               eLR       LR        14 38 01.4
       comp=Z,19µm,22.7s
M02C   Callahan           53.51  67  P        P         14 15 08.2 +2.3
       baz=309,SNR=65
WALA   Waterton Lakes     53.69  55 eP        P         14 15 07.8 +0.6
I07A   Izee               53.75  63 eP        P         14 15 08.5 +0.9
KMRM   Mail Ridge         53.75  69 eP        P         14 15 10.0 +2.4
F10A   Beach Ranch, E     53.83  59 eP        P         14 15 08.7 +0.5
KOHI   KOHIMA             53.84 267 eP        P         14 15 07.2 -1.3
TKM2   Tokmak 2           53.84 296  P        P         14 15 08.4  0.0
       SNR=126
TKM2   Tokmak 2           53.84 296 i P       P         14 15 08.7 +0.3
TKM2                                 pmax     pmax
       comp=Z,224nm,1.0s
M04C   Macdoel            53.85  66  P        P         14 15 10.1 +1.6
       baz=310,SNR=116
N02D   Trinity Center     53.86  67  P        P         14 15 10.2 +1.8
       baz=310,SNR=59
ULHL   Ulahol             53.89 295  P        P         14 15 09.1 +0.3
       SNR=17
TAWA   Tawang             53.94 271 eP        P         14 15 09.2 -0.4
TAWA                                 IAmb     IAmb      14 15 15.9
       comp=Z,621nm,1.0s
ARU    Arti               54.00 317 eP        P         14 15 07.5 -1.6
ARU                                  LR       LR
       comp=Z,77µm,19.0s
ARU    Arti               54.00 317c iP       P         14 15 07.5 -1.6
ARU                                  pmax     pmax
       comp=Z,393nm,1.1s
ARU                                  MLR      MLR
       comp=Z,133µm,18.0s
TEZP   TEZPUR             54.03 269 eP        P         14 15 09.7  0.0
KCPM   Cahto Peak         54.16  69 eP        P         14 15 12.6 +1.9
SKNT   Sakolnakorn        54.16 252  P        P         14 15 12.3 +1.5
       comp=Z,422nm,1.3s,comp=Z,7µmcomp=Z,25µm
LVZ    Lovozero           54.20 337 eP        P         14 15 10.0 -0.5
LVZ                                  LR       LR
       comp=Z,55µm,21.0s
LVZ    Lovozero           54.20 337 i P       P         14 15 07.5 -2.9
LVZ                                  pmax     pmax
       comp=Z,76nm,0.9s
LVZ                                  MLR      MLR
       comp=Z,101µm,21.0s
WDC    Whiskeytown Da     54.21  68 eP        P         14 15 12.1 +1.3
WDC    Whiskeytown Da     54.21  68 eP        P         14 15 12.1 +1.3
USP    Ospenovka          54.24 297  P        P         14 15 11.3 +0.2
       SNR=258
CHMS   Chumysh            54.27 296  P        P         14 15 11.1 -0.2
       SNR=128
O02D   Mt. Diablo Mer     54.32  68  P        P         14 15 13.7 +1.9
       baz=310,SNR=116
KBK    Karagaybulak       54.37 296  P        P         14 15 12.4 +0.1
       SNR=139
HAMF   Hammerfest         54.41 343 eP        P         14 15 12.0 +0.1
HAMF                                 IVmB_BB            14 15 25.6
       comp=Z,9µm,4.1s
HAMF                               eS        S         14 22 44.4 -1.5
HAMF                                 IVMsBB             14 44 55.9
       comp=Z,36µm,16.6s
KEV    Kevo               54.48 341  PFAKE              14 15 20.0 +7.6
KEV                                  LR       LR
       comp=Z,153µm,20.0s
KEV    Kevo               54.48 341 eP        P         14 15 12.3 -0.1
BMO    Blue Mountains     54.49  61 eP        P         14 15 13.9 +0.9
BMO                                  LR       LR
       comp=Z,25µm,20.0s
BMO    Blue Mountains     54.49  61 eP        P         14 15 13.9 +0.9
BMO                                  MLR      MLR
       comp=Z,25µm,20.0s
KZA    Kyzart             54.57 295  P        P         14 15 14.1 +0.1
       SNR=49
IMP    Imphal             54.57 267 eP        P         14 15 13.9 +0.1
IMP                                  IAmb     IAmb      14 15 16.0
       comp=Z,137nm,0.8s
AAK    Ala-Archa          54.64 296  P        P         14 15 14.3  0.0
       SNR=206
AAK    Ala-Archa          54.64 296 eP        P         14 15 14.2  0.0
AAK                                  LR       LR
       comp=Z,131µm,22.0s
AAK    Ala-Archa          54.64 296 i P       P         14 15 13.9 -0.3
       SNR=469
AAK    Ala-Archa          54.64 296 i P       P         14 15 14.8 +0.6
AAK                                  pmax     pmax
       comp=Z,433nm,1.2s
AAK                                  MLR      MLR
       comp=Z,137µm,22.0s
AAK    Ala-Archa          54.64 296  P        P         14 15 14.5 +0.3
       SNR=149
AAK                                  P        P         14 15 14.5 +0.3
       SNR=149
AAK                                  P        P         14 15 14.5 +0.3
       SNR=149
AAK    Ala-Archa          54.64 296  P4KPbc             14 52 32.8
       comp=Z,1.4nm,0.6s,baz=192,slow=2.6,SNR=5.8
MOD    Modoc Plateau      54.66  65 eP        P         14 15 15.8 +1.5
APA    Apatity            54.76 337⇓iP        P         14 15 12.6 -1.8
APA                                i                   14 16 17.5
APA                                i                   14 17 16.1
APA                                i S       S         14 22 43.0 -7.6
APA                                  pmax     pmax
       comp=Z,43nm,0.8s
J08A   Circle Bar Ran     54.78  63 eP        P         14 15 16.5 +1.4
O03E   Paynes Creek       54.82  67  P        P         14 15 16.4 +1.0
       baz=310,SNR=98
UCH    Uchtor             54.89 296  P        P         14 15 15.9 -0.5
       SNR=62
HOPS   Hopland Field      54.91  69 eP        P         14 15 15.2 -0.8
       comp=Z,533nm,1.2s
ARCES  ARCESS Array B     54.97 341 eP        P         14 15 16.9 +1.0
ARCES  ARCESS Array B     54.97 341  P        P         14 15 15.1 -0.9
       comp=Z,25nm,0.7s,baz=41,slow=6.5,SNR=48
ARCES                                PKKP     PKKPdf    14 36 55.4 -2.9
       comp=Z,8.0nm,0.9s,baz=3.0,slow=26,SNR=3.4
ARCES                                LR       LR        14 43 53.3
       comp=Z,106µm,19.9s,baz=34,slow=42
ARCES                                PKP2bc             14 45 35.9
       comp=Z,3.7nm,0.8s,baz=263,slow=2.0,SNR=3.8
ARE0   ARCESS Array S     54.97 341 eP        P         14 15 14.3 -1.7
ARE0                                 IVmB_BB            14 15 17.8
       comp=Z,8µm,4.1s
ARE0                               eS        S         14 22 50.0 -3.4
JAY    Jayapura           55.01 201  P        P         14 15 18.3 +1.4
       comp=Z,1µm,1.6s,comp=Z,35µmcomp=Z,358µm
EKS2   Erkin-Say          55.04 297  P        P         14 15 17.2 +0.2
       SNR=194
MSO    Missoula           55.07  57 eP        P         14 15 17.6 +0.5
MSO    Missoula           55.07  57  P        P         14 15 17.7 +0.5
       baz=310,SNR=176
GENI   Genyem             55.20 201  P        P         14 15 20.2 +2.0
       comp=Z,328nm,1.5s,comp=Z,14µmcomp=Z,54µm
KDM    Kudat              55.21 232  P        P         14 15 23.2 +4.9
KDM    Kudat              55.21 232  P        P         14 15 21.3 +3.0
WVOR   Wild Horse Val     55.28  64 eP        P         14 15 20.0 +1.3
WVOR   Wild Horse Val     55.28  64 eP        P         14 15 20.0 +1.3
SILR   SILCHAR            55.33 268 eP        P         14 15 18.9 -0.2
SHL    Shillong           55.36 269 eP        P         14 15 20.2 +0.6
SHL    Shillong           55.36 269 eP        P         14 15 19.9 +0.3
SHL                                  IAmb     IAmb      14 15 21.6
       comp=Z,240nm,0.8s
SHL                                ex        x         14 23 04.0
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AML	Almayashu	55.42	296	P	P	14 15 20.4	+0.3
	SNR=115						
SRPI	Serui, Papua	55.51	206	P	P	14 15 22.2	+1.7
	comp=Z,200nm,0.6s,comp=Z,55µm						
MCCM	Marconi Confer	55.58	70	eP	P	14 15 23.8	+3.1
	comp=Z,1µm,1.2s						
LAMP	Lampang	55.63	257	P	P	14 15 23.6	+2.2
	comp=Z,526nm,1.1s,comp=Z,4µm						
UTTA	Uttaradit	55.66	255	P	P	14 15 23.5	+2.0
	comp=Z,373nm,1.0s,comp=Z,3µm						
KSH	Kashi	55.79	292⇑	iP	P	14 15 26.5	+4.0
KSH				pP	sP	14 15 42.5	-0.3
KSH				PP	PP	14 17 34.0	+7.0
KSH				S	S	14 23 04.8	-0.7
KSH				sS	sS	14 23 36.3	+7.0
KSH				SS	SS	14 26 55.8	+4.7
KSH				pmax	pmax		
	comp=Z,930nm,1.3s						
KSH				LR	LR		
	comp=Z,24µm,13.7s						
KSH				LR	LR		
	comp=Z,30µm,12.2s						
FFC	Flin Flon	55.80	44	eP	P	14 15 22.5	+0.4
	comp=Z,325nm,1.0s						
FFC				LR	LR		
	comp=Z,107µm,20.0s						
FFC	Flin Flon	55.80	44	eP	P	14 15 22.5	+0.4
FFC				pmax	pmax		
	comp=Z,325nm,1.0s						
FFC				MLR	MLR		
	comp=Z,107µm,20.0s						
CMMT	Chiang Mai	55.84	258	P	P	14 15 24.4	+1.5
	comp=Z,2µm,1.1s,comp=Z,15µm						
CHTO	Chiang Mai	55.84	258	eP	P	14 15 24.9	+2.1
CHTO				LR	LR		
	comp=Z,21µm,20.0s						
CHTO	Chiang Mai	55.84	258	P	P	14 15 25.1	+2.2
	SNR=757						
CHTO				P	P	14 15 25.1	+2.2
	SNR=757						
CHTO				P	P	14 15 25.1	+2.2
	SNR=757						
CHTO	Chiang Mai	55.84	258	P	P	14 15 24.5	+1.6
	comp=Z,9µm,1.1s,comp=Z,68µmcomp=Z,382µm						
CHTO	Chiang Mai	55.84	258	eP	P	14 15 25.0	+2.1
KTK1	Kautokeino	55.86	342	eP	P	14 15 22.3	-0.1
KTK1				eS	S	14 23 04.7	-0.6
KTK1				IVMs_BB	IVMs_BB	14 42 20.6	
	comp=Z,33µm,16.8s						
BEKR	Beckworth	55.94	67	eP	P	14 15 24.5	+0.9
TNTI	Ternate	55.99	217	P	P	14 15 24.3	+0.4
	comp=Z,173nm,2.0s,comp=Z,5µm						
TMCR	Tamitsa	56.09	333	eP	P	14 15 22.6	-1.4
TMCR				pmax	pmax		
	comp=Z,115nm,0.9s						
CM31	Chiang Mai Arr	56.11	257	eP	P	14 15 27.1	+2.3
CMAR	Chiang Mai Arr	56.11	257	P	P	14 15 27.1	+2.2
	comp=Z,702nm,0.9s,baz=28,slow=6.8,SNR=262						
CMAR				LR	LR	14 42 36.0	
	comp=Z,12µm,19.3s,baz=38,slow=39						
CMAR				PKPPKP		14 45 17.2	
	comp=Z,3.7nm,1.1s,baz=251,slow=4.7,SNR=5.9						
CMAR				PKP2bc		14 45 35.1	
	comp=Z,1.4nm,0.5s,baz=247,slow=4.4,SNR=5.2						
CMAR				PKP2ab		14 45 53.5	
	comp=Z,1.4nm,0.3s,baz=256,slow=4.9,SNR=8.8						
CMAR				P4KPbc		14 52 41.7	
	comp=Z,1.3nm,0.9s,baz=15,slow=4.0,SNR=8.6						
CM01	Chiang Mai Arr	56.13	257	eP	P	14 15 25.0	0.0
SDKM	Sandakan	56.13	231	P	P	14 15 27.1	+2.0
TRO	Tromso	56.14	344	eP	P	14 15 23.5	-0.8
TRO				IVmB_BB		14 15 38.5	
	comp=Z,6µm,3.9s						
TRO				i		14 18 56.9	
TRO				eS	S	14 23 08.9	-0.1
TRO				IVMsBB		14 46 44.0	
	comp=Z,29µm,15.8s						
AFDM	Forest Hills D	56.18	68	eP	P	14 15 26.1	+0.9
GTK	Tadong	56.20	273	eP	P	14 15 25.8	+0.2
DHUB	DHUBRI	56.23	271	eP	P	14 15 25.1	-0.4
HRY	Holter Researc	56.26	56	eP	P	14 15 26.6	+0.9
DZA	Taraz	56.27	298	eP	P	14 15 23.3	-2.4
DZA				pmax	pmax		
	comp=Z,1µm,1.5s						
DZA				MLR	MLR		
	comp=Z,31µm,24.0s						
DZA	Taraz	56.27	298	eP	P	14 15 23.4	-2.3
	comp=Z,1µm,1.5s						
DZA				eLR	LR	14 39 54.8	
	comp=Z,31µm,24.3s						
KKM	Kota Kinabalu	56.27	232	P	P	14 15 28.7	+2.7
KIRV	Kirov	56.28	323	LR	LR	14 41 43.2	
	comp=Z,259µm,21.6s,baz=33,slow=38						
KIRV				PKPPKP	P'P'df	14 45 18.5	-8.8
	comp=Z,4.6nm,0.5s,baz=286,slow=7.4,SNR=2.8						
FCC	Fort Churchill	56.30	36	eP	P	14 15 25.9	+0.3
FCC	Fort Churchill	56.30	36	eP	P	14 15 25.9	+0.3
PBKT	Sadao Pong	56.30	254	eP	P	14 15 28.2	+2.1
PBKT	Sadao Pong	56.30	254	P	P	14 15 27.8	+1.7
	comp=Z,586nm,1.2s,comp=Z,12µm						
TURI	Tura	56.35	270	eP	P	14 15 26.5	0.0
TURI				IAmb	IAmb	14 15 32.9	
	comp=Z,143nm,0.6s						
SUKH	Sukhothai	56.42	256	P	P	14 15 29.2	+2.2
	comp=Z,175nm,1.1s,comp=Z,1µm						
SUMG	Summit	56.43	6	eP	P	14 15 27.0	+0.2
SUMG	Summit	56.43	6	i P	P	14 15 27.5	+0.6
	comp=Z,1µm,1.0s						
SUMG				i		14 15 48.2	
SUMG				e		14 45 15.5	
SUMG	Summit	56.43	6	i P	P	14 15 27.5	+0.6
SUMG				i		14 15 48.2	
SUMG				pmax	pmax		
	comp=Z,1µm,1.0s						
EGMT	Eagleton	56.48	54	PFAKE		14 15 40.0	+13
EGMT				LR	LR		
	comp=Z,114µm,22.0s						
EGMT	Eagleton	56.48	54	P	P	14 15 27.8	+0.6
	baz=311,SNR=56						
LRM	Limekiln Ridge	56.51	57	eP	P	14 15 28.2	+0.6
KK31	Karatay Array	56.59	299	eP	P	14 15 27.3	-0.7
KK31	Karatay Array	56.59	299	i P	P	14 15 26.9	-1.1
KK31				pmax	pmax		
	comp=Z,243nm,1.3s						
KKAR	Karatay Array	56.59	299	eP	P	14 15 27.3	-0.7
KKAR	Karatay Array	56.59	299	eP	P	14 15 27.3	-0.7
RUBR	Rubicon Trail	56.59	68	eP	P	14 15 30.1	+1.8
DLMT	Dillon	56.73	57	eP	P	14 15 30.0	+0.9
VCNR	Virginia City	56.73	67	eP	P	14 15 30.6	+1.4
SAIH	SAIHA	56.86	265	eP	P	14 15 31.1	+0.8
PNTR	Pine Nut	56.90	67	eP	P	14 15 31.9	+1.4
HLID	Hailey	56.91	60	eP	P	14 15 31.5	+1.1
HLID				LR	LR		
	comp=Z,45µm,21.0s						
HLID	Hailey	56.91	60	P	P	14 15 31.7	+1.3
	baz=311,SNR=224						
MCMT	McKenzie Canyo	56.94	58	eP	P	14 15 31.3	+0.6
AGT	Agartala	56.96	268	eP	P	14 15 31.6	+0.8
AGT				IAmb	IAmb	14 15 35.1	
	comp=Z,662nm,1.2s						
TSM	Tawau	56.97	229	P	P	14 15 33.0	+2.1
BOZ	Bozeman (W)	57.09	57	PFAKE		14 15 40.0	+8.4
BOZ				LR	LR		
	comp=Z,43µm,19.0s						
BOZ	Bozeman (W)	57.09	57	P	P	14 15 32.8	+1.2
	baz=311,SNR=84						
MSF	Maaselka	57.14	337	P	P	14 15 30.8	-0.7
MSF				pmax	pmax		
	comp=Z,111nm,1.0s						
YERR	Yerington	57.17	67	eP	P	14 15 33.8	+1.4
BELO	BELONIA	57.29	267	eP	P	14 15 33.4	+0.3
ODAN	Odare	57.30	273	eP	P	14 15 33.9	+0.5
	comp=Z,515nm,1.1s						
SAO	San Andreas Ge	57.34	70	eP	P	14 15 34.7	+1.4
SAO	San Andreas Ge	57.34	70	eP	P	14 15 34.7	+1.4
WAKR	Walker	57.38	68	eP	P	14 15 35.4	+1.5
BMN	Battle Mountai	57.39	65	eP	P	14 15 35.2	+1.3
	comp=Z,350nm,1.1s						
BMN	Battle Mountai	57.39	65	eP	P	14 15 35.2	+1.3
BMN				pmax	pmax		
	comp=Z,350nm,1.1s						
IUG	Iuzhnay	57.48	298	eP	P	14 15 32.1	-2.3
IUG				eS	S	14 23 24.6	-3.1
IUG				pmax	pmax		
	comp=Z,3µm,1.6s						
IUG				smax	smax		
	comp=N,669nm,4.8s						
IUG				MLR	MLR		
	comp=Z,24µm,21.0s						
IUG	Iuzhnay	57.48	298	eP	P	14 15 32.1	-2.3
	comp=Z,3µm,1.6s						
IUG				eS	S	14 23 24.6	-3.1
	comp=Z,669nm,4.8s						
IUG				eLR	LR	14 40 37.0	
	comp=Z,24µm,21.1s						
JIRN	Jiri	57.49	275	eP	P	14 15 35.7	+0.7
	comp=Z,1µm,0.9s						
GUN	Gumba	57.52	275	eP	P	14 15 35.6	+0.5
	comp=Z,1µm,1.0s						
KMSI	Cibinong	57.52	221	P	P	14 15 35.1	+0.3
	comp=Z,393nm,1.1s,comp=Z,7µm						
BRDH	Bariadhala	57.58	267	P	P	14 15 37.0	+1.8
	comp=Z,1µm,1.1s,baz=68,slow=9.1,SNR=132						
CHM	Chimkent	57.61	299c	iP	P	14 15 33.5	-1.6
CHM				eS	S	14 23 28.5	-0.7
CHM				pmax	pmax		
	comp=Z,2µm,1.2s						
CHM				smax	smax		
	comp=N,5µm,4.5s						
CHM				MLR	MLR		
	comp=Z,4µm,18.0s						
CHM	Chimkent	57.61	299⇑	iP	P	14 15 33.6	-1.6
	comp=Z,2µm,1.2s						
CHM				eS	S	14 23 28.5	-0.7
	comp=Z,5µm,4.5s						
CHM				eLR	LR	14 40 37.9	
	comp=Z,4µm,17.7s						
SRAK	Srakaew	57.63	251	P	P	14 15 35.1	-0.5
	comp=Z,2µm,1.0s,comp=Z,15µm						
QLMT	Earthquake Lak	57.70	57	eP	P	14 15 37.2	+1.2
FAKI	Fak Fak	57.70	210	eP	P	14 15 36.7	+0.7
FAKI	Fak Fak	57.70	210	P	P	14 15 36.6	+0.6
	comp=Z,569nm,1.5s,comp=Z,9µmcomp=Z,53µm						
RAMN	Ramite	57.73	274	eP	P	14 15 37.2	+0.7
	comp=Z,3µm,1.1s						
KVN	Kaiserville	57.80	66	eP	P	14 15 38.0	+1.2
KVN	Kaiserville	57.80	66	eP	P	14 15 38.0	+1.2
RYN	Ryan	57.83	67	eP	P	14 15 38.1	+1.2
UMPA	Umpang Tak	57.87	256	P	P	14 15 40.8	+3.5
	comp=Z,291nm,1.1s,comp=Z,3µm						
YHB	Horse Butte	57.88	57	eP	P	14 15 38.6	+1.3
KKN	Kakani	57.98	276	eP	P	14 15 39.0	+0.8
	comp=Z,519nm,0.6s						
GCMT	Greycliff	57.99	55	eP	P	14 15 39.4	+1.4
YHH	Holmes Hill	58.04	57	eP	P	14 15 39.6	+1.2
PKI	Pulchoki	58.05	275	eP	P	14 15 39.3	+0.5
	comp=Z,1µm,1.2s						
AB31	Akbulak array	58.05	310	i P	P	14 15 37.1	-1.0
AB31				pmax	pmax		
	comp=Z,134nm,1.0s						
ABKAR	Akbulak array	58.05	310	eP	P	14 15 37.1	-1.0
PKIN	Phulchoki	58.05	276	eP	P	14 15 39.3	+0.5
	comp=Z,1µm,1.2s						
YMR	Madison River	58.05	57	eP	P	14 15 40.0	+1.4
NV01	Mina Array Sit	58.09	67	eP	P	14 15 39.2	+0.3
NVAR	Mina Array Bea	58.09	67	P	P	14 15 40.0	+1.2
	comp=Z,126nm,1.0s,baz=292,slow=7.2,SNR=206						
NVAR				S	S	14 23 39.8	+3.8
	comp=Z,0.2nm,0.4s,baz=25,slow=24,SNR=3.8						
NVAR				LR	LR	14 37 20.0	
	comp=Z,15µm,21.2s,baz=304,slow=32						
NVAR				PKPPKP	P'P'df	14 45 19.4	-4.1
	comp=Z,4.5nm,1.2s,baz=140,slow=2.8,SNR=3.7						
NVAR				PKP2bc		14 45 28.7	
	comp=Z,5.5nm,1.0s,baz=150,slow=4.0,SNR=6.2						
NVAR				P4KPbc		14 52 49.8	
	comp=Z,0.6nm,0.6s,baz=292,slow=5.5,SNR=5.2						
JMIC	Jan Mayen	58.12	355	PKPPKP	P'P'df	14 45 19.1	-5.8
	comp=Z,85nm,0.4s,baz=165,slow=11,SNR=2.4						
JMIC	Jan Mayen	58.12	355	eP	P	14 15 39.9	+1.6
JMIC				eS	S	14 23 37.5	+2.5
JMIC				IVMs_BB	IVMs_BB	14 38 51.1	
	comp=Z,19µm,18.3s						
KLMR	Klimovskoe	58.12	329	eP	P	14 15 36.1	-2.3
KLMR				e		14 17 46.2	
KLMR				pmax	pmax		
	comp=Z,105nm,1.0s						
KLMR	Klimovskoe	58.12	329	eP	P	14 15 36.2	-2.2
KLMR				AMP		14 15 40.1	
	comp=Z,105nm,1.1s						
KLMR				ePP	PP	14 17 46.2	-0.9
MDPB	Devils Postpil	58.17	68	eP	P	14 15 40.8	+1.3
NV11	Mina Array Sit	58.17	67	eP	P	14 15 40.6	+1.2
YNR	Norris Junctio	58.17	57	eP	P	14 15 41.4	+2.0
AKTO	Aktyubinsk	58.18	312	P	P	14 15 37.9	-1.1
AKTO				pmax	pmax		
	comp=Z,147nm,1.3s						
AKTO	Aktyubinsk	58.18	312	LR	LR	14 42 39.8	
	comp=Z,101µm,21.0s,baz=33,slow=38						
AKTO				P4KPbc		14 52 48.1	
	comp=Z,4.8nm,0.9s,baz=37,slow=3.9,SNR=12						
DMN	Daman	58.22	276	eP	P	14 15 40.9	+1.0
	comp=Z,2µm,1.1s						
GKN	Gorkha	58.24	276	eP	P	14 15 41.1	+1.2
YFT	Old Faithful	58.27	57	eP	P	14 15 42.7	+2.6
STEI	Steigen	58.28	344	eP	P	14 15 38.7	-0.7
STEI				IVmB_BB		14 15 44.5	
	comp=Z,6µm,3.8s						
STEI				e		14 19 29.4	
STEI				eS	S	14 23 35.6	-1.5
STEI				IVMsBB		14 46 05.6	
	comp=Z,25µm,16.0s						
ELK	Elko	58.31	63	eP	P	14 15 41.8	+1.4
ELK	Elko	58.31	63	eP	P	14 15 41.8	+1.4
MLAC	Mammoth, Mammo	58.31	68	P	P	14 15 42.4	+1.9
	baz=312,SNR=31						
LOF	Lofoten	58.39	345	eP	P	14 15 40.6	+0.4
LOF				e		14 19 24.9	
LOF				eS	S	14 23 34.8	-3.8
LOF				IVMs_BB	IVMs_BB	14 45 01.8	
	comp=Z,15µm,17.3s						
YPP	Pitchstone Pla	58.40	57	eP	P	14 15 43.3	+2.2
LKWY	Lake	58.42	57	eP	P	14 15 43.7	+2.6
	comp=Z,514nm,1.1s						
LKWY				LR	LR		
	comp=Z,85µm,22.0s						
LKWY	Lake	58.42	57	eP	P	14 15 43.7	+2.6
LKWY				pmax	pmax		
	comp=Z,514nm,1.1s						
LKWY				MLR	MLR		
	comp=Z,85µm,22.0s						
TAS	Tashkent	58.44	298	P	P	14 15 41.4	+0.4
TAS				pmax	pmax		
	comp=Z,354nm,1.1s						
H17A	Grant Village	58.44	57	eP	P	14 15 44.1	+2.8
H17A	Grant Village	58.44	57	P	P	14 15 44.1	+2.8
	baz=312,SNR=377						
MRSI	Marisa	58.48	223	P	P	14 15 42.0	+0.5
	comp=Z,185nm,1.9s,comp=Z,5µmcomp=Z,35µm						
ILULI	Ilulissat	58.48	12	eP	P	14 15 40.3	-0.5
ILULI	Ilulissat	58.48	12⇑	iP	P	14 15 40.3	-0.5
	comp=Z,212nm,0.8s						
ILULI	Ilulissat	58.48	12	eP	P	14 15 40.3	-0.5
DANN	Dangsing	58.55	277	eP	P	14 15 43.2	+0.9
	comp=Z,993nm,0.6s						
IMW	Indian Meadow	58.58	58	eP	P	14 15 44.0	+1.7
FLWY	Flagg Ranch	58.59	58	eP	P	14 15 44.1	+1.8
RLMT	Red Lodge	58.65	56	eP	P	14 15 44.1	+1.4
RLMT				LR	LR		
	comp=Z,63µm,20.0s						
RLMT	Red Lodge	58.65	56	P	P	14 15 44.3	+1.7
	baz=312,SNR=492						
FXWY	Fox Creek	58.71	58	eP	P	14 15 44.7	+1.6
PAGB	Antelope Grade	58.75	71	eP	P	14 15 45.0	+1.8
MOOW	Moose Ponds	58.79	58	eP	P	14 15 45.2	+1.6
TPAW	Teton Pass	58.85	58	eP	P	14 15 45.0	+0.8
VOG	Valley Oaks Go	58.87	70	P	P	14 15 44.7	+0.7
	baz=313						
LOHW	Long Hollow	58.95	58	eP	P	14 15 46.5	+1.7
DGMT	Dagmar	58.96	50	eP	P	14 15 45.4	+0.8
DGMT				LR	LR		
	comp=Z,101µm,21.0s						
DGMT	Dagmar	58.96	50	P	P	14 15 45.2	+0.7
	baz=313,SNR=57						
JOF	Joensuu	58.97	334	P	P	14 15 43.4	-0.9
JOF				pmax	pmax		
	comp=Z,106nm,2.0s						
SNOW	Snow King Moun	58.97	58	eP	P	14 15 47.0	+2.0
REDW	Red Top Meadow	58.99	58	eP	P	14 15 46.7	+1.6
HVU	Hansel Valley	59.00	61	eP	P	14 15 46.5	+1.4
HVU	Hansel Valley	59.00	61	eP	P	14 15 46.5	+1.4
SCO	Scoresbysund	59.04	360	eP	P	14 15 45.0	+0.4
SCO	Scoresbysund	59.04	360	i P	P	14 15 45.3	+0.6
	comp=Z,48µm,20.0s						
SCO	Scoresbysund	59.04	360	i	P'P'df	14 45 17.1	-6.4
SCO	Scoresbysund	59.04	360	i P	P	14 15 45.3	+0.6
SCO				MLR	MLR		
	comp=Z,48µm,20.0s						
KOLN	Koldanda	59.05	277	eP	P	14 15 46.5	+0.8
	comp=Z,1µm,0.9s						
TIN	Tinemaha, Big	59.06	68	P	P	14 15 47.0	+1.5
	baz=313,SNR=20						
SANI	Sanana	59.11	217	P	P	14 15 45.5	-0.3
	comp=Z,358nm,1.5s,comp=Z,7µmcomp=Z,52µm						
SRDT	SRDT	59.14	254	P	P	14 15 48.4	+2.3
	comp=Z,350nm,1.6s,comp=Z,11µm						
LAO	LASA Array	59.16	53	eP	P	14 15 47.2	+1.2
LAO				LR	LR		
	comp=Z,94µm,21.0s						
LAO	LASA Array	59.16	53	P	P	14 15 47.4	+1.4
	baz=313,SNR=201						
SMMC	Simmler	59.19	71	P	P	14 15 47.7	+1.4
	baz=313,SNR=35						
PATY	Pattaya	59.19	251	P	P	14 15 49.3	+2.9
	comp=Z,141nm,0.9s						
PYUN	Piuthan	59.20	278	eP	P	14 15 47.5	+0.8
AHID	Auburn Hatcher	59.25	59	eP	P	14 15 48.1	+1.3
AHID				LR	LR		
	comp=Z,29µm,21.0s						
VES	Vestal, Richgr	59.37	70	P	P	14 15 47.8	+0.3
	baz=313,SNR=38						
GAR	Garm	59.42	295	eP	P	14 15 47.7	-0.3
GAR	Garm	59.42	295	eP	P	14 15 47.7	-0.3
BGU	Big Grassy Mou	59.43	62	eP	P	14 15 49.3	+1.2
LUWI	Luwuk	59.49	221	eP	P	14 15 48.4	-0.1
LUWI	Luwuk	59.49	221	P	P	14 15 47.9	-0.5
	comp=Z,345nm,1.3s,comp=Z,56µm						
SPUT	South Promonto	59.50	61	eP	P	14 15 50.2	+1.7
MPSI	Mapaga	59.50	225	P	P	14 15 49.2	+0.6
	comp=Z,101nm,1.9s,comp=Z,3µmcomp=Z,38µm						
KNTN	Kanton	59.50	144	eP	P	14 15 50.1	+1.6
CWC	Cottonwood Cre	59.56	69	P	P	14 15 50.1	+1.0
	baz=313						
PKM	Mcpherson Peak	59.58	71	P	P	14 15 50.5	+1.2
	baz=314,SNR=32						
GRAC	Grapevine Rang	59.60	68	P	P	14 15 50.4	+1.3
	baz=313,SNR=71						
R11A	Troy Canyon, C	59.72	65	eP	P	14 15 50.9	+0.7
R11A	Troy Canyon, C	59.72	65	P	P	14 15 51.0	+0.9
	baz=313,SNR=329						
NLAI	Namlea	59.78	216	P	P	14 15 51.9	+1.5
	comp=Z,86nm,2.0s,comp=Z,6µm						
ISA	Isabella, Lake	59.86	69	eP	P	14 15 51.2	+0.2
ISA	Isabella, Lake	59.86	69	eP	P	14 15 51.2	+0.2
ISA	Isabella, Lake	59.86	69	P	P	14 15 50.9	-0.1
	baz=314,SNR=48						
PHET	Kaeng Krachan	59.94	253	P	P	14 15 54.3	+2.7
	comp=Z,476nm,0.8s,comp=Z,4µm						
SBC	Santa Barbara	59.95	71	P	P	14 15 52.8	+1.3
	baz=314,SNR=5.8						
DAC	Darwin (Calif)	59.96	68	eP	P	14 15 52.7	+0.9
DAC	Darwin (Calif)	59.96	68	eP	P	14 15 52.7	+0.9
BNDI	Bandanaira	59.98	212	P	P	14 15 52.6	+0.8
	comp=Z,680nm,2.2s,comp=Z,17µmcomp=Z,62µm						
MOR8	Moi Rana	60.00	344	eP	P	14 15 50.1	-1.3
MOR8				IVmB_BB		14 15 54.8	
	comp=Z,4µm,3.7s						
MOR8				i		14 19 41.0	
MOR8				eS	S	14 23 57.3	-2.2
MOR8				IVMsBB		14 48 07.5	
	comp=Z,26µm,15.2s						
HNR	Honiara	60.01	177	eP	P	14 15 50.0	-1.9
HNR	Honiara	60.01	177	eP	P	14 15 53.9	+2.0
HNR				LR	LR		
	comp=Z,48µm,22.0s						
HNR	Honiara	60.01	177	eP	P	14 15 53.9	+2.0
HNR				MLR	MLR		
	comp=Z,48µm,22.0s						
ARVC	Arvin	60.01	70	P	P	14 15 52.3	+0.4
	baz=314,SNR=12						
DUG	Dugway, Tooele	60.05	62	eP	P	14 15 53.6	+1.3
DUG				LR	LR		
	comp=Z,31µm,22.0s						
DUG	Dugway, Tooele	60.05	62	eP	P	14 15 53.6	+1.3
DUG				MLR	MLR		
	comp=Z,31µm,22.0s						
DUG	Dugway, Tooele	60.05	62	P	P	14 15 53.7	+1.4
	baz=313,SNR=344						
BW06	Boulder Array	60.09	58	eP	P	14 15 53.6	+1.0
BW06				LR	LR		
	comp=Z,50µm,21.0s						
BW06	Boulder Array	60.09	58	P	P	14 15 53.6	+1.0
	baz=313,SNR=470						
PD31	Pinedale Array	60.09	58	eP	P	14 15 53.7	+1.0
PDAR	Pinedale Array	60.09	58	eP	P	14 15 52.7	+0.1
PDAR	Pinedale Array	60.09	58	P	P	14 15 53.5	+0.9
	comp=Z,213nm,0.9s,baz=301,slow=2.3,SNR=523						
PDAR				PKPPKP	P'P'df	14 44 46.9	-34
	comp=Z,0.9nm,0.9s,baz=119,slow=1.1,SNR=3.6						
PDAR				PKP2bc		14 45 27.1	
	comp=Z,11nm,1.1s,baz=158,slow=12,SNR=5.7						
PDAR				PKP2ab		14 45 38.5	
	comp=Z,6.6nm,1.2s,baz=180,slow=4.2,SNR=4.6						
PDAR				P4KPbc		14 52 53.4	
	comp=Z,0.3nm,0.9s,baz=255,slow=7.1,SNR=2.3						
MPMC	Manual Prospec	60.17	69	P	P	14 15 54.3	+1.0
	baz=314,SNR=106						
TCUT	Toone Canyon	60.20	61	eP	P	14 15 54.9	+1.4
FURC	Furnace Creek,	60.26	68	P	P	14 15 54.8	+1.3
	baz=314,SNR=119						
BTM	Bintulu	60.29	234	P	P	14 15 56.3	+2.3
TPNV	Topopah Spring	60.29	67	eP	P	14 15 55.0	+1.0
TPNV	Topopah Spring	60.29	67	eP	P	14 15 55.0	+1.0
TPNV	Topopah Spring	60.29	67	P	P	14 15 55.0	+1.0
	baz=314,SNR=261						
CTU	Camp Tracy	60.30	61	eP	P	14 15 55.3	+1.2
SCZ2	Santa Cruz Isl	60.30	72	P	P	14 15 54.5	+0.6
	baz=314,SNR=6.9						
CHGR	Chuyangaron	60.32	296	eP	P	14 15 53.8	-0.3
OSI	Osito Audit: C	60.42	71	eP	P	14 15 56.5	+1.7
OSI	Osito Audit: C	60.42	71	P	P	14 15 55.9	+1.0
	baz=314,SNR=6.3						
BOK	Bokaro	60.43	272	eP	P	14 15 55.0	+0.1
BOK				IAmb	IAmb	14 15 57.7	
	comp=Z,549nm,1.2s						
LRMC	Laurel Mtn Rad	60.45	69	P	P	14 15 56.0	+0.9
	baz=314,SNR=103						
DHRM	DHARAMSHALA	60.48	286	eP	P	14 15 54.9	-0.6
DHRM				IAmb	IAmb	14 16 00.8	
	comp=Z,568nm,0.6s						
JLU	Jordanelle	60.53	61	eP	P	14 15 57.0	+1.3
BLG	Laguna Peak, P	60.57	71	P	P	14 15 56.3	+0.5
	baz=314,SNR=5.1						
PSUT	Pine Spring	60.59	64	eP	P	14 15 57.2	+1.1
NLU	North Lily Min	60.63	62	eP	P	14 15 57.6	+1.3
SFJD	Kangerlussuaq	60.63	12	eP	P	14 15 55.2	-0.4
SFJD				LR	LR		
	comp=Z,86µm,19.0s						
SFJD	Kangerlussuaq	60.63	12⇑	iP	P	14 15 55.4	-0.2
	comp=Z,333nm,1.1s						
	comp=Z,80µm,19.0s						
SFJD	Kangerlussuaq	60.63	12	e	P'P'df	14 45 17.6	-3.3
SFJD	Kangerlussuaq	60.63	12⇑	iP	P	14 15 55.4	-0.2
SFJD				pmax	pmax		
	comp=Z,330nm,1.1s						
SFJD				MLR	MLR		
	comp=Z,80µm,19.0s						
SFJD	Kangerlussuaq	60.63	12	eP	P	14 15 54.3	-1.3
PCI	Palu	60.63	224	P	P	14 15 56.0	-0.3
	comp=Z,468nm,1.2s,comp=Z,5µm						
EDW2	Edwards Air Fo	60.68	70	P	P	14 15 57.5	+0.9
	baz=314,SNR=86						
SMLA	Simla	60.72	284	eP	P	14 15 56.0	-0.8
SMLA				IAmb	IAmb	14 16 01.4	
	comp=Z,1µm,1.4s						
DDI	Dehra Dun	60.73	283	eP	P	14 15 55.1	-1.9
DDI				IAmb	IAmb	14 16 00.7	
	comp=Z,3µm,0.1s						
MPU	Maple Canyon	60.83	62	eP	P	14 15 59.1	+1.4
SNCC	San Nicolas Is	60.88	72	eP	P	14 16 02.6	+4.7
SNCC	San Nicolas Is	60.88	72	P	P	14 15 58.8	+0.9
	baz=314						
DECC	Green Verdugo	60.91	71	P	P	14 15 58.8	+0.7
	baz=314,SNR=6.3						
SHOC	Shoshone, Teco	60.99	68	P	P	14 15 59.6	+1.0
	baz=314,SNR=72						

PASC	Pasadena Art C	61.05	71	*e*P	P	14 15 59.9	+0.9
VAF	Ylistaro	61.06	338	P	P	14 15 59.4	+0.8
VAF				pmax	pmax		
	comp=Z,117nm,0.9s						
MWC	Mount Wilson	61.09	70	*e*P	P	14 16 00.4	+0.9
GSC	Goldstone, Bar	61.09	69	*e*P	P	14 16 00.1	+0.7
GSC	Goldstone, Bar	61.09	69	*e*P	P	14 16 00.1	+0.7
GSC	Goldstone, Bar	61.09	69	P	P	14 16 00.3	+0.9
	baz=314,SNR=69						
SHPR	Sheep Range	61.23	67	*e*P	P	14 16 01.6	+1.2
RRX	Edison Barstow	61.27	69	P	P	14 16 01.7	+1.1
	baz=314						
FMP	Fort Macarthur	61.30	71	P	P	14 16 01.3	+0.6
	baz=314						
SGKI	Sangatta, Kali	61.32	227	P	P	14 15 56.9	-4.1
BFSC	Mount Baldy Ra	61.32	70	P	P	14 16 01.6	+0.6
	baz=314,SNR=48						
NIL	Nilore	61.35	289	PFAKE		14 16 10.0	+8.9
NIL				LR	LR		
	comp=Z,566nm,21.0s						
SBUM	Sibu	61.37	234	P	P	14 16 03.8	+2.5
SMKI	Samarinda	61.43	227	P	P	14 16 04.2	+2.5
	comp=Z,314nm,1.3s,comp=Z,5µmcomp=Z,46µm						
CIS	Catalina Islan	61.45	71	P	P	14 16 02.2	+0.4
	baz=314,SNR=21						
TUQ	Turquoise Moun	61.52	68	P	P	14 16 03.2	+0.9
	baz=314,SNR=92						
CCUT	Cedar City	61.55	65	*e*P	P	14 16 03.8	+1.2
MSU	Marysvale	61.56	63	*e*P	P	14 16 04.3	+1.6
MSU	Marysvale	61.56	63	*e*P	P	14 16 04.3	+1.6
TMUT	Trail Mountain	61.56	62	*e*P	P	14 16 04.0	+1.2
FIA1	FINESS Array S	61.58	336	*e*P	P	14 16 00.6	-1.5
FINES	FINESS Array B	61.58	336	*i* P	P	14 16 01.1	-1.0
FINES				pmax	pmax		
	comp=Z,35nm,0.4s						
FINES	FINESS Array B	61.58	336	P	P	14 16 00.4	-1.7
	comp=Z,35nm,0.5s,baz=34,slow=6.6,SNR=86						
FINES				PKPPKP	P'P'df	14 45 01.6	-18
	comp=Z,5.6nm,0.9s,baz=145,slow=7.0,SNR=8.0						
FINES				PKP2bc		14 45 22.8	
	comp=Z,2.6nm,0.7s,baz=160,slow=6.1,SNR=4.5						
FINES				PKP2ab		14 45 32.1	
	comp=Z,9.8nm,1.0s,baz=236,slow=2.1,SNR=5.8						
FINES				LR	LR	14 45 57.7	
	comp=Z,121µm,21.8s,baz=21,slow=39						
FINES				P4KPbc		14 53 02.5	
	comp=Z,2.5nm,0.8s,baz=36,slow=7.3,SNR=5.5						
ULM	Lac du Bonnet	61.59	44	*e*P	P	14 16 02.5	+0.1
ULM	Lac du Bonnet	61.59	44	P	P	14 16 02.6	+0.2
	comp=Z,82nm,1.0s,baz=316,slow=7.3,SNR=38						
ULM				S	S	14 24 22.1	+1.9
	comp=Z,13nm,1.1s,baz=357,slow=18,SNR=2.4						
ULM				LR	LR	14 43 49.4	
	comp=Z,72µm,21.8s,baz=323,slow=37						
ULM				PKP2bc		14 45 23.8	
	comp=Z,8.2nm,0.9s,baz=129,slow=1.7,SNR=5.4						
MDND	Maddock	61.60	48	*e*P	P	14 16 04.3	+1.8
MDND	Maddock	61.60	48	P	P	14 16 03.6	+1.0
	baz=316,SNR=18						
SCI2	San Clemente I	61.66	72	P	P	14 16 03.9	+0.8
	baz=314						
SZCU	Shurtz Canyon	61.67	64	*e*P	P	14 16 04.5	+1.0
HEC	Hector,Ludlow	61.70	69	P	P	14 16 04.6	+1.1
	baz=314,SNR=62						
P17A	Butcher Ranch,	61.70	61	*e*P	P	14 16 04.8	+1.3
BBRC	Big Bear Solar	61.74	70	P	P	14 16 04.8	+0.8
	baz=314,SNR=44						
K22A	Casper	61.79	56	*e*P	P	14 16 04.7	+0.6
K22A	Casper	61.79	56	P	P	14 16 04.9	+0.9
	baz=315,SNR=67						
PUL	Pulkovo	61.81	333	*i* P	P	14 16 02.8	-0.9
PUL				pmax	pmax		
	comp=Z,136nm,0.7s						
PUL				MLR	MLR		
	comp=Z,99µm,19.0s						
Q16A	Castle Valley	61.85	62	*e*P	P	14 16 05.9	+1.3
MTPU	Mount Pierson	61.88	64	*e*P	P	14 16 06.5	+1.5
NSS	Namsos	61.93	344	*e*P	P	14 16 04.3	-0.1
NSS				IVmB_BB		14 16 10.1	
	comp=Z,7µm,4.0s						
NSS				*e*S	S	14 24 24.1	+0.1
NSS				IVMsBB		14 49 42.1	
	comp=Z,29µm,15.5s						
LCMT	Little Creek M	61.99	65	*e*P	P	14 16 06.8	+1.3
MURC	Murrieta	62.04	70	P	P	14 16 06.5	+0.7
	baz=315,SNR=31						
RSSD	Black Hills	62.05	54	*e*P	P	14 16 06.7	+0.8
RSSD	Black Hills	62.05	54	*e*P	P	14 16 06.7	+0.8
RSSD	Black Hills	62.05	54	P	P	14 16 06.8	+0.8
	baz=315						
SRU	San Rafael Swe	62.08	62	*e*P	P	14 16 07.2	+1.1
SRU	San Rafael Swe	62.08	62	*e*P	P	14 16 07.2	+1.1
RWWY	Rawlins	62.09	58	*e*P	P	14 16 06.0	-0.3
GMRC	Granite Mounta	62.13	68	P	P	14 16 07.1	+0.7
	baz=315,SNR=118						
KDI	Kendari	62.19	220	P	P	14 16 08.4	+1.6
	comp=Z,240nm,1.9s,comp=Z,7µm						
PKCU	Pink Cliffs	62.23	64	*e*P	P	14 16 09.1	+1.8
KNB	Kanab	62.23	65	*e*P	P	14 16 08.6	+1.5
KNB	Kanab	62.23	65	*e*P	P	14 16 08.6	+1.5
LDFC	Landfair	62.25	68	*e*P	P	14 16 08.6	+1.4
NDI	New Delhi	62.40	282	*e*P	P	14 16 08.0	-0.2
PFO	Pinyon Flats O	62.47	70	*e*P	P	14 16 09.2	+0.4
PFO				LR	LR		
	comp=Z,43µm,20.0s						
PFO	Pinyon Flats O	62.47	70	*e*P	P	14 16 09.2	+0.4
PFO				MLR	MLR		
	comp=Z,43µm,20.0s						
PFO	Pinyon Flats O	62.47	70	P	P	14 16 09.4	+0.6
	baz=315,SNR=36						
BELC	Belle Mtn. Jos	62.47	69	P	P	14 16 09.1	+0.3
	baz=315,SNR=44						
XPFO	Pion Flat	62.48	70	*e*P	P	14 16 09.2	+0.4
TTSI	Tana Toraja	62.55	223	P	P	14 16 09.5	+0.3
	comp=Z,99nm,1.2s,comp=Z,5µmcomp=Z,49µm						
109C	Camp Elliot, M	62.59	71	P	P	14 16 10.3	+0.9
	baz=315,SNR=5.3						
CPE	Camp Elliot	62.59	71	*e*P	P	14 16 10.7	+1.4
O20A	White River Ci	62.62	59	*e*P	P	14 16 10.6	+0.8
O20A	White River Ci	62.62	59	P	P	14 16 10.6	+0.8
	baz=315,SNR=136						
MOS	Moscow	62.71	327	*e*P	P	14 16 06.2	-3.6
MOS				*e*		14 16 46.0	
MOS				*e*S	S	14 24 31.5	-2.5
MOS				*i* SS	SS	14 28 35.9	-2.5
MOS				pmax	pmax		
	comp=Z,129nm,1.3s						
MOS				pmax	pmax		
	comp=Z,3µm,4.6s						
MOS				MLR	MLR		
	comp=N,72µm,22.0s						
MOS				MLR	MLR		
	comp=E,75µm,22.0s						
MOS				MLR	MLR		
	comp=Z,112µm,22.0s						
NEE2	Needles Airpor	62.75	68	P	P	14 16 11.4	+0.9
	baz=315,SNR=10.0						
SAUI	Saumlaki	62.77	209	*e*P	P	14 16 13.1	+2.5
SAUI	Saumlaki	62.77	209	P	P	14 16 12.3	+1.7
	comp=Z,966nm,1.5s,comp=Z,16µmcomp=Z,55µm						
IRM	Iron Mountain	62.87	69	P	P	14 16 12.2	+0.9
	baz=315,SNR=161						
MTKI	Muara Teweh, K	62.96	229	P	P	14 16 13.5	+1.5
	comp=Z,620nm,1.4s,comp=Z,10µm						
BAR	Barrett	63.00	71	*e*P	P	14 16 12.9	+0.8
MONP2	Monument Peak	63.00	70	P	P	14 16 12.9	+0.5
	baz=315,SNR=37						
BWNR	Bhubaneshwar	63.02	269	*e*x	P	14 16 07.8	-4.5
BWNR				IAmb	IAmb	14 16 09.9	
	comp=Z,743nm,1.2s						
AGMN	Agassiz Nation	63.02	46	*e*P	P	14 16 12.0	0.0
AGMN				LR	LR		
	comp=Z,72µm,22.0s						
AGMN	Agassiz Nation	63.02	46	P	P	14 16 11.9	-0.1
	baz=317,SNR=53						
BC3	Big Chuckawall	63.04	69	P	P	14 16 13.2	+0.7
	baz=315,SNR=47						
KSM	Kuching	63.19	235	P	P	14 16 15.9	+2.5
KBL	Kabul	63.23	292	*e*P	P	14 16 11.8	-2.1
KBL	Kabul	63.23	292	*e*P	P	14 16 11.8	-2.1
PV09	Paradox Valley	63.28	61	*e*P	P	14 16 15.1	+0.9
PHWY	Pilot Hill	63.30	57	*e*P	P	14 16 14.8	+0.4
PV21	Cone Mtn., Par	63.32	61	*e*P	P	14 16 15.4	+0.9
N23A	Red Feather La	63.33	57	*e*P	P	14 16 15.7	+1.2
N23A	Red Feather La	63.33	57	P	P	14 16 15.8	+1.2
	baz=316,SNR=154						
SWSC	Sam W. Stewart	63.33	70	P	P	14 16 14.6	+0.4
	baz=315,SNR=19						
IKP	In-Ko-Pah, Jac	63.35	70	P	P	14 16 15.3	+0.7
	baz=315,SNR=32						
PDMCI	Parker Dam,Lak	63.36	68	P	P	14 16 15.4	+1.0
	baz=315,SNR=61						
PV23	Carpenter Ridg	63.38	61	*e*P	P	14 16 15.8	+0.9
SPSI	Sidrap Palu	63.39	223	P	P	14 16 15.4	+0.6
	comp=Z,210nm,1.4s,comp=Z,5µmcomp=Z,36µm						
TBLU	Trondheim	63.41	344	*e*P	P	14 16 15.3	+1.0
TBLU				*i*		14 20 23.7	
TBLU				*e*S	S	14 24 39.6	-3.1
TBLU				IVMs_BB	IVMs_BB	14 50 22.7	
	comp=Z,28µm,16.3s						
PV10	Paradox Valley	63.42	61	*e*P	P	14 16 16.6	+1.5
PV14	Lion Creek, Pa	63.43	61	*e*P	P	14 16 16.1	+0.9
PV04	Paradox Valley	63.48	61	*e*P	P	14 16 16.4	+1.0
PV20	West Nyswonger	63.48	61	*e*P	P	14 16 16.6	+1.1
PV19	Morning Glory	63.49	61	*e*P	P	14 16 16.4	+0.8
Y12C	Blythe	63.52	68	*e*P	P	14 16 16.4	+0.9
Y12C	Blythe	63.52	68	P	P	14 16 16.6	+1.1
	baz=315,SNR=55						
PV17	East Wray Mesa	63.53	61	*e*P	P	14 16 16.8	+1.0
PV16	Nyswonger Mesa	63.53	61	*e*P	P	14 16 16.8	+1.0
PV11	David Mesa, Pa	63.56	61	*e*P	P	14 16 17.1	+1.1
OBN	Obninsk	63.57	327	*e*P	P	14 16 14.5	-1.0
OBN	Obninsk	63.57	327*c*	*i*P	P	14 16 12.6	-2.9
OBN				*e*		14 16 51.0	
OBN				*e*		14 18 35.5	
OBN				*i* S	S	14 24 42.9	-1.9
OBN				pmax	pmax		
	comp=Z,73nm,0.9s						
OBN				MLR	MLR		
	comp=Z,112µm,21.0s						
OBN	Obninsk	63.57	327	LR	LR	14 47 01.3	
	comp=Z,29µm,21.0s,baz=32,slow=39						
PV12	Saucer Basin,	63.59	61	*e*P	P	14 16 17.1	+0.9
PV07	Paradox Valley	63.59	61	*e*P	P	14 16 17.1	+0.9
BBSI	Bau Bau	63.59	220	P	P	14 16 18.2	+2.1
	comp=Z,35nm,1.4s,comp=Z,1µm						
PV05	Paradox Valley	63.59	62	*e*P	P	14 16 17.4	+1.1
PV03	Paradox Valley	63.61	61	*e*P	P	14 16 17.2	+0.8
BNSI	Bone	63.64	222	P	P	14 16 17.3	+0.9
	comp=Z,285nm,1.1s,comp=Z,7µmcomp=Z,59µm						
PV13	Radium Mtn., P	63.69	61	*e*P	P	14 16 17.8	+0.9
PV02	Paradox Valley	63.70	61	*e*P	P	14 16 18.0	+1.0
PV15	Paradox Valley	63.75	61	*e*P	P	14 16 18.2	+0.9
GLA	Glamis	63.84	69	*e*P	P	14 16 18.7	+1.0
GLA	Glamis	63.84	69	*e*P	P	14 16 18.7	+1.0
GLA	Glamis	63.84	69	P	P	14 16 18.7	+1.0
	baz=315,SNR=47						
PV01	Paradox Valley	63.85	61	*e*P	P	14 16 18.9	+0.9
SKLT	Songkhla	63.89	248	P	P	14 16 20.9	+2.8
	comp=Z,614nm,1.3s,comp=Z,9µm						
KRAB	Krabi	63.89	250	P	P	14 16 21.6	+3.4
	comp=Z,2µm,0.8s,comp=Z,24µm						
TRTT	Trang	63.91	249	P	P	14 16 20.5	+2.3
	comp=Z,176nm,1.4s,comp=Z,4µmcomp=Z,34µm						
KTGM	Kuala Trenggan	63.92	244	P	P	14 16 22.0	+3.6
VSU	Vasula	63.92	334*c*	*i*P	P	14 16 16.7	-1.0
VSU				pmax	pmax		
	comp=Z,251nm,0.9s						
VSU				MLR	MLR		
	comp=Z,225µm,22.0s						
VSU	Vasula	63.92	334	*e*P	P	14 16 17.1	-0.6
SMCO	Snowmass	63.99	59	*e*P	P	14 16 20.0	+0.9
WUAZ	Wupatki	64.11	65	*e*P	P	14 16 21.0	+1.3
WUAZ	Wupatki	64.11	65	P	P	14 16 21.2	+1.5
	baz=316,SNR=134						
ISCO	Idaho Springs	64.28	58	*e*P	P	14 16 22.3	+1.5
ISCO				LR	LR		
	comp=Z,50µm,20.0s						
ISCO	Idaho Springs	64.28	58	*e*P	P	14 16 22.3	+1.5
ISCO				MLR	MLR		
	comp=Z,50µm,20.0s						
ISCO	Idaho Springs	64.28	58	P	P	14 16 22.4	+1.5
	baz=316,SNR=206						
KAPI	Kappang	64.34	223	PFAKE		14 16 30.0	+9.0
KAPI				LR	LR		
	comp=Z,6µm,22.0s						
SUSD	Miller	64.37	51	P	P	14 16 21.0	0.0
	baz=317,SNR=12						
KBKI	Kotabaru	64.42	227	P	P	14 16 22.3	+0.8
	comp=Z,138nm,1.2s,comp=Z,2µm						
BKSI	Bulukumba	64.46	222	P	P	14 16 22.3	+0.5
	comp=Z,84nm,1.3s,comp=Z,3µmcomp=Z,36µm						
MOL	Molde	64.50	345	*e*P	P	14 16 22.3	+0.8
MOL				IVmB_BB		14 16 27.0	
	comp=Z,6µm,3.7s						
MOL				IVMs_BB	IVMs_BB	14 40 37.7	
	comp=Z,15µm,37.4s						
MVCO	Mesa Verde	64.55	62	PFAKE		14 16 40.0	+17
MVCO				LR	LR		
	comp=Z,36µm,20.0s						
MVCO	Mesa Verde	64.55	62	P	P	14 16 23.7	+1.2
	baz=316,SNR=130						
PKDT	Phuket	64.67	250	P	P	14 16 25.4	+2.2
	comp=Z,306nm,1.2s,comp=Z,4µmcomp=Z,25µm						
LPSR	Galich'ya Gora	64.71	324	*e*P	P	14 16 21.5	-1.5
LPSR				*e*S	S	14 24 50.5	-8.4
LPSR				pmax	pmax		
	comp=Z,130nm,0.9s						
LPSR				smax	smax		
	comp=N,2µm,5.2s						
LPSR				MLR	MLR		
	comp=Z,176µm,21.0s						
VRH	Novokhopyorsk	64.72	321	*e*P	P	14 16 21.2	-1.9
VRH				*e*S	S	14 24 51.4	-7.7
VRH				*e*SS	SS	14 29 13.1	+3.2
VRH				pmax	pmax		
	comp=Z,190nm,0.8s						
VRH				smax	smax		
	comp=N,2µm,4.5s						
VRH				MLR	MLR		
	comp=Z,105µm,25.0s						
DOMB	Dombas	64.74	344	*e*P	P	14 16 23.1	-0.1
DOMB				IVmB_BB		14 16 25.3	
	comp=Z,4µm,2.9s						
DOMB				*e*S	S	14 25 01.4	+2.1
DOMB				IVMsBB		14 50 04.7	
	comp=Z,37µm,16.5s						
BORG	Borgarnes	64.80	359	*e*P	P	14 16 22.9	-0.5
	comp=Z,756nm,1.0s						
BORG	Borgarnes	64.80	359	*e*P	P	14 16 22.9	-0.5
BORG				pmax	pmax		
	comp=Z,756nm,1.0s						
BORG	Borgarnes	64.80	359	LR	LR	14 42 44.4	
	comp=Z,32µm,21.1s,baz=358,slow=34						
AKN	Aaknes	64.96	345	*e*P	P	14 16 24.8	+0.2
AKN				IVmB_BB		14 16 30.1	
	comp=Z,4µm,3.5s						
AKN				*e*S	S	14 25 03.7	+1.8
AKN				IVMs_BB	IVMs_BB	14 50 07.0	
	comp=Z,20µm,17.8s						
S22A	4UR Ranch, Cre	65.09	60	*e*P	P	14 16 27.6	+1.5
S22A	4UR Ranch, Cre	65.09	60	P	P	14 16 27.9	+1.8
	baz=316,SNR=414						
Q24A	Divide	65.13	58	P	P	14 16 27.5	+1.1
	baz=316,SNR=98						
PBA	Port Blair	65.14	258	*e*P	P	14 16 27.9	+1.6
PBA	Port Blair	65.14	258	*e*P	P	14 16 27.3	+1.1
PBA				IAmb	IAmb	14 16 32.6	
NC204	NORSAR Array S	65.15	343	*e*P	P	14 16 25.7	-0.1
EYMN	Ely	65.23	44	*e*P	P	14 16 27.0	+0.5
EYMN				LR	LR		
	comp=Z,89µm,22.0s						
EYMN	Ely	65.23	44	P	P	14 16 26.6	0.0
	baz=320,SNR=31						
NB2	NORSAR Subarra	65.29	343	P	P	14 16 26.2	-0.5
	comp=Z,790nm,2.0s,baz=23,slow=6.5						
NB2	NORSAR Subarra	65.29	343	P	P	14 16 26.2	-0.5
	baz=23,slow=6.5						
NOA	NORSAR Array B	65.29	343	P	P	14 16 25.7	-1.0
	comp=Z,27nm,0.6s,baz=25,slow=6.8,SNR=79						
NOA				PKPPKP	P'P'df	14 44 59.0	-14
	comp=Z,7.8nm,1.2s,baz=190,slow=3.2,SNR=3.8						
NOA				PKP2ab		14 45 18.6	
	comp=Z,4.1nm,1.0s,baz=170,slow=2.8,SNR=3.3						
NOA				LR	LR	14 50 05.4	
	comp=Z,51µm,19.6s,baz=25,slow=41						
VORR	Voronezh	65.33	323	*e*P	P	14 16 25.0	-2.1
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
W18A	Petrified Fore	65.34	64	P	P	14 16 29.1	+1.4
	baz=316						
OGNE	Ogallala	65.36	55	*e*P	P	14 16 28.5	+1.0
OGNE				LR	LR		
	comp=Z,39µm,21.0s						
OGNE	Ogallala	65.36	55	P	P	14 16 28.5	+1.0
	baz=317,SNR=65						
KULM	Kulim	65.38	246	P	P	14 16 30.4	+2.5
NC602	NORSAR Array S	65.50	342	*e*P	P	14 16 27.8	-0.3
NC602				IVmB_BB		14 16 33.4	
	comp=Z,4µm,4.0s						
NC602				*e*S	S	14 25 09.2	+0.6
NC602				IVMsBB		14 43 47.3	
	comp=Z,28µm,27.6s						
HFS	Hagfors	65.63	341	LR	LR	14 50 31.9	
	comp=Z,110µm,19.5s,baz=18,slow=41						
COEN	Coen	65.67	195	*e*P	P	14 16 30.6	+1.0
VSR	Storozhevoye	65.71	323	*e*P	P	14 16 28.3	-1.2
VSR				*e*PPP	PPP	14 20 31.7	
VSR				*e*S	S	14 25 04.8	-6.5
VSR				pmax	pmax		
	comp=Z,150nm,1.2s						
VSR				smax	smax		
	comp=N,2µm,6.3s						
VSR				MLR	MLR		
	comp=Z,170µm,21.0s						
214A	Organ Pipe Nat	65.81	69	P	P	14 16 31.7	+1.2
	baz=316,SNR=50						
FOO	Floro	65.82	346	*e*P	P	14 16 30.9	+0.9
FOO				*e*S	S	14 25 14.4	+2.1
FOO				IVMs_BB	IVMs_BB	14 50 38.1	
	comp=Z,17µm,23.4s						
IPM	Ipoh	65.82	246	P	P	14 16 32.9	+2.1
SDCO	Great Sand Dun	65.82	60	PFAKE		14 16 40.0	+9.2
SDCO				LR	LR		
	comp=Z,48µm,22.0s						
SDCO	Great Sand Dun	65.82	60	P	P	14 16 32.0	+1.2
	baz=317,SNR=224						
SLIT	Slitere, Latvi	65.85	335	*e*P	P	14 16 28.3	-2.0
SLIT				IAmb	IAmb	14 16 33.6	
	comp=Z,1µm,0.8s						
ECSD	EROS Data Cent	66.03	50	*e*P	P	14 16 31.7	0.0
ECSD				LR	LR		
	comp=Z,101µm,22.0s						
ECSD	EROS Data Cent	66.03	50	P	P	14 16 31.8	+0.1
	baz=318,SNR=124						
HYA	Hoyanger	66.05	345	*e*P	P	14 16 30.9	-0.6
HYA				IVmB_BB		14 16 34.2	
	comp=Z,5µm,2.7s						
HYA				*e*S	S	14 25 12.4	-2.7
HYA				IVMs_BB	IVMs_BB	14 50 57.7	
	comp=Z,17µm,16.3s						
PBKI	Pangkalan Bun	66.06	232	P	P	14 16 33.8	+1.6
	comp=Z,1µm,1.1s,comp=Z,10µm						
E38A	The Farm, Brul	66.22	45	*e*P	P	14 16 32.5	-0.5
E38A	The Farm, Brul	66.22	45	P	P	14 16 32.8	-0.1
	baz=320,SNR=29						
C40A	Isle Royale Na	66.27	42	P	P	14 16 32.9	-0.2
	baz=321						
SUE	Sulen	66.38	346	*e*P	P	14 16 34.4	+0.8
SUE				IVmB_BB		14 16 40.1	
	comp=Z,4µm,2.6s						
SUE				*e*S	S	14 25 20.4	+1.4
SUE				IVMsBB		14 50 54.3	
	comp=Z,14µm,14.7s						
OSL	Oslo	66.40	342	*e*P	P	14 16 34.7	+0.9
OSL				IVmB_BB		14 16 39.8	
	comp=Z,5µm,4.6s						
OSL				*e*S	S	14 25 16.4	-2.9
F37A	Hinrichs Farm,	66.41	46	P	P	14 16 34.1	0.0
	baz=320,SNR=20						
MYKOM	Kota Tinggi	66.41	241	P	P	14 16 37.6	+3.1
KSCO	Kaye Shedlock'	66.45	57	*e*P	P	14 16 35.7	+1.0
KSCO	Kaye Shedlock'	66.45	57	P	P	14 16 35.4	+0.7
	baz=317,SNR=29						
IVI	Ivigtut	66.48	13	*e*P	P	14 16 34.4	+0.2
FRIM	Kepong	66.48	244	P	P	14 16 37.3	+2.4
VIS	Vishakhapatnam	66.49	269	*i* P	P	14 16 35.6	+0.7
VIS				*i* x	x	14 25 26.3	
KGM	Kluang	66.52	242	P	P	14 16 38.0	+2.9
ISAL	Salakas	66.56	332	*e*P	P	14 16 34.1	-0.8
ISAL				IAmb	IAmb	14 16 36.5	
	comp=Z,35nm,1.0s						
F38A	Pierce - Schro	66.57	45	P	P	14 16 35.4	+0.2
	baz=320,SNR=85						
IDID	Didziasalis	66.60	332	*e*P	P	14 16 34.2	-0.9
IDID				IAmb	IAmb	14 16 36.7	
	comp=Z,44nm,1.0s						
NGP	Nagpur	66.67	275⇑	*i*P	P	14 16 36.1	0.0
NGP				IAmb	IAmb	14 16 37.4	
	comp=Z,564nm,0.6s						
NGP				*e*x	x	14 25 21.6	
NGP				IAMs_20	IAMs_20	14 46 16.0	
	comp=Z,70µm,28.3s						
SPMN	Marine on St.	66.71	46	*e*P	P	14 16 36.2	+0.1
SPMN	Marine on St.	66.71	46	P	P	14 16 36.1	0.0
	baz=320,SNR=37						
TUC	Tucson	66.75	67	P	P	14 16 37.7	+1.2
	baz=317						
TPRI	Tanjung Pinang	66.76	240	P	P	14 16 39.2	+2.5
	comp=Z,343nm,1.6s,comp=Z,8µmcomp=Z,75µm						
ASHT	Ashkhabad	66.81	302	P	P	14 16 37.3	+0.5
ASHT				pmax	pmax		
	comp=Z,216nm,0.8s						
SOEI	Soe	66.83	216	*e*P	P	14 16 38.0	+0.8
SOEI	Soe	66.83	216	P	P	14 16 37.7	+0.5
	comp=Z,526nm,1.1s,comp=Z,14µm						
E39A	Mellen	66.84	44	P	P	14 16 36.6	-0.3
	baz=320,SNR=17						
ASK	Askoy	66.86	345	*e*P	P	14 16 37.4	+0.8
ASK				IVmB_BB		14 16 43.2	
	comp=Z,6µm,3.9s						
ASK				*e*S	S	14 25 22.9	-1.9
ASK				*e*SKSac	SKSac	14 26 28.3	-0.3
ASK				IVMs_BB	IVMs_BB	14 52 34.2	
	comp=Z,17µm,17.2s						
T25A	Trinidad	66.86	59	P	P	14 16 38.3	+1.0
	baz=317,SNR=51						
KONO	Kongsberg	66.88	343	*e*P	P	14 16 37.1	+0.2
KONO	Kongsberg	66.88	343*c*	*i*P	P	14 16 36.2	-0.7
KONO				pmax	pmax		
	comp=Z,119nm,1.3s						
KONO				MLR	MLR		
	comp=Z,68µm,20.0s						
KONO	Kongsberg	66.88	343	*e*P	P	14 16 37.8	+1.0
KONO				IVmB_BB		14 16 43.5	
	comp=Z,5µm,6.0s						
KONO				*e*S	S	14 25 27.8	+2.5
KONO				*e*		14 30 00.2	
KONO				*i*		14 33 13.2	
KONO				IVMsBB		14 43 44.2	
	comp=Z,24µm,26.0s						
NRS	Narsarsuaq	66.90	12	*e*P	P	14 16 36.9	0.0
NRS	Narsarsuaq	66.90	12⇑	*i*P	P	14 16 36.9	0.0
	comp=Z,199nm,1.0s						
	comp=Z,83µm,22.0s						
NRS	Narsarsuaq	66.90	12	*e*P	P	14 16 36.9	0.0
EDFI	Ende, Flores	66.91	219	P	P	14 16 37.3	-0.4
	comp=Z,234nm,1.2s,comp=Z,6µm						
BER	Bergen	66.93	345	*e*P	P	14 16 37.8	+0.7
BER				IVmBBB		14 16 43.7	
	comp=Z,7µm,3.5s						
BER				*e*S	S	14 25 25.6	-0.1
BER				*e*ScS	ScS	14 26 30.7	+1.2
BER				IVMsBB		14 50 41.4	
	comp=Z,18µm,16.3s						
NACGM	Naroch	66.94	332	*e*P	P	14 16 35.0	-2.3
NACGM				*e*PP	PP	14 18 58.0	-6.6
NACGM				*e*PPP	PPP	14 21 10.0	
NACGM				*e*S	S	14 25 23.0	-3.0
NACGM				*e*PS		14 25 30.0	
NACGM				*e*SS	SS	14 29 40.0	-4.1
NACGM				*e*SSS	SSS	14 33 17.0	
NACGM				*e*LQ	LQ	14 37 56.0	
NACGM				*e*LR	LR	14 42 41.0	
MICGM	Minsk	66.94	331⇑	*e*P	P	14 16 36.0	-1.3
MICGM				*e*P	P	14 16 36.0	-1.3
MICGM				PM		14 16 38.0	
	comp=Z,0.5nm,2.0s						
MICGM				PM		14 16 44.0	
	comp=Z,13nm,24.0s						
MICGM				*e*pP	pP	14 16 46.0	-6.0
MICGM				*e*PP	PP	14 19 12.0	+7.4
MICGM				*e*PPP	PPP	14 20 40.0	
MICGM				*e*S	S	14 25 22.0	-4.1
MICGM				*e*sS	sS	14 25 48.0	-3.0

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MICGM                                  eSS      SS        14 29 44.0 -0.2
MICGM                                  eSSS     SSS       14 33 18.0
MICGM                                  eLQ      LQ        14 39 56.0
MICGM                                  eLR      LR        14 42 30.0
MICGM                                   LQM               14 42 56.0
       comp=E,61nm,26.0s
MICGM                                   LQM               14 43 06.0
       comp=E,99nm,24.0s
MICGM                                   LRM     MLR       14 47 52.0
       comp=N,200nm,20.0s
MICGM                                   LRM     MLR       14 47 56.0
       comp=Z,303nm,16.0s
MICGM                                   LRM     MLR       14 47 58.0
       comp=N,104nm,24.0s
MICGM                                   LRM     MLR       14 48 40.0
       comp=Z,112nm,20.0s
MICGM                                   LRM     MLR       14 49 04.0
       comp=E,83nm,18.0s
MICGM                                   LRM     MLR       14 49 08.0
       comp=E,142nm,20.0s
MNK    Minsk              66.94 331αeP      P         14 16 36.0 -1.3
MNK                                    e                  14 19 12.0
MNK                                    ePPP     PPP       14 20 40.0
MNK                                    eS       S         14 25 22.0 -4.1
MNK                                    e*SS     sS        14 25 48.0 -3.0
MNK                                    eSS      SS        14 29 44.0 -0.2
MNK                                     MLR     MLR
       comp=Z,303µm,16.0s
GEYT   Alibeck            66.97 302     P       P         14 16 37.8  0.0
       comp=Z,154nm,0.9s,baz=13,slow=3.2,SNR=126
GEYT                                    PKPPKP  P'P'df    14 45 04.3 -5.0
       comp=Z,0.5nm,0.4s,baz=238,slow=10,SNR=7.6
GEYT                                    PKP2bc            14 45 08.3
       comp=Z,1.5nm,0.7s,baz=197,slow=1.5,SNR=4.2
GEYT                                    PKP2ab            14 45 13.6
       comp=Z,2.0nm,0.9s,baz=284,slow=1.2,SNR=4.0
GEYT                                    LR      LR        14 49 05.5
       comp=Z,43µm,20.6s,baz=40,slow=39
GYA0B  ALIBECK ARRAY      66.97 302    eP       P         14 16 37.9 +0.1
BGNE   Belgrade           67.00  52    eP       P         14 16 38.2 +0.2
BGNE   Belgrade           67.00  52     P       P         14 16 38.1  0.0
       baz=318,SNR=26
F39A   Loretta            67.04  45     P       P         14 16 38.2 +0.1
       baz=320,SNR=29
ODD1   Odda               67.16 345    eP       P         14 16 38.6 -0.1
ODD1                                    IVmB_BB           14 16 45.5
       comp=Z,5µm,3.3s
ODD1                                   eS       S         14 25 31.1 +2.4
ODD1                                   eSKSac   ScS       14 26 31.7 +0.2
ODD1                                    IVMs_BB IVMs_BB   14 51 29.2
       comp=Z,40µm,18.8s
D41A   Chassel            67.19  43    eP       P         14 16 39.6 +0.6
D41A   Chassel            67.19  43     P       P         14 16 39.1 +0.1
       baz=321,SNR=17
G38A   Ridgeland          67.19  46     P       P         14 16 38.9 -0.2
       baz=320,SNR=30
ANMO   Albuquerque        67.32  62     PFAKE             14 16 50.0 +10
ANMO                                    LR      LR
       comp=Z,32µm,19.0s
ANMO   Albuquerque        67.32  62c iP       P         14 16 41.3 +1.0
ANMO                                    pmax    pmax
       comp=Z,158nm,1.1s
ANMO   Albuquerque        67.32  62     P       P         14 16 41.7 +1.4
       baz=317
PBUR   Paburg             67.36 335    eP       P         14 16 38.6 -1.3
PBUR                                    IAmb    IAmb      14 16 43.1
       comp=Z,200nm,0.8s
H38A   Maiden Rock        67.37  46     P       P         14 16 40.1 -0.1
       baz=320,SNR=23
F40A   Park Falls         67.39  44     P       P         14 16 40.1 -0.3
       baz=321,SNR=13
G39A   Holcombe           67.41  45     P       P         14 16 40.1 -0.3
       baz=320,SNR=30
MTN    Manton Dam         67.41 208    eP       P         14 16 41.5 +0.8
BATI   Baumata            67.48 216     P       P         14 16 39.5 -1.7
       comp=Z,94nm,2.3s,comp=Z,4µm
E41A   Kenton             67.48  43     P       P         14 16 40.4 -0.5
       baz=321,SNR=19
LHMI   Lhok Sumawe        67.61 250    eP       P         14 16 45.1 +3.0
LHMI   Lhok Sumawe        67.61 250     P       P         14 16 45.0 +2.9
       comp=Z,2µm,1.4s,comp=Z,30µmcomp=Z,98µm
BLS5   Blasjo             67.65 344    eP       P         14 16 41.6 -0.2
BLS5                                    IVmB_BB           14 16 48.4
       comp=Z,4µm,3.4s
BLS5                                   eS       S         14 25 31.1 -3.6
BLS5                                   eSS      SS        14 29 56.7 +1.7
BLS5                                    IVMsBB            14 51 32.2
       comp=Z,31µm,20.2s
COWI   Conover            67.68  44    eP       P         14 16 42.5 +0.2
COWI                                    LR      LR
       comp=Z,94µm,22.0s
Y22D   IRIS PASSCAL I     67.69  63     P       P         14 16 44.6 +2.0
       baz=317
H39A   Augusta            67.82  46     P       P         14 16 42.9 -0.2
       baz=321,SNR=16
G40A   Rib Lake           67.86  45    eP       P         14 16 43.7 +0.4
G40A   Rib Lake           67.86  45     P       P         14 16 43.2 -0.1
       baz=321,SNR=19
DSRI   Dabo               67.89 239     P       P         14 16 44.6 +0.8
E42A   Champion           67.96  43     P       P         14 16 43.8 -0.1
       baz=322,SNR=19
F41A   Three Lakes        67.98  44    eP       P         14 16 44.7 +0.6
F41A   Three Lakes        67.98  44     P       P         14 16 44.0 -0.1
       baz=321,SNR=17
TSI    Tuntungan          68.04 247     P       P         14 16 46.8 +2.0
       comp=Z,514nm,1.3s,comp=Z,14µm
KMY    Karmoy             68.06 345    eP       P         14 16 44.7 +0.4
KMY                                     IVmB_BB           14 16 50.6
       comp=Z,6µm,4.7s
KMY                                    eS       S         14 25 36.4 -2.9
KMY                                     IVMs_BB IVMs_BB   14 51 59.7
       comp=Z,22µm,18.2s
LRW    Lerwick            68.09 349    eP       P         14 16 44.6 +0.1
LRW                                     IAMs_20 IAMs_20   14 44 51.0
       comp=Z,45µm,20.3s
CBKS   Cedar Bluff        68.12  55    eP       P         14 16 45.1  0.0
CBKS                                    LR      LR
       comp=Z,29µm,20.0s
CBKS   Cedar Bluff        68.12  55    eP       P         14 16 45.1  0.0
CBKS                                    MLR     MLR
       comp=Z,29µm,20.0s
CBKS   Cedar Bluff        68.12  55     P       P         14 16 44.8 -0.3
       baz=318,SNR=57
TPI    Tanjungpandan      68.16 235     P       P         14 16 47.1 +1.6
       comp=Z,239nm,1.7s,comp=Z,8µm
H40A   Chili              68.27  45     P       P         14 16 45.7 -0.2
       baz=321,SNR=19
WSI    Waingapu           68.31 220     P       P         14 16 46.7 +0.4
       comp=Z,669nm,1.2s,comp=Z,15µm
121A   Cookes Peak, D     68.32  65     P       P         14 16 48.3 +1.7
       baz=318
I39A   Houston            68.35  47    eP       P         14 16 46.5 +0.1
I39A   Houston            68.35  47     P       P         14 16 46.0 -0.4
       baz=321,SNR=35
G41A   Antigo             68.36  44     P       P         14 16 46.2 -0.2
       baz=322
HOMB   Homborsund         68.38 343    eP       P         14 16 45.8 -0.5
HOMB                                   epP      pP        14 16 58.0 -2.9
HOMB                                    IVmB_BB           14 17 19.0
       comp=Z,4µm,4.3s
HOMB                                   eS       S         14 25 42.9 -0.3
HOMB                                    IVMsBB            14 44 24.9
       comp=Z,20µm,26.1s
F42A   Maple Grove Fa     68.39  43     P       P         14 16 46.7  0.0
       baz=322
E43A   Lone Tree Farm     68.39  42    eP       P         14 16 47.1 +0.4
E43A   Lone Tree Farm     68.39  42     P       P         14 16 46.1 -0.5
       baz=322,SNR=8.3
PSI    Prapat             68.39 246    eP       P         14 16 48.4 +1.2
PSI    Prapat             68.39 246     P       P         14 16 48.6 +1.4
       comp=Z,80nm,0.9s,baz=0.0,slow=5.2,SNR=69
PSI                                     S       S         14 25 45.4 +0.6
       comp=Z,3.3nm,0.7s,baz=360,slow=19,SNR=2.2
SCHQ   Schefferville      68.44  26     P       P         14 16 46.9 +0.1
       comp=Z,159nm,0.9s,baz=348,slow=6.7,SNR=76
SCHQ                                    S       S         14 25 41.9 -2.2
       comp=Z,6.5nm,0.8s,baz=354,slow=9.2,SNR=1.9
SCHQ                                    PKPPKP  P'P'df    14 45 01.6 -6.1
       comp=Z,30nm,1.1s,baz=166,slow=2.4,SNR=11
SCHQ                                    LR      LR        14 50 25.6
       comp=Z,31µm,20.2s,baz=332,slow=39
PPBI   Pangkal Pinang     68.45 237     P       P         14 16 49.5 +2.1
       comp=Z,188nm,1.6s,comp=Z,8µmcomp=Z,43µm
KCSI   Kotacane, Aceh     68.49 248     P       P         14 16 47.5 -0.1
       comp=Z,103nm,1.1s,comp=Z,4µmcomp=Z,71µm
SNART  Snartemo           68.55 344    eP       P         14 16 48.0 +0.7
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SNART                                  eS       S         14 25 46.2 +1.0
SNART                                   IVMs_BB IVMs_BB   14 52 12.8
       comp=Z,14µm,18.3s
MAK    Makhachkala        68.56 312    eP       P         14 16 46.8 -0.9
MAK                                    e*SP     pP        14 17 05.0 +2.6
MAK                                    e                  14 19 18.3
MAK                                    ePPP     PPP       14 20 57.0
MAK                                    eS       S         14 25 46.5 +0.7
MAK                                    e*SS     sS        14 26 09.5 -1.1
MAK                                    eSS      SS        14 30 10.2 +0.4
MAK                                     pmax    pmax
       comp=Z,2µm,3.8s
MAK                                     pmax    pmax
       comp=Z,205nm,0.7s
MAK                                     MLR     MLR
       comp=E,32µm,17.0s
PLAI   Plampang           68.60 223     P       P         14 16 47.8 -0.4
       comp=E,380nm,1.0s,comp=E,6µmcomp=E,58µm
H41A   Junction City      68.61  45    eP       P         14 16 47.5 -0.6
H41A   Junction City      68.61  45     P       P         14 16 47.7 -0.3
       baz=321,SNR=26
E44A   Grand Marais A     68.66  41     P       P         14 16 48.3 +0.1
       baz=323
J39A   Decorah            68.66  47     P       P         14 16 47.6 -0.7
       baz=321,SNR=34
G42A   Mountain           68.66  44    eP       P         14 16 48.3  0.0
G42A   Mountain           68.66  44     P       P         14 16 48.4 +0.1
       baz=322,SNR=12
BASI   Baing, Sumba       68.69 219     P       P         14 16 48.6 -0.1
       comp=E,1µm,1.7s,comp=E,15µm
MLSI   Meulaboh, Aceh     68.70 250     P       P         14 16 49.4 +0.5
       comp=E,1µm,1.0s,comp=E,11µmcomp=E,65µm
I40A   Norwalk            68.73  46     P       P         14 16 48.5 -0.3
       baz=321,SNR=20
KMMI   Kalianget          68.74 227     P       P         14 16 50.7 +1.6
       comp=E,121nm,1.1s,comp=E,2µm
F43A   Flat Rock, Esc     68.75  43     P       P         14 16 48.6 -0.3
       baz=322,SNR=22
SUW    Suwalki            68.77 333    eP       P         14 16 48.8  0.0
SUW                                    eS       S         14 25 45.8 -2.2
SUW                                     LMZ     LR        14 48 47.4
       comp=E,150µm,23.0s
SUW    Suwalki            68.77 333    eP       P         14 16 48.0 -0.9
SUW    Suwalki            68.77 333    eP       P         14 16 48.8  0.0
SUW                                    eS       S         14 25 45.8 -2.2
SUW                                     MLR     MLR
       comp=Z,150µm,23.0s
I41A   Arkdale            68.94  45    eP       P         14 16 50.4 +0.3
I41A   Arkdale            68.94  45     P       P         14 16 50.0 -0.1
       baz=321,SNR=17
F44A   Big Bay de Noc     68.96  42     P       P         14 16 50.0 -0.2
       baz=323,SNR=11
GOF    Gofitskoye         68.96 316⇑iP      P         14 16 49.6 -0.6
GOF                                    eS       S         14 25 53.2 +2.6
GOF                                     pmax    pmax
       comp=Z,260nm,1.0s
GOF                                     smax    smax
       comp=E,410nm,2.6s
G43A   Wallace            68.98  43    eP       P         14 16 50.8 +0.6
G43A   Wallace            68.98  43     P       P         14 16 50.2  0.0
       baz=322,SNR=12
TPTI                      69.05 248     P       P         14 16 50.7 -0.4
       comp=E,151nm,1.6s,comp=E,3µmcomp=E,42µm
SCIA   State Center       69.05  49    eP       P         14 16 51.2 +0.5
SCIA                                    LR      LR
       comp=Z,130µm,22.0s
SCIA   State Center       69.05  49     P       P         14 16 51.1 +0.4
       baz=320,SNR=19
J40A   Soldiers Grove     69.06  46     P       P         14 16 50.2 -0.6
       baz=321,SNR=13
K39A   Oelwein            69.06  48     P       P         14 16 50.3 -0.6
       baz=321,SNR=23
KLNR   Kaliningrad        69.07 335c iP       P         14 16 49.8 -0.9
KLNR                                    pmax    pmax
       comp=Z,456nm,1.0s
KLNR                                    MLR     MLR
       comp=Z,77µm,17.0s
SRBI   Singaraja          69.08 225     P       P         14 16 52.0 +0.8
       comp=Z,232nm,1.2s,comp=Z,5µmcomp=Z,35µm
GROC   Groznyy            69.17 313    eP       P         14 16 50.7 -0.8
GROC                                   e                  14 17 16.5
GROC                                   e                  14 19 24.8
GROC                                    pmax    pmax
       comp=Z,212nm,1.8s
E45A   Wooded Hills,      69.18  41     P       P         14 16 51.0 -0.5
       baz=323
BKNI   Bangkinang         69.19 243    eP       P         14 16 53.6 +1.6
BKNI   Bangkinang         69.19 243     P       P         14 16 53.9 +1.9
       comp=Z,1µm,1.0s,comp=Z,14µmcomp=Z,85µm
H42A   Shiocton           69.19  44     P       P         14 16 51.5 -0.2
       baz=322
D46A   Sault St. Mari     69.22  40     P       P         14 16 50.9 -0.9
       baz=324,SNR=34
MATQ   Matagami           69.34  35     P       P         14 16 51.9 -0.6
       baz=326,SNR=43
K40A   Colesburg          69.42  47     P       P         14 16 52.6 -0.5
       baz=321,SNR=19
J41A   Loganville         69.42  46     P       P         14 16 52.6 -0.4
       baz=322,SNR=20
L39A   Vinton             69.46  48     P       P         14 16 53.1 -0.2
       baz=321,SNR=37
D47A   Chapleau           69.47  39     P       P         14 16 52.6 -0.7
       baz=324,SNR=32
I42A   Draeger Farm,      69.51  45    eP       P         14 16 53.4 -0.2
I42A   Draeger Farm,      69.51  45     P       P         14 16 53.1 -0.4
       baz=322,SNR=11
SRIG   Santa Rosalia      69.51  72    eP       P         14 16 58.2 +4.4
KSU1   Kansas State U     69.51  53    eP       P         14 16 53.0 -0.7
KSU1                                    LR      LR
       comp=Z,94µm,20.0s
KSU1   Kansas State U     69.51  53     P       P         14 16 52.7 -1.0
       baz=320,SNR=24
E46A   Sault Ste Mari     69.53  41     P       P         14 16 53.0 -0.7
       baz=324,SNR=15
H43A   Windswept, Lux     69.56  44    eP       P         14 16 54.4 +0.5
H43A   Windswept, Lux     69.56  44     P       P         14 16 53.9  0.0
       baz=322,SNR=7.3
F45A   CMU Biological     69.57  42     P       P         14 16 53.5 -0.4
       baz=323,SNR=9.7
MNSI   Mandailing Nat     69.64 245     P       P         14 16 54.8 +0.1
       comp=Z,100nm,1.0s,comp=Z,4µmcomp=Z,68µm
JFWS   Jewell Farm        69.66  46    eP       P         14 16 54.1 -0.5
JFWS                                    LR      LR
       comp=Z,84µm,21.0s
JFWS   Jewell Farm        69.66  46    eP       P         14 16 54.1 -0.5
JFWS                                    MLR     MLR
       comp=Z,84µm,21.0s
JFWS   Jewell Farm        69.66  46     P       P         14 16 53.8 -0.7
       baz=322,SNR=12
AKASG  Malin Array Be     69.73 328     P       P         14 16 53.1 -1.7
       comp=Z,24nm,0.5s,baz=32,slow=6.6,SNR=59
AKASG                                   PKP2bc            14 45 00.3
       comp=Z,0.7nm,0.5s,baz=232,slow=2.5,SNR=11
AKASG                                   LR      LR        14 50 36.7
       comp=Z,107µm,21.1s,baz=25,slow=39
AKASG                                   P4KPbc            14 53 28.4
       comp=Z,0.1nm,0.3s,baz=313,slow=9.7,SNR=2.7
HYB    Hyderabad          69.74 273⇑iP      P         14 16 56.0 +0.6
       comp=Z,210nm,1.0s
HYB                                    ePP      PP        14 19 30.0  0.0
HYB                                    eS       S         14 26 00.0 -0.5
HYB                                    eScS     SKKSac    14 26 52.0 +0.1
HYB                                    eSS      SS        14 30 32.0 +2.6
HYB                                     LR      LR
       comp=Z,20nm,30.0s
HYB    Hyderabad          69.74 273    eP       P         14 16 55.0 -0.5
KIEV   Kiev               69.74 328    eP       P         14 16 53.0 -1.9
KIEV                                    LR      LR
       comp=Z,111µm,21.0s
KIEV   Kiev               69.74 328⇓iP      P         14 16 55.6 +0.7
KIEV   Kiev               69.74 328    i P      P         14 16 53.3 -1.6
       SNR=24
KIEV   Kiev               69.74 328c iP       P         14 16 53.3 -1.6
KIEV                                    pmax    pmax
       comp=Z,64nm,0.9s
KIEV                                    MLR     MLR
       comp=Z,117µm,21.0s
F46A   Macinaw City C     69.82  41     P       P         14 16 55.0 -0.4
       baz=324,SNR=32
PMBI   Palembang          69.83 238     P       P         14 16 58.2 +2.3
       comp=Z,482nm,0.8s,comp=Z,14µmcomp=Z,78µm
I43A   Langenfeld Bro     69.86  45     P       P         14 16 55.3 -0.4
       baz=322,SNR=5.6
J42A   Columbus           69.86  46     P       P         14 16 55.4 -0.4
       baz=322,SNR=20
L40A   Anamosa            69.87  48    eP       P         14 16 55.3 -0.6
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L40A   Anamosa            69.87  48     P       P         14 16 55.3 -0.6
       baz=321,SNR=24
K41A   Shullsburg         69.88  47     P       P         14 16 55.5 -0.4
       baz=322,SNR=16
M39A   Webster            69.88  49     P       P         14 16 55.8 -0.1
       baz=321,SNR=79
E47A   Iron Bridge        69.88  40     P       P         14 16 54.8 -1.0
       baz=324,SNR=26
D48A   Paudash Townsh     69.89  39     P       P         14 16 54.7 -1.2
       baz=325,SNR=22
JAGI   Jajag, Banyuwa     69.90 226    eP       P         14 16 54.9 -1.4
JAGI   Jajag, Banyuwa     69.90 226     P       P         14 16 55.4 -0.9
       comp=Z,83nm,1.1s,comp=Z,5µmcomp=Z,51µm
BSD    Bornholm Skovb     69.95 338    i P      P         14 16 55.1 -1.0
       comp=Z,338nm,1.4s
       comp=Z,112µm,20.0s
BSD    Bornholm Skovb     69.95 338    i P      P         14 16 55.1 -1.0
BSD                                     pmax    pmax
       comp=Z,340nm,1.4s
BSD                                     MLR     MLR
       comp=Z,110µm,20.0s
MUD    Monsted U'grnd     69.95 342    i P      P         14 16 56.5 +0.5
       comp=Z,69µm,22.0s
MUD    Monsted U'grnd     69.95 342    i P      P         14 16 56.5 +0.5
MUD                                     MLR     MLR
       comp=Z,69µm,22.0s
KVAR   Kislovodsk Arr     69.99 316     LR      LR        14 51 31.6
       comp=Z,39µm,21.4s,baz=274,slow=39
D49A   Beulah Townshi     69.99  38     P       P         14 16 55.4 -1.1
       baz=325,SNR=26
COP    Copenhagen         69.99 340    i P      P         14 16 56.5 +0.2
       comp=Z,67µm,24.0s
COP    Copenhagen         69.99 340    i P      P         14 16 56.5 +0.2
COP                                     MLR     MLR
       comp=Z,67µm,24.0s
KIV    Kislovodsk         69.99 316    eP       P         14 16 56.2 -0.4
KIV                                     LR      LR
       comp=Z,72µm,22.0s
KIV    Kislovodsk         69.99 316⇑iP      P         14 16 56.6 -0.1
KIV    Kislovodsk         69.99 316    i P      P         14 16 56.0 -0.6
       SNR=12
KIV    Kislovodsk         69.99 316    eP       P         14 16 56.2 -0.4
KIV                                    e                  14 17 18.7
KIV                                    e                  14 19 31.4
KIV                                    eS       S         14 26 02.7 -0.2
KIV                                    eSS      SS        14 30 33.4 +1.5
KIV                                     pmax    pmax
       comp=Z,1µm,4.3s
KIV                                     pmax    pmax
       comp=Z,62nm,1.1s
KIV                                     MLR     MLR
       comp=Z,54µm,17.0s
KIV    Kislovodsk         69.99 316     P       P         14 16 56.2 -0.4
       SNR=38
KIV                                     P       P         14 16 56.2 -0.4
       SNR=38
KIV                                     P       P         14 16 56.2 -0.4
       SNR=38
SDSI   Sungai Dareh       70.01 242     P       P         14 16 58.4 +1.4
       comp=Z,184nm,1.2s,comp=Z,7µmcomp=Z,70µm
AMTX   Amarillo           70.01  59     P       P         14 16 57.8 +0.8
       baz=319
BIGH   Upper Bighouse     70.02 350    eP       P         14 16 56.3 -0.1
BIGH                                    IAmb    IAmb      14 16 57.8
       comp=Z,290nm,1.1s
BIGH                                    IAMs_20 IAMs_20   14 42 33.4
       comp=Z,49µm,25.1s
G45A   Suttons Bay        70.02  42     P       P         14 16 56.4 -0.3
       baz=323
KBZ    Khabaz             70.08 315     P       P         14 16 56.9 -0.2
       comp=Z,62nm,0.9s,baz=58,slow=3.3,SNR=92
KBZ                                     PKP2bc            14 44 56.1
       comp=Z,4.0nm,1.0s,baz=97,slow=1.1,SNR=7.7
KBZ                                     LR      LR        14 50 58.4
       comp=Z,109µm,21.9s,baz=31,slow=39
MSTX   Muleshoe           70.09  61     P       P         14 16 58.1 +0.6
       baz=319,SNR=11
J43A   Natural Harves     70.13  45     P       P         14 16 56.8 -0.6
       baz=322
G46A   Petoskey           70.14  42     P       P         14 16 57.2 -0.3
       baz=324,SNR=15
LSQQ   Lebel-sur-Quev     70.17  35     P       P         14 16 56.9 -0.6
       baz=327
K42A   Prairie Point,     70.18  46     P       P         14 16 57.3 -0.4
       baz=322,SNR=15
H45A   Beulah             70.19  43     P       P         14 16 57.6 -0.2
       baz=323
L41A   Preston            70.20  47     P       P         14 16 57.4 -0.5
       baz=322,SNR=26
NGJI   Ngawi              70.20 229     P       P         14 17 00.1 +2.0
       comp=Z,200nm,1.5s,comp=Z,11µm
SNSI   Sinabang, Aceh     70.23 248     P       P         14 17 00.1 +1.7
       comp=Z,2µm,1.1s,comp=Z,24µmcomp=Z,72µm
M40A   Post Highland      70.25  48     P       P         14 16 57.8 -0.3
       baz=321,SNR=49
E48A   Lockeyer           70.31  39     P       P         14 16 57.6 -0.9
       baz=325,SNR=24
MNTX   Cornudas Mount     70.31  64     PFAKE             14 17 10.0 +11
MNTX                                    LR      LR
       comp=Z,37µm,22.0s
MNTX   Cornudas Mount     70.31  64     P       P         14 16 59.9 +1.2
       baz=318
CHGQ   Chibougamau        70.36  33     P       P         14 16 58.2 -0.5
       baz=328,SNR=56
GSI    Gunungsitoli       70.39 247    eP       P         14 17 00.4 +1.0
GSI    Gunungsitoli       70.39 247     P       P         14 17 00.7 +1.4
       comp=Z,402nm,1.8s,comp=Z,16µmcomp=Z,74µm
SMRI   Semarang           70.42 230    eP       P         14 17 00.9 +1.4
SMRI   Semarang           70.42 230     P       P         14 17 01.2 +1.7
       comp=Z,511nm,1.3s
NEY    Neytrino           70.53 315c iP       P         14 17 00.1  0.0
NEY                                     MLR     MLR
       comp=Z,58µm,21.0s
PDSI   Padang             70.53 243     P       P         14 17 00.0 -0.2
       comp=Z,129nm,1.0s,comp=Z,4µmcomp=Z,64µm
I45A   Fountain           70.58  43     P       P         14 17 00.2 +0.1
       baz=323
MSVF   Nonsavu            70.58 159    eP       P         14 17 02.5 +2.1
       comp=Z,306nm,1.4s
MSVF                                    LR      LR
       comp=Z,9µm,21.0s
MSVF   Nonsavu            70.58 159    eP       P         14 17 02.5 +2.1
MSVF                                    pmax    pmax
       comp=Z,306nm,1.4s
MSVF                                    MLR     MLR
       comp=Z,9µm,21.0s
N40A   Mertquake, Sal     70.62  49     P       P         14 17 00.3 -0.1
       baz=321,SNR=71
H46A   Fife Lake          70.62  42     P       P         14 17 00.3  0.0
       baz=324,SNR=7.3
GLMI   Grayling           70.64  42     PFAKE             14 17 10.0 +9.5
GLMI                                    LR      LR
       comp=Z,60µm,21.0s
GLMI   Grayling           70.64  42     P       P         14 17 00.5 -0.1
       baz=324
L42A   Oliver, Polo       70.64  47    eP       P         14 17 00.4 -0.2
L42A   Oliver, Polo       70.64  47     P       P         14 16 60.0 -0.6
       baz=322,SNR=13
F48A   Evansville         70.66  40     P       P         14 16 59.9 -0.7
       baz=325,SNR=11
D50A   G1974 Best Tow     70.67  37     P       P         14 16 59.7 -1.0
       baz=326,SNR=22
G47A   Hillman            70.68  41     P       P         14 17 00.2 -0.5
       baz=324,SNR=5.5
K43A   Burlington         70.70  45     P       P         14 17 00.5 -0.4
       baz=322
M41A   Milan              70.73  48     P       P         14 17 00.6 -0.5
       baz=322,SNR=32
TBLG   Delisi             70.81 313    eP       P         14 17 01.9 +0.3
TBLG   Delisi             70.81 313    eP       P         14 17 01.9 +0.3
RGN    Rugen              70.84 339    eP       P         14 17 01.7 +0.2
RGN                                     IAmb    IAmb      14 17 06.4
       comp=Z,443nm,1.2s
WOJI   Wonogiri, Jawa     70.87 230     P       P         14 17 02.9 +0.7
       comp=Z,120nm,1.7s,comp=Z,6µm
D51A   Lot 18 Range I     70.91  37     P       P         14 17 01.2 -0.8
       baz=326,SNR=21
L43A   Garden Prairie     70.93  46     P       P         14 17 01.9 -0.4
       baz=322,SNR=6.3
E50A   Wahnapitae         70.93  38     P       P         14 17 01.4 -0.8
       baz=326,SNR=12
KRJI   Kerinci            70.94 241     P       P         14 17 04.4 +1.6
       comp=Z,1µm,0.9s,comp=Z,18µmcomp=Z,42µm
F49A   Sandfield          70.95  40     P       P         14 17 01.4 -0.9
       baz=325,SNR=11
J45A   Montague           70.99  44     P       P         14 17 02.5 -0.2
       baz=323
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H47A  Mio               70.99  42   P        P         14 17 02.7  0.0
      baz=324
I46A  Reed City         70.99  43   P        P         14 17 02.8 +0.1
      baz=324,SNR=25
M42A  Sheffield         71.03  47   P        P         14 17 02.3 -0.7
      baz=322
GKP   Gorka Klasztor    71.05 336   eP       P         14 17 02.7 -0.1
GKP                                 eSKSac   SKSac     14 27 09.4 +8.8
GKP                                 LMZ      LR        14 47 15.4
      comp=Z,77µm,26.9s
GKP   Gorka Klasztor    71.05 336   eP       P         14 17 02.7 -0.1
GKP                                 e                  14 27 09.4
MME1  Meikle Cairn      71.06 349⇑  eP       P         14 17 02.5 -0.3
N41A  Harden Midland    71.10  48   eP       P         14 17 03.2 -0.2
N41A  Harden Midland    71.10  48   P        P         14 17 03.2 -0.2
      baz=322,SNR=36
MDO   Dochfour          71.11 350⇑  iP       P         14 17 03.1  0.0
UGM   Wanagama          71.13 230   eP       P         14 17 04.2 +0.4
UGM   Wanagama          71.13 230   P        P         14 17 05.2 +1.4
      comp=Z,724nm,1.5s
LHSI  Lahat             71.25 238   P        P         14 17 05.6 +1.1
      comp=Z,329nm,1.3s,comp=Z,9µmcomp=Z,62µm
CTA   Charters Tower    71.25 191   P        P         14 17 04.7 +0.3
CTA                                 pmax     pmax
      comp=Z,287nm,1.4s
CTA   Charters Tower    71.25 191   S        S         14 26 16.5 -1.2
      comp=Z,1.0nm,0.2s,baz=350,slow=6.1,SNR=2.2
CTAO  Charters Tower    71.25 191   PFAKE              14 17 20.0  +16
CTAO                                LR       LR
      comp=Z,20µm,22.0s
H48A  Harrisville       71.28  41   P        P         14 17 04.1 -0.3
      baz=324
L44A  Lake County Fo    71.31  46   P        P         14 17 04.3 -0.2
      baz=323
E51A  G1948 Merrick     71.32  38   P        P         14 17 03.6 -1.1
      baz=326,SNR=24
I47A  Gladwin           71.33  42   P        P         14 17 04.9 +0.2
      baz=324
KPL   Plockton          71.34 350⇑  eP       P         14 17 04.5  0.0
KPL                                 IAmb     IAmb      14 17 08.0
      comp=Z,569nm,1.2s
KPL                                 IAMs_20  IAMs_20   14 42 57.0
      comp=Z,50µm,28.6s
D52A  ZEK Kipawa Sen    71.37  37   P        P         14 17 04.1 -0.8
      baz=327,SNR=26
BEL   Belsk             71.38 333   eP       P         14 17 04.4 -0.4
BEL                                 LMZ      LR        14 49 56.1
      comp=Z,136µm,24.6s
BEL   Belsk             71.38 333   eP       P         14 17 04.4 -0.4
BEL                                 MLR      MLR
      comp=Z,136µm,24.6s
MASI  Maura Aman, Be    71.38 240   P        P         14 17 06.9 +1.5
      comp=Z,876nm,1.3s,comp=Z,18µm
J46A  Howard City       71.38  43   P        P         14 17 05.1 +0.1
      baz=324,SNR=18
N42A  Yates City        71.39  48   P        P         14 17 04.7 -0.4
      baz=322,SNR=49
DRUM  Mains of Drumt    71.40 349⇑  eP       P         14 17 04.8 -0.1
DRUM                                IAmb     IAmb      14 17 06.0
      comp=Z,655nm,1.3s
DRUM                                IAMs_20  IAMs_20   14 43 42.2
      comp=Z,39µm,25.8s
KLI   Kotabumi          71.41 237   P        P         14 17 05.7 +0.2
      comp=Z,274nm,1.1s,comp=Z,8µm
KPJI  Karang Pucung     71.41 232   P        P         14 17 05.8 +0.4
      comp=Z,175nm,1.4s,comp=Z,7µmcomp=Z,59µm
M43A  Waltham Townsh    71.42  47   P        P         14 17 04.9 -0.4
      baz=322,SNR=13
MDSI  Maura Dua         71.45 237   P        P         14 17 05.8 +0.1
      comp=Z,131nm,1.2s,comp=Z,6µm
I48A  Sherman Twp       71.54  42   P        P         14 17 06.1 +0.1
      baz=324
O41A  Passleys Farm,    71.55  49   P        P         14 17 06.0 -0.1
      baz=322,SNR=111
ANN   Anapa             71.56 319   eP       P         14 17 00.3 -5.7
ANN                                 e*PP     pP        14 17 14.2 -6.6
ANN                                 e                  14 17 27.4
ANN                                 e                  14 19 45.4
ANN                                 ePPP     PPP       14 21 32.2
ANN                                 eS       S         14 26 15.3 -5.5
ANN                                 e                  14 27 00.7
ANN                                 pmax     pmax
      comp=Z,221nm,2.0s
ANN                                 pmax     pmax
      comp=N,121nm,2.0s
ANN                                 pmax     pmax
      comp=Z,3µm,7.6s
ANN                                 pmax     pmax
      comp=N,1µm,7.7s
ANN                                 MLR      MLR
      comp=N,120µm,20.0s
ANN                                 MLR      MLR
      comp=Z,54µm,20.0s
SOC   Sochi             71.58 317c  iP       P         14 17 05.2 -1.0
SOC                                 e*PP     pP        14 17 19.3 -1.7
SOC                                 e*SP     sP        14 17 26.2 -0.7
SOC                                 e                  14 19 42.0
SOC                                 ePPP     PPP       14 21 32.3
SOC                                 eS       S         14 26 21.3 +0.1
SOC                                 pmax     pmax
      comp=Z,100nm,1.4s
SOC                                 MLR      MLR
      comp=Z,55µm,21.0s
TOBO  Tobermory, Bru    71.59  40   P        P         14 17 05.6 -0.7
      baz=325
BLSI  Bandar Lampung    71.63 236   P        P         14 17 06.6 -0.2
      comp=Z,136nm,0.5s,comp=Z,6µm
SISI  Saibi             71.65 244   P        P         14 17 08.3 +1.3
      comp=Z,394nm,1.2s,comp=Z,5µm
F51A  Arnstein          71.66  38   P        P         14 17 05.7 -1.0
      baz=326
WMOK  Wichita Mounta    71.69  57   eP       P         14 17 07.5 +0.5
WMOK  Wichita Mounta    71.69  57   eP       P         14 17 07.5 +0.5
WMOK  Wichita Mounta    71.69  57   P        P         14 17 07.6 +0.5
      baz=320,SNR=184
N43A  Stutzman Famil    71.71  47   P        P         14 17 06.8 -0.2
      baz=322,SNR=11
P41A  Barry, Barry      71.81  49   P        P         14 17 07.8 +0.2
      baz=322,SNR=80
EDU   Dundee            71.82 349⇑  iP       P         14 17 07.0 -0.4
J47A  Sunmer            71.83  43   P        P         14 17 07.8 +0.1
      baz=324,SNR=29
DBJI  Dramaga           71.85 234   P        P         14 17 08.3 +0.2
      comp=Z,273nm,1.2s,comp=Z,6µm
E52A  Mattawa           71.85  37   P        P         14 17 06.7 -1.1
      baz=327,SNR=17
K46A  Dorr              71.85  44   P        P         14 17 07.4 -0.4
      baz=324,SNR=11
O42A  Bath              71.87  48   P        P         14 17 07.8 -0.2
      baz=322,SNR=15
M44A  Midewin, Midew    71.88  46   eP       P         14 17 08.1 +0.1
M44A  Midewin, Midew    71.88  46   P        P         14 17 07.6 -0.4
      baz=323
D54A  Lac Fusel, La     71.88  36   P        P         14 17 07.2 -0.8
      baz=328,SNR=28
POO   Poona             71.89 277   eP       P         14 17 08.3 -0.2
MDRS  Chennai           71.93 269   eP       P         14 17 09.2 +0.5
MDRS                                IAmb     IAmb      14 17 10.9
MDRS                                IAMs_20  IAMs_20   14 45 39.1
      comp=Z,29µm,20.9s
HDIL  Hopedale          71.95  47   eP       P         14 17 08.2 -0.3
      comp=Z,532nm,1.1s
HDIL                                LR       LR
      comp=Z,95µm,20.0s
LWLI  Liwa              71.96 237   P        P         14 17 08.7 -0.2
      comp=Z,121nm,0.8s,comp=Z,4µm
F52A  Sundridge         72.00  38   P        P         14 17 07.9 -0.8
      baz=326,SNR=24
KLBO  Killbear Provi    72.01  39   P        P         14 17 08.2 -0.6
      baz=326,SNR=18
GNI   Garni             72.05 312   eP       P         14 17 10.0 +0.7
GNI                                 LR       LR
      comp=Z,108µm,20.0s
GNI   Garni             72.05 312   i P      P         14 17 09.9 +0.6
      SNR=32
GNI   Garni             72.05 312c  iP       P         14 17 09.7 +0.4
GNI                                 pmax     pmax
      comp=Z,409nm,1.1s
GNI                                 MLR      MLR
      comp=Z,262µm,21.0s
GNI   Garni             72.05 312   P        P         14 17 10.4 +1.1
      SNR=27
GNI                                 P        P         14 17 10.4 +1.1
      SNR=27
INVG  Invergeldie, C    72.06 349⇑  eP       P         14 17 08.6 -0.3
INVG                                IAmb     IAmb      14 17 10.0
      comp=Z,226nm,1.0s
INVG                                IAMs_20  IAMs_20   14 43 45.2
      comp=Z,47µm,24.9s
I49A  Point Hope        72.11  41   P        P         14 17 09.2 -0.2
      baz=325
KASI  Kota Agung        72.15 237   P        P         14 17 09.0 -0.9
      comp=Z,190nm,1.1s,comp=Z,4µmcomp=Z,51µm
O43A  Sugar Creek Fa    72.16  48   P        P         14 17 09.5 -0.2
      baz=322,SNR=23
L46A  Eue Claire        72.17  45   P        P         14 17 09.6 -0.1
      baz=324
LVV   L'vov             72.19 330   eP       P         14 17 10.1 +0.4
LVV                                 eS       S         14 26 27.1 -0.8
LVV                                 MLR      MLR
      comp=Z,119µm,19.0s
K47A  Vermontville      72.21  43   P        P         14 17 09.9 -0.1
      baz=324,SNR=22
P42A  Winchester        72.22  49   eP       P         14 17 09.8 -0.3
P42A  Winchester        72.22  49   P        P         14 17 09.9 -0.2
      baz=322,SNR=58
J48A  Bridge Port       72.22  42   P        P         14 17 10.2 +0.1
      baz=325
M45A  Boilermakers S    72.24  46   P        P         14 17 09.7 -0.4
      baz=323
BMRO  Meriville Lake    72.24  40   P        P         14 17 09.8 -0.3
      baz=326
BUKO  Buck Lake         72.27  38   P        P         14 17 09.5 -0.8
      baz=326
Q41A  Truxton           72.29  50   P        P         14 17 10.7 +0.2
      baz=322,SNR=198
N44A  Piper City        72.30  47   P        P         14 17 10.5 -0.1
      baz=323,SNR=17
PPSI  Pulau Pagai       72.31 242   P        P         14 17 12.1 +1.2
      comp=Z,659nm,1.1s,comp=Z,12µmcomp=Z,61µm
EAB   Aberfoyle         72.33 349⇑  iP       P         14 17 10.7 +0.2
ALGO  Algonquin Park    72.36  37   P        P         14 17 10.0 -0.9
      baz=327
TUL1  Leonard           72.37  55   P        P         14 17 11.3 +0.2
      baz=321,SNR=44
LAWE  Loch Awe, Argy    72.38 350⇑  eP       P         14 17 10.9 +0.2
LAWE                                IAmb     IAmb      14 17 12.6
      comp=Z,480nm,1.0s
LAWE                                IAMs_20  IAMs_20   14 43 26.8
      comp=Z,47µm,25.8s
ESY   Stoneypath        72.39 348⇑  iP       P         14 17 10.8  0.0
TASB  TASBURUN-IGDIR    72.42 312   eP       P         14 17 11.8 +0.4
BRCO  Bruce Peninsul    72.43  40   P        P         14 17 11.1 -0.3
      baz=326
J49A  Marlette          72.45  42   P        P         14 17 11.6 +0.2
      baz=325,SNR=12
EDI   Edinburgh         72.45 349⇑  eP       P         14 17 11.1 -0.1
EDI                                 IAmb     IAmb      14 17 14.4
      comp=Z,282nm,1.0s
EDI                                 IAMs_20  IAMs_20   14 47 18.8
      comp=Z,36µm,21.0s
BCA   Borcka            72.46 315   eP       P         14 17 10.7 -0.9
BCA   Borcka            72.46 315⇑  iP       P         14 17 11.2 -0.4
K48A  Perry             72.48  43   P        P         14 17 12.0 +0.3
      baz=324,SNR=42
BASO  Ashfield          72.53  40   P        P         14 17 11.8 -0.1
      baz=326,SNR=14
N45A  Kentland          72.55  46   P        P         14 17 11.8 -0.2
      baz=323,SNR=11
EAU   Auchinoon         72.56 349⇑  iP       P         14 17 12.1 +0.3
P43A  Skaggs, Pawnee    72.57  48   P        P         14 17 12.1 -0.1
      baz=323,SNR=23
EBL   Broad Law         72.58 349⇑  iP       P         14 17 12.1 +0.1
M46A  Old House Fiel    72.62  45   P        P         14 17 12.4 -0.1
      baz=324
RUE   Ruedersdorf       72.64 338   eP       P         14 17 12.1 -0.2
RUE                                 IAmb     IAmb      14 17 14.3
      comp=Z,211nm,1.0s
O44A  Mansfield         72.66  47   P        P         14 17 12.5 -0.2
      baz=323,SNR=12
Q42A  Golden Eagle      72.66  49   P        P         14 17 12.9 +0.2
      baz=322,SNR=102
BWLO  Walkerton         72.66  40   P        P         14 17 12.6 -0.1
      baz=326,SNR=8.9
L47A  Sherwood          72.68  44   P        P         14 17 12.4 -0.4
      baz=324,SNR=21
PGBU  Gleniffferbraes   72.72 349⇑  eP       P         14 17 12.8  0.0
PGBU                                IAmb     IAmb      14 17 14.4
      comp=Z,1µm,1.1s
PGBU                                IAMs_20  IAMs_20   14 44 16.5
      comp=Z,38µm,24.3s
R41A  Rosebud           72.73  50   P        P         14 17 13.2  0.0
      baz=322,SNR=112
KWP   Kalwaria Pacla    72.76 331   eP       P         14 17 13.0 -0.2
KWP                                 LMZ      LR        14 52 10.2
      comp=Z,254µm,21.4s
KWP   Kalwaria Pacla    72.76 331   eP       P         14 17 13.0 -0.2
KWP                                 MLR      MLR
      comp=Z,254µm,21.4s
SIM   Simferopol'       72.77 322c  iP       P         14 17 12.6 -0.7
SIM                                 i *PP    sP        14 17 43.0 +9.0
SIM                                 eSS      SS        14 31 22.0 +7.8
SIM                                 pmax     pmax
      comp=Z,860nm,4.2s
K49A  Clarkson          72.78  42   P        P         14 17 13.9 +0.4
      baz=325,SNR=22
ABTX  Abilene, Hawle    72.83  59   P        P         14 17 14.6 +0.7
      baz=320,SNR=138
G53A  Haliburton        72.83  38   P        P         14 17 13.2 -0.5
      baz=327
SENK  Senkaya-Erzuru    72.84 314   eP       P         14 17 14.5 +0.5
N46A  Monticello        72.86  46   P        P         14 17 13.5 -0.4
      baz=324
PEMO  Pembroke          72.90  37   P        P         14 17 13.3 -0.7
      baz=328,SNR=24
SADO  Sadowa            72.92  38   eP       P         14 17 13.0 -1.2
      comp=Z,168nm,1.4s
O45A  Potomac           72.93  47   P        P         14 17 14.3  0.0
      baz=323,SNR=23
DZM   Mont Dzumac       72.97 171   eP       P         14 17 16.7 +2.1
      comp=Z,476nm,1.3s
DZM   Mont Dzumac       72.97 171   S        SKiKP     14 26 42.2 -0.4
      comp=Z,7.0nm,0.9s,baz=308,slow=19,SNR=2.5
I51A  Listowel          72.97  40   P        P         14 17 14.5  0.0
      baz=326,SNR=19
CCM   Cathedral Cave    72.99  50   eP       P         14 17 14.3 -0.4
CCM   Cathedral Cave    72.99  50   eP       P         14 17 14.3 -0.4
CCM   Cathedral Cave    72.99  50   P        P         14 17 14.5 -0.2
      baz=322
M47A  Cromwell          72.99  45   P        P         14 17 14.4 -0.3
      baz=324,SNR=14
EKA   Eskdalemuir Ar    73.03 349   PKPPKP   P'P'df    14 44 54.8 -5.1
      comp=Z,0.3nm,0.4s,baz=150,slow=1.8,SNR=4.8
EKA                                 LR       LR        14 49 48.2
      comp=Z,18µm,19.6s,baz=40,slow=36
HHAR  Hobbs             73.03  53   eP       P         14 17 14.5 -0.5
KIS   Kishinev          73.03 326   i P      P         14 17 12.0 -2.8
      comp=Z,700nm,2.3s
KIS   Kishinev          73.03 326   ePP      PP        14 19 59.0 +1.8
      comp=Z,5µm,20.0s
KIS   Kishinev          73.03 326⇑  iP       P         14 17 12.0 -2.8
KIS                                 i                  14 17 30.0
KIS                                 i                  14 17 35.0
KIS                                 e                  14 19 59.0
KIS                                 ePPP     PPP       14 21 38.0
KIS                                 i S      S         14 26 29.0 -8.6
KIS                                 i                  14 27 14.0
KIS                                 ePS      PnS       14 27 30.0  +15
KIS                                 pmax     pmax
      comp=Z,700nm,2.3s
KIS                                 pmax     pmax
      comp=Z,10µm,22.0s
KIS                                 pmax     pmax
      comp=Z,5µm,20.0s
R42A  Luebbering        73.03  50   P        P         14 17 14.8 -0.1
      baz=322,SNR=65
Q43A  New Douglas       73.04  49   P        P         14 17 14.9 -0.1
      baz=323,SNR=29
L48A  N Adams           73.04  43   P        P         14 17 14.8 -0.2
      baz=324,SNR=36
ESK   Eskdalemuir       73.05 349   eP       P         14 17 14.9 +0.2
ESK                                 LR       LR
      comp=Z,48µm,20.0s
ESK   Eskdalemuir       73.05 349⇑  eP       P         14 17 14.9 +0.2
ESK                                 IAmb     IAmb      14 17 16.7
      comp=Z,2µm,1.1s
ESK                                 IAMs_20  IAMs_20   14 55 35.8
      comp=Z,234µm,20.2s
ESK   Eskdalemuir       73.05 349   i P      P         14 17 14.9 +0.2
TXAR  Lajitas Array     73.06  64   P        P         14 17 16.2 +0.8
      comp=Z,131nm,0.8s,baz=296,slow=4.0,SNR=238
TXAR                                PKP2ab             14 44 41.0
      comp=Z,1.6nm,1.0s,baz=169,slow=5.2,SNR=4.9
TXAR                                PKPPKP   P'P'df    14 44 53.9 -4.6
      comp=Z,4.7nm,1.2s,baz=155,slow=4.5,SNR=6.3
LATQ  La Tuque          73.07  33   P        P         14 17 14.9 -0.1
      baz=330,SNR=27
AAM   Ann Arbor         73.09  43   eP       P         14 17 16.1 +0.9
AAM                                 LR       LR
      comp=Z,42µm,21.0s
AAM   Ann Arbor         73.09  43   eP       P         14 17 16.1 +0.9
AAM                                 MLR      MLR
      comp=Z,42µm,21.0s
AAM   Ann Arbor         73.09  43   P        P         14 17 15.3 +0.1
      baz=325,SNR=9.4
I52A  Shelburne         73.09  40   P        P         14 17 14.8 -0.4
      baz=326
OJC   Ojcow             73.10 333   eP       P         14 17 15.0 -0.2
OJC                                 eSKSac   SKSac     14 27 37.8  +22
OJC                                 LMZ      LR        14 51 13.9
      comp=Z,125µm,23.4s
OJC   Ojcow             73.10 333   eP       P         14 17 14.6 -0.6
OJC   Ojcow             73.10 333   eP       P         14 17 15.0 -0.2
OJC                                 e                  14 27 37.8
OJC                                 MLR      MLR
      comp=Z,125µm,23.4s
F55A  Otter Lake        73.11  36   P        P         14 17 14.3 -1.0
      baz=328,SNR=15
S41A  Jillco Farms,     73.11  51   P        P         14 17 15.0 -0.5
      baz=322,SNR=115
SFIN  Lafayette         73.11  46   P        P         14 17 15.3 -0.1
      baz=324,SNR=17
CHOM  Cayeli-Rize       73.13 315   eP       P         14 17 15.1 -0.4
P44A  Sand Creek, Wi    73.13  48   P        P         14 17 15.6  0.0
      baz=323,SNR=52
L49A  Milan             73.20  43   P        P         14 17 16.1 +0.2
      baz=325,SNR=45
ONTNC Ouen Toro         73.20 171   eP       P         14 17 18.4 +2.6
CLDR  Caldiran          73.23 312   i P      P         14 17 16.9 +0.5
BHH   Howats Hill       73.27 349⇑  iP       P         14 17 16.3 +0.3
M48A  Edgerton          73.29  44   P        P         14 17 16.2 -0.2
      baz=324,SNR=24
IAS   Iasi              73.30 327⇑  iP       P         14 17 16.7 +0.3
WRAB  Tennant Creek     73.30 203   eP       P         14 17 17.1 +0.5
WRAB                                LR       LR
      comp=Z,9µm,21.0s
WRAB  Tennant Creek     73.30 203c  iP       P         14 17 15.9 -0.7
WRAB                                pmax     pmax
      comp=Z,429nm,1.1s
WRA   Warramunga Arr    73.32 203   i P      P         14 17 15.6 -1.1
WRA                                 pmax     pmax
      comp=Z,285nm,1.0s
WRA   Warramunga Arr    73.32 203   P        P         14 17 16.9 +0.3
      comp=Z,285nm,1.0s,baz=19,slow=6.4,SNR=247
WRA                                 S        S         14 26 41.4 +0.1
      comp=Z,1.0nm,1.0s,baz=40,slow=13,SNR=3.4
WRA                                 PKPPKP   P'P'df    14 44 52.0 +1.7
      comp=Z,4.7nm,1.0s,baz=211,slow=2.1,SNR=8.4
WRA                                 LR       LR        14 46 41.3
      comp=Z,9µm,21.9s,baz=5.0,slow=33
AGRB  Hanur-Agry        73.33 313   i P      P         14 17 17.7 +0.8
N47A  Urbana            73.34  45   P        P         14 17 16.1 -0.6
      baz=324,SNR=14
ELFO  Elginfield        73.35  41   P        P         14 17 16.7  0.0
      baz=326
EDMD  Edmundbyers       73.36 348⇑  eP       P         14 17 16.4 -0.3
EDMD                                IAMs_20  IAMs_20   14 54 44.0
      comp=Z,48µm,21.4s
Q44A  Meyer Farm, Va    73.39  48   eP       P         14 17 16.8 -0.2
Q44A  Meyer Farm, Va    73.39  48   P        P         14 17 17.0 -0.1
      baz=323,SNR=47
S42A  Caledonia         73.43  50   P        P         14 17 17.3  0.0
      baz=322,SNR=118
FVM   French Village    73.44  50   eP       P         14 17 17.3 -0.1
FVM   French Village    73.44  50   eP       P         14 17 17.3 -0.1
R43A  Red Bud           73.45  49   P        P         14 17 17.2 -0.3
      baz=323,SNR=34
G55A  Calabogie         73.46  37   P        P         14 17 16.7 -0.6
      baz=328,SNR=33
P45A  Graceland, Par    73.49  47   P        P         14 17 17.6 -0.1
      baz=323,SNR=20
KSP   Ksiaz             73.50 336   eP       P         14 17 17.6 +0.1
KSP                                 eSKSac   SKSac     14 27 47.0  +28
KSP                                 LMZ      LR        14 49 04.1
      comp=Z,71µm,27.1s
KSP   Ksiaz             73.50 336   eP       P         14 17 17.6 +0.1
KOPR  Koprukoy-ERZUR    73.52 314   eP       P         14 17 18.5 +0.5
U40A  Yellville         73.52  52   P        P         14 17 17.5 -0.4
      baz=322,SNR=203
T41A  Mountain View     73.53  51   P        P         14 17 17.5 -0.4
      baz=322,SNR=116
I53A  Kortright Cn E    73.53  39   P        P         14 17 17.3 -0.5
      baz=327
PINNC Pines Island,     73.60 170   eP       P         14 17 21.3 +3.1
PRAR  RASCA             73.61 328⇑  iP       P         14 17 17.8 -0.5
CLGH  Cloghs, Cushen    73.61 350⇑  eP       P         14 17 18.4 +0.3
CLGH                                IAmb     IAmb      14 17 21.8
      comp=Z,813nm,1.1s
CLGH                                IAMs_20  IAMs_20   14 44 14.7
      comp=Z,40µm,26.9s
BBO1  Bothel            73.62 348⇑  iP       P         14 17 18.5 +0.4
M49A  Liberty Center    73.62  43   P        P         14 17 18.3 -0.1
      baz=325,SNR=29
PKRO  Pickering         73.62  39   P        P         14 17 18.1 -0.2
      baz=327,SNR=18
O47A  Sheridan          73.65  46   P        P         14 17 17.6 -0.9
      baz=324,SNR=10
J52A  Paris             73.66  40   P        P         14 17 18.5 -0.1
      baz=326,SNR=15
K51A  Iona Station      73.66  41   P        P         14 17 18.8 +0.3
      baz=326
KTUT  Trabzon           73.66 316   eP       P         14 17 17.6 -1.0
KTUT  Trabzon           73.66 316⇓  iP       P         14 17 23.4 +4.8
N48A  Decatur           73.66  45   P        P         14 17 18.2 -0.4
      baz=324,SNR=37
L50A  Kingsville        73.67  42   P        P         14 17 18.5 -0.1
      baz=325,SNR=37
P46A  Rosedale          73.67  47   P        P         14 17 18.6 -0.1
      baz=324,SNR=37
GAL1  Galloway          73.67 349   eP       P         14 17 18.3 -0.1
GAL1                                IAmb     IAmb      14 17 19.7
      comp=Z,352nm,1.2s
GAL1                                IAMs_20  IAMs_20   14 47 43.2
      comp=Z,19µm,22.5s
NIE   Niedzica          73.67 332   eP       P         14 17 18.9 +0.3
NIE                                 ePcP     sP        14 17 40.5 +1.1
NIE                                 eSKSac   SKSac     14 27 48.7  +28
NIE                                 LMZ      LR        14 50 53.8
      comp=Z,83µm,24.6s
NIE   Niedzica          73.67 332   eP       P         14 17 18.9 +0.3
NIE                                 e                  14 17 40.5
NIE                                 MLR      MLR
      comp=Z,83µm,24.6s
RAC   Raciborz          73.68 334   eP       P         14 17 18.8 +0.3
RAC                                 eS       SKiKP     14 26 42.6 -0.4
RAC                                 MLR      MLR
      comp=Z,140µm,21.4s
LEOM  Leova             73.68 326⇑  iP       P         14 17 19.0 +0.4
LEOM  Leova             73.68 326   P        P         14 17 19.0 +0.4
HPIG                    73.70  67   eP       P         14 17 19.9 +0.6
BUR08 Bucovina Ar. S    73.71 329   eP       P         14 17 18.6 -0.4
ORHO  Orleans, Herit    73.73  36   P        P         14 17 17.9 -1.0
      baz=328
BURAR Bucovina Array    73.73 329⇓  iP       P         14 17 18.6 -0.5
BURAR Bucovina Array    73.73 329   P        P         14 17 18.5 -0.5
ORIO  Orleans, Innes    73.74  36   P        P         14 17 18.2 -0.8
      baz=328,SNR=13
KESW  Keswick, Cumbr    73.75 348⇑  eP       P         14 17 19.2 +0.3
KESW                                IAmb     IAmb      14 17 22.6
      comp=Z,1µm,1.0s
KESW                                IAMs_20  IAMs_20   14 55 53.7
      comp=Z,45µm,19.9s
IDGL  Inch Island, C    73.77 351   i P      P         14 17 19.5 +0.5
IDGL                                eS       SKiKP     14 26 42.1 -0.9
IDGL  Inch Island, C    73.77 351⇑  eP       P         14 17 19.3 +0.4
IDGL                                IAmb     IAmb      14 17 22.6
      comp=Z,1µm,1.0s
IDGL                                IAMs_20  IAMs_20   14 45 52.6
      comp=Z,43µm,23.6s
UZH   Uzhgorod          73.77 331⇓  iP       P         14 17 18.3 -0.8
UZH                                 e                  14 17 34.0
UZH                                 eSP                14 17 41.9
UZH                                 ePPP     PPP       14 21 56.1
UZH                                 eS       SKiKP     14 26 42.2 -1.0
UZH                                 eSS      SKSac     14 27 11.0  -10
UZH                                 i                  14 27 44.0
UZH                                 eSSS     SSS       14 34 47.0
Q45A  Warren Harvey,    73.81  48   P        P         14 17 19.4 -0.1
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	baz=323,SNR=74						
TORO	Toronto--Lesli	73.81	39	P	P	14 17 19.1	-0.3
	baz=327						
ALFO	Alfred	73.83	35	P	P	14 17 18.7	-0.7
	baz=329,SNR=24						
DRWO	Darlington Wes	73.84	39	P	P	14 17 19.4	-0.2
	baz=327,SNR=21						
DRCO	St. Marys Ceme	73.84	39	P	P	14 17 19.4	-0.2
	baz=327,SNR=21						
T42A	Van Buren	73.87	51	*e*P	P	14 17 19.3	-0.6
T42A	Van Buren	73.87	51	P	P	14 17 19.5	-0.4
	baz=322,SNR=59						
H55A	Tweed	73.87	37	P	P	14 17 19.1	-0.7
	baz=328,SNR=21						
MLAZ	Malazgirt-MUS	73.88	313	*e*P	P	14 17 20.9	+0.8
R44A	Waltonville	73.88	49	P	P	14 17 19.8	-0.1
	baz=323,SNR=70						
UPC	Upice	73.88	336	*e*P	P	14 17 21.0	+1.2
UPC				*e*PP	PP	14 20 11.9	+7.6
UPC				*e*S	SKiKP	14 26 42.5	-0.8
UPC				*e*SS	SS	14 32 36.9	+66
UPC				AMS	AMS	14 54 30.0	
	comp=Z,86µm,16.7s						
UPC	Upice	73.88	336	*e*P	P	14 17 21.0	+1.2
UPC				*e*		14 20 11.9	
UPC				*e*S	SKiKP	14 26 42.5	-0.8
UPC				MLR	MLR		
	comp=Z,86µm,16.7s						
CLL	Collm	73.91	338	*e*P	P	14 17 19.2	-0.6
CLL	Collm	73.91	338⇑	*i*P	P	14 17 18.9	-0.9
	comp=Z,565nm,1.4s						
CLL				*e*PcP	PcP	14 17 36.0	+0.9
CLL				*e*sPcP		14 17 52.0	
CLL				*e*PP	PP	14 20 04.0	-0.5
CLL				*e*PPP	PPP	14 21 54.0	
CLL				*e*S	SKiKP	14 26 45.0	+1.7
CLL				*e*(SP)		14 27 17.0	
CLL				*e*PPS	PPS	14 27 42.0	
CLL				*e*SS	SS	14 31 48.0	+17
CLL				*e*		14 32 42.0	
CLL				*e*		14 35 42.0	
CLL				*e*SSSS		14 36 36.0	
CLL				*e*PKPPKPdf		14 44 59.0	
CLL				Lm	MLR	14 52 00.0	
	comp=N,64µm,21.7s						
CLL				Lm	MLR	14 52 00.0	
	comp=E,34µm,20.3s						
CLL				Lm	MLR	14 52 00.0	
	comp=Z,65µm,21.9s						
CLL				Lmax		14 53 00.0	
CLL				LmV		16 43 00.0	
	comp=Z,2µm,20.0s						
CLL	Collm	73.91	338⇑	*i*P	P	14 17 18.9	-0.9
CLL				*e*		14 17 36.0	
CLL				*e*S	SKiKP	14 26 45.0	+1.7
CLL				pmax	pmax		
	comp=Z,565nm,1.4s						
OKC	Ostrava-Krasne	73.91	334	*e*P	P	14 17 21.4	+1.5
OKC				*e*x	x	14 20 19.6	
OKC				*e*S	SKiKP	14 26 23.6	-20
OKC				*e*SS	SS	14 32 33.6	+62
OKC				AMS	AMS	14 52 40.0	
	comp=Z,98µm,21.0s						
OKC	Ostrava-Krasne	73.91	334	*e*P	P	14 17 21.4	+1.5
OKC				MLR	MLR		
	comp=Z,98µm,21.0s						
VANB	Van	73.92	312	*e*P	P	14 17 20.9	+0.6
WLVO	Wesleyville	73.92	39	P	P	14 17 20.0	-0.1
	baz=327						
S43A	Fulton Ridge,	73.94	50	P	P	14 17 20.3	0.0
	baz=323,SNR=79						
K52A	Tillsonburg	73.94	41	P	P	14 17 20.3	+0.1
	baz=326,SNR=13						
DPC	Dobruska-Polom	73.94	335	*e*P	P	14 17 21.7	+1.5
DPC				*e*pP	pP	14 17 31.5	-3.5
DPC				*e*PP	PP	14 20 15.0	+10
DPC				*e*S	S	14 26 47.0	-1.0
DPC				*e*SS	SS	14 32 37.7	+66
DPC				AMS	AMS	14 54 40.0	
	comp=Z,97µm,17.2s						
DPC	Dobruska-Polom	73.94	335	*e*P	P	14 17 21.7	+1.5
DPC				*e*		14 17 31.5	
DPC				*e*		14 20 15.0	
DPC				*e*S	S	14 26 47.0	-1.0
DPC				MLR	MLR		
	comp=Z,97µm,17.2s						
W39A	Magazine	73.95	54	*e*P	P	14 17 20.3	-0.1
W39A	Magazine	73.95	54	P	P	14 17 20.4	0.0
	baz=322,SNR=67						
OLIL	Olney	73.96	48	*e*P	P	14 17 21.0	+0.6
I55A	Frankford	73.96	38	P	P	14 17 19.6	-0.7
	baz=328,SNR=14						
PLIO	Pelee Island,	73.98	42	P	P	14 17 20.3	-0.2
	baz=325						
N49A	Columbus Grove	73.98	44	P	P	14 17 20.2	-0.3
	baz=325,SNR=26						
U41A	Viola	74.00	52	P	P	14 17 20.3	-0.4
	baz=322,SNR=60						
BIZ	Bicaz	74.02	328⇑	*i*P	P	14 17 20.4	-0.2
KRLC	Kraliky	74.07	335	*e*P	P	14 17 21.9	+1.0
KRLC				AMS	AMS	14 53 00.0	
	comp=Z,23µm,21.7s						
KRLC	Kraliky	74.07	335	*e*P	P	14 17 21.9	+1.0
KRLC				MLR	MLR		
	comp=Z,23µm,21.7s						
BRG	Berggiesshubel	74.08	337⇑	*i*P	P	14 17 20.7	-0.2
	comp=Z,193nm,1.4s						
BRG				*i*		14 17 27.3	
	comp=Z,322nm,1.7s						
BRG				*i*		14 17 36.8	
	comp=Z,141nm,1.3s						
BRG				*i* sP	sP	14 17 44.3	+2.7
	comp=Z,144nm,1.5s						
BRG				PP	PP	14 20 01.0	-5.0
BRG				S	SKiKP	14 26 42.0	-1.6
BRG				SS	SS	14 31 40.0	+6.3
BRG				*e*PKPPKP		14 44 52.3	
	comp=Z,69nm,2.1s						
	comp=N,37µm,18.8s						
	comp=E,52µm,18.6s						
	comp=Z,87µm,18.5s						
BRG	Berggiesshubel	74.08	337⇑	*i*P	P	14 17 20.7	-0.2
BRG				*i*		14 17 36.8	
BRG				*i* *SP	sP	14 17 44.3	+2.7
BRG				S	SKiKP	14 26 42.0	-1.6
BRG				SS	SS	14 31 40.0	+6.3
BRG				pmax	pmax		
	comp=Z,193nm,1.4s						
BRG				MLR	MLR		
	comp=N,37µm,18.8s						
BRG				MLR	MLR		
	comp=E,52µm,18.6s						
BRG				MLR	MLR		
	comp=Z,87µm,18.5s						
Q46A	CEJHS Indians,	74.08	47	P	P	14 17 21.0	0.0
	baz=324						
BIR	Birlad	74.08	326⇑	*i*P	P	14 17 22.1	+1.1
FITZ	Fitzroy Crossi	74.08	211	P	P	14 17 22.4	+1.3
	comp=Z,231nm,1.0s,baz=26,slow=4.7,SNR=92						
FITZ				S	S	14 26 48.2	-1.7
	comp=Z,4.2nm,1.1s,baz=38,slow=17,SNR=1.7						
M50A	Fremont	74.09	43	P	P	14 17 20.9	-0.2
	baz=325,SNR=21						
O48A	Farmland	74.09	45	P	P	14 17 20.4	-0.7
	baz=324,SNR=43						
MORC	Moravsky Berou	74.14	334	*e*P	P	14 17 21.2	-0.1
MORC	Moravsky Berou	74.14	334⇓	*i*P	P	14 17 21.2	-0.1
MORC	Moravsky Berou	74.14	334	*e*P	P	14 17 21.2	-0.1
MORC	Moravsky Berou	74.14	334⇑	*i*P	P	14 17 21.1	-0.2
MORC				*e*S	SKiKP	14 26 40.2	-3.6
TRPA	Tarpa	74.14	330⇑	*i*P	P	14 17 21.3	0.0
TRPA	Tarpa	74.14	330⇑	*e*P	P	14 17 20.1	-1.2
TRPA				*e*S	S	14 27 01.0	+11
TRPA				*e*SS	SS	14 32 22.1	+47
LANS	Liptovska Anna	74.16	333	*e*P	P	14 17 22.4	+1.0
LANS	Liptovska Anna	74.16	333	*e*P	P	14 17 22.4	+1.0
HPK	Haverah Park	74.16	347⇑	*e*P	P	14 17 21.8	+0.5
HPK				IAmb	IAmb	14 17 23.0	
	comp=Z,1µm,1.1s						
HPK				IAMs_20	IAMs_20	14 57 21.4	
	comp=Z,41µm,18.3s						
GOA	Goa	74.18	275	*e*P	P	14 17 22.4	+0.5
GOA				IAmb	IAmb	14 17 24.7	
	comp=Z,2µm,1.1s						
GOA				IAMs_20	IAMs_20	14 53 49.4	
	comp=Z,44µm,25.3s						
H56A	Elgin	74.19	37	P	P	14 17 21.0	-0.6
	baz=328,SNR=13						
P47A	Martinsville	74.21	46	P	P	14 17 21.4	-0.5
	baz=324,SNR=32						
TESR	Tescani	74.21	327⇑	*i*P	P	14 17 21.9	+0.2
STCO	Saint Catharin	74.21	39	P	P	14 17 21.6	-0.2
	baz=327,SNR=8.3						
T43A	Greenville	74.22	50	P	P	14 17 21.9	-0.1
	baz=323,SNR=70						
R45A	Skylar, Fairfi	74.23	48	P	P	14 17 21.9	0.0
	baz=323,SNR=31						
PVCC	Panska Ves	74.24	336	*e*P	P	14 17 22.9	+1.1
PVCC				*e*PP	PP	14 20 15.0	+7.7
PVCC				*e*S	S	14 26 48.1	-3.0
PVCC				*e*SS	SS	14 32 47.2	+71
PVCC				AMS	AMS	14 51 30.0	
	comp=Z,70µm,22.7s						
PVCC	Panska Ves	74.24	336	*e*P	P	14 17 22.9	+1.1
PVCC				*e*		14 20 15.0	
PVCC				*e*S	S	14 26 48.1	-3.0
PVCC				MLR	MLR		
	comp=Z,70µm,22.7s						
S44A	Carbondale	74.24	49	P	P	14 17 22.0	0.0
	baz=323,SNR=51						
SIUC	Southern Illin	74.24	49	*e*P	P	14 17 22.0	0.0
BMR	Baia Mare	74.24	330⇑	*i*P	P	14 17 23.1	+1.2
AKDM	Akdamar-Van	74.33	312	*e*P	P	14 17 23.2	+0.4
U42A	Revenden	74.33	51	P	P	14 17 22.1	-0.5
	baz=322,SNR=22						
BLO	Bloomington	74.34	47	*e*P	P	14 17 22.5	-0.1
BLO	Bloomington	74.34	47	*e*P	P	14 17 22.5	-0.1
VRTB	Varto-Mus	74.37	313	*e*P	P	14 17 23.9	+0.9
JCT	Junction City	74.37	61	*e*P	P	14 17 23.4	+0.5
JCT				LR	LR		
	comp=Z,50µm,22.0s						
JCT	Junction City	74.37	61	*e*P	P	14 17 23.5	+0.5
JCT				MLR	MLR		
	comp=Z,50µm,22.0s						
JCT	Junction City	74.37	61	P	P	14 17 23.5	+0.5
	baz=320,SNR=91						
PBMO	Poplar Bluff	74.39	51	*e*P	P	14 17 22.9	0.0
GMM	Mts of Mourne	74.43	350⇑	*i*P	P	14 17 22.7	-0.2
PECO	Prince Edward	74.47	38	P	P	14 17 22.7	-0.5
	baz=328,SNR=18						
ARCR	ARCALIA	74.48	329⇓	*i*P	P	14 17 23.8	+0.5
WHTX	Lake Whitney,	74.50	58	*e*P	P	14 17 24.1	+0.5
WHTX	Lake Whitney,	74.50	58	P	P	14 17 24.2	+0.5
	baz=321,SNR=51						
O49A	Covington	74.51	44	*e*P	P	14 17 23.3	-0.3
O49A	Covington	74.51	44	P	P	14 17 23.4	-0.2
	baz=325,SNR=24						
M51A	Elyria	74.52	42	P	P	14 17 23.4	-0.2
	baz=326,SNR=20						
N50A	Nevada	74.56	43	P	P	14 17 24.0	+0.1
	baz=325,SNR=41						
T44A	Benton	74.56	50	P	P	14 17 24.1	+0.2
	baz=323,SNR=55						
YEDI	Yedisu-Bingol	74.56	314	*e*P	P	14 17 23.9	-0.2
MIAR	Mount Ida	74.57	54	*e*P	P	14 17 24.2	+0.2
MIAR				LR	LR		
	comp=Z,74µm,20.0s						
MIAR	Mount Ida	74.57	54	*e*P	P	14 17 24.2	+0.2
MIAR				MLR	MLR		
	comp=Z,74µm,20.0s						
MIAR	Mount Ida	74.57	54	P	P	14 17 24.4	+0.4
	baz=322,SNR=143						
S45A	Carrier Mills	74.58	49	P	P	14 17 24.2	+0.2
	baz=323,SNR=36						
Q47A	Bedord North L	74.58	47	P	P	14 17 24.0	0.0
	baz=324,SNR=33						
TLCR		74.58	325⇑	*i*P	P	14 17 24.1	+0.2
TLCR		74.58	325	P	P	14 17 24.1	+0.2
GURO	Guroymak-BITLI	74.59	313	*e*P	P	14 17 25.2	+0.9
P48A	Milroy	74.61	46	P	P	14 17 23.7	-0.5
	baz=324,SNR=48						
WHAR	Wooly Hollow	74.64	53	*e*P	P	14 17 24.1	-0.3
R46A	Gibon Southern	74.65	48	P	P	14 17 24.5	+0.1
	baz=324,SNR=27						
WTSB	Winterswijk	74.66	342	*e*P	P	14 17 24.4	+0.3
	comp=Z,1µm,1.5s						
PETR	Petresti	74.69	326⇑	*i*P	P	14 17 25.5	+1.0
J55A	Hilton	74.71	39	P	P	14 17 24.2	-0.4
	baz=328,SNR=28						
ODBI	Odobesti	74.71	326⇑	*i*P	P	14 17 25.5	+0.9
LBWR	Ladybower, Pea	74.72	347⇑	*e*P	P	14 17 24.9	+0.4
LBWR				IAmb	IAmb	14 17 26.1	
	comp=Z,1µm,1.1s						
LBWR				IAMs_20	IAMs_20	14 57 37.5	
	comp=Z,36µm,18.2s						
U43A	Rector	74.73	51	P	P	14 17 24.9	+0.1
	baz=323,SNR=22						
PRU	Pruhonice	74.74	336	*e*P	P	14 17 26.1	+1.4
PRU				*e*PP	PP	14 20 21.1	+10
PRU				*e*S	S	14 26 55.8	-0.9
PRU				*e*SS	SS	14 32 02.3	+19
PRU				AMS	AMS	14 52 20.0	
	comp=Z,68µm,20.8s						
PRU	Pruhonice	74.74	336	*e*P	P	14 17 26.1	+1.4
PRU				*e*		14 20 21.1	
PRU				*e*S	S	14 26 55.8	-0.9
PRU				MLR	MLR		
	comp=Z,68µm,20.8s						
VRI	Vrincioaia	74.74	327	*e*P	P	14 17 23.5	-1.3
VRI	Vrincioaia	74.74	327⇑	*i*P	P	14 17 25.3	+0.5
VRI	Vrincioaia	74.74	327	P	P	14 17 25.3	+0.5
GOPC	GO Pecny, Ondr	74.75	336	*e*P	P	14 17 26.2	+1.4
GOPC				*e*PP	PP	14 20 19.6	+7.9
GOPC				*e*S	S	14 26 54.4	-2.5
GOPC				*e*SS	SS	14 32 04.1	+20
GOPC				AMS	AMS	14 54 10.0	
	comp=Z,88µm,20.0s						
GOPC	GO Pecny, Ondr	74.75	336	*e*P	P	14 17 26.2	+1.4
GOPC				*e*		14 20 19.6	
GOPC				*e*S	S	14 26 54.4	-2.5
GOPC				MLR	MLR		
	comp=Z,88µm,20.0s						
W41B	Gary Mavity, V	74.75	53	P	P	14 17 25.0	0.0
	baz=322,SNR=96						
SNOP	Sinop	74.77	319	*e*P	P	14 17 24.6	-0.4
N51A	Ashland	74.77	43	P	P	14 17 24.9	-0.2
	baz=326,SNR=68						
PLOR	Plostina	74.78	327⇑	*i*P	P	14 17 24.4	-0.7
USIN	University of	74.78	48	*e*P	P	14 17 26.0	+0.8
ERPA	Erie	74.79	41	*e*P	P	14 17 25.2	0.0
ERPA	Erie	74.79	41	P	P	14 17 25.1	0.0
	baz=327,SNR=35						
LONY	Lake Ozonia	74.80	36	*e*P	P	14 17 25.0	-0.2
LONY				LR	LR		
	comp=Z,43µm,21.0s						
LONY	Lake Ozonia	74.80	36	P	P	14 17 24.4	-0.8
	baz=329,SNR=17						
L53A	Girard	74.81	41	P	P	14 17 25.5	+0.2
	baz=326,SNR=70						
ERZN	Erzincan	74.81	315	*e*P	P	14 17 26.0	+0.5
PARMO	Parma	74.82	50	*e*P	P	14 17 26.3	+0.9
VRAC	Vranov	74.82	335⇑	*i*P	P	14 17 25.6	+0.4
VRAC	Vranov	74.82	335	P	P	14 17 25.4	+0.2
VRAC				pmax	pmax		
	comp=Z,203nm,2.1s						
VRAC	Vranov	74.82	335⇑	*i*P	P	14 17 25.3	+0.1
VRAC				*e*S	SKiKP	14 26 42.0	-2.8
VRAC	Vranov	74.82	335	LR	LR	14 54 04.2	
	comp=Z,102µm,20.8s,baz=15,slow=39						
CFR	Carcaliu	74.83	325⇓	*i*P	P	14 17 25.2	-0.1
MOX	Moxa	74.85	338	P	P	14 17 25.5	+0.1
MOX				pmax	pmax		
	comp=Z,173nm,2.0s						
O50A	Cable	74.86	44	P	P	14 17 25.6	-0.1
	baz=325,SNR=34						
BNGB	Bingl	74.86	314	*i* P	P	14 17 26.5	+0.7
OZUR		74.86	327⇓	*i*P	P	14 17 26.4	+0.8
P49A	Miami Univ. Ec	74.87	45	P	P	14 17 25.4	-0.3
	baz=325,SNR=38						
CUKT	Cukurca	74.89	311	*i* P	P	14 17 25.8	-0.2
Q48A	North Vernon	74.90	46	P	P	14 17 25.6	-0.2
	baz=324,SNR=22						
VYHS	Vyhne	74.93	333	*e*P	P	14 17 26.0	+0.1
VYHS				pmax	pmax		
	comp=Z,728nm,2.6s						
VYHS	Vyhne	74.93	333	*e*P	P	14 17 26.0	+0.1
VYHS				*e*S	SKiKP	14 26 48.7	+3.7
VYHS				*e*SS	SS	14 32 14.8	+28
VYHS				*e*L	L	14 51 36.8	
JAVC	Velka Javorina	74.93	334⇑	*i*P	P	14 17 26.8	+0.9
U44A	Portageville	74.97	50	P	P	14 17 26.8	+0.5
	baz=323,SNR=16						
FRNY	Flat Rock	74.98	35	*e*P	P	14 17 25.8	-0.4
KOLL	Kolacno	74.98	333	*e*P	P	14 17 27.8	+1.7
KOLL	Kolacno	74.98	333	*e*P	P	14 17 27.8	+1.7
S46A	Don Dixon Farm	74.98	48	P	P	14 17 26.4	+0.1
	baz=324,SNR=27						
X40A	Basin Creek Fa	74.99	54	P	P	14 17 26.2	-0.2
	baz=322,SNR=62						
LTVH	Ltavrtes, Hu	75.00	331⇑	*e*P	P	14 17 26.1	-0.2
LTVH				*e*S	S	14 27 05.0	+5.3
UALR	University of	75.02	53	*e*P	P	14 17 27.0	+0.5
WACR	West Acre	75.03	346⇑	*e*P	P	14 17 26.1	-0.2
WACR				IAmb	IAmb	14 17 27.9	
	comp=Z,1µm,1.1s						
WACR				IAMs_20	IAMs_20	14 46 12.3	
	comp=Z,65µm,28.7s						
NKC	Novy Kostel	75.03	338	*e*P	P	14 17 27.4	+0.9
NKC				*e*x	x	14 17 34.8	
NKC				*e*PP	PP	14 20 22.7	+8.6
NKC				*e*S	S	14 26 56.9	-3.2
NKC				*e*SS	SS	14 32 18.7	+30
NKC				AMS	AMS	14 54 50.0	
	comp=Z,56µm,19.1s						
NKC	Novy Kostel	75.03	338	*e*P	P	14 17 27.4	+0.9
NKC				*e*		14 17 34.8	
NKC				*e*		14 20 22.7	
NKC				*e*S	S	14 26 56.9	-3.2
NKC				MLR	MLR		
	comp=Z,56µm,19.1s						
W42A	Bald Knob	75.04	52	P	P	14 17 26.6	0.0
	baz=322						
R47A	Wooly Knot Far	75.05	47	P	P	14 17 26.5	-0.2
	baz=324,SNR=41						
CJR	Cluj-Napoca	75.05	329⇑	*i*P	P	14 17 27.4	+0.7
DIKM	Dikmen	75.05	319	*i* P	P	14 17 26.7	0.0
DIKM	Dikmen	75.05	319⇓	*i*P	P	14 17 27.4	+0.7
K55A	Perry	75.06	39	P	P	14 17 26.3	-0.5
	baz=328,SNR=63						
M53A	WI Miller and	75.07	41	P	P	14 17 26.8	0.0
	baz=326,SNR=86						
T45A	Paducah	75.07	49	P	P	14 17 27.1	+0.2
	baz=323,SNR=7.9						
ACSO	Alum Creek Sta	75.07	44	*e*P	P	14 17 26.9	0.0
ACSO				LR	LR		
	comp=Z,66µm,21.0s						
ACSO	Alum Creek Sta	75.07	44	P	P	14 17 26.8	0.0
	baz=326,SNR=39						
GRER		75.07	326⇑	*i*P	P	14 17 27.8	+1.1
WPS	Cemaes, Angles	75.08	349⇑	*e*P	P	14 17 26.4	-0.2
WPS				IAmb	IAmb	14 17 29.8	
	comp=Z,459nm,1.0s						
WPS				IAMs_20	IAMs_20	14 57 16.6	
	comp=Z,39µm,19.5s						
STNC	Stoke	75.09	347⇑	*e*P	P	14 17 27.1	+0.5
STNC				IAmb	IAmb	14 17 29.8	
	comp=Z,955nm,1.4s						
STNC				IAMs_20	IAMs_20	14 58 00.4	
	comp=Z,35µm,17.0s						
KRUC	Moravsky	75.10	335⇑	*i*P	P	14 17 26.7	-0.1
KRUC				*e*S	SKiKP	14 26 52.7	+7.5
DOPR	Dopca	75.11	328⇓	*i*P	P	14 17 27.9	+0.9
ALLY	Alegheny Colle	75.11	41	*e*P	P	14 17 27.2	+0.1
MMNY	Mt. Morris Dam	75.12	39	*e*P	P	14 17 26.7	-0.4
V43A	Jonesboro	75.12	51	P	P	14 17 27.8	+0.6
	baz=323						
TREC	Trest	75.13	335	AMS	AMS	14 55 10.0	
	comp=Z,94µm,16.8s						
PSZ	Piszkesteto	75.14	332	*e*P	P	14 17 27.3	+0.2
PSZ	Piszkesteto	75.14	332⇑	*i*P	P	14 17 27.5	+0.3
PSZ	Piszkesteto	75.14	332	*e*P	P	14 17 27.3	+0.2
PSZ	Piszkesteto	75.14	332⇑	*e*P	P	14 17 24.0	-3.2
PSZ				*e*S	S	14 27 14.0	+13
PSZ				*e*SS	SS	14 32 24.1	+34
WPM1	Penmaenmawr	75.15	349⇑	*i*P	P	14 17 27.1	+0.1
N52A	McGinn’s Farm,	75.16	42	P	P	14 17 26.9	-0.4
	baz=326,SNR=32						
WLF1	Llynfaes	75.18	349⇑	*e*P	P	14 17 26.8	-0.4
WLF1				IAmb	IAmb	14 17 29.0	
	comp=Z,1µm,1.2s						
WLF1				IAMs_20	IAMs_20	14 57 19.1	
	comp=Z,83µm,19.4s						
KVT	Kavak	75.19	318	*i* P	P	14 17 28.0	+0.4
RSDY	Resadiye-TOKAT	75.21	317	*e*P	P	14 17 27.7	0.0
WCI	Wyandotte Cave	75.21	47	*e*P	P	14 17 27.7	+0.1
WCI	Wyandotte Cave	75.21	47	*e*P	P	14 17 27.7	+0.1
Q49A	Aurora	75.22	46	P	P	14 17 27.6	-0.1
	baz=325,SNR=12						
P50A	Jamestown	75.22	44	P	P	14 17 27.6	-0.2
	baz=325,SNR=27						
YRC	Rhoscolyn	75.24	349⇑	*e*P	P	14 17 27.3	-0.2
SIRT	Sirnak	75.24	312	*e*P	P	14 17 28.0	0.0
R48A	Northridge Ran	75.27	47	P	P	14 17 28.1	+0.1
	baz=324,SNR=23						
U44B	Burton Farm, H	75.27	50	P	P	14 17 28.5	+0.5
	baz=323						
DRGR		75.27	330⇑	*i*P	P	14 17 27.8	-0.2
DRGR		75.27	330	P	P	14 17 27.6	-0.4
DRGR				pmax	pmax		
	comp=Z,296nm,1.9s						
PQI	Presque Isle	75.29	31	*e*P	P	14 17 28.3	+0.3
MDB	Medias	75.30	328⇑	*i*P	P	14 17 29.4	+1.4
YLL	Llanberis	75.30	349⇑	*e*P	P	14 17 28.1	+0.2
SVAN	Silvan-Diyarba	75.30	313	*i* P	P	14 17 29.1	+0.8
CWF	Charnwood Fore	75.31	347⇑	*e*P	P	14 17 28.0	+0.1
CWF				IAmb	IAmb	14 17 29.5	
	comp=Z,1µm,1.3s						
CWF				IAMs_20	IAMs_20	14 45 15.4	
	comp=Z,48µm,29.3s						
O51A	Pataskala	75.31	43	P	P	14 17 28.1	-0.1
	baz=326,SNR=45						
BZK	Bozkurt	75.31	320	*e*P	P	14 17 26.5	-1.6
SMOL	Smolenice	75.31	334	*e*P	P	14 17 30.2	+2.1
SMOL	Smolenice	75.31	334	*e*P	P	14 17 30.2	+2.1
MLR	Muntele Rosu	75.34	327⇓	*i*P	P	14 17 28.3	-0.1
MLR	Muntele Rosu	75.34	327	P	P	14 17 28.1	-0.3
MLR				pmax	pmax		
	comp=Z,155nm,0.8s						
MLR	Muntele Rosu	75.34	327	LR	LR	14 54 18.9	
	comp=Z,109µm,19.6s,baz=32,slow=39						
TIRR	Tirgusor	75.36	325	*e*P	P	14 17 28.4	0.0
TIRR	Tirgusor	75.36	325⇓	*i*P	P	14 17 28.6	+0.3
435B	Jarrell	75.36	59	*e*P	P	14 17 29.8	+1.2
435B	Jarrell	75.36	59	P	P	14 17 29.2	+0.5
	baz=321,SNR=9.4						
L55A	Hinsdale	75.37	40	P	P	14 17 28.4	-0.1
	baz=327,SNR=37						
TLB	Topalu	75.38	325⇓	*i*P	P	14 17 28.7	+0.2
V44A	Blytheville	75.41	51	P	P	14 17 29.3	+0.4
	baz=323						
T46A	Princeton	75.41	49	P	P	14 17 29.4	+0.6
	baz=324,SNR=150						
FOEL	Foel Wylfa	75.42	348⇑	*e*P	P	14 17 29.0	+0.4
FOEL				IAmb	IAmb	14 17 32.4	
	comp=Z,924nm,1.0s						
FOEL				IAMs_20	IAMs_20	14 56 48.2	
	comp=Z,44µm,20.2s						
M54A	Oil Creek Stat	75.43	41	P	P	14 17 28.8	-0.1
	baz=327,SNR=78						
S47A	Hartford	75.45	48	P	P	14 17 29.0	0.0
	baz=324,SNR=36						
ISR	Istrita	75.45	326⇓	*i*P	P	14 17 29.2	+0.2
DSB	Dublin	75.45	350	*i* P	P	14 17 29.3	+0.5
DSB				*e*S	S	14 27 01.8	-2.7
DSB	Dublin	75.45	350	*e*P	P	14 17 29.1	+0.4
WLAR	White Oak Lake	75.48	54	*e*P	P	14 17 30.4	+1.1
MODS	Modra-Piesok	75.48	334	*e*P	P	14 17 29.6	+0.5
MODS				pmax	pmax		
	comp=Z,1µm,2.1s						
MODS	Modra-Piesok	75.48	334	*e*P	P	14 17 29.6	+0.5
MODS				*e*S	SKiKP	14 26 46.2	+0.3
MODS				*e*SS	SS	14 32 20.0	+25
MODS				*e*L	L	14 53 08.4	
NCB	Newcomb	75.49	36	*e*P	P	14 17 28.8	-0.3
N53A	Lisbon	75.52	42	P	P	14 17 29.4	0.0
	baz=326,SNR=39						
U45A	Rockin P Farm,	75.55	50	P	P	14 17 30.0	+0.4
	baz=324,SNR=10						
IGLA	Glengowla, Co	75.58	352	*i* P	P	14 17 29.7	+0.2
IGLA				*e*S	S	14 27 02.0	-3.9
IGLA	Glengowla, Co	75.58	352⇑	*e*P	P	14 17 29.5	0.0
IGLA				IAmb	IAmb	14 17 33.3	
	comp=Z,738nm,1.0s						

IGLA				IAMs_20	IAMs_20	14 47 41.0	
	comp=Z,37µm,23.8s						
MFTR	Murfatlar	75.59	325	⇑iP	P	14 17 30.3	+0.6
TOKT	Tokat	75.61	317	eP	P	14 17 30.4	+0.4
AMRR	Amara	75.61	326	⇑iP	P	14 17 30.0	+0.2
P51A	Williamsport	75.65	44	P	P	14 17 29.7	-0.5
	baz=326,SNR=19						
O52A	Adamsville	75.67	43	P	P	14 17 30.0	-0.2
	baz=326,SNR=56						
R49A	Shelbyville	75.67	46	P	P	14 17 30.6	+0.2
	baz=325,SNR=43						
SECR		75.69	327	⇑iP	P	14 17 30.7	+0.4
VOIR		75.69	328	⇓iP	P	14 17 31.1	+0.7
VOIR		75.69	328	P	P	14 17 30.4	0.0
VOIR				pmax	pmax		
	comp=Z,195nm,1.0s						
ZST	Bratislava	75.69	334	eP	P	14 17 30.4	+0.2
ZST				e		14 20 17.7	
ZST				eS	S	14 27 02.0	-5.4
ZST	Bratislava	75.69	334	eP	P	14 17 30.4	+0.2
ZST				ePP	PP	14 20 17.7	-2.0
ZST				eS	S	14 27 02.0	-5.4
ZST				eSS	SS	14 31 36.6	-22
SRO	Srobarova	75.70	333	eP	P	14 17 31.8	+1.6
SRO	Srobarova	75.70	333	eP	P	14 17 31.8	+1.6
VT1	Waterbury	75.71	35	eP	P	14 17 31.0	+0.5
SRO2	Moca	75.72	333	eP	P	14 17 30.9	+0.5
SRO2	Moca	75.72	333	eP	P	14 17 30.9	+0.5
HLM1	Long Mynd	75.74	348	⇑eP	P	14 17 30.8	+0.3
HLM1				IAmb	IAmb	14 17 32.1	
	comp=Z,664nm,1.1s						
HLM1				IAMs_20	IAMs_20	14 56 12.8	
	comp=Z,37µm,20.6s						
SVSK	Karacayir	75.75	317	eP	P	14 17 30.9	+0.2
N54A	Moraine State	75.75	41	P	P	14 17 30.7	0.0
	baz=327,SNR=63						
XMIS	Christmas Isla	75.75	233	eP	P	14 17 32.1	+1.2
Q50A	Georgetown	75.77	45	P	P	14 17 30.9	+0.1
	baz=325,SNR=47						
KHC	Kasperske Hory	75.78	336	eP	P	14 17 30.4	-0.3
KHC	Kasperske Hory	75.78	336	eP	P	14 17 31.5	+0.7
KHC				ex	x	14 20 30.4	
KHC				eS	S	14 27 08.7	+0.3
KHC				eSS	SS	14 32 19.7	+20
KHC				AMS	AMS	14 55 20.0	
	comp=Z,89µm,18.8s						
KHC	Kasperske Hory	75.78	336	eP	P	14 17 31.5	+0.7
KHC				e		14 20 30.4	
KHC				eS	S	14 27 08.7	+0.3
KHC				MLR	MLR		
	comp=Z,89µm,18.8s						
S48A	Wiedeman Farm,	75.78	47	P	P	14 17 31.1	+0.2
	baz=324,SNR=68						
BUD	Budapest	75.79	332	⇑eP	P	14 17 28.0	-2.7
BUD				eS	S	14 27 17.1	+8.7
BUD				eSS	SS	14 32 34.1	+34
U46A	Springville	75.82	49	P	P	14 17 31.5	+0.4
	baz=324,SNR=12						
O53A	New Philadelph	75.83	42	P	P	14 17 31.1	-0.1
	baz=326,SNR=33						
T47A	Sharon Grove	75.83	48	P	P	14 17 31.8	+0.5
	baz=324,SNR=78						
GRA1	Grafenberg Arr	75.83	338	eP	P	14 17 31.3	+0.3
GRF	Grafenberg Arr	75.83	338	eP	P	14 17 31.3	+0.3
GRFO	Grafenberg	75.83	338	eP	P	14 17 31.4	+0.4
GRFO	Grafenberg	75.83	338	eP	P	14 17 31.4	+0.4
M55A	Ridgway	75.83	40	P	P	14 17 31.2	0.0
	baz=327,SNR=80						
ICOR	Ion Corvin	75.87	325	⇓iP	P	14 17 31.4	+0.1
MTUR	Matau	75.87	327	⇑iP	P	14 17 32.5	+1.1
ARR	Arges	75.89	328	⇓iP	P	14 17 32.2	+0.7
Q51A	Peebles	75.90	45	P	P	14 17 31.7	+0.1
	baz=326,SNR=33						
LEHL	Lehliu	75.92	326	⇑iP	P	14 17 32.5	+1.0
P52A	Corning	75.94	43	P	P	14 17 31.3	-0.5
	baz=326,SNR=19						
SULR		75.94	326	⇑iP	P	14 17 32.8	+1.1
V45A	Humboldt	75.94	50	P	P	14 17 31.9	0.0
	baz=324,SNR=17						
X43A	Marvell	75.96	52	eP	P	14 17 33.0	+1.0
X43A	Marvell	75.96	52	P	P	14 17 32.3	+0.4
	baz=323,SNR=12						
TNS	Taunus Mts	75.96	340	P	P	14 17 32.0	+0.2
TNS				pmax	pmax		
	comp=Z,263nm,1.1s						
HGN	Heimansgroeve	75.97	342	eP	P	14 17 32.2	+0.4
	comp=Z,1µm,1.2s						
HGN				ePP	PP	14 20 27.6	+5.7
HGN				eS	S	14 27 27.8	+18
Z41A	Richland Creek	75.97	54	P	P	14 17 32.7	+0.6
	baz=322,SNR=6.0						
CCAR	Cane Creek	75.98	53	eP	P	14 17 33.8	+1.7
BEBN	Eben Emael	75.99	342	⇑P	P	14 17 32.1	+0.3
	comp=Z,61nm,1.4s						
W44A	Shelby Farms P	76.00	51	P	P	14 17 32.8	+0.6
	baz=323						
GERES	GERESS Array B	76.01	336	P	P	14 17 32.0	-0.1
	comp=Z,23nm,0.6s,baz=41,slow=4.3,SNR=156						
GERES				S	S	14 27 04.7	-6.3
	comp=Z,0.2nm,0.3s,baz=45,slow=14,SNR=2.2						
GERES				PKPPKP	P'P'df	14 44 45.8	-8.8
	comp=Z,0.5nm,0.5s,baz=110,slow=1.6,SNR=3.7						
GERES				LR	LR	14 56 04.2	
	comp=Z,102µm,18.7s,baz=24,slow=40						
RASA	Rasa	76.02	326	⇑iP	P	14 17 32.9	+0.7
EIDS	Eidsvold	76.03	186	eP	P	14 17 33.6	+1.4
S49A	Springfield	76.03	47	P	P	14 17 32.6	+0.3
	baz=325,SNR=73						
PALK	Pallekele	76.05	264	eP	P	14 17 33.7	+0.9
PALK	Pallekele	76.05	264	i P	P	14 17 33.7	+0.9
	SNR=87						
PALK	Pallekele	76.05	264	i P	P	14 17 33.8	+1.0
PALK	Pallekele	76.05	264	P	P	14 17 34.3	+1.5
	SNR=31						
T48A	Bowling Green	76.07	48	P	P	14 17 32.7	+0.2
	baz=324,SNR=37						
R50A	Paris	76.07	46	P	P	14 17 32.9	+0.3
	baz=325,SNR=38						
SIRR	Siria	76.07	330	⇑iP	P	14 17 32.3	-0.2
LBNH	Lisbon	76.09	34	eP	P	14 17 33.6	+1.0
LBNH	Lisbon	76.09	34	P	P	14 17 32.9	+0.3
	baz=330,SNR=15						
MEM	Membach	76.10	342	P	P	14 17 32.8	+0.3
MEM				pmax	pmax		
	comp=Z,884nm,1.2s						
MEM	Membach	76.10	342	⇑P	P	14 17 32.8	+0.3
	comp=Z,549nm,1.3s						
PSN	Preselentsi	76.11	325	eP	P	14 17 32.9	+0.2
PSN	Preselentsi	76.11	325	eP	P	14 17 32.6	-0.1
PKME	Peaks-Kenny Pk	76.11	32	eP	P	14 17 32.9	+0.3
PKME				LR	LR		
	comp=Z,102µm,21.0s						
PKME	Peaks-Kenny Pk	76.11	32	P	P	14 17 33.2	+0.6
	baz=332,SNR=13						
LOT	Lotru	76.11	328	eP	P	14 17 31.9	-0.9
LOT	Lotru	76.11	328	⇓iP	P	14 17 33.2	+0.4
WVT	Waverly	76.17	49	eP	P	14 17 33.5	+0.3
WVT	Waverly	76.17	49	eP	P	14 17 33.5	+0.3
WVT	Waverly	76.17	49	P	P	14 17 33.3	+0.1
	baz=324						
NATX	Nacogdoches	76.17	57	eP	P	14 17 34.4	+1.1
NATX				LR	LR		
	comp=Z,48µm,22.0s						
NATX	Nacogdoches	76.17	57	P	P	14 17 34.4	+1.1
	baz=322,SNR=30						
U47A	Clarksville	76.18	49	P	P	14 17 33.6	+0.3
	baz=324,SNR=53						
ILGA	Ilgaz	76.19	320	eP	P	14 17 35.0	+1.4
ACCN	Adirondack Com	76.20	36	eP	P	14 17 33.5	+0.3
MAZI	Mazidag	76.21	313	eP	P	14 17 33.7	+0.2
O54A	Avella	76.24	42	P	P	14 17 33.6	+0.1
	baz=327,SNR=29						
UCC	Uccle	76.24	343	⇑P	P	14 17 33.2	0.0
833A	Chaparral WMA,	76.25	62	eP	P	14 17 35.0	+1.3
833A	Chaparral WMA,	76.25	62	P	P	14 17 35.0	+1.3
	baz=321,SNR=29						
MCH1	Michaelchurch	76.27	348	⇑eP	P	14 17 33.6	+0.2
MCH1				IAmb	IAmb	14 17 35.0	
	comp=Z,464nm,1.2s						
MCH1				IAMs_20	IAMs_20	14 56 28.9	
	comp=Z,35µm,20.7s						
CONA	Conrad Observa	76.28	335	i P	P	14 17 34.2	+0.5
	comp=Z,113nm,1.1s,SNR=111						
LPW	Lampeter	76.29	348	⇑eP	P	14 17 33.6	+0.1
LPW				IAmb	IAmb	14 17 35.0	
	comp=Z,627nm,1.1s						
LPW				IAMs_20	IAMs_20	14 57 26.2	
	comp=Z,44µm,20.4s						
W45A	Hickory Valley	76.29	51	P	P	14 17 34.2	+0.3
	baz=324,SNR=20						
V46A	Holladay	76.30	50	P	P	14 17 34.1	+0.3
	baz=324,SNR=47						
SOP	Sopron	76.31	334	⇓eP	P	14 17 35.0	+1.3
SOP				eS	S	14 27 25.1	+11
N55A	Marion Center	76.32	41	P	P	14 17 33.8	-0.2
	baz=327,SNR=55						
BINY	Binghamton	76.33	38	eP	P	14 17 34.1	+0.2
BINY				LR	LR		
	comp=Z,41µm,20.0s						
BINY	Binghamton	76.33	38	P	P	14 17 33.5	-0.5
	baz=329,SNR=23						
IWEX	Carrickbyrne,	76.36	350	i P	P	14 17 34.6	+0.7
IWEX				eS	S	14 27 12.0	-2.5
IWEX	Carrickbyrne,	76.36	350	⇑eP	P	14 17 34.4	+0.5
IWEX				IAmb	IAmb	14 17 37.7	
	comp=Z,741nm,1.0s						
IWEX				IAMs_20	IAMs_20	14 45 56.3	
	comp=Z,42µm,25.6s						
STRD	Stroud	76.37	347	⇑eP	P	14 17 34.1	+0.1
STRD				IAmb	IAmb	14 17 35.6	
	comp=Z,2µm,1.2s						
STRD				IAMs_20	IAMs_20	14 45 43.9	
	comp=Z,43µm,31.1s						
P53A	Whipple	76.38	43	P	P	14 17 34.4	0.0
	baz=326,SNR=20						
R51A	Hillsboro	76.39	45	P	P	14 17 34.6	+0.2
	baz=326,SNR=65						
MONM	Monmouth	76.39	348	⇑eP	P	14 17 34.3	+0.1
MONM				IAmb	IAmb	14 17 35.8	
	comp=Z,920nm,1.1s						
MONM				IAMs_20	IAMs_20	14 45 32.0	
	comp=Z,39µm,28.1s						
BCLA	Clavier	76.42	342	⇑P	P	14 17 34.5	+0.2
	comp=Z,432nm,1.4s						
HNH	Hanover	76.42	35	eP	P	14 17 35.3	+0.8
Q52A	Bidwell	76.43	44	P	P	14 17 34.5	-0.1
	baz=326,SNR=27						
SGRR	Singureni	76.43	326	⇑iP	P	14 17 34.3	-0.2
ELSH	Elham, Standar	76.47	345	⇑eP	P	14 17 35.3	+0.7
ELSH				IAmb	IAmb	14 17 36.5	
	comp=Z,2µm,1.0s						
ELSH				IAMs_20	IAMs_20	14 47 25.3	
	comp=Z,73µm,27.9s						
T49A	Edmonton	76.47	47	eP	P	14 17 34.9	0.0
T49A	Edmonton	76.47	47	P	P	14 17 35.2	+0.3
	baz=325,SNR=46						
U48A	Cassie Pea, Po	76.48	48	P	P	14 17 35.1	+0.2
	baz=324,SNR=40						
GZR	Gura Zlata	76.49	329	⇑iP	P	14 17 34.8	-0.1
HUMR	Humele	76.51	327	⇑iP	P	14 17 34.2	-0.8
S50A	Richmond	76.53	46	P	P	14 17 35.4	+0.2
	baz=325,SNR=35						
OLDB	Oldbury-Upon-S	76.53	347	⇑eP	P	14 17 35.1	+0.2
OLDB				IAmb	IAmb	14 17 40.1	
	comp=Z,399nm,1.0s						
OLDB				IAMs_20	IAMs_20	14 58 51.1	
	comp=Z,36µm,17.9s						
RSBS	Rosebush, Pemb	76.53	349	⇑eP	P	14 17 35.0	0.0
RSBS				IAmb	IAmb	14 17 38.5	
	comp=Z,321nm,1.2s						
RSBS				IAMs_20	IAMs_20	14 57 05.5	
	comp=Z,23µm,21.4s						
V47A	Nunnelly	76.56	49	P	P	14 17 35.5	+0.1
	baz=324,SNR=39						
SWN1	Swindon	76.57	347	⇑eP	P	14 17 35.9	+0.8
SWN1				IAmb	IAmb	14 17 37.1	
	comp=Z,3µm,1.1s						
SWN1				IAMs_20	IAMs_20	14 57 12.5	
	comp=Z,42µm,21.1s						
WVL	Waterville	76.60	33	eP	P	14 17 36.4	+1.0
DARE	Darende-Malaty	76.64	316	i P	P	14 17 36.8	+0.8
TIH	Tihany	76.64	333	eP	P	14 17 31.1	-4.6
TIH				eS	S	14 27 26.0	+8.2
BZS	Buzias	76.66	330	⇑iP	P	14 17 35.1	-0.7
O55A	Ligonier	76.67	41	P	P	14 17 35.8	-0.1
	baz=327,SNR=37						
P54A	Burton	76.67	42	P	P	14 17 36.1	+0.1
	baz=327,SNR=44						
WOL	Wolverton	76.68	346	⇑eP	P	14 17 35.6	-0.1
WOL				IAmb	IAmb	14 17 37.7	
	comp=Z,1µm,1.0s						
WOL				IAMs_20	IAMs_20	14 46 11.8	
	comp=Z,48µm,29.4s						
OXF	Oxford	76.70	51	eP	P	14 17 36.2	+0.1
OXF	Oxford	76.70	51	eP	P	14 17 36.3	+0.1
OXF	Oxford	76.70	51	P	P	14 17 36.3	+0.1
	baz=324,SNR=50						
YOZ	Yozgat	76.70	318	eP	P	14 17 36.0	-0.3
W46A	Michie	76.71	50	P	P	14 17 36.2	-0.1
	baz=324,SNR=9.3						
TRY	Troy	76.76	36	eP	P	14 17 36.3	-0.1
MOA	Molln	76.78	336	i P	P	14 17 36.8	+0.3
	comp=Z,148nm,1.3s,SNR=50						
R52A	Catlettsburg	76.78	44	P	P	14 17 36.6	0.0
	baz=326,SNR=28						
U49A	Red Boiling Sp	76.84	48	P	P	14 17 36.9	0.0
	baz=325,SNR=62						
T50A	Nancy	76.86	47	P	P	14 17 37.2	+0.2
	baz=325,SNR=76						
DOU	Dourbes	76.87	342	⇑P	P	14 17 37.0	+0.2
	comp=Z,290nm,1.4s						
HMNX	Herstmonceux	76.87	345	⇑eP	P	14 17 37.7	+0.9
HMNX				IAmb	IAmb	14 17 41.2	
	comp=Z,1µm,1.0s						
HMNX				IAMs_20	IAMs_20	14 47 05.6	
	comp=Z,66µm,27.9s						
SSPA	Standing Stone	76.89	40	eP	P	14 17 37.1	-0.1
SSPA	Standing Stone	76.89	40	P	P	14 17 37.1	-0.1
	baz=328						
MCWV	Mont Chateau	76.90	42	P	P	14 17 37.4	+0.1
	baz=327,SNR=17						
O56A	Blue Knob Stat	76.92	41	eP	P	14 17 37.4	-0.1
O56A	Blue Knob Stat	76.92	41	P	P	14 17 37.3	-0.1
	baz=328,SNR=35						
HKT	Hockley	76.96	59	eP	P	14 17 38.6	+1.0
HKT	Hockley	76.96	59	eP	P	14 17 38.6	+1.0
KSPA	Keystone Colle	76.96	38	eP	P	14 17 37.7	+0.1
V48A	Smith Brothers	76.97	49	P	P	14 17 37.9	+0.2
	baz=324,SNR=47						
WLF	Walferdange	76.97	341	eP	P	14 17 38.3	+0.8
WLF	Walferdange	76.97	341	eP	P	14 17 38.3	+0.8
WLF	Walferdange	76.97	341	⇓P	P	14 17 38.1	+0.7
	comp=Z,299nm,1.4s						
URFA	Urfa	76.97	314	i P	P	14 17 38.7	+0.9
PLAL	Pickwick Lake	76.97	50	eP	P	14 17 37.5	-0.2
SHME	Shamm	76.99	295	i P	P	14 17 37.5	-0.5
	SNR=69						
ARSA	Arzberg	76.99	334	i P	P	14 17 38.0	+0.4
	comp=Z,333nm,1.8s,SNR=88						
BANOM	Banah	76.99	295	i P	P	14 17 38.0	0.0
	SNR=194						
BANOM	Banah	76.99	295	P	P	14 17 38.2	+0.2
	SNR=171						
BANOM				P	P	14 17 38.2	+0.2
	SNR=171						
W47A	Westpoint	76.99	50	P	P	14 17 38.0	+0.1
	baz=324,SNR=49						
SRE	Strehaia	76.99	328	⇑iP	P	14 17 38.7	+1.0
ASAR	Alice Springs	77.00	202	P	P	14 17 39.0	+1.2
	comp=Z,110nm,0.8s,baz=15,slow=4.8,SNR=468						
ASAR				PKKP	PKKPdf	14 36 35.0	+1.5
	comp=Z,0.6nm,0.8s,baz=222,slow=1.1,SNR=3.1						
ASAR				PKKPbc	PKKPbc	14 36 46.2	+1.1
	comp=Z,3.1nm,1.0s,baz=200,slow=2.8,SNR=4.1						
ASAR				PKP2ab		14 44 31.9	
	comp=Z,1.3nm,0.9s,baz=167,slow=4.6,SNR=4.8						
ASAR				PKPPKP	P'P'df	14 44 45.9	+2.0
	comp=Z,1.6nm,0.9s,baz=170,slow=1.1,SNR=5.7						
ASAR				LR	LR	14 49 39.3	
	comp=Z,13µm,22.0s,baz=25,slow=34						
BANR	Banloc	77.03	330	⇑iP	P	14 17 38.2	+0.4
P55A	Reedsville	77.03	42	P	P	14 17 38.1	+0.1
	baz=327,SNR=59						
Q54A	Coxs Mills	77.04	43	P	P	14 17 38.2	+0.2
	baz=327,SNR=29						
HERR	Herculane	77.06	329	⇑iP	P	14 17 37.2	-0.8
X46A	Booneville	77.07	51	P	P	14 17 38.1	-0.2
	baz=324,SNR=11						
R53A	Hurricane	77.09	44	P	P	14 17 38.3	0.0
	baz=326,SNR=25						
CRAR	CRAIOVA	77.09	328	⇑iP	P	14 17 38.3	+0.1
VAL	Valentia	77.12	352	i P	P	14 17 38.8	+0.6
VAL				eS	S	14 27 21.0	-1.8
S52A	Salyersville	77.13	45	P	P	14 17 38.8	+0.2
	baz=326,SNR=9.0						
BNN	Bunyan	77.13	317	eP	P	14 17 38.7	0.0
ZIMR		77.14	326	⇑iP	P	14 17 38.5	0.0
VLAD	Vladila	77.17	327	⇑iP	P	14 17 39.3	+0.6
EMMW	East Machias	77.21	31	eP	P	14 17 39.6	+0.8
SZH	Strazhica	77.28	326	eP	P	14 17 39.1	-0.2
HEX	Exmoor	77.28	348	⇑eP	P	14 17 39.5	+0.3
T51A	Gray	77.32	46	P	P	14 17 39.8	+0.1
	baz=326,SNR=29						
BR131	Keskin Array S	77.34	319	P	P	14 17 39.3	-0.6
	SNR=46						
BRTR	Keskin Array B	77.34	319	P	P	14 17 39.6	-0.3
	comp=Z,41nm,0.8s,baz=64,slow=2.9,SNR=80						
BRTR				PKKPbc	PKKPbc	14 36 44.9	+2.6
	comp=Z,0.6nm,0.5s,baz=224,slow=4.0,SNR=3.4						
BRTR				PKPPKP	P'P'df	14 44 16.9	-35
	comp=Z,0.9nm,0.7s,baz=191,slow=6.8,SNR=4.2						
BRTR				LR	LR	14 57 55.0	
	comp=Z,34µm,19.0s,baz=7.5,slow=40						
Q55A	Buckhannon	77.35	42	P	P	14 17 40.2	+0.3
	baz=327,SNR=29						
U50A	Jamestown	77.35	47	P	P	14 17 40.0	+0.1
	baz=325,SNR=25						
BEHE	Becsehely	77.36	333	eP	P	14 17 36.1	-3.6
BEHE				eS	S	14 27 35.1	+9.5
BEHE	Becsehely	77.36	333	⇑iP	P	14 17 40.0	+0.3
MDVR	Moldovita	77.38	329	⇓iP	P	14 17 39.5	-0.4
V49A	McMinnville	77.39	48	P	P	14 17 39.9	-0.1
	baz=325,SNR=46						
W48A	Pulaski	77.40	49	P	P	14 17 40.1	0.0
	baz=324,SNR=62						
PUNG	Punghina	77.42	328	⇑iP	P	14 17 40.2	+0.1
HTL	Hartland	77.44	348	⇑eP	P	14 17 40.5	+0.5
HTL				IAmb	IAmb	14 17 41.8	
	comp=Z,648nm,1.0s						
HTL				IAMs_20	IAMs_20	14 57 41.2	
	comp=Z,37µm,19.5s						
X47A	Russelville	77.45	50	P	P	14 17 40.1	-0.3
	baz=324,SNR=19						
MDH	Madha	77.47	295	i P	P	14 17 39.8	-0.9
	SNR=49						
MDH	Madha	77.47	295	P	P	14 17 41.0	+0.3
	SNR=34						
MDH				P	P	14 17 41.0	+0.3
	SNR=34						
N59A	State Game Lan	77.50	38	P	P	14 17 40.4	-0.2
	baz=329,SNR=28						
MSFE	Esma-Masafi	77.50	295	i P	P	14 17 40.7	-0.2
	SNR=57						
PVL	Pavlikeni	77.54	326	eP	P	14 17 41.4	+0.7
S53A	Williamson	77.55	44	P	P	14 17 41.0	+0.1
	baz=326,SNR=9.8						
ANTO	Ankara	77.56	320	P	P	14 17 41.3	+0.2
ANTO	Ankara	77.56	320	eP	P	14 17 41.5	+0.5
ANTO				LR	LR		
	comp=Z,36µm,21.0s						
ANTO	Ankara	77.56	320	⇑iP	P	14 17 41.7	+0.6
ANTO	Ankara	77.56	320	P	P	14 17 41.4	+0.3
ANTO				pmax	pmax		
	comp=Z,130nm,1.3s						
ANTO	Ankara	77.56	320	P	P	14 17 41.7	+0.6
	SNR=23						
ANTO				P	P	14 17 41.7	+0.6
	SNR=23						
ANTO	Ankara	77.56	320	eP	P	14 17 41.2	+0.2
QUA2	Belchertown	77.64	35	eP	P	14 17 41.7	+0.4
R54A	Victor	77.64	43	P	P	14 17 41.6	+0.1
	baz=327,SNR=44						
FRGS	Fruska Gora	77.64	331	⇑iP	P	14 17 40.8	-0.5
SOKA	Soboth	77.65	335	i P	P	14 17 41.9	+0.5
	comp=Z,757nm,1.5s,SNR=217						
UMQ	Umm Al-Quwin	77.66	295	i P	P	14 17 42.6	+0.9
	SNR=17						
UMQ	Umm Al-Quwin	77.66	295	P	P	14 17 43.0	+1.3
	SNR=24						
UMQ				P	P	14 17 43.0	+1.3
	SNR=24						
PERS	Pernice	77.67	334	i P	P	14 17 41.7	+0.2
WSAR	Wadi Sarin	77.69	292	P	P	14 17 43.1	+1.2
	SNR=59						
KVTX	Kingsville	77.69	62	P	P	14 17 42.6	+0.8
	comp=Z,825nm,1.1s						
KVTX				LR	LR		
	comp=Z,25µm,20.0s						
MDUB	Mudurnu	77.70	321	P	P	14 17 41.8	-0.1
HRV	Adam Dziewonsk	77.73	35	eP	P	14 17 41.9	+0.1
	comp=Z,211nm,1.0s						
HRV	Adam Dziewonsk	77.73	35	eP	P	14 17 41.9	+0.1
HRV				pmax	pmax		
	comp=Z,211nm,1.0s						
SILT	Sile	77.73	322	P	P	14 17 41.7	-0.1
SILT	Sile	77.73	322	⇑iP	P	14 17 42.7	+0.9
KBA	Koelnbreinsper	77.73	336	i P	P	14 17 42.8	+0.8
	comp=Z,567nm,1.0s,SNR=454						
KBA	Koelnbreinsper	77.73	336	P	P	14 17 42.5	+0.5
KBA				pmax	pmax		
	comp=Z,1µm,1.4s						
W49A	Belvidere	77.74	49	P	P	14 17 42.1	+0.1
	baz=325,SNR=48						
BIDO	Bidbid	77.77	292	P	P	14 17 43.0	+0.7
	SNR=63						
BIDO				P	P	14 17 43.0	+0.7
	SNR=63						
U51A	La Follette	77.77	47	P	P	14 17 42.1	-0.1
	baz=326,SNR=34						
BFO	Black Forest	77.77	340	eP	P	14 17 41.5	-0.5
BFO				LR	LR		
	comp=Z,3µm,21.0s						
BFO	Black Forest	77.77	340	eP	P	14 17 41.5	-0.5
BFO				MLR	MLR		
	comp=Z,3µm,21.0s						
AFSR	Afar-Bala (An	77.81	319	eP	P	14 17 42.5	+0.1
ODNJ	Ogdensburg	77.82	38	eP	P	14 17 42.4	0.0
SAUV	Serdivan-Sakar	77.82	322	P	P	14 17 42.2	-0.1
SWET	Sewanee	77.82	49	eP	P	14 17 42.2	-0.3
V50A	Pikevile	77.84	48	P	P	14 17 42.8	+0.2
	baz=325,SNR=51						
TZTN	Tazewell	77.84	46	eP	P	14 17 42.7	+0.1
TZTN	Tazewell	77.84	46	P	P	14 17 42.8	+0.2
	baz=326,SNR=33						
KLYT	Kilyos	77.88	323	eP	P	14 17 42.0	-0.6
X48A	Hartselle	77.90	50	P	P	14 17 42.6	-0.3
	baz=324,SNR=21						
GAZ	Gaziantep	77.92	315	eP	P	14 17 44.0	+0.9
WES	Weston	77.92	35	eP	P	14 17 43.7	+0.9
WES	Weston	77.92	35	eP	P	14 17 43.7	+0.9
CDF	Champ du Feu	77.92	340	eP	P	14 17 41.3	-1.6
CDF				pmax	pmax		
	comp=Z,747nm,1.2s						
YAYX	Yaylak	77.92	318	eP	P	14 17 42.9	-0.2
R55A	Marlinton	77.93	43	P	P	14 17 43.3	+0.2
	baz=327,SNR=59						
HATD	Hatta, Dubai	77.93	294	i P	P	14 17 43.2	-0.1
	SNR=179						
HATD	Hatta, Dubai	77.93	294	P	P	14 17 43.5	+0.3
	SNR=159						
LUPA	Lehigh Univers	77.93	38	eP	P	14 17 42.8	-0.2
OBKA	Obir	77.94	335	i P	P	14 17 43.5	+0.5
	comp=Z,409nm,1.4s,SNR=87						
WATA	Walderalm	77.94	337	i P	P	14 17 44.3	+1.2
	comp=Z,522nm,1.2s,SNR=46						
T53A	Wise	77.94	45	P	P	14 17 43.5	+0.3
	baz=326,SNR=37						
145A	Houston Renfro	77.96	53	P	P	14 17 44.1	+0.8
	baz=324,SNR=6.1						
WBK	Wadi Bani Khal	77.96	291	P	P	14 17 46.0	+2.5
	SNR=37						
VBMS	Vicksburg	77.97	53	P	P	14 17 44.3	+1.0
	baz=323,SNR=5.6						
CTYL	Yalikoy Yolu	77.97	323	eP	P	14 17 42.9	-0.3
WTTA	Wattenberg	77.99	337	i P	P	14 17 44.0	+0.6
	comp=Z,856nm,1.2s,SNR=198						
RETA	Reutte	78.00	338	i P	P	14 17 43.1	-0.2
	comp=Z,285nm,1.1s,SNR=100						
GULT	Gulveren	78.01	321	eP	P	14 17 43.7	+0.2
BCX	Boston College	78.02	35	eP	P	14 17 44.1	+0.7
SERE	Sereflikochisa	78.02	319	eP	P	14 17 43.9	+0.2
ISK	Istanbul-Kandi	78.03	323	eP	P	14 17 42.8	-0.7
KAVV	Kandilli-Istan	78.03	323	eP	P	14 17 42.8	-0.7
BGKT	Bogazkoy	78.04	323	i P	P	14 17 43.6	0.0
MOTA	Moosalm	78.05	337	i P	P	14 17 44.7	+0.9
	comp=Z,663nm,1.1s,SNR=214						

MOTA	Moosalm	78.05	337	P	P	14 17 44.7	+0.9
JLN	Jalan Bani Buh	78.05	290	P	P	14 17 45.0	+1.1
	SNR=180						
U52A	Thorn Hill	78.05	46	P	P	14 17 44.2	+0.5
	baz=326,SNR=79						
MVL	Millersville	78.05	39	*e*P	P	14 17 43.6	0.0
NAZ	Nazwa, Dubai	78.08	295	*i* P	P	14 17 43.9	-0.2
	SNR=110						
NAZ	Nazwa, Dubai	78.08	295	P	P	14 17 44.0	0.0
	SNR=127						
NAZ				P	P	14 17 44.0	0.0
	SNR=127						
ASHO	Ashiyiah	78.08	294	*i* P	P	14 17 43.8	-0.3
	SNR=186						
ASHO	Ashiyiah	78.08	294	P	P	14 17 44.7	+0.6
	SNR=159						
ASHO				P	P	14 17 44.7	+0.6
	SNR=159						
V51A	Loudon	78.08	47	P	P	14 17 43.9	0.0
	baz=325,SNR=50						
CTKS	Kestanelik-??a	78.10	323	*e*P	P	14 17 43.4	-0.5
PHSR	Pinarhisar	78.12	324	*e*P	P	14 17 44.0	0.0
PHSR	Pinarhisar	78.12	324	⇓*i*P	P	14 17 44.7	+0.7
W50A	Signal Mountai	78.12	48	P	P	14 17 44.3	0.0
	baz=325,SNR=50						
SQTA	Sankt Quirin	78.14	337	*i* P	P	14 17 44.5	+0.3
	comp=Z,791nm,1.2s,SNR=194						
PAL	Palisades	78.15	37	*e*P	P	14 17 43.8	-0.4
PAL	Palisades	78.15	37	*e*P	P	14 17 43.8	-0.4
PAL	Palisades	78.15	37	P	P	14 17 44.0	-0.2
	baz=330,SNR=26						
SMDO	Samad	78.17	292	P	P	14 17 46.0	+1.3
	SNR=74						
ZAG	Zagreb	78.17	334	⇑*i*P	P	14 17 44.8	+0.6
BRNJ	Basking Ridge	78.18	38	*e*P	P	14 17 44.7	+0.4
KULU	Kulu	78.18	319	*e*P	P	14 17 44.9	+0.4
S55A	Lewisburg	78.19	43	P	P	14 17 44.5	0.0
	baz=327,SNR=18						
BUY	Buyukada	78.19	323	*e*P	P	14 17 42.7	-1.7
HOQ	Hoqain	78.20	293	P	P	14 17 46.0	+1.2
	SNR=47						
X49A	Woodville	78.20	49	P	P	14 17 44.6	0.0
	baz=325,SNR=50						
SLVT	Silivri	78.21	323	*e*P	P	14 17 44.2	-0.3
EDRB	Edirne	78.22	325	*e*P	P	14 17 44.4	-0.2
EDRB	Edirne	78.22	325	P	P	14 17 44.3	-0.3
EDRB	Edirne	78.22	325	P	P	14 17 44.3	-0.3
SOHO	SOHO	78.23	294	P	P	14 17 45.0	+0.1
	SNR=161						
SOHO				P	P	14 17 45.0	+0.1
	SNR=161						
ABTA	Abfaltersbach	78.25	336	*i* P	P	14 17 44.7	-0.1
	comp=Z,538nm,1.2s,SNR=150						
YLE	Yale	78.25	36	*e*P	P	14 17 47.8	+3.0
TEKS	Tekeris	78.28	331	*e*P	P	14 17 44.9	0.0
KOZT	Kozan	78.28	316	P	P	14 17 45.3	+0.3
Y48A	Jasper	78.28	50	P	P	14 17 44.4	-0.6
	baz=324,SNR=19						
CPCT	Cooper Cave	78.29	47	*e*P	P	14 17 45.0	-0.1
FAQ	Al Faqa, Dubai	78.30	295	*i* P	P	14 17 45.0	-0.3
	SNR=82						
FAQ	Al Faqa, Dubai	78.30	295	P	P	14 17 45.1	-0.2
	SNR=110						
T54A	Tazewell	78.31	44	P	P	14 17 45.5	+0.2
	baz=327,SNR=52						
CPNY	Central Park	78.32	37	*e*P	P	14 17 45.0	0.0
CRES	Cresnjev	78.32	334	⇑*i*P	P	14 17 44.8	-0.2
CCA1	Carnmenellis	78.33	349	⇑*e*P	P	14 17 45.2	+0.2
CCA1				IAmb	IAmb	14 17 48.7	
	comp=Z,699nm,1.0s						
CCA1				IAMs_20	IAMs_20	14 52 26.3	
	comp=Z,38µm,21.7s						
YLV	Yalova	78.34	322	P	P	14 17 45.1	-0.2
YLV	Yalova	78.34	322	⇑*i*P	P	14 17 44.9	-0.4
YLV	Yalova	78.34	322	P	P	14 17 44.9	-0.4
SDMD	Soldier's Deli	78.36	40	*e*P	P	14 17 45.4	+0.1
LJU	Ljubljana	78.37	335	⇑*i*P	P	14 17 44.6	-0.7
DAVA	Damuels	78.40	338	*i* P	P	14 17 42.8	-2.9
	comp=Z,510nm,1.1s,SNR=140						
V52A	Sevierville	78.40	47	P	P	14 17 46.0	+0.3
	baz=326,SNR=48						
W51A	Cleveland	78.42	48	P	P	14 17 45.8	0.0
	baz=325,SNR=34						
U53A	Fall Branch	78.44	46	P	P	14 17 46.0	+0.1
	baz=326,SNR=78						
SVRH	Sivrihisar-ESK	78.44	320	P	P	14 17 45.8	-0.2
FETA	Feichten	78.44	337	*i* P	P	14 17 46.4	+0.5
	comp=Z,508nm,1.2s,SNR=139						
CAVI	Cavuskoy	78.47	322	*i* P	P	14 17 46.1	+0.1
CRLT	Corlu	78.48	324	*e*P	P	14 17 46.7	+0.7
MOF	Molkenrain	78.49	340	P	P	14 17 46.3	+0.2
OZLJ	Ozalj	78.51	334	P	P	14 17 45.5	-0.5
VISS	Visnje	78.51	334	*e*P	P	14 17 45.6	-0.5
VISS				*i* S	S	14 27 36.2	-1.9
VISS				*e*SP	SPn	14 28 19.2	+1.5
GEMT	Gemlik	78.52	322	*i* P	P	14 17 45.8	-0.5
PGB	Panagyurishte	78.53	327	*e*P	P	14 17 47.4	+1.1
ARMT	Armutlu	78.54	323	*i* P	P	14 17 45.5	-0.9
DIVS	Divibare	78.54	330	⇑*i*P	P	14 17 45.8	-0.6
X50B	Fort Payne	78.57	49	P	P	14 17 46.6	0.0
	baz=325,SNR=36						
CHBY	Cihanbeyli	78.61	319	*e*P	P	14 17 46.3	-0.6
JAVS	Javornik	78.64	335	*i* P	P	14 17 46.4	-0.5
JAVS				*e*S	S	14 27 42.0	+2.4
JMDO	Jabal Madar	78.66	291	P	P	14 17 49.1	+1.8
	SNR=95						
BOJS	Bojanci	78.67	334	*i* P	P	14 17 47.0	0.0
BOJS				*i* PcP	PcP	14 17 56.0	+0.3
BOJS				*e*pP	sP	14 18 08.7	+0.9
BOJS				*e*PKiKP	PKiKP	14 23 39.1	+17
BOJS				*e*S	S	14 27 43.4	+3.6
BOJS				*e*sS	sS	14 28 05.8	+0.7
BOJS				*e*		14 28 44.9	
SULT	Sultanhani-AKS	78.67	318	*i* P	P	14 17 47.5	+0.3
CEY	Cerknica	78.68	335	⇑*i*P	P	14 17 46.7	-0.4
Y49A	Blount Mountai	78.69	50	P	P	14 17 47.3	0.0
	baz=325,SNR=32						
BLA	Blacksburg	78.69	44	*e*P	P	14 17 47.9	+0.6
BLA				LR	LR		
	comp=Z,45µm,21.0s						
BLA	Blacksburg	78.69	44	*e*P	P	14 17 47.9	+0.6
BLA				MLR	MLR		
	comp=Z,45µm,21.0s						
BLA	Blacksburg	78.69	44	P	P	14 17 47.6	+0.3
	baz=327,SNR=28						
MDNY	Mudanya-Bursa	78.70	322	*i* P	P	14 17 47.3	+0.1
CEYT	Ceyhan	78.70	316	*e*P	P	14 17 47.9	+0.6
PLD	Plovdiv	78.73	326	*i* P	P	14 17 47.0	-0.4
PLD	Plovdiv	78.73	326	*e*P	P	14 17 47.9	+0.5
147A	Livingston	78.74	52	P	P	14 17 47.9	+0.4
	baz=324,SNR=34						
ALNE	Al Ain	78.74	294	*i* P	P	14 17 47.9	+0.1
	SNR=179						
VTS	Vitosha	78.79	327	⇓*i*P	P	14 17 48.3	+0.3
VTS	Vitosha	78.79	327	P	P	14 17 48.2	+0.3
VTS	Vitosha	78.79	327	*e*P	P	14 17 48.9	+1.0
AJN	Ajban	78.79	295	*i* P	P	14 17 47.5	-0.4
	SNR=85						
AJN	Ajban	78.79	295	P	P	14 17 47.8	-0.2
	SNR=85						
AJN				P	P	14 17 47.8	-0.2
	SNR=85						
KARA	Karaisali	78.80	317	*e*P	P	14 17 48.5	+0.6
BLY	Banja Luka	78.81	332	⇑*i*P	P	14 17 47.2	-0.5
BLY	Banja Luka	78.81	332	⇑*i*P	P	14 17 47.3	-0.5
SBT4	Kumbag-Tekirda	78.82	324	*e*P	P	14 17 48.1	+0.5
ARQ	Araqi	78.85	293	P	P	14 17 50.0	+1.7
	SNR=64						
X51A	Calhoun	78.86	48	P	P	14 17 48.3	+0.1
	baz=325,SNR=22						
W52A	Murphy	78.86	47	P	P	14 17 48.4	+0.2
	baz=326,SNR=15						
HAPS	Han Pijesak,Bl	78.87	331	⇑*i*P	P	14 17 47.8	-0.5
JRS	Jersey	78.88	347	*e*P	P	14 17 48.4	+0.4
KDZ	Kurdzhali	78.88	325	P	P	14 17 52.2	+4.0
M65A	Busby, Falmout	78.89	35	P	P	14 17 48.1	-0.1
	baz=332						
JSA	Saint Aubin	78.89	347	⇑*e*P	P	14 17 48.4	+0.3
JSA				IAmb	IAmb	14 17 49.8	
	comp=Z,1µm,1.0s						
JSA				IAMs_20	IAMs_20	14 50 03.4	
	comp=Z,44µm,24.0s						
V53A	Saluda	78.90	46	P	P	14 17 48.7	+0.2
	baz=326,SNR=52						
BSY	Bisya	78.91	292	P	P	14 17 50.0	+1.3
	SNR=166						
YURE	YUREGIR	78.91	316	*e*P	P	14 17 49.8	+1.3
BBLS	Lazići	78.93	331	⇑*i*P	P	14 17 48.6	+0.1
MBWA	Marble Bar	78.98	216	*e*P	P	14 17 49.6	+0.8
	comp=Z,1µm,1.1s						
MBWA				LR	LR		
	comp=Z,5µm,22.0s						
KDHN	Kadinhani	78.98	319	*i* P	P	14 17 49.4	+0.4
KDHN				IAML_P			
	comp=Z,959nm,0.9s						
Y50A	Piedmont	78.99	49	P	P	14 17 48.9	-0.1
	baz=325,SNR=27						
KCTX	Karacabey (Bur	78.99	323	*e*P	P	14 17 48.9	0.0
U55A	TA2, Sparta	79.01	44	P	P	14 17 49.2	+0.1
	baz=327,SNR=41						
TAHT	Tahtakopru-Hat	79.04	315	*e*P	P	14 17 34.9	-14
RIY	Rijeka	79.05	334	⇑*i*P	P	14 17 48.6	-0.4
KERG	Konya-Eregli	79.07	317	*i* P	P	14 17 49.9	+0.4
KERG				IAML_P			
	comp=Z,1µm,1.0s						
LRAL	Lakeview Retre	79.07	51	*e*P	P	14 17 48.9	-0.5
LRAL	Lakeview Retre	79.07	51	P	P	14 17 49.0	-0.4
	baz=325,SNR=18						
RKY	Sarkoy-Tekirda	79.07	324	*e*P	P	14 17 49.2	-0.1
EDC	Edincik	79.11	323	*e*P	P	14 17 49.7	+0.2
LDF	La Druitiere	79.15	345	P	P	14 17 48.0	-1.6
LDF				pmax	pmax		
	comp=Z,870nm,1.2s						
R58B	Mineral	79.15	41	P	P	14 17 49.9	+0.2
	baz=328,SNR=22						
W53A	Cullowhee	79.15	47	P	P	14 17 50.1	+0.1
	baz=326,SNR=30						
LADK	Ladik-KONYA	79.16	319	*e*P	P	14 17 49.5	-0.4
CBN	Corbin Frederi	79.16	41	PFAKE		14 18 00.0	+10
CBN				LR	LR		
	comp=Z,39µm,19.0s						
CBN	Corbin Frederi	79.16	41	P	P	14 17 50.0	+0.2
	baz=328						
Z49A	Columbiana	79.17	50	P	P	14 17 49.7	-0.3
	baz=325,SNR=33						
V54A	Nebo	79.21	45	P	P	14 17 50.1	0.0
	baz=326,SNR=39						
TVSB	Tavsanli	79.27	322	*e*P	P	14 17 50.2	-0.3
RDO	Rodhopi	79.28	325	*e*P	P	14 17 50.1	-0.3
RDO	Rodhopi	79.28	325	P	P	14 17 50.9	+0.5
RDO	Rodhopi	79.28	325	P	P	14 17 50.9	+0.5
KRBG	Karabiga-Canak	79.28	324	*e*P	P	14 17 50.6	+0.2
BOLV	Bolvadin	79.30	320	*i* P	P	14 17 51.9	+1.2
BOLV				IAML_P			
	comp=Z,4µm,0.9s						
Y51A	Rockmart	79.30	49	P	P	14 17 50.6	-0.1
	baz=325,SNR=44						
ALN	Alexandroupoli	79.31	325	*e*P	P	14 17 50.5	0.0
ALN	Alexandroupoli	79.31	325	P	P	14 17 51.0	+0.5
ALN	Alexandroupoli	79.31	325	P	P	14 17 51.0	+0.5
ALN	Alexandroupoli	79.31	325	P	P	14 17 51.0	+0.5
ERIK	Erikli-Kesan	79.33	324	*e*P	P	14 17 50.8	+0.1
MERS	Mersin	79.36	317	*i* P	P	14 17 51.0	0.0
KONT	Konya--Tatoy	79.37	319	*i* P	P	14 17 51.1	+0.1
KONT	Konya--Tatoy	79.37	319	*i* P	P	14 17 51.2	+0.2
KONT				IAML_P			
	comp=Z,3µm,0.6s						
ENEZ	Enez	79.41	325	*i* P	P	14 17 51.4	+0.3
Z50A	Ashland	79.42	50	P	P	14 17 51.1	-0.2
	baz=325,SNR=104						
PLE	Pljevlja	79.42	330	⇑*i*P	P	14 17 51.4	+0.1
UDBI	Udbina	79.42	333	P	P	14 17 50.3	-0.9
V55A	Taylorsville	79.47	45	P	P	14 17 51.8	+0.2
	baz=327,SNR=23						
AFYO	Afyonkarahisar	79.50	321	*i* P	P	14 17 52.1	+0.3
AFYO				IAML_P			
	comp=Z,7µm,1.1s						
LPK	Lapseki	79.50	324	*i* P	P	14 17 52.1	+0.5
KKB	Krupnik	79.51	327	*e*P	P	14 17 52.8	+1.1
KMER	Konya-Meram	79.52	319	*i* P	P	14 17 53.1	+1.2
KMER				IAML_P			
	comp=Z,112nm,0.2s						
DURS	Dursunbey	79.52	322	*i* P	P	14 17 51.4	-0.5
DURS				IAML_P			
	comp=Z,5µm,0.9s						
DOGA	KONYA_Doganhis	79.52	319	*i* P	P	14 17 52.4	+0.5
DOGA				IAML_P			
	comp=Z,3µm,0.9s						
149A	Jones	79.53	51	P	P	14 17 52.0	+0.1
	baz=325						
GDZ	Gediz	79.57	321	*i* P	P	14 17 52.6	+0.5
GDZ				IAML_P			
	comp=Z,2µm,0.6s						
GELI	Tayfur-Gelibol	79.59	324	*i* P	P	14 17 52.0	-0.1
SHUT	Suhut-Afyon	79.60	320	*i* P	P	14 17 52.6	+0.3
GEDZ	Gediz	79.63	321	*e*P	P	14 17 52.4	-0.1
X53A	Estanollee	79.64	47	P	P	14 17 53.0	+0.5
	baz=326,SNR=38						
NVLJ	Novalja	79.64	334	P	P	14 17 51.3	-1.0
W54A	Cherokee Point	79.67	46	P	P	14 17 52.7	+0.1
	baz=326,SNR=28						
IVA	Berane	79.67	330	⇑*i*P	P	14 17 52.4	-0.2
NVR	Nevrokopi	79.70	326	P	P	14 17 53.2	+0.5
NVR	Nevrokopi	79.70	326	P	P	14 17 53.2	+0.5
BALB	Balikesir	79.72	323	*i* P	P	14 17 52.7	-0.1
Z51A	Franklin	79.73	49	P	P	14 17 52.7	-0.3
	baz=325,SNR=20						
KAVA	Kavala	79.78	326	P	P	14 17 52.8	-0.3
KAVA	Kavala	79.78	326	P	P	14 17 52.8	-0.3
MHTO	MHTO	79.80	291	P	P	14 17 54.3	+0.8
	SNR=523						
Y52A	Lilburn	79.81	48	P	P	14 17 53.6	+0.2
	baz=326,SNR=20						
KOME	Kolasin	79.81	330	⇑*i*P	P	14 17 52.8	-0.6
KIZK	Mersin	79.85	317	*e*P	P	14 17 53.2	-0.4
KIZK	Mersin	79.85	317	*i* P	P	14 17 53.9	+0.4
KIZK				IAML_P			
	comp=Z,13µm,0.9s						
249A	Camden	79.87	51	P	P	14 17 54.4	+0.7
	baz=325,SNR=29						
SMTH	Samothraki Isl	79.87	325	P	P	14 17 52.8	-0.8
SMTH	Samothraki Isl	79.87	325	P	P	14 17 52.8	-0.8
150A	Eclectic	79.90	50	P	P	14 17 53.8	0.0
	baz=325,SNR=38						
DEMI	Demirci	79.91	322	*i* P	P	14 17 54.4	+0.4
DEMI				IAML_P			
	comp=Z,2µm,0.9s						
STIP	Stip	79.97	328	*i* P	P	14 17 53.0	-1.1
BAGO	Egridir - ISPA	79.98	320	*i* P	P	14 17 54.1	-0.2
BAGO				IAML_P			
	comp=Z,2µm,1.1s						
SRS	Serrai	80.00	326	P	P	14 17 54.5	+0.2
SRS	Serrai	80.00	326	P	P	14 17 54.5	+0.2
STEP	BALIKESIR_Sava	80.01	323	*i* P	P	14 17 54.6	+0.2
STEP				IAML_P			
	comp=Z,4µm,0.8s						
NKY	Niksic	80.01	330	⇑*i*P	P	14 17 53.5	-1.0
KMSC	Kings Mountain	80.01	45	P	P	14 17 54.5	0.0
	baz=327,SNR=25						
KZIL	AFYON_Kizioren	80.02	321	*i* P	P	14 17 54.5	-0.1
KZIL				IAML_P			
	comp=Z,978nm,0.6s						
X54A	Belton	80.03	46	P	P	14 17 55.0	+0.4
	baz=326,SNR=32						
Y53A	Monroe	80.04	48	P	P	14 17 54.9	+0.2
	baz=326,SNR=32						
THAS	Thassos island	80.05	325	P	P	14 17 54.1	-0.4
TAOE	Nuku Hiva Isla	80.05	117	*e*S	S	14 27 55.3	+0.1
	comp=Z,36µm,39.3s						
TAOE	Nuku Hiva Isla	80.05	117	*e*LQ	LQ	14 39 29.4	
	comp=Z,34µm,26.8s						
TAOE				*e*LR	LR	14 42 51.7	
	comp=Z,115µm,25.8s,baz=328						
KEBE	Keben-Mersin	80.06	317	P	P	14 17 54.4	-0.4
NKME	Niksic	80.06	330	⇓*i*P	P	14 17 54.6	-0.1
USAK	Uak-Merkez	80.07	322	*i* P	P	14 17 55.0	+0.2
USAK				IAML_P			
	comp=Z,3µm,1.1s						
EZN	Ezine	80.14	324	P	P	14 17 54.8	-0.3
EZN	Ezine	80.14	324	P	P	14 17 53.9	-1.2
EZN	Ezine	80.14	324	⇑*i*P	P	14 17 54.5	-0.6
EZN	Ezine	80.14	324	P	P	14 17 53.9	-1.2
EZN	Ezine	80.14	324	P	P	14 17 53.9	-1.2
VAY	Valandovo	80.17	327	*i* P	P	14 17 55.4	+0.2
KHAL	Karahalli	80.18	321	*i* P	P	14 17 55.1	-0.4
KHAL				IAML_P			
	comp=Z,3µm,1.0s						
TEVE	Tevekalti-Mers	80.19	317	P	P	14 17 55.0	-0.5
Z52A	Williamson	80.19	49	P	P	14 17 55.5	0.0
	baz=326,SNR=38						
KNT	Kendrikon	80.20	327	*i* P	P	14 17 55.5	+0.1
KNT	Kendrikon	80.20	327	P	P	14 17 55.9	+0.5
KNT	Kendrikon	80.20	327	P	P	14 17 55.9	+0.5
BOZC	Bozcaada	80.23	324	*i* P	P	14 17 55.1	-0.5
ISP	Isparta	80.23	320	*i* P	P	14 17 55.5	-0.3
ISP	Isparta	80.23	320	P	P	14 17 54.7	-1.1
ISP	Isparta	80.23	320	⇑*i*P	P	14 17 56.1	+0.3
ISP	Isparta	80.23	320	P	P	14 17 54.7	-1.1
ISP	Isparta	80.23	320	P	P	14 17 54.7	-1.1
ERMK	Ermenek	80.24	318	*i* P	P	14 17 56.1	+0.2
ERMK				IAML_P			
	comp=Z,7µm,0.5s						
IKL	Isikli	80.25	317	*i* P	P	14 17 55.2	-0.5
PDG	Podgorica	80.27	330	⇑*i*P	P	14 17 55.3	-0.4
PDG	Podgorica	80.27	330	⇑*i*P	P	14 17 55.0	-0.7
TTG	Podgorica	80.27	330	⇓*i*P	P	14 17 55.1	-0.7
CEME	Cevo	80.28	330	⇑*i*P	P	14 17 55.0	-0.8
250A	Grady	80.29	51	P	P	14 17 56.3	+0.3
	baz=325,SNR=15						
TREB	Trebinje	80.30	331	*e*P	P	14 17 55.6	-0.3
151A	Opelika	80.30	50	P	P	14 17 55.6	-0.5
	baz=325,SNR=19						
SMF	Signal de Mont	80.32	342	*e*P	P	14 17 55.8	-0.1
SMF				pmax	pmax		
	comp=Z,1µm,1.1s						
349A	Repton	80.34	52	P	P	14 17 57.3	+1.1
	baz=325,SNR=16						
SOH	Sokhos	80.34	326	P	P	14 17 55.8	-0.4
SOH	Sokhos	80.34	326	P	P	14 17 55.8	-0.4
448A	Bay Minette	80.35	52	P	P	14 17 57.7	+1.4
	baz=324						
BERE	Bereket-Mersin	80.36	317	*e*P	P	14 17 56.2	-0.3
GULN	MERSIN_Gulnar	80.36	317	*i* P	P	14 17 55.9	-0.4
GULN				IAML_P			
	comp=Z,2µm,0.9s						
STON	Ston	80.36	331	P	P	14 17 54.5	-1.7
STON	Ston	80.36	331	⇑*i*P	P	14 17 54.8	-1.4
AKKU	Akkuyu-Mersin	80.38	317	*e*P	P	14 17 55.9	-0.5
KULA	Kula-Manisa	80.39	322	*e*P	P	14 17 56.4	-0.1
KULA	Kula-Manisa	80.39	322	P	P	14 17 55.3	-1.2
KULA	Kula-Manisa	80.39	322	P	P	14 17 55.3	-1.2
AKHS	Akhisar	80.40	322	*i* P	P	14 17 57.0	+0.4
AKHS				IAML_P			
	comp=Z,3µm,0.9s						
X55A	Gracelyn & Ava	80.44	46	P	P	14 17 56.9	+0.2
	baz=327,SNR=25						
MANT	Manisa	80.45	322	*i* P	P	14 17 57.6	+0.5
MANT				IAML_P			
	comp=Z,5µm,1.0s						
Y54A	Tignall	80.45	47	P	P	14 17 57.3	+0.4
	baz=326,SNR=103						
GOGA	Godfrey	80.46	48	P	P	14 17 56.9	0.0
	baz=326,SNR=19						
152A	Waverly Hall	80.48	49	P	P	14 17 56.9	-0.1
	baz=326,SNR=22						
HCY	Herceg Novi	80.50	330	⇑*i*P	P	14 17 55.7	-1.3
HCY	Herceg Novi	80.50	330	*e*P	P	14 17 55.6	-1.4
LIA	Limnos Island	80.50	325	P	P	14 17 56.6	-0.4
LIA	Limnos Island	80.50	325	P	P	14 17 56.6	-0.4
BUM	Brajici-Budva	80.51	330	⇑*i*P	P	14 17 56.2	-0.9
DRME	Dracevica, Mon	80.52	330	⇑*i*P	P	14 17 56.5	-0.6
DRME	Dracevica, Mon	80.52	330	⇑*i*P	P	14 17 56.5	-0.6
BCK	Bucak	80.52	320	*e*P	P	14 17 56.7	-0.6
Z53A	Monticello	80.52	48	P	P	14 17 57.5	+0.3
	baz=326,SNR=37						
OUR	Ouranopolis	80.55	326	*e*P	P	14 17 56.8	-0.4
OUR	Ouranopolis	80.55	326	P	P	14 17 55.8	-1.4
OUR	Ouranopolis	80.55	326	P	P	14 17 55.8	-1.4
OUR	Ouranopolis	80.55	326	P	P	14 17 55.8	-1.4
BRAL	Brewton	80.56	52	*e*P	P	14 17 58.8	+1.3
	comp=Z,1µm,1.6s						
BRAL				LR	LR		
	comp=Z,49µm,21.0s						
BRAL	Brewton	80.56	52	P	P	14 17 58.9	+1.4
	baz=325,SNR=7.5						
PHP	Peshkopia	80.56	329	P	P	14 17 56.0	-1.4
PHP	Peshkopia	80.56	329	P	P	14 17 56.0	-1.4
PHP	Peshkopia	80.56	329	P	P	14 17 56.0	-1.4
TEKE	Tekeli-Mersin	80.58	317	*e*P	P	14 17 56.6	-0.9
ZEDA	zmir-Bergama	80.61	323	*i* P	P	14 17 57.6	+0.1
ZEDA				IAML_P			
	comp=Z,2µm,0.7s						
251A	Midway	80.61	50	P	P	14 17 57.9	+0.2
	baz=325,SNR=18						
HORT	Hortiatis	80.63	327	*e*P	P	14 17 56.9	-0.9
HORT	Hortiatis	80.63	327	P	P	14 17 56.4	-1.4
HORT	Hortiatis	80.63	327	P	P	14 17 56.4	-1.4
EREN	Erenkoy	80.64	316	*e*P	P	14 17 58.1	+0.3
THE	Thessaloniki	80.65	327	P	P	14 17 56.6	-1.2
THE	Thessaloniki	80.65	327	P	P	14 17 56.6	-1.2
THE	Thessaloniki	80.65	327	P	P	14 17 56.6	-1.2
PRK	Paraskevi	80.67	324	P	P	14 17 58.0	+0.1
PRK	Paraskevi	80.67	324	P	P	14 17 58.0	+0.1
X56A	White Oak	80.69	46	P	P	14 17 58.2	+0.1
	baz=327,SNR=24						
PLG	Polygyros	80.71	326	P	P	14 17 57.4	-0.8
PLG	Polygyros	80.71	326	P	P	14 17 57.4	-0.8
PLG	Polygyros	80.71	326	P	P	14 17 57.4	-0.8
350A	Dozier	80.71	51	P	P	14 17 59.2	+0.9
	baz=325,SNR=19						
Y55A	Saluda	80.78	46	P	P	14 17 59.0	+0.4
	baz=327,SNR=34						
LPL	La Plagne	80.79	340	*e*P	P	14 17 58.0	-0.8
LPL				pmax	pmax		
	comp=Z,743nm,1.0s						
449A	Pace	80.81	52	P	P	14 17 59.9	+1.1
	baz=325,SNR=6.2						
SIGR	SIGRI	80.86	324	*e*P	P	14 17 58.4	-0.5
SIGR	SIGRI	80.86	324	P	P	14 17 57.4	-1.5
SIGR	SIGRI	80.86	324	P	P	14 17 57.4	-1.5
BIA	Bitola	80.86	328	*i* P	P	14 17 58.9	-0.2
MZR	Muzera	80.87	295	*i* P	P	14 17 59.1	-0.1
	SNR=231						
MZR	Muzera	80.87	295	P	P	14 17 59.5	+0.2
	SNR=235						
MZR				P	P	14 17 59.5	+0.2
	SNR=235						
DQM	DQM	80.87	290	P	P	14 17 60.0	+0.7
	SNR=88						
DQM				P	P	14 17 60.0	+0.7
	SNR=88						
HWQ	Hawqa	80.89	314	*e*P	P	14 17 59.1	-0.3
Z54A	Sparta	80.90	48	P	P	14 17 59.7	+0.5
	baz=326,SNR=54						
153A	Fort Valley	80.92	49	P	P	14 17 59.4	+0.1
	baz=326						
OHR	Ohrid	80.96	328	*i* P	P	14 17 59.2	-0.3
RAR	Rarotonga	80.97	140	PFAKE		14 18 10.0	+11
RAR				LR	LR		
	comp=Z,20µm,21.0s						
ANTB	Antalya	80.97	319	*e*P	P	14 17 55.9	-3.6
TCF	Toulx Ste Croi	80.97	343	*e*P	P	14 17 59.6	+0.1
TCF				pmax	pmax		
	comp=Z,765nm,1.0s						
PMOR	Pomariorio Ree	81.00	127	*e*P	P	14 18 01.3	+1.5
	comp=Z,208nm,1.1s						
PMOR				*e*pP	pP	14 18 15.4	+0.7
	comp=Z,594nm,1.4s						
PMOR	Pomariorio Ree	81.00	127	*e*T	T	15 47 07.9	
	comp=Z,28nm,0.2s						
KORT	Korkueli	81.01	320	*i* P	P	14 17 59.3	-0.7
KORT	Korkueli	81.01	320	*i* P	P	14 18 00.2	+0.2
KORT				IAML_P			
	comp=Z,2µm,0.8s						
252A	Lumpkin	81.02	50	P	P	14 18 00.1	+0.2
	baz=326,SNR=18						
PAIG	Paliouri	81.02	326	P	P	14 17 58.6	-1.2
PAIG	Paliouri	81.02	326	P	P	14 17 58.6	-1.2
TIR	Tirane	81.05	329	P	P	14 17 59.2	-0.7
TIR	Tirane	81.05	329	⇑*i*P	P	14 18 00.1	+0.2
TIR	Tirane	81.05	329	P	P	14 17 59.2	-0.7
FNA	Florina	81.06	328	*i* P	P	14 17 59.1	-1.0
FNA	Florina	81.06	328	P	P	14 17 58.9	-1.2
FNA	Florina	81.06	328	P	P	14 17 58.9	-1.2
450A	Crestview	81.09	52	P	P	14 18 01.7	+1.4
	baz=325,SNR=6.9						
MFF	Saint Martin d	81.09	345	*e*P	P	14 18 00.3	+0.3
MFF				pmax	pmax		
	comp=Z,1µm,1.1s						
BLCB	Balcova	81.13	323	*i* P	P	14 17 59.8	-0.6
GOLH	Golhisar	81.13	320	*i* P	P	14 18 01.6	+1.0
GOLH				IAML_P			

	comp=Z,3µm,0.9s						
X57A	Johnson Farm,	81.14	45	P	P	14 18 00.5	+0.1
	baz=328,SNR=7.6						
PHNC	Paralimni	81.14	316	P	P	14 18 01.0	+0.5
Y56A	Pelion	81.15	46	P	P	14 18 00.9	+0.3
	baz=327						
AYDB	Zeytinkoy-Aydi	81.18	322	*e*P	P	14 18 00.0	-0.8
351A	Pinckard	81.19	51	P	P	14 18 01.4	+0.6
	baz=325,SNR=19						
TAVA	DENIZLI_Tavas	81.19	321	*i* P	P	14 18 02.0	+1.1
TAVA				IAML_P			
	comp=Z,2µm,0.7s						
Z55A	Blythe	81.24	47	P	P	14 18 01.6	+0.6
	baz=327						
BNI	Bardonecchia	81.24	340	P	P	14 18 02.2	+1.1
BNI				pmax	pmax		
	comp=Z,677nm,1.1s						
253A	Americus	81.26	49	P	P	14 18 01.5	+0.3
	baz=326,SNR=13						
LIT	Litokhoron	81.28	327	P	P	14 17 58.0	-3.2
LIT	Litokhoron	81.28	327	P	P	14 17 58.0	-3.2
LIT	Litokhoron	81.28	327	P	P	14 17 58.0	-3.2
154A	Montrose	81.29	48	P	P	14 18 02.0	+0.7
	baz=326,SNR=27						
CFF	Clermont-Ferra	81.31	342	P	P	14 18 02.3	+1.1
CFF				pmax	pmax		
	comp=Z,688nm,1.0s						
URLA	Izmir	81.32	323	*e*P	P	14 18 00.9	-0.6
URLA	Izmir	81.32	323	*i* P	P	14 18 02.0	+0.5
URLA				IAML_P			
	comp=Z,11µm,0.9s						
VAH	Vaihoa	81.34	127	*e*P	P	14 18 02.8	+1.2
	comp=Z,152nm,1.0s						
BHL	Bhannes	81.34	314	*e*P	P	14 18 01.7	0.0
KZN	Kozani	81.35	327	P	P	14 18 00.1	-1.5
KZN	Kozani	81.35	327	P	P	14 18 00.1	-1.5
KZN	Kozani	81.35	327	P	P	14 18 00.1	-1.5
352A	Blakely	81.35	50	P	P	14 18 02.0	+0.3
	baz=326,SNR=17						
MAMC	Mammari	81.36	317	P	P	14 18 01.2	-0.5
QASN	Qassioun	81.36	314	*e*P	P	14 18 04.2	+2.3
Y57A	Sumter	81.38	45	P	P	14 18 02.0	+0.2
	baz=327						
X58A	Rowland	81.40	44	P	P	14 18 02.1	+0.3
	baz=328,SNR=9.4						
ELL	Elmali	81.41	320	*i* P	P	14 18 01.8	-0.3
AYDN	Tasoluk	81.43	322	*i* P	P	14 18 02.6	+0.5
AYDN				IAML_P			
	comp=Z,10µm,0.9s						
TOTH	TOTAH	81.44	314	*e*P	P	14 18 03.6	+1.4
CNNC	Cliffs of the	81.45	43	PFAKE		14 18 10.0	+7.9
CNNC				LR	LR		
	comp=Z,70µm,21.0s						
CNNC	Cliffs of the	81.45	43	P	P	14 18 02.6	+0.5
	baz=328						
DGB	zmir	81.48	323	*i* P	P	14 18 01.6	-0.6
DGB				IAML_P			
	comp=Z,2µm,0.9s						
CSS	Mathiatis	81.48	317	*e*P	P	14 18 01.9	-0.5
CSS	Mathiatis	81.48	317	P	P	14 18 00.9	-1.5
CSS	Mathiatis	81.48	317	P	P	14 18 02.3	-0.1
CSS	Mathiatis	81.48	317	P	P	14 18 00.9	-1.5
NEST	Nestorio	81.50	328	P	P	14 18 01.4	-1.0
CHOS	Chios island	81.50	323	*e*P	P	14 18 02.2	-0.3
CHOS	Chios island	81.50	323	P	P	14 18 00.9	-1.6
CHOS	Chios island	81.50	323	P	P	14 18 00.9	-1.6
Z56A	Williston	81.51	46	P	P	14 18 03.1	+0.6
	baz=327						
LEF	Lefka	81.54	317	⇑*i*P	P	14 18 02.3	-0.3
LEF	Lefka	81.54	317	*i* P	P	14 18 02.5	-0.1
LEF				IAML_P			
	comp=Z,7µm,0.9s						
DQRL	Deir Qamar	81.54	314	*e*P	P	14 18 02.9	+0.1
155A	Kite	81.58	48	P	P	14 18 03.5	+0.6
	baz=327,SNR=38						
AKUM	Antalya-Kumluc	81.59	319	*i* P	P	14 18 02.2	-0.7
AKUM				IAML_P			
	comp=Z,6µm,1.0s						
RCY	Rachaya	81.60	314	*e*P	P	14 18 03.2	+0.1
BRBR	Barbar	81.61	314	*e*P	P	14 18 07.7	+4.4
AOS	Alonnisos	81.62	325	*e*P	P	14 18 02.5	-0.5
AOS	Alonnisos	81.62	325	P	P	14 18 00.4	-2.6
AOS	Alonnisos	81.62	325	P	P	14 18 00.4	-2.6
QRWL	Qaraoun	81.62	314	*e*P	P	14 18 03.4	+0.2
GCAM	G?zelcaml?	81.65	322	*e*P	P	14 18 02.5	-0.6
GCAM	G?zelcaml?	81.65	322	*i* P	P	14 18 09.6	+6.5
GCAM				IAML_P			
	comp=Z,3µm,0.6s						
451A	Vernon	81.66	51	P	P	14 18 04.2	+0.9
	baz=325,SNR=7.8						
PENT	Pentalofos	81.67	328	P	P	14 18 02.1	-1.2
XOR	Xorichti	81.69	326	P	P	14 18 00.4	-3.0
XOR	Xorichti	81.69	326	P	P	14 18 00.4	-3.0
X59A	McDuffie Farm,	81.71	44	P	P	14 18 03.5	+0.1
	baz=328						
YER	Yerkesik	81.73	321	*e*P	P	14 18 04.2	+0.5
YER	Yerkesik	81.73	321	P	P	14 18 02.1	-1.6
YER	Yerkesik	81.73	321	P	P	14 18 02.1	-1.6
NEO	Neokhori	81.73	326	P	P	14 18 02.7	-0.9
NEO	Neokhori	81.73	326	P	P	14 18 02.7	-0.9
FYTO	Fytoko, Volos	81.74	326	P	P	14 18 00.9	-2.7
FYTO	Fytoko, Volos	81.74	326	P	P	14 18 00.9	-2.7
452A	Marianna	81.74	51	P	P	14 18 04.6	+0.8
	baz=326						
254A	Abbeville	81.75	49	P	P	14 18 04.4	+0.6
	baz=326,SNR=34						
SHBL	Chebaa	81.76	314	*e*P	P	14 18 03.7	-0.3
SKIA	Skiathos	81.77	326	P	P	14 18 00.9	-2.9
MLSB	Milas	81.79	322	*e*P	P	14 18 03.8	-0.1
Y58A	Scranton	81.80	45	P	P	14 18 04.3	+0.3
	baz=328						
353A	Camilla	81.80	50	P	P	14 18 04.8	+0.8
	baz=326,SNR=21						
KPRO	Kipourio	81.80	327	P	P	14 18 01.6	-2.4
TURN	Turunc	81.83	321	*e*P	P	14 18 05.4	+1.3
TURN	Turunc	81.83	321	*i* P	P	14 18 06.0	+1.9
TURN				IAML_P			
	comp=Z,11µm,0.8s						
COCO	West Island	81.83	239	PFAKE		14 18 20.0	+16
COCO				LR	LR		
	comp=Z,9µm,20.0s						
COCO	West Island	81.83	239	*i* P	P	14 18 07.1	+2.9
Z57A	Bowman	81.84	46	P	P	14 18 04.5	+0.3
	baz=327,SNR=16						
FETY	Fethiye	81.84	320	*e*P	P	14 18 04.2	0.0
FETY	Fethiye	81.84	320	P	P	14 18 02.1	-2.1
FETY	Fethiye	81.84	320	P	P	14 18 02.1	-2.1
FETY	Fethiye	81.84	320	*i* P	P	14 18 10.8	+6.6
FETY				IAML_P			
	comp=Z,10µm,1.0s						
SZAC	Souni	81.85	317	P	P	14 18 03.9	-0.4
DALY	Dalyan (Mula)	81.86	321	*e*P	P	14 18 04.3	+0.1
DALY	Dalyan (Mula)	81.86	321	*i* P	P	14 18 05.6	+1.4
DALY				IAML_P			
	comp=Z,3µm,0.8s						
THL	Klokotos Trika	81.93	327	P	P	14 18 00.9	-3.7
AKAS	Kas	81.97	320	*i* P	P	14 18 06.0	+0.9
AKAS	Kas	81.97	320	*i* P	P	14 18 05.0	-0.1
AKAS				IAML_P			
	comp=Z,4µm,0.3s						
PPCY	Paphos	81.98	317	P	P	14 18 04.3	-0.6
156A	Sylvania	82.01	47	P	P	14 18 06.4	+1.3
	baz=327,SNR=18						
TIGA	Tifton	82.03	49	P	P	14 18 06.0	+0.8
	baz=326,SNR=19						
AQU	L'Aquila	82.09	334	P	P	14 18 06.2	+0.7
AQU				pmax	pmax		
	comp=Z,1µm,1.0s						
AQU	L'Aquila	82.09	334	⇑*i*P	P	14 18 06.2	+0.7
SMIA	Simia	82.12	326	P	P	14 18 03.5	-2.1
BDRM	Kayabasi	82.12	322	*i* P	P	14 18 06.4	+0.7
BDRM				IAML_P			
	comp=Z,5µm,0.9s						
MRKA	Markates	82.13	325	P	P	14 18 03.9	-1.8
255A	Hazlehurst	82.16	48	P	P	14 18 06.9	+1.0
	baz=327,SNR=23						
453A	Whigham	82.16	50	P	P	14 18 07.0	+1.0
	baz=326,SNR=13						
BODT	Bodrum	82.17	322	*e*P	P	14 18 05.6	-0.4
BODT	Bodrum	82.17	322	P	P	14 18 04.5	-1.5
BODT	Bodrum	82.17	322	P	P	14 18 04.5	-1.5
ASF	Jabal al Asfar	82.21	313	PKKPbc	PKKPbc	14 36 31.1	-0.4
	comp=Z,1.8nm,0.6s,baz=101,slow=5.2,SNR=2.3						
Z58A	St. Stephen	82.21	45	P	P	14 18 06.6	+0.4
	baz=328,SNR=8.7						
BAI	Bari	82.22	331	*e*P	P	14 18 06.3	+0.3
NHSC	New Hope	82.24	46	*e*P	P	14 18 06.7	+0.4
	comp=Z,877nm,1.4s						
NHSC				LR	LR		
	comp=Z,70µm,20.0s						
NHSC	New Hope	82.24	46	P	P	14 18 07.0	+0.7
	baz=328,SNR=12						
JAN	Janina	82.25	328	P	P	14 18 06.3	0.0
JAN	Janina	82.25	328	P	P	14 18 06.3	0.0
552A	Lynn Haven	82.28	51	P	P	14 18 07.9	+1.3
	baz=326						
AGG	Agios Georgios	82.30	326	*e*P	P	14 18 04.9	-1.7
AGG	Agios Georgios	82.30	326	P	P	14 18 02.1	-4.5
AGG	Agios Georgios	82.30	326	P	P	14 18 02.1	-4.5
AGG	Agios Georgios	82.30	326	P	P	14 18 02.1	-4.5
CAF	Calviac	82.31	343	P	P	14 18 05.9	-0.7
CAF				pmax	pmax		
	comp=Z,1µm,1.2s						
SRN	Sarande	82.33	328	P	P	14 18 04.5	-2.2
SRN	Sarande	82.33	328	P	P	14 18 04.5	-2.2
FASA	Fasano	82.34	331	*e*P	P	14 18 06.4	-0.3
ATAL	Atalanti	82.35	326	P	P	14 18 04.5	-2.3
ATAL	Atalanti	82.35	326	P	P	14 18 04.5	-2.3
PPT	Papeete	82.35	130	P	P	14 18 08.2	+1.2
	comp=Z,158nm,0.9s,baz=357,slow=8.9,SNR=6.0						
PPT				LR	LR	14 47 41.2	
	comp=Z,19µm,21.0s,baz=306,slow=30						
DAT	Datca	82.36	322	*i* P	P	14 18 06.1	-0.9
DAT	Datca	82.36	322	*i* P	P	14 18 12.8	+5.8
DAT				IAML_P			
	comp=Z,42nm,0.3s						
PPT2	Papeete2	82.37	130	*e*P	P	14 18 08.6	+1.5
	comp=Z,260nm,1.3s						
PPT2				*e*pP	pP	14 18 22.8	+0.8
	comp=Z,402nm,1.3s						
PPT2				*e*S	S	14 28 19.0	0.0
	comp=Z,21µm,26.9s						
PPT2	Papeete2	82.37	130	*e*LR	LR	14 43 46.6	
	comp=Z,100µm,33.0s,baz=317						
PPT2	Papeete2	82.37	130	*e*T	T	15 48 55.3	
	comp=Z,5.5nm,0.3s						
256A	Glennville	82.39	48	P	P	14 18 07.9	+0.8
	baz=327,SNR=9.6						
LKR	Lokris	82.39	326	P	P	14 18 03.3	-3.7
LKR	Lokris	82.39	326	P	P	14 18 03.3	-3.7
PAE	Paea	82.43	130	*e*P	P	14 18 08.6	+1.3
	comp=Z,26nm,0.9s						
CGL1	Ceglie Messapi	82.44	330	*e*P	P	14 18 06.8	-0.5
TIAR	Tiarei	82.45	130	*e*P	P	14 18 08.9	+1.4
	comp=Z,48nm,0.9s						
TIAR	Tiarei	82.45	130	*e*T	T	15 49 01.9	
	comp=Z,4.3nm,0.2s						
355A	Pearson	82.46	49	P	P	14 18 08.4	+0.9
	baz=326,SNR=11						
SG1	Sgolgore (BA)	82.52	331	*e*P	P	14 18 25.3	+18
Z59A	Georgetown, SC	82.53	45	P	P	14 18 07.9	+0.1
	baz=328,SNR=8.0						
IGT	Igoumenitsa	82.53	328	P	P	14 18 05.1	-2.7
IGT	Igoumenitsa	82.53	328	P	P	14 18 05.1	-2.7
158A	Hollywood	82.54	46	P	P	14 18 08.7	+0.8
	baz=328						
LFF	La Frestale	82.54	344	*e*P	P	14 18 07.0	-0.7
LFF				pmax	pmax		
	comp=Z,1µm,1.0s						
KEK	Kerkira	82.55	328	P	P	14 18 05.7	-2.1
KEK	Kerkira	82.55	328	P	P	14 18 05.7	-2.1
MASS	Massafra	82.57	331	*e*P	P	14 18 07.6	-0.3
EVR	Evrytania	82.58	327	P	P	14 18 02.7	-5.4
EVR	Evrytania	82.58	327	P	P	14 18 02.7	-5.4
ARG	Arkhangelos	82.59	321	*e*P	P	14 18 07.1	-1.0
ARG	Arkhangelos	82.59	321	P	P	14 18 03.9	-4.2
ARG	Arkhangelos	82.59	321	P	P	14 18 03.9	-4.2
ARG	Arkhangelos	82.59	321	P	P	14 18 03.9	-4.2
RAO	Raoul Island	82.61	158	PFAKE		14 18 20.0	+12
RAO				LR	LR		
	comp=Z,25µm,22.0s						
454A	Quitman	82.61	49	P	P	14 18 08.9	+0.7
	baz=326,SNR=10						
PTL	Penteli	82.61	325	P	P	14 18 04.5	-3.7
PTL	Penteli	82.61	325	P	P	14 18 04.5	-3.7
TAR1	Taranto	82.62	331	*e*P	P	14 18 07.8	-0.4
553A	Crawfordville	82.65	50	P	P	14 18 09.6	+1.1
	baz=326						
MMLI	Mount Malkishu	82.67	314	*e*P	P	14 18 09.1	+0.5
MATE	Matera	82.69	331	⇑*i*P	P	14 18 08.3	-0.2
TVO	Taravao	82.69	130	*e*P	P	14 18 10.4	+1.7
	comp=Z,62nm,1.1s						
VILL	Villia	82.71	325	P	P	14 18 06.9	-1.9
ATH	Athens Observa	82.74	325	P	P	14 18 06.3	-2.5
ATH	Athens Observa	82.74	325	P	P	14 18 06.3	-2.5
ATH	Athens Observa	82.74	325	P	P	14 18 06.3	-2.5
DSF	Desfina	82.78	326	P	P	14 18 05.1	-4.0
DSF	Desfina	82.78	326	P	P	14 18 05.1	-4.0
257A	Skidaway Islan	82.80	47	P	P	14 18 10.0	+0.8
	baz=327						
VLY	Voula,Athens	82.81	325	P	P	14 18 06.3	-2.9
VLY	Voula,Athens	82.81	325	P	P	14 18 06.3	-2.9
356A	Blackshear	82.82	48	P	P	14 18 10.2	+0.9
	baz=327,SNR=8.1						
APE	Apeiranthos	82.86	323	⇑*i*P	P	14 18 08.6	-1.0
APE	Apeiranthos	82.86	323	P	P	14 18 08.5	-1.0
455A	Stateville	82.88	49	P	P	14 18 10.6	+0.9
	baz=326,SNR=19						
KALE	Kalithea	82.93	326	P	P	14 18 05.7	-4.2
KALE	Kalithea	82.93	326	P	P	14 18 05.7	-4.2
SERG	Sergoula	82.94	326	P	P	14 18 06.9	-3.0
PVO	Paravola	82.94	327	P	P	14 18 07.5	-2.4
LTK	Loutraki	82.96	325	P	P	14 18 06.3	-3.7
LTK	Loutraki	82.96	325	P	P	14 18 06.3	-3.7
TRIZ	Trizonia	82.98	326	P	P	14 18 08.1	-2.0
EFP	Efpalio	82.98	326	P	P	14 18 09.2	-0.9
LOUT	Loutraki	82.99	325	P	P	14 18 06.3	-3.9
357A	Townsend	83.04	48	P	P	14 18 11.4	+0.9
	baz=327						
LKD2	Lefkada island	83.09	327	P	P	14 18 08.7	-2.0
LKD2	Lefkada island	83.09	327	P	P	14 18 08.7	-2.0
554A	Perry	83.10	50	P	P	14 18 11.9	+1.0
	baz=326						
LAKA	Lakka	83.12	326	P	P	14 18 10.6	-0.3
LAKA	Lakka	83.12	326	P	P	14 18 10.6	-0.3
KLV	Kalavryta, Ach	83.24	326	P	P	14 18 09.4	-2.1
KLV	Kalavryta, Ach	83.24	326	P	P	14 18 09.4	-2.1
EVGI	Lefkada island	83.24	327	P	P	14 18 09.2	-2.2
GUR	Goura	83.26	326	P	P	14 18 09.2	-2.5
GUR	Goura	83.26	326	P	P	14 18 09.2	-2.5
DID	Didima	83.33	325	P	P	14 18 08.1	-3.8
DID	Didima	83.33	325	P	P	14 18 08.1	-3.8
456A	Hilliard	83.37	48	P	P	14 18 13.1	+0.9
	baz=327						
555A	McAlpin	83.42	49	P	P	14 18 13.5	+1.0
	baz=327,SNR=17						
RLS	Riolos of Patr	83.47	327	P	P	14 18 11.0	-1.6
RLS	Riolos of Patr	83.47	327	P	P	14 18 11.0	-1.6
DRO	Drossia	83.47	326	P	P	14 18 09.8	-2.9
STKA	Stephens Creek	83.49	194	P	P	14 18 13.7	+1.2
	comp=Z,121nm,1.0s,baz=350,slow=7.5,SNR=81						
STKA				S	S	14 28 22.4	-7.3
	comp=Z,2.6nm,0.9s,baz=22,slow=19,SNR=1.8						
STKA				PKKPbc	PKKPbc	14 36 29.6	-1.0
	comp=Z,4.3nm,0.9s,baz=160,slow=16,SNR=3.9						
STKA				LR	LR	14 54 16.2	
	comp=Z,9µm,20.7s,baz=10,slow=35						
SANT	Santorini	83.50	323	⇑*i*P	P	14 18 10.7	-2.1
KARP	Karpathos	83.55	321	*e*P	P	14 18 11.4	-1.7
KARP	Karpathos	83.55	321	P	P	14 18 11.0	-2.1
KARP	Karpathos	83.55	321	P	P	14 18 11.0	-2.1
VLS	Valsamata	83.66	327	P	P	14 18 13.7	+0.1
VLS	Valsamata	83.66	327	P	P	14 18 13.7	+0.1
457A	Yulee	83.68	48	P	P	14 18 15.0	+1.3
	baz=327						
VTN	Vitineika	83.69	327	P	P	14 18 14.0	+0.3
VLX	Vlachokerasia	83.76	326	P	P	14 18 13.8	-0.4
VLX	Vlachokerasia	83.76	326	P	P	14 18 13.8	-0.4
655A	Horseshoe Beac	83.78	50	P	P	14 18 15.3	+0.9
	baz=326						
556A	Lake Butler	83.79	49	P	P	14 18 15.8	+1.5
	baz=327,SNR=14						
AMT	Artemida-Makis	83.85	326	P	P	14 18 14.0	-0.6
TIP	Timpagrande	84.02	330	P	P	14 18 15.7	+0.2
TIP	Timpagrande	84.02	330	⇓*i*P	P	14 18 15.5	0.0
TIP	Timpagrande	84.02	330	P	P	14 18 15.7	+0.2
ITM	Ithomi	84.09	326	*e*P	P	14 18 14.6	-1.2
ITM	Ithomi	84.09	326	P	P	14 18 14.0	-1.8
ITM	Ithomi	84.09	326	P	P	14 18 14.0	-1.8
557A	Orange Park	84.10	49	P	P	14 18 17.2	+1.2
	baz=327,SNR=8.5						
DMTO	DMTO	84.12	291	P	P	14 18 16.0	-0.2
	SNR=27						
DMTO				P	P	14 18 16.0	-0.2
	SNR=27						
VLI	Veliai	84.13	325	P	P	14 18 13.4	-2.6
VLI	Veliai	84.13	325	P	P	14 18 13.4	-2.6
656A	Willston	84.25	49	P	P	14 18 18.0	+1.2
	baz=327						
ZKR	Zakros	84.31	322	P	P	14 18 16.3	-0.6
ZKR	Zakros	84.31	322	P	P	14 18 14.6	-2.3
ZKR	Zakros	84.31	322	P	P	14 18 14.6	-2.3
657A	Interlachen	84.39	49	P	P	14 18 18.7	+1.2
	baz=327						
PYL	PYLOS	84.41	326	P	P	14 18 15.7	-1.7
PYL	PYLOS	84.41	326	P	P	14 18 15.7	-1.7
NPS	Neapolis	84.41	322	P	P	14 18 14.6	-2.9
NPS	Neapolis	84.41	322	P	P	14 18 14.6	-2.9
NPS	Neapolis	84.41	322	P	P	14 18 14.6	-2.9
KZIT	Kziot	84.43	314	*i* P	P	14 18 17.9	+0.3
KYTH	Kithira	84.50	325	P	P	14 18 14.0	-3.9
KYTH	Kithira	84.50	325	P	P	14 18 14.0	-3.9
KTHR	Kythira	84.52	325	P	P	14 18 15.2	-2.8
LAST	Lasithi	84.55	322	P	P	14 18 17.5	-0.8
LAST	Lasithi	84.55	322	P	P	14 18 17.5	-0.8
WHFO	Wadi Hawf	84.66	292	P	P	14 18 21.0	+1.9
	SNR=14						
IDI	Anoyia	84.67	323	P	P	14 18 16.4	-2.5
IDI	Anoyia	84.67	323	P	P	14 18 14.6	-4.3
IDI	Anoyia	84.67	323	⇓*i*P	P	14 18 17.4	-1.5
IDI	Anoyia	84.67	323	P	P	14 18 14.6	-4.3
RBK	Rabkut	84.73	291	P	P	14 18 20.1	+0.7
	SNR=13						
ANKY	Antikythira Is	84.76	324	P	P	14 18 15.2	-4.0
ANKY	Antikythira Is	84.76	324	P	P	14 18 15.2	-4.0
658A	Bunnell	84.82	48	P	P	14 18 21.0	+1.4
	baz=327						
VAM	Vamos	84.83	323	P	P	14 18 15.7	-3.9
VAM	Vamos	84.83	323	P	P	14 18 15.7	-3.9
VAM	Vamos	84.83	323	P	P	14 18 15.7	-3.9
757A	Oxford	84.83	49	P	P	14 18 20.9	+1.3
	baz=327,SNR=6.1						
IMMV	Iera Moni Meta	84.86	324	*e*P	P	14 18 18.6	-1.1
IMMV	Iera Moni Meta	84.86	324	P	P	14 18 16.9	-2.8
HRFI	Mount Harif	84.86	313	*i* P	P	14 18 20.3	+0.4
RAYN	Ar Rayn	84.92	301	*e*P	P	14 18 20.4	+0.1
	comp=Z,853nm,0.9s						
RAYN				LR	LR		
	comp=Z,48µm,21.0s						
RAYN	Ar Rayn	84.92	301	*i* P	P	14 18 20.2	0.0
	SNR=731						
RAYN	Ar Rayn	84.92	301	*e*P	P	14 18 20.4	+0.1
RAYN				pmax	pmax		
	comp=Z,853nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,48µm,21.0s						
EIL	Elat	85.21	313	S	S	14 28 40.9	-6.7
	comp=Z,3.1nm,0.9s,baz=41,slow=20,SNR=1.7						
758A	Lake Helen	85.23	49	P	P	14 18 23.0	+1.4
	baz=327,SNR=7.4						
857A	Zephyrhills	85.31	50	P	P	14 18 23.5	+1.4
	baz=327,SNR=9.5						
GVD	Gavdhos	85.37	323	*e*P	P	14 18 21.2	-1.1
ABTO	Aybut	85.38	292	P	P	14 18 24.0	+1.3
	SNR=12						
858A	St. Cloud	85.78	49	P	P	14 18 25.6	+1.2
	baz=327						
957A	Wimauma	85.81	50	P	P	14 18 25.6	+1.1
	baz=327,SNR=6.4						
DWPF	Disney Wildern	85.83	49	*e*P	P	14 18 25.7	+1.0
	comp=Z,3µm,1.7s						
DWPF	Disney Wildern	85.83	49	P	P	14 18 25.8	+1.1
	baz=327						
958A	Wauchula	86.11	50	P	P	14 18 27.4	+1.3
	baz=327,SNR=9.1						
859A	Kempfer Cattle	86.13	49	P	P	14 18 27.5	+1.4
	baz=328						
VAE	Valguarnera	86.30	331	PKKP	PKKPdf	14 36 14.1	+0.4
	comp=Z,26nm,0.3s,baz=305,slow=18,SNR=6.3						
VAE				PKKPbc	PKKPbc	14 36 21.6	-0.5
	comp=Z,33nm,0.3s,baz=280,slow=13,SNR=6.1						
058A	Arcadia	86.53	50	P	P	14 18 29.3	+1.2
	baz=327,SNR=12						
959A	Okeechobee	86.59	49	P	P	14 18 29.7	+1.3
	baz=328						
PBRG	Braganca	86.76	348	*e*P	P	14 18 28.9	-0.2
	comp=Z,303nm,1.6s						
PBRG	Braganca	86.76	348	*e*PP	PP	14 21 55.6	+4.6
PGAV	Gavieira, Arco	86.79	349	*e*P	P	14 18 29.3	0.0
	comp=Z,388nm,1.9s						
PGAV	Gavieira, Arco	86.79	349	*e*PP	PP	14 21 51.1	-0.2
PGAV				*e*S	SKSac	14 28 50.6	-1.1
PGAV				*e*SS	SS	14 34 47.9	+4.2
PGAV				*e*LQ	LQ	14 42 05.1	
PGAV				*e*LR	LR	14 47 51.3	
	comp=Z,26µm,20.0s						
059A	Moore Haven	86.93	50	P	P	14 18 31.2	+1.2
	baz=328,SNR=6.3						
PCAB	Cabril	87.02	349	*e*P	P	14 18 30.1	-0.2
	comp=Z,290nm,1.9s						
PCAB	Cabril	87.02	349	*e*PP	PP	14 21 58.1	+5.0
060A	Indiantown	87.25	49	P	P	14 18 33.1	+1.5
	baz=328						
059Z	Ave Maria	87.31	50	P	P	14 18 33.3	+1.4
	baz=327						
POLO	Lamas de Olo	87.32	349	*e*P	P	14 18 31.7	-0.2
	comp=Z,189nm,1.5s						
POLO	Lamas de Olo	87.32	349	*e*PP	PP	14 21 59.8	+4.2
TBI	Tubuai	87.36	133	*e*P	P	14 18 32.8	+0.9
	comp=Z,456nm,1.2s						
TBI	Tubuai	87.36	133	*e*S	S	14 29 09.2	+1.1
	comp=Z,25µm,28.2s						
TBI	Tubuai	87.36	133	*e*LR	LR	14 46 06.4	
	comp=Z,86µm,33.2s,baz=336						
TBI	Tubuai	87.36	133	*e*T	T	15 55 07.4	
	comp=Z,25nm,0.2s						
PVRL	Vila Real	87.41	349	*e*P	P	14 18 31.9	-0.3
	comp=Z,499nm,1.5s						
MVO	Moncorvo	87.43	348	*e*P	P	14 18 32.0	-0.4
	comp=Z,342nm,1.6s						
MVO	Moncorvo	87.43	348	*e*PP	PP	14 22 01.3	+4.9
MVO				*e*S	SKSac	14 28 56.6	+1.1
MVO				*e*SS	SS	14 35 21.8	+29
MVO				*e*LQ	LQ	14 42 16.8	
MVO				*e*LR	LR	14 48 00.9	
	comp=Z,34µm,20.0s						
PTO	Porto	87.65	350	*e*P	P	14 18 33.7	+0.4
	comp=Z,311nm,1.9s						
060Z	West Palm Beac	87.68	50	P	P	14 18 35.2	+1.5
	baz=328,SNR=10						
UCM	Universidad Co	87.72	345	⇑*i*P	P	14 18 32.9	-0.8
UCM				*i* S	S	14 29 21.4	+10
061Z	Ochoppi	87.96	50	P	P	14 18 36.4	+1.3
	baz=328						
PVIS	Viseu	87.98	349	*e*P	P	14 18 35.4	+0.4
	comp=Z,357nm,1.7s						
MTE	Manteigas	88.25	349	*e*P	P	14 18 36.1	-0.2
	comp=Z,425nm,1.4s						
MTE	Manteigas	88.25	349	*e*PP	PP	14 22 08.0	+5.0
MTE				*e*S	SKSac	14 29 01.8	+1.3
MTE				*e*SS	SS	14 35 07.8	+2.9
MTE				*e*LQ	LQ	14 42 29.5	
MTE				*e*LR	LR	14 48 00.1	
	comp=Z,31µm,20.0s						
ESDC	Sonseca Array	88.46	346	P	P	14 18 37.0	-0.3
	comp=Z,101nm,0.8s,baz=6.0,slow=4.4,SNR=259						
ESDC				S	SKSac	14 29 04.3	+2.6
	comp=Z,0.1nm,0.3s,baz=114,slow=6.2,SNR=2.2						
ESDC				PKKP	PKKPdf	14 36 09.4	-0.5
	comp=Z,0.2nm,0.3s,baz=157,slow=7.0,SNR=3.2						
ESDC				PKKPbc	PKKPbc	14 36 16.9	-0.2
	comp=Z,0.6nm,0.6s,baz=249,slow=1.2,SNR=4.0						
ESDC				LR	LR	15 04 57.6	
	comp=Z,26µm,20.3s,baz=20,slow=40						
WIAZ	Waiheke Island	88.58	166	P	P	14 18 40.1	+2.7
PAB	San Pablo	88.64	346	*e*P	P	14 18 37.9	-0.3
	comp=Z,222nm,1.1s						
PAB				LR	LR		
	comp=Z,41µm,20.0s						
PAB	San Pablo	88.64	346	*e*P	P	14 18 37.9	-0.3
PAB				pmax	pmax		
	comp=Z,222nm,1.1s						
PAB				MLR	MLR		
	comp=Z,41µm,20.0s						

PCAS	Casmilo, Conde	88.71	349	eP	P	14 18 37.8	-0.6
	comp=Z,318nm,1.8s						
PCAS	Casmilo, Conde	88.71	349	ePP	PP	14 22 08.5	+1.9
PCBR	Castelo Branco	88.79	348	eP	P	14 18 38.3	-0.5
	comp=Z,309nm,1.6s						
062Z	Marathon	88.85	51	P	P	14 18 40.4	+1.1
	baz=328						
MKAZ	Moumakai	88.89	166	P	P	14 18 41.2	+2.3
CAEH	'Ain El Ouahch	89.05	337	P	P	14 18 41.3	+1.2
CMAH	Djebel Manchou	89.06	336	P	P	14 18 41.3	+1.1
PTOM	Tomar	89.13	349	eP	P	14 18 39.8	-0.5
	comp=Z,254nm,1.5s						
PMRV	Marv??o	89.19	348	eP	P	14 18 39.7	-1.0
	comp=Z,212nm,2.0s						
PMRV	Marv??o	89.19	348	ePP	PP	14 22 13.5	+3.0
PMRV				eS	SKSac	14 29 08.0	+2.0
PMRV				eSS	SS	14 35 39.6	+21
PMRV				eLQ	LQ	14 42 50.8	
PMRV				eLR	LR	14 48 27.9	
	comp=Z,26µm,22.0s						
KEST	Kesra	89.39	335	P	P	14 18 41.9	+0.2
	comp=Z,442nm,0.9s,baz=285,slow=1.4,SNR=106						
KEST				S	SKSac	14 29 07.0	-0.5
	comp=Z,6.9nm,1.1s,baz=282,slow=19,SNR=2.5						
KEST				LR	LR	15 02 53.3	
	comp=Z,65µm,21.8s,baz=321,slow=38						
CKFL	Kef-Lekhel	89.45	337	P	P	14 18 43.1	+1.0
DFRA	Djebel Bou Aff	89.52	337	P	P	14 18 43.6	+1.2
TOZ	Tahuroa Road	89.56	166	P	P	14 18 44.3	+2.3
CASM	Ain Smara	89.64	337	P	P	14 18 43.8	+0.9
PMTG	Montargil	89.64	349	eP	P	14 18 41.9	-0.9
	comp=Z,177nm,1.6s						
PMTG	Montargil	89.64	349	ePP	PP	14 22 19.4	+5.3
KMRZ	Kaimai	89.74	165	P	P	14 18 44.9	+2.0
PESTR	Estremoz	89.77	348	eP	P	14 18 42.7	-0.7
	comp=Z,174nm,1.5s						
PESTR	Estremoz	89.77	348	ePP	PP	14 22 20.4	+5.3
OPRZ	Ohinepanea	89.84	165	P	P	14 18 43.8	+0.5
CTEI	Djebel Teioual	89.84	337	P	P	14 18 45.6	+1.7
ABMS	Boumerdes	89.88	339	P	P	14 18 43.2	-0.7
PMAFR	Mafra	89.88	350	eP	P	14 18 43.1	-0.8
	comp=Z,234nm,1.4s						
PMAFR	Mafra	89.88	350	ePP	PP	14 22 18.2	+2.2
H07S1	FLORES T-PHASE	89.89	7	eLQ	LQ	14 44 51.9	
H07S1				eLR	LR	14 50 34.8	
ABA	Alger-Bouzarea	89.93	340	P	P	14 18 44.2	0.0
HAZ	Te Kaha	89.96	164	P	P	14 18 45.0	+1.2
SET	Setif	89.96	338	P	P	14 18 47.0	+2.6
CART	Cartagena	89.99	343	⇑iP	P	14 18 43.0	-1.4
CART				i S	S	14 29 39.8	+6.9
PMST	Lisbon--Monsan	90.09	350	eP	P	14 18 44.3	-0.5
PMST	Lisbon--Monsan	90.09	350	ePP	PP	14 22 19.9	+2.3
LIS	Lisbon	90.10	350	eP	P	14 18 44.2	-0.7
LIS				ePP	PP	14 22 18.4	+0.7
LIS				eS	SKSac	14 29 10.4	-0.9
LIS				AMS	AMS	15 05 47.0	
	comp=Z,33µm,21.9s						
LIS	Lisbon	90.10	350	eP	P	14 18 43.9	-1.0
	comp=Z,177nm,2.5s						
LIS	Lisbon	90.10	350	ePP	PP	14 22 19.7	+2.0
LIS	Lisbon	90.10	350	eP	P	14 18 44.2	-0.7
LIS				e		14 22 18.4	
LIS				eS	SKSac	14 29 10.4	-0.9
CKHR	Kef el Ahmar	90.11	338	P	P	14 19 04.0	+19
RUGZ	Raukumara Rang	90.14	164	P	P	14 18 44.6	-0.3
HIZ	Hauiti	90.22	166	P	P	14 18 46.8	+1.7
URZ	Urewera	90.33	165	P	P	14 18 45.2	-0.3
PUZ	Puketiti	90.35	164	P	P	14 18 46.3	+0.6
TWGZ	Tauwhareparae	90.40	164	P	P	14 18 46.4	+0.4
PGRA	Graciosa	90.43	4	eLQ	LQ	14 45 16.6	
PGRA				eLR	LR	14 49 50.9	
	comp=Z,3µm,18.4s						
ADJB	Djebel Djouab	90.46	339	P	P	14 19 08.0	+21
MWZ	Matawai	90.48	164	P	P	14 18 46.2	-0.1
ATAF	Djebel Tarf	90.54	339	P	P	14 19 10.0	+23
NWAO	Narrogin (SRO)	90.61	213	P	P	14 18 47.3	+0.3
NWAO				LR	LR		
	comp=Z,9µm,21.0s						
NWAO	Narrogin (SRO)	90.61	213	P	P	14 18 47.3	+0.3
NWAO				MLR	MLR		
	comp=Z,9µm,21.0s						
NWAO	Narrogin (SRO)	90.61	213	P	P	14 18 47.3	+0.3
	comp=Z,133nm,1.0s,baz=259,slow=5.2,SNR=23						
NWAO				S	SKSac	14 29 16.5	+2.8
	comp=Z,10nm,1.1s,baz=32,slow=19,SNR=1.8						
PNCL	Nicolau / Gran	90.63	349	eP	P	14 18 46.8	-0.5
	comp=Z,84nm,1.9s						
PNCL	Nicolau / Gran	90.63	349	ePP	PP	14 22 27.6	+5.7
PBEJ	Beja	90.63	348	eP	P	14 18 47.7	+0.3
	comp=Z,184nm,1.6s						
PBEJ	Beja	90.63	348	ePP	PP	14 22 28.8	+6.9
RTZ	Ruatahuna	90.66	165	P	P	14 18 47.8	+0.6
ROSA	Rosais	90.73	4	eLQ	LQ	14 44 50.3	
ROSA				eLR	LR	14 49 59.9	
	comp=Z,3µm,23.8s						
MESJ	Messejana	90.86	349	eP	P	14 18 47.8	-0.6
MESJ				ePP	PP	14 22 24.1	+0.4
MESJ				eS	SKSac	14 29 14.6	-1.1
MESJ				eSS	SS	14 35 44.4	+1.8
MESJ				AMS	AMS	15 06 08.4	
	comp=Z,26µm,21.0s						
MESJ	Messejana	90.86	349	eP	P	14 18 47.9	-0.6
	comp=Z,130nm,2.0s						
MESJ	Messejana	90.86	349	ePP	PP	14 22 25.1	+1.4
MESJ	Messejana	90.86	349	eP	P	14 18 47.8	-0.6
MESJ				e		14 22 24.1	
MESJ				eS	SKSac	14 29 14.6	-1.1
MESJ				eSS	SS	14 35 44.3	+1.8
RIGZ	Rimuhau	90.88	164	P	P	14 18 49.5	+1.3
BKZ	Black Stump Fm	91.12	165	P	P	14 18 48.9	-0.3
PTEO	Sao Teotonio	91.21	349	eP	P	14 18 49.1	-1.0
	comp=Z,163nm,1.8s						
PVAQ	Vaqueiros	91.22	348	eP	P	14 18 49.8	-0.3
	comp=Z,208nm,1.4s						
PVAQ	Vaqueiros	91.22	348	ePP	PP	14 22 27.1	+0.5
PVAQ				eS	SKSac	14 29 18.9	+1.1
PVAQ				eSS	SS	14 35 52.0	+4.2
PVAQ				eLQ	LQ	14 44 27.7	
PVAQ				eLR	LR	14 49 02.2	
	comp=Z,36µm,20.0s						
BHHZ	Black Hill Sta	91.36	166	P	P	14 18 50.4	0.0
EMAL	Malaga-Limoner	91.38	346	⇑iP	P	14 18 49.3	-1.5
EMAL				i S	S	14 29 48.6	+2.9
PBDV	Barranco-do-Ve	91.41	348	eP	P	14 18 51.1	0.0
	comp=Z,147nm,1.5s						
PBDV	Barranco-do-Ve	91.41	348	ePP	PP	14 22 28.2	+0.1
MORF	Marmelete	91.44	349	eP	P	14 18 50.6	-0.6
MORF				ePP	PP	14 22 28.0	-0.4
MORF				eS	SKSac	14 29 18.6	-0.5
MORF				AMS	AMS	15 05 07.4	
	comp=N,35µm,23.9s						
MORF	Marmelete	91.44	349	eP	P	14 18 50.9	-0.3
	comp=N,253nm,1.5s						
MORF	Marmelete	91.44	349	eP	P	14 18 50.6	-0.6
MORF				e		14 22 28.0	
MORF				eS	SKSac	14 29 18.6	-0.5
PFVI	Vila Bisbo	91.63	349	eP	P	14 18 51.6	-0.4
	comp=N,209nm,1.6s						
PFVI	Vila Bisbo	91.63	349	ePP	PP	14 22 30.3	+0.5
PSET	Sete Cidades	91.72	3	eLR	LR	14 51 03.7	
	comp=N,2µm,21.3s						
CMLA	Cha da Macela	91.78	2	PFAKE		14 19 00.0	+7.2
CMLA				LR	LR		
	comp=Z,33µm,21.0s						
SFS	San Fernando	91.94	347	⇑iP	P	14 18 53.5	0.0
SFS				i S	S	14 29 58.8	+8.1
DGAR	Diego Garcia	92.55	261	PFAKE		14 19 10.0	+13
DGAR				LR	LR		
	comp=Z,5µm,22.0s						
PSMN	Pico do Norte,	92.56	2	eLQ	LQ	14 45 11.7	
PSMN				eLR	LR	14 48 33.2	
	comp=Z,2µm,19.0s						
MELI	Melilla	92.57	344	⇑iP	P	14 18 55.8	-0.6
MELI				i S	S	14 29 58.4	+2.0
H08S3	Diego Garcia H	92.70	261	P	P	14 18 57.7	+0.8
	baz=20,slow=10,SNR=3.6						
H08S2	Diego Garcia H	92.70	261	P	P	14 18 57.4	+0.5
	baz=20,slow=10,SNR=3.1						
H08S1	Diego Carcia H	92.72	261	P	P	14 18 57.8	+0.8
	baz=20,slow=10,SNR=3.6						
SNZO	South Karori	92.95	167	PFAKE		14 19 10.0	+12
SNZO				LR	LR		
	comp=Z,51µm,21.0s						
TAU	Tasmania Unive	93.74	187	PFAKE		14 19 10.0	+8.8
TAU				LR	LR		
	comp=Z,9µm,20.0s						
RKT	Rikitea	94.50	121	eT	T	16 03 37.6	
	comp=Z,2.3nm,0.3s						
IFR	Ifrane	94.67	345	⇑iP	P	14 19 03.8	-2.6
IFR				i S	S	14 30 08.6	-6.7
AVE	Averroes	95.22	347	⇑iP	P	14 19 07.0	-1.6
AVE				i S	S	14 30 06.2	-14
GTBY	Guantanamo Bay	95.80	49	PFAKE		14 19 20.0	+8.6
GTBY				LR	LR		
	comp=Z,66µm,22.0s						
MTDJ	Mount Denham	96.06	52	PFAKE		14 19 20.0	+7.2
MTDJ				LR	LR		
	comp=Z,40µm,21.0s						
ATD	Arta Tunnel	96.08	296	eP	P	14 19 06.1	-6.8
ATD	Arta Tunnel	96.08	296	eP	P	14 19 06.1	-6.8
GRTK	Grand Turk	96.26	45	PFAKE		14 19 30.0	+16
GRTK				LR	LR		
	comp=Z,66µm,21.0s						
PMOZ	Porto Moniz, M	96.62	355	eP	P	14 19 14.5	-0.6
	comp=Z,222nm,1.8s						
PMOZ	Porto Moniz, M	96.62	355	ePP	PP	14 23 10.2	+1.3
PMOZ				eS	S	14 30 29.3	-2.8
PMOZ				eSS	SS	14 37 10.3	+5.2
PMOZ	Porto Moniz, M	96.62	355	eLQ	LQ	14 47 36.3	
PMOZ				eLR	LR	14 52 38.3	
	comp=Z,19µm,22.0s						
PMAR	Madeira	96.71	355	eP	P	14 19 15.4	-0.2
PMAR	Madeira	96.71	355	ePP	PP	14 23 02.1	-7.5
FUL	Funchal	96.78	355	eP	P	14 19 16.7	+1.0
SDDR	Presa de Saban	98.40	46	PFAKE		14 19 40.0	+17
SDDR				LR	LR		
	comp=Z,37µm,22.0s						
JTS	JuntasAbangare	98.74	62	PFAKE		14 19 40.0	+15
JTS				LR	LR		
	comp=Z,14µm,20.0s						
AAE	Adis Abeba	100.42	298	eP	Pdif	14 19 30.3	-2.4
AAE	Adis Abeba	100.42	298	eP	Pdif	14 19 30.3	-2.4
FURI	Furi	100.57	298	eP	Pdif	14 19 44.4	+11
FURI	Furi	100.57	298	eP	Pdif	14 19 44.4	+11
SJG	San Juan	101.43	42	PFAKE		14 19 50.0	+13
SJG				LR	LR		
	comp=Z,26µm,22.0s						
BCIP	Isla Barro Col	102.48	58	PFAKE		14 19 50.0	+8.6
BCIP				LR	LR		
	comp=Z,13µm,19.0s						
BCIP	Isla Barro Col	102.48	58	eP	Pdif	14 19 43.8	+2.3
BCIP	Isla Barro Col	102.48	58	eP	Pdif	14 19 43.8	+2.3
ANWB	Willy Bob	103.62	38	PFAKE		14 20 00.0	+14
ANWB				LR	LR		
	comp=Z,19µm,20.0s						
CODC	Agustn Codazz	105.17	52	eP	Pdif	14 19 53.8	+0.4
CODC	Agustn Codazz	105.17	52	eP	Pdif	14 19 53.8	+0.4
SDV	Santo Domingo	107.47	50	eP	Pdif	14 20 08.7	+4.8
SDV	Santo Domingo	107.47	50	eP	Pdif	14 20 08.7	+4.8
PTBC	PUERTO BERRIO,	107.54	55	eP	Pdif	14 20 04.6	+0.7
PTBC	PUERTO BERRIO,	107.54	55	eP	Pdif	14 20 04.6	+0.7
BARC	Barichara	108.15	54	eP	Pdif	14 20 07.2	+0.3
BARC	Barichara	108.15	54	eP	Pdif	14 20 07.2	+0.3
BBGH	Gun Hill	108.60	38	PFAKE		14 24 30.0	+16
BBGH				LR	LR		
	comp=Z,27µm,21.0s						
GRGR	Grenville	108.67	41	PFAKE		14 24 30.0	+16
GRGR				LR	LR		
	comp=Z,22µm,21.0s						
KMBO	Kilima Mbogo	109.55	294	Pdif	Pdif	14 20 15.5	+2.3
KMBO				PKiKP	PKiKP	14 24 14.6	-1.4
KMBO				LR	LR		
	comp=Z,12µm,22.0s						
KMBO	Kilima Mbogo	109.55	294	P	Pdif	14 20 15.5	+2.3
KMBO				MLR	MLR		
	comp=Z,12µm,22.0s						
KMBO	Kilima Mbogo	109.55	294	eP	Pdif	14 20 18.6	+5.4
KMBO	Kilima Mbogo	109.55	294	eP	Pdif	14 20 18.6	+5.4
KMBO	Kilima Mbogo	109.55	294	Pdiff	Pdif	14 20 15.5	+2.3
	comp=Z,0.6nm,0.3s,baz=60,slow=13,SNR=3.0						
KMBO				PKiKP	PKiKP	14 24 14.6	-1.4
	comp=Z,1.5nm,0.5s,baz=59,slow=11,SNR=3.9						
OTAV	Otavalo	110.63	62	PFAKE		14 24 30.0	+12
OTAV				LR	LR		
	comp=Z,9µm,22.0s						
FLOC	Florencia	111.07	59	eP	Pdif	14 20 21.5	+1.8
FLOC	Florencia	111.07	59	eP	Pdif	14 20 21.5	+1.8
RPN	Rapa Nui	112.45	106	PFAKE		14 24 30.0	+9.3
RPN				LR	LR		
	comp=Z,24µm,20.0s						
MBAR	Mbarara	112.82	300	PKiKP	PKiKP	14 24 23.6	+1.5
MBAR				LR	LR		
	comp=Z,759nm,19.0s						
MBAR	Mbarara	112.82	300	PKIKP	PKiKP	14 24 23.6	+1.5
MBAR				MLR	MLR		
	comp=Z,759nm,19.0s						
MBAR	Mbarara	112.82	300	PKiKP	PKiKP	14 24 23.6	+1.5
	comp=Z,3.0nm,0.2s,baz=63,slow=2.3,SNR=4.9						
TORD	Torodi Ar. Bea	112.91	334	Pdiff	Pdif	14 20 27.3	-0.5
	comp=Z,5.0nm,1.1s,baz=58,slow=2.4,SNR=13						
TORD				PKiKP	PKiKP	14 24 21.4	-0.6
	comp=Z,14nm,0.9s,baz=336,slow=4.2,SNR=13						
TORD				PKKPbc	PKKPbc	14 35 08.3	+1.3
	comp=Z,4.0nm,0.9s,baz=316,slow=2.5,SNR=6.5						
TORD				PKKPab	PKKPab	14 35 18.1	-1.5
	comp=Z,12nm,0.9s,baz=172,slow=3.5,SNR=15						
TORD				PKKP	PKKPdf	14 35 24.9	-1.5
	comp=Z,6.2nm,1.0s,baz=229,slow=2.8,SNR=4.0						
SACV	Santiago Islan	114.52	1	PFAKE		14 24 40.0	+15
SACV				LR	LR		
	comp=Z,8µm,20.0s						
OPO	Ambohidratompo	116.97	273	PKP	PKiKP	14 24 30.4	+0.6
	comp=Z,14nm,1.0s,baz=104,slow=0.5,SNR=7.5						
OPO				PKKPbc	PKKPbc	14 34 51.7	-1.7
	comp=Z,2.2nm,0.8s,baz=36,slow=19,SNR=2.0						
ABPO	Ambohimpanom	117.27	273	PFAKE		14 24 40.0	+10
ABPO				LR	LR		
	comp=Z,8µm,22.0s						
DBIC	Dimbokro	120.77	339	PKP	PKiKP	14 24 37.6	+0.2
	comp=Z,82nm,1.0s,baz=5.3,slow=2.4,SNR=52						
DBIC				PKKPbc	PKKPbc	14 34 38.1	-1.4
	comp=Z,6.4nm,0.9s,baz=177,slow=5.4,SNR=5.5						
DBIC				PKKPab	PKKPab	14 34 44.1	-0.9
	comp=Z,6.2nm,0.8s,baz=187,slow=7.7,SNR=4.2						
DBIC				PKKP	PKKPdf	14 35 04.5	-7.2
	comp=Z,14nm,1.0s,baz=202,slow=4.1,SNR=4.8						
DBIC	Dimbokro	120.77	339	eP	PKiKP	14 24 37.5	+0.2
TIC	Toumodi	120.83	340	ePKIKP	PKPdf	14 24 37.0	-0.3
TIC	Toumodi	120.83	340	ePKP1	PKKPab	14 34 41.2	-3.6
PTGA	Pitinga	120.91	45	PFAKE		14 24 50.0	+12
PTGA				LR	LR		
	comp=Z,13µm,21.0s						
KIC	Kosan Boka	121.05	339	ePKIKP	PKPdf	14 24 37.5	-0.2
	comp=Z,264nm,1.2s						
KIC	Kosan Boka	121.05	339	ePKP1	PKKPab	14 34 40.2	-3.7
	comp=Z,48nm,0.9s						
LIC	Lamto	121.24	340	ePKIKP	PKPdf	14 24 37.7	-0.4
	comp=Z,376nm,1.3s						
LIC	Lamto	121.24	340	ePKP1	PKKPab	14 34 41.2	-1.8
	comp=Z,54nm,1.1s						
NNA	Nana	121.44	69	PFAKE		14 24 50.0	+11
NNA				LR	LR		
	comp=Z,10µm,21.0s						
NNA	Nana	121.44	69	i PKIKP	PKiKP	14 24 39.7	+1.1
CASY	Casey	122.10	200	PFAKE		14 24 50.0	+12
CASY				LR	LR		
	comp=Z,2µm,22.0s						
LSZ	Lusaka	126.18	292	PKP	PKiKP	14 24 48.8	+0.8
LSZ				LR	LR		
	comp=Z,13µm,21.0s						
LSZ	Lusaka	126.18	292	PKIKP	PKiKP	14 24 48.8	+0.8
LSZ				MLR	MLR		
	comp=Z,13µm,21.0s						
LSZ	Lusaka	126.18	292	PKP	PKiKP	14 24 48.8	+0.8
	comp=Z,43nm,1.1s,baz=27,slow=2.6,SNR=26						
KRI	Karoi	126.55	290	i P	PKiKP	14 24 49.3	+0.6
VNDA	Vanda	128.06	179	PKP	PKiKP	14 24 50.1	+0.3
	comp=Z,9.9nm,1.0s,baz=327,slow=3.9,SNR=17						
SBA	Scott Base	128.50	178	PFAKE		14 25 00.0	+9.4
SBA				LR	LR		
	comp=Z,19µm,22.0s						
BLWY	Bulawayo	129.70	288	i P	PKPpre	14 24 49.6	
BLWY	Bulawayo	129.70	288	i P	PKPpre	14 24 42.6	
LPAZ	La Paz	129.92	64	eP	PKPpre	14 24 48.5	
LPAZ	La Paz	129.92	64	PKP	PKiKP	14 24 55.8	-0.3
	comp=Z,36nm,0.9s,baz=0.7,slow=4.8,SNR=50						
MATP	Matopo	129.99	288	PKP	PKPdf	14 24 54.5	-0.2
	comp=Z,59nm,1.1s,baz=35,slow=1.9,SNR=23						
PB12	IPOC Station P	130.50	68	⇑iP	PKiKP	14 24 56.7	+0.2
PB12	IPOC Station P	130.50	68	⇑iP	PKiKP	14 24 56.2	-0.3
MNMC	Minye Minye	131.33	67	eP	PKPdf	14 24 55.7	-1.8
MNMCX	Minye Minye	131.33	67	⇑iP	PKiKP	14 24 59.0	+0.6
PSGC	Pisagua	131.38	68	eP	PKPdf	14 24 57.5	+0.2
PSGCX	Pisagua	131.38	68	⇑iP	PKiKP	14 24 58.4	+0.1
PB11	IPOC Station P	131.79	68	⇑iP	PKiKP	14 24 59.2	0.0
PB11	IPOC Station P	131.79	68	eP	PKPdf	14 24 57.9	-0.3
PB08	IPOC Station P	132.38	68	⇑iP	PKiKP	14 25 00.9	+0.2
PB08	IPOC Station P	132.38	68	eP	PKPdf	14 24 59.3	-0.2
PB02	IPOC Station P	132.85	69	⇑iP	PKiKP	14 25 01.2	0.0
PB02	IPOC Station P	132.85	69	eP	PKPdf	14 24 55.1	-4.9
PB01	IPOC Station P	132.88	69	⇑iP	PKiKP	14 25 01.0	-0.3
PB01	IPOC Station P	132.88	69	eP	PKPdf	14 24 58.1	-2.0
PB07	IPOC Station P	133.16	70	⇑iP	PKiKP	14 25 02.1	+0.1
PB07	IPOC Station P	133.16	70	eP	PKiKP	14 25 01.9	-0.1
PB04	IPOC Station P	133.47	70	⇑iP	PKiKP	14 25 02.4	-0.1
PB04	IPOC Station P	133.47	70	eP	PKPpre	14 24 51.0	
NBPA	Parau_RN	133.48	20	eP	PKPdf	14 25 00.8	-0.6
PB03	IPOC Station P	133.49	70	⇑iP	PKiKP	14 25 02.5	-0.1
PB03	IPOC Station P	133.49	70	eP	PKPpre	14 24 57.3	
PB09	IPOC Station P	133.60	69	⇑iP	PKiKP	14 25 03.4	+0.6
PB09	IPOC Station P	133.60	69	eP	PKPdf	14 24 58.6	-2.9
RCBR	Riachuelo	133.81	19	PFAKE		14 25 10.0	+6.6
RCBR				LR	LR		
	comp=Z,30µm,19.0s						
RCBR	Riachuelo	133.81	19	eP	PKPdf	14 25 01.6	-0.5
PB05	IPOC Station P	133.83	71	⇑iP	PKiKP	14 25 03.3	+0.1
PB05	IPOC Station P	133.83	71	eP	PKPpre	14 24 52.8	
PB06	IPOC Station P	134.10	70	⇑iP	PKiKP	14 25 03.4	-0.4
PB06	IPOC Station P	134.10	70	eP	PKPdf	14 25 01.9	-0.6
PB10	IPOC Station P	134.12	72	⇑iP	PKiKP	14 25 03.6	0.0
PB10	IPOC Station P	134.12	72	eP	PKPdf	14 25 00.8	-1.5
LVC	Limon Verde	134.42	70	ePKPdf	PKiKP	14 25 04.6	-0.1
LVC				LR	LR		
	comp=Z,12µm,22.0s						
LVC	Limon Verde	134.42	70	⇑iP	PKiKP	14 25 05.1	+0.4
LVC	Limon Verde	134.42	70	eP	PKPdf	14 25 02.6	-0.7
PB15	IPOC Station P	134.54	71	⇑iP	PKiKP	14 25 04.9	+0.2
PB15	IPOC Station P	134.54	71	eP	PKPdf	14 25 02.2	-1.1
PB14	IPOC Station P	135.04	73	⇑iP	PKiKP	14 25 05.6	-0.2
PB14	IPOC Station P	135.04	73	eP	PKPdf	14 25 02.2	-2.1
NBLI	Livramento-PB	135.08	20	eP	PKPdf	14 25 03.6	-0.8
LBTB	Lobatse	135.19	287	PKhKP	PKPpre	14 24 54.2	
	comp=Z,21nm,0.9s,baz=32,slow=4.5,SNR=7.8						
LBTB				PKP	PKiKP	14 25 05.4	-0.5
	comp=Z,79nm,1.1s,baz=79,slow=2.5,SNR=14						
TSUM	Tsumeb	135.36	300	PKhKP	PKPpre	14 24 54.3	
	comp=Z,6.3nm,0.9s,baz=27,slow=0.7,SNR=6.1						
TSUM				PKP	PKPdf	14 25 05.5	+0.6
	comp=Z,50nm,1.0s,baz=71,slow=2.8,SNR=8.2						
GO02	Mina Guanaco	135.93	73	eP	PKPdf	14 25 02.7	-3.3
SALV	Santo Antonio	136.19	50	eP	PKPdf	14 25 05.7	-0.6
HJA	Humahuaca	136.94	67	⇑eP	PKPpre	14 25 02.5	
MAW	Mawson	137.16	214	PKP	PKPdf	14 25 07.3	+0.8
	comp=Z,13nm,0.6s,baz=37,slow=20,SNR=4.6						
BOSA	Boshof	138.01	283	i P	PKPpre	14 24 59.0	
BOSA	Boshof	138.01	283	i P	PKPpre	14 25 01.2	
BOSA	Boshof	138.01	283	i P	PKPpre	14 24 59.0	
BOSA	Boshof	138.01	283	PKhKP	PKPpre	14 25 01.9	
	comp=Z,9.3nm,1.0s,baz=51,slow=9.1,SNR=6.2						
BOSA				PKP	PKPdf	14 25 10.2	+0.6
	comp=Z,34nm,0.8s,baz=57,slow=2.0,SNR=12						
BOSA	Boshof	138.01	283	eP	PKPdf	14 25 08.7	-0.8
LCO	Las Campanas	138.03	77	PFAKE		14 25 20.0	+8.2
LCO				LR	LR		
	comp=Z,16µm,20.0s						
LCO	Las Campanas	138.03	77	eP	PKPpre	14 25 02.6	
LCO	Las Campanas	138.03	77	eP	PKPdf	14 25 08.7	-1.0
GO04	Tololo Observa	138.78	79	eP	PKPpre	14 25 03.7	
CMCH	Combarbala	139.34	80	eP	PKPdf	14 25 08.5	-3.3
BDFB	Brasilia	139.38	40	PKhKP	PKPpre	14 25 05.4	
	comp=Z,7.6nm,0.7s,baz=330,slow=5.1,SNR=8.1						
BDFB				PKP	PKiKP	14 25 13.6	-1.0
	comp=Z,48nm,1.0s,baz=352,slow=4.1,SNR=20						
AROD	Rodeo	139.60	78	⇑eP	PKPpre	14 25 05.7	
AHML	Horco Molle	139.69	70	⇑eP	PKiKP	14 25 14.3	-0.6
AHML	Horco Molle	139.69	70	eP	PKPpre	14 24 56.5	
AGUA	GUANDACOL	139.73	76	⇑eP	PKPpre	14 25 06.8	
ACDV	Cuesta del Vie	139.82	77	⇑eP	PKPpre	14 25 06.3	
C2SB	Chapadao do Su	140.02	48	eP	PKPdf	14 25 11.9	-1.4
AQDB	Aquidauana	140.07	53	eP	PKPdf	14 25 13.5	+0.2
ACCO	Cerro Coronel	140.15	78	⇓eP	PKPpre	14 25 07.6	
QSPA	South Pole Qui	140.53	180	PKPpre	PKPpre	14 25 05.0	
QSPA				LR	LR		
	comp=Z,24µm,22.0s						
QSPA	South Pole Qui	140.53	180	PKhKP	PKPpre	14 25 05.0	
	comp=Z,54nm,0.7s,baz=17,slow=0.5,SNR=62						
ROC1	El Roble	140.54	82	⇑eP	PKPpre	14 25 07.5	
ROCH	El Roble	140.55	82	eP	PKPdf	14 25 10.6	-3.6
CYA	Choya	140.62	72	⇑eP	PKPpre	14 25 08.2	
CYA	Choya	140.62	72	eP	PKPpre	14 25 05.8	
AMOG	MOGNA	140.74	78	⇑eP	PKPpre	14 25 08.4	
RTLS	Leoncito	140.83	79	⇑eP	PKPpre	14 25 08.7	
PEL	Peldehue	140.86	82	⇑iP	PKPdf	14 25 15.8	+1.3
PEL	Peldehue	140.86	82	eP	PKPdf	14 25 14.9	+0.4
RTLL	Cerro Villicun	141.02	78	⇑eP	PKPpre	14 25 07.4	
ZON	Zonda	141.05	78	⇑eP	PKPdf	14 25 16.0	+1.1
AUSP	Uspallata	141.06	80	⇑eP	PKPpre	14 25 09.6	
CLCH	Cerro Calan	141.12	82	eP	PKPdf	14 25 15.1	+0.1
FCH	Farellones	141.23	82	eP	PKPdf	14 25 12.2	-3.3
GO05	Huala	141.29	85	eP	PKPpre	14 25 01.1	
RTCV	Cerro Valdivia	141.35	79	⇑eP	PKPpre	14 25 09.4	
IPMB	Ipameri, GO	141.40	41	eP	PKPdf	14 25 15.6	-0.3
APLL	PUNTA DE LOS L	141.58	75	⇓eP	PKPpre	14 25 09.8	
LMEL	Las Melosas	141.63	83	eP	PKPpre	14 25 07.8	
ASAL	Salagasta	141.66	80	⇑eP	PKPpre	14 25 11.0	
ARCO	CERRO ARCO	141.76	80	⇓eP	PKPpre	14 25 10.8	
MCI8	Montes Claros	141.87	35	eP	PKPdf	14 25 15.0	-1.8
MCI9	Montes Claros	141.92	34	eP	PKPdf	14 25 14.7	-2.1
AAGR	Agrelo	141.99	80	⇑eP	PKPdf	14 25 12.3	-4.3
MCI6	Montes Claros	142.02	35	eP	PKPdf	14 25 17.4	+0.4
CCHI	Chillan	142.19	88	eP	PKPdf	14 25 15.9	-0.7
ACAN	Cantantal	142.47	78	⇓eP	PKPdf	14 25 13.0	-4.4
SUR	Sutherland	143.37	283	PKPpre	PKPpre	14 25 05.8	
SUR				PKP	PKPbc	14 25 17.3	+0.8
SUR				LR	LR		
	comp=Z,26µm,21.0s						
SUR	Sutherland	143.37	283	PKhKP	PKPpre	14 25 05.8	
	comp=Z,5.9nm,0.9s,baz=292,slow=19,SNR=1.7						
SUR				PKP	PKPbc	14 25 17.3	+0.8
	comp=Z,91nm,1.2s,baz=356,slow=2.2,SNR=9.7						
TCA	Tanti	143.42	74	⇑eP	PKPab	14 25 15.9	+0.5
TCA	Tanti	143.42	74	eP	PKPab	14 25 13.8	-1.6
MRA	San Martin	143.48	77	⇑eP	PKPab	14 25 15.9	+0.3
TRCB	Terra Rica	143.55	51	eP	PKPbc	14 25 17.6	+0.6
CPUP	Villa Florida	143.96	61	eP	PKPab	14 25 13.8	-3.7
CPUP	Villa Florida	143.96	61	PKP	PKPbc	14 25 18.3	+0.2
	comp=Z,170nm,1.1s,baz=337,slow=3.5,SNR=75						
CPUP	Villa Florida	143.96	61	eP	PKPbc	14 25 18.9	+0.8
BB19B	Bebedouro	143.99	44	eP	PKPdf	14 25 19.7	-0.7
GO06	Curarrehue	144.34	91	eP	PKPab	14 25 11.8	-6.9
BSFB	Barra de Sao F	144.95	31	eP	PKPbc	14 25 21.7	+0.3
PTGB	Pitanga	145.44	52	eP	PKPbc	14 25 23.0	+0.1
FRTB	Fartura	145.49	48	eP	PKPab	14 25 24.3	+0.9
BSCB	Bom Sucesso	145.51	39	eP	PKPab	14 25 23.8	+0.3
RIB01	Linhares ES	145.54	31	eP	PKPbc	14 25 23.3	0.0
PLCA	Paso Flores	145.57	92	PKP2	PKPbc	14 25 23.0	+0.1
PLCA	Paso Flores	145.57	92	eP	PKPdf	14 25 22.5	-0.1
PLCA	Paso Flores	145.57	92	PKPbc	PKPbc	14 25 23.0	+0.1
	comp=Z,222nm,1.0s,baz=326,slow=3.9,SNR=253						
PLCA	Paso Flores	145.57	92	eP	PKPbc	14 25 23.1	+0.1
ALF01	Guarapari-ES	146.65	32	eP	PKPdf	14 25 24.8	-0.1
SPB	Sao Paulo	146.68	45	eP	PKPbc	14 25 26.5	0.0
VAS01	Vassouras-RJ	147.19	38	eP	PKPbc	14 25 27.4	-0.7
CAM01	Campos-RJ	147.44	34	eP	PKPdf	14 25 26.7	+0.5
ESAR	Angra dos Reis	147.46	40	eP	PKPbc	14 25 27.7	-1.0
ITAB	Concordia	147.47	55	eP	PKPdf	14 25 27.1	+1.0
CPSB	Cacapava Do Su	149.27	60	eP	PKPdf	14 25 29.7	+0.7
TRQA	Tornquist	149.45	81	ePKPdf	PKPdf	14 25 29.2	+0.2
TRQA	Tornquist	149.45	81	eP	PKPdf	14 25 28.6	-0.4
CNLB	Canela	149.81	56	eP	PKPdf	14 25 29.5	-0.4
TER01	Tubaro-SC	150.06	52	eP	PKPdf	14 25 31.1	+0.9
PLTB	Pedras Altas	150.21	62	eP	PKPdf	14 25 31.0	+0.6
PMSA	Palmer Station	154.39	139	PKPbc	PKiKP	14 25 44.0	+0.2
PMSA				LR	LR		
	comp=Z,15µm,20.0s						
PMSA	Palmer Station	154.39	139	PKPbc	PKiKP	14 25 44.0	+0.2
	comp=Z,71nm,1.0s,baz=247,slow=3.2,SNR=2.7						
PMSA	Palmer Station	154.39	139	eP	PKPdf	14 25 36.2	+0.8
NVL	N'lazarevskaya	154.52	206	ePKIKP	PKPdf	14 25 35.4	-0.1

NVL				*e*		14 29 39.2	
NVL				*e*SS	SS	14 49 03.5	-7.5
SNAA	**Sanae**	**157.24**	**196**	PKP	**PKPdf**	**14 25 38.9**	**-0.3**
SNAA	**Sanae**	**157.24**	**196**	PKP	**PKPdf**	**14 25 37.5**	**-1.7**
	comp=Z,16nm,1.2s,baz=124,slow=1.8,SNR=13						
SNAA				PKPab	**PKPab**	**14 26 11.1**	**+0.5**
	comp=Z,119nm,1.1s,baz=107,slow=3.6,SNR=20						
EFI	**East Falkland**	**157.85**	**106**	PFAKE		14 25 50.0	+10
EFI				LR	LR		
	comp=Z,28µm,20.0s						
VNA2	**Neumayer--Watz**	**158.62**	**194**	PKP	**PKPdf**	**14 25 40.8**	**-0.1**
VNA3	**Neumayer Olymp**	**158.65**	**191**	PKP	**PKPdf**	**14 25 40.7**	**-0.2**
VNA1	**Neumayer--Stat**	**159.00**	**193**	PKP	**PKPdf**	**14 25 41.4**	**+0.2**
HOPE	**Hope Point**	**170.79**	**118**	PFAKE		14 26 00.0	+8.2
HOPE				LR	LR		
	comp=Z,24µm,22.0s						

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*ISCJB **28** 14:15:20.2±0.6, 34°.12N±0°.03×107°.06W±0°.05, h5^{km}±5^{km}, Error ellipse: s-maj=6.4km s-min=5.6km az=174.0*
*NEIC **28** 14:15:20.5±0.6, 34°.16N×107°.02W, h5^{km}, ML3.0, Error ellipse: s-maj=7.9km s-min=7.2km az=209.0*
NEIC Felt [II] at Socorro. Also felt at Magdalena.
*SNM **28** 14:15:21.4±0.0, 34°.11N×107°.07W, h5^{km}*
*ANF **28** 14:15:21.1±0.4, 34°.12N×106°.98W, h11^{km}±3^{km}, ML3.5/7, Error ellipse: s-maj=8.2km s-min=3.6km az=106.0*
ISC 28 14:15:21.1±0.9**, 34°.13N**±0°.03×**107°.02W**±0°.03**, h9**^{km}±6^{km}**, n24,** σ**1^{s}.06**/34**, New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LENM	**Lemitar**	**0.05**	**43**	*e*Pg	**Pg**	**14 15 22.5**	**-0.7**
Y22D	**IRIS PASSCAL I**	**0.10**	**123**	*e*Pg	**Pg**	**14 15 23.4**	**-0.2**
Y22D				*e*Sg	**Sg**	**14 15 25.0**	**-0.4**
Y22D	**IRIS PASSCAL I**	**0.10**	**123**	P	**Pg**	**14 15 23.5**	**-0.2**
	baz=317						
Y22D				S	**Sg**	**14 15 26.1**	**+0.7**
	baz=317						
LAZ	**Ladron**	**0.29**	**340**	*e*Pg	**Pg**	**14 15 26.4**	**-0.6**
BNM	**Barren Site**	**0.33**	**86**	*e*Pg	**Pg**	**14 15 27.6**	**0.0**
LPM	**Los Pinos Moun**	**0.37**	**60**	*e*Pg	**Pg**	**14 15 28.3**	**-0.2**
ANMO	**Albuquerque**	**0.94**	**29**	*e*Pg	**Pg**	**14 15 38.7**	**-0.5**
ANMO				*e*Sg	**Sg**	**14 15 48.6**	**-2.9**
ANMO	**Albuquerque**	**0.94**	**29**	P	**Pg**	**14 15 38.7**	**-0.5**
	baz=207						
ANMO				S	**Sg**	**14 15 51.5**	**+0.1**
	baz=207						
121A	**Cookes Peak, D**	**1.71**	**202**	P	**Pn**	**14 15 50.8**	**-0.5**
	baz=23						
121A				S	**Sn**	**14 16 13.3**	**-0.2**
	baz=23						
W18A	**Petrified Fore**	**2.45**	**295**	*e*Pn	**Pn**	**14 16 02.0**	**+0.6**
W18A	**Petrified Fore**	**2.45**	**295**	P	**Pn**	**14 16 02.1**	**+0.6**
	baz=113						
X18A	**Snowflake**	**2.46**	**280**	*e*Pn	**Pn**	**14 16 01.9**	**+0.3**
X18A				*e*Pg	**Pb**	**14 16 06.2**	**+0.6**
MNTX	**Cornudas Mount**	**2.78**	**150**	*e*Pn	**Pn**	**14 16 05.9**	**0.0**
MNTX				*e*Sn	**Sn**	**14 16 40.5**	**+0.8**
MNTX	**Cornudas Mount**	**2.78**	**150**	P	**Pn**	**14 16 06.4**	**+0.5**
	baz=332						
MNTX				S	**Sn**	**14 16 40.4**	**+0.8**
	baz=332						
GDL2	**Guadalupe Moun**	**2.94**	**130**	*e*Pn	**Pn**	**14 16 09.9**	**+1.8**
GDL2				*e*Pg	**Pg**	**14 16 16.0**	**-1.5**
CLNB	**Carlsbad**	**3.22**	**124**	*e*Pg	**Pg**	**14 16 20.9**	**-1.9**
319A	**Douglas**	**3.34**	**215**	*e*Pn	**Pn**	**14 16 13.4**	**-0.2**
319A				*e*Pg	**Pb**	**14 16 21.7**	**+1.1**
MSTX	**Muleshoe**	**3.53**	**91**	*e*Pg	**Pb**	**14 16 23.0**	**-0.8**
TUC	**Tucson**	**3.64**	**241**	*e*Pn	**Pn**	**14 16 16.0**	**-1.8**
TUC	**Tucson**	**3.64**	**241**	Pb	**Pb**	**14 16 26.9**	**+1.2**
	baz=59						
T25A	**Trinidad**	**3.68**	**34**	*e*Pg	**Pb**	**14 16 27.2**	**+0.8**
T25A	**Trinidad**	**3.68**	**34**	Pb	**Pb**	**14 16 28.4**	**+1.9**
	baz=215						
AMTX	**Amarillo**	**4.47**	**79**	*e*Pg	**Pb**	**14 16 39.8**	**-0.1**
TX31	**Lajitas Ar. Si**	**5.56**	**148**	*e*Pn	**Pn**	**14 16 45.1**	**+0.9**

KRSC 28 14:22:33.8±0.9**, 50°.78N×157°.88E, h40**^{km}±13^{km}**, ML4.2, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.96**	**316**	*e*P	Pn	14 22 52.4	+1.5
PAU				*e*S	Sn	14 23 05.1	+1.7
KDTR	**Khodutka, Kamc**	**1.04**	**7**	*e*P	Pn	14 22 53.0	+1.1
KDTR				*e*S	Sn	14 23 06.1	+0.9
SKR	**Severo-Kuril's**	**1.13**	**266**	*e*P	Pn	14 22 54.2	+1.2
SKR				*e*S	Sn	14 23 08.2	+0.9
ALID	**Alaid**	**1.48**	**274**	*e*P	Pn	14 22 59.9	+1.8
ALID				*e*S	Sn	14 23 18.1	+1.8
RUS	**Russkaya**	**1.70**	**13**	*e*P	Pn	14 23 02.3	+1.3
MTVR	**Mutnovka**	**1.72**	**6**	*e*P	Pn	14 23 03.0	+1.7
MTVR				*e*S	Sn	14 23 23.7	+1.6
KRMR	**Karymshinskiy**	**2.06**	**4**	*e*P	Pn	14 23 08.5	+2.6
APC	**Apacha**	**2.20**	**348**	*e*P	Pn	14 23 10.2	+2.5
PET	**Petropavlovsk**	**2.30**	**12**	*e*P	Pn	14 23 11.3	+2.1
DALK	**Dalny**	**2.32**	**13**	*e*P	Pn	14 23 12.3	+2.9
UGLR	**Uglovaya**	**2.50**	**13**	*e*P	Pn	14 23 15.5	+3.4
AVH	**Avacha**	**2.55**	**12**	*e*P	Pn	14 23 16.1	+3.5
SMAR	**Somma**	**2.55**	**12**	*e*P	Pn	14 23 16.3	+3.4
KOK	**Koryaka**	**2.56**	**10**	*e*P	Pn	14 23 16.3	+3.4
SDLR	**Sedlovina**	**2.58**	**13**	*e*P	Pn	14 23 15.4	+2.3
KRX	**Arik**	**2.63**	**10**	*e*P	Pn	14 23 17.6	+3.8
SPN	**Mys Shipunski**	**2.67**	**29**	*e*P	Pn	14 23 17.1	+2.8
GNL	**Ganaly**	**2.92**	**1**	*e*P	Pn	14 23 20.8	+3.0

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*IDC **28** 14:22:46.1±1.2, 11°.50S×165°.01E, h0^{km}, mb3.9/5, mb1 4.1/8, mb1mx3.8/43, mbtmp4.0/8, ML3.9/3, Error ellipse: s-maj=31.2km s-min=25.4km az=129.0*
*ISCJB **28** 14:22:49.3±1.0, 11°.72S±0°.08×164°.9E±0°.1, h34^{km}, mb3.9/5, Error ellipse: s-maj=17.5km s-min=8.1km az=146.5*
ISC 28 14:22:51.1±1.1**, 11°.6S**±0°.1×**165°.0E**±0°.1**, h34**^{km}**, n8,** σ**0^{s}.87**/12**, mb3.8**/5**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.41**	**293**	Pn	**Pn**	**14 24 08.2**	**-1.2**
	14nm,0.3s,baz=140,slow=7.0,SNR=6.9						
HNR				Sn	**Sn**	**14 25 11.2**	**+0.7**
	14nm,0.3s,baz=191,slow=21,SNR=7.5						
DZM	**Mont Dzumac**	**10.49**	**173**	Pn	**Pn**	**14 25 20.0**	**+0.7**
	0.6nm,0.3s,baz=324,slow=9.7,SNR=11						
DZM				Sn	**Sn**	**14 27 14.7**	**-1.1**
	0.1nm,0.3s,baz=300,slow=20,SNR=2.5						
CTA	**Charters Tower**	**19.88**	**243**	P	**P**	**14 27 19.2**	**-0.4**
	0.1nm,0.3s,baz=80,slow=14,SNR=2.4						
WRA	**Warramunga Arr**	**30.59**	**250**	P	**P**	**14 29 02.8**	**+0.7**
	1.5nm,0.9s,baz=82,slow=8.5,SNR=4.7						
WRA				PcP	**PcP**	**14 32 01.5**	**+1.2**
	1.0nm,1.1s,baz=66,slow=2.6,SNR=3.3						
ASAR	**Alice Springs**	**31.87**	**244**	P	**P**	**14 29 13.3**	**-0.2**
	0.9nm,0.7s,baz=65,slow=10,SNR=8.9						
ASAR				PcP	**PcP**	**14 32 04.2**	**+0.5**
	0.5nm,0.8s,baz=69,slow=3.0,SNR=3.5						
SONM	**Songino Array**	**78.68**	**324**	P	**P**	**14 34 50.6**	**+0.6**
	0.7nm,0.8s,baz=141,slow=7.0,SNR=5.3						
ILAR	**Eielson Array**	**84.29**	**19**	P	**P**	**14 35 18.2**	**-0.9**
	0.5nm,0.5s,baz=238,slow=4.7,SNR=14						
MKAR	**Makanchi Array**	**93.42**	**317**	P	**P**	**14 36 03.2**	**+0.1**
	1.2nm,0.9s,baz=92,slow=6.1,SNR=5.2						

KRSC 28 14:29:29.2±1.2**, 51°.02N×157°.95E, h45**^{km}±16^{km}**, ML4.2, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.80**	**6**	*e*P	Pn	14 29 44.9	+0.9
KDTR				*e*S	Sn	14 29 56.1	+1.3
PAU	**Pauzhetka**	**0.84**	**303**	*e*P	Pn	14 29 46.3	+1.7
PAU				*e*S	Sn	14 29 58.4	+2.5
SKR	**Severo-Kuril's**	**1.21**	**255**	*e*P	Pn	14 29 50.2	+0.7
SKR				*e*S	Sn	14 30 05.6	+0.9
RUS	**Russkaya**	**1.46**	**14**	*i* P	Pn	14 29 54.0	+1.0
RUS				*e*S	Sn	14 30 11.8	+0.8
MTVR	**Mutnovka**	**1.48**	**6**	*e*P	Pn	14 29 54.8	+1.4
MTVR				*e*S	Sn	14 30 13.6	+2.0
ALID	**Alaid**	**1.52**	**265**	*i* P	Pn	14 29 55.8	+1.8
ALID				*e*S	Sn	14 30 14.9	+2.2
KRMR	**Karymshinskiy**	**1.82**	**3**	*e*P	Pn	14 30 00.5	+2.5
KRMR				*e*S	Sn	14 30 23.9	+4.1
APC	**Apacha**	**1.97**	**346**	*e*P	Pn	14 30 02.6	+2.6
PET	**Petropavlovsk**	**2.06**	**12**	*i* P	Pn	14 30 03.1	+1.9
PET				*e*S	Sn	14 30 27.6	+2.0
DALK	**Dalny**	**2.08**	**14**	*e*P	Pn	14 30 03.0	+1.5
DALK				*e*S	Sn	14 30 27.6	+1.5
UGLR	**Uglovaya**	**2.26**	**13**	*e*P	Pn	14 30 06.9	+2.8
AVH	**Avacha**	**2.31**	**12**	*e*P	Pn	14 30 07.7	+3.0
SMAR	**Somma**	**2.31**	**13**	*e*P	Pn	14 30 07.9	+3.0
KOK	**Koryaka**	**2.32**	**10**	*e*P	Pn	14 30 07.8	+2.9
SDLR	**Sedlovina**	**2.34**	**14**	*e*P	Pn	14 30 07.3	+2.1
KRX	**Arik**	**2.39**	**10**	*e*P	Pn	14 30 08.6	+2.7
SPN	**Mys Shipunski**	**2.45**	**31**	*e*P	Pn	14 30 11.2	+4.6
GNL	**Ganaly**	**2.68**	**360**	*i* P	Pn	14 30 13.0	+3.1

KRSC 28 14:35:31.1±1.3**, 50°.78N×157°.89E, h49**^{km}±18^{km}**, ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.97**	**316**	*e*P	Pn	14 35 50.0	+1.6
PAU				*e*S	Sn	14 36 02.7	+1.7
KDTR	**Khodutka, Kamc**	**1.03**	**6**	*e*P	Pn	14 35 50.4	+1.1
KDTR				*e*S	Sn	14 36 03.3	+0.6
SKR	**Severo-Kuril's**	**1.13**	**266**	*e*P	Pn	14 35 51.7	+1.1
SKR				*e*S	Sn	14 36 05.5	+0.5
ALID	**Alaid**	**1.49**	**274**	*e*P	Pn	14 35 57.3	+1.7
ALID				*e*S	Sn	14 36 15.4	+1.5
RUS	**Russkaya**	**1.70**	**13**	*e*P	Pn	14 35 59.6	+1.3
MTVR	**Mutnovka**	**1.71**	**6**	*e*P	Pn	14 36 00.6	+1.9
MTVR				*e*S	Sn	14 36 21.2	+1.7
KRMR	**Karymshinskiy**	**2.06**	**4**	*e*P	Pn	14 36 05.6	+2.4
KRMR				*e*S	Sn	14 36 32.1	+4.5
APC	**Apacha**	**2.19**	**348**	*e*P	Pn	14 36 08.1	+3.0
PET	**Petropavlovsk**	**2.29**	**12**	*e*P	Pn	14 36 08.7	+2.2
PET				*e*S	Sn	14 36 35.1	+1.6
DALK	**Dalny**	**2.31**	**13**	*e*P	Pn	14 36 08.9	+2.2
DALK				*e*S	Sn	14 36 36.9	+2.9
UGLR	**Uglovaya**	**2.50**	**13**	*e*P	Pn	14 36 12.8	+3.4
AVH	**Avacha**	**2.54**	**12**	*e*P	Pn	14 36 13.6	+3.7
SMAR	**Somma**	**2.55**	**12**	*e*P	Pn	14 36 13.8	+3.6
KOK	**Koryaka**	**2.56**	**10**	*e*P	Pn	14 36 13.8	+3.6
SDLR	**Sedlovina**	**2.57**	**13**	*e*P	Pn	14 36 13.3	+2.9
KRX	**Arik**	**2.62**	**10**	*e*P	Pn	14 36 15.1	+4.0
SPN	**Mys Shipunski**	**2.67**	**29**	*e*P	Pn	14 36 15.2	+3.6
GNL	**Ganaly**	**2.92**	**1**	*e*P	Pn	14 36 18.6	+3.5
MKZ	**Mys Kozlova**	**4.44**	**30**	*e*P	Pn	14 36 38.7	+2.8
KBTR	**Krutoberegovo**	**6.18**	**26**	*e*P	Pn	14 37 02.9	+3.2

KRSC 28 14:52:56.9±1.1**, 50°.86N×157°.94E, h48**^{km}±15^{km}**, ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.94**	**311**	*e*P	Pn	14 53 15.3	+1.6
PAU				*e*S	Sn	14 53 27.7	+1.7
KDTR	**Khodutka, Kamc**	**0.95**	**5**	*e*P	Pn	14 53 15.1	+1.2
KDTR				*e*S	Sn	14 53 27.5	+1.1
SKR	**Severo-Kuril's**	**1.17**	**262**	*e*P	Pn	14 53 17.8	+1.0
SKR				*e*S	Sn	14 53 32.2	+0.5
ALID	**Alaid**	**1.52**	**271**	*e*P	Pn	14 53 23.6	+1.9
ALID				*e*S	Sn	14 53 42.0	+1.7
RUS	**Russkaya**	**1.62**	**12**	*e*P	Pn	14 53 24.2	+1.3
RUS				*e*S	Sn	14 53 43.8	+1.3
MTVR	**Mutnovka**	**1.63**	**5**	*e*P	Pn	14 53 25.3	+2.0
MTVR				*e*S	Sn	14 53 45.4	+2.2
KRMR	**Karymshinskiy**	**1.98**	**3**	*e*P	Pn	14 53 30.7	+2.9
PET	**Petropavlovsk**	**2.21**	**11**	*e*P	Pn	14 53 33.5	+2.5
PET				*e*S	Sn	14 53 59.7	+2.6
DALK	**Dalny**	**2.23**	**13**	*e*P	Pn	14 53 33.7	+2.4
DALK				*e*S	Sn	14 53 59.8	+2.2
UGLR	**Uglovaya**	**2.42**	**13**	*e*P	Pn	14 53 37.6	+3.6
AVH	**Avacha**	**2.46**	**11**	*e*P	Pn	14 53 38.1	+3.6
AVH				*e*S	Sn	14 54 07.8	+4.4
SMAR	**Somma**	**2.47**	**12**	*e*P	Pn	14 53 38.0	+3.3
KOK	**Koryaka**	**2.47**	**10**	*e*P	Pn	14 53 38.5	+3.8
SDLR	**Sedlovina**	**2.49**	**13**	*e*P	Pn	14 53 37.2	+2.2
KRX	**Arik**	**2.54**	**10**	*e*P	Pn	14 53 39.5	+3.8
SPN	**Mys Shipunski**	**2.58**	**29**	*e*P	Pn	14 53 39.4	+3.2
GNL	**Ganaly**	**2.84**	**360**	*e*P	Pn	14 53 43.2	+3.4
MKZ	**Mys Kozlova**	**4.36**	**30**	*e*P	Pn	14 54 03.8	+3.3
KBTR	**Krutoberegovo**	**6.09**	**27**	*e*P	Pn	14 54 27.6	+3.3

IDC 28 15:04:30.9±2.0**, 7°.25S×128°.59E, h0**^{km}**, mb3.1**/1**, mb1 3.5**/3**, mb1mx3.3**/28**, mbtmp3.3**/3**, ML3.6**/2**, Error ellipse: s-maj=115.7km s-min=31.5km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.80**	**157**	Pn	Pn	15 07 47.0	-1.0
	0.3nm,0.3s,baz=335,slow=13,SNR=15						
WRA				Sn	Sn	15 10 08.9	-13
	0.6nm,0.3s,baz=335,slow=21,SNR=8.9						
ASAR	**Alice Springs**	**17.11**	**163**	Pn	Pn	15 08 32.5	+0.8
	0.2nm,0.3s,baz=339,slow=10,SNR=16						
ASAR				Sn	Sn	15 11 32.2	-10
	0.1nm,0.3s,baz=356,slow=28,SNR=5.8						
MKAR	**Makanchi Array**	**67.67**	**328**	P	P	15 15 30.0	0.0
	0.1nm,0.5s,baz=121,slow=5.3,SNR=3.6						

IDC 28 15:08:41.3±52.0**, 22°.19S×176°.51W, h0**^{km}**, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.9**/24**, mbtmp4.3**/3**, MS4.7**/1**, Ms1 4.7**/1**, ms1mx4.2**/30**, Error ellipse: s-maj=957.7km s-min=154.8km az=86.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**15.59**	**90**	LR	LR	15 16 56.0	
	comp=Z,3µm,20.9s,baz=24,slow=32						
STKA	**Stephens Creek**	**38.34**	**246**	P	P	15 16 04.3	+0.2
	1.8nm,0.5s,baz=92,slow=9.5,SNR=7.0						
ASAR	**Alice Springs**	**45.51**	**258**	P	P	15 17 02.5	-0.4
	2.7nm,0.5s,baz=94,slow=7.5,SNR=79						
WRA	**Warramunga Arr**	**45.77**	**263**	P	P	15 17 04.8	-0.1
	2.9nm,0.4s,baz=102,slow=8.3,SNR=111						

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*NEIC **28** 15:24:53.7±1.0, 22°.64N×12°.24W, h10^{km}, mb4.1/3, Error ellipse: s-maj=30.2km s-min=10.8km az=60.0*
*IDC **28** 15:24:55.4±2.9, 22°.82N×11°.69W, h0^{km}, mb3.8/4, mb1 3.9/6, mb1mx3.6/47, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=101.2km s-min=31.1km az=85.0*
ISC 28 15:24:52.7±0.9**, 22°.70N**±0°.09×**12°.2W**±0°.1**, h10**^{km}**, n21,** σ**2^{s}.97**/24**, mb3.7**/5**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACI	**Morro de la Ar**	**6.76**	**326**	*e*Pn	**Pn**	**15 26 31.1**	**-1.2**
MACI				*e*Sn	**Sn**	**15 27 42.9**	**-6.6**
TTIG	**Tnine Tigouga,**	**8.50**	**22**	P	**Pn**	**15 26 55.4**	**-0.6**
TTIG				S	Sn	15 28 24.6	-7.5
OUK	**Oukaimeden**	**9.30**	**24**	P	**Pn**	**15 27 08.0**	**+0.8**
OUK				S	Sn	15 28 44.9	-7.3
OUZM	**OUZ**	**9.50**	**29**	P	**Pn**	**15 27 09.9**	**+0.2**
OUZM				S	Sn	15 28 47.1	-10
TOA1	**Torodi Ar. Sit**	**16.25**	**123**	*e*Pn	**Pn**	**15 28 42.1**	**+0.8**
TOA1				*e*Sn	**Sn**	**15 31 35.1**	**-6.6**
TOA0	**Torodi Ar. Sit**	**16.26**	**123**	*e*Pn	**Pn**	**15 28 40.3**	**-1.0**
	3.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**16.26**	**123**	Pn	**Pn**	**15 28 42.1**	**+0.8**
	0.2nm,0.3s,baz=314,slow=14,SNR=7.6						
TORD				Sn	**Sn**	**15 31 35.1**	**-6.7**
	0.1nm,0.3s,baz=310,slow=23,SNR=3.6						
DBIC	**Dimbokro**	**17.43**	**155**	*e*Pn	**Pn**	**15 28 56.2**	**0.0**
	31nm,1.5s						
DBIC	**Dimbokro**	**17.43**	**155**	P	**P**	**15 28 58.3**	**+0.9**
	0.3nm,0.3s,baz=309,slow=12,SNR=3.1						
KEST	**Kesra**	**22.78**	**50**	*e*P	**P**	**15 29 51.8**	**-3.7**
	30nm,1.5s						
GERES	**GERESS Array B**	**33.18**	**32**	P	**P**	**15 31 30.6**	**+1.0**
	0.3nm,0.5s,baz=211,slow=7.6,SNR=4.5						
FIA0	**FINESS Array S**	**46.77**	**24**	*e*P	**P**	**15 33 23.7**	**+1.7**
FINES	**FINESS Array B**	**46.77**	**24**	P	**P**	**15 33 23.7**	**+1.7**
	2.4nm,0.9s,baz=248,slow=5.1,SNR=6.2						
FIA1	**FINESS Array S**	**46.77**	**24**	*e*P	**P**	**15 33 23.4**	**+1.4**
MK32	**Makanchi Array**	**76.74**	**45**	*e*P	**P**	**15 36 46.4**	**+1.9**
MKAR	**Makanchi Array**	**76.74**	**45**	P	**P**	**15 36 46.4**	**+1.9**
	0.3nm,0.5s,baz=301,slow=5.6,SNR=9.5						
MK01	**Makanchi Array**	**76.76**	**45**	*e*P	**P**	**15 36 45.9**	**+1.4**
SONM	**Songino Array**	**90.81**	**36**	P	**P**	**15 37 59.9**	**+3.4**
	0.2nm,0.5s,baz=305,slow=5.1,SNR=1.9						
WRA	**Warramunga Arr**	**148.73**	**91**	PKPbc	**PKiKP**	**15 44 43.7**	**+1.2**
	0.5nm,0.7s,baz=297,slow=2.2,SNR=5.5						
WR1	**Warramunga Arr**	**148.73**	**91**	*e*PKPbc	**PKiKP**	**15 44 43.7**	**+1.2**
ASAR	**Alice Springs**	**148.85**	**99**	PKPbc	**PKiKP**	**15 44 44.0**	**+1.2**
	0.4nm,0.6s,baz=284,slow=1.9,SNR=7.6						

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*REN **28** 15:29:25.9, 38°.02N×118°.07W, h6^{km}, ML4.1*
*NEIC **28** 15:29:25.9±0.0, 38°.02N×118°.07W, h6^{km}, ML4.1(REN), After REN.*
NEIC Felt at Silverpeak. Also felt at Bishop, California.
*ANF **28** 15:29:26.2±0.4, 38°.00N×118°.04W, h4^{km}±2^{km}, ML4.3/37, Error ellipse: s-maj=2.2km s-min=2.0km az=152.0*
*IDC **28** 15:29:28.7±1.2, 38°.10N×118°.12W, h0^{km}, mb3.3/2, mb1 3.7/6, mb1mx3.5/44, mbtmp3.3/6, ML3.4/3, Error ellipse: s-maj=12.3km s-min=6.9km az=42.0*
ISC 28 15:29:25.1±1.0**, 38°.07N**±0°.02×**118°.03W**±0°.02**, h4**^{km}±8^{km}**, n181,** σ**2^{s}.03**/226**, mb3.4**/3**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NV11	**Mina Array Sit**	**0.38**	**344**	*e*Pg	**Pg**	**15 29 33.8**	**+1.3**
NV11				*e*Sg	**Sg**	**15 29 39.5**	**+2.0**
NV01	**Mina Array Sit**	**0.42**	**329**	*e*Pg	**Pg**	**15 29 33.9**	**+0.6**
NV01				*e*Sg	**Sg**	**15 29 39.9**	**+1.1**
NVAR	**Mina Array Bea**	**0.42**	**329**	Pg	**Pb**	**15 29 34.9**	**-0.4**
	3µm,0.3s,baz=161,slow=20						
NVAR				Lg	Lg	15 29 39.9	
	4µm,0.3s,baz=132,slow=36,SNR=46						
RYN	**Ryan**	**0.68**	**325**	*e*Pg	**Pg**	**15 29 39.2**	**+0.9**
RYN				*e*Sg	**Sb**	**15 29 49.1**	**-0.5**
MLAC	**Mammoth, Mammo**	**0.78**	**236**	P	**Pg**	**15 29 40.0**	**0.0**
	baz=57						
MLAC				S	**Sg**	**15 29 50.2**	**+0.2**
	baz=57						
MDPB	**Devils Postpil**	**0.94**	**243**	*e*Pg	**Pg**	**15 29 42.7**	**-0.4**
MDPB				*e*Sg	**Sg**	**15 29 54.9**	**-0.4**
KVN	**Kaiserville**	**0.99**	**357**	*e*Pg	**Pg**	**15 29 44.9**	**+0.9**
KVN				*e*Sg	**Sb**	**15 29 58.4**	**0.0**
TIN	**Tinemaha, Big**	**1.02**	**189**	P	**Pg**	**15 29 44.8**	**+0.1**
	baz=7.7,SNR=498						
TIN				S	**Sg**	**15 29 58.0**	**+0.1**
	baz=7.7						
GRAC	**Grapevine Rang**	**1.19**	**154**	P	**Pg**	**15 29 48.4**	**+0.5**
	baz=332,SNR=541						
GRAC				S	**Sn**	**15 30 04.7**	**-0.5**
	baz=332						
WAKR	**Walker**	**1.19**	**292**	*e*Pg	**Pg**	**15 29 47.9**	**-0.1**
WAKR				*e*Sg	**Sn**	**15 30 05.3**	**-0.3**
YERR	**Yerington**	**1.32**	**314**	*e*Pn	**Pn**	**15 29 50.4**	**-0.1**
PNTR	**Pine Nut**	**1.60**	**310**	*e*Pn	**Pn**	**15 29 54.5**	**0.0**
CWC	**Cottonwood Cre**	**1.62**	**182**	S	**Sn**	**15 30 15.9**	**-0.3**
	baz=0.4						
VCNR	**Virginia City**	**1.77**	**315**	*e*Pn	**Pn**	**15 29 56.9**	**+0.2**
TPNV	**Topopah Spring**	**1.80**	**128**	*e*Pn	**Pn**	**15 29 57.3**	**+0.2**
TPNV	**Topopah Spring**	**1.80**	**128**	P	**Pn**	**15 29 57.5**	**+0.4**
	baz=307,SNR=1000						
TPNV				Sg	**Sg**	**15 30 25.2**	**+2.3**
	baz=307						
DAC	**Darwin (Calif)**	**1.82**	**169**	*e*Pn	**Pn**	**15 29 57.3**	**-0.1**
FURC	**Furnace Creek,**	**1.85**	**149**	P	**Pn**	**15 29 58.1**	**+0.6**
	baz=329,SNR=348						
FURC				S	**Sb**	**15 30 23.1**	**+0.2**
	baz=329						
CMB	**Columbia Colle**	**1.86**	**270**	*e*Pn	**Pn**	**15 29 57.3**	**-0.6**
RUBR	**Rubicon Trail**	**1.94**	**301**	*e*Pn	**Pn**	**15 29 59.6**	**+0.5**
R11A	**Troy Canyon, C**	**1.94**	**81**	*e*Pn	**Pn**	**15 29 58.6**	**-0.5**
R11A	**Troy Canyon, C**	**1.94**	**81**	P	**Pn**	**15 29 59.1**	**0.0**
	baz=261						
R11A				Sb	**Sg**	**15 30 29.1**	**+1.6**
	baz=261						
PAHR	**Pah Rah Range**	**1.95**	**328**	*e*Pn	**Pn**	**15 29 59.4**	**+0.3**
MPMC	**Manual Prospec**	**2.05**	**168**	P	**Pn**	**15 30 00.7**	**+0.1**
	baz=347,SNR=493						
MPMC				Sb	**Sb**	**15 30 29.9**	**+0.9**
	baz=347						
VOG	**Valley Oaks Go**	**2.05**	**212**	P	**Pn**	**15 30 00.8**	**+0.5**
	baz=31,SNR=13						
VOG				Sb	**Sb**	**15 30 29.3**	**+0.6**
	baz=31						
VES	**Vestal, Richgr**	**2.38**	**201**	Pb	**Pb**	**15 30 08.5**	**0.0**
	baz=20						
VES				Sb	**Sb**	**15 30 39.0**	**+0.8**
	baz=20						
ISA	**Isabella, Lake**	**2.42**	**189**	*e*Pn	**Pn**	**15 30 06.2**	**+0.6**
ISA	**Isabella, Lake**	**2.42**	**189**	P	**Pn**	**15 30 06.4**	**+0.8**
	baz=7.8,SNR=581						
ISA				Sb	**Sb**	**15 30 40.8**	**+1.1**
	baz=7.8						
AFDM	**Forest Hills D**	**2.47**	**292**	*e*Pn	**Pn**	**15 30 06.4**	**+0.1**
BEKR	**Beckworth**	**2.56**	**315**	*e*Pn	**Pn**	**15 30 07.9**	**+0.4**
SHOC	**Shoshone, Teco**	**2.58**	**147**	P	**Pn**	**15 30 07.7**	**0.0**
	baz=327,SNR=95						
SHOC				Sb	**Sg**	**15 30 47.1**	**-0.7**
	baz=327						
LRMC	**Laurel Mtn Rad**	**2.60**	**174**	P	**Pn**	**15 30 08.1**	**+0.1**
	baz=353,SNR=87						
LRMC				Sb	**Sb**	**15 30 46.6**	**+2.0**
	baz=353						
SHPR	**Sheep Range**	**2.77**	**123**	*e*Pn	**Pn**	**15 30 11.1**	**+0.7**
GSC	**Goldstone, Bar**	**2.93**	**160**	*e*Pn	**Pn**	**15 30 12.6**	**+0.1**
GSC	**Goldstone, Bar**	**2.93**	**160**	P	**Pn**	**15 30 12.6**	**+0.1**
	baz=340,SNR=16						
GSC				Sb	**Sg**	**15 30 57.4**	**-1.7**
	baz=340						
PAGB	**Antelope Grade**	**2.93**	**218**	*e*Pn	**Pn**	**15 30 12.9**	**+0.3**
ARVC	**Arvin**	**3.00**	**193**	Pb	**Pb**	**15 30 19.8**	**+0.6**
	baz=12						
ARVC				Sb	**Sb**	**15 30 57.9**	**+1.7**
	baz=12						
SAO	**San Andreas Ge**	**3.02**	**246**	*e*Pn	**Pn**	**15 30 13.8**	**+0.1**
ORV	**Oroville**	**3.10**	**300**	*e*Pn	**Pn**	**15 30 14.9**	**+0.2**
TUQ	**Turquoise Moun**	**3.12**	**147**	P	**Pn**	**15 30 15.4**	**+0.2**
	baz=327,SNR=17						
TUQ				S	**Sn**	**15 30 53.3**	**+0.3**
	baz=327						
SMMC	**Simmler**	**3.17**	**211**	P	**Pn**	**15 30 16.2**	**+0.4**
	baz=29						
EDW2	**Edwards Air Fo**	**3.18**	**180**	P	**Pn**	**15 30 16.6**	**+0.6**
	baz=359						
EDW2				Sb	**Sg**	**15 31 04.6**	**-2.6**
	baz=359						
RRX	**Edison Barstow**	**3.29**	**165**	Sg	**Sg**	**15 31 12.9**	**+2.1**
	baz=345						
PSUT	**Pine Spring**	**3.31**	**81**	*e*Pn	**Pn**	**15 30 18.8**	**+0.9**
ELK	**Elko**	**3.44**	**38**	Pn	**Pn**	**15 30 20.6**	**+1.0**
	8.3nm,0.3s,baz=239,slow=11,SNR=42						
ELK				Pg	**Pg**	**15 30 30.7**	**-0.3**
	51nm,0.3s,baz=224,slow=13,SNR=51						
ELK				Sn	**Sn**	**15 30 56.1**	**-4.9**
	17nm,0.3s,baz=233,slow=15,SNR=4.2						
ELK				Lg	Lg	15 31 15.3	
	111nm,0.3s,baz=306,slow=7.8,SNR=13						
PKM	**Mcpherson Peak**	**3.48**	**205**	P	**Pn**	**15 30 21.6**	**+1.3**
	baz=24,SNR=16						
OSI	**Osito Audit: C**	**3.49**	**189**	*e*Pn	**Pb**	**15 30 24.9**	**-2.6**
OSI	**Osito Audit: C**	**3.49**	**189**	Pb	**Pb**	**15 30 28.7**	**+1.2**
	baz=8.7						
OSI				Sb	**Sb**	**15 31 13.2**	**+3.0**
	baz=8.7						
HEC	**Hector,Ludlow**	**3.50**	**157**	P	**Pn**	**15 30 20.6**	**+0.2**
	baz=337,SNR=14						
O03E	**Paynes Creek**	**3.68**	**308**	P	**Pn**	**15 30 24.5**	**+1.6**
	baz=127						
O03E				Sb	**Sg**	**15 31 21.8**	**-1.6**
	baz=127						
CCUT	**Cedar City**	**3.73**	**96**	*e*Pn	**Pn**	**15 30 23.9**	**+0.3**
GMRC	**Granite Mounta**	**3.79**	**149**	P	**Pn**	**15 30 25.1**	**+0.7**
	baz=330						
LDFC	**Landfair**	**3.79**	**141**	*e*Pn	**Pn**	**15 30 24.5**	**0.0**
GDXM	**Geysers**	**3.82**	**283**	*e*Pn	**Pn**	**15 30 27.0**	**+2.3**
GDXM				*e*Sg	**Sb**	**15 31 19.6**	**-0.1**
BFSC	**Mount Baldy Ra**	**3.83**	**175**	Sb	**Sb**	**15 31 24.1**	**+3.9**
	baz=355						
MCCM	**Marconi Confer**	**3.83**	**273**	*e*Pn	**Pn**	**15 30 26.2**	**+1.4**
MCCM				*e*Sg	**Sb**	**15 31 19.7**	**-0.2**
MWC	**Mount Wilson**	**3.83**	**180**	*e*Pn	**Pn**	**15 30 26.8**	**+1.7**
PASC	**Pasadena Art C**	**3.89**	**182**	*e*Pn	**Pn**	**15 30 26.7**	**+1.0**
BBRC	**Big Bear Solar**	**3.90**	**166**	Sg	**Sg**	**15 31 32.0**	**+1.6**
	baz=346						

SZCU	Shurtz Canyon	3.94	95	ePn	Pn	15 30 27.5	+1.0
LCMT	Little Creek M	3.94	104	ePn	Pn	15 30 27.1	+0.6
HOPS	Hopland Field	4.06	285	ePn	Pn	15 30 28.8	+0.8
MOD	Modoc Plateau	4.21	336	ePn	Pn	15 30 32.9	+2.6
O02D	Mt. Diablo Mer	4.26	301	P	Pn	15 30 33.4	+2.5
	baz=119						
KNB	Kanab	4.27	103	ePn	Pn	15 30 32.0	+0.9
SCZ2	Santa Cruz Isl	4.27	198	Sb	Sb	15 31 34.6	+2.0
	baz=17						
WDC	Whiskeytown Da	4.31	307	ePn	Pn	15 30 30.2	-1.2
BELC	Belle Mtn. Jos	4.38	157	P	Pn	15 30 33.0	+0.5
	baz=338,SNR=24						
WVOR	Wild Horse Val	4.39	354	ePn	Pn	15 30 34.9	+2.2
TCRU	Three Creeks R	4.42	81	ePn	Pn	15 30 34.4	+1.2
W13A	Hualapai Mount	4.46	130	ePn	Pn	15 30 34.1	+0.4
MURC	Murrieta	4.51	171	P	Pn	15 30 35.1	+0.9
	baz=351						
IRM	Iron Mountain	4.54	148	P	Pn	15 30 35.3	+0.6
	baz=330						
PKCU	Pink Cliffs	4.57	96	ePn	Pn	15 30 37.3	+2.0
PKCU				ePg	Pg	15 30 51.6	-1.0
PKCU				eSg	Sg	15 31 53.7	+1.8
DUG	Dugway, Tooele	4.58	61	ePn	Pn	15 30 39.1	+3.8
DUG	Dugway, Tooele	4.58	61	P	Pn	15 30 38.1	+2.8
	baz=244						
DUG				Sb	Sg	15 31 49.4	-2.7
	baz=244						
MTPU	Mount Pierson	4.61	89	ePn	Pn	15 30 37.5	+1.6
MTPU				ePg	Pg	15 30 53.2	-0.2
MTPU				eSg	Sg	15 31 53.1	-0.1
MSU	Marysvale	4.62	83	ePn	Pn	15 30 38.5	+2.5
PFO	Pinyon Flats O	4.62	164	ePn	Pn	15 30 36.4	+0.6
PFO				Pg	Pg	15 30 51.6	-2.1
PFO				Sn	Sn	15 31 29.3	-0.8
PFO				eLg	Lg	15 31 52.1	
PFO	Pinyon Flats O	4.62	164	P	Pn	15 30 36.6	+0.7
	baz=344						
PFO	Pinyon Flats O	4.62	164	Pn	Pn	15 30 36.2	+0.3
	1.4nm,0.3s,baz=6.3,slow=14,SNR=15						
PFO				Pg	Pg	15 30 51.6	-2.1
	3.4nm,0.3s,baz=352,slow=16,SNR=16						
PFO				Sn	Sn	15 31 29.3	-0.8
	1.1nm,0.3s,baz=45,slow=4.2,SNR=2.4						
PFO				Lg	Lg	15 31 53.2	
	3.5nm,0.3s,baz=219,slow=8.6,SNR=3.6						
XPFO	Pion Flat	4.62	164	ePn	Pn	15 30 36.7	+0.8
KCPM	Cahto Peak	4.63	292	ePn	Pn	15 30 39.7	+3.7
N02D	Trinity Center	4.64	310	P	Pn	15 30 38.0	+1.9
	baz=128						
M04C	Macdoel	4.73	323	P	Pn	15 30 40.5	+3.2
	baz=141						
M04C				Sb	Sg	15 31 54.3	-2.7
	baz=141						
BGU	Big Grassy Mou	4.80	52	ePn	Pn	15 30 40.1	+1.7
U15A	North Rim	4.86	108	ePn	Pn	15 30 40.7	+1.4
BC3	Big Chuckawall	4.87	154	P	Pn	15 30 39.5	+0.2
	baz=335						
PDMCI	Parker Dam,Lak	4.89	139	P	Pn	15 30 40.3	+0.9
	baz=321						
KMRM	Mail Ridge	4.92	298	ePn	Pn	15 30 39.8	0.0
NLU	North Lily Min	5.00	66	ePn	Pn	15 30 46.1	+4.9
NLU				ePg	Pb	15 30 51.6	-1.8
YBH	Yreka Blue Hor	5.14	317	ePn	Pn	15 30 41.9	-1.0
YBH				Pg	Pg	15 31 02.5	-1.0
YBH	Yreka Blue Hor	5.14	317	Pn	Pn	15 30 47.5	+4.6
	1.2nm,0.3s,baz=142,slow=4.6,SNR=13						
YBH				Pg	Pg	15 31 02.5	-1.0
	0.7nm,0.3s,baz=140,slow=13,SNR=8.1						
Y12C	Blythe	5.16	146	ePn	Pn	15 30 44.1	+1.0
Y12C				eSg	Sg	15 32 08.9	-1.8
CPE	Camp Elliot	5.22	171	ePn	Pn	15 30 47.7	+3.8
J08A	Circle Bar Ran	5.30	356	ePg	Pb	15 30 53.6	-4.7
MPU	Maple Canyon	5.34	67	ePn	Pn	15 30 50.6	+4.7
SPUT	South Promonto	5.38	51	ePn	Pn	15 30 49.6	+3.2
Q16A	Castle Valley	5.44	79	ePn	Pn	15 30 50.3	+3.1
TMUT	Trail Mountain	5.47	75	ePn	Pn	15 30 44.7	-3.1
HVU	Hansel Valley	5.48	46	ePn	Pn	15 30 47.7	0.0
BAR	Barrett	5.49	168	ePn	Pn	15 30 48.8	+1.1
CTU	Camp Tracy	5.52	60	ePn	Pn	15 30 43.1	-5.2
GLA	Glamis	5.64	152	ePn	Pn	15 30 49.6	-0.2
JLU	Jordanelle	5.69	62	ePn	Pn	15 30 52.1	+1.4
Y14A	Wickenburg	5.79	134	ePn	Pn	15 30 52.9	+1.1
Y14A				ePg	Pg	15 31 12.4	-3.6
Y14A				eSg	Sg	15 32 29.7	-1.3
P17A	Butcher Ranch,	5.87	74	ePn	Pn	15 30 53.6	+0.7
HUMO	Hull Mountain	5.90	322	ePn	Pn	15 30 53.0	-0.3
WUAZ	Wupatki	5.91	113	ePn	Pn	15 30 54.6	+0.9
TCUT	Toone Canyon	5.95	57	ePn	Pn	15 30 53.9	-0.4
TCUT				eSg	Sb	15 32 28.9	+7.6
SRU	San Rafael Swe	5.97	78	ePn	Pn	15 30 56.5	+2.1
SRU				eSg	Sb	15 32 29.2	+7.5
I07A	Izee	6.11	350	ePn	Pn	15 30 58.7	+2.4
I07A				eSg	Sb	15 32 33.2	+7.4
PINE	Pine Mountain	6.13	340	ePn	Pn	15 30 56.1	-0.6
HLID	Hailey	6.14	25	ePn	Pn	15 30 57.9	+1.1
HLID				eSg	Sg	15 32 35.6	-6.5
113A	Mohawk Valley,	6.33	145	ePn	Pn	15 31 01.1	+1.9
X16A	Lo Mia Camp, P	6.45	122	ePn	Pn	15 30 59.9	-1.1
BMO	Blue Mountains	6.80	4	ePn	Pn	15 31 09.1	+3.3
PV09	Paradox Valley	7.01	84	ePn	Pn	15 31 11.2	+2.3
PV05	Paradox Valley	7.04	87	ePn	Pn	15 31 12.0	+2.8
AHID	Auburn Hatcher	7.07	46	ePn	Pn	15 31 11.2	+1.7
AHID				eLg	Lg	15 33 11.9	
PV10	Paradox Valley	7.08	85	ePn	Pn	15 31 10.1	+0.3
PV10				eLg	Lg	15 33 12.6	
PV14	Lion Creek, Pa	7.09	85	ePn	Pn	15 31 12.3	+2.4
PV23	Carpenter Ridg	7.10	84	ePn	Pn	15 31 13.0	+2.9
PV19	Morning Glory	7.13	85	ePn	Pn	15 31 11.4	+1.0
PV21	Cone Mtn., Par	7.13	83	ePn	Pn	15 31 11.9	+1.4
PV20	West Nyswonger	7.14	85	ePn	Pn	15 31 13.0	+2.5
PV17	East Wray Mesa	7.15	85	ePn	Pn	15 31 11.5	+0.9
PV16	Nyswonger Mesa	7.18	85	ePn	Pn	15 31 11.6	+0.5
PV04	Paradox Valley	7.19	85	ePn	Pn	15 31 11.2	0.0
PV11	David Mesa, Pa	7.21	85	ePn	Pn	15 31 10.7	-0.8
PV03	Paradox Valley	7.23	86	ePn	Pn	15 31 11.2	-0.6
PV13	Radium Mtn., P	7.26	86	ePn	Pn	15 31 11.8	-0.3
PV12	Saucer Basin,	7.27	85	ePn	Pn	15 31 12.4	+0.1
W18A	Petrified Fore	7.29	111	ePn	Pn	15 31 11.8	-0.8
PV02	Paradox Valley	7.32	86	ePn	Pn	15 31 13.7	+0.6
PV02				ePg	Pg	15 31 40.9	-4.4
PV07	Paradox Valley	7.39	84	ePn	Pn	15 31 08.8	-5.2
PV07				ePg	Pg	15 31 42.6	-4.1
X18A	Snowflake	7.41	116	ePn	Pn	15 31 10.8	-3.5
X18A				ePg	Pg	15 31 42.3	-4.7
PV01	Paradox Valley	7.46	87	ePn	Pn	15 31 12.7	-2.2
PV15	Paradox Valley	7.52	85	ePn	Pn	15 31 14.9	-0.9
PV15				eLg	Lg	15 33 27.6	
MVCO	Mesa Verde	7.61	94	ePn	Pn	15 31 18.8	+1.8
TPAW	Teton Pass	7.63	42	ePn	Pn	15 31 16.7	-0.5
MCMT	McKenzie Canyo	7.79	28	ePn	Pn	15 31 13.9	-5.6
O20A	White River Ci	7.88	72	ePn	Pn	15 31 18.9	-1.8
MOOW	Moose Ponds	7.91	42	ePn	Pn	15 31 21.5	+0.4
F10A	Beach Ranch, E	7.92	4	ePn	Pn	15 31 18.8	-2.4
BW06	Boulder Array	7.98	51	ePn	Pn	15 31 21.1	-1.0
PD31	Pinedale Array	7.98	51	ePn	Pn	15 31 20.3	-1.8
PD31				eLg	Lg	15 33 35.0	
PDAR	Pinedale Array	7.98	51	ePn	Pn	15 31 20.0	-2.1
PDAR				Pg	Pb	15 31 41.7	-2.4
PDAR				Sn	Sn	15 32 49.6	-3.4
PDAR				Lg	Lg	15 33 35.0	
PDAR	Pinedale Array	7.98	51	Pn	Pn	15 31 28.1	+6.0
	0.1nm,0.3s,baz=228,slow=12,SNR=3.0						
PDAR				Pg	Pb	15 31 41.7	-2.4
	0.5nm,0.3s,baz=222,slow=13,SNR=7.3						
PDAR				Sn	Sn	15 32 49.6	-3.4
	0.1nm,0.3s,baz=228,slow=21,SNR=1.6						
PDAR				Lg	Lg	15 33 35.0	
	0.6nm,0.3s,baz=228,slow=35,SNR=3.9						
FLWY	Flagg Ranch	8.17	40	ePn	Pn	15 31 23.2	-1.4
YPP	Pitchstone Pla	8.25	39	ePn	Pn	15 31 22.6	-3.2
TUC	Tucson	8.25	132	ePn	Pn	15 31 22.6	-3.1
TUC	Tucson	8.25	132	P	Pn	15 31 28.2	+2.5
	baz=316						
YFT	Old Faithful	8.37	38	ePn	Pn	15 31 28.2	+0.9
QLMT	Earthquake Lak	8.38	34	ePn	Pn	15 31 26.9	-0.6
SMCO	Snowmass	8.72	79	ePn	Pn	15 31 35.9	+3.5
319A	Douglas	9.81	130	ePn	Pn	15 31 46.9	-0.2
ANMO	Albuquerque	9.82	105	Pg	Pn	15 32 28.4	+41
	0.2nm,0.3s,baz=287,slow=14,SNR=12						
ANMO				Sn	Sn	15 33 39.0	+0.9
	0.1nm,0.3s,baz=266,slow=21,SNR=1.8						
ANMO				Lg	Lg	15 34 34.2	
	0.1nm,0.3s,baz=171,slow=23,SNR=2.7						
K22A	Casper	9.90	59	ePn	Pn	15 31 49.1	+0.8
NEW	Newport	10.21	3	Pn	Pn	15 31 57.9	+5.4
	baz=190,slow=18,SNR=3.0						
NEW				Lg	Lg	15 34 48.2	
	0.1nm,0.3s,baz=48,slow=6.2,SNR=2.2						
MSTX	Muleshoe	13.01	104	ePn	Pn	15 32 34.2	+3.4
AMTX	Amarillo	13.53	99	ePn	Pn	15 32 38.5	+0.5
TX31	Lajitas Ar. Si	14.77	122	ePn	Pn	15 32 54.5	-0.4
TXAR	Lajitas Array	14.77	122	Pn	P	15 33 02.4	+1.2
	0.1nm,0.3s,baz=303,slow=12,SNR=3.4						
HPIG		15.21	133	ePn	Pn	15 33 02.4	+1.4
ABTX	Abilene, Hawle	15.95	104	ePn	P	15 33 15.0	+1.0
JCT	Junction City	16.84	111	ePn	P	15 33 27.1	+3.1
WHTX	Lake Whitney,	17.89	104	ePn	P	15 33 36.5	+0.9
MIAR	Mount Ida	20.00	93	eP	Pn	15 34 01.4	+1.0
PBMO	Poplar Bluff	21.93	85	eP	P	15 34 18.2	-1.3
P45A	Graceland, Par	23.60	77	eP	P	15 34 35.5	-1.5
YKA	Yellowknife Ar	24.55	4	P	P	15 34 51.4	+5.8
	0.5nm,0.6s,baz=179,slow=8.9,SNR=13						
YKB5	Yellowknife Ar	24.55	4	eP	P	15 34 48.1	+2.4
M48A	Edgerton	25.74	72	eP	P	15 34 56.5	-0.1
Z50A	Ashland	26.45	91	eP	P	15 35 02.2	-1.0
AAM	Ann Arbor	26.49	70	eP	P	15 35 01.6	-1.8
CPCT	Cooper Cave	26.89	85	eP	P	15 35 03.1	-4.0
RGRS	Roger Stewart	31.08	88	eP	P	15 35 41.7	-2.7
ILAR	Eielson Array	31.68	337	P	P	15 35 54.5	+5.1
	0.5nm,1.0s,baz=147,slow=8.3,SNR=4.3						
WMQ	Urumqi	95.22	342	eP	P	15 42 52.0	+1.9
LZH	Lanzhou	96.66	327	eP	P	15 42 53.3	-3.6
LZH				pP	PcP	15 42 55.5	-1.5
LZH				sP	pP	15 42 56.5	-2.1
LZH				ePP	PP	15 46 47.5	-2.9
LZH				pmax	pmax		
	comp=Z,14nm,1.4s						
LZH				pmax	pmax		
	comp=Z,71nm,5.5s						
LZH				LR	LR		
	comp=N,32nm,17.2s						
LZH				LR	LR		
	comp=E,41nm,17.5s						
LZH				LR	LR		
	comp=Z,53nm,19.7s						

KRSC 28 15:29:32.6±1.4, 50°.74N×157°.70E, h48km±19km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	0.92	323	eP	Pn	15 29 50.9	+1.7
PAU				eS	Sn	15 30 03.6	+2.3
SKR	Severo-Kuril's	1.00	268	eP	Pn	15 29 50.9	+0.6
SKR				eS	Sn	15 30 03.8	+0.4
KDTR	Khodutka, Kamc	1.10	12	eP	Pn	15 29 52.7	+1.1
KDTR				eS	Sn	15 30 06.7	+1.0
ALID	Alaid	1.37	276	eP	Pn	15 29 56.9	+1.5
ALID				eS	Sn	15 30 14.0	+1.6
RUS	Russkaya	1.77	16	eP	Pn	15 30 01.9	+1.1
RUS				eS	Sn	15 30 23.5	+1.3
MTVR	Mutnovka	1.78	10	eP	Pn	15 30 03.0	+2.0
MTVR				eS	Sn	15 30 24.7	+2.3
KRMR	Karymshinskiy	2.12	7	eP	Pn	15 30 08.2	+2.7
KRMR				eS	Sn	15 30 34.4	+3.9
APC	Apacha	2.22	352	eP	Pn	15 30 09.8	+2.9
PET	Petropavlovsk	2.37	14	eS	Sn	15 30 39.2	+2.5
DALK	Dalny	2.39	15	eP	Pn	15 30 11.3	+2.1
DALK				eS	Sn	15 30 39.2	+1.9
UGLR	Uglovaya	2.57	15	eP	Pn	15 30 14.5	+2.6
AVH	Avacha	2.61	14	eP	Pn	15 30 16.0	+3.6
SMAR	Somma	2.62	15	eP	Pn	15 30 16.4	+3.8
KOK	Koryaka	2.62	12	eP	Pn	15 30 16.5	+3.9
KOK				eS	Sn	15 30 49.0	+5.8
SDLR	Sedlovina	2.65	16	eP	Pn	15 30 15.5	+2.6
KRX	Arik	2.69	12	eP	Pn	15 30 17.5	+4.0
SPN	Mys Shipunski	2.77	30	eP	Pn	15 30 19.0	+4.5
GNL	Ganaly	2.97	3	eP	Pn	15 30 21.2	+3.9
MKZ	Mys Kozlova	4.55	31	eP	Pn	15 30 41.1	+2.3

KRSC 28 15:40:09.9±1.3, 50°.73N×157°.82E, h48km±18km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	0.98	320	eP	Pn	15 40 28.7	+1.5
PAU				eS	Sn	15 40 41.2	+1.2
SKR	Severo-Kuril's	1.08	268	eP	Pn	15 40 29.9	+1.2
SKR				eS	Sn	15 40 43.0	+0.5
KDTR	Khodutka, Kamc	1.09	8	eP	Pn	15 40 30.2	+1.4
KDTR				eS	Sn	15 40 43.7	+0.9
ALID	Alaid	1.45	276	iP	Pn	15 40 35.6	+1.8
ALID				eS	Sn	15 40 52.5	+0.8
RUS	Russkaya	1.76	14	iP	Pn	15 40 39.6	+1.7
RUS				eS	Sn	15 41 00.1	+1.0
MTVR	Mutnovka	1.77	7	eP	Pn	15 40 40.3	+2.1
MTVR				eS	Sn	15 41 01.5	+1.9
KRMR	Karymshinskiy	2.11	5	eP	Pn	15 40 45.7	+3.0
KRMR				eS	Sn	15 41 12.2	+4.4
APC	Apacha	2.24	350	eP	Pn	15 40 47.4	+3.0
PET	Petropavlovsk	2.36	12	iP	Pn	15 40 49.0	+3.0
PET				eS	Sn	15 41 16.1	+2.4
DALK	Dalny	2.38	14	eP	Pn	15 40 48.7	+2.4
DALK				eS	Sn	15 41 16.4	+2.2
UGLR	Uglovaya	2.56	14	eP	Pn	15 40 52.0	+3.0
AVH	Avacha	2.60	12	iP	Pn	15 40 53.2	+3.7
AVH				eS	Sn	15 41 24.6	+4.7
SMAR	Somma	2.61	13	eP	Pn	15 40 53.4	+3.7
KOK	Koryaka	2.62	11	iP	Pn	15 40 53.6	+3.9
SDLR	Sedlovina	2.64	14	eP	Pn	15 40 52.4	+2.4
KRX	Arik	2.68	11	eP	Pn	15 40 54.9	+4.2
SPN	Mys Shipunski	2.74	29	eP	Pn	15 40 54.2	+2.9
GNL	Ganaly	2.97	1	eP	Pn	15 40 57.9	+3.3
MKZ	Mys Kozlova	4.51	30	iP	Pn	15 41 18.7	+3.1
KBTR	Krutoberegovo	6.25	27	eP	Pn	15 41 42.9	+3.5

IDC 28 15:43:17.9±3.8, 5°.81S×151°.35E, h175km±36km, mb3.2/6, mb1 3.4/6, mb1mx3.1/34, mbtmp3.6/6, Error ellipse: s-maj=26.9km s-min=14.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.70	228	P	P	15 47 55.2	-0.1
	1.0nm,0.3s,baz=51,slow=9.7,SNR=13						
WRA				S	S	15 51 44.8	+1.0
	1.0nm,0.9s,baz=49,slow=18,SNR=3.1						
DZM	Mont Dzumac	21.78	139	P	P	15 47 56.0	-0.2
	3.8nm,0.5s,baz=289,slow=7.6,SNR=3.4						
ASAR	Alice Springs	24.44	222	P	P	15 48 20.9	+0.2
	1.0nm,0.7s,baz=56,slow=9.3,SNR=42						
SONM	Songino Array	66.42	329	P	P	15 53 48.7	+0.4
	0.2nm,0.5s,baz=140,slow=5.1,SNR=2.5						
MKAR	Makanchi Array	80.14	319	P	P	15 55 08.1	-0.6
	0.1nm,0.3s,baz=103,slow=7.6,SNR=3.9						
ILAR	Eielson Array	83.63	22	P	P	15 55 26.8	+0.4
	1.7nm,1.3s,baz=230,slow=5.4,SNR=3.3						
TORD	Torodi Ar. Bea	149.22	286	PKPbc	PKPbc	16 02 46.1	-0.7
	0.2nm,0.3s,baz=66,slow=3.1,SNR=4.1						

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*ISCJB **28** 16:01:35.9±0.7, 53°.5N±0°.1×35°.2W±0°.2, h12km, mb3.6/9, Error ellipse: s-maj=23.2km s-min=12.6km az=31.8*

*IDC **28** 16:01:35.6±0.8, 53°.49N×35°.13W, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.6/52, mbtmp3.7/11, ML3.2/2, Error ellipse: s-maj=30.3km s-min=18.2km az=36.0*

ISC 28 16:01:37.5±0.8, 53°.5N±0°.2×35°.1W±0°.1, h12km, n14, σ0s.58/14, mb3.5/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	Kangerlussuaq	15.48	337	Pn	P	16 05 18.7	-1.0
	0.5nm,0.3s,baz=153,slow=9.0,SNR=3.3						
SCHQ	Schefferville	18.52	287	P	P	16 05 53.5	+0.1
	0.6nm,0.3s,baz=92,slow=7.6,SNR=5.6						
FRB	Frobisher Bay	19.93	314	P	P	16 06 08.6	-0.1
	0.1nm,0.3s,baz=102,slow=10,SNR=3.6						
ESDC	Sonseca Array	25.26	111	P	P	16 07 03.4	+0.1
	0.5nm,0.5s,baz=322,slow=8.1,SNR=3.3						
RES	Resolute Bay	31.44	334	P	P	16 07 58.8	+0.7
	1.2nm,0.3s,baz=91,slow=9.5,SNR=18						
YKA	Yellowknife Ar	40.44	315	P	P	16 09 15.1	-0.1
	0.3nm,0.6s,baz=63,slow=9.0,SNR=3.5						
TORD	Torodi Ar. Bea	49.69	130	P	P	16 10 29.2	+0.1
	1.4nm,0.8s,baz=331,slow=10,SNR=7.3						
ILAR	Eielson Array	50.96	329	P	P	16 10 38.9	+0.6
	0.6nm,1.0s,baz=47,slow=5.9,SNR=4.9						
NVAR	Mina Array Bea	56.48	291	P	P	16 11 19.0	-0.3
	0.2nm,0.4s,baz=46,slow=5.2,SNR=2.7						
MKAR	Makanchi Array	66.81	42	P	P	16 12 28.9	+0.3
	0.3nm,0.8s,baz=310,slow=7.4,SNR=3.6						
SONM	Songino Array	73.88	26	P	P	16 13 12.0	0.0
	0.9nm,0.8s,baz=339,slow=5.7,SNR=8.4						
LPAZ	La Paz	75.08	213	P	P	16 13 19.9	+0.2
	0.9nm,0.7s,baz=34,slow=11,SNR=2.5						
WRA	Warramunga Arr	145.52	18	PKPbc	PKPdf	16 21 14.9	-0.5
	0.5nm,0.7s,baz=339,slow=3.2,SNR=4.1						
ASAR	Alice Springs	149.06	20	PKPbc	PKPbc	16 21 24.1	-1.2
	1.0nm,0.8s,baz=356,slow=2.4,SNR=13						

IDC 28 16:08:41.9±2.1, 4°.90S×148°.41E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.6/29, mbtmp3.5/5, Error ellipse: s-maj=74.0km s-min=26.2km az=109.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.28	221	P	P	16 13 19.6	+0.2
	0.9nm,0.3s,baz=45,slow=11,SNR=20						
ASAR	Alice Springs	23.32	215	P	P	16 13 51.4	-0.4
	1.0nm,0.6s,baz=52,slow=9.1,SNR=31						
SONM	Songino Array	64.15	330	P	P	16 19 16.9	-1.5
	0.2nm,0.4s,baz=121,slow=5.6,SNR=4.2						
MKAR	Makanchi Array	77.56	320	P	P	16 20 41.8	+1.9
	0.1nm,0.5s,baz=128,slow=5.2,SNR=2.4						
YKA	Yellowknife Ar	97.55	28	P	P	16 22 17.6	-0.2
	0.1nm,0.4s,baz=264,slow=5.5,SNR=4.0						

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*IDC **28** 16:27:42.9±0.6, 13°.05N×125°.83E, h0km, mb4.1/17, mb1 4.1/18, mb1mx4.0/43, mbtmp4.1/18, ML3.1/1, Error ellipse: s-maj=28.1km s-min=11.8km az=76.0*

*ISCJB **28** 16:27:45.1±1.6, 13°.09N±0°.02×125°.78E±0°.04, h26km±12km, mb4.5/47, Error ellipse: s-maj=6.1km s-min=4.0km az=179.8*

*MAN **28** 16:27:45.2, 13°.16N×125°.85E, h34km, MS3.6*

*NEIC **28** 16:27:48.2±0.9, 13°.04N×125°.81E, h37km±8km, mb4.8/34, Error ellipse: s-maj=8.6km s-min=3.8km az=78.0*

ISC 28 16:27:46.1±1.8, 13°.07N±0°.03×125°.73E±0°.05, h19km±7km, n87, σ1s.24/101, mb4.6/47, 1C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	Catarman	1.18	242	eP	Pb	16 28 07.9	0.0
CNP				eS	Sg	16 28 24.1	-0.4
BESP	Borongan	1.49	191	eP	Pn	16 28 10.9	-1.0
BESP				eS	Sn	16 28 30.4	-0.4
PVCP	Virac	1.62	289	eP	Pn	16 28 12.9	-0.7
PVCP				eS	Sn	16 28 33.2	-0.8
PLP	Palo	2.03	201⇑	eP	Pn	16 28 18.6	-0.7
PLP				eS	Sn	16 28 41.6	-2.7
OCLP	Ormoc	2.29	209	eP	Pn	16 28 23.9	+1.0
OCLP				eS	Sn	16 28 52.6	+2.0
MSLP	Maasin	3.04	196	eP	Pn	16 28 31.1	-2.2
MSLP				eS	Sn	16 29 11.6	+2.4
LLP	Lapu-Lapu	3.24	212⇓	eP	Pn	16 28 36.6	+0.6
LLP				eS	Sn	16 29 13.2	-0.8
RCP	Roxas	3.28	243⇓	eP	Pn	16 28 37.9	+1.4
RCP				eS	Sn	16 29 16.6	+1.5
GQP	Guinayangan	3.30	285⇓	eP	Pn	16 28 36.9	+0.2
GQP				iS	Sn	16 29 14.9	-0.6
GUIM	Jordan	3.92	232	eP	Pn	16 28 46.1	+0.8
GUIM				eS	Sn	16 29 24.4	-6.4
POLP	Polilio Island	4.03	295	eP	Pn	16 28 47.0	+0.1
POLP				eS	Sn	16 29 32.1	-1.5
BUTP	Butuan	4.08	181	eP	Pn	16 28 46.4	-1.1
BUKP	Musuan	5.20	187	eP	Pn	16 29 08.9	+5.9
BUKP				eS	Sn	16 30 06.9	+4.3
YHNB	Yeheng	12.25	341	ePn	Pn	16 30 40.6	+1.0
JOW	Kunigami	13.89	10	ePn	Pn	16 31 03.3	+1.2
JOW	Kunigami	13.89	10	Pn	Pn	16 31 02.8	+0.7
	0.2nm,0.3s,baz=173,slow=8.5,SNR=5.2						
LUWI	Luwuk	14.33	192	ePn	Pn	16 31 09.0	+0.9
SOEI	Soe	22.73	184	eP	P	16 32 47.0	-0.2
	120nm,1.6s						
JAGI	Jajag, Banyuwa	24.30	209	eP	P	16 33 03.3	+0.7
	105nm,1.1s						
KS15	Wonju Array Si	24.34	4	eP	P	16 33 01.4	-1.5
	93nm,2.0s						
KSAR	Wonju Array Be	24.34	4	P	P	16 33 02.7	-0.2
KSRS	Korea Array	24.36	4	P	P	16 33 02.7	-0.3
	1.2nm,0.9s,baz=204,slow=8.8,SNR=3.8						
XAN	Xi'an	25.87	327	eP	P	16 33 16.1	-0.7
	8.7nm,0.8s						
CM01	Chiang Mai Arr	26.29	285	eP	P	16 33 20.7	-0.1
MTN	Manton Dam	26.30	168	eP	P	16 33 18.4	-2.3
	46nm,1.3s						
CM31	Chiang Mai Arr	26.31	285	eP	P	16 33 19.8	-1.2
	3.8nm,0.8s						
CMAR	Chiang Mai Arr	26.31	285	P	P	16 33 21.4	+0.4
	2.6nm,0.8s,baz=96,slow=7.6,SNR=22						
FITZ	Fitzroy Crossi	30.97	180	eP	P	16 34 00.9	-1.4
	41nm,1.8s						
FITZ	Fitzroy Crossi	30.97	180	P	P	16 34 03.0	+0.7
	5.5nm,0.6s,baz=11,slow=8.9,SNR=9.3						
WR1	Warramunga Arr	33.89	165	eP	P	16 34 25.8	-2.1
	12nm,1.3s						
WR1				ePcP	PcP	16 37 05.9	-0.6
WRA	Warramunga Arr	33.89	165	P	P	16 34 25.8	-2.1
	1.8nm,0.7s,baz=344,slow=9.6,SNR=14						
WRA				PcP	PcP	16 37 05.9	-0.6
	0.8nm,0.7s,baz=339,slow=2.8,SNR=5.9						
MBWA	Marble Bar	34.52	190	eP	P	16 34 34.9	+1.4
	60nm,1.4s						
LSA	Lhasa	36.02	303	eP	P	16 34 48.0	+1.2
	5.3nm,1.0s						
KLR	Kul'dur	36.39	7	P	P	16 34 49.3	+0.1
	0.4nm,0.6s,baz=194,slow=8.3,SNR=2.0						
KLR				PcP	PcP	16 37 13.4	0.0
	0.9nm,0.7s,baz=164,slow=4.0,SNR=3.4						
AS31	Alice Springs	37.38	168	eP	P	16 34 56.9	-1.1
	1.0nm,0.7s						
ASAR	Alice Springs	37.38	168	P	P	16 34 57.6	-0.3
	1.8nm,0.7s,baz=359,slow=14,SNR=31						
ASAR				PcP	PcP	16 37 16.4	-0.4
	0.6nm,0.7s,baz=345,slow=3.1,SNR=3.9						
AS01	Alice Springs	37.39	168	eP	P	16 34 56.9	-1.1
ULN	Ulaanbaatar	38.02	340	eP	P	16 35 03.8	+0.5
	2.6nm,0.6s						
SONA0	Songino Array	38.23	339	eP	P	16 35 05.4	+0.4
SONA0				ePcP	PcP	16 37 18.9	-0.3
SONM	Songino Array	38.23	339	P	P	16 35 05.4	+0.4
	2.4nm,0.9s,baz=157,slow=9.4,SNR=10						
SONM				PcP	PcP	16 37 18.9	-0.3
	0.7nm,0.7s,baz=151,slow=3.2,SNR=4.3						
SONA1	Songino Array	38.23	339	eP	P	16 35 04.8	-0.2
H11S3	WAKE ISLAND Hy	39.72	77	T	T	17 19 24.1	
	baz=271,slow=74						
H11S1	WAKE ISLAND Hy	39.73	77	T	T	17 19 11.2	
	baz=271						
H11S2	WAKE ISLAND Hy	39.74	77	T	T	17 19 16.8	
	baz=271,slow=74						
H11N1	WAKE ISLAND Hy	39.96	75	T	T	17 19 31.0	
	baz=266,slow=75,SNR=18						
H11N2	WAKE ISLAND Hy	39.97	75	T	T	17 19 29.9	
	baz=266,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	39.98	75	T	T	17 19 32.0	
	baz=266,slow=75,SNR=13						
FORT	Forrest	43.66	177	eP	P	16 35 50.6	+1.0
	50nm,1.2s						
WMQ	Urumqi	44.72	321	eP	P	16 36 00.1	+1.9
	20nm,1.8s						
NWAO	Narrogin (SRO)	46.46	190	eP	P	16 36 10.7	-1.3
	47nm,1.4s						
NWAO	Narrogin (SRO)	46.46	190	P	P	16 36 11.0	-0.9
	4.5nm,0.7s,baz=243,slow=11,SNR=4.1						
BBOO	Buckleboo	46.68	168	eP	P	16 36 13.0	-0.7
	69nm,1.6s						
STKA	Stephens Creek	47.21	162	eP	P	16 36 17.0	-0.8
	11nm,1.9s						
STKA	Stephens Creek	47.21	162	P	P	16 36 17.7	-0.1
	3.4nm,0.8s,baz=355,slow=10.0,SNR=7.8						
PEA0B	Petropavlovsk-	47.34	26	eP	P	16 36 18.9	+0.2
	46nm,1.4s						
PETK	Petropavlovsk-	47.34	26	eP	P	16 36 19.0	+0.4
MK01	Makanchi Array	49.48	322	eP	P	16 36 36.0	+0.6

MK01				*e*PcP	**PcP**	**16 37 56.8**	**-0.4**
MK31	**Makanchi Array**	**49.50**	**322**	*e*P	**P**	**16 36 36.0**	**+0.5**
	6.5nm,0.8s						
MK32	**Makanchi Array**	**49.50**	**322**	*e*P	**P**	**16 36 36.5**	**+1.0**
MK32				*e*PcP	**PcP**	**16 37 58.0**	**+0.7**
MKAR	**Makanchi Array**	**49.50**	**322**	P	**P**	**16 36 36.5**	**+1.0**
	7.5nm,0.7s,baz=113,slow=8.9,SNR=105						
MKAR				PcP	**PcP**	**16 37 58.0**	**+0.7**
	0.8nm,0.8s,baz=108,slow=4.7,SNR=2.3						
MAKZ	**Makanchi**	**49.70**	**321**	*e*P	**P**	**16 36 37.5**	**+0.5**
	4.9nm,0.6s						
NIL	**Nilore**	**51.76**	**303**	*e*P	**P**	**16 36 52.9**	**+0.2**
	10.0nm,0.8s						
ZAA0	**Zalesovo Array**	**51.93**	**331**	*e*P	**P**	**16 36 52.8**	**-0.8**
	16nm,2.0s						
ZALV	**Zalesovo Beam**	**51.93**	**331**	*e*P	**P**	**16 36 53.3**	**-0.3**
ZALV	**Zalesovo Beam**	**51.93**	**331**	P	**P**	**16 36 53.8**	**+0.2**
	1.5nm,0.5s,baz=116,slow=6.8,SNR=8.3						
ZAA1	**Zalesovo Array**	**51.94**	**331**	*e*P	**P**	**16 36 53.8**	**+0.1**
KURK	**Kurchatov**	**53.48**	**325**	*e*P	**P**	**16 37 05.2**	**+0.1**
	15nm,1.0s						
GAR	**Garm**	**55.12**	**309**	*e*P	**P**	**16 37 18.0**	**+0.5**
	8.3nm,0.7s						
KBL	**Kabul**	**55.34**	**303**	*e*P	**P**	**16 37 18.7**	**-0.6**
	6.1nm,0.7s						
KK31	**Karatay Array**	**55.93**	**313**	*e*P	**P**	**16 37 22.3**	**-0.8**
	3.3nm,0.9s						
KKAR	**Karatay Array**	**55.93**	**313**	*e*P	**P**	**16 37 22.3**	**-0.8**
	3.3nm,0.9s						
CHGR	**Chuyangaron**	**55.94**	**308**	*e*P	**P**	**16 37 23.7**	**+0.4**
	31nm,1.6s						
BRVK	**Borovoye**	**59.15**	**325**	*e*P	**P**	**16 37 45.6**	**+0.1**
	4.7nm,0.8s						
ABKAR	**Akbulak array**	**64.43**	**319**	*e*P	**P**	**16 38 21.1**	**0.0**
	2.1nm,0.7s						
GEYT	**Alibeck**	**64.47**	**306**	P	**P**	**16 38 23.0**	**+1.3**
	1.5nm,0.5s,baz=196,slow=4.2,SNR=5.0						
GYA0B	**ALIBECK ARRAY**	**64.47**	**306**	*e*P	**P**	**16 38 20.5**	**-1.2**
	3.9nm,0.8s						
ARU	**Arti**	**66.61**	**326**	*e*P	**P**	**16 38 34.2**	**-0.9**
	4.7nm,0.5s						
RAYN	**Ar Rayn**	**76.05**	**291**	*e*P	**P**	**16 39 33.3**	**+0.3**
	6.6nm,0.7s						
ILAR	**Eielson Array**	**77.17**	**26**	P	**P**	**16 39 38.1**	**-0.3**
	0.2nm,0.6s,baz=224,slow=5.0,SNR=4.2						
ILB	**Eielson Array**	**77.17**	**26**	*e*P	**P**	**16 39 37.7**	**-0.7**
	17nm,1.8s						
ARA0	**ARCESS Array S**	**81.40**	**340**	*e*P	**P**	**16 40 01.4**	**0.0**
ARCES	**ARCESS Array B**	**81.40**	**340**	P	**P**	**16 40 01.4**	**0.0**
	1.3nm,0.4s,baz=75,slow=6.3,SNR=16						
FIA0	**FINESS Array S**	**83.19**	**332**	*e*P	**P**	**16 40 10.8**	**-0.1**
FINES	**FINESS Array B**	**83.19**	**332**	P	**P**	**16 40 10.8**	**-0.1**
	1.1nm,0.5s,baz=69,slow=4.5,SNR=9.6						
BR101	**Keskin Array S**	**83.36**	**309**	*e*P	**P**	**16 40 12.8**	**+0.3**
BRTR	**Keskin Array B**	**83.36**	**309**	P	**P**	**16 40 12.8**	**+0.3**
	0.6nm,0.8s,baz=73,slow=6.8,SNR=2.7						
AKASG	**Malin Array Be**	**84.07**	**321**	P	**P**	**16 40 15.2**	**-0.5**
	0.5nm,0.6s,baz=63,slow=4.8,SNR=3.5						

IDC 28 16:46:13.6±4.4, 3°.49S×139°.82E, $h180^{km}\pm45^{km}$, mb3.0/4, mb1 3.2/5, mb1mx3.0/30, mbtmp3.6/5, Error ellipse: s-maj=43.6km s-min=13.7km az=116.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.20**	**198**	P	P	16 50 00.3	-1.9
	0.6nm,0.3s,baz=26,slow=13,SNR=18						
WRA				S	S	16 53 10.5	-1.7
	0.1nm,0.3s,baz=15,slow=22,SNR=4.3						
FITZ	**Fitzroy Crossi**	**20.09**	**223**	P	P	16 50 33.4	0.0
	2.4nm,0.5s,baz=54,slow=8.9,SNR=8.3						
FITZ				S	S	16 54 10.7	+1.3
	5.5nm,0.9s,baz=128,slow=2.2,SNR=2.0						
ASAR	**Alice Springs**	**20.86**	**195**	P	P	16 50 42.6	+1.0
	0.8nm,0.6s,baz=23,slow=10,SNR=27						
ASAR				S	S	16 54 31.1	+6.9
	0.7nm,1.0s,baz=9.6,slow=28,SNR=2.9						
MKAR	**Makanchi Array**	**71.08**	**322**	P	P	16 57 11.9	-0.3
	0.2nm,0.6s,baz=101,slow=7.8,SNR=2.5						
ILAR	**Eielson Array**	**86.08**	**24**	P	P	16 58 34.0	+0.3
	0.4nm,0.9s,baz=249,slow=3.8,SNR=4.1						

IDC 28 16:57:41.5±57.0, 16°.97S×179°.86E, $h0^{km}$, mb3.8/3, mb1 4.0/3, mb1mx3.7/23, mbtmp3.8/3, Error ellipse: s-maj=1028.0km s-min=148.1km az=77.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.66**	**240**	P	P	17 04 59.2	+0.7
	1.8nm,0.9s,baz=98,slow=7.1,SNR=2.8						
WRA	**Warramunga Arr**	**43.19**	**259**	P	P	17 05 44.1	-0.4
	0.5nm,0.8s,baz=96,slow=7.7,SNR=6.4						
ASAR	**Alice Springs**	**43.47**	**253**	P	P	17 05 46.1	-0.7
	1.7nm,0.6s,baz=89,slow=7.9,SNR=36						

*KRNET **28** 16:59:33.5±0.1, 41°.19N×71°.55E, $h13^{km}$, mb2.3*

*SOME **28** 16:59:34.7, 41°.27N×71°.58E, $h0^{km}$*

*NNC **28** 16:59:37.3±3.1, 41°.46N×71°.67E, $h0^{km}$, mb2.8, mpv2.7, Error ellipse: s-maj=28.8km s-min=9.6km az=179.0*

ISC 28 16:59:33.6±1.4, 41°.19N±0°.05×71°.57E±0°.03, $h6^{km}\pm15^{km}$, n20, $\sigma1^{s}.26$/35, 11C-12D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.68**	**25**	⇑*i*P	**Pg**	**16 59 46.3**	**-0.3**
	baz=29						
ARK				⇑*i*S	**Sg**	**16 59 55.8**	**+0.3**
	baz=29						
ARSB	**Arslanbob**	**1.07**	**82**	⇓*i*P	**Pg**	**16 59 54.0**	**-0.1**
	baz=82						
ARSB				⇓*i*S	**Sg**	**17 00 09.2**	**+1.2**
	baz=82						
BTK	**Batken**	**1.26**	**207**	⇑*i*P	**Pn**	**16 59 57.6**	**-0.2**
	baz=7.0						
BTK				⇑*i*S	**Sb**	**17 00 14.7**	**+0.3**
	baz=7.0						
IUG	**Iuzhnay**	**1.50**	**310**	P	**Pg**	**17 00 02.2**	**-0.1**
	5.2nm,0.2s						
IUG				S	**Sg**	**17 00 22.5**	**+0.6**
	29nm,0.3s						
IUG	**Iuzhnay**	**1.50**	**310**	*e*P	**Pg**	**17 00 02.2**	**-0.1**
	5.2nm,0.2s						
IUG				*e*S	**Sg**	**17 00 22.5**	**+0.6**
	29nm,0.3s						
AML	**Almayashu**	**1.85**	**59**	⇑*i*P	**Pb**	**17 00 08.3**	**+0.3**
	baz=59						
AML				⇑*i*S	**Sg**	**17 00 33.3**	**+0.3**
	baz=59						
MRKS	**Merke**	**1.99**	**38**	Pg	**Pb**	**17 00 10.9**	**+0.7**
	2.4nm,0.2s						
MRKS				Lg	Lg	17 00 37.5	
	5.1nm,0.3s						
MRKS	**Merke**	**1.99**	**38**	*e*P	**Pb**	**17 00 10.9**	**+0.7**
	2.4nm,0.2s						
MRKS				*e*S	**Sg**	**17 00 37.5**	**+0.1**
	5.1nm,0.3s						
KK31	**Karatay Array**	**2.07**	**338**	⇑Pg	**Pb**	**17 00 10.5**	**-1.1**
	0.2nm,0.2s,baz=148,slow=15,SNR=13						
KK31				⇓Lg	Lg	17 00 37.0	
	1.6nm,0.3s,baz=145,slow=28						
ARLS	**Aral**	**2.17**	**71**	⇓*i*P	**Pb**	**17 00 13.5**	**+0.2**
	baz=71						
ARLS				⇓*i*S	**Sb**	**17 00 41.8**	**+1.2**
	baz=71						
EKS2	**Erkin-Say**	**2.21**	**47**	⇓*e*P	**Pb**	**17 00 14.2**	**+0.2**
	baz=48						
EKS2				⇓*i*S	**Sb**	**17 00 42.3**	**+0.7**
	baz=48						
UCH	**Uchtor**	**2.44**	**64**	⇑*e*P	**Pb**	**17 00 17.8**	**-0.2**
	baz=64						
UCH				⇑*i*S	**Sb**	**17 00 49.1**	**+0.7**
	baz=64						
AAK	**Ala-Archa**	**2.62**	**55**	⇓Pg	**Pb**	**17 00 20.8**	**-0.2**
	2.5nm,0.9s						
AAK				Lg	Lg	17 00 52.6	
	2.4nm,0.7s						
AAK	**Ala-Archa**	**2.62**	**55**	⇓*e*P	**Pb**	**17 00 20.0**	**-1.0**
	baz=56						
AAK				⇓*i*S	**Sb**	**17 00 52.5**	**-0.9**
	baz=56						
KZA	**Kyzart**	**2.90**	**71**	⇓*i*P	**Pb**	**17 00 24.4**	**-1.4**
	baz=71						
KZA				⇓*i*S	**Sb**	**17 01 00.2**	**-1.5**
	baz=71						
KBK	**Karagaybulak**	**2.92**	**59**	⇑*e*P	**Pb**	**17 00 24.2**	**-1.8**
	baz=59						
KBK				⇑*i*S	**Sb**	**17 00 59.8**	**-2.2**
	baz=59						
DGS	**Degeres**	**3.73**	**55**	Pg	**Pb**	**17 00 40.7**	**+0.8**
	1.1nm,0.7s						
DGS				Lg	Lg	17 01 28.4	
	2.5nm,0.4s						
DGS	**Degeres**	**3.73**	**55**	*e*P	**Pb**	**17 00 40.7**	**+0.8**
	1.1nm,0.7s						
DGS				*e*S	**Sb**	**17 01 28.4**	**+2.9**
	2.5nm,0.4s						
KST	**Kastek**	**3.76**	**59**	Pg	**Pb**	**17 00 42.7**	**+2.4**
	3.2nm,0.9s						
KST				Lg	Lg	17 01 31.5	
	3.8nm,0.7s						
KST	**Kastek**	**3.76**	**59**	*e*P	**Pb**	**17 00 42.7**	**+2.4**
	3.2nm,0.9s						
KST				*e*S	**Sg**	**17 01 31.5**	**-2.6**
	3.8nm,0.7s						

*IDC **28** 17:07:27.6±3.0, 32°.72N×139°.57E, $h0^{km}$, mb3.6/2, mb1 3.7/3, mb1mx3.3/37, mbtmp3.4/3, ML2.2/1, Error ellipse: s-maj=193.5km s-min=32.0km az=82.0*

*ISCJB **28** 17:07:36.6±0.8, 33°.44N±0°.05×140°.2E±0°.1, $h131^{km}\pm5^{km}$, mb3.4/2, Error ellipse: s-maj=16.5km s-min=7.5km az=172.3*

*JMA **28** 17:07:38.2±0.1, 33°.48N×140°.19E, $h119^{km}\pm1^{km}$, M2.6*

ISC 28 17:07:37.3±1.2, 33°.44N±0°.05×140°.18E±0°.09, $h127^{km}\pm8^{km}$, n19, $\sigma0^{s}.82$/25, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.45**	**223**	P	**Pn**	**17 07 56.0**	**+0.3**
JHJ2				S	**Sn**	**17 08 09.7**	**+0.2**
JHCJ	**Hachijojimakas**	**0.49**	**222**	P	**Pn**	**17 07 56.2**	**+0.3**
JHCJ				*e*S	**Sn**	**17 08 09.8**	**-0.1**
JMKN	**Mikurajimanish**	**0.67**	**313**	P	**Pn**	**17 07 57.0**	**-0.1**
JMKN				S	**Sn**	**17 08 10.9**	**-1.2**
JAOM	**Aogashimamukai**	**1.03**	**200**	P	**Pn**	**17 08 01.0**	**+0.7**
BSO1	**Boso 1**	**1.38**	**28**	P	**Pn**	**17 08 04.3**	**+1.1**
BSO3	**Boso 3**	**1.39**	**11**	P	**Pn**	**17 08 04.3**	**+0.8**
JIM2	**Oshima 3**	**1.42**	**334**	P	**Pn**	**17 08 04.4**	**+0.2**
JIM2				*e*S	**Sn**	**17 08 24.5**	**-0.3**
JIZS	**Izushimoda**	**1.67**	**320**	P	**Pn**	**17 08 07.7**	**+0.6**
JOD2	**Odawara 2**	**2.03**	**334**	P	**Pn**	**17 08 12.0**	**+0.5**
JOD2				S	**Sn**	**17 08 37.6**	**-0.1**
TK02	**Tokai 2**	**2.08**	**285**	P	**Pn**	**17 08 12.6**	**+0.7**
TK04	**Tokai 4**	**2.14**	**297**	P	**Pn**	**17 08 13.6**	**+1.0**
JFNN	**Fujinakano**	**2.15**	**325**	P	**Pn**	**17 08 14.1**	**+1.3**
SHZ3	**Shizuoka 3**	**2.30**	**315**	P	**Pn**	**17 08 16.2**	**+1.3**
JYN	**Shimob**	**2.46**	**327**	P	**Pn**	**17 08 18.2**	**+1.3**
TTO2	**TONANKAI O.B.S**	**2.65**	**277**	P	**Pn**	**17 08 19.6**	**+0.7**
JRY	**Ryogami san**	**2.78**	**338**	P	**Pn**	**17 08 21.3**	**+0.4**
JRY				*e*S	**Sn**	**17 08 54.1**	**-0.5**
MJAR	**Matsushiro Arr**	**3.49**	**333**	Pn	**Pn**	**17 08 29.4**	**-0.9**
	0.2nm,0.3s,baz=167,slow=12,SNR=10.0						
WRA	**Warramunga Arr**	**53.38**	**187**	P	**P**	**17 16 42.7**	**-1.1**
	0.5nm,0.4s,baz=5.0,slow=8.0,SNR=16						
ASAR	**Alice Springs**	**57.10**	**187**	P	**P**	**17 17 10.7**	**+0.2**
	0.4nm,0.9s,baz=21,slow=11,SNR=8.7						

IDC 28 17:08:47.3±2.1, 4°.04S×152°.89E, $h0^{km}$, mb3.3/3, mb1 3.7/3, mb1mx3.3/30, mbtmp3.3/3, Error ellipse: s-maj=171.1km s-min=27.4km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.02**	**227**	P	P	17 14 03.8	-0.4
	0.2nm,0.4s,baz=53,slow=9.7,SNR=7.5						
ASAR	**Alice Springs**	**26.78**	**221**	P	P	17 14 29.5	+0.3
	0.2nm,0.3s,baz=54,slow=9.1,SNR=15						
ILAR	**Eielson Array**	**81.42**	**22**	P	P	17 21 05.9	0.0
	0.5nm,0.9s,baz=240,slow=7.2,SNR=2.7						

WEL 28 17:21:02.8±0.3, 40°S±2°×17°5E±°, $h21^{km}\pm4^{km}$, ML4.1/35, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHWZ	**Ohakea**	**0.30**	**100**	P	Pn	17 21 11.5	-0.4
OHWZ				S	Sn	17 21 17.7	0.0
WAZ	**Wanganui**	**0.40**	**6**	P	Pn	17 21 12.7	-0.6
WAZ				S	Sn	17 21 19.6	-0.6
POWZ	**Post Office Ro**	**0.68**	**111**	P	Pn	17 21 17.1	-0.1
POWZ				S	Sn	17 21 26.8	-0.5
OGWZ	**Otaki Gorge**	**0.69**	**165**	P	Pb	17 21 16.7	+0.5
OGWZ				S	Sn	17 21 26.4	-0.9
KIW	**Kapiti Island**	**0.71**	**181**	P	Pb	17 21 16.8	+0.3
KIW				S	Sb	17 21 26.2	+0.4
MRZ	**Mangatainoka R**	**0.71**	**136**	P	Pn	17 21 17.4	-0.2
MRZ				S	Sn	17 21 27.2	-0.7
TSZ	**Takapari Road**	**0.80**	**84**	P	Pn	17 21 18.4	-0.4
TSZ				S	Sn	17 21 29.3	-0.7
LREZ	**Lake Rotokare**	**0.80**	**329**	P	Pn	17 21 18.8	-0.1
HOWZ	**Holdsworth Sta**	**0.87**	**149**	P	Pn	17 21 19.7	-0.1
HOWZ				S	Sn	17 21 32.3	+0.5
MTVZ	**Mangateitei**	**0.87**	**29**	P	Pb	17 21 19.1	-0.2
MTVZ				S	Sn	17 21 31.6	-0.3
PRWZ	**Pori Road**	**0.89**	**117**	P	Pn	17 21 20.7	+0.7
PRWZ				S	Sn	17 21 33.1	+0.7
PKVZ	**Pokaka**	**0.92**	**21**	P	Pb	17 21 19.6	-0.5
PKVZ				S	Sb	17 21 31.9	+0.1
DVHZ	**Dannevirke**	**0.96**	**99**	P	Pn	17 21 21.6	+0.6
TIWZ	**Tintock**	**0.96**	**131**	P	Pn	17 21 21.6	+0.6
CAW	**Cannon Point**	**0.96**	**174**	P	Pb	17 21 20.7	0.0
TRVZ	**Turoa**	**0.98**	**29**	P	Pb	17 21 20.6	-0.5
MOVZ	**Moawhango**	**0.98**	**41**	P	Pb	17 21 20.3	-0.7
MOVZ				P	Pb	17 21 20.3	-0.7
DRZ	**Dome Shelter**	**1.00**	**29**	P	Pb	17 21 21.2	-0.4
PNHZ	**Pukenui**	**1.00**	**77**	P	Pb	17 21 21.5	0.0
PREZ	**Palmer Road**	**1.00**	**323**	P	Pn	17 21 21.9	+0.3
WHVZ	**Whangaehu Hut**	**1.01**	**30**	P	Pb	17 21 21.1	-0.6
WHVZ				P	Pb	17 21 21.1	-0.6
DUWZ	**D'Urville Isla**	**1.01**	**230**	P	Pb	17 21 20.7	-0.9
FWVZ	**Far West T-bar**	**1.02**	**28**	P	Pb	17 21 21.1	-0.7
VRZ	**Vera Road**	**1.03**	**353**	P	Pb	17 21 21.8	-0.2
TUVZ	**Tukino**	**1.04**	**32**	P	Pb	17 21 21.8	-0.4
COVZ	**Chateau Observ**	**1.06**	**27**	P	Pn	17 21 21.9	-0.7
BHHZ	**Black Hill Sta**	**1.09**	**53**	P	Pn	17 21 22.0	-1.0
MTW	**Mount Morrison**	**1.09**	**157**	P	Pb	17 21 23.0	0.0
NMEZ	**Namu Road**	**1.10**	**312**	P	Pb	17 21 23.4	+0.4
NGZ	**Ngauruhoe**	**1.10**	**28**	P	Pn	17 21 22.5	-0.7
KHEZ	**Kahui Hut**	**1.11**	**320**	P	Pb	17 21 23.3	0.0
DREZ	**Durham Road**	**1.11**	**329**	P	Pb	17 21 23.5	+0.1
BFZ	**Birch Farm**	**1.14**	**118**	P	Pn	17 21 23.5	+0.1
TWVZ	**Taurewa**	**1.15**	**20**	P	Pn	17 21 22.7	-1.0
WTVZ	**West Tongariro**	**1.15**	**26**	P	Pn	17 21 23.1	-0.7
WPHZ	**Waipukurau**	**1.16**	**86**	P	Pb	17 21 24.7	+0.6
TCW	**Tory Channel**	**1.17**	**205**	P	Pn	17 21 23.3	-0.6
MHEZ	**Mangahewa**	**1.17**	**336**	P	Pb	17 21 24.5	+0.1
KRVZ	**Karewarewa**	**1.19**	**28**	P	Pn	17 21 23.6	-0.7
KRVZ				P	Pn	17 21 23.6	-0.7
TMWZ	**Te Maipa**	**1.20**	**143**	P	Pn	17 21 24.6	+0.2
PKE	**Pukeiti**	**1.20**	**322**	P	Pn	17 21 24.9	+0.5
PKE				P	Pb	17 21 24.8	-0.1
NBEZ	**Newall Road No**	**1.21**	**317**	P	Pb	17 21 25.1	+0.1
NBEZ				P	Pb	17 21 25.1	+0.2
KRHZ	**Kereru**	**1.22**	**66**	P	Pn	17 21 24.7	+0.1
ANWZ	**Angora Road**	**1.22**	**105**	P	Pb	17 21 25.1	-0.1
CPWZ	**Castlepoint**	**1.23**	**128**	P	Pb	17 21 26.0	+0.7
BHW	**Baring Head**	**1.26**	**182**	P	Pn	17 21 25.2	+0.2
MSWZ	**Moikau Station**	**1.28**	**169**	P	Pb	17 21 26.1	-0.2
PAWZ	**Paruwai Farm**	**1.28**	**163**	P	Pb	17 21 26.2	-0.1
PRHZ	**Porangahau**	**1.31**	**96**	P	Pb	17 21 26.4	-0.3
KATZ	**Kakaramea**	**1.32**	**27**	P	Pb	17 21 25.9	-1.0
KATZ				P	Pn	17 21 25.8	-0.3
KWHZ	**Kaweka Forest**	**1.36**	**58**	P	Pn	17 21 26.7	+0.1
TRWZ	**Traveller**	**1.37**	**155**	P	Pb	17 21 27.9	+0.1
RITZ	**Rihia Road**	**1.38**	**32**	P	Pb	17 21 27.4	-0.5
PLWZ	**Palliser**	**1.44**	**170**	P	Pn	17 21 27.7	+0.1
RATZ	**Rangitukua**	**1.44**	**27**	P	Pn	17 21 27.7	+0.1
TUWZ	**Tuamarina**	**1.48**	**210**	P	Pn	17 21 27.7	-0.5
PXZ	**Pawanui**	**1.49**	**86**	P	Pn	17 21 28.7	+0.5
MCHZ	**McNeill Hill**	**1.53**	**63**	P	Pb	17 21 30.3	-0.2
KAHZ	**Kahuranaki**	**1.54**	**77**	P	Pn	17 21 29.6	+0.6
HATZ	**Hinemaiaia**	**1.55**	**36**	P	Pn	17 21 29.9	+0.7
BKZ	**Black Stump Fm**	**1.56**	**51**	P	Pn	17 21 29.8	+0.5
WATZ	**Wairara**	**1.57**	**24**	P	Pn	17 21 29.7	+0.3
NNZ	**Nelson**	**1.59**	**227**	P	Pn	17 21 29.3	-0.3
HIZ	**Hauiti**	**1.64**	**358**	P	Pn	17 21 30.4	+0.1
CMWZ	**Cape Campbell**	**1.69**	**199**	P	Pb	17 21 32.5	-0.6
MRHZ	**Matea Rd**	**1.75**	**42**	P	Pn	17 21 32.2	+0.2
BSWZ	**Blackbirch Sta**	**1.75**	**207**	P	Pn	17 21 32.6	+0.6
KUTZ	**Kaahu Road**	**1.80**	**23**	P	Pn	17 21 33.8	+1.2
TLZ	**Tolley Road**	**1.88**	**15**	P	Pn	17 21 32.9	-0.8
ALRZ	**Allen Road**	**1.93**	**35**	P	Pn	17 21 34.9	+0.6
QRZ	**Quartz Range**	**1.95**	**249**	P	Pn	17 21 34.3	-0.4
MTHZ	**Maungataniwha**	**1.97**	**49**	P	Pn	17 21 35.7	+0.8
PRRZ	**Plateau Road**	**2.00**	**35**	P	Pb	17 21 37.2	-1.3
RAHZ	**Arahi**	**2.07**	**54**	P	Pn	17 21 37.0	+0.7
WHHZ	**Waihua**	**2.08**	**60**	P	Pn	17 21 37.6	+1.2
MUGZ	**Murupara**	**2.20**	**41**	P	Pn	17 21 39.0	+0.9
RTZ	**Ruatahuna**	**2.21**	**47**	P	Pn	17 21 38.6	+0.4
THZ	**Tophouse**	**2.22**	**223**	P	Pn	17 21 39.1	+0.6
TARZ	**Mount Tarawera**	**2.27**	**33**	P	Pb	17 21 41.3	-1.8
SNGZ	**Shannon Statio**	**2.31**	**54**	P	Pn	17 21 40.4	+0.7
OMRZ	**Omania**	**2.33**	**29**	P	Pb	17 21 42.1	-2.0
KNZ	**Kokohu**	**2.40**	**63**	P	Pn	17 21 40.3	-0.5
TOZ	**Tahuroa Road**	**2.46**	**11**	P	Pn	17 21 41.2	-0.4
KHZ	**Kahutara**	**2.49**	**204**	P	Pn	17 21 42.2	+0.1
MHGZ	**Mahia Peninsul**	**2.50**	**67**	P	Pn	17 21 42.0	-0.2
URZ	**Urewera**	**2.54**	**43**	P	Pn	17 21 42.8	+0.1
RAGZ	**Rawiri**	**2.54**	**50**	P	Pn	17 21 44.4	+1.6
MARZ	**Manawahe**	**2.55**	**33**	P	Pn	17 21 44.8	+1.8
RIGZ	**Rimuhau**	**2.62**	**58**	P	Pn	17 21 44.1	+0.2
MWZ	**Matawai**	**2.71**	**49**	P	Pn	17 21 45.2	0.0
DSZ	**Denniston Nort**	**2.85**	**235**	P	Pn	17 21 47.1	0.0
MKAZ	**Moumakai**	**3.05**	**3**	P	Pn	17 21 49.4	-0.4
RUGZ	**Raukumara Rang**	**3.06**	**45**	P	Pn	17 21 49.4	-0.5
TWGZ	**Tauwhareparae**	**3.08**	**51**	P	Pn	17 21 50.4	+0.1
AWAZ	**Awhitu Peninsu**	**3.09**	**356**	P	Pn	17 21 50.9	+0.5
ETAZ	**East Tamaki Re**	**3.19**	**360**	P	Pn	17 21 52.1	+0.4
WTAZ	**Waiatarua**	**3.23**	**355**	P	Pn	17 21 53.2	+1.0
HAZ	**Te Kaha**	**3.27**	**44**	P	Pn	17 21 51.7	-1.0
LTZ	**Lake Taylor**	**3.30**	**216**	P	Pn	17 21 52.8	-0.4
PKGZ	**Pakihiroa**	**3.33**	**48**	P	Pn	17 21 53.2	-0.5
WIAZ	**Waiheke Island**	**3.36**	**3**	P	Pn	17 21 53.9	-0.1
MBAZ	**Motutapu North**	**3.38**	**360**	P	Pn	17 21 54.3	0.0
MBAZ				P	Pb	17 21 54.6	-7.4
AMCZ	**Amberley**	**3.47**	**209**	P	Pn	17 21 54.3	-1.2
WMGZ	**Waiomatatini S**	**3.58**	**50**	P	Pn	17 21 56.0	-1.0
INZ	**Inchbonnie**	**3.67**	**224**	P	Pn	17 21 58.2	-0.1
CRLZ	**Canterbury Las**	**3.83**	**206**	P	Pn	17 21 59.2	-1.3
OKCZ	**Okains Bay**	**3.83**	**201**	P	Pn	17 21 58.8	-1.7
OXZ	**Oxford**	**3.84**	**213**	P	Pn	17 21 58.8	-1.8
MQZ	**McQueen's Vall**	**3.94**	**205**	P	Pn	17 21 59.4	-2.6
AKCZ	**Akaroa Harbour**	**4.01**	**201**	P	Pn	17 22 00.9	-2.1
WCZ	**Waipu Caves**	**4.23**	**354**	P	Pn	17 22 06.2	+0.2
WVZ	**Waitaha Valley**	**4.29**	**226**	P	Pn	17 22 06.7	-0.1
FOZ	**Fox Glacier**	**5.10**	**227**	P	Pn	17 22 17.5	-0.4

IGQ 28 17:27:53.5±0.9, 3°S±7°×7°7W±°, $h10^{km}$, MLv3.9, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUYO	**Puyo, Santa Ro**	**1.39**	**327**	P	Pn	17 28 17.5	-1.6
PUYO				S	Sb	17 28 36.5	-1.0
APUY	**Puyo**	**1.41**	**329**	P	Pn	17 28 17.4	-1.8
APUY				S	Sb	17 28 36.7	-1.2
BPAT	**Tungurahua Vol**	**1.65**	**315**	P	Pn	17 28 21.0	-1.9
BPAT				S	Sn	17 28 42.7	-1.7
PAT1	**Patacocha**	**1.65**	**314**	P	Pn	17 28 21.4	-1.5
ARRY	**Arrayan**	**1.66**	**314**	P	Pn	17 28 21.0	-1.9
BULB	**Ulba Tungurahu**	**1.68**	**317**	P	Pn	17 28 21.0	-2.3
BULB				S	Sn	17 28 43.2	-1.8
BMAS	**Trigal station**	**1.68**	**314**	P	Pn	17 28 21.7	-1.6
BMAS				S	Sn	17 28 43.3	-1.7
BRUN	**Tungurahua Vol**	**1.69**	**317**	P	Pn	17 28 21.3	-2.1
BRUN				S	Sn	17 28 43.3	-1.9
RETU	**Refugio**	**1.69**	**316**	P	Pn	17 28 21.7	-1.8
RUN5	**Runtun**	**1.70**	**317**	P	Pn	17 28 21.7	-1.9
POND	**Pondoa**	**1.72**	**316**	P	Pn	17 28 21.6	-2.2
POND				S	Sn	17 28 44.2	-1.8
BBIL	**Ulba Tungurahu**	**1.72**	**315**	P	Pn	17 28 22.1	-1.8
JUI6	**Juive**	**1.73**	**316**	P	Pn	17 28 22.0	-1.8
BIL2	**Estacion Bilba**	**1.73**	**314**	P	Pn	17 28 21.6	-2.3
ARDO	**Archidona, Ten**	**1.75**	**342**	P	Pn	17 28 21.3	-2.7
ARDO				S	Sn	17 28 43.7	-2.7
PISA	**Pisayambo**	**1.95**	**325**	P	Pn	17 28 24.5	-2.7
COHC	**Cochancay**	**2.00**	**276**	P	Pn	17 28 25.6	-1.8
COHC				S	Sn	17 28 51.0	-1.4
BTAM	**Cotopaxi Volca**	**2.28**	**330**	P	Pn	17 28 29.3	-2.4
BVC2	**Cotopaxi Volca**	**2.30**	**330**	P	Pn	17 28 29.9	-2.1
MILO	**Milagro-Astudi**	**2.32**	**280**	P	Pn	17 28 29.0	-2.7
MILO				S	Sn	17 28 57.6	-2.8
ANTS	**Antisana-Sarah**	**2.34**	**337**	P	Pn	17 28 29.6	-2.9
ANTG	**Antisana-Guama**	**2.37**	**335**	P	Pn	17 28 30.5	-2.4
ANTI	**Antisana**	**2.38**	**338**	P	Pn	17 28 30.1	-3.0
PITA	**Cotopaxi Volc**	**2.40**	**331**	P	Pn	17 28 31.9	-1.3
GONZ	**Gonzanam**	**2.64**	**234**	P	Pn	17 28 34.1	-2.4
MORR	**Playas El Morr**	**3.07**	**270**	P	Pn	17 28 37.8	-4.3
MCRA	**Macar, Loja**	**3.17**	**238**	P	Pn	17 28 37.7	-5.9
SALI	**Salinas**	**3.75**	**277**	P	Pn	17 28 47.3	-4.2

*IDC **28** 17:32:28.6±1.0, 27°.05N×92°.23E, $h0^{km}$, mb3.5/9, mb1 3.7/10, mb1mx3.5/35, mbtmp3.4/10, ML3.5/1, Error ellipse: s-maj=40.6km s-min=17.3km az=56.0*

*ISCJB **28** 17:32:31.5±0.7, 27°.09N±0°.03×92°.23E±0°.03, $h25^{km}\pm6^{km}$, mb3.5/9, Error ellipse: s-maj=5.8km s-min=4.3km az=30.3*

*NDI **28** 17:32:32.3±2.7, 27°.15N×92°.33E, $h10^{km}$, ML3.8*

ISC 28 17:32:30.4±1.2, 27°.11N±0°.04×92°.30E±0°.03, $h10^{km}\pm9^{km}$, n27, $\sigma1^{s}.11$/40, mb3.4/9, 1C-2D, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAWA	**Tawang**	**0.62**	**322**	⇑*i*P	**Pb**	**17 32 43.2**	**-0.3**
TAWA				*e*S	**Sb**	**17 32 52.7**	**+0.3**
TAWA				IAML		17 32 53.5	
	comp=E,6µm,0.1s						
TAWA				IAML		17 32 53.9	
	comp=N,4µm,0.1s						
TEZP	**TEZPUR**	**0.66**	**137**	*e*P	**Pg**	**17 32 42.9**	**-0.4**
TEZP				*e*S	**Sg**	**17 32 51.7**	**-0.2**
TEZP				IAML		17 32 52.4	
	comp=N,8µm,0.1s						
TEZP				IAML		17 32 52.7	
ZIRO	**ZIRO**	**1.45**	**73**	*e*P	**Pn**	**17 32 57.1**	**+0.3**
ZIRO				*e*S	**Sg**	**17 33 18.0**	**+1.0**
SHL	**Shillong**	**1.58**	**194**	⇓*i*P	**Pb**	**17 33 00.3**	**+0.5**
SHL				*e*S	**Sg**	**17 33 21.4**	**+0.2**
SHL				IAML		17 33 23.5	
	comp=N,1µm,0.1s						
JORH	**JORHAT**	**1.78**	**101**	*e*P	**Pg**	**17 33 04.4**	**-0.2**
JORH				*e*S	**Sg**	**17 33 27.9**	**0.0**
JORH				IAML		17 33 28.7	
	comp=E,3µm,0.4s						
KOHI	**KOHIMA**	**2.13**	**130**	*e*P	**Pn**	**17 33 07.6**	**+1.4**
KOHI				*e*S	**Sn**	**17 33 34.2**	**+1.4**
KOHI				IAML		17 33 48.1	
	comp=E,352nm,0.4s						
MOKO	**MOKOCHONG**	**2.13**	**111**	*e*P	**Pn**	**17 33 08.0**	**+1.7**
MOKO				*e*S	**Sb**	**17 33 35.4**	**-0.5**
MOKO				IAML		17 33 42.0	
	comp=E,887nm,0.4s						
MOKO				IAML		17 33 43.0	
	comp=N,671nm,0.4s						
DHUB	**DHUBRI**	**2.33**	**243**	*e*P	**Pb**	**17 33 13.1**	**+0.7**
DHUB				*e*S	**Sb**	**17 33 41.4**	**+0.2**
DHUB				IAML		17 33 45.1	
	comp=N,2µm,0.1s						
DHUB				IAML		17 33 45.6	
	comp=E,1µm,0.1s						
TURI	**Tura**	**2.34**	**229**	*e*P	**Pb**	**17 33 13.4**	**+0.6**
TURI				*e*S	**Sg**	**17 33 44.0**	**-1.8**
TURI				IAML		17 33 48.8	
	comp=N,2µm,0.1s						
TURI				IAML		17 33 49.5	
	comp=E,2µm,0.2s						
LKP	**Lekhapani**	**3.17**	**85**	*e*P	**Pn**	**17 33 22.0**	**+1.6**
LKP				*e*S	**Sn**	**17 33 58.4**	**+0.1**
LKP				IAML		17 34 14.3	
	comp=N,525nm,0.3s						
LKP				IAML		17 34 22.3	
	comp=E,459nm,0.5s						

GTK	Tadong	3.30	275	⇓iP	Pn	17 33 25.6	+3.4
GTK				eS	Sn	17 34 02.8	+1.3
GTK				IAML		17 34 21.7	
	comp=E,162nm,0.3s						
BRDH	Bariadhala	4.45	188	Sn	Sn	17 34 29.7	-0.1
	comp=E,18nm,0.3s,baz=182,slow=19,SNR=7.0						
SAIH	SAIHA	4.64	172	eP	Pn	17 33 42.2	+1.5
SAIH				eS	Sn	17 34 35.2	+0.5
SAIH				IAML		17 34 41.9	
	comp=N,51nm,0.4s						
SAIH				IAML		17 34 43.1	
	comp=E,88nm,0.1s						
BOK	Bokaro	6.66	242	eP	Pn	17 34 09.9	+1.4
BOK				eS	Sn	17 35 23.6	-0.9
BOK				IAML		17 35 27.8	
	comp=N,19nm,0.2s						
CMAR	Chiang Mai Arr	10.56	143	Pn	Pn	17 35 02.5	+0.5
	comp=N,0.1nm,0.3s,baz=313,slow=12,SNR=5.2						
NGP	Nagpur	13.46	247	ex	P	17 35 48.5	-2.5
NGP				ex	x	17 37 37.3	
SMLA	Simla	13.82	290	eP	Pn	17 35 45.8	-0.6
DHRM	DHARAMSHALA	14.81	294	eP	Pn	17 35 59.9	-0.4
MKAR	Makanchi Array	21.18	341	P	P	17 37 16.9	+0.9
	comp=N,1.2nm,0.6s,baz=150,slow=12,SNR=13						
SONM	Songino Array	23.45	24	P	P	17 37 40.3	+0.3
	comp=N,0.4nm,0.7s,baz=202,slow=11,SNR=3.4						
KURBB	Kurchatov Arra	25.73	340	P	P	17 38 01.4	+0.5
	comp=N,0.4nm,0.5s,baz=147,slow=8.6,SNR=3.0						
AKASG	Malin Array Be	52.66	315	P	P	17 41 43.8	-0.9
	comp=N,0.1nm,0.2s,baz=81,slow=6.5,SNR=4.9						
WRA	Warramunga Arr	62.02	134	P	P	17 42 50.5	-0.7
	comp=N,0.3nm,0.5s,baz=325,slow=6.9,SNR=6.1						
NOA	NORSAR Array B	62.41	327	P	P	17 42 52.8	-0.5
	comp=N,1.1nm,0.7s,baz=86,slow=6.4,SNR=2.8						
GERES	GERESS Array B	62.83	313	P	P	17 42 56.6	+0.2
	comp=N,0.4nm,0.7s,baz=61,slow=4.6,SNR=5.0						
ASAR	Alice Springs	64.52	138	P	P	17 43 08.1	+0.4
	comp=N,0.4nm,0.6s,baz=316,slow=7.0,SNR=5.4						
ILAR	Eielson Array	77.66	22	P	P	17 44 27.0	+0.2
	comp=N,0.2nm,0.7s,baz=291,slow=5.7,SNR=3.0						

IDC 28 17:33:06.5±2.5, 4°.29N×126°.74E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.3/30, mbtmp3.3/3, Error ellipse: s-maj=208.8km s-min=28.1km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.21	163	P	P	17 38 34.2	+0.1
	0.7nm,0.8s,baz=342,slow=10,SNR=5.6						
ASAR	Alice Springs	28.65	166	P	P	17 39 04.9	-0.2
	0.2nm,0.8s,baz=349,slow=7.6,SNR=3.4						
MKAR	Makanchi Array	57.11	325	P	P	17 42 54.8	0.0
	0.2nm,0.5s,baz=120,slow=8.5,SNR=3.9						

CNRM 28 17:45:53.0, 35°.67N×5°.24W, h100^{km}, ml3.0

ISCJB 28 17:45:55.2±0.2, 35°.78N±0°.02×5°.08W±0°.02, h35^{km}, Error ellipse: s-maj=2.4km s-min=2.0km az=40.8

MDD 28 17:45:59.3±0.6, 35°.85N×5°.02W, h62^{km}±5^{km}, mb4.2/27, Error ellipse: s-maj=5.4km s-min=3.5km az=180.0, PRXIMO

LDG 28 17:45:59.3±0.2, 35°.87N×5°.08W, h56^{km}, Ml2.9/3, Error ellipse: s-maj=5.2km s-min=2.4km az=172.0

IGIL 28 17:45:59.1, 35°.85N×5°.01W, h60^{km}, ML3.2

SFS 28 17:45:59.0, 35°.80N×5°.00W, ML4.2, ESTRECHO DE GIBRALTAR

INMG 28 17:46:00.3±1.4, 35°.91N×5°.15W, h52^{km}±5^{km}, ML3.1, Error ellipse: s-maj=3.7km s-min=2.8km az=105.0

ISC 28 17:45:56.2±1.0, 35°.82N±0°.02×4°.99W±0°.02, h35^{km}, n145, σ2^{s}.48/250, 8C-2D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEUT	Ceuta	0.28	284	P	Pn	17 46 07.7	+3.8
CEUT				S	Sn	17 46 16.8	+7.7
ECEU	Ceuta	0.33	285	P	Pn	17 46 09.2	+4.8
	164nm,0.1s,SNR=75						
ECEU				S	Sn	17 46 16.3	+6.2
	59nm,0.1s,SNR=10						
SMIR	Smir Dam	0.35	248	P	Pn	17 46 08.5	+3.8
SMIR				S	Sn	17 46 16.5	+6.0
REAL	Reales	0.69	345	P	Pn	17 46 13.1	+3.5
REAL				S	Sn	17 46 21.7	+2.5
REAL	Reales	0.69	345	eP	Pn	17 46 13.1	+3.5
REAL				eS	Sn	17 46 21.7	+2.5
EJIF	Jimena Fronter	0.74	329	P	Pn	17 46 14.9	+4.7
	12nm,0.2s,SNR=7.9						
EJIF				S	Sn	17 46 22.6	+2.3
	21nm,0.2s,SNR=7.9						
CHEFC	Chefchaouen	0.76	202	P	Pn	17 46 10.3	-0.2
CHEFC				S	Sn	17 46 24.0	+3.2
EMIJ	Mijas	0.77	13	⇓P	Pn	17 46 13.0	+2.4
	27nm,0.1s,SNR=18						
EMIJ				S	Sn	17 46 24.1	+3.2
	187nm,0.2s,SNR=5.6						
ALJ	Aljibe	0.89	323	P	Pn	17 46 16.4	+4.2
ALJ				S	Sn	17 46 25.0	+1.0
ALJ	Aljibe	0.89	323	eP	Pn	17 46 16.4	+4.2
ALJ				eS	Sn	17 46 25.0	+1.0
CNIL	Conil	1.03	303	⇑P	Pn	17 46 17.5	+3.5
CNIL				S	Sn	17 46 26.4	-0.8
CNIL	Conil	1.03	303	⇑iP	Pn	17 46 17.5	+3.5
CNIL				eS	Sn	17 46 26.4	-0.8
PALE	Palemas	1.04	125	P	Pn	17 46 16.4	+2.1
PALE				S	Sn	17 46 31.1	+3.4
EMAL	Malaga-Limoner	1.05	25	eP	Pn	17 46 16.7	+2.4
EMAL				eS	Sn	17 46 30.3	+2.5
LIJA	Lijar	1.14	343	⇑P	Pn	17 46 19.4	+3.7
LIJA				S	Sn	17 46 35.4	+5.3
LIJA	Lijar	1.14	343	⇑iP	Pn	17 46 19.4	+3.7
LIJA				i S	Sn	17 46 35.4	+5.3
RSA	Sarsar	1.15	216	P	Pn	17 46 13.3	-2.5
RSA				S	Sn	17 46 28.8	-1.6
ESPR	Espera	1.26	327	P	Pn	17 46 20.3	+3.0
	2.8nm,0.1s,SNR=8.3						
ESPR				S	Sn	17 46 34.7	+1.6
	41nm,0.2s,SNR=11						
GIBL	Gibalbin	1.28	322	P	Pn	17 46 21.1	+3.5
GIBL				S	Sn	17 46 37.4	+3.7
GIBL	Gibalbin	1.28	322	eP	Pn	17 46 21.1	+3.5
GIBL				eS	Sn	17 46 37.4	+3.7
EGOR	Sierra Gorda,	1.47	28	P	Pn	17 46 23.2	+2.8
	13nm,0.3s,SNR=7.9						
EGOR				S	Sn	17 46 39.9	+1.4
	3.4nm,0.1s,SNR=7.9						
ELGU	Los Guajares,	1.52	46	P	Pn	17 46 22.2	+1.2
	18nm,0.1s,SNR=7.9						
ELGU				S	Sn	17 46 40.6	+1.1
	29nm,0.1s,SNR=7.9						
AKLM	AKL	1.60	144	P	Pn	17 46 20.2	-1.8
AKLM				S	Sn	17 46 39.5	-1.9
GOG	Mont Gurugu	1.73	109	P	Pn	17 46 24.1	+0.3
GOG				S	Sn	17 46 47.7	+3.0
EMEL	Melilla	1.73	107	S	Sn	17 46 45.6	+1.0
	154nm,0.2s,SNR=7.9						
MELI	Melilla	1.75	107	S	Sn	17 46 46.6	+1.5
	39nm,0.2s,SNR=7.9						
EQUE	Quentar	1.86	42	S	Sn	17 46 50.2	+2.1
	1.1nm,0.1s,SNR=4.0						
EBER	Berja	2.01	57	P	Pn	17 46 29.8	+2.1
	12nm,0.2s,SNR=32						
EBER				S	Sn	17 46 53.4	+1.6
	20nm,0.2s,SNR=6.5						
HORN	Hornachuelos	2.04	354	P	Pn	17 46 28.8	+0.9
HORN				S	Sn	17 46 53.8	+1.5
LCRM	LCR	2.13	177	P	Pn	17 46 27.7	-1.7
LCRM				S	Sn	17 46 54.0	-0.6
ECAB	El Cabril	2.28	351	P	Pn	17 46 33.3	+2.0
	1.5nm,0.1s,SNR=40						
ECAB				S	Sn	17 46 58.3	+0.1
	10nm,0.1s,SNR=7.1						
GORA	Gorafe	2.28	43	P	Pn	17 46 33.5	+2.1
	7.9nm,0.1s,SNR=7.9						
GORA				S	Sn	17 46 55.9	-2.4
	22nm,0.1s,SNR=7.9						
IFR	Ifrane	2.30	183	eP	Pn	17 46 32.2	+0.6
IFR				i S	Sn	17 46 57.1	-1.7
TAF	Taforalt	2.33	115	P	Pn	17 46 31.3	-0.7
TAF				S	Sn	17 47 01.1	+1.6
EADA	Adamuz	2.37	8	P	Pn	17 46 35.3	+2.7
	18nm,0.1s,SNR=146						
EADA				S	Sn	17 47 01.7	+1.3
	12nm,0.1s						
EMIN	Mina Concepcio	2.37	326	⇑P	Pn	17 46 34.2	+1.6
	11nm,0.1s,SNR=18						
EMIN				S	Sn	17 46 59.7	-0.7
	20nm,0.1s,SNR=5.5						
EQES	Quesada	2.51	37	⇓P	Pn	17 46 38.0	+3.5
	4.6nm,0.2s,SNR=18						
EQES				S	Sn	17 47 04.3	+0.3
	1.3nm,0.1s,SNR=4.8						
ENIJ	Nijar	2.52	62	P	Pn	17 46 37.1	+2.4
	5.2nm,0.1s,SNR=7.9						
ENIJ				S	Sn	17 47 05.0	+0.8
	8.3nm,0.2s,SNR=7.9						
EGRO	El Granado	2.64	311	⇑P	Pn	17 46 37.7	+1.5
	21nm,0.1s,SNR=18						
EGRO				S	Sn	17 47 06.3	-0.7
	30nm,0.1s,SNR=14						
PVAQ	Vaqueiros	2.71	307	⇑eP	Pn	17 46 38.4	+1.2
PVAQ				S	Sn	17 47 08.0	-0.7
PVAQ				A	A	17 47 08.9	
	60nm,0.2s						
PVAQ	Vaqueiros	2.71	307	P	Pn	17 46 38.4	+1.2
PVAQ				S	Sn	17 47 08.0	-0.7
	60nm,0.2s						
PVAQ	Vaqueiros	2.71	307	P	Pn	17 46 35.4	-1.8
PVAQ				S	Sn	17 47 06.1	-2.6
ZHG	ZHG	2.73	210	P	Pn	17 46 34.2	-3.3
ZHG				S	Sn	17 47 06.2	-3.2
PBDV	Barranco-do-Ve	2.77	302	eP	Pn	17 46 39.2	+1.2
PBDV				S	Sn	17 47 09.3	-0.9
PBDV				A	A	17 47 10.5	
	47nm,0.2s						
PBDV	Barranco-do-Ve	2.77	302	P	Pn	17 46 39.2	+1.2
PBDV				S	Sn	17 47 09.3	-0.9
	47nm,0.2s						
PBAR	Barrancos	2.87	326	eP	Pn	17 46 41.3	+1.9
PBAR				eS	Sn	17 47 11.8	-0.9
PBAR				A	A	17 47 14.9	
	76nm,0.5s						
PBAR	Barrancos	2.87	326	P	Pn	17 46 41.3	+1.9
PBAR				S	Sn	17 47 11.8	-0.9
	76nm,0.5s						
MD31	MD31	2.95	176	P	Pn	17 46 39.7	-0.9
MD31				S	Sn	17 47 09.9	-4.9
PBEJ	Beja	3.19	315	eP	Pn	17 46 46.2	+2.4
PBEJ				eS	Sn	17 47 19.6	-1.1
PBEJ				A	A	17 47 22.7	
	31nm,0.2s						
PBEJ	Beja	3.19	315	P	Pn	17 46 46.2	+2.4
PBEJ				S	Sn	17 47 19.6	-1.1
	16nm,0.2s						
MESJ	Messejana	3.29	309	eP	Pn	17 46 46.0	+0.9
MESJ				eS	Sn	17 47 21.2	-1.8
MESJ				AML	AML	17 47 25.4	
	comp=N,64nm,0.1s						
MESJ	Messejana	3.29	309	eP	Pn	17 46 46.4	+1.3
MESJ				eS	Sn	17 47 21.7	-1.3
MESJ				A	A	17 47 23.0	
	comp=N,30nm,0.2s						
MESJ	Messejana	3.29	309	P	Pn	17 46 46.0	+0.9
MESJ				S	Sn	17 47 21.2	-1.8
	comp=N,64nm,0.1s						
MORF	Marmelete	3.30	298	eP	Pn	17 46 46.2	+0.7
MORF				eS	Sn	17 47 21.8	-1.6
MORF				AML	AML	17 47 25.4	
	comp=E,81nm,0.2s						
MORF	Marmelete	3.30	298	eP	Pn	17 46 46.1	+0.7
MORF				S	Sn	17 47 22.6	-0.9
MORF				A	A	17 47 23.9	
	comp=E,42nm,0.2s						
MORF	Marmelete	3.30	298	P	Pn	17 46 46.2	+0.7
MORF				S	Sn	17 47 21.8	-1.6
	comp=E,81nm,0.2s						
EBAD	Badajoz	3.35	332	P	Pn	17 46 48.0	+2.0
	comp=E,3.4nm,0.1s,SNR=87						
EBAD				S	Sn	17 47 23.5	-1.0
	comp=E,29nm,0.1s,SNR=11						
PFVI	Vila Bisbo	3.36	294	eP	Pn	17 46 46.8	+0.6
PFVI				S	Sn	17 47 23.0	-1.8
PFVI				A	A	17 47 30.2	
	comp=E,22nm,0.2s						
PFVI	Vila Bisbo	3.36	294	P	Pn	17 46 47.1	+1.0
	comp=E,16nm,0.1s,SNR=39						
PFVI				S	Sn	17 47 23.1	-1.7
	comp=E,9.6nm,0.1s,SNR=6.3						
PFVI	Vila Bisbo	3.36	294	P	Pn	17 46 42.6	-3.5
PTEO	Sao Teotonio	3.46	301	eP	Pn	17 46 47.9	+0.3
PTEO				S	Sn	17 47 25.3	-2.0
PTEO				A	A	17 47 28.8	
	comp=E,35nm,0.3s						
PTEO	Sao Teotonio	3.46	301	P	Pn	17 46 47.9	+0.3
PTEO				S	Sn	17 47 25.3	-2.0
	comp=E,18nm,0.3s						
EMUR	La Murta	3.62	55	P	Pn	17 46 52.9	+3.1
	comp=E,0.3nm,0.2s,SNR=7.9						
EMUR				S	Sn	17 47 31.6	+0.3
	comp=E,0.4nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	3.65	310	eP	Pn	17 46 51.3	+1.2
PNCL				S	Sn	17 47 30.8	-1.0
PNCL				A	A	17 47 33.6	
	comp=E,19nm,0.3s						
PNCL	Nicolau / Gran	3.65	310	P	Pn	17 46 51.3	+1.2
PNCL				S	Sn	17 47 30.8	-1.0
	comp=E,19nm,0.3s						
PESTR	Estremoz	3.69	327	eP	Pn	17 46 52.7	+2.1
PESTR				eS	Sn	17 47 31.4	-1.4
PESTR				A	A	17 47 35.3	
	comp=E,23nm,0.2s						
PESTR	Estremoz	3.69	327	P	Pn	17 46 48.5	-2.1
PAB	San Pablo	3.76	8	P	Pn	17 46 53.7	+2.0
	comp=E,2.3nm,0.1s,SNR=7.9						
PAB				S	Sn	17 47 33.1	-1.7
	comp=E,8.3nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	3.94	12	P	Pn	17 46 56.4	+2.3
	comp=E,28nm,0.1s,baz=196,slow=13,SNR=78						
ESDC				S	Sn	17 47 37.7	-1.4
	comp=E,4.5nm,0.1s,baz=196,slow=23,SNR=6.7						
ETOB	Tobarra	3.94	43	P	Pn	17 46 57.2	+3.1
	comp=E,4.1nm,0.1s,SNR=37						
ETOB				S	Sn	17 47 38.9	-0.2
	comp=E,0.2nm,0.1s						
PMRV	Marv??o	4.08	333	eP	Pn	17 46 58.0	+1.9
PMRV				S	Sn	17 47 41.0	-1.6
PMRV				A	A	17 47 43.8	
	comp=E,21nm,0.3s						
PMRV	Marv??o	4.08	333	P	Pn	17 46 58.0	+1.9
PMRV				S	Sn	17 47 41.0	-1.6
	comp=E,21nm,0.3s						
SRHM	Skhour des Reh	4.12	217	P	Pn	17 46 54.0	-2.7
SRHM				S	Sn	17 47 39.9	-3.7
PMTG	Montargil	4.14	323	eP	Pn	17 46 58.4	+1.5
PMTG				S	Sn	17 47 42.9	-1.2
PMTG				A	A	17 47 45.0	
	comp=E,23nm,0.4s						
PMTG	Montargil	4.14	323	P	Pn	17 46 58.4	+1.5
PMTG				S	Sn	17 47 42.9	-1.2
	comp=E,23nm,0.4s						
PCBR	Castelo Branco	4.47	335	eP	Pn	17 47 03.7	+2.2
PCBR				S	Sn	17 47 50.4	-1.9
PCBR				A	A	17 47 52.0	
	comp=E,22nm,0.2s						
PCBR	Castelo Branco	4.47	335	P	Pn	17 47 03.7	+2.2
PCBR				S	Sn	17 47 50.4	-1.9
	comp=E,11nm,0.2s						
PMAFR	Mafra	4.64	314	eP	Pn	17 47 05.5	+1.8
PMAFR				S	Sn	17 47 54.2	-2.1
PMAFR				A	A	17 48 01.6	
	comp=E,21nm,0.3s						
PMAFR	Mafra	4.64	314	P	Pn	17 47 05.6	+1.8
	comp=E,2.8nm,0.1s,SNR=6.2						
PMAFR				S	Sn	17 47 54.3	-2.1
	comp=E,20nm,0.2s,SNR=7.0						
PTOM	Tomar	4.67	325	eP	Pn	17 47 06.4	+2.3
PTOM				S	Sn	17 47 55.0	-2.0
PTOM				A	A	17 47 59.2	
	comp=E,22nm,0.3s						
PTOM	Tomar	4.67	325	P	Pn	17 47 06.4	+2.3
PTOM				S	Sn	17 47 55.0	-2.0
	comp=E,11nm,0.3s						
GUD	Guadarrama	4.86	8	P	Pn	17 47 09.0	+2.1
	comp=E,3.1nm,0.1s,SNR=42						
GUD				S	Sn	17 48 00.3	-1.8
	comp=E,0.9nm,0.1s						
MTE	Manteigas	5.00	337	eS	Sn	17 48 03.5	-1.8
MTE				A	A	17 48 06.3	
	comp=E,12nm,0.4s						
MTE	Manteigas	5.00	337	S	Sn	17 48 03.5	-1.8
	comp=E,5.8nm,0.4s						
PCAS	Casmilo, Conde	5.06	328	eP	Pn	17 47 11.8	+2.3
PCAS				S	Sn	17 48 04.5	-2.2
PCAS				A	A	17 48 07.1	
	comp=E,16nm,0.4s						
PCAS	Casmilo, Conde	5.06	328	P	Pn	17 47 11.8	+2.3
PCAS				S	Sn	17 48 04.5	-2.2
	comp=E,16nm,0.4s						
OUZM	OUZ	5.11	197	P	Pn	17 47 05.7	-4.6
OUZM				S	Sn	17 48 03.4	-4.8
OUK	Oukaimeden	5.19	208	P	Pn	17 47 05.9	-5.7
OUK				S	Sn	17 48 01.7	-8.6
PVIS	Viseu	5.40	336	eP	Pn	17 47 16.2	+2.0
PVIS				eS	Sn	17 48 13.2	-2.0
PVIS				A	A	17 48 15.0	
	comp=E,19nm,0.3s						
PVIS	Viseu	5.40	336	P	Pn	17 47 16.2	+2.0
PVIS				S	Sn	17 48 13.2	-2.0
	comp=E,9.4nm,0.3s						
ETOR	Torete	5.50	24	P	Pn	17 47 18.2	+2.5
	comp=E,16nm,0.2s,SNR=54						
ETOR				S	Sn	17 48 16.0	-1.8
	comp=E,0.5nm,0.1s						
MVO	Moncorvo	5.58	344	eP	Pn	17 47 18.7	+2.1
MVO				eS	Sn	17 48 16.6	-2.9
MVO				A	A	17 48 19.6	
	comp=E,21nm,0.5s						
MVO	Moncorvo	5.58	344	⇑P	Pn	17 47 18.7	+2.1
	comp=E,8.3nm,0.1s,SNR=18						
MVO				S	Sn	17 48 16.6	-2.9
	comp=E,1.8nm,0.1s,SNR=8.9						
EMOS	Mosqueruela	5.77	37	P	Pn	17 47 22.7	+3.2
	comp=E,0.9nm,0.1s,SNR=7.9						
EMOS				S	Sn	17 48 22.1	-2.4
	comp=E,0.1nm,0.1s,SNR=7.9						
PVRL	Vila Real	5.86	339	eP	Pn	17 47 22.7	+2.2
PVRL				eS	Sn	17 48 23.4	-3.0
PVRL				A	A	17 48 26.4	
	comp=E,60nm,0.1s						
PVRL	Vila Real	5.86	339	P	Pn	17 47 22.7	+2.2
PVRL				S	Sn	17 48 23.4	-3.0
	comp=E,30nm,0.1s						
POLO	Lamas de Olo	5.97	339	eP	Pn	17 47 24.2	+2.1
POLO				eS	Sn	17 48 26.8	-2.4
POLO				A	A	17 48 30.3	
	comp=E,5.8nm,0.8s						
POLO	Lamas de Olo	5.97	339	P	Pn	17 47 24.2	+2.1
POLO				S	Sn	17 48 26.8	-2.4
	comp=E,5.8nm,0.8s						
TTIG	Tnine Tigouga,	6.00	210	P	Pn	17 47 16.6	-6.0
TTIG				S	Sn	17 48 22.9	-7.2
PBRG	Braganca	6.13	348	eP	Pn	17 47 26.7	+2.4
PBRG				eS	Sn	17 48 30.7	-2.6
PBRG				A	A	17 48 32.6	
	comp=E,7.3nm,0.3s						
PBRG	Braganca	6.13	348	P	Pn	17 47 26.7	+2.4
PBRG				S	Sn	17 48 30.7	-2.6
	comp=E,3.7nm,0.3s						
ECAL	Calabor	6.27	348	P	Pn	17 47 28.6	+2.4
	comp=E,1.5nm,0.1s,SNR=8.6						
ECAL				S	Sn	17 48 33.1	-3.4
	comp=E,0.7nm,0.1s,SNR=4.9						
ELOB	Lobios	6.50	339	P	Pn	17 47 31.5	+2.1
	comp=E,1.2nm,0.1s,SNR=13						
ELOB				S	Sn	17 48 38.9	-3.4
	comp=E,1.0nm,0.1s,SNR=9.9						
PGAV	Gavieira, Arco	6.65	338	eP	Pn	17 47 33.6	+2.1
PGAV				eS	Sn	17 48 42.5	-3.6
PGAV				A	A	17 48 45.2	
	comp=E,13nm,0.8s						
PGAV	Gavieira, Arco	6.65	338	P	Pn	17 47 33.6	+2.1
PGAV				S	Sn	17 48 42.5	-3.6
	comp=E,13nm,0.8s						
EZAM	Zamans	6.95	337	S	Sn	17 48 48.7	-4.6
	comp=E,0.3nm,0.1s,SNR=7.9						
EPOB	Poblet	7.29	39	P	Pn	17 47 42.5	+2.3
	comp=E,0.2nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	7.38	342	P	Pn	17 47 42.9	+1.6
	comp=E,1.2nm,0.1s,SNR=7.9						
EAGO				S	Sn	17 48 59.1	-4.8
	comp=E,0.6nm,0.1s,SNR=7.9						
EARI	Arriondas	7.48	359	P	Pn	17 47 45.5	+2.8
	comp=E,0.6nm,0.1s,SNR=11						
EARI				S	Sn	17 49 02.1	-4.2
	comp=E,0.1nm,0.1s,SNR=7.9						
ELAN	Lanestosa	7.50	9	P	Pn	17 47 45.1	+2.0
	comp=E,2.2nm,0.1s,SNR=19						
IELO	Elcoad	7.59	21	P	Pn	17 47 46.9	+2.5
	comp=E,2.2nm,0.1s,SNR=7.9						
EPON	Pontenova	7.69	348	P	Pn	17 47 47.7	+2.1
	comp=E,0.0nm,0.0s,SNR=7.9						
EPON				S	Sn	17 49 06.7	-4.7
	comp=E,0.0nm,0.1s,SNR=7.9						
SJPF	Ste Jean	7.85	21	ePn	Pn	17 47 50.2	+2.4
SJPF				eSn	Sn	17 49 12.1	-3.2
	comp=E,1.4nm,0.3s						
SJPF	Ste Jean	7.85	21	P	Pn	17 47 50.2	+2.4
SJPF				S	Sn	17 49 12.1	-3.2
	comp=E,0.7nm,0.3s						
ETSF	Etsaut	7.86	25	ePn	Pn	17 47 50.2	+2.2
ETSF				eSn	Sn	17 49 13.0	-2.7
	comp=E,1.0nm,0.5s						
ETSF	Etsaut	7.86	25	P	Pn	17 47 50.2	+2.2
ETSF				S	Sn	17 49 13.0	-2.7
	comp=E,0.5nm,0.5s						
EALK	Alkurruntz	7.87	19	P	Pn	17 47 51.0	+2.9
	comp=E,1.6nm,0.1s,SNR=17						
EALK				S	Sn	17 49 12.2	-3.7
	comp=E,0.0nm,0.1s,SNR=7.9						
ECHI	Chisagues Biel	7.93	29	P	Pn	17 47 50.9	+1.8
	comp=E,0.5nm,0.1s,SNR=7.9						
ATE	Arette	7.98	23	P	Pn	17 47 51.3	+1.7
	comp=E,0.8nm,0.1s,SNR=7.9						
ATE				S	Sn	17 49 14.1	-4.6
	comp=E,0.1nm,0.1s,SNR=7.9						
CSOR	Sort	8.10	34	P	Pn	17 47 53.3	+2.0
	comp=E,1.3nm,0.2s,SNR=7.9						
EPF	Esparros	8.30	28	ePn	Pn	17 47 56.3	+2.3
EPF				eSn	Sn	17 49 23.2	-3.3
	comp=E,0.7nm,0.2s						
EPF	Esparros	8.30	28	P	Pn	17 47 56.3	+2.3
EPF				S	Sn	17 49 23.2	-3.3
	comp=E,0.3nm,0.2s						
CAF	Calviac	10.57	28	ePn	Pn	17 48 25.9	+0.9
CAF	Calviac	10.57	28	P	Pn	17 48 25.9	+0.9
RJF	Les Rejaudoux	10.69	26	ePn	Pn	17 48 27.7	+1.0
RJF	Les Rejaudoux	10.69	26	P	Pn	17 48 27.7	+1.0
MFF	Saint Martin d	11.37	17	ePn	Pn	17 48 37.7	+1.7
MFF	Saint Martin d	11.37	17	P	Pn	17 48 37.7	+1.7
TCF	Toulx Ste Croi	11.78	25	ePn	Pn	17 48 42.8	+1.1
TCF	Toulx Ste Croi	11.78	25	P	Pn	17 48 42.8	+1.1
QUIF	Quistinic	12.17	6	ePn	Pn	17 48 48.4	+1.5
QUIF	Quistinic	12.17	6	P	Pn	17 48 48.4	+1.5
SGMF	Saint Gilles	12.56	7	ePn	Pn	17 48 53.4	+1.2
SGMF	Saint Gilles	12.56	7	P	Pn	17 48 53.4	+1.2
ROSF	Rostrenen	12.58	5	ePn	Pn	17 48 53.7	+1.2
ROSF	Rostrenen	12.58	5	P	Pn	17 48 53.7	+1.2
SMF	Signal de Mont	12.69	29	ePn	Pn	17 48 55.1	+1.1
SMF	Signal de Mont	12.69	29	P	Pn	17 48 55.1	+1.1
SSF	Saint Saulge	12.91	27	ePn	Pn	17 48 58.0	+1.0
SSF	Saint Saulge	12.91	27	P	Pn	17 48 58.0	+1.0
GRR	Gorron	12.93	12	ePn	Pn	17 48 58.7	+1.4
GRR	Gorron	12.93	12	P	Pn	17 48 58.7	+1.4
LDF	La Druitiere	13.26	14	ePn	Pn	17 49 02.7	+0.8
FLN	La Foliniere	13.36	13	ePn	Pn	17 49 03.9	+0.8
	baz=192						
FLN	La Foliniere	13.36	13	P	Pn	17 49 03.9	+0.8

MEX 28 17:50:47.7±0.7, 14°.62N×92°.30W, h106^{km}±19^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.29	7	i P	Pn	17 51 02.3	-0.6
THIG				i S	Sn	17 51 12.9	-1.4
CMIG	Matias Romero	3.50	315	eP	Pn	17 51 39.1	-1.1

BJI 28 18:07:44.2, 10°.56S×166°.07E, h17^{km}, mb5.4/73, mB5.6/59, Ms5.4/77, Ms7 5.2/72

ISCJB 28 18:07:46.6±0.8, 10°.90S±0°.02×165°.90E±0°.02, h35^{km}±7^{km},

mb5.4/303, MS5.3/160, Error ellipse: s-maj=3.7km s-min=3.0km az=17.6

*NEIC **28** 18:07:46.0±0.0, 10°.83S×165°.60E, h23^{km}, Moment Tensor Solution. s49 Moment tensor: Scale 10^{17}Nm; M_{rr}5.85; $M_{\theta\theta}$-1.47; $M_{\phi\phi}$-4.38; $M_{r\theta}$0.18; $M_{\theta\phi}$1.79; $M_{\phi r}$0.42; Best double couple: $M_0$5.60000×10^{17} NP1:ϕ_s338.00000°, δ47.00000°, λ94.00000°. NP2:ϕ_s152.00000°, δ43.00000°, λ86.00000°. Principal axes: T 5.8800, Plg86.0000°, Azm307.0000°; N -0.6400, Plg3.0000°, Azm154.0000°; P -5.2400, Plg1.0000°, Azm64.0000°;*

*NEIC **28** 18:07:48.3±0.1, 10°.89S×165°.92E, h39^{km}, mb5.5/251, ME5.3, MS5.4/99, MW5.8, MW5.8 Error ellipse: s-maj=3.1km s-min=2.5km az=121.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^{17}Nm; M_{rr}7.82; $M_{\theta\theta}$-2.32; $M_{\phi\phi}$-5.50; $M_{r\theta}$-1.19; $M_{\theta\phi}$1.03; $M_{\phi r}$0.18; Best double couple: $M_0$7.10000×10^{17} NP1:ϕ_s337.00000°, δ48.00000°, λ82.00000°. NP2:ϕ_s169.00000°, δ43.00000°, λ99.00000°. Principal axes: T 7.9600, Plg83.0000°, Azm182.0000°; N -2.1300, Plg6.0000°, Azm343.0000°; P -5.8300, Plg2.0000°, Azm73.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s330.00000°, δ25.00000°, λ90.00000°. NP2:ϕ_s150.00000°, δ65.00000°, λ90.00000°. Principal axes: T Plg70.0000°, Azm60.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm240.0000°; Apparent Stress 0.10 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*MOS **28** 18:07:48.0±1.0, 10°.82S×165°.88E, h43^{km}, mb5.6/82, MS5.3/39 Error ellipse: s-maj=6.9km s-min=6.1km az=94.8*

*IDC **28** 18:07:49.3±1.8, 10°.91S×166°.03E, h48^{km}±15^{km}, mb5.0/28, mb1 5.1/30, mb1mx5.1/35, mbtmp5.3/30, ML5.8/2, MS5.0/27, Ms1 5.0/27, ms1mx5.0/28, Error ellipse: s-maj=13.8km s-min=9.9km az=86.0*

*GCMT **28** 18:07:52.3±0.2, 10°.96S±0°.01×165°.67E±0°.01, h45^{km}, MW5.8/115, Moment Tensor Solution. s110,c181; s115,c214; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M_{rr}5.87±.11; $M_{\theta\theta}$-1.14±.08; $M_{\phi\phi}$-4.73±.07; $M_{r\theta}$-0.69±.08; $M_{\theta\phi}$2.43±.06; $M_{\phi r}$0.12±.08; Best double couple: $M_0$5.95500×10^{17} NP1:ϕ_s328.00000°, δ47.00000°, λ83.00000°. NP2:ϕ_s159.00000°, δ43.00000°, λ98.00000°. Principal axes: T 5.9390, Plg84.0000°, Azm173.0000°; N 0.0320, Plg5.0000°, Azm333.0000°; P -5.9710, Plg2.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 28 18:07:48.2±0.4**, 10°.94S**±0°.04×**166°.02E**±0°.04**, h41**^{km}±3^{km}**, h41**^{km}**:pP-P, n1067,** σ1^s**22**/1073**, mb5.5**/320**, MS5.3**/161**, 59C-9D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.17	284	*i* P	Pn	18 09 19.0	+2.2
HNR				*i* S	Sn	18 10 22.0	-4.1
HNR	Honiara	6.17	284	*e*Pn	Pn	18 09 18.6	+1.9
HNR				*e*Sn	Sn	18 10 26.3	+0.2
HNR	Honiara	6.17	284	*e*P	Pn	18 09 18.7	+1.9
HNR				*e*		18 10 26.3	
HNR	Honiara	6.17	284	P	Pn	18 09 19.0	+2.2
	461nm,0.3s,baz=147,slow=5.5,SNR=209						
HNR				S	Sn	18 10 26.3	+0.2
	baz=307,slow=20,SNR=1.6						
HNR				LR	LR	18 11 52.8	
	comp=Z,50µm,20.6s,baz=120,slow=40						
MARNC	Mare, Loyalty	10.65	170	*e*Pn	Pn	18 10 20.5	+2.2
DZM	Mont Dzumac	11.07	178	*e*Pn	Pn	18 10 27.0	+2.8
	243nm,0.6s						
DZM				*e*Sn	Sn	18 12 25.2	-1.6
	184nm,0.7s						
DZM				*e*LR	LR	18 12 59.2	
	comp=Z,26µm,24.6s						
DZM	Mont Dzumac	11.07	178	P	Pn	18 10 27.0	+2.8
	31nm,0.3s,baz=320,slow=6.4,SNR=134						
DZM				S	Sn	18 12 25.2	-1.6
	5.9nm,0.3s,baz=336,slow=19,SNR=3.9						
ONTNC	Ouen Toro	11.31	178	*e*Pn	Pn	18 10 30.9	+3.6
PINNC	Pines Island,	11.69	173	*e*Pn	Pn	18 10 35.6	+3.2
MSVF	Nonsavu	13.46	121	*e*Pn	Pn	18 11 00.7	+3.8
MSVF	Nonsavu	13.46	121	*e*P	Pn	18 11 00.7	+3.8
TARA	Tarawa	14.01	30	*e*Pn	Pn	18 11 05.5	+1.3
RABL	Rabaul	15.28	295	*e*Pn	Pn	18 11 21.7	+0.4
	221nm,0.6s						
PATS	Pohnpei	19.26	336	*e*P	Pn	18 12 10.8	+0.1
	471nm,1.3s						
EIDS	Eidsvold	20.16	223	P	Pn	18 12 22.3	+1.0
	baz=20,SNR=17						
EIDS	Eidsvold	20.16	223	*e*P	Pn	18 12 20.6	-0.6
	523nm,1.7s						
MANU	Manus Island	20.52	294	*e*P	P	18 12 23.0	-0.2
	704nm,1.3s						
CTA	Charters Tower	21.09	242	P	P	18 12 30.8	+1.4
	52nm,0.8s,baz=72,slow=12,SNR=46						
CTA				LR	LR	18 19 38.9	
	comp=Z,9µm,19.0s,baz=82,slow=34						
CTAO	Charters Tower	21.09	242	*e*P	P	18 12 29.0	-0.3
	473nm,1.5s						
CTAO				LR	LR		
	comp=Z,13µm,20.0s						
CTAO	Charters Tower	21.09	242	*e*P	P	18 12 29.0	-0.3
CTAO				pmax	pmax		
	comp=Z,473nm,1.5s						
CTAO				MLR	MLR		
	comp=Z,13µm,20.0s						
LHI	Lord Howe Isla	21.47	196	P	P	18 12 35.5	+2.3
	baz=22,SNR=3.9						
LHI	Lord Howe Isla	21.47	196	*e*P	P	18 12 33.8	+0.5
	comp=Z,158nm,0.9s						
MTSU	Mount Surprise	22.18	249	P	P	18 12 42.6	+1.5
	baz=22,SNR=70						
RMQ	Roma	22.46	224	P	P	18 12 46.1	+2.1
	baz=23,SNR=53						
COEN	Coen	22.51	260	P	P	18 12 45.4	+0.8
	baz=23,SNR=7.8						
COEN	Coen	22.51	260	*e*P	P	18 12 45.0	+0.4
	comp=Z,436nm,1.8s						
KNTN	Kanton	23.52	71	*e*P	P	18 12 56.4	+1.5
	comp=Z,642nm,1.5s						
ARMA	Armidale	23.55	213	P	P	18 12 57.3	+2.2
	baz=24,SNR=18						
ARMA	Armidale	23.55	213	*e*P	P	18 12 56.6	+1.5
	comp=Z,404nm,1.5s						
OUZ	Omahuta	25.13	165	*e*P	P	18 13 11.6	+2.2
	comp=Z,76nm,0.9s						
QIS	Mount Isa	27.12	246	P	P	18 13 28.8	+1.1
	baz=27,SNR=12						
CMSA	Cobar Meteorol	27.82	219	P	P	18 13 34.7	+1.0
	baz=28,SNR=12						
TOZ	Tahuroa Road	28.00	164	P	P	18 13 37.3	+2.0
HIZ	Hauiti	28.57	165	*e*P	P	18 13 41.8	+1.4
	comp=Z,136nm,1.3s						
OMRZ	Omania	28.60	163	P	P	18 13 45.2	+4.6
CNB	Canberra Magne	28.60	209	P	P	18 13 42.8	+2.0
	baz=29,SNR=8.8						
HAZ	Te Kaha	28.71	160	P	P	18 13 43.9	+2.3
MXZ	Matakaoa Point	28.71	159	P	P	18 13 44.1	+2.4
RUGZ	Raukumara Rang	28.87	161	P	P	18 13 44.9	+1.7
PKGZ	Pakihiroa	28.93	160	P	P	18 13 45.1	+1.4
URZ	Urewera	28.96	162	*e*P	P	18 13 44.0	+0.2
	comp=Z,71nm,1.0s						
URZ				*e*PcP	PcP	18 16 50.6	-1.4
URZ	Urewera	28.96	162	P	P	18 13 45.0	+1.2
	comp=Z,40nm,0.8s,baz=281,slow=3.3,SNR=12						
URZ				PcP	PcP	18 16 50.6	-1.4
	comp=Z,25nm,0.9s,baz=332,slow=7.0,SNR=4.5						
URZ	Urewera	28.96	162	P	P	18 13 45.3	+1.5
WMGZ	Waiomatatini S	28.98	159	P	P	18 13 45.3	+1.3
MUGZ	Murupara	29.06	162	P	P	18 13 46.5	+1.8
VRZ	Vera Road	29.13	166	P	P	18 13 48.3	+3.0
RATZ	Rangitukua	29.14	164	P	P	18 13 48.2	+2.7
MWZ	Matawai	29.16	161	P	P	18 13 47.0	+1.4
PUZ	Puketiti	29.16	160	P	P	18 13 45.8	+0.2
TWGZ	Tauwhareparae	29.16	160	P	P	18 13 46.9	+1.2
KATZ	Kakaramea	29.22	164	P	P	18 13 48.6	+2.3
TWVZ	Taurewa	29.24	165	P	P	18 13 49.3	+2.8
RTZ	Ruatahuna	29.25	162	P	P	18 13 48.1	+1.6
H11S2	WAKE ISLAND Hy	29.25	1	T	T	18 44 12.2	
	baz=181,slow=76,SNR=682						
H11S3	WAKE ISLAND Hy	29.26	1	T	T	18 44 13.9	
	baz=181,slow=76,SNR=702						
H11S1	WAKE ISLAND Hy	29.27	1	T	T	18 44 14.8	
	baz=181,slow=76,SNR=904						
MRHZ	Matea Rd	29.29	163	P	P	18 13 49.3	+2.6
KRVZ	Karewarewa	29.32	165	P	P	18 13 50.2	+3.0
WTVZ	West Tongariro	29.32	165	P	P	18 13 50.0	+2.8
TKGZ	Te Karaka	29.36	161	P	P	18 13 48.7	+1.3
NGZ	Ngauruhoe	29.39	165	P	P	18 13 50.8	+3.1
MTHZ	Maungataniwha	29.43	163	P	P	18 13 49.3	+1.3
PKVZ	Pokaka	29.43	165	P	P	18 13 51.2	+3.2
FWVZ	Far West T-bar	29.45	165	P	P	18 13 50.9	+2.5
TUVZ	Tukino	29.48	165	P	P	18 13 52.3	+3.7
TRVZ	Turoa	29.49	165	P	P	18 13 50.8	+2.1
SNGZ	Shannon Statio	29.51	162	P	P	18 13 49.7	+0.9
CNGZ	Carnagh Statio	29.51	160	P	P	18 13 49.8	+1.1
RAHZ	Arahi	29.56	162	P	P	18 13 50.4	+1.3
RIGZ	Rimuhau	29.57	161	P	P	18 13 49.2	-0.1
BKZ	Black Stump Fm	29.62	163	*e*P	P	18 13 50.0	+0.3
	comp=Z,89nm,0.5s						
BKZ	Black Stump Fm	29.62	163	P	P	18 13 50.8	+1.1
MOVZ	Moawhango	29.64	165	P	P	18 13 51.8	+1.8
WHHZ	Waihua	29.75	162	P	P	18 13 51.7	+0.9
WAZ	Wanganui	29.78	166	P	P	18 13 54.8	+3.7
BHHZ	Black Hill Sta	29.80	164	P	P	18 13 52.6	+1.2
KNZ	Kokohu	29.83	162	P	P	18 13 52.9	+1.4
KWHZ	Kaweka Forest	29.84	164	P	P	18 13 53.1	+1.5
MCHZ	McNeill Hill	29.93	163	P	P	18 13 54.4	+1.9
MHGZ	Mahia Peninsul	30.02	161	P	P	18 13 55.5	+2.2
KRHZ	Kereru	30.03	164	P	P	18 13 54.2	+0.9
PNHZ	Pukenui	30.23	164	P	P	18 13 56.4	+1.3
H11N1	WAKE ISLAND Hy	30.47	2	T	T	18 45 44.3	
	baz=182,slow=76,SNR=764						
H11N3	WAKE ISLAND Hy	30.48	2	T	T	18 45 44.7	
	baz=182,slow=76,SNR=892						
H11N2	WAKE ISLAND Hy	30.49	2	T	T	18 45 45.7	
	baz=182,slow=76,SNR=674						
STKA	Stephens Creek	30.70	224	P	P	18 14 01.0	+1.6
	baz=31,SNR=11						
STKA	Stephens Creek	30.70	224	*e*P	P	18 14 00.2	+0.9
	comp=Z,11nm,1.2s						
STKA	Stephens Creek	30.70	224	P	P	18 14 00.6	+1.2
	comp=Z,9.5nm,0.7s,baz=50,slow=8.3,SNR=14						
STKA				PcP	PcP	18 16 55.7	-0.9
	comp=Z,7.7nm,0.8s,baz=35,slow=5.8,SNR=3.4						
STKA				LR	LR	18 26 03.8	
	comp=Z,9µm,19.0s,baz=39,slow=36						
BFZ	Birch Farm	30.97	165	*e*P	P	18 14 01.5	-0.1
	comp=Z,278nm,1.6s						
SNZO	South Karori	31.20	167	*e*P	P	18 14 03.7	+0.2
	comp=Z,99nm,0.8s						
THZ	Tophouse	31.29	170	*e*P	P	18 14 05.1	+0.6
	comp=Z,299nm,1.1s						
WRAB	Tennant Creek	31.76	250	*e*P	P	18 14 08.8	-0.1
	comp=Z,367nm,1.8s						
WRAB				LR	LR		
	comp=Z,8µm,19.0s						
WRAB	Tennant Creek	31.76	250	*e*P	P	18 14 08.8	-0.1
WRAB				pmax	pmax		
	comp=Z,367nm,1.8s						
WRAB				MLR	MLR		
	comp=Z,8µm,19.0s						
WB2	Warramunga Arr	31.76	250	*e*P	P	18 14 08.2	-0.6
WR1	Warramunga Arr	31.77	250	*e*P	P	18 14 09.2	+0.3
	comp=Z,132nm,1.0s						
WR1				*e*PcP	PcP	18 16 59.7	0.0
WR1				*e*ScP	ScP	18 20 41.1	+1.0
WR1				*e*PKiKP	PKiKP	18 24 27.4	-1.4
WRA	Warramunga Arr	31.77	250	P	P	18 14 09.2	+0.3
	comp=Z,63nm,0.8s,baz=80,slow=9.1,SNR=190						
WRA				PcP	PcP	18 16 59.7	0.0
	comp=Z,9.7nm,0.8s,baz=81,slow=3.1,SNR=8.3						
WRA				ScP	ScP	18 20 41.1	+1.0
	comp=Z,4.3nm,1.1s,baz=75,slow=3.6,SNR=5.2						
WRA				PKiKP	PKiKP	18 24 27.4	-1.4
	comp=Z,2.4nm,0.8s,baz=352,slow=0.7,SNR=14						
WRA				LR	LR	18 27 20.2	
	comp=Z,8µm,18.4s,baz=65,slow=37						
WRA				PKP2ab		18 49 38.4	
	comp=Z,0.1nm,0.2s,baz=270,slow=2.3,SNR=6.6						
KHZ	Kahutara	32.03	169	*e*P	P	18 14 11.0	+0.1
	comp=Z,236nm,1.0s						
GUMO	Guam	32.16	319	LR	LR	18 26 46.3	
	comp=Z,1µm,19.4s,baz=136,slow=35						
LTZ	Lake Taylor	32.18	171	*e*P	P	18 14 13.0	+0.7
	comp=Z,156nm,0.8s						
TOO	Toolangi	32.30	211	P	P	18 14 15.2	+1.8
	baz=32,SNR=11						
TOO	Toolangi	32.30	211	*e*P	P	18 14 14.0	+0.6
	comp=Z,54nm,0.9s						
TOO	Toolangi	32.30	211	*e*P	P	18 14 14.0	+0.6
TOO				pmax	pmax		
	comp=Z,54nm,0.9s						
FOZ	Fox Glacier	32.64	175	*e*P	P	18 14 17.4	+1.2
	comp=Z,280nm,0.9s						
OXZ	Oxford	32.69	172	*e*P	P	18 14 17.2	+0.6
	comp=Z,246nm,1.0s						
KDU	Kakadu	32.87	264	P	P	18 14 18.5	-0.1
	baz=33,SNR=7.8						
RPZ	Rata Peaks	32.94	173	*e*P	P	18 14 19.4	+0.5
	comp=Z,298nm,1.0s						
RPZ	Rata Peaks	32.94	173	P	P	18 14 20.0	+1.1
	comp=Z,255nm,0.9s,baz=19,slow=0.5,SNR=60						
CRLZ	Canterbury Las	33.01	171	*e*P	P	18 14 20.1	+0.7
	comp=Z,581nm,1.2s						
AS01	Alice Springs	33.04	243	*e*P	P	18 14 18.9	-1.2
AS31	Alice Springs	33.08	243	*e*P	P	18 14 19.9	-0.5
	comp=Z,10nm,1.0s						
ASAR	Alice Springs	33.08	243	P	P	18 14 20.2	-0.2
	comp=Z,25nm,0.8s,baz=72,slow=9.5,SNR=155						
ASAR				PcP	PcP	18 17 03.1	-0.2
	comp=Z,15nm,0.8s,baz=75,slow=3.1,SNR=12						
ASAR				ScP	ScP	18 20 45.4	+0.8
	comp=Z,2.8nm,0.9s,baz=63,slow=3.3,SNR=5.1						
ASAR				PKiKP	PKiKP	18 24 27.7	-1.9
	comp=Z,1.4nm,0.8s,baz=155,slow=0.3,SNR=7.6						
ASAR				LR	LR	18 26 45.5	
	comp=Z,7µm,20.5s,baz=78,slow=34						
ASAR				P3KPbc		18 45 37.7	
	comp=Z,1.5nm,0.9s,baz=261,slow=3.5,SNR=8.8						
MQZ	McQueen's Vall	33.15	171	*e*P	P	18 14 21.2	+0.5
	comp=Z,330nm,0.9s						
HTT	Hallett	33.44	224	P	P	18 14 24.4	+1.0
	baz=34,SNR=6.8						
LBZ	Lake Benmore	33.52	175	*e*P	P	18 14 24.3	+0.4
	comp=Z,86nm,1.0s						
WKZ	Wanaka	33.86	176	*e*P	P	18 14 27.6	+0.7
	comp=Z,101nm,0.9s						
MTN	Manton Dam	34.18	263	P	P	18 14 30.7	+0.7
	baz=34,SNR=8.9						
MTN	Manton Dam	34.18	263	*e*P	P	18 14 29.9	-0.1
	comp=Z,47nm,0.8s						
ODZ	Otahua Downs	34.21	174	*e*P	P	18 14 30.4	+0.5
	comp=Z,95nm,1.1s						
DCZ	Deep Cove	34.41	179	*e*P	P	18 14 32.0	+0.4
	comp=Z,92nm,1.1s						
WHZ	Wether Hill Ro	34.87	178	*e*P	P	18 14 35.4	-0.2
	comp=Z,90nm,1.3s						
BBOO	Buckleboo	35.10	227	P	P	18 14 38.6	+0.9
	baz=35,SNR=10						
BBOO	Buckleboo	35.10	227	*e*P	P	18 14 38.0	+0.2
	comp=Z,63nm,1.0s						
MOO	Moorlands	35.43	204	P	P	18 14 42.7	+2.3
	baz=36,SNR=4.0						
TAU	Tasmania Unive	35.77	204	*e*P	P	18 14 42.6	-0.8
	comp=Z,165nm,1.8s						
TAU				LR	LR		
	comp=Z,2µm,21.0s						
TAU	Tasmania Unive	35.77	204	*e*P	P	18 14 42.6	-0.8
TAU				pmax	pmax		
	comp=Z,165nm,1.8s						
TAU				MLR	MLR		
	comp=Z,2µm,21.0s						
KNRA	Kununurra	36.53	258	P	P	18 14 50.9	+0.7
	baz=37,SNR=18						
JOHN	Johnston Islan	36.62	42	PFAKE		18 15 00.0	+9.2
JOHN				LR	LR		
	comp=Z,512nm,22.0s						
WRKA	Warakurna	38.37	243	P	P	18 15 06.0	+0.2
	baz=38,SNR=25						
NLAI	Namlea	39.34	278	P	P	18 15 14.5	+0.6
FITZ	Fitzroy Crossi	39.67	255	P	P	18 15 17.1	+0.5
	baz=40,SNR=33						
FITZ	Fitzroy Crossi	39.67	255	*e*P	P	18 15 16.9	+0.2
	comp=Z,106nm,1.0s						
FITZ				*e*PcP	PcP	18 17 22.3	-0.8
FITZ	Fitzroy Crossi	39.67	255	PcP	PcP	18 17 22.3	-0.8
	comp=Z,20nm,0.8s,baz=137,slow=4.4,SNR=5.5						
FITZ				LR	LR	18 30 50.5	
	comp=Z,5µm,20.3s,baz=86,slow=35						
TNTI	Ternate	40.15	284	P	P	18 15 16.8	-3.9
FORT	Forrest	40.32	235	*e*P	P	18 15 22.4	+0.4
	comp=Z,118nm,1.3s						
SANI	Sanana	40.70	280	P	P	18 15 25.2	0.0
SOEI	Soe	41.07	268	P	P	18 15 29.3	+0.8
BATI	Baumata	41.62	267	P	P	18 15 33.9	+1.0
MIDW	Midway	42.12	22	PFAKE		18 15 50.0	+13
MIDW				LR	LR		
	comp=Z,5µm,20.0s						
BBSI	Bau Bau	43.31	274	P	P	18 15 47.4	+0.8
KMSI	Cibinong	43.33	283	P	P	18 15 47.1	+0.4
PPT	Papeete	43.46	104	LR	LR	18 29 46.2	
	comp=Z,3µm,21.6s,baz=260,slow=30						
PPT2	Papeete2	43.46	104	*e*S	S	18 22 31.3	+17
	comp=Z,2µm,27.2s						
PPT2				*e*LQ	LQ	18 26 19.1	
	comp=Z,7µm,33.2s						
PPT2				*e*LR	LR	18 28 15.0	
	comp=Z,7µm,24.2s,baz=279						
KDI	Kendari	43.55	276	P	P	18 15 48.3	-0.2
EDFI	Ende, Flores	43.70	269	P	P	18 15 48.9	-1.0
DAV	Davao City (W)	44.05	292	PFAKE		18 16 00.0	+7.5
DAV				LR	LR		
	comp=Z,1µm,21.0s						
TBI	Tubuai	44.12	112	*e*S	S	18 22 40.9	+18
	comp=Z,2µm,27.2s						
TBI				*e*LQ	LQ	18 26 35.8	
	comp=Z,6µm,31.0s						
TBI				*e*LR	LR	18 28 29.0	
	comp=Z,11µm,27.8s,baz=286						
KCP	Kidapawan	44.47	292	⇓*e*P	P	18 15 56.6	+0.6
SKMP	Bagumbayan, Su	44.78	291	*e*P	P	18 15 57.8	-0.6
BUTP	Butuan	44.80	295	*e*P	P	18 16 11.2	+13
BUKP	Musuan	44.84	293	*e*P	P	18 16 11.6	+13
WSI	Waingapu	44.97	267	P	P	18 15 59.2	-0.7
MRSI	Marisa	45.26	282	P	P	18 16 00.8	-1.4
CTBH	Cotabato--PC H	45.32	292	⇑*i*P	P	18 16 02.9	+0.2
MBWA	Marble Bar	45.49	251	*e*P	P	18 16 04.9	+1.0
	comp=Z,135nm,1.0s						
MBWA				LR	LR		
	comp=Z,3µm,21.0s						
BKSI	Bulukumba	45.74	273	P	P	18 16 05.8	-0.2
BNSI	Bone	45.92	274	P	P	18 16 08.7	+1.3
KAPI	Kappang	46.16	274	PFAKE		18 16 20.0	+11
KAPI				LR	LR		
	comp=Z,1µm,22.0s						
SPSI	Sidrap Palu	46.34	275	P	P	18 16 10.7	0.0
PAGZ	Pagadian	46.36	292	*e*P	P	18 16 24.2	+13
TTSI	Tana Toraja	46.47	276	P	P	18 16 12.6	+0.8
PCI	Palu	46.94	279	P	P	18 16 16.3	+0.9
IPIL	Ipil	47.07	291	*e*P	P	18 16 29.7	+13
MPSI	Mapaga	47.19	281	P	P	18 16 16.8	-0.6
MEEK	Meekatharra	47.24	244	P	P	18 16 18.7	+1.1
	baz=47,SNR=50						
PLAI	Plampang	47.54	268	P	P	18 16 19.4	-0.7
KIP	Kipapa	47.77	48	PFAKE		18 16 30.0	+8.3
KIP				LR	LR		
	comp=Z,6µm,19.0s						
OPA	Opana	47.94	47	*e*P	P	18 16 25.0	+2.0
	comp=Z,200nm,0.9s						
OPA	Opana	47.94	47	*e*P	P	18 16 25.0	+2.0
OPA				pmax	pmax		
	comp=Z,200nm,0.9s						
PVCP	Virac	48.16	299	*e*P	P	18 16 38.1	+13
GUIM	Jordan	48.20	295	*e*P	P	18 16 37.4	+12
KHU	Kahuku	48.26	52	*e*P	P	18 16 27.6	+1.7
KHU	Kahuku	48.26	52	*e*P	P	18 16 27.6	+1.7
AIN	Ainahou	48.46	52	*e*P	P	18 16 29.3	+2.1
	comp=Z,212nm,1.0s						
HMH	Humu'ula Sheep	48.57	52	*e*P	P	18 16 30.8	+2.6
	comp=Z,260nm,0.9s						
MHA	Mahukona	48.59	51	*e*P	P	18 16 32.3	+4.3
MHA	Mahukona	48.59	51	*e*P	P	18 16 32.3	+4.3
POHA	Pohakuloa	48.62	51	*e*P	P	18 16 30.2	+1.6
	comp=Z,113nm,0.8s						
HPAH	Hawaii Prepara	48.65	51	*e*P	P	18 16 29.9	+1.3
	comp=Z,169nm,0.9s						
KLBR	Kellerberrin	48.99	238	P	P	18 16 31.7	+0.6
	baz=49,SNR=5.9						
OTRP	Odiongan	49.45	297	*e*P	P	18 16 34.8	+0.1
BLDU	Ballidu	49.65	239	P	P	18 16 36.2	+0.1
	baz=50,SNR=6.2						
NWAO	Narrogin (SRO)	49.74	236	P	P	18 16 37.0	+0.1
	baz=50,SNR=4.3						
NWAO	Narrogin (SRO)	49.74	236	*e*P	P	18 16 36.0	-0.8
	comp=Z,65nm,1.0s						
NWAO	Narrogin (SRO)	49.74	236	*e*P	P	18 16 36.0	-0.8
NWAO				pmax	pmax		
	comp=Z,65nm,1.0s						
MORW	Morawa	49.91	241	P	P	18 16 39.3	+1.2
	baz=50,SNR=6.1						
MORW	Morawa	49.91	241	*e*P	P	18 16 37.7	-0.4
	comp=Z,105nm,1.1s						
TSM	Tawau	50.26	285	P	P	18 16 42.1	+1.2
SJMP	San Jose	50.28	296	*e*P	P	18 16 41.8	+0.8
MUN	Mundaring	50.36	237	P	P	18 16 42.0	+0.5
	baz=50,SNR=8.9						
GIRL	Giralia	50.70	250	P	P	18 16 44.8	+0.7
	baz=51,SNR=3.4						
JAGI	Jajag, Banyuwa	51.14	268	*e*P	P	18 16 46.4	-1.2
	comp=Z,122nm,0.9s						
TGY	Tagaytay City	51.16	298	LR	LR	18 36 09.7	
	comp=Z,3µm,21.3s,baz=116,slow=33						
ENPP	El Nido	51.27	294	*e*P	P	18 16 48.1	-0.4
CAUP	Cauayan	51.74	302	*e*P	P	18 16 57.0	+5.0
BATP	Bataraza	51.83	290	*e*P	P	18 17 06.8	+14
SGCP	Mt. Cagua	52.20	303	*e*P	P	18 16 55.6	+0.2
SMPP	San Manuel, Pa	52.32	300	*e*P	P	18 16 55.9	-0.5
KKM	Kota Kinabalu	52.37	286	P	P	18 16 57.8	+0.9
JOW	Kunigami	52.47	316	*e*P	P	18 16 58.2	+0.9
	comp=Z,64nm,0.7s						
TAOE	Nuku Hiva Isla	53.01	93	*e*S	S	18 24 45.9	+17
	comp=Z,1µm,27.6s						
TAOE				*e*LQ	LQ	18 30 12.3	
	comp=Z,4µm,27.5s						
TAOE				*e*LR	LR	18 32 30.9	
	comp=Z,4µm,27.2s						
INU	Inuyama	53.59	330	*e*P	P	18 17 05.3	-0.1
	comp=Z,113nm,1.4s						
MJAR	Matsushiro Arr	54.01	332	P	P	18 17 07.9	-0.5
MJAR						18 18 12.3	
MJAR				pmax	pmax		
	comp=Z,32nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,614nm,21.9s						
MJAR	Matsushiro Arr	54.01	332	P	P	18 17 07.9	-0.5
	comp=Z,25nm,0.8s,baz=171,slow=8.8,SNR=74						
MJAR				PcP	PcP	18 18 12.3	-0.9
	comp=Z,6.0nm,0.7s,baz=162,slow=2.5,SNR=4.3						
MJAR				LR	LR	18 37 49.7	
	comp=Z,614nm,21.9s,baz=150,slow=33						
MAJO	Matsushiro	54.01	332	*e*P	P	18 17 07.8	-0.6
	comp=Z,43nm,0.8s						
MAJO				*e*PcP	PcP	18 18 12.3	-0.9
MAJO	Matsushiro	54.01	332	*e*P	P	18 17 07.8	-0.6
MAJO				*e*		18 18 12.3	
MAJO				pmax	pmax		
	comp=Z,43nm,0.8s						
MAT	Matsushiro	54.01	332	P	P	18 17 07.5	-0.9
MAT				S	S	18 24 36.0	-5.7
MJB9	Matsu-Tunnel	54.01	332	*e*P	P	18 17 07.9	-0.6
	comp=Z,42nm,0.8s						
BTM	Bintulu	54.52	282	P	P	18 17 14.2	+1.7
YOJ	Yonaguni jima	54.78	310	*e*P	P	18 17 13.4	-0.8
	comp=Z,198nm,1.3s						
YOJ	Yonaguni jima	54.78	310	*e*P	P	18 17 13.4	-0.8
YOJ				pmax	pmax		
	comp=Z,198nm,1.3s						
SBUM	Sibu	55.15	281	P	P	18 17 18.4	+1.2
JNU	Nakatsue	55.16	324	*e*P	P	18 17 16.7	-0.2
	comp=Z,68nm,0.8s						
TWG	Pinlang	55.35	308	*e*P	P	18 17 17.1	-1.3
	comp=Z,274nm,1.5s						
YULB	Yu-li	55.48	308	*e*P	P	18 17 18.4	-1.0
	comp=Z,123nm,1.6s						
SSLB	Suanglung	55.96	309	*e*P	P	18 17 21.6	-1.2
	comp=Z,70nm,1.5s						
YHNB	Yeheng	56.12	310	*e*P	P	18 17 23.4	-0.6
	comp=Z,123nm,1.2s						
ERM	Erimo	56.73	340	PFAKE		18 17 40.0	+12
ERM				LR	LR		
	comp=Z,1µm,21.0s						
KSM	Kuching	56.76	279	P	P	18 17 29.2	+0.6

CISI	**Cisompet, Garu**	**57.48**	**268**	eP	**P**	**18 17 32.5**	**-1.3**
	comp=Z,170nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**57.70**	**343**	eP	**P**	**18 17 32.7**	**-2.0**
YUK				e		18 19 44.9	
YUK				eS	**S**	**18 25 32.4**	**+1.9**
YUK				eSS	**SS**	**18 29 25.6**	**+3.9**
QZH	**Quanzhou**	**58.40**	**308**	⇑iP	**P**	**18 17 40.5**	**+0.6**
QZH				sP	**pP**	**18 17 51.3**	**-0.2**
QZH				S	**S**	**18 25 41.0**	**+0.7**
QZH				pmax	pmax		
	comp=Z,41nm,0.8s						
QZH				pmax	pmax		
	comp=Z,480nm,3.2s						
QZH				LR	LR		
	comp=Z,1µm,19.1s						
QZH				LR	LR		
	comp=Z,840nm,17.5s						
QZH				LR	LR		
	comp=Z,1µm,21.7s						
ASAJ	**Asahikawa**	**58.79**	**340**	P	**P**	**18 17 43.0**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,64nm,0.8s						
ASAJ				MLR	MLR		
	comp=Z,3µm,22.0s						
ASAJ	**Asahikawa**	**58.79**	**340**	P	**P**	**18 17 43.0**	**+0.7**
	comp=Z,64nm,0.8s,baz=207,slow=8.8,SNR=43						
ASAJ				LR	LR	18 38 37.9	
	comp=Z,3µm,21.9s,baz=174,slow=32						
TJN	**Taejon**	**59.50**	**324**	ceP	**P**	**18 17 47.8**	**+0.4**
KSRS	**Korea Array**	**59.95**	**325**	P	**P**	**18 17 50.8**	**+0.3**
	comp=Z,11nm,0.8s,baz=136,slow=7.4,SNR=32						
KSRS				PcP	**PcP**	**18 18 35.5**	**-0.8**
	comp=Z,9.9nm,1.1s,baz=139,slow=4.4,SNR=4.9						
KSRS				LR	LR	18 43 03.5	
	comp=Z,696nm,18.6s,baz=140,slow=35						
KS15	**Wonju Array Si**	**59.96**	**325**	eP	**P**	**18 17 50.8**	**+0.3**
KSAR	**Wonju Array Be**	**59.96**	**325**	P	**P**	**18 17 50.8**	**+0.3**
KSAR	**Wonju Array Be**	**59.96**	**325**	P	**P**	**18 17 50.8**	**+0.3**
SSE	**Sheshan**	**59.97**	**316**	P	**P**	**18 17 50.0**	**-0.7**
SSE				S	**S**	**18 26 02.0**	**+1.6**
SSE				pmax	pmax		
	comp=Z,45nm,0.8s						
SSE				pmax	pmax		
	comp=Z,290nm,5.9s						
SSE				LR	LR		
	comp=Z,290nm,19.0s						
SSE				LR	LR		
	comp=Z,450nm,22.8s						
KS01	**Wonju Array Si**	**59.98**	**325**	eP	**P**	**18 17 50.2**	**-0.5**
YSS	**Yuzh-Sakhalins**	**61.27**	**342**	eP	**P**	**18 17 59.8**	**+0.5**
	comp=Z,80nm,0.9s						
YSS	**Yuzh-Sakhalins**	**61.27**	**342**	α iP	**P**	**18 18 00.5**	**+1.2**
YSS				e*SP	**pP**	**18 18 11.3**	**+0.2**
YSS				e		18 18 20.7	
YSS				eS	**S**	**18 26 18.2**	**+1.7**
YSS				e		18 26 40.0	
YSS				eSS	**SS**	**18 30 18.0**	**+0.3**
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
GZH	**Guangzhou**	**61.66**	**304**	P	**P**	**18 18 04.0**	**+1.7**
GZH				S	**S**	**18 26 25.8**	**+3.6**
GZH				LR	LR		
	comp=Z,620nm,21.4s						
GZH				LR	LR		
	comp=Z,1µm,21.2s						
NJ2	**Nanjing**	**62.14**	**315**	eP	**P**	**18 18 06.3**	**+0.9**
NJ2				S	**S**	**18 26 26.5**	**-1.5**
NJ2				sS	**pS**	**18 26 38.3**	**-3.6**
NJ2				pmax	pmax		
	comp=Z,75nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,590nm,5.9s						
NJ2				LR	LR		
	comp=Z,2µm,25.0s						
NJ2				LR	LR		
	comp=Z,2µm,24.4s						
NJ2				LR	LR		
	comp=Z,1µm,23.0s						
VLA	**Vladivostok**	**62.18**	**332**	i P	**P**	**18 18 04.7**	**-0.7**
VLA				pmax	pmax		
	comp=Z,46nm,0.9s						
QIZ	**Qiongzhong**	**62.87**	**298**	P	**P**	**18 18 10.3**	**-0.3**
QIZ				S	**S**	**18 26 39.0**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,22nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,210nm,6.7s						
QIZ				LR	LR		
	comp=Z,550nm,23.5s						
QIZ				LR	LR		
	comp=Z,1µm,23.0s						
QIZ				LR	LR		
	comp=Z,2µm,23.5s						
USA0B	**Ussuriysk Arra**	**62.98**	**333**	eP	**P**	**18 18 11.0**	**+0.3**
	comp=Z,61nm,0.9s						
USRK	**Ussuriysk Ar.**	**62.98**	**333**	P	**P**	**18 18 12.0**	**+1.3**
	comp=Z,40nm,0.7s,baz=132,slow=7.0,SNR=74						
USRK				PcP	**PcP**	**18 18 49.3**	**+0.8**
	comp=Z,9.8nm,0.8s,baz=127,slow=3.8,SNR=2.6						
USRK				LR	LR	18 42 45.9	
	comp=Z,733nm,21.4s,baz=133,slow=33						
MYKOM	**Kota Tinggi**	**63.10**	**278**	P	**P**	**18 18 13.4**	**+1.2**
KGM	**Kluang**	**63.67**	**278**	P	**P**	**18 18 17.3**	**+1.3**
PET	**Petropavlovsk**	**64.02**	**355**	i P	**P**	**18 18 18.1**	**+0.7**
PET				pmax	pmax		
	comp=Z,25nm,1.1s						
PETK	**Petropavlovsk-**	**64.19**	**354**	eP	**P**	**18 18 19.0**	**+0.4**
PETK	**Petropavlovsk-**	**64.19**	**354**	P	**P**	**18 18 19.4**	**+0.8**
	comp=Z,17nm,0.8s,baz=163,slow=5.9,SNR=22						
PETK				PcP	**PcP**	**18 18 52.7**	**-0.5**
	comp=Z,16nm,0.9s,baz=128,slow=5.0,SNR=5.2						
PETK				LR	LR	18 40 36.9	
	comp=Z,1µm,21.3s,baz=169,slow=31						
PEA1	**Petropavlovsk-**	**64.20**	**354**	eP	**P**	**18 18 19.4**	**+0.8**
PEA1				ePcP	**PcP**	**18 18 52.7**	**-0.6**
KIWB	**Kanaga Island**	**64.21**	**12**	eP	**P**	**18 18 19.9**	**+1.2**
ADK	**Adak**	**64.33**	**12**	PFAKE		18 18 30.0	+11
ADK				LR	LR		
	comp=Z,4µm,22.0s						
MDJ	**Mudanjiang**	**64.39**	**332**	P	**P**	**18 18 21.0**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,86nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,680nm,4.6s						
MDJ	**Mudanjiang**	**64.39**	**332**	eP	**P**	**18 18 20.4**	**+0.4**
	comp=Z,63nm,0.9s						
MDJ				LR	LR		
	comp=Z,1µm,22.0s						
WHN	**Wuhan**	**64.53**	**311**	⇓P	**P**	**18 18 21.5**	**+0.2**
WHN				pP	**pP**	**18 18 34.0**	**+1.0**
WHN				S	**S**	**18 26 58.3**	**+0.4**
WHN				LR	LR		
	comp=Z,6µm,18.8s						
WHN				LR	LR		
	comp=Z,2µm,17.5s						
WHN				LR	LR		
	comp=Z,14µm,29.0s						
DL2	**Dalian**	**64.56**	**323**	P	**P**	**18 18 21.0**	**-0.3**
DL2				sP	**sP**	**18 18 35.8**	**-2.2**
DL2				eS	**S**	**18 26 57.5**	**-0.5**
DL2				pmax	pmax		
	comp=Z,80nm,1.0s						
DL2				pmax	pmax		
	comp=Z,500nm,8.0s						
DL2				LR	LR		
	comp=Z,1µm,29.7s						
DL2				LR	LR		
	comp=Z,770nm,24.9s						
DL2				LR	LR		
	comp=Z,2µm,26.1s						
KTGM	**Kuala Trenggan**	**64.64**	**281**	P	**P**	**18 18 23.8**	**+1.4**
TYV	**Tymovskoe**	**64.82**	**344**	eP	**P**	**18 18 23.5**	**+0.8**
TYV				eS	**S**	**18 27 03.1**	**+2.4**
TYV				pmax	pmax		
	comp=Z,21nm,1.9s						
TYV				pmax	pmax		
	comp=Z,400nm,5.9s						
TYV				smax	smax		
	comp=N,300nm,6.2s						
SNY	**Shenyang**	**65.40**	**326**	⇑P	**P**	**18 18 26.5**	**-0.2**
SNY				pmax	pmax		
	comp=N,14nm,0.9s						
SNY				pmax	pmax		
	comp=N,630nm,4.9s						
SNY				LR	LR		
	comp=N,380nm,14.7s						
SNY				LR	LR		
	comp=N,850nm,15.2s						
SNY				LR	LR		
	comp=N,2µm,20.3s						
BKNI	**Bangkinang**	**65.53**	**275**	eP	**P**	**18 18 28.3**	**+0.2**
	comp=N,253nm,0.9s						
FRIM	**Kepong**	**65.60**	**279**	P	**P**	**18 18 29.2**	**+0.6**
CN2	**Changchun**	**65.79**	**329**	⇑P	**P**	**18 18 30.0**	**+0.8**
CN2				esP	pP	18 18 39.0	-2.2
CN2				eS	**S**	**18 27 14.0**	**+1.0**
CN2				pmax	pmax		
	comp=N,500nm,6.0s						
CN2				LR	LR		
	comp=N,800nm,18.0s						
CN2				LR	LR		
	comp=N,700nm,18.0s						
CN2				LR	LR		
	comp=N,1µm,19.0s						
IPM	**Ipoh**	**66.47**	**280**	P	**P**	**18 18 35.2**	**+1.0**
CASY	**Casey**	**66.57**	**201**	PFAKE		18 18 50.0	+16
CASY				LR	LR		
	comp=Z,204nm,20.0s						
VNDA	**Vanda**	**66.60**	**181**	eP	**P**	**18 18 34.6**	**+0.7**
VNDA	**Vanda**	**66.60**	**181**	P	**P**	**18 18 34.7**	**+0.8**
	comp=Z,28nm,1.1s,baz=352,slow=7.4,SNR=26						
VNDA				LR	LR	18 44 21.8	
	comp=Z,1µm,19.1s,baz=336,slow=33						
GRNR	**Gornyy**	**66.64**	**340**	eP	**P**	**18 18 35.2**	**+0.7**
GRNR				pmax	pmax		
	comp=Z,29nm,1.0s						
SBA	**Scott Base**	**66.90**	**180**	eP	**P**	**18 18 37.6**	**+1.8**
	comp=Z,92nm,1.1s						
SBA	**Scott Base**	**66.90**	**180**	eP	**P**	**18 18 37.6**	**+1.8**
SBA				pmax	pmax		
	comp=Z,92nm,1.1s						
KULM	**Kulim**	**67.03**	**281**	P	**P**	**18 18 38.4**	**+0.7**
KLR	**Kul'dur**	**67.07**	**336**	eP	**P**	**18 18 38.0**	**+0.7**
KLR	**Kul'dur**	**67.07**	**336**	P	**P**	**18 18 38.0**	**+0.7**
	comp=Z,28nm,0.9s,baz=130,slow=4.3,SNR=96						
KLR				LR	LR	18 43 47.0	
	comp=Z,1µm,21.8s,baz=150,slow=32						
SKNT	**Sakolnakorn**	**67.30**	**294**	P	**P**	**18 18 39.8**	**+0.4**
	comp=Z,48nm,1.4s,comp=Z,758nm						
NKL	**Nikolayevsk**	**67.42**	**344**	i P	**P**	**18 18 40.0**	**+0.7**
NKL				e		18 18 53.3	
NKL				pmax	pmax		
	comp=Z,83nm,0.9s						
ENH	**Enshi**	**68.04**	**309**	eP	**P**	**18 18 43.4**	**-0.5**
	comp=Z,58nm,0.9s						
ENH				LR	LR		
	comp=Z,1µm,22.0s						
SRAK	**Srakaew**	**68.11**	**290**	P	**P**	**18 18 43.9**	**-0.6**
	comp=Z,23nm,1.0s,comp=Z,581nm						
PSI	**Prapat**	**68.13**	**277**	eP	**P**	**18 18 44.4**	**-0.5**
	comp=Z,335nm,2.0s						
PSI	**Prapat**	**68.13**	**277**	eP	**P**	**18 18 44.4**	**-0.5**
PSI				pmax	pmax		
	comp=Z,335nm,2.0s						
BJT	**Baijiatuau**	**68.56**	**321**	eP	**P**	**18 18 47.1**	**+0.2**
	comp=Z,51nm,1.1s						
BJT				LR	LR		
	comp=Z,1µm,22.0s						
BJT	**Baijiatuau**	**68.56**	**321**	eP	**P**	**18 18 47.1**	**+0.2**
BJT				pmax	pmax		
	comp=Z,51nm,1.1s						
BJT				MLR	MLR		
	comp=Z,1µm,22.0s						
BJI	**Beijing**	**68.57**	**321**	⇑iP	**P**	**18 18 47.3**	**+0.4**
BJI				pmax	pmax		
	comp=Z,32nm,0.9s						
BJI				LR	LR		
	comp=Z,950nm,25.5s						
BJI				LR	LR		
	comp=Z,1µm,26.8s						
BJI				LR	LR		
	comp=Z,1µm,28.9s						
GYA	**Guiyang**	**68.58**	**304**	⇑iP	**P**	**18 18 47.8**	**+0.3**
GYA				pP	pP	18 18 56.3	-3.0
GYA				PP	**PP**	**18 21 23.0**	**+3.6**
GYA				S	**S**	**18 27 47.3**	**-0.2**
GYA				sS	pS	18 28 01.8	-0.1
GYA				SKS	**SKSac**	**18 28 43.5**	**-0.4**
GYA				SS	**SS**	**18 32 15.0**	**+2.4**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,210nm,6.9s						
GYA				LR	LR		
	comp=Z,660nm,20.3s						
GYA				LR	LR		
	comp=Z,1µm,20.5s						
GYA				LR	LR		
	comp=Z,2µm,20.5s						
TRTT	**Trang**	**68.59**	**283**	P	**P**	**18 18 48.3**	**+0.7**
	comp=Z,15nm,1.4s,comp=Z,568nm						
PATY	**Pattaya**	**68.88**	**288**	P	**P**	**18 18 51.2**	**+1.9**
	comp=Z,26nm,0.9s						
GSI	**Gunungsitoli**	**69.12**	**276**	eP	**P**	**18 18 50.7**	**-0.2**
	comp=Z,123nm,0.8s						
TIY	**Taiyuan**	**69.67**	**317**	eP	**P**	**18 18 55.0**	**+1.1**
TIY				S	**S**	**18 27 58.5**	**-1.3**
TIY				pmax	pmax		
	comp=Z,26nm,0.6s						
TIY				pmax	pmax		
	comp=Z,280nm,4.4s						
TIY				LR	LR		
	comp=Z,370nm,14.2s						
TIY				LR	LR		
	comp=Z,1µm,22.3s						
TIY				LR	LR		
	comp=Z,2µm,24.6s						
PBKT	**Sadao Pong**	**69.89**	**292**	eP	**P**	**18 18 56.1**	**+0.5**
PBKT	**Sadao Pong**	**69.89**	**292**	P	**P**	**18 18 56.5**	**+1.0**
	comp=Z,55nm,1.0s,comp=Z,1µm						
PKDT	**Phuket**	**69.90**	**283**	P	**P**	**18 18 56.7**	**+1.0**
	comp=Z,16nm,1.1s,comp=Z,441nm						
PHET	**Kaeng Krachan**	**70.03**	**288**	P	**P**	**18 18 58.3**	**+1.9**
	comp=Z,15nm,0.9s,comp=Z,147nm						
XAN	**Xi'an**	**70.25**	**312**	P	**P**	**18 18 57.8**	**+0.3**
XAN				pP	pP	18 19 05.8	-3.5
XAN				PP	**PP**	**18 21 35.5**	**+1.9**
XAN				S	**S**	**18 28 08.0**	**+1.3**
XAN				SS	**SS**	**18 32 38.3**	**+0.4**
XAN				pmax	pmax		
	comp=Z,66nm,0.8s						
XAN				pmax	pmax		
	comp=Z,470nm,3.1s						
XAN				LR	LR		
	comp=Z,790nm,22.6s						
XAN				LR	LR		
	comp=Z,1µm,22.6s						
XAN				LR	LR		
	comp=Z,2µm,23.5s						
XAN	**Xi'an**	**70.25**	**312**	eP	**P**	**18 18 57.6**	**+0.1**
	comp=Z,51nm,0.8s						
XAN	**Xi'an**	**70.25**	**312**	eP	**P**	**18 18 57.6**	**+0.1**
XAN				pmax	pmax		
	comp=Z,51nm,0.8s						
SPIA	**Saint Paul Isl**	**70.64**	**13**	eP	**P**	**18 19 00.0**	**+0.7**
	comp=Z,67nm,0.8s						
UTTA	**Uttaradit**	**70.64**	**293**	P	**P**	**18 19 01.1**	**+1.0**
	comp=Z,9.7nm,0.9s,comp=Z,91nm						
NANT	**Nan**	**70.85**	**294**	P	**P**	**18 19 02.0**	**+0.6**
	comp=Z,16nm,0.8s,comp=Z,143nm						
SRDT	**SRDT**	**70.92**	**289**	P	**P**	**18 19 03.3**	**+1.5**
	comp=Z,50nm,1.6s						
UTHA	**Uthaitani**	**70.97**	**291**	P	**P**	**18 19 03.3**	**+1.1**
	comp=Z,17nm,0.9s,comp=Z,136nm						
KMI	**Kunming**	**71.30**	**301**	P	**P**	**18 19 05.5**	**+1.2**
KMI				pP	pP	18 19 11.3	-5.0
KMI				sP	sP	18 19 18.8	-2.0
KMI				PP	**PP**	**18 21 45.5**	**+2.5**
KMI				S	**S**	**18 28 19.5**	**-0.1**
KMI				sS	pS	18 28 30.5	-3.9
KMI				pmax	pmax		
	comp=Z,56nm,1.0s						
KMI				pmax	pmax		
	comp=Z,430nm,3.9s						
KMI				LR	LR		
	comp=Z,670nm,21.9s						
KMI				LR	LR		
	comp=Z,1µm,22.1s						
KMI				LR	LR		
	comp=Z,1µm,21.2s						
KMI	**Kunming**	**71.30**	**301**	eP	**P**	**18 19 05.7**	**+1.4**
	comp=Z,297nm,2.0s						
MA2	**Magadan**	**71.35**	**352**	eP	**P**	**18 19 03.5**	**-0.1**
	comp=Z,22nm,1.0s						
MA2				LR	LR		
	comp=Z,3µm,22.0s						
MA2	**Magadan**	**71.35**	**352**	ceP	**P**	**18 19 02.9**	**-0.6**
MA2				pmax	pmax		
	comp=Z,56nm,2.5s						
MA2	**Magadan**	**71.35**	**352**	P	**P**	**18 19 03.1**	**-0.4**
	comp=Z,13nm,0.8s,baz=149,slow=6.1,SNR=45						
SUKH	**Sukhothai**	**71.39**	**293**	P	**P**	**18 19 05.9**	**+1.2**
	comp=Z,12nm,0.9s						
UMPA	**Umpang Tak**	**71.70**	**291**	P	**P**	**18 19 07.5**	**+0.9**
	comp=Z,10nm,0.9s						
LAMP	**Lampang**	**71.72**	**294**	P	**P**	**18 19 07.9**	**+1.2**
	comp=Z,27nm,0.8s,comp=Z,213nm						
CM01	**Chiang Mai Arr**	**72.30**	**293**	eP	**P**	**18 19 10.7**	**+0.6**
CM31	**Chiang Mai Arr**	**72.32**	**293**	eP	**P**	**18 19 11.2**	**+1.0**
	comp=Z,49nm,0.8s						
CMAR	**Chiang Mai Arr**	**72.32**	**293**	P	**P**	**18 19 10.7**	**+0.4**
	comp=Z,30nm,0.8s,baz=119,slow=4.5,SNR=201						
CMAR				PKiKP	**PKiKP**	**18 25 12.0**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=22,slow=1.0,SNR=4.1						
CMAR				PKPPKP		18 46 56.1	
	comp=Z,1.4nm,1.0s,baz=273,slow=3.9,SNR=6.2						
CMAR				LR	LR	18 52 26.3	
	comp=Z,381nm,19.0s,baz=109,slow=37						
ZEA	**Zeya**	**72.35**	**337**	eP	**P**	**18 19 10.4**	**+0.7**
ZEA				pmax	pmax		
	comp=N,59nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,81nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,500nm,10.0s						
HIA	**Hailar**	**72.42**	**330**	eP	**P**	**18 19 11.2**	**+0.9**
	comp=Z,30nm,0.9s						
HIA				LR	LR		
	comp=Z,715nm,20.0s						
HIA	**Hailar**	**72.42**	**330**	eP	**P**	**18 19 11.2**	**+0.9**
HIA				pmax	pmax		
	comp=Z,30nm,0.9s						
HIA				MLR	MLR		
	comp=Z,715nm,20.0s						
CMMT	**Chiang Mai**	**72.43**	**294**	P	**P**	**18 19 11.5**	**+0.6**
	comp=Z,49nm,1.2s,comp=Z,713nm						
CHTO	**Chiang Mai**	**72.43**	**294**	eP	**P**	**18 19 11.2**	**+0.3**
	comp=Z,36nm,1.0s						
CHTO				LR	LR		
	comp=Z,774nm,22.0s						
CHTO	**Chiang Mai**	**72.43**	**294**	eP	**P**	**18 19 11.2**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,36nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,774nm,22.0s						
CHTO	**Chiang Mai**	**72.43**	**294**	P	**P**	**18 19 11.6**	**+0.7**
	SNR=18						
CHTO				P	**P**	**18 19 11.6**	**+0.7**
	SNR=18						
CHTO	**Chiang Mai**	**72.43**	**294**	P	**P**	**18 19 11.6**	**+0.7**
	comp=Z,220nm,1.2s,comp=Z,3µm						
CD2	**Chengdu**	**72.76**	**307**	⇑P	**P**	**18 19 13.0**	**+0.3**
CD2				pP	pP	18 19 19.8	-4.9
CD2				PP	**PP**	**18 21 54.8**	**-0.3**
CD2				S	**S**	**18 28 38.3**	**+2.5**
CD2				pmax	pmax		
	comp=Z,780nm,6.1s						
CD2				LR	LR		
	comp=Z,2µm,18.6s						
CD2				LR	LR		
	comp=Z,2µm,19.0s						
CD2				LR	LR		
	comp=Z,3µm,22.1s						
SEY	**Seymchan**	**74.40**	**354**	eP	**P**	**18 19 22.0**	**+0.4**
SEY	**Seymchan**	**74.40**	**354**	P	**P**	**18 19 21.9**	**+0.4**
	comp=Z,13nm,0.8s,baz=163,slow=5.4,SNR=71						
LZH	**Lanzhou**	**74.89**	**312**	⇑P	**P**	**18 19 26.8**	**+1.6**
LZH				pP	pP	18 19 33.5	-3.6
LZH				sP	PcP	18 19 36.5	-2.5
LZH				PP	**PP**	**18 22 15.0**	**+1.7**
LZH				S	**S**	**18 28 59.0**	**-0.9**
LZH				sS	pS	18 29 12.8	-2.1
LZH				SS	**SS**	**18 33 52.3**	**+3.3**
LZH				pmax	pmax		
	comp=Z,100nm,1.0s						
LZH				pmax	pmax		
	comp=Z,660nm,8.1s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,16.2s						
LZH				LR	LR		
	comp=Z,4µm,19.0s						
OHAK	**Old Harbor**	**75.71**	**21**	eP	**P**	**18 19 29.6**	**+0.4**
	comp=Z,178nm,1.8s						
PBA	**Port Blair**	**76.18**	**285**	eP	P	18 19 32.6	-0.2
PBA				IAmb	IAmb	18 19 34.4	
	comp=Z,25nm,0.8s						
KDAK	**Kodiak Island**	**76.38**	**21**	eP	**P**	**18 19 33.6**	**+0.5**
KDAK				LR	LR		
	comp=Z,784nm,19.0s						
KDAK	**Kodiak Island**	**76.38**	**21**	P	**P**	**18 19 33.5**	**+0.5**
	comp=Z,16nm,0.8s,baz=210,slow=4.5,SNR=8.0						
GAMB	**Gambell**	**76.42**	**10**	eP	**P**	**18 19 32.8**	**-0.3**
	comp=Z,75nm,1.0s						
CIT	**Chita**	**77.21**	**330**	eP	**P**	**18 19 39.3**	**+1.4**
CIT				e		18 19 52.6	
SVW2	**Sparrevohn**	**77.93**	**18**	eP	**P**	**18 19 42.7**	**+1.0**
	comp=Z,120nm,1.7s						
YAK	**Yakutsk**	**78.08**	**343**	c iP	**P**	**18 19 42.5**	**+0.1**
YAK				e*PP	**pP**	**18 19 55.5**	**+0.8**
YAK				eS	**SKSac**	**18 29 59.0**	**+5.9**
YAK				e		18 30 12.3	
YAK				e*SS	ScS	18 30 27.7	+29
YAK				pmax	pmax		
	comp=Z,279nm,0.6s						
YAK				pmax	pmax		
	comp=N,98nm,0.9s						
YAK				pmax	pmax		
	comp=E,43nm,0.8s						
YAK				smax	smax		
	comp=N,356nm,2.8s						
YAK				smax	smax		
	comp=E,308nm,2.7s						
ANM	**Nome**	**78.33**	**12**	eP	**P**	**18 19 44.2**	**+0.4**
	comp=E,32nm,1.2s						
ANM	**Nome**	**78.33**	**12**	eP	**P**	**18 19 44.2**	**+0.4**
ANM				pmax	pmax		
	comp=Z,32nm,1.2s						
ULN	**Ulaanbaatar**	**78.38**	**324**	eP	**P**	**18 19 45.5**	**+0.8**
	comp=Z,46nm,0.8s						
ULN	**Ulaanbaatar**	**78.38**	**324**	c iP	**P**	**18 19 45.2**	**+0.5**
ULN				pmax	pmax		
	comp=Z,61nm,1.0s						
ULN	**Ulaanbaatar**	**78.38**	**324**	P	**P**	**18 19 44.7**	**+0.1**
	SNR=25						
ULN				P	**P**	**18 19 44.7**	**+0.1**
	SNR=25						
BRLK	**Bradley Lake**	**78.45**	**21**	eP	**P**	**18 19 44.9**	**+0.3**
	comp=Z,49nm,0.8s						
SONA0	**Songino Array**	**78.74**	**324**	eP	**P**	**18 19 47.1**	**+0.4**
SONA0				eP'P'df	P'P'df	18 46 43.2	+0.1
SONM	**Songino Array**	**78.74**	**324**	P	**P**	**18 19 47.1**	**+0.4**
	comp=Z,17nm,0.9s,baz=139,slow=5.6,SNR=80						
SONM				PKPPKP		18 46 43.2	
	comp=Z,0.6nm,0.9s,baz=259,slow=2.2,SNR=3.8						
SONM				LR	LR	18 54 28.8	
	comp=Z,183nm,19.2s,baz=140,slow=36						
SONA1	**Songino Array**	**78.75**	**324**	eP	**P**	**18 19 46.4**	**-0.2**
BILL	**Bilibino**	**78.78**	**0**	eP	**P**	**18 19 46.4**	**+0.2**
	comp=Z,92nm,0.9s						
BILL				LR	LR		
	comp=Z,1µm,22.0s						
BILL	**Bilibino**	**78.78**	**0**	c iP	**P**	**18 19 46.6**	**+0.4**
BILL				pmax	pmax		
	comp=Z,116nm,1.0s						
QSPA	**South Pole Qui**	**79.06**	**180**	eP	**P**	**18 19 48.7**	**+0.5**
	comp=Z,65nm,0.9s						
GTA	**Gaotai**	**79.18**	**314**	⇑P	**P**	**18 19 50.0**	**+0.7**
GTA				pP	PcP	18 19 57.3	-0.2
GTA				sP	pP	18 20 01.0	-0.2
GTA				S	**S**	**18 29 46.3**	**-0.1**
GTA				sS	pS	18 30 00.8	-0.9
GTA				SS	**SS**	**18 34 55.8**	**+2.1**

GTA				pmax	pmax		
	comp=Z,47nm,1.1s						
GTA				pmax	pmax		
	comp=Z,360nm,8.6s						
GTA				LR	LR		
	comp=Z,560nm,24.0s						
GTA				LR	LR		
	comp=Z,1µm,21.6s						
GTA				LR	LR		
	comp=Z,2µm,22.7s						
SEW	Seward	79.19	21	eP	P	18 19 49.2	+0.6
	comp=Z,26nm,0.8s						
PPLA	Purkeypile	80.34	18	eP	P	18 19 55.9	+0.9
PMR	Palmer	80.37	20	eP	P	18 19 55.0	+0.1
	comp=Z,41nm,1.2s						
PMR	Palmer	80.37	20	eP	P	18 19 55.0	+0.1
PMR				pmax	pmax		
	comp=Z,41nm,1.2s						
KNK	Knik Glacier	80.47	20	eP	P	18 19 56.0	+0.4
	comp=Z,163nm,1.8s						
BOD	Bodaibo	80.55	335	eP	P	18 19 55.5	-0.6
BOD				pmax	pmax		
	comp=Z,28nm,1.6s						
GHO	Glory Hole Cre	80.56	20	eP	P	18 19 56.6	+0.5
	comp=Z,22nm,0.9s						
GLI	Glacier Island	80.57	21	eP	P	18 19 56.3	+0.2
	comp=Z,246nm,2.0s						
SHL	Shillong	80.71	298	eP	P	18 19 56.9	-1.0
	comp=Z,52nm,1.1s						
SHL	Shillong	80.71	298	eP	P	18 19 56.9	-1.0
SHL				pmax	pmax		
	comp=Z,52nm,1.1s						
SHL	Shillong	80.71	298	eP	P	18 19 57.5	-0.4
SHL				IAmb	IAmb	18 19 58.7	
	comp=Z,27nm,0.6s						
CAST	Castle Rocks	80.77	18	eP	P	18 19 57.1	0.0
	comp=Z,38nm,0.8s						
SML	Sawmill	80.79	20	eP	P	18 19 57.7	+0.4
	comp=Z,57nm,1.2s						
SML	Sawmill	80.79	20	eP	P	18 19 57.7	+0.4
SML				pmax	pmax		
	comp=Z,57nm,1.2s						
SCM	Sheep Creek Mo	81.15	20	eP	P	18 20 00.0	+0.7
	comp=Z,43nm,0.9s						
SCM	Sheep Creek Mo	81.15	20	eP	P	18 20 00.0	+0.7
SCM				pmax	pmax		
	comp=Z,43nm,0.9s						
DIV	Divide	81.21	21	eP	P	18 20 00.1	+0.5
	comp=Z,48nm,0.8s						
TRF	Thorofare Moun	81.34	18	eP	P	18 20 00.1	-0.3
	comp=Z,18nm,0.8s						
KLU	Klutina	81.41	21	eP	P	18 20 01.1	+0.5
	comp=Z,29nm,0.9s						
RND	Reindeer	81.75	19	eP	P	18 20 02.7	+0.3
	comp=Z,29nm,0.8s						
RND	Reindeer	81.75	19	eP	P	18 20 02.7	+0.3
RND				pmax	pmax		
	comp=Z,29nm,0.8s						
ZAK	Zakamensk	81.77	325	eP	P	18 20 01.7	-1.2
ZAK				pmax	pmax		
	comp=Z,28nm,1.1s						
RDOG	Red Dog Mine	81.87	11	eP	P	18 20 03.2	+0.3
	comp=Z,63nm,0.9s						
MCK	McKinley	81.96	19	eP	P	18 20 03.2	-0.3
	comp=Z,66nm,1.4s						
MCK	McKinley	81.96	19	eP	P	18 20 03.2	-0.3
MCK				pmax	pmax		
	comp=Z,66nm,1.4s						
DHY	Denali Highway	82.00	20	eP	P	18 20 04.1	+0.3
	comp=Z,20nm,1.0s						
IRK	Irkutsk	82.12	327	eP	P	18 20 03.8	-0.7
IRK				pmax	pmax		
	comp=Z,72nm,3.7s						
TLY	Talaya	82.19	326	eP	P	18 20 04.2	-0.7
	comp=Z,32nm,0.8s						
TLY				LR	LR		
	comp=Z,468nm,22.0s						
TLY	Talaya	82.19	326	eP	P	18 20 04.5	-0.4
TLY				eS	S	18 30 21.1	+4.0
TLY				eSS	SS	18 35 42.2	+4.4
TLY				pmax	pmax		
	comp=Z,73nm,0.7s						
TLY				MLR	MLR		
	comp=Z,1µm,19.0s						
TLY	Talaya	82.19	326	P	P	18 20 05.2	+0.3
	SNR=16						
IM3	Indian Mountai	82.25	15	eP	P	18 20 05.3	+0.4
KCPM	Cahto Peak	82.28	47	eP	P	18 20 06.4	+0.6
	comp=Z,51nm,0.9s						
HARP	HAARP	82.29	21	eP	P	18 20 06.0	+0.8
	comp=Z,58nm,0.8s						
MLY	Manley	82.36	17	eP	P	18 20 05.4	-0.1
	comp=Z,22nm,1.2s						
KMRM	Mail Ridge	82.38	47	eP	P	18 20 07.2	+0.9
	comp=Z,43nm,0.9s						
HOPS	Hopland Field	82.41	48	eP	P	18 20 07.8	+1.4
	comp=Z,56nm,1.1s						
BALM	Baldy	82.42	23	eP	P	18 20 06.7	+0.7
	comp=Z,37nm,0.6s						
BALM	Baldy	82.42	23	eP	P	18 20 06.7	+0.7
BALM				pmax	pmax		
	comp=Z,37nm,0.6s						
LSA	Lhasa	82.53	302	eP	P	18 20 06.7	-1.0
	comp=Z,40nm,1.6s						
LSA				LR	LR		
	comp=Z,1µm,21.0s						
LSA	Lhasa	82.53	302	eP	P	18 20 06.7	-1.0
LSA				pmax	pmax		
	comp=Z,40nm,1.6s						
LSA				MLR	MLR		
	comp=Z,1µm,21.0s						
GDXM	Geysers	82.54	48	eP	P	18 20 08.8	+1.6
	comp=Z,22nm,0.9s						
PAX	Paxson	82.56	20	eP	P	18 20 06.8	+0.1
	comp=Z,17nm,1.0s						
PAX	Paxson	82.56	20	eP	P	18 20 06.8	+0.1
PAX				pmax	pmax		
	comp=Z,17nm,1.0s						
KHMM	Horse Mountain	82.60	46	eP	P	18 20 08.6	+1.1
	comp=Z,89nm,1.5s						
WRH	Wood River Hil	82.75	18	eP	P	18 20 07.4	-0.1
	comp=Z,39nm,0.9s						
SAO	San Andreas Ge	82.86	51	eP	P	18 20 07.5	-1.2
	comp=Z,19nm,0.8s						
SAO	San Andreas Ge	82.86	51	eP	P	18 20 07.5	-1.2
SAO				pmax	pmax		
	comp=Z,19nm,0.8s						
O02D	Mt. Diablo Mer	83.03	47	P	P	18 20 11.1	+1.4
	baz=250,SNR=21						
MDM	Murphy Dome	83.05	18	eP	P	18 20 09.1	0.0
	comp=Z,38nm,0.8s						
HDA	Harding Lake	83.06	19	eP	P	18 20 08.7	-0.5
	comp=Z,88nm,0.8s						
HDA	Harding Lake	83.06	19	P	P	18 20 09.2	+0.1
	baz=226						
COLA	College	83.10	18	PFAKE		18 20 20.0	+11
COLA				LR	LR		
	comp=Z,2µm,22.0s						
COLA	College	83.10	18c	iP	P	18 20 09.0	-0.3
COLA				pmax	pmax		
	comp=Z,59nm,0.9s						
MENT	Mentasta	83.14	21	eP	P	18 20 10.7	+1.1
	comp=Z,133nm,1.7s						
L02E	Cave Junction	83.16	45	P	P	18 20 11.4	+1.2
	baz=249						
RIDG	Independ'e Rid	83.29	20	eP	P	18 20 10.6	+0.2
	comp=Z,195nm,1.6s						
J01E	Myrtle Point	83.30	44	P	P	18 20 12.3	+1.5
	baz=248						
K02D	Willamette Mer	83.31	44	P	P	18 20 12.2	+1.2
	baz=249,SNR=6.9						
ILAR	Eielson Array	83.33	18	P	P	18 20 10.5	0.0
	comp=Z,21nm,0.7s,baz=236,slow=5.2,SNR=299						
ILAR				PKKPbc	PKKPbc	18 38 30.3	-3.3
	comp=Z,0.8nm,0.6s,baz=356,slow=2.1,SNR=10.0						
ILAR				PKPPKP	P'P'df	18 46 36.9	+3.5
	comp=Z,0.9nm,1.0s,baz=179,slow=2.7,SNR=4.5						
ILAR				LR	LR	18 51 27.0	
	comp=Z,511nm,21.6s,baz=242,slow=31						
ILB	Eielson Array	83.33	18	eP	P	18 20 10.3	-0.2
IL1	Eielson Array	83.33	18	eP	P	18 20 09.5	-1.0
WDC	Whiskeytown Da	83.34	47	eP	P	18 20 12.3	+1.2
	comp=Z,52nm,1.6s						
WDC	Whiskeytown Da	83.34	47	eP	P	18 20 12.3	+1.2
WDC				pmax	pmax		
	comp=Z,52nm,1.6s						
N02D	Trinity Center	83.36	46	P	P	18 20 13.0	+1.7
	baz=250,SNR=12						
SCZ2	Santa Cruz Isl	83.38	54	P	P	18 20 12.4	+0.9
	baz=252						
POKR	Poker Plat Res	83.40	18	P	P	18 20 10.6	-0.3
	baz=226						
M02C	Callahan	83.41	46	P	P	18 20 13.0	+1.5
	baz=249,SNR=9.6						
DOT	Dot Lake	83.49	20	eP	P	18 20 11.9	+0.5
	comp=Z,70nm,1.2s						
PKM	Mcpherson Peak	83.52	53	P	P	18 20 13.7	+1.3
	baz=252						
YBH	Yreka Blue Hor	83.63	45	eP	P	18 20 13.8	+1.1
	comp=Z,24nm,0.9s						
YBH	Yreka Blue Hor	83.63	45	eP	P	18 20 13.8	+1.1
YBH				pmax	pmax		
	comp=Z,24nm,0.9s						
MOY	Mondy	83.65	325	eP	P	18 20 12.7	+0.1
MOY				pmax	pmax		
	comp=Z,53nm,2.5s						
I02D	Swisshome	83.70	43	P	P	18 20 14.3	+1.4
	baz=248						
SCRK	Sand Creek	83.73	20	eP	P	18 20 13.2	+0.4
	comp=Z,116nm,1.3s						
ORV	Oroville	83.74	48	eP	P	18 20 14.1	+0.9
	comp=Z,24nm,1.0s						
ORV	Oroville	83.74	48	eP	P	18 20 14.1	+0.9
ORV				pmax	pmax		
	comp=Z,24nm,1.0s						
HUMO	Hull Mountain	83.77	45	eP	P	18 20 14.8	+1.5
	comp=Z,32nm,0.9s						
O03E	Paynes Creek	83.78	47	P	P	18 20 14.3	+0.8
	baz=250,SNR=15						
I03D	Drain, OR	83.89	43	P	P	18 20 15.1	+1.3
	baz=249						
AFDM	Forest Hills D	83.93	49	eP	P	18 20 15.0	+0.7
	comp=Z,43nm,1.0s						
SCI2	San Clemente I	83.95	55	P	P	18 20 15.1	+0.7
	baz=253						
CMB	Columbia Colle	84.07	50	eP	P	18 20 15.4	+0.4
	comp=Z,22nm,0.9s						
CMB	Columbia Colle	84.07	50	eP	P	18 20 15.4	+0.4
CMB				pmax	pmax		
	comp=Z,22nm,0.9s						
L04D	Klamath Falls	84.08	45	P	P	18 20 15.7	+0.6
	baz=250,SNR=8.1						
COLD	Coldfoot	84.13	16	eP	P	18 20 15.7	+1.2
	comp=Z,9.9nm,0.9s						
CIS	Catalina Islan	84.18	55	P	P	18 20 16.3	+0.7
	baz=253						
M04C	Macdoel	84.26	46	P	P	18 20 17.1	+1.2
	baz=250,SNR=9.8						
PRP	Porcupine Dome	84.26	18	eP	P	18 20 14.8	-0.6
	comp=Z,9.7nm,1.0s						
OSI	Osito Audit: C	84.29	53	P	P	18 20 17.2	+1.0
	baz=253						
ARVC	Arvin	84.36	53	P	P	18 20 17.2	+0.8
	baz=253						
VES	Vestal, Richgr	84.38	52	P	P	18 20 17.3	+0.8
	baz=252						
G03D	McMinnville, O	84.50	42	P	P	18 20 18.2	+1.3
	baz=249						
I04A	Tendick Farm,	84.56	44	P	P	18 20 18.0	+0.7
	baz=249						
J04D	Umpqua Nationa	84.57	44	P	P	18 20 18.7	+1.1
	baz=250,SNR=7.6						
H04D	Lebanon	84.60	43	P	P	18 20 18.6	+1.1
	baz=249						
K04D	Chiloquin, OR	84.60	45	P	P	18 20 18.6	+0.9
	baz=250						
MWC	Mount Wilson	84.70	54	eP	P	18 20 19.4	+1.0
	comp=Z,25nm,1.0s						
BWNR	Bhubaneshwar	84.74	292	ex	P	18 20 13.7	-5.0
ISA	Isabella, Lake	84.80	52	eP	P	18 20 19.4	+0.6
ISA	Isabella, Lake	84.80	52	eP	P	18 20 19.4	+0.6
ISA	Isabella, Lake	84.80	52	P	P	18 20 19.7	+1.0
	baz=253,SNR=20						
MAW	Mawson	84.92	202	P	P	18 20 18.9	+0.2
	baz=85,SNR=6.8						
MAW	Mawson	84.92	202	eP	P	18 20 19.9	+1.2
	comp=Z,31nm,1.0s						
MAW	Mawson	84.92	202	P	P	18 20 19.8	+1.2
	comp=Z,94nm,1.0s,baz=119,slow=6.1,SNR=9.2						
MAW				LR	LR	18 55 13.5	
	comp=Z,382nm,18.4s,baz=115,slow=34						
MDPB	Devils Postpil	84.92	50	eP	P	18 20 20.4	+0.8
	comp=Z,32nm,0.9s						
WAKR	Walker	84.92	49	eP	P	18 20 20.4	+0.9
	comp=Z,46nm,1.2s						
EDW2	Edwards Air Fo	84.94	53	P	P	18 20 20.2	+0.7
	baz=253,SNR=33						
ODAN	Odare	84.94	298	eP	P	18 20 20.2	+0.3
	comp=Z,87nm,0.7s						
OMMB	Old Mammoth Mi	84.98	50	eP	P	18 20 20.9	+1.0
	comp=Z,29nm,1.2s						
PNTR	Pine Nut	84.99	49	eP	P	18 20 20.6	+0.7
	comp=Z,38nm,1.1s						
BFSC	Mount Baldy Ra	85.02	54	P	P	18 20 20.4	+0.4
	baz=253,SNR=9.4						
H04A	Detroit Lake	85.02	43	eP	P	18 20 20.1	+0.4
	comp=Z,39nm,1.3s						
FYU	Fort Yukon	85.06	18	eP	P	18 20 19.9	+0.7
	comp=Z,37nm,1.2s						
109C	Camp Elliot, M	85.08	55	P	P	18 20 21.0	+0.8
	baz=254						
WHY	Whitehorse	85.17	25	eP	P	18 20 19.4	-0.7
	comp=Z,95nm,2.0s						
J05D	Fort Rock, OR	85.19	44	P	P	18 20 21.9	+1.2
	baz=250						
EGAK	Eagle	85.19	20	eP	P	18 20 20.4	+0.5
	comp=Z,68nm,0.8s						
EGAK				LR	LR		
	comp=Z,1µm,21.0s						
MURC	Murrieta	85.21	55	P	P	18 20 21.6	+0.8
	baz=254						
YERR	Yerington	85.22	49	eP	P	18 20 21.5	+0.5
	comp=Z,29nm,1.4s						
TOLK	Toolik Lake Re	85.32	15	eP	P	18 20 21.4	+0.7
	comp=Z,13nm,0.8s						
TOLK	Toolik Lake Re	85.32	15	P	P	18 20 21.9	+1.3
	baz=224						
CWC	Cottonwood Cre	85.33	52	P	P	18 20 22.5	+0.9
	baz=253						
PAHR	Pah Rah Range	85.34	48	eP	P	18 20 22.5	+1.0
	comp=Z,29nm,1.1s						
LRMC	Laurel Mtn Rad	85.36	53	P	P	18 20 22.7	+1.0
	baz=253,SNR=12						
DAWY	Dawson	85.36	21	eP	P	18 20 21.3	+0.4
	comp=Z,26nm,0.8s						
TIN	Tinemaha, Big	85.40	51	P	P	18 20 22.9	+1.1
	baz=253						
E04D	Cinebar	85.44	41	P	P	18 20 23.0	+1.4
	baz=249						
D03D	Eldon	85.46	40	P	P	18 20 23.1	+1.4
	baz=249						
I05D	Terrebonne, OR	85.47	43	P	P	18 20 23.1	+1.2
	baz=250						
BOK	Bokaro	85.50	295	eP	P	18 20 21.9	-0.5
D04E	Lakebay	85.53	40	P	P	18 20 23.7	+1.7
	baz=249						
PINE	Pine Mountain	85.56	44	eP	P	18 20 23.8	+1.3
	comp=Z,28nm,0.8s						
MONP2	Monument Peak	85.63	55	P	P	18 20 24.1	+0.9
	baz=254,SNR=14						
RYN	Ryan	85.64	49	eP	P	18 20 23.7	+0.7
	comp=Z,19nm,0.9s						
RAMN	Ramite	85.65	298	eP	P	18 20 23.5	+0.1
DAC	Darwin (Calif)	85.66	52	eP	P	18 20 24.1	+0.9
DAC	Darwin (Calif)	85.66	52	eP	P	18 20 24.1	+0.9
MPMC	Manual Prospec	85.68	52	P	P	18 20 24.0	+0.7
	baz=253,SNR=20						
NV01	Mina Array Sit	85.75	50	eP	P	18 20 23.6	-0.1
NVAR	Mina Array Bea	85.75	50	P	P	18 20 24.9	+1.2
	comp=Z,22nm,0.9s,baz=232,slow=8.0,SNR=66						
NVAR				PKPPKP	P'P'df	18 46 33.5	+1.9
	comp=Z,0.3nm,0.5s,baz=132,slow=2.2,SNR=3.8						
NVAR				LR	LR	18 51 42.4	
	comp=Z,2µm,20.3s,baz=254,slow=31						
G05D	Wamic, OR	85.80	43	P	P	18 20 24.6	+1.1
	baz=250						
PFO	Pinyon Flats O	85.80	55	eP	P	18 20 24.5	+0.6
	comp=Z,12nm,0.8s						
PFO				LR	LR		
	comp=Z,2µm,19.0s						
PFO	Pinyon Flats O	85.80	55	iP	P	18 20 25.1	+1.2
PFO	Pinyon Flats O	85.80	55	P	P	18 20 24.9	+1.0
	baz=254,SNR=8.0						
XPFO	Pion Flat	85.80	55	eP	P	18 20 24.5	+0.6
	comp=Z,13nm,0.8s						
IKP	In-Ko-Pah, Jac	85.82	56	P	P	18 20 24.9	+1.0
	baz=254,SNR=5.3						
NV11	Mina Array Sit	85.86	50	eP	P	18 20 24.7	+0.5
	comp=Z,2.3nm,1.0s						
F05D	White Salmon	85.92	42	P	P	18 20 25.0	+0.9
	baz=250						
LON	Longmire	85.99	41	eP	P	18 20 24.3	-0.2
	comp=Z,21nm,1.5s						
LON	Longmire	85.99	41	eP	P	18 20 24.3	-0.2
LON				pmax	pmax		
	comp=Z,21nm,1.5s						
GSC	Goldstone, Bar	86.00	53	P	P	18 20 25.5	+0.7
	baz=254						
D05A	Enumclaw	86.03	41	eP	P	18 20 26.1	+1.6
	comp=Z,46nm,1.1s						
KVN	Kaiserville	86.09	49	eP	P	18 20 25.8	+0.5
	comp=Z,20nm,1.0s						
KVN	Kaiserville	86.09	49	eP	P	18 20 25.8	+0.5
KVN				pmax	pmax		
	comp=Z,20nm,1.0s						
A04D	Lummi Island	86.13	39	P	P	18 20 26.3	+1.4
	baz=249						
SWSC	Sam W. Stewart	86.15	56	P	P	18 20 26.3	+0.9
	baz=254,SNR=6.5						
JIRN	Jiri	86.18	299	eP	P	18 20 26.3	+0.1
	comp=Z,134nm,1.2s						
HEC	Hector,Ludlow	86.23	54	P	P	18 20 26.5	+0.6
	baz=254,SNR=20						
BELC	Belle Mtn. Jos	86.28	55	P	P	18 20 27.3	+1.0
	baz=254,SNR=22						
FURC	Furnace Creek,	86.28	52	P	P	18 20 27.2	+1.3
	baz=254						
B05A	Bryant	86.34	40	P	P	18 20 27.3	+1.2
	baz=249						
GUN	Gumba	86.50	299	eP	P	18 20 27.8	0.0
	comp=Z,76nm,1.0s						
SHOC	Shoshone, Teco	86.58	53	P	P	18 20 28.5	+1.0
	baz=254						
BC3	Big Chuckawall	86.62	55	P	P	18 20 29.1	+1.2
	baz=255,SNR=9.6						
I07A	Izee	86.64	44	eP	P	18 20 28.4	+0.7
	comp=Z,24nm,1.0s						
WVOR	Wild Horse Val	86.72	46	eP	P	18 20 28.6	+0.4
	comp=Z,37nm,1.2s						
WVOR	Wild Horse Val	86.72	46	eP	P	18 20 28.6	+0.4
WVOR				pmax	pmax		
	comp=Z,37nm,1.2s						
TUQ	Turquoise Moun	86.72	53	P	P	18 20 29.0	+0.6
	baz=254,SNR=16						
GMRC	Granite Mounta	86.76	54	P	P	18 20 29.3	+0.7
	baz=254,SNR=17						
B06A	Marblemount	86.82	39	eP	P	18 20 28.8	+0.4
	comp=Z,12nm,0.8s						
PKI	Pulchoki	86.83	299	eP	P	18 20 29.0	-0.3
	comp=Z,99nm,1.1s						
PKIN	Phulchoki	86.84	299	eP	P	18 20 29.1	-0.2
	comp=Z,74nm,1.2s						
TPNV	Topopah Spring	86.89	52	eP	P	18 20 29.4	+0.3
	comp=Z,8.8nm,0.8s						
TPNV	Topopah Spring	86.89	52	eP	P	18 20 29.5	+0.3
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TPNV	Topopah Spring	86.89	52	P	P	18 20 30.0	+0.8
	baz=254,SNR=11						
LTY	Liberty	86.90	41	eP	P	18 20 29.5	+0.6
	comp=Z,13nm,0.9s						
F07A	Phinny Hill Vi	86.93	42	eP	P	18 20 29.8	+0.8
	comp=Z,19nm,0.8s						
GLA	Glamis	86.97	56	eP	P	18 20 31.0	+1.4
	comp=Z,36nm,0.8s						
GLA	Glamis	86.97	56	eP	P	18 20 31.0	+1.4
GLA				pmax	pmax		
	comp=Z,36nm,0.8s						
GLA	Glamis	86.97	56	P	P	18 20 31.2	+1.7
	baz=255,SNR=8.4						
KKN	Kakani	86.99	299	eP	P	18 20 29.8	-0.2
	comp=Z,46nm,0.9s						
IRM	Iron Mountain	87.00	55	P	P	18 20 30.9	+1.2
	baz=255,SNR=32						
DMN	Daman	87.10	299	eP	P	18 20 30.7	+0.1
	comp=Z,143nm,1.1s						
J08A	Circle Bar Ran	87.12	45	eP	P	18 20 30.3	+0.2
	comp=Z,24nm,0.9s						
BMN	Battle Mountai	87.14	48	eP	P	18 20 31.1	+0.8
	comp=Z,14nm,1.1s						
BMN	Battle Mountai	87.14	48	eP	P	18 20 31.1	+0.8
BMN				pmax	pmax		
	comp=Z,14nm,1.1s						
E07A	Sunnyside	87.20	42	eP	P	18 20 31.0	+0.7
	comp=Z,27nm,1.0s						
LLLB	Lillooet	87.31	37	eP	P	18 20 31.3	+0.5
	comp=Z,12nm,0.9s						
HAWA	Hanford	87.36	42	eP	P	18 20 31.7	+0.6
	comp=Z,26nm,1.0s						
HAWA				LR	LR		
	comp=Z,1µm,20.0s						
G08A	Pilot Rock	87.39	43	eP	P	18 20 32.2	+0.8
	comp=Z,23nm,1.0s						
Y12C	Blythe	87.39	55	eP	P	18 20 32.7	+1.2
	comp=Z,31nm,0.8s						
Y12C	Blythe	87.39	55	P	P	18 20 32.9	+1.3
	baz=255,SNR=6.6						
NEE2	Needles Airpor	87.58	54	P	P	18 20 33.8	+1.4
	baz=255						
SHPR	Sheep Range	87.61	52	eP	P	18 20 33.2	+0.5
	comp=Z,22nm,1.1s						
EPYK	Eagle Plains	87.62	20	eP	P	18 20 31.8	-0.1
	comp=Z,22nm,0.8s						
EPYK	Eagle Plains	87.62	20	P	P	18 20 32.8	+0.9
	baz=236						
E08A	Dider Farm, El	87.70	42	eP	P	18 20 33.5	+0.8
	comp=Z,28nm,0.9s						
113A	Mohawk Valley,	87.76	56	eP	P	18 20 35.0	+1.7
R11A	Troy Canyon, C	87.77	50	eP	P	18 20 33.8	+0.3
	comp=Z,17nm,1.2s						
R11A	Troy Canyon, C	87.77	50	P	P	18 20 34.0	+0.6
	baz=254,SNR=17						
PDMCI	Parker Dam,Lak	87.84	55	P	P	18 20 34.8	+1.2
	baz=255,SNR=15						
B08A	Colville Reser	88.11	40	eP	P	18 20 34.9	+0.2
	comp=Z,11nm,0.9s						
W13A	Hualapai Mount	88.25	54	eP	P	18 20 36.8	+1.0
	comp=Z,24nm,1.1s						
E09A	Wood Farm, Sta	88.30	42	eP	P	18 20 36.5	+0.9
	comp=Z,12nm,0.9s						
214A	Organ Pipe Nat	88.35	57	P	P	18 20 37.4	+1.3
	baz=256,SNR=9.9						
BMO	Blue Mountains	88.37	44	eP	P	18 20 36.0	0.0
	comp=Z,12nm,1.0s						
BMO				LR	LR		
	comp=Z,2µm,22.0s						
BMO	Blue Mountains	88.37	44	eP	P	18 20 36.0	0.0
BMO				pmax	pmax		
	comp=Z,12nm,1.0s						
BMO				MLR	MLR		
	comp=Z,2µm,22.0s						
MDRS	Chennai	88.39	284	eP	P	18 20 36.1	-0.5
MDRS				IAmb	IAmb	18 20 37.7	
DANN	Dangsing	88.43	299	eP	P	18 20 36.2	-0.7
	comp=Z,61nm,0.8s						
KOLN	Koldanda	88.43	299	eP	P	18 20 36.1	-0.8
	comp=Z,50nm,1.0s						
C09A	Chrisman Ranch	88.61	41	eP	P	18 20 37.0	0.0
	comp=Z,8.4nm,0.9s						
Y14A	Wickenburg	88.67	55	eP	P	18 20 38.4	+0.7
	comp=Z,12nm,0.9s						
ELK	Elko	88.68	48	eP	P	18 20 38.7	+0.9
	comp=Z,45nm,1.8s						
ELK	Elko	88.68	48	eP	P	18 20 38.7	+0.9
ELK				pmax	pmax		
	comp=Z,45nm,1.8s						
F10A	Beach Ranch, E	88.75	43	eP	P	18 20 37.9	+0.1
	comp=Z,16nm,0.9s						
PYUN	Piuthan	89.03	299	eP	P	18 20 38.8	-0.9
	comp=Z,68nm,0.9s						
PSUT	Pine Spring	89.13	51	eP	P	18 20 40.6	+0.6
	comp=Z,16nm,0.9s						
WMQ	Urumqi	89.22	315	P	P	18 20 40.0	-0.1
WMQ				pP	pP	18 20 48.3	-3.9
WMQ				sP	sP	18 20 53.8	-2.8
WMQ				PP	PP	18 24 07.0	-4.0
WMQ				S	S	18 31 23.0	-3.5
WMQ				SS	SS	18 37 23.5	+2.0
WMQ				pmax	pmax		
	comp=Z,91nm,1.1s						
WMQ				LR	LR		
	comp=Z,730nm,24.9s						

WMQ				LR	LR		
	comp=Z,2µm,25.9s						
WMQ				LR	LR		
	comp=Z,2µm,24.9s						
WMQ	**Urumqi**	**89.22**	**315**	*e*P	**P**	**18 20 39.9**	**-0.1**
	comp=Z,157nm,1.9s						
WMQ	**Urumqi**	**89.22**	**315**	*e*P	**P**	**18 20 39.9**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,157nm,1.9s						
LCMT	**Little Creek M**	**89.22**	**52**	*e*P	**P**	**18 20 41.3**	**+1.0**
	comp=Z,29nm,1.0s						
CCUT	**Cedar City**	**89.27**	**52**	*e*P	**P**	**18 20 41.6**	**+1.0**
	comp=Z,25nm,0.9s						
SZCU	**Shurtz Canyon**	**89.49**	**52**	*e*P	**P**	**18 20 42.5**	**+0.9**
	comp=Z,25nm,0.9s						
NEW	**Newport**	**89.49**	**41**	*e*P	**P**	**18 20 41.6**	**+0.5**
	comp=Z,9.6nm,0.9s						
NEW	**Newport**	**89.49**	**41**	P	**P**	**18 20 41.4**	**+0.3**
	baz=253						
KNB	**Kanab**	**89.55**	**52**	*e*P	**P**	**18 20 43.4**	**+1.5**
	comp=Z,61nm,1.3s						
INK	**Inuvik**	**89.72**	**19**	*e*P	**P**	**18 20 41.1**	**-0.6**
	comp=Z,7.7nm,0.9s						
INK	**Inuvik**	**89.72**	**19**	P	**P**	**18 20 41.6**	**-0.1**
	comp=Z,3.8nm,0.7s,baz=282,slow=4.7,SNR=13						
INK				PKiKP	**PKiKP**	**18 25 37.9**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=272,slow=2.3,SNR=3.5						
U15A	**North Rim**	**89.83**	**53**	*e*P	**P**	**18 20 44.2**	**+0.9**
	comp=Z,42nm,0.8s						
HLID	**Hailey**	**90.01**	**46**	*e*P	**P**	**18 20 44.2**	**+0.3**
	comp=Z,12nm,0.9s						
HLID				LR	LR		
	comp=Z,1µm,19.0s						
HLID	**Hailey**	**90.01**	**46**	P	**P**	**18 20 45.2**	**+1.3**
	baz=255						
X16A	**Lo Mia Camp, P**	**90.04**	**55**	*e*P	**P**	**18 20 45.4**	**+1.2**
	comp=Z,23nm,0.8s						
PKCU	**Pink Cliffs**	**90.05**	**52**	*e*P	**P**	**18 20 46.1**	**+1.7**
	comp=Z,47nm,1.0s						
TUC	**Tucson**	**90.10**	**57**	*e*P	**P**	**18 20 46.1**	**+1.6**
	comp=Z,15nm,0.8s						
TUC	**Tucson**	**90.10**	**57**	P	**P**	**18 20 46.0**	**+1.6**
	baz=257						
TCRU	**Three Creeks R**	**90.22**	**51**	*e*P	**P**	**18 20 46.9**	**+1.8**
	comp=Z,35nm,0.8s						
MTPU	**Mount Pierson**	**90.29**	**51**	*e*P	**P**	**18 20 47.1**	**+1.5**
	comp=Z,30nm,0.9s						
DUG	**Dugway, Tooele**	**90.33**	**49**	*e*P	**P**	**18 20 45.7**	**+0.3**
	comp=Z,29nm,1.4s						
DUG				LR	LR		
	comp=Z,2µm,20.0s						
DUG	**Dugway, Tooele**	**90.33**	**49**	*e*P	**P**	**18 20 45.7**	**+0.3**
DUG				pmax	pmax		
	comp=Z,29nm,1.4s						
DUG				MLR	MLR		
	comp=Z,2µm,20.0s						
DUG	**Dugway, Tooele**	**90.33**	**49**	P	**P**	**18 20 46.4**	**+1.0**
	baz=256						
WUAZ	**Wupatki**	**90.34**	**54**	*e*P	**P**	**18 20 46.9**	**+1.3**
	comp=Z,29nm,0.9s						
WUAZ	**Wupatki**	**90.34**	**54**	P	**P**	**18 20 47.1**	**+1.5**
	baz=257						
BGU	**Big Grassy Mou**	**90.34**	**48**	*e*P	**P**	**18 20 46.5**	**+1.0**
	comp=Z,16nm,0.9s						
MSU	**Marysvale**	**90.41**	**51**	*e*P	**P**	**18 20 47.6**	**+1.7**
MSU	**Marysvale**	**90.41**	**51**	*e*P	**P**	**18 20 47.6**	**+1.7**
TRD	**Trivandrum**	**90.68**	**278**	*e*P	**P**	**18 20 46.4**	**-1.0**
TRD				IAmb	IAmb	18 20 49.3	
	comp=Z,30nm,1.0s						
HVU	**Hansel Valley**	**90.74**	**48**	*e*P	**P**	**18 20 48.1**	**+0.8**
	comp=Z,34nm,0.9s						
HVU	**Hansel Valley**	**90.74**	**48**	*e*P	**P**	**18 20 48.1**	**+0.8**
HVU				pmax	pmax		
	comp=Z,35nm,0.9s						
NLU	**North Lily Min**	**90.82**	**50**	*e*P	**P**	**18 20 47.5**	**-0.3**
	comp=Z,23nm,0.9s						
HYB	**Hyderabad**	**90.84**	**287**	*i* P	**P**	**18 20 48.0**	**-0.1**
HYB	**Hyderabad**	**90.84**	**287**	*e*P	**P**	**18 20 47.4**	**-0.8**
HYB				IAmb	IAmb	18 20 48.9	
	comp=Z,17nm,0.9s						
SPUT	**South Promonto**	**90.86**	**48**	*e*P	**P**	**18 20 48.7**	**+0.8**
	comp=Z,14nm,0.8s						
DGZ	**Jazzator, Alta**	**90.99**	**320***c*	*i*P	**P**	**18 20 47.7**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,16nm,0.8s						
NGP	**Nagpur**	**91.10**	**291**	*e*P	**P**	**18 20 47.8**	**-1.4**
NGP				IAmb	IAmb	18 20 49.6	
	comp=Z,15nm,0.4s						
319A	**Douglas**	**91.15**	**58**	*e*P	**P**	**18 20 50.7**	**+1.3**
	comp=Z,23nm,0.8s						
MPU	**Maple Canyon**	**91.16**	**50**	*e*P	**P**	**18 20 50.1**	**+0.7**
	comp=Z,36nm,1.3s						
MSO	**Missoula**	**91.17**	**43**	*e*P	**P**	**18 20 49.1**	**0.0**
	comp=Z,6.9nm,0.9s						
MSO	**Missoula**	**91.17**	**43**	P	**P**	**18 20 49.6**	**+0.5**
	baz=255						
CTU	**Camp Tracy**	**91.23**	**49**	*e*P	**P**	**18 20 50.2**	**+0.6**
	comp=Z,17nm,0.8s						
Q16A	**Castle Valley**	**91.26**	**51**	*e*P	**P**	**18 20 51.2**	**+1.4**
	comp=Z,36nm,1.1s						
TMUT	**Trail Mountain**	**91.32**	**50**	*e*P	**P**	**18 20 50.7**	**+0.4**
	comp=Z,16nm,0.9s						
MCMT	**McKenzie Canyo**	**91.42**	**45**	*e*P	**P**	**18 20 51.0**	**+0.5**
JLU	**Jordanelle**	**91.43**	**49**	*e*P	**P**	**18 20 51.3**	**+0.6**
	comp=Z,20nm,1.1s						
W18A	**Petrified Fore**	**91.56**	**55**	P	**P**	**18 20 52.6**	**+1.3**
	baz=258						
HWUT	**Hardware Ranch**	**91.58**	**48**	*e*P	**P**	**18 20 51.0**	**-0.2**
	comp=Z,6.6nm,0.8s						
HWUT				LR	LR		
	comp=Z,917nm,19.0s						
TCUT	**Toone Canyon**	**91.58**	**49**	*e*P	**P**	**18 20 52.1**	**+0.8**
	comp=Z,36nm,1.1s						
P17A	**Butcher Ranch,**	**91.71**	**50**	*e*P	**P**	**18 20 53.3**	**+1.4**
	comp=Z,43nm,1.8s						
DLMT	**Dillon**	**91.72**	**44**	*e*P	**P**	**18 20 52.6**	**+0.9**
	comp=Z,27nm,0.9s						
SRU	**San Rafael Swe**	**91.80**	**51**	*e*P	**P**	**18 20 53.0**	**+0.7**
	comp=Z,27nm,1.6s						
SRU	**San Rafael Swe**	**91.80**	**51**	*e*P	**P**	**18 20 53.0**	**+0.7**
SRU				pmax	pmax		
	comp=Z,27nm,1.6s						
LRM	**Limekiln Ridge**	**91.93**	**44**	*e*P	**P**	**18 20 53.5**	**+0.7**
DGAR	**Diego Garcia**	**92.09**	**262**	PFAKE		18 21 00.0	+6.0
DGAR				LR	LR		
	comp=Z,717nm,19.0s						
AHID	**Auburn Hatcher**	**92.17**	**47**	PFAKE		18 21 10.0	+16
AHID				LR	LR		
	comp=Z,949nm,20.0s						
QLMT	**Earthquake Lak**	**92.40**	**45**	*e*P	**P**	**18 20 56.2**	**+1.2**
FXWY	**Fox Creek**	**92.42**	**46**	*e*P	**P**	**18 20 55.3**	**+0.2**
	comp=Z,8.5nm,0.8s						
BOZ	**Bozeman (W)**	**92.44**	**44**	*e*P	**P**	**18 20 56.1**	**+1.0**
	comp=Z,15nm,1.0s						
BOZ				LR	LR		
	comp=Z,1µm,21.0s						
BOZ	**Bozeman (W)**	**92.44**	**44**	*e*P	**P**	**18 20 56.1**	**+1.0**
BOZ				pmax	pmax		
	comp=Z,15nm,1.0s						
BOZ				MLR	MLR		
	comp=Z,1µm,21.0s						
BOZ	**Bozeman (W)**	**92.44**	**44**	P	**P**	**18 20 56.1**	**+1.0**
	baz=257						
TPAW	**Teton Pass**	**92.44**	**46**	*e*P	**P**	**18 20 53.9**	**-1.4**
	comp=Z,129nm,0.6s						
IMW	**Indian Meadow**	**92.54**	**46**	*e*P	**P**	**18 20 56.5**	**+0.8**
	comp=Z,7.7nm,0.8s						
YHB	**Horse Butte**	**92.55**	**45**	*e*P	**P**	**18 20 56.8**	**+1.1**
	comp=Z,14nm,1.1s						
HRY	**Holter Researc**	**92.55**	**43**	*e*P	**P**	**18 20 55.9**	**+0.4**
121A	**Cookes Peak, D**	**92.63**	**58**	P	**P**	**18 20 57.6**	**+1.3**
	baz=259						
MOOW	**Moose Ponds**	**92.64**	**46**	*e*P	**P**	**18 20 56.5**	**+0.3**
	comp=Z,5.0nm,0.9s						
PV05	**Paradox Valley**	**92.67**	**52**	*e*P	**P**	**18 20 56.9**	**+0.5**
	comp=Z,9.7nm,1.0s						
YMR	**Madison River**	**92.69**	**45**	*e*P	**P**	**18 20 57.6**	**+1.3**
	comp=Z,28nm,1.3s						
LOHW	**Long Hollow**	**92.71**	**46**	*e*P	**P**	**18 20 56.5**	**0.0**
	comp=Z,14nm,1.4s						
YFT	**Old Faithful**	**92.73**	**45**	*e*P	**P**	**18 20 56.7**	**+0.1**
	comp=Z,7.4nm,0.9s						
PV09	**Paradox Valley**	**92.73**	**51**	*e*P	**P**	**18 20 55.3**	**-1.5**
FLWY	**Flagg Ranch**	**92.75**	**46**	*e*P	**P**	**18 20 55.9**	**-0.8**
	comp=Z,7.8nm,0.9s						
PV14	**Lion Creek, Pa**	**92.79**	**52**	*e*P	**P**	**18 20 56.4**	**-0.6**
	comp=Z,10nm,0.8s						
YHH	**Holmes Hill**	**92.79**	**45**	*e*P	**P**	**18 20 56.5**	**-0.5**
	comp=Z,9.9nm,1.4s						
PV19	**Morning Glory**	**92.81**	**52**	*e*P	**P**	**18 20 57.1**	**+0.1**
	comp=Z,9.9nm,0.8s						
PV23	**Carpenter Ridg**	**92.82**	**52**	*e*P	**P**	**18 20 57.8**	**+0.7**
	comp=Z,19nm,0.8s						
PV17	**East Wray Mesa**	**92.82**	**52**	*e*P	**P**	**18 20 57.9**	**+0.8**
	comp=Z,25nm,1.2s						
PV20	**West Nyswonger**	**92.83**	**52**	*e*P	**P**	**18 20 56.8**	**-0.3**
	comp=Z,9.9nm,0.8s						
PV16	**Nyswonger Mesa**	**92.86**	**52**	*e*P	**P**	**18 20 57.4**	**+0.1**
	comp=Z,7.8nm,1.0s						
PV21	**Cone Mtn., Par**	**92.87**	**51**	*e*P	**P**	**18 20 57.8**	**+0.5**
	comp=Z,32nm,1.4s						
PV04	**Paradox Valley**	**92.89**	**52**	*e*P	**P**	**18 20 58.2**	**+0.8**
	comp=Z,11nm,0.8s						
PV11	**David Mesa, Pa**	**92.89**	**52**	*e*P	**P**	**18 20 57.9**	**+0.5**
	comp=Z,9.8nm,1.0s						
H17A	**Grant Village**	**92.90**	**45**	*e*P	**P**	**18 20 58.6**	**+1.2**
	comp=Z,9.3nm,0.8s						
H17A	**Grant Village**	**92.90**	**45**	P	**P**	**18 20 59.1**	**+1.8**
	baz=258						
PV03	**Paradox Valley**	**92.90**	**52**	*e*P	**P**	**18 20 57.8**	**+0.3**
	comp=Z,9.8nm,1.2s						
PV13	**Radium Mtn., P**	**92.91**	**52**	*e*P	**P**	**18 20 58.2**	**+0.7**
	comp=Z,12nm,1.2s						
PV12	**Saucer Basin,**	**92.95**	**52**	*e*P	**P**	**18 20 58.2**	**+0.5**
	comp=Z,12nm,0.9s						
MVCO	**Mesa Verde**	**92.97**	**53**	PFAKE		18 21 10.0	+12
MVCO				LR	LR		
	comp=Z,2µm,19.0s						
MVCO	**Mesa Verde**	**92.97**	**53**	P	**P**	**18 20 58.1**	**+0.3**
	baz=259						
BHPL	**Bhopal**	**92.97**	**293**	*e*P	**P**	**18 20 56.5**	**-1.4**
BHPL				IAmb	IAmb	18 20 57.9	
	comp=Z,48nm,0.1s						
LKWY	**Lake**	**93.06**	**45**	*e*P	**P**	**18 21 00.7**	**+2.6**
	comp=Z,4.9nm,0.8s						
LKWY				LR	LR		
	comp=Z,2µm,21.0s						
PV01	**Paradox Valley**	**93.09**	**52**	*e*P	**P**	**18 20 57.5**	**-0.9**
	comp=Z,4.7nm,0.8s						
PV07	**Paradox Valley**	**93.09**	**52**	*e*P	**P**	**18 20 57.4**	**-1.0**
	comp=Z,9.7nm,0.9s						
BW06	**Boulder Array**	**93.28**	**47**	*e*P	**P**	**18 20 58.9**	**-0.3**
	comp=Z,8.0nm,1.1s						
BW06				LR	LR		
	comp=Z,953nm,20.0s						
BW06	**Boulder Array**	**93.28**	**47**	P	**P**	**18 20 59.4**	**+0.3**
	baz=258						
PD31	**Pinedale Array**	**93.28**	**47**	*e*P	**P**	**18 20 58.6**	**-0.5**
	comp=Z,8.2nm,1.2s						
PDAR	**Pinedale Array**	**93.28**	**47**	*e*P	**P**	**18 20 58.0**	**-1.1**
PDAR	**Pinedale Array**	**93.28**	**47**	P	**P**	**18 20 59.5**	**+0.3**
	comp=Z,5.3nm,0.9s,baz=253,slow=3.0,SNR=27						
PDAR				PKKP	**PKKPdf**	**18 38 07.2**	**+0.3**
	comp=Z,1.1nm,1.0s,baz=90,slow=3.6,SNR=5.6						
PDAR				PKPPKP		18 46 17.9	
	comp=Z,1.1nm,1.0s,baz=180,slow=3.0,SNR=3.9						
PDAR				LR	LR	18 55 50.3	
	comp=Z,477nm,21.9s,baz=268,slow=31						
MK01	**Makanchi Array**	**93.62**	**317**	*e*P	**P**	**18 20 59.5**	**-0.8**
MK31	**Makanchi Array**	**93.63**	**317**	*e*P	**P**	**18 20 59.5**	**-0.9**
	comp=Z,35nm,0.9s						
MK31	**Makanchi Array**	**93.63**	**317**	*e*P	**P**	**18 20 59.5**	**-0.9**
MK31				pmax	pmax		
	comp=Z,35nm,0.9s						
MK32	**Makanchi Array**	**93.63**	**317**	*e*P	**P**	**18 21 00.4**	**0.0**
MK32				*e*PKiKP	**PKiKP**	**18 25 45.5**	**-0.4**
MK32				*e*PKKPdf	**PKKPdf**	**18 38 05.0**	**-1.2**
MKAR	**Makanchi Array**	**93.63**	**317**	P	**P**	**18 21 00.4**	**0.0**
	comp=Z,32nm,0.8s,baz=98,slow=6.2,SNR=342						
MKAR				PKiKP	**PKiKP**	**18 25 45.5**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=194,slow=2.2,SNR=4.6						
MKAR				PKKP	**PKKPdf**	**18 38 05.0**	**-1.2**
	comp=Z,4.0nm,0.8s,baz=276,slow=3.3,SNR=21						
MKAR				LR	LR	19 05 53.6	
	comp=Z,305nm,18.0s,baz=114,slow=37						
ZAA0	**Zalesovo Array**	**93.63**	**324**	*e*P	**P**	**18 20 58.4**	**-1.7**
	comp=Z,32nm,1.0s						
ZAA1	**Zalesovo Array**	**93.63**	**324**	*e*P	**P**	**18 20 59.4**	**-0.8**
ZALV	**Zalesovo Beam**	**93.63**	**324**	*e*P	**P**	**18 20 58.4**	**-1.7**
ZALV	**Zalesovo Beam**	**93.63**	**324**	P	**P**	**18 20 59.4**	**-0.8**
	comp=Z,17nm,0.9s,baz=108,slow=4.8,SNR=60						
ZALV				LR	LR	19 02 46.6	
	comp=Z,489nm,20.7s,baz=73,slow=35						
DDI	**Dehra Dun**	**93.70**	**300**	*e*P	**P**	**18 20 59.8**	**-1.3**
O20A	**White River Ci**	**93.73**	**50**	P	**P**	**18 21 02.6**	**+1.4**
	baz=259						
MAKZ	**Makanchi**	**93.85**	**317**	*e*P	**P**	**18 21 00.4**	**-0.9**
	comp=Z,51nm,1.0s						
MAKZ	**Makanchi**	**93.85**	**317**	*e*P	**P**	**18 21 00.4**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,51nm,1.0s						
RLMT	**Red Lodge**	**93.96**	**45**	PFAKE		18 21 10.0	+7.8
RLMT				LR	LR		
	comp=Z,2µm,20.0s						
RLMT	**Red Lodge**	**93.96**	**45**	P	**P**	**18 21 02.8**	**+0.6**
	baz=259						
ANMO	**Albuquerque**	**94.17**	**55**	*e*P	**P**	**18 21 02.4**	**-0.9**
	comp=Z,8.4nm,1.3s						
ANMO				LR	LR		
	comp=Z,976nm,19.0s						
ANMO	**Albuquerque**	**94.17**	**55**	*e*P	**P**	**18 21 02.4**	**-0.9**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,976nm,19.0s						
ANMO	**Albuquerque**	**94.17**	**55**	P	**P**	**18 21 03.7**	**+0.3**
	baz=260						
EGMT	**Eagleton**	**94.21**	**42**	*e*P	**P**	**18 21 03.0**	**-0.1**
	comp=Z,15nm,0.8s						
EGMT				LR	LR		
	comp=Z,901nm,20.0s						
EGMT	**Eagleton**	**94.21**	**42**	P	**P**	**18 21 03.9**	**+0.8**
	baz=258						
MNCY	**Minicoy**	**94.45**	**278**	*e*P	**P**	**18 21 04.6**	**-0.2**
MNTX	**Cornudas Mount**	**94.48**	**59**	*e*P	**P**	**18 21 04.4**	**-0.2**
	comp=Z,6.2nm,0.8s						
MNTX				LR	LR		
	comp=Z,2µm,21.0s						
MNTX	**Cornudas Mount**	**94.48**	**59**	P	**P**	**18 21 05.9**	**+1.2**
	baz=260						
SMLA	**Simla**	**94.60**	**301**	*e*P	**P**	**18 21 04.2**	**-0.9**
SMLA				IAmb	IAmb	18 21 05.8	
	comp=Z,52nm,1.2s						
NVS	**Novosibirsk**	**94.73**	**325**	*e*P	**P**	**18 21 04.4**	**-0.8**
NVS				*i*		18 21 19.8	
NVS				*e*		18 24 48.3	
NVS				pmax	pmax		
	comp=E,12nm,1.3s						
NVS				pmax	pmax		
	comp=Z,24nm,1.3s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.1s						
YKA	**Yellowknife Ar**	**94.76**	**27**	P	**P**	**18 21 04.2**	**-0.9**
	comp=N,5.0nm,0.7s,baz=255,slow=4.7,SNR=59						
YKA				PP	**PP**	**18 24 52.1**	**-1.9**
	comp=N,0.8nm,0.9s,baz=251,slow=7.4,SNR=3.8						
YKA				PKiKP	**PKiKP**	**18 25 47.1**	**-0.1**
	comp=N,0.5nm,0.7s,baz=251,slow=1.1,SNR=5.6						
YKA				LR	LR	18 56 43.7	
	comp=N,132nm,21.3s,baz=252,slow=31						
YKB5	**Yellowknife Ar**	**94.76**	**27**	*e*P	**P**	**18 21 02.9**	**-2.2**
YKB5				*e*PKiKP	**PKiKP**	**18 25 46.7**	**-0.5**
YKW3	**Yellowknife Ar**	**94.77**	**27**	*e*P	**P**	**18 21 03.4**	**-1.8**
	comp=N,6.0nm,0.9s						
SDCO	**Great Sand Dun**	**95.41**	**53**	PFAKE		18 21 20.0	+11
SDCO				LR	LR		
	comp=Z,1µm,19.0s						
SDCO	**Great Sand Dun**	**95.41**	**53**	P	**P**	**18 21 09.4**	**+0.3**
	baz=260						
POO	**Poona**	**95.44**	**288**	*e*P	**P**	**18 21 07.9**	**-1.4**
POO				IAmb	IAmb	18 21 09.8	
	comp=Z,31nm,1.3s						
DHRM	**DHARAMSHALA**	**95.52**	**302**	*e*P	**P**	**18 21 08.2**	**-1.4**
DHRM				IAmb	IAmb	18 21 09.8	
	comp=Z,25nm,0.9s						
TXAR	**Lajitas Array**	**95.54**	**61**	P	**P**	**18 21 09.5**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=228,slow=5.5,SNR=18						
TXAR				PP	**PP**	**18 24 58.3**	**-2.9**
	comp=Z,1.8nm,1.1s,baz=247,slow=6.7,SNR=7.3						
TXAR				PKKP	**PKKPdf**	**18 38 02.5**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=103,slow=2.0,SNR=5.6						
TXAR				LR	LR	18 56 44.8	
	comp=Z,2µm,20.4s,baz=0.0,slow=31						
N23A	**Red Feather La**	**95.59**	**50**	P	**P**	**18 21 11.7**	**+1.9**
	baz=260						
ISCO	**Idaho Springs**	**95.66**	**51**	PFAKE		18 21 20.0	+10
ISCO				LR	LR		
	comp=Z,3µm,22.0s						
ISCO	**Idaho Springs**	**95.66**	**51**	P	**P**	**18 21 11.7**	**+1.5**
	baz=261						
Q24A	**Divide**	**95.88**	**52**	P	**P**	**18 21 11.9**	**+0.6**
	baz=261						
NRIK	**Noril'sk**	**96.12**	**340**	P	**P**	**18 21 10.0**	**-1.2**
NRIK				pmax	pmax		
	comp=Z,12nm,0.8s						
NRIK				MLR	MLR		
	comp=Z,881nm,21.9s						
NRIK	**Noril'sk**	**96.12**	**340**	P	**P**	**18 21 10.0**	**-1.2**
	comp=Z,12nm,0.8s,baz=112,slow=5.2,SNR=16						
NRIK				LR	LR	19 01 39.5	
	comp=Z,881nm,21.9s,baz=92,slow=34						
T25A	**Trinidad**	**96.17**	**53**	P	**P**	**18 21 13.2**	**+0.7**
	baz=261						
LAO	**LASA Array**	**96.33**	**44**	PFAKE		18 21 20.0	+7.2
LAO				LR	LR		
	comp=Z,1µm,22.0s						
KURK	**Kurchatov**	**96.73**	**320**	*e*P	**P**	**18 21 13.1**	**-1.3**
	comp=Z,49nm,1.8s						
KURK				*e*PKKPbc	**PKKPbc**	**18 37 57.6**	**-1.4**
KURK				LR	LR		
	comp=Z,2µm,22.0s						
KURK	**Kurchatov**	**96.73**	**320**	*e*P	**P**	**18 21 13.1**	**-1.3**
KURK				pmax	pmax		
	comp=Z,49nm,1.8s						
KURK				MLR	MLR		
	comp=Z,2µm,22.0s						
KURK	**Kurchatov**	**96.73**	**320**	P	**P**	**18 21 14.1**	**-0.3**
	SNR=6.0						
KURK				P	**P**	**18 21 14.1**	**-0.3**
	SNR=6.0						
KURBB	**Kurchatov Arra**	**96.78**	**320**	PKKP	**PKKPbc**	**18 37 57.6**	**-1.3**
	comp=Z,1.0nm,0.4s,baz=274,slow=3.2,SNR=11						
KSH	**Kashi**	**96.90**	**309**	P	**P**	**18 21 17.5**	**+1.9**
KSH				pP	pP	18 21 25.5	-2.3
KSH				PP	PP	18 25 19.3	+7.8
KSH				SKS	**SKSac**	**18 31 53.3**	**+3.5**
KSH				S	**S**	**18 32 33.0**	**-2.3**
KSH				sS	pS	18 32 48.5	-2.8
KSH				SS	**SS**	**18 39 17.8**	**+5.8**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				LR	LR		
	comp=Z,290nm,4.5s						
KSH				LR	LR		
	comp=Z,750nm,6.9s						
KSH				LR	LR		
	comp=Z,760nm,13.2s						
SNAA	**Sanae**	**97.24**	**184**	P	Pdif	18 21 16.9	+0.3
SNAA	**Sanae**	**97.24**	**184**	*e*P	**P**	**18 21 15.6**	**-0.9**
	comp=Z,10nm,1.2s						
SNAA	**Sanae**	**97.24**	**184**	*e*P	**P**	**18 21 15.6**	**-0.9**
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RSSD	**Black Hills**	**97.48**	**47**	P	Pdif	18 21 19.8	+1.5
	baz=262						
DGMT	**Dagmar**	**97.95**	**42**	*e*P	Pdif	18 21 20.2	+0.2
	comp=Z,10nm,0.8s						
DGMT				LR	LR		
	comp=Z,1µm,20.0s						
DGMT	**Dagmar**	**97.95**	**42**	P	Pdif	18 21 20.7	+0.6
	baz=263						
VNA3	**Neumayer Olymp**	**97.95**	**181**	P	**P**	**18 21 19.5**	**-0.1**
AMTX	**Amarillo**	**98.03**	**56**	*e*P	Pdif	18 21 20.8	0.0
	comp=Z,8.1nm,0.8s						
AMTX	**Amarillo**	**98.03**	**56**	P	Pdif	18 21 21.0	+0.2
	baz=262						
VNA2	**Neumayer--Watz**	**98.20**	**182**	P	**P**	**18 21 20.6**	**-0.2**
NIL	**Nilore**	**98.26**	**303**	PFAKE		18 21 30.0	+8.2
NIL				LR	LR		
	comp=Z,193nm,20.0s						
AAK	**Ala-Archa**	**98.43**	**312**	*e*P	**P**	**18 21 21.1**	**-1.4**
	comp=Z,4.4nm,0.9s						
AAK				LR	LR		
	comp=Z,839nm,21.0s						
AAK	**Ala-Archa**	**98.43**	**312**	*e*P	**P**	**18 21 21.1**	**-1.4**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK				MLR	MLR		
	comp=Z,839nm,21.0s						
JCT	**Junction City**	**99.03**	**61**	PFAKE		18 21 40.0	+15
JCT				LR	LR		
	comp=Z,2µm,19.0s						
JCT	**Junction City**	**99.03**	**61**	Pdiff	**Pdif**	**18 21 25.3**	**0.0**
	baz=263						
FFC	**Flin Flon**	**99.99**	**36**	*e*Pdif	**Pdif**	**18 21 28.4**	**-0.6**
FFC				LR	LR		
	comp=Z,2µm,21.0s						
FFC	**Flin Flon**	**99.99**	**36**	*e*P	**Pdif**	**18 21 28.4**	**-0.6**
FFC				MLR	MLR		
	comp=Z,2µm,21.0s						
BHJ	**Bhuj**	**100.03**	**292**	*e*P	**Pdif**	**18 21 28.9**	**-0.9**
BHJ				IAmb	IAmb	18 21 30.0	
	comp=Z,34nm,0.2s						
CBKS	**Cedar Bluff**	**100.05**	**52**	PFAKE		18 21 40.0	+10
CBKS				LR	LR		
	comp=Z,1µm,19.0s						
KVTX	**Kingsville**	**100.32**	**64**	PFAKE		18 21 40.0	+9.0
KVTX				LR	LR		
	comp=Z,830nm,20.0s						
KK31	**Karatay Array**	**101.39**	**312**	*e*Pdif	**Pdif**	**18 21 34.4**	**-1.1**
KK31	**Karatay Array**	**101.39**	**312**	*e*P	**Pdif**	**18 21 34.4**	**-1.1**
KKAR	**Karatay Array**	**101.39**	**312**	*e*Pdif	**Pdif**	**18 21 34.4**	**-1.1**
KKAR	**Karatay Array**	**101.39**	**312**	*e*P	**Pdif**	**18 21 34.4**	**-1.1**
BVAR	**Borovoye Array**	**102.04**	**322**	PKKPbc	PKKPbc	18 37 43.0	-1.0
	comp=Z,0.6nm,0.8s,baz=14,slow=3.1,SNR=3.9						
BRVK	**Borovoye**	**102.10**	**322**	*e*Pdif	**Pdif**	**18 21 37.2**	**-1.1**
BRVK				LR	LR		
	comp=Z,670nm,21.0s						
BRVK	**Borovoye**	**102.10**	**322**	*e*P	**Pdif**	**18 21 37.3**	**-1.1**
BRVK				MLR	MLR		
	comp=Z,670nm,21.0s						
KSU1	**Kansas State U**	**102.50**	**52**	PFAKE		18 21 50.0	+10
KSU1				LR	LR		
	comp=Z,1µm,21.0s						
ECSD	**EROS Data Cent**	**102.78**	**47**	PFAKE		18 21 50.0	+8.4
ECSD				LR	LR		
	comp=Z,1µm,21.0s						
AGMN	**Agassiz Nation**	**103.47**	**43**	PFAKE		18 22 00.0	+15
AGMN				LR	LR		
	comp=Z,906nm,20.0s						
ULM	**Lac du Bonnet**	**103.50**	**41**	Pdiff	**Pdif**	**18 21 43.2**	**-1.4**
	comp=Z,2.4nm,0.7s,baz=266,slow=4.8,SNR=4.5						
ULM				PKiKP	**PP**	**18 26 01.4**	**+0.4**
	comp=Z,3.8nm,1.2s,baz=236,slow=3.6,SNR=3.1						
NATX	**Nacogdoches**	**103.55**	**60**	PFAKE		18 22 00.0	+15
NATX				LR	LR		
	comp=Z,2µm,20.0s						
MIAR	**Mount Ida**	**104.64**	**57**	PFAKE		18 22 00.0	+10
MIAR				LR	LR		
	comp=Z,2µm,21.0s						
EYMN	**Ely**	**106.40**	**43**	PFAKE		18 26 20.0	+11
EYMN				LR	LR		
	comp=Z,2µm,22.0s						
PLCA	**Paso Flores**	**106.77**	**139**	PKiKP	**PKiKP**	**18 26 09.8**	**0.0**
	comp=Z,1.7nm,0.9s,baz=207,slow=4.5,SNR=3.0						
PLCA				PKKPbc	**PKKPbc**	**18 37 27.5**	**-1.8**
	comp=Z,2.1nm,0.8s,baz=68,slow=5.1,SNR=4.9						
EFI	**East Falkland**	**106.96**	**153**	PFAKE		18 26 20.0	+10
EFI				LR	LR		
	comp=Z,924nm,19.0s						
JFWS	**Jewell Farm**	**107.41**	**48**	PFAKE		18 26 20.0	+9.3
JFWS				LR	LR		
	comp=Z,879nm,22.0s						
COWI	**Conover**	**108.09**	**45**	PFAKE		18 26 20.0	+8.1
COWI				LR	LR		
	comp=Z,2µm,21.0s						
HDIL	**Hopedale**	**108.17**	**51**	PFAKE		18 26 20.0	+7.8
HDIL				LR	LR		
	comp=Z,3µm,22.0s						
ARU	**Arti**	**108.69**	**326**	PFAKE		18 26 20.0	+7.4
ARU				LR	LR		
	comp=Z,579nm,20.0s						
BRAL	**Brewton**	**110.01**	**61**	PFAKE		18 26 30.0	+14
BRAL				LR	LR		
	comp=Z,2µm,22.0s						
JTS	**JuntasAbangare**	**110.40**	**83**	PFAKE		18 26 30.0	+13
JTS				LR	LR		
	comp=Z,930nm,21.0s						
GEYT	**Alibeck**	**110.74**	**306**	PKiKP	**PKiKP**	**18 26 16.4**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=264,slow=1.5,SNR=3.7						

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GEYT                                    PP         PP         18 26 53.2  -1.4
       comp=Z,2.2nm,0.8s,baz=76,slow=7.6,SNR=3.5
KBS    Kingsbay           110.84 355    PFAKE                 18 26 30.0  +14
KBS                                     LR         LR
       comp=Z,870nm,20.0s
GLMI   Grayling           111.36  46    PFAKE                 18 26 30.0  +12
GLMI                                    LR         LR
       comp=Z,2µm,20.0s
HOPE   Hope Point         112.28 166    PFAKE                 18 26 30.0  +10
HOPE                                    LR         LR
       comp=Z,526nm,20.0s
AAM    Ann Arbor          112.30  49    PFAKE                 18 26 30.0  +10
AAM                                     LR         LR
       comp=Z,2µm,19.0s
LCO    Las Campanas       112.39 128    PFAKE                 18 26 30.0 +9.1
LCO                                     LR         LR
       comp=Z,860nm,21.0s
ABPO   Ambohimpanom       112.73 244    PFAKE                 18 26 30.0 +8.4
ABPO                                    LR         LR
       comp=Z,347nm,20.0s
ACSO   Alum Creek Sta     113.00  51    PFAKE                 18 26 30.0 +8.7
ACSO                                    LR         LR
       comp=Z,1µm,22.0s
GOGA   Godfrey            113.03  58    PFAKE                 18 26 30.0 +8.4
GOGA                                    LR         LR
       comp=Z,2µm,20.0s
NNA    Nana               113.54 108    PFAKE                 18 26 40.0  +17
NNA                                     LR         LR
       comp=Z,445nm,21.0s
LVZ    Lovozero           114.85 342    PFAKE                 18 26 40.0  +16
LVZ                                     LR         LR
       comp=Z,1µm,21.0s
BCIP   Isla Barro Col     115.24  85    PFAKE                 18 26 40.0  +14
BCIP                                    LR         LR
       comp=Z,598nm,22.0s
BLA    Blacksburg         115.27  54    PFAKE                 18 26 40.0  +14
BLA                                     LR         LR
       comp=Z,2µm,22.0s
APA    Apatity            115.42 342⇑iPKIKP    PKiKP      18 26 23.1  -2.0
APA                                     pmax       pmax
       comp=Z,8.0nm,0.9s
APA                                     MLR        MLR
       comp=Z,3µm,18.0s
TMCR   Tamitsa            115.75 337  ePKIKP     PKiKP      18 26 24.0  -1.8
TMCR                                    pmax       pmax
       comp=Z,8.0nm,0.8s
KEV    Kevo               115.78 345    PFAKE                 18 26 40.0  +14
KEV                                     LR         LR
       comp=Z,3µm,19.0s
NHSC   New Hope           115.80  59    PFAKE                 18 26 40.0  +13
NHSC                                    LR         LR
       comp=Z,2µm,21.0s
ARA0   ARCESS Array S     116.30 346  ePKPdf     PKPdf      18 26 25.6  -1.3
ARA0                                  ePKKPbc    PKKPbc     18 36 56.0  -2.6
ARCES  ARCESS Array B     116.30 346    PKP        PKPdf      18 26 25.6  -1.3
       comp=Z,12nm,0.5s,baz=74,slow=1.8,SNR=76
ARCES                                   PKKPbc     PKKPbc     18 36 56.0  -2.6
       comp=Z,3.1nm,0.9s,baz=170,slow=2.2,SNR=9.7
LVC    Limon Verde        116.70 122    PFAKE                 18 26 40.0  +11
LVC                                     LR         LR
       comp=Z,846nm,21.0s
KLMR   Klimovskoe         116.77 334  ePKIKP     PKPdf      18 26 26.3  -1.6
KLMR                                    pmax       pmax
       comp=Z,12nm,0.9s
KLMR   Klimovskoe         116.77 334  ePKPdf     PKPdf      18 26 26.4  -1.5
KLMR                                    AMP                   18 26 28.1
       comp=Z,12nm,0.9s
CNNC   Cliffs of the      117.51  56    PFAKE                 18 26 40.0  +10
CNNC                                    LR         LR
       comp=Z,2µm,20.0s
CBN    Corbin Frederi     117.56  53    PFAKE                 18 26 40.0  +10
CBN                                     LR         LR
       comp=Z,2µm,20.0s
BINY   Binghamton         117.95  48    PFAKE                 18 26 40.0 +9.2
BINY                                    LR         LR
       comp=Z,2µm,22.0s
MAK    Makhachkala        118.18 313  i P        Pdif       18 22 47.3  -2.8
MAK                                   i                       18 26 29.6
MAK                                   e                       18 27 43.4
MAK                                   e                       18 33 21.3
MAK                                   ePS        PS         18 37 31.9  -1.5
MAK                                   eSS        SS         18 43 58.6  -0.8
MAK                                   eSSS       SSS        18 48 19.8
MTDJ   Mount Denham       118.31  75    PFAKE                 18 26 40.0 +7.7
MTDJ                                    LR         LR
       comp=Z,533nm,20.0s
LONY   Lake Ozonia        118.44  45    PFAKE                 18 26 40.0 +8.3
LONY                                    LR         LR
       comp=Z,1µm,21.0s
PRAC   Prado              119.25  92  eP         PKPdf      18 26 33.0  -1.2
PRAC   Prado              119.25  92  eP         PKPdf      18 26 33.0  -1.2
GROC   Groznyy            119.35 314  i PKIKP    PKPdf      18 26 33.3  -0.1
GROC                                  e                       18 27 54.0
GROC                                  e                       18 33 42.9
GROC                                    pmax       pmax
       comp=Z,12nm,0.6s
VRH    Novokhopyorsk      119.65 323  ePKIKP     PKPdf      18 26 33.4  -0.3
VRH                                     pmax       pmax
       comp=Z,30nm,0.8s
SCHQ   Schefferville      119.80  32    PKP        PKPdf      18 26 33.3  -0.7
       comp=Z,5.5nm,0.8s,baz=292,slow=4.6,SNR=5.7
SCHQ                                    PKKPbc     PKKPab     18 36 45.0  -0.2
       comp=Z,7.2nm,0.9s,baz=147,slow=3.1,SNR=7.3
ZARC   Zaragoza, Cauc     119.89  88  eP         PKPdf      18 26 33.6  -1.7
ZARC   Zaragoza, Cauc     119.89  88  eP         PKPdf      18 26 33.6  -1.7
LPAZ   La Paz             119.98 116  ePKPdf     PKPdf      18 26 35.8  -0.4
LPAZ   La Paz             119.98 116  ePKIKP     PKPdf      18 26 35.8  -0.4
LPAZ   La Paz             119.98 116    PKP        PKPdf      18 26 34.9  -1.3
       comp=Z,4.7nm,0.8s,baz=26,slow=0.6,SNR=9.1
TBLG   Delisi             120.45 312  ePKPdf     PKiKP      18 26 35.9  +0.2
TBLG   Delisi             120.45 312  ePKIKP     PKiKP      18 26 35.9  +0.2
CHIC   Chingaza           120.54  91  eP         PKPdf      18 26 36.3  -0.8
CHIC   Chingaza           120.54  91  eP         PKPdf      18 26 36.3  -0.8
GTBY   Guantanamo Bay     120.66  73    PFAKE                 18 26 50.0  +13
GTBY                                    LR         LR
       comp=Z,721nm,20.0s
LPSR   Galich'ya Gora     120.71 326  ePKIKP     PKPdf      18 26 35.3  -0.4
LPSR                                    pmax       pmax
       comp=Z,20nm,1.0s
GNI    Garni              120.80 310  ePKPdf     PKiKP      18 26 37.1  +0.4
GNI                                     LR         LR
       comp=Z,646nm,21.0s
GNI    Garni              120.80 310c iPKIKP     PKiKP      18 26 37.2  +0.6
ZEI    Tsey               120.80 313  i PKIKP    PKPdf      18 26 36.1  -0.4
ZEI                                     pmax       pmax
       comp=Z,7.0nm,0.9s
OBN    Obninsk            120.86 329    PFAKE                 18 26 50.0  +14
OBN                                     LR         LR
       comp=Z,725nm,20.0s
OBN    Obninsk            120.86 329⇓iPKIKP    PKPdf      18 26 34.8  -1.1
OBN                                   e                       18 28 11.7
OBN                                   e                       18 33 37.1
OBN                                     pmax       pmax
       comp=Z,53nm,1.7s
VSR    Storozhevoye       121.14 324  i PKIKP    PKPdf      18 26 36.1  -0.5
KBZ    Khabaz             121.26 315    PKP        PKPdf      18 26 36.9  -0.2
       comp=Z,4.5nm,0.8s,baz=134,slow=3.0,SNR=16
KBZ                                     PKKPbc     PKKPbc     18 36 41.0  +1.2
       comp=Z,0.8nm,0.8s,baz=109,slow=3.5,SNR=4.2
KIV    Kislovodsk         121.35 315    PFAKE                 18 26 50.0  +12
KIV                                     LR         LR
       comp=Z,614nm,21.0s
KIV    Kislovodsk         121.35 315  i PKIKP    PKPdf      18 26 36.8  -0.6
KIV                                     pmax       pmax
       comp=Z,7.0nm,1.0s
IGDI   IGDIR              121.35 310  i P        PKiKP      18 26 39.0  +1.3
IGDI                                    IAML_P
       comp=Z,262nm,0.8s
RUSC   La Rusia           121.39  90  eP         PKPdf      18 26 37.6  -1.2
RUSC   La Rusia           121.39  90  eP         PKPdf      18 26 37.6  -1.2
NEY    Neytrino           121.51 314  i PKIKP    PKiKP      18 26 38.7  +0.7
EAK    Akyaka             121.52 311  i P        PKiKP      18 26 38.1  +0.1
EAK                                     IAML_P
       comp=Z,685nm,0.7s
CLDR   Caldiran           121.63 309  i P        PKiKP      18 26 45.2  +6.8
CLDR                                    IAML_P
       comp=Z,201nm,0.3s
FIA1   FINESS Array S     121.77 339  ePKPdf     PKPdf      18 26 36.7  -0.8
FIA0   FINESS Array S     121.78 339  ePKPdf     PKPdf      18 26 36.6  -0.9
FIA0                                  ePKKPbc    PKKPab     18 36 37.0  +0.6
FIA0   FINESS Array S     121.78 339  ePKIKP     PKPdf      18 26 36.6  -0.9
FINES  FINESS Array B     121.78 339    PKP        PKPdf      18 26 36.6  -0.9
       comp=Z,11nm,0.8s,baz=44,slow=1.3,SNR=33
FINES                                   PKKPbc     PKKPab     18 36 37.0  +0.6
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       comp=Z,5.7nm,1.2s,baz=243,slow=8.4,SNR=3.4
EPOS   Posof              121.97 312  i P        PKiKP      18 26 39.9  +1.0
RAYN   Ar Rayn            122.18 291  ePKPdf     PKPdf      18 26 39.6  +0.1
RAYN                                    LR         LR
       comp=Z,652nm,21.0s
RAYN   Ar Rayn            122.18 291  ePKIKP     PKPdf      18 26 39.6  +0.1
RAYN                                    MLR        MLR
       comp=Z,652nm,21.0s
ARTV   Artvin             122.63 312  i P        PKiKP      18 26 41.2  +0.9
ARTV                                    IAML_P
       comp=Z,998nm,0.7s
DAGI   Agillar            122.67 312  i P        PKiKP      18 26 41.0  +0.7
DAGI                                    IAML_P
       comp=Z,227nm,0.7s
DBOC   Borcka             122.78 312  i P        PKiKP      18 26 40.4  +0.1
DBOC                                    IAML_P
       comp=Z,605nm,0.8s
BCA    Borcka             122.78 312⇑iP        PKiKP      18 26 40.5  +0.2
DBAD   Bademkaya          122.84 312  i P        PKiKP      18 26 41.7  +1.1
DBAD                                    IAML_P
       comp=Z,754nm,0.8s
HOMI   Horasan            122.94 311  i P        PKiKP      18 26 42.4  +1.5
HOMI                                    IAML_P
       comp=Z,84nm,0.1s
SIRT   Sirnak             123.12 308  ePKPdf     PKiKP      18 26 41.1  -0.1
BATG   Bathurst New B     123.30  40  ePKPdf     PKPdf      18 26 40.4  -0.5
VSU    Vasula             123.48 336  i PKIKP    PKPdf      18 26 40.9   0.0
VSU    Vasula             123.48 336  eP         PKiKP      18 26 41.3  +0.2
VSU                                     IAmb       IAmb       18 26 42.0
       comp=Z,65nm,0.8s
ECAT   Cat-ERZURUM        123.74 310  i P        PKiKP      18 26 43.3  +0.8
CPUP   Villa Florida      123.89 132  ePKPdf     PKPdf      18 26 42.4  -0.3
CPUP   Villa Florida      123.89 132    PKP        PKPdf      18 26 41.8  -0.9
       comp=Z,12nm,0.8s,baz=268,slow=2.0,SNR=26
BAYB   BAYBURT            124.10 311  i P        PKiKP      18 26 49.6  +6.3
BAYB                                    IAML_P
       comp=Z,32nm,0.1s
SDV    Santo Domingo      124.22  87  ePKPdf     PKPdf      18 26 43.0  -0.8
SDV    Santo Domingo      124.22  87    PKP        PKPdf      18 26 43.5  -0.4
       comp=Z,23nm,0.7s,baz=161,slow=2.2,SNR=38
GRTK   Grand Turk         124.38  71    PFAKE                 18 27 00.0  +16
GRTK                                    LR         LR
       comp=Z,987nm,21.0s
ANN    Anapa              124.65 317  eP         Pdif       18 23 24.4  +5.6
ANN                                   e                       18 28 38.4
ANN                                     pmax       pmax
       comp=Z,114nm,1.6s
ANN                                     MLR        MLR
       comp=N,882nm,22.0s
ANN                                     MLR        MLR
       comp=Z,959nm,22.0s
EUZM   Uzumlu             124.66 311  i P        PKiKP      18 26 45.7  +1.5
EUZM                                    IAML_P
       comp=Z,230nm,0.2s
NRS    Narsarsuaq         124.83  18  ePKPdf     PKPdf      18 26 42.9  -0.5
NRS    Narsarsuaq         124.83  18  ePKIKP     PKPdf      18 26 42.9  -0.5
BOSA   Boshof             125.38 223    PKP        PKPdf      18 26 45.5  -0.1
       comp=Z,12nm,0.8s,baz=85,slow=0.7,SNR=17
IZAR   Zarasai            125.42 333  eP         PKPdf      18 26 44.6  -0.1
IZAR                                    IAmb       IAmb       18 26 45.3
       comp=Z,6.9nm,0.8s
IDID   Didziasalis        125.47 333  eP         PKPdf      18 26 44.7  -0.1
IDID                                    IAmb       IAmb       18 26 46.2
       comp=Z,15nm,0.9s
ISAL   Salakas            125.58 333  eP         PKPdf      18 26 44.8  -0.2
ISAL                                    IAmb       IAmb       18 26 46.5
       comp=Z,8.7nm,0.9s
SUR    Sutherland         125.58 216    PFAKE                 18 27 00.0  +14
SUR                                     LR         LR
       comp=Z,2µm,22.0s
IIGN   Ignalina           125.68 333  eP         PKiKP      18 26 45.5  -0.1
IIGN                                    IAmb       IAmb       18 26 46.7
       comp=Z,13nm,0.7s
NACGM  Naroch             125.70 332  e          PKPdf      18 26 43.0  -2.2
SIV    San Ignacio        126.26 119    PKP        PKPdf      18 26 47.5   0.0
       comp=Z,7.2nm,0.9s,baz=281,slow=2.4,SNR=26
NC303  NORSAR Array S     126.47 345  ePKPdf     PKPdf      18 26 46.4  -0.2
NB2    NORSAR Subarra     126.67 345    PKPdf      PKPdf      18 26 46.7  -0.3
       comp=Z,11nm,0.8s,baz=33,slow=2.0
NB2    NORSAR Subarra     126.67 345    PKPdf      PKPdf      18 26 46.7  -0.3
       baz=33,slow=2.0
NB200  NORSAR Array S     126.67 345  ePKPdf     PKPdf      18 26 46.9  -0.2
NOA    NORSAR Array B     126.67 345    PKP        PKPdf      18 26 46.9  -0.2
       comp=Z,8.2nm,0.8s,baz=33,slow=2.0,SNR=23
NC602  NORSAR Array S     126.85 345  ePKPdf     PKPdf      18 26 47.0  -0.3
AKASG  Malin Array Be     126.92 327    PKP        PKPdf      18 26 47.1  -0.6
       comp=Z,6.5nm,0.8s,baz=62,slow=2.2,SNR=27
AKBB   Malin Array Si     126.92 327  ePKPdf     PKPdf      18 26 46.4  -1.3
AKBB   Malin Array Si     126.92 327  ePKIKP     PKPdf      18 26 46.4  -1.3
KIEV   Kiev               126.94 327  ePKPdf     PKPdf      18 26 46.4  -1.3
KIEV                                    LR         LR
       comp=Z,1µm,22.0s
KIEV   Kiev               126.94 327⇑iP        PKPdf      18 26 47.2  -0.5
KIEV   Kiev               126.94 327  ⇑PKIKP     PKPdf      18 26 47.2  -0.5
AK11   Malin Array Si     126.97 327  ePKPdf     PKPdf      18 26 46.4  -1.4
PBUR   Paburg             127.06 336  eP         PKiKP      18 26 48.8  +0.5
PBUR                                    IAmb       IAmb       18 26 49.1
       comp=Z,119nm,1.0s
KMBO   Kilima Mbogo       127.67 260  ePKPdf     PKPdf      18 26 49.8  -0.8
KMBO                                    LR         LR
       comp=Z,610nm,20.0s
KMBO   Kilima Mbogo       127.67 260    P          PKiKP      18 26 52.1  +1.0
       SNR=6.0
KMBO   Kilima Mbogo       127.67 260    PKP        PKPdf      18 26 50.5  -0.1
       comp=Z,5.8nm,1.0s,baz=133,slow=1.8,SNR=12
SUW    Suwalki            127.89 333  ePKP       PKPdf      18 26 49.5   0.0
SUW    Suwalki            127.89 333  ePKPdf     PKPdf      18 26 49.4  -0.1
SUW    Suwalki            127.89 333  ePKIKP     PKPdf      18 26 49.5   0.0
BR101  Keskin Array S     129.09 313  ePKPdf     PKPdf      18 26 52.2  -0.2
BR101                                 ePP        PP         18 29 00.6  +0.1
BR131  Keskin Array S     129.09 313  ePKPdf     PKPdf      18 26 51.1  -1.4
BRTR   Keskin Array B     129.09 313    PKP        PKPdf      18 26 52.2  -0.2
       comp=Z,5.7nm,0.9s,baz=145,slow=3.5,SNR=20
BRTR                                    PP         PP         18 29 00.6  +0.1
       comp=Z,2.3nm,0.9s,baz=85,slow=3.0,SNR=3.9
SJG    San Juan           129.13  76  ePKPdf     PKPdf      18 26 51.7  -1.1
SJG    San Juan           129.13  76  ePKIKP     PKPdf      18 26 51.7  -1.1
HUMP   Col San Antoni     129.42  76  ePKPdf     PKPdf      18 26 52.5  -0.9
ANTO   Ankara             129.65 313  ePKPdf     PKPdf      18 26 52.9  -0.5
ANTO                                    LR         LR
       comp=Z,470nm,22.0s
ANTO   Ankara             129.65 313⇑iP        PKiKP      18 26 54.3  +0.2
ANTO   Ankara             129.65 313  ePKIKP     PKPdf      18 26 52.9  -0.5
ANTO                                    MLR        MLR
       comp=Z,470nm,22.0s
TLCR                      130.01 321⇑iP        PKiKP      18 26 54.9  +0.3
TLCR                      130.01 321  ⇑PKIKP     PKiKP      18 26 54.9  +0.3
LVV    L'vov              130.16 329  ePKIKP     PKiKP      18 26 54.6  -0.1
LVV                                     MLR        MLR
       comp=Z,400nm,21.0s
BEL    Belsk              130.43 332  ePKP       PKiKP      18 26 55.8  +0.6
BEL    Belsk              130.43 332  ePKIKP     PKiKP      18 26 55.8  +0.6
CFR    Carcaliu           130.43 321⇑iP        PKiKP      18 26 55.2  -0.2
CFR    Carcaliu           130.43 321  ⇑PKIKP     PKiKP      18 26 55.2  -0.2
TIRR   Tirgusor           130.62 321⇑iP        PKiKP      18 26 55.7  -0.1
TIRR   Tirgusor           130.62 321  ⇑PKIKP     PKiKP      18 26 55.7  -0.1
BIZ    Bicaz              130.71 324⇑iP        PKiKP      18 26 56.3  +0.3
LSZ    Lusaka             130.78 239  ePKPdf     PKPdf      18 26 56.0  -0.2
LSZ                                     LR         LR
       comp=Z,2µm,21.0s
LSZ    Lusaka             130.78 239  ePKIKP     PKPdf      18 26 56.0  -0.2
LSZ                                     MLR        MLR
       comp=Z,2µm,21.0s
LSZ    Lusaka             130.78 239    PP         PP         18 29 11.7  -0.1
       comp=Z,2.8nm,0.9s,baz=135,slow=2.9,SNR=3.1
TLB    Topalu             130.79 321⇑iP        PKPdf      18 26 55.5  +0.3
TLB    Topalu             130.79 321  ⇑PKIKP     PKPdf      18 26 55.5  +0.3
BUR08  Bucovina Ar. S     130.82 326  ePKPdf     PKiKP      18 26 56.4  +0.1
BUR04  Bucovina Ar. S     130.83 326  ePKPdf     PKPdf      18 26 55.7  +0.3
BURAR  Bucovina Array     130.83 326⇑iP        PKiKP      18 26 56.6  +0.3
BURAR  Bucovina Array     130.83 326  ⇑PKIKP     PKiKP      18 26 56.6  +0.3
VRI    Vrincioaia         130.93 323⇑iP        PKPdf      18 26 55.1  -0.4
VRI    Vrincioaia         130.93 323  ⇑PKIKP     PKPdf      18 26 55.1  -0.4
GKP    Gorka Klasztor     130.94 336  ePKP       PKiKP      18 26 56.9  +0.8
GKP    Gorka Klasztor     130.94 336  ePKIKP     PKiKP      18 26 56.9  +0.8
KWP    Kalwaria Pacla     130.95 329  ePKP       PKiKP      18 26 56.1  -0.3
KWP    Kalwaria Pacla     130.95 329  ePKIKP     PKiKP      18 26 56.1  -0.3
MLR    Muntele Rosu       131.59 323  ePKPdf     PKPdf      18 26 56.5  -0.5
MLR    Muntele Rosu       131.59 323⇓iP        PKiKP      18 26 58.0  +0.1
MLR    Muntele Rosu       131.59 323  ⇓PKIKP     PKiKP      18 26 58.0  +0.1
DOPR   Dopca              131.66 324⇑iP        PKiKP      18 26 57.6  -0.3
SECR                      131.76 322⇑iP        PKiKP      18 26 57.9  -0.2
UZH    Uzhgorod           131.79 328  ePKIKP     PKPdf      18 26 55.9  -1.1
UZH                                   e                       18 27 04.7
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TRPA   Tarpa              131.97 328⇑iP        PKiKP      18 26 57.9  -0.5
OJC    Ojcow              131.98 331  ePKP       PKiKP      18 26 58.0  -0.4
OJC    Ojcow              131.98 331  ePKPdf     PKPdf      18 26 56.9  -0.5
OJC    Ojcow              131.98 331  ePKIKP     PKiKP      18 26 58.0  -0.4
CJR    Cluj-Napoca        132.25 325⇑iP        PKiKP      18 26 59.1   0.0
CJR    Cluj-Napoca        132.25 325  ⇑PKIKP     PKiKP      18 26 59.1   0.0
NIE    Niedzica           132.28 330  ePKP       PKiKP      18 26 59.0  -0.2
NIE    Niedzica           132.28 330  ePKIKP     PKiKP      18 26 58.9  -0.2
ARR    Arges              132.43 323⇑iP        PKiKP      18 26 59.5  -0.1
HUMR   Humele             132.69 322⇑iP        PKPdf      18 26 58.2  -0.7
DRGR                      132.70 326⇓iP        PKPdf      18 26 59.2  +0.3
DRGR                      132.70 326  ⇓PKIKP     PKPdf      18 26 59.2  +0.3
PTGA   Pitinga            132.84 101  ePKPdf     PKPdf      18 26 59.8  -0.2
PTGA   Pitinga            132.84 101    PKP        PKPdf      18 26 59.4  -0.7
       comp=Z,5.8nm,0.5s,baz=53,slow=1.7,SNR=12
LANS   Liptovska Anna     132.87 330  ePKIKP     PKiKP      18 27 00.1  -0.2
LANS   Liptovska Anna     132.87 330  ePKP       PKiKP      18 27 00.1  -0.2
OKC    Ostrava-Krasne     133.02 332    AMS        AMS        19 20 30.0
       comp=Z,2µm,27.3s
KSP    Ksiaz              133.12 334  ePKP       PKiKP      18 27 00.4  -0.3
KSP    Ksiaz              133.12 334  ePKIKP     PKiKP      18 27 00.4  -0.3
MANT   Manisa             133.22 313  ePKPdf     PKPdf      18 26 60.0  -0.4
ANWB   Willy Bob          133.29  76    PFAKE                 18 27 10.0 +8.1
ANWB                                    LR         LR
       comp=Z,897nm,21.0s
GRGR   Grenville          133.32  84    PFAKE                 18 27 10.0 +7.9
GRGR                                    LR         LR
       comp=Z,463nm,19.0s
MORC   Moravsky Berou     133.34 332  ePKPdf     PKPdf      18 26 59.1  -0.9
MORC   Moravsky Berou     133.34 332⇑iP        PKiKP      18 27 00.6  -0.6
MORC   Moravsky Berou     133.34 332  ePKIKP     PKPdf      18 26 59.1  -0.9
MORC   Moravsky Berou     133.34 332  ePKP       PKiKP      18 27 01.3  +0.1
DPC    Dobruska-Polom     133.47 334  ePKPDF     PKiKP      18 27 02.1  +0.6
DPC                                     AMS        AMS        19 24 30.0
       comp=Z,2µm,20.7s
DPC    Dobruska-Polom     133.47 334  ePKIKP     PKiKP      18 27 02.1  +0.6
DPC                                     MLR        MLR
       comp=Z,2µm,20.7s
PSZ    Piszkesteto        133.47 329  ePKPdf     PKiKP      18 27 01.1  -0.5
PSZ    Piszkesteto        133.47 329  ePKiKP     PKiKP      18 27 01.0  -0.6
GZR    Gura Zlata         133.49 324⇑iP        PKPdf      18 27 00.9  +0.4
GZR    Gura Zlata         133.49 324  ⇑PKIKP     PKPdf      18 27 00.9  +0.4
UPC    Upice              133.49 334  ePKPDF     PKiKP      18 27 01.9  +0.4
UPC                                     AMS        AMS        19 25 10.0
       comp=Z,1µm,19.9s
UPC    Upice              133.49 334  ePKIKP     PKiKP      18 27 01.9  +0.4
UPC                                     MLR        MLR
       comp=Z,1µm,19.9s
SIRR   Siria              133.59 326⇑iP        PKPdf      18 27 00.9  +0.3
VYHS   Vyhne              133.62 330  ePKIKP     PKiKP      18 27 01.3  -0.5
VYHS   Vyhne              133.62 330  ePKP       PKiKP      18 27 01.3  -0.5
JAVC   Velka Javorina     133.93 331  ePKP       PKiKP      18 27 02.2  -0.3
BZS    Buzias             134.01 325⇑iP        PKPdf      18 27 01.1  -0.2
BZS    Buzias             134.01 325  ⇑PKIKP     PKPdf      18 27 01.1  -0.2
BRG    Berggiesshubel     134.08 336  ePKP       PKPdf      18 27 01.2  -0.1
       comp=Z,14nm,0.9s
       comp=N,760nm,16.4s
       comp=E,557nm,16.7s
       comp=Z,1µm,23.1s
BRG    Berggiesshubel     134.08 336  ePKIKP     PKPdf      18 27 01.2  -0.1
BRG                                     pmax       pmax
       comp=Z,14nm,0.9s
BRG                                     MLR        MLR
       comp=N,760nm,16.4s
BRG                                     MLR        MLR
       comp=E,557nm,16.7s
BRG                                     MLR        MLR
       comp=Z,1µm,23.1s
PVCC   Panska Ves         134.09 335  ePKPDF     PKiKP      18 27 02.1  -0.6
PVCC                                    AMS        AMS        19 23 30.0
       comp=Z,2µm,26.9s
PVCC   Panska Ves         134.09 335  ePKIKP     PKiKP      18 27 02.1  -0.6
PVCC                                    MLR        MLR
       comp=Z,2µm,26.9s
MBAR   Mbarara            134.09 258    PFAKE                 18 27 10.0 +6.0
MBAR                                    LR         LR
       comp=Z,831nm,21.0s
VRAC   Vranov             134.11 332⇓iP        PKiKP      18 27 02.8   0.0
VRAC   Vranov             134.11 332  ⇓PKIKP     PKiKP      18 27 02.8   0.0
VRAC   Vranov             134.11 332  ePKP       PKiKP      18 27 02.5  -0.3
CLL    Collm              134.12 337  ePKPdf     PKPdf      18 27 00.6  -0.7
CLL    Collm              134.12 337  i PKPdf    PKPdf      18 27 01.3   0.0
       comp=Z,20nm,0.9s
CLL                                   e                       18 27 06.0
CLL                                   epPKPdf    pPKPdf     18 27 12.0  -2.0
CLL                                   ePP        PP         18 29 30.0  -1.8
CLL                                   ePKSdf     PKSdf      18 30 38.0  +0.5
CLL                                   ePPS       PPS        18 41 36.0
CLL                                   ePPPrev                 18 42 48.0
CLL                                   eSSS       SSS        18 52 48.0
CLL                                     LmV                   19 30 00.0
       comp=Z,700nm,20.0s
CLL    Collm              134.12 337  i PKIKP    PKPdf      18 27 01.3   0.0
CLL                                   e                       18 27 12.0
CLL                                     pmax       pmax
       comp=Z,20nm,0.9s
CLL                                     MLR        MLR
       comp=Z,700nm,20.0s
EZN    Ezine              134.19 316⇑iP        PKPdf      18 27 02.3  +0.5
EZN    Ezine              134.19 316  ⇑PKIKP     PKPdf      18 27 02.3  +0.5
KRUC   Moravsky           134.37 332  ePKP       PKPdf      18 27 01.8  -0.1
MODS   Modra-Piesok       134.45 331  ePKIKP     PKiKP      18 27 03.5   0.0
MODS   Modra-Piesok       134.45 331  ePKP       PKiKP      18 27 03.5   0.0
GOPC   GO Pecny, Ondr     134.46 334  ePKPDF     PKiKP      18 27 03.0  -0.5
GOPC                                    AMS        AMS        19 27 40.0
       comp=Z,1µm,15.5s
GOPC   GO Pecny, Ondr     134.46 334  ePKIKP     PKiKP      18 27 03.0  -0.5
GOPC                                    MLR        MLR
       comp=Z,1µm,15.5s
MDVR   Moldovita          134.46 324⇑iP        PKPdf      18 27 02.2  -0.1
PRU    Pruhonice          134.51 334  ePKPDF     PKiKP      18 27 04.0  +0.5
PRU                                     AMS        AMS        19 24 10.0
       comp=Z,1µm,18.2s
PRU    Pruhonice          134.51 334  ePKIKP     PKiKP      18 27 04.0  +0.5
PRU                                     MLR        MLR
       comp=Z,1µm,18.2s
TREC   Trest              134.61 333  ePKPDF     PKiKP      18 27 04.1  +0.3
TREC                                    AMS        AMS        19 26 00.0
       comp=Z,2µm,23.4s
TREC   Trest              134.61 333  ePKIKP     PKiKP      18 27 04.1  +0.3
TREC                                    MLR        MLR
       comp=Z,2µm,23.4s
ZST    Bratislava         134.66 331  ePKIKP     PKPdf      18 27 03.1  +0.6
ZST    Bratislava         134.66 331  ePKP       PKPdf      18 27 03.1  +0.6
VTS    Vitosha            134.79 321  ePKPdf     PKPdf      18 27 02.1  -1.0
VTS    Vitosha            134.79 321⇑iP        PKPdf      18 27 02.5  -0.5
VTS    Vitosha            134.79 321  ⇑PKIKP     PKPdf      18 27 02.6  -0.5
ESK    Eskdalemuir        134.93 351    PFAKE                 18 27 10.0 +5.8
ESK                                     LR         LR
       comp=Z,554nm,19.0s
CONA   Conrad Observa     135.44 332  i PKiKP    PKPdf      18 27 04.4  +0.3
       comp=Z,8.8nm,0.7s
KHC    Kasperske Hory     135.57 334  ePKPdf     PKPdf      18 27 04.3  +0.1
KHC    Kasperske Hory     135.57 334  ePKPDF     PKiKP      18 27 05.0  -0.8
KHC                                     AMS        AMS        19 25 20.0
       comp=Z,2µm,22.6s
KHC    Kasperske Hory     135.57 334  ePKIKP     PKiKP      18 27 05.0  -0.8
KHC                                     MLR        MLR
       comp=Z,2µm,22.6s
GEC2   GERESS Array S     135.73 334  ePKPdf     PKPdf      18 27 04.5  -0.1
GERES  GERESS Array B     135.73 334    PKhKP      PKPpre     18 26 52.1
       comp=Z,1.3nm,0.7s,baz=64,slow=3.1,SNR=13
GERES                                   PKP        PKPdf      18 27 04.7  +0.1
       comp=Z,6.4nm,0.8s,baz=36,slow=1.8,SNR=24
GERES                                   PKKP       PKKPdf     18 36 44.2  -2.6
       comp=Z,0.4nm,0.6s,baz=151,slow=3.0,SNR=3.7
GEA0   GERESS Array S     135.74 334  ePKPpre    PKPpre     18 26 51.8
DIVS   Divibare           135.85 325  ePKPdf     PKPdf      18 27 05.1  +0.1
MOA    Molln              136.23 333  i PKPdf    PKPdf      18 27 04.9  -0.6
       comp=Z,5.6nm,0.7s
SOKA   Soboth             136.73 331  i PKiKP    PKPdf      18 27 06.8  +0.3
       comp=Z,8.7nm,1.0s
FNA    Florina            136.96 320  ePKPdf     PKPdf      18 27 05.0  -2.1
MEM    Membach            137.17 341  ⇑PKiKP     PKPdf      18 27 07.0  -0.1
BDFB   Brasilia           137.18 127  ePKPpre    PKPpre     18 27 00.1
BDFB                                  ePKPdf     PKPdf      18 27 08.1  -0.1
BDFB                                  ePKPdf     PKPdf      18 27 08.4  +0.1
BDFB   Brasilia           137.18 127    PKhKP      PKPpre     18 27 00.1
       comp=Z,2.7nm,0.7s,baz=231,slow=4.7,SNR=4.9
BDFB                                    PKP        PKPdf      18 27 08.4  +0.1
       comp=Z,17nm,0.8s,baz=306,slow=1.1,SNR=14
KBA    Koelnbreinsper     137.22 332  i PKPdf    PKPdf      18 27 07.6  +0.1
       comp=Z,13nm,1.1s
AGG    Agios Georgios     137.28 317  ePKPdf     PKPdf      18 27 07.2  -0.5
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PDG	Podgorica	137.30	323	⇑iP	PKPdf	18 27 07.3	-0.2
TTG	Podgorica	137.30	323	ePKPdf	PKPdf	18 27 06.9	-0.6
WATA	Walderalm	137.81	334	ePKiKP	PKiKP	18 27 10.1	-0.4
	comp=Z,2.7nm,0.5s						
WTTA	Wattenberg	137.84	334	ePKPdf	PKPdf	18 27 07.8	-0.8
	comp=Z,6.0nm,0.6s						
ABTA	Abfaltersbach	137.84	333	i PKPdf	PKPdf	18 27 08.2	-0.3
	comp=Z,13nm,0.9s						
WLF	Walferdange	137.94	340	ePKPdf	PKPdf	18 27 07.3	-1.2
WLF	Walferdange	137.94	340	⇑PKiKP	PKiKP	18 27 09.6	-0.9
MOTA	Moosalm	138.00	334	ePKiKP	PKiKP	18 27 10.3	-0.7
	comp=Z,3.1nm,0.6s						
RETA	Reutte	138.03	335	ePKPdf	PKPdf	18 27 08.5	-0.4
	comp=Z,3.9nm,1.3s						
SQTA	Sankt Quirin	138.05	334	ePKiKP	PKPdf	18 27 09.7	+0.7
	comp=Z,2.5nm,0.6s						
DOU	Dourbes	138.06	342	⇑PKiKP	PKiKP	18 27 10.5	-0.2
BFO	Black Forest	138.31	338	ePKPdf	PKiKP	18 27 10.3	-1.1
BFO				LR	LR		
	comp=Z,25nm,20.0s						
BFO	Black Forest	138.31	338	i PKIKP	PKiKP	18 27 11.9	+0.5
FETA	Feichten	138.41	334	i PKPdf	PKPdf	18 27 09.1	-0.6
	comp=Z,15nm,0.9s						
DAVA	Damuels	138.55	335	ePKiKP	PKiKP	18 27 11.6	-0.5
	comp=Z,7.1nm,0.7s						
FUORN	Ofenpass-Fuorn	138.92	334	ePKPpre	PKPpre	18 27 00.1	
DAVOX	Davos/Dischmat	138.96	335	PKhKP	PKPpre	18 27 02.4	
	baz=166,slow=1.6						
DAVOX				PKP	PKPdf	18 27 11.4	+0.7
	comp=Z,23nm,0.9s						
TUE	Stuetta	139.43	335	ePKPdf	PKPdf	18 27 09.5	-2.1
SENIN	Lac Senin/Sane	140.33	337	ePKPdf	PKPdf	18 27 11.0	-2.3
CLF	Chambon-Foret	140.60	343	ePKPdf	PKPdf	18 27 11.8	-1.6
AQU	L'Aquila	140.62	327	ePKPpre	PKPpre	18 27 06.2	
AQU	L'Aquila	140.62	327	ePKHKP	PKPpre	18 27 06.2	
TIP	Timpagrande	140.78	321	ePKPdf	PKPdf	18 27 12.6	-1.5
BNI	Bardonecchia	141.66	336	ePKPpre	PKPpre	18 27 07.9	
BNI	Bardonecchia	141.66	336	ePKHKP	PKPpre	18 27 07.9	
SSB	Saint Sauveur	142.28	338	ePKPpre	PKPpre	18 27 12.8	
VAE	Valguarnera	143.28	321	PKP	PKPdf	18 27 19.6	+0.9
	comp=Z,14nm,0.8s,baz=136,slow=3.0,SNR=4.3						
VAE				PKKP	PKKPdf	18 36 28.6	-3.4
	comp=Z,13nm,0.6s,baz=78,slow=3.7,SNR=5.5						
CLTB	Caltabellotta	143.95	322	ePKPdf	PKPbc	18 27 18.4	+0.7
TAMR	Tamra	146.71	325	ePKPdf	PKPbc	18 27 25.7	-0.4
KEST	Kesra	147.50	323	ePKPbc	PKPbc	18 27 28.9	+0.4
KEST	Kesra	147.50	323	PKPbc	PKPbc	18 27 29.1	+0.6
	comp=Z,101nm,0.9s,baz=328,slow=0.5,SNR=60						
PBRG	Braganca	148.61	350	ePKPdf	PKPbc	18 27 31.0	-0.2
PGAV	Gavieira, Arco	148.69	352	ePKPdf	PKPbc	18 27 31.7	+0.2
PGAV	Gavieira, Arco	148.69	352	eLR	LR	19 23 50.0	
	comp=Z,835nm,20.0s						
PCAB	Cabril	148.91	351	ePKPdf	PKPbc	18 27 32.2	+0.2
POLO	Lamas de Olo	149.20	351	ePKPdf	PKPbc	18 27 33.2	+0.4
MVO	Moncorvo	149.28	350	ePKPdf	PKPbc	18 27 33.2	+0.2
MVO	Moncorvo	149.28	350	eLR	LR	19 18 58.7	
	comp=Z,1µm,22.0s						
PVRL	Vila Real	149.29	351	ePKPdf	PKiKP	18 27 33.6	-0.5
PTO	Porto	149.55	352	ePKPdf	PKiKP	18 27 34.3	-0.3
PVIS	Viseu	149.86	351	ePKPdf	PKiKP	18 27 35.0	-0.4
ES19	SONSECA Array	149.99	344	ePKPdf	PKPdf	18 27 30.2	+0.3
ESDC	Sonseca Array	150.03	344	PKP	PKPdf	18 27 30.0	+0.1
	comp=Z,29nm,0.9s,baz=15,slow=2.5,SNR=32						
ESDC				PKPbc	PKiKP	18 27 35.3	-0.5
	comp=Z,19nm,0.7s,baz=2.6,slow=3.5,SNR=58						
ESDC				PKPab	pPKPdf	18 27 41.7	-0.9
	comp=Z,27nm,0.8s,baz=11,slow=3.4,SNR=21						
ESLA	Sonseca Array	150.03	344	ePKPbc	PKPbc	18 27 34.7	-0.1
MTE	Manteigas	150.11	350	ePKPdf	PKPbc	18 27 35.2	+0.1
MTE	Manteigas	150.11	350	eLR	LR	19 22 34.9	
	comp=Z,1µm,20.0s						
MTE	Manteigas	150.11	350	ePKPbc	PKPbc	18 27 35.1	+0.1
PAB	San Pablo	150.25	345	ePKPbc	PKPbc	18 27 35.8	+0.3
PAB	San Pablo	150.25	345	ePKIKP	PKPbc	18 27 35.8	+0.3
PCAS	Casmilo, Conde	150.60	351	ePKPdf	PKPbc	18 27 36.1	0.0
PCBR	Castelo Branco	150.65	350	ePKPdf	PKPbc	18 27 36.5	+0.3
PTOM	Tomar	151.01	351	ePKPdf	PKPbc	18 27 37.3	+0.2
PMRV	Marv??o	151.03	349	ePKPdf	PKiKP	18 27 37.5	-0.3
PMRV	Marv??o	151.03	349	eLR	LR	19 23 17.3	
	comp=Z,799nm,18.0s						
PMTG	Montargil	151.52	351	ePKPdf	PKPbc	18 27 38.4	+0.1
PESTR	Estremoz	151.61	349	ePKPdf	PKPbc	18 27 38.6	+0.1
PESTR	Estremoz	151.61	349	ePKPbc	PKPbc	18 27 38.1	-0.4
PMAFR	Mafra	151.79	352	eLQ	LQ	18 27 49.0	
SHEL	Horse Pasture	152.06	197	ePKPbc	PKiKP	18 27 41.0	+0.4
SHEL				LR	LR		
	comp=Z,438nm,19.0s						
PBEJ	Beja	152.48	350	ePKPdf	PKiKP	18 27 42.0	+1.2
PNCL	Nicolau / Gran	152.51	351	ePKPdf	PKiKP	18 27 41.0	+0.2
RCBR	Riachuelo	152.54	126	ePKPbc	PKPbc	18 27 40.9	-0.5
RCBR	Riachuelo	152.54	126	ePKIKP	PKPbc	18 27 40.9	-0.5
MESJ	Messejana	152.72	350	ePKPdf	PKPdf	18 27 33.5	-0.5
MESJ				AMS	AMS	19 42 07.9	
	comp=Z,533nm,16.9s						
MESJ	Messejana	152.72	350	ePKPdf	PKPdf	18 27 34.9	+0.9
MESJ	Messejana	152.72	350	ePKIKP	PKPdf	18 27 33.4	-0.5
PVAQ	Vaqueiros	153.06	349	ePKPdf	PKiKP	18 27 42.8	+0.8
PTEO	Sao Teotonio	153.09	351	ePKPdf	PKiKP	18 27 42.0	0.0
PBDV	Barranco-do-Ve	153.25	349	ePKPdf	PKiKP	18 27 43.4	+1.0
MORF	Marmelete	153.31	351	ePKPdf	PKPdf	18 27 33.8	-1.1
MORF				AMS	AMS	19 40 42.4	
	comp=Z,799nm,20.2s						
MORF	Marmelete	153.31	351	ePKPdf	PKiKP	18 27 43.1	+0.5
MORF	Marmelete	153.31	351	ePKIKP	PKPdf	18 27 33.8	-1.1
PFVI	Vila Bisbo	153.51	351	ePKPdf	PKPdf	18 27 37.1	+2.0
MDT	Midelt	156.59	340	PKP	PKPdf	18 27 39.4	-0.2
	comp=Z,2.1nm,0.8s,baz=32,slow=7.5,SNR=3.9						
MDT				PKPab	PKPab	18 28 06.9	-1.5
	comp=Z,11nm,1.1s,baz=334,slow=8.0,SNR=4.3						
TOA0	Torodi Ar. Sit	164.51	280	ePKPdf	PKPdf	18 27 46.4	-2.2
TOA0	Torodi Ar. Sit	164.51	280	P	PKPdf	18 27 50.0	+1.4
	SNR=6.7						
TORD	Torodi Ar. Bea	164.51	280	PKP	PKPdf	18 27 47.8	-0.8
	comp=Z,10.0nm,1.0s,baz=74,slow=1.0,SNR=36						
TORD				PKPab	PKPab	18 28 43.0	-0.7
	comp=Z,9.3nm,1.0s,baz=92,slow=3.9,SNR=9.5						
TOA1	Torodi Ar. Sit	164.52	280	ePKPdf	PKPdf	18 27 47.8	-0.8
TOA1				ePKPab	PKPab	18 28 43.0	-0.7
SACV	Santiago Islan	169.80	66	PFAKE		18 28 00.0	+7.5
SACV				LR	LR		
	comp=Z,971nm,21.0s						
KIC	Kosan Boka	169.80	244	ePKIKP	PKPdf	18 27 51.9	-0.7
	comp=Z,116nm,1.2s						
KIC	Kosan Boka	169.80	244	eP	PKPab	18 29 07.1	+0.2
	comp=Z,59nm,1.1s						
LIC	Lamto	169.99	243	ePKIKP	PKPdf	18 27 52.0	-0.7
	comp=Z,127nm,1.5s						
LIC	Lamto	169.99	243	eP	PKPab	18 29 07.8	0.0
	comp=Z,89nm,1.1s						
DBIC	Dimbokro	170.04	246	ePKPdf	PKPdf	18 27 51.4	-1.2
DBIC				ePKPab	PKPab	18 29 08.4	+0.4
DBIC	Dimbokro	170.04	246	PKP	PKPdf	18 27 52.1	-0.5
	comp=Z,20nm,0.9s,baz=38,slow=1.6,SNR=16						
DBIC				PKPab	PKPab	18 29 08.4	+0.4
	comp=Z,7.9nm,0.8s,baz=95,slow=4.2,SNR=5.5						
DBIC				PP	PP	18 32 54.4	-3.6
	comp=Z,2.5nm,0.9s,baz=109,slow=7.7,SNR=4.2						
TIC	Toumodi	170.17	245	ePKIKP	PKPdf	18 27 52.1	-0.7
TIC	Toumodi	170.17	245	eP	PKPab	18 29 09.2	+0.6

TAP 28 18:12:11.9, 21.°36N×121.°98E, h161^{km}, ML3.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.78	330	eP	Pn	18 12 35.9	-0.2
	baz=330						
LAY				eS	Sn	18 12 55.5	+0.7
	baz=330						
TSEB	Hengchuen, Pin	1.14	298	eP	Pn	18 12 39.7	+0.9
	baz=293						
TSEB				eS	Sn	18 13 00.7	+1.2
	baz=293						
TWKBT	Hengchun	1.23	298	eP	Pn	18 12 40.1	+0.5
	baz=296						
TWKBT				eS	Sn	18 13 00.8	-0.2
	baz=296						
TWK1	Hengchun	1.23	298	P	Pn	18 12 40.2	+0.5
	baz=296						
TWK1				S	Sn	18 13 00.8	-0.3
	baz=296						
HEN	Hengchun	1.32	299	eP	Pn	18 12 40.3	-0.2
	baz=299						
HEN				eS	Sn	18 13 02.1	-0.4
	baz=299						
TAW	Tawu	1.41	315	P	Pn	18 12 41.2	-0.1
	baz=318						
TAW				eS	Sn	18 13 03.0	-1.1
	baz=318						
EAST	Anshuo	1.46	314	P	Pn	18 12 42.0	0.0
	baz=314						
EAST				S	Sn	18 13 04.0	-1.1
	baz=314						
ECL	Taimali	1.55	323	P	Pn	18 12 42.9	+0.1
	baz=319						
ECL				S	Sn	18 13 04.7	-2.0
	baz=319						
SCZT	Fangliau	1.61	309	P	Pn	18 12 43.1	-0.4
	baz=309						
SCZT				S	Sn	18 13 06.5	-1.3
	baz=309						
TWGBT	Beinan	1.67	330	eP	Pn	18 12 43.3	-0.7
	baz=325						
TWGBT				eS	Sn	18 13 07.5	-1.4
	baz=325						
TWG	Pinlang	1.68	330	P	Pn	18 12 43.8	-0.4
	baz=325						
TWG				S	Sn	18 13 07.2	-1.8
	baz=325						
SSPT	Xinbi	1.72	311	eP	Pn	18 12 45.0	+0.5
	baz=313						
SSPT				S	Sn	18 13 09.6	-0.2
	baz=313						
MASBT	Mashibuluo	1.76	315	P	Pn	18 12 45.0	0.0
	baz=315						
MASBT				S	Sn	18 13 08.9	-1.7
	baz=315						
WLCH	Liuqiu	1.78	304	eP	Pn	18 12 46.4	+1.2
	baz=304						
WLCH				eS	Sn	18 13 13.5	+2.5
	baz=304						
TWP	Hsiaoliuchiu	1.79	303	P	Pn	18 12 46.3	+0.9
	baz=303						
TWP				eS	Sn	18 13 13.7	+2.5
	baz=303						
CHKT	Chengkung	1.82	342	eS	Sn	18 13 10.5	-1.3
	baz=345						
SSD	Sandimen	1.86	318	P	Pn	18 12 46.6	+0.6
	baz=318						
SSD				S	Sn	18 13 11.3	-1.3
	baz=318						
FULB	Fuli	1.94	341	eP	Pn	18 12 48.0	+1.0
	baz=343						
FULB				eS	Sn	18 13 15.3	+1.2
	baz=343						
SGLT	Jiouru	1.94	315	eS	Sn	18 13 14.2	+0.2
	baz=319						
KAU	Kaohsiung	1.96	308	eS	Sn	18 13 14.8	+0.3
	baz=301						
ELDTW	Lidau	2.02	334	eP	Pn	18 12 48.2	+0.2
	baz=334						
ELDTW				eS	Sn	18 13 14.4	-1.7
	baz=334						
SLGT	Liugui	2.04	323	eP	Pn	18 12 48.5	+0.4
	baz=323						
SLGT				eS	Sn	18 13 15.6	-0.6
	baz=323						
TWM1	Shoushan	2.05	316	P	Pn	18 12 49.5	+1.3
	baz=322						
TWM1				eS	Sn	18 13 17.6	+1.2
	baz=322						
SNJT	Kaohsiung City	2.06	313	eP	Pn	18 12 48.6	+0.3
	baz=305						
SNJT				eS	Sn	18 13 17.0	+0.5
	baz=305						
TWF1	Yuli	2.08	343	eP	Pn	18 12 49.2	+0.6
	baz=334						
TWF1				eS	Sn	18 13 16.5	-0.6
	baz=334						
YULB	Yu-li	2.12	343	eP	Pn	18 12 48.9	-0.1
	baz=334						
YULB				eS	Sn	18 13 17.2	-0.7
	baz=334						
STYT	Tauyuan	2.12	328	P	Pn	18 12 49.2	+0.1
	baz=322						
STYT				eS	Sn	18 13 17.4	-0.6
	baz=322						
SGST	Jiashian	2.15	323	P	Pn	18 12 50.0	+0.7
	baz=323						
SGST				S	Sn	18 13 17.4	-0.9
	baz=323						
HGSD	Ruisui	2.18	347	eP	Pn	18 12 50.5	+0.7
	baz=348						
HGSD				eS	Sn	18 13 20.0	+0.8
	baz=348						
CHN1	Nanshi	2.26	324	P	Pn	18 12 51.2	+0.5
	baz=324						
CHN1				S	Sn	18 13 19.7	-1.0
	baz=324						
WTP	Ta-pu	2.26	326	P	Pn	18 12 50.5	-0.3
	baz=320						
WTP				S	Sn	18 13 20.2	-0.6
	baz=320						
CHN3	Shinhua	2.27	319	eP	Pn	18 12 51.7	+1.0
	baz=325						
CHN3				eS	Sn	18 13 21.6	+0.8
	baz=325						
SNST	Tainan City	2.30	324	eP	Pn	18 12 51.6	+0.4
	baz=324						
SNST				eS	Sn	18 13 20.5	-1.1
	baz=324						
TWK	Hsinying	2.34	324	eP	Pn	18 12 51.9	+0.1
	baz=324						
TWK				eS	Sn	18 13 21.9	-0.7
	baz=324						
EGFH	Guangfu	2.35	348	eP	Pn	18 12 53.5	+1.8
	baz=339						
EGFH				eS	Sn	18 13 22.5	-0.2
	baz=339						
CHN4	Tsaushan	2.36	327	P	Pn	18 12 51.9	0.0
	baz=321						
CHN4				S	Sn	18 13 22.1	-0.8
	baz=321						
SCLT	Jiali	2.45	318	S	Sn	18 13 24.3	-0.3
	baz=323						
ESL	Shilin	2.49	348	eS	Sn	18 13 24.7	-1.0
	baz=342						
VWDT	VWDT	2.50	342	eP	Pn	18 12 55.1	+1.5
	baz=345						
VWDT				eS	Sn	18 13 26.4	+0.5
	baz=345						
CHN5	Tsauling	2.53	332	P	Pn	18 12 53.4	-0.6
	baz=332						
CHN5				S	Sn	18 13 26.0	-0.6
	baz=332						
WHYT	Xinyi Township	2.55	336	eP	Pn	18 12 53.8	-0.3
	baz=328						
WHYT				eS	Sn	18 13 26.4	-0.5
	baz=328						
CHN8	Yiju	2.56	321	S	Sn	18 13 26.7	-0.5
	baz=326						
CHY	Chiayi	2.57	326	eS	Sn	18 13 25.8	-1.4
	baz=321						
CHN2	Minshiung	2.57	328	eS	Sn	18 13 26.1	-1.2
	baz=321						
SSLB	Suanglung	2.59	339	eP	Pn	18 12 54.2	-0.4
	baz=330						
SSLB				S	Sn	18 13 26.8	-1.1
	baz=330						
WGK	Gukeng	2.66	331	S	Sn	18 13 27.9	-1.3
	baz=331						
WDLH	Douliu	2.67	330	eS	Sn	18 13 28.2	-1.3
	baz=330						
OWD	Renai	2.69	344	eP	Pn	18 12 56.3	+0.4
	baz=346						
OWD				eS	Sn	18 13 30.4	+0.3
	baz=346						
SMLT	Sun Moon Lake	2.70	339	eS	Sn	18 13 30.9	+0.5
	baz=331						
WJS	Zhushan	2.71	335	eS	Sn	18 13 29.8	-0.6
	baz=335						
TYC	Yuchr	2.73	338	P	Pn	18 12 56.9	+0.5
	baz=331						
TYC				eS	Sn	18 13 29.9	-1.0
	baz=331						
WNT	Mingjian	2.77	335	P	Pn	18 12 57.2	+0.3
	baz=335						
WNT				eS	Sn	18 13 30.7	-1.1
	baz=335						
WSF	Szhu	2.79	325	S	Sn	18 13 30.4	-1.6
	baz=325						
WHF	Hehuan Shan	2.85	347	eS	Sn	18 13 33.4	-0.8
	baz=352						
WDGT	Dungji	2.86	312	P	Pn	18 12 57.4	-0.5
	baz=312						
WDGT				S	Sn	18 13 31.3	-2.3
	baz=312						
ETLH	Xiulin Townshi	2.87	351	eS	Sn	18 13 33.9	-0.1
	baz=345						
RLNB	Erlin	2.93	330	eS	Sn	18 13 33.5	-1.6
	baz=334						
WTCT	Ta-ch'eng	2.94	328	eS	Sn	18 13 34.8	-0.7
	baz=333						
VCHM	Qimei	2.99	308	eP	Pn	18 12 58.6	-1.0
	baz=308						
VCHM				eS	Sn	18 13 34.4	-2.2
	baz=308						
WCHH	Zhanghua	3.01	334	eS	Sn	18 13 36.6	-0.3
	baz=334						
TCU	Taichung	3.02	337	eS	Sn	18 13 36.3	-1.0
	baz=337						
WHP	Taichung City	3.06	342	P	Pn	18 13 00.8	+0.4
	baz=334						
WHP				S	Sn	18 13 39.1	+0.9
	baz=334						
PHUB	P'eng-hu	3.09	314	eP	Pn	18 12 59.7	-1.1
	baz=319						
PHUB				S	Sn	18 13 35.8	-2.9
	baz=319						
NNSB	Datong	3.10	350	eS	Sn	18 13 38.4	-0.9
	baz=356						
NNS	Nan Shan	3.12	350	eS	Sn	18 13 39.1	-0.5
	baz=356						
PNG	Penghu	3.14	315	P	Pn	18 13 00.5	-0.8
	baz=320						
PNG				S	Sn	18 13 37.4	-2.4
	baz=320						
TWQ1	Liyutan	3.17	340	eS	Sn	18 13 39.5	-1.2
	baz=340						
NDT	Datong Townshi	3.25	353	eS	Sn	18 13 41.5	-1.1
	baz=352						
YHNB	Yeheng	3.34	351	eS	Sn	18 13 43.3	-1.3
	baz=356						
NSK	Sanguang	3.35	350	eS	Sn	18 13 43.9	-0.9
	baz=356						
VWUC	VWUC	4.30	328	eP	Pn	18 13 16.3	+0.1
	baz=327						
VWUC				eS	Sn	18 14 03.7	-2.8
	baz=327						
MATB	Ma-tsu	5.12	339	eP	Pn	18 13 26.0	-1.0
	baz=345						
MATB				eS	Sn	18 14 22.9	-3.0
	baz=345						

MEX 28 18:21:21.2±0.2, 16.°63N×98.°92W, h5^{km}±2^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.80	107	i P	Pg	18 21 34.9	-1.6
PNIG				eS	Sg	18 21 45.7	-1.1
CAIG	El Cayaco	1.36	288	eP	Pn	18 21 42.8	-4.0
CAIG				i S	Sb	18 22 00.1	-4.6
MEIG	Mezcala	1.45	333	eP	Pn	18 21 44.1	-4.0
MEIG				i S	Sb	18 22 02.4	-5.2

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*NEIC **28** 18:32:26.8±0.7, 22.°61N×94.°56E, h104^{km}±8^{km}, mb4.6/2, Error ellipse: s-maj=19.4km s-min=7.1km az=54.0*

*IDC **28** 18:32:26.7±2.3, 22.°57N×94.°48E, h104^{km}±24^{km}, mb3.6/9, mb1 3.7/10, mb1mx3.3/40, mbtmp3.9/10, MS3.9/1, Ms1 3.9/1, ms1mx3.2/33, Error ellipse: s-maj=30.0km s-min=12.0km az=48.0*

*NDI **28** 18:32:31.5±2.6, 22.°89N×94.°29E, h43^{km}±372^{km}, ML4.6, mb4.6(NEIC)*

ISC 28 18:32:27.1±0.8, 22.°75N±0.°06×94.°40E±0.°06, h106^{km}, n45, σ2.^{s}17/61, mb4.0/11, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAIH	SAIHA	1.33	259	eP	Pn	18 32 52.8	+1.0
SAIH				eS	Sn	18 33 07.7	-2.8
SILR	SILCHAR	2.49	324	eS	Sn	18 33 35.6	-0.8
BRDH	Bariadhala	2.55	269	P	Pn	18 33 08.6	+1.6
	baz=60,slow=20,SNR=3.7						
BRDH				S	Sn	18 33 39.2	+1.6
	301nm,0.3s,baz=255,slow=21,SNR=37						
BELO	BELONIA	2.76	281	eP	Pn	18 33 13.0	+3.2
BELO				ex	x	18 33 47.0	
BELO				IAML		18 33 47.6	
	comp=N,25µm,0.2s						
BELO				IAML		18 33 48.1	
	comp=E,18µm,0.5s						
KOHI	KOHIMA	2.97	355	eP	Pn	18 33 14.8	+2.1
KOHI				eS	Sn	18 33 44.1	-3.7
MOKO	MOKOCHONG	3.55	2	eP	Pn	18 33 23.5	+3.0
SHL	Shillong	3.62	321	ePn	Pn	18 33 23.1	+1.6
SHL	Shillong	3.62	321	eP	Pn	18 33 23.2	+1.8
SHL				eS	Sn	18 34 02.3	-1.3
TEZP	TEZPUR	4.11	340	eP	Pn	18 33 29.0	+1.1
TEZP				eS	Sn	18 34 12.5	-2.6
TURI	Tura	4.64	308	eP	Pn	18 33 36.9	+1.8
TURI				eS	Sn	18 34 24.4	-3.4
ZIRO	ZIRO	4.78	354	eP	Pn	18 33 38.1	+1.0
ZIRO				eS	Sn	18 34 26.2	-5.3
ZIRO				IAML		18 34 34.7	
	comp=E,748nm,0.3s						
ZIRO				IAML		18 34 35.8	
	comp=N,717nm,0.4s						
DHUB	DHUBRI	5.17	310	eP	Pn	18 33 42.9	+0.8
DHUB				eS	Sn	18 34 36.1	-4.4
TAWA	Tawang	5.34	335	eP	Pn	18 33 46.7	+1.9
TAWA				eS	Sn	18 34 39.4	-5.8
TAWA				IAML		18 34 47.9	
	comp=E,1µm,0.3s						
TAWA				IAML		18 34 48.0	
	comp=N,797nm,0.2s						
CMAR	Chiang Mai Arr	6.03	134	P	Pn	18 33 51.0	-3.0
	comp=N,0.2nm,0.3s,baz=312,slow=14,SNR=5.7						
LSA	Lhasa	7.51	338	ePn	Pn	18 34 17.1	+2.7
ODAN	Odare	7.57	304	ePn	Pn	18 34 16.8	+1.9
ODAN				eSn	Sn	18 35 37.0	-2.2
	comp=N,138nm,0.5s						
RAMN	Ramite	8.22	302	ePn	Pn	18 34 25.9	+2.1
JIRN	Jiri	8.89	305	ePn	Pn	18 34 34.7	+1.6
JIRN				eSn	Sn	18 36 09.2	-2.5
	comp=N,68nm,0.3s						
GUN	Gumba	9.26	305	ePn	Pn	18 34 39.3	+1.3
GUN				eSn	Sn	18 36 18.9	-1.6
	comp=N,86nm,0.6s						
PKI	Pulchoki	9.45	302	ePn	Pn	18 34 41.8	+1.2
PKI				eSn	Sn	18 36 22.9	-2.3
	comp=N,48nm,0.5s						
PKIN	Phulchoki	9.46	302	ePn	Pn	18 34 41.8	+1.1
PKIN				eSn	Sn	18 36 23.2	-2.2
	comp=N,31nm,0.4s						
KKN	Kakani	9.65	303	eSn	Sn	18 36 26.9	-3.1
	comp=N,32nm,0.3s						
DMN	Daman	9.70	302	ePn	Pn	18 34 45.2	+1.2
DMN				eSn	Sn	18 36 28.2	-3.1
	comp=N,18nm,0.3s						
GKN	Gorkha	10.26	303	ePn	Pn	18 34 52.9	+1.5
GKN				eSn	Sn	18 36 41.7	-2.8
	comp=N,1.4nm,0.2s						
KOLN	Koldanda	10.97	299	ePn	Pn	18 35 01.8	+0.6
KOLN				eSn	Sn	18 36 58.2	-3.8
	comp=N,74nm,0.5s						
DANN	Dangsing	11.10	302	ePn	Pn	18 35 03.4	+0.4
PYUN	Piuthan	11.60	300	ePn	Pn	18 35 10.1	+0.5
PYUN				eSn	Sn	18 37 12.8	-4.5
	comp=N,24nm,0.3s						
MK01	Makanchi Array	25.88	341	eP	P	18 37 51.1	+2.2
MK31	Makanchi Array	25.90	341	eP	P	18 37 51.3	+2.2
	comp=N,4.6nm,0.9s						
MK32	Makanchi Array	25.90	341	eP	P	18 37 51.9	+2.7
MKAR	Makanchi Array	25.90	341	P	P	18 37 51.9	+2.7
	comp=N,1.9nm,0.7s,baz=146,slow=9.3,SNR=19						
KURBB	Kurchatov Arra	30.45	340	P	P	18 38 31.5	+1.9
	comp=N,1.1nm,0.5s,baz=148,slow=8.5,SNR=5.6						
KURK	Kurchatov	30.51	340	eP	P	18 38 31.5	+1.5
ZALV	Zalesovo Beam	31.98	349	P	P	18 38 42.5	-0.4
	comp=N,0.6nm,0.3s,baz=163,slow=10,SNR=2.7						
ZAA1	Zalesovo Array	31.99	349	eP	P	18 38 42.5	-0.4
BVAR	Borovoye Array	35.33	335	P	P	18 39 13.4	+1.4
	comp=N,0.4nm,0.3s,baz=131,slow=11,SNR=5.4						
BVAR				PcP	PcP	18 41 40.4	+0.4
	comp=N,0.3nm,0.3s,baz=159,slow=4.5,SNR=4.8						

KIRV	Kirov	47.97	330	LR	LR	19 01 30.8	
	comp=N,141nm,20.2s,baz=210,slow=36						
WR1	Warramunga Arr	57.63	134	eP	P	18 42 04.7	-1.7
	comp=N,41nm,1.9s						
WRA	Warramunga Arr	57.63	134	P	P	18 42 04.7	-1.7
	comp=N,1.2nm,0.5s,baz=322,slow=7.5,SNR=45						
FIA0	FINESS Array S	59.93	329	eP	P	18 42 22.8	+1.1
FINES	FINESS Array B	59.93	329	P	P	18 42 22.8	+1.1
	comp=N,0.9nm,0.6s,baz=93,slow=7.6,SNR=5.1						
ASAR	Alice Springs	60.03	138	P	P	18 42 21.7	-1.3
	comp=N,1.0nm,0.5s,baz=321,slow=6.8,SNR=25						
ARA0	ARCESS Array S	61.52	338	eP	P	18 42 33.8	+1.4
ARCES	ARCESS Array B	61.52	338	P	P	18 42 33.8	+1.4
	comp=N,1.4nm,0.8s,baz=99,slow=7.8,SNR=6.6						
GERES	GERESS Array B	67.22	315	P	P	18 43 10.8	+0.8
	comp=N,0.4nm,0.5s,baz=60,slow=7.9,SNR=4.2						

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*MOS **28** 18:38:05.5±1.2, 42°.47N×48°.92E, h38^{km}, mb4.0/1, Error ellipse: s-maj=15.3km s-min=8.7km az=3.3*

*ISCJB **28** 18:38:06.3±0.8, 42°.49N±0°.04×48°.69E±0°.05, h15^{km}±6^{km}, Error ellipse: s-maj=6.8km s-min=5.7km az=37.5*

*NORS **28** 18:38:08.0±0.0, 42°.36N×48°.59E, h38^{km}, MPVA4.0*

*DRS **28** 18:38:08.4±0.0, 42°.46N×48°.49E, h15^{km}*

ISC 28 18:38:07.4±1.5**, 42°.44N**±0°.03×**48°.61E**±0°.06**, h27**^{km}±14^{km}**, n33, σ0^{s}.86**/62**, 6C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRN	Derbent	0.46	207	⇑iP	Pn	18 38 18.0	-0.2
DRN				eS	Sn	18 38 24.9	-0.6
DRN	Derbent	0.46	207	i Pg	Pn	18 38 17.9	-0.2
DRN				eSg	Sn	18 38 24.8	-0.7
URKR	Urkarakh	0.78	250	⇑eP	Pb	18 38 22.3	-0.1
URKR				e		18 38 31.5	
KSMR	Kasumkent	0.91	203	i P	Pn	18 38 25.0	+0.5
KSMR				eS	Sn	18 38 37.0	+0.2
KSMR				pmax	pmax		
	comp=Z,195nm,0.3s						
KSMR	Kasumkent	0.91	203	i Pg	Pn	18 38 25.0	+0.5
KSMR				eSg	Sn	18 38 37.0	+0.2
MAK	Makhachkala	0.97	303	eP	Pn	18 38 23.5	-1.7
MAK				e		18 38 39.8	
MAK				pmax	pmax		
	comp=Z,62nm,0.3s						
MAK				smax	smax		
	comp=E,619nm,0.3s						
MAK				smax	smax		
	comp=E,591nm,0.5s						
MAK	Makhachkala	0.97	303	ePg	Pn	18 38 24.1	-1.1
MAK				eSg	Sn	18 38 38.3	+0.3
AKT	Akhty	1.17	215	⇓eP	Pb	18 38 28.6	-0.4
AKT				e		18 38 42.4	
AKT				pmax	pmax		
	comp=Z,97nm,0.2s						
AKT				smax	smax		
	comp=N,445nm,0.5s						
AKT	Akhty	1.17	215	ePg	Pn	18 38 28.3	+0.3
AKT				eSg	Sn	18 38 42.4	-0.7
KMKR	Kumukh	1.17	255	eP	Pn	18 38 28.0	-0.1
KMKR				eS	Sb	18 38 43.0	-0.8
KMKR				pmax	pmax		
	comp=Z,27nm,0.1s						
KMKR	Kumukh	1.17	255	ePg	Pn	18 38 28.0	-0.1
KMKR				eSg	Sb	18 38 43.0	-0.8
BUJR	Buynaksk	1.18	290	P	Pn	18 38 28.5	+0.4
BUJR				eS	Sn	18 38 42.5	-0.7
BUJR	Buynaksk	1.18	290	ePg	Pn	18 38 28.5	+0.4
BUJR				eSg	Sn	18 38 42.5	-0.7
ARKR	Arakani	1.21	278	P	Pn	18 38 29.0	+0.5
ARKR				eS	Sb	18 38 45.0	+0.1
ARKR	Arakani	1.21	278	ePg	Pn	18 38 29.0	+0.5
ARKR				eSg	Sb	18 38 45.0	+0.1
GNBR	Gunib	1.22	268	eP	Pn	18 38 29.0	+0.3
GNBR				eS	Sb	18 38 45.1	-0.2
GNBR				pmax	pmax		
	comp=Z,26nm,0.4s						
GNBR	Gunib	1.22	268	ePg	Pn	18 38 29.0	+0.3
GNBR				eSg	Sb	18 38 45.2	-0.2
KRNR	Karanay	1.32	288	P	Pn	18 38 30.5	+0.4
KRNR				eS	Sn	18 38 47.0	+0.2
KRNR	Karanay	1.32	288	ePg	Pn	18 38 30.5	+0.4
KRNR				eSg	Sn	18 38 47.0	+0.2
UNCR	Uncukul	1.37	282	P	Pb	18 38 32.0	-0.4
UNCR				eS	Sb	18 38 49.0	-0.5
UNCR				pmax	pmax		
	comp=Z,30nm,0.1s						
UNCR	Uncukul	1.37	282	ePg	Pb	18 38 32.0	-0.4
UNCR				eSg	Sb	18 38 49.0	-0.5
XNZR	Khunzakh	1.42	275	eP	Pn	18 38 32.3	+0.8
XNZR				eS	Sb	18 38 50.2	-0.7
XNZR	Khunzakh	1.42	275	ePg	Pb	18 38 32.7	-0.5
XNZR				eSg	Sb	18 38 49.8	-1.1
DBC	Dubki	1.44	294	⇑eP	Pn	18 38 32.6	+0.9
DBC				e		18 38 52.1	
DBC	Dubki	1.44	294	ePg	Pn	18 38 32.6	+0.9
DBC				eSg	Sb	18 38 50.7	-0.7
DLMR	Dylym	1.59	294	eP	Pb	18 38 36.0	-0.1
DLMR				eS	Sb	18 38 56.0	+0.2
DLMR	Dylym	1.59	294	ePg	Pb	18 38 36.0	-0.1
DLMR				eSg	Sb	18 38 56.0	+0.2
BTLR	Botlikh	1.78	278	eP	Pb	18 38 40.0	+0.6
BTLR				eS	Sb	18 39 01.5	+0.2
BTLR				pmax	pmax		
	comp=Z,24nm,0.6s						
BTLR	Botlikh	1.78	278	ePg	Pb	18 38 40.0	+0.6
BTLR				eSg	Sb	18 39 01.5	+0.2
DVE	Vedeno	1.90	287	eP	Pb	18 38 40.8	-0.7
DVE				eS	Sb	18 39 04.6	-0.3
DVE	Vedeno	1.90	287	ePg	Pb	18 38 40.8	-0.7
DVE				eSg	Sb	18 39 04.6	-0.3
AKTO	Aktyubinsk	10.29	36	⇓Pn	Pn	18 40 35.8	+2.6
	comp=Z,6.0nm,1.6s						
AKTO				⇑Sn	Sn	18 42 26.9	-0.6
	comp=Z,3.4nm,1.2s						
AB31	Akbulak array	10.43	45	⇑Pn	Pn	18 40 36.5	+1.5
	comp=Z,0.6nm,0.7s,baz=228,slow=12						
AB31				⇑Sn	Sn	18 42 26.9	-4.0
	comp=Z,0.3nm,0.3s,baz=222,slow=23						

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*DDA **28** 18:48:25.6, 37°.73N×36°.13E, h7^{km}±2^{km}, ML2.5*

*ISK **28** 18:48:25.8, 37°.77N×36°.14E, h5^{km}, ML2.1/4*

*ISCJB **28** 18:48:26.4±0.5, 37°.74N±0°.03×36°.13E±0°.04, h8^{km}±6^{km}, Error ellipse: s-maj=5.9km s-min=4.2km az=42.5*

ISC 28 18:48:26.2±0.9**, 37°.74N**±0°.03×**36°.15E**±0°.03**, h13**^{km}±7^{km}**, n15, σ0^{s}.69**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	Andirin	0.23	136	i P	Pg	18 48 30.9	-0.3
ANDN				i S	Sg	18 48 34.6	0.0
ANDN				IAML_P			
	comp=Z,7μm,0.1s						
SAIM	ADANA	0.24	347	i P	Pg	18 48 31.9	+0.4
SAIM				i S	Sg	18 48 35.2	+0.3
SAIM				IAML_P			
	comp=Z,9μm,0.1s						
KOZT	Kozan	0.37	224	PG	Pg	18 48 33.4	-0.2
KOZT				SG	Sb	18 48 39.4	-0.9
AKO	Adana	0.62	243	i P	Pg	18 48 37.7	-0.8
YAHY	KAYSERI_Yahyal	0.71	300	i P	Pb	18 48 40.6	0.0
YAHY				i S	Sb	18 48 50.2	-0.2
YAHY				IAML_P			
	comp=Z,392nm,0.1s						
HCB	Kahramanmara	0.72	123	i P	Pg	18 48 39.6	-0.7
CEYT	Ceyhan	0.80	204	PG	Pb	18 48 42.2	+0.2
ELBS	KAHRAMANMARAS	0.97	53	i P	Pn	18 48 46.5	+0.8
ELBS				IAML_P			
	comp=Z,44nm,0.1s						
KARA	Karaisali	0.99	241	PG	Pb	18 48 45.3	0.0
GAZ	Gaziantep	1.02	124	PG	Pb	18 48 46.2	+0.4
GAZ				SG	Sn	18 49 00.9	+0.3
BNN	Bunyan	1.13	348	PN	Pb	18 48 47.5	-0.3
GZT	Gaziantep	1.19	109	i P	Pg	18 48 48.4	-0.8
GZT				i S	Sn	18 49 05.7	+0.8
KUZU	Kuzuini	1.22	142	i P	Pn	18 48 49.9	+0.9
KUZU				i S	Sb	18 49 05.9	+1.1
AKCD	Akcadag	1.50	68	i P	Pn	18 48 51.8	-1.2
AKCD				IAML_P			
	comp=Z,93nm,0.1s						
URFA	Urfa	2.14	97	PN	Pb	18 49 04.2	-0.8

KRSC 28 18:50:52.5±1.1**, 50°.92N**×**157°.97E, h24**^{km}±16^{km}**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	Khodutka, Kamc	0.89	4	eP	Pb	18 51 09.1	-0.1
KDTR				eS	Sn	18 51 21.2	-0.4
PAU	Pauzhetka	0.91	307	eP	Pn	18 51 09.8	+0.1
PAU				eS	Sn	18 51 22.4	+0.3
SKR	Severo-Kuril’s	1.20	259	eP	Pb	18 51 14.3	-0.2
SKR				eS	Sn	18 51 29.3	+0.1
ALID	Alaid	1.54	269	i P	Pb	18 51 19.7	-0.6
RUS	Russkaya	1.55	12	i P	Pn	18 51 19.0	+0.5
MTVR	Mutnovka	1.57	5	eP	Pb	18 51 19.9	-1.0
KRMR	Karymshinskiy	1.91	3	eP	Pb	18 51 25.4	-1.2
KRMR				eS	Sb	18 51 49.9	-0.2
PET	Petropavlovsk	2.15	11	eP	Pb	18 51 29.0	-1.6
PET				eS	Sn	18 51 54.3	+1.8
DALK	Dalny	2.17	13	eP	Pn	18 51 28.8	+1.8
DALK				eS	Sb	18 51 55.2	-2.1
UGLR	Uglovaya	2.35	13	eP	Pn	18 51 31.8	+2.2
AVH	Avacha	2.39	11	eP	Pb	18 51 32.9	-2.0
SMAR	Somma	2.40	12	eP	Pb	18 51 33.3	-1.7
KOK	Koryaka	2.41	10	eP	Pb	18 51 33.5	-1.6
SDLR	Sedlovina	2.43	13	eP	Pn	18 51 31.6	+0.9
KRX	Arik	2.48	9	eP	Pb	18 51 35.3	-1.0
GNL	Ganaly	2.78	360	eP	Pn	18 51 38.4	+2.9

KRSC 28 18:59:39.5±1.4**, 50°.74N**×**157°.82E, h40**^{km}±18^{km}**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	0.97	319	eP	Pn	18 59 58.1	+1.5
PAU				eS	Sn	19 00 10.0	+0.9
PAU	Pauzhetka	0.97	319	eP	Pn	18 59 58.2	+1.6
PAU				eS	Sn	19 00 09.9	+0.8
SKR	Severo-Kuril’s	1.08	268	eP	Pn	18 59 59.2	+1.1
SKR				eS	Sn	19 00 12.0	+0.1
SKR	Severo-Kuril’s	1.08	268	eP	Pn	18 59 59.7	+1.6
SKR				eS	Sn	19 00 12.1	+0.2
KDTR	Khodutka, Kamc	1.09	9	eP	Pn	18 59 59.8	+1.6
KDTR				eS	Sn	19 00 12.8	+0.8
KDTR	Khodutka, Kamc	1.09	9	eP	Pn	18 59 59.7	+1.5
KDTR				eS	Sn	19 00 13.0	+1.0
ALID	Alaid	1.45	276	P	Pn	19 00 04.7	+1.4
ALID	Alaid	1.45	276	eP	Pn	19 00 05.1	+1.8
ASAK	Asacha	1.65	2	P	Pn	19 00 08.0	+2.0
RUS	Russkaya	1.75	14	eP	Pn	19 00 09.0	+1.7
RUS				eS	Sn	19 00 29.3	+0.9
RUS	Russkaya	1.75	14	eP	Pn	19 00 08.7	+1.4
RUS				eS	Sn	19 00 29.5	+1.1
MTVR	Mutnovka	1.76	7	eP	Pn	19 00 09.7	+2.1
MTVR				eS	Sn	19 00 30.7	+1.8
MTVR	Mutnovka	1.76	7	eP	Pn	19 00 09.7	+2.1
MTVR				eS	Sn	19 00 30.7	+1.8
GRL	Gorelyy	1.82	5	S	Sn	19 00 32.9	+2.5
KRMR	Karymshinskiy	2.10	5	eP	Pn	19 00 15.6	+3.4
KRMR				eS	Sn	19 00 41.4	+4.3
KRMR	Karymshinskiy	2.10	5	eP	Pn	19 00 15.1	+2.9
KRMR				eS	Sn	19 00 41.6	+4.5
APC	Apacha	2.23	350	P	Pn	19 00 16.5	+2.6
APC				eS	Sn	19 00 43.5	+3.4
APC	Apacha	2.23	350	eP	Pn	19 00 15.4	+1.5
PET	Petropavlovsk	2.35	12	eP	Pn	19 00 18.0	+2.5
PET				eS	Sn	19 00 45.1	+2.0
DALK	Dalny	2.37	14	P	Pn	19 00 18.3	+2.5
DALK				eS	Sn	19 00 45.2	+1.6
DALK	Dalny	2.37	14	eP	Pn	19 00 18.3	+2.5
DALK				eS	Sn	19 00 45.4	+1.8
UGLR	Uglovaya	2.55	14	eP	Pn	19 00 21.8	+3.4
UGLR				eS	Sn	19 00 51.2	+2.9
UGLR	Uglovaya	2.55	14	eP	Pn	19 00 22.1	+3.7
AVH	Avacha	2.59	12	P	Pn	19 00 22.6	+3.6
AVH				eS	Sn	19 00 53.9	+4.6
AVH	Avacha	2.59	12	eP	Pn	19 00 22.6	+3.6
AVH				eS	Sn	19 00 53.3	+4.0
SMAR	Somma	2.60	13	eP	Pn	19 00 22.3	+3.1
SMAR	Somma	2.60	13	eP	Pn	19 00 23.2	+4.0
KOK	Koryaka	2.61	11	eP	Pn	19 00 23.1	+3.9
KOK				eS	Sn	19 00 54.0	+4.3
KOK	Koryaka	2.61	11	eP	Pn	19 00 23.0	+3.8
KOK				eS	Sn	19 00 54.5	+4.8
SDLR	Sedlovina	2.63	14	eP	Pn	19 00 22.1	+2.6
SDLR				eS	Sn	19 00 52.5	+2.3
SDLR	Sedlovina	2.63	14	eP	Pn	19 00 21.9	+2.4
KRER	Koryakskii	2.63	12	eP	Pn	19 00 23.2	+3.6
KRER				eS	Sn	19 00 54.8	+4.4
KRX	Arik	2.68	11	eP	Pn	19 00 23.6	+3.4
KRX				eS	Sn	19 00 55.8	+4.4
KRX	Arik	2.68	11	eP	Pn	19 00 24.3	+4.1
SPN	Mys Shipunski	2.73	29	eS	Sn	19 00 54.7	+2.2
SPN	Mys Shipunski	2.73	29	eP	Pn	19 00 25.3	+4.5
GNL	Ganaly	2.96	1	P	Pn	19 00 27.9	+3.8
GNL				eS	Sn	19 01 03.7	+5.3
GNL	Ganaly	2.96	1	eP	Pn	19 00 27.9	+3.8
MKZ	Mys Kozlova	4.51	30	eP	Pn	19 00 46.9	+1.8

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*IDC **28** 19:10:01.6±1.8, 43°.99N×105°.45W, h0^{km}, mb1 3.4/3, mb1mx3.2/36, mbtmp3.1/3, ML2.4/2, Error ellipse: s-maj=57.9km s-min=8.8km az=148.0*

*ISCJB **28** 19:10:03.6±1.9, 44°.0N±0°.1×105°.3W±0°.2, h0^{km}, Error ellipse: s-maj=20.8km s-min=10.3km az=142.5*

*NEIC **28** 19:10:10.5±2.2, 43°.70N×105°.86W, h0^{km}, ML2.9, Error ellipse: s-maj=14.6km s-min=8.9km az=140.0, Suspected Mining explosion.*

NEIC 47 km [29 miles] NE of Midwest.

ISC 28 19:10:02.0±1.1**, 44°.09N**±0°.06×**105°.51W**±0°.05**, h0**^{km}**, n22, σ2^{s}.47**/23**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
K22A	Casper	1.62	208	ePg	Pg	19 10 33.0	-0.1
RWWY	Rawlins	2.71	208	ePn	Pb	19 10 49.7	-1.8
PHWY	Pilot Hill	2.78	179	ePn	Pb	19 10 51.4	-1.5
RLMT	Red Lodge	2.88	292	ePn	Pb	19 10 52.9	-1.6
N23A	Red Feather La	3.21	186	ePn	Pb	19 10 56.5	-3.6
BW06	Boulder Array	3.23	247	ePn	Pb	19 10 57.7	-2.7
PD31	Pinedale Array	3.23	247	ePn	Pb	19 10 58.1	-2.3
PD31				eSn	Sb	19 11 41.7	+1.2
PDAR	Pinedale Array	3.23	247	Pn	Pb	19 10 58.1	-2.3
	3.2nm,0.3s,baz=74,slow=17,SNR=30						
PDAR				Pg	Pg	19 11 03.3	-0.7
	4.3nm,0.3s,baz=73,slow=16,SNR=39						
PDAR				Lg	Lg	19 11 41.7	
	2.2nm,0.3s,baz=68,slow=22,SNR=7.2						
H17A	Grant Village	3.66	277	ePn	Pb	19 11 05.9	-1.8
LOHW	Long Hollow	3.72	264	ePn	Pb	19 11 07.2	-1.5
FLWY	Flagg Ranch	3.74	272	ePn	Pb	19 11 05.9	-3.2
YHH	Holmes Hill	3.89	282	ePn	Pb	19 11 11.7	-0.1
REDW	Red Top Meadow	3.94	261	ePn	Pb	19 11 09.7	-2.9
TPAW	Teton Pass	3.99	263	ePn	Pg	19 11 21.5	+3.0
FXWY	Fox Creek	4.02	265	ePn	Pb	19 11 10.3	-3.5
OGNE	Ogallala	4.05	140	ePn	Pb	19 11 14.7	+0.3
OGNE				eLg	Lg	19 12 19.5	
TCUT	Toone Canyon	5.27	238	ePn	Pn	19 11 25.9	+3.7
SRU	San Rafael Swe	6.23	219	ePn	Pn	19 11 38.3	+2.9
DUG	Dugway, Tooele	6.68	237	ePn	Pn	19 11 44.4	+2.8
I10CA	LAC DU BONNET	8.89	43	i		20 01 00.0	
	baz=222,slow=322,SNR=3.9						
ULM	Lac du Bonnet	9.00	43	Pn	Pn	19 12 10.8	-2.3
	0.4nm,0.3s,baz=230,slow=11,SNR=6.6						
ULM				Lg	Lg	19 14 41.1	
	0.2nm,0.3s,baz=0.0,slow=17,SNR=2.2						
NVAR	Mina Array Bea	11.16	244	Pn	Pn	19 12 43.8	+0.7
	0.1nm,0.3s,baz=64,slow=14,SNR=1.9						

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*IDC **28** 19:33:20.2±0.8, 6°.10S×150°.25E, h0^{km}, mb4.1/11, mb1 4.2/12, mb1mx4.1/34, mbtmp4.1/12, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.9/24, Error ellipse: s-maj=33.1km s-min=15.5km az=103.0*

*ISCJB **28** 19:33:26.4±0.5, 6°.10S±0°.06×149°.9E±0°.1, h52^{km}, mb3.9/11, MS3.2/1, Error ellipse: s-maj=16.8km s-min=7.4km az=19.3*

*NEIC **28** 19:33:28.8±1.3, 6°.10S×149°.91E, h58^{km}±13^{km}, mb4.4/5, Error ellipse: s-maj=16.0km s-min=7.3km az=115.0*

ISC 28 19:33:28.1±0.6**, 6°.14S**±0°.09×**150°.0E**±0°.1**, h52**^{km}**, n33, σ0^{s}.99**/33**, mb3.9**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.93	49	ePn	Pn	19 34 13.7	+1.4
CTA	Charters Tower	14.32	194	Pn	Pn	19 36 47.2	-0.9
	0.3nm,0.3s,baz=30,slow=14,SNR=2.1						
EIDS	Eidsvold	19.15	177	eP	Pn	19 37 48.5	0.0
	11nm,0.6s						
GUMO	Guam	20.24	346	LR	LR	19 43 53.9	
	comp=Z,129nm,21.1s,baz=150,slow=31						
WRAB	Tennant Creek	20.44	226	eP	P	19 38 00.4	-0.9
	17nm,0.8s						
WB2	Warramunga Arr	20.45	226	eP	P	19 38 01.0	-0.3
WR1	Warramunga Arr	20.45	226	eP	P	19 38 01.8	+0.3
	15nm,0.6s						
WRA	Warramunga Arr	20.45	226	P	P	19 38 01.8	+0.3
	10nm,0.5s,baz=52,slow=11,SNR=96						
AS01	Alice Springs	23.25	220	eP	P	19 38 31.2	+0.1
AS31	Alice Springs	23.28	220	eP	P	19 38 32.1	+0.7
	2.4nm,0.6s						
ASAR	Alice Springs	23.28	220	P	P	19 38 32.2	+0.8
	1.9nm,0.7s,baz=55,slow=9.3,SNR=31						
FITZ	Fitzroy Crossi	26.53	241	eP	P	19 39 01.2	+0.1
	63nm,1.6s						
FITZ	Fitzroy Crossi	26.53	241	P	P	19 39 01.2	+0.1
	4.1nm,0.3s,baz=50,slow=8.7,SNR=34						
STKA	Stephens Creek	26.77	196	P	P	19 39 03.1	-0.1
	5.0nm,1.0s,baz=353,slow=12,SNR=5.3						
MJAR	Matsushiro Arr	43.86	346	P	P	19 41 27.9	-1.5
	1.2nm,0.7s,baz=170,slow=7.8,SNR=4.3						
MAJO	Matsushiro	43.86	346	eP	P	19 41 27.9	-1.5
KSRS	Korea Array	47.99	336	P	P	19 42 02.3	+0.4
	0.7nm,0.5s,baz=149,slow=8.1,SNR=4.1						
KSAR	Wonju Array Be	48.00	336	P	P	19 42 02.3	+0.4
PETK	Petropavlovsk-	59.39	5	P	P	19 43 24.5	-0.5
	1.3nm,0.6s,baz=166,slow=7.4,SNR=3.1						
PEA1	Petropavlovsk-	59.39	5	eP	P	19 43 24.5	-0.5
SONA0	Songino Array	65.98	329	eP	P	19 44 10.1	+0.9
SONM	Songino Array	65.98	329	P	P	19 44 10.0	+0.9
	0.8nm,0.5s,baz=147,slow=4.2,SNR=8.0						
VNDA	Vanda	71.62	177	P	P	19 44 44.9	+1.3
	1.2nm,0.7s,baz=337,slow=3.7,SNR=5.0						
MK32	Makanchi Array	79.48	320	eP	P	19 45 29.7	+0.5
MKAR	Makanchi Array	79.48	320	P	P	19 45 29.7	+0.5
	0.4nm,0.4s,baz=99,slow=8.6,SNR=10						
ILAR	Eielson Array	84.47	23	P	P	19 45 52.5	-2.4
	0.5nm,0.7s,baz=253,slow=4.7,SNR=6.5						
GERES	GERESS Array B	123.66	327	PKP	PKiKP	19 52 20.3	-0.1
	0.5nm,0.5s,baz=27,slow=1.5,SNR=7.5						
TOA0	Torodi Ar. Sit	147.96	285	ePKPdf	PKPdf	19 53 07.1	+1.4
TOA0				ePKPbc	PKPbc	19 53 08.6	-0.1
TORD	Torodi Ar. Bea	147.96	285	PKPbc	PKPbc	19 53 08.2	-0.6
	2.9nm,0.3s,baz=50,slow=3.5,SNR=54						
TOA1	Torodi Ar. Sit	147.97	285	ePKPbc	PKPbc	19 53 08.2	-0.6
PTGA	Pitinga	149.37	102	ePKPbc	PKiKP	19 53 13.3	-0.2
BDFB	Brasilia	151.99	141	PKPbc	PKPbc	19 53 16.4	-2.3
	1.6nm,0.5s,baz=207,slow=4.5,SNR=2.9						
DBIC	Dimbokro	154.96	273	PKP	PKPdf	19 53 17.6	+1.3
	2.4nm,0.9s,baz=214,slow=3.6,SNR=2.1						

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*TAP **28** 19:49:20.2, 21°.75N×121°.39E, h33^{km}, ML2.7, C*

*ISCJB **28** 19:49:21.0±0.8, 21°.83N±0°.05×121°.47E±0°.03, h22^{km}±4^{km}, Error ellipse: s-maj=8.7km s-min=5.0km az=164.1*

*JMA **28** 19:49:22.6±0.2, 21°.97N×121°.32E, h54^{km}*

ISC 28 19:49:21.8±1.3**, 21°.85N**±0°.07×**121°.39E**±0°.03**, h28**^{km}±8^{km}**, n41, σ1^{s}.28**/57**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	Lan-yu	0.24	38	i P	Pb	19 49 28.3	0.0
	baz=36						
LAY				eS	Sb	19 49 34.3	+1.6
	baz=36						
TSEB	Hengchuen, Pin	0.46	277	eP	Pb	19 49 32.2	+0.8
	baz=287						
TSEB				eS	Sn	19 49 39.8	0.0
	baz=287						
TWKBT	Hengchun	0.54	280	i P	Pb	19 49 32.0	-0.8
	baz=299						
TWKBT				eS	Sb	19 49 38.5	-1.8
	baz=299						
TWK1	Hengchun	0.55	280	P	Pb	19 49 32.2	-0.8
	baz=299						
TWK1				eS	Sb	19 49 38.5	-2.0
	baz=299						
HEN	Hengchun	0.62	285	P	Pb	19 49 33.6	-0.6
	baz=300						
HEN				eS	Sb	19 49 39.7	-2.9
	baz=300						
TAW	Tawu	0.68	318	P	Pb	19 49 34.5	-0.7
	baz=323						
TAW				S	Sn	19 49 44.7	-0.7
	baz=323						
EAST	Anshuo	0.73	317	⇓P	Pb	19 49 35.1	-0.9
	baz=331						
ECL	Taimali	0.85	332	P	Pb	19 49 36.6	-1.4
	baz=335						
ECL				S	Sn	19 49 48.7	-0.8
	baz=335						
SCZT	Fangliau	0.88	306	eP	Pb	19 49 38.0	-0.5
	baz=319						
SCZT				eS	Sn	19 49 50.7	+0.3
	baz=319						
SSPT	Xinbi	0.99	310	eP	Pn	19 49 41.2	+1.4
	baz=326						
TWGBT	Beinan	1.01	344	eP	Pb	19 49 39.0	-1.6
	baz=345						
TWGBT				eS	Sn	19 49 53.4	-0.1
	baz=345						
TWG	Pinlang	1.01	343	eP	Pb	19 49 39.0	-1.7
	baz=345						
TWG				eS	Sn	19 49 53.4	-0.2
	baz=345						
MASBT	Mashibuluo	1.03	318	eP	Pb	19 49 40.2	-0.9
	baz=331						
WLCH	Liuqiu	1.06	298	eP	Pn	19 49 42.8	+2.0
	baz=303						
SSD	Sandimen	1.14	322	eP	Pn	19 49 43.2	+1.3
	baz=335						
SLGT	Liugui	1.33	329	P	Pb	19 49 45.7	-0.5
	baz=331						
SLGT				eS	Sn	19 50 05.5	+4.0
	baz=331						
FULB	Fuli	1.35	356	P	Pn	19 49 44.9	+0.1
	baz=344						
FULB				eS	Sn	19 50 03.3	+1.4
	baz=344						
ELDTW	Lidau	1.38	346	eP	Pn	19 49 44.3	-1.1
	baz=347						
STYT	Tauyuan	1.43	336	P	Pn	19 49 46.2	+0.2
	baz=347						
SGST	Jiashian	1.44	329	eP	Pb	19 49 47.9	-0.1
	baz=342						
SGST				eS	Sb	19 50 09.4	+3.5
	baz=342						
TWF1	Yuli	1.50	357	P	Pn	19 49 47.1	+0.1
	baz=347						
YULB	Yu-li	1.54	357	eP	Pn	19 49 46.7	-0.8
	baz=348						
CHN1	Nanshi	1.55	329	eP	Pb	19 49 50.5	+0.6
	baz=331						
WTP	Ta-pu	1.57	333	eP	Pb	19 49 49.7	-0.5
	baz=344						
SNST	Tainan City	1.60	329	eP	Pb	19 49 51.1	+0.5
	baz=331						
HGSD	Ruisui	1.64	1	eP	Pn	19 49 49.6	+0.8
	baz=11						
TWK	Hsinying	1.64	330	eP	Pb	19 49 51.2	-0.2
	baz=332						
CHN4	Tsaushan	1.67	334	eP	Pb	19 49 51.5	-0.4
	baz=335						
CHN5	Tsauling	1.86	339	eP	Pb	19 49 54.8	-0.4
	baz=340						
WHYT	Xinyi Township	1.91	345	eP	Pb	19 49 54.0	-1.9
	baz=353						
VWDT	VWDT	1.91	353	eP	Pn	19 49 53.5	+0.9
	baz=359						
ESL	Shilin	1.96	1	eP	Pn	19 49 53.5	+0.2
	baz=352						
SSLB	Suanglung	1.97	348	eP	Pn	19 49 54.4	+0.9
	baz=349						
SMLT	Sun Moon Lake	2.08	348	eP	Pb	19 49 57.1	-1.8
	baz=348						
OWD	Renai	2.11	355	eP	Pn	19 49 55.9	+0.5

	baz=3.0						
JYNG	Yonagunijimaku	2.96	29	*e*S	Sn	19 50 40.8	-0.8
IRIF	Iriomote-Funau	3.28	41	P	Pn	19 50 12.1	+0.7
JKRS	Kuro-shima	3.39	45	P	Pn	19 50 13.9	+1.0
JKRS				*e*S	Sn	19 50 51.9	-0.3
JIJ	Ishigaki jima	3.56	45	P	Pn	19 50 16.1	+0.8
JIJ				*e*S	Sn	19 50 56.6	+0.1
JISG	Ishigakijimahi	3.83	44	P	Pn	19 50 19.2	+0.3
JISG				*e*S	Sn	19 51 02.9	-0.1
JTJ	Tarama	4.12	47	*e*S	Sn	19 51 09.4	-1.0

WEL 28 19:49:25.4, 40˚S±1˚×17˚7E±˚, h24^{km}±6^{km}, ML3.8/19, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PXZ	Pawanui	0.54	296	P	Pb	19 49 36.1	-0.1
PXZ				S	Sb	19 49 44.6	+1.1
PRHZ	Porangahau	0.66	270	P	Pn	19 49 38.9	-0.4
PRHZ				S	Sn	19 49 48.3	-0.5
KAHZ	Kahuranaki	0.67	315	P	Pb	19 49 38.3	-0.2
CKHZ	Cape Kidnapper	0.68	332	P	Pn	19 49 38.8	-0.9
CKHZ				P	Pb	19 49 38.7	0.0
CKHZ				S	Sb	19 49 48.3	+0.6
ANWZ	Angora Road	0.80	256	P	Pn	19 49 41.4	+0.2
WPHZ	Waipukurau	0.83	284	P	Pb	19 49 41.1	-0.1
WPHZ				S	Sb	19 49 52.4	+0.4
DVHZ	Dannevirke	1.01	268	P	Pn	19 49 43.8	-0.4
MCHZ	McNeill Hill	1.02	323	P	Pn	19 49 43.9	-0.4
BFZ	Birch Farm	1.04	246	P	Pn	19 49 44.4	-0.1
PNHZ	Pukenui	1.05	289	P	Pn	19 49 44.0	-0.8
KRHZ	Kereru	1.06	305	P	Pn	19 49 44.1	-0.8
KWHZ	Kaweka Forest	1.18	315	P	Pn	19 49 45.7	-0.7
TSZ	Takapari Road	1.19	279	P	Pn	19 49 46.0	-0.6
PRWZ	Pori Road	1.20	255	P	Pn	19 49 46.8	+0.1
WHHZ	Waihua	1.20	350	P	Pn	19 49 47.0	+0.2
WHHZ				P	Pb	19 49 47.2	-0.3
KNZ	Kokohu	1.25	6	P	Pn	19 49 47.3	-0.1
NMHZ	Naumai	1.28	335	P	Pn	19 49 47.8	-0.1
POWZ	Post Office Ro	1.32	264	P	Pn	19 49 48.7	+0.2
TIWZ	Tintock	1.33	247	P	Pn	19 49 48.6	0.0
BKZ	Black Stump Fm	1.34	325	P	Pn	19 49 48.2	-0.6
BHHZ	Black Hill Sta	1.34	305	P	Pn	19 49 48.1	-0.7
PRGZ	Paritu Road	1.37	13	P	Pn	19 49 49.3	+0.1
PRGZ				S	Sb	19 50 07.3	-0.3
RAHZ	Arahi	1.38	347	P	Pn	19 49 49.3	0.0
TMWZ	Te Maipa	1.48	235	P	Pn	19 49 50.2	-0.4
SNGZ	Shannon Statio	1.48	355	P	Pn	19 49 50.8	+0.1
MTHZ	Maungataniwha	1.50	340	P	Pn	19 49 50.5	-0.3
MTHZ				S	Sn	19 50 08.0	-1.6
MRZ	Mangatainoka R	1.51	254	P	Pn	19 49 50.6	-0.4
RIGZ	Rimuhau	1.57	8	P	Pn	19 49 51.9	0.0
MOVZ	Moawhango	1.59	302	P	Pn	19 49 52.0	-0.1
HOWZ	Holdsworth Sta	1.63	247	P	Pn	19 49 52.3	-0.4
MRHZ	Matea Rd	1.65	329	P	Pn	19 49 53.1	+0.1
RTZ	Ruatahuna	1.69	346	P	Pn	19 49 53.4	-0.1
MTW	Mount Morrison	1.76	239	P	Pn	19 49 53.9	-0.5
WHVZ	Whangaehu Hut	1.76	303	P	Pb	19 49 56.0	-1.2
RAGZ	Rawiri	1.77	358	P	Pn	19 49 54.5	0.0
TRWZ	Traveller	1.78	230	P	Pn	19 49 53.9	-0.8
TRVZ	Turoa	1.78	302	P	Pb	19 49 56.3	-1.2
FWVZ	Far West T-bar	1.80	303	P	Pn	19 49 56.0	+0.8
NGZ	Ngauruhoe	1.82	306	P	Pn	19 49 56.2	+0.8
COVZ	Chateau Observ	1.84	305	P	Pn	19 49 57.0	+1.4
TKGZ	Te Karaka	1.84	9	P	Pn	19 49 55.5	-0.1
KRVZ	Karewarewa	1.84	309	P	Pn	19 49 57.0	+1.3
OGWZ	Otaki Gorge	1.85	252	P	Pn	19 49 55.4	-0.3
CNGZ	Carnagh Statio	1.86	18	P	Pn	19 49 56.1	+0.3
WTVZ	West Tongariro	1.86	307	P	Pn	19 49 57.4	+1.4
MUGZ	Murupara	1.87	342	P	Pn	19 49 55.8	-0.1
ALRZ	Allen Road	1.92	332	P	Pn	19 49 56.8	+0.2
PAWZ	Paruwai Farm	1.92	234	P	Pn	19 49 55.9	-0.8
MWZ	Matawai	1.93	1	P	Pn	19 49 56.3	-0.5
PRRZ	Plateau Road	1.96	334	P	Pn	19 49 57.1	-0.1
WHTZ	Whakaora	1.99	323	P	Pn	19 49 59.2	+1.6
WAZ	Wanganui	1.99	284	P	Pn	19 49 59.0	+1.3
URZ	Urewera	2.02	351	P	Pn	19 49 57.9	-0.2
MSWZ	Moikau Station	2.05	235	P	Pn	19 49 57.6	-0.9
KIW	Kapiti Island	2.06	252	P	Pn	19 49 58.2	-0.3
TWGZ	Tauwhareparae	2.12	10	P	Pn	19 49 59.4	0.0
PLWZ	Palliser	2.14	232	P	Pn	19 49 58.3	-1.4
TARZ	Mount Tarawera	2.17	339	P	Pn	19 50 00.2	+0.1
BHW	Baring Head	2.29	239	P	Pn	19 50 00.9	-0.9
RUGZ	Raukumara Rang	2.30	4	P	Pn	19 50 01.5	-0.5
PKGZ	Pakihiroa	2.42	11	P	Pn	19 50 03.1	-0.4
HAZ	Te Kaha	2.51	5	P	Pn	19 50 04.3	-0.5
TCW	Tory Channel	2.62	248	P	Pn	19 50 05.4	-0.8
HIZ	Hauiti	2.69	310	P	Pn	19 50 08.0	+0.9
DUWZ	D'Urville Isla	2.77	258	P	Pb	19 50 08.8	-5.5
DUWZ				P	Pn	19 50 08.6	+0.2
BSWZ	Blackbirch Sta	3.10	241	P	Pn	19 50 11.5	-1.3
KHZ	Kahutara	3.67	233	P	Pn	19 50 18.8	-1.8
THZ	Tophouse	3.78	245	P	Pn	19 50 20.6	-1.7
QRZ	Quartz Range	3.82	260	P	Pn	19 50 22.2	-0.6
WIAZ	Waiheke Island	3.93	331	P	Pn	19 50 24.7	+0.5

MEX 28 19:58:57.0±0.6, 16°.00N×98°.61W, h3^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.61	49	*e*P	Pg	19 59 07.9	-0.8
PNIG				*i* S	Sg	19 59 17.4	+0.8

ISCJB ***28*** *20:32:00.8±1.0, 19°.24N±0°.05×64°.58W±0°.03, h27^{km}±6^{km}, Error ellipse: s-maj=8.4km s-min=4.6km az=3.2*

NEIC ***28*** *20:32:01.8±0.0, 19°.14N×64°.43W, h58^{km}, ML3.5(RSPR), After RSPR.*

RSPR ***28*** *20:32:01.8, 19°.14N×64°.43W, h58^{km}±2^{km}, MD3.5/13*

ISC 28 20:31:58.3±1.7, 19°.23N±0°.08×64°.46W±0°.04, h13^{km}±12^{km}, n63, σ1§28/79, 9C-21D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABV	Anegada	0.51	166	⇓*i*P	Pn	20 32 12.2	+0.9
ABV	Anegada	0.51	166	*e*S	Sn	20 32 20.3	+0.4
ABV	Anegada	0.51	166	⇓*i*P	Pn	20 32 12.2	+0.9
ABV				*e*S	Sn	20 32 20.3	+0.4
ABVI	Anegada Island	0.51	166	*e*Pn	Pn	20 32 12.1	+0.8
ABVI				*e*Sn	Sn	20 32 20.3	+0.4
TBVI	Tortola	0.82	190	⇑*i*P	Pn	20 32 15.7	+0.1
TBVI				*e*S	Sb	20 32 26.2	+0.9
TBVI	Tortola	0.82	190	⇑*i*P	Pn	20 32 15.7	+0.1
TBVI				*e*S	Sb	20 32 26.2	+0.9
STVI	Saint Thomas	0.99	208	⇓*e*P	Pn	20 32 17.8	-0.1
STVI	Saint Thomas	0.99	208	⇓*e*P	Pn	20 32 18.0	+0.1
STVI				*e*S	Sb	20 32 30.9	+0.6
STVI	Saint Thomas	0.99	208	*e*S	Sb	20 32 31.8	+1.5
STVI	Saint Thomas	0.99	208	*e*Pn	Pn	20 32 17.8	-0.1
STVI	Saint Thomas	0.99	208	⇓*e*P	Pn	20 32 17.8	-0.1
STVI	Saint Thomas	0.99	208	⇓*e*P	Pn	20 32 18.0	+0.1
STVI				*e*S	Sb	20 32 30.9	+0.6
STVI				*e*S		20 32 31.8	
CUPR	Culebra, Puert	1.20	221	⇓*e*P	Pn	20 32 21.0	+0.2
CUPR	Culebra, Puert	1.20	221	*e*S	Sn	20 32 36.0	-1.0
CUPR	Culebra, Puert	1.20	221	*e*Pn	Pn	20 32 20.8	-0.1
CDVI	St. Croix	1.50	191	*e*Pn	Pg	20 32 28.1	+1.0
MTP	Monte Pirata	1.53	223	⇓*e*P	Pn	20 32 25.7	+0.4
MTP	Monte Pirata	1.53	223	*e*S	Sn	20 32 44.9	-0.2
MTP	Monte Pirata	1.53	223	⇓*e*P	Pn	20 32 25.7	+0.4
MTP				*e*S	Sn	20 32 44.9	-0.2
MTP	Monte Pirata	1.53	223	⇓*e*P	Pn	20 32 25.7	+0.4
MTP				*e*S	Sn	20 32 44.9	-0.2
CBYP	Canovanas	1.63	235	⇓*e*P	Pn	20 32 26.8	+0.1
CBYP	Canovanas	1.63	235	⇓*e*P	Pn	20 32 27.0	+0.2
CBYP				*e*S	Sn	20 32 46.8	-0.9
CBYP	Canovanas	1.63	235	*e*Pn	Pn	20 32 26.5	-0.3
CBYP				*e*Sn	Sn	20 32 46.8	-0.9
CBYP	Canovanas	1.63	235	⇓*e*P	Pn	20 32 26.8	+0.1
CBYP				*e*S	Sn	20 32 46.7	-1.0
CBYP				*e*S		20 32 46.8	
HUMP	Col San Antoni	1.70	231	⇑*e*P	Pn	20 32 28.1	+0.3
HUMP	Col San Antoni	1.70	231	⇓*e*P	Pn	20 32 28.1	+0.3
HUMP	Col San Antoni	1.70	231	*e*Pn	Pn	20 32 27.8	0.0
HUMP	Col San Antoni	1.70	231	⇓*e*P	Pn	20 32 28.1	+0.3
SMRT	St. Maarten	1.76	131	*e*Pn	Pb	20 32 29.4	-1.1
SMRT	St. Maarten	1.76	131	*e*P	Pg	20 32 32.5	+0.4
SMRT				*e*S	Sg	20 32 54.5	-0.5
PDPR	Patillas Dam,	1.91	231	⇓*e*P	Pn	20 32 31.5	+0.9
PDPR				*e*S	Sn	20 32 53.8	-0.6
SJG	San Juan	1.95	236	⇑*e*P	Pn	20 32 31.4	+0.3
SJG	San Juan	1.95	236	*e*S	Sn	20 32 53.9	-1.6
SJG	San Juan	1.95	236	*e*Pn	Pn	20 32 30.9	-0.2
SJG				*e*Sn	Sn	20 32 53.9	-1.6
SJG	San Juan	1.95	236	⇑*e*P	Pn	20 32 31.4	+0.3
SJG				*e*S	Sn	20 32 53.9	-1.6
IGPR	InterUniversit	2.00	231	⇑*e*P	Pn	20 32 32.5	+0.6
IGPR				*e*S	Sn	20 32 56.6	-0.2
EMPR	Esperanza - Ma	2.10	250	⇑*e*P	Pn	20 32 34.0	+0.8
EMPR	Esperanza - Ma	2.10	250	*e*Pn	Pn	20 32 32.9	-0.3
OBIP	Obispado Ponce	2.35	240	⇑*e*P	Pn	20 32 36.2	-0.4
OBIP	Obispado Ponce	2.35	240	*e*S	Sn	20 33 04.8	-0.6
OBIP	Obispado Ponce	2.35	240	*e*Pn	Pn	20 32 35.7	-1.0
OBIP	Obispado Ponce	2.35	240	⇑*e*P	Pn	20 32 36.2	-0.4
OBIP				*e*S	Sn	20 33 04.8	-0.6
AGPR	Aguadilla, PR	2.62	254	⇓*e*P	Pn	20 32 40.7	+0.4
AGPR	Aguadilla, PR	2.62	254	⇓*e*P	Pn	20 32 40.7	+0.4
AGPR	Aguadilla, PR	2.62	254	⇓*e*P	Pn	20 32 40.7	+0.4
AGP	Aguadilla	2.67	253	*e*Pn	Pn	20 32 40.5	-0.5
LSP	Las Mesas	2.70	248	⇓*e*P	Pn	20 32 43.0	+1.6
LSP	Las Mesas	2.70	248	*e*Pn	Pn	20 32 43.0	+1.6
LSP	Las Mesas	2.70	248	⇓*e*P	Pn	20 32 43.0	+1.6
MPR	Mayaguez	2.73	249	*e*Pn	Pn	20 32 42.6	+0.7
NEV	Hard Times	2.75	139	*e*P	Pb	20 32 47.4	0.0
ANWB	Willy Bob	2.98	121	*e*Pn	Pb	20 32 47.7	-3.5
ANWB	Willy Bob	2.98	121	*e*P	Pb	20 32 48.4	-2.8
BPA	Boggy Peak	3.29	131	*e*P	Pb	20 32 52.6	-4.0
MLYT	Lee's Yard	3.30	139	*e*P	Pb	20 32 55.4	-1.3
MLYT				*e*S	Sb	20 33 39.5	+2.7
TBG	Guadaloupe-3	4.30	141	*e*P	Pn	20 33 00.1	-3.3
MGG	Marie-Galante	4.45	137	*e*P	Pn	20 33 08.8	+3.2
BBL	Barber's Block	4.66	142	*e*P	Pn	20 33 12.1	+3.6
DR12	Loma Pena Alta	4.67	265	⇑*e*P	Pn	20 33 10.3	+1.6
DR12	Loma Pena Alta	4.67	265	*e*Pn	Pn	20 33 10.3	+1.6
DWS	Wesley	4.72	140	*e*P	Pb	20 33 14.0	-7.0
DWS				*e*S	Sn	20 33 30.2	-34
BANI	BANI	5.65	263	*e*Pn	Pn	20 33 26.0	+3.9
SDDR	Presa de Saban	6.46	269	*e*Pn	Pn	20 33 34.3	+1.0

IDC ***28*** *20:36:57.5±1.1, 52°.05N×142°.30E, h0^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.5/57, mbtmp3.6/9, ML2.5/1, Error ellipse: s-maj=32.1km s-min=20.8km az=165.0*

MOS ***28*** *20:36:57.5±1.4, 52°.07N×142°.12E, h9^{km}, mb4.0/5, Error ellipse: s-maj=18.3km s-min=9.6km az=88.5*

SKHL ***28*** *20:36:57.8±0.6, 52°.04N×142°.06E, h10^{km}±2^{km}, mb4.4/9, Ms3.7/2*

ISCJB ***28*** *20:36:58.3±0.6, 52°.04N±0°.02×142°.02E±0°.05, h12^{km}±4^{km}, mb3.6/8, Error ellipse: s-maj=5.2km s-min=3.7km az=170.2*

ISC 28 20:37:00.1±1.1, 52°.07N±0°.02×142°.16E±0°.04, h15^{km}±8^{km}, n28, σ1§66/40, mb3.6/8, 2D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TYV	Tymovskoe	1.24	165	*e*Pg	Pn	20 37 21.8	-1.1
TYV				AMB	AMB	20 37 22.6	
	240nm,0.4s						
TYV				AMB	AMB	20 37 22.6	
	240nm,0.4s						
TYV				pP	Pg	20 37 24.6	+0.6
TYV				*e*Sg	Sb	20 37 38.4	-0.6
TYV				A	A	20 37 39.5	
	600nm,0.3s						
TYV				A	A	20 37 39.6	
	790nm,0.5s						
TYV				A	A	20 37 39.6	
	760nm,0.5s						
TYV				AMS	AMS	20 38 02.1	
	2μm,8.0s						
TYV				AMS	AMS	20 38 02.1	
	2μm,8.0s						
TYV				AMS	AMS	20 38 02.1	
	2μm,8.0s						
TYV	Tymovskoe	1.24	165	*e*PN	Pn	20 37 21.5	-1.4
TYV				*e*S	Sb	20 37 38.6	-0.4
TYV				pmax	pmax		
	comp=Z,200nm,0.4s						
TYV				pmax	pmax		
	comp=Z,236nm,0.4s						
TYV				smax	smax		
	comp=N,600nm,0.3s						
TYV				smax	smax		
	comp=N,782nm,0.4s						
NKL	Nikolayevsk	1.41	321	*e*Pg	Pn	20 37 25.0	-0.2
NKL				AMB	AMB	20 37 27.0	
	comp=N,200nm,0.4s						
NKL				*e*Sg	Sg	20 37 44.5	-1.1
NKL				A	A	20 37 47.5	
	comp=N,680nm,0.4s						
NKL	Nikolayevsk	1.41	321	*e*PN	Pn	20 37 25.0	-0.2
NKL				*e*S	Sg	20 37 44.5	-1.1
NKL				pmax	pmax		
	comp=Z,200nm,0.4s						
NKL				smax	smax		
	comp=E,680nm,0.4s						
OKH	Okha	1.56	17	⇓*i*P	Pb	20 37 28.2	-0.4
OKH				⇓*i*Pg	Pg	20 37 31.1	+1.1
OKH				AMB	AMB	20 37 31.8	
	comp=E,420nm,0.5s						
OKH				sP	Pn	20 37 33.4	+6.2
OKH				*i* S	Sg	20 37 49.7	-0.6
OKH				*i* Sg	Sb	20 37 53.3	+5.2
OKH				A	A	20 37 54.2	
	comp=E,2μm,0.8s						
OKH				A	A	20 37 54.2	
	comp=E,2μm,0.8s						
OKH				AMS	AMS	20 38 43.2	
	comp=E,2μm,7.0s						
OKH				AMS	AMS	20 38 43.2	
	comp=E,3μm,7.0s						
OKH				AMS	AMS	20 38 43.2	
	comp=E,1μm,7.0s						
OKH	Okha	1.56	17	*i* PN	Pb	20 37 28.0	-0.6
OKH				*i* SN	Sg	20 37 49.6	-0.7
UGL	Uglegorsk	2.99	181	*e*Pg	Pg	20 37 57.0	-0.4
UGL				AMB	AMB	20 37 57.8	
	comp=E,40nm,0.7s						
UGL				*e*Sg	Sg	20 38 38.8	+2.7
UGL				A	A	20 38 41.6	
	comp=E,140nm,0.7s						
UGL				A	A	20 38 41.6	
	comp=E,170nm,0.7s						
UGL	Uglegorsk	2.99	181	*e*PN	Pg	20 37 57.0	-0.4
UGL				pmax	pmax		
	comp=Z,55nm,0.8s						
GRNR	Gornyy	3.82	252	*e*Pg	Pb	20 38 09.0	+1.8
GRNR				AMB	AMB	20 38 09.3	
	comp=Z,21nm,0.2s						
GRNR				AMB	AMB	20 38 14.2	
	comp=Z,32nm,0.2s						
GRNR				*e*Sg	Sg	20 39 01.3	-1.4
GRNR				A	A	20 39 03.7	
	comp=Z,120nm,0.2s						
GRNR				A	A	20 39 10.2	
	comp=Z,140nm,0.2s						
GRNR	Gornyy	3.82	252	*e*PN	Pb	20 38 08.2	+1.0
GRNR				pmax	pmax		
	comp=Z,21nm,0.2s						
YSS	Yuzh-Sakhalins	5.13	175	*i* PN	Pn	20 38 16.6	+0.3
EKMR	Ekimchan	5.71	284	*e*P	Pn	20 38 24.0	-0.3
EKMR				*e*Pg	Pg	20 38 47.2	-2.1
EKMR				AMB	AMB	20 38 47.9	
	comp=Z,6.0nm,0.7s						
EKMR				AMB	AMB	20 38 47.9	
	comp=Z,7.0nm,0.7s						
EKMR				AMB	AMB	20 38 47.9	
	comp=Z,15nm,0.7s						
EKMR				*e*S	Sn	20 39 28.5	-1.0
EKMR				*e*Sg	Sg	20 40 07.0	+3.8
EKMR				A	A	20 40 21.1	
	comp=Z,180nm,0.8s						
EKMR				A	A	20 40 21.1	
	comp=Z,33nm,0.8s						
EKMR				A	A	20 40 21.1	
	comp=Z,130nm,0.8s						
KLR	Kul'dur	7.20	251	*i* PN	Pn	20 38 44.0	-0.8
KLR	Kul'dur	7.20	251	Pn	Pn	20 38 41.5	-3.3
	comp=Z,0.1nm,0.3s,baz=137,slow=6.6,SNR=2.5						
KLR				Lg	Lg	20 40 38.3	
	comp=Z,0.6nm,0.3s,baz=125,slow=18,SNR=3.9						
TEY	Ternei	7.94	210	*e*P	Pn	20 38 55.4	+0.5
TEY				*e*Sg	Sg	20 41 22.0	+7.3
BMKR	Bomnak	8.39	294	*e*P	Pn	20 39 04.0	+2.9
BMKR				*e*Sg	Sg	20 41 26.8	-2.3
BMKR				A	A	20 41 42.2	
	comp=Z,30nm,0.5s						
ZEA	Zeya	9.17	286	*e*Sg		20 42 06.0	
ZEA				A	A	20 42 07.5	
	comp=Z,120nm,1.2s						
KROS	Kirovskiy	9.41	291	*e*P	Pn	20 39 12.8	-2.2
KROS				AMB	AMB	20 39 17.3	
	comp=Z,6.0nm,0.5s						
KROS				*e*Sg	Sn	20 41 52.0	+51
KROS				A	A	20 42 04.5	
	comp=Z,11nm,0.5s						
PETK	Petropavlovsk-	9.52	78	Pn	Pn	20 39 15.6	-0.9
	comp=Z,0.2nm,0.3s,baz=278,slow=9.8,SNR=5.0						
USRK	Ussuriysk Ar.	10.39	225	Lg	Lg	20 42 28.1	
	comp=Z,0.1nm,0.3s,baz=44,slow=26,SNR=2.4						
SONM	Songino Array	23.25	274	P	P	20 42 07.4	+0.6
	comp=Z,0.2nm,0.4s,baz=69,slow=7.9,SNR=3.2						
ILAR	Eielson Array	37.14	42	P	P	20 44 09.8	0.0
	comp=Z,0.7nm,0.7s,baz=294,slow=8.1,SNR=10.0						
MKAR	Makanchi Array	38.33	287	P	P	20 44 20.7	+0.7
	comp=Z,0.4nm,0.6s,baz=67,slow=7.5,SNR=5.9						
YKA	Yellowknife Ar	50.86	36	P	P	20 45 58.7	-1.0
	comp=Z,0.3nm,0.7s,baz=308,slow=7.3,SNR=7.0						
FINES	FINESS Array B	55.98	329	P	P	20 46 37.3	0.0
	comp=Z,1.2nm,0.6s,baz=47,slow=8.9,SNR=6.8						
NOA	NORSAR Array B	60.64	335	P	P	20 47 09.9	0.0
	comp=Z,1.0nm,0.6s,baz=32,slow=6.7,SNR=2.8						
ASAR	Alice Springs	75.75	188	P	P	20 48 44.8	-0.1
	comp=Z,0.5nm,0.6s,baz=3.3,slow=5.3,SNR=4.6						
TXAR	Lajitas Array	80.63	54	P	P	20 49 11.1	-1.2
	comp=Z,0.5nm,0.8s,baz=316,slow=3.5,SNR=4.6						

ISCJB ***28*** *20:40:23.7±0.5, 40°.76N±0°.02×19°.51E±0°.04, h18^{km}±6^{km}, Error ellipse: s-maj=5.6km s-min=3.9km az=158.7*

ATH ***28*** *20:40:23.2, 40°.76N×19°.65E, h17^{km}±3^{km}, ML2.5/5, Error ellipse: s-maj=3.1km s-min=2.0km az=278.0*

TIR ***28*** *20:40:24.0, 40°.70N×19°.61E, h2^{km}, Md3.0/6*

THE ***28*** *20:40:24.6, 40°.68N×19°.63E, h10^{km}±1^{km}, ML2.4/6, Error ellipse: s-maj=2.3km s-min=0.8km az=271.0*

BEO ***28*** *20:40:24.3±0.8, 40°.92N×19°.23E, h0^{km}, ML2.3/4*

ISC 28 20:40:23.4±1.0, 40°.75N±0°.02×19°.62E±0°.03, h9^{km}±8^{km}, n50, σ1§24/78, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.30	199	P	Pg	20 40 29.6	+0.2
VLO				S	Sg	20 40 32.7	-0.7
VLO	Vlora	0.30	199	*i* PG	Pg	20 40 29.8	+0.5
VLO				*i* SG	Sg	20 40 33.9	+0.5
TPE	Tepelena	0.54	147	P	Pg	20 40 33.2	-0.8
TPE				S	Sg	20 40 40.8	-0.3
TPE	Tepelena	0.54	147	*i* PG	Pg	20 40 32.1	-1.8
TPE				*i* SG	Sb	20 40 43.3	+0.3
TIR	Tirane	0.62	17	*e*Pg	Pg	20 40 36.0	+0.5
TIR				*e*Sg	Sg	20 40 44.0	+0.4
TIR	Tirane	0.62	17	P	Pg	20 40 36.0	+0.5
TIR	Tirane	0.62	17	P	Pn	20 40 37.9	-0.5
TIR				S	Sn	20 40 48.4	-0.1
TIR	Tirane	0.62	17	*i* PG	Pb	20 40 37.5	+1.0
TIR				*i* SG	Sn	20 40 49.0	+0.5
SRN	Sarande	0.92	162	P	Pg	20 40 40.1	-1.0
SRN	Sarande	0.92	162	*i* PG	Pg	20 40 40.0	-1.0
SRN				*i* SG	Sn	20 40 55.8	+0.2
OHR	Ohrid	0.96	68	*i* Pn	Pg	20 40 39.1	-2.8
OHR				*i* Sn	Sn	20 40 56.4	-0.4
OHR	Ohrid	0.96	68	*i* Pn	Pg	20 40 39.1	-2.8
OHR				*i* Sn	Sn	20 40 56.4	-0.4
KEK	Kerkira	1.05	173	P	Pb	20 40 43.8	+0.1
KEK				S	Sb	20 40 57.9	+0.4
KEK				AML	AML	20 41 03.9	
	comp=N,191μm,0.7s						
KEK				AML	AML	20 41 06.6	
	comp=E,409μm,0.6s						
KEK	Kerkira	1.05	173	P	Pg	20 40 43.3	-0.2
KEK				S	Sb	20 40 57.8	+0.4
SCTE	Santa Cesarea	1.11	233	P	Pg	20 40 44.3	-0.5
PHP	Peshkopia	1.12	33	P	Pn	20 40 45.6	+0.4
PHP	Peshkopia	1.12	33	*i* PN	Pn	20 40 46.1	+0.8
PHP				*i* SN	Sn	20 41 05.5	+4.7
NEST	Nestorio	1.14	107	P	Pg	20 40 43.9	-1.4
NEST				AML	AML	20 41 11.8	
	comp=N,230μm,0.9s						
NEST				AML	AML	20 41 15.5	
	comp=E,256μm,0.6s						
NEST	Nestorio	1.14	107	P	Pg	20 40 44.8	-0.5
NEST				S	Sn	20 41 01.7	+0.4
PENT	Pentalofos	1.28	115	P	Pn	20 40 46.8	-0.7
PENT	Pentalofos	1.28	115	P	Pn	20 40 46.6	-0.9
PENT				S	Sn	20 41 05.5	+0.6
BIA	Bitola	1.32	78	*i* Pn	Pn	20 40 47.0	-1.0
BIA				*i* Sn	Sg	20 41 08.0	+2.2
BIA	Bitola	1.32	78	*i* Pn	Pn	20 40 47.0	-1.0
BIA				*i* Sn	Sg	20 41 08.0	+2.2
FNA	Florina	1.33	88	P	Pn	20 40 47.5	-0.7
FNA				AML	AML	20 41 14.2	
	comp=N,832μm,0.7s						
FNA				AML	AML	20 41 14.9	
	comp=E,676μm,0.6s						
FNA	Florina	1.33	88	P	Pn	20 40 47.2	-1.0
FNA				S	Sg	20 41 07.1	+0.8
IGT	Igoumenitsa	1.33	156	P	Pb	20 40 48.7	+0.2
IGT				S	Sg	20 41 06.7	+0.4
IGT				AML	AML	20 41 13.0	
	comp=N,220μm,0.5s						
IGT				AML	AML	20 41 14.0	
	comp=E,319μm,0.7s						
IGT	Igoumenitsa	1.33	156	P	Pn	20 40 48.0	-0.1
IGT				S	Sb	20 41 05.4	-0.3
JAN	Janina	1.44	139	P	Pb	20 40 50.5	+0.1
KPRO	Kipourio	1.55	120	P	Pb	20 40 52.7	+0.4
KPRO	Kipourio	1.55	120	P	Pn	20 40 51.2	0.0
KPRO				S	Sb	20 41 12.0	0.0
MEV	Metsovon	1.56	128	P	Pg	20 40 53.2	-0.2
KZN	Kozani	1.70	105	P	Pb	20 40 54.5	-0.3
KZN				AML	AML	20 41 26.0	
	comp=N,258μm,0.5s						
KZN				AML	AML	20 41 29.8	
	comp=E,310μm,0.5s						
PDG	Podgorica	1.70	351	*e*Pg	Pn	20 40 51.8	-1.4
PDG				*e*Sg	Sn	20 41 12.6	-2.4
LKD2	Lefkada island	2.12	158	P	Pn	20 40 59.2	+0.3
STIP	Stip	2.15	63	*e*Pn	Pb	20 41 02.1	-0.4
STIP				*i* Sn	Sg	20 41 34.5	+1.9
STIP	Stip	2.15	63	*e*Pn	Pb	20 41 02.1	-0.4
STIP				*i* Sn	Sg	20 41 34.5	+1.9
TREB	Trebinje	2.18	335	*e*Pg	Pn	20 40 58.3	-1.5
TREB				*e*Sg	Sn	20 41 24.6	-2.3
THL	Klokotos Trika	2.18	122	P	Pn	20 41 01.1	+1.3
EVGI	Lefkada island	2.27	159	P	Pn	20 41 02.0	+1.0
VAY	Valandovo	2.30	75	*i* Pn	Pn	20 41 00.4	-1.0
VAY				*i* Sn	Sg	20 41 36.7	-0.6
VAY	Valandovo	2.30	75	*i* Pn	Pn	20 41 00.4	-1.0
VAY				*i* Sn	Sg	20 41 36.7	-0.6
KNT	Kendrikon	2.51	80	P	Pn	20 41 04.6	+0.2
SJES	Sjenica	2.52	6	*e*Pg	Pb	20 41 07.4	-1.4
SJES				*e*Sg	Sb	20 41 40.9	+0.9
BARS	Barje	2.63	38	*e*Pn	Pb	20 41 09.3	-1.4
SELS	Selova	2.71	24	*e*Pn	Pn	20 41 09.5	+2.5
IVAS	Ivanjica	2.85	8	*e*Pn	Pn	20 41 09.5	+0.5
GRUS	Gruza	3.24	14	*e*Pn	Pn	20 41 15.7	+1.4
DIVS	Divibare	3.35	5	*e*Pn	Pn	20 41 15.2	-0.8
ZAPS	Zavoj	3.37	41	*e*Pn	Pn	20 41 18.4	+2.2
TRUS	Trudelj	3.52	9	*e*Pn	Pn	20 41 18.7	+0.5

IDC ***28*** *20:40:31.5±0.9, 3°.37N×128°.60E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.6/49, mbtmp3.9/8, Error ellipse: s-maj=52.0km s-min=16.0km az=69.0*

NEIC ***28*** *20:40:34.6±7.2, 3°.36N×128°.60E, h20^{km}±46^{km}, mb4.5/2, Error ellipse: s-maj=17.0km s-min=8.2km az=70.0*

ISCJB ***28*** *20:40:35.8±0.6, 3°.37N±0°.06×128°.5E±0°.2, h45^{km}, mb3.9/10, Error ellipse: s-maj=22.5km s-min=8.8km az=172.4*

ISC 28 20:40:37.6±0.9, 3°.26N±0°.09×128°.5E±0°.2, h45^{km}, n18,

σ1^{s}00/16, mb4.0/10, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.72	205	*e*Pn	Pn	20 41 18.9	+0.1
FITZ	Fitzroy Crossi	21.41	188	S	S	20 49 14.3	-2.7
	3.4nm,1.0s,baz=3.2,slow=12,SNR=3.7						
WR1	Warramunga Arr	23.75	166	*e*P	P	20 45 47.1	+1.1
	28nm,1.6s						
WRA	Warramunga Arr	23.75	166	P	P	20 45 47.1	+1.1
	3.9nm,0.8s,baz=344,slow=10.0,SNR=26						
ASAR	Alice Springs	27.27	169	P	P	20 46 18.8	+0.9
	0.7nm,0.4s,baz=347,slow=7.2,SNR=15						
ASAR				PcP	PcP	20 49 37.9	+0.8
	0.4nm,0.5s,baz=351,slow=2.1,SNR=7.2						
CMAR	Chiang Mai Arr	32.65	300	P	P	20 47 06.0	+0.4
	0.4nm,0.6s,baz=127,slow=8.3,SNR=4.2						
MAJO	Matsushiro	34.31	14	*e*P	P	20 47 18.9	-0.9
MJAR	Matsushiro Arr	34.31	14	P	P	20 47 18.9	-0.9
	1.4nm,0.8s,baz=190,slow=9.6,SNR=3.5						
STKA	Stephens Creek	37.08	161	P	P	20 47 43.6	0.0
	1.3nm,0.5s,baz=340,slow=8.3,SNR=4.8						
H11S3	WAKE ISLAND Hy	40.30	65	T	T	21 31 24.7	
	baz=252,slow=74,SNR=4.9						
H11S2	WAKE ISLAND Hy	40.31	65	T	T	21 31 23.4	
	baz=252,slow=74,SNR=3.8						
H11S1	WAKE ISLAND Hy	40.31	65	T	T	21 31 23.2	
	baz=252						
MK01	Makanchi Array	58.95	325	*e*P	P	20 50 32.4	0.0
MK31	Makanchi Array	58.97	325	*e*P	P	20 50 32.5	0.0
	7.5nm,1.9s						
MK32	Makanchi Array	58.97	325	*e*P	P	20 50 32.8	+0.2
MKAR	Makanchi Array	58.97	325	P	P	20 50 32.8	+0.2
	0.8nm,0.4s,baz=116,slow=8.4,SNR=22						
KURBB	Kurchatov Arra	63.10	327	P	P	20 51 00.2	-0.3
	0.7nm,0.5s,baz=128,slow=6.1,SNR=10						
BVAR	Borovoye Array	68.69	327	P	P	20 51 36.5	+0.1
	0.3nm,0.4s,baz=84,slow=3.3,SNR=5.9						

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*ISCJB **28** 20:45:25.7±0.6, 39°.04N±0°.03×29°.71E±0°.04, h4^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=5.1km az=35.0*
*ISK **28** 20:45:25.3, 39°.06N×29°.68E, h2^{km}, ML2.2/13*
*DDA **28** 20:45:26.1, 39°.02N×29°.65E, h7^{km}±2^{km}, ML2.5*
ISC 28 20:45:26.0±1.0, **39°.05N**±0°.03×**29°.69E**±0°.03, **h11**^{km}±9^{km}, **n23**, σ**0^{s}52**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.17	285	*i* P	Pg	20 45 30.0	+0.2
GDZ				*i* S	Sg	20 45 32.4	-0.1
GDZ				IAML_P			
	comp=Z,17μm,0.1s						
GEDZ	Gediz	0.21	270	PG	Pg	20 45 30.5	-0.1
GEDZ				SG	Sg	20 45 34.1	+0.4
SHAP	Saphane-Kutahy	0.36	266	PG	Pg	20 45 33.1	-0.2
TVSB	Tavsanli	0.44	337	PG	Pg	20 45 34.1	-0.6
SMAA	Simav-Kutahya	0.55	276	PG	Pb	20 45 36.9	-0.8
USAK	Uak-Merkez	0.62	238	*i* P	Pb	20 45 38.9	0.0
USAK				*i* S	Sb	20 45 47.5	-0.1
USAK				IAML_P			
	comp=Z,963nm,0.1s						
KHAL	Karahalli	0.69	193	*i* P	Pb	20 45 39.5	-0.7
KHAL				*i* S	Sg	20 45 48.2	-0.3
KHAL				IAML_P			
	comp=Z,1μm,0.1s						
DEMI	Demirci	0.76	270	*i* P	Pb	20 45 40.5	-0.7
DEMI				*i* S	Sb	20 45 51.1	-0.4
DEMI				IAML_P			
	comp=Z,674nm,0.1s						
SHUT	Suhut-Afyon	0.84	126	PG	Pb	20 45 42.6	0.0
KZIL	AFYON_Kizioren	0.86	156	*i* P	Pb	20 45 43.0	-0.1
KZIL				IAML_P			
	comp=Z,598nm,0.1s						
KULA	Kula-Manisa	0.96	237	PG	Pb	20 45 44.6	-0.1
BORA	Eskisehir	1.02	35	*i* P	Pg	20 45 45.4	-0.3
BORA				*i* S	Sg	20 45 57.6	-1.4
MANT	Manisa	1.04	238	*i* P	Pb	20 45 46.3	+0.1
MANT				*i* S	Sb	20 45 59.6	-0.4
MANT				IAML_P			
	comp=Z,337nm,0.2s						
DURS	Dursunbey	1.09	301	*i* P	Pb	20 45 47.2	+0.2
CAVI	Cavuskoy	1.16	6	PN	Pg	20 45 48.2	-0.1
ORLT	Orhaneli	1.17	329	PN	Pb	20 45 48.6	+0.3
MDNY	Mudanya-Bursa	1.46	335	PN	Pg	20 45 53.6	-0.4
SVRH	Sivrihisar-ESK	1.48	74	PN	Pn	20 45 53.8	+1.1
BALB	Balikesir	1.52	294	PN	Pb	20 45 54.3	+0.1
GULT	Gulveren	1.52	25	PN	Pn	20 45 54.1	+0.8
YLV	Yalova	1.54	351	PN	Pb	20 45 54.8	+0.2
KCTX	Karacabey (Bur	1.59	320	PN	Pb	20 45 55.4	-0.1
ARMT	Armutlu	1.65	338	PN	Pb	20 45 56.3	-0.1

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*IDC **28** 20:45:55.7±0.9, 11°.54N×142°.18E, h0^{km}, mb3.5/7, mb1 3.8/8, mb1mx3.5/63, mbtmp3.6/8, ML3.9/1, Error ellipse: s-maj=33.5km s-min=20.8km az=101.0*
*ISCJB **28** 20:45:59.1±0.8, 11°.5N±0°.1×142°.2E±0°.2, h35^{km}, mb3.7/8, Error ellipse: s-maj=24.0km s-min=15.5km az=27.2*
ISC 28 20:46:00.9±0.9, **11°.5N**±0°.2×**142°.2E**±0°.2, **h35**^{km}, **n9**, σ**0^{s}72**/9, **mb3.6**/8, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.33	52	Pn	Pn	20 46 50.7	+0.2
	12nm,0.3s,baz=183,slow=19,SNR=4.0						
WRA	Warramunga Arr	32.22	194	P	P	20 52 25.5	-0.5
	0.6nm,0.8s,baz=17,slow=9.9,SNR=6.8						
ASAR	Alice Springs	35.91	193	P	P	20 52 58.5	+0.5
	0.3nm,0.7s,baz=18,slow=13,SNR=4.4						
SONM	Songino Array	46.96	327	P	P	20 54 27.9	-0.6
	0.3nm,0.7s,baz=128,slow=7.2,SNR=2.2						
KURBB	Kurchatov Arra	64.51	321	P	P	20 56 35.1	+0.9
	0.5nm,0.7s,baz=105,slow=6.5,SNR=3.4						
BVAR	Borovoye Array	69.91	322	P	P	20 57 09.5	+1.0
	0.5nm,0.6s,baz=104,slow=9.3,SNR=5.4						
ILAR	Eielson Array	71.54	25	P	P	20 57 17.9	-0.2
	1.1nm,0.6s,baz=247,slow=5.8,SNR=23						
YKA	Yellowknife Ar	85.88	27	P	P	20 58 36.8	-0.1
	0.1nm,0.3s,baz=294,slow=6.5,SNR=3.7						
FINES	FINESS Array B	91.88	334	P	P	20 59 04.8	-0.6
	11nm,1.2s,baz=90,slow=2.8,SNR=3.8						

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*ISCJB **28** 20:48:23.9±0.4, 38°.21N±0°.02×118°.20W±0°.03, h23^{km}±5^{km}, Error ellipse: s-maj=4.0km s-min=3.2km az=175.4*
*NEIC **28** 20:48:23.8±0.0, 38°.13N×118°.26W, h14^{km}, ML3.6(REN), After REN.*
NEIC Felt at Silverpeak. Also felt at Bishop, California.
*ANF **28** 20:48:23.7±0.4, 38°.12N×118°.22W, h5^{km}±2^{km}, ML4.0/12, Error ellipse: s-maj=2.9km s-min=1.9km az=145.0*
*REN **28** 20:48:23.8, 38°.13N×118°.26W, h14^{km}, ML3.6*
ISC 28 20:48:23.3±1.0, **38°.14N**±0°.02×**118°.22W**±0°.03, **h18**^{km}±10^{km}, **n84**, σ**1^{s}61**/92, **California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NV11	Mina Array Sit	0.30	10	*e*Pg	Pg	20 48 29.8	-0.1
NV01	Mina Array Sit	0.30	347	*e*Pg	Pg	20 48 29.4	-0.6
RYN	Ryan	0.54	334	*e*Pg	Pb	20 48 34.4	0.0
MLAC	Mammoth, Mammo	0.70	224	P	Pb	20 48 37.1	-0.1
	baz=42						
MLAC				S	Sg	20 48 46.8	+0.2
	baz=42						
OMMB	Old Mammoth Mi	0.81	230	*e*Pg	Pb	20 48 38.7	-0.4
MDPB	Devils Postpil	0.85	234	*e*Pg	Pb	20 48 39.3	-0.3
KVN	Kaiserville	0.92	6	*e*Pg	Pg	20 48 41.1	0.0
WAKR	Walker	1.03	291	*e*Pg	Pb	20 48 42.7	0.0
TIN	Tinemaha, Big	1.08	181	P	Pg	20 48 44.5	+0.1
	baz=359						
TIN				S	Sg	20 48 59.0	+0.5
	baz=359						
YERR	Yerington	1.16	317	*e*Pg	Pb	20 48 45.2	+0.2
GRAC	Grapevine Rang	1.33	149	P	Pg	20 48 48.8	-0.1
	baz=328						
GRAC				S	Sg	20 49 08.0	+1.7
	baz=328						
PNTR	Pine Nut	1.44	312	*e*Pn	Pb	20 48 49.6	-0.1
VCNR	Virginia City	1.61	316	*e*Pn	Pb	20 48 52.3	-0.3
CWC	Cottonwood Cre	1.70	176	P	Pb	20 48 54.1	0.0
	baz=355						
CWC				S	Sg	20 49 17.4	-0.8
	baz=355						
CMB	Columbia Colle	1.71	267	*e*Pn	Pn	20 48 53.2	+0.9
RUBR	Rubicon Trail	1.77	302	*e*Pn	Pb	20 48 54.6	-0.7
PAHR	Pah Rah Range	1.81	330	*e*Pn	Pb	20 48 54.9	-1.1
DAC	Darwin (Calif)	1.93	165	*e*Pn	Pb	20 48 57.0	-0.9
TPNV	Topopah Spring	1.96	127	*e*Pn	Pn	20 48 57.4	+1.6
TPNV	Topopah Spring	1.96	127	P	Pb	20 48 57.7	-0.9
	baz=307						
FURC	Furnace Creek,	1.99	147	Pb	Pg	20 49 00.5	-1.0
	baz=327						
VOG	Valley Oaks Go	2.04	207	P	Pb	20 48 59.3	-0.5
	baz=26						
VOG				Sb	Sg	20 49 28.1	-0.8
	baz=26						
R11A	Troy Canyon, C	2.08	83	*e*Pn	Pn	20 48 58.5	+1.0
R11A	Troy Canyon, C	2.08	83	P	Pn	20 48 58.8	+1.3
	baz=265						
R11A				Sb	Sg	20 49 30.7	+0.3
	baz=265						
MPMC	Manual Prospec	2.16	164	Sb	Sg	20 49 32.2	-0.6
	baz=344						
AFDM	Forest Hills D	2.31	291	*e*Pn	Pn	20 49 01.6	+1.2
VES	Vestal, Richgr	2.40	197	Pb	Pb	20 49 07.2	+1.3
	baz=16						
VES				Sb	Sg	20 49 38.6	-1.7
	baz=16						
BEKR	Beckworth	2.40	317	*e*Pn	Pn	20 49 02.5	+0.7
BMN	Battle Mountai	2.42	18	*e*Pn	Pn	20 49 03.5	+1.5
ISA	Isabella, Lake	2.48	185	*e*Pn	Pn	20 49 04.4	+1.5
ISA	Isabella, Lake	2.48	185	Pb	Pb	20 49 09.0	+1.6
	baz=3.9						
ISA				Sb	Sg	20 49 41.0	-2.0
	baz=3.9						
LRMC	Laurel Mtn Rad	2.69	171	Pb	Pg	20 49 13.7	-1.2
	baz=350						
PAGB	Antelope Grade	2.90	215	*e*Pn	Pn	20 49 08.9	+0.2
SAO	San Andreas Ge	2.91	243	*e*Pn	Pn	20 49 09.0	+0.2
ORV	Oroville	2.93	300	*e*Pn	Pn	20 49 10.2	+1.3
SHPR	Sheep Range	2.93	123	*e*Pn	Pn	20 49 11.3	+2.1
GSC	Goldstone, Bar	3.05	158	*e*Pn	Pn	20 49 12.0	+1.3
PSUT	Pine Spring	3.45	82	*e*Pn	Pn	20 49 17.6	+1.3
ELK	Elko	3.48	41	*e*Pn	Pn	20 49 18.4	+1.7
OSI	Osito Audit: C	3.54	187	*e*Pg	Pb	20 49 25.4	0.0
GDXM	Geysers	3.65	282	*e*Pg	Pb	20 49 27.0	-0.3
MCCM	Marconi Confer	3.68	272	*e*Pg	Pb	20 49 26.8	-0.8
CCUT	Cedar City	3.89	97	*e*Pn	Pn	20 49 24.0	+1.7
HOPS	Hopland Field	3.90	284	*e*Pg	Pb	20 49 31.4	0.0
MWC	Mount Wilson	3.91	178	*e*Pg	Pb	20 49 32.6	+0.8
LDFC	Landfair	3.95	140	*e*Pg	Pb	20 49 32.4	0.0
MOD	Modoc Plateau	4.08	338	*e*Pn	Pn	20 49 26.1	+1.1
SZCU	Shurtz Canyon	4.10	96	*e*Pn	Pn	20 49 26.3	+1.1
LCMT	Little Creek M	4.11	104	*e*Pn	Pn	20 49 26.9	+1.6
WDC	Whiskeytown Da	4.14	307	*e*Pn	Pn	20 49 26.4	+0.8
WVOR	Wild Horse Val	4.30	356	*e*Pg	Pb	20 49 41.0	+2.6
KNB	Kanab	4.43	103	*e*Pn	Pn	20 49 31.8	+2.0
TCRU	Three Creeks R	4.56	82	*e*Pn	Pn	20 49 32.1	+0.5
W13A	Hualapai Mount	4.62	130	*e*Pg	Pb	20 49 46.8	+2.9
DUG	Dugway, Tooele	4.67	62	*e*Pn	Pn	20 49 33.1	0.0
PKCU	Pink Cliffs	4.73	97	*e*Pn	Pn	20 49 36.4	+2.4
PFO	Pinyon Flats O	4.74	162	*e*Pn	Pn	20 49 35.4	+1.5
XPFO	Pion Flat	4.74	162	*e*Pn	Pn	20 49 35.8	+1.9
MTPU	Mount Pierson	4.76	89	*e*Pn	Pn	20 49 36.3	+1.8
MSU	Marysvale	4.76	84	*e*Pn	Pn	20 49 36.0	+1.5
BGU	Big Grassy Mou	4.88	54	*e*Pn	Pn	20 49 37.4	+1.5
YBH	Yreka Blue Hor	4.98	318	*e*Pn	Pn	20 49 37.2	0.0
U15A	North Rim	5.03	108	*e*Pn	Pn	20 49 40.0	+1.9
NLU	North Lily Min	5.11	67	*e*Pg	Pg	20 50 00.2	-1.0
J08A	Circle Bar Ran	5.22	358	*e*Pg	Pb	20 49 56.6	+2.6
Y12C	Blythe	5.31	145	*e*Pg	Pb	20 49 59.6	+4.1
SPUT	South Promonto	5.46	53	*e*Pn	Pn	20 49 44.5	+0.6
HVU	Hansel Valley	5.54	47	*e*Pn	Pn	20 49 45.7	+0.7
Q16A	Castle Valley	5.58	80	*e*Pg	Pg	20 50 06.2	-3.9
BAR	Barrett	5.59	166	*e*Pn	Pn	20 49 46.9	+1.3
TMUT	Trail Mountain	5.60	76	*e*Pg	Pg	20 50 06.9	-3.6
JLU	Jordanelle	5.79	63	*e*Pg	Pg	20 50 14.0	-0.2
Y14A	Wickenburg	5.95	133	*e*Pg	Pg	20 50 14.4	-2.8
TCUT	Toone Canyon	6.04	58	*e*Pn	Pn	20 49 54.2	+2.3
WUAZ	Wupatki	6.08	113	*e*Pn	Pn	20 49 53.4	+1.0
SRU	San Rafael Swe	6.10	78	*e*Pg	Pg	20 50 15.6	-4.5
HLID	Hailey	6.14	27	*e*Pn	Pn	20 49 52.7	-0.5
X16A	Lo Mia Camp, P	6.61	122	*e*Pg	Pg	20 50 26.8	-3.1
PV16	Nyswonger Mesa	7.33	86	*e*Pn	Pn	20 50 14.1	+4.5
PV04	Paradox Valley	7.33	85	*e*Pn	Pn	20 50 10.6	+1.0
PV11	David Mesa, Pa	7.36	86	*e*Pn	Pn	20 50 09.9	-0.1
PV03	Paradox Valley	7.38	86	*e*Pn	Pn	20 50 09.4	-0.9
PV12	Saucer Basin,	7.42	86	*e*Pn	Pn	20 50 12.3	+1.5
PV02	Paradox Valley	7.47	87	*e*Pn	Pn	20 50 13.3	+1.8

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*IDC **28** 20:55:12.4±1.6, 10°.49N×125°.85E, h0^{km}, mb4.0/7, mb1 4.1/7, mb1mx3.6/60, mbtmp4.0/7, MS3.2/2, Ms1 3.2/2, ms1mx2.7/35, Error ellipse: s-maj=128.3km s-min=19.2km az=73.0*
*MAN **28** 20:55:17.8, 10°.64N×126°.02E, h9^{km}, MS3.2*
ISC 28 20:55:15.8±1.6, **10°.66N**±0°.04×**126°.17E**±0°.06, **h16**^{km}±10^{km}, **n24**, σ**2^{s}11**/31, **mb4.1**/7, **4C-1D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	1.18	323	*e*P	Pg	20 55 39.1	+0.6
BESP				*e*S	Sn	20 55 56.4	+3.0
PLP	Palo	1.27	293⇓	*e*P	Pb	20 55 38.6	-0.7
PLP				*e*S	Sg	20 55 54.5	-2.3
MSLP	Maasin	1.39	248	*e*P	Pn	20 55 40.1	-0.4
MSLP				*e*S	Sb	20 55 57.6	-1.3
OCLP	Ormoc	1.58	284	*e*P	Pb	20 55 44.7	0.0
OCLP				*e*S	Sg	20 56 07.4	+0.6
BUTP	Butuan	1.77	198	*e*P	Pn	20 55 46.7	+1.0
BUTP				*e*S	Sg	20 56 13.1	+0.4
LLP	Lapu-Lapu	2.19	261⇑	*e*P	Pn	20 55 52.8	+1.2
LLP				*e*S	Sn	20 56 18.7	+0.2
CNP	Catarman	2.36	321	*e*P	Pn	20 55 56.2	+2.4
CNP				*e*S	Sn	20 56 24.6	+2.1
BIPH	Bislig	2.47	176⇑	*i*P	Pn	20 55 58.2	+2.9
BIPH				*i* S	Sn	20 56 23.0	-2.2
BUKP	Musuan	2.97	202	*e*P	Pn	20 56 04.8	+2.5
BUKP				*e*S	Sn	20 56 41.6	+3.9
SNPH	Sibulan	3.17	246	*e*P	Pn	20 56 06.5	+1.4
DCPH	Dipolog City	3.46	234⇑	*e*P	Pn	20 56 11.6	+2.5
RCP	Roxas	3.48	285⇑	*e*P	Pn	20 56 11.7	+2.4
PVCP	Virac	3.52	326	*e*P	Pn	20 56 12.6	+2.7
PVCP				*e*S	Sg	20 57 06.8	-2.1
PAGZ	Pagadian	3.92	225	*e*P	Pn	20 56 17.3	+2.0
IPIL	Ipil	4.55	232	*e*P	Pn	20 56 28.2	+4.1
MJAR	Matsushiro Arr	27.98	21	LR	LR	21 10 59.2	
	comp=Z,22nm,20.3s,baz=30,slow=34						
FITZ	Fitzroy Crossi	28.58	181	P	P	21 01 08.5	-2.8
	3.0nm,0.8s,baz=12,slow=9.3,SNR=2.5						
ASAR	Alice Springs	34.95	168	P	P	21 02 06.2	-1.1
	0.4nm,0.3s,baz=340,slow=7.6,SNR=9.4						
SONM	Songino Array	40.62	340	P	P	21 02 55.5	+0.4
	0.3nm,0.5s,baz=163,slow=8.9,SNR=4.2						
MKAR	Makanchi Array	51.66	323	P	P	21 04 21.3	-0.6
	0.7nm,0.3s,baz=118,slow=7.8,SNR=16						
KURBB	Kurchatov Arra	55.70	325	P	P	21 04 50.4	-1.0
	0.7nm,0.4s,baz=125,slow=6.6,SNR=4.3						
NRIK	Noril'sk	63.61	346	LR	LR	21 36 51.1	
	comp=Z,45nm,18.2s,baz=34,slow=39						
ARCES	ARCESS Array B	83.80	340	P	P	21 07 42.4	-1.7
	3.1nm,0.9s,baz=83,slow=7.5,SNR=3.7						
FINES	FINESS Array B	85.50	332	P	P	21 07 51.0	-1.8
	2.3nm,0.9s,baz=63,slow=6.4,SNR=4.3						

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*ISCJB **28** 21:08:17.7±0.6, 43°.70N±0°.04×105°.41W±0°.06, h0^{km}, Error ellipse: s-maj=6.5km s-min=5.7km az=12.3*
*IDC **28** 21:08:18.8±1.3, 43°.70N×105°.50W, h0^{km}, mb1 3.8/5, mb1mx3.4/41, mbtmp3.5/5, ML2.8/3, Error ellipse: s-maj=30.5km s-min=7.7km az=150.0*
*NEIC **28** 21:08:19.5±0.6, 43°.82N×105°.35W, h0^{km}, ML3.1, Error ellipse: s-maj=9.7km s-min=8.1km az=173.0, Suspected Mining explosion.*
NEIC 54 km [34 miles] SSE of Gillette.
ISC 28 21:08:19.6±0.8, **43°.91N**±0°.04×**105°.36W**±0°.05, **h0**^{km}, **n13**, σ**1^{s}19**/17, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.98	77	*e*Pg	Pg	21 08 38.6	+0.3
RSSD				*e*Sg	Sb	21 08 54.4	+1.3
LAO	LASA Array	2.85	348	*e*Pn	Pn	21 09 07.7	+1.4
LAO				*e*Sb	Sg	21 09 50.3	-0.8
RLMT	Red Lodge	3.05	295	*e*Pn	Pn	21 09 07.7	-1.6
RLMT				S	Sb	21 09 52.9	+0.2
PDAR	Pinedale Array	3.27	251	Pn	Pn	21 09 12.6	+0.2
	6.8nm,0.3s,baz=77,slow=16,SNR=25						
PDAR				Lg	Lg	21 09 55.3	
	17nm,0.3s,baz=73,slow=32,SNR=9.6						
OGNE	Ogallala	3.85	139	*e*Pn	Pn	21 09 18.6	-1.5
OGNE				*e*Pg	Pb	21 09 28.7	+0.3
ISCO	Idaho Springs	4.11	183	*e*Pn	Pn	21 09 21.8	-2.1
ISCO				*e*Pg	Pb	21 09 34.3	+1.3
ISCO				*e*Sg	Sb	21 10 24.6	+1.4
ELK	Elko	7.97	250	Pn	Pn	21 10 16.8	-0.2
	0.1nm,0.3s,baz=54,slow=11,SNR=2.4						
ELK				Lg	Lg	21 12 25.9	
	0.1nm,0.3s,baz=156,slow=15,SNR=2.5						
I10CA	LAC DU BONNET	8.95	42	*i*		22 06 20.0	
	baz=220,slow=318,SNR=1.1						
ANMO	Albuquerque	8.99	186	Lg	Lg	21 12 57.8	
	0.1nm,0.3s,baz=97,slow=16,SNR=2.8						
ULM	Lac du Bonnet	9.06	42	Pn	Pn	21 10 30.8	-0.7
	1.3nm,0.3s,baz=227,slow=11,SNR=10.0						
ULM				Sn	Sn	21 12 13.3	-0.8
	0.3nm,0.3s,baz=257,slow=15,SNR=2.3						
ULM				Lg	Lg	21 13 05.4	
	0.2nm,0.3s,baz=127,slow=17,SNR=2.4						
TXAR	Lajitas Array	14.61	174	Lg	Lg	21 15 54.7	
	0.0nm,0.3s,baz=345,slow=28,SNR=3.5						
TKL	Tuckaleechee C	18.48	109	P	P	21 12 37.2	+0.2
	1.6nm,0.3s,baz=339,slow=9.0,SNR=7.2						
YKA	Yellowknife Ar	19.39	347	P	Pn	21 12 48.9	+1.1
	0.1nm,0.3s,baz=155,slow=11,SNR=3.1						

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*DDA **28** 21:12:34.6, 39°.52N×26°.01E, h6^{km}±4^{km}, ML2.7*
*ISK **28** 21:12:34.9, 39°.54N×25°.90E, h5^{km}, ML2.7/21*
*ISCJB **28** 21:12:35.6±0.4, 39°.52N±0°.01×25°.98E±0°.03, h6^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.4km az=171.8*
*ATH **28** 21:12:35.3, 39°.50N×25°.97E, h26^{km}±2^{km}, ML2.3/3, Error ellipse: s-maj=3.1km s-min=1.0km az=227.0*
*THE **28** 21:12:35.8, 39°.52N×25°.98E, h2^{km}±1^{km}, ML1.9/9, Error ellipse: s-maj=1.5km s-min=0.5km az=139.0*
ISC 28 21:12:35.6±0.9, **39°.52N**±0°.02×**25°.98E**±0°.02, **h10**^{km}±8^{km}, **n63**, σ**0^{s}69**/88, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.32	198	PG	Pg	21 12 41.9	0.0
SIGR				SG	Sg	21 12 46.6	+0.4
SIGR	SIGRI	0.32	198	P	Pg	21 12 42.0	0.0
SIGR				S	Sg	21 12 47.1	+0.9
SIGR				AML	AML	21 12 47.8	
	comp=E,1179μm,0.2s						
SIGR				AML	AML	21 12 52.7	
	comp=N,1136μm,0.3s						
SIGR	SIGRI	0.32	198	P	Pg	21 12 41.9	0.0
SIGR				S	Sg	21 12 46.8	+0.6
BOZC	Bozcaada	0.33	10	PG	Pg	21 12 42.1	-0.1
BOZC				SG	Sg	21 12 47.3	+0.7
BOZC	Bozcaada	0.33	10	*i* P	Pb	21 12 42.8	-0.8
BOZC				*i* S	Sb	21 12 47.5	-1.5
BOZC				IAML_P			
	comp=Z,6μm,0.1s						
PRK	Paraskevi	0.35	140	P	Pb	21 12 43.5	-0.4
PRK				S	Sb	21 12 48.7	-0.8
PRK				AML	AML	21 12 49.1	
	comp=N,1745μm,0.3s						
PRK				AML	AML	21 12 50.3	
	comp=E,2364μm,0.5s						
PRK	Paraskevi	0.35	140	P	Pb	21 12 43.3	-0.6
PRK				S	Sb	21 12 48.6	-0.9
EZN	Ezine	0.41	41	PG	Pg	21 12 43.3	-0.4
EZN	Ezine	0.41	41	P	Pg	21 12 43.2	-0.4
EZN				S	Sg	21 12 49.2	+0.2
BAYC	CANAKKALE_Bayr	0.49	63	*i* P	Pg	21 12 45.3	+0.1
BAYC				*i* S	Sg	21 12 51.3	-0.4
BAYC				IAML_P			
	comp=Z,2μm,0.1s						
AYVA	Ayvalik	0.59	110	*i* P	Pg	21 12 45.4	-1.6
AYVA				*i* S	Sb	21 12 55.9	-0.4
AYVA				IAML_P			
	comp=Z,181nm,0.1s						
LIA	Limnos Island	0.72	302	P	Pb	21 12 49.8	-0.5
LIA				S	Sb	21 13 00.5	+0.2
LIA				AML	AML	21 13 03.5	
	comp=E,282μm,0.5s						
LIA				AML	AML	21 13 03.9	
	comp=N,222μm,0.6s						
LIA	Limnos Island	0.72	302	P	Pb	21 12 49.8	-0.5
LIA				S	Sb	21 13 00.7	+0.4
EFSA	Agios Efstrati	0.77	272	P	Pn	21 12 51.9	-0.6
GELI	Tayfur-Gelibol	0.96	23	PG	Pg	21 12 53.6	-0.5
GELI				SG	Sb	21 13 07.3	+0.2
FOCM	Foa	0.99	144	PG	Pn	21 12 55.7	+0.1
SMTH	Samothraki Isl	1.01	340	P	Pg	21 12 54.7	-0.4
SMTH	Samothraki Isl	1.01	340	P	Pg	21 12 54.7	-0.4
SMTH				S	Sb	21 13 09.4	+0.7
KRBN	Karaburun	1.02	154	PG	Pn	21 12 55.9	-0.1
PSRA	Psara	1.03	199	P	Pb	21 12 55.7	+0.2
LPK	Lapseki	1.04	35	PG	Pn	21 12 56.1	-0.2
CHOS	Chios island	1.13	177	PN	Pn	21 12 57.7	+0.1
CHOS	Chios island	1.13	177	P	Pb	21 12 57.3	0.0
CHOS	Chios island	1.13	177	P	Pg	21 12 57.1	-0.2
CHOS				S	Sn	21 13 13.2	0.0
ERIK	Erikli-Kesan	1.22	19	PN	Pg	21 12 58.3	-0.8
ENEZ	Enez	1.23	6	PN	Pn	21 12 58.9	+0.1
URLA	Izmir	1.25	157	*i* P	Pn	21 12 58.7	-0.5
URLA				*i* S	Sg	21 13 15.6	-0.3
URLA				IAML_P			
	comp=Z,1μm,0.3s						
KRBG	Karabiga-Canak	1.34	49	PN	Pg	21 13 00.8	-0.5
ZEY	zmir	1.34	162	*i* P	Pn	21 13 00.2	-0.1
ZEY				*i* S	Sb	21 13 17.1	-0.9
ZEY				IAML_P			
	comp=Z,532nm,0.3s						
STEP	BALIKESIR_Sava	1.35	95	*i* P	Pn	21 13 00.9	+0.3
STEP				IAML_P			
	comp=Z,861nm,0.3s						
ALN	Alexandroupoli	1.38	2	PN	Pn	21 13 00.8	-0.1
ALN	Alexandroupoli	1.38	2	P	Pn	21 13 01.0	+0.1
ALN	Alexandroupoli	1.38	2	P	Pb	21 13 01.2	-0.3
ALN				S	Sg	21 13 20.8	+0.8
KNL	Balıkesir	1.41	57	*i* P	Pn	21 13 01.2	-0.2
KNL				*i* S	Sg	21 13 21.7	+0.8
KNL				IAML_P			
	comp=Z,2μm,0.4s						
KESN	Edirne-Kesan	1.41	22	*i* P	Pn	21 13 01.2	-0.5
KESN				*i* S	Sb	21 13 20.2	-0.3
KESN				IAML_P			
	comp=Z,297nm,0.2s						
GONE	Gonen-Balikesi	1.42	67	PN	Pg	21 13 02.4	-0.4
THAS	Thassos island	1.46	319	P	Pn	21 13 01.8	-0.2
THAS	Thassos island	1.46	319	P	Pn	21 13 01.7	-0.2
THAS				S	Sg	21 13 22.4	-0.1
BALB	Balikesir	1.47	85	PN	Pb	21 13 02.8	-0.3
RKY	Sarkoy-Tekirda	1.49	38	PN	Pb	21 13 03.3	-0.1
SART	Tekirdag	1.49	38	*i* P	Pb	21 13 03.1	-0.3
SART				*i* S	Sg	21 13 23.9	+0.3
SART				IAML_P			
	comp=Z,1μm,0.1s						
AKHS	Akhisar	1.56	113	*i* P	Pn	21 13 03.1	-0.3
AKHS				IAML_P			
	comp=Z,306nm,0.1s						
RDO	Rodhopi	1.66	348	PN	Pn	21 13 04.9	+0.2
RDO	Rodhopi	1.66	348	P	Pn	21 13 05.0	+0.2
RDO	Rodhopi	1.66	348	P	Pn	21 13 05.0	+0.2
RDO				S	Sn	21 13 26.8	+0.6
AOS	Alonnisos	1.67	259	P	Pn	21 13 04.8	-0.1
EDC	Edincik	1.67	60	PN	Pb	21 13 06.1	-0.3
OUR	Ouranopolis	1.74	299	PN	Pn	21 13 05.3	-0.6
SBT4	Kumbag-Tekirda	1.77	42	PN	Pb	21 13 07.2	-0.9
PAIG	Paliouri	1.82	284	P	Pn	21 13 07.0	0.0
KAVA	Kavala	1.86	323	P	Pn	21 13 07.6	+0.1
KAVA				S	Sn	21 13 31.9	+0.9
TKR	Tekirdag	1.89	38	PN	Pb	21 13 09.3	-0.9
SMG	Samos	1.93	159	P	Pn	21 13 08.2	-0.2
DURS	Dursunbey	1.93	87	*i* P	Pn	21 13 08.6	+0.1
DURS				*i* S	Sn	21 13 33.2	+0.3
DURS				IAML_P			
	comp=Z,202nm,0.1s						
KCTX	Karacabey (Bur	1.98	67	PN	Pn	21 13 10.3	+1.2
GCAM	G?zelcaml?	2.06	151	PN	Pn	21 13 11.6	+1.3
CRLT	Corlu	2.10	39	PN	Pn	21 13 12.1	+1.3
AYDB	Zeytinkoy-Aydi	2.17	136	PN	Pn	21 13 13.4	+1.6

KULA	Kula-Manisa	2.31	115	PN	Pn	21 13 15.7	+1.8
EDRB	Edirne	2.40	14	PN	Pn	21 13 15.7	+0.7
SLVT	Silivri	2.42	44	PN	Pn	21 13 16.6	+1.4
ARMT	Armutlu	2.45	64	PN	Pn	21 13 17.5	+1.9
CTKS	Kestanelik-??a	2.58	48	PN	Pn	21 13 19.1	+1.6

IDC 28 21:21:16.3±2.4**, 6°.74S**×**129°.71E, h0^{km}, mb3.2**/1**, mb1 3.6**/4**, mb1mx3.4**/30**, mbtmp3.4**/4**, ML3.5**/3**, Error ellipse: s-maj=88.6km s-min=30.2km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.97	199	Pn	Pn	21 24 07.6	-0.7
	0.2nm,0.3s,baz=22,slow=10.0,SNR=9.5						
FITZ				Sn	Sn	21 26 08.3	-14
	0.1nm,0.3s,baz=15,slow=16,SNR=1.9						
WRA	Warramunga Arr	13.88	162	Pn	Pn	21 24 33.2	-1.2
	0.3nm,0.3s,baz=345,slow=14,SNR=26						
WRA				Sn	Sn	21 26 55.8	-14
	0.4nm,0.3s,baz=335,slow=23,SNR=8.6						
ASAR	Alice Springs	17.31	167	P	P	21 25 21.3	+0.2
	0.1nm,0.3s,baz=340,slow=8.5,SNR=7.0						
ASAR				S	Sn	21 28 18.0	-15
	0.1nm,0.3s,baz=218,slow=32,SNR=2.9						
MKAR	Makanchi Array	67.84	327	P	P	21 32 16.5	0.0
	0.1nm,0.3s,baz=116,slow=6.6,SNR=2.7						

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*ISCJB **28** 21:46:16.0±0.4, 38°.33N±0°.03×141°.01E±0°.05, h99^{km}±3^{km}, mb3.6/7, Error ellipse: s-maj=7.2km s-min=5.0km az=26.9*

*JMA **28** 21:46:17.3, 38°.34N×140°.97E, h90^{km}±1^{km}, M3.2*

JMA Felt I J1.

*IDC **28** 21:46:19.1±2.9, 38°.29N×140°.85E, h113^{km}±26^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.3/46, mbtmp3.6/9, Error ellipse: s-maj=31.5km s-min=16.4km az=91.0*

ISC 28 21:46:17.0±0.8**, 38°.32N**±0°.04×**141°.01E**±0°.05**, h93**^{km}±5^{km}**, n33, σ0^s.67**/43**, mb3.6**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOU	Okura	0.27	280	P	Pn	21 46 30.6	-0.1
JOU				S	Sn	21 46 40.7	-0.1
JOFO	Osakifurukawao	0.29	345	P	Pn	21 46 30.6	-0.1
JOFO				S	Sn	21 46 41.2	+0.3
JIO	Ouri	0.30	63	P	Pn	21 46 30.9	+0.2
JIO				S	Sn	21 46 40.6	-0.4
JIKH	Ishinomakikobu	0.36	91	P	Pn	21 46 31.4	+0.3
JIKH				S	Sn	21 46 41.8	+0.3
JMM	Marumori	0.48	201	P	Pn	21 46 32.0	+0.1
JMM				S	Sn	21 46 43.0	0.0
JMK	Ichinoseki	0.65	15	P	Pn	21 46 33.3	0.0
JMK				S	Sn	21 46 45.4	-0.1
JYS	Shirataka	0.75	263	P	Pn	21 46 34.2	0.0
JYS				S	Sn	21 46 46.8	-0.3
JYK	Kaneyama	0.79	320	P	Pn	21 46 34.4	-0.2
JYK				S	Sn	21 46 47.1	-0.7
JFK	Kawauchi	0.96	186	P	Pn	21 46 36.9	+0.4
JFK				eS	Sn	21 46 51.3	+0.3
JFT	Otama	0.96	214	P	Pn	21 46 37.0	+0.5
JFT				S	Sn	21 46 51.8	+0.8
JYA	Atsumi	1.05	286	P	Pn	21 46 37.2	-0.3
JYA				S	Sn	21 46 52.2	-0.7
JRG	Rokugo	1.11	345	P	Pn	21 46 38.4	+0.2
JRG				S	Sn	21 46 54.5	+0.3
JOM	Ohasama	1.17	11	P	Pn	21 46 39.2	+0.3
JOM				S	Sn	21 46 55.3	-0.1
JFY	Yanaizu	1.38	229	P	Pn	21 46 41.9	+0.5
JAW	Awa shima	1.39	276	P	Pn	21 46 41.4	-0.1
JAW				S	Sn	21 46 59.3	-0.7
JNS	Sasagawa	1.42	250	P	Pn	21 46 42.1	+0.2
JNS				eS	Sn	21 47 00.5	-0.3
MJAR	Matsushiro Arr	2.85	232	P	Pn	21 47 01.2	+0.6
	0.3nm,0.3s,baz=34,slow=12,SNR=42						
MAT	Matsushiro	2.85	232	P	Pn	21 47 01.0	+0.5
MAT				eS	Sn	21 47 35.8	+1.7
JHJ	Hachijo jima 2	5.28	191	S	Sn	21 48 30.7	-2.3
	11nm,0.3s,baz=56,slow=18,SNR=3.0						
USRK	Ussuriysk Ar.	8.98	314	P	Pn	21 48 25.3	+1.6
	0.3nm,0.3s,baz=119,slow=14,SNR=7.7						
H11N2	WAKE ISLAND Hy	29.09	122	T	T	22 22 36.0	
	baz=316,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	29.10	122	T	T	22 22 35.7	
	baz=316,slow=75,SNR=56						
H11N3	WAKE ISLAND Hy	29.11	122	T	T	22 22 37.0	
	baz=316,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	29.84	124	T	T	22 23 31.9	
	baz=318,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.84	124	T	T	22 23 31.6	
	baz=318,slow=76,SNR=39						
H11S2	WAKE ISLAND Hy	29.85	124	T	T	22 23 32.2	
	baz=318,slow=76,SNR=31						
MKAR	Makanchi Array	43.17	301	P	P	21 54 08.1	-0.4
	0.3nm,0.5s,baz=86,slow=9.3,SNR=6.4						
ILAR	Eielson Array	48.59	33	P	P	21 54 51.6	+0.9
	0.4nm,0.8s,baz=263,slow=7.0,SNR=4.1						
WRA	Warramunga Arr	58.29	187	P	P	21 56 01.9	-0.2
	0.8nm,0.5s,baz=5.3,slow=7.3,SNR=13						
ASAR	Alice Springs	62.02	187	P	P	21 56 26.9	-0.5
	0.6nm,0.6s,baz=1.3,slow=5.3,SNR=5.7						
YKA	Yellowknife Ar	62.86	30	P	P	21 56 33.0	+0.4
	0.2nm,0.6s,baz=302,slow=7.0,SNR=3.8						
FINES	FINESS Array B	67.53	332	P	P	21 57 02.2	-0.6
	0.4nm,0.3s,baz=34,slow=7.6,SNR=5.8						
NOA	NORSAR Array B	72.88	337	P	P	21 57 34.9	-0.6
	0.7nm,0.7s,baz=40,slow=5.9,SNR=2.7						

IDC 28 21:52:32.6±5.9**, 23°.33S**×**176°.88W, h0^{km}, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.6**/34**, mbtmp3.7**/2**, Error ellipse: s-maj=314.2km s-min=63.1km az=154.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.95	259	P	P	22 00 50.6	+0.9
	0.3nm,0.4s,baz=98,slow=7.1,SNR=4.1						
WRA	Warramunga Arr	45.30	265	P	P	22 00 51.8	-0.8
	0.8nm,0.3s,baz=104,slow=8.6,SNR=44						
BRTR	Keskin Array B	149.47	310	PKPbc	PKPbc	22 12 23.6	-0.5
	0.6nm,0.6s,baz=60,slow=3.5,SNR=3.2						

MEX 28 21:54:22.3±0.7**, 19°.55N**×**105°.28W, h2^{km}, MD3.7, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	Chamela	0.23	102	i P	Pg	21 54 26.6	0.0
CJM				i S	Sg	21 54 30.4	+0.8
EZ5V		1.58	92	eP	Pn	21 54 46.5	-5.1
EZ5V				eS	Sn	21 55 07.9	-4.9

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*ISCJB **28** 21:59:07.0±0.9, 40°.80N±0°.04×145°.30E±0°.07, h35^{km}, mb3.5/3, Error ellipse: s-maj=8.1km s-min=5.4km az=26.6*

*JMA **28** 21:59:06.8±0.2, 40°.77N×145°.38E, h65^{km}±4^{km}, M3.2*

*IDC **28** 21:59:08.6±3.1, 39°.75N×145°.36E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.3/35, mbtmp3.5/3, Error ellipse: s-maj=123.1km s-min=36.9km az=76.0*

ISC 28 21:59:07.1±1.5**, 40°.74N**±0°.07×**145°.37E**±0°.08**, h35^{km}, n20, σ1^s.08**/30**, mb3.7**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	Erimo	2.09	308	P	Pn	21 59 40.4	+0.7
JTHR	Tokachihiroo	2.19	316	P	Pn	21 59 41.8	+0.8
JTHR				eS	Sn	22 00 05.7	-1.2
JAK	Akkeshi	2.31	348	P	Pn	21 59 42.9	+0.3
JAK				eS	Sn	22 00 09.1	-0.6
JKHN	Kushirohamanak	2.34	356	P	Pn	21 59 43.9	+0.8
JKHN				eS	Sn	22 00 10.5	-0.1
JCH	Churui	2.40	322	P	Pn	21 59 44.3	+0.4
JCH				eS	Sn	22 00 11.4	-0.6
JOB	Onbets	2.44	333	P	Pn	21 59 45.4	+0.9
JOB				eS	Sn	22 00 12.9	-0.2
JNBK	Urakawa-nobuka	2.49	309	P	Pn	21 59 46.6	+1.4
JNBK				eS	Sn	22 00 15.0	+0.7
NEM2	Nemuro 2	2.63	6	P	Pn	21 59 47.8	+0.7
NEM2				eS	Sn	22 00 17.3	-0.5
JAR	Ashorobuto	2.82	336	P	Pn	21 59 50.0	+0.4
JAR				eS	Sn	22 00 20.7	-1.6
JNK	Nakash	2.88	351	P	Pn	21 59 50.5	0.0
JNK				eS	Sn	22 00 21.3	-2.6
JRA	Rausu	3.20	357	eS	Sn	22 00 30.4	-1.3
JOT	Ohata	3.33	282	P	Pn	21 59 57.0	+0.4
JOT				eS	Sn	22 00 32.4	-2.5
JOM	Ohasama	3.37	249	P	Pn	21 59 57.8	+0.5
JTKR	Abashiri--Toko	3.40	342	P	Pn	21 59 58.9	+1.2
JTKR				eS	Sn	22 00 37.0	+0.3
JKB	Kayabe	3.46	291	P	Pn	21 59 59.4	+1.0
JKB				eS	Sn	22 00 36.8	-1.3
JEW	Eniwo	3.60	307	eS	Sn	22 00 42.5	+0.8
JMK	Ichinoseki	3.66	242	P	Pn	22 00 01.6	+0.4
MKAR	Makanchi Array	44.86	300	P	P	22 07 28.3	+10
	0.2nm,0.7s,baz=72,slow=7.1,SNR=3.0						
WRA	Warramunga Arr	61.24	192	P	P	22 09 18.7	+0.1
	0.5nm,0.8s,baz=8.5,slow=6.9,SNR=3.5						
FINES	FINESS Array B	66.95	333	P	P	22 10 08.0	+12
	0.4nm,0.5s,baz=39,slow=9.0,SNR=4.0						

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*IDC **28** 22:22:31.6±2.3, 9°.16S×113°.37E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.5/33, mbtmp3.5/5, Error ellipse: s-maj=122.5km s-min=21.0km az=52.0*

*ISCJB **28** 22:22:37.4±0.7, 9°.22S±0°.08×113°.22E±0°.04, h63^{km}, mb3.6/5, Error ellipse: s-maj=10.8km s-min=5.2km az=3.9*

*DJA **28** 22:22:38.9±0.7, 9°S±12°×11°3E±°, h53^{km}±30^{km}, M3.4/8, MLv3.4/8*

ISC 28 22:22:38.9±1.0**, 9°.2S**±0°.1×**113°.22E**±0°.04**, h63^{km}, n12, σ1^s.27**/16**, mb3.8**/5**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	1.15	53	P	Pn	22 22 58.4	-0.7
JAGI				S	Sn	22 23 13.2	-0.9
PWJI	Pagerwojo	1.81	309	P	Pn	22 23 07.1	-0.7
PWJI				S	Sn	22 23 27.0	-2.8
DNP	Denpasar	2.02	76	P	Pn	22 23 19.2	+8.5
DNP				S	Sn	22 23 35.4	+0.4
KMMI	Kalianget	2.23	19	P	Pn	22 23 13.2	-0.4
SRBI	Singaraja	2.24	61	P	Pn	22 23 14.0	+0.3
SRBI				S	Sn	22 23 40.5	+0.2
PCJI	Pacitan	2.25	295	P	Pn	22 23 13.5	-0.2
PCJI				S	Sn	22 23 41.8	+1.4
UGM	Wanagama	2.95	295	P	Pn	22 23 23.5	+0.1
WRA	Warramunga Arr	23.04	120	P	P	22 27 36.8	-2.3
	0.4nm,0.7s,baz=296,slow=11,SNR=3.8						
ASAR	Alice Springs	24.47	129	P	P	22 27 52.0	-0.2
	0.9nm,0.8s,baz=302,slow=8.8,SNR=6.1						
STKA	Stephens Creek	34.68	135	P	P	22 29 22.2	-0.4
	2.6nm,1.0s,baz=329,slow=12,SNR=3.2						
SONM	Songino Array	57.08	355	P	P	22 32 20.1	+1.4
	1.2nm,1.2s,baz=175,slow=8.7,SNR=4.1						
MKAR	Makanchi Array	62.17	336	P	P	22 32 54.8	+1.1
	0.4nm,0.6s,baz=149,slow=7.7,SNR=9.7						

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*IDC **28** 22:33:01.1±3.6, 52°.07N×160°.88E, h0^{km}, mb3.7/2, mb1 3.7/3, mb1mx3.2/45, mbtmp3.6/3, ML2.6/1, Error ellipse: s-maj=68.4km s-min=45.3km az=3.0*

*ISCJB **28** 22:33:04.1±1.6, 52°.21N±0°.07×160°.91E±0°.09, h17^{km}±12^{km}, mb3.9/2, Error ellipse: s-maj=12.9km s-min=9.2km az=159.3*

*KRSC **28** 22:33:04.2±1.5, 52°.28N×160°.90E, h19^{km}±21^{km}, ML3.6*

ISC 28 22:33:03.7±2.3**, 52°.29N**±0°.07×**160°.81E**±0°.07**, h8**^{km}±11^{km}**, n25, σ0^s.89**/29**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.94	330	eP	Pb	22 33 22.2	-0.1
SPN				eS	Sg	22 33 34.1	+0.1
NLC	Nalytchevo	1.26	316	eP	Pg	22 33 27.4	-0.4
RUS	Russkaya	1.41	277	eP	Pg	22 33 30.7	-0.1
RUS				eS	Sg	22 33 49.5	+0.4
DALK	Dalny	1.46	302	eP	Pb	22 33 30.9	-0.1
DALK				eS	Sn	22 33 49.9	+0.3
PET	Petropavlovsk	1.51	300	eP	Pb	22 33 31.8	-0.1
PET				eS	Sg	22 33 52.4	+0.3
UGLR	Uglovaya	1.52	308	eP	Pb	22 33 32.4	+0.2
SDLR	Sedlovina	1.53	311	eP	Pn	22 33 32.0	+0.5
SMAR	Somma	1.56	310	eP	Pb	22 33 33.2	+0.2
AVH	Avacha	1.59	309	eP	Pb	22 33 33.3	-0.1
MTVR	Mutnovka	1.62	278	eP	Pb	22 33 34.2	+0.3
KOK	Koryaka	1.66	308	eP	Pb	22 33 34.5	-0.1
KRX	Arik	1.69	310	eP	Pb	22 33 34.9	-0.3
KRMR	Karymshinskiy	1.72	290	eP	Pb	22 33 34.9	-0.7
KDTR	Khodutka, Kamc	1.75	255	eP	Pb	22 33 35.5	-0.6
KDTR				eS	Sn	22 33 56.3	-0.5
PETK	Petropavlovsk-	2.06	295	Pn	Pn	22 33 40.0	+1.3
	8.8nm,0.3s,baz=114,slow=19,SNR=77						
PETK				Sn	Sb	22 34 07.0	-0.2
	7.1nm,0.3s,baz=113,slow=28,SNR=8.0						
GNL	Ganaly	2.23	310	eP	Pb	22 33 43.4	-1.0
GNL				eS	Sb	22 34 11.3	-0.9
KZV	Kizimen	2.85	354	eP	Pn	22 33 51.3	+1.7
TUMD	Tumrok D	2.93	355	eP	Pb	22 33 54.5	-1.7
TUMR	Tumrok	3.03	353	eP	Pn	22 33 54.0	+2.0
KBTR	Krutoberegovo	4.10	16	eP	Pn	22 34 08.1	+1.4
H11N2	WAKE ISLAND Hy	32.84	169	T	T	23 15 08.0	
	baz=351						
H11N3	WAKE ISLAND Hy	32.85	169	T	T	23 15 09.1	
	baz=351						
H11N1	WAKE ISLAND Hy	32.85	169	T	T	23 15 08.6	
	baz=351						
MKAR	Makanchi Array	48.90	297	P	P	22 41 48.4	-1.4
	0.2nm,0.4s,baz=53,slow=6.2,SNR=4.8						
FINES	FINESS Array B	61.03	337	P	P	22 43 17.9	+0.6
	2.2nm,1.0s,baz=30,slow=6.6,SNR=4.1						

IDC 28 22:37:36.0±11.0**, 6°.21S**×**124°.89E, h452**^{km}±157^{km}**, mb2.3**/1**, mb1 2.4**/3**, mb1mx2.3**/30**, mbtmp3.1**/3**, Error ellipse: s-maj=257.7km s-min=45.8km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.45	147	P	P	22 41 02.9	+0.3
	0.1nm,0.3s,baz=329,slow=13,SNR=7.7						
ASAR	Alice Springs	19.40	154	P	P	22 41 31.9	0.0
	0.1nm,0.3s,baz=342,slow=15,SNR=6.5						
MKAR	Makanchi Array	64.87	329	P	P	22 47 29.4	0.0
	0.1nm,0.5s,baz=117,slow=5.5,SNR=2.6						

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*IDC **28** 22:55:32.0±8.6, 18°.45S×178°.13W, h368^{km}±83^{km}, mb3.0/6, mb1 3.4/6, mb1mx3.1/29, mbtmp3.7/6, Error ellipse: s-maj=102.7km s-min=25.2km az=154.0*

*ISCJB **28** 22:55:48.4±1.8, 18°.0S±0°.8×178°.8W±0°.4, h557^{km}, mb3.2/6, Error ellipse: s-maj=111.1km s-min=19.0km az=154.2*

ISC 28 22:55:50.5±1.5**, 17°.8S**±0°.5×**178°.8W**±0°.3**, h557^{km}, n14, σ1^s.27**/16**, mb3.0**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	44.30	259	P	P	23 03 09.9	-1.7
	0.2nm,0.5s,baz=98,slow=6.1,SNR=8.6						
WRA				PcP	PcP	23 04 45.2	+1.5
	0.7nm,0.8s,baz=89,slow=3.6,SNR=2.9						
ASAR	Alice Springs	44.47	254	P	P	23 03 12.6	-0.4
	4.1nm,0.6s,baz=90,slow=8.4,SNR=59						
ASAR				PcP	PcP	23 04 44.3	0.0
	0.5nm,0.6s,baz=108,slow=3.0,SNR=3.9						
NVAR	Mina Array Bea	79.60	44	P	P	23 06 59.5	-1.1
	0.3nm,0.5s,baz=234,slow=8.8,SNR=3.3						
ILAR	Eielson Array	85.87	13	P	P	23 07 31.2	+0.1
	0.1nm,0.5s,baz=206,slow=5.4,SNR=2.9						
TXAR	Lajitas Array	86.25	58	P	P	23 07 33.0	-0.9
	0.7nm,0.7s,baz=231,slow=6.0,SNR=7.1						
PDAR	Pinedale Array	87.53	44	P	P	23 07 39.5	-0.3
	0.2nm,0.6s,baz=223,slow=6.1,SNR=2.9						
ARCES	ARCESS Array B	126.15	350	PKP	PKiKP	23 13 51.2	+1.5
	3.3nm,0.9s,baz=0.0,slow=1.3,SNR=8.5						
BRTR	Keskin Array B	144.45	315	PKPbc	PKiKP	23 14 28.2	+0.2
	0.3nm,0.6s,baz=131,slow=3.8,SNR=2.4						
GERES	GERESS Array B	147.42	345	PKPbc	PKPab	23 14 35.6	-0.5
	0.6nm,0.6s,baz=20,slow=4.3,SNR=5.2						
CONA	Conrad Observa	147.65	341	PKPab	PKPab	23 14 37.1	+0.1
	3.7nm,1.3s						
SOKA	Soboth	149.02	341	PKPdf	PKiKP	23 14 37.1	0.0
	3.8nm,1.6s						
KBA	Koelnbreinsper	149.14	344	PKPdf	PKPbc	23 14 36.3	-0.3
	2.5nm,1.0s						
ABTA	Abfaltersbach	149.66	345	PKPbc	PKiKP	23 14 40.5	+2.1
	2.8nm,0.9s						
FETA	Feichten	149.82	347	ePKPbc	PKiKP	23 14 41.5	+2.6
	5.6nm,1.5s						

KRSC 28 23:04:05.8±1.1**, 50°.97N**×**157°.93E, h41**^{km}±17^{km}**, ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	Khodutka, Kamc	0.84	6	eP	Pn	23 04 22.0	+0.7
KDTR				eS	Sn	23 04 33.6	+1.1
PAU	Pauzhetka	0.86	306	eP	Pn	23 04 23.1	+1.6
PAU				eS	Sn	23 04 35.2	+2.4
SKR	Severo-Kuril’s	1.18	257	eP	Pn	23 04 26.9	+1.0
SKR				eS	Sn	23 04 41.9	+1.2
ALID	Alaid	1.51	267	eP	Pn	23 04 32.0	+1.5
RUS	Russkaya	1.51	14	eP	Pn	23 04 31.1	+0.7
MTVR	Mutnovka	1.52	6	eP	Pn	23 04 32.2	+1.5
MTVR				eS	Sn	23 04 50.6	+1.2
KRMR	Karymshinskiy	1.87	4	eP	Pn	23 04 38.3	+3.0
KRMR				eS	Sn	23 05 00.7	+3.1
DALK	Dalny	2.13	14	eP	Pn	23 04 40.9	+2.1
DALK				eS	Sn	23 05 05.4	+1.4
UGLR	Uglovaya	2.31	14	eP	Pn	23 04 43.6	+2.1
AVH	Avacha	2.35	12	eP	Pn	23 04 45.1	+3.1
SMAR	Somma	2.36	13	eP	Pn	23 04 44.9	+2.7
KOK	Koryaka	2.37	10	eP	Pn	23 04 44.9	+2.7
SDLR	Sedlovina	2.39	14	eP	Pn	23 04 44.7	+2.2
KRX	Arik	2.43	10	eP	Pn	23 04 46.6	+3.4
SPN	Mys Shipunski	2.49	30	eP	Pn	23 04 48.4	+4.5
SPN				eS	Sn	23 05 16.7	+3.7
GNL	Ganaly	2.73	0	eP	Pn	23 04 49.5	+2.3

IDC 28 23:06:14.7±3.6**, 3°.45S**×**150°.76E, h0^{km}, mb3.2**/2**, mb1 3.5**/2**, mb1mx3.2**/25**, mbtmp3.2**/2**, Error ellipse: s-maj=153.6km s-min=45.0km az=115.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.92	223	P	P	23 11 19.6	-0.8
	0.2nm,0.4s,baz=49,slow=10,SNR=5.1						
ASAR	Alice Springs	25.87	218	P	P	23 11 49.1	+0.8
	0.3nm,0.4s,baz=59,slow=7.7,SNR=3.4						
TORD	Torodi Ar. Bea	147.94	289	PKPbc	PKPbc	23 26 02.2	-0.9
	0.2nm,0.7s,baz=72,slow=4.7,SNR=2.2						

IDC 28 23:08:01.7±3.5**, 14°.50S**×**179°.82W, h0^{km}, mb3.6**/4**, mb1 4.0**/4**, mb1mx3.7**/24**, mbtmp3.6**/4**, Error ellipse: s-maj=307.3km s-min=25.3km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	44.01	256	P	P	23 16 11.8	+0.3
	0.1nm,0.2s,baz=90,slow=8.1,SNR=5.2						
ASAR	Alice Springs	44.51	251	P	P	23 16 14.8	-0.5
	0.7nm,0.4s,baz=87,slow=8.0,SNR=8.9						
NVAR	Mina Array Bea	77.95	45	P	P	23 20 03.3	+1.2
	0.4nm,0.7s,baz=224,slow=7.2,SNR=3.2						
PDAR	Pinedale Array	85.84	44	P	P	23 20 42.3	-1.4
	0.2nm,0.4s,baz=203,slow=5.9,SNR=2.9						

GUC 28 23:22:00.2±0.5**, 23°.83S**×**67°.46W, h233**^{km}±8^{km}**, ML3.8, 4C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.80	312	⇓iP	Pn	23 22 40.8	+0.9
LVC				i S	S	23 23 12.4	+1.5
PB15	IPOC Station P	1.95	288	⇑iP	Pn	23 22 42.8	+1.7
PB15				i S	S	23 23 15.1	+2.2
PB06	IPOC Station P	2.24	299	⇓iP	Pn	23 22 45.7	+1.9
PB06				i S	S	23 23 19.9	+1.9
PB06				IAML		23 23 21.4	
	comp=N,362nm,0.2s						
GO02	Mina Guanaco	2.36	235	⇑iP	Pn	23 22 46.2	+1.1
GO02				i S	S	23 23 22.6	+2.4
GO02				IAML		23 23 25.6	
	comp=N,163nm,0.1s						
PB09	IPOC Station P	2.61	320	⇓iP	Pn	23 22 49.3	+1.7
PB09				i S	S	23 23 27.0	+2.3
PB14	IPOC Station P	2.81	253	eP	Pn	23 22 51.8	+2.0
PB14				i S	S	23 23 31.3	+2.5
PB14				IAML		23 23 34.1	
	comp=E,87nm,0.3s						
PB10	IPOC Station P	2.86	276	⇑iP	Pn	23 22 52.8	+2.7
PB10				i S	S	23 23 32.2	+3.0
PB10				IAML		23 23 35.0	
	comp=E,97nm,0.3s						
PB04	IPOC Station P	2.89	300	eP	Pn	23 22 53.0	+2.3
PB04				i S	S	23 23 32.6	+2.4
PB04				IAML		23 23 35.8	
	comp=E,178nm,0.4s						
PB07	IPOC Station P	3.06	312	eP	Pn	23 22 54.2	+1.6
PB07				i S	S	23 23 35.4	+1.6
PB01	IPOC Station P	3.35	325	⇑iP	Pn	23 22 56.6	+0.9
PB01				i S	S	23 23 40.1	+0.7

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*ISCJB **28** 23:26:54.0±0.4, 36°.88N±0°.03×139°.40E±0°.04, h10^{km}, mb3.5/6, Error ellipse: s-maj=5.2km s-min=3.5km az=17.2*

*IDC **28** 23:26:54.6±0.9, 36°.86N×139°.35E, h0^{km}, mb3.5/6, mb1 3.9/7, mb1mx3.6/31, mbtmp3.6/7, ML3.6/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/29, Error ellipse: s-maj=25.9km s-min=10.3km az=153.0*

*JMA **28** 23:26:54.0, 36°.88N×139°.41E, h3^{km}±1^{km}, M3.3*

Broadband fault plane solution: P waves. NP1: ϕ_s195.00000°, δ78.00000°, λ22.00000°. NP2: ϕ_s100.00000°, δ69.00000°, λ167.00000°. Principal axes: T Plg24.0000°, Azm59.0000°; N Plg65.0000°, Azm223.0000°; P Plg6.0000°, Azm326.0000°;

JMA Felt II J1.

ISC 28 23:26:55.5±0.7**, 36°.88N**±0°.03×**139°.38E**±0°.04**, h10^{km}, n26, σ1^s.43**/24**, mb3.5**/6**, 4C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKT	Katashina	0.16	222	⇑P	Pg	23 26 57.7	-1.3
JKT				S	Sg	23 27 00.2	-1.3
JSB	Shiboa	0.44	79	⇑P	Pg	23 27 02.8	-1.4
JAG	Ashikaga	0.46	173	⇓P	Pg	23 27 02.9	-1.6
JAG				S	Sg	23 27 09.2	-1.4
JHK	Hiroka	0.47	322	⇓P	Pg	23 27 03.6	-1.0
JHK				S	Sg	23 27 10.1	-0.7
JFY	Yanaizu	0.58	26	⇑P	Pg	23 27 05.4	-1.5
JFY				S	Sg	23 27 13.1	-1.5
JIZZ	Izumozaki	0.84	321	P	Pb	23 27 11.6	-0.6
JNS	Sasagawa	0.93	357	⇓P	Pg	23 27 12.0	-1.5
JNS				S	Sg	23 27 24.4	-1.3
JRY	Ryogami san	0.95	204	P	Pg	23 27 12.0	-1.7
JFT	Otama	0.99	50	⇑P	Pg	23 27 12.9	-1.7
MJAR	Matsushiro Arr	1.00	250	Pg	Pg	23 27 13.2	-1.5
	9.6nm,0.3s,baz=69,slow=14,SNR=237						
MJAR				Lg	Lg	23 27 25.9	
	5.4nm,0.3s,baz=64,slow=24,SNR=11						
MAT	Matsushiro	1.00	250	P	Pg	23 27 13.7	-1.1
MAT				S	Sg	23 27 26.7	-1.1
JHJ	Hachijo jima 2	3.77	175	Pn	Pn	23 27 55.2	+1.5
	12nm,0.3s,baz=18,slow=9.6,SNR=3.1						
JNU	Nakatsue	7.92	244	LR	LR	23 32 22.2	
	comp=Z,75nm,19.3s,baz=356,slow=42						
KLR	Kul'dur	13.53	338	LR	LR	23 34 40.0	
	comp=Z,48nm,20.2s,baz=70,slow=34						
H11N2	WAKE ISLAND Hy	29.50	118	T	T	00 03 06.6	
	baz=310						
H11N1	WAKE ISLAND Hy	29.50	118	T	T	00 03 08.0	
	baz=310						
H11N3	WAKE ISLAND Hy	29.51	118	T	T	00 03 08.9	
	baz=310						
H11S1	WAKE ISLAND Hy	30.17	120	T	T	00 03 56.3	
	baz=322						
H11S3	WAKE ISLAND Hy	30.17	120	T	T	00 03 56.1	
	baz=322						
H11S2	WAKE ISLAND Hy	30.19	120	T	T	00 03 56.9	
	baz=322						
ILAR	Eielson Array	50.49	32	P	P	23 35 53.2	-0.1
	0.4nm,0.8s,baz=272,slow=6.9,SNR=3.5						

WRA	Warramunga Arr	56.72	186	P	P	23 36 39.3	-0.1
	1.2nm,0.6s,baz=1.0,slow=7.6,SNR=17						
ASAR	Alice Springs	60.45	186	P	P	23 37 05.5	+0.1
	0.7nm,0.8s,baz=10,slow=11,SNR=5.2						
YKA	Yellowknife Ar	64.75	30	P	P	23 37 33.9	+0.2
	0.1nm,0.6s,baz=301,slow=6.9,SNR=3.5						
NVAR	Mina Array Bea	76.37	52	P	P	23 38 46.7	+1.4
	0.2nm,0.6s,baz=307,slow=6.6,SNR=2.7						
PDAR	Pinedale Array	78.92	44	P	P	23 39 02.4	+2.9
	0.5nm,0.9s,baz=270,slow=5.1,SNR=2.4						

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*GUC **28** 23:27:12.4±0.7, 29.°14S×71.°32W, h80^{km}±12^{km}, ML3.7*
*SJA **28** 23:27:12.8±0.7, 29.°25S×71.°55W, h10^{km}±71^{km}, ML3.4, MW3.3*
ISC 28 23:27:07.3±3.1**, 28.°99S**±0.°06×**71.°9W**±0.°1**, h7**^{km}±14^{km}**, n17, σ2§28**/22**, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	1.06	91	⇓eP	Pg	23 27 28.3	+0.4
LCO				⇓eS	Sg	23 27 39.8	-1.9
LCO	Las Campanas	1.06	91	⇓iP	Pg	23 27 28.2	+0.4
LCO				i S	Sg	23 27 39.7	-1.9
LCO				IAML		23 27 41.7	
	comp=N,3μm,0.4s						
GO04	Tololo Observa	1.53	141	eP	Pn	23 27 34.9	-0.4
GO04				i S	Sg	23 27 51.5	-4.9
GO03	Copiap	2.03	47	⇑iP	Pn	23 27 42.8	+0.7
GO03				i S	Sn	23 28 06.5	-1.3
CMCH	Combarbala	2.31	160	eP	Pn	23 27 46.5	+0.5
CMCH				i S	Sn	23 28 11.7	-3.0
CMCH				IAML		23 28 29.0	
	comp=E,1μm,0.5s						
AROD	Rodeo	2.43	119	eP	Pn	23 27 50.0	+2.2
AROD				eS	Sn	23 28 17.6	-0.3
ACDV	Cuesta del Vie	2.70	116	eP	Pn	23 27 53.8	+2.4
ACCO	Cerro Coronel	2.94	123	eP	Pn	23 27 57.9	+3.0
AMOG	MOGNA	3.55	124	eP	Pn	23 28 06.4	+3.5
RTLS	Leoncito	3.60	142	eP	Pn	23 28 06.9	+3.1
RTLS				IAML		23 29 02.2	
	comp=Z,101nm,0.5s						
RTLL	Cerro Villicun	3.78	129	IAML		23 29 07.9	
	comp=Z,120nm,0.4s						
AUSP	Uspallata	3.89	147	eP	Pn	23 28 10.7	+2.8
RTCV	Cerro Valdivia	4.08	135	eP	Pn	23 28 12.5	+2.2
ASAL	Salagasta	4.46	144	eP	Pn	23 28 18.5	+3.0
CLCH	Cerro Calan	4.55	165	eP	Pn	23 28 17.9	+1.2
CLCH				i S	Sn	23 29 07.5	-2.4
APLL	PUNTA DE LOS L	4.89	108	eP	Pn	23 28 22.4	+1.0
APLL				IAML		23 29 40.5	
	comp=Z,30nm,0.7s						
CYA	Choya	5.40	86	eP	Pn	23 28 29.6	+1.3
CYA				IAML		23 28 37.6	
	comp=Z,15nm,0.4s						

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*SOME **28** 23:37:02.5, 40.°33N×77.°60E, h0^{km}*
*NNC **28** 23:37:02.5±2.9, 40.°23N×77.°34E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=20.7km s-min=18.0km az=107.0*
*KRNET **28** 23:37:03.6±0.1, 40.°23N×77.°43E, mb2.6*
ISC 28 23:37:04.4±2.4**, 40.°2N**±0.°1×**77.°30E**±0.°06**, h10**^{km}**, n30, σ1§61**/50**, 8C-16D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.55	321	⇑iP	Pb	23 37 33.5	0.0
	baz=18						
NRN				⇑iS	Sg	23 37 56.6	+2.2
	baz=18						
KDJ	Kajisay	1.90	357	⇑iP	Pg	23 37 39.6	-1.2
	baz=55						
KDJ				⇑iS	Sg	23 38 05.2	-0.2
	baz=55						
ULHL	Ulahol	2.16	339	⇑iP	Pb	23 37 43.7	-0.1
	baz=36						
ULHL				⇑iS	Sb	23 38 12.7	+1.9
	baz=36						
PRZ	Przheval'sk	2.40	20	⇓iP	Pb	23 37 45.8	-2.0
	baz=18						
PRZ				⇓iS	Sb	23 38 16.8	-0.6
	baz=18						
KZA	Kyzart	2.41	321	⇓iP	Pb	23 37 47.8	-0.3
	baz=19						
KZA				⇓iS	Sb	23 38 19.5	+1.5
	baz=19						
BOOM	Boomskoye usch	2.48	336	⇓iP	Pb	23 37 48.0	-1.1
	baz=34						
BOOM				⇓iS	Sb	23 38 20.2	+0.4
	baz=34						
ARLS	Aral	2.78	307	⇓eP	Pb	23 37 52.8	-1.5
	baz=6.0						
ARLS				⇓iS	Sb	23 38 28.4	0.0
	baz=6.0						
TNSS	Tian-Shan	2.81	355	Pg	Pb	23 37 55.7	+0.6
	7.0nm,0.5s						
TNSS				Lg	Lg	23 38 34.0	
	12nm,0.4s						
TNSS	Tian-Shan	2.81	355	eP	Pb	23 37 55.7	+0.6
	7.0nm,0.5s						
TNSS				eS	Sg	23 38 34.0	-0.9
	12nm,0.4s						
IZV	Izvestkoviy	2.85	350	Pg	Pb	23 37 56.1	+0.6
	2.2nm,0.4s						
IZV				Lg	Lg	23 38 34.9	
	11nm,0.6s						
IZV	Izvestkoviy	2.85	350	eP	Pb	23 37 56.1	+0.6
	2.2nm,0.4s						
IZV				eS	Sg	23 38 34.6	-1.3
	11nm,0.6s						
MDOK	Medeo	2.93	356	Pg	Pb	23 37 56.1	-0.8
	4.2nm,0.5s						
MDOK				Lg	Lg	23 38 34.5	
	17nm,0.7s						
MDOK	Medeo	2.93	356	eP	Pb	23 37 56.1	-0.8
	4.2nm,0.5s						
MDOK				eS	Sb	23 38 34.5	+1.6
	17nm,0.7s						
TKM2	Tokmak 2	2.97	335	⇓Pg	Pb	23 37 57.8	+0.2
	0.8nm,0.3s						
TKM2				⇑Lg	Lg	23 38 40.0	
	7.5nm,0.8s						
TKM2	Tokmak 2	2.97	335	⇓iP	Pb	23 37 54.7	-2.9
	baz=34						
TKM2				⇓iS	Sb	23 38 32.4	-1.7
	baz=34						
KST	Kastek	2.98	341	eP	Pb	23 37 58.5	+0.8
	1.6nm,0.3s						
KST				eS	Sg	23 38 38.8	-1.4
	7.3nm,0.3s						
KBK	Karagaybulak	3.00	325	⇓iP	Pb	23 37 55.5	-2.5
	baz=23						
KBK				⇓iS	Sb	23 38 33.4	-1.4
	baz=23						
KOTS	Kotyrbulak	3.00	357	Pg	Pb	23 37 58.3	+0.2
	2.1nm,0.4s						
KOTS				Lg	Lg	23 38 38.6	
	11nm,0.4s						
KOTS	Kotyrbulak	3.00	357	eP	Pb	23 37 58.3	+0.2
	2.1nm,0.4s						
KOTS				eS	Sg	23 38 38.6	-2.3
	11nm,0.4s						
AAK	Ala-Archa	3.20	320	⇑Pg	Pb	23 37 59.2	-2.2
	3.3nm,0.9s						
AAK				⇓Lg	Lg	23 38 48.5	
	6.2nm,0.8s						
DGS	Degeres	3.22	340	Pg	Pb	23 37 59.3	-2.4
	1.3nm,0.4s						
DGS				Lg	Lg	23 38 40.6	
	6.8nm,0.7s						
DGS	Degeres	3.22	340	eP	Pb	23 38 01.4	-0.3
	1.6nm,0.4s						
DGS				eS	Sb	23 38 43.8	+2.8
	6.8nm,0.7s						
KURS	Kuram	3.32	11	Pg	Pb	23 38 02.4	-1.0
	0.4nm,0.2s						
KURS				Lg	Lg	23 38 45.4	
	2.6nm,0.4s						
KURS	Kuram	3.32	11	eP	Pb	23 38 02.4	-1.0
	0.4nm,0.2s						
KURS				eS	Sb	23 38 45.4	+1.6
	2.6nm,0.4s						
AML	Almayashu	3.32	306	⇓iP	Pn	23 38 00.4	+3.6
	baz=5.0						
AML				⇓iS	Sb	23 38 41.9	-2.3
	baz=5.0						
KTBS	Karatobe	3.51	353	Pg	Pb	23 38 05.9	-0.7
	0.4nm,0.3s						
KTBS				Lg	Lg	23 38 51.9	
	3.4nm,0.3s						
KTBS	Karatobe	3.51	353	eP	Pb	23 38 05.9	-0.7
	0.4nm,0.3s						
KTBS				eS	Sb	23 38 51.8	+2.5
	3.4nm,0.3s						
CHKK	Chushkaly	3.62	356	Pg	Pb	23 38 09.6	+1.0
	0.8nm,0.1s						
CHKK				Lg	Lg	23 38 57.8	
	4.5nm,0.4s						
CHKK	Chushkaly	3.62	356	eP	Pb	23 38 09.6	+1.0
	0.8nm,0.1s						
CHKK				eS	Sg	23 38 57.8	-3.1
	4.5nm,0.4s						
MRKS	Merke	3.96	311	eP	Pg	23 38 18.2	-2.1
	0.9nm,0.2s						
MRKS				eS	Sg	23 39 12.8	+1.3
	2.5nm,1.0s						

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*NIED **28** 23:53:00, 36.°10N×139.°90E, h50^{km}, Mw3.6 Best double couple: $M_0$2.89000×10^{14} NP1:ϕ_s236.00000°, δ23.00000°, λ117.00000°. NP2:ϕ_s27.00000°, δ70.00000°, λ79.00000°.*
*ISCJB **28** 23:53:37.8±0.5, 36.°06N±0.°04×139.°92E±0.°05, h57^{km}±4^{km}, mb3.5/8, Error ellipse: s-maj=7.3km s-min=5.7km az=150.9*
*JMA **28** 23:53:39.1±0.1, 36.°09N×139.°86E, h47^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s12.00000°, δ78.00000°, λ80.00000°. NP2:ϕ_s231.00000°, δ15.00000°, λ128.00000°. Principal axes: T Plg56.0000°, Azm270.0000°; N Plg9.0000°, Azm14.0000°; P Plg32.0000°, Azm110.0000°;*
JMA Felt II J1.
*IDC **28** 23:53:40.1±1.6, 35.°89N×139.°82E, h71^{km}±15^{km}, mb3.3/8, mb1 3.6/9, mb1mx3.3/36, mbtmp3.7/9, MS2.3/1, Ms1 2.3/1, ms1mx2.1/15 Error ellipse: s-maj=24.1km s-min=7.7km az=63.0*
ISC 28 23:53:38.5±0.8**, 36.°07N**±0.°04×**139.°90E**±0.°05**, h51**^{km}±7^{km}**, n29, σ1§05**/29**, mb3.5**/8**, 2C-6D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.28	56	⇑P	Pn	23 53 47.9	+0.3
JYT				S	Sn	23 53 54.2	+0.1
JAG	Ashikaga	0.51	315	⇓P	Pn	23 53 49.8	-0.1
JAG				S	Sn	23 53 57.5	-0.6
JRY	Ryogami san	0.81	267	⇓P	Pn	23 53 53.6	-0.2
JRY				S	Sn	23 54 04.1	-0.8
JKT	Katashina	0.87	323	⇓P	Pn	23 53 54.4	-0.3
JKT				S	Sn	23 54 05.7	-0.8
JOD2	Odawara 2	1.04	220	S	Sn	23 54 11.0	+0.6
JYN	Shimob	1.24	243	⇓P	Pn	23 54 00.9	+1.3
JFY	Yanaizu	1.34	353	P	Pn	23 54 01.4	+0.4
BSO3	Boso 3	1.36	158	⇓P	Pn	23 54 01.5	+0.6
BSO3				S	Sn	23 54 18.8	+1.1
JHK	Hiroka	1.37	329	⇓P	Pn	23 54 01.5	+0.2
MJAR	Matsushiro Arr	1.45	290	P	Pn	23 54 01.8	-0.5
	9.4nm,0.3s,baz=97,slow=9.1,SNR=254						
MJAR				S	Sn	23 54 22.4	+2.3
	2.9nm,0.3s,baz=152,slow=30,SNR=7.2						
MJAR				LR	LR	23 54 26.4	
	comp=Z,47nm,19.5s,baz=285,slow=33						
MAT	Matsushiro	1.45	290	P	Pn	23 54 02.8	+0.5
MAT				eS	Sn	23 54 21.8	+1.6
MAT	Matsushiro	1.45	290	P	Pn	23 54 02.8	+0.5
JHJ	Hachijo jima 2	2.94	182	P	Pn	23 54 23.4	+0.5
	50nm,0.3s,baz=332,slow=16,SNR=18						
JHJ				S	Sn	23 54 55.0	-2.0
	18nm,0.3s,baz=73,slow=19,SNR=5.1						
JNU	Nakatsue	8.00	251	LR	LR	23 59 00.5	
	comp=Z,22nm,19.8s,baz=152,slow=41						
MA2	Magadan	24.56	13	P	P	23 58 55.5	+2.3
	4.2nm,0.4s,baz=106,slow=23,SNR=7.0						
SONM	Songino Array	27.34	306	P	P	23 59 19.2	+0.5
	0.3nm,0.7s,baz=116,slow=9.8,SNR=2.9						
H11N2	WAKE ISLAND Hy	28.75	117	T	T	00 29 28.0	
	baz=310						
H11N1	WAKE ISLAND Hy	28.75	117	T	T	00 29 28.0	
	baz=310						
H11N3	WAKE ISLAND Hy	28.77	117	T	T	00 29 29.8	
	baz=310						
H11S1	WAKE ISLAND Hy	29.41	119	T	T	00 30 26.0	
	baz=310						
H11S3	WAKE ISLAND Hy	29.41	119	T	T	00 30 27.7	
	baz=310						
H11S2	WAKE ISLAND Hy	29.42	119	T	T	00 30 26.5	
	baz=310						
DMPH	Davao City--Mi	31.72	208	⇑eP	P	00 00 06.2	+8.6
DMPH				eS	S	00 00 12.7	-291
ZALV	Zalesovo Beam	41.67	313	P	P	00 01 21.4	-0.5
	1.3nm,0.6s,baz=94,slow=6.1,SNR=5.2						
MKAR	Makanchi Array	43.61	303	P	P	00 01 37.3	-0.4
	0.4nm,0.6s,baz=86,slow=10,SNR=7.3						
ILAR	Eielson Array	50.96	32	P	P	00 02 35.0	+0.5
	0.3nm,0.7s,baz=272,slow=6.9,SNR=4.1						
WRA	Warramunga Arr	55.95	186	P	P	00 03 09.8	-1.8
	0.3nm,0.5s,baz=1.2,slow=7.5,SNR=6.4						
BRTR	Keskin Array B	78.57	311	P	P	00 05 34.4	-0.5
	0.5nm,0.8s,baz=43,slow=4.6,SNR=2.5						
TXAR	Lajitas Array	91.67	51	P	P	00 06 40.4	-0.3
	0.1nm,0.6s,baz=330,slow=5.2,SNR=2.4						

ISC Computed Locations for February 2013